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



交通部運輸研究所

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著者：蘇青和、李俊穎、傅怡釗
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編輯：蘇青和、李俊穎、傅怡釧、蔣敏玲、劉清松、陳鈞彥

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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，包括高雄海域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 (高雄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，蒐集之高雄海域風力資料，除本中心自行觀測之外，在高雄氣象站(測站 E) 觀測風力資料，係交通部 中央氣象局(CWB)提供。彌陀海上浮標站(測站 Z)、小港氣象站(測站 H)等觀測風力資料，係經濟部 水利署(WRA)提供，謹致謝忱。

2018 年港灣環境資訊網觀測波浪資料，蒐集之高雄海域波浪資料，除本中心自行觀測之外，在彌陀海上浮標站(測站 Z)觀測波浪資料，係經濟部 水利署(WRA)提供，謹致謝忱。

2018 年港灣海氣象觀測潮汐資料，蒐集之高雄海域潮汐觀測資料，除本中心自行觀測之外，在高雄 1 港(測站 F)、高雄 2 港(測站 L)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，蒐集之高雄海域海流資料，除本中心自行觀測之外，在彌陀海上浮標(測站 Z)觀測海流資料，係經濟部 水利署(WRA)提供，謹致謝忱。

第 0 章 高雄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。

高雄海域觀測風力資料測站統計表如表 WH1，觀測波浪資料測站統計表如表 VH1，觀測潮汐資料測站統計表如表 TH1，觀測海流資料測站統計表如表 CH1。

表 WH1 高雄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
高雄海域	6	3	2	1		

表 VH1 高雄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
高雄海域	7	4	2	1		

表 TH1 高雄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
高雄海域	10	9	1	0	0	

表 CH1 高雄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
高雄海域	5	4	0	1	0	

註:資料更新時間為 2018 年。

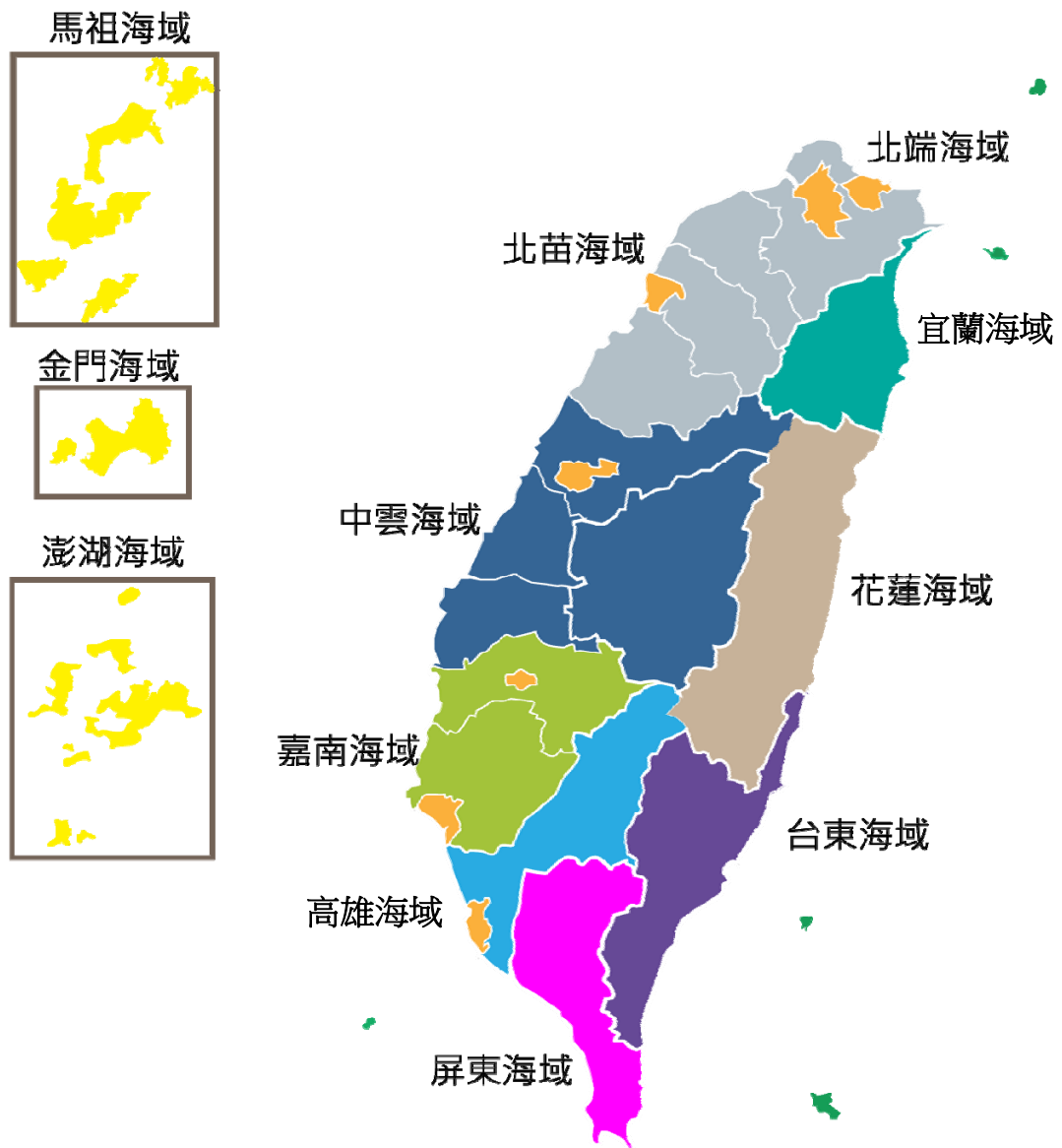


圖 A1 臺灣 12 海域區分示意圖

2018 年高雄海域觀測風力資料

高雄海域風之觀測係 2003 年 6 月本中心(IHMT)在高雄港十號碼頭安裝一具風速風向即時傳送監測系統(稱測站 B0)，本測站於 2010 年 9 月停止觀測。2010 年 10 月在第二港口南防坡堤堤頭，增設 Gill 二維超音波式風速計(測站 B1)，測站之位置如圖 WH1。另於 2007 年 4 月在高雄港二港口北防坡堤頭增設超音波風速風向儀(稱測站 W 及測站 C)。

高雄港附近風力觀測站 E 風速儀屬中央氣象局(CWB)所有，測站 Z(彌陀外海浮標站) 及小港氣象站測站 H 之風速儀則屬水利署(WRA)所有。各測站歷年觀測風資料蒐集概況如表 WH1。

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)。

表 WH1 高雄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
B	22°36'54"N	120°17'19"E	2002/06-2018/11(觀測中)	港研中心	高雄 1 港口
W	22°32'51"N	120°17'55"E	2010/09-2018/11(觀測中)	港研中心	高雄 2 港口
C	22°32'51"N	120°17'55"E	2007/04-2018/11(觀測中)	港研中心	高雄 2 港口
E	22°33'58"N	120°18'57"E	1999/01-2018/11(觀測中)	中央氣象局	高雄
Z	22°45'50"N	120°09'49"E	2012/09-2018/11(觀測中)	水利署	彌陀浮標站
H	23°09'32"N	121°24'12"E	2013/09-2018/11(觀測中)	中央氣象局	小港氣象站

高雄海域



圖 WH1 高雄海域風力觀測站位置示意圖

2018 年高雄海域觀測波浪資料

高雄海域波浪觀測係本中心(IHMT)2000 年 12 月於中區污水處理廠附近海域安置 NORTEK 公司之剖面海流與波浪即時監測系統(測站 X0)，如圖 VH1，以進行長期觀測。本站於 2005 年 8 月移至第二港口附近海(稱測站 X1)，水深約 18m;另於 2014 年 4 月及 12 月分別於第一港口及第二港口附近海(測站 A 及測站 1、測站 2)，增設潮波儀站。

測站 Z(彌陀外海浮標站)之波浪儀則屬水利署(WRA)所有。高雄海域各測站歷年觀測波浪資料蒐集概況如表 VH1。

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 VH1 高雄海域觀測波浪資料蒐集概況表(統計時間至 2018 年 11 月)

測站	緯度	經度	觀測期間	觀測單位	備註
X0	22°34'23"N	120°16'09"E	2000/12-2005/08	港研中心	高雄中洲外海
X1	22°32'34"N	120°17'38"E	2005/08-2018/11(觀測中)	港研中心	高雄 2 港口外海
A	22°38'36"N	120°14'13"E	2014/04-2015/03	港研中心	高雄 1 港口外海
1			2014/12-2015/12	港研中心	高雄 2 港口外海
2			2015/12-2018/10	港研中心	高雄 2 港口外海
Z	22°45'50"N	120°09'49"E	2012/09-2018/11(觀測中)	水利署	彌陀外海浮標站

高雄海域



IHMT 波潮流站



WRA 浮標波浪站



圖 VH1 高雄海域波浪觀測站位置示意圖

2018 年高雄海域觀測潮汐資料

高雄海域潮汐之觀測本中心於 2000 年 12 月在高雄一港口與二港口間海域(稱**測站 X0**)，其位置如附圖 TH1，安置 AWCP 具量測水位功能，本站於 2005 年 8 月移至第二港口附近海域(稱**測站 X1**)，另於 2013 年 12 月於第一港口及第二港口附近海域(**測站 A**、**測站 2** 及 **測站 1**)，增設潮波儀。早期 1992 年 1 月本中心於港區安置潮位站(稱**測站 L**)，2003 年 6 月本中心在 10 號碼頭(稱**測站 T**)，增加安裝壓力式潮位儀監測系統。2014 年於高雄港內增設潮位站(稱**測站 S**)。2018 年於高雄港內增設即時水深潮位站(稱**測站 P** 及 **測站 Q**)。高雄港附近潮汐**測站 F** 之潮汐儀屬中央氣象局所有。高雄海域各測站歷年觀測潮汐資料蒐集概況如表 TH1。

潮位**測站 X** 等潮波流儀，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，然後加以平均得出該小時之平均水位值。**測站 T** 潮位資料取樣方式為每 6 分鐘量測一次水位變化。**測站 F** 資料由中央氣象局提供。

表 TH1 高雄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	22°32'52"N	120°17'18"E	2003/06-2018/11(觀測中)	港研中心	高港 10 號碼頭
X0	22°34'23"N	120°16'09"E	2000/12-2005/08	港研中心	高雄中洲外海
X1	22°32'34"N	120°17'38"E	2005/08-2018/11(觀測中)	港研中心	高雄 2 港口外海
A	22°38'36"N	120°14'13"E	2014/04-2015/03	港研中心	高雄 1 港口外海
1			2014/12-2015/12	港研中心	高雄 2 港口外海
2			2015/12-2017/11	港研中心	高雄 2 港口外海
L			1992/06-2003/12	港研中心	高雄 2 港區
F	22°36'52"N	120°17'18"E	1971/01-2013/11	中央氣象局	高雄 1 港區
P			2018/10-2018/11(觀測中)	港研中心	高雄港潮位站
Q			2018/10-2018/11(觀測中)	港研中心	高雄港潮位站
S			2014/12-2018/11(觀測中)	港研中心	高雄港潮位站

高雄海域

 IHMT 潮位站	 IHMT 波潮流站
 CWB 潮位站	

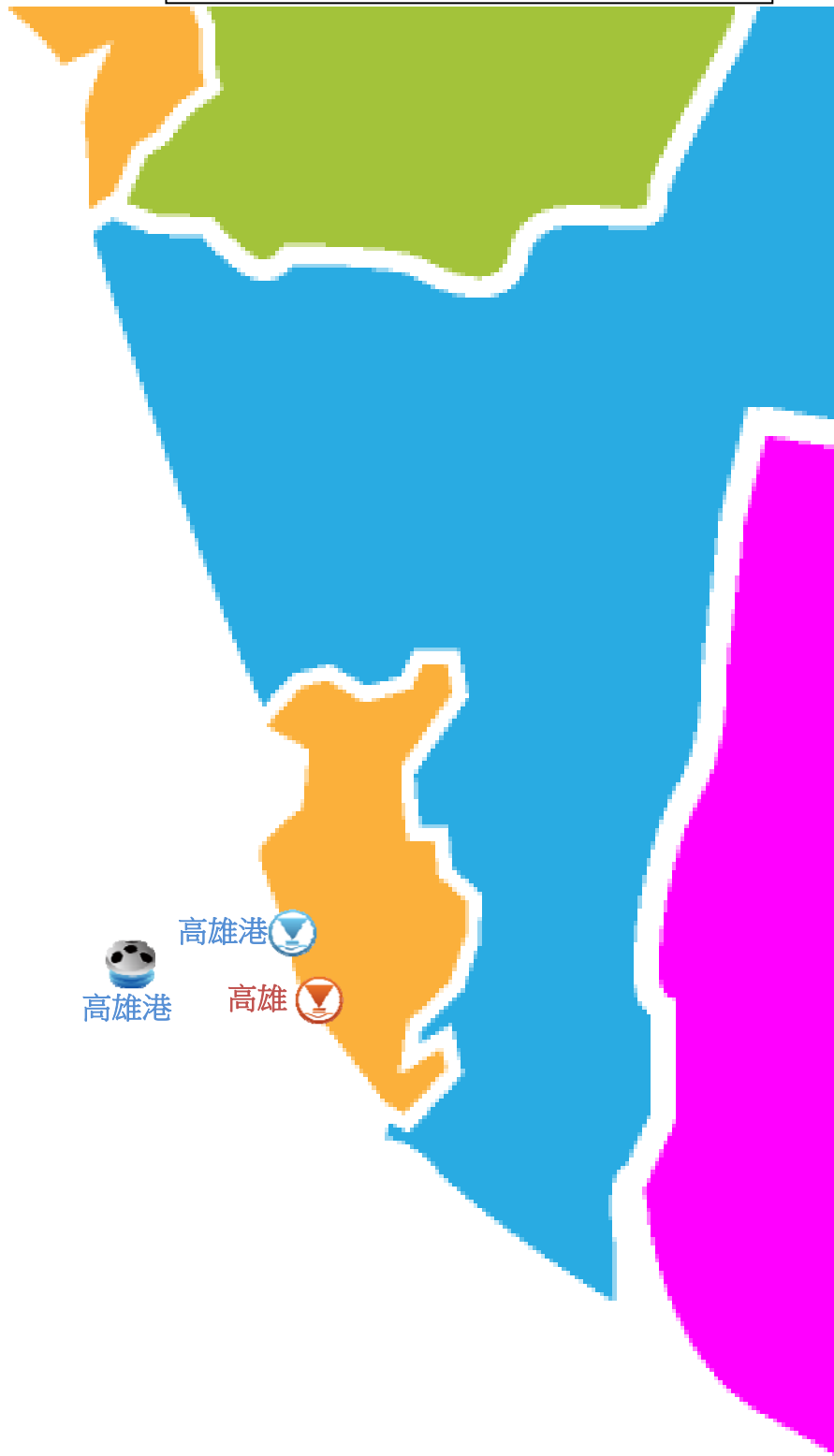


圖 TH1 高雄海域潮汐觀測站位置示意圖

2018 年高雄海域觀測海流資料

高雄海域海流觀測係本中心(IHMT)2000 年 12 月於中區污水處理廠附近海域安置 NORTEK 公司之剖面海流與海流即時監測系統(測站 X0)，如圖 CH1，以進行長期觀測。本站於 2005 年 8 月移至第二港口附近海(稱測站 X1)，水深約 18m;另於 2014 年 4 月及 12 月分別於第一港口及第二港口附近海(稱測站 A 及測站 1)，增設潮波流儀。

測站 Z(彌陀外海浮標站)之海流儀則屬水利署(WRA)所有。高雄海域各測站歷年觀測海流資料蒐集概況如表 CH1。

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，高雄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 CH1 高雄海域觀測海流資料蒐集概況表(統計時間至 2018 年 11 月)

測站	緯度	經度	觀測期間	觀測單位	備註
X0	22°34'23"N	120°16'09"E	2000/12-2005/08	港研中心	高雄中洲外海
X1	22°32'34"N	120°17'38"E	2005/08-2018/11(觀測中)	港研中心	高雄 2 港口外海
A	22°38'36"N	120°14'13"E	2014/04-2015/03	港研中心	高雄 1 港口外海
1			2014/12-2015/12	港研中心	高雄 2 港口外海
2			2015/12-2017/10	港研中心	高雄 2 港口外海
Z	22°45'50"N	120°09'49"E	2012/09-2018/11(觀測中)	水利署	彌陀外海浮標站

高雄海域



IHMT 波潮流站



WRA 浮標海流站



圖 CH1 高雄海域海流觀測站位置示意圖

第一章 2018 年高雄海域觀測風力資料

高雄海域風之觀測包括測站 **W**、測站 **Z**、測站 **B**、測站 **C**、測站 **E** 及測站 **H** 等 6 個測站(測站位置如第 0 章圖 WH1)。本年報取經檢核及補遺之 **W** 站資料作為主要測站 1，**Z** 站資料作為主要測站 2。

1.1 2018 年高雄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 年高雄海域**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 年高雄海域**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 年高雄海域**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 年高雄海域**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 年高雄海域**各測站**修補前每月風力向量行進圖。

表 1.1.1a 2018年每月高雄海域修補前各測站觀測風力資料紀錄表

海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域
年月/測站	W	Z	B	C	E	H						
2017/12月	743(99.9%)	742(99.7%)	744(100%)	*	744(100%)	744(100%)	*	*	*	*	*	*
2018/ 1月	744(100%)	744(100%)	744(100%)	*	744(100%)	744(100%)	*	*	*	*	*	*
2018/ 2月	671(99.9%)	658(97.9%)	672(100%)	*	672(100%)	671(99.9%)	*	*	*	*	*	*
2018/ 3月	744(100%)	701(94.2%)	744(100%)	11(1.5%)	744(100%)	744(100%)	*	*	*	*	*	*
2018/ 4月	719(99.9%)	684(95.0%)	720(100%)	*	720(100%)	718(99.7%)	*	*	*	*	*	*
2018/ 5月	668(89.8%)	738(99.2%)	744(100%)	*	744(100%)	744(100%)	*	*	*	*	*	*
2018/ 6月	277(38.5%)	711(98.8%)	720(100%)	37(5.1%)	720(100%)	718(99.7%)	*	*	*	*	*	*
2018/ 7月	*	738(99.2%)	744(100%)	377(50.7%)	744(100%)	744(100%)	*	*	*	*	*	*
2018/ 8月	*	738(99.2%)	744(100%)	299(40.2%)	744(100%)	744(100%)	*	*	*	*	*	*
2018/ 9月	*	708(98.3%)	720(100%)	344(47.8%)	720(100%)	719(99.9%)	*	*	*	*	*	*
2018/10月	*	733(98.5%)	744(100%)	339(45.6%)	744(100%)	740(99.5%)	*	*	*	*	*	*
2018/11月	*	714(99.2%)	720(100%)	307(42.6%)	720(100%)	709(98.5%)	*	*	*	*	*	*
2018/冬季	2158(99.9%)	2144(99.3%)	2160(100%)	*	2160(100%)	2159(99.9%)	*	*	*	*	*	*
2018/春季	2131(96.5%)	2123(96.2%)	2208(100%)	11(.5%)	2208(100%)	2206(99.9%)	*	*	*	*	*	*
2018/夏季	277(12.5%)	2187(99.0%)	2208(100%)	713(32.3%)	2208(100%)	2206(99.9%)	*	*	*	*	*	*
2018/秋季	*	2155(98.7%)	2184(100%)	990(45.3%)	2184(100%)	2168(99.3%)	*	*	*	*	*	*
2018/整年	4566(52.1%)	8609(98.3%)	8760(100%)	1714(19.6%)	8760(100%)	8739(99.8%)	*	*	*	*	*	*
起始年月	2017/12	2017/12	2017/12	2018/03	2017/12	2017/12	*	*	*	*	*	*
結束年月	2018/06	2018/11	2018/11	2018/11	2018/11	2018/11	*	*	*	*	*	*

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表 1.1.1b 2018 年每月高雄海域修補後各測站風力資料紀錄表

海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域
年月/測站	W	Z										
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年高雄海域 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%)	4.6	4.1/NNW	12.6/NNW	29.0	62.8	8.2	.0	30.8	.0	4.7	64.5	N /32.1%
2	2018/01	744(100%)	4.4	3.8/NNW	12.7/N	30.1	64.5	5.4	.0	29.2	1.1	5.1	64.7	N /26.7%
3	2018/02	672(100%)	4.9	3.9/NNW	12.4/NNW	23.7	65.9	10.4	.0	31.0	3.3	6.4	59.4	N /30.7%
4	2018/03	744(100%)	4.3	2.8/NNW	12.6/NNW	39.1	52.2	8.7	.0	28.9	6.3	9.5	55.2	NNW/17.1%
5	2018/04	720(100%)	4.2	1.9/WNW	12.1/S	41.0	51.3	7.8	.0	16.5	10.3	20.7	52.5	NW /19.0%
6	2018/05	744(100%)	3.7	1.6/WSW	9.8/NW	45.7	50.5	3.8	.0	7.1	20.3	35.3	37.2	S /16.4%
7	2018/06	720(100%)	4.5	1.2/SSW	20.7/SSW	43.1	44.3	11.0	1.7	17.4	25.6	26.4	30.7	S /11.1%
8	2018/07	744(100%)	3.9	1.2/NW	14.8/SSE	46.9	48.8	4.2	.1	33.3	13.0	15.7	37.9	NE /14.1%
9	2018/08	744(100%)	4.5	.7/SSE	13.8/SSE	33.9	57.7	8.5	.0	29.6	30.4	19.1	21.0	SSE/13.3%
10	2018/09	720(100%)	4.2	1.8/NNW	15.4/NW	49.7	38.8	11.0	.6	30.7	13.1	12.8	43.5	NW /18.2%
11	2018/10	744(100%)	3.9	3.0/NNW	15.8/NNW	49.7	44.0	6.0	.3	27.3	2.7	11.2	58.9	NNW/21.0%
12	2018/11	720(100%)	4.3	3.9/NNW	11.1/N	36.7	57.2	6.1	.0	32.1	.6	3.3	64.0	NNW/34.2%
13	2018/冬	2160(100%)	4.6	4.0/NNW	12.7/N	27.7	64.4	7.9	.0	30.3	1.4	5.4	63.0	N /29.8%
14	2018/春	2208(100%)	4.1	1.7/NW	12.6/NNW	41.9	51.3	6.7	.0	17.5	12.3	21.9	48.3	NW /16.7%
15	2018/夏	2208(100%)	4.3	.5/SW	20.7/SSW	41.3	50.3	7.8	.6	26.9	23.0	20.3	29.8	NW /11.1%
16	2018/秋	2184(100%)	4.1	2.9/NNW	15.8/NNW	45.4	46.6	7.7	.3	30.0	5.4	9.1	55.5	NNW/22.7%
17	2018/年	8760(100%)	4.3	2.0/NNW	20.7/SSW	39.1	53.1	7.5	.2	26.1	10.6	14.2	49.1	NW /15.9%

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表 1.1.3 2018 年高雄海域 Z 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%)	5.7	5.5/N	11.8/N	13.6	69.9	16.5	.0	47.3	.5	.4	51.7	N /52.8%
2	2018/01	744(100%)	5.5	5.2/N	13.0/N	11.0	73.9	15.1	.0	50.1	1.5	.5	47.8	N /51.5%
3	2018/02	672(100%)	5.8	5.2/N	11.8/N	14.4	65.2	20.4	.0	50.1	2.2	2.4	45.2	N /47.3%
4	2018/03	744(100%)	4.4	3.3/N	13.0/N	35.3	53.5	11.2	.0	43.0	8.2	5.1	43.7	N /22.0%
5	2018/04	720(100%)	3.6	1.9/NNW	12.4/N	51.7	44.4	3.9	.0	22.6	7.2	15.7	54.4	NNW/19.4%
6	2018/05	744(100%)	3.0	1.1/WSW	8.5/ESE	57.1	42.2	.7	.0	8.5	20.0	36.2	35.3	S /14.7%
7	2018/06	720(100%)	3.9	.6/S	12.9/S	47.5	45.6	6.9	.0	13.6	33.3	21.7	31.4	SSE/11.7%
8	2018/07	744(100%)	3.2	.4/WSW	8.7/N	54.2	44.1	1.7	.0	15.2	28.4	23.3	33.2	W /11.2%
9	2018/08	744(100%)	4.2	2.0/SSE	14.5/W	40.7	50.3	8.6	.4	13.4	46.4	26.3	13.8	ESE/13.6%
10	2018/09	720(100%)	3.7	2.1/NNW	13.8/N	53.8	37.1	9.0	.1	30.0	12.2	13.2	44.6	NNW/17.1%
11	2018/10	744(100%)	4.0	3.4/N	12.7/N	43.3	50.9	5.8	.0	40.7	3.6	5.4	50.3	N /31.9%
12	2018/11	720(100%)	4.1	3.8/N	10.7/NNE	35.1	61.0	3.9	.0	48.2	.7	1.4	49.7	N /37.1%
13	2018/冬	2160(100%)	5.7	5.3/N	13.0/N	13.0	69.8	17.2	.0	49.2	1.4	1.1	48.4	N /50.6%
14	2018/春	2208(100%)	3.7	1.7/NNW	13.0/N	48.0	46.7	5.3	.0	24.7	11.9	19.0	44.4	NNW/15.9%
15	2018/夏	2208(100%)	3.8	.9/S	14.5/W	47.5	46.6	5.8	.1	14.1	36.1	23.8	26.1	ESE/10.3%
16	2018/秋	2184(100%)	3.9	3.1/N	13.8/N	44.0	49.7	6.2	.0	39.7	5.5	6.6	48.2	N /27.5%
17	2018/年	8760(100%)	4.3	2.2/N	14.5/W	38.2	53.1	8.6	.0	31.8	13.8	12.7	41.7	N /23.6%

Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

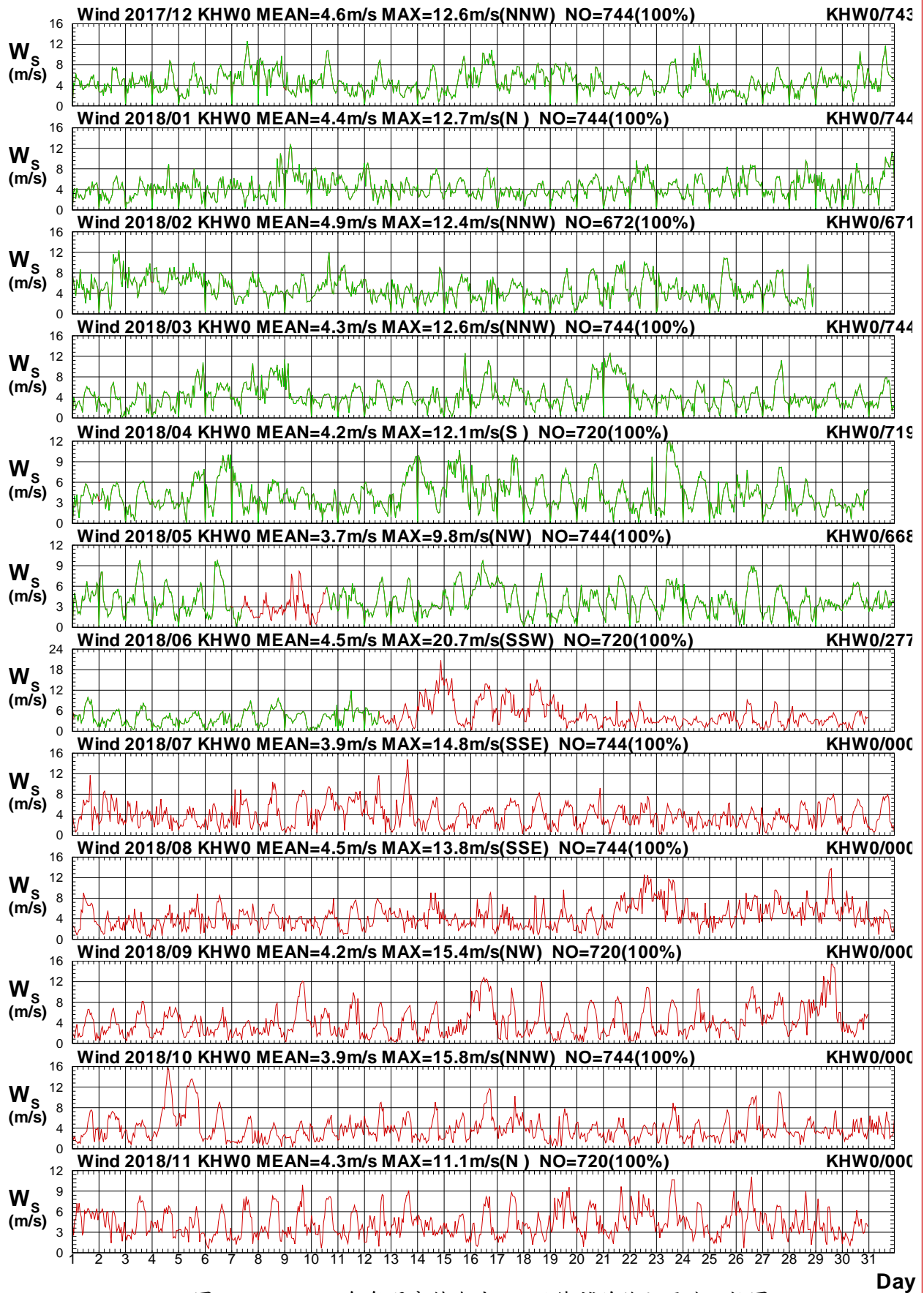


圖1.1.1a 2018年每月高雄海域 W 站修補前後之風速比較圖

W17CKHW0.1HA W17CKHW0.1H0 W181KHW0.1HA W181KHW0.1H0 W182KHW0.1HA W182KHW0.1H0
 W183KHW0.1HA W183KHW0.1H0 W184KHW0.1HA W184KHW0.1H0 W185KHW0.1HA W185KHW0.1H0

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

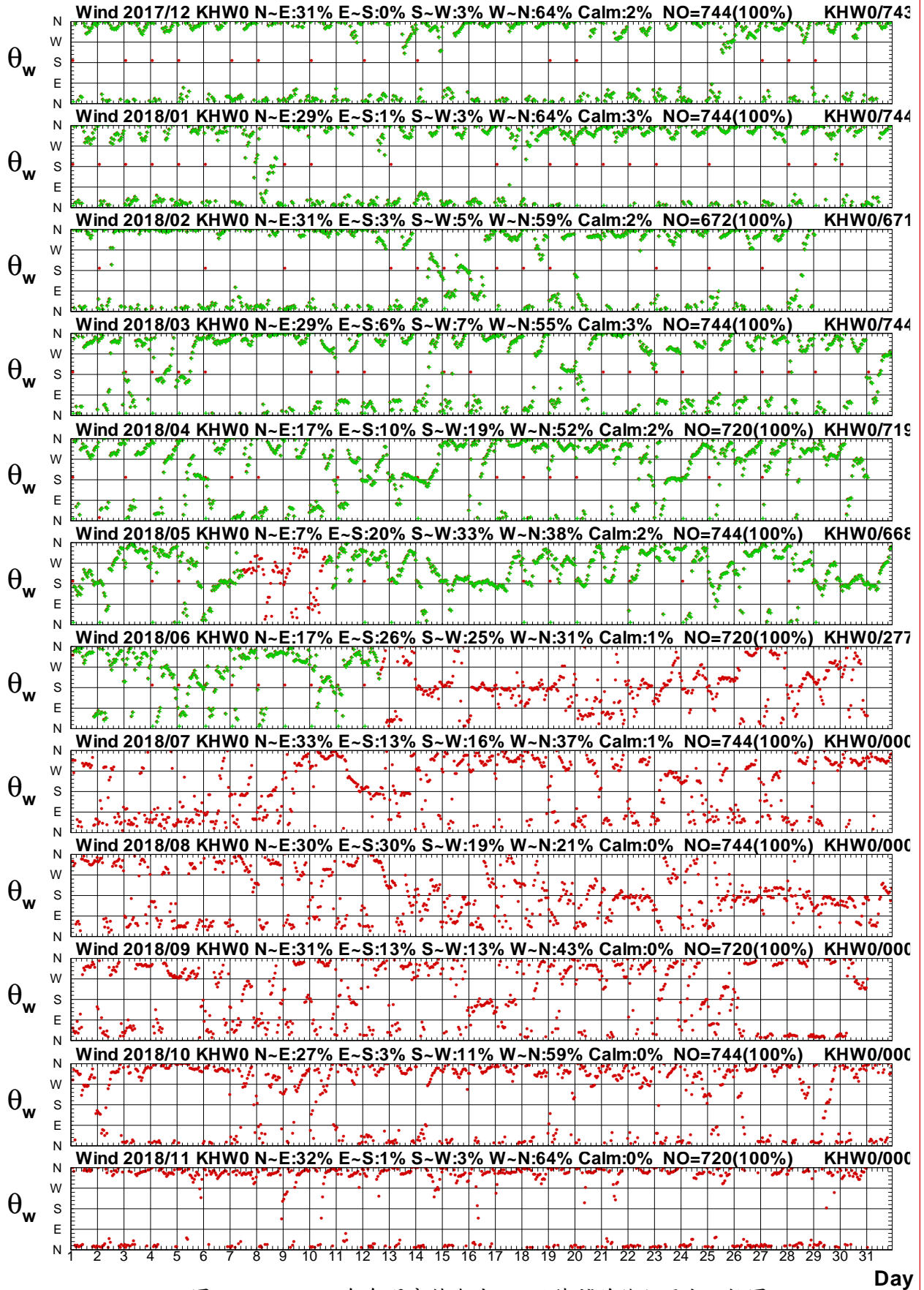


圖1.1.1b 2018年每月高雄海域 W 站修補前後之風向比較圖

W17CKHW0.1HA W17CKHW0.1H0 W181KHW0.1HA W181KHW0.1H0 W182KHW0.1HA W182KHW0.1H0

W183KHW0.1HA W183KHW0.1H0 W184KHW0.1HA W184KHW0.1H0 W185KHW0.1HA W185KHW0.1H0 Institute of Harbor & Marine Technology

Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

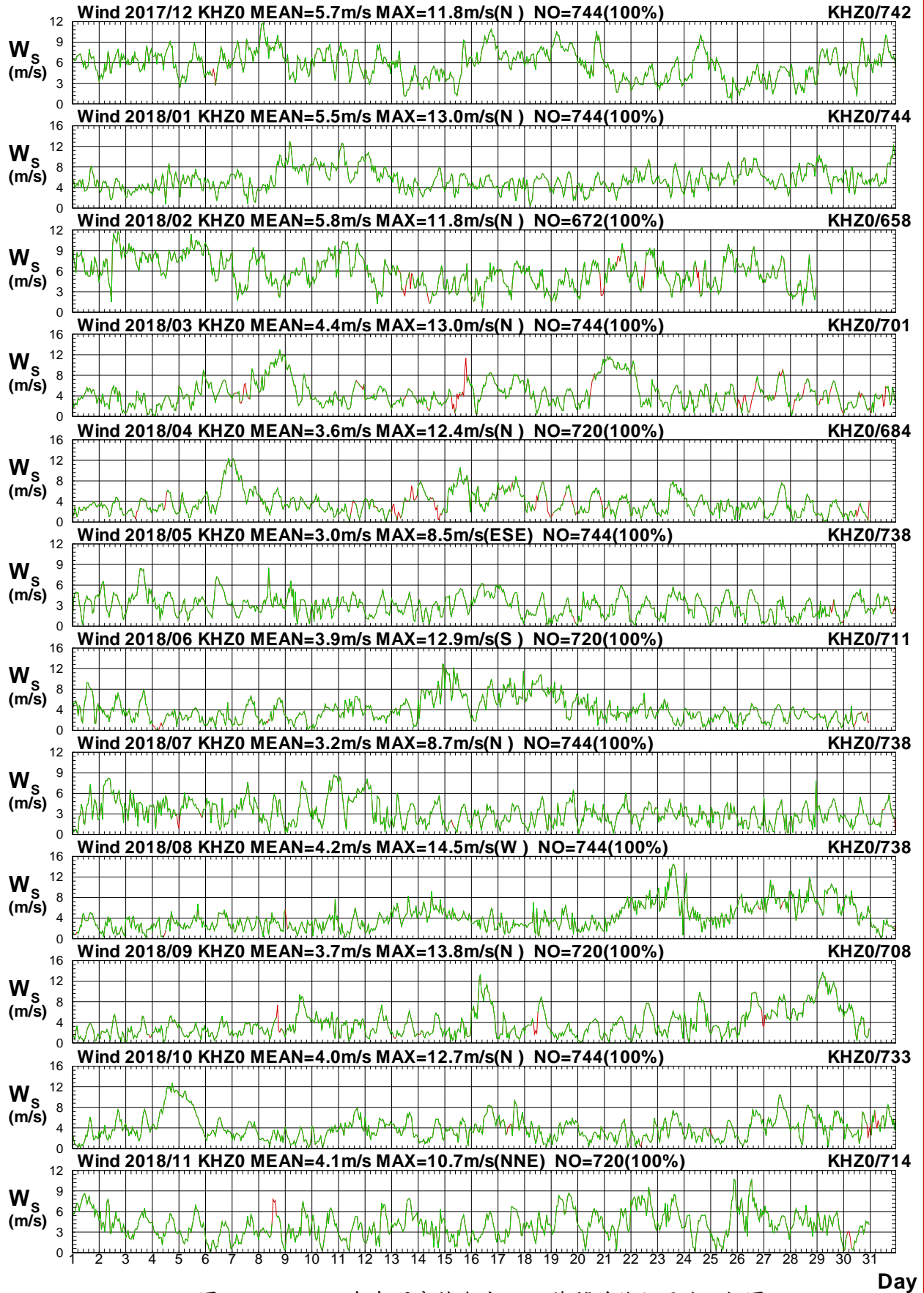


圖1.1.2a 2018年每月高雄海域 Z 站修補前後之風速比較圖

W17CKHZ0.1HA W17CKHZ0.1HO W181KHZ0.1HA W181KHZ0.1HO W182KHZ0.1HA W182KHZ0.1HO
W183KHZ0.1HA W183KHZ0.1HO W184KHZ0.1HA W184KHZ0.1HO W185KHZ0.1HA W185KHZ0.1HO

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

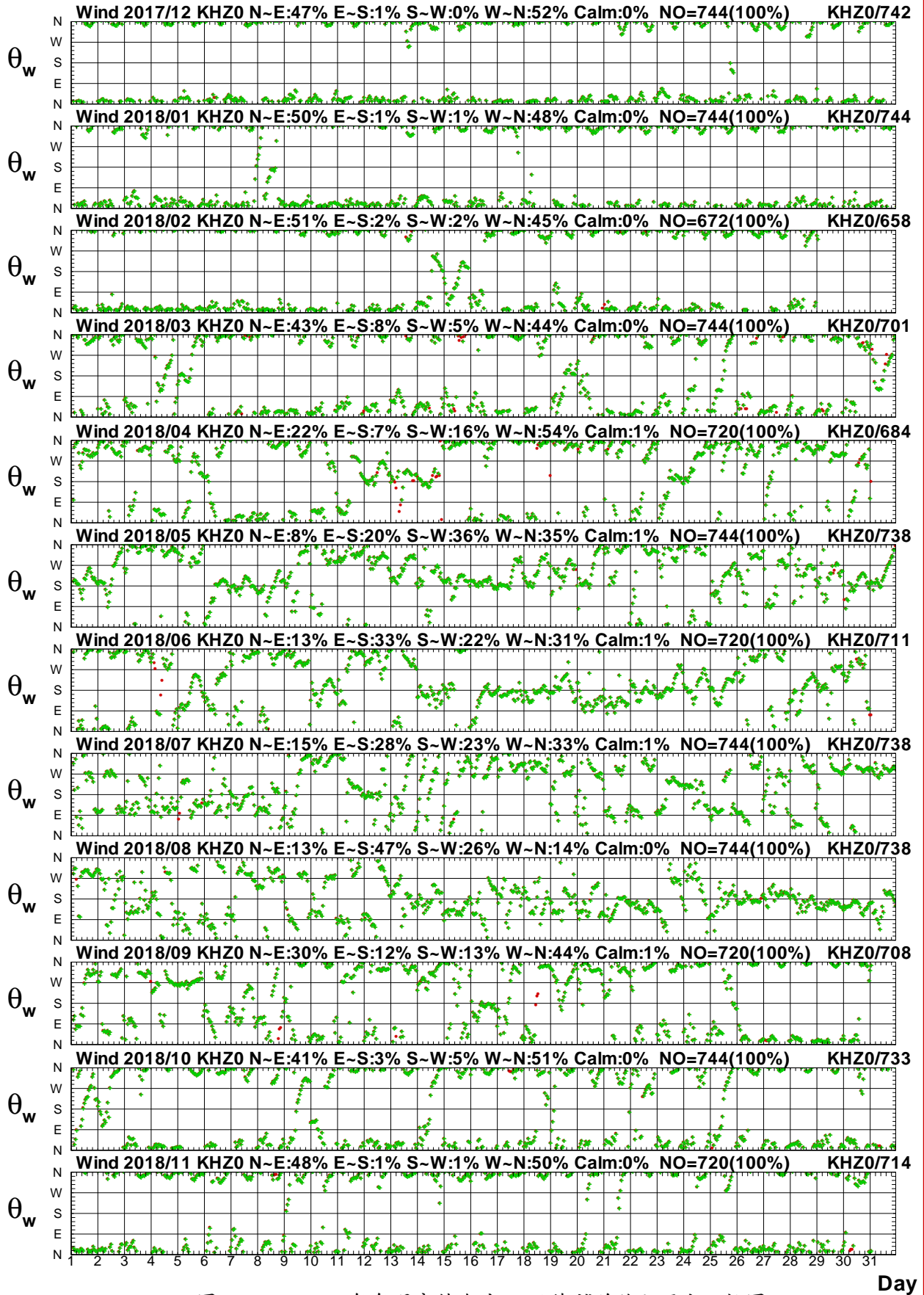


圖1.1.2b 2018年每月高雄海域 Z 站修補前後之風向比較圖

W17CKHZ0.1HA W17CKHZ0.1HO W181KHZ0.1HA W181KHZ0.1HO W182KHZ0.1HA W182KHZ0.1HO
W183KHZ0.1HA W183KHZ0.1HO W184KHZ0.1HA W184KHZ0.1HO W185KHZ0.1HA W185KHZ0.1HO

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Distribution of Wind Vectors

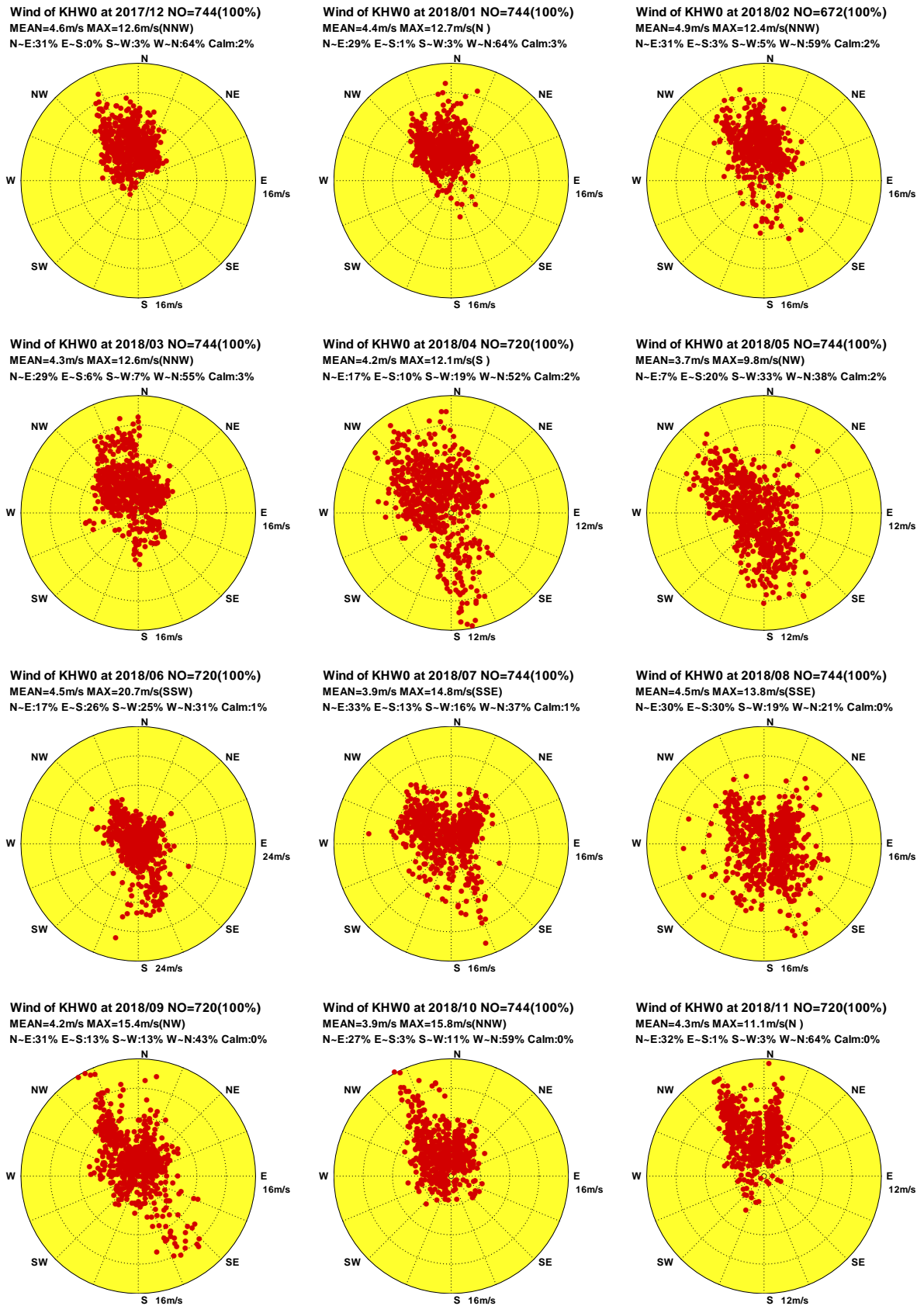


圖1.1.3 2018年高雄海域每月 W 站修補後觀測風力向量分佈圖

Distribution of Wind Vectors

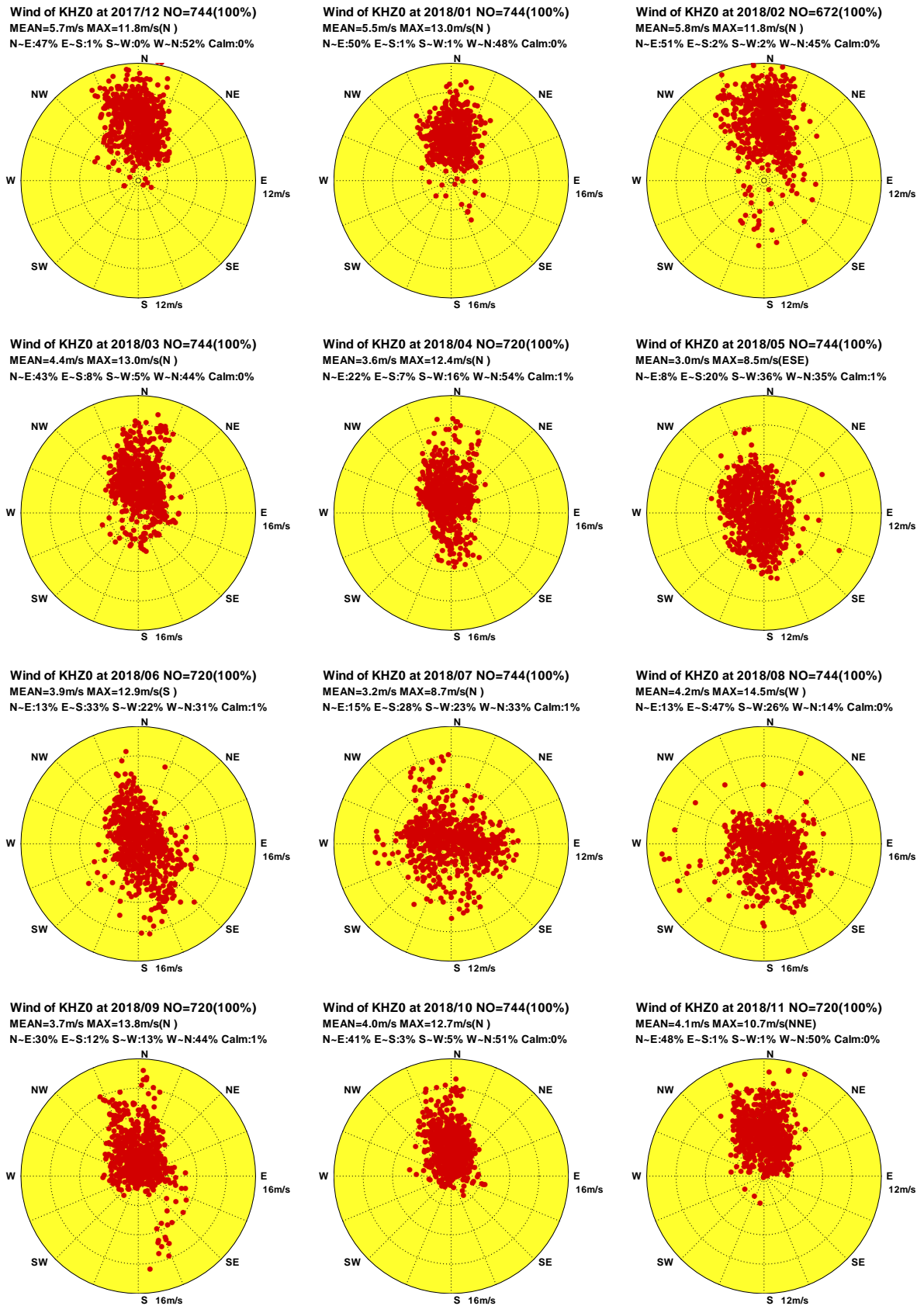


圖1.1.4 2018年高雄海域每月 Z 站修補後觀測風力向量分佈圖

W17CKHZ0.1HA W181KHZ0.1HA W182KHZ0.1HA W183KHZ0.1HA W184KHZ0.1HA W185KHZ0.1HA
 W186KHZ0.1HA W187KHZ0.1HA W188KHZ0.1HA W189KHZ0.1HA W18AKHZ0.1HA W18BKHZ0.1HA

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Progressive Vector Diagram of Wind

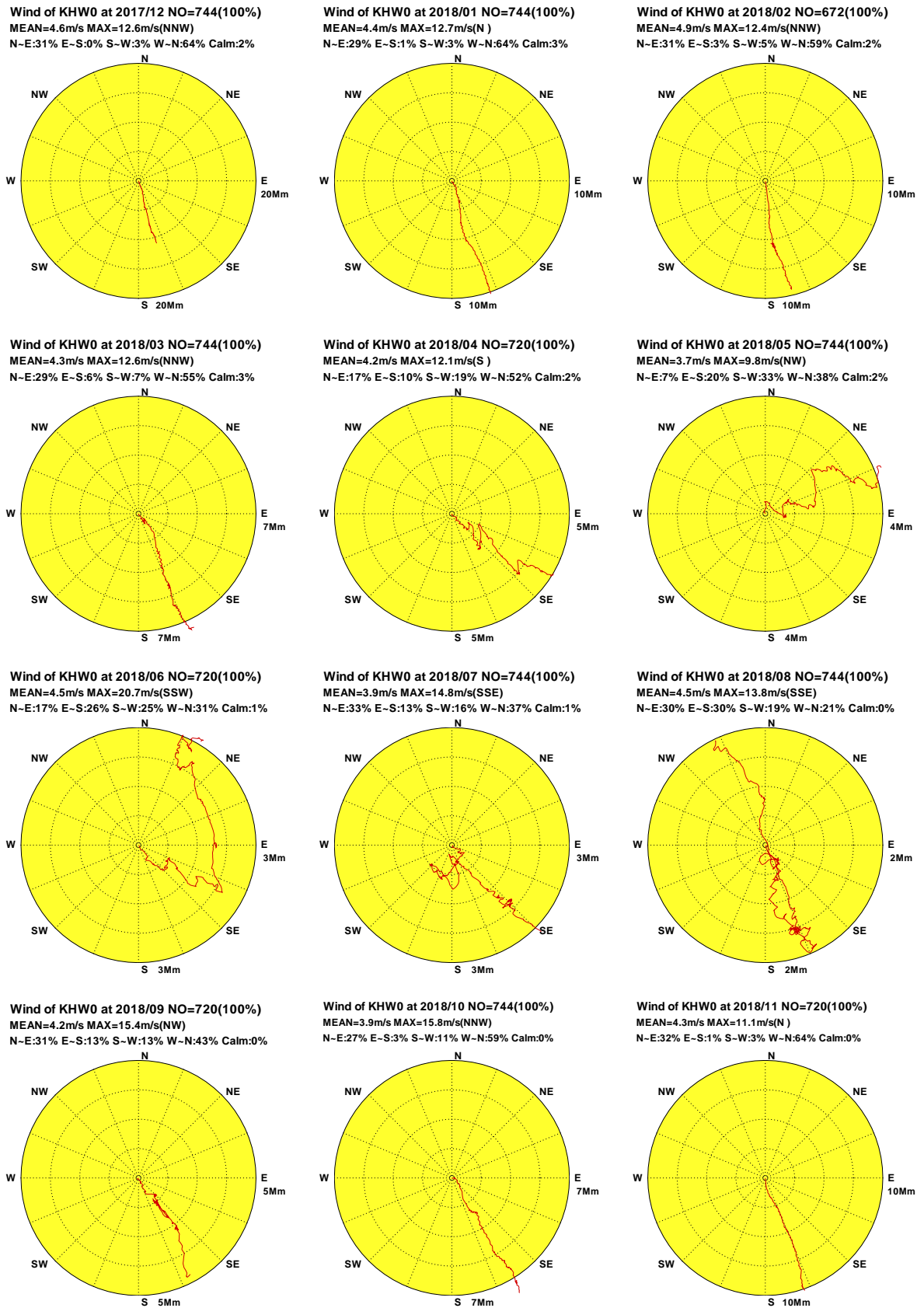


圖1.1.5 2018年高雄海域每月 W 站修補後觀測風力向量行進圖

Progressive Vector Diagram of Wind

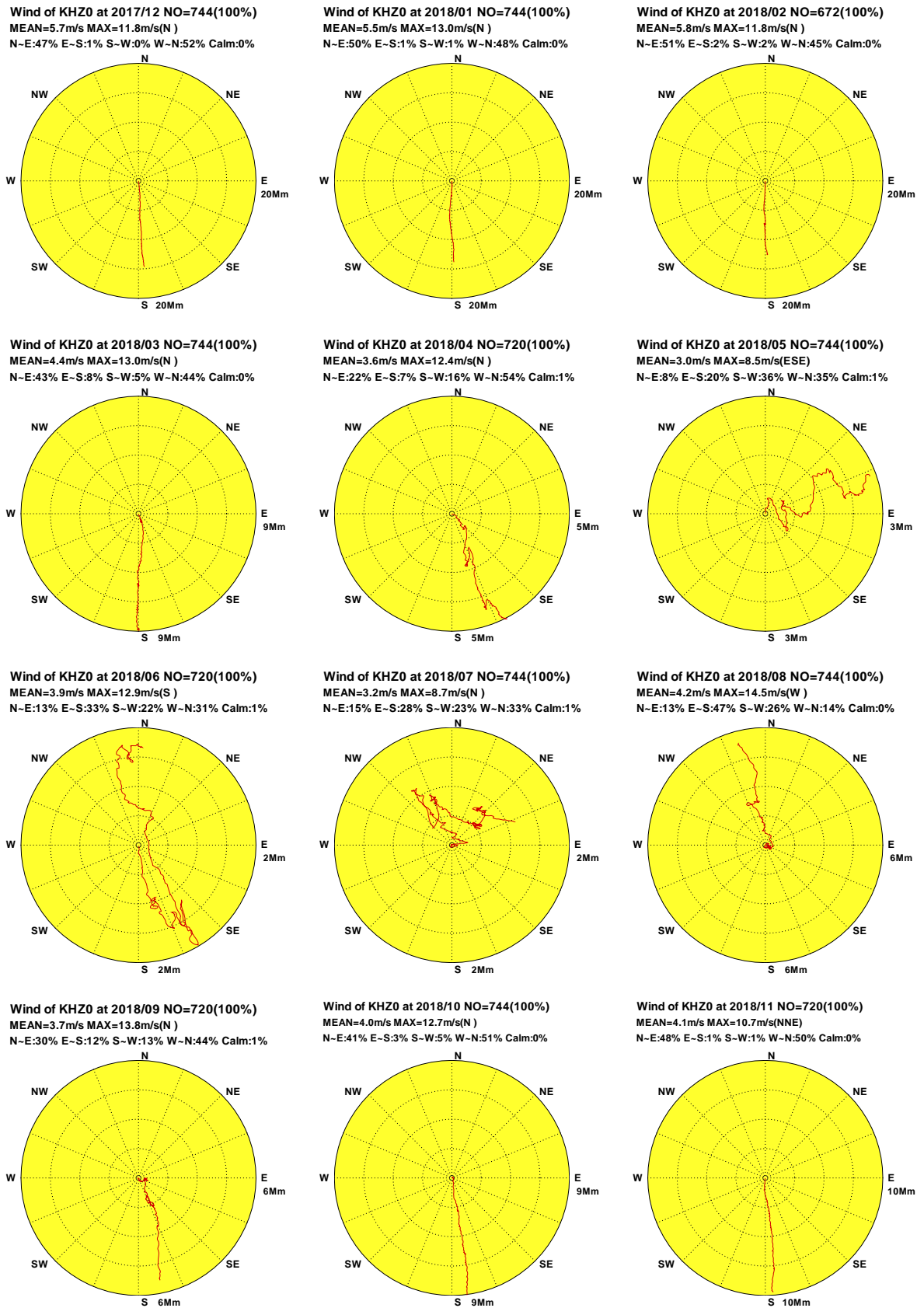


圖1.1.6 2018年高雄海域每月 Z 站修補後觀測風力向量行進圖

W17CKHZ0.1HA W181KHZ0.1HA W182KHZ0.1HA W183KHZ0.1HA W184KHZ0.1HA W185KHZ0.1HA
W186KHZ0.1HA W187KHZ0.1HA W188KHZ0.1HA W189KHZ0.1HA W18AKHZ0.1HA W18BKHZ0.1HA

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1.2 2018 年高雄海域各測站修補前 風力統計量統計表

表1.2.1 2018年高雄海域 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	743(100%)	4.6	4.1/NNW	12.6/NNW	28.8	62.9	8.3	.0	32.6	.0	2.8	64.6	N /34.1%
2	2018/01	744(100%)	4.4	3.8/NNW	12.7/N	30.1	64.5	5.4	.0	31.7	1.1	2.6	64.7	N /29.4%
3	2018/02	671(100%)	4.9	3.9/NNW	12.4/NNW	23.5	66.0	10.4	.0	32.6	3.3	4.6	59.5	N /32.3%
4	2018/03	744(100%)	4.3	2.8/NNW	12.6/NNW	39.1	52.2	8.7	.0	31.5	6.3	7.1	55.1	NNW/17.1%
5	2018/04	719(100%)	4.2	1.9/WNW	12.1/S	40.9	51.3	7.8	.0	18.5	10.2	18.8	52.6	NW /19.1%
6	2018/05	668(90%)	3.8	1.6/WSW	9.8/NW	43.1	52.8	4.0	.0	7.8	21.0	32.5	38.8	S /15.6%
7	2018/06	277(39%)	3.9	2.2/WNW	11.9/WNW	43.3	51.6	5.1	.0	18.4	8.3	22.0	51.3	NW /19.5%
8	2018/07													
9	2018/08													
10	2018/09													
11	2018/10													
12	2018/11													
13	2018/冬	2158(100%)	4.6	4.0/NNW	12.7/N	27.6	64.4	8.0	.0	32.3	1.4	3.3	63.0	N /31.9%
14	2018/春	2131(97%)	4.1	1.8/NW	12.6/NNW	41.0	52.1	6.9	.0	19.7	12.2	19.0	49.1	NW /17.0%
15	2018/夏	277(13%)	3.9	2.2/WNW	11.9/WNW	43.3	51.6	5.1	.0	18.4	8.3	22.0	51.3	NW /19.5%
16	2018/秋													
17	2018/年	4566(52%)	4.3	2.7/NNW	12.7/N	34.8	57.9	7.3	.0	25.6	6.9	11.8	55.8	N /19.5%

1-2-1

表1.2.2 2018年高雄海域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	742(100%)	5.7	5.5/N	11.8/N	13.6	69.8	16.6	.0	47.2	.5	.4	51.9	N /53.0%
2	2018/01	744(100%)	5.5	5.2/N	13.0/N	10.9	74.1	15.1	.0	50.1	1.5	.5	47.8	N /51.5%
3	2018/02	658(98%)	5.9	5.2/N	11.8/N	13.7	65.8	20.5	.0	50.5	2.3	2.4	44.8	N /47.4%
4	2018/03	701(94%)	4.4	3.3/N	13.0/N	35.7	53.1	11.3	.0	43.5	8.7	5.1	42.7	N /22.1%
5	2018/04	684(95%)	3.7	2.0/NNW	12.4/N	51.2	44.7	4.1	.0	23.2	6.7	15.1	55.0	NNW/19.7%
6	2018/05	738(99%)	3.0	1.1/WSW	8.5/ESE	56.8	42.5	.7	.0	8.5	20.1	36.0	35.4	S /14.9%
7	2018/06	711(99%)	4.0	.7/S	12.9/S	46.8	46.1	7.0	.0	13.4	33.6	21.7	31.4	SSE/11.7%
8	2018/07	738(99%)	3.2	.4/WSW	8.7/N	53.9	44.3	1.8	.0	14.9	28.5	23.3	33.3	W /11.4%
9	2018/08	738(99%)	4.2	2.0/SSE	14.5/W	40.7	50.3	8.7	.4	13.6	46.3	26.3	13.8	SSE/13.7%
10	2018/09	708(98%)	3.7	2.1/NNW	13.8/N	53.1	37.6	9.2	.1	29.5	12.3	12.9	45.3	NNW/17.4%
11	2018/10	733(99%)	4.0	3.4/N	12.7/N	43.5	50.6	5.9	.0	40.9	3.7	5.3	50.1	N /31.5%
12	2018/11	714(99%)	4.1	3.8/N	10.7/NNE	35.0	61.1	3.9	.0	48.2	.7	1.4	49.7	N /37.3%
13	2018/冬	2144(99%)	5.7	5.3/N	13.0/N	12.7	70.1	17.3	.0	49.2	1.4	1.1	48.3	N /50.7%
14	2018/春	2123(96%)	3.7	1.7/NNW	13.0/N	48.0	46.7	5.3	.0	24.8	12.0	19.1	44.1	NNW/15.5%
15	2018/夏	2187(99%)	3.8	.9/S	14.5/W	47.1	46.9	5.8	.1	13.9	36.2	23.8	26.1	ESE/10.4%
16	2018/秋	2155(99%)	3.9	3.1/N	13.8/N	43.9	49.8	6.3	.0	39.6	5.5	6.5	48.4	N /27.4%
17	2018/年	8609(98%)	4.3	2.2/N	14.5/W	37.9	53.4	8.7	.0	31.8	13.9	12.6	41.7	N /23.7%

1-2-2

表1.2.3 2018年高雄海域C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													
2	2018/01													
3	2018/02													
4	2018/03	11(2%)	6.7	6.0/NW	11.2/NNW	9.1	45.5	45.5	.0	.0	.0	.0	100.0	NNW/45.5%
5	2018/04													
6	2018/05													
7	2018/06	37(5%)	4.6	3.1/WNW	8.3/NW	27.0	67.6	5.4	.0	13.5	8.1	21.6	56.8	NW /37.8%
8	2018/07	377(51%)	4.8	2.2/WNW	12.1/SSE	24.4	69.8	5.8	.0	17.0	12.5	19.9	50.7	WNW/23.1%
9	2018/08	299(40%)	4.8	1.4/WSW	12.2/SSE	26.8	63.5	9.7	.0	14.4	22.7	25.4	37.5	NW /16.4%
10	2018/09	344(48%)	5.6	3.0/NW	15.1/NW	25.3	54.4	18.9	1.5	12.8	10.8	14.0	62.5	NW /37.2%
11	2018/10	339(46%)	5.0	4.2/NW	15.1/NW	28.6	58.4	12.4	.6	7.1	2.1	17.4	73.5	NW /34.5%
12	2018/11	307(43%)	5.2	4.7/NW	10.7/NW	24.4	64.8	10.7	.0	11.4	.7	4.6	83.4	NW /52.4%
13	2018/冬													
14	2018/春	11(1%)	6.7	6.0/NW	11.2/NNW	9.1	45.5	45.5	.0	.0	.0	.0	100.0	NNW/45.5%
15	2018/夏	713(32%)	4.8	1.8/W	12.2/SSE	25.5	67.0	7.4	.0	15.7	16.5	22.3	45.4	NW /18.8%
16	2018/秋	990(45%)	5.3	3.9/NW	15.1/NW	26.2	59.0	14.1	.7	10.4	4.6	12.2	72.7	NW /41.0%
17	2018/年	1714(20%)	5.1	2.9/NW	15.1/NW	25.8	62.3	11.6	.4	12.5	9.6	16.3	61.6	NW /31.5%

1-2-3

表1.2.4 2018年高雄海域 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%)	2.4	2.1/N	6.7/N	78.0	22.0	.0	.0	50.7	.3	2.8	46.2	N /48.0%
2	2018/01	744(100%)	2.3	1.9/NNW	8.0/N	83.7	16.1	.1	.0	48.4	1.2	2.6	47.8	N /39.8%
3	2018/02	672(100%)	2.5	2.0/N	7.5/N	74.9	25.1	.0	.0	52.4	2.1	4.8	40.8	N /43.0%
4	2018/03	744(100%)	2.3	1.4/NNW	7.3/N	78.2	21.8	.0	.0	41.0	4.6	6.7	47.7	N /21.1%
5	2018/04	720(100%)	2.2	1.1/WNW	6.4/N	80.6	19.4	.0	.0	24.0	7.8	17.4	50.8	NW /15.7%
6	2018/05	744(100%)	2.0	.9/WSW	5.5/NW	82.3	17.7	.0	.0	12.5	14.9	33.2	39.4	S /23.8%
7	2018/06	720(100%)	2.2	.5/SW	9.6/S	80.0	19.4	.6	.0	26.0	22.2	21.9	29.9	S /14.9%
8	2018/07	744(100%)	2.0	.6/NW	6.3/N	82.4	17.6	.0	.0	40.3	10.6	12.6	36.4	ENE/13.4%
9	2018/08	744(100%)	2.2	.4/S	8.7/SSW	80.1	19.6	.3	.0	35.2	29.7	15.5	19.6	SSE/18.7%
10	2018/09	720(100%)	2.2	.8/NW	7.2/SSE	78.8	21.3	.0	.0	36.0	10.8	10.3	42.9	NW /16.3%
11	2018/10	744(100%)	2.1	1.4/NNW	8.3/N	84.3	15.2	.5	.0	36.8	3.2	10.9	49.1	N /22.6%
12	2018/11	720(100%)	2.0	1.6/NNW	5.7/N	88.2	11.8	.0	.0	38.5	1.4	3.5	56.7	N /31.3%
13	2018/冬	2160(100%)	2.4	2.0/N	8.0/N	79.0	21.0	.0	.0	50.4	1.2	3.3	45.1	N /43.6%
14	2018/春	2208(100%)	2.2	1.0/WNW	7.3/N	80.3	19.7	.0	.0	25.9	9.1	19.1	45.9	N /13.9%
15	2018/夏	2208(100%)	2.1	.3/WSW	9.6/S	80.8	18.9	.3	.0	33.9	20.8	16.6	28.6	SSE/12.2%
16	2018/秋	2184(100%)	2.1	1.3/NNW	8.3/N	83.7	16.1	.2	.0	37.1	5.1	8.2	49.5	N /22.6%
17	2018/年	8760(100%)	2.2	1.0/NNW	9.6/S	81.0	18.9	.1	.0	36.7	9.1	11.9	42.3	N /22.2%

1-2-4

表1.2.5 2018年高雄海域 B 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%)	2.5	2.2/N	5.9/N	75.1	24.9	.0	.0	48.5	.3	2.6	48.7	N /43.8%
2	2018/01	744(100%)	2.3	1.8/N	5.6/NNE	80.6	19.4	.0	.0	60.1	.9	3.0	36.0	NNE/37.9%
3	2018/02	672(100%)	2.6	2.2/N	5.8/W	73.8	26.2	.0	.0	59.7	1.5	4.6	34.2	N /36.5%
4	2018/03	744(100%)	2.4	1.5/NNW	6.6/NNE	74.5	25.5	.0	.0	36.3	4.3	8.3	51.1	N /25.5%
5	2018/04	720(100%)	2.2	1.1/WNW	9.1/S	76.9	22.8	.3	.0	20.3	5.6	20.4	53.8	WNW/14.2%
6	2018/05	744(100%)	2.2	1.3/WSW	7.4/SSE	82.9	17.1	.0	.0	7.4	8.3	48.5	35.8	SW /18.5%
7	2018/06	720(100%)	2.6	.8/SW	12.3/SSW	74.0	23.6	2.4	.0	18.1	22.4	28.1	31.5	WNW/ 9.9%
8	2018/07	744(100%)	2.2	.8/WNW	6.7/SSE	77.8	22.2	.0	.0	35.1	7.3	19.4	38.3	W /14.1%
9	2018/08	744(100%)	2.4	.3/S	8.2/W	77.6	22.2	.3	.0	30.4	28.4	21.2	20.0	NE /10.6%
10	2018/09	720(100%)	2.1	.9/NW	7.0/SE	82.6	17.4	.0	.0	28.5	8.3	12.8	50.4	N /15.4%
11	2018/10	744(100%)	2.0	1.3/NW	5.5/WNW	86.3	13.7	.0	.0	31.7	2.4	14.1	51.7	N /27.7%
12	2018/11	720(100%)	2.1	1.6/NNW	5.4/NNE	86.8	13.2	.0	.0	39.2	.4	6.1	54.3	N /39.0%
13	2018/冬	2160(100%)	2.5	2.1/N	5.9/N	76.6	23.4	.0	.0	56.0	.9	3.3	39.8	N /37.3%
14	2018/春	2208(100%)	2.3	1.1/WNW	9.1/S	78.1	21.8	.1	.0	21.3	6.1	25.8	46.8	N /14.7%
15	2018/夏	2208(100%)	2.4	.4/WSW	12.3/SSW	76.5	22.6	.9	.0	27.9	19.3	22.8	29.9	W /10.0%
16	2018/秋	2184(100%)	2.1	1.3/NNW	7.0/SE	85.3	14.7	.0	.0	33.1	3.7	11.0	52.2	N /27.4%
17	2018/年	8760(100%)	2.3	1.0/NNW	12.3/SSW	79.1	20.6	.2	.0	34.5	7.5	15.8	42.2	N /21.2%

