

109-033-7B76

MOTC-IOT-108-H3DA001b-Y6

2018 年港灣環境資訊網  
海氣象觀測資料年報  
(北端海域風浪潮流觀測資料)



交通部運輸研究所

中華民國 109 年 2 月

109

二  
一八年港灣環境資訊網海氣象觀測資料年報(北端海域風浪潮流觀測資料)交通部運輸研究所

GPN : 1010900090

定價:100 元

109-033-7B76

MOTC-IOT-108-H3DA001b-Y6

# 2018 年港灣環境資訊網 海氣象觀測資料年報 (北端海域風浪潮流觀測資料)

著者：蘇青和、李俊穎、傅怡釗  
蔣敏玲、劉清松、陳鈞彥

交通部運輸研究所

中華民國 109 年 2 月

國家圖書館出版品預行編目(CIP)資料

港灣環境資訊網海氣象觀測資料年報(北端海域風  
浪潮流觀測資料). 2018年 / 蘇青和等著. -- 初  
版. -- 臺北市 : 交通部運研所, 民 109.02  
面 ; 公分  
ISBN 978-986-531-062-2(平裝)

1. 海洋氣象

444.94

108022708

2018年港灣環境資訊網海氣象觀測資料年報(北端海域風浪潮流觀測資料)

編輯：蘇青和、李俊穎、傅怡釧、蔣敏玲、劉清松、陳鈞彥

出版機關：交通部運輸研究所

地址：10548 臺北市敦化北路 240 號

網址：[www.ihmt.gov.tw](http://www.ihmt.gov.tw) (中文版 > 中心出版品)

電話：(04)26587134

出版年月：中華民國 109 年 2 月

印刷者：

版(刷)次冊數：初版一刷 20 冊

本書同時登載於交通部運輸研究所港灣技術研究中心網站

定價：100 元

展售處：

交通部運輸研究所運輸資訊組•電話：(02)23496880

國家書店松江門市：10485 臺北市中山區松江路 209 號 F1•電話：(02)25180207

五南文化廣場：40042 臺中市中山路 6 號•電話：(04)22260330

GPN：1010900090

ISBN：978-986-531-062-2 (平裝)

著作財產權人：中華民國(代表機關：交通部運輸研究所)

本著作保留所有權利，欲利用本著作全部或部份內容者，須徵求交通部  
運輸研究所書面授權。



## 交通部運輸研究所自行研究計畫出版品摘要表

出版品名稱：2018 年港灣環境資訊網海氣象觀測資料年報(北端海域風浪潮流觀測資料)			
國際標準書號(或叢刊號) ISBN 978-986-531-062-2 (平裝)	政府出版品統一編號 1010900090	運輸研究所出版品編號 109-033-7B76	計畫編號 108-H3DA001b-Y6
主辦單位：港灣技術研究中心 主管：蔡立宏 主持人：蘇青和 研究人員：李俊穎、傅怡釗、蔣敏玲、劉清松、陳鈞彥 研究助理：林珂如、謝佳紘 聯絡電話：04-26587175, 04-26587133, 04-26587132 傳真號碼：04-26571329			研究期間 自 108 年 01 月 至 108 年 12 月
關鍵詞:港灣環境資訊網、2018 年、北端海域、觀測海氣象資料、年報			
摘要： <p style="text-align: center;">本港灣環境資訊網觀測海氣象資料年報，包括北端海域2018年觀測風力、波浪、潮汐及海流等資料之觀測記錄表及逐時資料歷線圖。</p>			
出版日期	頁數	定價	本出版品取得方式
109 年 2 月	328	100 元	凡屬機密性出版品均不對外公開。普通性出版品，公營、公益機關團體及學校可函洽本所免費贈閱；私人及私營機關團體可按定價價購。
機密等級： <input type="checkbox"/> 密 <input type="checkbox"/> 機密 <input type="checkbox"/> 極機密 <input type="checkbox"/> 絕對機密 (解密條件： <input type="checkbox"/> 年 <input type="checkbox"/> 月 <input type="checkbox"/> 日解密， <input type="checkbox"/> 公布後解密， <input type="checkbox"/> 附件抽存後解密， <input type="checkbox"/> 工作完成或會議終了時解密， <input type="checkbox"/> 另行檢討後辦理解密) <input checked="" type="checkbox"/> 普通			
備註：本研究之結論與建議不代表交通部之意見。			

**PUBLICATION ABSTRACTS OF RESEARCH PROJECTS  
INSTITUTE OF TRANSPORTATION  
MINISTRY OF TRANSPORTATION AND COMMUNICATIONS**

TITLE: Annual Report of Oceanographical Observation Data in North Offshoe Region at 2018			
ISBN(OR ISSN) 978-986-531-062-2 (pbk)	GOVERNMENT PUBLICATIONS NUMBER 1010900090	IOT SERIAL NUMBER 109-033-7B76	PROJECT NUMBER 108-H3DA001b-Y6
DIVISION: HARBOR & MARINE TECHNOLOGY CENTER DIVISION DIRECTION: Li-Hung Tsai PRINCIPAL INVESTIGATOR: Ching-Ho Su PROJECT STAFF: Chun-Ying Lee, Yi-Chuan Fu, Min-Ling Chiang, Ching-Sung Liu Chun-Yen Chen, Jenny Lin, Chia-Hon Shieh PHONE: 886-4-26587175, 886-4-26587133, 886-4-26587132 FAX: 886-4-26571329			PROJECT PERIOD FROM January 2019 TO December 2019
KEY WORDS: Harbor Environment Information Website, 2018, Annual Report, North Off-shoe Region, Oceanographical Observation Data			
ABSTRACT:  This Annual report 2018 of Harbor Environment Information Website(HEIV) covers the observation data of winds, waves, tides and currents near North offshoe region in Taiwan. The contents in this Annual report include the records of observation and the time series of data.			
DATE OF PUBLICATION February 2020	NUMBER OF PAGES 328	PRICE 100	CLASSIFICATION <input type="checkbox"/> RESTRICTED <input type="checkbox"/> CONFIDENTIAL <input type="checkbox"/> SECRET <input type="checkbox"/> TOP SECRET <input checked="" type="checkbox"/> UNCLASSIFIED
The views expressed in this publication are not necessarily those of the Ministry of Transportation and Communications.			

# 2018年港灣環境資訊網海氣象觀測資料年報 (北端海域風浪潮流觀測資料)

## 目 錄

中文摘要 .....	I
英文摘要 .....	II
目錄 .....	III
誌謝 .....	V
第 0 章 北端海域觀測風浪潮流資料蒐集 .....	0-1
第一章 2018 年北端海域觀測風力資料年報 .....	1-1
1.1 2018 年北端海域觀測風力資料年報圖表 .....	1-1
1.2 2018 年北端海域各測站修補前風力統計量統計表 .....	1-2
1.3 2018 年北端海域主要測站 1 與其他測站風力歷線比較圖 ...	1-3
1.4 2018 年北端海域主要測站 2 與其他測站風力歷線比較圖 ...	1-4
1.5 2018 年北端海域各測站修補前風力向量分佈圖 .....	1-5
1.6 2018 年北端海域各測站修補前風力向量行進圖 .....	1-6
第二章 2018 年北端海域觀測波浪資料年報 .....	2-1
2.1 2018 年北端海域觀測波浪資料年報圖表 .....	2-1
2.2 2018 年北端海域各測站修補前波浪統計量統計表 .....	2-2
2.3 2018 年北端海域主要測站 1 與其他測站波浪歷線比較圖 ...	2-3
2.4 2018 年北端海域主要測站 2 與其他測站波浪歷線比較圖 ...	2-4
2.5 2018 年北端海域各測站修補前波浪向量分佈圖 .....	2-5
第三章 2018 年北端海域觀測潮汐資料年報 .....	3-1
3.1 2018 年北端海域觀測潮汐資料年報圖表 .....	3-1
3.2 2018 年北端海域各測站修補前潮汐統計量統計表 .....	3-2
3.3 2018 年北端海域主要測站 1 與其他測站潮汐歷線比較圖 ...	3-3
3.4 2018 年北端海域主要測站 2 與其他測站潮汐歷線比較圖 ...	3-4

3.5	2018 年北端海域主要測站 3 與其他測站潮汐歷線比較圖 ...	3-5
<b>第四章</b>	<b>2018 年北端海域觀測海流資料年報 .....</b>	<b>4-1</b>
4.1	2018 年北端海域觀測海流資料年報圖表 .....	4-1
4.2	2018 年北端海域各測站海流統計量統計表 .....	4-2
4.3	2018 年北端海域各測站海流歷線比較圖 .....	4-3
4.4	2018 年北端海域各測站海流向量分佈圖 .....	4-4
4.5	2018 年北端海域各測站海流向量行進圖 .....	4-5

## 誌 謝

2018 年港灣環境資訊網觀測風力資料，蒐集之北端海域風力資料，除本中心自行觀測之外，在基隆港氣象站(測站 E、F 及 M)、龍洞氣象站(測站 J)、龍洞海上浮標(測站 Y)、富貴角海上浮標(測站 R)、彭佳嶼氣象站(測站 I)等觀測風力資料，係交通部 中央氣象局(CWB) 提供;基隆海域附近海上浮標(測站 Z)觀測風力資料，係 國立臺灣海洋大學(NTOC) 裝設，謹致謝忱。

2018 年港灣環境資訊網觀測波浪資料，蒐集之北端海域波浪資料，除本中心自行觀測之外，在龍洞海上浮標(測站 Y)、富貴角海上浮標(測站 R) 等觀測波浪資料，係交通部 中央氣象局(CWB) 提供;基隆海域附近海上浮標(測站 Z)觀測波浪儀，係 國立臺灣海洋大學(NTOC) 裝設，謹致謝忱。

2018 年港灣海氣象觀測潮汐資料，蒐集之北端海域潮汐觀測資料，除本中心自行觀測之外，在基隆港(測站 F 及測站 M)、龍洞(測站 J 及測站 O)、長潭里(測站 Q)、麟山鼻(測站 K)、澎佳嶼(測站 P)等觀測潮汐資料，係交通部 中央氣象局 提供，謹致謝忱。

2018 年觀測海流資料，蒐集之北端海域海流觀測資料，除本中心自行觀測之外，在測站 Y(龍洞外海浮標站) 及測站 R(富貴角外海浮標站)，係交通部 中央氣象局 提供，謹致謝忱。



## 第 0 章 北端海域觀測風浪潮流資料蒐集

本年報將彙整包括本所港研中心(IHMT)、氣象局(CWB)、水利署(WRA)、成功大學水文中心(COMC)、立臺灣海洋大學(NTOC)、海科中心(TORI)、觀光局東北角管理處(TBRC)、台灣中油(CPC)等單位，於臺灣北苗海域、北端海域、宜蘭海域、花蓮海域、臺東海域、屏東海域、高雄海域、嘉南海域、中雲海域、澎湖海域、金門海域及馬祖海域等 12 個海域，海域區分如附圖 A1。

北端海域觀測風力資料測站統計表如表 WK1，觀測波浪資料測站統計表如表 VK1，觀測潮汐資料測站統計表如表 TK1，觀測海流資料測站統計表如表 CK1。

表 WK1 北端海域觀測風力資料測站統計表

海域名稱	測站總數	IHMT 測站	CWB 測站	WRA 測站	其他 測站	備註
北端海域	8	1	6		1	

表 VK1 北端海域觀測波浪資料測站統計表

海域名稱	測站總數	IHMT 測站	CWB 測站	WRA 測站	其他 測站	備註
北端海域	4	1	2	0	1	

表 TK1 北端海域觀測潮汐資料測站統計表

海域名稱	測站總數	IHMT 測站	CWB 測站	WRA 測站	其他 測站	備註
北端海域	10	3	7	0	1	

表 CK1 北端海域觀測海流資料測站統計表

海域名稱	測站總數	IHMT 測站	CWB 測站	WRA 測站	其他 測站	備註
北端海域	3	1	2	0	0	

註:資料更新時間為 2018 年。

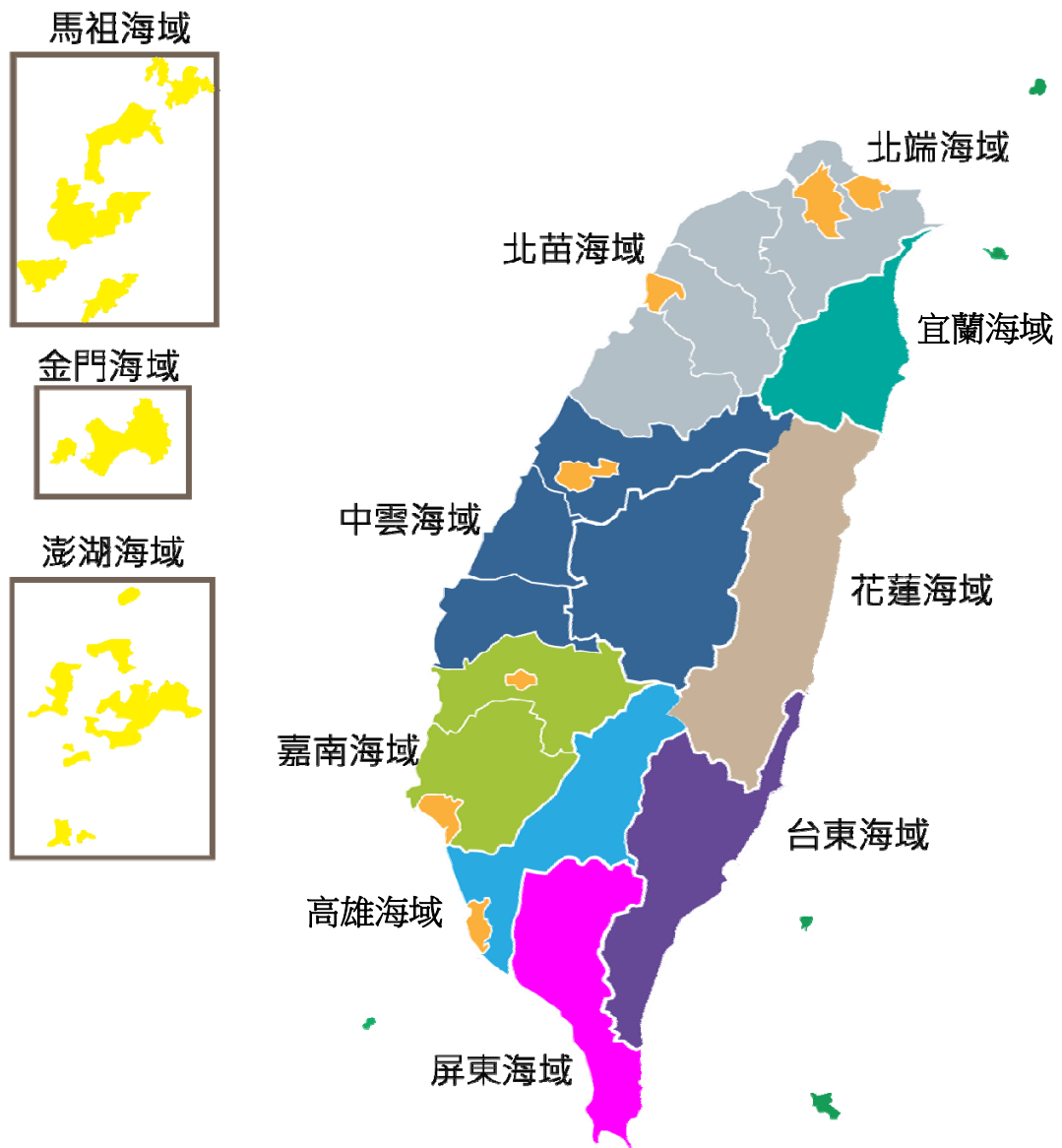


圖 A1 臺灣 12 海域區分示意圖



## 2018 年北端海域觀測風力資料

北端海域(富貴角~龍洞)風之觀測係 2002 年 6 月本中心(IHMT)安裝 Young Brand 風速計於基隆港(稱測站 W)，其位置如附圖 WK1，2010 年 10 月後更新安裝 Gill 二維超音波式風速計。測站 E(基隆)、測站 F(基隆)、測站 J(龍洞)及測站 I(彭佳嶼)之風速儀屬中央氣象局(CWB)所有，測站 Y(龍洞外海浮標站)及測站 R(富貴角外海浮標站)之風速儀也屬中央氣象局所有，測站 Z(基隆外海浮標站)之風速儀則為國立臺灣海洋大學(NOTC)所裝設。

本中心測站風資料之蒐集係採取每小時測定十分鐘之風速、風向數據加以平均，而得出該小時之平均風速、平均風向、最大陣風風速、最大陣風風向、最大陣風之發生時間。本中心之風力資料以取平均風速及平均風向為主。其他測站觀測風速、風向資料也是平均風速(m/s)及風向(度)。各測站歷年觀測風資料蒐集概況如表 WK1。

表 WK1 北端海域觀測風力資料蒐集概況表(統計時間至 2018 年 11 月)

測站	緯度	經度	觀測期間	觀測單位	備註
W	25°09'19"N	121°45'09"E	2002/06-2018/11(觀測中)	港研中心	基隆港區
E	25°07'58"N	121°44'26"E	1999/01-2018/11(觀測中)	中央氣象局	基隆
F	25°09'18"N	121°45'05"E	2015/01-2018/11(觀測中)	中央氣象局	基隆
Y	25°05'54"N	121°55'22"E	1998/09-2018/11(觀測中)	中央氣象局	龍洞浮標站
Z	25°09'17"N	121°47'06"E	2012/05-2018/11(觀測中)	臺灣海洋大學	基隆浮標站
R	25°18'15"N	121°32'05"E	2014/12-2018/11(觀測中)	中央氣象局	富貴角浮標
I	25°37'46"N	122°04'17"E	2014/08-2018/11(觀測中)	中央氣象局	彭佳嶼
J	25°05'51"N	121°55'05"E	2015/01-2018/11(觀測中)	中央氣象局	龍洞

# 北端海域



圖 WK1 北端海域風力觀測站位置示意圖

## 2018 年北端海域觀測波浪資料

北端海域(富貴角~龍洞)波浪觀測，本中心(IHMT)於 2001 年 6 月安置 NORTEK 剖面海流表面波浪與潮汐之監測系統(簡稱 AWCP)，在基隆港東防波堤堤頭外水深 44m 處(測站 X0)，如附圖 VK1，2006 年 8 月因防波堤延伸工程，移至西防波堤堤外水深 36m 位置(測站 X1)。2011 年 8 月，再移至東防波堤堤頭北方約 200m，水深 48m(測站 X2)。

測站 Y(龍洞外海浮標站)及測站 R(富貴角外海浮標站)波浪儀屬中央氣象局(CWB)所有，測站 Z(基隆外海浮標站)波浪儀為國立臺灣海洋大學(NOTC)裝設。北端海域各測站歷年觀測波浪資料蒐集概況如表 VK1。

波浪觀測 AWCP 系統有兩個分離波高量測模式：一個是對平靜波浪時，當資料由傳統式壓力感應器量測時將會因儀器佈放的深度而受很大的影響。此時，表面高度必須用一個聲波式的高度感應器量測波高。AWCP 波向量測範圍：波向的量測從海面下 3 米以上的流向資料與波高資料計算轉換而得。對攪動的海況來說；用於轉換波向的該層深度應該自動被調整為平均水位也就是  $H_{max}/2$ 。量測的參數為：平均波向及波向分佈，波向單位為度。

**表 VK1 北端海域觀測波浪資料蒐集概況表(統計時間至 2018 年 11 月)**

測站	緯度	經度	觀測期間	觀測單位	備註
X0	25°09'50"N	121°45'14"E	2001/06-2006/05	港研中心	基隆港東堤外海
X1	25°44'58"N	121°44'58"E	2006/08-2011/07	港研中心	基隆港西堤外海
X2	25°09'57"N	121°45'17"E	2011/08-2018/11(觀測中)	港研中心	基隆港東堤外海
Y	25°05'54"N	121°55'22"E	1998/09-2018/11(觀測中)	中央氣象局	龍洞浮標站
Z	25°09'17"N	121°47'06"E	2012/05-2018/11(觀測中)	臺灣海洋大學	基隆浮標站
R	25°18'15"N	121°32'05"E	2015/07-2018/11(觀測中)	中央氣象局	富貴角浮標

# 北端海域



圖 VK1 北端海域波浪觀測站位置示意圖

## 2018 年北端海域觀測潮汐資料

北端海域(富貴角~龍洞) 潮汐之觀測係本中心於 2001 年 6 月安置 AWCP，在基隆港東防波堤堤頭外水深 44 公尺處(測站 X0)，位置如附圖 TK1，2006 年 8 月因防波堤延伸工程，移至西防波堤堤外水深 36 公尺位置(測站 X1)。2011 年 8 月安裝在東防波堤堤頭北方約 200 公尺，水深 48 公尺位置(測站 X2)。另 2002 年 6 月本中心於港區安裝 Water Log 公司潮位計(稱測站 T)。2018 年於基隆港內增設即時水深潮位站(稱測站 S)。基隆港潮位站站(測站 F 及測站 M)、龍洞潮位站(測站 J 及測站 O)、長潭里潮位站(測站 Q)、麟山鼻潮位站(測站 K)、澎佳嶼潮位站(測站 P)是由中央氣象局設置。各測站歷年各站觀測潮汐資料蒐集概況如表 TK1。

潮位測站 X 潮波流儀，以壓力感測器測得水壓變化時間序列，取樣方式為每一小時取前 10 分鐘之水位變化，取樣頻率為 2Hz，然後加以平均得出該小時之平均水位值。潮位資料之平均水位以觀測水位資料之平均值為基準，未經高程量測，與一般固定式潮位計不同。測站 T 潮位資料取樣方式為每 6 分鐘量測一次水位變化。

表 TK1 北端海域觀測潮汐資料蒐集概況表(統計時間至 2018 年 11 月)

測站	緯度	經度	觀測期間	觀測單位	備註
T	25°09'19"N	121°45'09"E	2002/07-2018/11(觀測中)	港研中心	基隆港潮位計
X0	25°09'50"N	121°45'14"E	2001/06-2006/05	港研中心	基隆港東堤外海
X1	25°44'58"N	121°44'58"E	2006/08-2011/07	港研中心	基隆港西堤外海
X2	25°09'57"N	121°45'17"E	2011/08-2018/11(觀測中)	港研中心	基隆港東堤外海
F	25°09'18"N	121°45'08"E	1966/01-2018/11(觀測中)	中央氣象局	基隆港潮位站
J	25°05'51"N	121°55'05"E	2013/12-2018/11(觀測中)	中央氣象局	龍洞潮位站
K	25°17'04"N	121°30'38"E	2013/12-2018/11(觀測中)	中央氣象局	麟山鼻潮位站
P	25°31'31"N	122°04'32"E	2014/06-2018/11(觀測中)	中央氣象局	澎佳嶼潮位站
M	25°08'26"N	121°47'59"E	2016/10-2018/11(觀測中)	中央氣象局	基隆港潮位站
Q	25°08'24"N	121°47'58"E	2017/05-2018/07	中央氣象局	長潭里潮位站
O	25°05'58"N	121°55'12"E	2017/08-2018/11(觀測中)	中央氣象局	龍洞潮位站
S			2018/10-2018/11(觀測中)	港研中心	基隆港潮位站

# 北端海域



圖 TK1 北端海域潮汐觀測站位置示意圖

## 2018 年北端海域觀測海流資料

北端海域(富貴角~龍洞)海流之觀測，本中心於 2001 年 6 月中旬安置挪威 NORTEK 公司之剖面海流表面波浪與潮汐之監測系統(簡稱 AWCP)，安裝在基隆港東防波堤堤頭外水深 44 公尺處(測站 X0)，如附圖 CK1，2006 年 8 月因防波堤延伸工程，移至西防波堤堤外水深 36 公尺位置(測站 X1)。2011 年 8 月，安裝在東防波堤堤頭北方約 200 公尺，水深 48 公尺(測站 X2)。

測站 Y(龍洞外海浮標站) 及測站 R(富貴角外海浮標站)海流儀屬中央氣象局(CWB)所有，歷年觀測海流資料蒐集概況如表 CK1。

剖面海流流速的量測可以依照使用在不同水深即自固定在海床上之儀器位置到水表面來設定量測不同的間距，基隆港觀測站水深間距設定為 2 公尺；每小時連續量測 600 秒，再將總和平均代表其數樣每一間距層之海流流速、流向等資料，記錄在感應器內，並每隔 1 小時經由海底電纜傳訊回接收站之電腦中儲存。

表 CK1 北端海域觀測海流資料蒐集概況表(統計時間至 2018 年 11 月)

測站	緯度	經度	觀測期間	觀測單位	備註
X0	25°09'50"N	121°45'14"E	2001/06-2006/05	港研中心	基隆港東堤外海
X1	25°44'58"N	121°44'58"E	2006/08-2011/07	港研中心	基隆港西堤外海
X2	25°09'57"N	121°45'17"E	2011/08-2018/11(觀測中)	港研中心	基隆港東堤外海
Y	25°05'54"N	121°55'22"E	2016/08-2018/11(觀測中)	中央氣象局	龍洞浮標站
R	25°18'15"N	121°32'05"E	2017/08-2018/11(觀測中)	中央氣象局	富貴角浮標

# 北端海域



圖 CK1 北端海域海流觀測站位置示意圖



# 第一章 2018 年北端海域觀測風力資料年報

北端海域(富貴角~龍洞) 風力之觀測包括測站 **W**、測站 **Y**、測站 **E**、測站 **F**、測站 **Z**、測站 **R**、測站 **J** 及測站 **I** 等 8 個測站(測站位置如第 0 章圖 WK1)。本年報取經檢核及補遺之 **W** 站資料作為主要測站 1，**Y** 站資料作為主要測站 2。

## 1.1 2018 年北端海域觀測風力資料年報圖表

本章第 1 節**風力**年報資料處理之圖表包括：

1. 表 1.1.1a 2018 年**各觀測站**每月**觀測風力**資料**修補前**記錄表。
2. 表 1.1.1b 2018 年**主要測站**每月**觀測風力**資料**修補後**記錄表。
3. 表 1.1.2 2018 年**主要測站 1** **修補後**每月(季)及整年風速及風向重要統計量統計表。
4. 表 1.1.3 2018 年**主要測站 2** **修補後**每月(季)及整年風速及風向重要統計量統計表。
5. 圖 1.1.1a 2018 年**主要測站 1** **修補前後**每月風速歷線比較圖。
6. 圖 1.1.1b 2018 年**主要測站 1** **修補前後**每月風向歷線比較圖。
7. 圖 1.1.2a 2018 年**主要測站 2** **修補前後**每月風速歷線比較圖。
8. 圖 1.1.2b 2018 年**主要測站 2** **修補前後**每月風向歷線比較圖。
9. 圖 1.1.3 2018 年**主要測站 1** **修補後**每月風力向量分佈圖。
10. 圖 1.1.4 2018 年**主要測站 2** **修補後**每月風力向量分佈圖。
11. 圖 1.1.5 2018 年**主要測站 1** **修補後**每月風力向量行進圖。
12. 圖 1.1.6 2018 年**主要測站 2** **修補後**每月風力向量行進圖。

第 2 節風力年報資料處理之統計表包括：2018 年北端海域**各測站****修補前**每月(季)及整年風速及風向重要統計量統計表。

第 3 節風力年報資料處理之統計圖包括：2018 年北端海域**主要測站 1****修補後**與**其他測站(修補前)**每月風速及風向歷線比較圖。

第 4 節風力年報資料處理之統計圖包括：2018 年北端海域**主要測站 2****修補後**與**其他測站(修補前)**每月風速及風向歷線比較圖。

第 5 節風力年報資料處理之統計圖包括：2018 年北端海域**各測站****修補前**每月風力向量分佈圖。

第 6 節風力年報資料處理之統計圖包括：2018 年北端海域**各測站****修補前**每月風力向量行進圖。

表 1.1.1a 2018年每月北端海域修補前各測站觀測風力資料紀錄表

海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域
年月/測站	W	Y	Z	R	E	I	J	F				
2017/12月	744(100%)	727(97.7%)	744(100%)	717(96.4%)	744(100%)	744(100%)	562(75.5%)	567(76.2%)	*	*	*	*
2018/ 1月	744(100%)	310(41.7%)	744(100%)	697(93.7%)	744(100%)	744(100%)	710(95.4%)	710(95.4%)	*	*	*	*
2018/ 2月	672(100%)	158(23.5%)	672(100%)	26( 3.9%)	672(100%)	672(100%)	654(97.3%)	654(97.3%)	*	*	*	*
2018/ 3月	744(100%)	613(82.4%)	744(100%)	*	744(100%)	744(100%)	707(95.0%)	625(84.0%)	*	*	*	*
2018/ 4月	720(100%)	658(91.4%)	720(100%)	*	720(100%)	720(100%)	687(95.4%)	692(96.1%)	*	*	*	*
2018/ 5月	744(100%)	353(47.4%)	744(100%)	*	744(100%)	744(100%)	439(59.0%)	409(55.0%)	*	*	*	*
2018/ 6月	720(100%)	531(73.8%)	720(100%)	*	720(100%)	720(100%)	683(94.9%)	681(94.6%)	*	*	*	*
2018/ 7月	744(100%)	583(78.4%)	744(100%)	155(20.8%)	744(100%)	*	693(93.1%)	701(94.2%)	*	*	*	*
2018/ 8月	744(100%)	597(80.2%)	744(100%)	326(43.8%)	744(100%)	*	723(97.2%)	703(94.5%)	*	*	*	*
2018/ 9月	720(100%)	580(80.6%)	718(99.7%)	*	720(100%)	*	664(92.2%)	622(86.4%)	*	*	*	*
2018/10月	744(100%)	691(92.9%)	744(100%)	134(18.0%)	744(100%)	*	730(98.1%)	731(98.3%)	*	*	*	*
2018/11月	720(100%)	637(88.5%)	720(100%)	659(91.5%)	720(100%)	*	669(92.9%)	652(90.6%)	*	*	*	*
2018/冬季	2160(100%)	1195(55.3%)	2160(100%)	1440(66.7%)	2160(100%)	2160(100%)	1926(89.2%)	1931(89.4%)	*	*	*	*
2018/春季	2208(100%)	1624(73.6%)	2208(100%)	*	2208(100%)	2208(100%)	1833(83.0%)	1726(78.2%)	*	*	*	*
2018/夏季	2208(100%)	1711(77.5%)	2208(100%)	481(21.8%)	2208(100%)	720(32.6%)	2099(95.1%)	2085(94.4%)	*	*	*	*
2018/秋季	2184(100%)	1908(87.4%)	2182(99.9%)	793(36.3%)	2184(100%)	*	2063(94.5%)	2005(91.8%)	*	*	*	*
2018/整年	8760(100%)	6438(73.5%)	8758(99.9%)	2714(31.0%)	8760(100%)	5088(58.1%)	7921(90.4%)	7747(88.4%)	*	*	*	*
起始年月	2017/12	2017/12	2017/12	2017/12	2017/12	2017/12	2017/12	2017/12	*	*	*	*
結束年月	2018/11	2018/11	2018/11	2018/11	2018/11	2018/06	2018/11	2018/11	*	*	*	*

1-1-3

表 1.1.1b 2018年每月北端海域修補後各測站風力資料紀錄表

海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域
年月/測站	W	Y										
2017/12月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 1月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 2月	672(100%)	672(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 3月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 4月	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 5月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 6月	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 7月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 8月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 9月	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*	*
2018/10月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/11月	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*	*
2018/冬季	2160(100%)	2160(100%)	*	*	*	*	*	*	*	*	*	*
2018/春季	2208(100%)	2208(100%)	*	*	*	*	*	*	*	*	*	*
2018/夏季	2208(100%)	2208(100%)	*	*	*	*	*	*	*	*	*	*
2018/秋季	2184(100%)	2184(100%)	*	*	*	*	*	*	*	*	*	*
2018/整年	8760(100%)	8760(100%)	*	*	*	*	*	*	*	*	*	*
起始年月	2017/12	2017/12	*	*	*	*	*	*	*	*	*	*
結束年月	2018/11	2018/11	*	*	*	*	*	*	*	*	*	*

F-1-1

表1.1.2 2018年北端海域 W 站修補後風速及風向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	風速 平均值 (m/s)	平均風 風速/風向 (m/s)/(來向)	最大風 風速/風向 (m/s)/(來向)	輕風 <3.3 (%)	和風 ~7.9 (%)	強風 ~13.8 (%)	疾風 >13.8 (%)	風向 N~E (%)	風向 E~S (%)	風向 S~W (%)	風向 W~N (%)	主要風向 方向/百分比
1	2017/12	744(100%)	5.5	4.2/NE	14.1/N	27.0	50.4	22.3	.3	67.7	20.3	6.3	5.6	NNE/28.9%
2	2018/01	744(100%)	4.4	2.8/NE	13.1/N	38.0	51.7	10.2	.0	54.0	17.3	9.8	18.8	NNE/16.7%
3	2018/02	672(100%)	4.7	3.4/NNE	12.5/N	38.7	44.2	17.1	.0	50.0	11.5	11.6	26.9	NNE/22.8%
4	2018/03	744(100%)	3.8	1.7/NNE	12.1/NW	52.0	38.8	9.1	.0	33.7	28.9	15.7	21.6	N /14.1%
5	2018/04	720(100%)	3.1	1.3/ENE	11.5/NNE	61.1	35.7	3.2	.0	33.6	34.3	19.6	12.5	NNE/14.4%
6	2018/05	744(100%)	2.5	1.0/NE	10.5/N	74.7	24.2	1.1	.0	40.9	19.2	19.8	20.2	NNE/14.1%
7	2018/06	720(100%)	2.7	1.3/NE	10.7/N	70.8	28.5	.7	.0	45.1	20.6	15.0	19.3	NE /14.6%
8	2018/07	744(100%)	3.5	1.1/SE	14.9/NNW	57.9	35.8	6.2	.1	17.7	37.1	32.0	13.2	SE /14.8%
9	2018/08	744(100%)	2.6	.6/SE	8.1/SSE	73.0	26.9	.1	.0	23.5	26.6	36.3	13.6	SSW/14.7%
10	2018/09	720(100%)	4.6	1.9/NE	12.7/N	49.3	30.6	20.1	.0	34.3	30.6	17.9	17.2	N /16.1%
11	2018/10	744(100%)	4.7	3.9/NNE	12.9/N	29.0	59.9	11.0	.0	73.9	7.4	8.9	9.8	NNE/28.8%
12	2018/11	720(100%)	3.8	2.5/NE	11.6/N	48.6	44.6	6.8	.0	51.9	22.1	8.5	17.5	NNE/17.9%
13	2018/冬	2160(100%)	4.9	3.4/NNE	14.1/N	34.4	48.9	16.5	.1	57.5	16.5	9.2	16.8	NNE/22.8%
14	2018/春	2208(100%)	3.1	1.3/NE	12.1/NW	62.6	32.9	4.5	.0	36.1	27.4	18.3	18.2	NNE/13.3%
15	2018/夏	2208(100%)	2.9	.7/E	14.9/NNW	67.2	30.4	2.4	.0	28.6	28.2	27.9	15.3	SSW/ 9.3%
16	2018/秋	2184(100%)	4.4	2.8/NE	12.9/N	42.2	45.2	12.6	.0	53.6	19.9	11.7	14.8	NNE/19.9%
17	2018/年	8760(100%)	3.8	1.9/NE	14.9/NNW	51.7	39.3	8.9	.0	43.9	23.0	16.8	16.3	NNE/16.0%

1-1-1

表1.1.3 2018年北端海域 Y 站修補後風速及風向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	風速 平均值 (m/s)	平均風 風速/風向 (m/s)/(來向)	最大風 風速/風向 (m/s)/(來向)	輕風 <3.3 (%)	和風 ~7.9 (%)	強風 ~13.8 (%)	疾風 >13.8 (%)	風向 N~E (%)	風向 E~S (%)	風向 S~W (%)	風向 W~N (%)	主要風向 方向/百分比
1	2017/12	744(100%)	6.8	4.9/NE	13.0/N	9.8	54.2	36.0	.0	67.9	14.2	9.7	8.2	NNE/23.4%
2	2018/01	744(100%)	5.0	2.7/NE	10.7/N	27.0	60.5	12.5	.0	53.0	16.7	12.9	17.5	ENE/13.8%
3	2018/02	672(100%)	4.9	3.7/NNE	11.9/N	35.0	48.2	16.8	.0	67.7	12.9	4.9	14.4	NNE/25.0%
4	2018/03	744(100%)	4.6	.7/ENE	11.6/N	35.8	52.3	12.0	.0	30.9	26.7	30.2	12.1	N /17.6%
5	2018/04	720(100%)	4.3	1.2/SSE	11.0/NE	35.7	56.9	7.4	.0	25.6	29.4	40.4	4.6	SSW/17.8%
6	2018/05	744(100%)	2.5	.4/E	11.0/N	74.2	24.9	.9	.0	31.7	18.3	37.2	12.8	SSW/19.4%
7	2018/06	720(100%)	2.9	.4/NE	10.2/NNE	64.4	33.3	2.2	.0	30.6	17.4	34.0	18.1	SSW/19.0%
8	2018/07	744(100%)	3.7	1.9/S	13.1/SSW	57.3	32.8	9.9	.0	11.3	36.8	40.5	11.4	S /20.7%
9	2018/08	744(100%)	3.5	1.7/S	12.0/SSW	61.3	30.8	7.9	.0	11.0	29.0	45.3	14.7	SSW/18.3%
10	2018/09	720(100%)	4.8	.8/ENE	13.1/NE	38.2	43.9	17.9	.0	30.1	28.1	33.2	8.6	SSW/14.4%
11	2018/10	744(100%)	5.1	4.2/NNE	11.6/N	23.0	65.9	11.2	.0	73.8	1.5	7.8	16.9	NE /27.4%
12	2018/11	720(100%)	4.3	2.1/NE	10.7/NE	36.5	56.0	7.5	.0	47.1	12.6	23.1	17.2	N /16.1%
13	2018/冬	2160(100%)	5.6	3.7/NE	13.0/N	23.6	54.5	21.9	.0	62.7	14.7	9.3	13.3	NNE/20.1%
14	2018/春	2208(100%)	3.8	.6/ESE	11.6/N	48.7	44.6	6.7	.0	29.4	24.8	35.9	9.9	SSW/16.7%
15	2018/夏	2208(100%)	3.3	1.1/S	13.1/SSW	61.0	32.3	6.7	.0	17.5	27.9	40.0	14.7	SSW/16.9%
16	2018/秋	2184(100%)	4.7	2.3/NE	13.1/NE	32.5	55.4	12.2	.0	50.6	13.9	21.2	14.3	NNE/16.5%
17	2018/年	8760(100%)	4.3	1.3/NE	13.1/SSW	41.5	46.6	11.8	.0	39.9	20.4	26.7	13.0	NNE/13.2%

9-1-1

# Wind Speed in North Seas of K LW0 at 2018

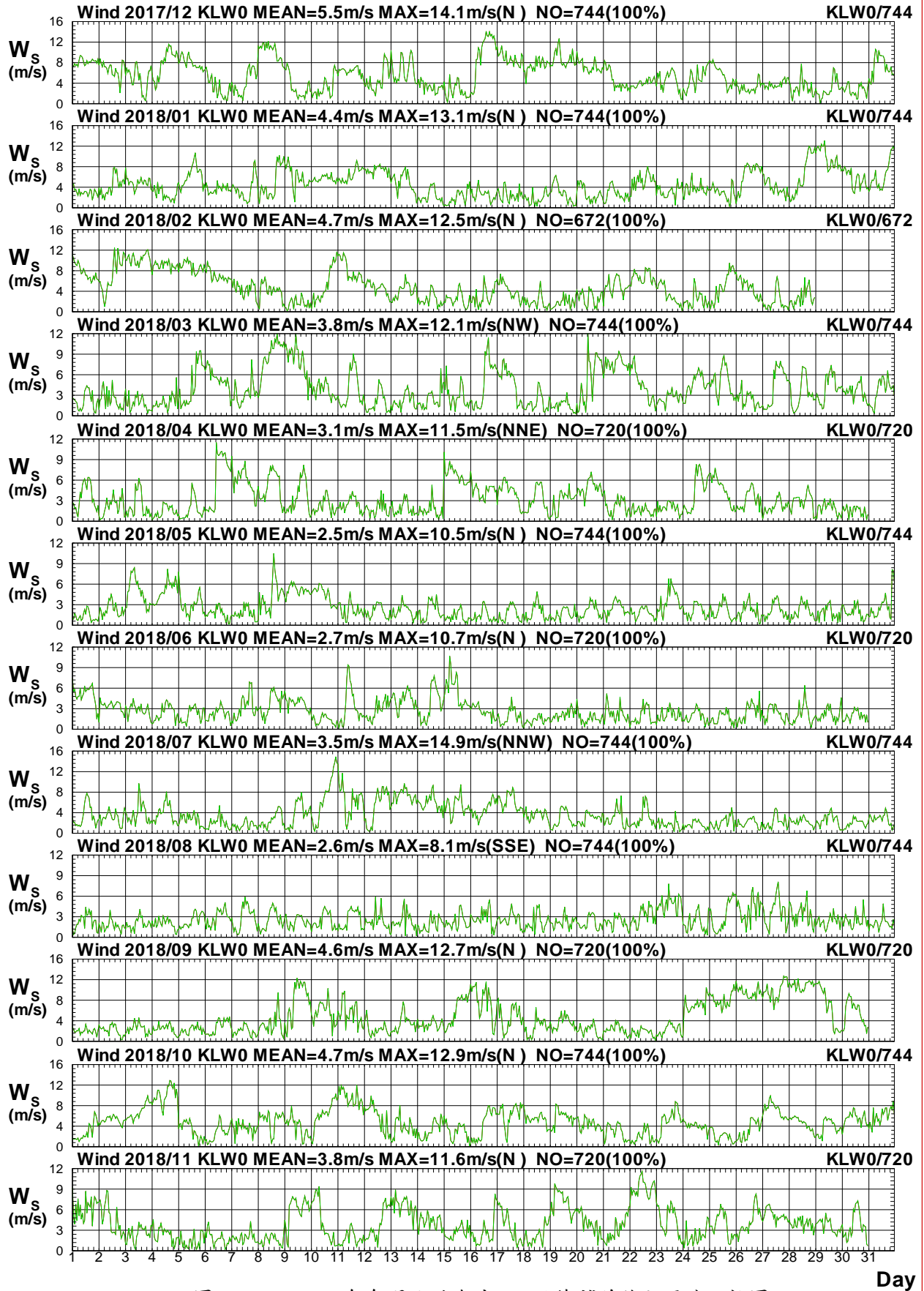


圖1.1.1a 2018年每月北端海域 W 站修補前後之風速比較圖

W17CKLW0.1HA W17CKLW0.1H0 W181KLW0.1HA W181KLW0.1H0 W182KLW0.1HA W182KLW0.1H0  
 W183KLW0.1HA W183KLW0.1H0 W184KLW0.1HA W184KLW0.1H0 W185KLW0.1HA W185KLW0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLR0 at 2018

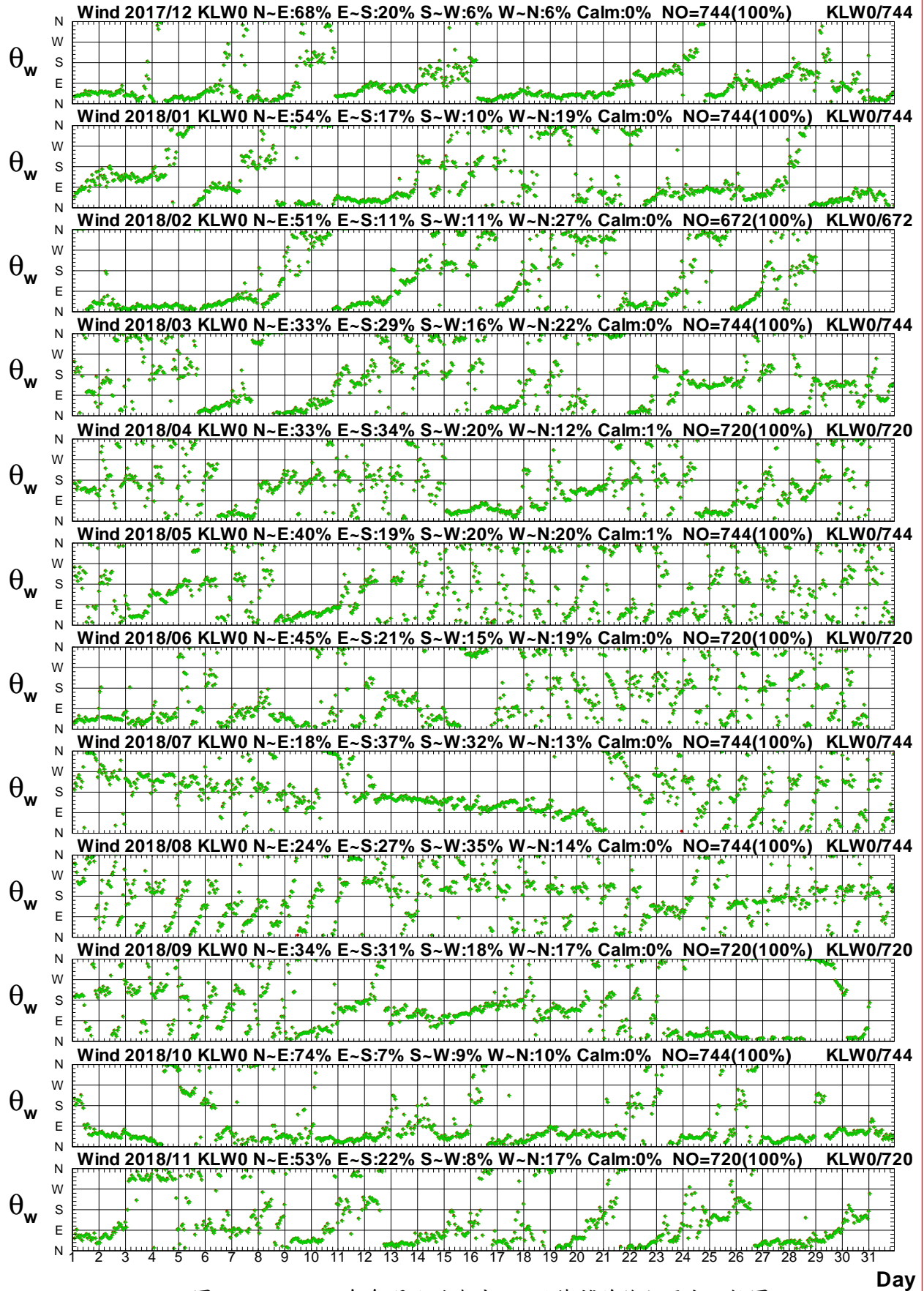


圖1.1.1b 2018年每月北端海域 W 站修補前後之風向比較圖

W17CKLR0.1HA W17CKLR0.1H0 W181KLR0.1HA W181KLR0.1H0 W182KLR0.1HA W182KLR0.1H0  
 W183KLR0.1HA W183KLR0.1H0 W184KLR0.1HA W184KLR0.1H0 W185KLR0.1HA W185KLR0.1H0

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of KLY0 at 2018

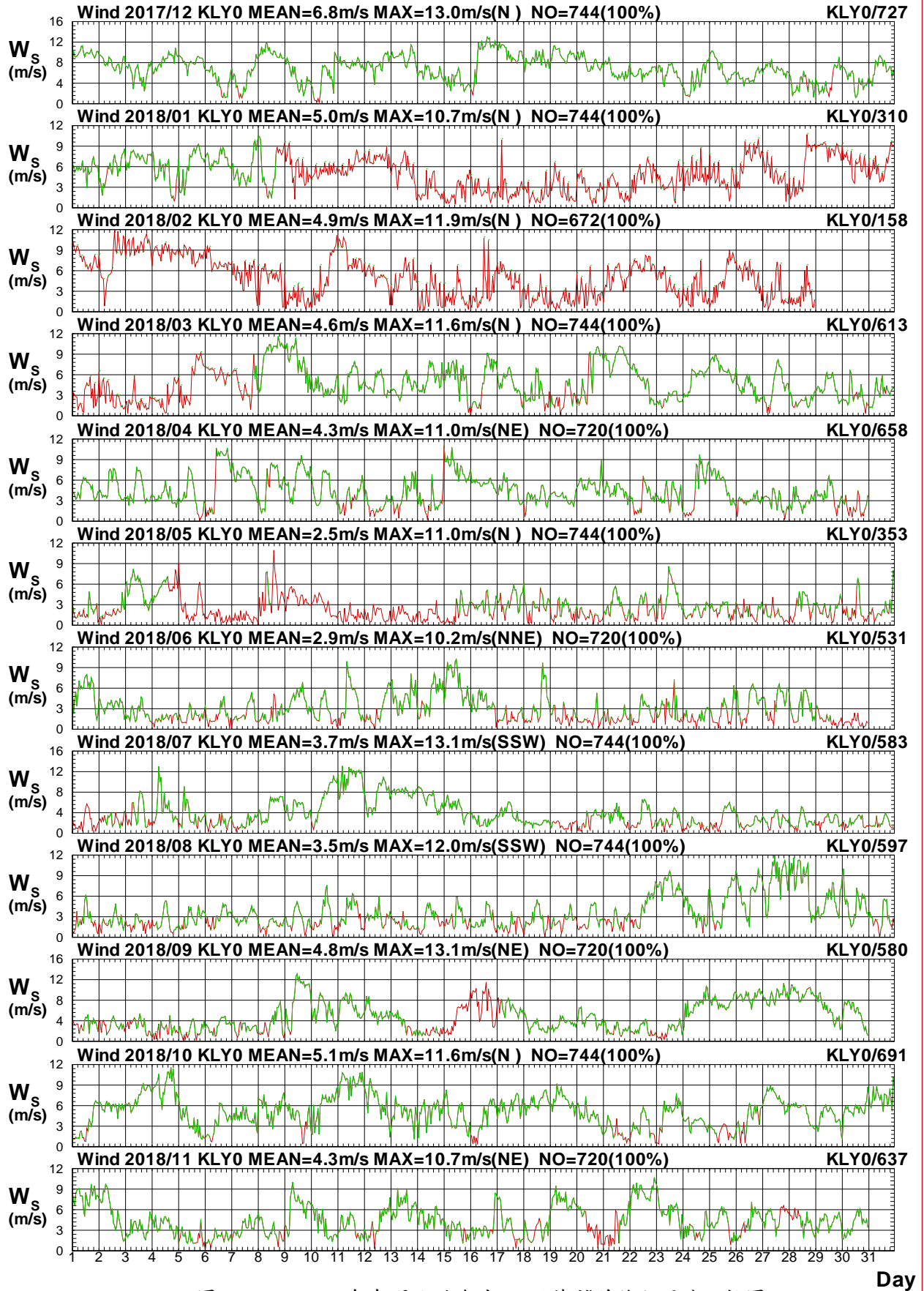


圖1.1.2a 2018年每月北端海域 Y 站修補前後之風速比較圖

W17CKLY0.1HA W17CKLY0.1H0 W181KLY0.1HA W181KLY0.1H0 W182KLY0.1HA W182KLY0.1H0  
 W183KLY0.1HA W183KLY0.1H0 W184KLY0.1HA W184KLY0.1H0 W185KLY0.1HA W185KLY0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLY0 at 2018

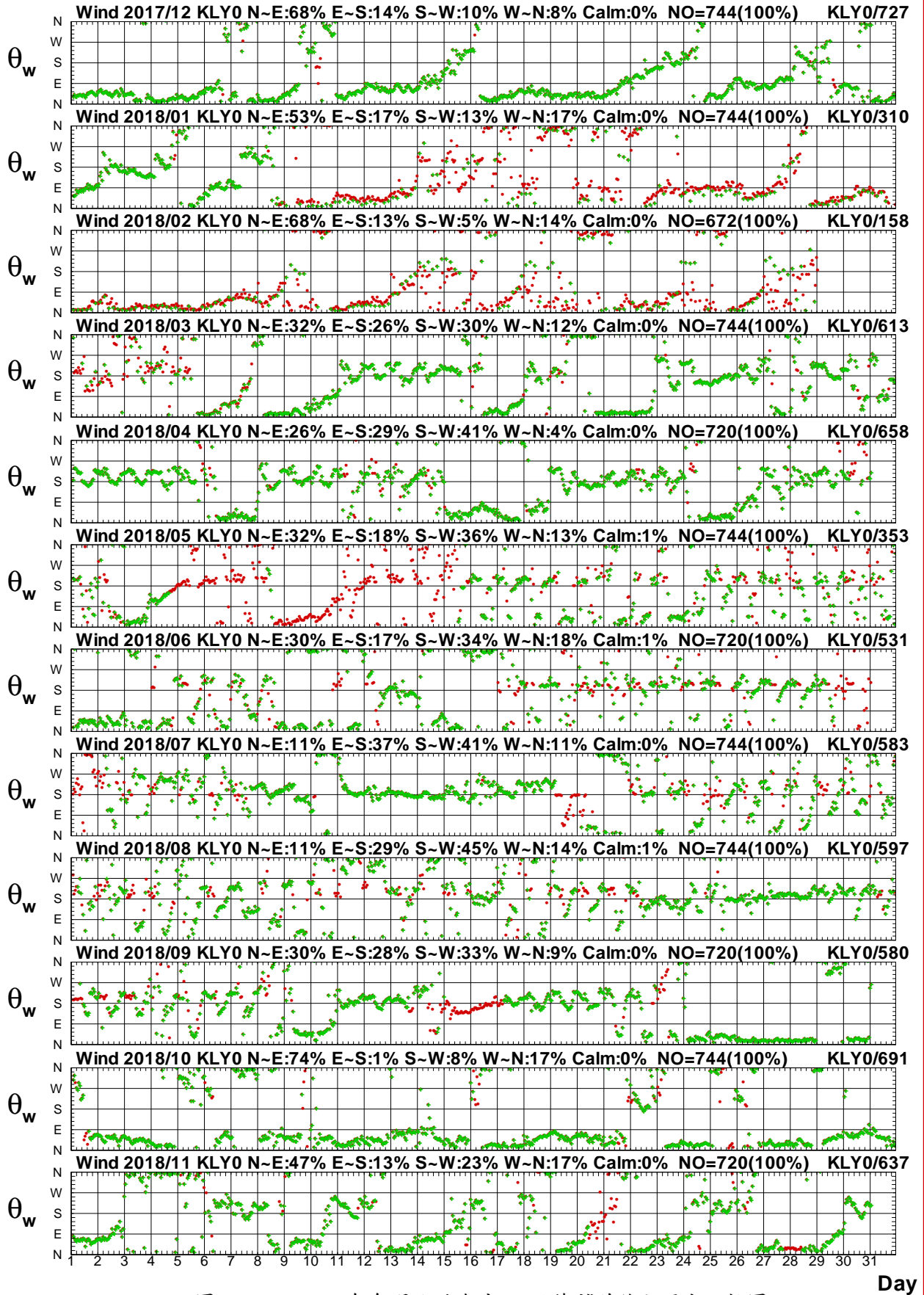


圖1.1.2b 2018年每月北端海域 Y 站修補前後之風向比較圖

W17CKLY0.1HA W17CKLY0.1H0 W181KLY0.1HA W181KLY0.1H0 W182KLY0.1HA W182KLY0.1H0  
 W183KLY0.1HA W183KLY0.1H0 W184KLY0.1HA W184KLY0.1H0 W185KLY0.1HA W185KLY0.1H0

Institute of Harbor & Marine Technology

# Distribution of Wind Vectors

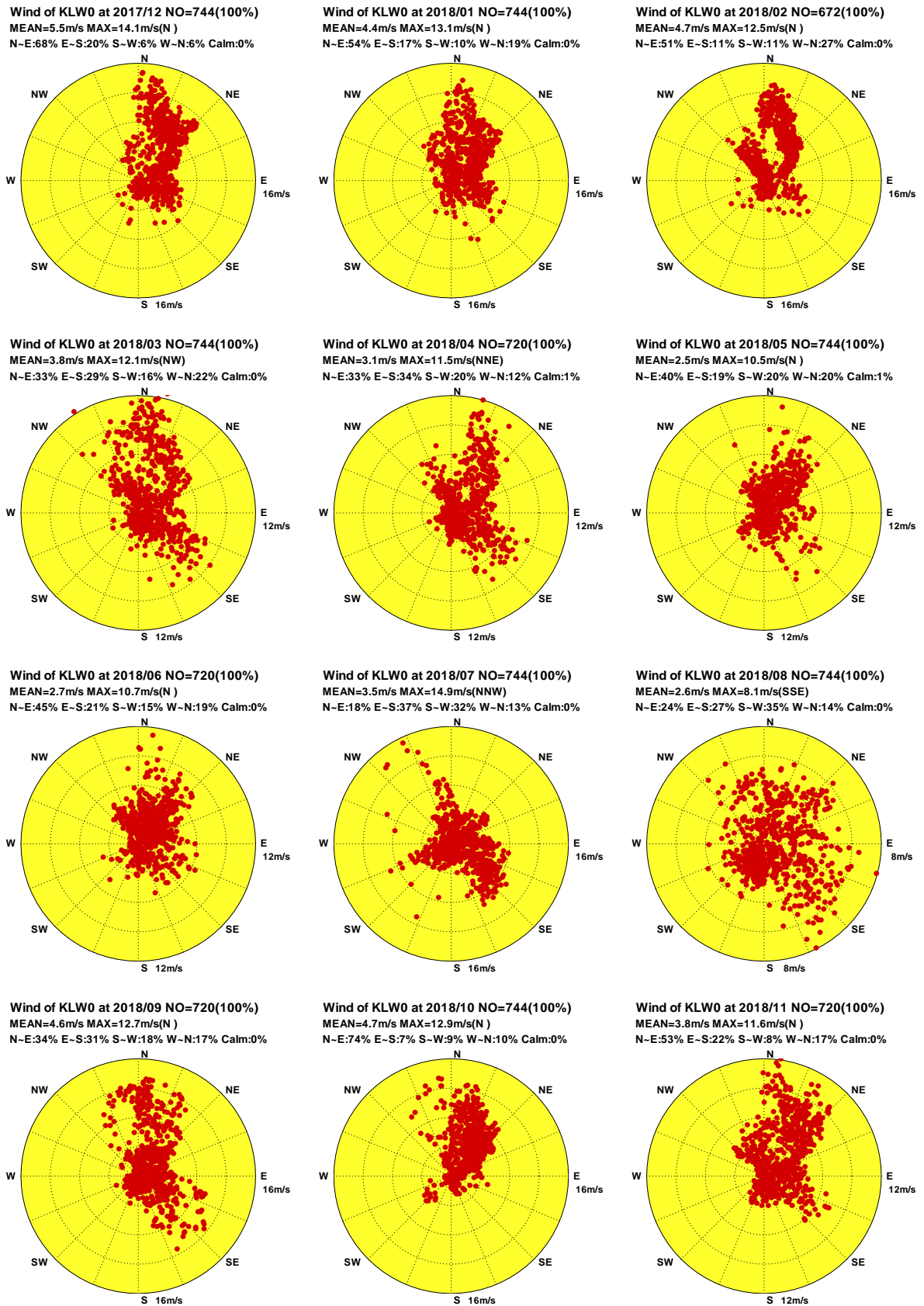


圖1.1.3 2018年北端海域每月 W 站修補後觀測風力向量分佈圖

W17CKLW0.1HA W181KLW0.1HA W182KLW0.1HA W183KLW0.1HA W184KLW0.1HA W185KLW0.1HA  
W186KLW0.1HA W187KLW0.1HA W188KLW0.1HA W189KLW0.1HA W18AKLW0.1HA W18BKLW0.1HA

Institute of Harbor & Marine Technology

# Distribution of Wind Vectors

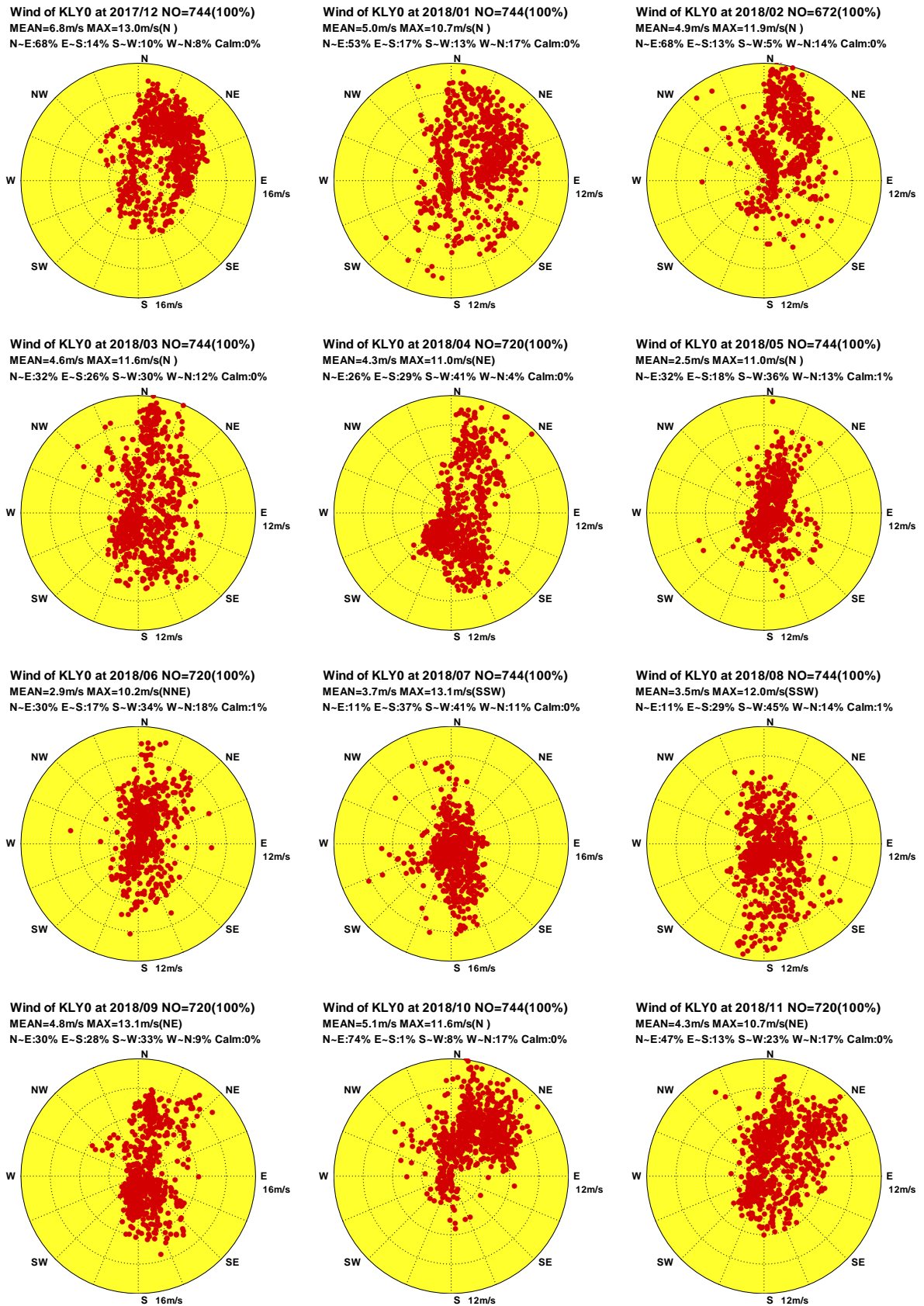


圖1.1.4 2018年北端海域每月 Y 站修補後觀測風力向量分佈圖

W17CKLY0.1HA W181KLY0.1HA W182KLY0.1HA W183KLY0.1HA W184KLY0.1HA W185KLY0.1HA  
W186KLY0.1HA W187KLY0.1HA W188KLY0.1HA W189KLY0.1HA W18AKLY0.1HA W18BKLY0.1HA

Institute of Harbor & Marine Technology

# Progressive Vector Diagram of Wind

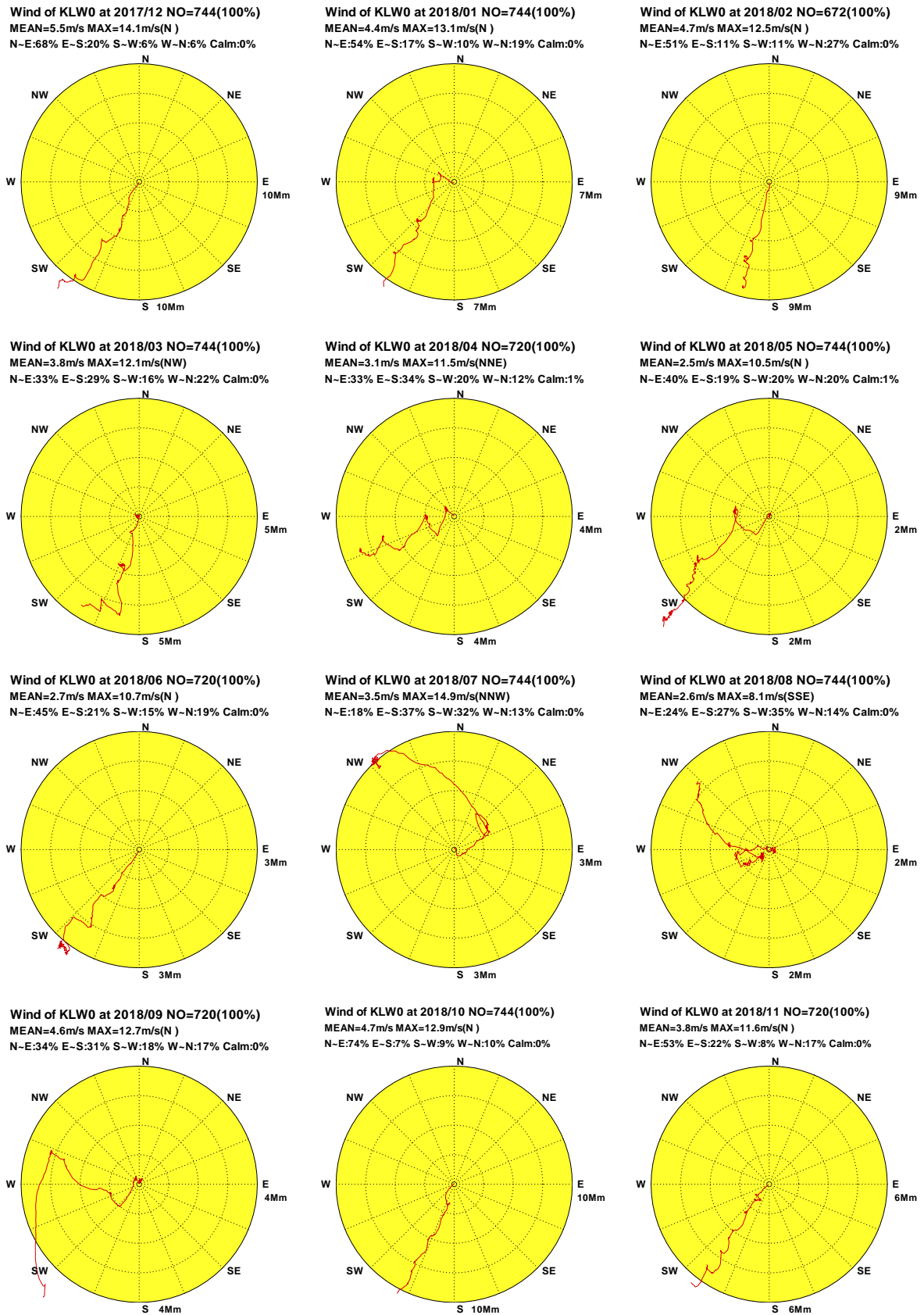


圖1.1.5 2018年北端海域每月 W 站修補後觀測風力向量行進圖

W17CKLW0.1HA W181KLW0.1HA W182KLW0.1HA W183KLW0.1HA W184KLW0.1HA W185KLW0.1HA  
W186KLW0.1HA W187KLW0.1HA W188KLW0.1HA W189KLW0.1HA W18AKLW0.1HA W18BKLW0.1HA

Institute of Harbor & Marine Technology



# Progressive Vector Diagram of Wind

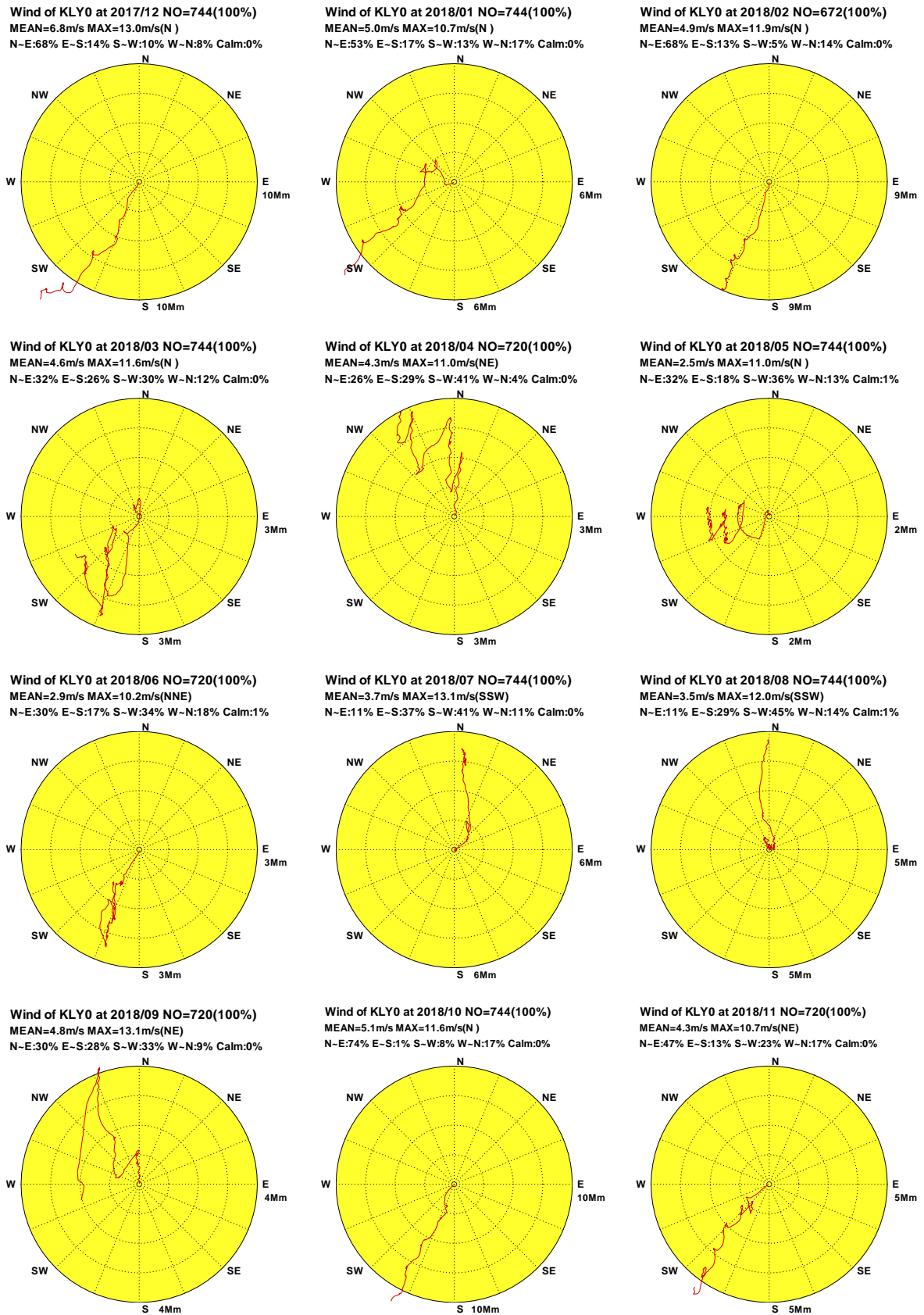


圖1.1.6 2018年北端海域每月 Y 站修補後觀測風力向量行進圖

W17CKLY0.1HA W181KLY0.1HA W182KLY0.1HA W183KLY0.1HA W184KLY0.1HA W185KLY0.1HA  
W186KLY0.1HA W187KLY0.1HA W188KLY0.1HA W189KLY0.1HA W18AKLY0.1HA W18BKLY0.1HA

Institute of Harbor & Marine Technology

## 1.2 2018 年北端海域各測站修補前 風力統計量統計表





表1.2.1 2018年北端海域 W 站修補前風速及風向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	風速 平均值 (m/s)	平均風 風速/風向 (m/s)/(來向)	最大風 風速/風向 (m/s)/(來向)	輕風 <3.3 (%)	和風 ~7.9 (%)	強風 ~13.8 (%)	疾風 >13.8 (%)	風向 N~E (%)	風向 E~S (%)	風向 S~W (%)	風向 W~N (%)	主要風向 方向/百分比
1	2017/12	744(100%)	5.5	4.2/NE	14.1/N	26.9	50.5	22.3	.3	67.7	20.3	6.3	5.6	NNE/28.8%
2	2018/01	744(100%)	4.4	2.8/NE	13.1/N	37.9	51.9	10.2	.0	54.0	17.3	9.8	18.8	NNE/16.7%
3	2018/02	672(100%)	4.7	3.4/NNE	12.5/N	38.7	44.2	17.1	.0	50.0	11.5	11.8	26.8	NNE/22.9%
4	2018/03	744(100%)	3.8	1.7/NNE	12.1/NW	51.9	39.0	9.1	.0	33.7	29.0	15.6	21.6	N /14.1%
5	2018/04	720(100%)	3.1	1.3/ENE	11.5/NNE	60.8	36.0	3.2	.0	33.6	34.3	19.6	12.5	NNE/14.4%
6	2018/05	744(100%)	2.5	1.0/NE	10.5/N	74.7	24.2	1.1	.0	40.7	19.2	19.8	20.3	NNE/14.1%
7	2018/06	720(100%)	2.7	1.3/NE	10.7/N	70.8	28.5	.7	.0	45.1	20.6	15.1	19.2	NE /14.6%
8	2018/07	744(100%)	3.5	1.1/SE	14.9/NNW	57.8	35.9	6.2	.1	17.6	37.1	32.0	13.3	SE /14.9%
9	2018/08	744(100%)	2.6	.6/SE	8.1/SSE	73.0	26.9	.1	.0	23.4	26.6	36.3	13.7	SSW/14.5%
10	2018/09	720(100%)	4.6	1.9/NE	12.7/N	49.2	30.7	20.1	.0	34.3	30.6	17.9	17.2	N /16.1%
11	2018/10	744(100%)	4.7	3.9/NNE	12.9/N	29.0	59.9	11.0	.0	73.9	7.4	8.9	9.8	NNE/28.9%
12	2018/11	720(100%)	3.8	2.5/NE	11.6/N	48.6	44.6	6.8	.0	51.9	22.1	8.5	17.5	NNE/17.9%
13	2018/冬	2160(100%)	4.9	3.4/NNE	14.1/N	34.4	49.0	16.5	.1	57.5	16.5	9.2	16.8	NNE/22.8%
14	2018/春	2208(100%)	3.1	1.3/NE	12.1/NW	62.5	33.0	4.5	.0	36.1	27.4	18.3	18.2	NNE/13.3%
15	2018/夏	2208(100%)	2.9	.7/E	14.9/NNW	67.2	30.4	2.4	.0	28.5	28.2	27.9	15.4	SE / 9.3%
16	2018/秋	2184(100%)	4.4	2.8/NE	12.9/N	42.1	45.2	12.6	.0	53.6	19.9	11.7	14.8	NNE/19.9%
17	2018/年	8760(100%)	3.8	1.9/NE	14.9/NNW	51.7	39.4	8.9	.0	43.8	23.0	16.8	16.3	NNE/16.0%

1-2-1

表1.2.2 2018年北端海域 Y 站修補前風速及風向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	風速 平均值 (m/s)	平均風 風速/風向 (m/s)/(來向)	最大風 風速/風向 (m/s)/(來向)	輕風 <3.3 (%)	和風 ~7.9 (%)	強風 ~13.8 (%)	疾風 >13.8 (%)	風向 N~E (%)	風向 E~S (%)	風向 S~W (%)	風向 W~N (%)	主要風向 方向/百分比
1	2017/12	727( 98%)	6.9	5.0/NE	13.0/N	8.1	55.2	36.7	.0	68.8	13.9	9.4	8.0	NNE/23.8%
2	2018/01	310( 42%)	5.8	2.2/ENE	10.7/N	15.2	66.8	18.1	.0	46.8	21.9	17.4	13.9	N /11.3%
3	2018/02	158( 24%)	5.8	3.3/NNE	10.8/NW	14.6	69.0	16.5	.0	60.1	9.5	16.5	13.9	N /24.7%
4	2018/03	613( 82%)	4.9	.7/ENE	11.6/N	29.0	56.9	14.0	.0	33.3	27.1	29.4	10.3	N /19.2%
5	2018/04	658( 91%)	4.5	1.2/SSE	11.0/NE	30.9	61.1	8.1	.0	26.7	30.7	39.4	3.2	SSW/17.6%
6	2018/05	353( 47%)	3.2	.6/E	8.6/NE	62.3	36.8	.8	.0	39.7	19.8	32.9	7.6	SSW/18.1%
7	2018/06	531( 74%)	3.5	.7/NNE	10.2/NNE	52.4	44.6	3.0	.0	35.4	15.8	29.2	19.6	N /16.0%
8	2018/07	583( 78%)	4.2	2.2/S	13.1/SSW	46.5	40.8	12.7	.0	11.8	35.0	41.0	12.2	S /20.1%
9	2018/08	597( 80%)	3.9	1.9/S	12.0/SSW	52.1	38.0	9.9	.0	12.6	32.7	39.4	15.4	SSW/15.1%
10	2018/09	580( 81%)	5.1	1.1/NE	13.1/NE	32.8	47.8	19.5	.0	35.9	23.1	32.1	9.0	N /17.1%
11	2018/10	691( 93%)	5.4	4.5/NNE	11.6/N	18.1	69.9	12.0	.0	76.8	1.4	6.1	15.6	NE /29.2%
12	2018/11	637( 89%)	4.5	2.2/NE	10.7/NE	33.1	58.4	8.5	.0	48.5	12.1	23.1	16.3	N /16.5%
13	2018/冬	1195( 55%)	6.5	3.9/NE	13.0/N	10.8	60.0	29.2	.0	61.9	15.4	12.4	10.3	NNE/20.2%
14	2018/春	1624( 74%)	4.4	.7/ESE	11.6/N	37.0	54.2	8.7	.0	32.0	27.0	34.2	6.8	SSW/15.9%
15	2018/夏	1711( 78%)	3.9	1.3/S	13.1/SSW	50.3	41.0	8.7	.0	19.4	28.2	36.8	15.6	S /14.5%
16	2018/秋	1908( 87%)	5.0	2.7/NNE	13.1/NE	27.6	59.3	13.1	.0	54.9	11.6	19.7	13.8	NE /17.9%
17	2018/年	6438( 74%)	4.8	1.4/NE	13.1/SSW	32.9	53.3	13.8	.0	41.0	20.6	26.5	11.9	NNE/13.5%

1-2-2

表1.2.3 2018年北端海域 F 站修補前風速及風向重要統計量統計表

序號	日期 (年/月)	觀測 點數	風速 平均值 (m/s)	平均風 風速/風向 (m/s)/(來向)	最大風 風速/風向 (m/s)/(來向)	輕風 <3.3 (%)	和風 ~7.9 (%)	強風 ~13.8 (%)	疾風 >13.8 (%)	風向 N~E (%)	風向 E~S (%)	風向 S~W (%)	風向 W~N (%)	主要風向 方向/百分比
1	2017/12	567( 76%)	5.5	4.2/NNE	13.2/N	28.0	51.5	20.5	.0	67.2	19.8	7.2	5.8	NNE/31.0%
2	2018/01	710( 95%)	4.2	2.8/NNE	11.8/N	40.4	51.7	7.9	.0	57.0	15.9	8.9	18.2	NNE/17.6%
3	2018/02	654( 97%)	4.5	3.1/NNE	11.5/N	38.8	47.9	13.3	.0	48.5	11.8	11.5	28.3	NNE/21.7%
4	2018/03	625( 84%)	3.9	1.8/NE	11.8/NNE	48.2	45.9	5.9	.0	35.8	29.4	14.6	20.2	N /15.5%
5	2018/04	692( 96%)	3.2	1.3/ENE	11.5/NNE	60.1	36.7	3.2	.0	35.0	33.4	19.5	12.1	NNE/15.6%
6	2018/05	409( 55%)	2.1	.8/NE	8.5/NNE	80.9	18.6	.5	.0	42.1	18.8	16.6	22.5	NE /12.7%
7	2018/06	681( 95%)	2.6	1.3/NE	9.9/N	69.2	30.2	.6	.0	46.3	19.4	15.6	18.8	NNE/16.7%
8	2018/07	701( 94%)	3.5	1.3/SE	14.2/NNW	56.5	37.7	5.7	.1	22.3	35.2	31.4	11.1	SE /13.3%
9	2018/08	703( 95%)	2.6	.6/SE	8.1/E	71.1	28.6	.3	.0	24.9	24.9	36.7	13.5	SSW/13.1%
10	2018/09	622( 86%)	4.3	2.0/NNE	12.6/NNE	49.0	35.2	15.8	.0	37.3	25.1	19.1	18.5	N /17.8%
11	2018/10	731( 98%)	4.6	3.9/NNE	12.1/NNE	28.9	61.1	10.0	.0	73.9	7.8	8.5	9.8	NNE/33.2%
12	2018/11	652( 91%)	3.5	2.4/NE	9.8/N	53.5	42.0	4.4	.0	56.4	21.9	7.7	14.0	NNE/19.0%
13	2018/冬	1931( 89%)	4.6	3.2/NNE	13.2/N	36.3	50.3	13.4	.0	57.1	15.6	9.3	18.0	NNE/22.9%
14	2018/春	1726( 78%)	3.2	1.3/NE	11.8/NNE	60.7	35.7	3.5	.0	37.0	28.5	17.0	17.5	NNE/13.2%
15	2018/夏	2085( 94%)	2.9	.8/E	14.2/NNW	65.6	32.2	2.2	.0	31.0	26.6	28.0	14.4	SW / 9.4%
16	2018/秋	2005( 92%)	4.1	2.8/NNE	12.6/NNE	43.1	46.9	10.0	.0	56.9	17.8	11.5	13.9	NNE/22.2%
17	2018/年	7747( 88%)	3.7	1.9/NE	14.2/NNW	51.4	41.3	7.3	.0	45.5	22.0	16.6	15.9	NNE/16.9%

1-2-3

表1.2.4 2018年北端海域 E 站修補前風速及風向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	風速 平均值 (m/s)	平均風 風速/風向 (m/s)/(來向)	最大風 風速/風向 (m/s)/(來向)	輕風 <3.3 (%)	和風 ~7.9 (%)	強風 ~13.8 (%)	疾風 >13.8 (%)	風向 N~E (%)	風向 E~S (%)	風向 S~W (%)	風向 W~N (%)	主要風向 方向/百分比
1	2017/12	744(100%)	4.0	3.4/NE	11.2/N	37.0	58.2	4.8	.0	83.3	6.7	7.1	2.8	NNE/21.9%
2	2018/01	744(100%)	3.4	2.5/NNE	9.9/N	49.7	48.4	1.9	.0	74.7	5.9	12.5	6.9	N /20.6%
3	2018/02	672(100%)	3.3	2.4/NNE	9.4/N	51.8	45.7	2.5	.0	73.5	4.0	15.3	7.1	N /32.3%
4	2018/03	744(100%)	2.8	1.6/NNE	9.3/N	62.9	35.9	1.2	.0	58.9	13.8	19.6	7.7	N /25.5%
5	2018/04	720(100%)	2.4	1.0/NE	7.4/NNE	72.8	27.2	.0	.0	49.0	19.3	27.2	4.4	N /15.8%
6	2018/05	744(100%)	2.4	1.0/NNE	7.6/NNE	71.1	28.9	.0	.0	57.7	8.1	29.2	5.1	NNE/22.6%
7	2018/06	720(100%)	2.3	1.2/NNE	8.4/N	74.3	25.6	.1	.0	61.8	8.8	22.4	7.1	NNE/23.1%
8	2018/07	744(100%)	3.1	.5/SSE	10.6/NW	58.7	39.1	2.2	.0	29.6	26.1	38.8	5.5	SW /17.9%
9	2018/08	744(100%)	2.4	.1/SE	6.3/N	74.9	25.1	.0	.0	34.5	15.5	43.8	6.2	SW /18.5%
10	2018/09	720(100%)	3.7	1.8/NNE	10.9/NNE	50.8	42.2	6.9	.0	51.5	18.9	23.6	6.0	N /20.7%
11	2018/10	744(100%)	3.6	3.0/NNE	10.3/N	39.7	59.1	1.2	.0	82.9	2.4	11.0	3.6	NE /26.2%
12	2018/11	720(100%)	2.9	2.2/NE	9.9/N	59.3	40.1	.6	.0	78.2	7.2	9.4	5.1	NE /22.2%
13	2018/冬	2160(100%)	3.6	2.8/NNE	11.2/N	46.0	50.9	3.1	.0	77.3	5.6	11.5	5.6	N /24.2%
14	2018/春	2208(100%)	2.5	1.2/NNE	9.3/N	68.9	30.7	.4	.0	55.3	13.7	25.3	5.8	N /19.0%
15	2018/夏	2208(100%)	2.6	.3/ENE	10.6/NW	69.2	30.0	.8	.0	41.8	16.8	35.1	6.3	SW /14.6%
16	2018/秋	2184(100%)	3.4	2.3/NNE	10.9/NNE	49.8	47.3	2.9	.0	71.0	9.4	14.7	4.9	N /20.8%
17	2018/年	8760(100%)	3.0	1.6/NNE	11.2/N	58.6	39.6	1.8	.0	61.2	11.4	21.7	5.6	N /19.2%

1-2-4

表1.2.5 2018年北端海域 Z 站修補前風速及風向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	風速 平均值 (m/s)	平均風 風速/風向 (m/s)/(來向)	最大風 風速/風向 (m/s)/(來向)	輕風 <3.3 (%)	和風 ~7.9 (%)	強風 ~13.8 (%)	疾風 >13.8 (%)	風向 N~E (%)	風向 E~S (%)	風向 S~W (%)	風向 W~N (%)	主要風向 方向/百分比
1	2017/12	744(100%)	9.0	8.4/NE	15.9/NNE	2.7	31.0	63.8	2.4	94.4	5.2	.1	.3	NE /37.8%
2	2018/01	744(100%)	7.3	6.8/NE	12.8/NNE	9.0	45.0	46.0	.0	91.7	1.7	3.4	3.2	NNE/41.8%
3	2018/02	672(100%)	7.4	6.1/NE	12.9/NNE	11.5	37.9	50.6	.0	77.8	12.8	7.3	2.1	NNE/43.2%
4	2018/03	744(100%)	6.3	4.4/ENE	13.1/NNE	9.3	66.3	24.5	.0	63.2	24.1	11.4	1.3	ENE/28.1%
5	2018/04	720(100%)	5.5	3.4/E	14.4/NNE	13.2	73.5	12.9	.4	55.1	32.6	10.8	1.4	ENE/26.9%
6	2018/05	744(100%)	4.1	1.3/S	13.5/SW	39.9	53.4	6.7	.0	21.5	20.7	52.8	5.0	SSW/20.8%
7	2018/06	720(100%)	4.9	1.2/WSW	13.3/SSW	34.2	49.4	16.4	.0	33.3	9.4	49.7	7.5	SW /22.9%
8	2018/07	744(100%)	5.2	1.1/SW	15.7/SW	34.8	42.2	21.9	1.1	27.3	20.3	42.6	9.8	WSW/19.9%
9	2018/08	744(100%)	4.9	4.0/SW	12.2/SW	38.3	39.8	21.9	.0	9.4	8.6	75.0	7.0	SW /31.6%
10	2018/09	718(100%)	5.1	2.9/NNE	15.7/N	44.8	28.8	25.8	.6	46.0	20.8	14.2	19.1	N /20.8%
11	2018/10	744(100%)	6.7	6.0/NNE	13.9/NNE	18.5	38.7	42.5	.3	83.1	7.8	3.2	5.9	NNE/33.9%
12	2018/11	720(100%)	5.9	5.3/NE	14.6/NNE	11.1	66.7	21.5	.7	91.4	3.2	2.8	2.6	NE /33.9%
13	2018/冬	2160(100%)	7.9	7.1/NE	15.9/NNE	7.6	38.0	53.6	.8	88.3	6.4	3.5	1.9	NNE/39.4%
14	2018/春	2208(100%)	5.3	2.5/E	14.4/NNE	20.9	64.3	14.7	.1	46.5	25.7	25.2	2.6	ENE/20.5%
15	2018/夏	2208(100%)	5.0	2.1/SW	15.7/SW	35.8	43.8	20.1	.4	23.2	12.8	55.8	8.1	SW /22.5%
16	2018/秋	2182(100%)	5.9	4.7/NNE	15.7/N	24.7	44.7	30.1	.5	73.6	10.5	6.7	9.2	NNE/23.0%
17	2018/年	8758(100%)	6.0	2.8/NE	15.9/NNE	22.3	47.7	29.5	.5	57.7	13.9	23.0	5.4	NE /19.3%

1-2-5

表1.2.6 2018年北端海域 R 站修補前風速及風向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	風速 平均值 (m/s)	平均風 風速/風向 (m/s)/(來向)	最大風 風速/風向 (m/s)/(來向)	輕風 <3.3 (%)	和風 ~7.9 (%)	強風 ~13.8 (%)	疾風 >13.8 (%)	風向 N~E (%)	風向 E~S (%)	風向 S~W (%)	風向 W~N (%)	主要風向 方向/百分比
1	2017/12	717( 96%)	10.2	8.4/ENE	15.8/ENE	2.8	14.9	74.1	8.2	68.5	24.8	2.5	4.2	NE /25.1%
2	2018/01	697( 94%)	8.4	1.5/E	14.6/N	8.5	30.7	58.5	2.3	35.6	24.8	25.3	14.3	S /11.8%
3	2018/02	26( 4%)	7.4	7.1/N	13.2/N	11.5	42.3	46.2	.0	38.5	.0	.0	61.5	N /38.5%
4	2018/03													
5	2018/04													
6	2018/05													
7	2018/06													
8	2018/07	155( 21%)	4.3	2.8/WSW	9.1/W	38.1	53.5	8.4	.0	9.7	18.1	60.6	11.6	SW /22.6%
9	2018/08	326( 44%)	4.4	1.1/SSW	10.3/WSW	35.6	56.4	8.0	.0	8.6	38.7	38.0	14.7	ESE/14.4%
10	2018/09													
11	2018/10	134( 18%)	7.9	7.2/ENE	11.6/E	4.5	34.3	61.2	.0	87.3	6.7	2.2	3.7	ENE/50.7%
12	2018/11	659( 92%)	6.8	5.6/ENE	13.0/ENE	13.2	44.8	42.0	.0	63.7	24.4	6.4	5.5	ENE/26.4%
13	2018/冬	1440( 67%)	9.3	4.9/ENE	15.8/ENE	5.7	23.1	66.0	5.2	52.0	24.4	13.5	10.1	NE /18.0%
14	2018/春													
15	2018/夏	481( 22%)	4.4	1.6/SW	10.3/WSW	36.4	55.5	8.1	.0	8.9	32.0	45.3	13.7	WSW/16.4%
16	2018/秋	793( 36%)	7.0	5.8/ENE	13.0/ENE	11.7	43.0	45.3	.0	67.7	21.4	5.7	5.2	ENE/30.5%
17	2018/年	2714( 31%)	7.7	4.0/ENE	15.8/ENE	12.9	34.6	49.7	2.8	49.0	24.9	16.8	9.3	ENE/17.6%

表1.2.7 2018年北端海域 I 站修補前風速及風向重要統計量統計表

序號	日期 (年/月)	觀測 點數	風速 平均值 (m/s)	平均風 風速/風向 (m/s)/(來向)	最大風 風速/風向 (m/s)/(來向)	輕風 <3.3 (%)	和風 ~7.9 (%)	強風 ~13.8 (%)	疾風 >13.8 (%)	風向 N~E (%)	風向 E~S (%)	風向 S~W (%)	風向 W~N (%)	主要風向 方向/百分比
1	2017/12	744(100%)	9.5	8.2/NE	16.0/N	.1	24.5	72.3	3.1	84.5	12.6	.1	2.7	NE /30.0%
2	2018/01	744(100%)	8.8	6.4/ENE	18.7/SSE	2.7	29.7	65.6	2.0	71.9	19.1	2.2	6.9	ENE/25.3%
3	2018/02	672(100%)	7.8	4.6/NE	13.4/N	4.6	37.8	57.6	.0	65.2	17.6	7.9	9.4	NNE/27.8%
4	2018/03	744(100%)	7.1	3.2/ENE	18.1/SSE	6.5	53.2	39.7	.7	41.0	41.5	4.6	12.9	ESE/14.5%
5	2018/04	720(100%)	6.7	3.9/ESE	15.1/NE	6.3	64.0	29.4	.3	31.7	53.1	13.6	1.7	SSE/21.9%
6	2018/05	744(100%)	5.4	1.7/SSE	15.1/WNW	24.5	57.4	17.9	.3	23.9	31.9	32.7	11.6	S /17.1%
7	2018/06	720(100%)	6.0	2.1/E	15.2/WSW	10.8	67.6	20.4	1.1	44.6	30.0	16.9	8.5	ENE/14.4%
8	2018/07													
9	2018/08													
10	2018/09													
11	2018/10													
12	2018/11													
13	2018/冬	2160(100%)	8.7	6.4/NE	18.7/SSE	2.4	30.4	65.4	1.8	74.2	16.4	3.2	6.2	NNE/20.7%
14	2018/春	2208(100%)	6.4	2.5/ESE	18.1/SSE	12.5	58.2	29.0	.4	32.2	42.0	17.0	8.8	SSE/17.5%
15	2018/夏	720( 33%)	6.0	2.1/E	15.2/WSW	10.8	67.6	20.4	1.1	44.6	30.0	16.9	8.5	ENE/14.4%
16	2018/秋													
17	2018/年	5088( 58%)	7.3	3.7/ENE	18.7/SSE	8.0	47.7	43.2	1.1	51.8	29.4	11.1	7.6	NE /14.4%

1-2-7

表1.2.8 2018年北端海域J站修補前風速及風向重要統計量統計表

序號	日期 (年/月)	觀測 點數	風速 平均值 (m/s)	平均風 風速/風向 (m/s)/(來向)	最大風 風速/風向 (m/s)/(來向)	輕風 <3.3 (%)	和風 ~7.9 (%)	強風 ~13.8 (%)	疾風 >13.8 (%)	風向 N~E (%)	風向 E~S (%)	風向 S~W (%)	風向 W~N (%)	主要風向 方向/百分比
1	2017/12	562( 76%)	4.0	2.7/N	9.8/N	40.6	55.2	4.3	.0	51.8	7.7	14.6	26.0	N /27.9%
2	2018/01	710( 95%)	3.4	1.9/N	9.2/NNE	49.0	49.9	1.1	.0	46.6	9.4	16.2	27.7	NNE/25.9%
3	2018/02	654( 97%)	3.4	1.9/N	10.2/NW	51.5	46.6	1.8	.0	42.5	10.1	19.0	28.4	N /24.5%
4	2018/03	707( 95%)	3.0	.4/NNE	10.1/NNE	60.5	36.6	2.8	.0	30.1	24.0	28.3	17.5	S /15.8%
5	2018/04	687( 95%)	2.7	.6/SSE	8.1/NNE	67.4	32.5	.1	.0	20.1	33.6	31.1	15.1	S /19.7%
6	2018/05	439( 59%)	1.6	.2/NNE	6.6/NNE	87.7	12.3	.0	.0	33.0	22.8	22.6	21.6	NNE/13.7%
7	2018/06	683( 95%)	1.9	.7/NNE	8.3/N	79.2	20.6	.1	.0	32.2	24.0	14.2	29.6	N /12.9%
8	2018/07	693( 93%)	2.4	1.2/SE	10.8/SE	70.9	26.7	2.5	.0	18.6	41.8	20.9	18.6	SE /15.3%
9	2018/08	723( 97%)	2.1	.9/SE	9.5/SE	77.2	22.3	.6	.0	19.4	37.6	24.2	18.8	SE /12.7%
10	2018/09	664( 92%)	3.1	1.5/NE	10.5/NNE	59.5	35.8	4.7	.0	38.1	26.8	17.0	18.1	NNE/18.4%
11	2018/10	730( 98%)	3.4	2.8/N	9.6/NNE	49.6	48.1	2.3	.0	49.9	3.3	7.0	39.9	NNE/27.9%
12	2018/11	669( 93%)	2.7	1.6/N	8.5/NNE	65.2	34.5	.3	.0	41.1	11.5	16.7	30.6	NNE/21.2%
13	2018/冬	1926( 89%)	3.6	2.1/N	10.2/NW	47.4	50.3	2.3	.0	46.7	9.1	16.7	27.5	NNE/23.8%
14	2018/春	1833( 83%)	2.5	.2/E	10.1/NNE	69.6	29.2	1.1	.0	27.1	27.3	28.0	17.6	S /16.2%
15	2018/夏	2099( 95%)	2.2	.6/ESE	10.8/SE	75.8	23.2	1.0	.0	23.3	34.6	19.9	22.2	SE /11.7%
16	2018/秋	2063( 95%)	3.1	1.9/NNE	10.5/NNE	57.8	39.7	2.4	.0	43.2	13.5	13.4	29.9	NNE/22.7%
17	2018/年	7921( 90%)	2.8	1.0/NNE	10.8/SE	62.8	35.5	1.7	.0	35.1	21.2	19.3	24.4	NNE/16.4%

1-2-8



### 1.3 2018 年北端海域**主要測站 1**(修補後)與 **其他測站**(修補前)風力歷線比較圖



# Wind Speed in North Seas of K LW0 at 2018

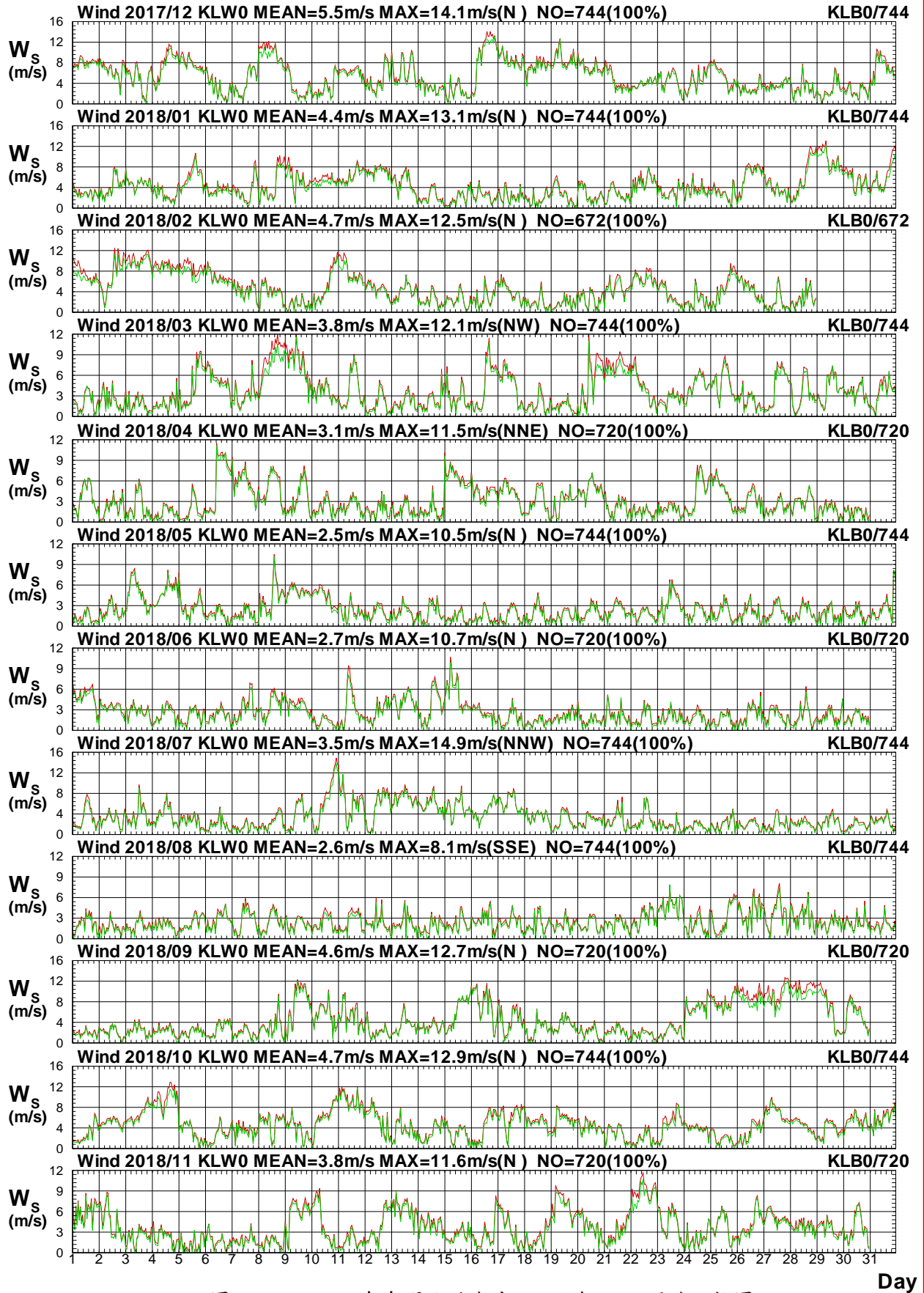


圖1.3.1a 2018年每月北端海域 W 站與 B 站風速比較圖

W17CKLW0.1HA W17CKLB0.1HO W181KLW0.1HA W181KLB0.1HO W182KLW0.1HA W182KLB0.1HO  
W183KLW0.1HA W183KLB0.1HO W184KLW0.1HA W184KLB0.1HO W185KLW0.1HA W185KLB0.1HO

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLR0 at 2018

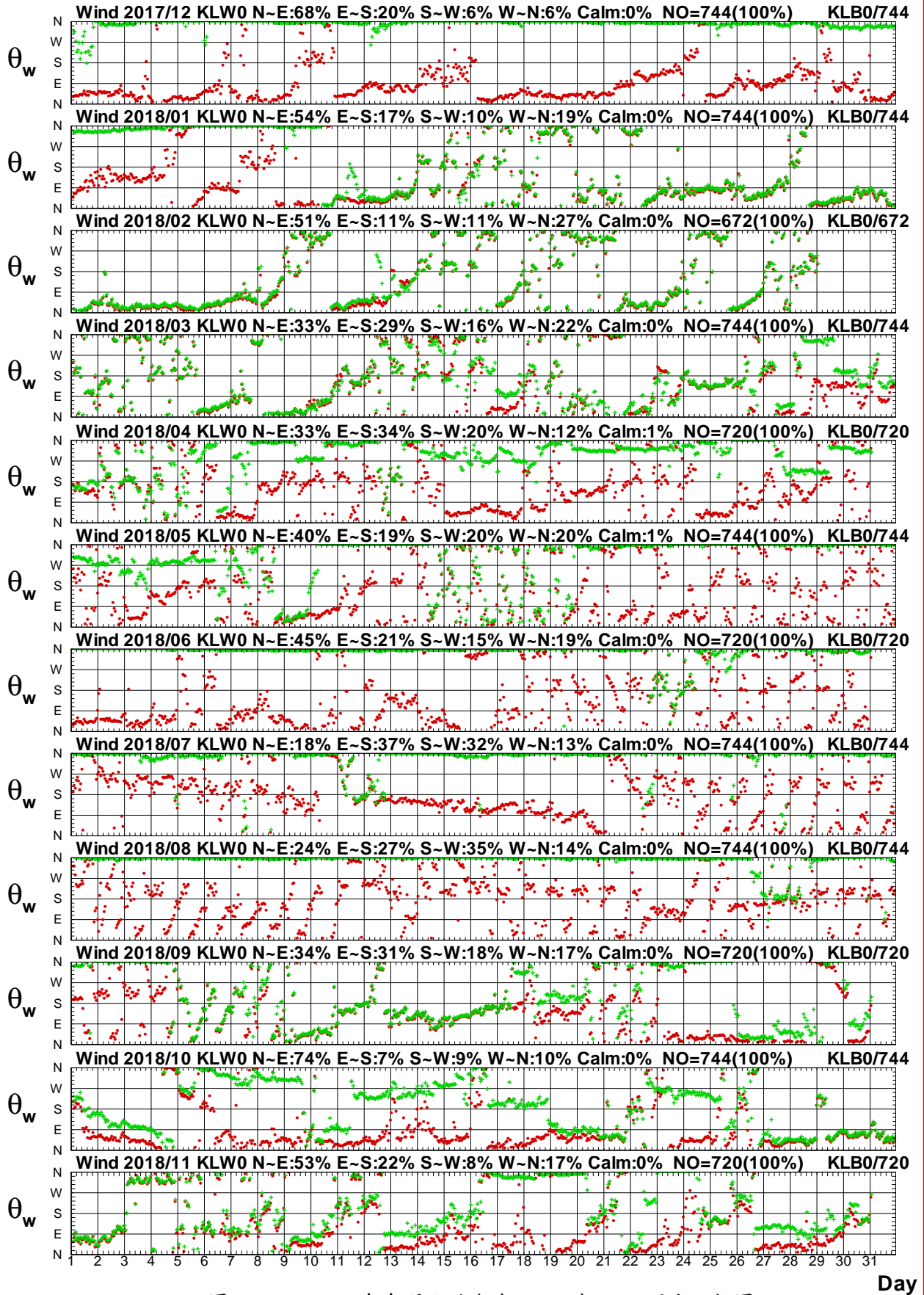


圖1.3.1b 2018年每月北端海域 W 站與 B 站風向比較圖

W17CKLR0.1HA W17CKLB0.1HO W181KLR0.1HA W181KLB0.1HO W182KLR0.1HA W182KLB0.1HO  
 W183KLR0.1HA W183KLB0.1HO W184KLR0.1HA W184KLB0.1HO W185KLR0.1HA W185KLB0.1HO

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of K LW0 at 2018

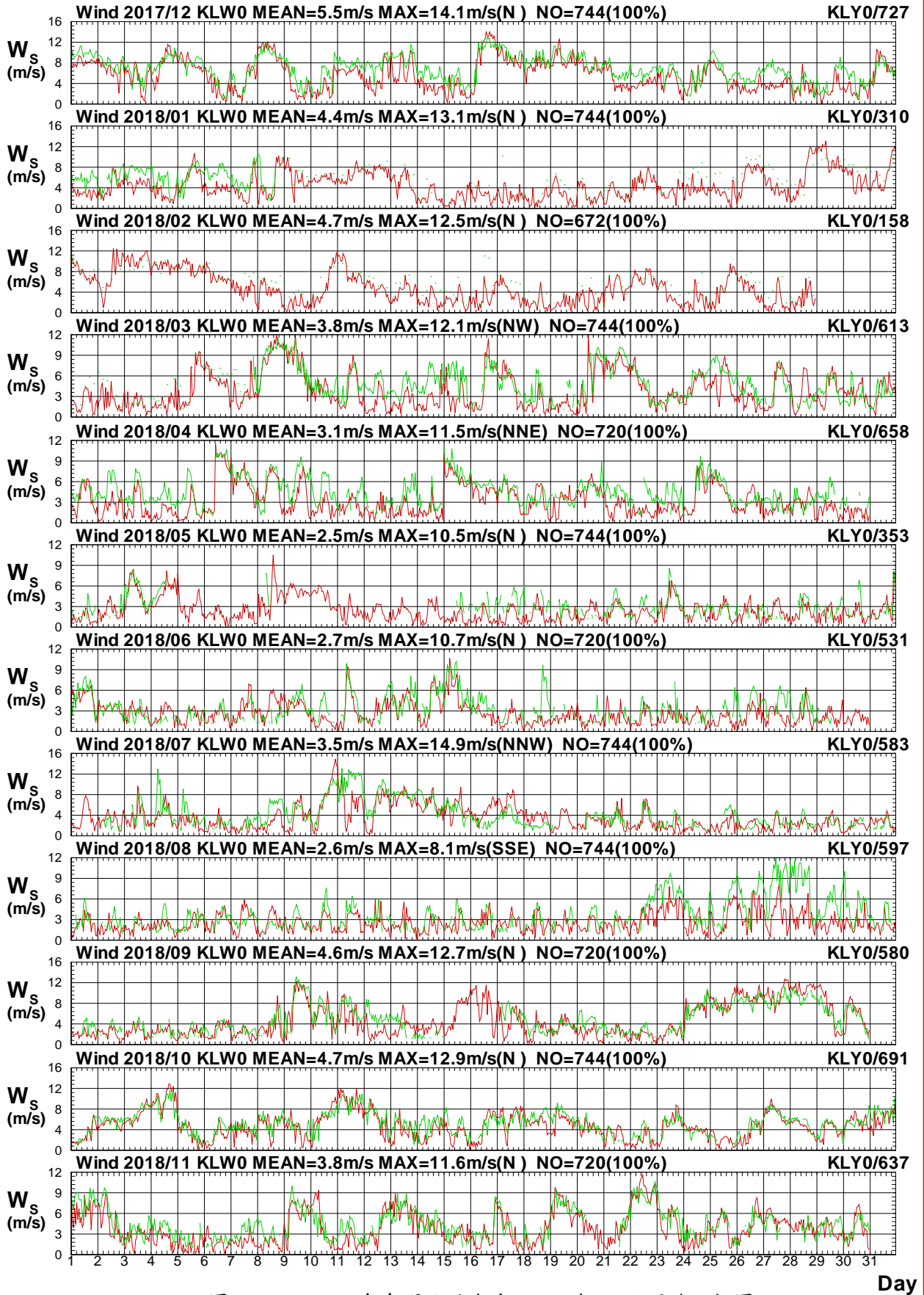


圖1.3.2a 2018年每月北端海域 W 站與 Y 站風速比較圖

W17CKLW0.1HA W17CKLY0.1HO W181KLW0.1HA W181KLY0.1HO W182KLW0.1HA W182KLY0.1HO  
 W183KLW0.1HA W183KLY0.1HO W184KLW0.1HA W184KLY0.1HO W185KLW0.1HA W185KLY0.1HO

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLR0 at 2018

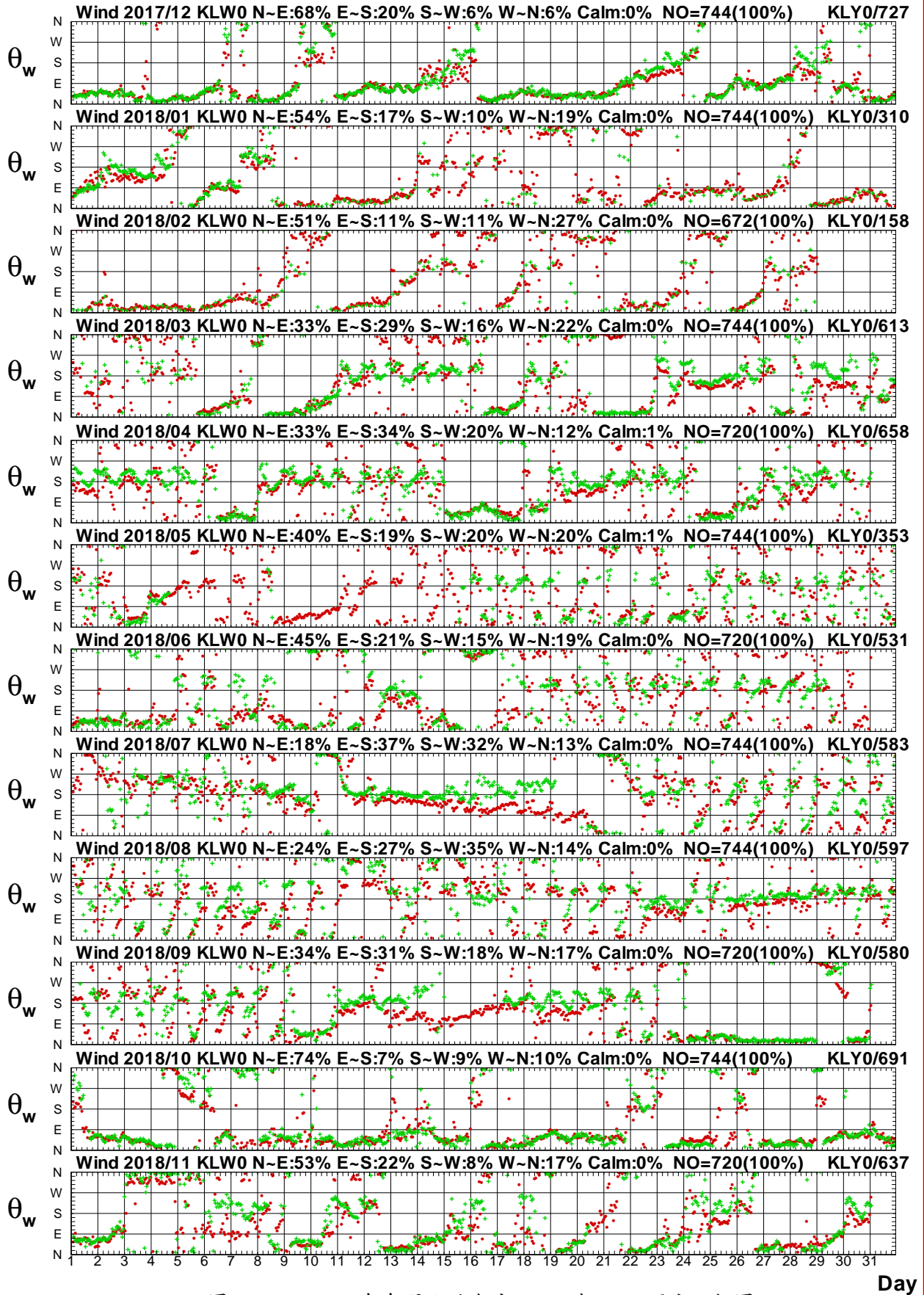


圖1.3.2b 2018年每月北端海域 W 站與 Y 站風向比較圖

W17CKLR0.1HA W17CKLY0.1HO W181KLR0.1HA W181KLY0.1HO W182KLR0.1HA W182KLY0.1HO  
 W183KLR0.1HA W183KLY0.1HO W184KLR0.1HA W184KLY0.1HO W185KLR0.1HA W185KLY0.1HO

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of K LW0 at 2018

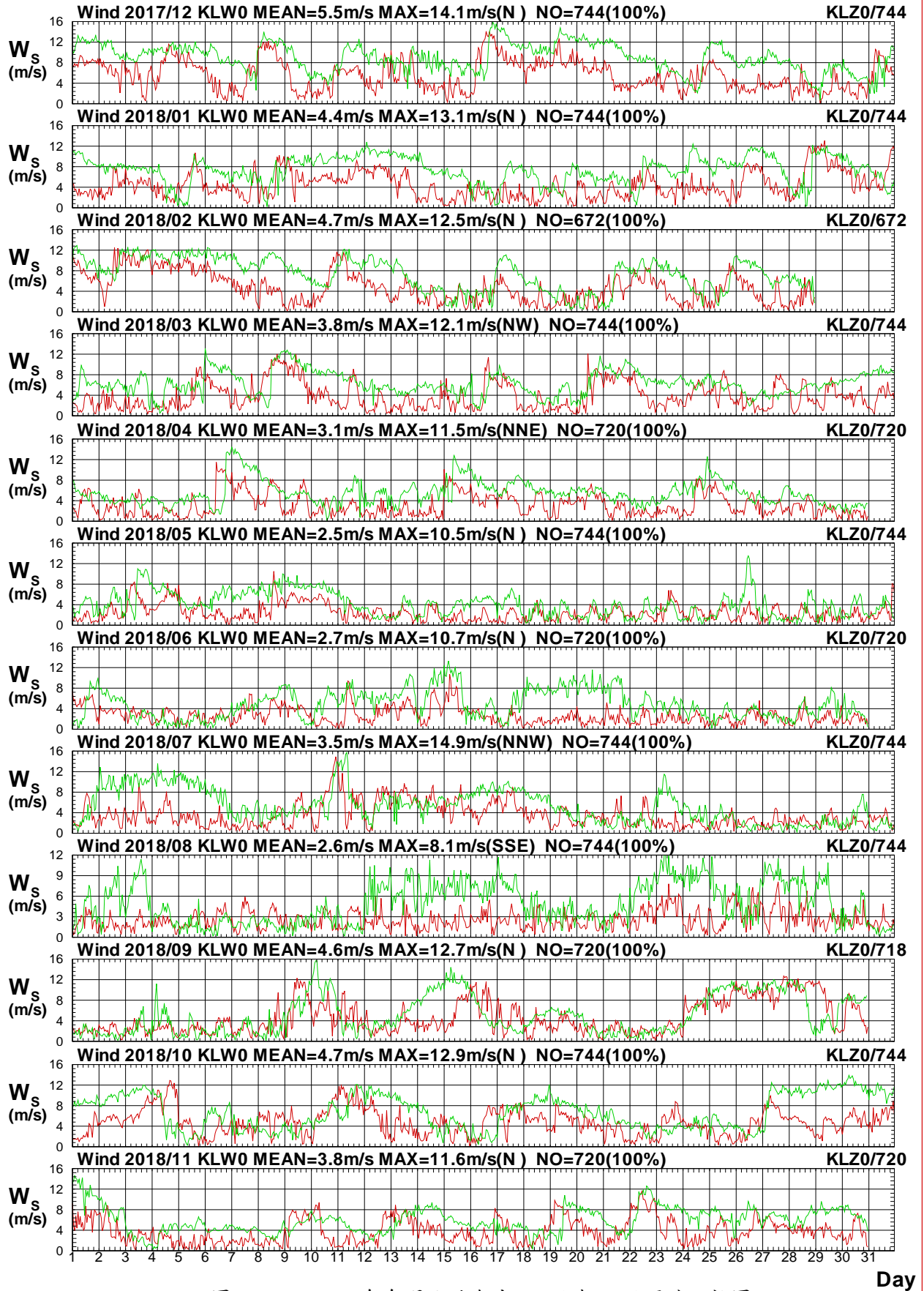


圖1.3.3a 2018年每月北端海域 W 站與 Z 站風速比較圖

W17CKLW0.1HA W17CKLZ0.1HO W181KLW0.1HA W181KLZ0.1HO W182KLW0.1HA W182KLZ0.1HO  
 W183KLW0.1HA W183KLZ0.1HO W184KLW0.1HA W184KLZ0.1HO W185KLW0.1HA W185KLZ0.1HO

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLR0 at 2018

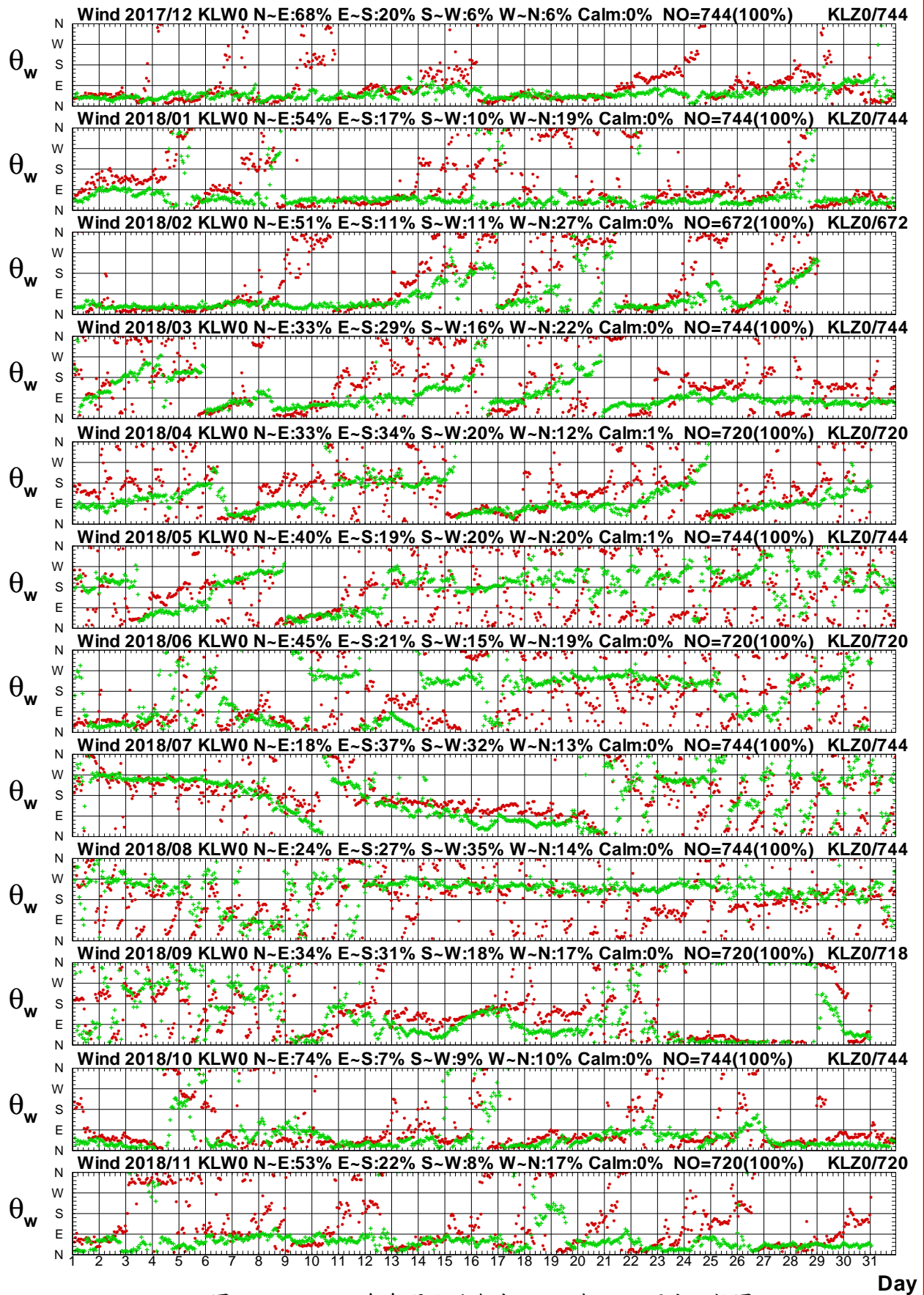


圖1.3.3b 2018年每月北端海域 W 站與 Z 站風向比較圖

W17CKLR0.1HA W17CKLR0.1HO W181CKLR0.1HA W181CKLR0.1HO W182CKLR0.1HA W182CKLR0.1HO  
 W183CKLR0.1HA W183CKLR0.1HO W184CKLR0.1HA W184CKLR0.1HO W185CKLR0.1HA W185CKLR0.1HO

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of KLR0 at 2018

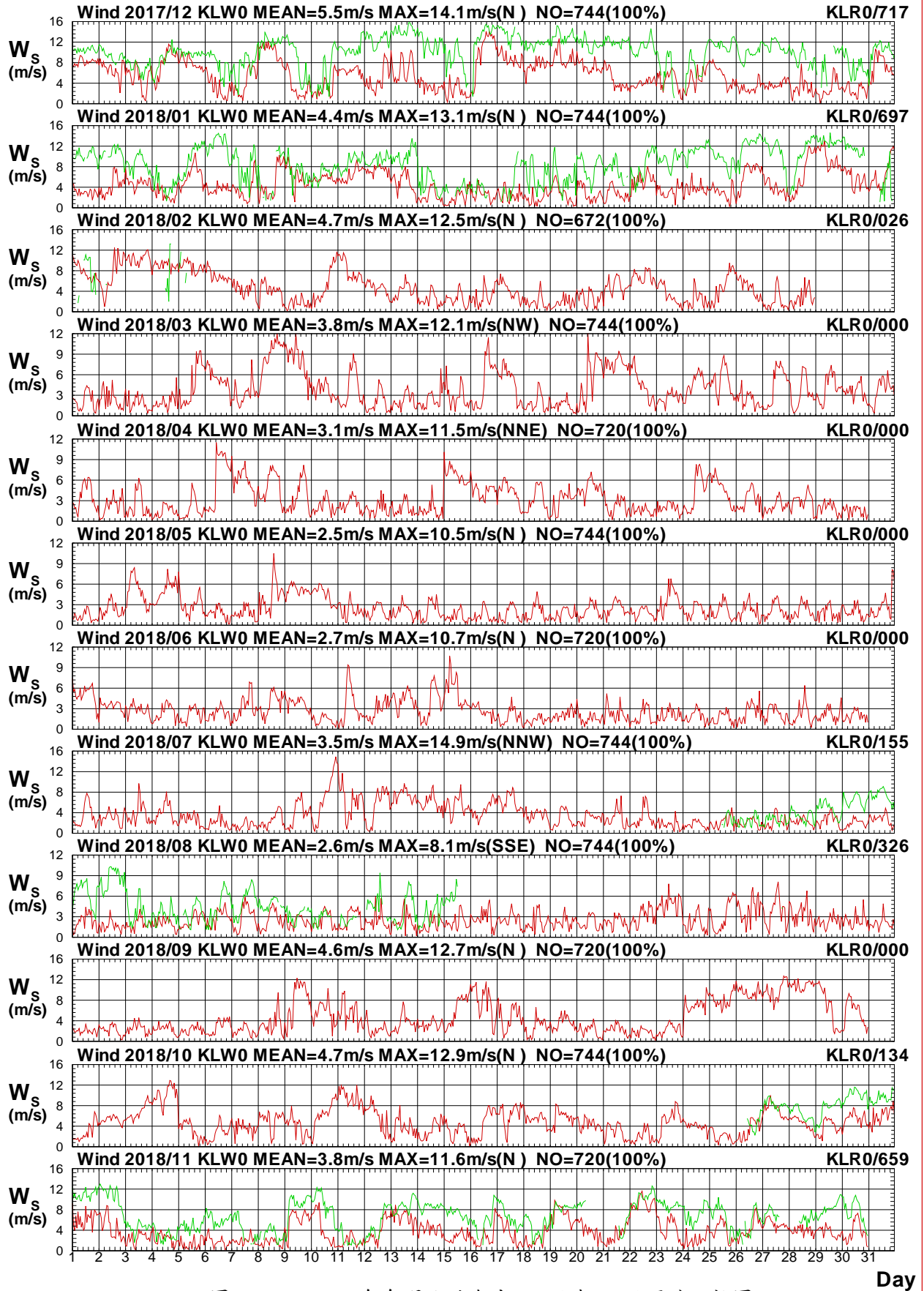


圖1.3.4a 2018年每月北端海域 W 站與 R 站風速比較圖

W17CKLW0.1HA W17CKLR0.1HO W181KLW0.1HA W181KLR0.1HO W182KLW0.1HA W182KLR0.1HO  
 W183KLW0.1HA W183KLR0.1HO W184KLW0.1HA W184KLR0.1HO W185KLW0.1HA W185KLR0.1HO

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLR0 at 2018

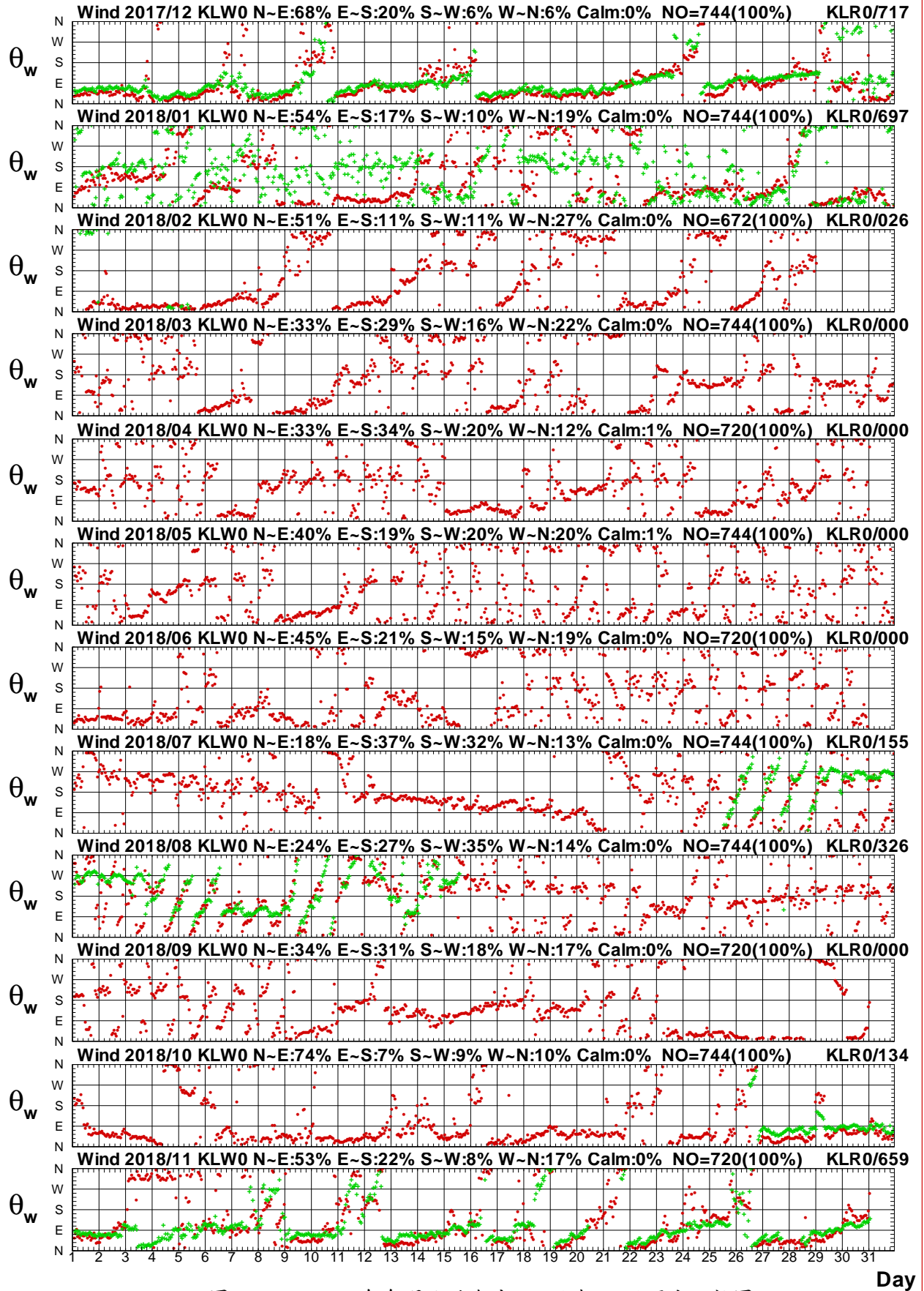


圖1.3.4b 2018年每月北端海域 W 站與 R 站風向比較圖

W17CKLW0.1HA W17CKLR0.1HO W181KLW0.1HA W181KLR0.1HO W182KLW0.1HA W182KLR0.1HO  
 W183KLW0.1HA W183KLR0.1HO W184KLW0.1HA W184KLR0.1HO W185KLW0.1HA W185KLR0.1HO

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of K LW0 at 2018

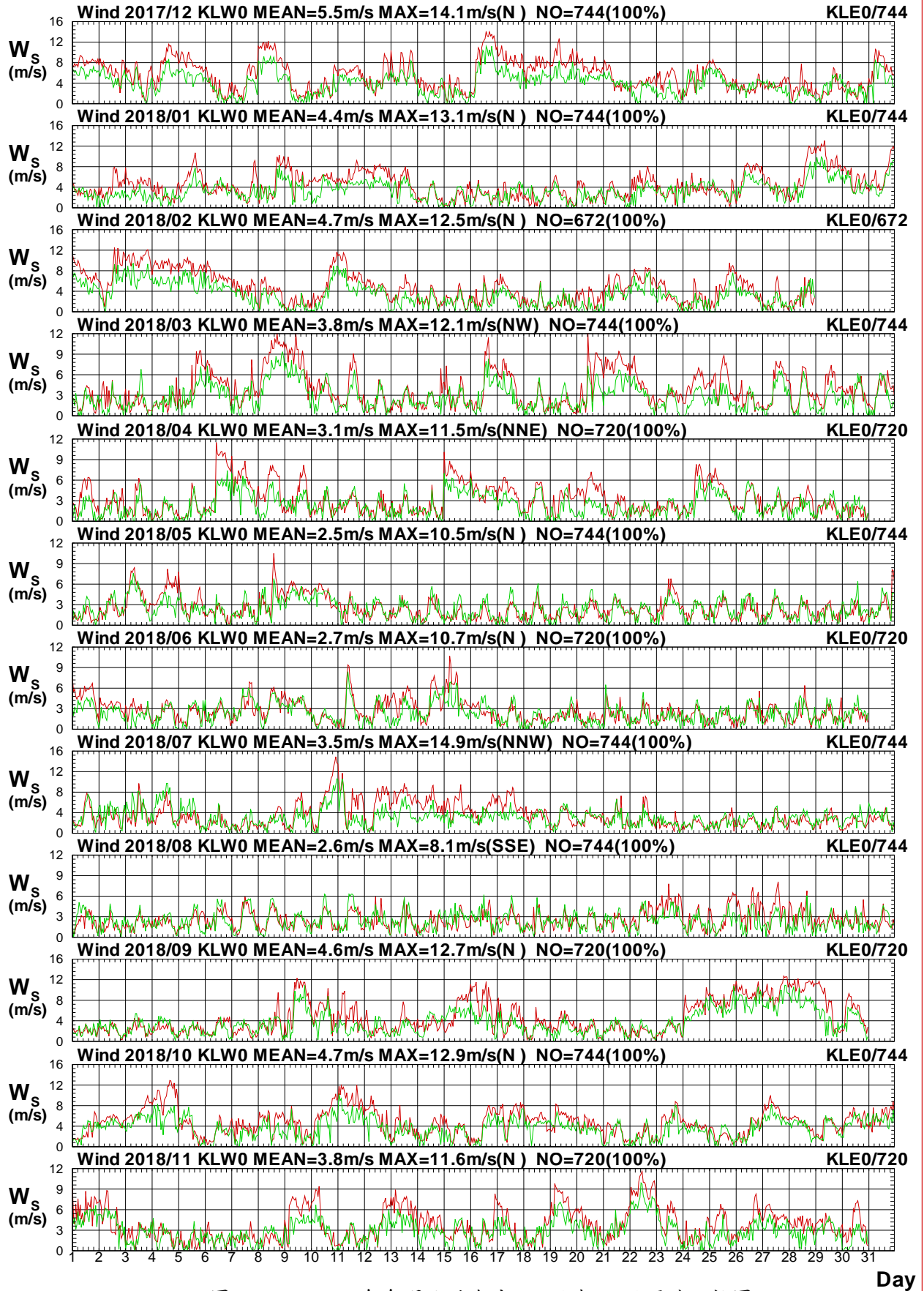


圖1.3.5a 2018年每月北端海域 W 站與 E 站風速比較圖

W17CKLW0.1HA W17CKLE0.1HO W181KLW0.1HA W181KLE0.1HO W182KLW0.1HA W182KLE0.1HO  
 W183KLW0.1HA W183KLE0.1HO W184KLW0.1HA W184KLE0.1HO W185KLW0.1HA W185KLE0.1HO

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLR0 at 2018

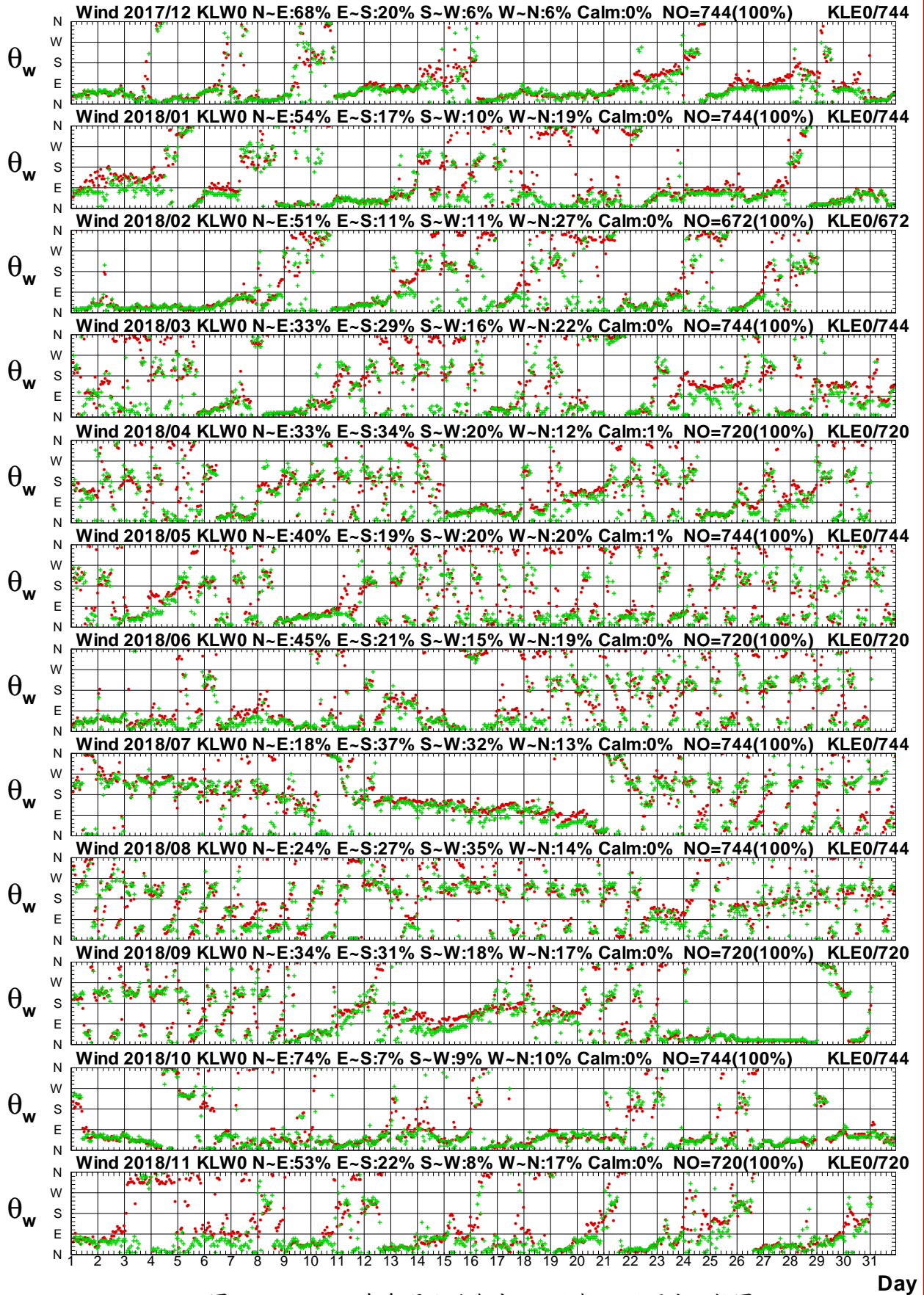


圖1.3.5b 2018年每月北端海域 W 站與 E 站風向比較圖

W17CKLR0.1HA W17CKLE0.1HO W181KLR0.1HA W181KLE0.1HO W182KLR0.1HA W182KLE0.1HO  
 W183KLR0.1HA W183KLE0.1HO W184KLR0.1HA W184KLE0.1HO W185KLR0.1HA W185KLE0.1HO

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLW0 at 2018

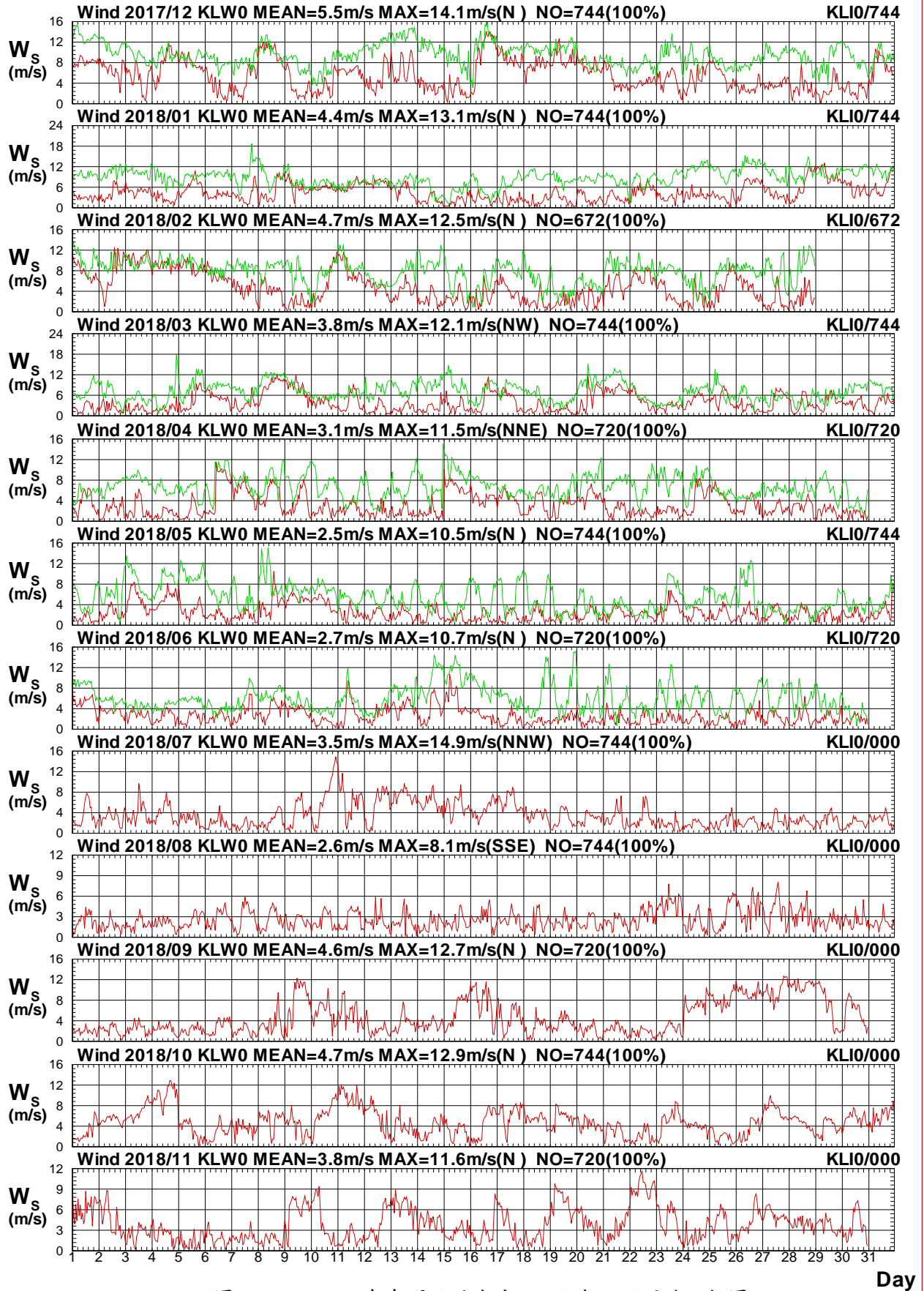


圖1.3.6a 2018年每月北端海域 W 站與 I 站風速比較圖

W17CKLW0.1HA W17CKLI0.1H0 W181KLW0.1HA W181KLI0.1H0 W182KLW0.1HA W182KLI0.1H0  
 W183KLW0.1HA W183KLI0.1H0 W184KLW0.1HA W184KLI0.1H0 W185KLW0.1HA W185KLI0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLR0 at 2018

