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2018 年港灣環境資訊網
海氣象觀測資料年報
(宜蘭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

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摘要： <p style="text-align: center;">本港灣環境資訊網觀測海氣象資料年報，包括宜蘭海域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>			
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2018年港灣環境資訊網海氣象觀測資料年報 (宜蘭海域風浪潮流觀測資料)

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誌 謝

2018 年港灣環境資訊網觀測風力資料，蒐集之宜蘭海域風力資料，除本中心自行觀測之外，在蘇澳氣象站(測站 E 及 F)、宜蘭氣象站(測站 H)等，係交通部 中央氣象局(CWB)提供;蘇澳海上浮標(測站 Y)觀測風力資料，係經濟部 水利署(WRA)提供;福隆海上浮標(測站 R)觀測風力資料，係 國立成功大學水文中心(COMC)裝設；龜山島外海浮標站(測站 Z)之風速儀屬 觀光局東北角管理處(TBRC)所設置，謹致謝忱。

2018 年港灣環境資訊網觀測波浪資料，蒐集之宜蘭海域波浪資料，除本中心自行觀測之外，在蘇澳海上浮標(測站 Y)觀測波浪資料，係經濟部 水利署(WRA)提供;福隆海上浮標(測站 R)觀測波浪儀，係 國立成功大學水文中心(COMC)裝設；龜山島外海浮標站(測站 Z)之波浪儀屬 觀光局東北角管理處(TBRC)所設置，謹致謝忱。

2018 年港灣海氣象觀測潮汐資料，蒐集之宜蘭海域潮汐觀測資料，除本中心自行觀測之外，在蘇澳港(測站 F 及測站 P)、烏石(測站 J)、福隆(測站 K)等觀測潮汐資料，係交通部 中央氣象局提供，謹致謝忱。

2018 年港灣環境資訊網觀測海流資料，蒐集之宜蘭海域海流資料，除本中心自行觀測之外，在蘇澳海上浮標(測站 Y)觀測海流資料，係經濟部 水利署(WRA)提供，謹致謝忱。

第 0 章 宜蘭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。

宜蘭海域觀測風力資料測站統計表如表 WS1，觀測波浪資料測站統計表如表 VS1，觀測潮汐資料測站統計表如表 TS1，觀測海流資料測站統計表如表 CS1。

表 WS1 宜蘭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
宜蘭海域	7	1	3	1	2	

表 VS1 宜蘭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
宜蘭海域	4	1	0	1	2	

表 TS1 宜蘭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
宜蘭海域	7	3	4	0	0	

表 CS1 宜蘭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
宜蘭海域	2	1	0	1	0	

註:資料更新時間為 2018 年。

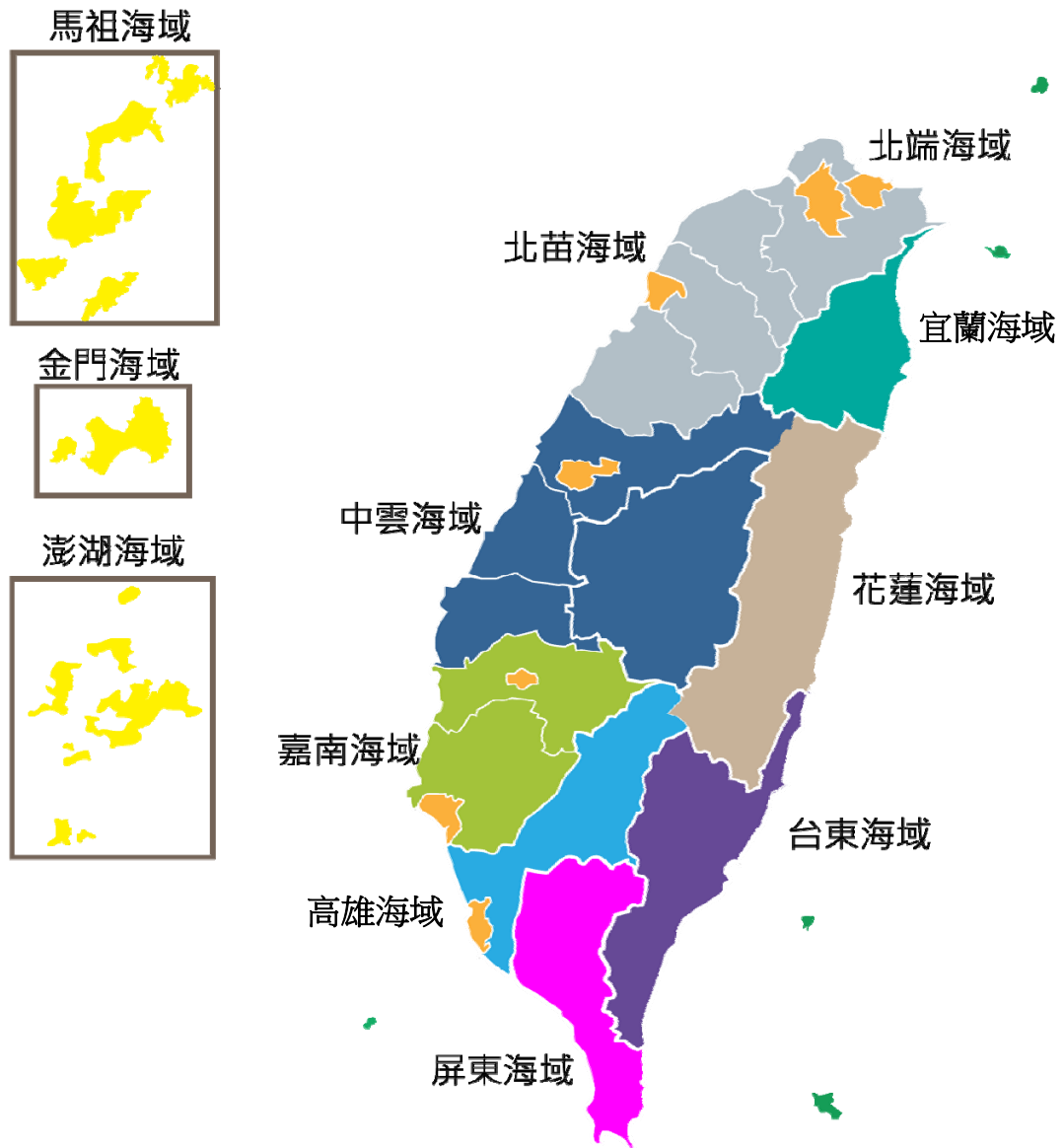


圖 A1 臺灣 12 海域區分示意圖

2018 年宜蘭海域觀測風力資料

宜蘭海域風之觀測係 2003 年 6 月本所港研中心(IHMT)於蘇澳港安裝一具風速風向即時傳送監測系統(稱測站 W)，其位置如附圖 WS1，2012 年 10 月更新為 Gill 二維超音波式風速計。測站 E、測站 F 及測站 H 之風速儀屬中央氣象局所有，測站 Y(蘇澳外海浮標站)之風速儀屬水利署(WRA)所有，測站 Z(龜山島外海浮標站)之風速儀屬觀光局東北角管理處(TBRC)所設置。福隆海上浮標(測站 R)觀測風力，係國立成功大學水文中心(COMC)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 WS1。

表 WS1 宜蘭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	24°35'33"N	121°51'01"E	2003/06-2018/11(觀測中)	港研中心	蘇澳港區
E	24°35'48"N	121°51'26"E	1999/01-2018/11(觀測中)	中央氣象局	蘇澳
Y	24°37'38"N	121°52'36"E	1999/09-2018/11(觀測中)	水利署	蘇澳浮標站
Z	24°50'52"N	121°55'39"E	2002/05-2018/11(觀測中)	觀光局	龜山島浮標站
H	24°45'56"N	121°44'53"E	2013/11-2018/11(觀測中)	中央氣象局	宜蘭
R	22°18'50"N	120°21'50"E	2006/04-2008/02	水文中心	福隆浮標站
F	24°35'33"N	121°51'56"E	2015/04-2018/11(觀測中)	中央氣象局	蘇澳

宜蘭海域

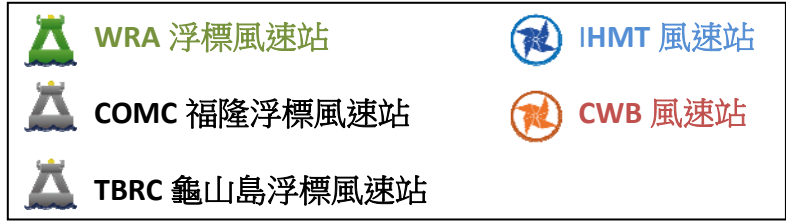


圖 WS1 宜蘭海域風力觀測站位置示意圖

2018 年宜蘭海域觀測波浪資料

宜蘭海域波浪之觀測本中心(IHMT)於 2002 年 7 月 19 日於蘇澳港外約 700m 附近(稱測站 X)，水深約 25 公尺處設置挪威 NORTEK 公司之剖面海流與表面波浪(波高、週期及波向)即時傳送監測系統(簡稱 AWCP)波浪觀測站，其位置如附圖 VS1。

測站 Y(蘇澳外海浮標站)之波浪儀屬水利署(WRA)所有，測站 Z(龜山島外海浮標站)之波浪儀屬觀光局東北角管理處(TBRC)所設置。福隆海上浮標(測站 R)觀測風力，係國立成功大學水文中心(COMC)所裝設。蘇澳海域各測站歷年觀測波浪資料蒐集概況如表 VS1。

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 VS1 宜蘭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
X	24°35'23"N	121°53'07"E	2002/08-2018/11(觀測中)	港研中心	AWCP 蘇澳港
Y	24°37'38"N	121°52'36"E	1999/09-2018/11(觀測中)	水利署	蘇澳浮標站
Z	24°50'52"N	121°55'39"E	2002/05-2018/11(觀測中)	觀光局	龜山島浮標站
R	22°18'50"N	120°21'50"E	2006/04-2008/08	水文中心	福隆浮標站

宜蘭海域



IHMT 波潮流站



WRA 浮標波浪站



COMC 福隆浮標波浪站



TBRC 龜山島浮標波浪站



圖 VS1 宜蘭海域波浪觀測站位置示意圖

2018 年宜蘭海域觀測潮汐資料

宜蘭海域潮汐之觀測係本中心於 2003 年 6 月本中心在蘇澳港(稱**測站 T**)安裝一具壓力式潮位儀監測系統，如附圖 TS1。另於 2002 年 7 月，在蘇澳港港口外 700 公尺水深約 25 公尺處(**測站 X**) 安置 AWCP 即時傳送監測系統，也具量測水位功能。2018 年於蘇澳港內增設即時水深潮位站(稱**測站 G**)。蘇澳港潮位站(**測站 F** 及 **測站 P**)、烏石潮位站(**測站 J**)及福隆潮位站(**測站 K**)由中央氣象局設置。各測站歷年觀測潮汐資料蒐集概況如表 TS1。

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。其他潮位資料由中央氣象局提供。

表 TS1 宜蘭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	24°35'33"N	121°51'56"E	2003/06-2018/11(觀測中)	港研中心	蘇澳港潮位計
X	24°35'23"N	121°53'07"E	2002/08-2018/11(觀測中)	港研中心	AWCP
F	24°35'33"N	121°51'56"E	1981/01-2018/11(觀測中)	中央氣象局	蘇澳港潮位站
J	24°52'07"N	121°50'17"E	2013/12-2018/11(觀測中)	中央氣象局	烏石潮位站
K	24°01'18"N	121°57'00"E	2013/12-2018/11(觀測中)	中央氣象局	福隆潮位站
P	24°35'24"N	121°52'12"E	2017/07-2018/11(觀測中)	中央氣象局	蘇澳潮位站
G			2017/10-2018/11(觀測中)	港研中心	蘇澳港潮位站

宜蘭海域

	IHMT 潮位站
	CWB 潮位站
	IHMT 波潮流站



圖 TS1 宜蘭海域潮汐觀測站位置示意圖

2018 年宜蘭海域觀測海流資料

宜蘭海域海流之觀測本中心於 2002 年 7 月 19 日於蘇澳港外約 700m 附近(稱**測站 X**)，水深約 25 公尺處設置挪威 NORTEK 公司之剖面海流與表面波浪(波高、週期及波向)即時傳送監測系統(簡稱 AWCP)海流觀測站，其位置如附圖 CS1。

測站 Y(蘇澳外海浮標站)之海流儀屬水利署所有，各測站歷年觀測海流資料蒐集概況如表 CS1。

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，蘇澳港觀測站水深間距設定為 1 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 CS1 宜蘭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
X	24°35'23"N	121°53'07"E	2002/08-2018/11(觀測中)	港研中心	AWCP 蘇澳港
Y	24°37'38"N	121°52'36"E	1999/09-2018/11(觀測中)	水利署	蘇澳浮標站

宜蘭海域



圖 CS1 宜蘭海域海流觀測站位置示意圖

第一章 2018 年宜蘭海域觀測風力資料

宜蘭海域風之觀測包括測站 **W**、測站 **Y**、測站 **E**、測站 **F**、測站 **Z** 及測站 **H** 等 6 個測站(測站位置如第 0 章圖 WS1)。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 年宜蘭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 年宜蘭海域**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 年宜蘭海域**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 年宜蘭海域**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 年宜蘭海域**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 年宜蘭海域**各測站**修補前每月風力向量行進圖。

表 1.1.1a 2018年每月宜蘭海域修補前各測站觀測風力資料紀錄表

海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域
年月/測站	W	Y	Z	F	E	H	R					
2017/12月	530(71.2%)	744(100%)	744(100%)	560(75.3%)	744(100%)	744(100%)	*	*	*	*	*	*
2018/ 1月	278(37.4%)	744(100%)	744(100%)	649(87.2%)	744(100%)	744(100%)	*	*	*	*	*	*
2018/ 2月	*	672(100%)	672(100%)	467(69.5%)	672(100%)	672(100%)	*	*	*	*	*	*
2018/ 3月	*	744(100%)	744(100%)	701(94.2%)	744(100%)	744(100%)	*	*	*	*	*	*
2018/ 4月	*	720(100%)	720(100%)	691(96.0%)	720(100%)	720(100%)	*	*	*	*	*	*
2018/ 5月	392(52.7%)	744(100%)	744(100%)	465(62.5%)	744(100%)	744(100%)	*	*	*	*	*	*
2018/ 6月	720(100%)	719(99.9%)	718(99.7%)	684(95.0%)	720(100%)	720(100%)	*	*	*	*	*	*
2018/ 7月	744(100%)	743(99.9%)	744(100%)	621(83.5%)	744(100%)	744(100%)	*	*	*	*	*	*
2018/ 8月	744(100%)	732(98.4%)	744(100%)	722(97.0%)	744(100%)	744(100%)	*	*	*	*	*	*
2018/ 9月	720(100%)	719(99.9%)	720(100%)	666(92.5%)	720(100%)	720(100%)	*	*	*	*	*	*
2018/10月	744(100%)	744(100%)	744(100%)	741(99.6%)	744(100%)	744(100%)	*	*	*	*	*	*
2018/11月	720(100%)	720(100%)	720(100%)	672(93.3%)	720(100%)	720(100%)	*	*	*	*	*	*
2018/冬季	808(37.4%)	2160(100%)	2160(100%)	1676(77.6%)	2160(100%)	2160(100%)	*	*	*	*	*	*
2018/春季	392(17.8%)	2208(100%)	2208(100%)	1857(84.1%)	2208(100%)	2208(100%)	*	*	*	*	*	*
2018/夏季	2208(100%)	2194(99.4%)	2206(99.9%)	2027(91.8%)	2208(100%)	2208(100%)	*	*	*	*	*	*
2018/秋季	2184(100%)	2183(99.9%)	2184(100%)	2079(95.2%)	2184(100%)	2184(100%)	*	*	*	*	*	*
2018/整年	5592(63.8%)	8745(99.8%)	8758(99.9%)	7639(87.2%)	8760(100%)	8760(100%)	*	*	*	*	*	*
起始年月	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	2018/11	*	*	*	*	*	*

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表 1.1.1b 2018 年每月宜蘭海域修補後各測站風力資料紀錄表

海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域
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	*	*	*	*	*	*	*	*	*	*

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表1.1.2 2018年宜蘭海域 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%)	5.1	3.3/WNW	12.1/NNE	16.0	75.9	8.1	.0	14.0	2.2	23.9	59.9	WNW/28.9%
2	2018/01	744(100%)	4.6	2.3/NW	11.9/NNE	29.2	63.0	7.8	.0	15.2	7.5	25.0	52.3	WNW/21.0%
3	2018/02	672(100%)	3.8	2.0/W	9.4/SE	45.1	54.2	.7	.0	14.4	6.5	49.6	29.5	WSW/30.1%
4	2018/03	744(100%)	3.8	.4/SSW	13.6/ENE	46.9	48.1	5.0	.0	19.9	24.1	42.1	14.0	WSW/22.7%
5	2018/04	720(100%)	3.3	.9/S	11.6/NE	63.1	32.4	4.6	.0	14.0	23.8	44.9	17.4	WSW/26.0%
6	2018/05	744(100%)	3.5	1.5/S	12.1/SSE	62.5	28.9	8.6	.0	11.3	36.0	24.3	28.4	SSE/15.2%
7	2018/06	720(100%)	3.8	.3/WSW	12.4/SSE	49.3	42.6	8.1	.0	16.7	29.9	10.6	42.9	WNW/14.9%
8	2018/07	744(100%)	4.4	2.6/S	15.0/SSE	46.0	39.8	13.7	.5	6.9	53.1	11.3	28.8	SSE/27.7%
9	2018/08	744(100%)	4.2	2.0/S	13.5/S	48.0	39.2	12.8	.0	9.5	43.3	11.2	36.0	SSE/19.1%
10	2018/09	720(100%)	5.0	1.1/SSW	20.8/SSE	33.5	51.3	13.9	1.4	8.9	40.4	6.4	44.3	SSE/20.1%
11	2018/10	744(100%)	4.5	3.2/NW	10.6/NW	24.5	70.0	5.5	.0	14.4	4.0	15.1	66.5	WNW/25.0%
12	2018/11	720(100%)	3.6	1.0/WNW	10.9/ENE	51.8	44.2	4.0	.0	14.3	15.7	21.3	48.8	W /20.7%
13	2018/冬	2160(100%)	4.5	2.5/WNW	12.1/NNE	29.6	64.7	5.7	.0	14.5	5.4	32.3	47.8	WNW/20.7%
14	2018/春	2208(100%)	3.5	.9/S	13.6/ENE	57.4	36.5	6.1	.0	15.1	28.0	37.0	19.9	WSW/19.2%
15	2018/夏	2208(100%)	4.1	1.6/S	15.0/SSE	47.7	40.5	11.5	.2	11.0	42.2	11.0	35.8	SSE/19.6%
16	2018/秋	2184(100%)	4.4	1.3/WNW	20.8/SSE	36.4	55.3	7.8	.5	12.5	19.9	14.2	53.3	WNW/20.7%
17	2018/年	8760(100%)	4.1	.9/WSW	20.8/SSE	42.9	49.2	7.8	.2	13.3	24.0	23.6	39.1	WNW/15.4%

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表1.1.3 2018年宜蘭海域 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%)	5.1	3.0/NNW	11.8/N	25.4	60.2	14.4	.0	25.9	5.0	6.7	62.4	WNW/34.4%
2	2018/01	744(100%)	4.8	2.6/NNW	13.4/NNE	28.6	57.8	13.6	.0	25.4	8.2	7.4	59.0	WNW/31.3%
3	2018/02	672(100%)	4.8	2.8/NW	10.7/NNE	32.7	55.4	11.9	.0	20.8	6.7	7.9	64.6	WNW/35.3%
4	2018/03	744(100%)	4.3	.8/N	13.2/NNE	46.4	42.3	11.3	.0	26.2	20.8	13.8	39.1	WNW/17.6%
5	2018/04	720(100%)	3.9	.5/WSW	12.8/NE	50.8	39.7	9.4	.0	18.1	22.4	17.4	42.2	WNW/19.7%
6	2018/05	744(100%)	3.1	.9/S	11.3/NE	63.2	31.3	5.5	.0	19.5	24.5	22.3	33.7	S /23.3%
7	2018/06	720(100%)	3.4	.5/NNE	10.9/S	59.0	34.4	6.5	.0	27.8	22.6	12.9	36.7	NW /12.5%
8	2018/07	744(100%)	3.5	1.9/S	12.0/S	55.2	38.3	6.5	.0	9.3	47.6	14.8	28.4	S /23.9%
9	2018/08	744(100%)	3.5	1.8/SSE	13.4/SSE	62.4	28.4	9.3	.0	13.7	43.4	11.7	31.2	SSE/20.7%
10	2018/09	720(100%)	4.6	.4/SE	14.8/SE	38.2	47.2	14.4	.1	13.9	38.3	11.1	36.7	SSE/15.4%
11	2018/10	744(100%)	4.8	3.3/NNW	11.0/NW	24.5	64.9	10.6	.0	28.2	3.6	5.6	62.5	WNW/28.8%
12	2018/11	720(100%)	4.0	1.5/NNW	11.6/NNE	46.0	46.4	7.6	.0	26.3	14.7	10.3	48.8	WNW/24.4%
13	2018/冬	2160(100%)	4.9	2.8/NNW	13.4/NNE	28.8	57.9	13.3	.0	24.2	6.6	7.3	61.9	WNW/33.6%
14	2018/春	2208(100%)	3.8	.2/SW	13.2/NNE	53.5	37.8	8.7	.0	21.3	22.6	17.8	38.3	S /18.2%
15	2018/夏	2208(100%)	3.5	1.1/SSE	13.4/SSE	58.9	33.7	7.4	.0	16.8	38.0	13.1	32.0	S /15.4%
16	2018/秋	2184(100%)	4.5	1.5/NNW	14.8/SE	36.1	53.0	10.9	.0	22.8	18.7	9.0	49.5	WNW/22.1%
17	2018/年	8760(100%)	4.1	.8/NNW	14.8/SE	44.4	45.5	10.1	.0	21.3	21.6	11.8	45.3	WNW/20.8%

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

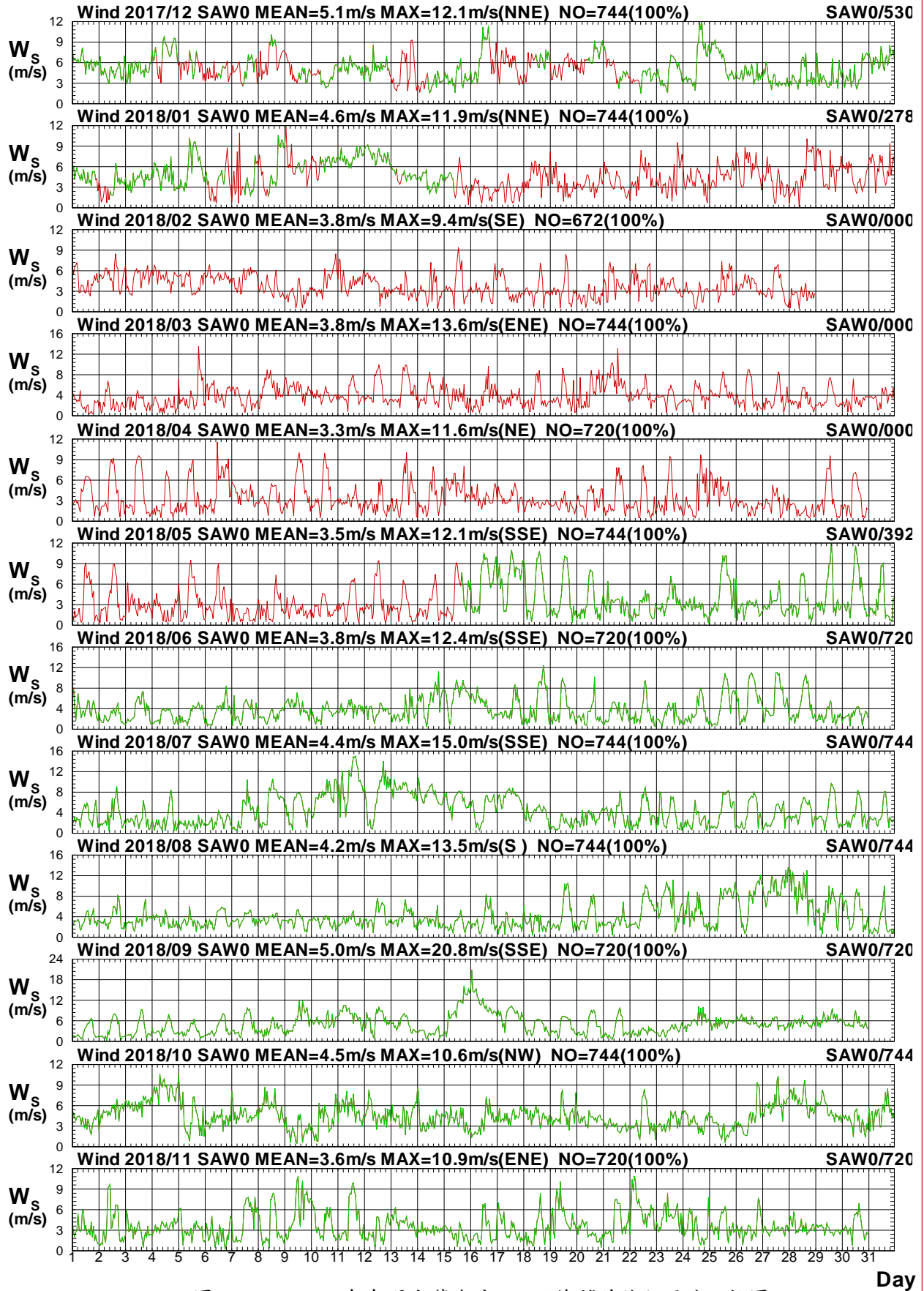


圖1.1.1a 2018年每月宜蘭海域 W 站修補前後之風速比較圖

W17CSAW0.1HA W17CSAW0.1H0 W181SAW0.1HA W181SAW0.1H0 W182SAW0.1HA W182SAW0.1H0
 W183SAW0.1HA W183SAW0.1H0 W184SAW0.1HA W184SAW0.1H0 W185SAW0.1HA W185SAW0.1H0

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

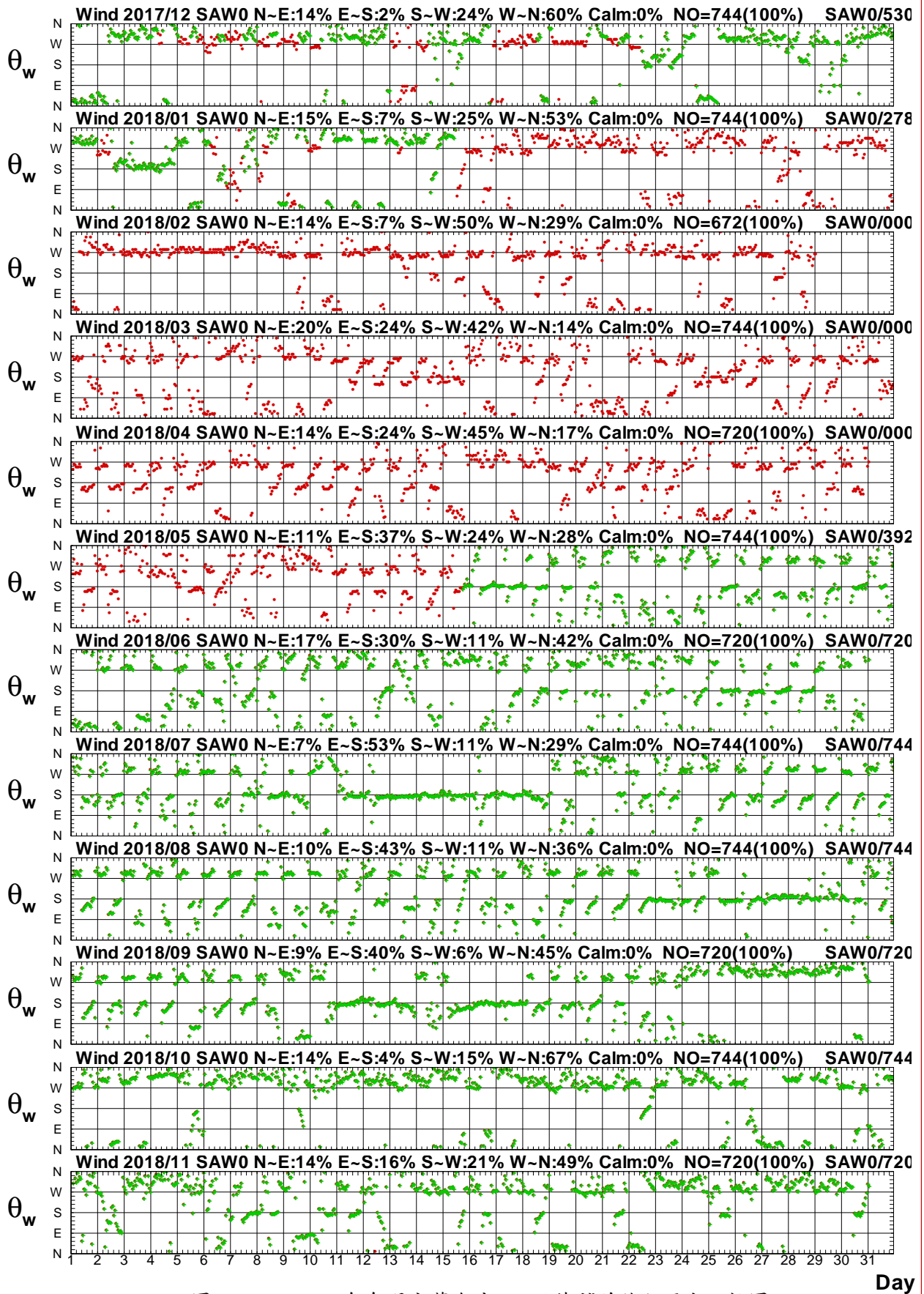


圖1.1.1b 2018年每月宜蘭海域 W 站修補前後之風向比較圖

W17CSAW0.1HA W17CSAW0.1H0 W181SAW0.1HA W181SAW0.1H0 W182SAW0.1HA W182SAW0.1H0
 W183SAW0.1HA W183SAW0.1H0 W184SAW0.1HA W184SAW0.1H0 W185SAW0.1HA W185SAW0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

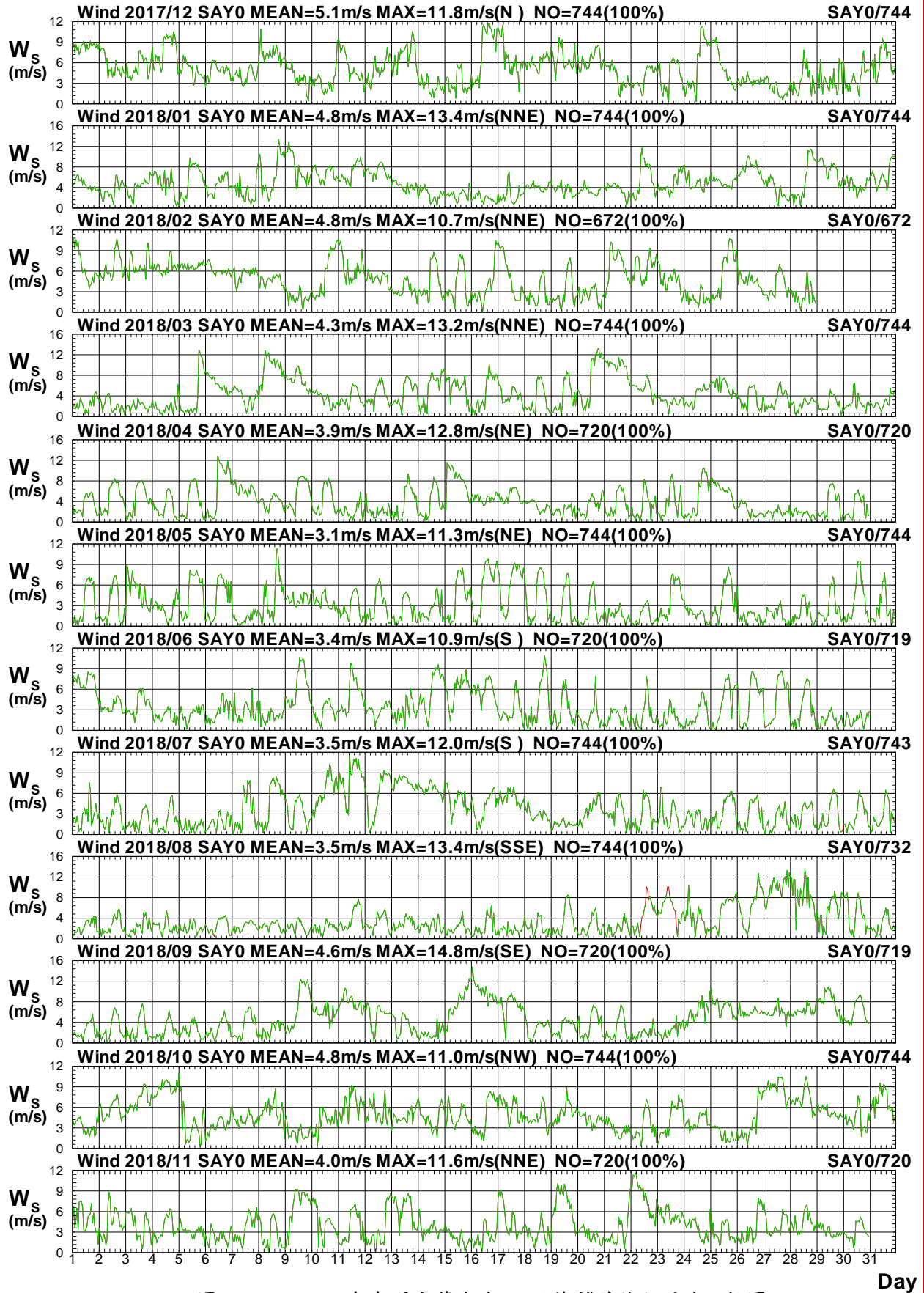


圖1.1.2a 2018年每月宜蘭海域 Y 站修補前後之風速比較圖

W17CSAY0.1HA W17CSAY0.1HO W181SAY0.1HA W181SAY0.1HO W182SAY0.1HA W182SAY0.1HO
W183SAY0.1HA W183SAY0.1HO W184SAY0.1HA W184SAY0.1HO W185SAY0.1HA W185SAY0.1HO

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

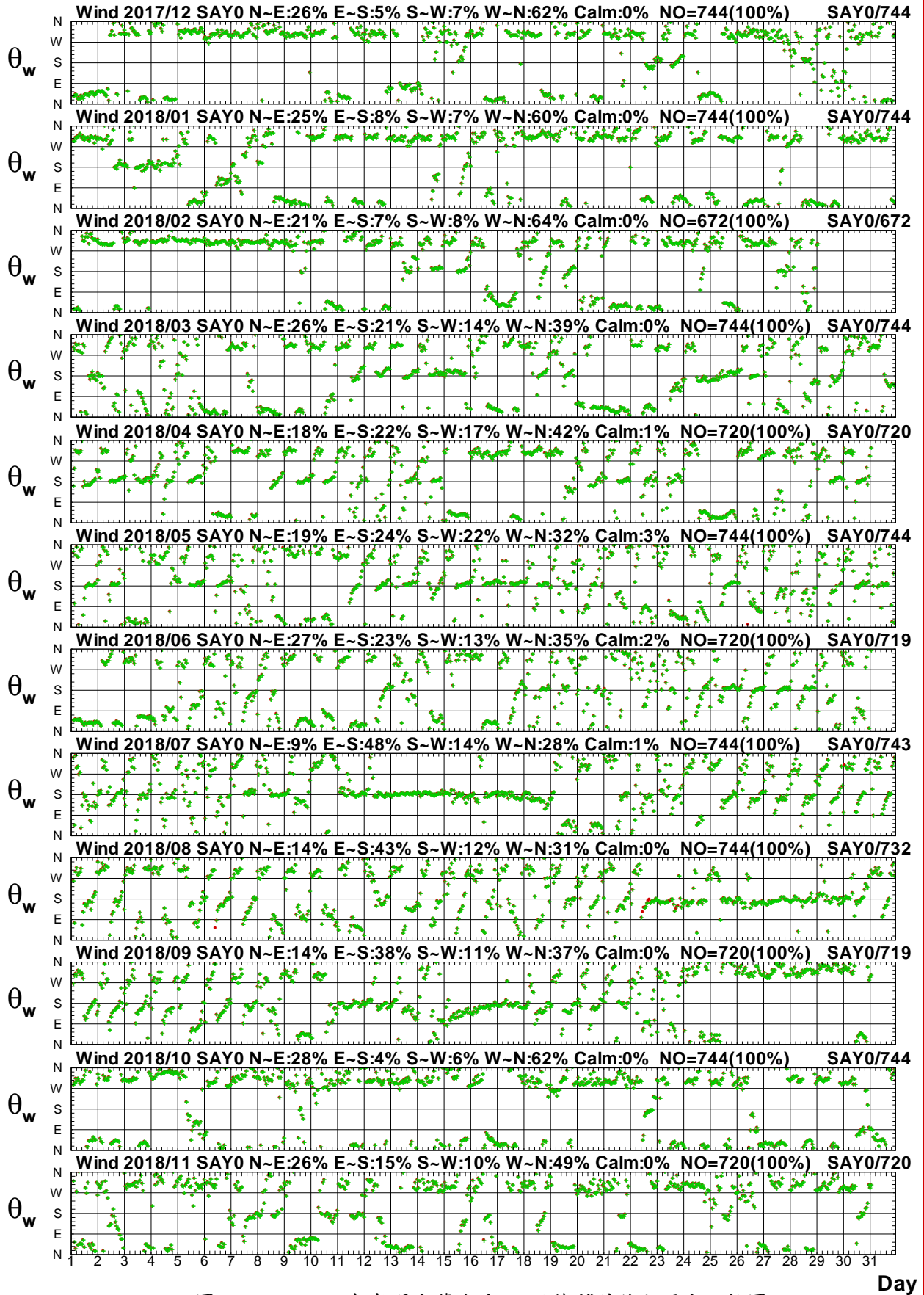


圖1.1.2b 2018年每月宜蘭海域 Y 站修補前後之風向比較圖

W17CSAY0.1HA W17CSAY0.1HO W181SAY0.1HA W181SAY0.1HO W182SAY0.1HA W182SAY0.1HO
W183SAY0.1HA W183SAY0.1HO W184SAY0.1HA W184SAY0.1HO W185SAY0.1HA W185SAY0.1HO

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Distribution of Wind Vectors

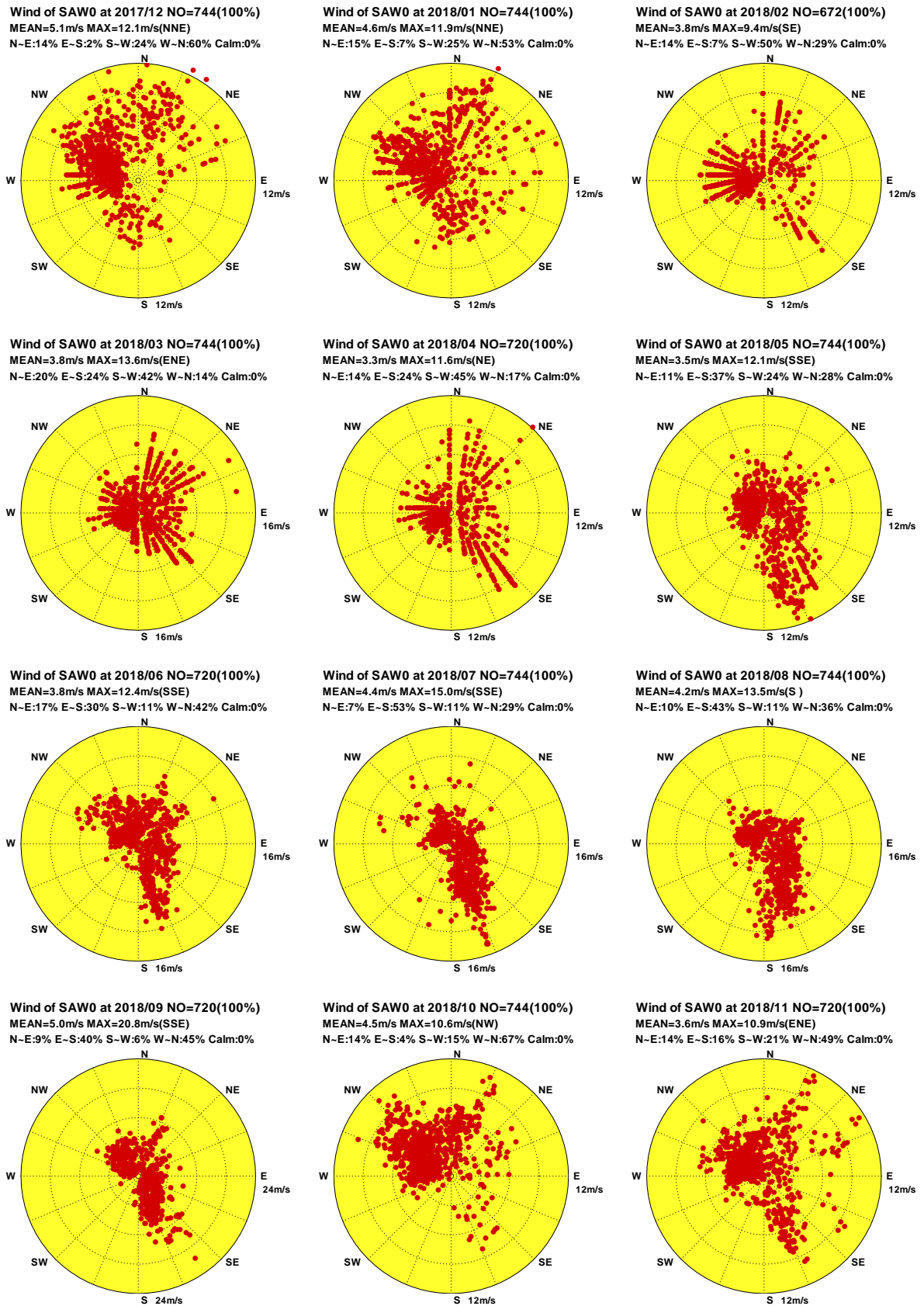


圖1.1.3 2018年宜蘭海域每月W站修補後觀測風力向量分佈圖

Distribution of Wind Vectors

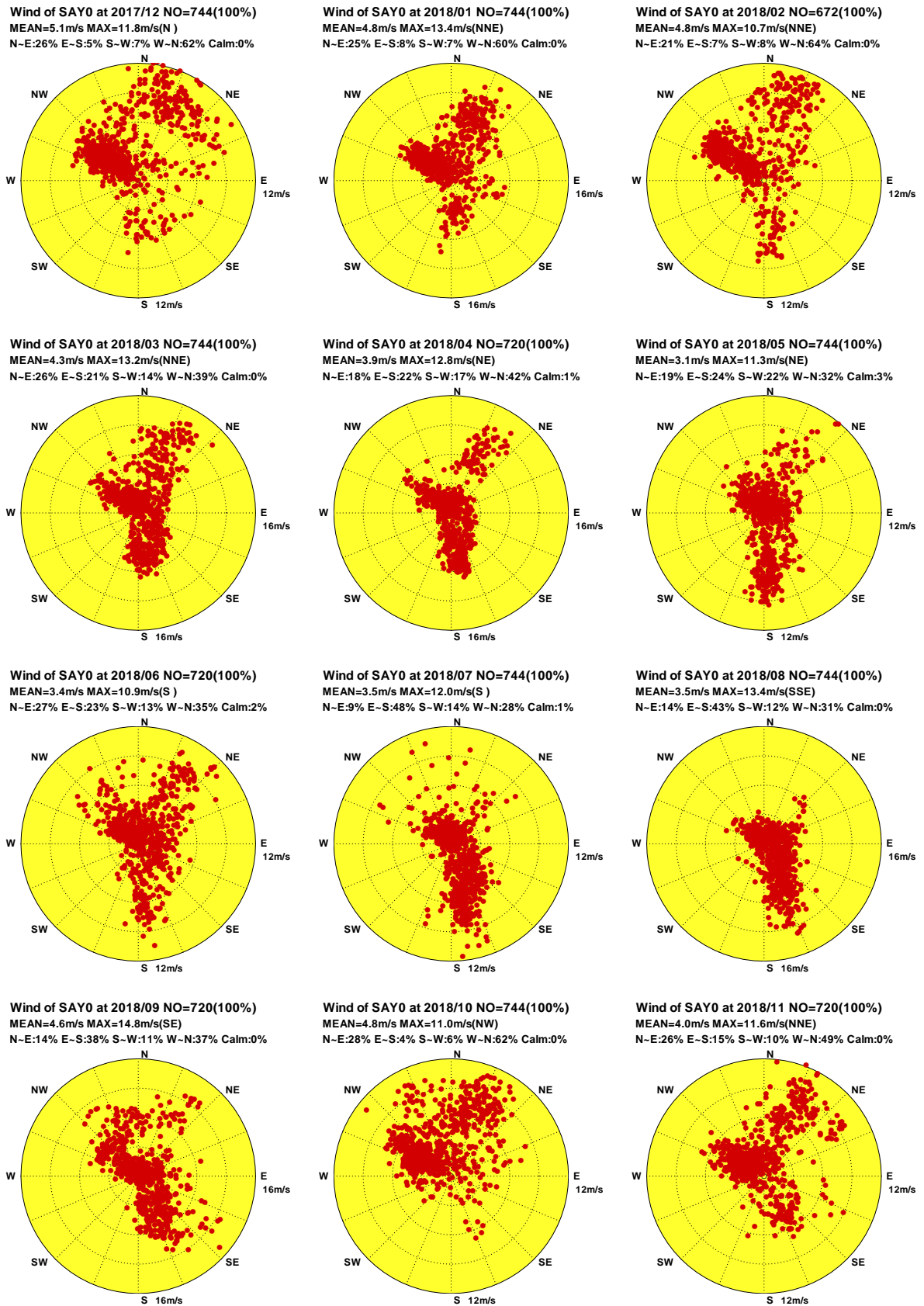


圖1.1.4 2018年宜蘭海域每月 Y 站修補後觀測風力向量分佈圖

W17CSAY0.1HA W181SAY0.1HA W182SAY0.1HA W183SAY0.1HA W184SAY0.1HA W185SAY0.1HA
 W186SAY0.1HA W187SAY0.1HA W188SAY0.1HA W189SAY0.1HA W18ASAY0.1HA W18BSAY0.1HA

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Progressive Vector Diagram of Wind

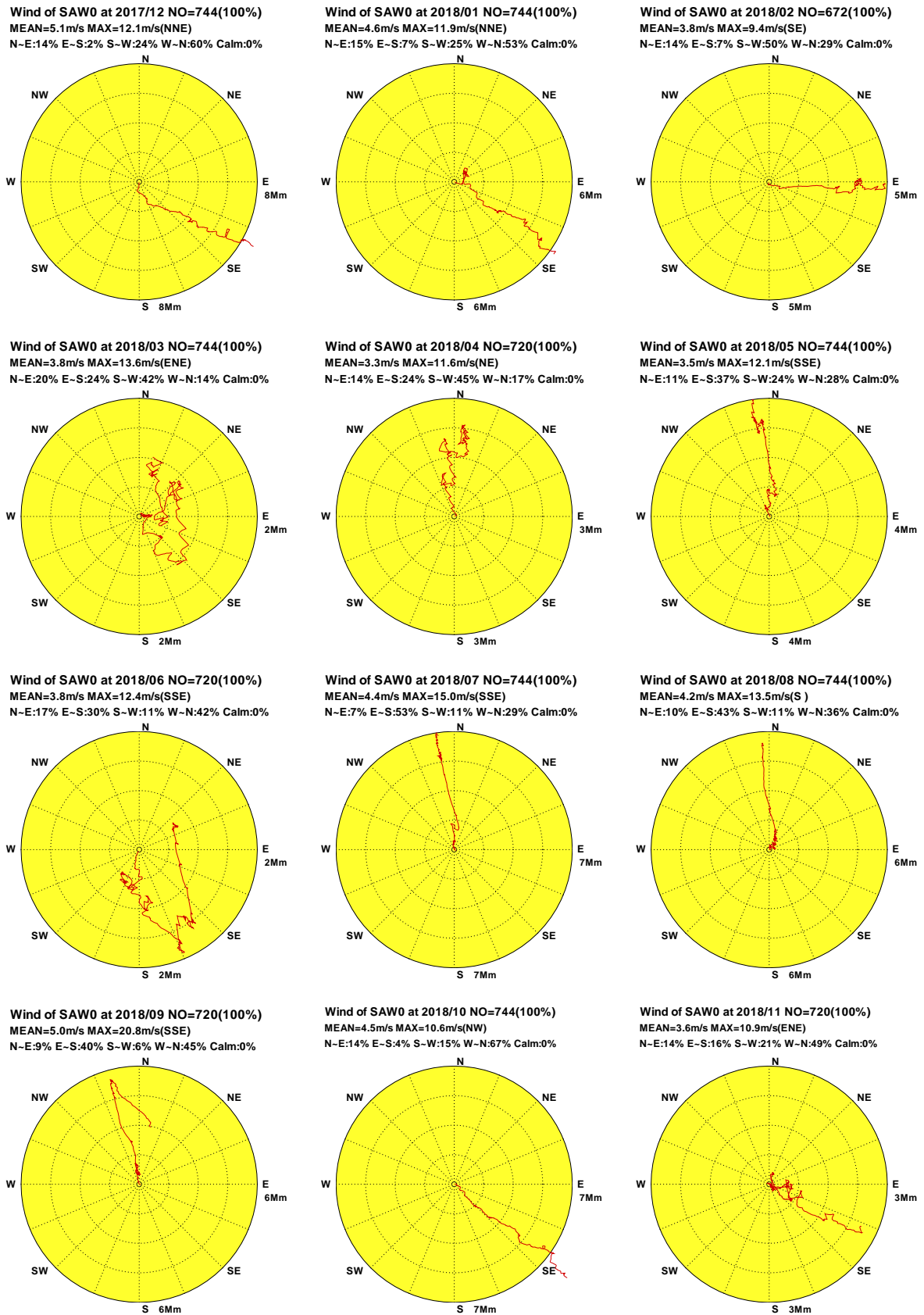


圖1.1.5 2018年宜蘭海域每月 W 站修補後觀測風力向量行進圖

W17CSAW0.1HA W181SAW0.1HA W182SAW0.1HA W183SAW0.1HA W184SAW0.1HA W185SAW0.1HA
 W186SAW0.1HA W187SAW0.1HA W188SAW0.1HA W189SAW0.1HA W18ASAW0.1HA W18BSAW0.1HA

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Progressive Vector Diagram of Wind

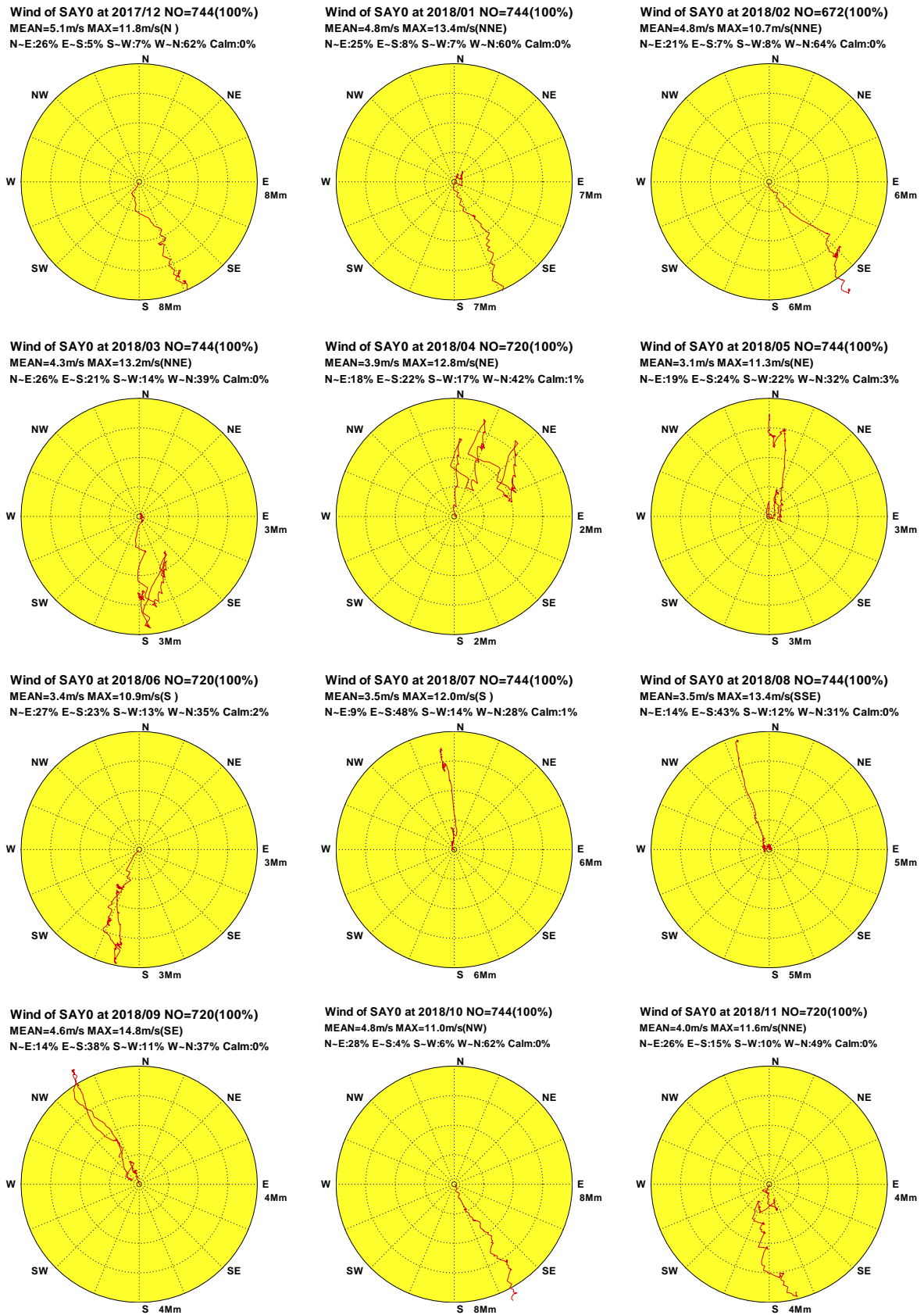


圖1.1.6 2018年宜蘭海域每月 Y 站修補後觀測風力向量行進圖

W17CSAY0.1HA W181SAY0.1HA W182SAY0.1HA W183SAY0.1HA W184SAY0.1HA W185SAY0.1HA
W186SAY0.1HA W187SAY0.1HA W188SAY0.1HA W189SAY0.1HA W18ASAY0.1HA W18BSAY0.1HA

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1.2 2018 年宜蘭海域各測站修補前 風力統計量統計表

表1.2.1 2018年宜蘭海域 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	530(71%)	5.1	3.3/NW	12.1/NNE	16.6	72.8	10.6	.0	15.7	3.0	15.5	65.8	WNW/31.9%
2	2018/01	278(37%)	5.3	2.7/NW	11.9/NNE	15.1	73.4	11.5	.0	14.0	10.8	16.5	58.6	WNW/29.5%
3	2018/02													
4	2018/03													
5	2018/04													
6	2018/05	392(53%)	4.0	1.8/SSE	12.1/SSE	54.8	32.1	13.0	.0	12.5	44.9	7.1	35.5	WNW/15.3%
7	2018/06	720(100%)	3.8	.3/WSW	12.4/SSE	49.2	42.8	8.1	.0	16.7	29.9	10.7	42.8	WNW/14.9%
8	2018/07	744(100%)	4.4	2.6/S	15.0/SSE	46.0	39.8	13.7	.5	6.9	53.1	11.3	28.8	SSE/27.7%
9	2018/08	744(100%)	4.2	2.0/S	13.5/S	48.0	39.2	12.8	.0	9.5	43.3	11.3	35.9	SSE/19.2%
10	2018/09	720(100%)	5.0	1.1/SSW	20.8/SSE	33.2	51.3	14.2	1.4	8.9	40.4	6.5	44.2	SSE/20.3%
11	2018/10	744(100%)	4.5	3.2/NW	10.6/NW	24.5	70.0	5.5	.0	14.4	4.0	15.1	66.5	WNW/25.0%
12	2018/11	720(100%)	3.6	1.0/WNW	10.9/ENE	51.8	44.2	4.0	.0	14.2	15.7	21.3	48.9	W /20.7%
13	2018/冬	808(37%)	5.2	3.1/NW	12.1/NNE	16.1	73.0	10.9	.0	15.1	5.7	15.8	63.4	WNW/31.1%
14	2018/春	392(18%)	4.0	1.8/SSE	12.1/SSE	54.8	32.1	13.0	.0	12.5	44.9	7.1	35.5	WNW/15.3%
15	2018/夏	2208(100%)	4.1	1.6/S	15.0/SSE	47.7	40.6	11.5	.2	11.0	42.2	11.1	35.7	SSE/19.6%
16	2018/秋	2184(100%)	4.4	1.3/WNW	20.8/SSE	36.4	55.3	7.9	.5	12.5	19.9	14.3	53.3	WNW/20.7%
17	2018/年	5592(64%)	4.4	.8/WSW	20.8/SSE	39.2	50.4	10.1	.3	12.3	28.4	12.8	46.6	WNW/19.1%

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表1.2.2 2018年宜蘭海域 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	744(100%)	5.1	3.0/NNW	11.8/N	25.3	60.3	14.4	.0	25.9	5.0	6.7	62.4	WNW/34.4%
2	2018/01	744(100%)	4.8	2.6/NNW	13.4/NNE	28.6	57.8	13.6	.0	25.4	8.2	7.4	59.0	WNW/31.3%
3	2018/02	672(100%)	4.8	2.8/NW	10.7/NNE	32.7	55.4	11.9	.0	20.8	6.7	7.9	64.6	WNW/35.3%
4	2018/03	744(100%)	4.3	.8/N	13.2/NNE	46.2	42.5	11.3	.0	26.2	20.8	13.8	39.1	WNW/17.6%
5	2018/04	720(100%)	3.9	.5/WSW	12.8/NE	50.8	39.7	9.4	.0	18.1	22.4	17.4	42.2	WNW/19.7%
6	2018/05	744(100%)	3.1	.9/S	11.3/NE	63.2	31.3	5.5	.0	19.4	24.5	22.3	33.9	S /23.3%
7	2018/06	719(100%)	3.4	.5/NNE	10.9/S	58.8	34.6	6.5	.0	27.8	22.7	12.9	36.6	NW /12.7%
8	2018/07	743(100%)	3.5	1.9/S	12.0/S	55.2	38.4	6.5	.0	9.3	47.6	14.8	28.3	S /24.0%
9	2018/08	732(98%)	3.4	1.7/SSE	13.4/SSE	62.8	28.4	8.7	.0	13.8	42.6	11.9	31.7	SSE/20.2%
10	2018/09	719(100%)	4.6	.4/SE	14.8/SE	38.2	47.1	14.5	.1	13.9	38.4	11.1	36.6	SSE/15.4%
11	2018/10	744(100%)	4.8	3.3/NNW	11.0/NW	24.5	64.9	10.6	.0	28.2	3.6	5.6	62.5	WNW/28.8%
12	2018/11	720(100%)	4.0	1.5/NNW	11.6/NNE	46.0	46.4	7.6	.0	26.3	14.7	10.3	48.8	WNW/24.4%
13	2018/冬	2160(100%)	4.9	2.8/NNW	13.4/NNE	28.8	57.9	13.3	.0	24.2	6.6	7.3	61.9	WNW/33.6%
14	2018/春	2208(100%)	3.8	.2/SW	13.2/NNE	53.4	37.8	8.7	.0	21.2	22.6	17.8	38.4	S /18.2%
15	2018/夏	2194(99%)	3.5	1.1/SSE	13.4/SSE	58.9	33.8	7.2	.0	16.9	37.8	13.2	32.1	S /15.5%
16	2018/秋	2183(100%)	4.5	1.5/NNW	14.8/SE	36.1	53.0	10.9	.0	22.9	18.7	9.0	49.4	WNW/22.0%
17	2018/年	8745(100%)	4.1	.8/NNW	14.8/SE	44.4	45.6	10.0	.0	21.3	21.5	11.9	45.4	WNW/20.8%

1-2-2

表1.2.3 2018年宜蘭海域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%)	3.1	1.5/W	7.7/ENE	59.9	40.1	.0	.0	18.7	4.6	45.6	31.2	W /30.0%
2	2018/01	744(100%)	2.9	1.1/WNW	6.5/W	63.8	36.2	.0	.0	22.3	11.3	35.9	30.5	W /23.5%
3	2018/02	672(100%)	3.2	1.7/W	7.8/SE	56.5	43.5	.0	.0	17.1	7.4	49.6	25.9	W /31.8%
4	2018/03	744(100%)	2.7	.4/SSW	9.1/ENE	69.9	29.8	.3	.0	23.9	24.1	38.6	13.4	WSW/20.2%
5	2018/04	720(100%)	2.6	.8/S	8.9/NE	71.8	27.6	.6	.0	20.8	25.3	44.9	9.0	WSW/23.8%
6	2018/05	744(100%)	2.1	.8/SSE	7.8/SE	80.2	19.8	.0	.0	25.4	28.9	35.3	10.3	WSW/14.2%
7	2018/06	720(100%)	2.3	.3/SE	8.0/ENE	76.1	23.8	.1	.0	26.9	22.8	33.1	17.2	WSW/14.0%
8	2018/07	744(100%)	2.1	1.3/SSE	9.3/SSE	74.5	25.4	.1	.0	28.1	45.6	19.8	6.6	N /21.0%
9	2018/08	744(100%)	2.6	1.3/SSE	10.4/S	72.8	26.9	.3	.0	8.1	39.5	41.5	10.9	WSW/21.5%
10	2018/09	720(100%)	3.2	1.0/S	10.2/SSE	59.7	37.5	2.8	.0	11.5	35.4	34.0	19.0	W /20.4%
11	2018/10	744(100%)	2.9	1.4/WNW	7.3/NW	62.8	37.2	.0	.0	23.0	5.8	27.6	43.7	W /32.7%
12	2018/11	720(100%)	2.6	.5/W	8.5/E	76.0	23.8	.3	.0	22.9	14.7	35.4	26.9	W /27.5%
13	2018/冬	2160(100%)	3.0	1.4/W	7.8/SE	60.2	39.8	.0	.0	19.4	7.8	43.5	29.3	W /28.3%
14	2018/春	2208(100%)	2.5	.6/S	9.1/ENE	74.0	25.7	.3	.0	23.4	26.1	39.5	11.0	WSW/19.3%
15	2018/夏	2208(100%)	2.3	1.0/SSE	10.4/S	74.5	25.4	.2	.0	21.0	36.1	31.4	11.5	WSW/14.9%
16	2018/秋	2184(100%)	2.9	.6/W	10.2/SSE	66.1	32.9	1.0	.0	19.2	18.5	32.3	30.0	W /26.9%
17	2018/年	8760(100%)	2.7	.5/SW	10.4/S	68.8	30.9	.4	.0	20.8	22.2	36.7	20.4	W /18.8%

1-2-3

表1.2.4 2018年宜蘭海域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%)	6.8	4.8/NNE	13.5/NNE	18.4	38.3	43.3	.0	62.9	9.8	17.5	9.8	NNE/25.9%
2	2018/01	744(100%)	5.8	3.7/NNE	12.1/N	24.1	48.7	27.3	.0	58.7	9.1	17.2	14.9	NNE/25.0%
3	2018/02	672(100%)	5.8	3.5/NNE	12.0/NNE	25.6	44.5	29.9	.0	50.3	9.2	24.1	16.4	NNE/24.3%
4	2018/03	744(100%)	4.4	1.4/NE	12.6/N	44.2	41.8	14.0	.0	36.6	25.5	23.7	14.2	N /14.1%
5	2018/04	720(100%)	3.7	.5/E	12.8/NNE	52.6	38.2	9.2	.0	25.3	31.9	26.9	15.8	SSE/18.6%
6	2018/05	744(100%)	3.1	.8/ESE	10.5/NNE	60.8	36.4	2.8	.0	33.6	32.3	23.9	10.2	SSE/17.9%
7	2018/06	718(100%)	3.4	1.2/NE	11.1/N	55.7	36.5	7.8	.0	39.8	26.7	16.7	16.7	NNE/14.3%
8	2018/07	744(100%)	3.2	1.5/SSE	15.5/S	61.7	31.3	6.9	.1	21.5	45.7	20.8	12.0	SSE/21.0%
9	2018/08	744(100%)	3.8	1.9/SSE	14.4/S	57.9	30.0	12.0	.1	22.8	38.3	26.5	12.4	S /20.0%
10	2018/09	720(100%)	4.8	1.4/ENE	13.3/NE	44.0	31.4	24.6	.0	31.1	34.6	20.8	13.5	SSE/18.2%
11	2018/10	744(100%)	5.8	4.5/NNE	12.7/NNE	23.9	51.6	24.5	.0	67.2	5.0	10.3	17.5	NNE/28.2%
12	2018/11	720(100%)	4.6	2.8/NE	12.3/NNE	36.7	49.2	14.2	.0	56.5	13.1	19.3	11.1	NNE/26.7%
13	2018/冬	2160(100%)	6.1	4.0/NNE	13.5/NNE	22.6	43.8	33.6	.0	57.5	9.4	19.4	13.6	NNE/25.1%
14	2018/春	2208(100%)	3.7	.8/ENE	12.8/NNE	52.5	38.8	8.7	.0	31.9	29.9	24.8	13.4	SSE/15.3%
15	2018/夏	2206(100%)	3.5	1.1/SE	15.5/S	58.5	32.5	8.9	.1	27.9	37.0	21.4	13.6	SSE/16.1%
16	2018/秋	2184(100%)	5.1	2.8/NE	13.3/NE	34.8	44.1	21.1	.0	51.8	17.4	16.8	14.1	NNE/21.6%
17	2018/年	8758(100%)	4.6	1.8/NE	15.5/S	42.2	39.8	18.0	.0	42.2	23.5	20.6	13.7	NNE/16.4%

1-2-4

表1.2.5 2018年宜蘭海域 H 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%)	1.9	.4/WSW	8.1/NNE	88.3	11.6	.1	.0	23.1	7.4	59.5	9.9	SSW/22.4%
2	2018/01	744(100%)	1.9	.2/NNW	7.4/NE	86.0	14.0	.0	.0	29.8	7.0	49.3	13.8	SW /17.2%
3	2018/02	672(100%)	1.7	.3/SW	5.8/NNE	93.0	7.0	.0	.0	24.0	5.2	62.5	8.3	SW /22.5%
4	2018/03	744(100%)	2.1	.4/NNE	8.8/NE	80.6	19.1	.3	.0	34.1	14.9	38.2	12.8	SW /14.1%
5	2018/04	720(100%)	1.9	.4/E	8.3/E	86.8	13.1	.1	.0	26.3	23.8	16.3	33.8	W /26.4%
6	2018/05	744(100%)	2.0	.8/E	6.9/E	82.3	17.7	.0	.0	27.7	29.6	9.7	33.1	E /17.7%
7	2018/06	720(100%)	2.0	.8/E	7.2/ESE	79.7	20.3	.0	.0	20.7	35.4	11.9	31.9	W /18.9%
8	2018/07	744(100%)	2.3	1.0/SE	6.7/SSE	75.0	25.0	.0	.0	15.7	44.4	8.2	31.7	SE /16.9%
9	2018/08	744(100%)	2.1	.7/ESE	6.5/SSE	81.0	19.0	.0	.0	16.5	40.5	8.2	34.8	W /20.0%
10	2018/09	720(100%)	2.3	.8/ESE	7.7/SE	75.3	24.7	.0	.0	20.1	36.5	13.8	29.6	W /16.7%
11	2018/10	744(100%)	2.0	.3/W	6.4/E	86.8	13.2	.0	.0	14.4	18.1	35.1	32.4	W /29.3%
12	2018/11	720(100%)	1.8	.1/SSE	6.5/ENE	89.3	10.7	.0	.0	18.8	20.7	31.3	29.3	W /26.4%
13	2018/冬	2160(100%)	1.8	.2/WSW	8.1/NNE	89.0	11.0	.0	.0	25.7	6.6	56.9	10.8	SSW/18.9%
14	2018/春	2208(100%)	2.0	.5/ENE	8.8/NE	83.2	16.7	.1	.0	29.4	22.7	21.4	26.4	W /16.3%
15	2018/夏	2208(100%)	2.1	.8/ESE	7.2/ESE	78.6	21.4	.0	.0	17.6	40.1	9.4	32.8	W /18.4%
16	2018/秋	2184(100%)	2.0	.2/SE	7.7/SE	83.8	16.2	.0	.0	17.7	25.0	26.8	30.4	W /24.2%
17	2018/年	8760(100%)	2.0	.3/ESE	8.8/NE	83.6	16.3	.0	.0	22.6	23.7	28.5	25.2	W /15.9%

1-2-5

表1.2.6 2018年宜蘭海域 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	560(75%)	3.8	2.4/NW	10.7/NNW	47.1	49.6	3.2	.0	12.5	8.0	15.0	64.5	WNW/30.2%
2	2018/01	649(87%)	3.4	1.8/NW	10.2/NNE	54.4	43.1	2.5	.0	12.3	15.1	11.4	61.2	WNW/24.3%
3	2018/02	467(70%)	3.1	1.4/NW	11.6/NW	62.7	34.0	3.2	.0	13.7	13.7	15.0	57.6	WNW/29.1%
4	2018/03	701(94%)	3.5	.5/NW	12.1/NNW	54.6	40.1	5.3	.0	17.4	27.5	11.6	43.5	WNW/18.0%
5	2018/04	691(96%)	3.2	.5/SW	10.6/NE	61.2	35.6	3.2	.0	11.6	31.0	12.9	44.6	WNW/19.2%
6	2018/05	465(63%)	2.9	1.1/SSE	9.4/SE	68.8	30.3	.9	.0	11.8	43.9	10.8	33.5	SSE/24.3%
7	2018/06	684(95%)	3.0	.2/NW	10.0/NNE	63.5	34.5	2.0	.0	16.7	33.2	9.6	40.5	WNW/16.7%
8	2018/07	621(84%)	3.1	1.4/S	12.7/NNW	59.3	39.5	1.3	.0	5.8	53.3	9.2	31.7	SSE/32.2%
9	2018/08	722(97%)	3.0	1.5/S	12.3/S	69.1	27.8	3.0	.0	7.1	48.9	11.1	33.0	SSE/23.4%
10	2018/09	666(93%)	3.7	.5/W	12.1/NNE	48.6	46.5	4.8	.0	9.2	37.4	8.3	45.2	SSE/19.5%
11	2018/10	741(100%)	3.8	2.7/NW	15.9/WNW	45.6	50.3	3.9	.1	18.2	4.7	11.5	65.6	WNW/24.7%
12	2018/11	672(93%)	3.0	1.0/NW	10.5/NNE	64.3	33.8	1.9	.0	17.6	17.9	16.4	48.2	WNW/19.8%
13	2018/冬	1676(78%)	3.5	1.9/NW	11.6/NW	54.3	42.8	2.9	.0	12.8	12.4	13.6	61.3	WNW/27.6%
14	2018/春	1857(84%)	3.2	.3/SSW	12.1/NNW	60.6	36.0	3.4	.0	13.8	32.9	11.8	41.4	SSE/19.1%
15	2018/夏	2027(92%)	3.0	.9/S	12.7/NNW	64.2	33.6	2.2	.0	9.9	44.9	10.0	35.1	SSE/23.6%
16	2018/秋	2079(95%)	3.5	1.4/NW	15.9/WNW	52.6	43.8	3.6	.0	15.1	19.4	12.0	53.4	WNW/20.6%
17	2018/年	7639(87%)	3.3	.6/WNW	15.9/WNW	58.0	39.0	3.0	.0	12.9	27.9	11.8	47.4	WNW/19.9%

1-2-6

1.3 2018 年宜蘭海域**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 Yi-Lan Seas of SAW0 at 2018

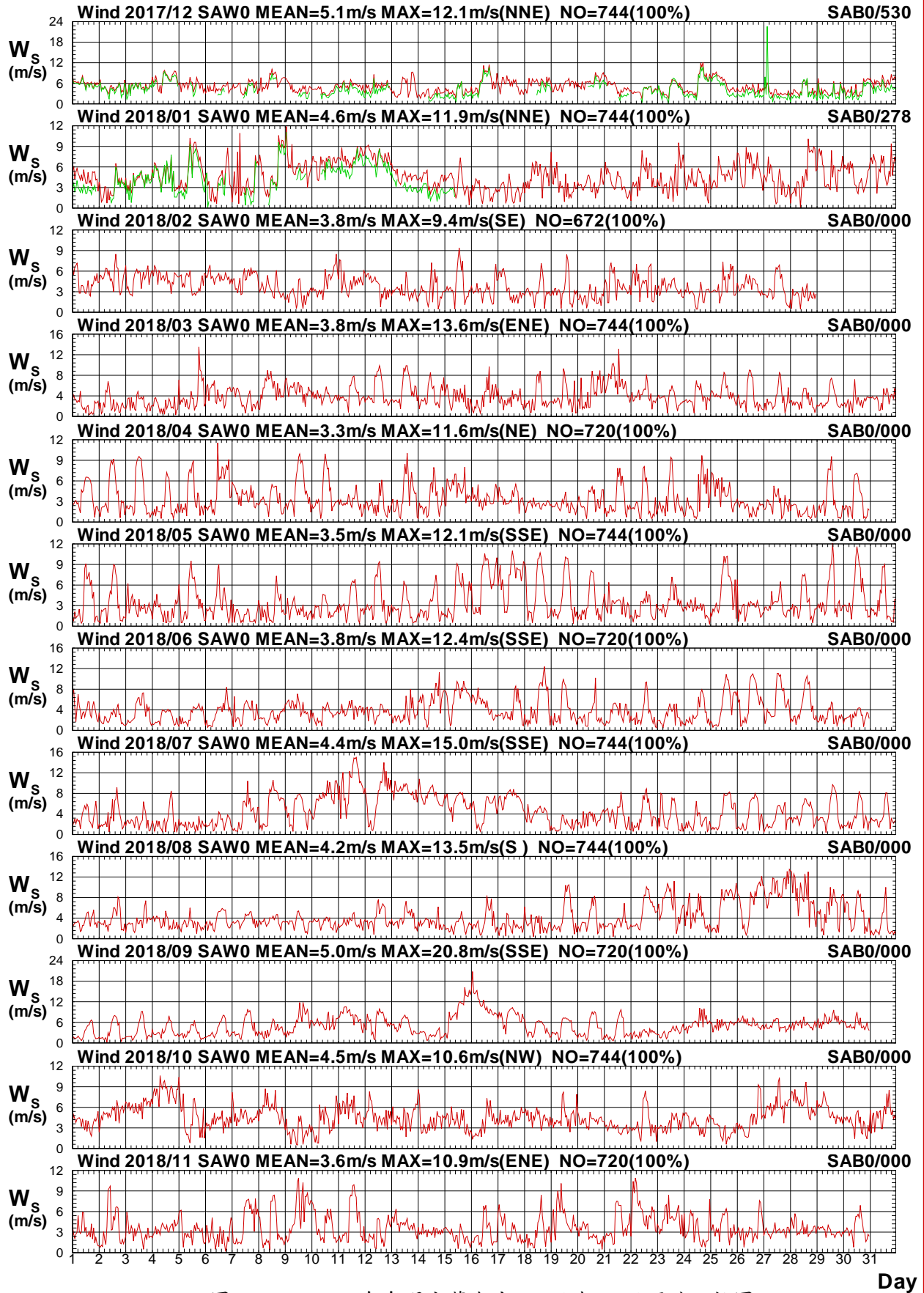


圖1.3.1a 2018年每月宜蘭海域 W 站與 B 站風速比較圖

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 W183SAW0.1HA W183SAB0.1HO W184SAW0.1HA W184SAB0.1HO W185SAW0.1HA W185SAB0.1HO

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

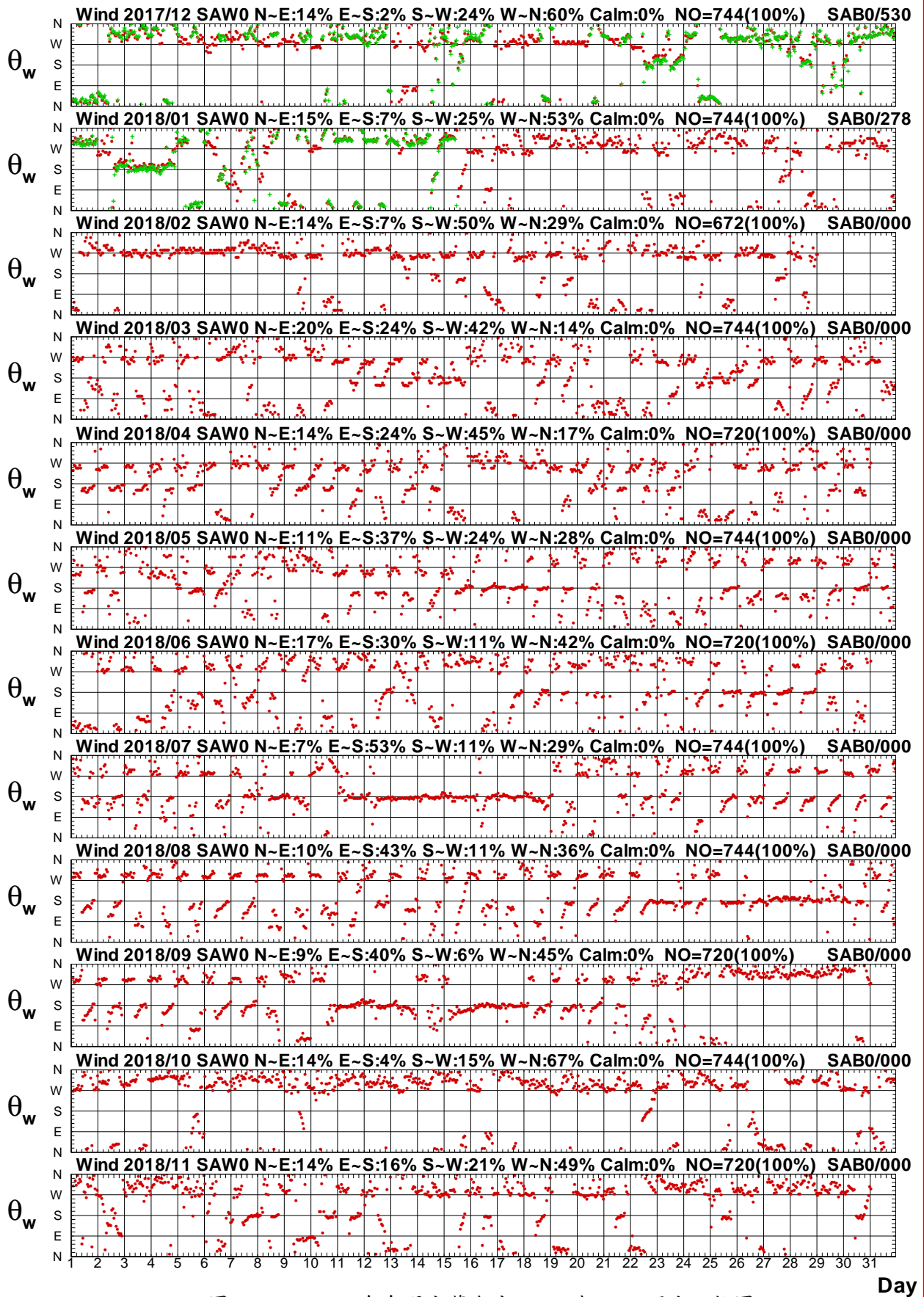


圖1.3.1b 2018年每月宜蘭海域 W 站與 B 站風向比較圖

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 W183SAW0.1HA W183SAB0.1HO W184SAW0.1HA W184SAB0.1HO W185SAW0.1HA W185SAB0.1HO

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

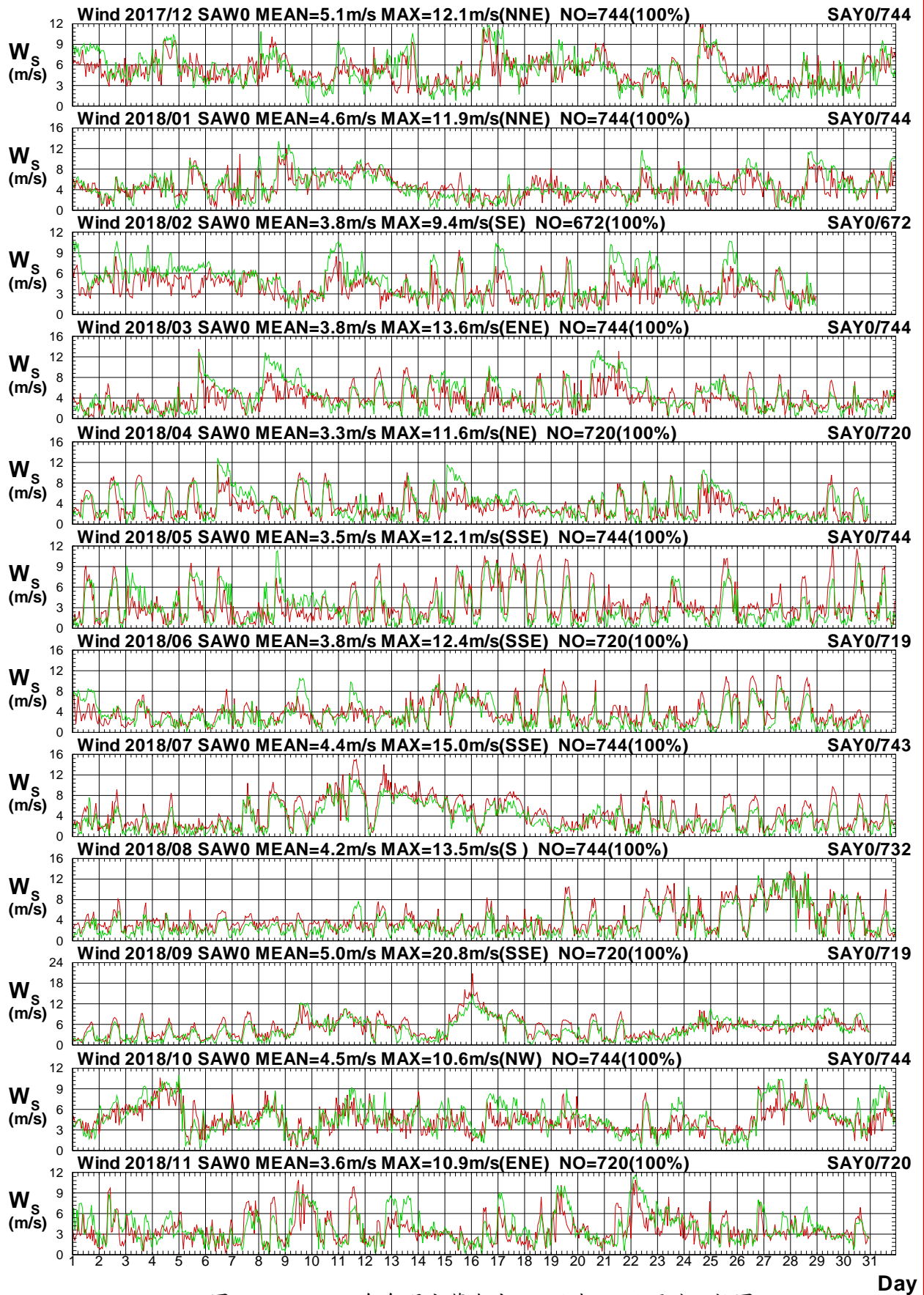


圖1.3.2a 2018年每月宜蘭海域 W 站與 Y 站風速比較圖

W17CSAW0.1HA W17CSAY0.1HO W181SAW0.1HA W181SAY0.1HO W182SAW0.1HA W182SAY0.1HO
 W183SAW0.1HA W183SAY0.1HO W184SAW0.1HA W184SAY0.1HO W185SAW0.1HA W185SAY0.1HO

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

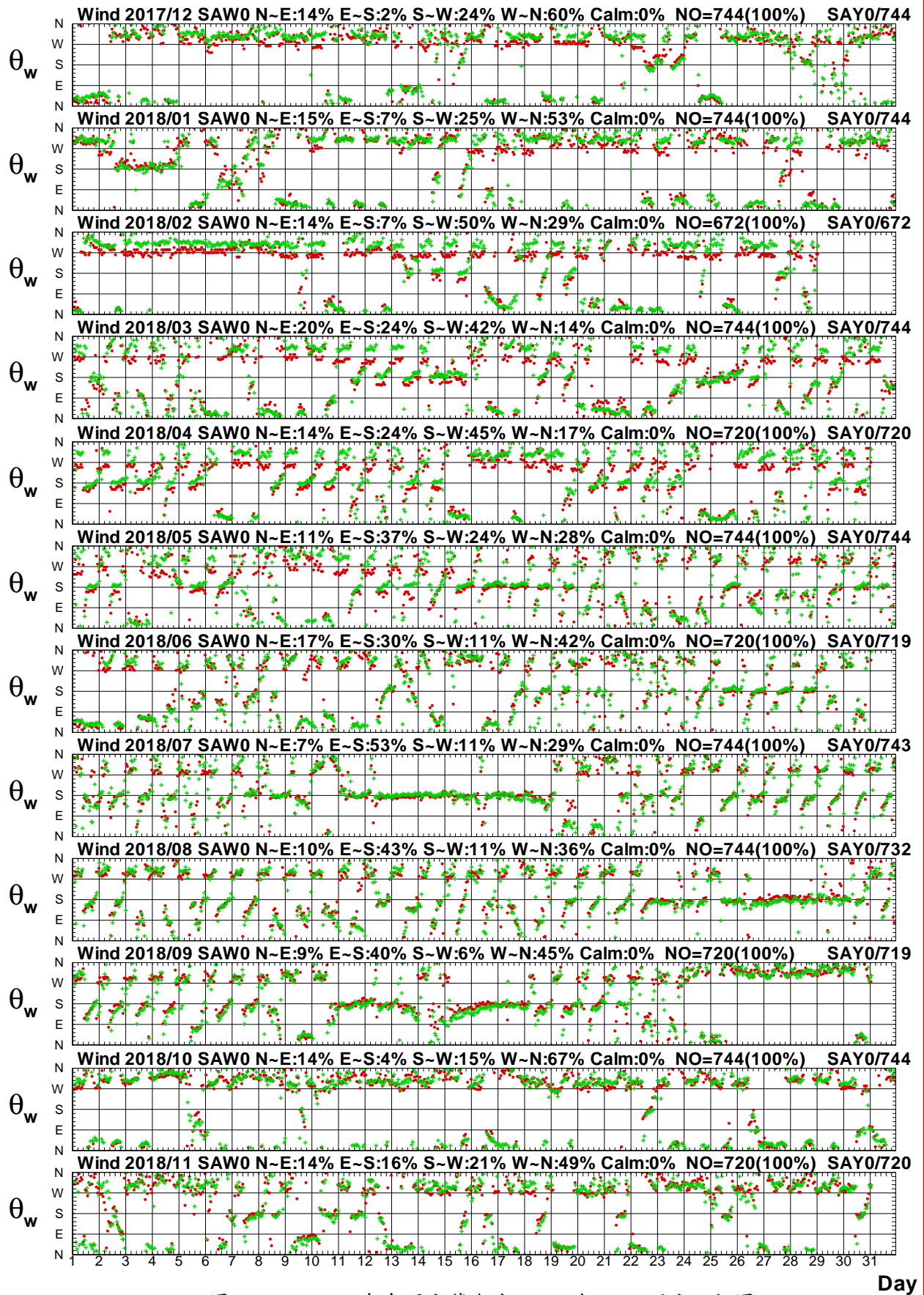


圖1.3.2b 2018年每月宜蘭海域 W 站與 Y 站風向比較圖

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 W183SAW0.1HA W183SAY0.1HO W184SAW0.1HA W184SAY0.1HO W185SAW0.1HA W185SAY0.1HO

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

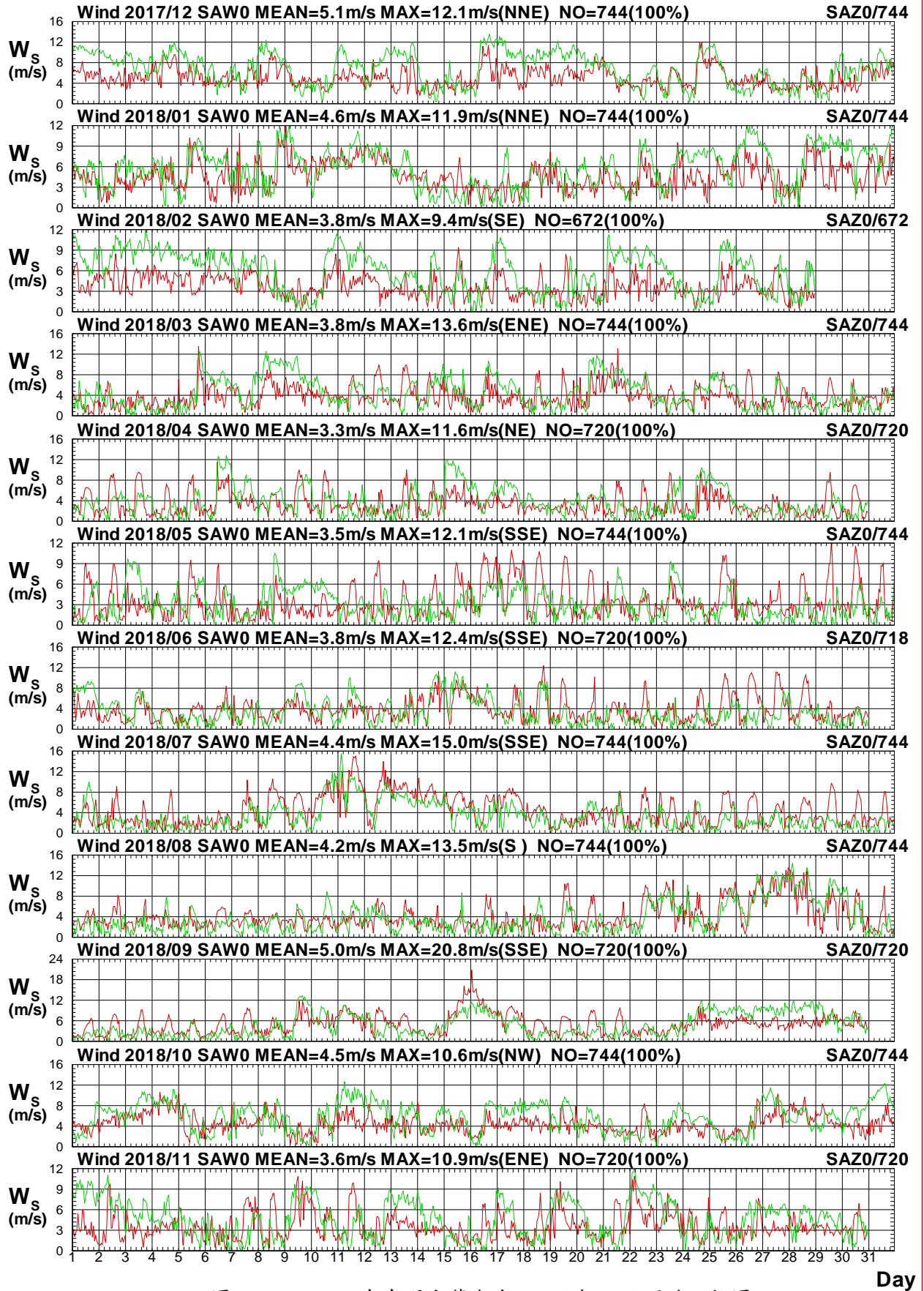


圖1.3.3a 2018年每月宜蘭海域 W 站與 Z 站風速比較圖

W17CSAW0.1HA W17CSAZ0.1HO W181SAW0.1HA W181SAZ0.1HO W182SAW0.1HA W182SAZ0.1HO
W183SAW0.1HA W183SAZ0.1HO W184SAW0.1HA W184SAZ0.1HO W185SAW0.1HA W185SAZ0.1HO

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

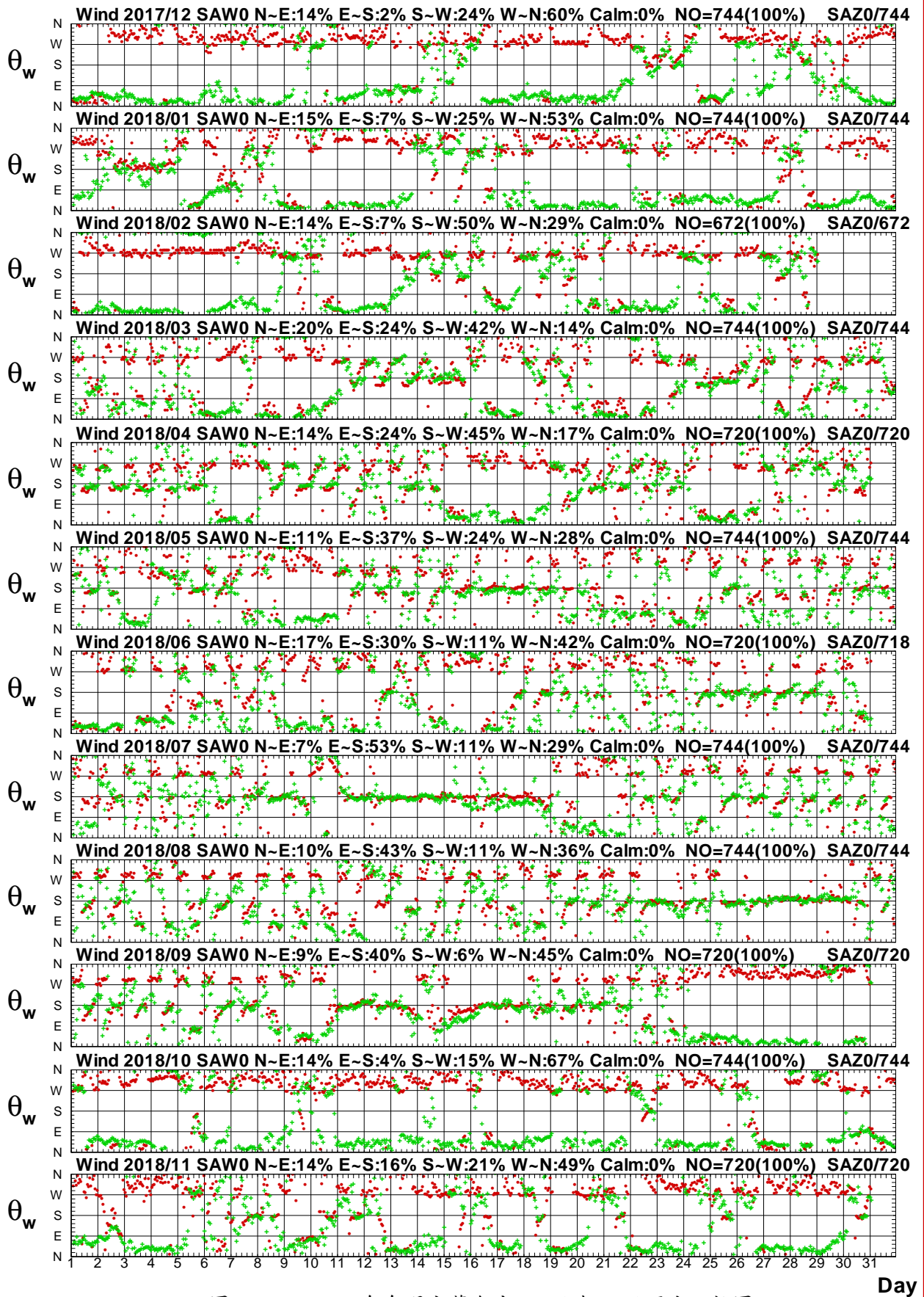


圖1.3.3b 2018年每月宜蘭海域 W 站與 Z 站風向比較圖

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 W183SAW0.1HA W183SAZ0.1HO W184SAW0.1HA W184SAZ0.1HO W185SAW0.1HA W185SAZ0.1HO

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

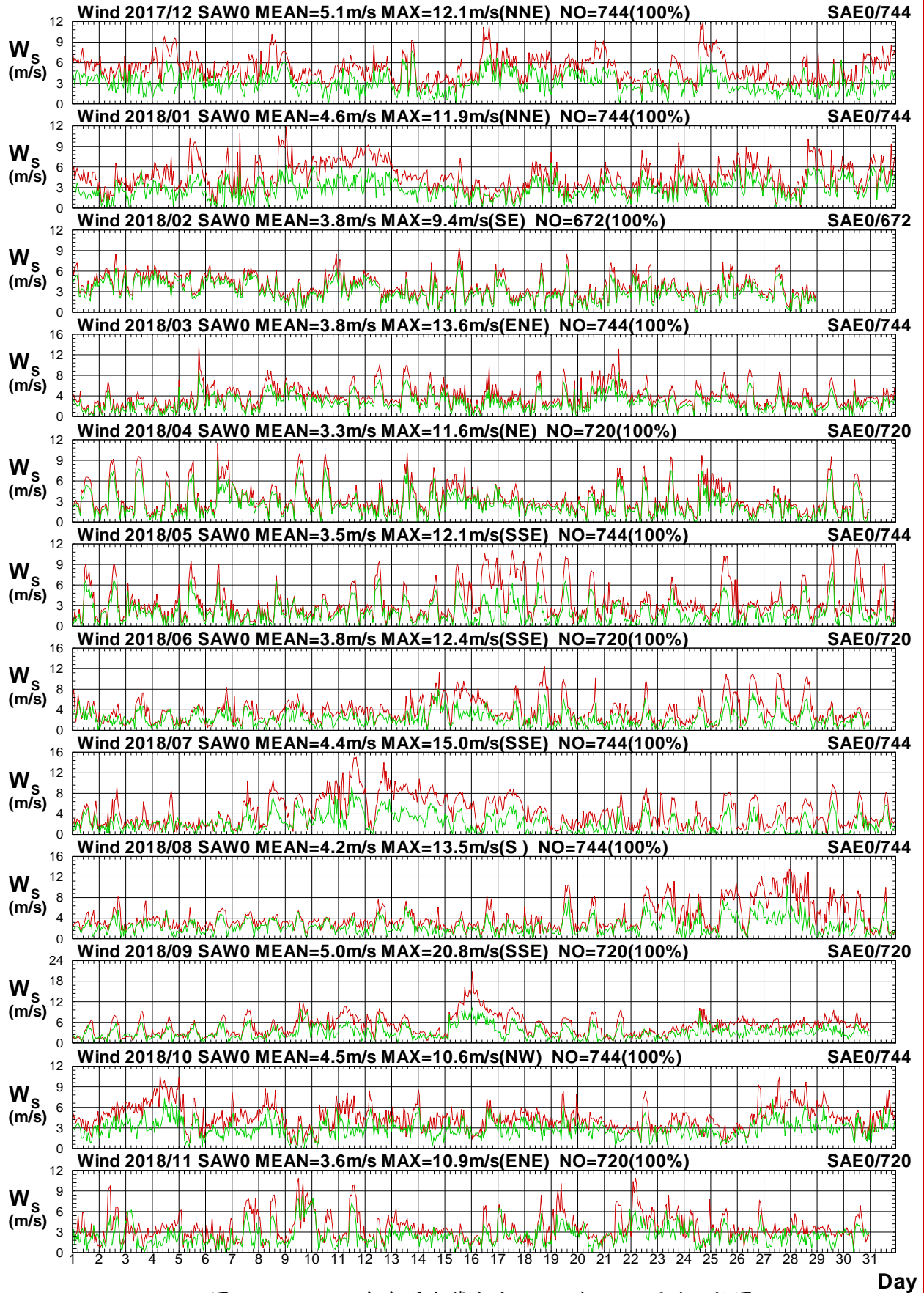


圖1.3.4a 2018年每月宜蘭海域 W 站與 E 站風速比較圖

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 W183SAW0.1HA W183SAE0.1HO W184SAW0.1HA W184SAE0.1HO W185SAW0.1HA W185SAE0.1HO

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

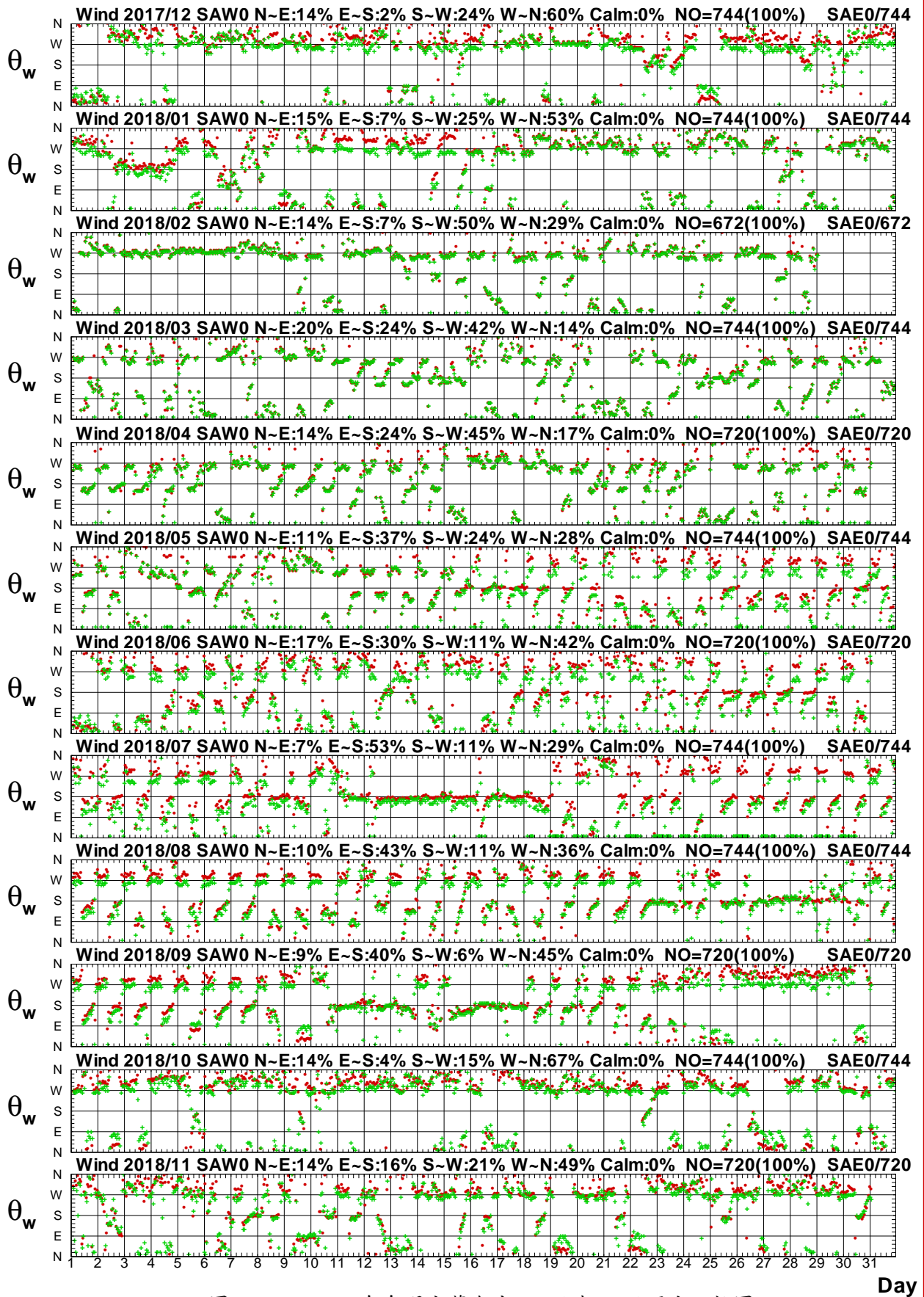


圖1.3.4b 2018年每月宜蘭海域 W 站與 E 站風向比較圖

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 W183SAW0.1HA W183SAE0.1HO W184SAW0.1HA W184SAE0.1HO W185SAW0.1HA W185SAE0.1HO

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

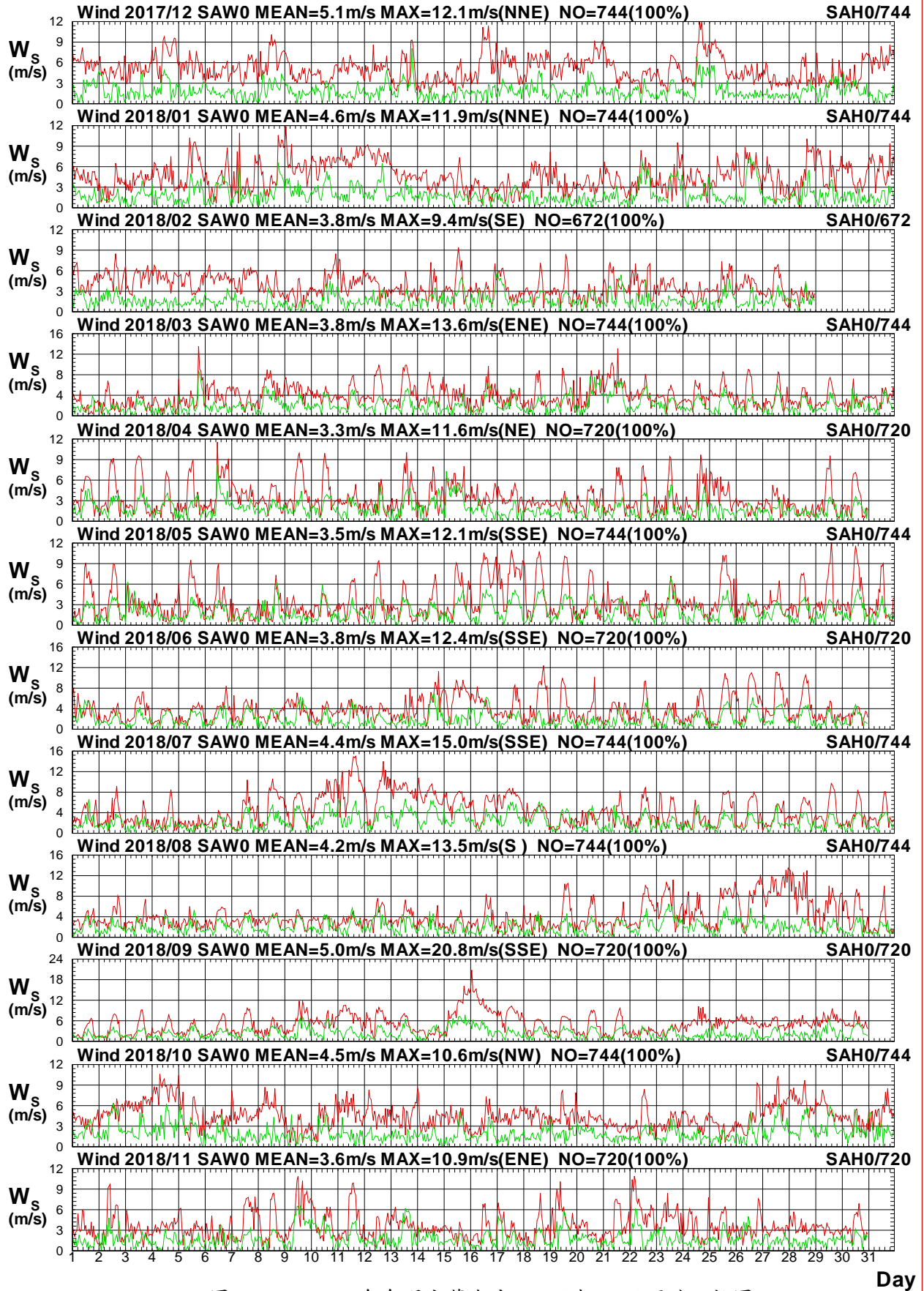


圖1.3.5a 2018年每月宜蘭海域 W 站與 H 站風速比較圖

W17CSAW0.1HA W17CSAH0.1H0 W181SAW0.1HA W181SAH0.1H0 W182SAW0.1HA W182SAH0.1H0
 W183SAW0.1HA W183SAH0.1H0 W184SAW0.1HA W184SAH0.1H0 W185SAW0.1HA W185SAH0.1H0

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

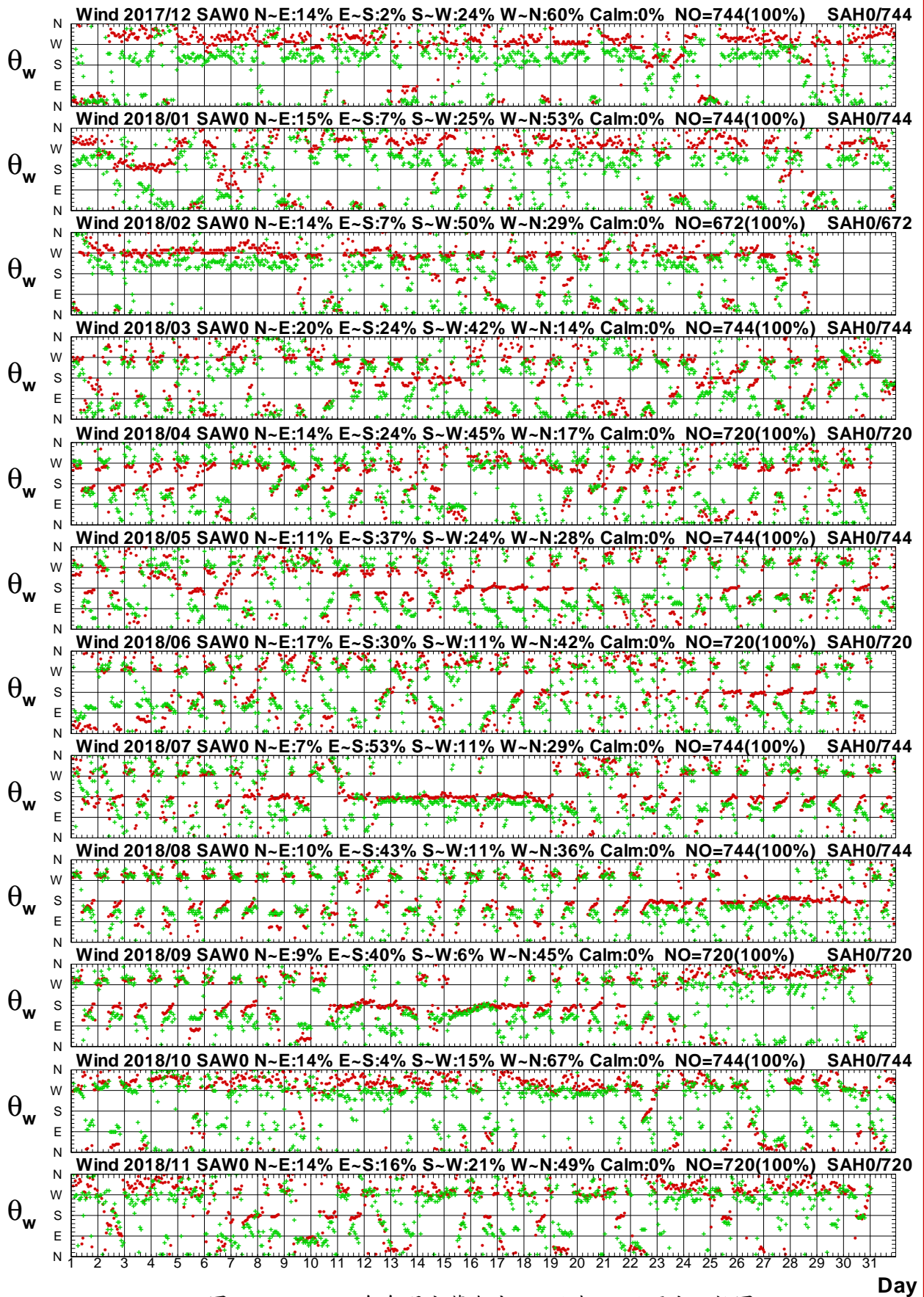


圖1.3.5b 2018年每月宜蘭海域 W 站與 H 站風向比較圖

W17CSAW0.1HA W17CSAH0.1H0 W181SAW0.1HA W181SAH0.1H0 W182SAW0.1HA W182SAH0.1H0
 W183SAW0.1HA W183SAH0.1H0 W184SAW0.1HA W184SAH0.1H0 W185SAW0.1HA W185SAH0.1H0

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

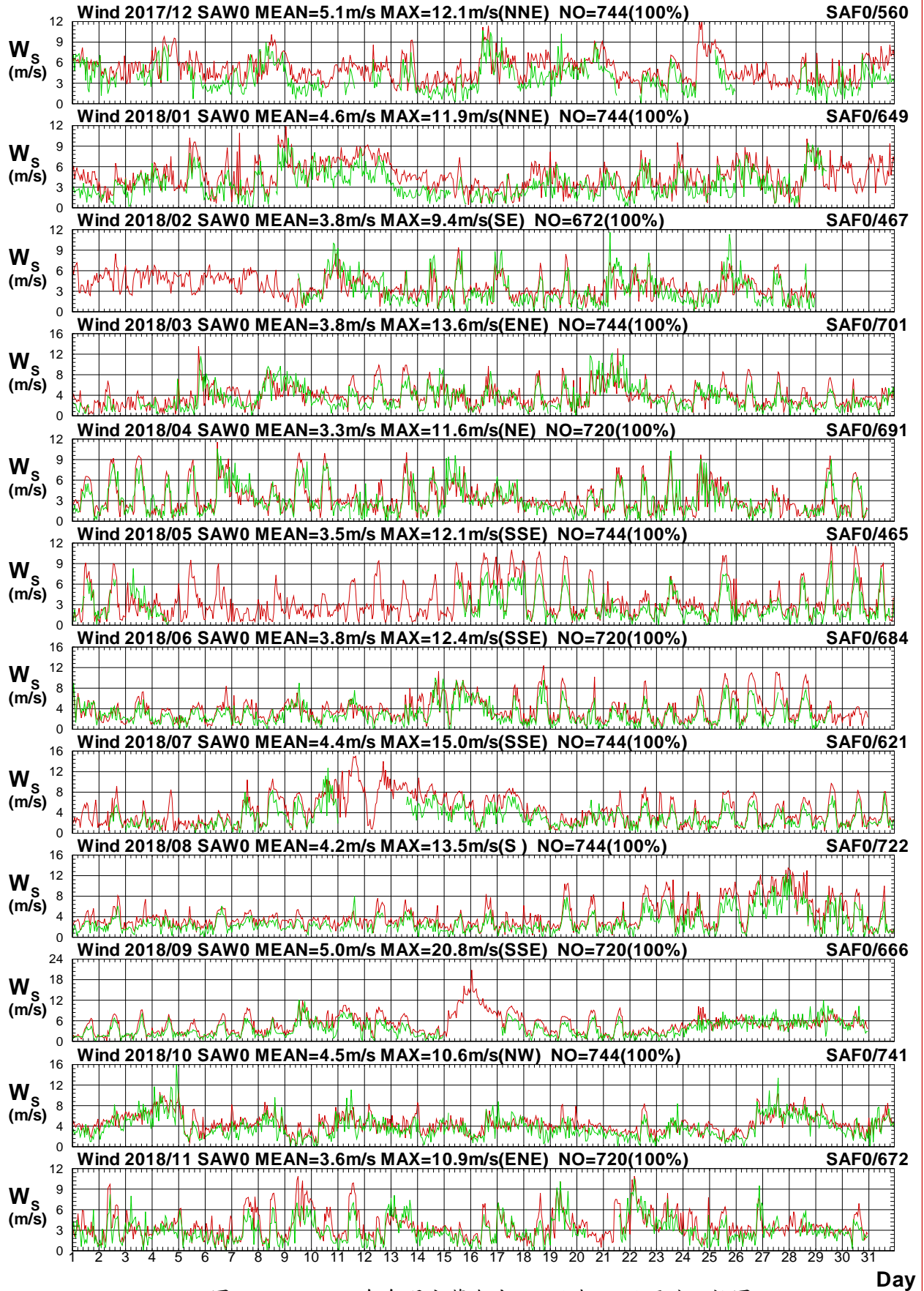


圖1.3.6a 2018年每月宜蘭海域 W 站與 F 站風速比較圖

W17CSAW0.1HA W17CSAF0.1HO W181SAW0.1HA W181SAF0.1HO W182SAW0.1HA W182SAF0.1HO
 W183SAW0.1HA W183SAF0.1HO W184SAW0.1HA W184SAF0.1HO W185SAW0.1HA W185SAF0.1HO