1-2-5

表1.2.6 2018年高雄海域 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%)	4.9	4.7/N	11.4/NNE	32.9	49.7	17.3	.0	59.5	.1	1.6	38.7	N /45.4%
2	2018/01	744(100%)	3.5	3.2/N	11.1/NNE	51.5	44.1	4.4	.0	39.5	1.5	2.4	56.6	N /39.0%
3	2018/02	671(100%)	3.5	3.0/N	9.8/NNE	49.5	48.4	2.1	.0	35.6	1.3	4.5	58.6	N /42.3%
4	2018/03	744(100%)	2.9	1.6/N	11.2/NNE	66.4	31.9	1.7	.0	28.1	7.1	14.7	50.1	NNW/19.1%
5	2018/04	718(100%)	2.8	1.1/NNW	11.6/NNE	70.6	25.6	3.8	.0	22.0	13.2	20.8	44.0	N /16.3%
6	2018/05	744(100%)	2.7	.6/SSW	9.4/NNE	68.0	31.0	.9	.0	15.9	21.4	38.3	24.5	S /13.3%
7	2018/06	718(100%)	2.6	.4/NNW	9.3/NE	71.4	27.9	.7	.0	27.0	10.9	26.5	35.7	N /17.4%
8	2018/07	744(100%)	2.2	.6/N	6.9/SSW	76.7	23.3	.0	.0	28.8	15.7	23.5	32.0	N /13.7%
9	2018/08	744(100%)	2.2	.5/SSW	10.0/SSE	80.1	19.4	.5	.0	21.8	15.7	36.0	26.5	SSW/12.6%
10	2018/09	719(100%)	2.7	1.5/N	12.0/NNE	67.2	29.6	3.2	.0	34.1	15.7	15.2	35.0	N /18.9%
11	2018/10	740(100%)	3.8	3.4/NNE	11.8/NNE	50.9	41.5	7.6	.0	54.1	1.5	4.1	40.4	N /35.5%
12	2018/11	709(99%)	2.5	2.1/N	9.4/NNE	76.0	23.1	.8	.0	38.4	5.1	4.1	52.5	N /25.8%
13	2018/冬	2159(100%)	4.0	3.7/N	11.4/NNE	44.5	47.4	8.2	.0	45.2	1.0	2.8	51.0	N /42.2%
14	2018/春	2206(100%)	2.8	.8/NNW	11.6/NNE	68.3	29.6	2.1	.0	22.0	13.9	24.6	39.5	N /15.0%
15	2018/夏	2206(100%)	2.3	.2/NNW	10.0/SSE	76.2	23.4	.4	.0	25.8	14.1	28.7	31.3	N /12.1%
16	2018/秋	2168(99%)	3.0	2.3/N	12.0/NNE	64.5	31.5	3.9	.0	42.3	7.4	7.7	42.6	N /26.8%
17	2018/年	8739(100%)	3.0	1.7/N	12.0/NNE	63.5	32.9	3.6	.0	33.7	9.2	16.1	41.0	N /23.9%

1-2-6

1.3 2018 年高雄海域**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 Kao-Hsiung Seas of KHW0 at 2018

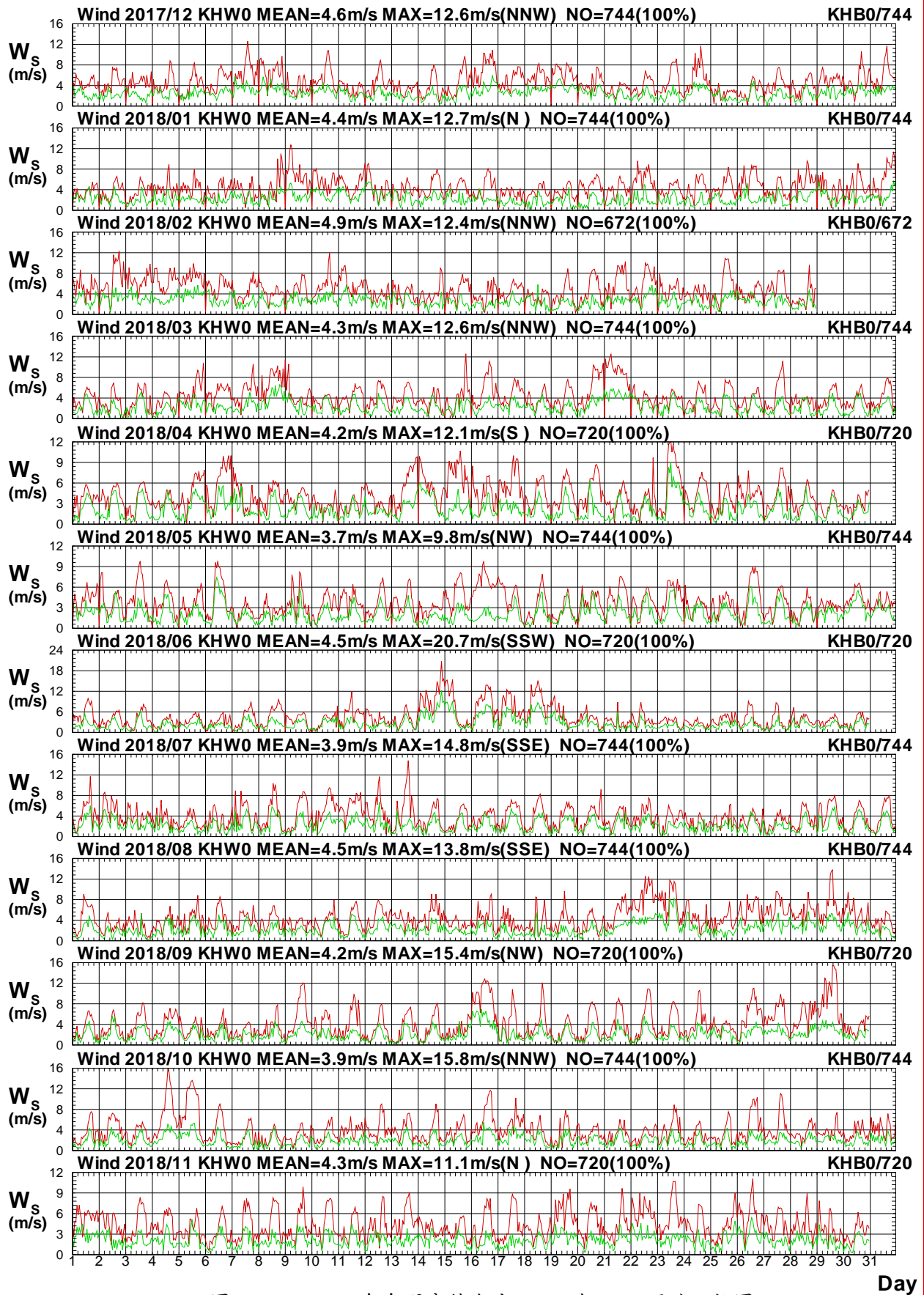


圖1.3.1a 2018年每月高雄海域 W 站與 B 站風速比較圖

W17CKHW0.1HA W17CKHB0.1HO W181KHW0.1HA W181KHB0.1HO W182KHW0.1HA W182KHB0.1HO
 W183KHW0.1HA W183KHB0.1HO W184KHW0.1HA W184KHB0.1HO W185KHW0.1HA W185KHB0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

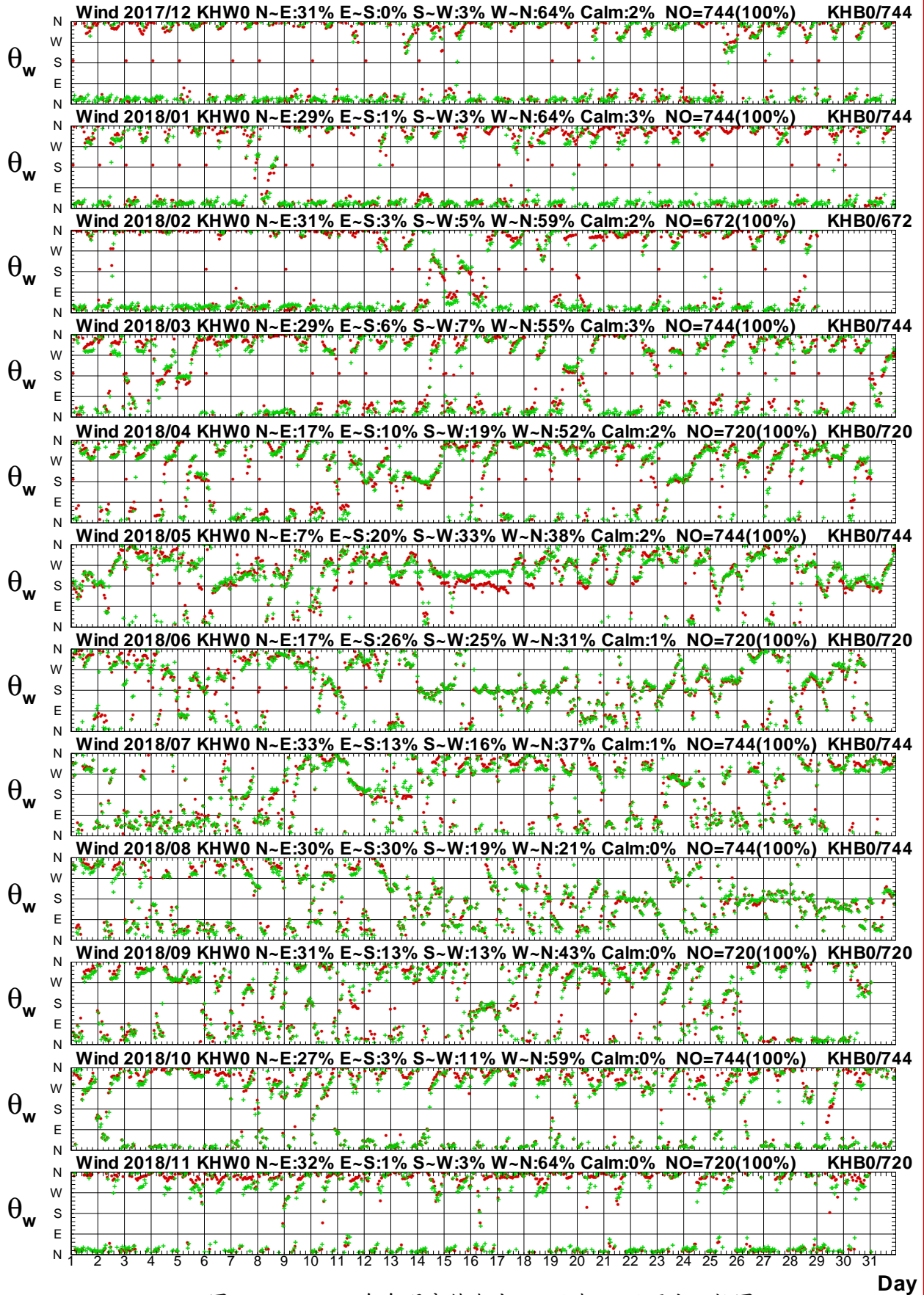


圖1.3.1b 2018年每月高雄海域 W 站與 B 站風向比較圖

W17CKHW0.1HA W17CKHB0.1HO W181KHW0.1HA W181KHB0.1HO W182KHW0.1HA W182KHB0.1HO
 W183KHW0.1HA W183KHB0.1HO W184KHW0.1HA W184KHB0.1HO W185KHW0.1HA W185KHB0.1HO

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

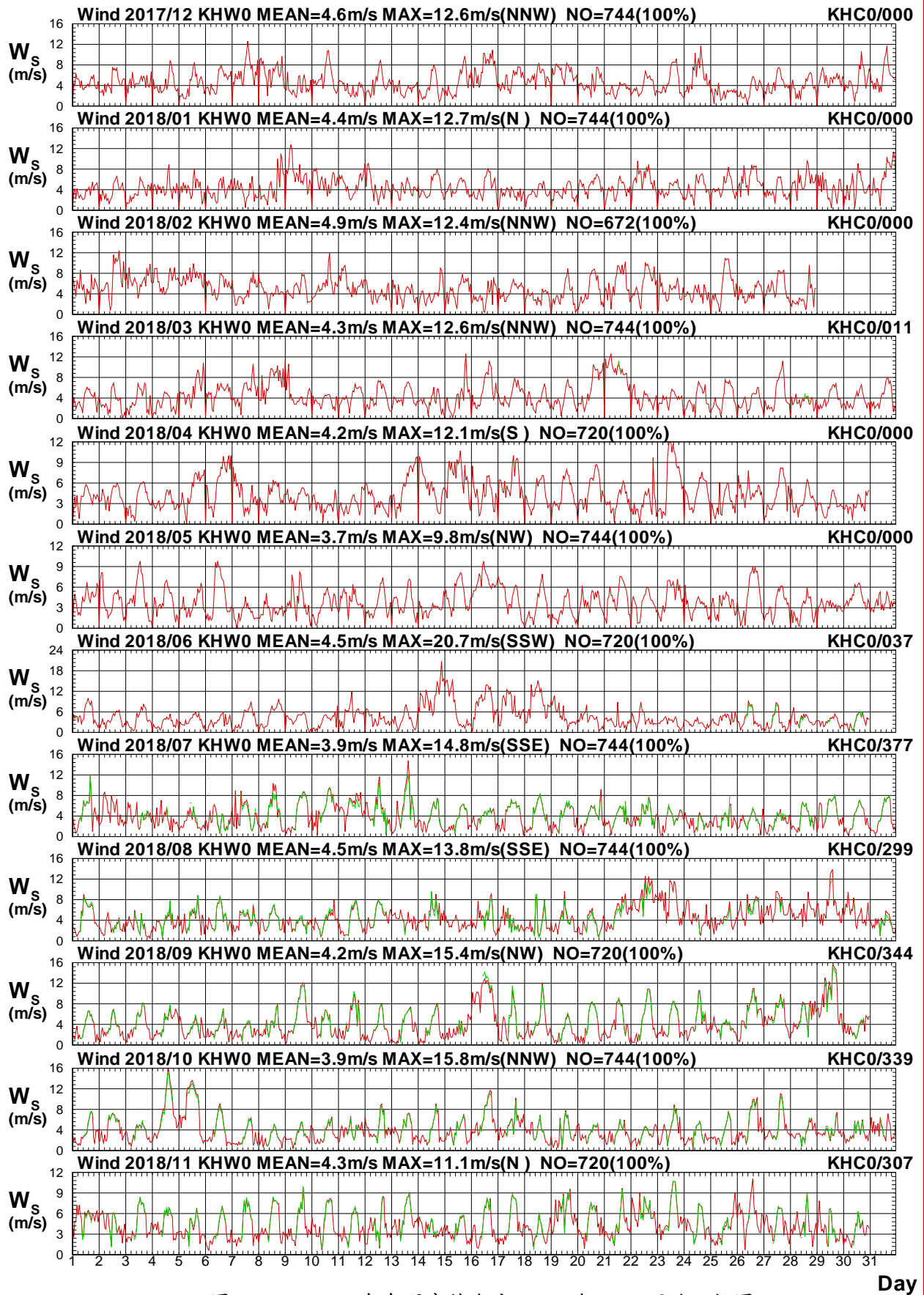


圖1.3.2a 2018年每月高雄海域 W 站與 C 站風速比較圖

W17CKHW0.1HA W17CKHC0.1HO W181KHW0.1HA W181KHC0.1HO W182KHW0.1HA W182KHC0.1HO
 W183KHW0.1HA W183KHC0.1HO W184KHW0.1HA W184KHC0.1HO W185KHW0.1HA W185KHC0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

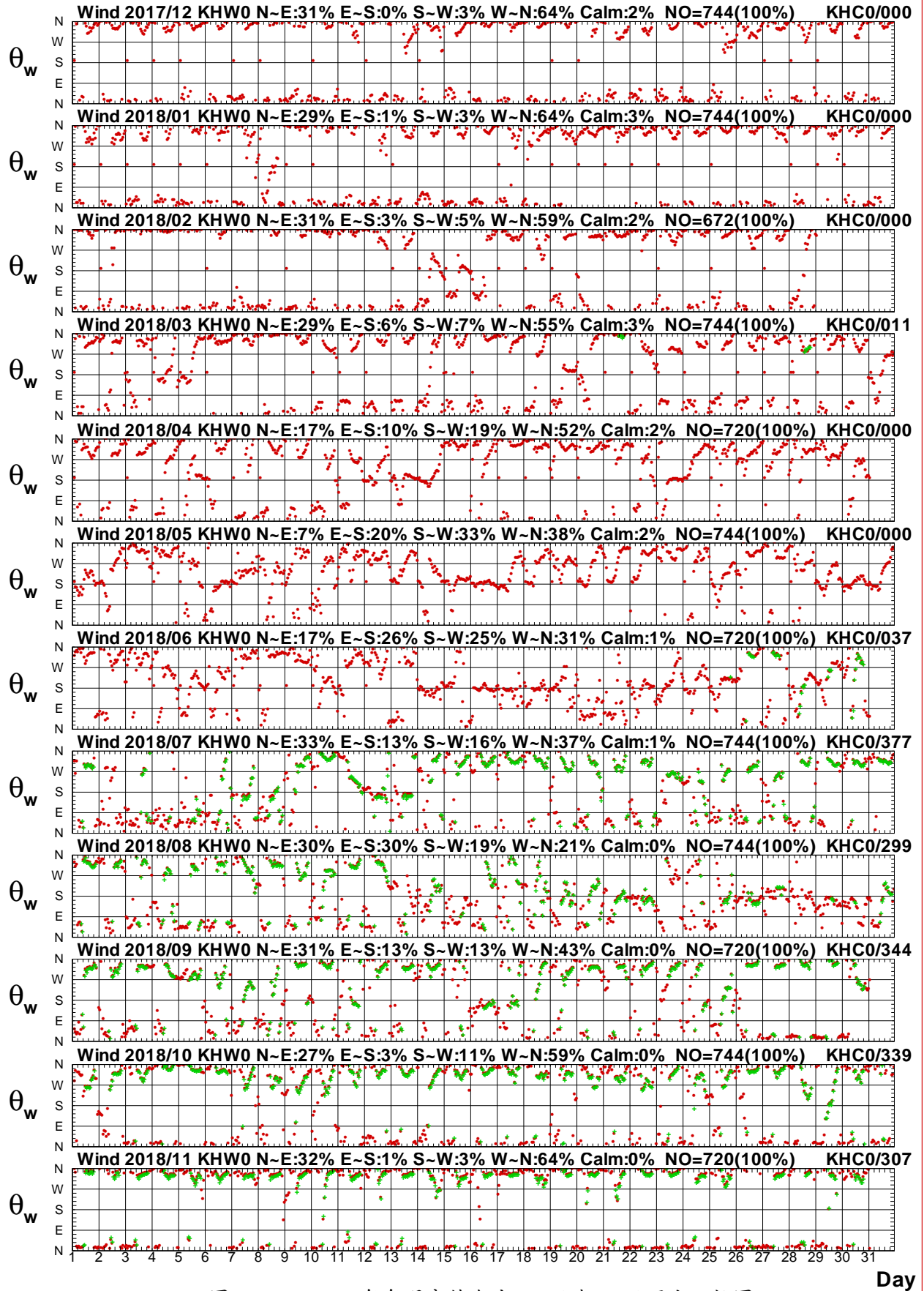


圖1.3.2b 2018年每月高雄海域 W 站與 C 站風向比較圖

W17CKHW0.1HA W17CKHC0.1H0 W181KHW0.1HA W181KHC0.1H0 W182KHW0.1HA W182KHC0.1H0
 W183KHW0.1HA W183KHC0.1H0 W184KHW0.1HA W184KHC0.1H0 W185KHW0.1HA W185KHC0.1H0

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

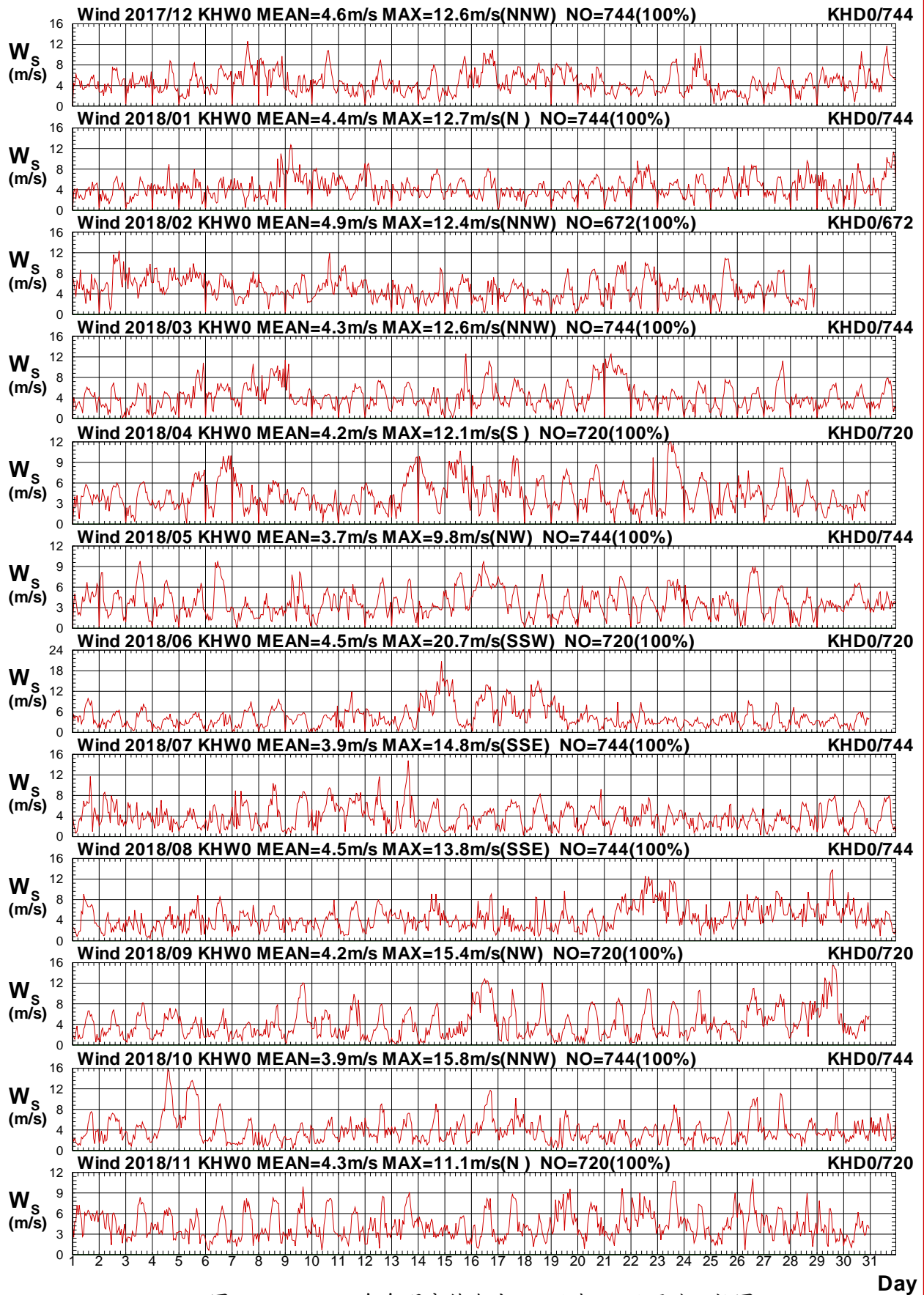


圖1.3.3a 2018年每月高雄海域 W 站與 D 站風速比較圖

W17CKHW0.1HA W17CKHD0.1HO W181KHW0.1HA W181KHD0.1HO W182KHW0.1HA W182KHD0.1HO
 W183KHW0.1HA W183KHD0.1HO W184KHW0.1HA W184KHD0.1HO W185KHW0.1HA W185KHD0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

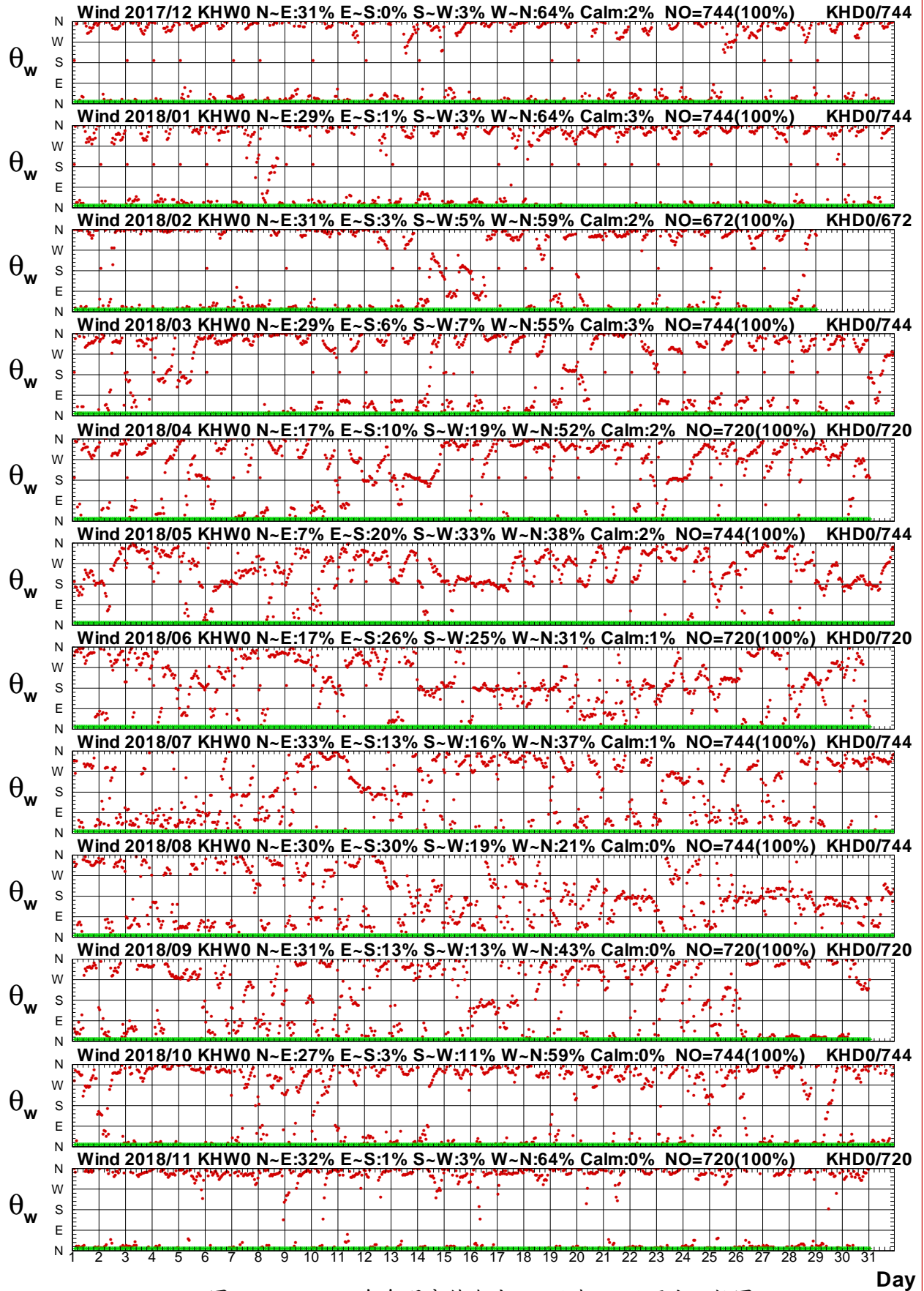


圖1.3.3b 2018年每月高雄海域 W 站與 D 站風向比較圖

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 W183KHW0.1HA W183KHD0.1HO W184KHW0.1HA W184KHD0.1HO W185KHW0.1HA W185KHD0.1HO

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

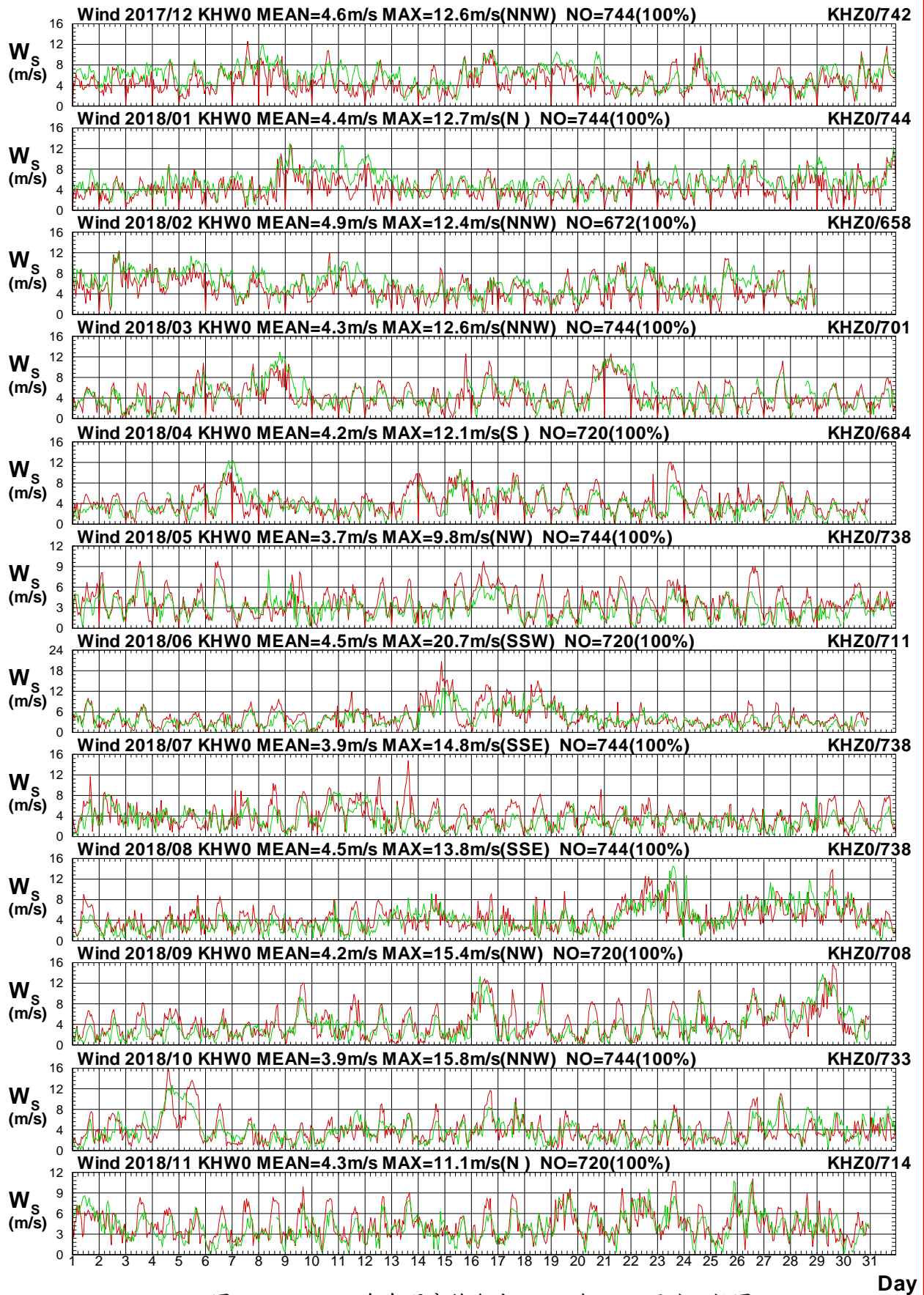


圖1.3.4a 2018年每月高雄海域 W 站與 Z 站風速比較圖

W17CKHW0.1HA W17CKHZ0.1HO W181KHW0.1HA W181KHZ0.1HO W182KHW0.1HA W182KHZ0.1HO
W183KHW0.1HA W183KHZ0.1HO W184KHW0.1HA W184KHZ0.1HO W185KHW0.1HA W185KHZ0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

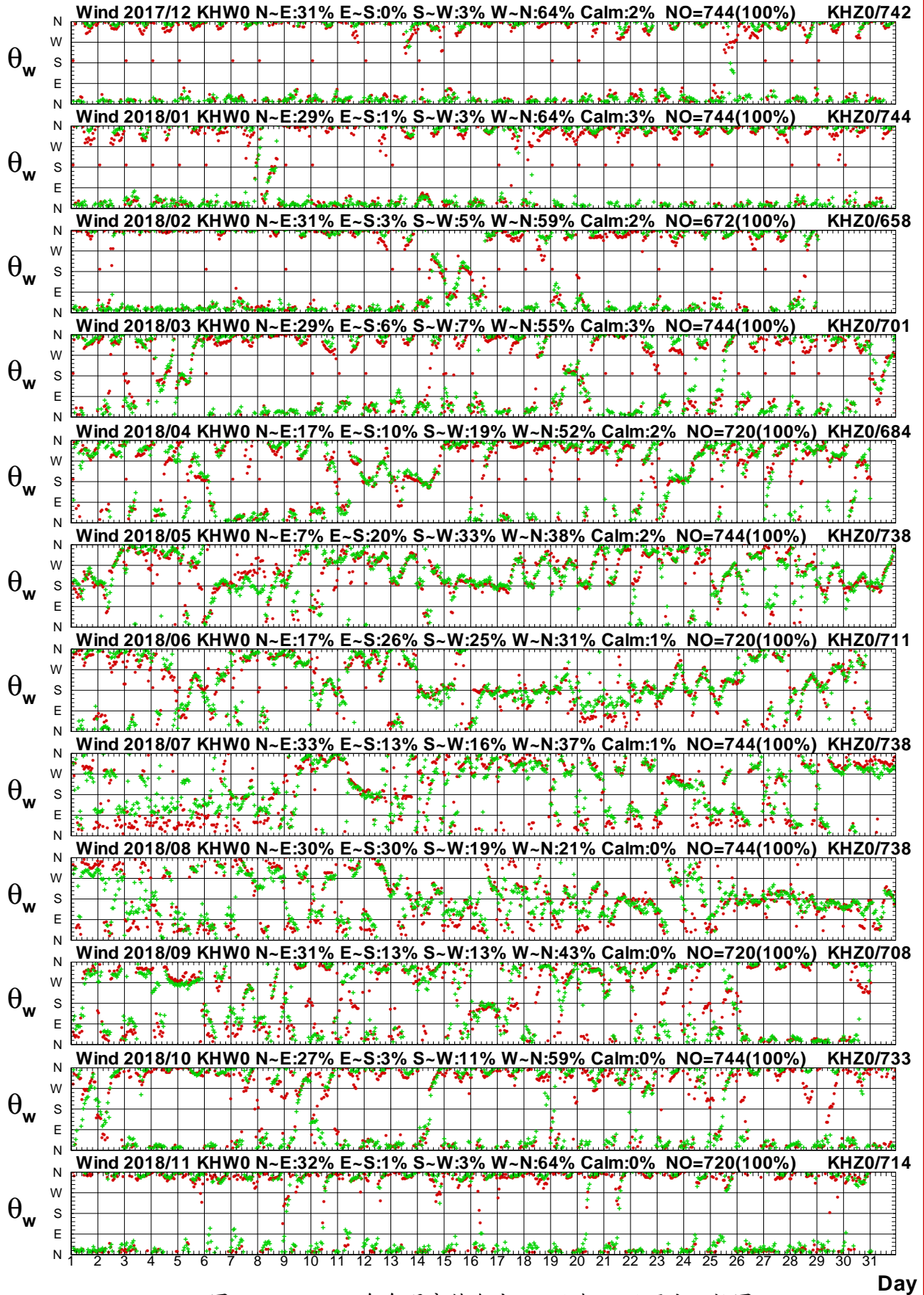


圖1.3.4b 2018年每月高雄海域 W 站與 Z 站風向比較圖

W17CKHW0.1HA W17CKHZ0.1H0 W181KHW0.1HA W181KHZ0.1H0 W182KHW0.1HA W182KHZ0.1H0
 W183KHW0.1HA W183KHZ0.1H0 W184KHW0.1HA W184KHZ0.1H0 W185KHW0.1HA W185KHZ0.1H0

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

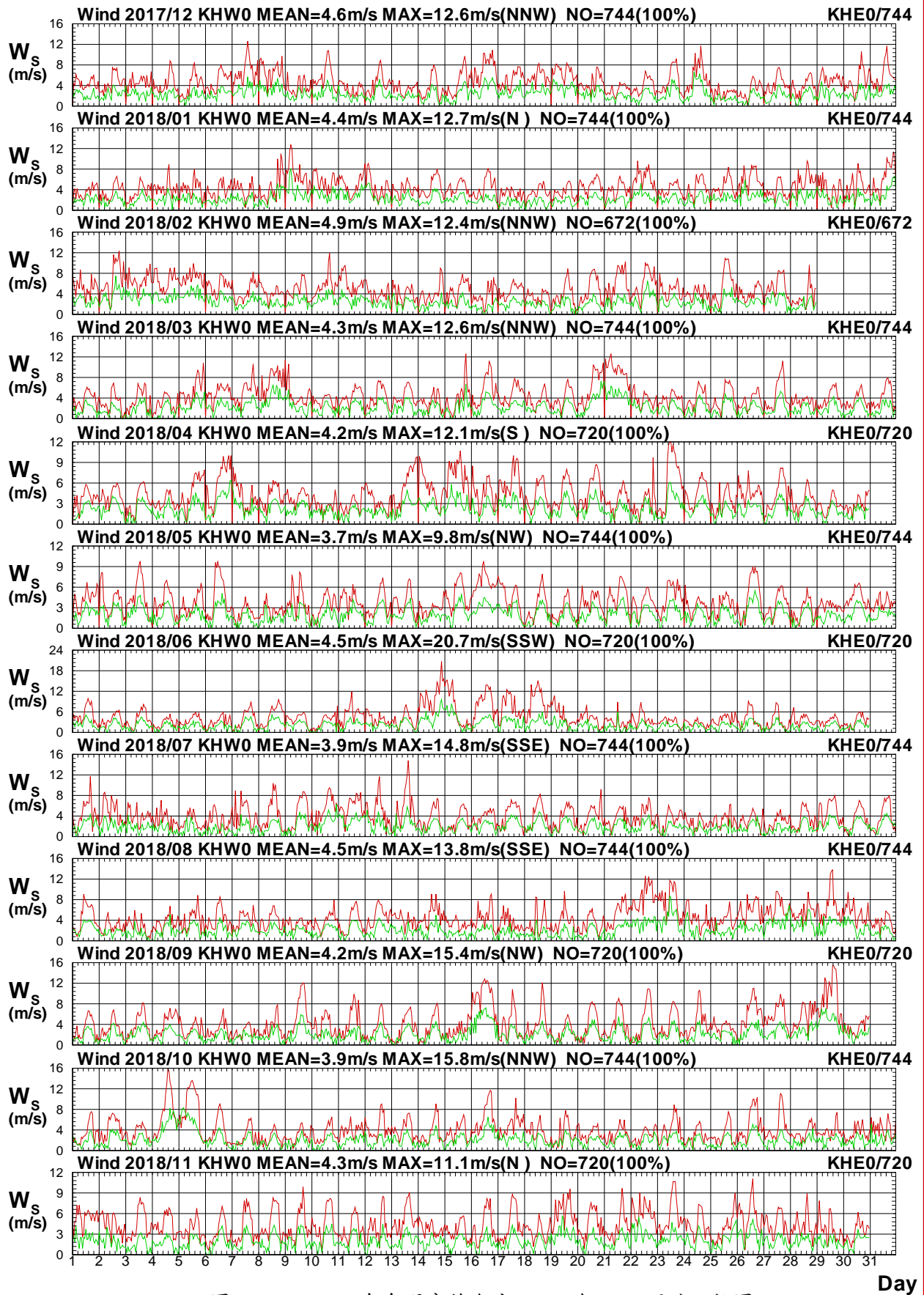


圖1.3.5a 2018年每月高雄海域 W 站與 E 站風速比較圖

W17CKHW0.1HA W17CKHE0.1HO W181KHW0.1HA W181KHE0.1HO W182KHW0.1HA W182KHE0.1HO
 W183KHW0.1HA W183KHE0.1HO W184KHW0.1HA W184KHE0.1HO W185KHW0.1HA W185KHE0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

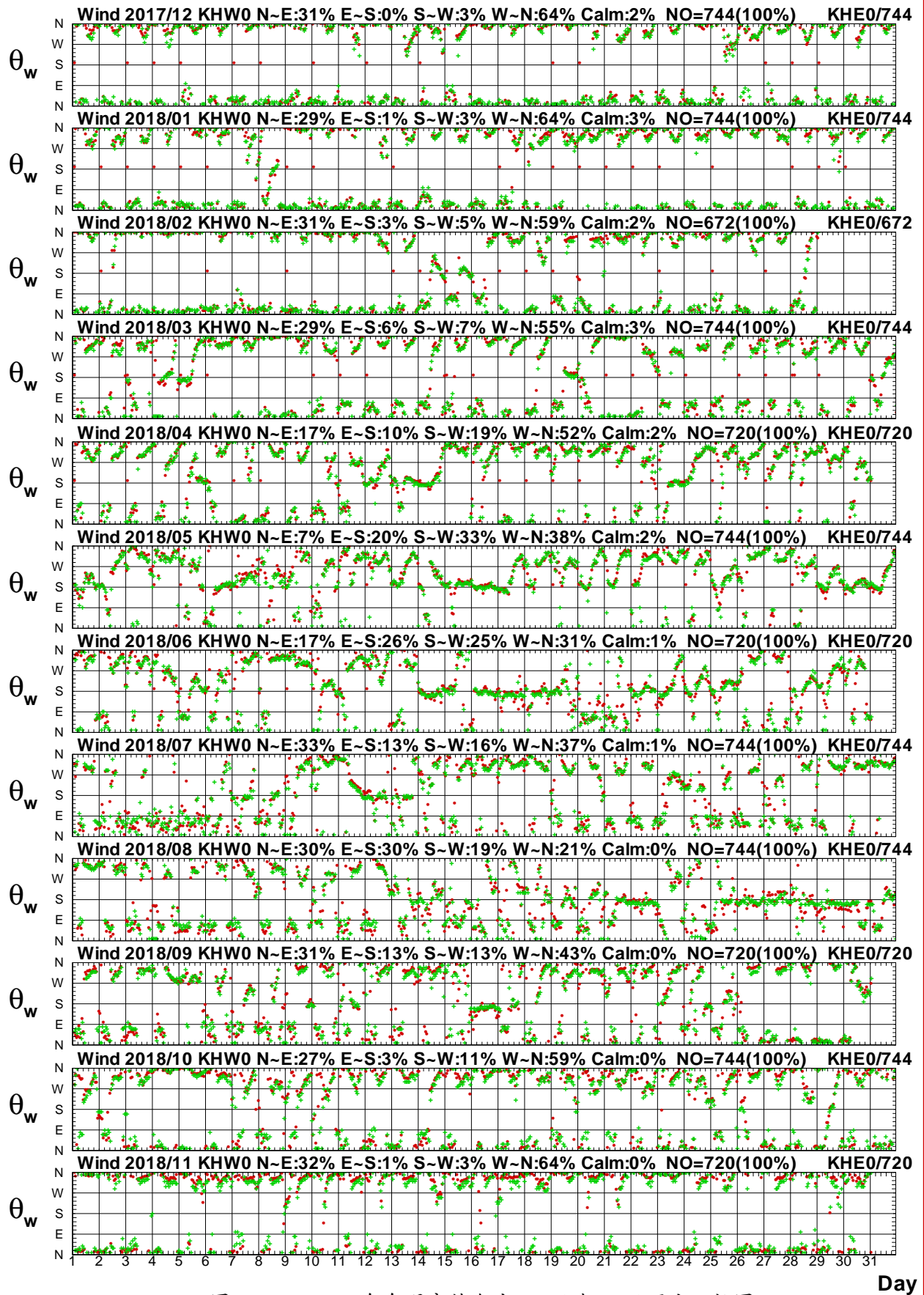


圖1.3.5b 2018年每月高雄海域 W 站與 E 站風向比較圖

W17CKHW0.1HA W17CKHE0.1HO W181KHW0.1HA W181KHE0.1HO W182KHW0.1HA W182KHE0.1HO
 W183KHW0.1HA W183KHE0.1HO W184KHW0.1HA W184KHE0.1HO W185KHW0.1HA W185KHE0.1HO

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

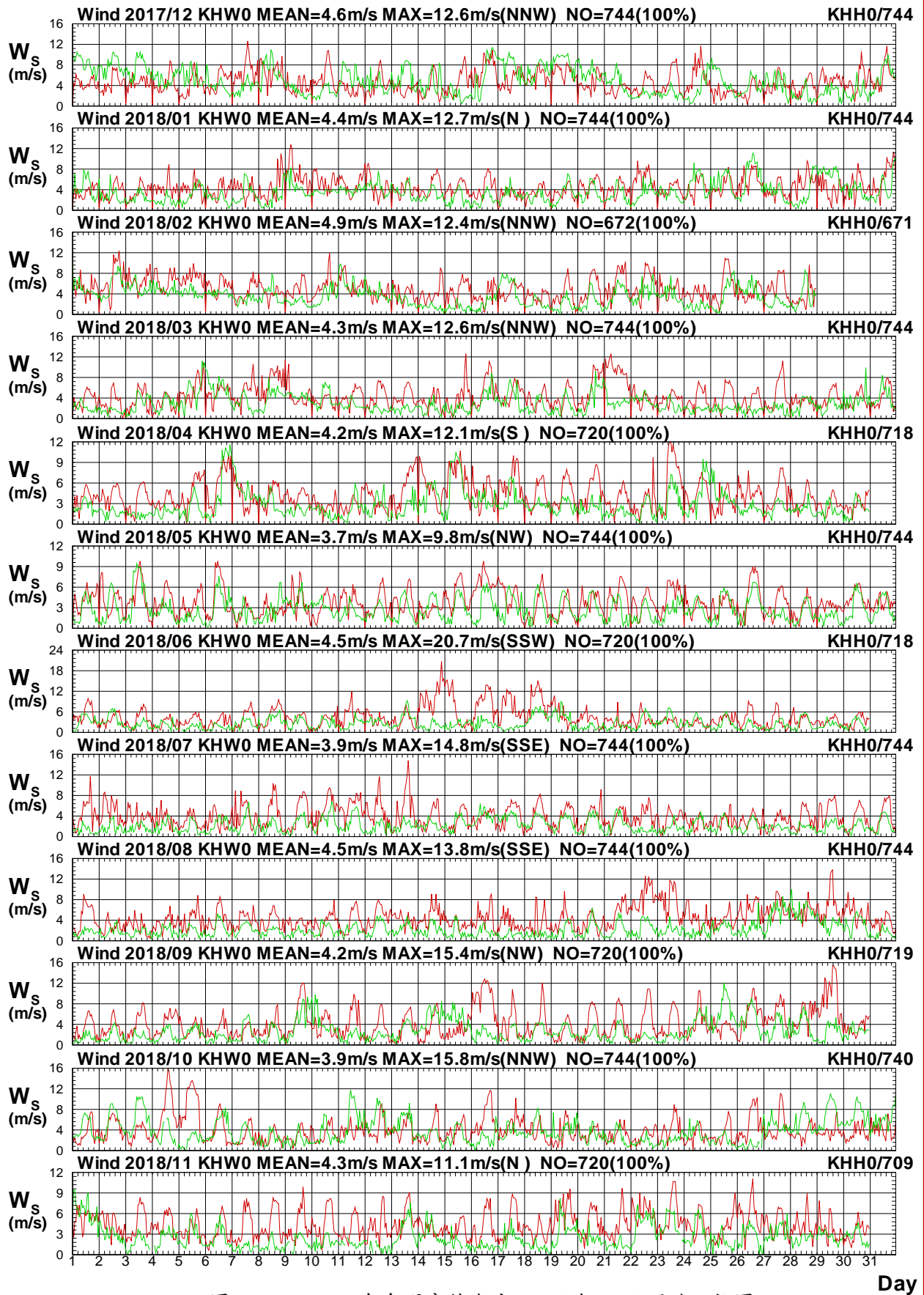


圖1.3.6a 2018年每月高雄海域 W 站與 H 站風速比較圖

W17CKHW0.1HA W17CKHH0.1HO W181KHW0.1HA W181KHH0.1HO W182KHW0.1HA W182KHH0.1HO
 W183KHW0.1HA W183KHH0.1HO W184KHW0.1HA W184KHH0.1HO W185KHW0.1HA W185KHH0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

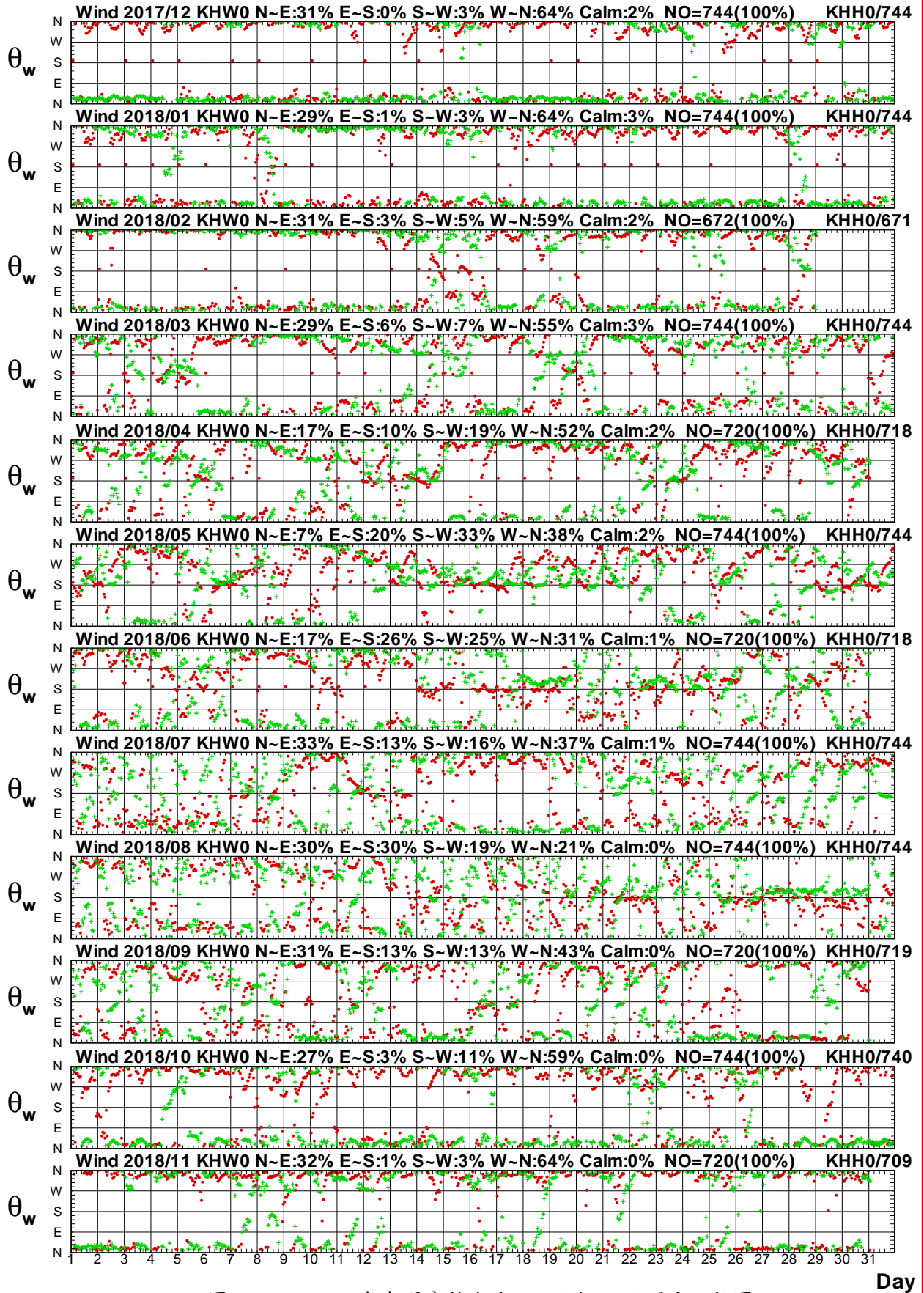


圖1.3.6b 2018年每月高雄海域 W 站與 H 站風向比較圖

W17CKHW0.1HA W17CKHH0.1HO W181KHW0.1HA W181KHH0.1HO W182KHW0.1HA W182KHH0.1HO
 W183KHW0.1HA W183KHH0.1HO W184KHW0.1HA W184KHH0.1HO W185KHW0.1HA W185KHH0.1HO

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

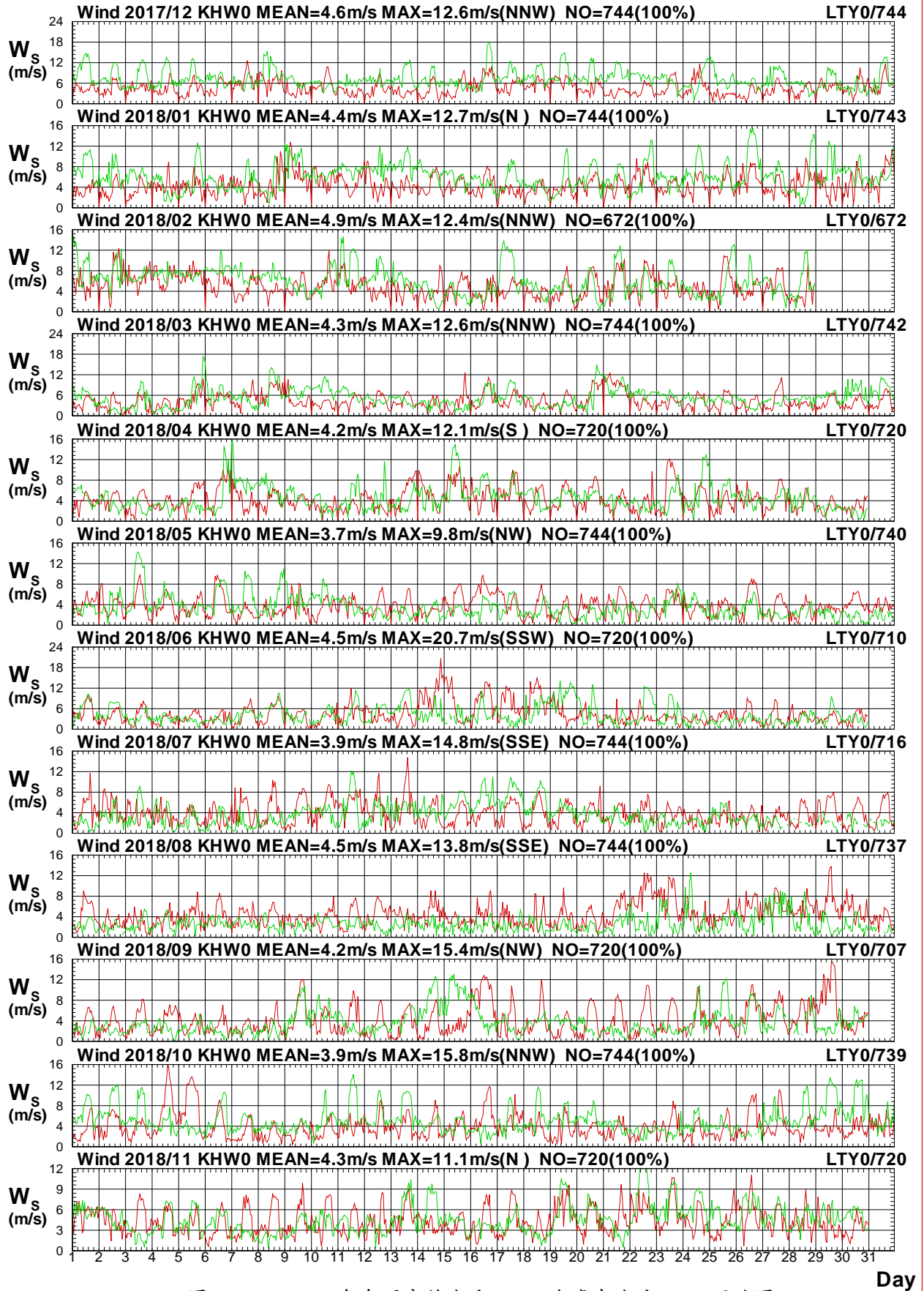


圖1.3.7a 2018年每月高雄海域 W 站與臺東海域 Y 站風速圖

W17CKHW0.1HA W17CLTY0.1HO W181KHW0.1HA W181LTY0.1HO W182KHW0.1HA W182LTY0.1HO
 W183KHW0.1HA W183LTY0.1HO W184KHW0.1HA W184LTY0.1HO W185KHW0.1HA W185LTY0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

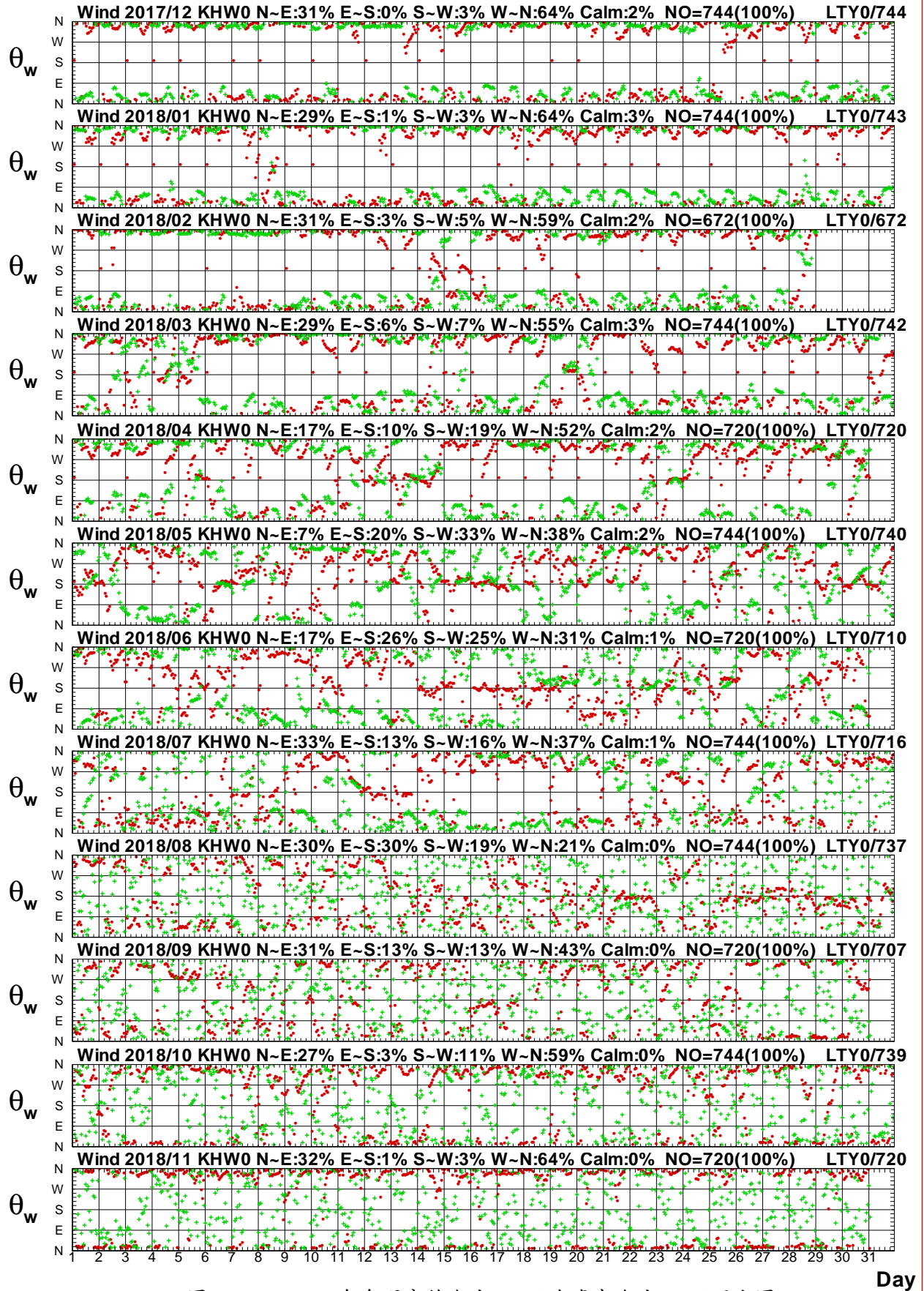


圖1.3.7b 2018年每月高雄海域 W 站與臺東海域 Y 站風向圖

W17CKHW0.1HA W17CLTY0.1H0 W181KHW0.1HA W181LTY0.1H0 W182KHW0.1HA W182LTY0.1H0
 W183KHW0.1HA W183LTY0.1H0 W184KHW0.1HA W184LTY0.1H0 W185KHW0.1HA W185LTY0.1H0

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

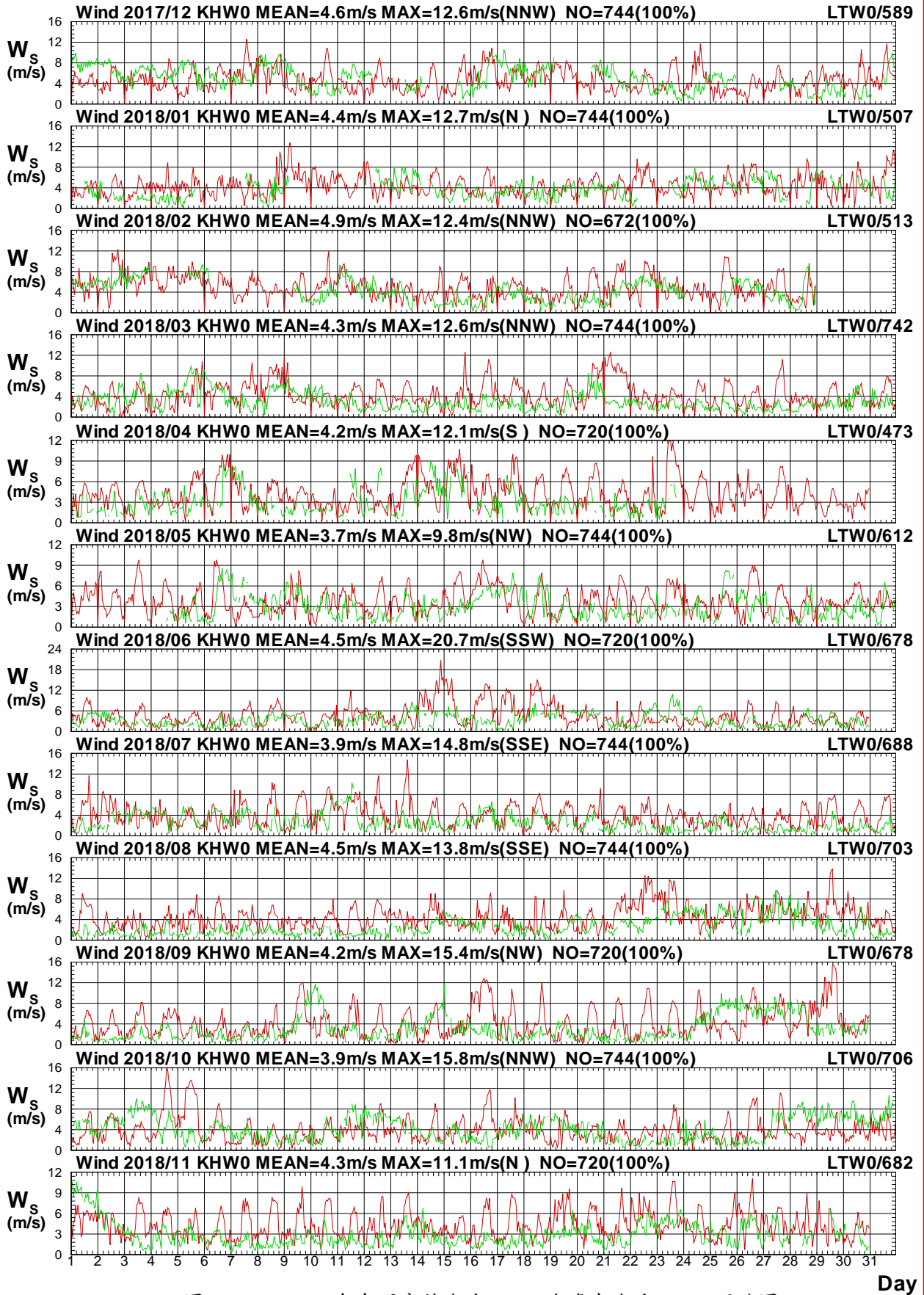


圖 1.3.8a 2018 年每月高雄海域 W 站與臺東海域 W 站風速圖

W17CKHW0.1HA W17CLTW0.1HO W181KHW0.1HA W181LTW0.1HO W182KHW0.1HA W182LTW0.1HO
 W183KHW0.1HA W183LTW0.1HO W184KHW0.1HA W184LTW0.1HO W185KHW0.1HA W185LTW0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

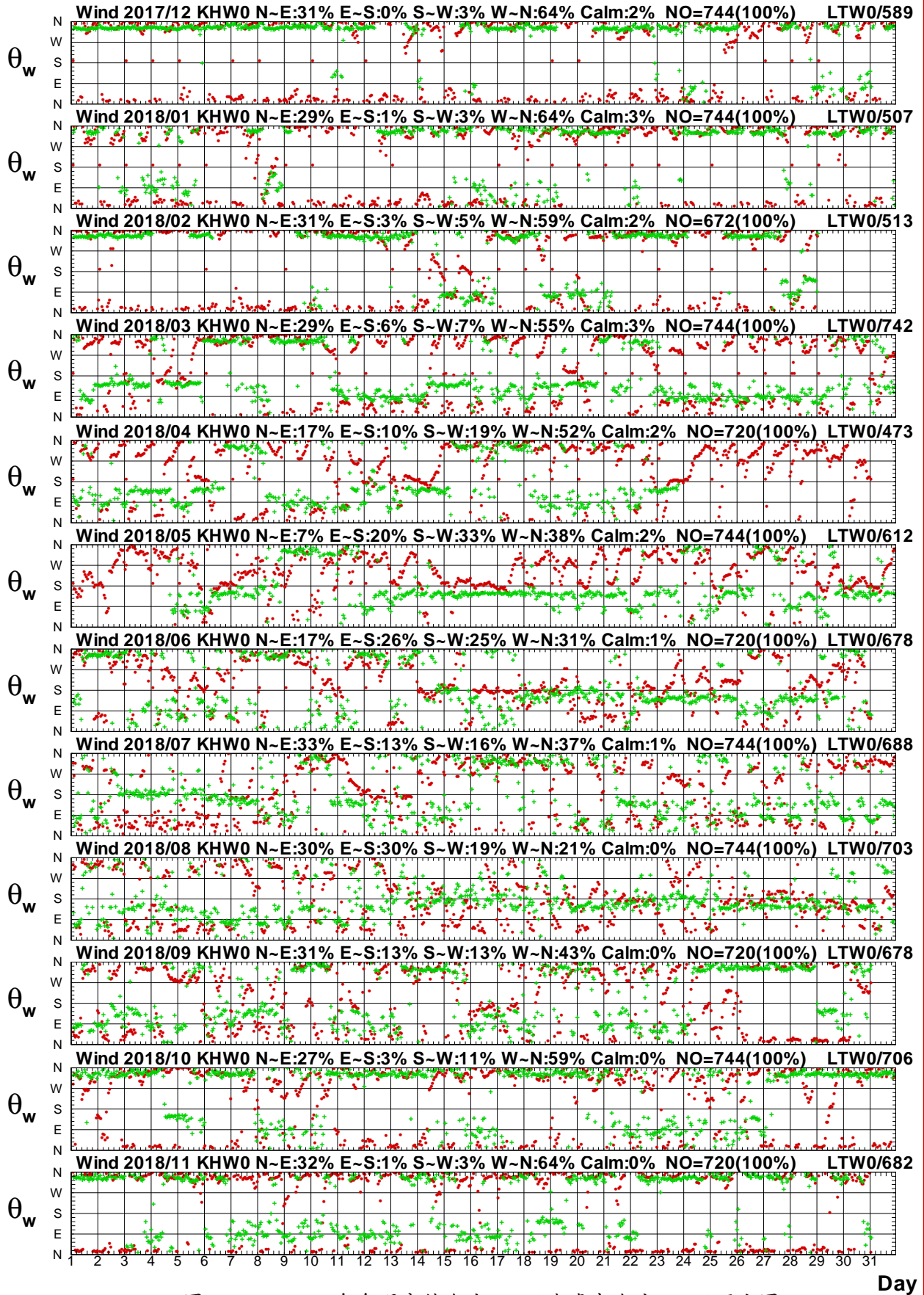


圖1.3.8b 2018年每月高雄海域 W 站與臺東海域 W 站風向圖

W17CKHW0.1HA W17CLTW0.1HO W181KHW0.1HA W181LTW0.1HO W182KHW0.1HA W182LTW0.1HO
 W183KHW0.1HA W183LTW0.1HO W184KHW0.1HA W184LTW0.1HO W185KHW0.1HA W185LTW0.1HO