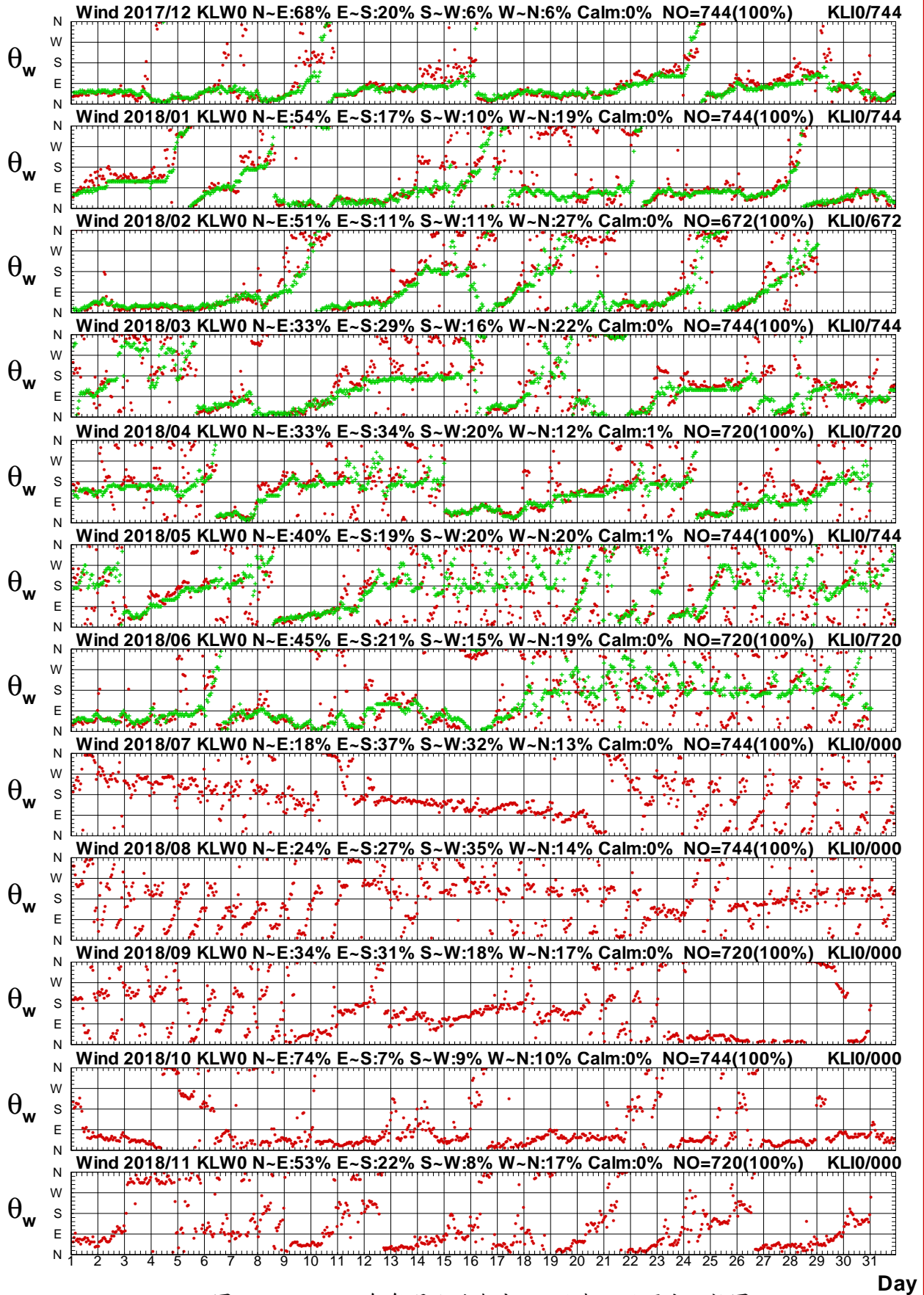


圖1.3.6b 2018年每月北端海域 W 站與 I 站風向比較圖

W17CKLR0.1HA W17CKLI0.1H0 W181KLR0.1HA W181KLI0.1H0 W182KLR0.1HA W182KLI0.1H0  
W183KLR0.1HA W183KLI0.1H0 W184KLR0.1HA W184KLI0.1H0 W185KLR0.1HA W185KLI0.1H0

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of K LW0 at 2018

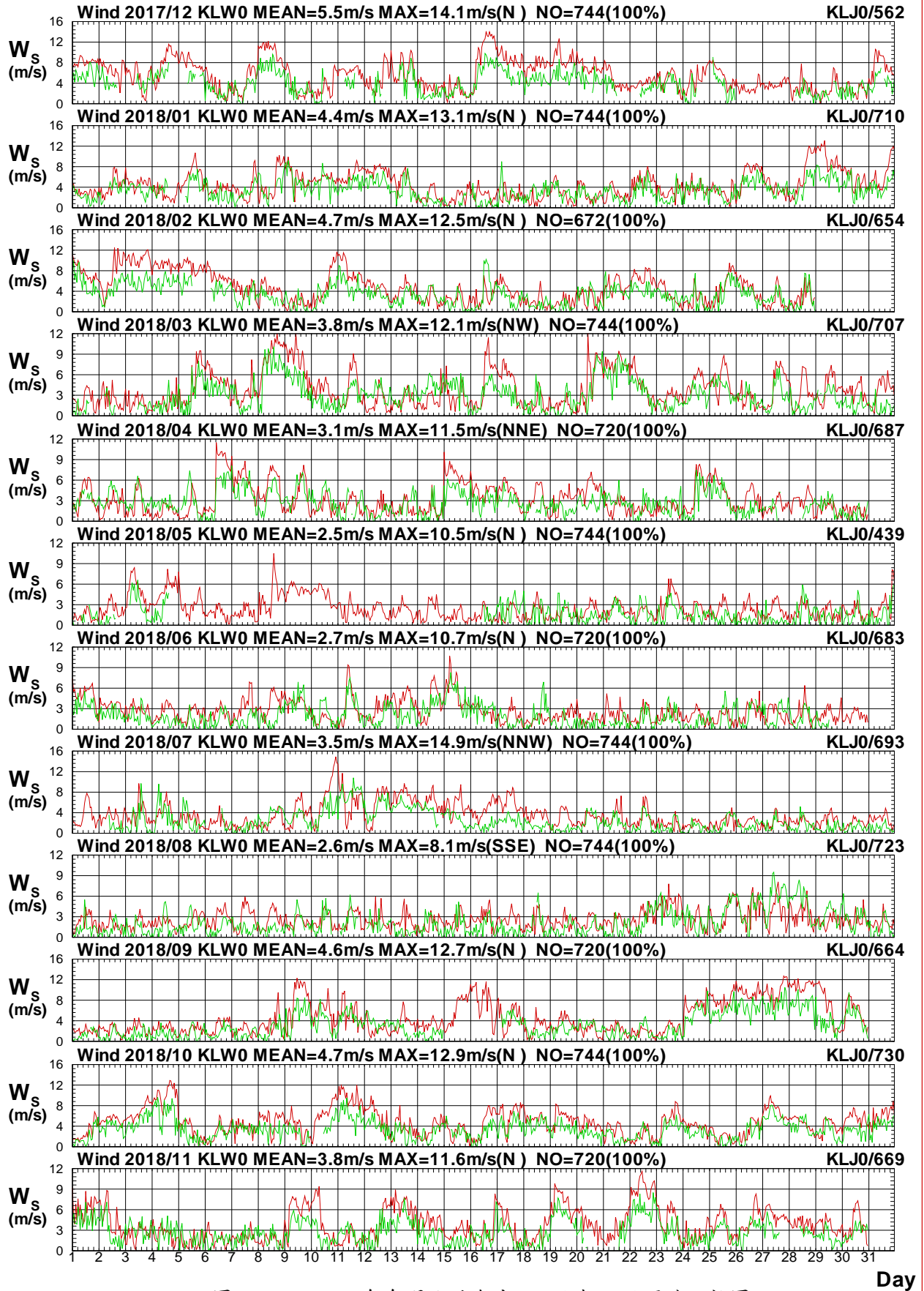


圖1.3.7a 2018年每月北端海域 W 站與 J 站風速比較圖

W17CKLW0.1HA W17CKLJ0.1H0 W181KLW0.1HA W181KLJ0.1H0 W182KLW0.1HA W182KLJ0.1H0  
 W183KLW0.1HA W183KLJ0.1H0 W184KLW0.1HA W184KLJ0.1H0 W185KLW0.1HA W185KLJ0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLR0 at 2018

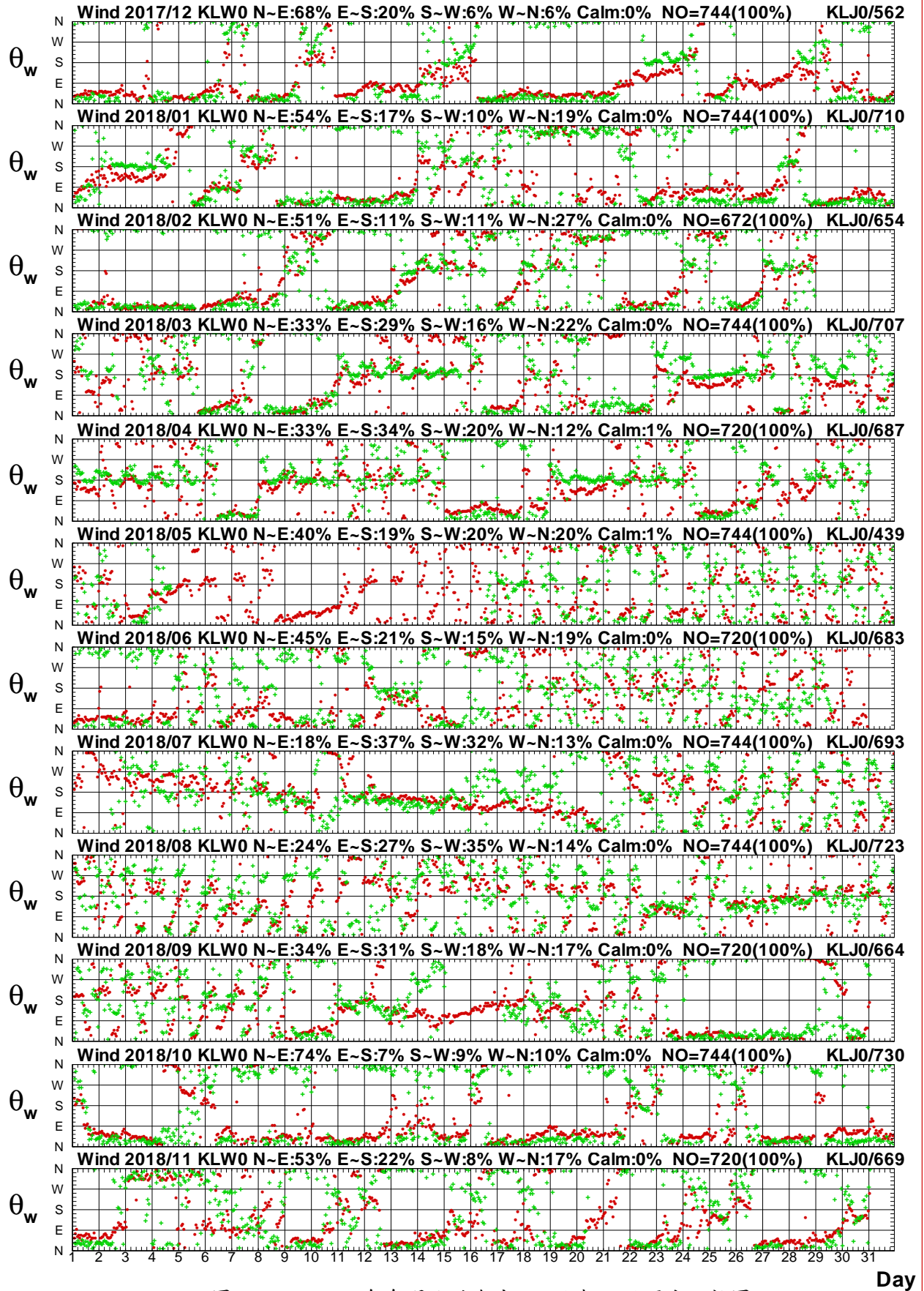


圖1.3.7b 2018年每月北端海域 W 站與 J 站風向比較圖

W17CKLR0.1HA W17CKLJ0.1H0 W181KLR0.1HA W181KLJ0.1H0 W182KLR0.1HA W182KLJ0.1H0  
 W183KLR0.1HA W183KLJ0.1H0 W184KLR0.1HA W184KLJ0.1H0 W185KLR0.1HA W185KLJ0.1H0

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of K LW0 at 2018

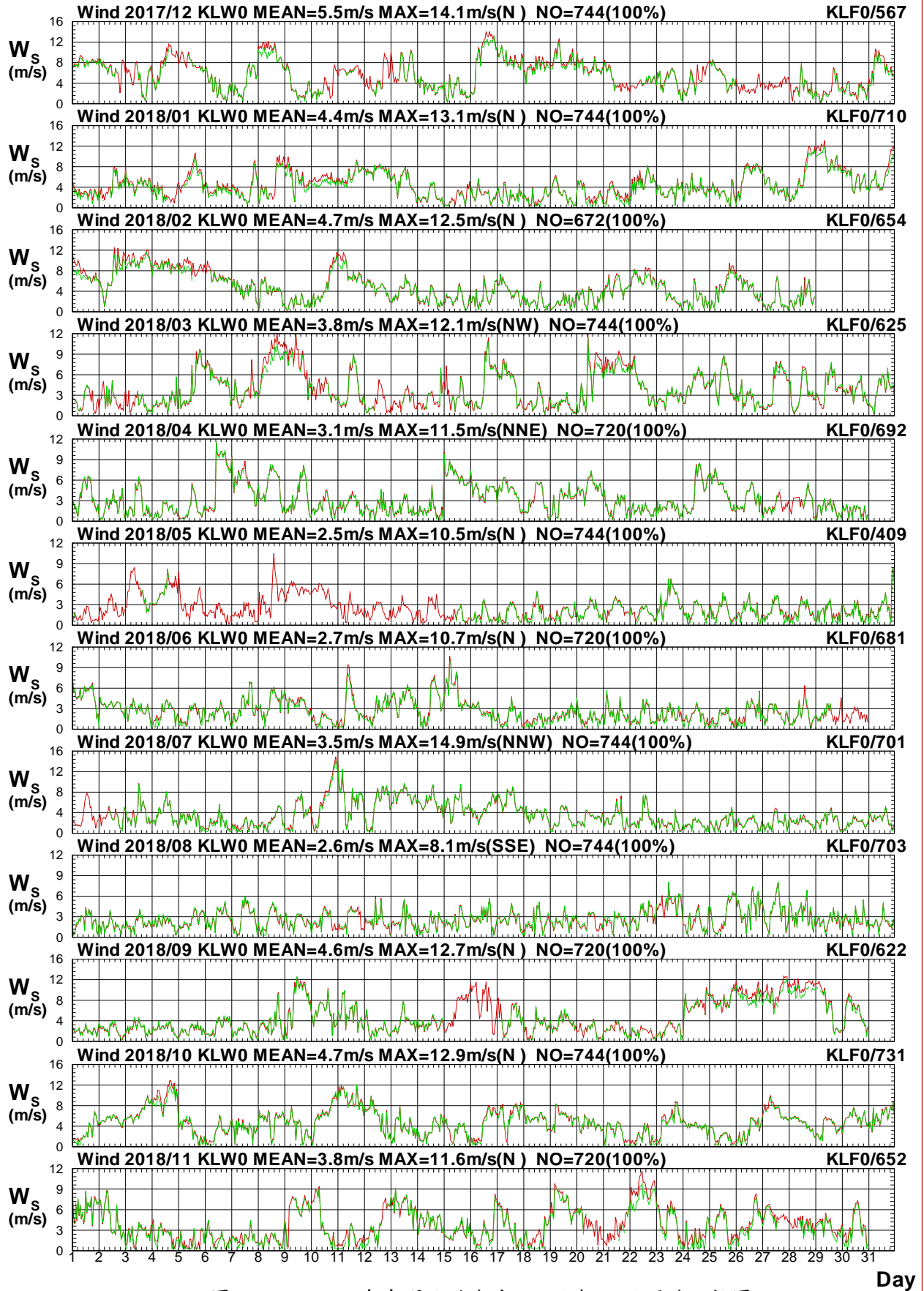


圖1.3.8a 2018年每月北端海域 W 站與 F 站風速比較圖

W17CKLW0.1HA W17CKLF0.1HO W181KLW0.1HA W181KLF0.1HO W182KLW0.1HA W182KLF0.1HO  
 W183KLW0.1HA W183KLF0.1HO W184KLW0.1HA W184KLF0.1HO W185KLW0.1HA W185KLF0.1HO

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLR0 at 2018

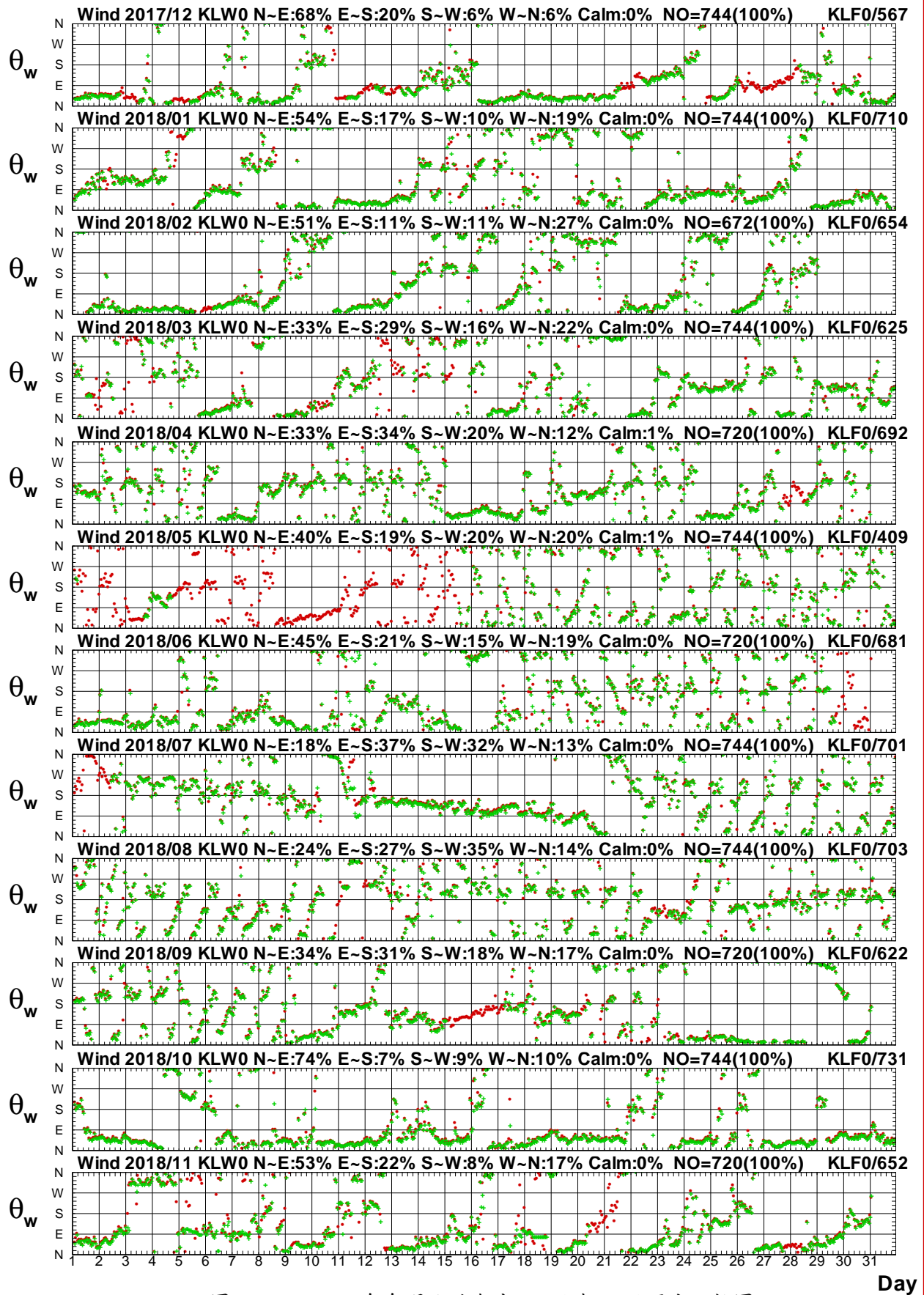


圖1.3.8b 2018年每月北端海域 W 站與 F 站風向比較圖

W17CKLR0.1HA W17CKLF0.1HO W181KLR0.1HA W181KLF0.1HO W182KLR0.1HA W182KLF0.1HO  
 W183KLR0.1HA W183KLF0.1HO W184KLR0.1HA W184KLF0.1HO W185KLR0.1HA W185KLF0.1HO

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of K LW0 at 2018

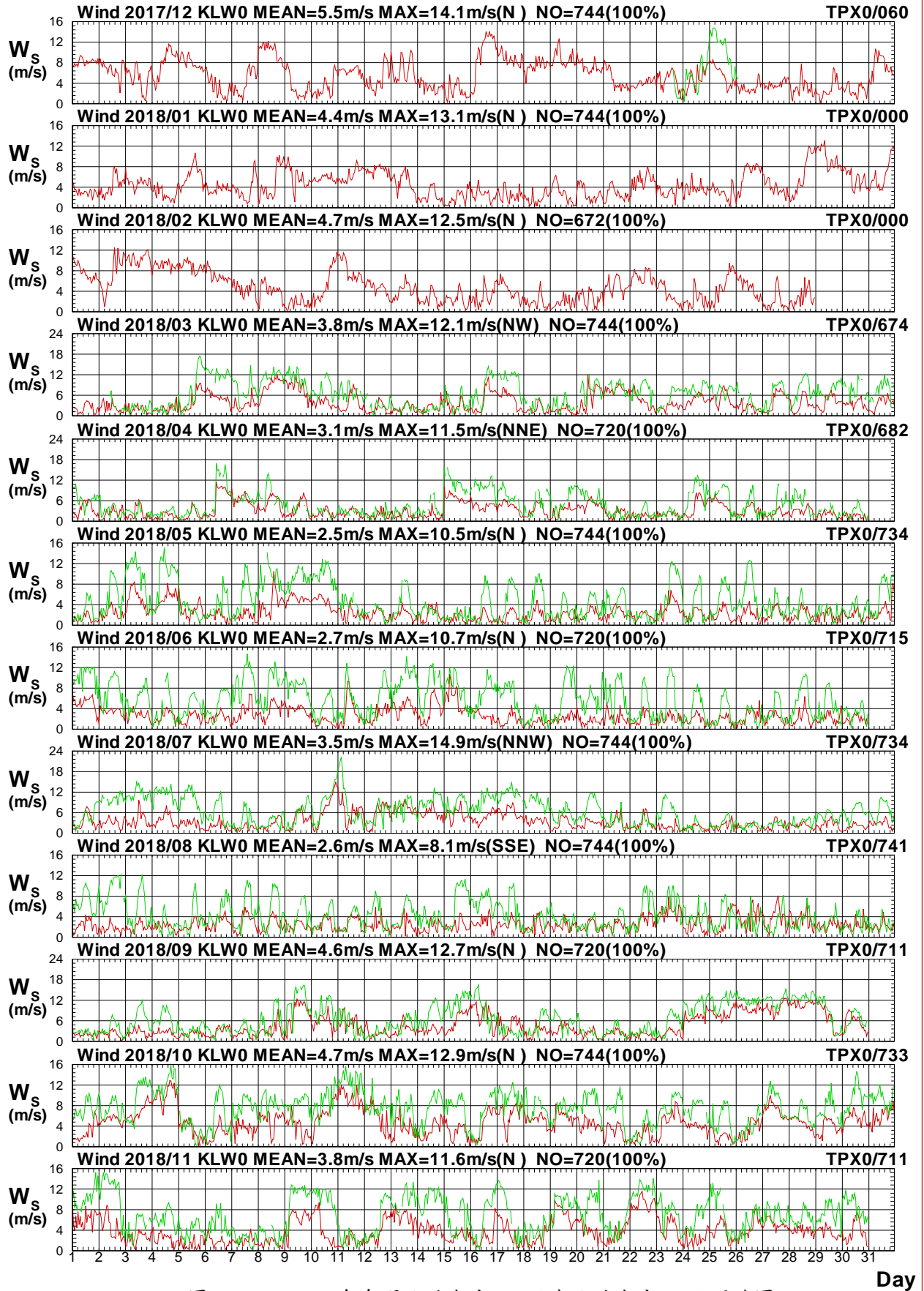


圖 1.3.9a 2018 年每月北端海域 W 站與北苗海域 X 站風速圖

W17CKLW0.1HA W17CTPX0.1H0 W181KLW0.1HA W181TPX0.1H0 W182KLW0.1HA W182TPX0.1H0  
 W183KLW0.1HA W183TPX0.1H0 W184KLW0.1HA W184TPX0.1H0 W185KLW0.1HA W185TPX0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLR0 at 2018

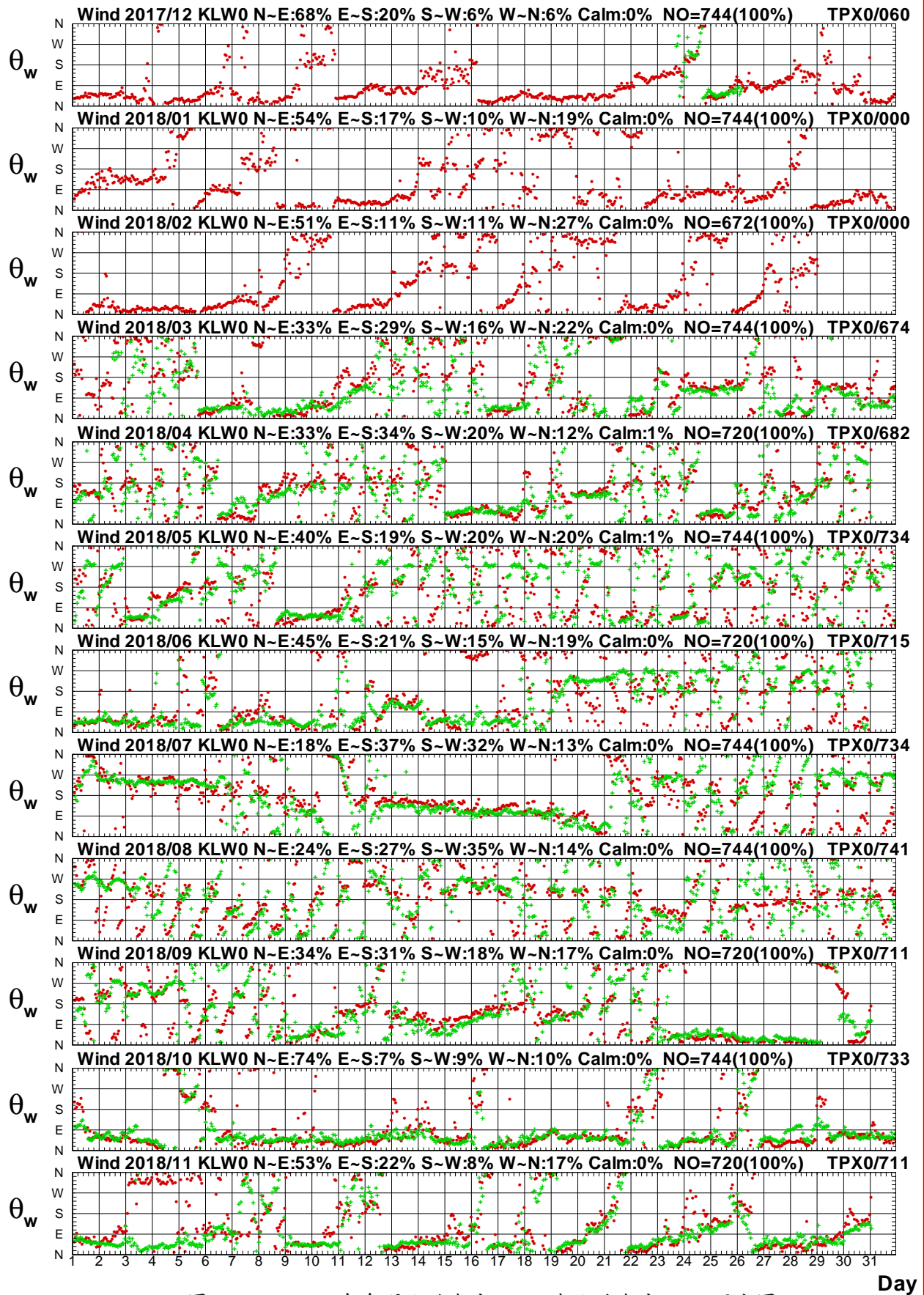


圖 1.3.9b 2018年每月北端海域 W 站與北苗海域 X 站風向圖

W17CKLR0.1HA W17CTPX0.1HO W181KLR0.1HA W181TPX0.1HO W182KLR0.1HA W182TPX0.1HO  
 W183KLR0.1HA W183TPX0.1HO W184KLR0.1HA W184TPX0.1HO W185KLR0.1HA W185TPX0.1HO

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of K LW0 at 2018

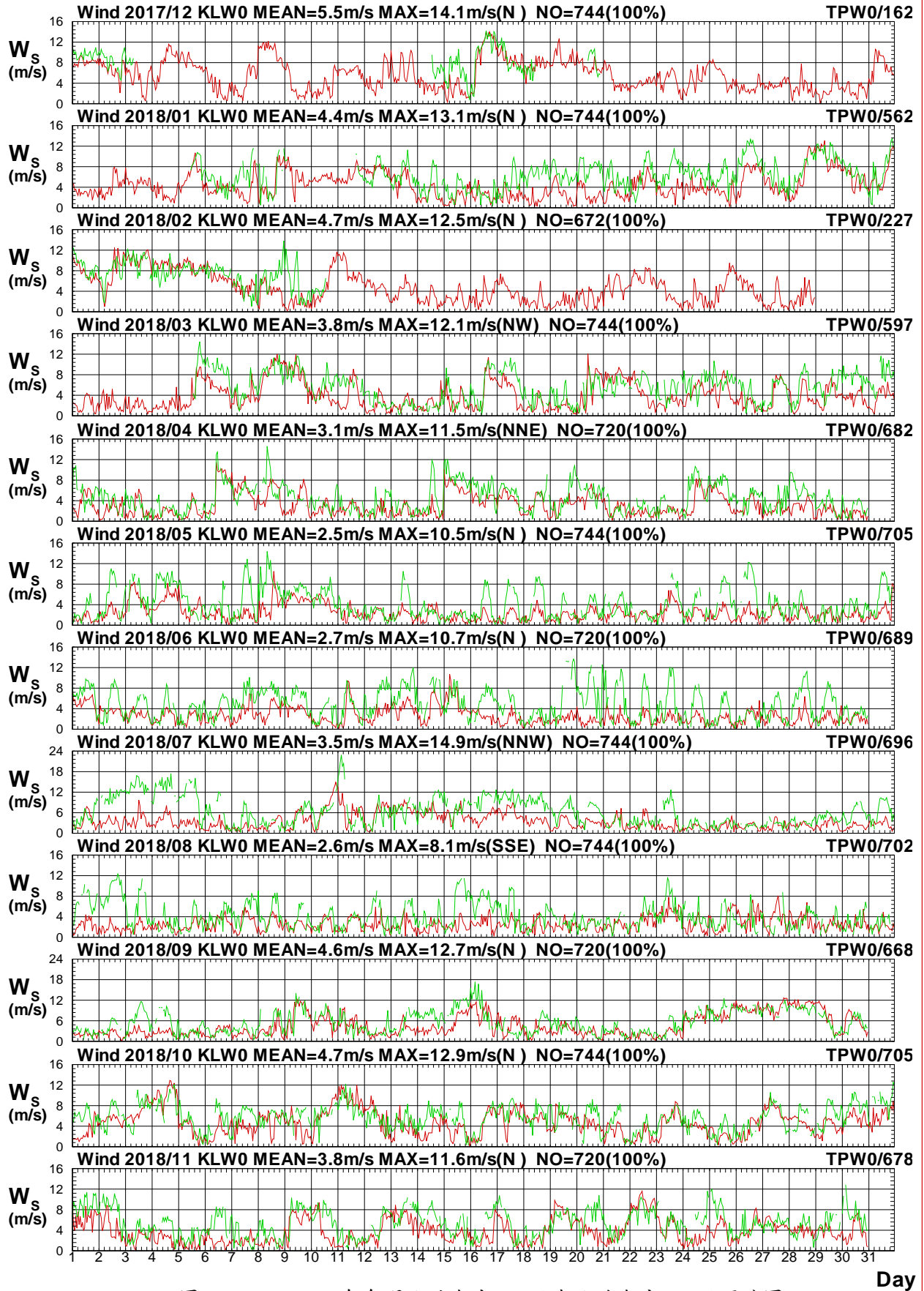


圖 1.3.10a 2018 年每月北端海域 W 站與北苗海域 W 站風速圖

W17K LW0.1HA W17CTPW0.1H0 W181K LW0.1HA W181TPW0.1H0 W182K LW0.1HA W182TPW0.1H0  
 W183K LW0.1HA W183TPW0.1H0 W184K LW0.1HA W184TPW0.1H0 W185K LW0.1HA W185TPW0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLR0 at 2018

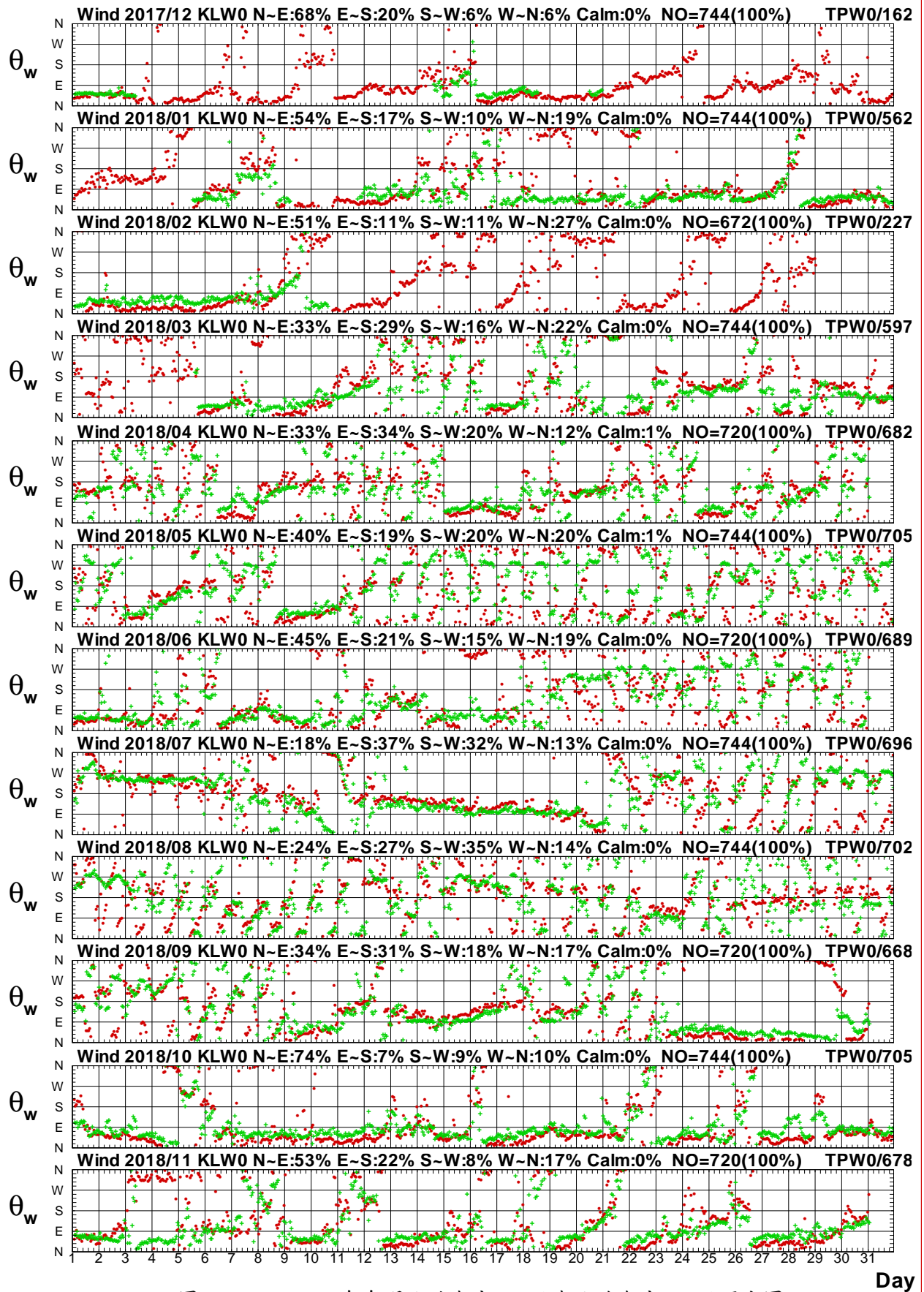


圖1.3.10b 2018年每月北端海域 W 站與北苗海域 W 站風向圖

W17CKLR0.1HA W17CTPW0.1H0 W181KLR0.1HA W181TPW0.1H0 W182KLR0.1HA W182TPW0.1H0  
 W183KLR0.1HA W183TPW0.1H0 W184KLR0.1HA W184TPW0.1H0 W185KLR0.1HA W185TPW0.1H0

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of K LW0 at 2018

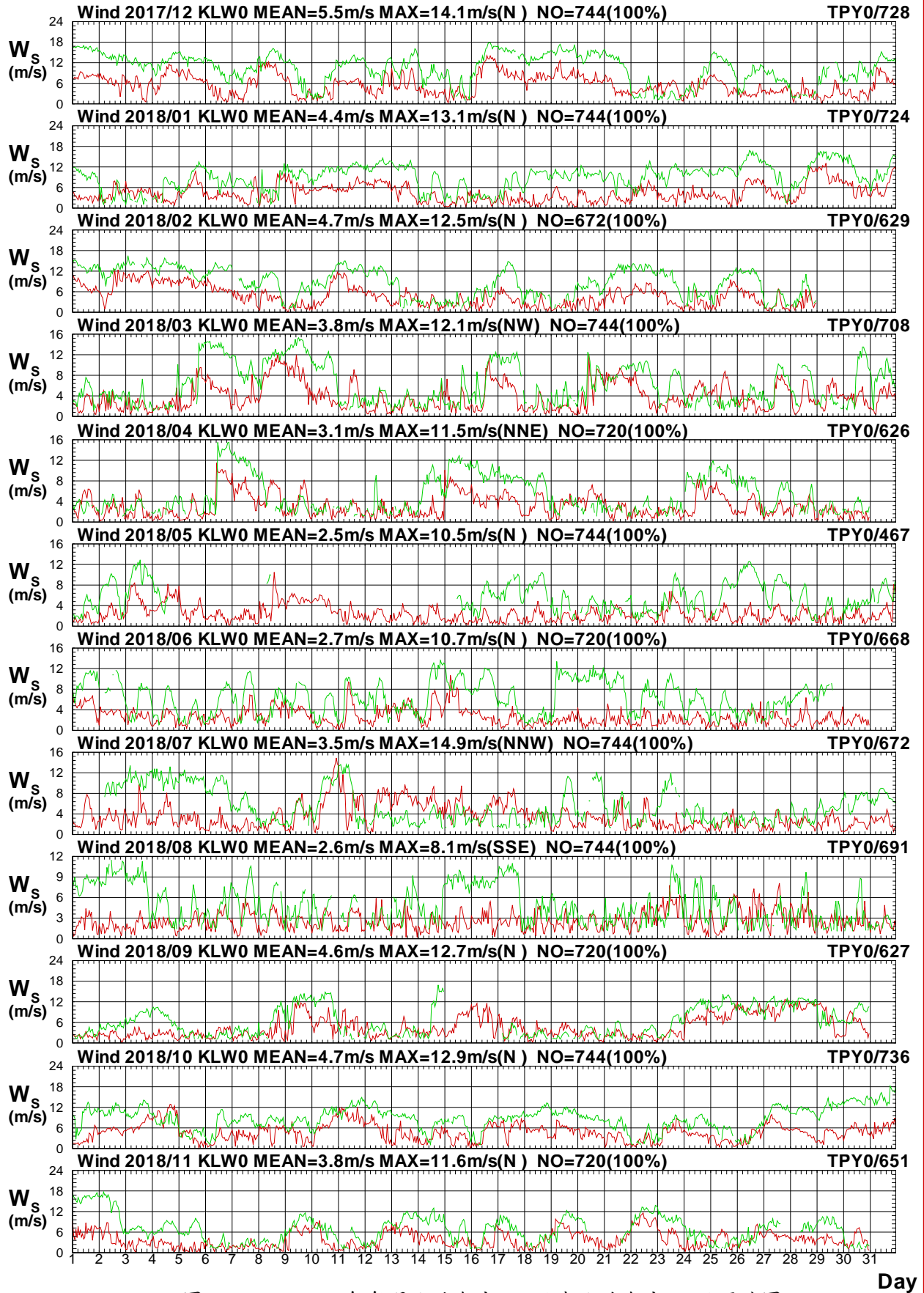


圖 1.3.11a 2018年每月北端海域 W 站與北苗海域 Y 站風速圖

W17CKLW0.1HA W17CTPY0.1HO W181KLW0.1HA W181TPY0.1HO W182KLW0.1HA W182TPY0.1HO  
 W183KLW0.1HA W183TPY0.1HO W184KLW0.1HA W184TPY0.1HO W185KLW0.1HA W185TPY0.1HO

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of K LW0 at 2018

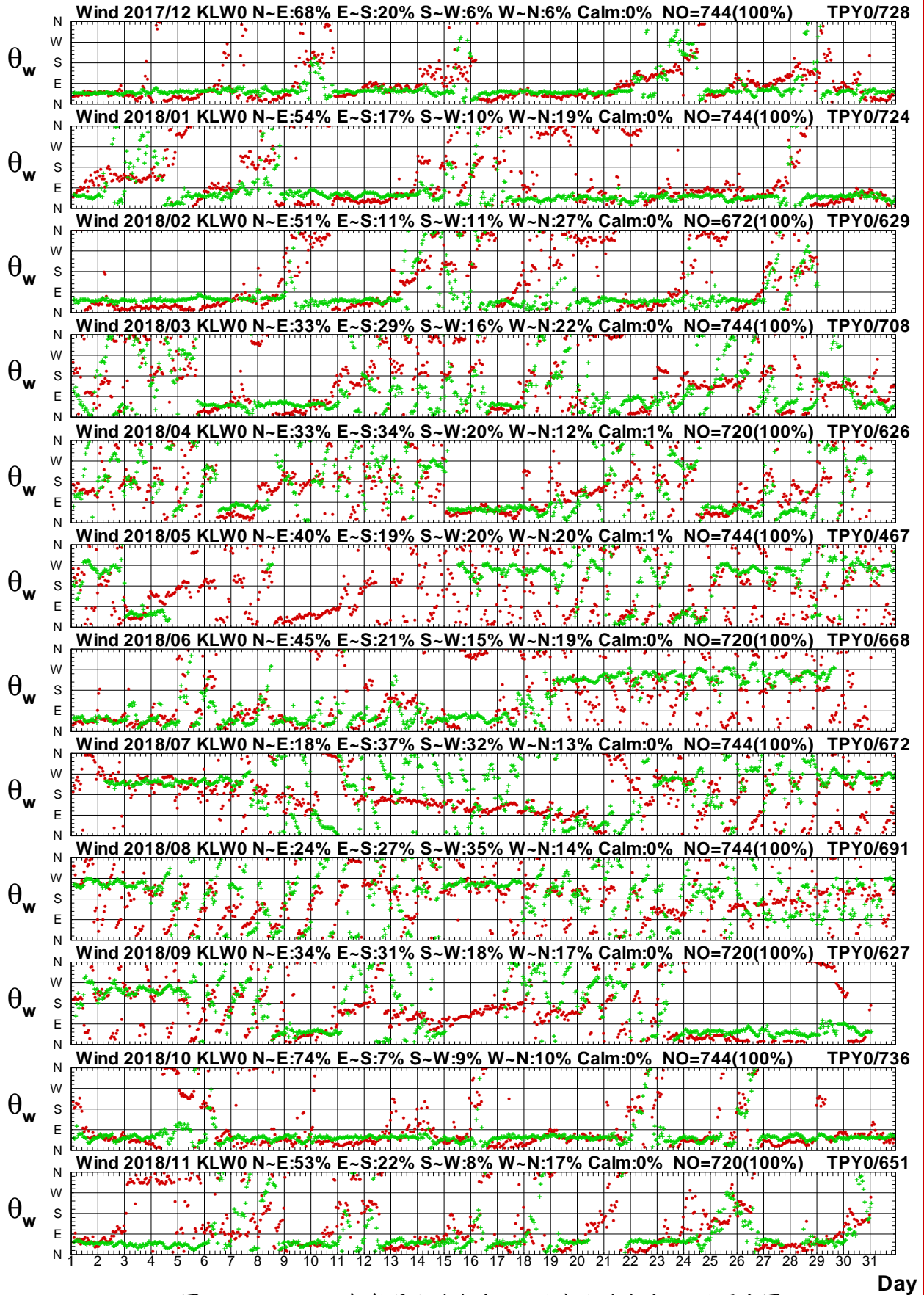


圖 1.3.11b 2018年每月北端海域 W 站與北苗海域 Y 站風向圖

W17CKLW0.1HA W17CTPY0.1HO W181KLW0.1HA W181TPY0.1HO W182KLW0.1HA W182TPY0.1HO  
 W183KLW0.1HA W183TPY0.1HO W184KLW0.1HA W184TPY0.1HO W185KLW0.1HA W185TPY0.1HO

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of KLOW at 2018

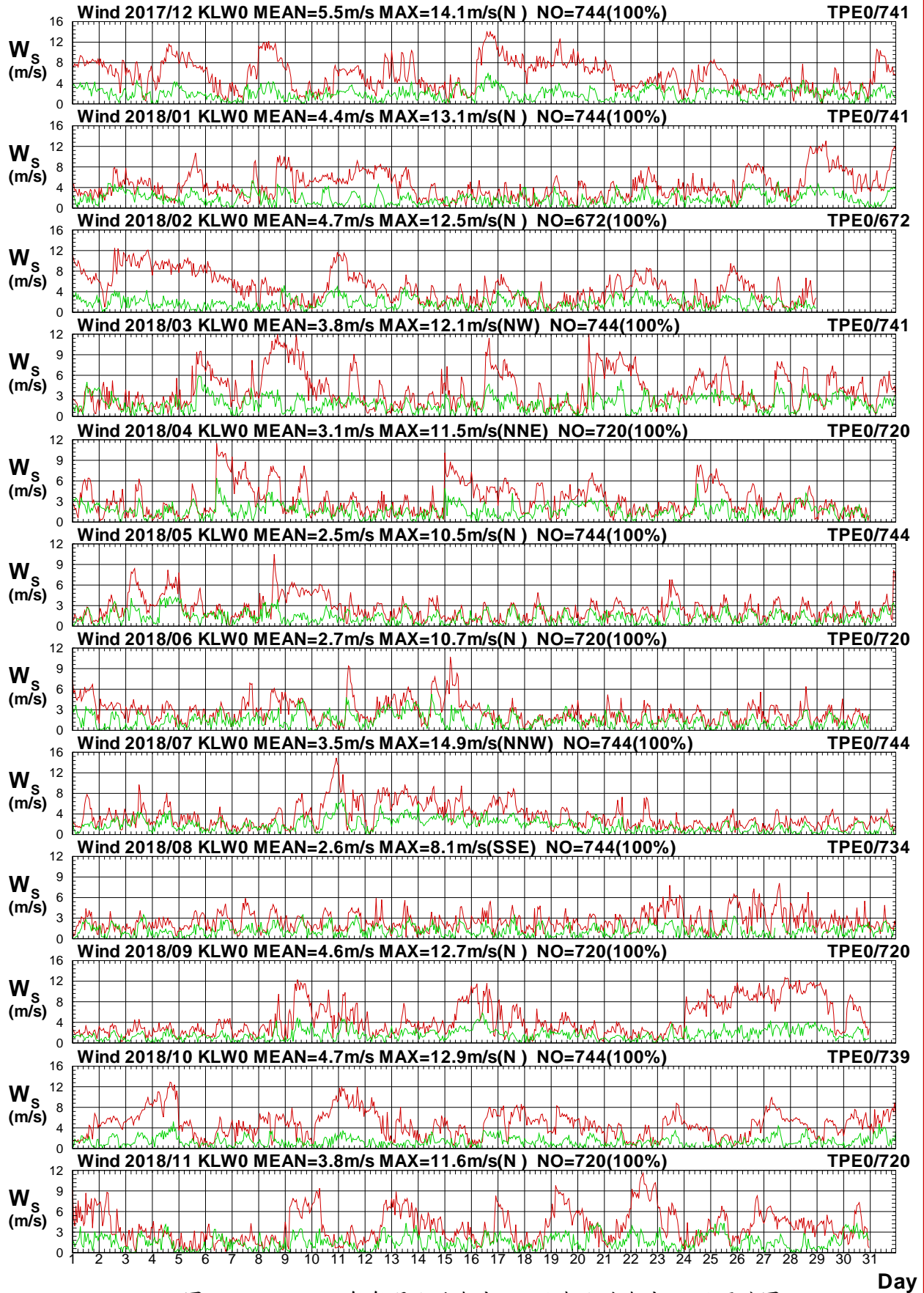


圖1.3.12a 2018年每月北端海域 W 站與北苗海域 E 站風速圖

W17CKLOW.1HA W17CTPE0.1HO W181KLOW.1HA W181TPE0.1HO W182KLOW.1HA W182TPE0.1HO  
W183KLOW.1HA W183TPE0.1HO W184KLOW.1HA W184TPE0.1HO W185KLOW.1HA W185TPE0.1HO

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLR0 at 2018

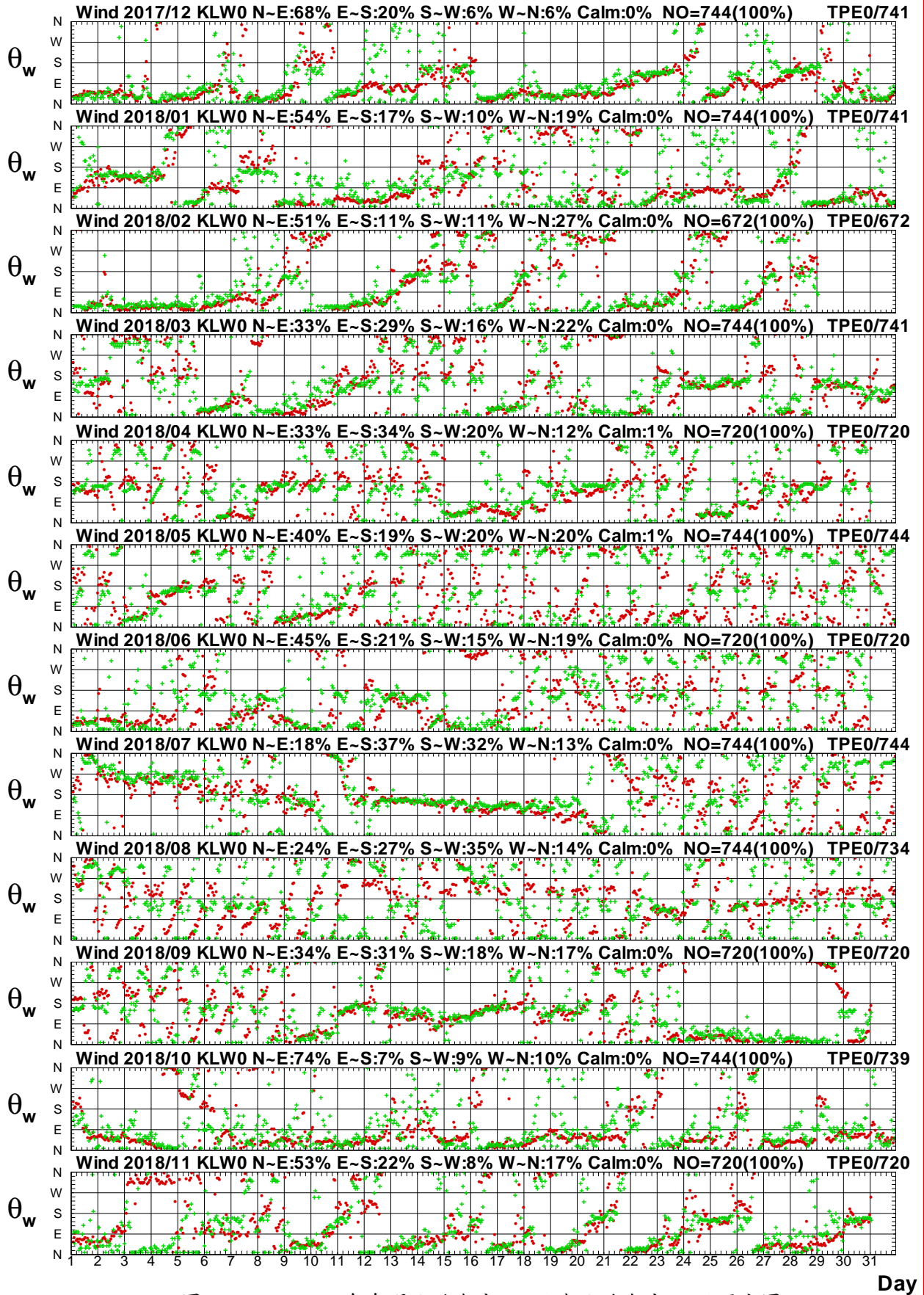


圖 1.3.12b 2018年每月北端海域 W 站與北苗海域 E 站風向圖

W17CKLR0.1HA W17CTPE0.1HO W181KLR0.1HA W181TPE0.1HO W182KLR0.1HA W182TPE0.1HO  
 W183KLR0.1HA W183TPE0.1HO W184KLR0.1HA W184TPE0.1HO W185KLR0.1HA W185TPE0.1HO

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of K LW0 at 2018

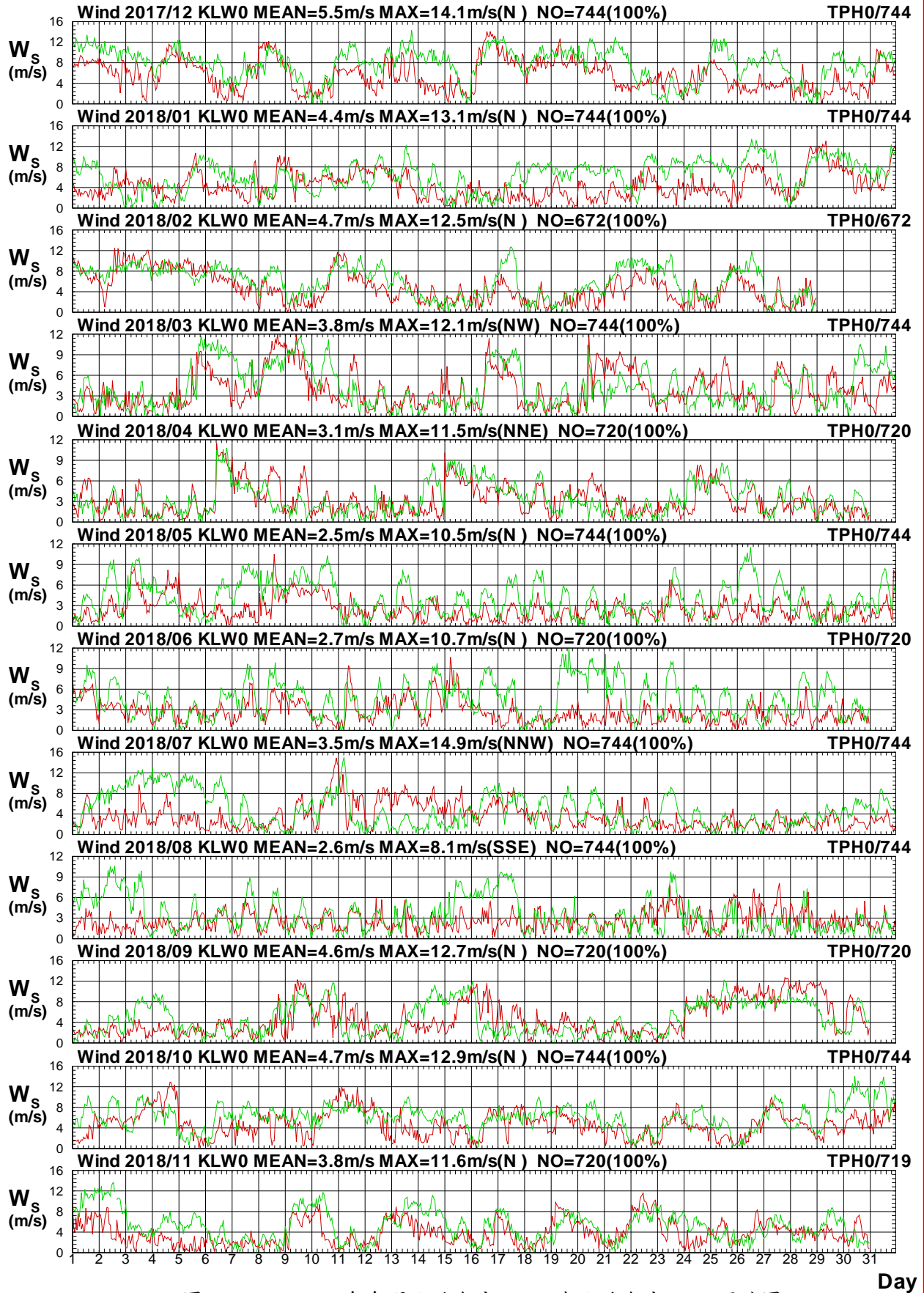


圖 1.3.13a 2018年每月北端海域 W 站與北苗海域 H 站風速圖

W17K LW0.1HA W17CTPH0.1H0 W181K LW0.1HA W181TPH0.1H0 W182K LW0.1HA W182TPH0.1H0  
 W183K LW0.1HA W183TPH0.1H0 W184K LW0.1HA W184TPH0.1H0 W185K LW0.1HA W185TPH0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLR0 at 2018

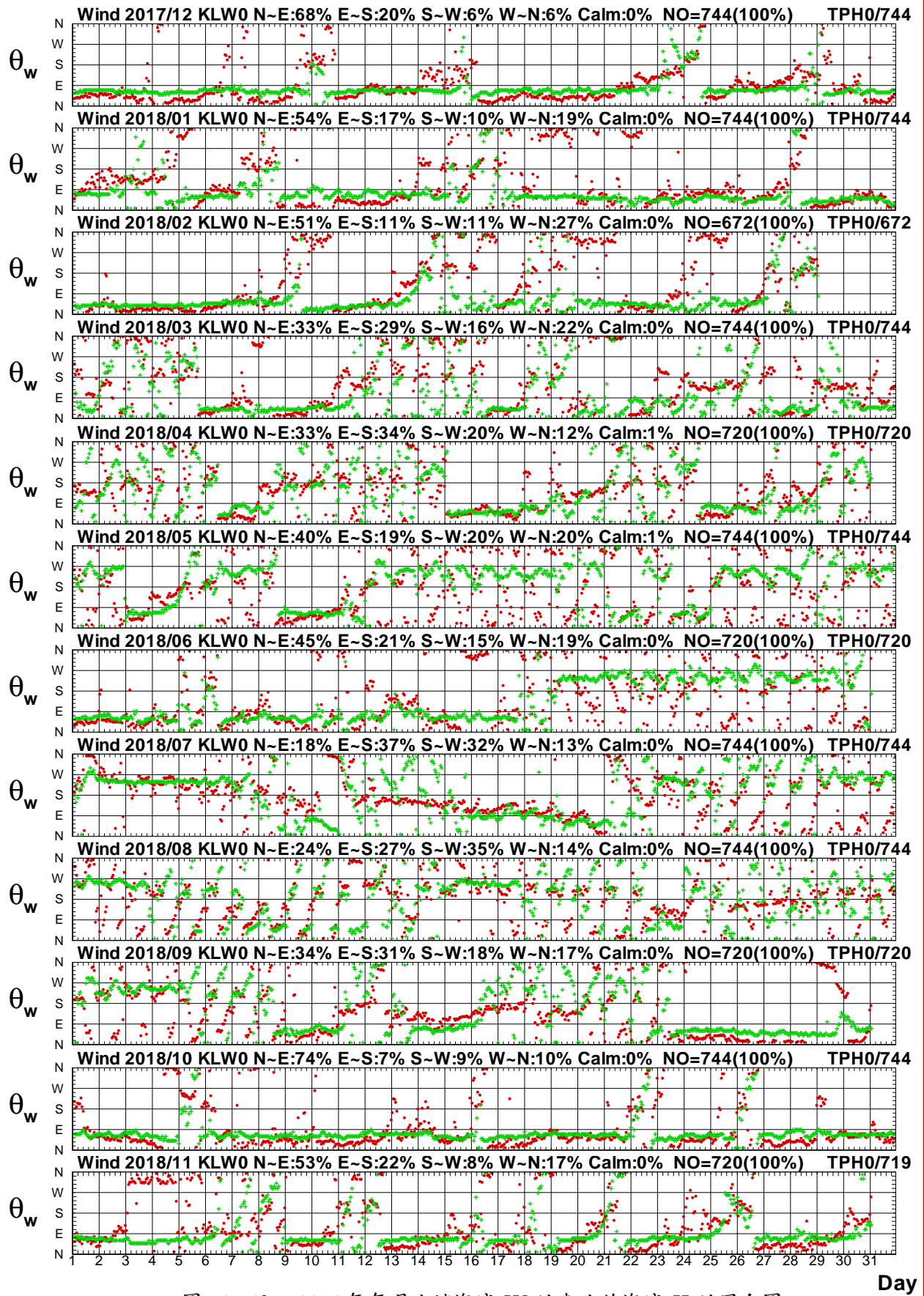


圖 1.3.13b 2018年每月北端海域 W 站與北苗海域 H 站風向圖

W17CKLR0.1HA W17CTPH0.1HO W181KLR0.1HA W181TPH0.1HO W182KLR0.1HA W182TPH0.1HO  
 W183KLR0.1HA W183TPH0.1HO W184KLR0.1HA W184TPH0.1HO W185KLR0.1HA W185TPH0.1HO

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of K LW0 at 2018

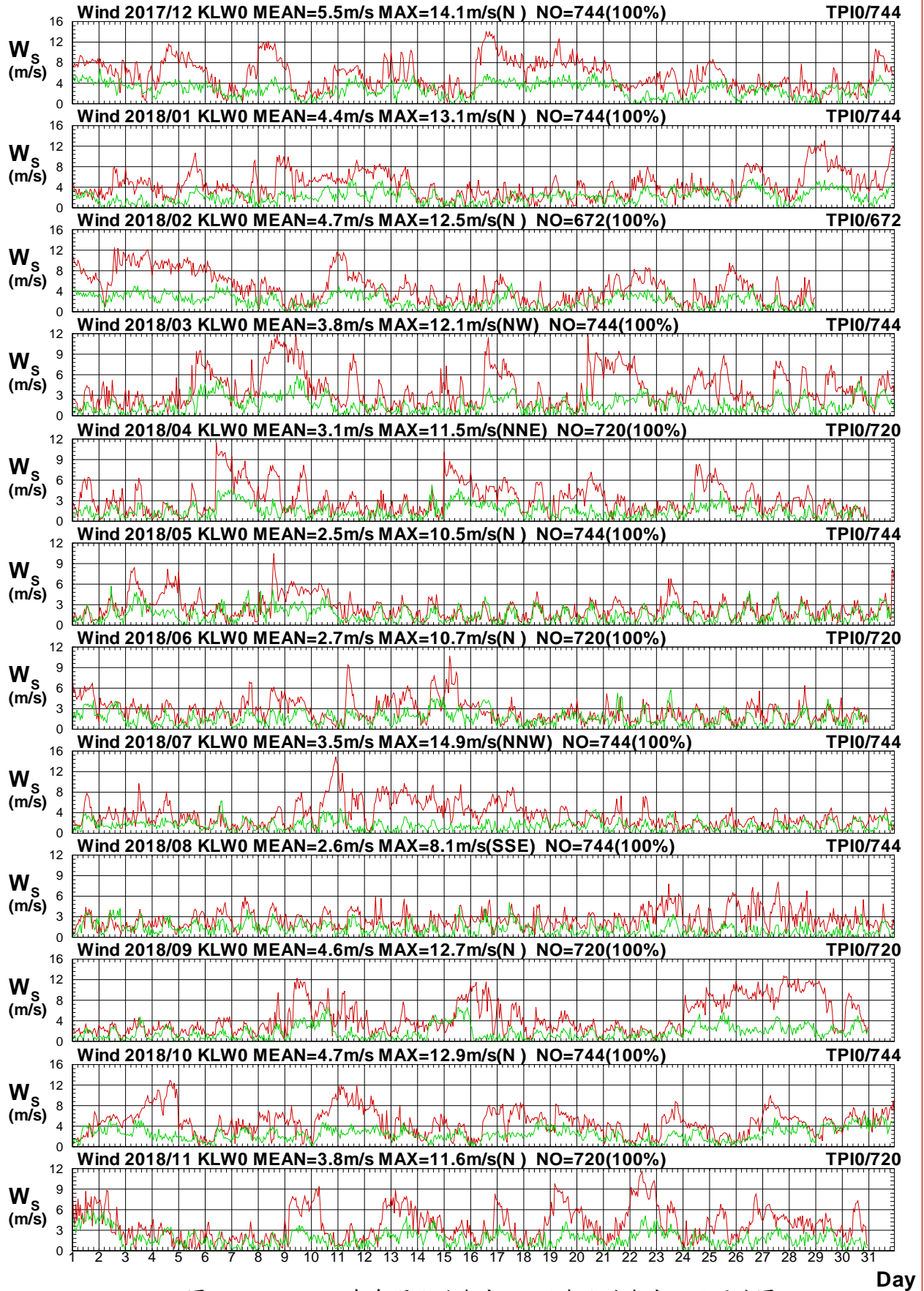


圖1.3.14a 2018年每月北端海域 W 站與北苗海域 I 站風速圖

W17CKLW0.1HA W17CTPI0.1H0 W181KLW0.1HA W181TPI0.1H0 W182KLW0.1HA W182TPI0.1H0  
 W183KLW0.1HA W183TPI0.1H0 W184KLW0.1HA W184TPI0.1H0 W185KLW0.1HA W185TPI0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLR0 at 2018

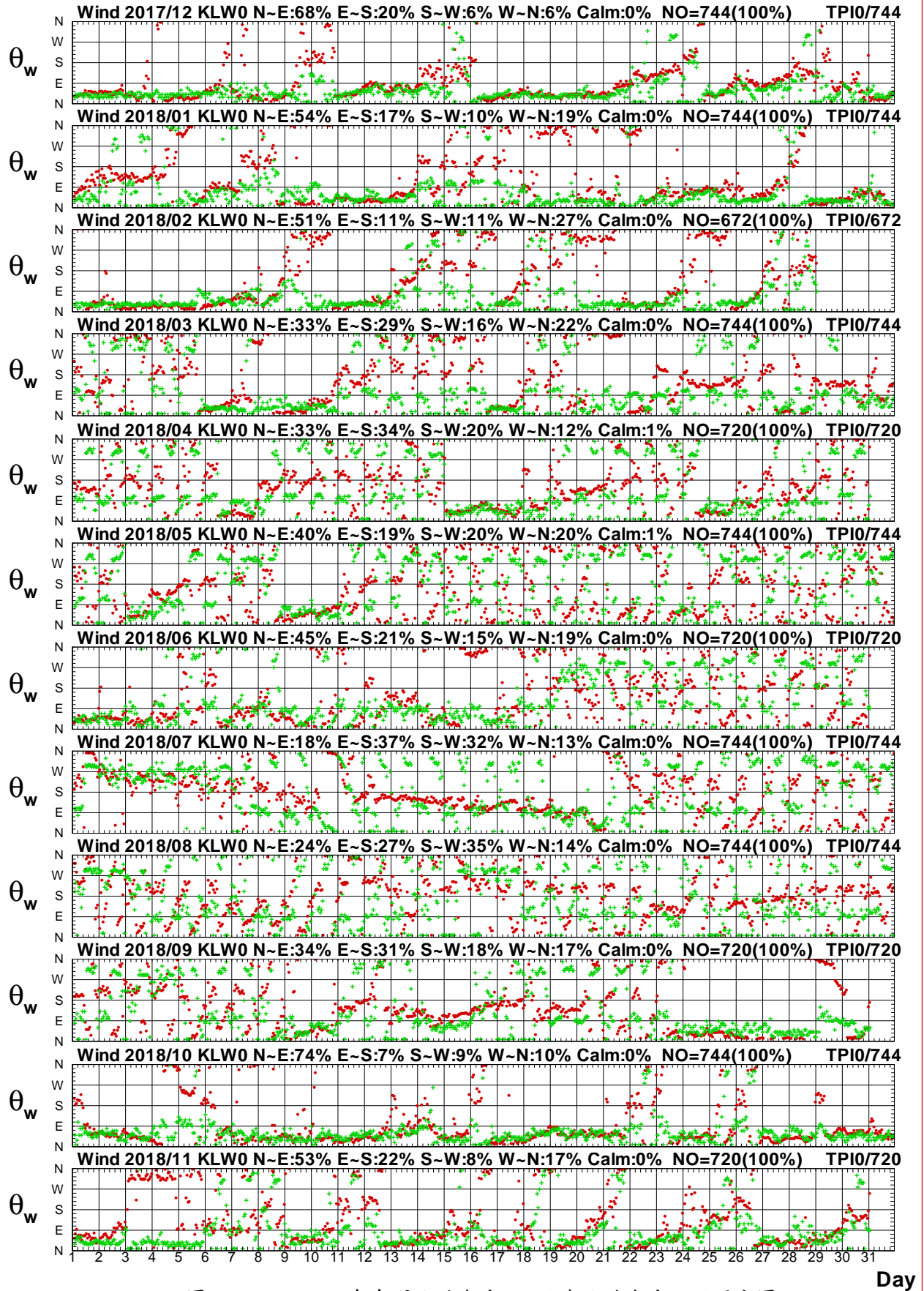


圖1.3.14b 2018年每月北端海域 W 站與北苗海域 I 站風向圖

W17CKLR0.1HA W17CTPI0.1H0 W181KLR0.1HA W181TPI0.1H0 W182KLR0.1HA W182TPI0.1H0  
 W183KLR0.1HA W183TPI0.1H0 W184KLR0.1HA W184TPI0.1H0 W185KLR0.1HA W185TPI0.1H0

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of K LW0 at 2018

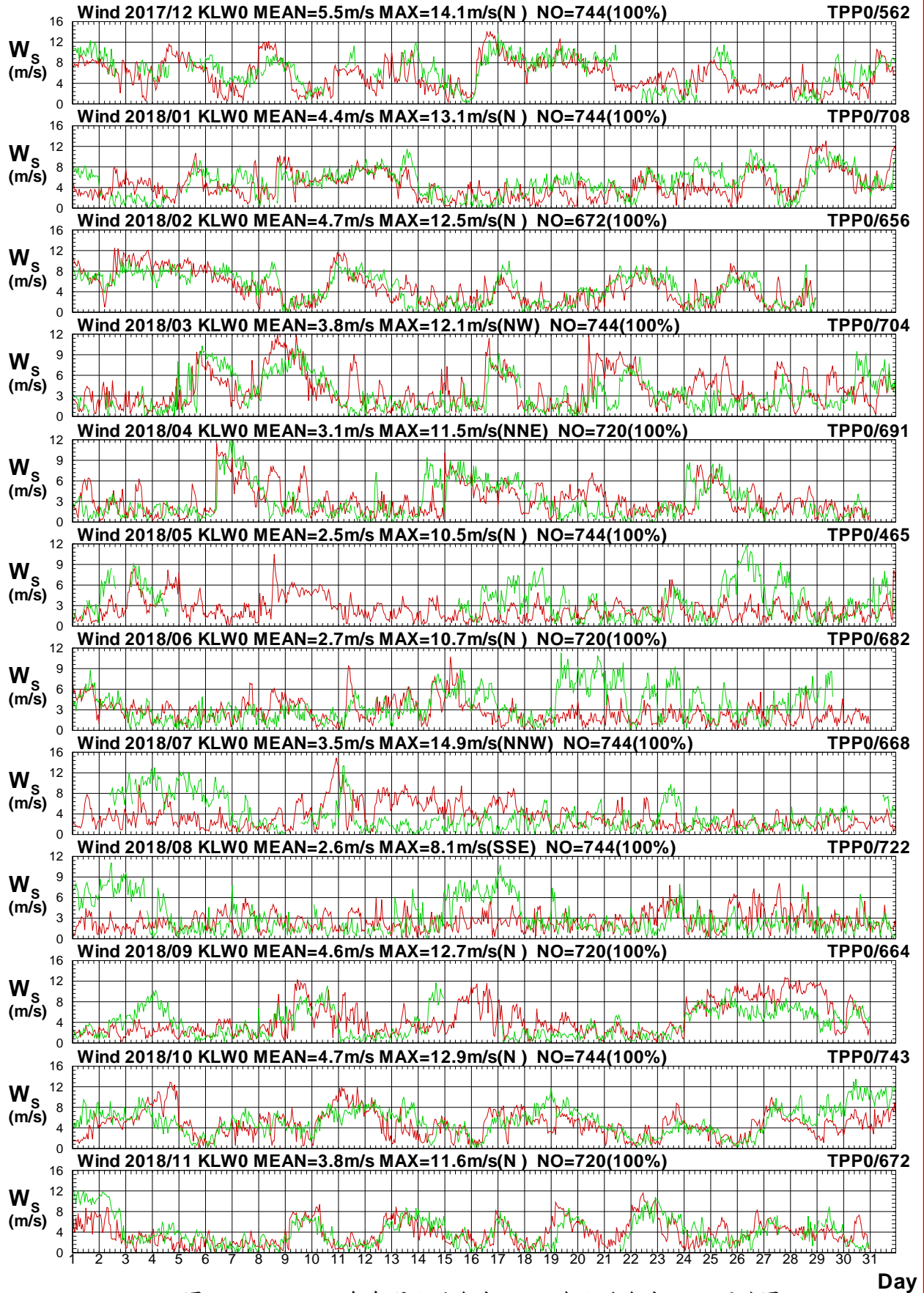


圖 1.3.15a 2018年每月北端海域 W 站與北苗海域 P 站風速圖

W17K LW0.1HA W17CTPP0.1HO W181K LW0.1HA W181TPP0.1HO W182K LW0.1HA W182TPP0.1HO  
 W183K LW0.1HA W183TPP0.1HO W184K LW0.1HA W184TPP0.1HO W185K LW0.1HA W185TPP0.1HO

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of K LW0 at 2018

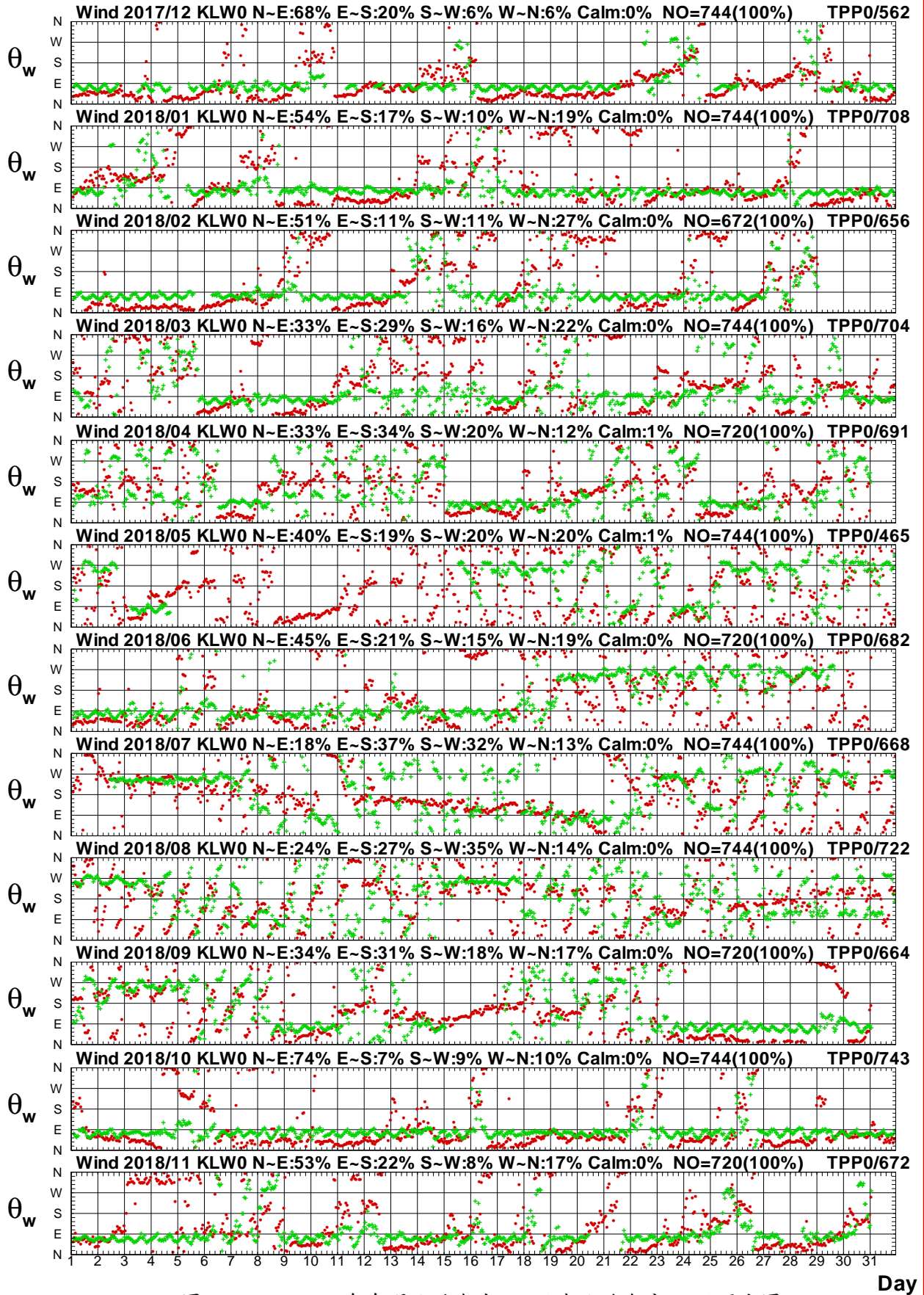


圖 1.3.15b 2018年每月北端海域 W 站與北苗海域 P 站風向圖

W17K LW0.1HA W17CTPP0.1HO W181K LW0.1HA W181TPP0.1HO W182K LW0.1HA W182TPP0.1HO  
 W183K LW0.1HA W183TPP0.1HO W184K LW0.1HA W184TPP0.1HO W185K LW0.1HA W185TPP0.1HO

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of K LW0 at 2018

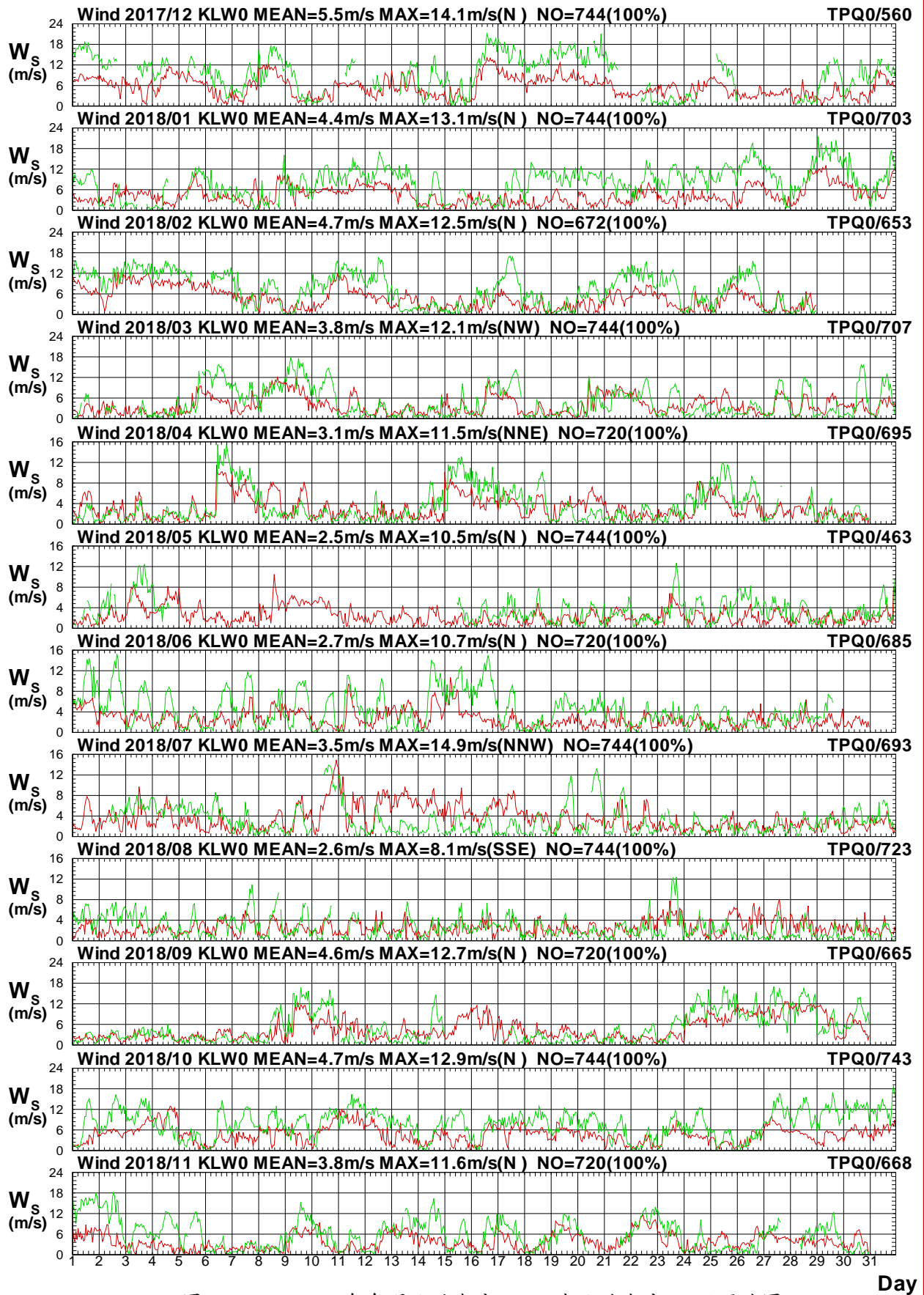


圖 1.3.16a 2018年每月北端海域 W 站與北苗海域 Q 站風速圖

W17K LW0.1HA W17CTPQ0.1H0 W181K LW0.1HA W181TPQ0.1H0 W182K LW0.1HA W182TPQ0.1H0  
 W183K LW0.1HA W183TPQ0.1H0 W184K LW0.1HA W184TPQ0.1H0 W185K LW0.1HA W185TPQ0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLR0 at 2018

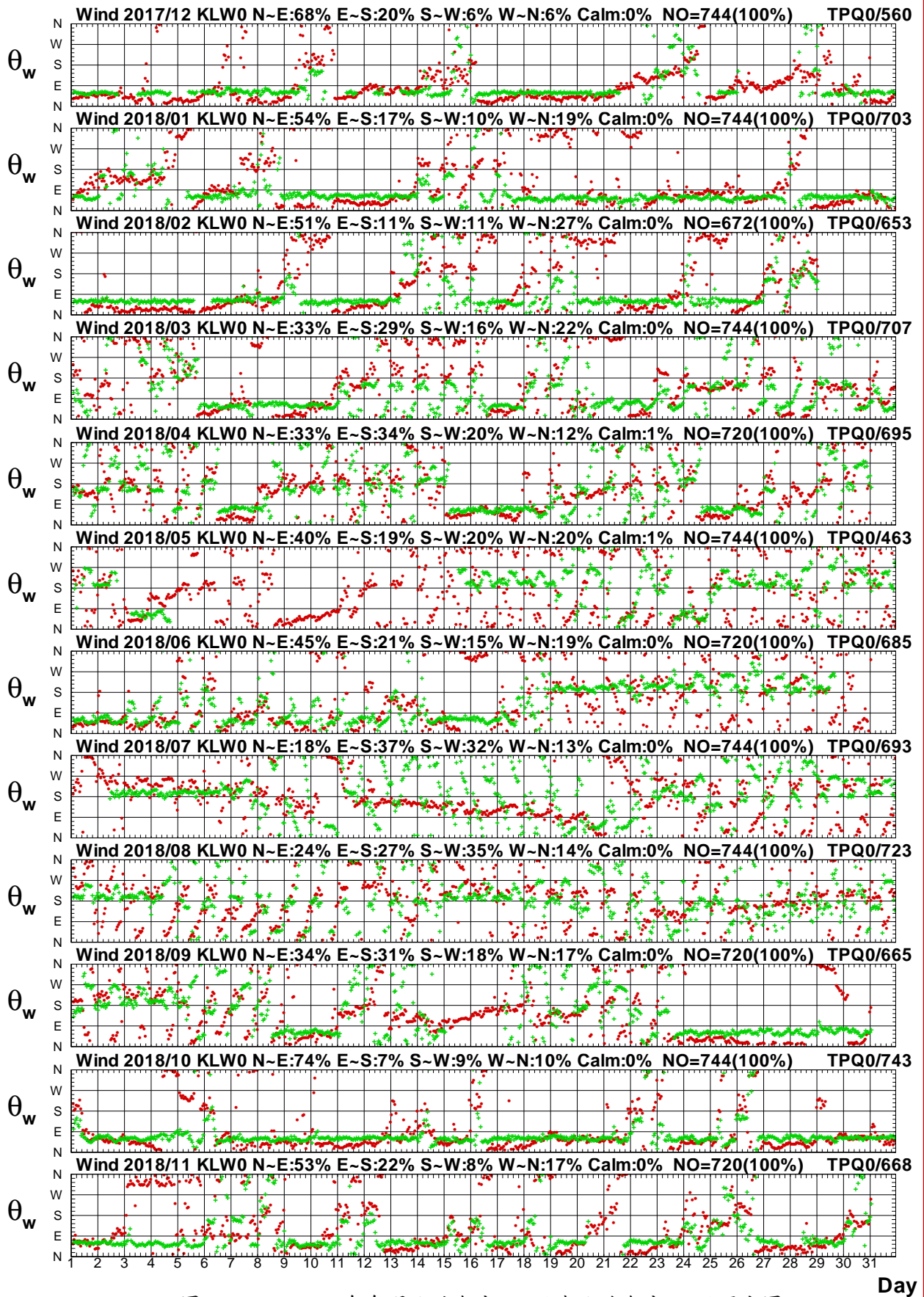


圖 1.3.16b 2018年每月北端海域 W 站與北苗海域 Q 站風向圖

W17CKLR0.1HA W17CTPQ0.1H0 W181KLR0.1HA W181TPQ0.1H0 W182KLR0.1HA W182TPQ0.1H0  
 W183KLR0.1HA W183TPQ0.1H0 W184KLR0.1HA W184TPQ0.1H0 W185KLR0.1HA W185TPQ0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of K LW0 at 2018

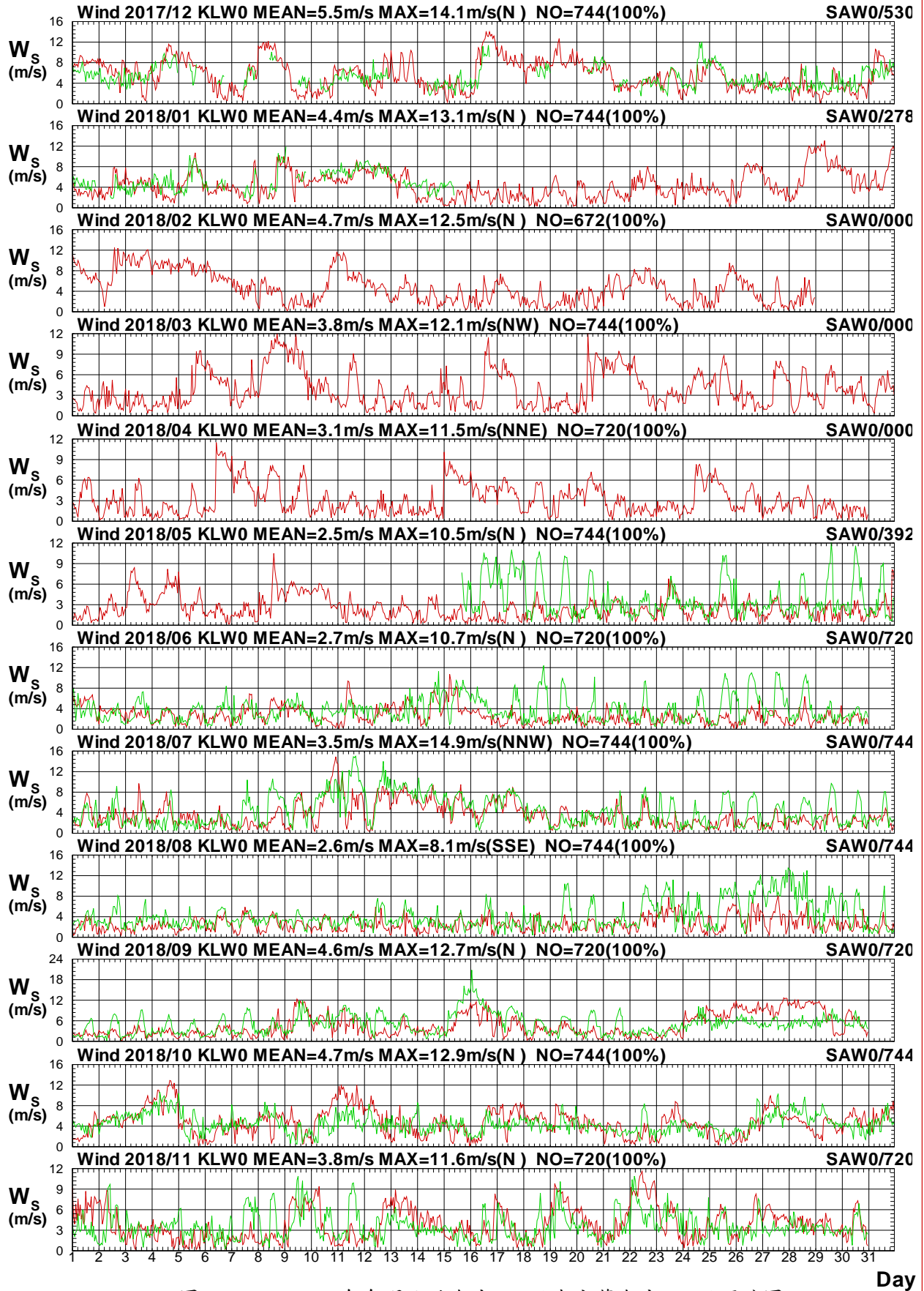


圖 1.3.17a 2018 年每月北端海域 W 站與宜蘭海域 W 站風速圖

W17CKLW0.1HA W17CSAW0.1H0 W181KLW0.1HA W181SAW0.1H0 W182KLW0.1HA W182SAW0.1H0  
 W183KLW0.1HA W183SAW0.1H0 W184KLW0.1HA W184SAW0.1H0 W185KLW0.1HA W185SAW0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLR0 at 2018

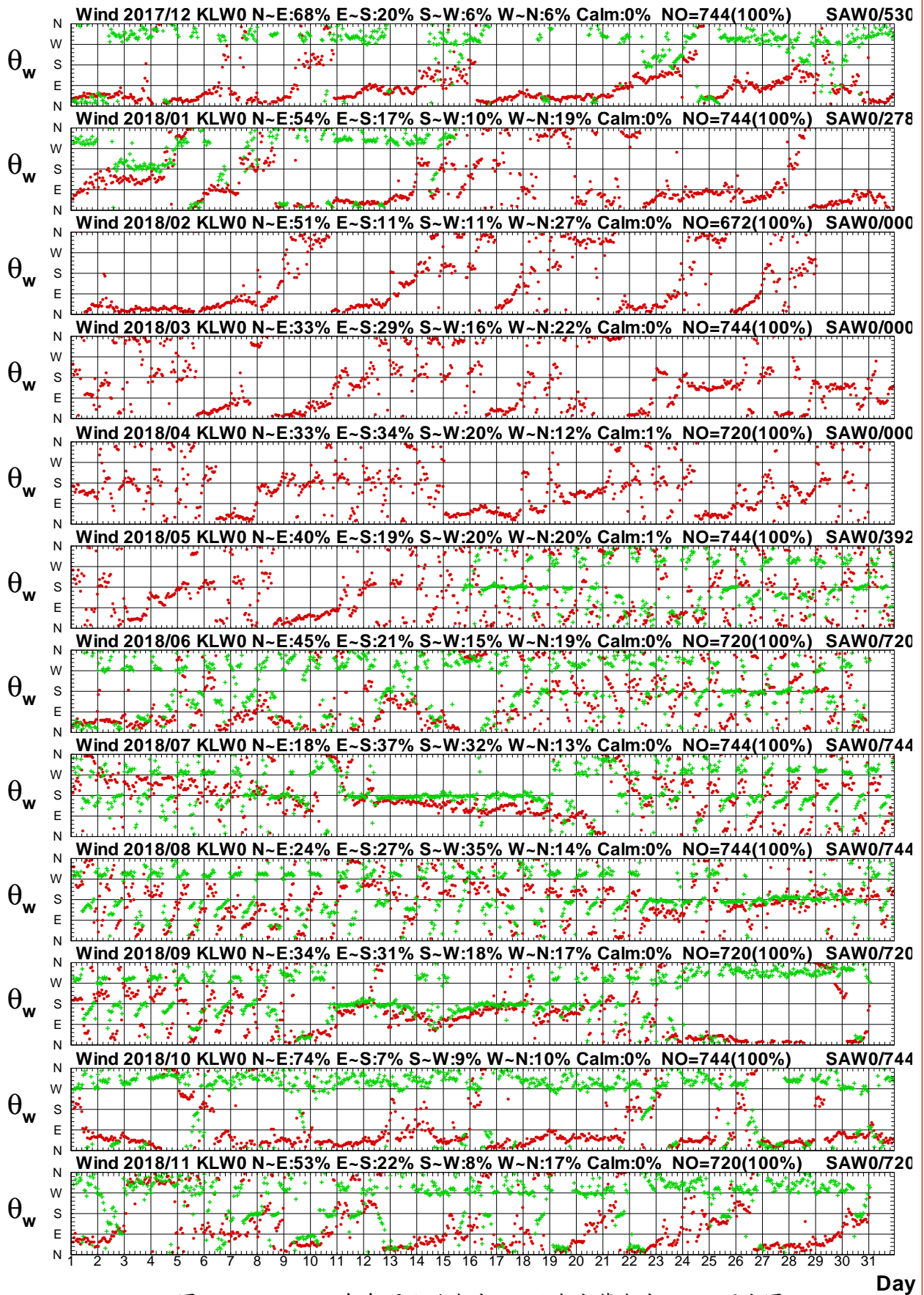


圖1.3.17b 2018年每月北端海域 W 站與宜蘭海域 W 站風向圖

W17CKLR0.1HA W17CSAW0.1H0 W181KLR0.1HA W181SAW0.1H0 W182KLR0.1HA W182SAW0.1H0  
 W183KLR0.1HA W183SAW0.1H0 W184KLR0.1HA W184SAW0.1H0 W185KLR0.1HA W185SAW0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of K LW0 at 2018

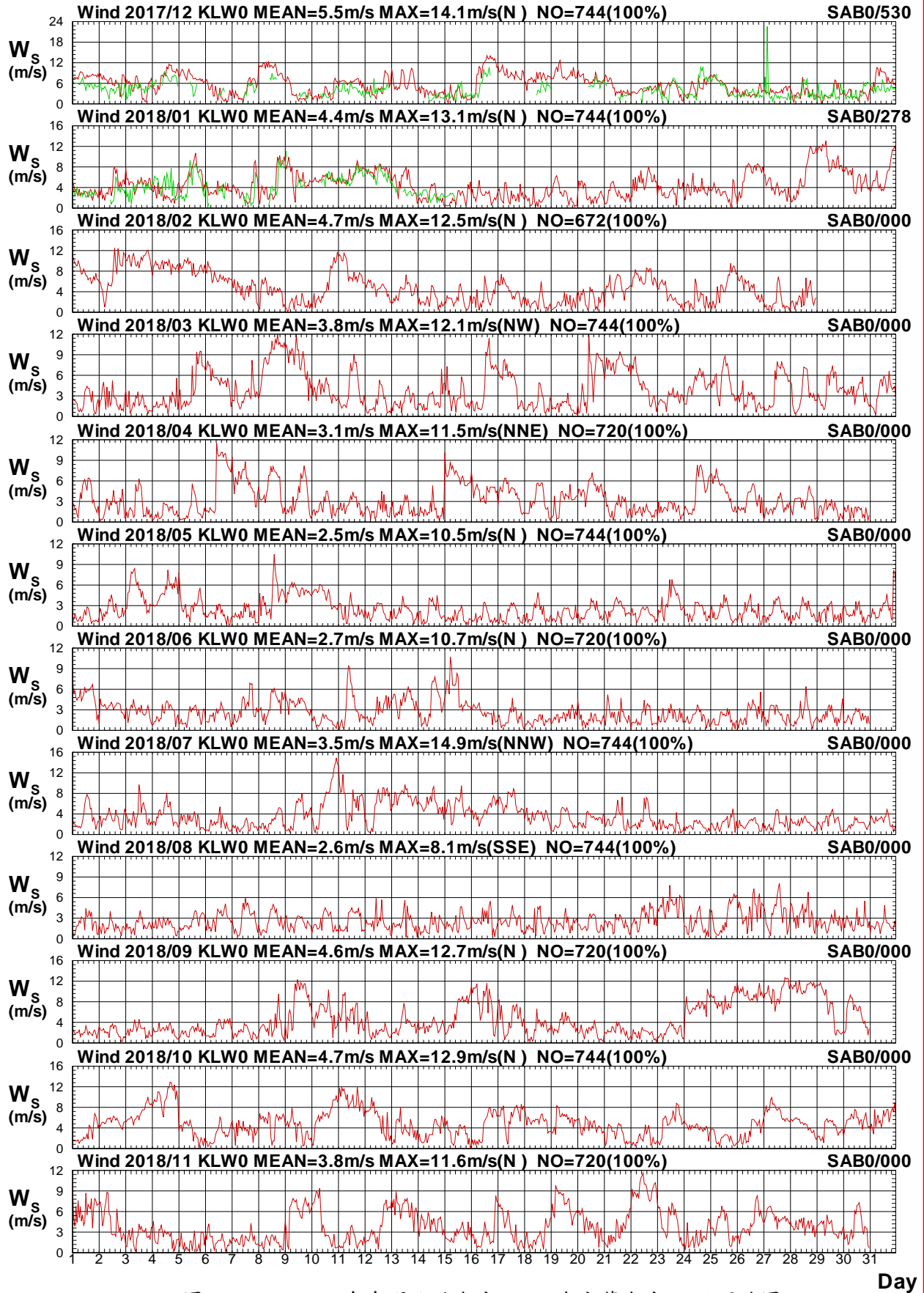


圖 1.3.18a 2018年每月北端海域 W 站與宜蘭海域 B 站風速圖

W17K LW0.1HA W17CSAB0.1H0 W181K LW0.1HA W181SAB0.1H0 W182K LW0.1HA W182SAB0.1H0  
 W183K LW0.1HA W183SAB0.1H0 W184K LW0.1HA W184SAB0.1H0 W185K LW0.1HA W185SAB0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLR0 at 2018

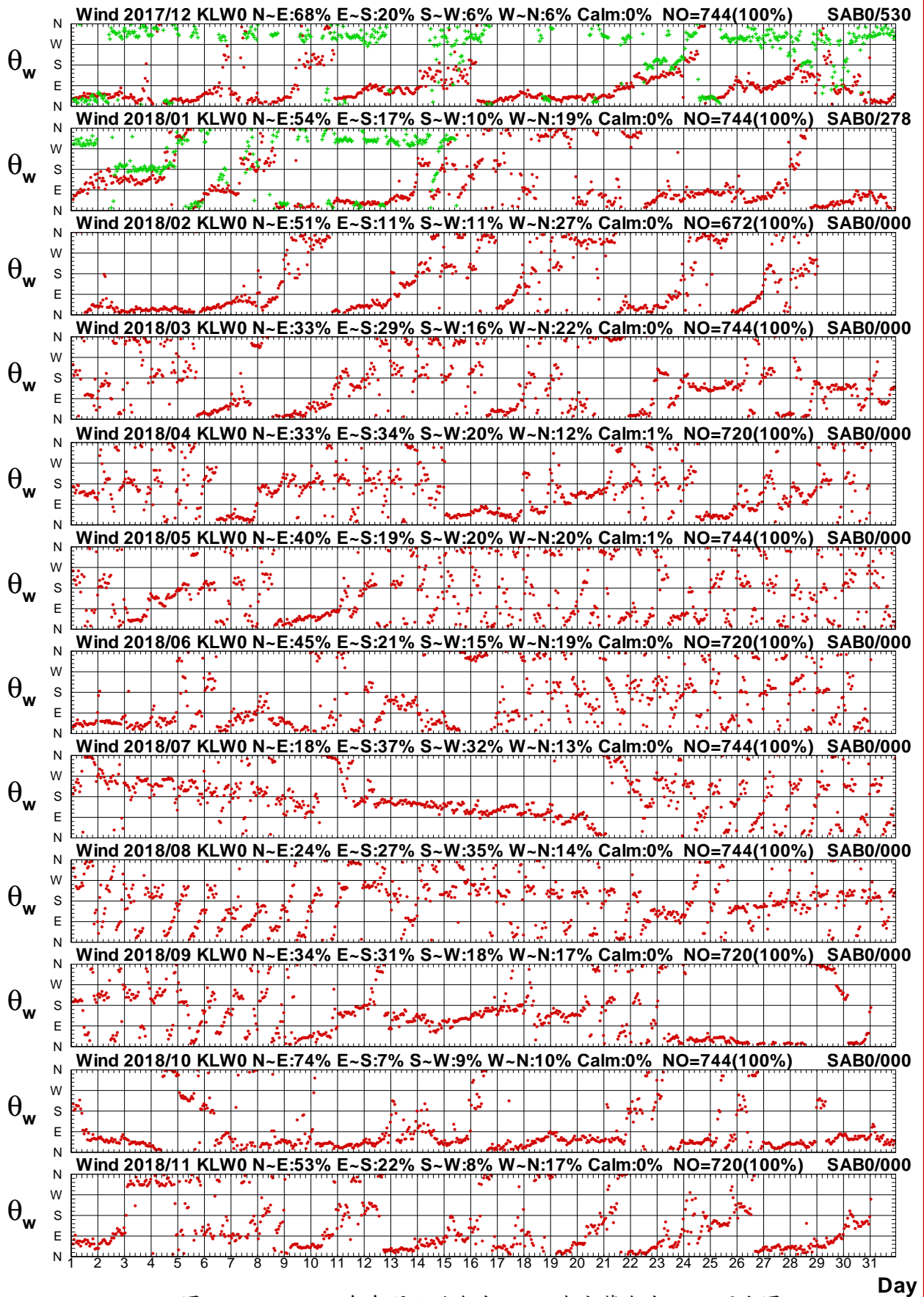


圖 1.3.18b 2018年每月北端海域 W 站與宜蘭海域 B 站風向圖

W17CKLR0.1HA W17CSAB0.1HO W181KLR0.1HA W181SAB0.1HO W182KLR0.1HA W182SAB0.1HO  
 W183KLR0.1HA W183SAB0.1HO W184KLR0.1HA W184SAB0.1HO W185KLR0.1HA W185SAB0.1HO

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of K LW0 at 2018

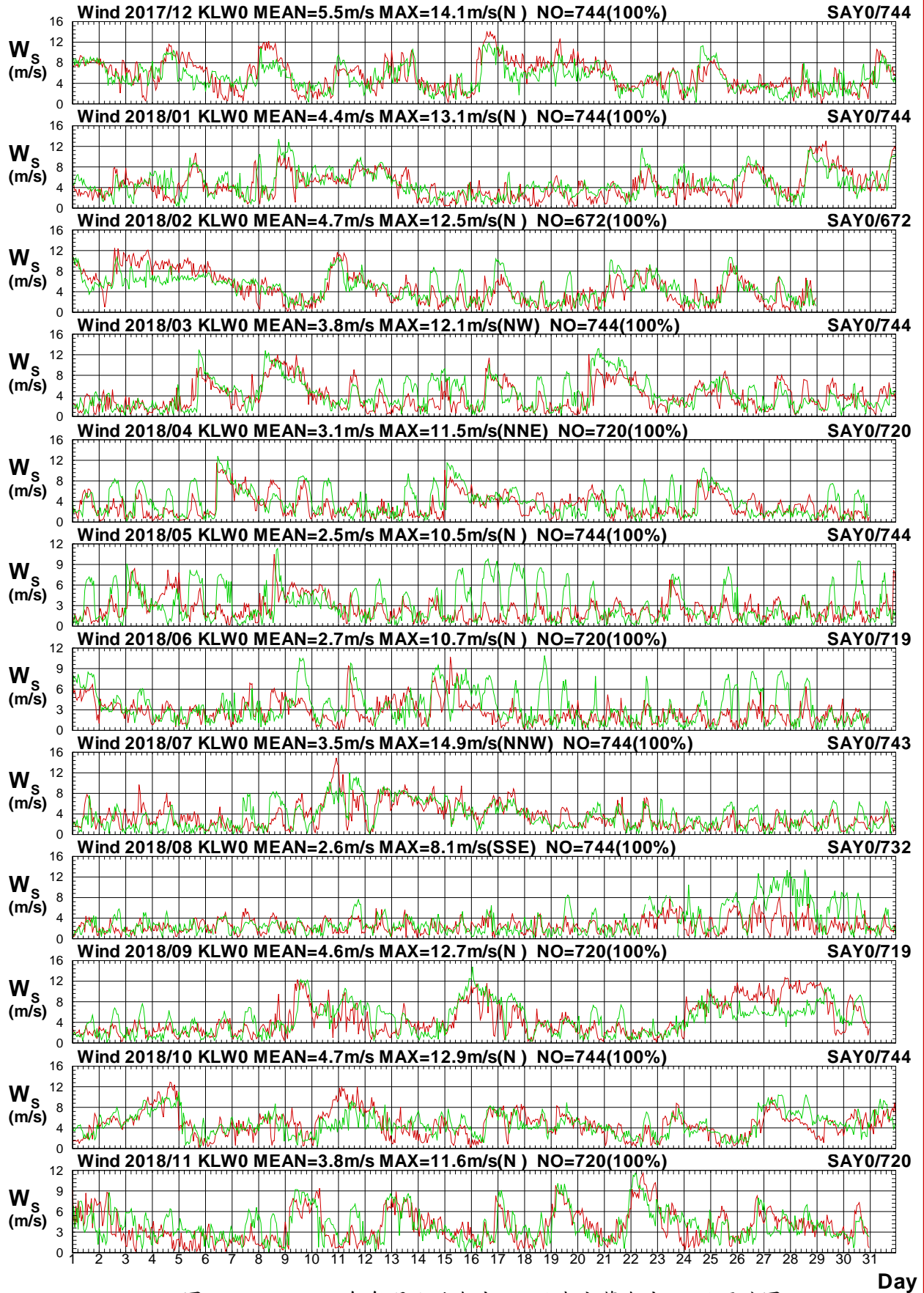


圖 1.3.19a 2018年每月北端海域 W 站與宜蘭海域 Y 站風速圖

W17K LW0.1HA W17CSAY0.1H0 W181K LW0.1HA W181SAY0.1H0 W182K LW0.1HA W182SAY0.1H0  
 W183K LW0.1HA W183SAY0.1H0 W184K LW0.1HA W184SAY0.1H0 W185K LW0.1HA W185SAY0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLOW at 2018

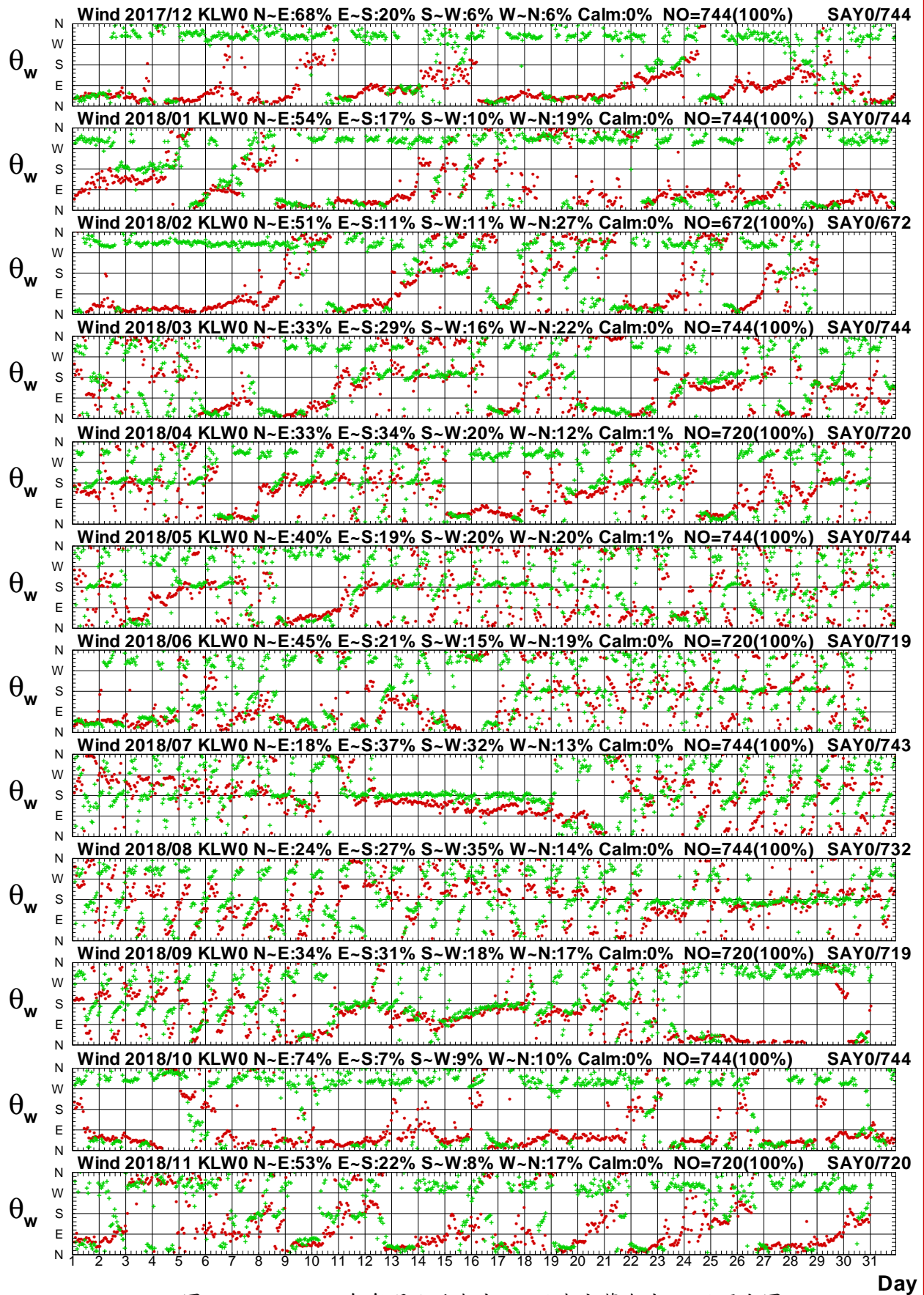


圖 1.3.19b 2018年每月北端海域 W 站與宜蘭海域 Y 站風向圖

W17CKLOW.1HA W17CSAYO.1HO W181KLOW.1HA W181SAYO.1HO W182KLOW.1HA W182SAYO.1HO  
 W183KLOW.1HA W183SAYO.1HO W184KLOW.1HA W184SAYO.1HO W185KLOW.1HA W185SAYO.1HO

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of K LW0 at 2018

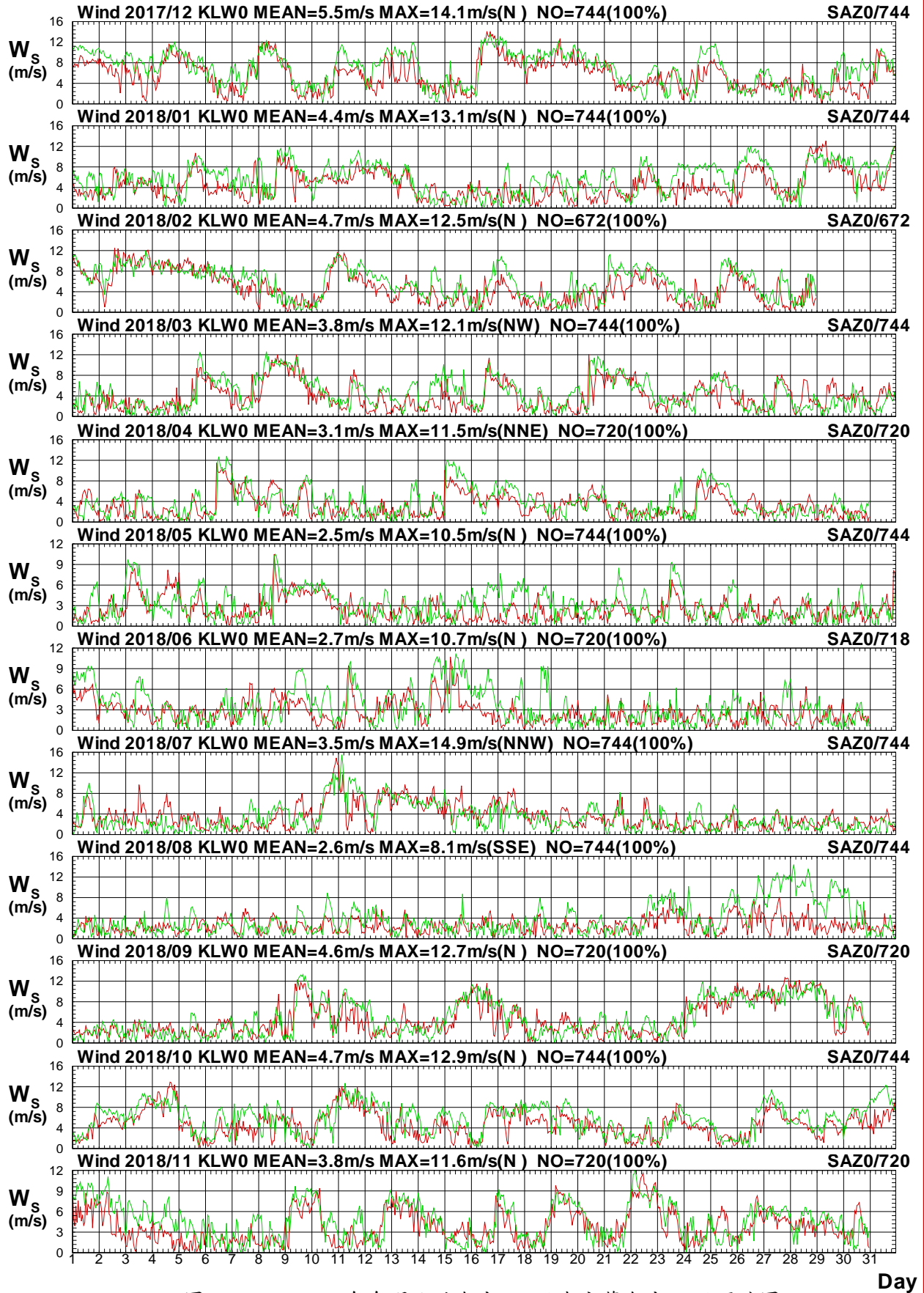


圖 1.3.20a 2018年每月北端海域 W 站與宜蘭海域 Z 站風速圖

W17CLW0.1HA W17CSAZ0.1HO W181KLW0.1HA W181SAZ0.1HO W182KLW0.1HA W182SAZ0.1HO  
W183KLW0.1HA W183SAZ0.1HO W184KLW0.1HA W184SAZ0.1HO W185KLW0.1HA W185SAZ0.1HO

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLR0 at 2018

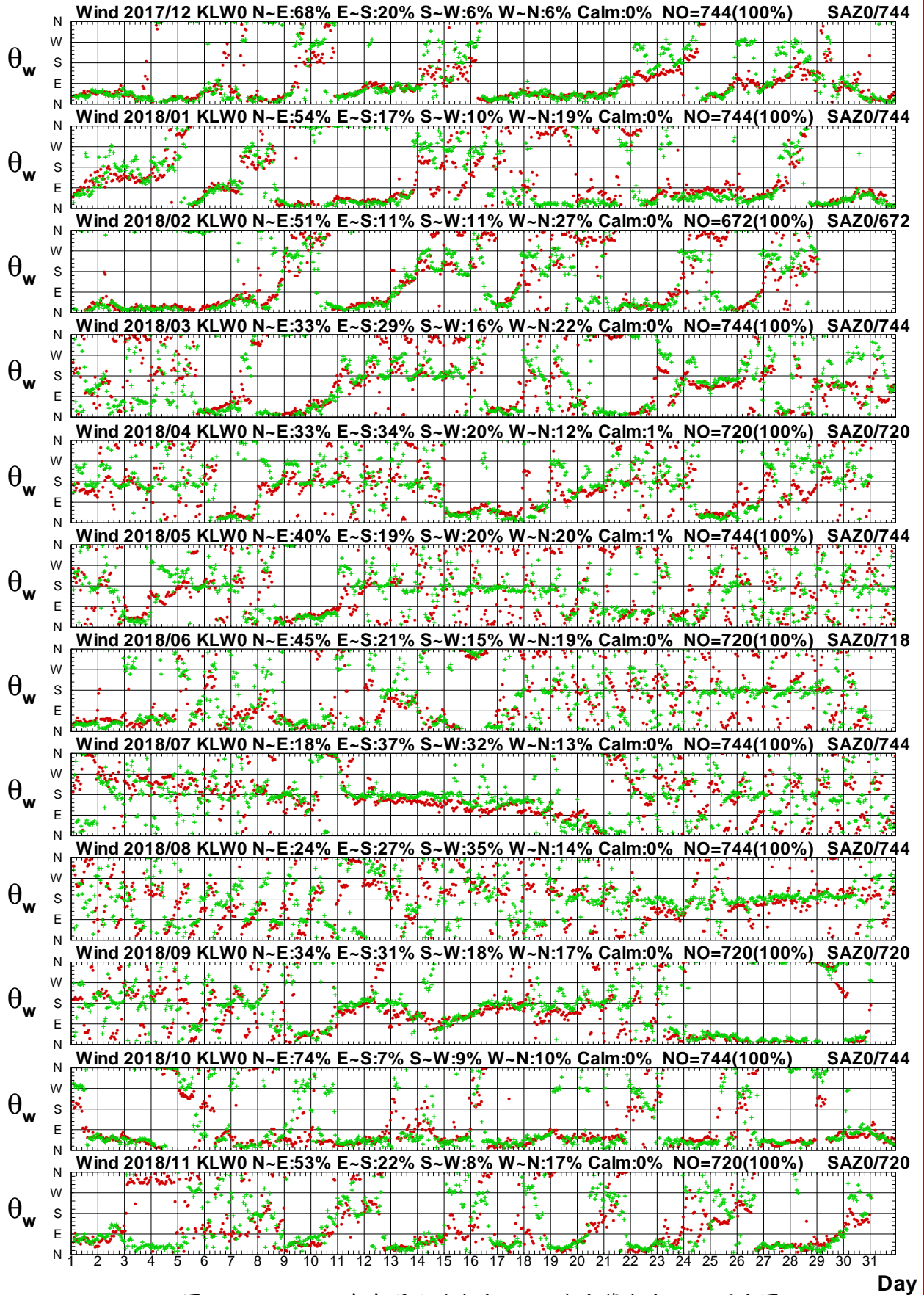


圖 1.3.20b 2018年每月北端海域 W 站與宜蘭海域 Z 站風向圖

W17CKLR0.1HA W17CSAZ0.1HO W181KLR0.1HA W181SAZ0.1HO W182KLR0.1HA W182SAZ0.1HO  
 W183KLR0.1HA W183SAZ0.1HO W184KLR0.1HA W184SAZ0.1HO W185KLR0.1HA W185SAZ0.1HO

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of K LW0 at 2018

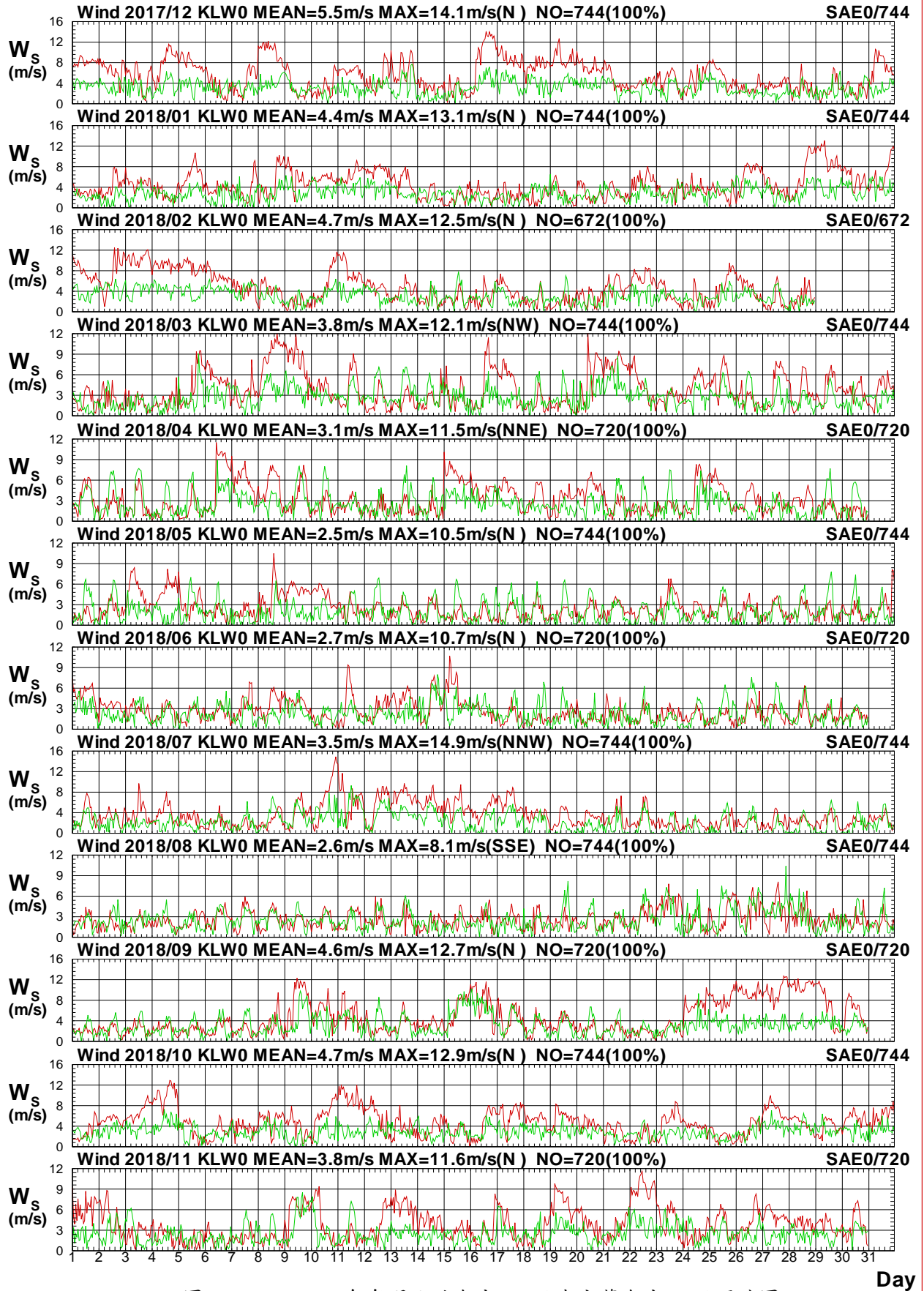


圖1.3.21a 2018年每月北端海域 W 站與宜蘭海域 E 站風速圖

W17CLW0.1HA W17CSAE0.1H0 W181KLW0.1HA W181SAE0.1H0 W182KLW0.1HA W182SAE0.1H0  
 W183KLW0.1HA W183SAE0.1H0 W184KLW0.1HA W184SAE0.1H0 W185KLW0.1HA W185SAE0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLR0 at 2018

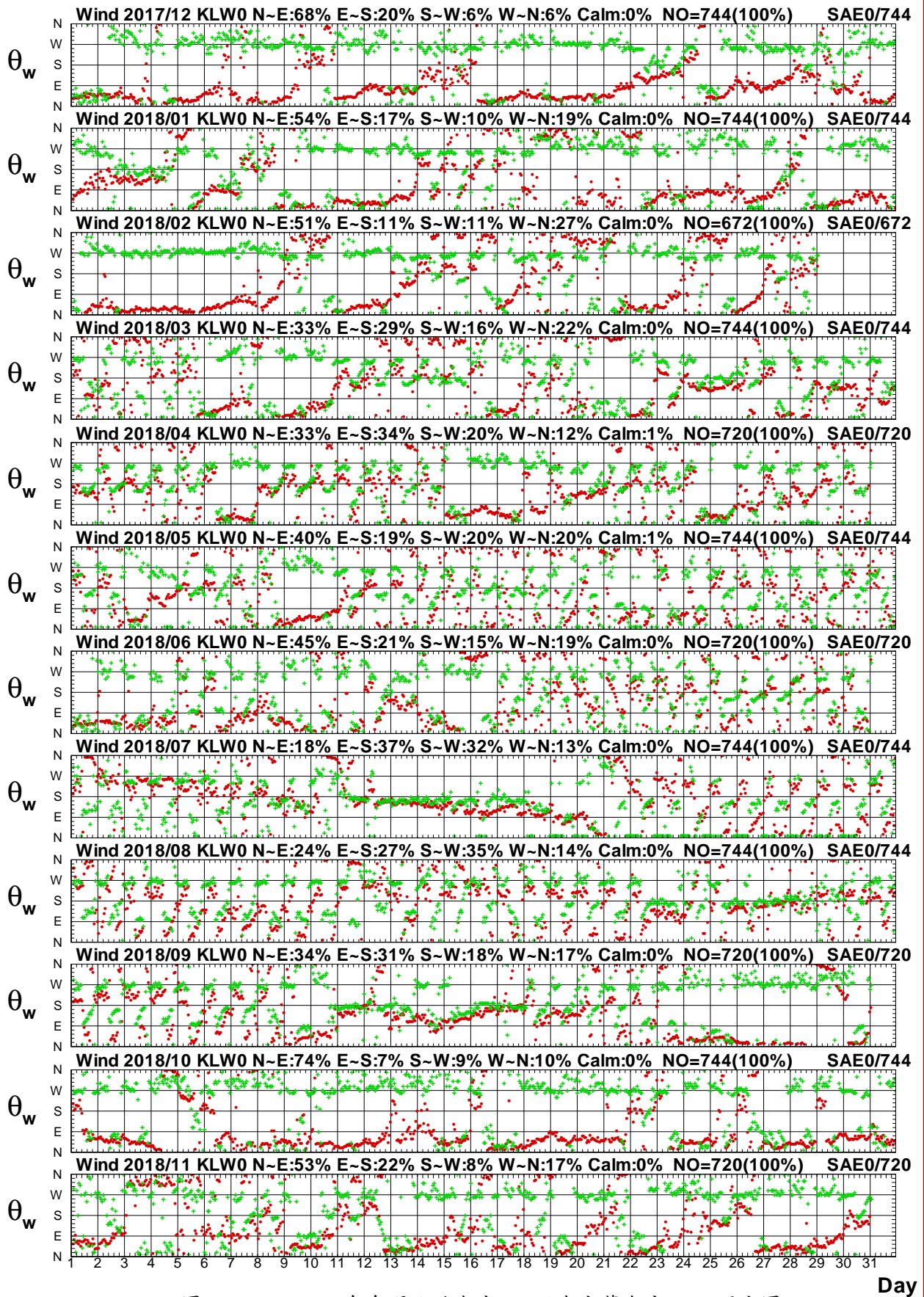


圖 1.3.21b 2018年每月北端海域 W 站與宜蘭海域 E 站風向圖

W17CKLR0.1HA W17CSAE0.1H0 W181KLR0.1HA W181SAE0.1H0 W182KLR0.1HA W182SAE0.1H0  
 W183KLR0.1HA W183SAE0.1H0 W184KLR0.1HA W184SAE0.1H0 W185KLR0.1HA W185SAE0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLOW0 at 2018

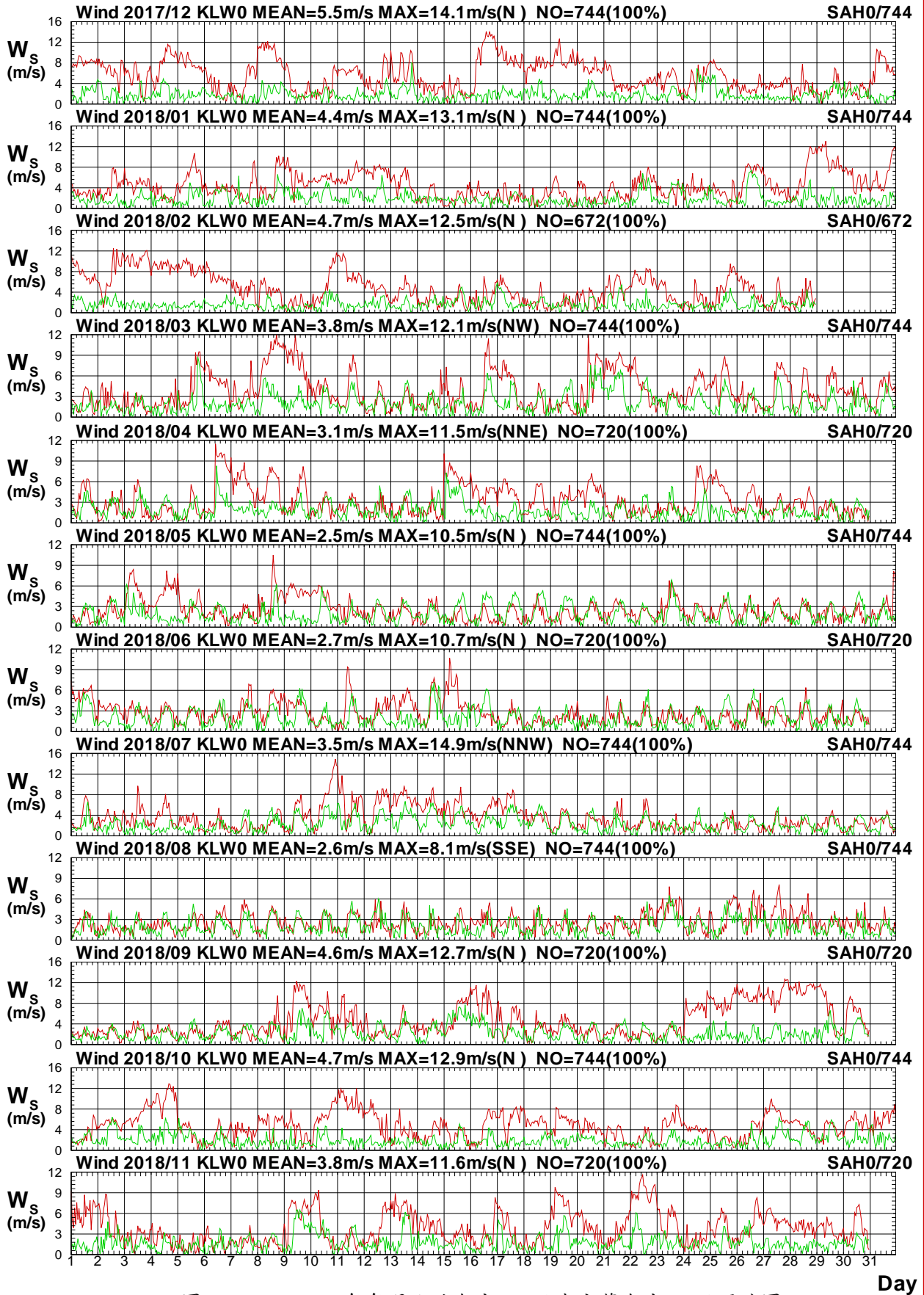


圖 1.3.22a 2018年每月北端海域 W 站與宜蘭海域 H 站風速圖

W17CKLOW0.1HA W17CSAH0.1H0 W181KLOW0.1HA W181SAH0.1H0 W182KLOW0.1HA W182SAH0.1H0  
 W183KLOW0.1HA W183SAH0.1H0 W184KLOW0.1HA W184SAH0.1H0 W185KLOW0.1HA W185SAH0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLOW at 2018

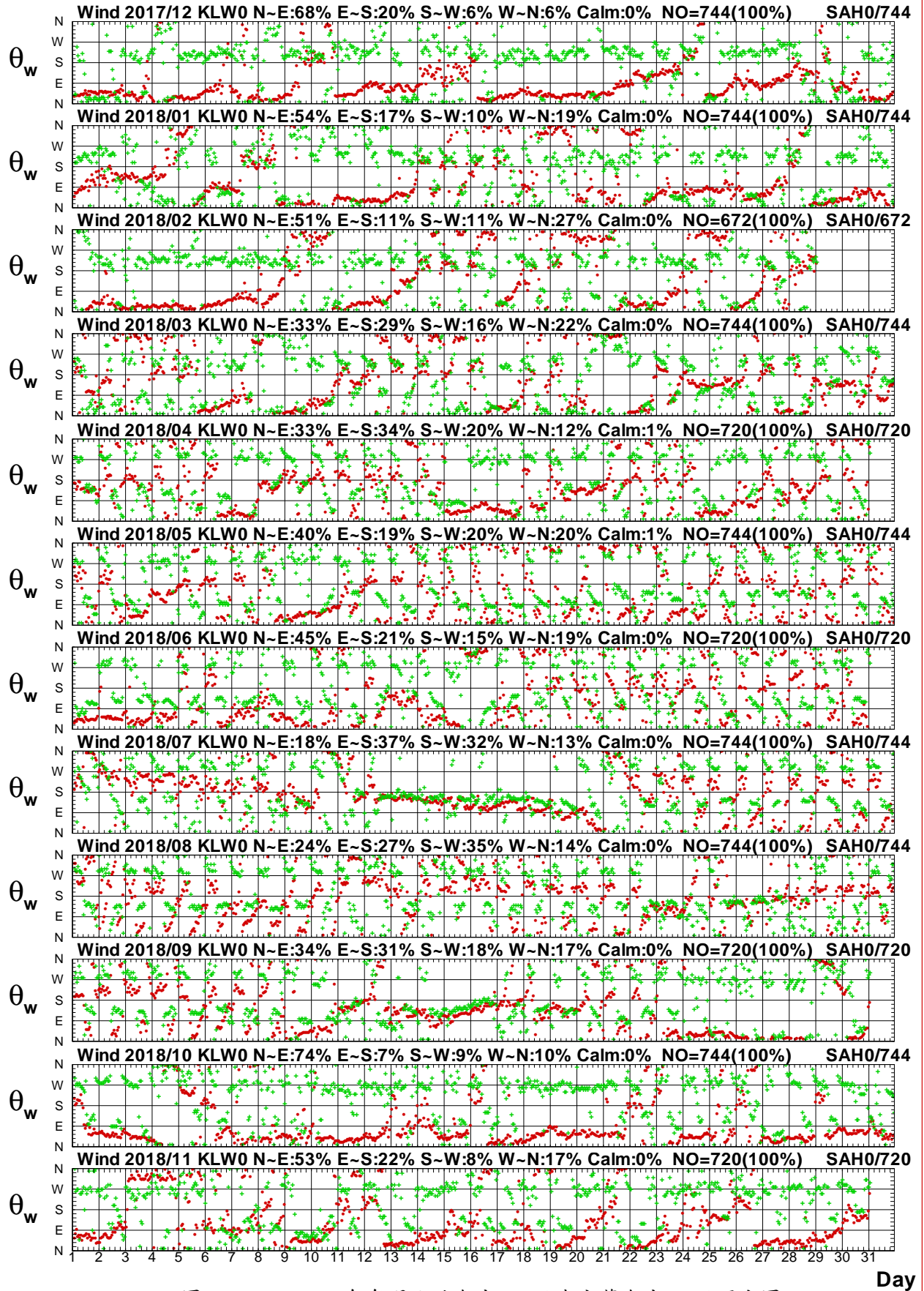


圖 1.3.22b 2018年每月北端海域 W 站與宜蘭海域 H 站風向圖



# Wind Speed in North Seas of K LW0 at 2018

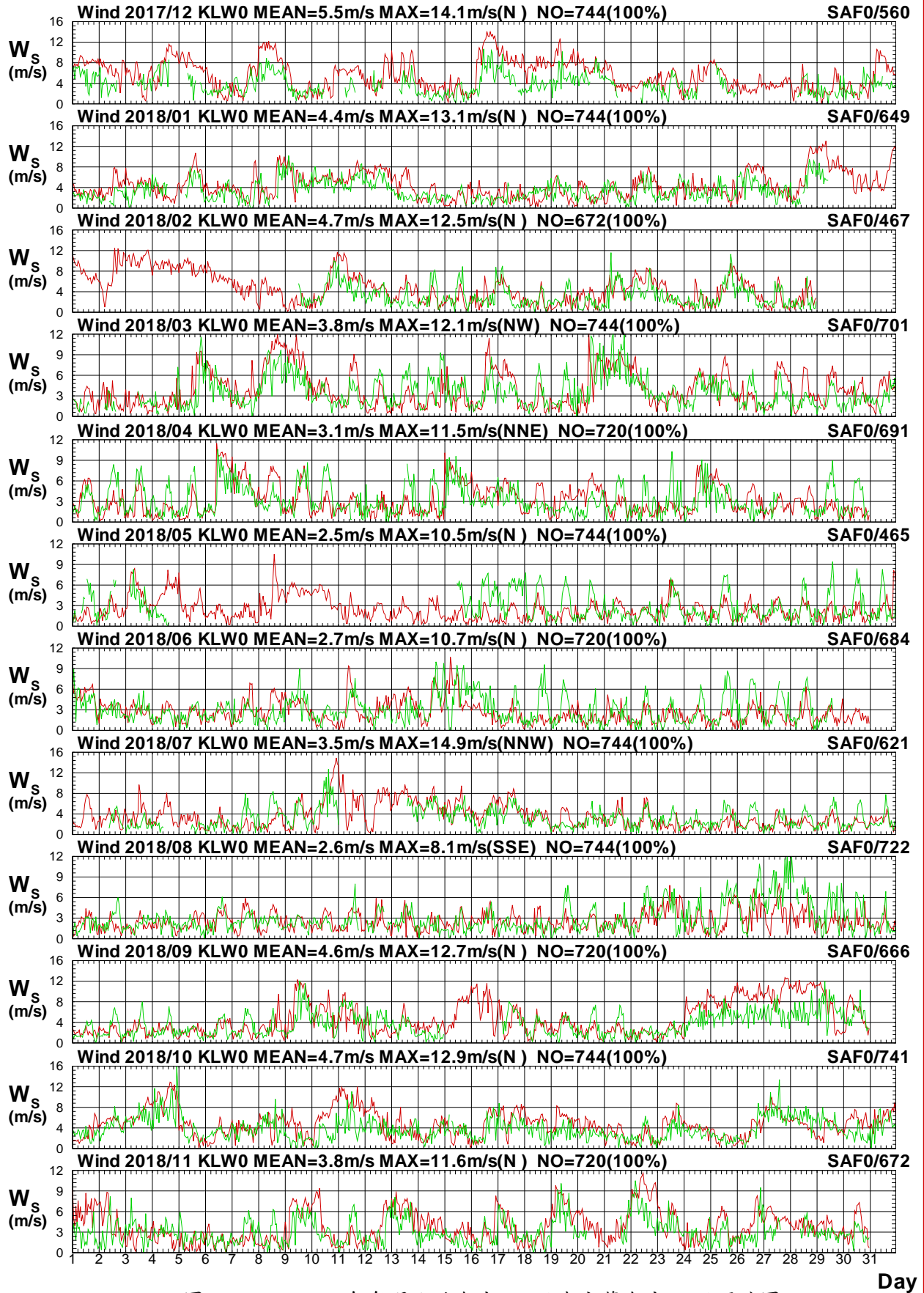


圖 1.3.23a 2018年每月北端海域 W 站與宜蘭海域 F 站風速圖

W17K LW0.1HA W17CSAF0.1HO W181K LW0.1HA W181SAF0.1HO W182K LW0.1HA W182SAF0.1HO  
 W183K LW0.1HA W183SAF0.1HO W184K LW0.1HA W184SAF0.1HO W185K LW0.1HA W185SAF0.1HO