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

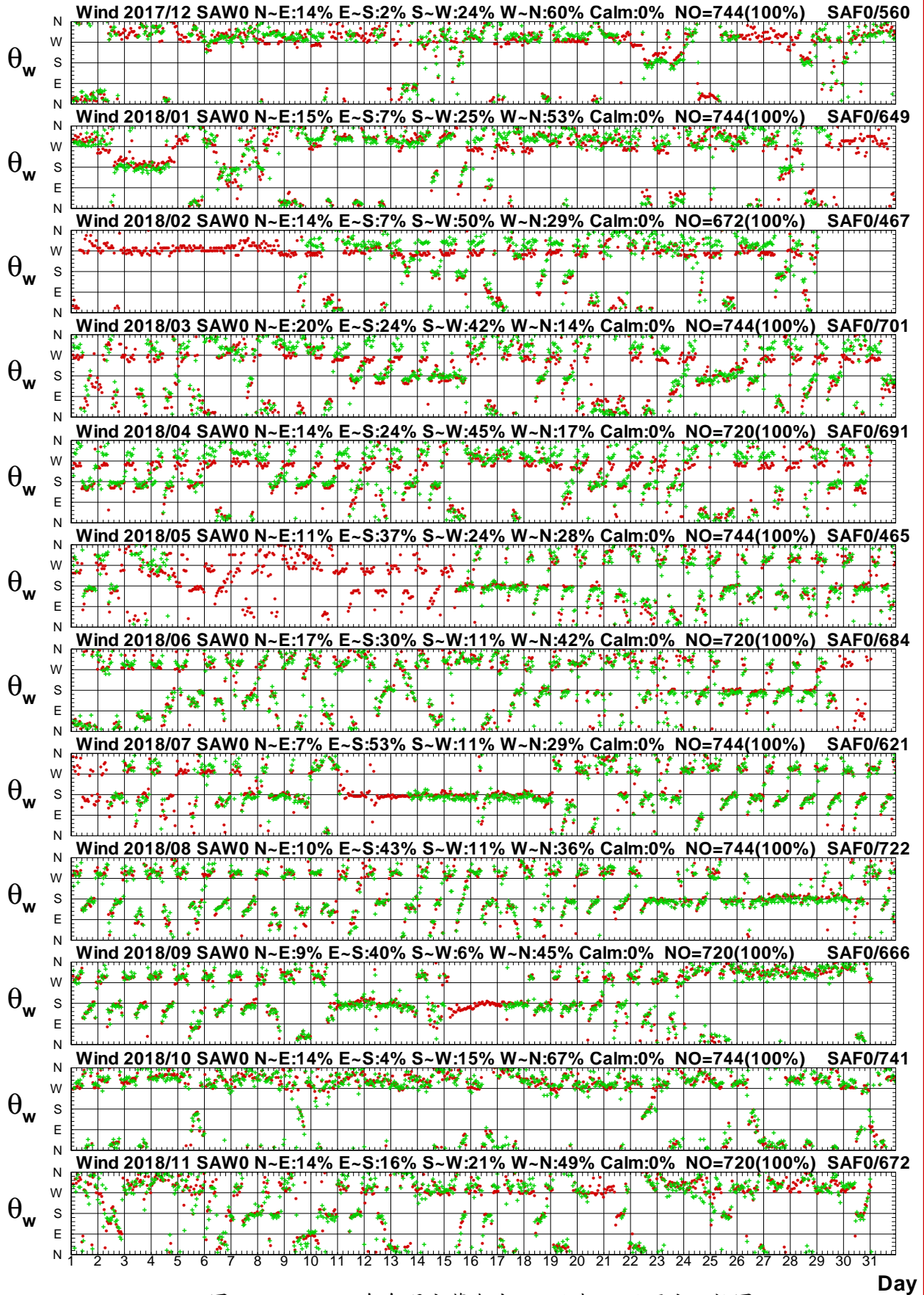


圖1.3.6b 2018年每月宜蘭海域 W 站與 F 站風向比較圖

W17CSAW0.1HA W17CSAF0.1HO W181SAW0.1HA W181SAF0.1HO W182SAW0.1HA W182SAF0.1HO
 W183SAW0.1HA W183SAF0.1HO W184SAW0.1HA W184SAF0.1HO W185SAW0.1HA W185SAF0.1HO

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

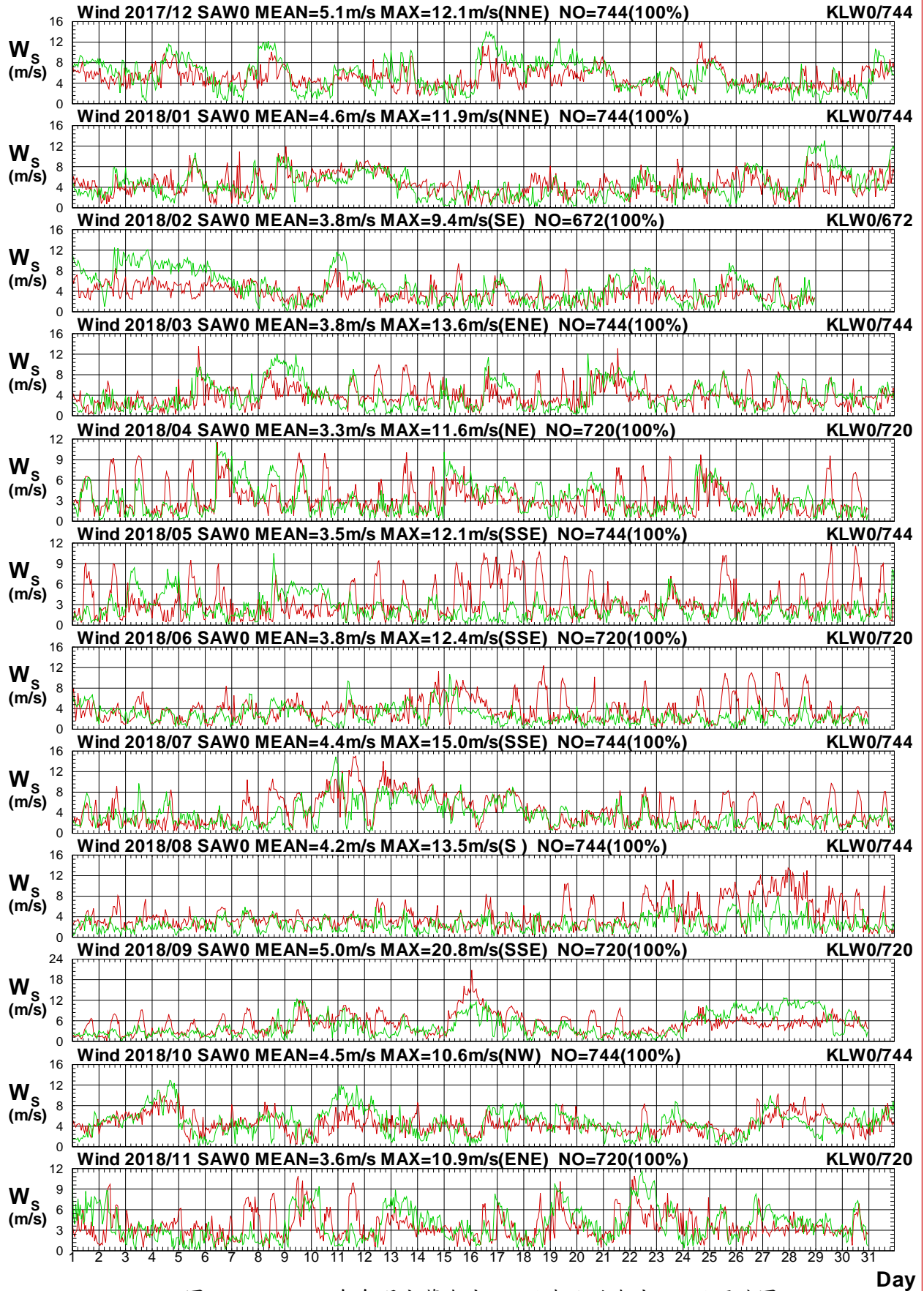


圖1.3.7a 2018年每月宜蘭海域 W 站與北端海域 W 站風速圖

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

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

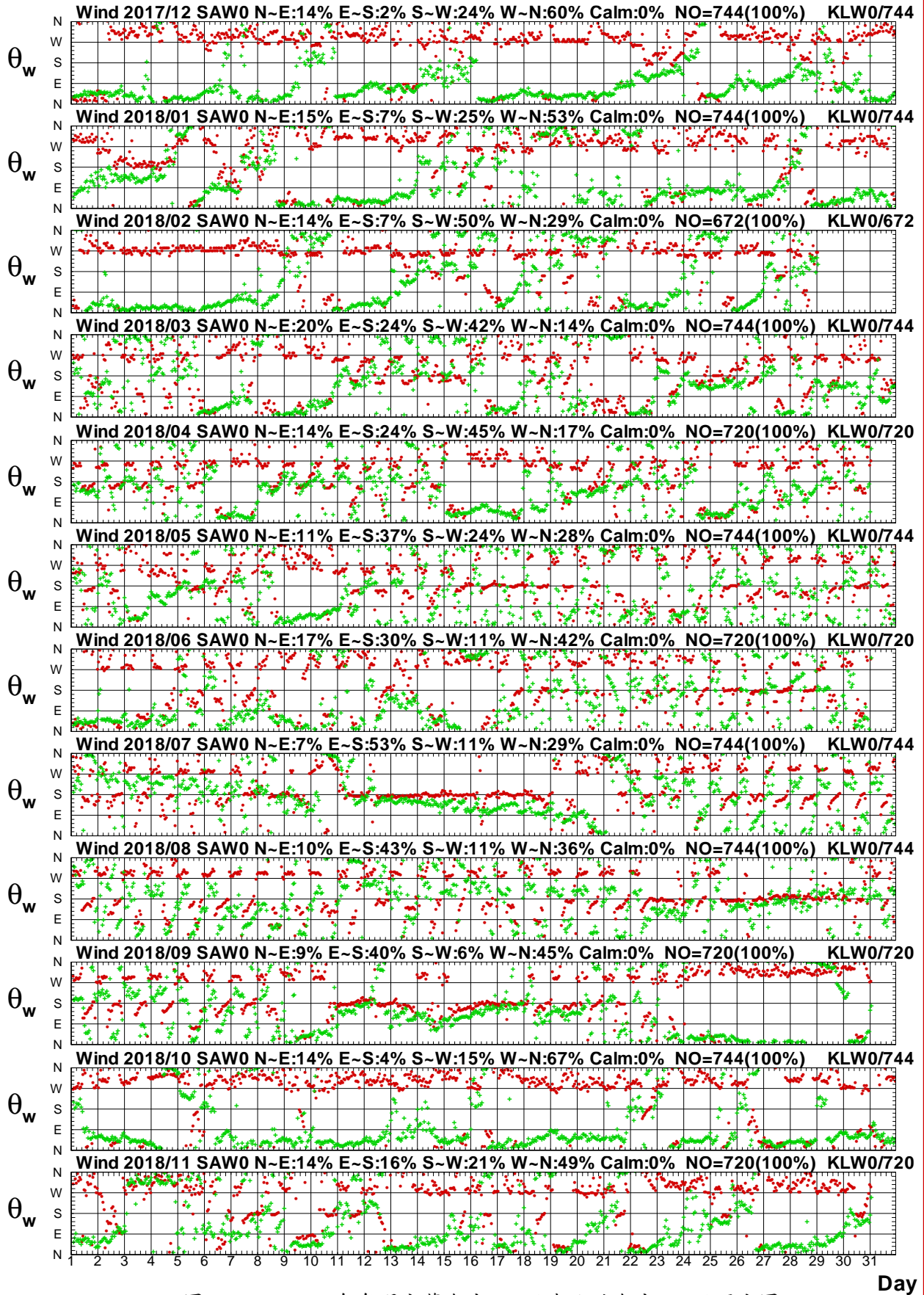


圖 1.3.7b 2018 年每月宜蘭海域 W 站與北端海域 W 站風向圖

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

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

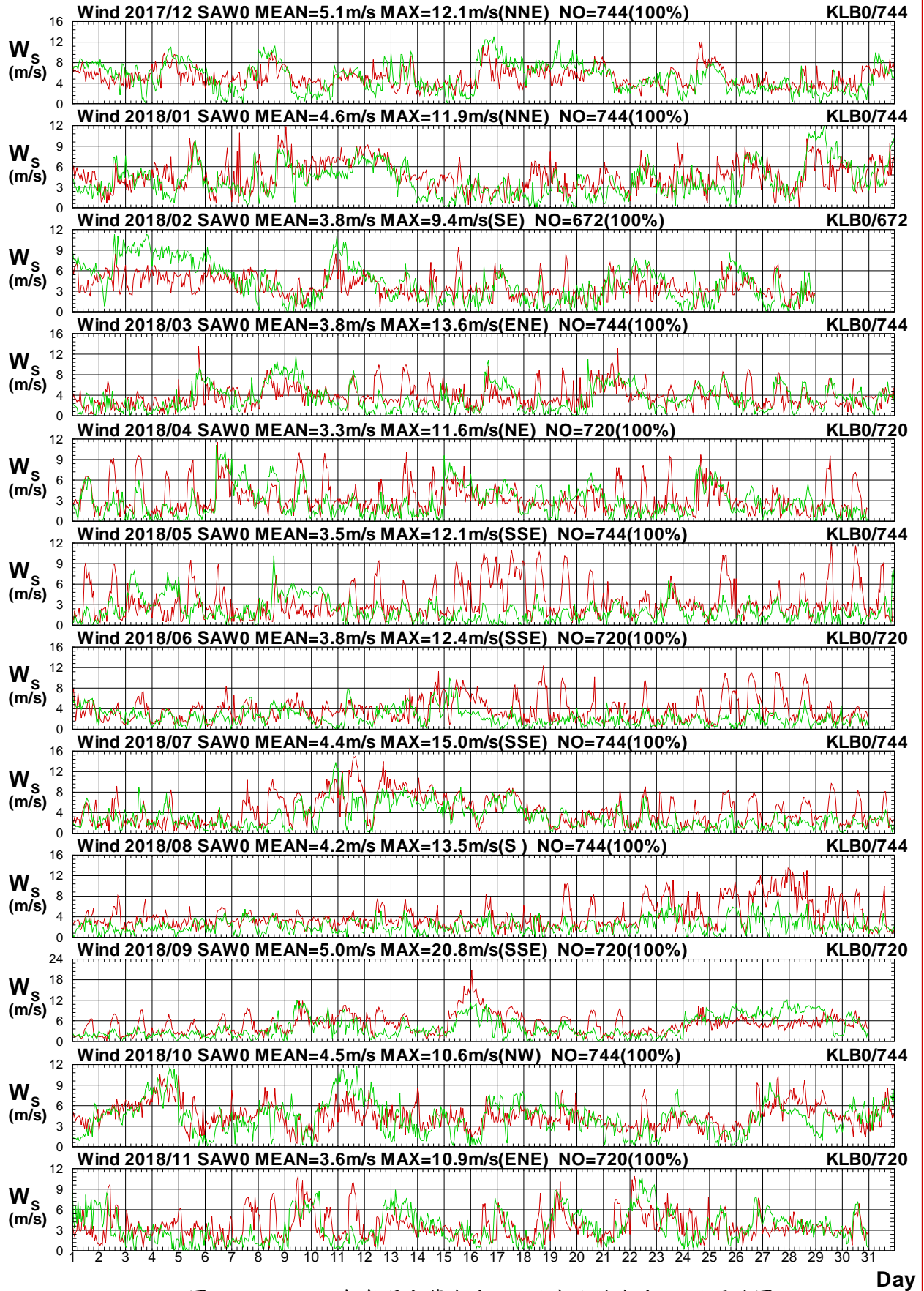


圖1.3.8a 2018年每月宜蘭海域 W 站與北端海域 B 站風速圖

W17CSAW0.1HA W17CKLB0.1HO W181SAW0.1HA W181KLB0.1HO W182SAW0.1HA W182KLB0.1HO
 W183SAW0.1HA W183KLB0.1HO W184SAW0.1HA W184KLB0.1HO W185SAW0.1HA W185KLB0.1HO

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

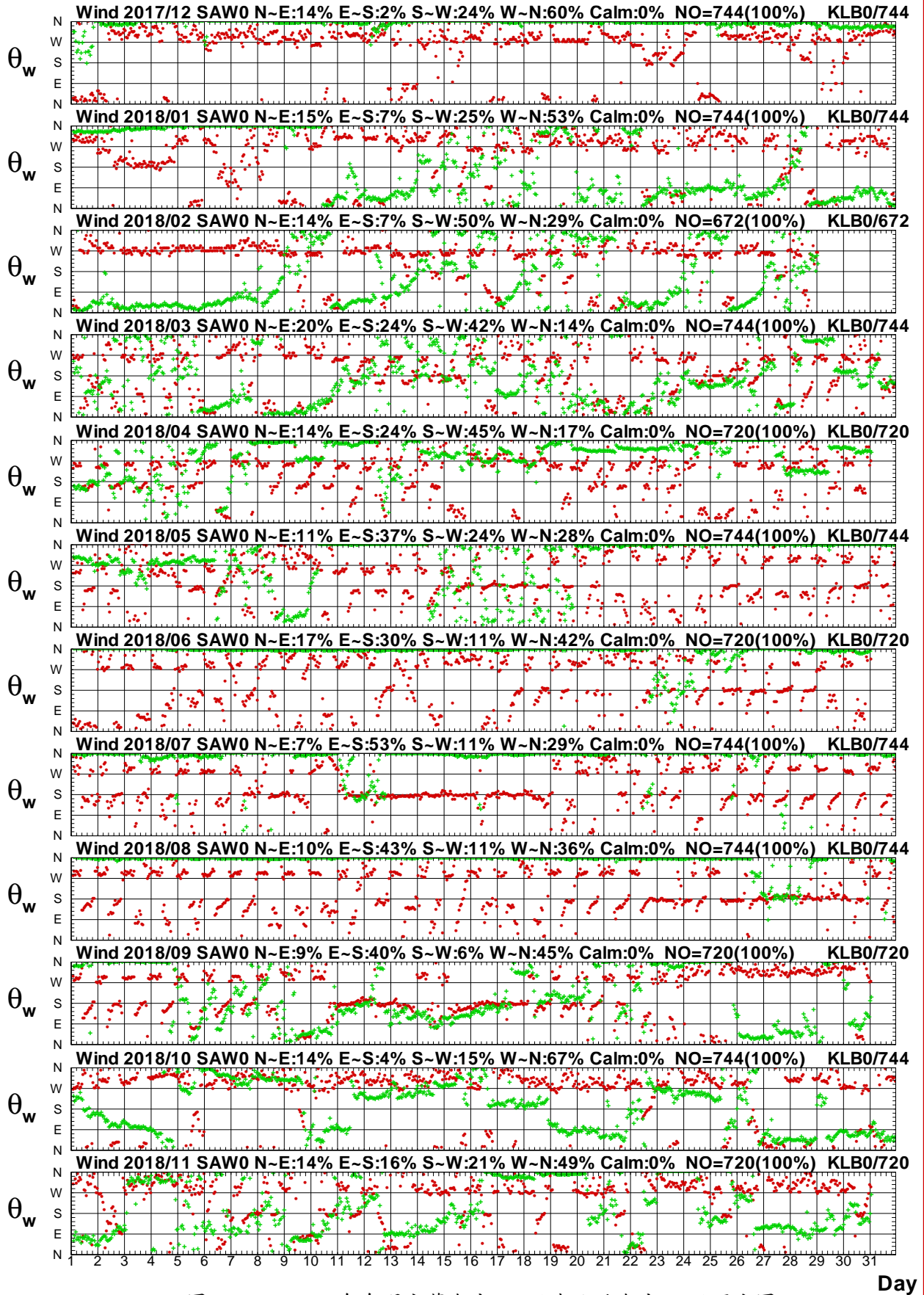


圖1.3.8b 2018年每月宜蘭海域 W 站與北端海域 B 站風向圖

W17CSAW0.1HA W17CKLB0.1HO W181SAW0.1HA W181KLB0.1HO W182SAW0.1HA W182KLB0.1HO
W183SAW0.1HA W183KLB0.1HO W184SAW0.1HA W184KLB0.1HO W185SAW0.1HA W185KLB0.1HO

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

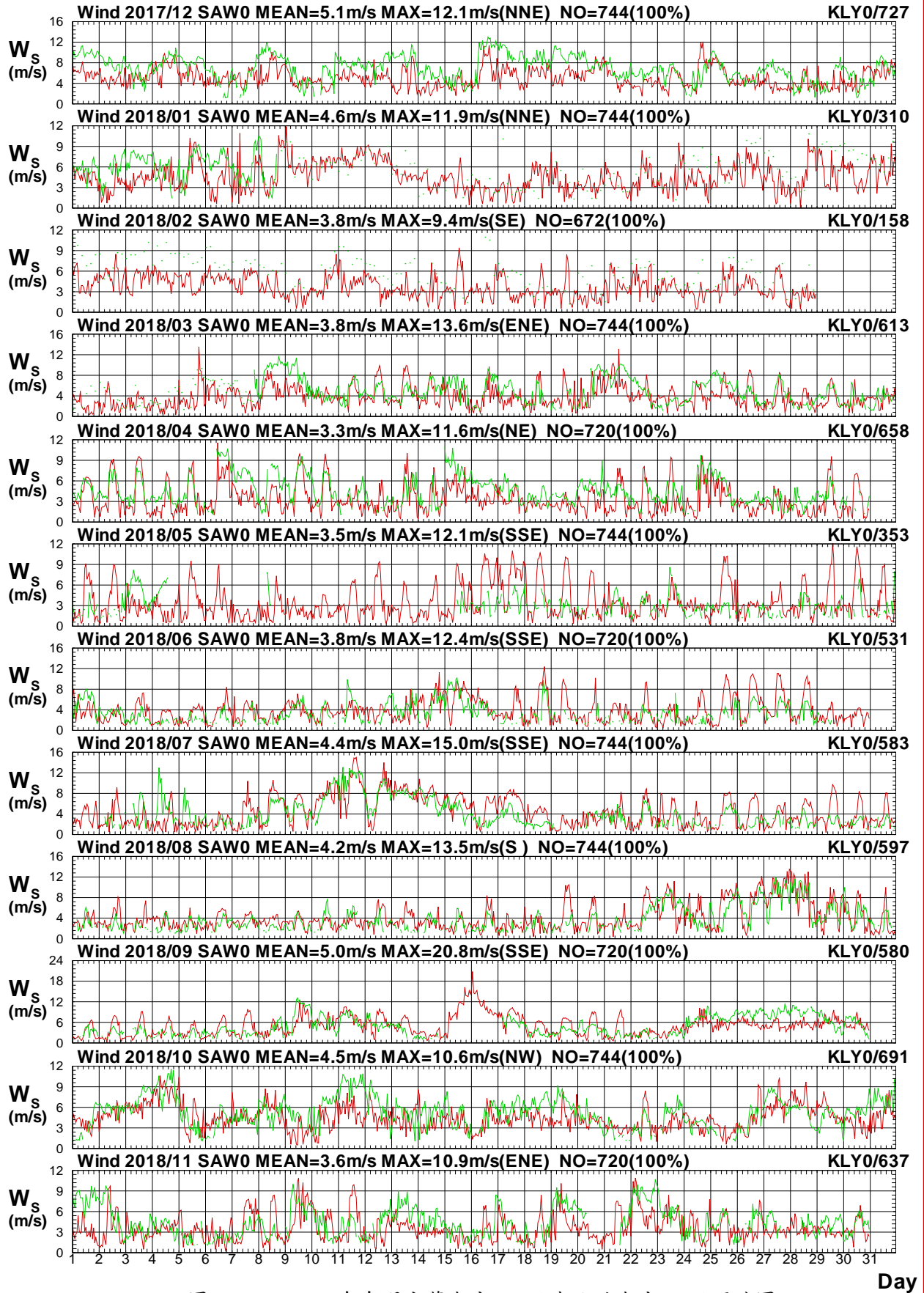


圖1.3.9a 2018年每月宜蘭海域 W 站與北端海域 Y 站風速圖

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

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

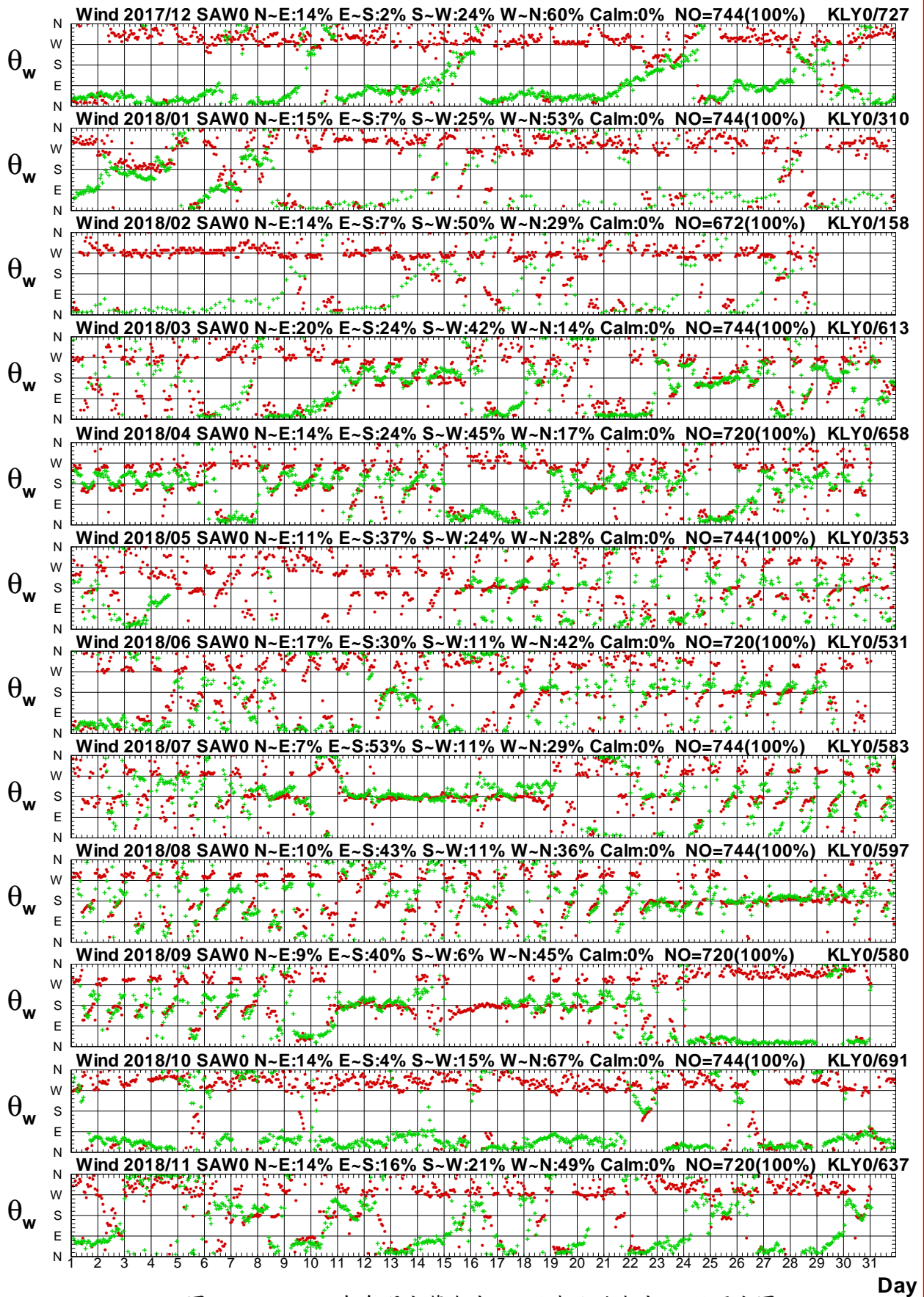


圖1.3.9b 2018年每月宜蘭海域 W 站與北端海域 Y 站風向圖

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 W183SAW0.1HA W183KLY0.1HO W184SAW0.1HA W184KLY0.1HO W185SAW0.1HA W185KLY0.1HO

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

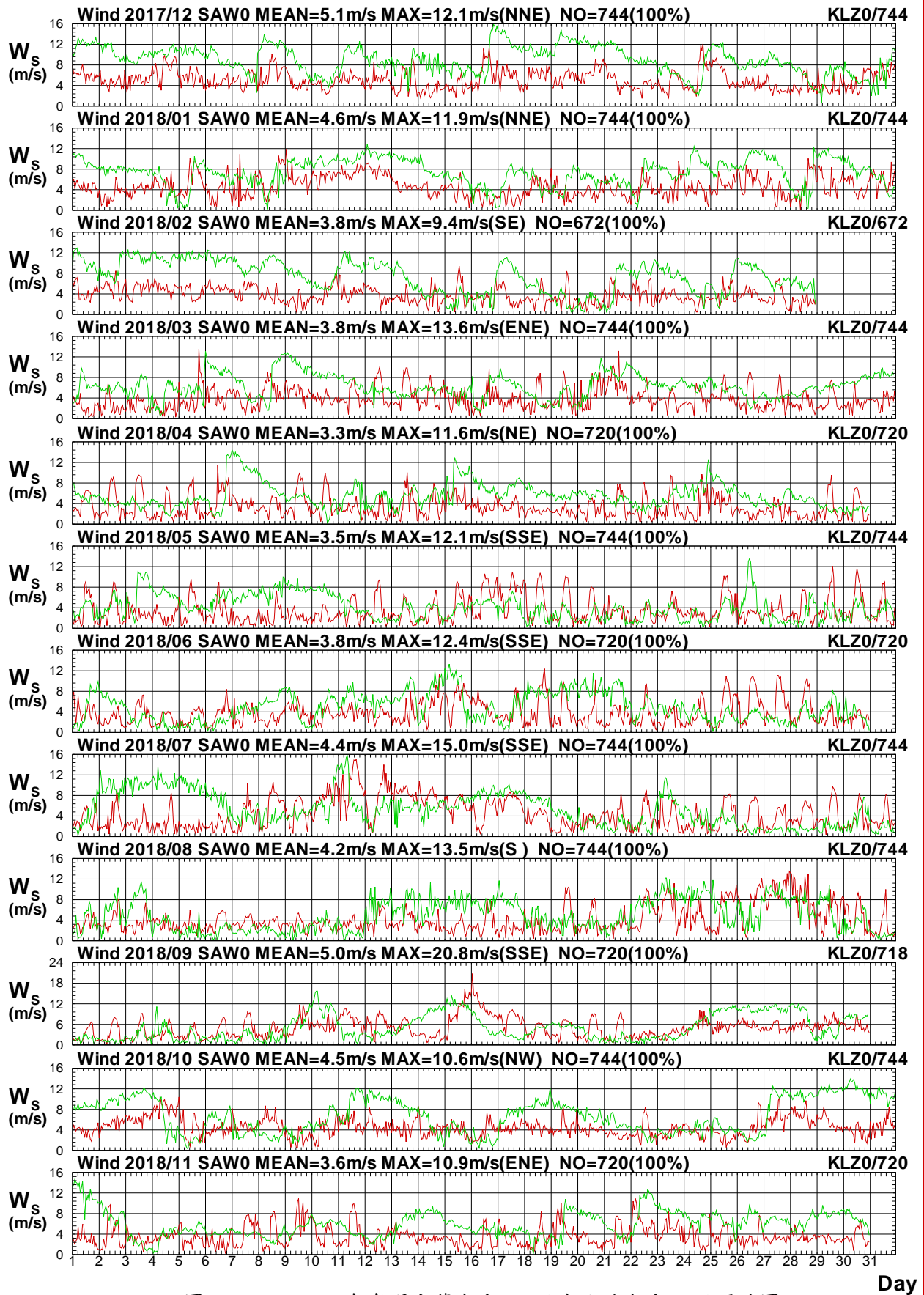


圖1.3.10a 2018年每月宜蘭海域 W 站與北端海域 Z 站風速圖

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 W183SAW0.1HA W183KLZ0.1HO W184SAW0.1HA W184KLZ0.1HO W185SAW0.1HA W185KLZ0.1HO

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

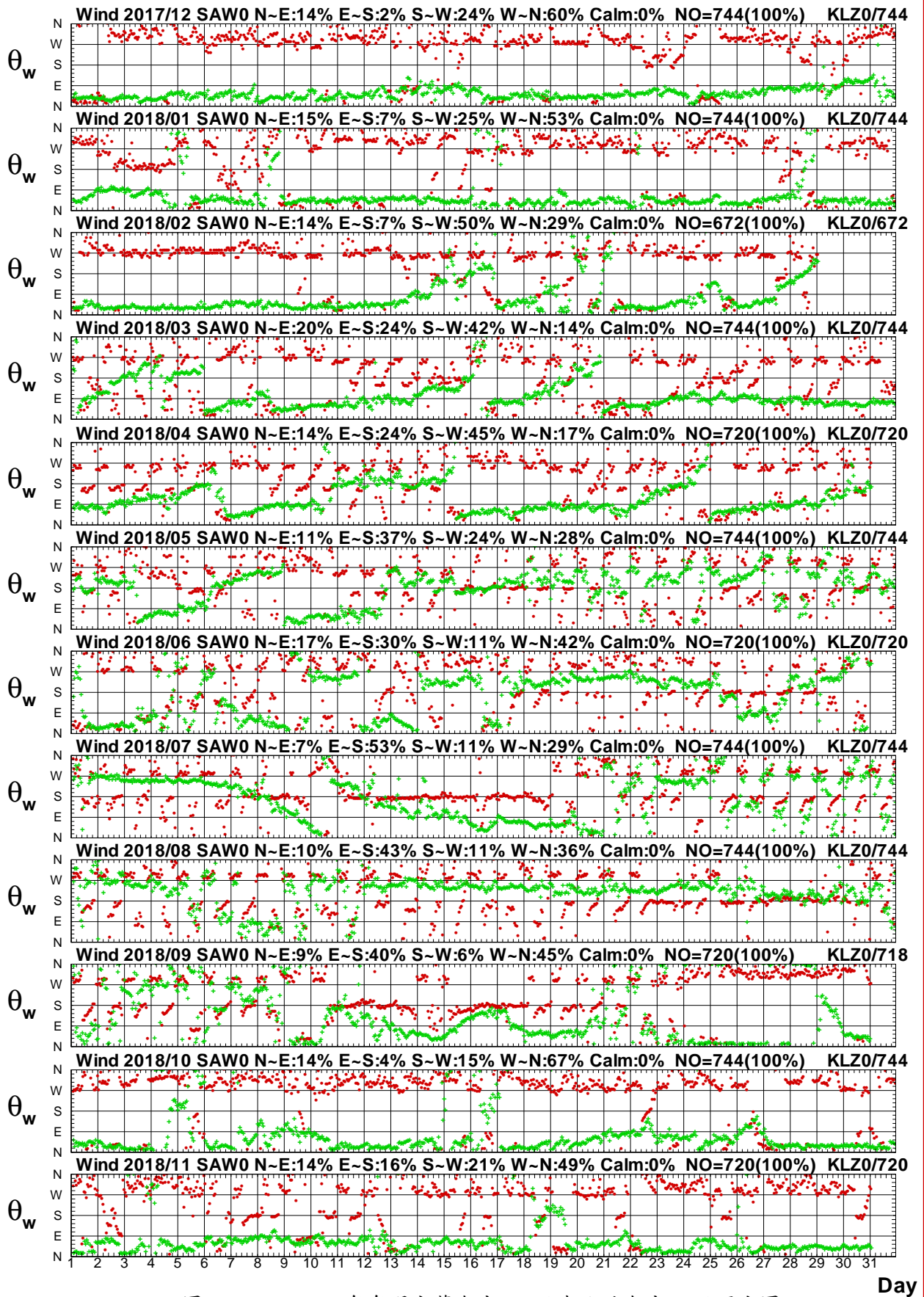


圖 1.3.10b 2018年每月宜蘭海域 W 站與北端海域 Z 站風向圖

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W183SAW0.1HA W183KLZ0.1HO W184SAW0.1HA W184KLZ0.1HO W185SAW0.1HA W185KLZ0.1HO

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

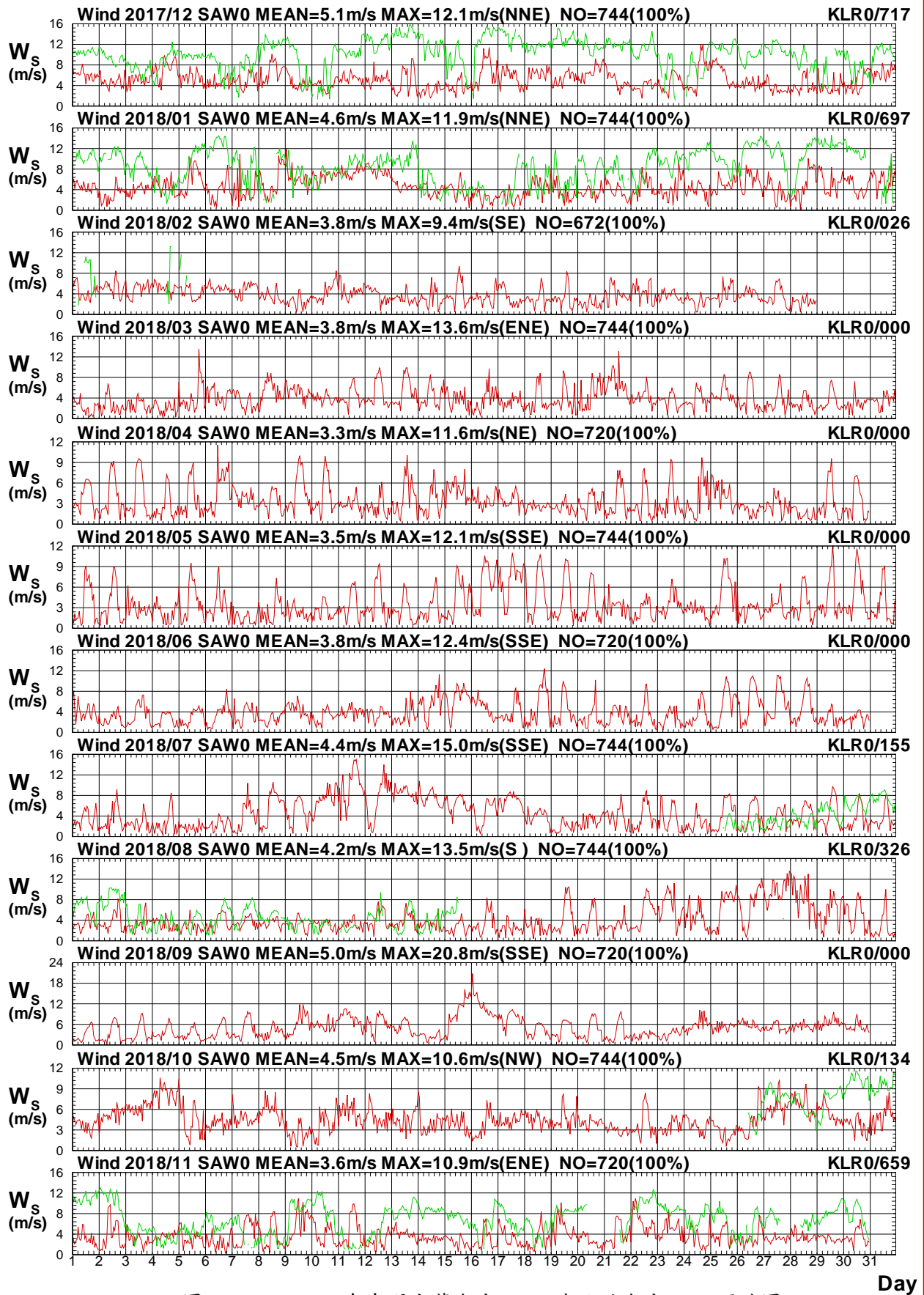


圖 1.3.11a 2018年每月宜蘭海域 W 站與北端海域 R 站風速圖

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

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

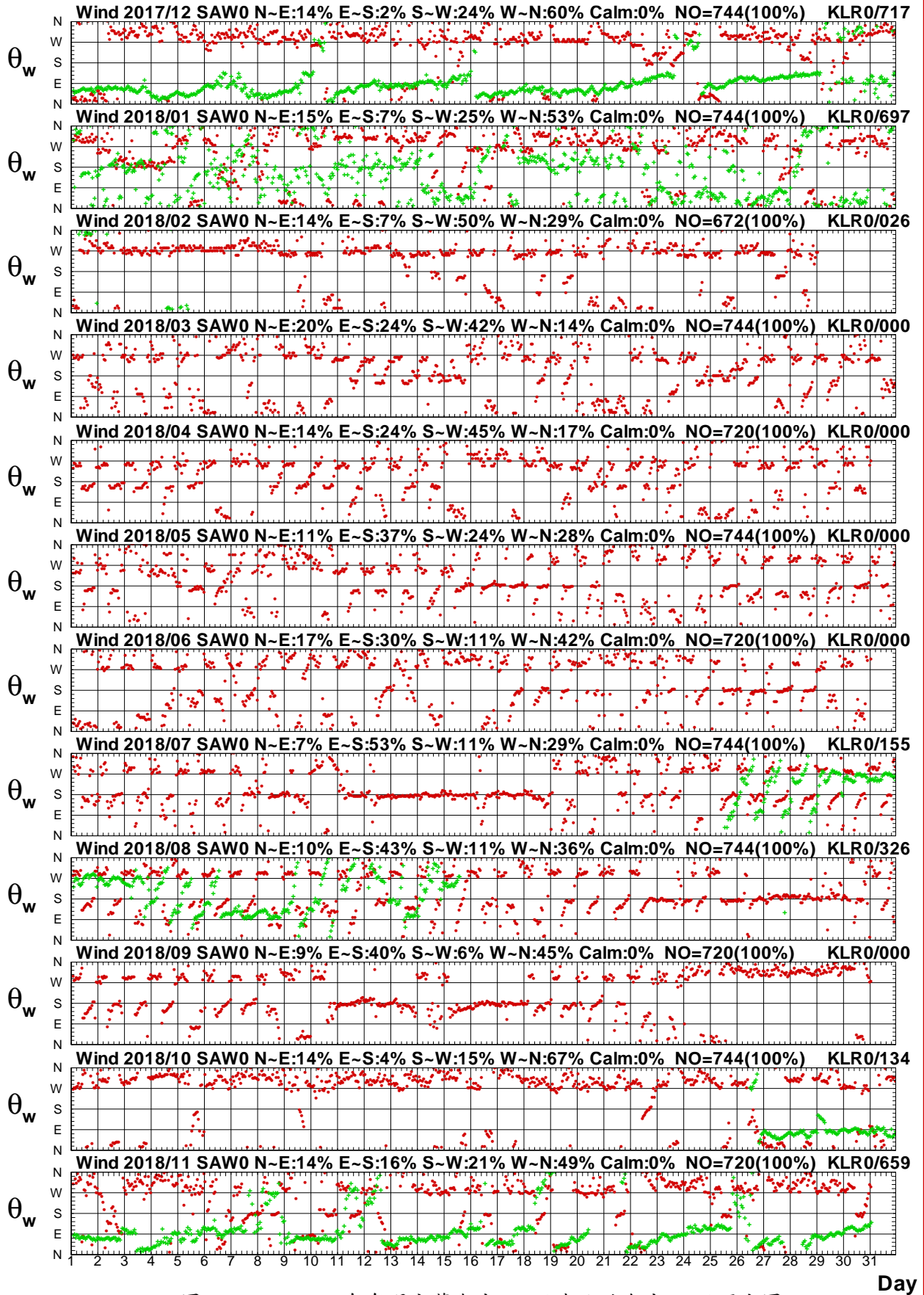


圖 1.3.11b 2018年每月宜蘭海域 W 站與北端海域 R 站風向圖

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

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

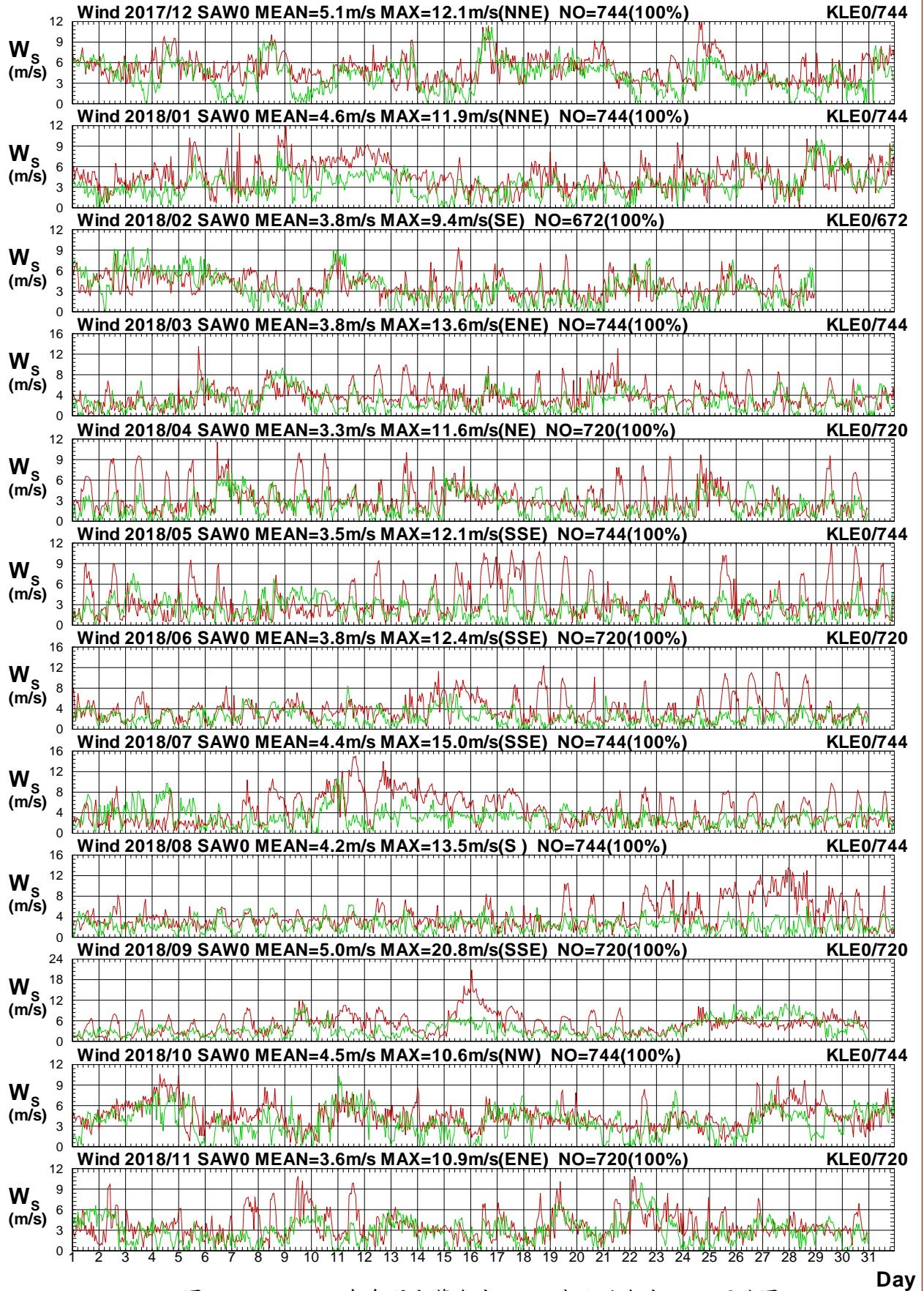


圖1.3.12a 2018年每月宜蘭海域 W 站與北端海域 E 站風速圖

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 W183SAW0.1HA W183KLE0.1H0 W184SAW0.1HA W184KLE0.1H0 W185SAW0.1HA W185KLE0.1H0

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

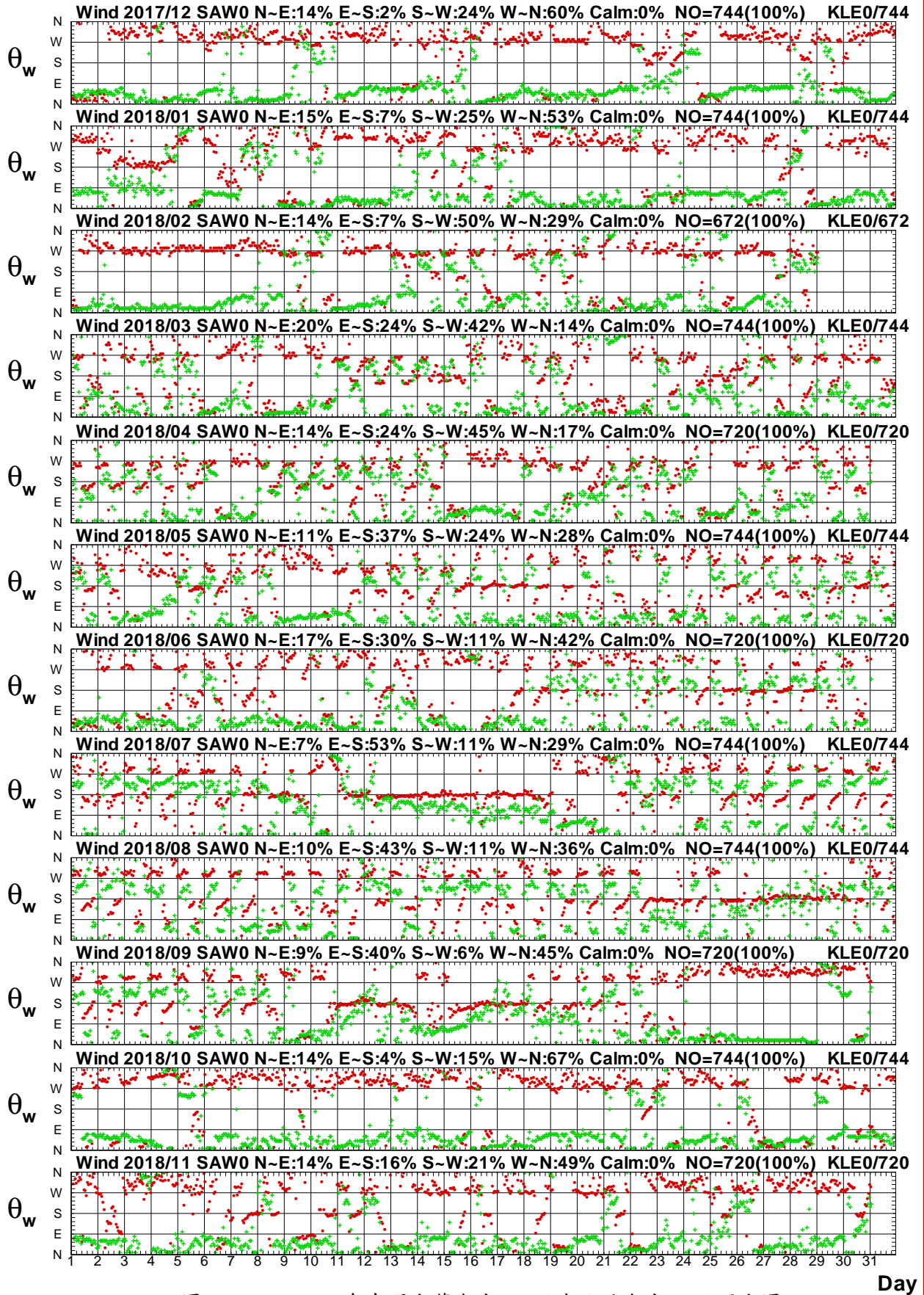


圖 1.3.12b 2018年每月宜蘭海域 W 站與北端海域 E 站風向圖

W17CSAW0.1HA W17CKLE0.1HO W181SAW0.1HA W181KLE0.1HO W182SAW0.1HA W182KLE0.1HO
 W183SAW0.1HA W183KLE0.1HO W184SAW0.1HA W184KLE0.1HO W185SAW0.1HA W185KLE0.1HO

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

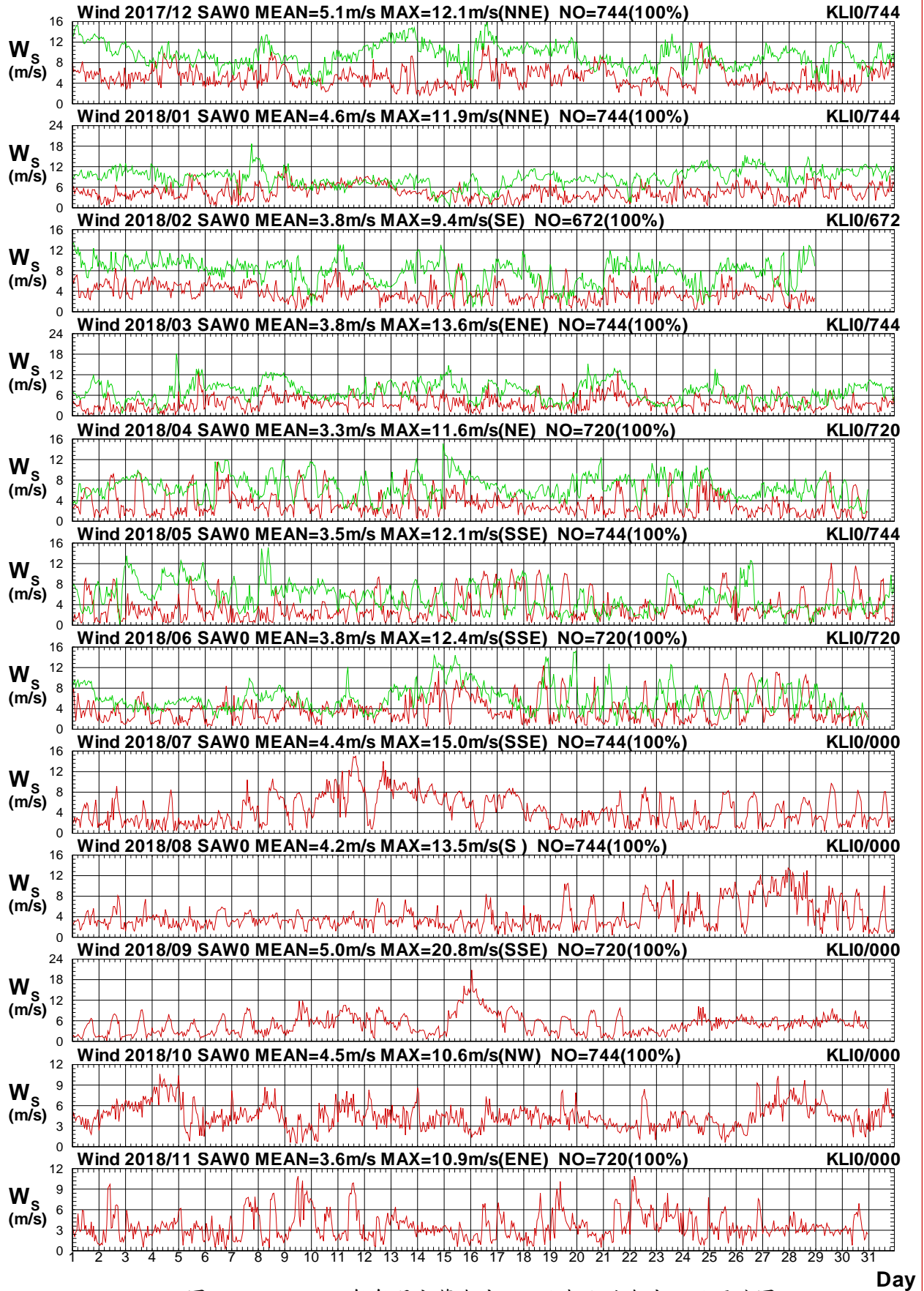


圖 1.3.13a 2018年每月宜蘭海域 W 站與北端海域 I 站風速圖

W17CSAW0.1HA W17CKLI0.1H0 W181SAW0.1HA W181KLI0.1H0 W182SAW0.1HA W182KLI0.1H0
 W183SAW0.1HA W183KLI0.1H0 W184SAW0.1HA W184KLI0.1H0 W185SAW0.1HA W185KLI0.1H0

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

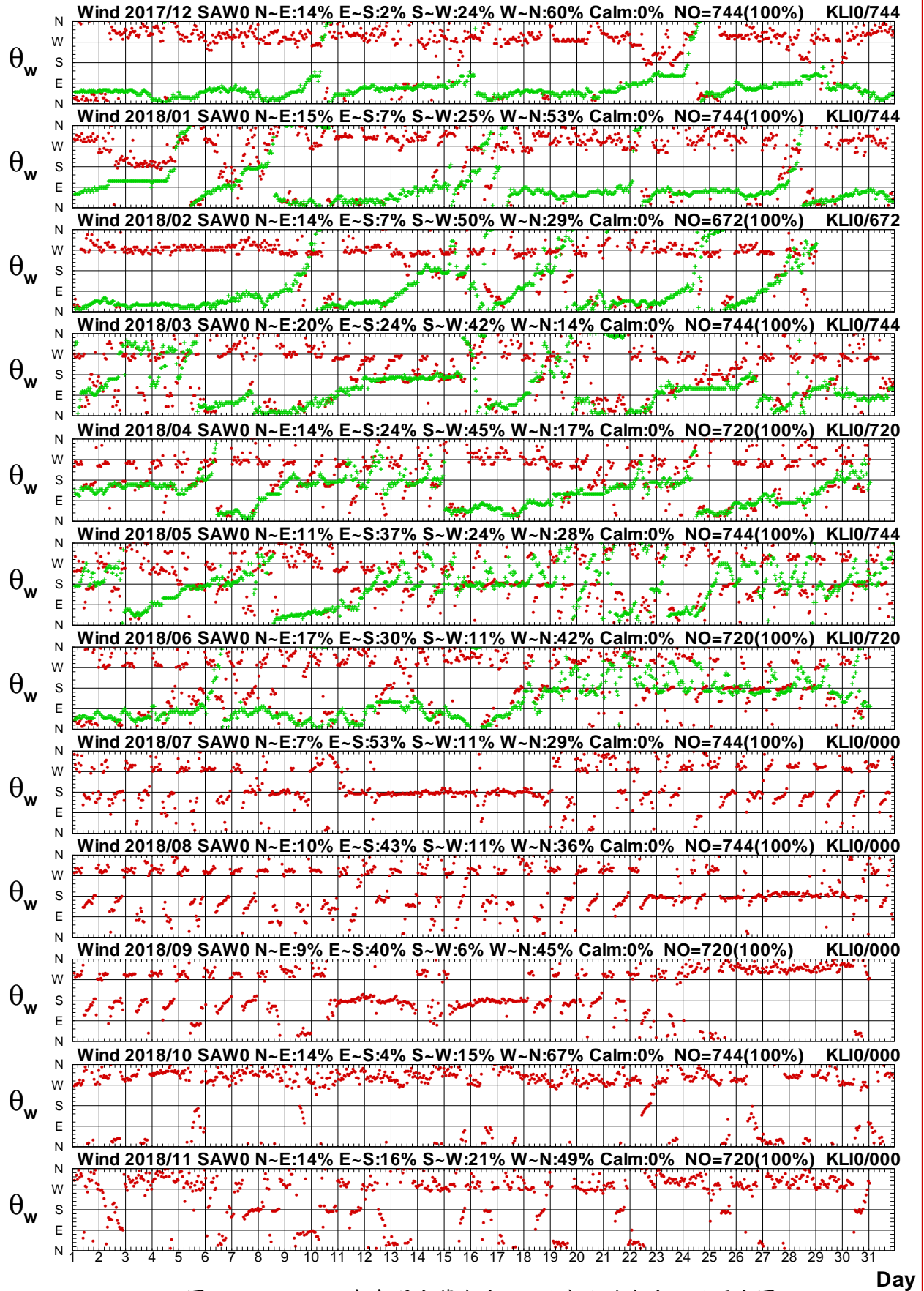


圖1.3.13b 2018年每月宜蘭海域 W 站與北端海域 I 站風向圖

W17CSAW0.1HA W17CKLI0.1H0 W181SAW0.1HA W181KLI0.1H0 W182SAW0.1HA W182KLI0.1H0
 W183SAW0.1HA W183KLI0.1H0 W184SAW0.1HA W184KLI0.1H0 W185SAW0.1HA W185KLI0.1H0

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

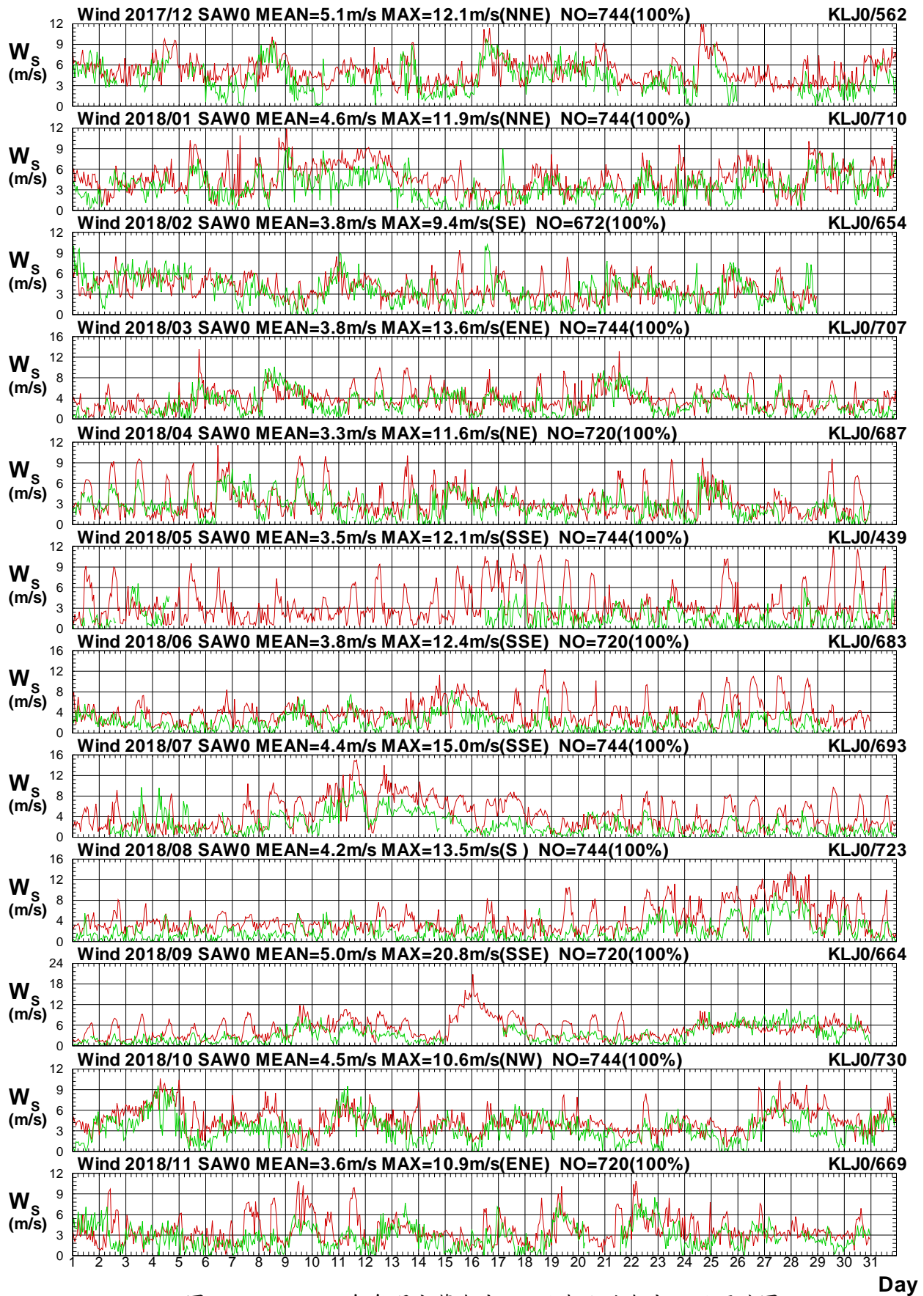


圖1.3.14a 2018年每月宜蘭海域 W 站與北端海域 J 站風速圖

W17CSAW0.1HA W17CKLJ0.1H0 W181SAW0.1HA W181KLJ0.1H0 W182SAW0.1HA W182KLJ0.1H0
W183SAW0.1HA W183KLJ0.1H0 W184SAW0.1HA W184KLJ0.1H0 W185SAW0.1HA W185KLJ0.1H0

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

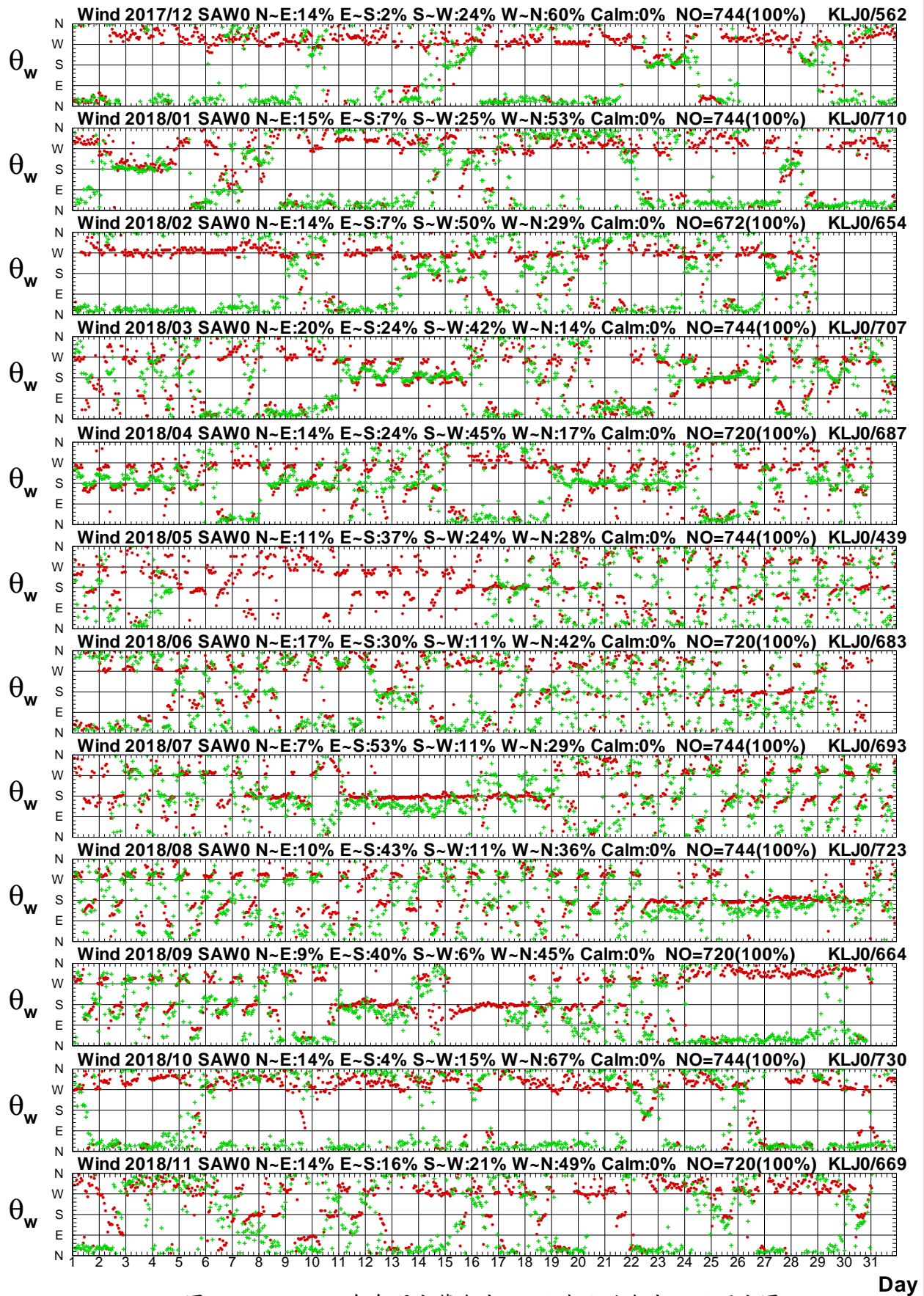


圖 1.3.14b 2018 年每月宜蘭海域 W 站與北端海域 J 站風向圖

W17CSAW0.1HA W17CKLJ0.1H0 W181SAW0.1HA W181KLJ0.1H0 W182SAW0.1HA W182KLJ0.1H0
 W183SAW0.1HA W183KLJ0.1H0 W184SAW0.1HA W184KLJ0.1H0 W185SAW0.1HA W185KLJ0.1H0

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

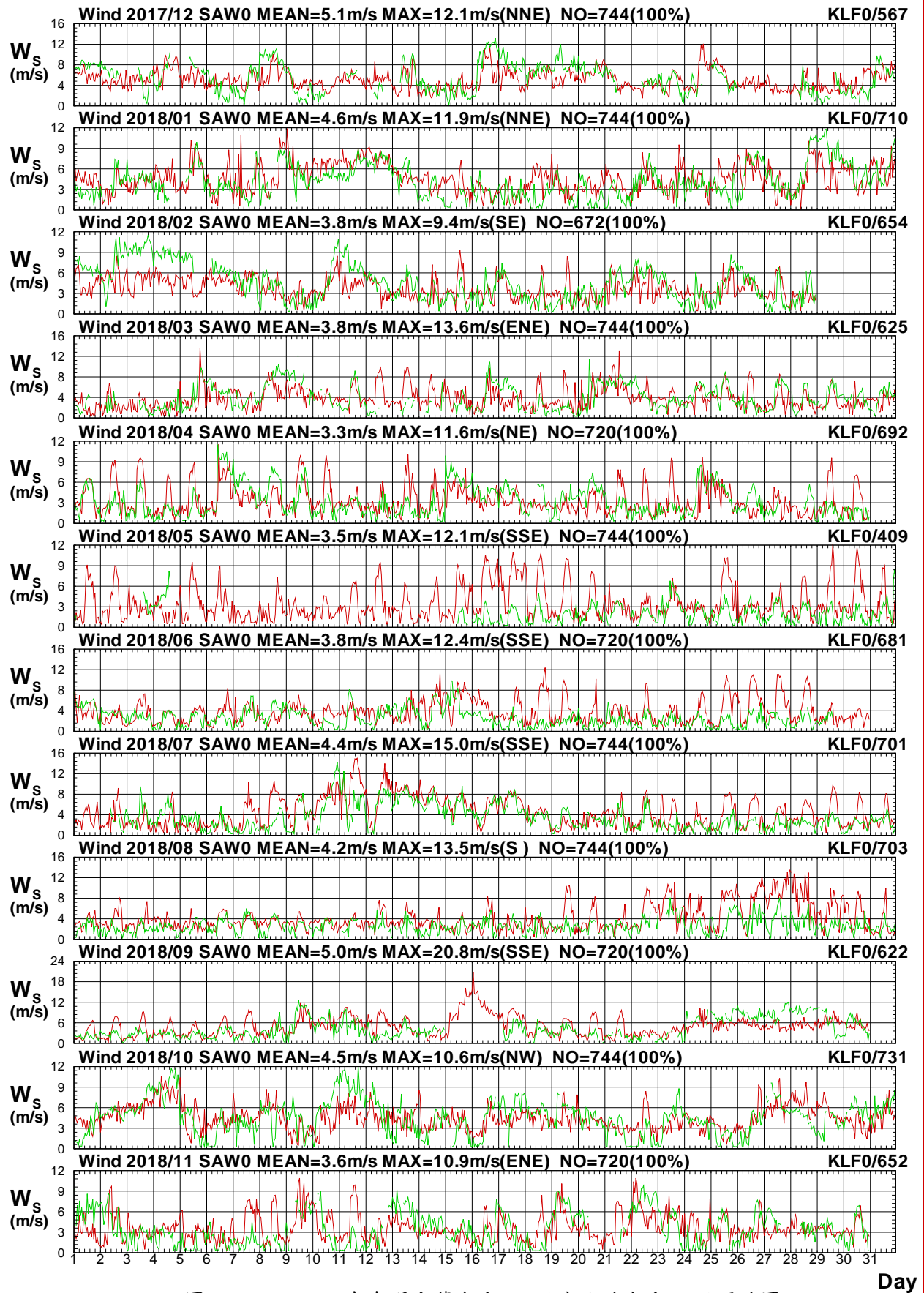


圖1.3.15a 2018年每月宜蘭海域 W 站與北端海域 F 站風速圖

W17CSAW0.1HA W17CKLF0.1HO W181SAW0.1HA W181KLF0.1HO W182SAW0.1HA W182KLF0.1HO
 W183SAW0.1HA W183KLF0.1HO W184SAW0.1HA W184KLF0.1HO W185SAW0.1HA W185KLF0.1HO

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

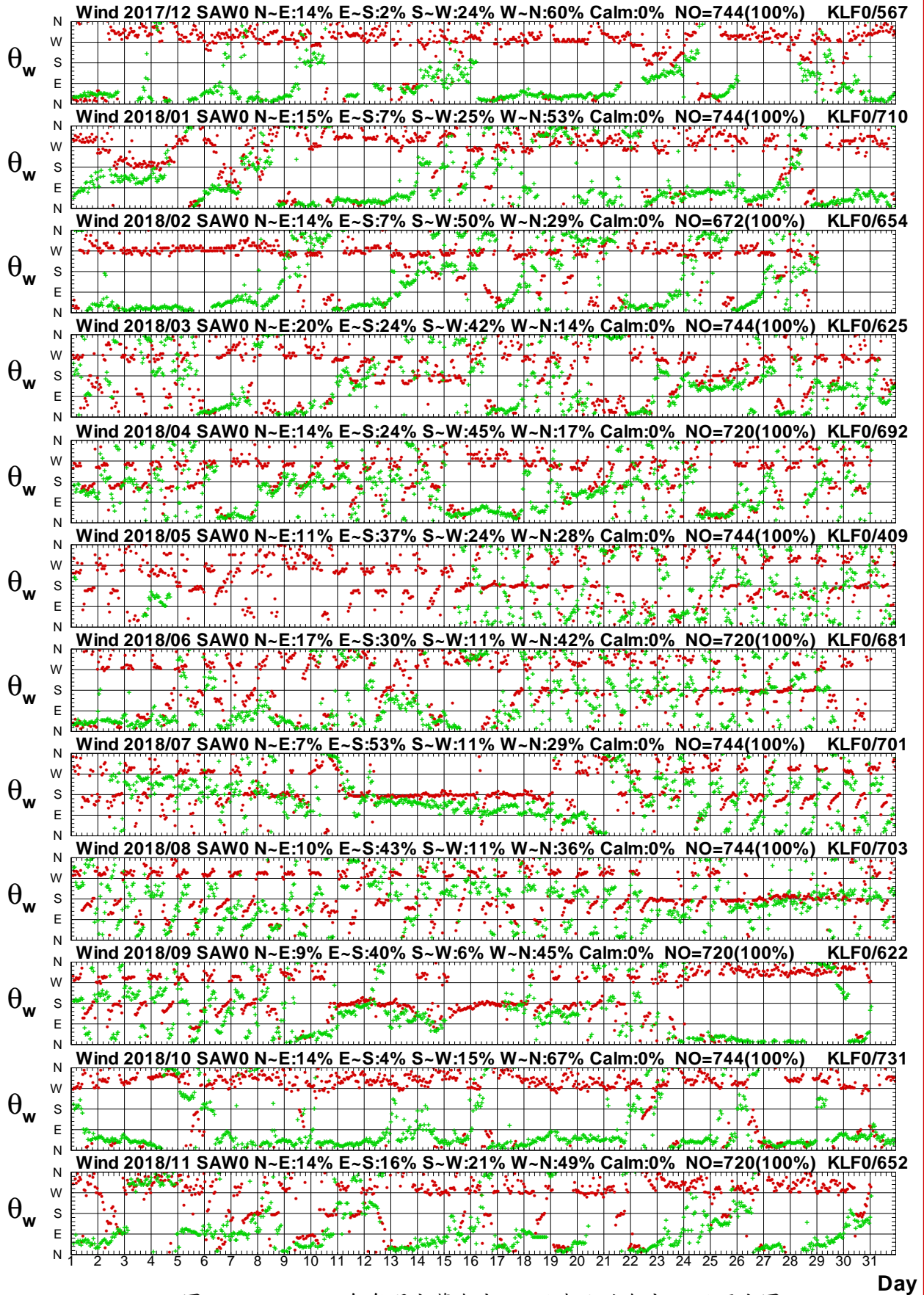


圖1.3.15b 2018年每月宜蘭海域 W 站與北端海域 F 站風向圖

W17CSAW0.1HA W17CKLF0.1HO W181SAW0.1HA W181KLF0.1HO W182SAW0.1HA W182KLF0.1HO
 W183SAW0.1HA W183KLF0.1HO W184SAW0.1HA W184KLF0.1HO W185SAW0.1HA W185KLF0.1HO

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

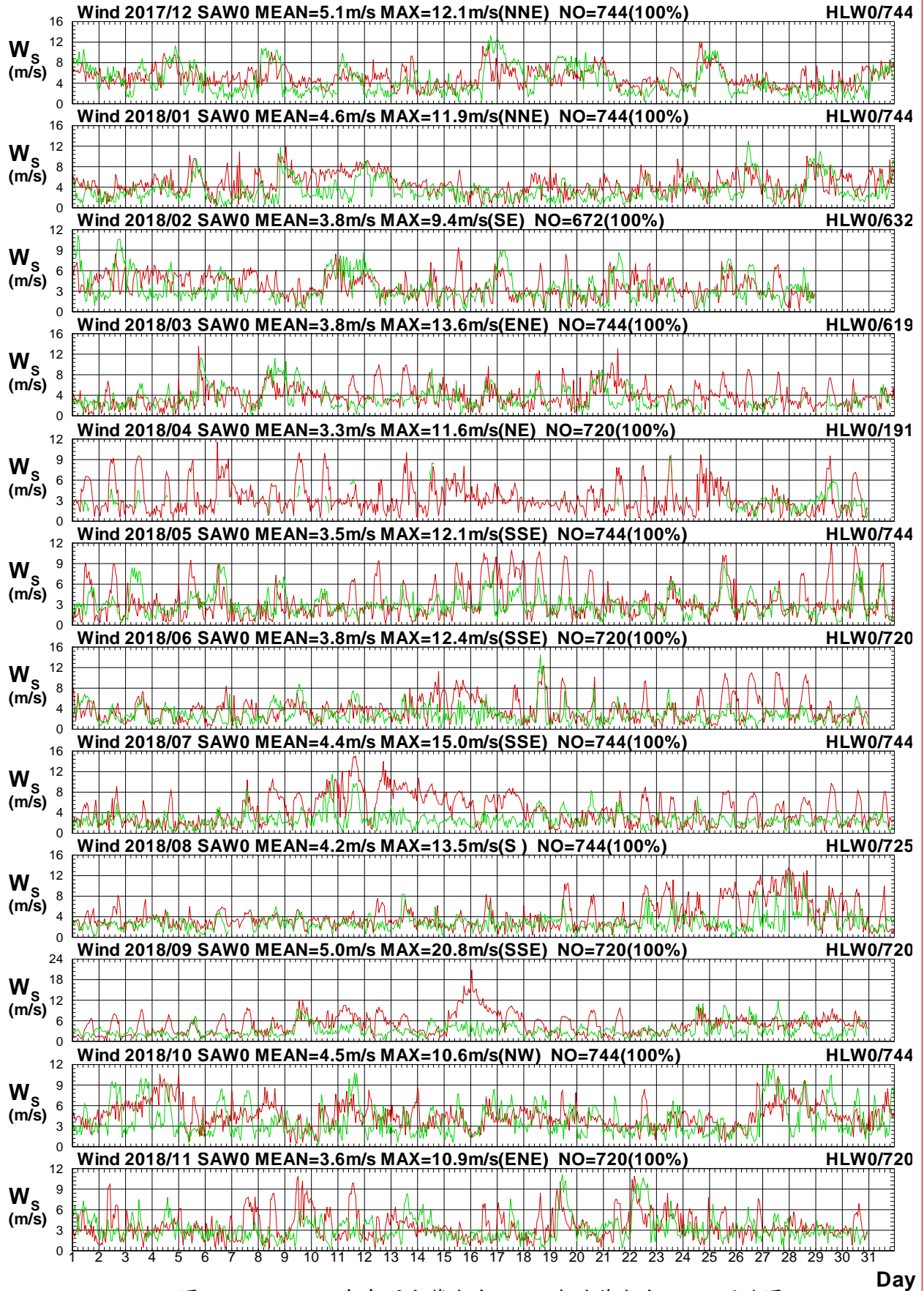


圖 1.3.16a 2018 年每月宜蘭海域 W 站與花蓮海域 W 站風速圖

W17CSAW0.1HA W17CHLW0.1H0 W181SAW0.1HA W181HLW0.1H0 W182SAW0.1HA W182HLW0.1H0
 W183SAW0.1HA W183HLW0.1H0 W184SAW0.1HA W184HLW0.1H0 W185SAW0.1HA W185HLW0.1H0

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

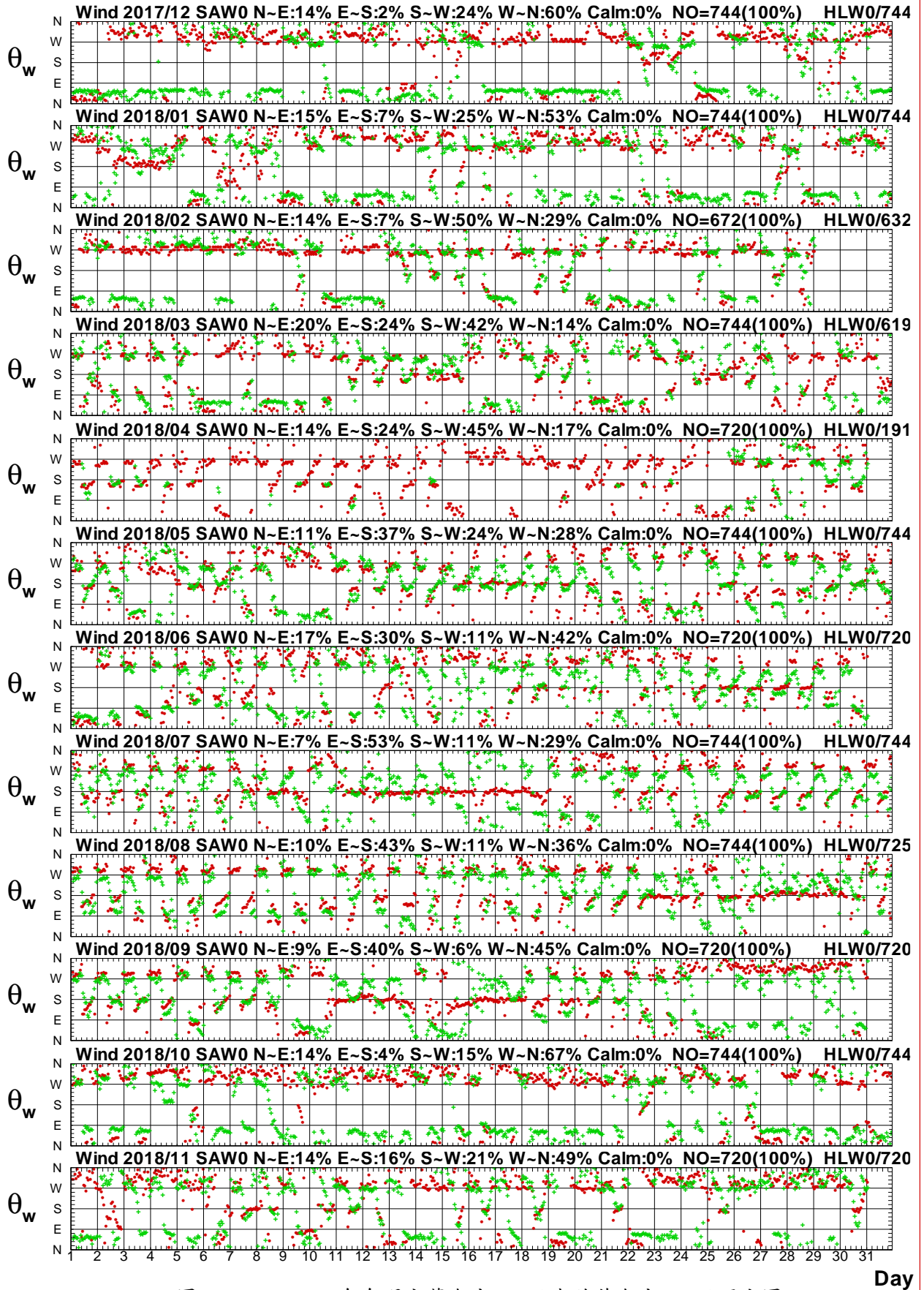


圖1.3.16b 2018年每月宜蘭海域 W 站與花蓮海域 W 站風向圖

W17CSAW0.1HA W17CHLW0.1H0 W181SAW0.1HA W181HLW0.1H0 W182SAW0.1HA W182HLW0.1H0
 W183SAW0.1HA W183HLW0.1H0 W184SAW0.1HA W184HLW0.1H0 W185SAW0.1HA W185HLW0.1H0

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

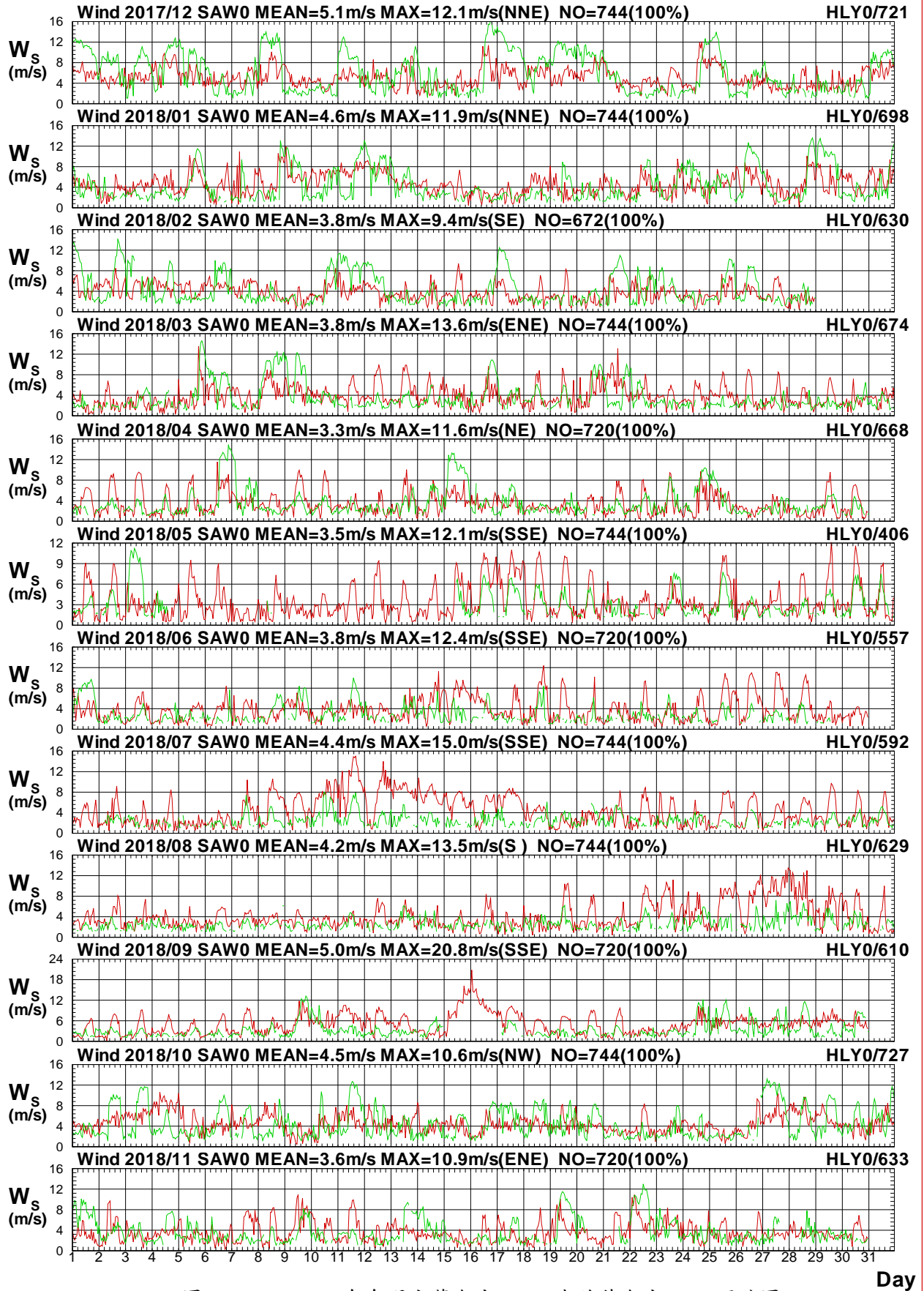


圖 1.3.17a 2018年每月宜蘭海域 W 站與花蓮海域 Y 站風速圖

W17CSAW0.1HA W17CHLY0.1HO W181SAW0.1HA W181HLY0.1HO W182SAW0.1HA W182HLY0.1HO
 W183SAW0.1HA W183HLY0.1HO W184SAW0.1HA W184HLY0.1HO W185SAW0.1HA W185HLY0.1HO

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

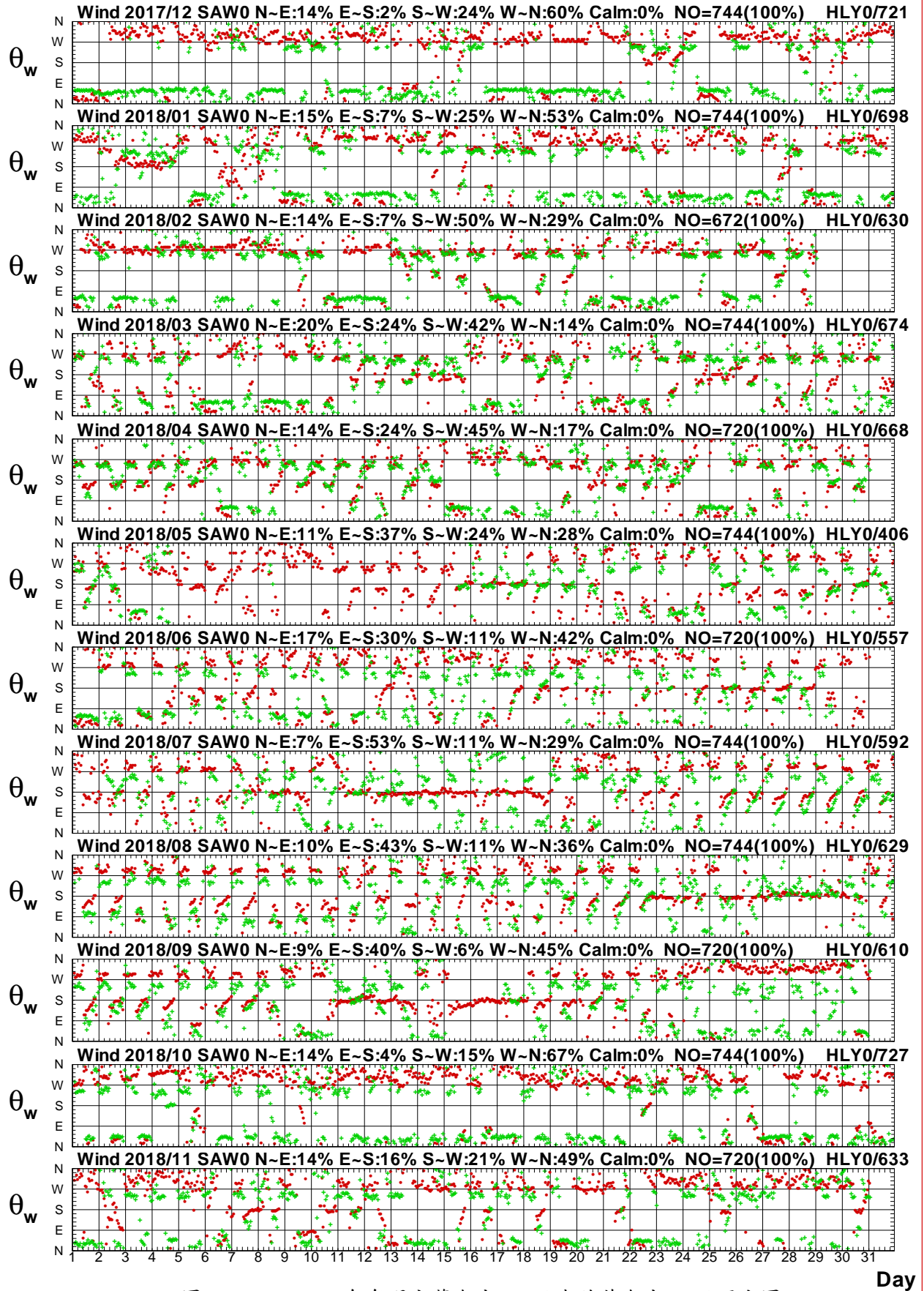


圖 1.3.17b 2018年每月宜蘭海域 W 站與花蓮海域 Y 站風向圖

W17CSAW0.1HA W17CHLY0.1HO W181SAW0.1HA W181HLY0.1HO W182SAW0.1HA W182HLY0.1HO
 W183SAW0.1HA W183HLY0.1HO W184SAW0.1HA W184HLY0.1HO W185SAW0.1HA W185HLY0.1HO
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Wind Speed in Yi-Lan Seas of SAW0 at 2018

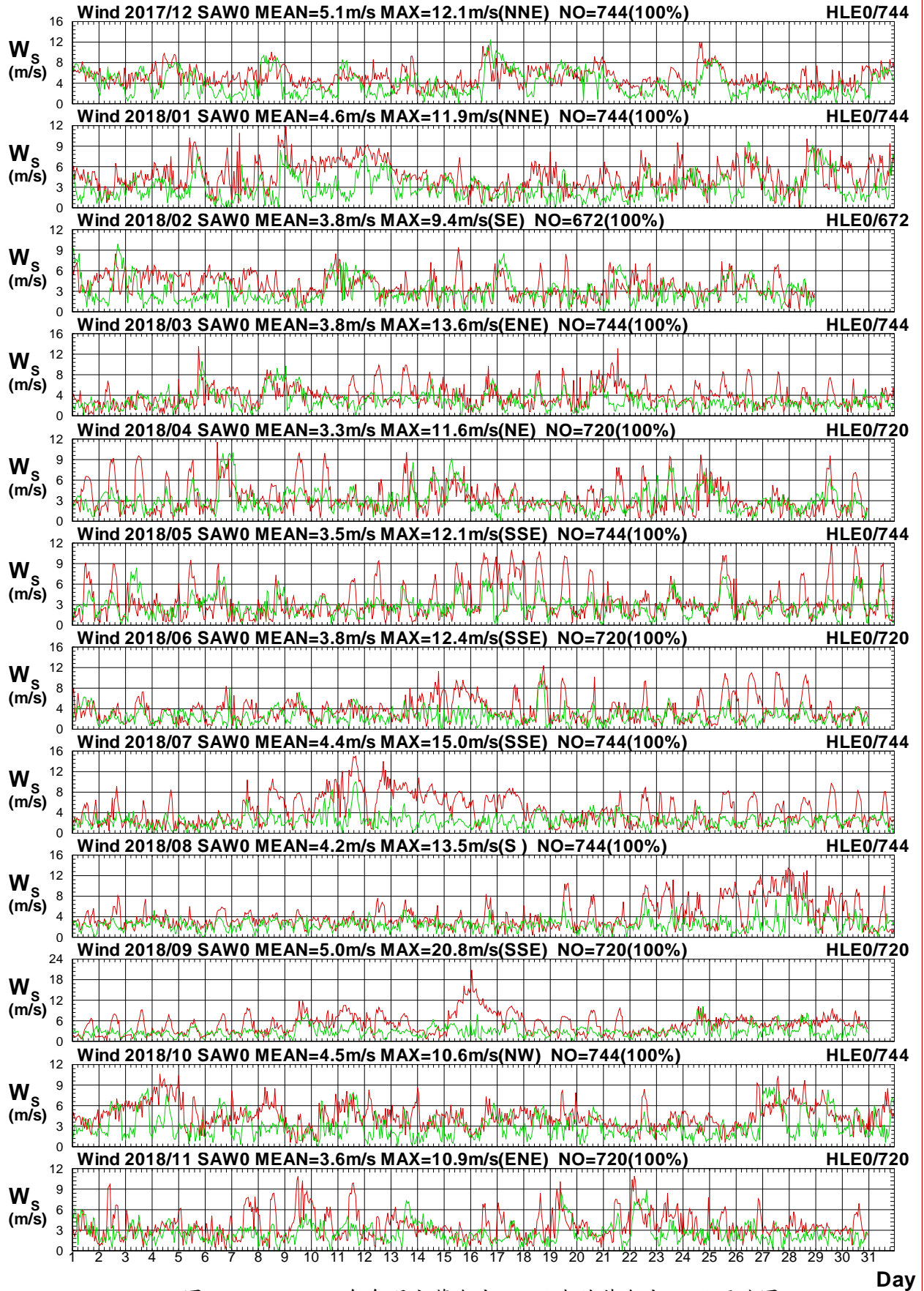


圖1.3.18a 2018年每月宜蘭海域 W 站與花蓮海域 E 站風速圖

W17CSAW0.1HA W17CHLE0.1HO W181SAW0.1HA W181HLE0.1HO W182SAW0.1HA W182HLE0.1HO
 W183SAW0.1HA W183HLE0.1HO W184SAW0.1HA W184HLE0.1HO W185SAW0.1HA W185HLE0.1HO

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

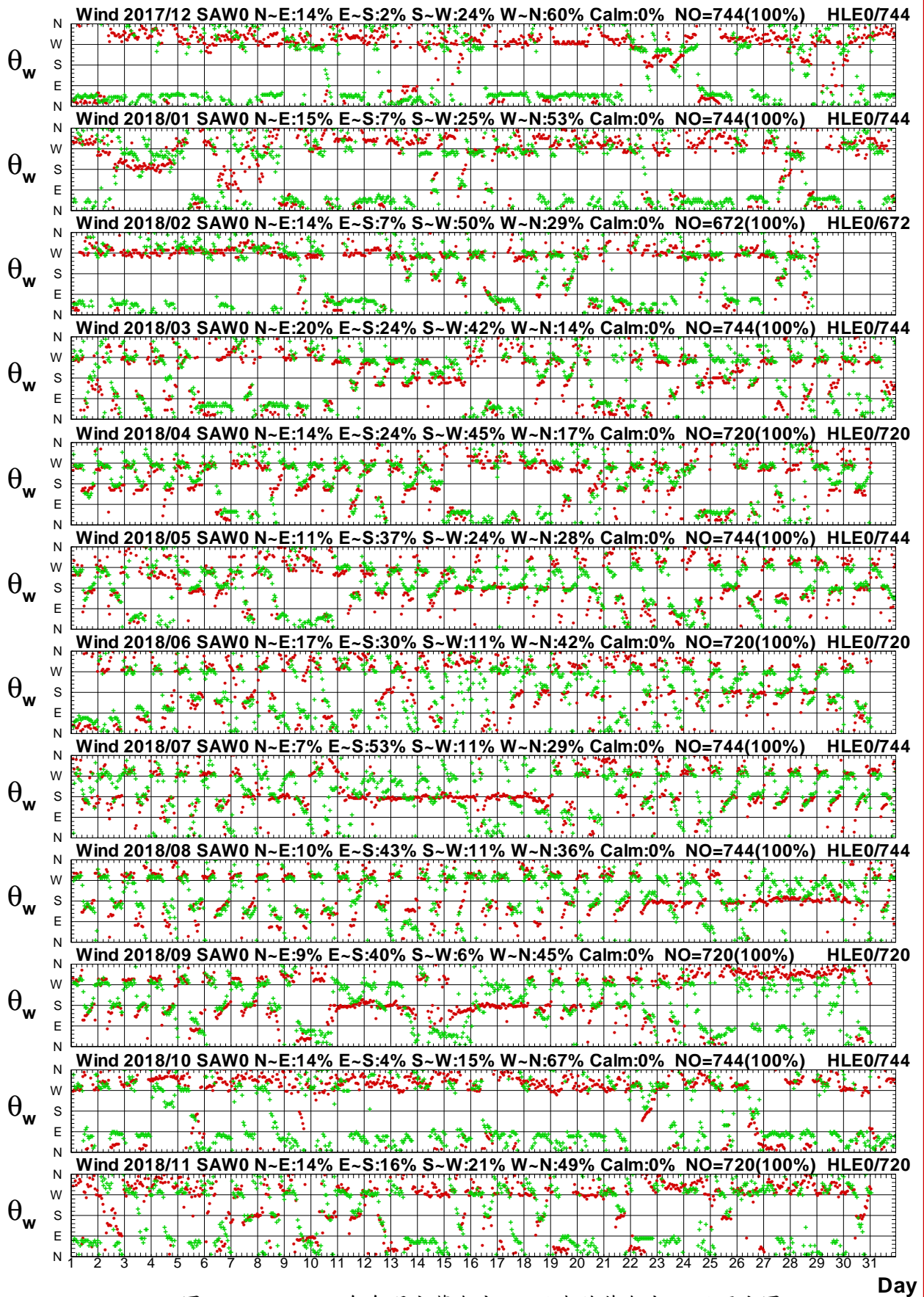


圖 1.3.18b 2018年每月宜蘭海域 W 站與花蓮海域 E 站風向圖

W17CSAW0.1HA W17CHLE0.1HO W181SAW0.1HA W181HLE0.1HO W182SAW0.1HA W182HLE0.1HO
 W183SAW0.1HA W183HLE0.1HO W184SAW0.1HA W184HLE0.1HO W185SAW0.1HA W185HLE0.1HO

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

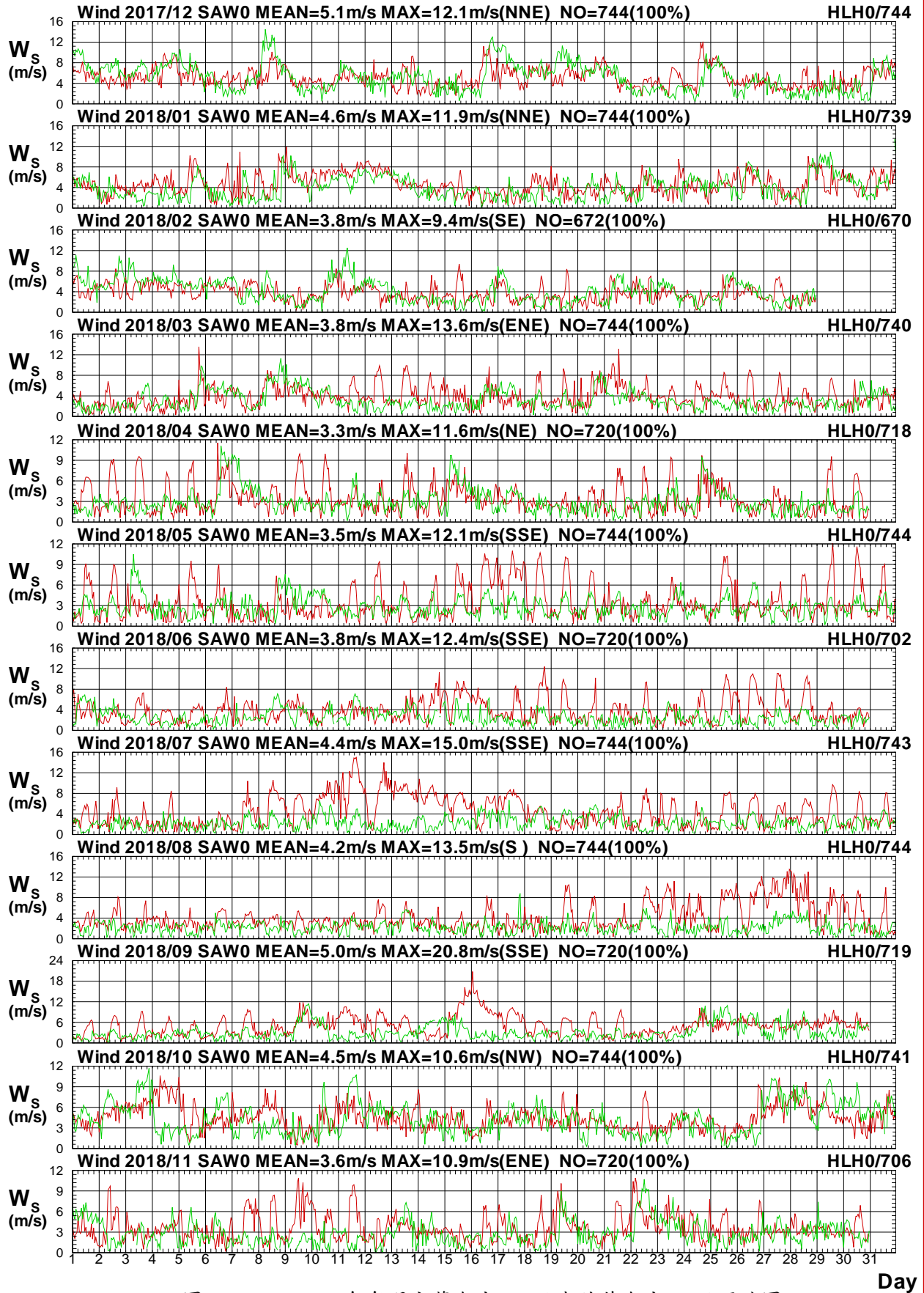


圖 1.3.19a 2018年每月宜蘭海域 W 站與花蓮海域 H 站風速圖

W17CSAW0.1HA W17CHLH0.1H0 W181SAW0.1HA W181HLH0.1H0 W182SAW0.1HA W182HLH0.1H0
 W183SAW0.1HA W183HLH0.1H0 W184SAW0.1HA W184HLH0.1H0 W185SAW0.1HA W185HLH0.1H0

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

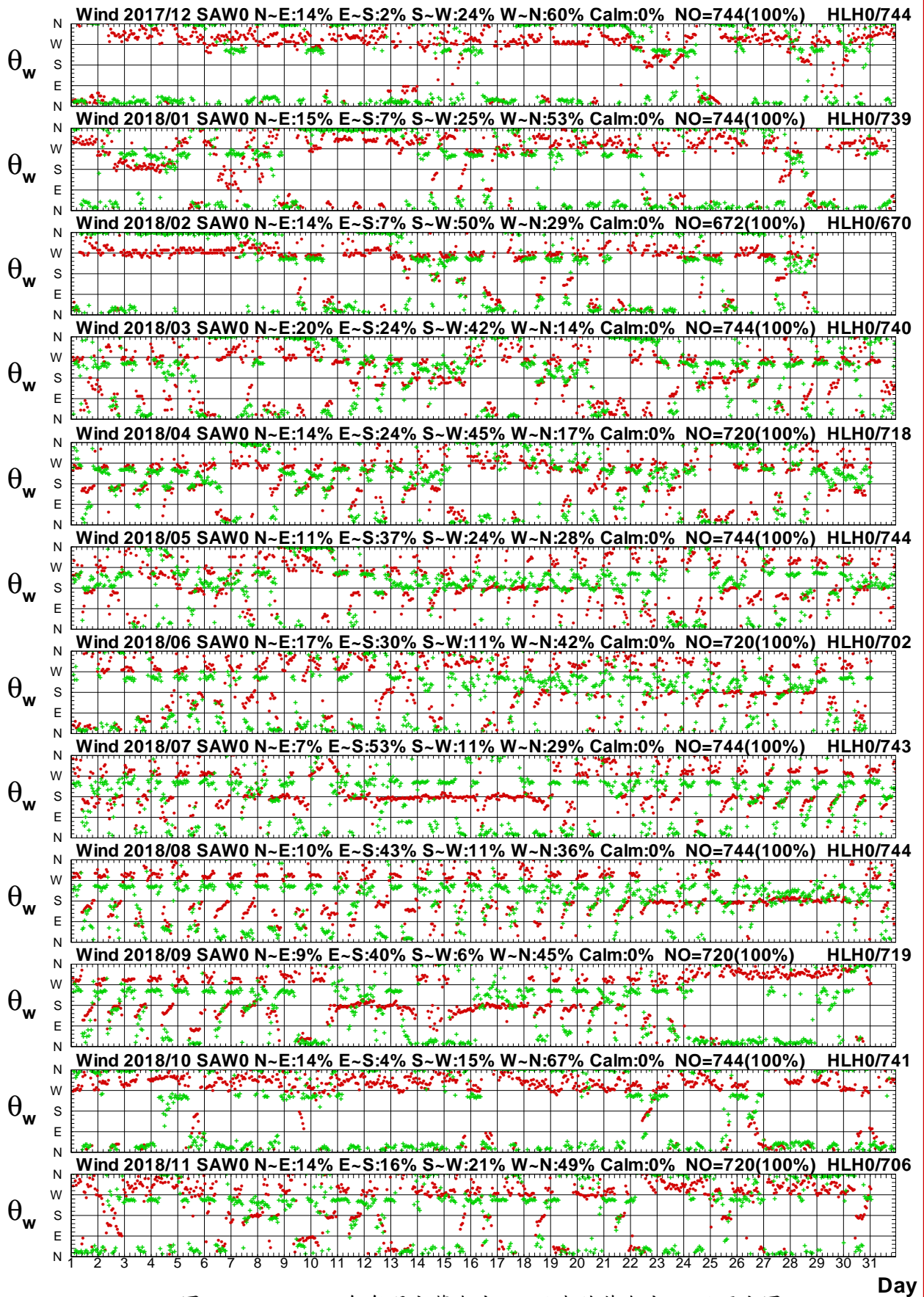


圖 1.3.19b 2018年每月宜蘭海域 W 站與花蓮海域 H 站風向圖

W17CSAW0.1HA W17CHLH0.1H0 W181SAW0.1HA W181HLH0.1H0 W182SAW0.1HA W182HLH0.1H0
 W183SAW0.1HA W183HLH0.1H0 W184SAW0.1HA W184HLH0.1H0 W185SAW0.1HA W185HLH0.1H0

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Wind Speed in Yi-Lan Seas of SAW0 at 2018

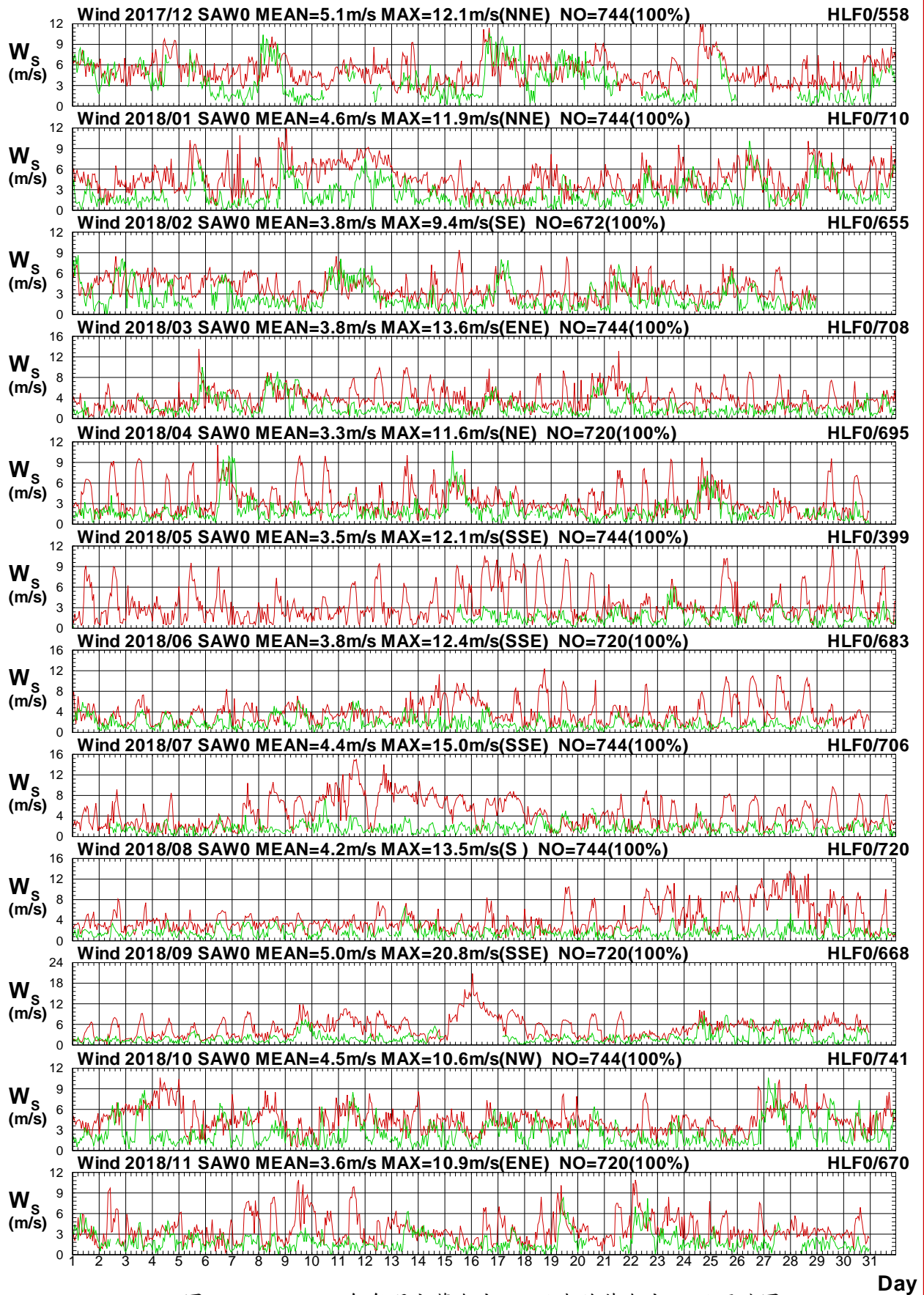


圖1.3.20a 2018年每月宜蘭海域 W 站與花蓮海域 F 站風速圖

W17CSAW0.1HA W17CHLF0.1HO W181SAW0.1HA W181HLF0.1HO W182SAW0.1HA W182HLF0.1HO
 W183SAW0.1HA W183HLF0.1HO W184SAW0.1HA W184HLF0.1HO W185SAW0.1HA W185HLF0.1HO

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Wind Direction in Yi-Lan Seas of SAW0 at 2018

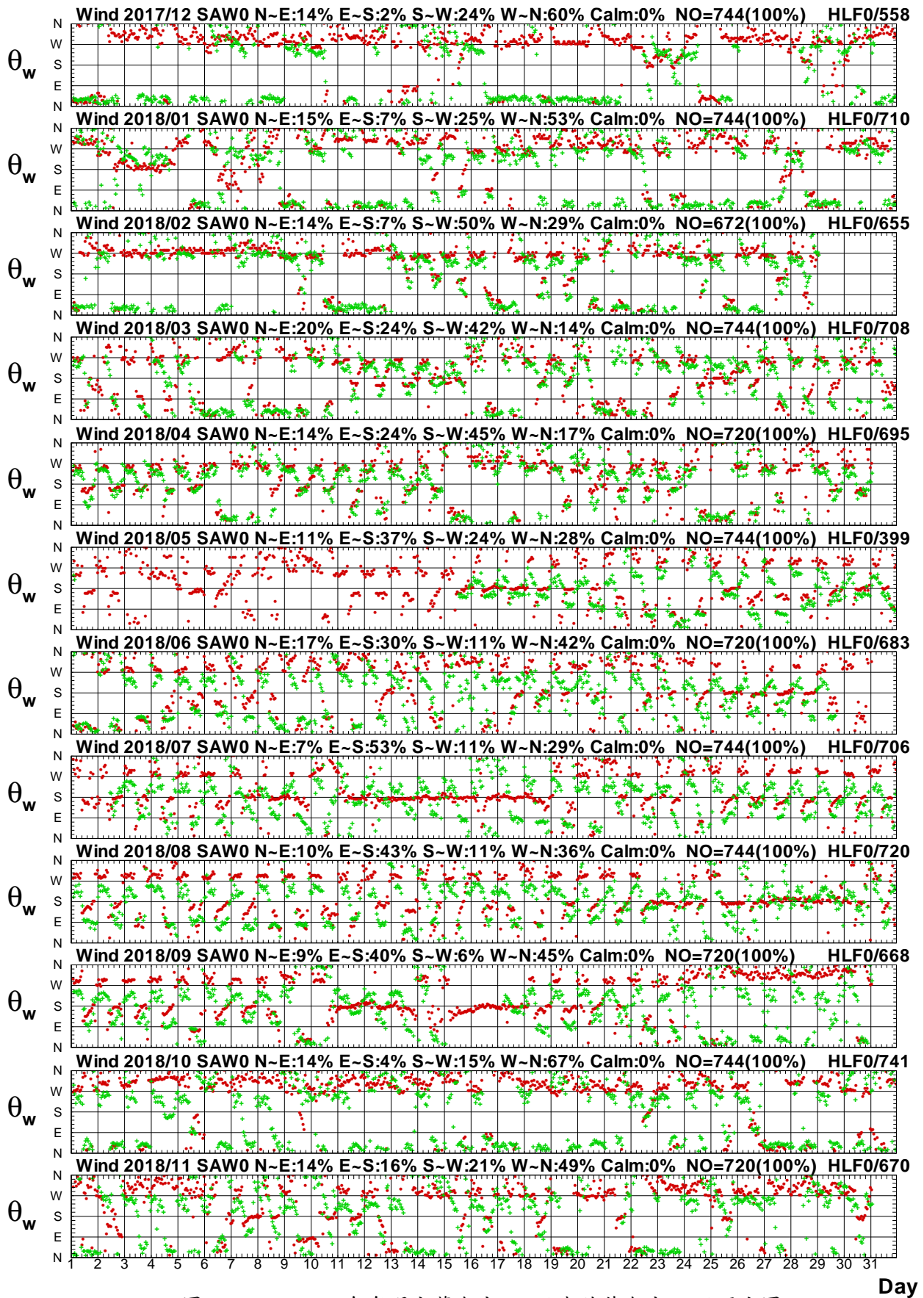


圖1.3.20b 2018年每月宜蘭海域 W 站與花蓮海域 F 站風向圖

W17CSAW0.1HA W17CHLHF0.1HO W181SAW0.1HA W181HLF0.1HO W182SAW0.1HA W182HLF0.1HO
 W183SAW0.1HA W183HLF0.1HO W184SAW0.1HA W184HLF0.1HO W185SAW0.1HA W185HLF0.1HO

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1.4 2018年宜蘭海域風力**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 Yi-Lan Seas of SAY0 at 2018