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

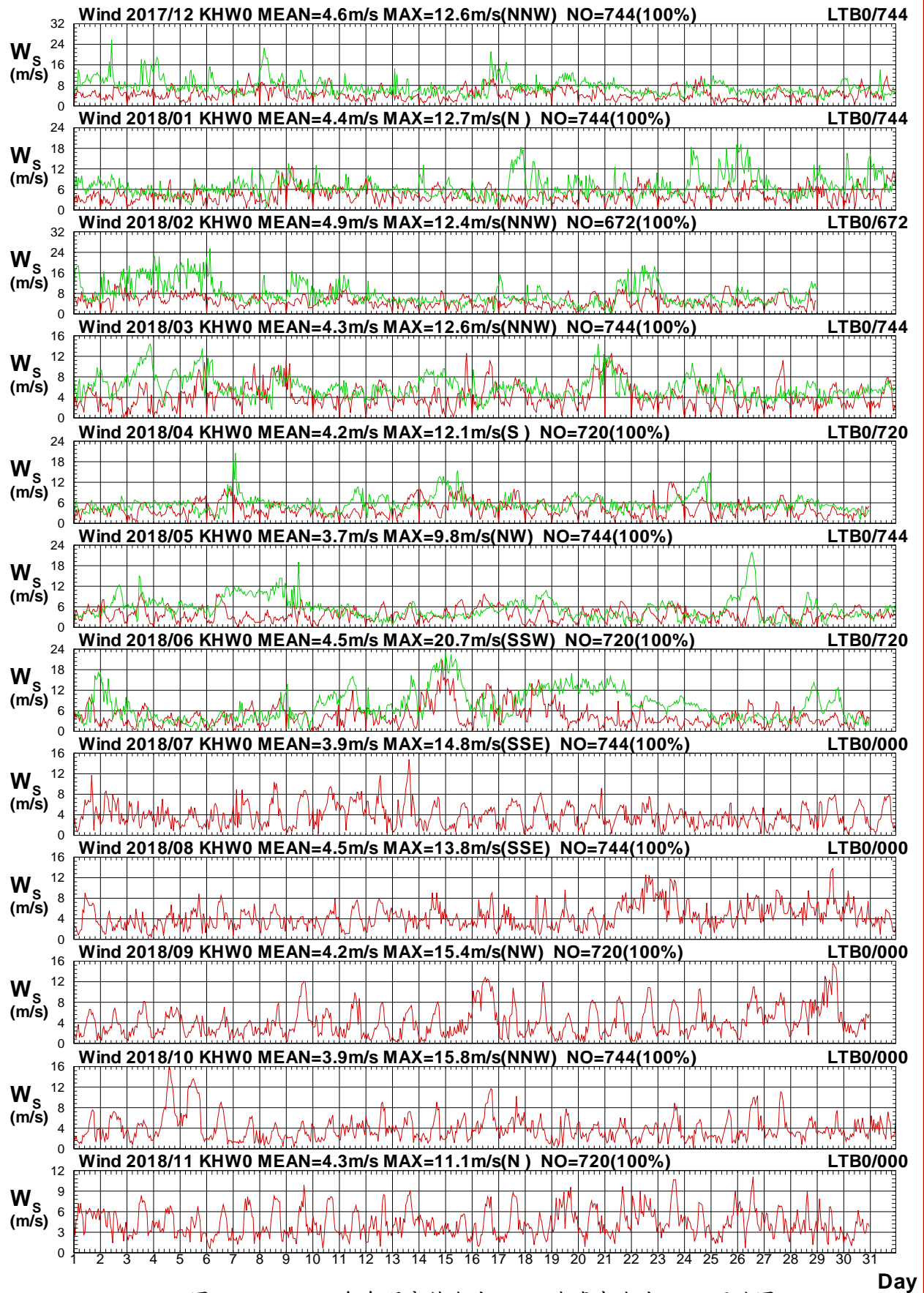


圖1.3.9a 2018年每月高雄海域 W 站與臺東海域 B 站風速圖

W17CKHW0.1HA W17CLTB0.1HO W181KHW0.1HA W181LTB0.1HO W182KHW0.1HA W182LTB0.1HO
 W183KHW0.1HA W183LTB0.1HO W184KHW0.1HA W184LTB0.1HO W185KHW0.1HA W185LTB0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

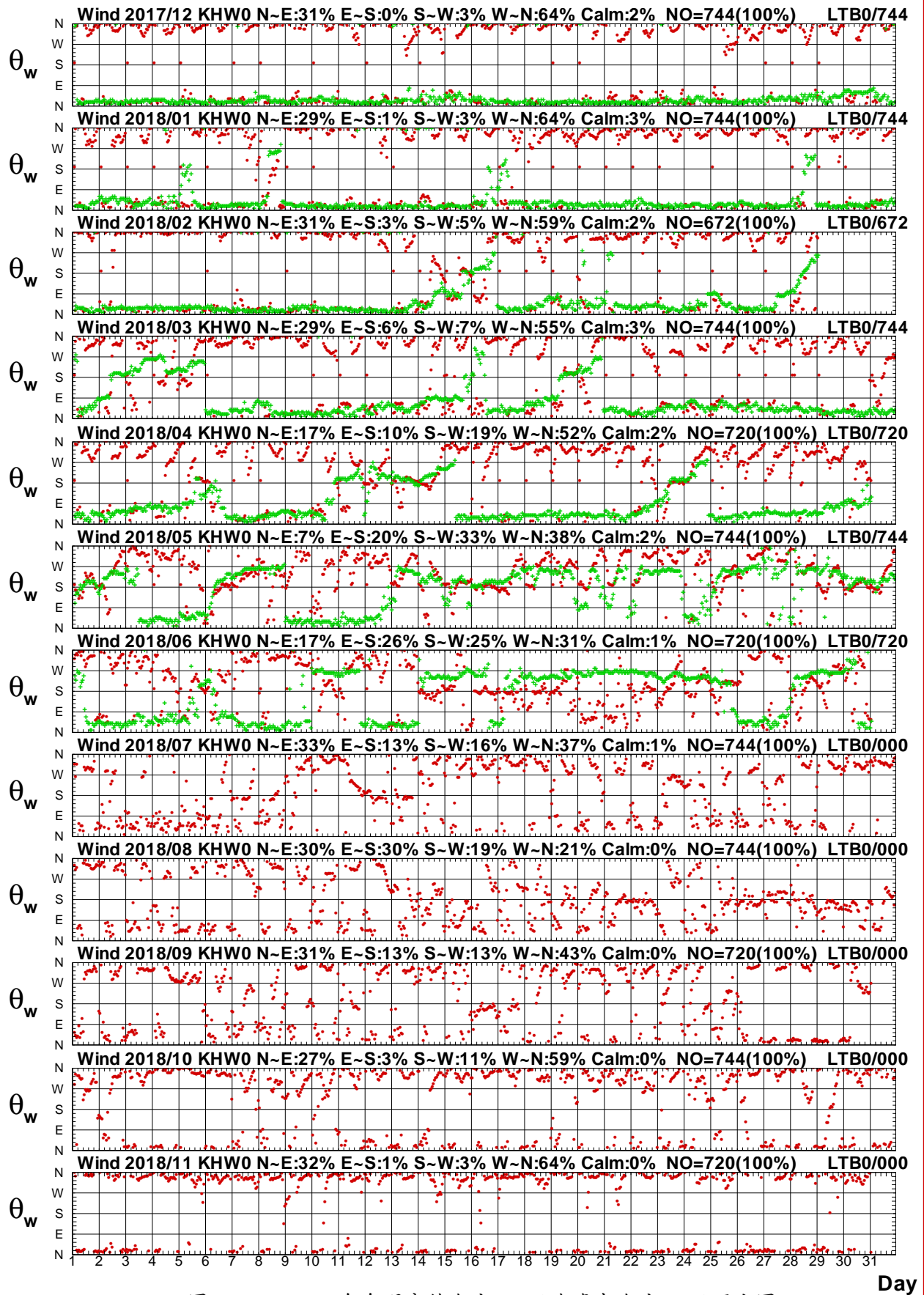


圖1.3.9b 2018年每月高雄海域 W 站與臺東海域 B 站風向圖

W17CKHW0.1HA W17CLTB0.1H0 W181KHW0.1HA W181LTB0.1H0 W182KHW0.1HA W182LTB0.1H0
 W183KHW0.1HA W183LTB0.1H0 W184KHW0.1HA W184LTB0.1H0 W185KHW0.1HA W185LTB0.1H0

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

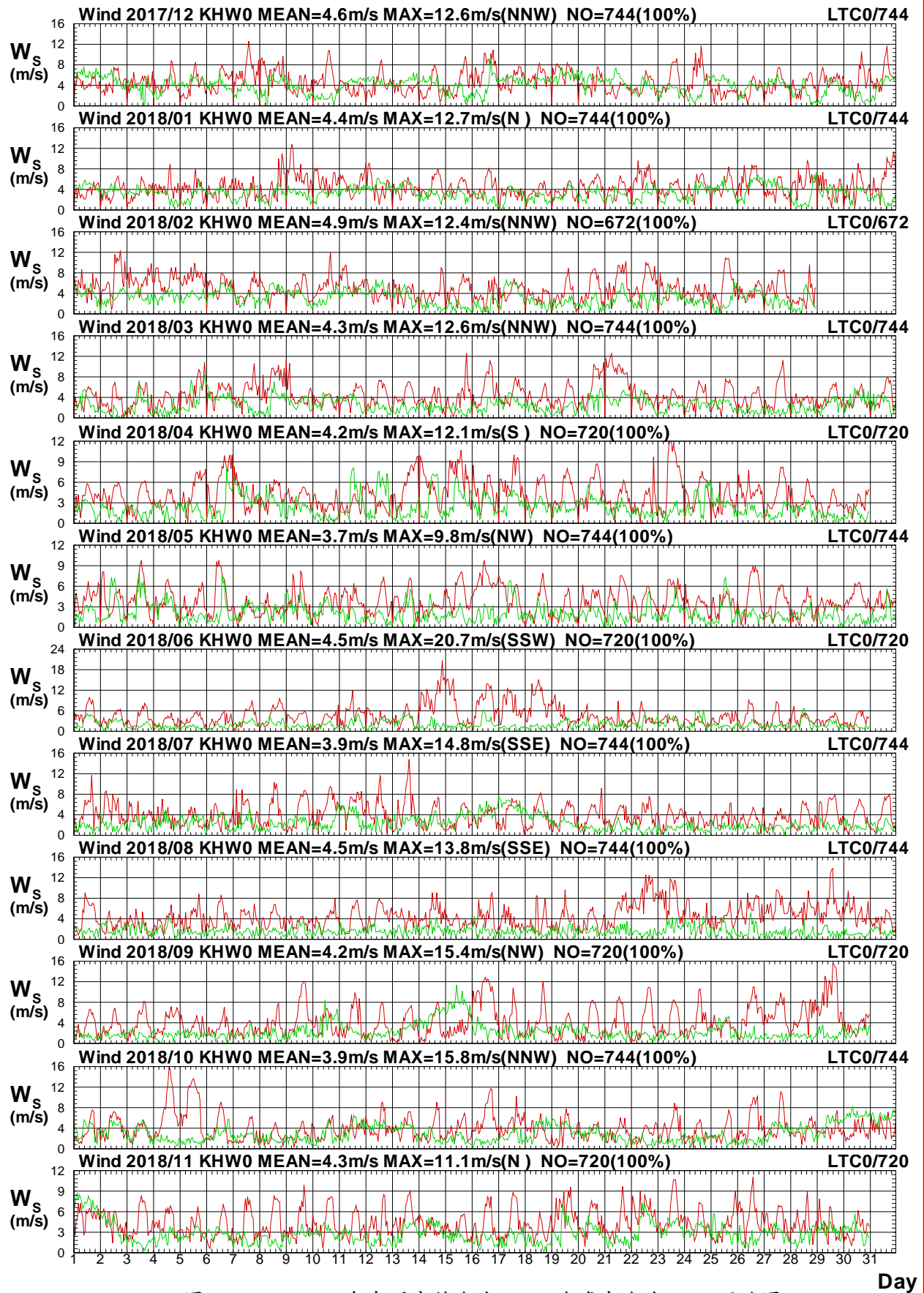


圖 1.3.10a 2018年每月高雄海域 W 站與臺東海域 C 站風速圖

W17CKHW0.1HA W17CLTC0.1HO W181KHW0.1HA W181LTC0.1HO W182KHW0.1HA W182LTC0.1HO
 W183KHW0.1HA W183LTC0.1HO W184KHW0.1HA W184LTC0.1HO W185KHW0.1HA W185LTC0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

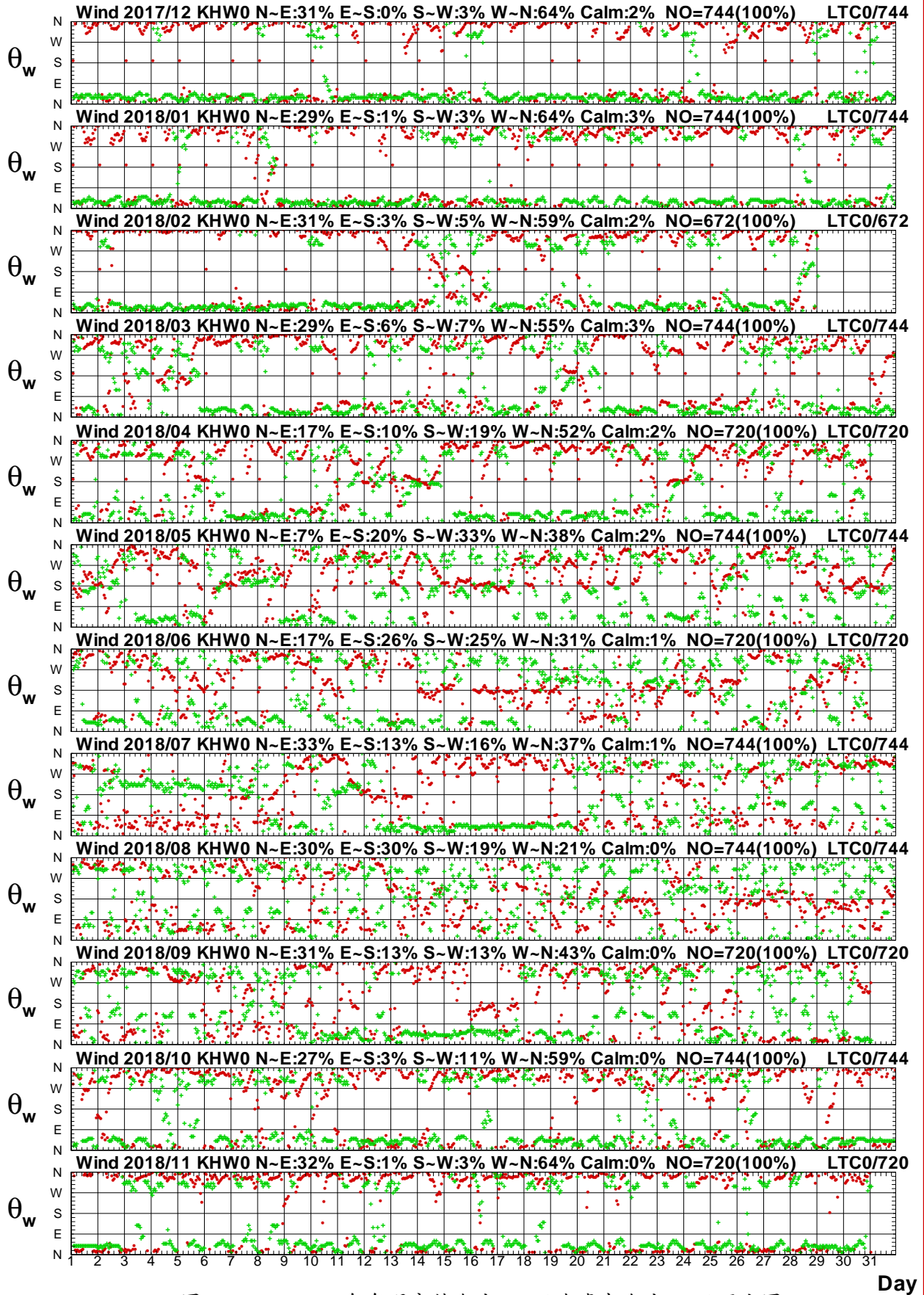


圖 1.3.10b 2018年每月高雄海域 W 站與臺東海域 C 站風向圖

W17CKHW0.1HA W17CLTC0.1HO W181KHW0.1HA W181LTC0.1HO W182KHW0.1HA W182LTC0.1HO
 W183KHW0.1HA W183LTC0.1HO W184KHW0.1HA W184LTC0.1HO W185KHW0.1HA W185LTC0.1HO

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

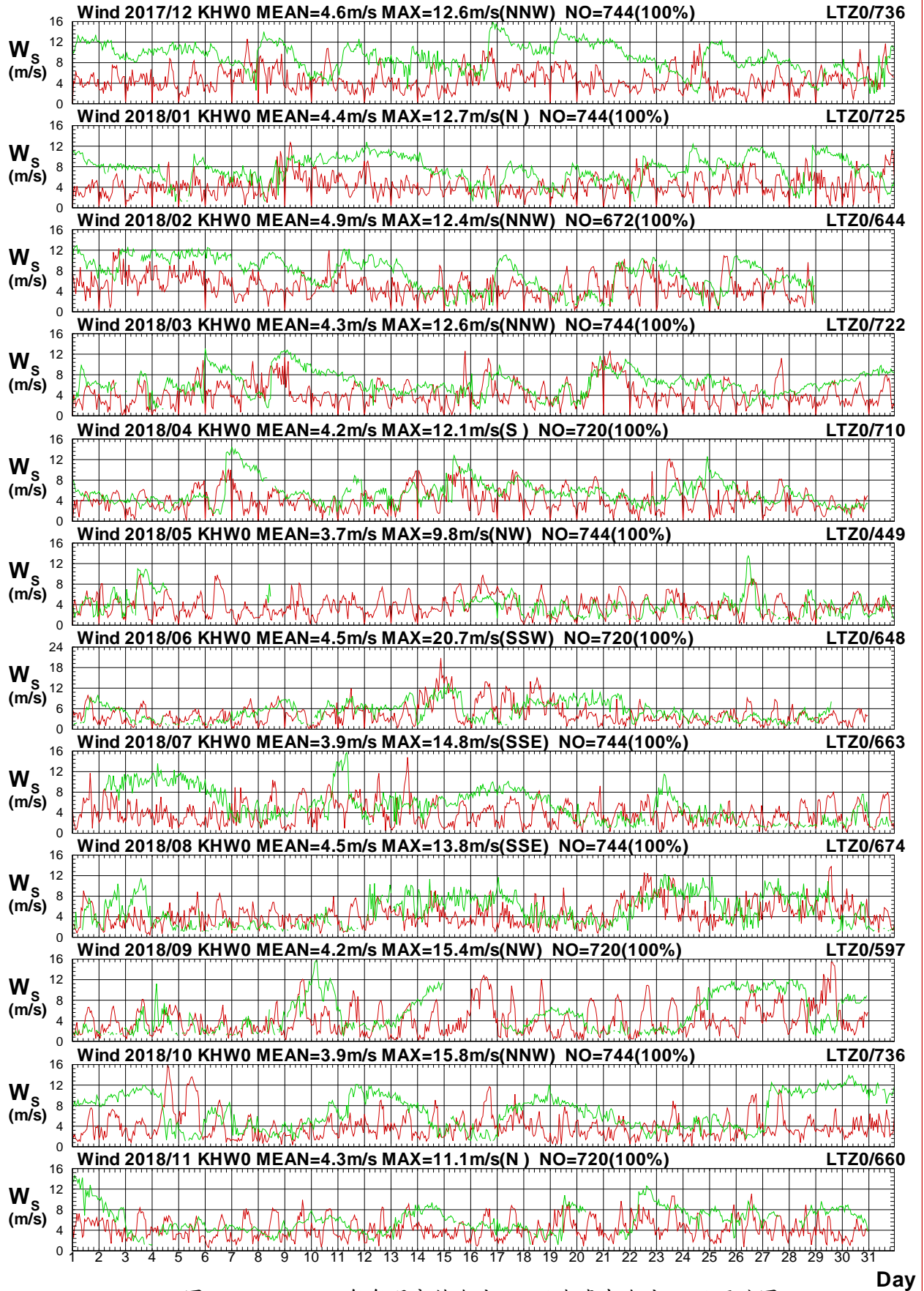


圖 1.3.11a 2018年每月高雄海域 W 站與臺東海域 Z 站風速圖

W17CKHW0.1HA W17CLTZ0.1HO W181KHW0.1HA W181LTZ0.1HO W182KHW0.1HA W182LTZ0.1HO
 W183KHW0.1HA W183LTZ0.1HO W184KHW0.1HA W184LTZ0.1HO W185KHW0.1HA W185LTZ0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

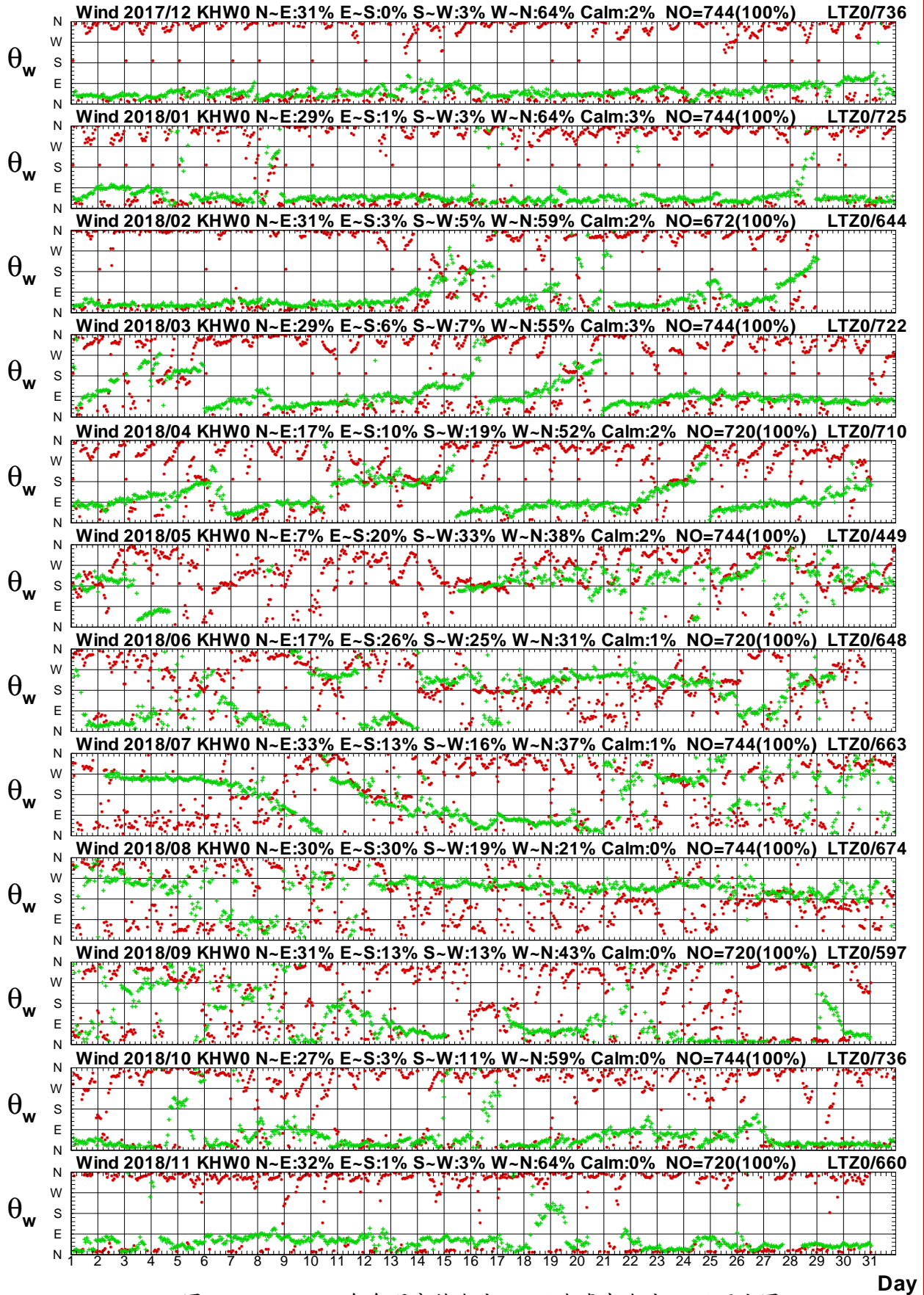


圖1.3.11b 2018年每月高雄海域 W 站與臺東海域 Z 站風向圖

W17CKHW0.1HA W17CLTZ0.1HO W181KHW0.1HA W181LTZ0.1HO W182KHW0.1HA W182LTZ0.1HO
 W183KHW0.1HA W183LTZ0.1HO W184KHW0.1HA W184LTZ0.1HO W185KHW0.1HA W185LTZ0.1HO

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

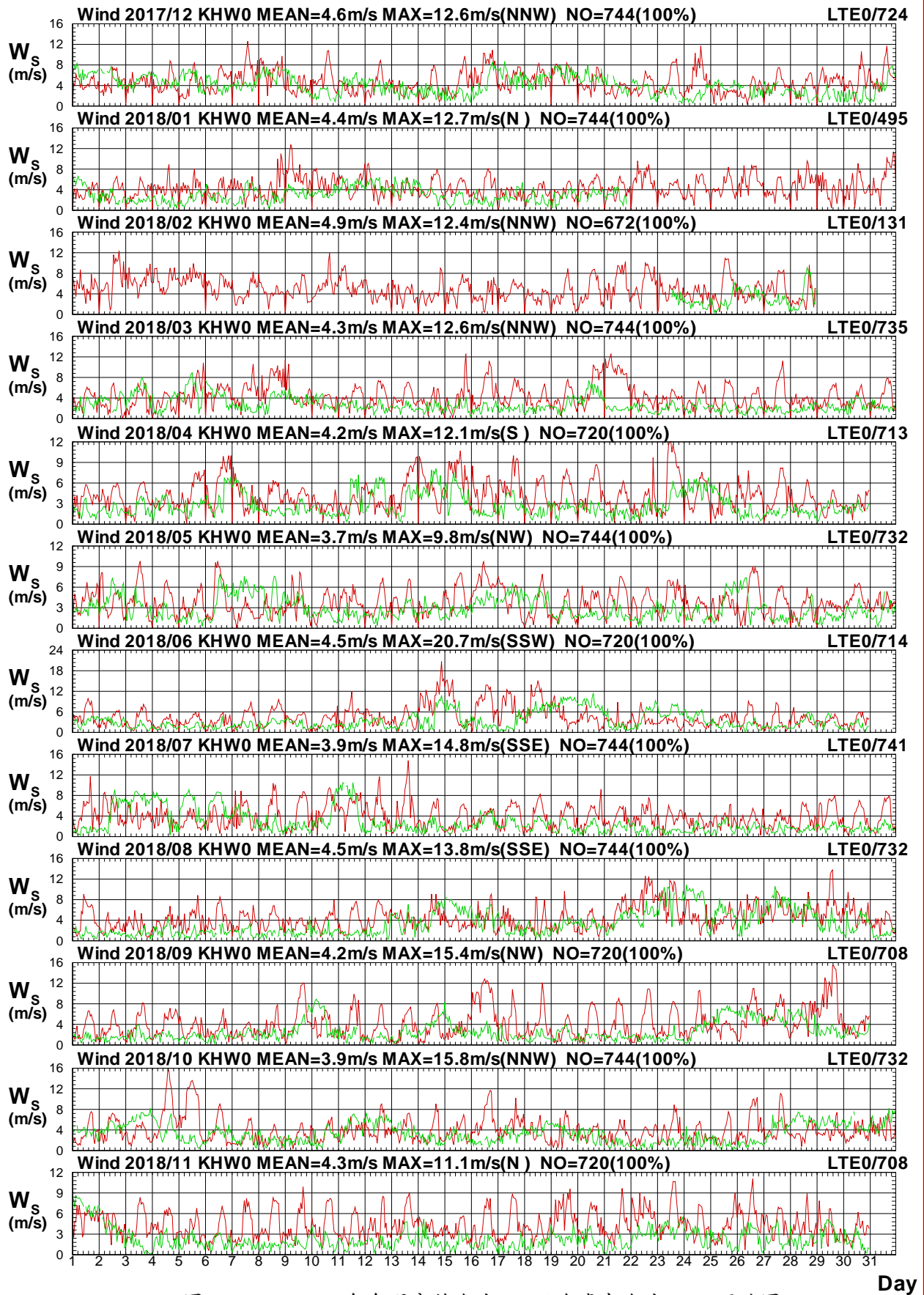


圖 1.3.12a 2018年每月高雄海域 W 站與臺東海域 E 站風速圖

W17CKHW0.1HA W17CLTE0.1HO W181KHW0.1HA W181LTE0.1HO W182KHW0.1HA W182LTE0.1HO
 W183KHW0.1HA W183LTE0.1HO W184KHW0.1HA W184LTE0.1HO W185KHW0.1HA W185LTE0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

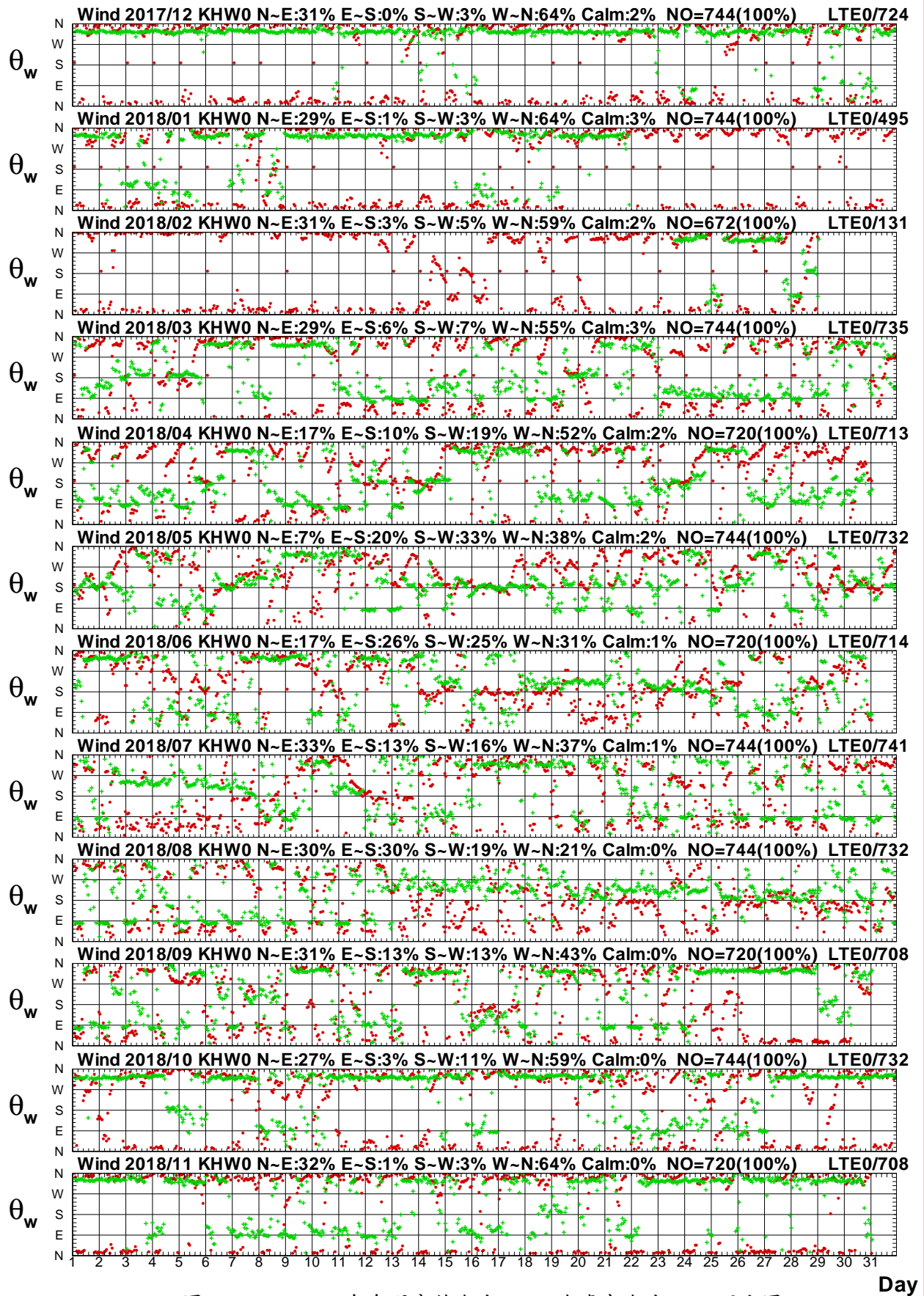


圖 1.3.12b 2018年每月高雄海域 W 站與臺東海域 E 站風向圖

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W183KHW0.1HA W183LTE0.1HO W184KHW0.1HA W184LTE0.1HO W185KHW0.1HA W185LTE0.1HO

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

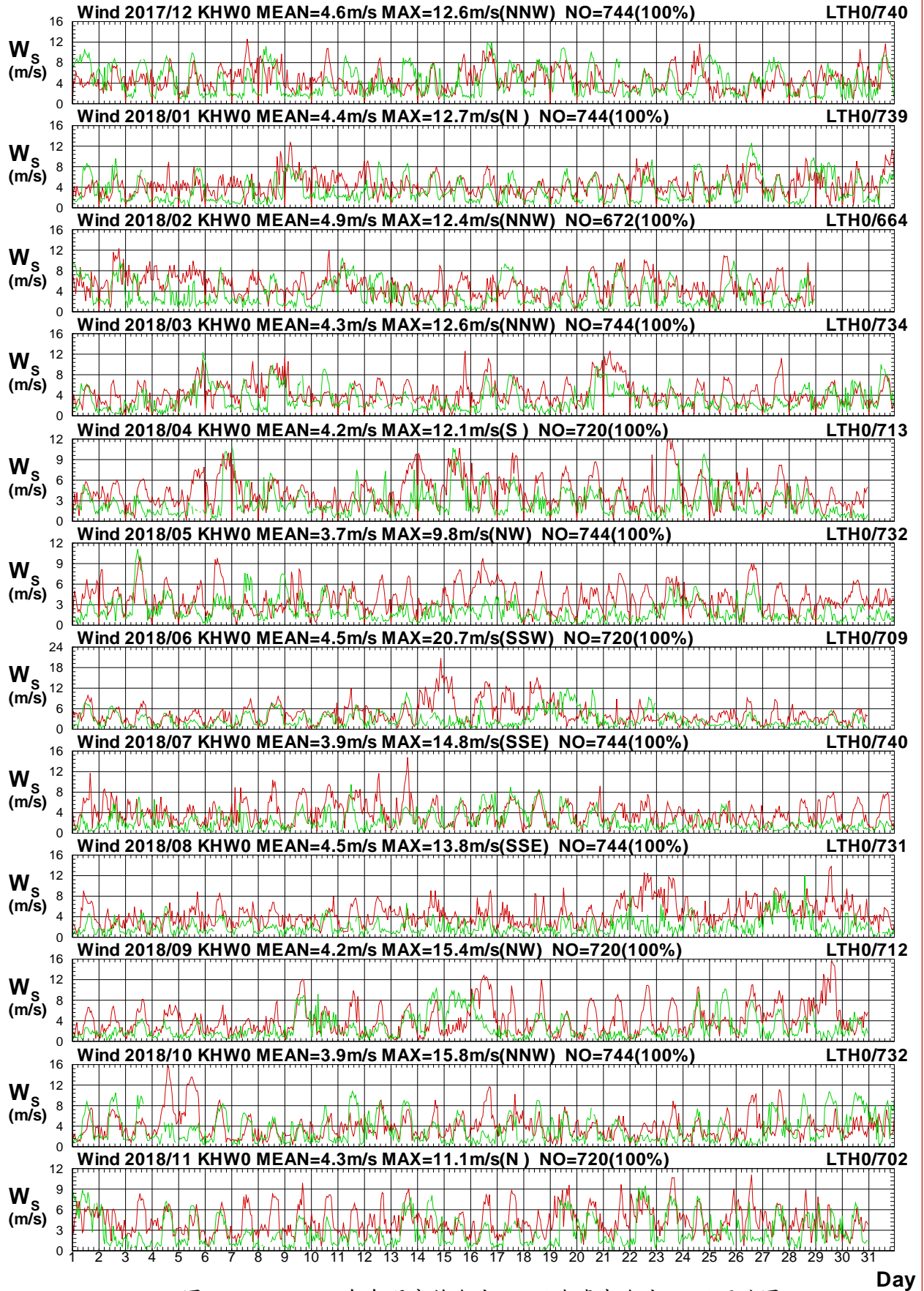


圖 1.3.13a 2018年每月高雄海域 W 站與臺東海域 H 站風速圖

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 W183KHW0.1HA W183LTH0.1HO W184KHW0.1HA W184LTH0.1HO W185KHW0.1HA W185LTH0.1HO
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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

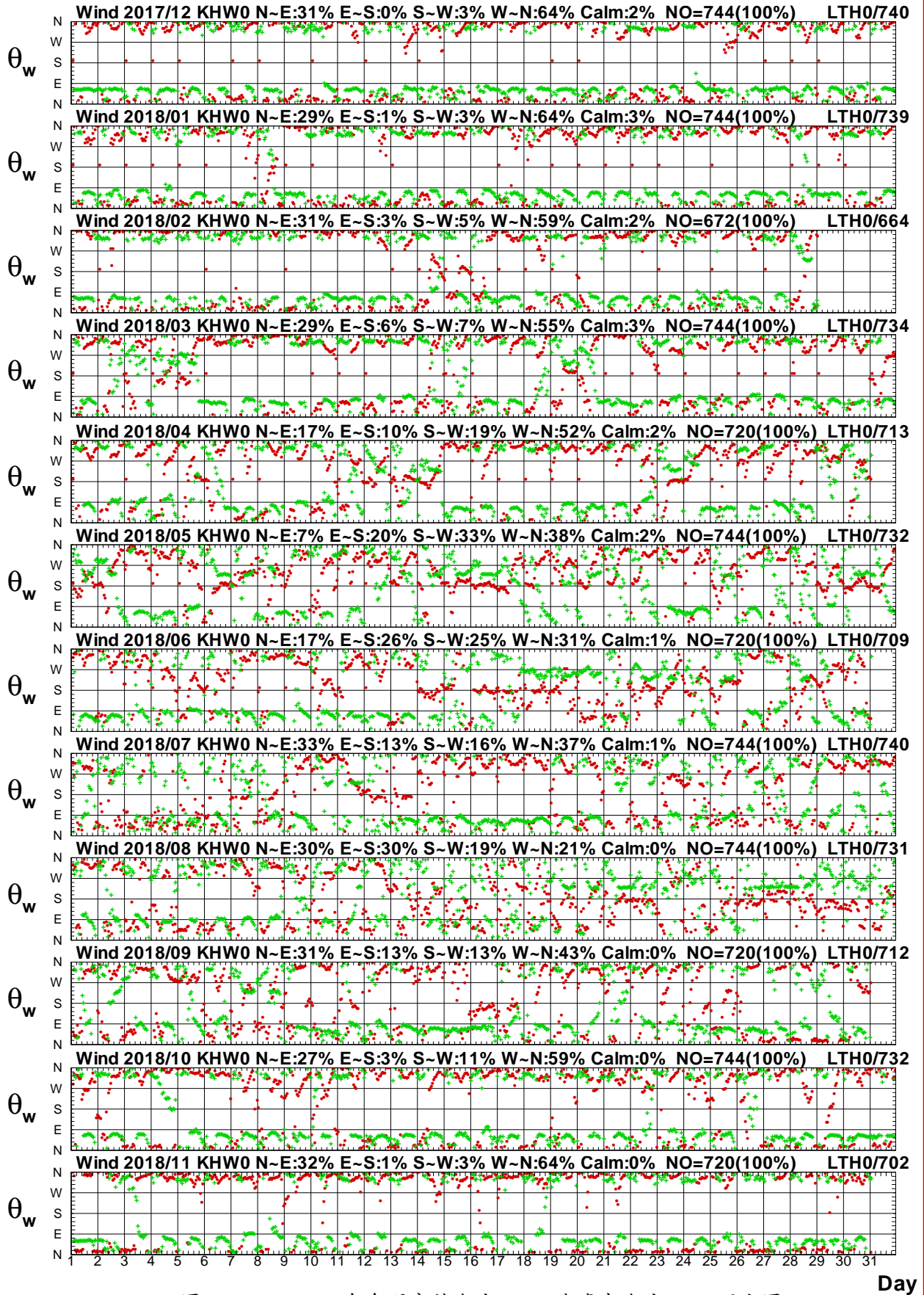


圖 1.3.13b 2018年每月高雄海域 W 站與臺東海域 H 站風向圖

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 W183KHW0.1HA W183LTH0.1HO W184KHW0.1HA W184LTH0.1HO W185KHW0.1HA W185LTH0.1HO

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

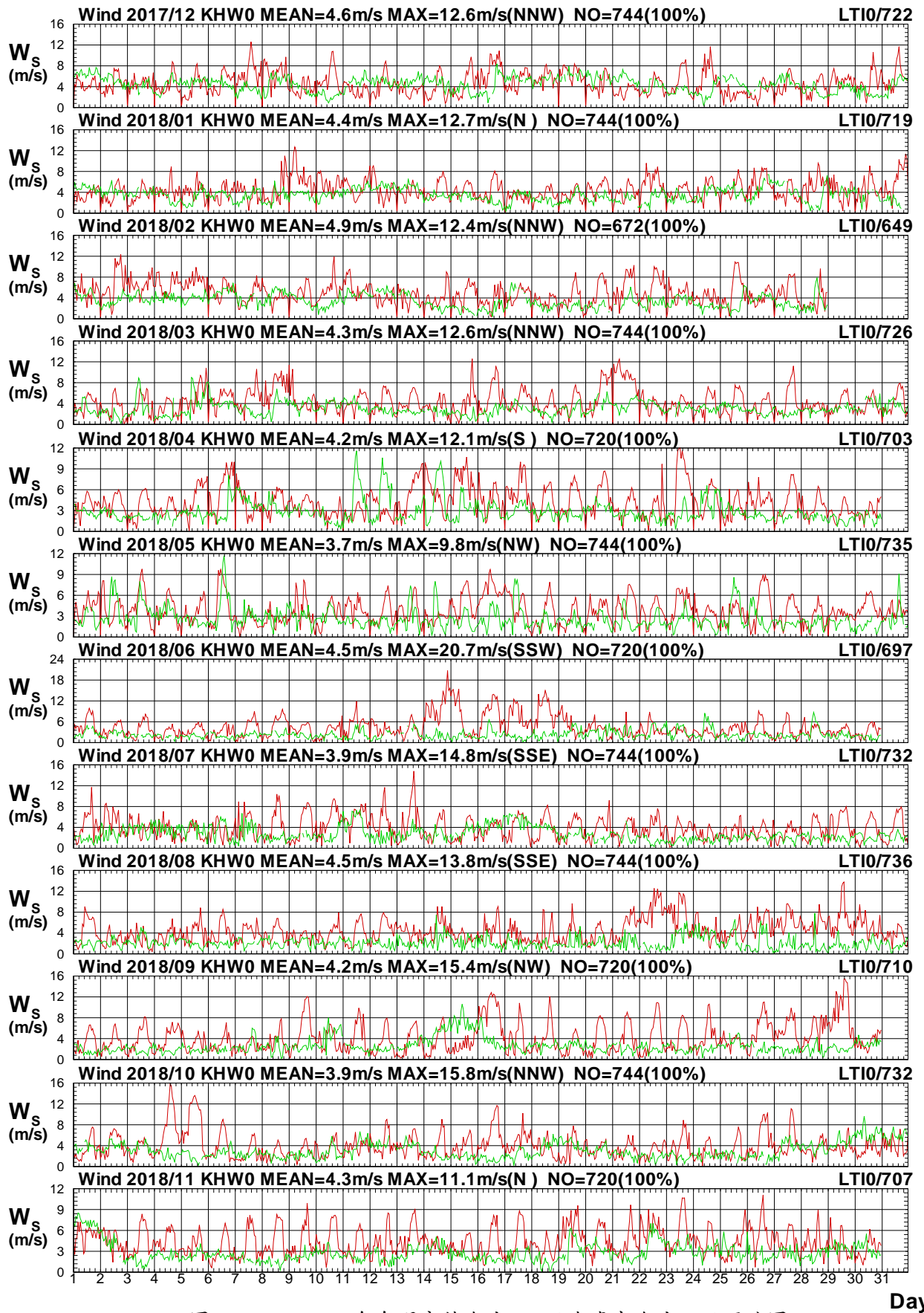


圖1.3.14a 2018年每月高雄海域 W 站與臺東海域 I 站風速圖

W17CKHW0.1HA W17CLTI0.1H0 W181KHW0.1HA W181LTI0.1H0 W182KHW0.1HA W182LTI0.1H0
W183KHW0.1HA W183LTI0.1H0 W184KHW0.1HA W184LTI0.1H0 W185KHW0.1HA W185LTI0.1H0

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

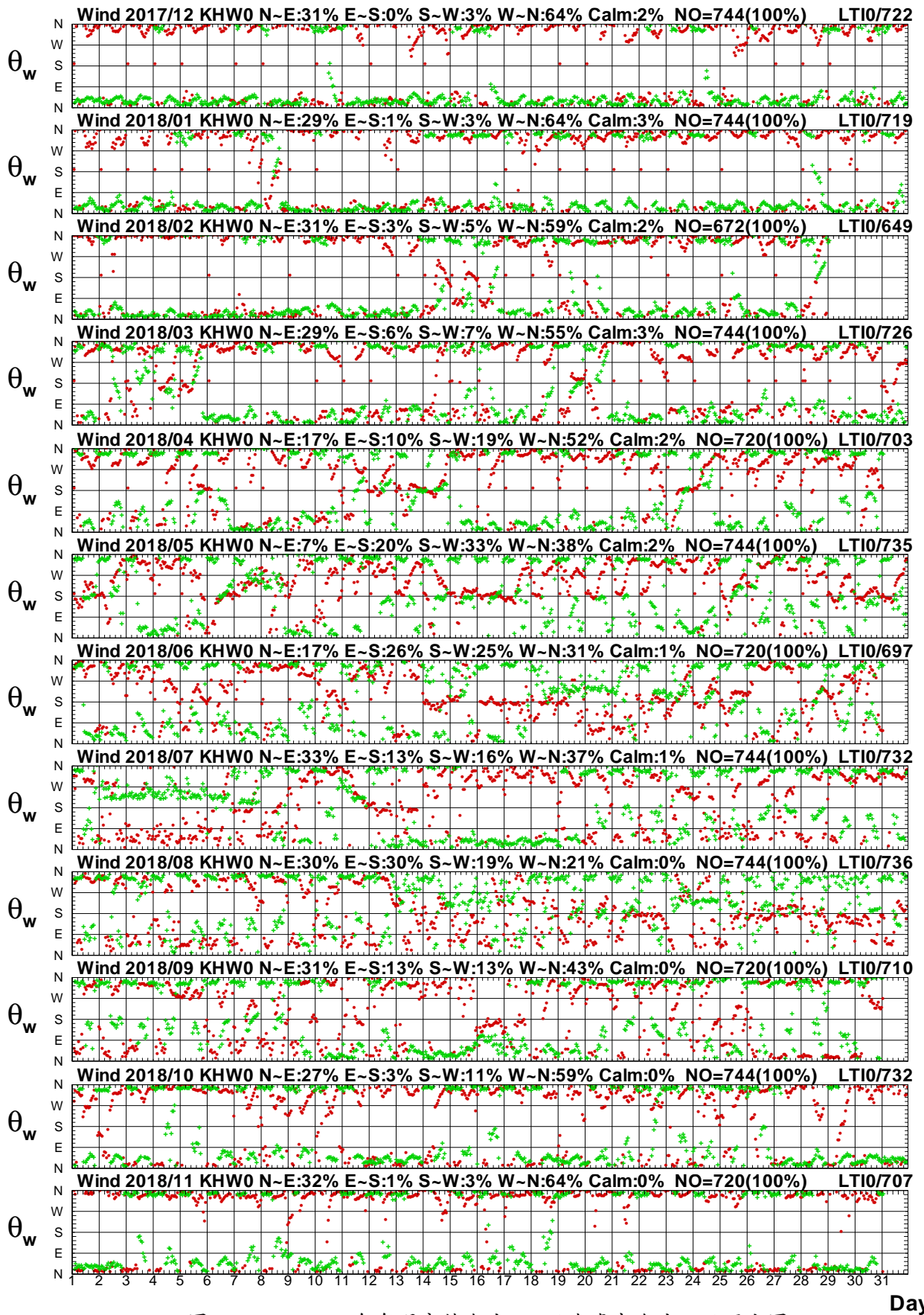


圖1.3.14b 2018年每月高雄海域 W 站與臺東海域 I 站風向圖

W17CKHW0.1HA W17CLTI0.1H0 W181KHW0.1HA W181LTI0.1H0 W182KHW0.1HA W182LTI0.1H0
 W183KHW0.1HA W183LTI0.1H0 W184KHW0.1HA W184LTI0.1H0 W185KHW0.1HA W185LTI0.1H0

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

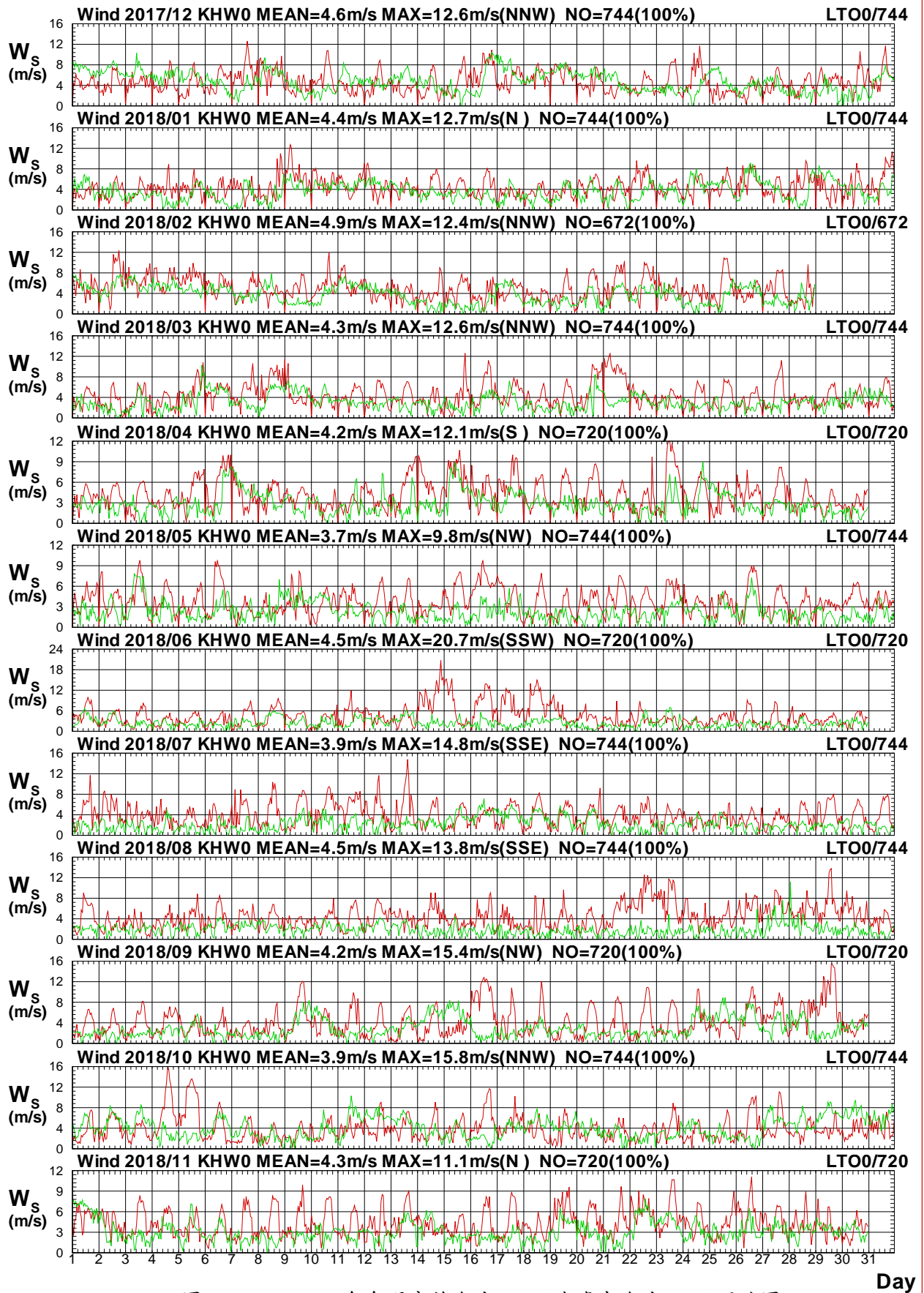


圖 1.3.15a 2018年每月高雄海域 W 站與臺東海域 O 站風速圖

W17CKHW0.1HA W17CLTO0.1HO W181KHW0.1HA W181LTO0.1HO W182KHW0.1HA W182LTO0.1HO
 W183KHW0.1HA W183LTO0.1HO W184KHW0.1HA W184LTO0.1HO W185KHW0.1HA W185LTO0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

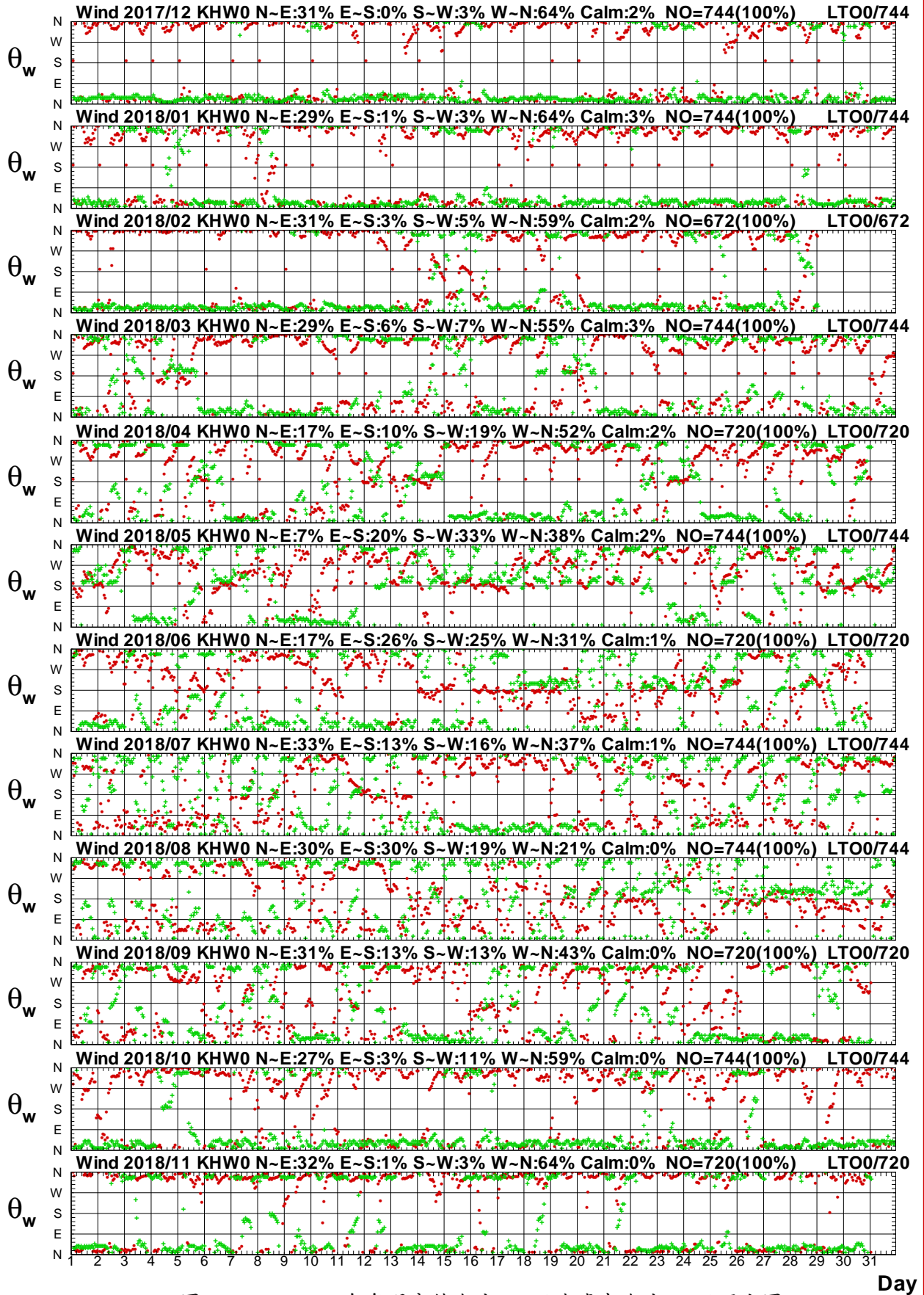


圖1.3.15b 2018年每月高雄海域 W 站與臺東海域 O 站風向圖

W17CKHW0.1HA W17CLTO0.1HO W181KHW0.1HA W181LTO0.1HO W182KHW0.1HA W182LTO0.1HO
 W183KHW0.1HA W183LTO0.1HO W184KHW0.1HA W184LTO0.1HO W185KHW0.1HA W185LTO0.1HO

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

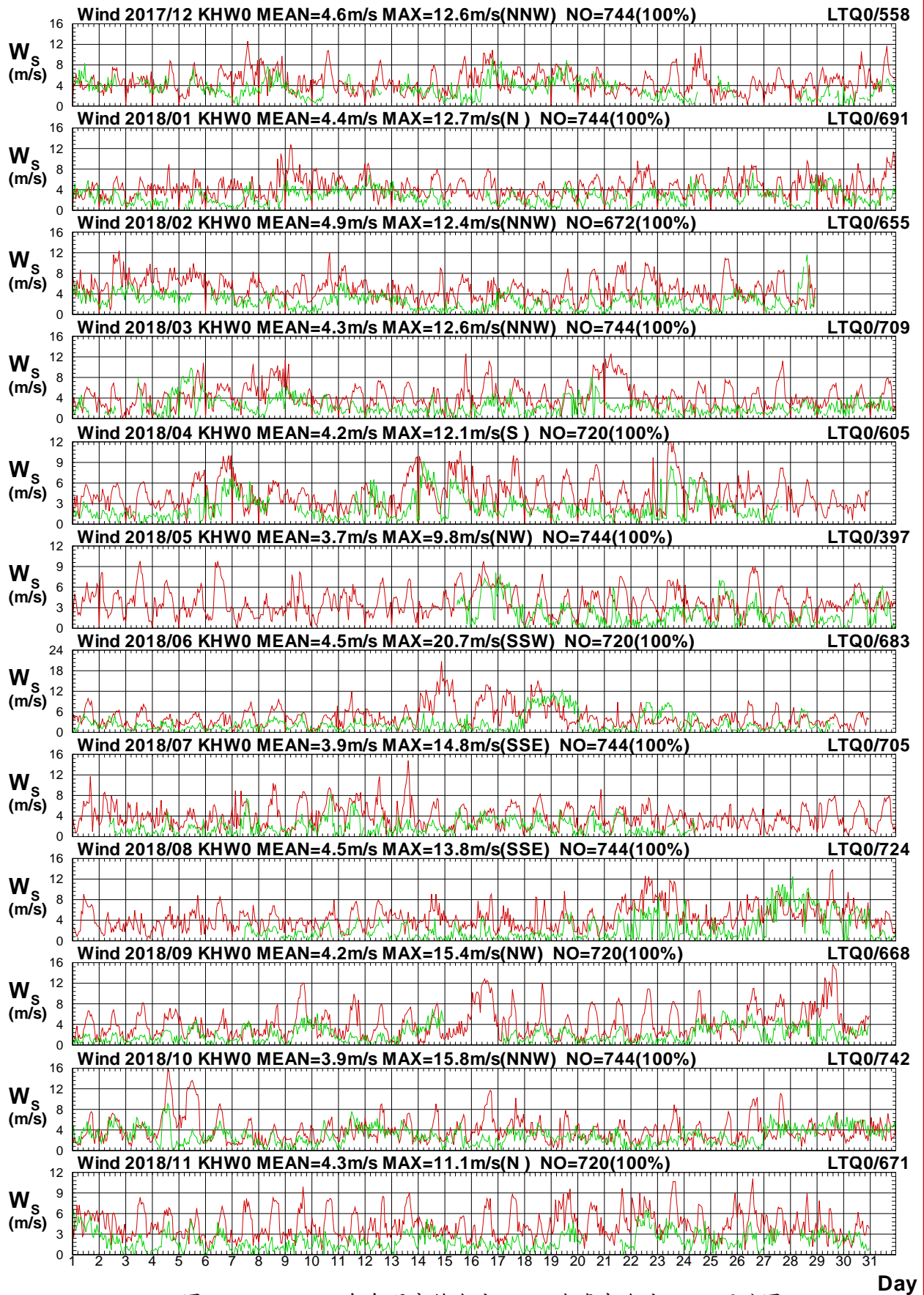


圖 1.3.16a 2018年每月高雄海域 W 站與臺東海域 Q 站風速圖

W17CKHW0.1HA W17CLTQ0.1H0 W181KHW0.1HA W181LTQ0.1H0 W182KHW0.1HA W182LTQ0.1H0
 W183KHW0.1HA W183LTQ0.1H0 W184KHW0.1HA W184LTQ0.1H0 W185KHW0.1HA W185LTQ0.1H0

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

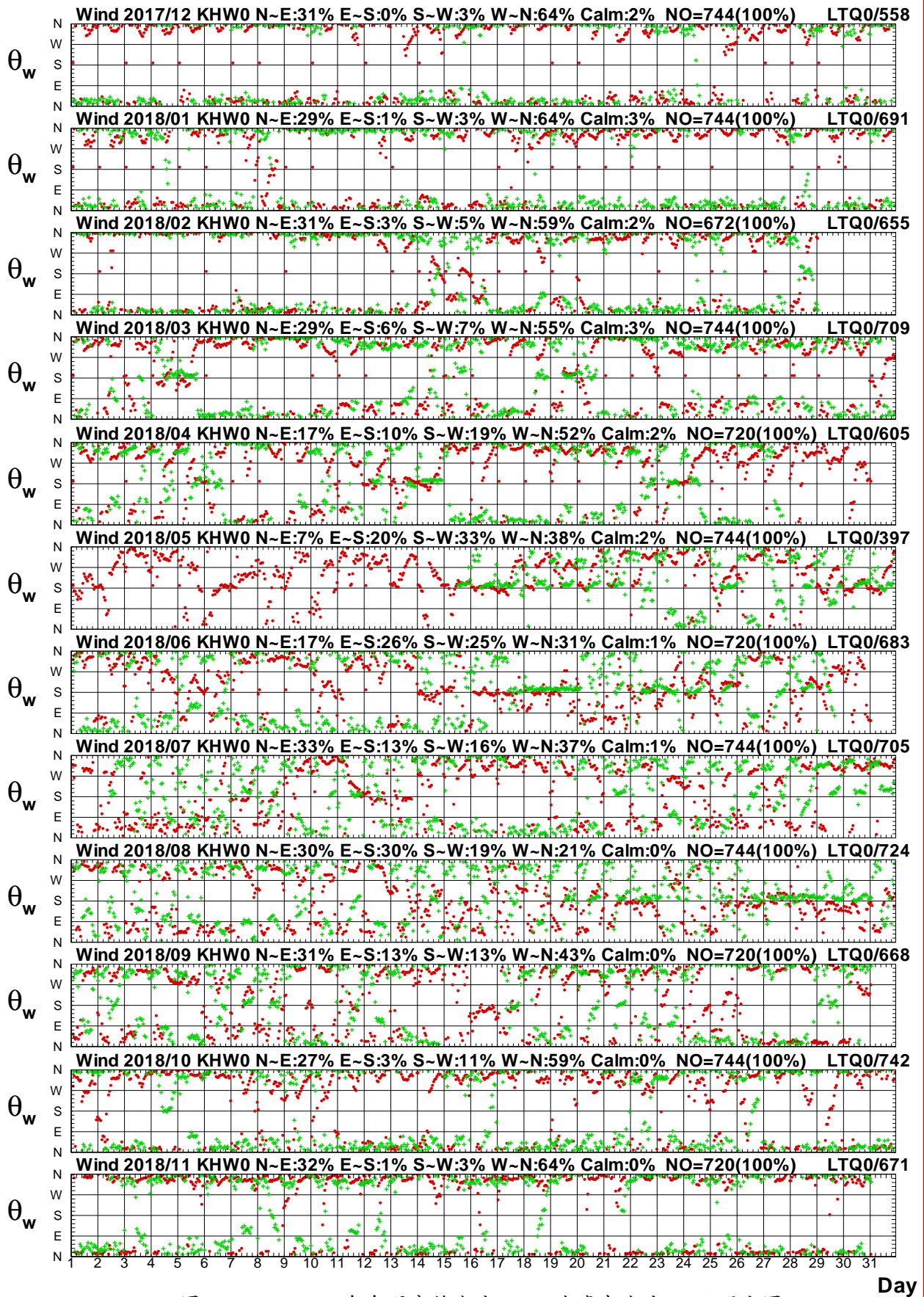


圖 1.3.16b 2018年每月高雄海域 W 站與臺東海域 Q 站風向圖

W17CKHW0.1HA W17CLTQ0.1HO W181KHW0.1HA W181LTQ0.1HO W182KHW0.1HA W182LTQ0.1HO
W183KHW0.1HA W183LTQ0.1HO W184KHW0.1HA W184LTQ0.1HO W185KHW0.1HA W185LTQ0.1HO

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

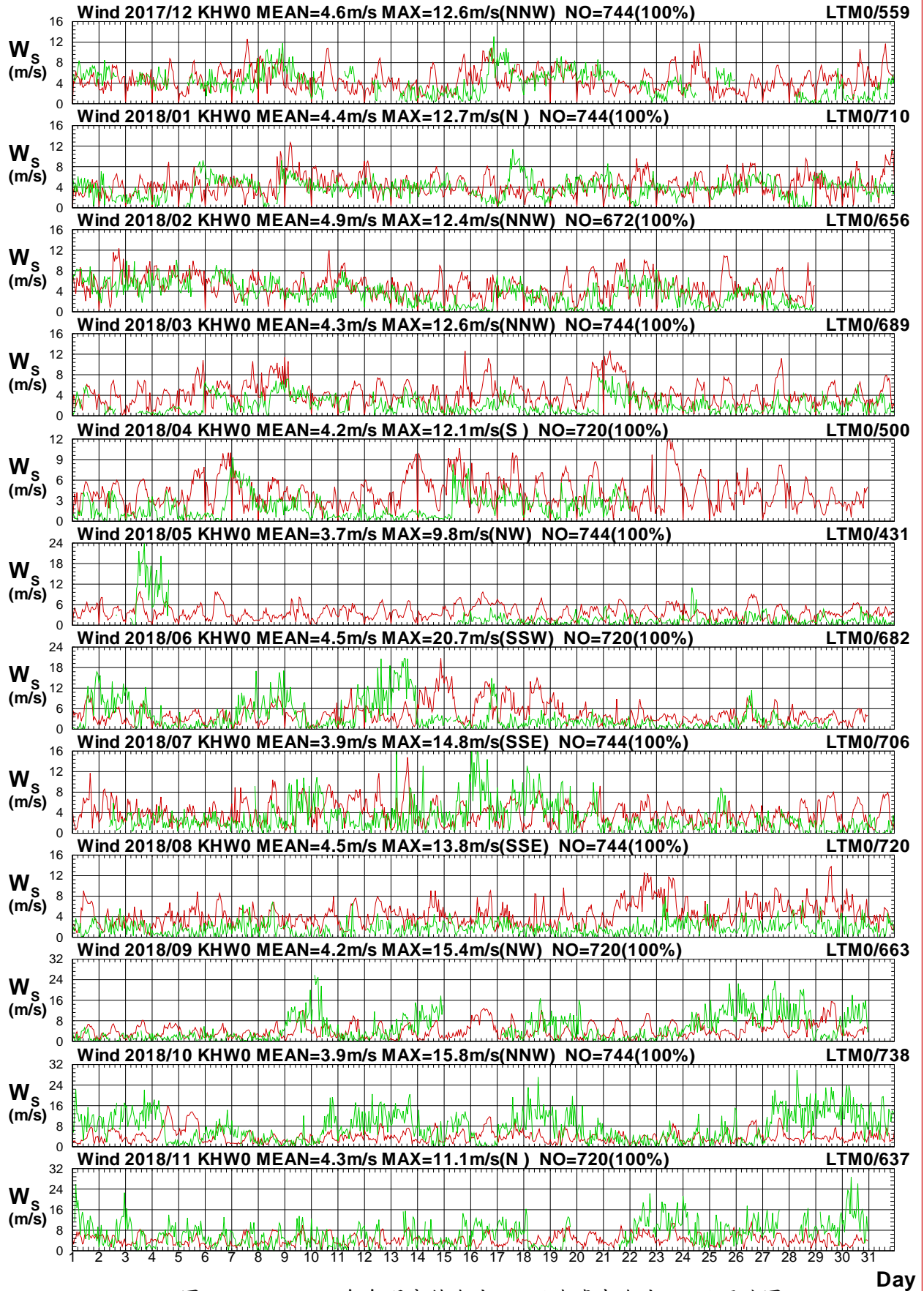


圖 1.3.17a 2018 年每月高雄海域 W 站與臺東海域 M 站風速圖

W17CKHW0.1HA W17CLTM0.1H0 W181KHW0.1HA W181LTM0.1H0 W182KHW0.1HA W182LTM0.1H0
 W183KHW0.1HA W183LTM0.1H0 W184KHW0.1HA W184LTM0.1H0 W185KHW0.1HA W185LTM0.1H0

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

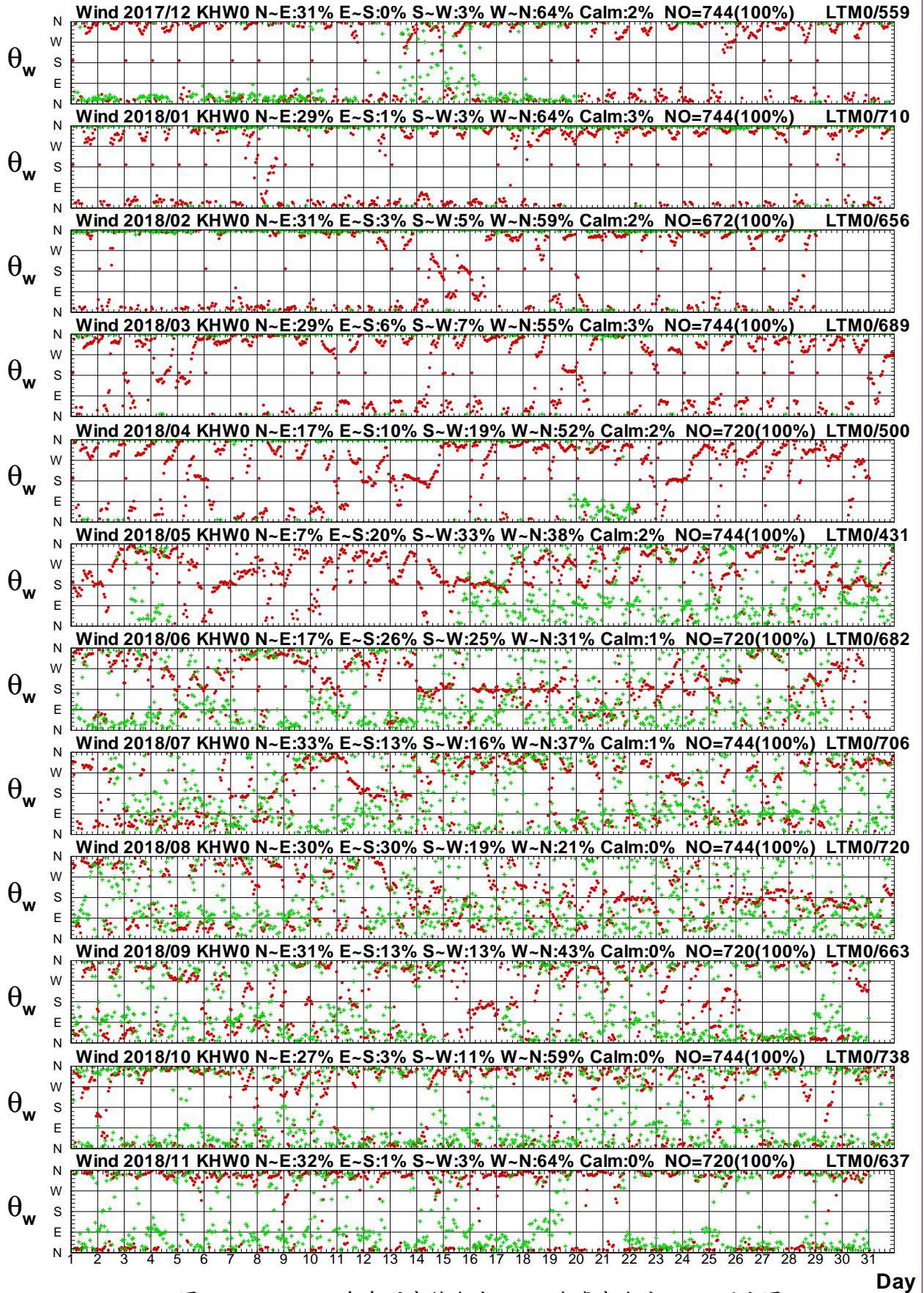


圖 1.3.17b 2018 年每月高雄海域 W 站與臺東海域 M 站風向圖

W17CKHW0.1HA W17CLTM0.1H0 W181KHW0.1HA W181LTM0.1H0 W182KHW0.1HA W182LTM0.1H0
 W183KHW0.1HA W183LTM0.1H0 W184KHW0.1HA W184LTM0.1H0 W185KHW0.1HA W185LTM0.1H0