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLOW at 2018

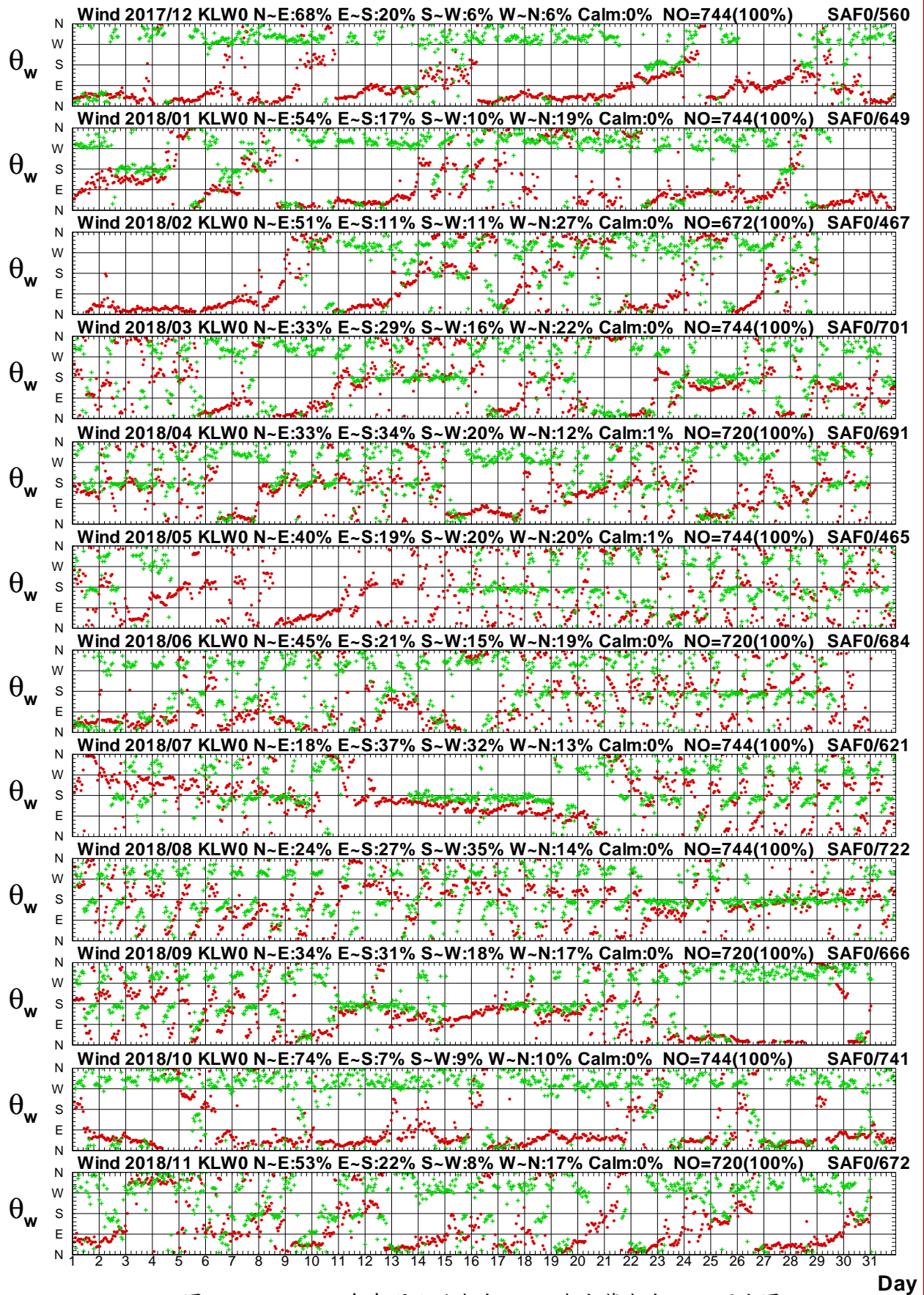


圖 1.3.23b 2018年每月北端海域 W 站與宜蘭海域 F 站風向圖

W17CKLOW.1HA W17CSAF0.1HO W181KLOW.1HA W181SAF0.1HO W182KLOW.1HA W182SAF0.1HO  
 W183KLOW.1HA W183SAF0.1HO W184KLOW.1HA W184SAF0.1HO W185KLOW.1HA W185SAF0.1HO

Institute of Harbor & Marine Technology

## 1.4 2018 年北端海域風力**主要測站 2**(修補後)與 **其他測站**(修補前)每月風力歷線比較圖



# Wind Speed in North Seas of KLY0 at 2018

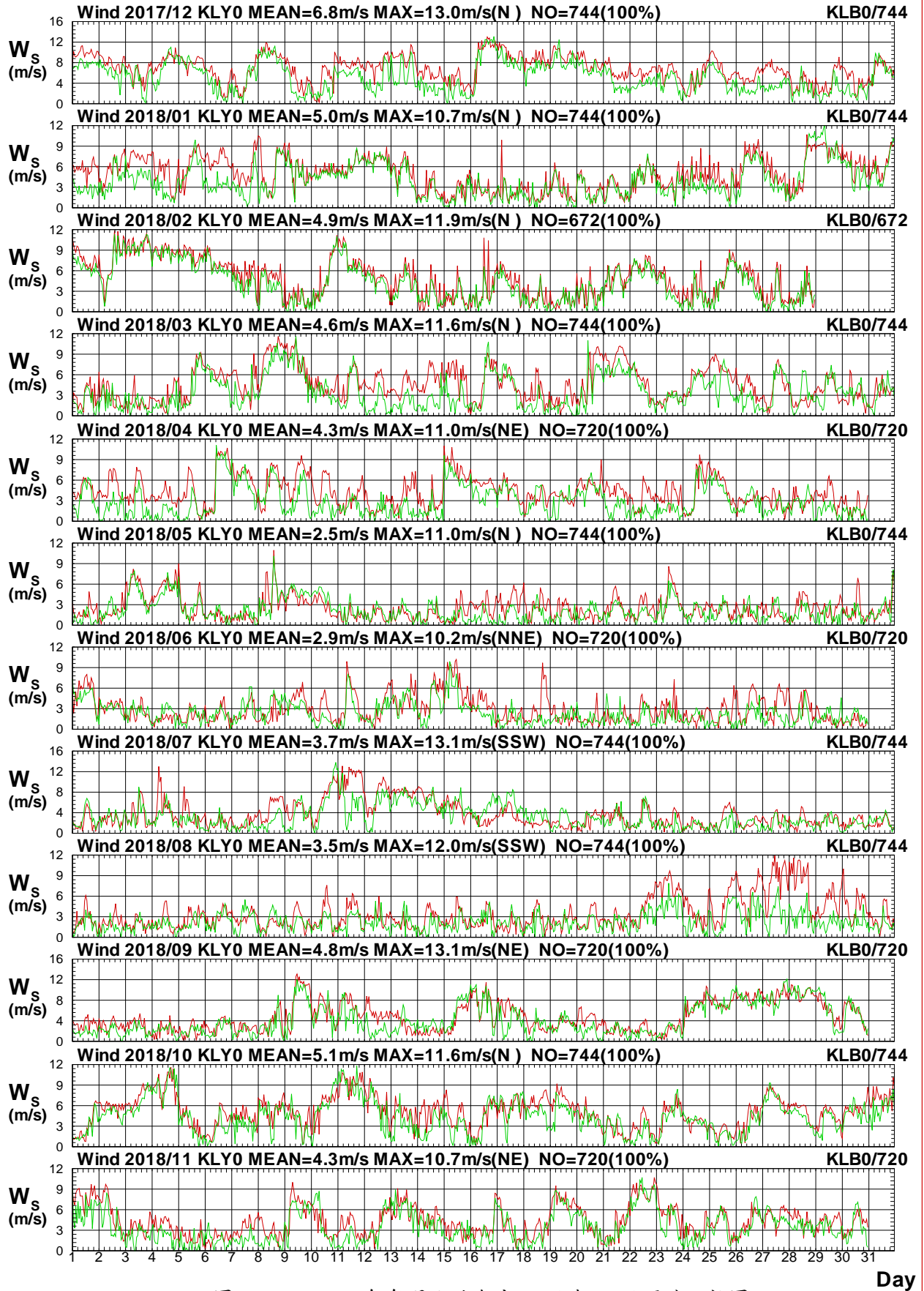


圖1.4.1a 2018年每月北端海域 Y 站與 B 站風速比較圖

W17CKLY0.1HA W17CKLB0.1H0 W181KLY0.1HA W181KLB0.1H0 W182KLY0.1HA W182KLB0.1H0  
 W183KLY0.1HA W183KLB0.1H0 W184KLY0.1HA W184KLB0.1H0 W185KLY0.1HA W185KLB0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLY0 at 2018

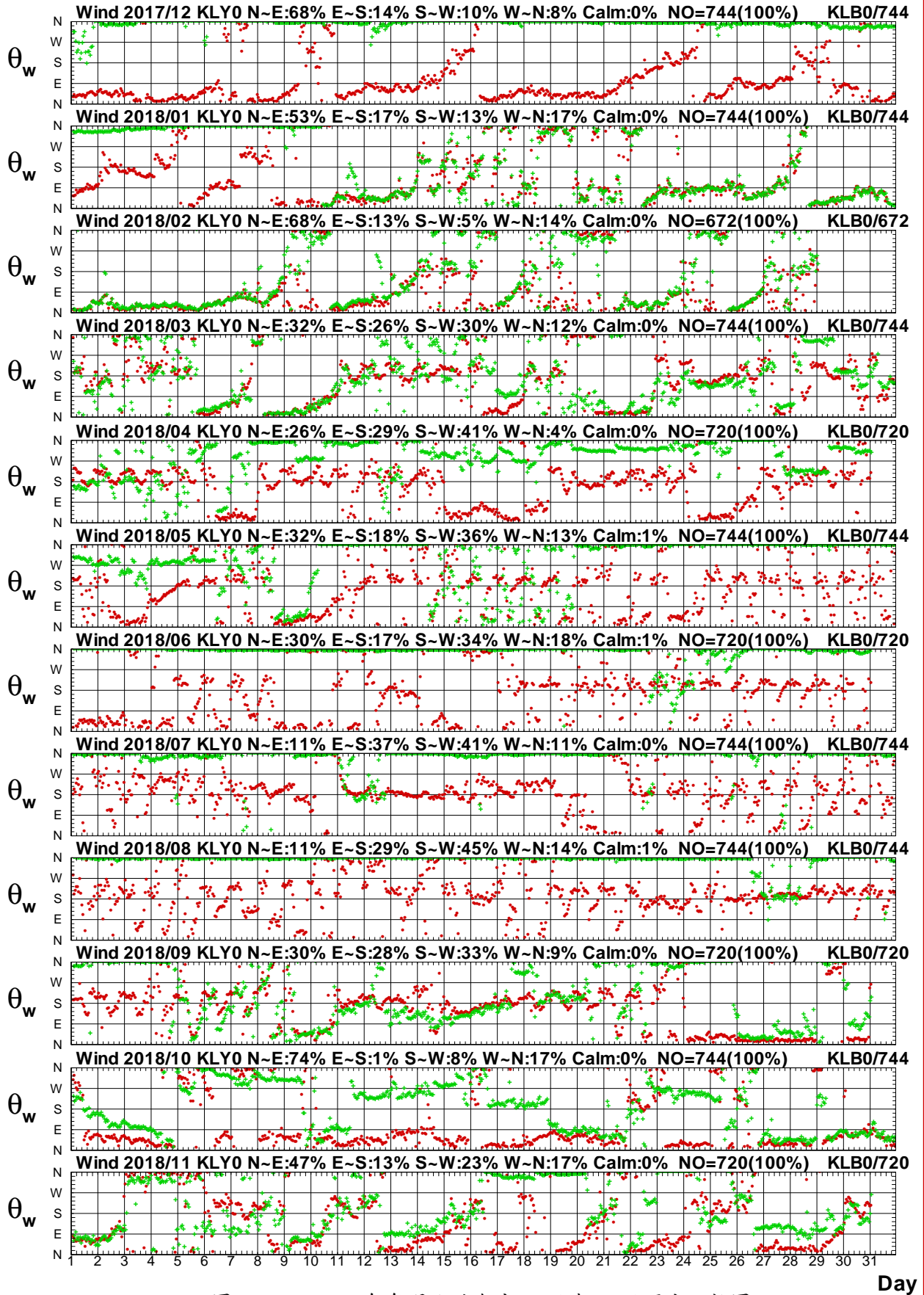


圖1.4.1b 2018年每月北端海域 Y 站與 B 站風向比較圖

W17CKLY0.1HA W17CKLB0.1H0 W181KLY0.1HA W181KLB0.1H0 W182KLY0.1HA W182KLB0.1H0  
 W183KLY0.1HA W183KLB0.1H0 W184KLY0.1HA W184KLB0.1H0 W185KLY0.1HA W185KLB0.1H0

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of KLY0 at 2018

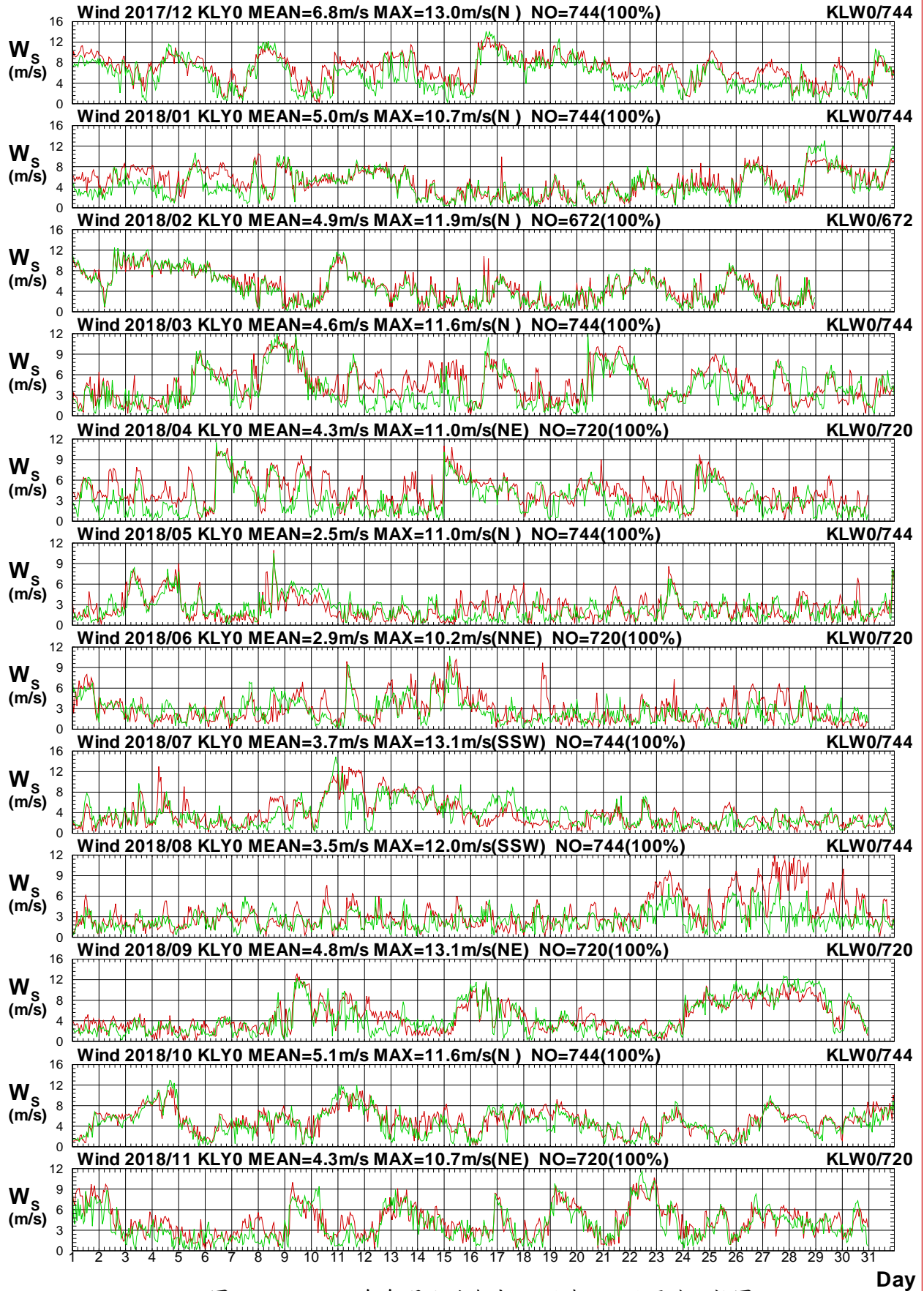


圖1.4.2a 2018年每月北端海域 Y 站與 W 站風速比較圖

W17CKLY0.1HA W17CKLW0.1HO W181KLY0.1HA W181KLW0.1HO W182KLY0.1HA W182KLW0.1HO  
 W183KLY0.1HA W183KLW0.1HO W184KLY0.1HA W184KLW0.1HO W185KLY0.1HA W185KLW0.1HO

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLY0 at 2018

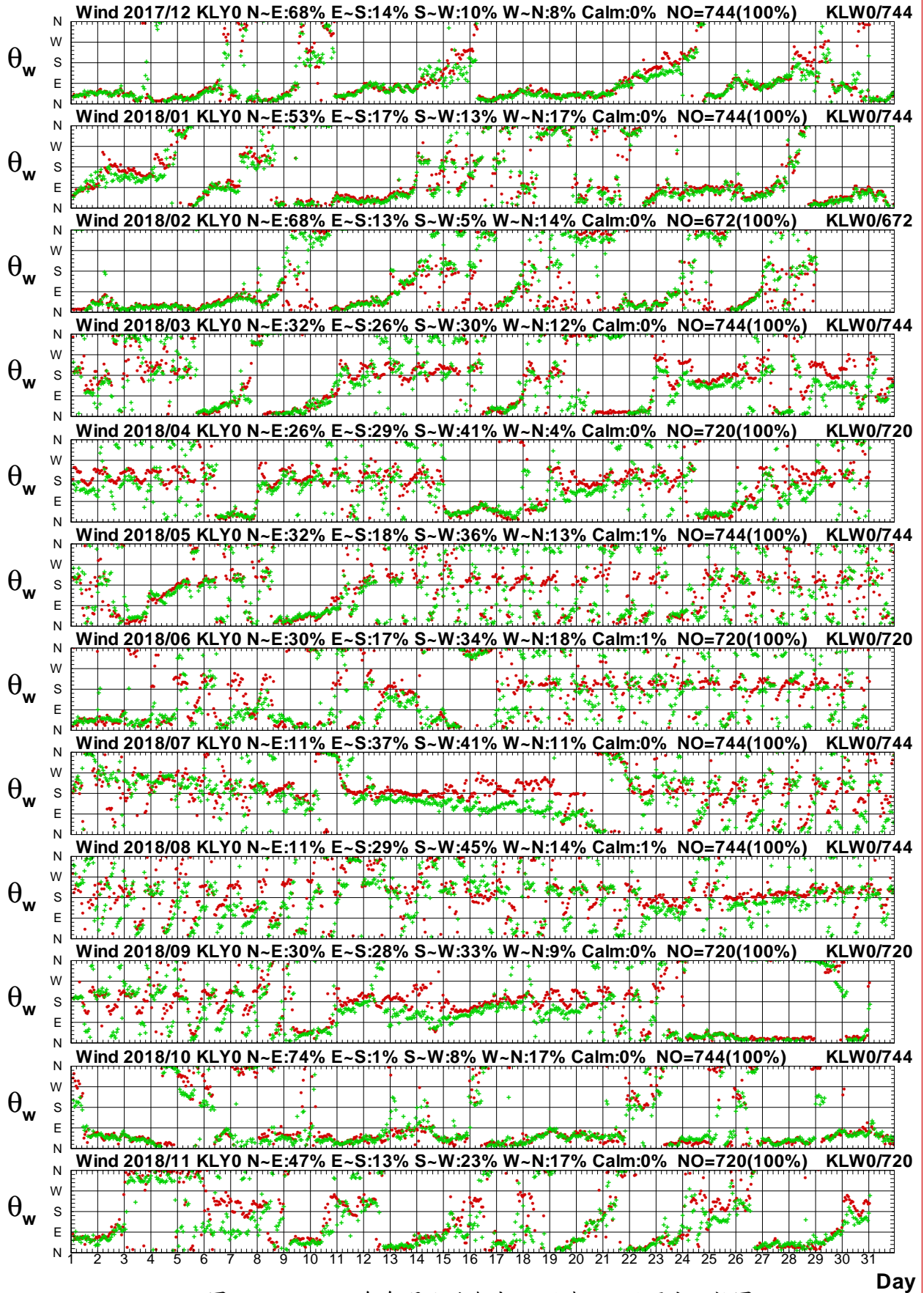


圖1.4.2b 2018年每月北端海域 Y 站與 W 站風向比較圖

W17CKLY0.1HA W17CKLW0.1HO W181KLY0.1HA W181KLW0.1HO W182KLY0.1HA W182KLW0.1HO  
 W183KLY0.1HA W183KLW0.1HO W184KLY0.1HA W184KLW0.1HO W185KLY0.1HA W185KLW0.1HO

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLY0 at 2018

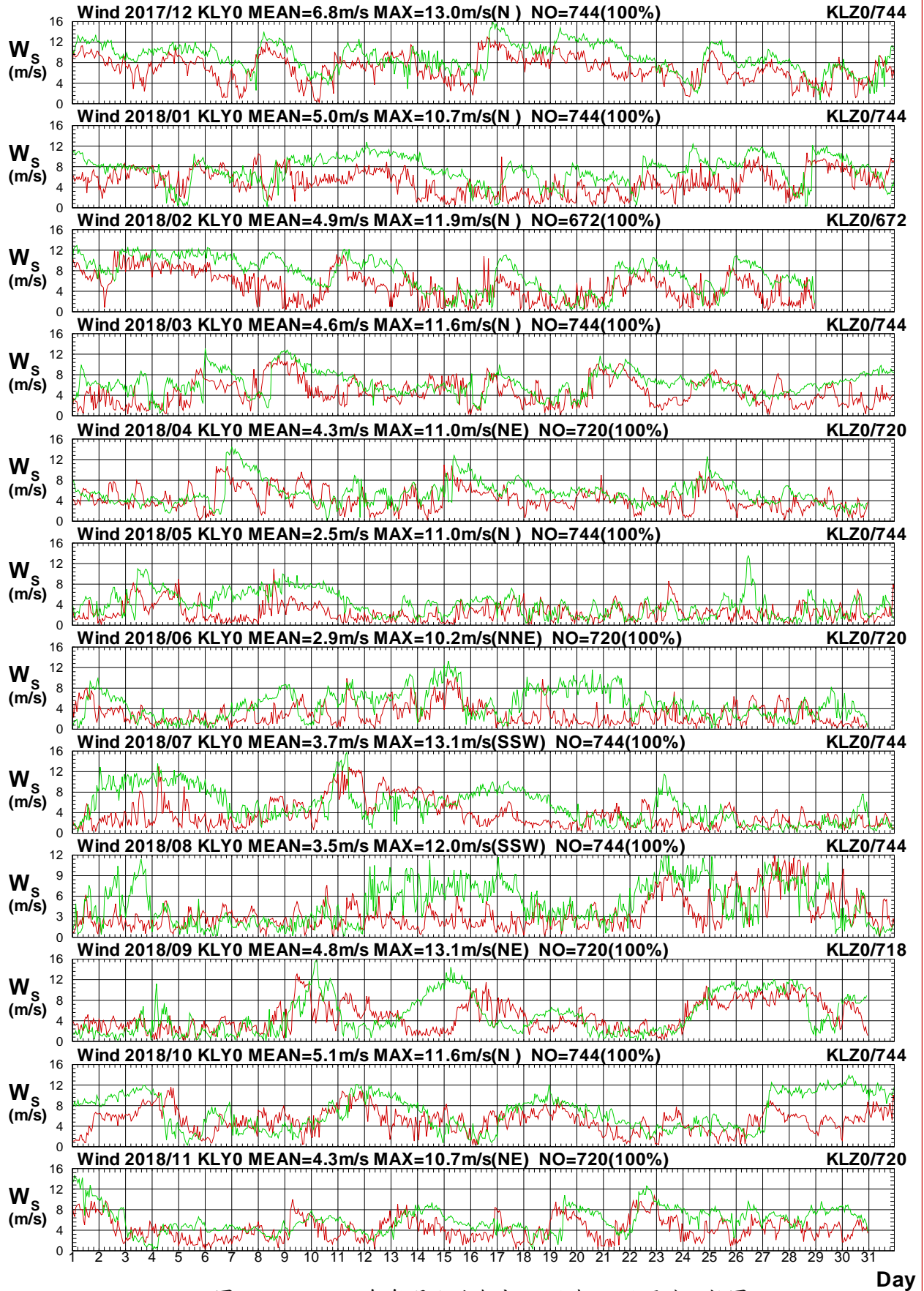


圖1.4.3a 2018年每月北端海域 Y 站與 Z 站風速比較圖

W17CKLY0.1HA W17CKLZ0.1HO W181KLY0.1HA W181KLZ0.1HO W182KLY0.1HA W182KLZ0.1HO  
 W183KLY0.1HA W183KLZ0.1HO W184KLY0.1HA W184KLZ0.1HO W185KLY0.1HA W185KLZ0.1HO

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLY0 at 2018

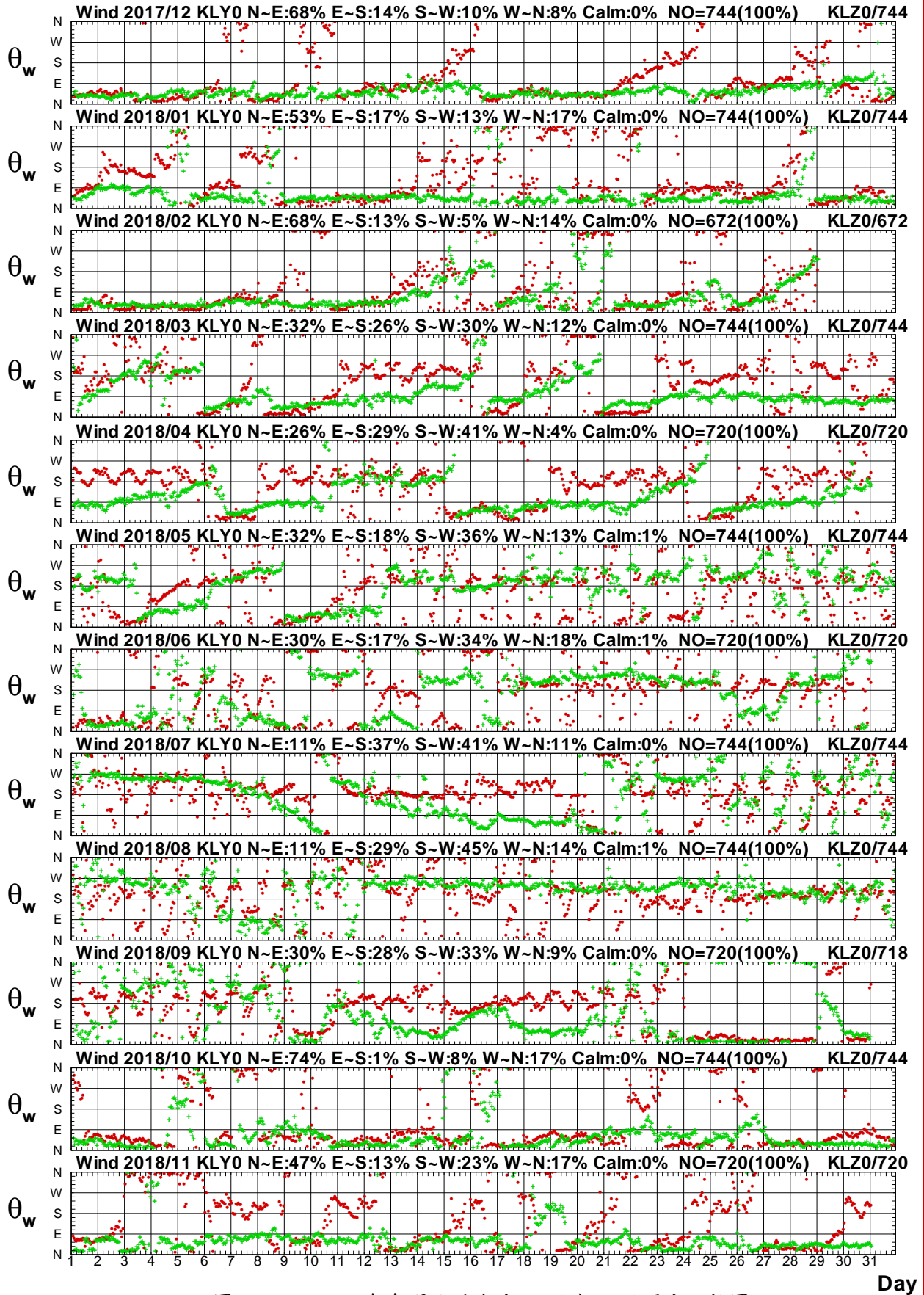


圖1.4.3b 2018年每月北端海域 Y 站與 Z 站風向比較圖

W17CKLY0.1HA W17CKLZ0.1H0 W181KLY0.1HA W181KLZ0.1H0 W182KLY0.1HA W182KLZ0.1H0  
 W183KLY0.1HA W183KLZ0.1H0 W184KLY0.1HA W184KLZ0.1H0 W185KLY0.1HA W185KLZ0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLY0 at 2018

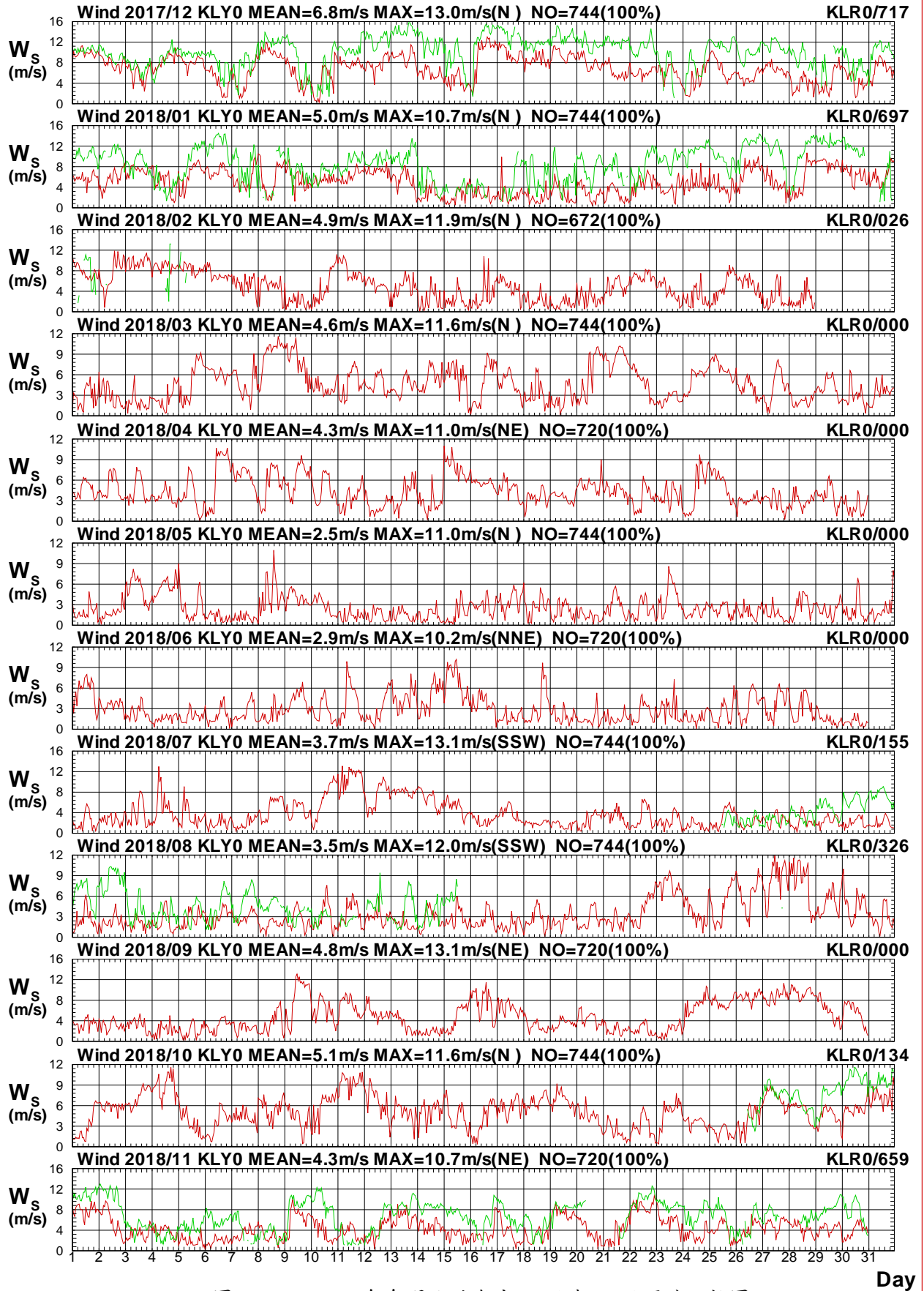


圖1.4.4a 2018年每月北端海域 Y 站與 R 站風速比較圖

W17CKLY0.1HA W17CKLR0.1H0 W181KLY0.1HA W181KLR0.1H0 W182KLY0.1HA W182KLR0.1H0  
 W183KLY0.1HA W183KLR0.1H0 W184KLY0.1HA W184KLR0.1H0 W185KLY0.1HA W185KLR0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLY0 at 2018

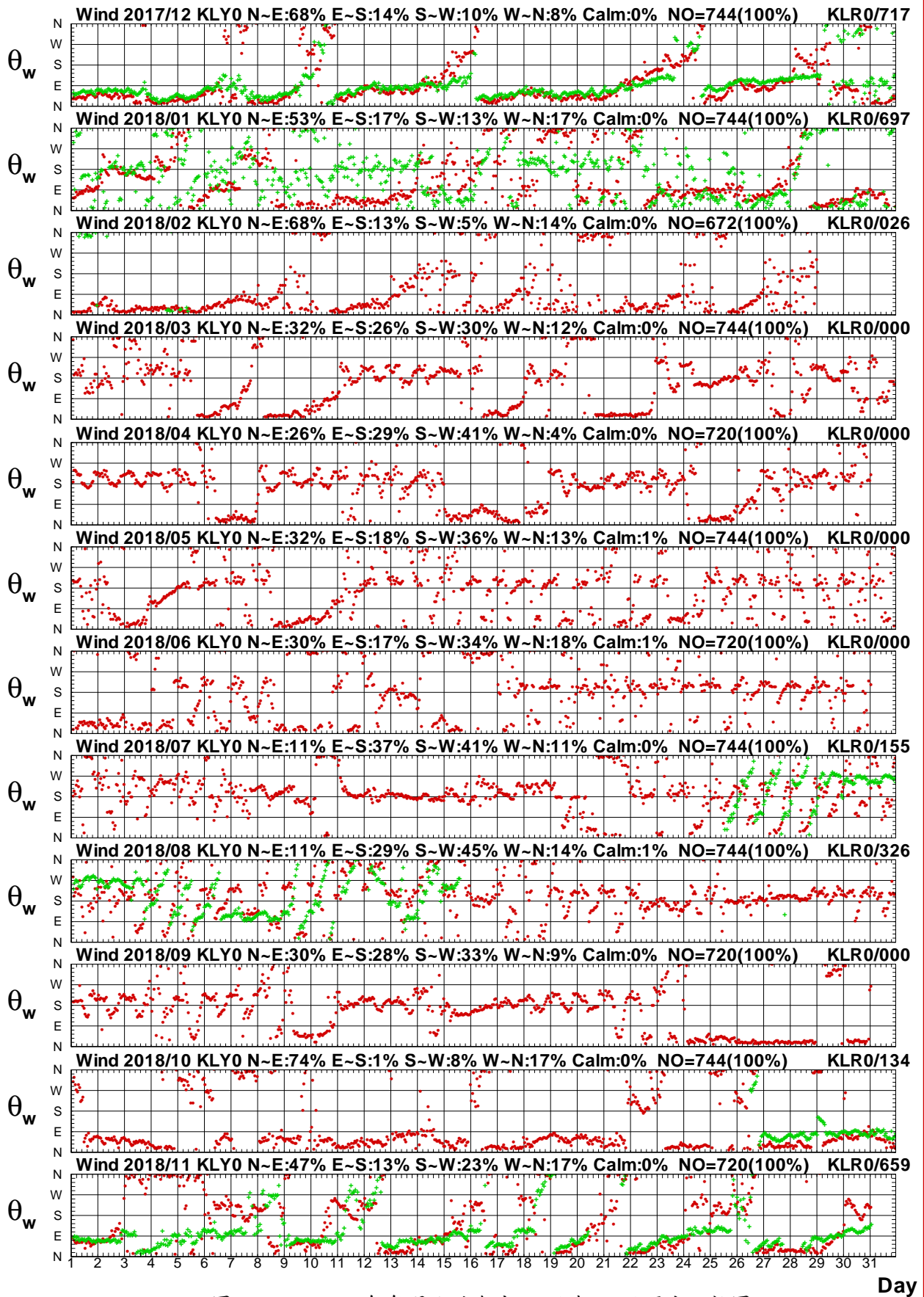


圖1.4.4b 2018年每月北端海域 Y 站與 R 站風向比較圖

W17CKLY0.1HA W17CKLR0.1H0 W181KLY0.1HA W181KLR0.1H0 W182KLY0.1HA W182KLR0.1H0  
 W183KLY0.1HA W183KLR0.1H0 W184KLY0.1HA W184KLR0.1H0 W185KLY0.1HA W185KLR0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLY0 at 2018

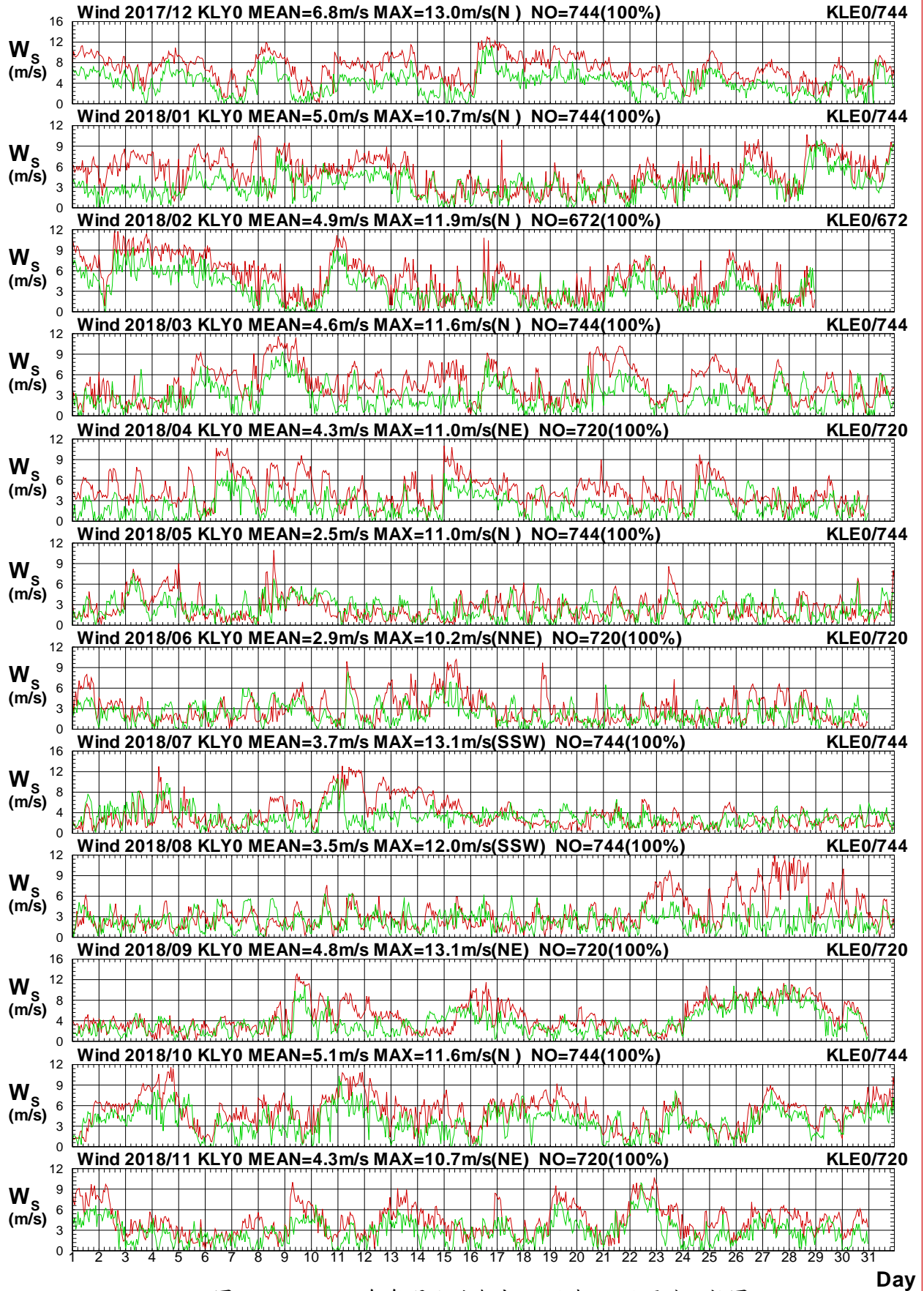


圖1.4.5a 2018年每月北端海域 Y 站與 E 站風速比較圖

W17CKLY0.1HA W17CKLE0.1H0 W181KLY0.1HA W181KLE0.1H0 W182KLY0.1HA W182KLE0.1H0  
 W183KLY0.1HA W183KLE0.1H0 W184KLY0.1HA W184KLE0.1H0 W185KLY0.1HA W185KLE0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLY0 at 2018

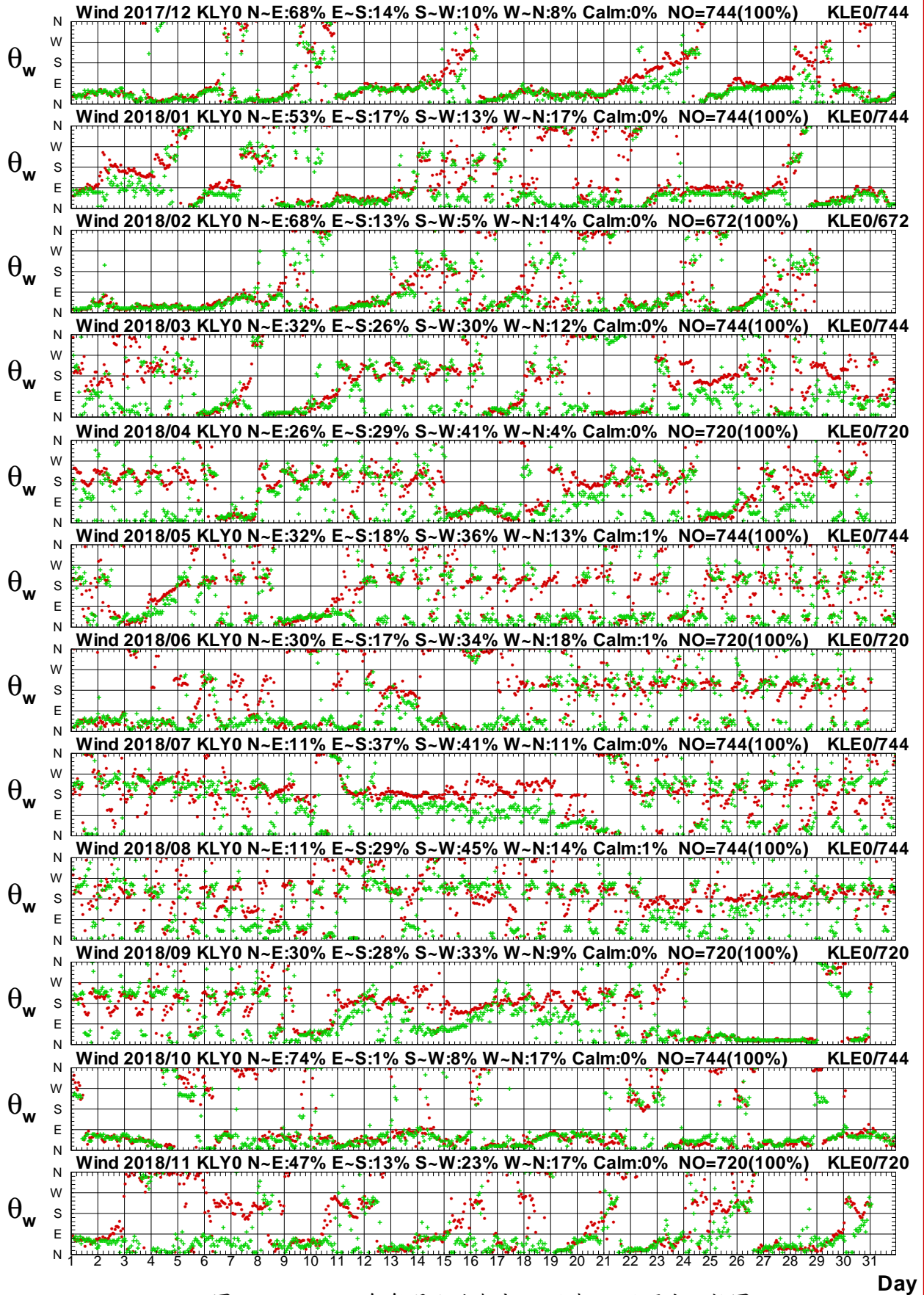


圖1.4.5b 2018年每月北端海域 Y 站與 E 站風向比較圖

W17CKLY0.1HA W17CKLE0.1H0 W181KLY0.1HA W181KLE0.1H0 W182KLY0.1HA W182KLE0.1H0  
 W183KLY0.1HA W183KLE0.1H0 W184KLY0.1HA W184KLE0.1H0 W185KLY0.1HA W185KLE0.1H0

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of KLY0 at 2018

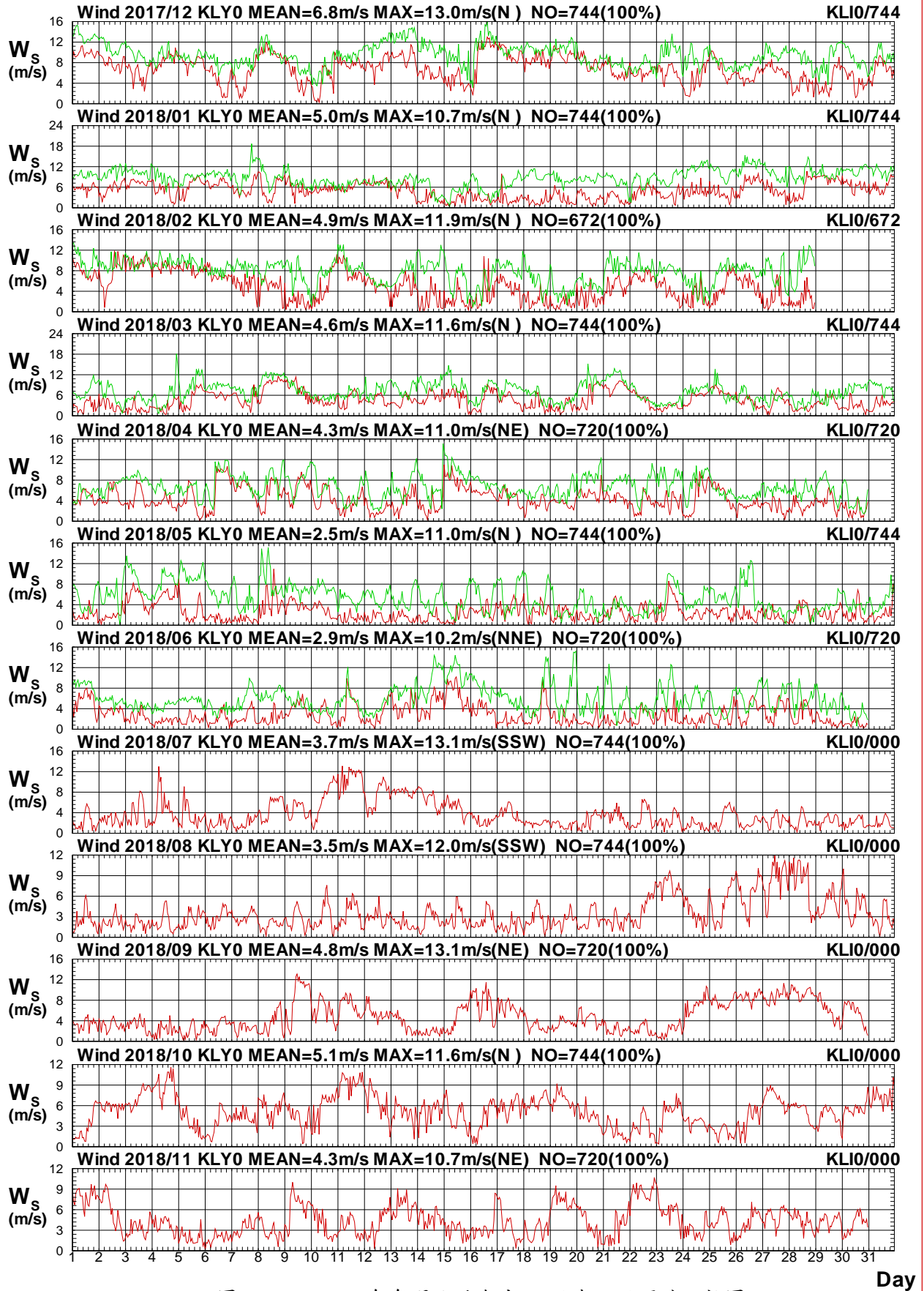


圖1.4.6a 2018年每月北端海域 Y 站與 I 站風速比較圖

W17CKLY0.1HA W17CKLI0.1H0 W181KLY0.1HA W181KLI0.1H0 W182KLY0.1HA W182KLI0.1H0  
 W183KLY0.1HA W183KLI0.1H0 W184KLY0.1HA W184KLI0.1H0 W185KLY0.1HA W185KLI0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLY0 at 2018

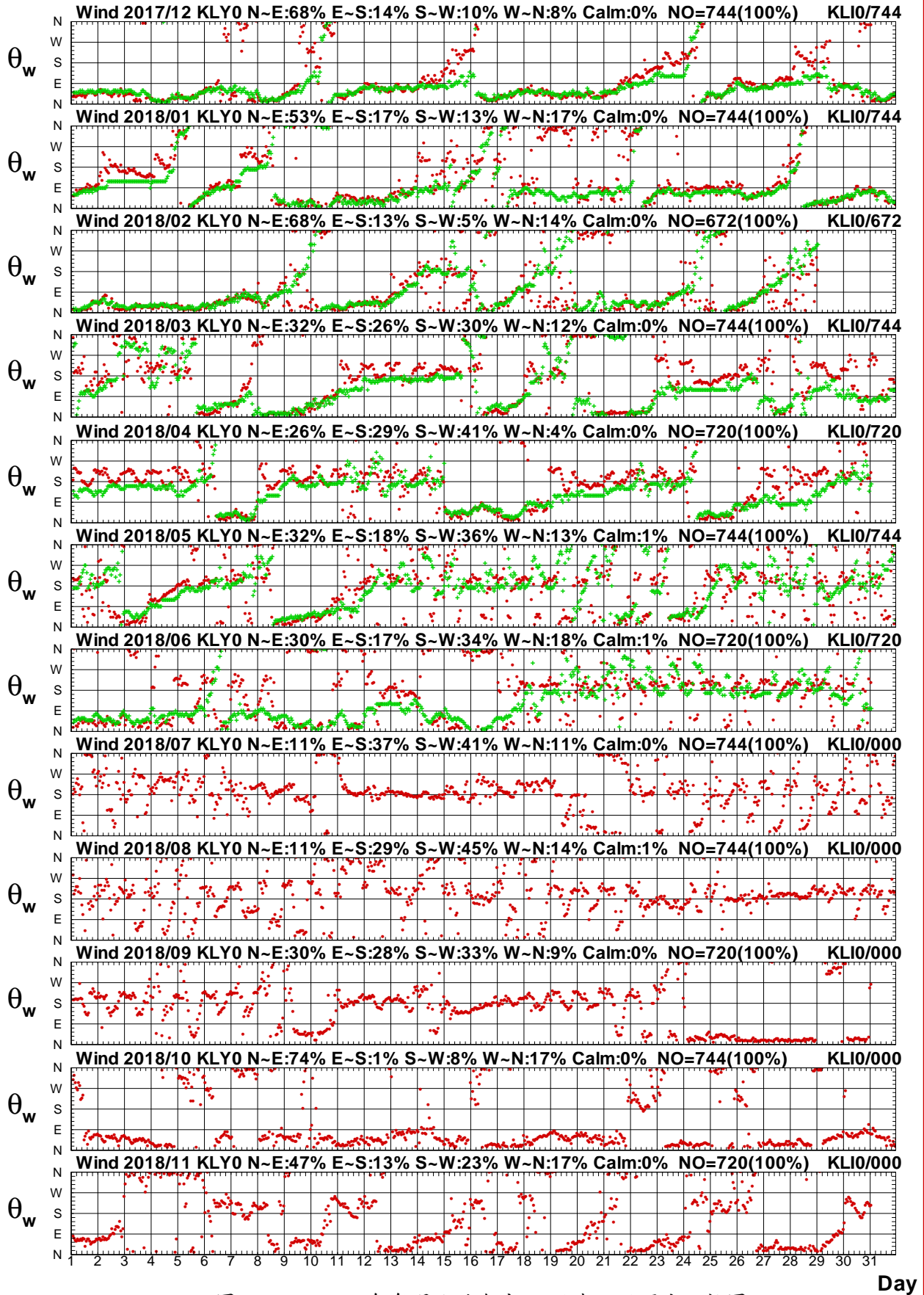


圖1.4.6b 2018年每月北端海域 Y 站與 I 站風向比較圖

W17CKLY0.1HA W17CKLI0.1H0 W181KLY0.1HA W181KLI0.1H0 W182KLY0.1HA W182KLI0.1H0  
 W183KLY0.1HA W183KLI0.1H0 W184KLY0.1HA W184KLI0.1H0 W185KLY0.1HA W185KLI0.1H0

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of KLY0 at 2018

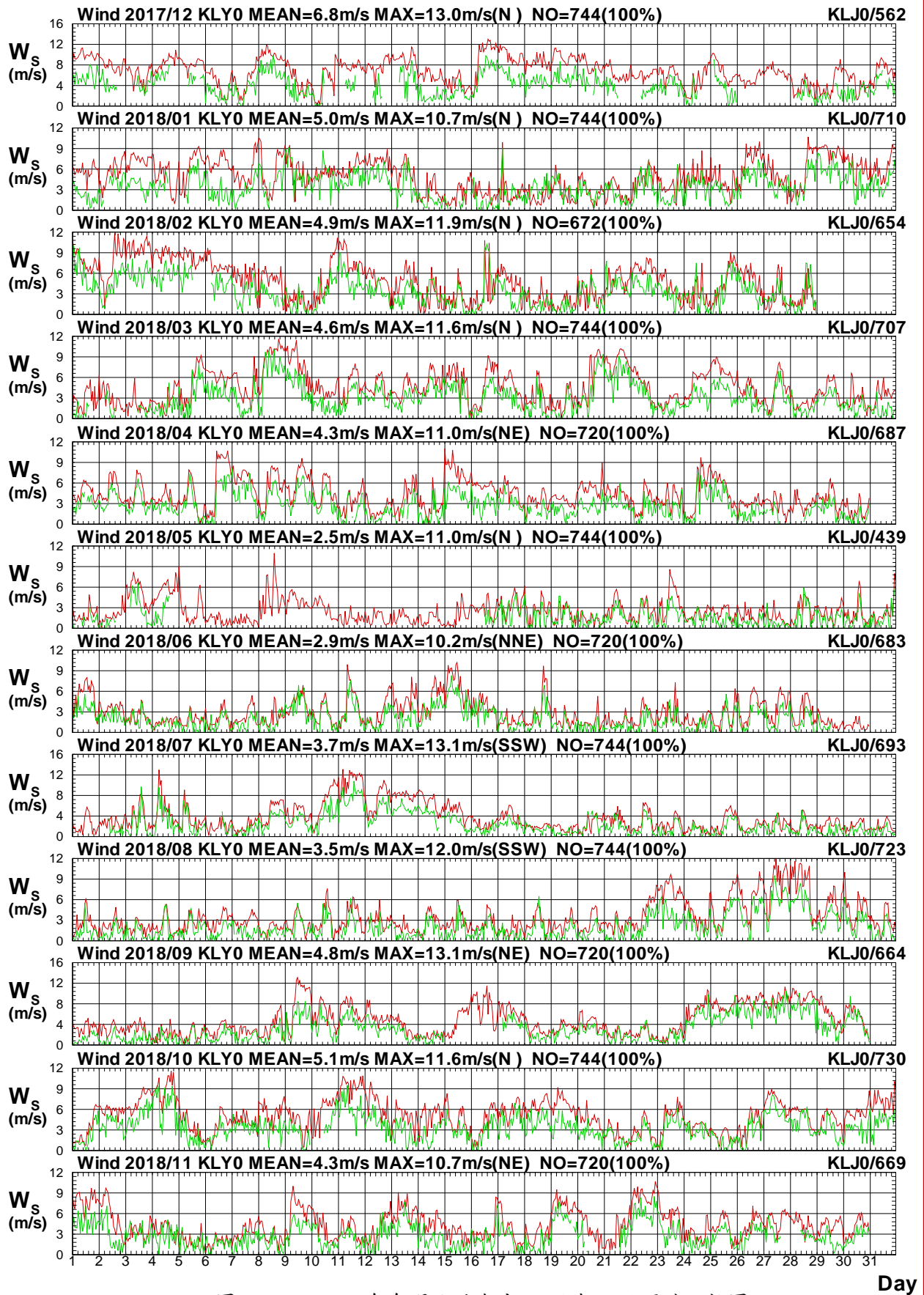


圖1.4.7a 2018年每月北端海域 Y 站與 J 站風速比較圖

W17CKLY0.1HA W17CKLJ0.1H0 W181KLY0.1HA W181KLJ0.1H0 W182KLY0.1HA W182KLJ0.1H0  
 W183KLY0.1HA W183KLJ0.1H0 W184KLY0.1HA W184KLJ0.1H0 W185KLY0.1HA W185KLJ0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLY0 at 2018

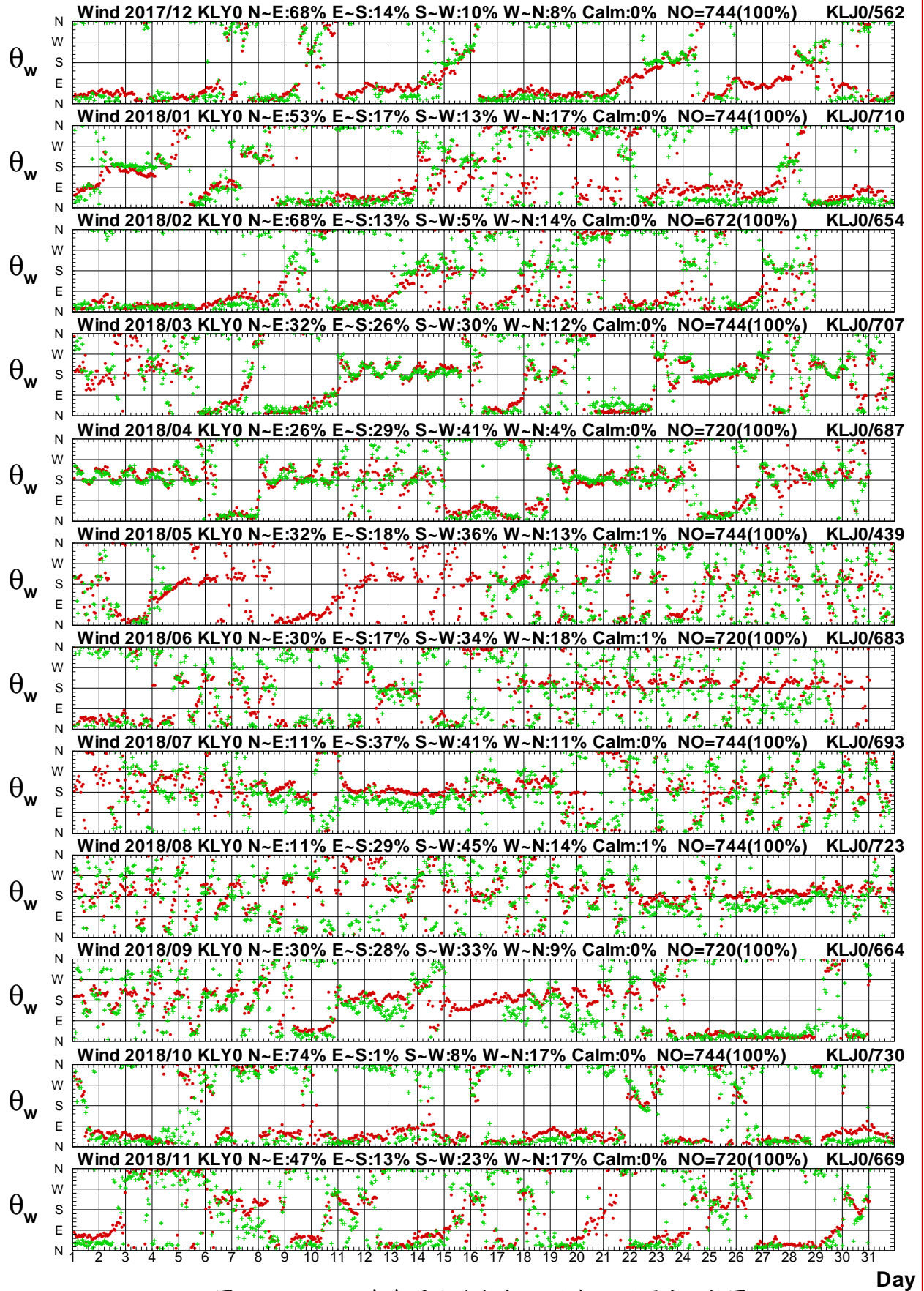


圖1.4.7b 2018年每月北端海域 Y 站與 J 站風向比較圖

W17CKLY0.1HA W17CKLJ0.1H0 W181KLY0.1HA W181KLJ0.1H0 W182KLY0.1HA W182KLJ0.1H0  
 W183KLY0.1HA W183KLJ0.1H0 W184KLY0.1HA W184KLJ0.1H0 W185KLY0.1HA W185KLJ0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLY0 at 2018

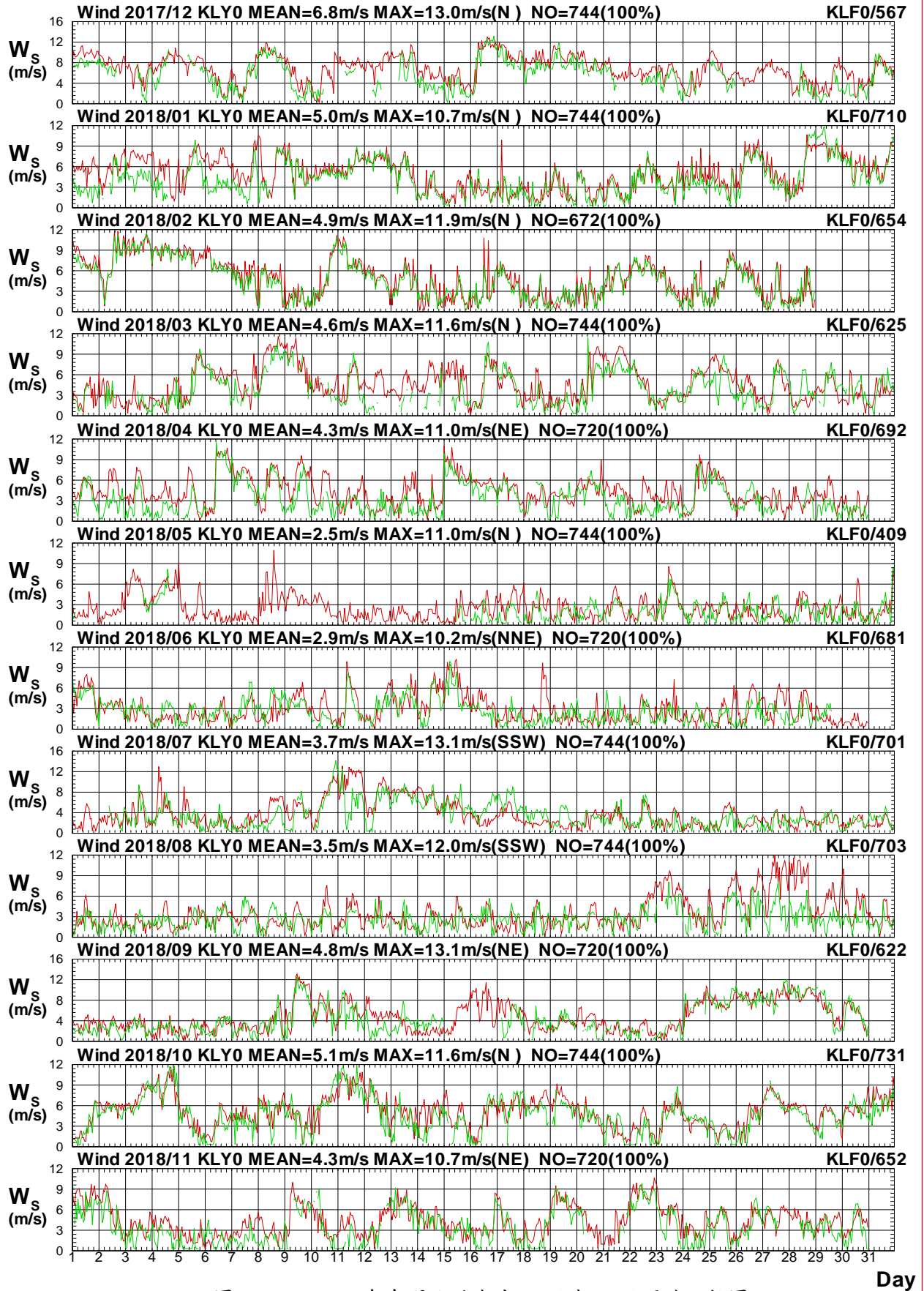


圖1.4.8a 2018年每月北端海域 Y 站與 F 站風速比較圖

W17CKLY0.1HA W17CKLF0.1H0 W181KLY0.1HA W181KLF0.1H0 W182KLY0.1HA W182KLF0.1H0  
 W183KLY0.1HA W183KLF0.1H0 W184KLY0.1HA W184KLF0.1H0 W185KLY0.1HA W185KLF0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLY0 at 2018

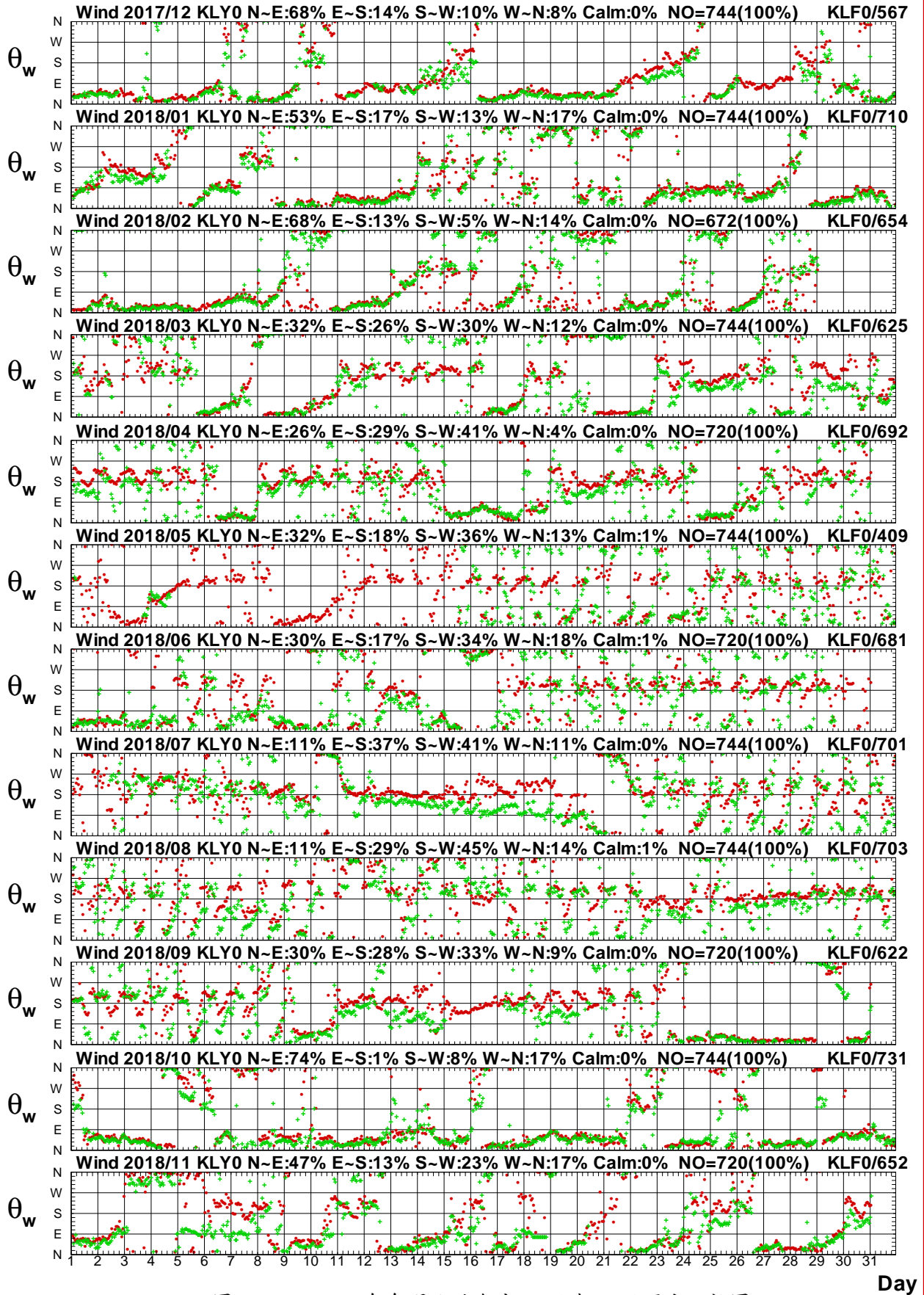


圖1.4.8b 2018年每月北端海域 Y 站與 F 站風向比較圖

W17CKLY0.1HA W17CKLF0.1HO W181KLY0.1HA W181KLF0.1HO W182KLY0.1HA W182KLF0.1HO  
 W183KLY0.1HA W183KLF0.1HO W184KLY0.1HA W184KLF0.1HO W185KLY0.1HA W185KLF0.1HO

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLY0 at 2018

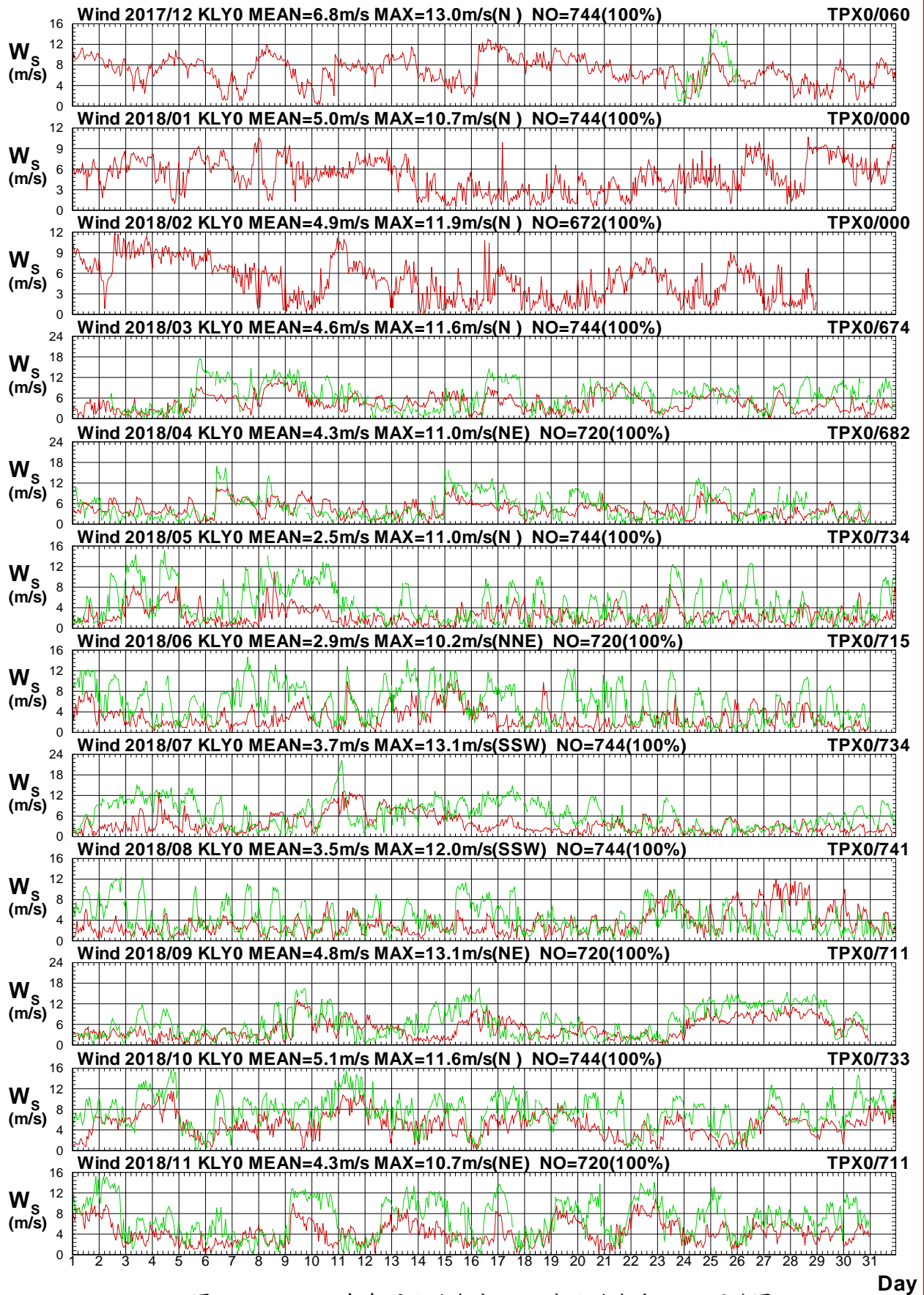


圖1.4.9a 2018年每月北端海域 Y 站與北苗海域 X 站風速圖

W17CKLY0.1HA W17CTPX0.1H0 W181KLY0.1HA W181TPX0.1H0 W182KLY0.1HA W182TPX0.1H0  
 W183KLY0.1HA W183TPX0.1H0 W184KLY0.1HA W184TPX0.1H0 W185KLY0.1HA W185TPX0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLY0 at 2018

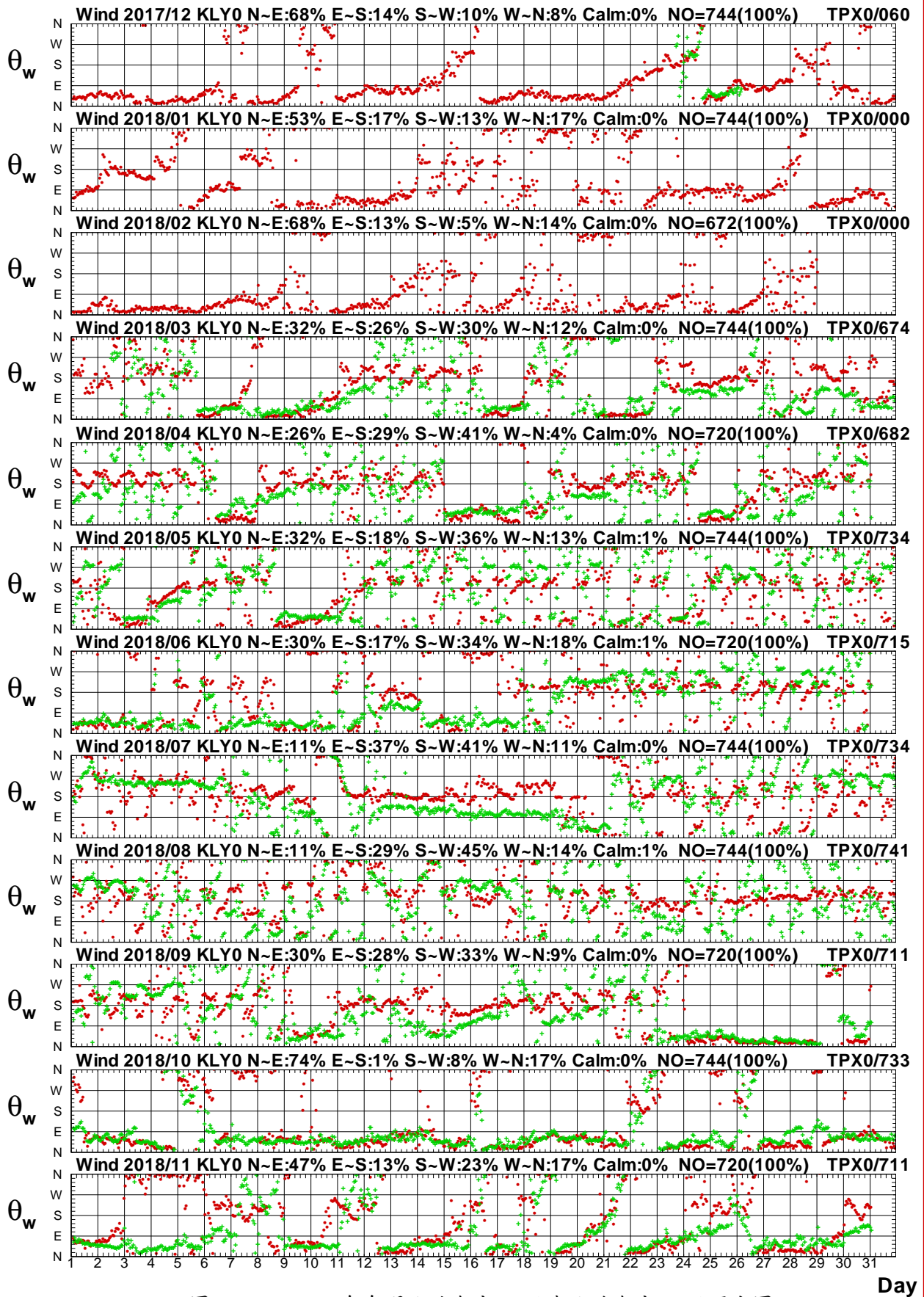


圖1.4.9b 2018年每月北端海域 Y 站與北苗海域 X 站風向圖

W17CKLY0.1HA W17CTPX0.1H0 W181KLY0.1HA W181TPX0.1H0 W182KLY0.1HA W182TPX0.1H0  
 W183KLY0.1HA W183TPX0.1H0 W184KLY0.1HA W184TPX0.1H0 W185KLY0.1HA W185TPX0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLY0 at 2018

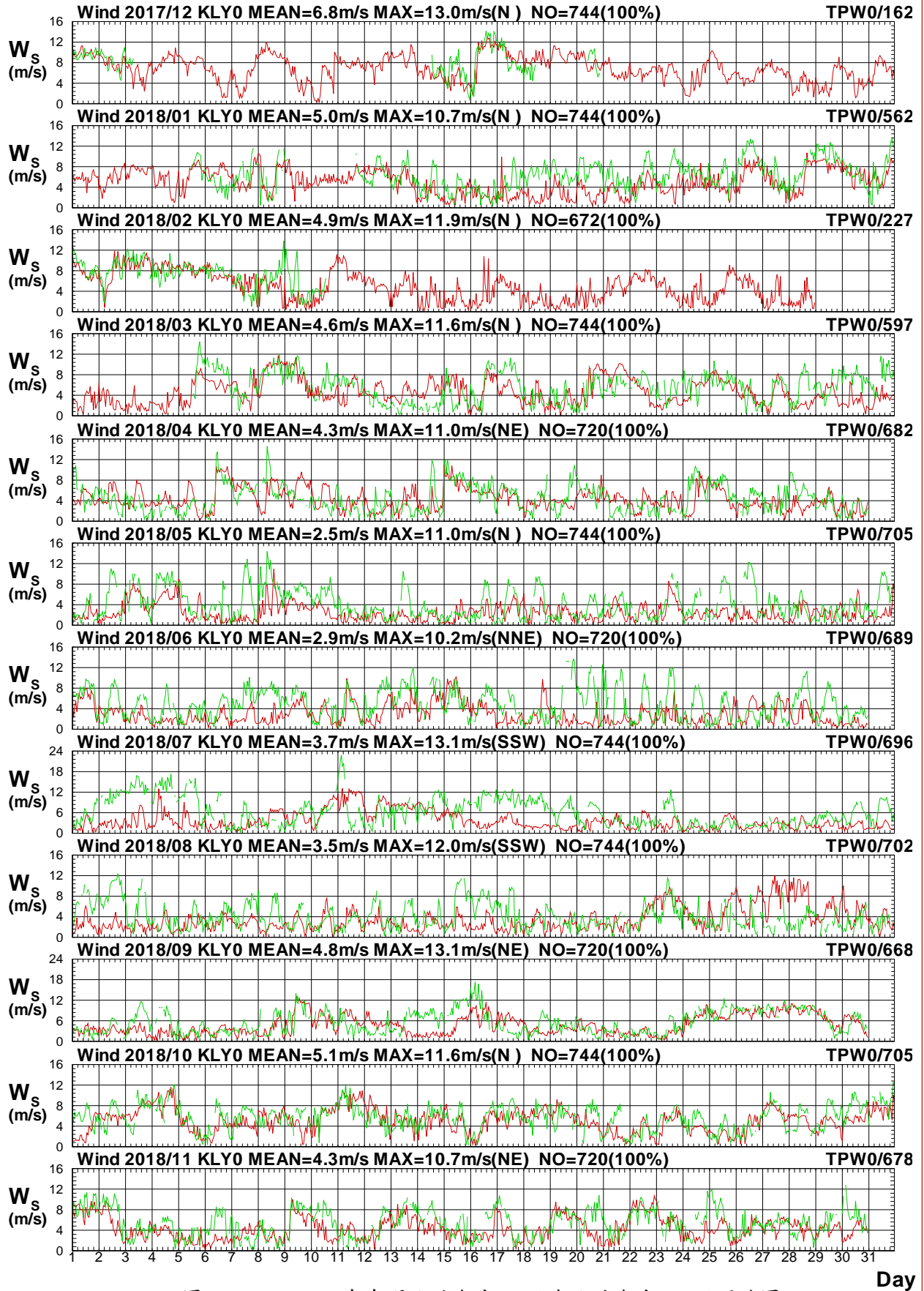


圖 1.4.10a 2018年每月北端海域 Y 站與北苗海域 W 站風速圖

W17CKLY0.1HA W17CTPW0.1H0 W181KLY0.1HA W181TPW0.1H0 W182KLY0.1HA W182TPW0.1H0  
 W183KLY0.1HA W183TPW0.1H0 W184KLY0.1HA W184TPW0.1H0 W185KLY0.1HA W185TPW0.1H0  
 Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLY0 at 2018

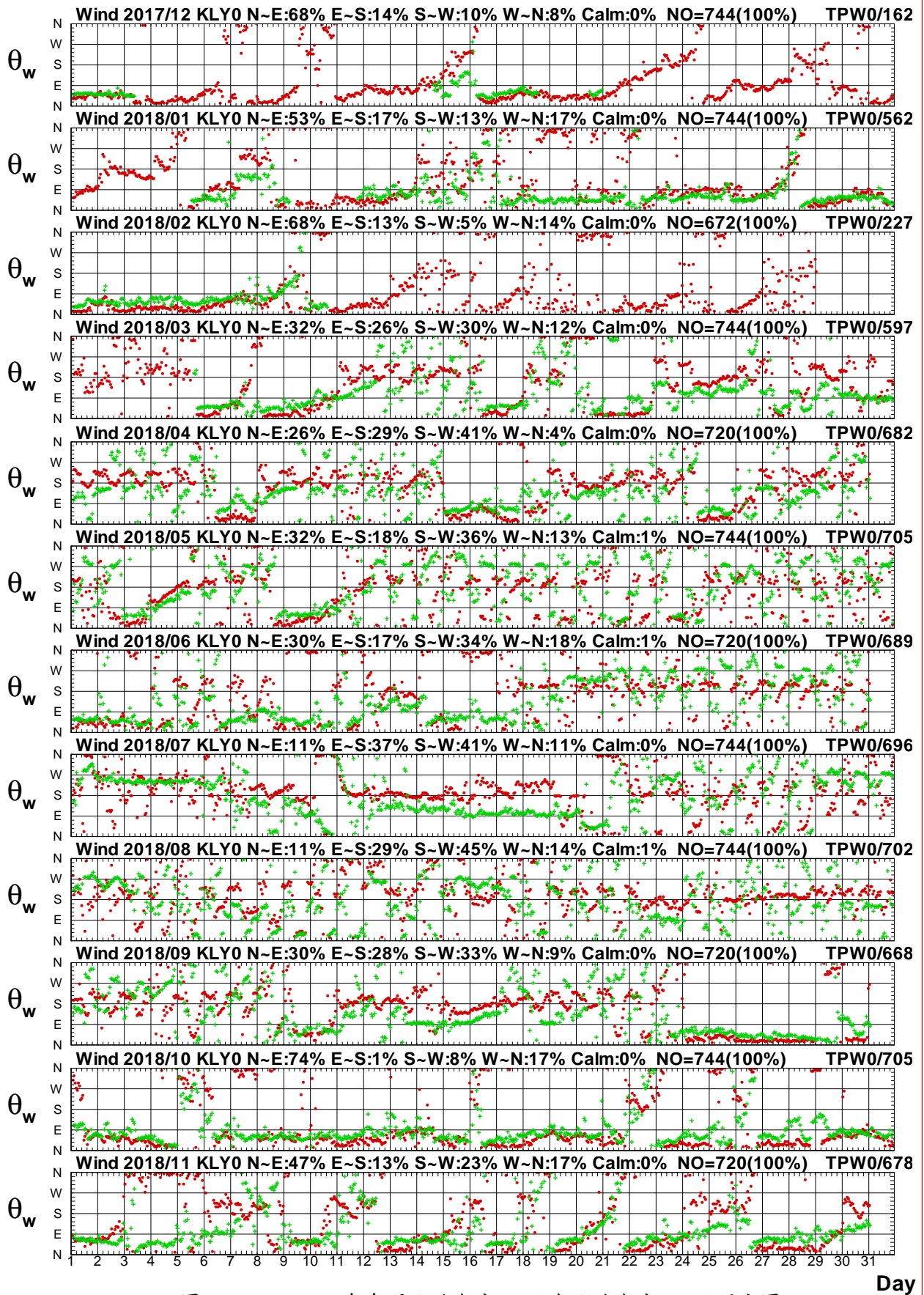


圖 1.4.10b 2018年每月北端海域 Y 站與北苗海域 W 站風向圖

W17CKLY0.1HA W17CTPW0.1HO W181KLY0.1HA W181TPW0.1HO W182KLY0.1HA W182TPW0.1HO  
 W183KLY0.1HA W183TPW0.1HO W184KLY0.1HA W184TPW0.1HO W185KLY0.1HA W185TPW0.1HO

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of KLY0 at 2018

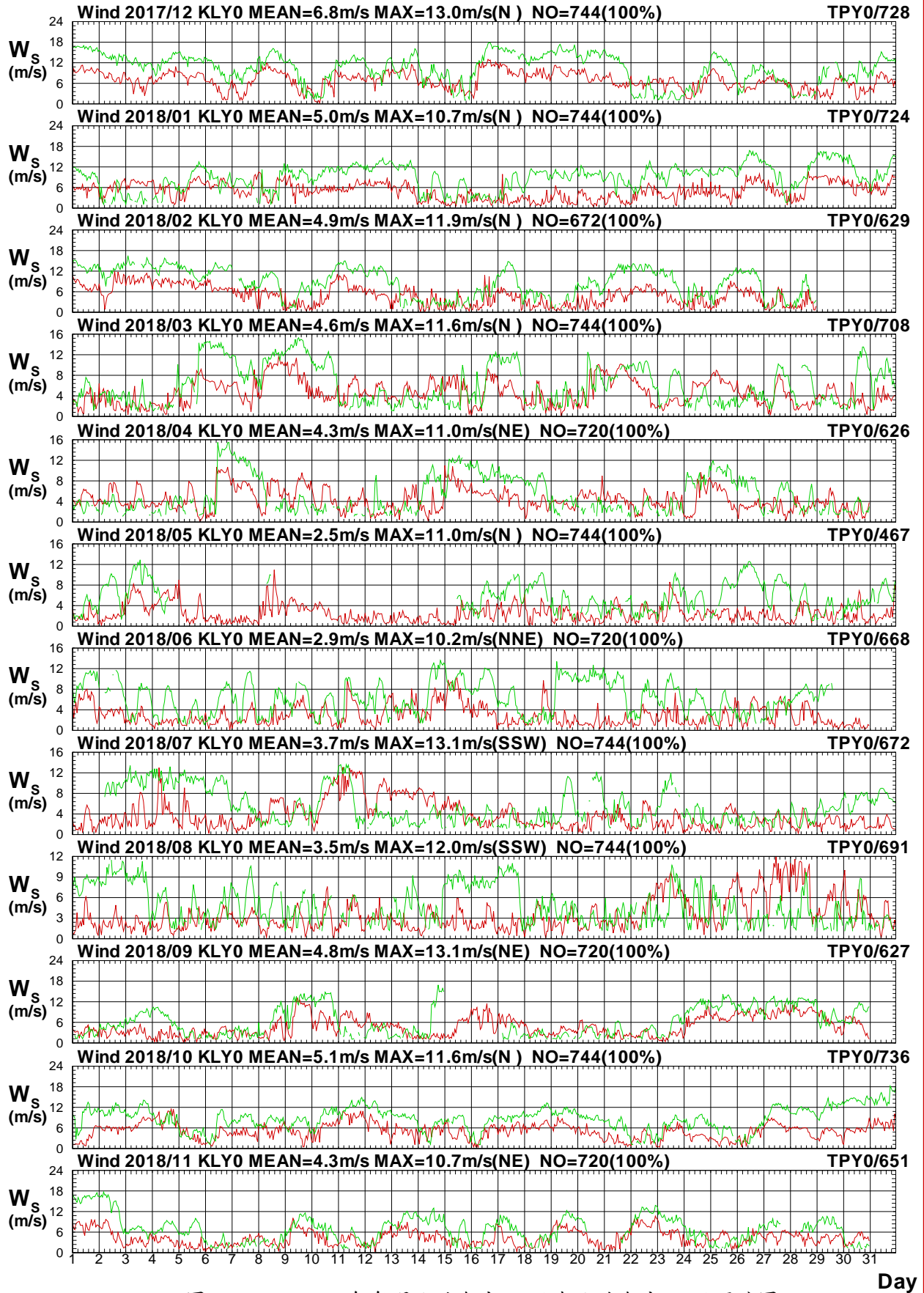


圖1.4.11a 2018年每月北端海域 Y 站與北苗海域 Y 站風速圖

W17CKLY0.1HA W17CTPY0.1H0 W181KLY0.1HA W181TPY0.1H0 W182KLY0.1HA W182TPY0.1H0  
 W183KLY0.1HA W183TPY0.1H0 W184KLY0.1HA W184TPY0.1H0 W185KLY0.1HA W185TPY0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLY0 at 2018

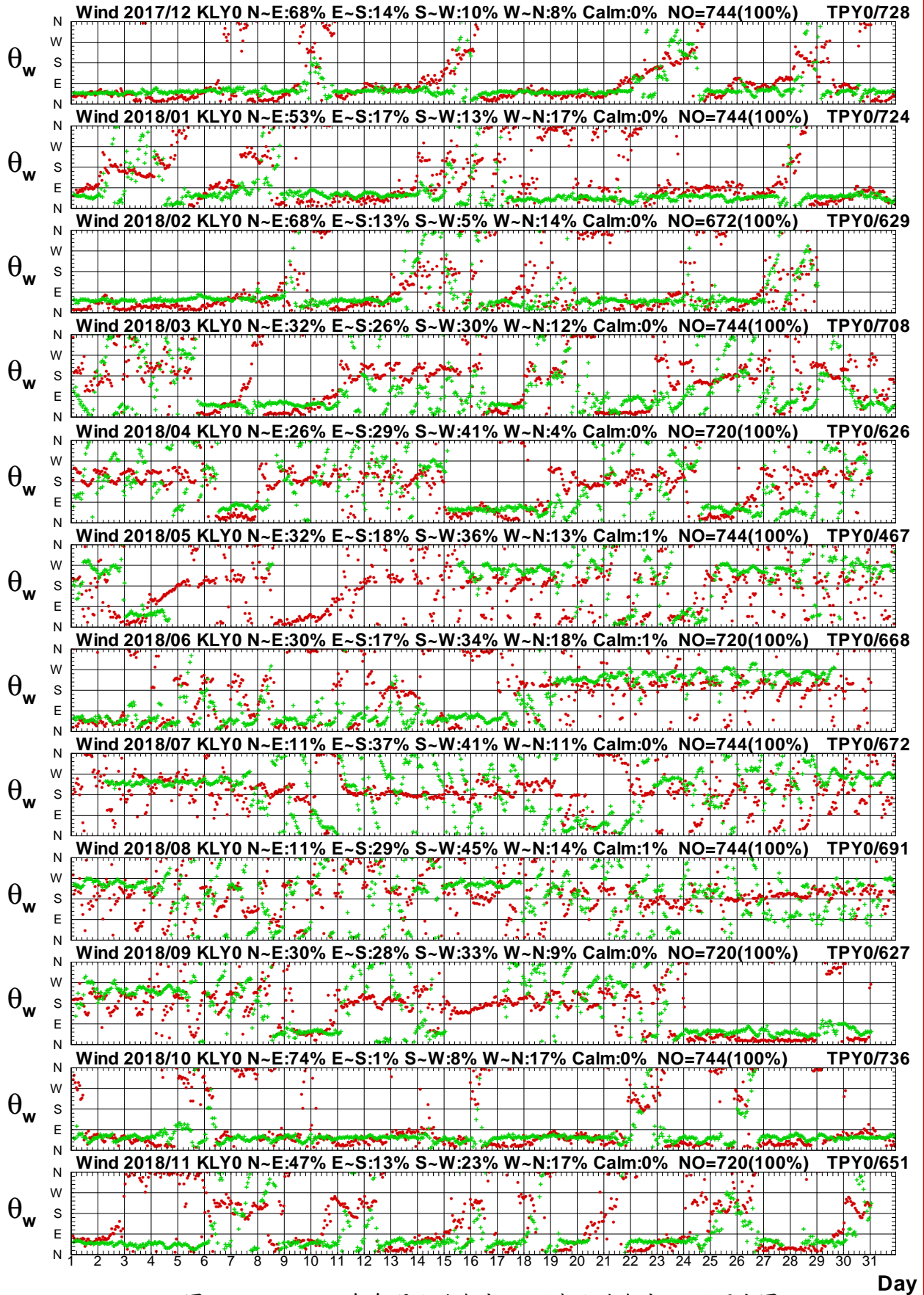


圖1.4.11b 2018年每月北端海域 Y 站與北苗海域 Y 站風向圖

W17CKLY0.1HA W17CTPY0.1H0 W181KLY0.1HA W181TPY0.1H0 W182KLY0.1HA W182TPY0.1H0  
 W183KLY0.1HA W183TPY0.1H0 W184KLY0.1HA W184TPY0.1H0 W185KLY0.1HA W185TPY0.1H0

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of KLY0 at 2018

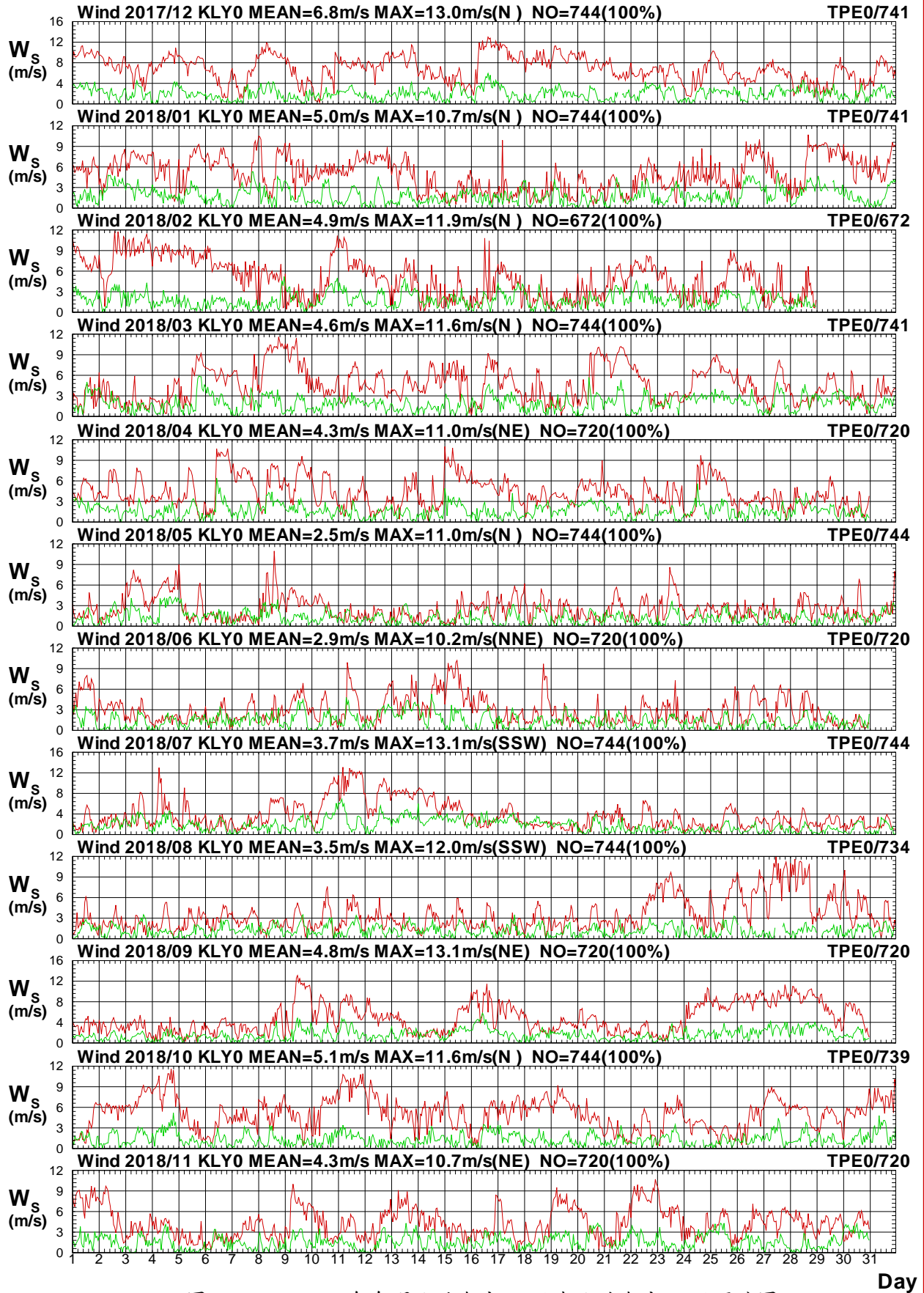


圖 1.4.12a 2018 年每月北端海域 Y 站與北苗海域 E 站風速圖

W17CKLY0.1HA W17CTPE0.1H0 W181KLY0.1HA W181TPE0.1H0 W182KLY0.1HA W182TPE0.1H0  
W183KLY0.1HA W183TPE0.1H0 W184KLY0.1HA W184TPE0.1H0 W185KLY0.1HA W185TPE0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLY0 at 2018

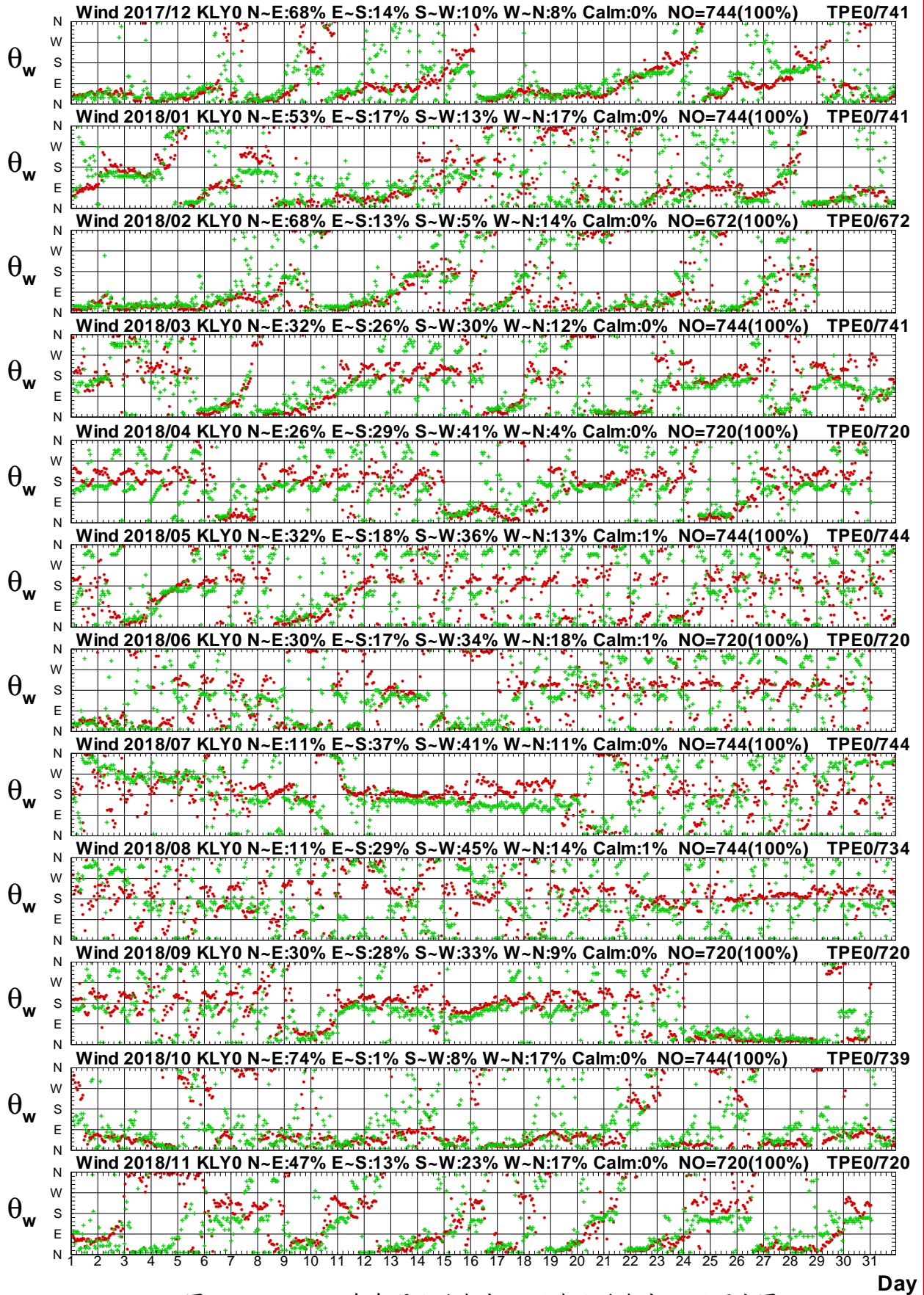


圖1.4.12b 2018年每月北端海域 Y 站與北苗海域 E 站風向圖

W17CKLY0.1HA W17CTPE0.1H0 W181KLY0.1HA W181TPE0.1H0 W182KLY0.1HA W182TPE0.1H0  
W183KLY0.1HA W183TPE0.1H0 W184KLY0.1HA W184TPE0.1H0 W185KLY0.1HA W185TPE0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLY0 at 2018

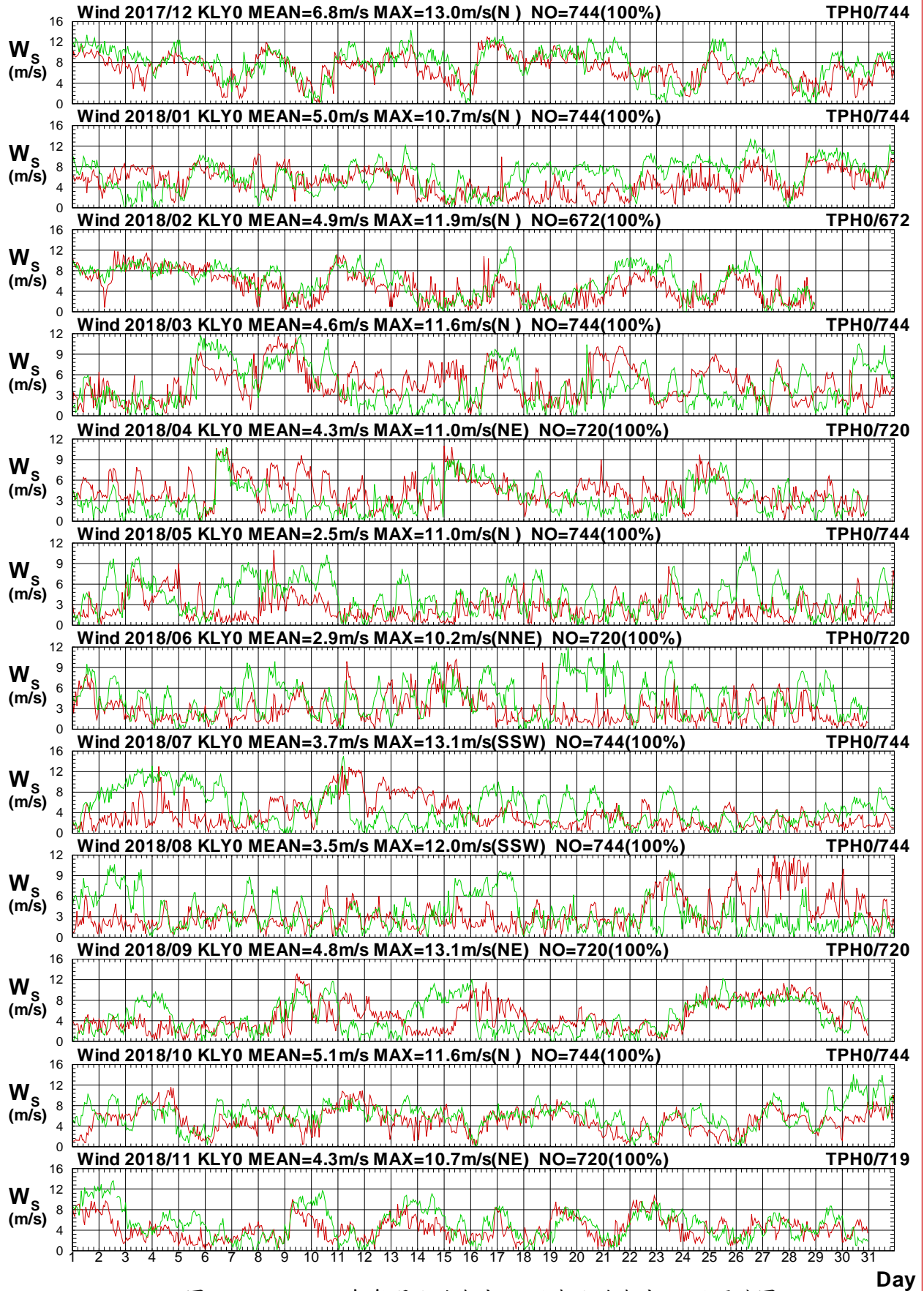


圖 1.4.13a 2018年每月北端海域 Y 站與北苗海域 H 站風速圖

W17CKLY0.1HA W17CTPH0.1H0 W181KLY0.1HA W181TPH0.1H0 W182KLY0.1HA W182TPH0.1H0  
 W183KLY0.1HA W183TPH0.1H0 W184KLY0.1HA W184TPH0.1H0 W185KLY0.1HA W185TPH0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLY0 at 2018

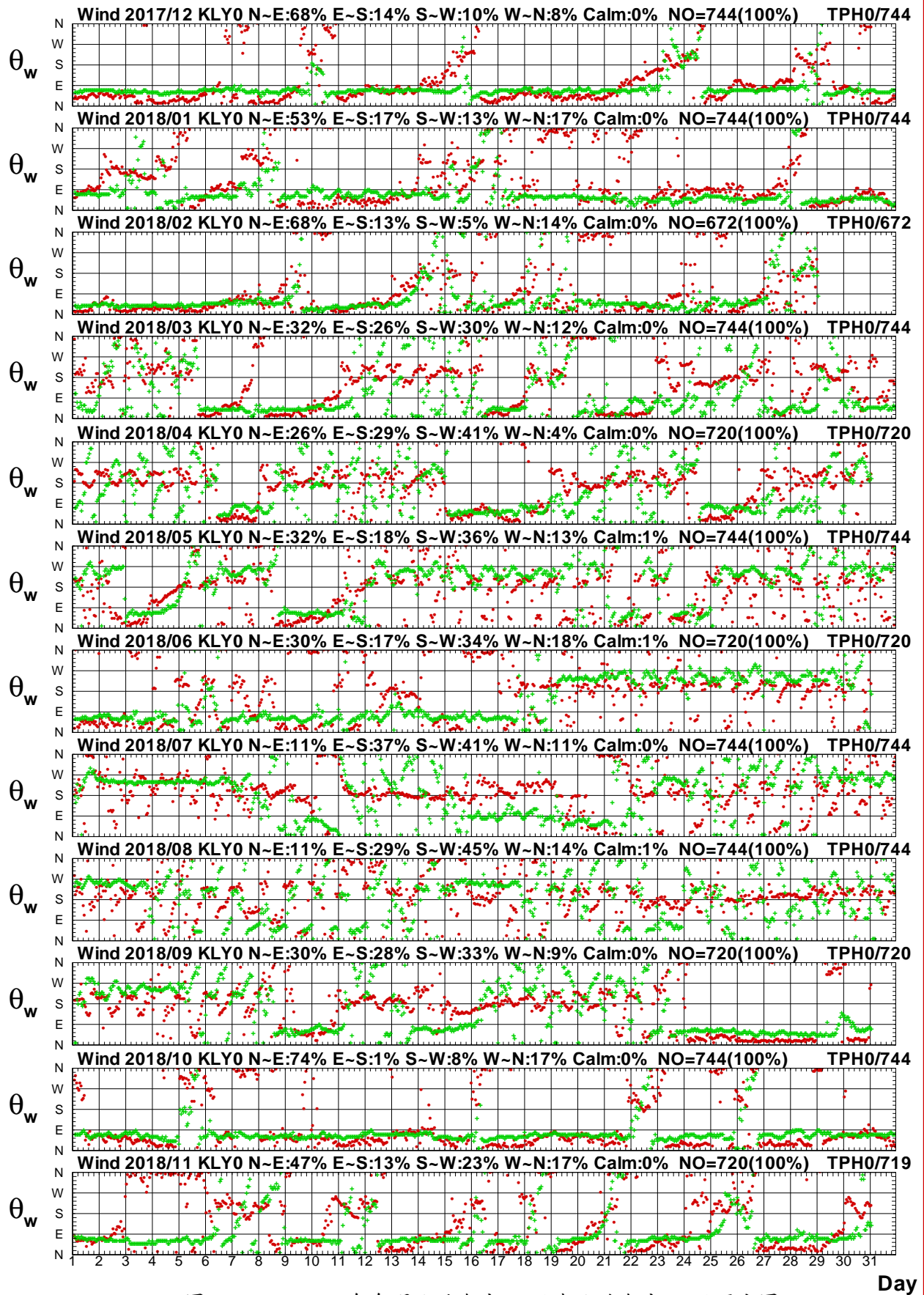


圖1.4.13b 2018年每月北端海域 Y 站與北苗海域 H 站風向圖

W17CKLY0.1HA W17CTPH0.1H0 W181KLY0.1HA W181TPH0.1H0 W182KLY0.1HA W182TPH0.1H0  
W183KLY0.1HA W183TPH0.1H0 W184KLY0.1HA W184TPH0.1H0 W185KLY0.1HA W185TPH0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLY0 at 2018

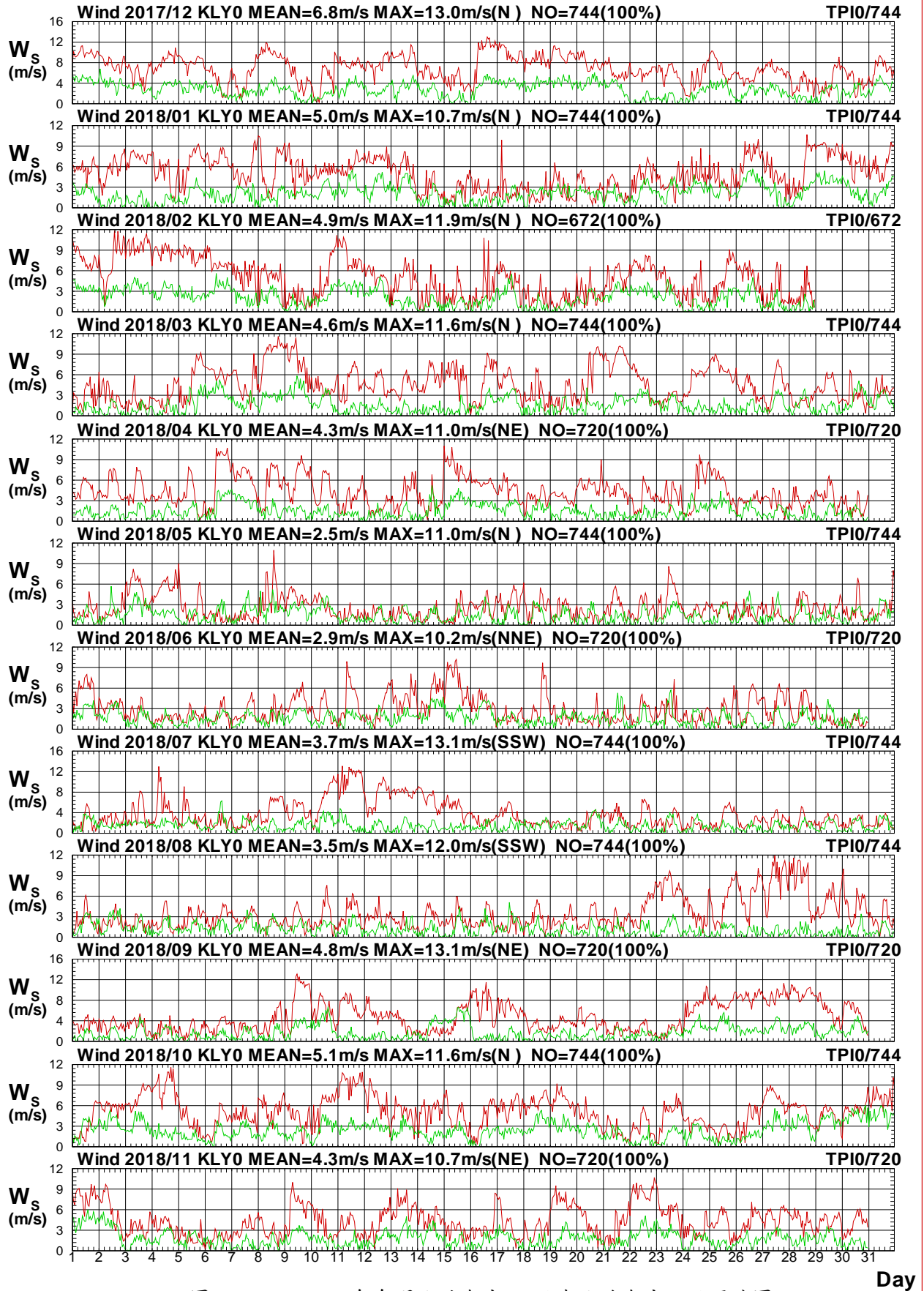


圖1.4.14a 2018年每月北端海域 Y 站與北苗海域 I 站風速圖

W17CKLY0.1HA W17CTPI0.1HO W181KLY0.1HA W181TPI0.1HO W182KLY0.1HA W182TPI0.1HO  
 W183KLY0.1HA W183TPI0.1HO W184KLY0.1HA W184TPI0.1HO W185KLY0.1HA W185TPI0.1HO

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLY0 at 2018

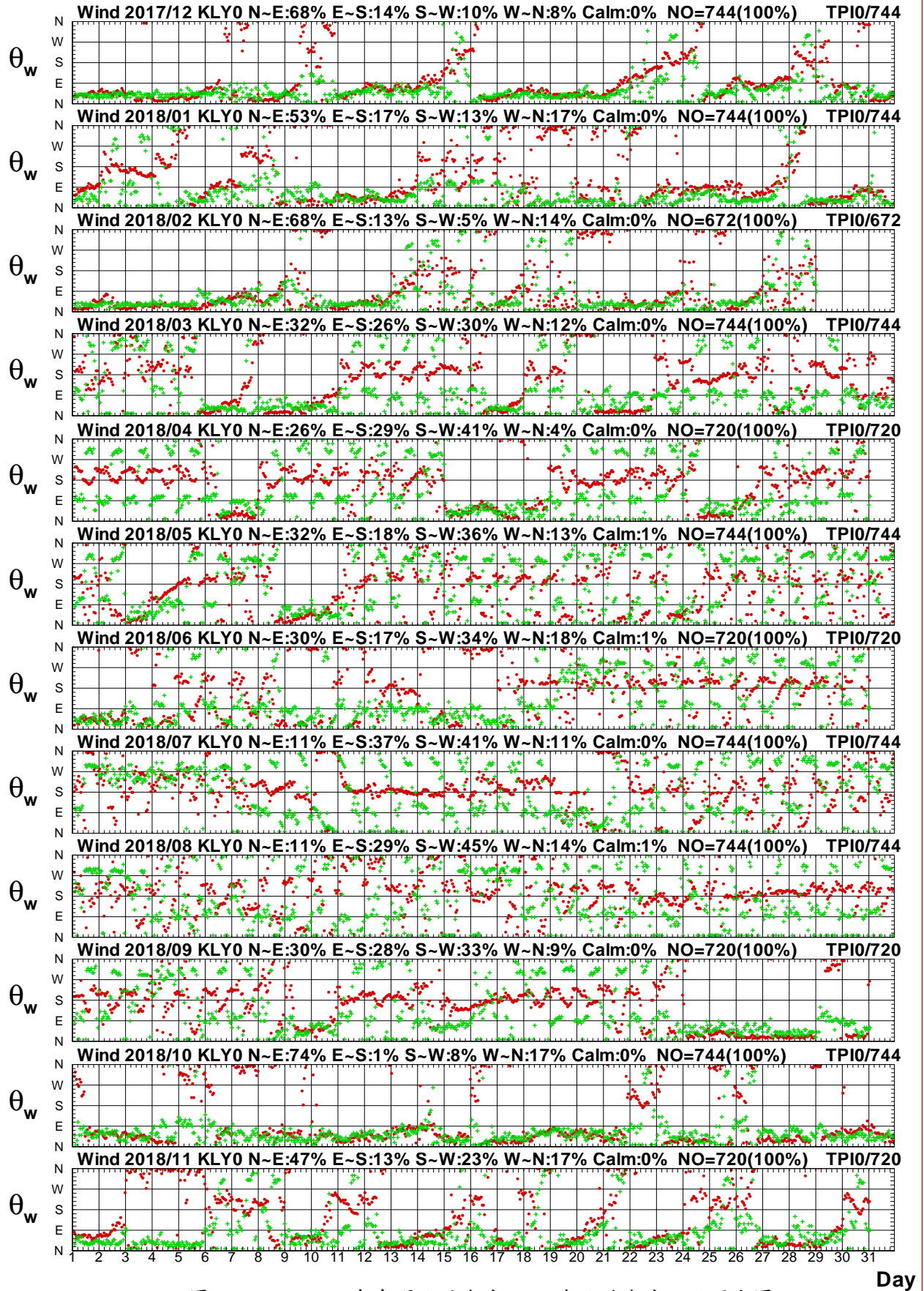


圖1.4.14b 2018年每月北端海域 Y 站與北苗海域 I 站風向圖

W17CKLY0.1HA W17CTPI0.1H0 W181KLY0.1HA W181TPI0.1H0 W182KLY0.1HA W182TPI0.1H0  
 W183KLY0.1HA W183TPI0.1H0 W184KLY0.1HA W184TPI0.1H0 W185KLY0.1HA W185TPI0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLY0 at 2018

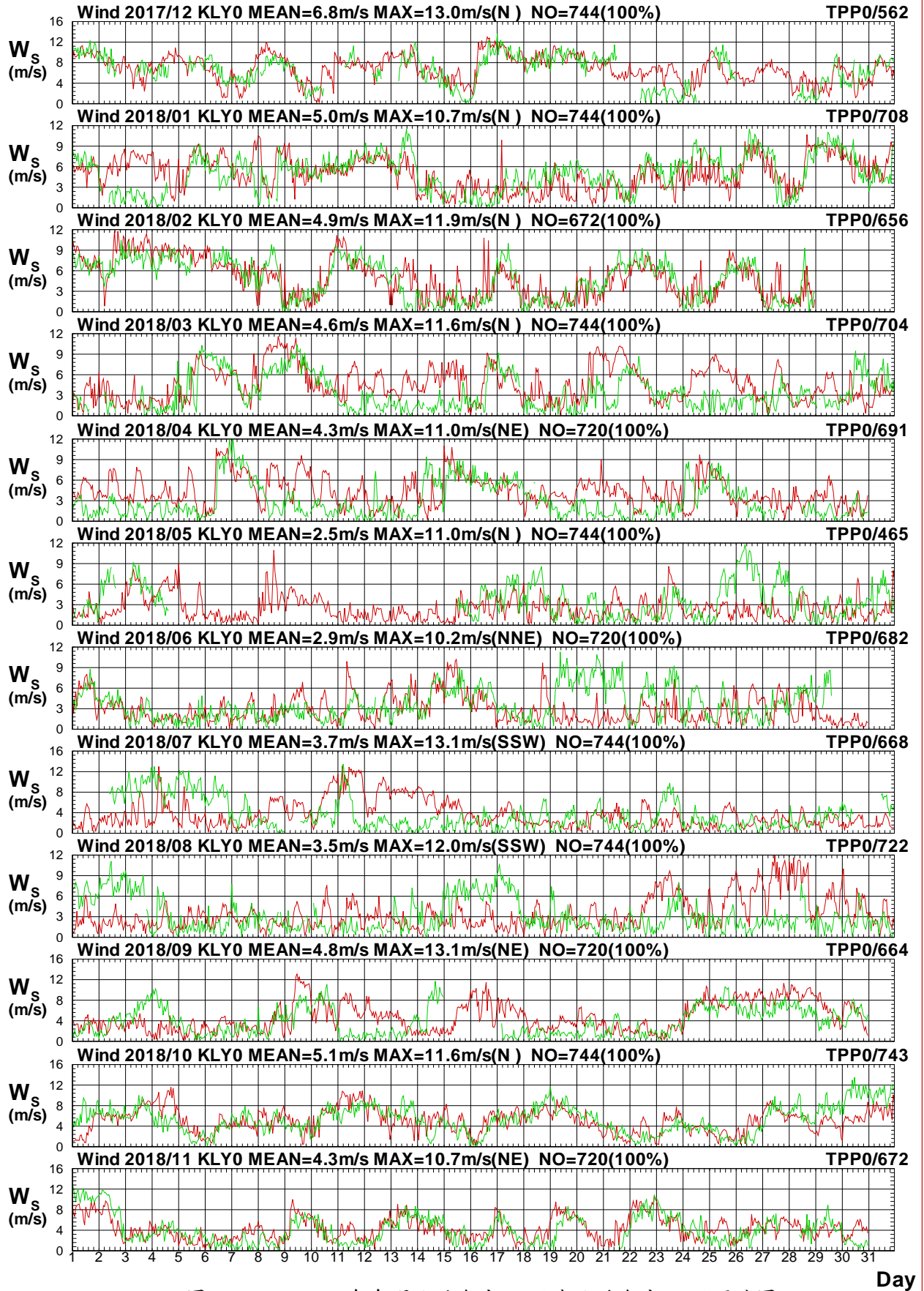


圖1.4.15a 2018年每月北端海域 Y 站與北苗海域 P 站風速圖

W17CKLY0.1HA W17CTPP0.1H0 W181KLY0.1HA W181TPP0.1H0 W182KLY0.1HA W182TPP0.1H0  
W183KLY0.1HA W183TPP0.1H0 W184KLY0.1HA W184TPP0.1H0 W185KLY0.1HA W185TPP0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLY0 at 2018

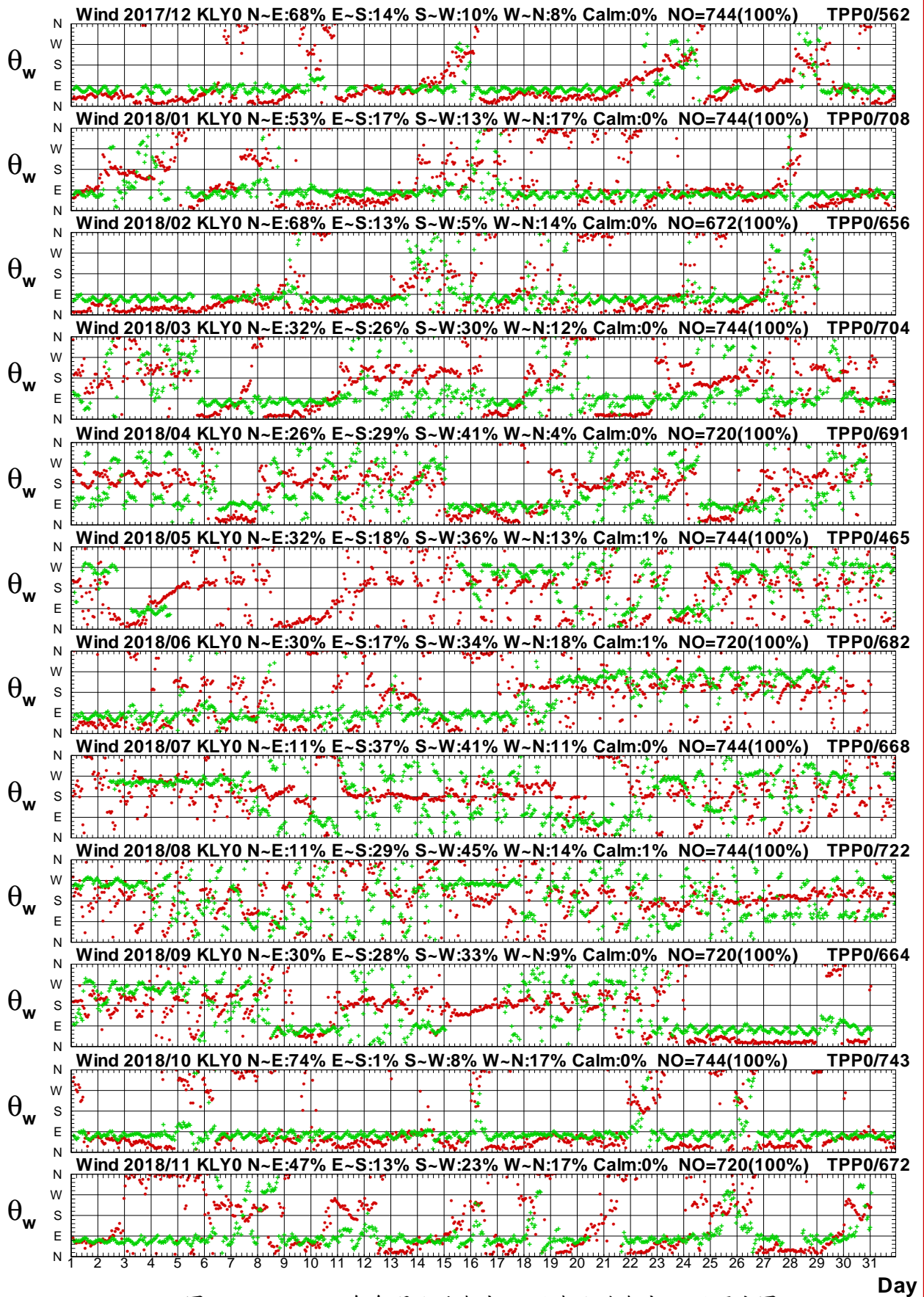


圖1.4.15b 2018年每月北端海域 Y 站與北苗海域 P 站風向圖

W17CKLY0.1HA W17CTPP0.1H0 W181KLY0.1HA W181TPP0.1H0 W182KLY0.1HA W182TPP0.1H0  
W183KLY0.1HA W183TPP0.1H0 W184KLY0.1HA W184TPP0.1H0 W185KLY0.1HA W185TPP0.1H0

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of KLY0 at 2018

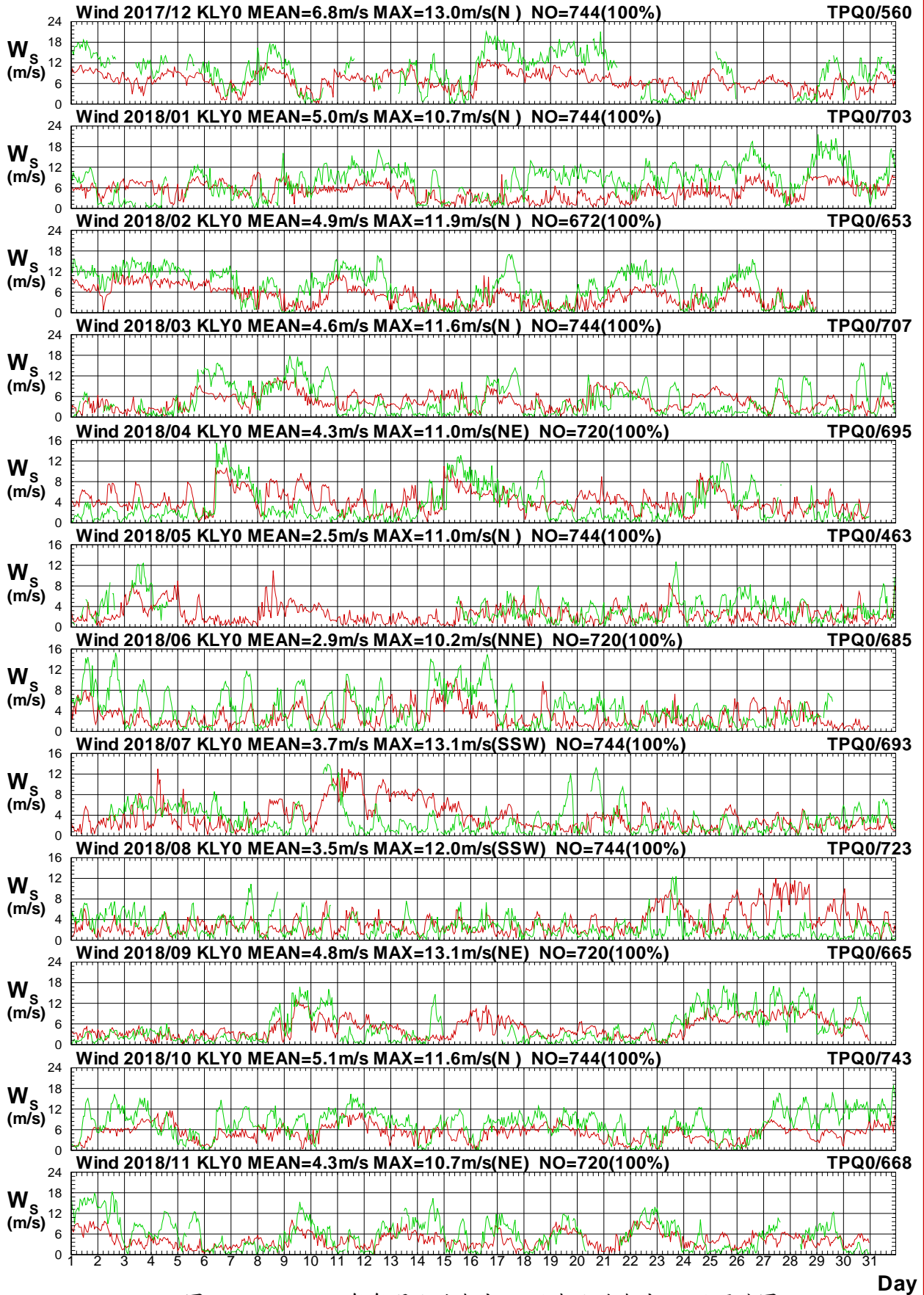


圖1.4.16a 2018年每月北端海域 Y 站與北苗海域 Q 站風速圖

W17CKLY0.1HA W17CTPQ0.1H0 W181KLY0.1HA W181TPQ0.1H0 W182KLY0.1HA W182TPQ0.1H0  
 W183KLY0.1HA W183TPQ0.1H0 W184KLY0.1HA W184TPQ0.1H0 W185KLY0.1HA W185TPQ0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLY0 at 2018

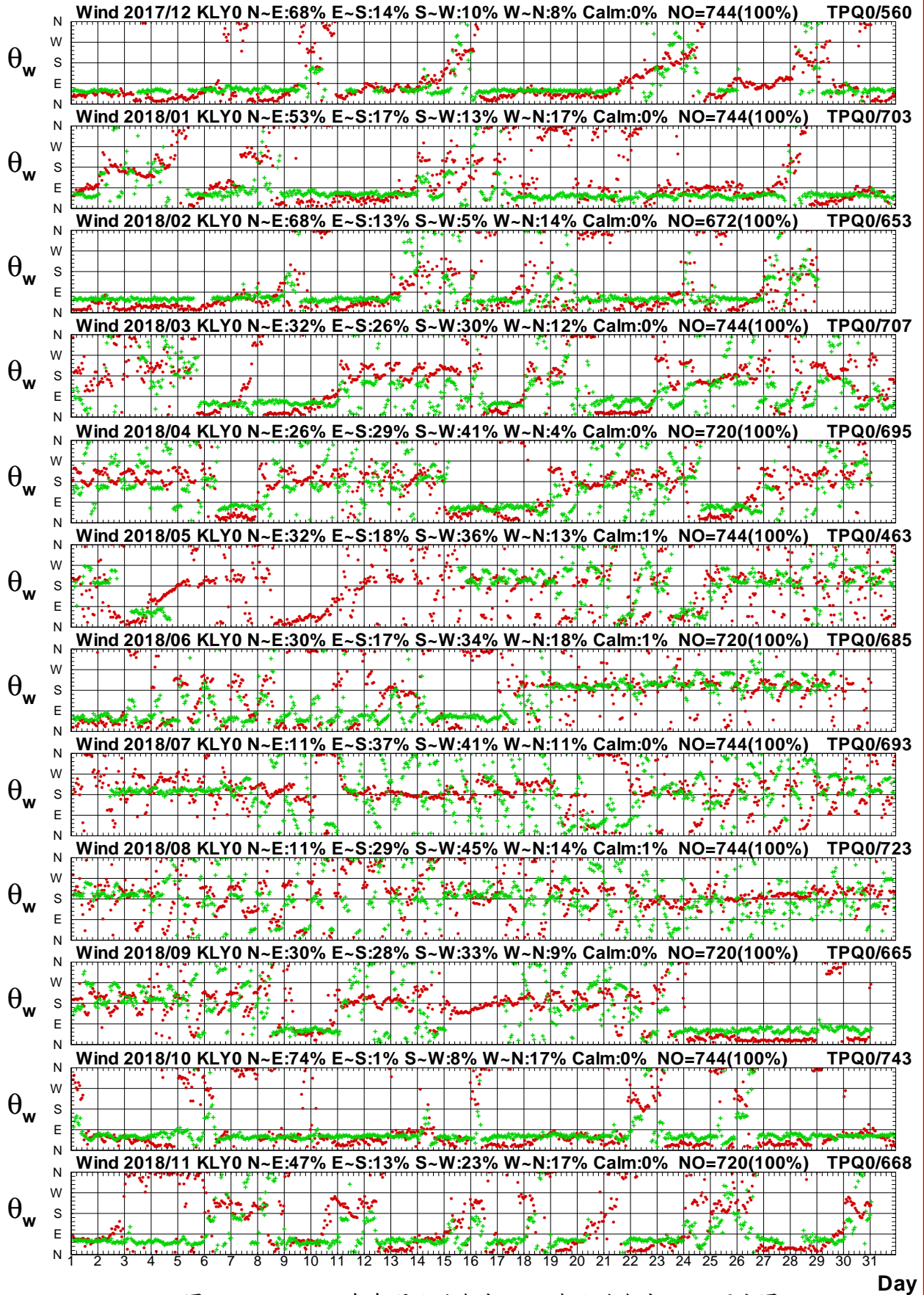


圖1.4.16b 2018年每月北端海域 Y 站與北苗海域 Q 站風向圖

W17CKLY0.1HA W17CTPQ0.1H0 W181KLY0.1HA W181TPQ0.1H0 W182KLY0.1HA W182TPQ0.1H0  
 W183KLY0.1HA W183TPQ0.1H0 W184KLY0.1HA W184TPQ0.1H0 W185KLY0.1HA W185TPQ0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLY0 at 2018

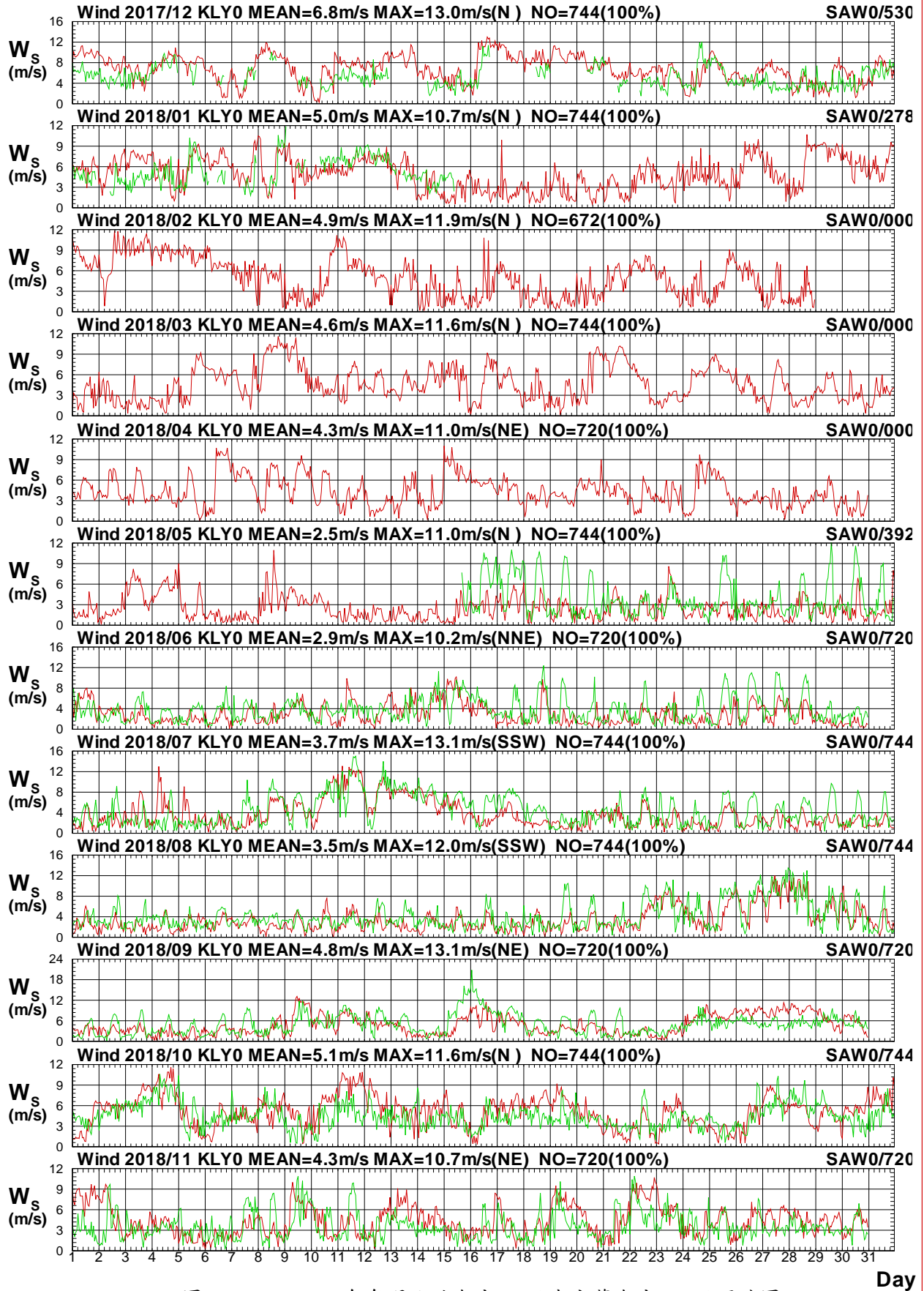


圖 1.4.17a 2018年每月北端海域 Y 站與宜蘭海域 W 站風速圖

W17CKLY0.1HA W17CSAW0.1H0 W181KLY0.1HA W181SAW0.1H0 W182KLY0.1HA W182SAW0.1H0  
 W183KLY0.1HA W183SAW0.1H0 W184KLY0.1HA W184SAW0.1H0 W185KLY0.1HA W185SAW0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLY0 at 2018