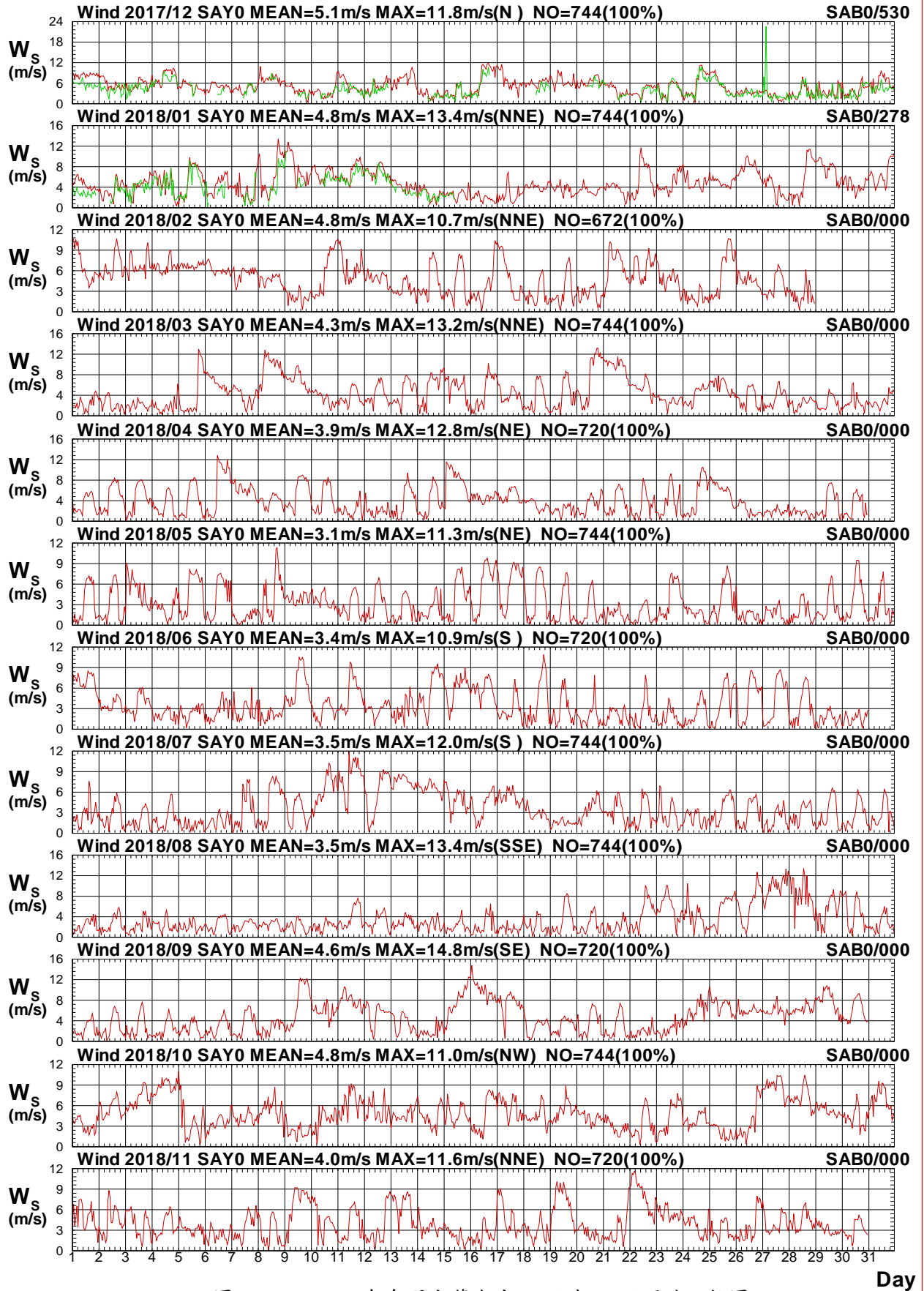


圖1.4.1a 2018年每月宜蘭海域 Y 站與 B 站風速比較圖

W17CSAY0.1HA W17CSAB0.1H0 W181SAY0.1HA W181SAB0.1H0 W182SAY0.1HA W182SAB0.1H0
 W183SAY0.1HA W183SAB0.1H0 W184SAY0.1HA W184SAB0.1H0 W185SAY0.1HA W185SAB0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

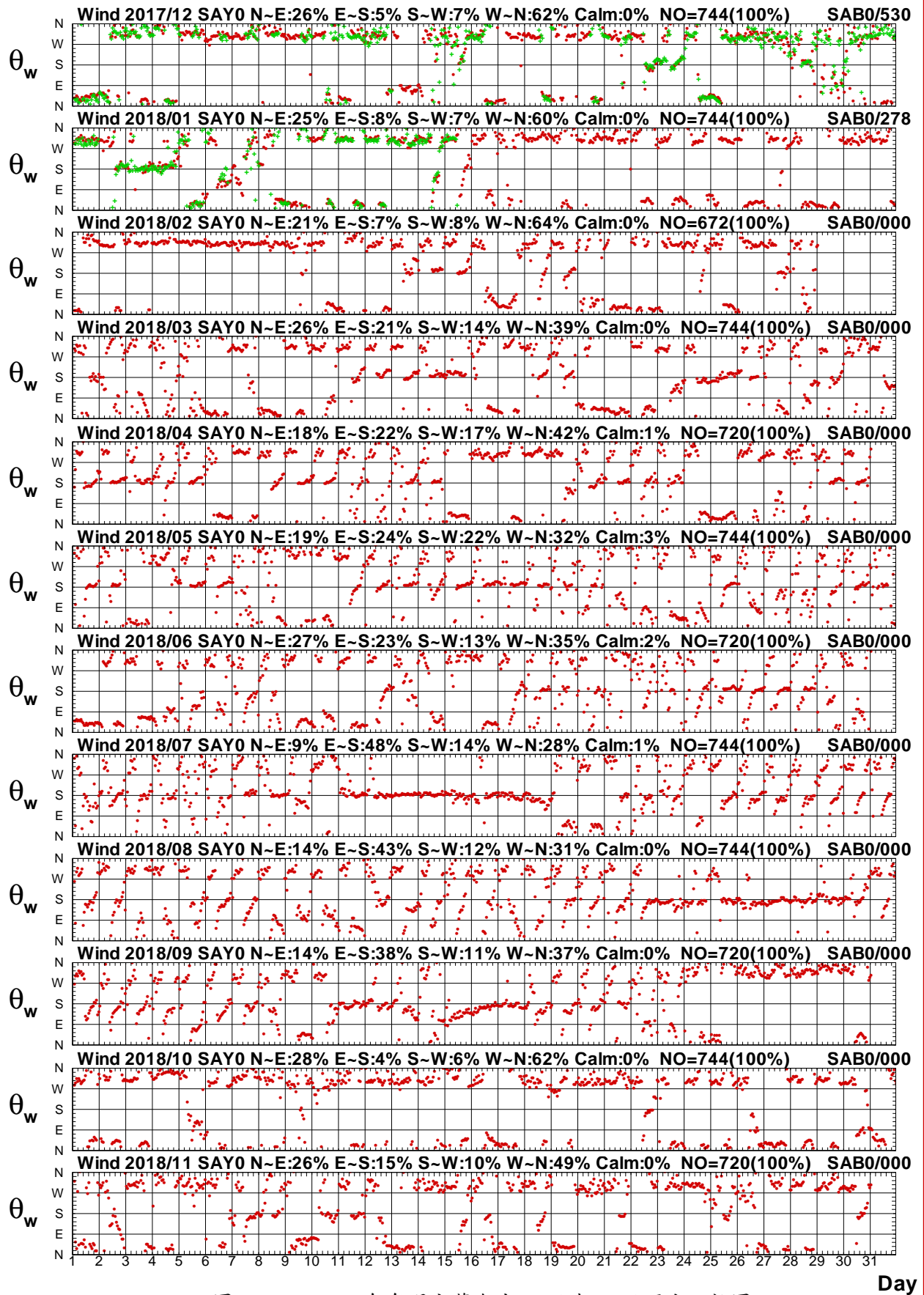


圖1.4.1b 2018年每月宜蘭海域 Y 站與 B 站風向比較圖

W17CSAY0.1HA W17CSAB0.1HO W181SAY0.1HA W181SAB0.1HO W182SAY0.1HA W182SAB0.1HO
 W183SAY0.1HA W183SAB0.1HO W184SAY0.1HA W184SAB0.1HO W185SAY0.1HA W185SAB0.1HO

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

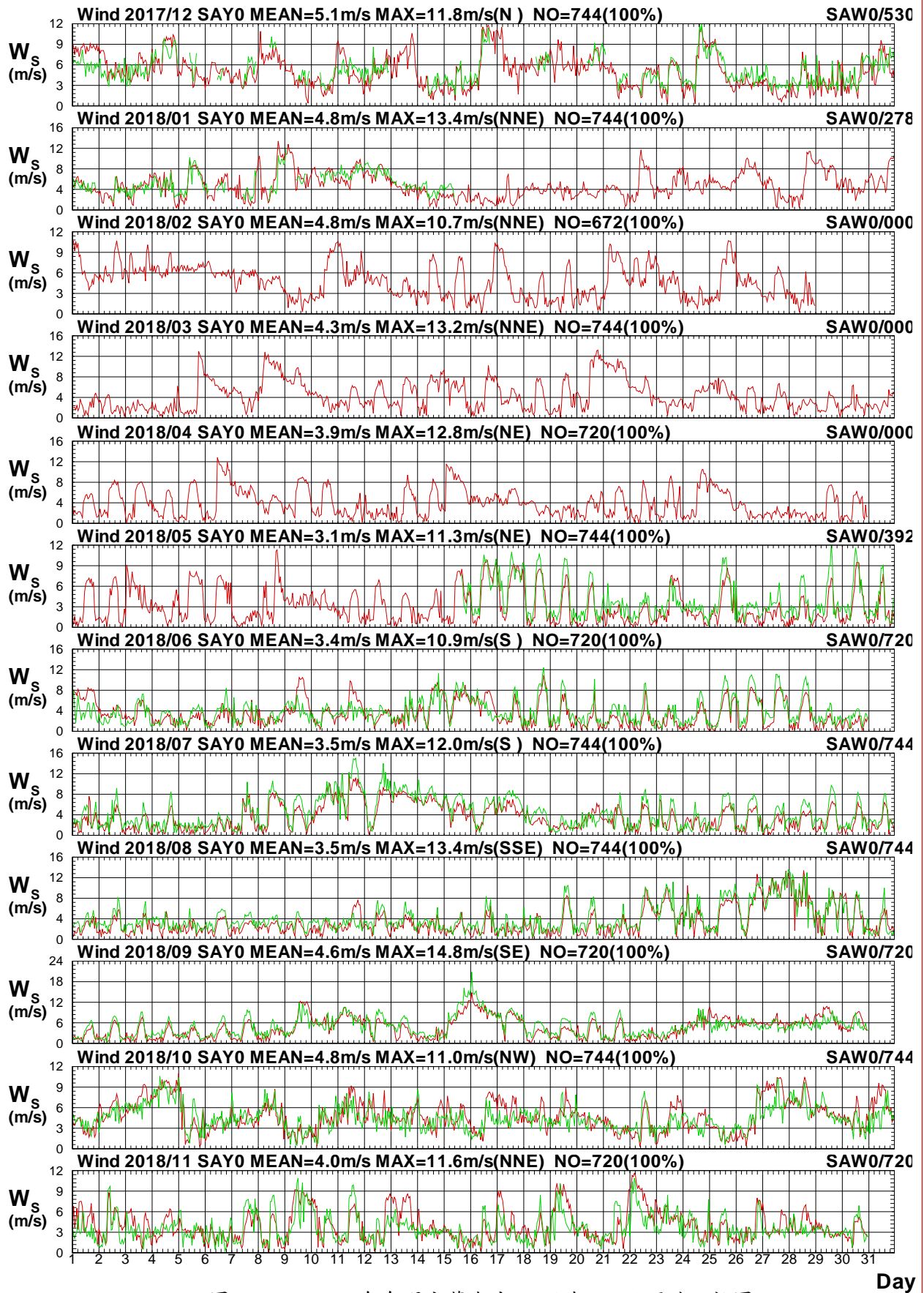


圖1.4.2a 2018年每月宜蘭海域 Y 站與 W 站風速比較圖

W17CSAY0.1HA W17CSAW0.1H0 W181SAY0.1HA W181SAW0.1H0 W182SAY0.1HA W182SAW0.1H0
 W183SAY0.1HA W183SAW0.1H0 W184SAY0.1HA W184SAW0.1H0 W185SAY0.1HA W185SAW0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

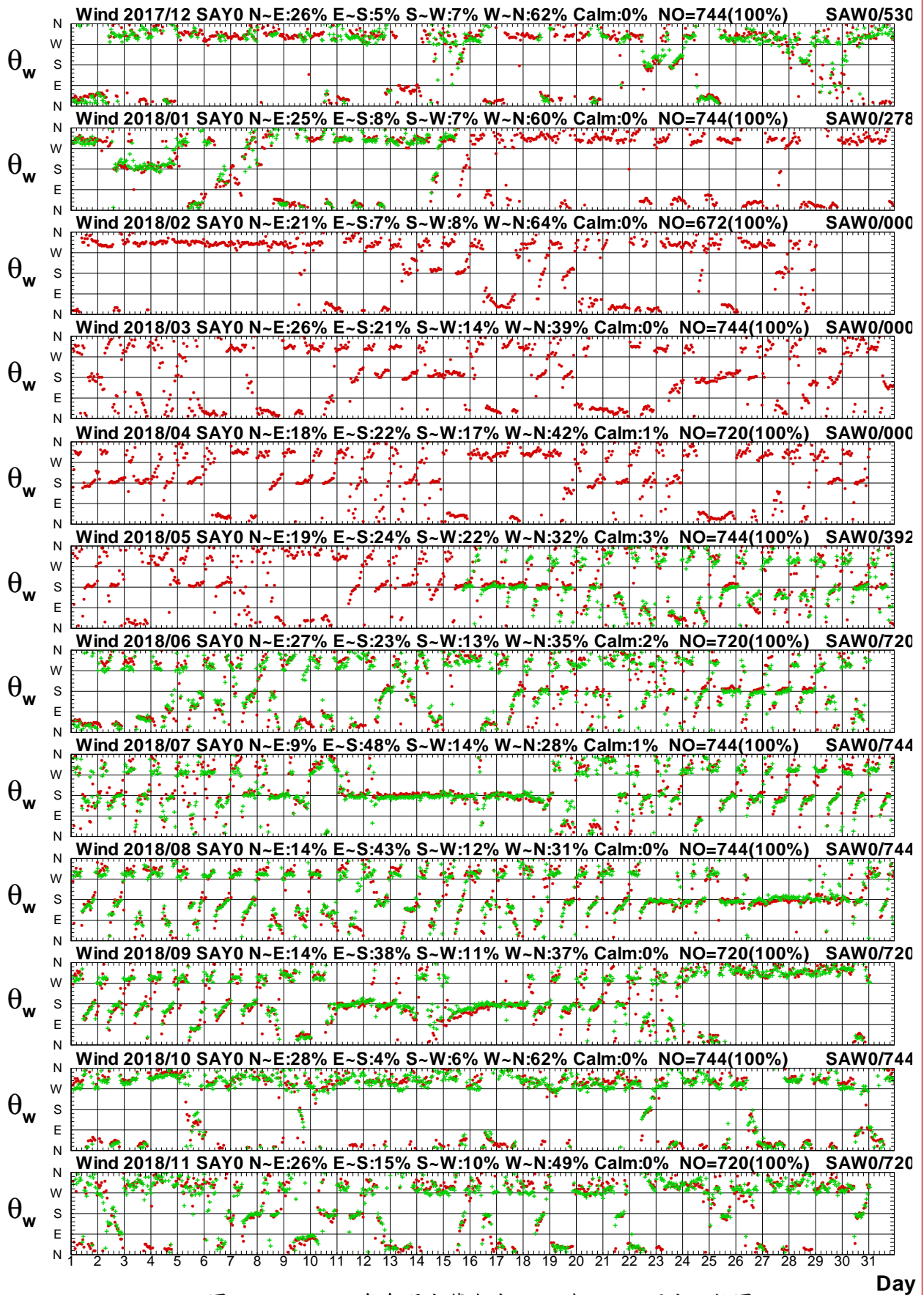


圖1.4.2b 2018年每月宜蘭海域 Y 站與 W 站風向比較圖

W17CSAY0.1HA W17CSAW0.1H0 W181SAY0.1HA W181SAW0.1H0 W182SAY0.1HA W182SAW0.1H0
 W183SAY0.1HA W183SAW0.1H0 W184SAY0.1HA W184SAW0.1H0 W185SAY0.1HA W185SAW0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

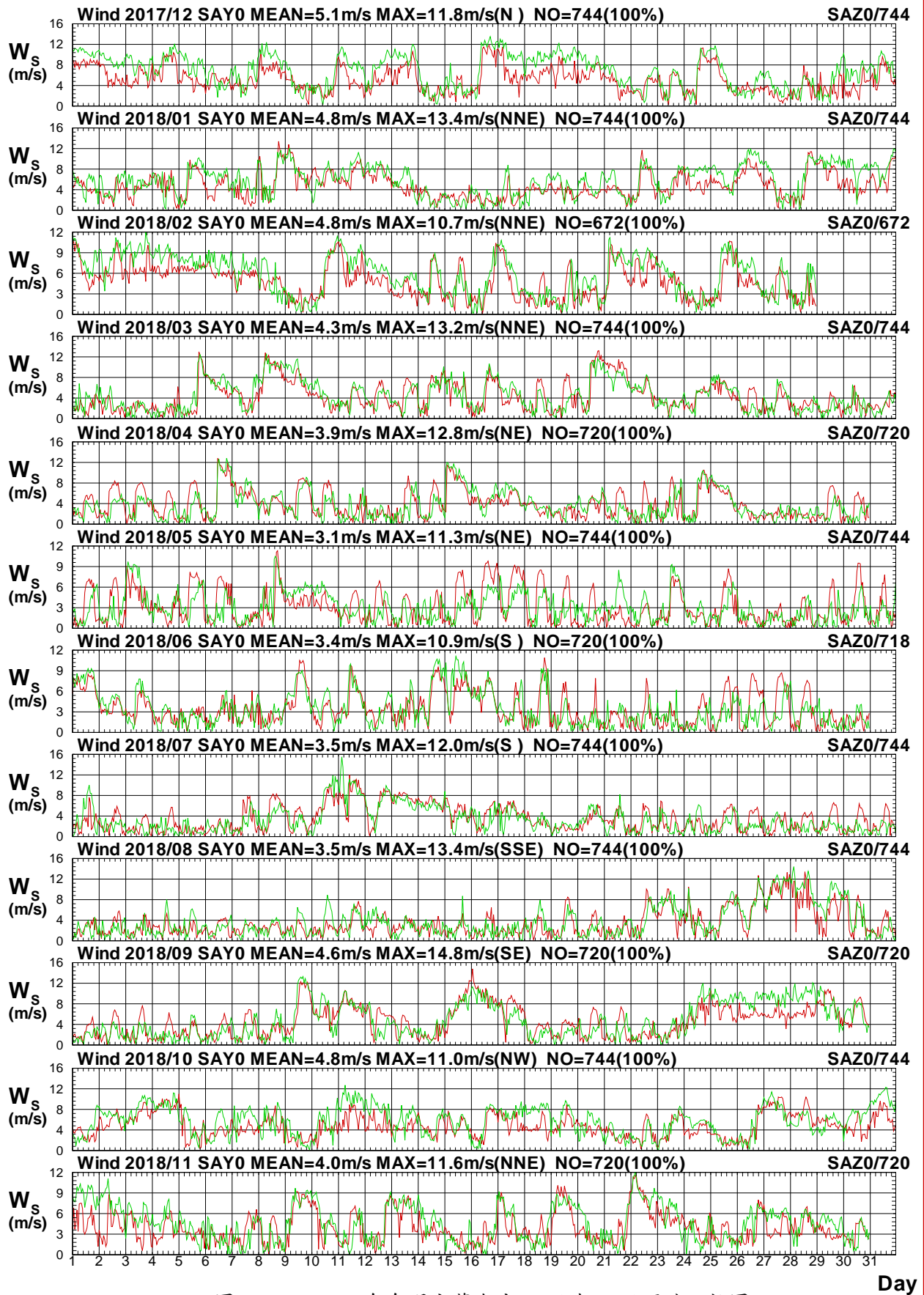


圖1.4.3a 2018年每月宜蘭海域 Y 站與 Z 站風速比較圖

W17CSAY0.1HA W17CSAZ0.1H0 W181SAY0.1HA W181SAZ0.1H0 W182SAY0.1HA W182SAZ0.1H0
 W183SAY0.1HA W183SAZ0.1H0 W184SAY0.1HA W184SAZ0.1H0 W185SAY0.1HA W185SAZ0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

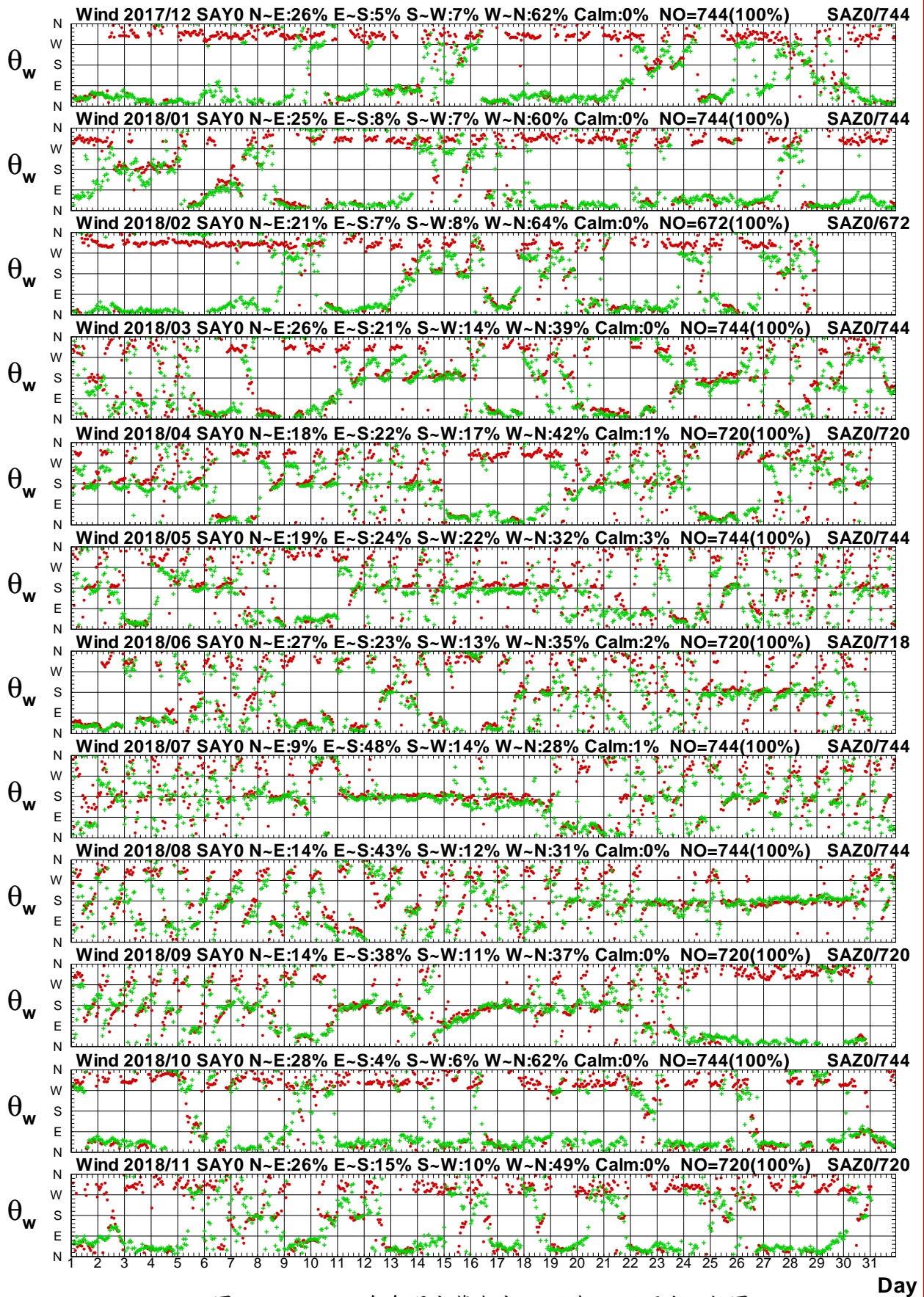


圖1.4.3b 2018年每月宜蘭海域 Y 站與 Z 站風向比較圖

W17CSAY0.1HA W17CSAZ0.1H0 W181SAY0.1HA W181SAZ0.1H0 W182SAY0.1HA W182SAZ0.1H0
 W183SAY0.1HA W183SAZ0.1H0 W184SAY0.1HA W184SAZ0.1H0 W185SAY0.1HA W185SAZ0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

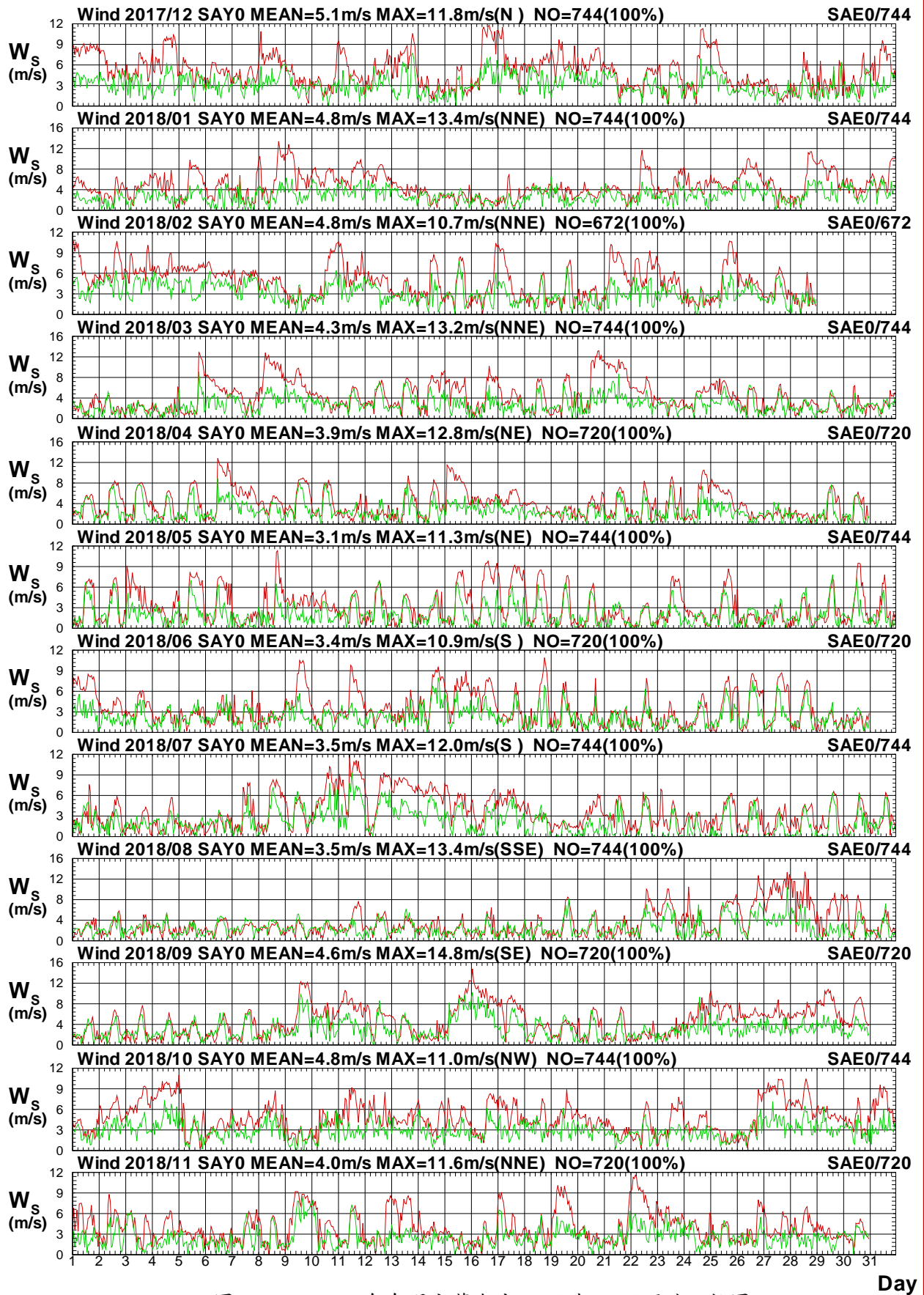


圖1.4.4a 2018年每月宜蘭海域 Y 站與 E 站風速比較圖

W17CSAY0.1HA W17CSAE0.1H0 W181SAY0.1HA W181SAE0.1H0 W182SAY0.1HA W182SAE0.1H0
 W183SAY0.1HA W183SAE0.1H0 W184SAY0.1HA W184SAE0.1H0 W185SAY0.1HA W185SAE0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

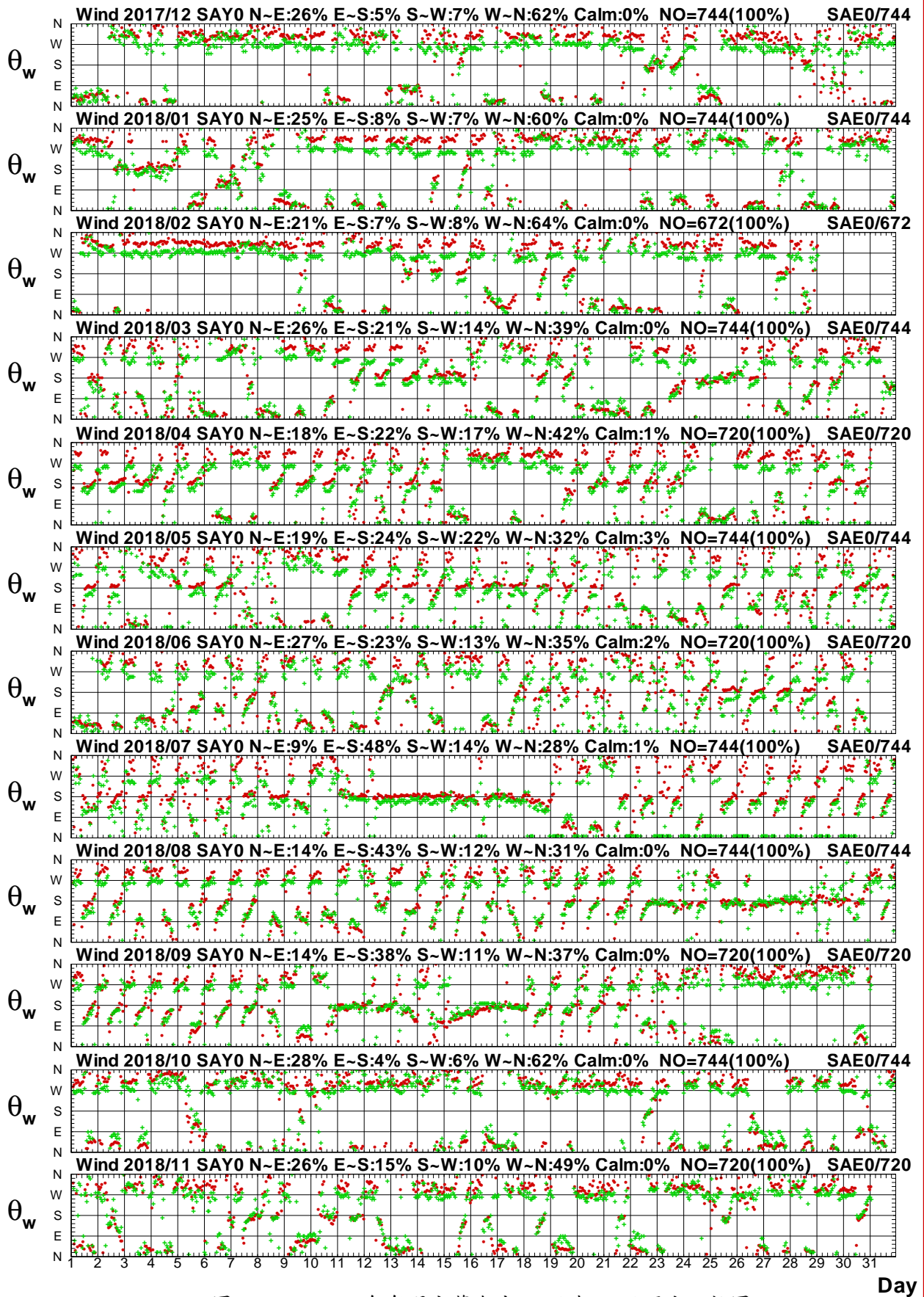


圖1.4.4b 2018年每月宜蘭海域 Y 站與 E 站風向比較圖

W17CSAY0.1HA W17CSAE0.1HO W181SAY0.1HA W181SAE0.1HO W182SAY0.1HA W182SAE0.1HO
 W183SAY0.1HA W183SAE0.1HO W184SAY0.1HA W184SAE0.1HO W185SAY0.1HA W185SAE0.1HO

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

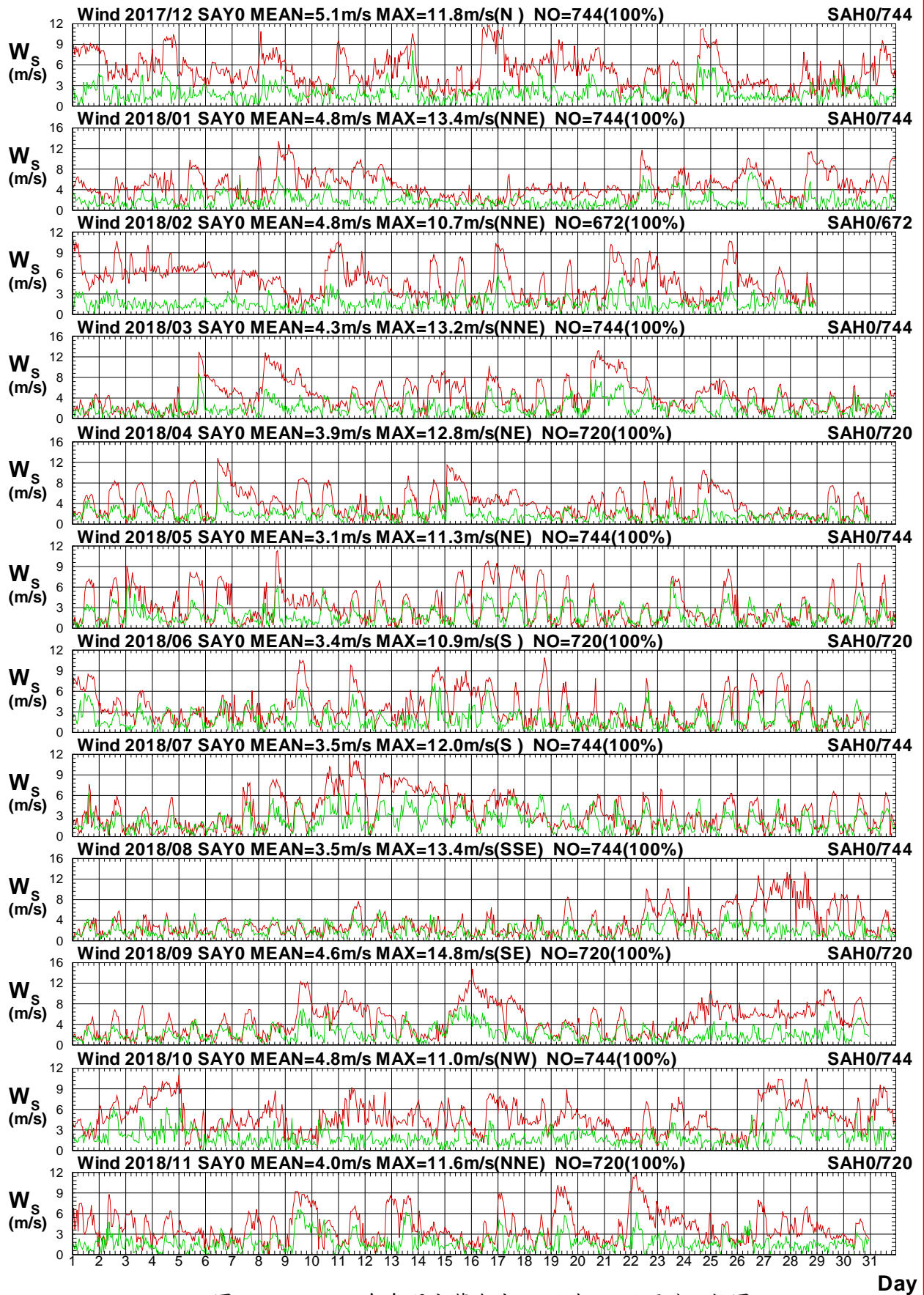


圖1.4.5a 2018年每月宜蘭海域 Y 站與 H 站風速比較圖

W17CSAY0.1HA W17CSAH0.1H0 W181SAY0.1HA W181SAH0.1H0 W182SAY0.1HA W182SAH0.1H0
W183SAY0.1HA W183SAH0.1H0 W184SAY0.1HA W184SAH0.1H0 W185SAY0.1HA W185SAH0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

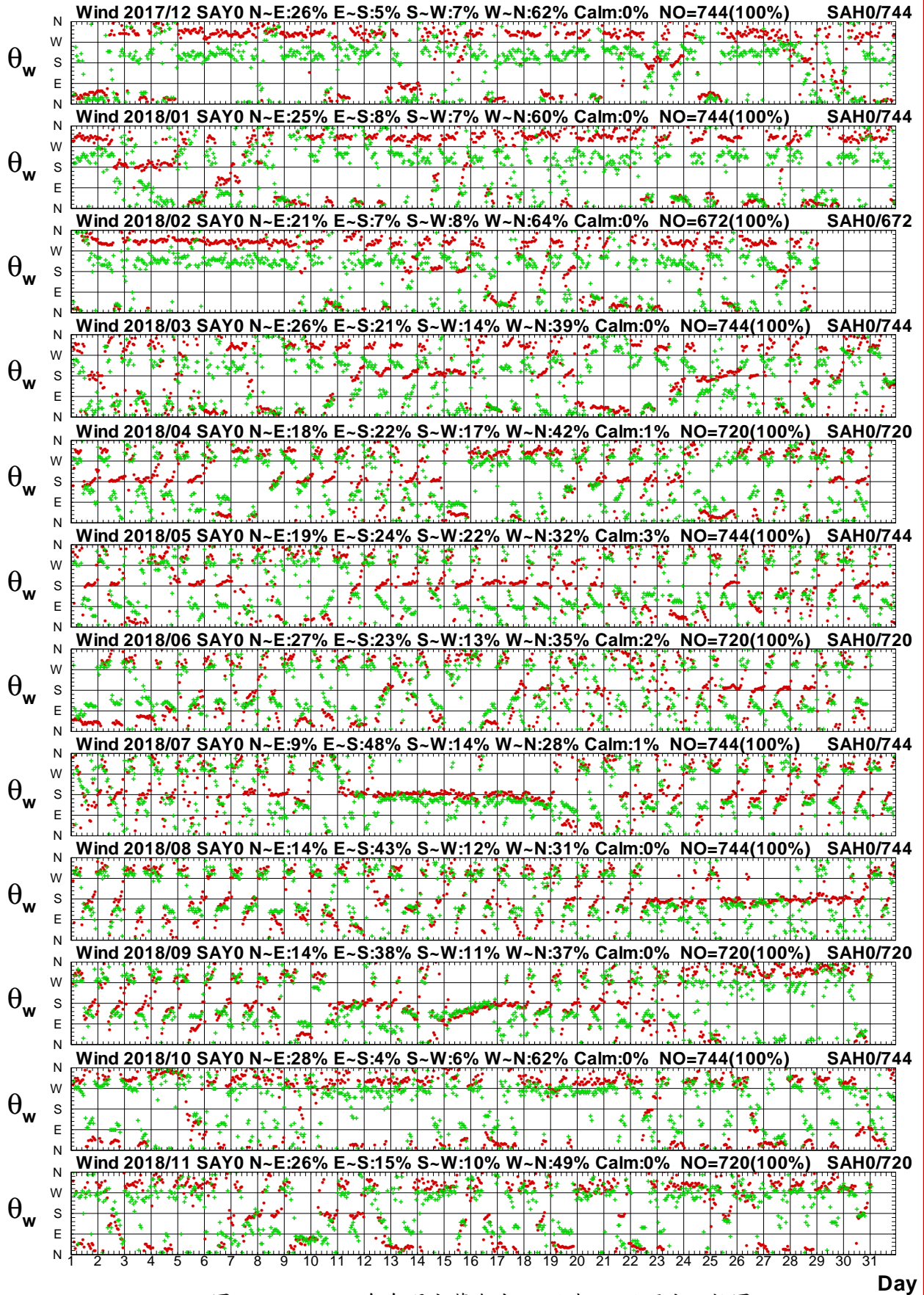


圖1.4.5b 2018年每月宜蘭海域 Y 站與 H 站風向比較圖

W17CSAY0.1HA W17CSAH0.1HO W181SAY0.1HA W181SAH0.1HO W182SAY0.1HA W182SAH0.1HO
 W183SAY0.1HA W183SAH0.1HO W184SAY0.1HA W184SAH0.1HO W185SAY0.1HA W185SAH0.1HO

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

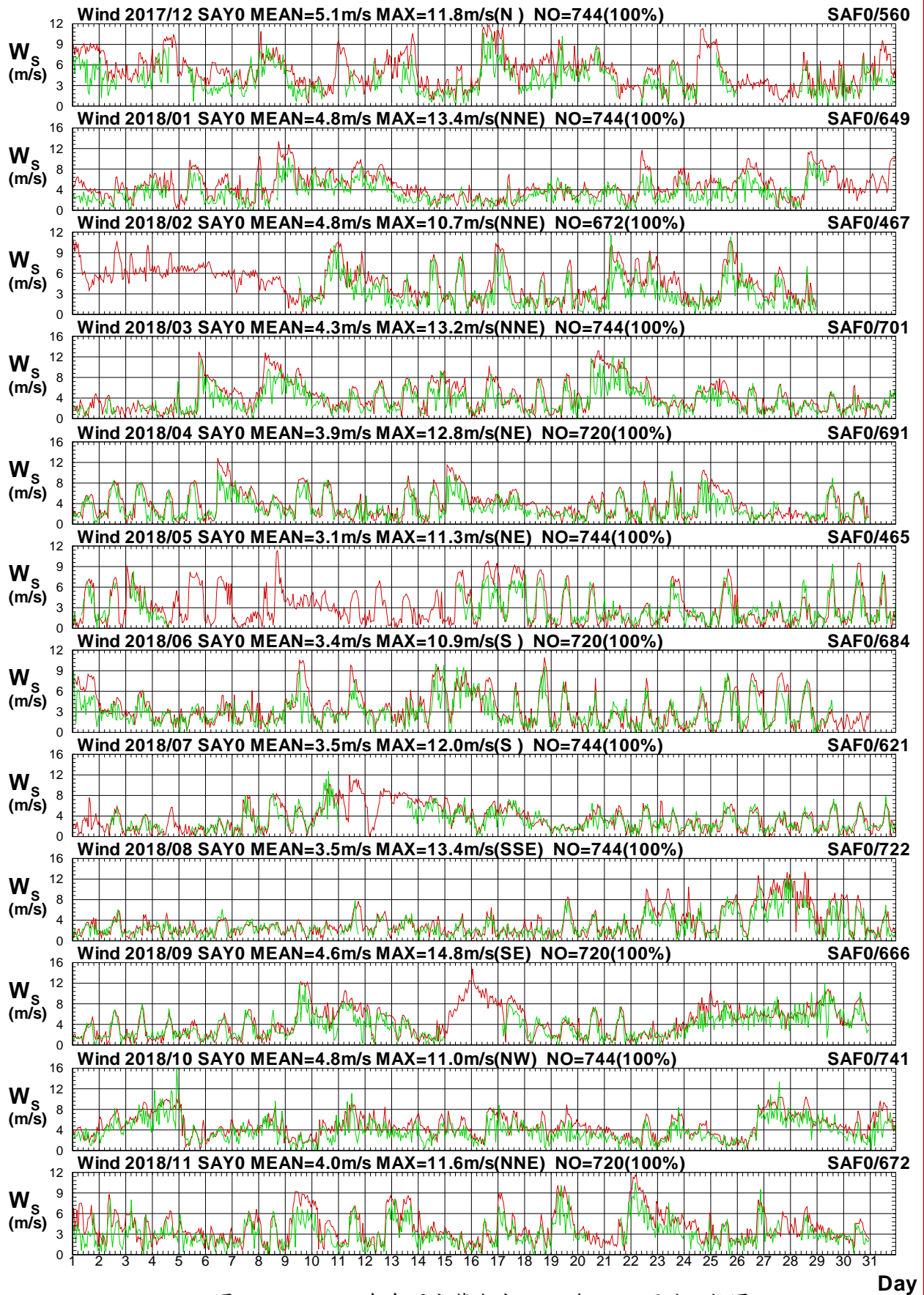


圖1.4.6a 2018年每月宜蘭海域 Y 站與 F 站風速比較圖

W17CSAY0.1HA W17CSAF0.1H0 W181SAY0.1HA W181SAF0.1H0 W182SAY0.1HA W182SAF0.1H0
 W183SAY0.1HA W183SAF0.1H0 W184SAY0.1HA W184SAF0.1H0 W185SAY0.1HA W185SAF0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

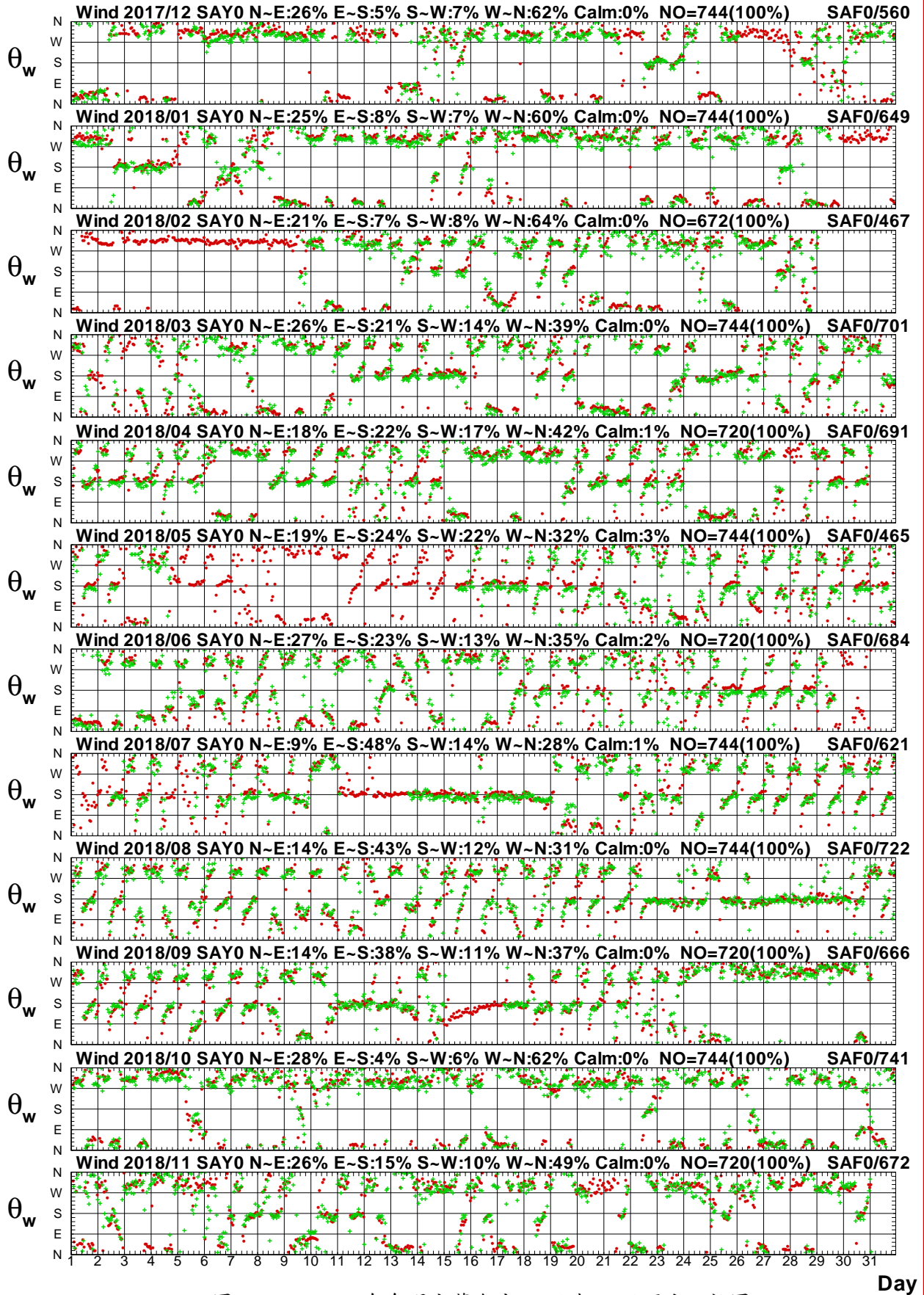


圖1.4.6b 2018年每月宜蘭海域 Y 站與 F 站風向比較圖

W17CSAY0.1HA W17CSAF0.1H0 W181SAY0.1HA W181SAF0.1H0 W182SAY0.1HA W182SAF0.1H0
 W183SAY0.1HA W183SAF0.1H0 W184SAY0.1HA W184SAF0.1H0 W185SAY0.1HA W185SAF0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

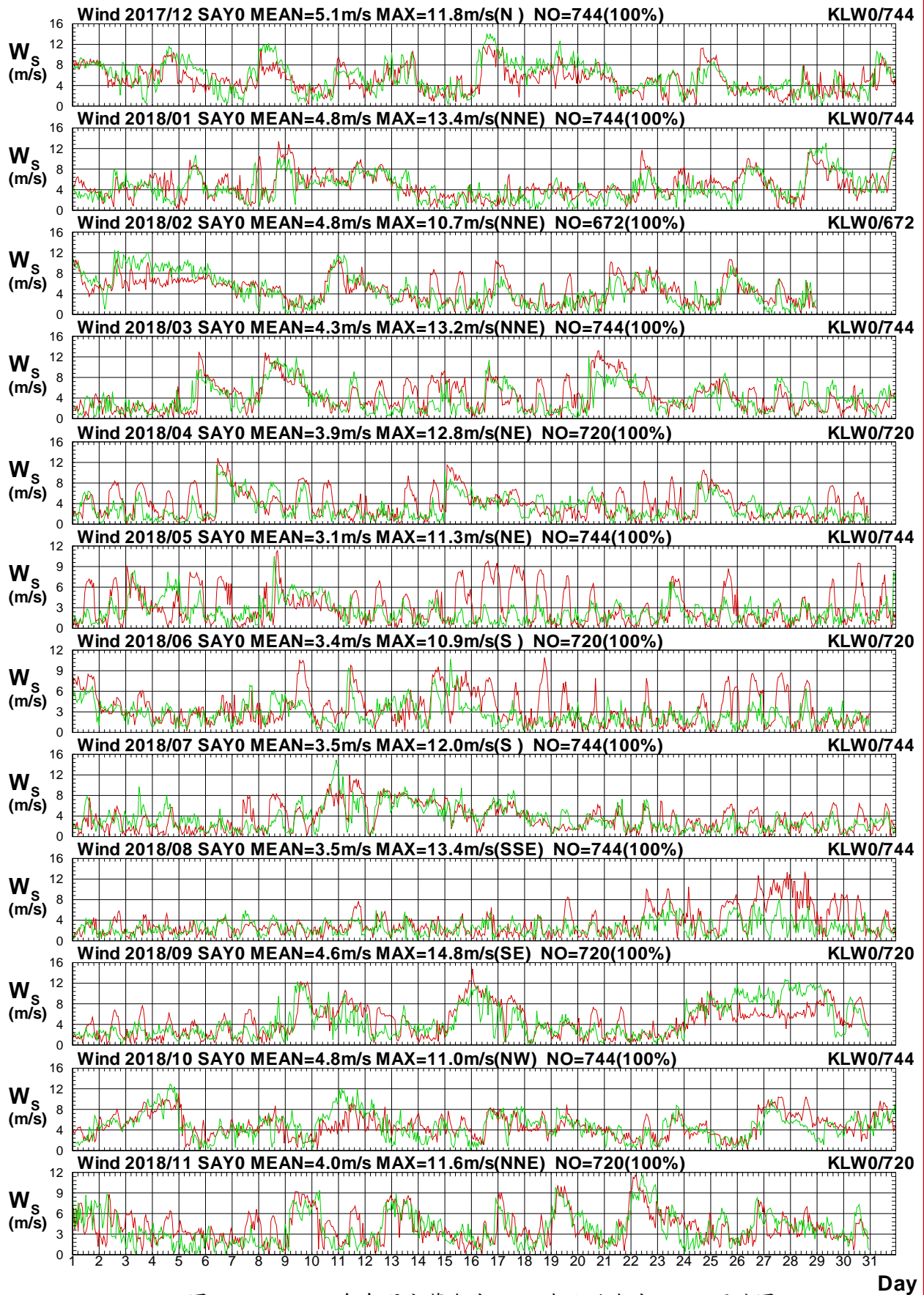


圖1.4.7a 2018年每月宜蘭海域 Y 站與北端海域 W 站風速圖

W17CSAY0.1HA W17CKLW0.1H0 W181SAY0.1HA W181KLW0.1H0 W182SAY0.1HA W182KLW0.1H0
 W183SAY0.1HA W183KLW0.1H0 W184SAY0.1HA W184KLW0.1H0 W185SAY0.1HA W185KLW0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

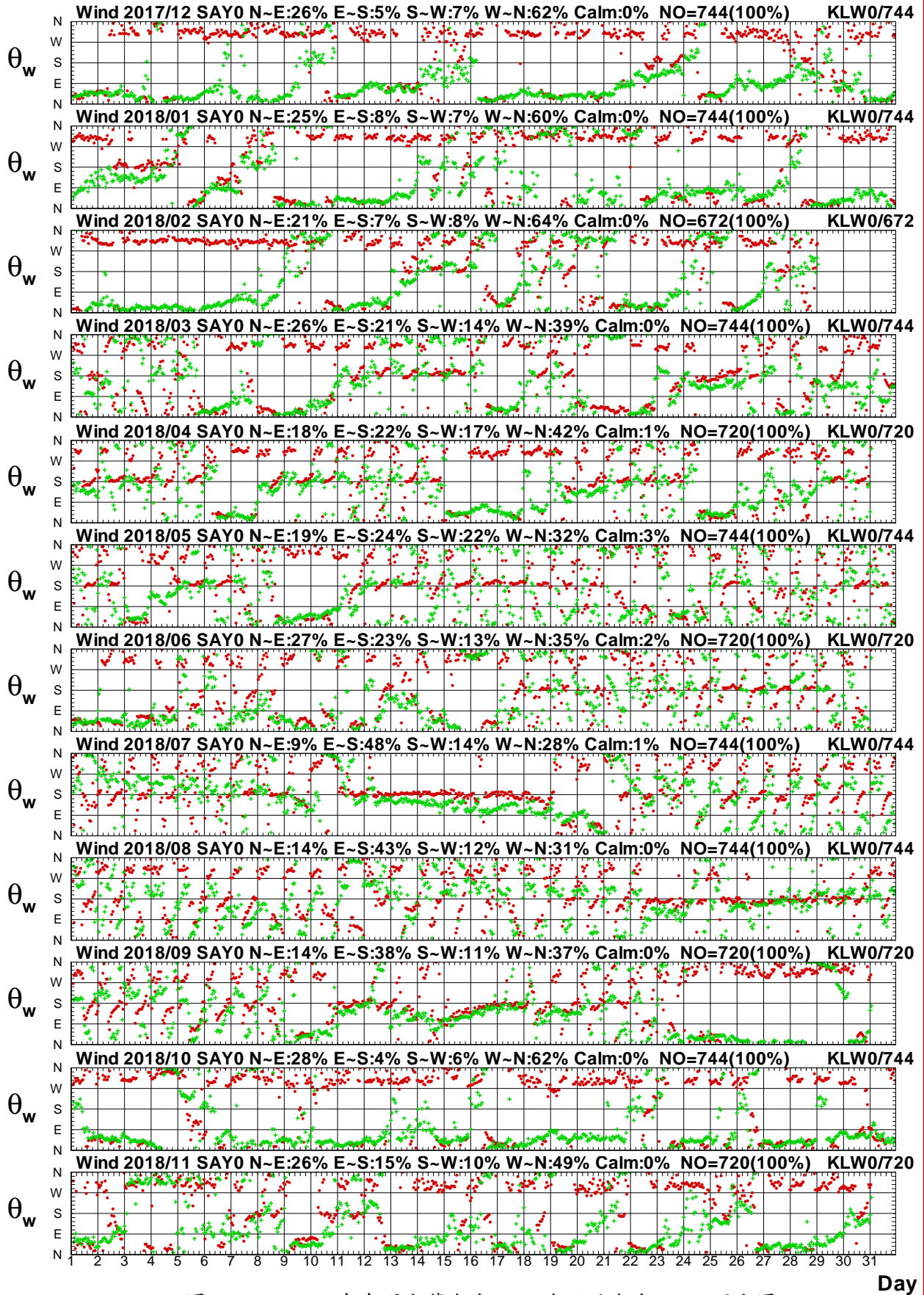


圖 1.4.7b 2018年每月宜蘭海域 Y 站與北端海域 W 站風向圖

W17CSAY0.1HA W17CKLW0.1H0 W181SAY0.1HA W181KLW0.1H0 W182SAY0.1HA W182KLW0.1H0
 W183SAY0.1HA W183KLW0.1H0 W184SAY0.1HA W184KLW0.1H0 W185SAY0.1HA W185KLW0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

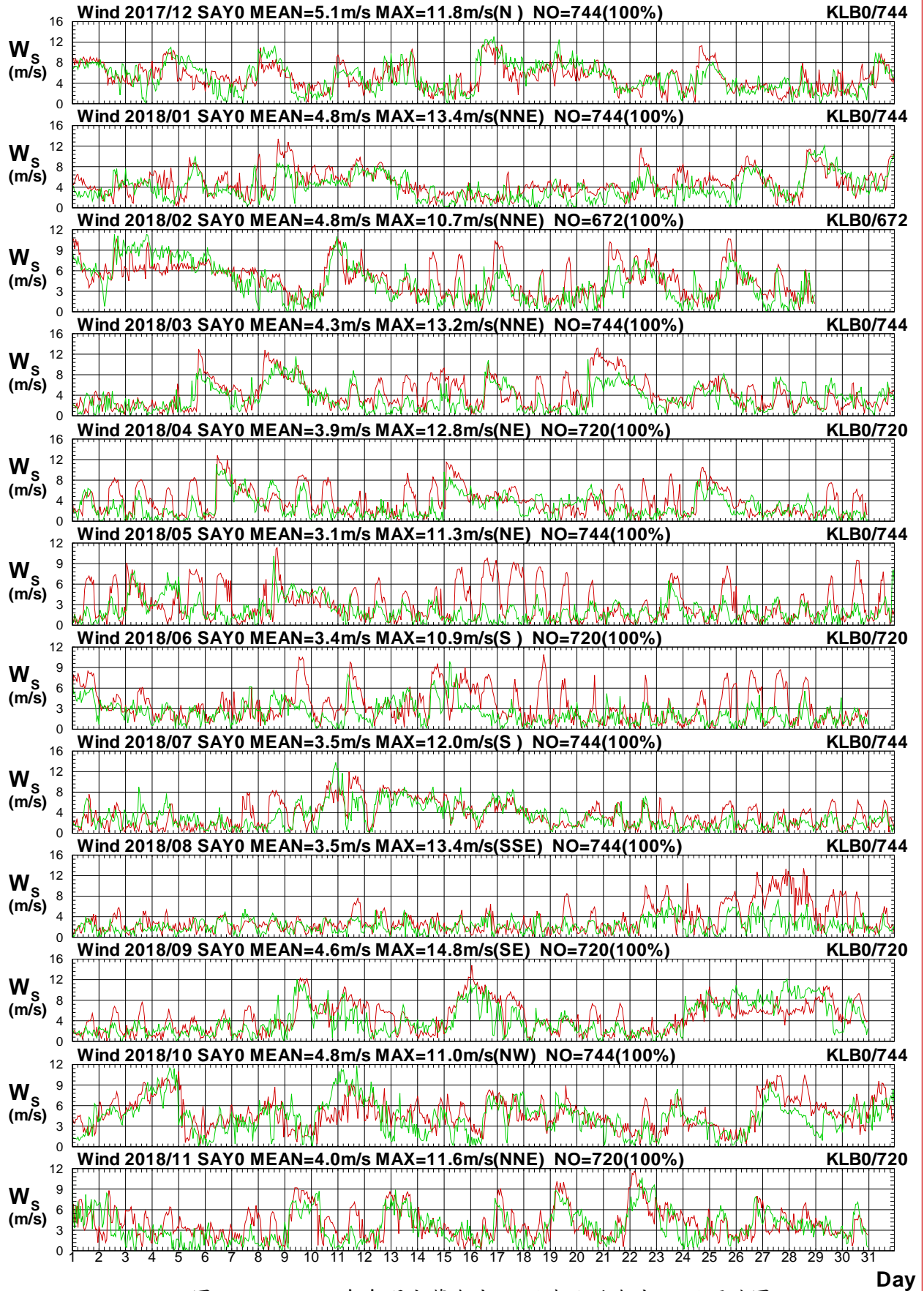


圖1.4.8a 2018年每月宜蘭海域 Y 站與北端海域 B 站風速圖

W17CSAY0.1HA W17CKLB0.1H0 W181SAY0.1HA W181KLB0.1H0 W182SAY0.1HA W182KLB0.1H0
 W183SAY0.1HA W183KLB0.1H0 W184SAY0.1HA W184KLB0.1H0 W185SAY0.1HA W185KLB0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

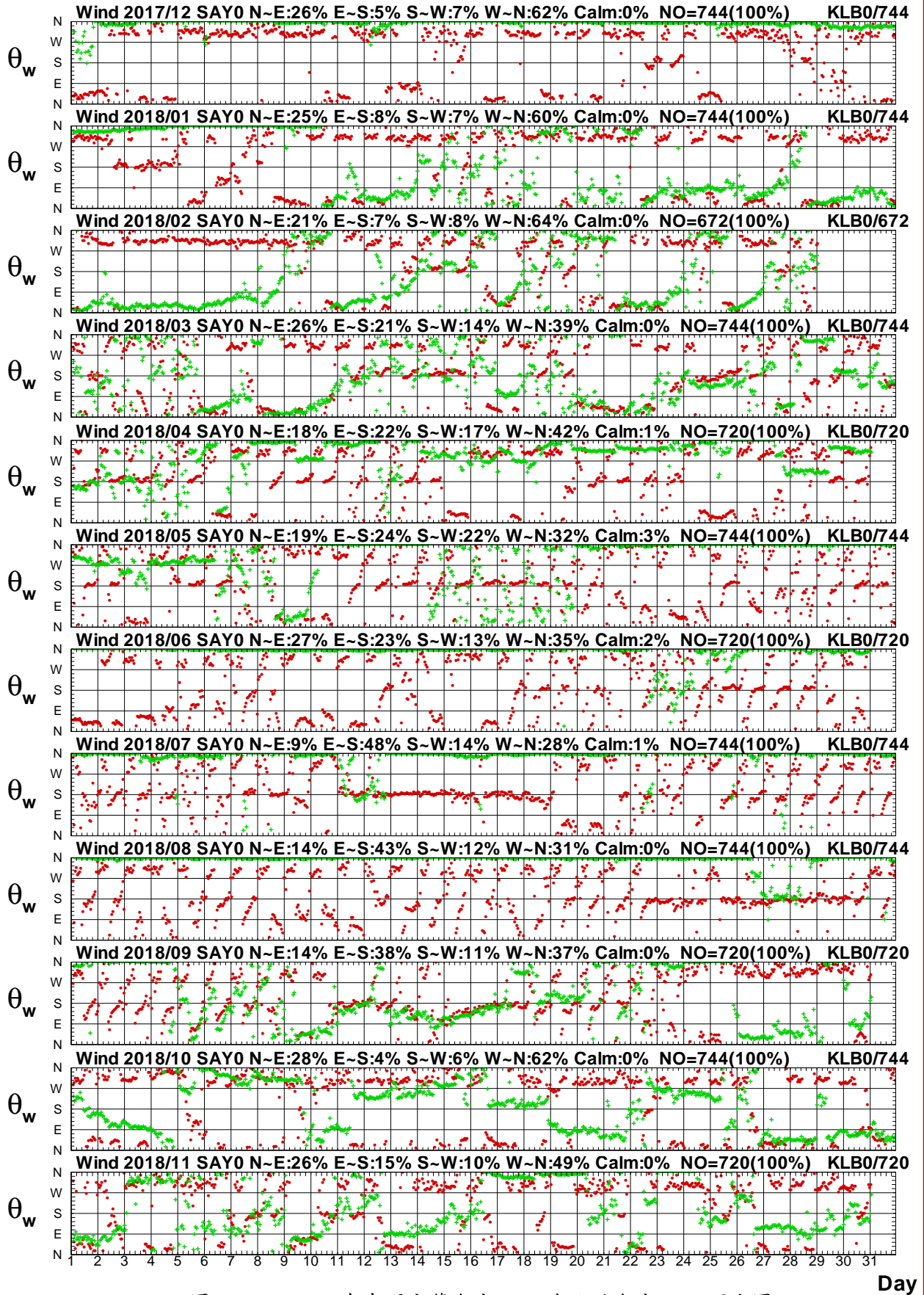


圖1.4.8b 2018年每月宜蘭海域 Y 站與北端海域 B 站風向圖

W17CSAY0.1HA W17CKLB0.1H0 W181SAY0.1HA W181KLB0.1H0 W182SAY0.1HA W182KLB0.1H0
 W183SAY0.1HA W183KLB0.1H0 W184SAY0.1HA W184KLB0.1H0 W185SAY0.1HA W185KLB0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

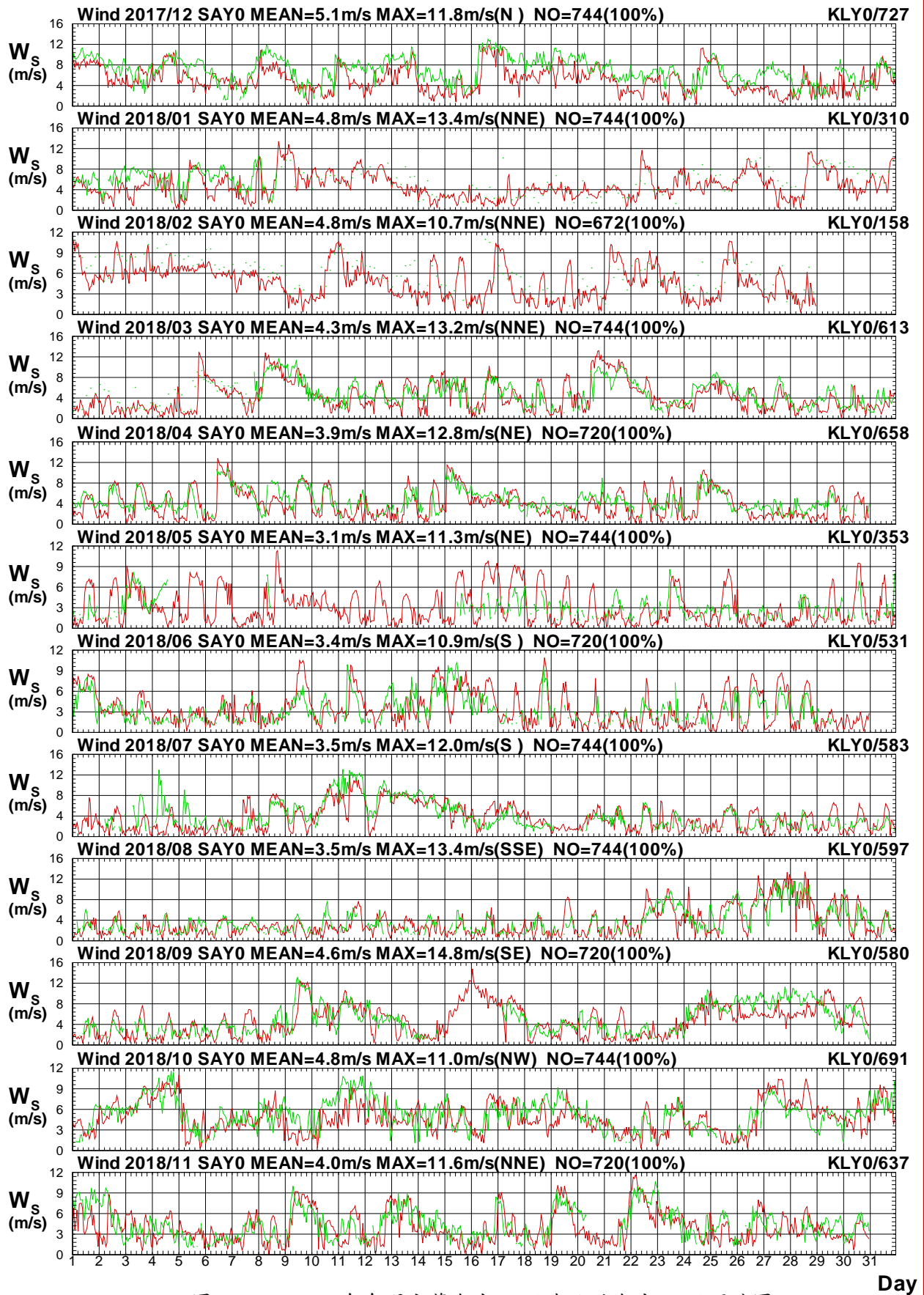


圖1.4.9a 2018年每月宜蘭海域 Y 站與北端海域 Y 站風速圖

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

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

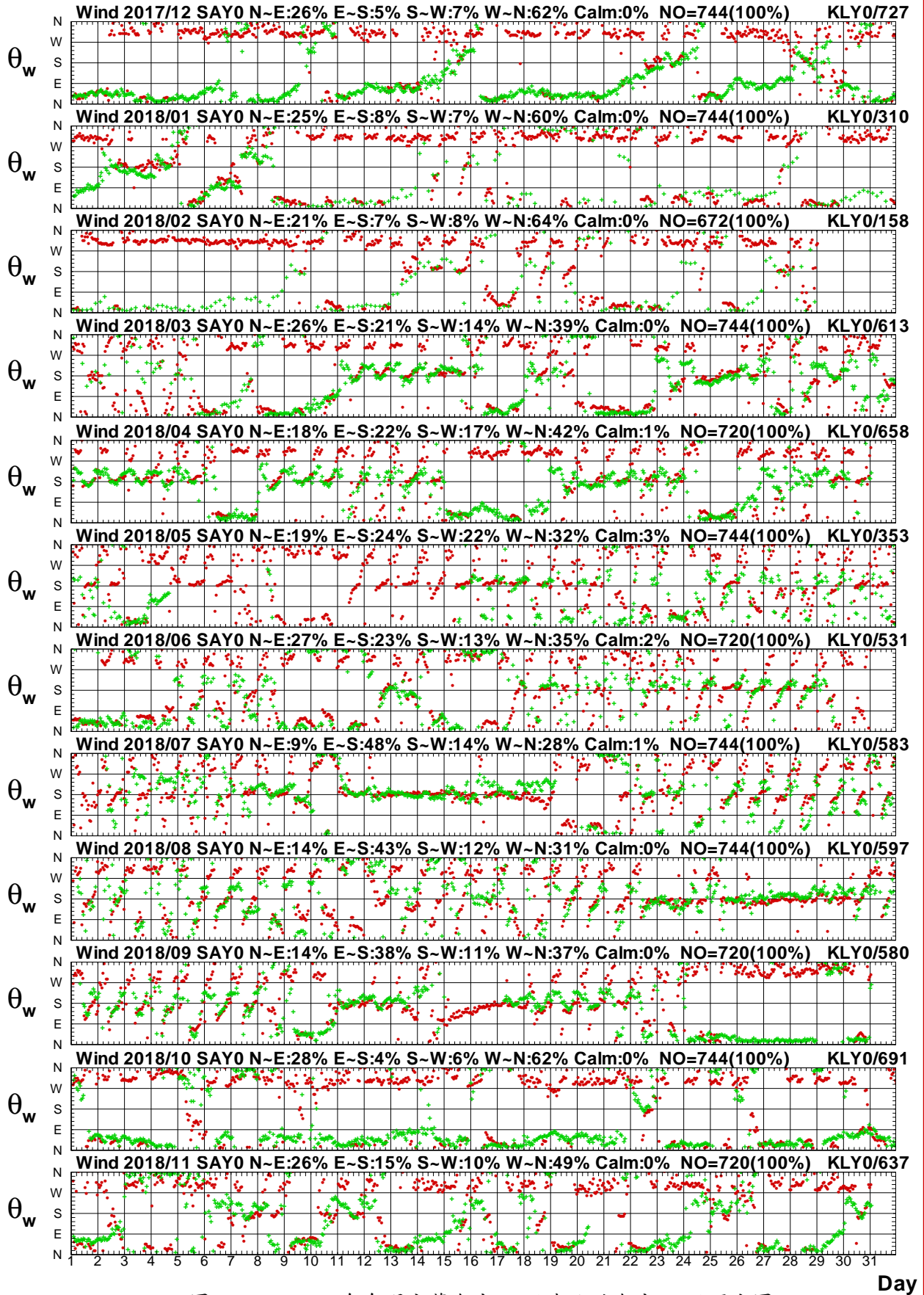


圖1.4.9b 2018年每月宜蘭海域 Y 站與北端海域 Y 站風向圖

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

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

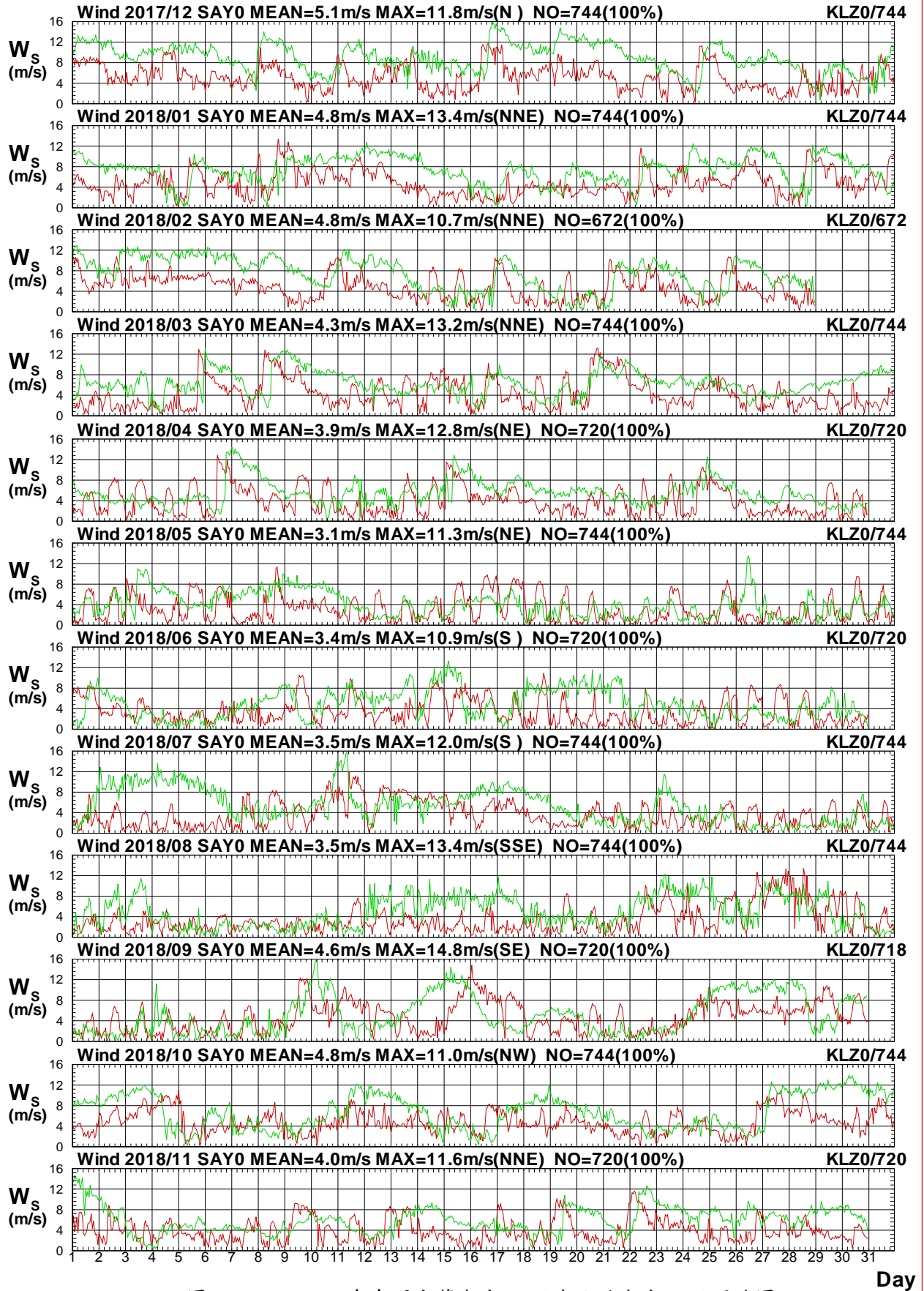


圖1.4.10a 2018年每月宜蘭海域 Y 站與北端海域 Z 站風速圖

W17CSAY0.1HA W17CKLZ0.1H0 W181SAY0.1HA W181KLZ0.1H0 W182SAY0.1HA W182KLZ0.1H0
 W183SAY0.1HA W183KLZ0.1H0 W184SAY0.1HA W184KLZ0.1H0 W185SAY0.1HA W185KLZ0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

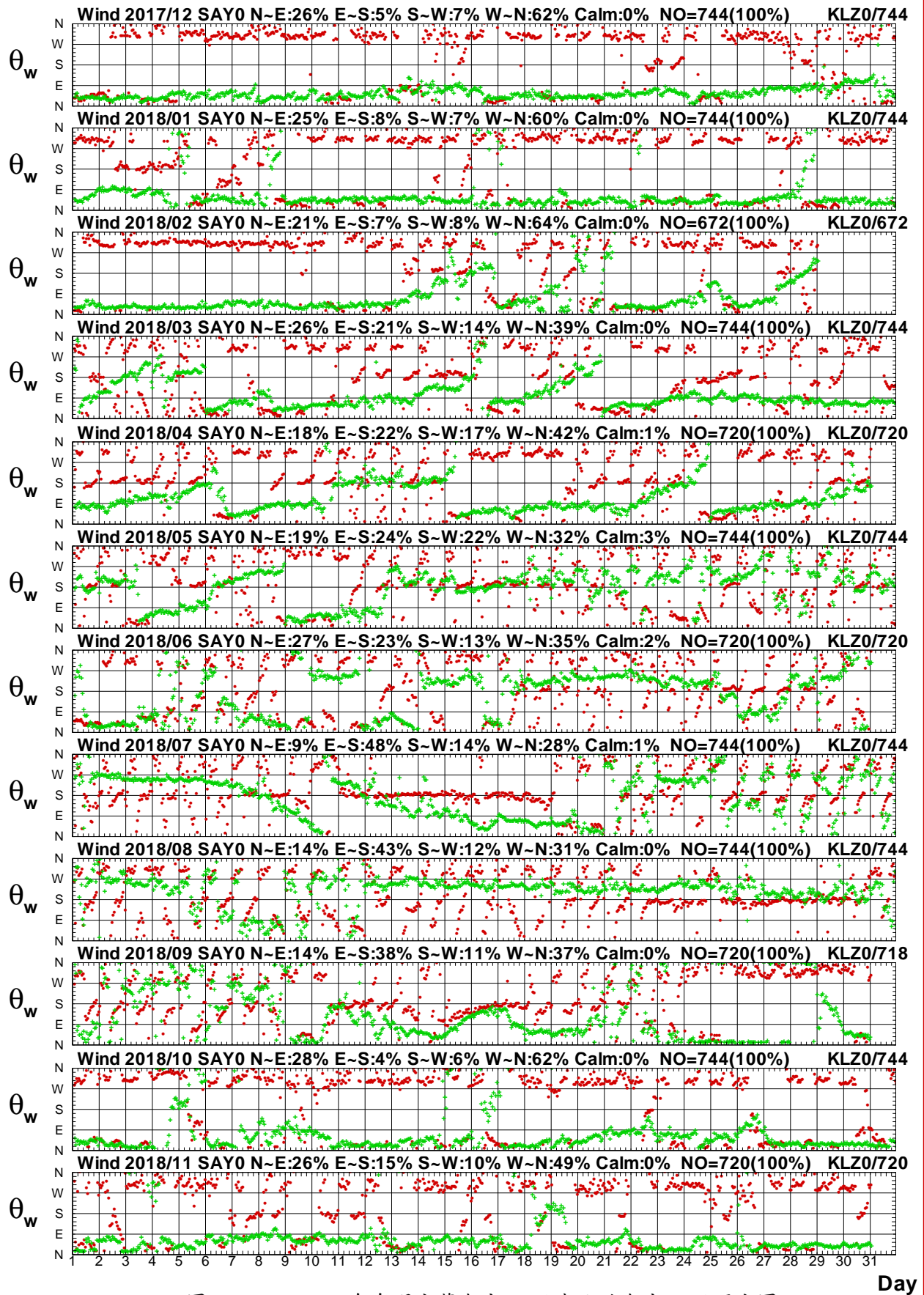


圖 1.4.10b 2018年每月宜蘭海域 Y 站與北端海域 Z 站風向圖

W17CSAY0.1HA W17CKLZ0.1H0 W181SAY0.1HA W181KLZ0.1H0 W182SAY0.1HA W182KLZ0.1H0
 W183SAY0.1HA W183KLZ0.1H0 W184SAY0.1HA W184KLZ0.1H0 W185SAY0.1HA W185KLZ0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

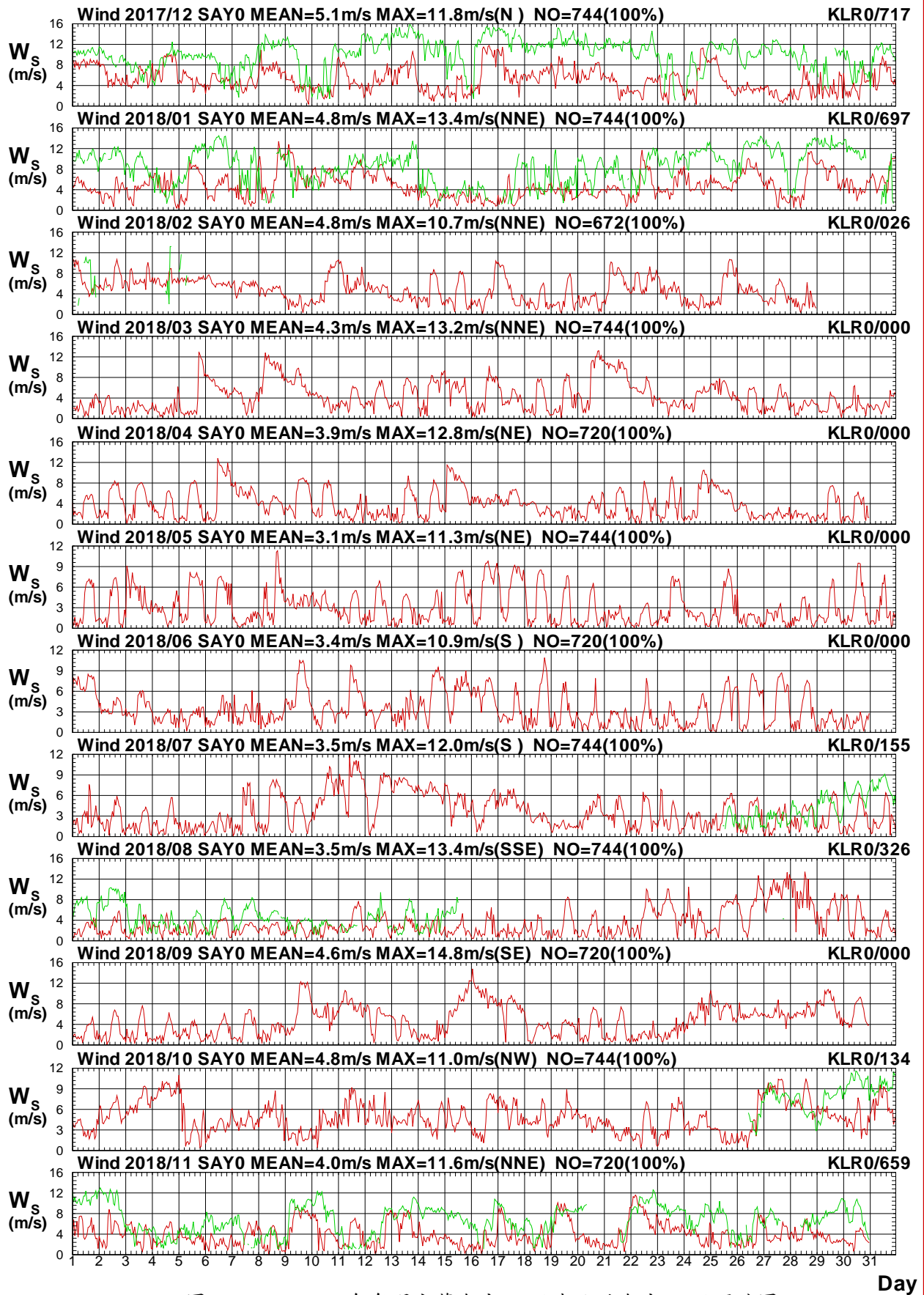


圖1.4.11a 2018年每月宜蘭海域 Y 站與北端海域 R 站風速圖

W17CSAY0.1HA W17CKLR0.1HO W181SAY0.1HA W181KLR0.1HO W182SAY0.1HA W182KLR0.1HO
W183SAY0.1HA W183KLR0.1HO W184SAY0.1HA W184KLR0.1HO W185SAY0.1HA W185KLR0.1HO

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

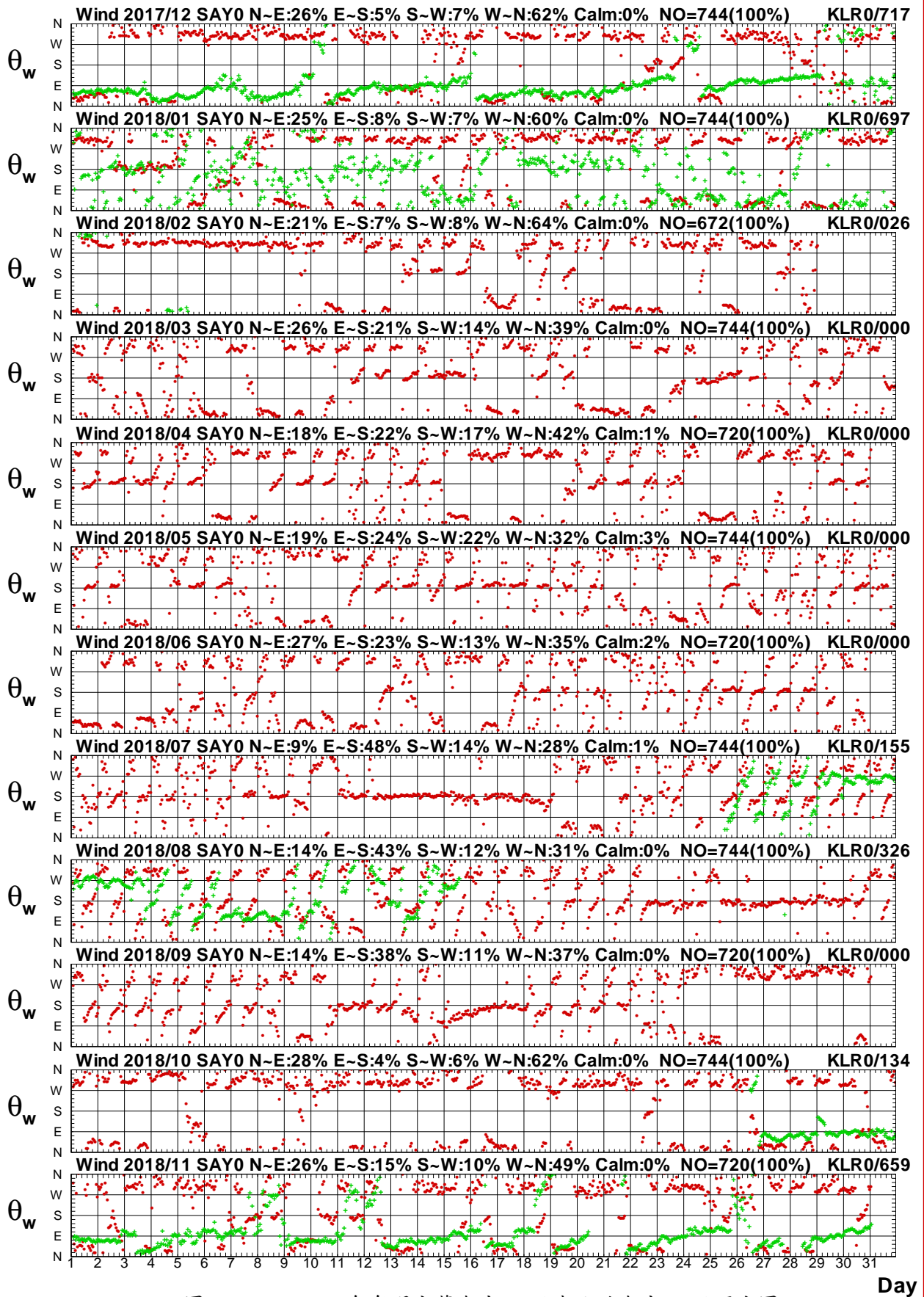


圖1.4.11b 2018年每月宜蘭海域 Y 站與北端海域 R 站風向圖

W17CSAY0.1HA W17CKLR0.1HO W181SAY0.1HA W181KLR0.1HO W182SAY0.1HA W182KLR0.1HO
 W183SAY0.1HA W183KLR0.1HO W184SAY0.1HA W184KLR0.1HO W185SAY0.1HA W185KLR0.1HO

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

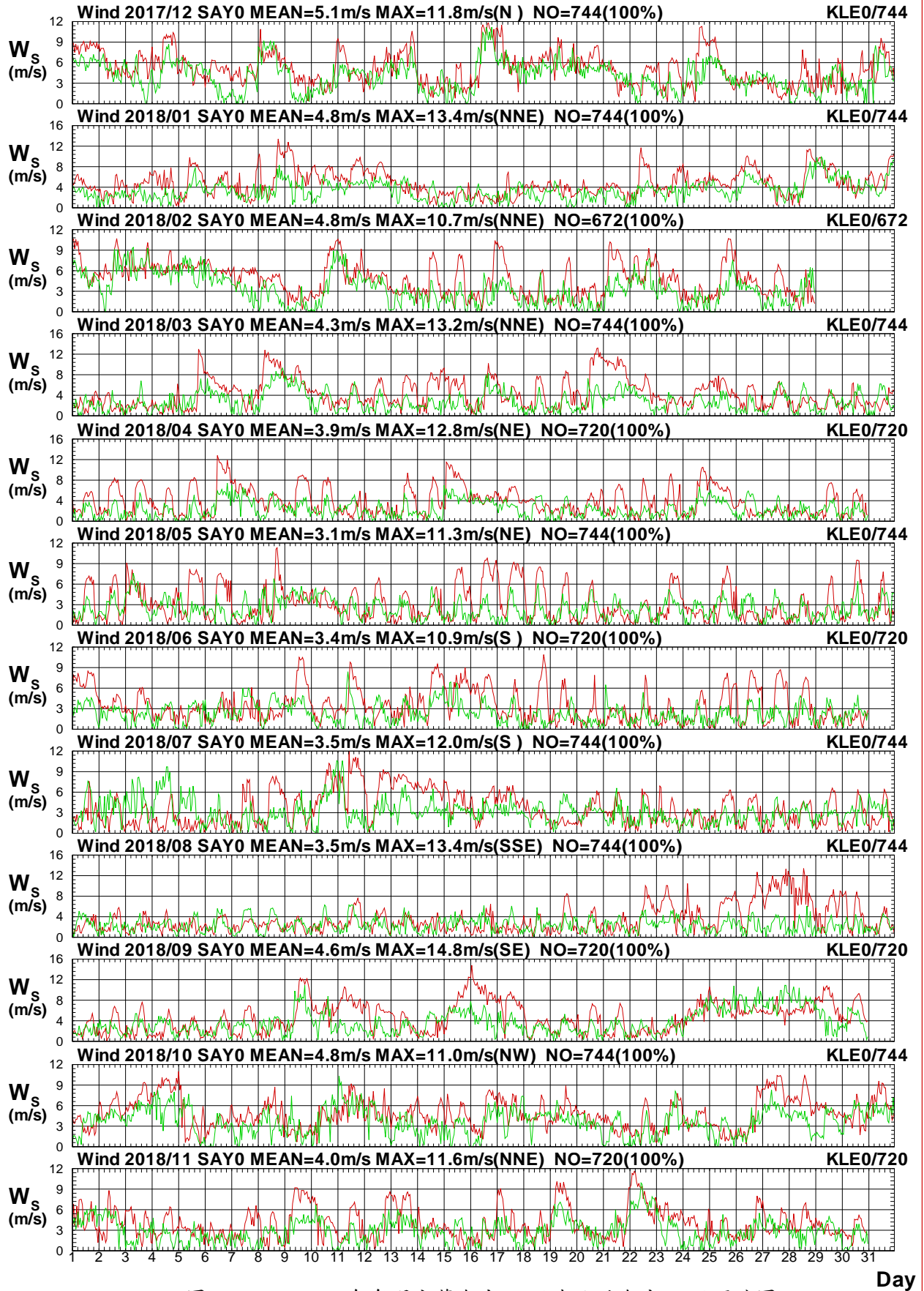


圖 1.4.12a 2018年每月宜蘭海域 Y 站與北端海域 E 站風速圖

W17CSAY0.1HA W17CKLE0.1H0 W181SAY0.1HA W181KLE0.1H0 W182SAY0.1HA W182KLE0.1H0
 W183SAY0.1HA W183KLE0.1H0 W184SAY0.1HA W184KLE0.1H0 W185SAY0.1HA W185KLE0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

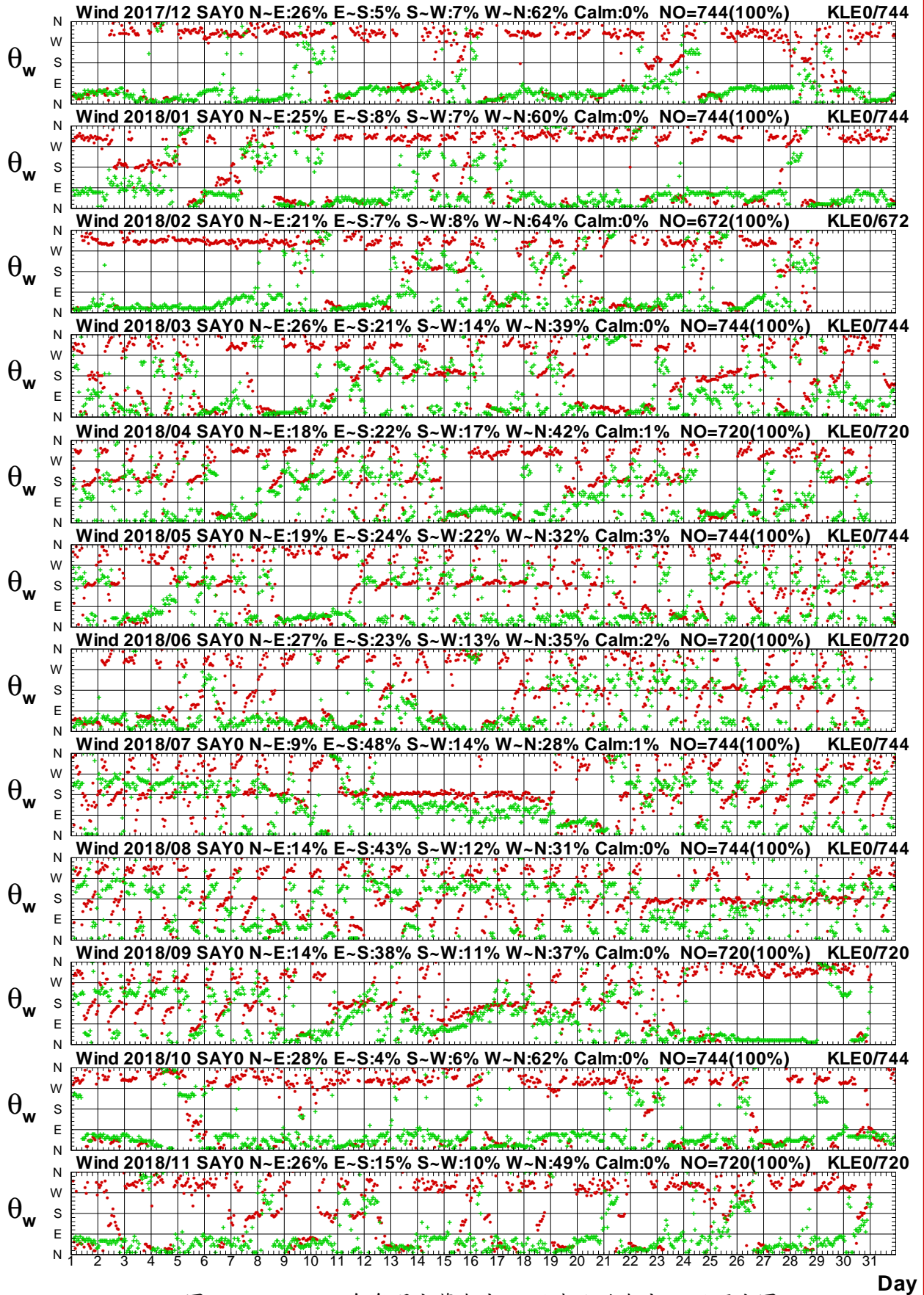


圖1.4.12b 2018年每月宜蘭海域 Y 站與北端海域 E 站風向圖

W17CSAY0.1HA W17CKLE0.1H0 W181SAY0.1HA W181KLE0.1H0 W182SAY0.1HA W182KLE0.1H0
 W183SAY0.1HA W183KLE0.1H0 W184SAY0.1HA W184KLE0.1H0 W185SAY0.1HA W185KLE0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

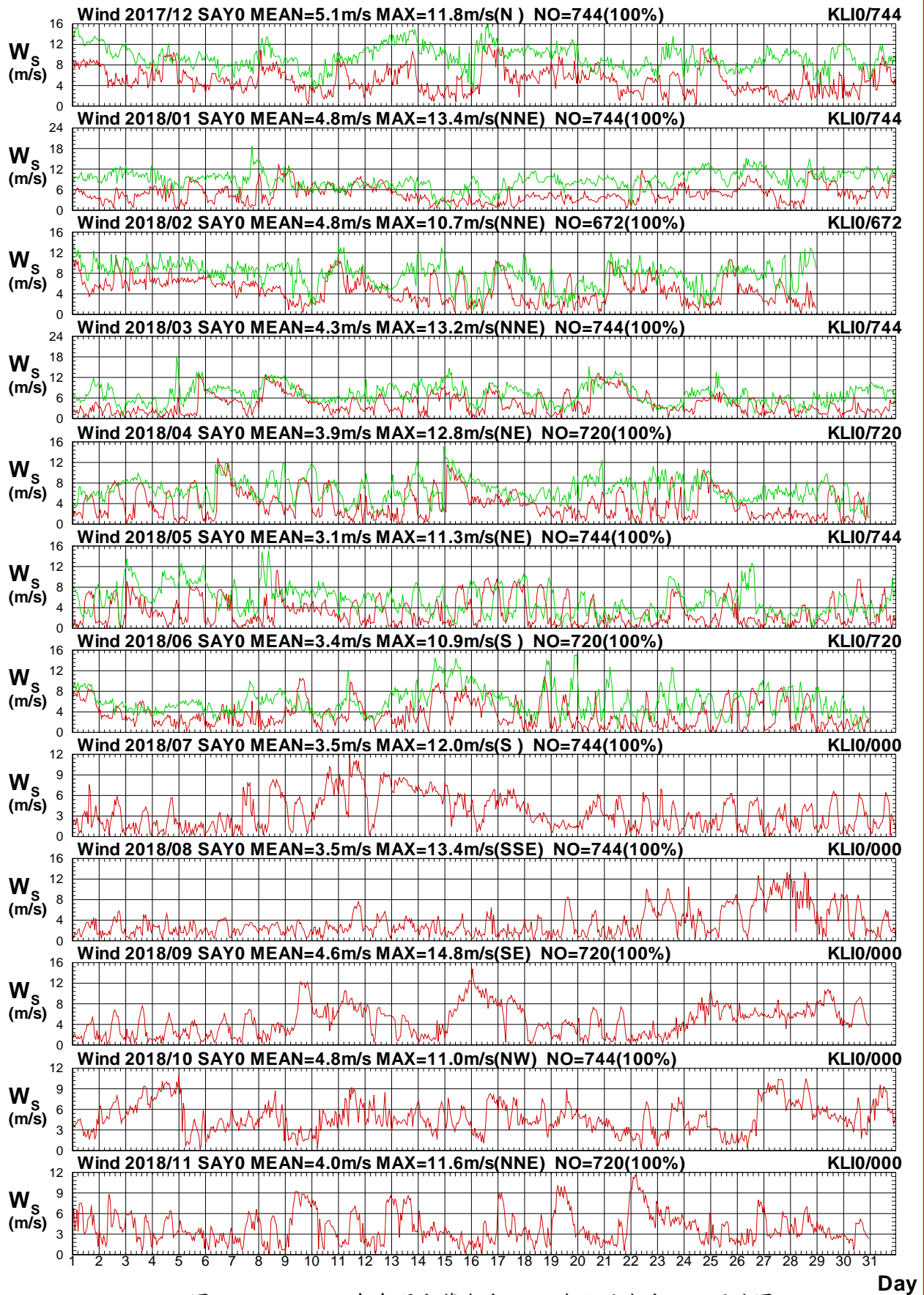


圖1.4.13a 2018年每月宜蘭海域 Y 站與北端海域 I 站風速圖

W17CSAY0.1HA W17CKLI0.1H0 W181SAY0.1HA W181KLI0.1H0 W182SAY0.1HA W182KLI0.1H0
 W183SAY0.1HA W183KLI0.1H0 W184SAY0.1HA W184KLI0.1H0 W185SAY0.1HA W185KLI0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

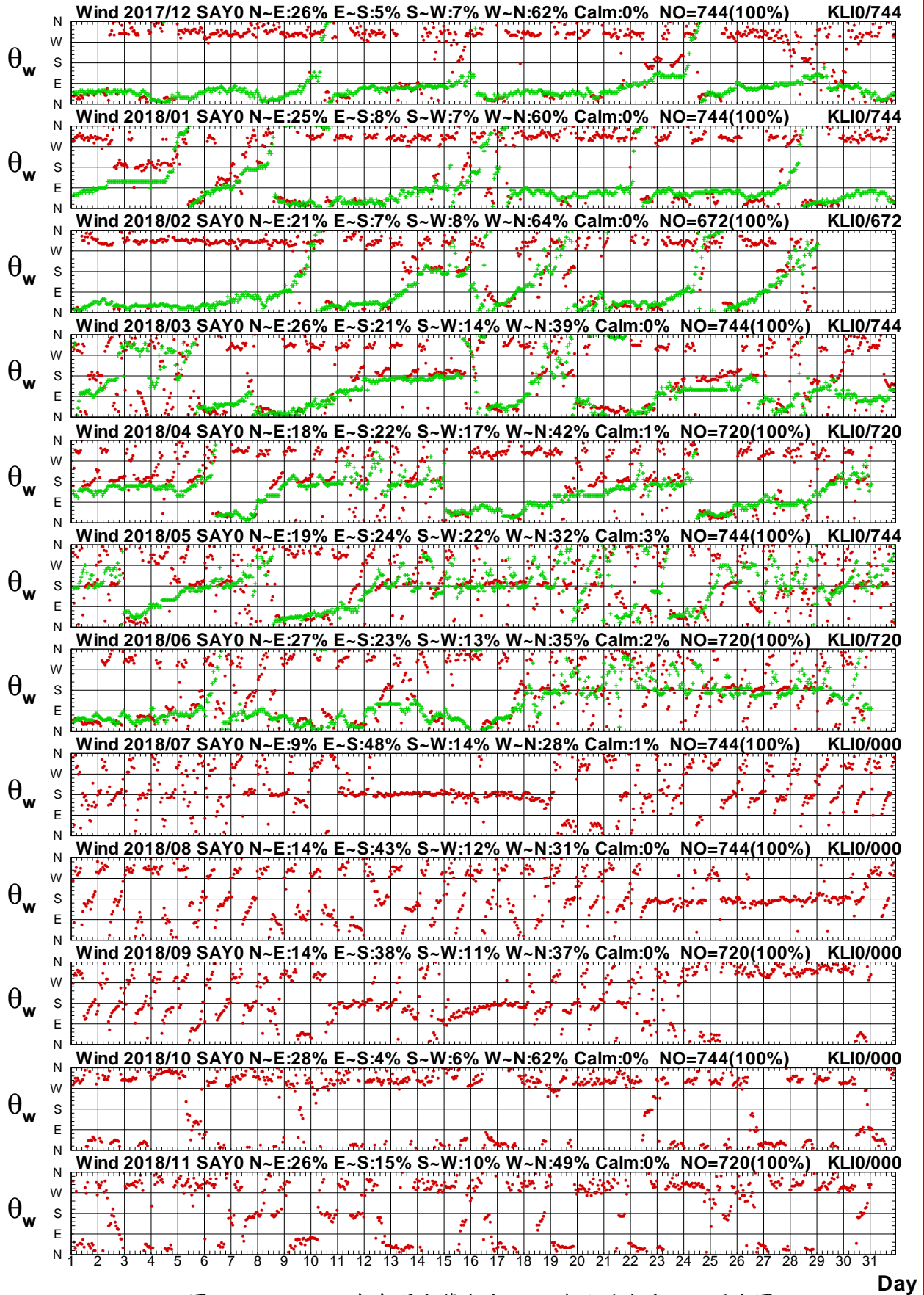


圖1.4.13b 2018年每月宜蘭海域 Y 站與北端海域 I 站風向圖

W17CSAY0.1HA W17CKLI0.1H0 W181SAY0.1HA W181KLI0.1H0 W182SAY0.1HA W182KLI0.1H0
 W183SAY0.1HA W183KLI0.1H0 W184SAY0.1HA W184KLI0.1H0 W185SAY0.1HA W185KLI0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

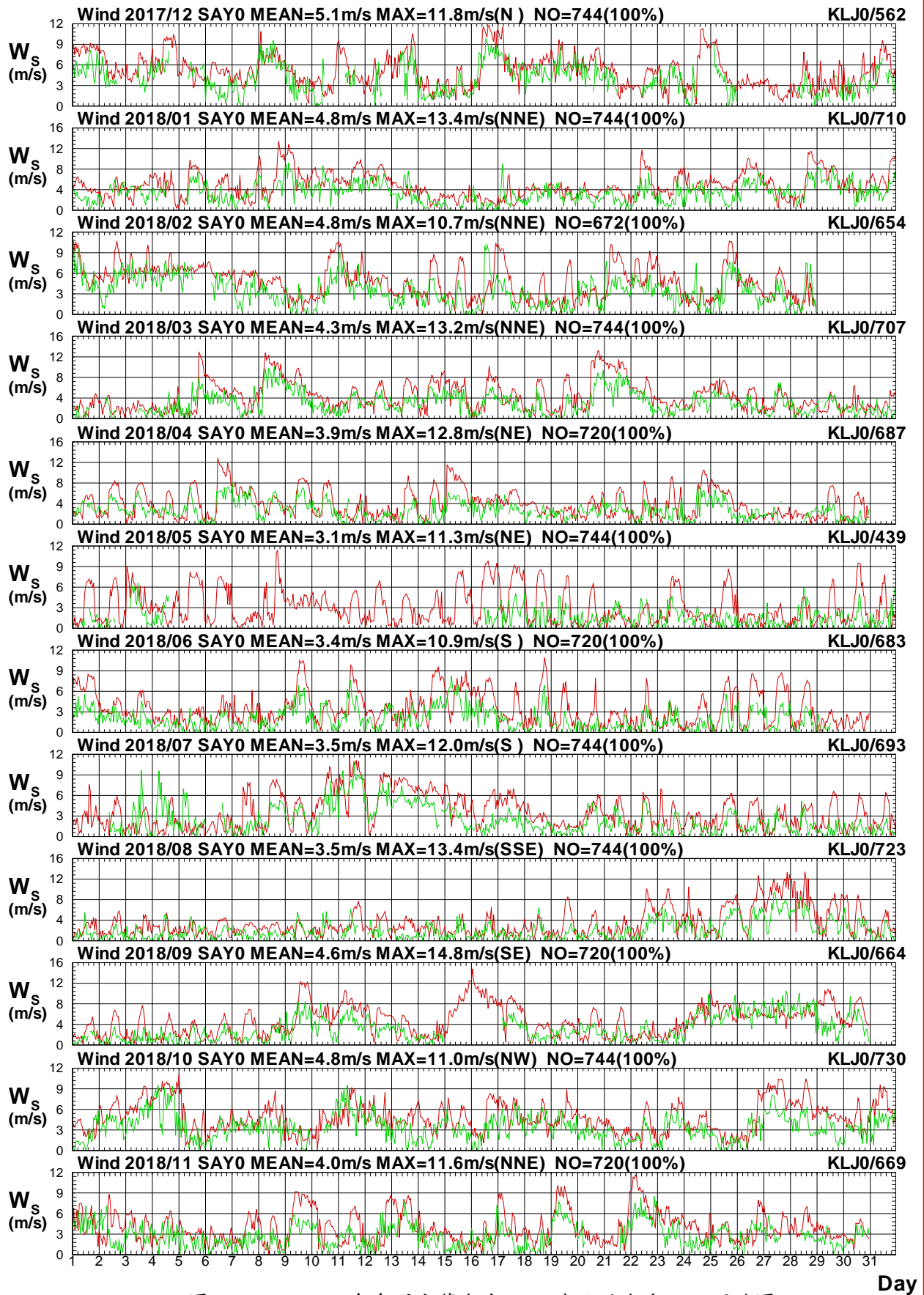


圖1.4.14a 2018年每月宜蘭海域 Y 站與北端海域 J 站風速圖

W17CSAY0.1HA W17CKLJ0.1H0 W181SAY0.1HA W181KLJ0.1H0 W182SAY0.1HA W182KLJ0.1H0
W183SAY0.1HA W183KLJ0.1H0 W184SAY0.1HA W184KLJ0.1H0 W185SAY0.1HA W185KLJ0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

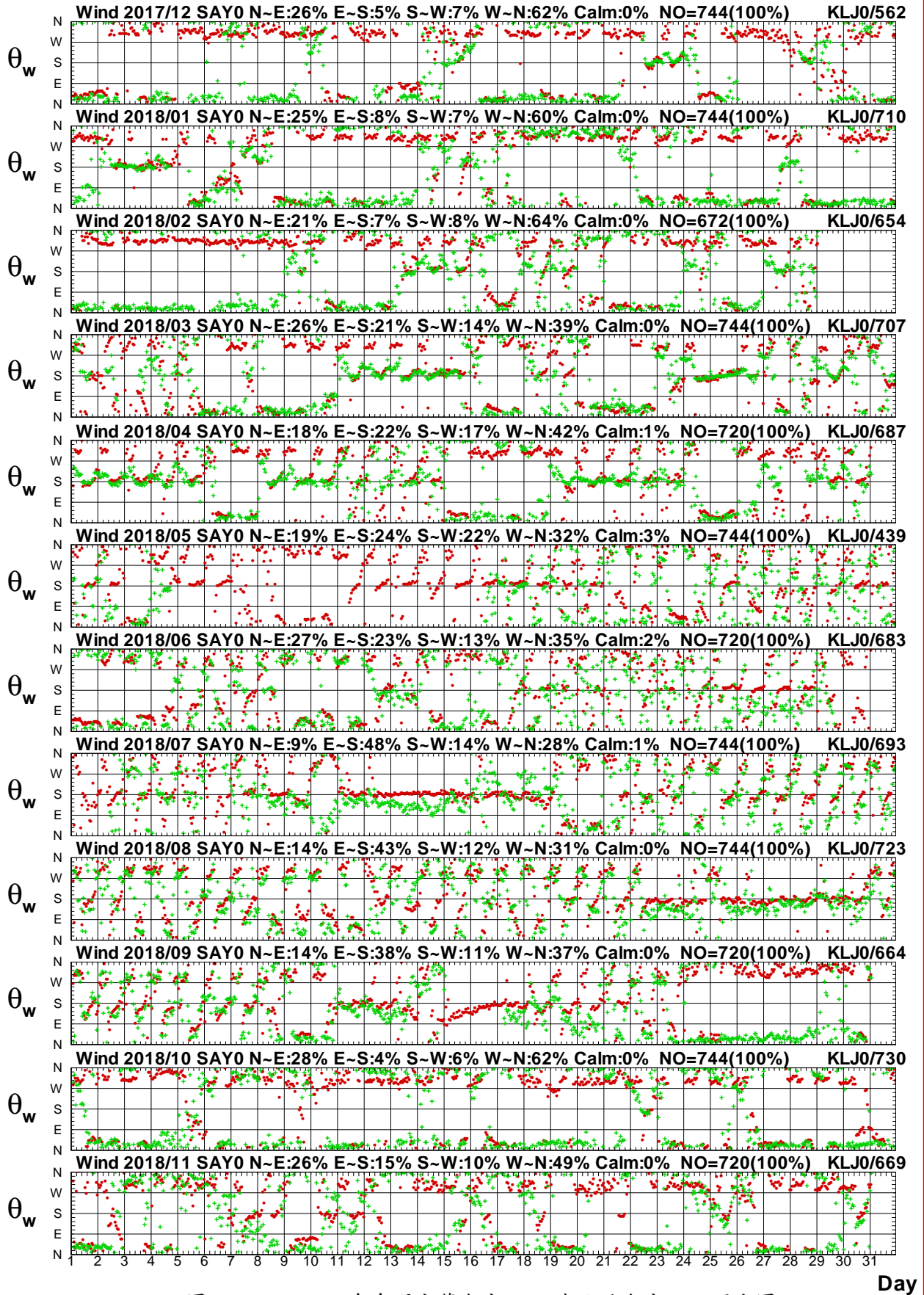


圖1.4.14b 2018年每月宜蘭海域 Y 站與北端海域 J 站風向圖

W17CSAY0.1HA W17CKLJ0.1H0 W181SAY0.1HA W181KLJ0.1H0 W182SAY0.1HA W182KLJ0.1H0
 W183SAY0.1HA W183KLJ0.1H0 W184SAY0.1HA W184KLJ0.1H0 W185SAY0.1HA W185KLJ0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

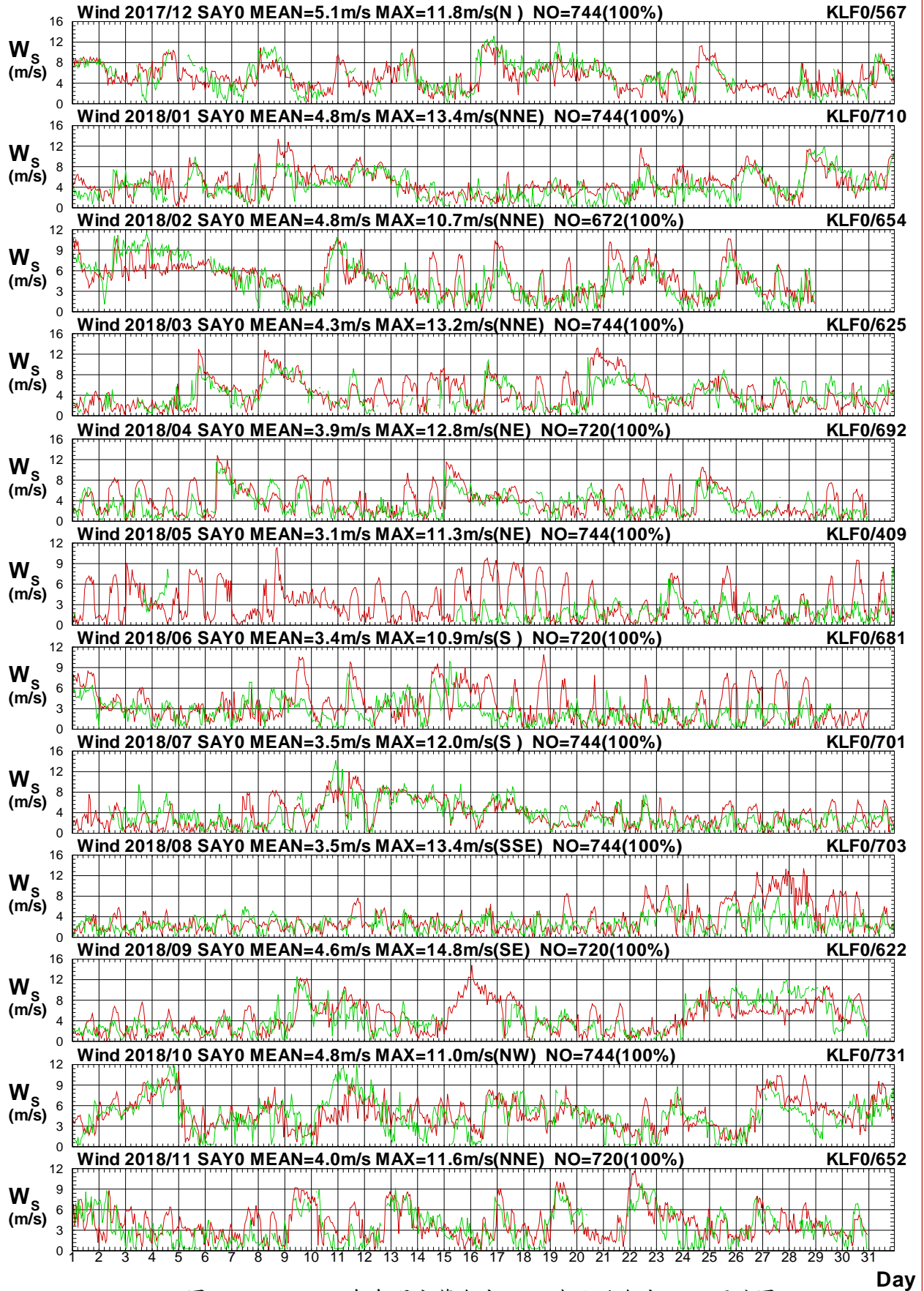


圖1.4.15a 2018年每月宜蘭海域 Y 站與北端海域 F 站風速圖

W17CSAY0.1HA W17CKLF0.1H0 W181SAY0.1HA W181KLF0.1H0 W182SAY0.1HA W182KLF0.1H0
 W183SAY0.1HA W183KLF0.1H0 W184SAY0.1HA W184KLF0.1H0 W185SAY0.1HA W185KLF0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