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

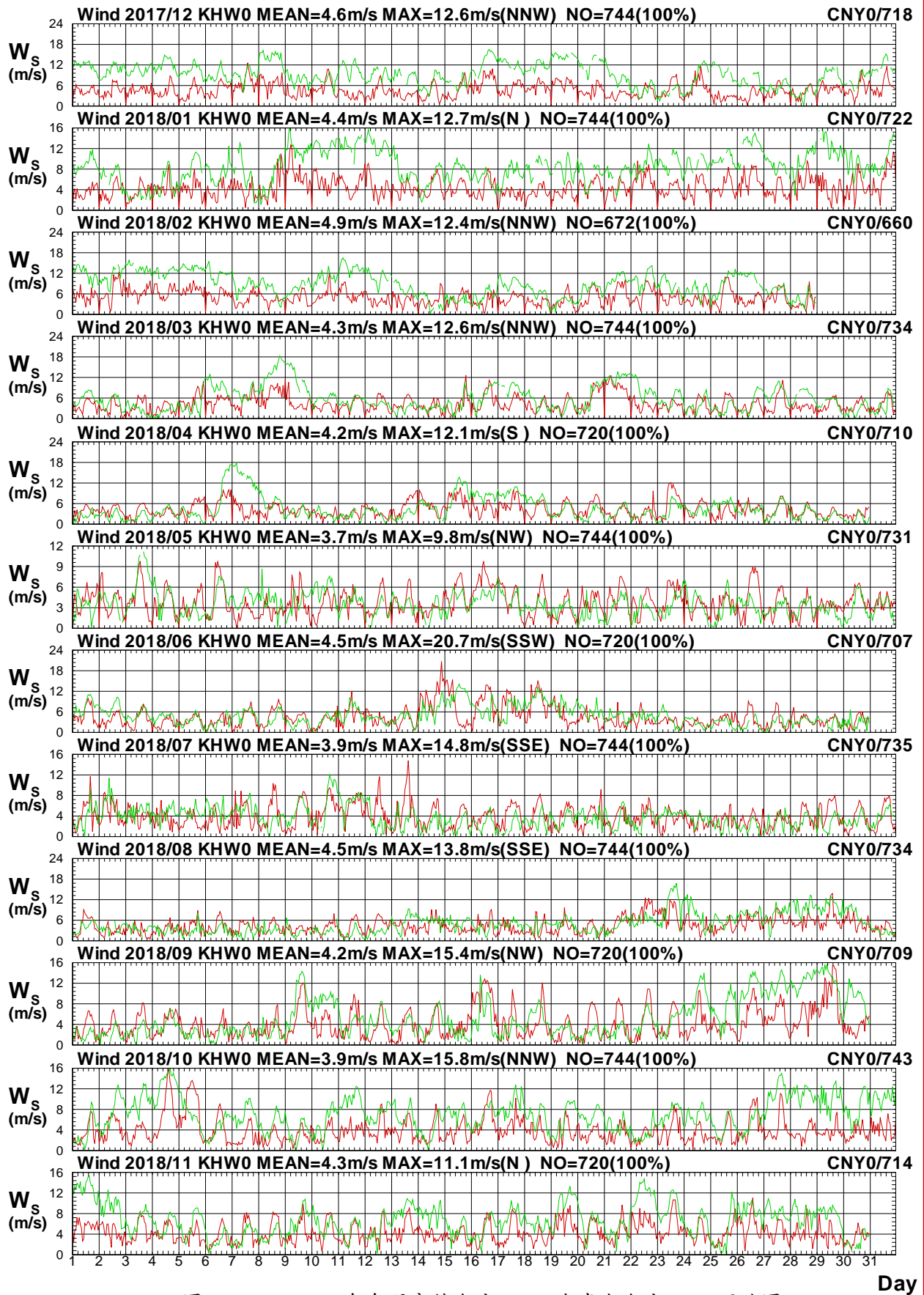


圖 1.3.18a 2018年每月高雄海域 W 站與嘉南海域 Y 站風速圖

W17CKHW0.1HA W17CCNY0.1H0 W181KHW0.1HA W181CNY0.1H0 W182KHW0.1HA W182CNY0.1H0
 W183KHW0.1HA W183CNY0.1H0 W184KHW0.1HA W184CNY0.1H0 W185KHW0.1HA W185CNY0.1H0

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

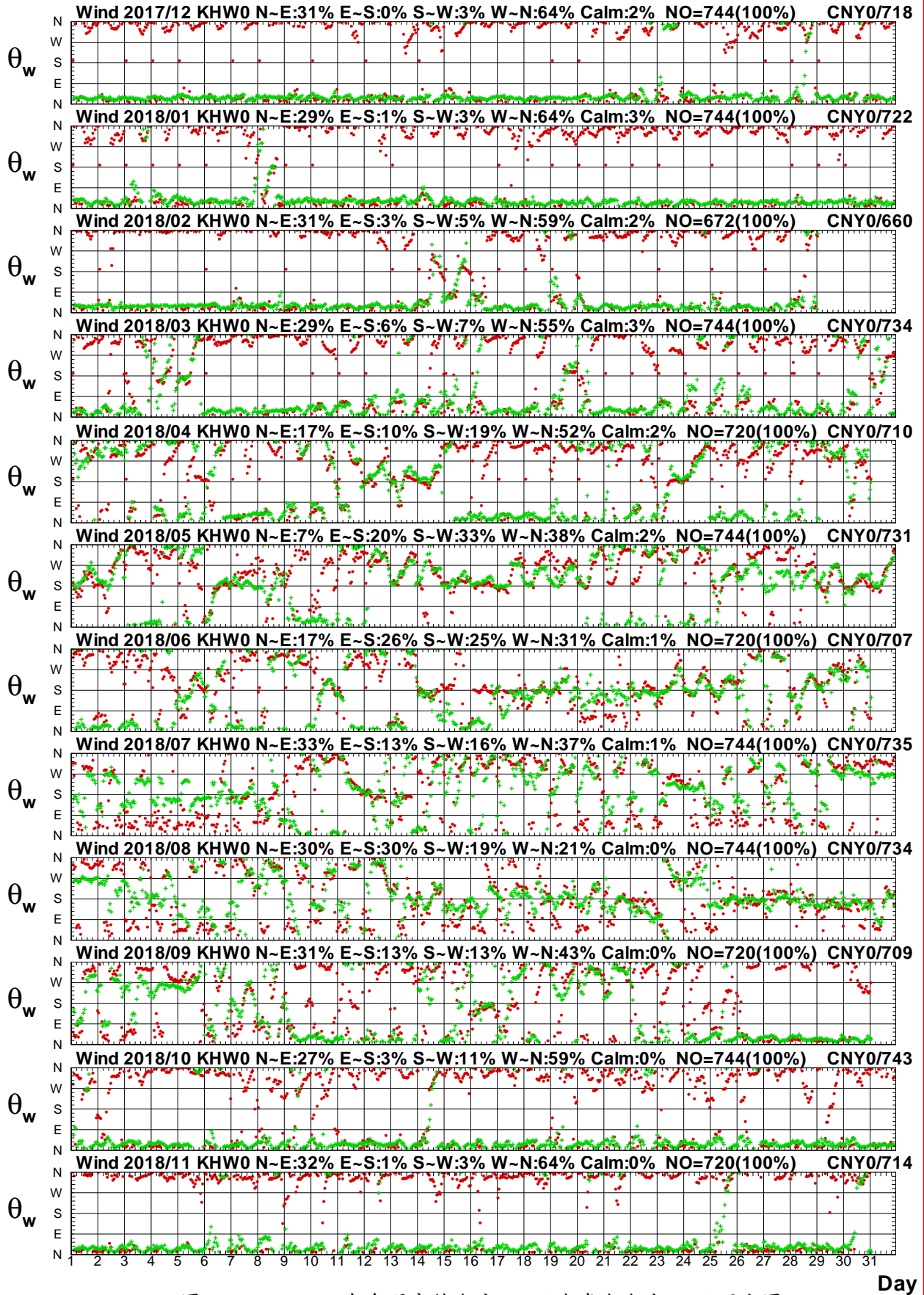


圖 1.3.18b 2018年每月高雄海域 W 站與嘉南海域 Y 站風向圖

W17CKHW0.1HA W17CCNY0.1H0 W181KHW0.1HA W181CNY0.1H0 W182KHW0.1HA W182CNY0.1H0
 W183KHW0.1HA W183CNY0.1H0 W184KHW0.1HA W184CNY0.1H0 W185KHW0.1HA W185CNY0.1H0

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

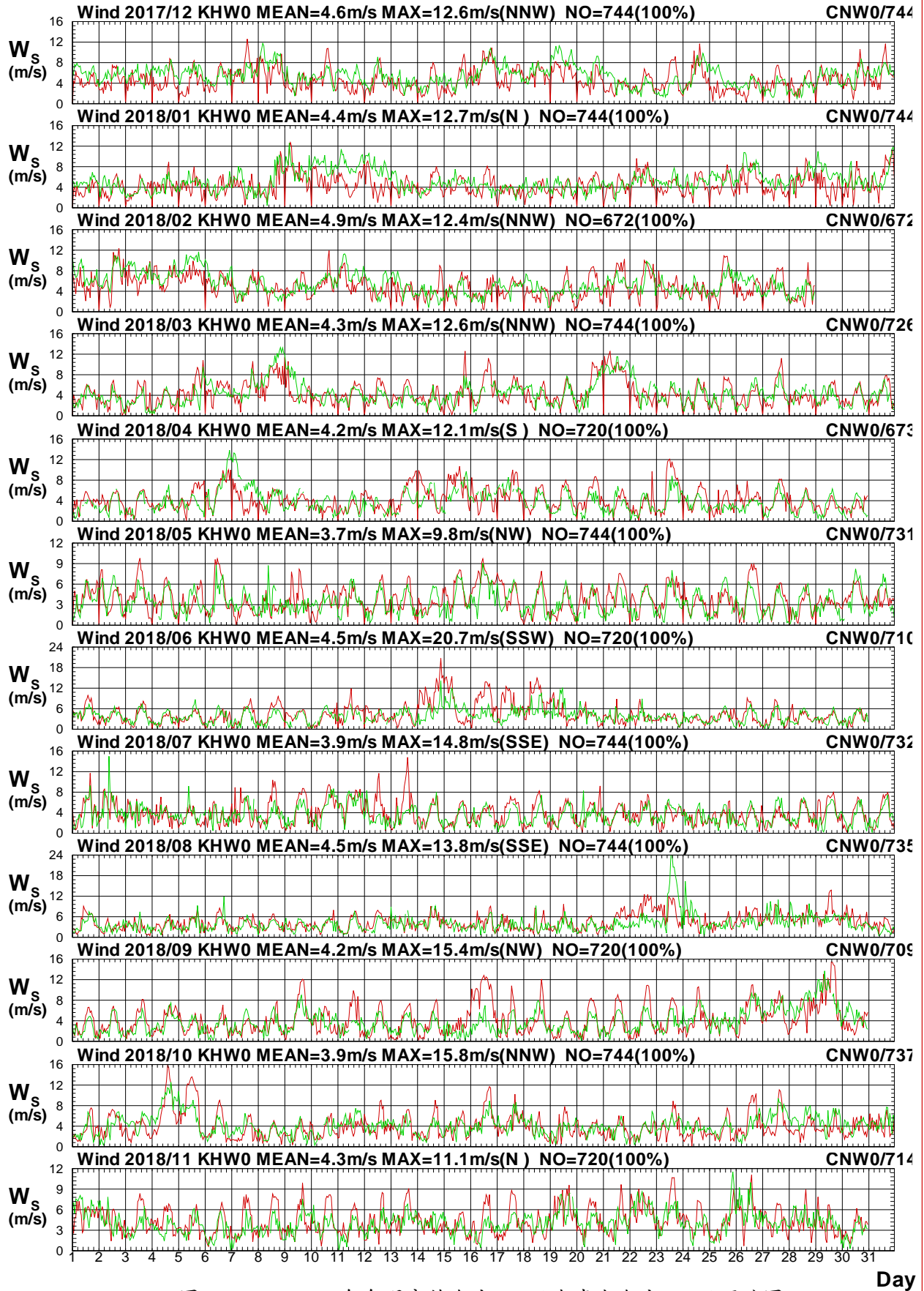


圖 1.3.19a 2018 年每月高雄海域 W 站與嘉南海域 W 站風速圖

W17CKHW0.1HA W17CCNW0.1H0 W181KHW0.1HA W181CNW0.1H0 W182KHW0.1HA W182CNW0.1H0
 W183KHW0.1HA W183CNW0.1H0 W184KHW0.1HA W184CNW0.1H0 W185KHW0.1HA W185CNW0.1H0

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

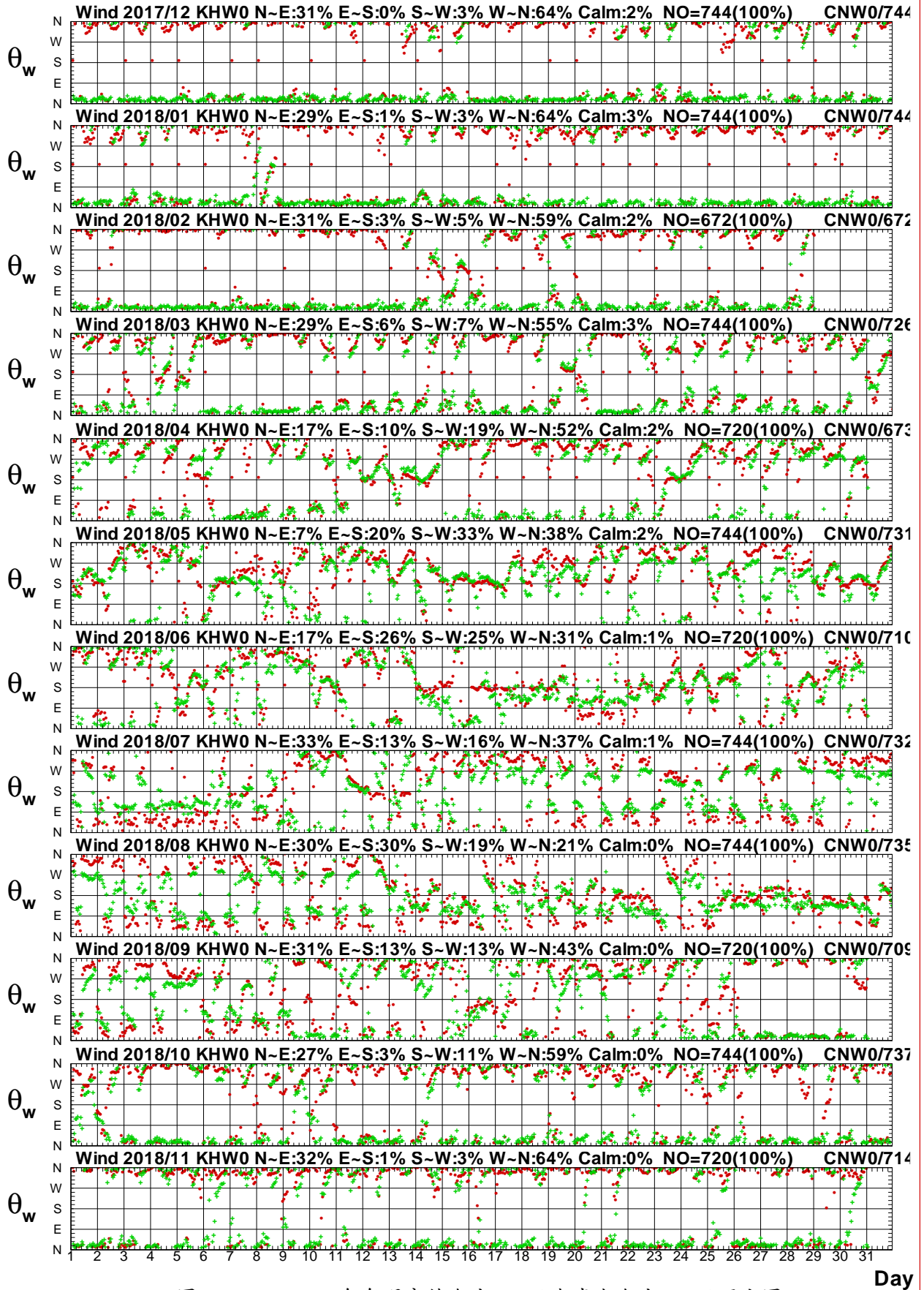


圖1.3.19b 2018年每月高雄海域 W 站與嘉南海域 W 站風向圖

W17CKHW0.1HA W17CCNW0.1H0 W181KHW0.1HA W181CNW0.1H0 W182KHW0.1HA W182CNW0.1H0

W183KHW0.1HA W183CNW0.1H0 W184KHW0.1HA W184CNW0.1H0 W185KHW0.1HA W185CNW0.1H0

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

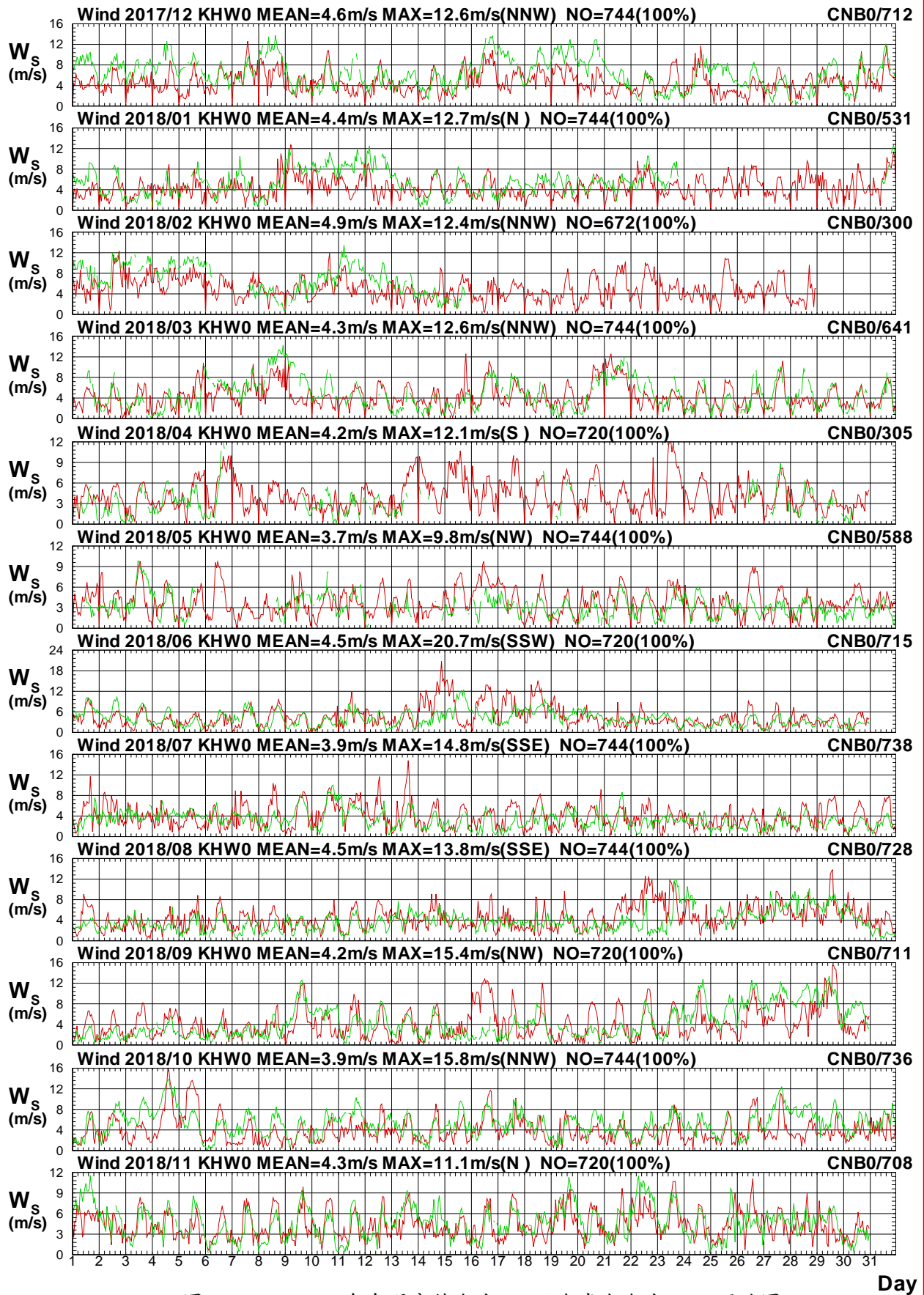


圖 1.3.20a 2018年每月高雄海域 W 站與嘉南海域 B 站風速圖

W17CKHW0.1HA W17CCNB0.1HO W181KHW0.1HA W181CNB0.1HO W182KHW0.1HA W182CNB0.1HO
 W183KHW0.1HA W183CNB0.1HO W184KHW0.1HA W184CNB0.1HO W185KHW0.1HA W185CNB0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

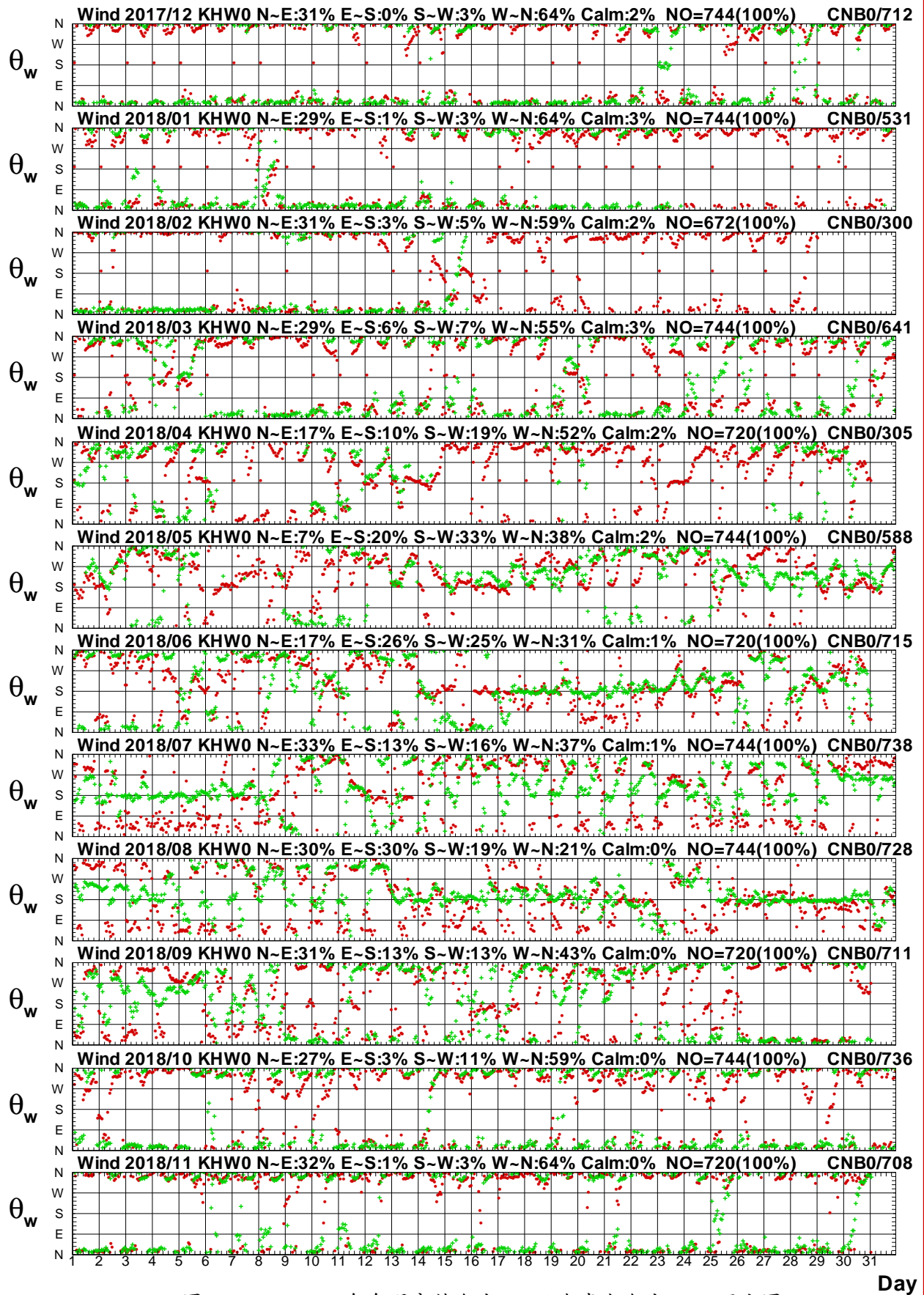


圖 1.3.20b 2018年每月高雄海域 W 站與嘉南海域 B 站風向圖

W17CKHW0.1HA W17CCNB0.1H0 W181KHW0.1HA W181CNB0.1H0 W182KHW0.1HA W182CNB0.1H0
 W183KHW0.1HA W183CNB0.1H0 W184KHW0.1HA W184CNB0.1H0 W185KHW0.1HA W185CNB0.1H0

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

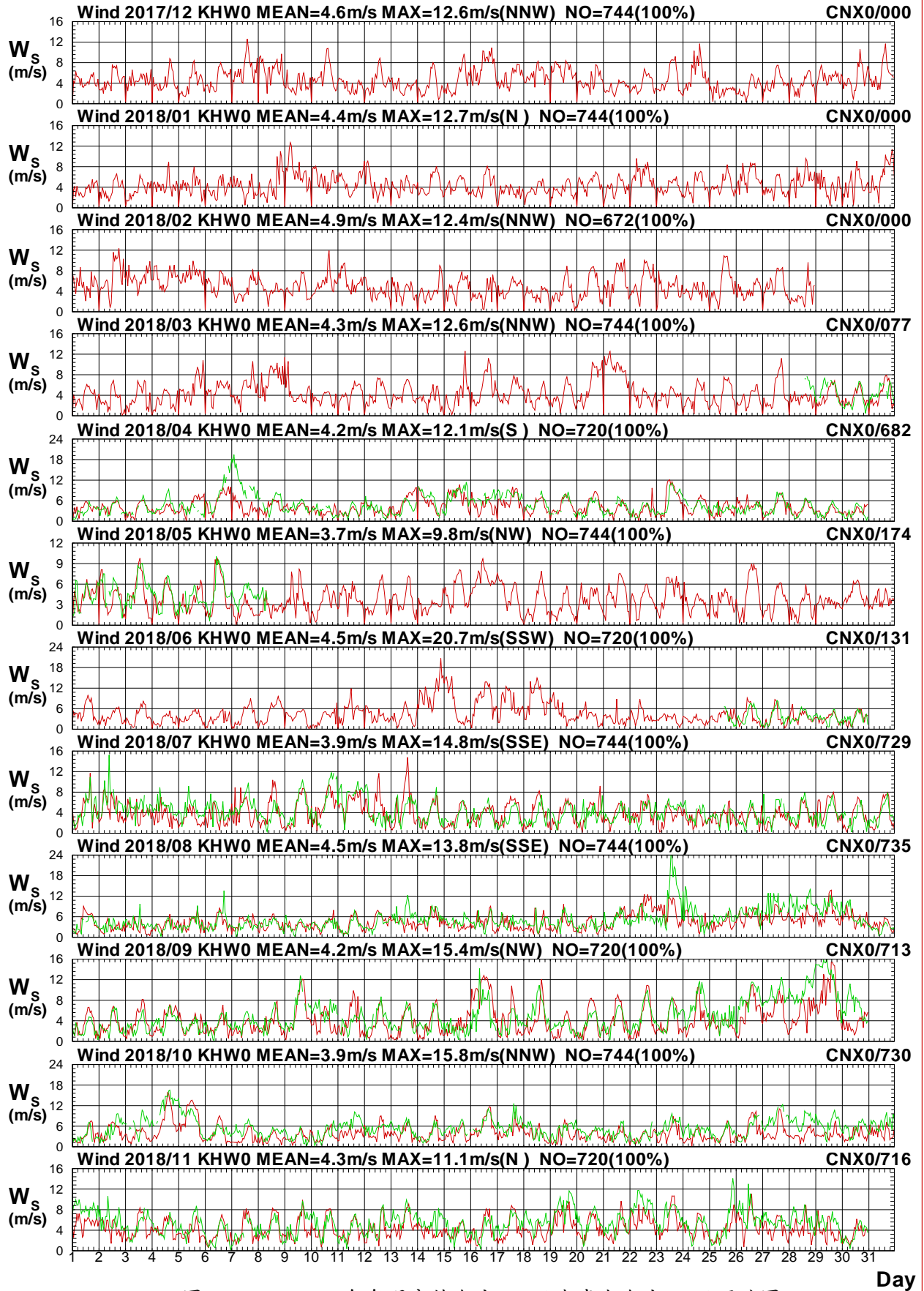


圖 1.3.21a 2018年每月高雄海域 W 站與嘉南海域 X 站風速圖

W17CKHW0.1HA W17CCNX0.1HO W181KHW0.1HA W181CNX0.1HO W182KHW0.1HA W182CNX0.1HO
 W183KHW0.1HA W183CNX0.1HO W184KHW0.1HA W184CNX0.1HO W185KHW0.1HA W185CNX0.1HO
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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

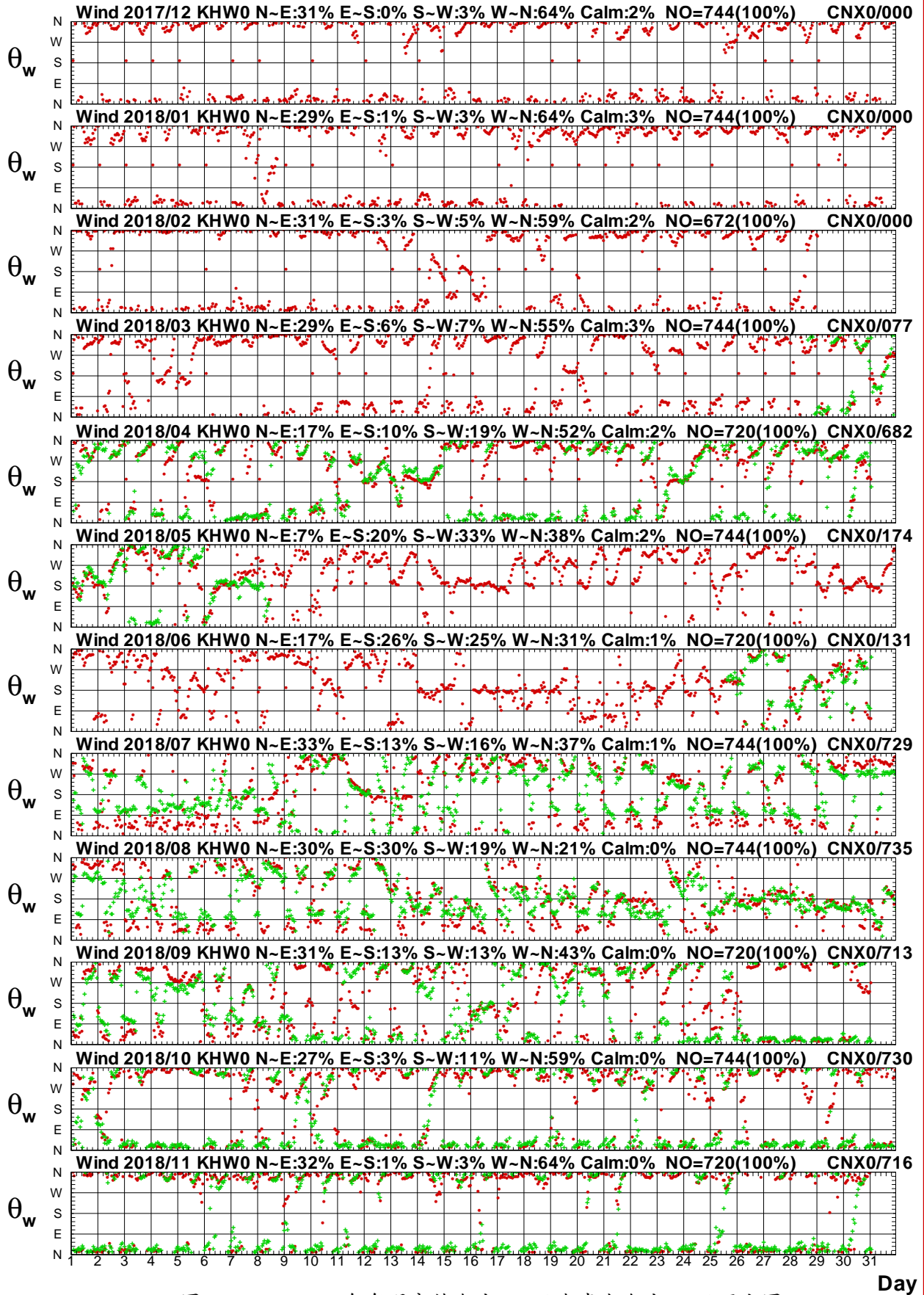


圖 1.3.21b 2018年每月高雄海域 W 站與嘉南海域 X 站風向圖

W17CKHW0.1HA W17CCNX0.1HO W181KHW0.1HA W181CNX0.1HO W182KHW0.1HA W182CNX0.1HO
 W183KHW0.1HA W183CNX0.1HO W184KHW0.1HA W184CNX0.1HO W185KHW0.1HA W185CNX0.1HO

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

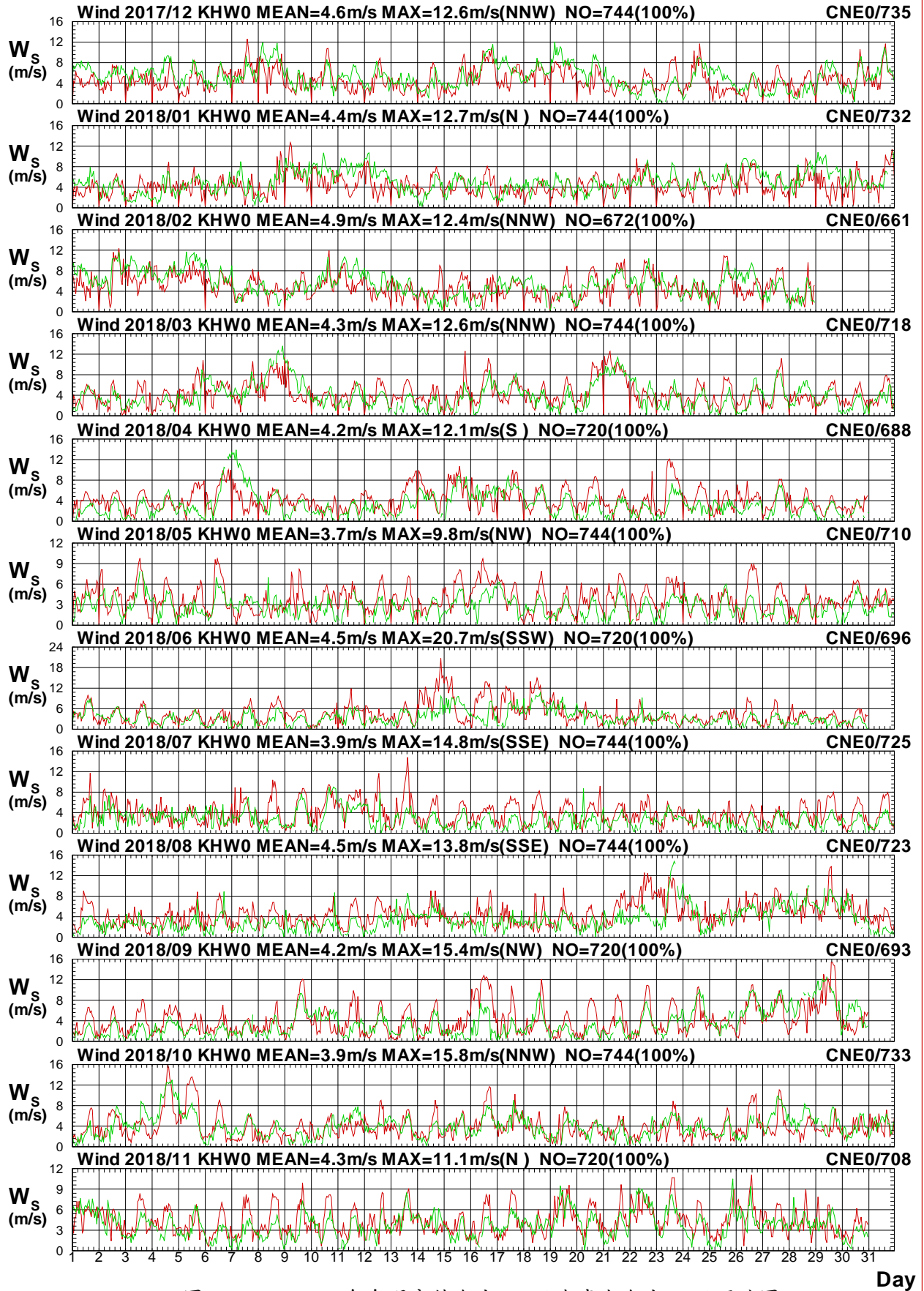


圖1.3.22a 2018年每月高雄海域 W 站與嘉南海域 E 站風速圖

W17CKHW0.1HA W17CCNE0.1HO W181KHW0.1HA W181CNE0.1HO W182KHW0.1HA W182CNE0.1HO
 W183KHW0.1HA W183CNE0.1HO W184KHW0.1HA W184CNE0.1HO W185KHW0.1HA W185CNE0.1HO

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

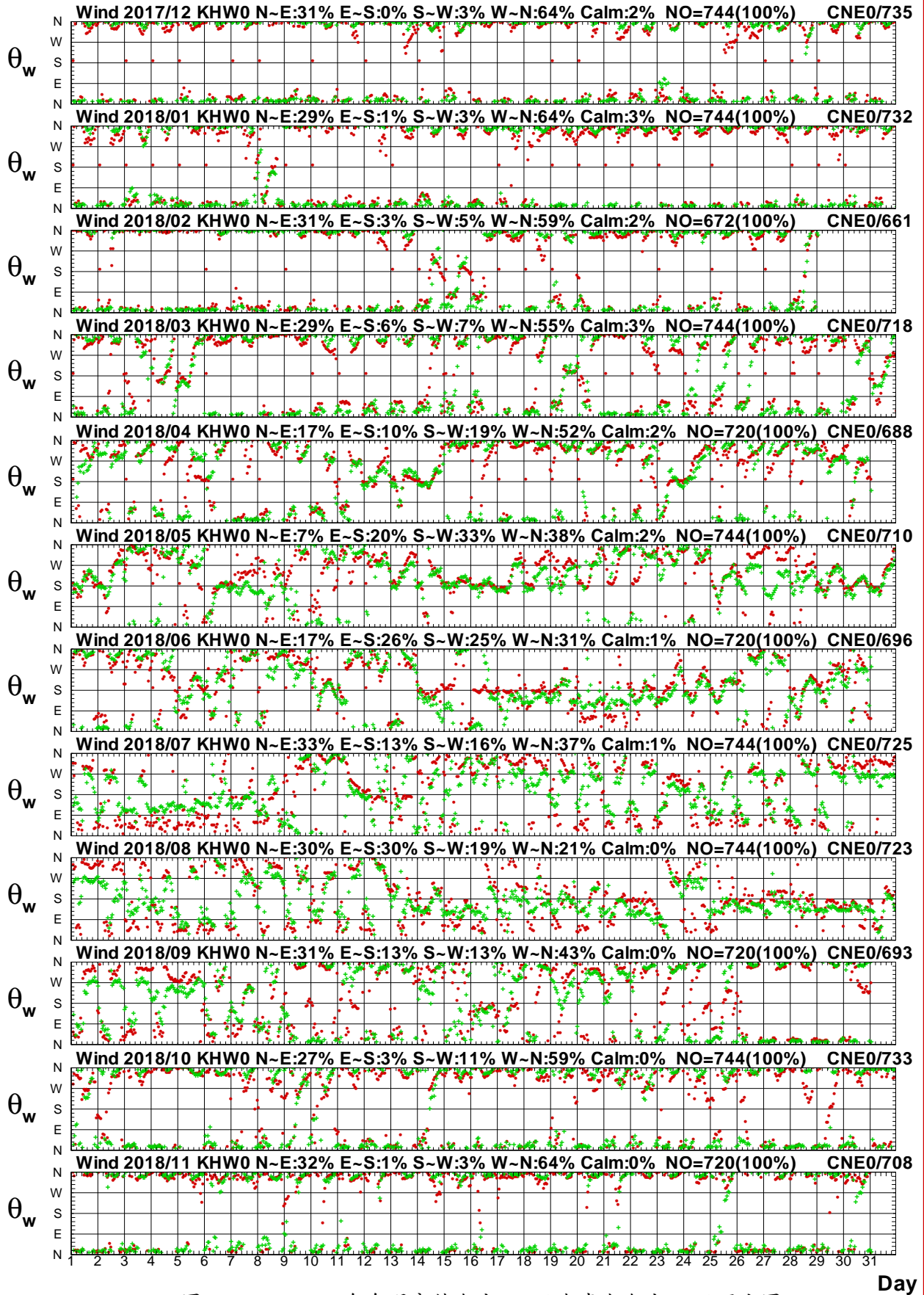


圖 1.3.22b 2018年每月高雄海域 W 站與嘉南海域 E 站風向圖

W17CKHW0.1HA W17CCNE0.1H0 W181KHW0.1HA W181CNE0.1H0 W182KHW0.1HA W182CNE0.1H0
 W183KHW0.1HA W183CNE0.1H0 W184KHW0.1HA W184CNE0.1H0 W185KHW0.1HA W185CNE0.1H0

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

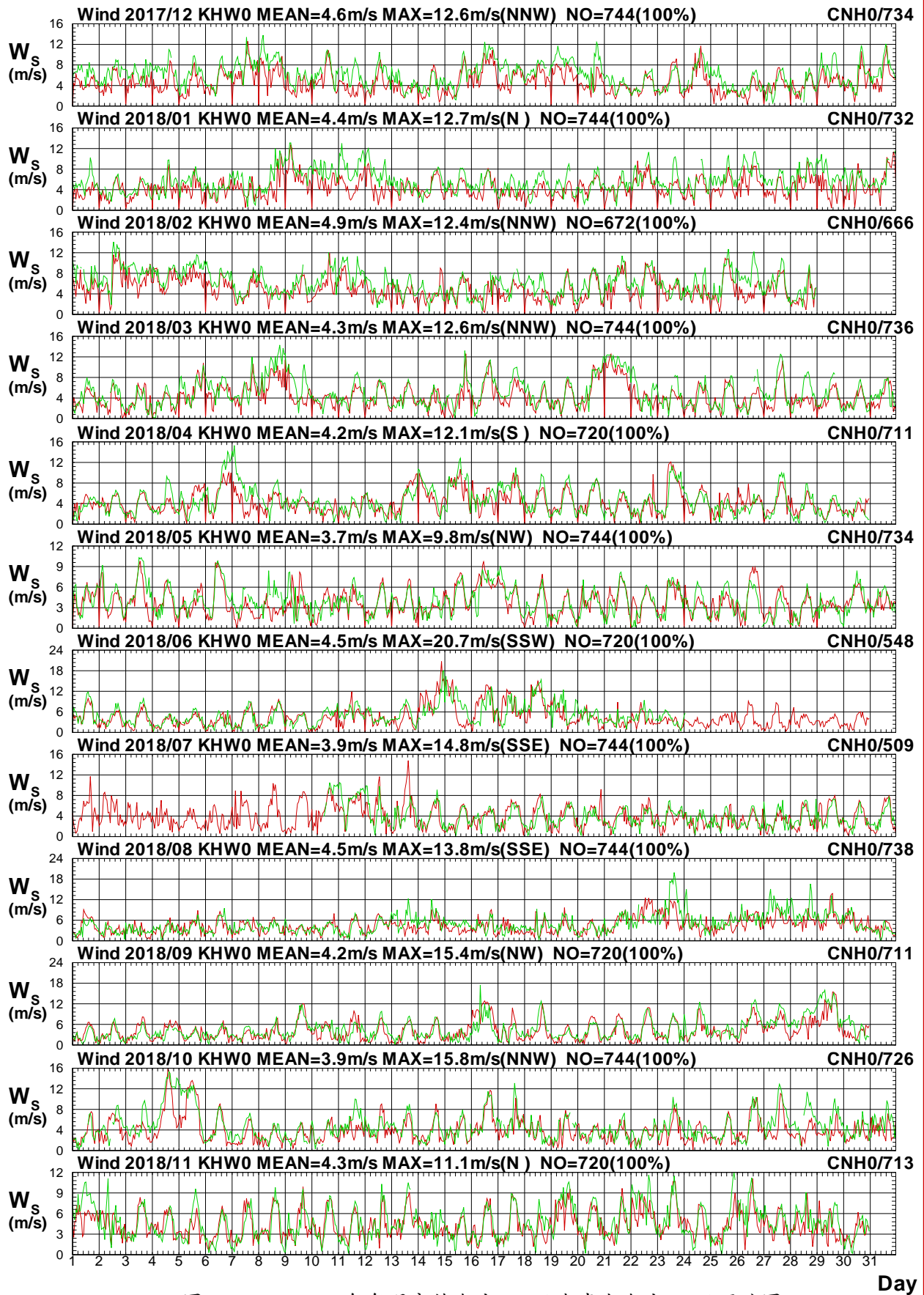


圖 1.3.23a 2018年每月高雄海域 W 站與嘉南海域 H 站風速圖

W17CKHW0.1HA W17CCNH0.1H0 W181KHW0.1HA W181CNH0.1H0 W182KHW0.1HA W182CNH0.1H0
 W183KHW0.1HA W183CNH0.1H0 W184KHW0.1HA W184CNH0.1H0 W185KHW0.1HA W185CNH0.1H0

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

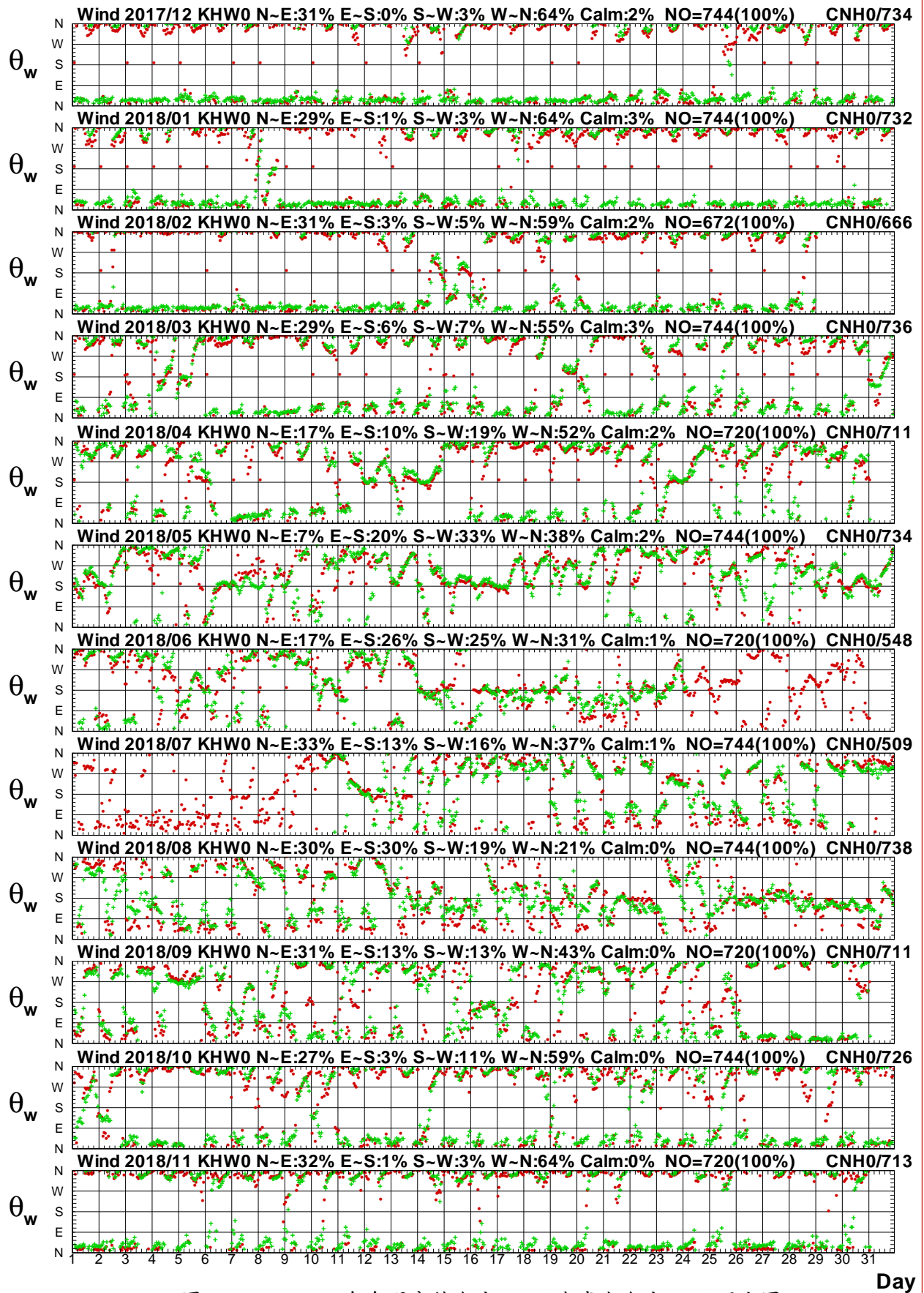


圖 1.3.23b 2018年每月高雄海域 W 站與嘉南海域 H 站風向圖

W17CKHW0.1HA W17CCNH0.1H0 W181KHW0.1HA W181CNH0.1H0 W182KHW0.1HA W182CNH0.1H0
 W183KHW0.1HA W183CNH0.1H0 W184KHW0.1HA W184CNH0.1H0 W185KHW0.1HA W185CNH0.1H0

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

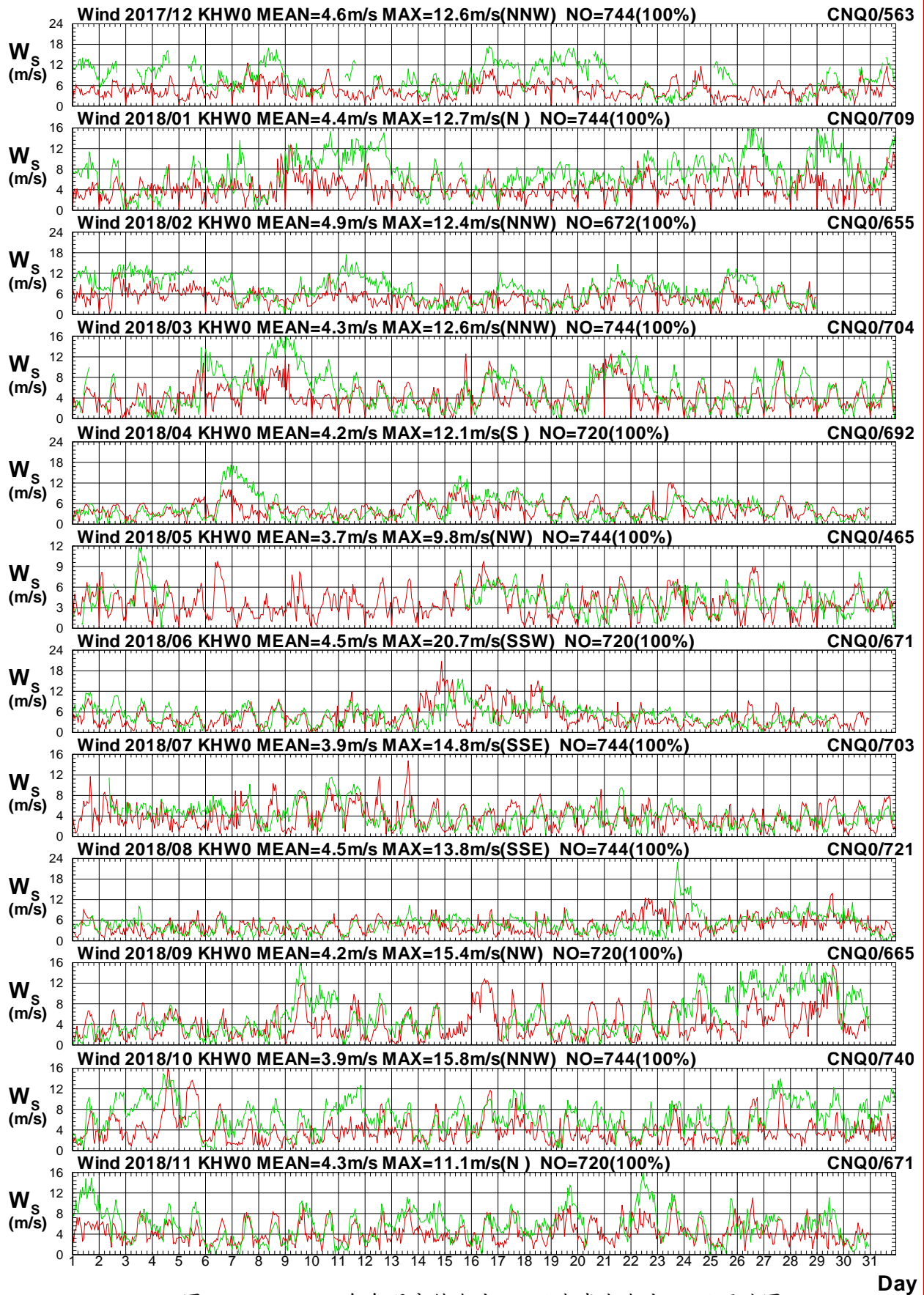


圖 1.3.24a 2018年每月高雄海域 W 站與嘉南海域 Q 站風速圖

W17CKHW0.1HA W17CCNQ0.1H0 W181KHW0.1HA W181CNQ0.1H0 W182KHW0.1HA W182CNQ0.1H0
 W183KHW0.1HA W183CNQ0.1H0 W184KHW0.1HA W184CNQ0.1H0 W185KHW0.1HA W185CNQ0.1H0

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

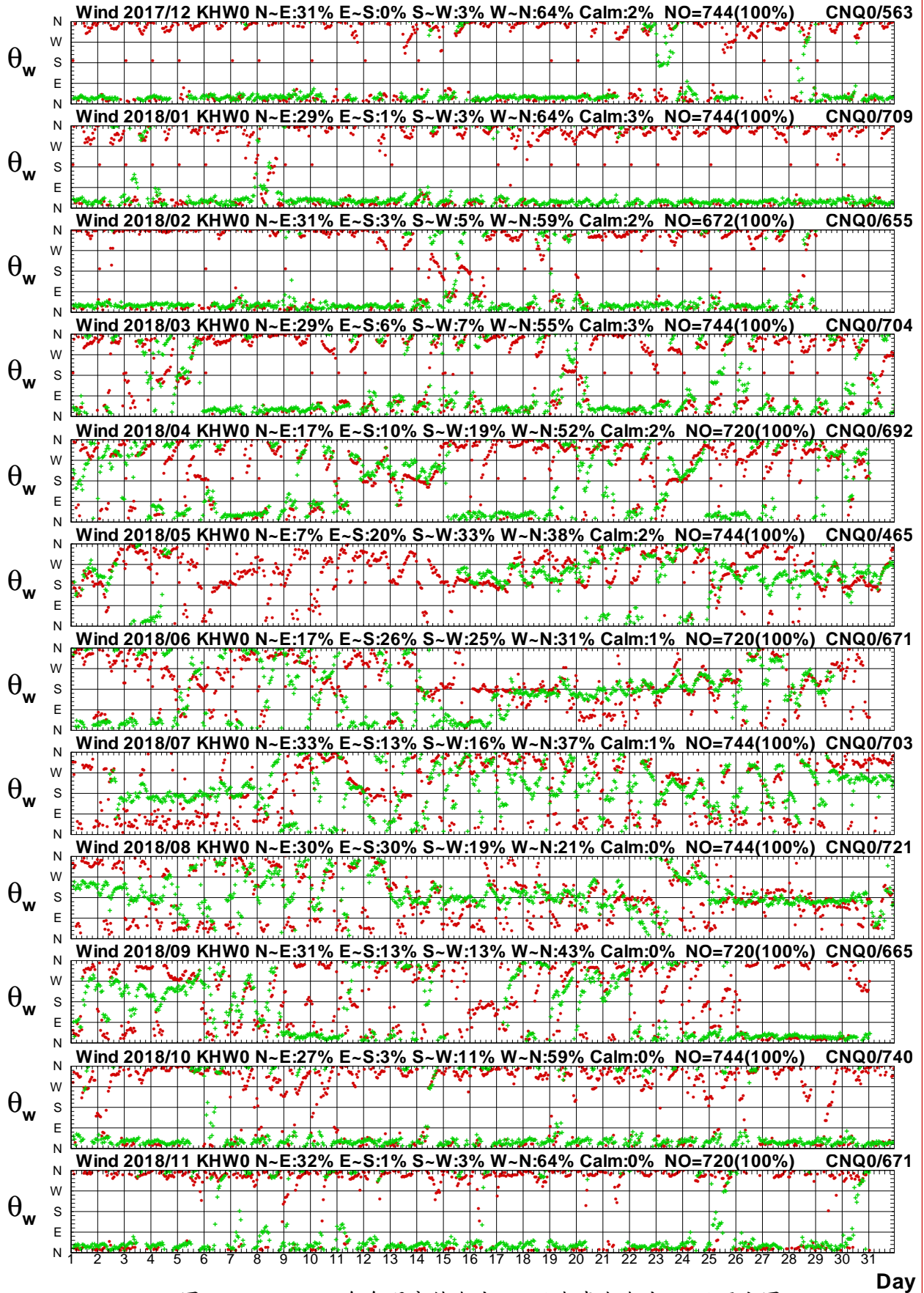


圖 1.3.24b 2018年每月高雄海域 W 站與嘉南海域 Q 站風向圖

W17CKHW0.1HA W17CCNQ0.1H0 W181KHW0.1HA W181CNQ0.1H0 W182KHW0.1HA W182CNQ0.1H0
 W183KHW0.1HA W183CNQ0.1H0 W184KHW0.1HA W184CNQ0.1H0 W185KHW0.1HA W185CNQ0.1H0

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Wind Speed in Kao-Hsiung Seas of KHW0 at 2018

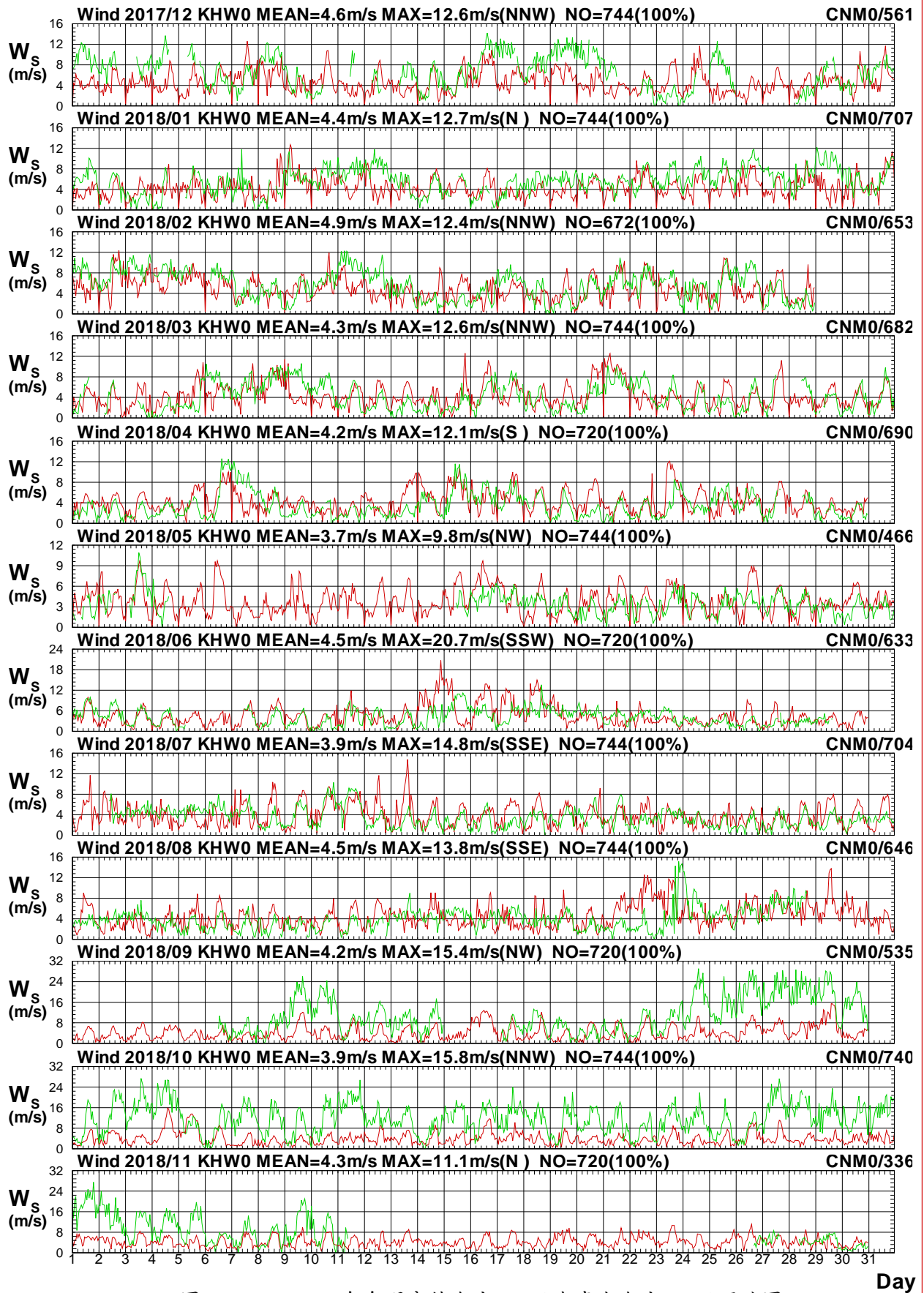


圖 1.3.25a 2018年每月高雄海域 W 站與嘉南海域 M 站風速圖

W17CKHW0.1HA W17CCNM0.1H0 W181KHW0.1HA W181CNM0.1H0 W182KHW0.1HA W182CNM0.1H0
 W183KHW0.1HA W183CNM0.1H0 W184KHW0.1HA W184CNM0.1H0 W185KHW0.1HA W185CNM0.1H0

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Wind Direction in Kao-Hsiung Seas of KHW0 at 2018

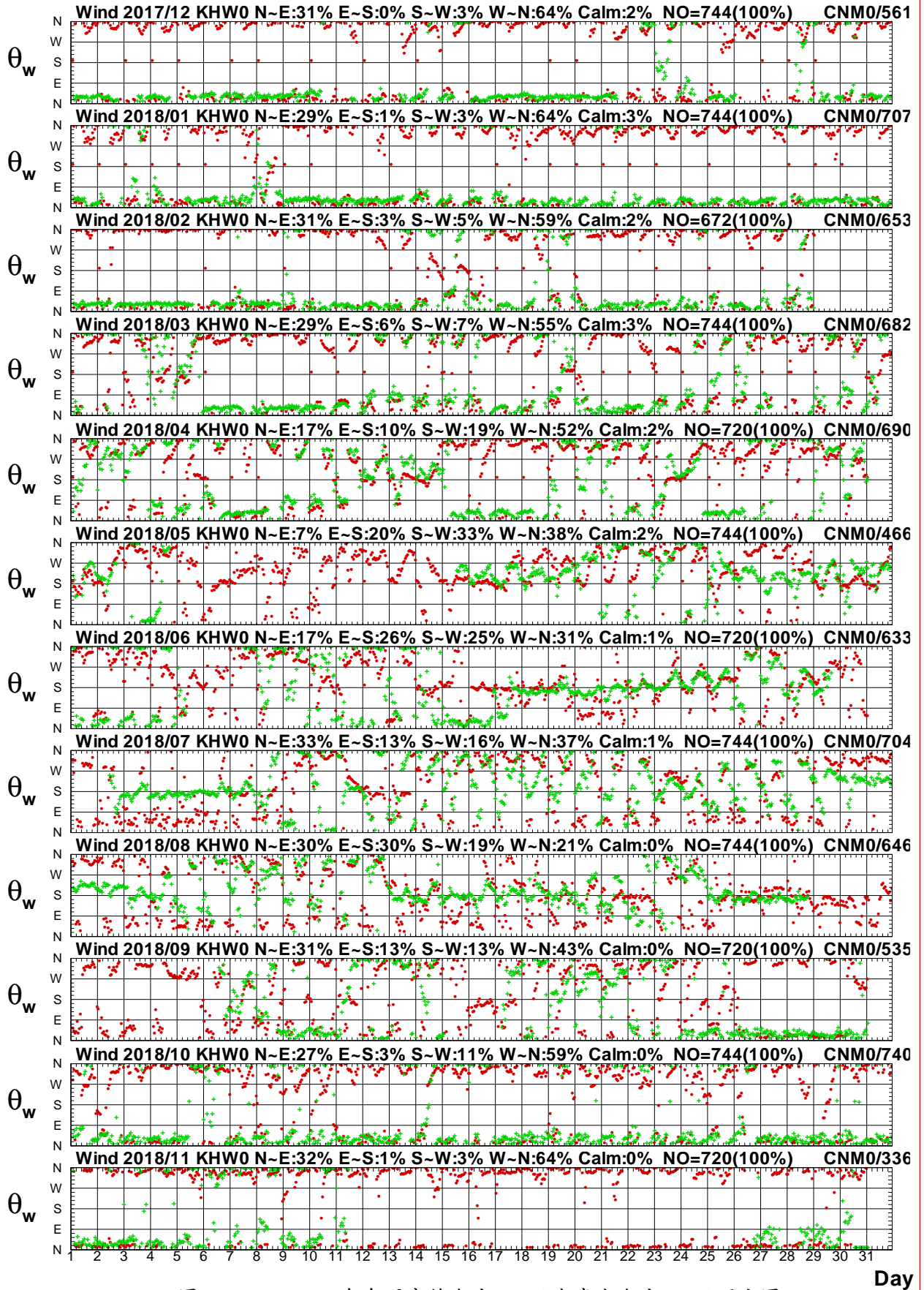


圖 1.3.25b 2018年每月高雄海域 W 站與嘉南海域 M 站風向圖

W17CKHW0.1HA W17CCNM0.1H0 W181KHW0.1HA W181CNM0.1H0 W182KHW0.1HA W182CNM0.1H0
 W183KHW0.1HA W183CNM0.1H0 W184KHW0.1HA W184CNM0.1H0 W185KHW0.1HA W185CNM0.1H0

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1.4 2018年高雄海域風力**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 Kao-Hsiung Seas of KHZ0 at 2018

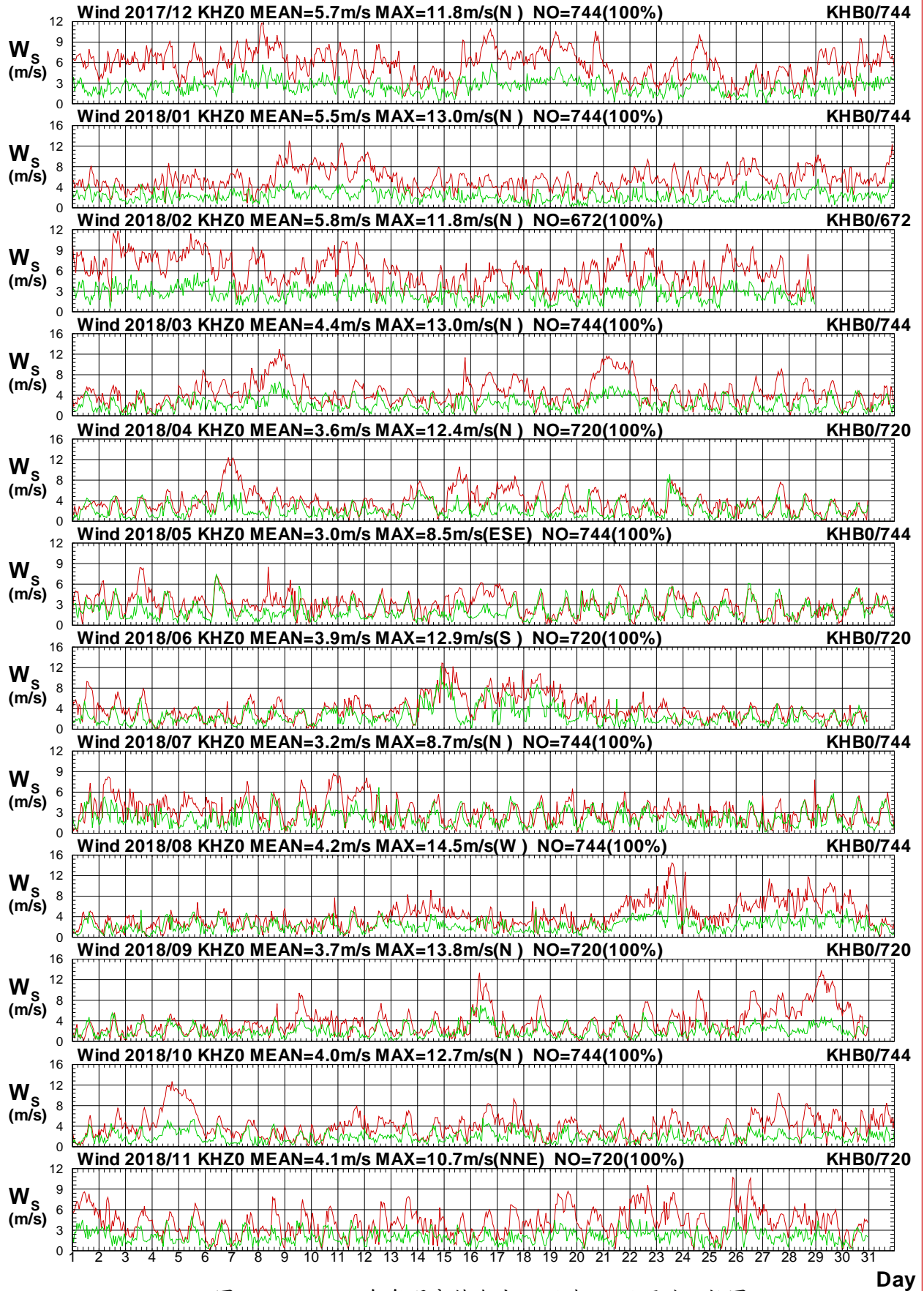


圖1.4.1a 2018年每月高雄海域 Z 站與 B 站風速比較圖

W17CKHZ0.1HA W17CKHB0.1HO W181KHZ0.1HA W181KHB0.1HO W182KHZ0.1HA W182KHB0.1HO
 W183KHZ0.1HA W183KHB0.1HO W184KHZ0.1HA W184KHB0.1HO W185KHZ0.1HA W185KHB0.1HO