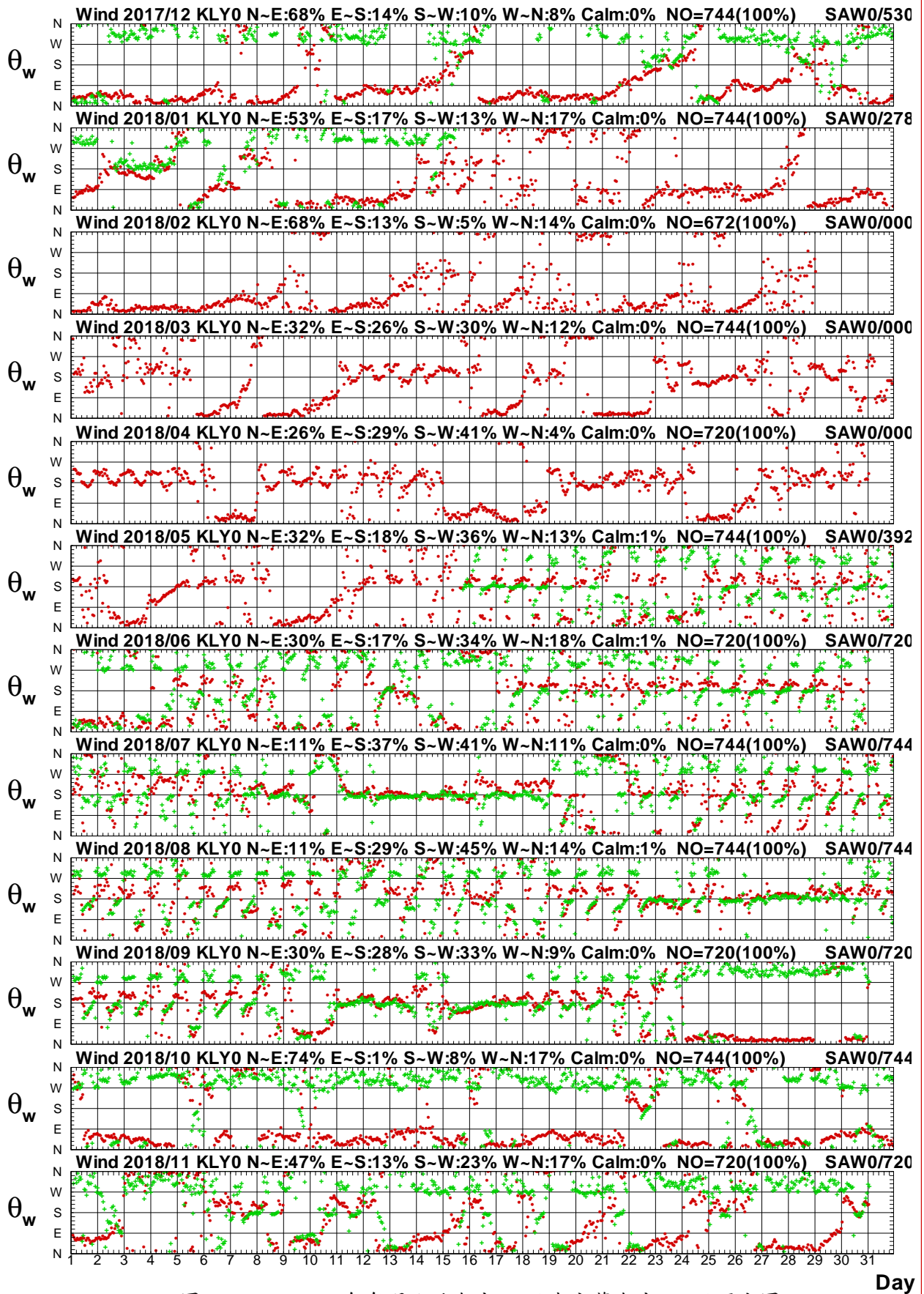


圖 1.4.17b 2018年每月北端海域 Y 站與宜蘭海域 W 站風向圖

W17CKLY0.1HA W17CSAW0.1H0 W181KLY0.1HA W181SAW0.1H0 W182KLY0.1HA W182SAW0.1H0  
 W183KLY0.1HA W183SAW0.1H0 W184KLY0.1HA W184SAW0.1H0 W185KLY0.1HA W185SAW0.1H0

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of KLY0 at 2018

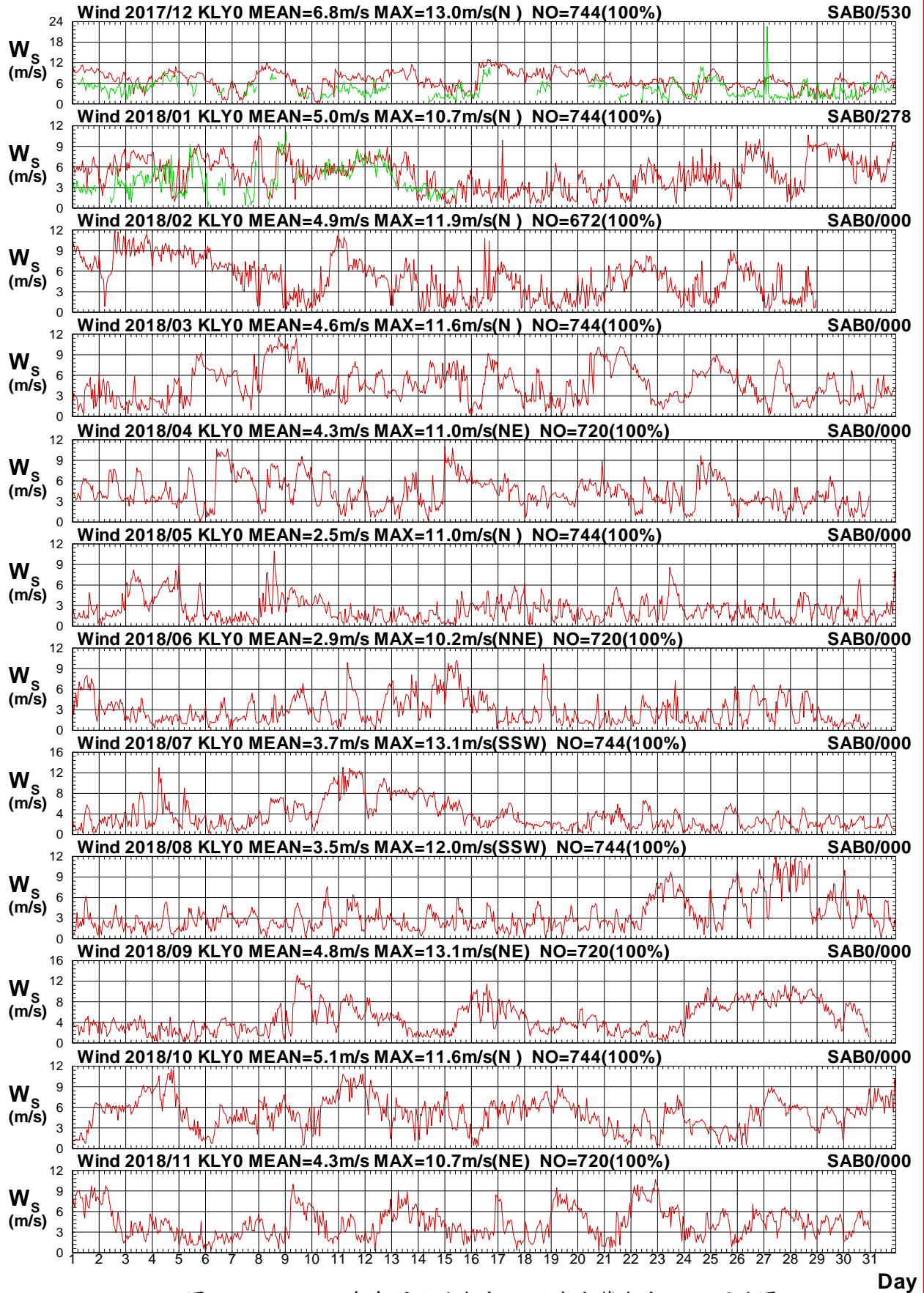


圖1.4.18a 2018年每月北端海域 Y 站與宜蘭海域 B 站風速圖

W17CKLY0.1HA W17CSAB0.1H0 W181KLY0.1HA W181SAB0.1H0 W182KLY0.1HA W182SAB0.1H0  
 W183KLY0.1HA W183SAB0.1H0 W184KLY0.1HA W184SAB0.1H0 W185KLY0.1HA W185SAB0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLY0 at 2018

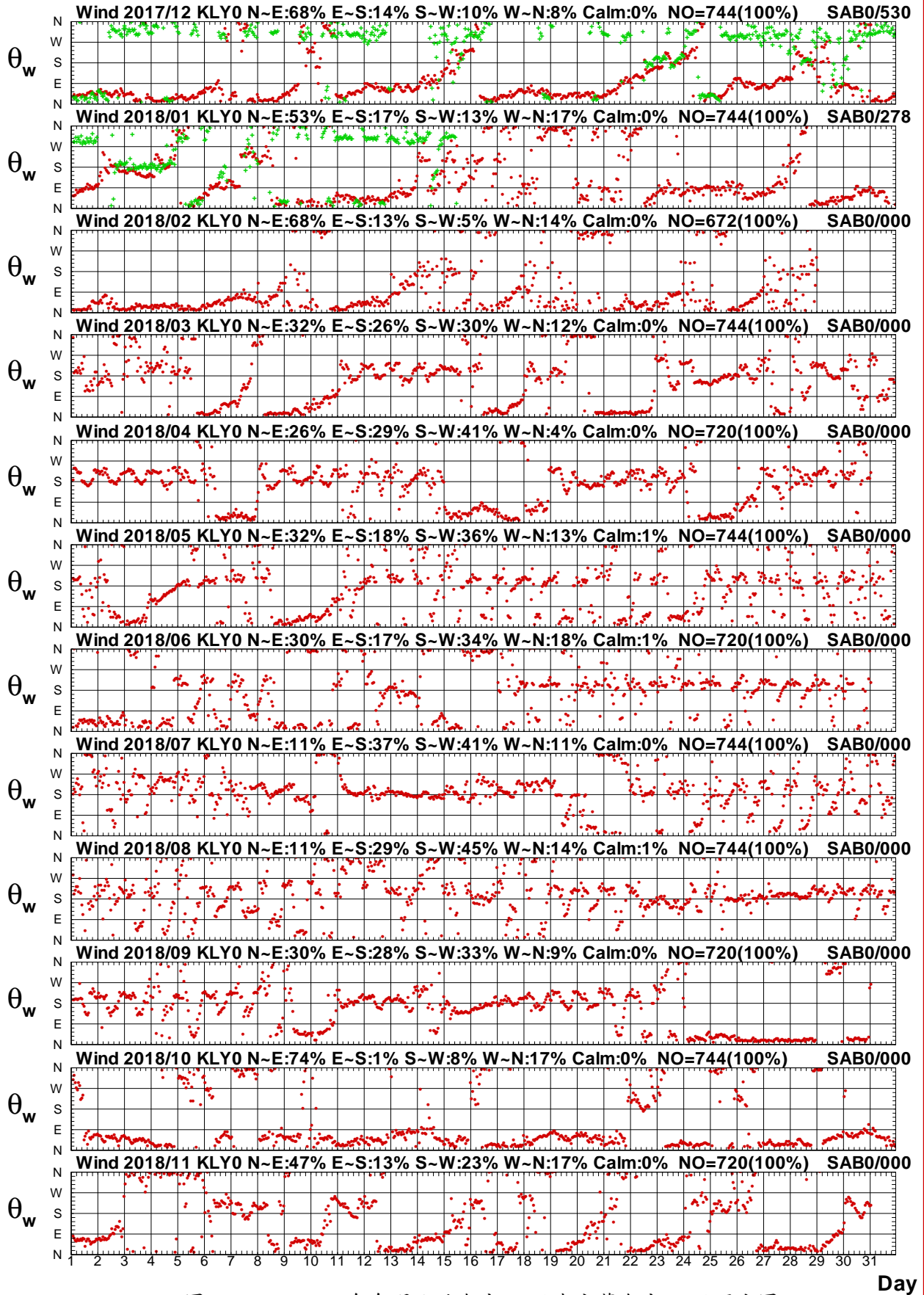


圖1.4.18b 2018年每月北端海域 Y 站與宜蘭海域 B 站風向圖

W17CKLY0.1HA W17CSAB0.1H0 W181KLY0.1HA W181SAB0.1H0 W182KLY0.1HA W182SAB0.1H0  
W183KLY0.1HA W183SAB0.1H0 W184KLY0.1HA W184SAB0.1H0 W185KLY0.1HA W185SAB0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLY0 at 2018

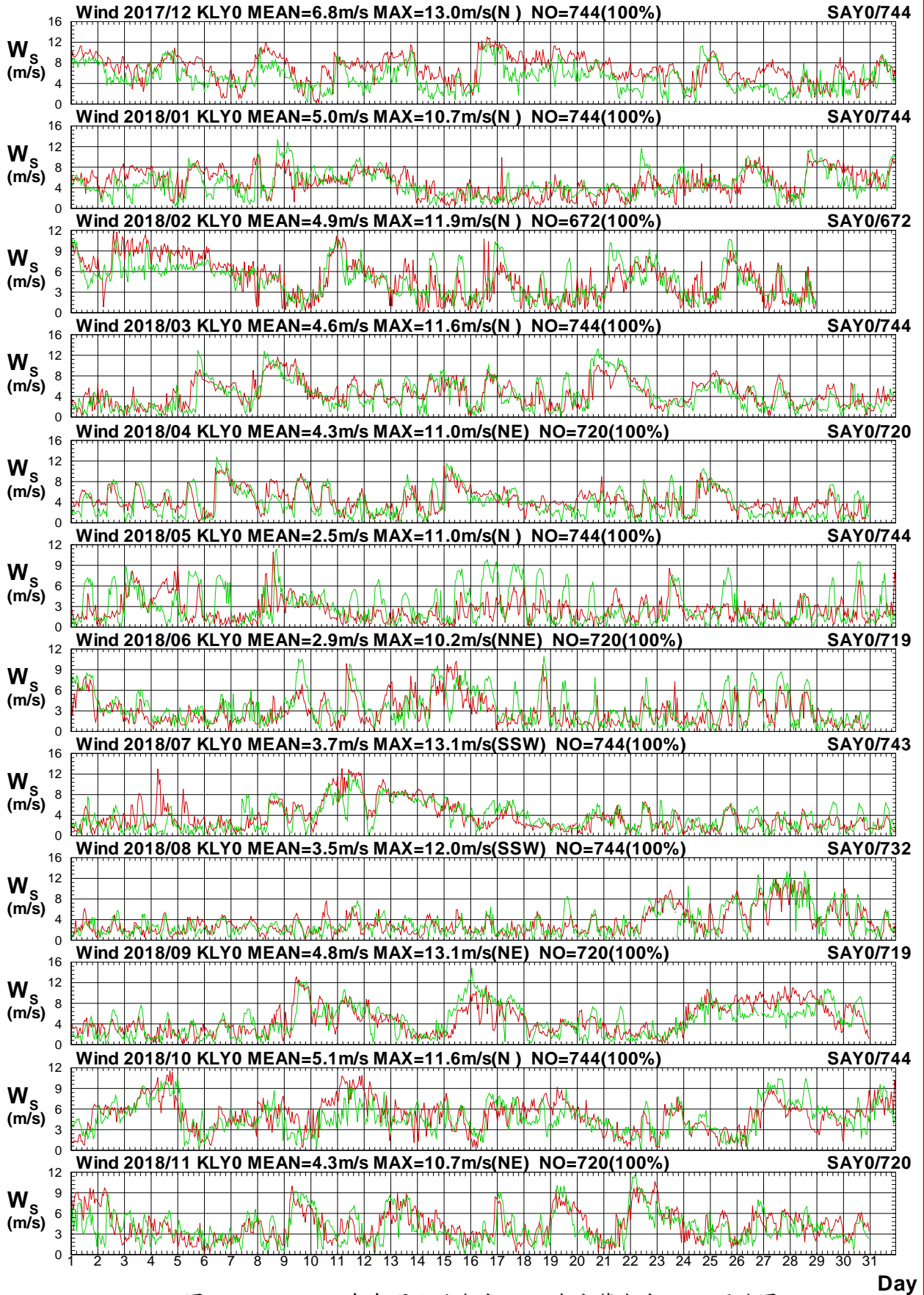


圖1.4.19a 2018年每月北端海域 Y 站與宜蘭海域 Y 站風速圖

W17CKLY0.1HA W17CSAY0.1H0 W181KLY0.1HA W181SAY0.1H0 W182KLY0.1HA W182SAY0.1H0  
 W183KLY0.1HA W183SAY0.1H0 W184KLY0.1HA W184SAY0.1H0 W185KLY0.1HA W185SAY0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLY0 at 2018

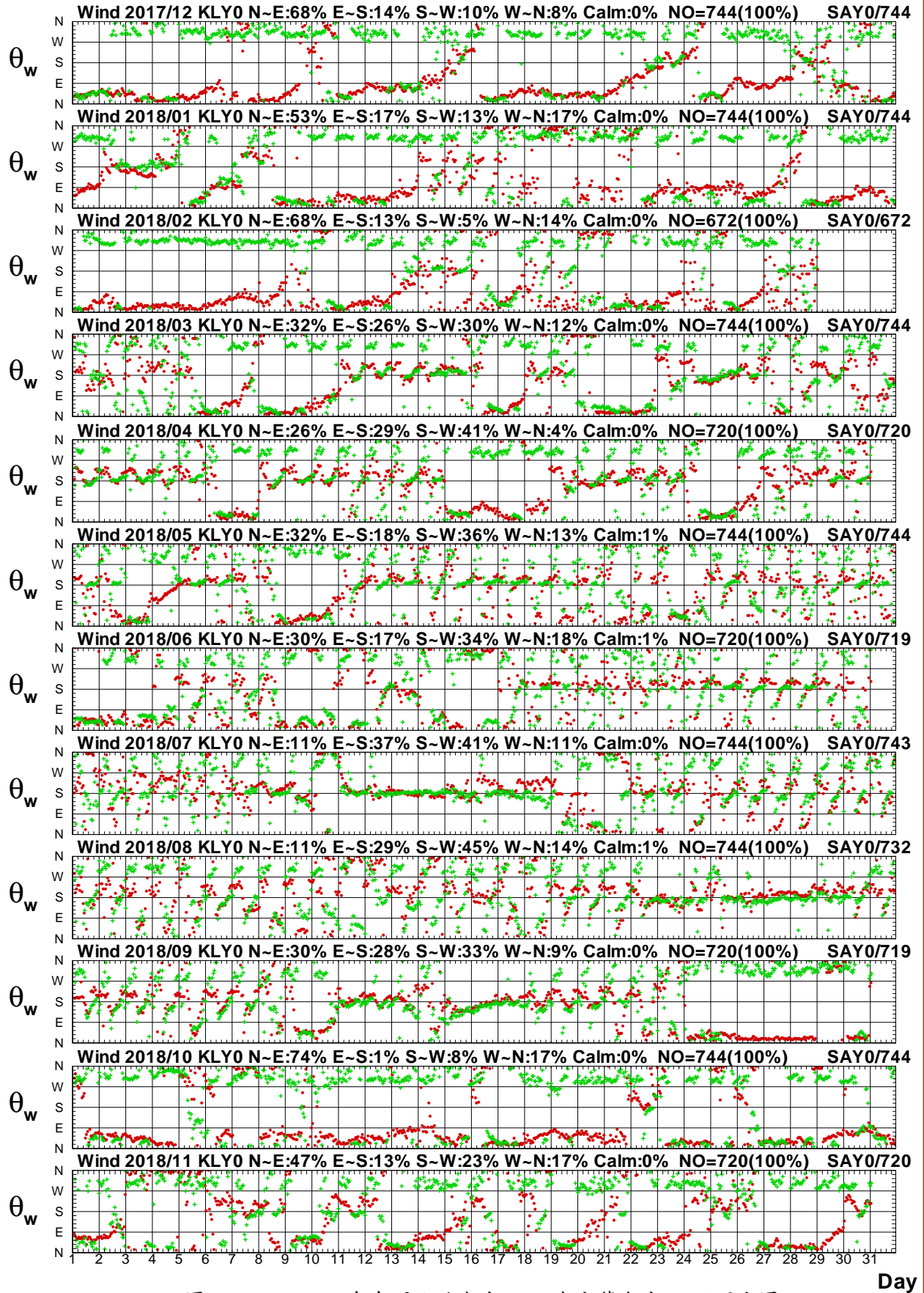


圖1.4.19b 2018年每月北端海域 Y 站與宜蘭海域 Y 站風向圖

W17CKLY0.1HA W17CSAY0.1H0 W181KLY0.1HA W181SAY0.1H0 W182KLY0.1HA W182SAY0.1H0  
 W183KLY0.1HA W183SAY0.1H0 W184KLY0.1HA W184SAY0.1H0 W185KLY0.1HA W185SAY0.1H0

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of KLY0 at 2018

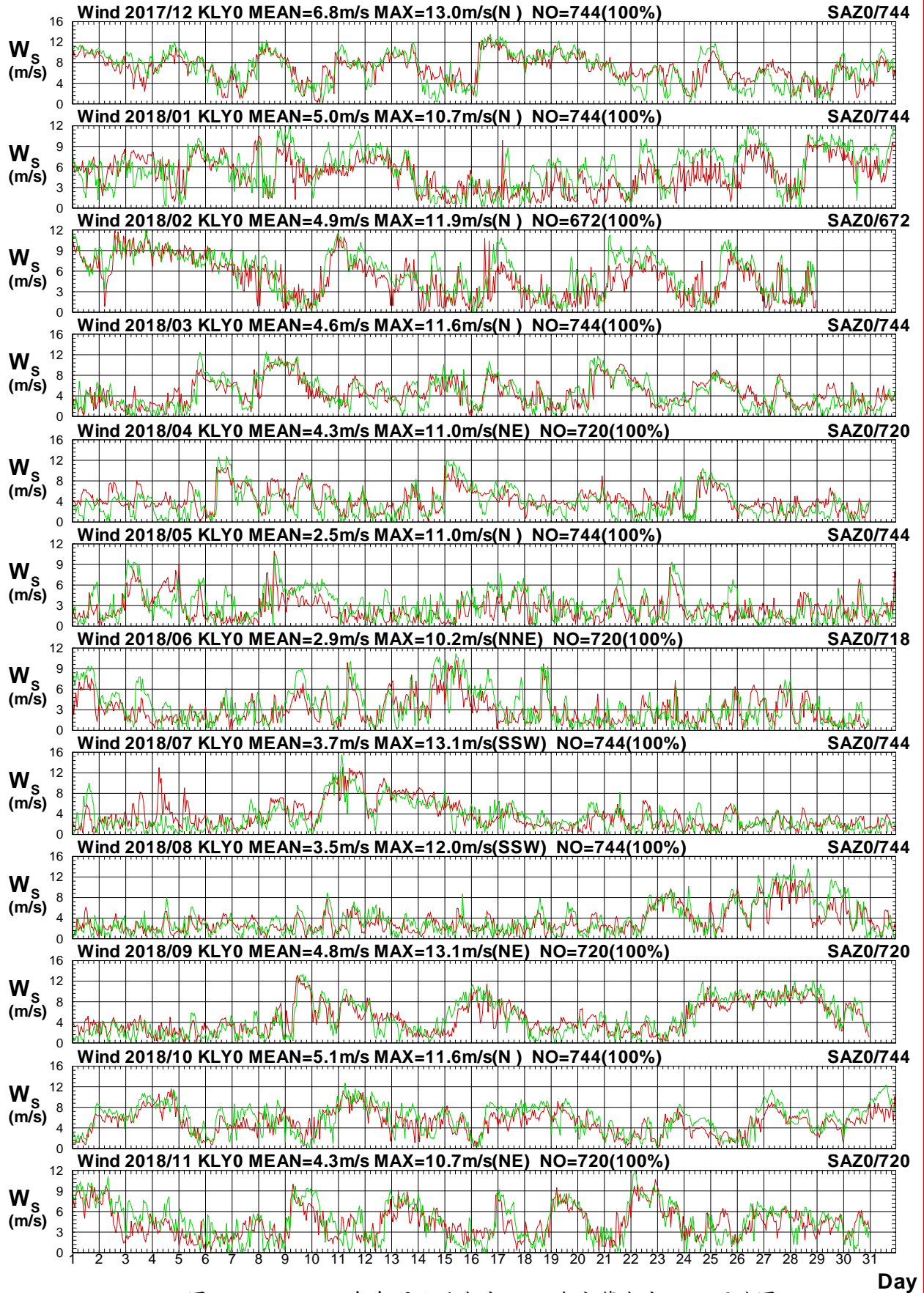


圖1.4.20a 2018年每月北端海域 Y 站與宜蘭海域 Z 站風速圖

W17CKLY0.1HA W17CSAZ0.1H0 W181KLY0.1HA W181SAZ0.1H0 W182KLY0.1HA W182SAZ0.1H0  
 W183KLY0.1HA W183SAZ0.1H0 W184KLY0.1HA W184SAZ0.1H0 W185KLY0.1HA W185SAZ0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLY0 at 2018

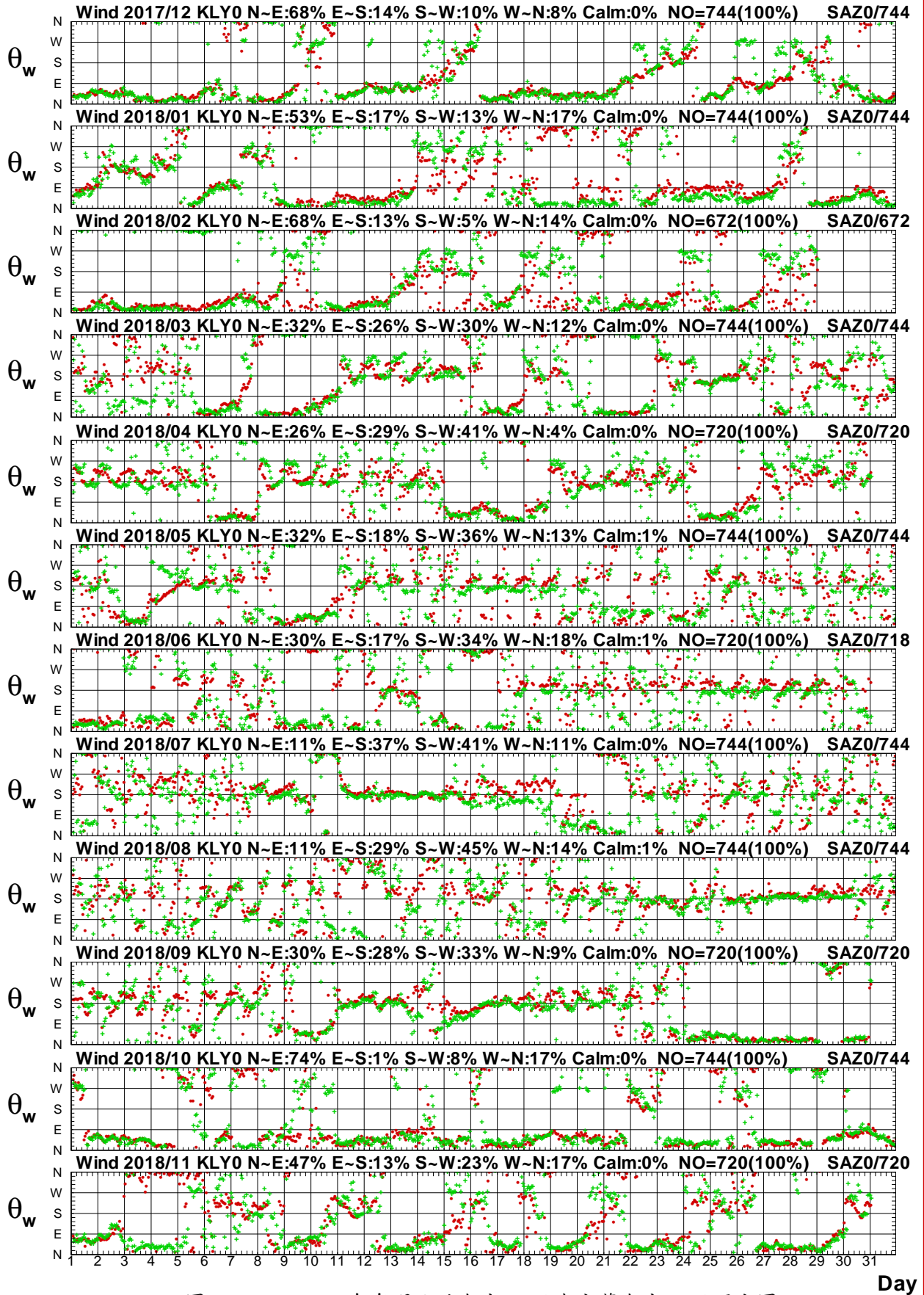


圖1.4.20b 2018年每月北端海域 Y 站與宜蘭海域 Z 站風向圖

W17CKLY0.1HA W17CSAZ0.1H0 W181KLY0.1HA W181SAZ0.1H0 W182KLY0.1HA W182SAZ0.1H0  
W183KLY0.1HA W183SAZ0.1H0 W184KLY0.1HA W184SAZ0.1H0 W185KLY0.1HA W185SAZ0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLY0 at 2018

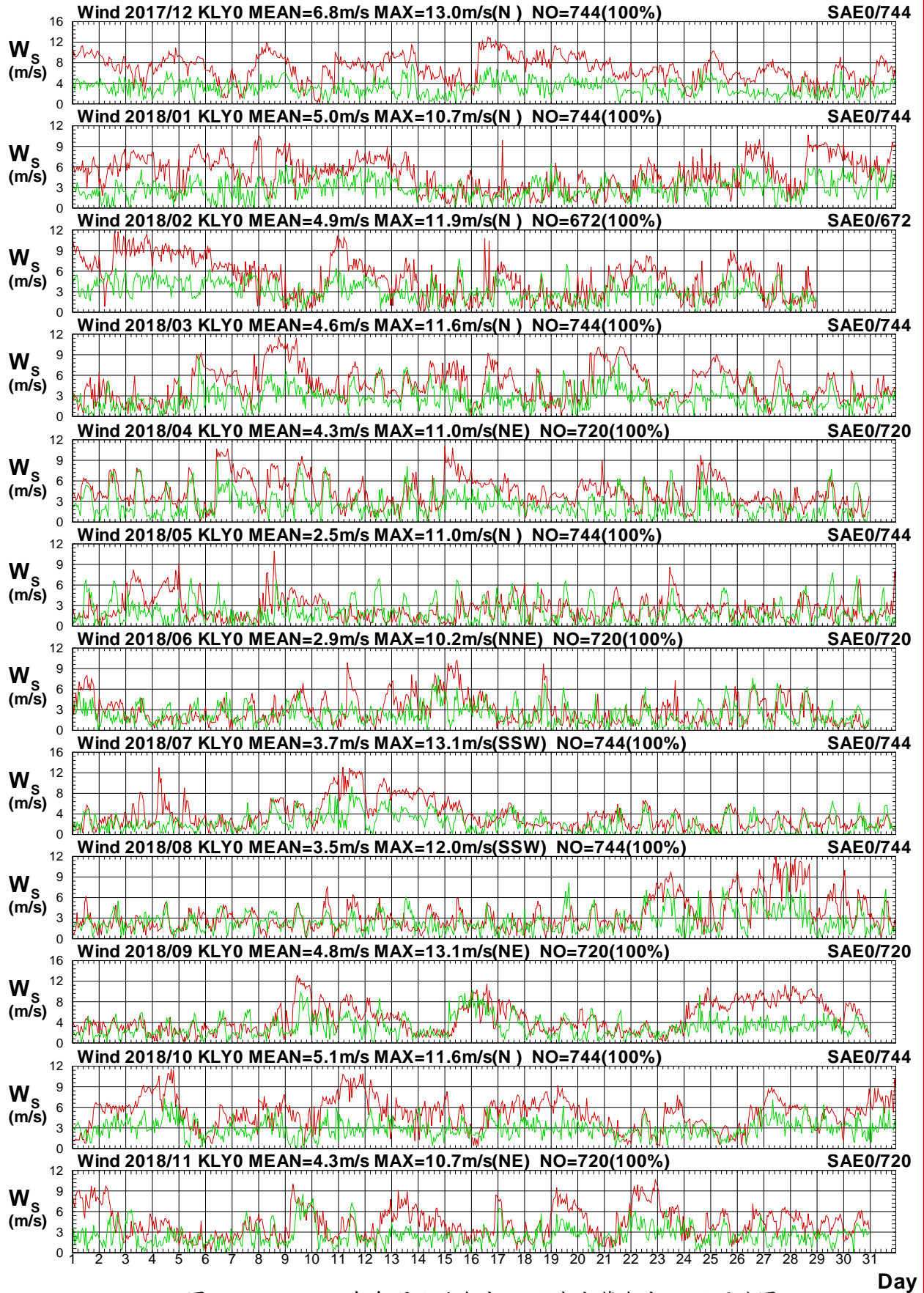


圖1.4.21a 2018年每月北端海域 Y 站與宜蘭海域 E 站風速圖

W17CKLY0.1HA W17CSAE0.1H0 W181KLY0.1HA W181SAE0.1H0 W182KLY0.1HA W182SAE0.1H0  
 W183KLY0.1HA W183SAE0.1H0 W184KLY0.1HA W184SAE0.1H0 W185KLY0.1HA W185SAE0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLY0 at 2018

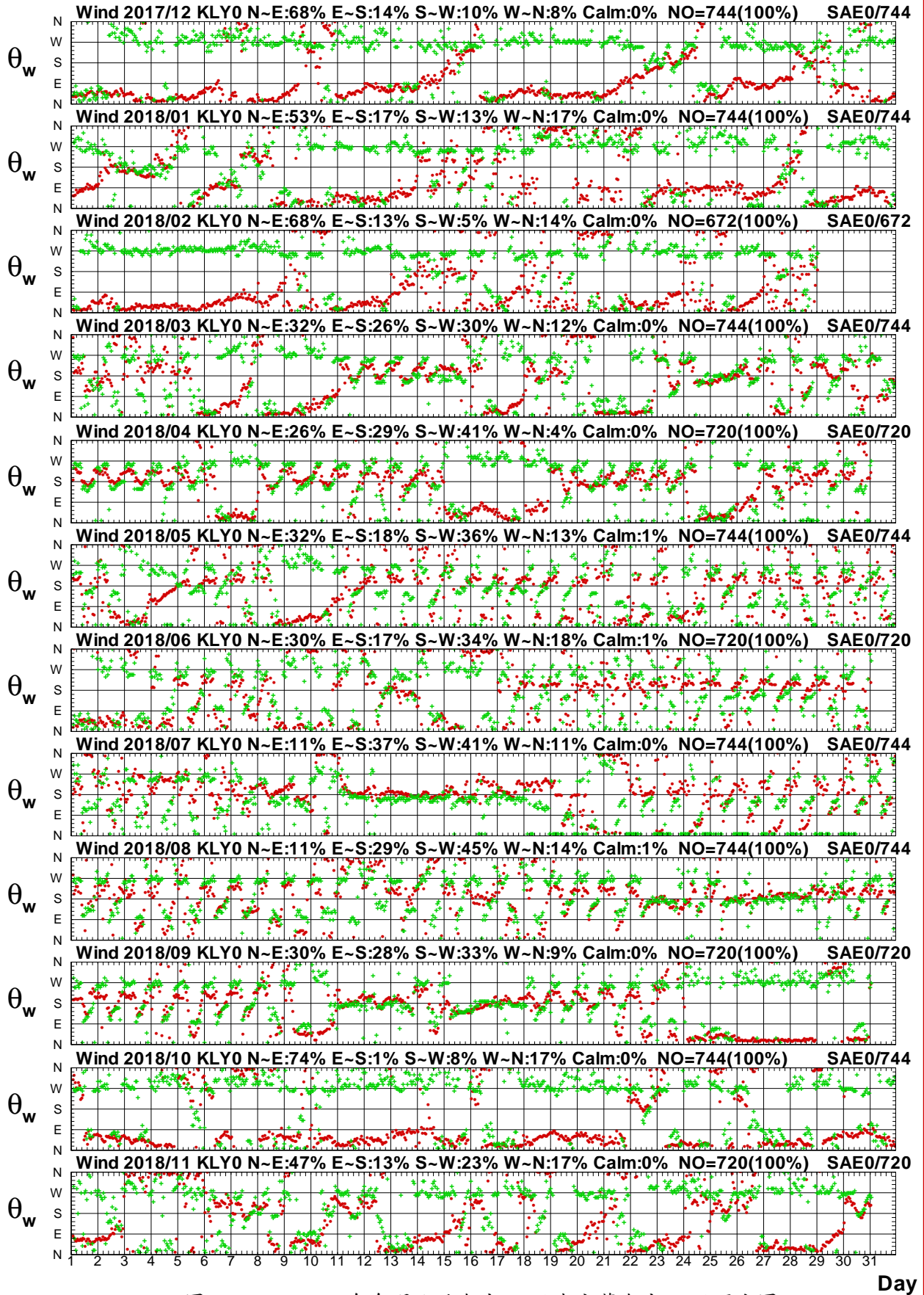


圖1.4.21b 2018年每月北端海域 Y 站與宜蘭海域 E 站風向圖

W17CKLY0.1HA W17CSAE0.1H0 W181KLY0.1HA W181SAE0.1H0 W182KLY0.1HA W182SAE0.1H0  
W183KLY0.1HA W183SAE0.1H0 W184KLY0.1HA W184SAE0.1H0 W185KLY0.1HA W185SAE0.1H0

Institute of Harbor & Marine Technology



# Wind Speed in North Seas of KLY0 at 2018

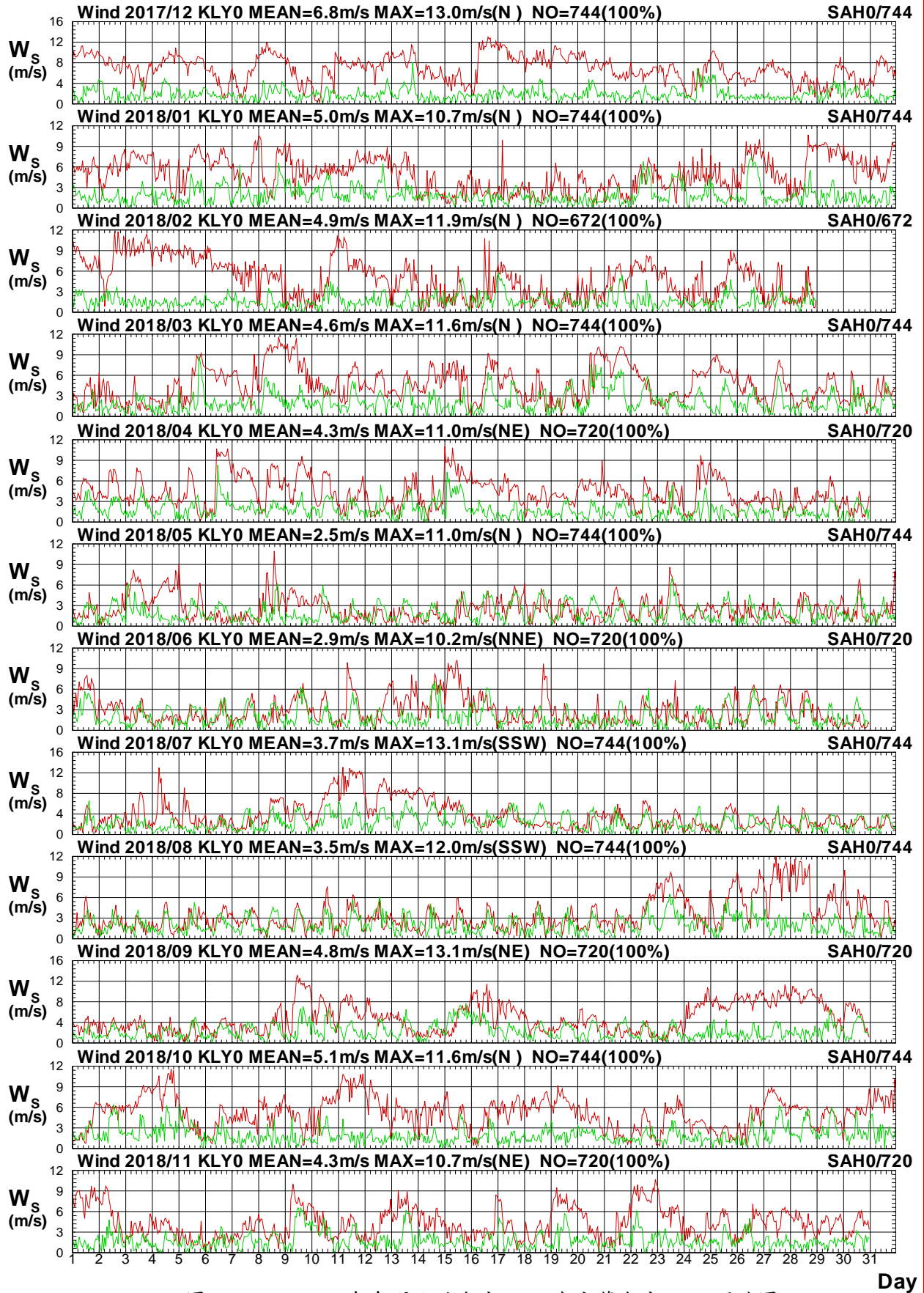


圖1.4.22a 2018年每月北端海域 Y 站與宜蘭海域 H 站風速圖

W17CKLY0.1HA W17CSAH0.1H0 W181KLY0.1HA W181SAH0.1H0 W182KLY0.1HA W182SAH0.1H0  
W183KLY0.1HA W183SAH0.1H0 W184KLY0.1HA W184SAH0.1H0 W185KLY0.1HA W185SAH0.1H0

Institute of Harbor & Marine Technology



# Wind Direction in North Seas of KLY0 at 2018

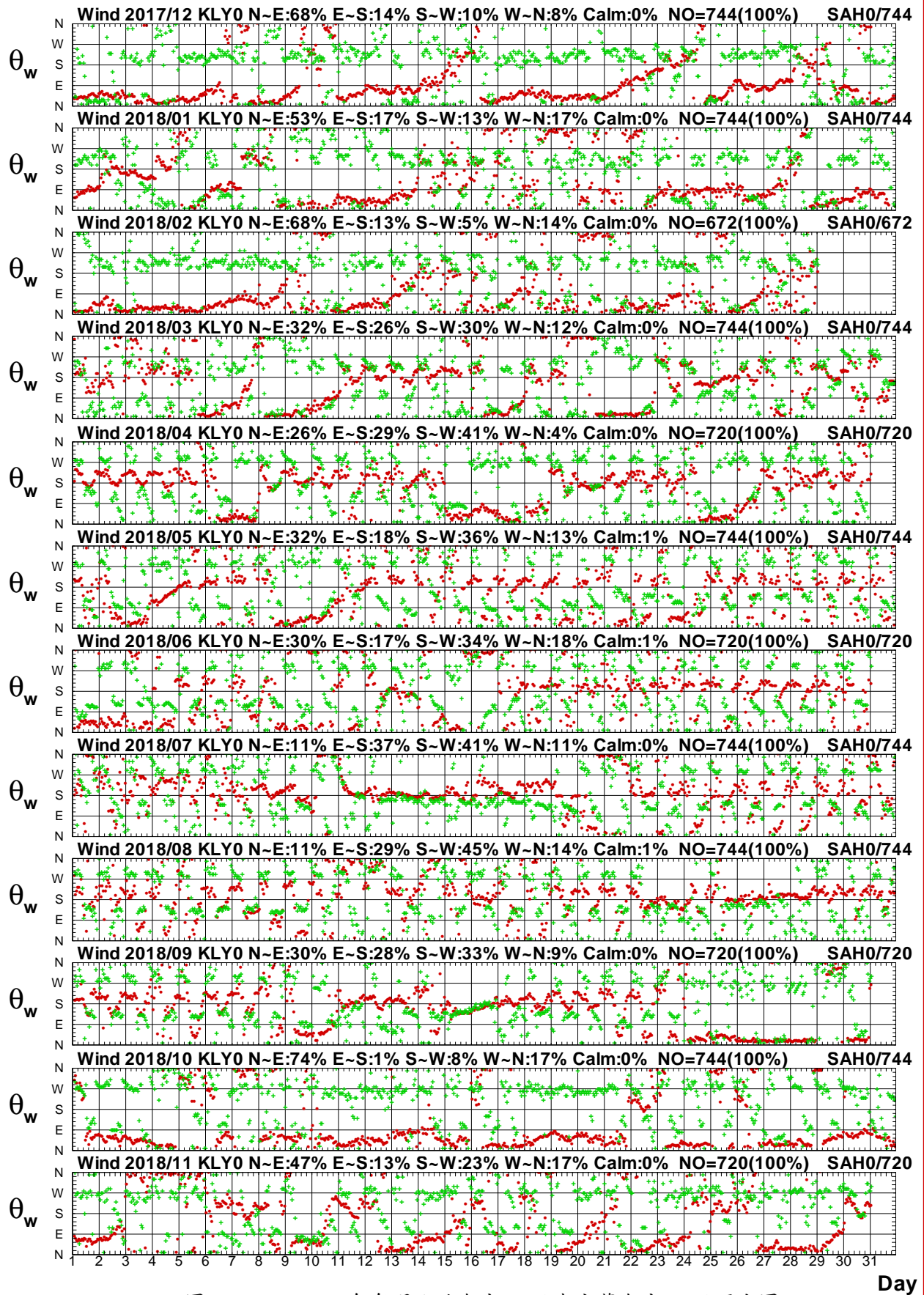


圖1.4.22b 2018年每月北端海域 Y 站與宜蘭海域 H 站風向圖

W17CKLY0.1HA W17CSAH0.1H0 W181KLY0.1HA W181SAH0.1H0 W182KLY0.1HA W182SAH0.1H0  
 W183KLY0.1HA W183SAH0.1H0 W184KLY0.1HA W184SAH0.1H0 W185KLY0.1HA W185SAH0.1H0

Institute of Harbor & Marine Technology

# Wind Speed in North Seas of KLY0 at 2018

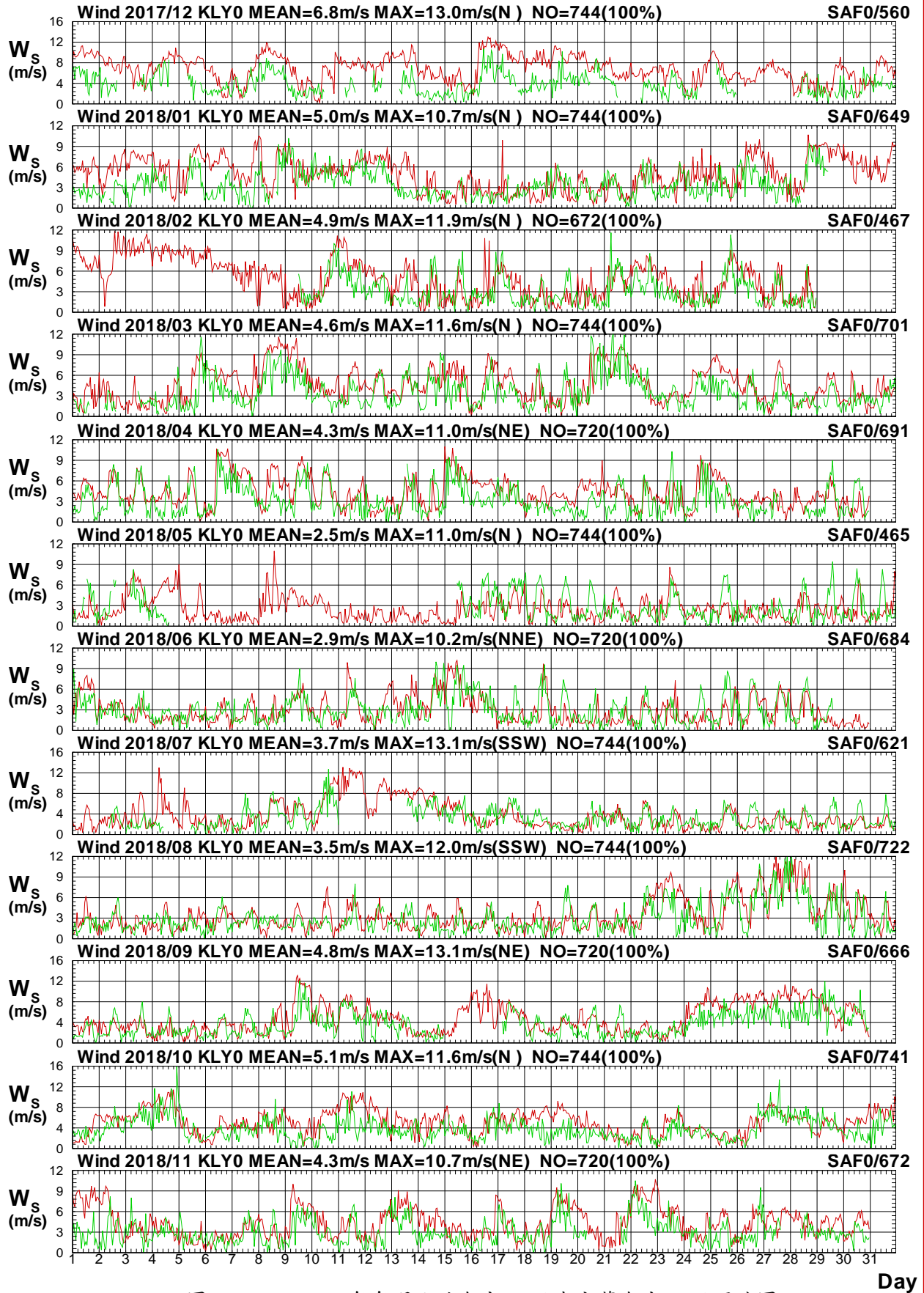


圖1.4.23a 2018年每月北端海域 Y 站與宜蘭海域 F 站風速圖

W17CKLY0.1HA W17CSAF0.1H0 W181KLY0.1HA W181SAF0.1H0 W182KLY0.1HA W182SAF0.1H0  
 W183KLY0.1HA W183SAF0.1H0 W184KLY0.1HA W184SAF0.1H0 W185KLY0.1HA W185SAF0.1H0

Institute of Harbor & Marine Technology

# Wind Direction in North Seas of KLY0 at 2018

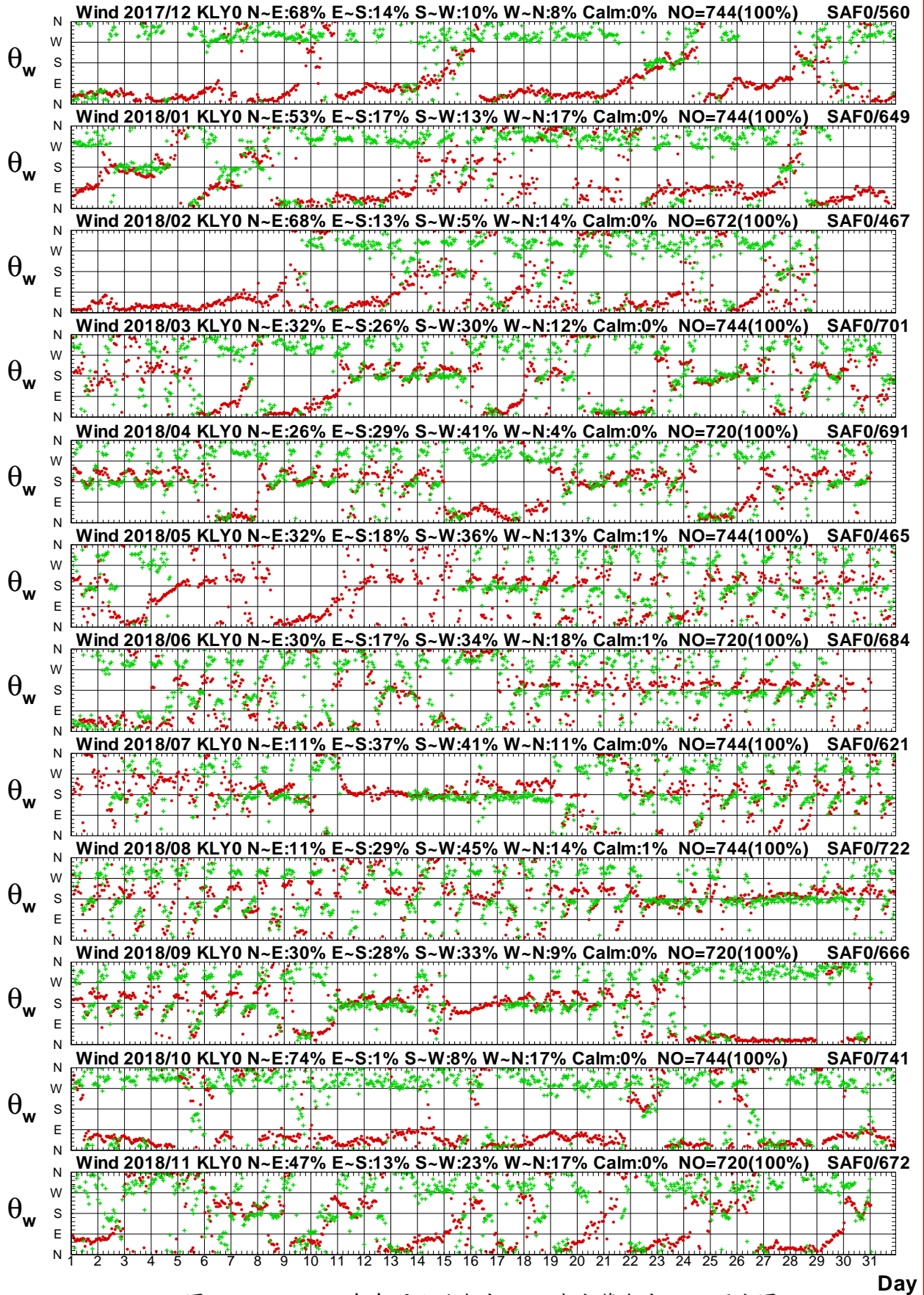


圖1.4.23b 2018年每月北端海域 Y 站與宜蘭海域 F 站風向圖

W17CKLY0.1HA W17CSAF0.1H0 W181KLY0.1HA W181SAF0.1H0 W182KLY0.1HA W182SAF0.1H0  
W183KLY0.1HA W183SAF0.1H0 W184KLY0.1HA W184SAF0.1H0 W185KLY0.1HA W185SAF0.1H0

Institute of Harbor & Marine Technology

## 1.5 2018 年北端海域風力各測站修補前 風力向量分佈圖





# Distribution of Wind Vectors

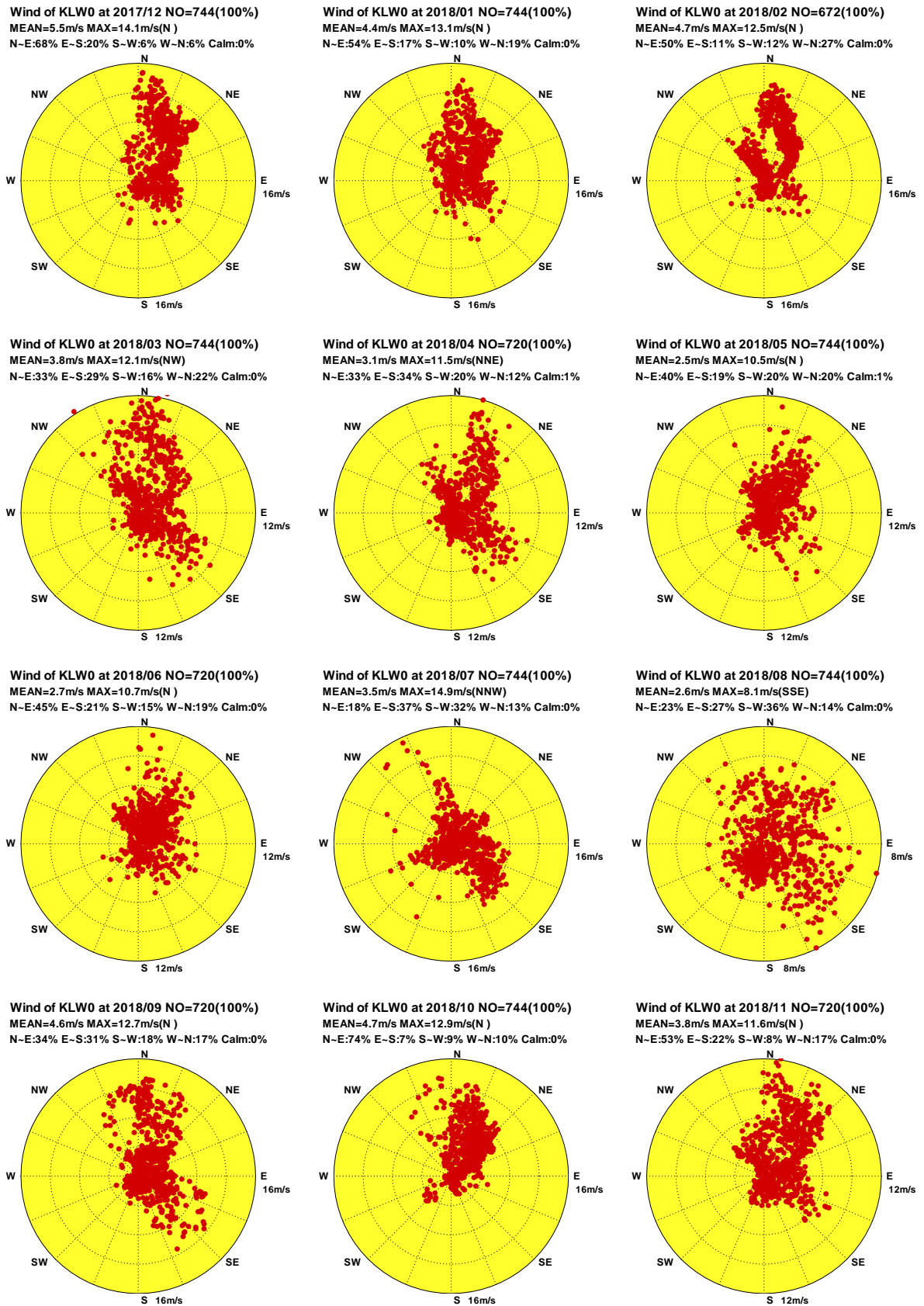


圖 1.5.1 2018 年北端海域每月 W 站修補前觀測風力向量分佈圖

W17CKLOW0.1H0 W181KLOW0.1H0 W182KLOW0.1H0 W183KLOW0.1H0 W184KLOW0.1H0 W185KLOW0.1H0  
W186KLOW0.1H0 W187KLOW0.1H0 W188KLOW0.1H0 W189KLOW0.1H0 W18AKLOW0.1H0 W18BKLOW0.1H0

Institute of Harbor & Marine Technology

# Distribution of Wind Vectors

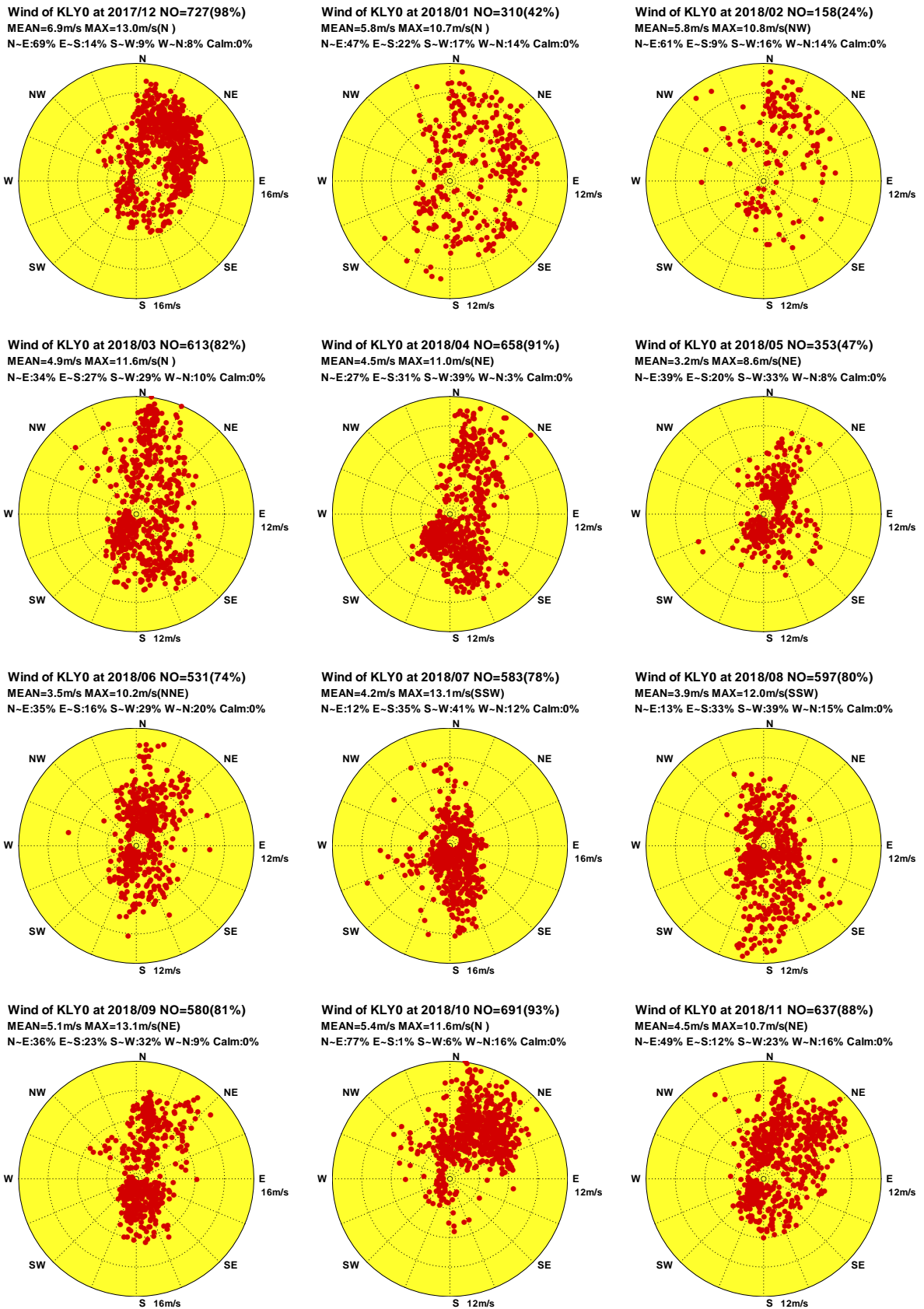


圖1.5.2 2018年北端海域每月 Y 站修補前觀測風力向量分佈圖

W17CKLY0.1H0 W181KLY0.1H0 W182KLY0.1H0 W183KLY0.1H0 W184KLY0.1H0 W185KLY0.1H0  
 W186KLY0.1H0 W187KLY0.1H0 W188KLY0.1H0 W189KLY0.1H0 W18AKLY0.1H0 W18BKLY0.1H0

Institute of Harbor & Marine Technology

# Distribution of Wind Vectors

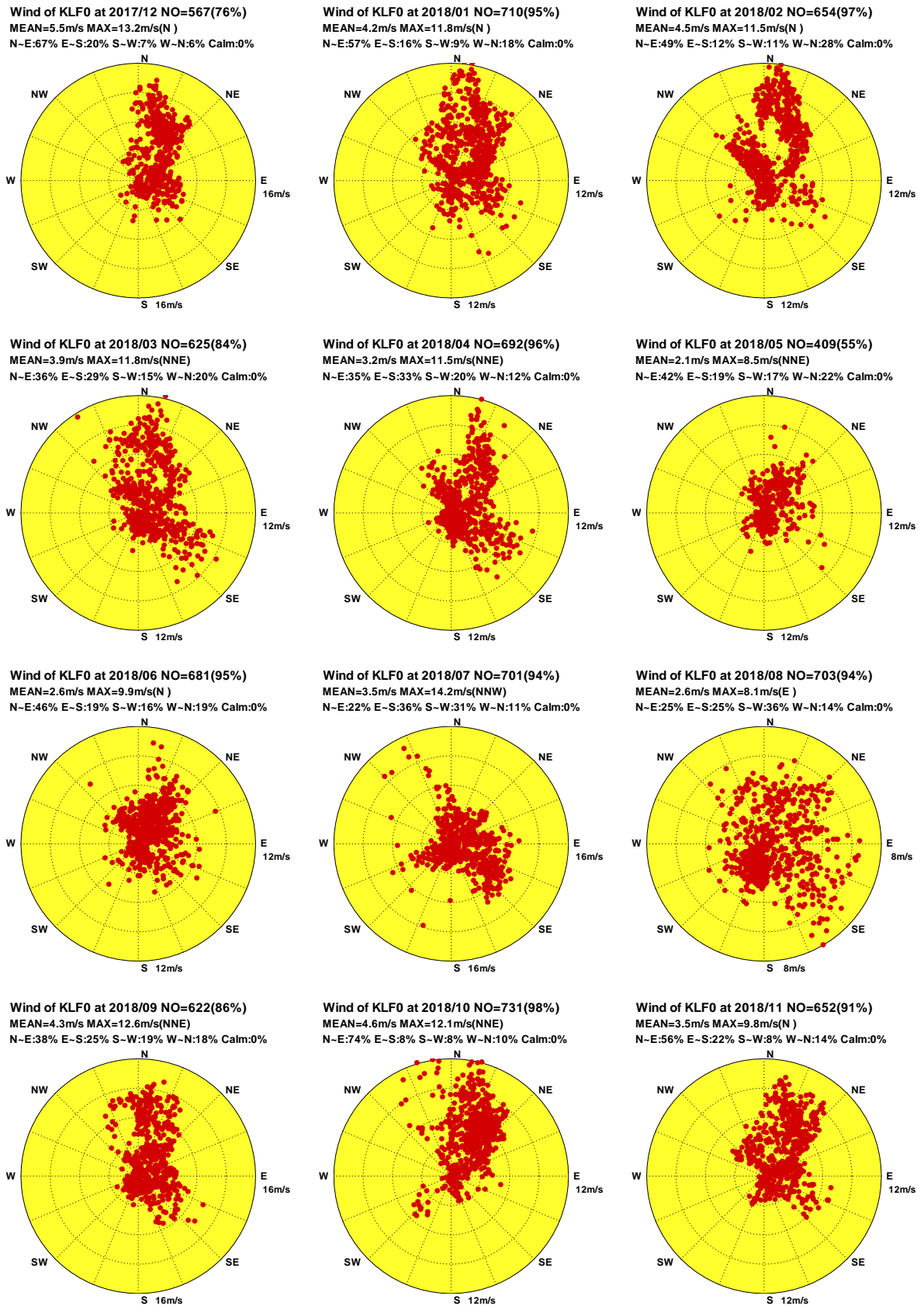


圖1.5.3 2018年北端海域每月 F 站修補前觀測風力向量分佈圖

W17CKLF0.1HO W181KLF0.1HO W182KLF0.1HO W183KLF0.1HO W184KLF0.1HO W185KLF0.1HO  
W186KLF0.1HO W187KLF0.1HO W188KLF0.1HO W189KLF0.1HO W18AKLF0.1HO W18BKLF0.1HO

Institute of Harbor & Marine Technology



# Distribution of Wind Vectors

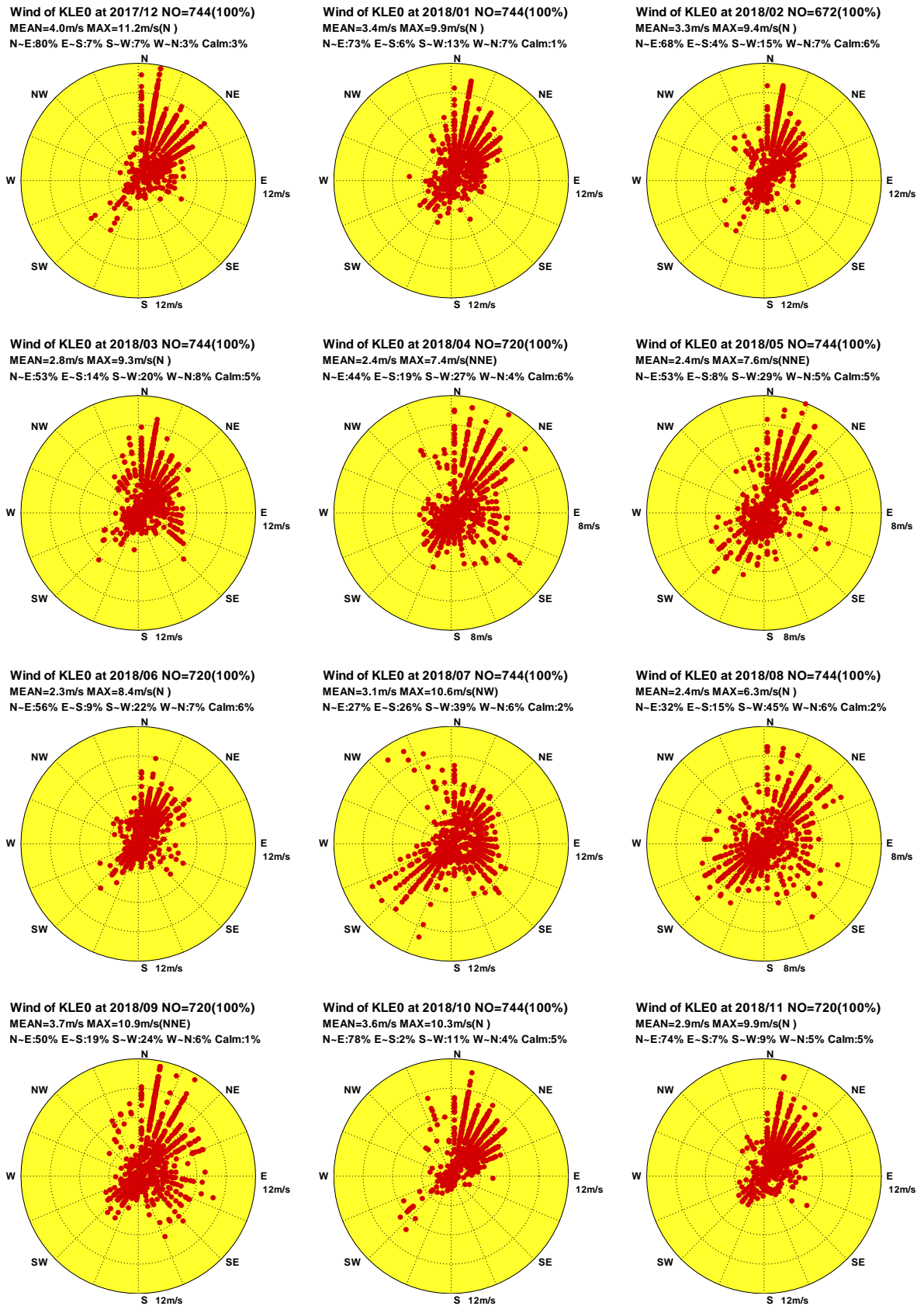


圖1.5.4 2018年北端海域每月 E 站修補前觀測風力向量分佈圖

W17CKLE0.1H0 W181KLE0.1H0 W182KLE0.1H0 W183KLE0.1H0 W184KLE0.1H0 W185KLE0.1H0  
 W186KLE0.1H0 W187KLE0.1H0 W188KLE0.1H0 W189KLE0.1H0 W18AKLE0.1H0 W18BKLE0.1H0

Institute of Harbor & Marine Technology

# Distribution of Wind Vectors

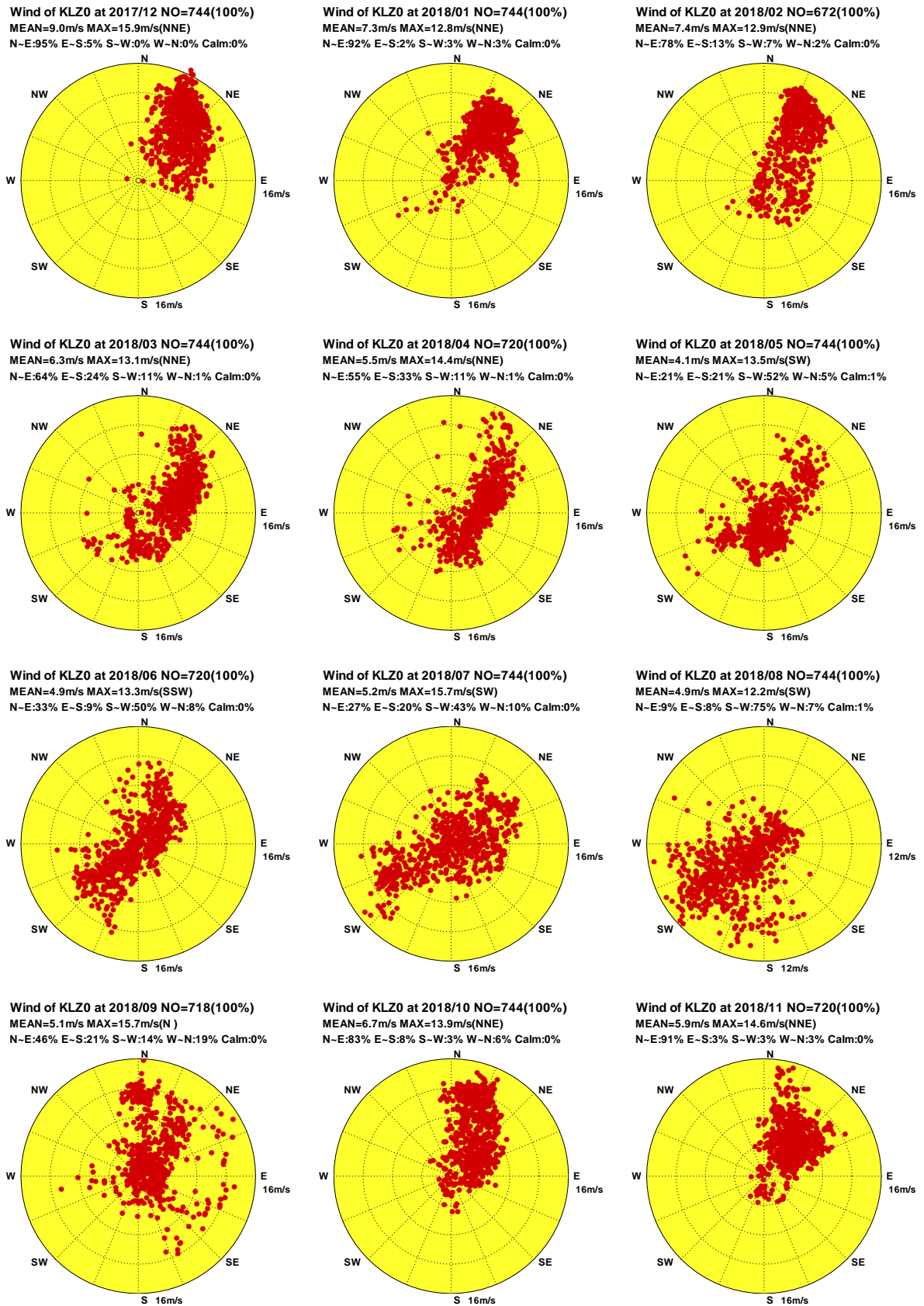


圖1.5.5 2018年北端海域每月 Z 站修補前觀測風力向量分佈圖

W17CKLZ0.1HO W181KLZ0.1HO W182KLZ0.1HO W183KLZ0.1HO W184KLZ0.1HO W185KLZ0.1HO  
 W186KLZ0.1HO W187KLZ0.1HO W188KLZ0.1HO W189KLZ0.1HO W18AKLZ0.1HO W18BKLZ0.1HO

Institute of Harbor & Marine Technology

# Distribution of Wind Vectors

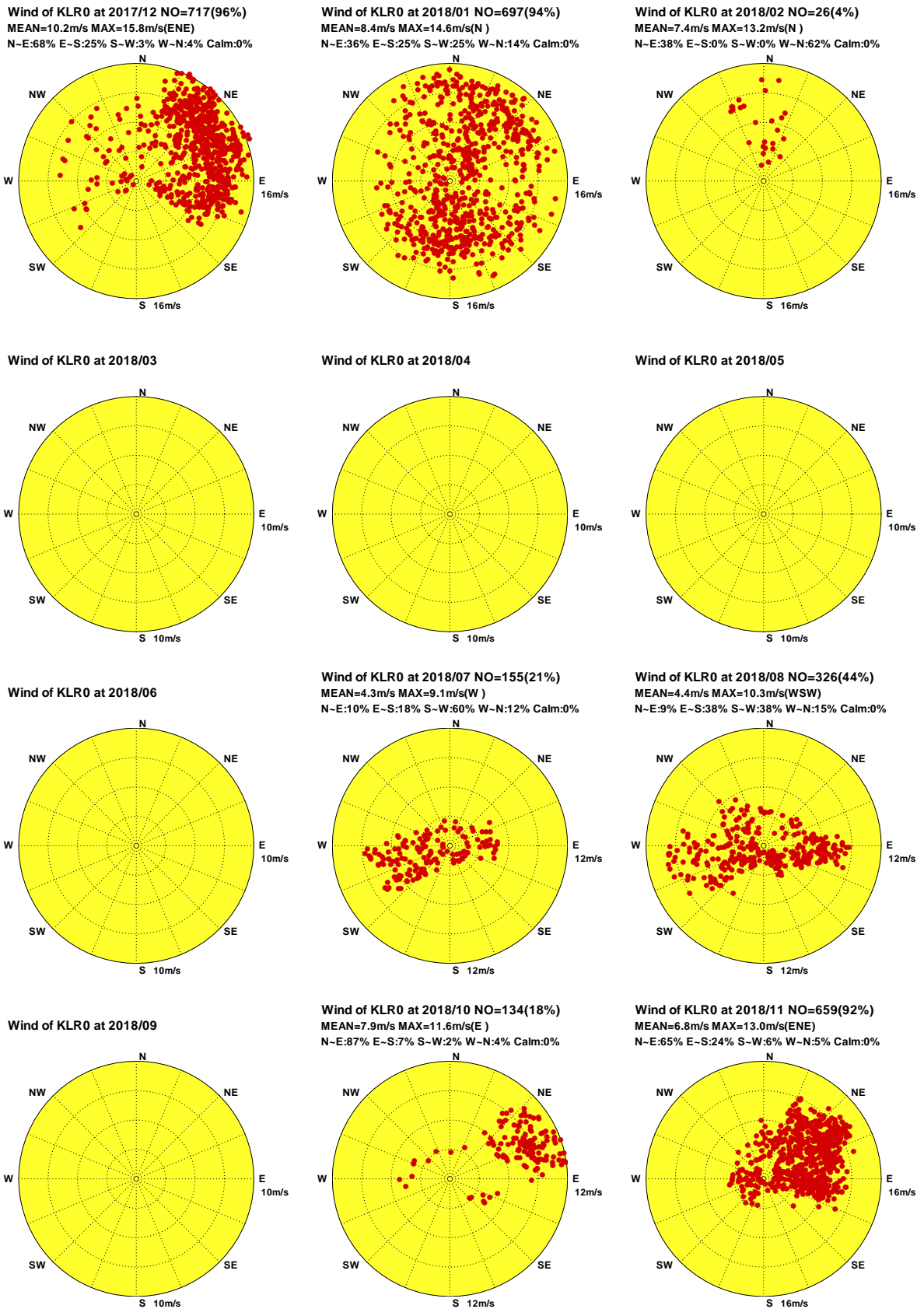


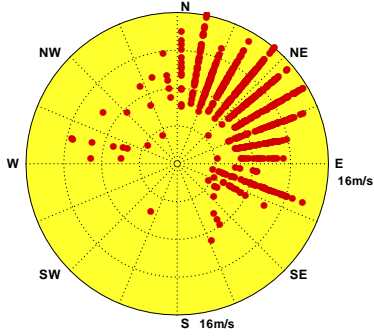
圖1.5.6 2018年北端海域每月 R 站修補前觀測風力向量分佈圖

W17CKLR0.1H0 W181KLR0.1H0 W182KLR0.1H0 W183KLR0.1H0 W184KLR0.1H0 W185KLR0.1H0  
 W186KLR0.1H0 W187KLR0.1H0 W188KLR0.1H0 W189KLR0.1H0 W18AKLR0.1H0 W18BKLR0.1H0

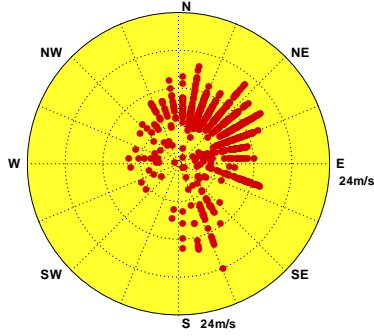
Institute of Harbor & Marine Technology

# Distribution of Wind Vectors

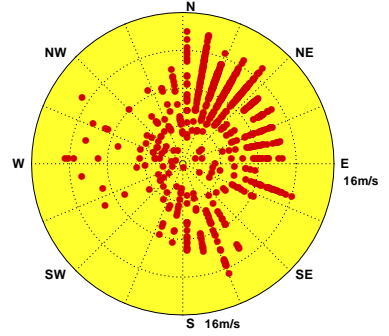
Wind of KLI0 at 2017/12 NO=744(100%)  
 MEAN=9.5m/s MAX=16.0m/s(N)  
 N-E:84% E-S:13% S-W:0% W-N:3% Calm:0%



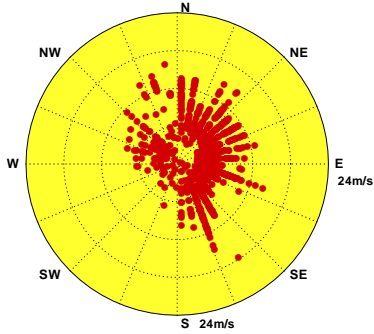
Wind of KLI0 at 2018/01 NO=744(100%)  
 MEAN=8.8m/s MAX=18.7m/s(SSE)  
 N-E:72% E-S:19% S-W:2% W-N:7% Calm:0%



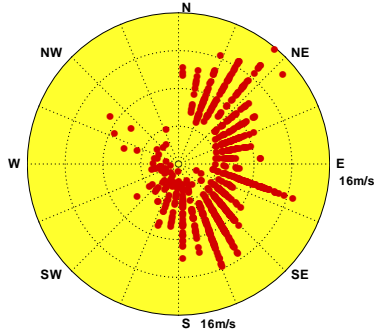
Wind of KLI0 at 2018/02 NO=672(100%)  
 MEAN=7.8m/s MAX=13.4m/s(N)  
 N-E:65% E-S:18% S-W:8% W-N:9% Calm:0%



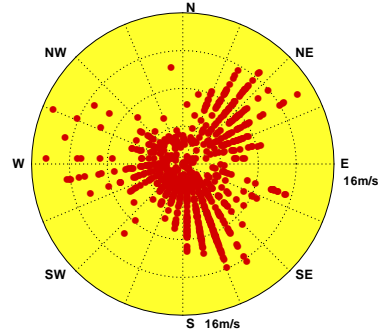
Wind of KLI0 at 2018/03 NO=744(100%)  
 MEAN=7.1m/s MAX=18.1m/s(SSE)  
 N-E:41% E-S:41% S-W:5% W-N:13% Calm:0%



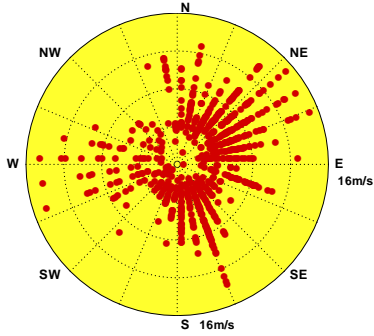
Wind of KLI0 at 2018/04 NO=720(100%)  
 MEAN=6.7m/s MAX=15.1m/s(NE)  
 N-E:32% E-S:52% S-W:14% W-N:2% Calm:0%



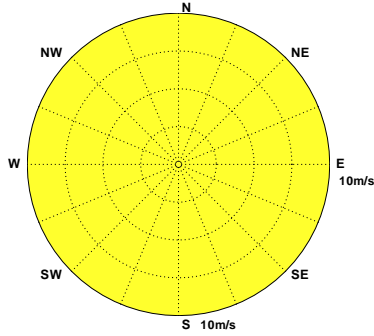
Wind of KLI0 at 2018/05 NO=744(100%)  
 MEAN=5.4m/s MAX=15.1m/s(WNW)  
 N-E:24% E-S:32% S-W:32% W-N:12% Calm:0%



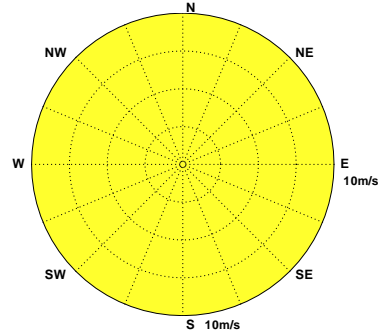
Wind of KLI0 at 2018/06 NO=720(100%)  
 MEAN=6.0m/s MAX=15.2m/s(WSW)  
 N-E:45% E-S:30% S-W:17% W-N:8% Calm:0%



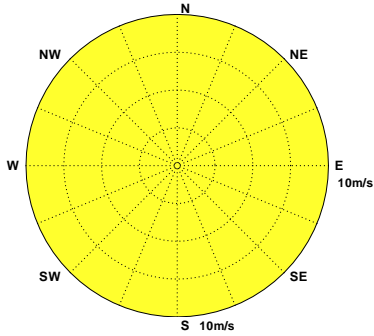
Wind of KLI0 at 2018/07



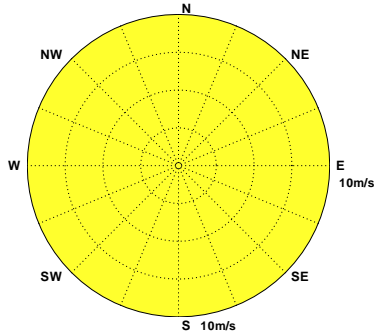
Wind of KLI0 at 2018/08



Wind of KLI0 at 2018/09



Wind of KLI0 at 2018/10



Wind of KLI0 at 2018/11

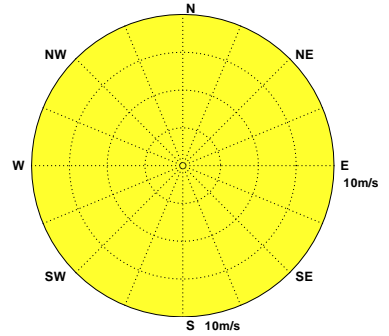


圖1.5.7 2018年北端海域每月I站修補前觀測風力向量分佈圖

W17CKLI0.1H0 W181KLI0.1H0 W182KLI0.1H0 W183KLI0.1H0 W184KLI0.1H0 W185KLI0.1H0  
 W186KLI0.1H0 W187KLI0.1H0 W188KLI0.1H0 W189KLI0.1H0 W18AKLI0.1H0 W18BKLI0.1H0

Institute of Harbor & Marine Technology



# Distribution of Wind Vectors

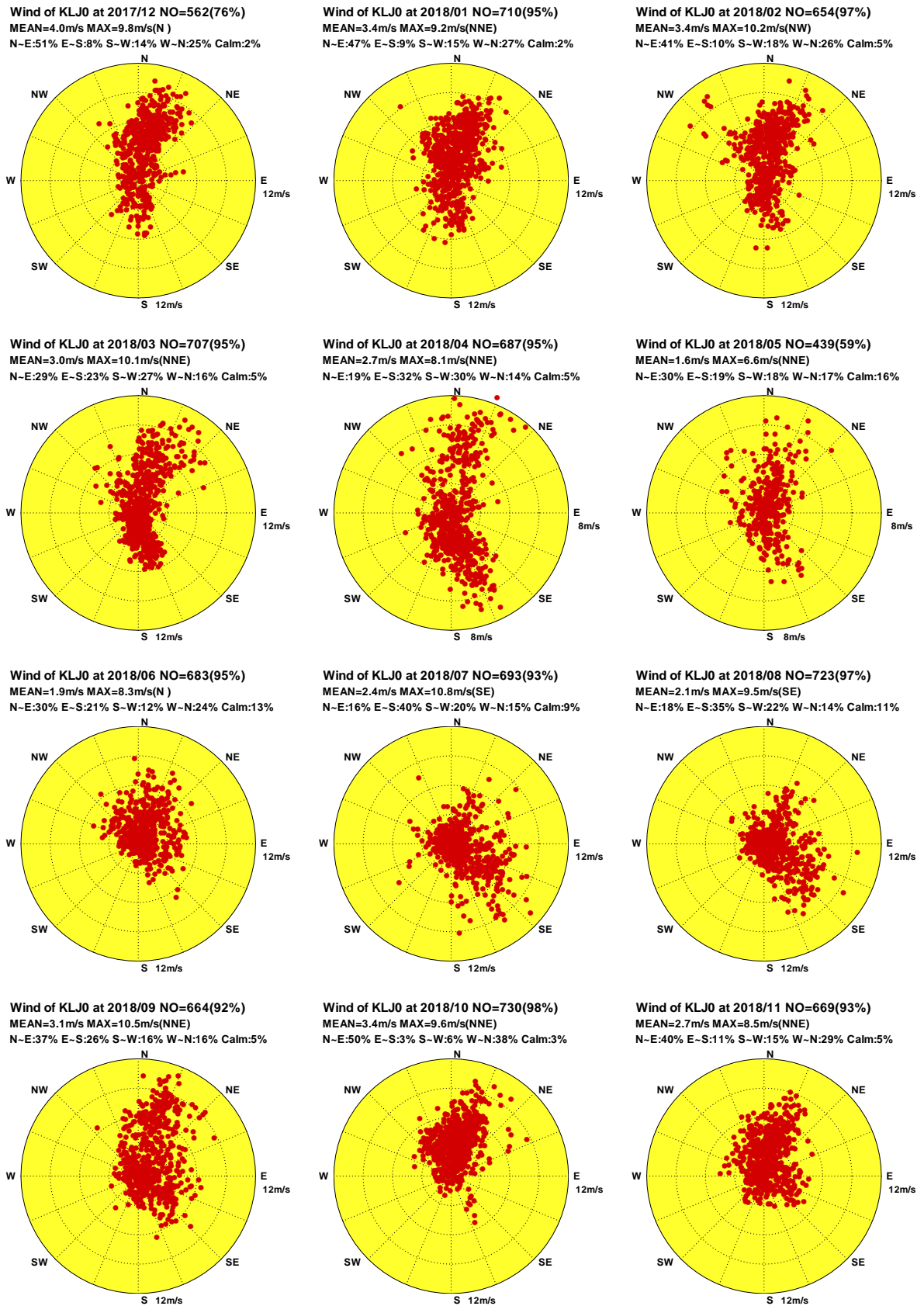


圖1.5.8 2018年北端海域每月J站修補前觀測風力向量分佈圖

W17CKLJ0.1H0 W181KLJ0.1H0 W182KLJ0.1H0 W183KLJ0.1H0 W184KLJ0.1H0 W185KLJ0.1H0  
 W186KLJ0.1H0 W187KLJ0.1H0 W188KLJ0.1H0 W189KLJ0.1H0 W18AKLJ0.1H0 W18BKLJ0.1H0

Institute of Harbor & Marine Technology

## 1.6 2018 年北端海域風力各測站修補前 風力向量行進圖



# Progressive Vector Diagram of Wind

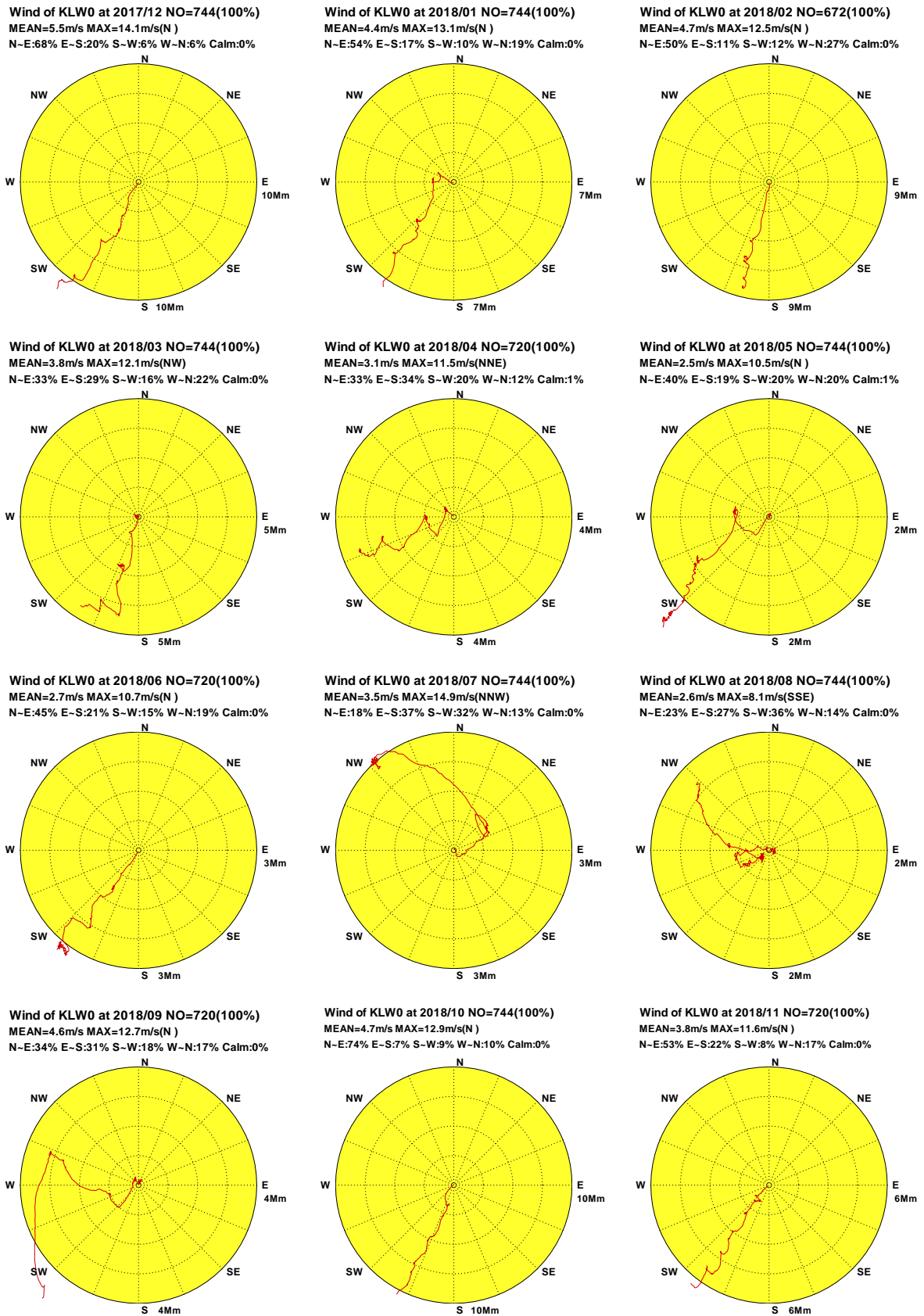


圖 1.6.1 2018 年北端海域每月 W 站修補前觀測風力向量行進圖

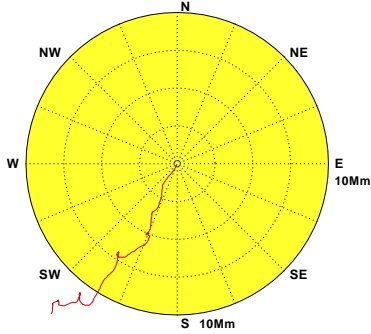
W17CKLW0.1H0 W181KLW0.1H0 W182KLW0.1H0 W183KLW0.1H0 W184KLW0.1H0 W185KLW0.1H0  
W186KLW0.1H0 W187KLW0.1H0 W188KLW0.1H0 W189KLW0.1H0 W18AKLW0.1H0 W18BKLW0.1H0

Institute of Harbor & Marine Technology

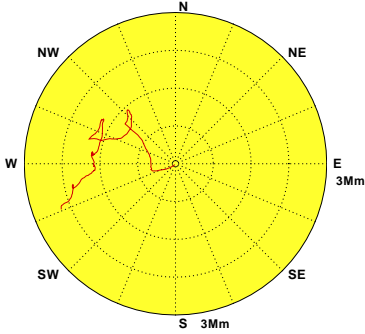


# Progressive Vector Diagram of Wind

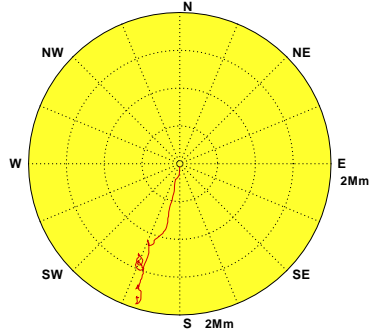
Wind of KLY0 at 2017/12 NO=727(98%)  
 MEAN=6.9m/s MAX=13.0m/s(N)  
 N-E:69% E-S:14% S-W:9% W-N:8% Calm:0%



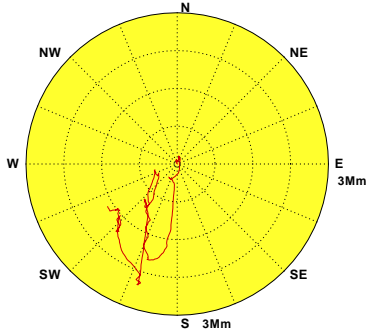
Wind of KLY0 at 2018/01 NO=310(42%)  
 MEAN=5.8m/s MAX=10.7m/s(N)  
 N-E:47% E-S:22% S-W:17% W-N:14% Calm:0%



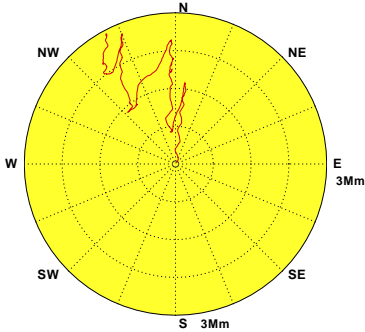
Wind of KLY0 at 2018/02 NO=158(24%)  
 MEAN=5.8m/s MAX=10.8m/s(NW)  
 N-E:61% E-S:9% S-W:16% W-N:14% Calm:0%



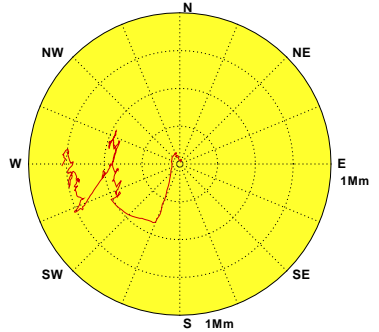
Wind of KLY0 at 2018/03 NO=613(82%)  
 MEAN=4.9m/s MAX=11.6m/s(N)  
 N-E:34% E-S:27% S-W:29% W-N:10% Calm:0%



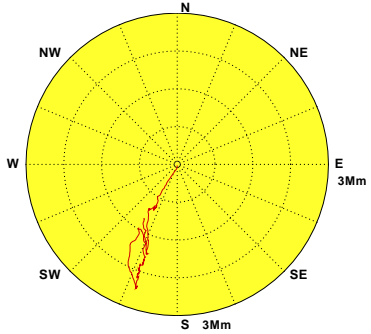
Wind of KLY0 at 2018/04 NO=658(91%)  
 MEAN=4.5m/s MAX=11.0m/s(NE)  
 N-E:27% E-S:31% S-W:39% W-N:3% Calm:0%



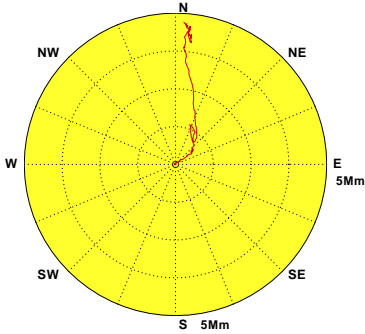
Wind of KLY0 at 2018/05 NO=353(47%)  
 MEAN=3.2m/s MAX=8.6m/s(NE)  
 N-E:39% E-S:20% S-W:33% W-N:8% Calm:0%



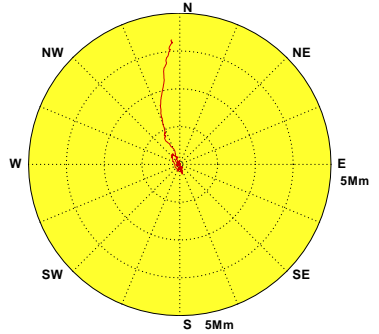
Wind of KLY0 at 2018/06 NO=531(74%)  
 MEAN=3.5m/s MAX=10.2m/s(NNE)  
 N-E:35% E-S:16% S-W:29% W-N:20% Calm:0%



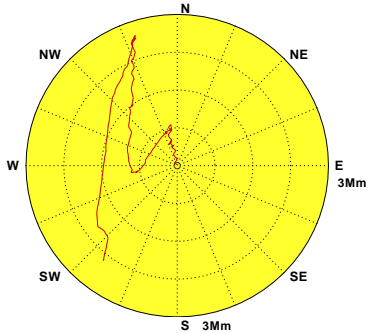
Wind of KLY0 at 2018/07 NO=583(78%)  
 MEAN=4.2m/s MAX=13.1m/s(SSW)  
 N-E:12% E-S:35% S-W:41% W-N:12% Calm:0%



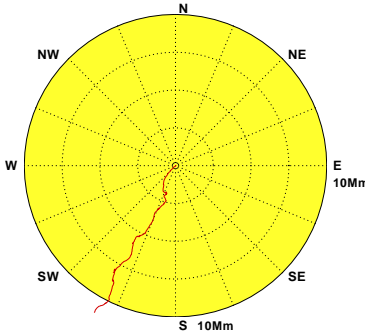
Wind of KLY0 at 2018/08 NO=597(80%)  
 MEAN=3.9m/s MAX=12.0m/s(SSW)  
 N-E:13% E-S:33% S-W:39% W-N:15% Calm:0%



Wind of KLY0 at 2018/09 NO=580(81%)  
 MEAN=5.1m/s MAX=13.1m/s(NE)  
 N-E:36% E-S:23% S-W:32% W-N:9% Calm:0%



Wind of KLY0 at 2018/10 NO=691(93%)  
 MEAN=5.4m/s MAX=11.6m/s(N)  
 N-E:77% E-S:1% S-W:6% W-N:16% Calm:0%



Wind of KLY0 at 2018/11 NO=637(88%)  
 MEAN=4.5m/s MAX=10.7m/s(NE)  
 N-E:49% E-S:12% S-W:23% W-N:16% Calm:0%

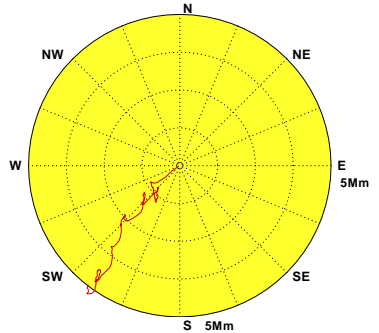


圖1.6.2 2018年北端海域每月 Y 站修補前觀測風力向量行進圖

W17CKLY0.1H0 W181KLY0.1H0 W182KLY0.1H0 W183KLY0.1H0 W184KLY0.1H0 W185KLY0.1H0  
 W186KLY0.1H0 W187KLY0.1H0 W188KLY0.1H0 W189KLY0.1H0 W18AKLY0.1H0 W18BKLY0.1H0

Institute of Harbor & Marine Technology

# Progressive Vector Diagram of Wind

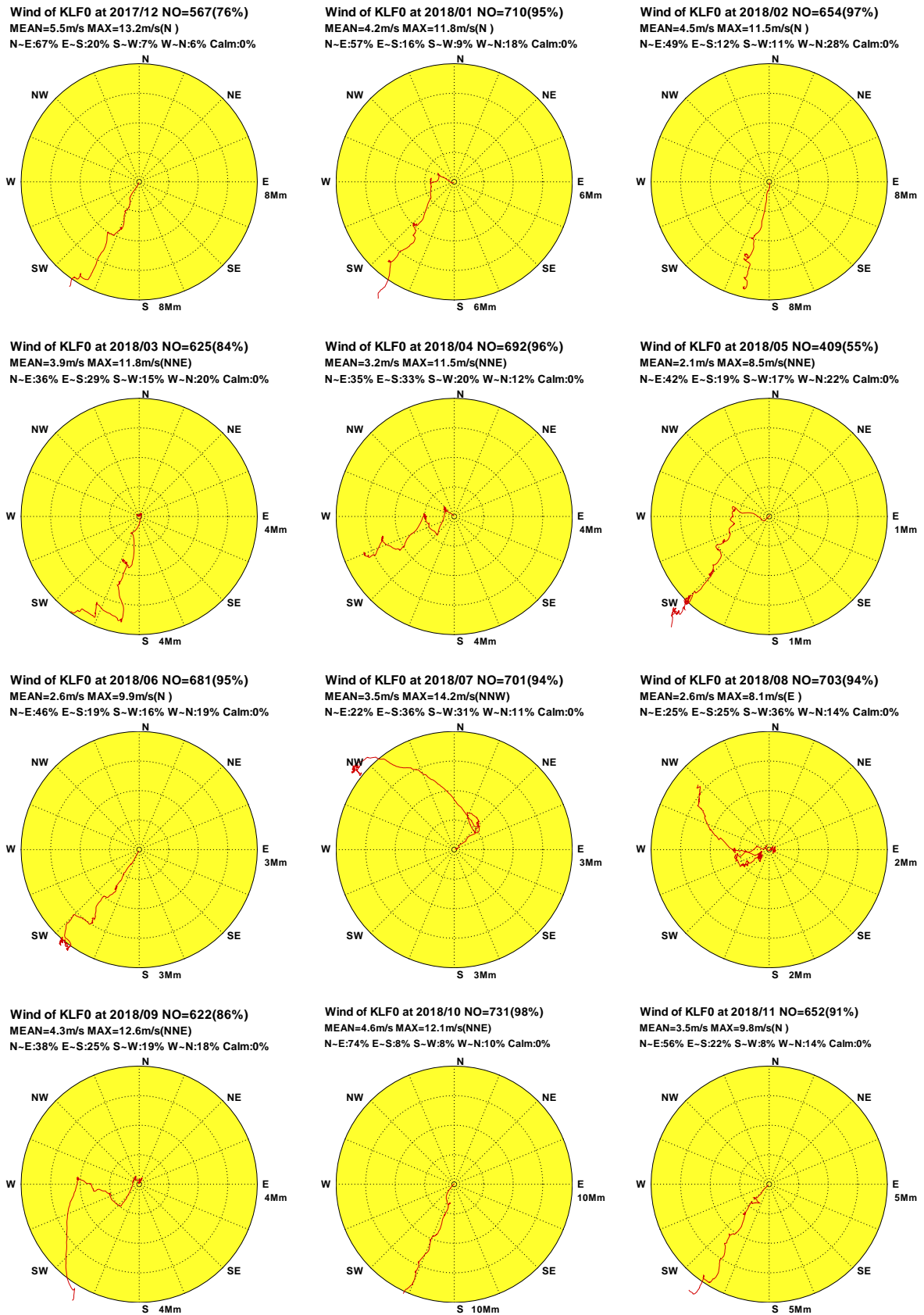


圖1.6.3 2018年北端海域每月 F 站修補前觀測風力向量行進圖

W17CKLF0.1H0 W181KLF0.1H0 W182KLF0.1H0 W183KLF0.1H0 W184KLF0.1H0 W185KLF0.1H0  
W186KLF0.1H0 W187KLF0.1H0 W188KLF0.1H0 W189KLF0.1H0 W18AKLF0.1H0 W18BKLF0.1H0

Institute of Harbor & Marine Technology

# Progressive Vector Diagram of Wind

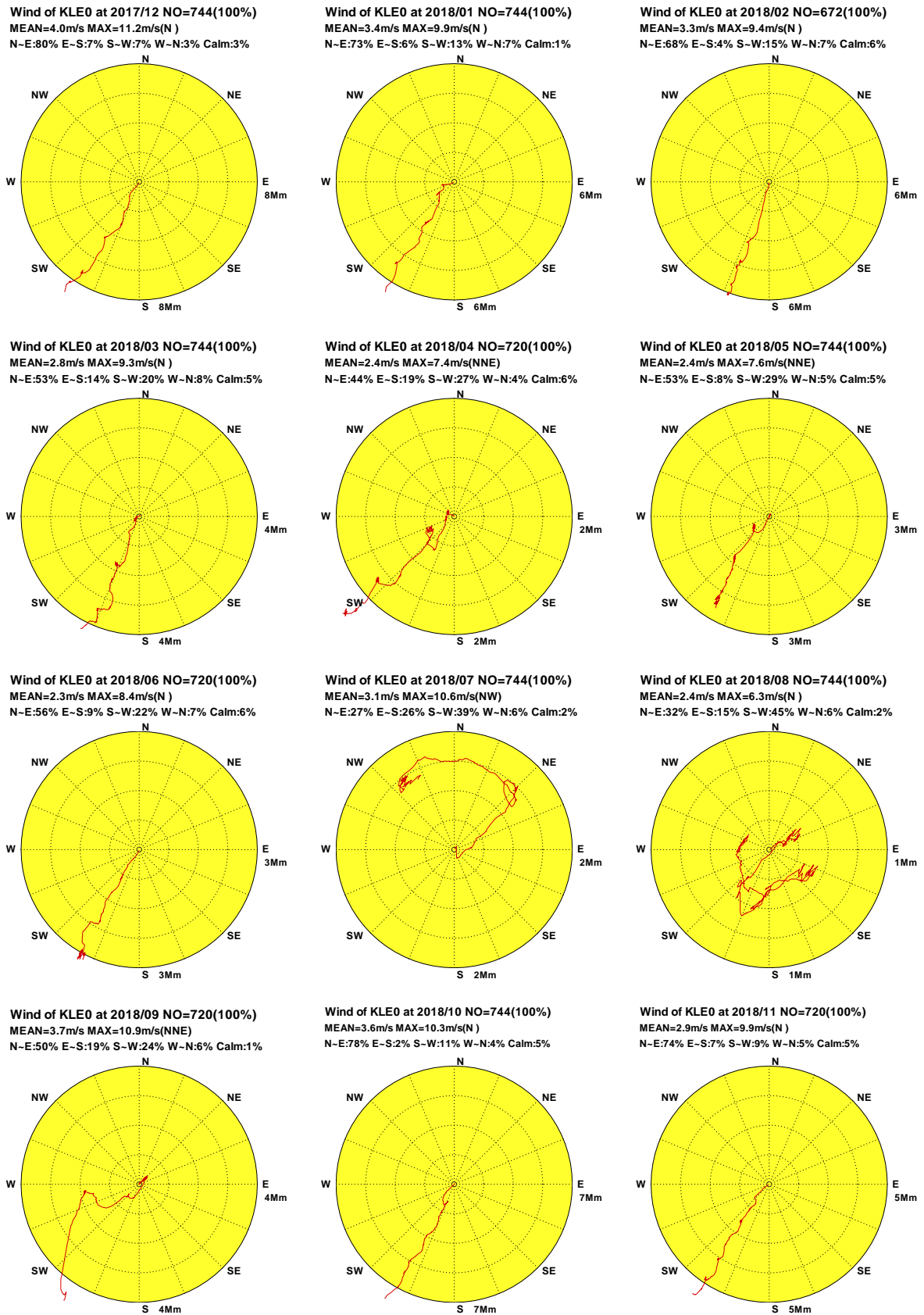


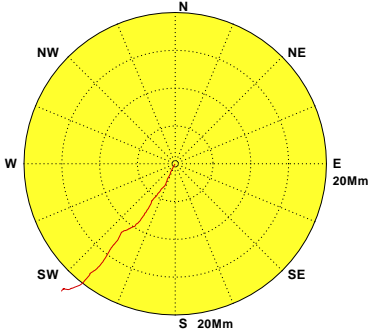
圖1.6.4 2018年北端海域每月 E 站修補前觀測風力向量行進圖

W17CKLE0.1H0 W181KLE0.1H0 W182KLE0.1H0 W183KLE0.1H0 W184KLE0.1H0 W185KLE0.1H0  
W186KLE0.1H0 W187KLE0.1H0 W188KLE0.1H0 W189KLE0.1H0 W18AKLE0.1H0 W18BKLE0.1H0

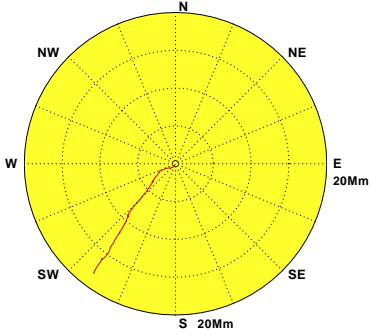
Institute of Harbor & Marine Technology

# Progressive Vector Diagram of Wind

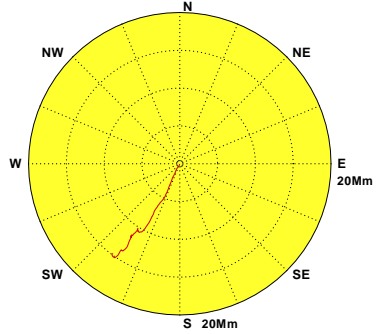
Wind of KLZ0 at 2017/12 NO=744(100%)  
 MEAN=9.0m/s MAX=15.9m/s(NNE)  
 N-E:95% E-S:5% S-W:0% W-N:0% Calm:0%



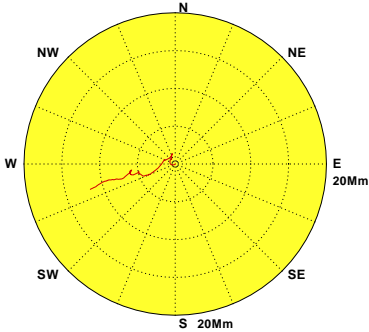
Wind of KLZ0 at 2018/01 NO=744(100%)  
 MEAN=7.3m/s MAX=12.8m/s(NNE)  
 N-E:92% E-S:2% S-W:3% W-N:3% Calm:0%



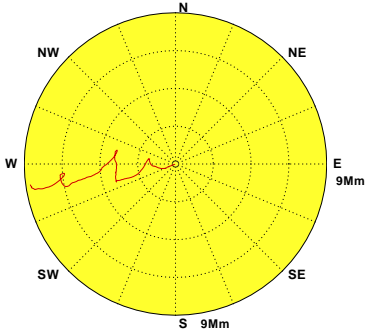
Wind of KLZ0 at 2018/02 NO=672(100%)  
 MEAN=7.4m/s MAX=12.9m/s(NNE)  
 N-E:78% E-S:13% S-W:7% W-N:2% Calm:0%



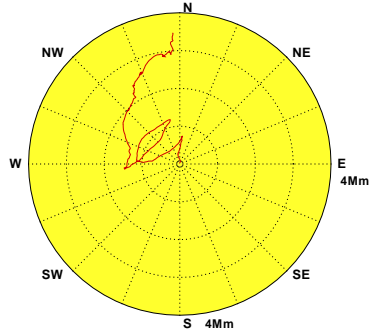
Wind of KLZ0 at 2018/03 NO=744(100%)  
 MEAN=6.3m/s MAX=13.1m/s(NNE)  
 N-E:64% E-S:24% S-W:11% W-N:1% Calm:0%



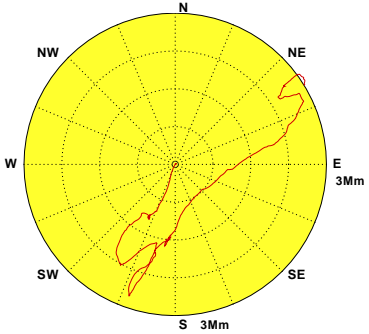
Wind of KLZ0 at 2018/04 NO=720(100%)  
 MEAN=5.5m/s MAX=14.4m/s(NNE)  
 N-E:55% E-S:33% S-W:11% W-N:1% Calm:0%



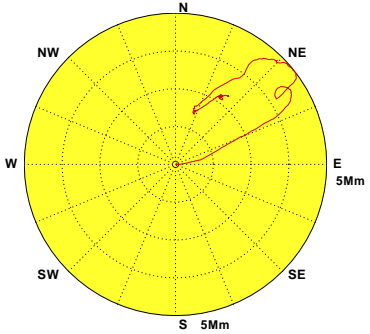
Wind of KLZ0 at 2018/05 NO=744(100%)  
 MEAN=4.1m/s MAX=13.5m/s(SW)  
 N-E:21% E-S:21% S-W:52% W-N:5% Calm:1%



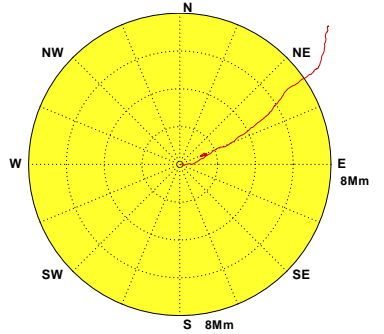
Wind of KLZ0 at 2018/06 NO=720(100%)  
 MEAN=4.9m/s MAX=13.3m/s(SSW)  
 N-E:33% E-S:9% S-W:50% W-N:8% Calm:0%



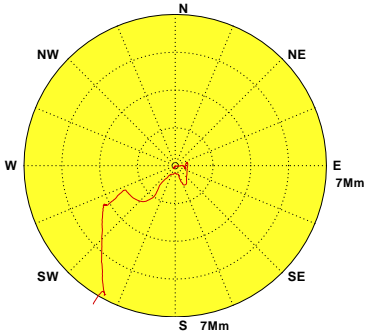
Wind of KLZ0 at 2018/07 NO=744(100%)  
 MEAN=5.2m/s MAX=15.7m/s(SW)  
 N-E:27% E-S:20% S-W:43% W-N:10% Calm:0%



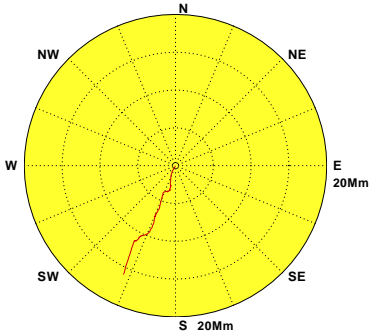
Wind of KLZ0 at 2018/08 NO=744(100%)  
 MEAN=4.9m/s MAX=12.2m/s(SW)  
 N-E:9% E-S:8% S-W:75% W-N:7% Calm:1%



Wind of KLZ0 at 2018/09 NO=718(100%)  
 MEAN=5.1m/s MAX=15.7m/s(N)  
 N-E:46% E-S:21% S-W:14% W-N:19% Calm:0%



Wind of KLZ0 at 2018/10 NO=744(100%)  
 MEAN=6.7m/s MAX=13.9m/s(NNE)  
 N-E:83% E-S:8% S-W:3% W-N:6% Calm:0%



Wind of KLZ0 at 2018/11 NO=720(100%)  
 MEAN=5.9m/s MAX=14.6m/s(NNE)  
 N-E:91% E-S:3% S-W:3% W-N:3% Calm:0%

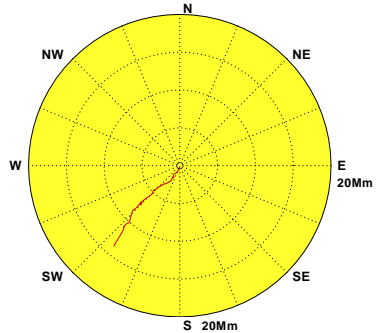


圖1.6.5 2018年北端海域每月Z站修補前觀測風力向量行進圖

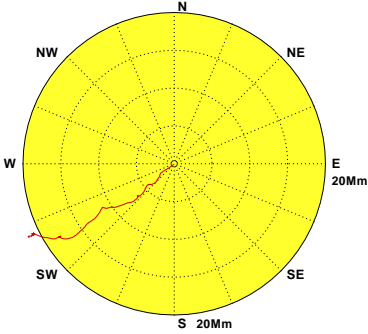
W17CKLZ0.1H0 W181KLZ0.1H0 W182KLZ0.1H0 W183KLZ0.1H0 W184KLZ0.1H0 W185KLZ0.1H0  
 W186KLZ0.1H0 W187KLZ0.1H0 W188KLZ0.1H0 W189KLZ0.1H0 W18AKLZ0.1H0 W18BKLZ0.1H0

Institute of Harbor & Marine Technology

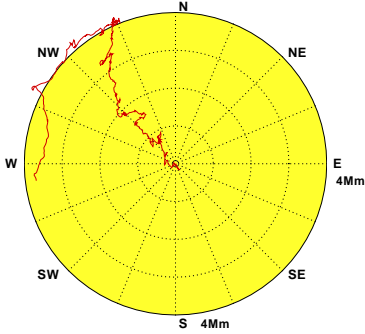


# Progressive Vector Diagram of Wind

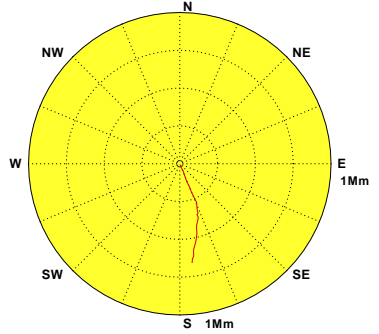
Wind of KLR0 at 2017/12 NO=717(96%)  
 MEAN=10.2m/s MAX=15.8m/s(ENE)  
 N-E:68% E-S:25% S-W:3% W-N:4% Calm:0%



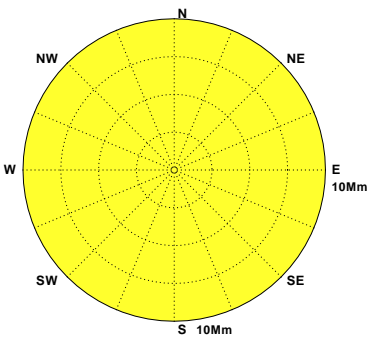
Wind of KLR0 at 2018/01 NO=697(94%)  
 MEAN=8.4m/s MAX=14.6m/s(N)  
 N-E:36% E-S:25% S-W:25% W-N:14% Calm:0%



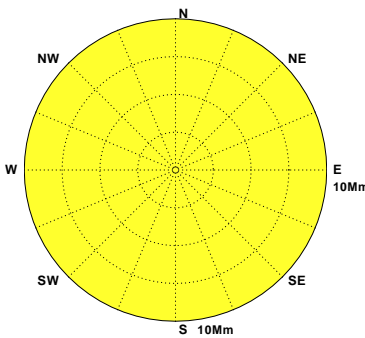
Wind of KLR0 at 2018/02 NO=26(4%)  
 MEAN=7.4m/s MAX=13.2m/s(N)  
 N-E:38% E-S:0% S-W:0% W-N:62% Calm:0%



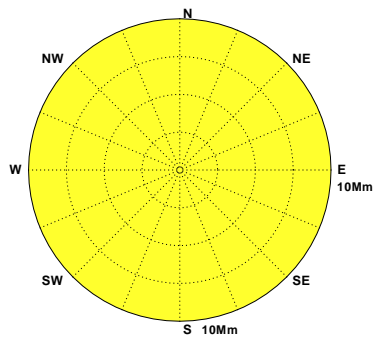
Wind of KLR0 at 2018/03



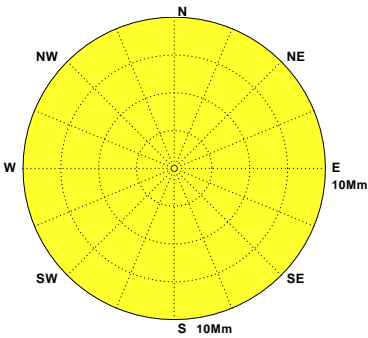
Wind of KLR0 at 2018/04



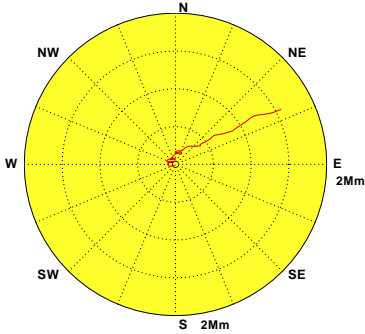
Wind of KLR0 at 2018/05



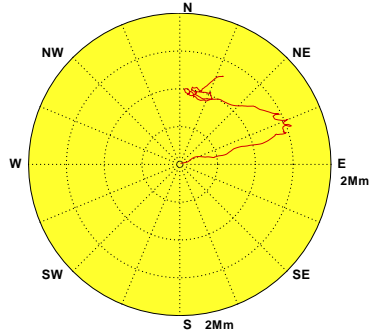
Wind of KLR0 at 2018/06



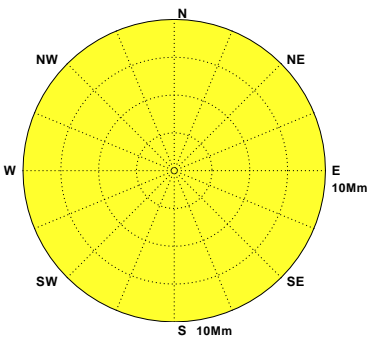
Wind of KLR0 at 2018/07 NO=155(21%)  
 MEAN=4.3m/s MAX=9.1m/s(W)  
 N-E:10% E-S:18% S-W:60% W-N:12% Calm:0%



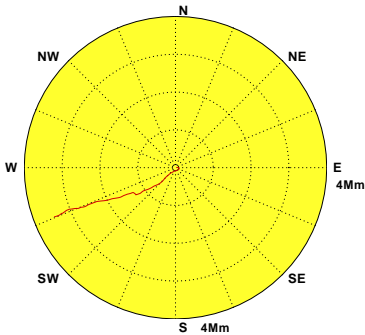
Wind of KLR0 at 2018/08 NO=326(44%)  
 MEAN=4.4m/s MAX=10.3m/s(WSW)  
 N-E:9% E-S:38% S-W:38% W-N:15% Calm:0%



Wind of KLR0 at 2018/09



Wind of KLR0 at 2018/10 NO=134(18%)  
 MEAN=7.9m/s MAX=11.6m/s(E)  
 N-E:87% E-S:7% S-W:2% W-N:4% Calm:0%



Wind of KLR0 at 2018/11 NO=659(92%)  
 MEAN=6.8m/s MAX=13.0m/s(ESE)  
 N-E:65% E-S:24% S-W:6% W-N:5% Calm:0%

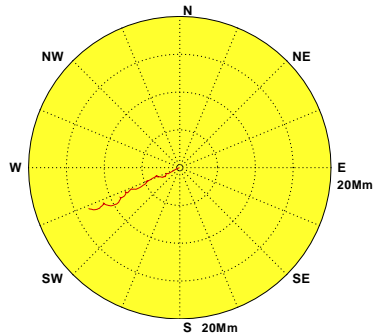


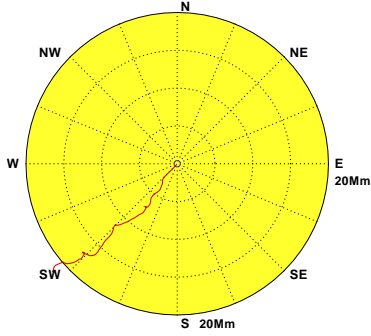
圖1.6.6 2018年北端海域每月R站修補前觀測風力向量行進圖

W17CKLR0.1H0 W181KLR0.1H0 W182KLR0.1H0 W183KLR0.1H0 W184KLR0.1H0 W185KLR0.1H0  
 W186KLR0.1H0 W187KLR0.1H0 W188KLR0.1H0 W189KLR0.1H0 W18AKLR0.1H0 W18BKLR0.1H0

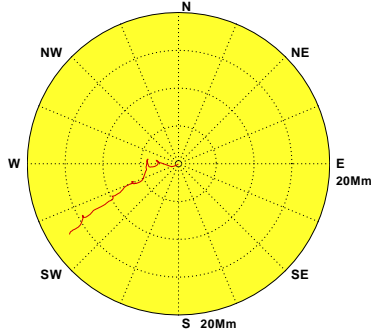
Institute of Harbor & Marine Technology

# Progressive Vector Diagram of Wind

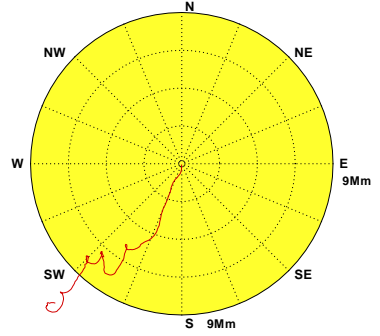
Wind of KLI0 at 2017/12 NO=744(100%)  
 MEAN=9.5m/s MAX=16.0m/s(N)  
 N-E:84% E-S:13% S-W:0% W-N:3% Calm:0%



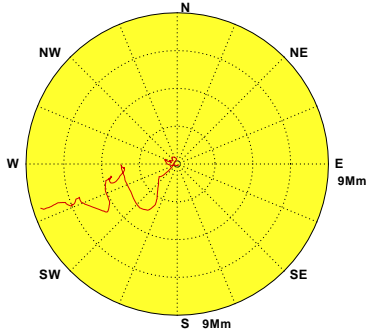
Wind of KLI0 at 2018/01 NO=744(100%)  
 MEAN=8.8m/s MAX=18.7m/s(SSE)  
 N-E:72% E-S:19% S-W:2% W-N:7% Calm:0%



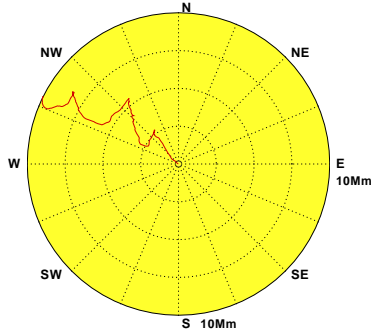
Wind of KLI0 at 2018/02 NO=672(100%)  
 MEAN=7.8m/s MAX=13.4m/s(N)  
 N-E:65% E-S:18% S-W:8% W-N:9% Calm:0%



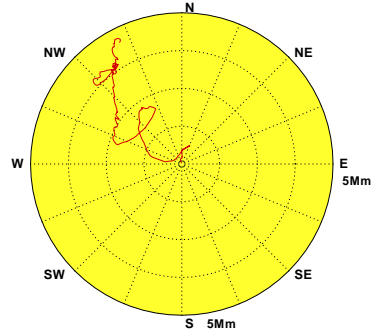
Wind of KLI0 at 2018/03 NO=744(100%)  
 MEAN=7.1m/s MAX=18.1m/s(SSE)  
 N-E:41% E-S:41% S-W:5% W-N:13% Calm:0%



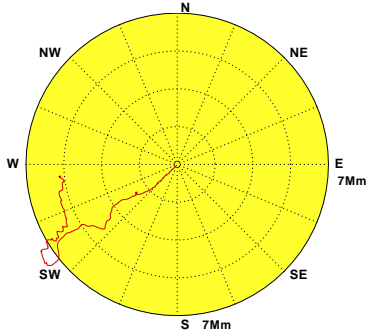
Wind of KLI0 at 2018/04 NO=720(100%)  
 MEAN=6.7m/s MAX=15.1m/s(NE)  
 N-E:32% E-S:52% S-W:14% W-N:2% Calm:0%



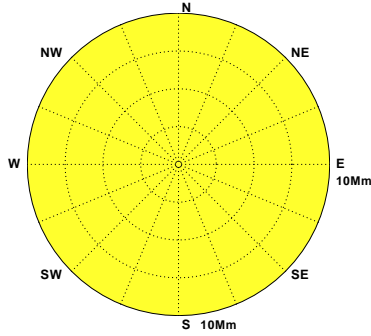
Wind of KLI0 at 2018/05 NO=744(100%)  
 MEAN=5.4m/s MAX=15.1m/s(WNW)  
 N-E:24% E-S:32% S-W:32% W-N:12% Calm:0%



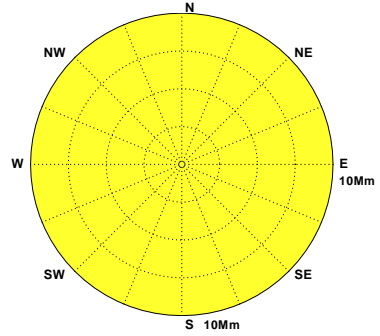
Wind of KLI0 at 2018/06 NO=720(100%)  
 MEAN=6.0m/s MAX=15.2m/s(WSW)  
 N-E:45% E-S:30% S-W:17% W-N:8% Calm:0%



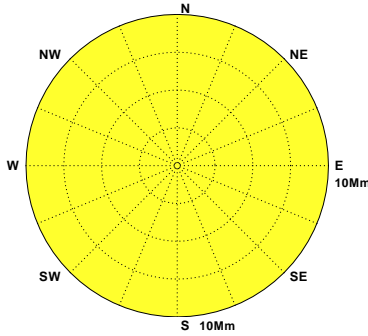
Wind of KLI0 at 2018/07



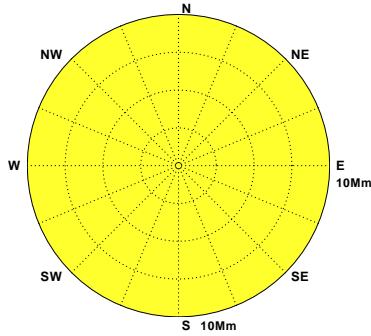
Wind of KLI0 at 2018/08



Wind of KLI0 at 2018/09



Wind of KLI0 at 2018/10



Wind of KLI0 at 2018/11

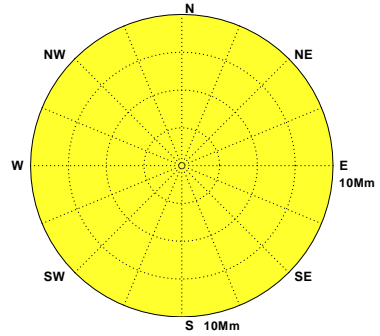


圖1.6.7 2018年北端海域每月I站修補前觀測風力向量行進圖

W17CKLI0.1H0 W181KLI0.1H0 W182KLI0.1H0 W183KLI0.1H0 W184KLI0.1H0 W185KLI0.1H0  
 W186KLI0.1H0 W187KLI0.1H0 W188KLI0.1H0 W189KLI0.1H0 W18AKLI0.1H0 W18BKLI0.1H0

Institute of Harbor & Marine Technology

# Progressive Vector Diagram of Wind

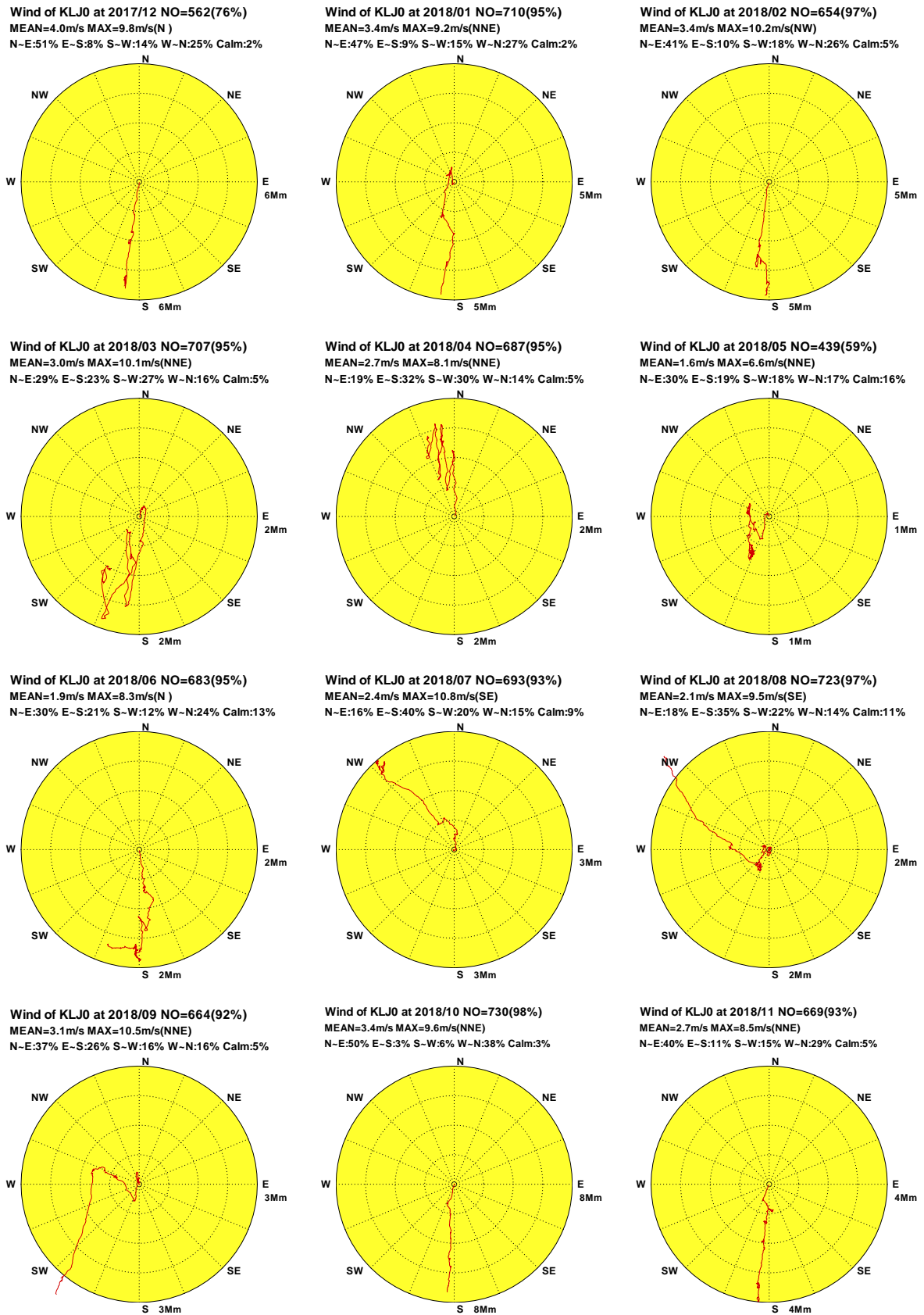


圖1.6.8 2018年北端海域每月J站修補前觀測風力向量行進圖

W17CKLJ0.1H0 W181KLJ0.1H0 W182KLJ0.1H0 W183KLJ0.1H0 W184KLJ0.1H0 W185KLJ0.1H0  
 W186KLJ0.1H0 W187KLJ0.1H0 W188KLJ0.1H0 W189KLJ0.1H0 W18AKLJ0.1H0 W18BKLJ0.1H0

Institute of Harbor & Marine Technology

## 第二章 2018 年北端海域觀測波浪資料年報

北端海域(富貴角~龍洞)波浪觀測包括測站 X、測站 Y、測站 Z 及測站 R 等 4 個測站(測站位置如第 0 章圖 VK1)。本年報取經檢核及補遺之 X 站資料作為主要測站 1，Y 站資料作為主要測站 2。

### 2.1 2018 年北端海域觀測風力資料年報圖表

本章第 1 節波浪年報資料處理之圖表包括：

1. 表 2.1.1a 2018 年各觀測站每月觀測波浪資料修補前記錄表。
2. 表 2.1.1b 2018 年主要測站每月觀測波浪資料修補後記錄表。
3. 表 2.1.2 2018 年主要測站 1 修補後每月(季)及整年示性波高、示性週期及波向重要統計量統計表。
4. 表 2.1.3 2018 年主要測站 2 修補後每月(季)及整年示性波高、示性週期及波向重要統計量統計表。
5. 圖 2.1.1a 2018 年主要測站 1 修補前後每月示性波高歷線比較圖。
6. 圖 2.1.1b 2018 年主要測站 1 修補前後每月示性週期歷線比較圖。
7. 圖 2.1.1c 2018 年主要測站 1 修補前後每月波向歷線比較圖。
8. 圖 2.1.2a 2018 年主要測站 2 修補前後每月示性波高歷線比較圖。
9. 圖 2.1.2b 2018 年主要測站 2 修補前後每月示性週期歷線比較圖。
10. 圖 2.1.2c 2018 年主要測站 2 修補前後每月波向歷線比較圖。
11. 圖 2.1.3 2018 年主要測站 1 修補後每月波高向量分佈圖。