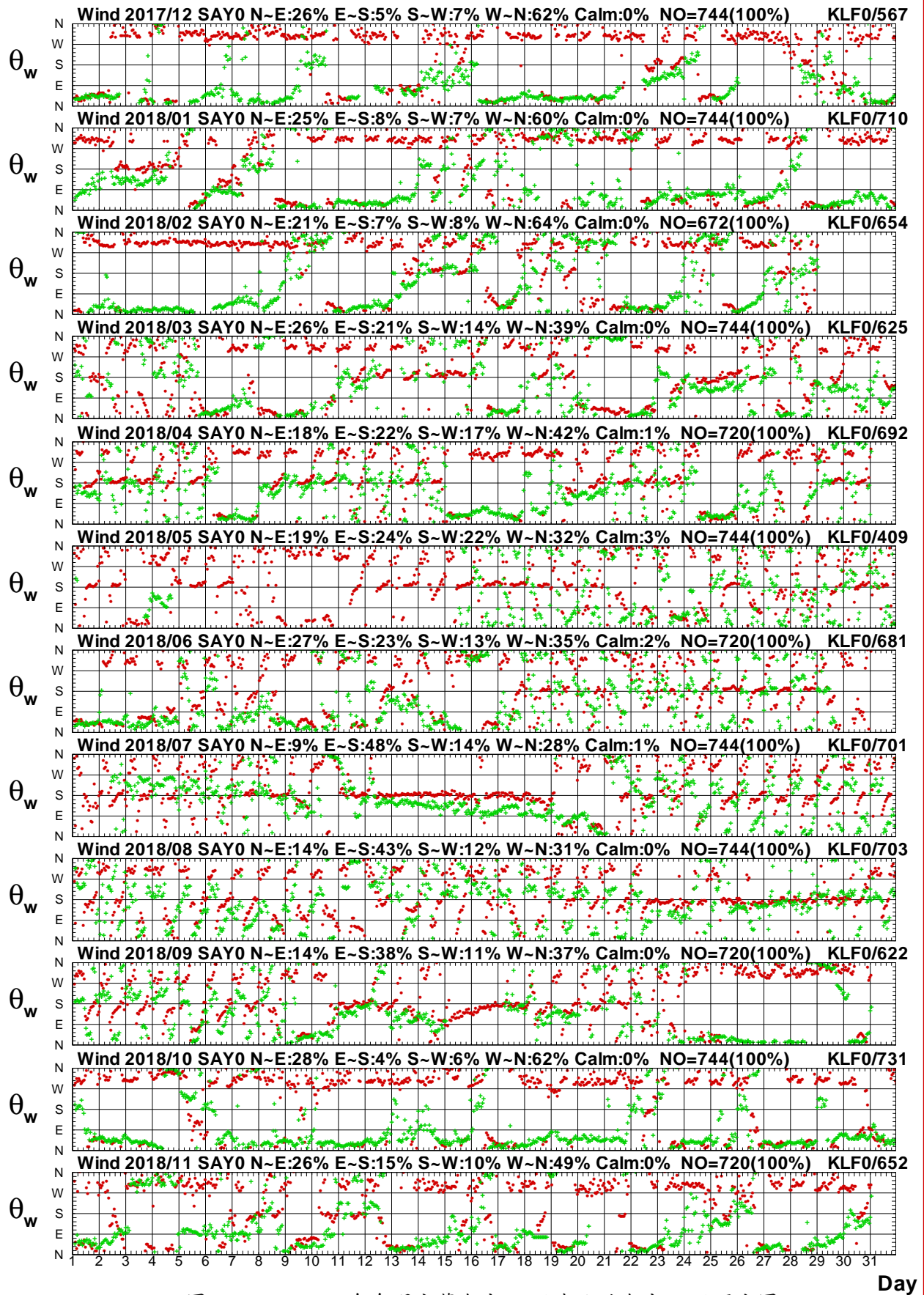


圖1.4.15b 2018年每月宜蘭海域 Y 站與北端海域 F 站風向圖

W17CSAY0.1HA W17CKLF0.1H0 W181SAY0.1HA W181KLF0.1H0 W182SAY0.1HA W182KLF0.1H0
 W183SAY0.1HA W183KLF0.1H0 W184SAY0.1HA W184KLF0.1H0 W185SAY0.1HA W185KLF0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

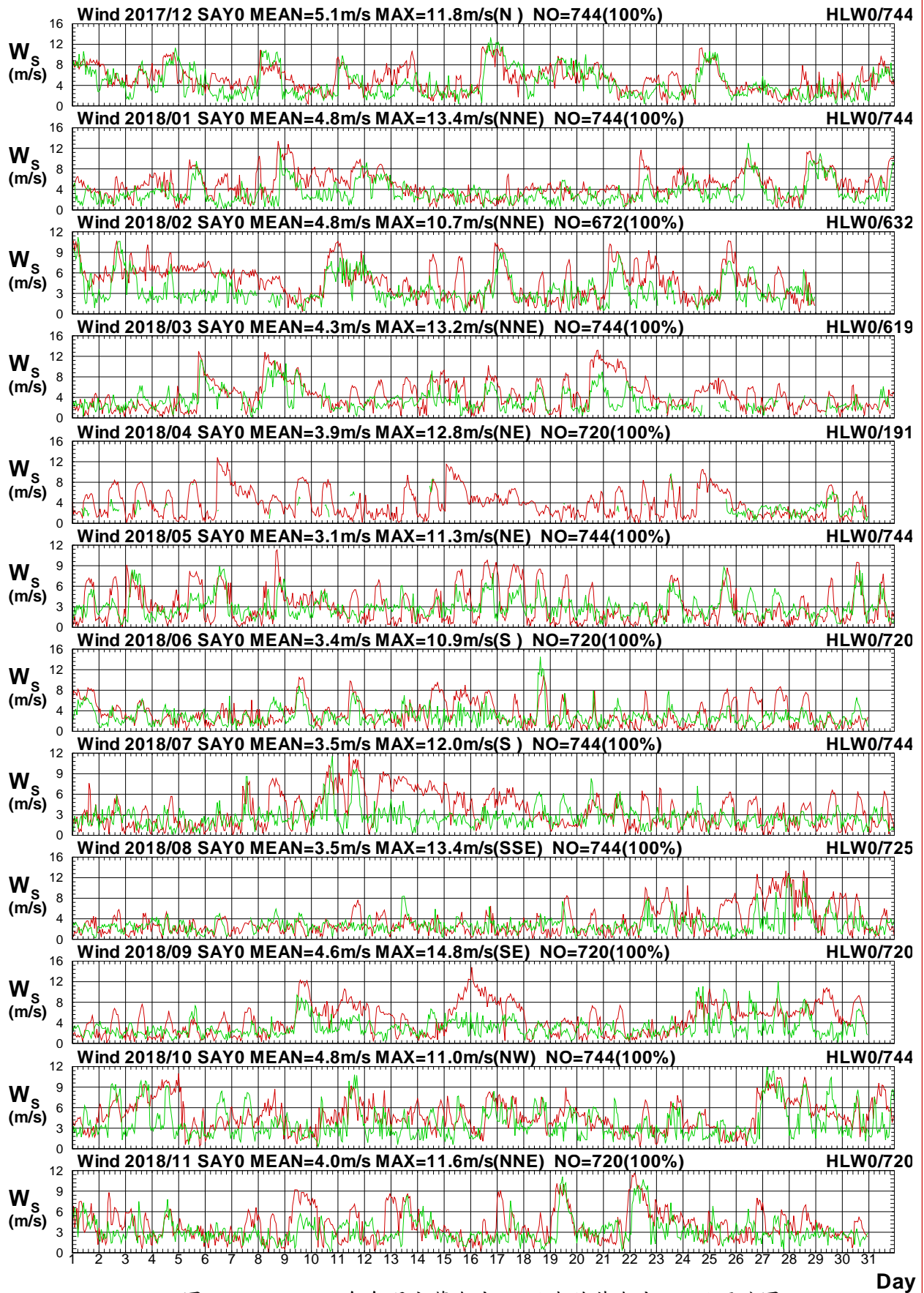


圖 1.4.16a 2018年每月宜蘭海域 Y 站與花蓮海域 W 站風速圖

W17CSAY0.1HA W17CHLW0.1HO W181SAY0.1HA W181HLW0.1HO W182SAY0.1HA W182HLW0.1HO
 W183SAY0.1HA W183HLW0.1HO W184SAY0.1HA W184HLW0.1HO W185SAY0.1HA W185HLW0.1HO

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

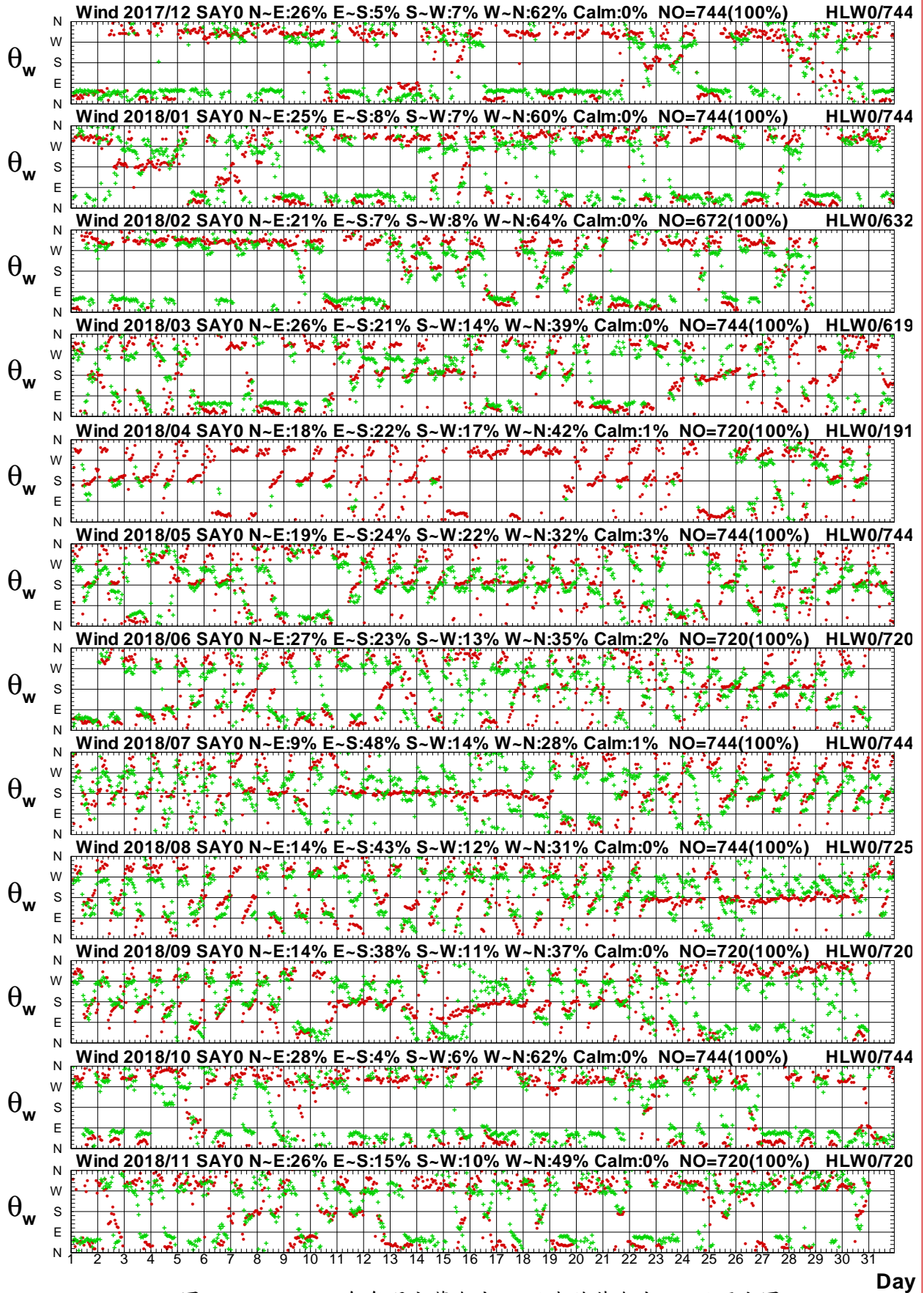


圖 1.4.16b 2018年每月宜蘭海域 Y 站與花蓮海域 W 站風向圖

W17CSAY0.1HA W17CHLW0.1H0 W181SAY0.1HA W181HLW0.1H0 W182SAY0.1HA W182HLW0.1H0
W183SAY0.1HA W183HLW0.1H0 W184SAY0.1HA W184HLW0.1H0 W185SAY0.1HA W185HLW0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

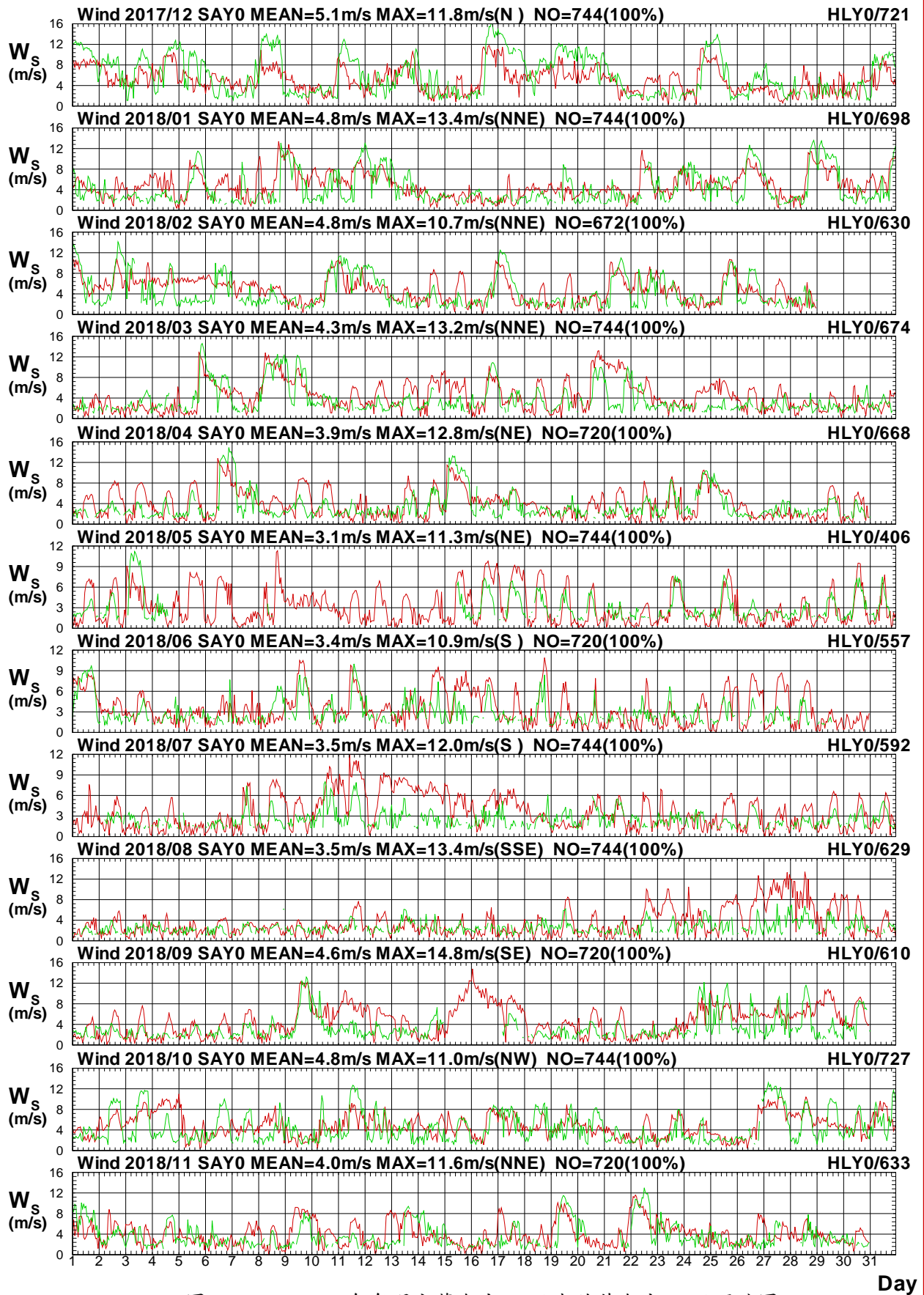


圖1.4.17a 2018年每月宜蘭海域 Y 站與花蓮海域 Y 站風速圖

W17CSAY0.1HA W17CHLY0.1H0 W181SAY0.1HA W181HLY0.1H0 W182SAY0.1HA W182HLY0.1H0
 W183SAY0.1HA W183HLY0.1H0 W184SAY0.1HA W184HLY0.1H0 W185SAY0.1HA W185HLY0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

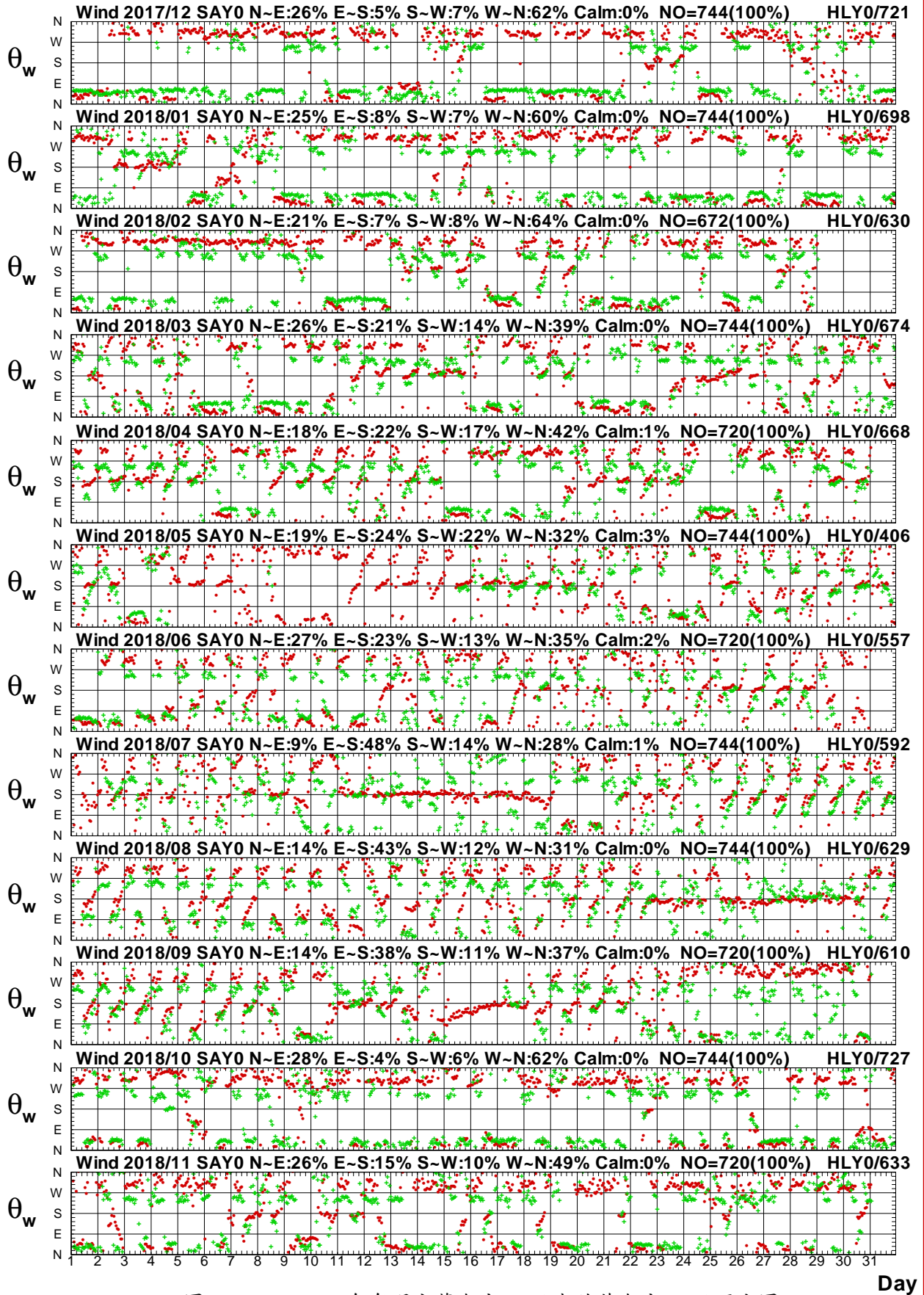


圖1.4.17b 2018年每月宜蘭海域 Y 站與花蓮海域 Y 站風向圖

W17CSAY0.1HA W17CHLY0.1HO W181SAY0.1HA W181HLY0.1HO W182SAY0.1HA W182HLY0.1HO
 W183SAY0.1HA W183HLY0.1HO W184SAY0.1HA W184HLY0.1HO W185SAY0.1HA W185HLY0.1HO

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

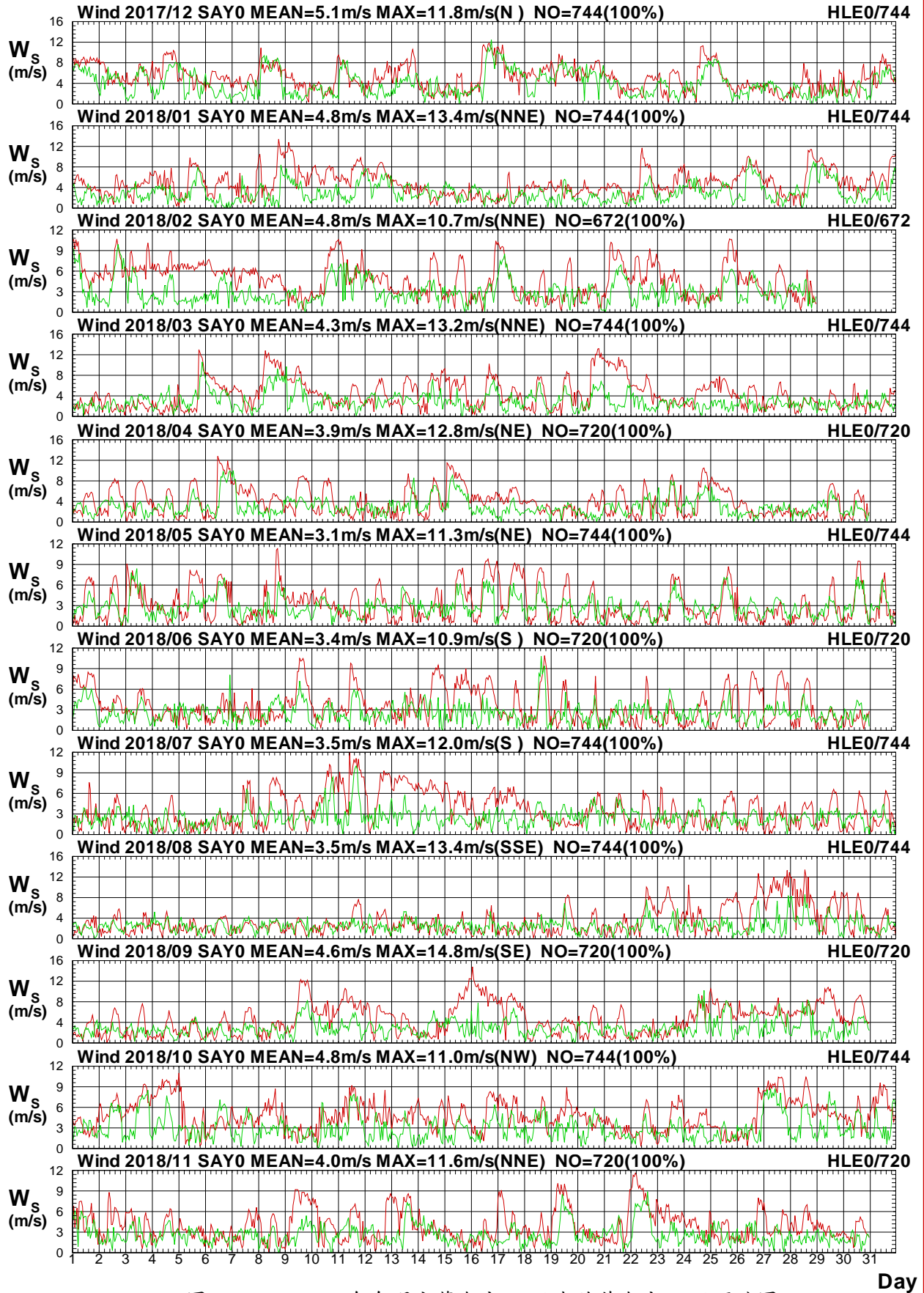


圖1.4.18a 2018年每月宜蘭海域 Y 站與花蓮海域 E 站風速圖

W17CSAY0.1HA W17CHLE0.1H0 W181SAY0.1HA W181HLE0.1H0 W182SAY0.1HA W182HLE0.1H0
 W183SAY0.1HA W183HLE0.1H0 W184SAY0.1HA W184HLE0.1H0 W185SAY0.1HA W185HLE0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

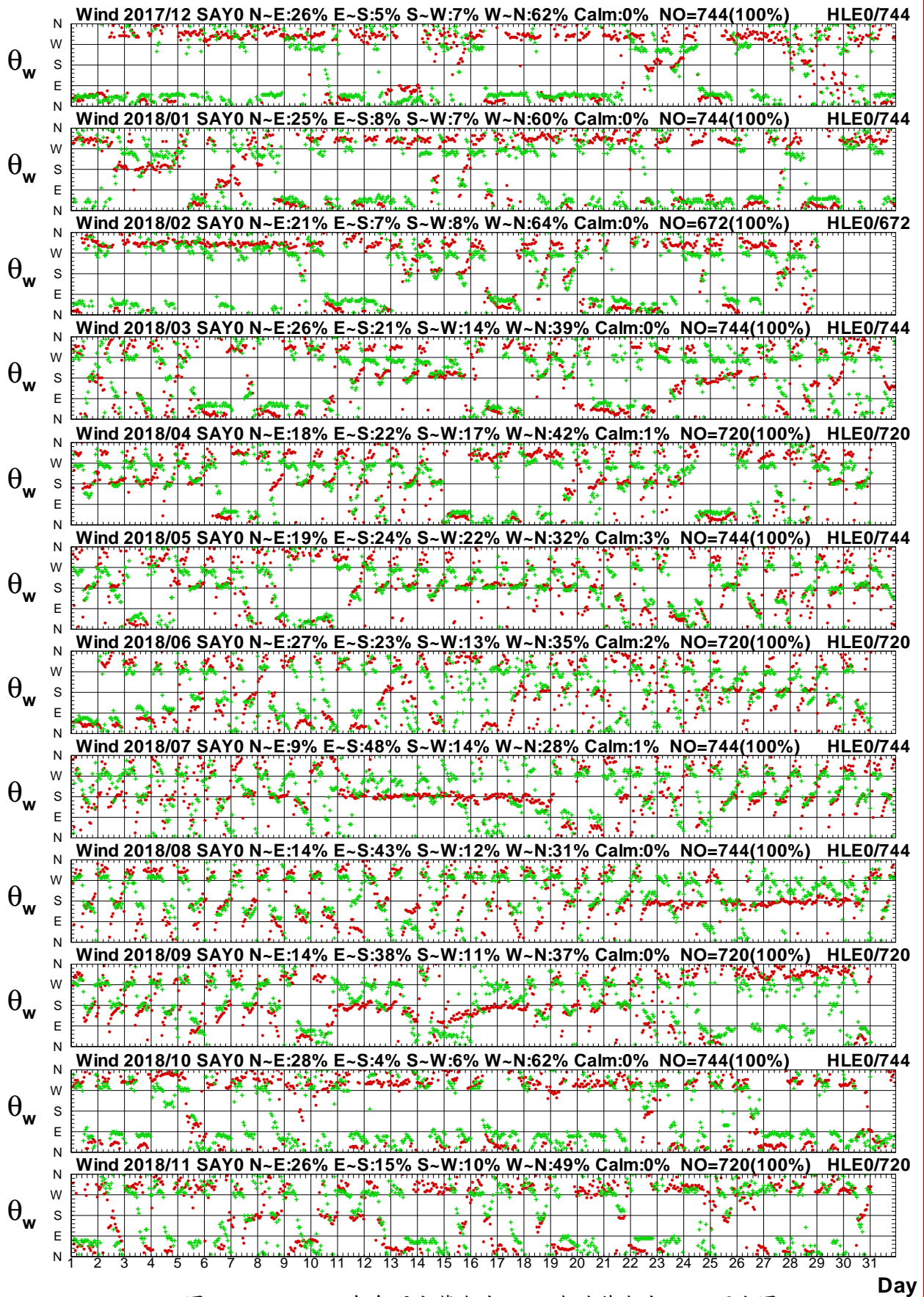


圖1.4.18b 2018年每月宜蘭海域 Y 站與花蓮海域 E 站風向圖

W17CSAY0.1HA W17CHLE0.1H0 W181SAY0.1HA W181HLE0.1H0 W182SAY0.1HA W182HLE0.1H0
W183SAY0.1HA W183HLE0.1H0 W184SAY0.1HA W184HLE0.1H0 W185SAY0.1HA W185HLE0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

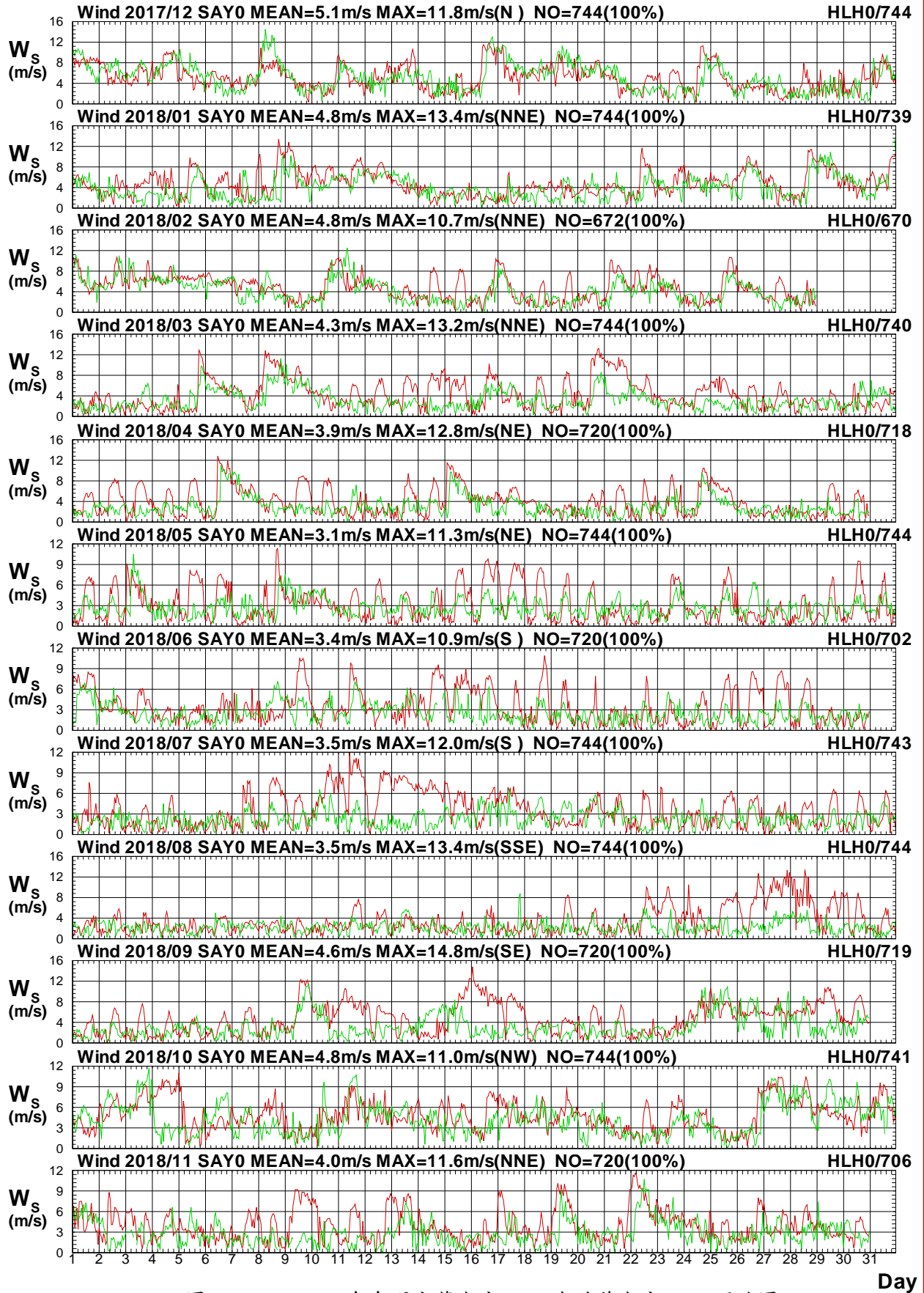


圖1.4.19a 2018年每月宜蘭海域 Y 站與花蓮海域 H 站風速圖

W17CSAY0.1HA W17CHLH0.1H0 W181SAY0.1HA W181HLH0.1H0 W182SAY0.1HA W182HLH0.1H0
W183SAY0.1HA W183HLH0.1H0 W184SAY0.1HA W184HLH0.1H0 W185SAY0.1HA W185HLH0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

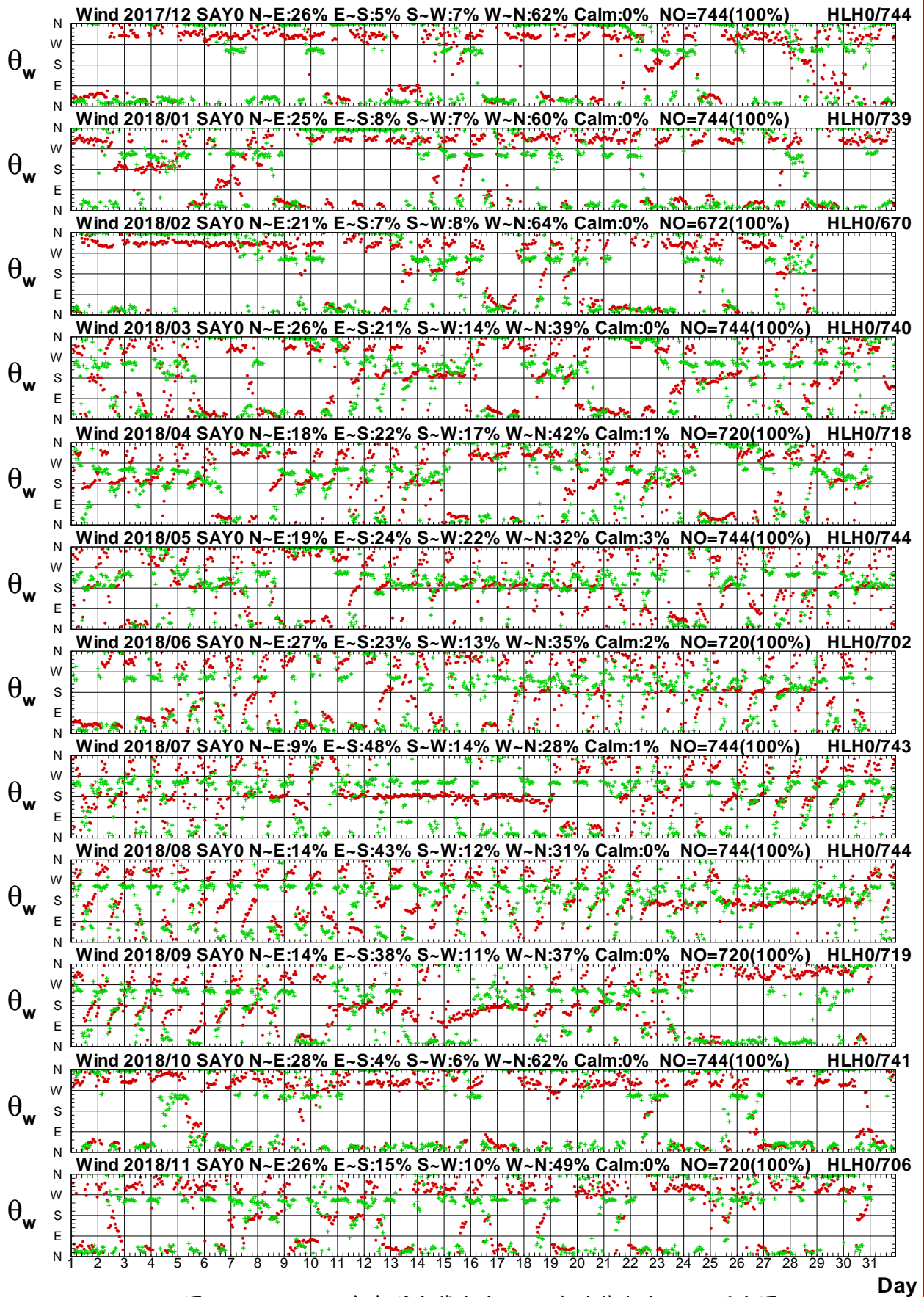


圖 1.4.19b 2018 年每月宜蘭海域 Y 站與花蓮海域 H 站風向圖

W17CSAY0.1HA W17CHLH0.1H0 W181SAY0.1HA W181HLH0.1H0 W182SAY0.1HA W182HLH0.1H0
W183SAY0.1HA W183HLH0.1H0 W184SAY0.1HA W184HLH0.1H0 W185SAY0.1HA W185HLH0.1H0

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Wind Speed in Yi-Lan Seas of SAY0 at 2018

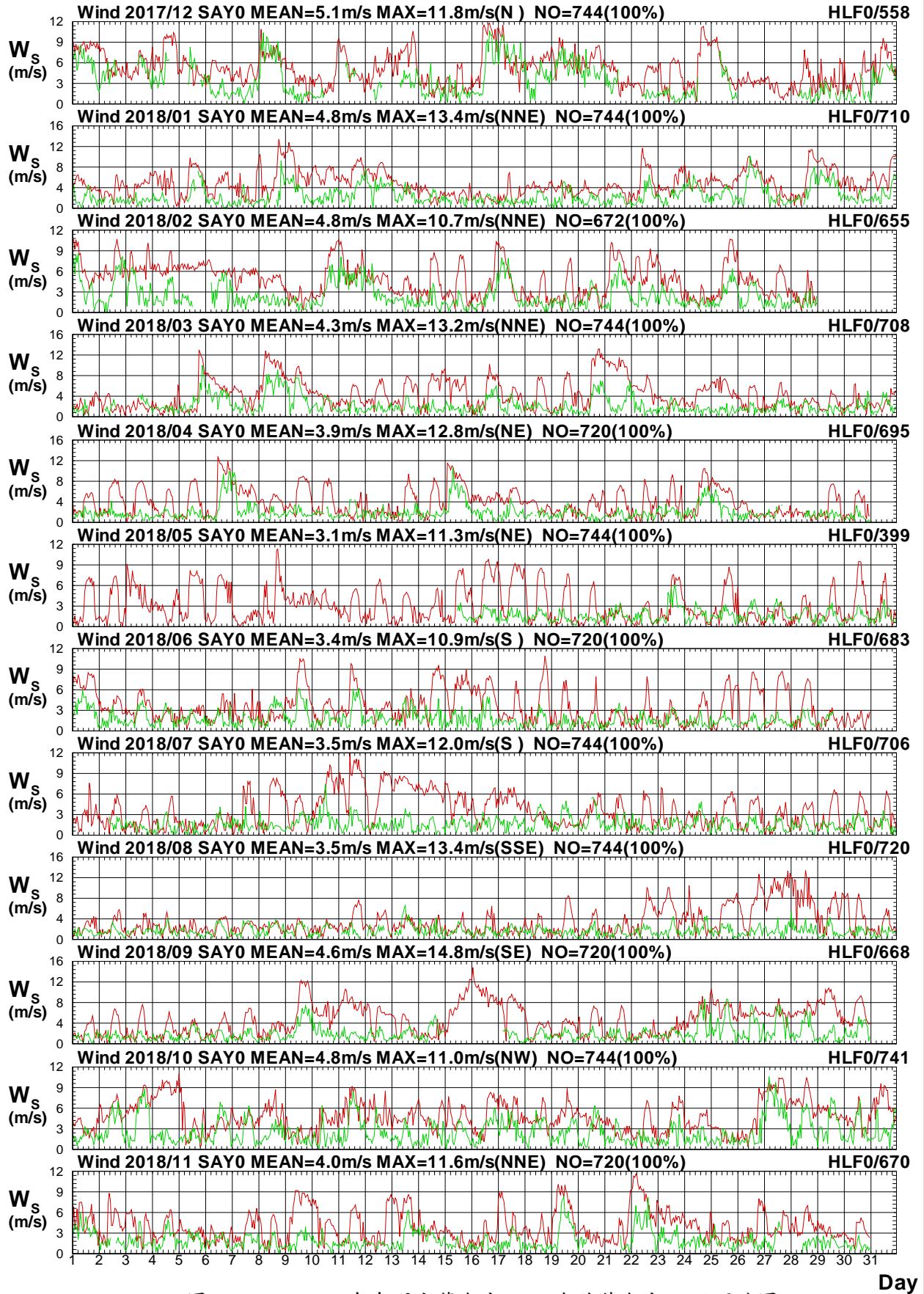


圖1.4.20a 2018年每月宜蘭海域 Y 站與花蓮海域 F 站風速圖

W17CSAY0.1HA W17CHLF0.1H0 W181SAY0.1HA W181HLF0.1H0 W182SAY0.1HA W182HLF0.1H0
 W183SAY0.1HA W183HLF0.1H0 W184SAY0.1HA W184HLF0.1H0 W185SAY0.1HA W185HLF0.1H0

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Wind Direction in Yi-Lan Seas of SAY0 at 2018

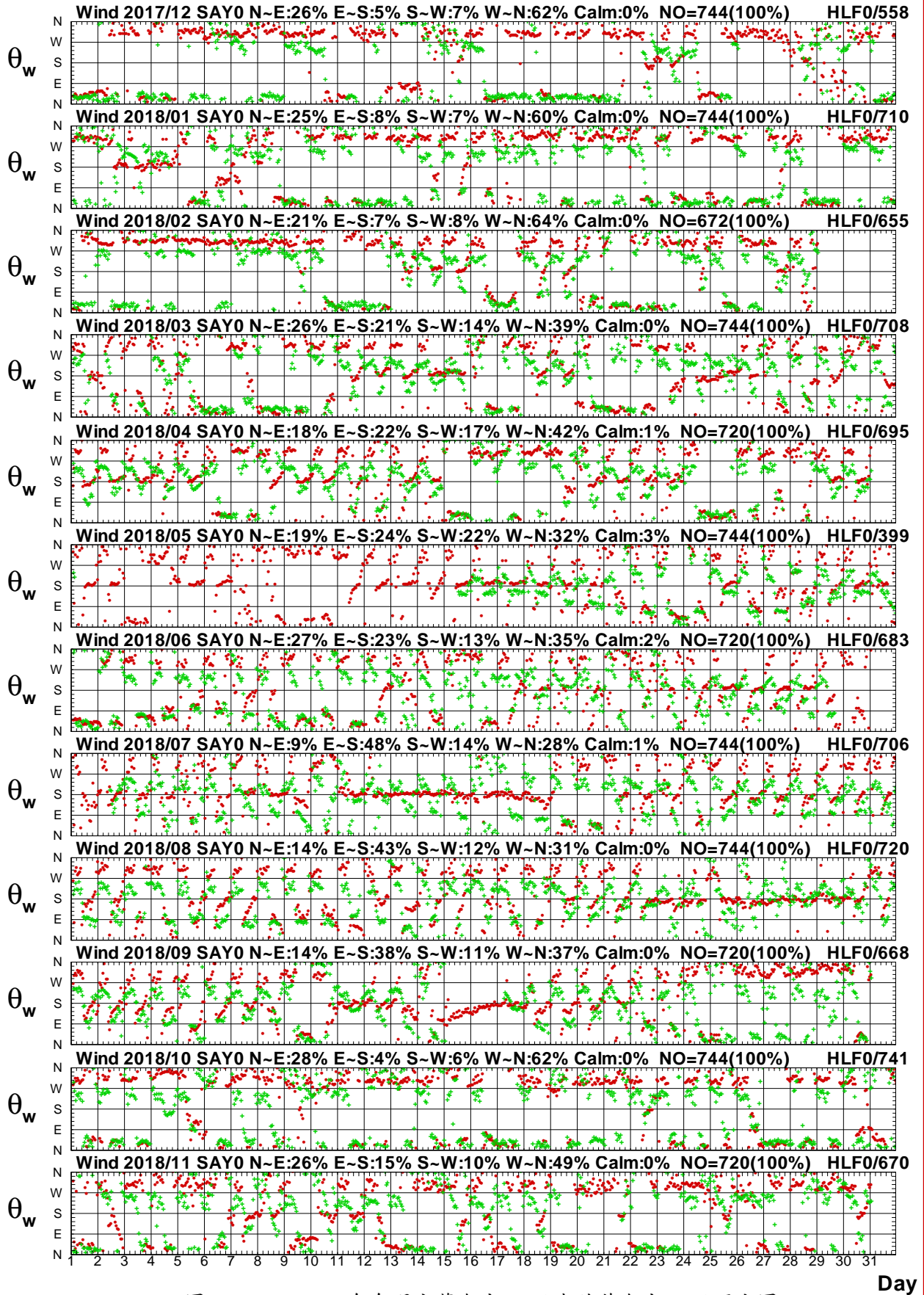


圖 1.4.20b 2018 年每月宜蘭海域 Y 站與花蓮海域 F 站風向圖

W17CSAY0.1HA W17CHLF0.1H0 W181SAY0.1HA W181HLF0.1H0 W182SAY0.1HA W182HLF0.1H0
 W183SAY0.1HA W183HLF0.1H0 W184SAY0.1HA W184HLF0.1H0 W185SAY0.1HA W185HLF0.1H0

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1.5 2018 年宜蘭海域風力各測站修補前 風力向量分佈圖

Distribution of Wind Vectors

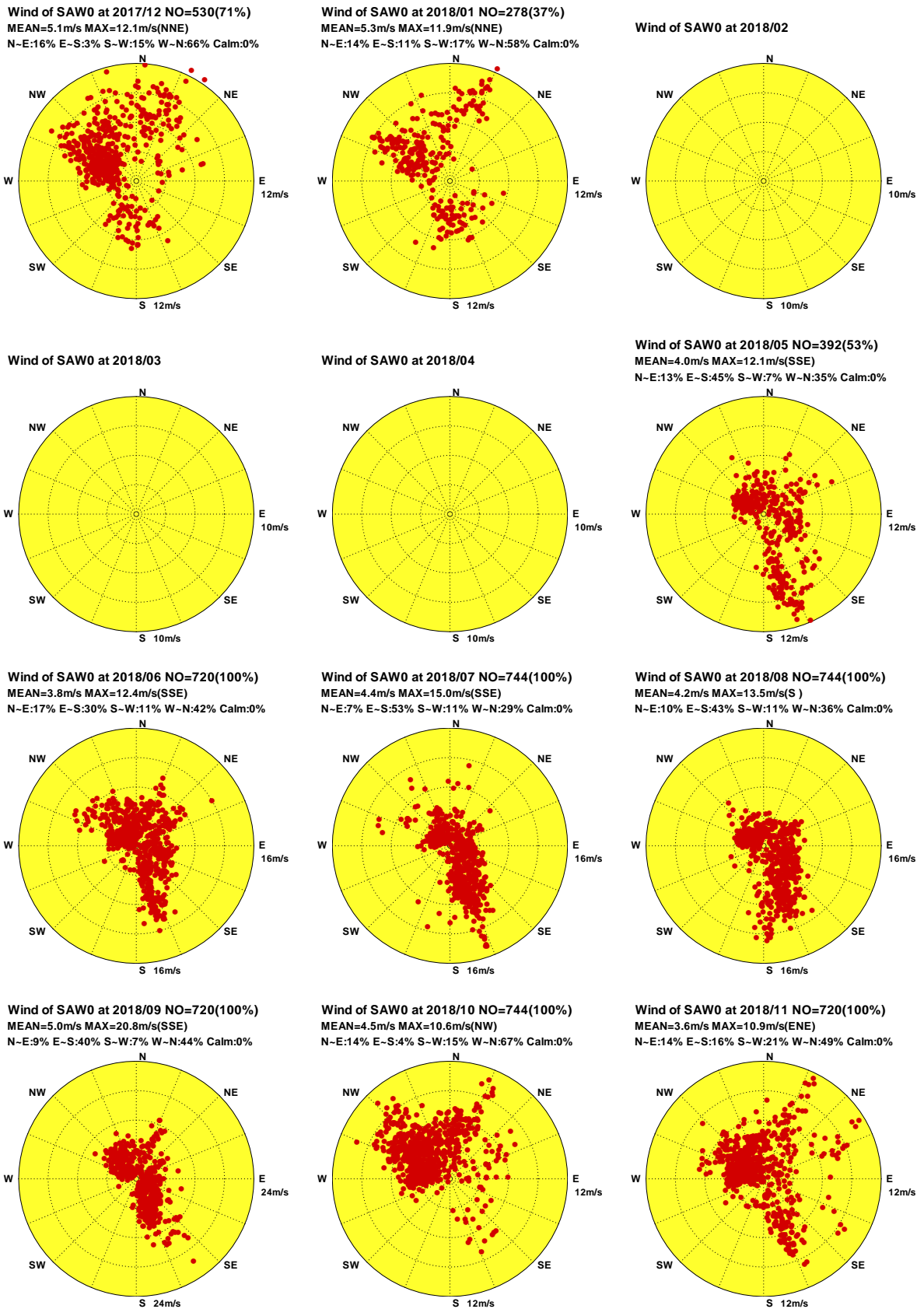


圖 1.5.1 2018 年宜蘭海域每月 W 站修補前觀測風力向量分佈圖

W17CSAW0.1H0 W181SAW0.1H0 W182SAW0.1H0 W183SAW0.1H0 W184SAW0.1H0 W185SAW0.1H0
 W186SAW0.1H0 W187SAW0.1H0 W188SAW0.1H0 W189SAW0.1H0 W18ASAW0.1H0 W18BSAW0.1H0

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Distribution of Wind Vectors

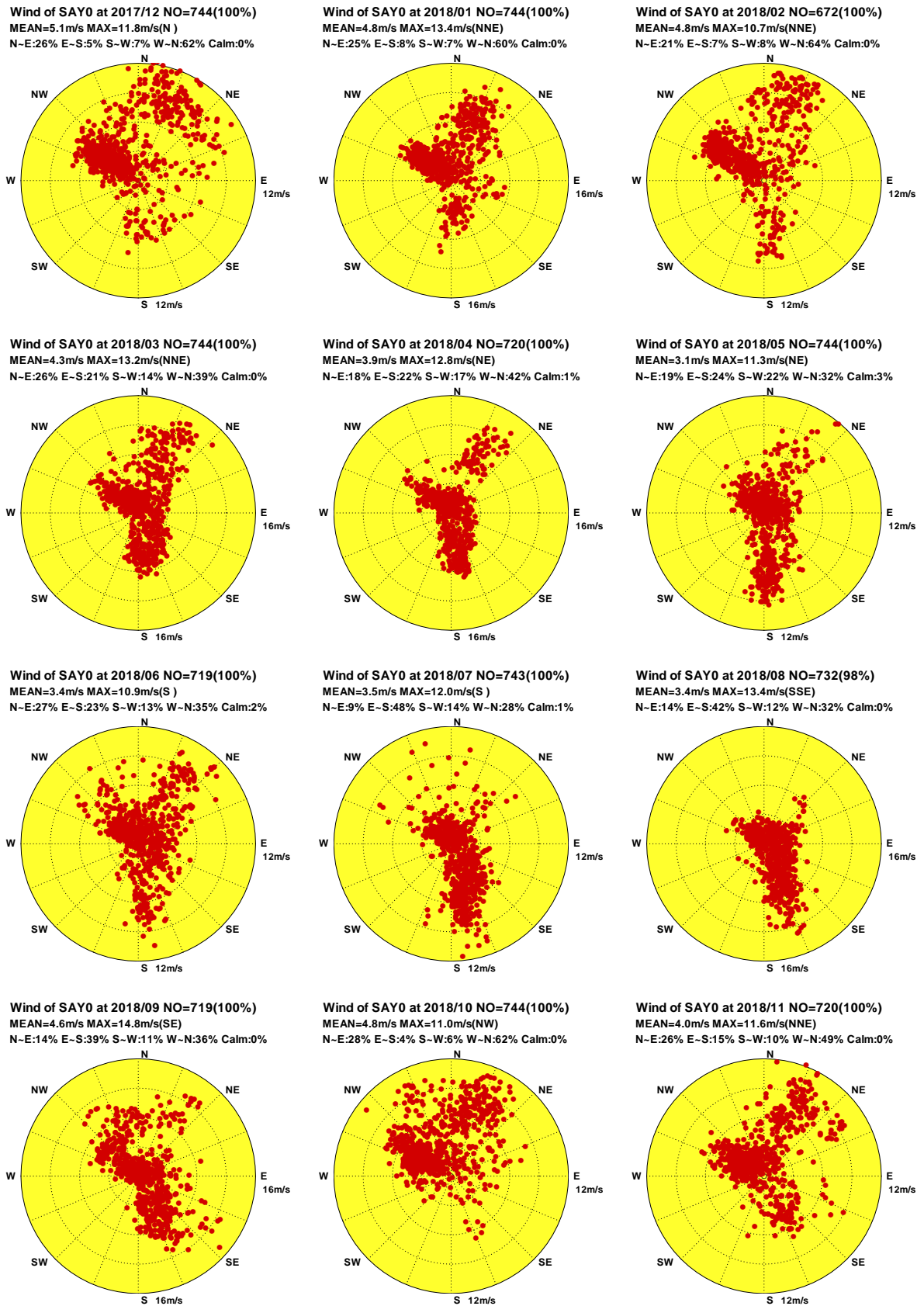


圖 1.5.2 2018年宜蘭海域每月 Y 站修補前觀測風力向量分佈圖

W17CSAY0.1H0 W181SAY0.1H0 W182SAY0.1H0 W183SAY0.1H0 W184SAY0.1H0 W185SAY0.1H0
 W186SAY0.1H0 W187SAY0.1H0 W188SAY0.1H0 W189SAY0.1H0 W18ASAY0.1H0 W18BSAY0.1H0

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Distribution of Wind Vectors

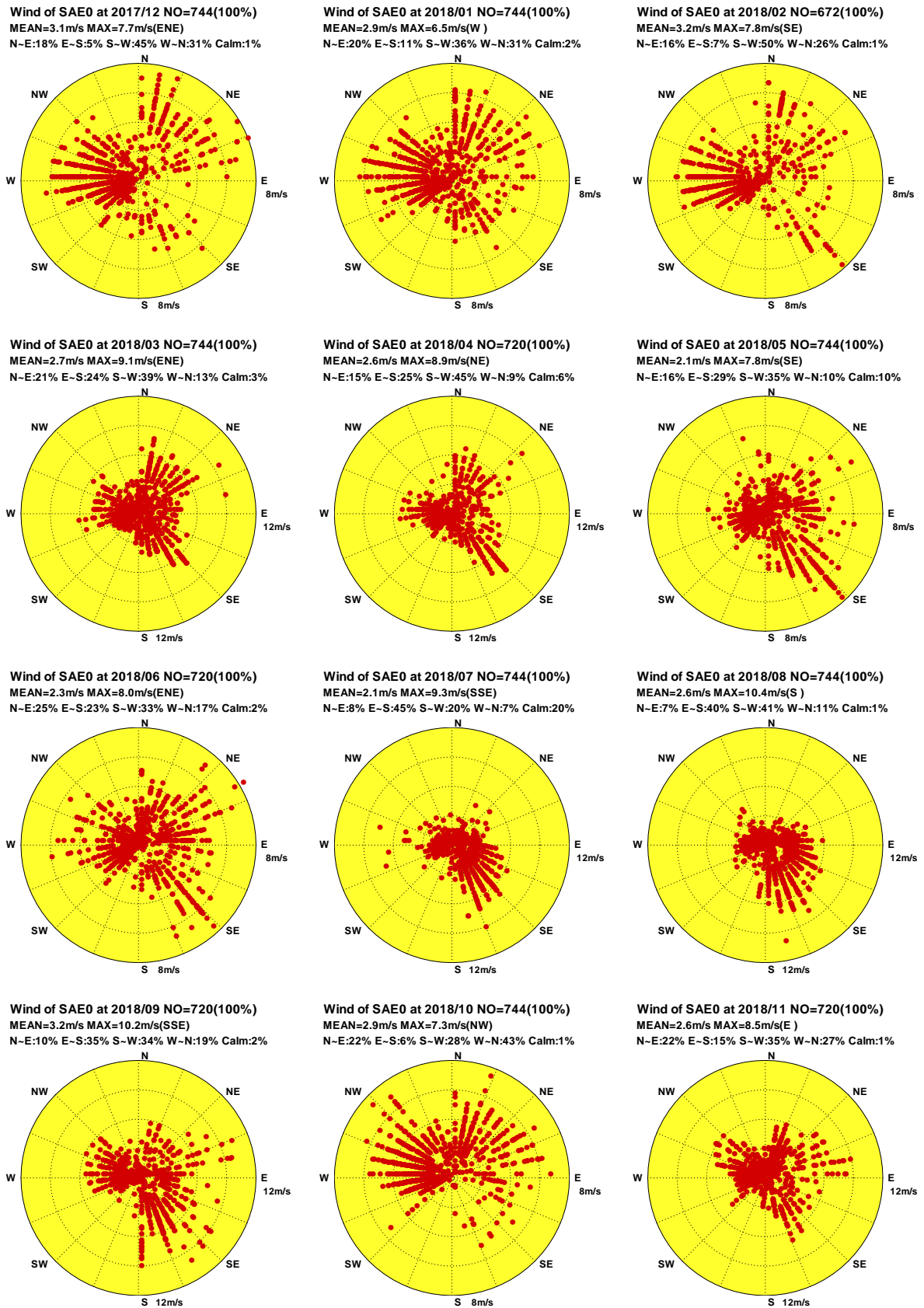


圖1.5.3 2018年宜蘭海域每月 E 站修補前觀測風力向量分佈圖

W17CSAE0.1H0 W181SAE0.1H0 W182SAE0.1H0 W183SAE0.1H0 W184SAE0.1H0 W185SAE0.1H0
 W186SAE0.1H0 W187SAE0.1H0 W188SAE0.1H0 W189SAE0.1H0 W18ASAE0.1H0 W18BSAE0.1H0

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Distribution of Wind Vectors

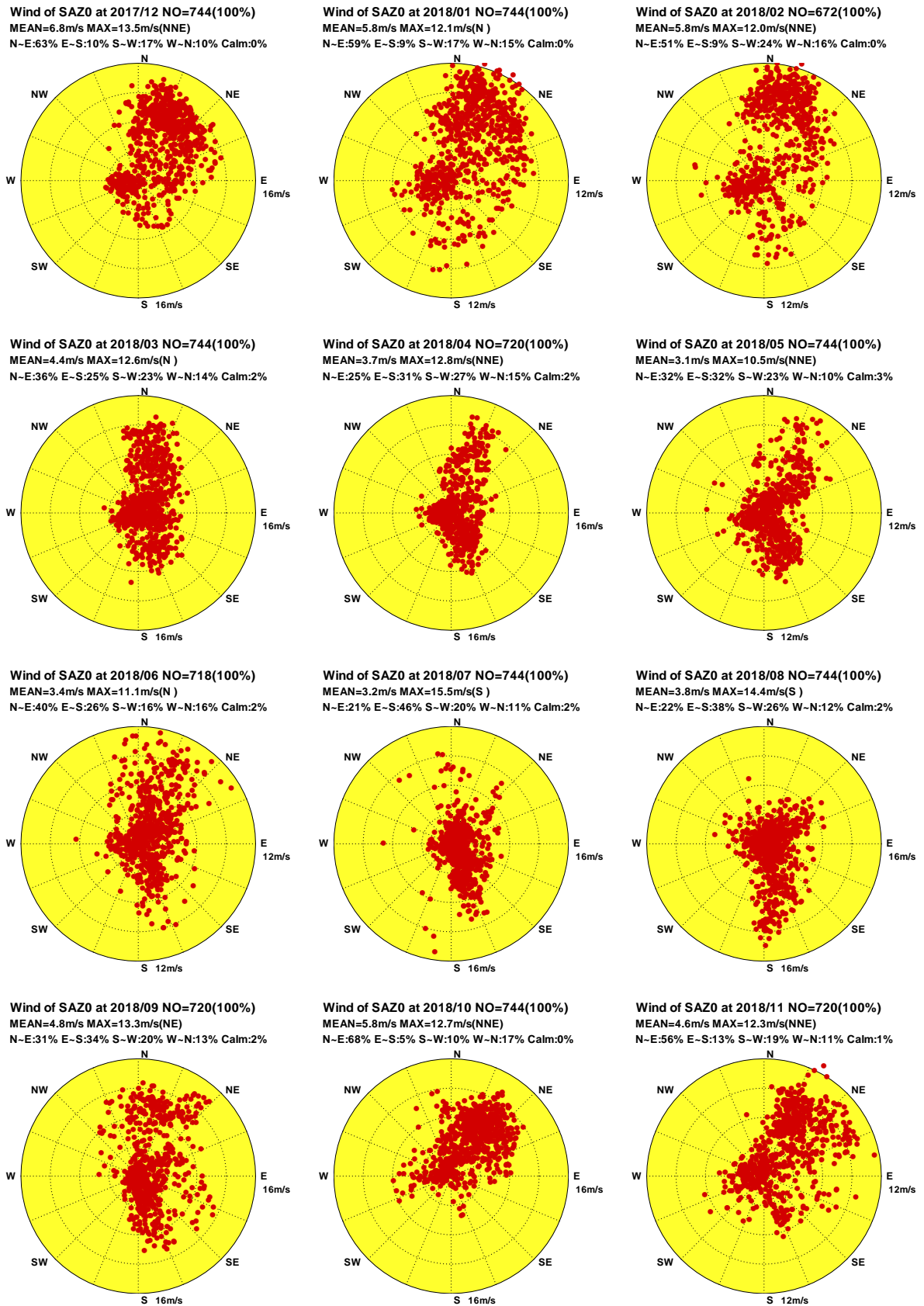


圖1.5.4 2018年宜蘭海域每月Z站修補前觀測風力向量分佈圖

W17CSAZO.1H0 W181SAZO.1H0 W182SAZO.1H0 W183SAZO.1H0 W184SAZO.1H0 W185SAZO.1H0
W186SAZO.1H0 W187SAZO.1H0 W188SAZO.1H0 W189SAZO.1H0 W18ASAZO.1H0 W18BSAZO.1H0

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Distribution of Wind Vectors

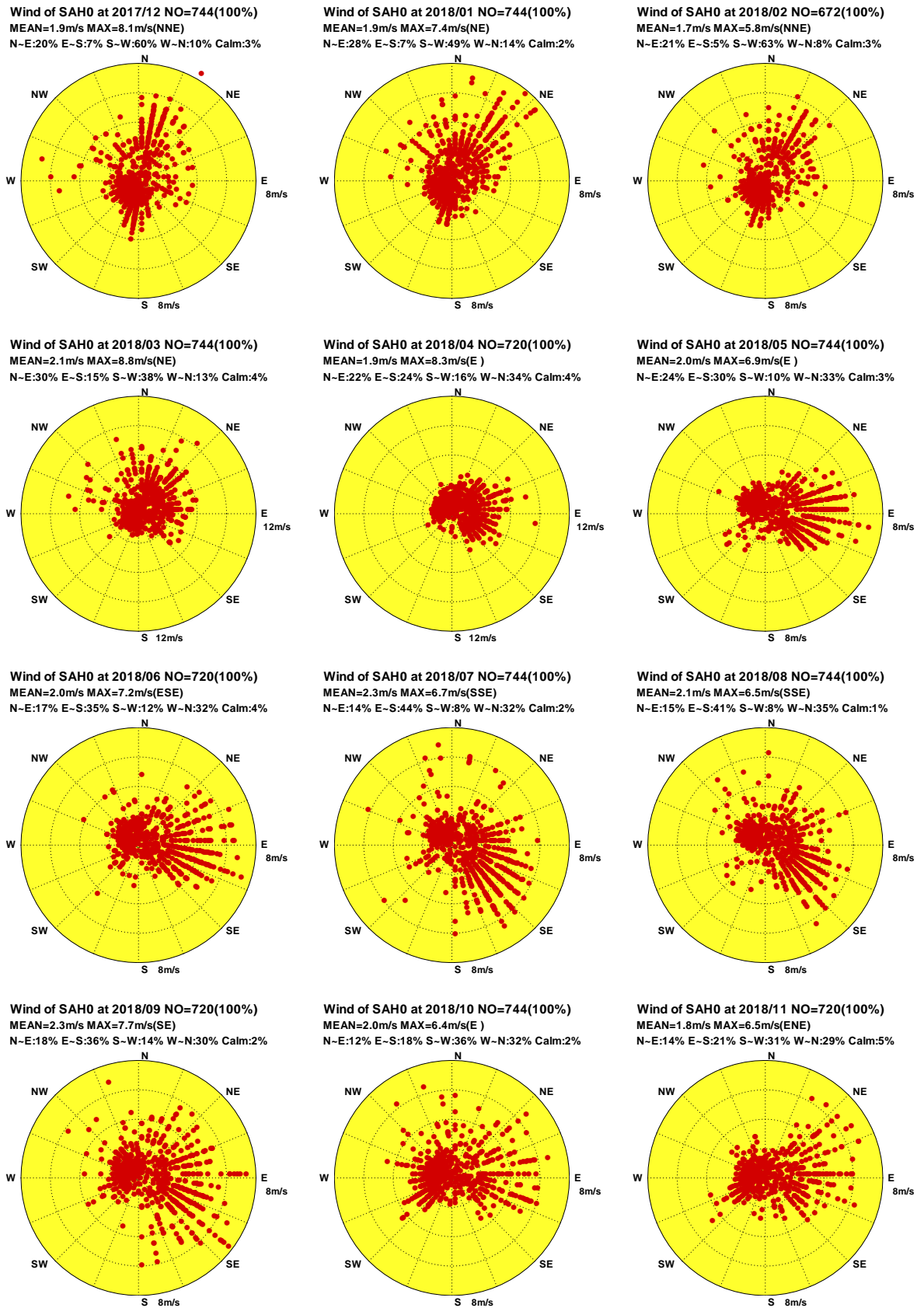


圖1.5.5 2018年宜蘭海域每月 H 站修補前觀測風力向量分佈圖

W17CSAH0.1H0 W181SAH0.1H0 W182SAH0.1H0 W183SAH0.1H0 W184SAH0.1H0 W185SAH0.1H0
W186SAH0.1H0 W187SAH0.1H0 W188SAH0.1H0 W189SAH0.1H0 W18ASAH0.1H0 W18BSAH0.1H0

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Distribution of Wind Vectors

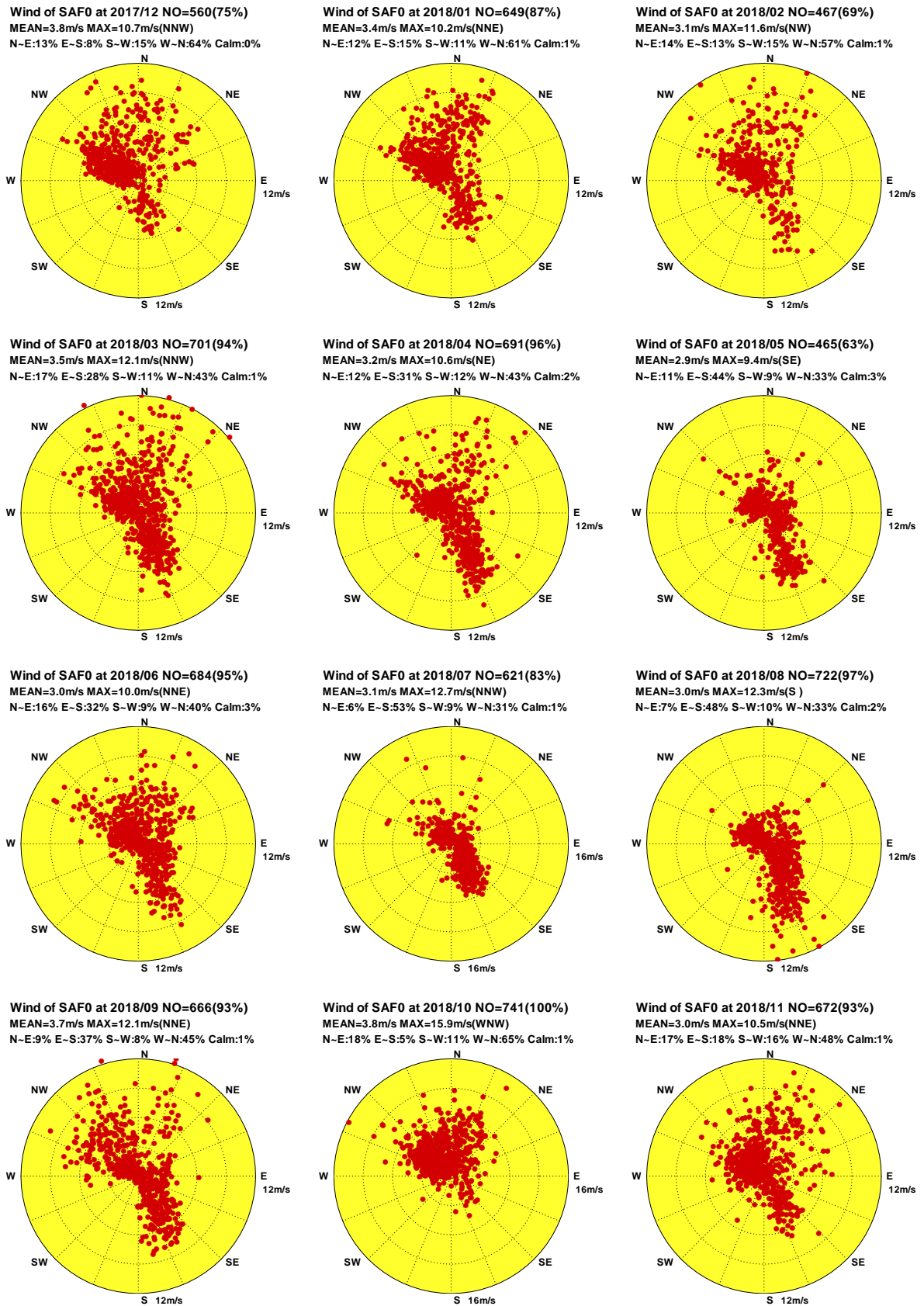


圖1.5.6 2018年宜蘭海域每月 F 站修補前觀測風力向量分佈圖

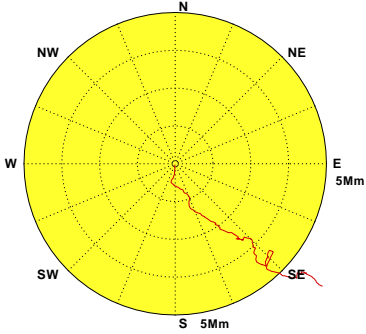
W17CSAF0.1H0 W181SAF0.1H0 W182SAF0.1H0 W183SAF0.1H0 W184SAF0.1H0 W185SAF0.1H0
W186SAF0.1H0 W187SAF0.1H0 W188SAF0.1H0 W189SAF0.1H0 W18ASAF0.1H0 W18BSAF0.1H0

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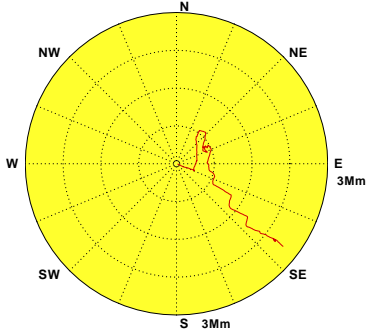
1.6 2018 年宜蘭海域風力各測站修補前 風力向量行進圖

Progressive Vector Diagram of Wind

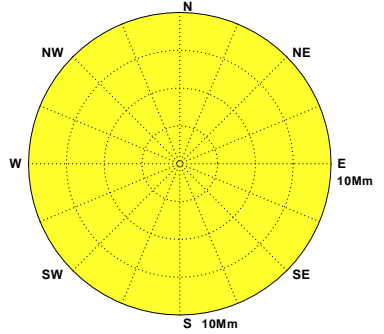
Wind of SAW0 at 2017/12 NO=530(71%)
 MEAN=5.1m/s MAX=12.1m/s(NNE)
 N-E:16% E-S:3% S-W:15% W-N:66% Calm:0%



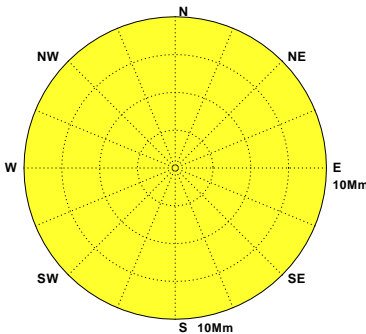
Wind of SAW0 at 2018/01 NO=278(37%)
 MEAN=5.3m/s MAX=11.9m/s(NNE)
 N-E:14% E-S:11% S-W:17% W-N:58% Calm:0%



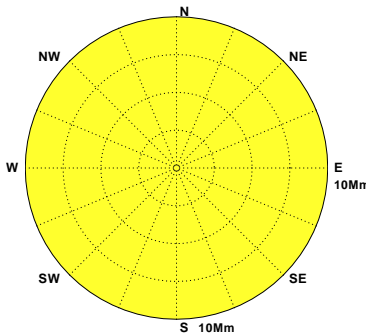
Wind of SAW0 at 2018/02



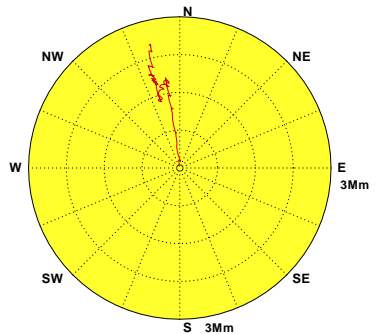
Wind of SAW0 at 2018/03



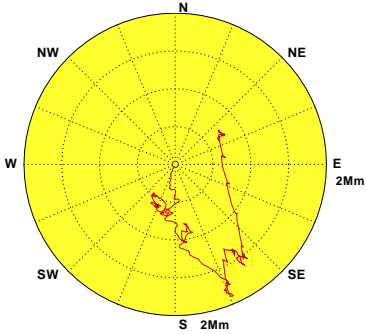
Wind of SAW0 at 2018/04



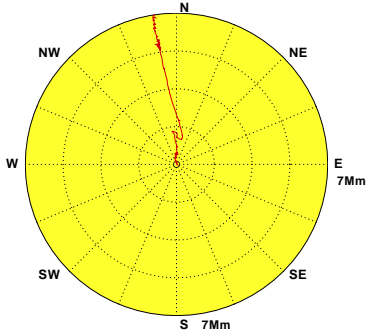
Wind of SAW0 at 2018/05 NO=392(53%)
 MEAN=4.0m/s MAX=12.1m/s(SSE)
 N-E:13% E-S:45% S-W:7% W-N:35% Calm:0%



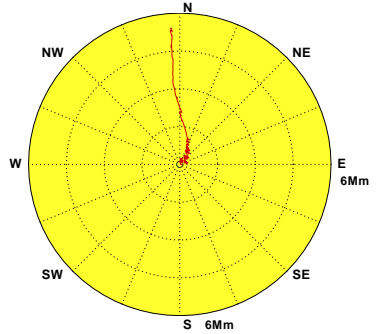
Wind of SAW0 at 2018/06 NO=720(100%)
 MEAN=3.8m/s MAX=12.4m/s(SSE)
 N-E:17% E-S:30% S-W:11% W-N:42% Calm:0%



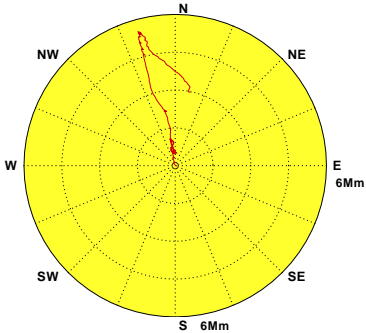
Wind of SAW0 at 2018/07 NO=744(100%)
 MEAN=4.4m/s MAX=15.0m/s(SSE)
 N-E:7% E-S:53% S-W:11% W-N:29% Calm:0%



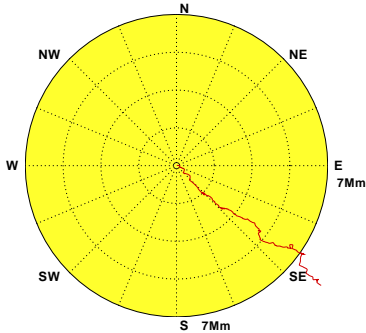
Wind of SAW0 at 2018/08 NO=744(100%)
 MEAN=4.2m/s MAX=13.5m/s(S)
 N-E:10% E-S:43% S-W:11% W-N:36% Calm:0%



Wind of SAW0 at 2018/09 NO=720(100%)
 MEAN=5.0m/s MAX=20.8m/s(SSE)
 N-E:9% E-S:40% S-W:7% W-N:44% Calm:0%



Wind of SAW0 at 2018/10 NO=744(100%)
 MEAN=4.5m/s MAX=10.6m/s(NW)
 N-E:14% E-S:4% S-W:15% W-N:67% Calm:0%



Wind of SAW0 at 2018/11 NO=720(100%)
 MEAN=3.6m/s MAX=10.9m/s(ENE)
 N-E:14% E-S:16% S-W:21% W-N:49% Calm:0%

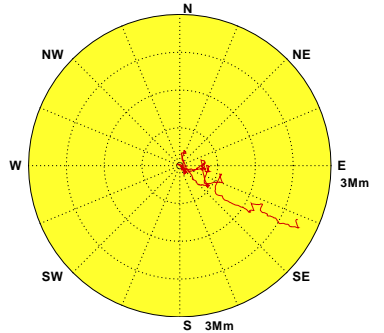


圖 1.6.1 2018年宜蘭海域每月 W 站修補前觀測風力向量行進圖

W17CSAW0.1H0 W181SAW0.1H0 W182SAW0.1H0 W183SAW0.1H0 W184SAW0.1H0 W185SAW0.1H0
 W186SAW0.1H0 W187SAW0.1H0 W188SAW0.1H0 W189SAW0.1H0 W18ASAW0.1H0 W18BSAW0.1H0

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Progressive Vector Diagram of Wind

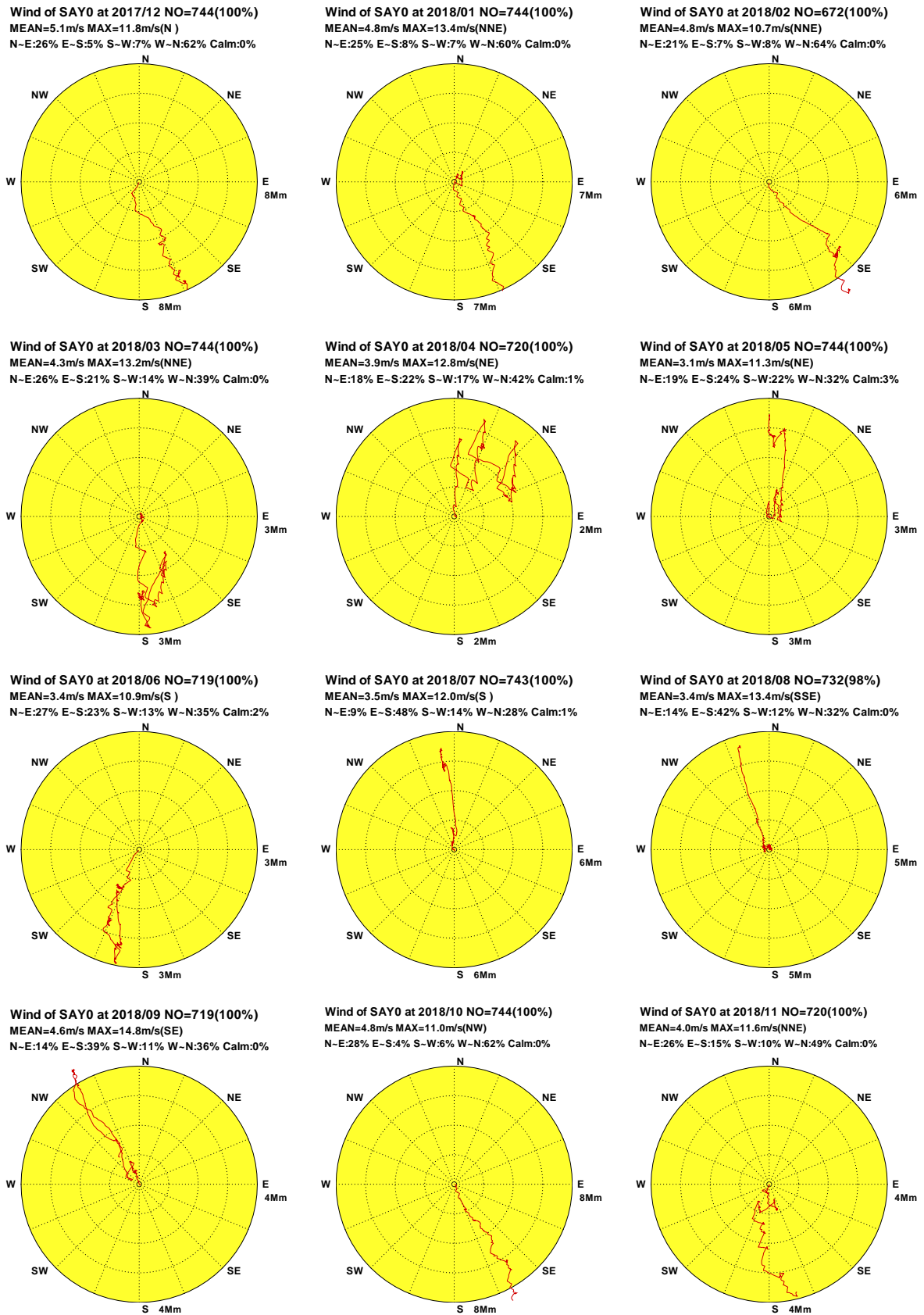


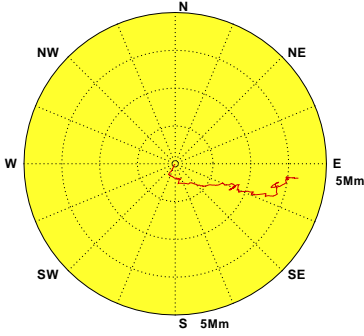
圖1.6.2 2018年宜蘭海域每月 Y 站修補前觀測風力向量行進圖

W17CSAY0.1H0 W181SAY0.1H0 W182SAY0.1H0 W183SAY0.1H0 W184SAY0.1H0 W185SAY0.1H0
W186SAY0.1H0 W187SAY0.1H0 W188SAY0.1H0 W189SAY0.1H0 W18ASAY0.1H0 W18BSAY0.1H0

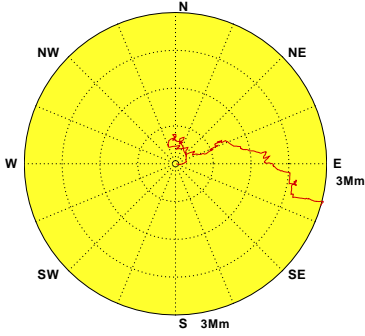
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Progressive Vector Diagram of Wind

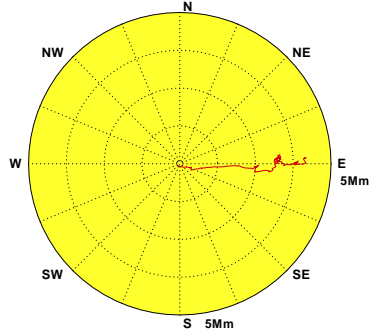
Wind of SAE0 at 2017/12 NO=744(100%)
MEAN=3.1m/s MAX=7.7m/s(ENE)
N-E:18% E-S:5% S-W:45% W-N:31% Calm:1%



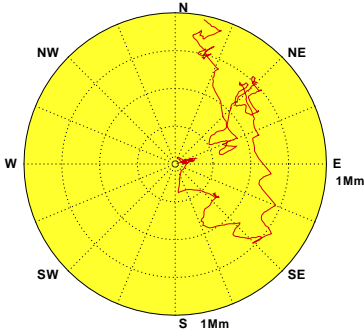
Wind of SAE0 at 2018/01 NO=744(100%)
MEAN=2.9m/s MAX=6.5m/s(W)
N-E:20% E-S:11% S-W:36% W-N:31% Calm:2%



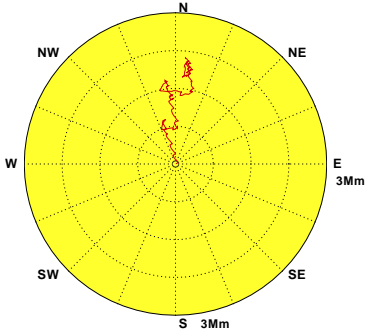
Wind of SAE0 at 2018/02 NO=672(100%)
MEAN=3.2m/s MAX=7.8m/s(SE)
N-E:16% E-S:7% S-W:50% W-N:26% Calm:1%



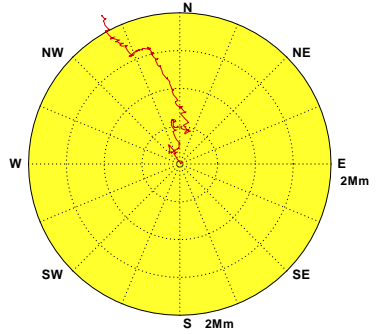
Wind of SAE0 at 2018/03 NO=744(100%)
MEAN=2.7m/s MAX=9.1m/s(ENE)
N-E:21% E-S:24% S-W:39% W-N:13% Calm:3%



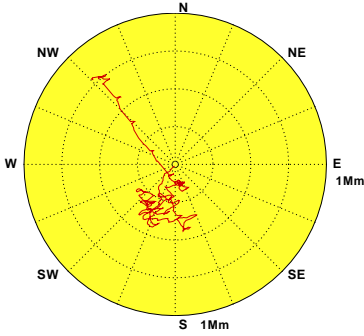
Wind of SAE0 at 2018/04 NO=720(100%)
MEAN=2.6m/s MAX=8.9m/s(NE)
N-E:15% E-S:25% S-W:45% W-N:9% Calm:6%



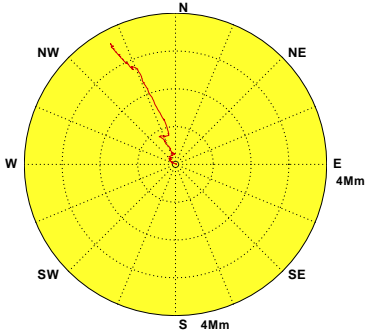
Wind of SAE0 at 2018/05 NO=744(100%)
MEAN=2.1m/s MAX=7.8m/s(SE)
N-E:16% E-S:29% S-W:35% W-N:10% Calm:10%



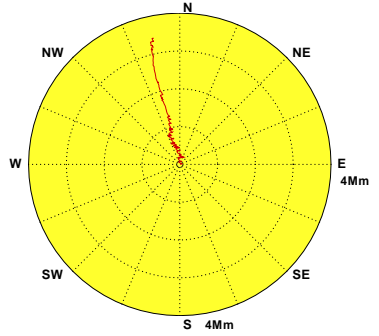
Wind of SAE0 at 2018/06 NO=720(100%)
MEAN=2.3m/s MAX=8.0m/s(ENE)
N-E:25% E-S:23% S-W:33% W-N:17% Calm:2%



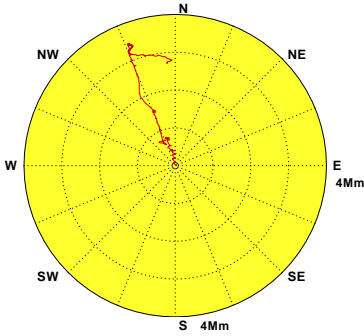
Wind of SAE0 at 2018/07 NO=744(100%)
MEAN=2.1m/s MAX=9.3m/s(SSE)
N-E:8% E-S:45% S-W:20% W-N:7% Calm:20%



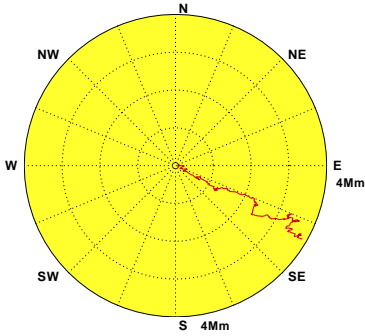
Wind of SAE0 at 2018/08 NO=744(100%)
MEAN=2.6m/s MAX=10.4m/s(S)
N-E:7% E-S:40% S-W:41% W-N:11% Calm:1%



Wind of SAE0 at 2018/09 NO=720(100%)
MEAN=3.2m/s MAX=10.2m/s(SSE)
N-E:10% E-S:35% S-W:34% W-N:19% Calm:2%



Wind of SAE0 at 2018/10 NO=744(100%)
MEAN=2.9m/s MAX=7.3m/s(NW)
N-E:22% E-S:6% S-W:28% W-N:43% Calm:1%



Wind of SAE0 at 2018/11 NO=720(100%)
MEAN=2.6m/s MAX=8.5m/s(E)
N-E:22% E-S:15% S-W:35% W-N:27% Calm:1%

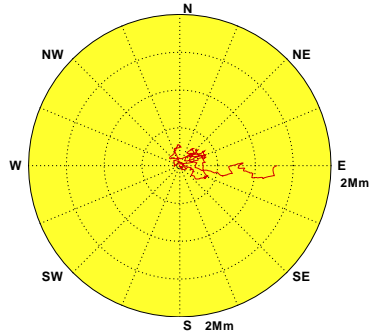


圖1.6.3 2018年宜蘭海域每月 E 站修補前觀測風力向量行進圖

W17CSAE0.1H0 W181SAE0.1H0 W182SAE0.1H0 W183SAE0.1H0 W184SAE0.1H0 W185SAE0.1H0
W186SAE0.1H0 W187SAE0.1H0 W188SAE0.1H0 W189SAE0.1H0 W18ASAE0.1H0 W18BSAE0.1H0

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Progressive Vector Diagram of Wind

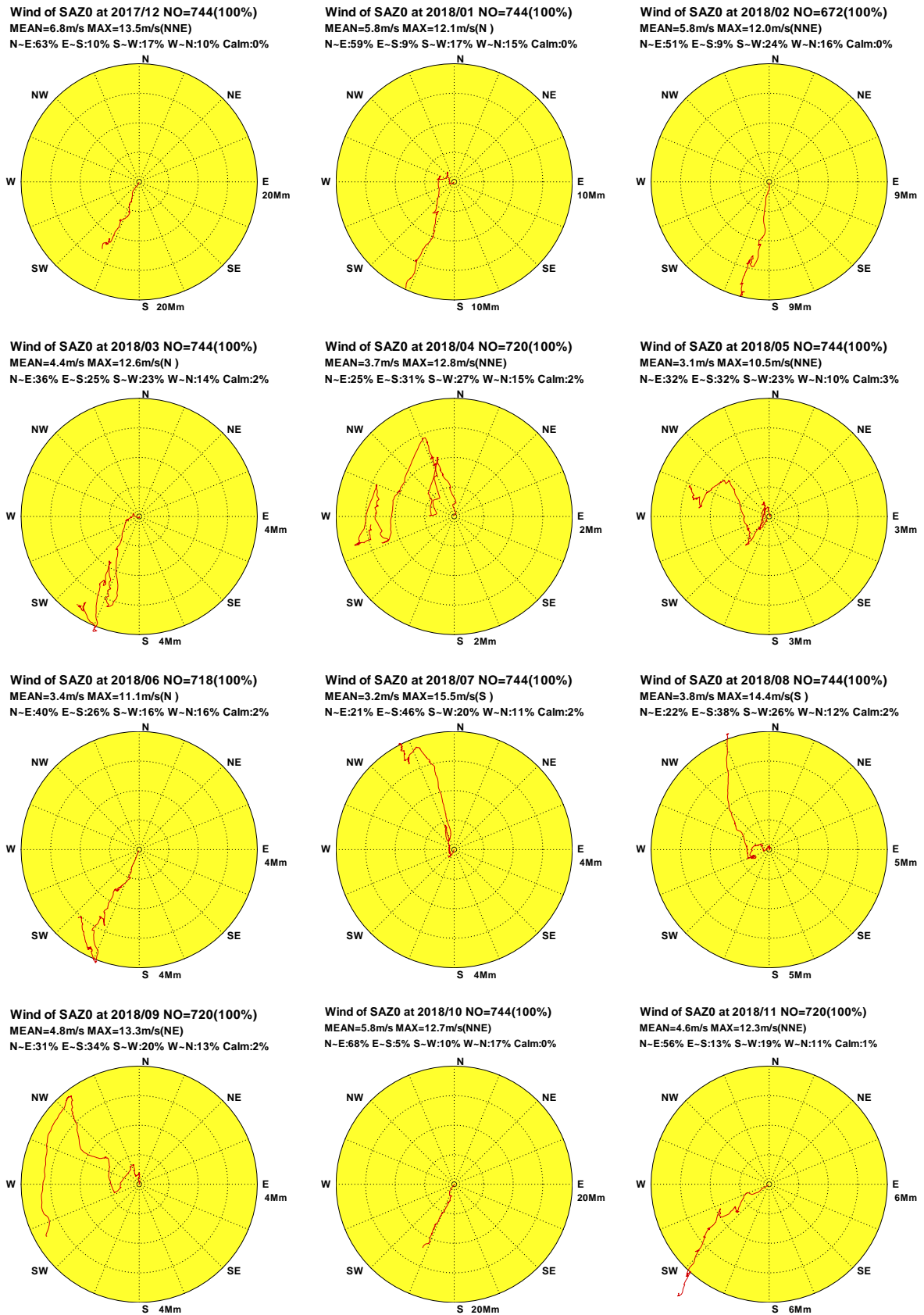


圖1.6.4 2018年宜蘭海域每月Z站修補前觀測風力向量行進圖

W17CSAZ0.1H0 W181SAZ0.1H0 W182SAZ0.1H0 W183SAZ0.1H0 W184SAZ0.1H0 W185SAZ0.1H0
 W186SAZ0.1H0 W187SAZ0.1H0 W188SAZ0.1H0 W189SAZ0.1H0 W18ASAZ0.1H0 W18BSAZ0.1H0

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Progressive Vector Diagram of Wind

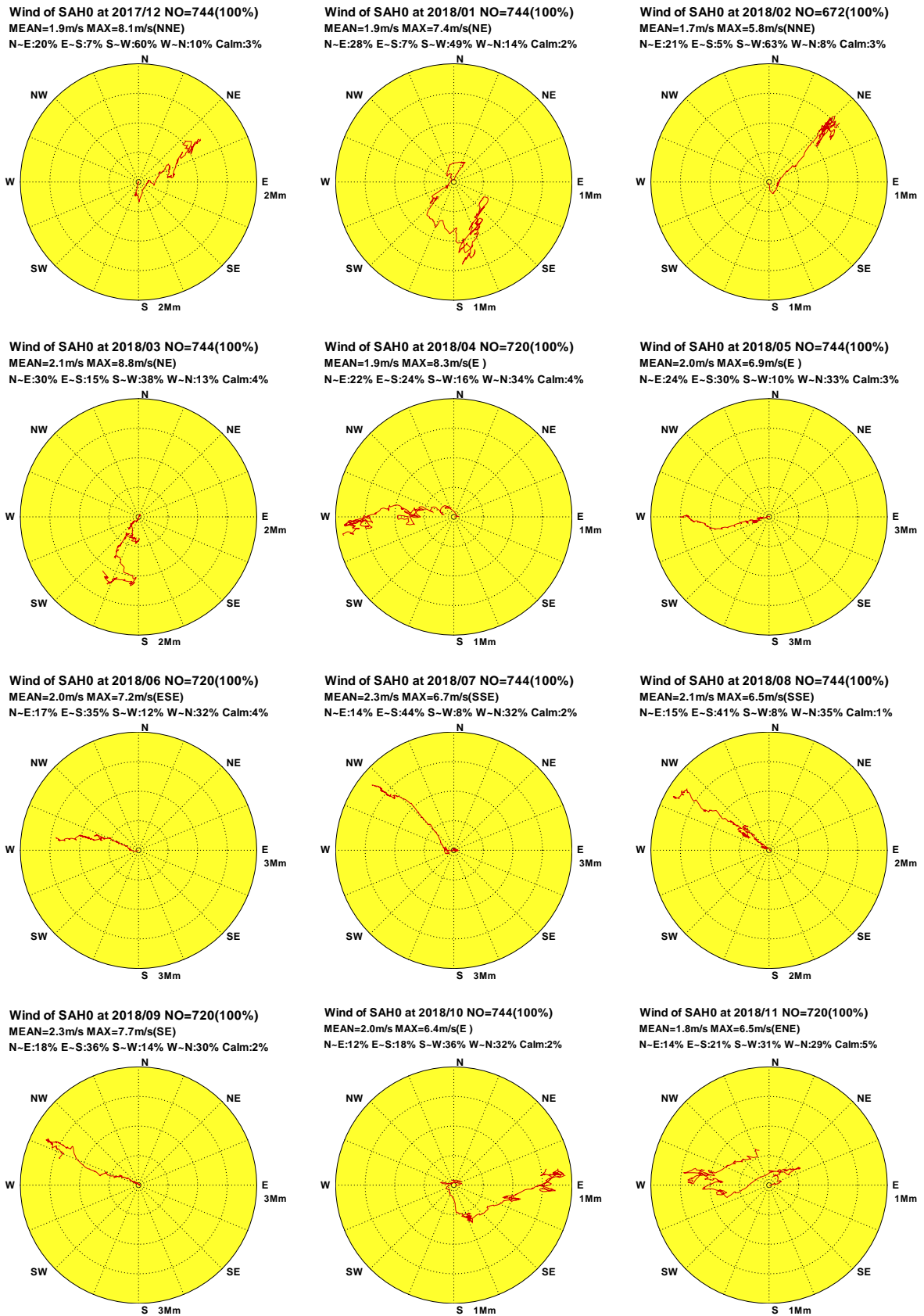


圖1.6.5 2018年宜蘭海域每月 H 站修補前觀測風力向量行進圖

W17CSAH0.1H0 W181SAH0.1H0 W182SAH0.1H0 W183SAH0.1H0 W184SAH0.1H0 W185SAH0.1H0
W186SAH0.1H0 W187SAH0.1H0 W188SAH0.1H0 W189SAH0.1H0 W18ASAH0.1H0 W18BSAH0.1H0

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Progressive Vector Diagram of Wind

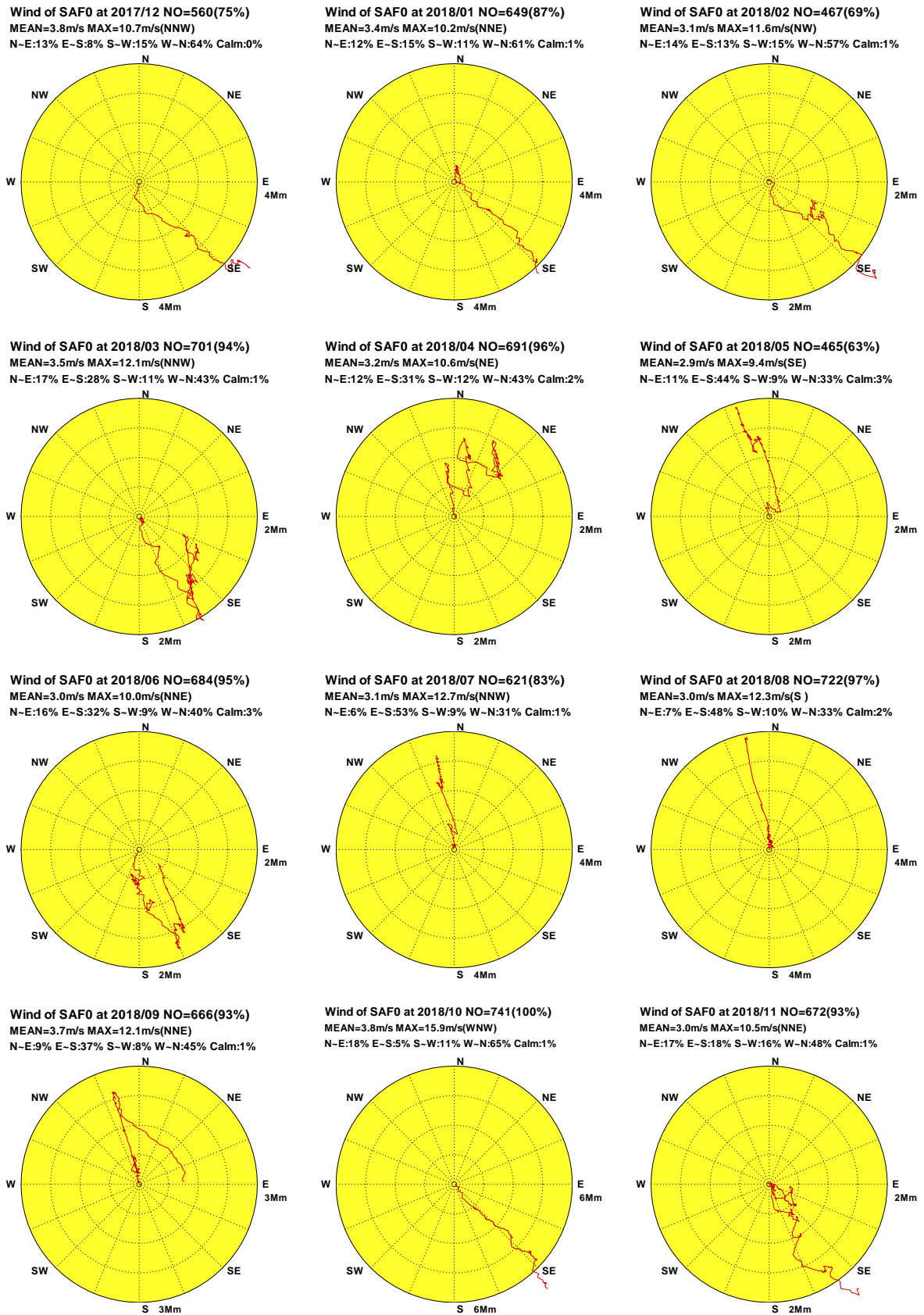


圖1.6.6 2018年宜蘭海域每月 F 站修補前觀測風力向量行進圖

W17CSAF0.1H0 W181SAF0.1H0 W182SAF0.1H0 W183SAF0.1H0 W184SAF0.1H0 W185SAF0.1H0
 W186SAF0.1H0 W187SAF0.1H0 W188SAF0.1H0 W189SAF0.1H0 W18ASAF0.1H0 W18BSAF0.1H0

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第二章 2018 年宜蘭海域觀測波浪資料年報

宜蘭海域波浪之觀測包括測站 X、測站 Y 及測站 Z 等 3 個測站(測站位置如第 0 章圖 VS1)。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 年宜蘭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 年宜蘭海域**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 年宜蘭海域**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 年宜蘭海域**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 年宜蘭海域**各測站修補前**每月波高向量分佈圖。

表 2.1.1a 2018年每月宜蘭海域修補前各測站觀測波浪資料紀錄表

海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域
年月/測站	X	Y	Z	R								
2017/12月	521(70.0%)	744(100%)	742(99.7%)	*	*	*	*	*	*	*	*	*
2018/ 1月	146(19.6%)	744(100%)	740(99.5%)	*	*	*	*	*	*	*	*	*
2018/ 2月	607(90.3%)	672(100%)	672(100%)	*	*	*	*	*	*	*	*	*
2018/ 3月	681(91.5%)	744(100%)	743(99.9%)	*	*	*	*	*	*	*	*	*
2018/ 4月	657(91.3%)	720(100%)	717(99.6%)	*	*	*	*	*	*	*	*	*
2018/ 5月	727(97.7%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 6月	701(97.4%)	719(99.9%)	717(99.6%)	*	*	*	*	*	*	*	*	*
2018/ 7月	739(99.3%)	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 8月	155(20.8%)	412(55.4%)	744(100%)	*	*	*	*	*	*	*	*	*
2018/ 9月	699(97.1%)	715(99.3%)	720(100%)	*	*	*	*	*	*	*	*	*
2018/10月	*	739(99.3%)	743(99.9%)	*	*	*	*	*	*	*	*	*
2018/11月	*	713(99.0%)	717(99.6%)	*	*	*	*	*	*	*	*	*
2018/冬季	1274(59.0%)	2160(100%)	2154(99.7%)	*	*	*	*	*	*	*	*	*
2018/春季	2065(93.5%)	2208(100%)	2204(99.8%)	*	*	*	*	*	*	*	*	*
2018/夏季	1595(72.2%)	1875(84.9%)	2205(99.9%)	*	*	*	*	*	*	*	*	*
2018/秋季	699(32.0%)	2167(99.2%)	2180(99.8%)	*	*	*	*	*	*	*	*	*
2018/整年	5633(64.3%)	8410(96.0%)	8743(99.8%)	*	*	*	*	*	*	*	*	*
起始年月	2017/12	2017/12	2017/12	*	*	*	*	*	*	*	*	*
結束年月	2018/09	2018/11	2018/11	*	*	*	*	*	*	*	*	*

2-1-3

表 2.1.1b 2018年每月宜蘭海域修補後各測站波浪資料紀錄表

海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域
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年宜蘭海域主要測站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%	1.72	2.9/ 9.0/E	8.7	11.1	.0	37.9	62.1	.0	.0	24.2	67.3	8.5	100%	66.7	33.3	.0	.0	ENE/55%
2018/01	100%	1.44	2.8/10.4/ESE	8.7	11.3	.0	68.1	31.9	.0	.0	14.1	82.5	3.4	100%	26.2	73.7	.1	.0	ESE/35%
2018/02	100%	1.45	2.4/ 9.7/ENE	8.8	11.1	.0	56.0	44.0	.0	1.0	20.5	70.5	7.9	100%	75.6	24.4	.0	.0	ENE/58%
2018/03	100%	1.31	2.2/ 9.6/E	8.8	12.3	.0	72.0	28.0	.0	11.4	18.8	41.3	28.5	100%	58.7	41.3	.0	.0	E /42%
2018/04	100%	1.11	2.0/10.0/ENE	8.8	12.7	.0	84.9	15.1	.0	6.7	25.0	46.8	21.5	100%	37.4	62.1	.6	.0	E /37%
2018/05	100%	.87	2.0/10.0/ESE	8.8	15.1	7.8	90.5	1.7	.0	9.1	11.2	56.5	23.3	100%	35.2	59.8	4.8	.1	SE /22%
2018/06	100%	1.06	2.2/ 9.8/ESE	7.7	10.7	1.8	78.3	19.9	.0	15.4	35.7	46.7	2.2	100%	28.9	44.3	26.1	.7	S /15%
2018/07	100%	1.21	6.0/15.3/ENE	8.6	17.7	11.4	67.5	18.0	3.1	3.4	43.1	37.4	16.1	100%	28.2	51.9	18.5	1.3	ESE/17%
2018/08	100%	1.12	3.3/12.1/E	8.8	12.8	12.0	69.0	18.7	.4	1.5	23.0	60.6	14.9	100%	16.4	79.8	3.8	.0	SE /25%
2018/09	100%	1.78	7.4/16.3/SE	10.5	17.7	9.4	45.8	23.1	21.7	1.5	25.6	24.6	48.3	100%	41.4	50.8	7.4	.4	E /27%
2018/10	100%	1.51	3.4/14.1/ESE	9.4	15.2	.0	55.1	43.5	1.3	.0	24.9	44.2	30.9	100%	17.9	81.9	.1	.1	ESE/47%
2018/11	100%	1.39	2.7/ 9.7/E	8.4	10.8	.0	73.1	26.9	.0	.0	28.5	69.9	1.7	100%	37.9	62.1	.0	.0	E /55%
2018/冬	100%	1.54	2.9/ 9.0/E	8.7	11.3	.0	53.9	46.1	.0	.3	19.6	73.6	6.5	100%	55.5	44.4	.0	.0	ENE/43%
2018/春	100%	1.10	2.2/ 9.6/E	8.8	15.1	2.6	82.4	14.9	.0	9.1	18.3	48.2	24.5	100%	43.8	54.3	1.8	.0	E /30%
2018/夏	100%	1.13	6.0/15.3/ENE	8.4	17.7	8.5	71.5	18.8	1.2	6.7	33.9	48.2	11.2	100%	24.5	58.8	16.0	.7	SE /16%
2018/秋	100%	1.56	7.4/16.3/SE	9.4	17.7	3.1	58.0	31.3	7.6	.5	26.3	46.2	27.0	100%	32.2	65.1	2.5	.2	E /43%
2018/年	100%	1.33	7.4/16.3/SE	8.8	17.7	3.6	66.6	27.7	2.2	4.2	24.5	54.0	17.3	100%	38.9	55.7	5.1	.2	E /28%

2-1-5

表2.1.3 2018年宜蘭海域主要測站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%	1.74	3.7/ 7.4/ENE	6.3	7.9	.0	41.1	56.5	2.4	27.7	72.3	.0	.0	100%	73.7	26.3	.0	.0	ENE/39%
2018/01	100%	1.43	3.6/ 8.3/ENE	6.2	8.3	.0	66.8	32.9	.3	31.2	68.7	.1	.0	100%	65.3	34.5	.1	.0	NE /32%
2018/02	100%	1.44	3.2/ 7.7/NE	6.3	8.8	.0	56.3	43.6	.1	35.4	62.2	2.4	.0	100%	70.1	29.9	.0	.0	NE /42%
2018/03	100%	1.14	2.9/ 7.1/ENE	6.0	8.7	.3	77.4	22.3	.0	51.3	46.5	2.2	.0	100%	40.5	59.5	.0	.0	ESE/29%
2018/04	100%	.89	2.5/ 6.4/NE	5.8	8.6	7.1	83.8	9.2	.0	62.1	37.1	.8	.0	100%	32.5	67.5	.0	.0	ESE/30%
2018/05	100%	.66	1.8/ 6.0/ENE	5.5	9.5	33.6	65.5	.9	.0	67.2	29.8	3.0	.0	100%	33.7	66.3	.0	.0	ESE/28%
2018/06	100%	.82	2.8/ 6.9/NE	5.6	8.3	30.6	60.3	9.2	.0	64.9	34.3	.8	.0	100%	33.5	66.5	.0	.0	ESE/23%
2018/07	100%	.88	5.6/11.8/E	6.2	11.8	22.6	68.8	7.3	1.3	43.4	52.2	3.4	1.1	100%	26.5	73.4	.0	.1	ESE/38%
2018/08	100%	.77	2.5/ 8.7/NE	6.0	9.1	24.7	69.5	5.8	.0	37.5	62.0	.5	.0	100%	37.1	62.8	.0	.1	ESE/30%
2018/09	100%	1.42	5.2/11.3/NE	6.9	11.7	25.1	38.8	23.5	12.6	37.1	37.5	20.4	5.0	100%	43.9	56.0	.1	.0	E /28%
2018/10	100%	1.44	3.6/ 9.2/ENE	6.3	10.3	.3	58.5	39.7	1.6	45.6	41.1	12.6	.7	100%	86.7	13.0	.1	.1	ENE/43%
2018/11	100%	1.26	3.4/ 7.4/ENE	6.1	8.6	1.1	75.1	23.5	.3	43.2	56.4	.4	.0	100%	79.2	20.8	.0	.0	ENE/42%
2018/冬	100%	1.54	3.7/ 7.4/ENE	6.3	8.8	.0	54.7	44.4	1.0	31.3	67.9	.8	.0	100%	69.7	30.3	.0	.0	NE /35%
2018/春	100%	.90	2.9/ 7.1/ENE	5.8	9.5	13.7	75.5	10.8	.0	60.2	37.8	2.0	.0	100%	35.6	64.4	.0	.0	ESE/29%
2018/夏	100%	.82	5.6/11.8/E	5.9	11.8	25.9	66.3	7.4	.5	48.4	49.6	1.6	.4	100%	32.3	67.6	.0	.1	ESE/30%
2018/秋	100%	1.38	5.2/11.3/NE	6.4	11.7	8.7	57.5	29.0	4.8	42.0	45.0	11.2	1.9	100%	70.1	29.8	.1	.0	ENE/34%
2018/年	100%	1.16	5.6/11.8/E	6.1	11.8	12.2	63.5	22.8	1.6	45.6	50.0	3.9	.6	100%	51.8	48.2	.0	.0	ENE/26%

Wave H_s in Yi-Lan Seas of SAX0 at 2018

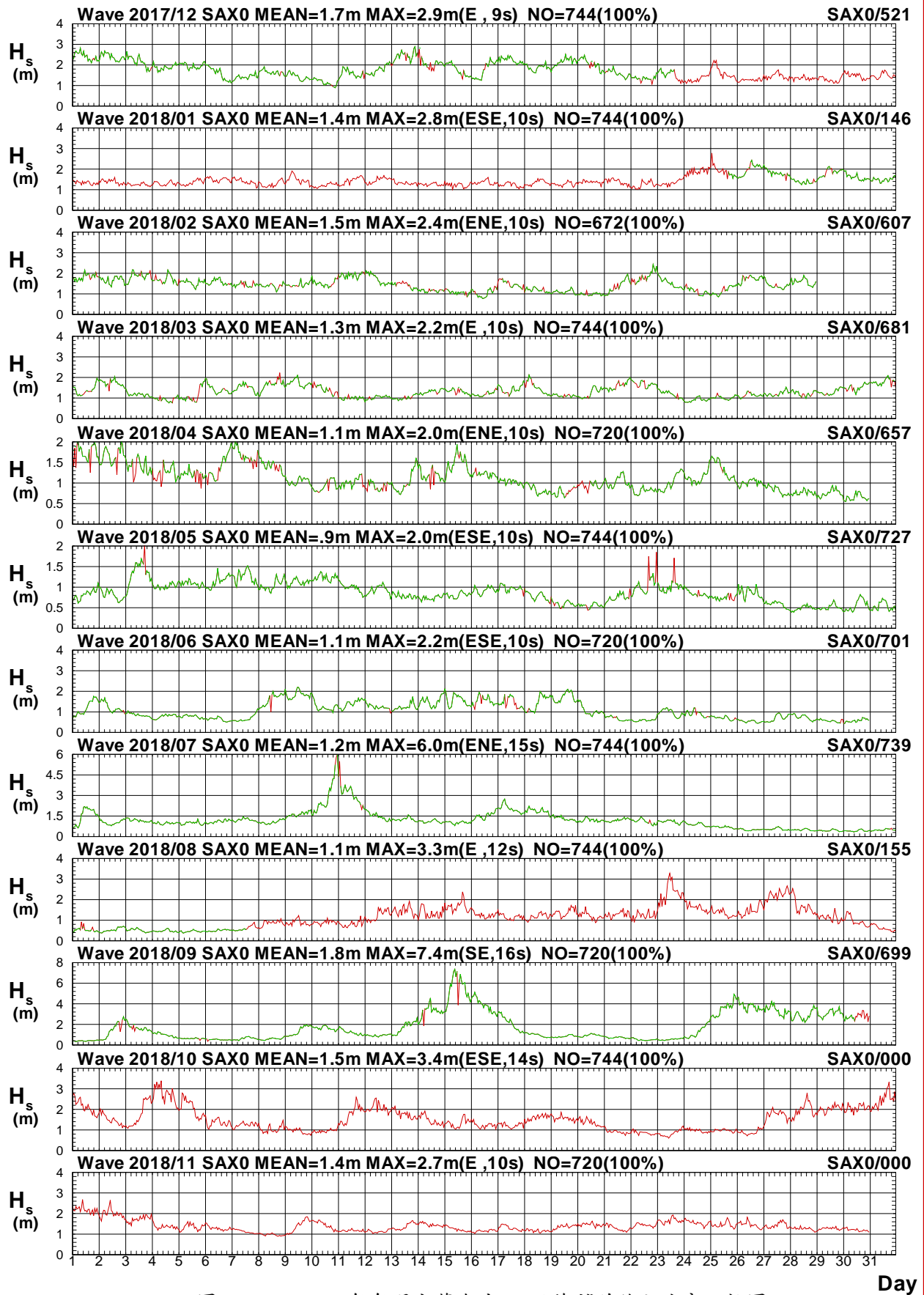


圖2.1.1a 2018年每月宜蘭海域 X 站修補前後之波高比較圖

V17CSAX0.1HA V17CSAX0.1HO V181SAX0.1HA V181SAX0.1HO V182SAX0.1HA V182SAX0.1HO
 V183SAX0.1HA V183SAX0.1HO V184SAX0.1HA V184SAX0.1HO V185SAX0.1HA V185SAX0.1HO