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

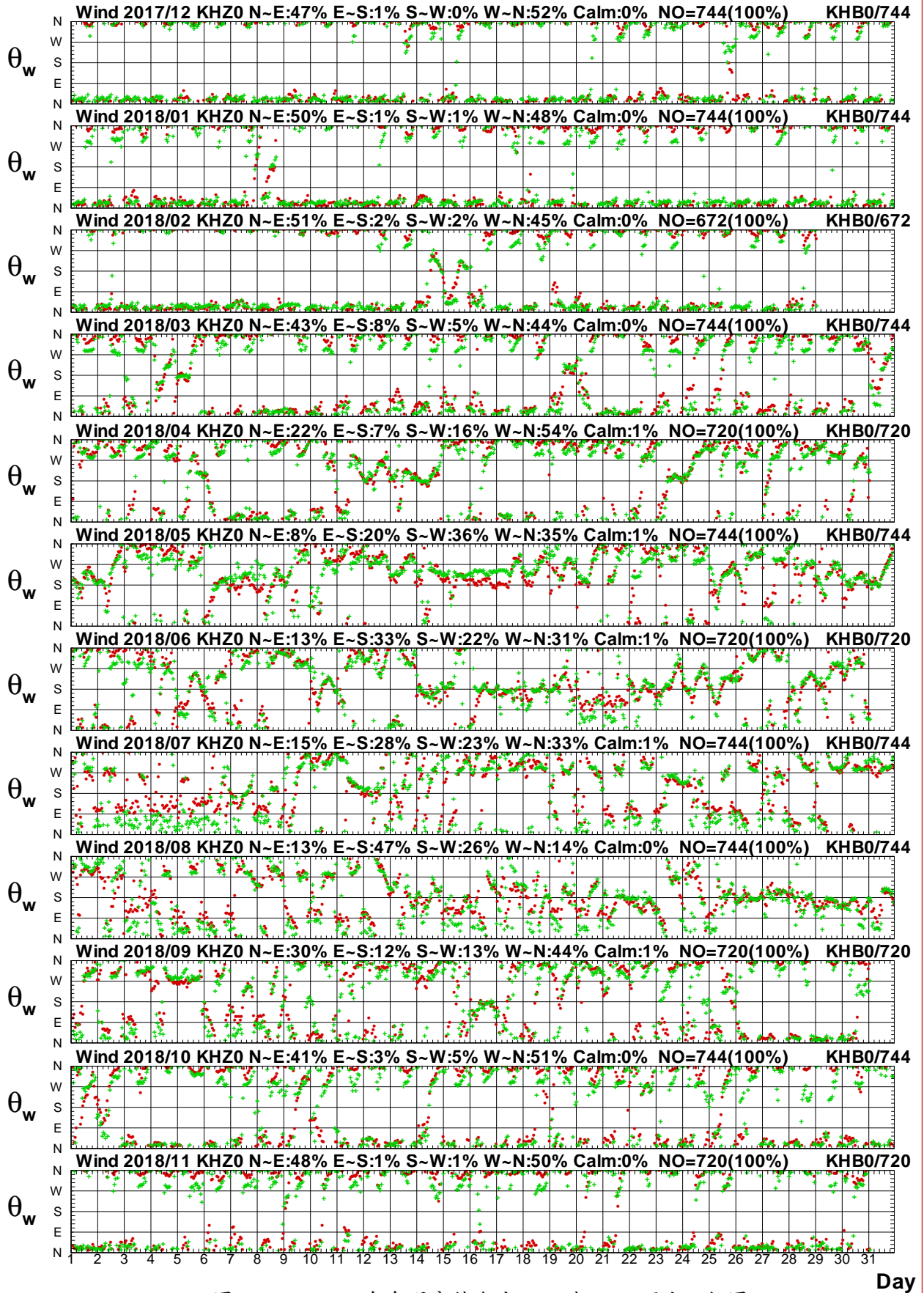


圖1.4.1b 2018年每月高雄海域 Z 站與 B 站風向比較圖

W17CKHZ0.1HA W17CKHB0.1HO W181KHZ0.1HA W181KHB0.1HO W182KHZ0.1HA W182KHB0.1HO
 W183KHZ0.1HA W183KHB0.1HO W184KHZ0.1HA W184KHB0.1HO W185KHZ0.1HA W185KHB0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

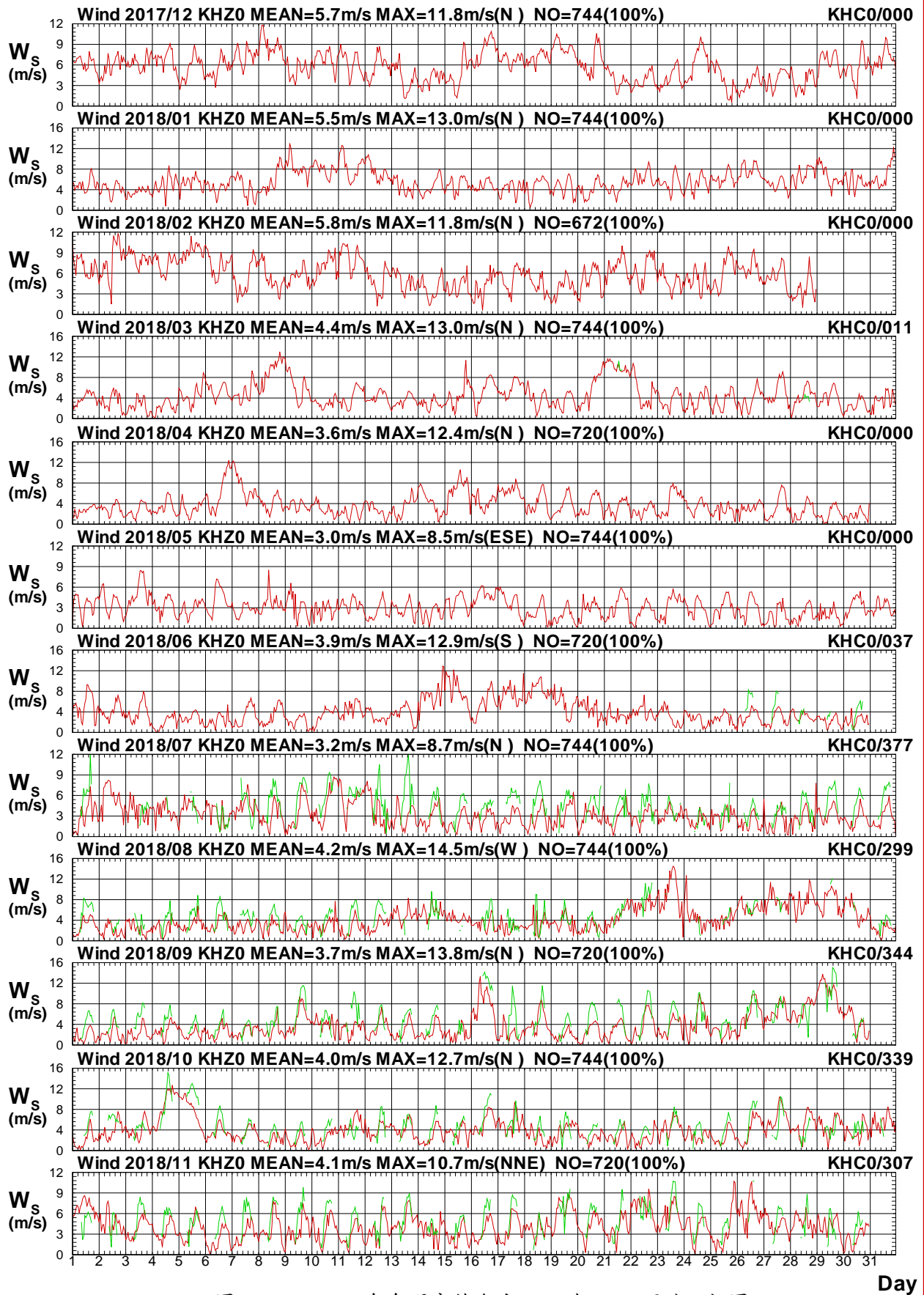


圖1.4.2a 2018年每月高雄海域 Z 站與 C 站風速比較圖

W17CKHZ0.1HA W17CKHC0.1HO W181KHZ0.1HA W181KHC0.1HO W182KHZ0.1HA W182KHC0.1HO
 W183KHZ0.1HA W183KHC0.1HO W184KHZ0.1HA W184KHC0.1HO W185KHZ0.1HA W185KHC0.1HO

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

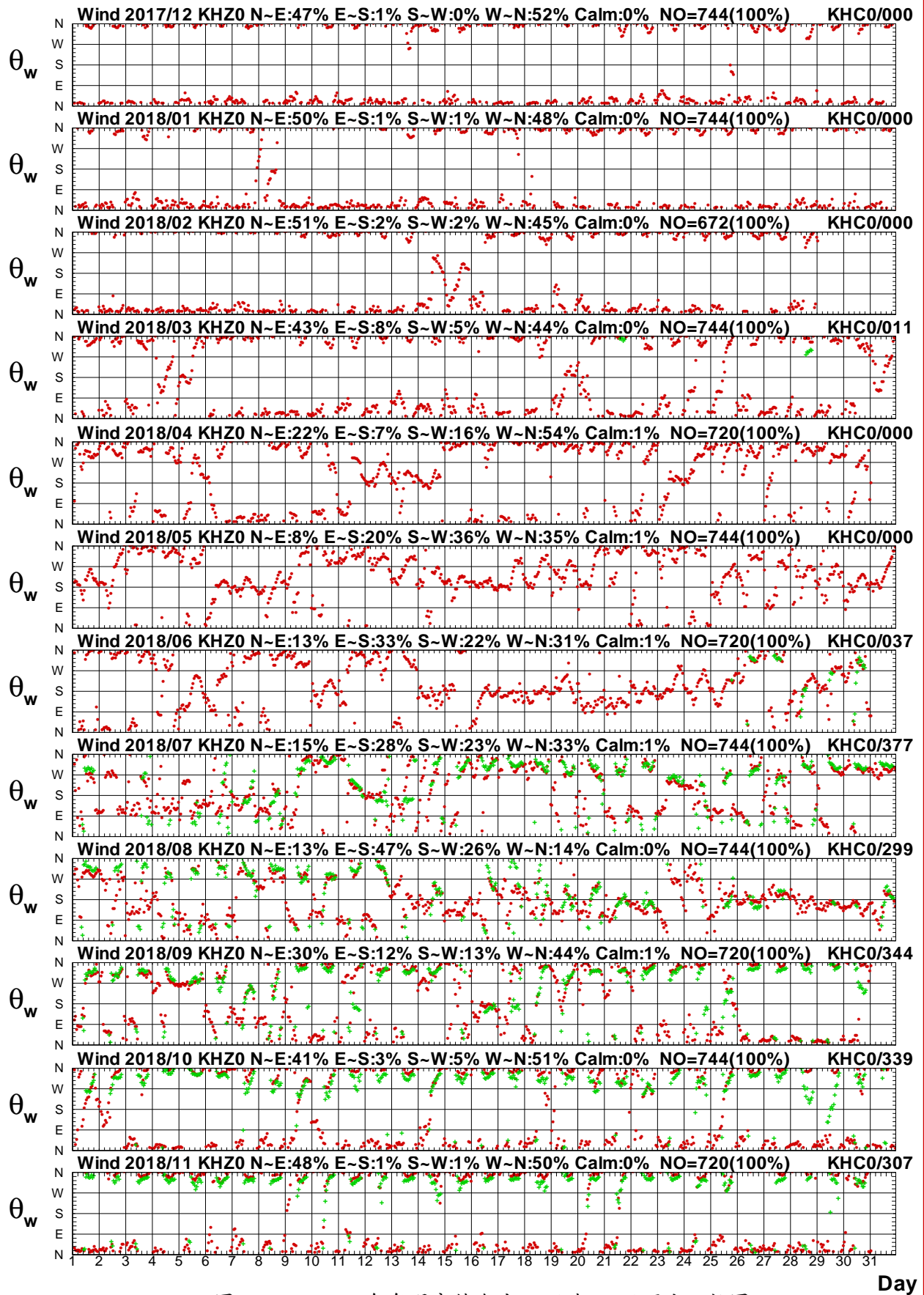


圖1.4.2b 2018年每月高雄海域 Z 站與 C 站風向比較圖

W17CKHZ0.1HA W17CKHC0.1HO W181KHZ0.1HA W181KHC0.1HO W182KHZ0.1HA W182KHC0.1HO
 W183KHZ0.1HA W183KHC0.1HO W184KHZ0.1HA W184KHC0.1HO W185KHZ0.1HA W185KHC0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

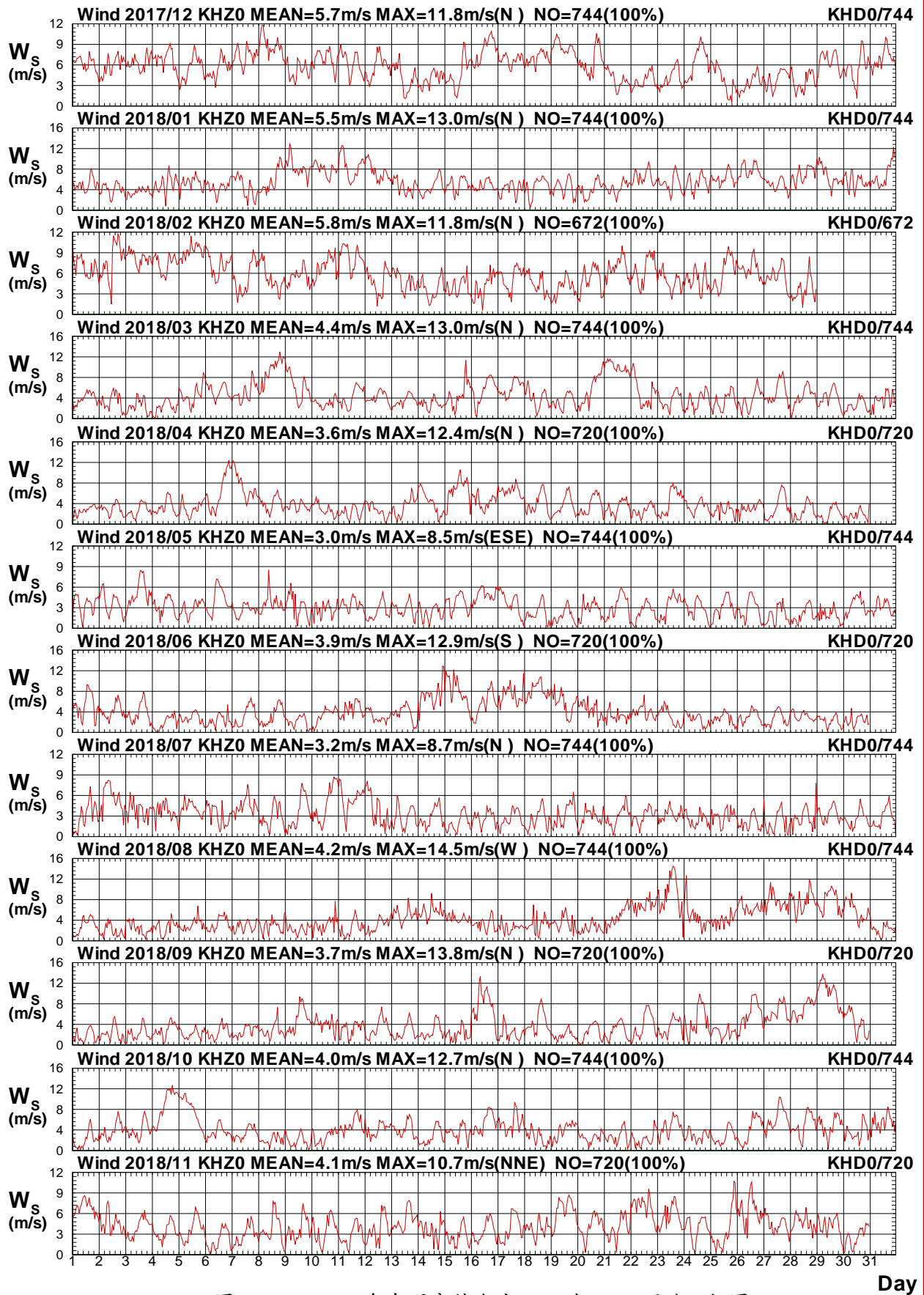


圖1.4.3a 2018年每月高雄海域 Z 站與 D 站風速比較圖

W17CKHZ0.1HA W17CKHD0.1HO W181KHZ0.1HA W181KHD0.1HO W182KHZ0.1HA W182KHD0.1HO
 W183KHZ0.1HA W183KHD0.1HO W184KHZ0.1HA W184KHD0.1HO W185KHZ0.1HA W185KHD0.1HO

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

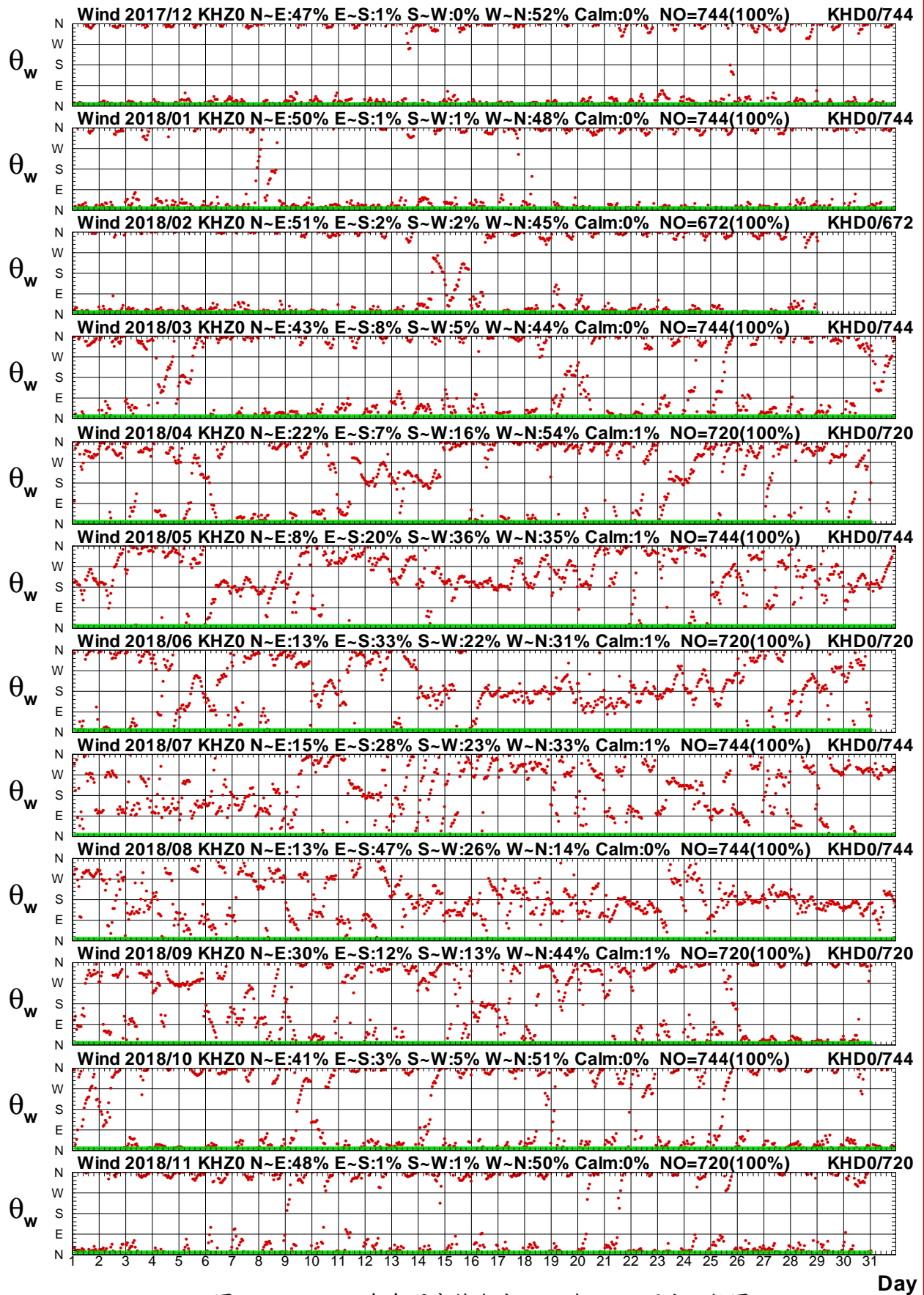


圖1.4.3b 2018年每月高雄海域 Z 站與 D 站風向比較圖

W17CKHZ0.1HA W17CKHD0.1HO W181KHZ0.1HA W181KHD0.1HO W182KHZ0.1HA W182KHD0.1HO
 W183KHZ0.1HA W183KHD0.1HO W184KHZ0.1HA W184KHD0.1HO W185KHZ0.1HA W185KHD0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

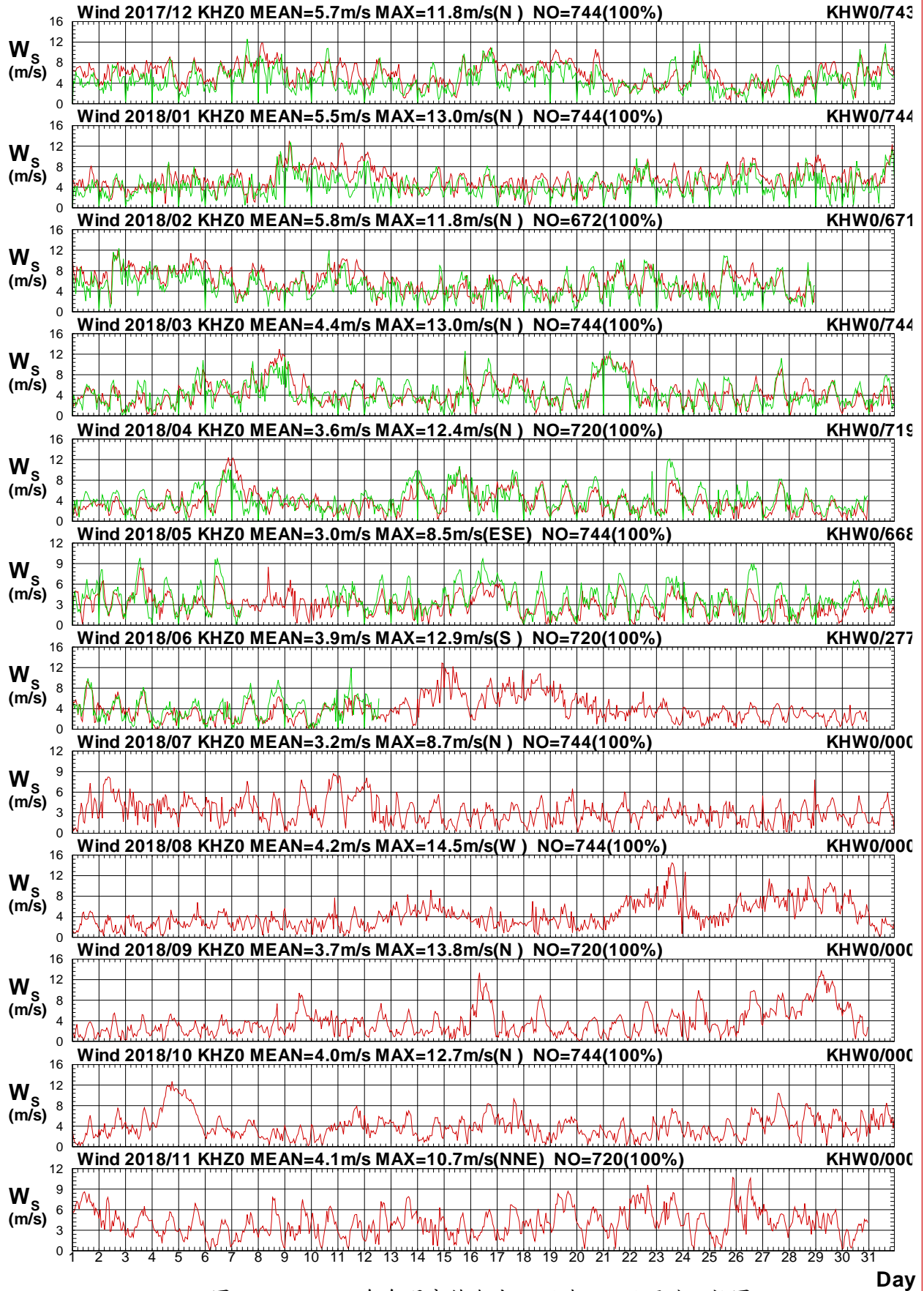


圖1.4.4a 2018年每月高雄海域 Z 站與 W 站風速比較圖

W17CKHZ0.1HA W17CKHW0.1H0 W181KHZ0.1HA W181KHW0.1H0 W182KHZ0.1HA W182KHW0.1H0
 W183KHZ0.1HA W183KHW0.1H0 W184KHZ0.1HA W184KHW0.1H0 W185KHZ0.1HA W185KHW0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

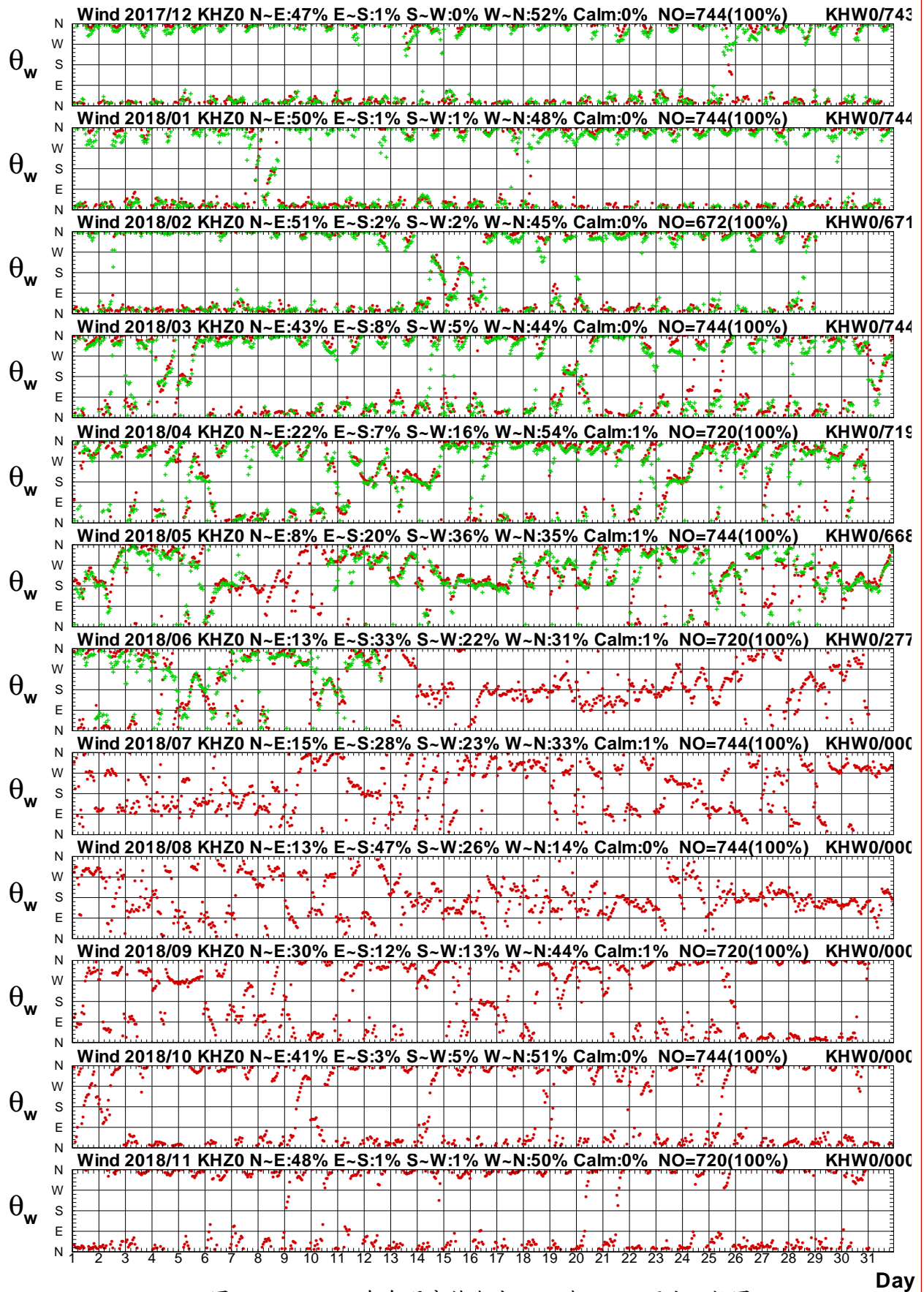


圖1.4.4b 2018年每月高雄海域 Z 站與 W 站風向比較圖

W17CKHZ0.1HA W17CKHW0.1H0 W181KHZ0.1HA W181KHW0.1H0 W182KHZ0.1HA W182KHW0.1H0
 W183KHZ0.1HA W183KHW0.1H0 W184KHZ0.1HA W184KHW0.1H0 W185KHZ0.1HA W185KHW0.1H0

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

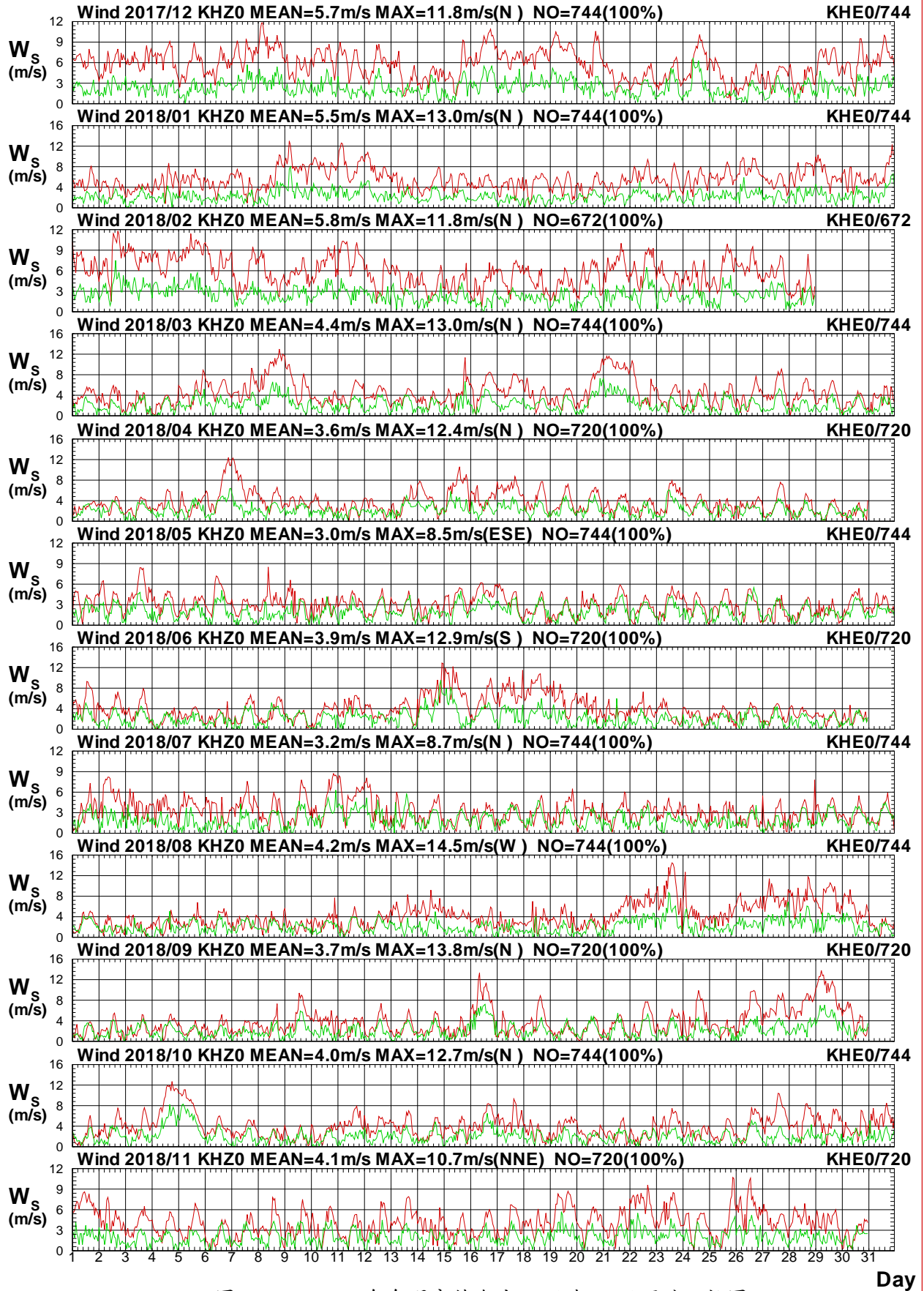


圖1.4.5a 2018年每月高雄海域 Z 站與 E 站風速比較圖

W17CKHZ0.1HA W17CKHE0.1HO W181KHZ0.1HA W181KHE0.1HO W182KHZ0.1HA W182KHE0.1HO
 W183KHZ0.1HA W183KHE0.1HO W184KHZ0.1HA W184KHE0.1HO W185KHZ0.1HA W185KHE0.1HO

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

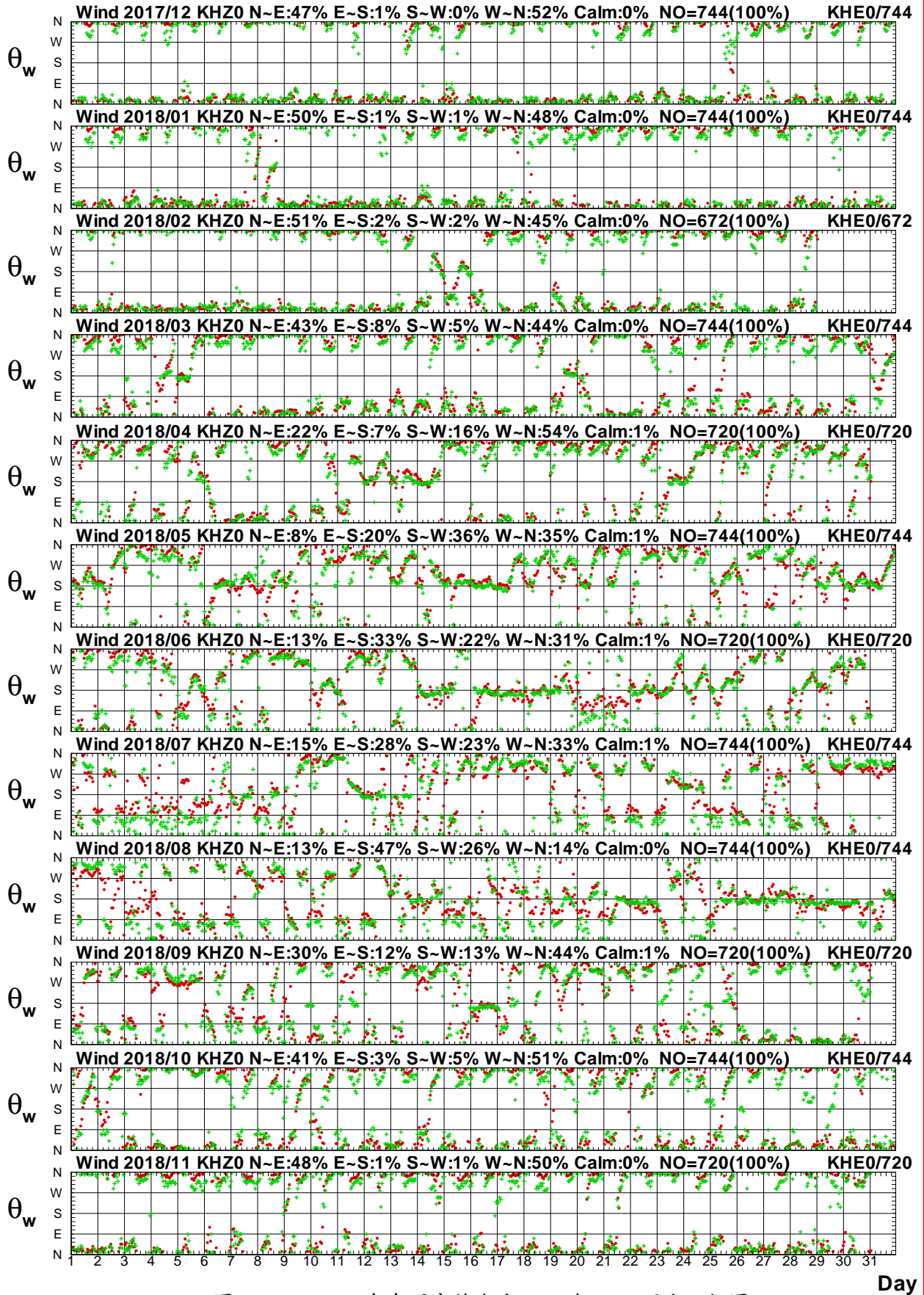


圖1.4.5b 2018年每月高雄海域 Z 站與 E 站風向比較圖

W17CKHZ0.1HA W17CKHE0.1HO W181KHZ0.1HA W181KHE0.1HO W182KHZ0.1HA W182KHE0.1HO
 W183KHZ0.1HA W183KHE0.1HO W184KHZ0.1HA W184KHE0.1HO W185KHZ0.1HA W185KHE0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

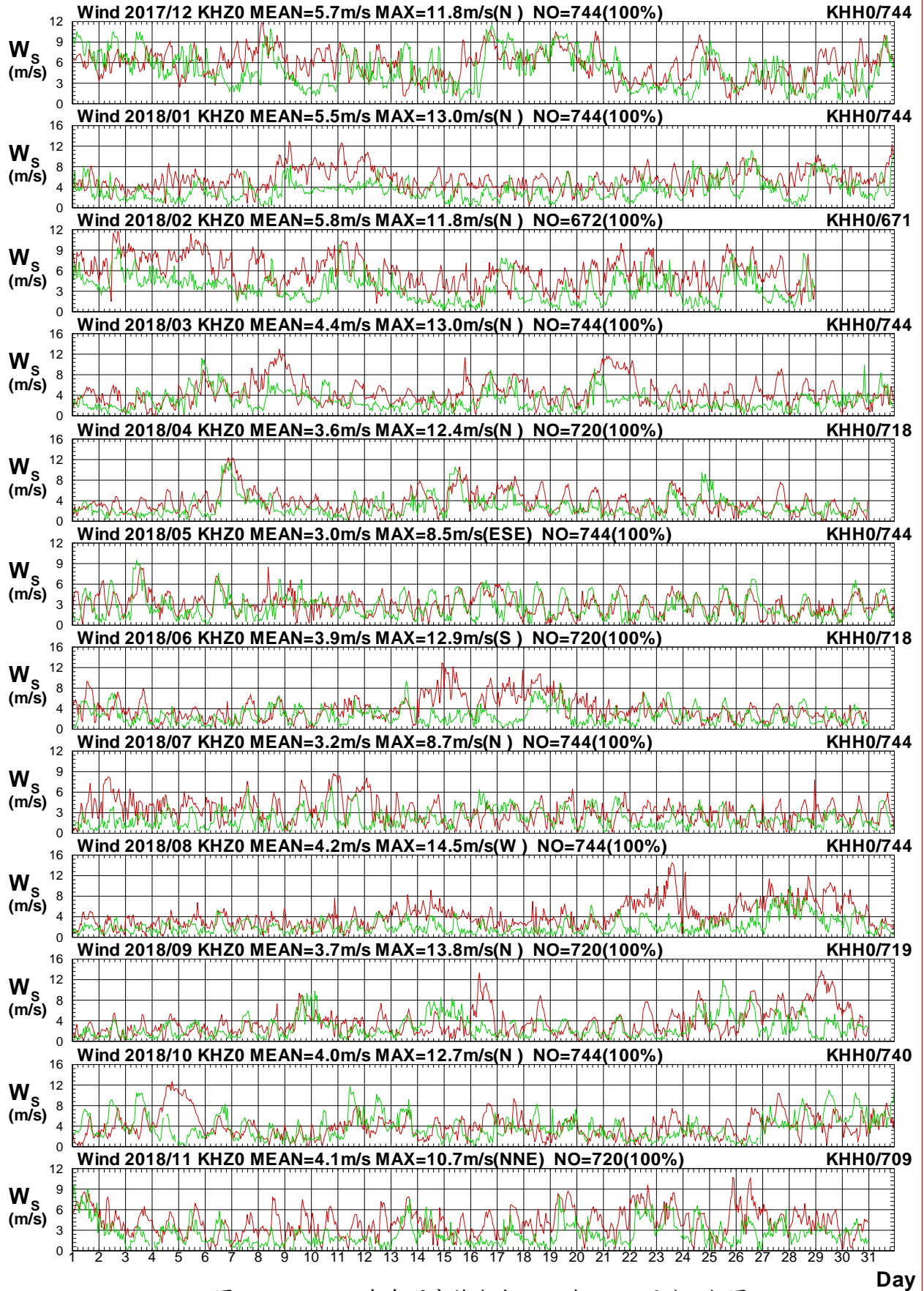


圖1.4.6a 2018年每月高雄海域 Z 站與 H 站風速比較圖

W17CKHZ0.1HA W17CKHH0.1HO W181KHZ0.1HA W181KHH0.1HO W182KHZ0.1HA W182KHH0.1HO
 W183KHZ0.1HA W183KHH0.1HO W184KHZ0.1HA W184KHH0.1HO W185KHZ0.1HA W185KHH0.1HO

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

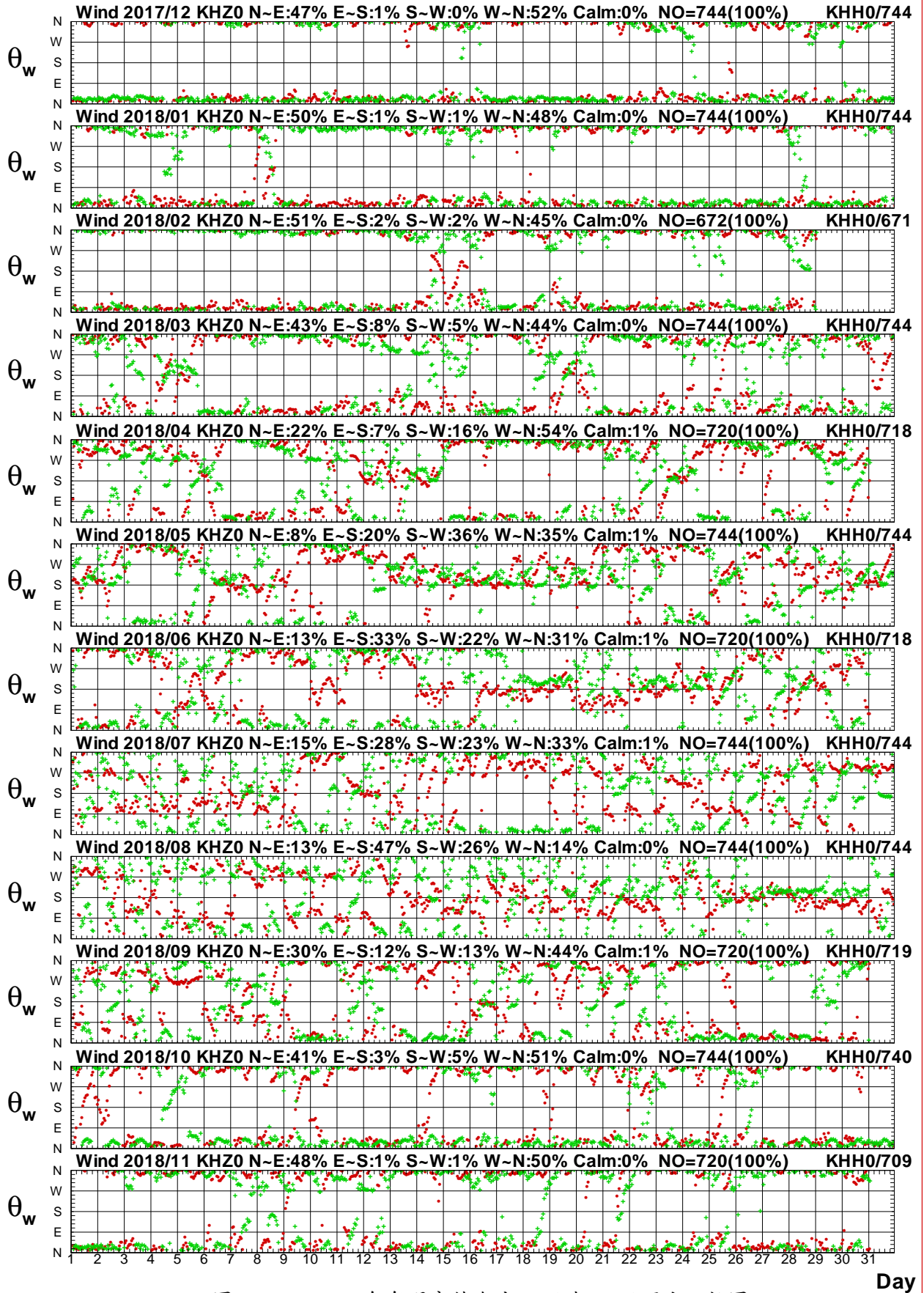


圖1.4.6b 2018年每月高雄海域 Z 站與 H 站風向比較圖

W17CKHZ0.1HA W17CKHH0.1HO W181KHZ0.1HA W181KHH0.1HO W182KHZ0.1HA W182KHH0.1HO
 W183KHZ0.1HA W183KHH0.1HO W184KHZ0.1HA W184KHH0.1HO W185KHZ0.1HA W185KHH0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

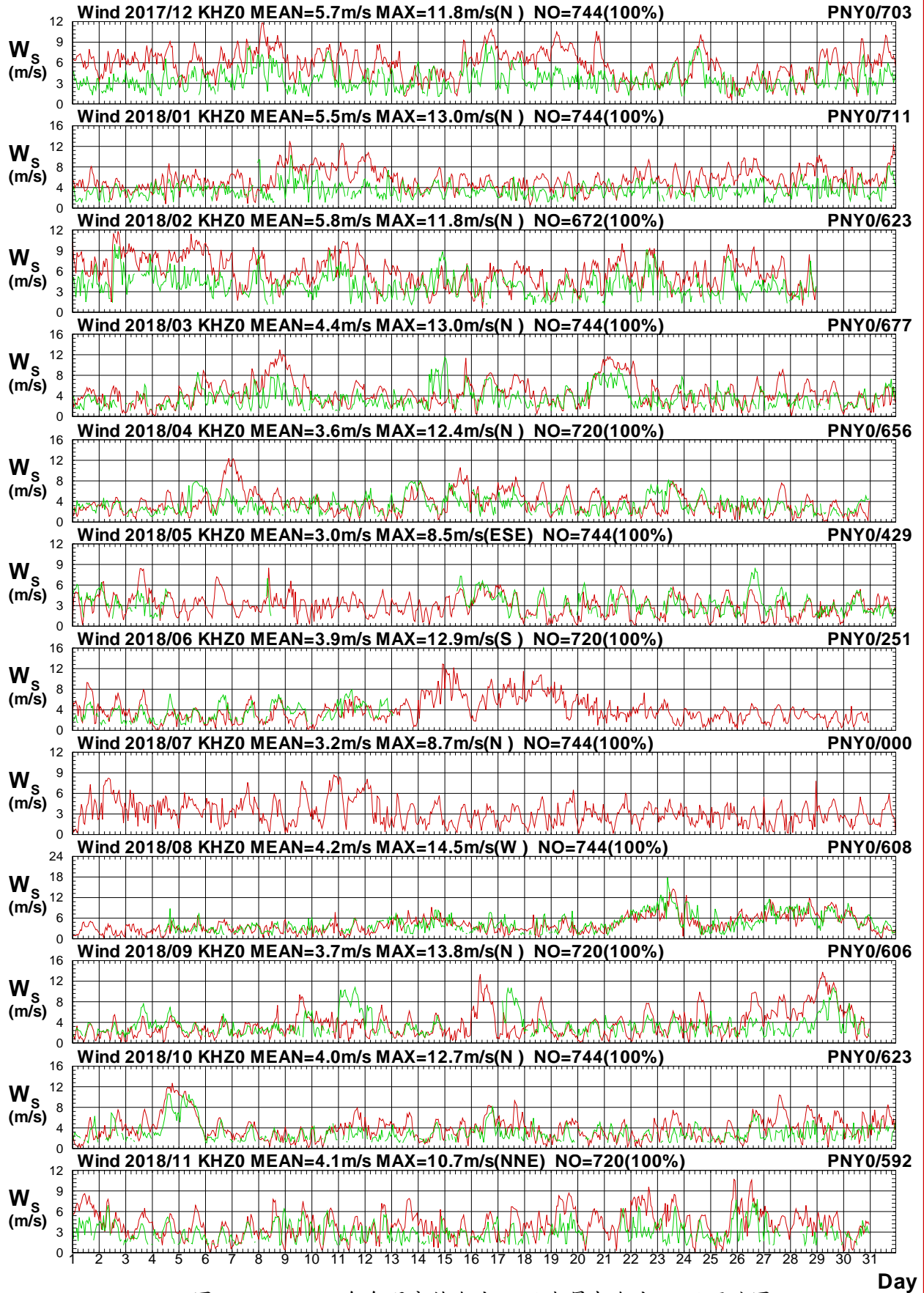


圖1.4.7a 2018年每月高雄海域 Z 站與屏東海域 Y 站風速圖

W17CKHZ0.1HA W17CPNY0.1HO W181KHZ0.1HA W181PNY0.1HO W182KHZ0.1HA W182PNY0.1HO
 W183KHZ0.1HA W183PNY0.1HO W184KHZ0.1HA W184PNY0.1HO W185KHZ0.1HA W185PNY0.1HO

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

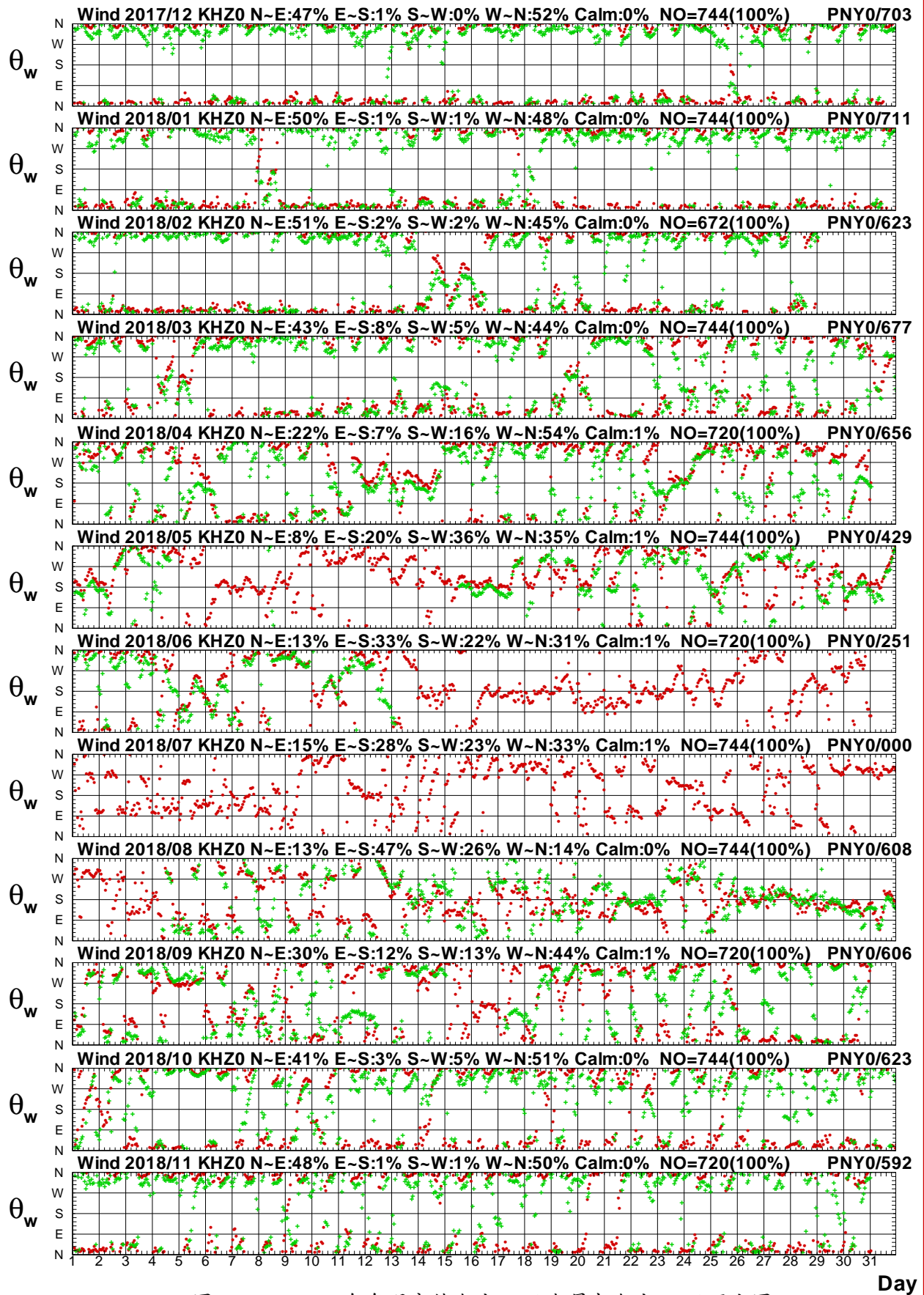


圖1.4.7b 2018年每月高雄海域 Z 站與屏東海域 Y 站風向圖

W17CKHZ0.1HA W17CPNY0.1HO W181KHZ0.1HA W181PNY0.1HO W182KHZ0.1HA W182PNY0.1HO
W183KHZ0.1HA W183PNY0.1HO W184KHZ0.1HA W184PNY0.1HO W185KHZ0.1HA W185PNY0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

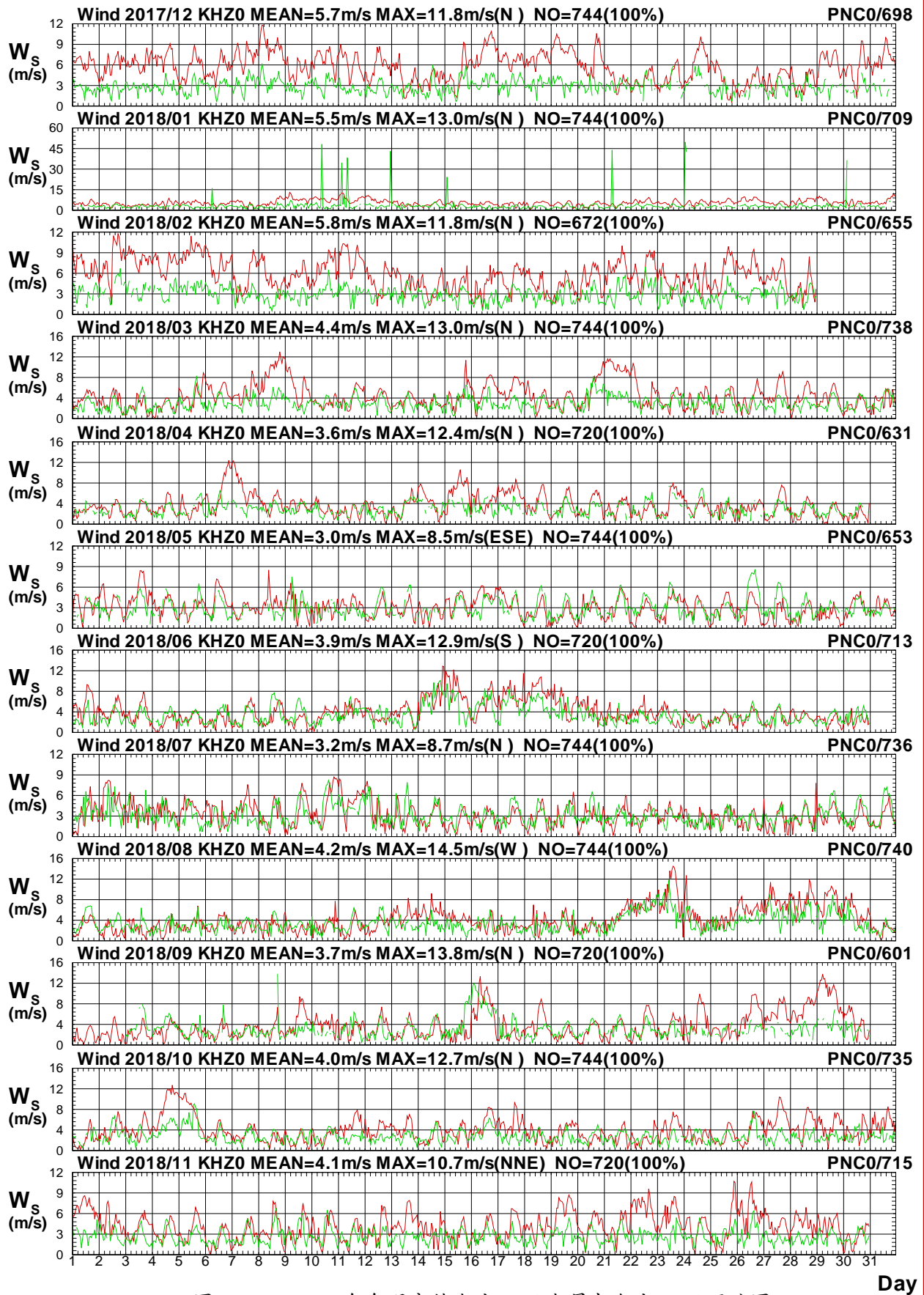


圖1.4.8a 2018年每月高雄海域 Z 站與屏東海域 C 站風速圖

W17CKHZ0.1HA W17CPNC0.1H0 W181KHZ0.1HA W181PNC0.1H0 W182KHZ0.1HA W182PNC0.1H0
W183KHZ0.1HA W183PNC0.1H0 W184KHZ0.1HA W184PNC0.1H0 W185KHZ0.1HA W185PNC0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

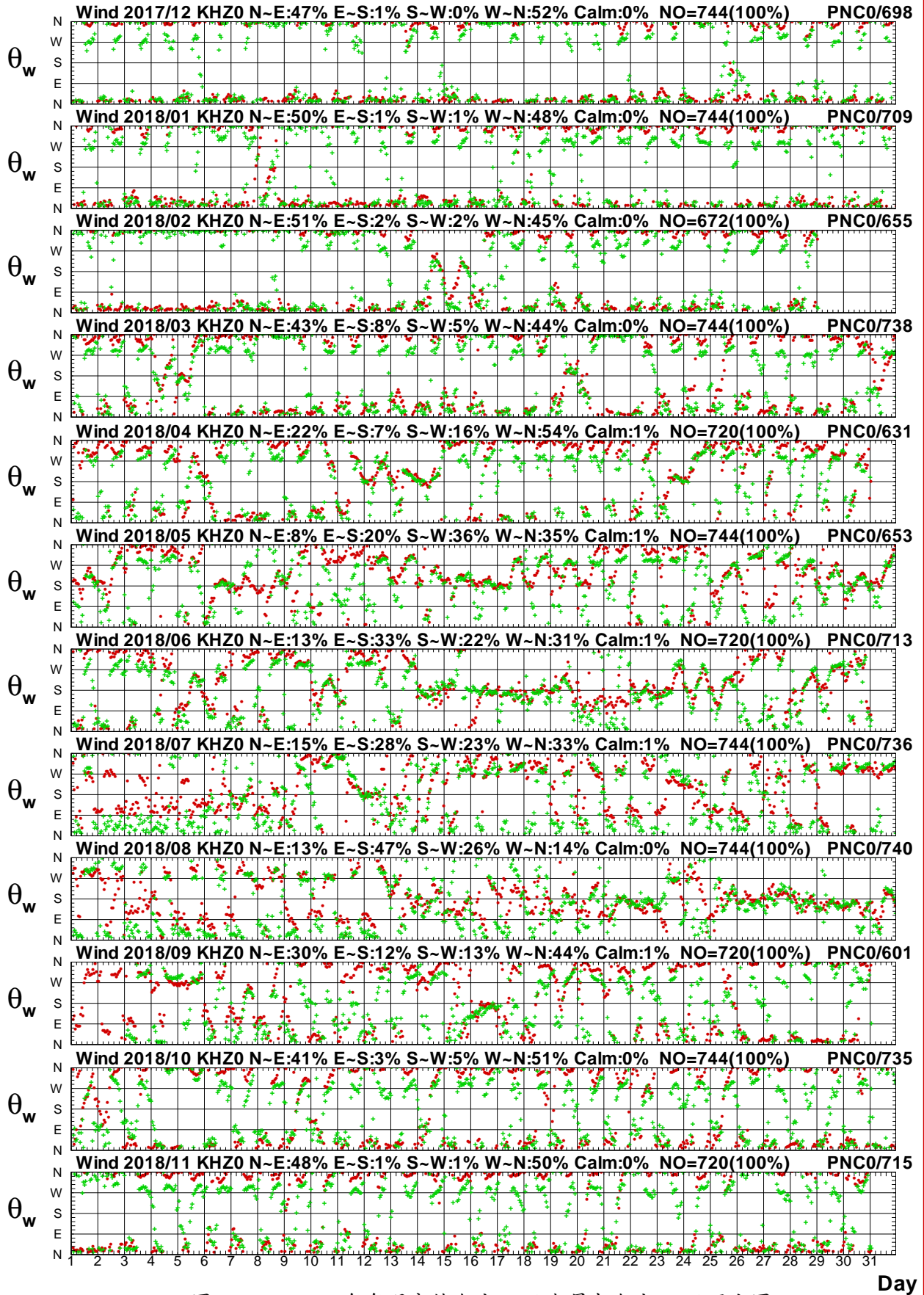


圖1.4.8b 2018年每月高雄海域 Z 站與屏東海域 C 站風向圖

W17CKHZ0.1HA W17CPNC0.1HO W181KHZ0.1HA W181PNC0.1HO W182KHZ0.1HA W182PNC0.1HO
 W183KHZ0.1HA W183PNC0.1HO W184KHZ0.1HA W184PNC0.1HO W185KHZ0.1HA W185PNC0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

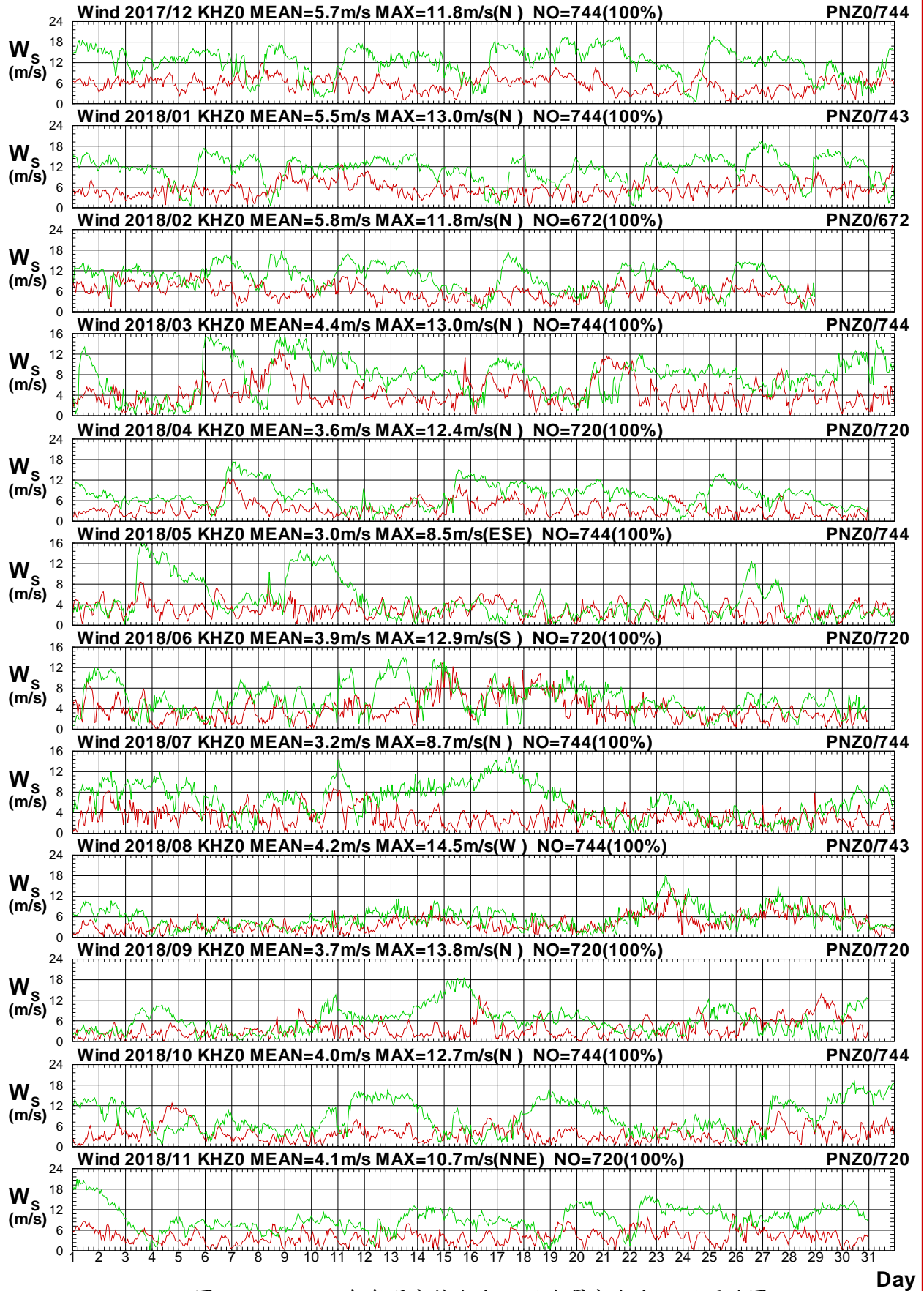


圖1.4.9a 2018年每月高雄海域 Z 站與屏東海域 Z 站風速圖

W17CKHZ0.1HA W17CPNZ0.1H0 W181KHZ0.1HA W181PNZ0.1H0 W182KHZ0.1HA W182PNZ0.1H0
 W183KHZ0.1HA W183PNZ0.1H0 W184KHZ0.1HA W184PNZ0.1H0 W185KHZ0.1HA W185PNZ0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

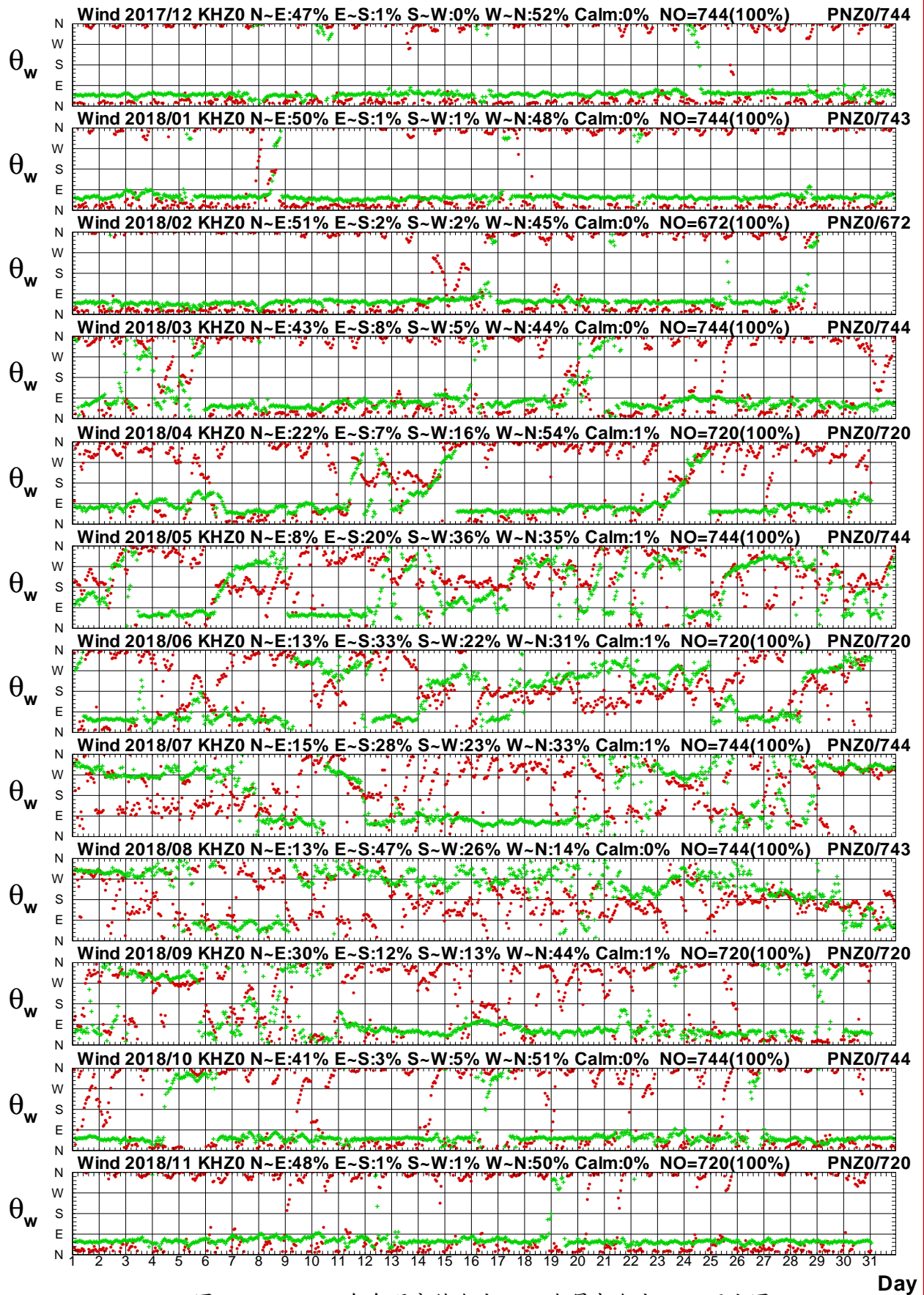


圖1.4.9b 2018年每月高雄海域 Z 站與屏東海域 Z 站風向圖

W17CKHZ0.1HA W17CPNZ0.1H0 W181KHZ0.1HA W181PNZ0.1H0 W182KHZ0.1HA W182PNZ0.1H0
 W183KHZ0.1HA W183PNZ0.1H0 W184KHZ0.1HA W184PNZ0.1H0 W185KHZ0.1HA W185PNZ0.1H0