12. 圖 2.1.4 2018 年**主要測站 2 修補後**每月波高向量分佈圖。

第 2 節波浪年報資料處理之統計表包括: 2018 年北端海域**各測站修補前**每月(季)及整年示性波高、示性週期及波向重要統計量統計表。

第 3 節波浪年報資料處理之統計圖包括: 2018 年北端海域**主要測站 1 修補後**與**其他測站(修補前)**每月示性波高、示性週期及波向歷線比較圖。

第 4 節波浪年報資料處理之統計圖包括: 2018 年北端海域**主要測站 2 修補後**與**其他測站(修補前)**每月示性波高、示性週期及波向歷線比較圖。

第 5 節波浪年報資料處理之統計圖包括: 2018 年北端海域**各測站修補前**每月波高向量分佈圖。

表 2.1.1a 2018年每月北端海域修補前各測站觀測波浪資料紀錄表

海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域
年月/測站	X	Y	Z	R								
2017/12月	742(99.7%)	744(100%)	744(100%)	740(99.5%)	*	*	*	*	*	*	*	*
2018/ 1月	737(99.1%)	323(43.4%)	743(99.9%)	744(100%)	*	*	*	*	*	*	*	*
2018/ 2月	667(99.3%)	167(24.9%)	672(100%)	671(99.9%)	*	*	*	*	*	*	*	*
2018/ 3月	738(99.2%)	651(87.5%)	744(100%)	743(99.9%)	*	*	*	*	*	*	*	*
2018/ 4月	711(98.8%)	719(99.9%)	720(100%)	720(100%)	*	*	*	*	*	*	*	*
2018/ 5月	743(99.9%)	739(99.3%)	744(100%)	743(99.9%)	*	*	*	*	*	*	*	*
2018/ 6月	713(99.0%)	713(99.0%)	719(99.9%)	718(99.7%)	*	*	*	*	*	*	*	*
2018/ 7月	739(99.3%)	737(99.1%)	744(100%)	743(99.9%)	*	*	*	*	*	*	*	*
2018/ 8月	498(66.9%)	740(99.5%)	743(99.9%)	342(46.0%)	*	*	*	*	*	*	*	*
2018/ 9月	*	714(99.2%)	717(99.6%)	*	*	*	*	*	*	*	*	*
2018/10月	174(23.4%)	739(99.3%)	743(99.9%)	134(18.0%)	*	*	*	*	*	*	*	*
2018/11月	*	713(99.0%)	718(99.7%)	720(100%)	*	*	*	*	*	*	*	*
2018/冬季	2146(99.4%)	1234(57.1%)	2159(99.9%)	2155(99.8%)	*	*	*	*	*	*	*	*
2018/春季	2192(99.3%)	2109(95.5%)	2208(100%)	2206(99.9%)	*	*	*	*	*	*	*	*
2018/夏季	1950(88.3%)	2190(99.2%)	2206(99.9%)	1803(81.7%)	*	*	*	*	*	*	*	*
2018/秋季	174( 8.0%)	2166(99.2%)	2178(99.7%)	854(39.1%)	*	*	*	*	*	*	*	*
2018/整年	6462(73.8%)	7699(87.9%)	8751(99.9%)	7018(80.1%)	*	*	*	*	*	*	*	*
起始年月	2017/12	2017/12	2017/12	2017/12	*	*	*	*	*	*	*	*
結束年月	2018/10	2018/11	2018/11	2018/11	*	*	*	*	*	*	*	*

2-1-3

表 2.1.1b 2018年每月北端海域修補後各測站波浪資料紀錄表

海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域
年月/測站	X	Y										
2017/12月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 1月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 2月	672(100%)	672(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 3月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 4月	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 5月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 6月	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 7月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 8月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 9月	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*	*
2018/10月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/11月	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*	*
2018/冬季	2160(100%)	2160(100%)	*	*	*	*	*	*	*	*	*	*
2018/春季	2208(100%)	2208(100%)	*	*	*	*	*	*	*	*	*	*
2018/夏季	2208(100%)	2208(100%)	*	*	*	*	*	*	*	*	*	*
2018/秋季	2184(100%)	2184(100%)	*	*	*	*	*	*	*	*	*	*
2018/整年	8760(100%)	8760(100%)	*	*	*	*	*	*	*	*	*	*
起始年月	2017/12	2017/12	*	*	*	*	*	*	*	*	*	*
結束年月	2018/11	2018/11	*	*	*	*	*	*	*	*	*	*

2-1-4

表2.1.2 2018年北端海域主要測站1修補後示性波高週期及波向重要統計量統計表

觀測 日期 年、月	波高 $H_s$		$H_s$ 最大	$T_p$	$T_p$	小波	小浪	中浪	大浪	$T_p$	$T_p$	$T_p$	$T_p$	波向	波向	波向	波向	波向	主波向
	蒐集 率	平均 (m)	(波高/週期/波向) (m/s/來向)	平均 (s)	最大 (s)	<0.5m (%)	~1.5m (%)	~3m (%)	>3m (%)	<6s (%)	6~8s (%)	8~10s (%)	>10s (%)	蒐集 率	N~E (%)	E~S (%)	S~W (%)	W~N (%)	(百分比) 來向/%
2017/12	100%	2.08	5.7/10.8/NE	8.1	11.1	.0	29.8	56.2	14.0	3.2	42.2	50.0	4.6	100%	99.9	.0	.0	.1	NE /72%
2018/01	100%	1.81	5.0/ 9.1/ENE	7.9	10.3	.1	39.2	50.0	10.6	3.4	49.2	43.8	3.6	100%	99.7	.1	.0	.1	NE /69%
2018/02	100%	1.76	4.3/ 9.8/NE	8.1	10.3	5.2	42.7	39.4	12.6	3.4	38.8	56.1	1.6	100%	100.0	.0	.0	.0	NE /65%
2018/03	100%	1.25	3.7/ 9.2/N	7.7	12.2	6.7	63.4	25.4	4.4	24.9	29.3	32.3	13.6	100%	99.6	.3	.0	.1	NE /55%
2018/04	100%	.89	4.3/ 9.8/NE	7.8	12.0	24.7	61.3	12.1	1.9	17.2	36.7	34.0	12.1	100%	99.6	.4	.0	.0	ENE/59%
2018/05	100%	.67	2.5/ 8.2/ENE	8.3	11.9	52.7	39.1	8.2	.0	11.8	26.7	43.8	17.6	100%	99.7	.0	.1	.1	ENE/57%
2018/06	100%	.79	2.9/ 7.2/NE	7.0	14.5	35.3	51.3	13.5	.0	24.6	45.0	27.8	2.6	100%	99.0	.7	.0	.3	ENE/55%
2018/07	100%	.69	5.6/16.7/ENE	8.3	17.0	36.7	59.7	2.3	1.3	10.6	30.8	46.8	11.8	100%	98.7	1.3	.0	.0	ENE/67%
2018/08	100%	.67	2.3/11.8/N	8.3	15.8	35.6	63.6	.8	.0	9.7	36.3	33.7	20.3	100%	98.9	.8	.0	.3	ENE/50%
2018/09	100%	1.40	4.6/12.7/NE	8.6	12.9	21.4	43.3	22.2	13.1	1.0	40.8	37.1	21.1	100%	96.9	1.8	.1	1.1	NE /48%
2018/10	100%	1.70	3.7/ 9.9/NNE	8.0	12.2	.0	41.4	54.6	4.0	2.8	50.7	38.4	8.1	100%	99.6	.0	.0	.4	NNE/72%
2018/11	100%	1.48	3.8/ 9.3/NE	8.0	9.8	1.4	56.8	39.3	2.5	.8	42.6	56.5	.0	100%	98.9	1.1	.0	.0	NE /56%
2018/冬	100%	1.89	5.7/10.8/NE	8.0	11.1	1.7	37.1	48.8	12.4	3.3	43.6	49.8	3.3	100%	99.9	.0	.0	.1	NE /69%
2018/春	100%	.94	4.3/ 9.8/NE	7.9	12.2	28.1	54.5	15.3	2.1	18.0	30.8	36.7	14.4	100%	99.6	.2	.0	.1	ENE/50%
2018/夏	100%	.71	5.6/16.7/ENE	7.9	17.0	35.9	58.2	5.4	.5	14.9	37.3	36.2	11.7	100%	98.9	1.0	.0	.2	ENE/58%
2018/秋	100%	1.53	4.6/12.7/NE	8.2	12.9	7.5	47.1	38.9	6.5	1.6	44.8	44.0	9.7	100%	98.5	1.0	.0	.5	NE /41%
2018/年	100%	1.26	5.7/10.8/NE	8.0	17.0	18.4	49.3	27.0	5.3	9.5	39.1	41.6	9.8	100%	99.2	.5	.0	.2	NE /45%

2-1-5



表2.1.3 2018年北端海域主要測站2修補後示性波高週期及波向重要統計量統計表

觀測 日期 年、月	波高 $H_s$		$H_s$ 最大		$T_p$	$T_p$	小波	小浪	中浪	大浪	$T_p$	$T_p$	$T_p$	$T_p$	波向	波向	波向	波向	波向	主波向
	蒐集 率	平均 (m)	(波高/週期/波向) (m/s/來向)		平均 (s)	最大 (s)	<0.5m (%)	~1.5m (%)	~3m (%)	>3m (%)	<6s (%)	6~8s (%)	8~10s (%)	>10s (%)	蒐集 率	N~E (%)	E~S (%)	S~W (%)	W~N (%)	(百分比) 來向/%
2017/12	100%	1.93	5.2/	8.2/NE	6.2	8.5	.0	30.9	60.2	8.9	38.3	60.3	1.3	.0	100%	85.3	14.7	.0	.0	ENE/48%
2018/01	100%	1.58	4.3/	8.2/NE	5.9	8.2	.0	50.9	46.1	3.0	51.1	48.8	.1	.0	100%	37.8	62.2	.0	.0	E /44%
2018/02	100%	1.56	3.7/	7.7/NE	6.2	7.7	.9	51.9	45.8	1.3	30.7	69.3	.0	.0	100%	46.2	53.4	.4	.0	E /50%
2018/03	100%	1.21	4.0/	7.9/NE	6.1	9.3	1.3	72.6	23.0	3.1	46.9	51.1	2.0	.0	100%	71.5	25.7	2.7	.1	NE /36%
2018/04	100%	.89	3.6/	7.6/NE	5.9	8.1	12.8	76.7	10.1	.4	59.9	39.4	.7	.0	100%	68.6	28.6	2.4	.4	ENE/39%
2018/05	100%	.70	2.6/	6.8/NE	5.9	10.1	46.2	45.4	8.3	.0	56.2	40.2	3.4	.3	100%	57.0	41.5	1.2	.3	ENE/30%
2018/06	100%	.83	3.0/	6.8/NE	5.5	7.8	38.6	48.9	12.5	.0	71.5	28.5	.0	.0	100%	38.1	61.8	.0	.1	ENE/29%
2018/07	100%	.84	7.9/	12.4/E	6.1	12.4	25.1	67.7	5.5	1.6	51.6	43.7	3.8	.9	100%	24.9	74.2	.4	.5	E /34%
2018/08	100%	.75	3.1/	8.7/NNE	6.0	10.8	33.7	60.9	5.1	.3	54.2	39.5	5.2	1.1	100%	33.6	65.5	.7	.3	E /34%
2018/09	100%	1.41	5.3/	10.5/ENE	6.6	10.7	31.9	32.8	20.3	15.0	41.8	40.3	15.6	2.4	100%	52.9	46.4	.6	.1	ENE/31%
2018/10	100%	1.61	4.0/	7.9/ENE	6.1	10.8	.5	46.8	47.2	5.5	57.8	33.7	8.1	.4	100%	79.2	20.8	.0	.0	ENE/52%
2018/11	100%	1.33	3.3/	6.9/ENE	5.9	7.4	1.9	66.7	30.7	.7	57.6	42.4	.0	.0	100%	69.3	30.7	.0	.0	ENE/49%
2018/冬	100%	1.70	5.2/	8.2/NE	6.1	8.5	.3	44.4	50.9	4.5	40.3	59.2	.5	.0	100%	56.8	43.1	.1	.0	E /35%
2018/春	100%	.93	4.0/	7.9/NE	6.0	10.1	20.2	64.8	13.9	1.2	54.3	43.6	2.0	.1	100%	65.7	32.0	2.1	.3	ENE/30%
2018/夏	100%	.81	7.9/	12.4/E	5.9	12.4	32.4	59.3	7.7	.6	59.0	37.3	3.0	.7	100%	32.1	67.2	.4	.3	E /32%
2018/秋	100%	1.45	5.3/	10.5/ENE	6.2	10.8	11.4	48.7	32.9	7.1	52.5	38.7	7.9	.9	100%	67.3	32.5	.2	.0	ENE/44%
2018/年	100%	1.22	7.9/	12.4/E	6.0	12.4	16.2	54.3	26.2	3.3	51.6	44.6	3.4	.4	100%	55.4	43.7	.7	.2	ENE/31%

# Wave $H_s$ in North Seas of KLX0 at 2018

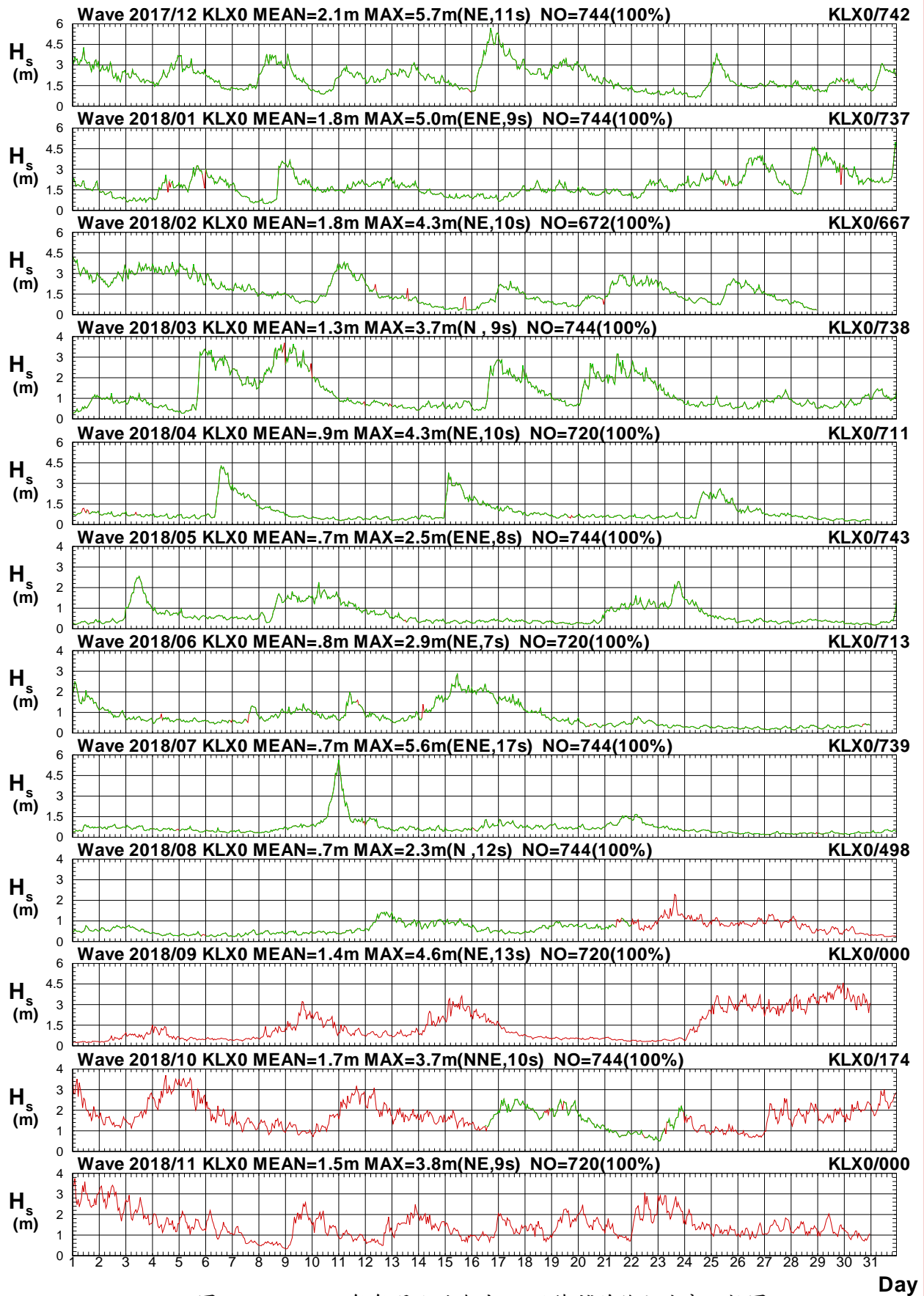


圖2.1.1a 2018年每月北端海域 X 站修補前後之波高比較圖

V17CKLX0.1HA V17CKLX0.1H0 V181KLX0.1HA V181KLX0.1H0 V182KLX0.1HA V182KLX0.1H0  
 V183KLX0.1HA V183KLX0.1H0 V184KLX0.1HA V184KLX0.1H0 V185KLX0.1HA V185KLX0.1H0

Institute of Harbor & Marine Technology

# Wave $T_p$ in North Seas of KLX0 at 2018

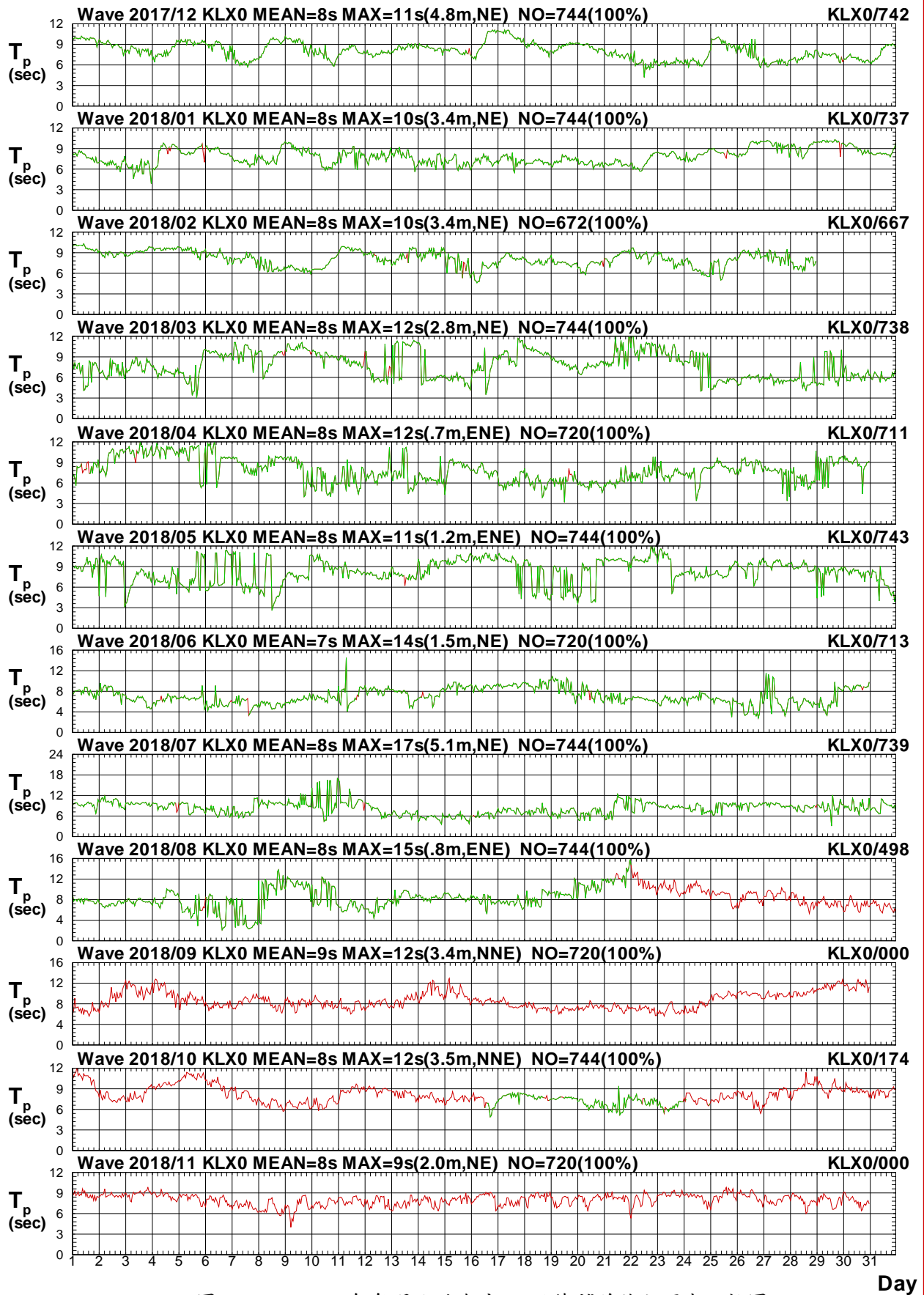


圖2.1.1b 2018年每月北端海域 X 站修補前後之週期比較圖

V17CKLX0.1HA V17CKLX0.1H0 V181KLX0.1HA V181KLX0.1H0 V182KLX0.1HA V182KLX0.1H0  
 V183KLX0.1HA V183KLX0.1H0 V184KLX0.1HA V184KLX0.1H0 V185KLX0.1HA V185KLX0.1H0

Institute of Harbor & Marine Technology

# Wave Direction in North Seas of KLX0 at 2018

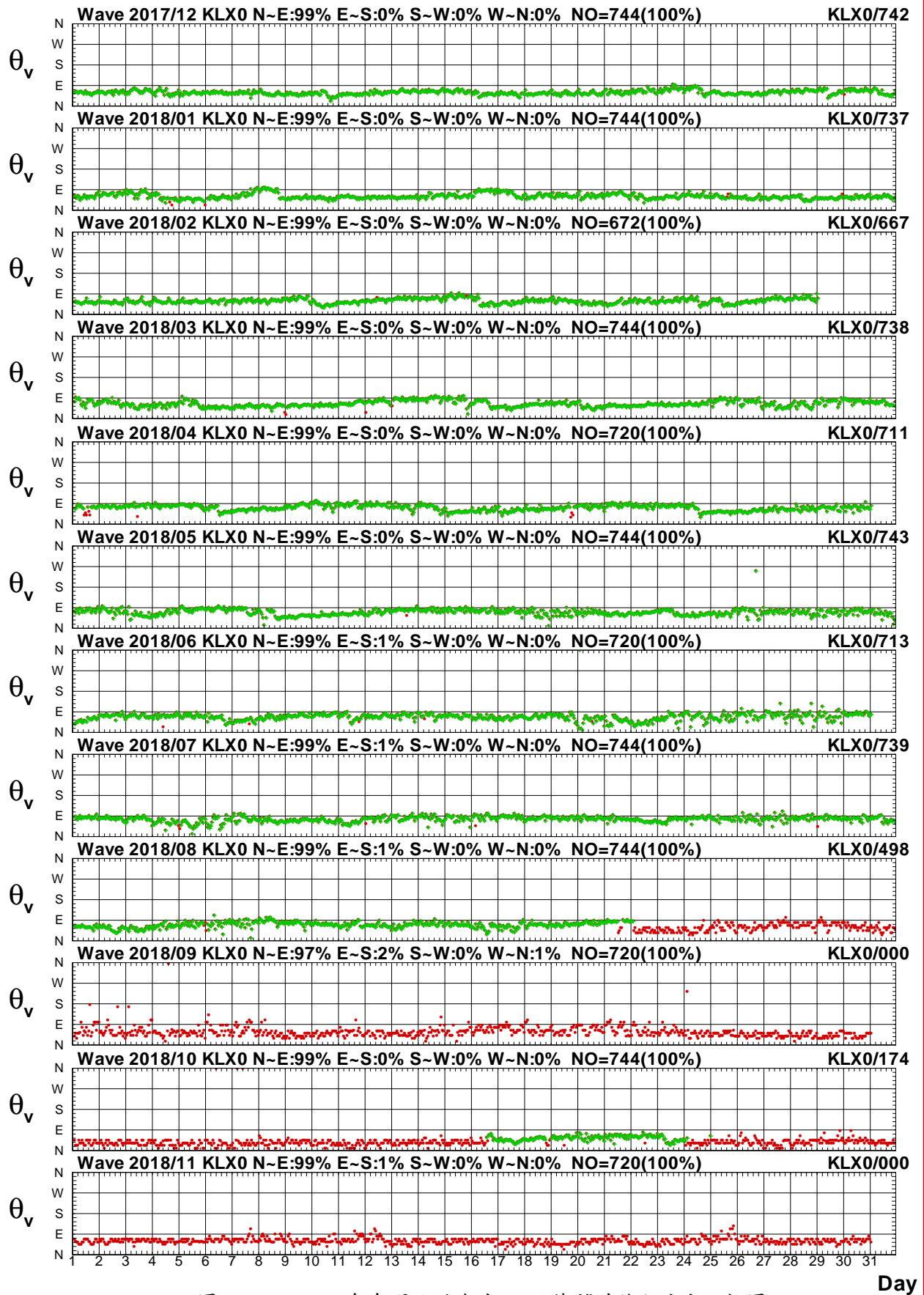


圖2.1.1c 2018年每月北端海域 X 站修補前後之波向比較圖

V17CKLX0.1HA V17CKLX0.1H0 V181KLX0.1HA V181KLX0.1H0 V182KLX0.1HA V182KLX0.1H0  
 V183KLX0.1HA V183KLX0.1H0 V184KLX0.1HA V184KLX0.1H0 V185KLX0.1HA V185KLX0.1H0

Institute of Harbor & Marine Technology

# Wave $H_s$ in North Seas of KLY0 at 2018

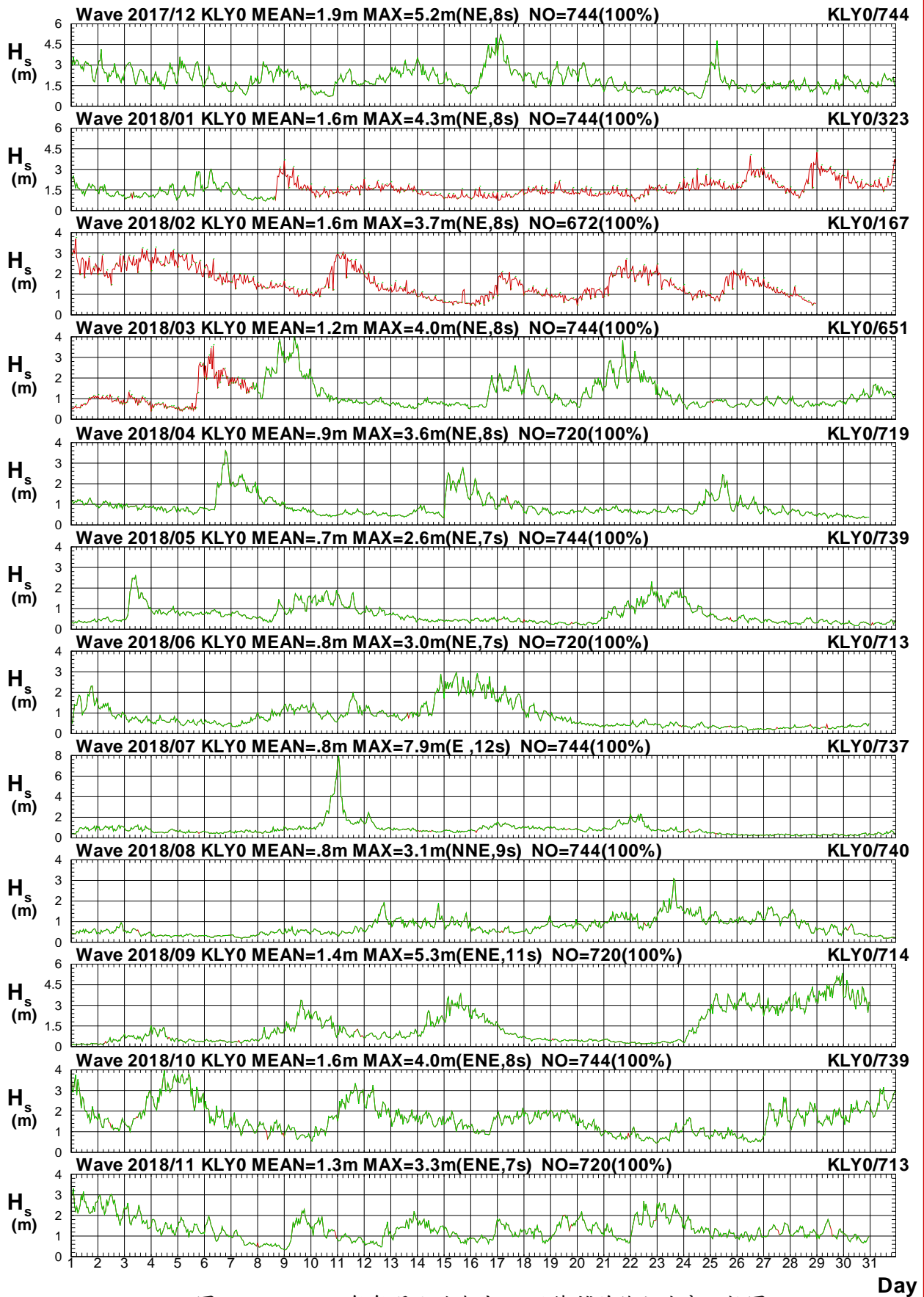


圖2.1.2a 2018年每月北端海域 Y 站修補前後之波高比較圖

V17CKLY0.1HA V17CKLY0.1H0 V181KLY0.1HA V181KLY0.1H0 V182KLY0.1HA V182KLY0.1H0  
 V183KLY0.1HA V183KLY0.1H0 V184KLY0.1HA V184KLY0.1H0 V185KLY0.1HA V185KLY0.1H0

Institute of Harbor & Marine Technology



# Wave $T_p$ in North Seas of KLY0 at 2018

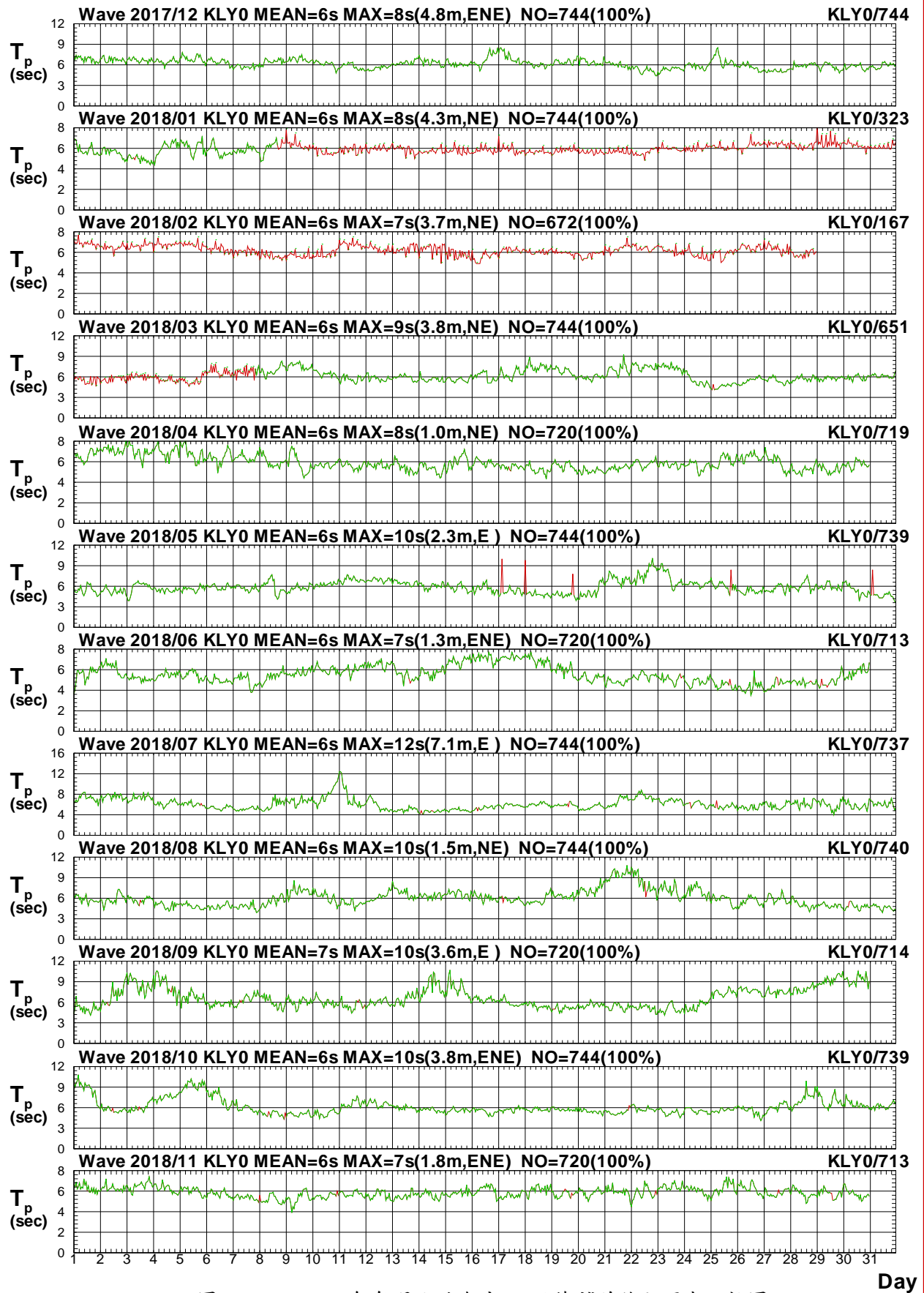


圖2.1.2b 2018年每月北端海域 Y 站修補前後之週期比較圖

V17CKLY0.1HA V17CKLY0.1H0 V181KLY0.1HA V181KLY0.1H0 V182KLY0.1HA V182KLY0.1H0  
 V183KLY0.1HA V183KLY0.1H0 V184KLY0.1HA V184KLY0.1H0 V185KLY0.1HA V185KLY0.1H0

Institute of Harbor & Marine Technology

# Wave Direction in North Seas of KLY0 at 2018

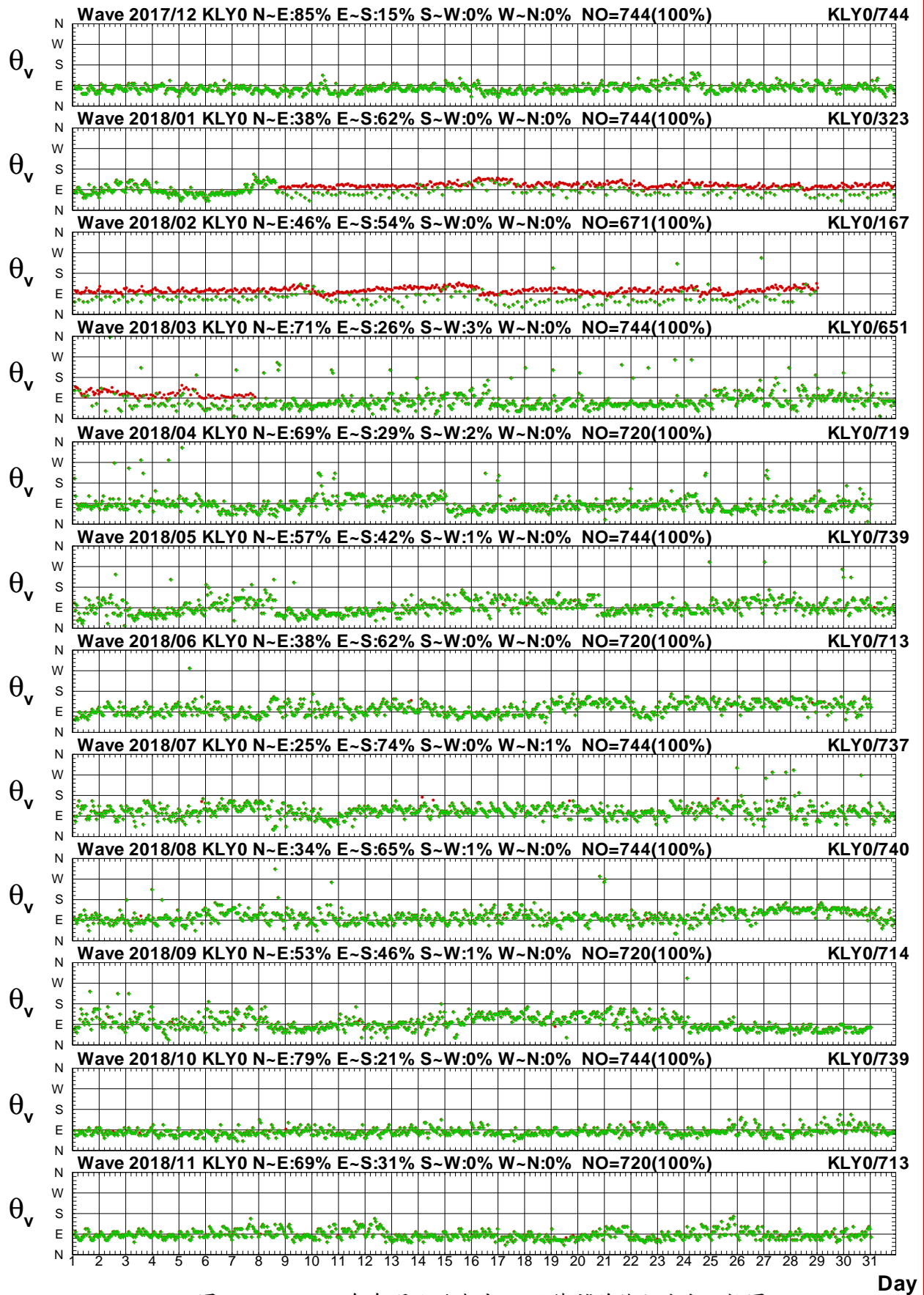


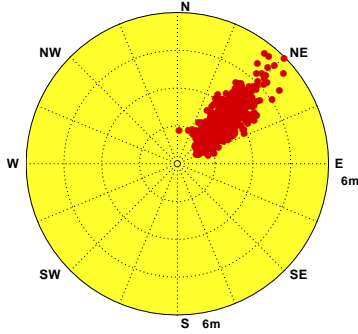
圖2.1.2c 2018年每月北端海域 Y 站修補前後之波向比較圖

V17CKLY0.1HA V17CKLY0.1H0 V181KLY0.1HA V181KLY0.1H0 V182KLY0.1HA V182KLY0.1H0  
 V183KLY0.1HA V183KLY0.1H0 V184KLY0.1HA V184KLY0.1H0 V185KLY0.1HA V185KLY0.1H0

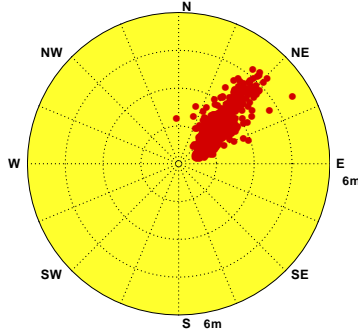
Institute of Harbor & Marine Technology

# Distribution of $H_s$ Vectors

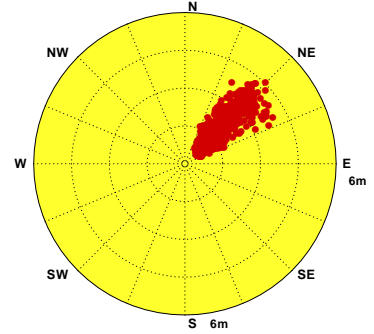
Wave of KLX0 at 2017/12 NO=744(100%)  
Hs : MEAN=2.1m MAX=5.7m(NE,11s)  
N-E:99% E-S:0% S-W:0% W-N:0%



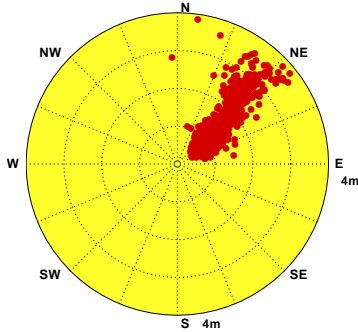
Wave of KLX0 at 2018/01 NO=744(100%)  
Hs : MEAN=1.8m MAX=5.0m(ENE,9s)  
N-E:99% E-S:0% S-W:0% W-N:0%



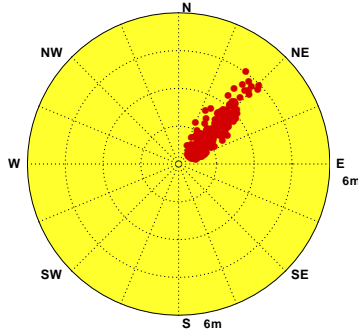
Wave of KLX0 at 2018/02 NO=672(100%)  
Hs : MEAN=1.8m MAX=4.3m(NE,10s)  
N-E:99% E-S:0% S-W:0% W-N:0%



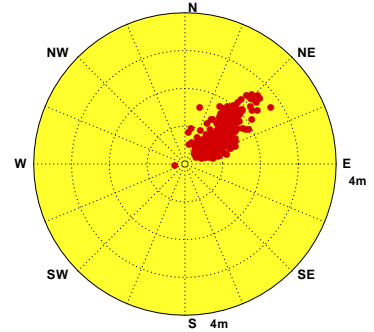
Wave of KLX0 at 2018/03 NO=744(100%)  
Hs : MEAN=1.3m MAX=3.7m(N, 9s)  
N-E:99% E-S:0% S-W:0% W-N:0%



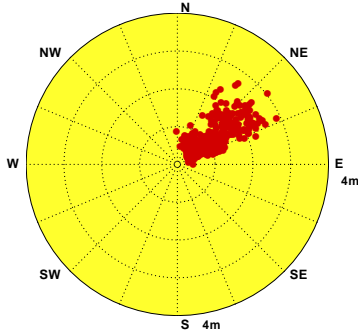
Wave of KLX0 at 2018/04 NO=720(100%)  
Hs : MEAN=.9m MAX=4.3m(NE,10s)  
N-E:99% E-S:0% S-W:0% W-N:0%



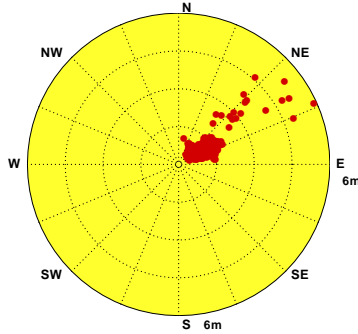
Wave of KLX0 at 2018/05 NO=744(100%)  
Hs : MEAN=.7m MAX=2.5m(ENE,8s)  
N-E:99% E-S:0% S-W:0% W-N:0%



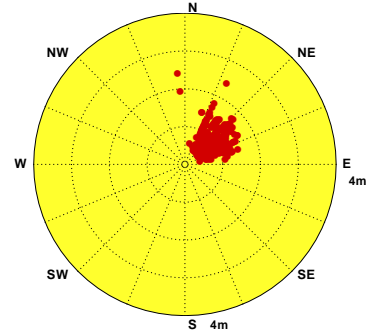
Wave of KLX0 at 2018/06 NO=720(100%)  
Hs : MEAN=.8m MAX=2.9m(NE,7s)  
N-E:99% E-S:1% S-W:0% W-N:0%



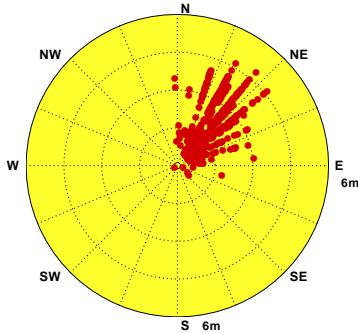
Wave of KLX0 at 2018/07 NO=744(100%)  
Hs : MEAN=.7m MAX=5.6m(ENE,17s)  
N-E:99% E-S:1% S-W:0% W-N:0%



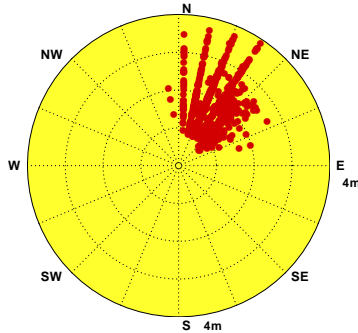
Wave of KLX0 at 2018/08 NO=744(100%)  
Hs : MEAN=.7m MAX=2.3m(N, 12s)  
N-E:99% E-S:1% S-W:0% W-N:0%



Wave of KLX0 at 2018/09 NO=720(100%)  
Hs : MEAN=1.4m MAX=4.6m(NE,13s)  
N-E:97% E-S:2% S-W:0% W-N:1%



Wave of KLX0 at 2018/10 NO=744(100%)  
Hs : MEAN=1.7m MAX=3.7m(NNE,10s)  
N-E:99% E-S:0% S-W:0% W-N:0%



Wave of KLX0 at 2018/11 NO=720(100%)  
Hs : MEAN=1.5m MAX=3.8m(NE,9s)  
N-E:99% E-S:1% S-W:0% W-N:0%

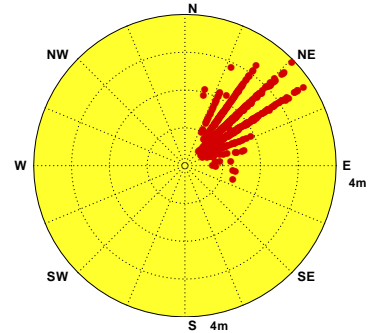


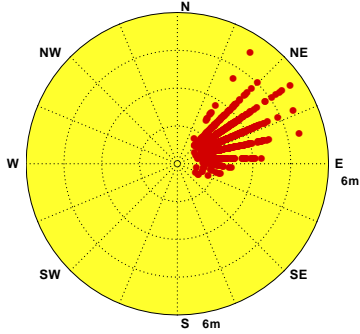
圖2.1.3 2018年北端海域每月 X 站修補後觀測波高向量分佈圖

V17CKLX0.1HA V181KLX0.1HA V182KLX0.1HA V183KLX0.1HA V184KLX0.1HA V185KLX0.1HA  
V186KLX0.1HA V187KLX0.1HA V188KLX0.1HA V189KLX0.1HA V18AKLX0.1HA V18BKLX0.1HA

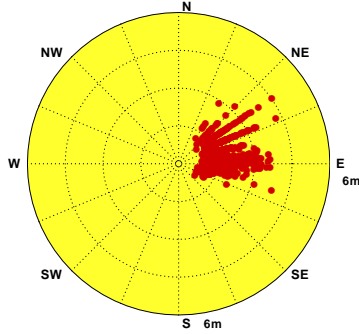
Institute of Harbor & Marine Technology

# Distribution of $H_s$ Vectors

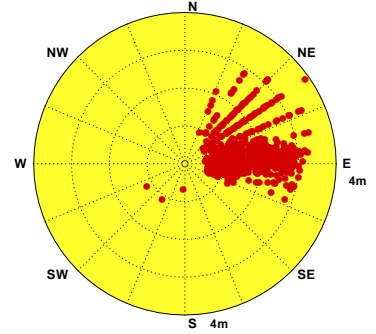
Wave of KLY0 at 2017/12 NO=744(100%)  
 Hs : MEAN=1.9m MAX=5.2m(NE,8s)  
 N-E:85% E-S:15% S-W:0% W-N:0%



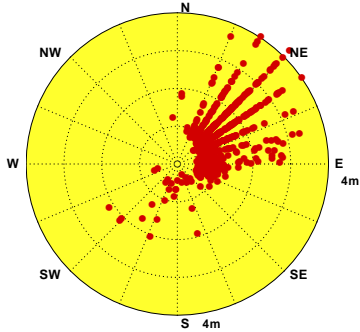
Wave of KLY0 at 2018/01 NO=744(100%)  
 Hs : MEAN=1.6m MAX=4.3m(NE,8s)  
 N-E:38% E-S:62% S-W:0% W-N:0%



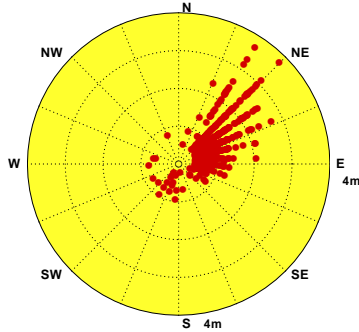
Wave of KLY0 at 2018/02 NO=672(100%)  
 Hs : MEAN=1.6m MAX=3.7m(NE,8s)  
 N-E:46% E-S:54% S-W:0% W-N:0%



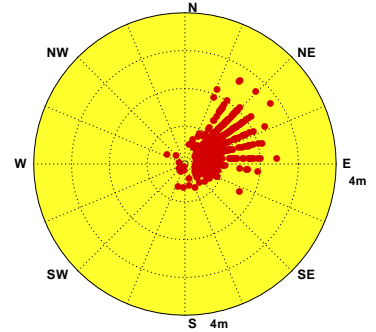
Wave of KLY0 at 2018/03 NO=744(100%)  
 Hs : MEAN=1.2m MAX=4.0m(NE,8s)  
 N-E:71% E-S:26% S-W:3% W-N:0%



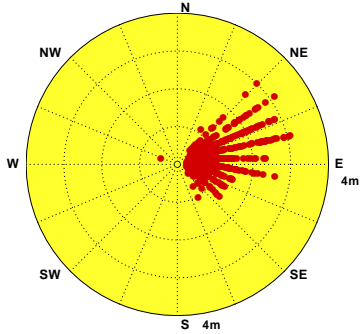
Wave of KLY0 at 2018/04 NO=720(100%)  
 Hs : MEAN=.9m MAX=3.6m(NE,8s)  
 N-E:69% E-S:29% S-W:2% W-N:0%



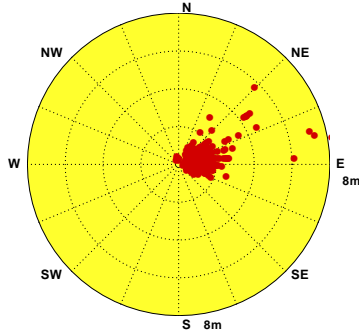
Wave of KLY0 at 2018/05 NO=744(100%)  
 Hs : MEAN=.7m MAX=2.6m(NE,7s)  
 N-E:57% E-S:42% S-W:1% W-N:0%



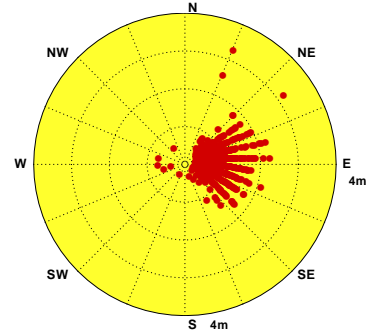
Wave of KLY0 at 2018/06 NO=720(100%)  
 Hs : MEAN=.8m MAX=3.0m(NE,7s)  
 N-E:38% E-S:62% S-W:0% W-N:0%



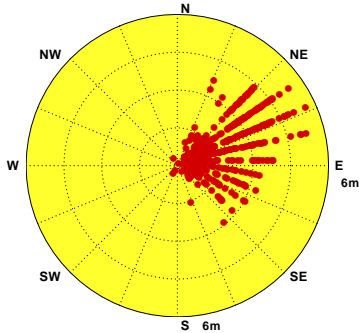
Wave of KLY0 at 2018/07 NO=744(100%)  
 Hs : MEAN=.8m MAX=7.9m(E,12s)  
 N-E:25% E-S:74% S-W:0% W-N:1%



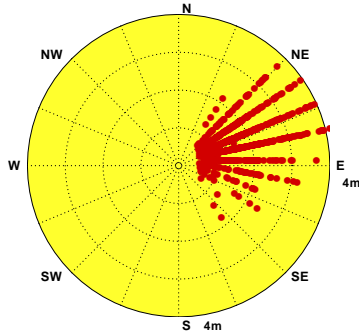
Wave of KLY0 at 2018/08 NO=744(100%)  
 Hs : MEAN=.8m MAX=3.1m(NNE,9s)  
 N-E:34% E-S:65% S-W:1% W-N:0%



Wave of KLY0 at 2018/09 NO=720(100%)  
 Hs : MEAN=1.4m MAX=5.3m(ENE,11s)  
 N-E:53% E-S:46% S-W:1% W-N:0%



Wave of KLY0 at 2018/10 NO=744(100%)  
 Hs : MEAN=1.6m MAX=4.0m(ENE,8s)  
 N-E:79% E-S:21% S-W:0% W-N:0%



Wave of KLY0 at 2018/11 NO=720(100%)  
 Hs : MEAN=1.3m MAX=3.3m(ENE,7s)  
 N-E:69% E-S:31% S-W:0% W-N:0%

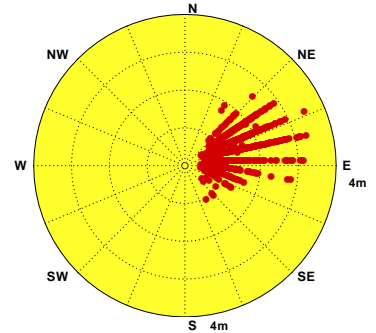


圖2.1.4 2018年北端海域每月 Y 站修補後觀測波高向量分佈圖

V17CKLY0.1HA V181KLY0.1HA V182KLY0.1HA V183KLY0.1HA V184KLY0.1HA V185KLY0.1HA  
 V186KLY0.1HA V187KLY0.1HA V188KLY0.1HA V189KLY0.1HA V18AKLY0.1HA V18BKLY0.1HA

Institute of Harbor & Marine Technology

## 2.2 2018 年北端海域各測站修補前 波浪統計量統計表





表2.2.1 2018年北端海域 X 站修補前示性波高週期及波向重要統計量統計表

觀測 日期 年、月	波高 $H_s$		$H_s$ 最大	$T_p$	$T_p$	小波	小浪	中浪	大浪	$T_p$	$T_p$	$T_p$	$T_p$	波向	波向	波向	波向	波向	主波向
	蒐集 率	平均 (m)	(波高/週期/波向) (m/s/來向)	平均 (s)	最大 (s)	<0.5m (%)	~1.5m (%)	~3m (%)	>3m (%)	<6s (%)	6~8s (%)	8~10s (%)	>10s (%)	蒐集 率	N~E (%)	E~S (%)	S~W (%)	W~N (%)	(百分比) 來向/%
2017/12	100%	2.08	5.7/10.8/NE	8.1	11.1	.0	29.8	56.2	14.0	3.2	42.2	50.0	4.6	100%	100.0	.0	.0	.0	NE /72%
2018/01	99%	1.81	5.0/ 9.1/ENE	7.9	10.3	.1	39.5	49.7	10.7	3.4	49.1	43.8	3.7	99%	99.9	.1	.0	.0	NE /70%
2018/02	99%	1.76	4.3/ 9.8/NE	8.1	10.3	5.2	42.6	39.4	12.7	3.4	38.7	56.2	1.6	99%	100.0	.0	.0	.0	NE /65%
2018/03	99%	1.25	3.6/10.1/NE	7.7	12.2	6.8	63.6	25.5	4.2	25.1	29.3	32.0	13.7	99%	99.7	.3	.0	.0	NE /55%
2018/04	99%	.89	4.3/ 9.8/NE	7.8	12.0	24.9	60.9	12.2	2.0	17.4	36.6	33.8	12.2	99%	99.6	.4	.0	.0	ENE/60%
2018/05	100%	.67	2.5/ 8.2/ENE	8.3	11.9	52.6	39.2	8.2	.0	11.8	26.6	43.9	17.6	100%	99.7	.0	.1	.1	ENE/57%
2018/06	99%	.79	2.9/ 7.2/NE	7.0	14.5	35.3	51.2	13.5	.0	24.8	44.6	27.9	2.7	99%	99.0	.7	.0	.3	ENE/56%
2018/07	99%	.69	5.6/16.7/ENE	8.3	17.0	36.8	59.5	2.3	1.4	10.7	30.4	47.0	11.9	99%	98.6	1.4	.0	.0	ENE/68%
2018/08	67%	.60	1.4/ 7.1/NE	8.2	15.8	42.2	57.8	.0	.0	11.8	35.3	33.3	19.5	67%	99.2	.8	.0	.0	ENE/57%
2018/09	0																		
2018/10	23%	1.53	2.5/ 8.1/NNE	7.1	9.4	.0	46.0	54.0	.0	9.2	77.0	13.8	.0	23%	100.0	.0	.0	.0	NE /67%
2018/11	0																		
2018/冬	99%	1.89	5.7/10.8/NE	8.0	11.1	1.7	37.1	48.7	12.5	3.4	43.5	49.8	3.4	99%	100.0	.0	.0	.0	NE /69%
2018/春	99%	.94	4.3/ 9.8/NE	7.9	12.2	28.2	54.4	15.3	2.1	18.1	30.7	36.6	14.6	99%	99.7	.2	.0	.0	ENE/51%
2018/夏	88%	.70	5.6/16.7/ENE	7.8	17.0	37.6	56.1	5.8	.5	16.2	36.9	36.5	10.5	88%	98.9	1.0	.0	.1	ENE/61%
2018/秋	8%	1.53	2.5/ 8.1/NNE	7.1	9.4	.0	46.0	54.0	.0	9.2	77.0	13.8	.0	8%	100.0	.0	.0	.0	NE /67%
2018/年	74%	1.20	5.7/10.8/NE	7.9	17.0	21.5	48.9	24.6	5.0	12.4	38.1	40.3	9.2	74%	99.6	.4	.0	.0	NE /46%

2-2-1

表2.2.2 2018年北端海域 Y 站修補前示性波高週期及波向重要統計量統計表

觀測日期	波高	$H_s$	$H_s$ 最大	$T_p$	$T_p$	小波	小浪	中浪	大浪	$T_p$	$T_p$	$T_p$	$T_p$	波向	波向	波向	波向	波向	主波向
年、月	蒐集率	平均 (m)	(波高/週期/波向) (m/s/來向)	平均 (s)	最大 (s)	<0.5m (%)	~1.5m (%)	~3m (%)	>3m (%)	<6s (%)	6~8s (%)	8~10s (%)	>10s (%)	蒐集率	N~E (%)	E~S (%)	S~W (%)	W~N (%)	(百分比) 來向/%
2017/12	100%	1.93	5.2/ 8.2/NE	6.2	8.5	.0	30.9	60.2	8.9	38.3	60.3	1.3	.0	100%	85.3	14.7	.0	.0	ENE/48%
2018/01	43%	1.54	4.3/ 8.2/NE	5.9	8.2	.0	55.7	41.5	2.8	52.0	47.7	.3	.0	43%	71.2	28.8	.0	.0	ENE/43%
2018/02	25%	1.54	3.7/ 7.7/NE	6.2	7.7	3.6	51.5	41.9	3.0	35.3	64.7	.0	.0	25%	85.6	12.6	1.8	.0	NE /51%
2018/03	88%	1.22	4.0/ 7.9/NE	6.2	9.3	1.4	72.4	22.7	3.5	45.0	52.7	2.3	.0	88%	77.4	19.4	3.1	.2	NE /41%
2018/04	100%	.89	3.6/ 7.6/NE	5.9	8.1	12.8	76.6	10.2	.4	59.8	39.5	.7	.0	100%	68.7	28.5	2.4	.4	ENE/39%
2018/05	99%	.70	2.6/ 6.8/NE	5.9	10.1	46.0	45.6	8.4	.0	56.6	40.3	3.0	.1	99%	57.1	41.4	1.2	.3	ENE/30%
2018/06	99%	.83	3.0/ 6.8/NE	5.5	7.8	38.1	49.2	12.6	.0	71.2	28.8	.0	.0	99%	38.4	61.4	.0	.1	ENE/29%
2018/07	99%	.84	7.9/12.4/E	6.1	12.4	25.1	67.7	5.6	1.6	51.6	43.7	3.8	.9	99%	25.1	73.9	.4	.5	E /34%
2018/08	100%	.75	3.1/ 8.7/NNE	6.0	10.8	33.9	60.7	5.1	.3	54.1	39.6	5.3	1.1	100%	33.6	65.4	.7	.3	E /34%
2018/09	99%	1.42	5.3/10.5/ENE	6.6	10.7	31.9	32.5	20.4	15.1	41.7	40.2	15.7	2.4	99%	52.9	46.4	.6	.1	ENE/30%
2018/10	99%	1.62	4.0/ 7.9/ENE	6.1	10.8	.5	46.5	47.4	5.5	57.8	33.7	8.1	.4	99%	79.2	20.8	.0	.0	ENE/52%
2018/11	99%	1.33	3.3/ 6.9/ENE	5.9	7.4	2.0	66.6	30.7	.7	57.8	42.2	.0	.0	99%	69.0	31.0	.0	.0	ENE/49%
2018/冬	57%	1.78	5.2/ 8.2/NE	6.1	8.5	.5	40.2	52.8	6.5	41.5	57.6	.9	.0	57%	81.7	18.1	.2	.0	ENE/44%
2018/春	96%	.92	4.0/ 7.9/NE	6.0	10.1	20.9	64.4	13.4	1.2	54.1	43.9	2.0	.0	96%	67.3	30.2	2.2	.3	ENE/31%
2018/夏	99%	.81	7.9/12.4/E	5.9	12.4	32.3	59.3	7.7	.6	58.8	37.4	3.1	.7	99%	32.3	67.0	.4	.3	E /32%
2018/秋	99%	1.46	5.3/10.5/ENE	6.2	10.8	11.4	48.5	33.0	7.1	52.5	38.6	7.9	.9	99%	67.2	32.6	.2	.0	ENE/44%
2018/年	88%	1.18	7.9/12.4/E	6.0	12.4	18.2	54.6	23.6	3.6	53.0	42.8	3.8	.5	88%	59.6	39.4	.8	.2	ENE/35%

2-2-2

表2.2.3 2018年北端海域Z站修補前示性波高週期及波向重要統計量統計表

觀測 日期 年、月	波高 $H_s$		$H_s$ 最大	$T_p$	$T_p$	小波	小浪	中浪	大浪	$T_p$	$T_p$	$T_p$	$T_p$	波向	波向	波向	波向	波向	主波向
	蒐集 率	平均 (m)	(波高/週期/波向) (m/s/來向)	平均	最大	<0.5m (%)	~1.5m (%)	~3m (%)	>3m (%)	<6s (%)	6~8s (%)	8~10s (%)	>10s (%)	蒐集 率	N~E (%)	E~S (%)	S~W (%)	W~N (%)	(百分比) 來向/%
2017/12	100%	2.33	4.7/ 8.3/ENE	6.4	8.3	.0	3.6	82.4	14.0	21.4	78.1	.5	.0	100%	37.0	63.0	.0	.0	E /50%
2018/01	100%	1.82	2.9/ 6.9/ESE	6.0	7.6	.0	24.0	76.0	.0	50.6	49.4	.0	.0	100%	42.8	57.2	.0	.0	E /40%
2018/02	100%	1.70	3.0/ 7.1/ESE	6.0	7.6	.0	40.8	59.2	.0	48.1	51.9	.0	.0	100%	43.6	56.3	.0	.1	ENE/35%
2018/03	100%	1.37	3.2/ 6.9/ENE	5.7	7.3	.0	70.7	28.6	.7	66.8	33.2	.0	.0	100%	18.1	81.9	.0	.0	E /46%
2018/04	100%	1.26	3.0/ 6.8/ENE	5.8	9.4	.0	74.7	25.3	.0	67.4	28.6	4.0	.0	100%	18.9	81.0	.1	.0	ESE/42%
2018/05	100%	.75	2.0/ 5.4/ENE	6.0	8.6	20.8	76.7	2.4	.0	50.1	48.3	1.6	.0	100%	12.9	87.0	.1	.0	ESE/42%
2018/06	100%	.76	2.3/ 7.3/E	5.6	8.4	23.5	71.9	4.6	.0	68.8	30.9	.3	.0	100%	8.2	91.5	.1	.1	ESE/40%
2018/07	100%	1.02	5.6/14.8/ESE	6.3	14.8	22.6	58.9	16.9	1.6	44.8	47.8	5.1	2.3	100%	13.4	86.0	.1	.4	E /38%
2018/08	100%	.70	2.0/ 8.6/SE	6.1	10.7	31.4	65.5	3.1	.0	48.9	44.8	6.2	.1	100%	12.8	86.8	.0	.4	ESE/38%
2018/09	100%	1.68	7.0/10.5/ESE	6.8	13.2	13.7	48.1	19.5	18.7	39.6	35.0	20.4	5.0	100%	25.0	74.6	.1	.3	ESE/34%
2018/10	100%	1.64	5.1/ 9.0/E	6.0	9.9	.0	52.1	38.1	9.8	62.2	30.4	7.4	.0	100%	62.6	37.3	.0	.1	ENE/44%
2018/11	100%	1.41	3.3/ 6.5/ENE	5.7	7.9	.0	64.5	34.5	1.0	65.0	35.0	.0	.0	100%	40.5	59.5	.0	.0	E /47%
2018/冬	100%	1.96	4.7/ 8.3/ENE	6.1	8.3	.0	22.2	73.0	4.8	39.7	60.1	.2	.0	100%	41.0	58.9	.0	.0	E /42%
2018/春	100%	1.13	3.2/ 6.9/ENE	5.9	9.4	7.0	74.0	18.7	.2	61.4	36.8	1.9	.0	100%	16.6	83.3	.1	.0	ESE/40%
2018/夏	100%	.83	5.6/14.8/ESE	6.0	14.8	25.8	65.4	8.3	.5	54.0	41.3	3.9	.8	100%	11.5	88.1	.1	.3	ESE/37%
2018/秋	100%	1.58	7.0/10.5/ESE	6.2	13.2	4.5	54.9	30.8	9.8	55.7	33.4	9.2	1.7	100%	42.9	56.9	.0	.1	E /37%
2018/年	100%	1.37	7.0/10.5/ESE	6.0	14.8	9.4	54.3	32.5	3.8	52.8	42.8	3.8	.6	100%	27.9	71.9	.1	.1	E /37%

2-2-3

表2.2.4 2018年北端海域 R 站修補前示性波高週期及波向重要統計量統計表

觀測 日期 年、月	波高 $H_s$		$H_s$ 最大	$T_p$	$T_p$	小波	小浪	中浪	大浪	$T_p$	$T_p$	$T_p$	$T_p$	波向	波向	波向	波向	波向	主波向
	蒐集 率	平均 (m)	(波高/週期/波向) (m/s/來向)	平均	最大	<0.5m (%)	~1.5m (%)	~3m (%)	>3m (%)	<6s (%)	6~8s (%)	8~10s (%)	>10s (%)	蒐集 率	N~E (%)	E~S (%)	S~W (%)	W~N (%)	(百分比) 來向/%
2017/12	100%	2.28	6.1/ 8.2/N	6.3	8.6	.0	22.8	54.2	23.0	35.4	62.3	2.3	.0	100%	97.8	.3	.0	1.9	NNE/41%
2018/01	100%	1.90	5.8/ 8.3/NNE	6.1	8.5	2.0	32.0	54.6	11.4	47.4	51.9	.7	.0	100%	96.9	.7	.0	2.4	NNE/44%
2018/02	100%	1.90	4.8/ 8.5/NE	6.0	8.5	5.8	38.0	38.6	17.6	48.0	50.8	1.2	.0	100%	96.0	.4	.0	3.6	NNE/41%
2018/03	100%	1.30	4.0/ 7.6/NE	5.7	8.3	13.3	56.4	24.6	5.7	59.1	40.5	.4	.0	100%	93.0	2.0	.0	5.0	NNE/35%
2018/04	100%	.86	4.7/ 7.5/N	5.3	8.1	34.6	51.4	11.7	2.4	76.0	23.5	.6	.0	100%	90.4	3.3	.4	5.8	NNE/32%
2018/05	100%	.72	2.6/ 5.8/N	5.0	9.2	45.8	43.3	10.9	.0	82.2	16.8	.9	.0	100%	68.9	1.6	5.5	24.0	NE /24%
2018/06	100%	.85	2.7/ 6.5/NNE	5.0	7.8	24.8	62.0	13.2	.0	85.0	15.0	.0	.0	100%	69.8	2.8	5.0	22.4	NNE/27%
2018/07	100%	.80	7.2/10.0/NE	5.2	10.0	32.4	60.4	5.4	1.7	83.0	15.6	1.1	.3	100%	64.1	4.2	5.0	26.8	ENE/23%
2018/08	46%	.61	1.7/ 5.8/NNE	5.2	8.8	49.4	48.8	1.8	.0	84.2	14.9	.9	.0	46%	79.2	5.6	2.9	12.3	NE /26%
2018/09	0																		
2018/10	18%	1.51	3.2/ 6.5/N	5.7	7.0	4.5	47.8	47.0	.7	62.7	37.3	.0	.0	18%	96.3	.0	.0	3.7	NNE/44%
2018/11	100%	1.48	3.8/ 7.3/N	5.6	7.5	3.5	54.9	39.0	2.6	70.0	30.0	.0	.0	100%	97.4	.3	.0	2.4	NNE/48%
2018/冬	100%	2.03	6.1/ 8.2/N	6.1	8.6	2.5	30.7	49.5	17.3	43.5	55.1	1.4	.0	100%	96.9	.5	.0	2.6	NNE/42%
2018/春	100%	.96	4.7/ 7.5/N	5.4	9.2	31.2	50.4	15.8	2.7	72.4	27.0	.6	.0	100%	84.0	2.3	2.0	11.7	NNE/30%
2018/夏	82%	.79	7.2/10.0/NE	5.1	10.0	32.6	58.8	7.8	.7	84.0	15.3	.6	.1	82%	69.2	3.9	4.6	22.3	NE /22%
2018/秋	39%	1.48	3.8/ 7.3/N	5.6	7.5	3.6	53.7	40.3	2.3	68.9	31.1	.0	.0	39%	97.2	.2	.0	2.6	NNE/48%
2018/年	80%	1.31	7.2/10.0/NE	5.6	10.0	19.4	46.9	27.1	6.6	66.1	33.1	.8	.0	80%	85.8	1.9	1.8	10.5	NNE/34%

2-2-4



### 2.3 2018 年北端海域**主要測站 1**(修補後)與 **其他測站**(修補前)波浪歷線比較圖



# Wave $H_s$ in Kee-Lung Harbor of KLX0 at 2018

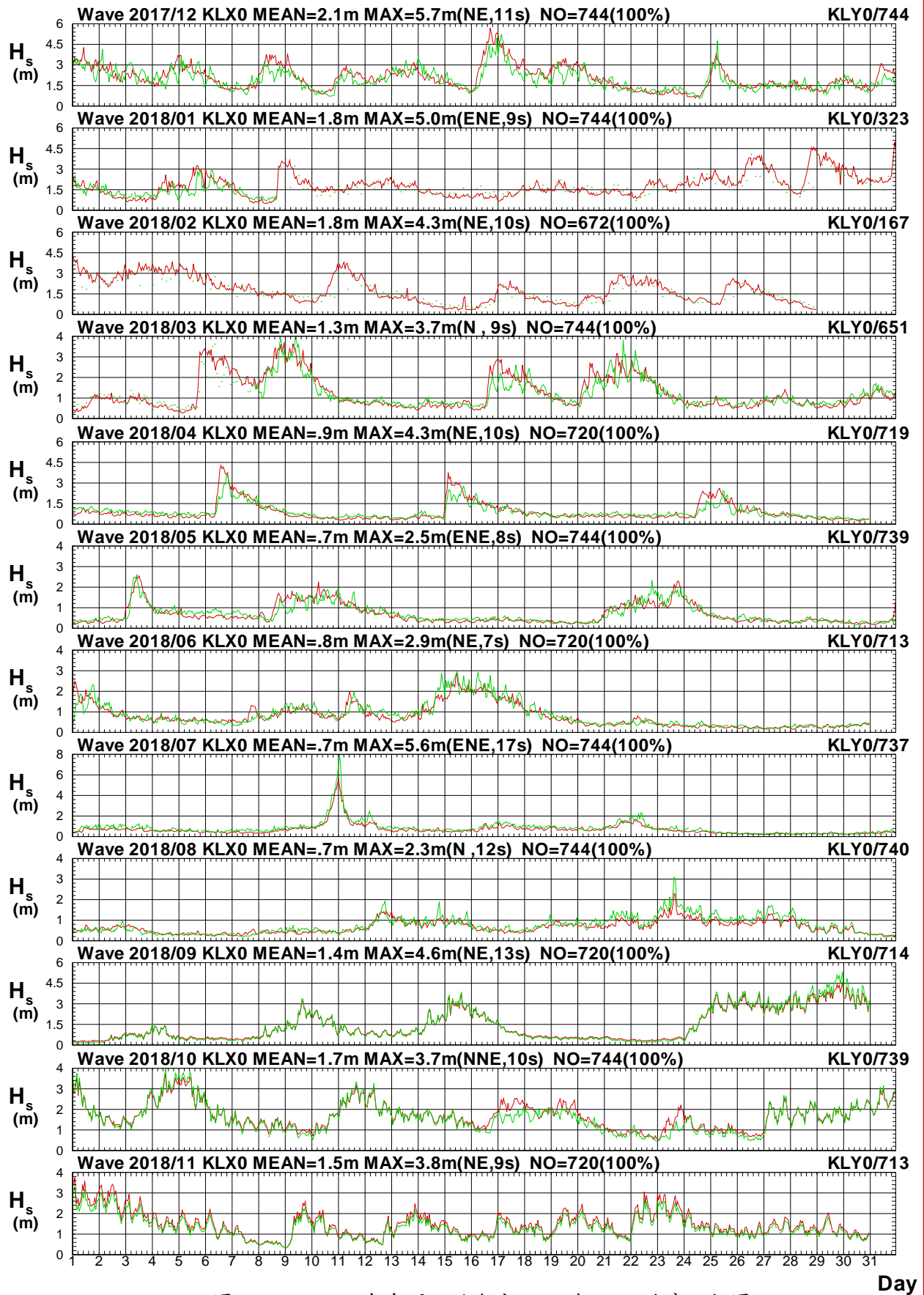


圖2.3.1a 2018年每月北端海域 X 站與 Y 站波高比較圖

V17CKLX0.1HA V17CKLY0.1H0 V181KLX0.1HA V181KLY0.1H0 V182KLX0.1HA V182KLY0.1H0  
 V183KLX0.1HA V183KLY0.1H0 V184KLX0.1HA V184KLY0.1H0 V185KLX0.1HA V185KLY0.1H0

Institute of Harbor & Marine Technology

# Wave $T_p$ in Kee-Lung Harbor of KLX0 at 2018

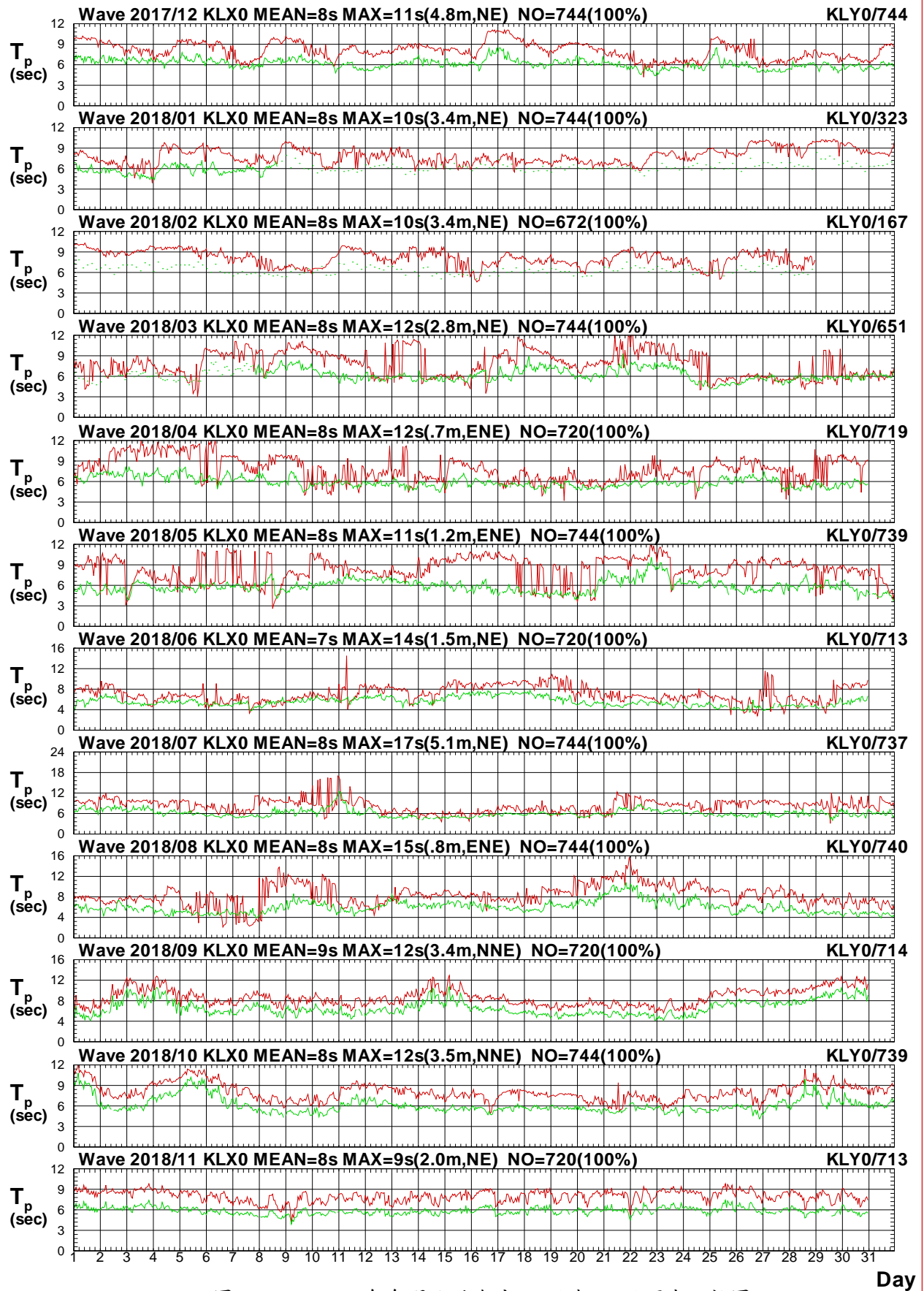


圖2.3.1b 2018年每月北端海域 X 站與 Y 站週期比較圖

V17CKLX0.1HA V17CKLY0.1H0 V181KLX0.1HA V181KLY0.1H0 V182KLX0.1HA V182KLY0.1H0  
 V183KLX0.1HA V183KLY0.1H0 V184KLX0.1HA V184KLY0.1H0 V185KLX0.1HA V185KLY0.1H0

Institute of Harbor & Marine Technology

# Wave Direction in Kee-Lung Harbor of KLX0 at 2018

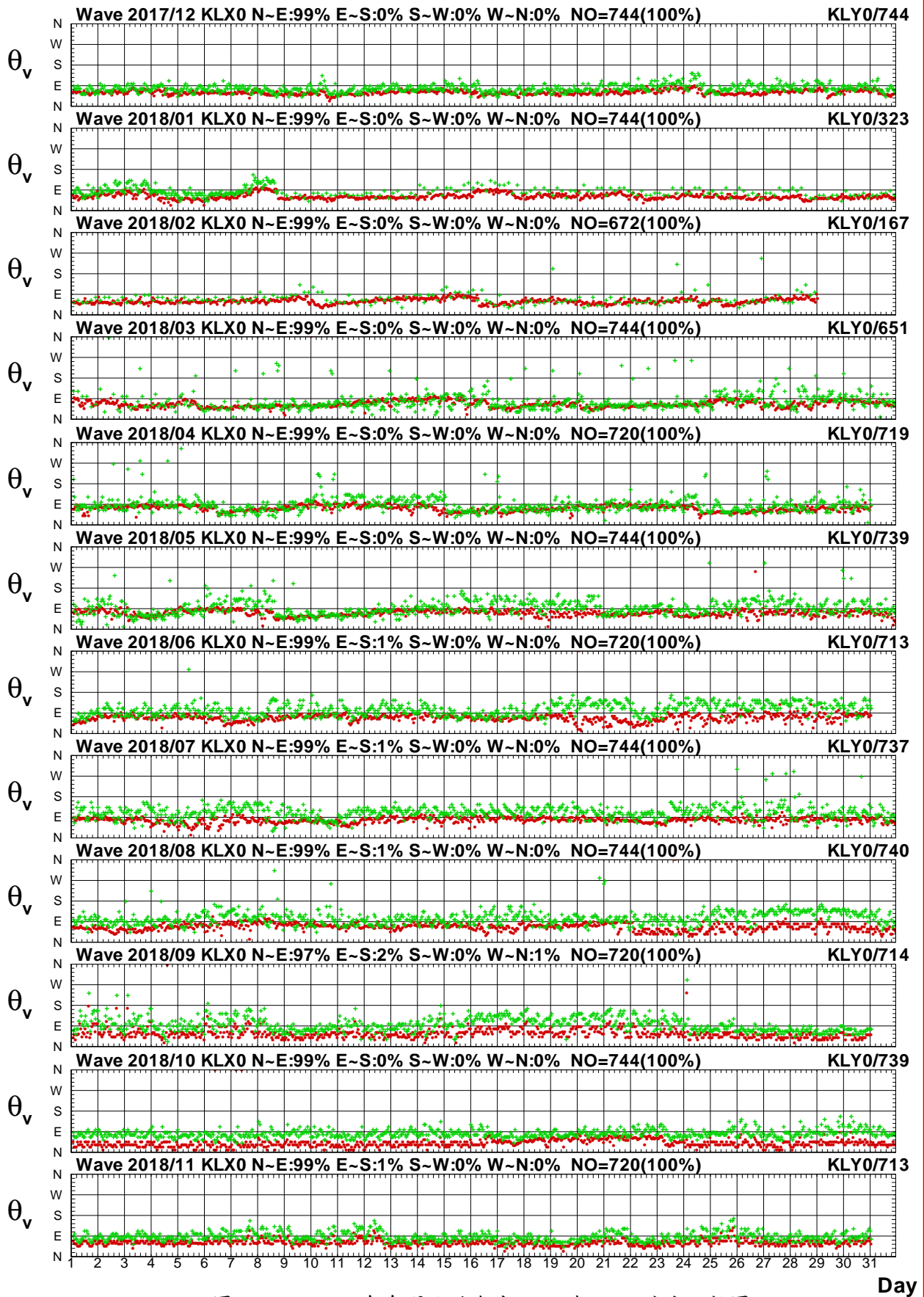


圖2.3.1c 2018年每月北端海域 X 站與 Y 站波向比較圖

V17CKLX0.1HA V17CKLY0.1H0 V181KLX0.1HA V181KLY0.1H0 V182KLX0.1HA V182KLY0.1H0  
 V183KLX0.1HA V183KLY0.1H0 V184KLX0.1HA V184KLY0.1H0 V185KLX0.1HA V185KLY0.1H0

Institute of Harbor & Marine Technology



# Wave $H_s$ in Kee-Lung Harbor of KLX0 at 2018

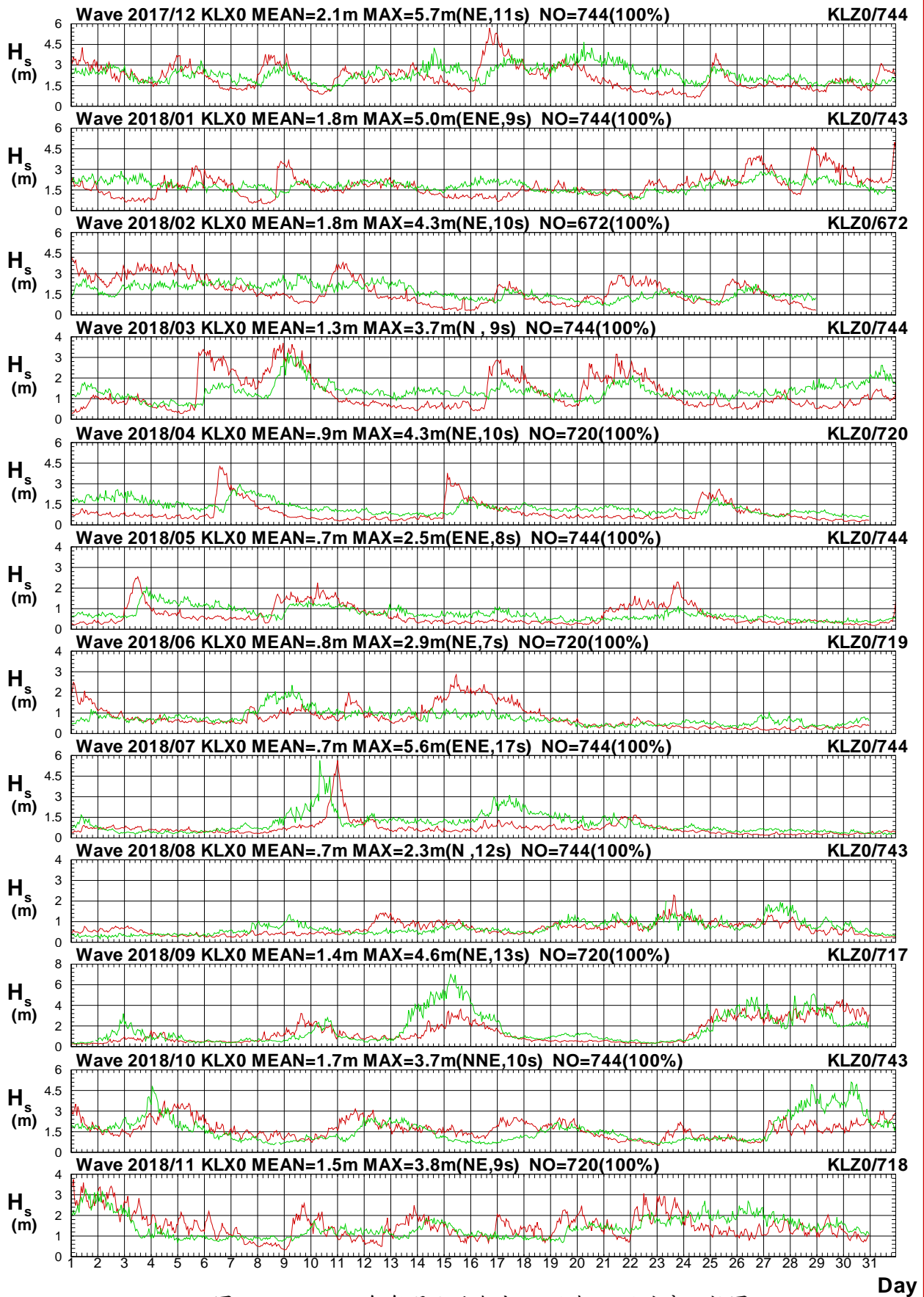


圖2.3.2a 2018年每月北端海域 X 站與 Z 站波高比較圖

V17CKLX0.1HA V17CKLZ0.1H0 V181KLX0.1HA V181KLZ0.1H0 V182KLX0.1HA V182KLZ0.1H0  
 V183KLX0.1HA V183KLZ0.1H0 V184KLX0.1HA V184KLZ0.1H0 V185KLX0.1HA V185KLZ0.1H0

Institute of Harbor & Marine Technology

# Wave $T_p$ in Kee-Lung Harbor of KLX0 at 2018

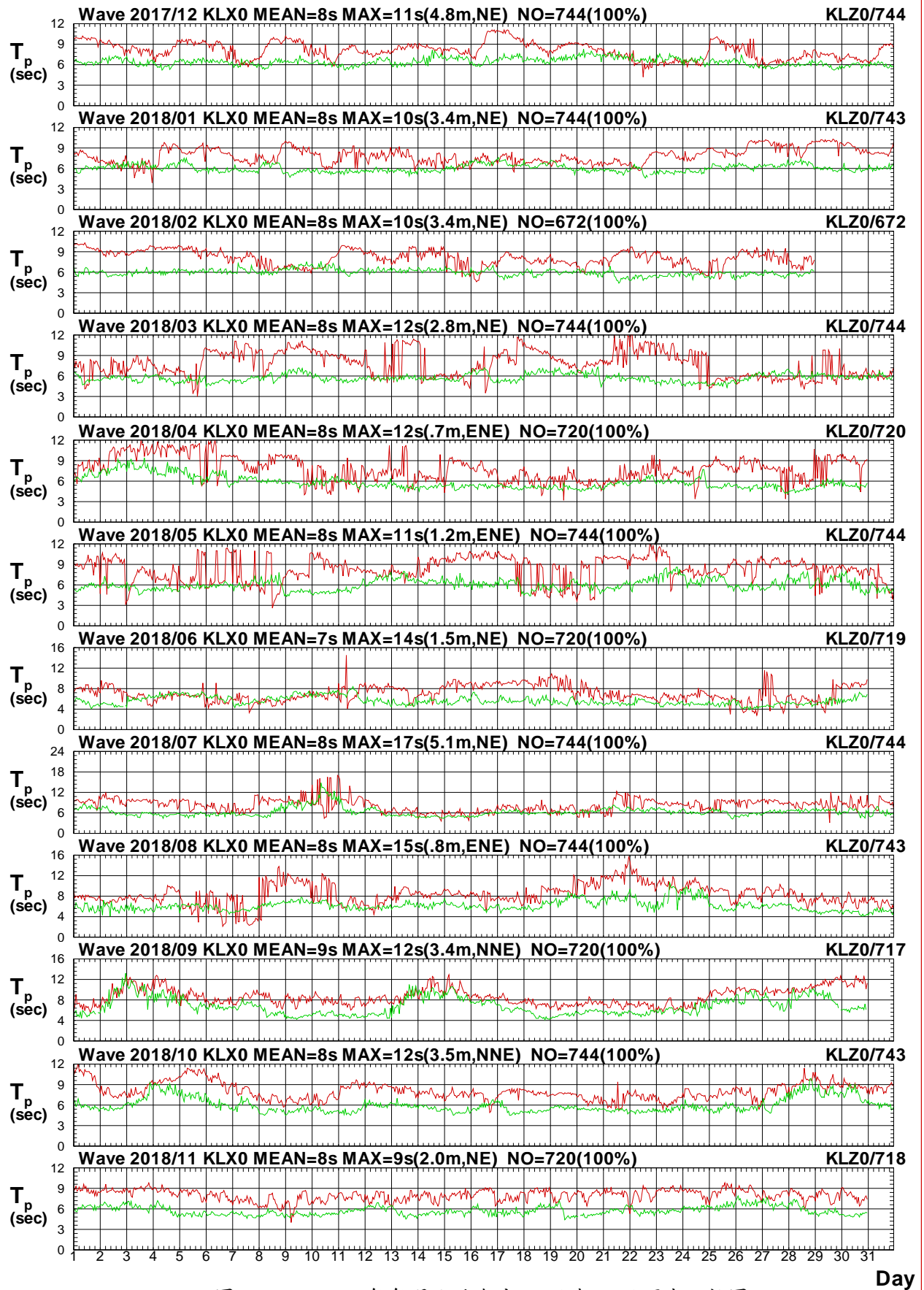


圖2.3.2b 2018年每月北端海域 X 站與 Z 站週期比較圖

V17CKLX0.1HA V17CKLZ0.1H0 V181KLX0.1HA V181KLZ0.1H0 V182KLX0.1HA V182KLZ0.1H0  
 V183KLX0.1HA V183KLZ0.1H0 V184KLX0.1HA V184KLZ0.1H0 V185KLX0.1HA V185KLZ0.1H0

Institute of Harbor & Marine Technology

# Wave Direction in Kee-Lung Harbor of KLX0 at 2018

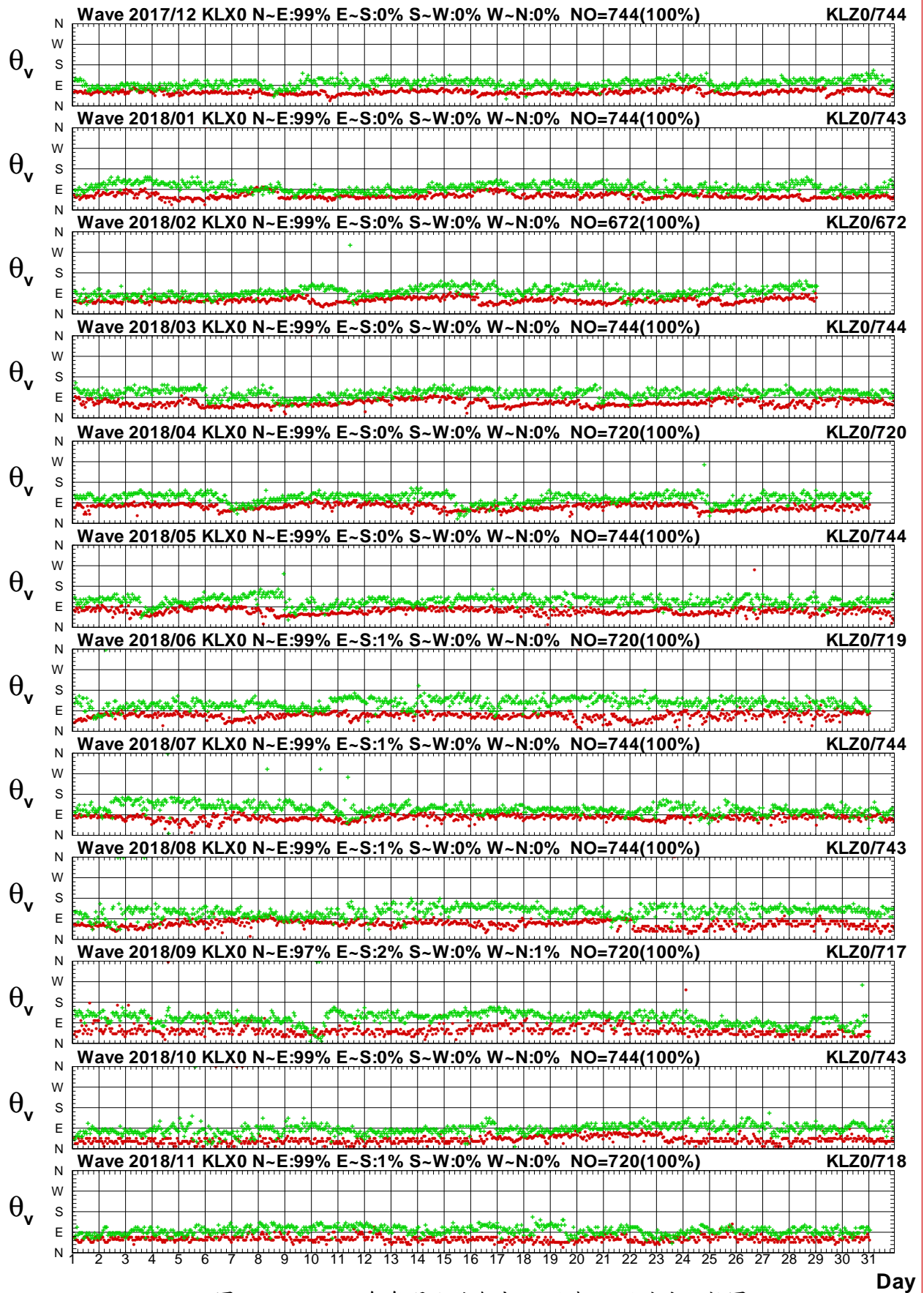


圖2.3.2c 2018年每月北端海域 X 站與 Z 站波向比較圖

V17CKLX0.1HA V17CKLZ0.1H0 V181KLX0.1HA V181KLZ0.1H0 V182KLX0.1HA V182KLZ0.1H0  
 V183KLX0.1HA V183KLZ0.1H0 V184KLX0.1HA V184KLZ0.1H0 V185KLX0.1HA V185KLZ0.1H0

Institute of Harbor & Marine Technology

# Wave $H_s$ in Kee-Lung Harbor of KLX0 at 2018

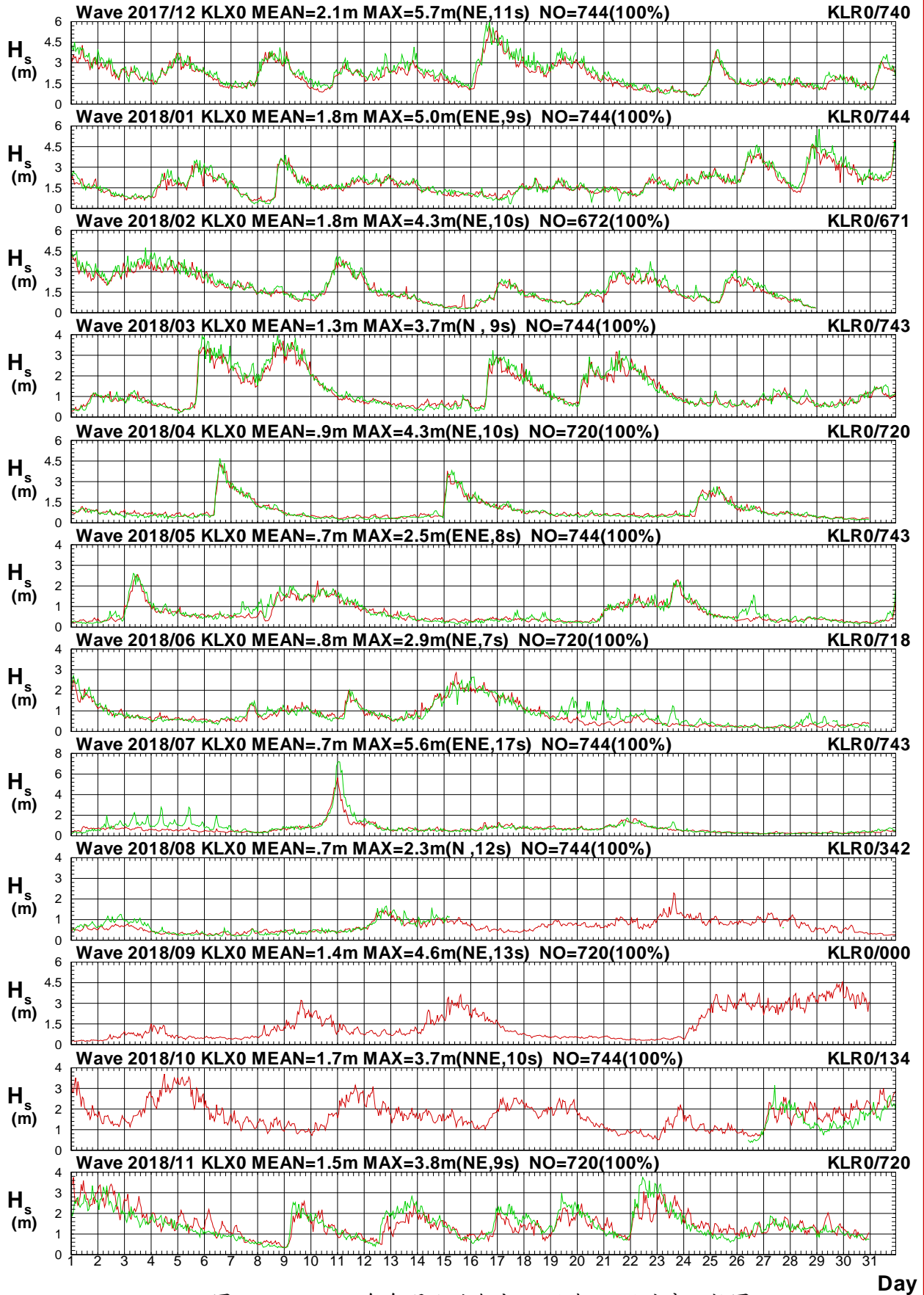


圖2.3.3a 2018年每月北端海域 X 站與 R 站波高比較圖

V17CKLX0.1HA V17CKLR0.1H0 V181KLX0.1HA V181KLR0.1H0 V182KLX0.1HA V182KLR0.1H0  
 V183KLX0.1HA V183KLR0.1H0 V184KLX0.1HA V184KLR0.1H0 V185KLX0.1HA V185KLR0.1H0

Institute of Harbor & Marine Technology



# Wave $T_p$ in Kee-Lung Harbor of KLX0 at 2018

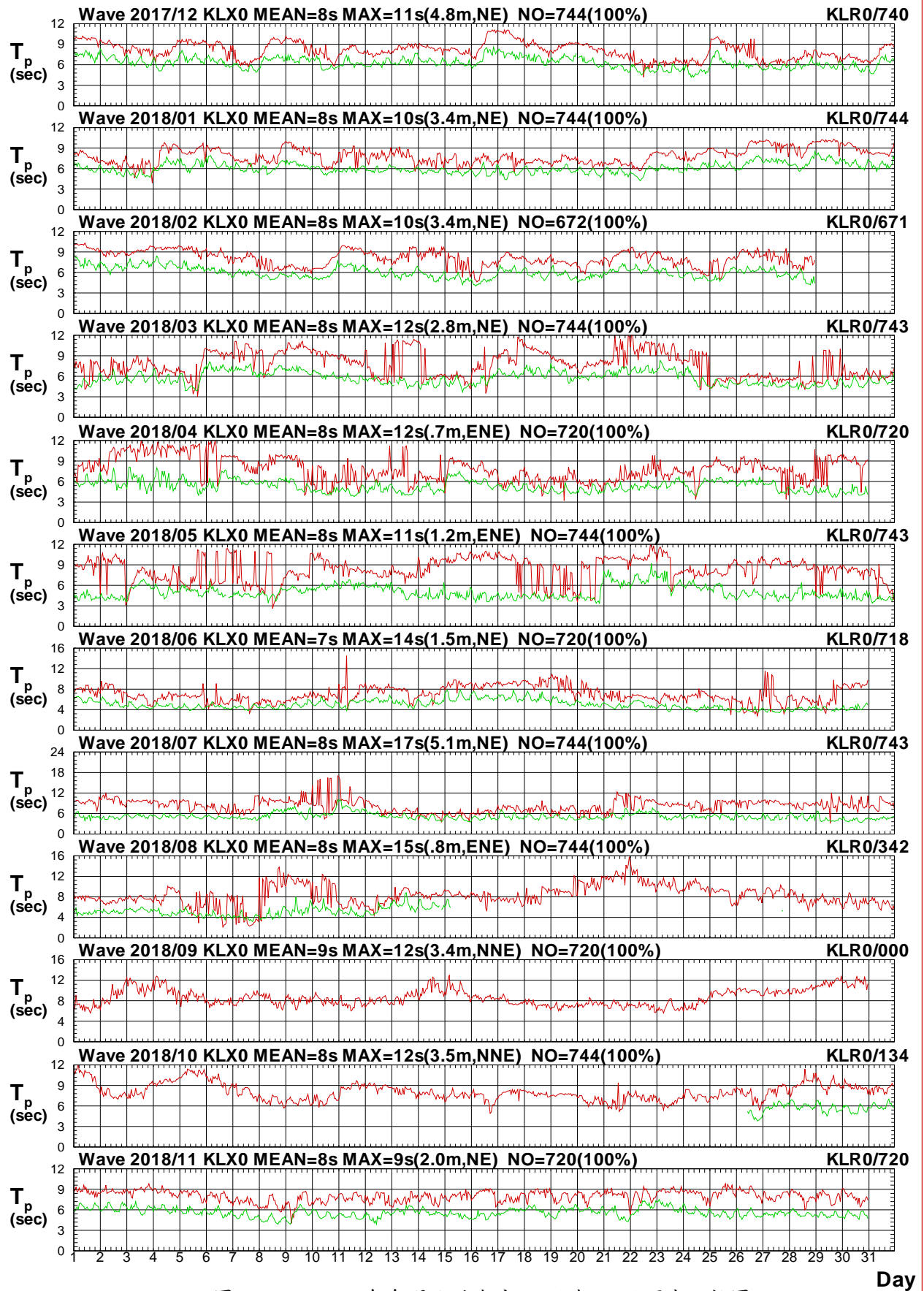


圖2.3.3b 2018年每月北端海域 X 站與 R 站週期比較圖

V17CKLX0.1HA V17CKLR0.1H0 V181KLX0.1HA V181KLR0.1H0 V182KLX0.1HA V182KLR0.1H0  
 V183KLX0.1HA V183KLR0.1H0 V184KLX0.1HA V184KLR0.1H0 V185KLX0.1HA V185KLR0.1H0

Institute of Harbor & Marine Technology



# Wave Direction in Kee-Lung Harbor of KLX0 at 2018

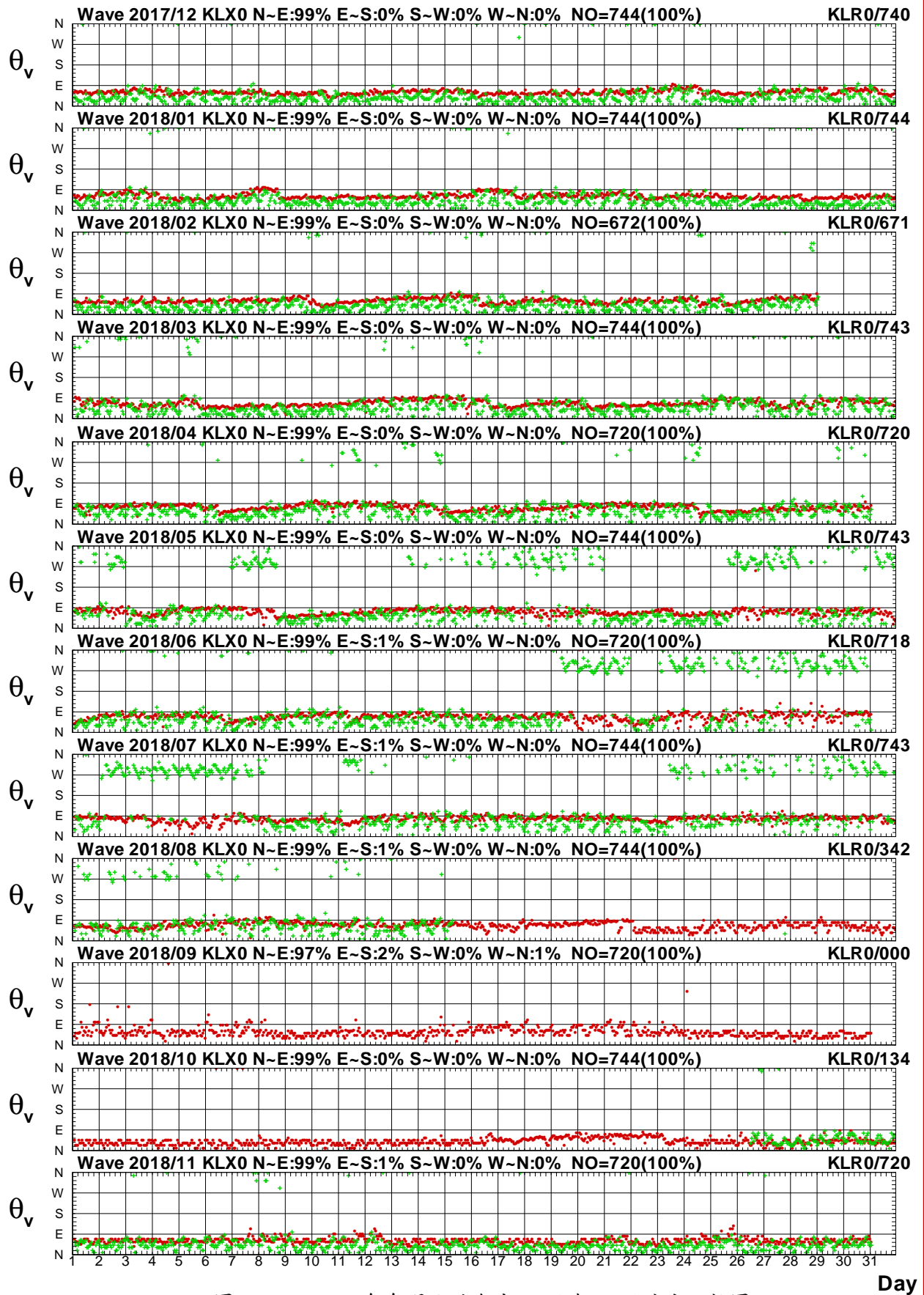


圖2.3.3c 2018年每月北端海域 X 站與 R 站波向比較圖

V17CKLX0.1HA V17CKLR0.1H0 V181KLX0.1HA V181KLR0.1H0 V182KLX0.1HA V182KLR0.1H0  
 V183KLX0.1HA V183KLR0.1H0 V184KLX0.1HA V184KLR0.1H0 V185KLX0.1HA V185KLR0.1H0

Institute of Harbor & Marine Technology

# Wave $H_s$ in Kee-Lung Harbor of KLX0 at 2018

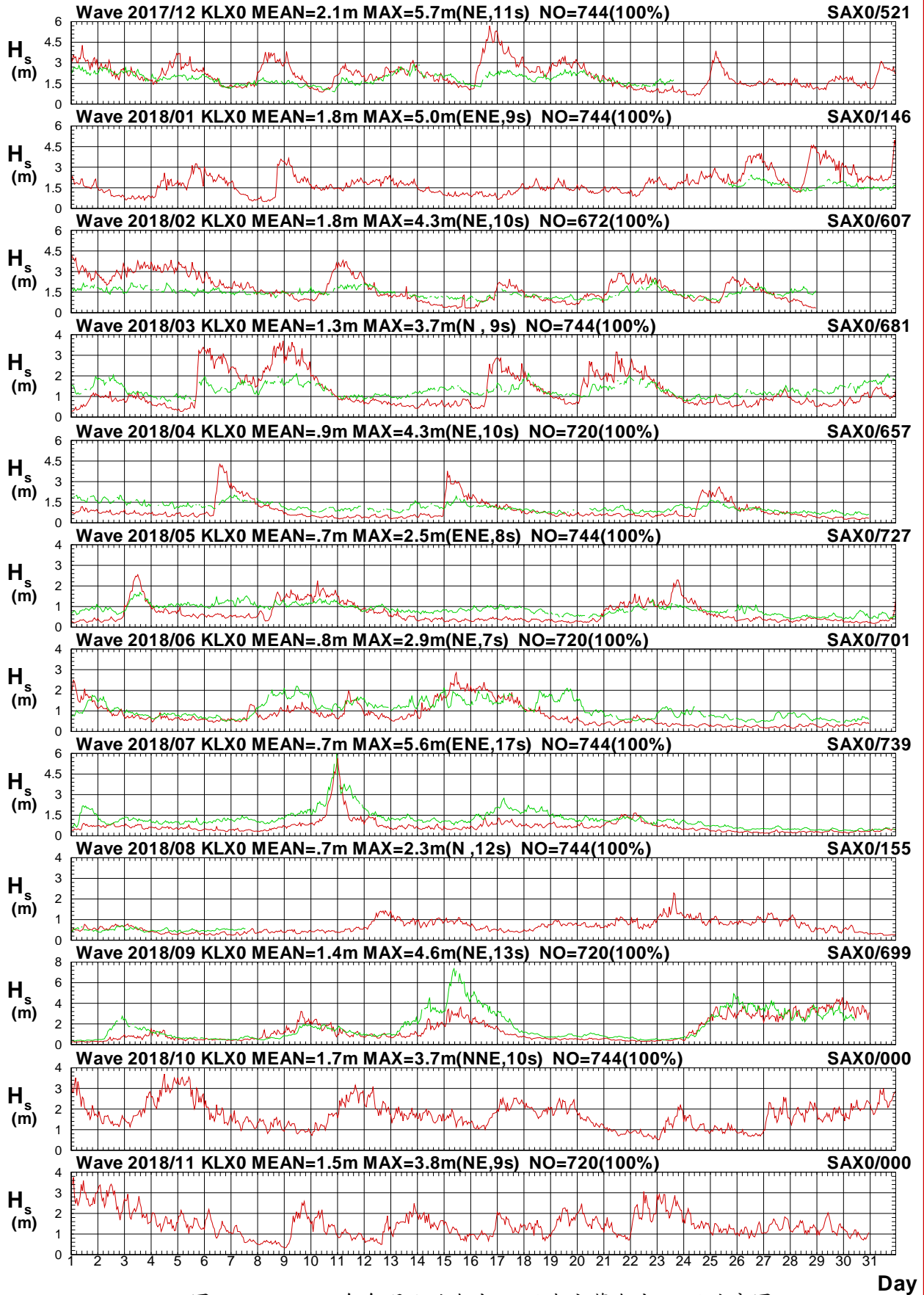


圖2.3.4a 2018年每月北端海域 X 站與宜蘭海域 X 站波高圖

V17CKLX0.1HA V17CSAX0.1H0 V181KLX0.1HA V181SAX0.1H0 V182KLX0.1HA V182SAX0.1H0  
 V183KLX0.1HA V183SAX0.1H0 V184KLX0.1HA V184SAX0.1H0 V185KLX0.1HA V185SAX0.1H0

Institute of Harbor & Marine Technology

# Wave $T_p$ in Kee-Lung Harbor of KLX0 at 2018

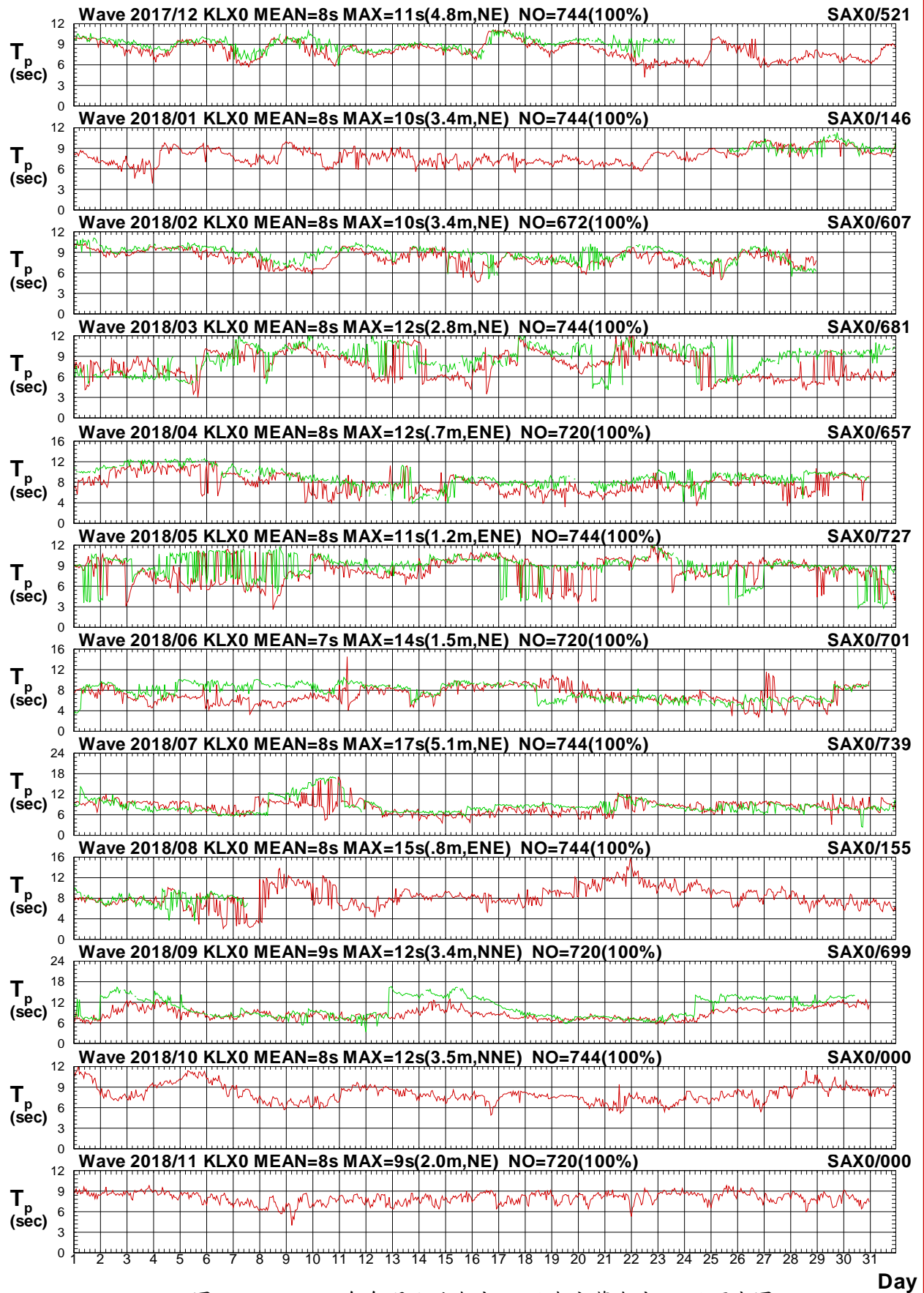


圖2.3.4b 2018年每月北端海域 X 站與宜蘭海域 X 站週期圖

V17CKLX0.1HA V17CSAX0.1H0 V181KLX0.1HA V181SAX0.1H0 V182KLX0.1HA V182SAX0.1H0  
 V183KLX0.1HA V183SAX0.1H0 V184KLX0.1HA V184SAX0.1H0 V185KLX0.1HA V185SAX0.1H0

Institute of Harbor & Marine Technology

# Wave Direction in Kee-Lung Harbor of KLX0 at 2018

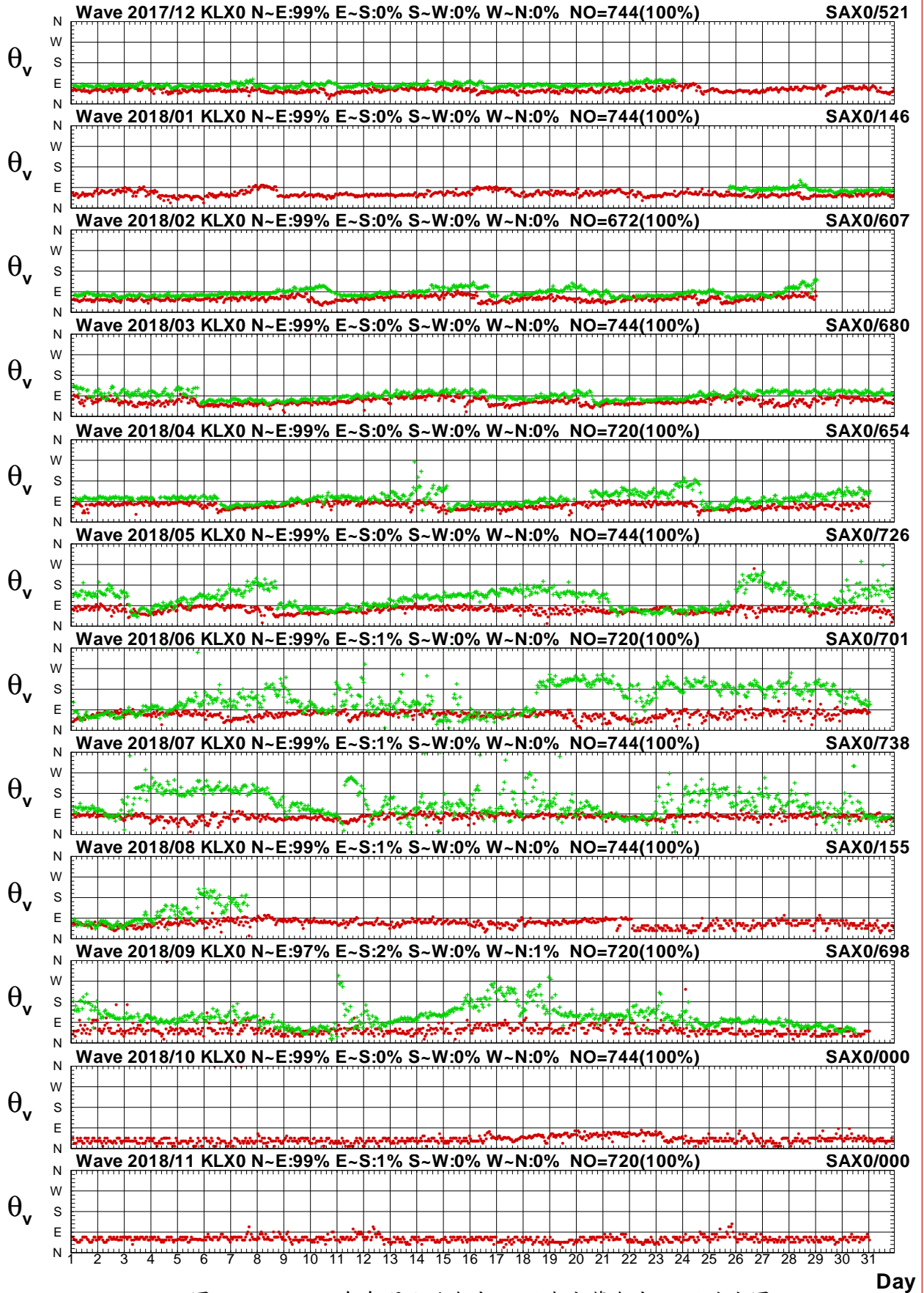


圖2.3.4c 2018年每月北端海域 X 站與宜蘭海域 X 站波向圖

V17CKLX0.1HA V17CSAX0.1H0 V181KLX0.1HA V181SAX0.1H0 V182KLX0.1HA V182SAX0.1H0  
 V183KLX0.1HA V183SAX0.1H0 V184KLX0.1HA V184SAX0.1H0 V185KLX0.1HA V185SAX0.1H0

Institute of Harbor & Marine Technology



# Wave $H_s$ in Kee-Lung Harbor of KLX0 at 2018

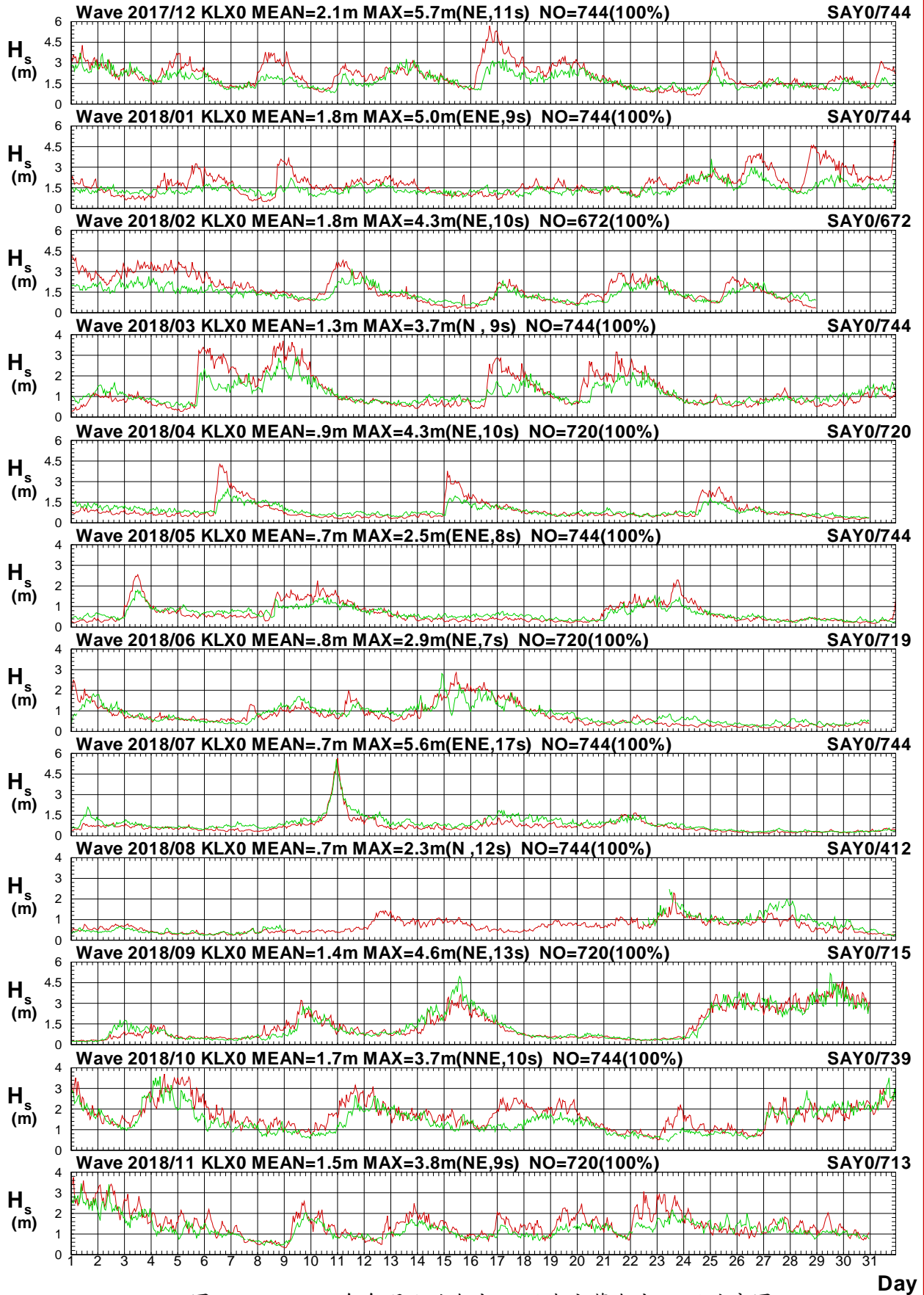


圖2.3.5a 2018年每月北端海域 X 站與宜蘭海域 Y 站波高圖

V17CKLX0.1HA V17CSAY0.1H0 V181KLX0.1HA V181SAY0.1H0 V182KLX0.1HA V182SAY0.1H0  
 V183KLX0.1HA V183SAY0.1H0 V184KLX0.1HA V184SAY0.1H0 V185KLX0.1HA V185SAY0.1H0

Institute of Harbor & Marine Technology



# Wave $T_p$ in Kee-Lung Harbor of KLX0 at 2018

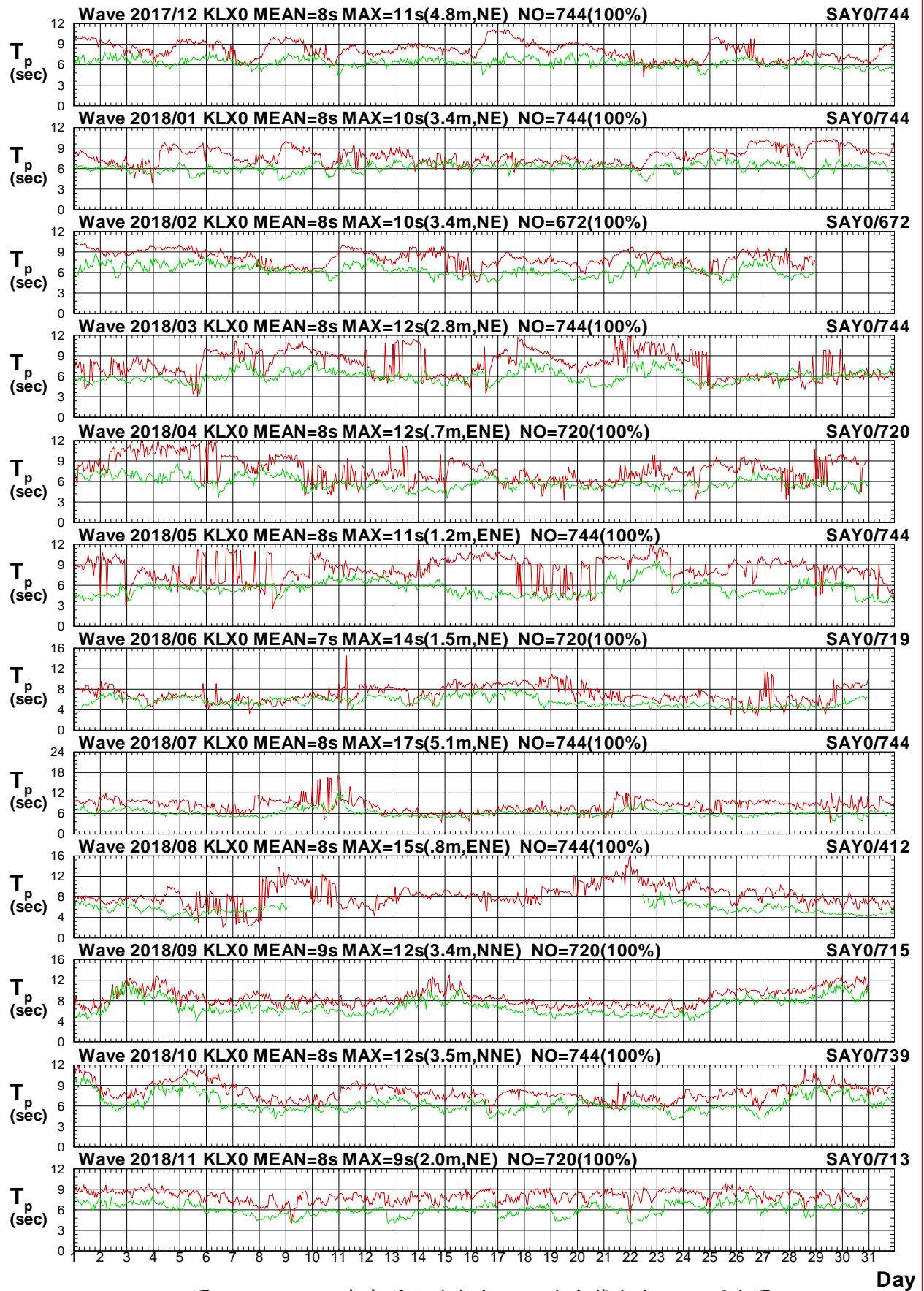


圖2.3.5b 2018年每月北端海域 X 站與宜蘭海域 Y 站週期圖

V17CKLX0.1HA V17CSAY0.1H0 V181KLX0.1HA V181SAY0.1H0 V182KLX0.1HA V182SAY0.1H0  
 V183KLX0.1HA V183SAY0.1H0 V184KLX0.1HA V184SAY0.1H0 V185KLX0.1HA V185SAY0.1H0

Institute of Harbor & Marine Technology

# Wave Direction in Kee-Lung Harbor of KLX0 at 2018

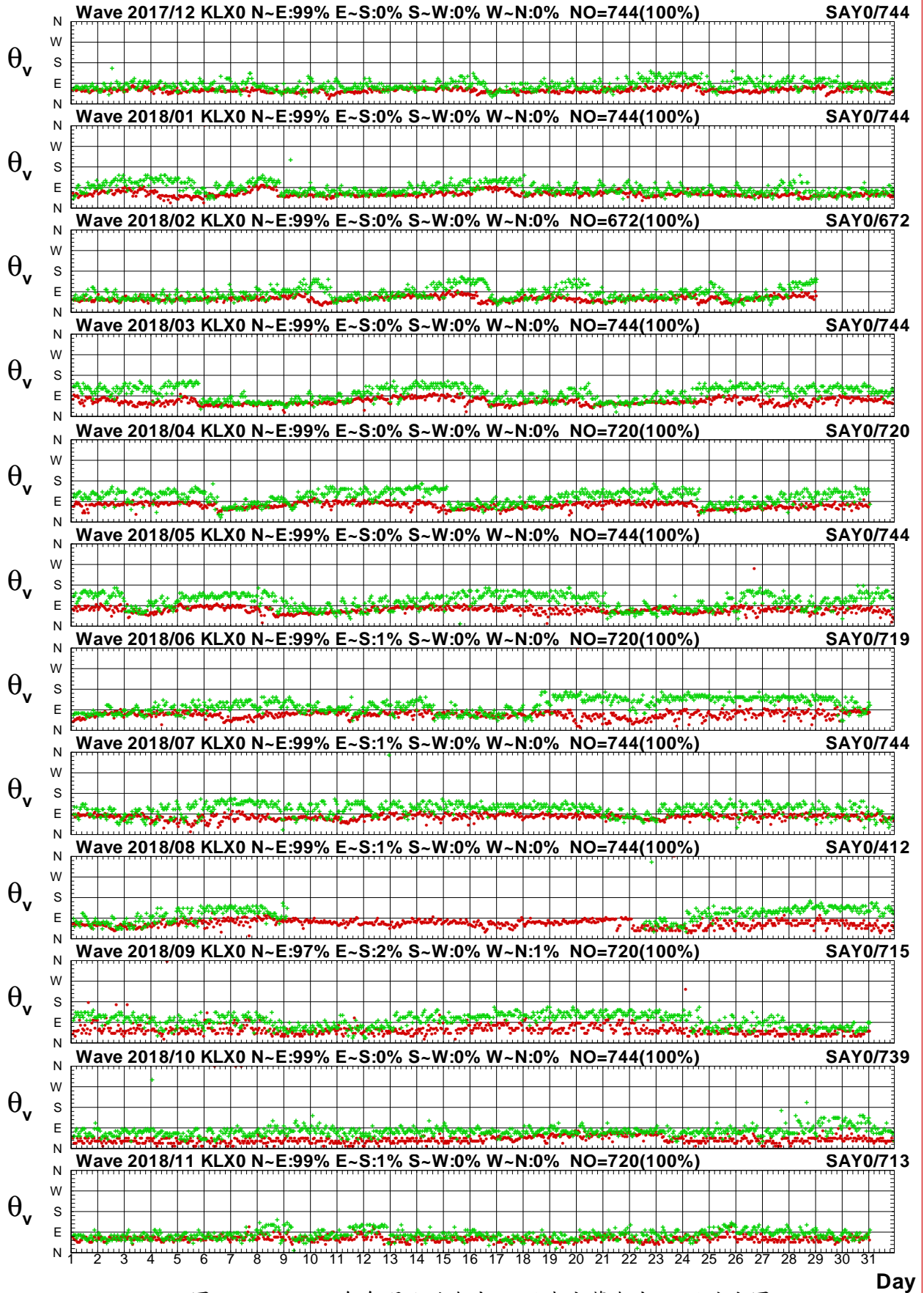


圖2.3.5c 2018年每月北端海域 X 站與宜蘭海域 Y 站波向圖

V17CKLX0.1HA V17CSAY0.1H0 V181KLX0.1HA V181SAY0.1H0 V182KLX0.1HA V182SAY0.1H0  
 V183KLX0.1HA V183SAY0.1H0 V184KLX0.1HA V184SAY0.1H0 V185KLX0.1HA V185SAY0.1H0

Institute of Harbor & Marine Technology

# Wave $H_s$ in Kee-Lung Harbor of KLX0 at 2018

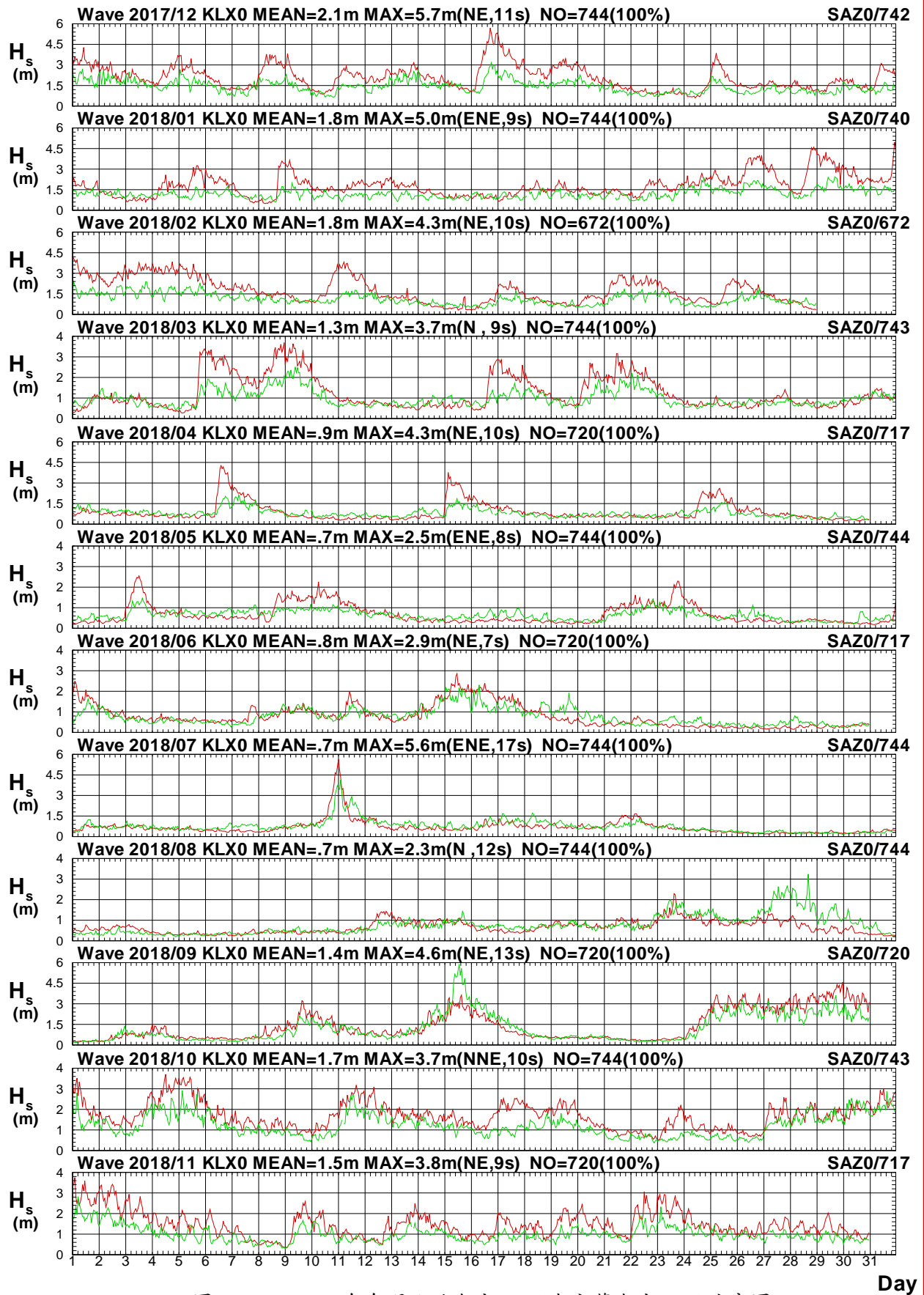


圖2.3.6a 2018年每月北端海域 X 站與宜蘭海域 Z 站波高圖

V17CKLX0.1HA V17CSAZ0.1H0 V181KLX0.1HA V181SAZ0.1H0 V182KLX0.1HA V182SAZ0.1H0  
 V183KLX0.1HA V183SAZ0.1H0 V184KLX0.1HA V184SAZ0.1H0 V185KLX0.1HA V185SAZ0.1H0

Institute of Harbor & Marine Technology

# Wave $T_p$ in Kee-Lung Harbor of KLX0 at 2018

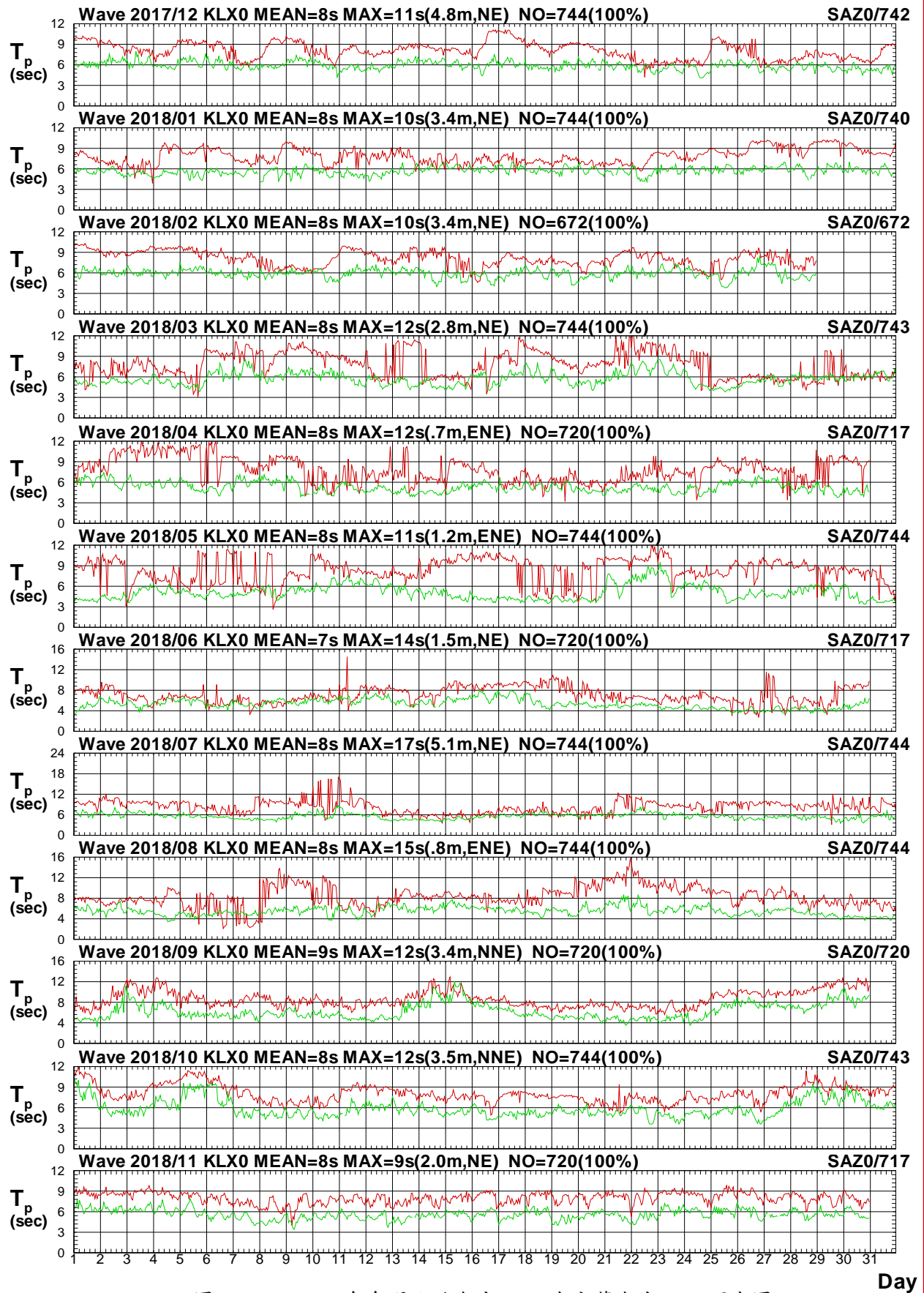


圖2.3.6b 2018年每月北端海域 X 站與宜蘭海域 Z 站週期圖

V17CKLX0.1HA V17CSAZ0.1H0 V181KLX0.1HA V181SAZ0.1H0 V182KLX0.1HA V182SAZ0.1H0  
 V183KLX0.1HA V183SAZ0.1H0 V184KLX0.1HA V184SAZ0.1H0 V185KLX0.1HA V185SAZ0.1H0