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Wave T_p in Yi-Lan Seas of SAX0 at 2018

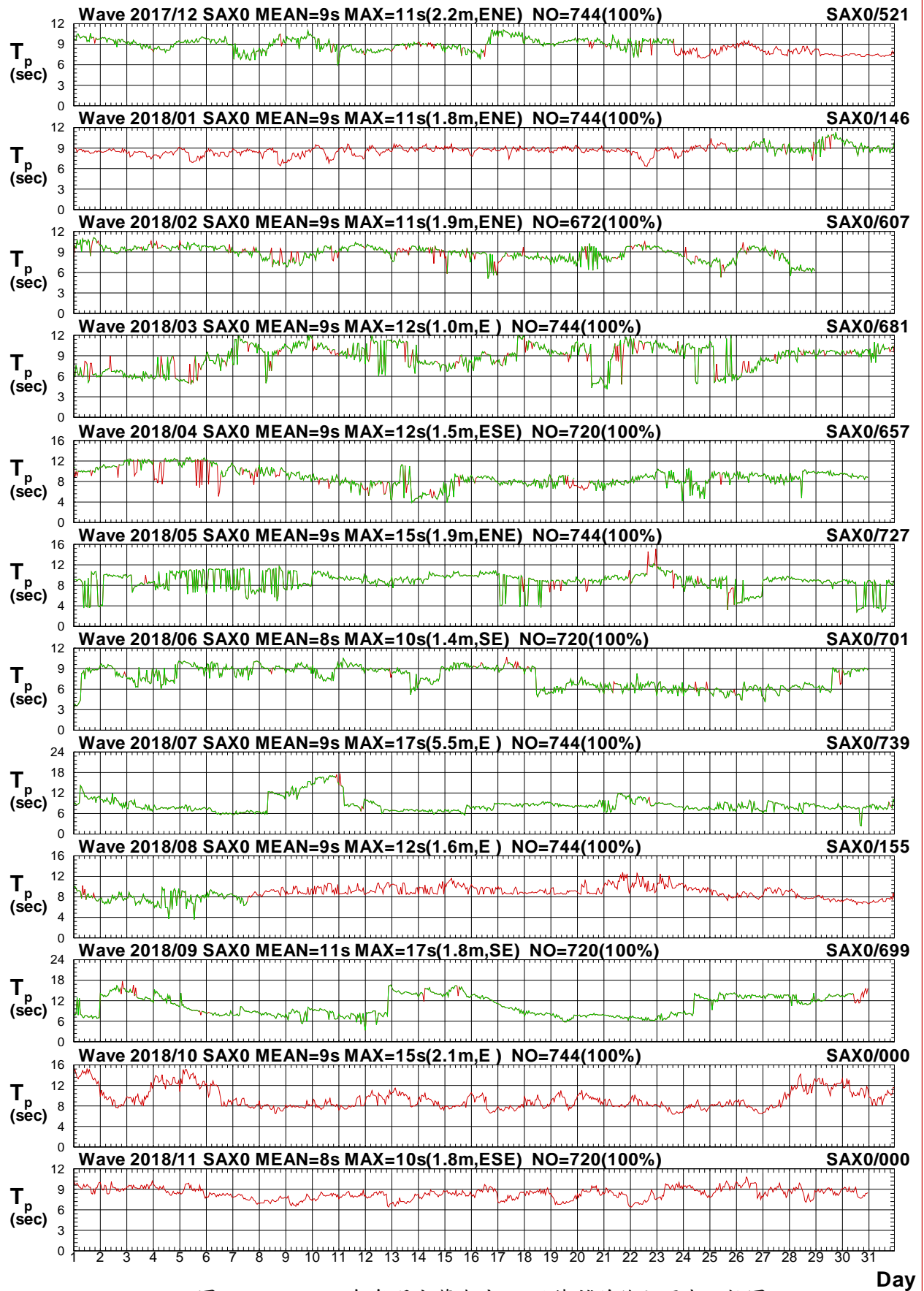


圖2.1.1b 2018年每月宜蘭海域 X 站修補前後之週期比較圖

V17CSAX0.1HA V17CSAX0.1HO V181SAX0.1HA V181SAX0.1HO V182SAX0.1HA V182SAX0.1HO
 V183SAX0.1HA V183SAX0.1HO V184SAX0.1HA V184SAX0.1HO V185SAX0.1HA V185SAX0.1HO

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Wave Direction in Yi-Lan Seas of SAX0 at 2018

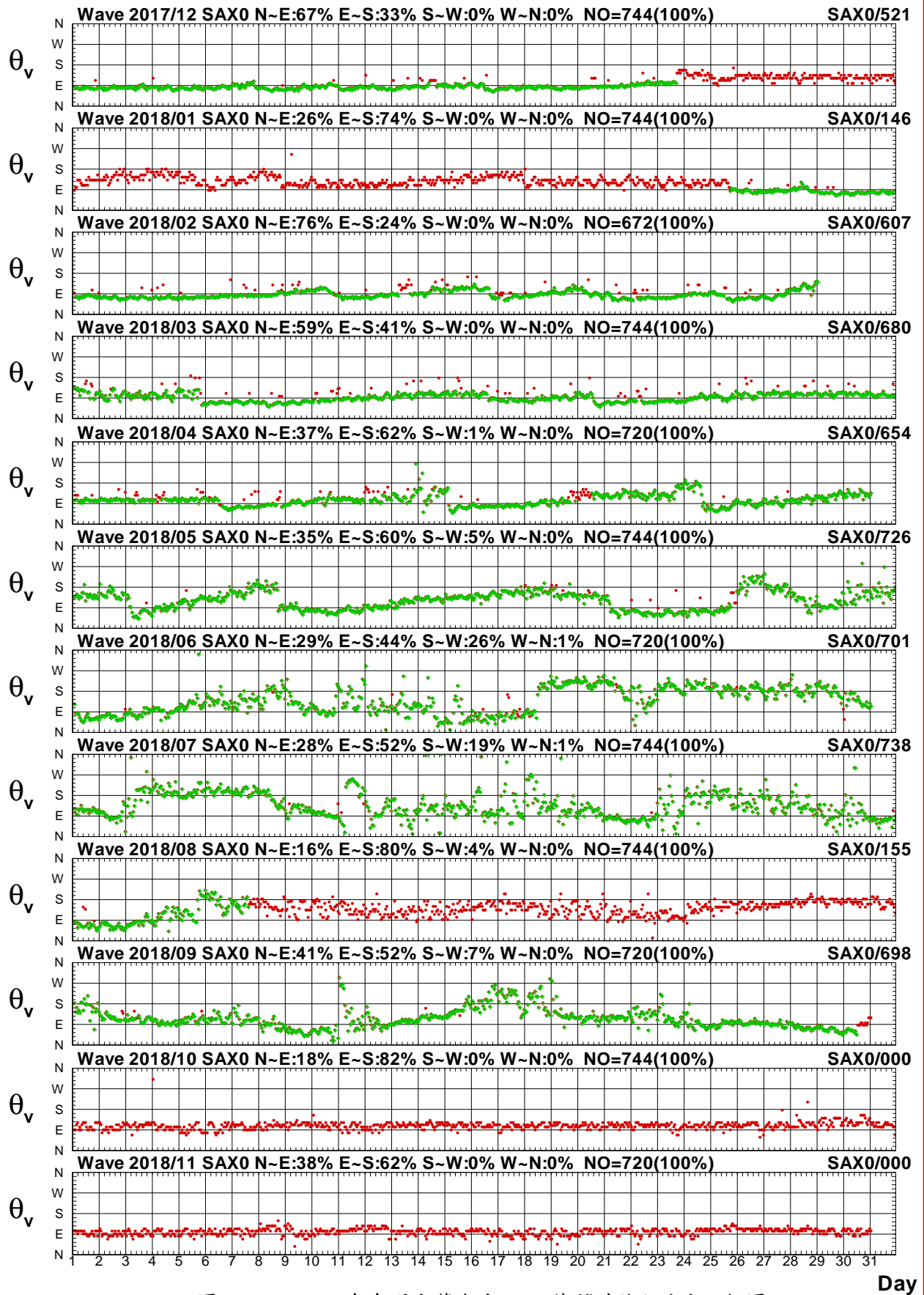


圖2.1.1c 2018年每月宜蘭海域 X 站修補前後之波向比較圖

V17CSAX0.1HA V17CSAX0.1HO V181SAX0.1HA V181SAX0.1HO V182SAX0.1HA V182SAX0.1HO
 V183SAX0.1HA V183SAX0.1HO V184SAX0.1HA V184SAX0.1HO V185SAX0.1HA V185SAX0.1HO

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Wave H_s in Yi-Lan Seas of SAY0 at 2018

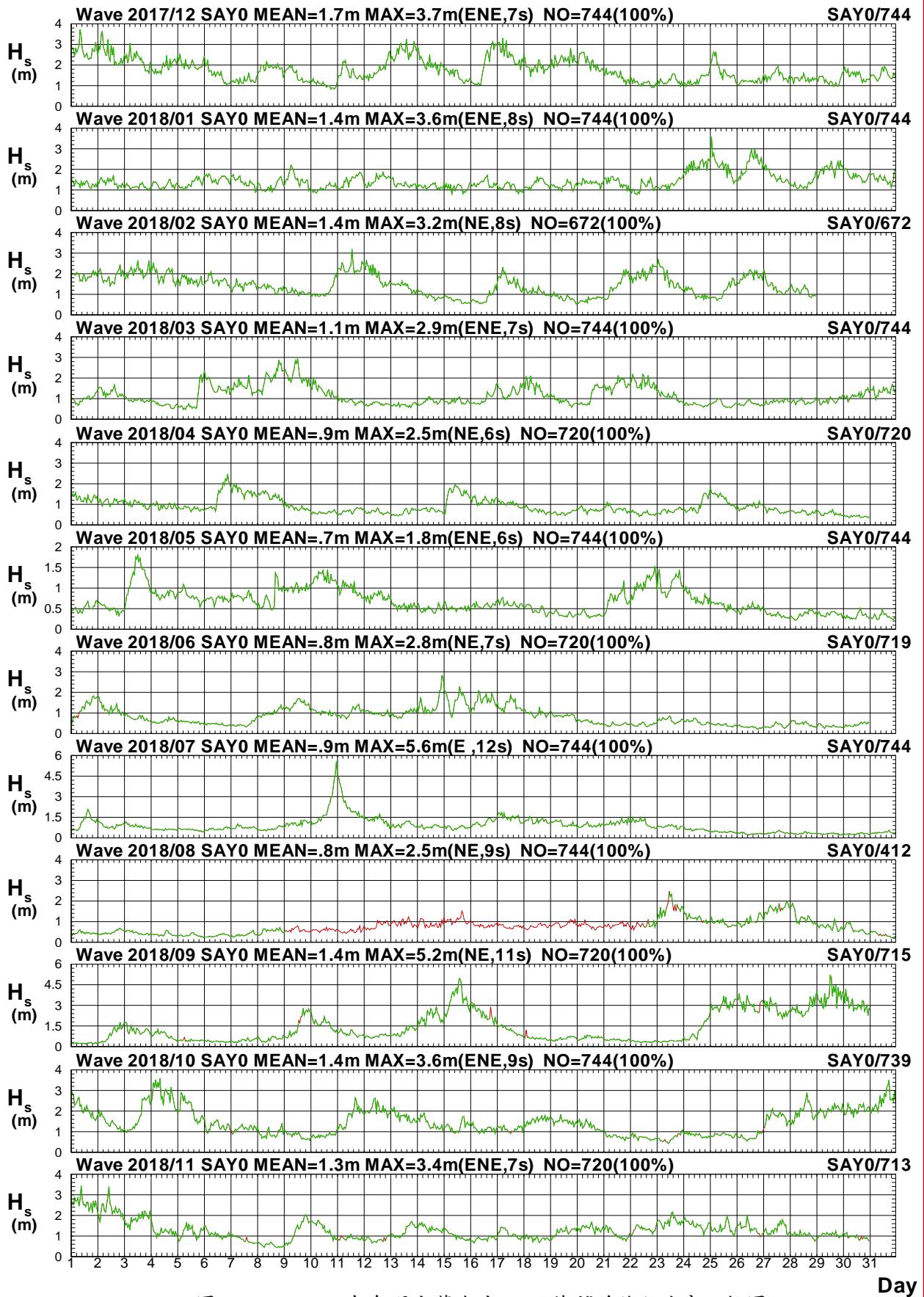


圖2.1.2a 2018年每月宜蘭海域 Y 站修補前後之波高比較圖

V17CSAY0.1HA V17CSAY0.1HO V181SAY0.1HA V181SAY0.1HO V182SAY0.1HA V182SAY0.1HO
 V183SAY0.1HA V183SAY0.1HO V184SAY0.1HA V184SAY0.1HO V185SAY0.1HA V185SAY0.1HO

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Wave T_p in Yi-Lan Seas of SAY0 at 2018

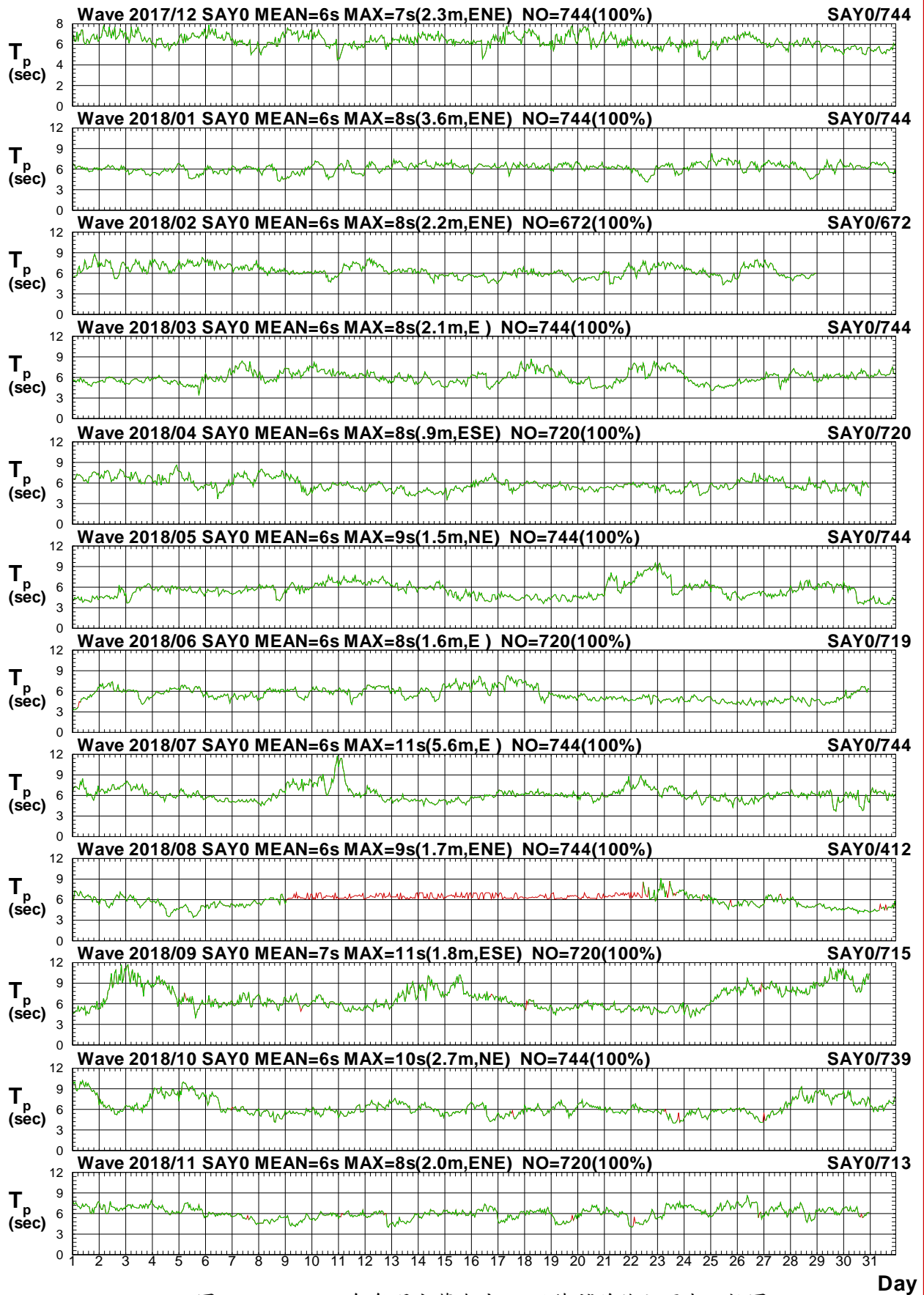


圖2.1.2b 2018年每月宜蘭海域 Y 站修補前後之週期比較圖

V17CSAY0.1HA V17CSAY0.1HO V181SAY0.1HA V181SAY0.1HO V182SAY0.1HA V182SAY0.1HO
 V183SAY0.1HA V183SAY0.1HO V184SAY0.1HA V184SAY0.1HO V185SAY0.1HA V185SAY0.1HO

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Wave Direction in Yi-Lan Seas of SAY0 at 2018

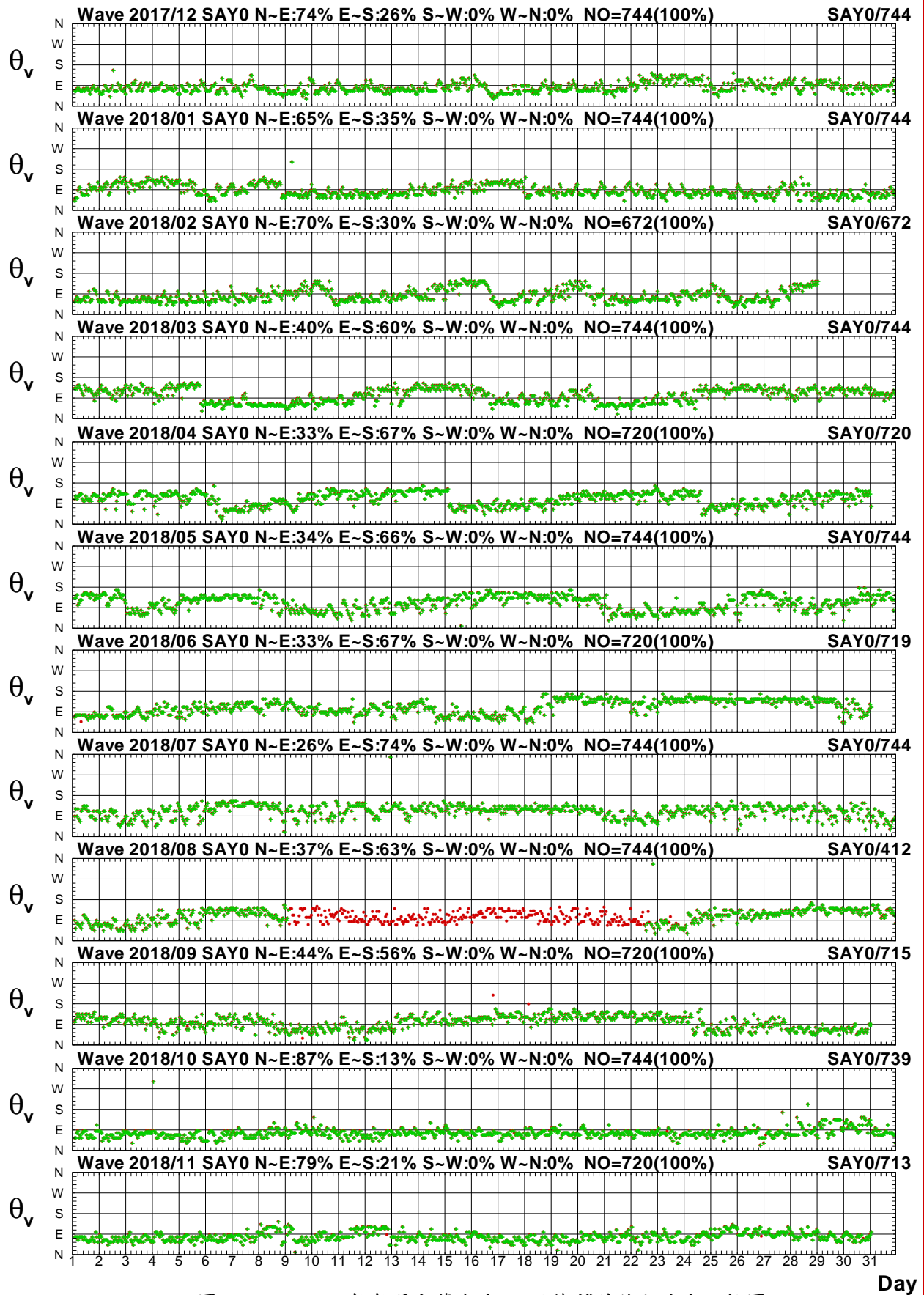


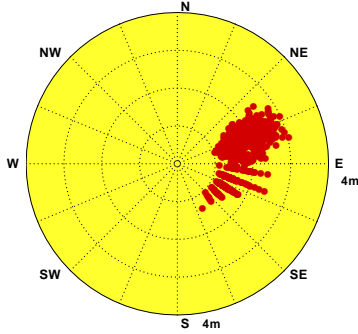
圖2.1.2c 2018年每月宜蘭海域 Y 站修補前後之波向比較圖

V17CSAY0.1HA V17CSAY0.1HO V181SAY0.1HA V181SAY0.1HO V182SAY0.1HA V182SAY0.1HO
 V183SAY0.1HA V183SAY0.1HO V184SAY0.1HA V184SAY0.1HO V185SAY0.1HA V185SAY0.1HO

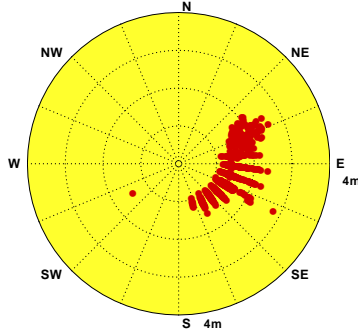
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Distribution of H_s Vectors

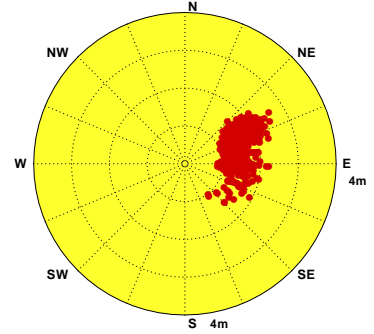
Wave of SAX0 at 2017/12 NO=744(100%)
 Hs : MEAN=1.7m MAX=2.9m(E, 9s)
 N-E:67% E-S:33% S-W:0% W-N:0%



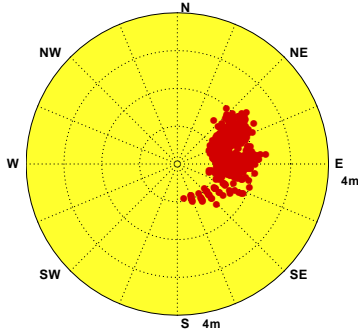
Wave of SAX0 at 2018/01 NO=744(100%)
 Hs : MEAN=1.4m MAX=2.8m(ESE,10s)
 N-E:26% E-S:74% S-W:0% W-N:0%



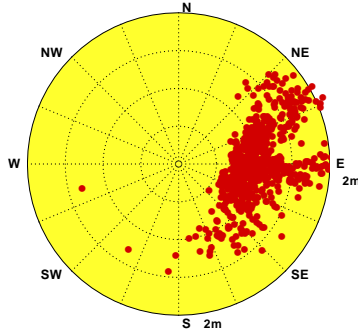
Wave of SAX0 at 2018/02 NO=672(100%)
 Hs : MEAN=1.5m MAX=2.4m(ENE,10s)
 N-E:76% E-S:24% S-W:0% W-N:0%



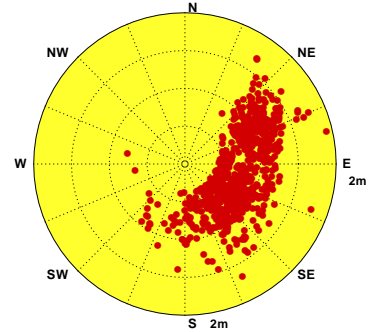
Wave of SAX0 at 2018/03 NO=744(100%)
 Hs : MEAN=1.3m MAX=2.2m(E, 10s)
 N-E:59% E-S:41% S-W:0% W-N:0%



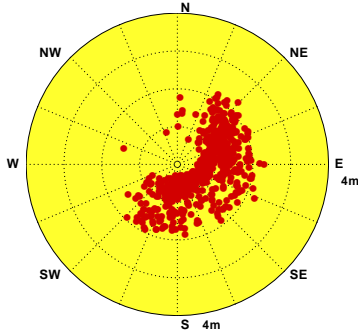
Wave of SAX0 at 2018/04 NO=720(100%)
 Hs : MEAN=1.1m MAX=2.0m(ENE,10s)
 N-E:37% E-S:62% S-W:1% W-N:0%



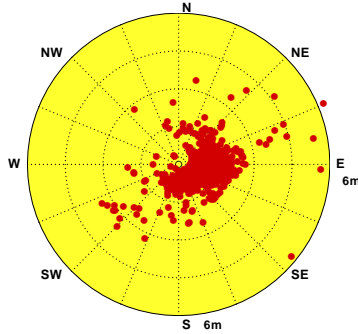
Wave of SAX0 at 2018/05 NO=744(100%)
 Hs : MEAN=.9m MAX=2.0m(ESE,10s)
 N-E:35% E-S:60% S-W:5% W-N:0%



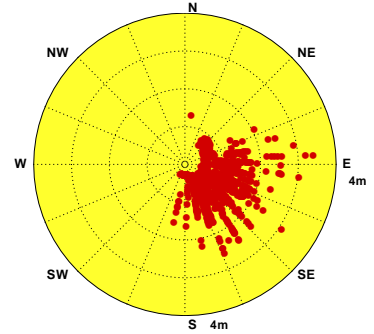
Wave of SAX0 at 2018/06 NO=720(100%)
 Hs : MEAN=1.1m MAX=2.2m(ESE,10s)
 N-E:29% E-S:44% S-W:26% W-N:1%



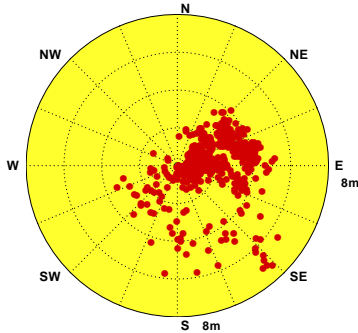
Wave of SAX0 at 2018/07 NO=744(100%)
 Hs : MEAN=1.2m MAX=6.0m(ENE,15s)
 N-E:28% E-S:52% S-W:19% W-N:1%



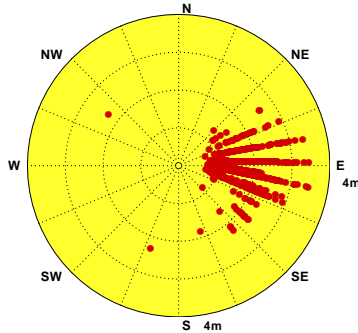
Wave of SAX0 at 2018/08 NO=744(100%)
 Hs : MEAN=1.1m MAX=3.3m(E, 12s)
 N-E:16% E-S:80% S-W:4% W-N:0%



Wave of SAX0 at 2018/09 NO=720(100%)
 Hs : MEAN=1.8m MAX=7.4m(SE,16s)
 N-E:41% E-S:52% S-W:7% W-N:0%



Wave of SAX0 at 2018/10 NO=744(100%)
 Hs : MEAN=1.5m MAX=3.4m(ESE,14s)
 N-E:18% E-S:82% S-W:0% W-N:0%



Wave of SAX0 at 2018/11 NO=720(100%)
 Hs : MEAN=1.4m MAX=2.7m(E, 10s)
 N-E:38% E-S:62% S-W:0% W-N:0%

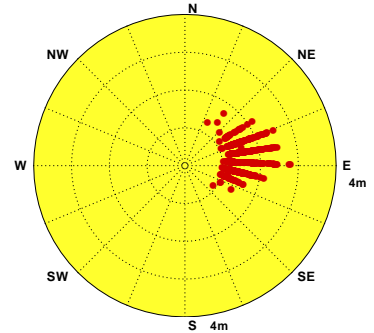


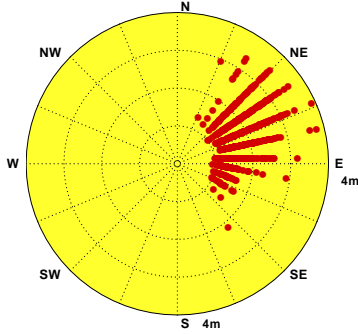
圖2.1.3 2018年宜蘭海域每月 X 站修補後觀測波高向量分佈圖

V17CSAX0.1HA V181SAX0.1HA V182SAX0.1HA V183SAX0.1HA V184SAX0.1HA V185SAX0.1HA
 V186SAX0.1HA V187SAX0.1HA V188SAX0.1HA V189SAX0.1HA V18ASAX0.1HA V18BSAX0.1HA

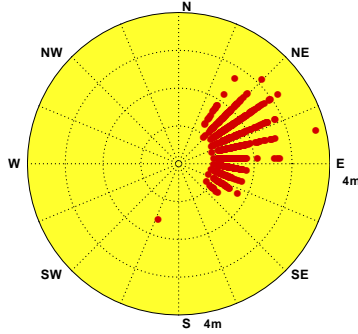
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Distribution of H_s Vectors

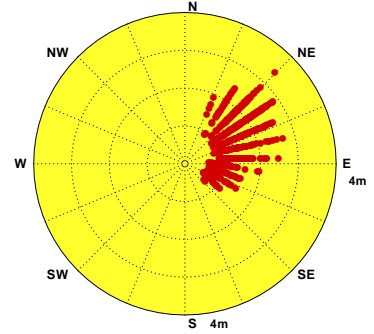
Wave of SAY0 at 2017/12 NO=744(100%)
Hs : MEAN=1.7m MAX=3.7m(ENE,7s)
N-E:74% E-S:26% S-W:0% W-N:0%



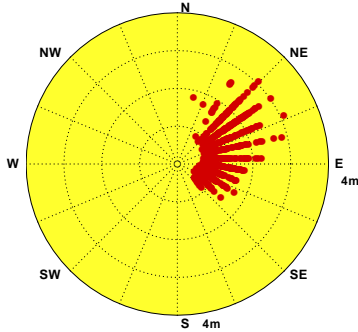
Wave of SAY0 at 2018/01 NO=744(100%)
Hs : MEAN=1.4m MAX=3.6m(ENE,8s)
N-E:65% E-S:35% S-W:0% W-N:0%



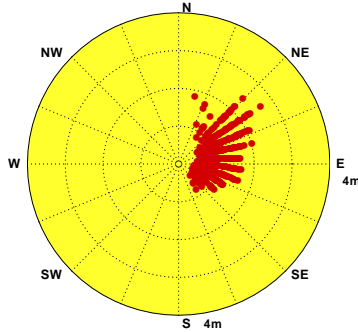
Wave of SAY0 at 2018/02 NO=672(100%)
Hs : MEAN=1.4m MAX=3.2m(NE,8s)
N-E:70% E-S:30% S-W:0% W-N:0%



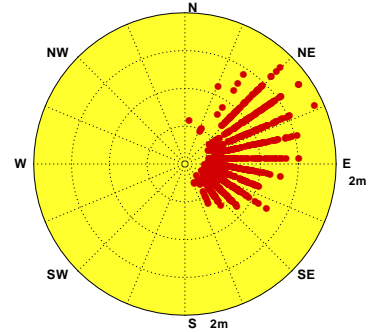
Wave of SAY0 at 2018/03 NO=744(100%)
Hs : MEAN=1.1m MAX=2.9m(ENE,7s)
N-E:40% E-S:60% S-W:0% W-N:0%



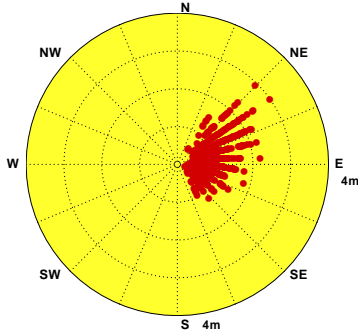
Wave of SAY0 at 2018/04 NO=720(100%)
Hs : MEAN=.9m MAX=2.5m(NE,6s)
N-E:33% E-S:67% S-W:0% W-N:0%



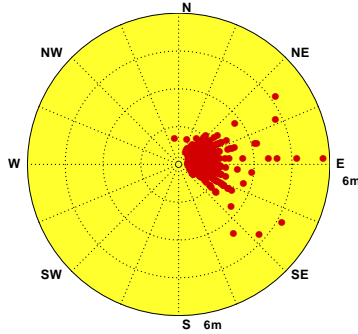
Wave of SAY0 at 2018/05 NO=744(100%)
Hs : MEAN=.7m MAX=1.8m(ENE,6s)
N-E:34% E-S:66% S-W:0% W-N:0%



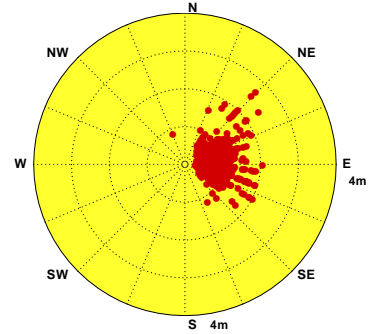
Wave of SAY0 at 2018/06 NO=720(100%)
Hs : MEAN=.8m MAX=2.8m(NE,7s)
N-E:33% E-S:67% S-W:0% W-N:0%



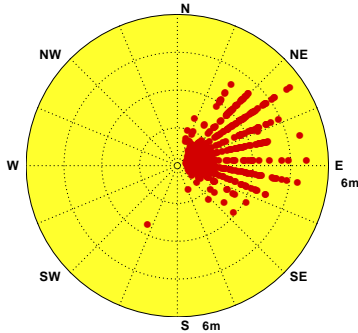
Wave of SAY0 at 2018/07 NO=744(100%)
Hs : MEAN=.9m MAX=5.6m(E,12s)
N-E:26% E-S:74% S-W:0% W-N:0%



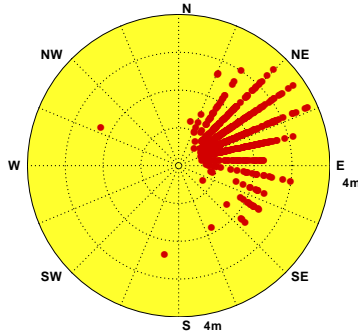
Wave of SAY0 at 2018/08 NO=744(100%)
Hs : MEAN=.8m MAX=2.5m(NE,9s)
N-E:37% E-S:63% S-W:0% W-N:0%



Wave of SAY0 at 2018/09 NO=720(100%)
Hs : MEAN=1.4m MAX=5.2m(NE,11s)
N-E:44% E-S:56% S-W:0% W-N:0%



Wave of SAY0 at 2018/10 NO=744(100%)
Hs : MEAN=1.4m MAX=3.6m(ENE,9s)
N-E:87% E-S:13% S-W:0% W-N:0%



Wave of SAY0 at 2018/11 NO=720(100%)
Hs : MEAN=1.3m MAX=3.4m(ENE,7s)
N-E:79% E-S:21% S-W:0% W-N:0%

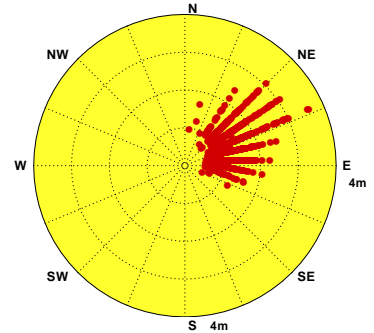


圖2.1.4 2018年宜蘭海域每月 Y 站修補後觀測波高向量分佈圖

V17CSAY0.1HA V181SAY0.1HA V182SAY0.1HA V183SAY0.1HA V184SAY0.1HA V185SAY0.1HA
V186SAY0.1HA V187SAY0.1HA V188SAY0.1HA V189SAY0.1HA V18ASAY0.1HA V18BSAY0.1HA

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2.2 2018 年宜蘭海域各測站修補前 波浪統計量統計表

表2.2.1 2018年宜蘭海域 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	波高 蒐集率	H_s 平均 (m)	H_s 最大 (m/s/來向)	T_p 平均 (s)	T_p 最大 (s)	小波 <0.5m (%)	小浪 ~1.5m (%)	中浪 ~3m (%)	大浪 >3m (%)	T_p <6s (%)	T_p 6~8s (%)	T_p 8~10s (%)	T_p >10s (%)	波向 蒐集率	波向 N~E (%)	波向 E~S (%)	波向 S~W (%)	波向 W~N (%)	主波向 (百分比) 來向/%
2017/12	70%	1.84	2.9/ 9.0/E	9.1	11.1	.0	23.6	76.4	.0	.0	11.1	76.8	12.1	70%	94.8	5.2	.0	.0	ENE/78%
2018/01	20%	1.68	2.4/ 8.8/ENE	9.2	11.3	.0	25.3	74.7	.0	.0	2.7	80.8	16.4	20%	97.3	2.7	.0	.0	ENE/82%
2018/02	90%	1.45	2.4/ 9.7/ENE	8.8	11.1	.0	57.2	42.8	.0	1.2	20.9	70.5	7.4	90%	80.7	19.3	.0	.0	ENE/64%
2018/03	92%	1.31	2.1/11.2/ENE	8.7	12.3	.0	72.0	28.0	.0	12.5	19.5	37.4	30.5	91%	63.1	36.9	.0	.0	E /44%
2018/04	91%	1.12	2.0/10.0/ENE	8.9	12.7	.0	83.9	16.1	.0	7.0	21.2	48.2	23.6	91%	40.7	58.7	.6	.0	E /40%
2018/05	98%	.87	1.7/ 8.4/ENE	8.8	12.2	7.7	91.1	1.2	.0	9.4	9.8	57.6	23.2	98%	36.0	59.0	5.0	.1	SE /22%
2018/06	97%	1.06	2.2/ 9.8/ESE	7.7	10.5	1.9	77.7	20.4	.0	15.7	35.7	46.6	2.0	97%	28.8	44.4	26.1	.7	S /15%
2018/07	99%	1.20	6.0/15.3/ENE	8.6	17.1	11.5	67.7	18.0	2.8	3.4	43.4	37.3	15.8	99%	28.5	51.5	18.7	1.4	ESE/17%
2018/08	21%	.50	.7/ 7.7/NE	7.8	10.0	54.8	45.2	.0	.0	7.1	49.7	42.6	.6	21%	51.0	40.6	8.4	.0	ENE/29%
2018/09	97%	1.76	7.4/16.3/SE	10.4	16.6	9.4	46.9	22.2	21.5	1.6	26.2	25.2	47.1	97%	41.3	50.7	7.6	.4	E /28%
2018/10	0																		
2018/11	0																		
2018/冬	59%	1.64	2.9/ 9.0/E	8.9	11.3	.0	39.8	60.2	.0	.5	14.8	74.3	10.4	59%	88.4	11.6	.0	.0	ENE/72%
2018/春	94%	1.09	2.1/11.2/ENE	8.8	12.7	2.7	82.5	14.8	.0	9.6	16.6	48.0	25.8	93%	46.4	51.6	1.9	.0	E /31%
2018/夏	72%	1.07	6.0/15.3/ENE	8.1	17.1	11.5	69.9	17.3	1.3	9.2	40.6	41.9	8.3	72%	30.8	47.3	21.0	.9	ENE/15%
2018/秋	32%	1.76	7.4/16.3/SE	10.4	16.6	9.4	46.9	22.2	21.5	1.6	26.2	25.2	47.1	32%	41.3	50.7	7.6	.4	E /28%
2018/年	64%	1.29	7.4/16.3/SE	8.8	17.1	5.4	64.8	26.7	3.0	6.4	24.2	49.4	20.0	64%	50.9	41.2	7.6	.3	ENE/32%

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表2.2.2 2018年宜蘭海域 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%	1.74	3.7/ 7.4/ENE	6.3	7.9	.0	41.1	56.5	2.4	27.7	72.3	.0	.0	100%	73.7	26.3	.0	.0	ENE/39%
2018/01	100%	1.43	3.6/ 8.3/ENE	6.2	8.3	.0	66.8	32.9	.3	31.2	68.7	.1	.0	100%	65.3	34.5	.1	.0	NE /32%
2018/02	100%	1.44	3.2/ 7.7/NE	6.3	8.8	.0	56.3	43.6	.1	35.4	62.2	2.4	.0	100%	70.1	29.9	.0	.0	NE /42%
2018/03	100%	1.14	2.9/ 7.1/ENE	6.0	8.7	.3	77.4	22.3	.0	51.3	46.5	2.2	.0	100%	40.5	59.5	.0	.0	ESE/29%
2018/04	100%	.89	2.5/ 6.4/NE	5.8	8.6	7.1	83.8	9.2	.0	62.1	37.1	.8	.0	100%	32.5	67.5	.0	.0	ESE/30%
2018/05	100%	.66	1.8/ 6.0/ENE	5.5	9.5	33.6	65.5	.9	.0	67.2	29.8	3.0	.0	100%	33.7	66.3	.0	.0	ESE/28%
2018/06	100%	.82	2.8/ 6.9/NE	5.6	8.3	30.6	60.2	9.2	.0	64.8	34.4	.8	.0	100%	33.4	66.6	.0	.0	ESE/23%
2018/07	100%	.88	5.6/11.8/E	6.2	11.8	22.6	68.8	7.3	1.3	43.4	52.2	3.4	1.1	100%	26.5	73.4	.0	.1	ESE/38%
2018/08	55%	.74	2.5/ 8.7/NE	5.6	9.1	41.7	49.3	9.0	.0	67.0	32.0	1.0	.0	55%	32.0	67.7	.0	.2	ESE/33%
2018/09	99%	1.42	5.2/11.3/NE	6.9	11.7	25.3	38.7	23.4	12.6	37.2	37.2	20.6	5.0	99%	43.8	56.2	.0	.0	E /28%
2018/10	99%	1.45	3.6/ 9.2/ENE	6.4	10.3	.3	58.2	39.9	1.6	45.5	41.1	12.7	.7	99%	86.6	13.1	.1	.1	ENE/42%
2018/11	99%	1.26	3.4/ 7.4/ENE	6.1	8.6	1.1	74.9	23.7	.3	43.1	56.5	.4	.0	99%	79.0	21.0	.0	.0	ENE/41%
2018/冬	100%	1.54	3.7/ 7.4/ENE	6.3	8.8	.0	54.7	44.4	1.0	31.3	67.9	.8	.0	100%	69.7	30.3	.0	.0	NE /35%
2018/春	100%	.90	2.9/ 7.1/ENE	5.8	9.5	13.7	75.5	10.8	.0	60.2	37.8	2.0	.0	100%	35.6	64.4	.0	.0	ESE/29%
2018/夏	85%	.83	5.6/11.8/E	5.8	11.8	29.9	61.2	8.4	.5	56.8	40.9	1.9	.4	85%	30.3	69.5	.0	.1	ESE/31%
2018/秋	99%	1.38	5.2/11.3/NE	6.4	11.7	8.8	57.3	29.1	4.8	41.9	44.9	11.3	1.9	99%	70.0	29.9	.0	.0	ENE/34%
2018/年	96%	1.17	5.6/11.8/E	6.1	11.8	12.5	62.3	23.6	1.6	47.3	48.1	4.0	.6	96%	52.0	47.9	.0	.0	ENE/25%

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表2.2.3 2018年宜蘭海域 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 蒐集 率	H_s 平均 (m)	H_s 最大 (波高/週期/波向) (m/s/來向)	T_p 平均 (s)	T_p 最大 (s)	小波 <0.5m (%)	小浪 ~1.5m (%)	中浪 ~3m (%)	大浪 >3m (%)	T_p <6s (%)	T_p 6~8s (%)	T_p 8~10s (%)	T_p >10s (%)	波向 蒐集 率	波向 N~E (%)	波向 E~S (%)	波向 S~W (%)	波向 W~N (%)	主波向 (百分比) 來向/%
2017/12	100%	1.44	3.2/ 6.9/NNE	5.9	8.0	.0	56.9	43.0	.1	56.1	43.8	.1	.0	100%	88.5	9.7	1.5	.3	NE /35%
2018/01	100%	1.21	2.4/ 6.7/N	5.7	7.0	.0	81.8	18.2	.0	68.0	32.0	.0	.0	100%	78.6	18.5	2.7	.1	NE /30%
2018/02	100%	1.13	2.4/ 6.4/NNE	5.9	8.5	.6	79.0	20.4	.0	52.2	47.5	.3	.0	100%	76.2	17.3	1.3	5.2	NNE/29%
2018/03	100%	.99	2.5/ 6.5/N	5.7	8.6	.9	87.5	11.6	.0	61.5	36.5	2.0	.0	100%	49.0	45.1	4.8	1.1	SSE/19%
2018/04	100%	.80	2.1/ 7.1/NNE	5.3	7.4	10.0	85.8	4.2	.0	77.5	22.5	.0	.0	100%	41.3	48.3	9.9	.6	SSE/23%
2018/05	100%	.64	1.5/ 5.9/NE	5.1	9.5	31.0	69.0	.0	.0	79.6	18.7	1.7	.0	100%	44.8	44.9	8.1	2.3	SSE/22%
2018/06	100%	.77	2.3/ 8.0/NE	5.3	8.0	32.4	62.3	5.3	.0	73.6	25.9	.4	.0	100%	37.8	45.5	14.9	1.8	SSE/23%
2018/07	100%	.75	4.1/ 8.0/N	5.6	8.7	26.5	69.2	3.4	.9	69.8	28.9	1.3	.0	100%	27.4	45.7	25.3	1.6	SSE/27%
2018/08	100%	.78	3.2/ 6.0/SSE	5.5	8.7	33.1	58.2	8.6	.1	71.9	27.3	.8	.0	100%	35.8	35.6	26.2	2.4	S /22%
2018/09	100%	1.24	5.9/11.7/S	6.2	12.1	28.6	37.4	29.7	4.3	53.6	31.3	12.9	2.2	100%	41.3	31.4	24.9	2.5	S /19%
2018/10	100%	1.21	2.9/ 9.6/NNE	5.9	10.4	3.8	69.7	26.5	.0	63.1	27.6	9.0	.3	100%	82.0	7.1	8.9	2.0	NE /41%
2018/11	100%	1.00	2.8/ 7.7/NE	5.6	7.9	3.5	87.0	9.5	.0	68.2	31.8	.0	.0	100%	79.4	11.0	7.9	1.7	NE /33%
2018/冬	100%	1.26	3.2/ 6.9/NNE	5.8	8.5	.2	72.3	27.4	.0	59.0	40.9	.1	.0	100%	81.3	15.1	1.9	1.8	NE /30%
2018/春	100%	.81	2.5/ 6.5/N	5.4	9.5	14.1	80.7	5.3	.0	72.8	25.9	1.3	.0	100%	45.1	46.1	7.6	1.3	SSE/21%
2018/夏	100%	.77	4.1/ 8.0/N	5.5	8.7	30.6	63.3	5.8	.4	71.7	27.4	.9	.0	100%	33.6	42.2	22.2	2.0	SSE/24%
2018/秋	100%	1.15	5.9/11.7/S	5.9	12.1	11.9	64.7	22.0	1.4	61.7	30.2	7.3	.8	100%	67.7	16.4	13.9	2.1	NE /29%
2018/年	100%	1.00	5.9/11.7/S	5.6	12.1	14.3	70.3	15.0	.5	66.4	31.0	2.4	.2	100%	56.7	30.1	11.4	1.8	NE /22%

2.3 2018 年宜蘭海域**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 Su-Ao Harbor of SAX0 at 2018

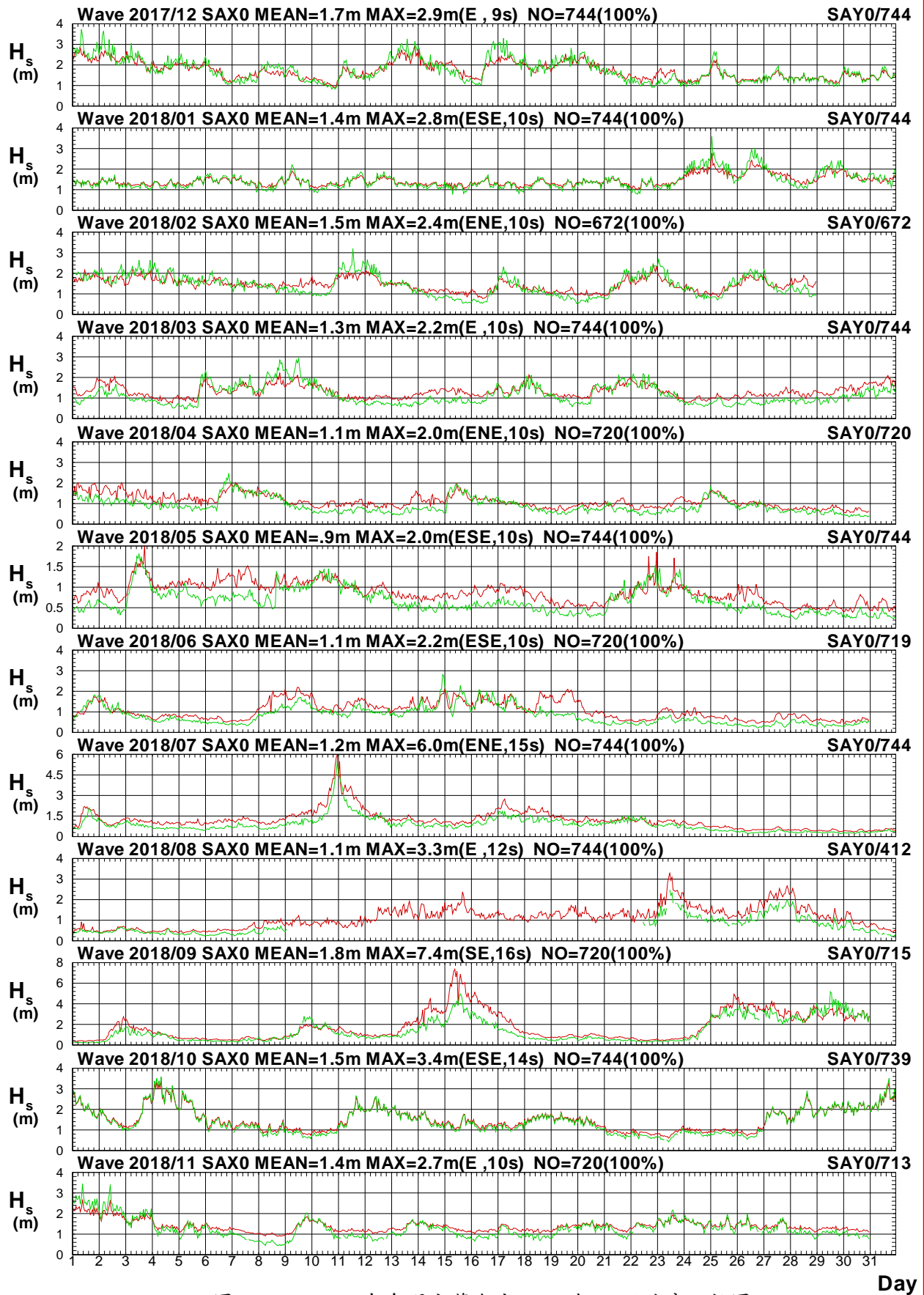


圖2.3.1a 2018年每月宜蘭海域 X 站與 Y 站波高比較圖

V17CSAX0.1HA V17CSAY0.1H0 V181SAX0.1HA V181SAY0.1H0 V182SAX0.1HA V182SAY0.1H0
 V183SAX0.1HA V183SAY0.1H0 V184SAX0.1HA V184SAY0.1H0 V185SAX0.1HA V185SAY0.1H0

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Wave T_p in Su-Ao Harbor of SAX0 at 2018

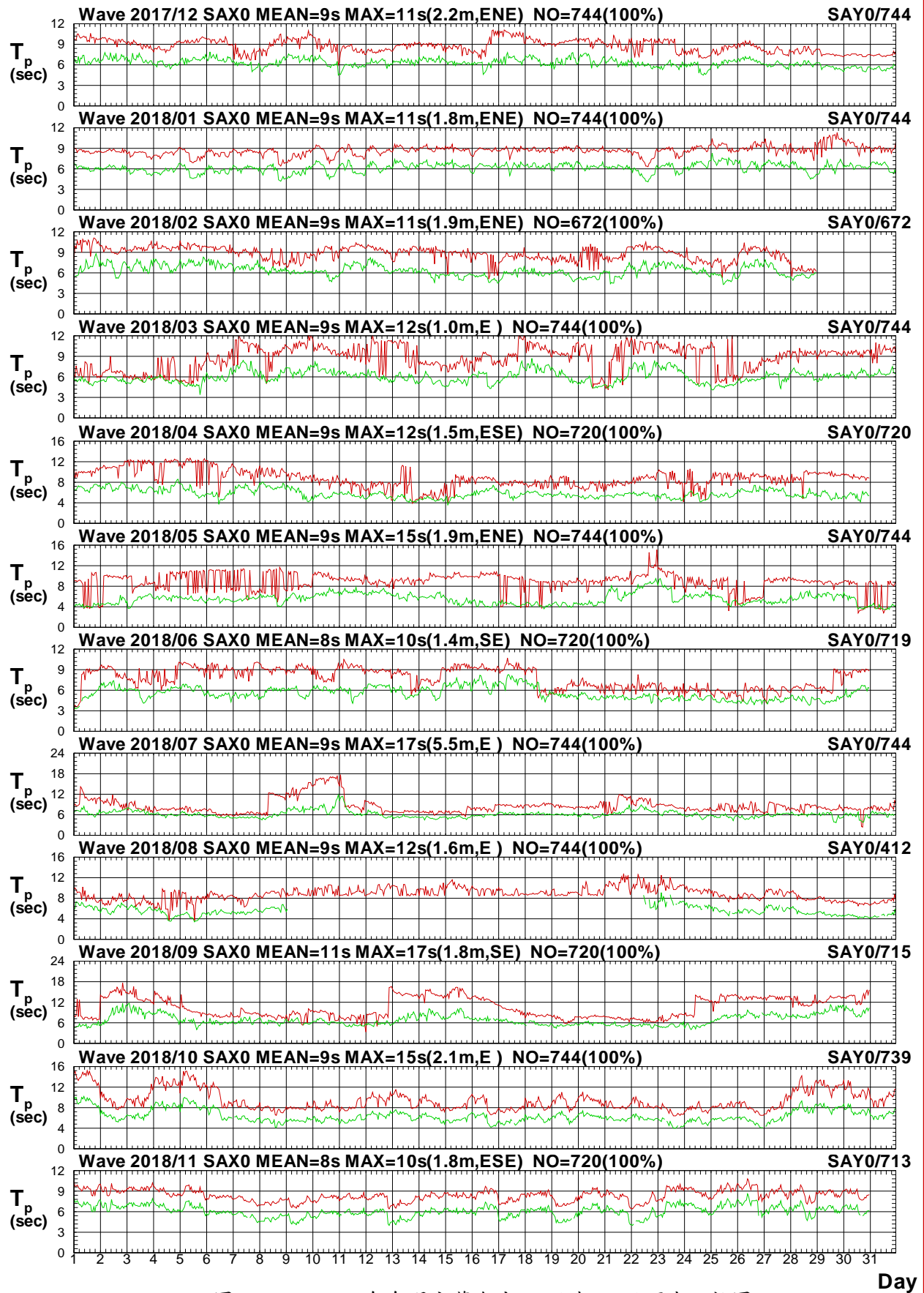


圖2.3.1b 2018年每月宜蘭海域 X 站與 Y 站週期比較圖

V17CSAX0.1HA V17CSAY0.1HO V181SAX0.1HA V181SAY0.1HO V182SAX0.1HA V182SAY0.1HO
 V183SAX0.1HA V183SAY0.1HO V184SAX0.1HA V184SAY0.1HO V185SAX0.1HA V185SAY0.1HO

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Wave Direction in Su-Ao Harbor of SAX0 at 2018

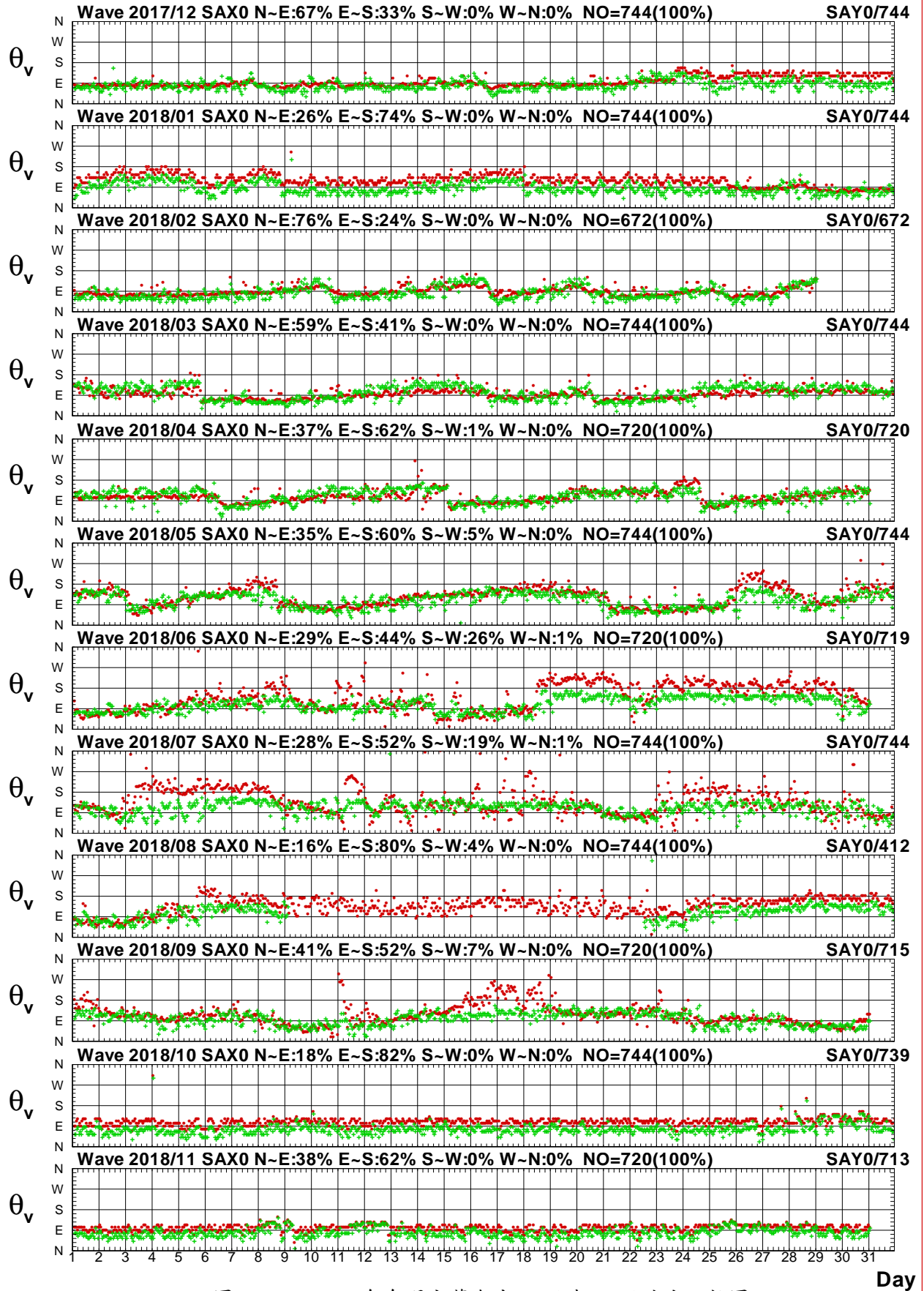


圖2.3.1c 2018年每月宜蘭海域 X 站與 Y 站波向比較圖

V17CSAX0.1HA V17CSAY0.1H0 V181SAX0.1HA V181SAY0.1H0 V182SAX0.1HA V182SAY0.1H0
 V183SAX0.1HA V183SAY0.1H0 V184SAX0.1HA V184SAY0.1H0 V185SAX0.1HA V185SAY0.1H0

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Wave H_s in Su-Ao Harbor of SAX0 at 2018

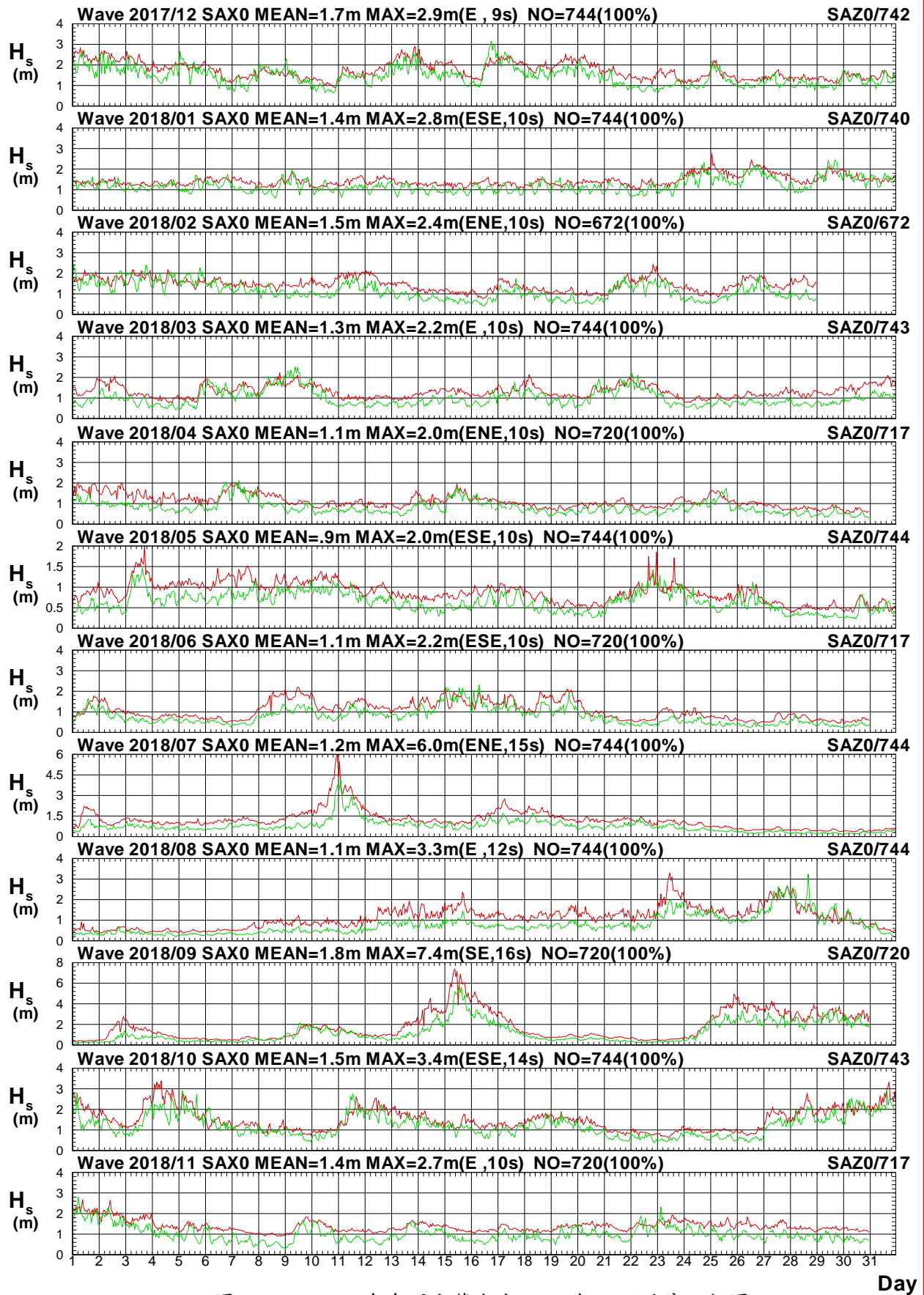


圖2.3.2a 2018年每月宜蘭海域 X 站與 Z 站波高比較圖

V17CSAX0.1HA V17CSAZ0.1H0 V181SAX0.1HA V181SAZ0.1H0 V182SAX0.1HA V182SAZ0.1H0
 V183SAX0.1HA V183SAZ0.1H0 V184SAX0.1HA V184SAZ0.1H0 V185SAX0.1HA V185SAZ0.1H0

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Wave T_p in Su-Ao Harbor of SAX0 at 2018

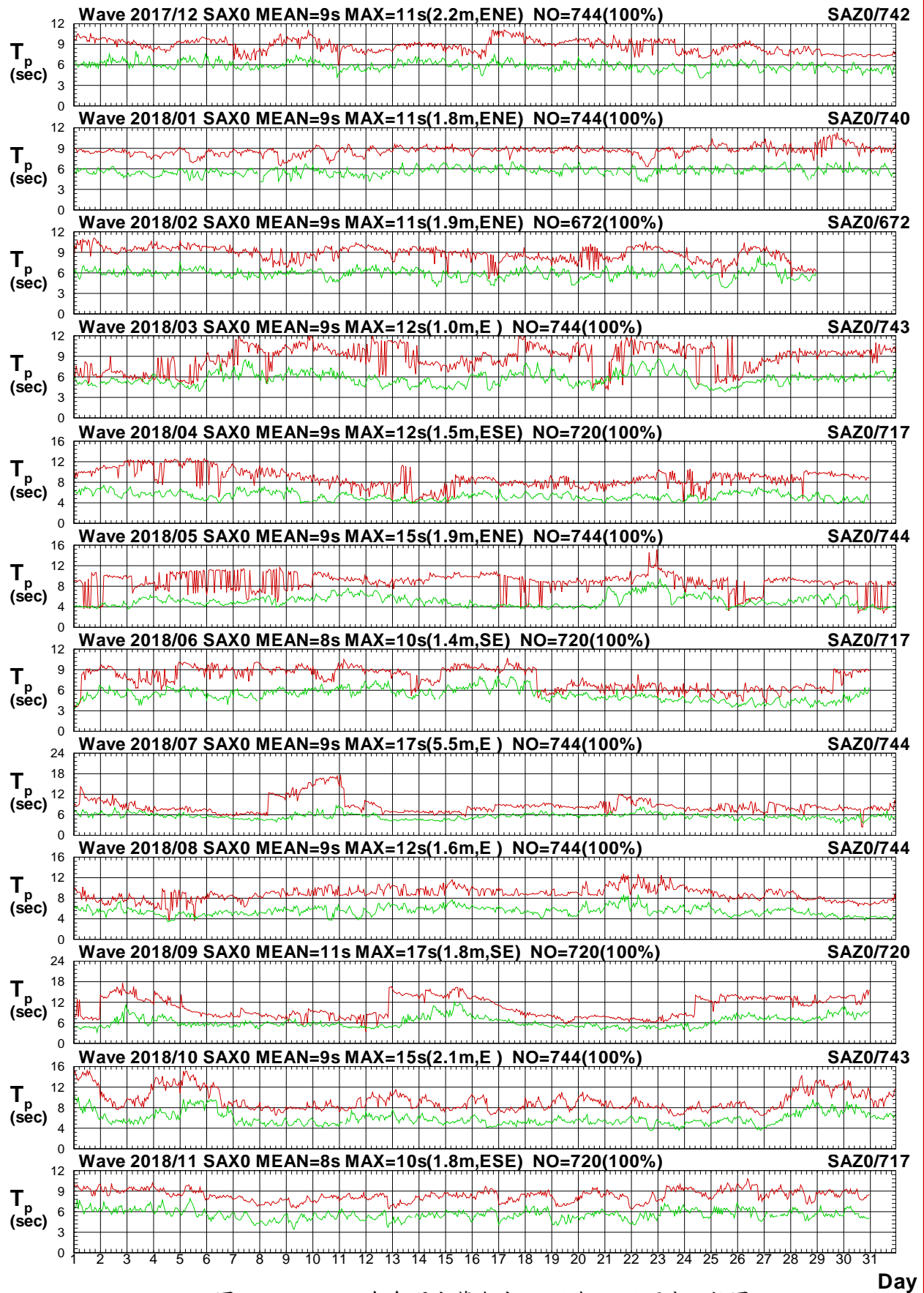


圖2.3.2b 2018年每月宜蘭海域 X 站與 Z 站週期比較圖

V17CSAX0.1HA V17CSAZ0.1HO V181SAX0.1HA V181SAZO.1HO V182SAX0.1HA V182SAZO.1HO
 V183SAX0.1HA V183SAZO.1HO V184SAX0.1HA V184SAZO.1HO V185SAX0.1HA V185SAZO.1HO

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Wave Direction in Su-Ao Harbor of SAX0 at 2018

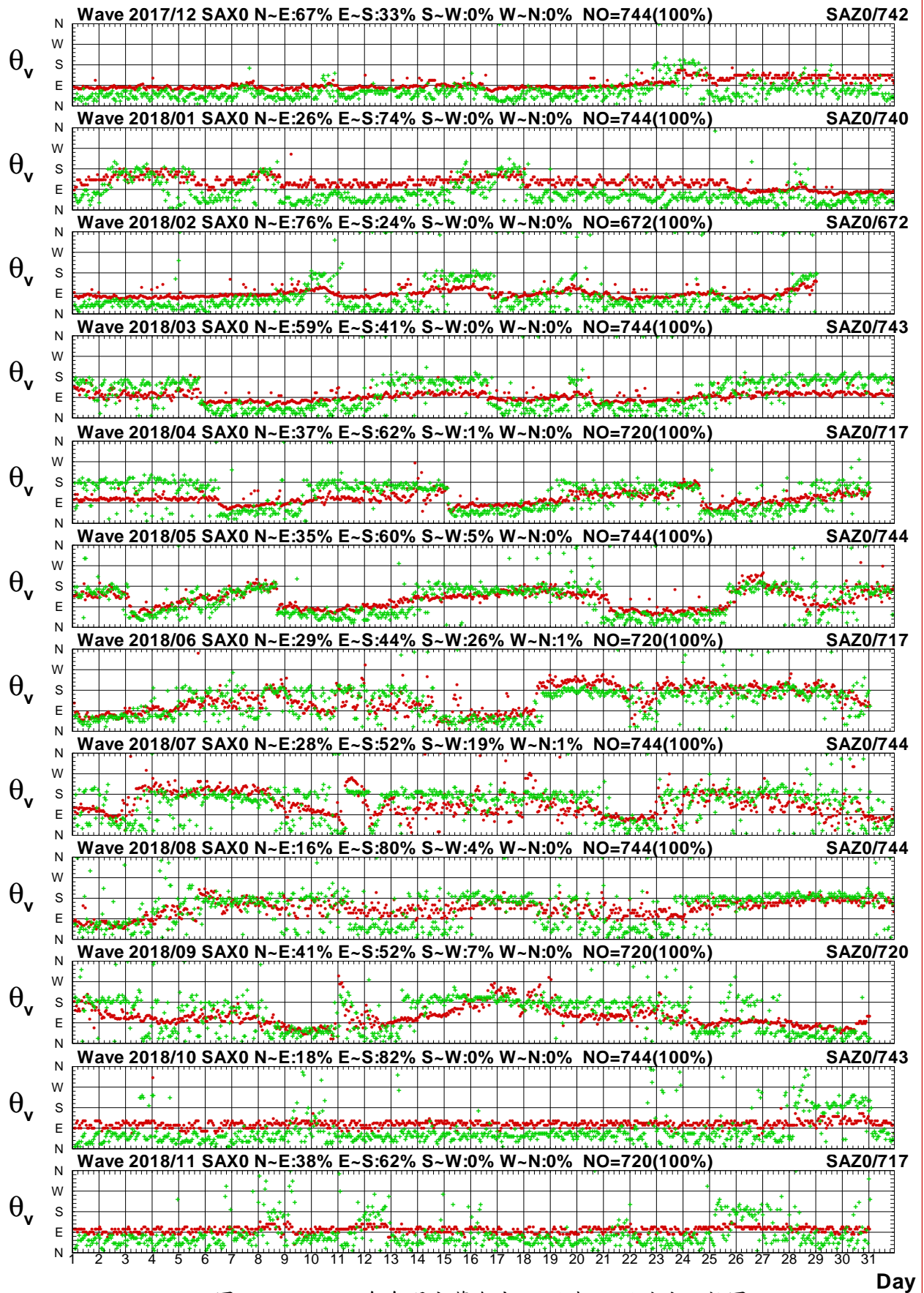


圖2.3.2c 2018年每月宜蘭海域 X 站與 Z 站波向比較圖

V17CSAX0.1HA V17CSAZ0.1H0 V181SAX0.1HA V181SAZ0.1H0 V182SAX0.1HA V182SAZ0.1H0
 V183SAX0.1HA V183SAZ0.1H0 V184SAX0.1HA V184SAZ0.1H0 V185SAX0.1HA V185SAZ0.1H0

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Wave H_s in Su-Ao Harbor of SAX0 at 2018

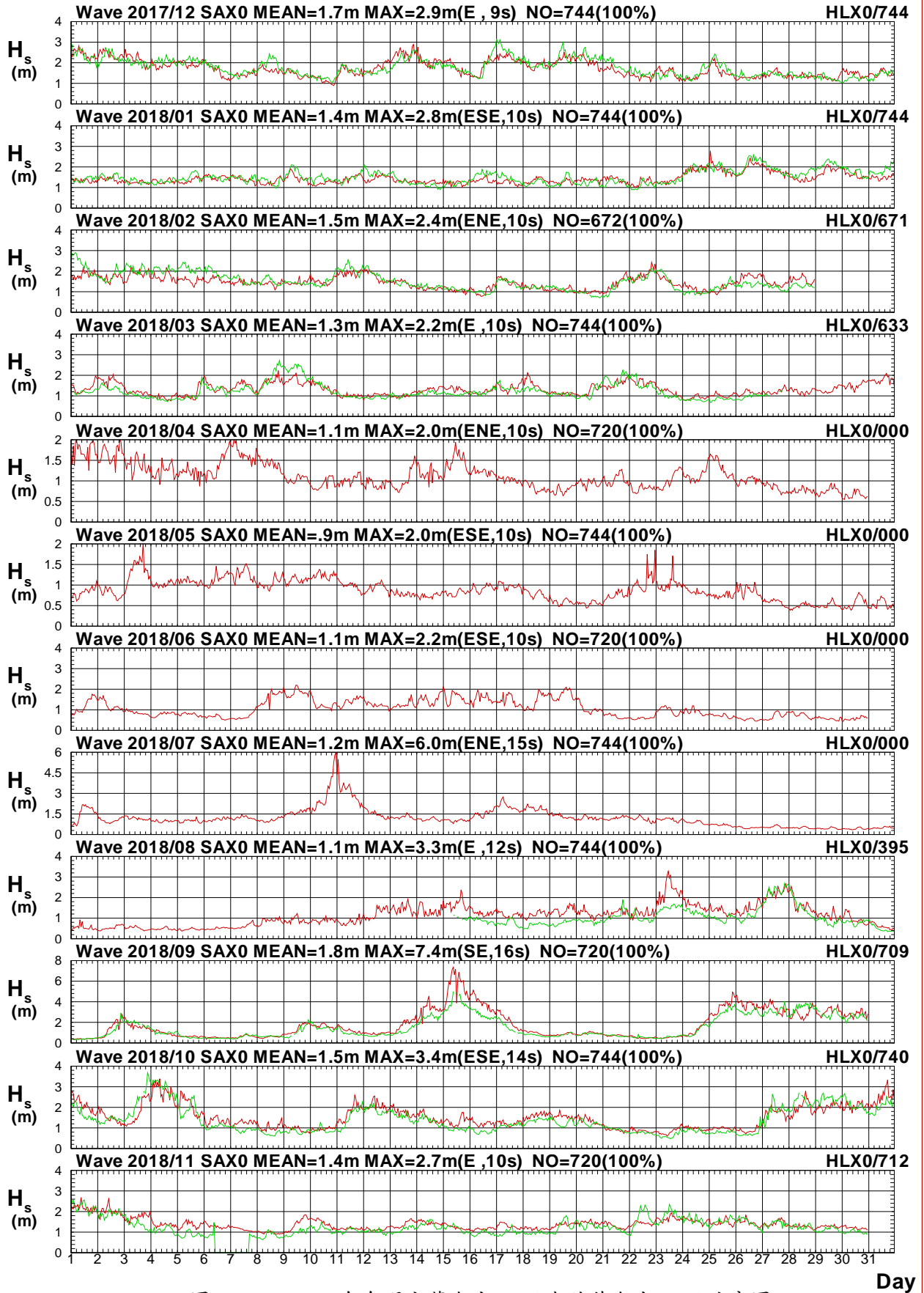


圖2.3.3a 2018年每月宜蘭海域 X 站與花蓮海域 X 站波高圖

V17CSAX0.1HA V17CHLX0.1H0 V181SAX0.1HA V181HLX0.1H0 V182SAX0.1HA V182HLX0.1H0
 V183SAX0.1HA V183HLX0.1H0 V184SAX0.1HA V184HLX0.1H0 V185SAX0.1HA V185HLX0.1H0

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Wave T_p in Su-Ao Harbor of SAX0 at 2018

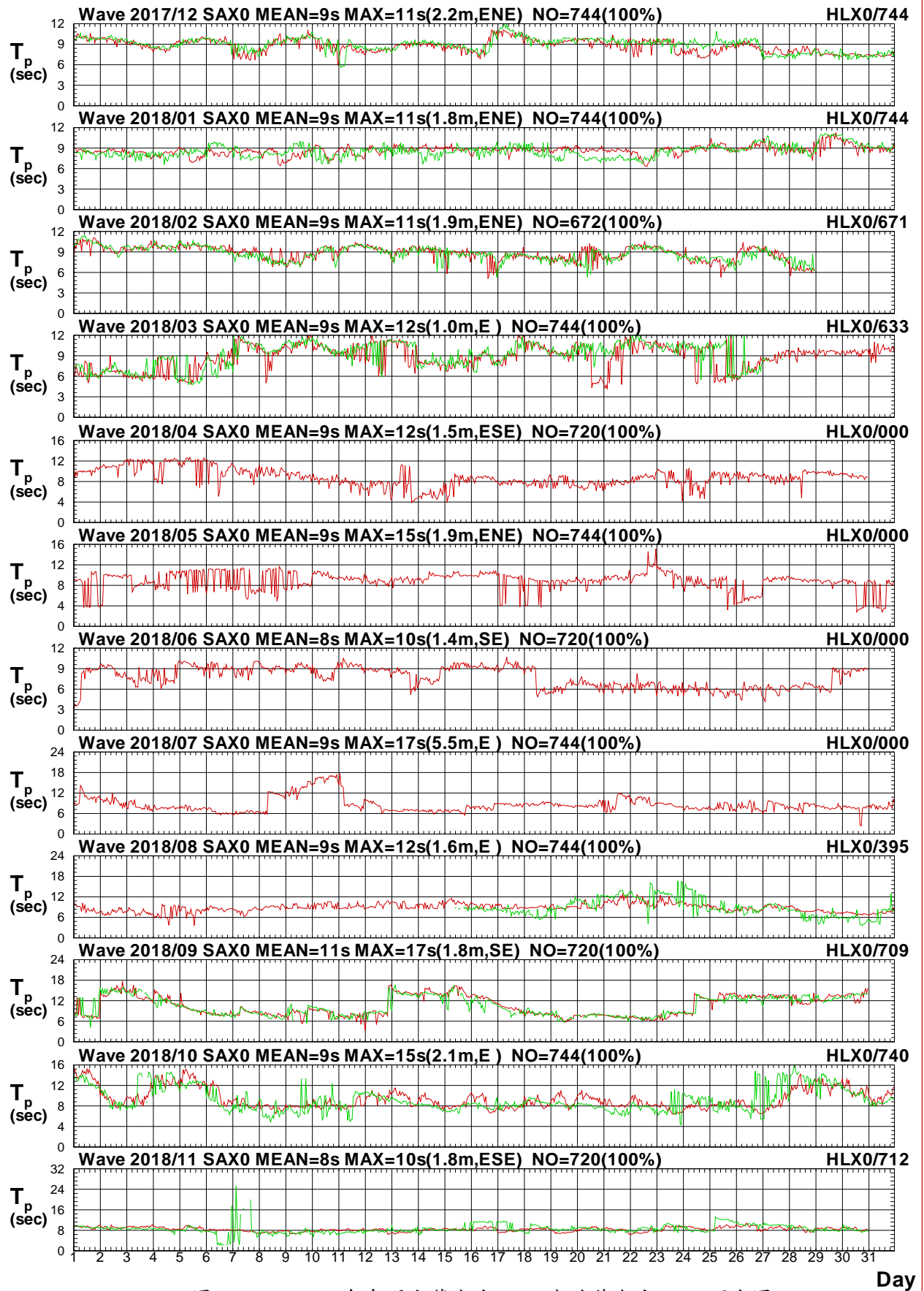


圖2.3.3b 2018年每月宜蘭海域 X 站與花蓮海域 X 站週期圖

V17CSAX0.1HA V17CHLX0.1H0 V181SAX0.1HA V181HLX0.1H0 V182SAX0.1HA V182HLX0.1H0
 V183SAX0.1HA V183HLX0.1H0 V184SAX0.1HA V184HLX0.1H0 V185SAX0.1HA V185HLX0.1H0

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Wave Direction in Su-Ao Harbor of SAX0 at 2018

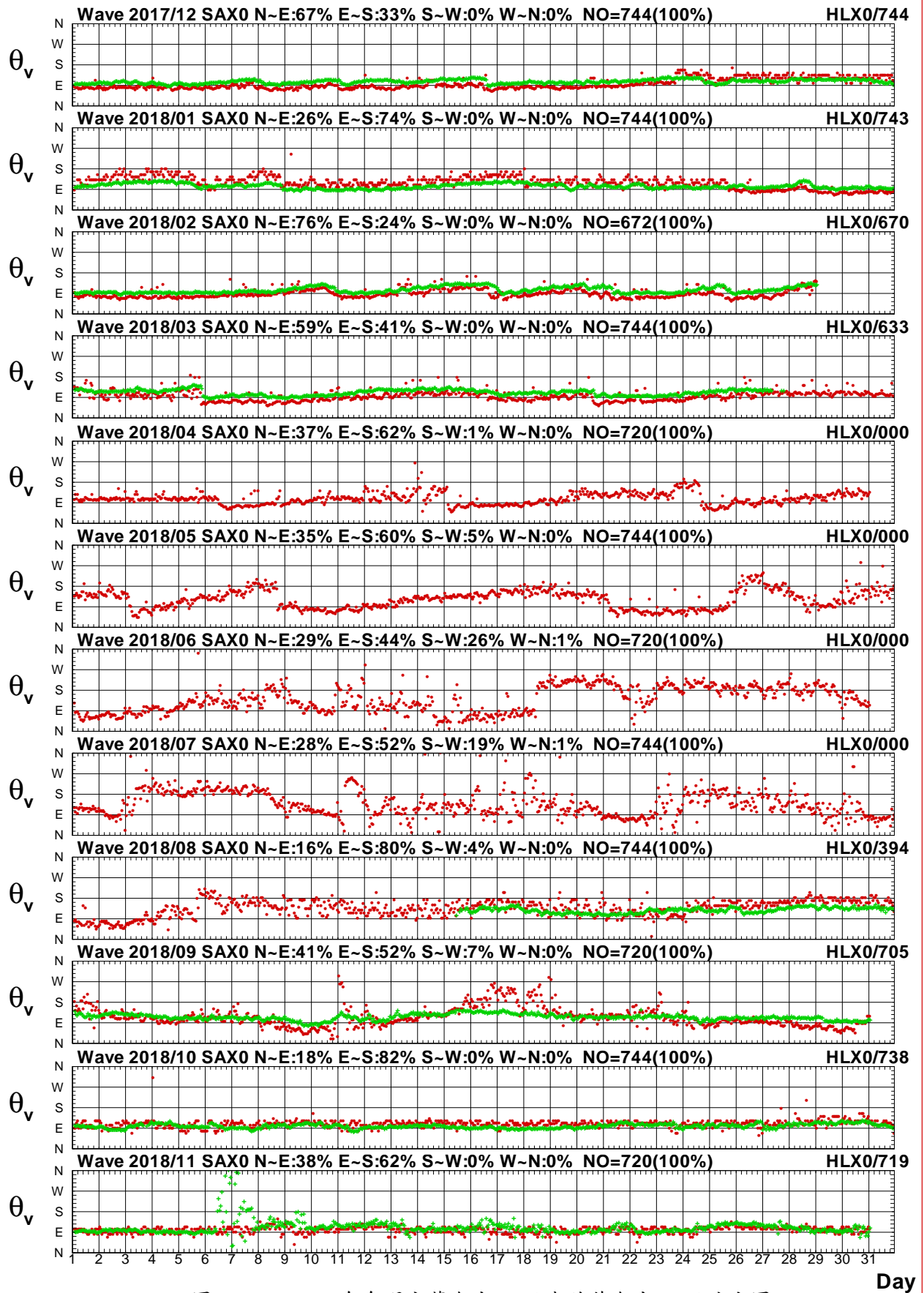


圖2.3.3c 2018年每月宜蘭海域 X 站與花蓮海域 X 站波向圖

V17CSAX0.1HA V17CHLX0.1H0 V181SAX0.1HA V181HLX0.1H0 V182SAX0.1HA V182HLX0.1H0
 V183SAX0.1HA V183HLX0.1H0 V184SAX0.1HA V184HLX0.1H0 V185SAX0.1HA V185HLX0.1H0

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Wave H_s in Su-Ao Harbor of SAX0 at 2018

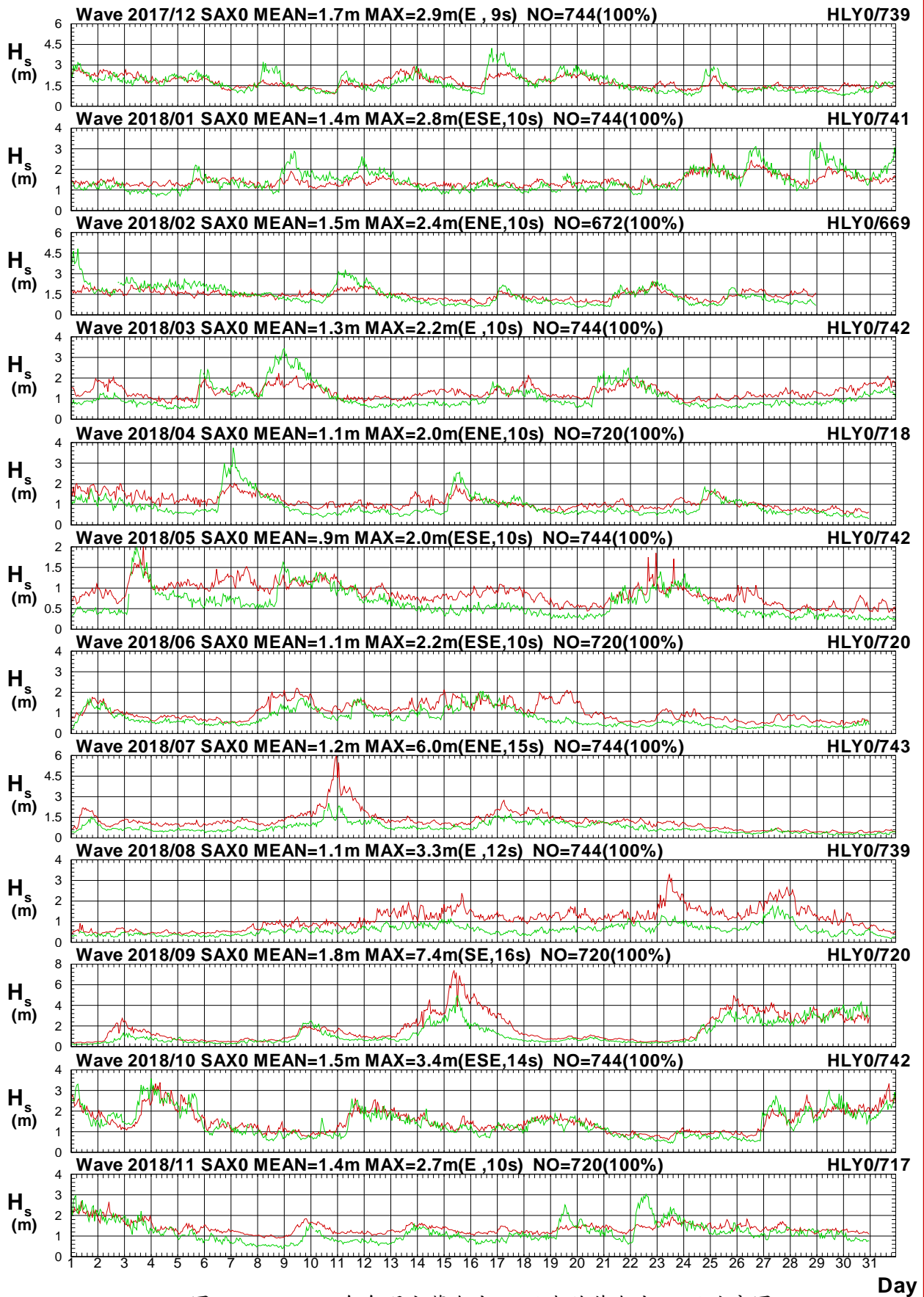


圖2.3.4a 2018年每月宜蘭海域 X 站與花蓮海域 Y 站波高圖

V17CSAX0.1HA V17CHLY0.1H0 V181SAX0.1HA V181HLY0.1H0 V182SAX0.1HA V182HLY0.1H0
 V183SAX0.1HA V183HLY0.1H0 V184SAX0.1HA V184HLY0.1H0 V185SAX0.1HA V185HLY0.1H0

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Wave T_p in Su-Ao Harbor of SAX0 at 2018

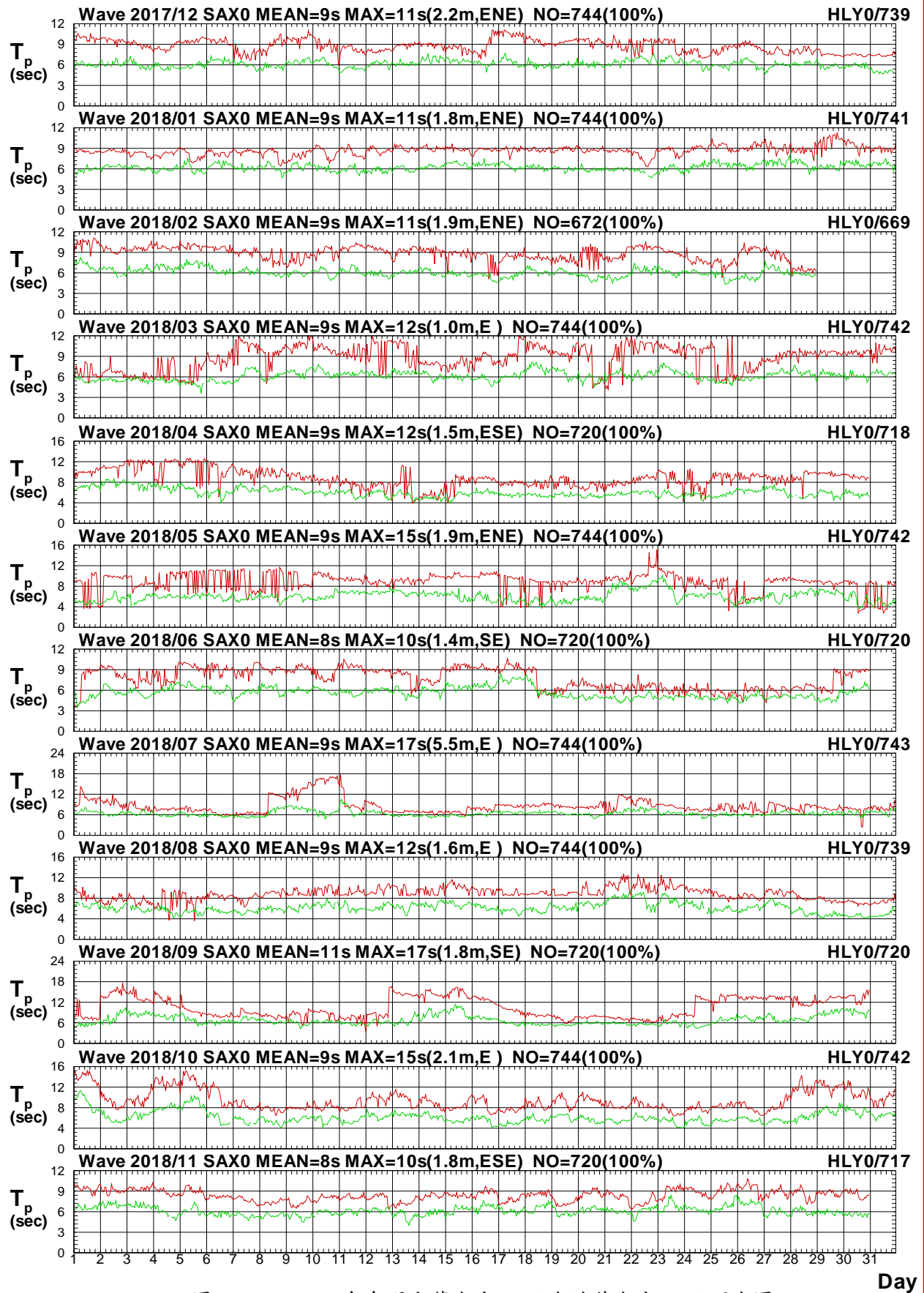


圖2.3.4b 2018年每月宜蘭海域 X 站與花蓮海域 Y 站週期圖

V17CSAX0.1HA V17CHLY0.1H0 V181SAX0.1HA V181HLY0.1H0 V182SAX0.1HA V182HLY0.1H0
 V183SAX0.1HA V183HLY0.1H0 V184SAX0.1HA V184HLY0.1H0 V185SAX0.1HA V185HLY0.1H0

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Wave Direction in Su-Ao Harbor of SAX0 at 2018

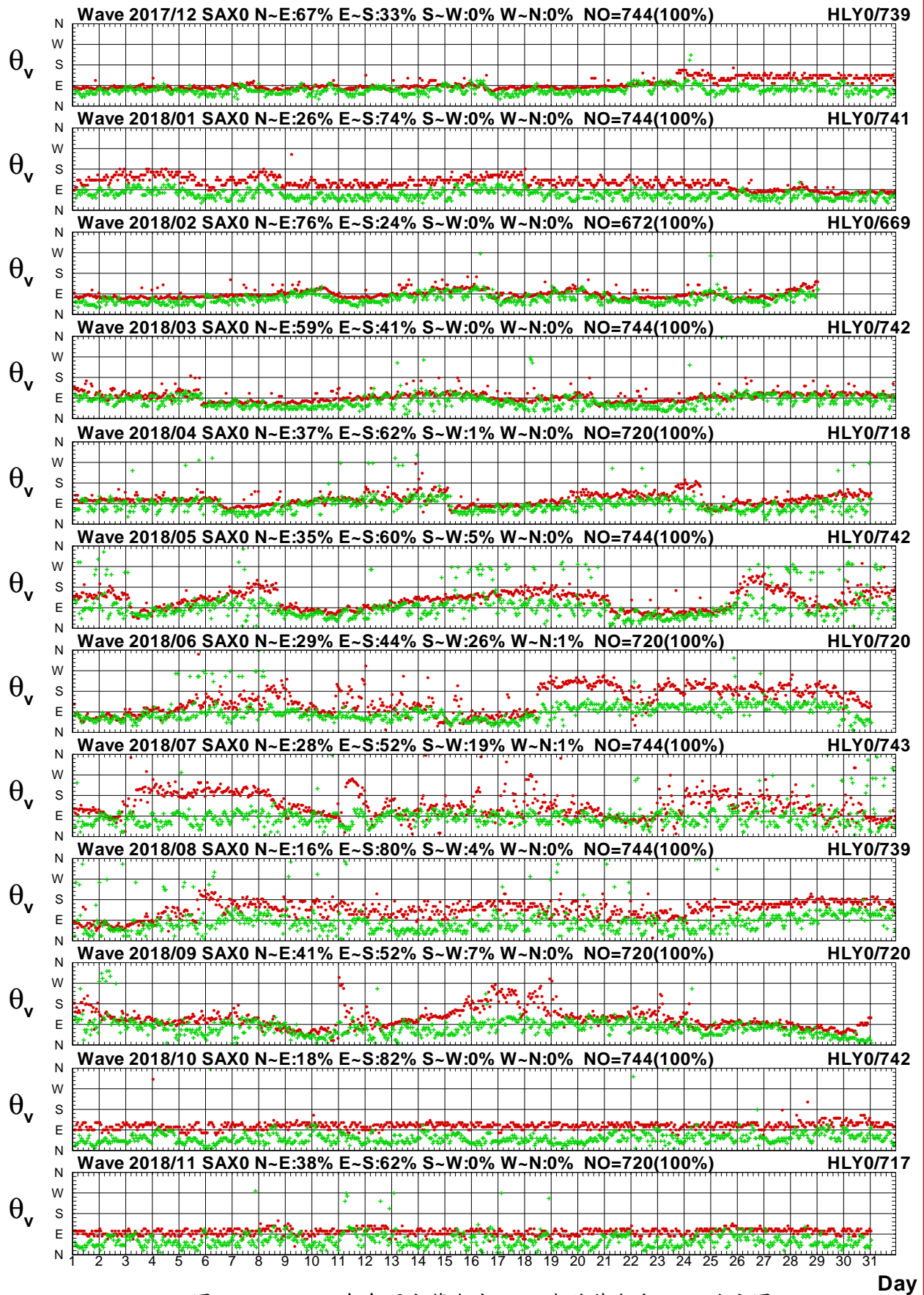


圖2.3.4c 2018年每月宜蘭海域 X 站與花蓮海域 Y 站波向圖

V17CSAX0.1HA V17CHLY0.1H0 V181SAX0.1HA V181HLY0.1H0 V182SAX0.1HA V182HLY0.1H0
 V183SAX0.1HA V183HLY0.1H0 V184SAX0.1HA V184HLY0.1H0 V185SAX0.1HA V185HLY0.1H0

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Wave H_s in Su-Ao Harbor of SAX0 at 2018

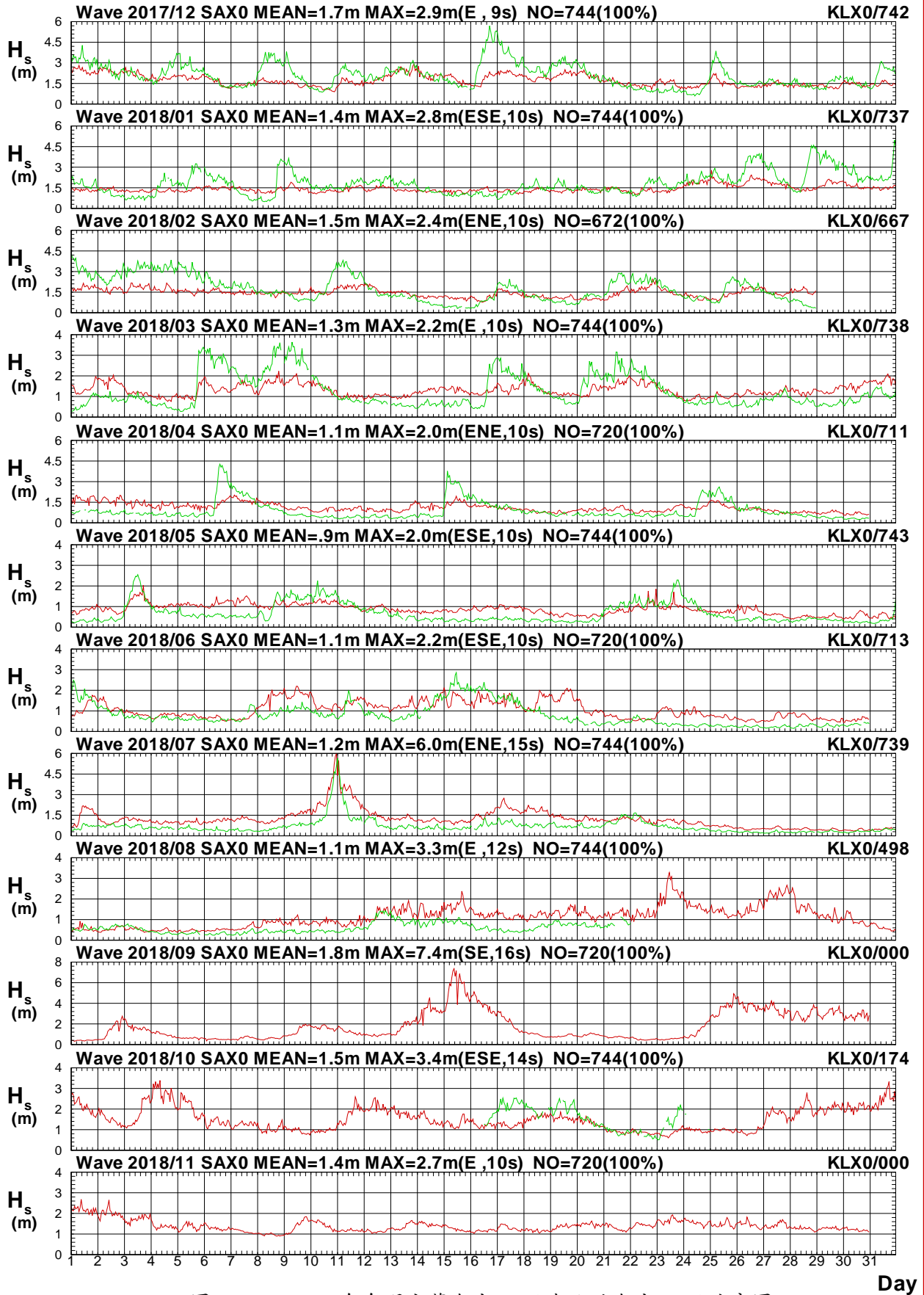


圖2.3.5a 2018年每月宜蘭海域 X 站與北端海域 X 站波高圖

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

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Wave T_p in Su-Ao Harbor of SAX0 at 2018

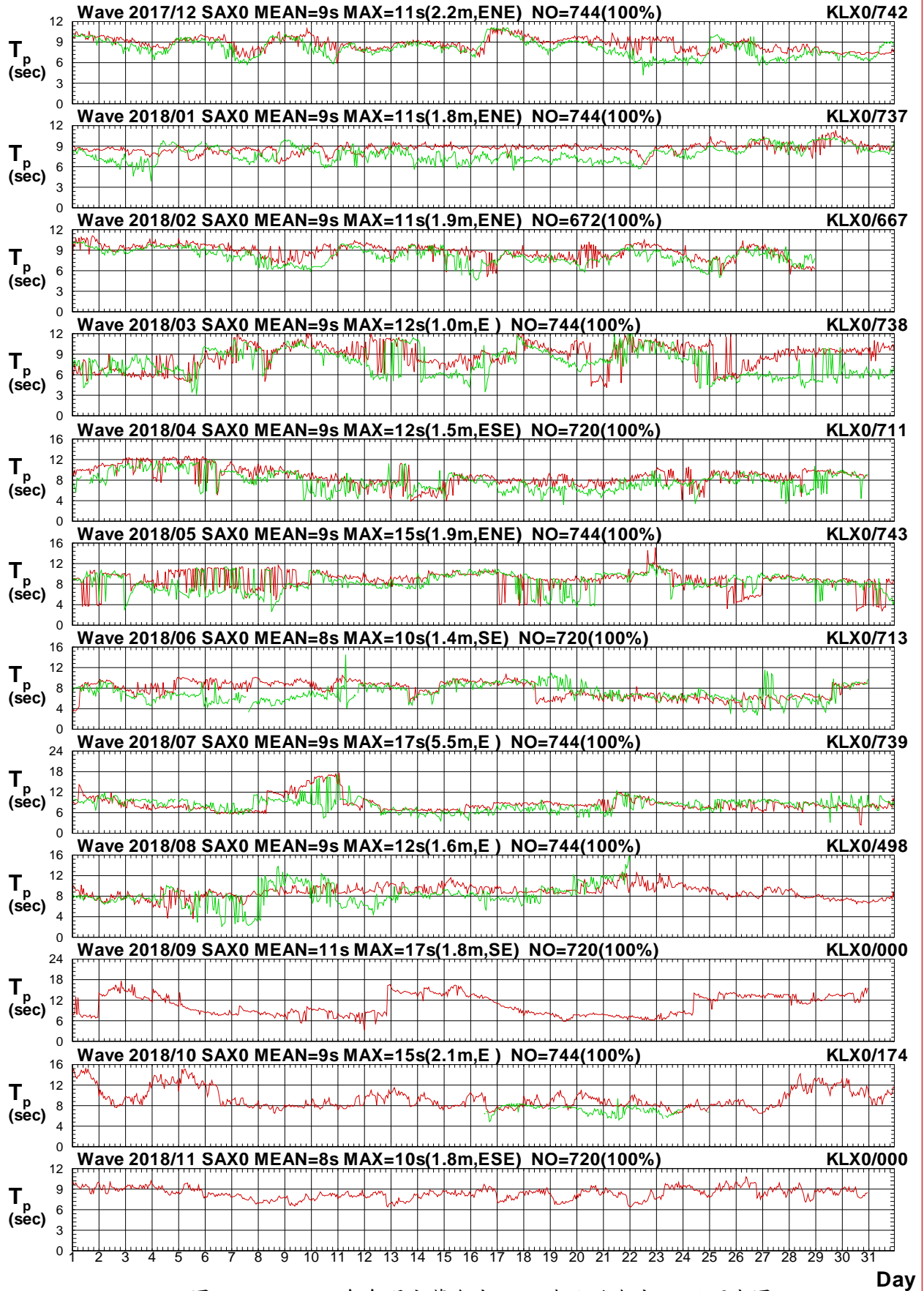


圖2.3.5b 2018年每月宜蘭海域 X 站與北端海域 X 站週期圖

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

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Wave Direction in Su-Ao Harbor of SAX0 at 2018

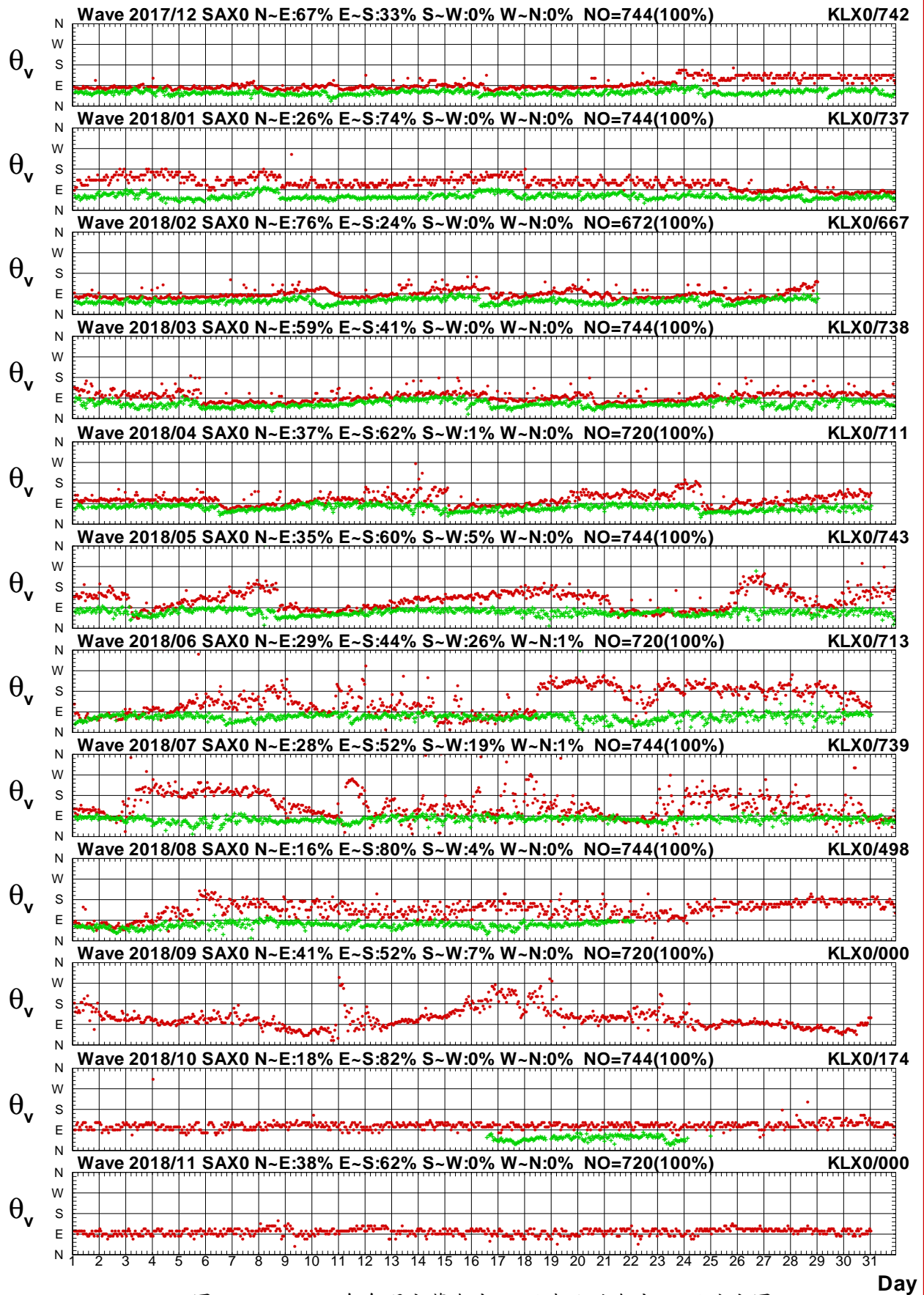


圖2.3.5c 2018年每月宜蘭海域 X 站與北端海域 X 站波向圖

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

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Wave H_s in Su-Ao Harbor of SAX0 at 2018

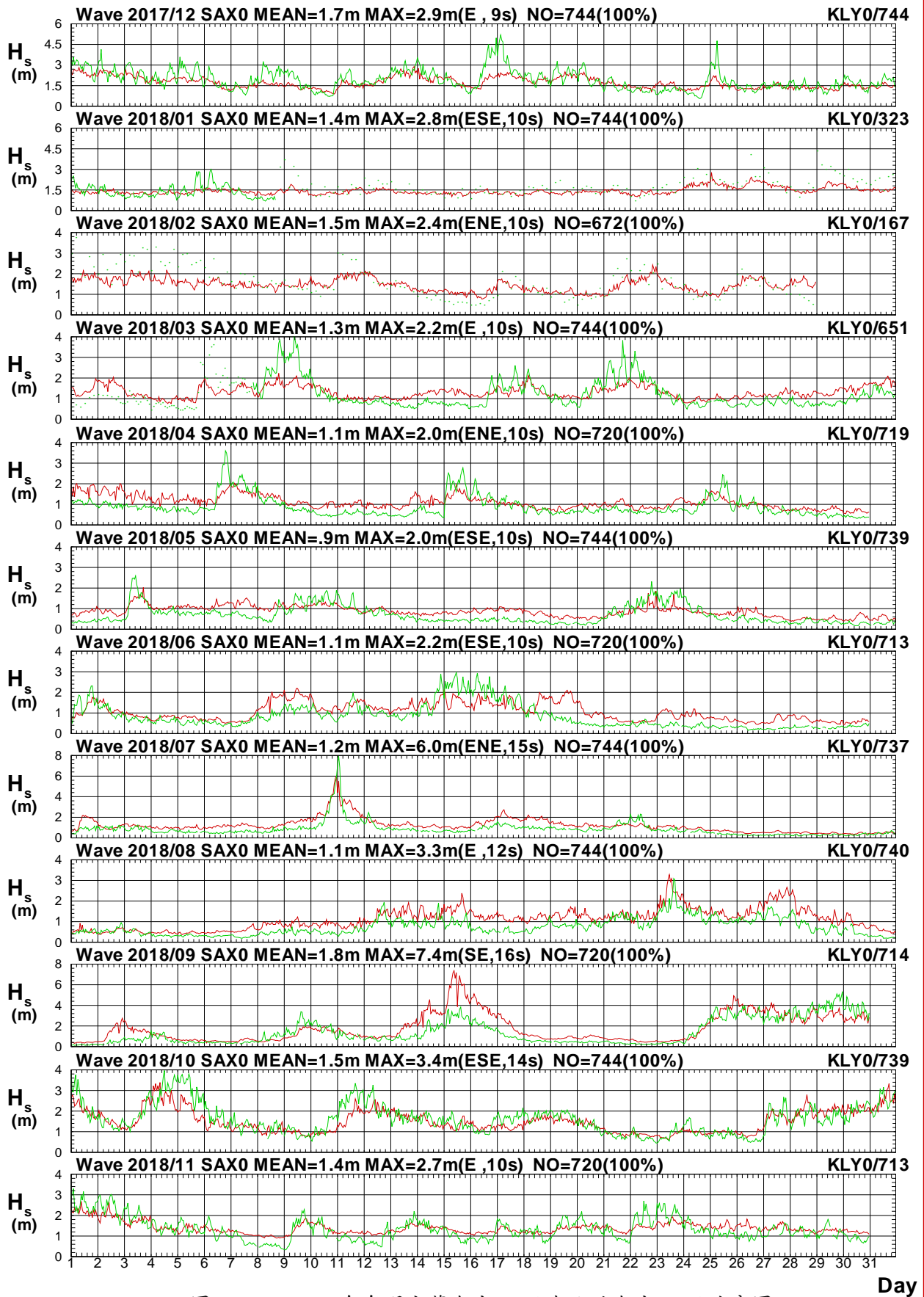


圖2.3.6a 2018年每月宜蘭海域 X 站與北端海域 Y 站波高圖

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

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Wave T_p in Su-Ao Harbor of SAX0 at 2018

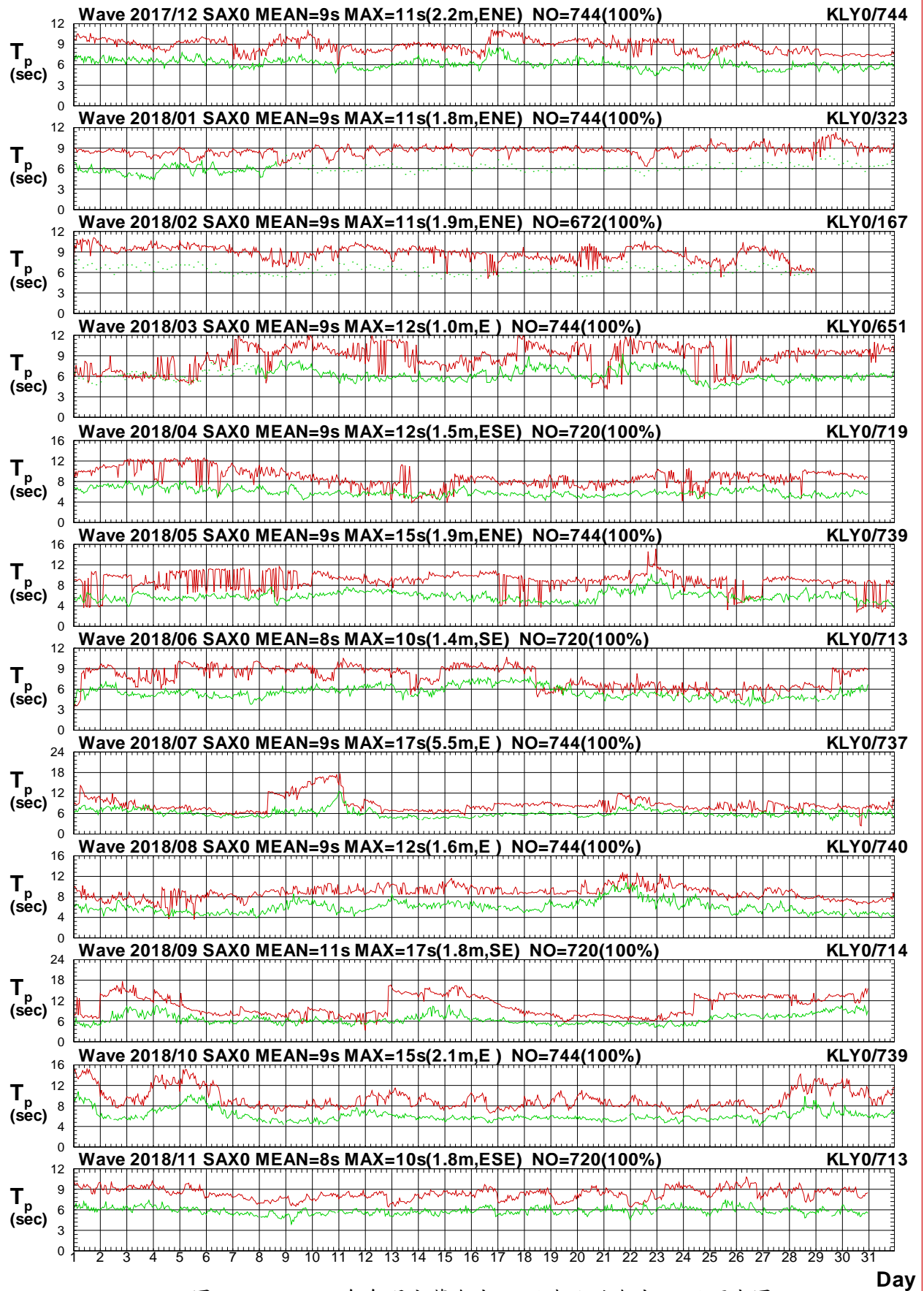


圖2.3.6b 2018年每月宜蘭海域 X 站與北端海域 Y 站週期圖

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

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Wave Direction in Su-Ao Harbor of SAX0 at 2018