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

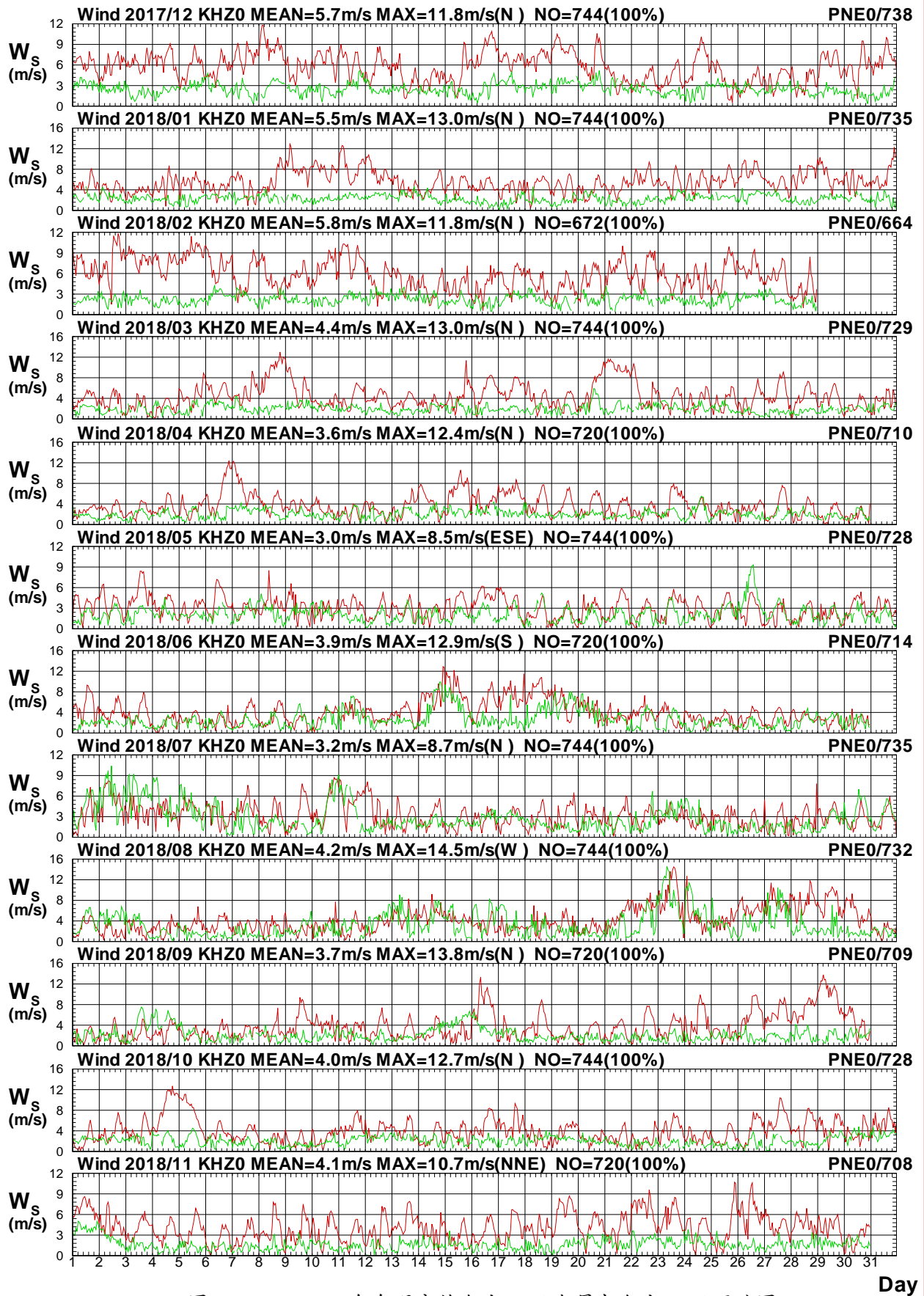


圖1.4.10a 2018年每月高雄海域 Z 站與屏東海域 E 站風速圖

W17CKHZ0.1HA W17CPNE0.1HO W181KHZ0.1HA W181PNE0.1HO W182KHZ0.1HA W182PNE0.1HO
W183KHZ0.1HA W183PNE0.1HO W184KHZ0.1HA W184PNE0.1HO W185KHZ0.1HA W185PNE0.1HO

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

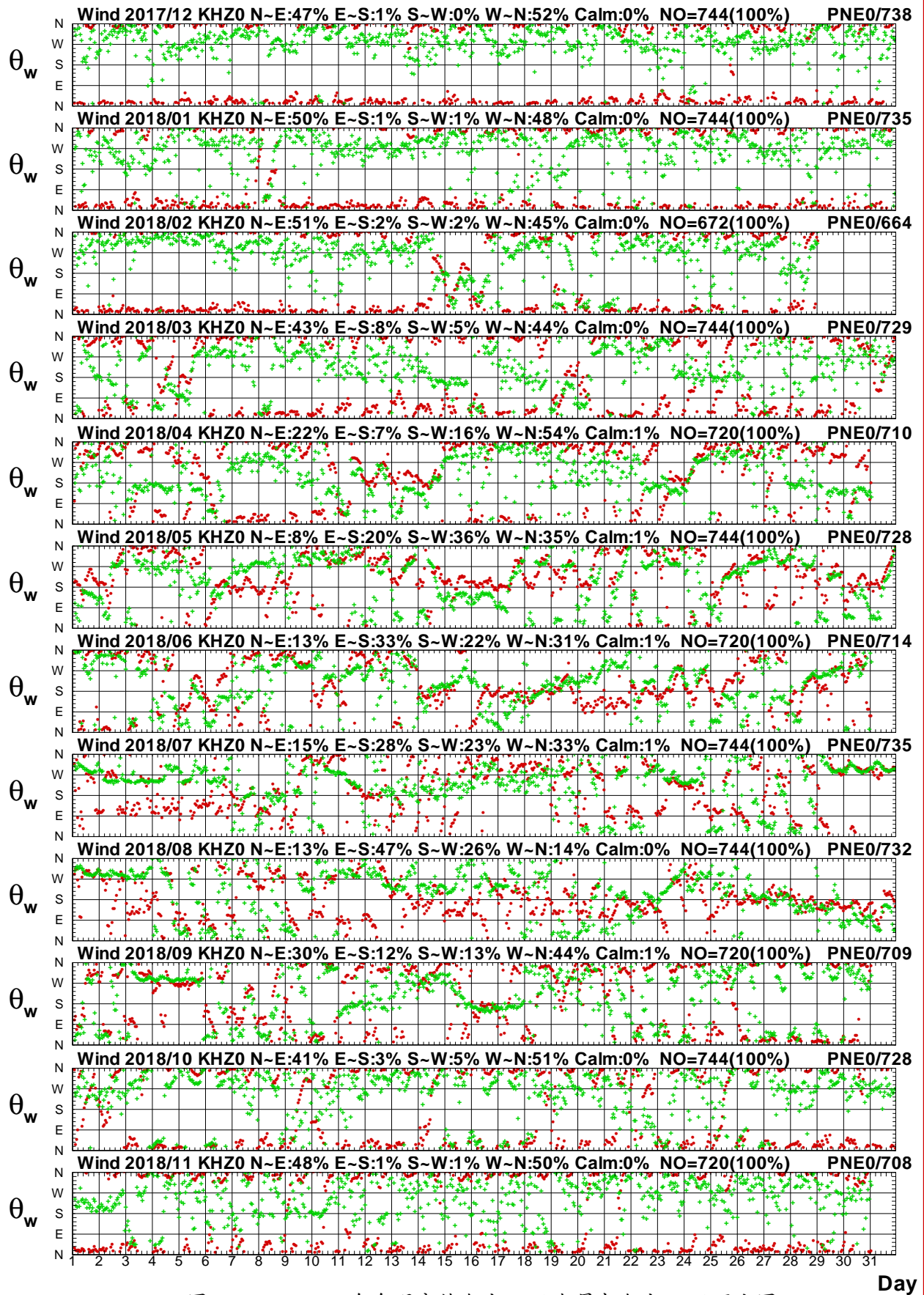


圖1.4.10b 2018年每月高雄海域 Z 站與屏東海域 E 站風向圖

W17CKHZ0.1HA W17CPNE0.1HO W181KHZ0.1HA W181PNE0.1HO W182KHZ0.1HA W182PNE0.1HO
 W183KHZ0.1HA W183PNE0.1HO W184KHZ0.1HA W184PNE0.1HO W185KHZ0.1HA W185PNE0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

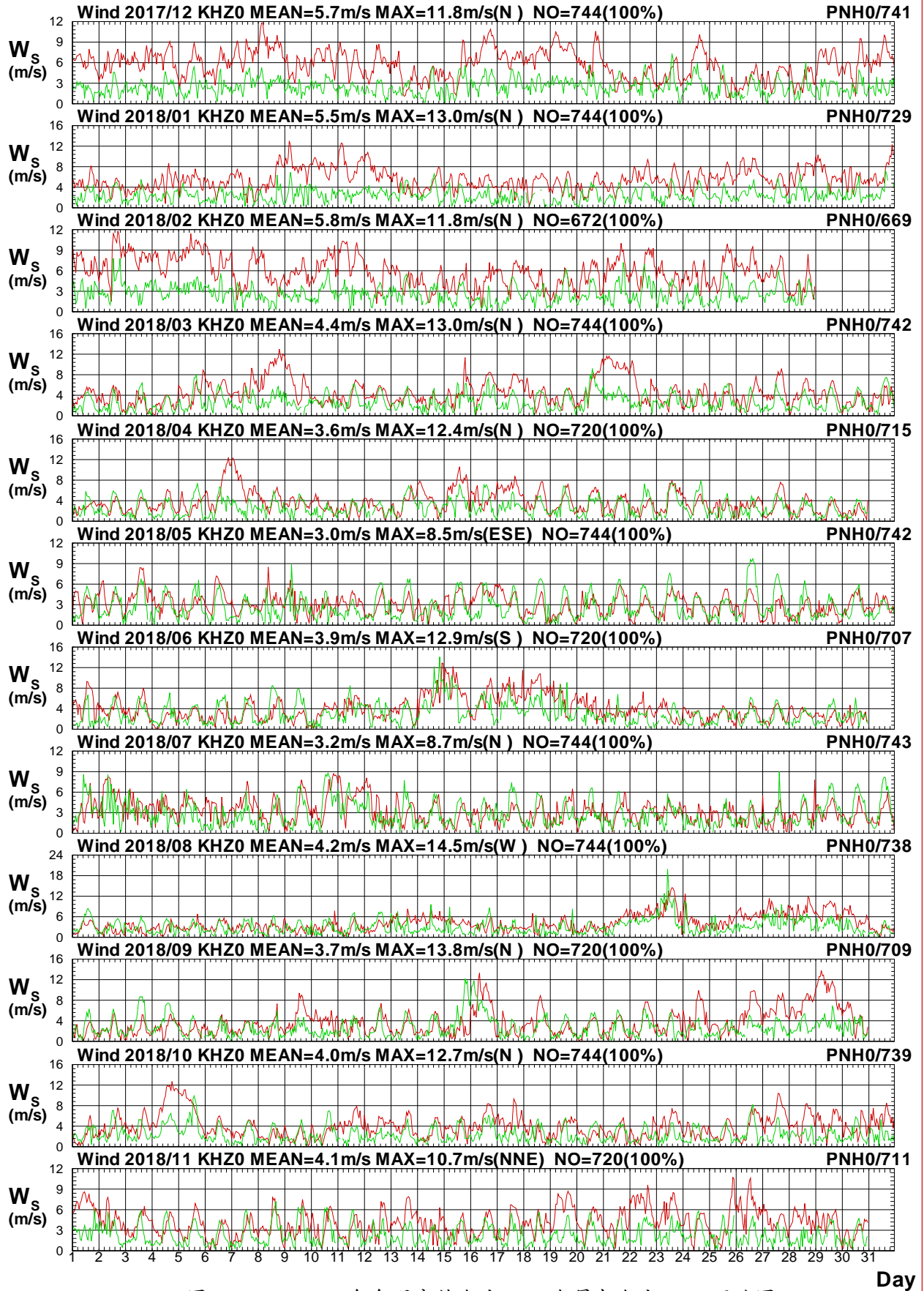


圖1.4.11a 2018年每月高雄海域 Z 站與屏東海域 H 站風速圖

W17CKHZ0.1HA W17CPNH0.1H0 W181KHZ0.1HA W181PNH0.1H0 W182KHZ0.1HA W182PNH0.1H0
 W183KHZ0.1HA W183PNH0.1H0 W184KHZ0.1HA W184PNH0.1H0 W185KHZ0.1HA W185PNH0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

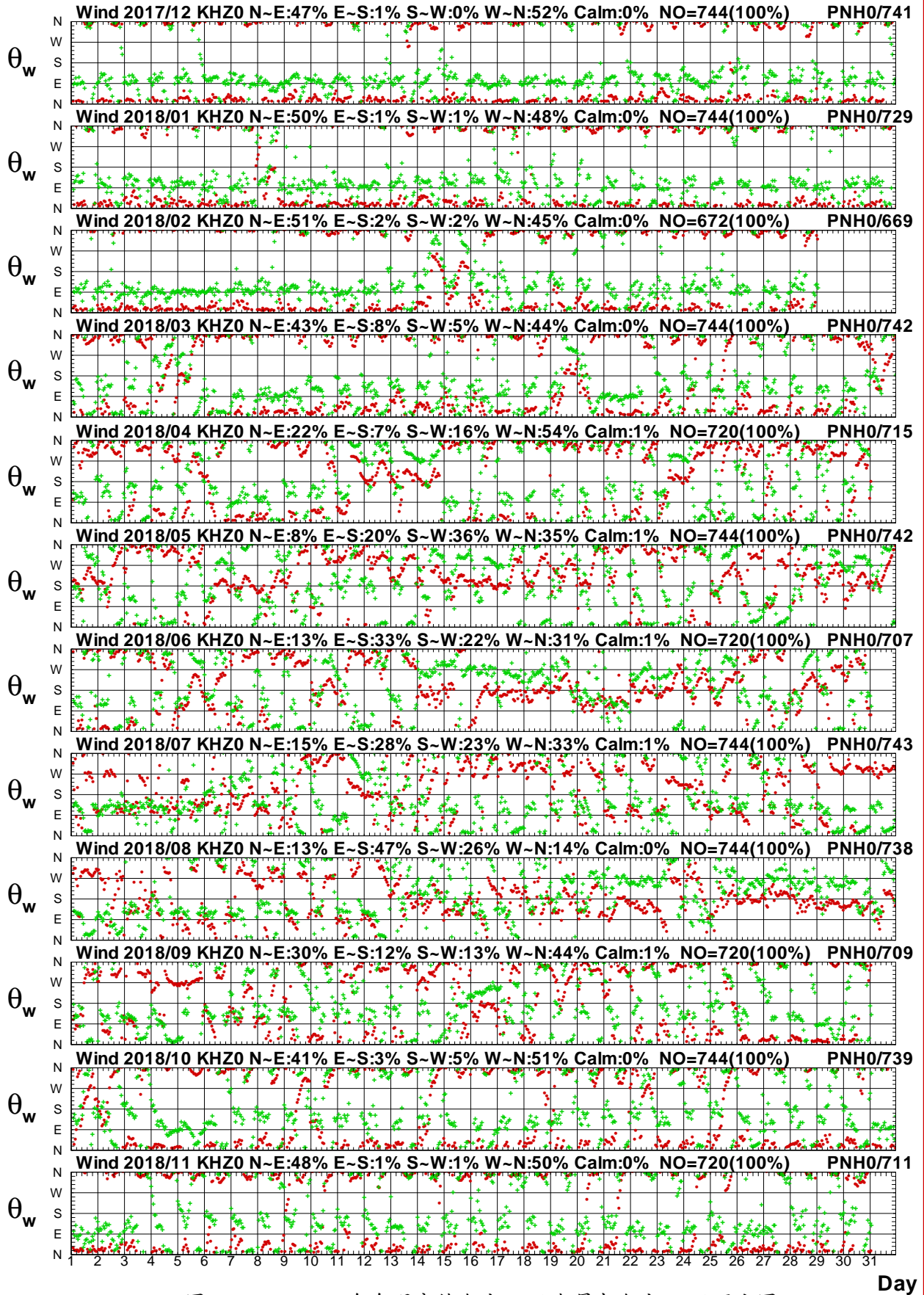


圖1.4.11b 2018年每月高雄海域 Z 站與屏東海域 H 站風向圖

W17CKHZ0.1HA W17CPNH0.1HO W181KHZ0.1HA W181PNH0.1HO W182KHZ0.1HA W182PNH0.1HO
 W183KHZ0.1HA W183PNH0.1HO W184KHZ0.1HA W184PNH0.1HO W185KHZ0.1HA W185PNH0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

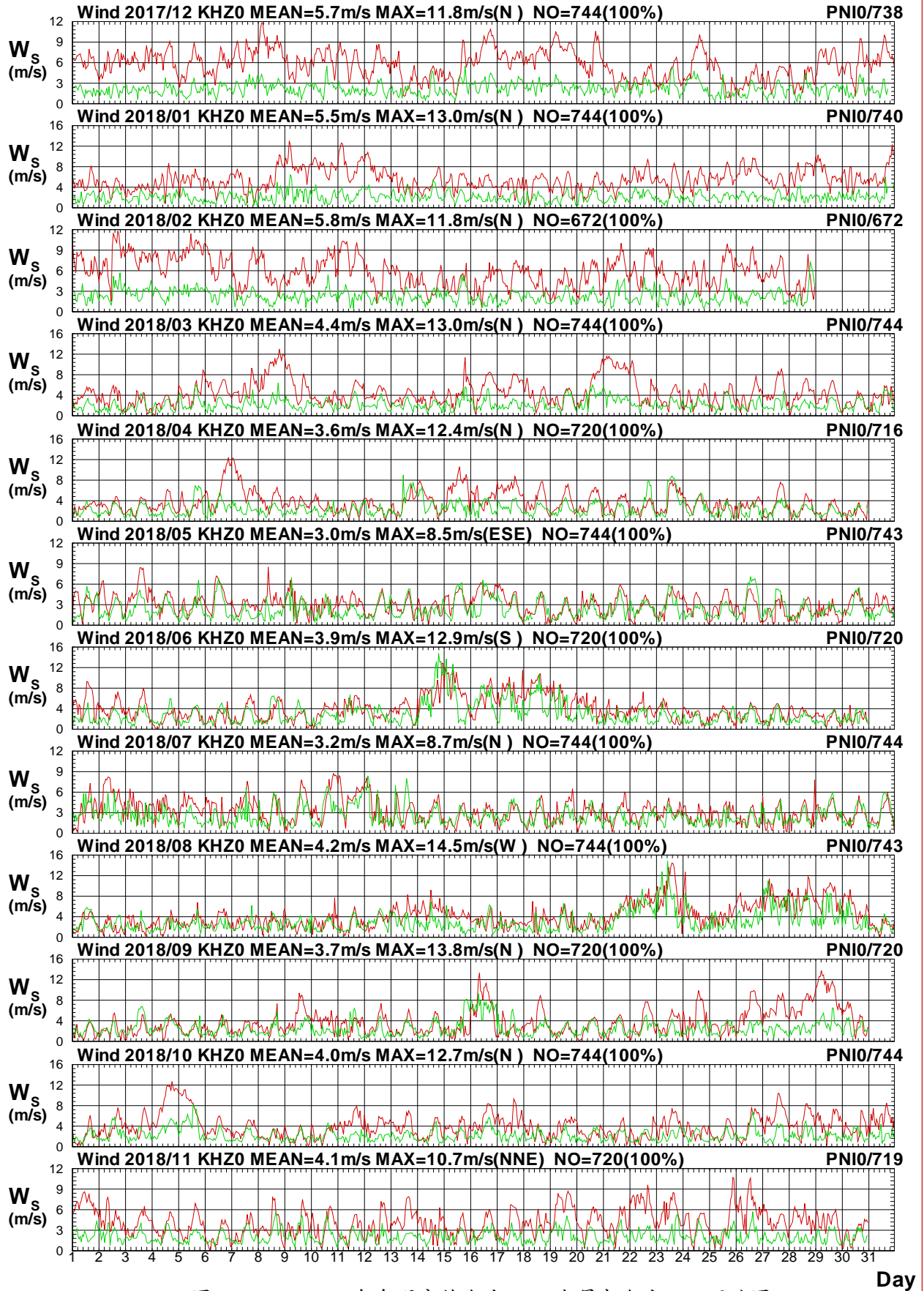


圖1.4.12a 2018年每月高雄海域 Z 站與屏東海域 I 站風速圖

W17CKHZ0.1HA W17CPNI0.1H0 W181KHZ0.1HA W181PNI0.1H0 W182KHZ0.1HA W182PNI0.1H0
 W183KHZ0.1HA W183PNI0.1H0 W184KHZ0.1HA W184PNI0.1H0 W185KHZ0.1HA W185PNI0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

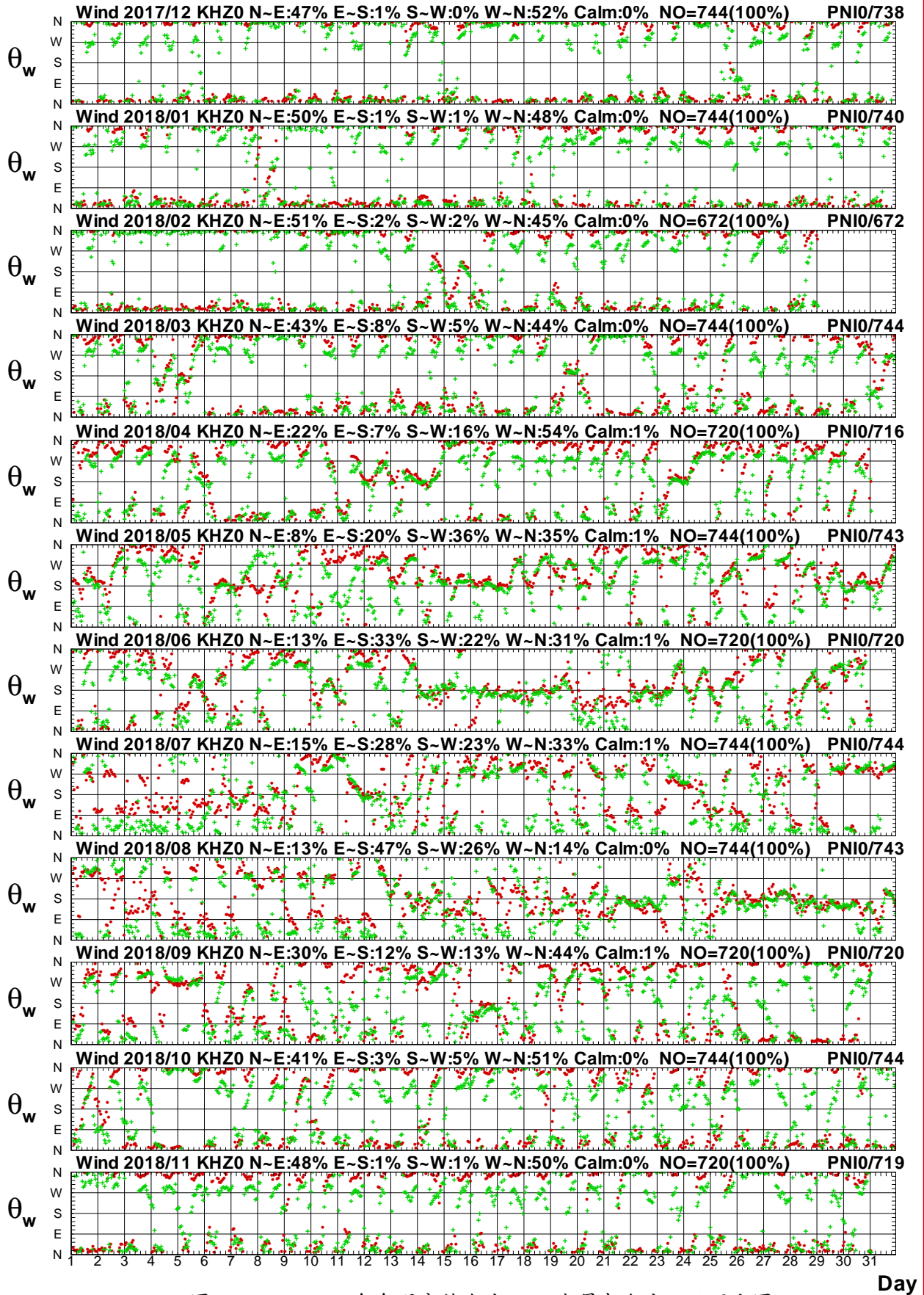


圖1.4.12b 2018年每月高雄海域 Z 站與屏東海域 I 站風向圖

W17CKHZ0.1HA W17CPNI0.1H0 W181KHZ0.1HA W181PNI0.1H0 W182KHZ0.1HA W182PNI0.1H0
 W183KHZ0.1HA W183PNI0.1H0 W184KHZ0.1HA W184PNI0.1H0 W185KHZ0.1HA W185PNI0.1H0

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

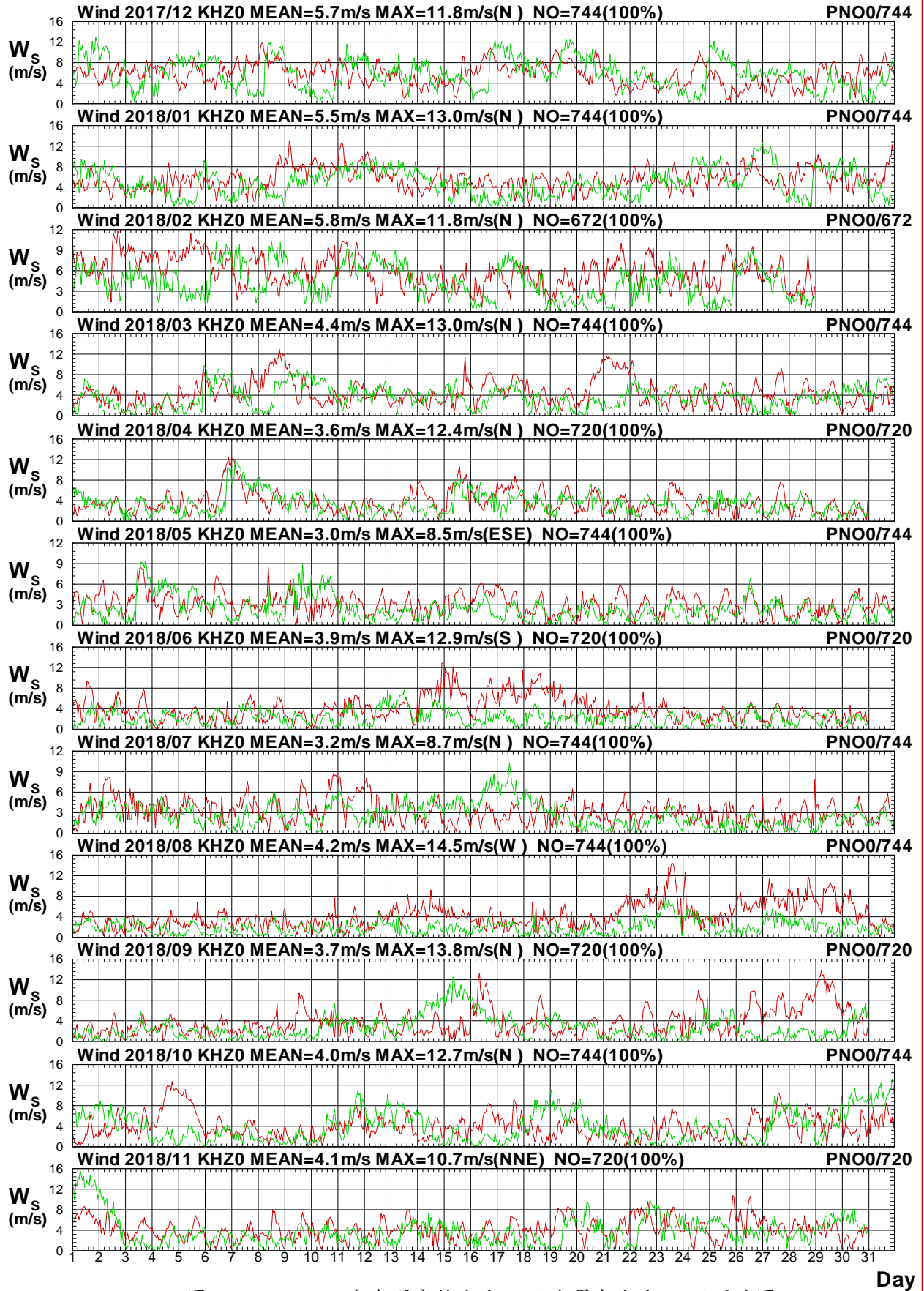


圖1.4.13a 2018年每月高雄海域 Z 站與屏東海域 O 站風速圖

W17CKHZ0.1HA W17CPNO0.1H0 W181KHZ0.1HA W181PNO0.1H0 W182KHZ0.1HA W182PNO0.1H0
 W183KHZ0.1HA W183PNO0.1H0 W184KHZ0.1HA W184PNO0.1H0 W185KHZ0.1HA W185PNO0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

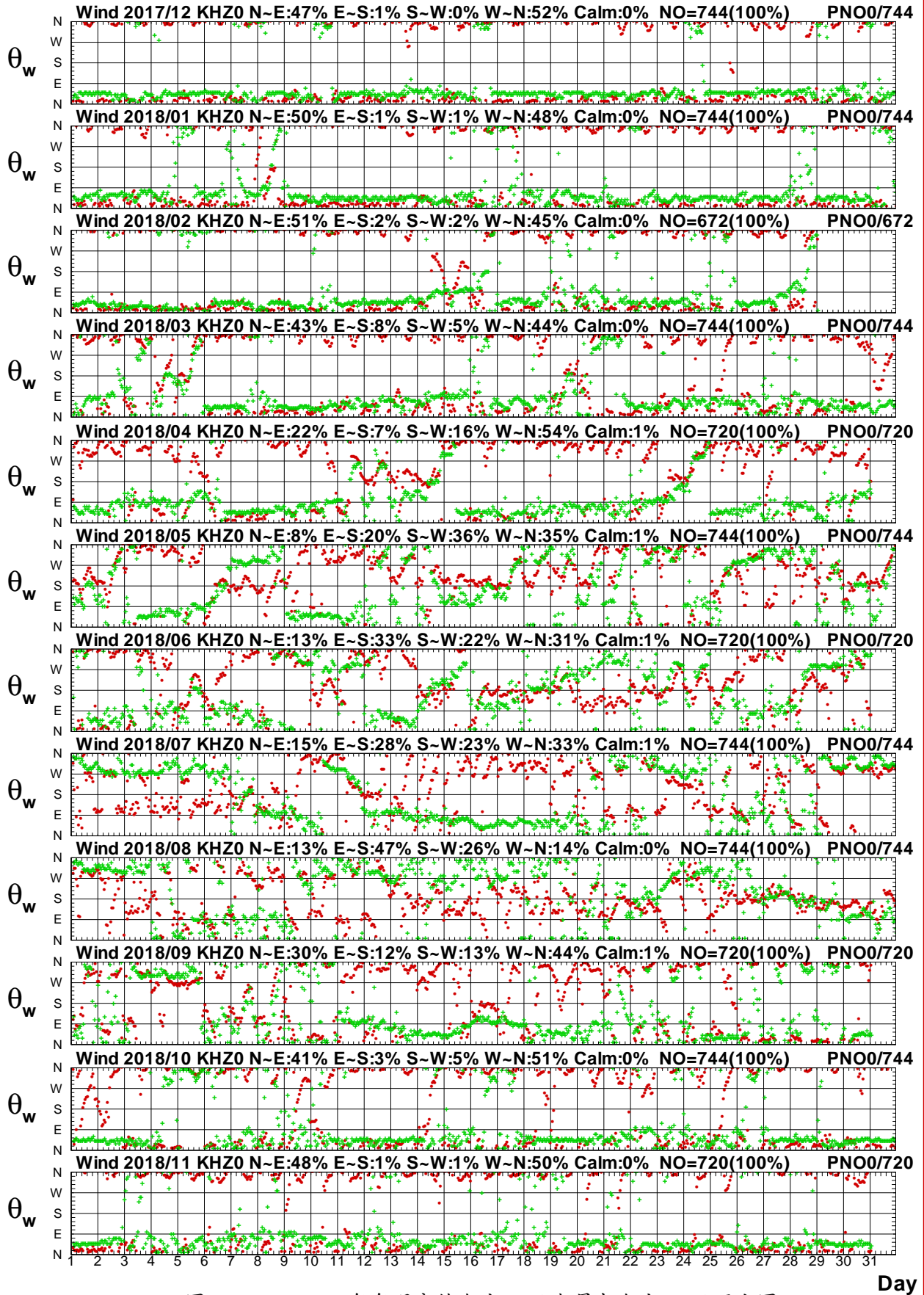


圖1.4.13b 2018年每月高雄海域 Z 站與屏東海域 O 站風向圖

W17CKHZ0.1HA W17CPNO0.1HO W181KHZ0.1HA W181PNO0.1HO W182KHZ0.1HA W182PNO0.1HO
 W183KHZ0.1HA W183PNO0.1HO W184KHZ0.1HA W184PNO0.1HO W185KHZ0.1HA W185PNO0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

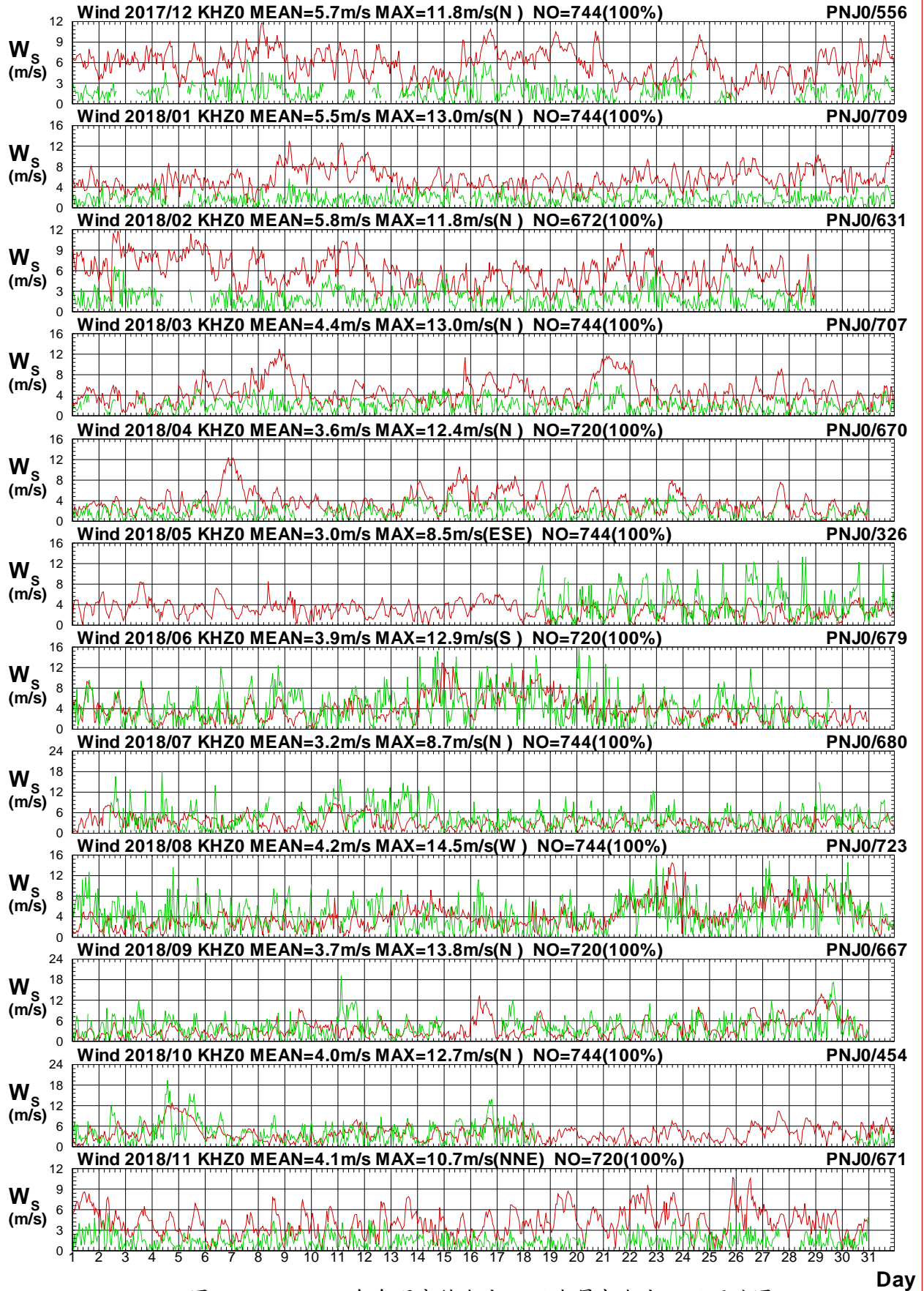


圖1.4.14a 2018年每月高雄海域 Z 站與屏東海域 J 站風速圖

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 W183KHZ0.1HA W183PNJ0.1H0 W184KHZ0.1HA W184PNJ0.1H0 W185KHZ0.1HA W185PNJ0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

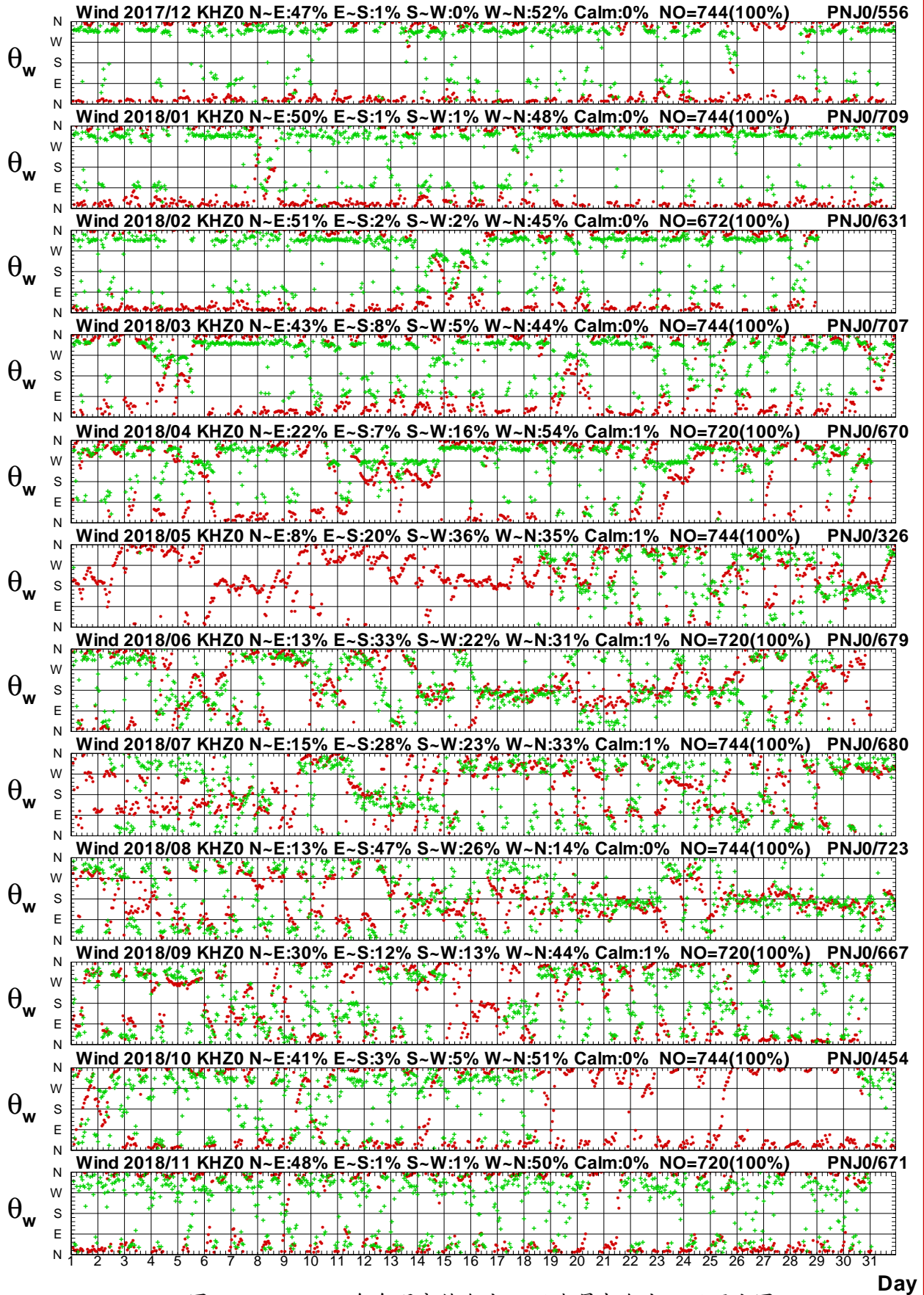


圖1.4.14b 2018年每月高雄海域 Z 站與屏東海域 J 站風向圖

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 W183KHZ0.1HA W183PNJ0.1H0 W184KHZ0.1HA W184PNJ0.1H0 W185KHZ0.1HA W185PNJ0.1H0

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

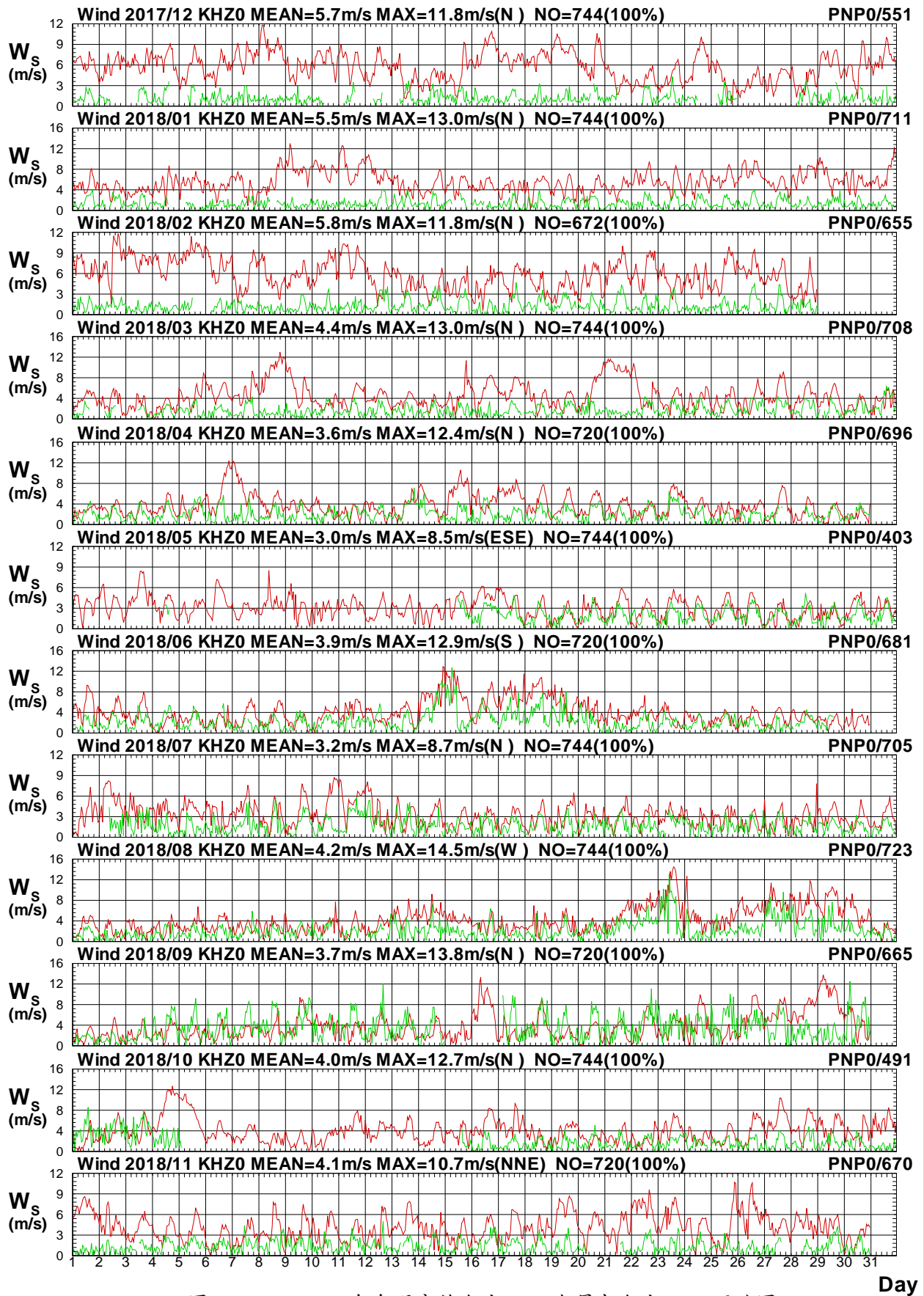


圖1.4.15a 2018年每月高雄海域 Z 站與屏東海域 P 站風速圖

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 W183KHZ0.1HA W183PNP0.1HO W184KHZ0.1HA W184PNP0.1HO W185KHZ0.1HA W185PNP0.1HO

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

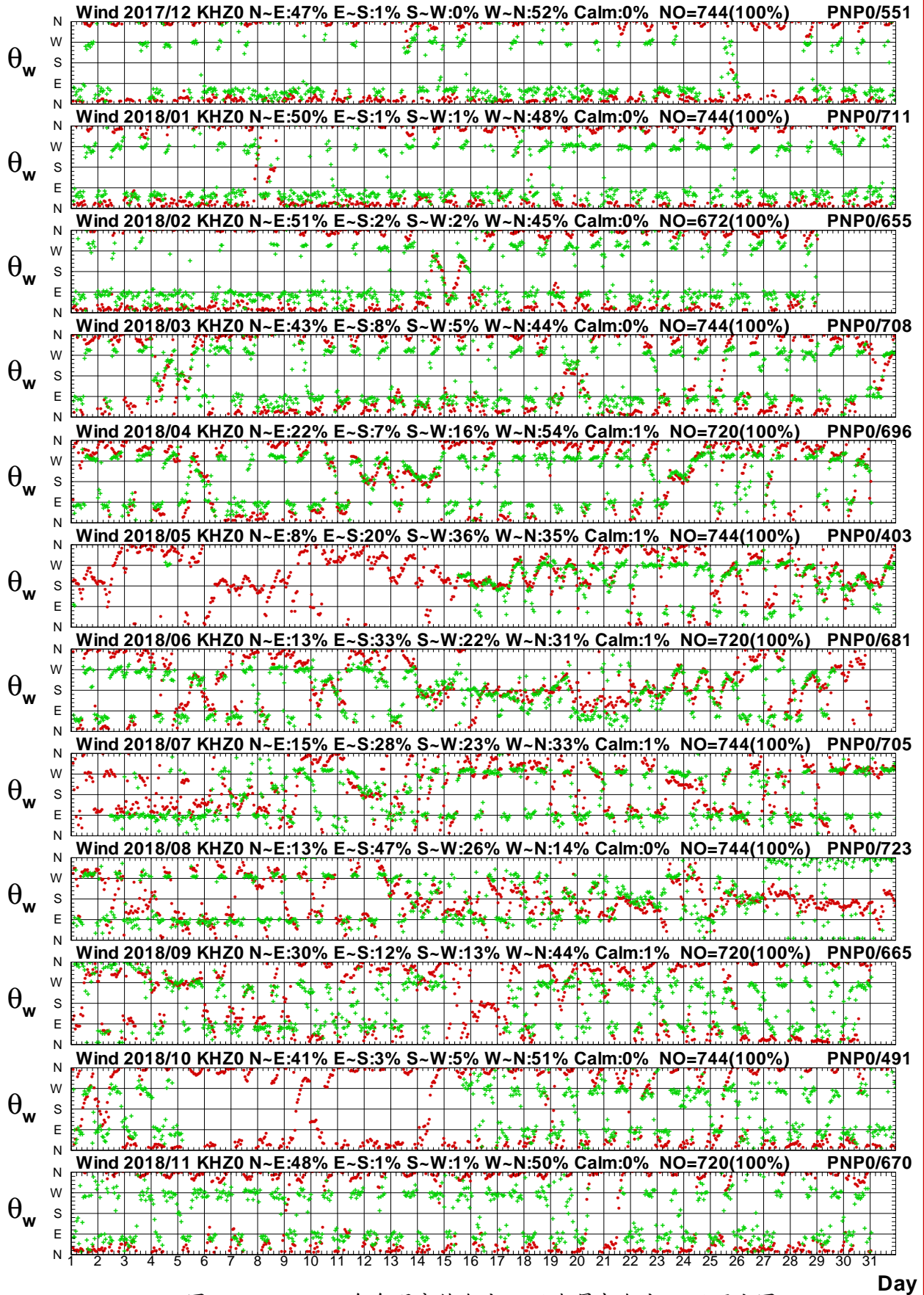


圖1.4.15b 2018年每月高雄海域 Z 站與屏東海域 P 站風向圖

W17CKHZ0.1HA W17CPNP0.1HO W181KHZ0.1HA W181PNP0.1HO W182KHZ0.1HA W182PNP0.1HO
 W183KHZ0.1HA W183PNP0.1HO W184KHZ0.1HA W184PNP0.1HO W185KHZ0.1HA W185PNP0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

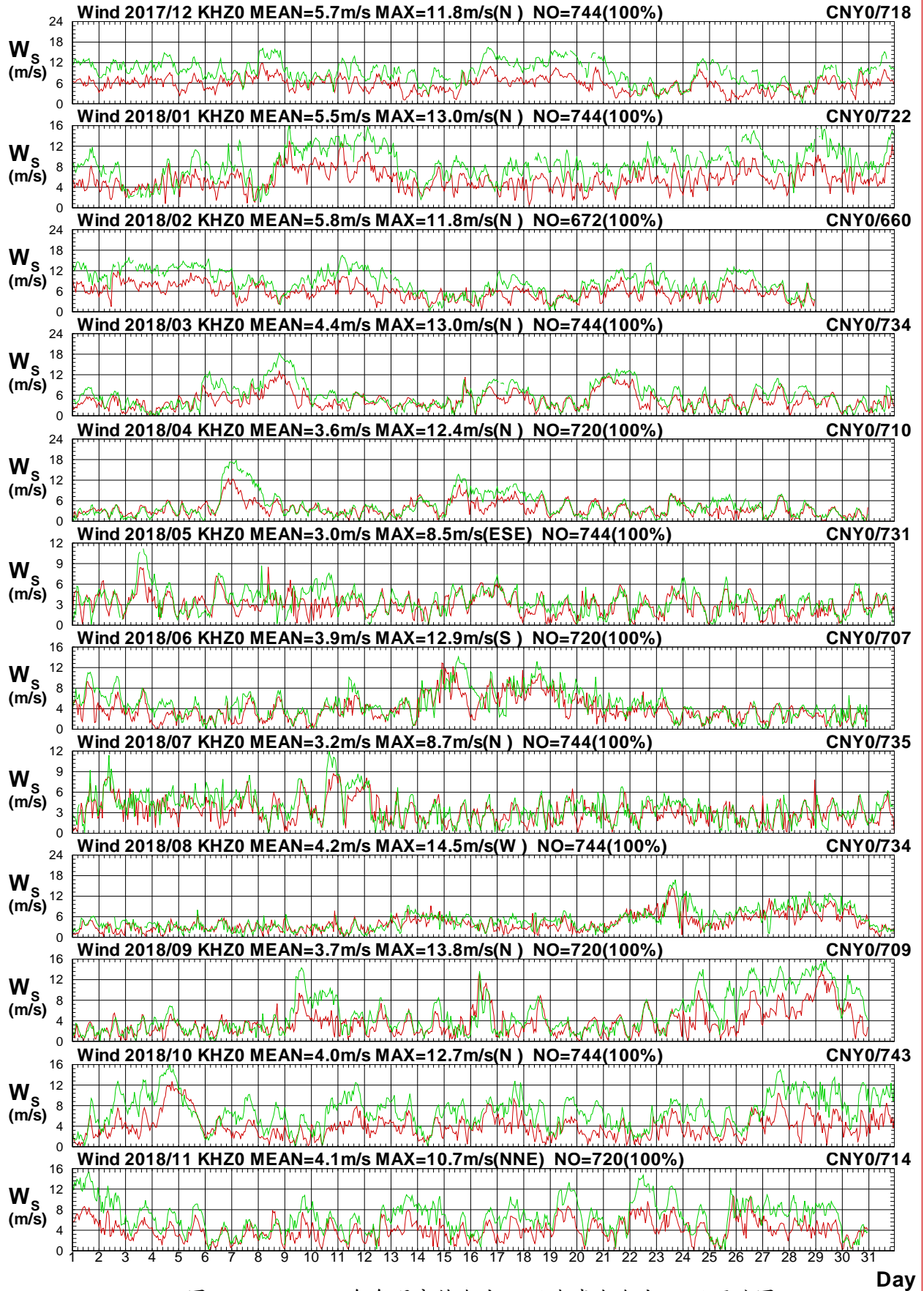


圖1.4.16a 2018年每月高雄海域 Z 站與嘉南海域 Y 站風速圖

W17CKHZ0.1HA W17CCNY0.1H0 W181KHZ0.1HA W181CNY0.1H0 W182KHZ0.1HA W182CNY0.1H0
 W183KHZ0.1HA W183CNY0.1H0 W184KHZ0.1HA W184CNY0.1H0 W185KHZ0.1HA W185CNY0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

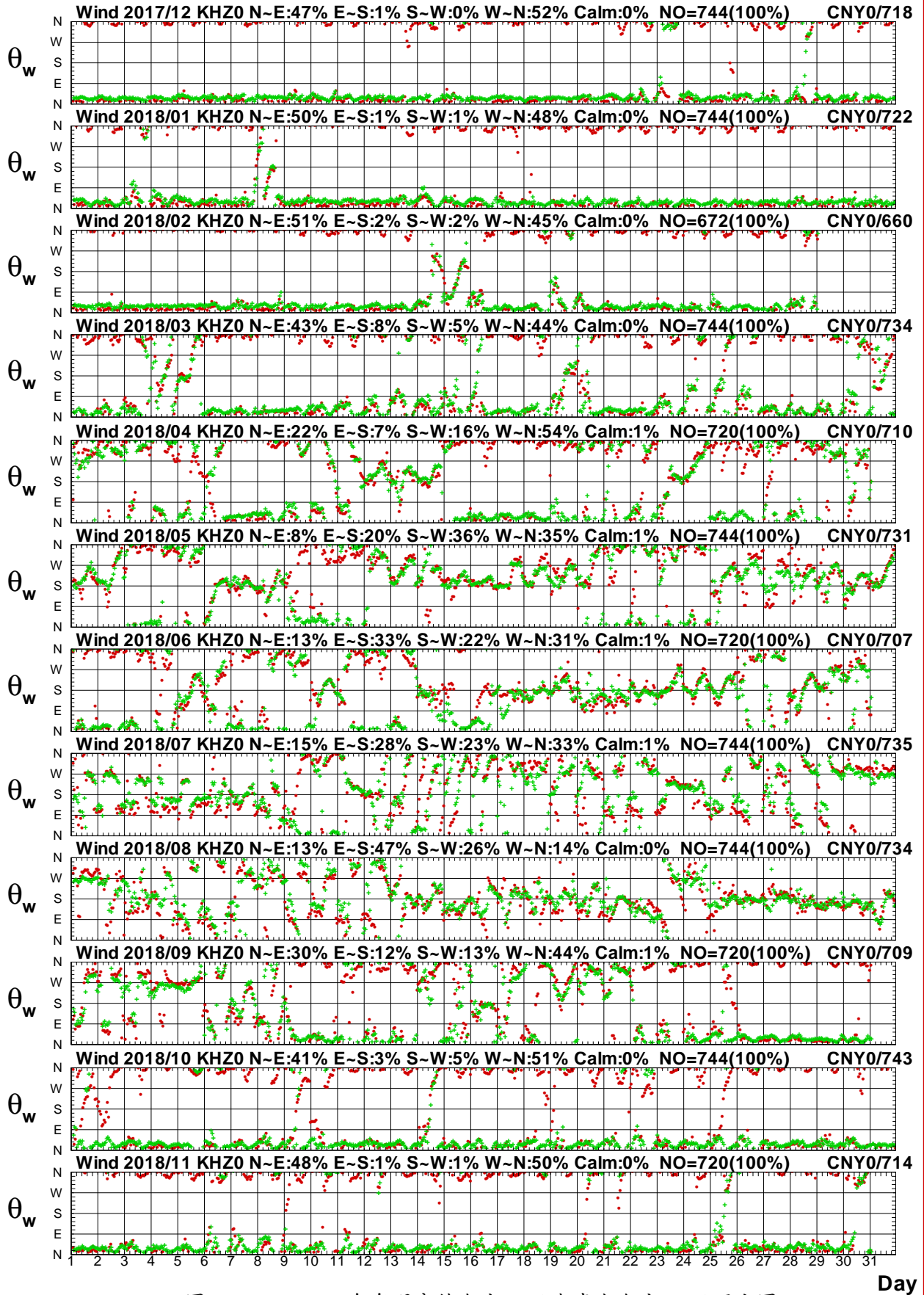


圖1.4.16b 2018年每月高雄海域 Z 站與嘉南海域 Y 站風向圖

W17CKHZ0.1HA W17CCNY0.1HO W181KHZ0.1HA W181CNY0.1HO W182KHZ0.1HA W182CNY0.1HO
 W183KHZ0.1HA W183CNY0.1HO W184KHZ0.1HA W184CNY0.1HO W185KHZ0.1HA W185CNY0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

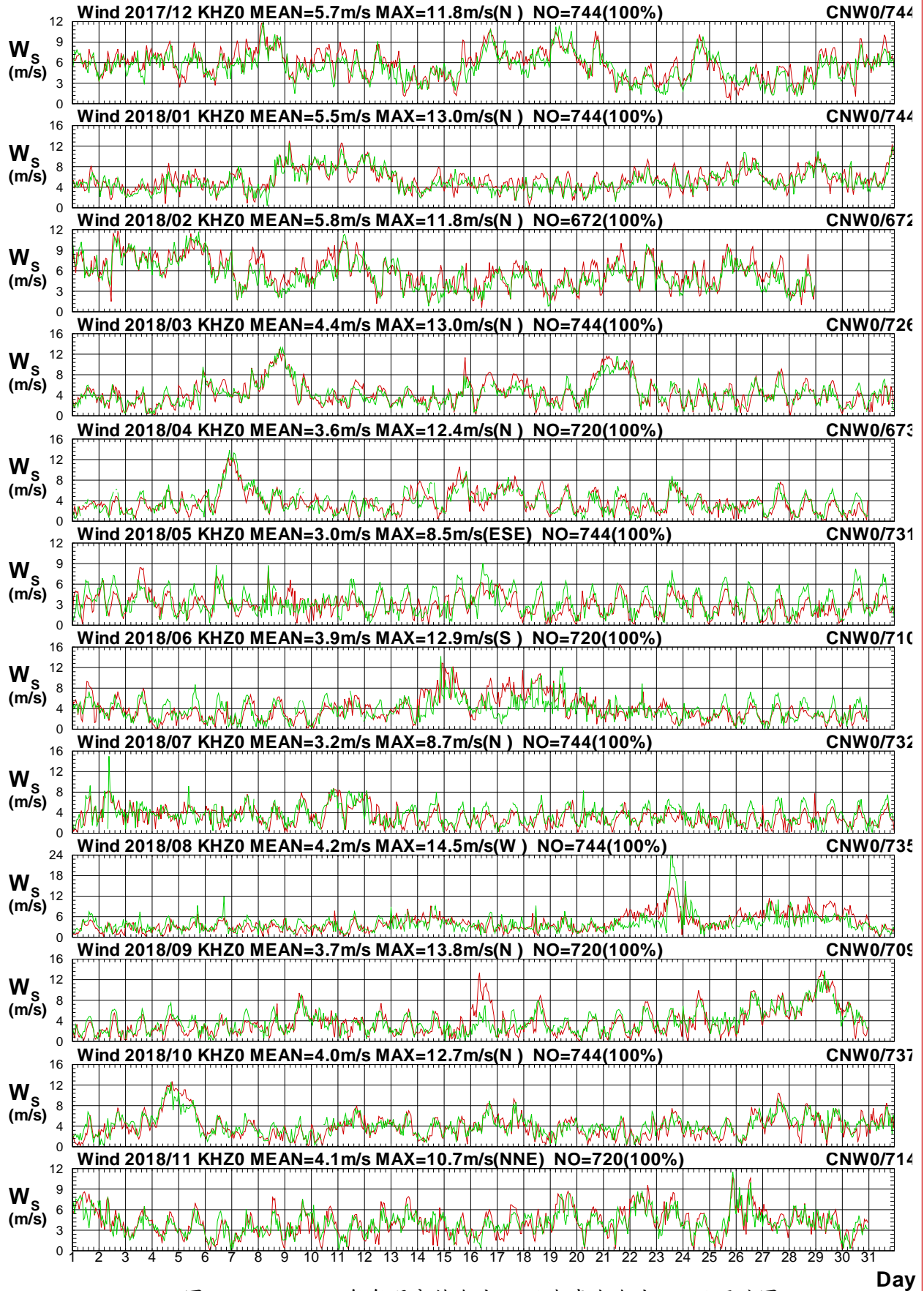


圖1.4.17a 2018年每月高雄海域 Z 站與嘉南海域 W 站風速圖

W17CKHZ0.1HA W17CCNW0.1H0 W181KHZ0.1HA W181CNW0.1H0 W182KHZ0.1HA W182CNW0.1H0
 W183KHZ0.1HA W183CNW0.1H0 W184KHZ0.1HA W184CNW0.1H0 W185KHZ0.1HA W185CNW0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

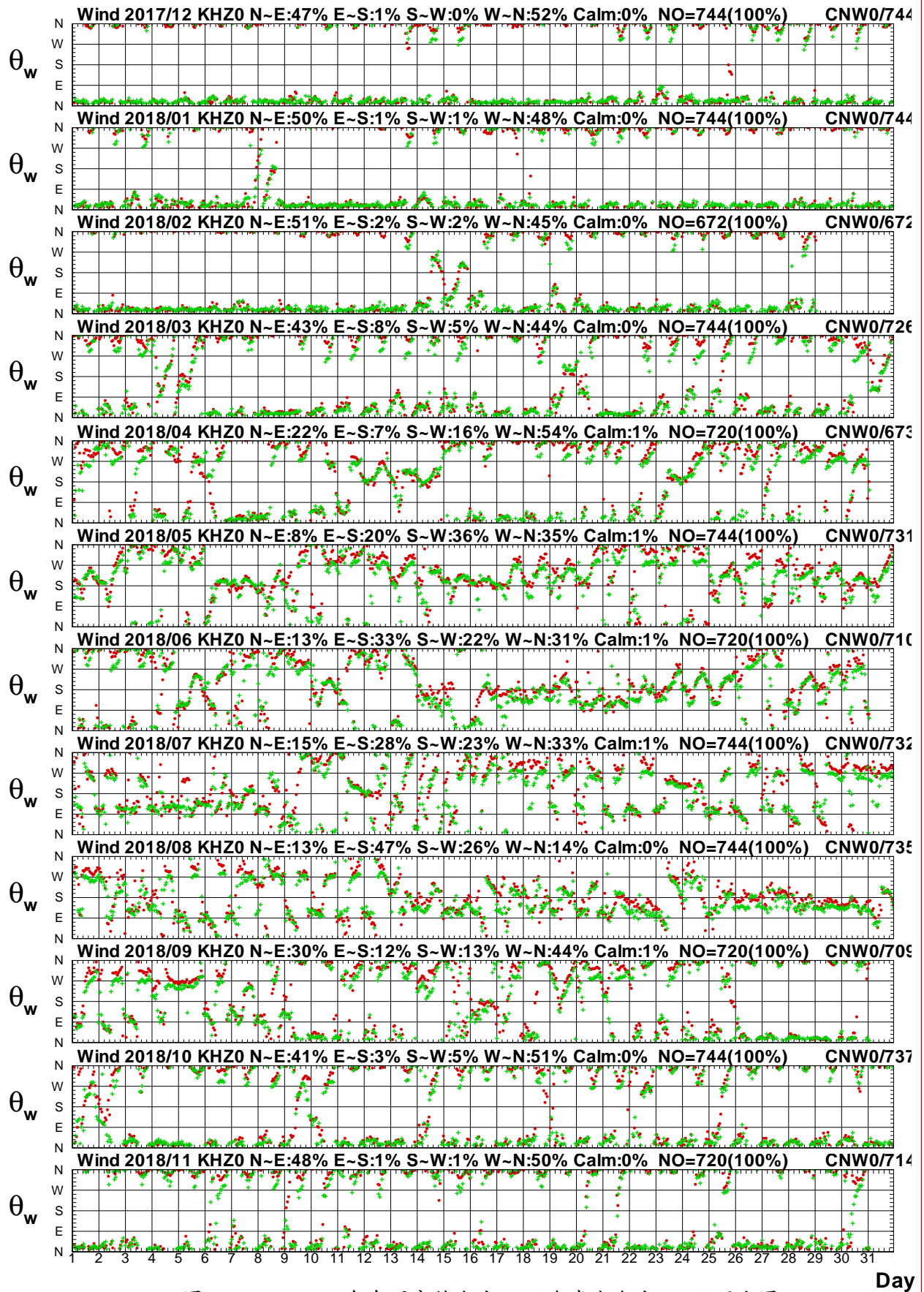


圖1.4.17b 2018年每月高雄海域 Z 站與嘉南海域 W 站風向圖

W17CKHZ0.1HA W17CCNW0.1H0 W181KHZ0.1HA W181CNW0.1H0 W182KHZ0.1HA W182CNW0.1H0
 W183KHZ0.1HA W183CNW0.1H0 W184KHZ0.1HA W184CNW0.1H0 W185KHZ0.1HA W185CNW0.1H0

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

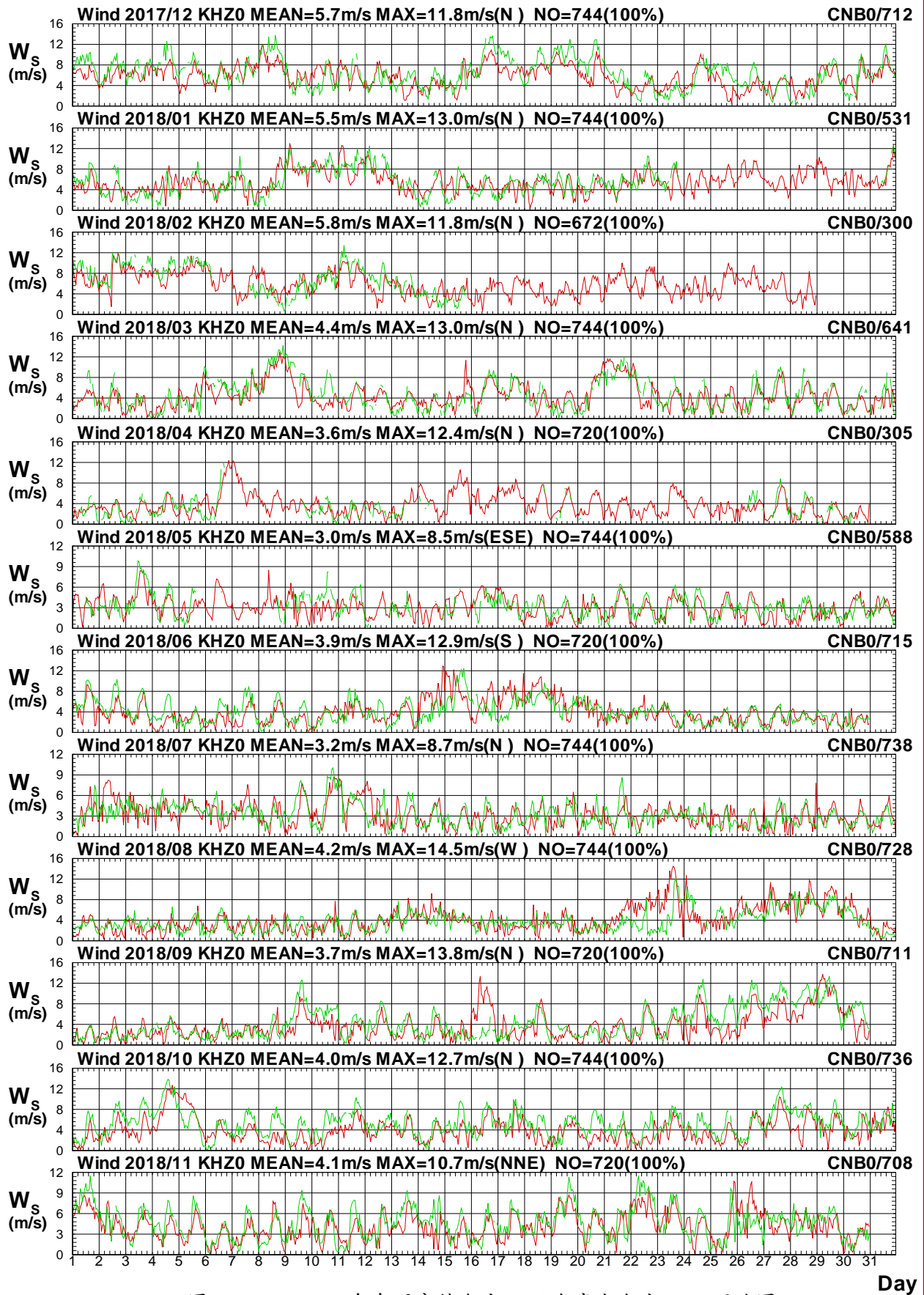


圖1.4.18a 2018年每月高雄海域 Z 站與嘉南海域 B 站風速圖

W17CKHZ0.1HA W17CCNB0.1H0 W181KHZ0.1HA W181CNB0.1H0 W182KHZ0.1HA W182CNB0.1H0
 W183KHZ0.1HA W183CNB0.1H0 W184KHZ0.1HA W184CNB0.1H0 W185KHZ0.1HA W185CNB0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