Institute of Harbor & Marine Technology



# Wave Direction in Kee-Lung Harbor of KLX0 at 2018

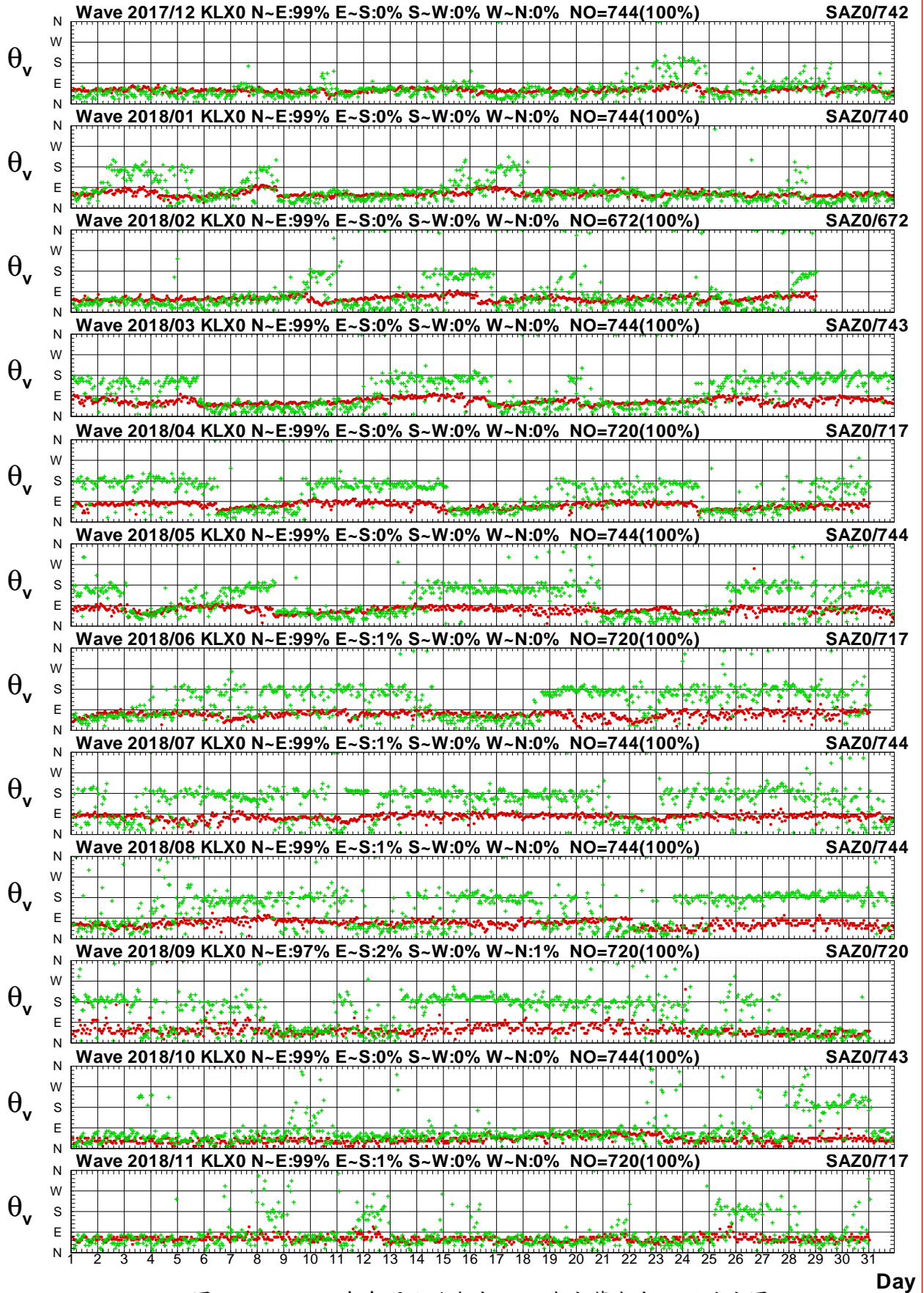


圖2.3.6c 2018年每月北端海域 X 站與宜蘭海域 Z 站波向圖

V17CKLX0.1HA V17CSAZ0.1H0 V181KLX0.1HA V181SAZO.1H0 V182KLX0.1HA V182SAZO.1H0  
 V183KLX0.1HA V183SAZO.1H0 V184KLX0.1HA V184SAZO.1H0 V185KLX0.1HA V185SAZO.1H0

Institute of Harbor & Marine Technology



# Wave $H_s$ in Kee-Lung Harbor of KLX0 at 2018

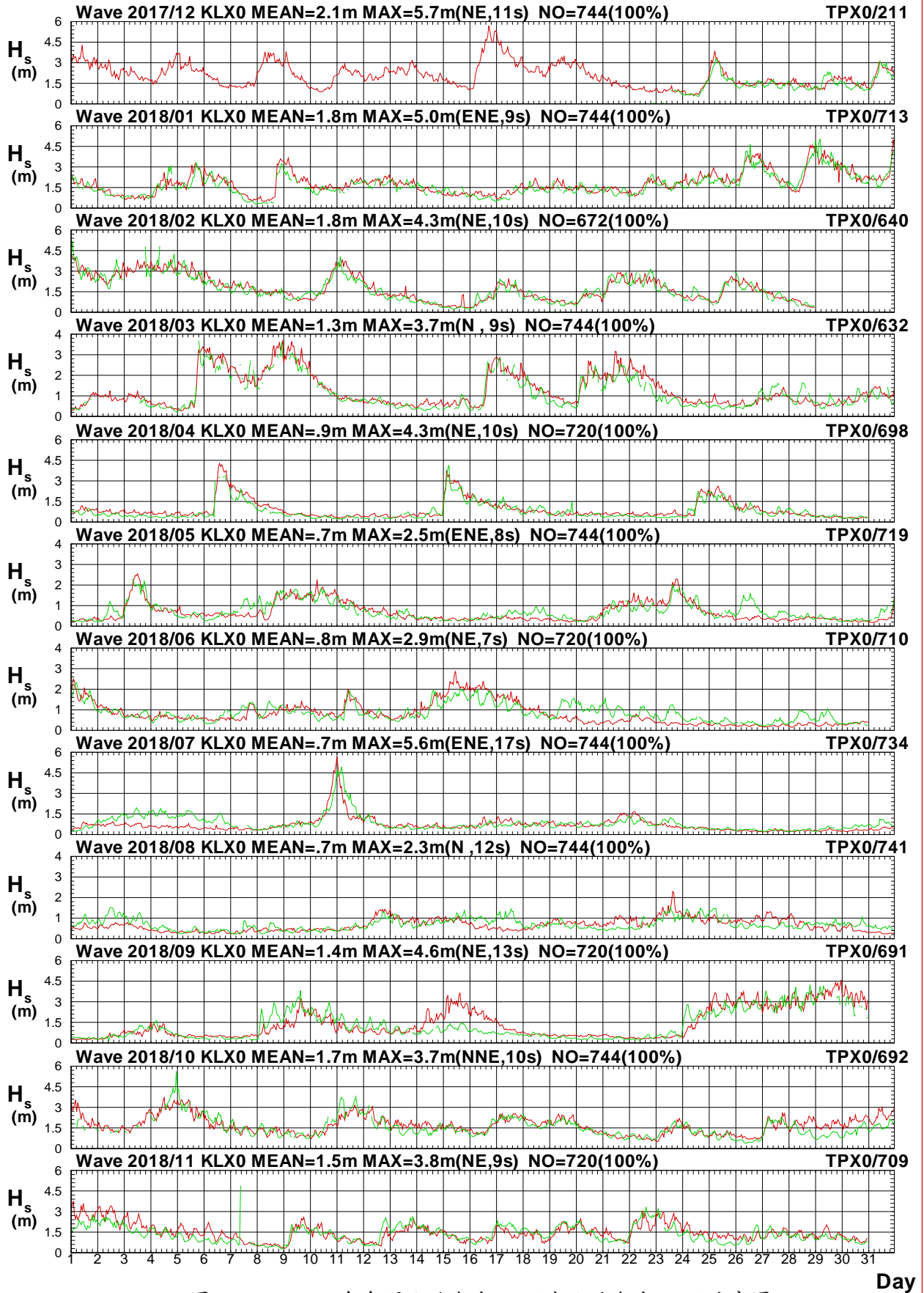


圖2.3.7a 2018年每月北端海域 X 站與北苗海域 X 站波高圖

V17CKLX0.1HA V17CTPX0.1H0 V181KLX0.1HA V181TPX0.1H0 V182KLX0.1HA V182TPX0.1H0  
 V183KLX0.1HA V183TPX0.1H0 V184KLX0.1HA V184TPX0.1H0 V185KLX0.1HA V185TPX0.1H0

Institute of Harbor & Marine Technology

# Wave $T_p$ in Kee-Lung Harbor of KLX0 at 2018

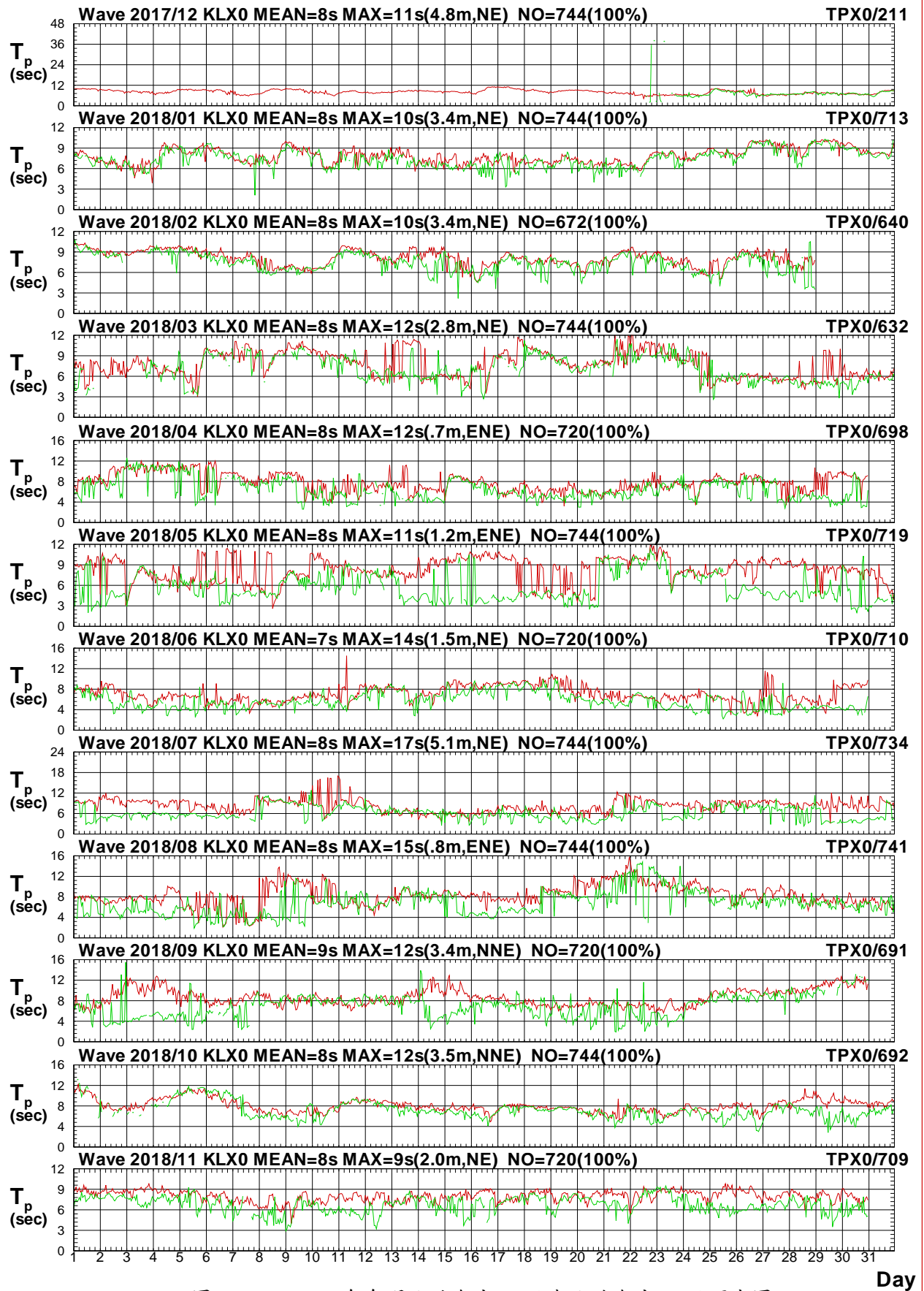


圖2.3.7b 2018年每月北端海域 X 站與北苗海域 X 站週期圖

V17CKLX0.1HA V17CTPX0.1H0 V181KLX0.1HA V181TPX0.1H0 V182KLX0.1HA V182TPX0.1H0  
 V183KLX0.1HA V183TPX0.1H0 V184KLX0.1HA V184TPX0.1H0 V185KLX0.1HA V185TPX0.1H0

Institute of Harbor & Marine Technology

# Wave Direction in Kee-Lung Harbor of KLX0 at 2018

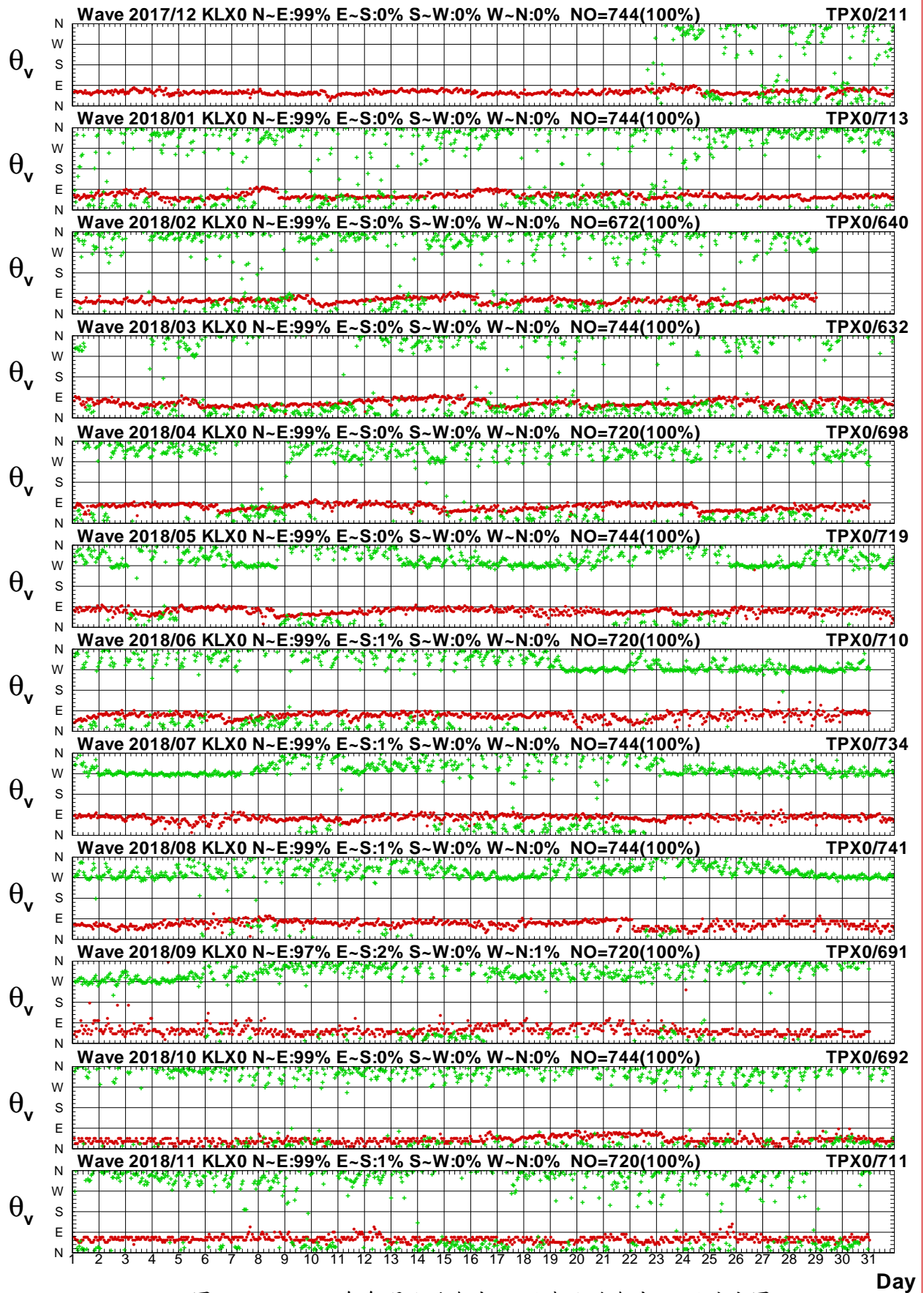


圖2.3.7c 2018年每月北端海域 X 站與北苗海域 X 站波向圖

V17CKLX0.1HA V17CTPX0.1H0 V181KLX0.1HA V181TPX0.1H0 V182KLX0.1HA V182TPX0.1H0  
 V183KLX0.1HA V183TPX0.1H0 V184KLX0.1HA V184TPX0.1H0 V185KLX0.1HA V185TPX0.1H0

Institute of Harbor & Marine Technology

# Wave $H_s$ in Kee-Lung Harbor of KLX0 at 2018

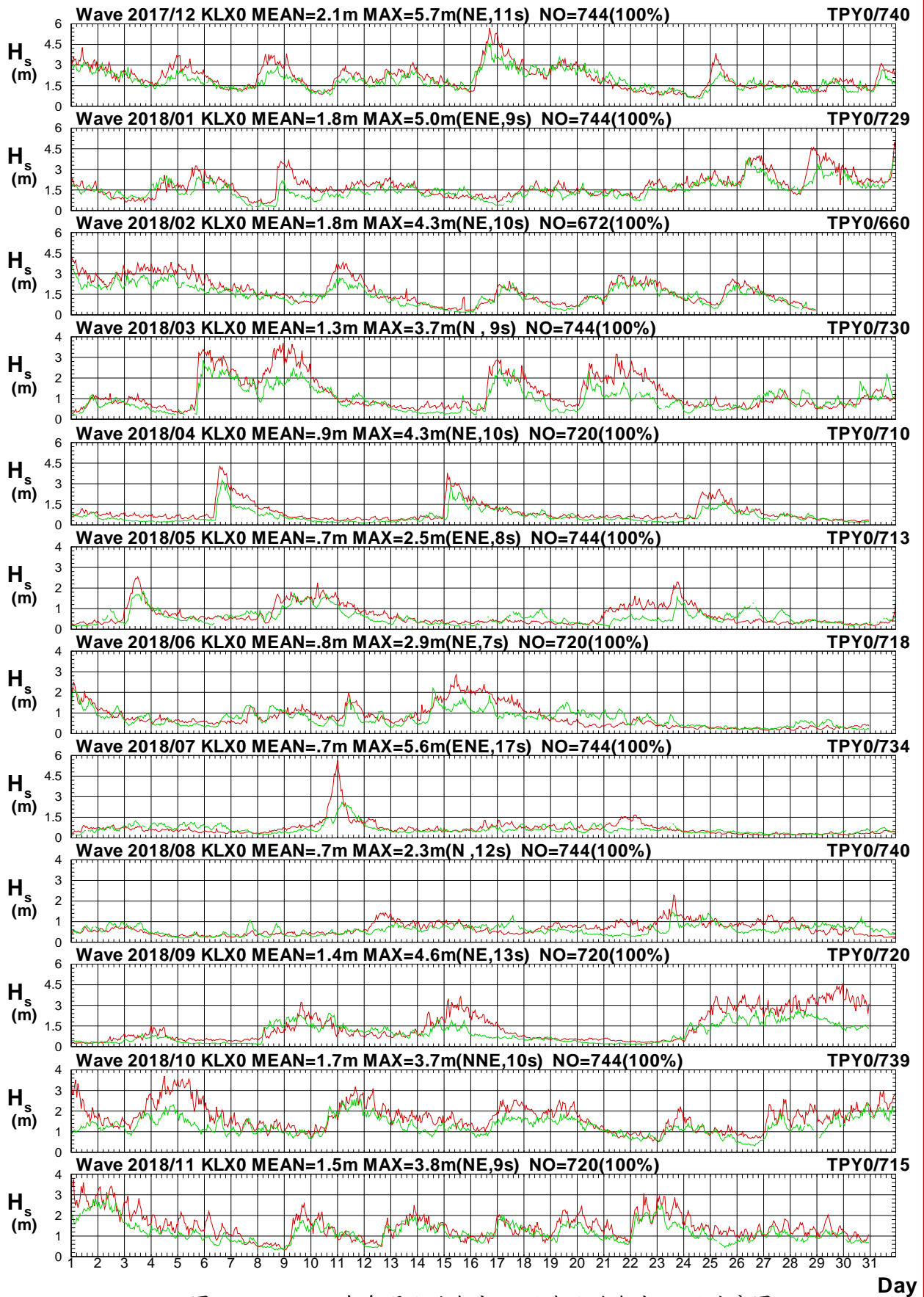


圖2.3.8a 2018年每月北端海域 X 站與北苗海域 Y 站波高圖

V17CKLX0.1HA V17CTPY0.1H0 V181KLX0.1HA V181TPY0.1H0 V182KLX0.1HA V182TPY0.1H0  
 V183KLX0.1HA V183TPY0.1H0 V184KLX0.1HA V184TPY0.1H0 V185KLX0.1HA V185TPY0.1H0

Institute of Harbor & Marine Technology



# Wave $T_p$ in Kee-Lung Harbor of KLX0 at 2018

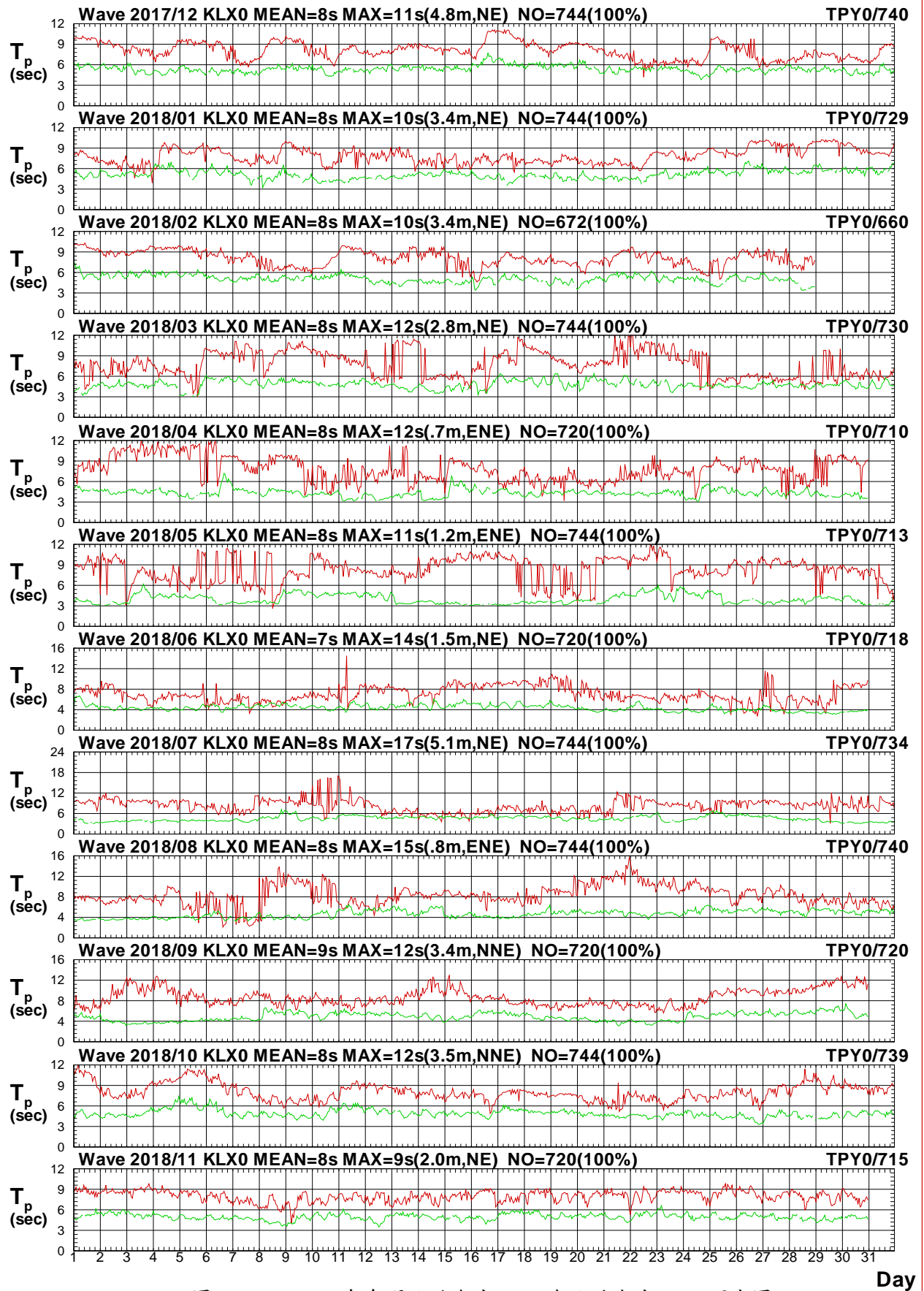


圖2.3.8b 2018年每月北端海域 X 站與北苗海域 Y 站週期圖

V17CKLX0.1HA V17CTPY0.1H0 V181KLX0.1HA V181TPY0.1H0 V182KLX0.1HA V182TPY0.1H0  
 V183KLX0.1HA V183TPY0.1H0 V184KLX0.1HA V184TPY0.1H0 V185KLX0.1HA V185TPY0.1H0

Institute of Harbor & Marine Technology



# Wave Direction in Kee-Lung Harbor of KLX0 at 2018

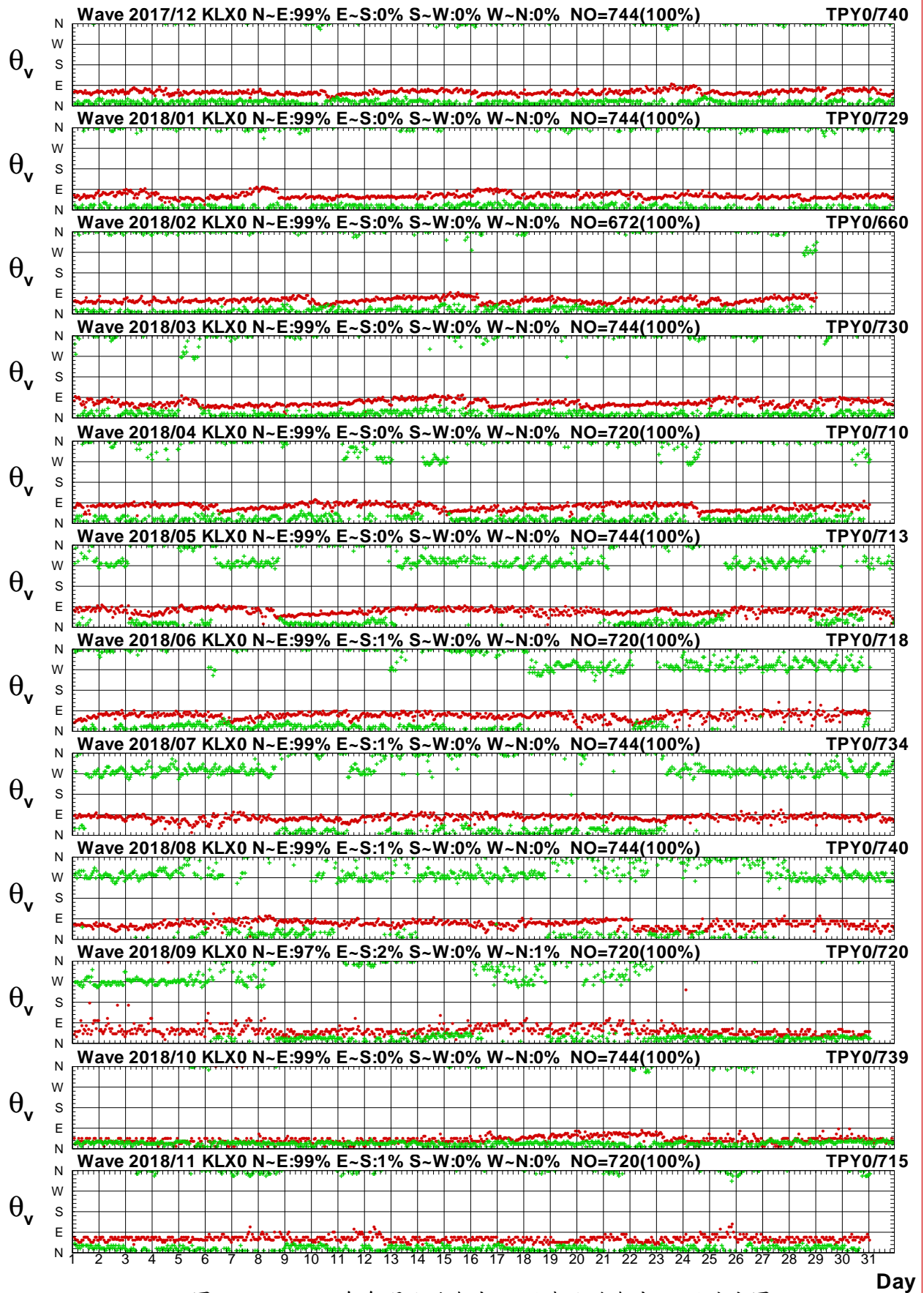


圖2.3.8c 2018年每月北端海域 X 站與北苗海域 Y 站波向圖

V17CKLX0.1HA V17CTPY0.1H0 V181KLX0.1HA V181TPY0.1H0 V182KLX0.1HA V182TPY0.1H0  
 V183KLX0.1HA V183TPY0.1H0 V184KLX0.1HA V184TPY0.1H0 V185KLX0.1HA V185TPY0.1H0

Institute of Harbor & Marine Technology

## 2.4 2018 年北端海域波浪**主要測站 2**(修補後)與 **其他測站**(修補前)每月波浪歷線比較圖



# Wave $H_s$ in Kee-Lung Harbor of KLY0 at 2018

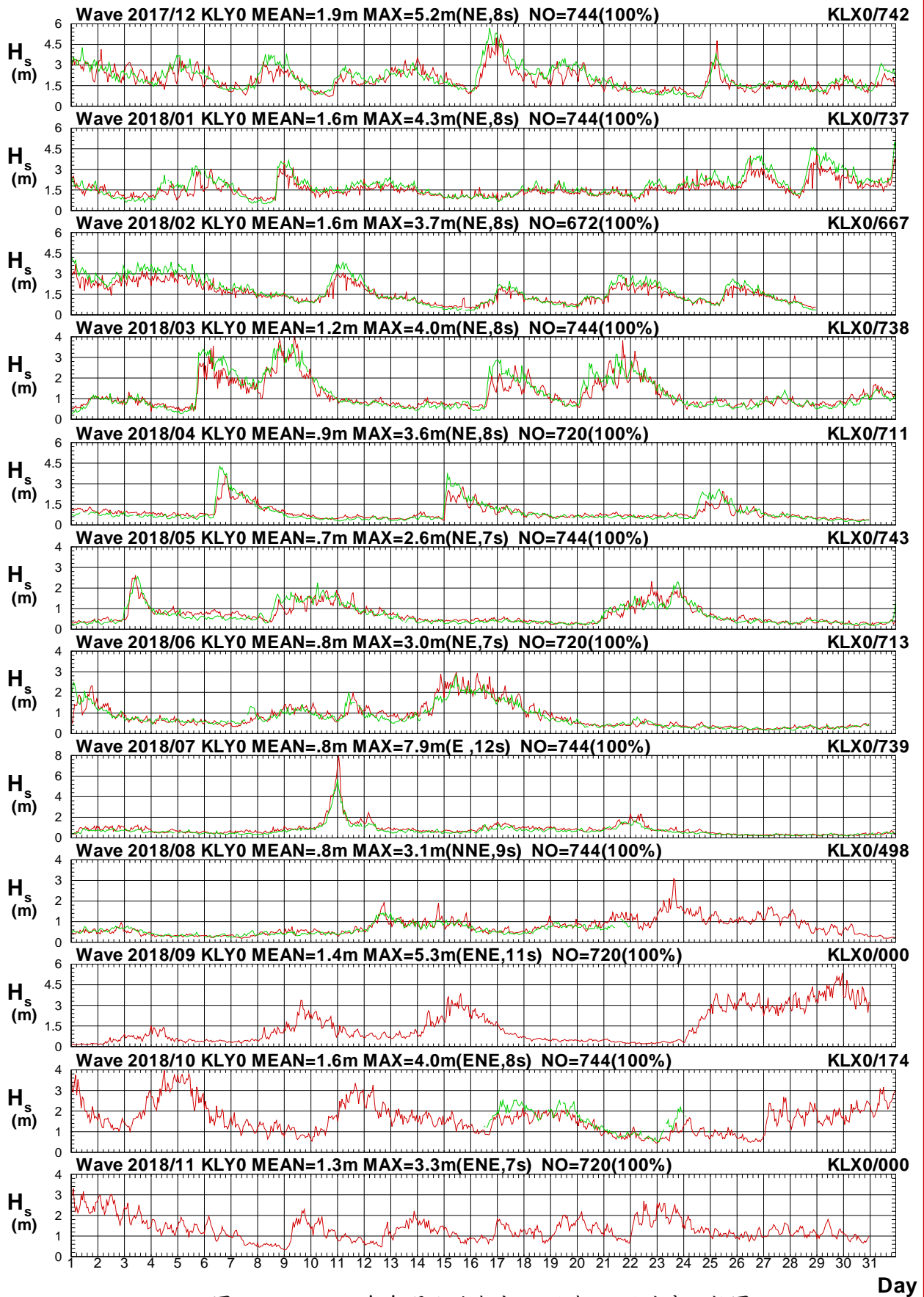


圖2.4.1a 2018年每月北端海域 Y 站與 X 站波高比較圖

V17CKLY0.1HA V17CKLX0.1H0 V181KLY0.1HA V181KLX0.1H0 V182KLY0.1HA V182KLX0.1H0  
 V183KLY0.1HA V183KLX0.1H0 V184KLY0.1HA V184KLX0.1H0 V185KLY0.1HA V185KLX0.1H0

Institute of Harbor & Marine Technology

# Wave $T_p$ in Kee-Lung Harbor of KLY0 at 2018

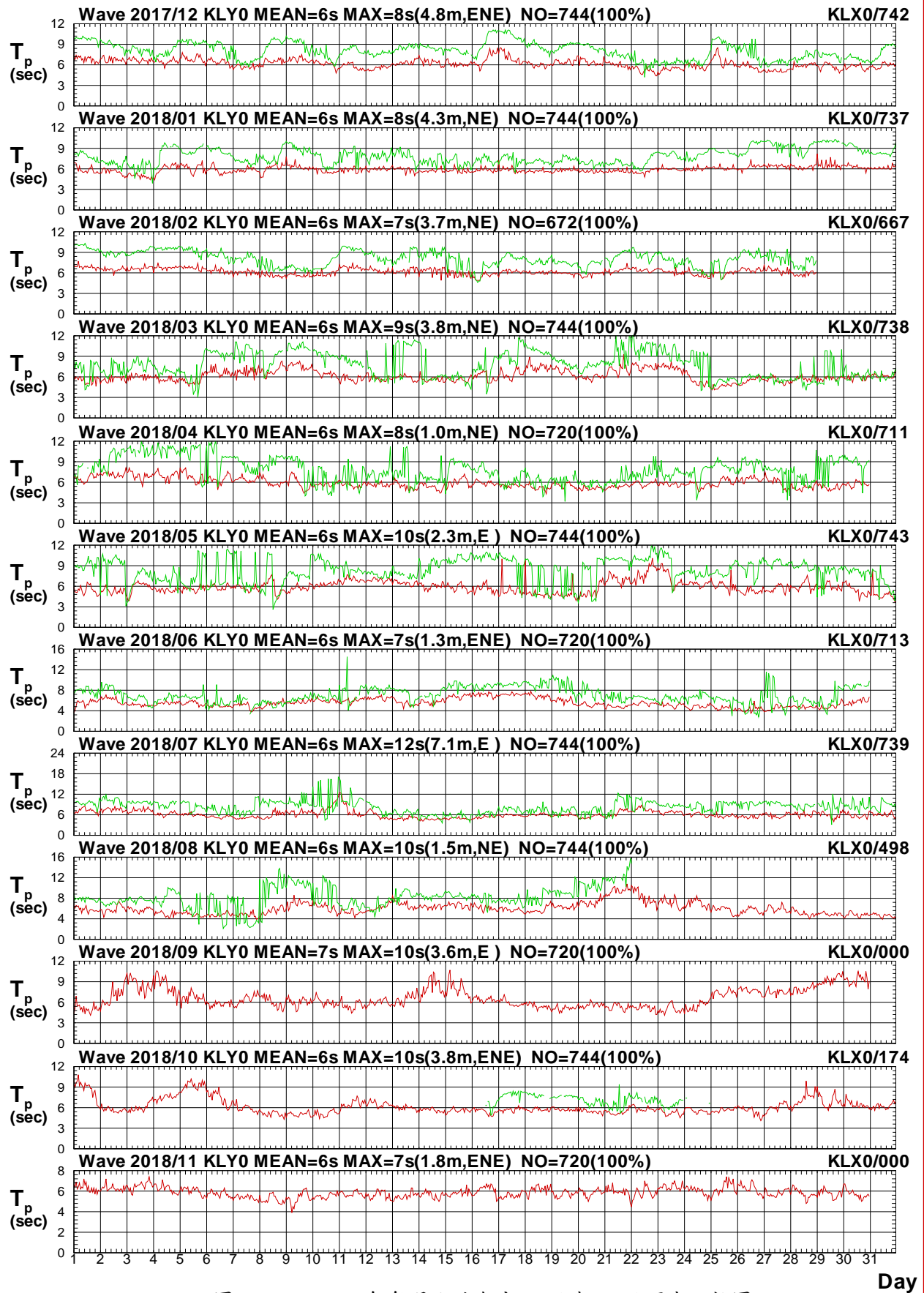


圖2.4.1b 2018年每月北端海域 Y 站與 X 站週期比較圖

V17CKLY0.1HA V17CKLX0.1H0 V181KLY0.1HA V181KLX0.1H0 V182KLY0.1HA V182KLX0.1H0  
 V183KLY0.1HA V183KLX0.1H0 V184KLY0.1HA V184KLX0.1H0 V185KLY0.1HA V185KLX0.1H0

Institute of Harbor & Marine Technology



# Wave Direction in Kee-Lung Harbor of KLY0 at 2018

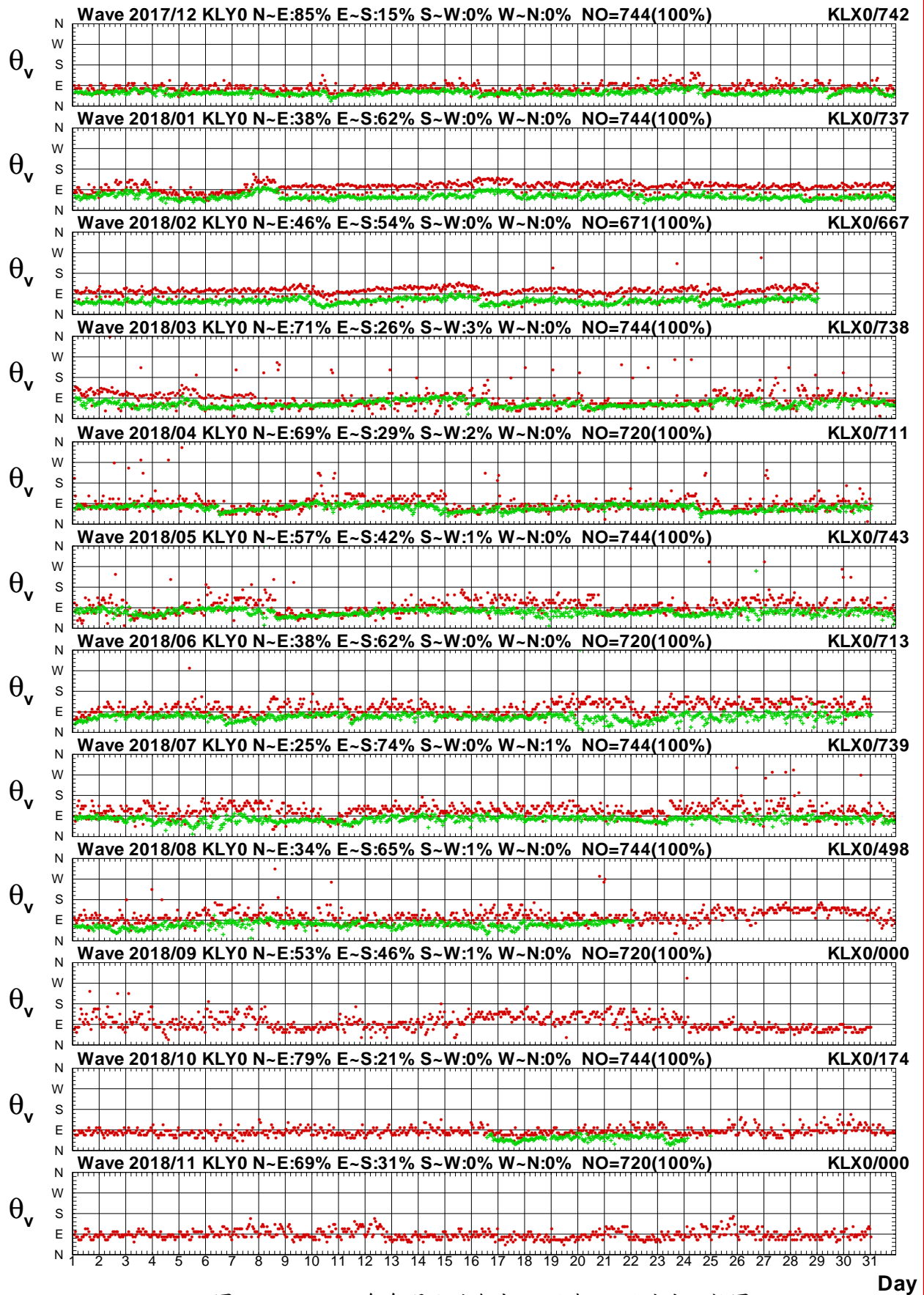


圖2.4.1c 2018年每月北端海域 Y 站與 X 站波向比較圖

V17CKLY0.1HA V17CKLX0.1H0 V181KLY0.1HA V181KLX0.1H0 V182KLY0.1HA V182KLX0.1H0  
 V183KLY0.1HA V183KLX0.1H0 V184KLY0.1HA V184KLX0.1H0 V185KLY0.1HA V185KLX0.1H0

Institute of Harbor & Marine Technology

# Wave $H_s$ in Kee-Lung Harbor of KLY0 at 2018

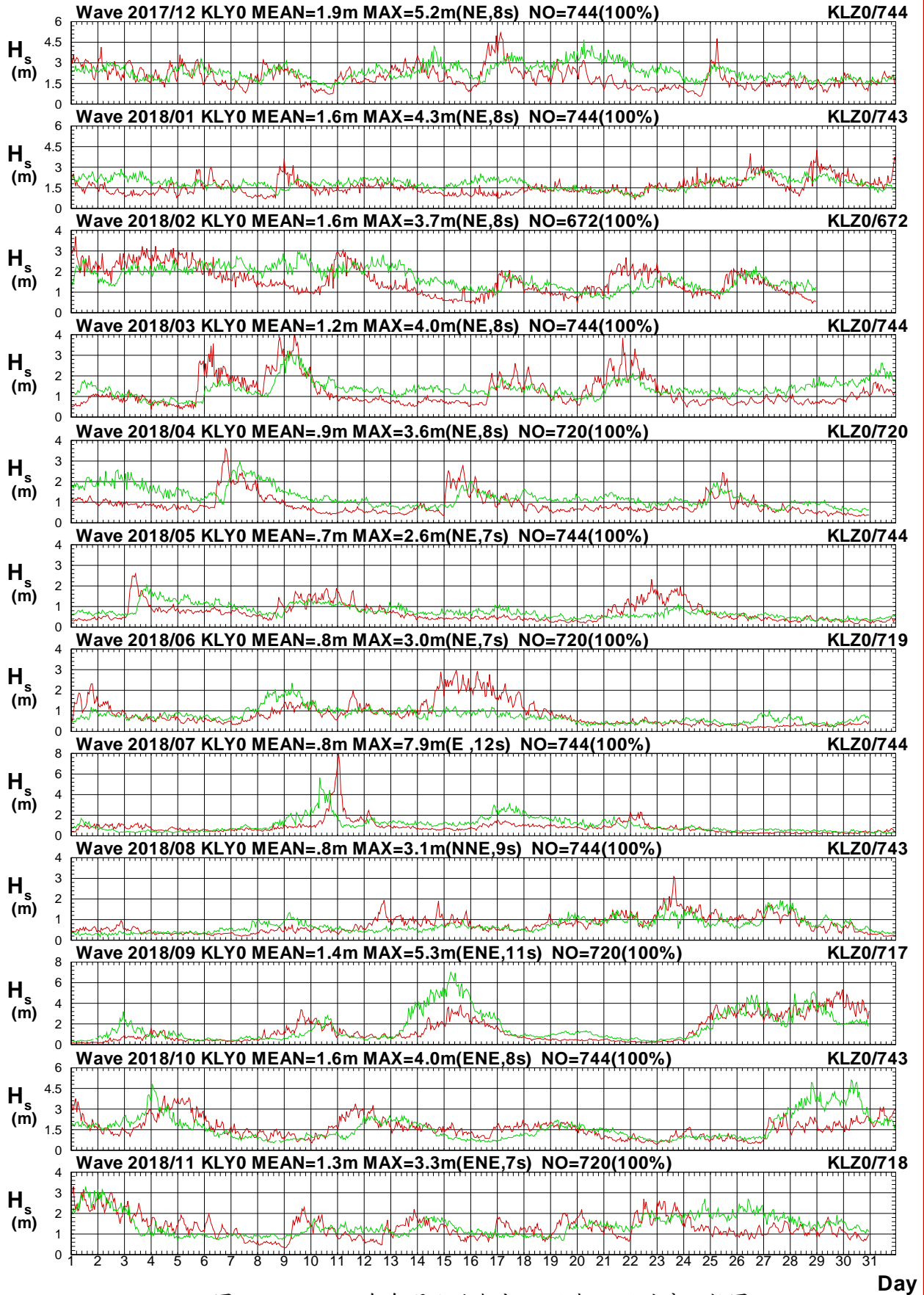


圖2.4.2a 2018年每月北端海域 Y 站與 Z 站波高比較圖

V17CKLY0.1HA V17CKLZ0.1H0 V181KLY0.1HA V181KLZ0.1H0 V182KLY0.1HA V182KLZ0.1H0  
 V183KLY0.1HA V183KLZ0.1H0 V184KLY0.1HA V184KLZ0.1H0 V185KLY0.1HA V185KLZ0.1H0

Institute of Harbor & Marine Technology

# Wave $T_p$ in Kee-Lung Harbor of KLY0 at 2018

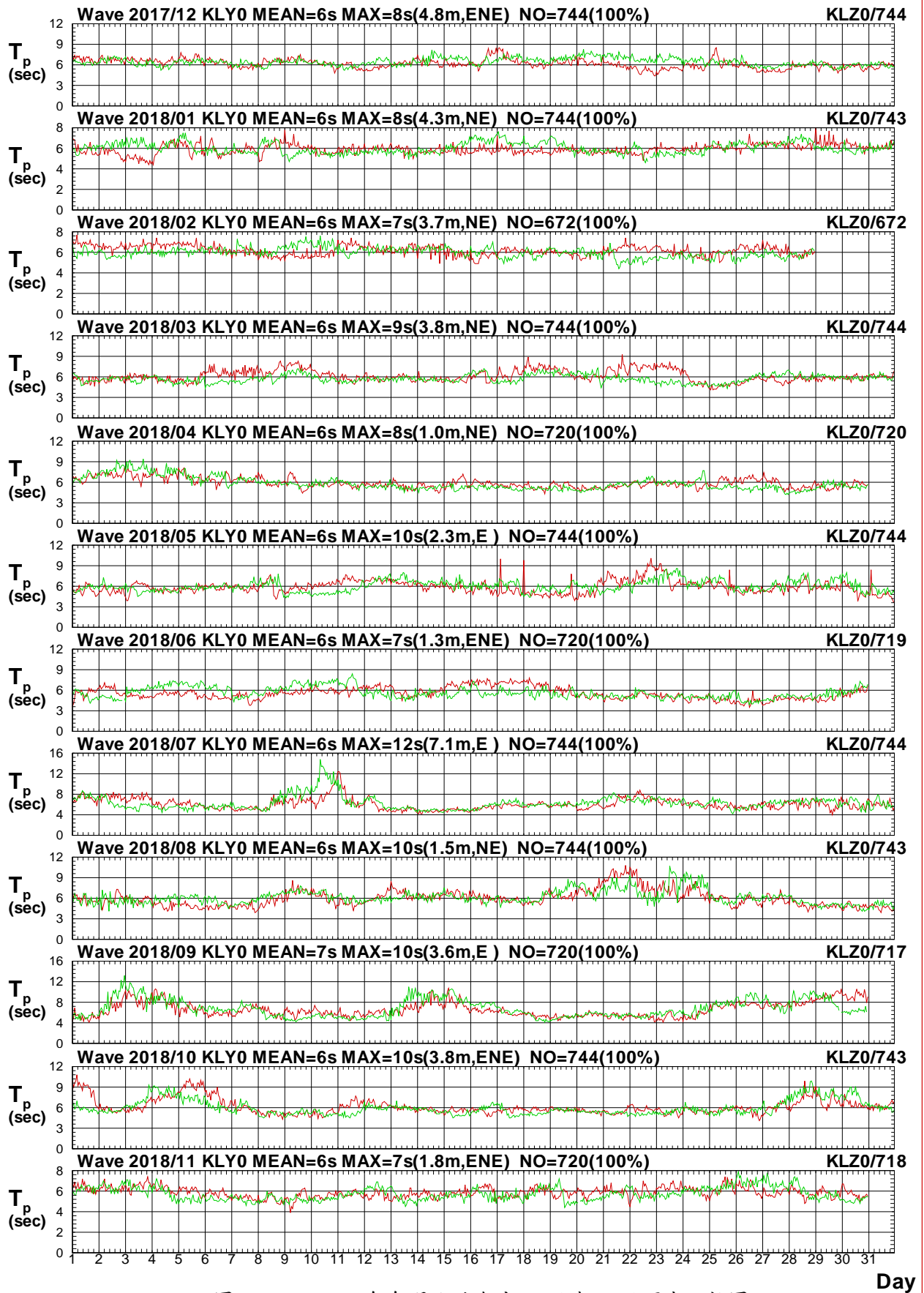


圖2.4.2b 2018年每月北端海域 Y 站與 Z 站週期比較圖

V17CKLY0.1HA V17CKLZ0.1H0 V181KLY0.1HA V181KLZ0.1H0 V182KLY0.1HA V182KLZ0.1H0  
 V183KLY0.1HA V183KLZ0.1H0 V184KLY0.1HA V184KLZ0.1H0 V185KLY0.1HA V185KLZ0.1H0

Institute of Harbor & Marine Technology

# Wave Direction in Kee-Lung Harbor of KLY0 at 2018

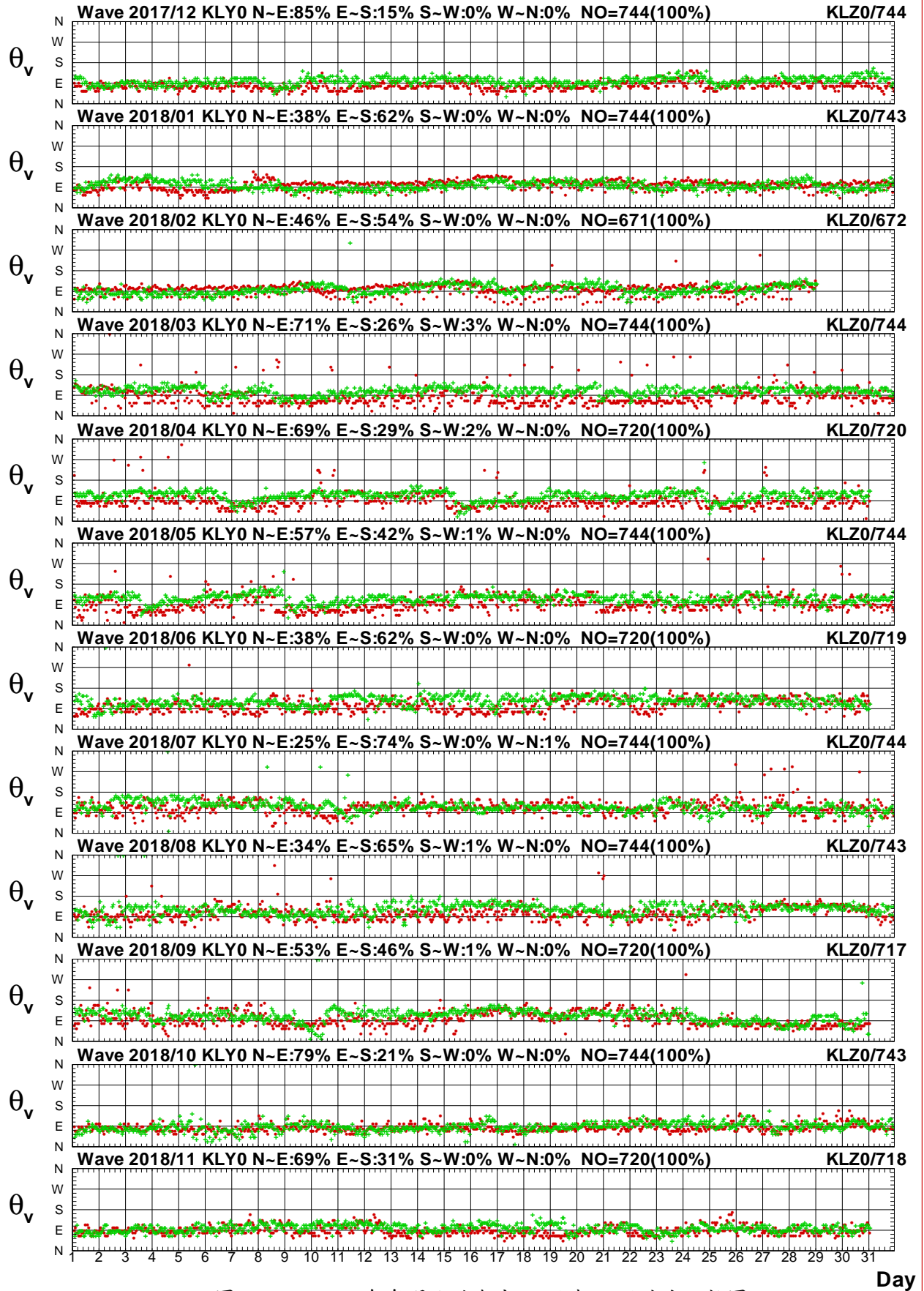


圖2.4.2c 2018年每月北端海域 Y 站與 Z 站波向比較圖

V17CKLY0.1HA V17CKLZ0.1H0 V181KLY0.1HA V181KLZ0.1H0 V182KLY0.1HA V182KLZ0.1H0  
 V183KLY0.1HA V183KLZ0.1H0 V184KLY0.1HA V184KLZ0.1H0 V185KLY0.1HA V185KLZ0.1H0

Institute of Harbor & Marine Technology



# Wave $H_s$ in Kee-Lung Harbor of KLY0 at 2018

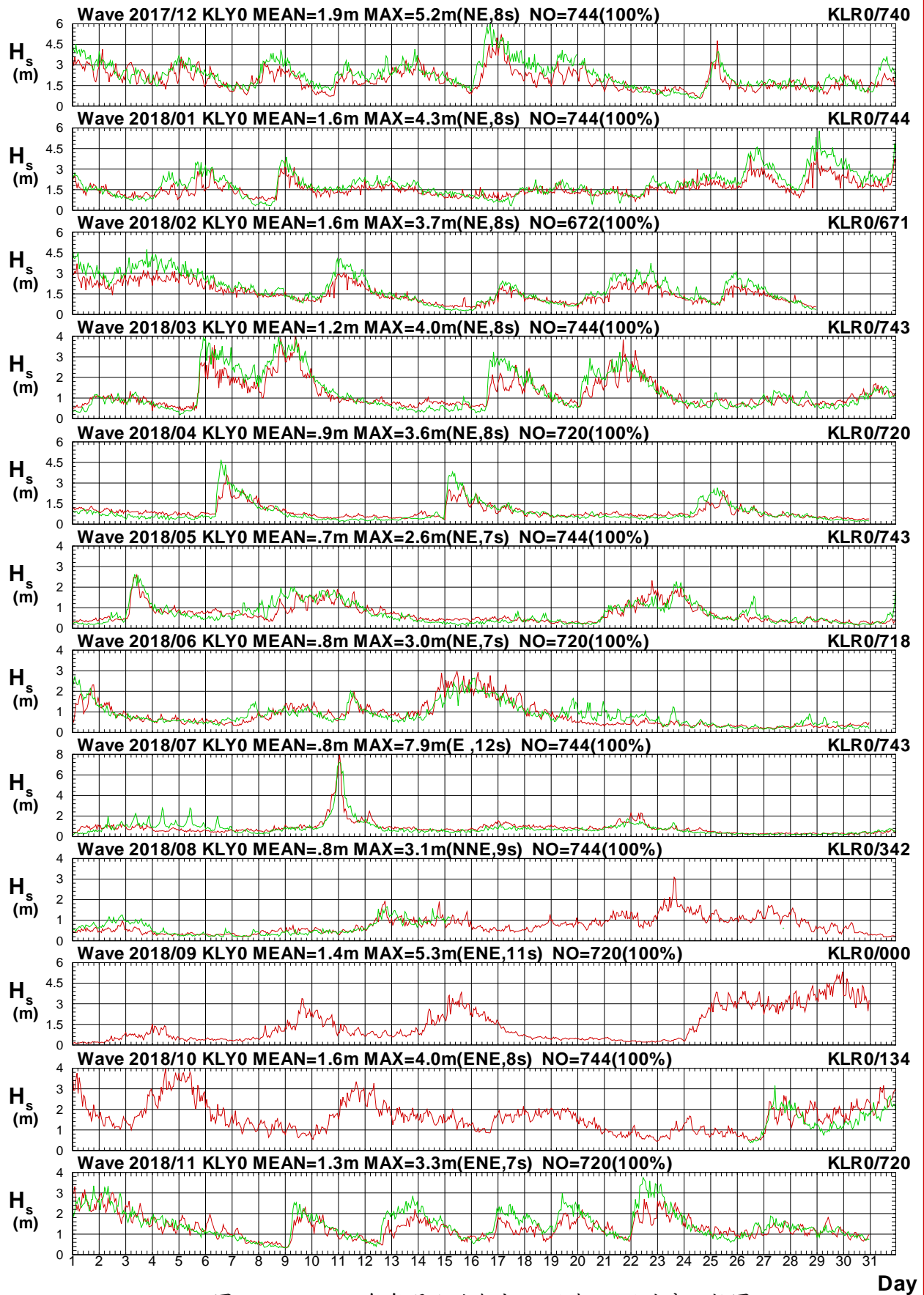


圖2.4.3a 2018年每月北端海域 Y 站與 R 站波高比較圖

V17CKLY0.1HA V17CKLR0.1H0 V181KLY0.1HA V181KLR0.1H0 V182KLY0.1HA V182KLR0.1H0  
 V183KLY0.1HA V183KLR0.1H0 V184KLY0.1HA V184KLR0.1H0 V185KLY0.1HA V185KLR0.1H0

Institute of Harbor & Marine Technology



# Wave $T_p$ in Kee-Lung Harbor of KLY0 at 2018

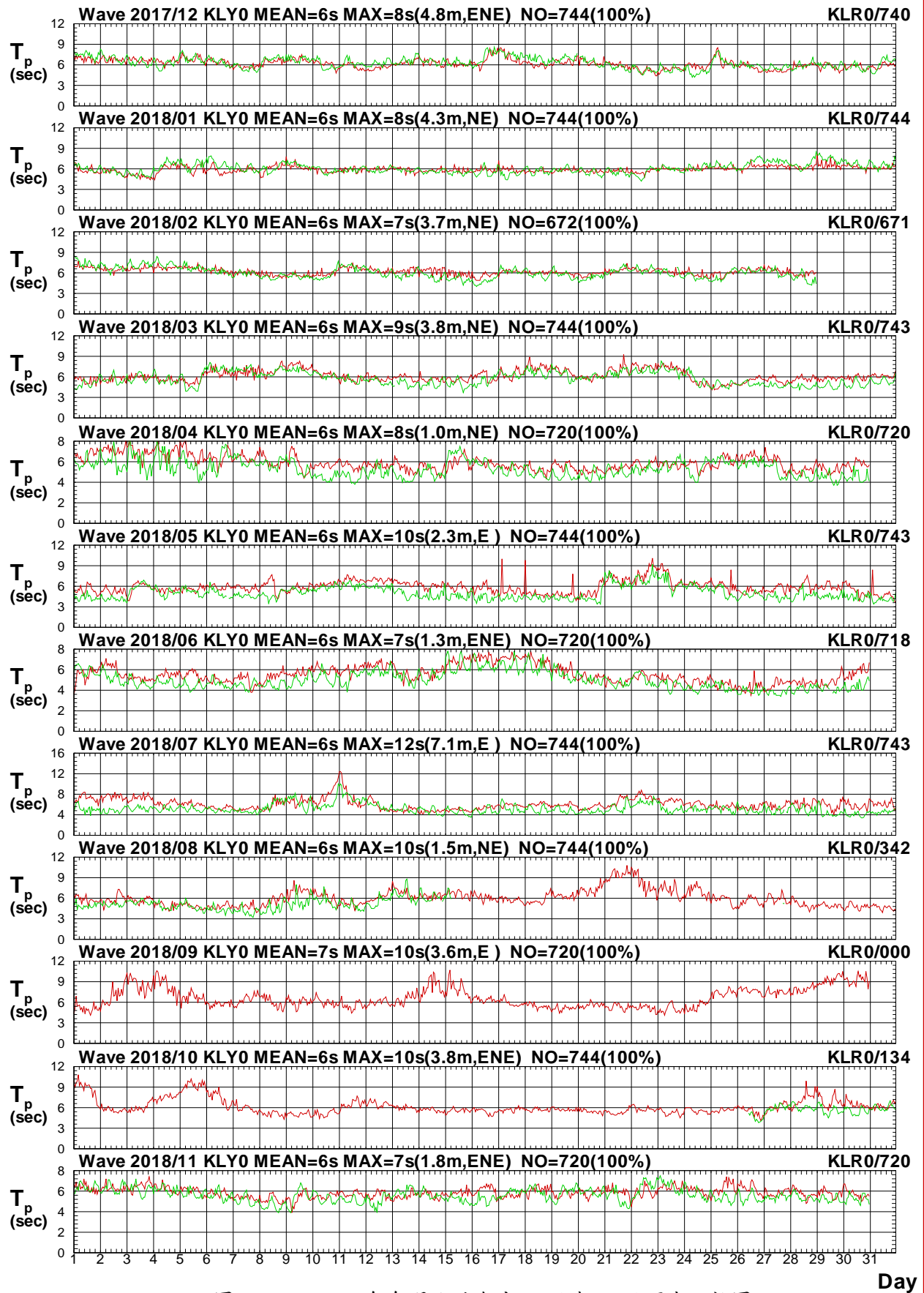


圖2.4.3b 2018年每月北端海域 Y 站與 R 站週期比較圖

V17CKLY0.1HA V17CKLR0.1H0 V181KLY0.1HA V181KLR0.1H0 V182KLY0.1HA V182KLR0.1H0  
 V183KLY0.1HA V183KLR0.1H0 V184KLY0.1HA V184KLR0.1H0 V185KLY0.1HA V185KLR0.1H0

Institute of Harbor & Marine Technology

# Wave Direction in Kee-Lung Harbor of KLY0 at 2018

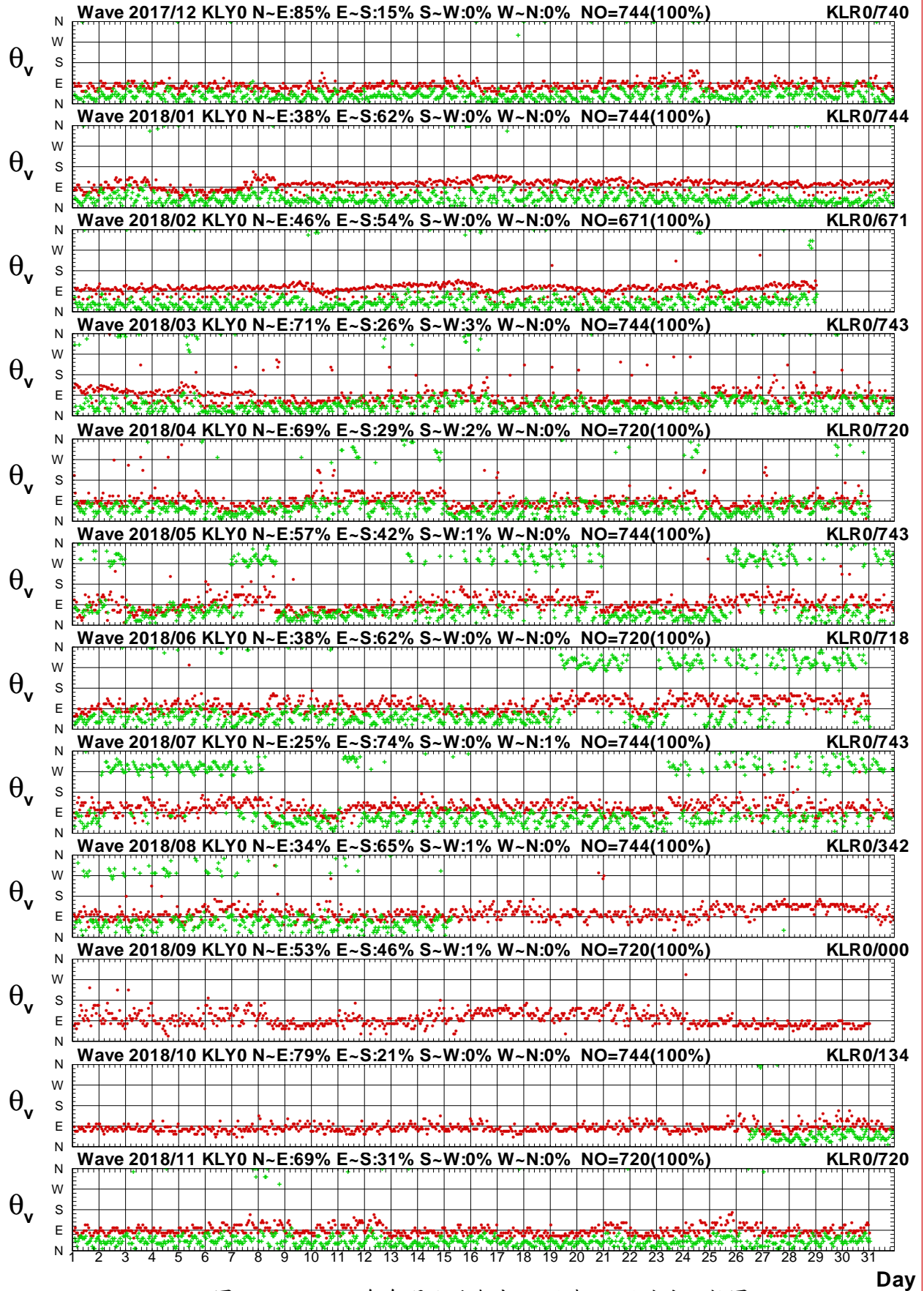


圖2.4.3c 2018年每月北端海域 Y 站與 R 站波向比較圖

V17CKLY0.1HA V17CKLR0.1H0 V181KLY0.1HA V181KLR0.1H0 V182KLY0.1HA V182KLR0.1H0  
 V183KLY0.1HA V183KLR0.1H0 V184KLY0.1HA V184KLR0.1H0 V185KLY0.1HA V185KLR0.1H0

Institute of Harbor & Marine Technology

# Wave $H_s$ in Kee-Lung Harbor of KLY0 at 2018

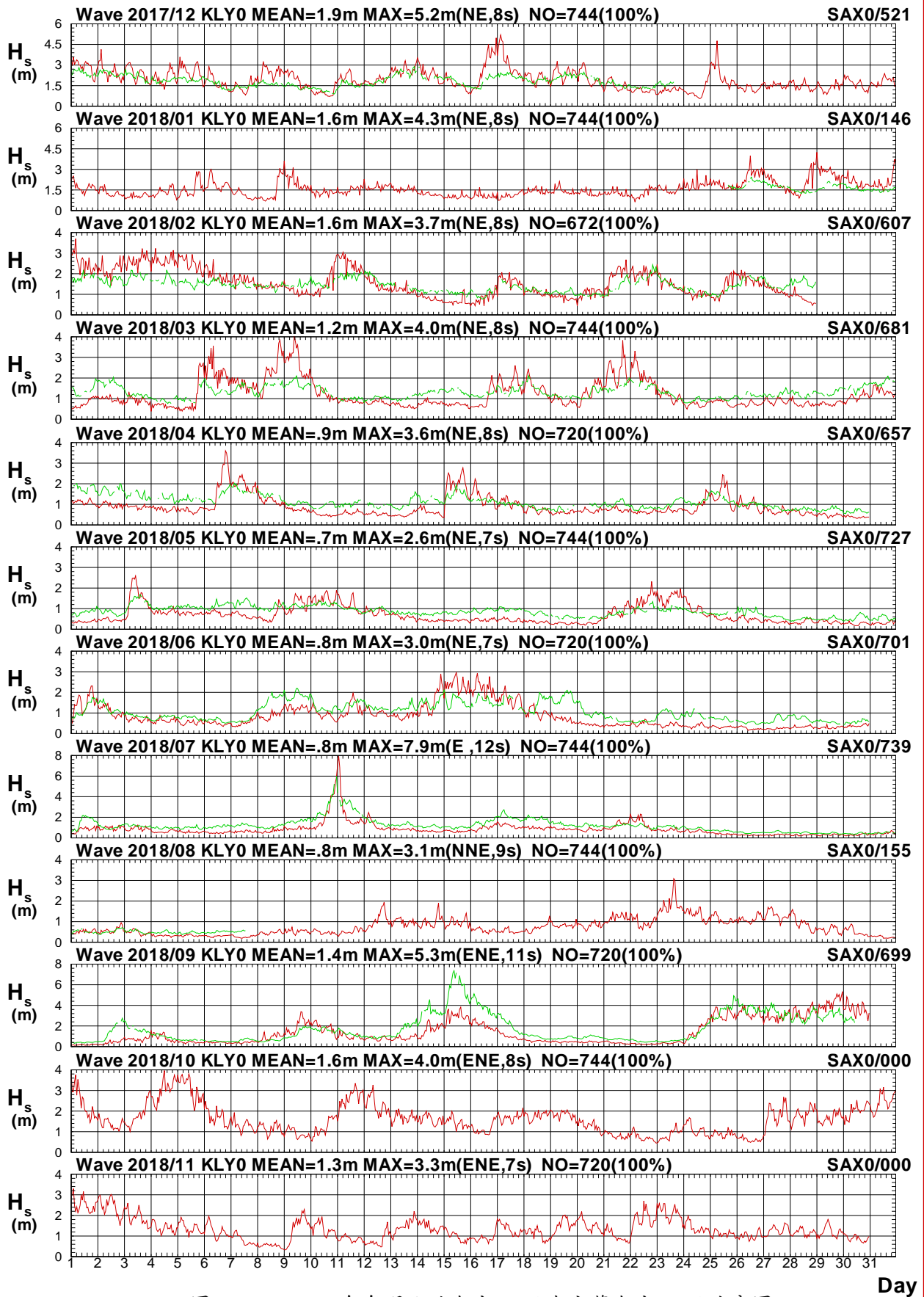


圖2.4.4a 2018年每月北端海域 Y 站與宜蘭海域 X 站波高圖

V17CKLY0.1HA V17CSAX0.1HO V181KLY0.1HA V181SAX0.1HO V182KLY0.1HA V182SAX0.1HO  
 V183KLY0.1HA V183SAX0.1HO V184KLY0.1HA V184SAX0.1HO V185KLY0.1HA V185SAX0.1HO

Institute of Harbor & Marine Technology

# Wave $T_p$ in Kee-Lung Harbor of KLY0 at 2018

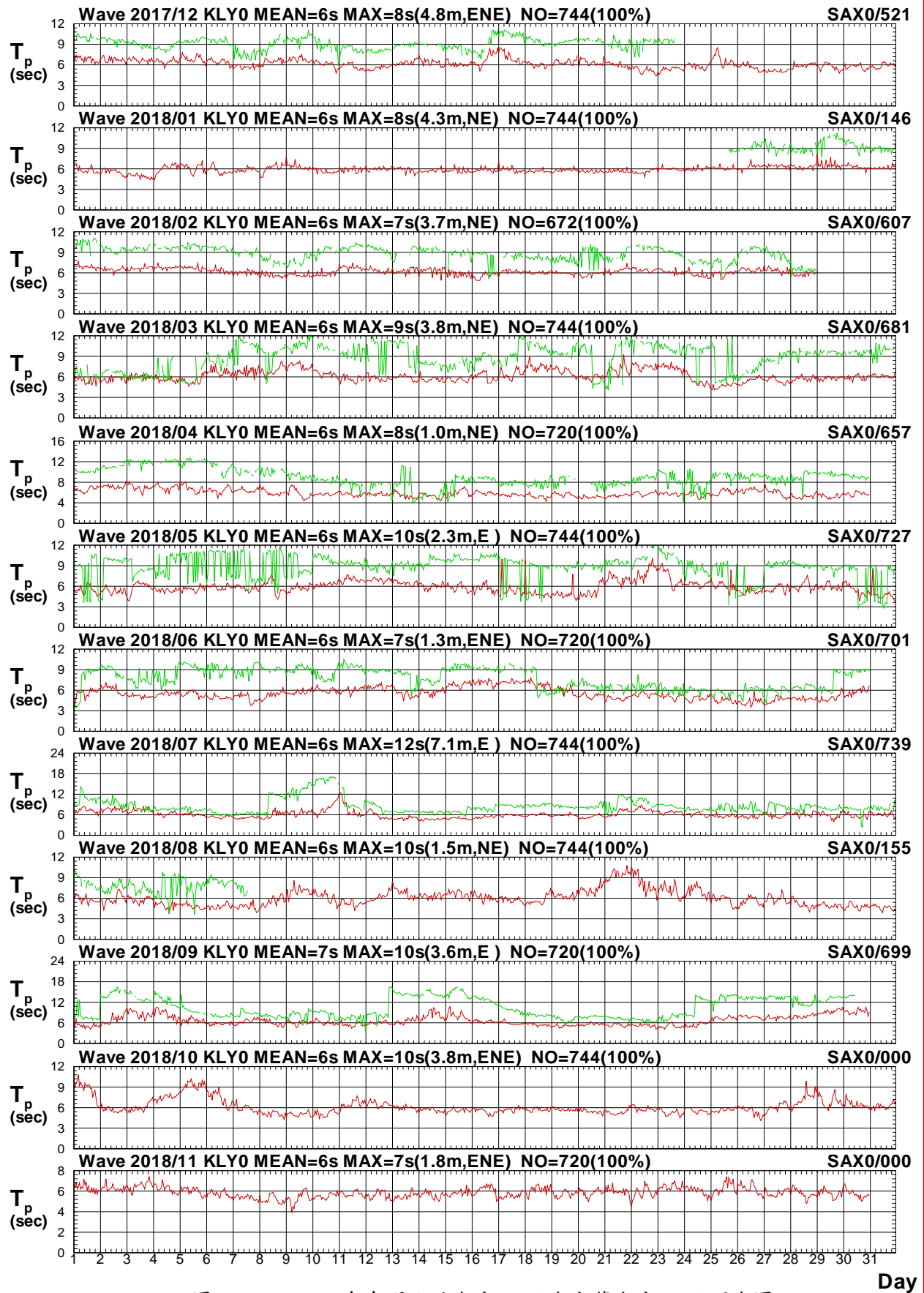


圖2.4.4b 2018年每月北端海域 Y 站與宜蘭海域 X 站週期圖

V17CKLY0.1HA V17CSAX0.1HO V181KLY0.1HA V181SAX0.1HO V182KLY0.1HA V182SAX0.1HO  
 V183KLY0.1HA V183SAX0.1HO V184KLY0.1HA V184SAX0.1HO V185KLY0.1HA V185SAX0.1HO

Institute of Harbor & Marine Technology



# Wave Direction in Kee-Lung Harbor of KLY0 at 2018

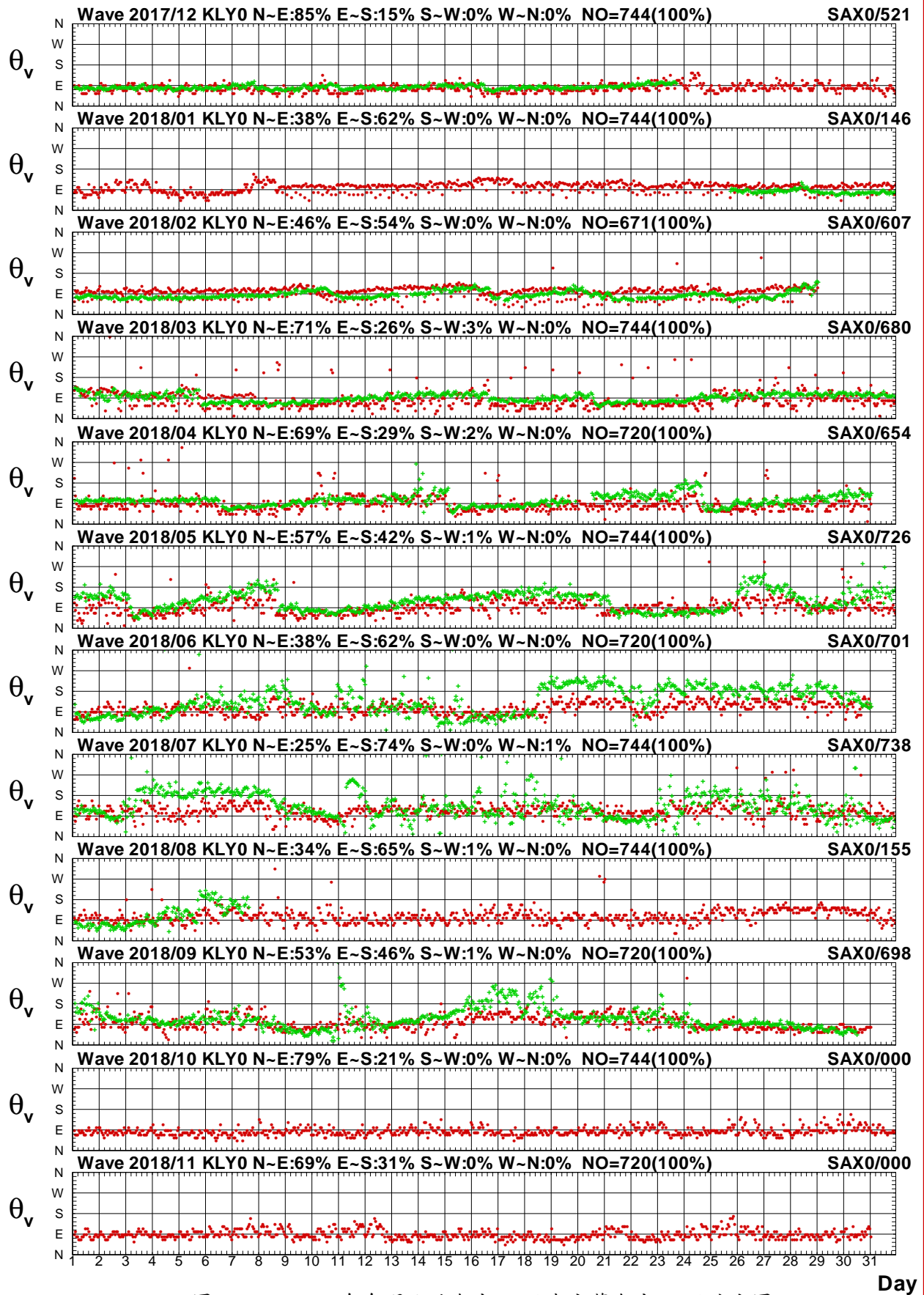


圖2.4.4c 2018年每月北端海域 Y 站與宜蘭海域 X 站波向圖

V17CKLY0.1HA V17CSAX0.1H0 V181KLY0.1HA V181SAX0.1H0 V182KLY0.1HA V182SAX0.1H0  
 V183KLY0.1HA V183SAX0.1H0 V184KLY0.1HA V184SAX0.1H0 V185KLY0.1HA V185SAX0.1H0

Institute of Harbor & Marine Technology



# Wave $H_s$ in Kee-Lung Harbor of KLY0 at 2018

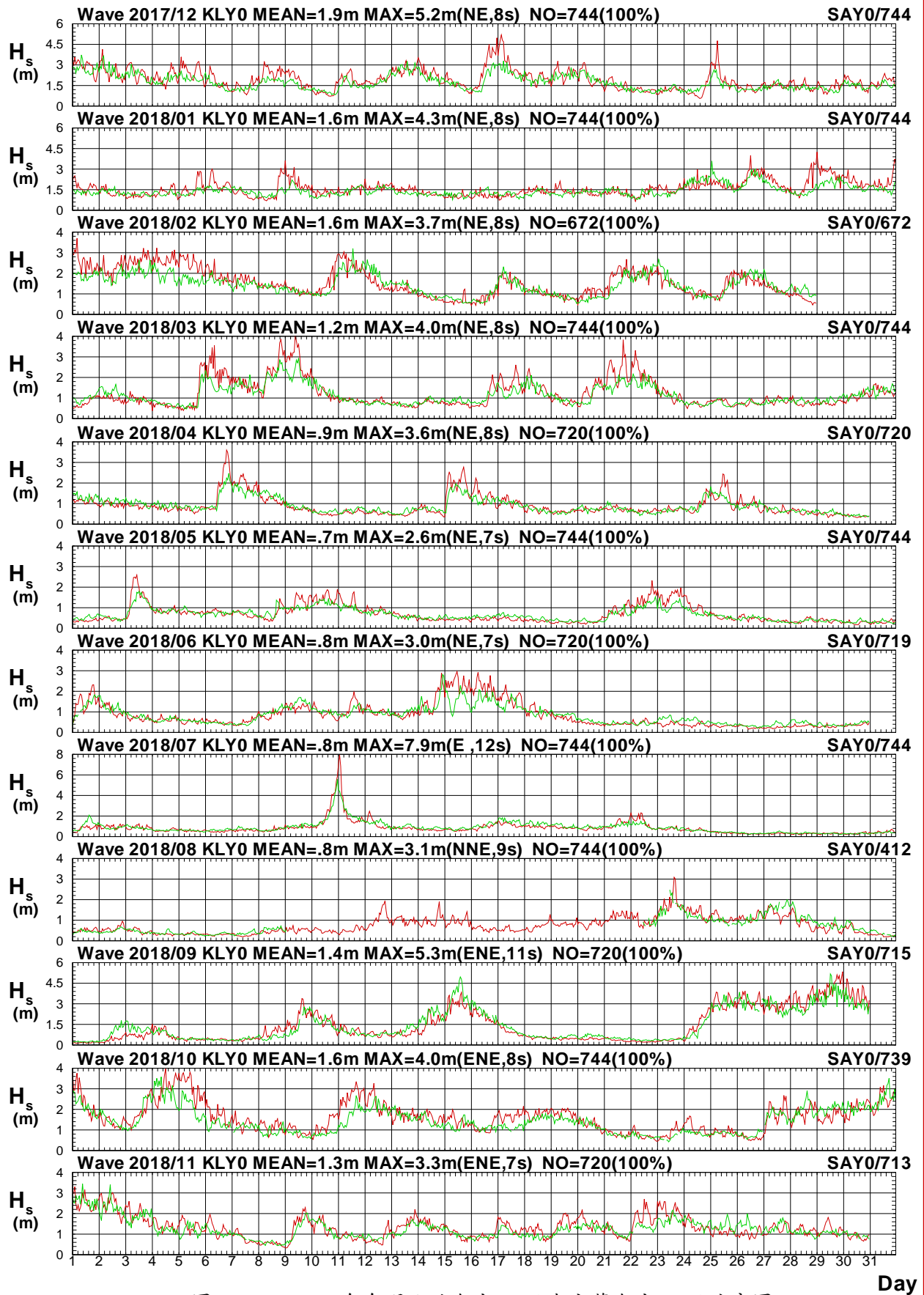


圖2.4.5a 2018年每月北端海域 Y 站與宜蘭海域 Y 站波高圖

V17CKLY0.1HA V17CSAY0.1H0 V181KLY0.1HA V181SAY0.1H0 V182KLY0.1HA V182SAY0.1H0  
 V183KLY0.1HA V183SAY0.1H0 V184KLY0.1HA V184SAY0.1H0 V185KLY0.1HA V185SAY0.1H0

Institute of Harbor & Marine Technology

# Wave $T_p$ in Kee-Lung Harbor of KLY0 at 2018

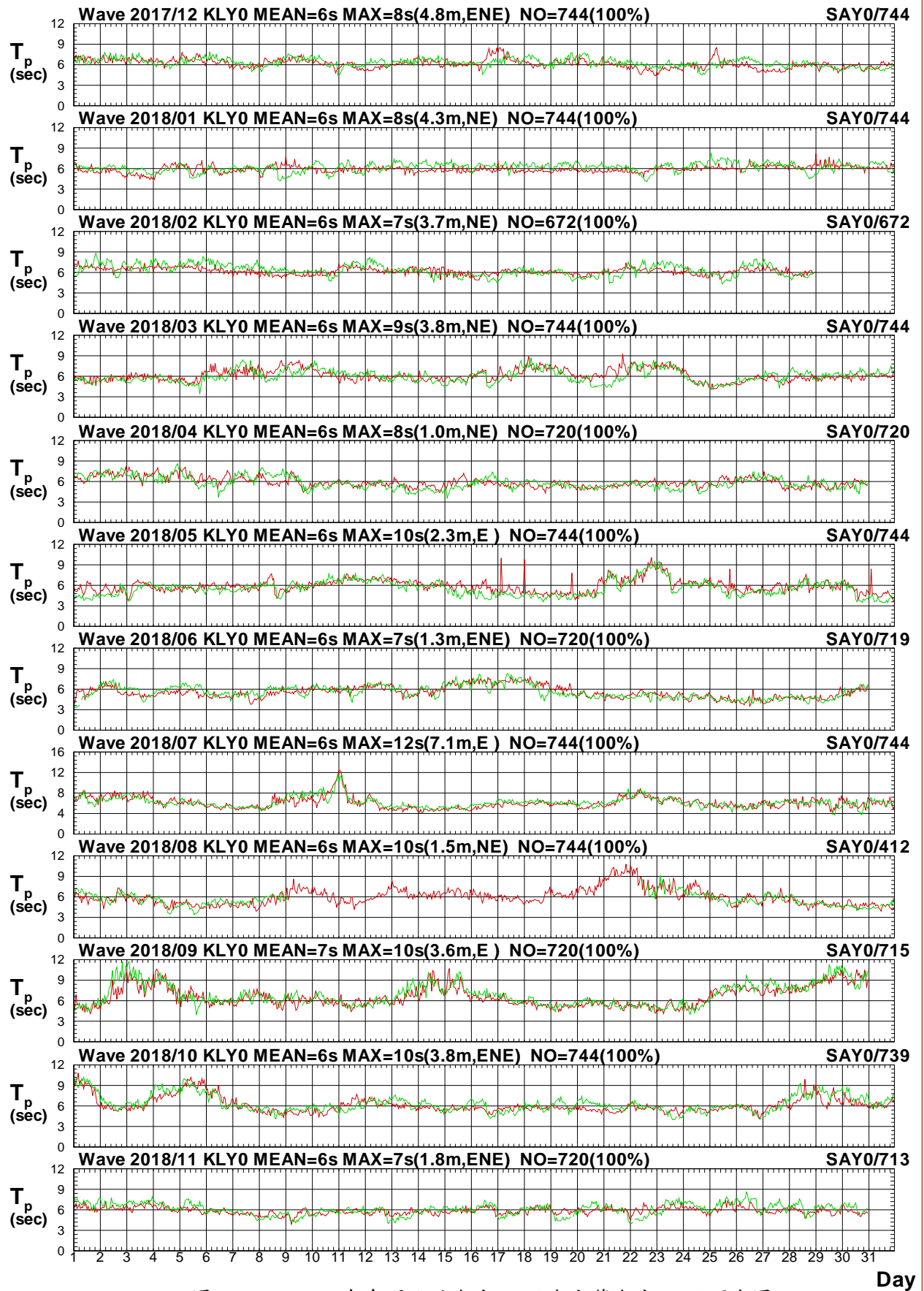


圖2.4.5b 2018年每月北端海域 Y 站與宜蘭海域 Y 站週期圖

V17CKLY0.1HA V17CSAY0.1HO V181KLY0.1HA V181SAY0.1HO V182KLY0.1HA V182SAY0.1HO  
 V183KLY0.1HA V183SAY0.1HO V184KLY0.1HA V184SAY0.1HO V185KLY0.1HA V185SAY0.1HO

Institute of Harbor & Marine Technology

# Wave Direction in Kee-Lung Harbor of KLY0 at 2018

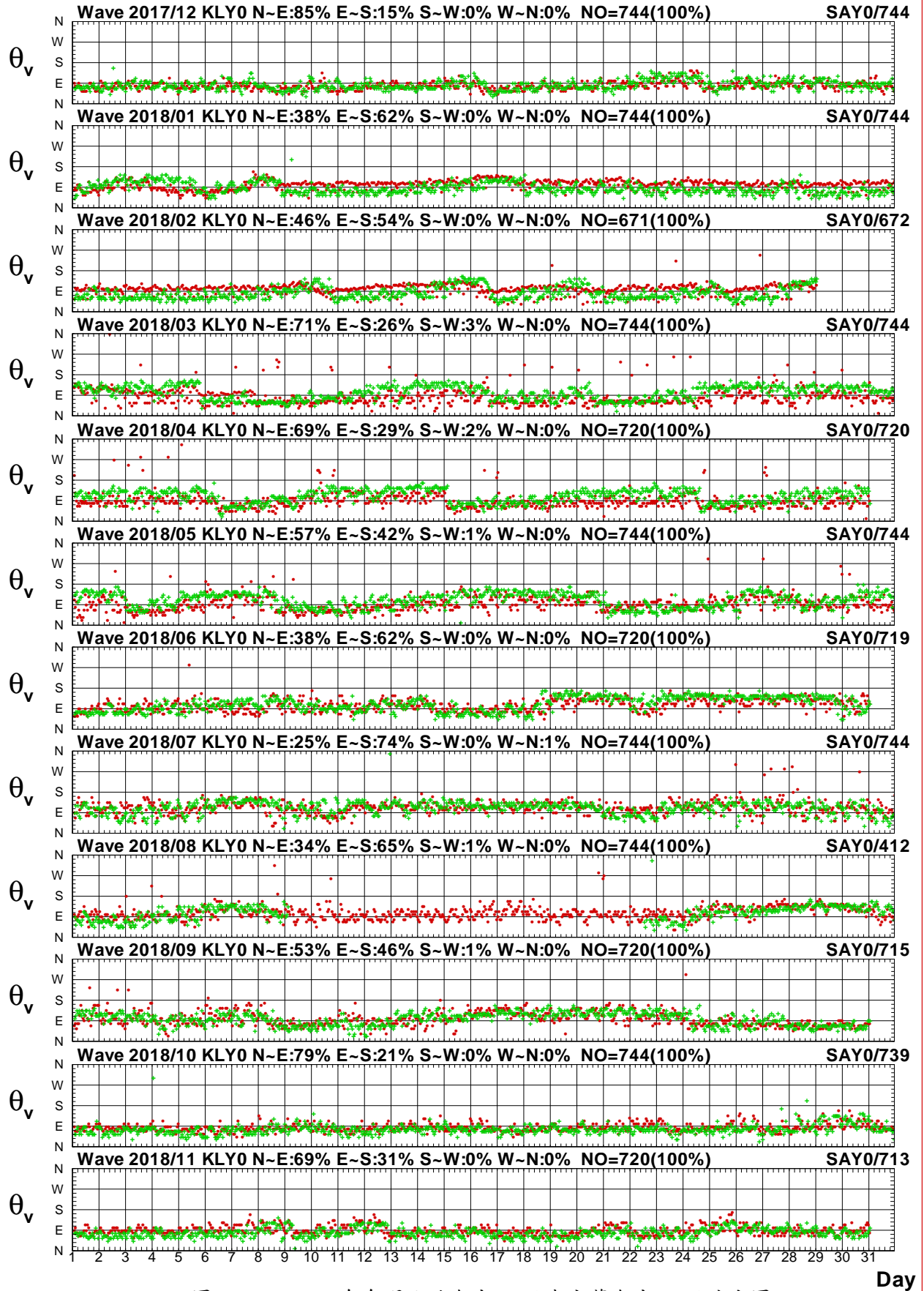


圖2.4.5c 2018年每月北端海域 Y 站與宜蘭海域 Y 站波向圖

V17CKLY0.1HA V17CSAY0.1H0 V181KLY0.1HA V181SAY0.1H0 V182KLY0.1HA V182SAY0.1H0  
 V183KLY0.1HA V183SAY0.1H0 V184KLY0.1HA V184SAY0.1H0 V185KLY0.1HA V185SAY0.1H0

Institute of Harbor & Marine Technology

# Wave $H_s$ in Kee-Lung Harbor of KLY0 at 2018

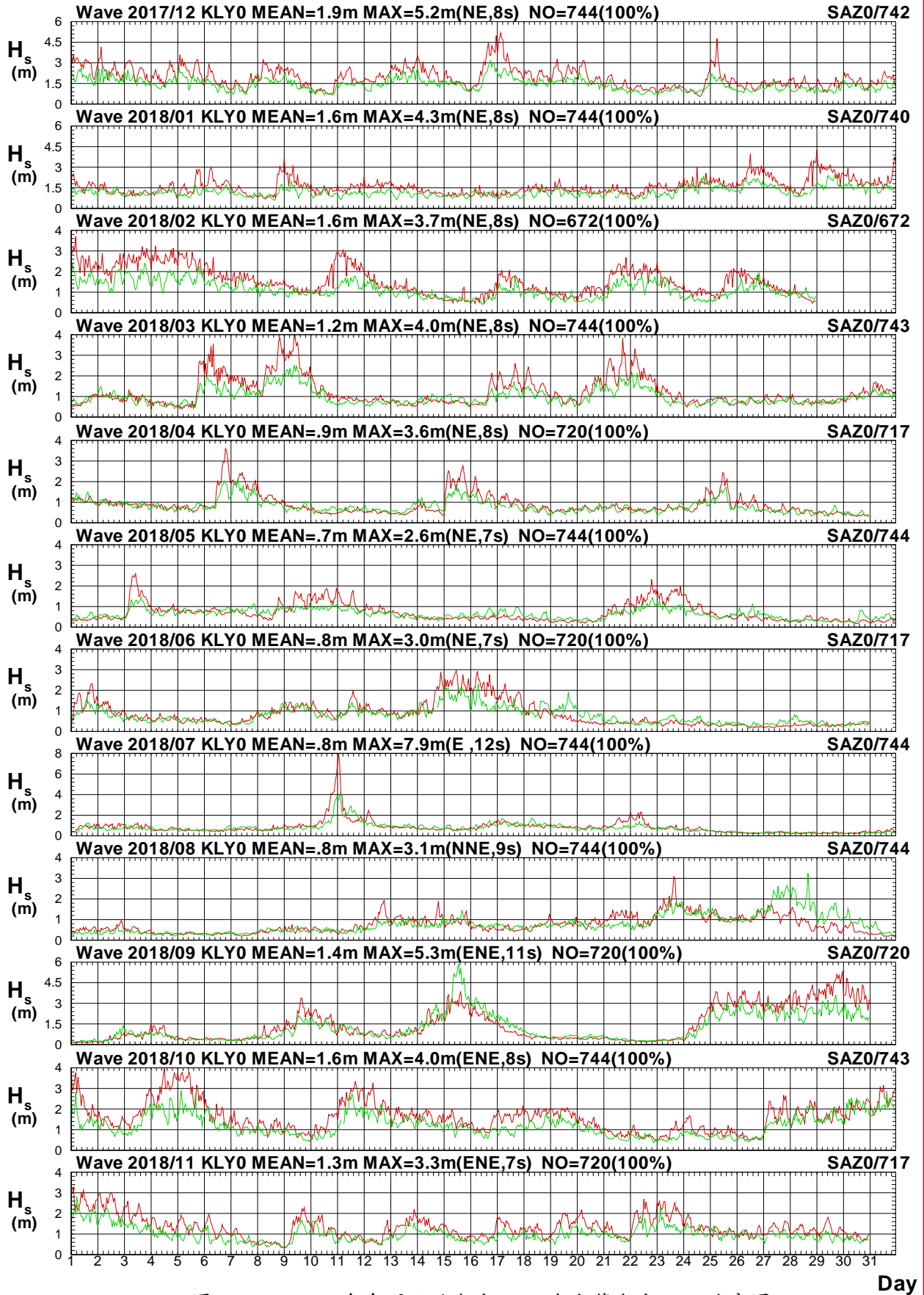


圖2.4.6a 2018年每月北端海域 Y 站與宜蘭海域 Z 站波高圖

V17CKLY0.1HA V17CSAZ0.1H0 V181KLY0.1HA V181SAZ0.1H0 V182KLY0.1HA V182SAZ0.1H0  
 V183KLY0.1HA V183SAZ0.1H0 V184KLY0.1HA V184SAZ0.1H0 V185KLY0.1HA V185SAZ0.1H0

Institute of Harbor & Marine Technology



# Wave $T_p$ in Kee-Lung Harbor of KLY0 at 2018

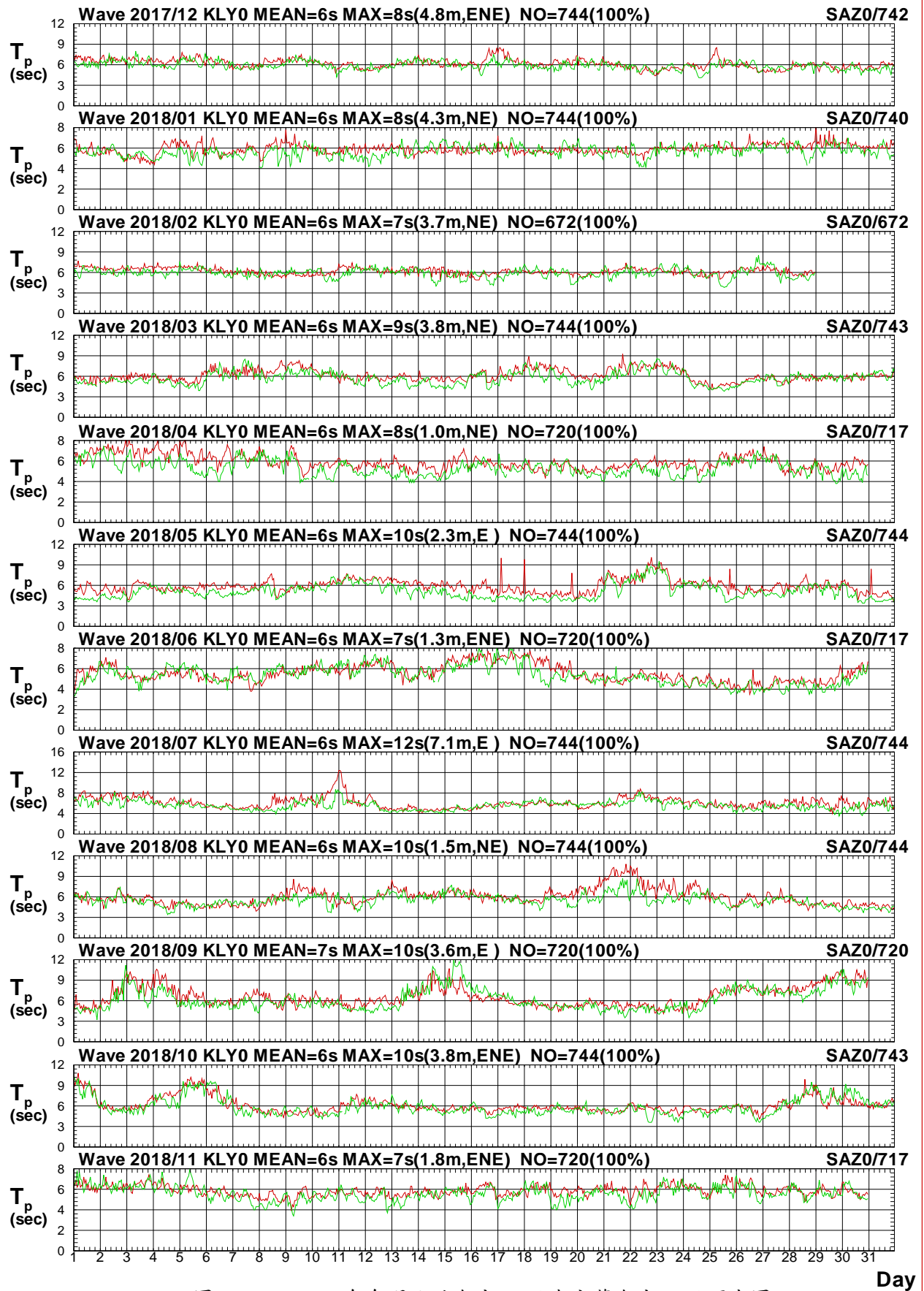


圖2.4.6b 2018年每月北端海域 Y 站與宜蘭海域 Z 站週期圖

V17CKLY0.1HA V17CSAZ0.1H0 V181KLY0.1HA V181SAZ0.1H0 V182KLY0.1HA V182SAZ0.1H0  
 V183KLY0.1HA V183SAZ0.1H0 V184KLY0.1HA V184SAZ0.1H0 V185KLY0.1HA V185SAZ0.1H0

Institute of Harbor & Marine Technology



# Wave Direction in Kee-Lung Harbor of KLY0 at 2018

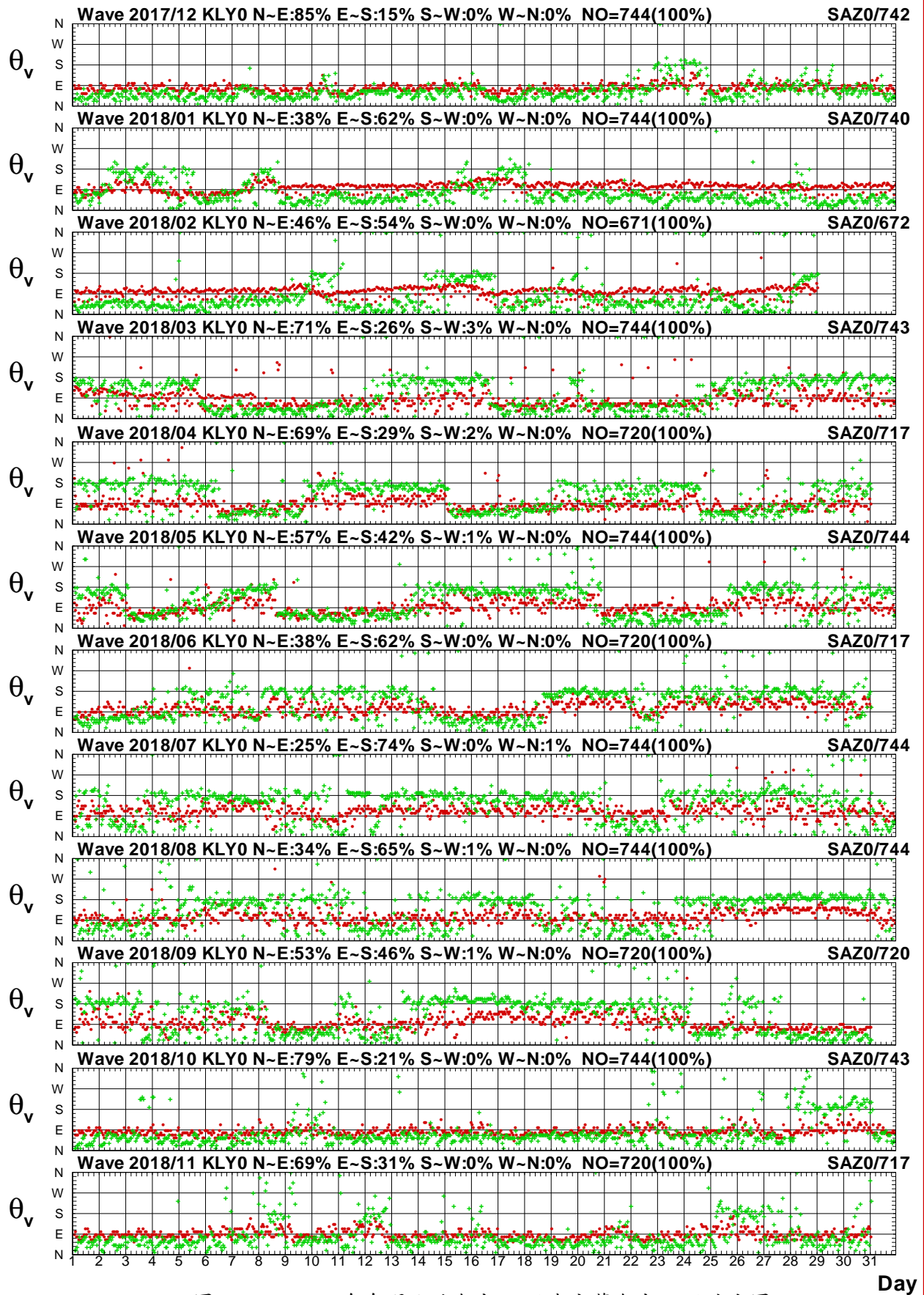


圖2.4.6c 2018年每月北端海域 Y 站與宜蘭海域 Z 站波向圖

V17CKLY0.1HA V17CSAZ0.1H0 V181KLY0.1HA V181SAZ0.1H0 V182KLY0.1HA V182SAZ0.1H0  
 V183KLY0.1HA V183SAZ0.1H0 V184KLY0.1HA V184SAZ0.1H0 V185KLY0.1HA V185SAZ0.1H0

Institute of Harbor & Marine Technology

# Wave $H_s$ in Kee-Lung Harbor of KLY0 at 2018

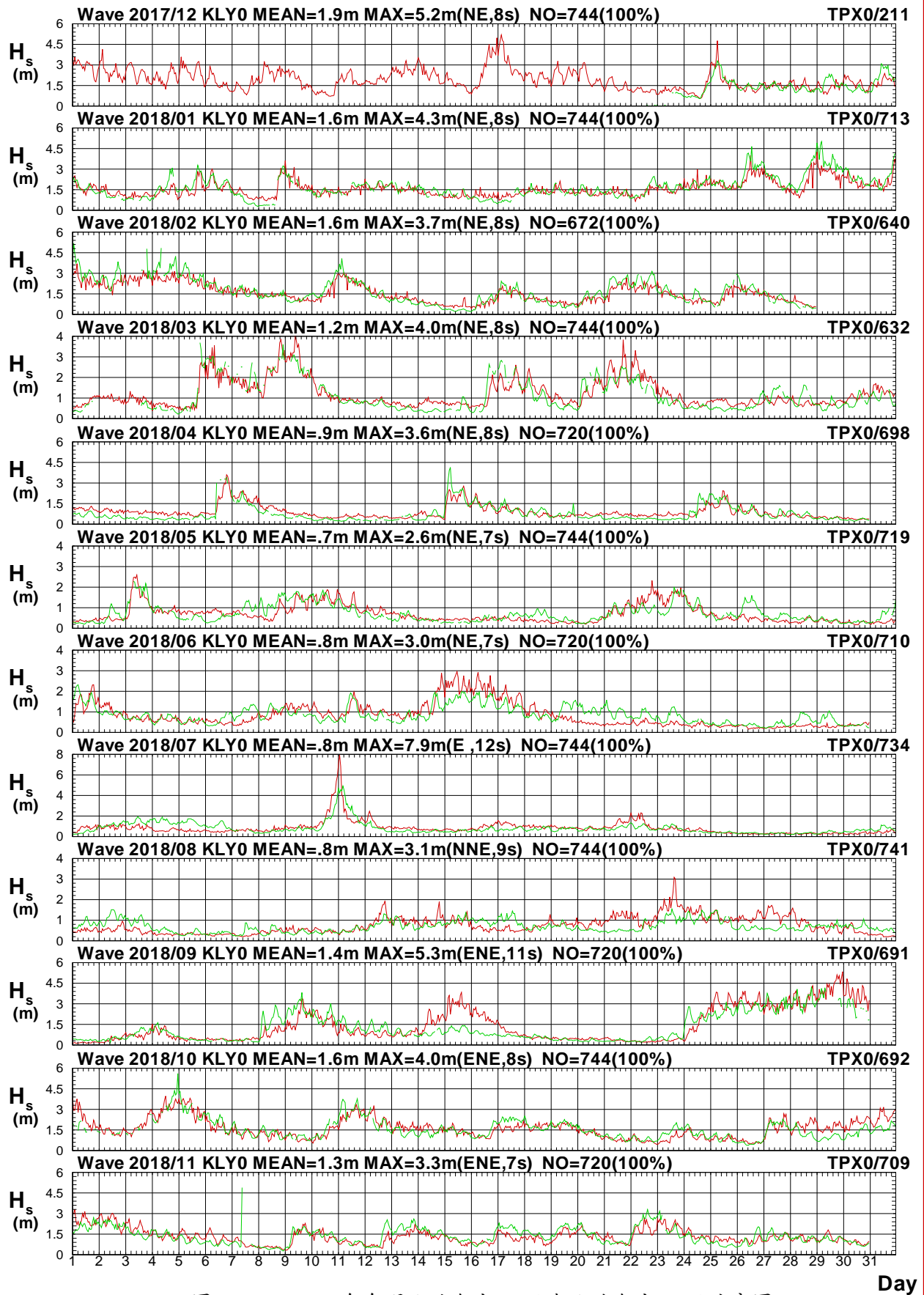


圖2.4.7a 2018年每月北端海域 Y 站與北苗海域 X 站波高圖

V17CKLY0.1HA V17CTPX0.1H0 V181KLY0.1HA V181TPX0.1H0 V182KLY0.1HA V182TPX0.1H0  
 V183KLY0.1HA V183TPX0.1H0 V184KLY0.1HA V184TPX0.1H0 V185KLY0.1HA V185TPX0.1H0

Institute of Harbor & Marine Technology

# Wave $T_p$ in Kee-Lung Harbor of KLY0 at 2018

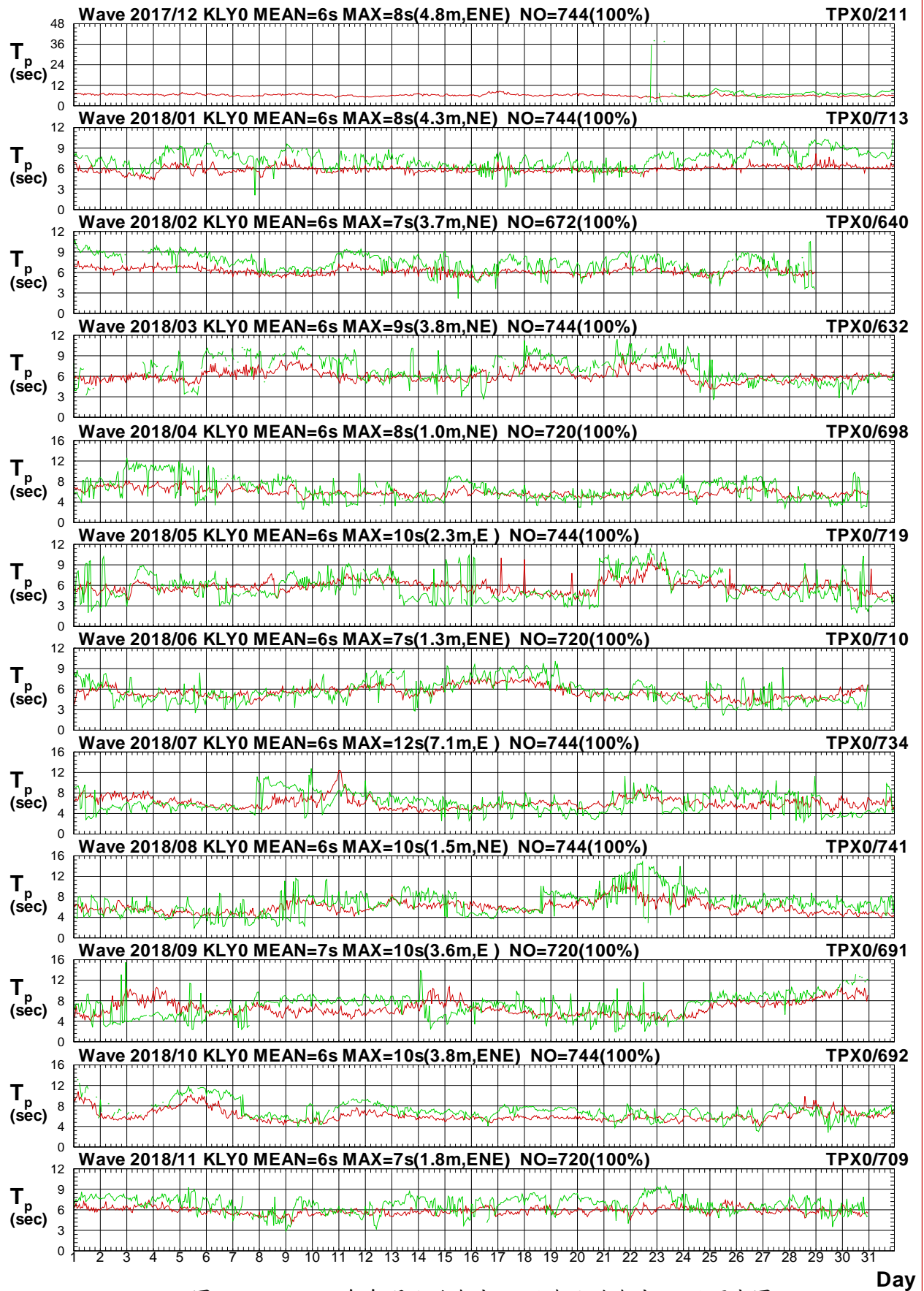


圖2.4.7b 2018年每月北端海域 Y 站與北苗海域 X 站週期圖

V17CKLY0.1HA V17CTPX0.1H0 V181KLY0.1HA V181TPX0.1H0 V182KLY0.1HA V182TPX0.1H0  
 V183KLY0.1HA V183TPX0.1H0 V184KLY0.1HA V184TPX0.1H0 V185KLY0.1HA V185TPX0.1H0

Institute of Harbor & Marine Technology

# Wave Direction in Kee-Lung Harbor of KLY0 at 2018

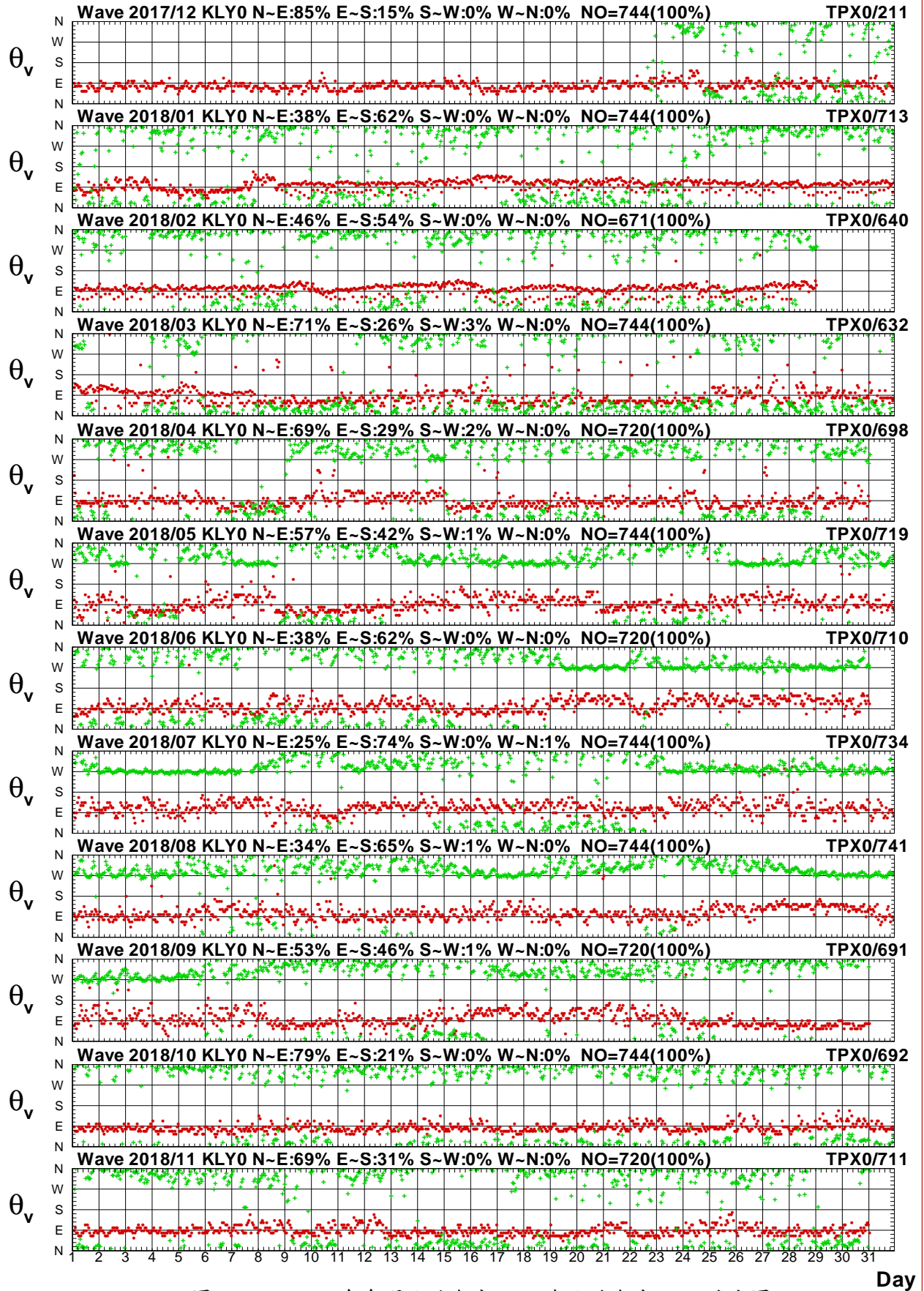


圖2.4.7c 2018年每月北端海域 Y 站與北苗海域 X 站波向圖

V17CKLY0.1HA V17CTPX0.1H0 V181KLY0.1HA V181TPX0.1H0 V182KLY0.1HA V182TPX0.1H0  
 V183KLY0.1HA V183TPX0.1H0 V184KLY0.1HA V184TPX0.1H0 V185KLY0.1HA V185TPX0.1H0

Institute of Harbor & Marine Technology



# Wave $H_s$ in Kee-Lung Harbor of KLY0 at 2018

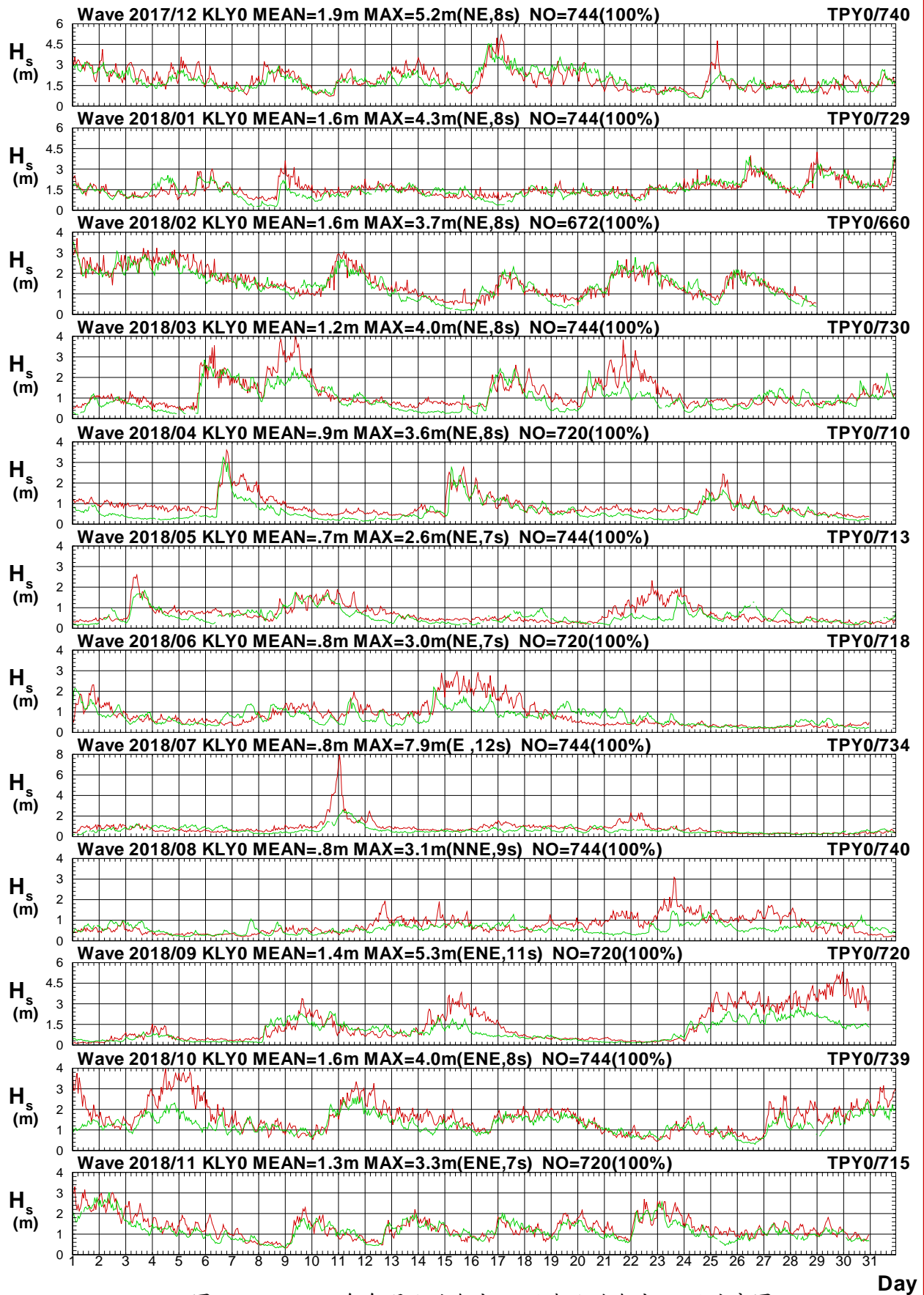


圖2.4.8a 2018年每月北端海域 Y 站與北苗海域 Y 站波高圖

V17CKLY0.1HA V17CTPY0.1H0 V181KLY0.1HA V181TPY0.1H0 V182KLY0.1HA V182TPY0.1H0  
 V183KLY0.1HA V183TPY0.1H0 V184KLY0.1HA V184TPY0.1H0 V185KLY0.1HA V185TPY0.1H0

Institute of Harbor & Marine Technology



# Wave $T_p$ in Kee-Lung Harbor of KLY0 at 2018

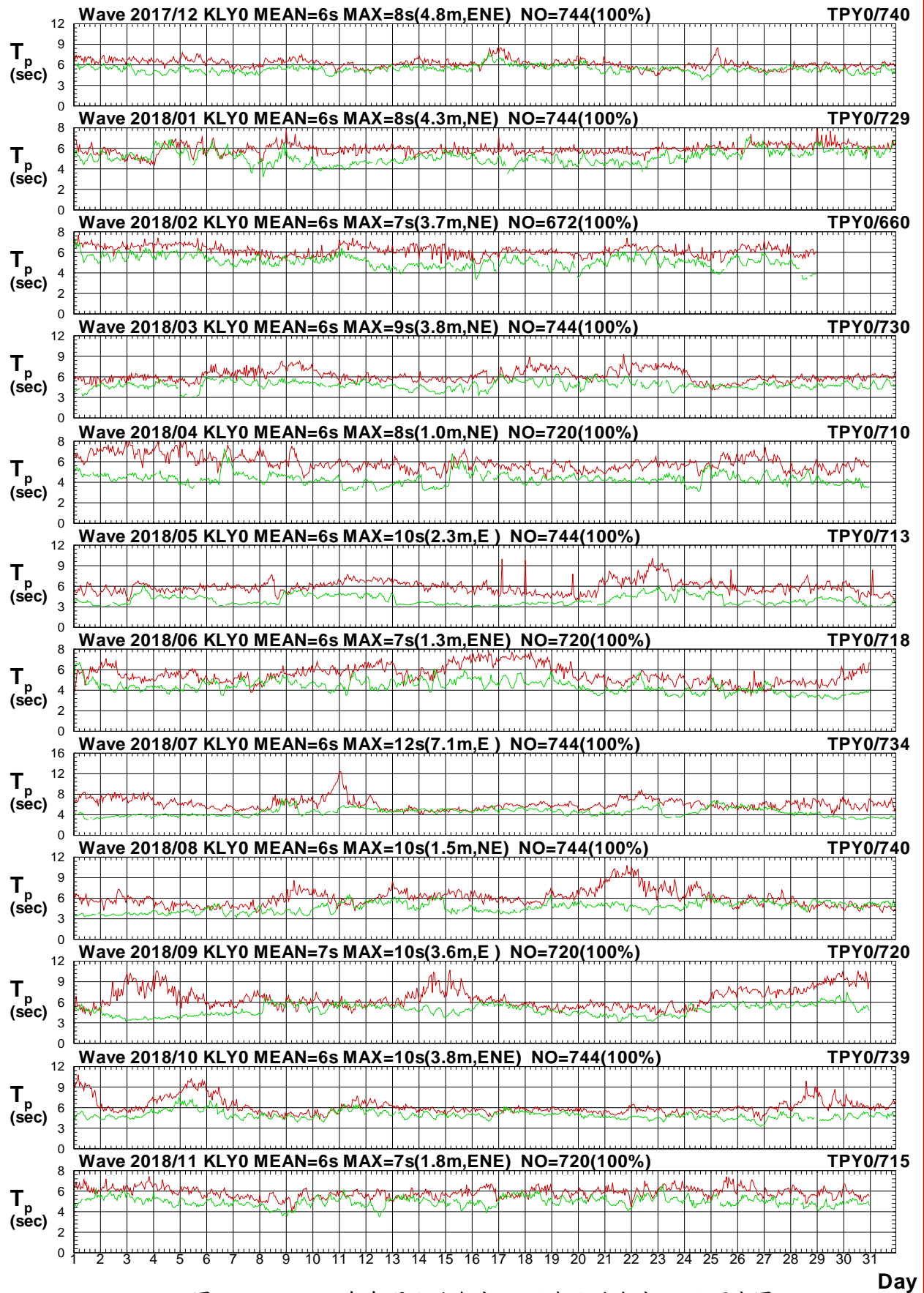


圖2.4.8b 2018年每月北端海域 Y 站與北苗海域 Y 站週期圖

V17CKLY0.1HA V17CTPY0.1H0 V181KLY0.1HA V181TPY0.1H0 V182KLY0.1HA V182TPY0.1H0  
 V183KLY0.1HA V183TPY0.1H0 V184KLY0.1HA V184TPY0.1H0 V185KLY0.1HA V185TPY0.1H0

Institute of Harbor & Marine Technology

# Wave Direction in Kee-Lung Harbor of KLY0 at 2018

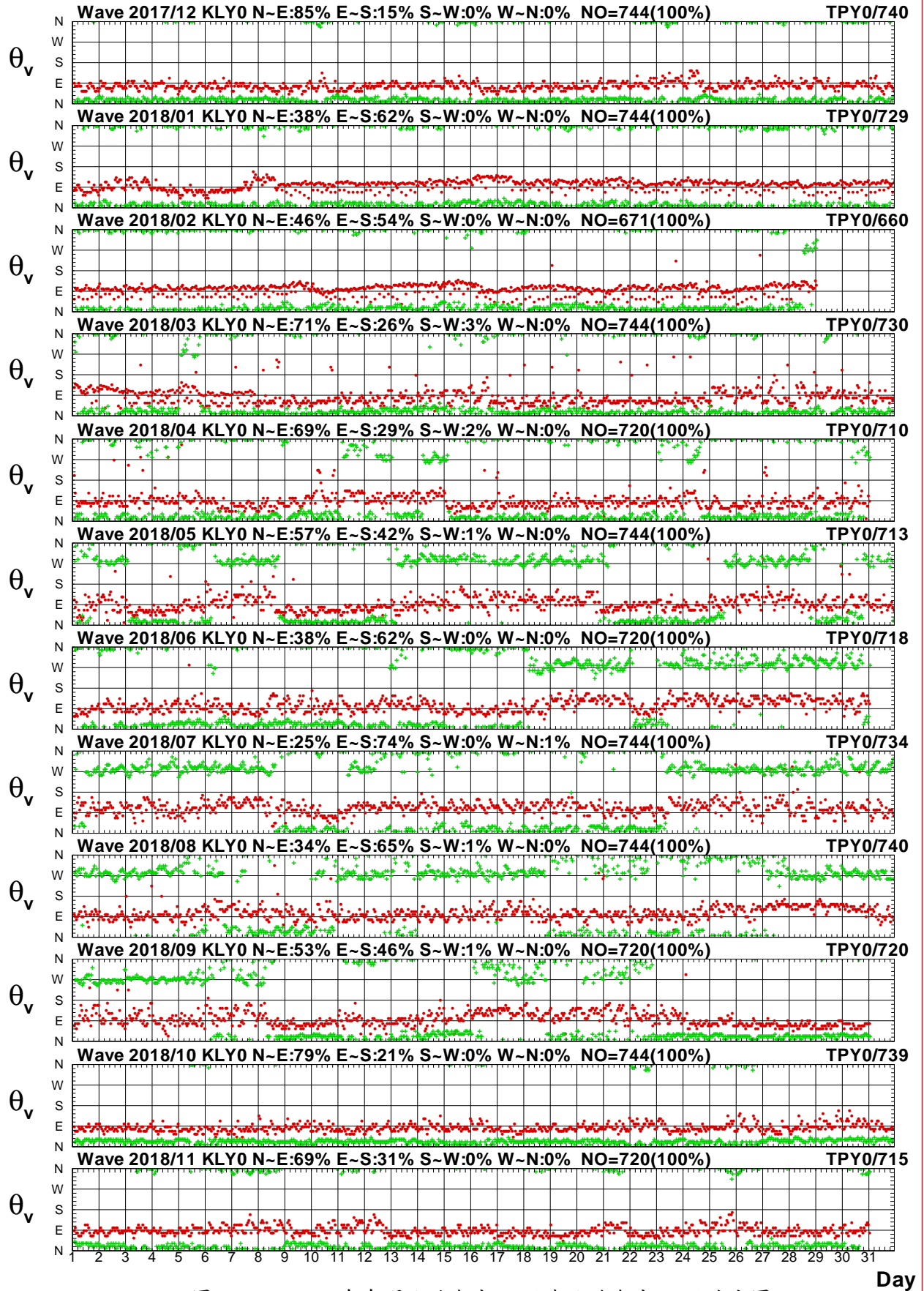


圖2.4.8c 2018年每月北端海域 Y 站與北苗海域 Y 站波向圖

V17CKLY0.1HA V17CTPY0.1H0 V181KLY0.1HA V181TPY0.1H0 V182KLY0.1HA V182TPY0.1H0  
 V183KLY0.1HA V183TPY0.1H0 V184KLY0.1HA V184TPY0.1H0 V185KLY0.1HA V185TPY0.1H0

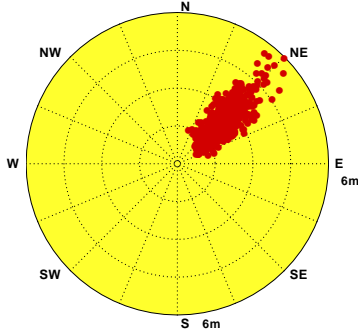
Institute of Harbor & Marine Technology

## 2.5 2018 年北端海域波浪各測站修補前 波浪向量分佈圖

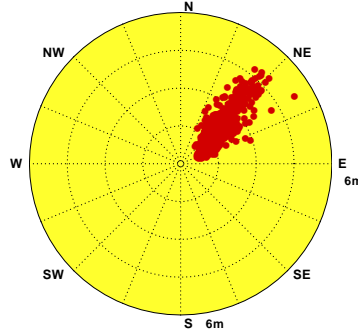


# Distribution of $H_s$ Vectors

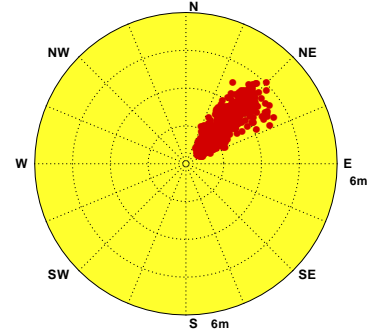
Wave of KLX0 at 2017/12 NO=742(100%)  
Hs : MEAN=2.1m MAX=5.7m(NE,11s)  
N-E:99% E-S:0% S-W:0% W-N:0%



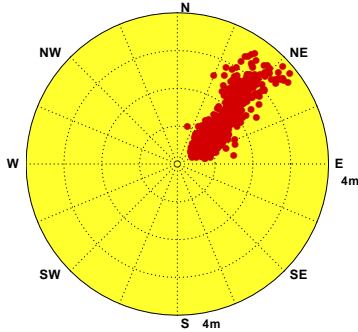
Wave of KLX0 at 2018/01 NO=737(99%)  
Hs : MEAN=1.8m MAX=5.0m(ENE,9s)  
N-E:99% E-S:0% S-W:0% W-N:0%



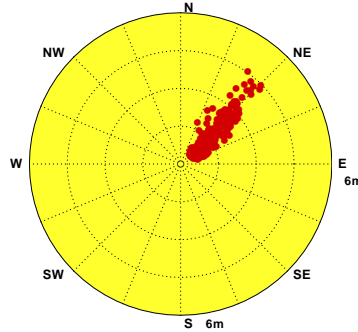
Wave of KLX0 at 2018/02 NO=667(99%)  
Hs : MEAN=1.8m MAX=4.3m(NE,10s)  
N-E:99% E-S:0% S-W:0% W-N:0%



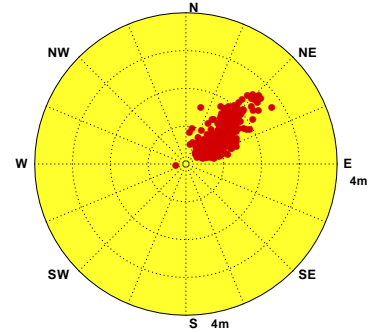
Wave of KLX0 at 2018/03 NO=738(99%)  
Hs : MEAN=1.2m MAX=3.6m(NE,10s)  
N-E:99% E-S:0% S-W:0% W-N:0%



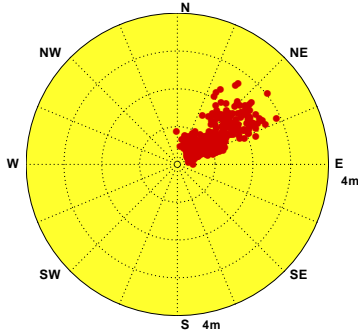
Wave of KLX0 at 2018/04 NO=711(99%)  
Hs : MEAN=.9m MAX=4.3m(NE,10s)  
N-E:99% E-S:0% S-W:0% W-N:0%



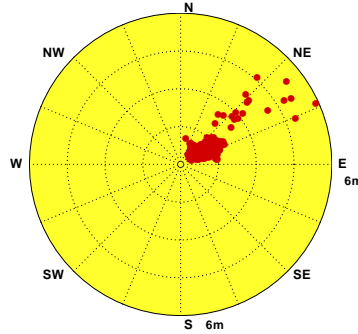
Wave of KLX0 at 2018/05 NO=743(100%)  
Hs : MEAN=.7m MAX=2.5m(ENE,8s)  
N-E:99% E-S:0% S-W:0% W-N:0%



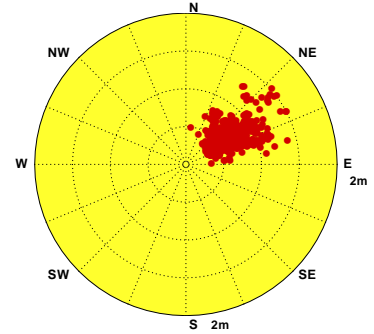
Wave of KLX0 at 2018/06 NO=713(99%)  
Hs : MEAN=.8m MAX=2.9m(NE,7s)  
N-E:99% E-S:1% S-W:0% W-N:0%



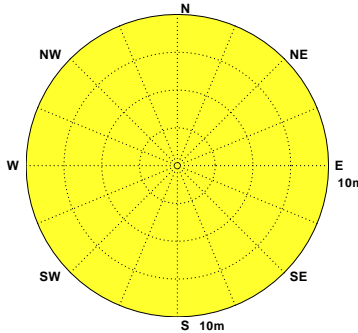
Wave of KLX0 at 2018/07 NO=739(99%)  
Hs : MEAN=.7m MAX=5.6m(ENE,17s)  
N-E:99% E-S:1% S-W:0% W-N:0%



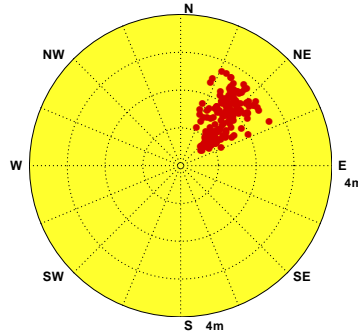
Wave of KLX0 at 2018/08 NO=498(67%)  
Hs : MEAN=.6m MAX=1.4m(NE,7s)  
N-E:99% E-S:1% S-W:0% W-N:0%



Wave of KLX0 at 2018/09



Wave of KLX0 at 2018/10 NO=174(23%)  
Hs : MEAN=1.5m MAX=2.5m(NNE,8s)  
N-E:99% E-S:0% S-W:0% W-N:0%



Wave of KLX0 at 2018/11

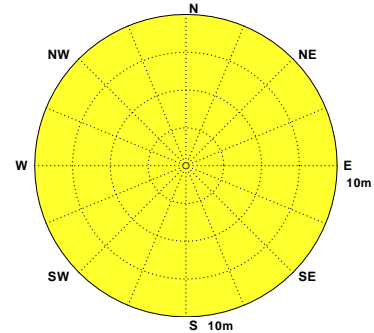


圖2.5.1 2018年北端海域每月 X 站修補前觀測波高向量分佈圖

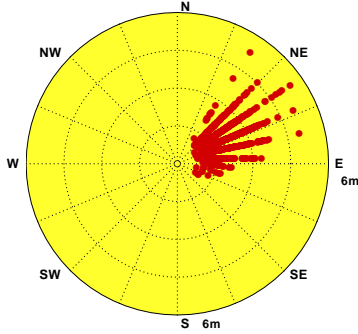
V17CKLX0.1H0 V181KLX0.1H0 V182KLX0.1H0 V183KLX0.1H0 V184KLX0.1H0 V185KLX0.1H0  
V186KLX0.1H0 V187KLX0.1H0 V188KLX0.1H0 V189KLX0.1H0 V18AKLX0.1H0 V18BKLX0.1H0

Institute of Harbor & Marine Technology

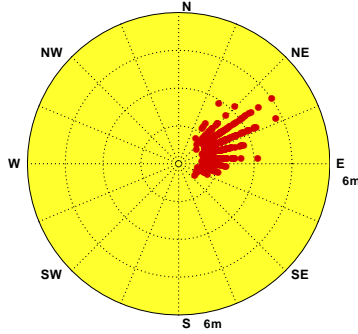


# Distribution of H<sub>s</sub> Vectors

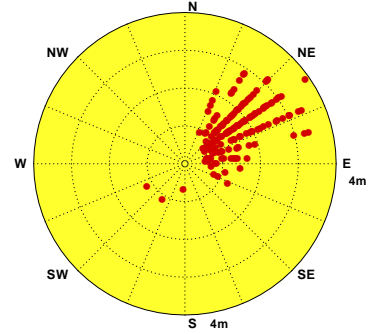
Wave of KLY0 at 2017/12 NO=744(100%)  
Hs : MEAN=1.9m MAX=5.2m(NE,8s)  
N-E:85% E-S:15% S-W:0% W-N:0%



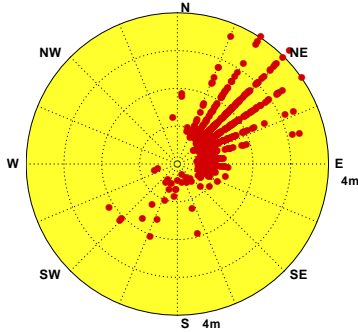
Wave of KLY0 at 2018/01 NO=323(43%)  
Hs : MEAN=1.5m MAX=4.3m(NE,8s)  
N-E:71% E-S:29% S-W:0% W-N:0%