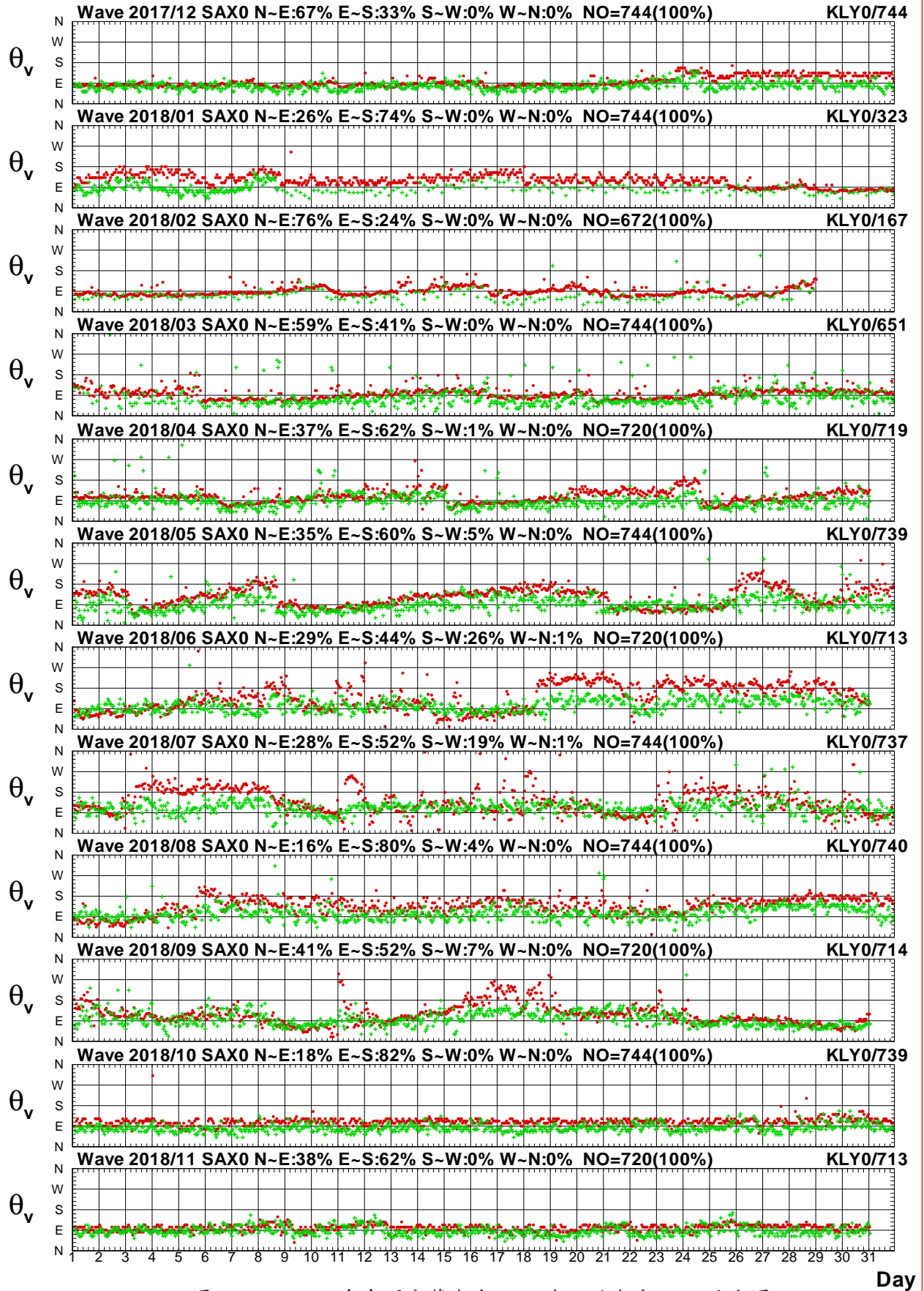


圖2.3.6c 2018年每月宜蘭海域 X 站與北端海域 Y 站波向圖

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

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Wave H_s in Su-Ao Harbor of SAX0 at 2018

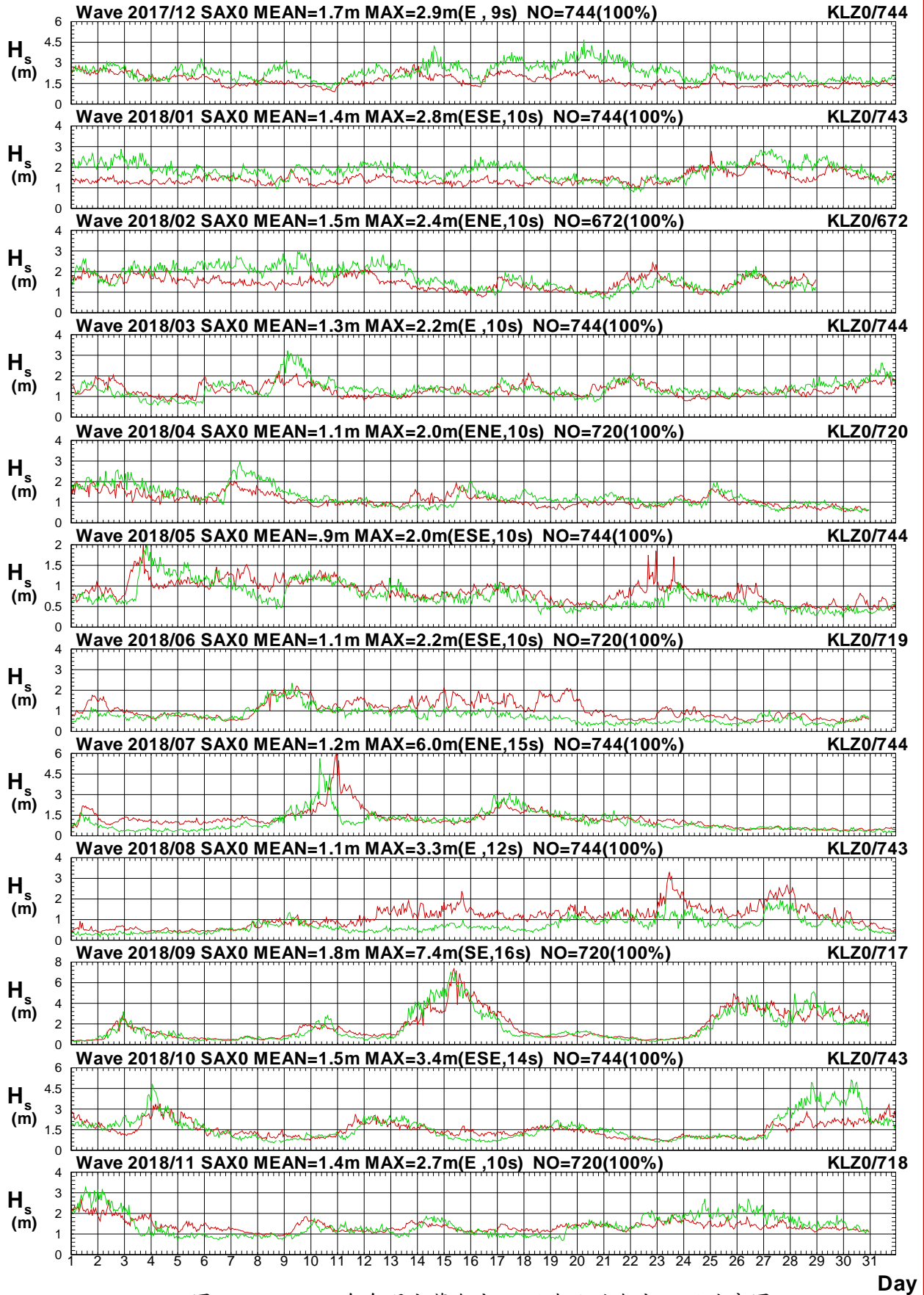


圖2.3.7a 2018年每月宜蘭海域 X 站與北端海域 Z 站波高圖

V17CSAX0.1HA V17CKLZ0.1H0 V181SAX0.1HA V181KLZ0.1H0 V182SAX0.1HA V182KLZ0.1H0
 V183SAX0.1HA V183KLZ0.1H0 V184SAX0.1HA V184KLZ0.1H0 V185SAX0.1HA V185KLZ0.1H0

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Wave T_p in Su-Ao Harbor of SAX0 at 2018

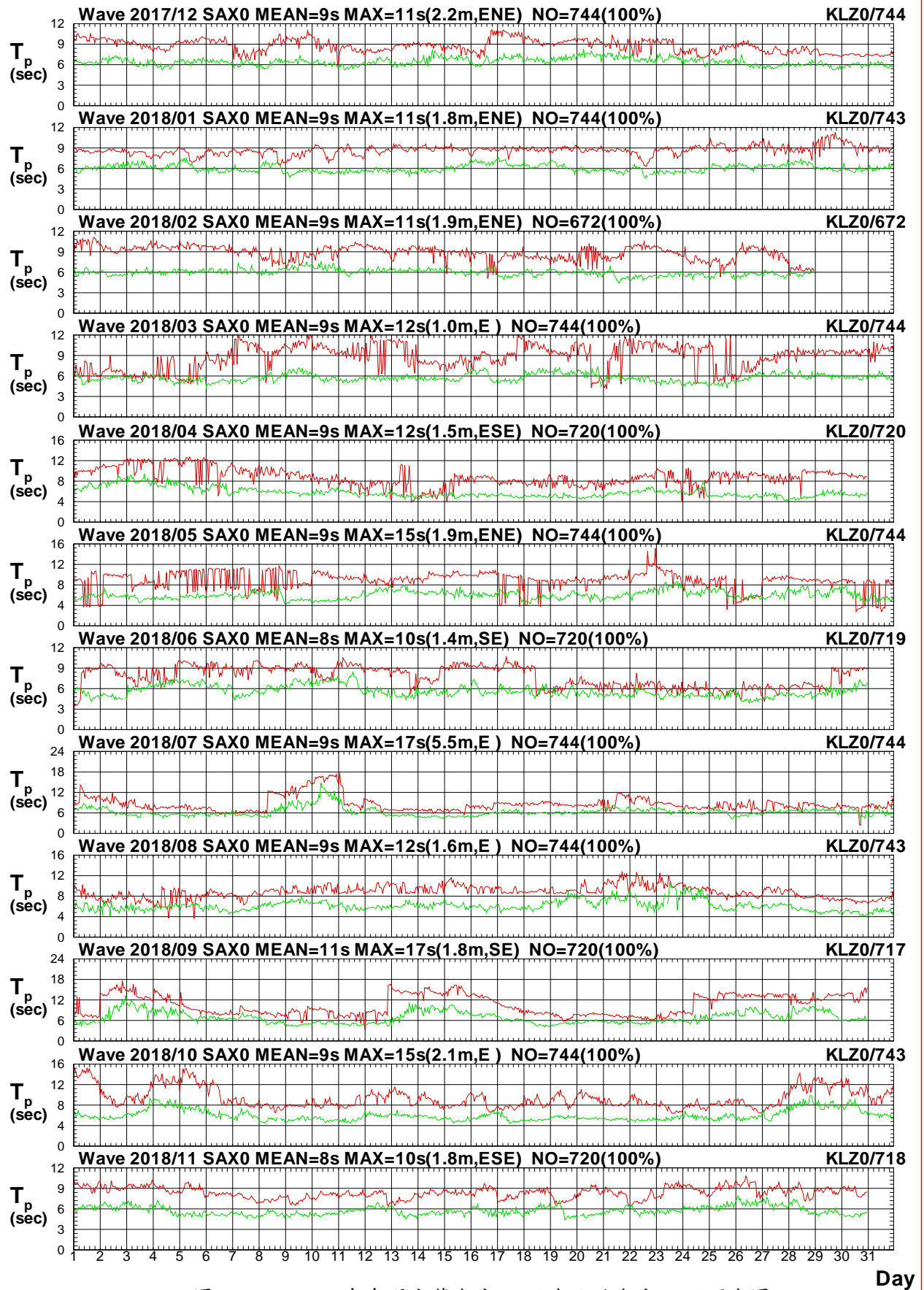


圖2.3.7b 2018年每月宜蘭海域 X 站與北端海域 Z 站週期圖

V17CSAX0.1HA V17CKLZ0.1H0 V181SAX0.1HA V181KLZ0.1H0 V182SAX0.1HA V182KLZ0.1H0
 V183SAX0.1HA V183KLZ0.1H0 V184SAX0.1HA V184KLZ0.1H0 V185SAX0.1HA V185KLZ0.1H0

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Wave Direction in Su-Ao Harbor of SAX0 at 2018

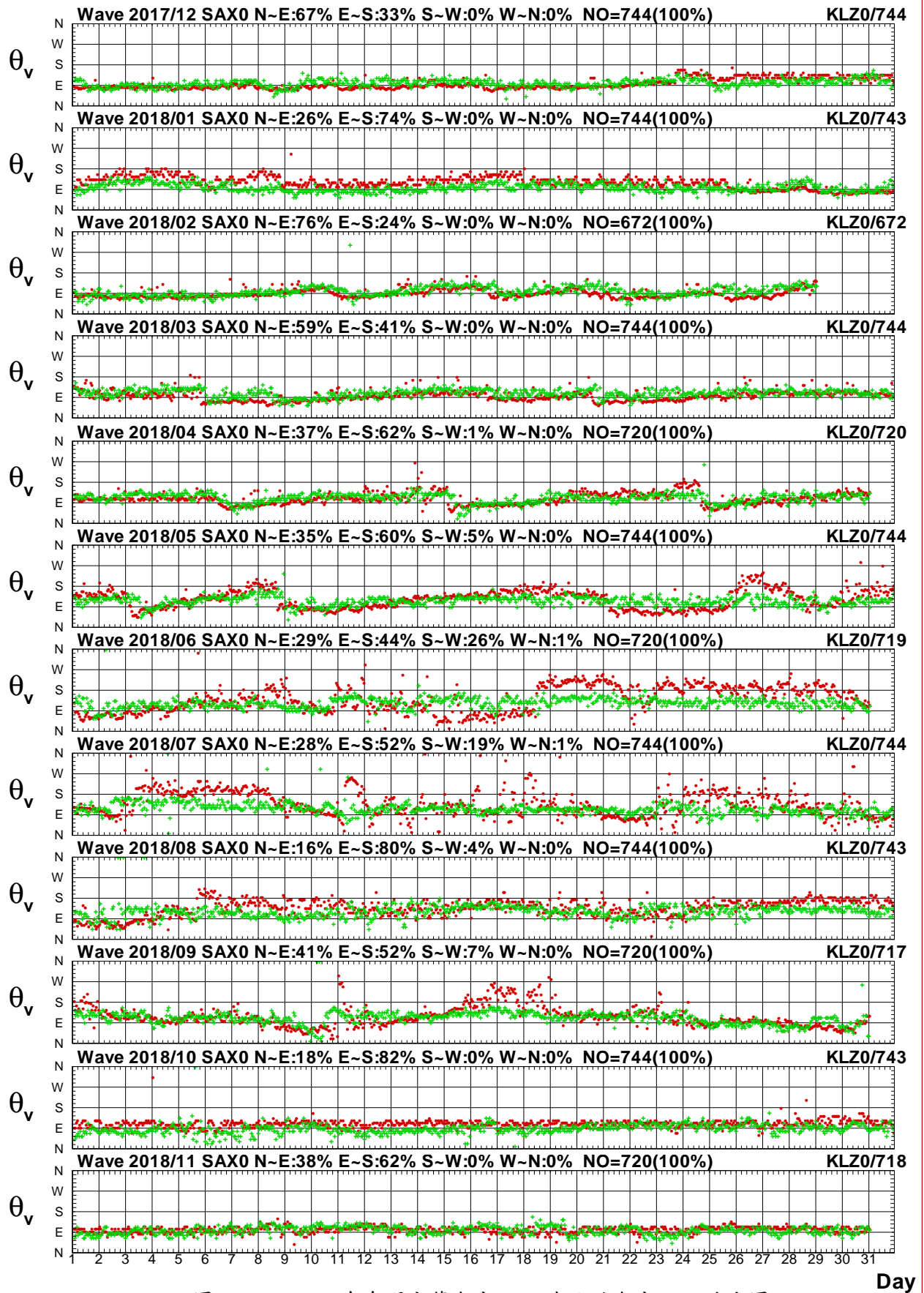


圖2.3.7c 2018年每月宜蘭海域 X 站與北端海域 Z 站波向圖

V17CSAX0.1HA V17CKLZ0.1H0 V181SAX0.1HA V181KLZ0.1H0 V182SAX0.1HA V182KLZ0.1H0
 V183SAX0.1HA V183KLZ0.1H0 V184SAX0.1HA V184KLZ0.1H0 V185SAX0.1HA V185KLZ0.1H0

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Wave H_s in Su-Ao Harbor of SAX0 at 2018

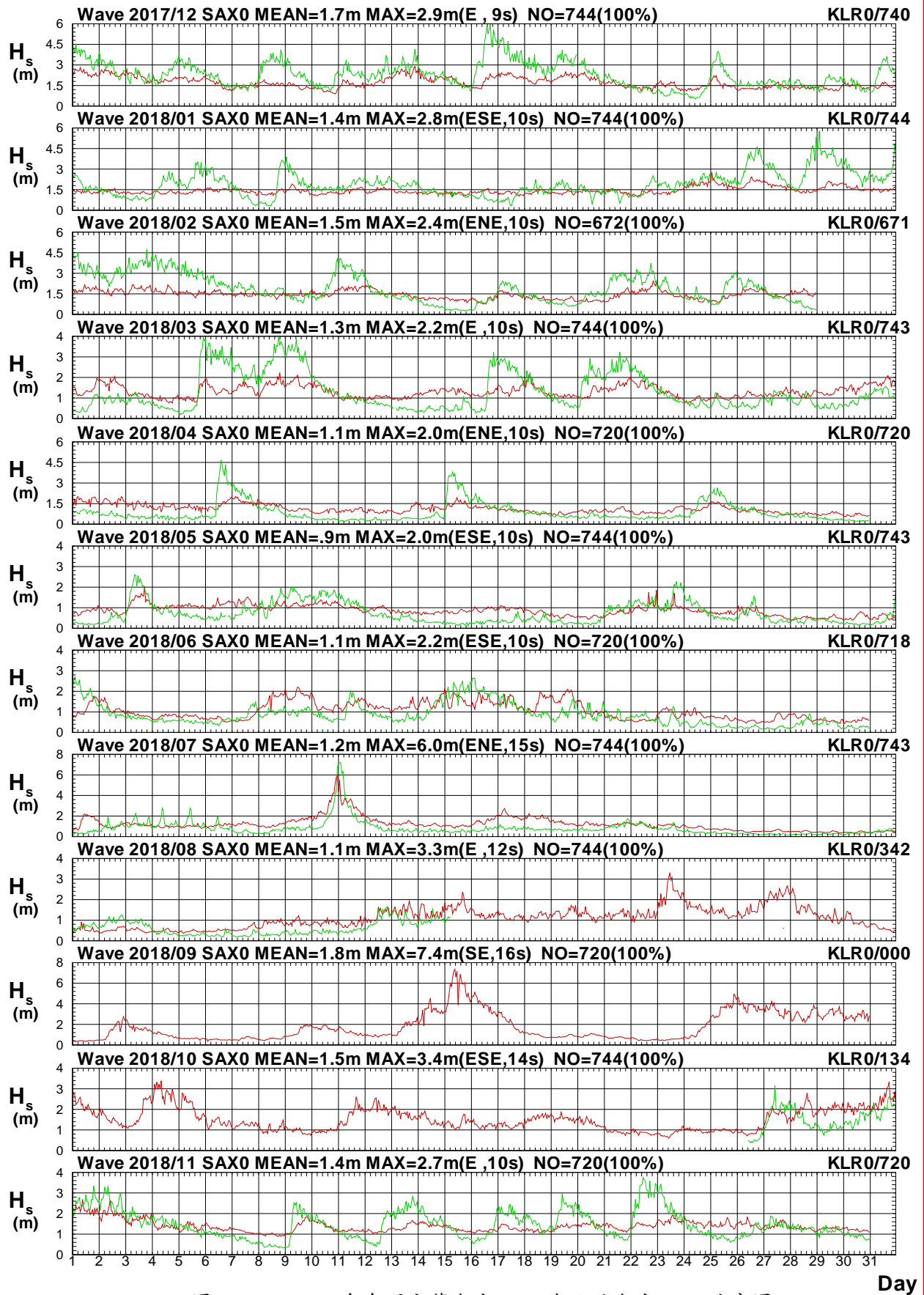


圖2.3.8a 2018年每月宜蘭海域 X 站與北端海域 R 站波高圖

V17CSAX0.1HA V17CKLR0.1HO V181SAX0.1HA V181KLR0.1HO V182SAX0.1HA V182KLR0.1HO
 V183SAX0.1HA V183KLR0.1HO V184SAX0.1HA V184KLR0.1HO V185SAX0.1HA V185KLR0.1HO

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Wave T_p in Su-Ao Harbor of SAX0 at 2018

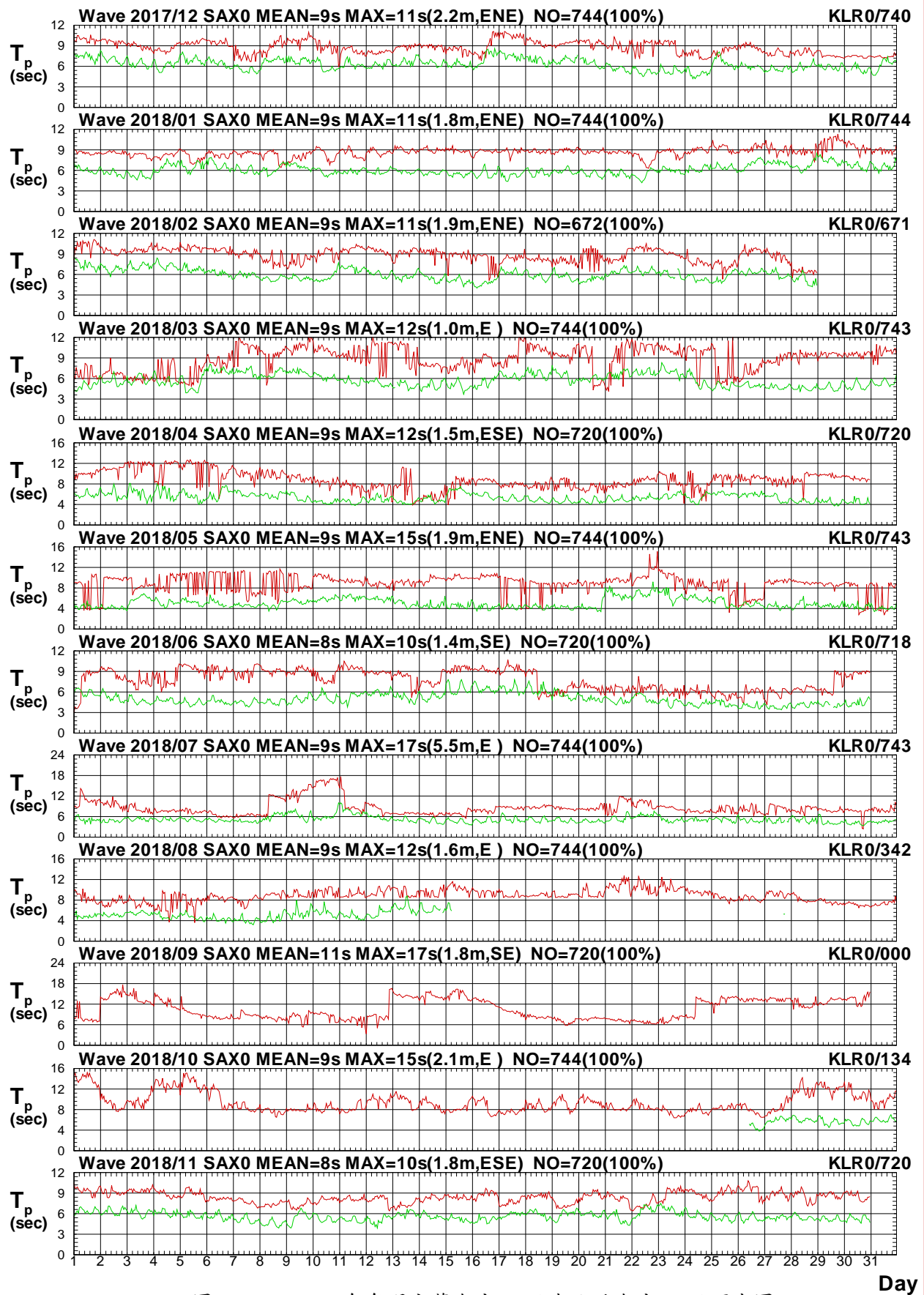


圖2.3.8b 2018年每月宜蘭海域 X 站與北端海域 R 站週期圖

V17CSAX0.1HA V17CKLR0.1H0 V181SAX0.1HA V181KLR0.1H0 V182SAX0.1HA V182KLR0.1H0
 V183SAX0.1HA V183KLR0.1H0 V184SAX0.1HA V184KLR0.1H0 V185SAX0.1HA V185KLR0.1H0

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Wave Direction in Su-Ao Harbor of SAX0 at 2018

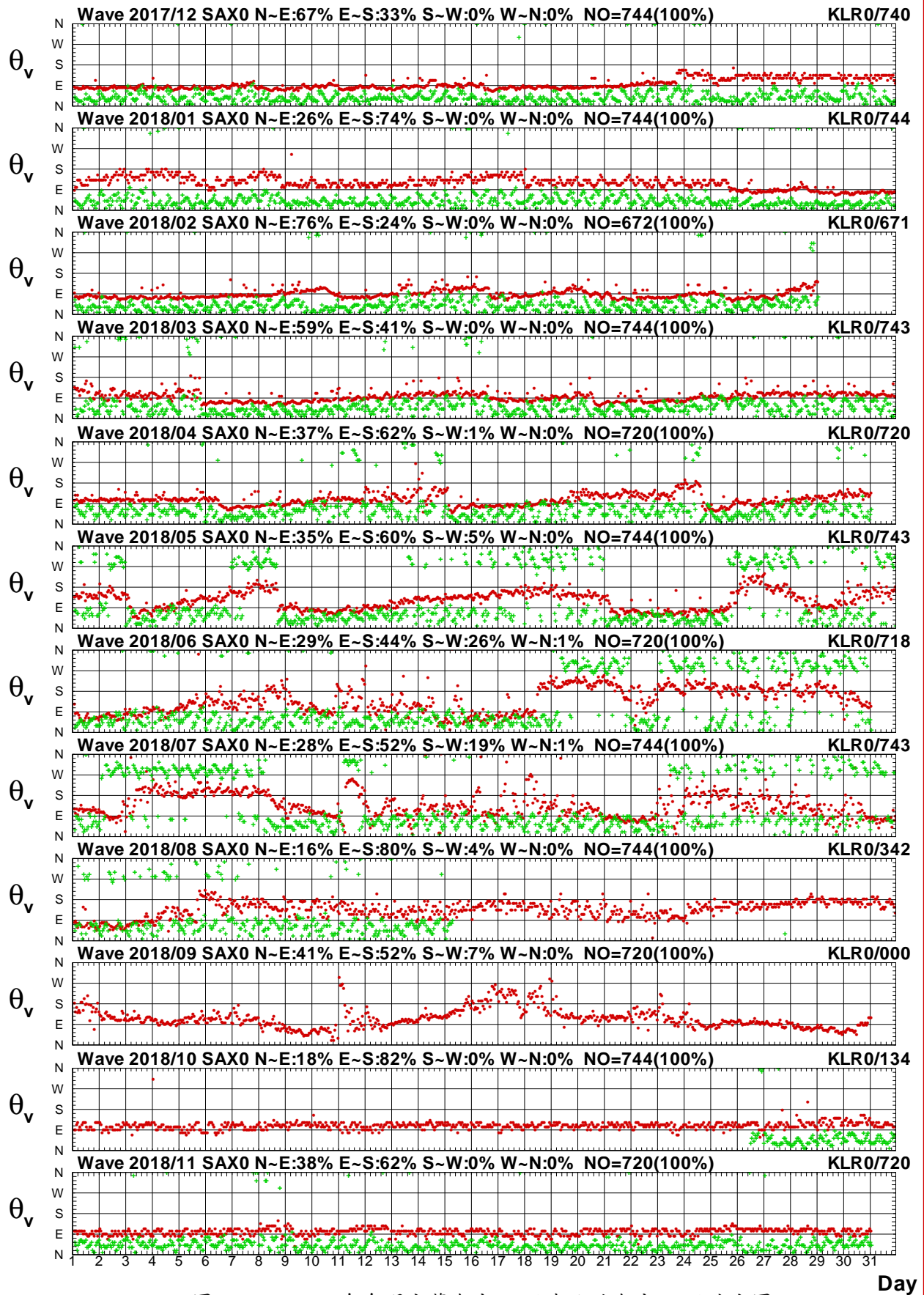


圖2.3.8c 2018年每月宜蘭海域 X 站與北端海域 R 站波向圖

V17CSAX0.1HA V17CKLR0.1H0 V181SAX0.1HA V181KLR0.1H0 V182SAX0.1HA V182KLR0.1H0
 V183SAX0.1HA V183KLR0.1H0 V184SAX0.1HA V184KLR0.1H0 V185SAX0.1HA V185KLR0.1H0

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2.4 2018年宜蘭海域波浪**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 Su-Ao Harbor of SAY0 at 2018

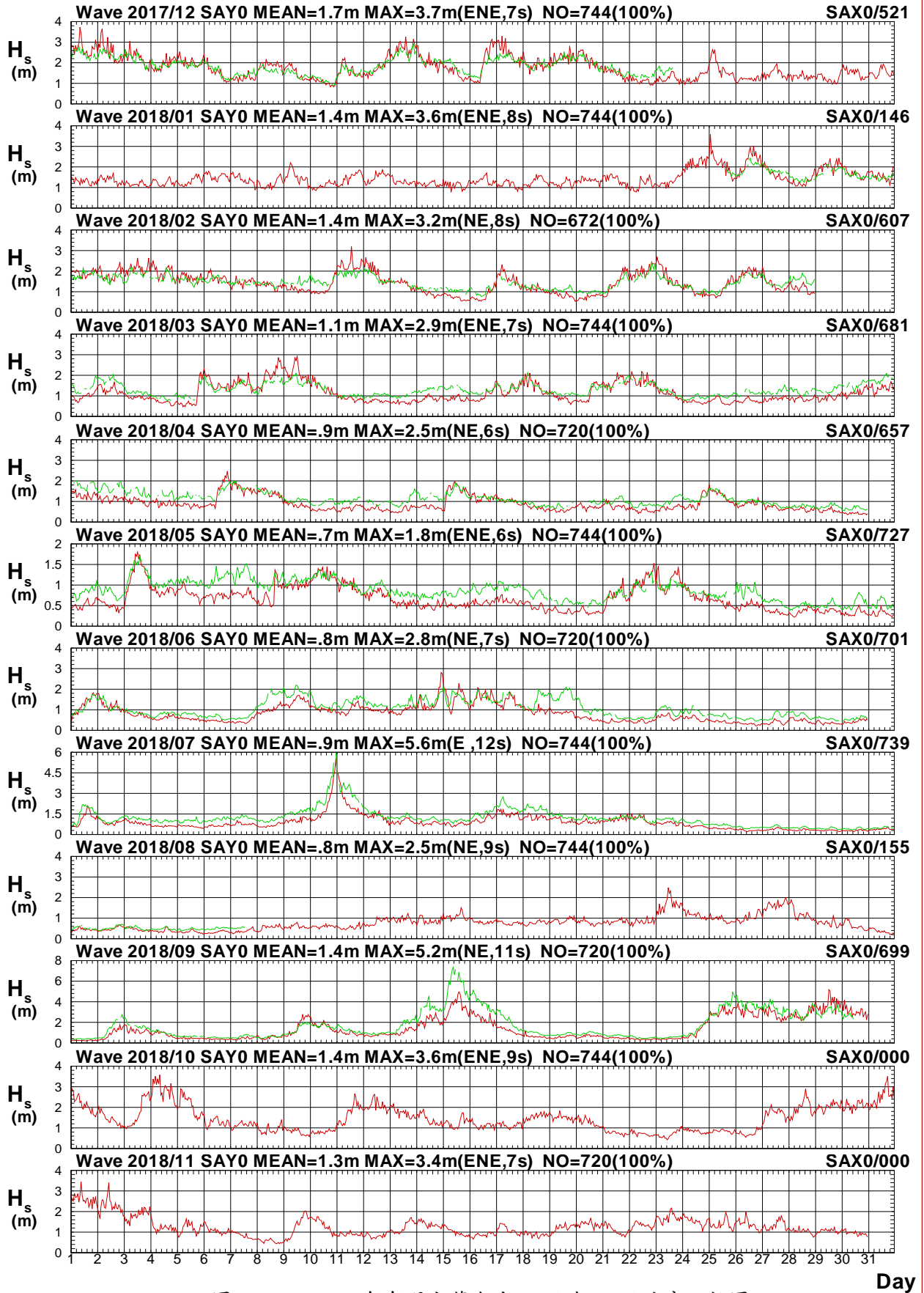


圖2.4.1a 2018年每月宜蘭海域 Y 站與 X 站波高比較圖

V17CSAY0.1HA V17CSAX0.1H0 V181SAY0.1HA V181SAX0.1H0 V182SAY0.1HA V182SAX0.1H0
 V183SAY0.1HA V183SAX0.1H0 V184SAY0.1HA V184SAX0.1H0 V185SAY0.1HA V185SAX0.1H0

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Wave T_p in Su-Ao Harbor of SAY0 at 2018

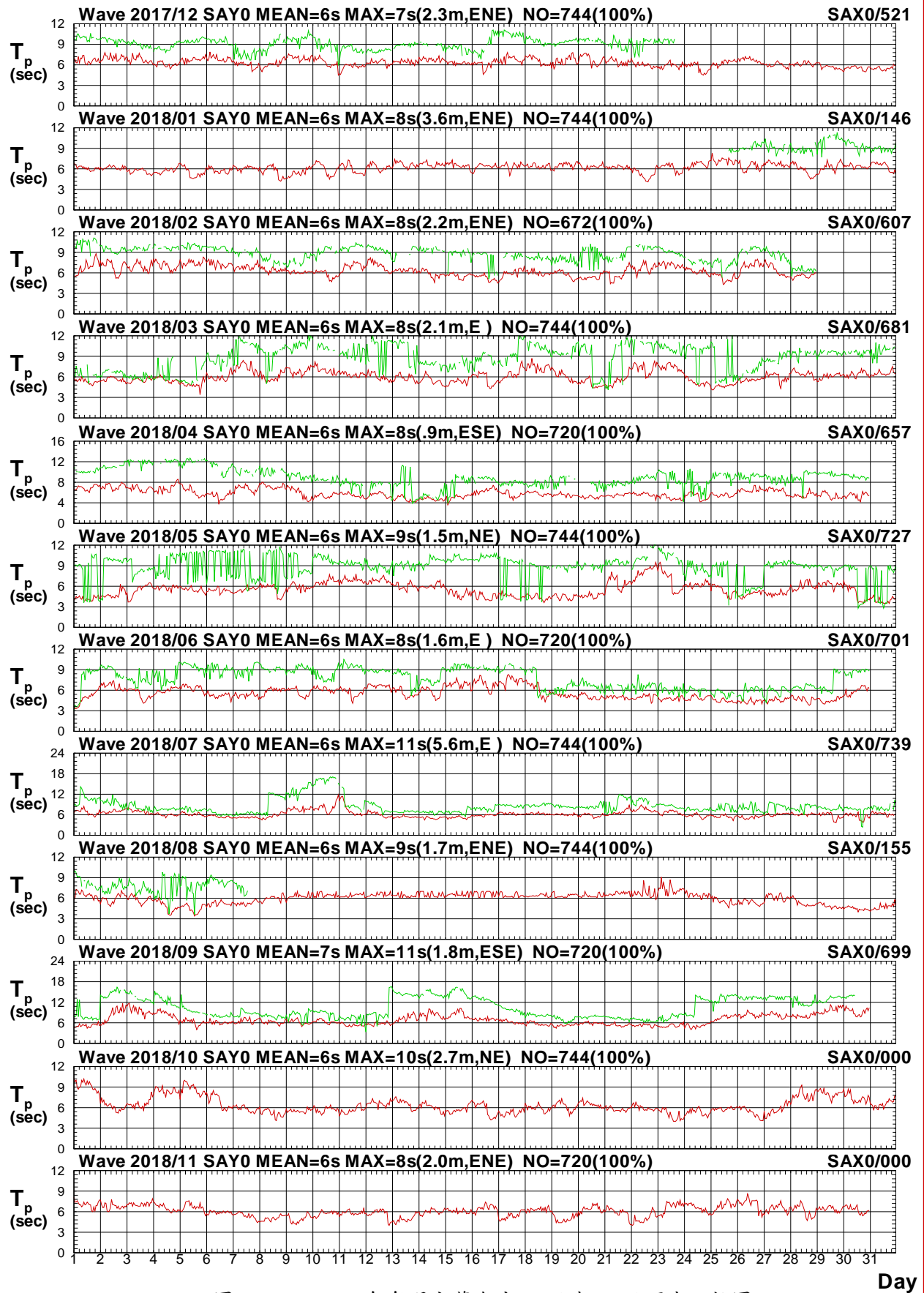


圖2.4.1b 2018年每月宜蘭海域 Y 站與 X 站週期比較圖

V17CSAY0.1HA V17CSAX0.1HO V181SAY0.1HA V181SAX0.1HO V182SAY0.1HA V182SAX0.1HO
 V183SAY0.1HA V183SAX0.1HO V184SAY0.1HA V184SAX0.1HO V185SAY0.1HA V185SAX0.1HO

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Wave Direction in Su-Ao Harbor of SAY0 at 2018

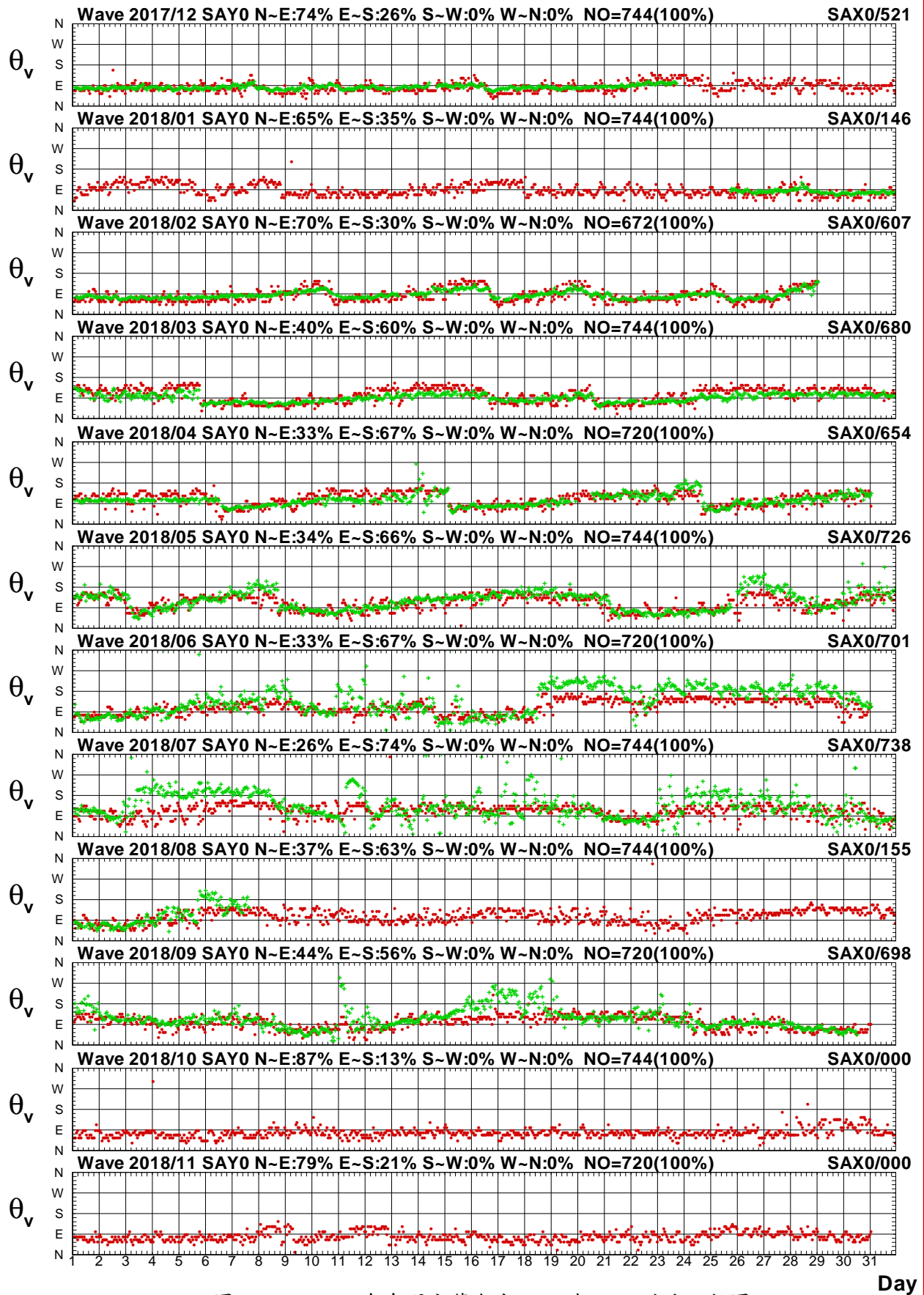


圖2.4.1c 2018年每月宜蘭海域 Y 站與 X 站波向比較圖

V17CSAY0.1HA V17CSAX0.1H0 V181SAY0.1HA V181SAX0.1H0 V182SAY0.1HA V182SAX0.1H0
 V183SAY0.1HA V183SAX0.1H0 V184SAY0.1HA V184SAX0.1H0 V185SAY0.1HA V185SAX0.1H0

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Wave H_s in Su-Ao Harbor of SAY0 at 2018

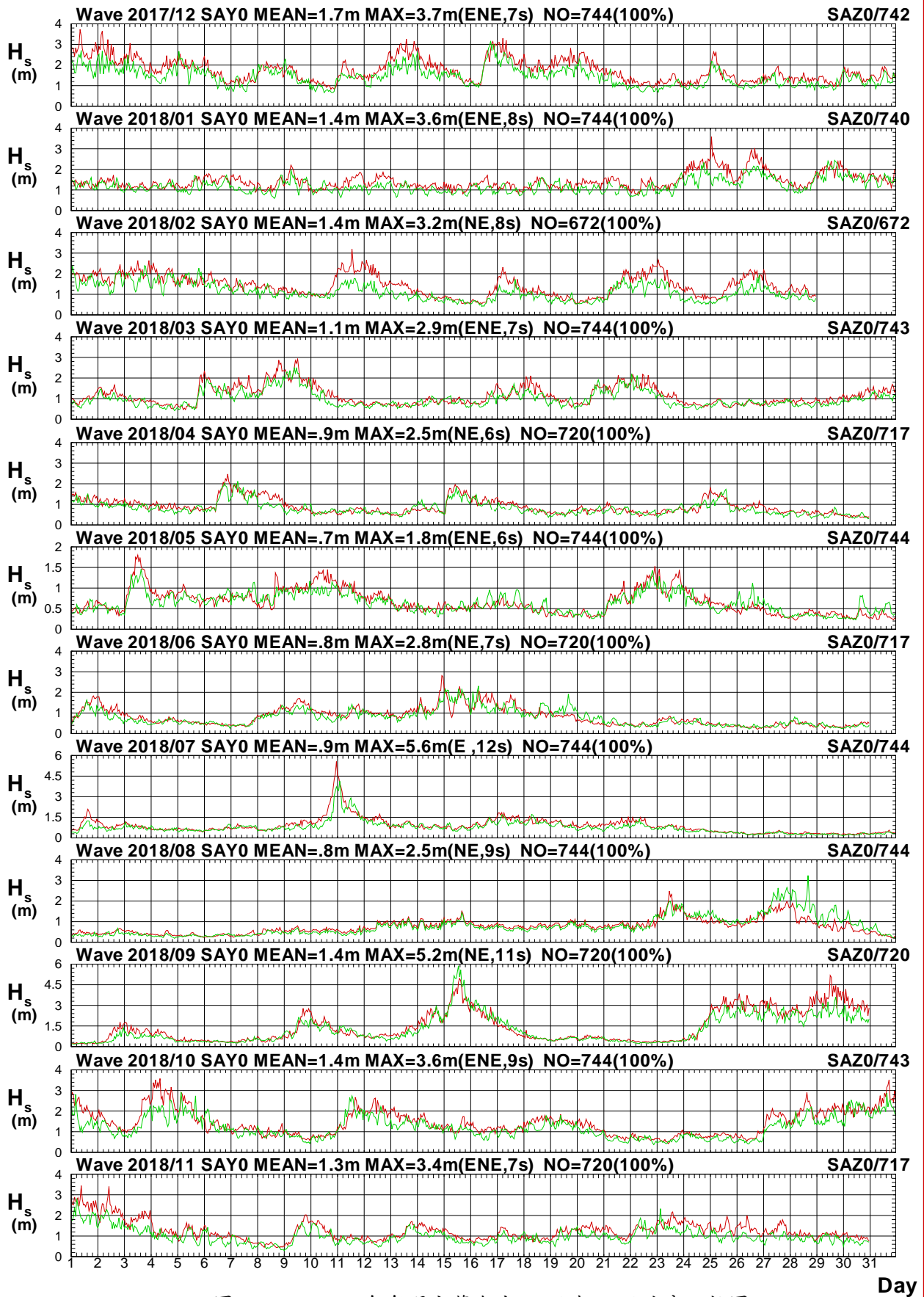


圖2.4.2a 2018年每月宜蘭海域 Y 站與 Z 站波高比較圖

V17CSAY0.1HA V17CSAZ0.1HO V181SAY0.1HA V181SAZ0.1HO V182SAY0.1HA V182SAZ0.1HO
 V183SAY0.1HA V183SAZ0.1HO V184SAY0.1HA V184SAZ0.1HO V185SAY0.1HA V185SAZ0.1HO

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Wave T_p in Su-Ao Harbor of SAY0 at 2018

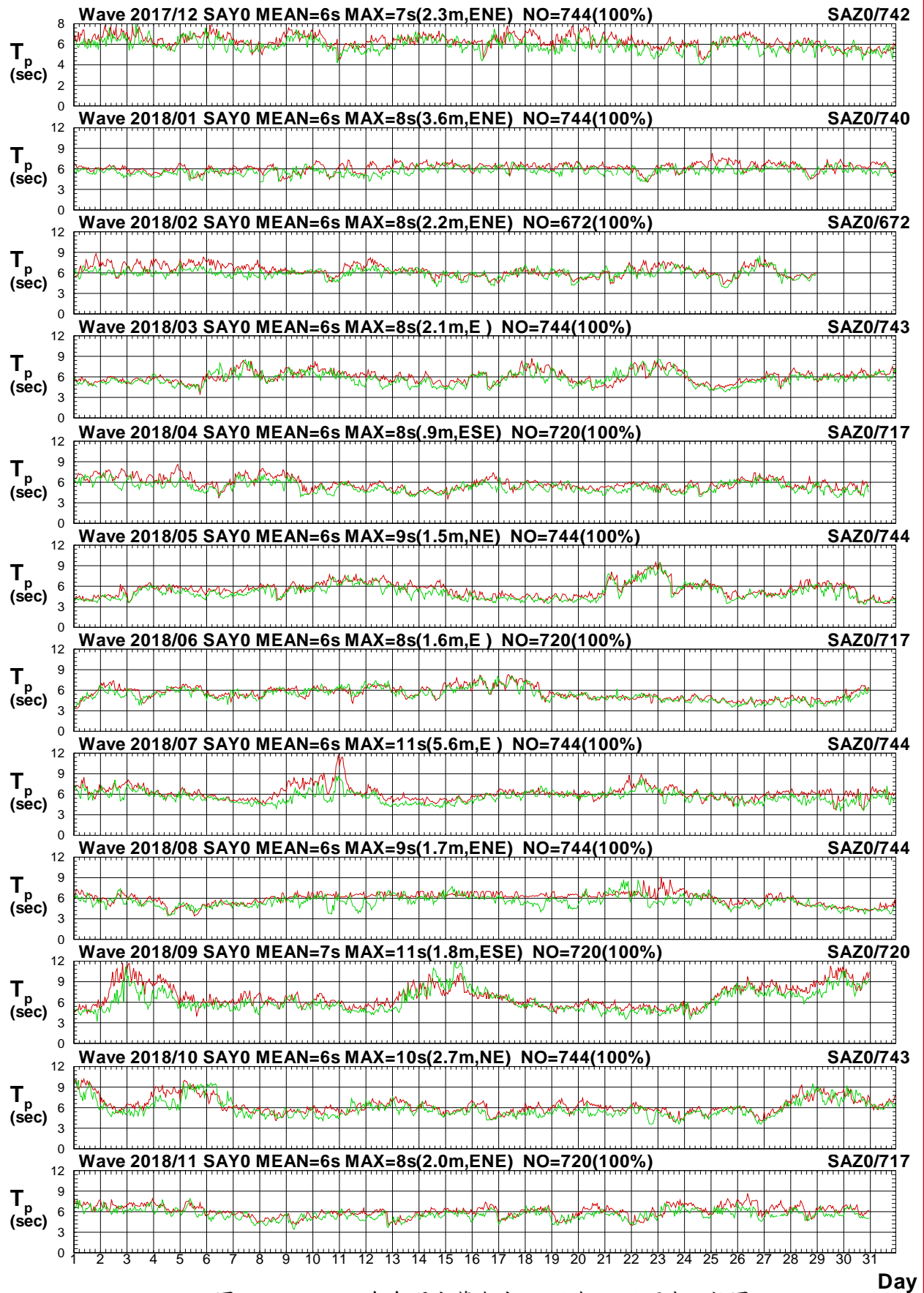


圖2.4.2b 2018年每月宜蘭海域 Y 站與 Z 站週期比較圖

V17CSAY0.1HA V17CSAZ0.1H0 V181SAY0.1HA V181SAZ0.1H0 V182SAY0.1HA V182SAZ0.1H0
 V183SAY0.1HA V183SAZ0.1H0 V184SAY0.1HA V184SAZ0.1H0 V185SAY0.1HA V185SAZ0.1H0

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Wave Direction in Su-Ao Harbor of SAY0 at 2018

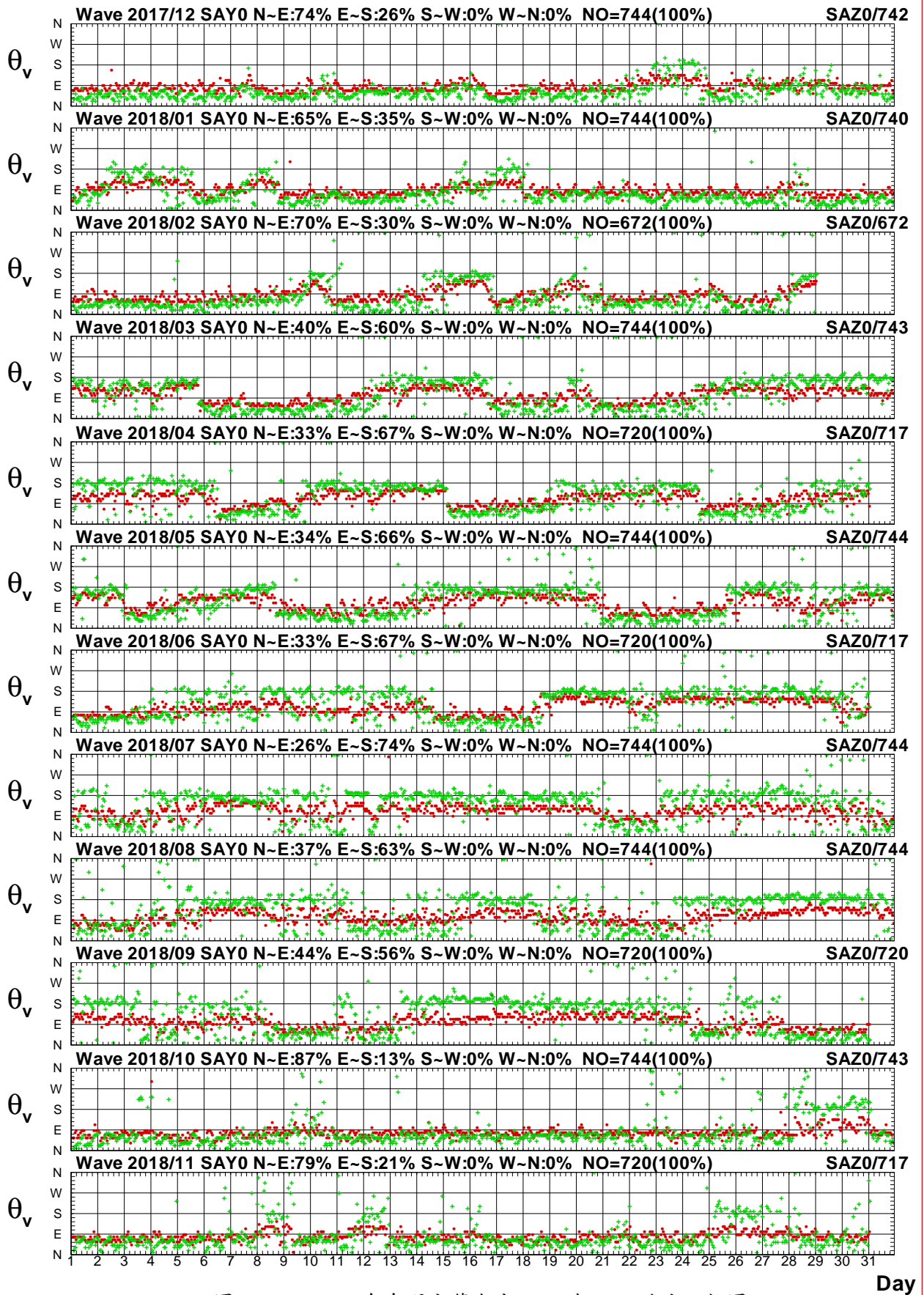


圖2.4.2c 2018年每月宜蘭海域 Y 站與 Z 站波向比較圖

V17CSAY0.1HA V17CSAZ0.1H0 V181SAY0.1HA V181SAZ0.1H0 V182SAY0.1HA V182SAZ0.1H0
 V183SAY0.1HA V183SAZ0.1H0 V184SAY0.1HA V184SAZ0.1H0 V185SAY0.1HA V185SAZ0.1H0

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Wave H_s in Su-Ao Harbor of SAY0 at 2018

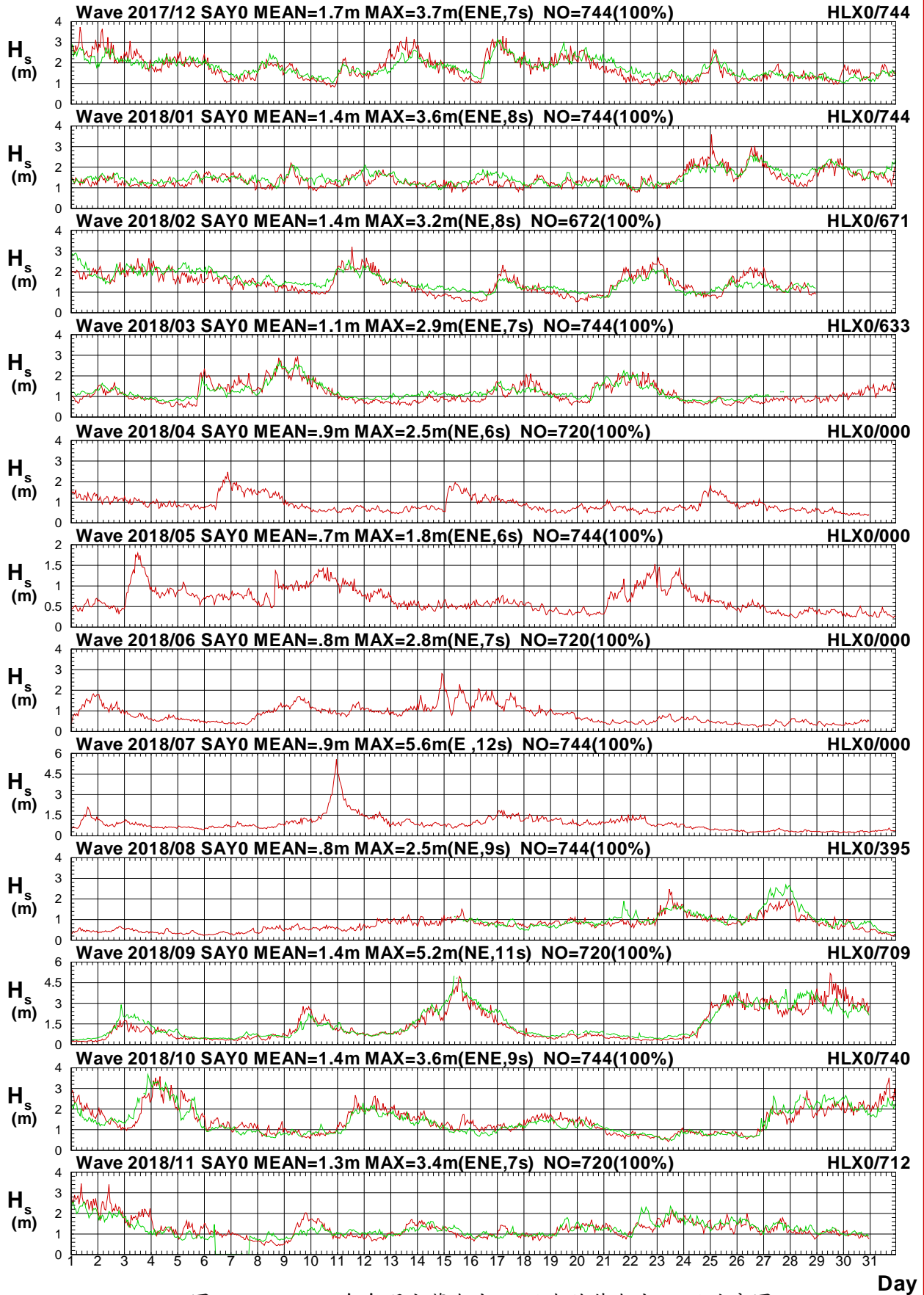


圖2.4.3a 2018年每月宜蘭海域 Y 站與花蓮海域 X 站波高圖

V17CSAY0.1HA V17CHLX0.1H0 V181SAY0.1HA V181HLX0.1H0 V182SAY0.1HA V182HLX0.1H0
 V183SAY0.1HA V183HLX0.1H0 V184SAY0.1HA V184HLX0.1H0 V185SAY0.1HA V185HLX0.1H0

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Wave T_p in Su-Ao Harbor of SAY0 at 2018

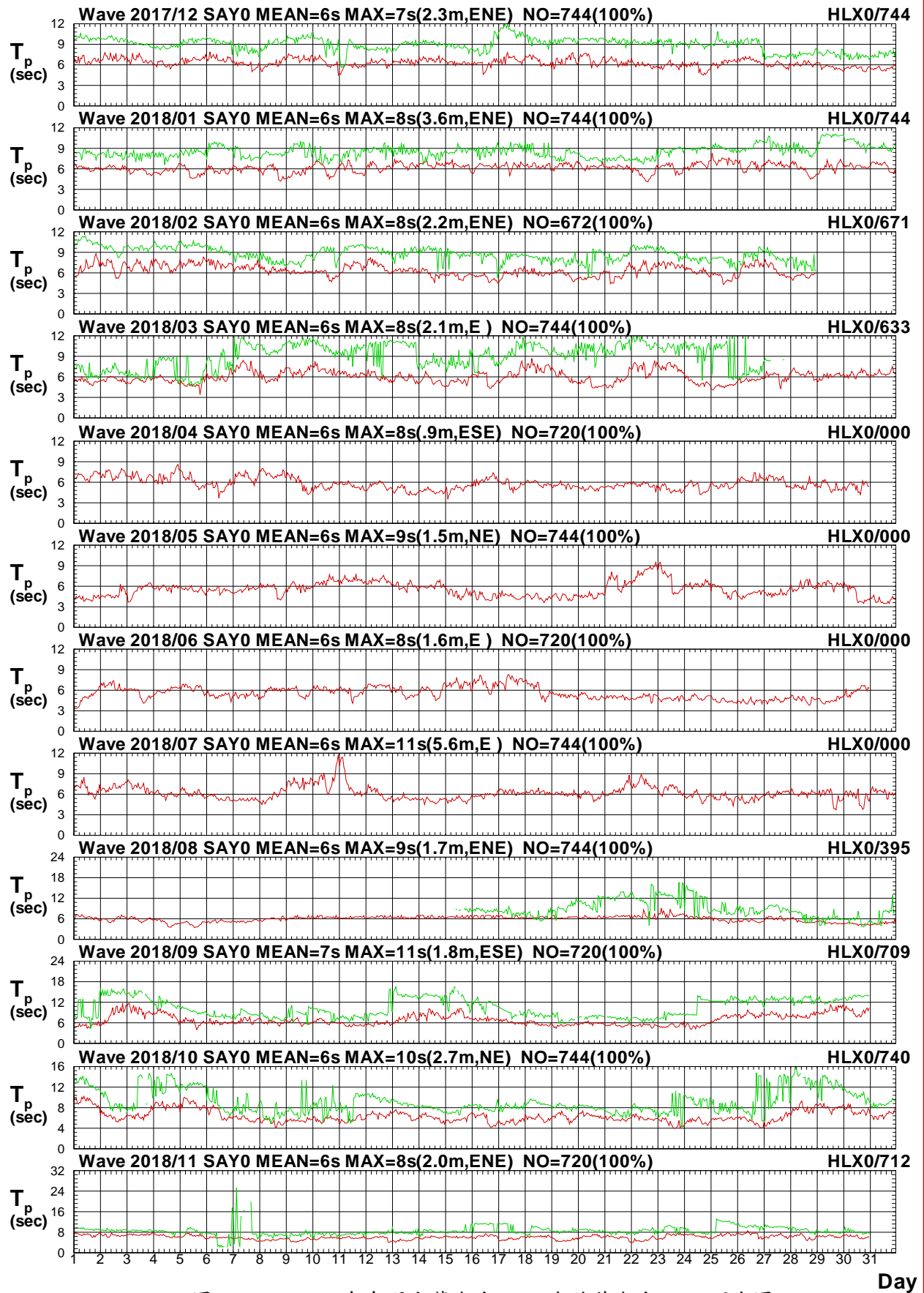


圖2.4.3b 2018年每月宜蘭海域 Y 站與花蓮海域 X 站週期圖

V17CSAY0.1HA V17CHLX0.1H0 V181SAY0.1HA V181HLX0.1H0 V182SAY0.1HA V182HLX0.1H0
 V183SAY0.1HA V183HLX0.1H0 V184SAY0.1HA V184HLX0.1H0 V185SAY0.1HA V185HLX0.1H0

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Wave Direction in Su-Ao Harbor of SAY0 at 2018

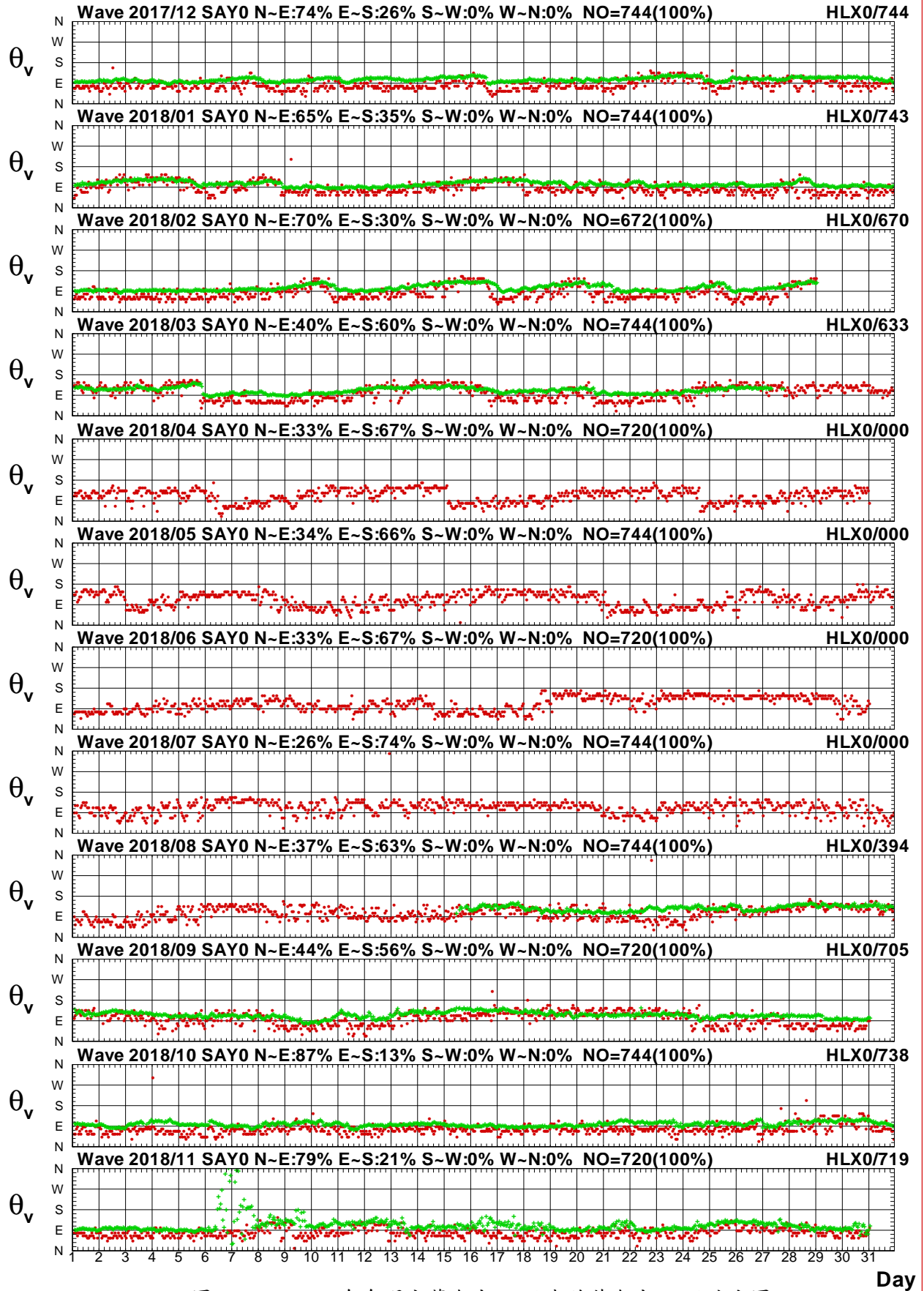


圖2.4.3c 2018年每月宜蘭海域 Y 站與花蓮海域 X 站波向圖

V17CSAY0.1HA V17CHLX0.1H0 V181SAY0.1HA V181HLX0.1H0 V182SAY0.1HA V182HLX0.1H0
 V183SAY0.1HA V183HLX0.1H0 V184SAY0.1HA V184HLX0.1H0 V185SAY0.1HA V185HLX0.1H0

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Wave H_s in Su-Ao Harbor of SAY0 at 2018

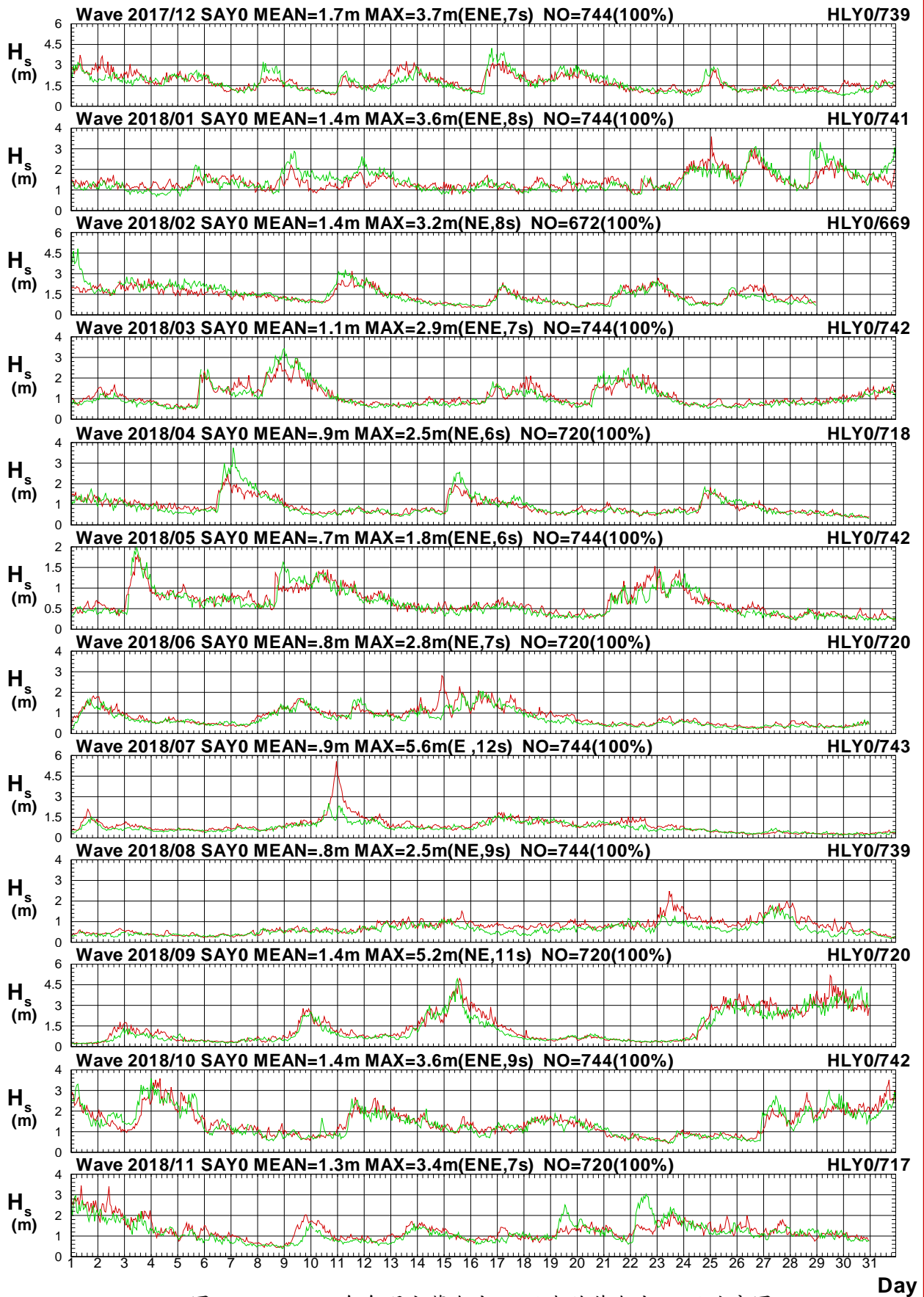


圖2.4.4a 2018年每月宜蘭海域 Y 站與花蓮海域 Y 站波高圖

V17CSAY0.1HA V17CHLY0.1HO V181SAY0.1HA V181HLY0.1HO V182SAY0.1HA V182HLY0.1HO
 V183SAY0.1HA V183HLY0.1HO V184SAY0.1HA V184HLY0.1HO V185SAY0.1HA V185HLY0.1HO

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Wave T_p in Su-Ao Harbor of SAY0 at 2018

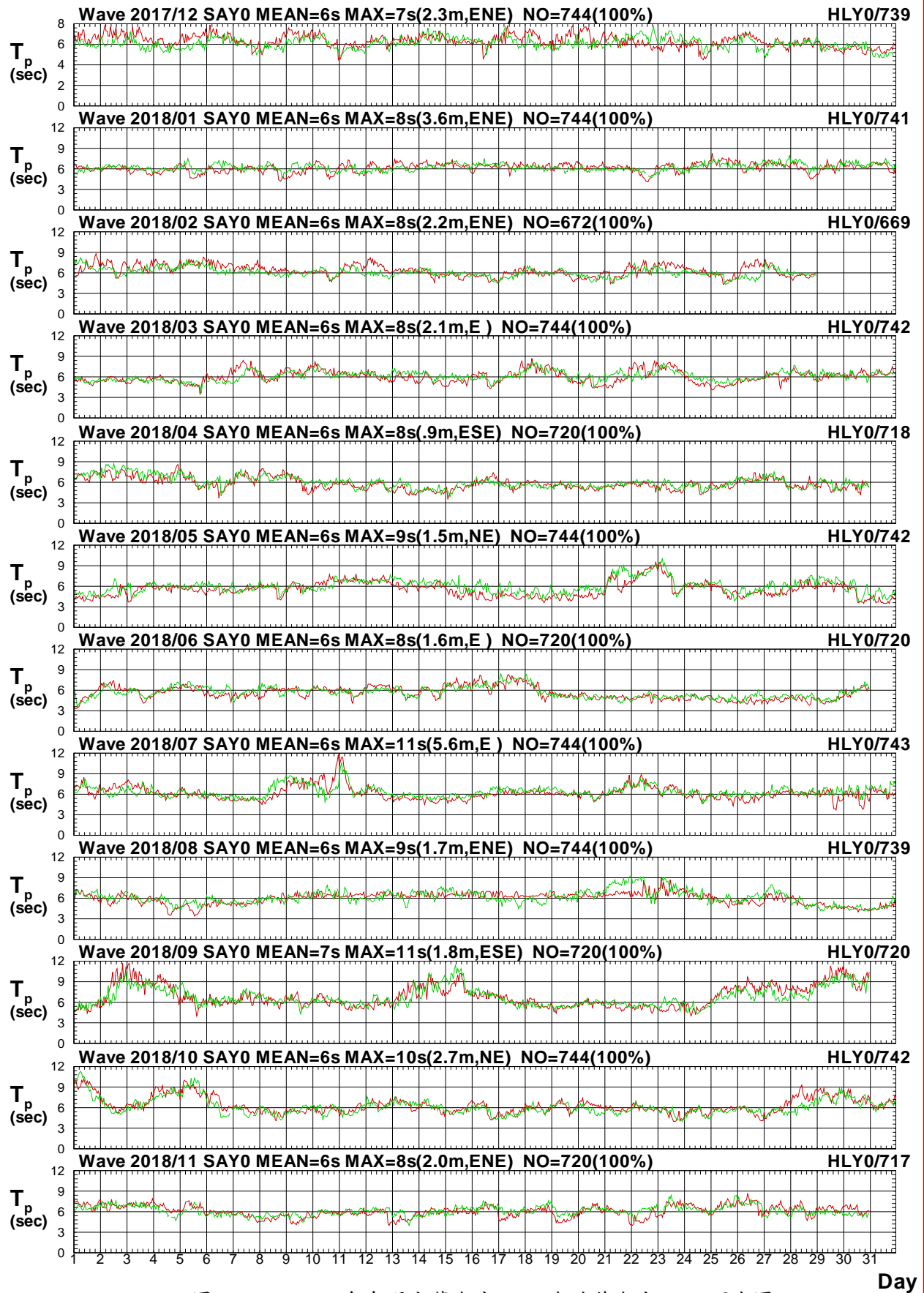


圖2.4.4b 2018年每月宜蘭海域 Y 站與花蓮海域 Y 站週期圖

V17CSAY0.1HA V17CHLY0.1H0 V181SAY0.1HA V181HLY0.1H0 V182SAY0.1HA V182HLY0.1H0
 V183SAY0.1HA V183HLY0.1H0 V184SAY0.1HA V184HLY0.1H0 V185SAY0.1HA V185HLY0.1H0

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Wave Direction in Su-Ao Harbor of SAY0 at 2018

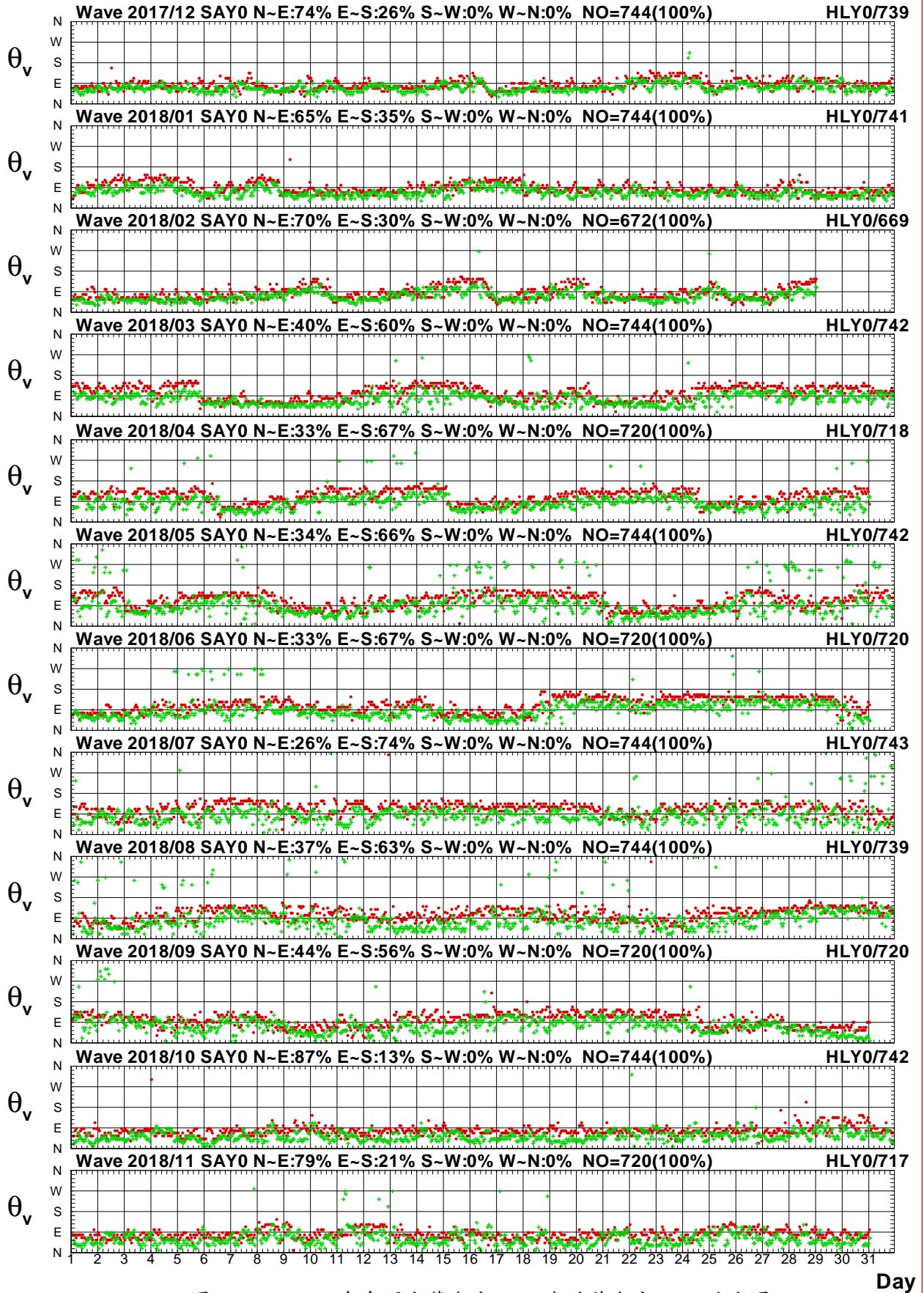


圖2.4.4c 2018年每月宜蘭海域 Y 站與花蓮海域 Y 站波向圖

V17CSAY0.1HA V17CHLY0.1H0 V181SAY0.1HA V181HLY0.1H0 V182SAY0.1HA V182HLY0.1H0
 V183SAY0.1HA V183HLY0.1H0 V184SAY0.1HA V184HLY0.1H0 V185SAY0.1HA V185HLY0.1H0

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Wave H_s in Su-Ao Harbor of SAY0 at 2018

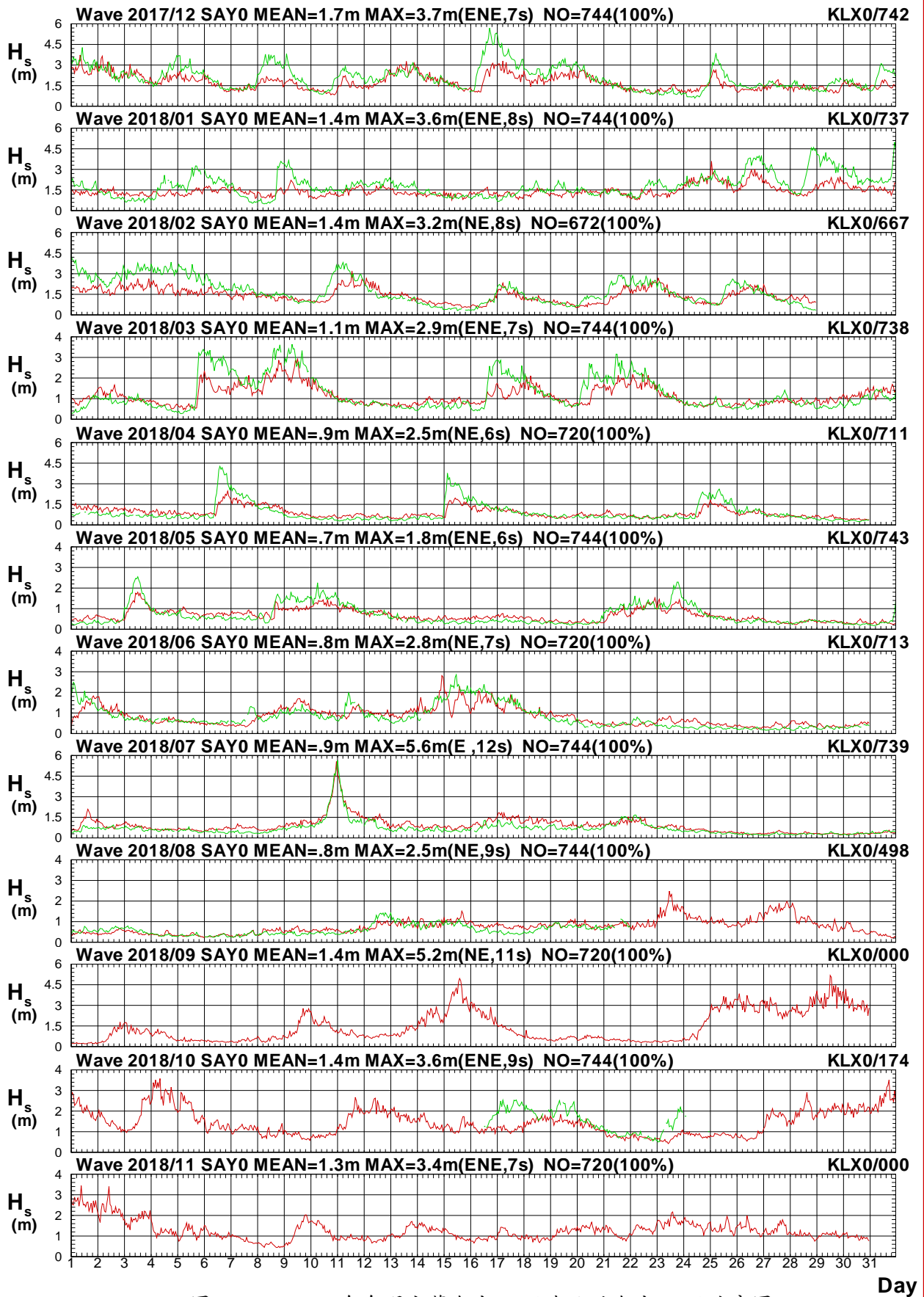


圖2.4.5a 2018年每月宜蘭海域 Y 站與北端海域 X 站波高圖

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

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Wave T_p in Su-Ao Harbor of SAY0 at 2018

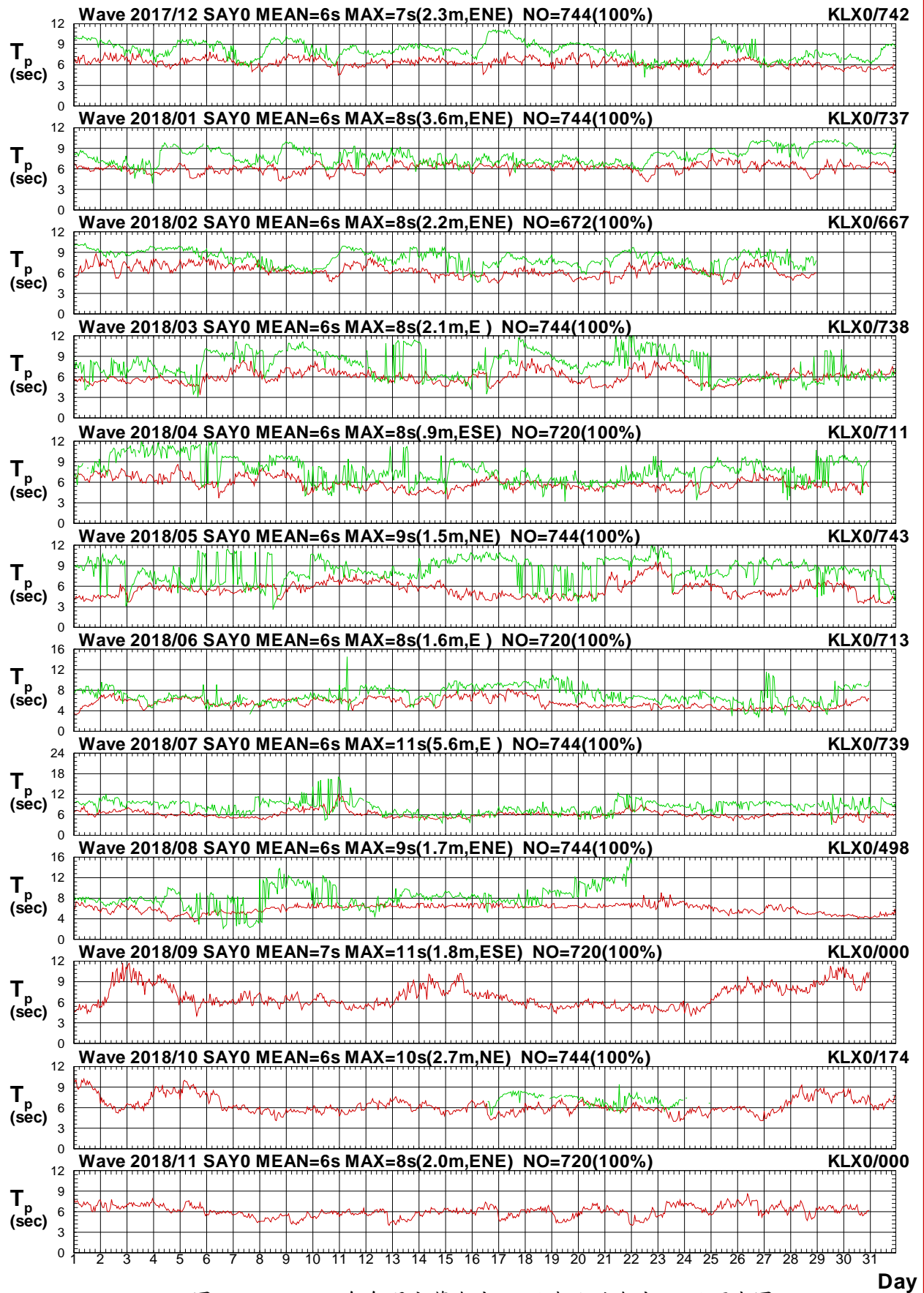


圖2.4.5b 2018年每月宜蘭海域 Y 站與北端海域 X 站週期圖

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

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Wave Direction in Su-Ao Harbor of SAY0 at 2018

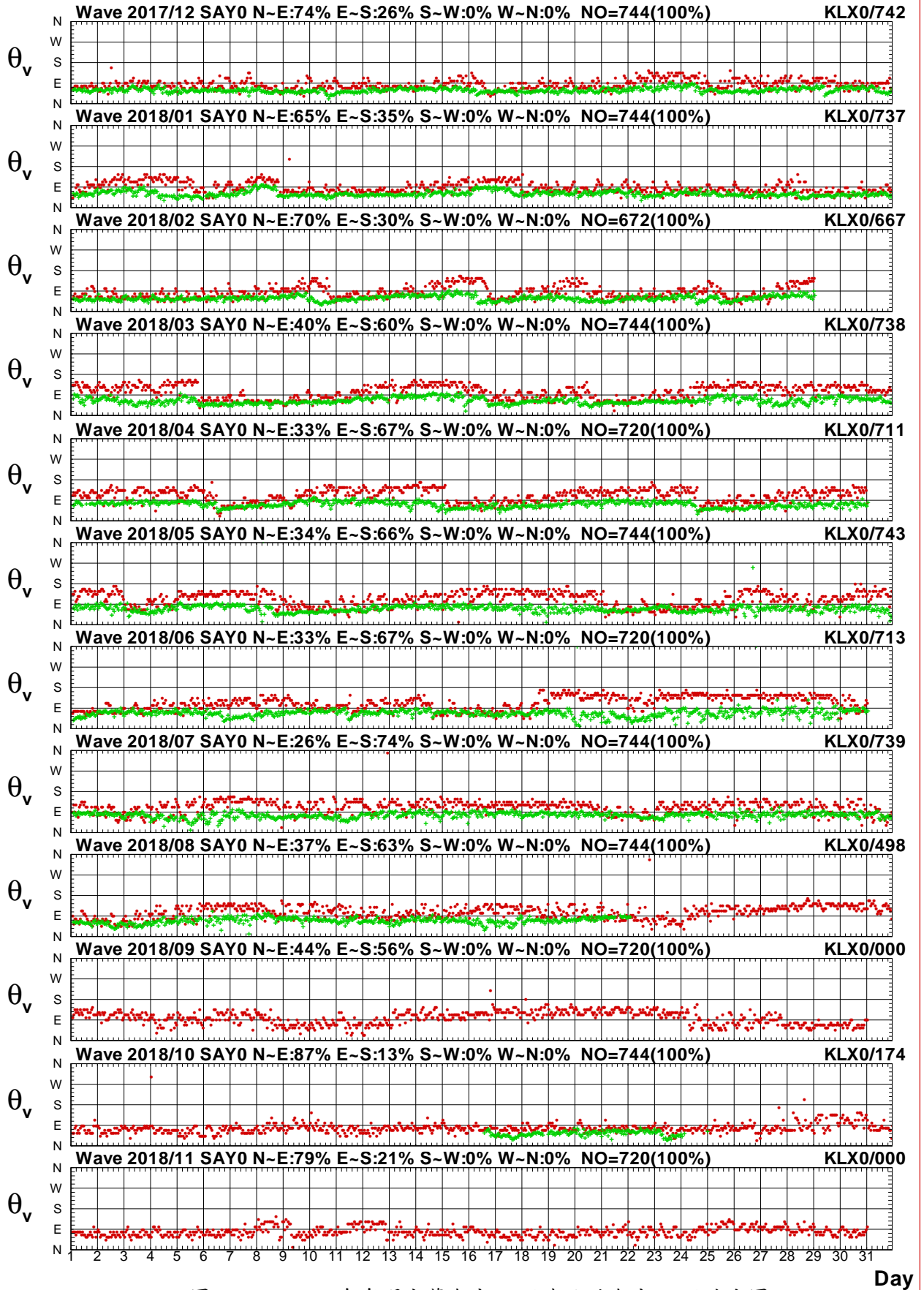


圖2.4.5c 2018年每月宜蘭海域 Y 站與北端海域 X 站波向圖

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

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Wave H_s in Su-Ao Harbor of SAY0 at 2018

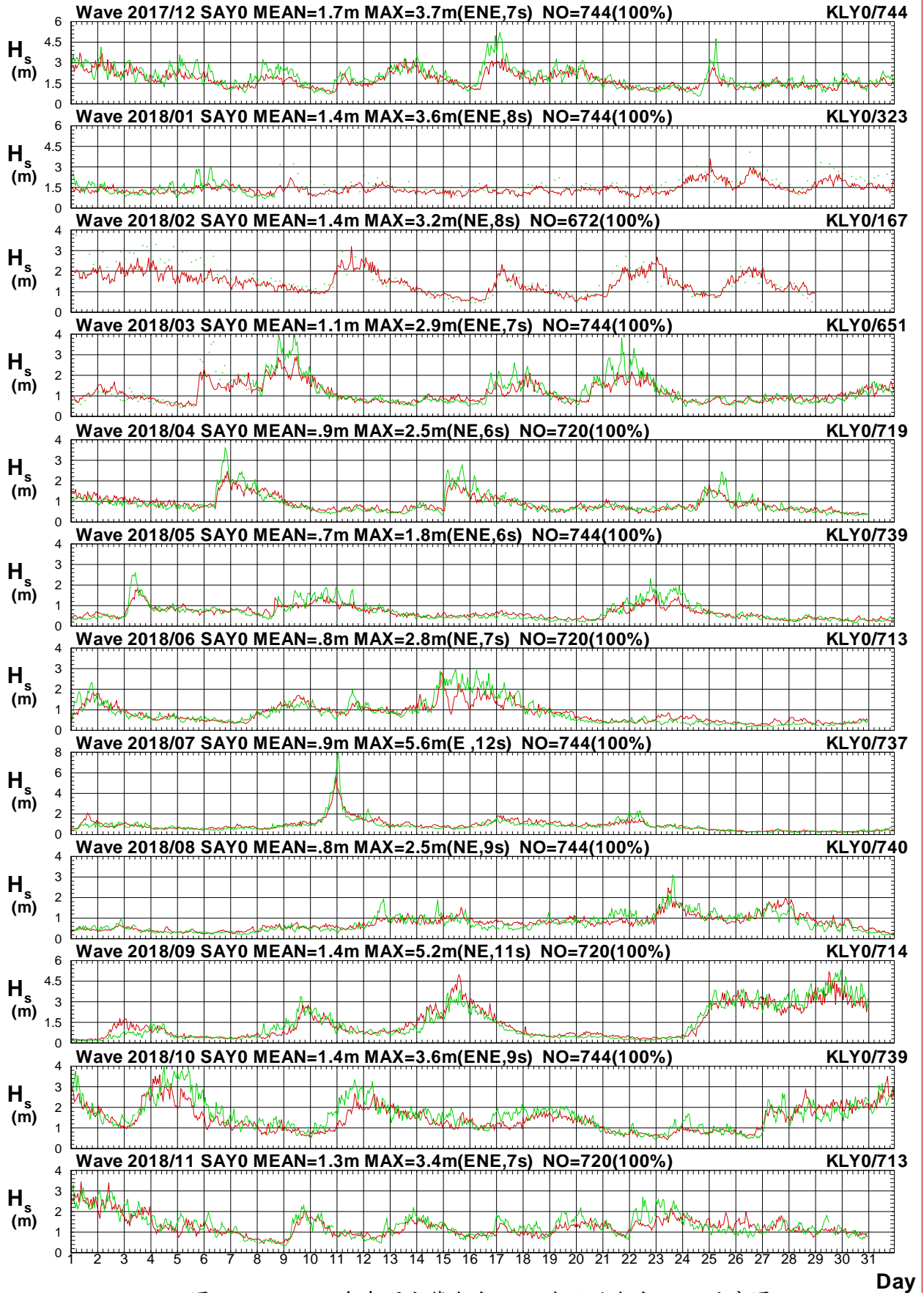


圖2.4.6a 2018年每月宜蘭海域 Y 站與北端海域 Y 站波高圖

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

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Wave T_p in Su-Ao Harbor of SAY0 at 2018

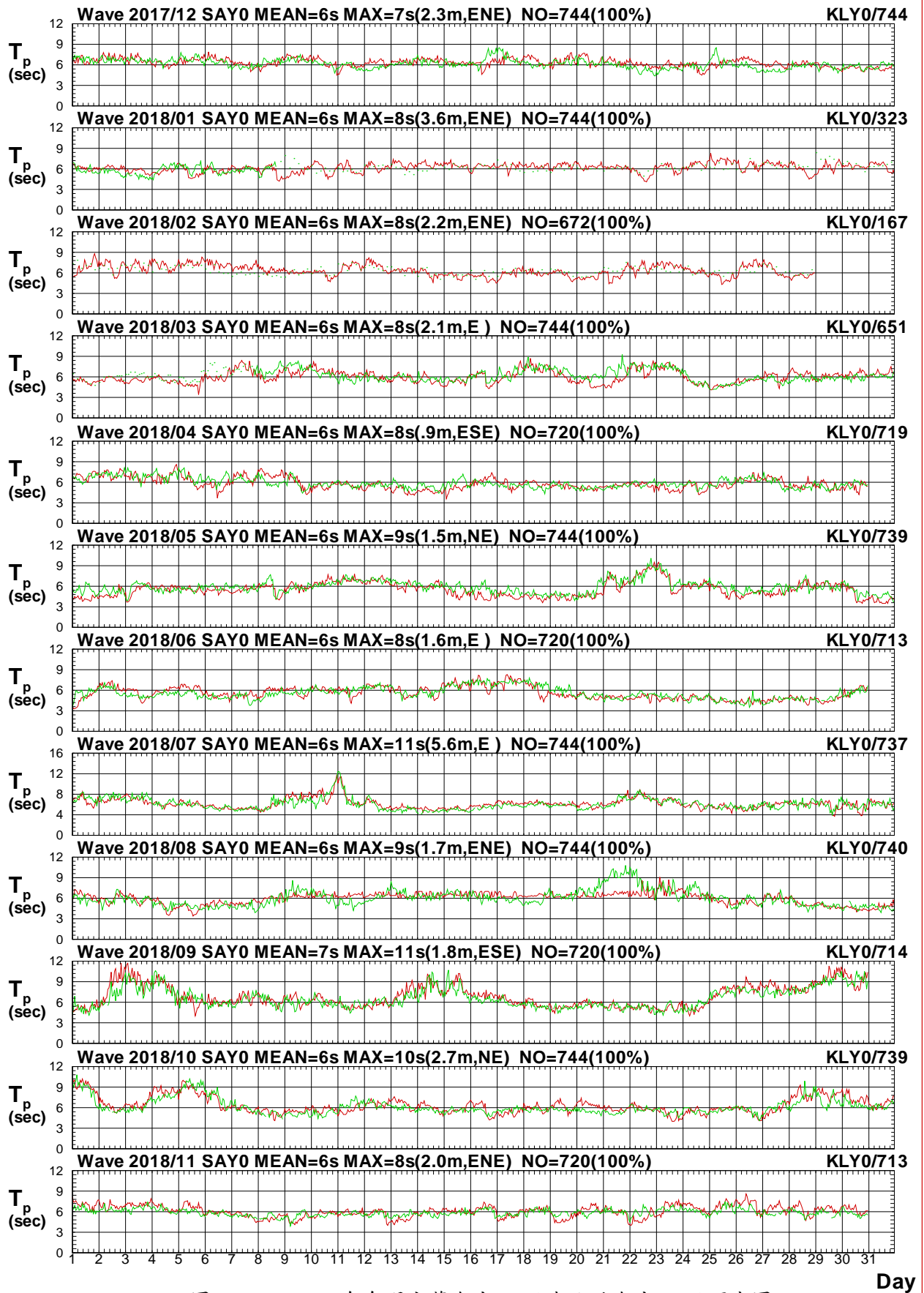


圖2.4.6b 2018年每月宜蘭海域 Y 站與北端海域 Y 站週期圖

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

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Wave Direction in Su-Ao Harbor of SAY0 at 2018

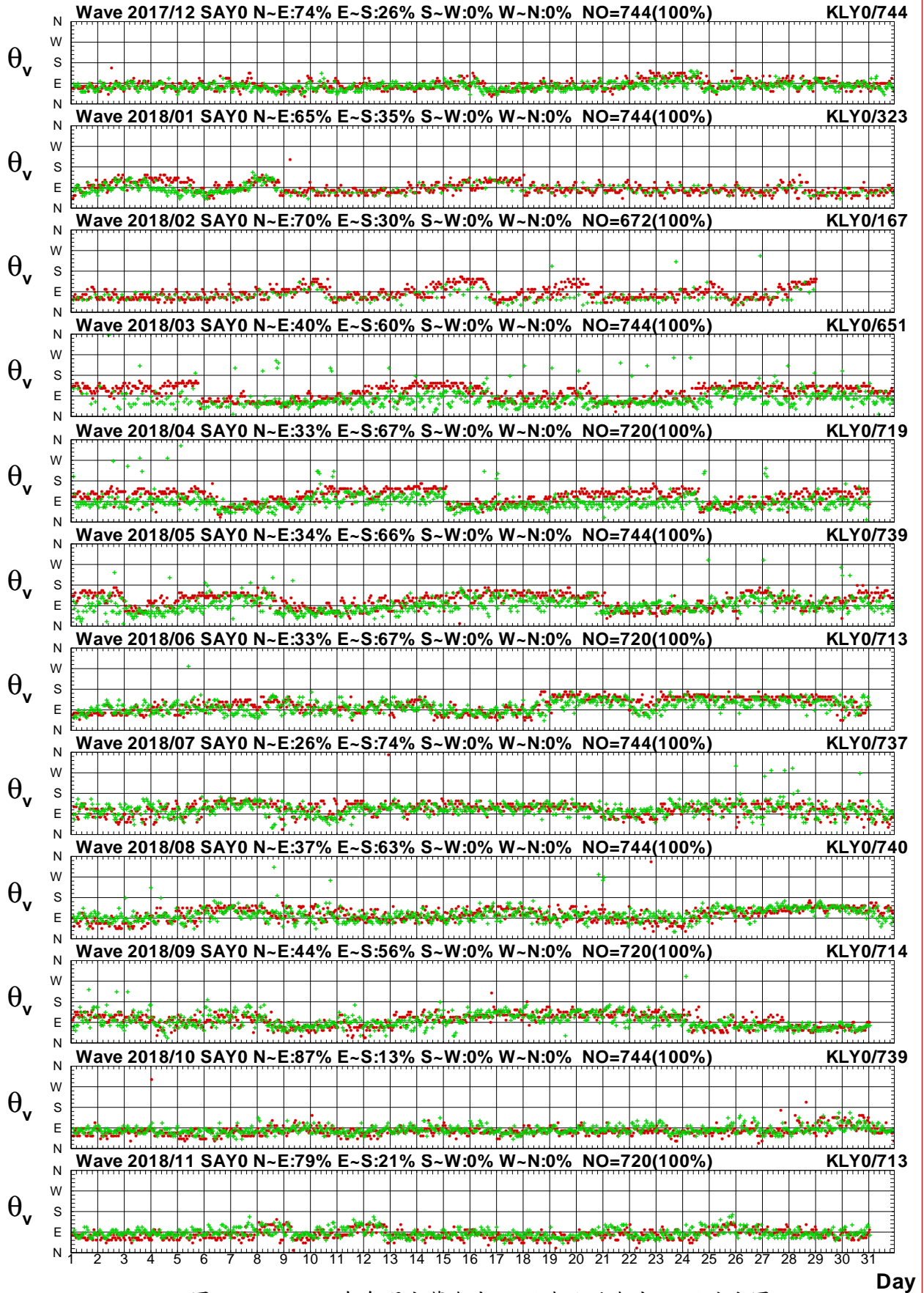


圖2.4.6c 2018年每月宜蘭海域 Y 站與北端海域 Y 站波向圖

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

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Wave H_s in Su-Ao Harbor of SAY0 at 2018

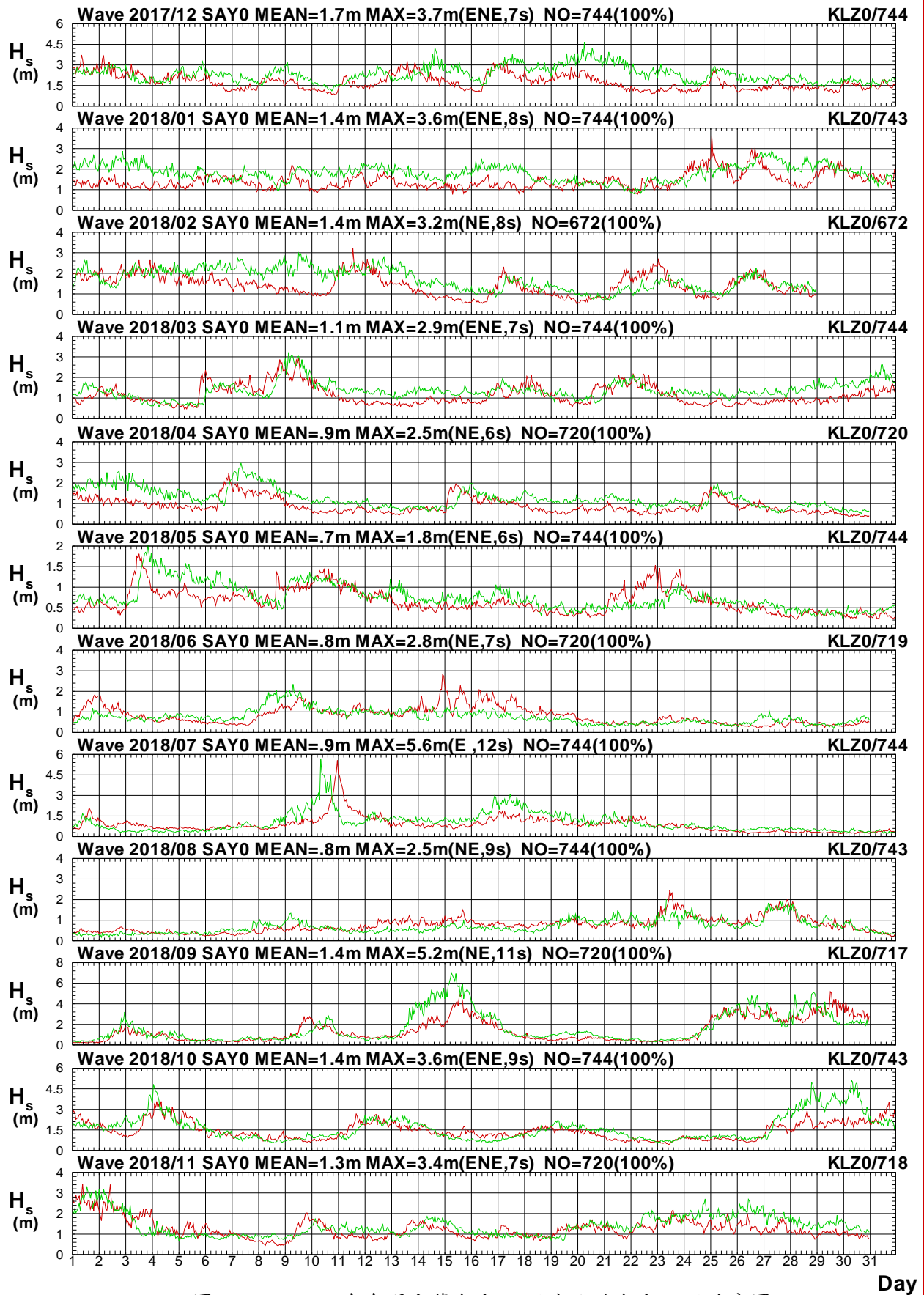


圖2.4.7a 2018年每月宜蘭海域 Y 站與北端海域 Z 站波高圖

V17CSAY0.1HA V17CKLZ0.1H0 V181SAY0.1HA V181KLZ0.1H0 V182SAY0.1HA V182KLZ0.1H0
 V183SAY0.1HA V183KLZ0.1H0 V184SAY0.1HA V184KLZ0.1H0 V185SAY0.1HA V185KLZ0.1H0

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Wave T_p in Su-Ao Harbor of SAY0 at 2018

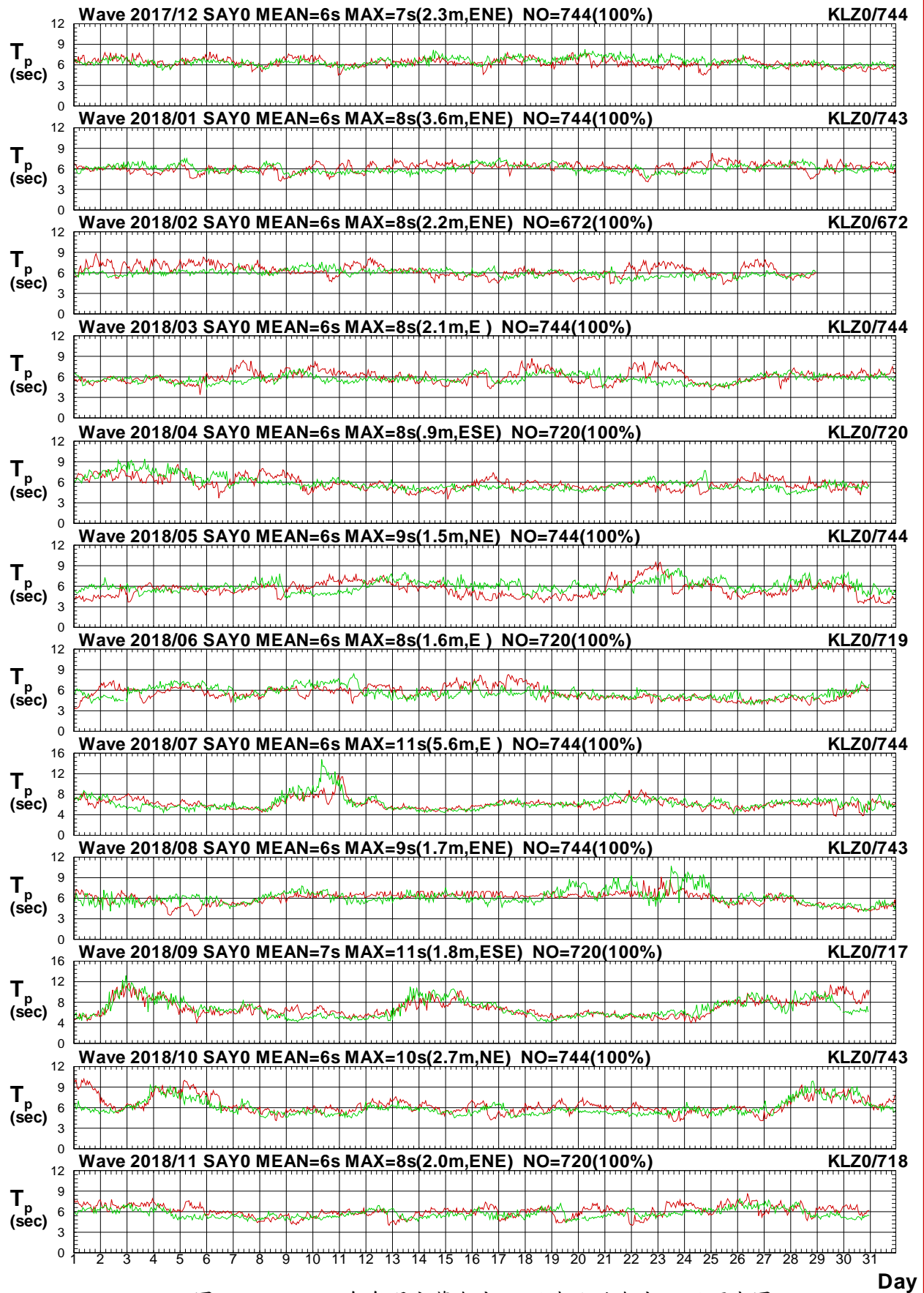


圖2.4.7b 2018年每月宜蘭海域 Y 站與北端海域 Z 站週期圖

V17CSAY0.1HA V17CKLZ0.1H0 V181SAY0.1HA V181KLZ0.1H0 V182SAY0.1HA V182KLZ0.1H0
 V183SAY0.1HA V183KLZ0.1H0 V184SAY0.1HA V184KLZ0.1H0 V185SAY0.1HA V185KLZ0.1H0

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Wave Direction in Su-Ao Harbor of SAY0 at 2018

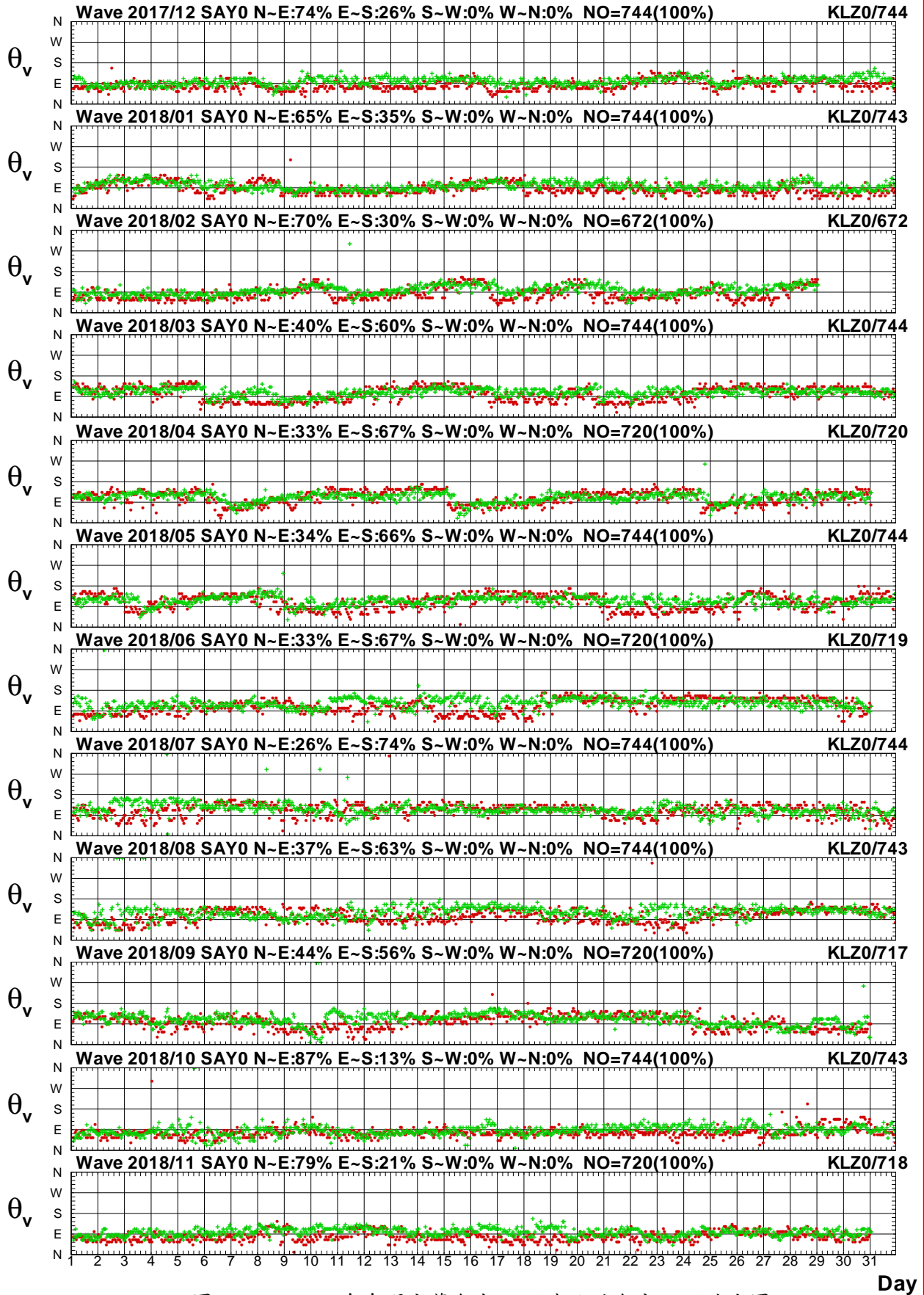


圖2.4.7c 2018年每月宜蘭海域 Y 站與北端海域 Z 站波向圖

V17CSAY0.1HA V17CKLZ0.1H0 V181SAY0.1HA V181KLZ0.1H0 V182SAY0.1HA V182KLZ0.1H0
 V183SAY0.1HA V183KLZ0.1H0 V184SAY0.1HA V184KLZ0.1H0 V185SAY0.1HA V185KLZ0.1H0

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Wave H_s in Su-Ao Harbor of SAY0 at 2018