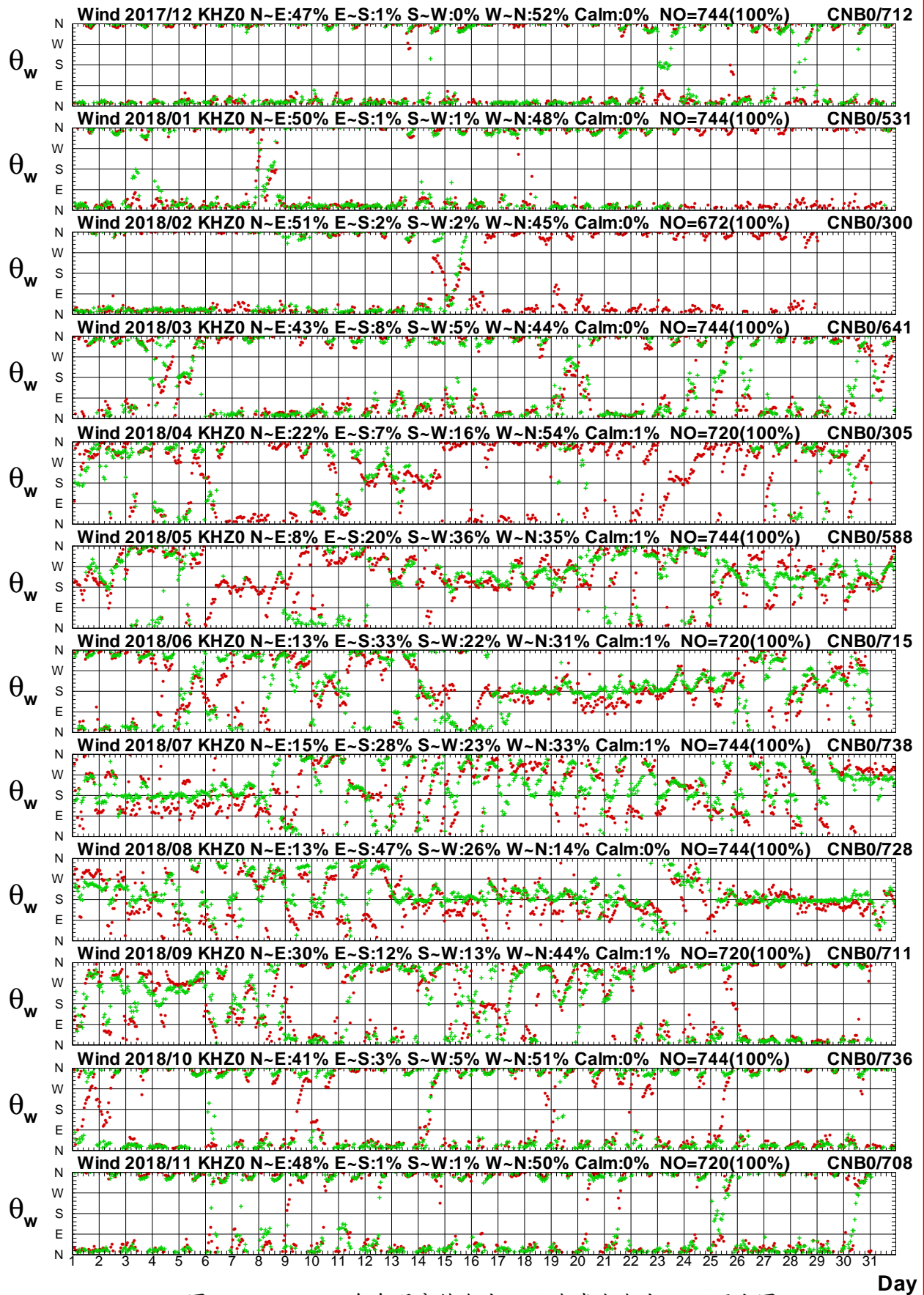


圖1.4.18b 2018年每月高雄海域 Z 站與嘉南海域 B 站風向圖

W17CKHZ0.1HA W17CCNB0.1H0 W181KHZ0.1HA W181CNB0.1H0 W182KHZ0.1HA W182CNB0.1H0
 W183KHZ0.1HA W183CNB0.1H0 W184KHZ0.1HA W184CNB0.1H0 W185KHZ0.1HA W185CNB0.1H0

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

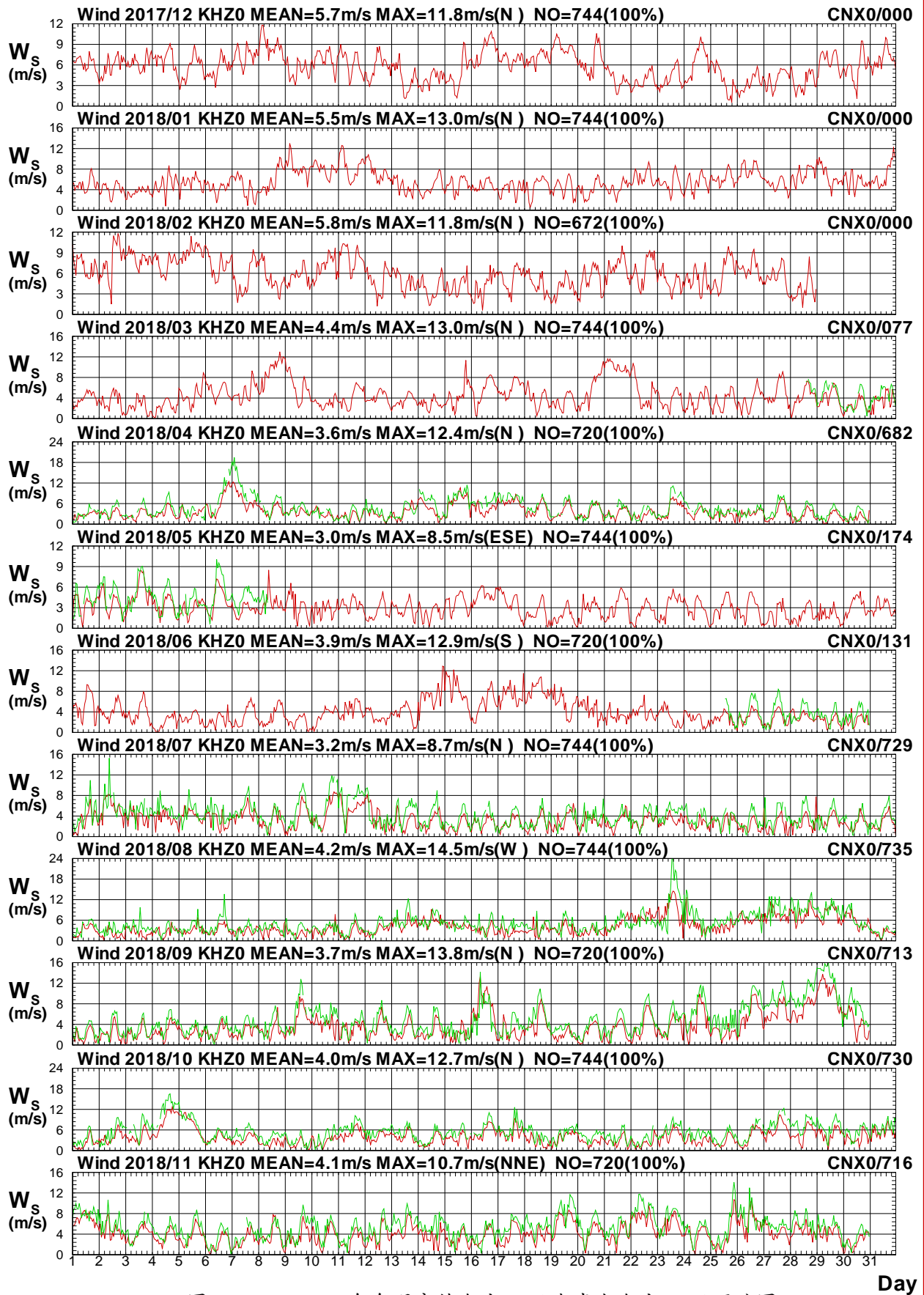


圖1.4.19a 2018年每月高雄海域 Z 站與嘉南海域 X 站風速圖

W17CKHZ0.1HA W17CCNX0.1H0 W181KHZ0.1HA W181CNX0.1H0 W182KHZ0.1HA W182CNX0.1H0
 W183KHZ0.1HA W183CNX0.1H0 W184KHZ0.1HA W184CNX0.1H0 W185KHZ0.1HA W185CNX0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

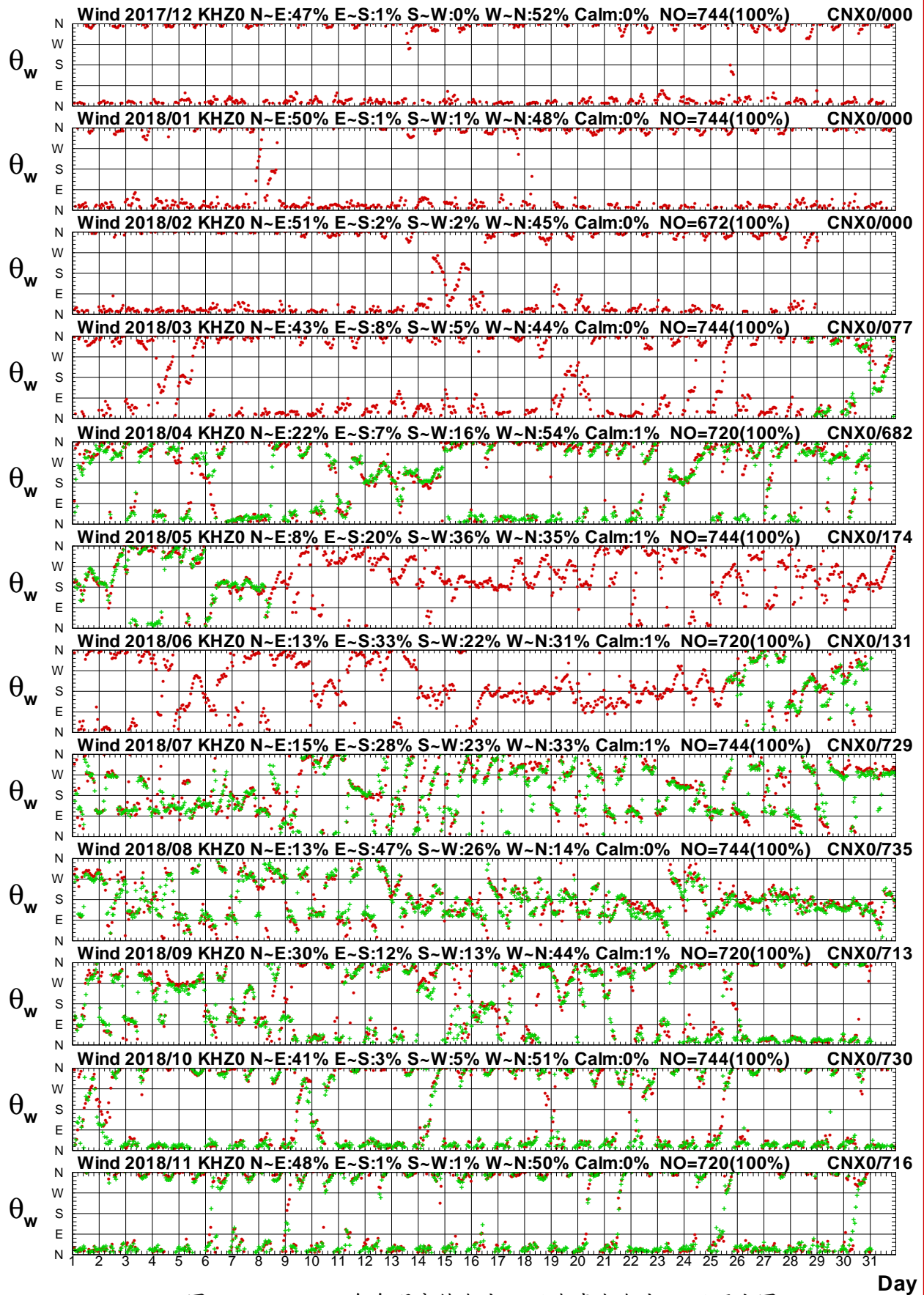


圖1.4.19b 2018年每月高雄海域 Z 站與嘉南海域 X 站風向圖

W17CKHZ0.1HA W17CCNX0.1H0 W181KHZ0.1HA W181CNX0.1H0 W182KHZ0.1HA W182CNX0.1H0
 W183KHZ0.1HA W183CNX0.1H0 W184KHZ0.1HA W184CNX0.1H0 W185KHZ0.1HA W185CNX0.1H0

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

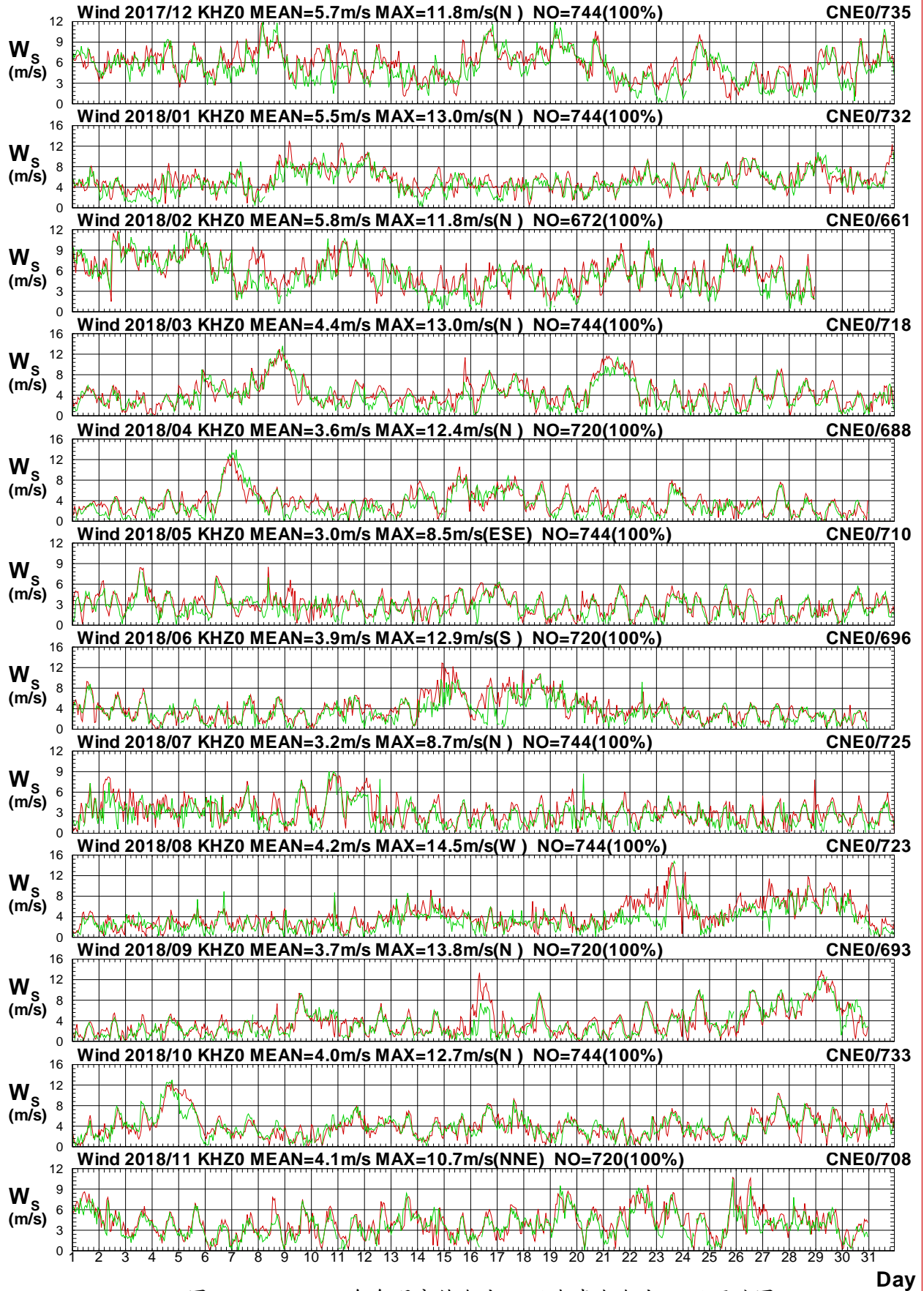


圖 1.4.20a 2018年每月高雄海域 Z 站與嘉南海域 E 站風速圖

W17CKHZ0.1HA W17CCNE0.1H0 W181KHZ0.1HA W181CNE0.1H0 W182KHZ0.1HA W182CNE0.1H0
 W183KHZ0.1HA W183CNE0.1H0 W184KHZ0.1HA W184CNE0.1H0 W185KHZ0.1HA W185CNE0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

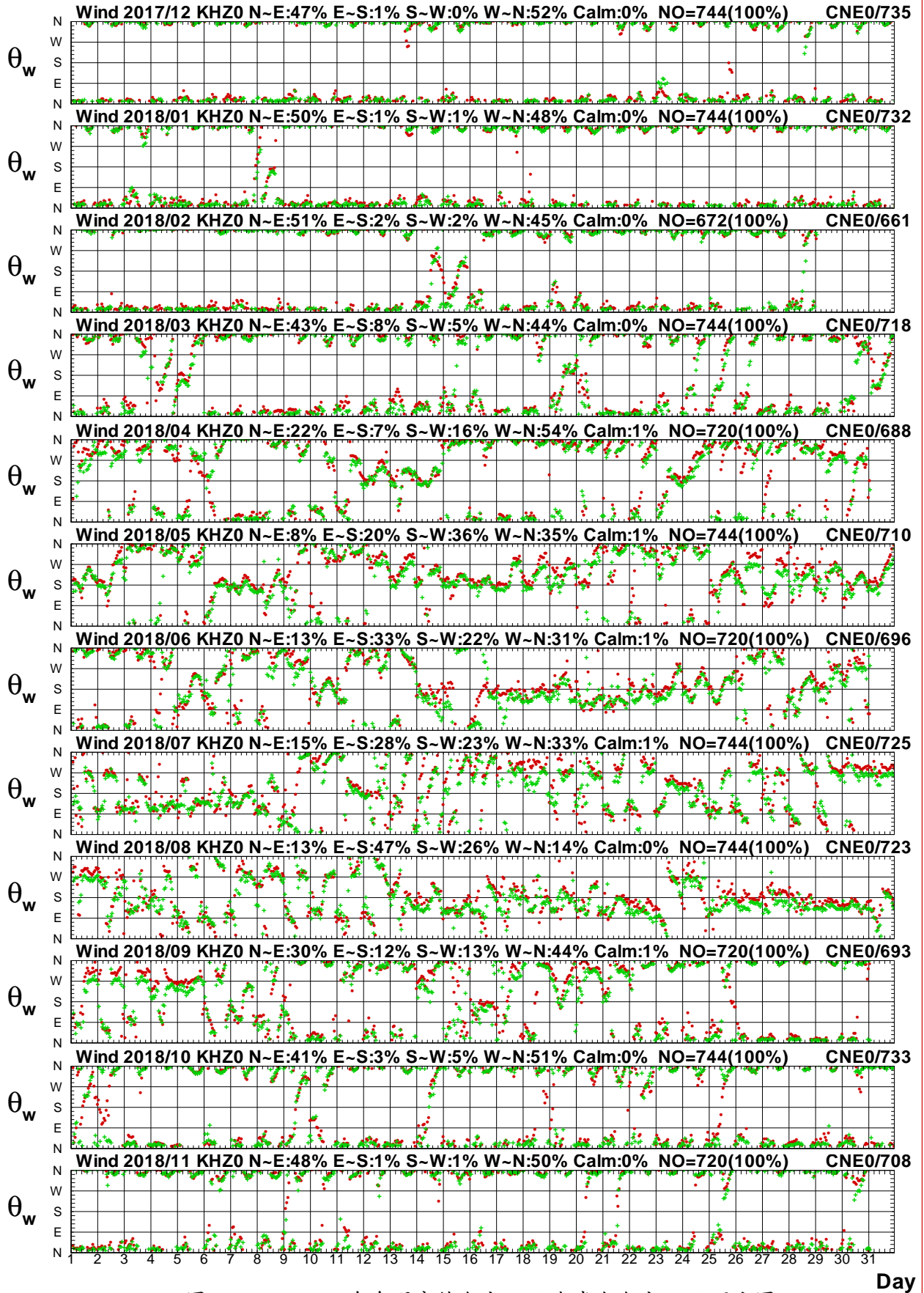


圖1.4.20b 2018年每月高雄海域 Z 站與嘉南海域 E 站風向圖

W17CKHZ0.1HA W17CCNE0.1HO W181KHZ0.1HA W181CNE0.1HO W182KHZ0.1HA W182CNE0.1HO
W183KHZ0.1HA W183CNE0.1HO W184KHZ0.1HA W184CNE0.1HO W185KHZ0.1HA W185CNE0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

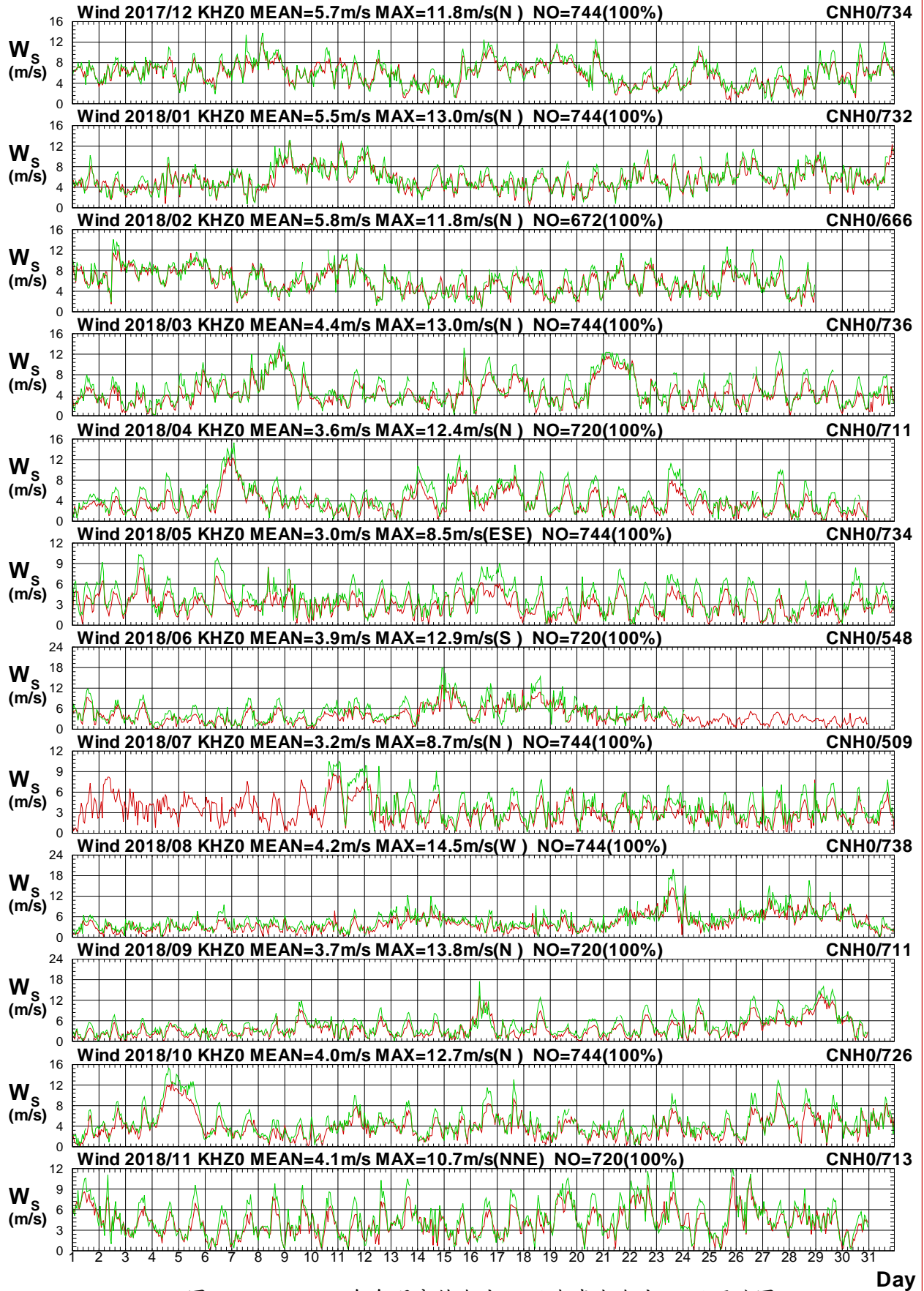


圖1.4.21a 2018年每月高雄海域 Z 站與嘉南海域 H 站風速圖

W17CKHZ0.1HA W17CCNH0.1H0 W181KHZ0.1HA W181CNH0.1H0 W182KHZ0.1HA W182CNH0.1H0
 W183KHZ0.1HA W183CNH0.1H0 W184KHZ0.1HA W184CNH0.1H0 W185KHZ0.1HA W185CNH0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

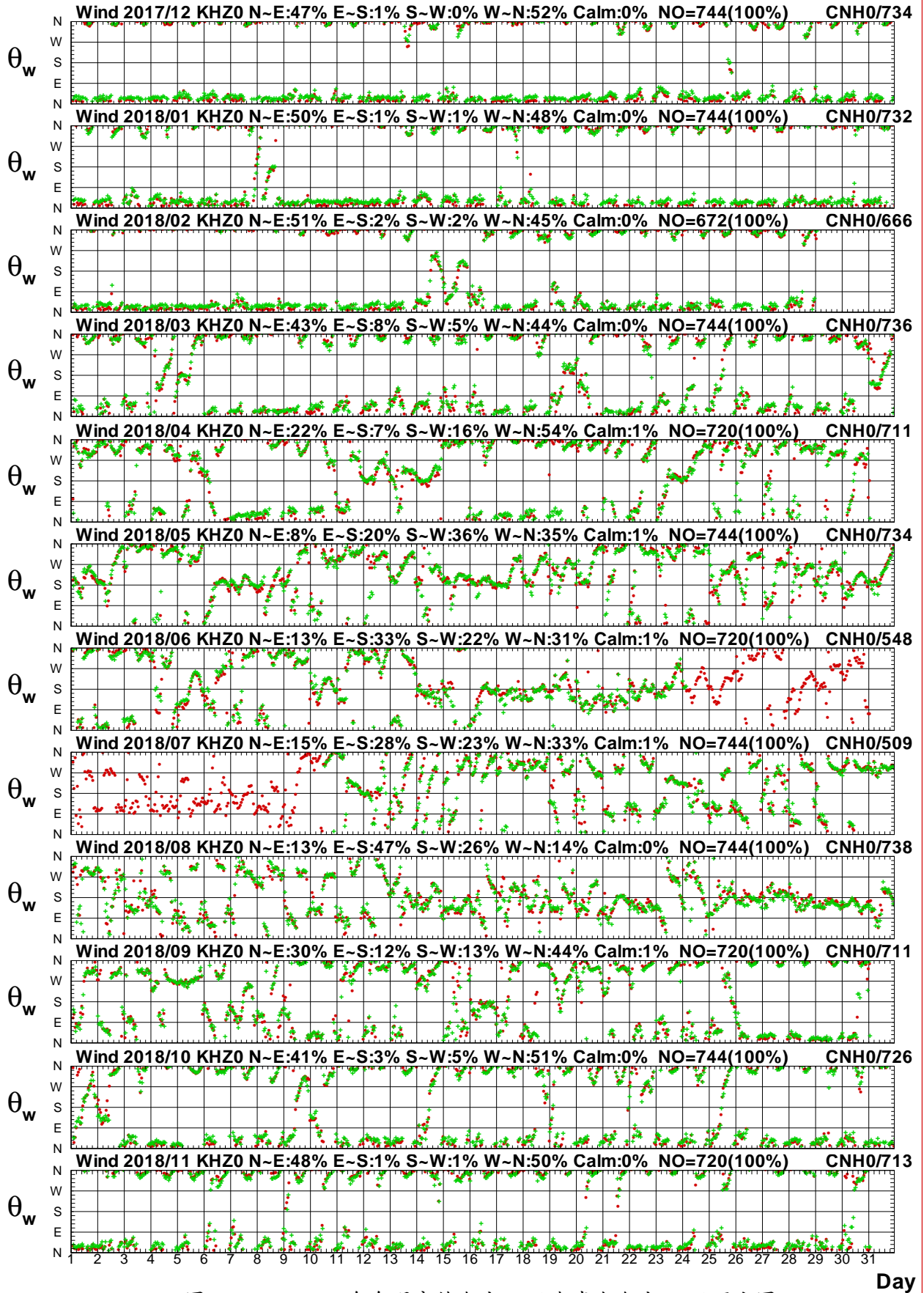


圖1.4.21b 2018年每月高雄海域 Z 站與嘉南海域 H 站風向圖

W17CKHZ0.1HA W17CCNH0.1HO W181KHZ0.1HA W181CNH0.1HO W182KHZ0.1HA W182CNH0.1HO
 W183KHZ0.1HA W183CNH0.1HO W184KHZ0.1HA W184CNH0.1HO W185KHZ0.1HA W185CNH0.1HO

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

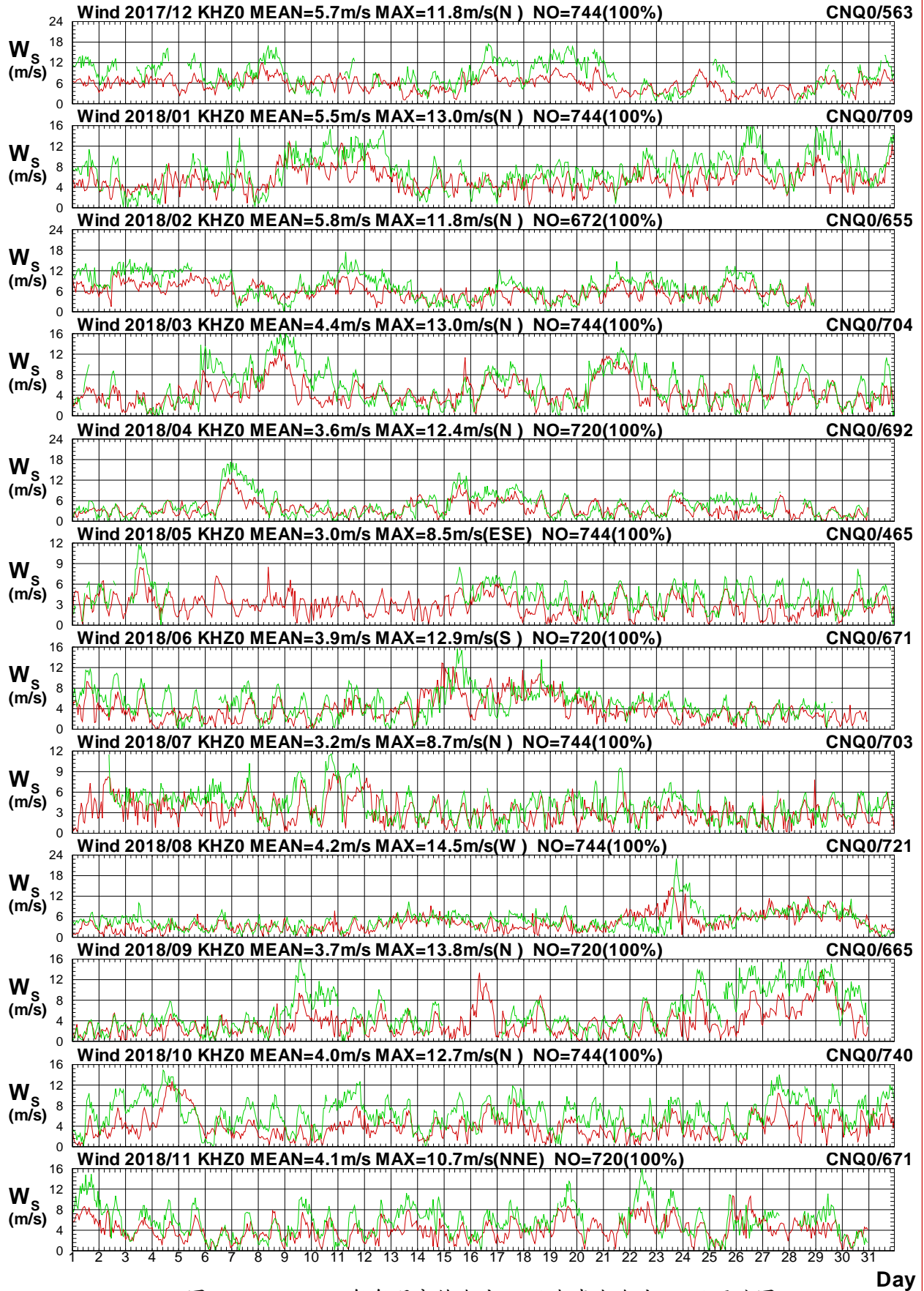


圖 1.4.22a 2018 年每月高雄海域 Z 站與嘉南海域 Q 站風速圖

W17CKHZ0.1HA W17CCNQ0.1H0 W181KHZ0.1HA W181CNQ0.1H0 W182KHZ0.1HA W182CNQ0.1H0
 W183KHZ0.1HA W183CNQ0.1H0 W184KHZ0.1HA W184CNQ0.1H0 W185KHZ0.1HA W185CNQ0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

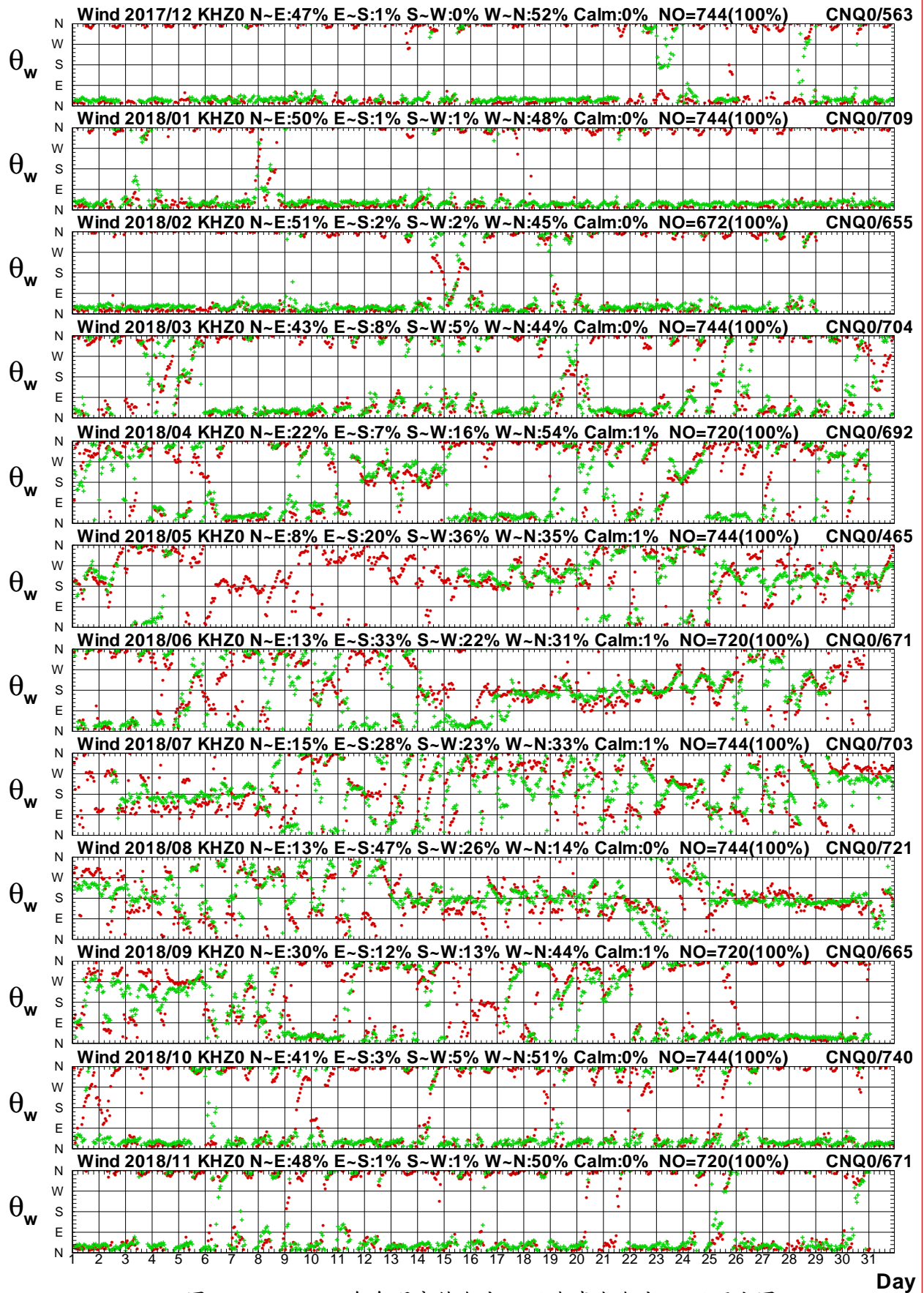


圖1.4.22b 2018年每月高雄海域 Z 站與嘉南海域 Q 站風向圖

W17CKHZ0.1HA W17CCNQ0.1H0 W181KHZ0.1HA W181CNQ0.1H0 W182KHZ0.1HA W182CNQ0.1H0
 W183KHZ0.1HA W183CNQ0.1H0 W184KHZ0.1HA W184CNQ0.1H0 W185KHZ0.1HA W185CNQ0.1H0

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Wind Speed in Kao-Hsiung Seas of KHZ0 at 2018

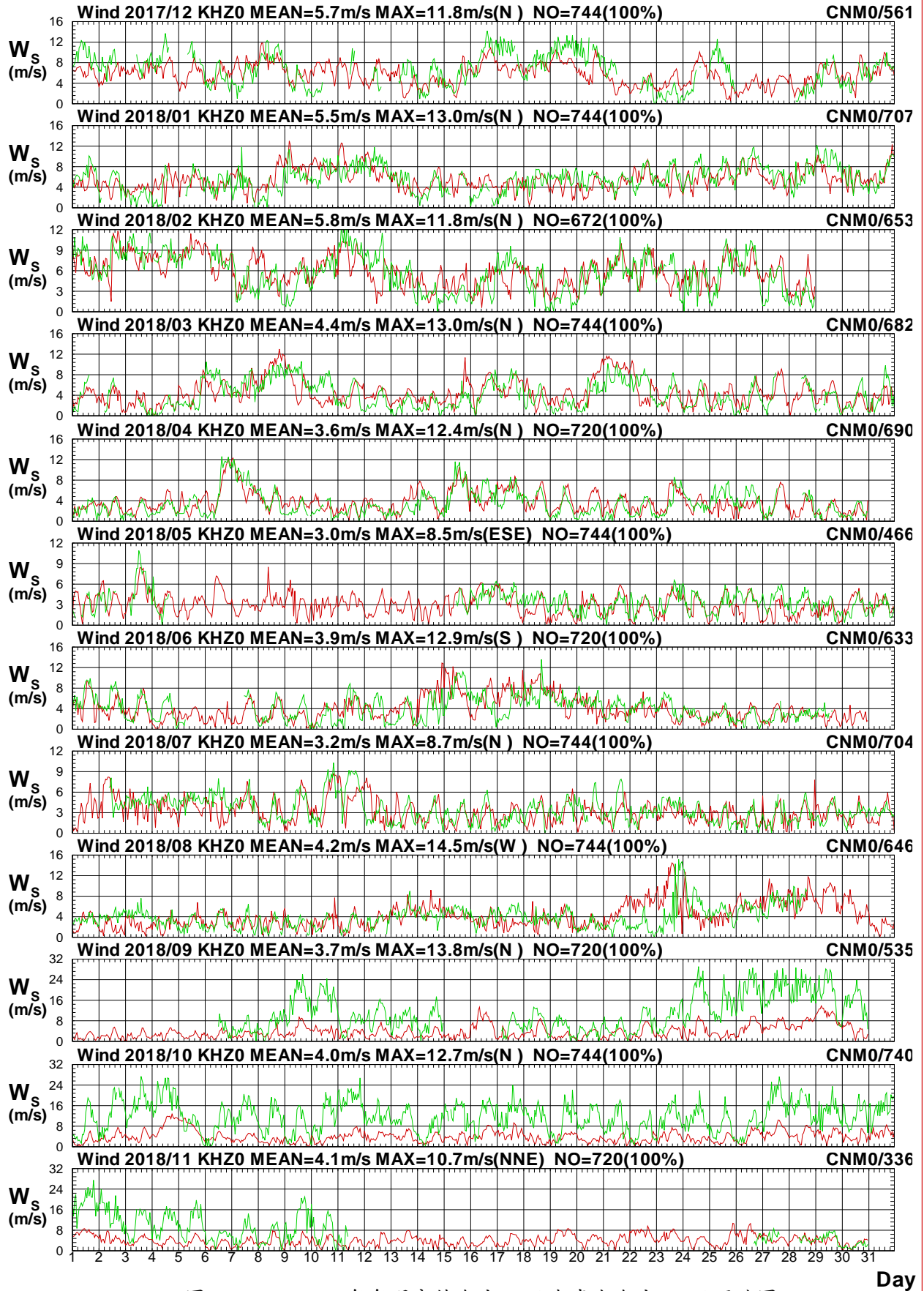


圖 1.4.23a 2018年每月高雄海域 Z 站與嘉南海域 M 站風速圖

W17CKHZ0.1HA W17CCNM0.1H0 W181KHZ0.1HA W181CNM0.1H0 W182KHZ0.1HA W182CNM0.1H0
 W183KHZ0.1HA W183CNM0.1H0 W184KHZ0.1HA W184CNM0.1H0 W185KHZ0.1HA W185CNM0.1H0

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Wind Direction in Kao-Hsiung Seas of KHZ0 at 2018

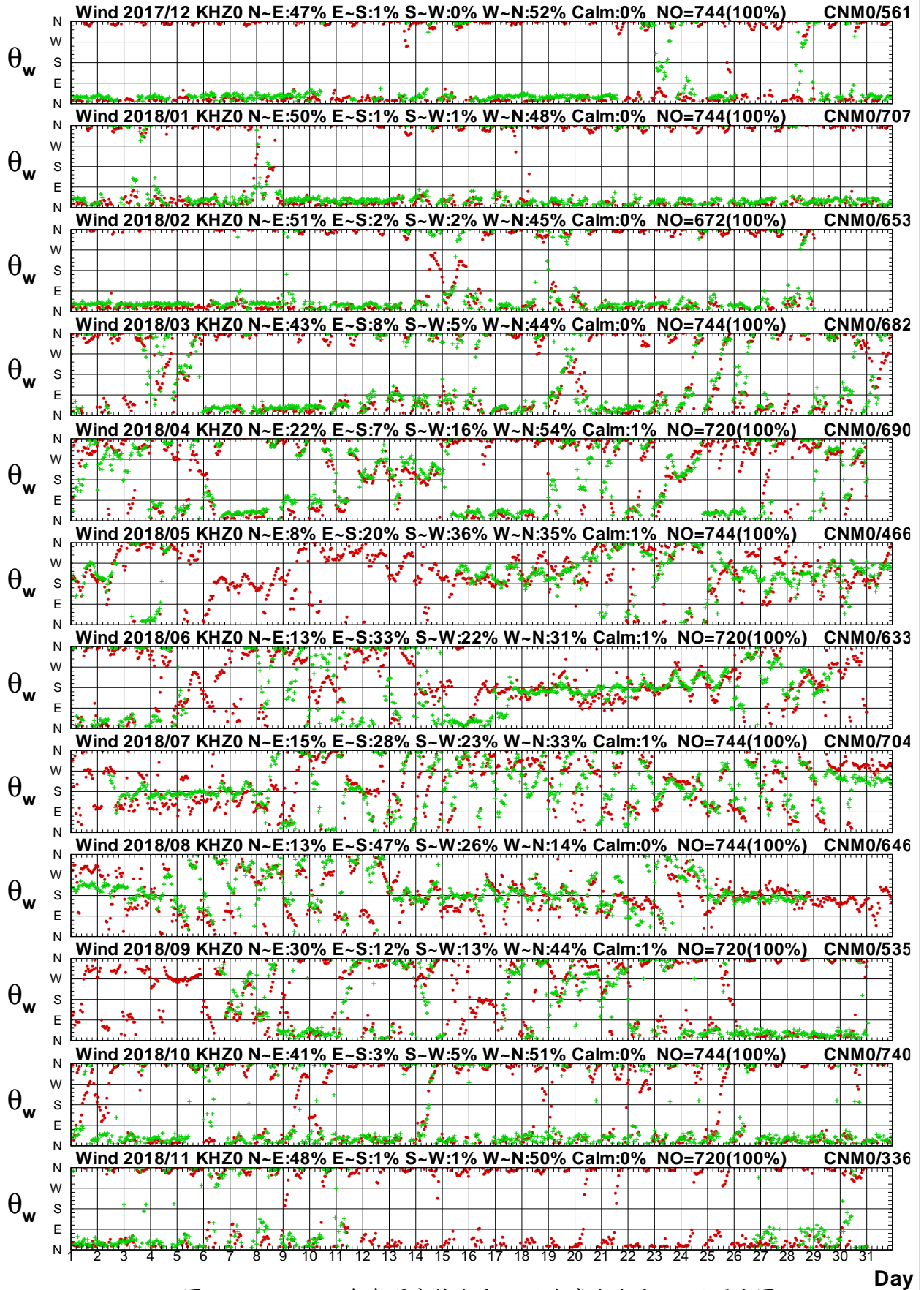


圖1.4.23b 2018年每月高雄海域 Z 站與嘉南海域 M 站風向圖

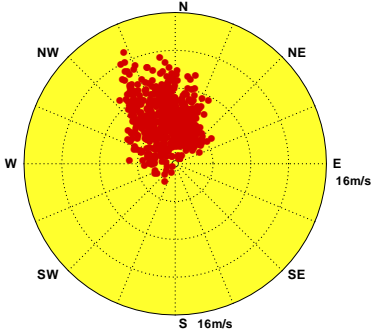
W17CKHZ0.1HA W17CCNM0.1H0 W181KHZ0.1HA W181CNM0.1H0 W182KHZ0.1HA W182CNM0.1H0
 W183KHZ0.1HA W183CNM0.1H0 W184KHZ0.1HA W184CNM0.1H0 W185KHZ0.1HA W185CNM0.1H0

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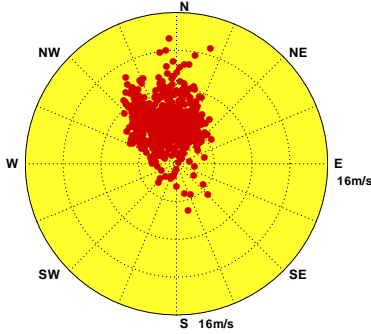
1.5 2018 年高雄海域風力各測站修補前 風力向量分佈圖

Distribution of Wind Vectors

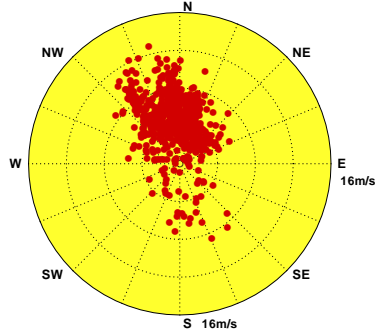
Wind of KHW0 at 2017/12 NO=743(100%)
 MEAN=4.6m/s MAX=12.6m/s(NNW)
 N-E:31% E-S:0% S-W:3% W-N:64% Calm:2%



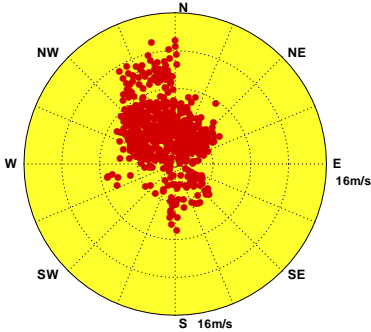
Wind of KHW0 at 2018/01 NO=744(100%)
 MEAN=4.4m/s MAX=12.7m/s(N)
 N-E:29% E-S:1% S-W:3% W-N:64% Calm:3%



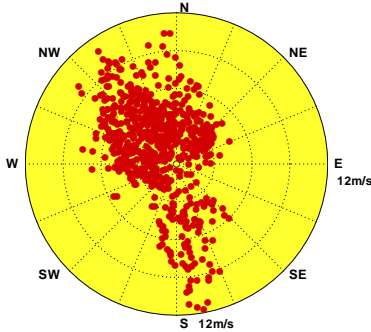
Wind of KHW0 at 2018/02 NO=671(100%)
 MEAN=4.9m/s MAX=12.4m/s(NNW)
 N-E:31% E-S:3% S-W:5% W-N:59% Calm:2%



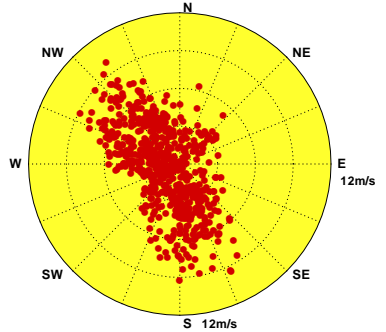
Wind of KHW0 at 2018/03 NO=744(100%)
 MEAN=4.3m/s MAX=12.6m/s(NNW)
 N-E:29% E-S:6% S-W:7% W-N:55% Calm:3%



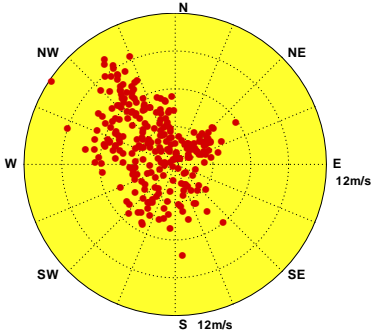
Wind of KHW0 at 2018/04 NO=719(100%)
 MEAN=4.2m/s MAX=12.1m/s(S)
 N-E:17% E-S:10% S-W:19% W-N:52% Calm:2%



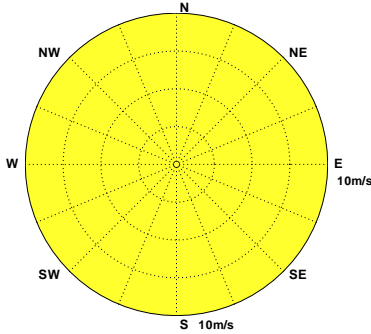
Wind of KHW0 at 2018/05 NO=668(90%)
 MEAN=3.8m/s MAX=9.8m/s(NW)
 N-E:6% E-S:21% S-W:32% W-N:39% Calm:2%



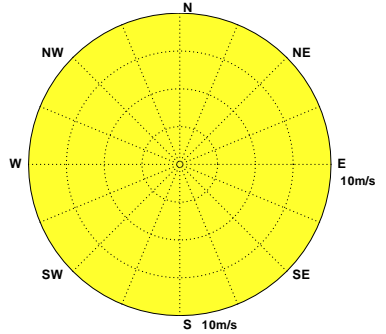
Wind of KHW0 at 2018/06 NO=277(38%)
 MEAN=3.9m/s MAX=11.9m/s(WNW)
 N-E:15% E-S:8% S-W:22% W-N:51% Calm:4%



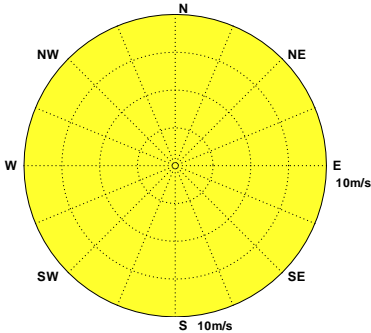
Wind of KHW0 at 2018/07



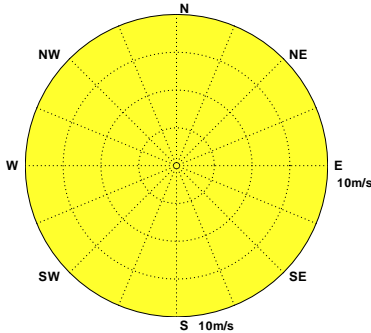
Wind of KHW0 at 2018/08



Wind of KHW0 at 2018/09



Wind of KHW0 at 2018/10



Wind of KHW0 at 2018/11

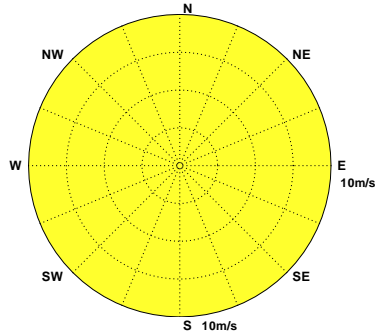


圖 1.5.1 2018 年高雄海域每月 W 站修補前觀測風力向量分佈圖

W17CKHW0.1H0 W181KHW0.1H0 W182KHW0.1H0 W183KHW0.1H0 W184KHW0.1H0 W185KHW0.1H0
 W186KHW0.1H0 W187KHW0.1H0 W188KHW0.1H0 W189KHW0.1H0 W18AKHW0.1H0 W18BKHW0.1H0

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Distribution of Wind Vectors

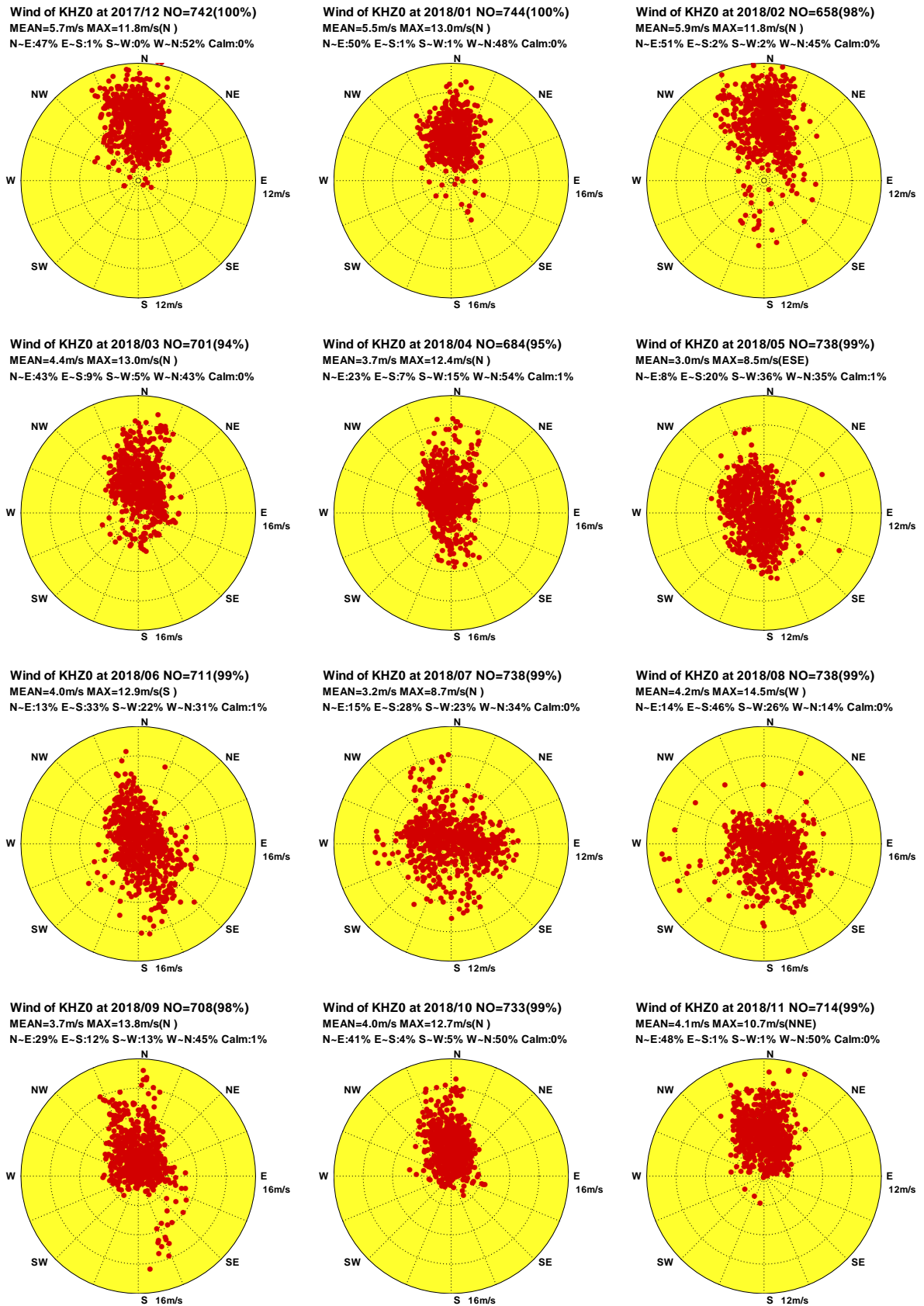


圖1.5.2 2018年高雄海域每月Z站修補前觀測風力向量分佈圖

W17CKHZ0.1H0 W181KHZ0.1H0 W182KHZ0.1H0 W183KHZ0.1H0 W184KHZ0.1H0 W185KHZ0.1H0
 W186KHZ0.1H0 W187KHZ0.1H0 W188KHZ0.1H0 W189KHZ0.1H0 W18AKHZ0.1H0 W18BKHZ0.1H0

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Distribution of Wind Vectors

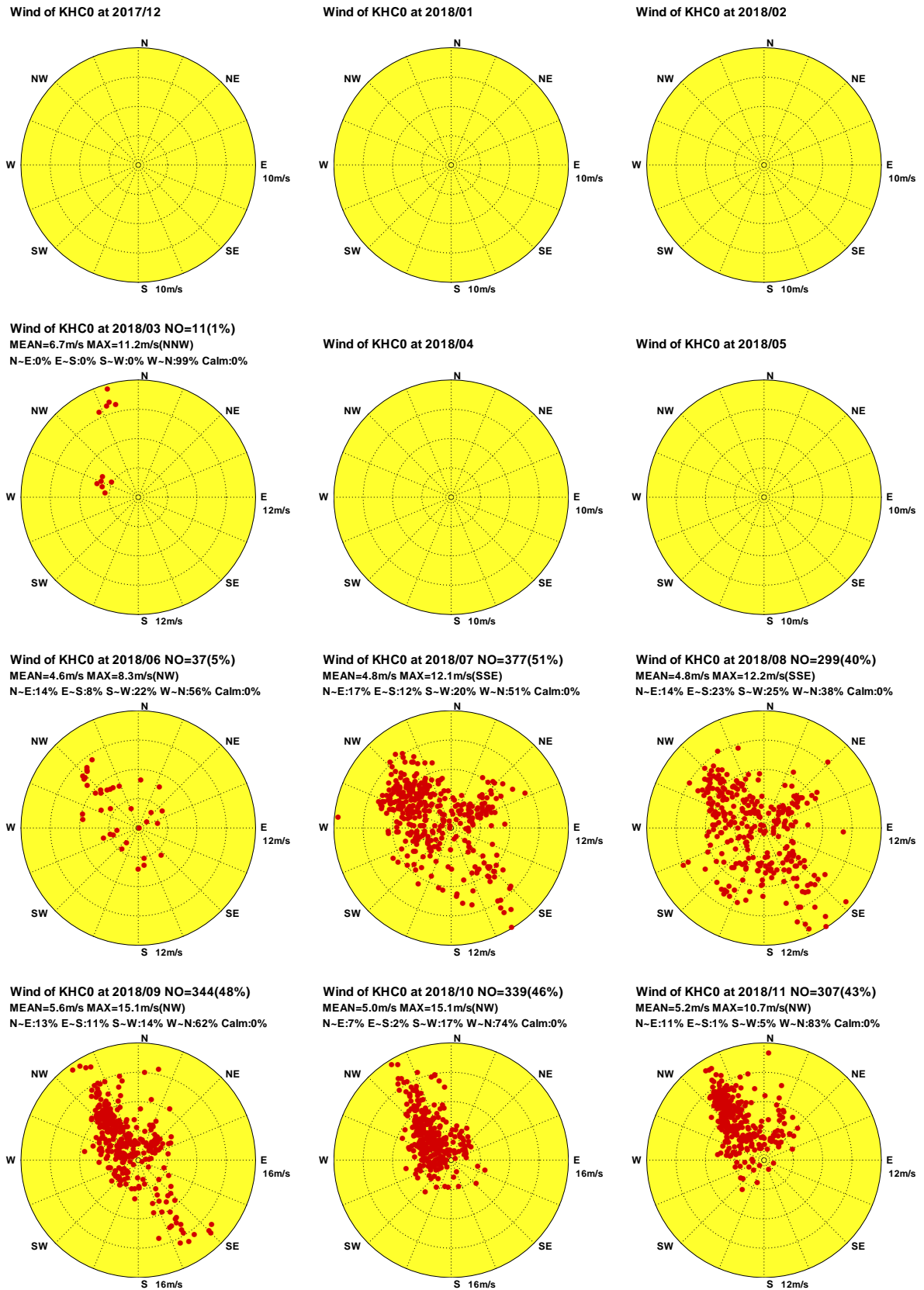


圖1.5.3 2018年高雄海域每月 C 站修補前觀測風力向量分佈圖

W17CKHC0.1H0 W181KHC0.1H0 W182KHC0.1H0 W183KHC0.1H0 W184KHC0.1H0 W185KHC0.1H0
 W186KHC0.1H0 W187KHC0.1H0 W188KHC0.1H0 W189KHC0.1H0 W18AKHC0.1H0 W18BKHC0.1H0

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Distribution of Wind Vectors

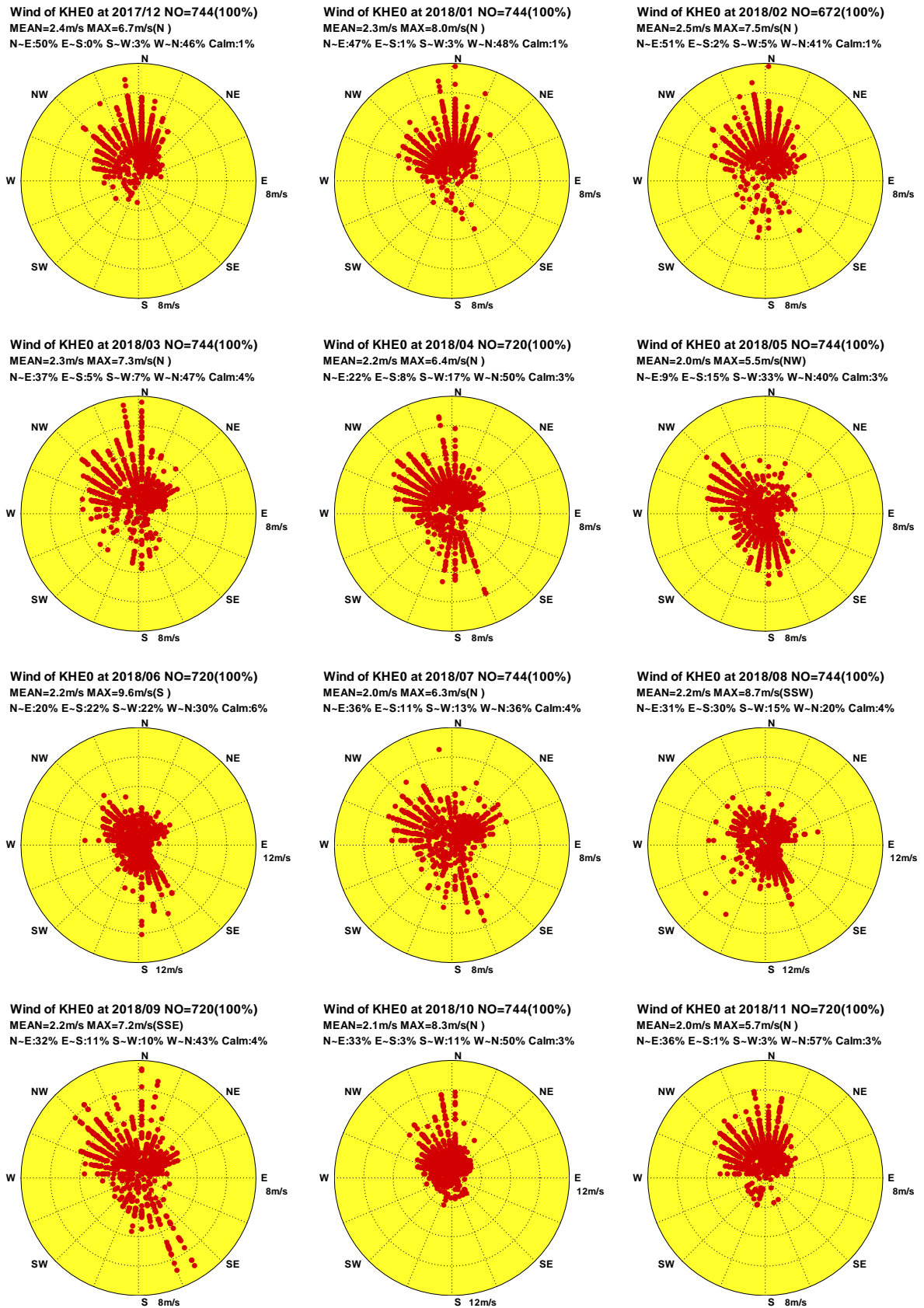


圖1.5.4 2018年高雄海域每月 E 站修補前觀測風力向量分佈圖

W17CKHE0.1H0 W181KHE0.1H0 W182KHE0.1H0 W183KHE0.1H0 W184KHE0.1H0 W185KHE0.1H0
 W186KHE0.1H0 W187KHE0.1H0 W188KHE0.1H0 W189KHE0.1H0 W18AKHE0.1H0 W18BKHE0.1H0

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Distribution of Wind Vectors

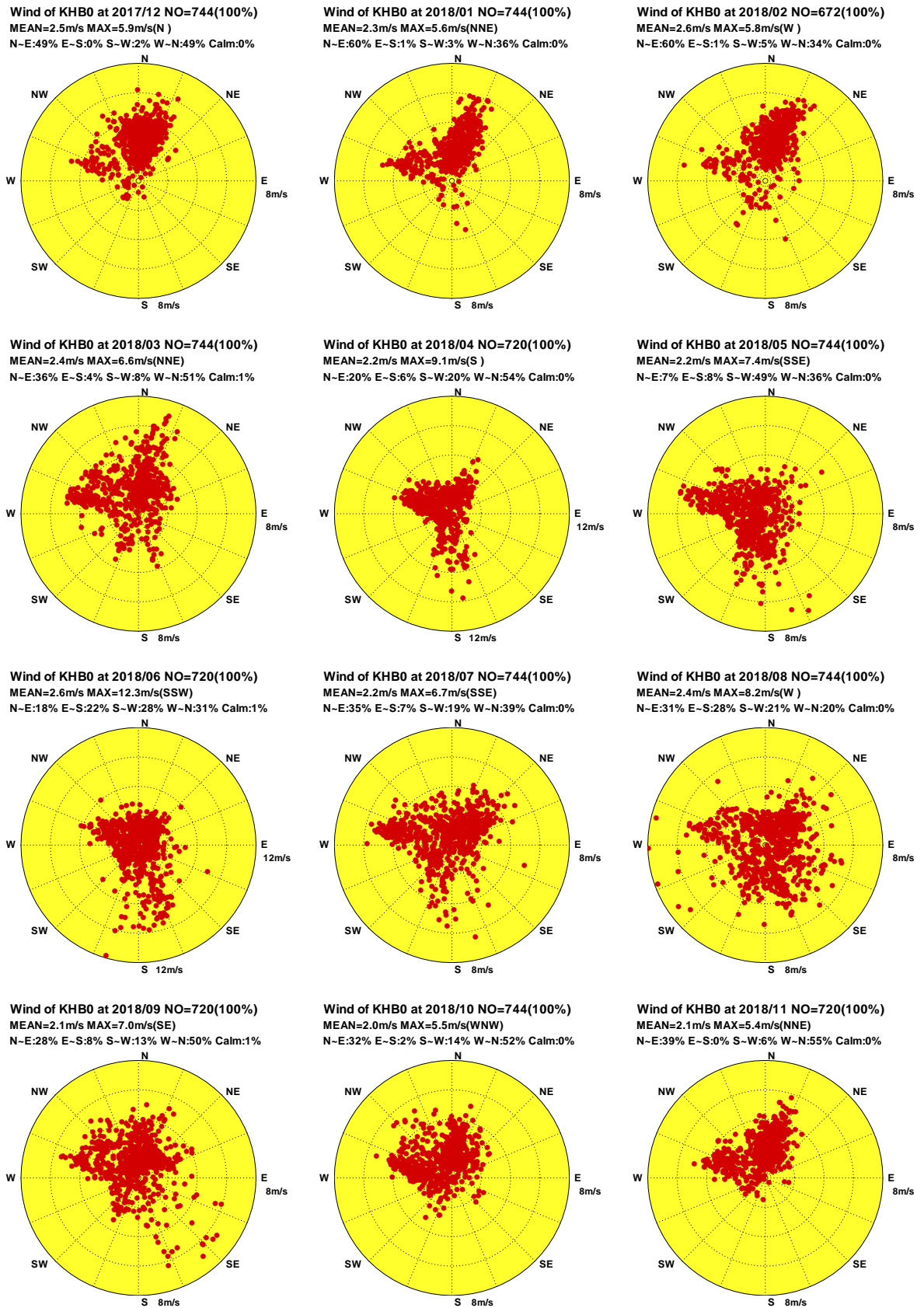


圖1.5.5 2018年高雄海域每月 B 站修補前觀測風力向量分佈圖

W17CKHB0.1H0 W181KHB0.1H0 W182KHB0.1H0 W183KHB0.1H0 W184KHB0.1H0 W185KHB0.1H0
 W186KHB0.1H0 W187KHB0.1H0 W188KHB0.1H0 W189KHB0.1H0 W18AKHB0.1H0 W18BKHB0.1H0

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Distribution of Wind Vectors