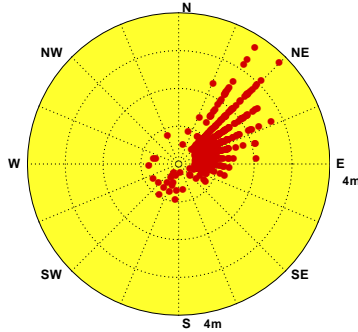
Wave of KLY0 at 2018/02 NO=167(25%)  
Hs : MEAN=1.5m MAX=3.7m(NE,8s)  
N-E:85% E-S:13% S-W:2% W-N:0%



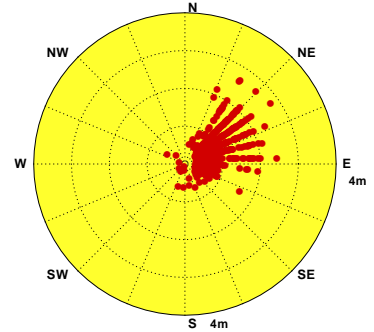
Wave of KLY0 at 2018/03 NO=651(88%)  
Hs : MEAN=1.2m MAX=4.0m(NE,8s)  
N-E:78% E-S:19% S-W:3% W-N:0%



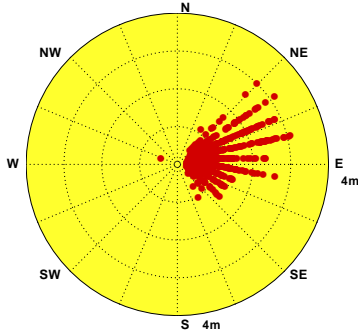
Wave of KLY0 at 2018/04 NO=719(100%)  
Hs : MEAN=.9m MAX=3.6m(NE,8s)  
N-E:69% E-S:29% S-W:2% W-N:0%



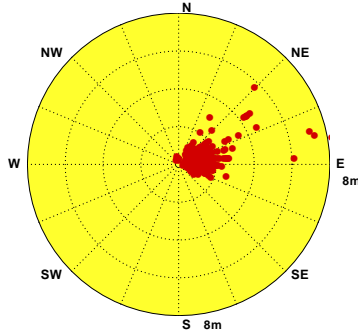
Wave of KLY0 at 2018/05 NO=739(99%)  
Hs : MEAN=.7m MAX=2.6m(NE,7s)  
N-E:58% E-S:41% S-W:1% W-N:0%



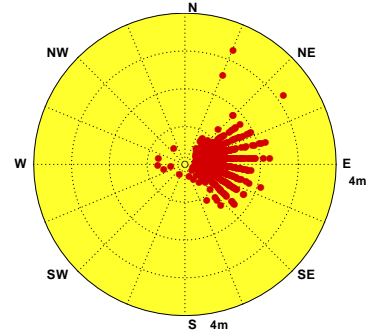
Wave of KLY0 at 2018/06 NO=713(99%)  
Hs : MEAN=.8m MAX=3.0m(NE,7s)  
N-E:38% E-S:62% S-W:0% W-N:0%



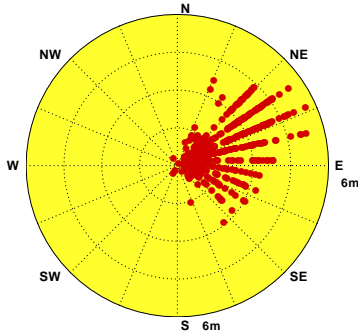
Wave of KLY0 at 2018/07 NO=737(99%)  
Hs : MEAN=.8m MAX=7.9m(E,12s)  
N-E:25% E-S:74% S-W:0% W-N:1%



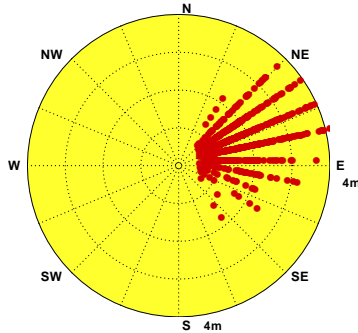
Wave of KLY0 at 2018/08 NO=740(99%)  
Hs : MEAN=.8m MAX=3.1m(NNE,9s)  
N-E:34% E-S:65% S-W:1% W-N:0%



Wave of KLY0 at 2018/09 NO=714(99%)  
Hs : MEAN=1.4m MAX=5.3m(ENE,11s)  
N-E:53% E-S:46% S-W:1% W-N:0%



Wave of KLY0 at 2018/10 NO=739(99%)  
Hs : MEAN=1.6m MAX=4.0m(ENE,8s)  
N-E:79% E-S:21% S-W:0% W-N:0%



Wave of KLY0 at 2018/11 NO=713(99%)  
Hs : MEAN=1.3m MAX=3.3m(ENE,7s)  
N-E:69% E-S:31% S-W:0% W-N:0%

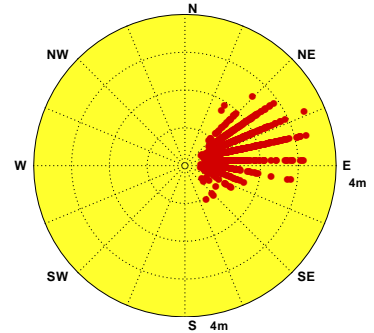


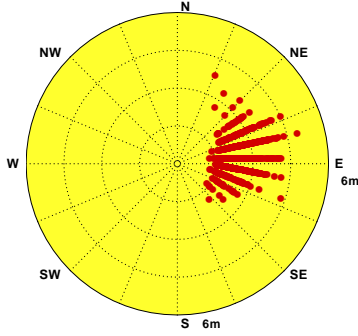
圖2.5.2 2018年北端海域每月 Y 站修補前觀測波高向量分佈圖

V17CKLY0.1H0 V181KLY0.1H0 V182KLY0.1H0 V183KLY0.1H0 V184KLY0.1H0 V185KLY0.1H0  
V186KLY0.1H0 V187KLY0.1H0 V188KLY0.1H0 V189KLY0.1H0 V18AKLY0.1H0 V18BKLY0.1H0

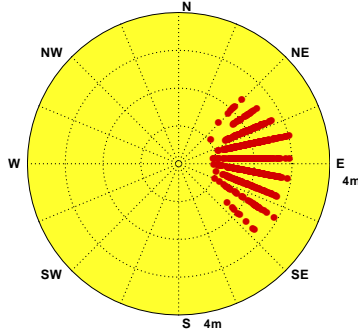
Institute of Harbor & Marine Technology

# Distribution of H<sub>s</sub> Vectors

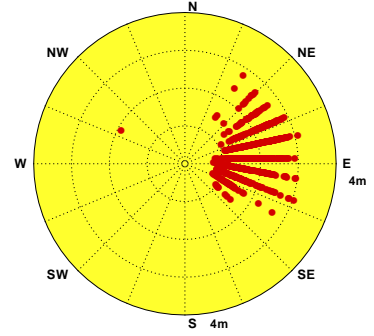
Wave of KLZ0 at 2017/12 NO=744(100%)  
 Hs : MEAN=2.3m MAX=4.7m(ENE,8s)  
 N-E:37% E-S:63% S-W:0% W-N:0%



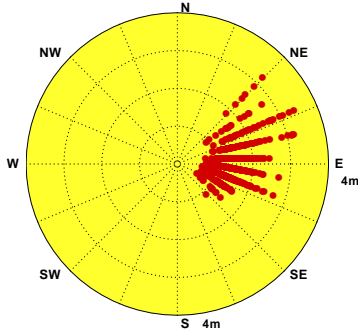
Wave of KLZ0 at 2018/01 NO=743(100%)  
 Hs : MEAN=1.8m MAX=2.9m(ESE,7s)  
 N-E:43% E-S:57% S-W:0% W-N:0%



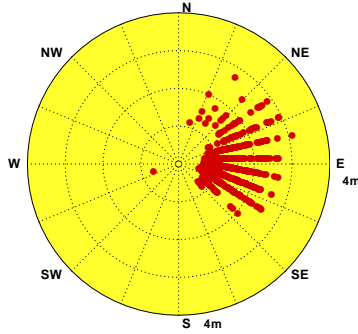
Wave of KLZ0 at 2018/02 NO=672(100%)  
 Hs : MEAN=1.7m MAX=3.0m(ESE,7s)  
 N-E:44% E-S:56% S-W:0% W-N:0%



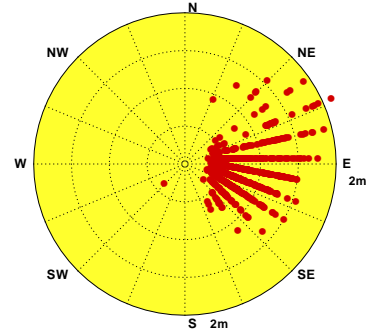
Wave of KLZ0 at 2018/03 NO=744(100%)  
 Hs : MEAN=1.4m MAX=3.2m(ENE,7s)  
 N-E:18% E-S:82% S-W:0% W-N:0%



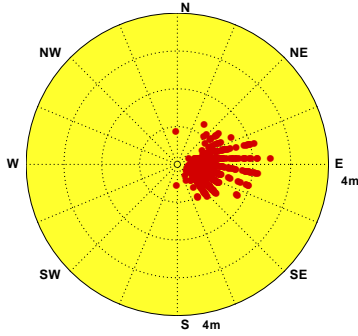
Wave of KLZ0 at 2018/04 NO=720(100%)  
 Hs : MEAN=1.3m MAX=3.0m(ENE,7s)  
 N-E:19% E-S:81% S-W:0% W-N:0%



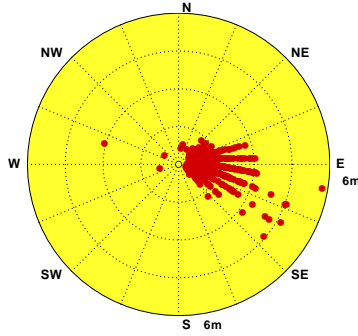
Wave of KLZ0 at 2018/05 NO=744(100%)  
 Hs : MEAN=.8m MAX=2.0m(ENE,5s)  
 N-E:13% E-S:87% S-W:0% W-N:0%



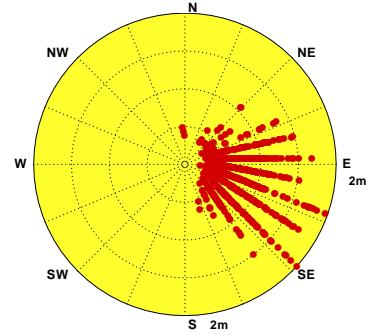
Wave of KLZ0 at 2018/06 NO=719(100%)  
 Hs : MEAN=.8m MAX=2.3m(E, 7s)  
 N-E:8% E-S:92% S-W:0% W-N:0%



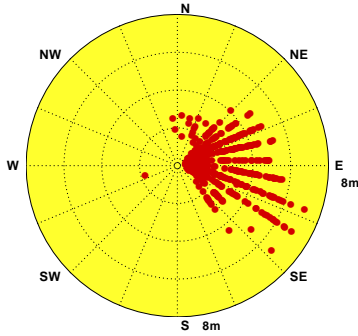
Wave of KLZ0 at 2018/07 NO=744(100%)  
 Hs : MEAN=1.0m MAX=5.6m(ESE,15s)  
 N-E:13% E-S:87% S-W:0% W-N:0%



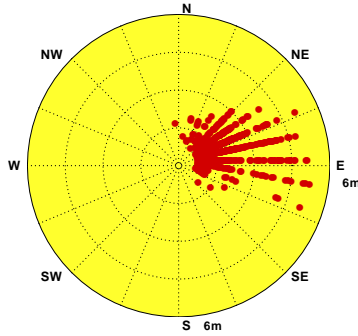
Wave of KLZ0 at 2018/08 NO=743(100%)  
 Hs : MEAN=.7m MAX=2.0m(SE,9s)  
 N-E:13% E-S:87% S-W:0% W-N:0%



Wave of KLZ0 at 2018/09 NO=717(100%)  
 Hs : MEAN=1.7m MAX=7.0m(ESE,11s)  
 N-E:25% E-S:75% S-W:0% W-N:0%



Wave of KLZ0 at 2018/10 NO=743(100%)  
 Hs : MEAN=1.6m MAX=5.1m(E, 9s)  
 N-E:63% E-S:37% S-W:0% W-N:0%



Wave of KLZ0 at 2018/11 NO=718(100%)  
 Hs : MEAN=1.4m MAX=3.3m(ENE,7s)  
 N-E:41% E-S:59% S-W:0% W-N:0%

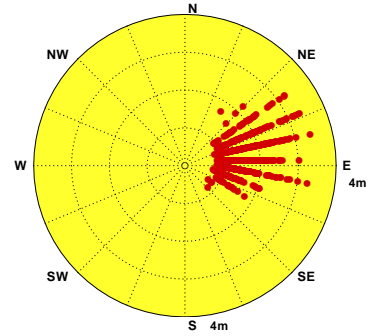


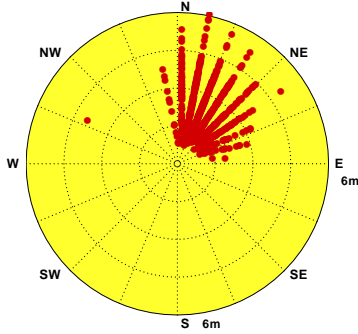
圖2.5.3 2018年北端海域每月乙站修補前觀測波高向量分佈圖

V17CKLZ0.1H0 V181KLZ0.1H0 V182KLZ0.1H0 V183KLZ0.1H0 V184KLZ0.1H0 V185KLZ0.1H0  
 V186KLZ0.1H0 V187KLZ0.1H0 V188KLZ0.1H0 V189KLZ0.1H0 V18AKLZ0.1H0 V18BKLZ0.1H0

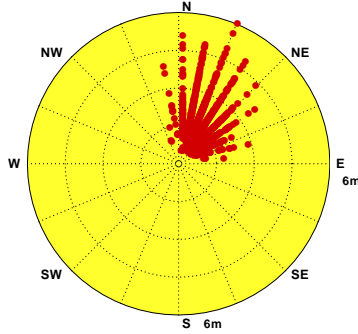
Institute of Harbor & Marine Technology

# Distribution of $H_s$ Vectors

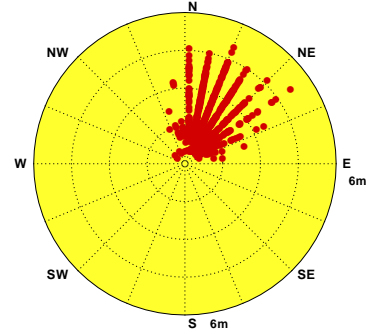
Wave of KLR0 at 2017/12 NO=740(99%)  
 Hs : MEAN=2.3m MAX=6.1m(N, 8s)  
 N-E:98% E-S:0% S-W:0% W-N:2%



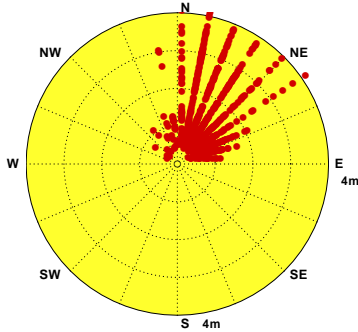
Wave of KLR0 at 2018/01 NO=744(100%)  
 Hs : MEAN=1.9m MAX=5.8m(NNE,8s)  
 N-E:97% E-S:1% S-W:0% W-N:2%



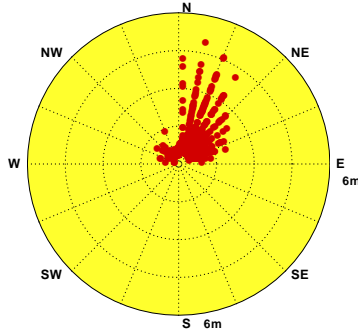
Wave of KLR0 at 2018/02 NO=671(100%)  
 Hs : MEAN=1.9m MAX=4.8m(NE,9s)  
 N-E:96% E-S:0% S-W:0% W-N:4%



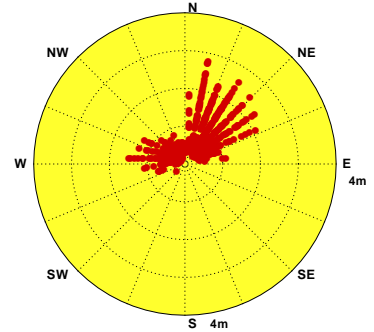
Wave of KLR0 at 2018/03 NO=743(100%)  
 Hs : MEAN=1.3m MAX=4.0m(NE,8s)  
 N-E:93% E-S:2% S-W:0% W-N:5%



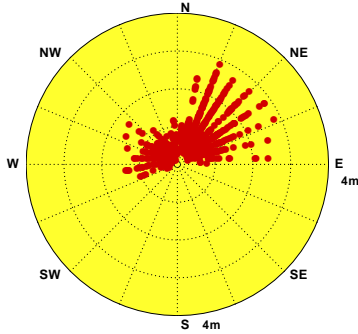
Wave of KLR0 at 2018/04 NO=720(100%)  
 Hs : MEAN=.9m MAX=4.7m(N, 8s)  
 N-E:91% E-S:3% S-W:0% W-N:6%



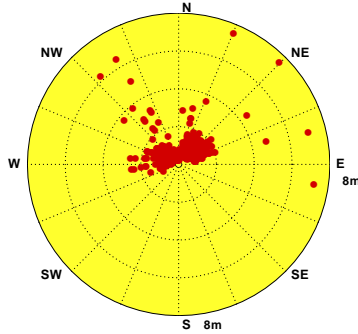
Wave of KLR0 at 2018/05 NO=743(100%)  
 Hs : MEAN=.7m MAX=2.6m(N, 6s)  
 N-E:68% E-S:2% S-W:6% W-N:24%



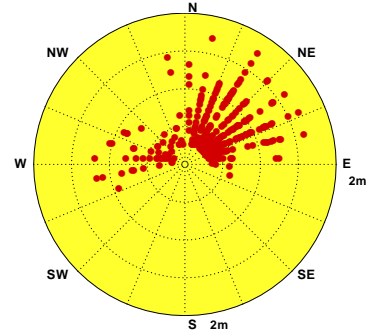
Wave of KLR0 at 2018/06 NO=718(100%)  
 Hs : MEAN=.9m MAX=2.7m(NNE,7s)  
 N-E:70% E-S:3% S-W:5% W-N:22%



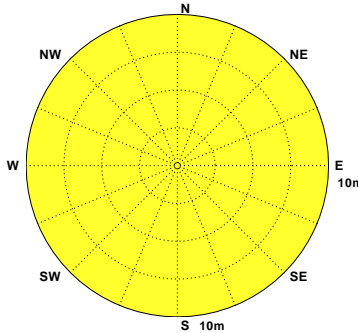
Wave of KLR0 at 2018/07 NO=743(100%)  
 Hs : MEAN=.8m MAX=7.2m(NE,10s)  
 N-E:64% E-S:4% S-W:5% W-N:27%



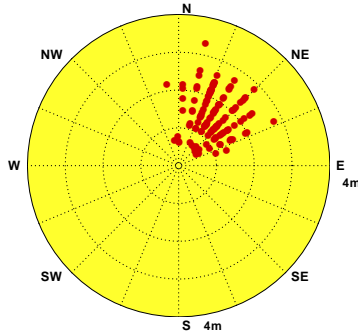
Wave of KLR0 at 2018/08 NO=342(46%)  
 Hs : MEAN=.6m MAX=1.7m(NNE,6s)  
 N-E:79% E-S:6% S-W:3% W-N:12%



Wave of KLR0 at 2018/09



Wave of KLR0 at 2018/10 NO=134(18%)  
 Hs : MEAN=1.5m MAX=3.2m(N, 7s)  
 N-E:96% E-S:0% S-W:0% W-N:4%



Wave of KLR0 at 2018/11 NO=720(100%)  
 Hs : MEAN=1.5m MAX=3.8m(N, 7s)  
 N-E:98% E-S:0% S-W:0% W-N:2%

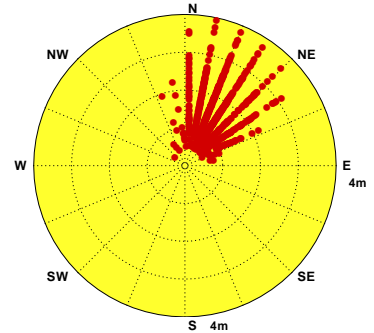


圖2.5.4 2018年北端海域每月 R 站修補前觀測波高向量分佈圖

V17CKLR0.1H0 V181KLR0.1H0 V182KLR0.1H0 V183KLR0.1H0 V184KLR0.1H0 V185KLR0.1H0  
 V186KLR0.1H0 V187KLR0.1H0 V188KLR0.1H0 V189KLR0.1H0 V18AKLR0.1H0 V18BKLR0.1H0

Institute of Harbor & Marine Technology

### 第三章 2018 年北端海域觀測潮汐資料年報

北端海域(富貴角~龍洞) 潮汐之觀測包括測站 **T**、測站 **X**、測站 **F**、測站 **S**、測站 **J**、測站 **O** 及測站 **K** 等 7 個測站(測站位置如第 0 章圖 TK1)。測站 **T** 與測站 **F**、測站 **X** 及測站 **S** 等 3 個測站特性相近，測站 **J** 與測站 **O** 兩站特性相近，而測站 **K** 與其他測站特性皆不相近。本年報取經檢核及補遺之測站 **T** 資料作為**主要測站 1**，測站 **J** 資料作為**主要測站 2**，測站 **K** 資料作為**主要測站 3**。

#### 3.1 2018 年北端海域觀測潮汐資料年報圖表

本章第 1 節**潮汐**年報資料處理之圖表包括：

1. 表 3.1.1a 2018 年**各觀測站**每月**觀測潮汐**資料**修補前**記錄表。
2. 表 3.1.1b 2018 年**主要測站**每月**觀測潮汐**資料**修補後**記錄表。
3. 表 3.1.2 2018 年**主要測站 1** **修補後**每月(季)及整年觀測潮位、潮差及週期重要統計量統計表。
4. 表 3.1.3 2018 年**主要測站 2** **修補後**每月(季)及整年觀測潮位、潮差及週期重要統計量統計表。
5. 表 3.1.4 2018 年**主要測站 3** **修補後**每月(季)及整年觀測潮位、潮差及週期重要統計量統計表。
6. 圖 3.1.1 2018 年**主要測站 1** **修補前後**每月觀測潮位歷線比較圖。
7. 圖 3.1.2 2018 年**主要測站 1** **修補後**每月觀測潮位及計算天文潮位歷線比較圖。
8. 圖 3.1.3 2018 年**主要測站 2** **修補前後**每月觀測潮位歷線比較圖。

9. 圖 3.1.4 2018 年**主要測站 2 修補後**每月觀測潮位及計算天文潮位歷線比較圖。

10. 圖 3.1.5 2018 年**主要測站 3 修補前後**每月觀測潮位歷線比較圖。

11. 圖 3.1.6 2018 年**主要測站 3 修補後**每月觀測潮位及計算天文潮位歷線比較圖。

第 2 節潮汐年報資料處理之圖表包括：2018 年北端海域**各測站修補前**每月(季)及整年潮位、潮差及週期重要統計量統計表。

第 3 節潮汐年報資料處理之統計圖包括：2018 年北端海域**主要測站 1 修補後與其他測站(修補前)**每月觀測潮位歷線比較圖。

第 4 節潮汐年報資料處理之統計圖包括：2018 年北端海域**主要測站 2 修補後與其他測站(修補前)**每月觀測潮位歷線比較圖。

第 5 節潮汐年報資料處理之統計圖包括：2018 年北端海域**主要測站 3 修補後與其他測站(修補前)**每月觀測潮位歷線比較圖。



表 3.1.1a 2018 年每月北端海域修補前各測站觀測潮汐資料紀錄表

海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域
年月/測站	T	J	K	F	X	O	S	P	M	Q		
2017/12 月	744(100%)	562(75.5%)	547(73.5%)	567(76.2%)	742(99.7%)	563(75.7%)	*	*	*	*	*	*
2018/ 1 月	744(100%)	710(95.4%)	711(95.6%)	710(95.4%)	737(99.1%)	710(95.4%)	*	*	*	*	*	*
2018/ 2 月	672(100%)	653(97.2%)	653(97.2%)	653(97.2%)	667(99.3%)	654(97.3%)	*	*	*	*	*	*
2018/ 3 月	744(100%)	707(95.0%)	707(95.0%)	625(84.0%)	738(99.2%)	707(95.0%)	*	*	*	*	*	*
2018/ 4 月	720(100%)	688(95.6%)	663(92.1%)	693(96.3%)	711(98.8%)	688(95.6%)	*	*	*	*	*	*
2018/ 5 月	744(100%)	441(59.3%)	393(52.8%)	409(55.0%)	743(99.9%)	441(59.3%)	*	*	*	*	*	*
2018/ 6 月	720(100%)	683(94.9%)	680(94.4%)	681(94.6%)	713(99.0%)	683(94.9%)	*	*	*	*	*	*
2018/ 7 月	744(100%)	693(93.1%)	689(92.6%)	701(94.2%)	739(99.3%)	693(93.1%)	*	*	*	*	*	*
2018/ 8 月	744(100%)	723(97.2%)	711(95.6%)	703(94.5%)	498(66.9%)	723(97.2%)	*	*	*	*	*	*
2018/ 9 月	720(100%)	664(92.2%)	664(92.2%)	622(86.4%)	*	664(92.2%)	*	*	*	*	*	*
2018/10 月	743(99.9%)	730(98.1%)	740(99.5%)	731(98.3%)	174(23.4%)	730(98.1%)	647(87.0%)	*	*	*	*	*
2018/11 月	720(100%)	669(92.9%)	670(93.1%)	652(90.6%)	*	669(92.9%)	707(98.2%)	*	*	*	*	*
2018/冬季	2160(100%)	1925(89.1%)	1911(88.5%)	1930(89.4%)	2146(99.4%)	1927(89.2%)	*	*	*	*	*	*
2018/春季	2208(100%)	1836(83.2%)	1763(79.8%)	1727(78.2%)	2192(99.3%)	1836(83.2%)	*	*	*	*	*	*
2018/夏季	2208(100%)	2099(95.1%)	2080(94.2%)	2085(94.4%)	1950(88.3%)	2099(95.1%)	*	*	*	*	*	*
2018/秋季	2183(99.9%)	2063(94.5%)	2074(95.0%)	2005(91.8%)	174( 8.0%)	2063(94.5%)	1354(62.0%)	*	*	*	*	*
2018/整年	8759(99.9%)	7923(90.4%)	7828(89.4%)	7747(88.4%)	6462(73.8%)	7925(90.5%)	1354(15.5%)	*	*	*	*	*
起始年月	2017/12	2017/12	2017/12	2017/12	2017/12	2017/12	2018/10	*	*	*	*	*
結束年月	2018/11	2018/11	2018/11	2018/11	2018/10	2018/11	2018/11	*	*	*	*	*

3-1-3

表 3.1.1b 2018年每月北端海域修補後各測站潮汐資料紀錄表

海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域
年月/測站	T	J	K									
2017/12月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 1月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 2月	672(100%)	672(100%)	672(100%)	*	*	*	*	*	*	*	*	*
2018/ 3月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 4月	720(100%)	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*
2018/ 5月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 6月	720(100%)	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*
2018/ 7月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 8月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 9月	720(100%)	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*
2018/10月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/11月	720(100%)	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*
2018/冬季	2160(100%)	2160(100%)	2160(100%)	*	*	*	*	*	*	*	*	*
2018/春季	2208(100%)	2208(100%)	2208(100%)	*	*	*	*	*	*	*	*	*
2018/夏季	2208(100%)	2208(100%)	2208(100%)	*	*	*	*	*	*	*	*	*
2018/秋季	2184(100%)	2184(100%)	2184(100%)	*	*	*	*	*	*	*	*	*
2018/整年	8760(100%)	8760(100%)	8760(100%)	*	*	*	*	*	*	*	*	*
起始年月	2017/12	2017/12	2017/12	*	*	*	*	*	*	*	*	*
結束年月	2018/11	2018/11	2018/11	*	*	*	*	*	*	*	*	*

3-1-8

表3.1.2 2018年北端海域主要測站1修補後潮差週期及潮位重要統計量統計表

序號	日期 (年/月)	測站	平均潮差 (公分)	最大潮差 (公分)	1/3潮差 (公分)	1/10潮差 (公分)	平均週期 (時)	最大週期 (時)	1/3週期 (時)	1/10週期 (時)	潮差個數 (個)	平均潮位 (公分)	最高潮位 (公分)	最低潮位 (公分)	水位點數 (個)
1	2017/12	T	74	167	124	160	15.0	26.0	20.8	25.3	49	0	74	-110	744(100%)
2	2018/01	T	81	183	134	173	13.5	26.0	16.7	24.8	47	0	86	-116	744(100%)
3	2018/02	T	73	171	108	144	13.8	26.0	17.1	25.0	45	0	73	-116	672(100%)
4	2018/03	T	75	145	100	124	13.3	27.0	15.7	22.8	47	0	84	-114	744(100%)
5	2018/04	T	70	129	96	110	13.4	26.0	16.2	23.2	53	0	82	-87	720(100%)
6	2018/05	T	68	139	105	127	13.9	26.0	17.7	25.5	45	0	70	-99	744(100%)
7	2018/06	T	71	155	118	150	14.1	26.0	18.1	25.5	45	0	69	-109	720(100%)
8	2018/07	T	72	151	118	142	13.2	25.0	15.6	20.4	50	0	79	-113	744(100%)
9	2018/08	T	73	162	114	149	13.1	25.0	16.1	20.8	55	0	73	-89	744(100%)
10	2018/09	T	72	139	105	131	13.9	26.0	18.2	25.8	51	0	90	-89	720(100%)
11	2018/10	T	81	141	115	136	14.6	26.0	19.8	25.3	48	0	102	-114	744(100%)
12	2018/11	T	76	167	116	135	14.6	27.0	20.1	25.5	45	0	74	-101	720(100%)
13	2018/冬	T	76	183	122	158	14.1	26.0	18.3	24.9	141	0	86	-116	2160(100%)
14	2018/春	T	71	145	100	119	13.5	27.0	16.5	23.8	145	0	84	-114	2208(100%)
15	2018/夏	T	72	162	116	146	13.4	26.0	16.5	22.8	150	0	79	-113	2208(100%)
16	2018/秋	T	76	167	113	133	14.4	27.0	19.3	25.5	144	0	102	-114	2184(100%)
17	2018/年	T	74	183	113	142	13.9	27.0	17.7	25.1	580	0	102	-116	8760(100%)

表3.1.3 2018年北端海域主要測站2修補後潮差週期及潮位重要統計量統計表

序 號	日期 (年/月)	測 站	平均 潮差 (公分)	最大 潮差 (公分)	1/3 潮差 (公分)	1/10 潮差 (公分)	平均 週期 (時)	最大 週期 (時)	1/3 週期 (時)	1/10 週期 (時)	潮差 個數 (個)	平均 潮位 (公分)	最高 潮位 (公分)	最低 潮位 (公分)	水位 點數 (個)
1	2017/12	J	53	140	101	128	13.1	25.0	16.7	21.0	56	0	59	-88	744(100%)
2	2018/01	J	56	133	94	118	13.6	25.0	16.5	24.6	51	0	66	-88	744(100%)
3	2018/02	J	58	121	85	109	13.9	26.0	17.4	25.3	43	0	60	-85	672(100%)
4	2018/03	J	57	99	85	94	13.6	27.0	16.5	25.4	54	0	57	-69	744(100%)
5	2018/04	J	61	110	88	104	12.9	25.0	14.5	18.2	51	0	48	-72	720(100%)
6	2018/05	J	55	119	88	110	13.3	27.0	15.7	22.8	55	0	61	-74	744(100%)
7	2018/06	J	55	123	91	115	12.9	25.0	14.6	18.2	55	0	63	-83	720(100%)
8	2018/07	J	55	135	98	127	12.9	26.0	14.6	18.6	56	0	71	-92	744(100%)
9	2018/08	J	56	141	94	129	12.8	25.0	14.3	18.0	57	0	63	-81	744(100%)
10	2018/09	J	59	116	88	108	13.2	26.0	15.2	20.6	51	0	54	-77	720(100%)
11	2018/10	J	61	105	90	98	13.4	26.0	15.9	23.2	55	0	59	-74	744(100%)
12	2018/11	J	58	119	91	111	13.1	26.0	15.1	20.6	54	0	54	-86	720(100%)
13	2018/冬	J	56	140	93	119	13.5	26.0	16.9	23.5	150	0	66	-88	2160(100%)
14	2018/春	J	58	119	87	102	13.3	27.0	15.6	21.6	160	0	61	-74	2208(100%)
15	2018/夏	J	55	141	94	122	12.9	26.0	14.5	18.1	168	0	71	-92	2208(100%)
16	2018/秋	J	59	119	90	106	13.2	26.0	15.4	21.1	160	0	59	-86	2184(100%)
17	2018/年	J	57	141	91	113	13.2	27.0	15.6	21.3	638	0	71	-92	8760(100%)

表3.1.4 2018年北端海域主要測站3修補後潮差週期及潮位重要統計量統計表

序號	日期 (年/月)	測站	平均潮差 (公分)	最大潮差 (公分)	1/3潮差 (公分)	1/10潮差 (公分)	平均週期 (時)	最大週期 (時)	1/3週期 (時)	1/10週期 (時)	潮差個數 (個)	平均潮位 (公分)	最高潮位 (公分)	最低潮位 (公分)	水位點數 (個)
1	2017/12	K	164	272	218	266	12.6	25.0	13.7	15.6	58	0	139	-145	744(100%)
2	2018/01	K	169	285	231	273	12.4	13.0	13.0	13.0	59	0	140	-145	744(100%)
3	2018/02	K	166	270	214	249	12.4	13.0	13.0	13.0	53	0	128	-144	672(100%)
4	2018/03	K	168	249	208	230	12.4	13.0	13.0	13.0	59	0	125	-126	744(100%)
5	2018/04	K	162	228	202	221	12.4	14.0	13.1	13.2	57	0	118	-123	720(100%)
6	2018/05	K	150	251	207	238	12.4	14.0	13.1	13.2	59	0	128	-123	744(100%)
7	2018/06	K	158	263	215	254	12.6	22.0	13.7	15.4	56	0	134	-134	720(100%)
8	2018/07	K	162	257	198	238	12.4	13.0	13.0	13.0	59	0	124	-142	744(100%)
9	2018/08	K	165	238	202	231	12.4	14.0	13.1	13.2	59	0	133	-130	744(100%)
10	2018/09	K	167	233	202	221	12.4	14.0	13.1	13.4	57	0	127	-131	720(100%)
11	2018/10	K	172	220	206	217	12.4	14.0	13.2	13.6	59	0	132	-135	744(100%)
12	2018/11	K	168	230	206	221	12.4	14.0	13.1	13.4	57	0	133	-136	720(100%)
13	2018/冬	K	167	285	221	262	12.5	25.0	13.2	13.8	170	0	140	-146	2160(100%)
14	2018/春	K	160	251	206	228	12.4	14.0	13.0	13.1	175	0	128	-126	2208(100%)
15	2018/夏	K	162	263	204	239	12.5	22.0	13.2	13.8	174	0	134	-142	2208(100%)
16	2018/秋	K	169	233	205	219	12.4	14.0	13.1	13.4	173	0	133	-136	2184(100%)
17	2018/年	K	164	285	209	238	12.5	25.0	13.1	13.5	692	0	140	-146	8760(100%)



# Tidal Level in Kee-Lung Harbor of KLF0 at 2018

1 ○ 8 ● 15 ● 22 ●

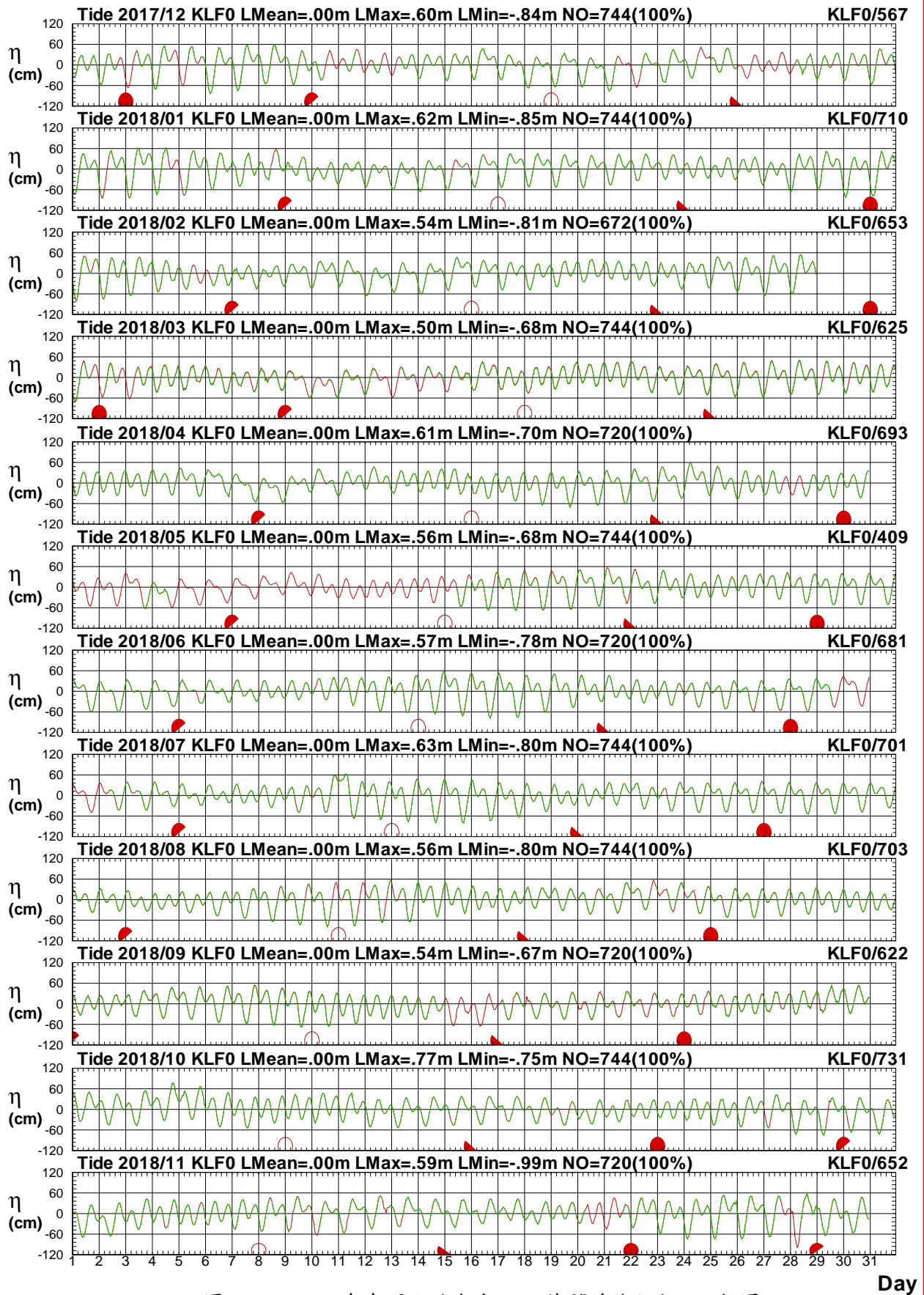


圖3.1.7 2018年每月北端海域 F 站修補前後之潮位比較圖

T17CKLF0.1HA T17CKLF0.1H0 T181KLF0.1HA T181KLF0.1H0 T182KLF0.1HA T182KLF0.1H0  
 T183KLF0.1HA T183KLF0.1H0 T184KLF0.1HA T184KLF0.1H0 T185KLF0.1HA T185KLF0.1H0

Institute of Harbor & Marine Technology

# Tidal Level in Kee-Lung Harbor of KLF0 at 2018

1 ○ 8 ● 15 ● 22 ●

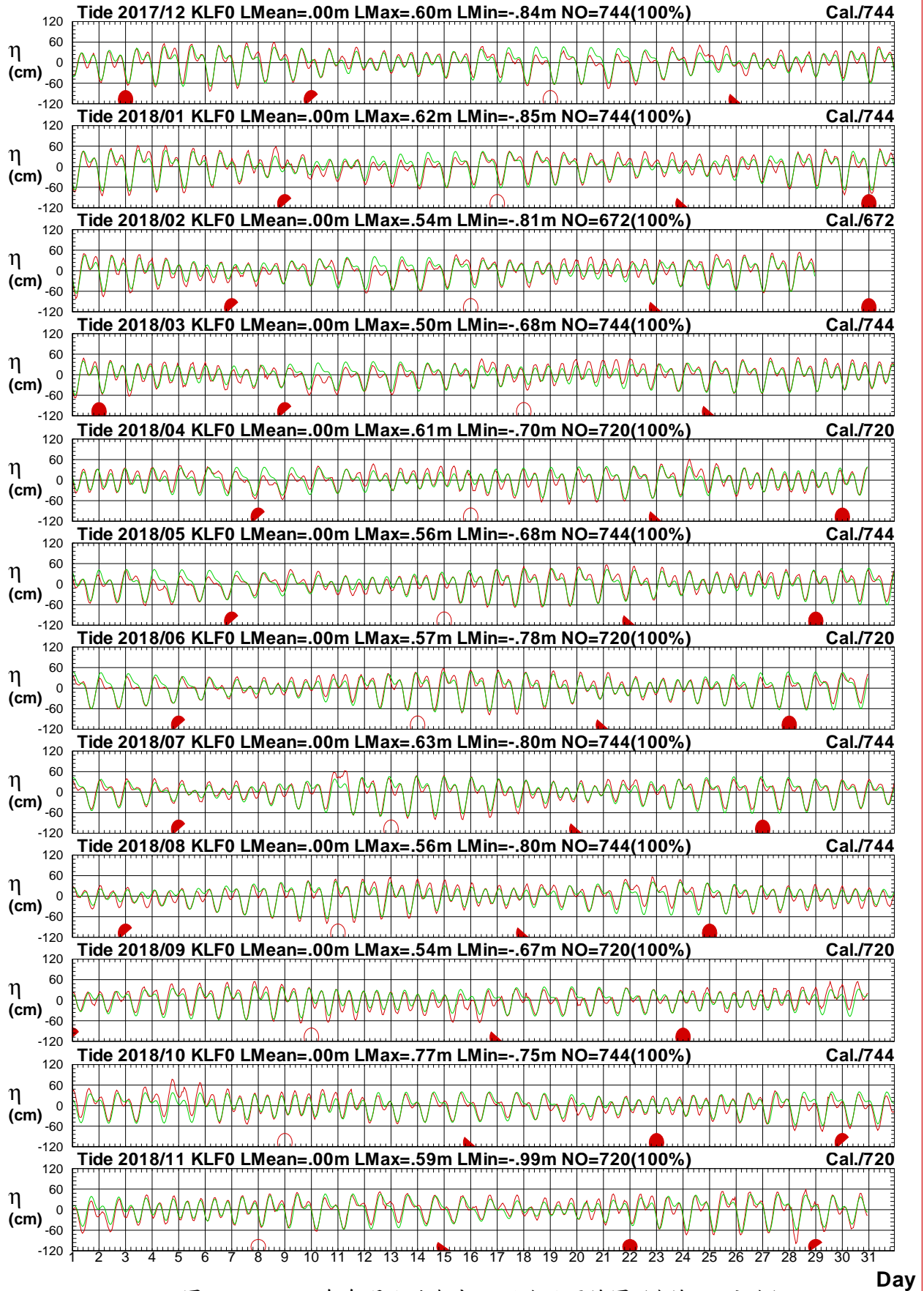


圖3.1.8 2018年每月北端海域 F 站潮位歷線圖 (綠線: 天文潮)

T17CKLF0.1HA T17CKLT0.1HC T181KLF0.1HA T181KLT0.1HC T182KLF0.1HA T182KLT0.1HC  
 T183KLF0.1HA T183KLT0.1HC T184KLF0.1HA T184KLT0.1HC T185KLF0.1HA T185KLT0.1HC

Institute of Harbor & Marine Technology

# Tidal Level in Kee-Lung Harbor of KLJ0 at 2018

1 ○ 8 ● 15 ● 22 ●

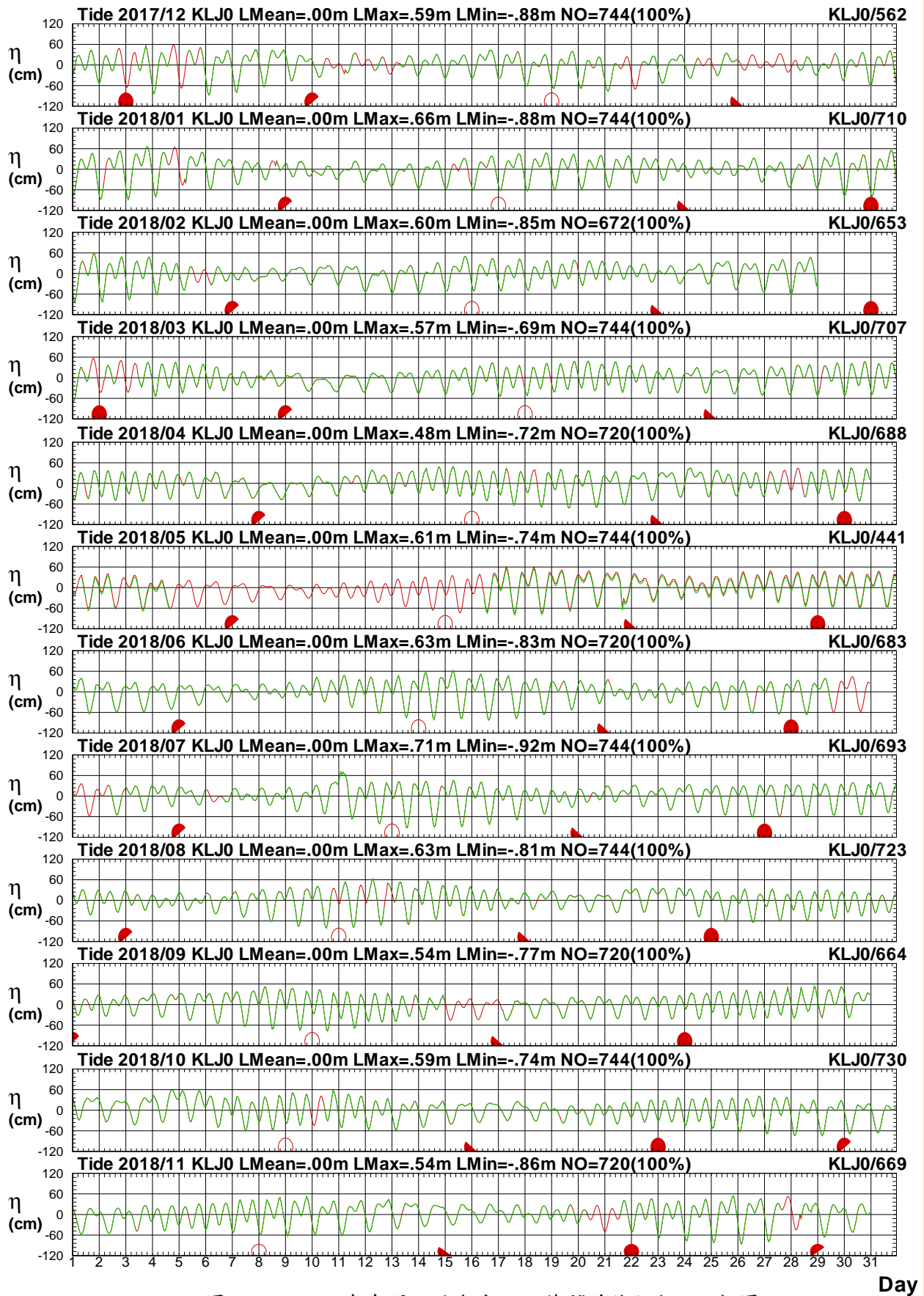


圖3.1.9 2018年每月北端海域 J 站修補前後之潮位比較圖

T17CKLJ0.1HA T17CKLJ0.1H0 T181KLJ0.1HA T181KLJ0.1H0 T182KLJ0.1HA T182KLJ0.1H0  
 T183KLJ0.1HA T183KLJ0.1H0 T184KLJ0.1HA T184KLJ0.1H0 T185KLJ0.1HA T185KLJ0.1H0

Institute of Harbor & Marine Technology

# Tidal Level in Kee-Lung Harbor of KLJ0 at 2018

1 ○ 8 ● 15 ● 22 ●

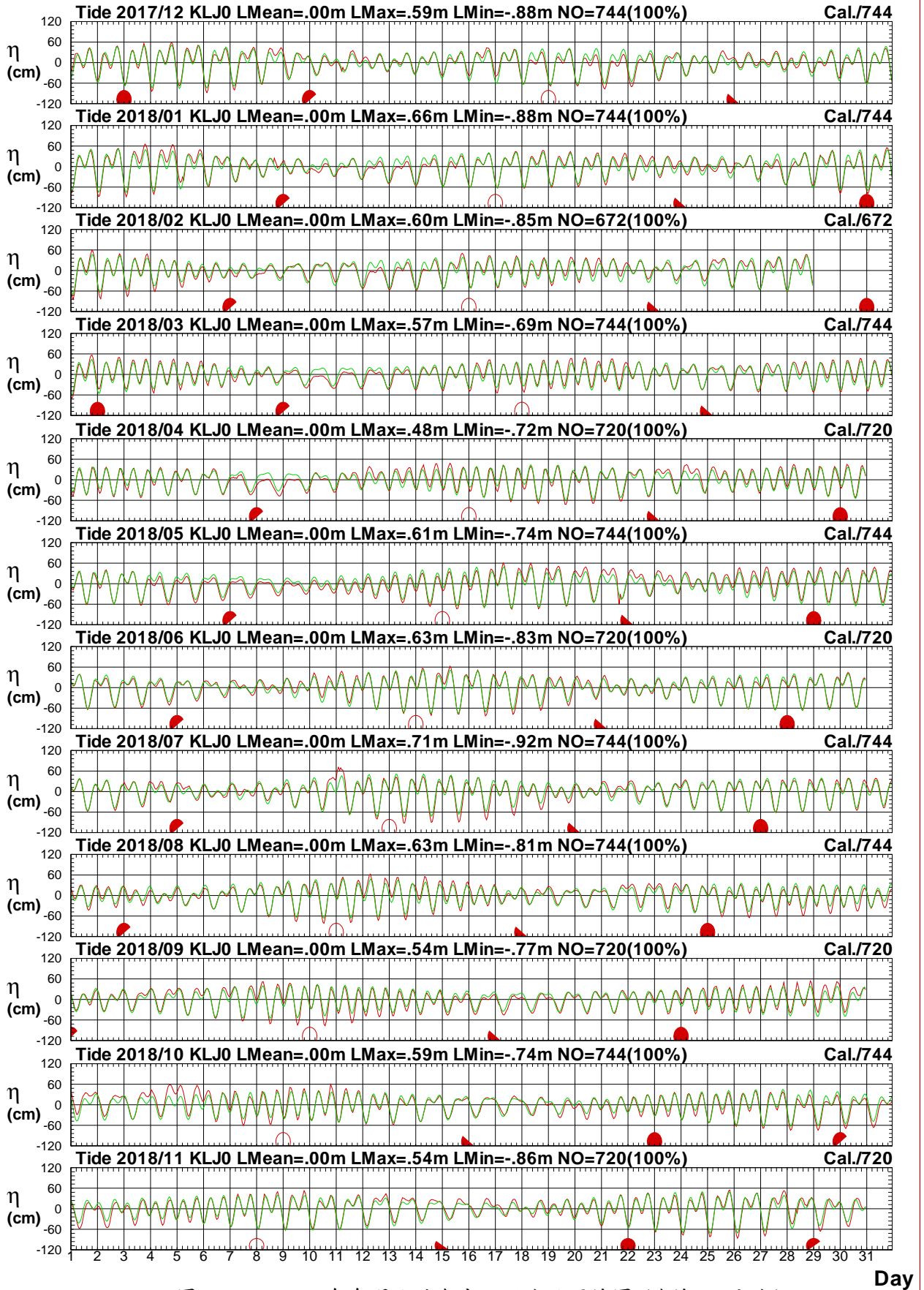


圖3.1.10 2018年每月北端海域J站潮位歷線圖 (綠線: 天文潮)

T17CKLJ0.1HA T17CKLJ0.1HC T181KLJ0.1HA T181KLJ0.1HC T182KLJ0.1HA T182KLJ0.1HC  
 T183KLJ0.1HA T183KLJ0.1HC T184KLJ0.1HA T184KLJ0.1HC T185KLJ0.1HA T185KLJ0.1HC

Institute of Harbor & Marine Technology



# Tidal Level in Kee-Lung Harbor of KKK0 at 2018

1 ○ 8 ● 15 ● 22 ●

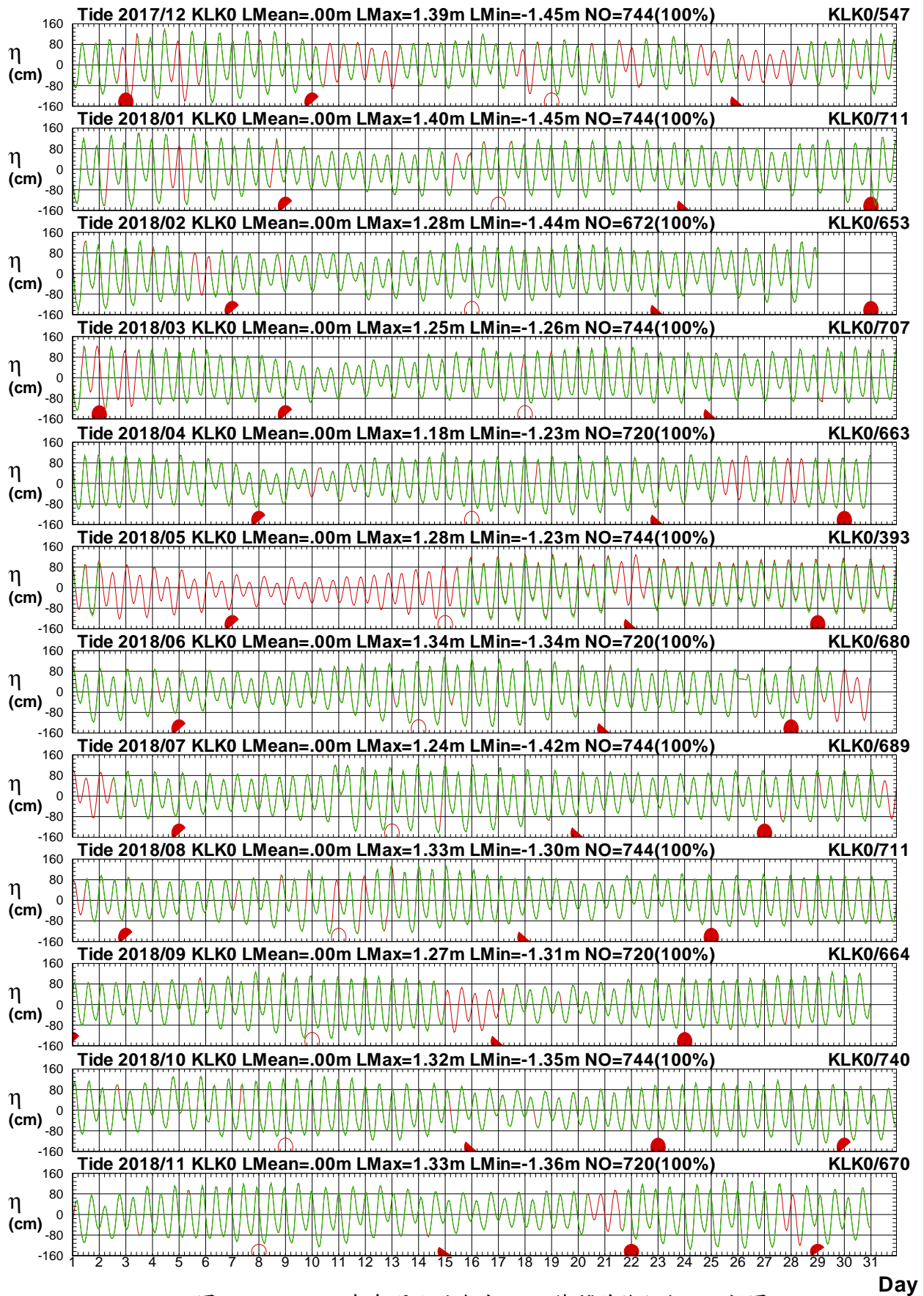


圖3.1.11 2018年每月北端海域 K 站修補前後之潮位比較圖

T17CKLK0.1HA T17CKLK0.1H0 T181KKL0.1HA T181KKL0.1H0 T182KKL0.1HA T182KKL0.1H0  
T183KKL0.1HA T183KKL0.1H0 T184KKL0.1HA T184KKL0.1H0 T185KKL0.1HA T185KKL0.1H0

Institute of Harbor & Marine Technology



# Tidal Level in Kee-Lung Harbor of KKK0 at 2018

1 ○ 8 ● 15 ● 22 ●

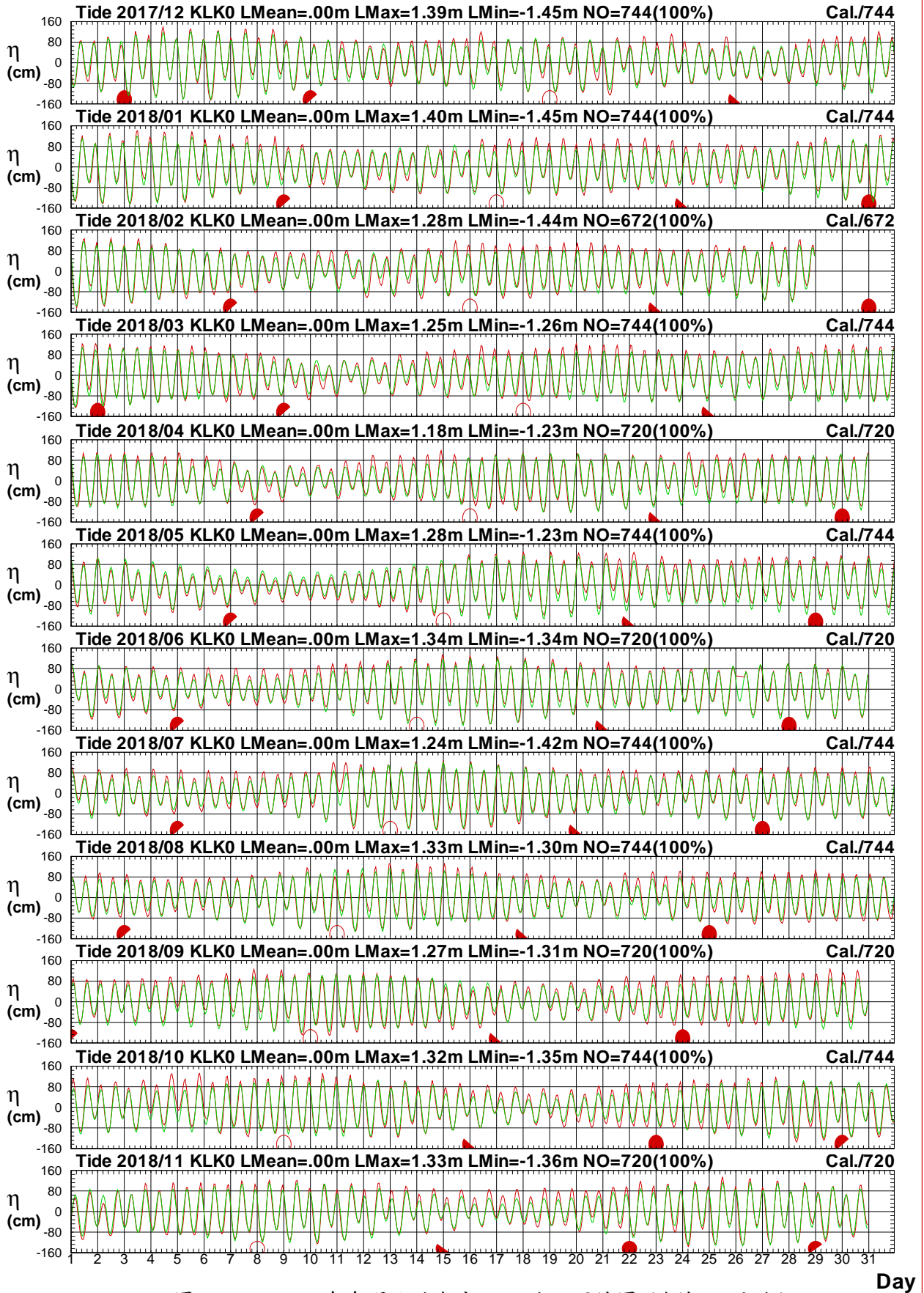


圖3.1.12 2018年每月北端海域 K 站潮位歷線圖 (綠線: 天文潮)

T17CKLK0.1HA T17CKLK0.1HC T181KLL0.1HA T181KLL0.1HC T182KLL0.1HA T182KLL0.1HC  
 T183KLL0.1HA T183KLL0.1HC T184KLL0.1HA T184KLL0.1HC T185KLL0.1HA T185KLL0.1HC

Institute of Harbor & Marine Technology



## 3.2 2018 年北端海域各測站修補前 潮汐統計量統計表



表3.2.1 2018年北端海域 T 站修補前潮差週期及潮位重要統計量統計表

序 號	日期 (年/月)	測 站	平均 潮差 (公分)	最大 潮差 (公分)	1/3 潮差 (公分)	1/10 潮差 (公分)	平均 週期 (時)	最大 週期 (時)	1/3 週期 (時)	1/10 週期 (時)	潮差 個數 (個)	平均 潮位 (公分)	最高 潮位 (公分)	最低 潮位 (公分)	水位 點數 (個)
1	2017/12	T	74	167	124	160	15.0	26.0	20.8	25.3	49	0	74	-110	744(100%)
2	2018/01	T	81	183	134	173	13.5	26.0	16.7	24.8	47	0	86	-116	744(100%)
3	2018/02	T	73	171	108	144	13.8	26.0	17.1	25.0	45	0	73	-116	672(100%)
4	2018/03	T	75	145	100	124	13.3	27.0	15.7	22.8	47	0	84	-114	744(100%)
5	2018/04	T	70	129	96	110	13.4	26.0	16.2	23.2	53	0	82	-87	720(100%)
6	2018/05	T	68	139	105	127	13.9	26.0	17.7	25.5	45	0	70	-99	744(100%)
7	2018/06	T	71	155	118	150	14.1	26.0	18.1	25.5	45	0	69	-109	720(100%)
8	2018/07	T	72	151	118	142	13.2	25.0	15.6	20.4	50	0	79	-113	744(100%)
9	2018/08	T	73	162	114	149	13.1	25.0	16.1	20.8	55	0	73	-89	744(100%)
10	2018/09	T	72	139	105	131	13.9	26.0	18.2	25.8	51	0	90	-89	720(100%)
11	2018/10	T	81	136	114	129	14.9	26.0	20.9	25.3	47	0	102	-114	743(100%)
12	2018/11	T	76	167	116	135	14.6	27.0	20.1	25.5	45	0	74	-101	720(100%)
13	2018/冬	T	76	183	122	158	14.1	26.0	18.3	24.9	141	0	86	-116	2160(100%)
14	2018/春	T	71	145	100	119	13.5	27.0	16.5	23.8	145	0	84	-114	2208(100%)
15	2018/夏	T	72	162	116	146	13.4	26.0	16.5	22.8	150	0	79	-113	2208(100%)
16	2018/秋	T	76	167	113	131	14.4	27.0	19.7	25.5	143	0	102	-114	2183(100%)
17	2018/年	T	74	183	113	142	13.9	27.0	17.7	25.1	579	0	102	-116	8759(100%)



表3.2.2 2018年北端海域 J 站修補前潮差週期及潮位重要統計量統計表

序 號	日期 (年/月)	測 站	平均 潮差 (公分)	最大 潮差 (公分)	1/3 潮差 (公分)	1/10 潮差 (公分)	平均 週期 (時)	最大 週期 (時)	1/3 週期 (時)	1/10 週期 (時)	潮差 個數 (個)	平均 潮位 (公分)	最高 潮位 (公分)	最低 潮位 (公分)	水位 點數 (個)
1	2017/12	J	61	129	102	127	15.4	25.0	21.9	25.0	28	0	56	-87	562( 76%)
2	2018/01	J	58	154	100	129	14.9	25.0	20.7	25.0	44	0	66	-88	710( 95%)
3	2018/02	J	57	121	93	111	13.9	26.0	17.7	25.3	41	0	60	-85	653( 97%)
4	2018/03	J	54	99	83	93	14.0	27.0	18.0	25.8	47	0	49	-68	707( 95%)
5	2018/04	J	62	107	86	99	13.8	27.0	17.1	25.3	45	0	49	-71	688( 96%)
6	2018/05	J	60	119	96	119	13.7	25.0	17.0	25.0	29	0	55	-80	441( 59%)
7	2018/06	J	54	123	91	115	13.2	25.0	15.3	20.4	51	0	63	-83	683( 95%)
8	2018/07	J	55	123	96	115	13.7	26.0	17.1	25.3	48	0	71	-92	693( 93%)
9	2018/08	J	56	139	95	124	14.1	25.0	17.9	25.0	52	0	63	-81	723( 97%)
10	2018/09	J	61	116	90	111	13.5	26.0	16.3	25.3	45	0	53	-78	664( 92%)
11	2018/10	J	60	112	93	105	13.6	26.0	16.6	25.2	54	0	59	-75	730( 98%)
12	2018/11	J	60	140	103	127	13.5	26.0	16.3	25.3	46	0	54	-86	669( 93%)
13	2018/冬	J	58	154	97	122	14.7	26.0	20.0	25.1	113	0	66	-88	1925( 89%)
14	2018/春	J	58	119	87	102	13.9	27.0	17.3	25.3	121	0	55	-80	1836( 83%)
15	2018/夏	J	55	139	94	117	13.6	26.0	16.8	24.9	151	0	71	-92	2099( 95%)
16	2018/秋	J	60	140	95	115	13.5	26.0	16.4	24.4	145	0	59	-86	2063( 95%)
17	2018/年	J	58	154	93	115	13.9	27.0	17.5	25.1	530	0	71	-92	7923( 90%)

3-2-2

表3.2.3 2018年北端海域 K 站修補前潮差週期及潮位重要統計量統計表

序 號	日期 (年/月)	測 站	平均 潮差 (公分)	最大 潮差 (公分)	1/3 潮差 (公分)	1/10 潮差 (公分)	平均 週期 (時)	最大 週期 (時)	1/3 週期 (時)	1/10 週期 (時)	潮差 個數 (個)	平均 潮位 (公分)	最高 潮位 (公分)	最低 潮位 (公分)	水位 點數 (個)
1	2017/12	K	170	276	210	265	13.7	25.0	16.9	25.0	27	0	138	-147	547( 74%)
2	2018/01	K	168	285	230	270	13.1	25.0	15.1	20.2	52	0	141	-144	711( 96%)
3	2018/02	K	164	254	201	234	12.9	25.0	14.5	19.0	48	0	128	-144	653( 97%)
4	2018/03	K	162	217	195	210	13.2	25.0	15.1	20.0	51	0	126	-126	707( 95%)
5	2018/04	K	164	211	198	207	12.9	25.0	14.5	19.0	49	0	119	-121	663( 92%)
6	2018/05	K	172	251	214	248	12.4	13.0	13.0	13.0	27	0	121	-131	393( 53%)
7	2018/06	K	157	262	206	239	13.2	25.0	15.3	20.2	50	0	133	-135	680( 94%)
8	2018/07	K	164	263	214	256	13.1	26.0	15.1	20.2	52	0	125	-142	689( 93%)
9	2018/08	K	165	258	206	236	13.6	25.0	16.5	24.6	53	0	133	-129	711( 96%)
10	2018/09	K	169	240	211	235	12.9	26.0	14.6	19.3	49	0	126	-131	664( 92%)
11	2018/10	K	171	232	217	228	12.7	25.0	13.8	16.0	58	0	132	-135	740(100%)
12	2018/11	K	171	259	224	254	13.0	25.0	14.6	19.5	48	0	133	-135	670( 93%)
13	2018/冬	K	167	285	215	258	13.2	25.0	15.3	20.9	127	0	141	-147	1911( 89%)
14	2018/春	K	165	251	201	222	12.9	25.0	14.4	17.9	127	0	125	-131	1763( 80%)
15	2018/夏	K	162	263	208	246	13.3	26.0	15.6	21.7	155	0	133	-142	2080( 94%)
16	2018/秋	K	170	259	217	238	12.9	26.0	14.3	17.4	155	0	133	-135	2074( 95%)
17	2018/年	K	166	285	211	242	13.1	26.0	14.9	19.3	564	0	141	-147	7828( 89%)

3-2-3

表3.2.4 2018年北端海域 X 站修補前潮差週期及潮位重要統計量統計表

序 號	日期 (年/月)	測 站	平均 潮差 (公分)	最大 潮差 (公分)	1/3 潮差 (公分)	1/10 潮差 (公分)	平均 週期 (時)	最大 週期 (時)	1/3 週期 (時)	1/10 週期 (時)	潮差 個數 (個)	平均 潮位 (公分)	最高 潮位 (公分)	最低 潮位 (公分)	水位 點數 (個)
1	2017/12	X	54	126	97	120	13.3	25.0	16.2	22.6	55	0	58	-82	742(100%)
2	2018/01	X	58	141	99	125	13.3	25.0	15.9	22.8	55	0	61	-81	737( 99%)
3	2018/02	X	54	125	86	111	13.3	26.0	15.7	22.5	47	0	51	-74	667( 99%)
4	2018/03	X	53	111	75	93	13.3	26.0	16.1	22.8	55	0	49	-71	738( 99%)
5	2018/04	X	52	97	78	90	13.6	26.0	17.1	25.0	52	0	51	-62	711( 99%)
6	2018/05	X	54	96	78	92	13.4	25.0	16.2	23.0	52	0	50	-69	743(100%)
7	2018/06	X	52	125	91	121	14.2	25.0	18.6	25.0	44	0	50	-77	713( 99%)
8	2018/07	X	53	100	82	97	13.1	25.0	15.5	20.2	53	0	52	-78	739( 99%)
9	2018/08	X	56	124	95	124	12.8	26.0	15.2	18.7	38	0	51	-75	498( 67%)
10	2018/09	X													
11	2018/10	X	45	74	60	74	14.3	25.0	19.0	25.0	12	0	36	-39	174( 23%)
12	2018/11	X													
13	2018/冬	X	55	141	94	119	13.3	26.0	15.9	22.1	157	0	61	-82	2146( 99%)
14	2018/春	X	53	111	77	92	13.4	26.0	16.4	23.7	159	0	51	-71	2192( 99%)
15	2018/夏	X	53	125	88	114	13.4	26.0	16.3	22.6	135	0	52	-78	1950( 88%)
16	2018/秋	X	45	74	60	74	14.3	25.0	19.0	25.0	12	0	36	-39	174( 8%)
17	2018/年	X	54	141	86	109	13.4	26.0	16.3	22.7	463	0	61	-82	6462( 74%)

3-2-4

表3.2.5 2018年北端海域 F 站修補前潮差週期及潮位重要統計量統計表

序號	日期 (年/月)	測站	平均 潮差 (公分)	最大 潮差 (公分)	1/3 潮差 (公分)	1/10 潮差 (公分)	平均 週期 (時)	最大 週期 (時)	1/3 週期 (時)	1/10 週期 (時)	潮差 個數 (個)	平均 潮位 (公分)	最高 潮位 (公分)	最低 潮位 (公分)	水位 點數 (個)
1	2017/12	F	66	125	97	116	15.9	25.0	23.4	25.0	24	0	60	-84	567( 76%)
2	2018/01	F	57	120	94	113	13.2	25.0	15.7	22.3	46	0	62	-85	710( 95%)
3	2018/02	F	58	123	87	111	14.9	26.0	20.7	25.3	41	0	54	-81	653( 97%)
4	2018/03	F	55	99	81	91	16.8	26.0	24.9	25.3	31	0	48	-70	625( 84%)
5	2018/04	F	57	95	77	87	14.3	27.0	19.1	25.5	47	0	61	-70	693( 96%)
6	2018/05	F	59	118	87	105	12.9	24.0	14.9	19.0	24	0	55	-69	409( 55%)
7	2018/06	F	57	127	101	124	12.9	26.0	14.9	19.5	47	0	57	-78	681( 95%)
8	2018/07	F	60	133	91	111	14.5	26.0	19.8	25.3	48	0	63	-80	701( 94%)
9	2018/08	F	56	118	86	105	14.1	25.0	18.8	25.0	49	0	56	-78	703( 95%)
10	2018/09	F	58	101	80	98	13.5	25.0	17.1	24.7	37	0	53	-68	622( 86%)
11	2018/10	F	60	97	78	88	13.2	25.0	16.2	20.8	53	0	77	-75	731( 98%)
12	2018/11	F	59	127	92	113	15.1	26.0	21.4	25.7	37	0	58	-74	652( 91%)
13	2018/冬	F	60	125	92	112	14.4	26.0	19.1	25.1	111	0	62	-85	1930( 89%)
14	2018/春	F	57	118	81	92	14.7	27.0	20.0	25.3	102	0	61	-70	1727( 78%)
15	2018/夏	F	58	133	92	114	13.9	26.0	18.0	25.0	144	0	63	-80	2085( 94%)
16	2018/秋	F	59	127	83	99	13.8	26.0	17.9	25.0	127	0	77	-75	2005( 92%)
17	2018/年	F	58	133	87	107	14.2	27.0	18.7	25.2	484	0	77	-85	7747( 88%)

3-2-5

表3.2.6 2018年北端海域 O 站修補前潮差週期及潮位重要統計量統計表

序 號	日期 (年/月)	測 站	平均 潮差 (公分)	最大 潮差 (公分)	1/3 潮差 (公分)	1/10 潮差 (公分)	平均 週期 (時)	最大 週期 (時)	1/3 週期 (時)	1/10 週期 (時)	潮差 個數 (個)	平均 潮位 (公分)	最高 潮位 (公分)	最低 潮位 (公分)	水位 點數 (個)
1	2017/12	O	60	131	104	128	14.9	25.0	20.9	25.0	29	0	56	-87	563( 76%)
2	2018/01	O	56	154	104	131	14.8	25.0	20.4	25.0	47	0	66	-87	710( 95%)
3	2018/02	O	56	122	84	110	13.9	26.0	17.7	25.3	41	0	60	-85	654( 97%)
4	2018/03	O	56	99	83	94	13.8	26.0	17.1	25.3	45	0	49	-68	707( 95%)
5	2018/04	O	63	109	88	105	13.8	27.0	17.2	25.3	45	0	47	-72	688( 96%)
6	2018/05	O	60	120	97	119	13.7	26.0	17.2	25.5	29	0	52	-83	441( 59%)
7	2018/06	O	54	122	91	114	13.2	25.0	15.3	20.4	51	0	62	-84	683( 95%)
8	2018/07	O	56	123	96	116	13.7	26.0	17.1	25.3	48	0	68	-92	693( 93%)
9	2018/08	O	56	139	95	124	14.1	25.0	17.9	25.0	52	0	63	-81	723( 97%)
10	2018/09	O	61	117	91	111	13.5	26.0	16.2	25.0	45	0	53	-77	664( 92%)
11	2018/10	O	60	104	89	98	13.4	26.0	15.9	23.2	55	0	58	-74	730( 98%)
12	2018/11	O	57	140	98	120	13.9	25.0	17.4	24.8	44	0	54	-86	669( 93%)
13	2018/冬	O	57	154	96	123	14.5	26.0	19.5	25.1	117	0	66	-88	1927( 89%)
14	2018/春	O	59	120	88	106	13.8	27.0	17.2	25.2	119	0	52	-83	1836( 83%)
15	2018/夏	O	55	139	94	117	13.6	26.0	16.7	24.8	151	0	68	-92	2099( 95%)
16	2018/秋	O	59	140	92	110	13.6	26.0	16.4	24.2	144	0	58	-86	2063( 95%)
17	2018/年	O	58	154	93	114	13.8	27.0	17.3	25.0	531	0	68	-92	7925( 91%)

3-2-0



表3.2.7 2018年北端海域 S 站修補前潮差週期及潮位重要統計量統計表

序 號	日期 (年/月)	測 站	平均 潮差 (公分)	最大 潮差 (公分)	1/3 潮差 (公分)	1/10 潮差 (公分)	平均 週期 (時)	最大 週期 (時)	1/3 週期 (時)	1/10 週期 (時)	潮差 個數 (個)	平均 潮位 (公分)	最高 潮位 (公分)	最低 潮位 (公分)	水位 點數 (個)
1	2017/12	S													
2	2018/01	S													
3	2018/02	S													
4	2018/03	S													
5	2018/04	S													
6	2018/05	S													
7	2018/06	S													
8	2018/07	S													
9	2018/08	S													
10	2018/09	S													
11	2018/10	S	58	99	81	92	14.7	28.0	20.1	27.0	29	0	62	-69	647( 87%)
12	2018/11	S	67	107	89	105	19.0	27.0	25.9	27.0	27	0	78	-77	707( 98%)
13	2018/冬	S													
14	2018/春	S													
15	2018/夏	S													
16	2018/秋	S	62	107	85	99	16.8	28.0	25.3	27.0	56	0	78	-77	1354( 62%)
17	2018/年	S	62	107	85	99	16.8	28.0	25.3	27.0	56	0	78	-77	1354( 16%)

3-2-7



### 3.3 2018 年北端海域**主要測站 1**(修補後)與 **其他測站**(修補前)潮位歷線比較圖



# Tidal Level in North Seas of KLT0 at 2018

1 ○ 8 ● 15 ● 22 ●

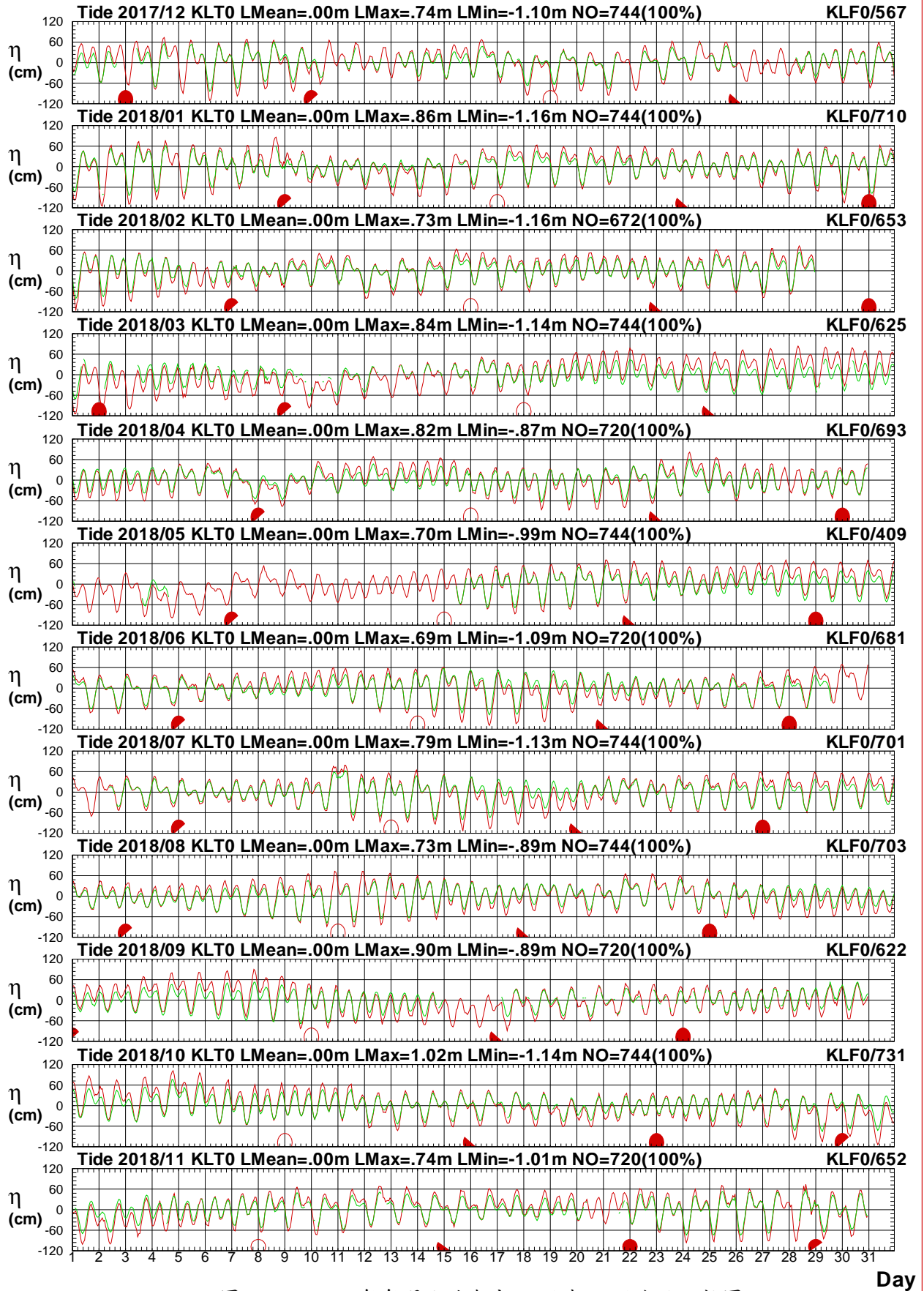


圖3.3.1 2018年每月北端海域 T 站與 F 站潮位比較圖

T17CKLT0.1HA T17CKLF0.1H0 T181KLT0.1HA T181KLF0.1H0 T182KLT0.1HA T182KLF0.1H0  
 T183KLT0.1HA T183KLF0.1H0 T184KLT0.1HA T184KLF0.1H0 T185KLT0.1HA T185KLF0.1H0

Institute of Harbor & Marine Technology



# Tidal Level in North Seas of KLT0 at 2018

1 ○ 8 ● 15 ● 22 ●

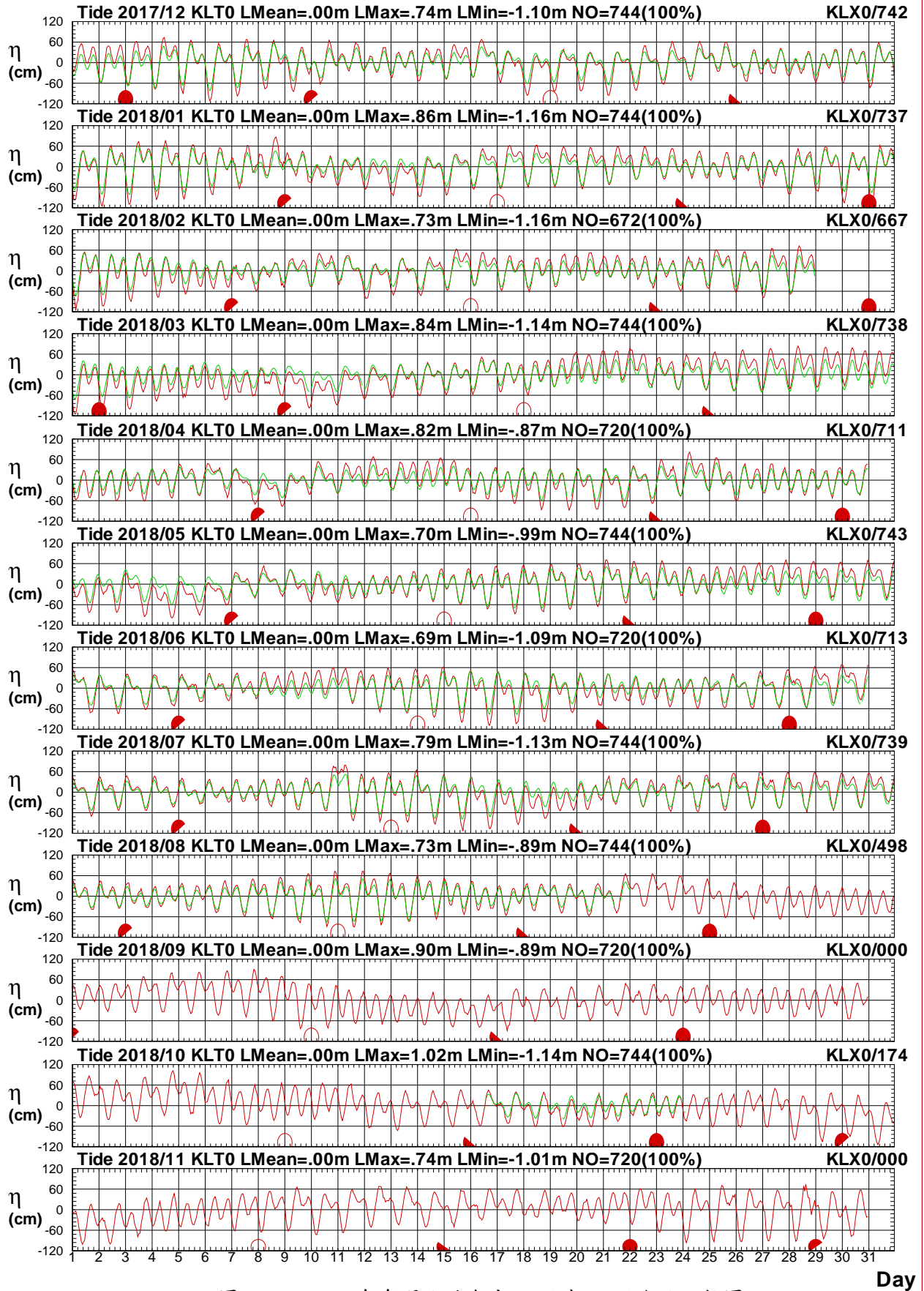


圖3.3.2 2018年每月北端海域 T 站與 X 站潮位比較圖

T17CKLT0.1HA T17CKLX0.1H0 T181KLT0.1HA T181KLX0.1H0 T182KLT0.1HA T182KLX0.1H0  
 T183KLT0.1HA T183KLX0.1H0 T184KLT0.1HA T184KLX0.1H0 T185KLT0.1HA T185KLX0.1H0

Institute of Harbor & Marine Technology

# Tidal Level in North Seas of KLT0 at 2018

1 ○ 8 ● 15 ● 22 ●

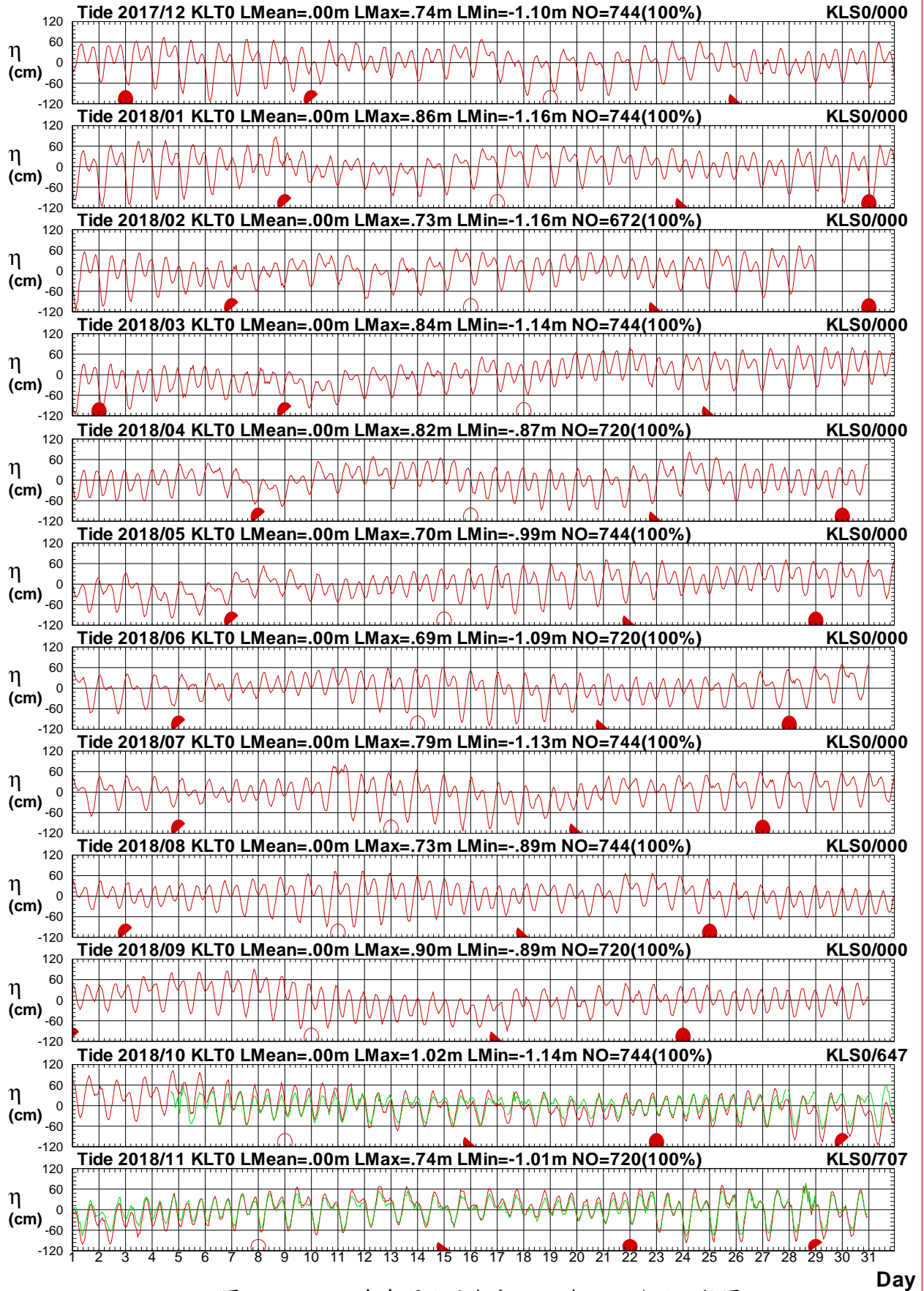


圖3.3.3 2018年每月北端海域 T 站與 S 站潮位比較圖

T17CKLT0.1HA T17CKLS0.1H0 T181KLT0.1HA T181KLS0.1H0 T182KLT0.1HA T182KLS0.1H0  
 T183KLT0.1HA T183KLS0.1H0 T184KLT0.1HA T184KLS0.1H0 T185KLT0.1HA T185KLS0.1H0

Institute of Harbor & Marine Technology



### 3.4 2018 年北端海域**主要測站 2**(修補後)與 **其他測站**(修補前)潮位歷線比較圖





# Tidal Level in North Seas of KLJ0 at 2018

1 ○ 8 ● 15 ● 22 ●

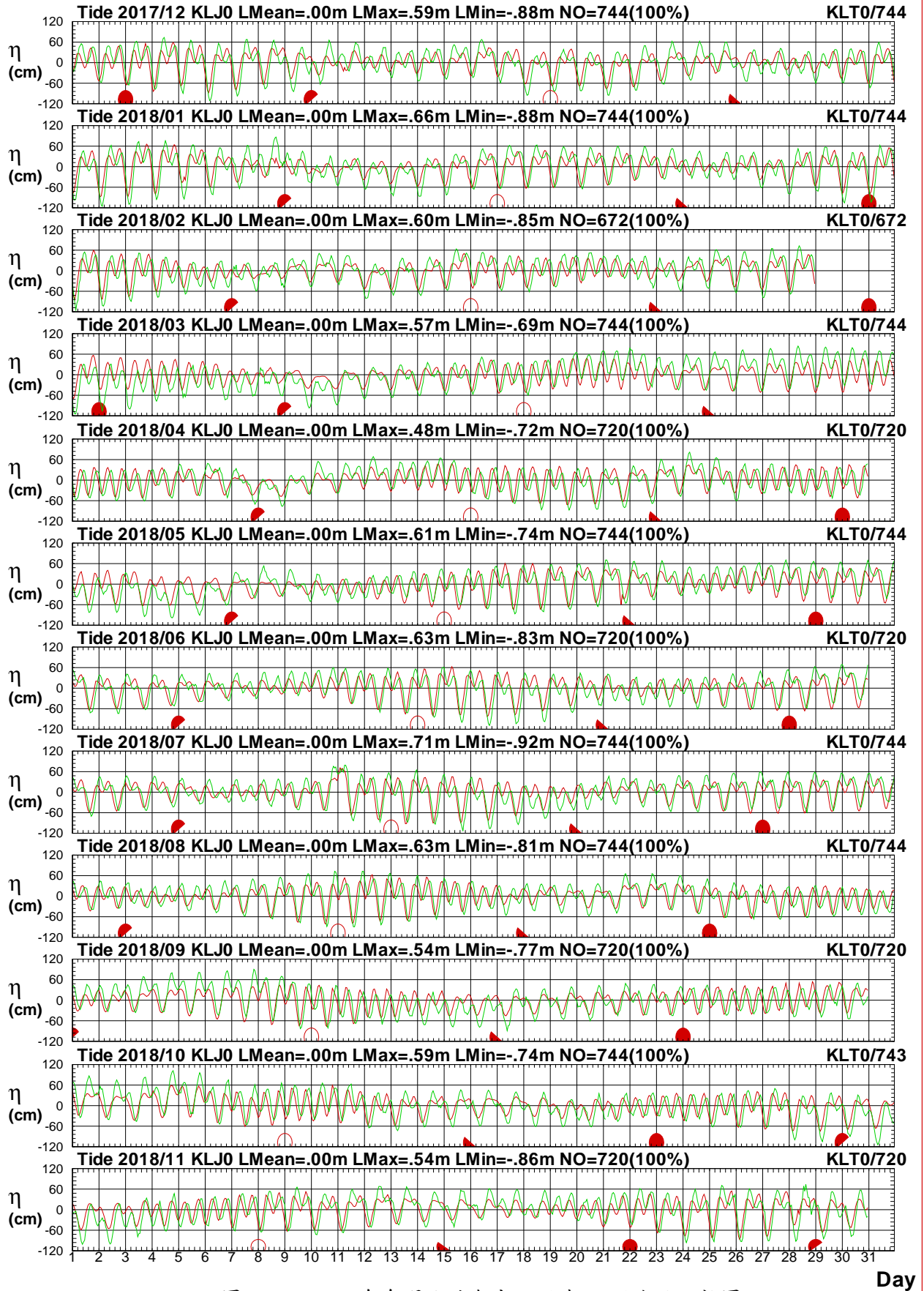


圖3.4.1 2018年每月北端海域 J 站與 T 站潮位比較圖

T17CKLJ0.1HA T17CKLT0.1H0 T181KLJ0.1HA T181KLT0.1H0 T182KLJ0.1HA T182KLT0.1H0  
 T183KLJ0.1HA T183KLT0.1H0 T184KLJ0.1HA T184KLT0.1H0 T185KLJ0.1HA T185KLT0.1H0

Institute of Harbor & Marine Technology

# Tidal Level in North Seas of KLJ0 at 2018

1 ○ 8 ● 15 ● 22 ●

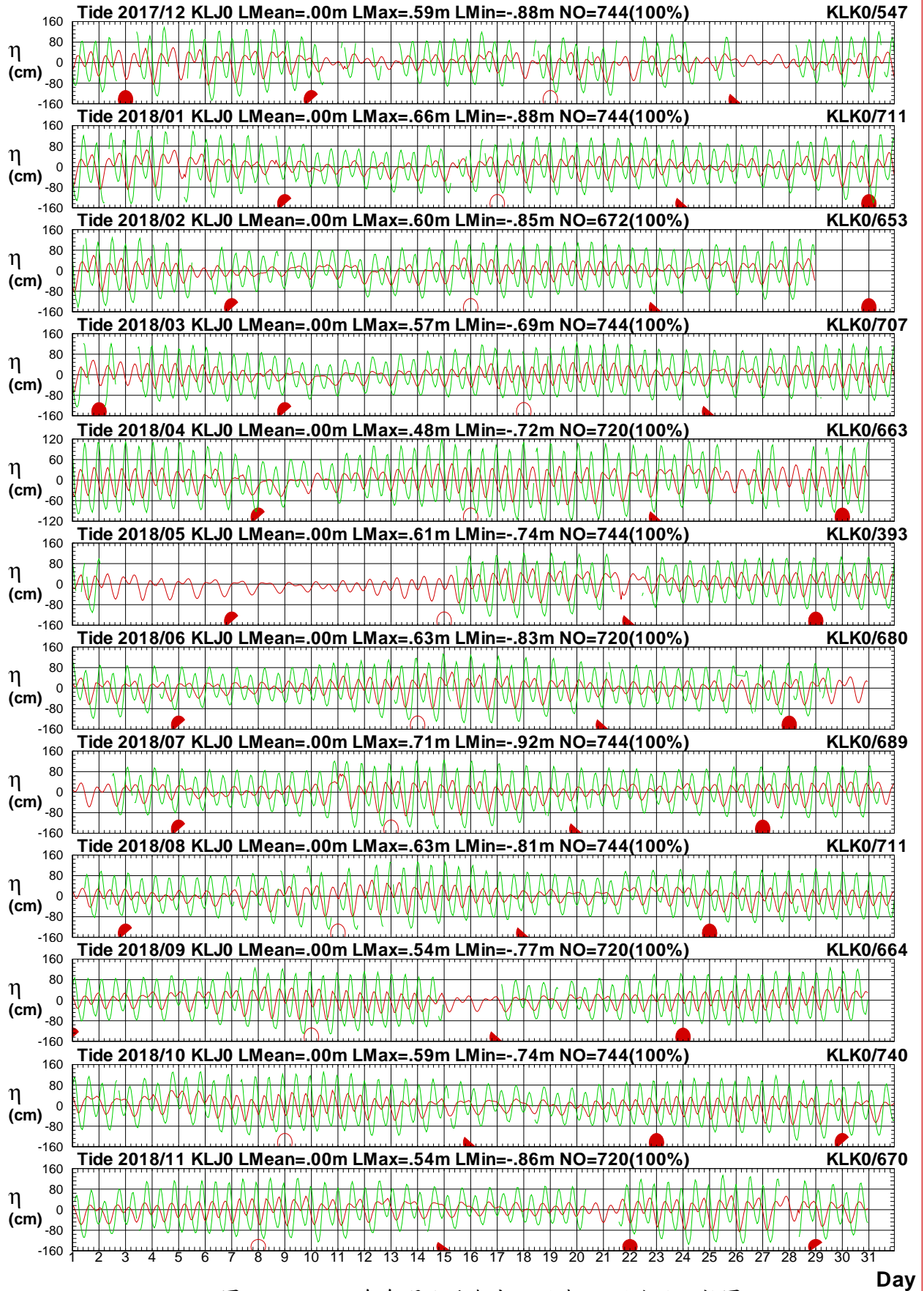


圖3.4.2 2018年每月北端海域 J 站與 K 站潮位比較圖

T17CKLJ0.1HA T17CKLK0.1H0 T181KLJ0.1HA T181KLK0.1H0 T182KLJ0.1HA T182KLK0.1H0  
 T183KLJ0.1HA T183KLK0.1H0 T184KLJ0.1HA T184KLK0.1H0 T185KLJ0.1HA T185KLK0.1H0

Institute of Harbor & Marine Technology

### 3.5 2018 年北端海域**主要測站 3**(修補後)與 **其他測站**(修補前)潮位歷線比較圖



# Tidal Level in North Seas of KLK0 at 2018

1 ○ 8 ● 15 ● 22 ●

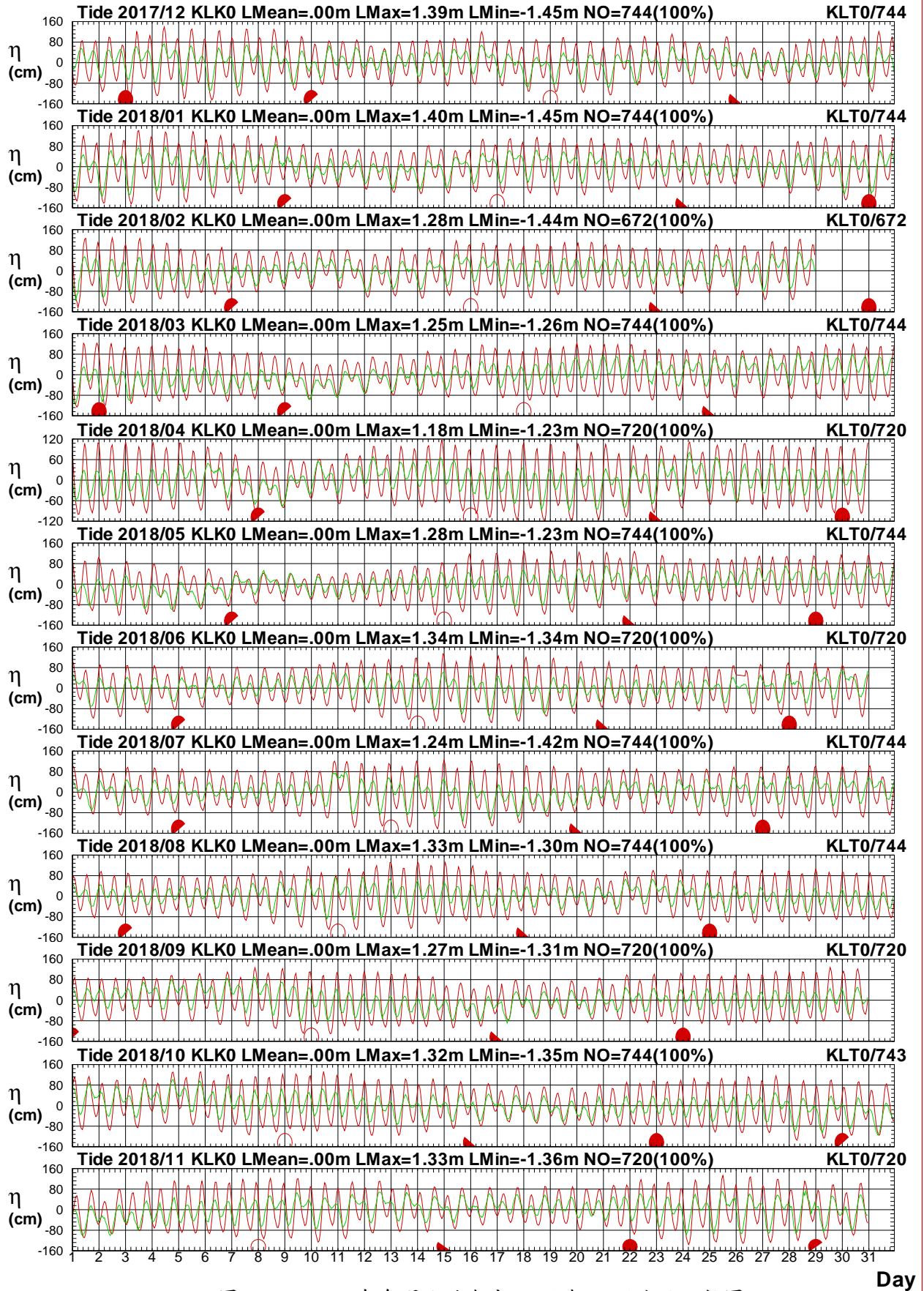


圖3.5.1 2018年每月北端海域 K 站與 T 站潮位比較圖

T17CKLK0.1HA T17CKLT0.1H0 T181KLK0.1HA T181KLT0.1H0 T182KLK0.1HA T182KLT0.1H0  
 T183KLK0.1HA T183KLT0.1H0 T184KLK0.1HA T184KLT0.1H0 T185KLK0.1HA T185KLT0.1H0

Institute of Harbor & Marine Technology



# Tidal Level in North Seas of KLK0 at 2018

1 ○ 8 ● 15 ● 22 ●

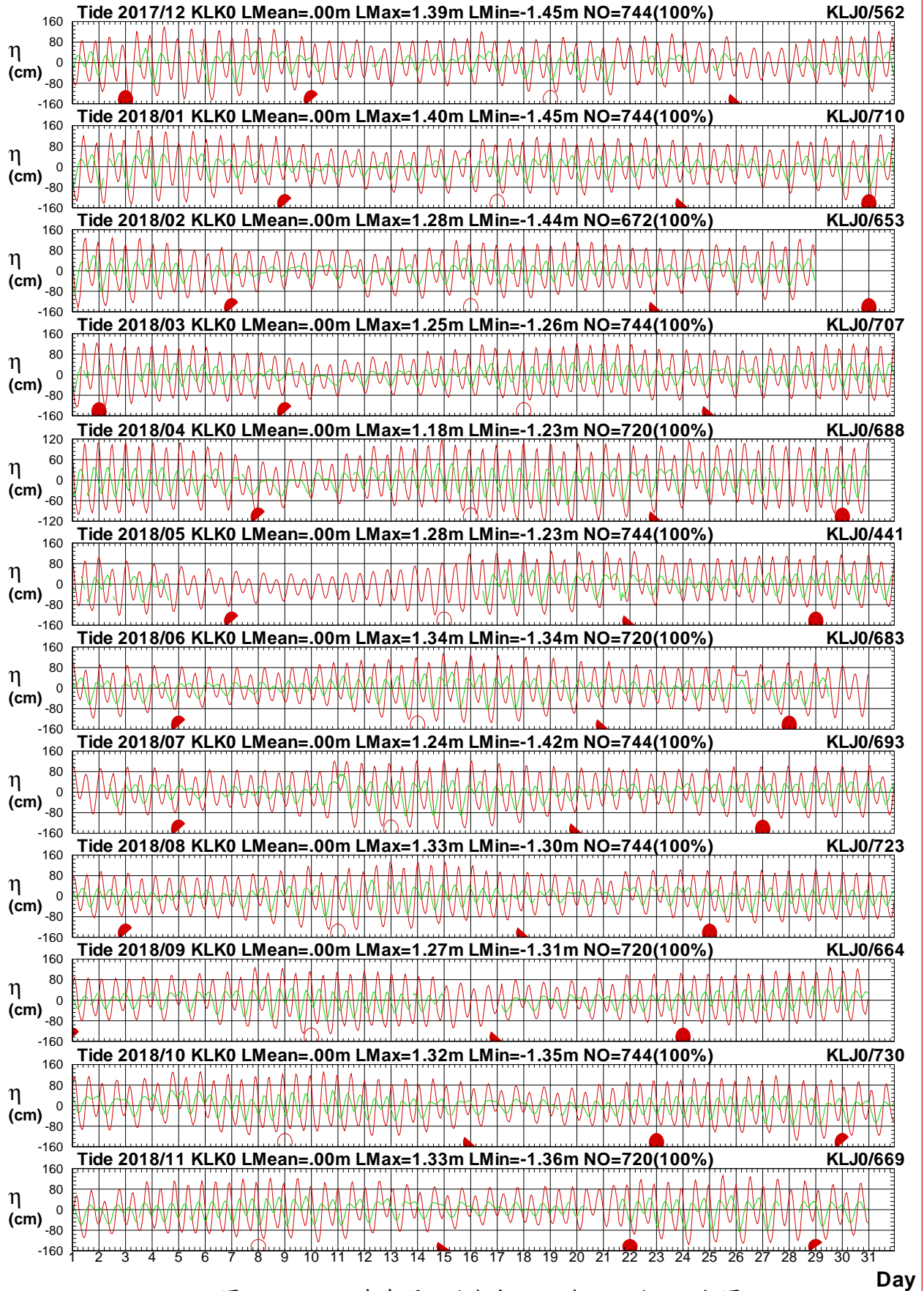


圖3.5.2 2018年每月北端海域 K 站與 J 站潮位比較圖

T17CKLK0.1HA T17CKLJ0.1H0 T181KLK0.1HA T181KLJ0.1H0 T182KLK0.1HA T182KLJ0.1H0  
 T183KLK0.1HA T183KLJ0.1H0 T184KLK0.1HA T184KLJ0.1H0 T185KLK0.1HA T185KLJ0.1H0

Institute of Harbor & Marine Technology

## 第四章 2018 年北端海域觀測海流資料年報

北端海域(富貴角~龍洞)海流之觀測包括測站 **X**、測站 **Y** 及測站 **R** 等 3 個測站(測站位置如第 0 章圖 CK1)。

本年報利用調和分析方法觀測海流可分解為：

(1)計算潮流(包括平均流)。

(2)計算殘(餘)流(或稱非潮流)。

### 4.1 2018 年北端海域觀測海流資料年報圖表

本章第 1 節風力年報資料處理之統計表包括：

1. 表 1.1.1a 2018 年各觀測站每月觀測海流資料記錄表。
2. 表 1.1.1b 2018 年各觀測站每月計算潮流資料記錄表。

本章第 2 節海流年報資料處理之統計表包括：

1. 2018 年各觀測站每月觀測流速及流向重要統計量統計表。
2. 2018 年各觀測站每月計算潮流流速及流向重要統計量統計表。
3. 2018 年各觀測站每月計算殘(餘)流流速及流向重要統計量統計表。

本章第 3 節海流年報資料處理之統計圖包括：

1. 2018 年各觀測站之觀測海流與計算潮流歷線比較圖。
2. 2018 年各觀測站之觀測海流與計算殘(餘)流歷線比較圖。

本章第 4 節海流年報資料處理之統計圖包括:2018 年各觀測站之觀測海流、計算潮流及計算殘流等 3 個向量分佈圖。

本章第 5 節海流年報資料處理之統計圖包括:2018 年各觀測站之觀測海流、計算潮流及計算殘流等 3 個向量行進圖。

表4.1.1a 2018年每月北端海域各測站觀測海流資料紀錄表

海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域
年月/測站	X	Y	R									
2017/12月	742(99.7%)	744(100%)	735(98.8%)	*	*	*	*	*	*	*	*	*
2018/ 1月	737(99.1%)	462(62.1%)	722(97.0%)	*	*	*	*	*	*	*	*	*
2018/ 2月	667(99.3%)	301(44.8%)	656(97.6%)	*	*	*	*	*	*	*	*	*
2018/ 3月	738(99.2%)	606(81.5%)	617(82.9%)	*	*	*	*	*	*	*	*	*
2018/ 4月	711(98.8%)	672(93.3%)	649(90.1%)	*	*	*	*	*	*	*	*	*
2018/ 5月	743(99.9%)	718(96.5%)	593(79.7%)	*	*	*	*	*	*	*	*	*
2018/ 6月	713(99.0%)	720(100%)	696(96.7%)	*	*	*	*	*	*	*	*	*
2018/ 7月	739(99.3%)	739(99.3%)	619(83.2%)	*	*	*	*	*	*	*	*	*
2018/ 8月	498(66.9%)	743(99.9%)	727(97.7%)	*	*	*	*	*	*	*	*	*
2018/ 9月	*	719(99.9%)	712(98.9%)	*	*	*	*	*	*	*	*	*
2018/10月	174(23.4%)	742(99.7%)	668(89.8%)	*	*	*	*	*	*	*	*	*
2018/11月	*	718(99.7%)	718(99.7%)	*	*	*	*	*	*	*	*	*
2018/冬季	2146(99.4%)	1507(69.8%)	2113(97.8%)	*	*	*	*	*	*	*	*	*
2018/春季	2192(99.3%)	1996(90.4%)	1859(84.2%)	*	*	*	*	*	*	*	*	*
2018/夏季	1950(88.3%)	2202(99.7%)	2042(92.5%)	*	*	*	*	*	*	*	*	*
2018/秋季	174( 8.0%)	2179(99.8%)	2098(96.1%)	*	*	*	*	*	*	*	*	*
2018/整年	6462(73.8%)	7884(90.0%)	8112(92.6%)	*	*	*	*	*	*	*	*	*
起始年月	2017/12	2017/12	2017/12	*	*	*	*	*	*	*	*	*
結束年月	2018/10	2018/11	2018/11	*	*	*	*	*	*	*	*	*

4-1-3

表4.1.1b 2018年每月北端海域計算潮流各測站資料紀錄表

海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域	北端海域
年月/測站	X	Y	R									
2017/12月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 1月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 2月	672(100%)	672(100%)	672(100%)	*	*	*	*	*	*	*	*	*
2018/ 3月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 4月	720(100%)	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*
2018/ 5月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 6月	720(100%)	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*
2018/ 7月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 8月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 9月	720(100%)	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*
2018/10月	744(100%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/11月	720(100%)	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*
2018/冬季	2160(100%)	2160(100%)	2160(100%)	*	*	*	*	*	*	*	*	*
2018/春季	2208(100%)	2208(100%)	2208(100%)	*	*	*	*	*	*	*	*	*
2018/夏季	2208(100%)	2208(100%)	2208(100%)	*	*	*	*	*	*	*	*	*
2018/秋季	2184(100%)	2184(100%)	2184(100%)	*	*	*	*	*	*	*	*	*
2018/整年	8760(100%)	8760(100%)	8760(100%)	*	*	*	*	*	*	*	*	*
起始年月	2017/12	2017/12	2017/12	*	*	*	*	*	*	*	*	*
結束年月	2018/11	2018/11	2018/11	*	*	*	*	*	*	*	*	*

4-14



## 4.2 2018 年北端海域各測站觀測海流與 計算潮流(殘流)統計量統計表



表 4.2.1a 2018 年北端海域 X 站觀測流速及流向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	流速 平均值 (cm/s)	平均流 流速/流向 (cm/s)/(來向)	最大流 流速/流向 (cm/s)/(來向)	1/2節流 <25.7 (%)	1節流 ~51.4 (%)	2節流 ~103 (%)	大流 >103 (%)	流向 N~E (%)	流向 E~S (%)	流向 S~W (%)	流向 W~N (%)	主要流向 方向/百分比
1	2017/12	742(100%)	31.6	9.9/ENE	91.5/ENE	40.0	47.8	12.1	.0	46.4	16.3	20.6	16.7	ENE/21.0%
2	2018/01	737( 99%)	32.3	12.6/ENE	101.8/E	40.4	45.7	13.8	.0	47.1	18.2	18.0	16.7	ENE/22.9%
3	2018/02	667( 99%)	31.7	12.6/ENE	108.2/ENE	44.7	41.8	13.2	.3	46.8	18.7	18.7	15.7	ENE/24.1%
4	2018/03	738( 99%)	32.2	10.7/ENE	94.4/ENE	40.8	45.8	13.4	.0	43.1	19.4	19.2	18.3	ENE/20.5%
5	2018/04	711( 99%)	29.7	7.6/ENE	93.2/ENE	42.1	49.1	8.9	.0	44.3	16.6	23.3	15.8	ENE/22.1%
6	2018/05	743(100%)	29.9	6.4/ENE	84.5/E	40.6	52.1	7.3	.0	42.7	17.9	26.4	13.1	ENE/22.5%
7	2018/06	713( 99%)	26.5	6.4/ENE	73.0/ENE	51.9	43.5	4.6	.0	40.8	21.0	25.0	13.2	E /17.8%
8	2018/07	739( 99%)	26.1	6.6/ENE	87.1/E	52.2	44.0	3.8	.0	42.4	19.6	21.7	16.4	ENE/17.2%
9	2018/08	498( 67%)	22.3	6.4/ENE	66.8/ENE	64.9	33.1	2.0	.0	43.4	18.5	18.5	19.7	ENE/18.1%
10	2018/09													
11	2018/10	174( 23%)	18.9	8.2/ESE	52.2/ENE	78.2	21.3	.6	.0	28.2	37.9	23.6	10.3	ENE/14.4%
12	2018/11													
13	2018/冬	2146( 99%)	31.9	11.7/ENE	108.2/ENE	41.6	45.2	13.0	.1	46.7	17.7	19.2	16.4	ENE/22.6%
14	2018/春	2192( 99%)	30.6	8.2/ENE	94.4/ENE	41.1	49.0	9.9	.0	43.3	18.0	23.0	15.7	ENE/21.7%
15	2018/夏	1950( 88%)	25.3	6.4/ENE	87.1/E	55.3	41.0	3.6	.0	42.1	19.8	22.1	16.1	ENE/16.8%
16	2018/秋	174( 8%)	18.9	8.2/ESE	52.2/ENE	78.2	21.3	.6	.0	28.2	37.9	23.6	10.3	ENE/14.4%
17	2018/年	6462( 74%)	29.1	8.8/ENE	108.2/ENE	46.6	44.6	8.8	.0	43.7	19.0	21.4	15.9	ENE/20.3%

4-2-1

表4.2.1b 2018年北端海域 X 站潮流流速及流向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	流速	平均流	最大流	1/2節流	1節流	2節流	大流	流向	流向	流向	流向	主要流向 方向/百分比
			平均值 (cm/s)	流速/流向 (cm/s)/(來向)	流速/流向 (cm/s)/(來向)	<25.7 (%)	~51.4 (%)	~103 (%)	>103 (%)	N~E (%)	E~S (%)	S~W (%)	W~N (%)	
1	2017/12	744(100%)	24.1	8.8/ENE	60.0/ENE	58.1	40.1	1.9	.0	45.2	12.9	27.7	14.2	ENE/23.7%
2	2018/01	744(100%)	24.5	8.7/ENE	60.8/ENE	57.7	39.4	3.0	.0	45.7	11.7	29.0	13.6	ENE/23.3%
3	2018/02	672(100%)	23.7	8.8/ENE	60.8/ENE	59.7	37.9	2.4	.0	45.8	13.2	27.2	13.7	ENE/24.0%
4	2018/03	744(100%)	24.4	8.7/ENE	59.0/ENE	57.0	40.2	2.8	.0	45.2	12.5	28.6	13.7	ENE/22.3%
5	2018/04	720(100%)	24.0	8.7/ENE	54.8/ENE	58.2	39.6	2.2	.0	45.7	12.8	27.8	13.8	ENE/23.9%
6	2018/05	744(100%)	23.8	8.7/ENE	56.9/ENE	58.6	39.8	1.6	.0	46.1	12.5	26.7	14.7	ENE/23.1%
7	2018/06	720(100%)	23.5	8.8/ENE	60.1/ENE	60.1	37.8	2.1	.0	46.1	13.2	27.6	13.1	ENE/23.3%
8	2018/07	744(100%)	23.5	8.7/ENE	60.9/ENE	60.1	37.4	2.6	.0	45.3	13.4	26.3	14.9	ENE/23.7%
9	2018/08	744(100%)	23.6	8.8/ENE	59.7/ENE	59.9	38.2	1.9	.0	45.3	12.9	27.7	14.1	ENE/23.5%
10	2018/09	720(100%)	23.8	8.8/ENE	58.6/ENE	58.6	38.9	2.5	.0	46.1	12.4	27.4	14.2	ENE/23.6%
11	2018/10	744(100%)	23.9	8.8/ENE	56.3/ENE	58.6	39.2	2.2	.0	45.3	13.3	27.4	14.0	ENE/23.3%
12	2018/11	720(100%)	23.9	8.8/ENE	56.5/ENE	57.6	40.3	2.1	.0	45.0	13.2	27.4	14.4	ENE/23.9%
13	2018/冬	2160(100%)	24.1	8.8/ENE	60.8/ENE	58.4	39.2	2.4	.0	45.6	12.6	28.0	13.8	ENE/23.6%
14	2018/春	2208(100%)	24.1	8.7/ENE	59.0/ENE	57.9	39.9	2.2	.0	45.7	12.6	27.7	14.0	ENE/23.1%
15	2018/夏	2208(100%)	23.5	8.8/ENE	60.9/ENE	60.1	37.8	2.2	.0	45.6	13.2	27.2	14.0	ENE/23.5%
16	2018/秋	2184(100%)	23.9	8.8/ENE	58.6/ENE	58.3	39.5	2.2	.0	45.5	13.0	27.4	14.2	ENE/23.6%
17	2018/年	8760(100%)	23.9	8.8/ENE	60.9/ENE	58.7	39.1	2.3	.0	45.6	12.8	27.6	14.0	ENE/23.4%

4-2-2

表4.2.1c 2018年北端海域 X 站殘流流速及流向重要統計量統計表

序號	日期 (年/月)	觀測 點數	流速 平均值 (cm/s)	平均流 流速/流向 (cm/s)/(來向)	最大流 流速/流向 (cm/s)/(來向)	1/2節流 <25.7 (%)	1節流 ~51.4 (%)	2節流 ~103 (%)	大流 >103 (%)	流向 N~E (%)	流向 E~S (%)	流向 S~W (%)	流向 W~N (%)	主要流向 方向/百分比
1	2017/12	742(100%)	17.6	1.5/NNE	52.9/NW	79.5	20.1	.4	.0	31.9	19.8	22.9	25.3	ENE/ 9.8%
2	2018/01	737( 99%)	16.5	4.0/ENE	55.3/NNE	83.0	16.4	.5	.0	32.6	25.1	17.6	24.7	ENE/11.1%
3	2018/02	667( 99%)	16.0	3.8/ENE	62.3/ENE	84.7	15.0	.3	.0	33.6	25.5	20.5	20.4	ENE/10.6%
4	2018/03	738( 99%)	16.8	2.0/ENE	63.8/SW	82.1	17.6	.3	.0	30.4	23.4	20.3	25.9	ENE/ 9.1%
5	2018/04	711( 99%)	15.0	1.1/W	56.2/WSW	88.3	11.5	.1	.0	24.1	21.9	29.0	25.0	WSW/ 9.6%
6	2018/05	743(100%)	15.4	2.4/SW	60.3/WSW	87.9	11.7	.4	.0	24.0	19.5	33.9	22.6	WSW/13.7%
7	2018/06	713( 99%)	14.2	2.7/WSW	46.8/N	90.5	9.5	.0	.0	22.6	18.8	34.9	23.7	WSW/12.5%
8	2018/07	739( 99%)	15.3	2.2/SW	72.3/W	88.4	11.1	.5	.0	24.2	21.7	32.3	21.8	W /11.5%
9	2018/08	498( 67%)	14.4	3.0/W	63.1/W	90.6	8.0	1.4	.0	25.3	17.9	31.9	24.9	W /12.7%
10	2018/09													
11	2018/10	174( 23%)	13.0	7.0/S	51.1/SSE	90.8	9.2	.0	.0	10.9	32.2	41.4	15.5	S /12.6%
12	2018/11													
13	2018/冬	2146( 99%)	16.7	3.0/ENE	62.3/ENE	82.3	17.2	.4	.0	32.7	23.4	20.4	23.6	ENE/10.5%
14	2018/春	2192( 99%)	15.7	.5/WSW	63.8/SW	86.1	13.6	.3	.0	26.1	21.6	27.7	24.5	WSW/ 9.5%
15	2018/夏	1950( 88%)	14.7	2.5/WSW	72.3/W	89.7	9.7	.6	.0	23.9	19.6	33.2	23.3	WSW/11.4%
16	2018/秋	174( 8%)	13.0	7.0/S	51.1/SSE	90.8	9.2	.0	.0	10.9	32.2	41.4	15.5	S /12.6%
17	2018/年	6462( 74%)	15.7	.0/WSW	72.3/W	86.1	13.5	.4	.0	27.2	21.9	27.3	23.6	WSW/ 8.9%

4-2-3



表 4.2.2a 2018 年北端海域 Y 站觀測流速及流向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	流速 平均值 (cm/s)	平均流 流速/流向 (cm/s)/(來向)	最大流 流速/流向 (cm/s)/(來向)	1/2節流 <25.7 (%)	1節流 ~51.4 (%)	2節流 ~103 (%)	大流 >103 (%)	流向 N~E (%)	流向 E~S (%)	流向 S~W (%)	流向 W~N (%)	主要流向 方向/百分比
1	2017/12	744(100%)	28.1	13.8/N	85.0/NNE	48.1	42.7	9.1	.0	46.2	2.8	30.1	20.8	NNE/26.3%
2	2018/01	462( 62%)	28.2	17.1/N	73.0/NNE	47.4	43.1	9.5	.0	48.9	2.8	25.5	22.7	NNE/33.3%
3	2018/02	301( 45%)	23.5	13.4/N	71.0/N	57.1	37.9	5.0	.0	52.5	2.0	27.9	17.6	NNE/32.2%
4	2018/03	606( 82%)	13.4	7.5/N	53.0/NNE	86.8	12.9	.3	.0	45.2	6.8	25.2	22.8	NNE/20.5%
5	2018/04	672( 93%)	10.9	5.9/N	47.0/NNE	90.9	9.1	.0	.0	44.8	9.1	23.2	22.9	NNE/20.1%
6	2018/05	718( 97%)	17.4	10.2/N	76.0/NNE	75.9	21.9	2.2	.0	49.6	6.7	23.8	19.9	NNE/29.5%
7	2018/06	720(100%)	23.6	15.9/N	74.0/N	59.9	35.7	4.4	.0	57.1	4.4	21.4	17.1	NNE/36.4%
8	2018/07	739( 99%)	9.7	5.4/N	68.0/NNE	91.5	7.6	.9	.0	30.0	10.1	21.9	37.9	N /16.5%
9	2018/08	743(100%)	6.3	2.3/NNW	35.0/NW	98.7	1.3	.0	.0	28.5	14.8	24.8	31.9	NNE/11.0%
10	2018/09	719(100%)	13.2	5.0/NNE	75.0/N	87.8	11.5	.7	.0	43.9	12.5	24.9	18.6	NNE/17.5%
11	2018/10	742(100%)	16.3	9.1/N	64.0/NNE	81.0	17.3	1.8	.0	46.9	8.0	24.0	21.2	NNE/23.9%
12	2018/11	718(100%)	14.4	8.0/N	69.0/N	85.9	13.6	.4	.0	46.5	8.1	20.1	25.3	NNE/22.3%
13	2018/冬	1507( 70%)	27.2	14.8/N	85.0/NNE	49.7	41.9	8.4	.0	48.3	2.7	28.3	20.8	NNE/29.7%
14	2018/春	1996( 90%)	14.0	7.9/N	76.0/NNE	84.3	14.8	.9	.0	46.6	7.5	24.0	21.8	NNE/23.6%
15	2018/夏	2202(100%)	13.1	7.7/N	74.0/N	83.6	14.7	1.8	.0	38.4	9.9	22.7	29.1	NNE/20.1%
16	2018/秋	2179(100%)	14.7	7.4/N	75.0/N	84.9	14.2	1.0	.0	45.8	9.5	23.0	21.7	NNE/21.2%
17	2018/年	7884( 90%)	16.5	9.0/N	85.0/NNE	77.6	19.8	2.6	.0	44.4	7.8	24.2	23.6	NNE/23.1%

4-2-4

表4.2.2b 2018年北端海域 Y 站潮流流速及流向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	流速 平均值 (cm/s)	平均流 流速/流向 (cm/s)/(來向)	最大流 流速/流向 (cm/s)/(來向)	1/2節流 <25.7 (%)	1節流 ~51.4 (%)	2節流 ~103 (%)	大流 >103 (%)	流向 N~E (%)	流向 E~S (%)	流向 S~W (%)	流向 W~N (%)	主要流向 方向/百分比
1	2017/12	744(100%)	9.4	9.0/N	19.0/NNE	100.0	.0	.0	.0	60.2	.0	.8	39.0	N /45.7%
2	2018/01	744(100%)	9.4	9.0/N	19.5/NNE	100.0	.0	.0	.0	59.5	.0	1.3	39.1	N /44.1%
3	2018/02	672(100%)	9.4	9.0/N	19.6/NNE	100.0	.0	.0	.0	59.4	.0	1.6	39.0	N /41.1%
4	2018/03	744(100%)	9.5	9.0/N	19.9/NNE	100.0	.0	.0	.0	58.6	.0	3.1	38.3	N /40.7%
5	2018/04	720(100%)	9.4	9.0/N	19.8/NNE	100.0	.0	.0	.0	58.6	.0	2.1	39.3	N /42.6%
6	2018/05	744(100%)	9.4	9.0/N	19.5/NNE	100.0	.0	.0	.0	59.9	.0	1.5	38.6	N /45.4%
7	2018/06	720(100%)	9.4	9.0/N	18.8/NNE	100.0	.0	.0	.0	60.7	.0	.6	38.8	N /47.4%
8	2018/07	744(100%)	9.4	9.0/N	19.3/NNE	100.0	.0	.0	.0	60.5	.0	.9	38.6	N /47.2%
9	2018/08	744(100%)	9.4	9.0/N	19.7/NNE	100.0	.0	.0	.0	60.2	.0	1.5	38.3	N /47.0%
10	2018/09	720(100%)	9.4	9.0/N	19.7/NNE	100.0	.0	.0	.0	59.4	.0	1.8	38.8	N /43.1%
11	2018/10	744(100%)	9.4	9.0/N	20.0/NNE	100.0	.0	.0	.0	59.0	.0	2.2	38.8	N /43.1%
12	2018/11	720(100%)	9.4	9.0/N	19.9/NNE	100.0	.0	.0	.0	59.3	.0	2.2	38.5	N /45.4%
13	2018/冬	2160(100%)	9.4	9.0/N	19.6/NNE	100.0	.0	.0	.0	59.7	.0	1.3	39.0	N /43.7%
14	2018/春	2208(100%)	9.4	9.0/N	19.9/NNE	100.0	.0	.0	.0	59.1	.0	2.2	38.7	N /42.9%
15	2018/夏	2208(100%)	9.4	9.0/N	19.7/NNE	100.0	.0	.0	.0	60.5	.0	1.0	38.5	N /47.2%
16	2018/秋	2184(100%)	9.4	9.0/N	20.0/NNE	100.0	.0	.0	.0	59.2	.0	2.1	38.7	N /43.9%
17	2018/年	8760(100%)	9.4	9.0/N	20.0/NNE	100.0	.0	.0	.0	59.6	.0	1.6	38.7	N /44.4%

4-2-5

表4.2.2c 2018年北端海域 Y 站殘流流速及流向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	流速 平均值 (cm/s)	平均流 流速/流向 (cm/s)/(來向)	最大流 流速/流向 (cm/s)/(來向)	1/2節流 <25.7 (%)	1節流 ~51.4 (%)	2節流 ~103 (%)	大流 >103 (%)	流向 N~E (%)	流向 E~S (%)	流向 S~W (%)	流向 W~N (%)	主要流向 方向/百分比
1	2017/12	744(100%)	26.2	5.0/NNW	81.0/SW	52.7	41.4	5.9	.0	39.9	6.3	36.8	16.9	NNE/21.6%
2	2018/01	462( 62%)	25.4	8.2/N	72.4/NNE	55.6	39.2	5.2	.0	43.1	5.2	35.9	15.8	NNE/28.1%
3	2018/02	301( 45%)	22.4	4.4/N	71.4/NNE	65.8	30.2	4.0	.0	46.2	6.3	37.9	9.6	NNE/25.2%
4	2018/03	606( 82%)	14.2	1.8/SSE	53.5/NE	91.6	8.1	.3	.0	32.2	14.5	46.4	6.9	SSW/23.1%
5	2018/04	672( 93%)	12.8	3.3/S	44.5/NNE	93.6	6.4	.0	.0	29.0	17.4	49.4	4.2	SSW/25.0%
6	2018/05	718( 97%)	17.3	1.2/NNE	74.0/NNE	82.0	16.9	1.1	.0	37.5	11.8	41.4	9.3	SSW/20.1%
7	2018/06	720(100%)	21.9	7.0/NNE	61.4/NNE	65.8	33.1	1.1	.0	46.8	9.6	33.6	10.0	NNE/28.5%
8	2018/07	739( 99%)	12.4	3.8/SSW	66.8/NNE	93.6	5.5	.8	.0	18.0	18.0	52.6	11.4	SSW/25.8%
9	2018/08	743(100%)	10.5	6.9/SSW	30.6/SSW	99.2	.8	.0	.0	11.2	26.8	55.2	6.9	S /27.7%
10	2018/09	719(100%)	15.3	4.1/S	66.3/SW	86.8	12.5	.7	.0	27.8	22.4	42.6	7.2	SSW/20.6%
11	2018/10	742(100%)	16.5	.6/E	58.8/NNE	83.7	15.5	.8	.0	35.4	14.7	39.6	10.2	SSW/19.0%
12	2018/11	718(100%)	14.8	1.0/S	56.8/NNW	88.3	11.6	.1	.0	31.6	17.0	40.1	11.3	SSW/17.8%
13	2018/冬	1507( 70%)	25.2	5.8/N	81.0/SW	56.2	38.5	5.3	.0	42.1	6.0	36.8	15.1	NNE/24.4%
14	2018/春	1996( 90%)	14.8	1.3/SSE	74.0/NNE	88.8	10.7	.5	.0	33.0	14.5	45.6	6.9	SSW/22.6%
15	2018/夏	2202(100%)	14.8	1.3/S	66.8/NNE	86.4	12.9	.6	.0	25.1	18.2	47.3	9.4	SSW/22.3%
16	2018/秋	2179(100%)	15.5	1.7/S	66.3/SW	86.2	13.2	.6	.0	31.7	18.0	40.8	9.6	SSW/19.1%
17	2018/年	7884( 90%)	17.0	.0/SSW	81.0/SW	81.2	17.3	1.5	.0	32.2	14.9	43.0	9.9	SSW/20.5%

4-2-6

表 4.2.3a 2018 年北端海域 R 站觀測流速及流向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	流速 平均值 (cm/s)	平均流 流速/流向 (cm/s)/(來向)	最大流 流速/流向 (cm/s)/(來向)	1/2節流 <25.7 (%)	1節流 ~51.4 (%)	2節流 ~103 (%)	大流 >103 (%)	流向 N~E (%)	流向 E~S (%)	流向 S~W (%)	流向 W~N (%)	主要流向 方向/百分比
1	2017/12	735( 99%)	74.8	21.5/ENE	181.0/E	11.6	20.0	43.0	25.4	44.4	15.5	19.2	21.0	ENE/23.0%
2	2018/01	722( 97%)	73.1	18.2/ENE	168.0/ENE	9.4	22.4	44.3	23.8	42.5	15.7	23.1	18.7	ENE/23.8%
3	2018/02	656( 98%)	73.8	18.3/ENE	175.0/ENE	11.4	19.2	45.6	23.8	41.0	15.7	22.6	20.7	W /22.9%
4	2018/03	617( 83%)	68.1	16.9/ENE	164.0/ENE	15.2	24.0	37.3	23.5	37.8	19.6	24.1	18.5	W /21.2%
5	2018/04	649( 90%)	69.4	18.2/ENE	164.0/ENE	13.3	24.0	41.0	21.7	40.2	17.6	22.7	19.6	W /21.4%
6	2018/05	593( 80%)	61.8	11.6/ENE	161.0/E	16.9	27.2	41.0	15.0	37.4	18.2	24.6	19.7	W /20.4%
7	2018/06	696( 97%)	69.6	25.7/ENE	179.0/E	15.9	22.1	38.8	23.1	46.4	14.9	19.3	19.4	ENE/24.6%
8	2018/07	619( 83%)	67.4	22.1/ENE	203.0/ENE	16.6	27.9	34.1	21.3	42.3	16.5	20.2	21.0	E /24.6%
9	2018/08	727( 98%)	89.4	35.7/ENE	226.0/E	11.6	16.4	33.6	38.5	48.3	11.0	25.4	15.3	E /33.1%
10	2018/09	712( 99%)	90.7	36.0/ENE	219.0/ENE	10.8	15.7	34.8	38.6	45.8	13.8	23.5	17.0	E /31.0%
11	2018/10	668( 90%)	86.9	31.7/ENE	212.0/E	10.2	17.5	35.6	36.7	49.3	11.1	23.8	15.9	E /29.0%
12	2018/11	718(100%)	70.6	20.2/ENE	167.0/ENE	11.3	21.7	47.4	19.6	45.7	14.1	29.4	10.9	E /20.1%
13	2018/冬	2113( 98%)	73.9	19.4/ENE	181.0/E	10.8	20.6	44.2	24.4	42.7	15.6	21.6	20.1	ENE/22.7%
14	2018/春	1859( 84%)	66.6	15.7/ENE	164.0/ENE	15.1	25.0	39.8	20.2	38.5	18.5	23.8	19.3	W /21.0%
15	2018/夏	2042( 93%)	76.0	28.1/ENE	226.0/E	14.6	21.8	35.5	28.1	45.8	14.0	21.7	18.4	E /26.3%
16	2018/秋	2098( 96%)	82.6	29.2/ENE	219.0/ENE	10.8	18.4	39.4	31.5	46.9	13.0	25.6	14.5	E /26.6%
17	2018/年	8112( 93%)	75.0	23.1/ENE	226.0/E	12.7	21.3	39.8	26.2	43.6	15.2	23.2	18.0	E /22.4%

4-2-7

表 4.2.3b 2018 年北端海域 R 站潮流流速及流向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	流速	平均流	最大流	1/2節流	1節流	2節流	大流	流向	流向	流向	流向	主要流向 方向/百分比
			平均值 (cm/s)	流速/流向 (cm/s)/(來向)	流速/流向 (cm/s)/(來向)	<25.7 (%)	~51.4 (%)	~103 (%)	>103 (%)	N~E (%)	E~S (%)	S~W (%)	W~N (%)	
1	2017/12	744(100%)	39.6	23.1/ENE	96.8/ENE	35.5	32.7	31.9	.0	62.6	.8	12.1	24.5	ENE/32.4%
2	2018/01	744(100%)	40.3	23.1/ENE	99.1/ENE	35.3	31.5	33.2	.0	62.5	.9	11.4	25.1	ENE/31.5%
3	2018/02	672(100%)	39.4	23.2/ENE	100.3/ENE	37.4	29.8	32.9	.0	62.6	.9	10.1	26.3	ENE/32.1%
4	2018/03	744(100%)	40.6	23.1/ENE	101.2/E	36.2	29.8	34.0	.0	62.0	.9	12.9	24.2	ENE/32.1%
5	2018/04	720(100%)	40.2	23.2/ENE	101.3/ENE	35.7	31.1	33.2	.0	62.1	1.3	12.2	24.4	ENE/32.5%
6	2018/05	744(100%)	40.2	23.2/ENE	96.3/E	35.2	32.9	31.9	.0	63.4	.7	12.8	23.1	ENE/34.1%
7	2018/06	720(100%)	39.5	23.2/ENE	93.6/E	36.0	34.2	29.9	.0	62.9	1.3	11.4	24.4	ENE/34.0%
8	2018/07	744(100%)	39.2	23.2/ENE	97.4/ENE	35.8	33.3	30.9	.0	63.0	.7	10.8	25.5	ENE/32.7%
9	2018/08	744(100%)	39.0	23.2/ENE	99.9/E	37.1	31.2	31.7	.0	63.8	.4	9.5	26.2	ENE/33.2%
10	2018/09	720(100%)	39.3	23.2/ENE	101.9/ENE	37.6	29.6	32.8	.0	63.3	.3	11.4	25.0	ENE/32.8%
11	2018/10	744(100%)	39.4	23.3/ENE	101.6/ENE	37.0	30.6	32.4	.0	62.8	.8	11.6	24.9	ENE/33.7%
12	2018/11	720(100%)	39.8	23.2/ENE	100.3/ENE	36.4	31.7	31.9	.0	62.4	1.0	11.8	24.9	ENE/33.3%
13	2018/冬	2160(100%)	39.8	23.1/ENE	100.3/ENE	36.0	31.3	32.6	.0	62.6	.9	11.3	25.3	ENE/32.0%
14	2018/春	2208(100%)	40.3	23.1/ENE	101.3/ENE	35.7	31.3	33.0	.0	62.5	1.0	12.6	23.9	ENE/32.9%
15	2018/夏	2208(100%)	39.2	23.2/ENE	99.9/E	36.3	32.9	30.8	.0	63.3	.8	10.6	25.4	ENE/33.3%
16	2018/秋	2184(100%)	39.5	23.2/ENE	101.9/ENE	37.0	30.6	32.4	.0	62.8	.7	11.6	24.9	ENE/33.3%
17	2018/年	8760(100%)	39.7	23.2/ENE	101.9/ENE	36.2	31.5	32.2	.0	62.8	.8	11.5	24.9	ENE/32.9%

4-2-8



表4.2.3c 2018年北端海域 R 站殘流流速及流向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	流速 平均值 (cm/s)	平均流 流速/流向 (cm/s)/(來向)	最大流 流速/流向 (cm/s)/(來向)	1/2節流 <25.7 (%)	1節流 ~51.4 (%)	2節流 ~103 (%)	大流 >103 (%)	流向 N~E (%)	流向 E~S (%)	流向 S~W (%)	流向 W~N (%)	主要流向 方向/百分比
1	2017/12	735( 99%)	67.5	3.1/NW	194.9/W	14.1	23.8	44.6	17.4	36.1	15.0	30.9	18.1	E /19.9%
2	2018/01	722( 97%)	66.6	5.7/W	172.1/W	14.5	23.0	46.3	16.2	35.7	13.6	33.8	16.9	ENE/21.6%
3	2018/02	656( 98%)	66.2	6.1/WNW	173.3/WNW	13.9	24.2	46.2	15.7	34.5	15.5	31.1	18.9	W /22.1%
4	2018/03	617( 83%)	64.1	5.8/W	180.9/W	14.9	26.1	43.4	15.6	33.1	13.3	38.2	15.4	WSW/21.1%
5	2018/04	649( 90%)	64.0	4.7/W	175.1/WNW	15.6	23.9	46.1	14.5	33.1	14.8	35.1	16.9	ENE/20.0%
6	2018/05	593( 80%)	60.6	10.3/WSW	163.3/W	16.9	25.5	45.4	12.3	32.4	11.5	40.5	15.7	WSW/22.4%
7	2018/06	696( 97%)	61.7	2.3/ENE	166.9/W	17.7	24.0	44.8	13.5	40.1	13.1	31.6	15.2	E /23.3%
8	2018/07	619( 83%)	61.9	.2/ENE	173.7/ENE	17.9	26.8	40.9	14.4	33.0	16.0	34.2	16.8	E /22.9%
9	2018/08	727( 98%)	75.5	13.2/E	196.4/ENE	15.0	17.1	39.5	28.5	34.4	21.0	31.5	13.1	E /33.0%
10	2018/09	712( 99%)	75.4	13.7/E	181.4/ENE	14.5	20.8	37.8	27.0	33.7	20.9	31.0	14.3	E /29.4%
11	2018/10	667( 90%)	75.0	9.2/E	169.8/E	13.8	17.8	41.2	27.1	38.4	16.3	32.1	13.2	E /26.8%
12	2018/11	718(100%)	62.1	3.2/SW	172.9/W	14.8	25.8	46.2	13.2	37.7	13.8	42.6	5.8	ENE/22.6%
13	2018/冬	2113( 98%)	66.8	4.9/WNW	194.9/W	14.2	23.7	45.7	16.5	35.4	14.7	31.9	17.9	ENE/20.8%
14	2018/春	1859( 84%)	63.0	6.8/W	180.9/W	15.8	25.1	45.0	14.1	32.9	13.2	37.9	16.0	WSW/20.9%
15	2018/夏	2042( 93%)	66.7	5.5/E	196.4/ENE	16.8	22.4	41.7	19.1	35.9	16.8	32.4	14.9	E /26.6%
16	2018/秋	2097( 96%)	70.7	6.8/E	181.4/ENE	14.4	21.6	41.8	22.3	36.6	17.0	35.3	11.1	E /23.1%
17	2018/年	8111( 93%)	66.9	.4/ENE	196.4/ENE	15.3	23.1	43.5	18.1	35.3	15.5	34.3	15.0	E /21.2%