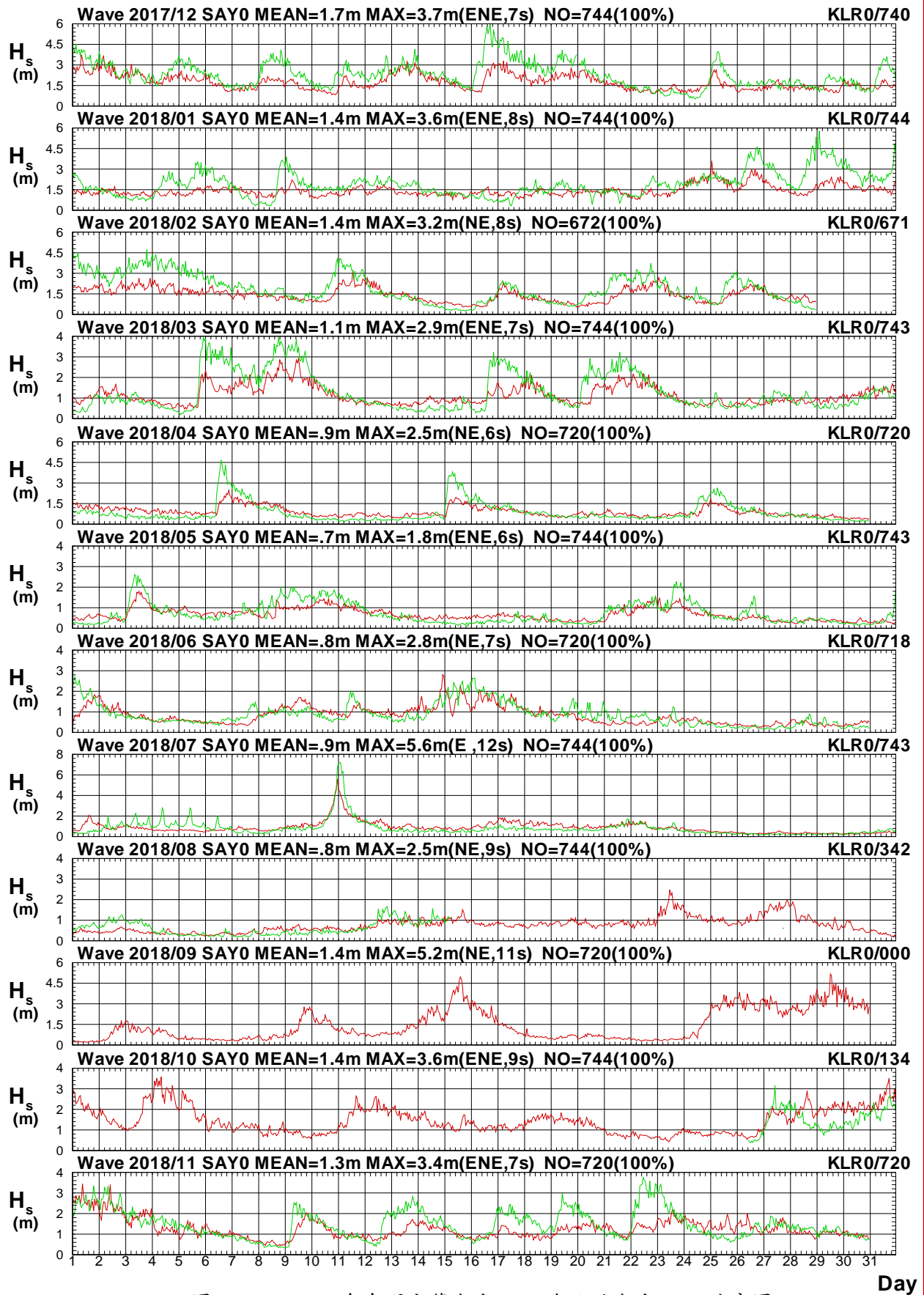


圖2.4.8a 2018年每月宜蘭海域 Y 站與北端海域 R 站波高圖

V17CSAY0.1HA V17CKLR0.1HO V181SAY0.1HA V181KLR0.1HO V182SAY0.1HA V182KLR0.1HO
 V183SAY0.1HA V183KLR0.1HO V184SAY0.1HA V184KLR0.1HO V185SAY0.1HA V185KLR0.1HO

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Wave T_p in Su-Ao Harbor of SAY0 at 2018

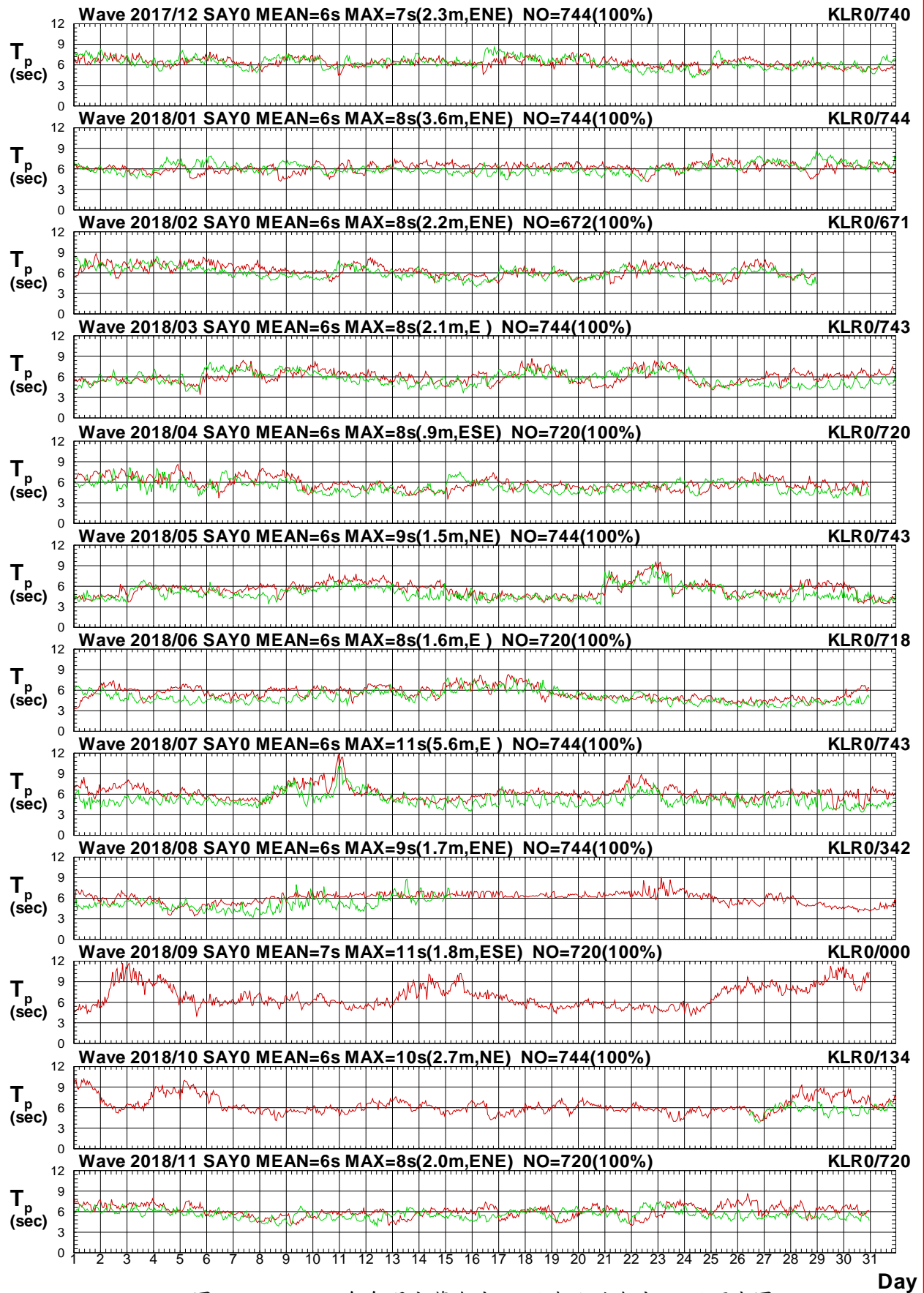


圖2.4.8b 2018年每月宜蘭海域 Y 站與北端海域 R 站週期圖

V17CSAY0.1HA V17CKLR0.1H0 V181SAY0.1HA V181KLR0.1H0 V182SAY0.1HA V182KLR0.1H0
 V183SAY0.1HA V183KLR0.1H0 V184SAY0.1HA V184KLR0.1H0 V185SAY0.1HA V185KLR0.1H0

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Wave Direction in Su-Ao Harbor of SAY0 at 2018

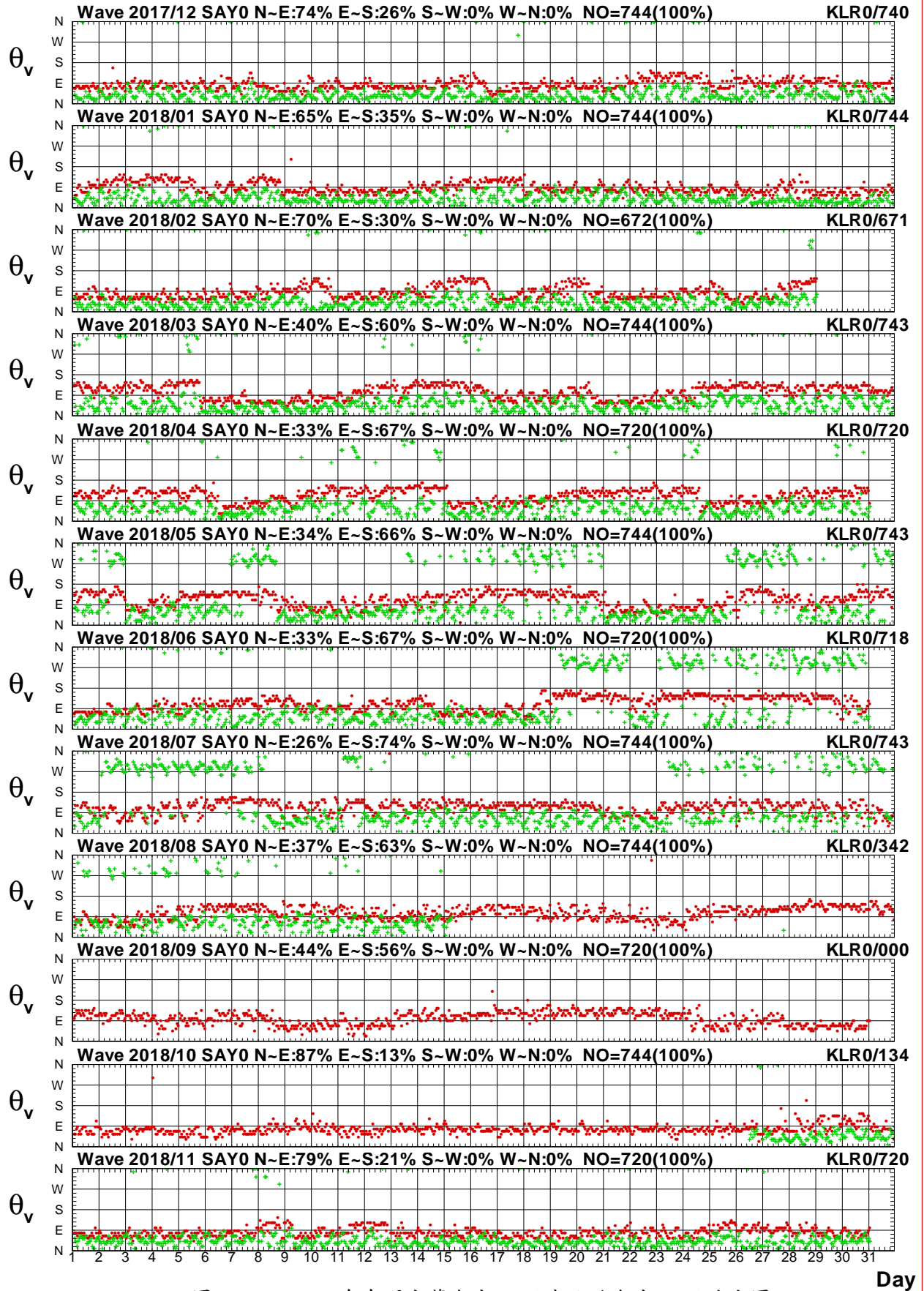


圖2.4.8c 2018年每月宜蘭海域 Y 站與北端海域 R 站波向圖

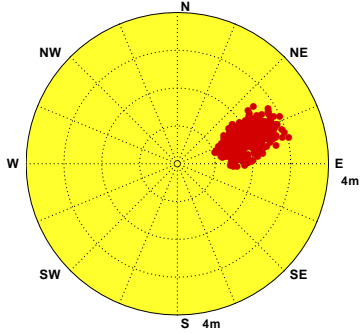
V17CSAY0.1HA V17CKLR0.1HO V181SAY0.1HA V181KLR0.1HO V182SAY0.1HA V182KLR0.1HO
 V183SAY0.1HA V183KLR0.1HO V184SAY0.1HA V184KLR0.1HO V185SAY0.1HA V185KLR0.1HO

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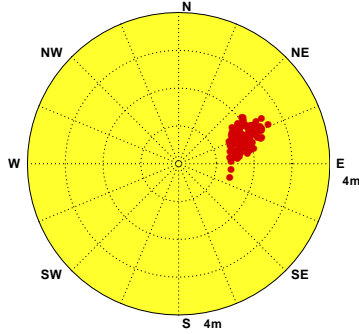
2.5 2018 年宜蘭海域波浪各測站修補前 波浪向量分佈圖

Distribution of H_s Vectors

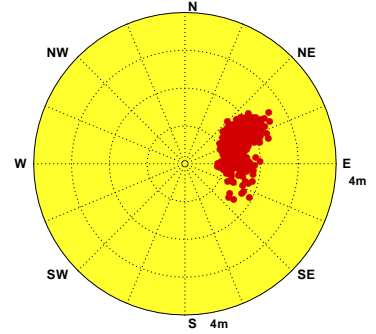
Wave of SAX0 at 2017/12 NO=521(70%)
Hs : MEAN=1.8m MAX=2.9m(E, 9s)
N-E:95% E-S:5% S-W:0% W-N:0%



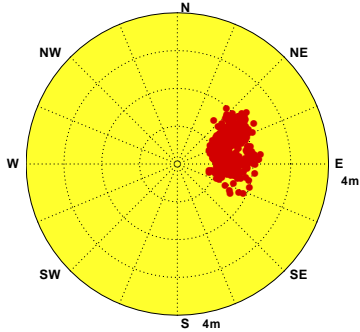
Wave of SAX0 at 2018/01 NO=146(20%)
Hs : MEAN=1.7m MAX=2.4m(ENE,9s)
N-E:97% E-S:3% S-W:0% W-N:0%



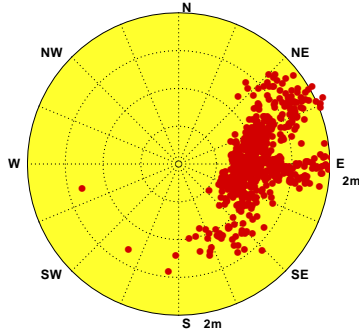
Wave of SAX0 at 2018/02 NO=607(90%)
Hs : MEAN=1.4m MAX=2.4m(ENE,10s)
N-E:81% E-S:19% S-W:0% W-N:0%



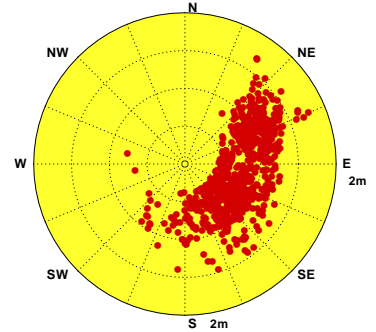
Wave of SAX0 at 2018/03 NO=681(92%)
Hs : MEAN=1.3m MAX=2.1m(ENE,11s)
N-E:63% E-S:37% S-W:0% W-N:0%



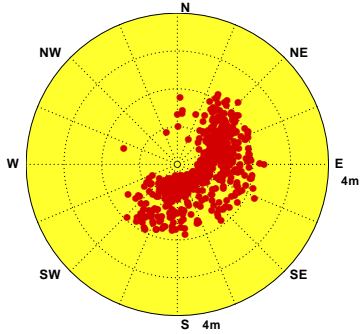
Wave of SAX0 at 2018/04 NO=657(91%)
Hs : MEAN=1.1m MAX=2.0m(ENE,10s)
N-E:41% E-S:58% S-W:1% W-N:0%



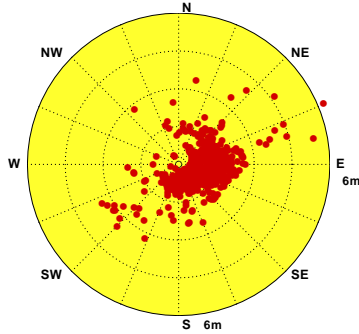
Wave of SAX0 at 2018/05 NO=727(98%)
Hs : MEAN=.9m MAX=1.7m(ENE,8s)
N-E:36% E-S:59% S-W:5% W-N:0%



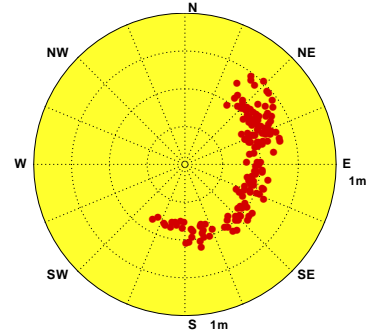
Wave of SAX0 at 2018/06 NO=701(97%)
Hs : MEAN=1.1m MAX=2.2m(ESE,10s)
N-E:29% E-S:44% S-W:26% W-N:1%



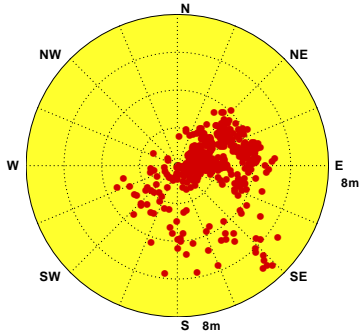
Wave of SAX0 at 2018/07 NO=739(99%)
Hs : MEAN=1.2m MAX=6.0m(ENE,15s)
N-E:28% E-S:52% S-W:19% W-N:1%



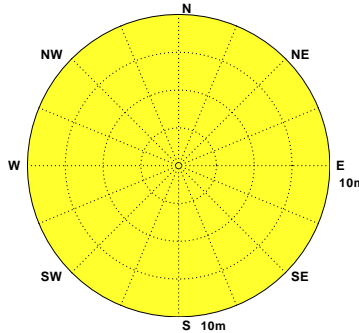
Wave of SAX0 at 2018/08 NO=155(21%)
Hs : MEAN=.5m MAX=.7m(NE,8s)
N-E:51% E-S:41% S-W:8% W-N:0%



Wave of SAX0 at 2018/09 NO=699(97%)
Hs : MEAN=1.8m MAX=7.4m(SE,16s)
N-E:41% E-S:51% S-W:8% W-N:0%



Wave of SAX0 at 2018/10



Wave of SAX0 at 2018/11

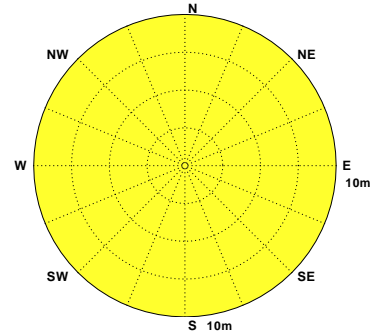


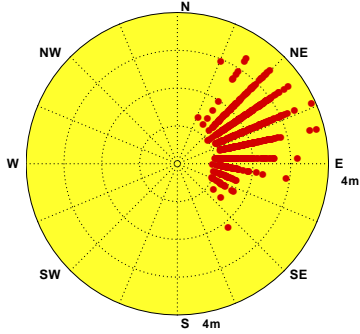
圖2.5.1 2018年宜蘭海域每月 X 站修補前觀測波高向量分佈圖

V17CSAX0.1H0 V181SAX0.1H0 V182SAX0.1H0 V183SAX0.1H0 V184SAX0.1H0 V185SAX0.1H0
V186SAX0.1H0 V187SAX0.1H0 V188SAX0.1H0 V189SAX0.1H0 V18ASAX0.1H0 V18BSAX0.1H0

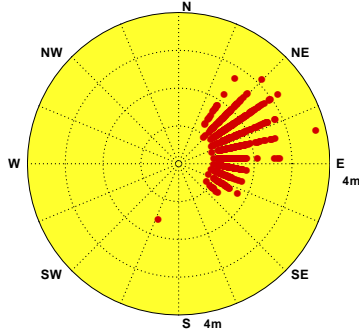
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Distribution of H_s Vectors

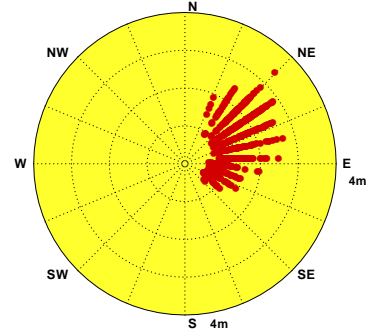
Wave of SAY0 at 2017/12 NO=744(100%)
Hs : MEAN=1.7m MAX=3.7m(ENE,7s)
N-E:74% E-S:26% S-W:0% W-N:0%



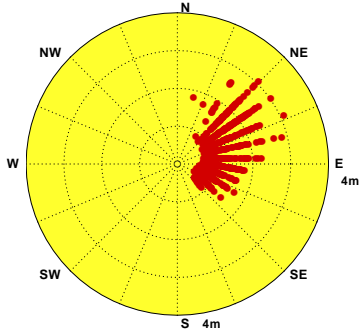
Wave of SAY0 at 2018/01 NO=744(100%)
Hs : MEAN=1.4m MAX=3.6m(ENE,8s)
N-E:65% E-S:35% S-W:0% W-N:0%



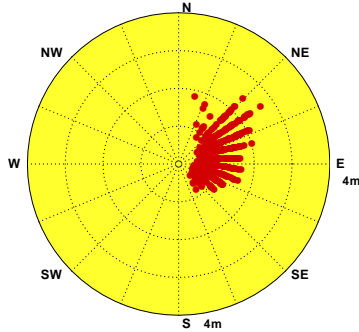
Wave of SAY0 at 2018/02 NO=672(100%)
Hs : MEAN=1.4m MAX=3.2m(NE,8s)
N-E:70% E-S:30% S-W:0% W-N:0%



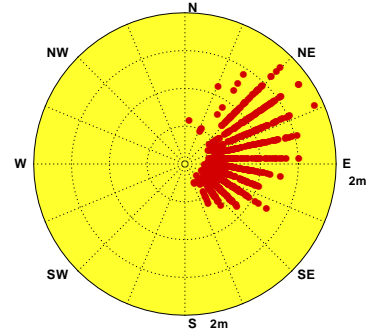
Wave of SAY0 at 2018/03 NO=744(100%)
Hs : MEAN=1.1m MAX=2.9m(ENE,7s)
N-E:40% E-S:60% S-W:0% W-N:0%



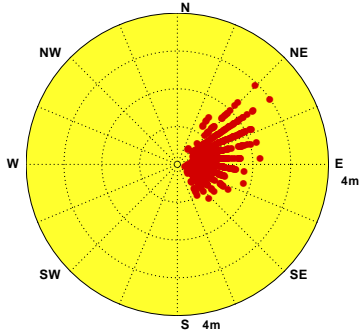
Wave of SAY0 at 2018/04 NO=720(100%)
Hs : MEAN=.9m MAX=2.5m(NE,6s)
N-E:33% E-S:67% S-W:0% W-N:0%



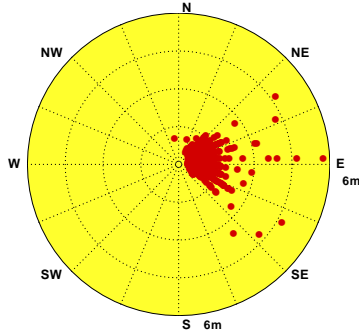
Wave of SAY0 at 2018/05 NO=744(100%)
Hs : MEAN=.7m MAX=1.8m(ENE,6s)
N-E:34% E-S:66% S-W:0% W-N:0%



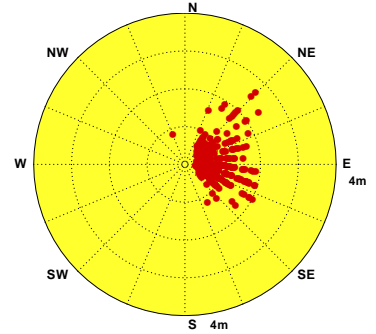
Wave of SAY0 at 2018/06 NO=719(100%)
Hs : MEAN=.8m MAX=2.8m(NE,7s)
N-E:33% E-S:67% S-W:0% W-N:0%



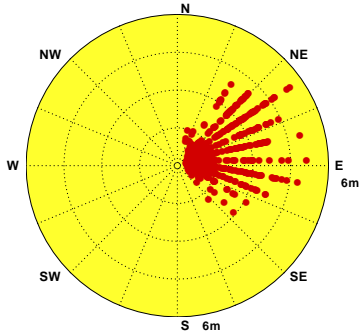
Wave of SAY0 at 2018/07 NO=744(100%)
Hs : MEAN=.9m MAX=5.6m(E,12s)
N-E:26% E-S:74% S-W:0% W-N:0%



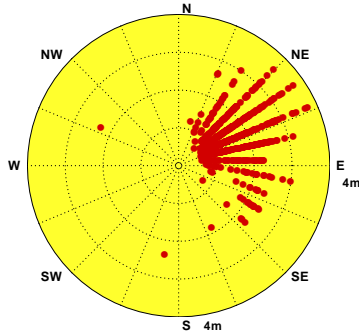
Wave of SAY0 at 2018/08 NO=412(55%)
Hs : MEAN=.7m MAX=2.5m(NE,9s)
N-E:32% E-S:68% S-W:0% W-N:0%



Wave of SAY0 at 2018/09 NO=715(99%)
Hs : MEAN=1.4m MAX=5.2m(NE,11s)
N-E:44% E-S:56% S-W:0% W-N:0%



Wave of SAY0 at 2018/10 NO=739(99%)
Hs : MEAN=1.4m MAX=3.6m(ENE,9s)
N-E:87% E-S:13% S-W:0% W-N:0%



Wave of SAY0 at 2018/11 NO=713(99%)
Hs : MEAN=1.3m MAX=3.4m(ENE,7s)
N-E:79% E-S:21% S-W:0% W-N:0%

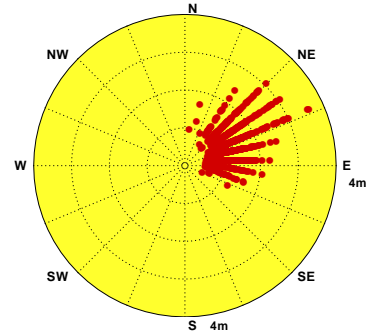


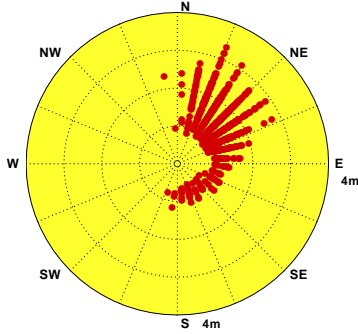
圖2.5.2 2018年宜蘭海域每月 Y 站修補前觀測波高向量分佈圖

V17CSAY0.1H0 V181SAY0.1H0 V182SAY0.1H0 V183SAY0.1H0 V184SAY0.1H0 V185SAY0.1H0
V186SAY0.1H0 V187SAY0.1H0 V188SAY0.1H0 V189SAY0.1H0 V18ASAY0.1H0 V18BSAY0.1H0

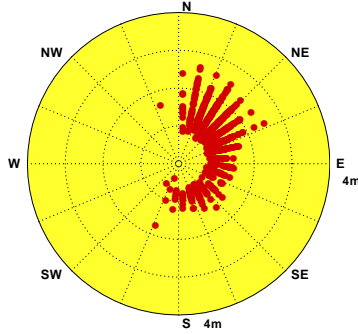
Institute of Harbor & Marine Technology

Distribution of H_s Vectors

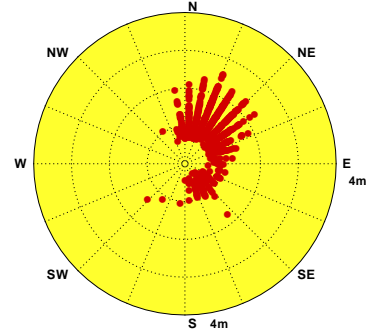
Wave of SAZ0 at 2017/12 NO=742(100%)
Hs : MEAN=1.4m MAX=3.2m(NNE,7s)
N-E:89% E-S:10% S-W:1% W-N:0%



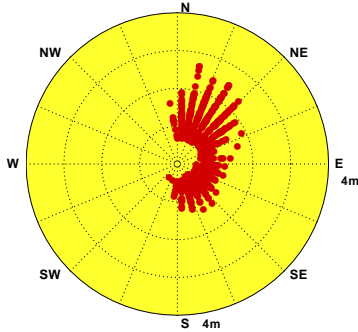
Wave of SAZ0 at 2018/01 NO=740(99%)
Hs : MEAN=1.2m MAX=2.4m(N, 7s)
N-E:78% E-S:19% S-W:3% W-N:0%



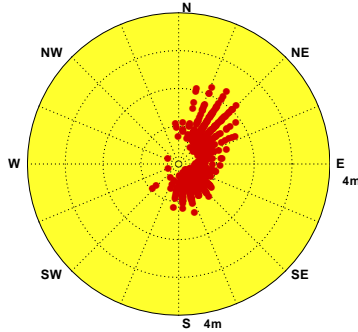
Wave of SAZ0 at 2018/02 NO=672(100%)
Hs : MEAN=1.1m MAX=2.4m(NNE,6s)
N-E:77% E-S:17% S-W:1% W-N:5%



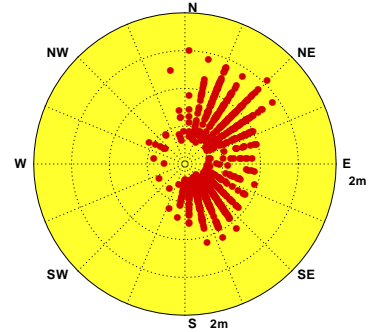
Wave of SAZ0 at 2018/03 NO=743(100%)
Hs : MEAN=1.0m MAX=2.5m(N, 7s)
N-E:49% E-S:45% S-W:5% W-N:1%



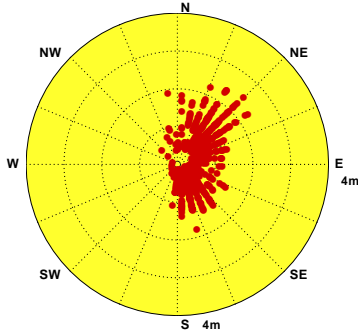
Wave of SAZ0 at 2018/04 NO=717(100%)
Hs : MEAN=.8m MAX=2.1m(NNE,7s)
N-E:41% E-S:48% S-W:10% W-N:1%



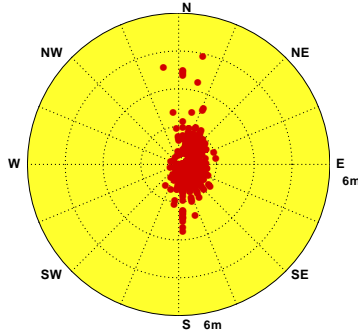
Wave of SAZ0 at 2018/05 NO=744(100%)
Hs : MEAN=.6m MAX=1.5m(NE,6s)
N-E:45% E-S:45% S-W:8% W-N:2%



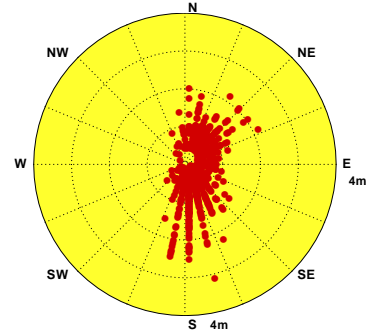
Wave of SAZ0 at 2018/06 NO=717(100%)
Hs : MEAN=.8m MAX=2.3m(NE,8s)
N-E:38% E-S:45% S-W:15% W-N:2%



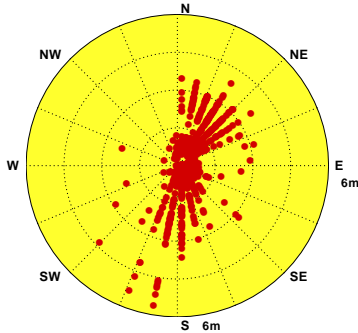
Wave of SAZ0 at 2018/07 NO=744(100%)
Hs : MEAN=.8m MAX=4.1m(N, 8s)
N-E:27% E-S:46% S-W:25% W-N:2%



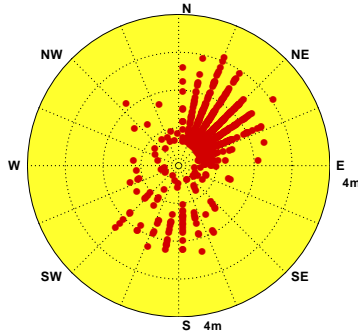
Wave of SAZ0 at 2018/08 NO=744(100%)
Hs : MEAN=.8m MAX=3.2m(SSE,6s)
N-E:36% E-S:36% S-W:26% W-N:2%



Wave of SAZ0 at 2018/09 NO=720(100%)
Hs : MEAN=1.2m MAX=5.9m(S, 12s)
N-E:41% E-S:31% S-W:25% W-N:3%



Wave of SAZ0 at 2018/10 NO=743(100%)
Hs : MEAN=1.2m MAX=2.9m(NNE,10s)
N-E:82% E-S:7% S-W:9% W-N:2%



Wave of SAZ0 at 2018/11 NO=717(100%)
Hs : MEAN=1.0m MAX=2.8m(NE,8s)
N-E:79% E-S:11% S-W:8% W-N:2%

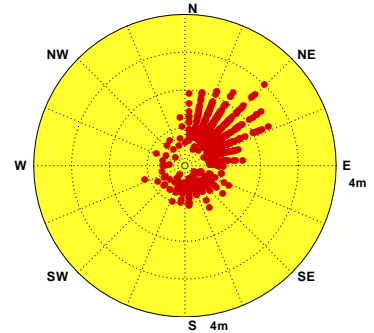


圖2.5.3 2018年宜蘭海域每月乙站修補前觀測波高向量分佈圖

V17CSAZ0.1H0 V181SAZ0.1H0 V182SAZ0.1H0 V183SAZ0.1H0 V184SAZ0.1H0 V185SAZ0.1H0
V186SAZ0.1H0 V187SAZ0.1H0 V188SAZ0.1H0 V189SAZ0.1H0 V18ASAZ0.1H0 V18BSAZ0.1H0

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第三章 2018 年宜蘭海域觀測潮汐資料年報

宜蘭海域潮汐之觀測包括測站 **T**、測站 **X**、測站 **F**、測站 **J**、測站 **P**、測站 **G** 及測站 **K** 等 7 個測站(測站位置如第 0 章圖 TS1)。測站 **T** 與測站 **F**、測站 **X**、測站 **J**、測站 **G** 及測站 **P** 等 5 個測站特性相近，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 **K** 資料作為**主要測站 2**，測站 **J** 資料作為**主要測站 3**。

3.1 2018 年宜蘭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 年宜蘭海域**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 年宜蘭海域**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 年宜蘭海域**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 年宜蘭海域**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 年每月宜蘭海域修補前各測站觀測潮汐資料紀錄表

海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域
年月/測站	T	K	J	F	X	P	G					
2017/12 月	588(79.0%)	428(57.5%)	557(74.9%)	560(75.3%)	521(70.0%)	561(75.4%)	*	*	*	*	*	*
2018/ 1 月	742(99.7%)	687(92.3%)	706(94.9%)	649(87.2%)	146(19.6%)	649(87.2%)	*	*	*	*	*	*
2018/ 2 月	672(100%)	653(97.2%)	651(96.9%)	467(69.5%)	607(90.3%)	467(69.5%)	*	*	*	*	*	*
2018/ 3 月	744(100%)	701(94.2%)	707(95.0%)	701(94.2%)	681(91.5%)	701(94.2%)	*	*	*	*	*	*
2018/ 4 月	720(100%)	692(96.1%)	697(96.8%)	691(96.0%)	657(91.3%)	691(96.0%)	*	*	*	*	*	*
2018/ 5 月	743(99.9%)	461(62.0%)	453(60.9%)	465(62.5%)	727(97.7%)	465(62.5%)	*	*	*	*	*	*
2018/ 6 月	720(100%)	680(94.4%)	662(91.9%)	684(95.0%)	701(97.4%)	684(95.0%)	*	*	*	*	*	*
2018/ 7 月	744(100%)	692(93.0%)	650(87.4%)	621(83.5%)	739(99.3%)	621(83.5%)	*	*	*	*	*	*
2018/ 8 月	744(100%)	717(96.4%)	722(97.0%)	721(96.9%)	737(99.1%)	721(96.9%)	*	*	*	*	*	*
2018/ 9 月	720(100%)	664(92.2%)	662(91.9%)	666(92.5%)	699(97.1%)	666(92.5%)	*	*	*	*	*	*
2018/10 月	744(100%)	740(99.5%)	740(99.5%)	741(99.6%)	*	741(99.6%)	650(87.4%)	*	*	*	*	*
2018/11 月	720(100%)	669(92.9%)	650(90.3%)	672(93.3%)	*	672(93.3%)	710(98.6%)	*	*	*	*	*
2018/冬季	2002(92.7%)	1768(81.9%)	1914(88.6%)	1676(77.6%)	1274(59.0%)	1677(77.6%)	*	*	*	*	*	*
2018/春季	2207(99.9%)	1854(84.0%)	1857(84.1%)	1857(84.1%)	2065(93.5%)	1857(84.1%)	*	*	*	*	*	*
2018/夏季	2208(100%)	2089(94.6%)	2034(92.1%)	2026(91.8%)	2177(98.6%)	2026(91.8%)	*	*	*	*	*	*
2018/秋季	2184(100%)	2073(94.9%)	2052(94.0%)	2079(95.2%)	699(32.0%)	2079(95.2%)	1360(62.3%)	*	*	*	*	*
2018/整年	8601(98.2%)	7784(88.9%)	7857(89.7%)	7638(87.2%)	6215(70.9%)	7639(87.2%)	1360(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	2018/09	2018/11	2018/11	*	*	*	*	*

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表 3.1.1b 2018年每月宜蘭海域修補後各測站潮汐資料紀錄表

海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域
年月/測站	T	K	J									
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	*	*	*	*	*	*	*	*	*

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表3.1.2 2018年宜蘭海域主要測站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	97	209	157	196	12.4	15.0	13.8	14.4	59	0	101	-107	744(100%)
2	2018/01	T	97	212	160	201	12.4	14.0	13.8	14.0	59	0	100	-115	744(100%)
3	2018/02	T	95	156	131	147	12.6	25.0	14.2	16.6	52	0	100	-110	672(100%)
4	2018/03	T	98	184	137	162	13.1	26.0	15.7	21.2	56	0	92	-92	744(100%)
5	2018/04	T	97	162	135	154	12.5	16.0	13.8	14.6	54	0	74	-93	720(100%)
6	2018/05	T	95	151	126	144	12.4	14.0	13.1	13.4	59	0	87	-100	744(100%)
7	2018/06	T	95	153	123	144	12.4	14.0	13.2	13.6	57	0	101	-101	720(100%)
8	2018/07	T	97	217	150	200	12.6	25.0	13.9	16.2	58	0	100	-117	744(100%)
9	2018/08	T	95	162	135	151	12.6	26.0	13.9	16.4	58	0	106	-99	744(100%)
10	2018/09	T	99	155	137	149	13.1	26.0	15.3	20.6	54	0	94	-94	720(100%)
11	2018/10	T	97	161	139	153	13.1	26.0	15.3	20.8	56	0	80	-98	744(100%)
12	2018/11	T	95	184	142	175	12.7	25.0	14.0	16.2	56	0	88	-100	720(100%)
13	2018/冬	T	96	212	149	185	12.5	25.0	13.9	14.9	170	0	101	-115	2160(100%)
14	2018/春	T	97	184	133	152	12.6	26.0	14.1	16.6	169	0	92	-100	2208(100%)
15	2018/夏	T	96	217	137	168	12.6	26.0	13.6	15.2	173	0	106	-117	2208(100%)
16	2018/秋	T	97	184	139	159	12.9	26.0	14.9	18.9	166	0	94	-100	2184(100%)
17	2018/年	T	96	217	140	167	12.7	26.0	14.1	16.3	678	0	106	-117	8760(100%)

表3.1.3 2018年宜蘭海域主要測站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	K	54	133	93	122	12.9	25.0	15.7	19.4	51	0	61	-81	744(100%)
2	2018/01	K	55	142	93	131	13.5	25.0	17.4	24.3	46	0	66	-84	744(100%)
3	2018/02	K	57	102	88	100	14.4	26.0	19.0	25.3	37	0	64	-72	672(100%)
4	2018/03	K	59	96	83	93	13.3	25.0	16.4	23.8	49	0	55	-65	744(100%)
5	2018/04	K	59	93	82	92	14.4	27.0	19.2	25.8	49	0	56	-73	720(100%)
6	2018/05	K	54	109	84	103	13.3	26.0	16.0	23.0	55	0	59	-74	744(100%)
7	2018/06	K	52	140	100	127	13.4	25.0	16.2	22.4	50	0	64	-75	720(100%)
8	2018/07	K	52	132	98	127	13.6	26.0	16.7	24.8	54	0	75	-86	744(100%)
9	2018/08	K	54	113	83	103	13.6	25.0	16.5	24.8	54	0	61	-75	744(100%)
10	2018/09	K	57	104	84	99	13.2	26.0	15.4	22.0	45	0	57	-68	720(100%)
11	2018/10	K	59	100	88	97	14.6	26.0	20.0	25.8	44	0	64	-70	744(100%)
12	2018/11	K	61	136	98	123	14.2	27.0	18.5	25.8	48	0	57	-78	720(100%)
13	2018/冬	K	55	142	92	118	13.5	26.0	17.3	24.2	134	0	66	-84	2160(100%)
14	2018/春	K	57	109	83	96	13.7	27.0	17.1	25.1	153	0	60	-74	2208(100%)
15	2018/夏	K	52	140	93	122	13.5	26.0	16.5	24.1	158	0	75	-86	2208(100%)
16	2018/秋	K	59	136	91	108	14.0	27.0	17.9	25.4	137	0	64	-78	2184(100%)
17	2018/年	K	56	142	90	111	13.7	27.0	17.1	24.9	582	0	75	-86	8760(100%)

表3.1.4 2018年宜蘭海域主要測站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	J	88	205	135	185	13.6	26.0	17.0	25.0	54	0	85	-125	744(100%)
2	2018/01	J	87	194	129	182	13.1	26.0	16.0	21.0	56	0	108	-107	744(100%)
3	2018/02	J	86	154	119	147	13.0	25.0	15.0	19.5	47	0	85	-105	672(100%)
4	2018/03	J	86	184	122	152	12.9	25.0	15.2	19.2	54	0	82	-104	744(100%)
5	2018/04	J	82	129	114	125	12.6	24.0	13.9	16.4	56	0	66	-83	720(100%)
6	2018/05	J	87	140	119	137	12.9	26.0	14.6	18.4	57	0	75	-91	744(100%)
7	2018/06	J	81	165	130	161	13.4	25.0	16.0	22.6	53	0	77	-94	720(100%)
8	2018/07	J	85	165	120	151	12.4	14.0	13.3	14.0	59	0	79	-146	744(100%)
9	2018/08	J	89	159	123	149	12.4	15.0	13.4	14.2	59	0	95	-97	744(100%)
10	2018/09	J	94	157	131	147	12.6	24.0	14.0	16.4	56	0	87	-93	720(100%)
11	2018/10	J	91	147	130	143	12.9	25.0	14.4	18.4	57	0	77	-88	744(100%)
12	2018/11	J	86	139	118	135	12.9	26.0	14.6	18.4	55	0	83	-99	720(100%)
13	2018/冬	J	87	205	128	172	13.2	26.0	16.0	21.7	157	0	108	-125	2160(100%)
14	2018/春	J	85	184	119	138	12.8	26.0	14.6	17.8	167	0	82	-104	2208(100%)
15	2018/夏	J	85	165	123	152	12.7	25.0	14.1	16.6	171	0	95	-146	2208(100%)
16	2018/秋	J	90	157	127	142	12.8	26.0	14.3	17.5	168	0	87	-99	2184(100%)
17	2018/年	J	87	205	124	151	12.9	26.0	14.7	18.2	663	0	108	-146	8760(100%)

Tidal Level in Su-Ao Harbor of SAT0 at 2018

1 ○ 8 ● 15 ● 22 ●

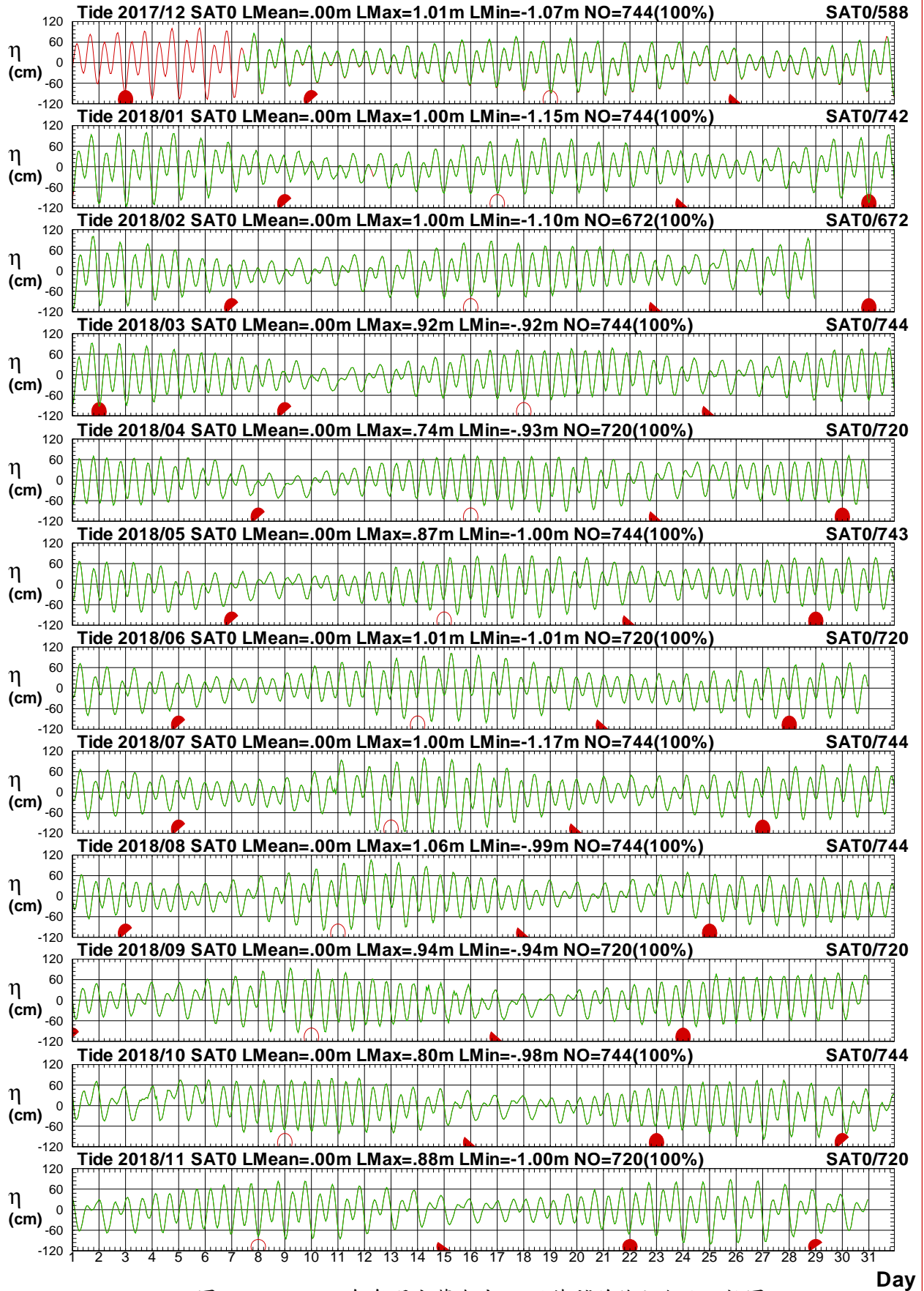


圖3.1.13 2018年每月宜蘭海域 T 站修補前後之潮位比較圖

T17CSAT0.1HA T17CSAT0.1H0 T181SAT0.1HA T181SAT0.1H0 T182SAT0.1HA T182SAT0.1H0
 T183SAT0.1HA T183SAT0.1H0 T184SAT0.1HA T184SAT0.1H0 T185SAT0.1HA T185SAT0.1H0

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Tidal Level in Su-Ao Harbor of SAT0 at 2018

1 ○ 8 ● 15 ● 22 ●

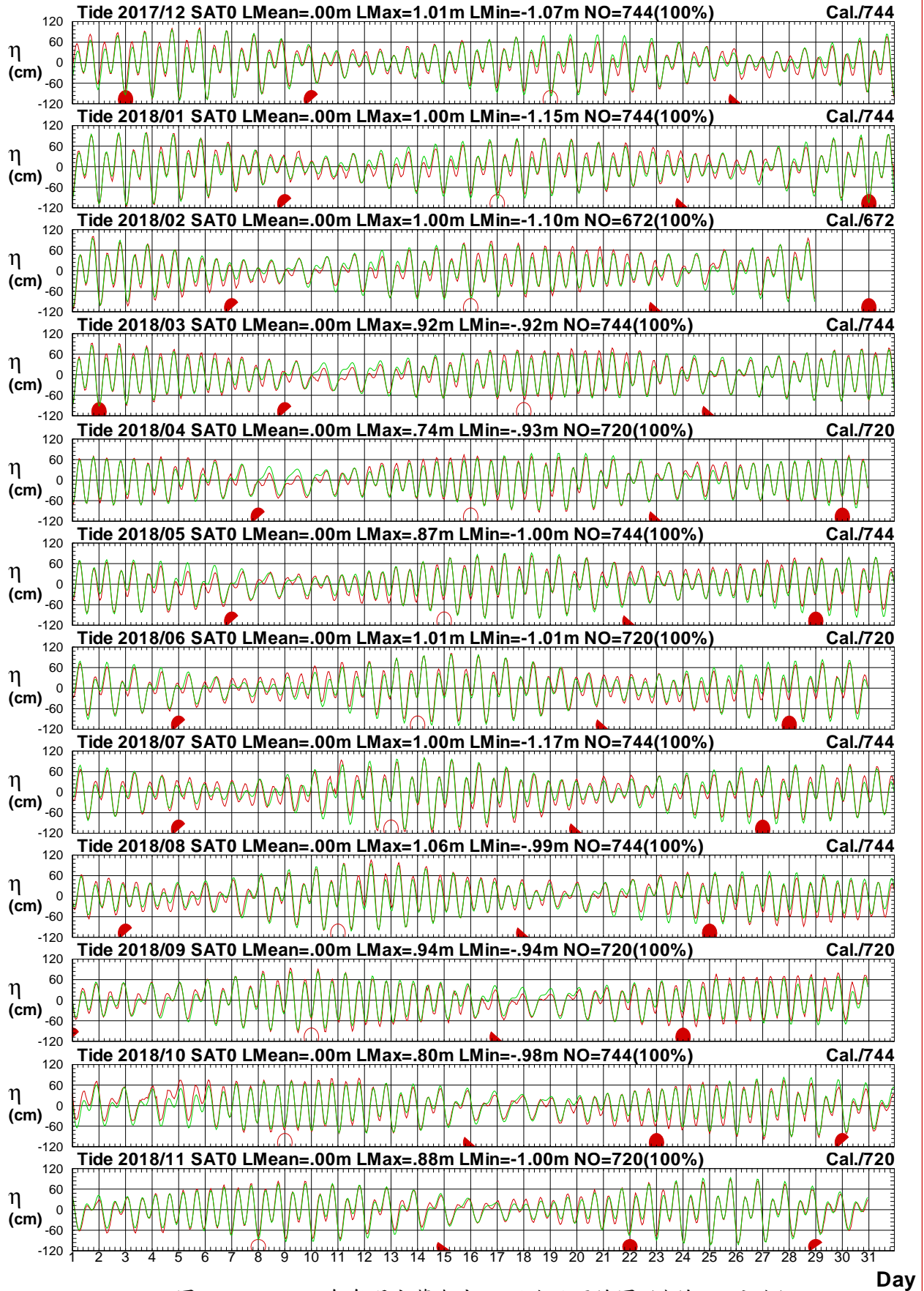


圖3.1.14 2018年每月宜蘭海域 T 站潮位歷線圖 (綠線: 天文潮)

T17CSAT0.1HA T17CSAT0.1HC T181SAT0.1HA T181SAT0.1HC T182SAT0.1HA T182SAT0.1HC
 T183SAT0.1HA T183SAT0.1HC T184SAT0.1HA T184SAT0.1HC T185SAT0.1HA T185SAT0.1HC

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Tidal Level in Su-Ao Harbor of SAK0 at 2018

1 ○ 8 ● 15 ● 22 ●

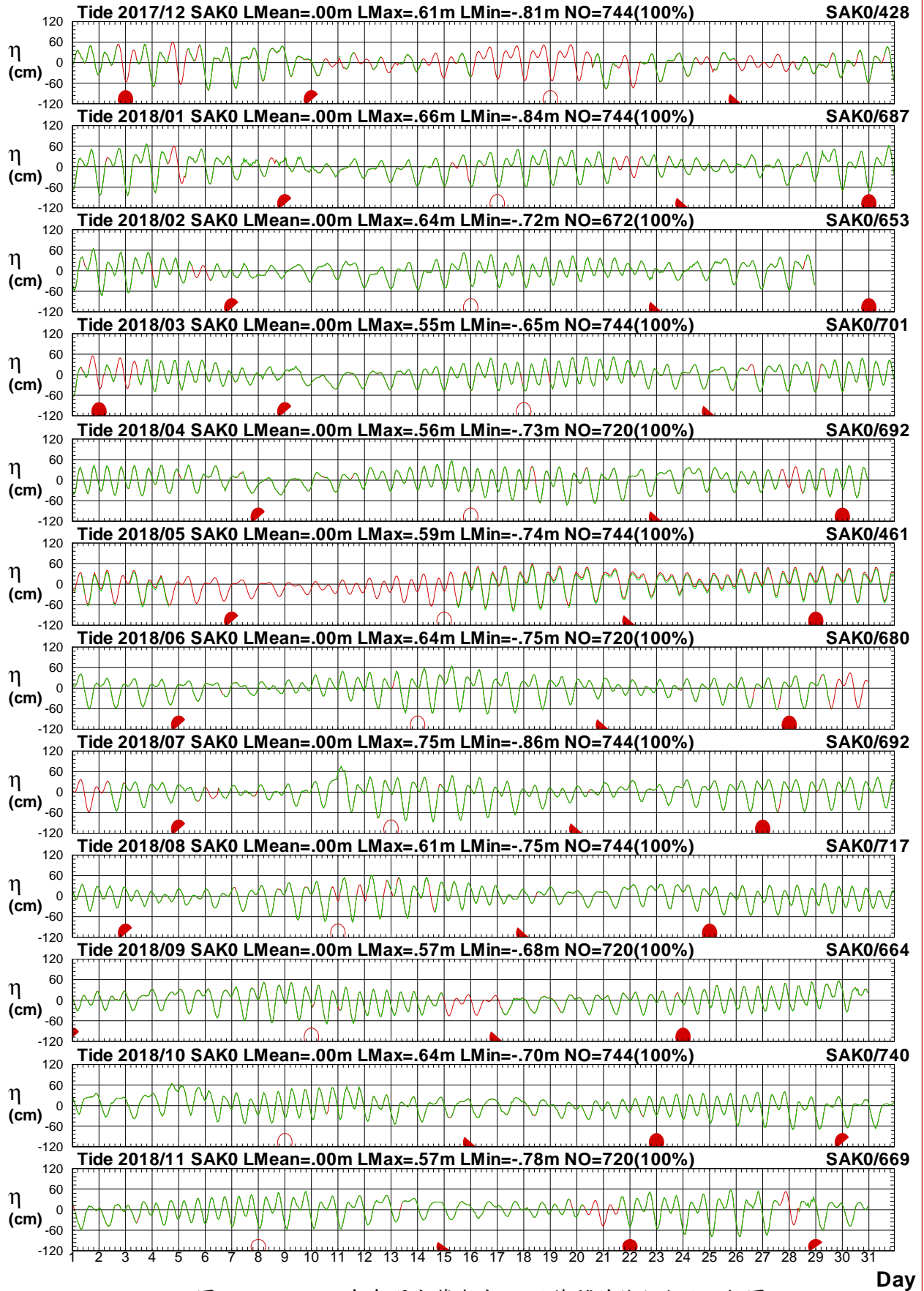


圖3.1.15 2018年每月宜蘭海域 K 站修補前後之潮位比較圖

T17CSAK0.1HA T17CSAK0.1H0 T181SAK0.1HA T181SAK0.1H0 T182SAK0.1HA T182SAK0.1H0
 T183SAK0.1HA T183SAK0.1H0 T184SAK0.1HA T184SAK0.1H0 T185SAK0.1HA T185SAK0.1H0

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Tidal Level in Su-Ao Harbor of SAK0 at 2018

1 ○ 8 ● 15 ● 22 ●

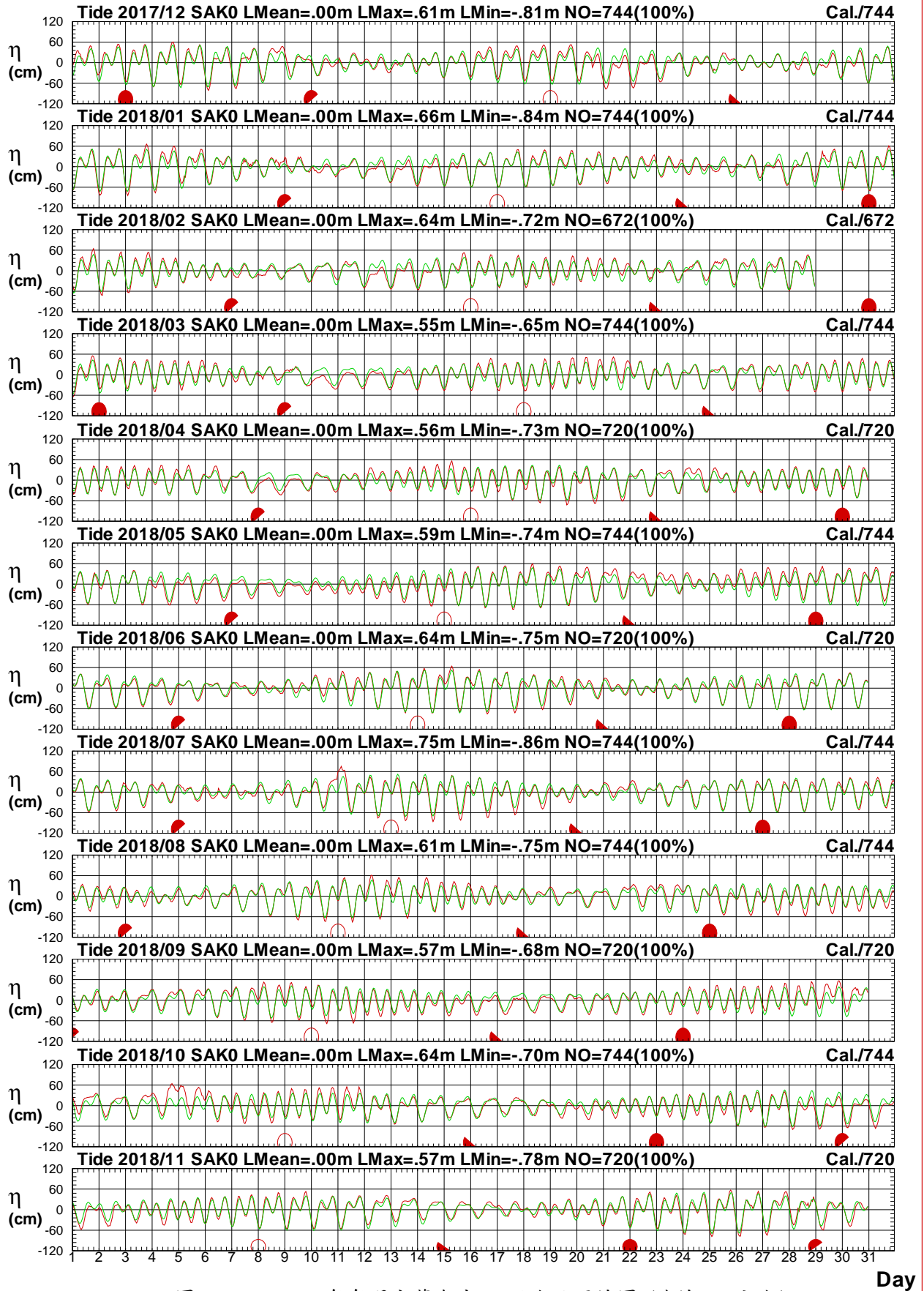


圖3.1.16 2018年每月宜蘭海域 K 站潮位歷線圖 (綠線: 天文潮)

T17CSAK0.1HA T17CSAK0.1HC T181SAK0.1HA T181SAK0.1HC T182SAK0.1HA T182SAK0.1HC
 T183SAK0.1HA T183SAK0.1HC T184SAK0.1HA T184SAK0.1HC T185SAK0.1HA T185SAK0.1HC

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Tidal Level in Su-Ao Harbor of SAJO at 2018

1 ○ 8 ● 15 ● 22 ●

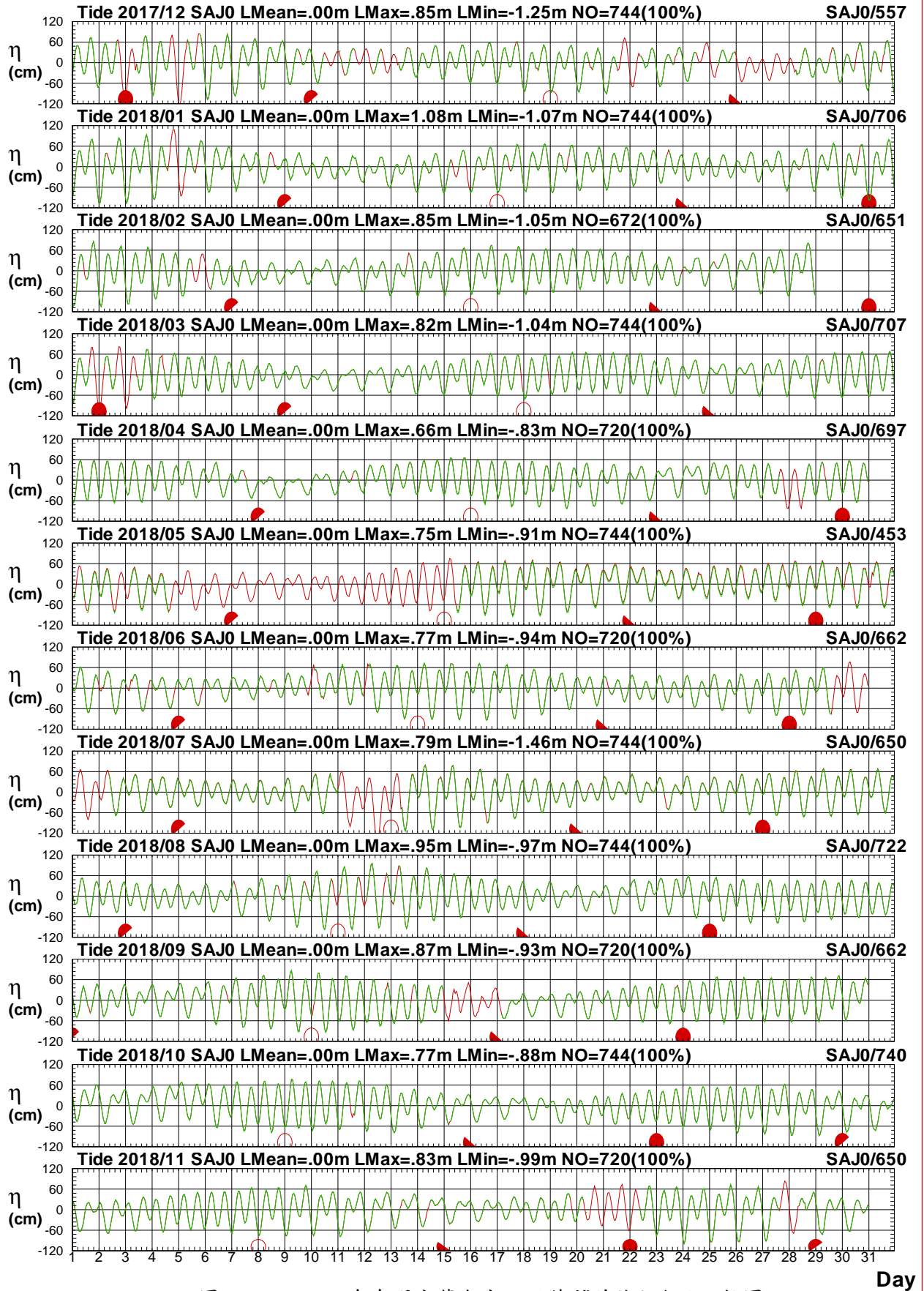


圖3.1.17 2018年每月宜蘭海域J站修補前後之潮位比較圖

T17CSAJ0.1HA T17CSAJ0.1H0 T181SAJ0.1HA T181SAJ0.1H0 T182SAJ0.1HA T182SAJ0.1H0
 T183SAJ0.1HA T183SAJ0.1H0 T184SAJ0.1HA T184SAJ0.1H0 T185SAJ0.1HA T185SAJ0.1H0

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Tidal Level in Su-Ao Harbor of SAJ0 at 2018

1 ○ 8 ● 15 ● 22 ●

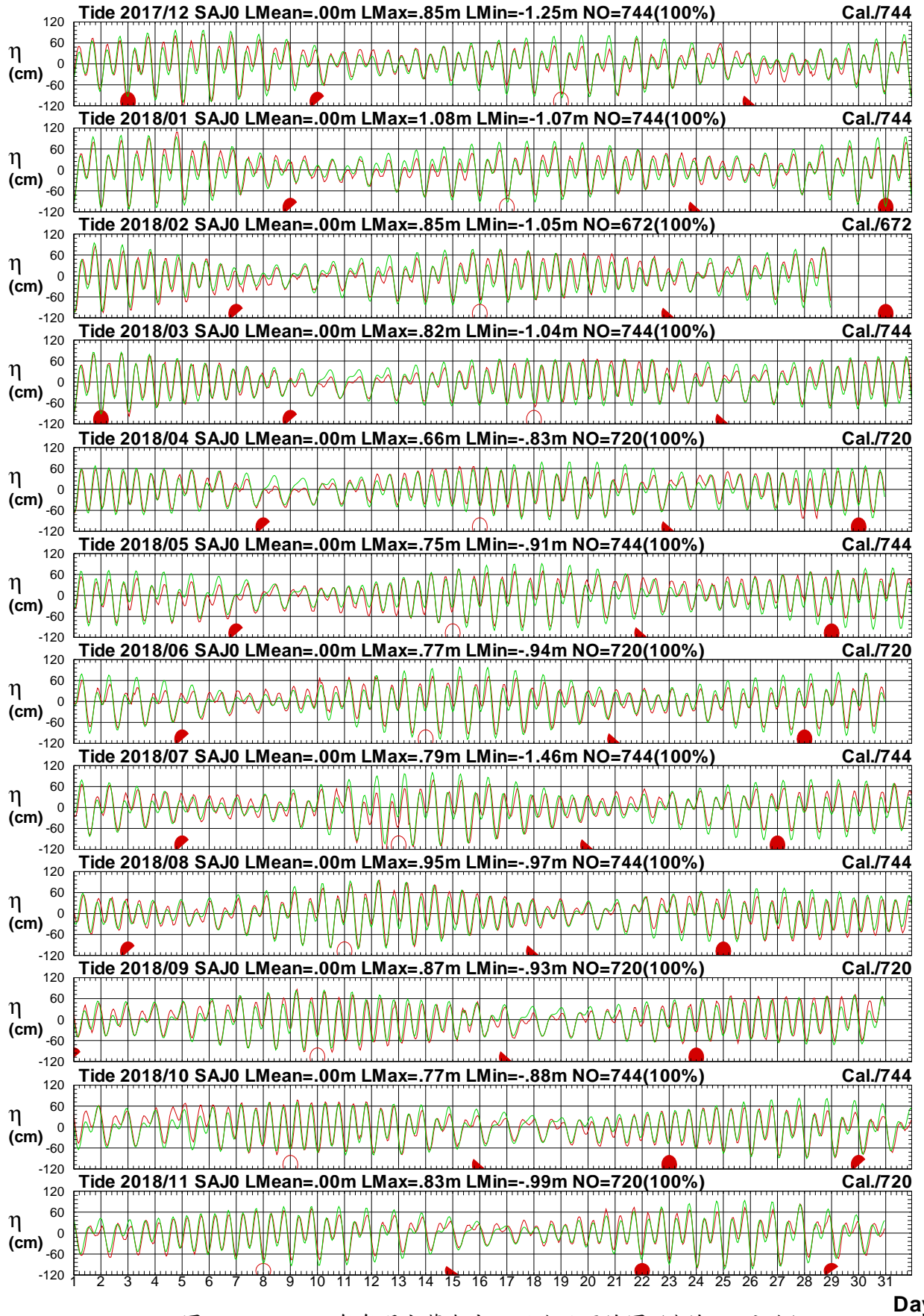


圖3.1.18 2018年每月宜蘭海域J站潮位歷線圖 (綠線: 天文潮)

T17CSAJ0.1HA T17CSAT0.1HC T181SAJ0.1HA T181SAT0.1HC T182SAJ0.1HA T182SAT0.1HC
T183SAJ0.1HA T183SAT0.1HC T184SAJ0.1HA T184SAT0.1HC T185SAJ0.1HA T185SAT0.1HC

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3.2 2018 年宜蘭海域各測站修補前 潮汐統計量統計表

表3.2.1 2018年宜蘭海域 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	86	128	109	120	12.4	14.0	13.4	14.0	46	0	86	-101	588(79%)
2	2018/01	T	97	212	138	198	12.6	25.0	14.4	16.2	58	0	99	-116	742(100%)
3	2018/02	T	95	156	131	147	12.6	25.0	14.2	16.6	52	0	100	-110	672(100%)
4	2018/03	T	98	184	137	162	13.1	26.0	15.7	21.2	56	0	92	-92	744(100%)
5	2018/04	T	97	162	135	154	12.5	16.0	13.8	14.6	54	0	74	-93	720(100%)
6	2018/05	T	95	184	142	176	12.6	25.0	13.7	15.8	58	0	87	-100	743(100%)
7	2018/06	T	95	153	123	144	12.4	14.0	13.2	13.6	57	0	101	-101	720(100%)
8	2018/07	T	97	217	150	200	12.6	25.0	13.9	16.2	58	0	100	-117	744(100%)
9	2018/08	T	95	162	135	151	12.6	26.0	13.9	16.4	58	0	106	-99	744(100%)
10	2018/09	T	99	155	137	149	13.1	26.0	15.3	20.6	54	0	94	-94	720(100%)
11	2018/10	T	97	161	139	153	13.1	26.0	15.3	20.8	56	0	80	-98	744(100%)
12	2018/11	T	95	184	142	175	12.7	25.0	14.0	16.2	56	0	88	-100	720(100%)
13	2018/冬	T	93	212	128	160	12.6	25.0	14.0	15.6	156	0	100	-116	2002(93%)
14	2018/春	T	97	184	138	165	12.7	26.0	14.4	17.3	168	0	92	-100	2207(100%)
15	2018/夏	T	96	217	137	168	12.6	26.0	13.6	15.2	173	0	106	-117	2208(100%)
16	2018/秋	T	97	184	139	159	12.9	26.0	14.9	18.9	166	0	94	-100	2184(100%)
17	2018/年	T	96	217	136	163	12.7	26.0	14.2	16.7	663	0	106	-117	8601(98%)

表3.2.2 2018年宜蘭海域 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	66	125	108	125	16.0	26.0	23.4	26.0	15	0	54	-80	428(58%)
2	2018/01	K	54	133	93	118	15.4	25.0	22.1	25.0	34	0	67	-84	687(92%)
3	2018/02	K	58	102	79	99	14.6	26.0	19.5	25.3	33	0	64	-72	653(97%)
4	2018/03	K	57	90	80	87	14.5	26.0	19.3	25.8	42	0	53	-65	701(94%)
5	2018/04	K	59	111	86	98	15.3	27.0	21.7	25.8	44	0	56	-72	692(96%)
6	2018/05	K	61	129	99	123	14.0	26.0	18.0	25.7	30	0	54	-79	461(62%)
7	2018/06	K	53	140	98	129	13.8	25.0	17.1	24.8	46	0	64	-75	680(94%)
8	2018/07	K	51	135	97	123	15.0	26.0	20.8	25.3	44	0	75	-86	692(93%)
9	2018/08	K	54	130	91	117	14.9	25.0	20.3	25.0	46	0	62	-75	717(96%)
10	2018/09	K	59	107	87	105	13.9	25.0	17.8	24.7	38	0	56	-69	664(92%)
11	2018/10	K	59	100	87	96	14.8	26.0	20.5	25.5	41	0	64	-70	740(100%)
12	2018/11	K	62	135	97	121	14.5	27.0	19.3	25.8	42	0	57	-78	669(93%)
13	2018/冬	K	58	133	91	112	15.2	26.0	21.5	25.4	82	0	67	-84	1768(82%)
14	2018/春	K	59	129	87	105	14.7	27.0	19.8	25.7	116	0	56	-79	1854(84%)
15	2018/夏	K	53	140	95	123	14.5	26.0	19.2	25.1	136	0	75	-86	2089(95%)
16	2018/秋	K	60	135	90	108	14.4	27.0	19.0	25.3	121	0	64	-79	2073(95%)
17	2018/年	K	57	140	91	114	14.6	27.0	19.7	25.4	455	0	75	-86	7784(89%)

3-2-2

表3.2.3 2018年宜蘭海域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	91	158	129	152	14.3	25.0	18.8	25.0	28	0	84	-108	557(75%)
2	2018/01	J	87	187	125	152	14.9	26.0	21.1	25.3	43	0	94	-107	706(95%)
3	2018/02	J	86	154	121	147	13.6	25.0	16.6	24.5	42	0	85	-105	651(97%)
4	2018/03	J	81	133	114	127	13.8	25.0	17.5	25.0	48	0	74	-86	707(95%)
5	2018/04	J	80	127	112	123	12.7	24.0	14.0	16.4	53	0	65	-84	697(97%)
6	2018/05	J	95	140	127	139	14.4	26.0	19.1	25.3	31	0	66	-95	453(61%)
7	2018/06	J	83	166	122	161	14.1	25.0	17.9	25.0	45	0	73	-93	662(92%)
8	2018/07	J	80	192	121	156	13.0	25.0	14.7	19.3	48	0	78	-114	650(87%)
9	2018/08	J	87	186	127	167	13.6	25.0	16.8	24.8	51	0	96	-97	722(97%)
10	2018/09	J	95	179	138	166	13.2	25.0	15.5	22.3	49	0	87	-94	662(92%)
11	2018/10	J	92	150	134	146	12.6	25.0	13.8	16.0	55	0	77	-88	740(100%)
12	2018/11	J	83	139	120	136	12.7	24.0	14.1	16.8	48	0	74	-98	650(90%)
13	2018/冬	J	88	187	125	150	14.3	26.0	19.0	25.1	113	0	94	-108	1914(89%)
14	2018/春	J	84	140	116	130	13.5	26.0	16.4	23.3	132	0	74	-95	1857(84%)
15	2018/夏	J	83	192	123	161	13.6	25.0	16.4	24.0	144	0	96	-114	2034(92%)
16	2018/秋	J	90	179	132	149	12.8	25.0	14.5	17.7	152	0	87	-98	2052(94%)
17	2018/年	J	86	192	125	149	13.5	26.0	16.4	23.3	541	0	96	-114	7857(90%)

3-2-3

表3.2.4 2018年宜蘭海域 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	106	172	151	169	14.8	25.0	20.5	25.0	31	0	97	-112	521(70%)
2	2018/01	X	81	146	126	0	15.3	26.0	21.7	.0	9	0	93	-103	146(20%)
3	2018/02	X	102	194	143	189	17.1	27.0	25.6	26.5	29	0	97	-108	607(90%)
4	2018/03	X	98	153	143	148	15.4	26.0	22.2	25.3	34	0	87	-94	681(92%)
5	2018/04	X	95	163	131	149	14.1	25.0	19.1	25.0	41	0	77	-88	657(91%)
6	2018/05	X	92	184	141	172	13.6	25.0	17.0	25.0	54	0	81	-103	727(98%)
7	2018/06	X	92	158	131	155	13.2	25.0	15.3	22.0	48	0	92	-105	701(97%)
8	2018/07	X	96	163	131	156	12.9	25.0	14.4	18.2	57	0	105	-110	739(99%)
9	2018/08	X	93	198	143	184	13.3	25.0	15.9	22.8	55	0	95	-108	737(99%)
10	2018/09	X	97	188	142	171	13.1	26.0	15.5	20.8	53	0	92	-96	699(97%)
11	2018/10	X													
12	2018/11	X													
13	2018/冬	X	101	194	144	175	15.9	27.0	23.2	26.0	69	0	97	-112	1274(59%)
14	2018/春	X	95	184	139	160	14.3	26.0	19.0	25.1	129	0	87	-103	2065(94%)
15	2018/夏	X	94	198	135	163	13.1	25.0	15.2	20.1	160	0	105	-110	2177(99%)
16	2018/秋	X	97	188	142	171	13.1	26.0	15.5	20.8	53	0	92	-96	699(32%)
17	2018/年	X	96	198	139	164	13.9	27.0	17.8	25.1	411	0	105	-112	6215(71%)

3-2-4

表3.2.5 2018年宜蘭海域 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	96	148	130	145	14.1	26.0	18.1	25.0	30	0	95	-107	560(75%)
2	2018/01	F	92	195	142	168	14.3	25.0	18.9	25.0	47	0	97	-112	649(87%)
3	2018/02	F	90	159	138	156	12.8	25.0	14.9	18.3	36	0	86	-84	467(70%)
4	2018/03	F	92	148	133	144	13.6	25.0	17.2	24.8	51	0	83	-91	701(94%)
5	2018/04	F	91	156	133	146	13.2	25.0	16.1	21.2	50	0	73	-90	691(96%)
6	2018/05	F	100	181	136	177	13.1	25.0	15.6	21.0	34	0	81	-100	465(63%)
7	2018/06	F	92	150	121	141	12.4	14.0	13.1	13.4	54	0	98	-99	684(95%)
8	2018/07	F	91	197	130	171	13.5	25.0	16.5	24.8	43	0	96	-115	621(84%)
9	2018/08	F	93	199	130	171	13.1	25.0	15.3	20.6	56	0	103	-97	721(97%)
10	2018/09	F	97	152	136	148	13.2	26.0	15.6	22.5	49	0	90	-94	666(93%)
11	2018/10	F	97	163	145	159	13.1	25.0	15.5	20.8	53	0	77	-94	741(100%)
12	2018/11	F	91	182	149	173	13.2	25.0	15.3	20.4	50	0	89	-98	672(93%)
13	2018/冬	F	93	195	137	159	13.7	26.0	17.4	24.9	113	0	96	-112	1676(78%)
14	2018/春	F	94	181	134	153	13.4	25.0	16.3	22.8	135	0	83	-100	1857(84%)
15	2018/夏	F	92	199	126	158	13.0	25.0	14.8	19.1	153	0	103	-115	2026(92%)
16	2018/秋	F	95	182	143	162	13.1	26.0	15.4	20.7	152	0	90	-98	2079(95%)
17	2018/年	F	93	199	135	160	13.3	26.0	15.9	21.8	553	0	103	-115	7638(87%)

3-2-5

表3.2.6 2018年宜蘭海域 P 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	P	97	151	134	149	13.6	26.0	17.0	25.0	31	0	96	-109	561(75%)
2	2018/01	P	93	197	143	169	14.3	25.0	18.9	25.0	47	0	96	-112	649(87%)
3	2018/02	P	90	159	137	155	12.8	25.0	14.8	18.0	36	0	86	-84	467(70%)
4	2018/03	P	91	147	132	143	13.6	25.0	17.2	24.8	51	0	83	-90	701(94%)
5	2018/04	P	91	156	133	146	13.2	25.0	16.0	21.2	50	0	73	-89	691(96%)
6	2018/05	P	103	182	143	179	13.1	25.0	15.6	21.0	34	0	97	-101	465(63%)
7	2018/06	P	92	150	121	140	12.4	14.0	13.1	13.4	54	0	99	-98	684(95%)
8	2018/07	P	92	160	137	155	13.2	25.0	15.7	22.3	44	0	97	-115	621(84%)
9	2018/08	P	93	200	131	173	13.1	25.0	15.4	21.0	56	0	103	-98	721(97%)
10	2018/09	P	98	192	141	162	13.2	26.0	15.6	22.5	49	0	108	-94	666(93%)
11	2018/10	P	96	162	143	159	13.6	26.0	16.7	25.2	54	0	76	-95	741(100%)
12	2018/11	P	92	165	135	157	13.2	25.0	15.4	20.6	50	0	88	-99	672(93%)
13	2018/冬	P	93	197	138	159	13.6	26.0	17.0	24.9	114	0	96	-112	1677(78%)
14	2018/春	P	94	182	135	154	13.3	25.0	16.3	22.8	135	0	97	-101	1857(84%)
15	2018/夏	P	93	200	129	158	12.9	25.0	14.6	18.5	154	0	103	-115	2026(92%)
16	2018/秋	P	95	192	140	159	13.3	26.0	15.9	22.3	153	0	108	-99	2079(95%)
17	2018/年	P	94	200	135	158	13.3	26.0	15.9	21.8	556	0	108	-115	7639(87%)

3-2-0

表3.2.7 2018年宜蘭海域 G 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	G													
2	2018/01	G													
3	2018/02	G													
4	2018/03	G													
5	2018/04	G													
6	2018/05	G													
7	2018/06	G													
8	2018/07	G													
9	2018/08	G													
10	2018/09	G													
11	2018/10	G	110	187	151	173	13.6	27.0	16.9	26.0	39	0	96	-114	650(87%)
12	2018/11	G	99	173	132	157	14.6	26.0	19.7	25.3	45	0	91	-101	710(99%)
13	2018/冬	G													
14	2018/春	G													
15	2018/夏	G													
16	2018/秋	G	104	187	143	164	14.1	27.0	18.4	25.5	84	0	95	-114	1360(62%)
17	2018/年	G	104	187	143	164	14.1	27.0	18.4	25.5	84	0	95	-114	1360(16%)

3-2-7

3.3 2018 年宜蘭海域**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 Yi-Lan Seas of SAT0 at 2018

1 ○ 8 ● 15 ● 22 ●

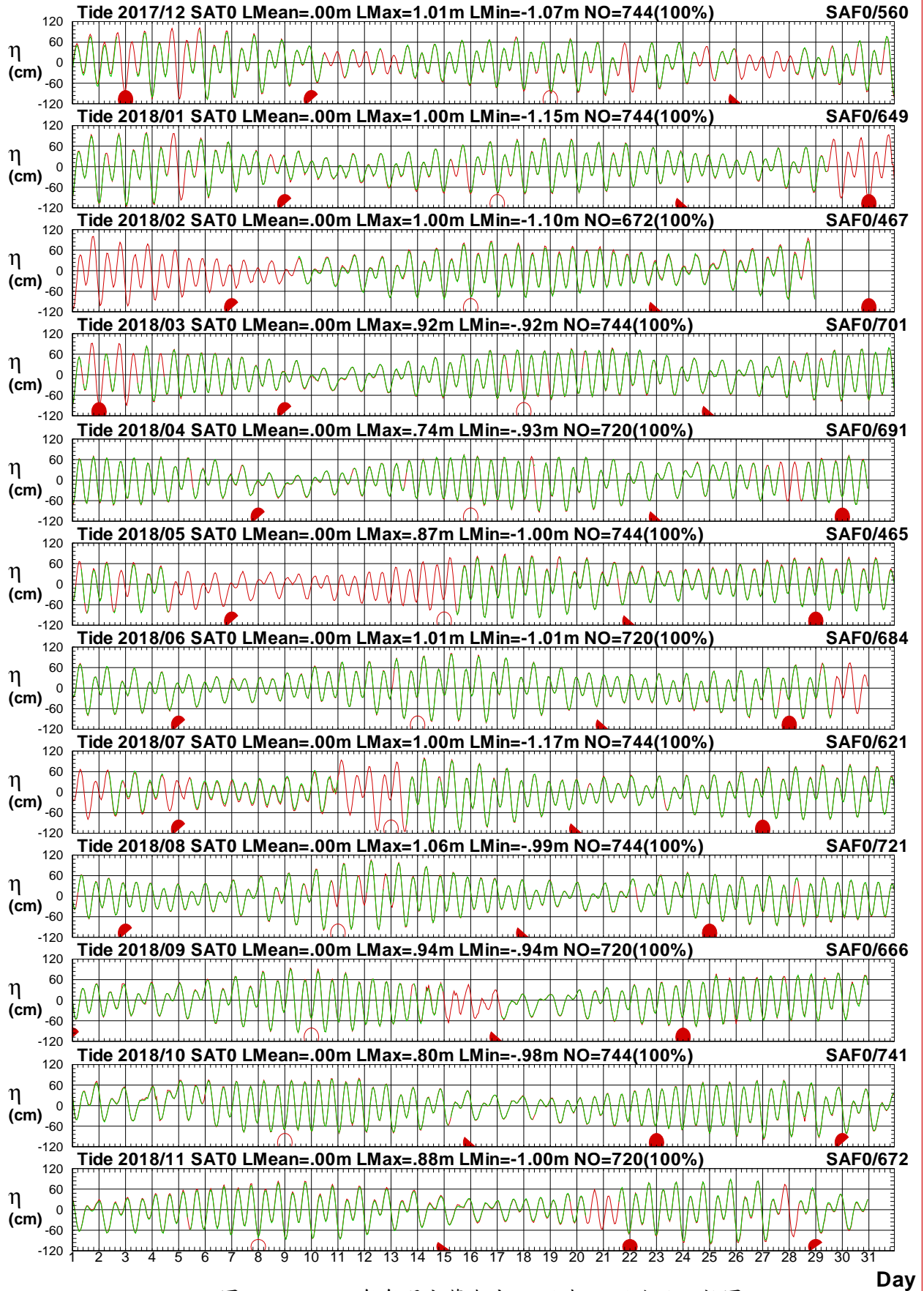


圖3.3.1 2018年每月宜蘭海域 T 站與 F 站潮位比較圖

T17CSAT0.1HA T17CSAF0.1H0 T181SAT0.1HA T181SAF0.1H0 T182SAT0.1HA T182SAF0.1H0
 T183SAT0.1HA T183SAF0.1H0 T184SAT0.1HA T184SAF0.1H0 T185SAT0.1HA T185SAF0.1H0

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Tidal Level in Yi-Lan Seas of SAT0 at 2018

1 ○ 8 ● 15 ● 22 ●

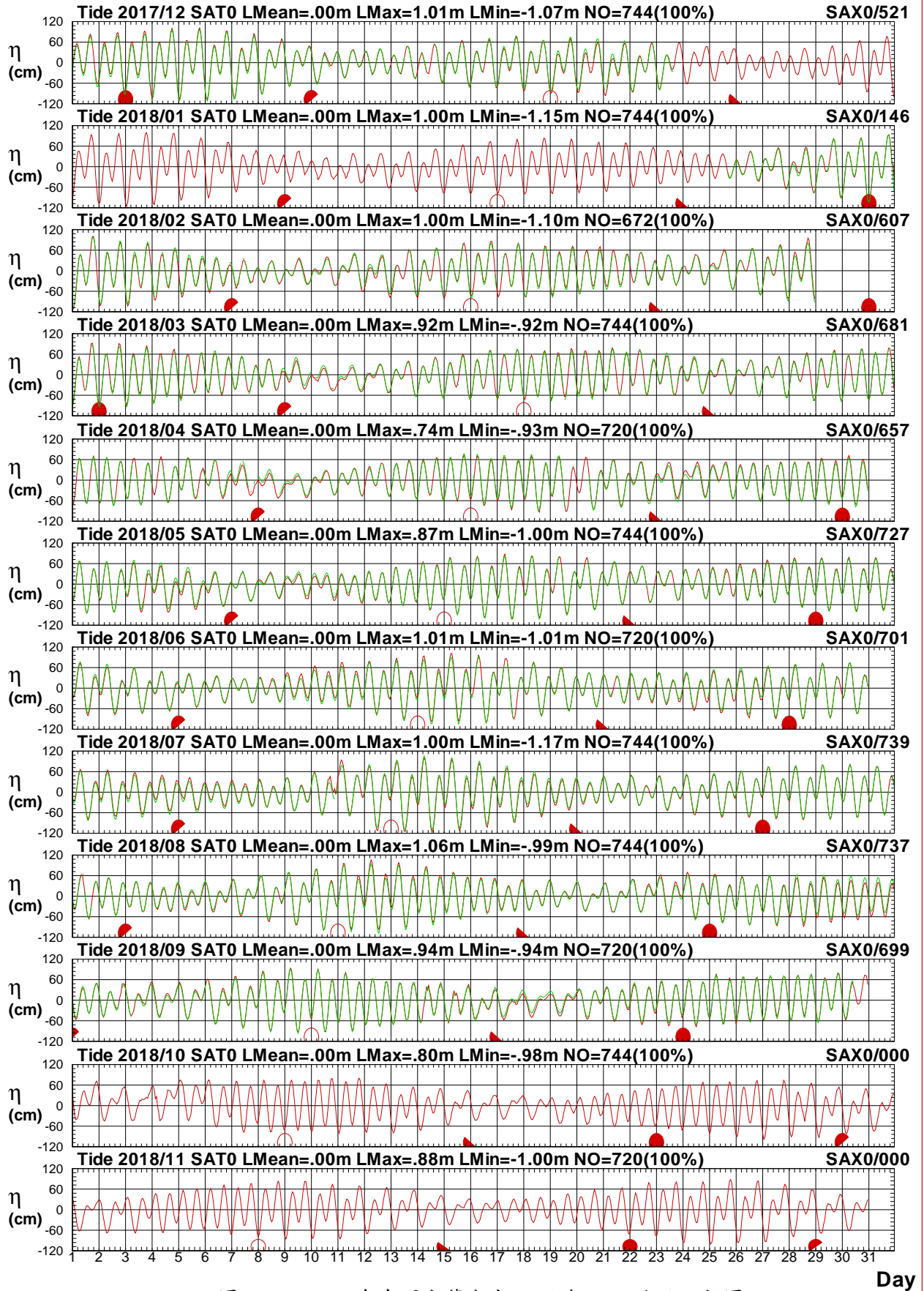


圖3.3.2 2018年每月宜蘭海域 T 站與 X 站潮位比較圖

T17CSAT0.1HA T17CSAX0.1H0 T181SAT0.1HA T181SAX0.1H0 T182SAT0.1HA T182SAX0.1H0
T183SAT0.1HA T183SAX0.1H0 T184SAT0.1HA T184SAX0.1H0 T185SAT0.1HA T185SAX0.1H0

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Tidal Level in Yi-Lan Seas of SAT0 at 2018

1 ○ 8 ● 15 ● 22 ●

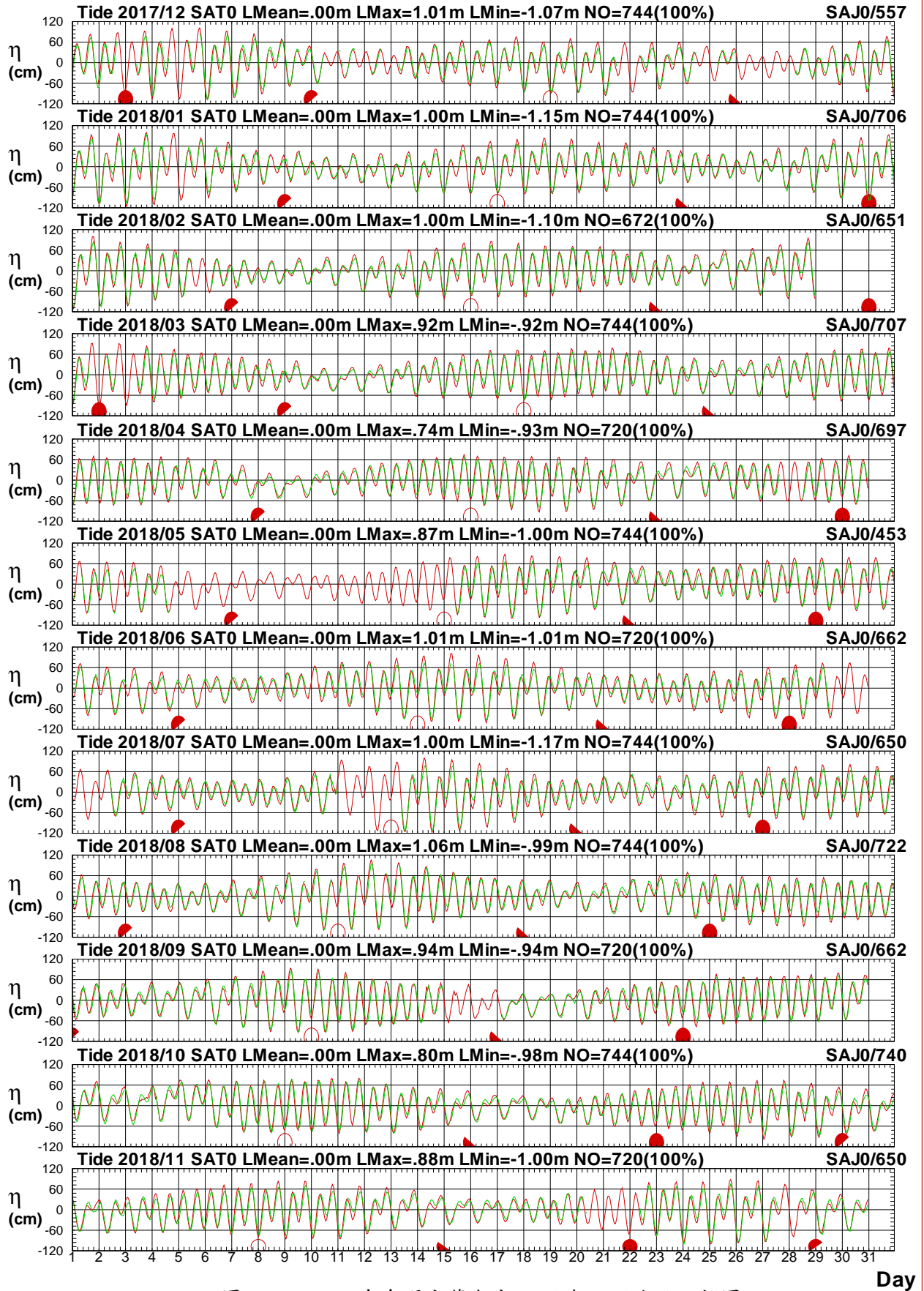


圖3.3.3 2018年每月宜蘭海域 T 站與 J 站潮位比較圖

T17CSAT0.1HA T17CSAJ0.1H0 T181SAT0.1HA T181SAJ0.1H0 T182SAT0.1HA T182SAJ0.1H0
 T183SAT0.1HA T183SAJ0.1H0 T184SAT0.1HA T184SAJ0.1H0 T185SAT0.1HA T185SAJ0.1H0

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Tidal Level in Yi-Lan Seas of SAT0 at 2018

1 ○ 8 ● 15 ● 22 ●

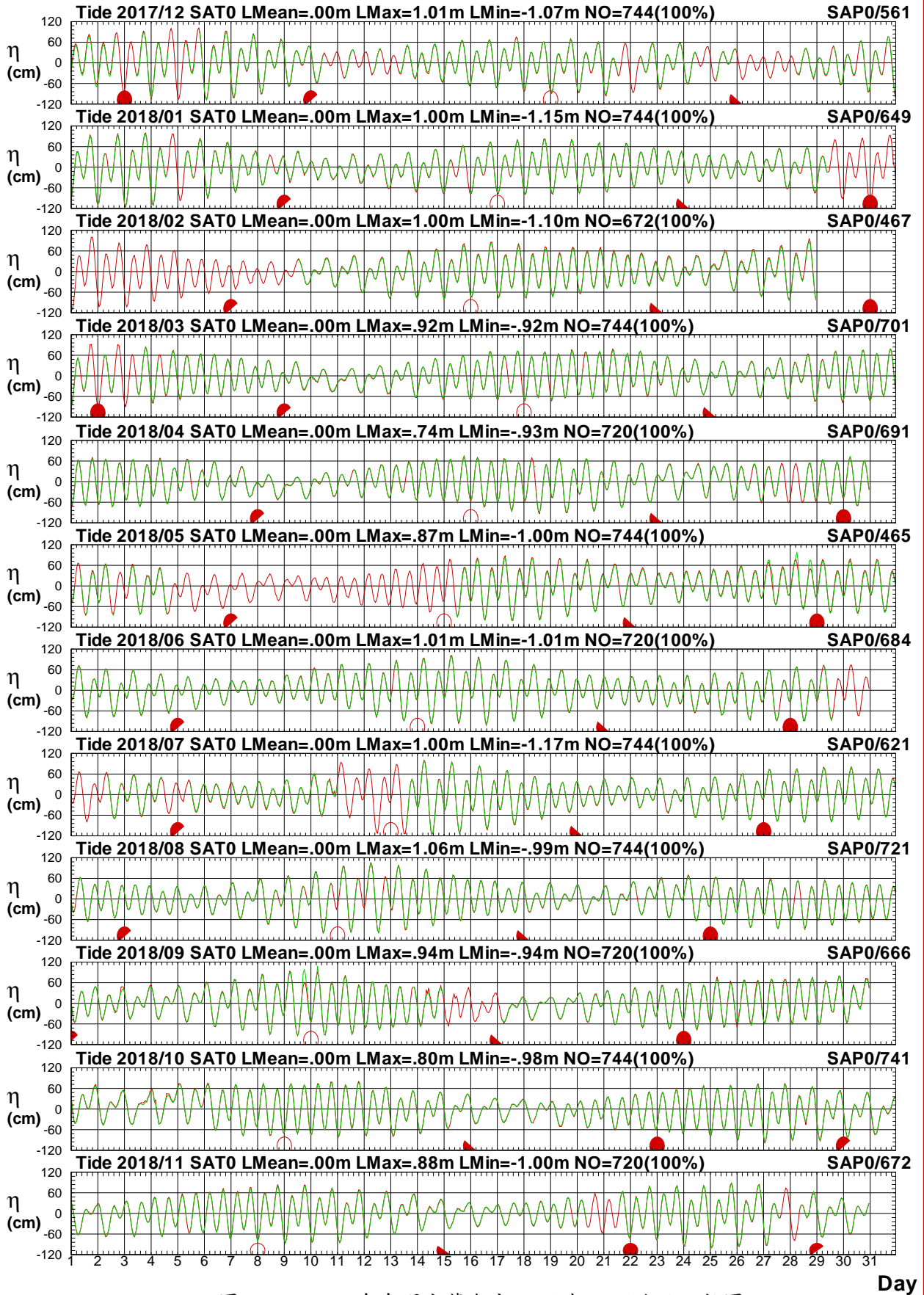


圖3.3.4 2018年每月宜蘭海域 T 站與 P 站潮位比較圖

T17CSAT0.1HA T17CSAP0.1H0 T181SAT0.1HA T181SAP0.1H0 T182SAT0.1HA T182SAP0.1H0
 T183SAT0.1HA T183SAP0.1H0 T184SAT0.1HA T184SAP0.1H0 T185SAT0.1HA T185SAP0.1H0

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Tidal Level in Yi-Lan Seas of SAT0 at 2018

1 ○ 8 ● 15 ● 22 ●

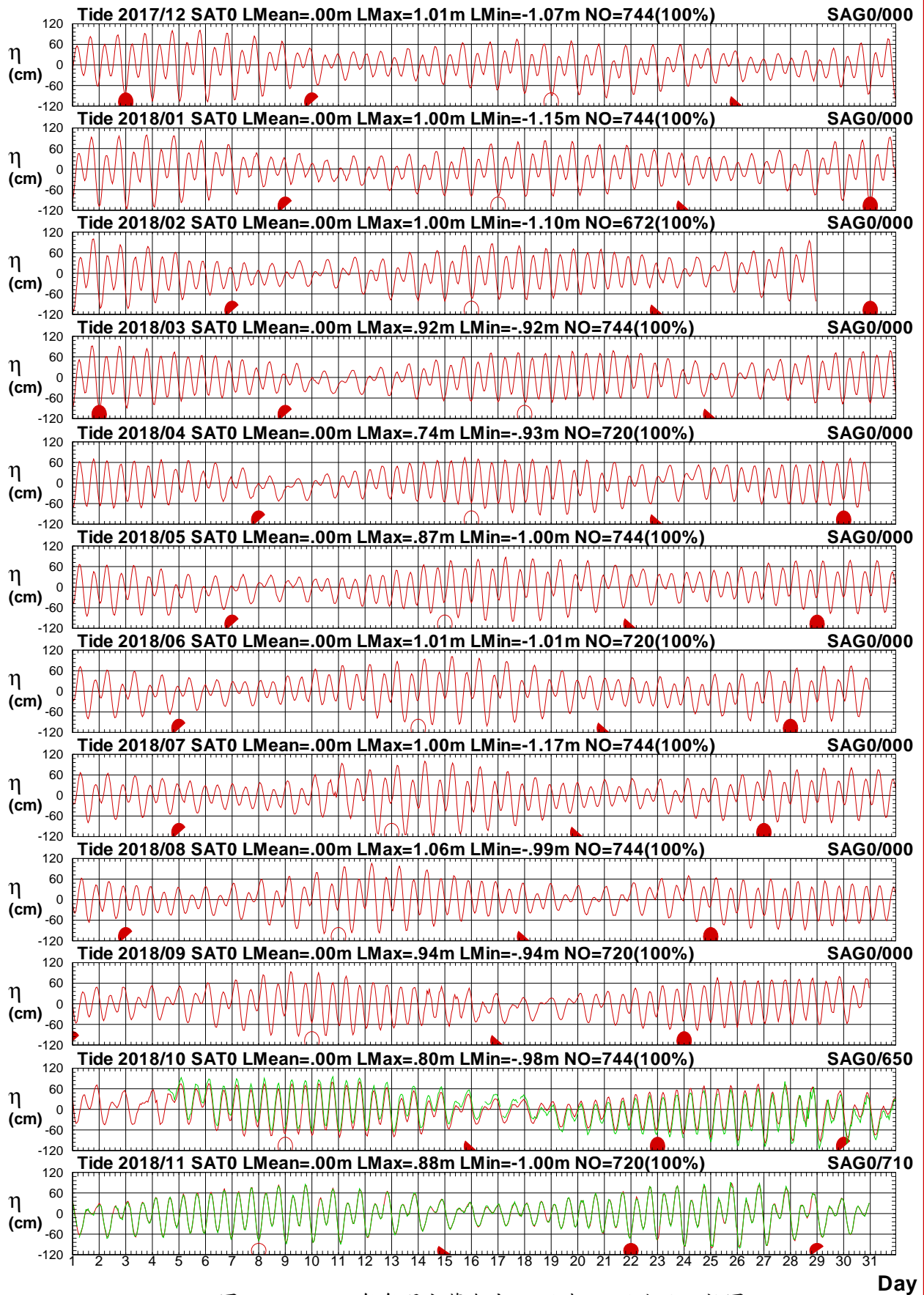


圖3.3.5 2018年每月宜蘭海域 T 站與 G 站潮位比較圖

T17CSAT0.1HA T17CSAG0.1H0 T181SAT0.1HA T181SAG0.1H0 T182SAT0.1HA T182SAG0.1H0
T183SAT0.1HA T183SAG0.1H0 T184SAT0.1HA T184SAG0.1H0 T185SAT0.1HA T185SAG0.1H0

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3.4 2018 年宜蘭海域**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 Yi-Lan Seas of SAK0 at 2018

1 ○ 8 ● 15 ● 22 ●

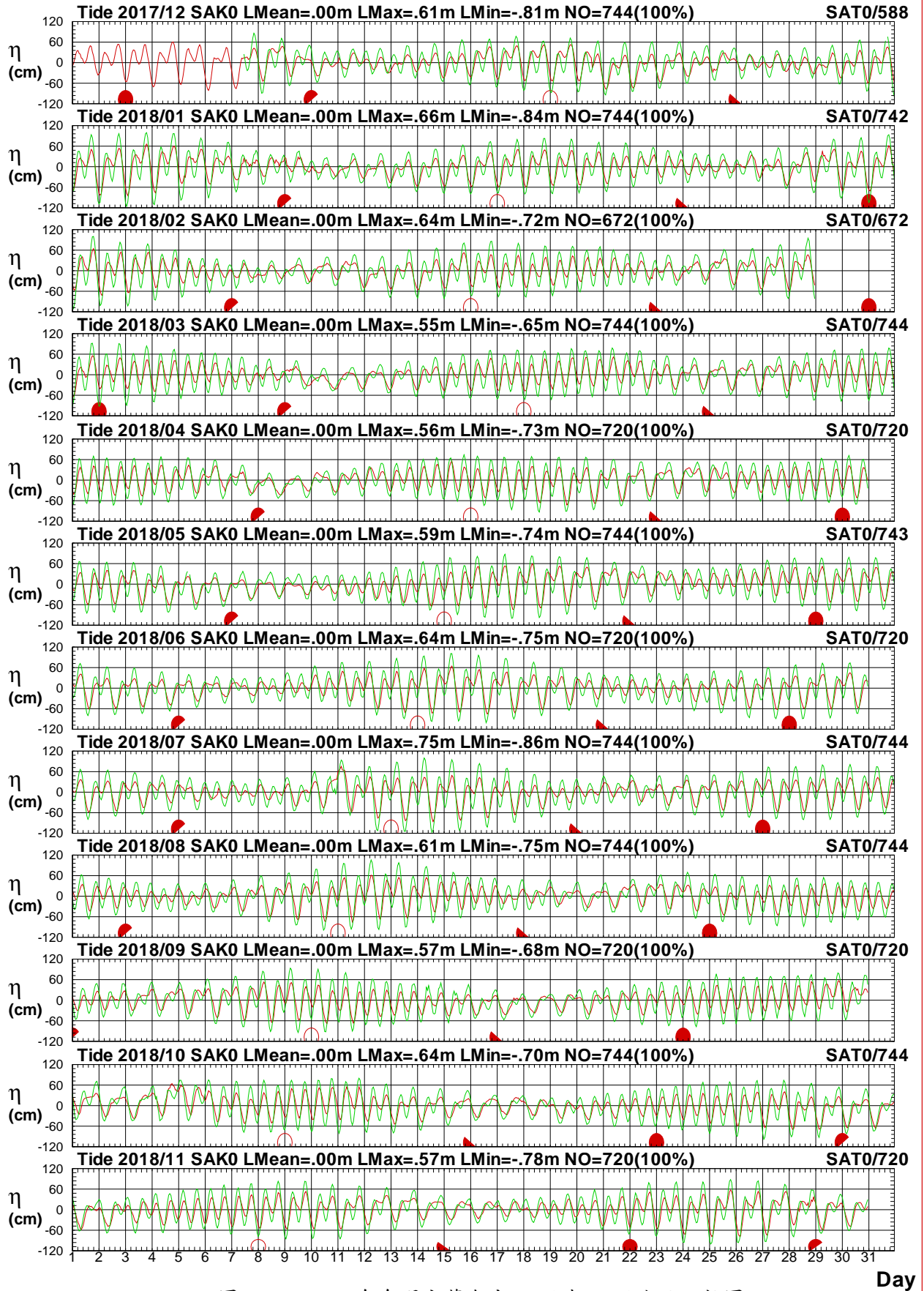


圖3.4.1 2018年每月宜蘭海域 K 站與 T 站潮位比較圖

T17CSAK0.1HA T17CSAT0.1H0 T181SAK0.1HA T181SAT0.1H0 T182SAK0.1HA T182SAT0.1H0
 T183SAK0.1HA T183SAT0.1H0 T184SAK0.1HA T184SAT0.1H0 T185SAK0.1HA T185SAT0.1H0

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Tidal Level in Yi-Lan Seas of SAK0 at 2018

1 ○ 8 ● 15 ● 22 ●

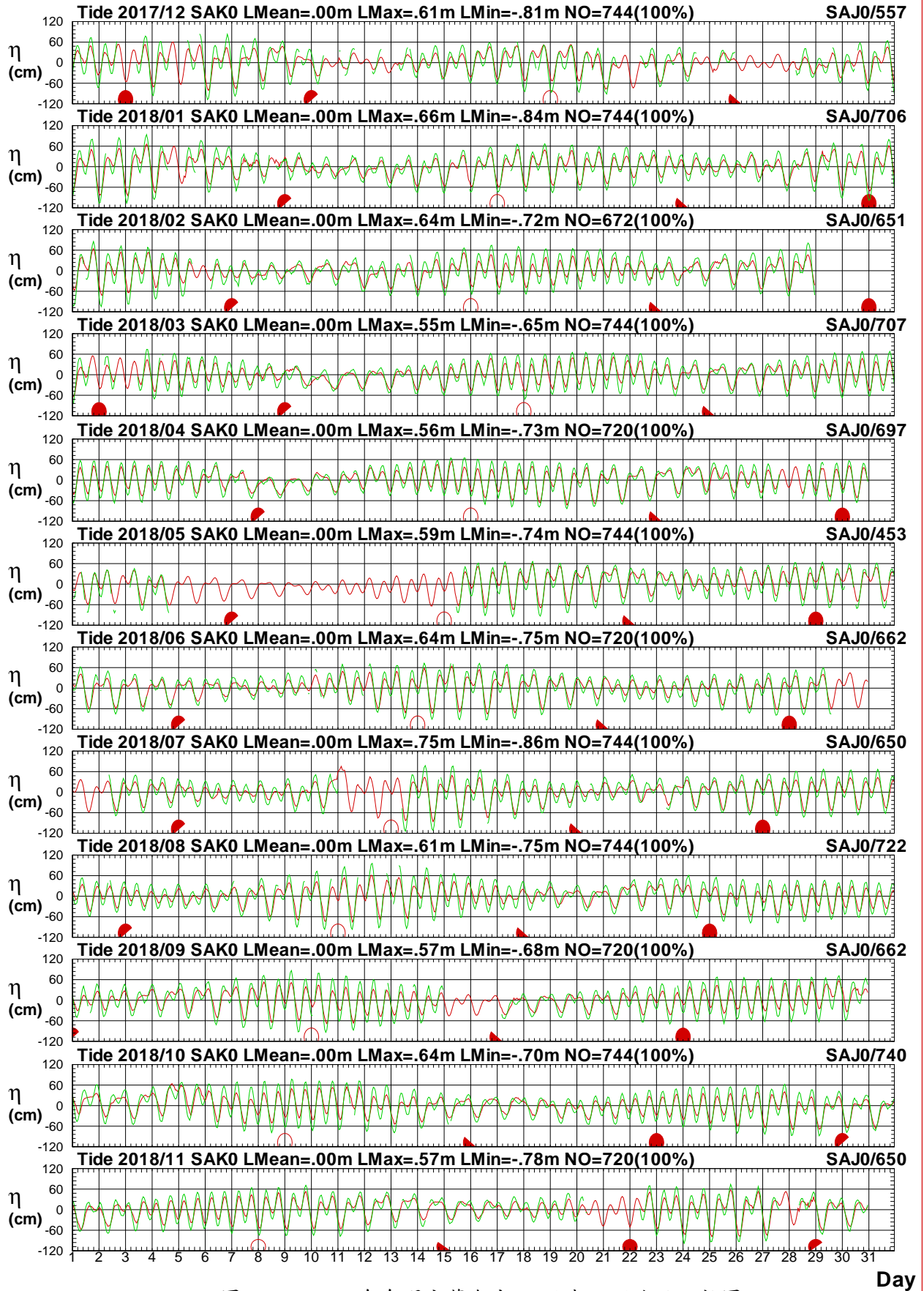


圖3.4.2 2018年每月宜蘭海域 K 站與 J 站潮位比較圖

T17CSAK0.1HA T17CSAJ0.1H0 T181SAK0.1HA T181SAJ0.1H0 T182SAK0.1HA T182SAJ0.1H0
 T183SAK0.1HA T183SAJ0.1H0 T184SAK0.1HA T184SAJ0.1H0 T185SAK0.1HA T185SAJ0.1H0

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3.5 2018 年宜蘭海域**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 Yi-Lan Seas of SAJ0 at 2018

1 ○ 8 ● 15 ● 22 ●

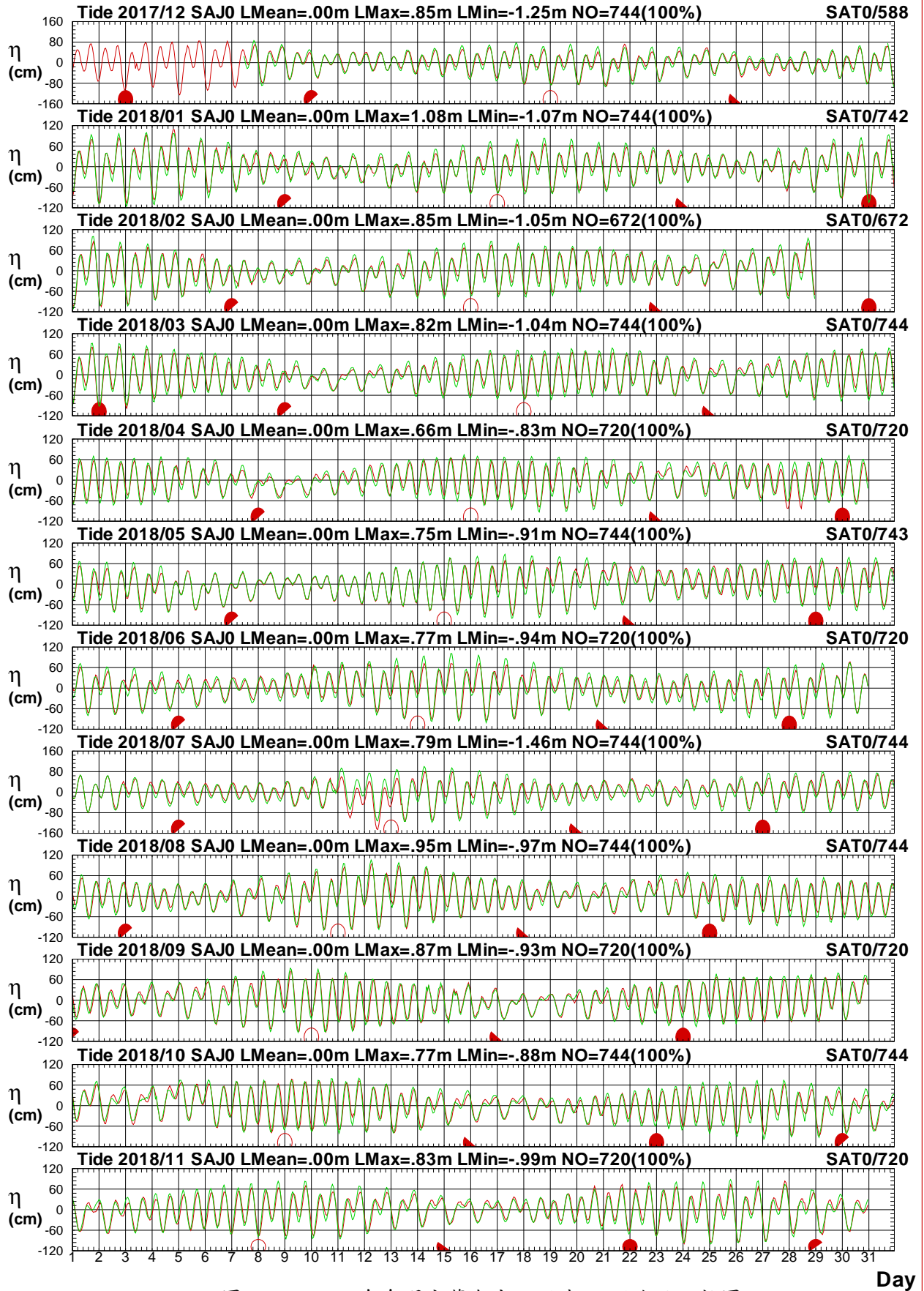


圖3.5.1 2018年每月宜蘭海域J站與T站潮位比較圖

T17CSAJ0.1HA T17CSAT0.1H0 T181SAJ0.1HA T181SAT0.1H0 T182SAJ0.1HA T182SAT0.1H0
 T183SAJ0.1HA T183SAT0.1H0 T184SAJ0.1HA T184SAT0.1H0 T185SAJ0.1HA T185SAT0.1H0

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Tidal Level in Yi-Lan Seas of SAJ0 at 2018