4-2-9



### 4.3 2018 年北端海域各測站觀測海流與 計算潮流(殘流)歷線比較圖



# Current Speed in Kee-Lung Harbor of KLX0 at 2018

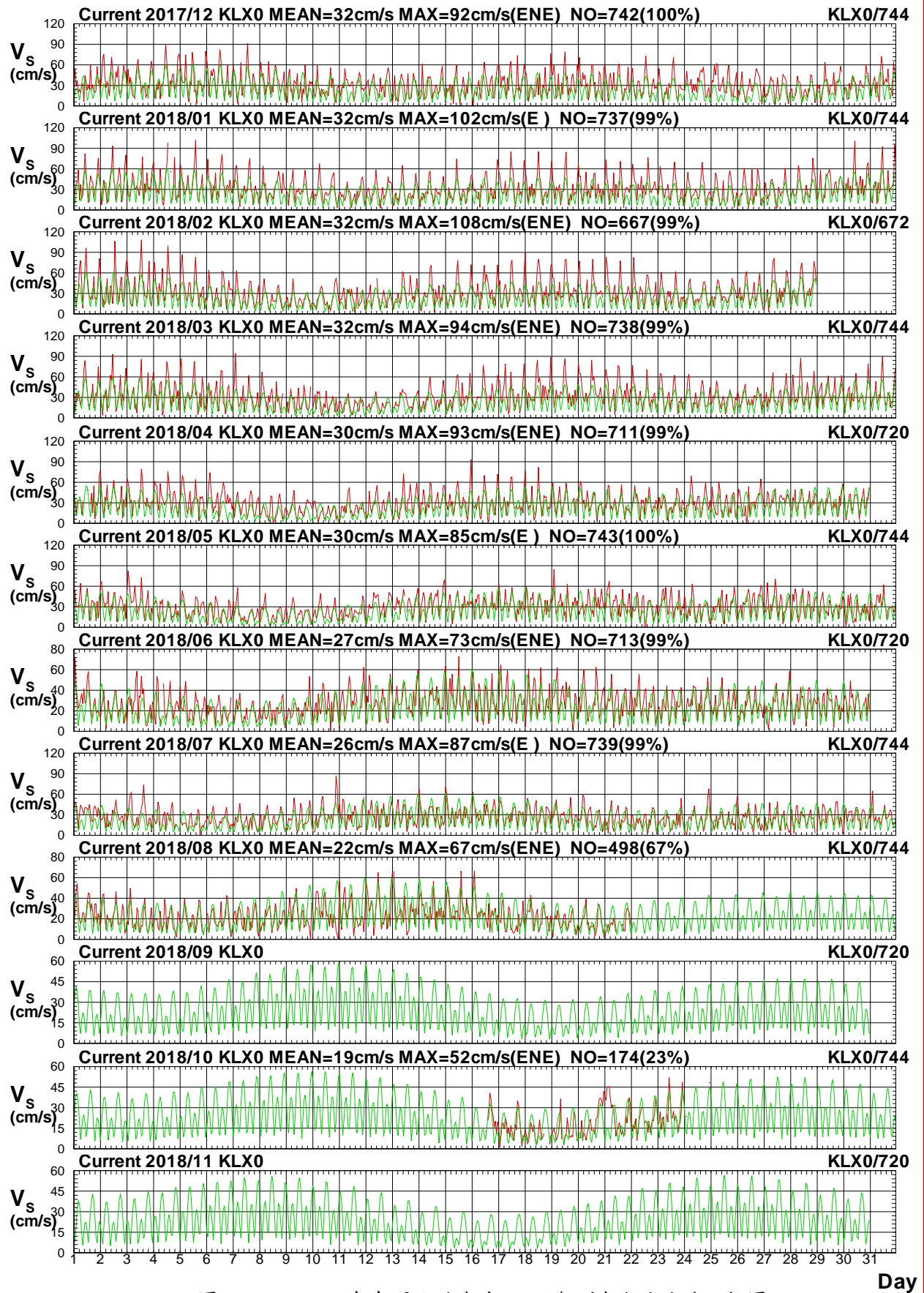


圖4.3.1a 2018年每月北端海域 X 站觀測與潮流流速比較圖

C17CKLX0.1H0 C17CKLX0.1HD C181KLX0.1H0 C181KLX0.1HD C182KLX0.1H0 C182KLX0.1HD  
 C183KLX0.1H0 C183KLX0.1HD C184KLX0.1H0 C184KLX0.1HD C185KLX0.1H0 C185KLX0.1HD

Institute of Harbor & Marine Technology



# Current Direction in Kee-Lung Harbor of KLX0 at 2018

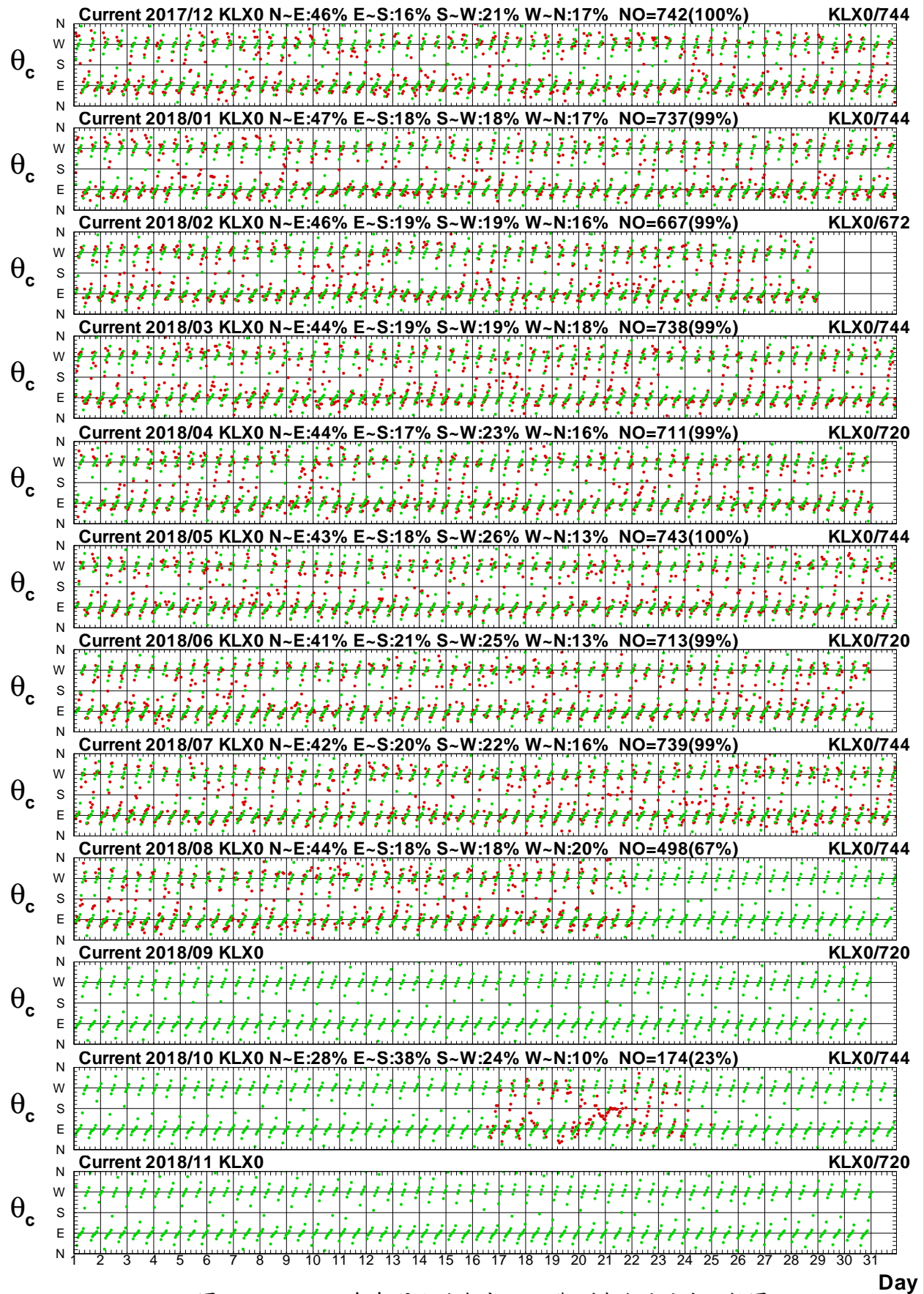


圖4.3.1b 2018年每月北端海域 X 站觀測與潮流流向比較圖

C17CKLX0.1HO C17CKLX0.1HD C181KLX0.1HO C181KLX0.1HD C182KLX0.1HO C182KLX0.1HD  
 C183KLX0.1HO C183KLX0.1HD C184KLX0.1HO C184KLX0.1HD C185KLX0.1HO C185KLX0.1HD

Institute of Harbor & Marine Technology

# Current Speed in Kee-Lung Harbor of KLX0 at 2018

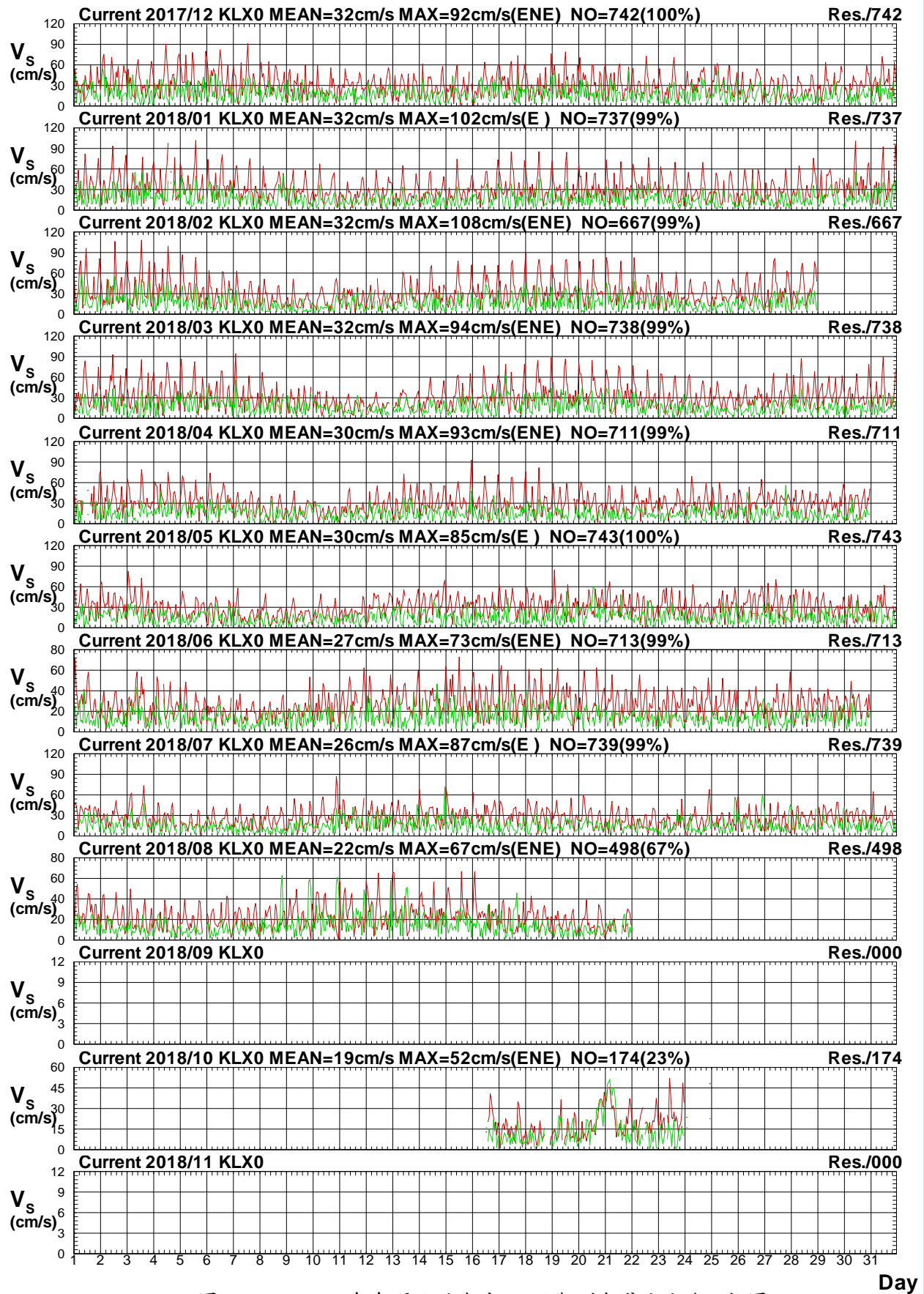


圖4.3.2a 2018年每月北端海域 X 站觀測與殘流流速比較圖

C17CKLX0.1H0 C17CKLX0.1HR C181KLX0.1H0 C181KLX0.1HR C182KLX0.1H0 C182KLX0.1HR  
 C183KLX0.1H0 C183KLX0.1HR C184KLX0.1H0 C184KLX0.1HR C185KLX0.1H0 C185KLX0.1HR

Institute of Harbor & Marine Technology

# Current Direction in Kee-Lung Harbor of KLX0 at 2018

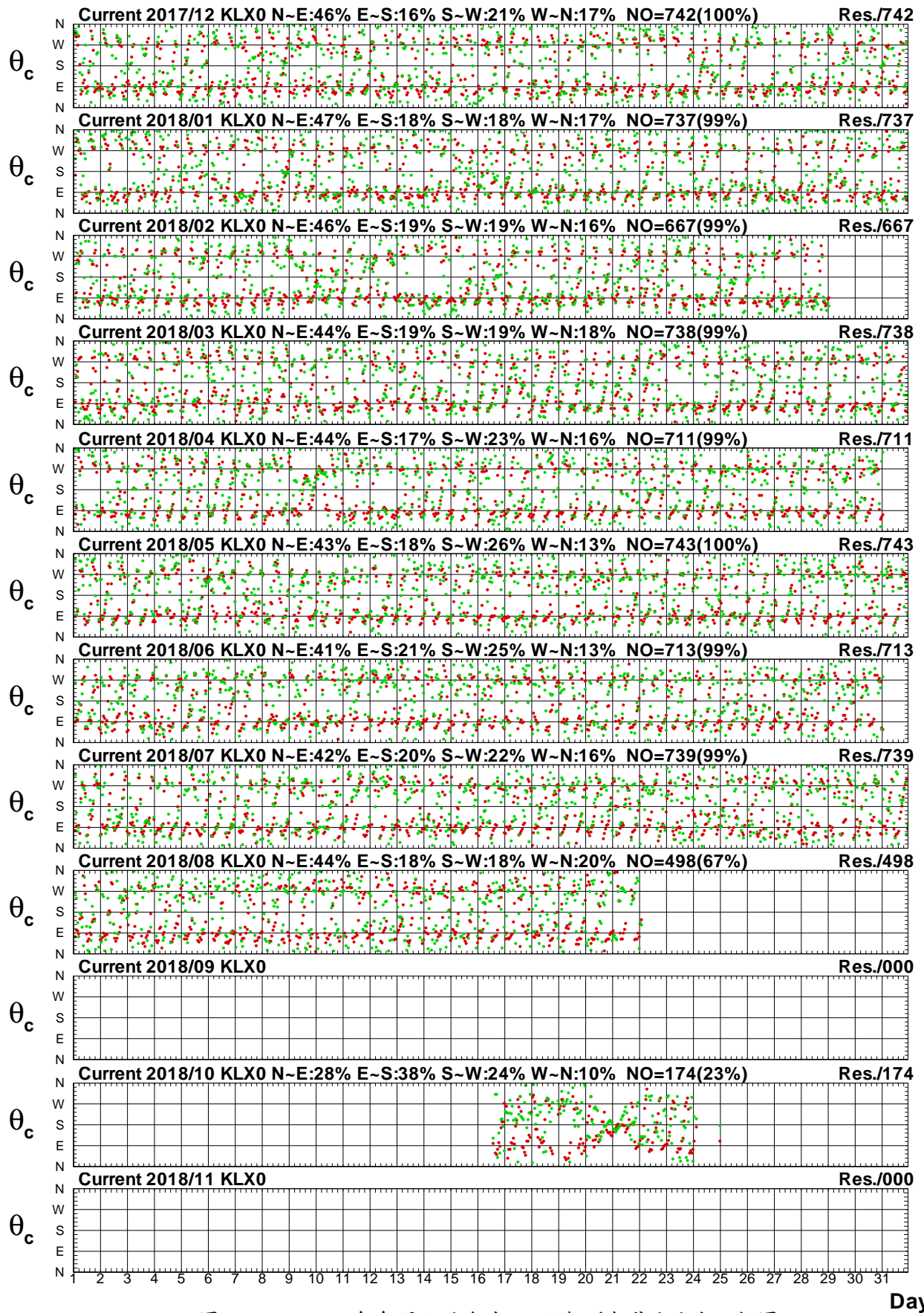


圖4.3.2b 2018年每月北端海域 X 站觀測與殘流流向比較圖

C17CKLX0.1H0 C17CKLX0.1HR C181KLX0.1H0 C181KLX0.1HR C182KLX0.1H0 C182KLX0.1HR  
 C183KLX0.1H0 C183KLX0.1HR C184KLX0.1H0 C184KLX0.1HR C185KLX0.1H0 C185KLX0.1HR

Institute of Harbor & Marine Technology



# Current Speed in Kee-Lung Harbor of KLY0 at 2018

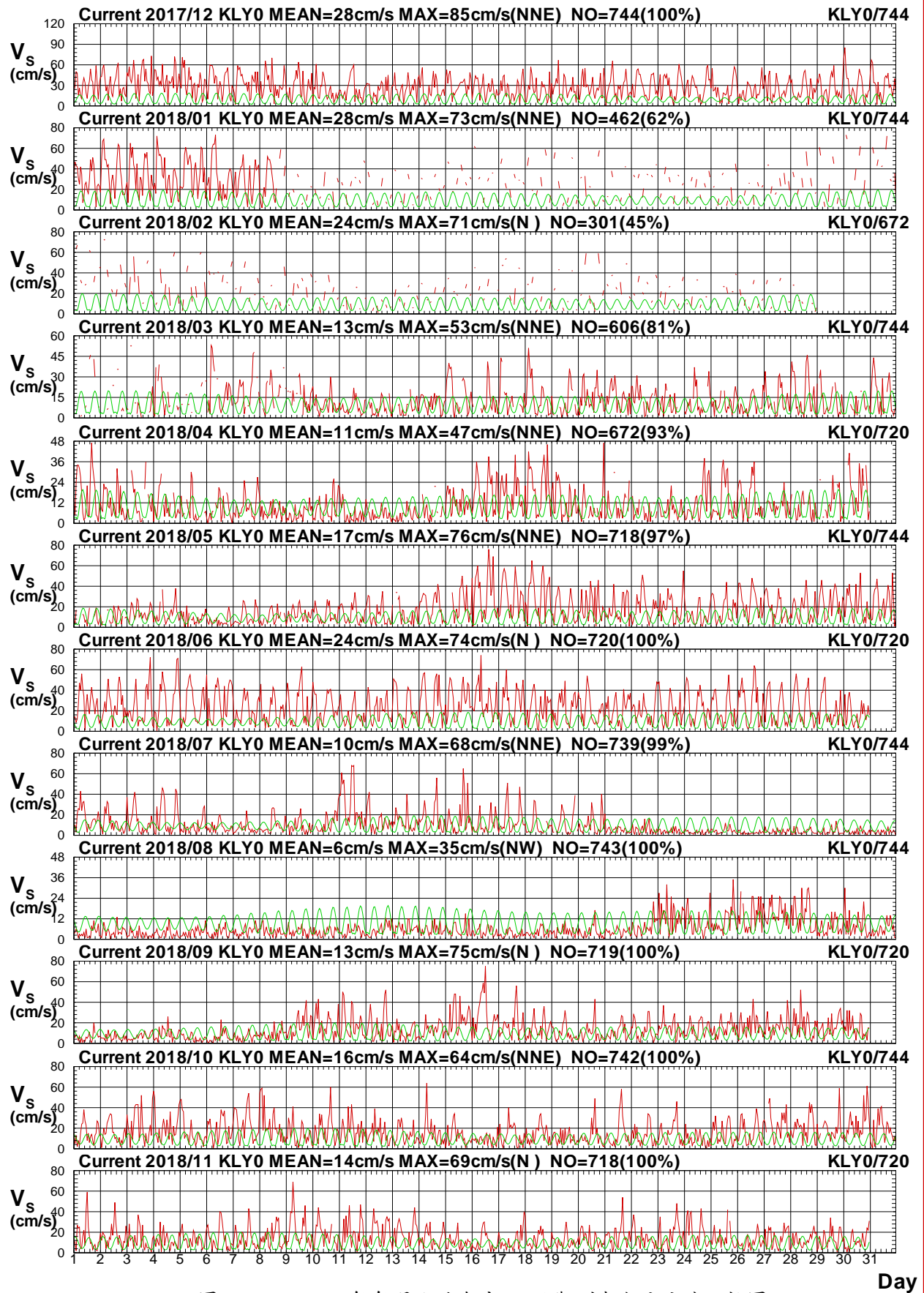


圖4.3.3a 2018年每月北端海域 Y 站觀測與潮流流速比較圖

C17CKLY0.1H0 C17CKLY0.1HD C181KLY0.1H0 C181KLY0.1HD C182KLY0.1H0 C182KLY0.1HD  
 C183KLY0.1H0 C183KLY0.1HD C184KLY0.1H0 C184KLY0.1HD C185KLY0.1H0 C185KLY0.1HD

Institute of Harbor & Marine Technology

# Current Direction in Kee-Lung Harbor of KLY0 at 2018

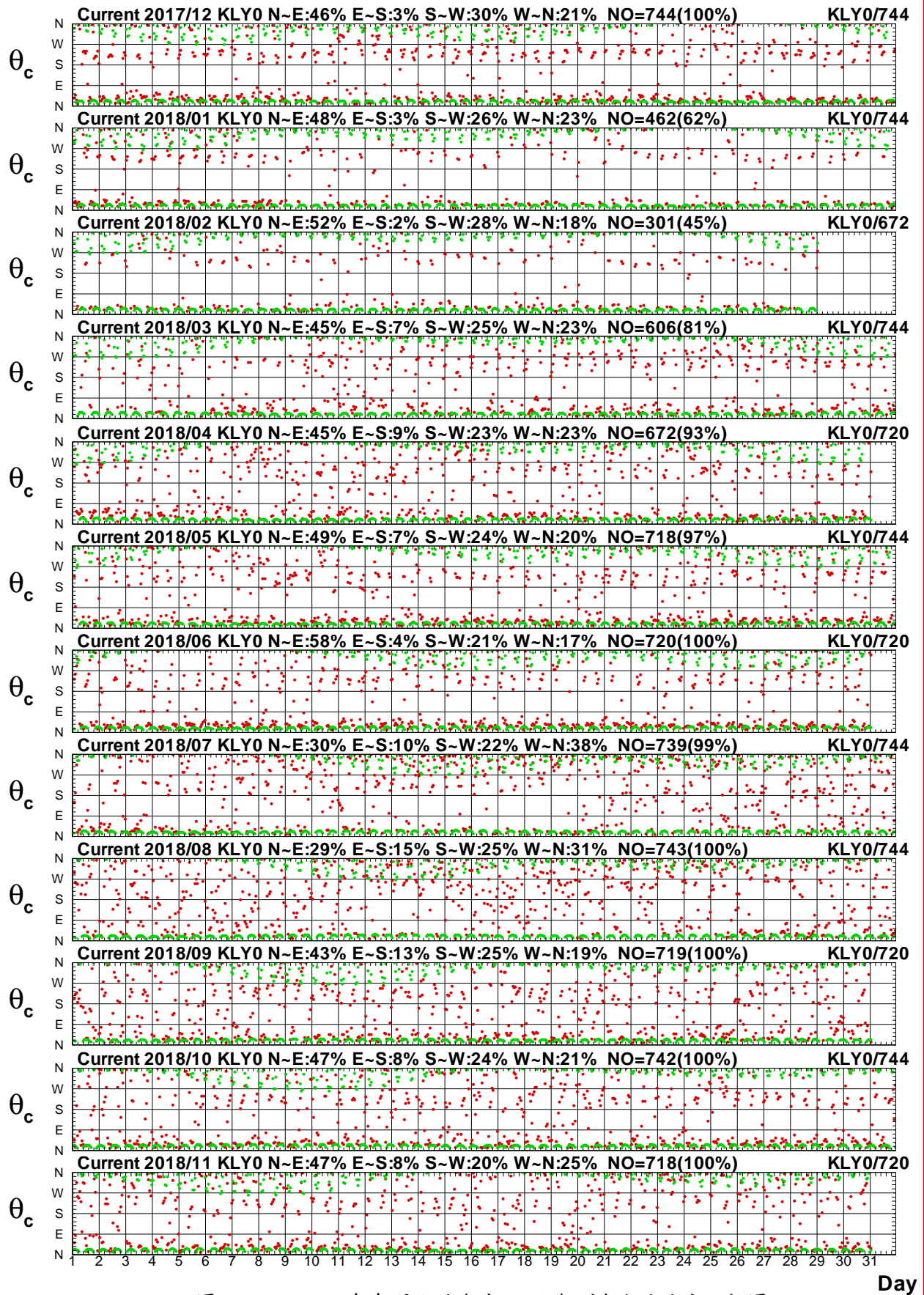


圖4.3.3b 2018年每月北端海域 Y 站觀測與潮流流向比較圖

C17CKLY0.1HO C17CKLY0.1HD C181KLY0.1HO C181KLY0.1HD C182KLY0.1HO C182KLY0.1HD  
 C183KLY0.1HO C183KLY0.1HD C184KLY0.1HO C184KLY0.1HD C185KLY0.1HO C185KLY0.1HD

Institute of Harbor & Marine Technology



# Current Speed in Kee-Lung Harbor of KLY0 at 2018

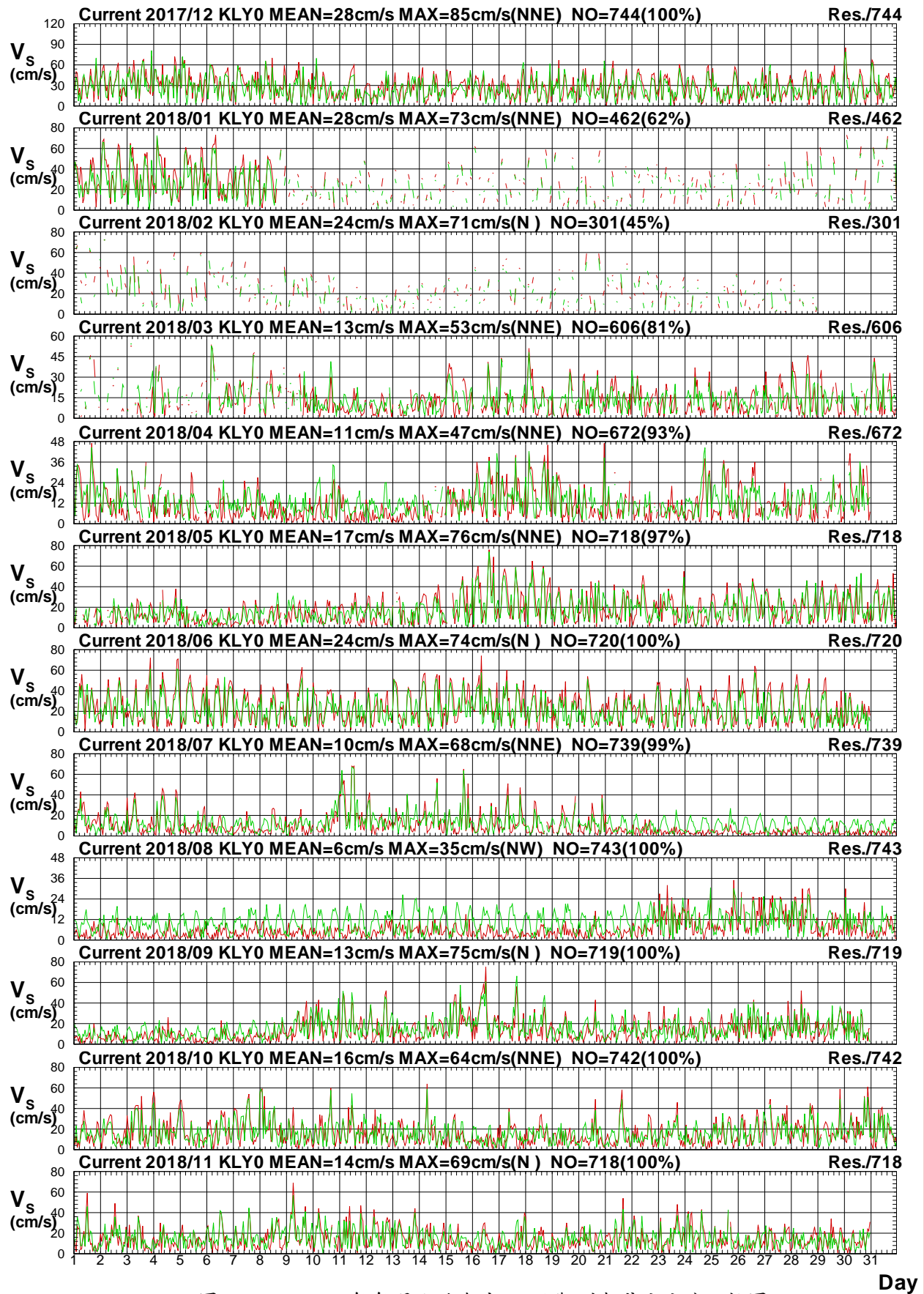


圖4.3.4a 2018年每月北端海域 Y 站觀測與殘流流速比較圖

C17CKLY0.1H0 C17CKLY0.1HR C181KLY0.1H0 C181KLY0.1HR C182KLY0.1H0 C182KLY0.1HR  
 C183KLY0.1H0 C183KLY0.1HR C184KLY0.1H0 C184KLY0.1HR C185KLY0.1H0 C185KLY0.1HR

Institute of Harbor & Marine Technology

# Current Direction in Kee-Lung Harbor of KLY0 at 2018

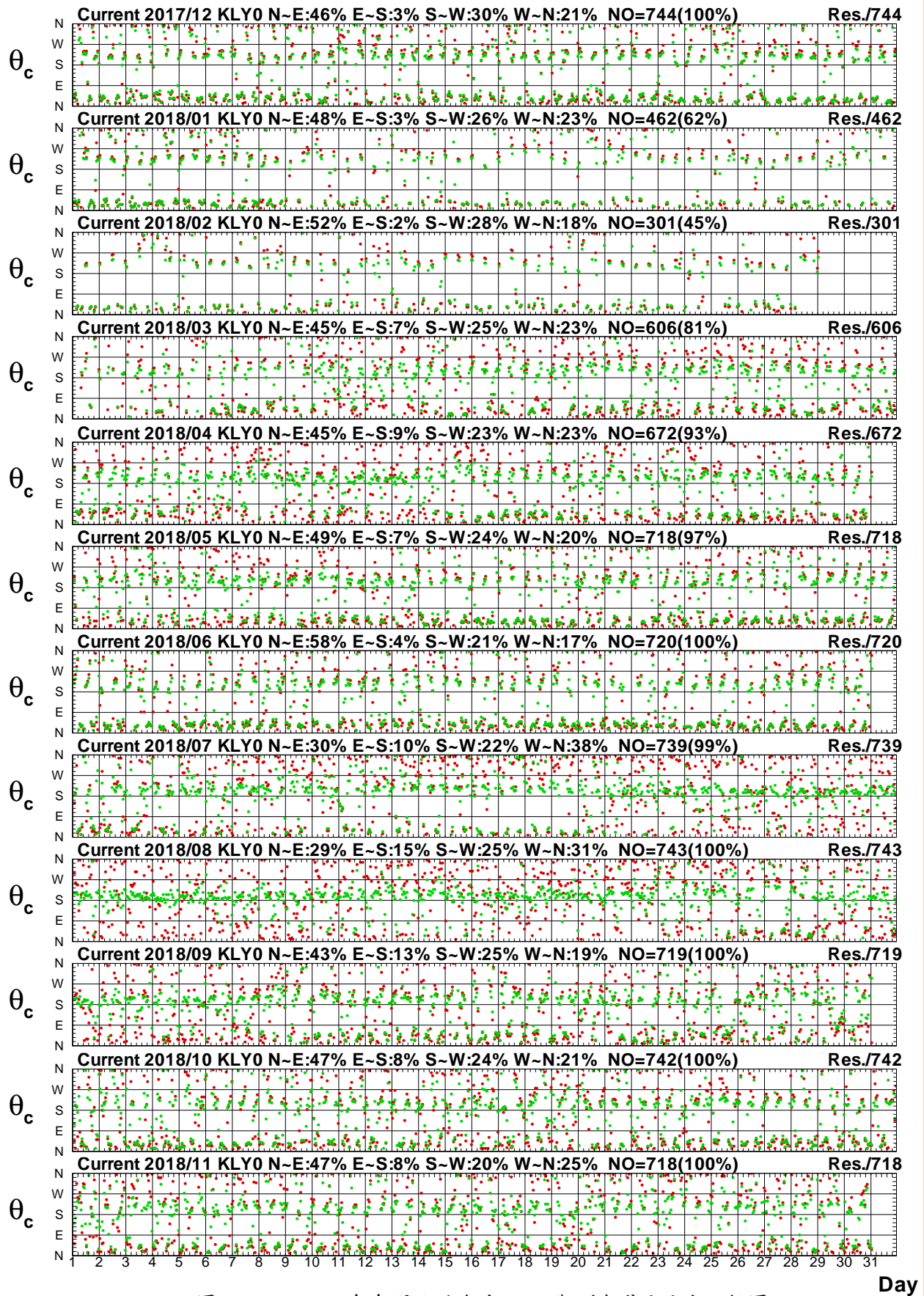


圖4.3.4b 2018年每月北端海域 Y 站觀測與殘流流向比較圖

C17CKLY0.1H0 C17CKLY0.1HR C181KLY0.1H0 C181KLY0.1HR C182KLY0.1H0 C182KLY0.1HR  
 C183KLY0.1H0 C183KLY0.1HR C184KLY0.1H0 C184KLY0.1HR C185KLY0.1H0 C185KLY0.1HR

Institute of Harbor & Marine Technology

# Current Speed in Kee-Lung Harbor of KLR0 at 2018

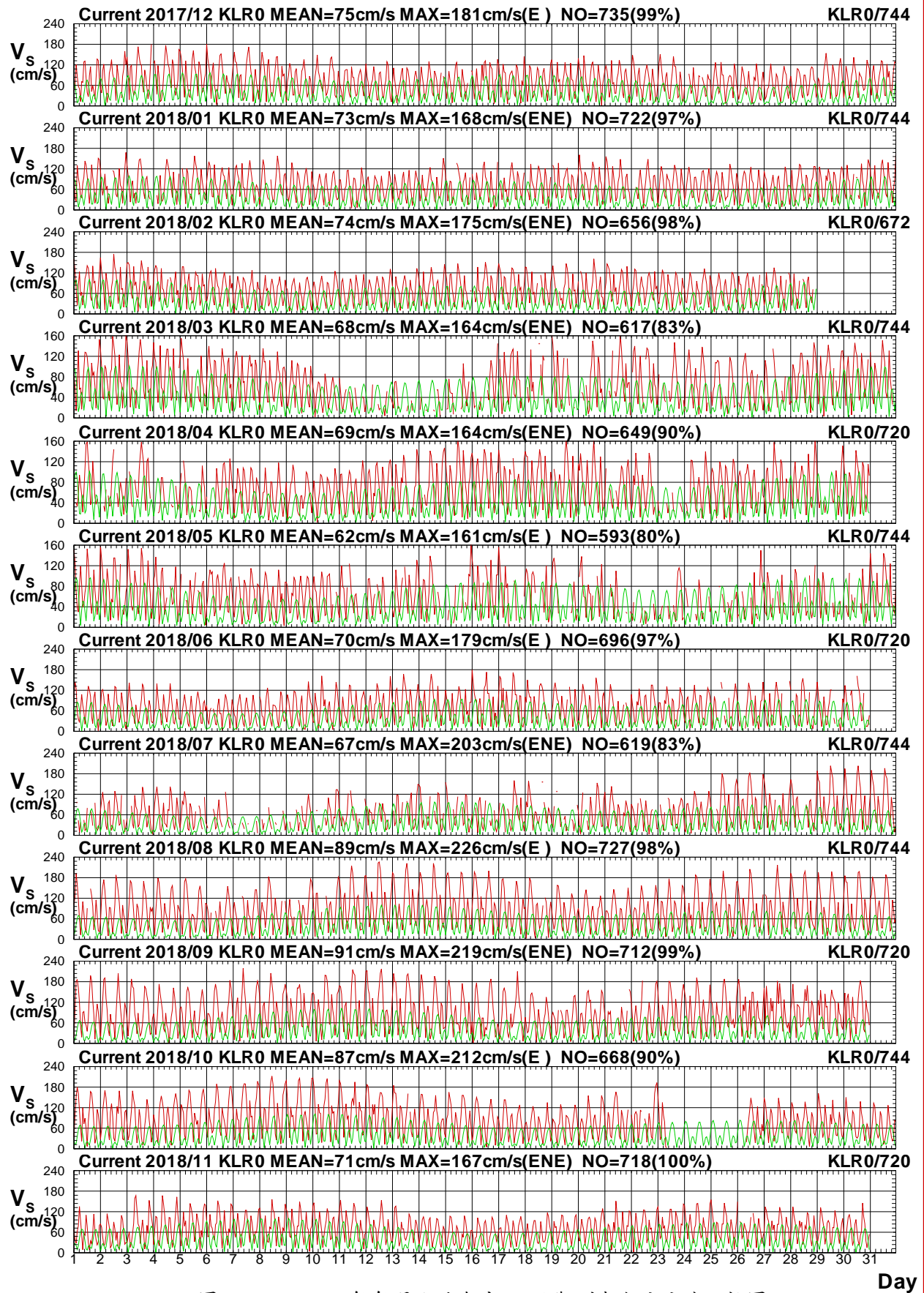


圖4.3.5a 2018年每月北端海域 R 站觀測與潮流流速比較圖

C17CKLR0.1H0 C17CKLR0.1HD C181KLR0.1H0 C181KLR0.1HD C182KLR0.1H0 C182KLR0.1HD  
 C183KLR0.1H0 C183KLR0.1HD C184KLR0.1H0 C184KLR0.1HD C185KLR0.1H0 C185KLR0.1HD

Institute of Harbor & Marine Technology



# Current Direction in Kee-Lung Harbor of KLR0 at 2018

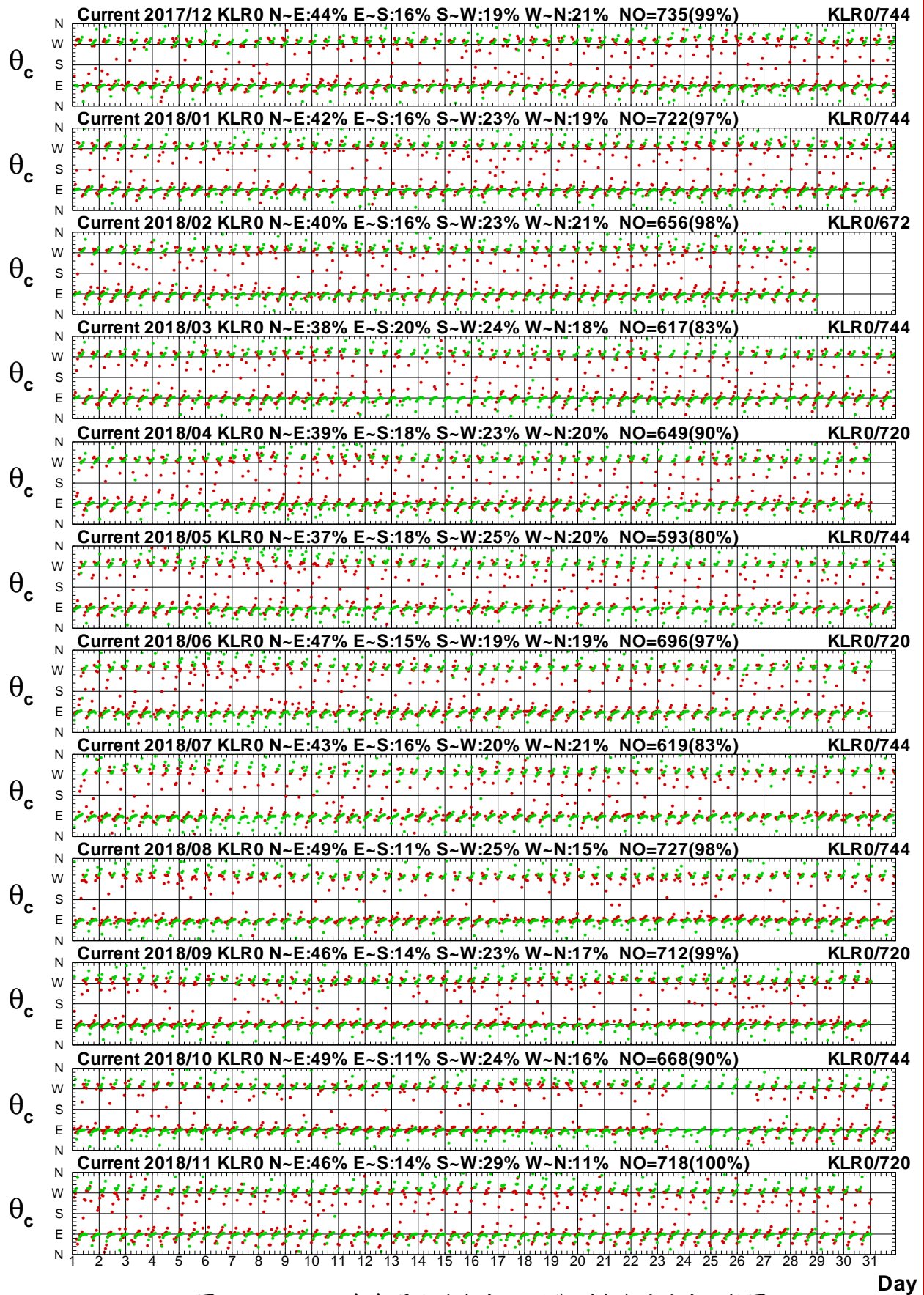


圖4.3.5b 2018年每月北端海域 R 站觀測與潮流流向比較圖

C17CKLR0.1H0 C17CKLR0.1HD C181KLR0.1H0 C181KLR0.1HD C182KLR0.1H0 C182KLR0.1HD  
 C183KLR0.1H0 C183KLR0.1HD C184KLR0.1H0 C184KLR0.1HD C185KLR0.1H0 C185KLR0.1HD

Institute of Harbor & Marine Technology

# Current Speed in Kee-Lung Harbor of KLR0 at 2018

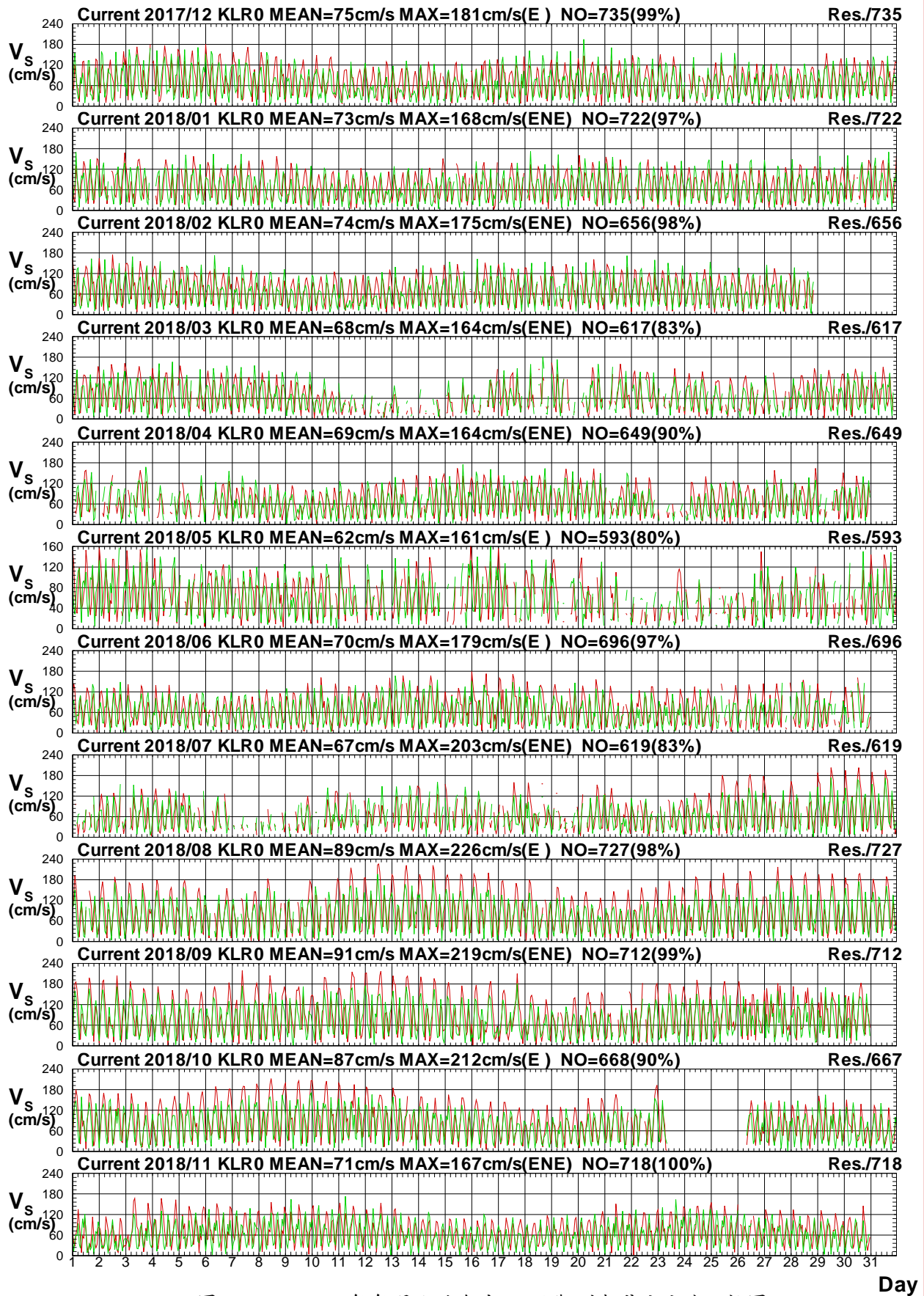


圖4.3.6a 2018年每月北端海域 R 站觀測與殘流流速比較圖

C17CKLR0.1H0 C17CKLR0.1HR C181KLR0.1H0 C181KLR0.1HR C182KLR0.1H0 C182KLR0.1HR  
 C183KLR0.1H0 C183KLR0.1HR C184KLR0.1H0 C184KLR0.1HR C185KLR0.1H0 C185KLR0.1HR

Institute of Harbor & Marine Technology



# Current Direction in Kee-Lung Harbor of KLR0 at 2018

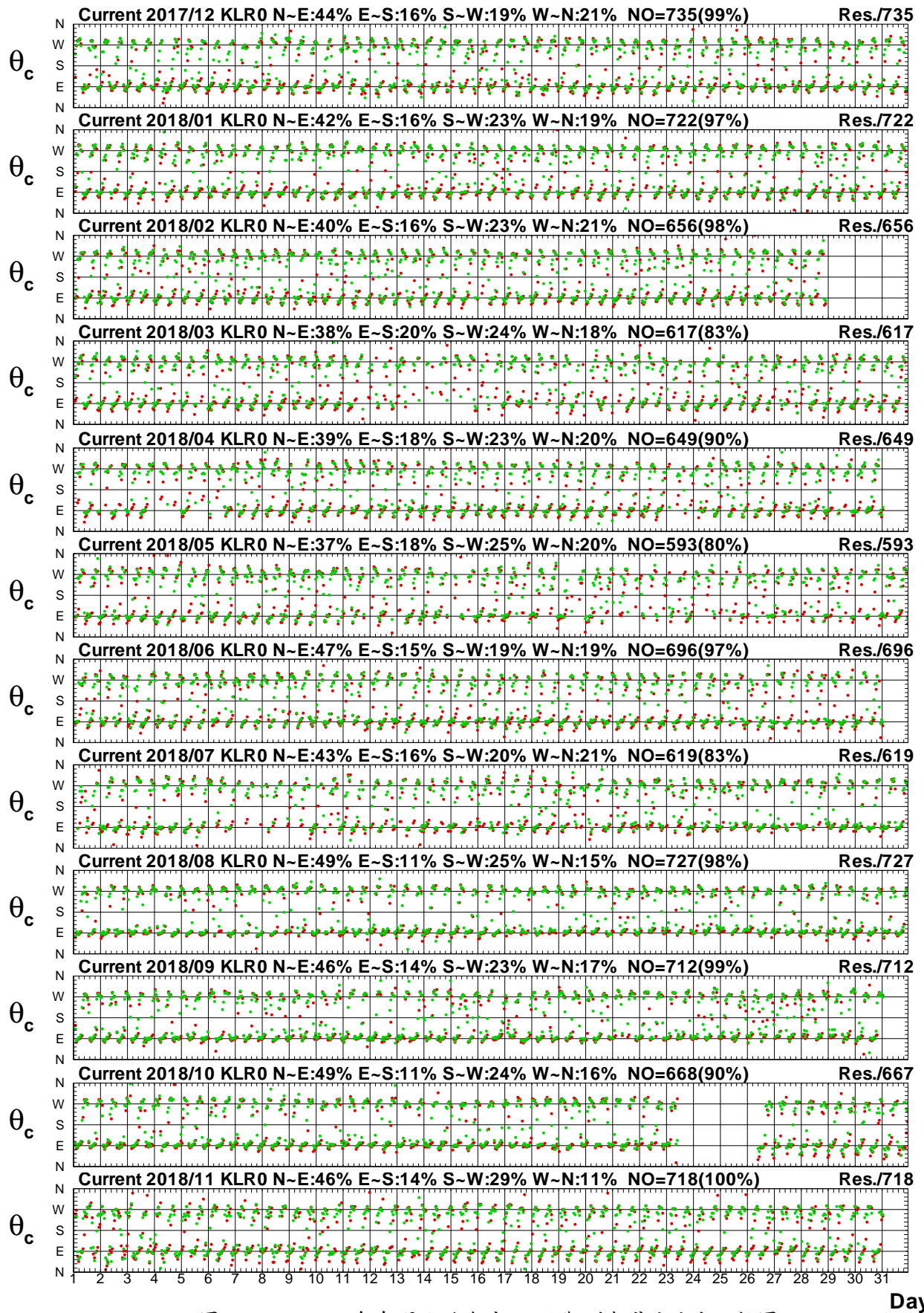


圖4.3.6b 2018年每月北端海域 R 站觀測與殘流流向比較圖

C17CKLR0.1HO C17CKLR0.1HR C181KLR0.1HO C181KLR0.1HR C182KLR0.1HO C182KLR0.1HR  
 C183KLR0.1HO C183KLR0.1HR C184KLR0.1HO C184KLR0.1HR C185KLR0.1HO C185KLR0.1HR

Institute of Harbor & Marine Technology

#### 4.4 2018 年北端海域各測站觀測海流與 計算潮流(殘流)向量分佈圖



# Distribution of Current Vectors

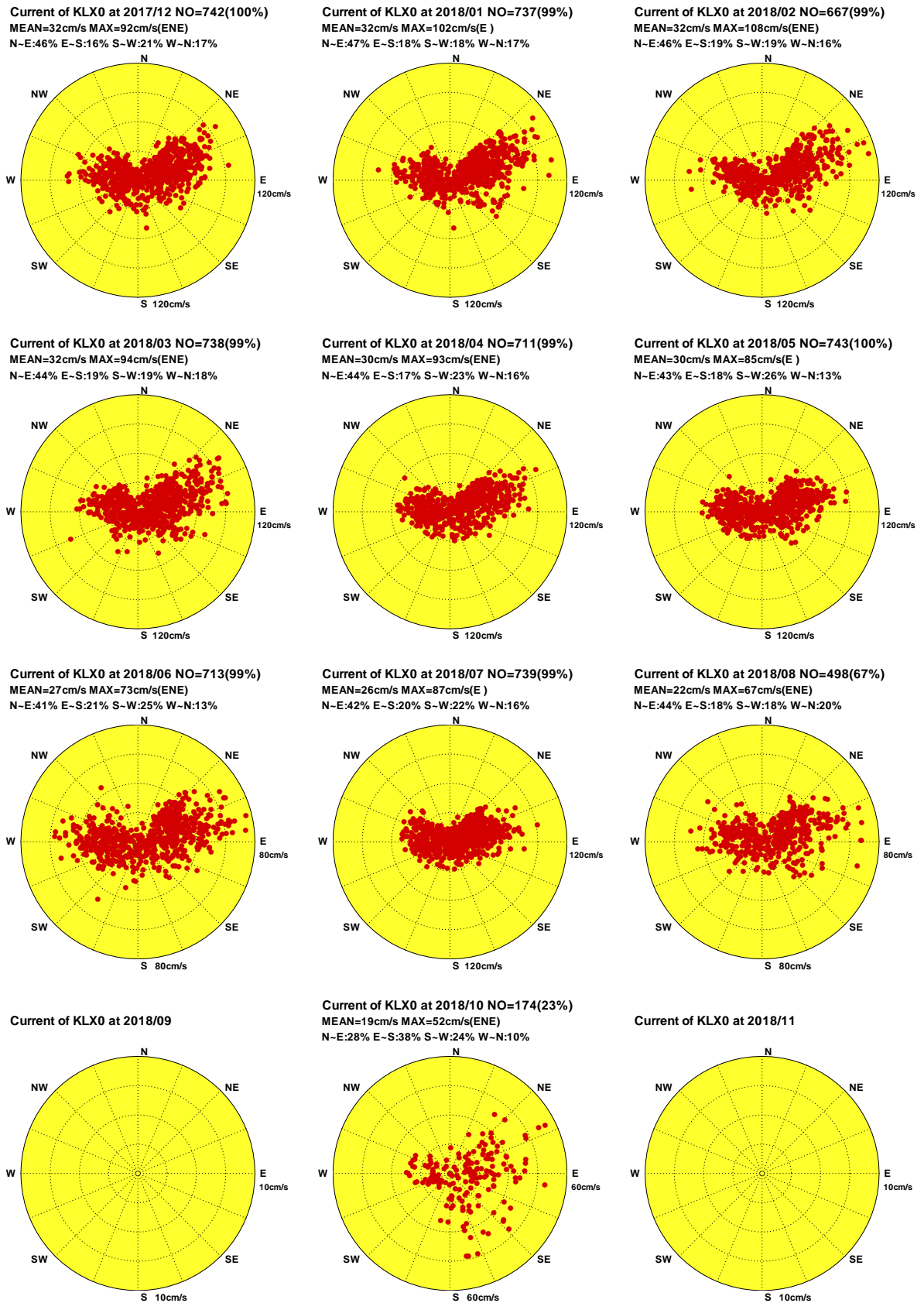


圖4.4.1a 2018年北端海域每月測站 X 觀測海流向量分佈圖

C17CKLX0.1H0 C181KLX0.1H0 C182KLX0.1H0 C183KLX0.1H0 C184KLX0.1H0 C185KLX0.1H0  
 C186KLX0.1H0 C187KLX0.1H0 C188KLX0.1H0 C189KLX0.1H0 C18AKLX0.1H0 C18BKLX0.1H0

Institute of Harbor & Marine Technology

# Distribution of Current Vectors

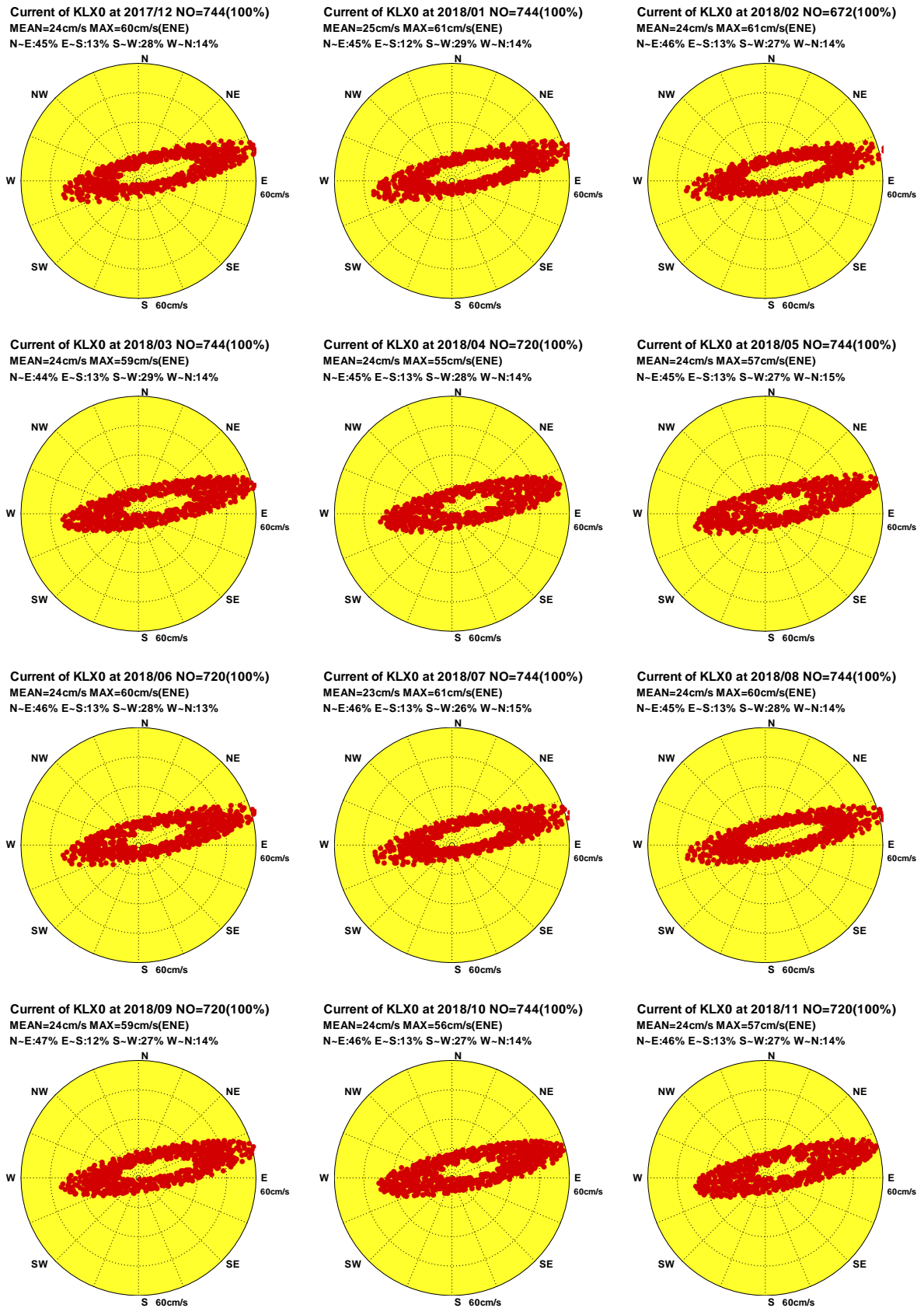


圖4.4.1b 2018年北端海域每月測站 X 計算潮流向量分佈圖

C17CKLX0.1HD C181KLX0.1HD C182KLX0.1HD C183KLX0.1HD C184KLX0.1HD C185KLX0.1HD  
 C186KLX0.1HD C187KLX0.1HD C188KLX0.1HD C189KLX0.1HD C18AKLX0.1HD C18BKLX0.1HD

Institute of Harbor & Marine Technology



# Distribution of Current Vectors

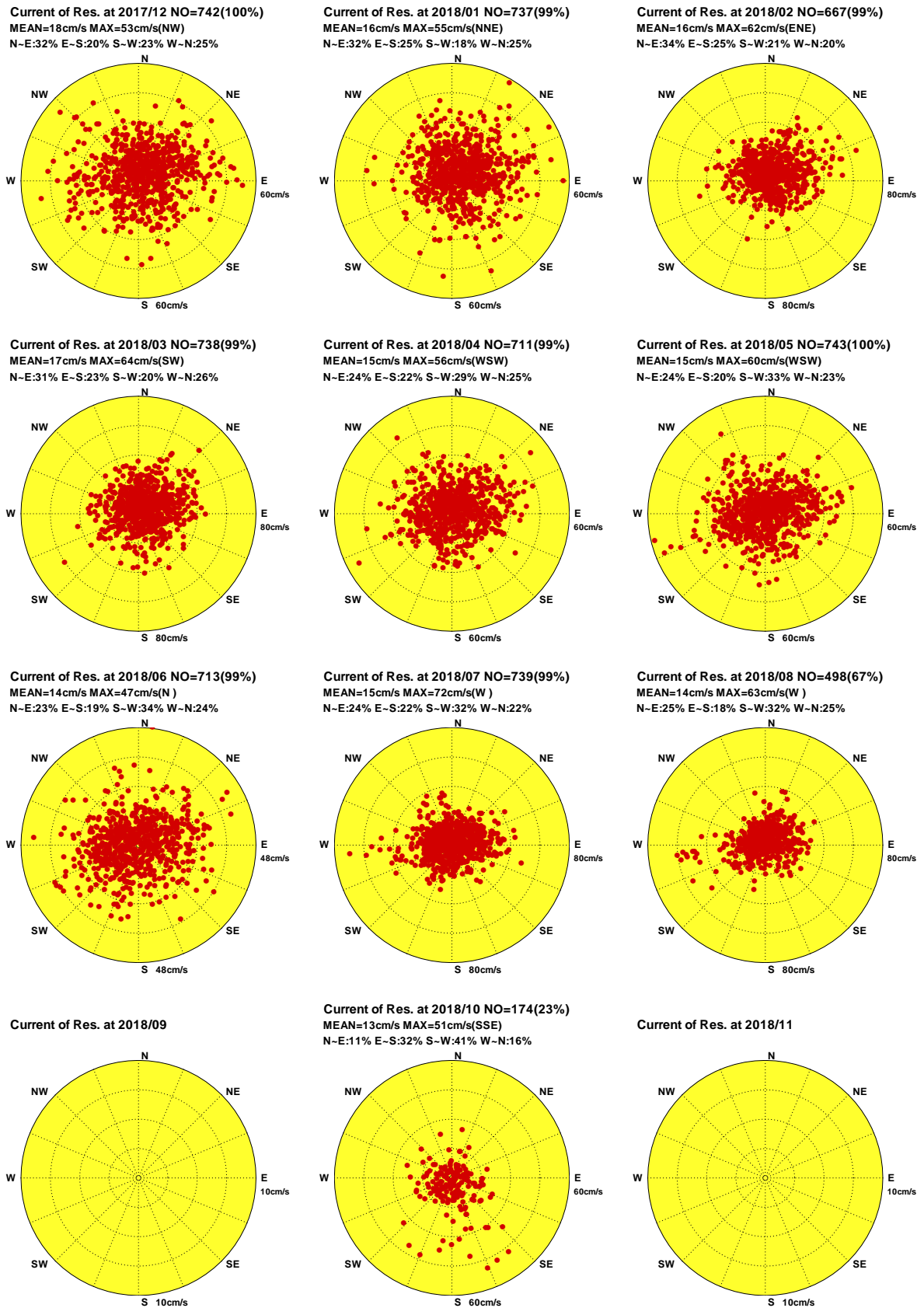


圖4.4.1c 2018年北端海域每月測站 X 計算殘流向量分佈圖

C17CKLX0.1HR C181KLX0.1HR C182KLX0.1HR C183KLX0.1HR C184KLX0.1HR C185KLX0.1HR  
 C186KLX0.1HR C187KLX0.1HR C188KLX0.1HR C189KLX0.1HR C18AKLX0.1HR C18BKLX0.1HR

Institute of Harbor & Marine Technology

# Distribution of Current Vectors

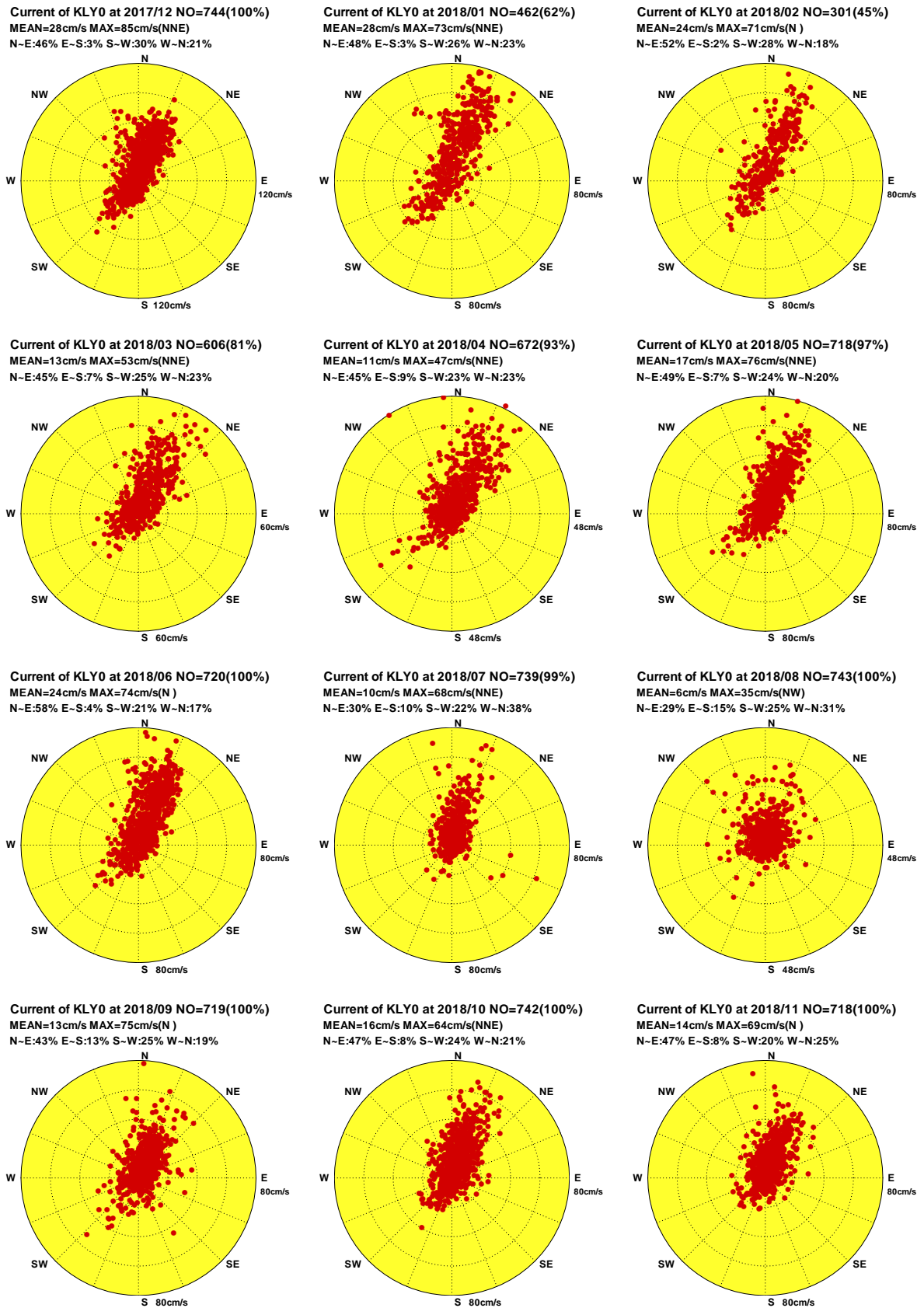


圖4.4.2a 2018年北端海域每月測站 Y 觀測海流向量分佈圖

C17CKLY0.1H0 C181KLY0.1H0 C182KLY0.1H0 C183KLY0.1H0 C184KLY0.1H0 C185KLY0.1H0  
 C186KLY0.1H0 C187KLY0.1H0 C188KLY0.1H0 C189KLY0.1H0 C18AKLY0.1H0 C18BKLY0.1H0

Institute of Harbor & Marine Technology

# Distribution of Current Vectors

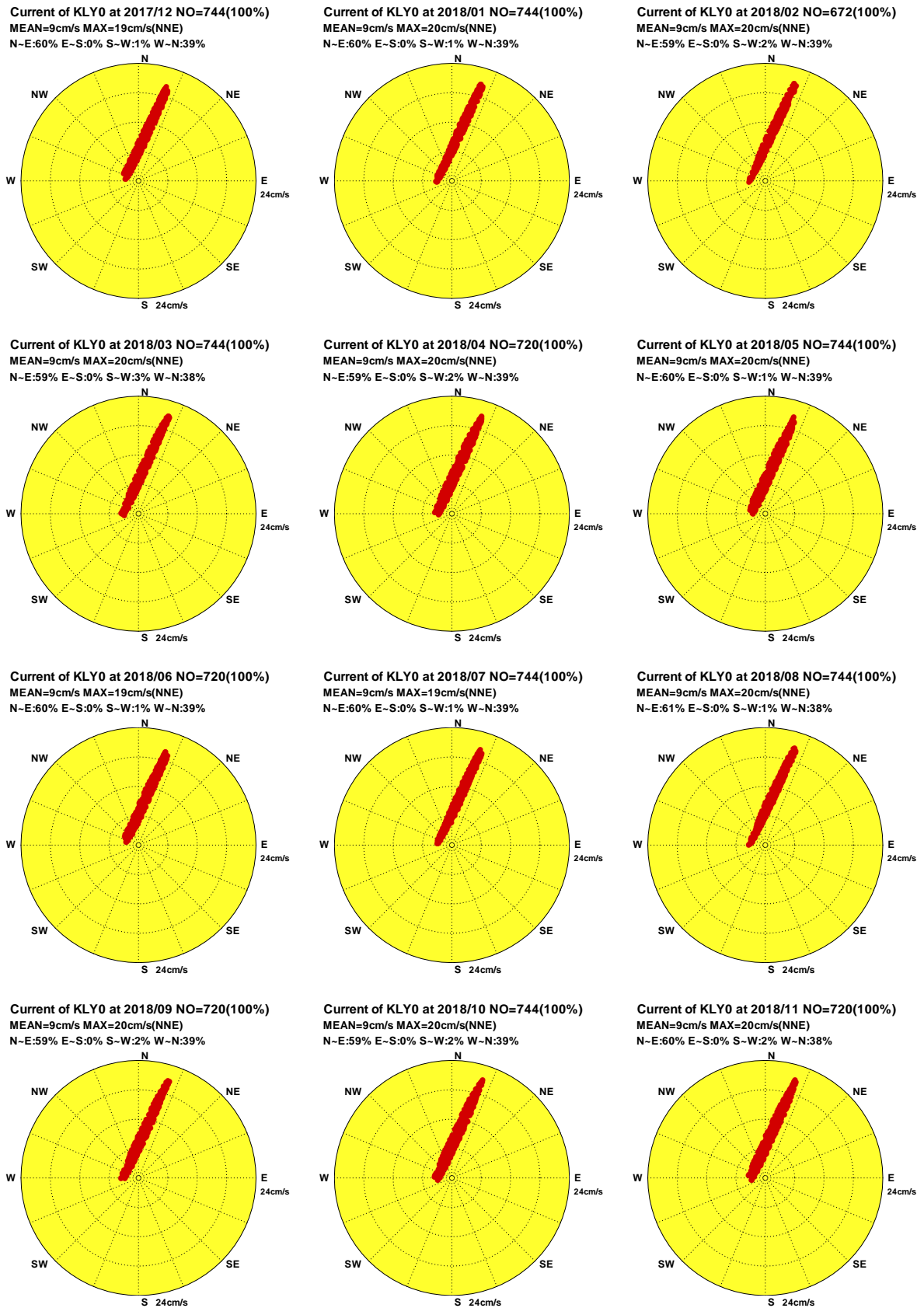


圖4.4.2b 2018年北端海域每月測站 Y 計算潮流向量分佈圖

C17CKLY0.1HD C181KLY0.1HD C182KLY0.1HD C183KLY0.1HD C184KLY0.1HD C185KLY0.1HD  
C186KLY0.1HD C187KLY0.1HD C188KLY0.1HD C189KLY0.1HD C18AKLY0.1HD C18BKLY0.1HD

Institute of Harbor & Marine Technology

# Distribution of Current Vectors

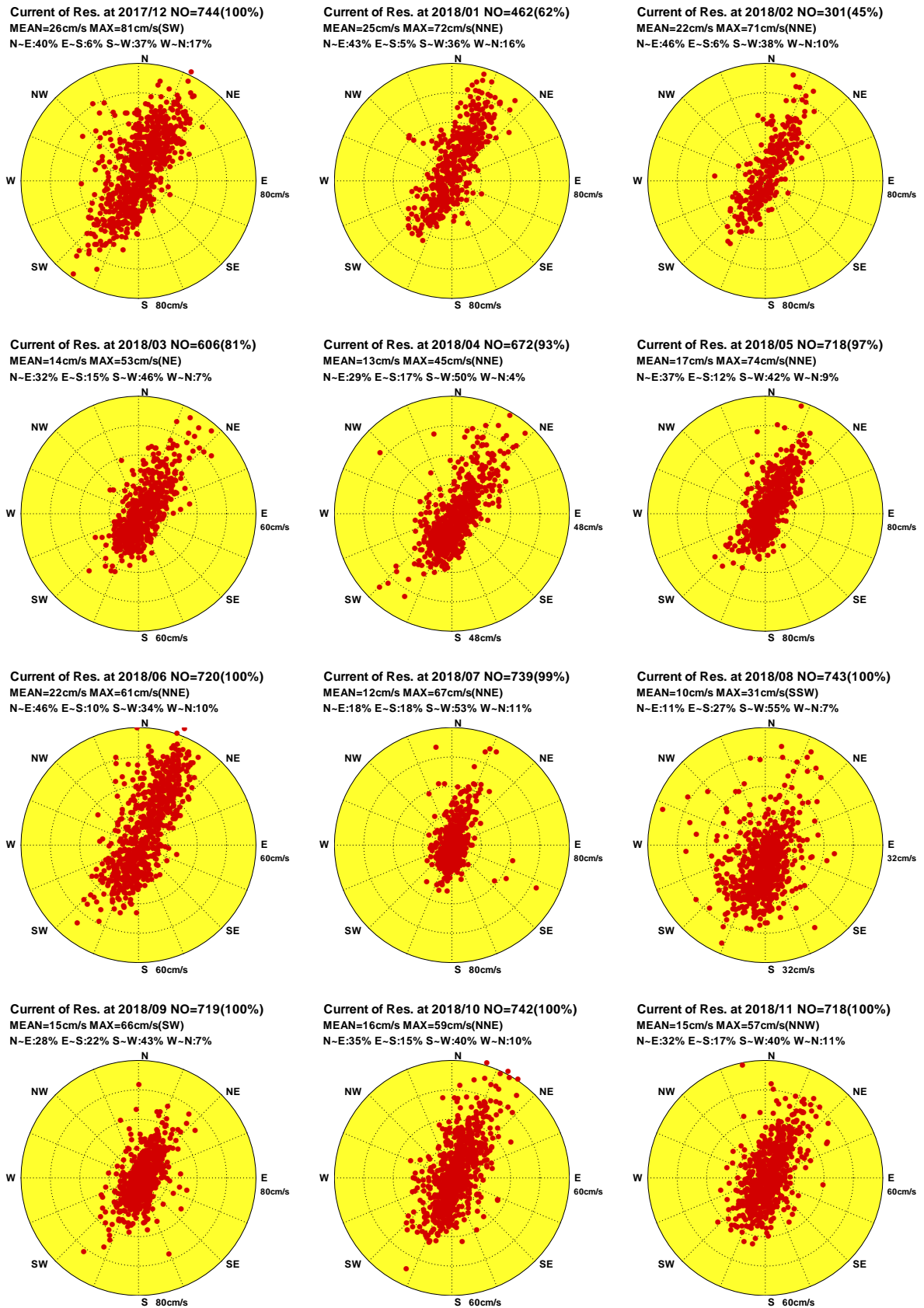


圖4.4.2c 2018年北端海域每月測站 Y 計算殘流向量分佈圖

C17CKLY0.1HR C181KLY0.1HR C182KLY0.1HR C183KLY0.1HR C184KLY0.1HR C185KLY0.1HR  
 C186KLY0.1HR C187KLY0.1HR C188KLY0.1HR C189KLY0.1HR C18AKLY0.1HR C18BKLY0.1HR

Institute of Harbor & Marine Technology

# Distribution of Current Vectors

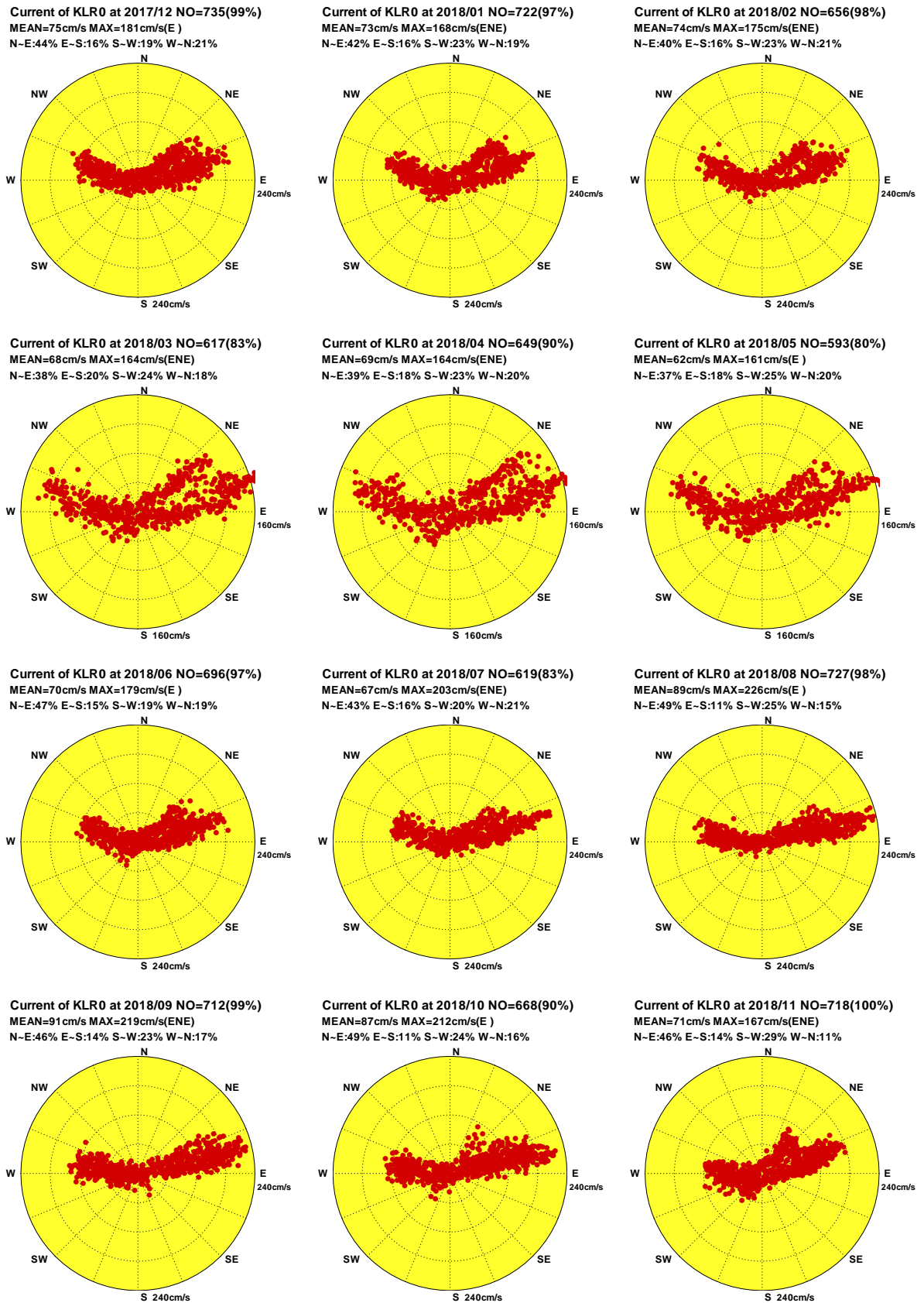


圖4.4.3a 2018年北端海域每月測站 R 觀測海流向量分佈圖

C17CKLR0.1H0 C181KLR0.1H0 C182KLR0.1H0 C183KLR0.1H0 C184KLR0.1H0 C185KLR0.1H0  
 C186KLR0.1H0 C187KLR0.1H0 C188KLR0.1H0 C189KLR0.1H0 C18AKLR0.1H0 C18BKLR0.1H0

Institute of Harbor & Marine Technology



# Distribution of Current Vectors

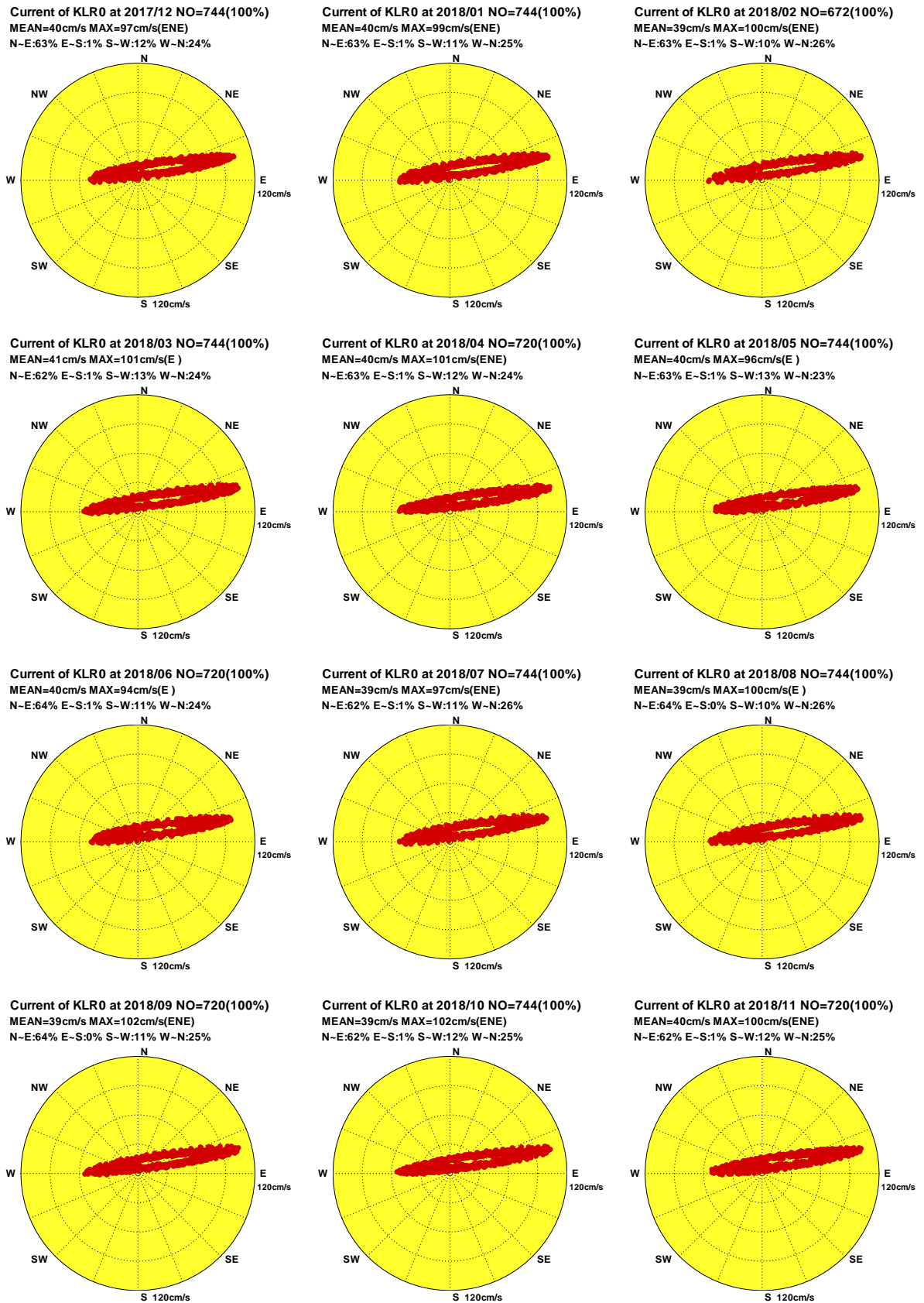


圖4.4.3b 2018年北端海域每月測站 R 計算潮流向量分佈圖

C17CKLR0.1HD C181KLR0.1HD C182KLR0.1HD C183KLR0.1HD C184KLR0.1HD C185KLR0.1HD  
 C186KLR0.1HD C187KLR0.1HD C188KLR0.1HD C189KLR0.1HD C18AKLR0.1HD C18BKLR0.1HD

Institute of Harbor & Marine Technology

# Distribution of Current Vectors

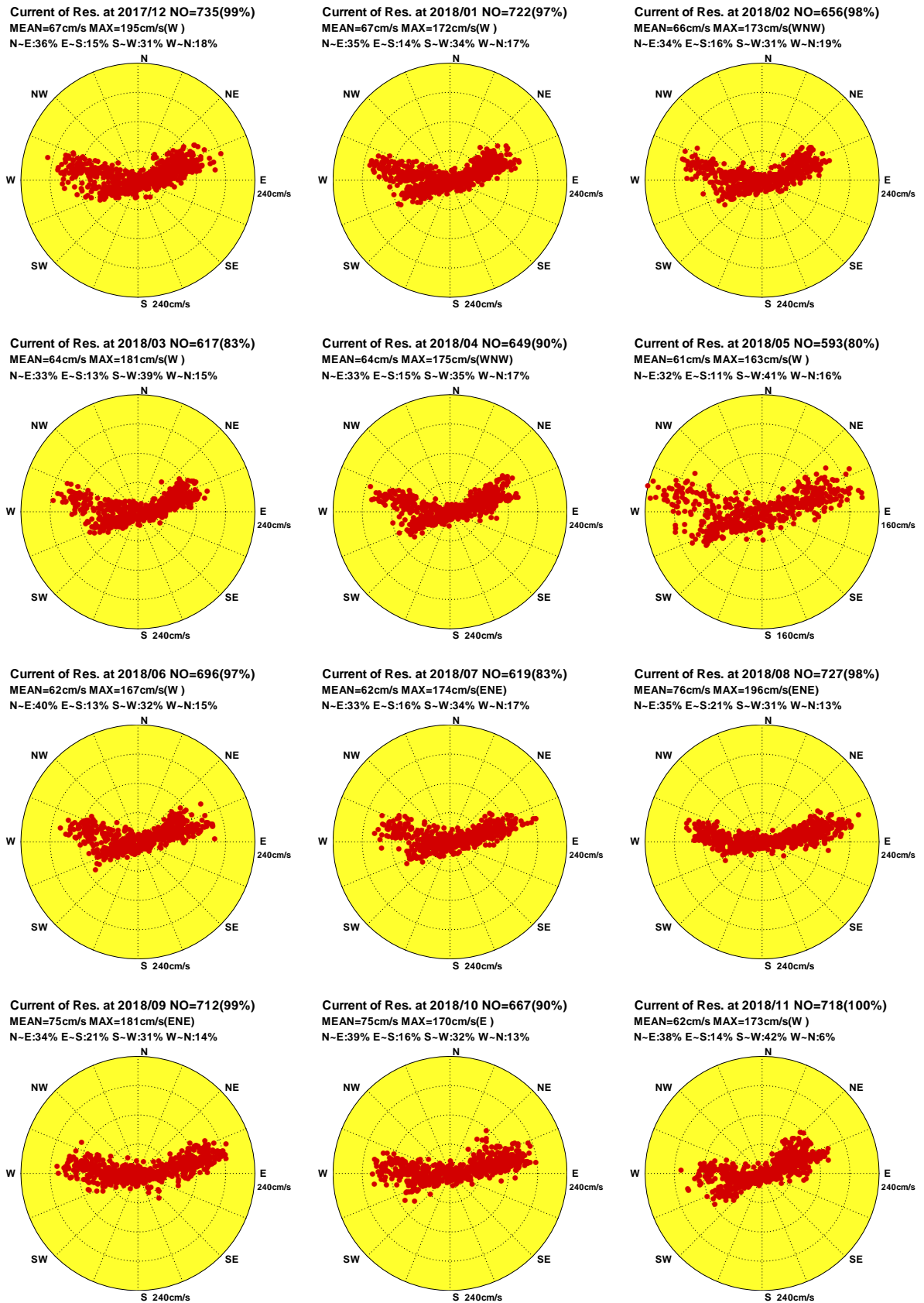


圖4.4.3c 2018年北端海域每月測站 R 計算殘流向量分佈圖

C17CKLR0.1HR C181KLR0.1HR C182KLR0.1HR C183KLR0.1HR C184KLR0.1HR C185KLR0.1HR  
 C186KLR0.1HR C187KLR0.1HR C188KLR0.1HR C189KLR0.1HR C18AKLR0.1HR C18BKLR0.1HR

Institute of Harbor & Marine Technology



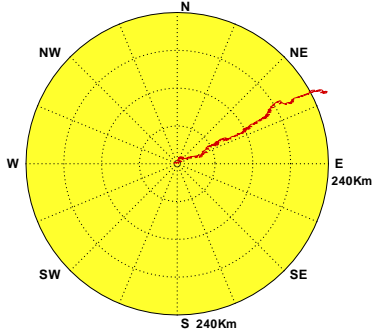
## 4.5 2018 年北端海域各測站觀測海流與 計算潮流(殘流)向量行進圖



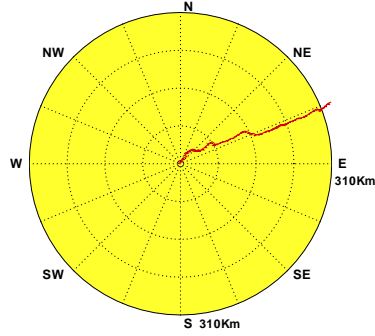


# Progressive Vector Diagram of Current

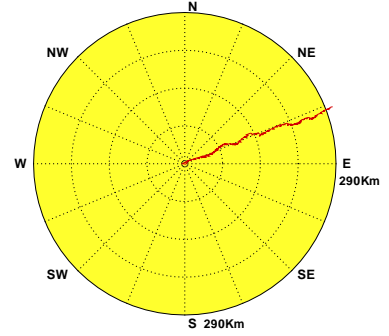
Current of KLX0 at 2017/12 NO=742(100%)  
MEAN=32cm/s MAX=92cm/s(ENE)  
N-E:46% E-S:16% S-W:21% W-N:17%



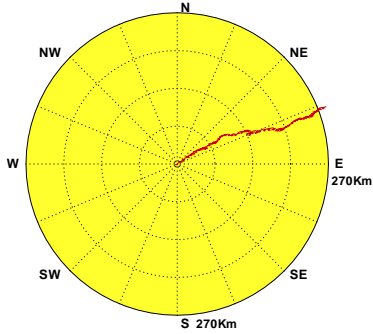
Current of KLX0 at 2018/01 NO=737(99%)  
MEAN=32cm/s MAX=102cm/s(E)  
N-E:47% E-S:18% S-W:18% W-N:17%



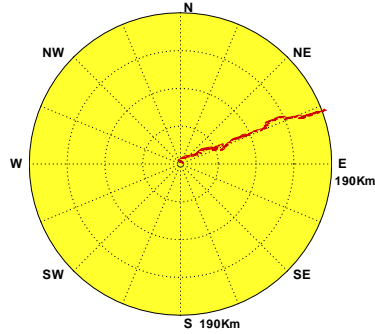
Current of KLX0 at 2018/02 NO=667(99%)  
MEAN=32cm/s MAX=108cm/s(ENE)  
N-E:46% E-S:19% S-W:19% W-N:16%



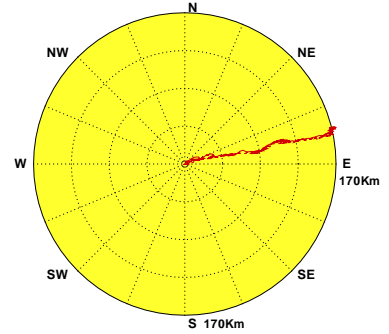
Current of KLX0 at 2018/03 NO=738(99%)  
MEAN=32cm/s MAX=94cm/s(ENE)  
N-E:44% E-S:19% S-W:19% W-N:18%



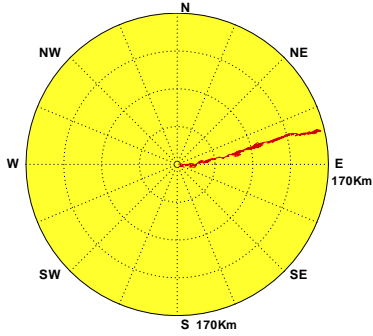
Current of KLX0 at 2018/04 NO=711(99%)  
MEAN=30cm/s MAX=93cm/s(ENE)  
N-E:44% E-S:17% S-W:23% W-N:16%



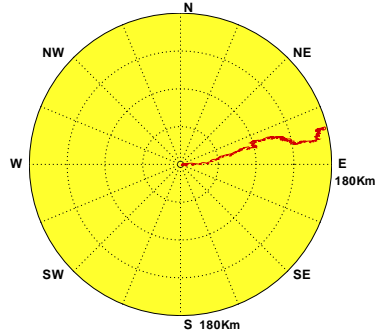
Current of KLX0 at 2018/05 NO=743(100%)  
MEAN=30cm/s MAX=85cm/s(E)  
N-E:43% E-S:18% S-W:26% W-N:13%



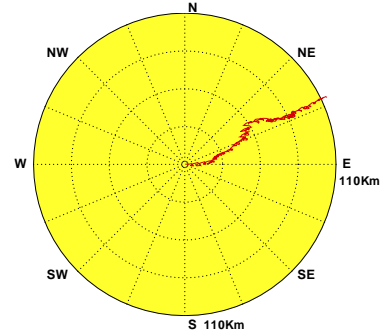
Current of KLX0 at 2018/06 NO=713(99%)  
MEAN=27cm/s MAX=73cm/s(ENE)  
N-E:41% E-S:21% S-W:25% W-N:13%



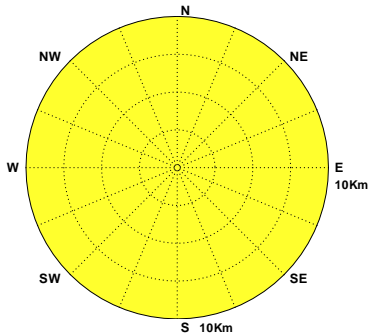
Current of KLX0 at 2018/07 NO=739(99%)  
MEAN=26cm/s MAX=87cm/s(E)  
N-E:42% E-S:20% S-W:22% W-N:16%



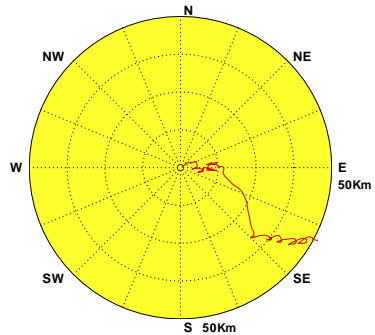
Current of KLX0 at 2018/08 NO=498(67%)  
MEAN=22cm/s MAX=67cm/s(ENE)  
N-E:44% E-S:18% S-W:18% W-N:20%



Current of KLX0 at 2018/09



Current of KLX0 at 2018/10 NO=174(23%)  
MEAN=19cm/s MAX=52cm/s(ENE)  
N-E:28% E-S:38% S-W:24% W-N:10%



Current of KLX0 at 2018/11

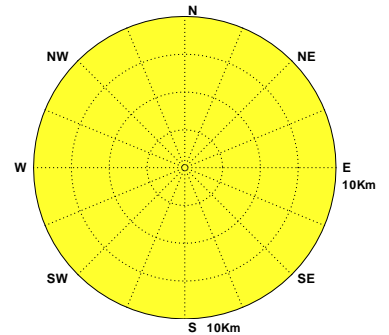


圖4.5.1a 2018年北端海域每月測站 X 觀測海流向量行進圖

C17CKLX0.1H0 C181KLX0.1H0 C182KLX0.1H0 C183KLX0.1H0 C184KLX0.1H0 C185KLX0.1H0  
C186KLX0.1H0 C187KLX0.1H0 C188KLX0.1H0 C189KLX0.1H0 C18AKLX0.1H0 C18BKLX0.1H0

Institute of Harbor & Marine Technology

# Progressive Vector Diagram of Current

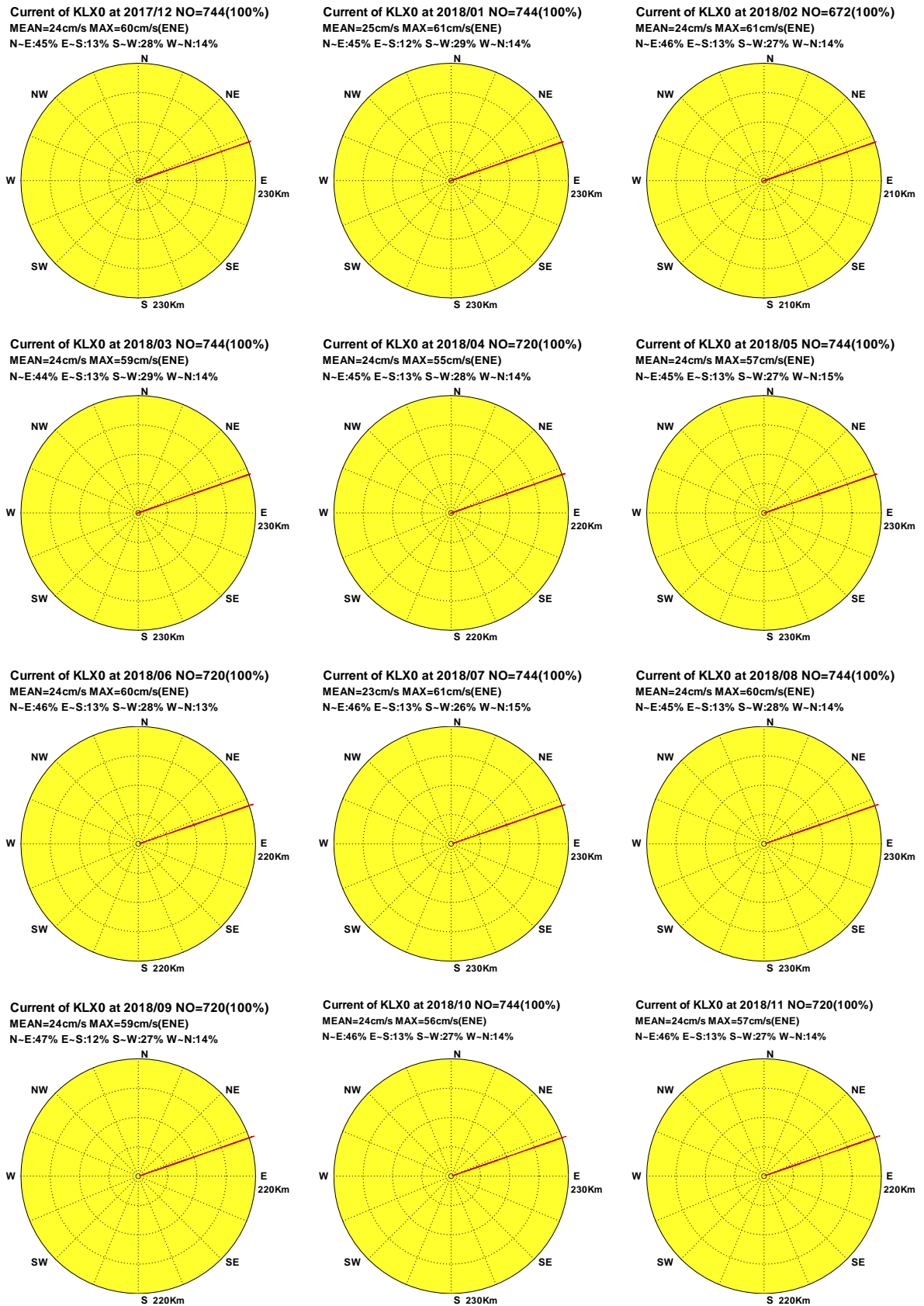


圖4.5.1b 2018年北端海域每月測站 X 計算潮流向量行進圖

C17CKLX0.1HD C181KLX0.1HD C182KLX0.1HD C183KLX0.1HD C184KLX0.1HD C185KLX0.1HD  
 C186KLX0.1HD C187KLX0.1HD C188KLX0.1HD C189KLX0.1HD C18AKLX0.1HD C18BKLX0.1HD

Institute of Harbor & Marine Technology

# Progressive Vector Diagram of Current

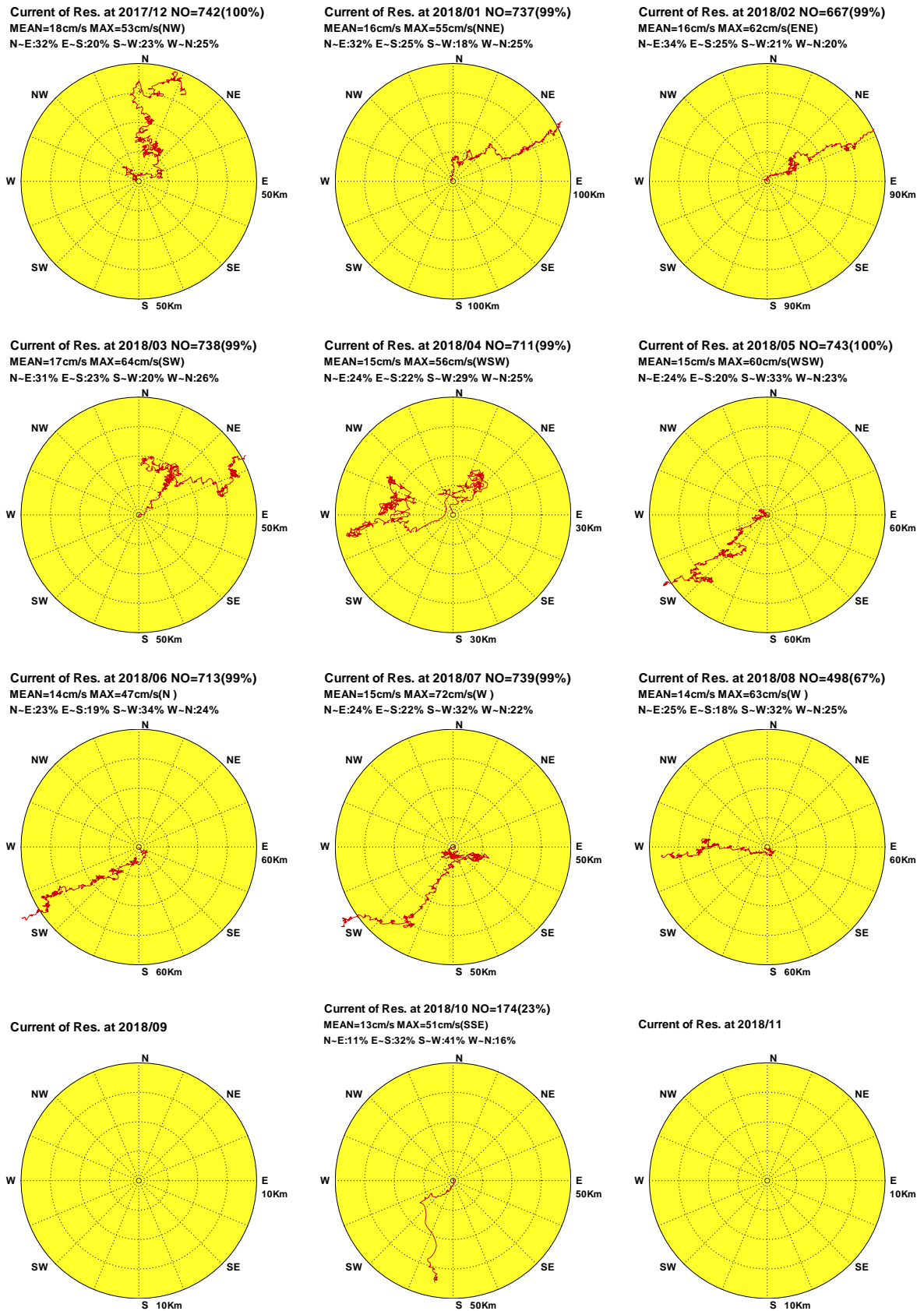


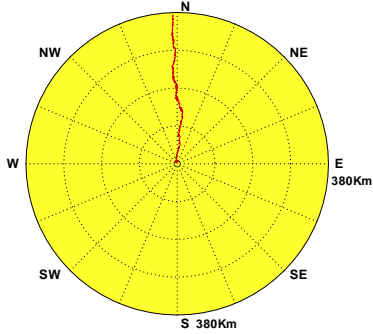
圖4.5.1c 2018年北端海域每月測站 X 計算殘流向量行進圖

C17CKLX0.1HR C181KLX0.1HR C182KLX0.1HR C183KLX0.1HR C184KLX0.1HR C185KLX0.1HR  
C186KLX0.1HR C187KLX0.1HR C188KLX0.1HR C189KLX0.1HR C18AKLX0.1HR C18BKLX0.1HR

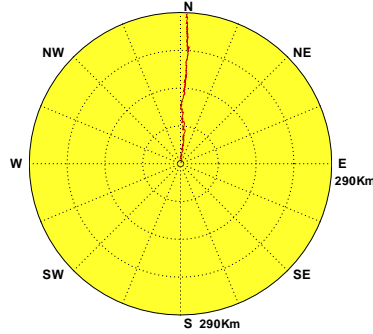
Institute of Harbor & Marine Technology

# Progressive Vector Diagram of Current

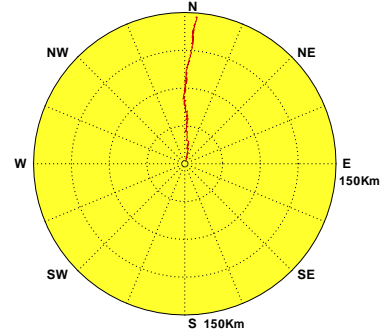
Current of KLY0 at 2017/12 NO=744(100%)  
MEAN=28cm/s MAX=85cm/s(NNE)  
N-E:46% E-S:3% S-W:30% W-N:21%



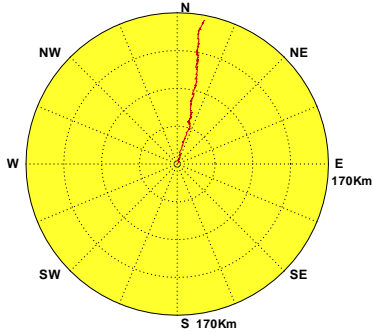
Current of KLY0 at 2018/01 NO=462(62%)  
MEAN=28cm/s MAX=73cm/s(NNE)  
N-E:48% E-S:3% S-W:26% W-N:23%



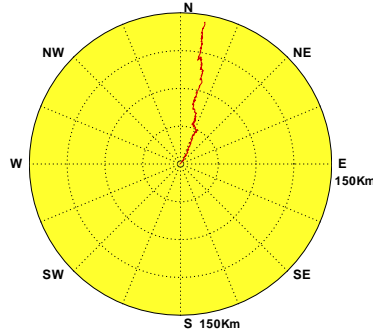
Current of KLY0 at 2018/02 NO=301(45%)  
MEAN=24cm/s MAX=71cm/s(N)  
N-E:52% E-S:2% S-W:28% W-N:18%



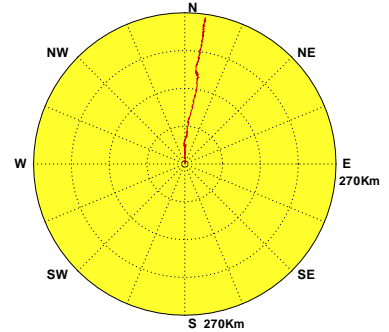
Current of KLY0 at 2018/03 NO=606(81%)  
MEAN=13cm/s MAX=53cm/s(NNE)  
N-E:45% E-S:7% S-W:25% W-N:23%



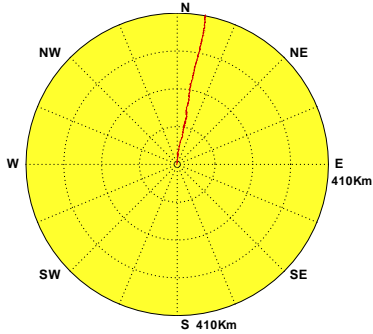
Current of KLY0 at 2018/04 NO=672(93%)  
MEAN=11cm/s MAX=47cm/s(NNE)  
N-E:45% E-S:9% S-W:23% W-N:23%



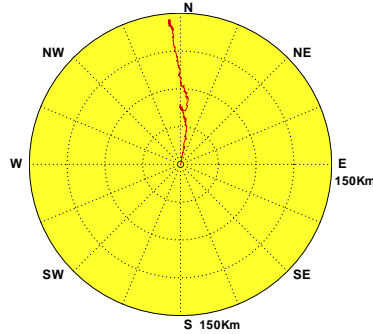
Current of KLY0 at 2018/05 NO=718(97%)  
MEAN=17cm/s MAX=76cm/s(NNE)  
N-E:49% E-S:7% S-W:24% W-N:20%



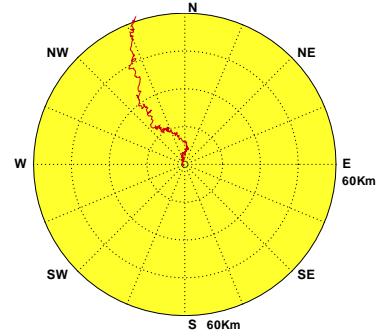
Current of KLY0 at 2018/06 NO=720(100%)  
MEAN=24cm/s MAX=74cm/s(N)  
N-E:58% E-S:4% S-W:21% W-N:17%



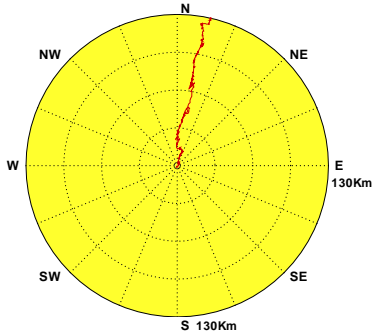
Current of KLY0 at 2018/07 NO=739(99%)  
MEAN=10cm/s MAX=68cm/s(NNE)  
N-E:30% E-S:10% S-W:22% W-N:38%



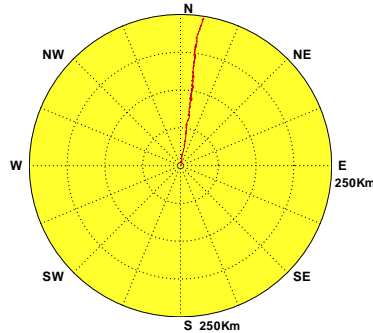
Current of KLY0 at 2018/08 NO=743(100%)  
MEAN=6cm/s MAX=35cm/s(NW)  
N-E:29% E-S:15% S-W:25% W-N:31%



Current of KLY0 at 2018/09 NO=719(100%)  
MEAN=13cm/s MAX=75cm/s(N)  
N-E:43% E-S:13% S-W:25% W-N:19%



Current of KLY0 at 2018/10 NO=742(100%)  
MEAN=16cm/s MAX=64cm/s(NNE)  
N-E:47% E-S:8% S-W:24% W-N:21%



Current of KLY0 at 2018/11 NO=718(100%)  
MEAN=14cm/s MAX=69cm/s(N)  
N-E:47% E-S:8% S-W:20% W-N:25%

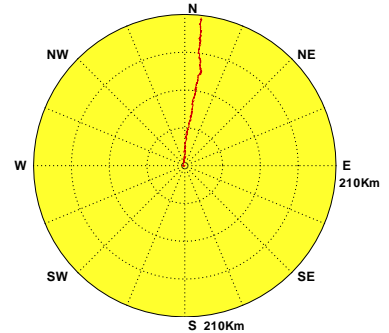


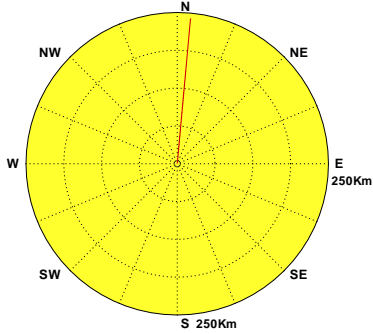
圖4.5.2a 2018年北端海域每月測站 Y 觀測海流向量行進圖

C17CKLY0.1H0 C181KLY0.1H0 C182KLY0.1H0 C183KLY0.1H0 C184KLY0.1H0 C185KLY0.1H0  
C186KLY0.1H0 C187KLY0.1H0 C188KLY0.1H0 C189KLY0.1H0 C18AKLY0.1H0 C18BKLY0.1H0

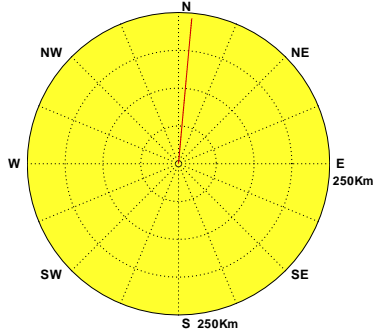
Institute of Harbor & Marine Technology

# Progressive Vector Diagram of Current

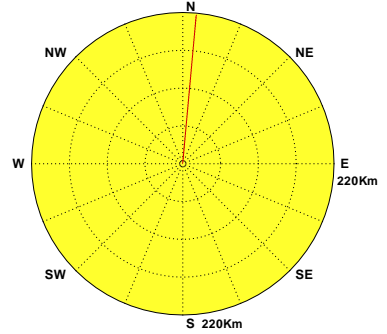
Current of KLY0 at 2017/12 NO=744(100%)  
MEAN=9cm/s MAX=19cm/s(NNE)  
N-E:60% E-S:0% S-W:1% W-N:39%



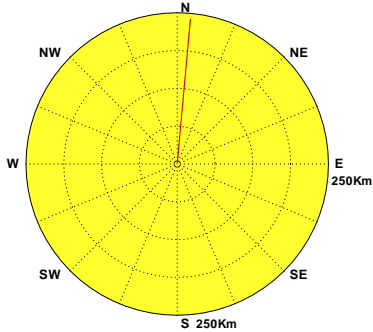
Current of KLY0 at 2018/01 NO=744(100%)  
MEAN=9cm/s MAX=20cm/s(NNE)  
N-E:60% E-S:0% S-W:1% W-N:39%



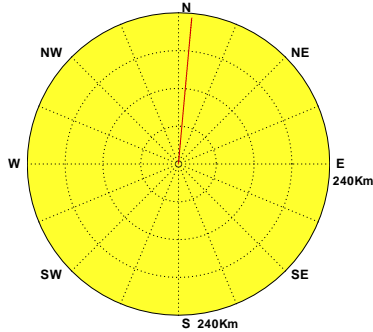
Current of KLY0 at 2018/02 NO=672(100%)  
MEAN=9cm/s MAX=20cm/s(NNE)  
N-E:59% E-S:0% S-W:2% W-N:39%



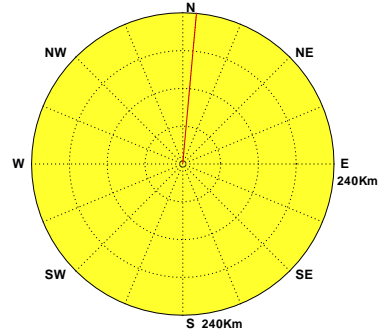
Current of KLY0 at 2018/03 NO=744(100%)  
MEAN=9cm/s MAX=20cm/s(NNE)  
N-E:59% E-S:0% S-W:3% W-N:38%



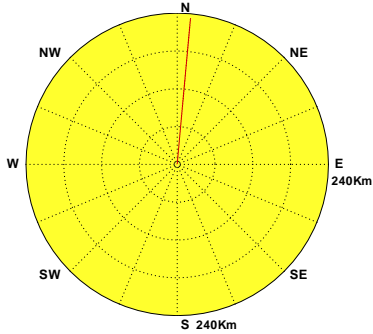
Current of KLY0 at 2018/04 NO=720(100%)  
MEAN=9cm/s MAX=20cm/s(NNE)  
N-E:59% E-S:0% S-W:2% W-N:39%



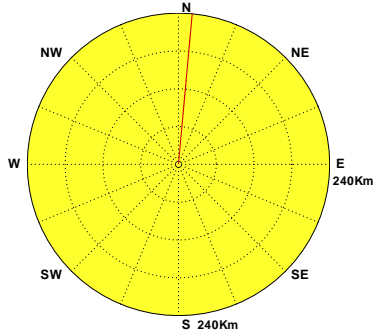
Current of KLY0 at 2018/05 NO=744(100%)  
MEAN=9cm/s MAX=20cm/s(NNE)  
N-E:60% E-S:0% S-W:1% W-N:39%



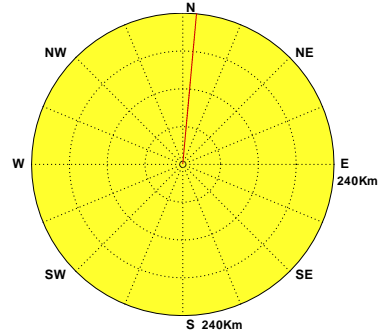
Current of KLY0 at 2018/06 NO=720(100%)  
MEAN=9cm/s MAX=19cm/s(NNE)  
N-E:60% E-S:0% S-W:1% W-N:39%



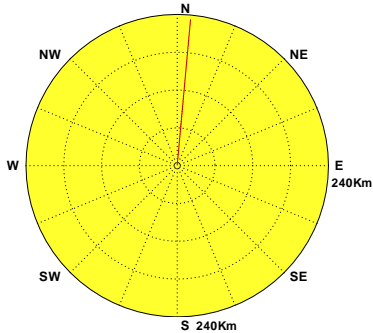
Current of KLY0 at 2018/07 NO=744(100%)  
MEAN=9cm/s MAX=19cm/s(NNE)  
N-E:60% E-S:0% S-W:1% W-N:39%



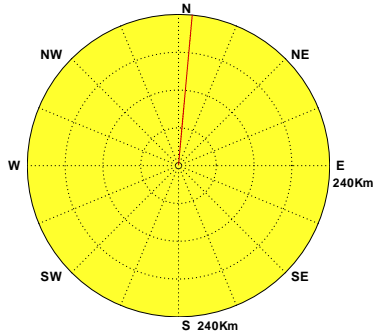
Current of KLY0 at 2018/08 NO=744(100%)  
MEAN=9cm/s MAX=20cm/s(NNE)  
N-E:61% E-S:0% S-W:1% W-N:38%



Current of KLY0 at 2018/09 NO=720(100%)  
MEAN=9cm/s MAX=20cm/s(NNE)  
N-E:59% E-S:0% S-W:2% W-N:39%



Current of KLY0 at 2018/10 NO=744(100%)  
MEAN=9cm/s MAX=20cm/s(NNE)  
N-E:59% E-S:0% S-W:2% W-N:39%



Current of KLY0 at 2018/11 NO=720(100%)  
MEAN=9cm/s MAX=20cm/s(NNE)  
N-E:60% E-S:0% S-W:2% W-N:38%

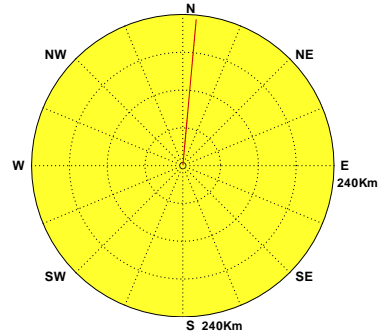


圖4.5.2b 2018年北端海域每月測站 Y 計算潮流向量行進圖

C17CKLY0.1HD C181KLY0.1HD C182KLY0.1HD C183KLY0.1HD C184KLY0.1HD C185KLY0.1HD  
C186KLY0.1HD C187KLY0.1HD C188KLY0.1HD C189KLY0.1HD C18AKLY0.1HD C18BKLY0.1HD

Institute of Harbor & Marine Technology



# Progressive Vector Diagram of Current

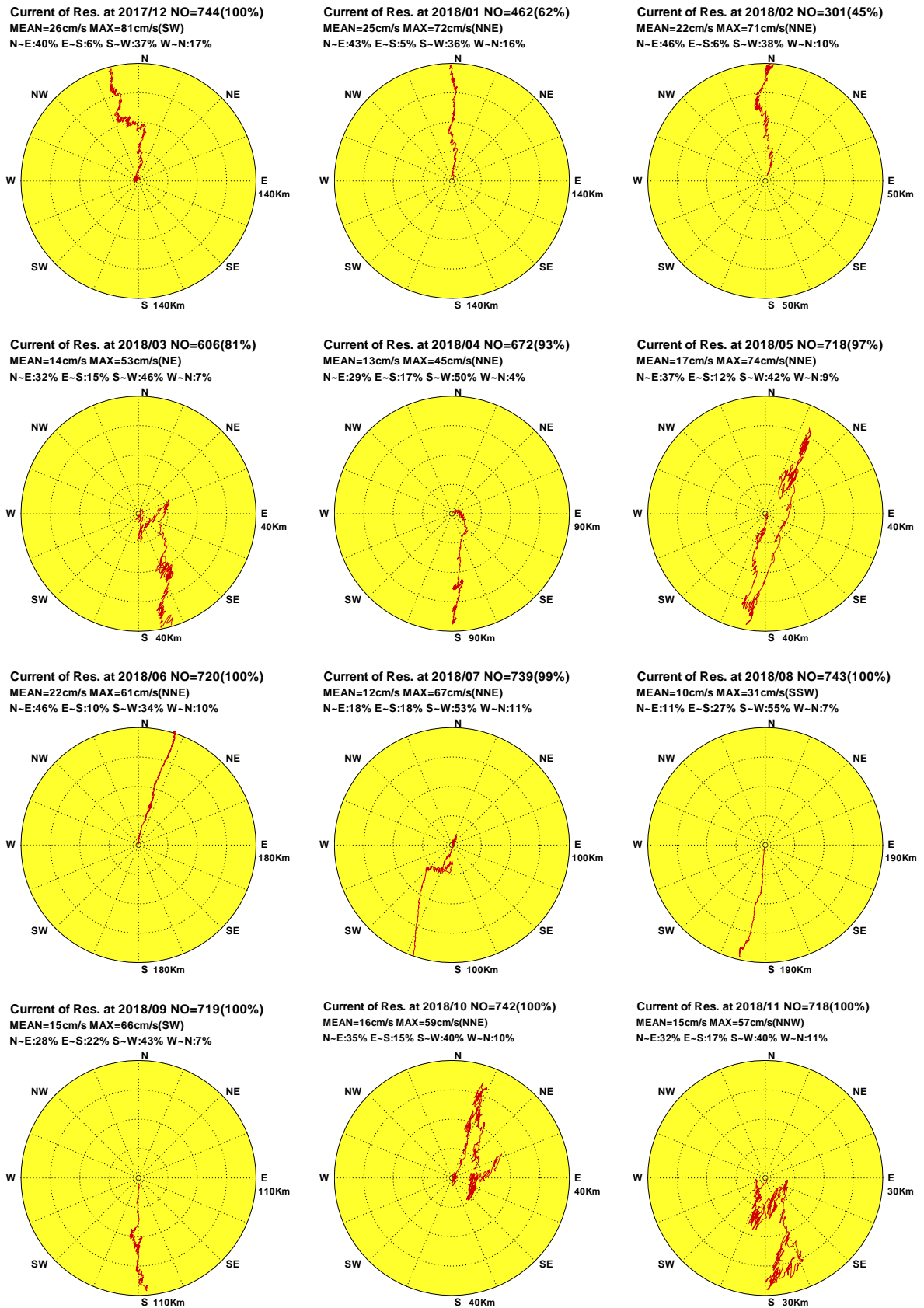


圖4.5.2c 2018年北端海域每月測站 Y 計算殘流向量行進圖

C17CKLY0.1HR C181KLY0.1HR C182KLY0.1HR C183KLY0.1HR C184KLY0.1HR C185KLY0.1HR  
C186KLY0.1HR C187KLY0.1HR C188KLY0.1HR C189KLY0.1HR C18AKLY0.1HR C18BKLY0.1HR

Institute of Harbor & Marine Technology

# Progressive Vector Diagram of Current

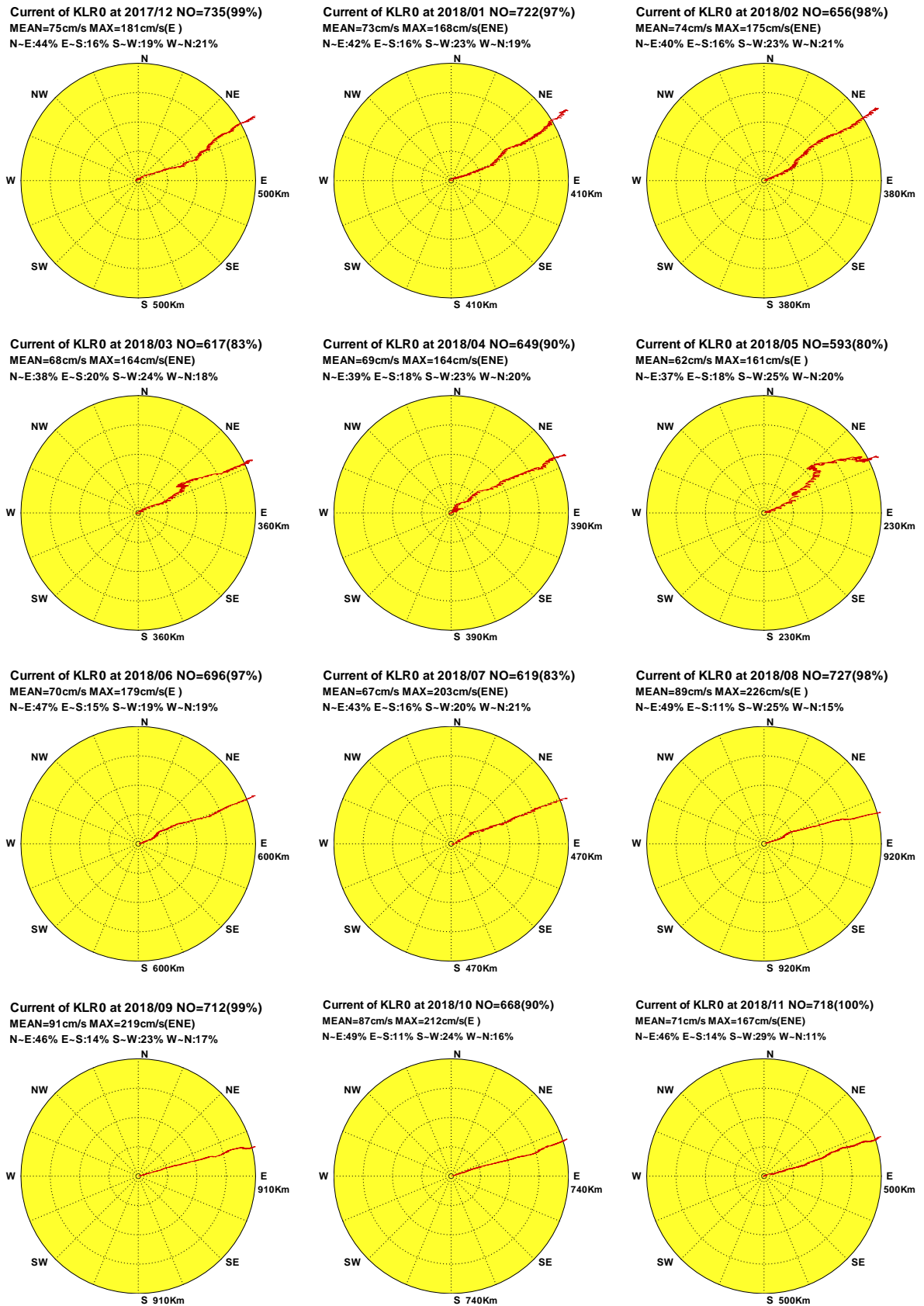


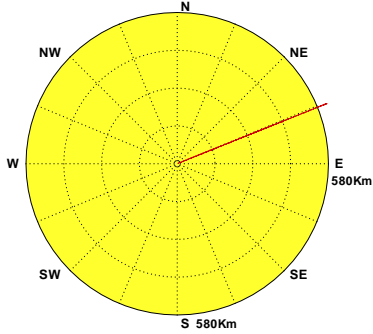
圖4.5.3a 2018年北端海域每月測站 R 觀測海流向量行進圖

C17CKLR0.1H0 C181KLR0.1H0 C182KLR0.1H0 C183KLR0.1H0 C184KLR0.1H0 C185KLR0.1H0  
C186KLR0.1H0 C187KLR0.1H0 C188KLR0.1H0 C189KLR0.1H0 C18AKLR0.1H0 C18BKLR0.1H0

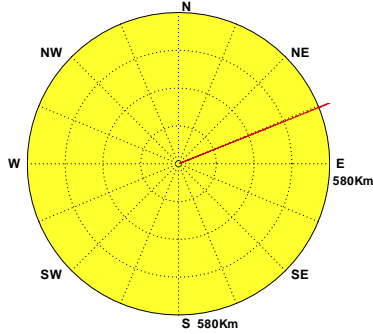
Institute of Harbor & Marine Technology

# Progressive Vector Diagram of Current

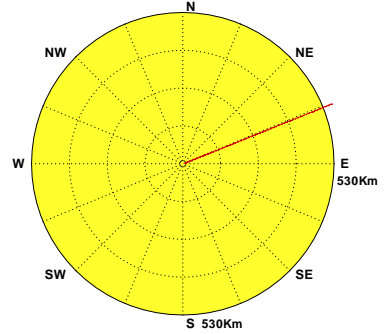
Current of KLR0 at 2017/12 NO=744(100%)  
 MEAN=40cm/s MAX=97cm/s(E)  
 N-E:63% E-S:1% S-W:12% W-N:24%



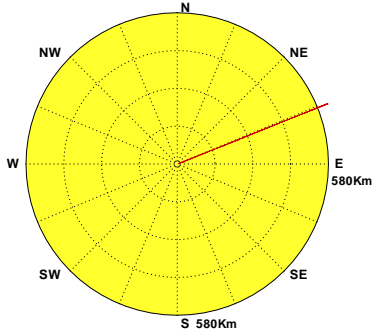
Current of KLR0 at 2018/01 NO=744(100%)  
 MEAN=40cm/s MAX=99cm/s(E)  
 N-E:63% E-S:1% S-W:11% W-N:25%



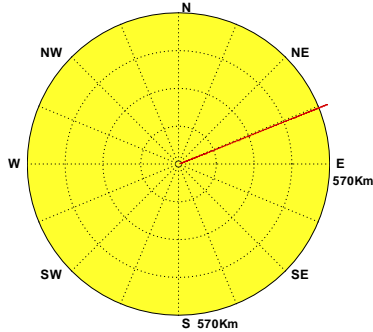
Current of KLR0 at 2018/02 NO=672(100%)  
 MEAN=39cm/s MAX=100cm/s(E)  
 N-E:63% E-S:1% S-W:10% W-N:26%



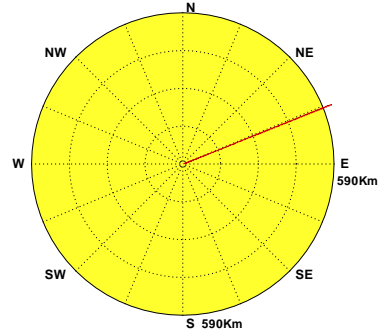
Current of KLR0 at 2018/03 NO=744(100%)  
 MEAN=41cm/s MAX=101cm/s(E)  
 N-E:62% E-S:1% S-W:13% W-N:24%



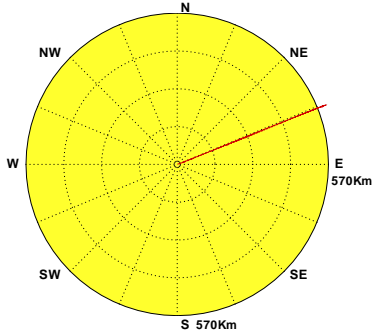
Current of KLR0 at 2018/04 NO=720(100%)  
 MEAN=40cm/s MAX=101cm/s(E)  
 N-E:63% E-S:1% S-W:12% W-N:24%



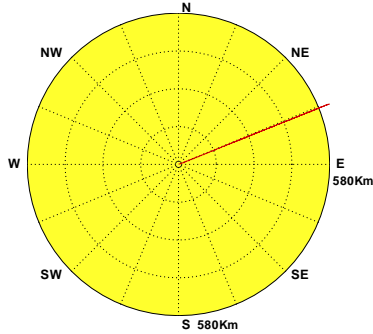
Current of KLR0 at 2018/05 NO=744(100%)  
 MEAN=40cm/s MAX=96cm/s(E)  
 N-E:63% E-S:1% S-W:13% W-N:23%



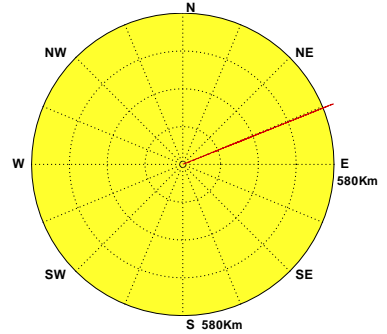
Current of KLR0 at 2018/06 NO=720(100%)  
 MEAN=40cm/s MAX=94cm/s(E)  
 N-E:64% E-S:1% S-W:11% W-N:24%



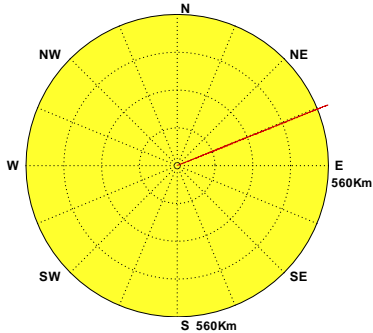
Current of KLR0 at 2018/07 NO=744(100%)  
 MEAN=39cm/s MAX=97cm/s(E)  
 N-E:62% E-S:1% S-W:11% W-N:26%



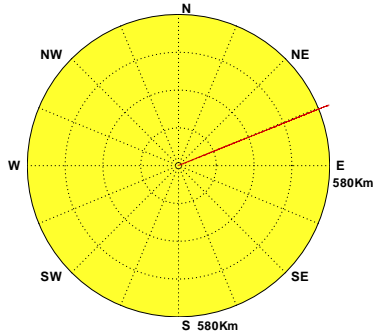
Current of KLR0 at 2018/08 NO=744(100%)  
 MEAN=39cm/s MAX=100cm/s(E)  
 N-E:64% E-S:0% S-W:10% W-N:26%



Current of KLR0 at 2018/09 NO=720(100%)  
 MEAN=39cm/s MAX=102cm/s(E)  
 N-E:64% E-S:1% S-W:11% W-N:25%



Current of KLR0 at 2018/10 NO=744(100%)  
 MEAN=39cm/s MAX=102cm/s(E)  
 N-E:62% E-S:1% S-W:12% W-N:25%



Current of KLR0 at 2018/11 NO=720(100%)  
 MEAN=40cm/s MAX=100cm/s(E)  
 N-E:62% E-S:1% S-W:12% W-N:25%

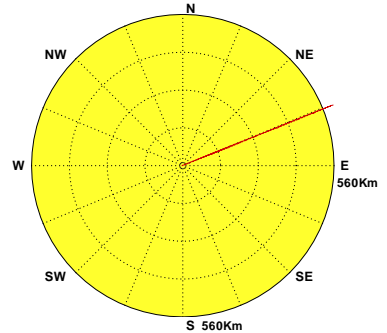


圖4.5.3b 2018年北端海域每月測站 R 計算潮流向量行進圖

C17CKLR0.1HD C181KLR0.1HD C182KLR0.1HD C183KLR0.1HD C184KLR0.1HD C185KLR0.1HD  
 C186KLR0.1HD C187KLR0.1HD C188KLR0.1HD C189KLR0.1HD C18AKLR0.1HD C18BKLR0.1HD

Institute of Harbor & Marine Technology

# Progressive Vector Diagram of Current

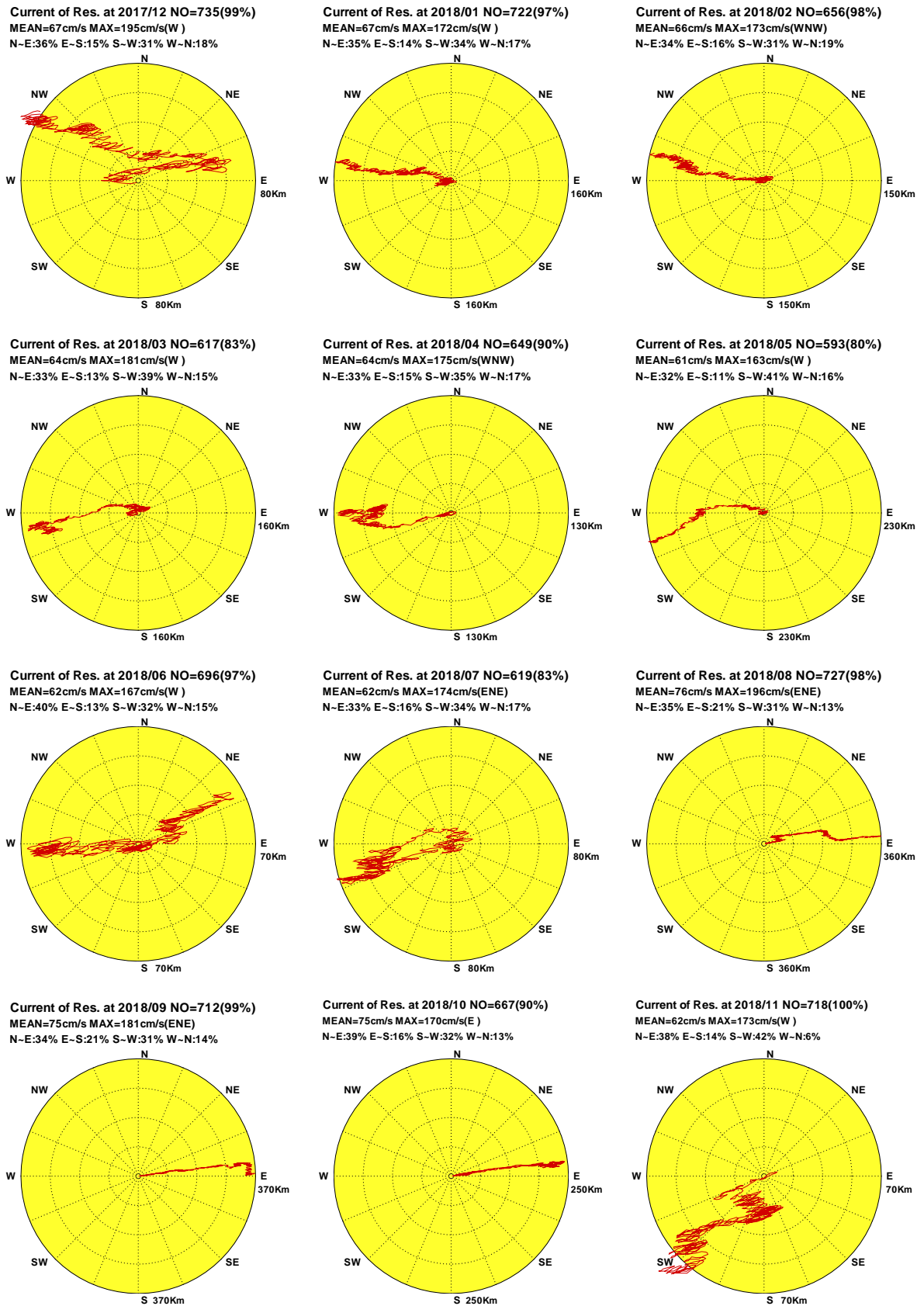


圖4.5.3c 2018年北端海域每月測站 R 計算殘流向量行進圖

C17CKLR0.1HR C181KLR0.1HR C182KLR0.1HR C183KLR0.1HR C184KLR0.1HR C185KLR0.1HR  
 C186KLR0.1HR C187KLR0.1HR C188KLR0.1HR C189KLR0.1HR C18AKLR0.1HR C18BKLR0.1HR

Institute of Harbor & Marine Technology