1 ○ 8 ● 15 ● 22 ●

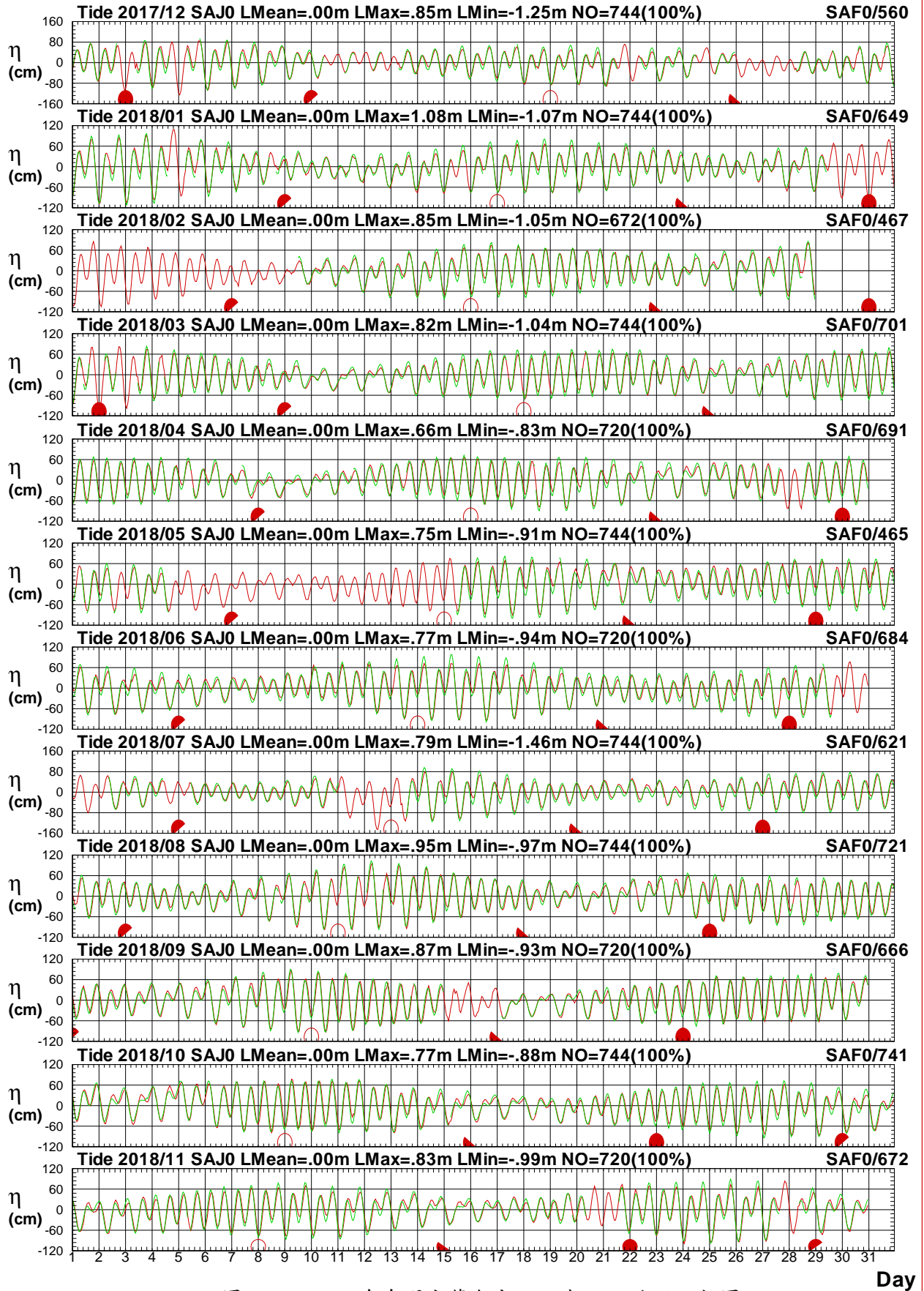


圖3.5.2 2018年每月宜蘭海域 J 站與 F 站潮位比較圖

T17CSAJ0.1HA T17CSAF0.1H0 T181SAJ0.1HA T181SAF0.1H0 T182SAJ0.1HA T182SAF0.1H0
 T183SAJ0.1HA T183SAF0.1H0 T184SAJ0.1HA T184SAF0.1H0 T185SAJ0.1HA T185SAF0.1H0

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Tidal Level in Yi-Lan Seas of SAJ0 at 2018

1 ○ 8 ● 15 ● 22 ●

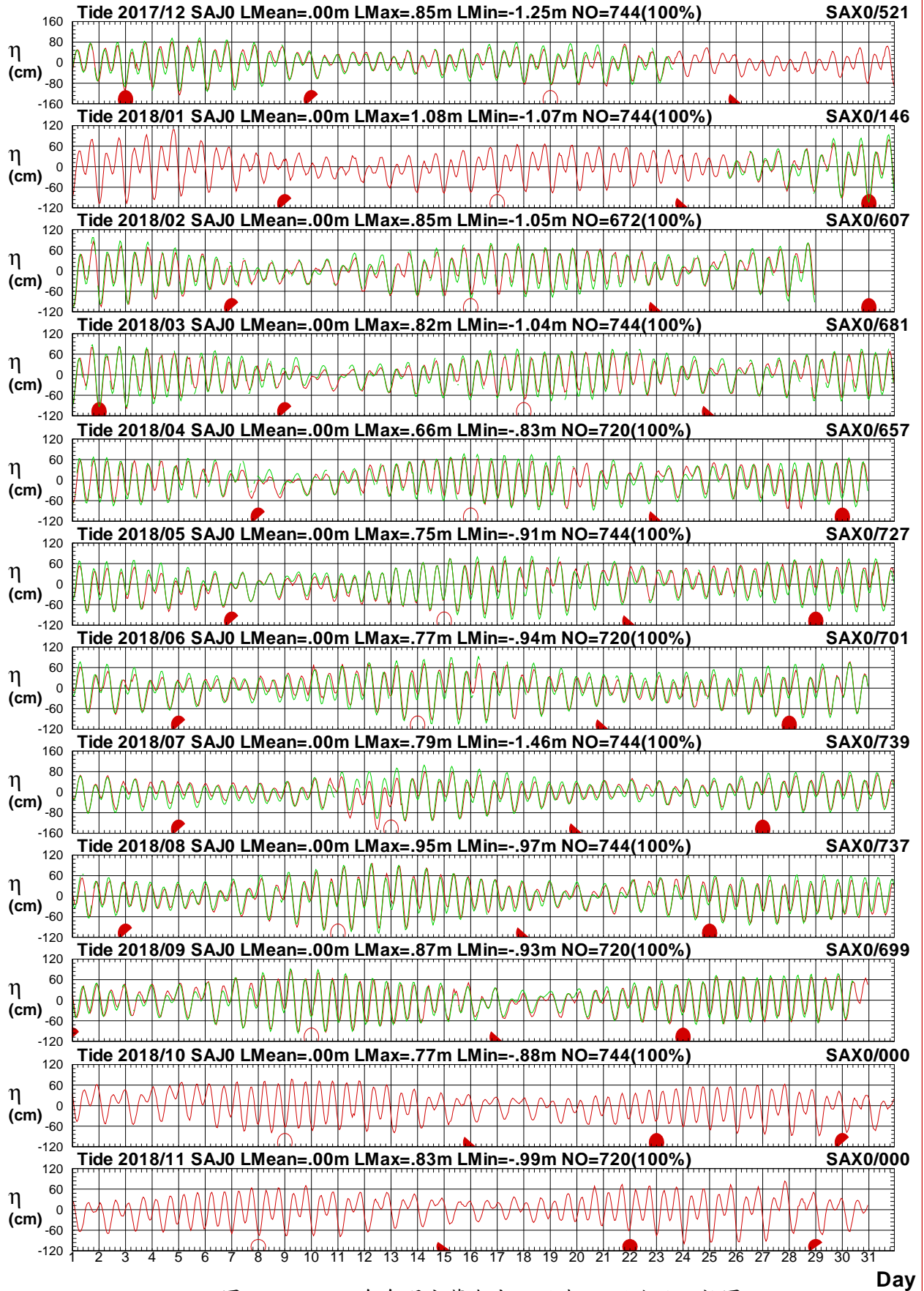


圖3.5.3 2018年每月宜蘭海域J站與X站潮位比較圖

T17CSAJ0.1HA T17CSAX0.1H0 T181SAJ0.1HA T181SAX0.1H0 T182SAJ0.1HA T182SAX0.1H0
 T183SAJ0.1HA T183SAX0.1H0 T184SAJ0.1HA T184SAX0.1H0 T185SAJ0.1HA T185SAX0.1H0

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Tidal Level in Yi-Lan Seas of SAJ0 at 2018

1 ○ 8 ● 15 ● 22 ●

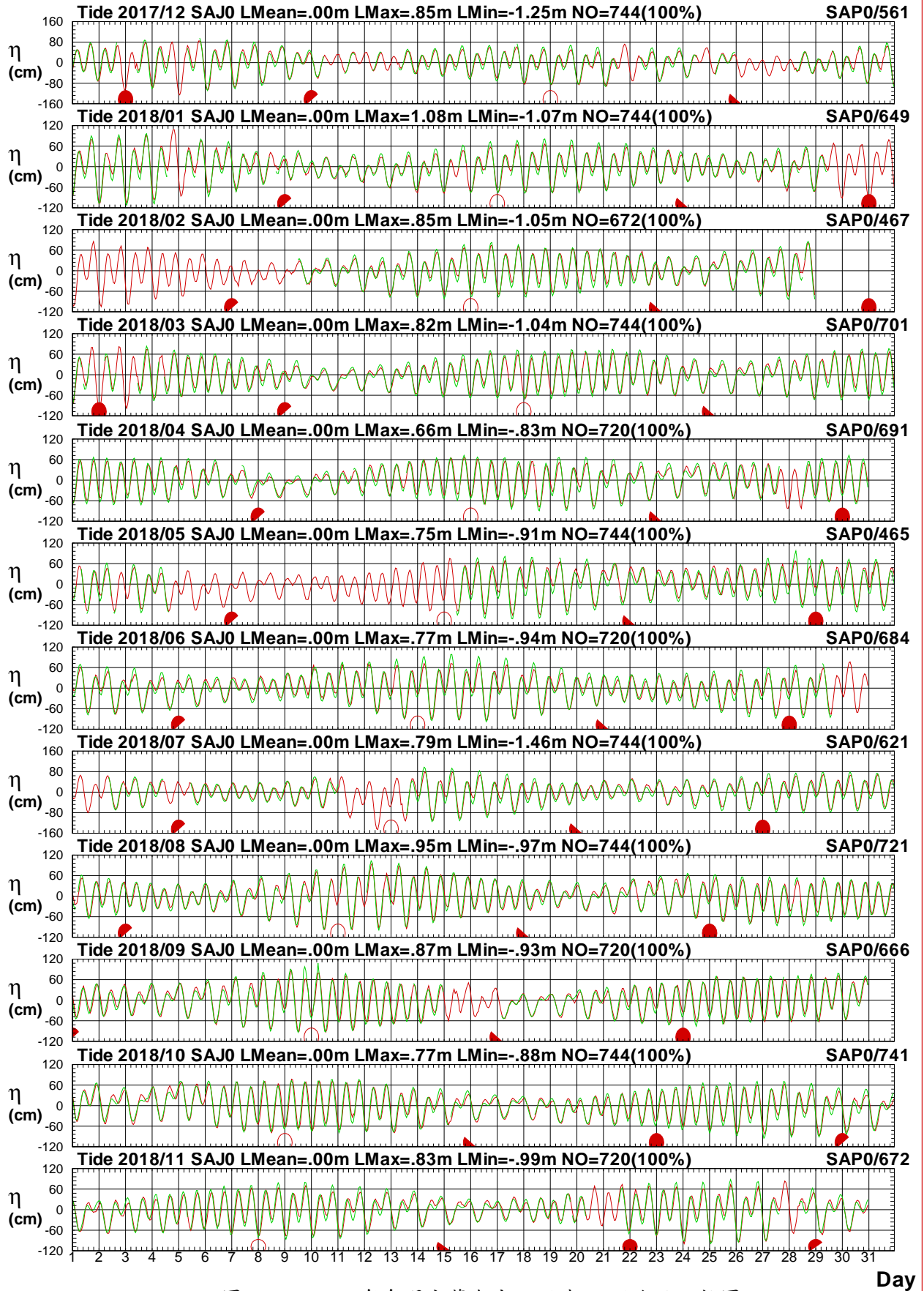


圖3.5.4 2018年每月宜蘭海域 J 站與 P 站潮位比較圖

T17CSAJ0.1HA T17CSAP0.1H0 T181SAJ0.1HA T181SAP0.1H0 T182SAJ0.1HA T182SAP0.1H0
 T183SAJ0.1HA T183SAP0.1H0 T184SAJ0.1HA T184SAP0.1H0 T185SAJ0.1HA T185SAP0.1H0

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Tidal Level in Yi-Lan Seas of SAJ0 at 2018

1 ○ 8 ● 15 ● 22 ●

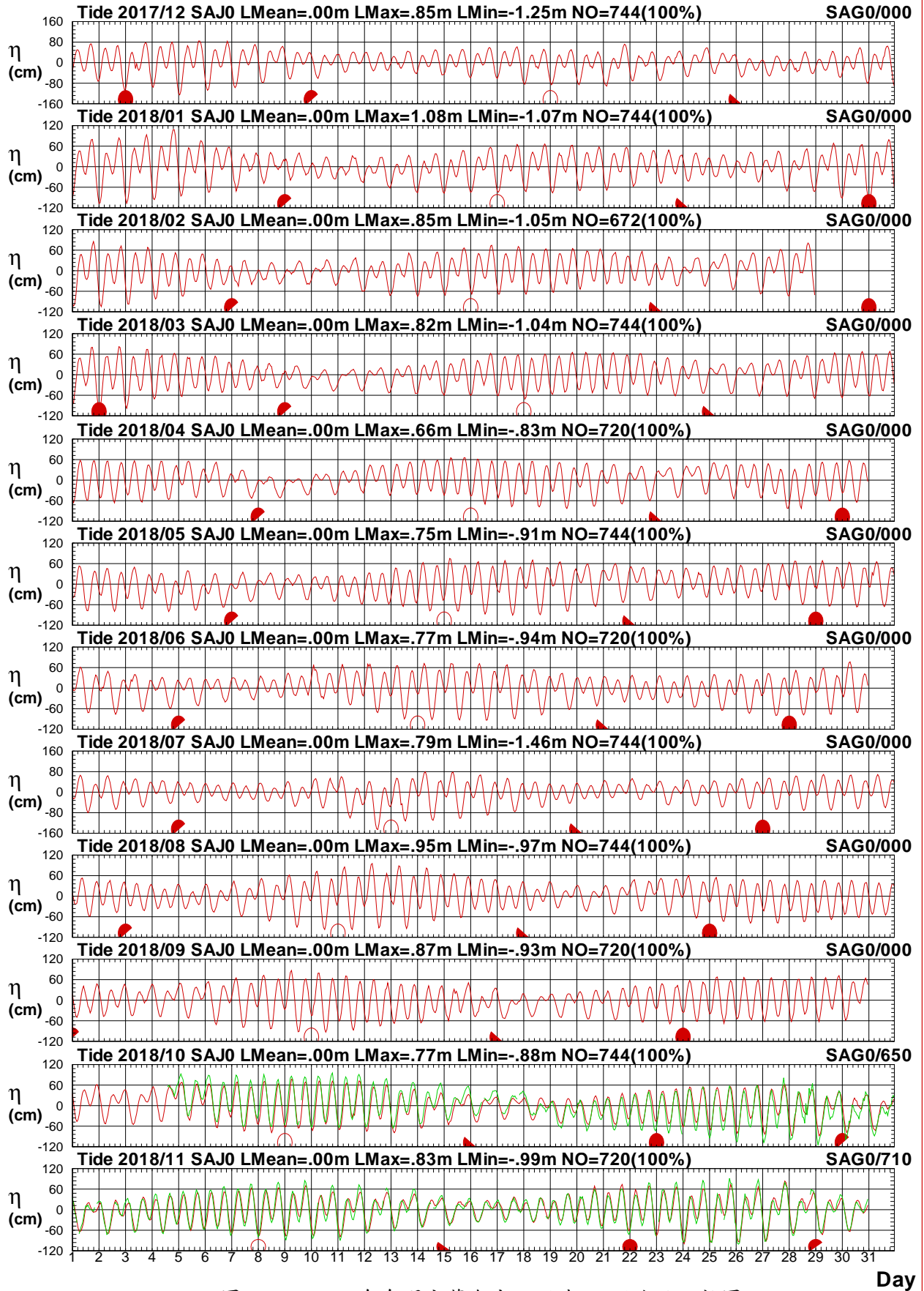


圖3.5.5 2018年每月宜蘭海域 J 站與 G 站潮位比較圖

T17CSAJ0.1HA T17CSAG0.1H0 T181SAJ0.1HA T181SAG0.1H0 T182SAJ0.1HA T182SAG0.1H0
 T183SAJ0.1HA T183SAG0.1H0 T184SAJ0.1HA T184SAG0.1H0 T185SAJ0.1HA T185SAG0.1H0

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第四章 2018 年宜蘭海域觀測海流資料年報

宜蘭海域海流之觀測包括測站 X 及測站 Y 等 2 個測站(測站位置如第 0 章圖 CS1)。

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 年宜蘭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年每月宜蘭海域各測站觀測海流資料紀錄表

海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域
年月/測站	X	Y										
2017/12月	521(70.0%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 1月	146(19.6%)	743(99.9%)	*	*	*	*	*	*	*	*	*	*
2018/ 2月	607(90.3%)	672(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 3月	681(91.5%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 4月	657(91.3%)	720(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 5月	727(97.7%)	743(99.9%)	*	*	*	*	*	*	*	*	*	*
2018/ 6月	701(97.4%)	720(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 7月	739(99.3%)	734(98.7%)	*	*	*	*	*	*	*	*	*	*
2018/ 8月	155(20.8%)	730(98.1%)	*	*	*	*	*	*	*	*	*	*
2018/ 9月	699(97.1%)	719(99.9%)	*	*	*	*	*	*	*	*	*	*
2018/10月	*	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/11月	*	720(100%)	*	*	*	*	*	*	*	*	*	*
2018/冬季	1274(59.0%)	2159(99.9%)	*	*	*	*	*	*	*	*	*	*
2018/春季	2065(93.5%)	2207(99.9%)	*	*	*	*	*	*	*	*	*	*
2018/夏季	1595(72.2%)	2184(98.9%)	*	*	*	*	*	*	*	*	*	*
2018/秋季	699(32.0%)	2183(99.9%)	*	*	*	*	*	*	*	*	*	*
2018/整年	5633(64.3%)	8733(99.7%)	*	*	*	*	*	*	*	*	*	*
起始年月	2017/12	2017/12	*	*	*	*	*	*	*	*	*	*
結束年月	2018/09	2018/11	*	*	*	*	*	*	*	*	*	*

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表4.1.1b 2018年每月宜蘭海域計算潮流各測站資料紀錄表

海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域	宜蘭海域
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	*	*	*	*	*	*	*	*	*	*

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4.2 2018 年宜蘭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年宜蘭海域 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	521(70%)	15.5	7.5/SSW	50.9/SSW	84.1	15.9	.0	.0	20.2	19.4	49.3	11.1	SSW/22.8%
2	2018/01	146(20%)	16.3	8.9/SW	41.6/SW	85.6	14.4	.0	.0	15.1	14.4	54.1	16.4	SSW/24.0%
3	2018/02	607(90%)	13.7	5.1/S	43.5/NNE	92.3	7.7	.0	.0	20.4	27.5	40.5	11.5	SSW/16.5%
4	2018/03	681(92%)	16.0	4.1/N	65.0/N	84.4	14.4	1.2	.0	36.0	16.3	28.6	19.1	N /19.7%
5	2018/04	657(91%)	15.1	4.8/N	60.1/N	85.8	12.9	1.2	.0	32.7	13.9	28.8	24.7	N /19.5%
6	2018/05	727(98%)	14.1	5.4/N	76.6/N	87.5	12.2	.3	.0	40.3	9.9	28.2	21.6	N /17.5%
7	2018/06	701(97%)	13.5	3.3/NNW	48.3/NNE	89.9	10.1	.0	.0	24.8	18.5	27.2	29.4	N /14.3%
8	2018/07	739(99%)	14.8	5.5/NNW	60.5/N	85.7	13.8	.5	.0	24.0	14.5	26.8	34.8	N /18.4%
9	2018/08	155(21%)	12.3	2.9/SSW	36.5/NW	89.7	10.3	.0	.0	12.9	33.5	29.7	23.9	S /18.1%
10	2018/09	699(97%)	15.5	2.1/NNW	63.9/N	84.8	14.7	.4	.0	31.9	18.0	29.5	20.6	N /14.4%
11	2018/10													
12	2018/11													
13	2018/冬	1274(59%)	14.7	6.5/SSW	50.9/SSW	88.1	11.9	.0	.0	19.7	22.7	45.7	11.9	SSW/19.9%
14	2018/春	2065(94%)	15.0	4.8/N	76.6/N	86.0	13.2	.9	.0	36.5	13.3	28.5	21.7	N /18.8%
15	2018/夏	1595(72%)	14.0	3.8/NNW	60.5/N	87.9	11.8	.3	.0	23.3	18.1	27.3	31.3	N /15.4%
16	2018/秋	699(32%)	15.5	2.1/NNW	63.9/N	84.8	14.7	.4	.0	31.9	18.0	29.5	20.6	N /14.4%
17	2018/年	5633(64%)	14.7	2.0/NW	76.6/N	86.9	12.7	.4	.0	28.4	17.4	32.2	22.1	N /14.7%

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表4.2.1b 2018年宜蘭海域 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%)	5.4	2.0/NW	13.9/NNE	100.0	.0	.0	.0	30.1	.3	41.0	28.6	SW /24.7%
2	2018/01	744(100%)	5.3	2.0/NW	15.1/NNE	100.0	.0	.0	.0	29.4	.4	41.4	28.8	N /22.7%
3	2018/02	672(100%)	5.4	2.0/NW	15.6/N	100.0	.0	.0	.0	29.3	.1	42.0	28.6	N /23.4%
4	2018/03	744(100%)	5.7	2.0/NW	15.0/N	100.0	.0	.0	.0	30.9	.3	41.3	27.6	N /26.7%
5	2018/04	720(100%)	5.7	2.0/NW	14.5/N	100.0	.0	.0	.0	31.1	.6	39.2	29.2	N /29.3%
6	2018/05	744(100%)	5.4	2.0/NW	13.4/N	100.0	.0	.0	.0	30.1	.7	38.7	30.5	N /27.7%
7	2018/06	720(100%)	5.2	2.0/NW	13.1/NNE	100.0	.0	.0	.0	28.9	.6	40.0	30.6	N /25.7%
8	2018/07	744(100%)	5.2	2.0/NW	14.5/NNE	100.0	.0	.0	.0	29.6	.1	41.1	29.2	N /23.9%
9	2018/08	744(100%)	5.4	2.0/NW	15.3/NNE	100.0	.0	.0	.0	29.6	.0	41.3	29.2	N /23.9%
10	2018/09	720(100%)	5.7	2.0/NW	15.9/N	100.0	.0	.0	.0	29.9	.4	41.5	28.2	N /28.6%
11	2018/10	744(100%)	5.7	2.0/NW	15.1/N	100.0	.0	.0	.0	30.9	.8	40.6	27.7	N /28.9%
12	2018/11	720(100%)	5.5	2.0/NW	13.1/N	100.0	.0	.0	.0	29.7	.6	39.2	30.6	N /28.3%
13	2018/冬	2160(100%)	5.3	2.0/NW	15.6/N	100.0	.0	.0	.0	29.6	.3	41.4	28.7	N /23.4%
14	2018/春	2208(100%)	5.6	2.0/NW	15.0/N	100.0	.0	.0	.0	30.7	.5	39.7	29.1	N /27.9%
15	2018/夏	2208(100%)	5.3	2.0/NW	15.3/NNE	100.0	.0	.0	.0	29.3	.2	40.8	29.6	N /24.5%
16	2018/秋	2184(100%)	5.6	2.0/NW	15.9/N	100.0	.0	.0	.0	30.2	.6	40.4	28.8	N /28.6%
17	2018/年	8760(100%)	5.5	2.0/NW	15.9/N	100.0	.0	.0	.0	30.0	.4	40.6	29.0	N /26.1%

4-2-2

表4.2.1c 2018年宜蘭海域 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	521(70%)	15.0	8.7/SSW	50.9/SSW	86.9	13.1	.0	.0	14.6	25.5	50.3	9.6	SSW/25.1%
2	2018/01	146(20%)	15.5	9.9/SSW	55.0/SSW	85.6	13.0	1.4	.0	11.6	22.6	53.4	12.3	SSW/24.7%
3	2018/02	607(90%)	13.6	6.7/S	43.0/NNE	90.8	9.2	.0	.0	18.5	34.8	37.7	9.1	S /16.5%
4	2018/03	681(92%)	14.7	2.8/NNE	54.9/N	88.5	11.0	.4	.0	36.9	22.5	25.3	15.4	NNE/15.9%
5	2018/04	657(91%)	13.7	3.2/N	62.3/N	89.5	10.0	.5	.0	34.1	22.2	23.3	20.4	N /17.5%
6	2018/05	727(98%)	13.4	3.8/NNE	69.1/N	90.0	9.9	.1	.0	38.9	16.9	24.1	20.1	NNE/16.2%
7	2018/06	701(97%)	13.3	1.4/N	49.1/NNE	92.0	8.0	.0	.0	26.5	24.3	23.7	25.5	N /13.1%
8	2018/07	739(99%)	14.6	3.5/NNW	54.4/N	88.2	11.4	.4	.0	26.1	19.5	24.8	29.6	N /16.2%
9	2018/08	155(21%)	13.7	4.2/S	37.1/S	89.7	10.3	.0	.0	16.8	43.2	21.9	18.1	SSE/20.0%
10	2018/09	699(97%)	15.7	.5/ENE	61.3/N	84.8	14.9	.3	.0	32.6	23.5	28.8	15.2	N /12.9%
11	2018/10													
12	2018/11													
13	2018/冬	1274(59%)	14.4	7.8/S	55.0/SSW	88.6	11.2	.2	.0	16.1	29.6	44.7	9.7	SSW/20.3%
14	2018/春	2065(94%)	13.9	3.3/NNE	69.1/N	89.3	10.3	.3	.0	36.7	20.4	24.2	18.6	N /14.9%
15	2018/夏	1595(72%)	13.9	1.8/NNW	54.4/N	90.0	9.8	.2	.0	25.4	23.9	24.0	26.7	N /14.1%
16	2018/秋	699(32%)	15.7	.5/ENE	61.3/N	84.8	14.9	.3	.0	32.6	23.5	28.8	15.2	N /12.9%
17	2018/年	5633(64%)	14.3	.0/SW	69.1/N	88.8	10.9	.2	.0	28.3	23.9	29.3	18.5	N /12.1%

4-2-3

表 4.2.2a 2018年宜蘭海域 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%)	24.6	13.4/SSE	98.0/SSE	60.1	31.0	8.9	.0	6.6	56.7	9.8	26.9	SSE/31.3%
2	2018/01	743(100%)	23.0	10.9/SSE	77.0/SSE	66.1	29.3	4.6	.0	3.4	57.2	10.8	28.7	SSE/24.4%
3	2018/02	672(100%)	22.0	7.9/SSE	71.0/SSE	65.6	31.0	3.4	.0	8.0	54.8	7.6	29.6	SSE/22.5%
4	2018/03	744(100%)	21.0	7.7/SSE	74.0/SSE	66.4	30.5	3.1	.0	5.2	51.2	10.5	33.1	SSE/22.4%
5	2018/04	720(100%)	22.0	9.7/SSE	72.0/SSE	64.0	32.2	3.8	.0	5.8	56.3	7.9	30.0	SSE/24.3%
6	2018/05	743(100%)	22.2	9.4/SSE	78.0/SE	64.2	31.0	4.8	.0	4.8	55.2	8.7	31.2	SSE/23.4%
7	2018/06	720(100%)	22.9	11.0/SSE	81.0/SSE	65.7	27.2	7.1	.0	7.9	51.8	11.3	29.0	SSE/24.9%
8	2018/07	734(99%)	22.9	10.2/SSE	124.0/SE	67.0	24.5	8.3	.1	9.5	49.9	11.6	29.0	SSE/25.2%
9	2018/08	730(98%)	23.3	8.2/SSE	103.0/SSE	62.5	31.4	5.9	.3	6.7	46.0	10.8	36.4	SSE/23.3%
10	2018/09	719(100%)	25.5	9.5/SSE	105.0/SSE	58.6	32.5	8.6	.3	6.5	47.6	11.1	34.8	SSE/23.6%
11	2018/10	744(100%)	24.4	12.2/SSE	85.0/SSE	58.3	35.6	6.0	.0	5.8	55.5	11.8	26.9	SSE/26.2%
12	2018/11	720(100%)	22.6	10.5/SSE	73.0/SSE	63.1	33.1	3.9	.0	5.4	54.7	10.7	29.2	SSE/27.8%
13	2018/冬	2159(100%)	23.2	10.8/SSE	98.0/SSE	63.9	30.4	5.7	.0	5.9	56.3	9.4	28.3	SSE/26.2%
14	2018/春	2207(100%)	21.7	8.9/SSE	78.0/SE	64.9	31.2	3.9	.0	5.3	54.2	9.1	31.4	SSE/23.4%
15	2018/夏	2184(99%)	23.0	9.8/SSE	124.0/SE	65.1	27.7	7.1	.1	8.1	49.2	11.2	31.5	SSE/24.5%
16	2018/秋	2183(100%)	24.2	10.8/SSE	105.0/SSE	60.0	33.8	6.2	.1	5.9	52.6	11.2	30.2	SSE/25.9%
17	2018/年	8733(100%)	23.0	10.1/SSE	124.0/SE	63.4	30.8	5.7	.1	6.3	53.1	10.2	30.4	SSE/25.0%

4-2-4

表4.2.2b 2018年宜蘭海域 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%)	19.4	10.0/SSE	57.8/SSE	71.4	27.4	1.2	.0	.7	57.8	8.6	32.9	SSE/37.1%
2	2018/01	744(100%)	19.5	10.0/SSE	57.6/SSE	69.5	29.0	1.5	.0	1.2	57.4	7.1	34.3	SSE/36.6%
3	2018/02	672(100%)	19.0	10.1/SSE	56.2/SSE	71.4	28.0	.6	.0	1.8	57.1	7.3	33.8	SSE/37.4%
4	2018/03	744(100%)	19.7	10.0/SSE	52.9/SSE	69.4	30.4	.3	.0	2.0	58.1	7.7	32.3	SSE/37.6%
5	2018/04	720(100%)	19.7	10.1/SSE	50.3/SSE	71.3	28.8	.0	.0	.7	59.7	7.4	32.2	SSE/38.6%
6	2018/05	744(100%)	19.7	10.1/SSE	54.6/SSE	71.2	28.0	.8	.0	.9	58.7	7.8	32.5	SSE/39.5%
7	2018/06	720(100%)	19.3	10.1/SSE	57.8/SSE	70.7	28.1	1.3	.0	1.1	58.1	7.9	32.9	SSE/38.5%
8	2018/07	744(100%)	19.0	10.1/SSE	57.8/SSE	70.6	28.1	1.3	.0	1.1	57.7	7.8	33.5	SSE/37.8%
9	2018/08	744(100%)	18.9	10.1/SSE	55.5/SSE	70.6	28.6	.8	.0	1.3	57.4	7.9	33.3	SSE/37.0%
10	2018/09	720(100%)	19.3	10.1/SSE	51.2/SSE	70.3	29.7	.0	.0	1.3	59.4	7.6	31.7	SSE/38.1%
11	2018/10	744(100%)	19.6	10.1/SSE	50.8/SSE	71.5	28.5	.0	.0	1.3	58.9	7.7	32.1	SSE/39.4%
12	2018/11	720(100%)	19.8	10.1/SSE	55.2/SSE	70.3	28.5	1.3	.0	1.5	59.0	6.9	32.5	SSE/39.6%
13	2018/冬	2160(100%)	19.3	10.0/SSE	57.8/SSE	70.7	28.1	1.1	.0	1.2	57.5	7.7	33.7	SSE/37.0%
14	2018/春	2208(100%)	19.7	10.0/SSE	54.6/SSE	70.6	29.0	.4	.0	1.2	58.8	7.6	32.3	SSE/38.6%
15	2018/夏	2208(100%)	19.1	10.1/SSE	57.8/SSE	70.6	28.3	1.1	.0	1.2	57.7	7.9	33.2	SSE/37.7%
16	2018/秋	2184(100%)	19.6	10.1/SSE	55.2/SSE	70.7	28.9	.4	.0	1.4	59.1	7.4	32.1	SSE/39.0%
17	2018/年	8760(100%)	19.4	10.1/SSE	57.8/SSE	70.7	28.6	.8	.0	1.2	58.3	7.6	32.8	SSE/38.1%

4-2-5

表4.2.2c 2018年宜蘭海域 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%)	14.5	3.4/SSE	55.2/S	89.4	10.5	.1	.0	14.4	41.0	16.3	28.4	SSE/16.9%
2	2018/01	743(100%)	12.9	.9/SSE	43.5/NNW	91.4	8.6	.0	.0	16.3	34.9	15.2	33.6	NNW/13.2%
3	2018/02	672(100%)	12.9	2.5/N	43.6/NNW	93.6	6.4	.0	.0	22.0	29.2	10.4	38.4	NNW/16.2%
4	2018/03	744(100%)	12.1	2.4/NNW	46.2/NW	94.0	6.0	.0	.0	17.2	30.9	13.6	38.3	NNW/18.0%
5	2018/04	720(100%)	12.6	1.0/NE	42.6/NNW	93.8	6.3	.0	.0	19.6	36.0	8.9	35.6	SSE/14.9%
6	2018/05	743(100%)	12.2	1.1/NNE	54.0/SSE	92.7	7.1	.1	.0	20.1	32.8	10.2	36.9	NNW/14.0%
7	2018/06	720(100%)	13.0	1.0/S	46.9/SSE	94.3	5.7	.0	.0	16.5	35.1	16.9	31.4	SSE/13.2%
8	2018/07	734(99%)	14.4	.8/SW	111.1/SE	89.4	8.6	1.9	.1	14.6	32.3	15.3	37.9	NNW/12.9%
9	2018/08	730(98%)	12.9	2.0/NW	67.3/SSE	93.3	6.3	.4	.0	14.8	27.5	14.1	43.6	NNW/16.6%
10	2018/09	719(100%)	15.5	.7/WNW	63.4/SSE	87.1	11.4	1.5	.0	14.6	31.2	13.4	40.9	NNW/13.8%
11	2018/10	744(100%)	14.2	2.1/SSE	57.0/SSE	89.0	10.9	.1	.0	14.7	39.4	15.9	30.1	SSE/12.5%
12	2018/11	720(100%)	11.5	.5/S	40.5/SE	95.7	4.3	.0	.0	18.2	31.1	17.6	33.1	SSE/11.8%
13	2018/冬	2159(100%)	13.5	.9/SE	55.2/S	91.4	8.6	.0	.0	17.4	35.2	14.1	33.3	NNW/12.7%
14	2018/春	2207(100%)	12.3	1.3/N	54.0/SSE	93.5	6.5	.0	.0	18.9	33.2	10.9	36.9	NNW/15.4%
15	2018/夏	2184(99%)	13.4	.7/W	111.1/SE	92.3	6.9	.8	.0	15.3	31.6	15.4	37.6	NNW/13.7%
16	2018/秋	2183(100%)	13.8	.7/S	63.4/SSE	90.6	8.9	.5	.0	15.8	33.9	15.6	34.6	SSE/12.2%
17	2018/年	8733(100%)	13.2	.0/SE	111.1/SE	91.9	7.7	.4	.0	16.9	33.5	14.0	35.6	NNW/13.1%

4-2-6

4.3 2018 年宜蘭海域各測站觀測海流與 計算潮流(殘流)歷線比較圖

Current Speed in Su-Ao Harbor of SAX0 at 2018

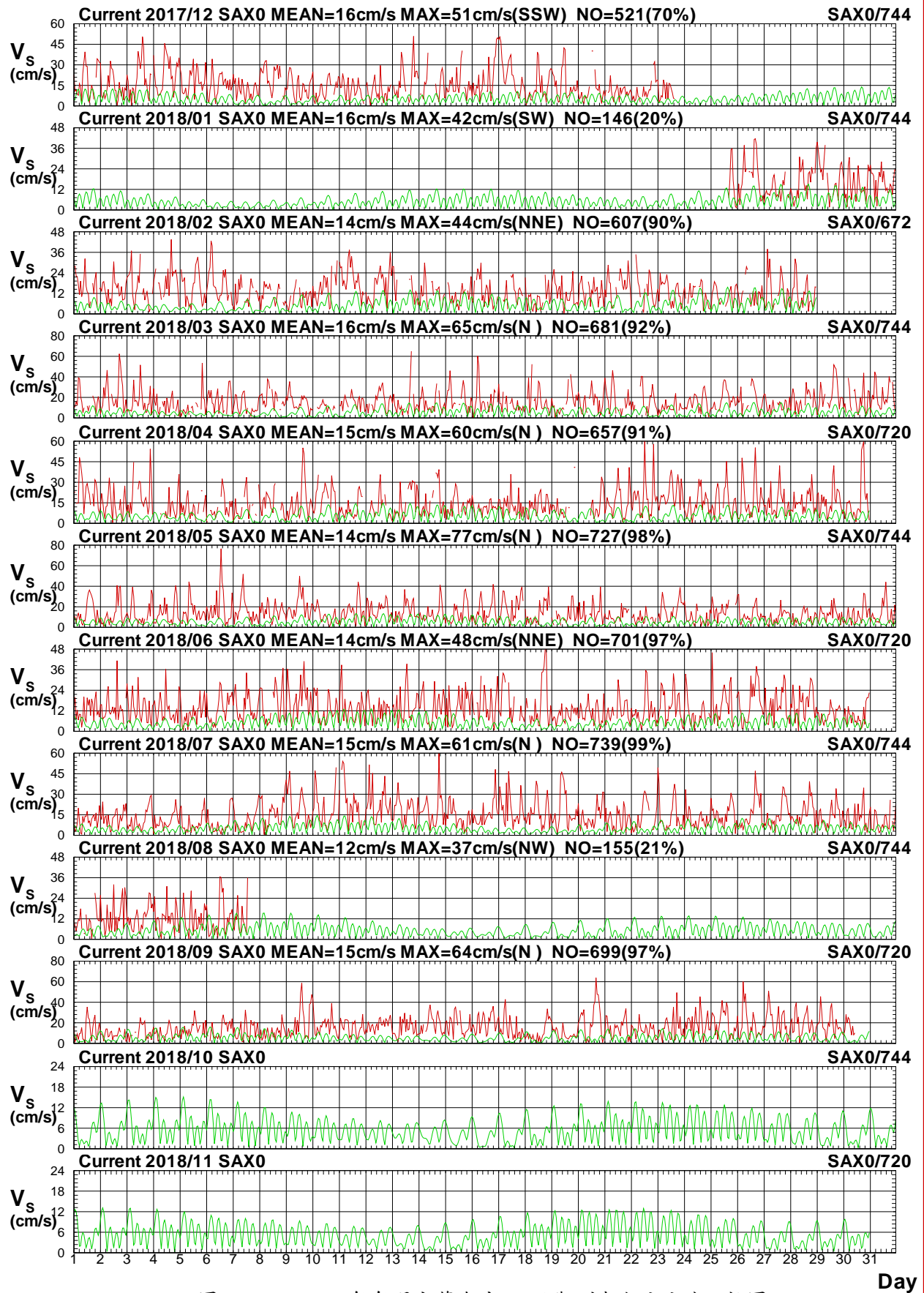


圖4.3.1a 2018年每月宜蘭海域 X 站觀測與潮流流速比較圖

C17CSAX0.1H0 C17CSAX0.1HD C181SAX0.1H0 C181SAX0.1HD C182SAX0.1H0 C182SAX0.1HD
 C183SAX0.1H0 C183SAX0.1HD C184SAX0.1H0 C184SAX0.1HD C185SAX0.1H0 C185SAX0.1HD

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Current Direction in Su-Ao Harbor of SAX0 at 2018

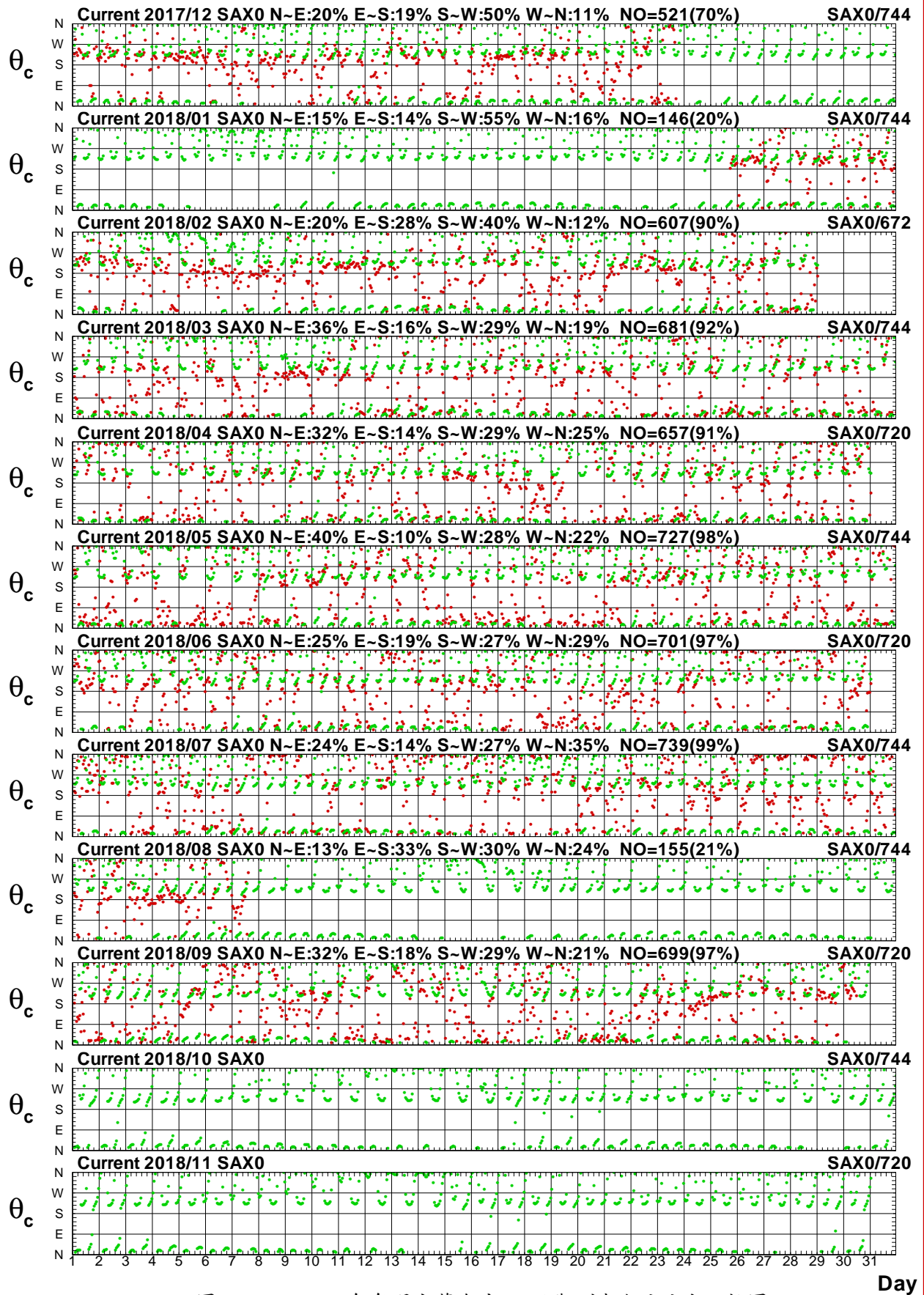


圖4.3.1b 2018年每月宜蘭海域 X 站觀測與潮流流向比較圖

C17CSAX0.1H0 C17CSAX0.1HD C181SAX0.1H0 C181SAX0.1HD C182SAX0.1H0 C182SAX0.1HD
 C183SAX0.1H0 C183SAX0.1HD C184SAX0.1H0 C184SAX0.1HD C185SAX0.1H0 C185SAX0.1HD

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Current Speed in Su-Ao Harbor of SAX0 at 2018

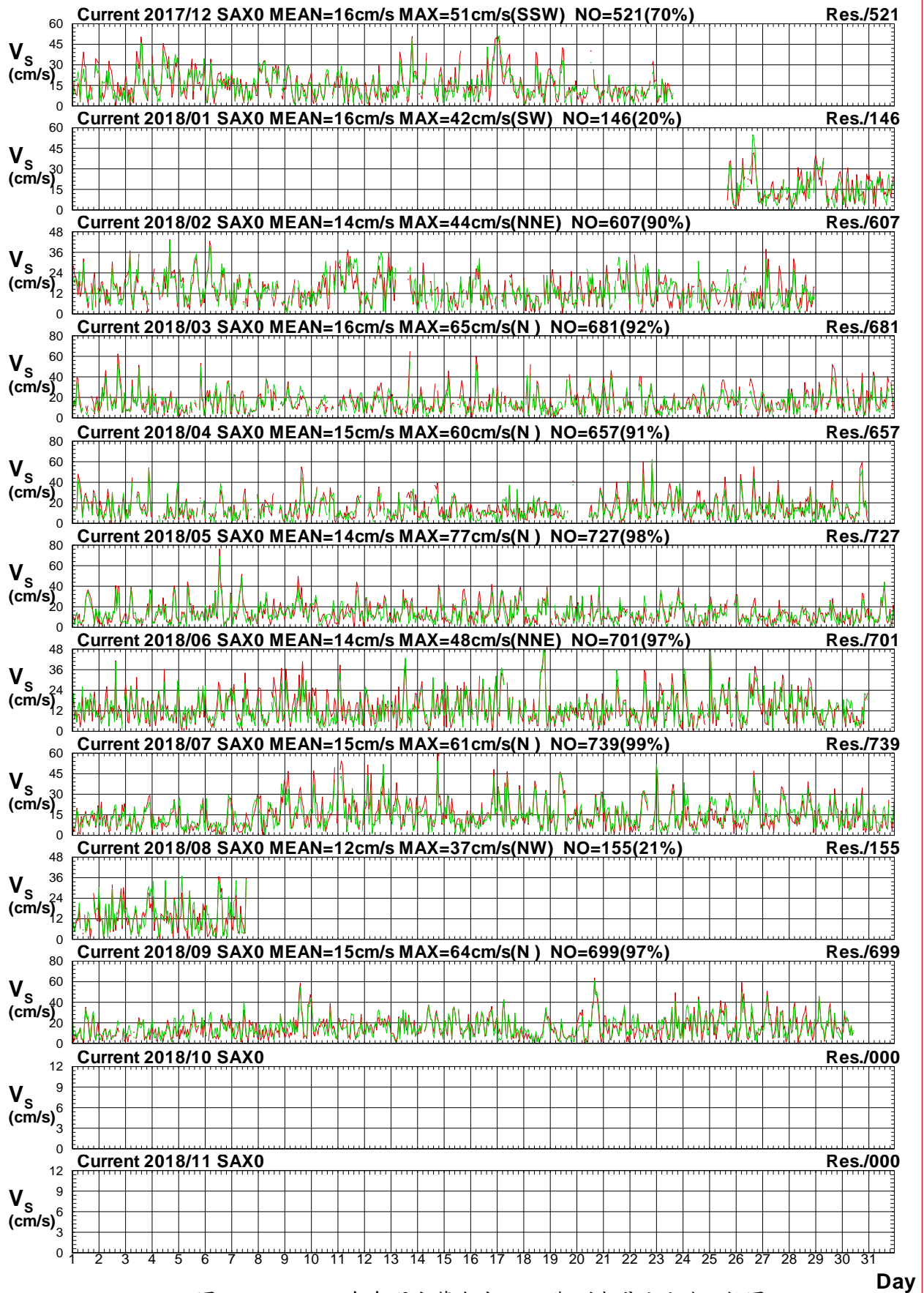


圖4.3.2a 2018年每月宜蘭海域 X 站觀測與殘流流速比較圖

C17CSAX0.1H0 C17CSAX0.1HR C181SAX0.1H0 C181SAX0.1HR C182SAX0.1H0 C182SAX0.1HR
 C183SAX0.1H0 C183SAX0.1HR C184SAX0.1H0 C184SAX0.1HR C185SAX0.1H0 C185SAX0.1HR

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Current Direction in Su-Ao Harbor of SAX0 at 2018

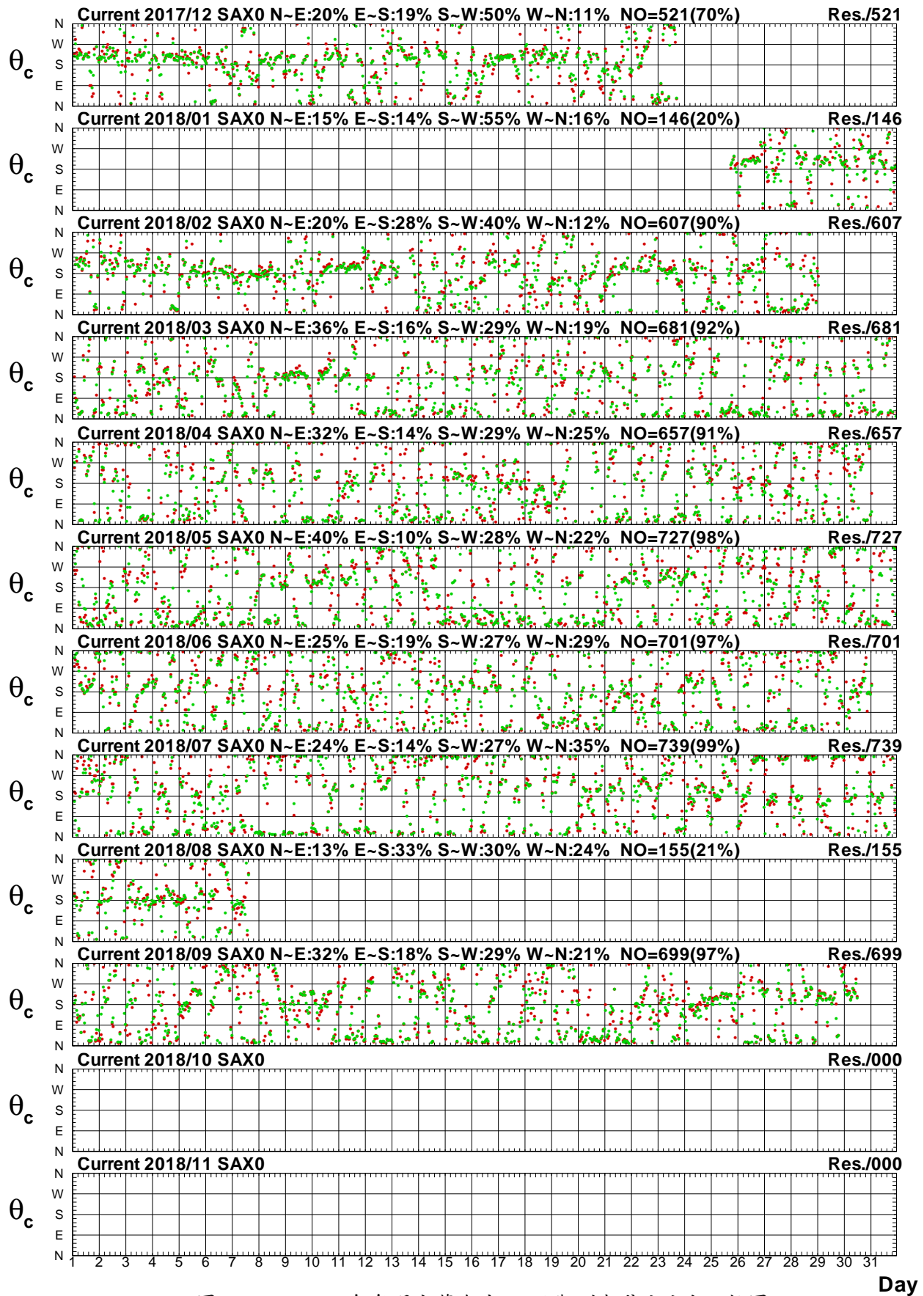


圖4.3.2b 2018年每月宜蘭海域 X 站觀測與殘流流向比較圖

C17CSAX0.1H0 C17CSAX0.1HR C181SAX0.1H0 C181SAX0.1HR C182SAX0.1H0 C182SAX0.1HR
 C183SAX0.1H0 C183SAX0.1HR C184SAX0.1H0 C184SAX0.1HR C185SAX0.1H0 C185SAX0.1HR

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Current Speed in Su-Ao Harbor of SAY0 at 2018

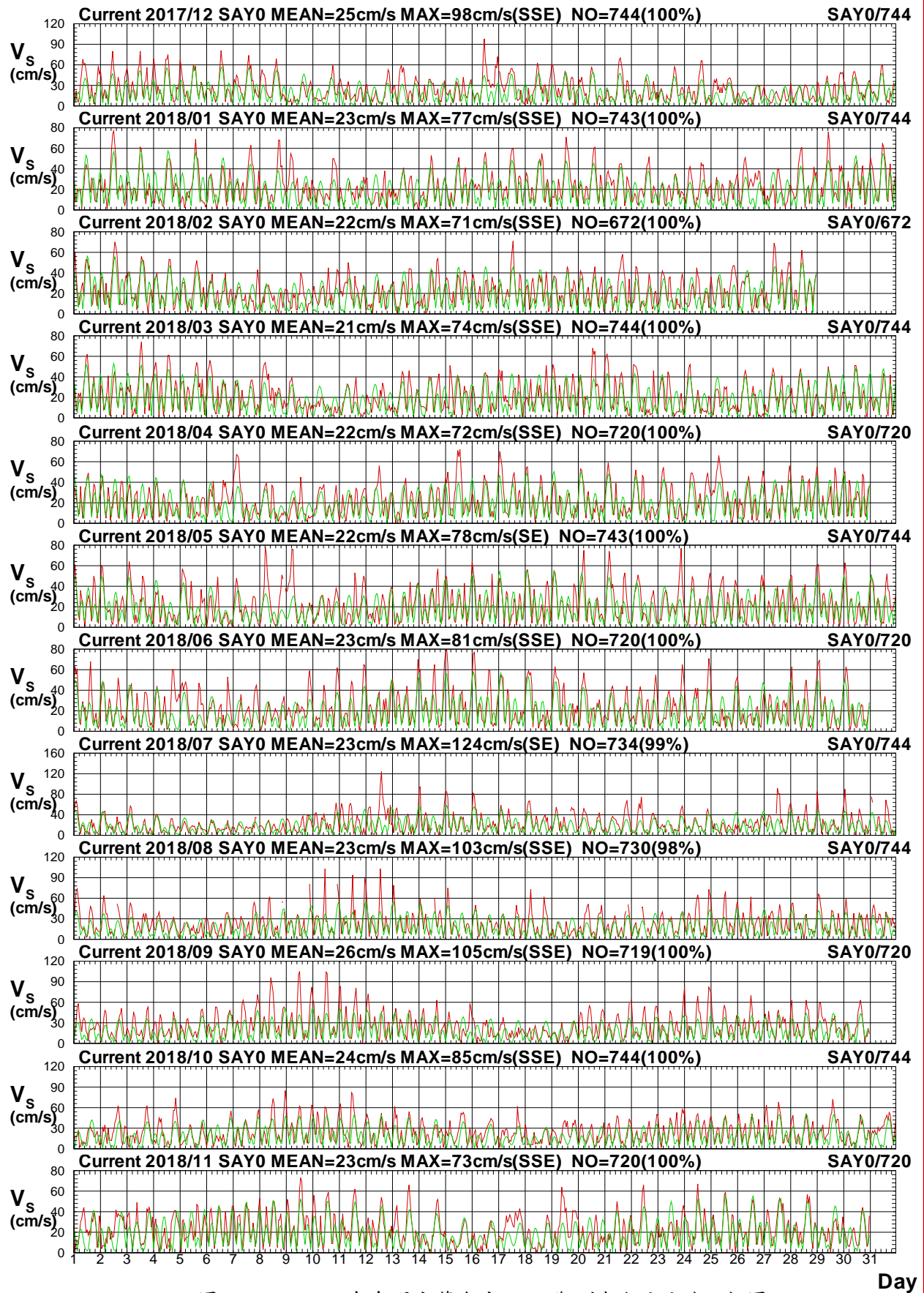


圖4.3.3a 2018年每月宜蘭海域 Y 站觀測與潮流流速比較圖

C17CSAY0.1H0 C17CSAY0.1HD C181SAY0.1H0 C181SAY0.1HD C182SAY0.1H0 C182SAY0.1HD
 C183SAY0.1H0 C183SAY0.1HD C184SAY0.1H0 C184SAY0.1HD C185SAY0.1H0 C185SAY0.1HD

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Current Direction in Su-Ao Harbor of SAY0 at 2018

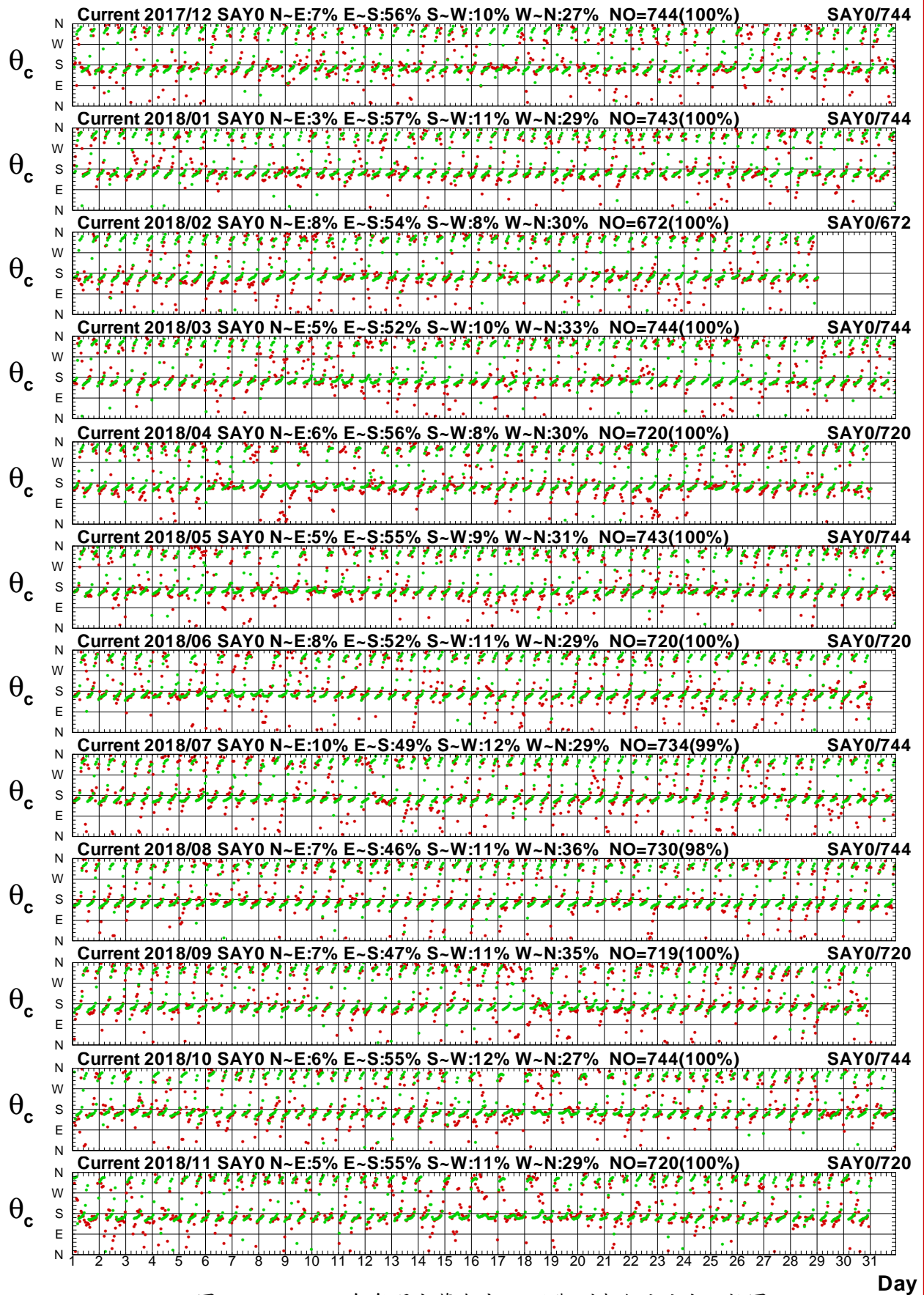


圖4.3.3b 2018年每月宜蘭海域 Y 站觀測與潮流流向比較圖

C17CSAY0.1H0 C17CSAY0.1HD C181SAY0.1H0 C181SAY0.1HD C182SAY0.1H0 C182SAY0.1HD
 C183SAY0.1H0 C183SAY0.1HD C184SAY0.1H0 C184SAY0.1HD C185SAY0.1H0 C185SAY0.1HD

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Current Speed in Su-Ao Harbor of SAY0 at 2018

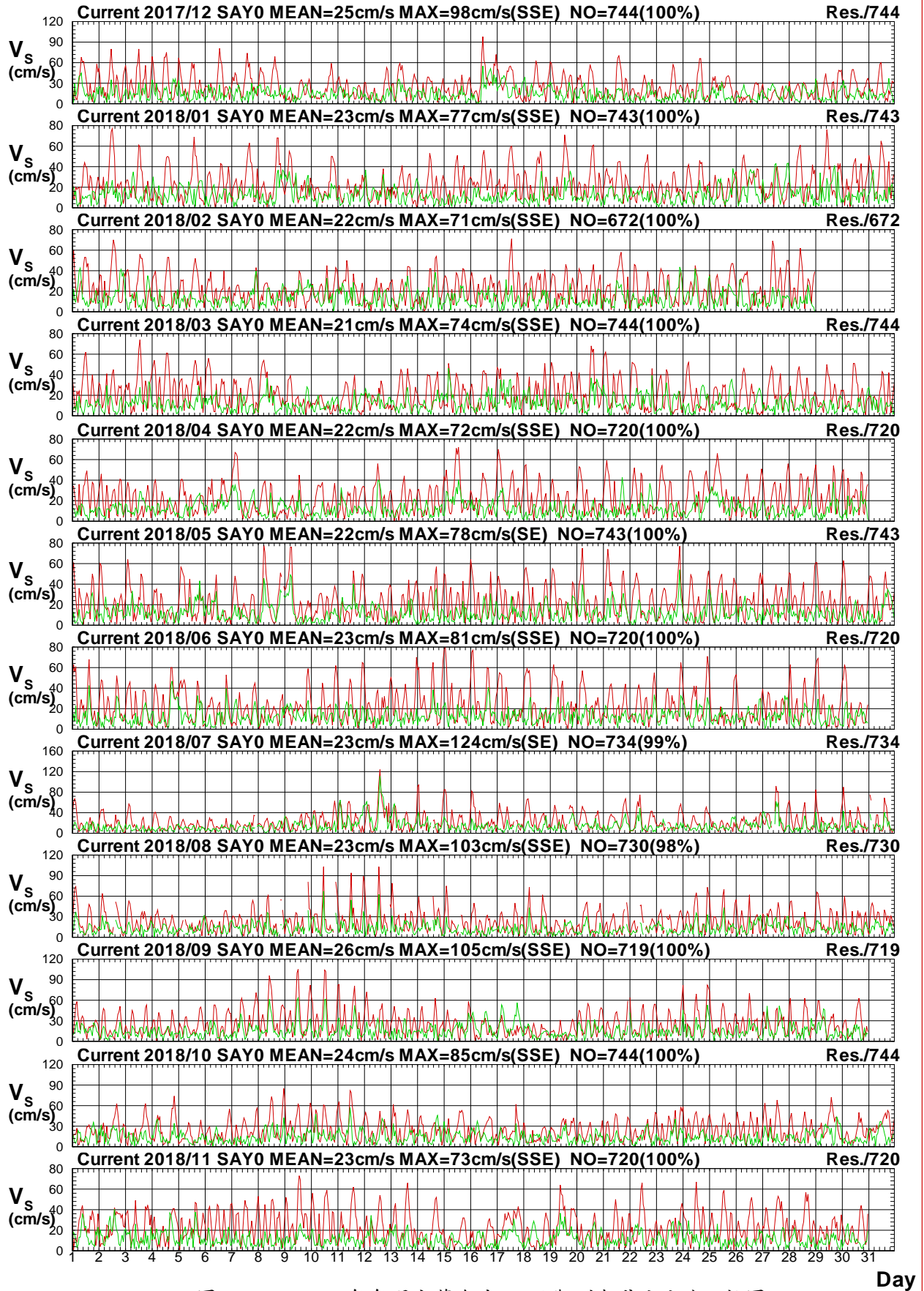


圖4.3.4a 2018年每月宜蘭海域 Y 站觀測與殘流流速比較圖

C17CSAY0.1H0 C17CSAY0.1HR C181SAY0.1H0 C181SAY0.1HR C182SAY0.1H0 C182SAY0.1HR
 C183SAY0.1H0 C183SAY0.1HR C184SAY0.1H0 C184SAY0.1HR C185SAY0.1H0 C185SAY0.1HR

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Current Direction in Su-Ao Harbor of SAY0 at 2018

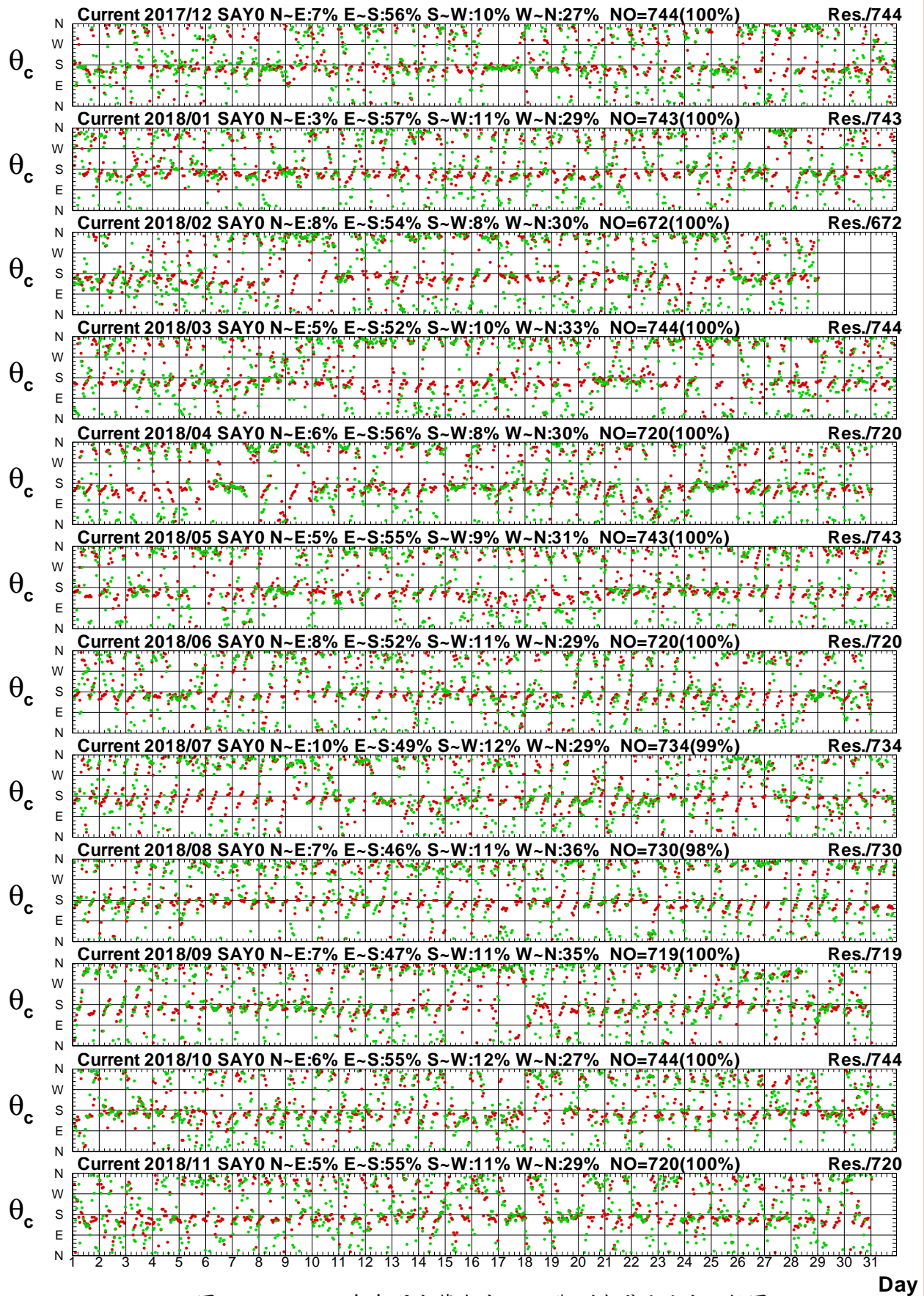


圖4.3.4b 2018年每月宜蘭海域 Y 站觀測與殘流流向比較圖

C17CSAY0.1H0 C17CSAY0.1HR C181SAY0.1H0 C181SAY0.1HR C182SAY0.1H0 C182SAY0.1HR
 C183SAY0.1H0 C183SAY0.1HR C184SAY0.1H0 C184SAY0.1HR C185SAY0.1H0 C185SAY0.1HR

Institute of Harbor & Marine Technology

4.4 2018 年宜蘭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

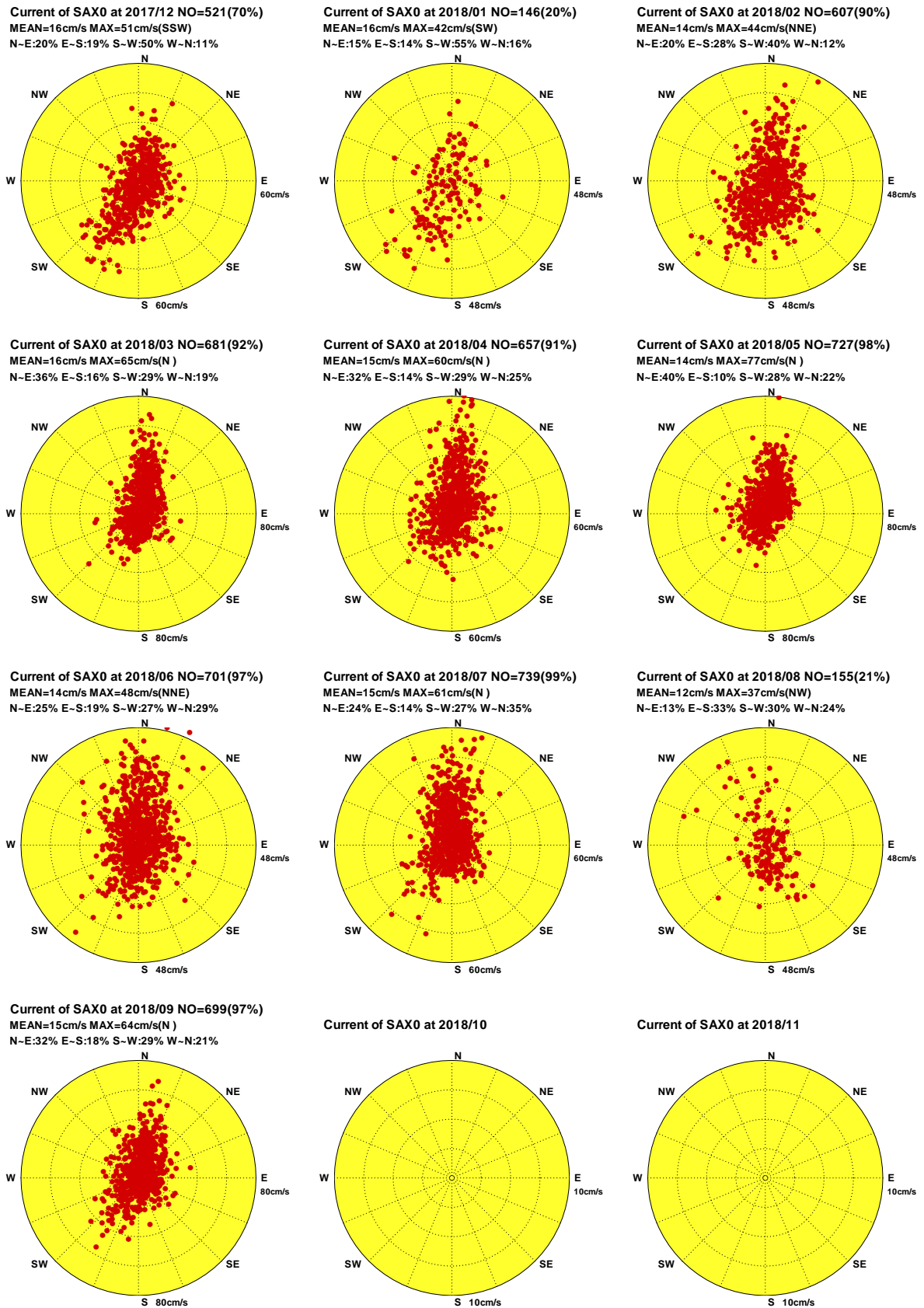


圖4.4.1a 2018年宜蘭海域每月測站 X 觀測海流向量分佈圖

C17CSAX0.1H0 C181SAX0.1H0 C182SAX0.1H0 C183SAX0.1H0 C184SAX0.1H0 C185SAX0.1H0
 C186SAX0.1H0 C187SAX0.1H0 C188SAX0.1H0 C189SAX0.1H0 C18ASAX0.1H0 C18BSAX0.1H0

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Distribution of Current Vectors

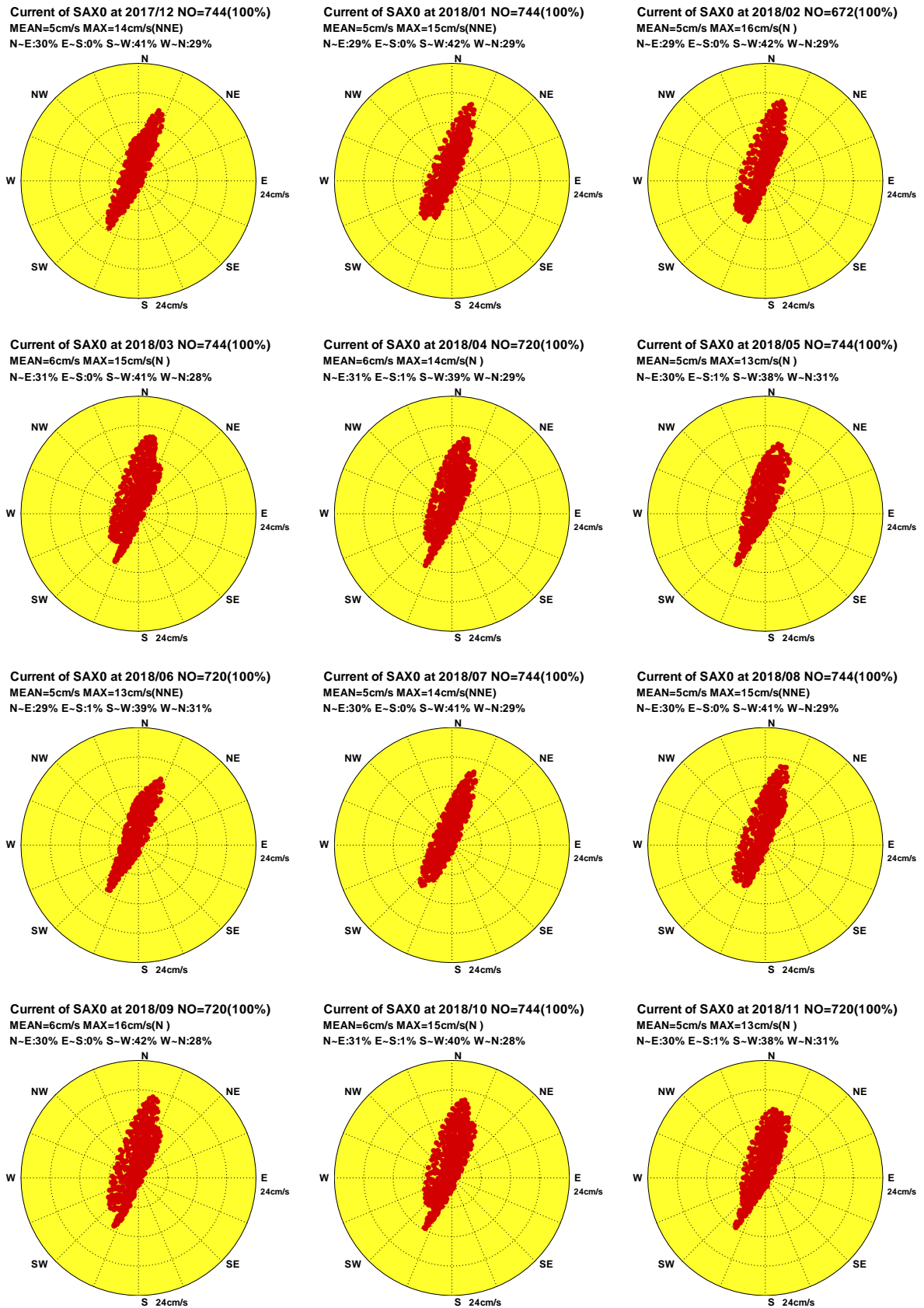


圖4.4.1b 2018年宜蘭海域每月測站 X 計算潮流向量分佈圖

C17CSAX0.1HD C181SAX0.1HD C182SAX0.1HD C183SAX0.1HD C184SAX0.1HD C185SAX0.1HD
 C186SAX0.1HD C187SAX0.1HD C188SAX0.1HD C189SAX0.1HD C18ASAX0.1HD C18BSAX0.1HD

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Distribution of Current Vectors

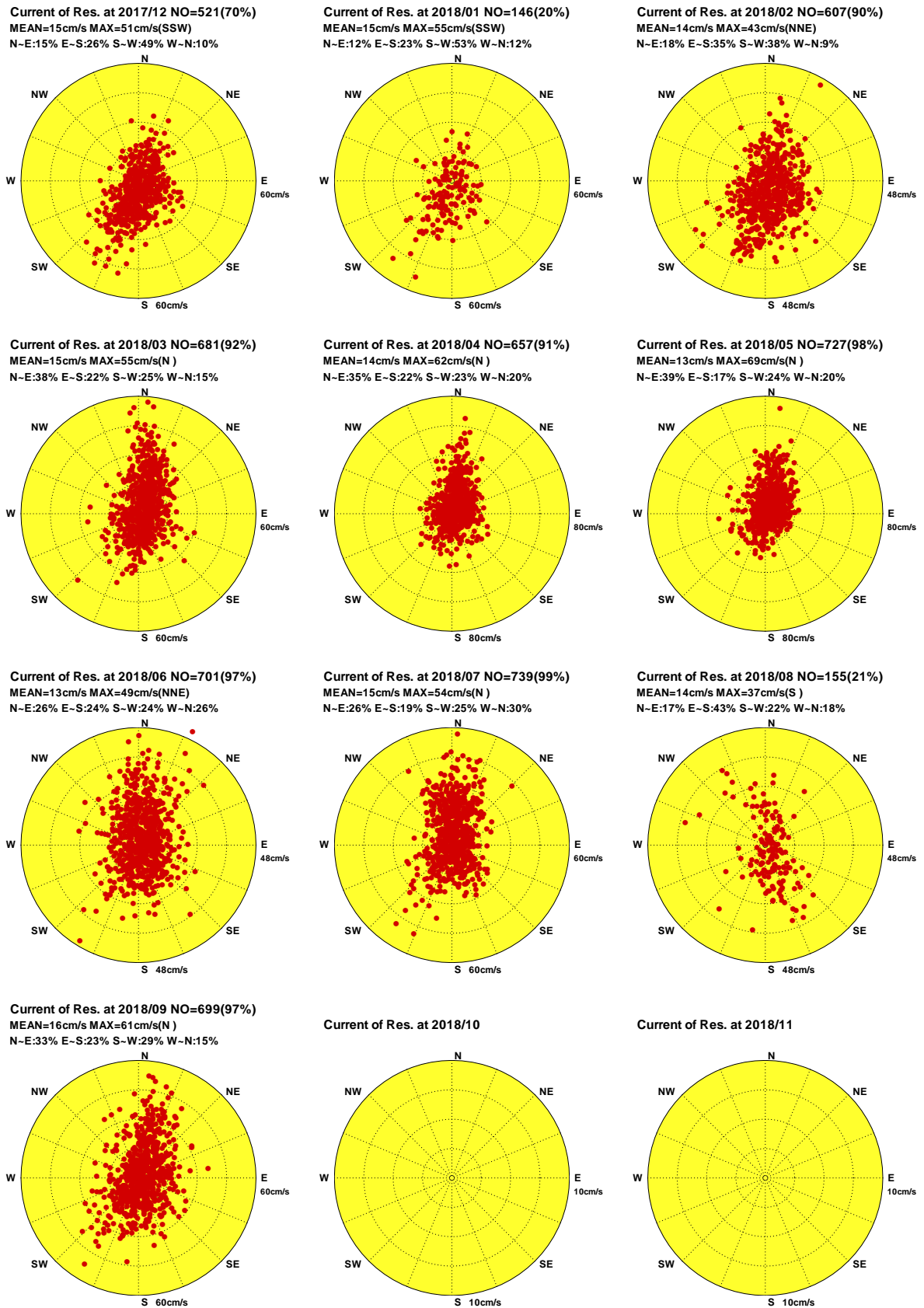


圖4.4.1c 2018年宜蘭海域每月測站 X 計算殘流向量分佈圖

C17CSAX0.1HR C181SAX0.1HR C182SAX0.1HR C183SAX0.1HR C184SAX0.1HR C185SAX0.1HR
 C186SAX0.1HR C187SAX0.1HR C188SAX0.1HR C189SAX0.1HR C18ASAX0.1HR C18BSAX0.1HR

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Distribution of Current Vectors

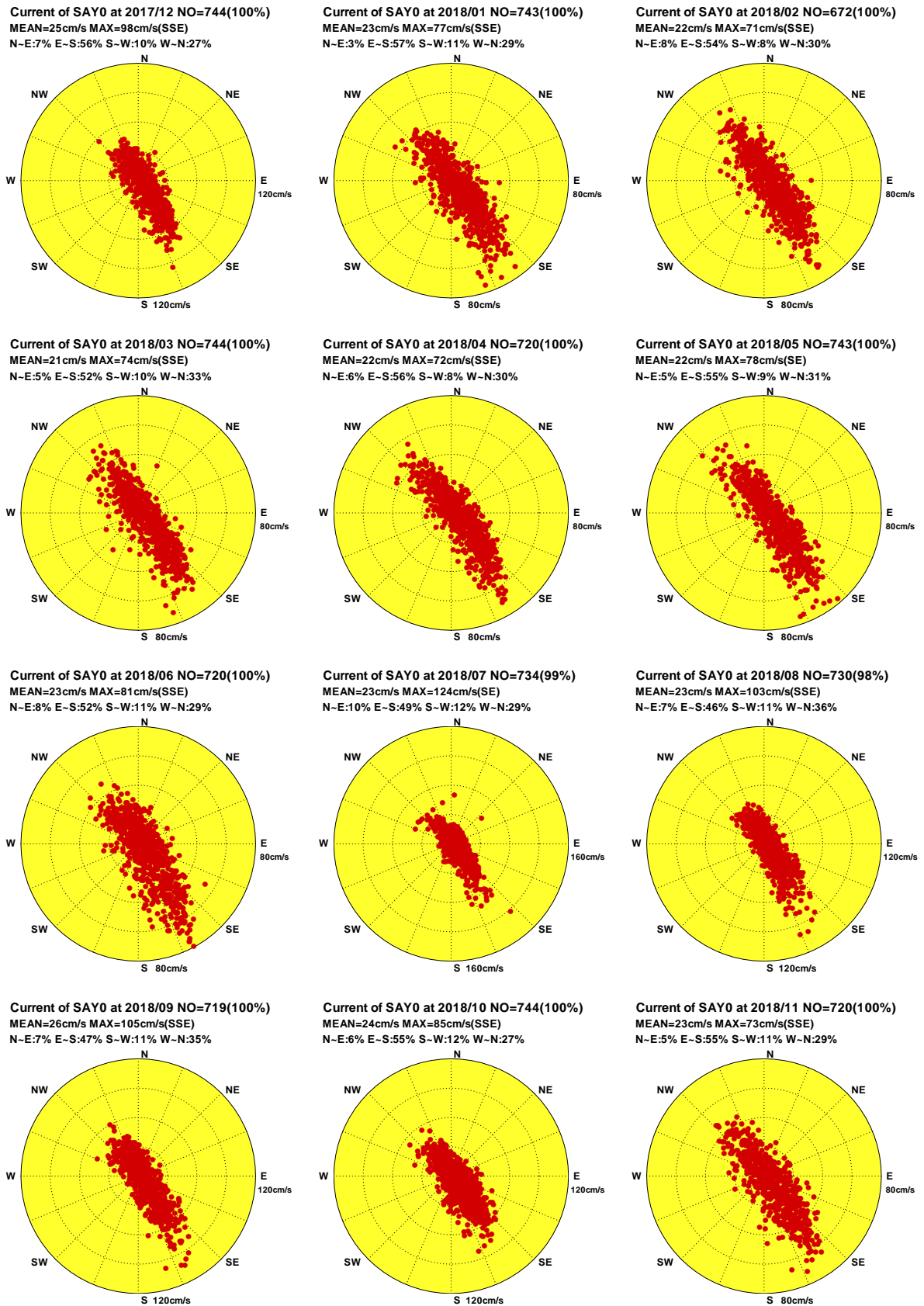


圖4.4.2a 2018年宜蘭海域每月測站 Y 觀測海流向量分佈圖

C17CSAY0.1H0 C181SAY0.1H0 C182SAY0.1H0 C183SAY0.1H0 C184SAY0.1H0 C185SAY0.1H0
C186SAY0.1H0 C187SAY0.1H0 C188SAY0.1H0 C189SAY0.1H0 C18ASAY0.1H0 C18BSAY0.1H0

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Distribution of Current Vectors

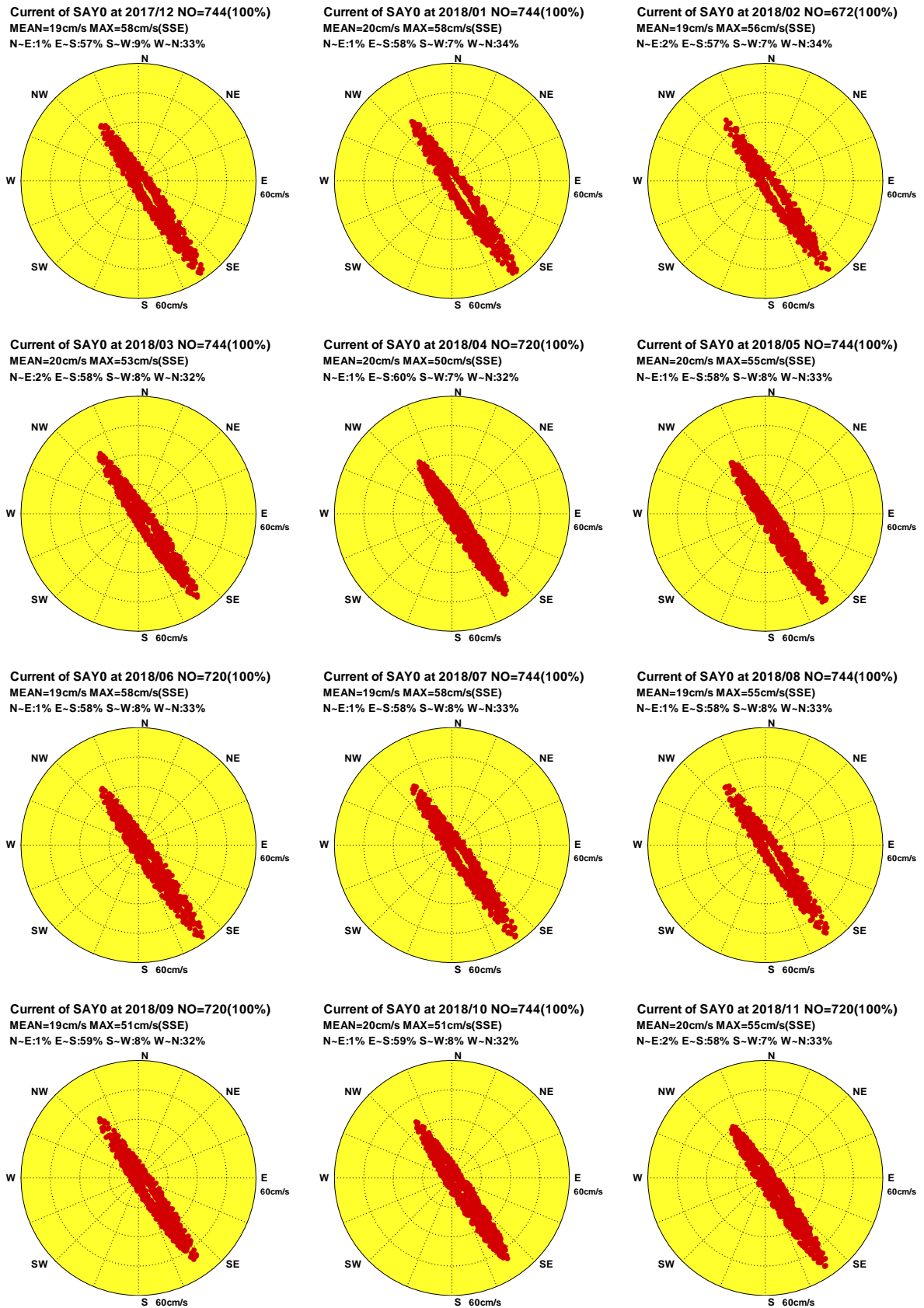


圖4.4.2b 2018年宜蘭海域每月測站 Y 計算潮流向量分佈圖

C17CSAY0.1HD C181SAY0.1HD C182SAY0.1HD C183SAY0.1HD C184SAY0.1HD C185SAY0.1HD
C186SAY0.1HD C187SAY0.1HD C188SAY0.1HD C189SAY0.1HD C18ASAY0.1HD C18BSAY0.1HD

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Distribution of Current Vectors

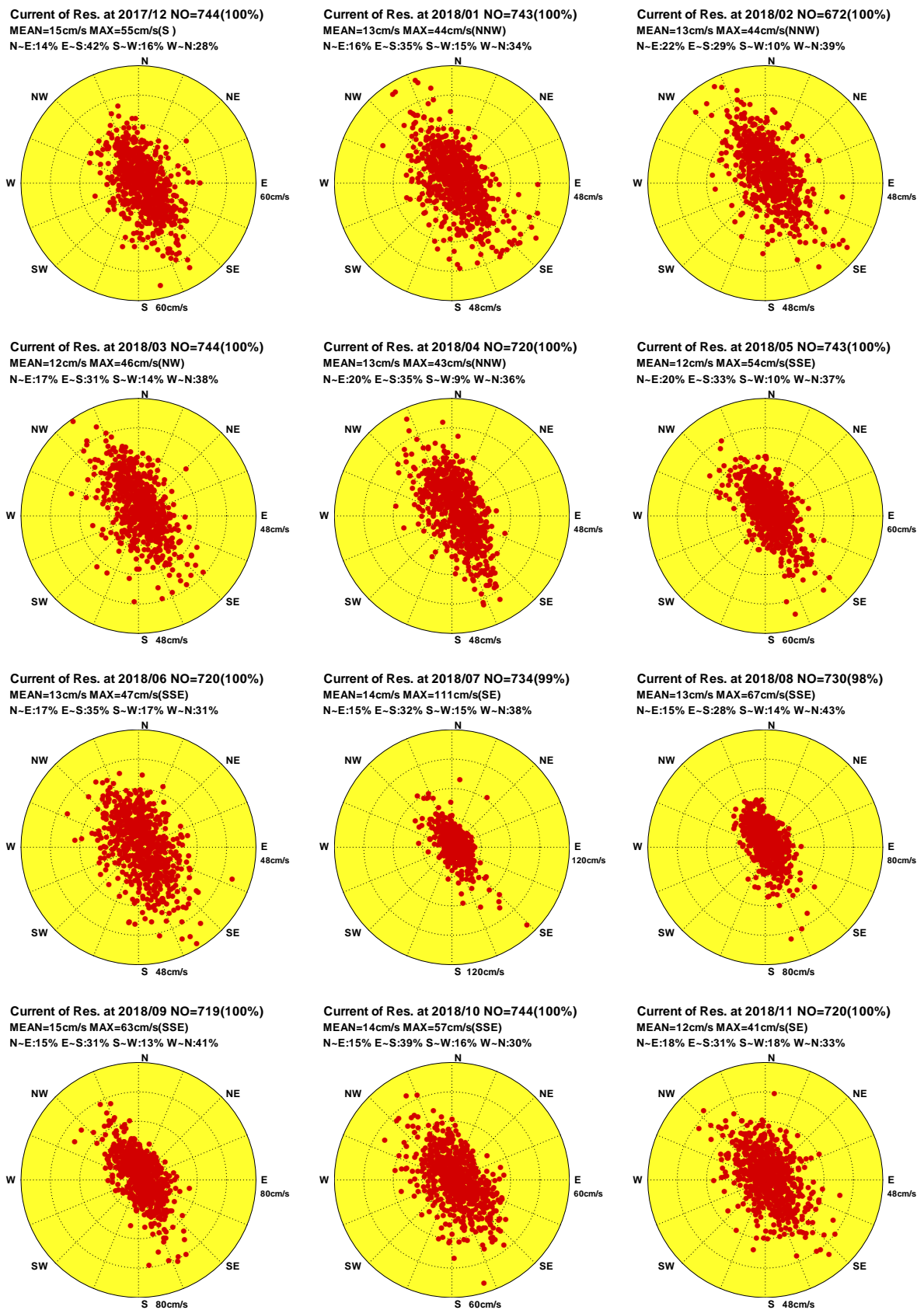


圖4.4.2c 2018年宜蘭海域每月測站 Y 計算殘流向量分佈圖

C17CSAY0.1HR C181SAY0.1HR C182SAY0.1HR C183SAY0.1HR C184SAY0.1HR C185SAY0.1HR
 C186SAY0.1HR C187SAY0.1HR C188SAY0.1HR C189SAY0.1HR C18ASAY0.1HR C18BSAY0.1HR

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4.5 2018 年宜蘭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

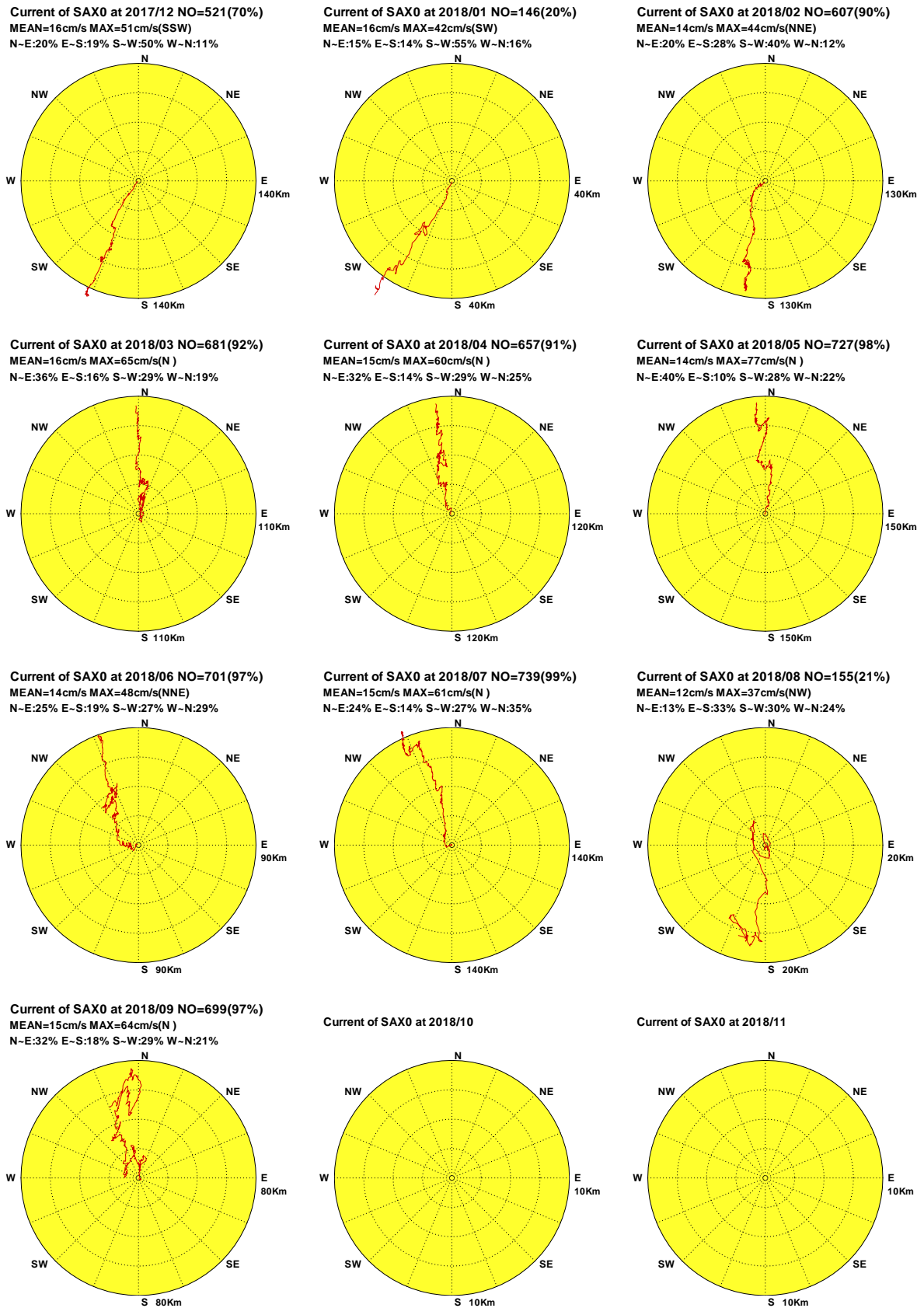


圖4.5.1a 2018年宜蘭海域每月測站 X 觀測海流向量行進圖

C17CSAX0.1H0 C181SAX0.1H0 C182SAX0.1H0 C183SAX0.1H0 C184SAX0.1H0 C185SAX0.1H0
 C186SAX0.1H0 C187SAX0.1H0 C188SAX0.1H0 C189SAX0.1H0 C18ASAX0.1H0 C18BSAX0.1H0

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Progressive Vector Diagram of Current

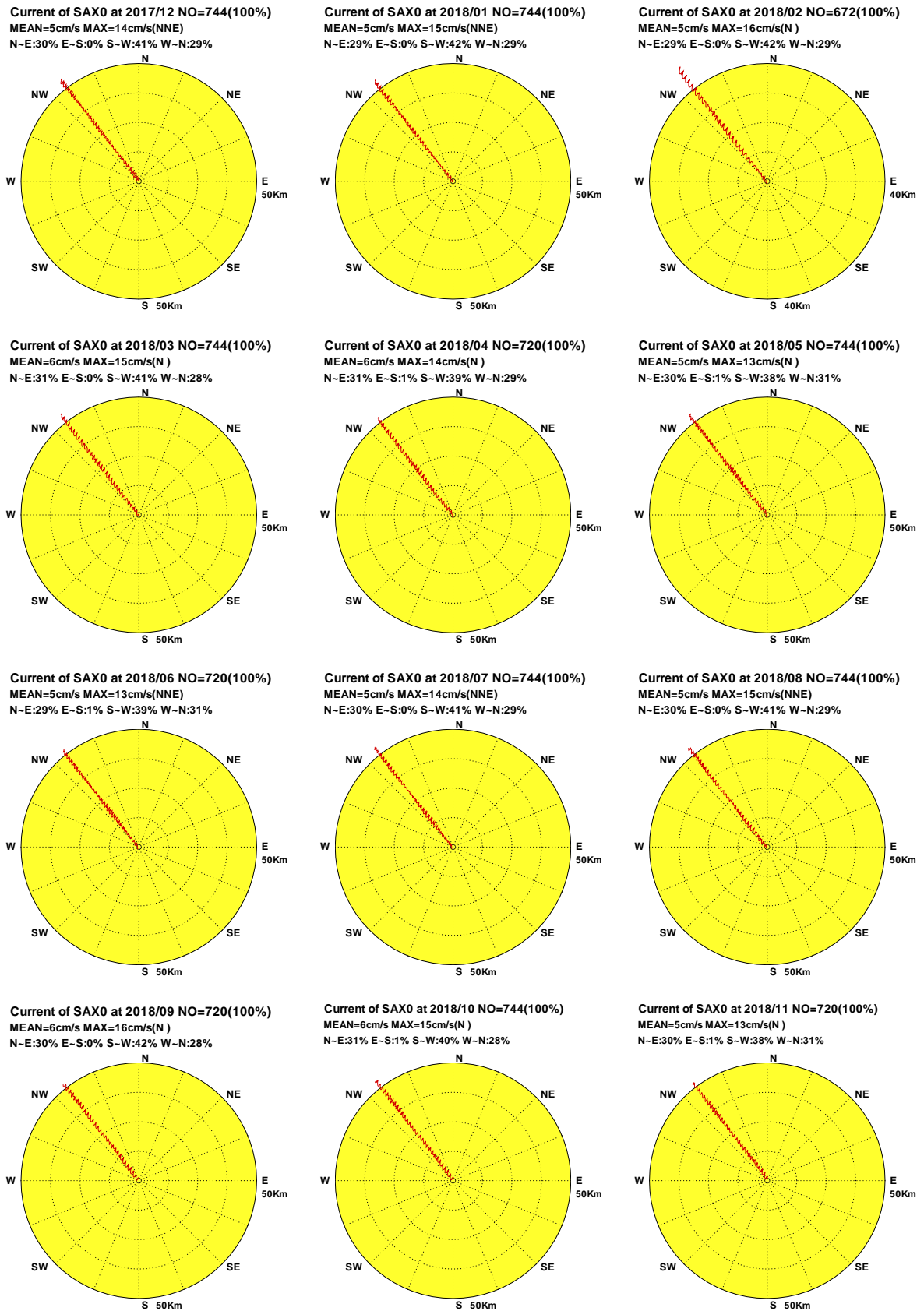


圖4.5.1b 2018年宜蘭海域每月測站 X 計算潮流向量行進圖

C17CSAX0.1HD C181SAX0.1HD C182SAX0.1HD C183SAX0.1HD C184SAX0.1HD C185SAX0.1HD
C186SAX0.1HD C187SAX0.1HD C188SAX0.1HD C189SAX0.1HD C18ASAX0.1HD C18BSAX0.1HD

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Progressive Vector Diagram of Current

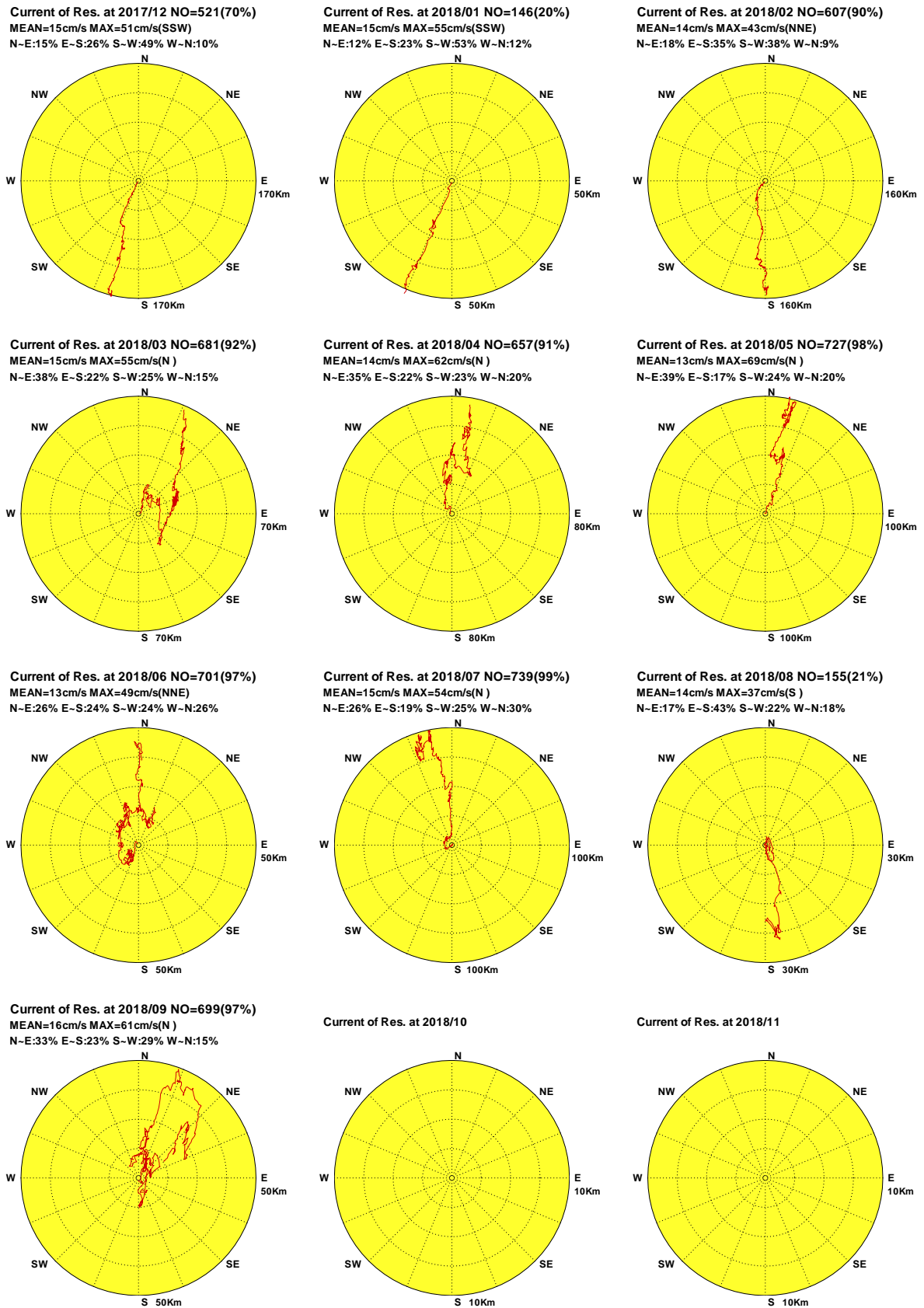


圖4.5.1c 2018年宜蘭海域每月測站 X 計算殘流向量行進圖

C17CSAX0.1HR C181SAX0.1HR C182SAX0.1HR C183SAX0.1HR C184SAX0.1HR C185SAX0.1HR
C186SAX0.1HR C187SAX0.1HR C188SAX0.1HR C189SAX0.1HR C18ASAX0.1HR C18BSAX0.1HR

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Progressive Vector Diagram of Current

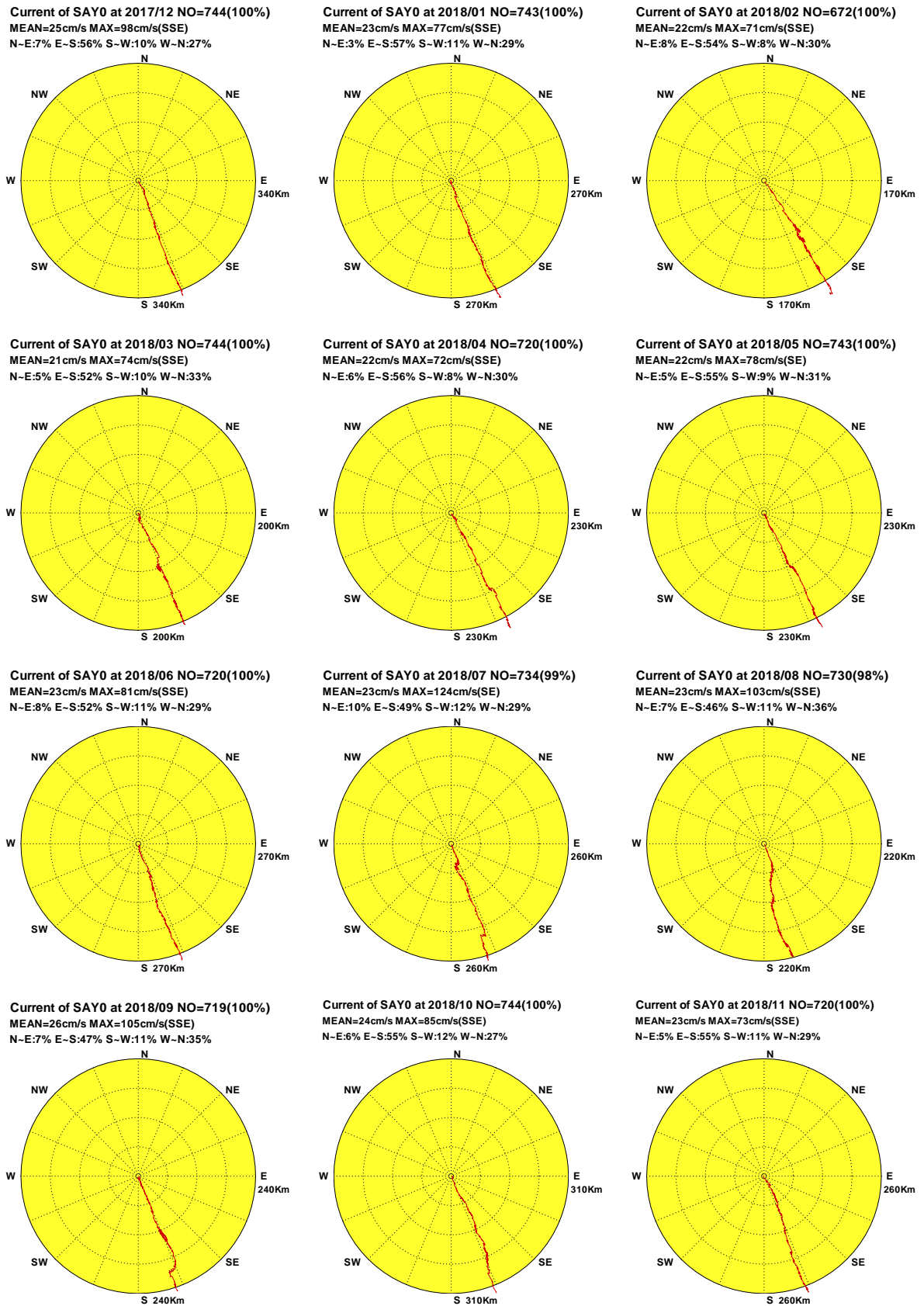


圖4.5.2a 2018年宜蘭海域每月測站 Y 觀測海流向量行進圖

C17CSAY0.1H0 C181SAY0.1H0 C182SAY0.1H0 C183SAY0.1H0 C184SAY0.1H0 C185SAY0.1H0
C186SAY0.1H0 C187SAY0.1H0 C188SAY0.1H0 C189SAY0.1H0 C18ASAY0.1H0 C18BSAY0.1H0

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Progressive Vector Diagram of Current

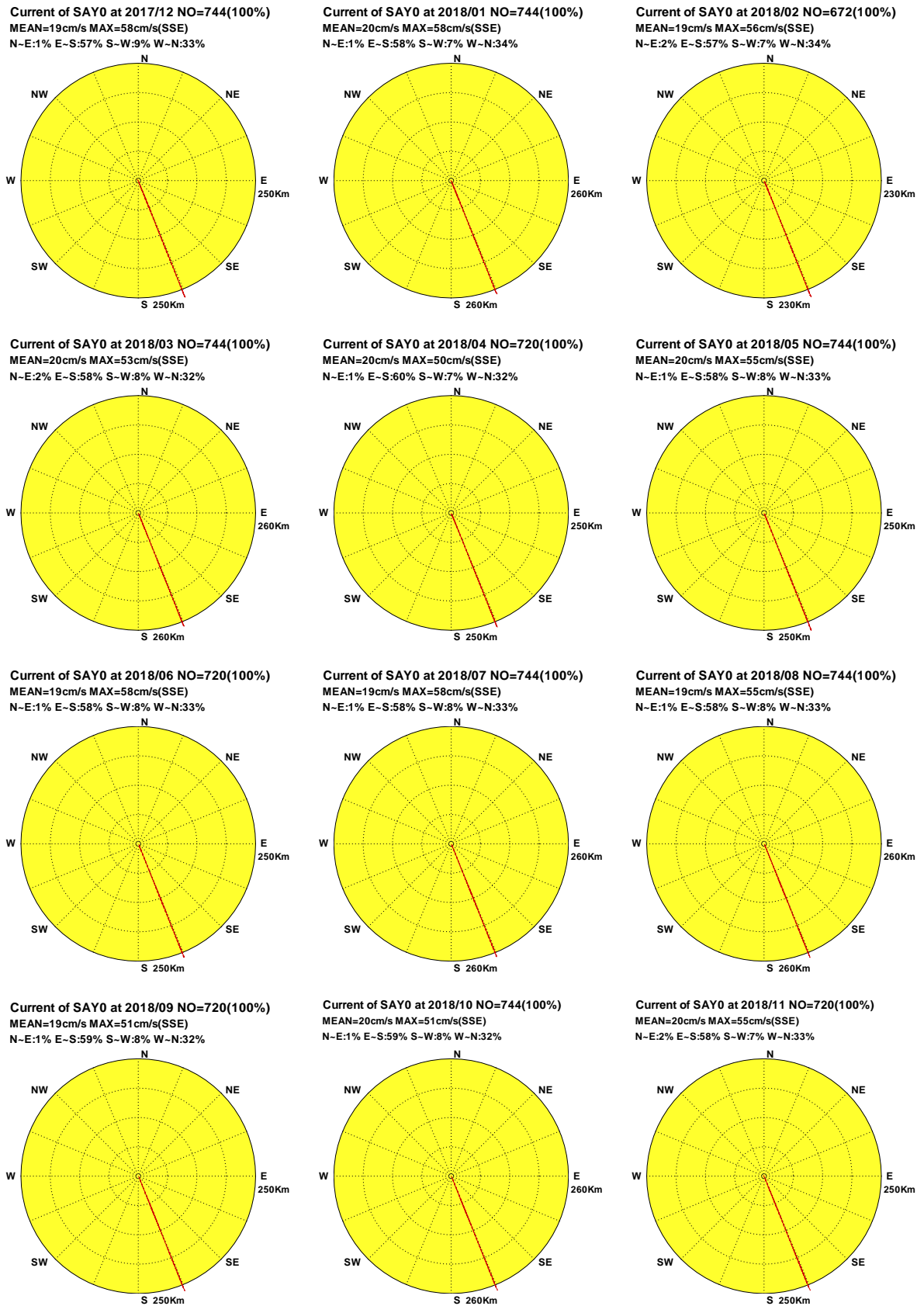


圖4.5.2b 2018年宜蘭海域每月測站 Y 計算潮流向量行進圖

C17CSAY0.1HD C181SAY0.1HD C182SAY0.1HD C183SAY0.1HD C184SAY0.1HD C185SAY0.1HD
C186SAY0.1HD C187SAY0.1HD C188SAY0.1HD C189SAY0.1HD C18ASAY0.1HD C18BSAY0.1HD

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Progressive Vector Diagram of Current

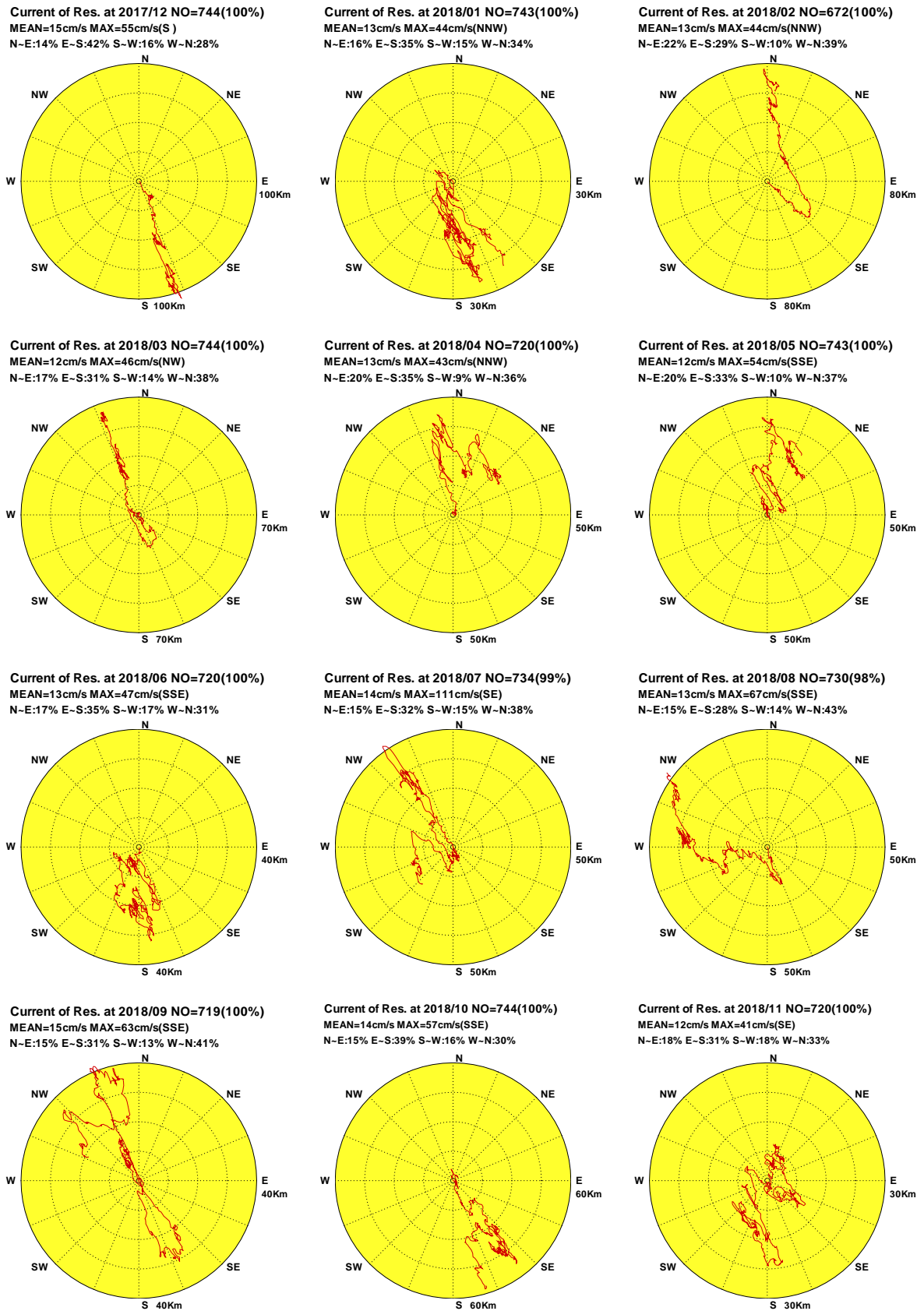


圖4.5.2c 2018年宜蘭海域每月測站 Y 計算殘流向量行進圖

C17CSAY0.1HR C181SAY0.1HR C182SAY0.1HR C183SAY0.1HR C184SAY0.1HR C185SAY0.1HR
C186SAY0.1HR C187SAY0.1HR C188SAY0.1HR C189SAY0.1HR C18ASAY0.1HR C18BSAY0.1HR

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