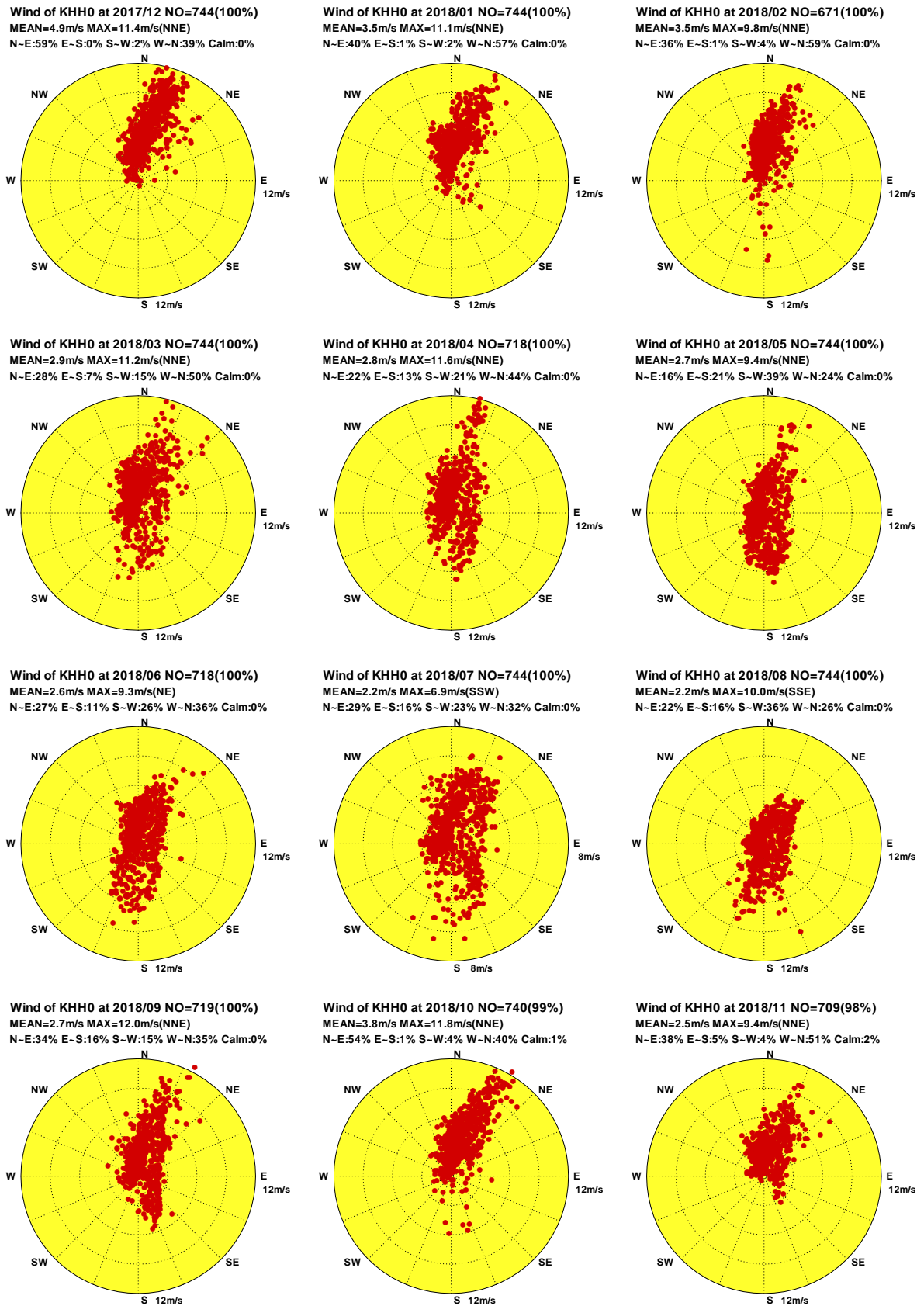


圖 1.5.6 2018 年高雄海域每月 H 站修補前觀測風力向量分佈圖

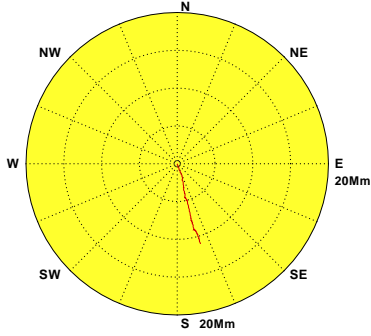
W17CKHH0.1H0 W181KHH0.1H0 W182KHH0.1H0 W183KHH0.1H0 W184KHH0.1H0 W185KHH0.1H0
W186KHH0.1H0 W187KHH0.1H0 W188KHH0.1H0 W189KHH0.1H0 W18AKHH0.1H0 W18BKHH0.1H0

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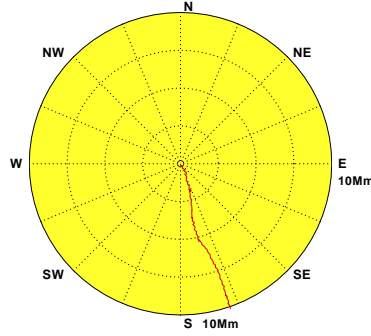
1.6 2018 年高雄海域風力各測站修補前 風力向量行進圖

Progressive Vector Diagram of Wind

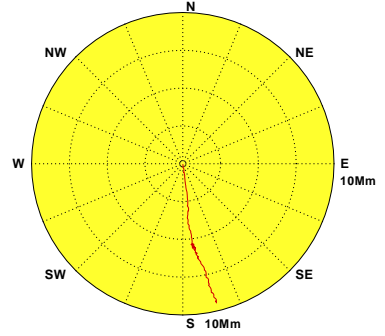
Wind of KHW0 at 2017/12 NO=743(100%)
 MEAN=4.6m/s MAX=12.6m/s(NNW)
 N-E:31% E-S:0% S-W:3% W-N:64% Calm:2%



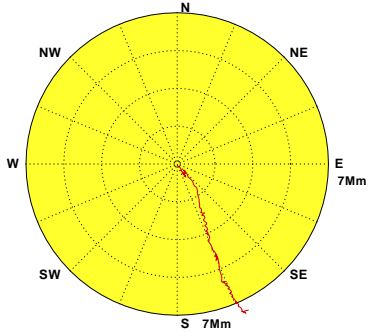
Wind of KHW0 at 2018/01 NO=744(100%)
 MEAN=4.4m/s MAX=12.7m/s(N)
 N-E:29% E-S:1% S-W:3% W-N:64% Calm:3%



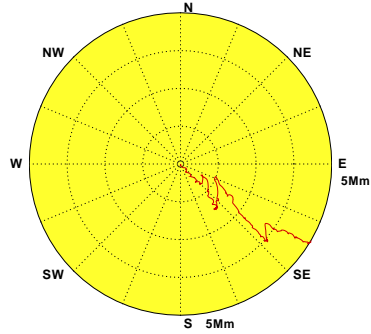
Wind of KHW0 at 2018/02 NO=671(100%)
 MEAN=4.9m/s MAX=12.4m/s(NNW)
 N-E:31% E-S:3% S-W:5% W-N:59% Calm:2%



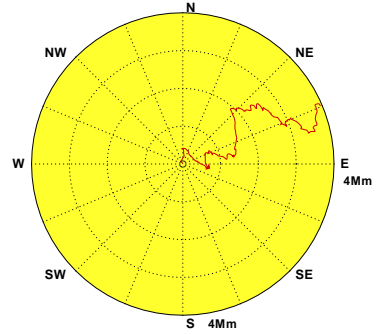
Wind of KHW0 at 2018/03 NO=744(100%)
 MEAN=4.3m/s MAX=12.6m/s(NNW)
 N-E:29% E-S:6% S-W:7% W-N:55% Calm:3%



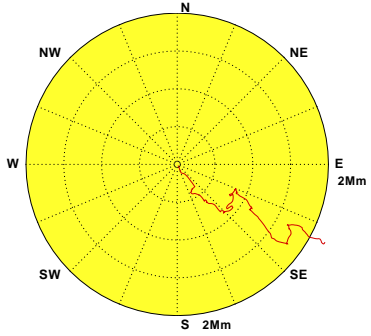
Wind of KHW0 at 2018/04 NO=719(100%)
 MEAN=4.2m/s MAX=12.1m/s(S)
 N-E:17% E-S:10% S-W:19% W-N:52% Calm:2%



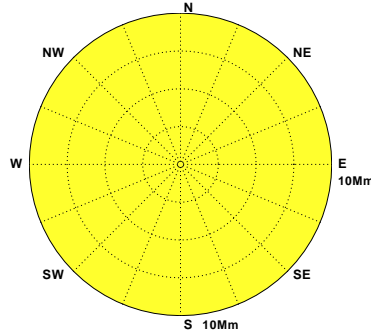
Wind of KHW0 at 2018/05 NO=668(90%)
 MEAN=3.8m/s MAX=9.8m/s(NW)
 N-E:6% E-S:21% S-W:32% W-N:39% Calm:2%



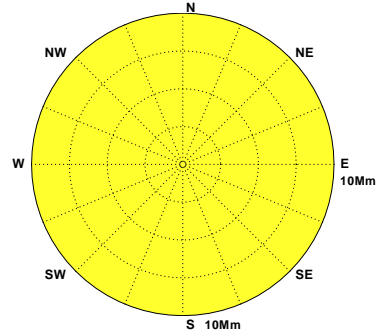
Wind of KHW0 at 2018/06 NO=277(38%)
 MEAN=3.9m/s MAX=11.9m/s(WNW)
 N-E:15% E-S:8% S-W:22% W-N:51% Calm:4%



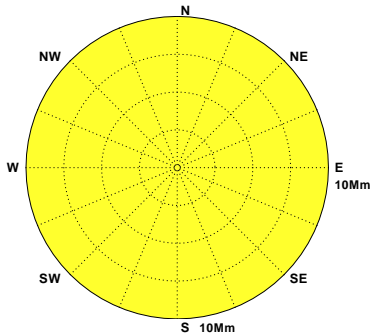
Wind of KHW0 at 2018/07



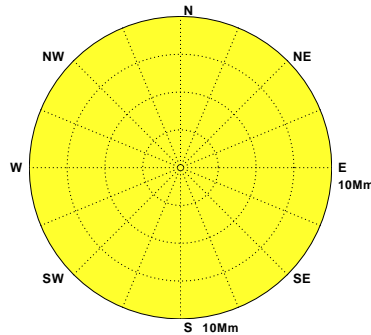
Wind of KHW0 at 2018/08



Wind of KHW0 at 2018/09



Wind of KHW0 at 2018/10



Wind of KHW0 at 2018/11

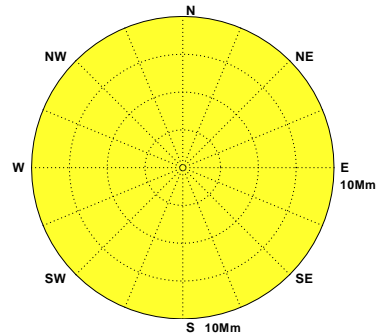


圖 1.6.1 2018 年高雄海域每月 W 站修補前觀測風力向量行進圖

W17CKHW0.1HO W181KHW0.1HO W182KHW0.1HO W183KHW0.1HO W184KHW0.1HO W185KHW0.1HO
 W186KHW0.1HO W187KHW0.1HO W188KHW0.1HO W189KHW0.1HO W18AKHW0.1HO W18BKHW0.1HO

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Progressive Vector Diagram of Wind

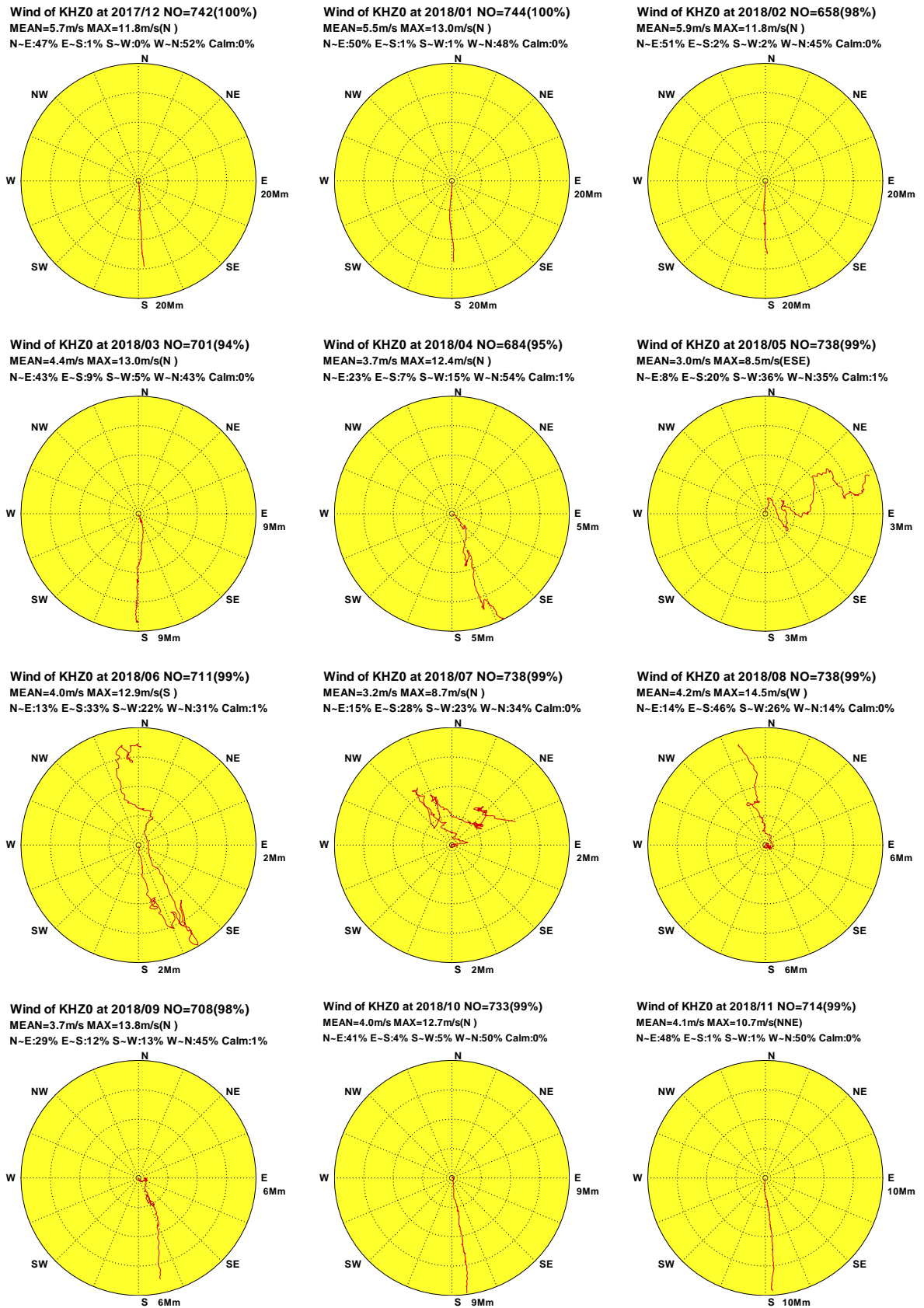


圖1.6.2 2018年高雄海域每月Z站修補前觀測風力向量行進圖

W17CKHZ0.1H0 W181KHZ0.1H0 W182KHZ0.1H0 W183KHZ0.1H0 W184KHZ0.1H0 W185KHZ0.1H0
W186KHZ0.1H0 W187KHZ0.1H0 W188KHZ0.1H0 W189KHZ0.1H0 W18AKHZ0.1H0 W18BKHZ0.1H0

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Progressive Vector Diagram of Wind

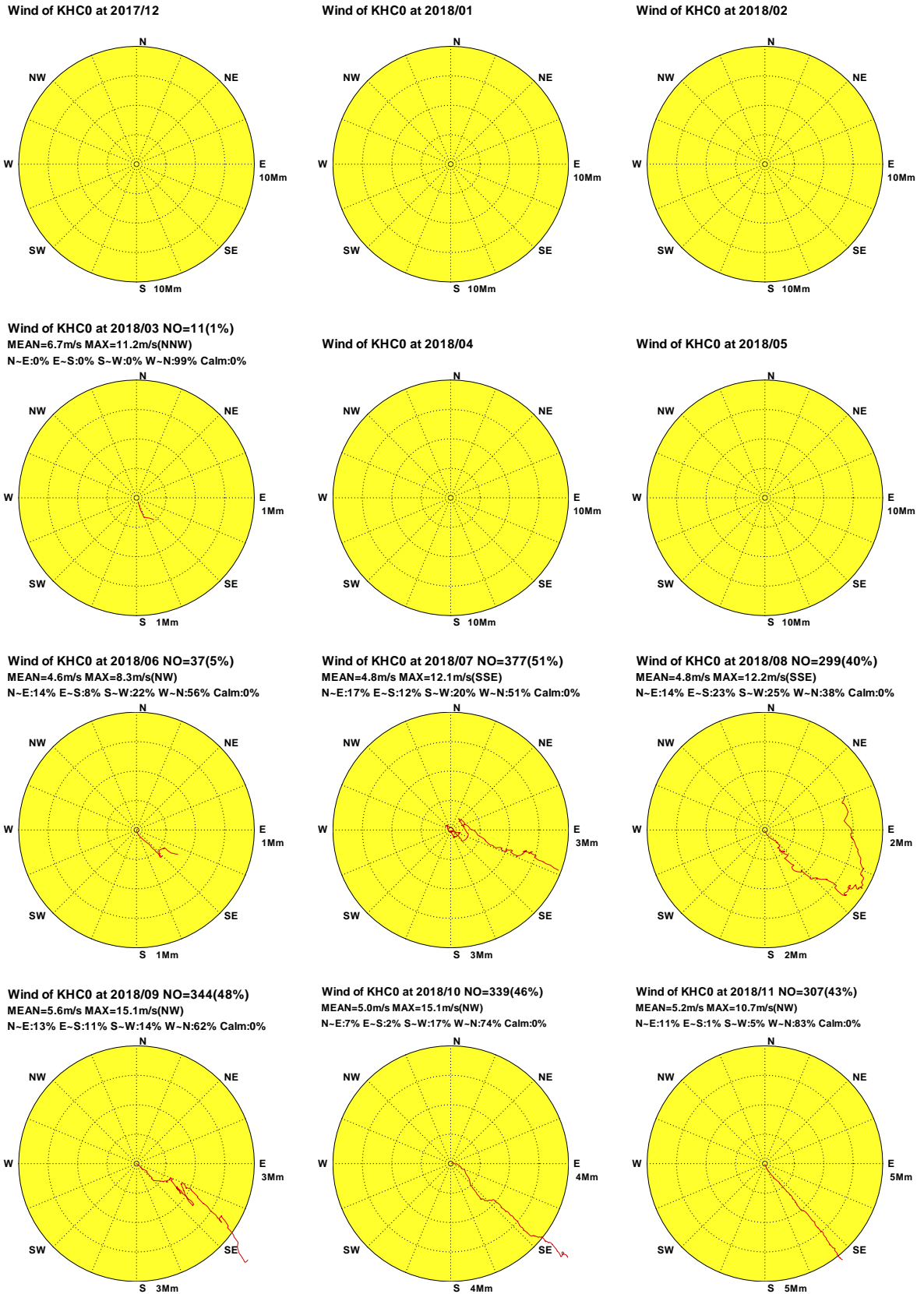


圖1.6.3 2018年高雄海域每月 C 站修補前觀測風力向量行進圖

W17CKHC0.1H0 W181KHC0.1H0 W182KHC0.1H0 W183KHC0.1H0 W184KHC0.1H0 W185KHC0.1H0
 W186KHC0.1H0 W187KHC0.1H0 W188KHC0.1H0 W189KHC0.1H0 W18AKHC0.1H0 W18BKHC0.1H0

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Progressive Vector Diagram of Wind

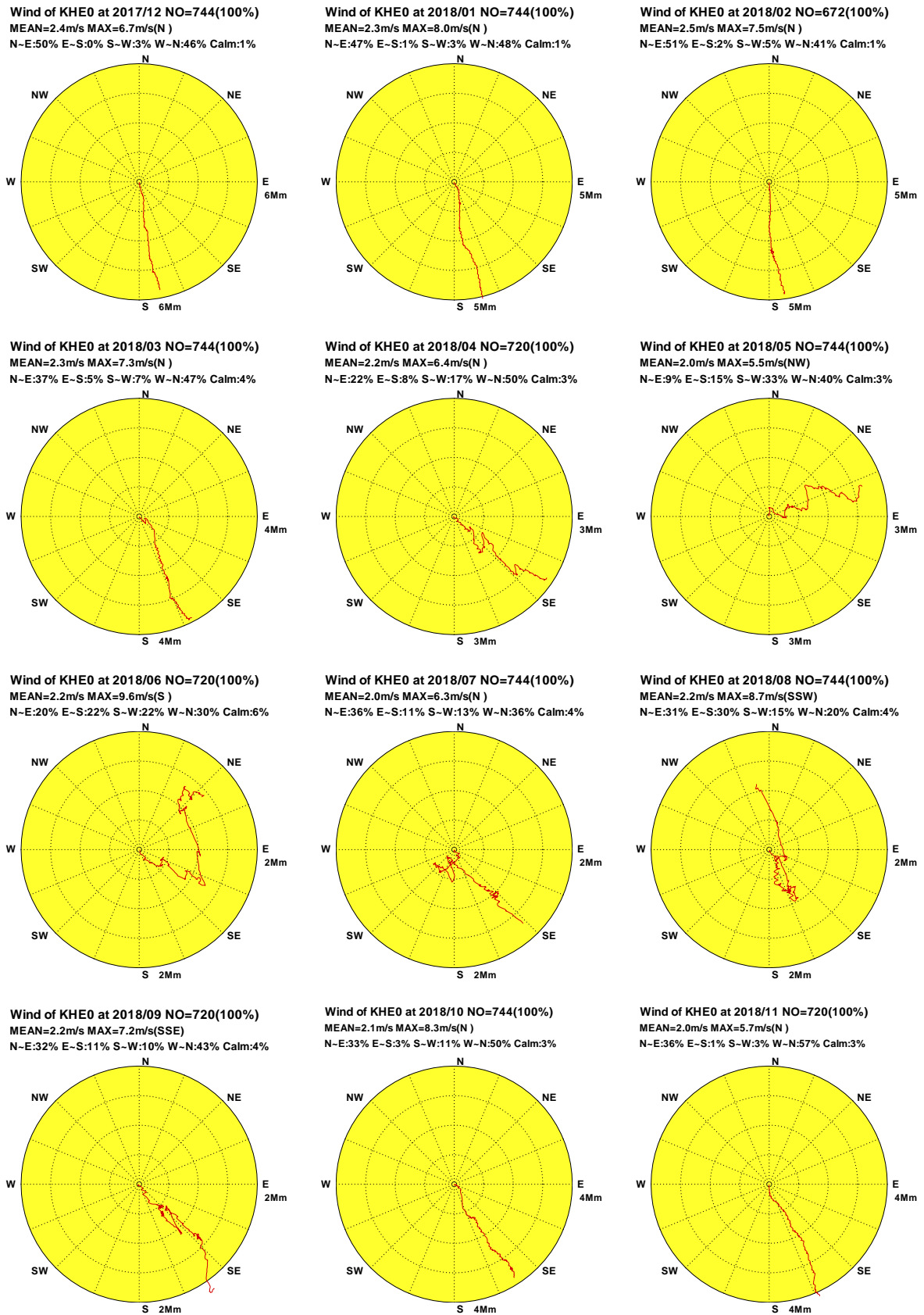


圖1.6.4 2018年高雄海域每月 E 站修補前觀測風力向量行進圖

W17CKHE0.1H0 W181KHE0.1H0 W182KHE0.1H0 W183KHE0.1H0 W184KHE0.1H0 W185KHE0.1H0
W186KHE0.1H0 W187KHE0.1H0 W188KHE0.1H0 W189KHE0.1H0 W18AKHE0.1H0 W18BKHE0.1H0

Institute of Harbor & Marine Technology

Progressive Vector Diagram of Wind

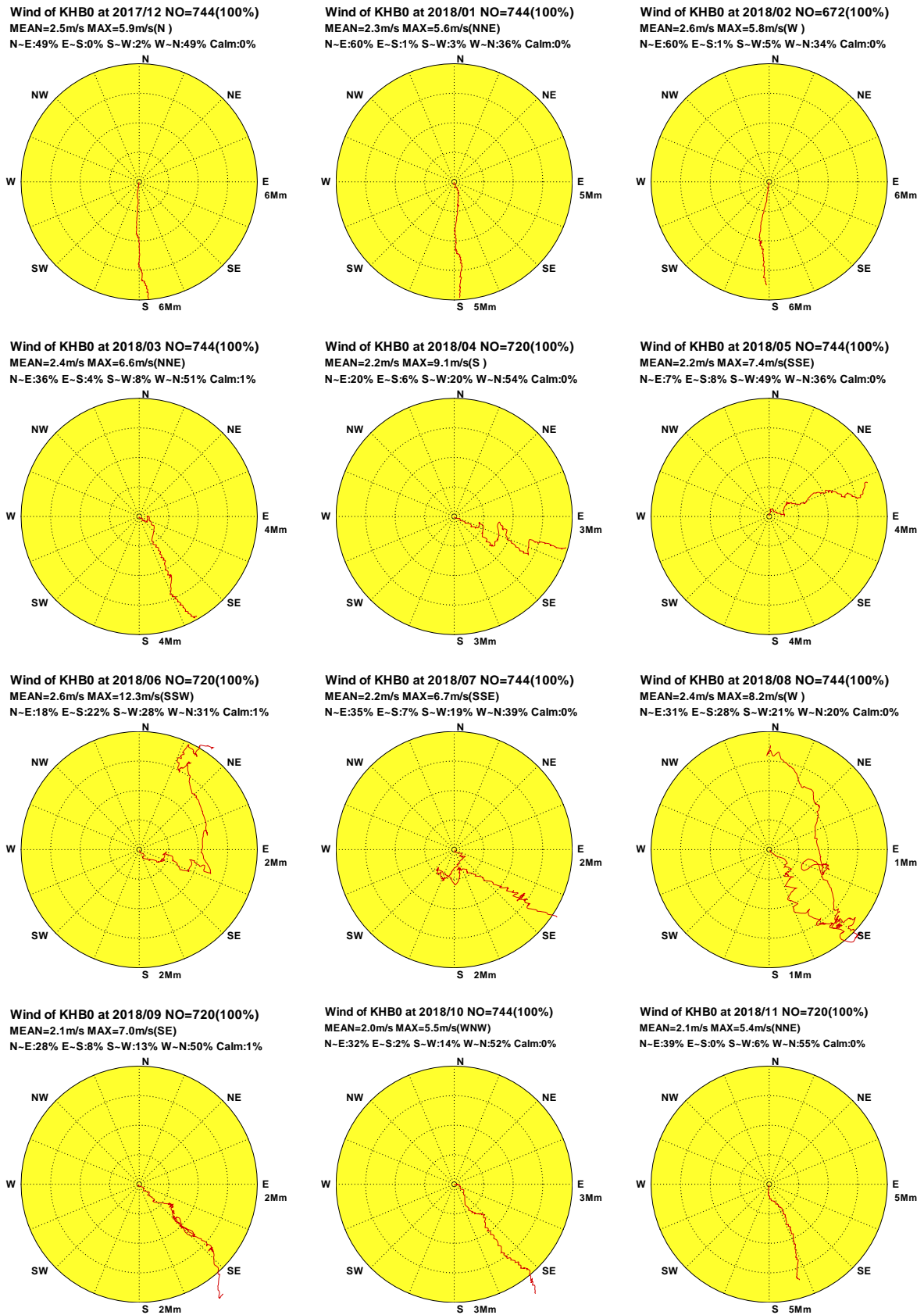


圖1.6.5 2018年高雄海域每月 B 站修補前觀測風力向量行進圖

W17CKHB0.1H0 W181KHB0.1H0 W182KHB0.1H0 W183KHB0.1H0 W184KHB0.1H0 W185KHB0.1H0
W186KHB0.1H0 W187KHB0.1H0 W188KHB0.1H0 W189KHB0.1H0 W18AKHB0.1H0 W18BKHB0.1H0

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Progressive Vector Diagram of Wind

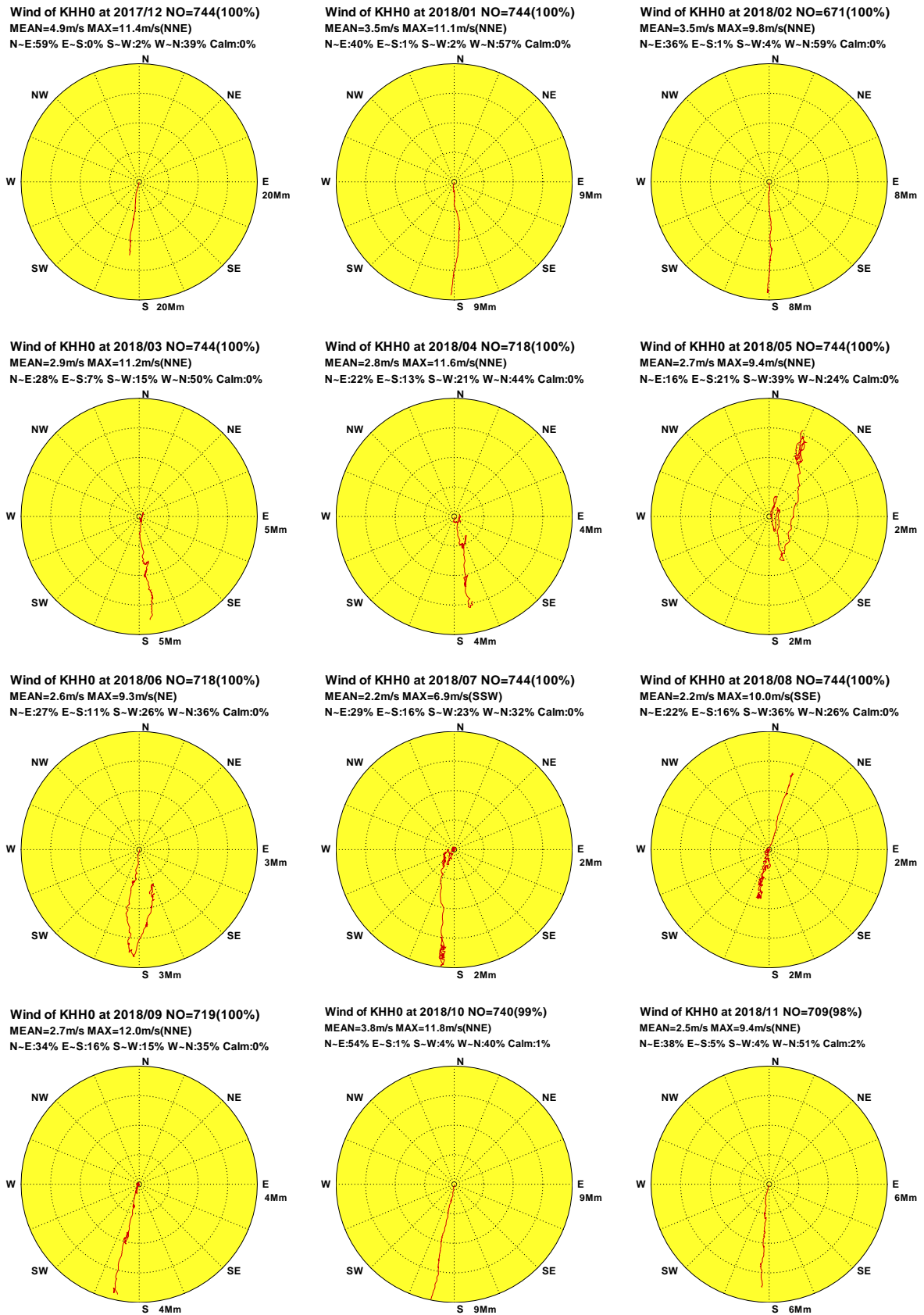


圖1.6.6 2018年高雄海域每月 H 站修補前觀測風力向量行進圖

W17CKHH0.1H0 W181KHH0.1H0 W182KHH0.1H0 W183KHH0.1H0 W184KHH0.1H0 W185KHH0.1H0
W186KHH0.1H0 W187KHH0.1H0 W188KHH0.1H0 W189KHH0.1H0 W18AKHH0.1H0 W18BKHH0.1H0

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第二章 2018 年高雄海域觀測波浪資料年報

高雄海域波浪觀測包括測站 **X** 及測站 **Z** 等 5 個測站(測站位置如第 O 章圖 VH1)。本年報取經檢核及補遺之 **X 站** 資料作為主要測站 1，**Z 站** 資料作為主要測站 2。

2.1 2018 年高雄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 年高雄海域**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 年高雄海域**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 年高雄海域**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 年高雄海域**各測站修補前**每月波高向量分佈圖。

表 2.1.1a 2018年每月高雄海域修補前各測站觀測波浪資料紀錄表

海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域
年月/測站	X	Z	A	1	2							
2017/12月	*	715(96.1%)	*	*	*	*	*	*	*	*	*	*
2018/ 1月	*	714(96.0%)	*	*	*	*	*	*	*	*	*	*
2018/ 2月	*	634(94.3%)	*	*	*	*	*	*	*	*	*	*
2018/ 3月	*	689(92.6%)	*	*	*	*	*	*	*	*	*	*
2018/ 4月	*	670(93.1%)	*	*	*	*	*	*	*	*	*	*
2018/ 5月	*	720(96.8%)	*	*	*	*	*	*	*	*	*	*
2018/ 6月	*	707(98.2%)	*	*	*	*	*	*	*	*	*	*
2018/ 7月	*	738(99.2%)	*	*	*	*	*	*	*	*	*	*
2018/ 8月	527(70.8%)	738(99.2%)	*	*	*	*	*	*	*	*	*	*
2018/ 9月	169(23.5%)	709(98.5%)	*	*	*	*	*	*	*	*	*	*
2018/10月	649(87.2%)	730(98.1%)	*	*	*	*	*	*	*	*	*	*
2018/11月	653(90.7%)	714(99.2%)	*	*	*	*	*	*	*	*	*	*
2018/冬季	*	2063(95.5%)	*	*	*	*	*	*	*	*	*	*
2018/春季	*	2079(94.2%)	*	*	*	*	*	*	*	*	*	*
2018/夏季	527(23.9%)	2183(98.9%)	*	*	*	*	*	*	*	*	*	*
2018/秋季	1471(67.4%)	2153(98.6%)	*	*	*	*	*	*	*	*	*	*
2018/整年	1998(22.8%)	8478(96.8%)	*	*	*	*	*	*	*	*	*	*
起始年月	2018/08	2017/12	*	*	*	*	*	*	*	*	*	*
結束年月	2018/11	2018/11	*	*	*	*	*	*	*	*	*	*

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表 2.1.1b 2018年每月高雄海域修補後各測站波浪資料紀錄表

海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域
年月/測站	X	Z										
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2.1.2 2018年高雄海域主要測站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 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%	.79	1.1/ 8.9/w	7.5	9.8	.0	100.0	.0	.0	1.5	68.0	30.5	.0	100%	.3	.8	64.7	34.3	w /50%
2018/01	100%	.77	1.1/ 8.0/w	7.9	9.2	.0	100.0	.0	.0	2.0	54.4	43.5	.0	100%	2.6	4.3	77.8	15.3	w /37%
2018/02	100%	.77	1.2/ 7.7/wsw	6.7	7.7	.0	100.0	.0	.0	2.7	97.3	.0	.0	100%	.0	3.9	65.3	30.8	w /41%
2018/03	100%	.69	1.3/ 6.2/wnw	6.3	7.9	11.6	88.4	.0	.0	23.5	76.5	.0	.0	100%	.3	.1	80.2	19.4	ssw/26%
2018/04	100%	.41	1.3/ 6.0/w	5.3	7.2	75.6	24.4	.0	.0	86.5	13.5	.0	.0	100%	.4	.4	80.4	18.8	sw /30%
2018/05	100%	.25	.6/ 4.1/wnw	4.3	7.3	97.6	2.4	.0	.0	96.1	3.9	.0	.0	100%	.3	.1	77.6	22.0	sw /33%
2018/06	100%	1.07	3.7/10.0/sw	7.9	10.5	17.1	59.4	22.9	.6	19.0	27.9	49.3	3.8	100%	.0	.4	91.3	8.3	sw /44%
2018/07	100%	1.04	1.8/ 8.0/wsw	7.9	9.6	.0	89.9	10.1	.0	.7	51.2	48.1	.0	100%	.1	.0	96.4	3.5	wsw/42%
2018/08	100%	1.52	4.0/ 9.0/wsw	8.6	10.6	.0	47.8	51.3	.8	.3	18.7	74.3	6.7	100%	.0	.0	100.0	.0	ssw/51%
2018/09	100%	.89	4.4/11.6/ssw	7.1	12.7	23.1	67.4	6.9	2.6	25.0	52.9	17.4	4.7	100%	.1	2.1	64.2	33.6	sw /28%
2018/10	100%	.63	1.4/12.1/wsw	6.1	15.1	25.3	74.7	.0	.0	61.3	24.2	5.2	9.3	100%	6.6	6.0	9.9	77.4	wnw/57%
2018/11	100%	.68	1.6/10.1/wsw	6.1	11.1	13.8	86.0	.3	.0	53.1	39.0	3.6	4.3	100%	.1	.0	43.1	56.8	w /58%
2018/冬	100%	.78	1.2/ 7.7/wsw	7.4	9.8	.0	100.0	.0	.0	2.0	72.5	25.5	.0	100%	1.0	3.0	69.4	26.7	w /43%
2018/春	100%	.45	1.3/ 6.0/w	5.3	7.9	61.4	38.6	.0	.0	68.5	31.5	.0	.0	100%	.3	.2	79.4	20.1	sw /25%
2018/夏	100%	1.21	4.0/ 9.0/wsw	8.1	10.6	5.6	65.8	28.2	.5	6.5	32.7	57.3	3.5	100%	.0	.1	95.9	3.9	sw /42%
2018/秋	100%	.73	4.4/11.6/ssw	6.4	15.1	20.7	76.0	2.4	.9	46.6	38.6	8.7	6.1	100%	2.3	2.7	38.7	56.2	wnw/35%
2018/年	100%	.79	4.4/11.6/ssw	6.8	15.1	22.1	69.9	7.7	.3	31.0	43.6	22.9	2.4	100%	.9	1.5	71.0	26.6	w /26%

表2.1.3 2018年高雄海域主要測站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%	.86	1.5/	5.4/NW	4.6	5.9	.5	99.5	.0	.0	100.0	.0	.0	.0	100%	.3	.8	12.5	86.4	NW /48%
2018/01	100%	.74	1.6/	4.6/NNW	4.5	5.8	5.5	94.4	.1	.0	100.0	.0	.0	.0	100%	.1	2.6	15.2	82.1	NW /42%
2018/02	100%	.82	1.5/	4.6/NNW	4.6	6.4	3.3	96.6	.1	.0	99.0	1.0	.0	.0	100%	.0	3.9	22.9	73.2	NW /41%
2018/03	100%	.72	1.5/	4.6/NNW	4.7	6.1	17.1	82.7	.3	.0	99.6	.4	.0	.0	100%	.3	3.9	43.1	52.7	s /20%
2018/04	100%	.52	1.9/	4.7/NW	4.2	5.6	60.0	39.0	1.0	.0	100.0	.0	.0	.0	100%	.4	8.5	41.5	49.6	NW /22%
2018/05	100%	.37	.9/	3.9/SSW	4.0	5.6	78.9	21.1	.0	.0	100.0	.0	.0	.0	100%	.4	5.8	61.7	32.1	s /25%
2018/06	100%	1.12	4.1/	7.1/SW	5.5	7.6	18.5	53.5	26.4	1.7	60.8	39.2	.0	.0	100%	.0	.6	88.1	11.4	SW /47%
2018/07	100%	1.04	2.0/	5.8/SW	5.6	7.2	3.6	84.0	12.4	.0	66.3	33.7	.0	.0	100%	.1	.0	97.3	2.6	SW /41%
2018/08	100%	1.55	4.3/	6.9/SSW	6.2	8.2	.8	46.2	51.5	1.5	33.2	65.9	.9	.0	100%	.0	.0	97.7	2.3	SW /53%
2018/09	100%	.89	4.7/	8.7/SSW	5.1	9.6	21.3	69.6	6.5	2.6	81.9	14.4	3.6	.0	100%	.6	.4	54.0	45.0	SW /25%
2018/10	100%	.71	2.1/	5.1/NNW	4.5	6.8	17.2	81.7	1.1	.0	99.2	.8	.0	.0	100%	.3	2.3	4.0	93.4	NW /51%
2018/11	100%	.71	1.6/	6.2/SW	4.5	6.2	11.3	88.3	.4	.0	99.3	.7	.0	.0	100%	1.9	.6	21.0	76.5	WNW/28%
2018/冬	100%	.81	1.6/	4.6/NNW	4.6	6.4	3.1	96.8	.1	.0	99.7	.3	.0	.0	100%	.1	2.4	16.7	80.8	NW /44%
2018/春	100%	.54	1.9/	4.7/NW	4.3	6.1	51.9	47.7	.4	.0	99.9	.1	.0	.0	100%	.4	6.0	48.9	44.7	s /22%
2018/夏	100%	1.24	4.3/	6.9/SSW	5.8	8.2	7.5	61.3	30.1	1.0	53.4	46.3	.3	.0	100%	.0	.2	94.4	5.3	SW /47%
2018/秋	100%	.77	4.7/	8.7/SSW	4.7	9.6	16.6	79.9	2.7	.9	93.5	5.3	1.2	.0	100%	.9	1.1	26.1	71.9	NW /33%
2018/年	100%	.84	4.7/	8.7/SSW	4.8	9.6	19.9	71.3	8.4	.5	86.5	13.1	.4	.0	100%	.4	2.4	46.7	50.5	NW /24%

Wave H_s in Kao-Hsiung Seas of KHX0 at 2018

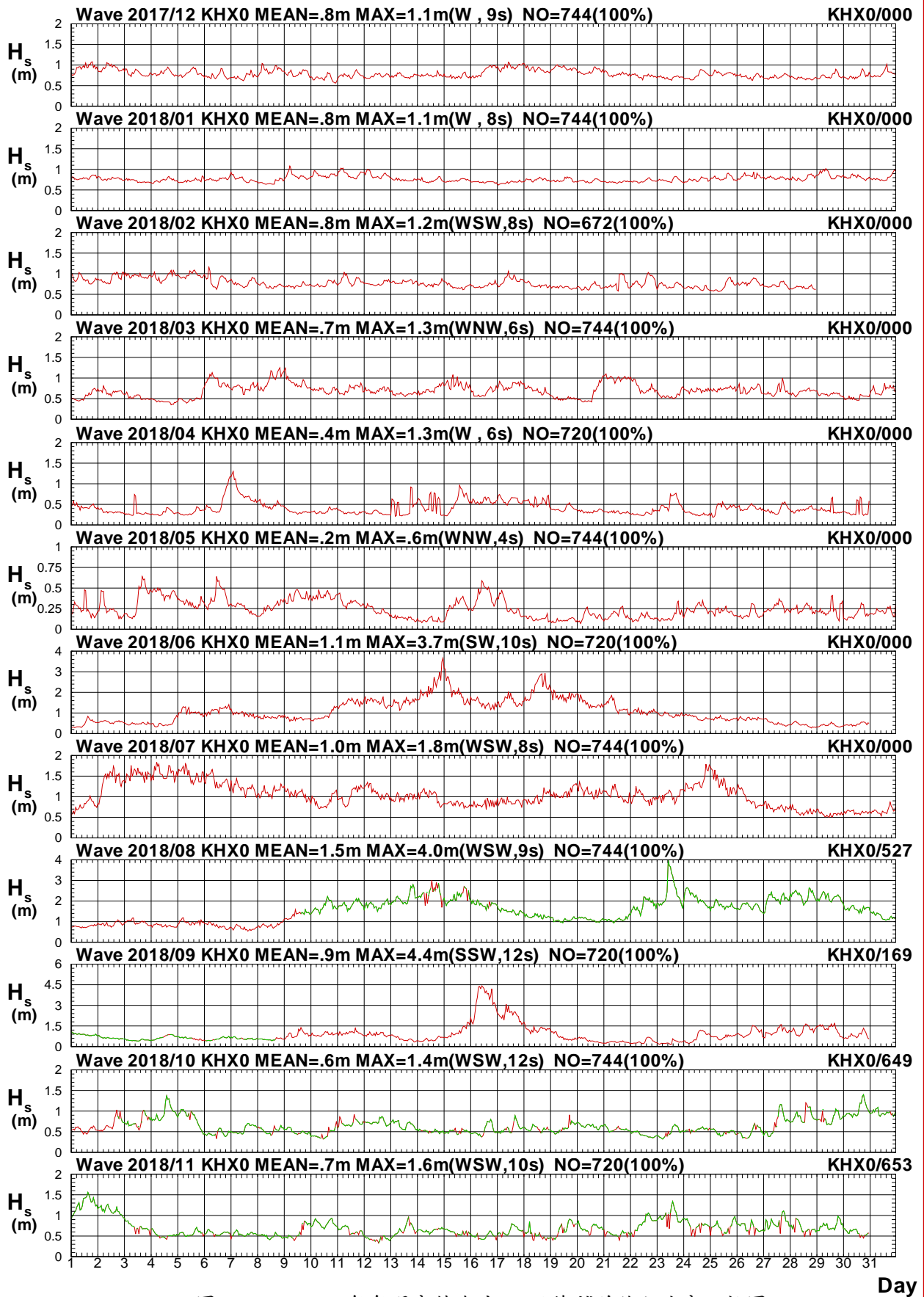


圖2.1.1a 2018年每月高雄海域 X 站修補前後之波高比較圖

V17CKHX0.1HA V17CKHX0.1H0 V181KHX0.1HA V181KHX0.1H0 V182KHX0.1HA V182KHX0.1H0
 V183KHX0.1HA V183KHX0.1H0 V184KHX0.1HA V184KHX0.1H0 V185KHX0.1HA V185KHX0.1H0

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Wave T_p in Kao-Hsiung Seas of KHX0 at 2018

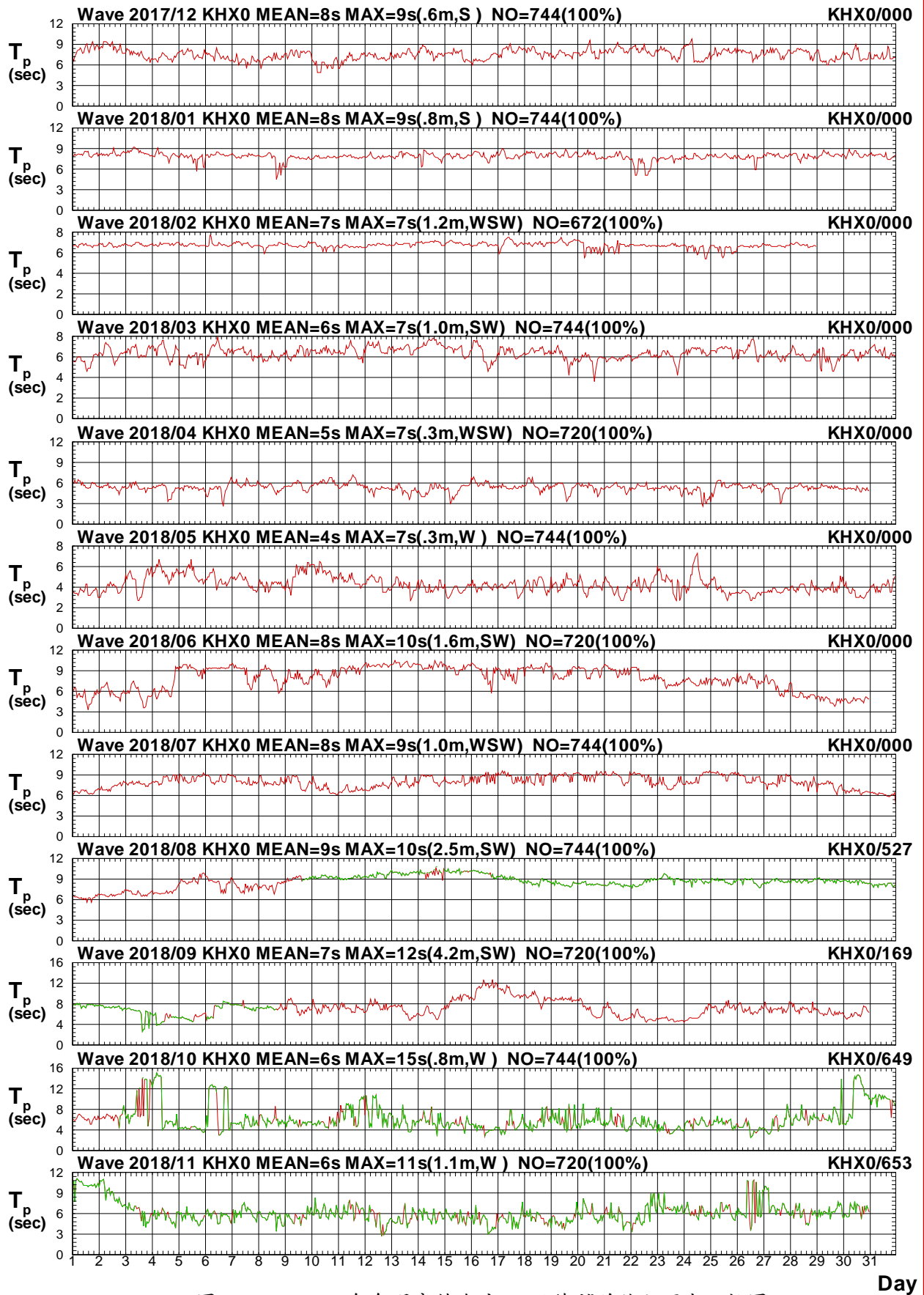


圖2.1.1b 2018年每月高雄海域 X 站修補前後之週期比較圖

V17CKHX0.1HA V17CKHX0.1HO V181KHX0.1HA V181KHX0.1HO V182KHX0.1HA V182KHX0.1HO
 V183KHX0.1HA V183KHX0.1HO V184KHX0.1HA V184KHX0.1HO V185KHX0.1HA V185KHX0.1HO

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Wave Direction in Kao-Hsiung Seas of KHX0 at 2018

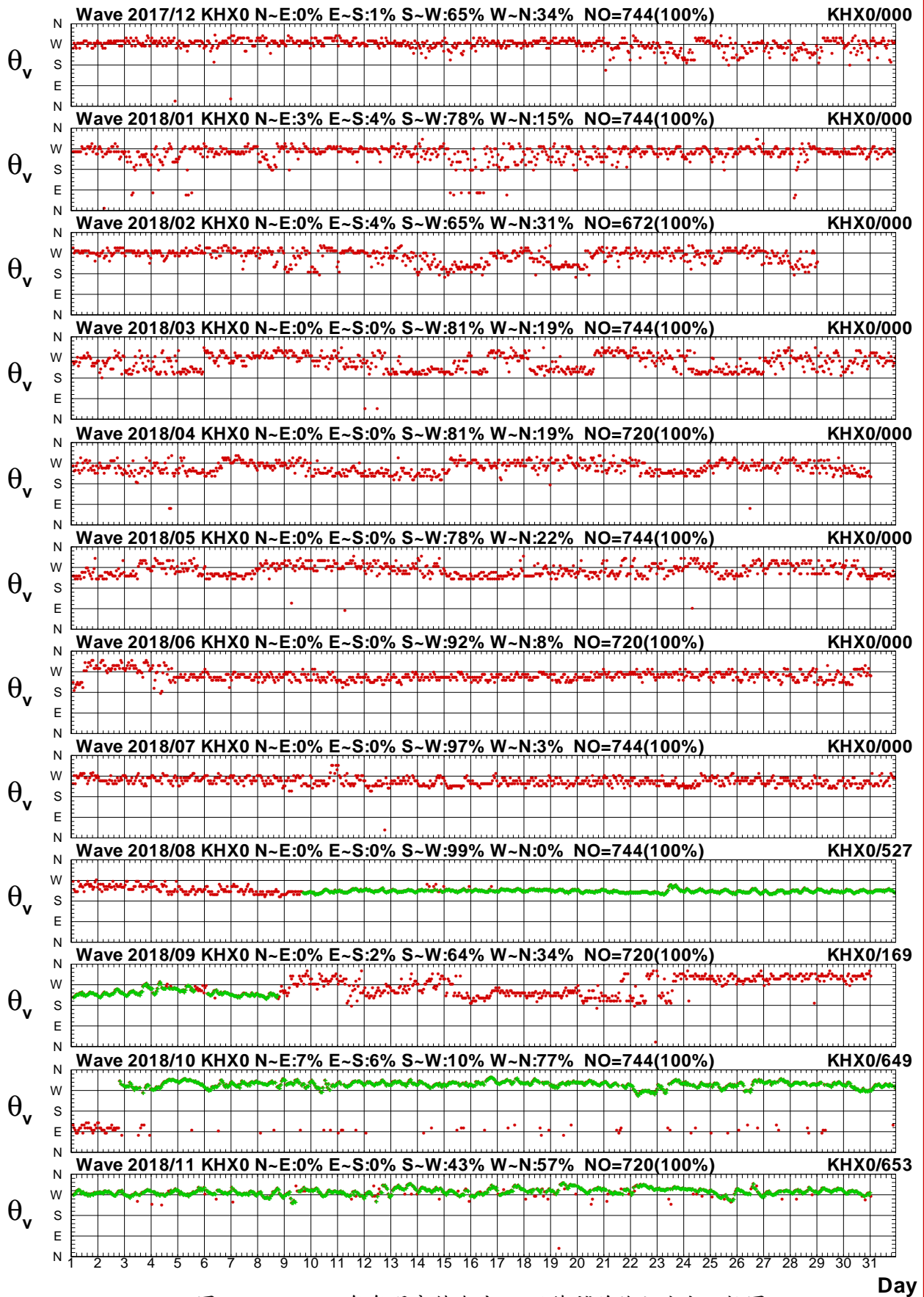


圖2.1.1c 2018年每月高雄海域 X 站修補前後之波向比較圖

V17CKHX0.1HA V17CKHX0.1H0 V181KHX0.1HA V181KHX0.1H0 V182KHX0.1HA V182KHX0.1H0
 V183KHX0.1HA V183KHX0.1H0 V184KHX0.1HA V184KHX0.1H0 V185KHX0.1HA V185KHX0.1H0

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Wave H_s in Kao-Hsiung Seas of KHZ0 at 2018

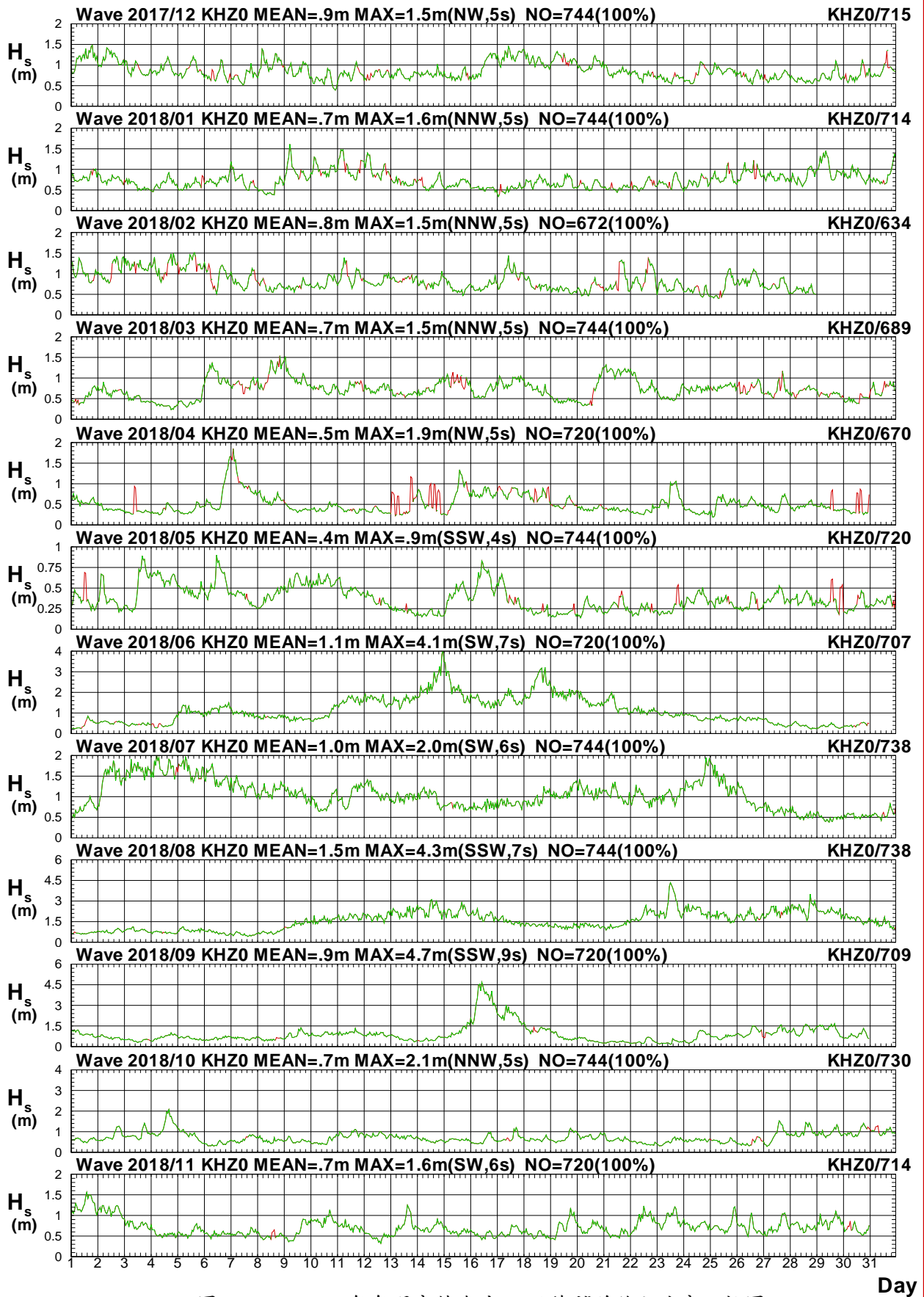


圖2.1.2a 2018年每月高雄海域 Z 站修補前後之波高比較圖

V17CKHZ0.1HA V17CKHZ0.1H0 V181KHZ0.1HA V181KHZ0.1H0 V182KHZ0.1HA V182KHZ0.1H0
 V183KHZ0.1HA V183KHZ0.1H0 V184KHZ0.1HA V184KHZ0.1H0 V185KHZ0.1HA V185KHZ0.1H0

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Wave T_p in Kao-Hsiung Seas of KHZ0 at 2018

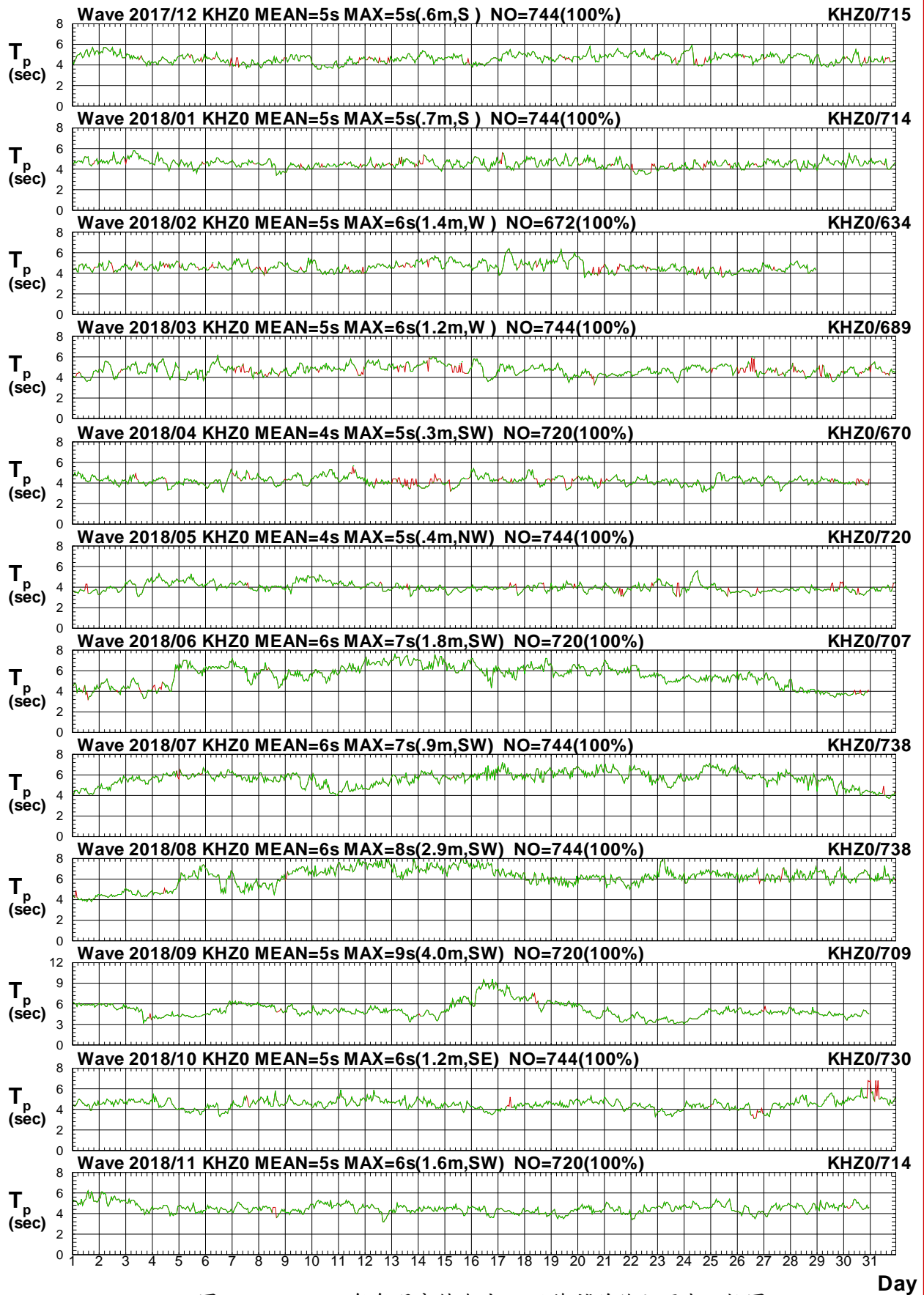


圖2.1.2b 2018年每月高雄海域 Z 站修補前後之週期比較圖

V17CKHZ0.1HA V17CKHZ0.1HO V181KHZ0.1HA V181KHZ0.1HO V182KHZ0.1HA V182KHZ0.1HO
 V183KHZ0.1HA V183KHZ0.1HO V184KHZ0.1HA V184KHZ0.1HO V185KHZ0.1HA V185KHZ0.1HO

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Wave Direction in Kao-Hsiung Seas of KHZ0 at 2018

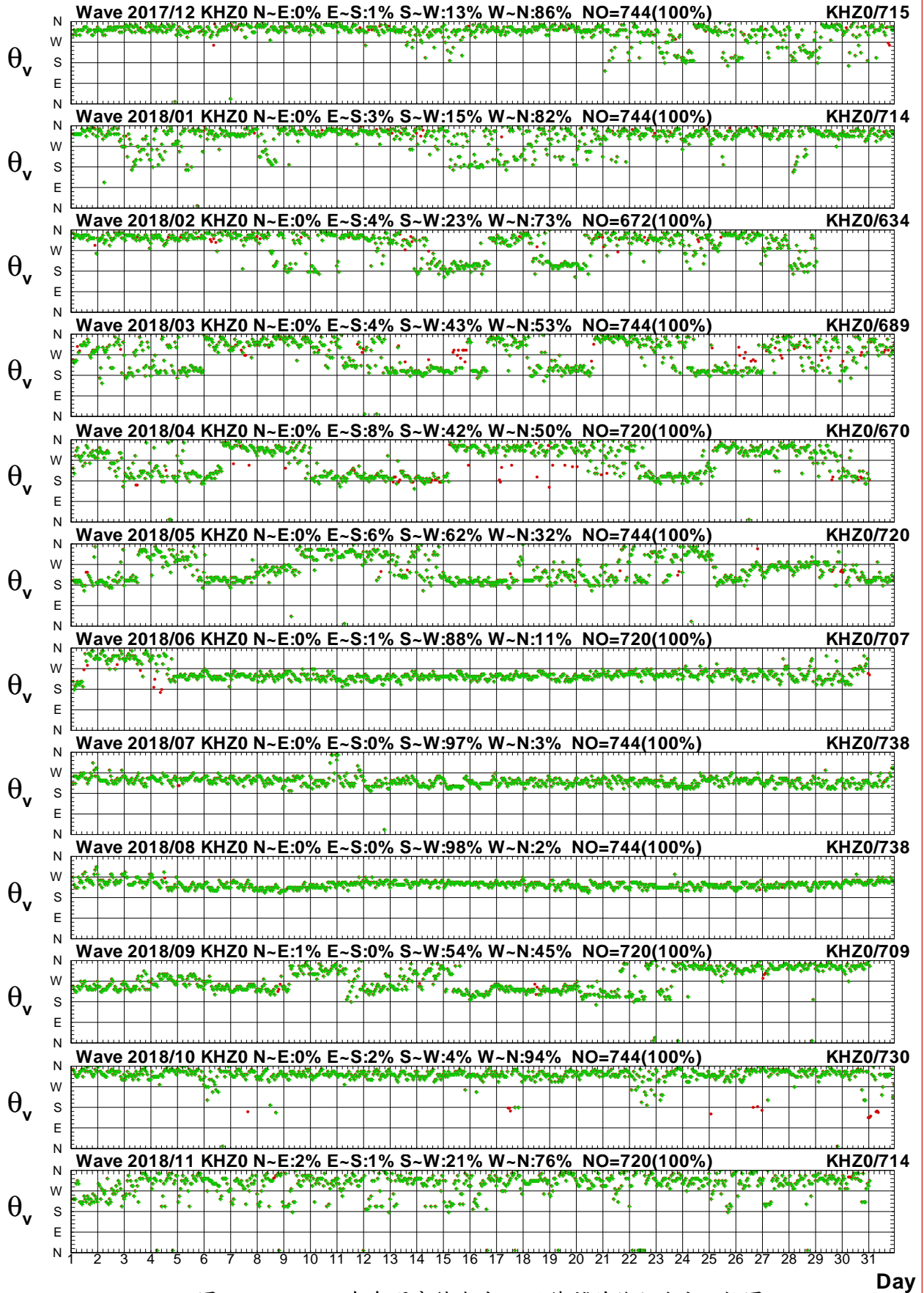


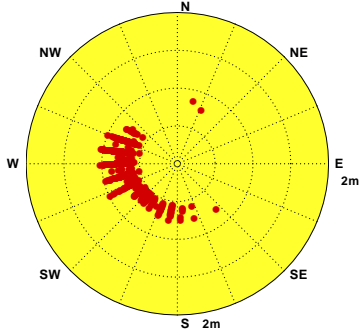
圖2.1.2c 2018年每月高雄海域 Z 站修補前後之波向比較圖

V17CKHZ0.1HA V17CKHZ0.1H0 V181KHZ0.1HA V181KHZ0.1H0 V182KHZ0.1HA V182KHZ0.1H0
 V183KHZ0.1HA V183KHZ0.1H0 V184KHZ0.1HA V184KHZ0.1H0 V185KHZ0.1HA V185KHZ0.1H0

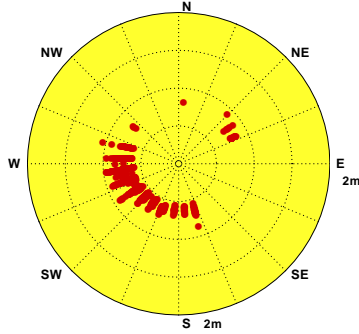
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Distribution of H_s Vectors

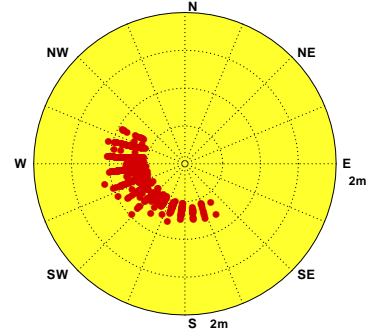
Wave of KHX0 at 2017/12 NO=744(100%)
 Hs : MEAN=.8m MAX=1.1m(W, 9s)
 N-E:0% E-S:1% S-W:65% W-N:34%



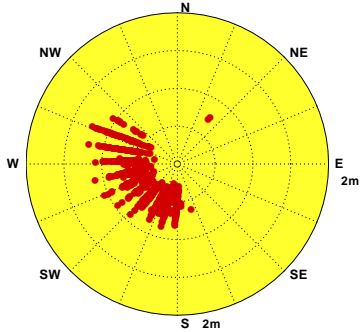
Wave of KHX0 at 2018/01 NO=744(100%)
 Hs : MEAN=.8m MAX=1.1m(W, 8s)
 N-E:3% E-S:4% S-W:78% W-N:15%



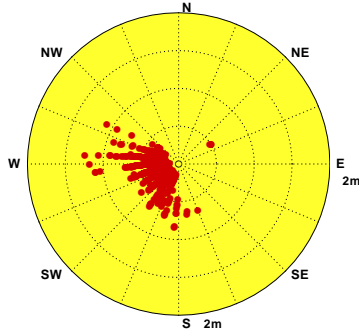
Wave of KHX0 at 2018/02 NO=672(100%)
 Hs : MEAN=.8m MAX=1.2m(WSW,8s)
 N-E:0% E-S:4% S-W:65% W-N:31%



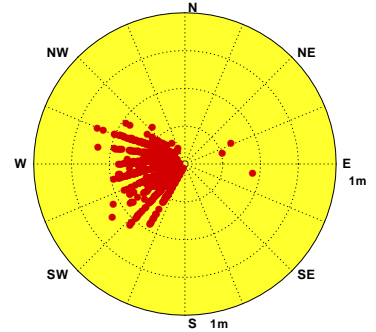
Wave of KHX0 at 2018/03 NO=744(100%)
 Hs : MEAN=.7m MAX=1.3m(WNW,6s)
 N-E:0% E-S:0% S-W:81% W-N:19%



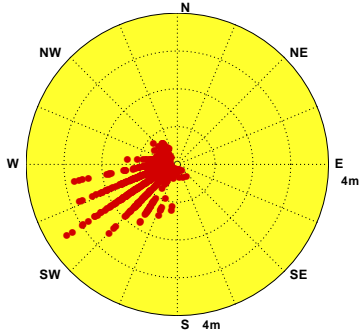
Wave of KHX0 at 2018/04 NO=720(100%)
 Hs : MEAN=.4m MAX=1.3m(W, 6s)
 N-E:0% E-S:0% S-W:81% W-N:19%



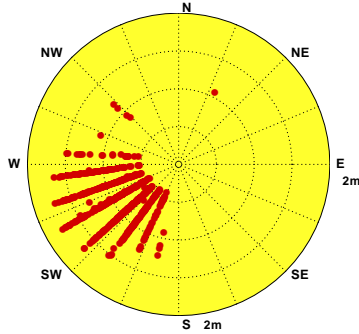
Wave of KHX0 at 2018/05 NO=744(100%)
 Hs : MEAN=.2m MAX=6m(WNW,4s)
 N-E:0% E-S:0% S-W:78% W-N:22%



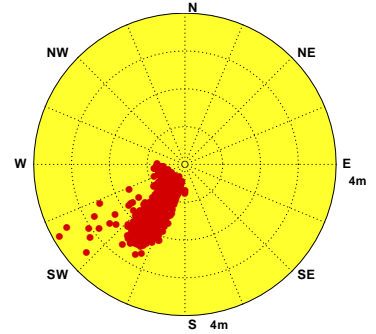
Wave of KHX0 at 2018/06 NO=720(100%)
 Hs : MEAN=1.1m MAX=3.7m(SW,10s)
 N-E:0% E-S:0% S-W:92% W-N:8%



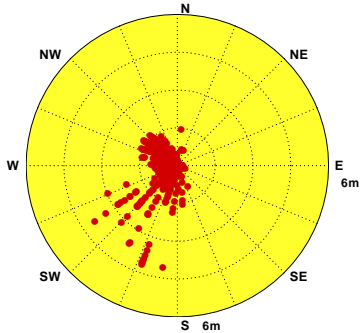
Wave of KHX0 at 2018/07 NO=744(100%)
 Hs : MEAN=1.0m MAX=1.8m(W,8s)
 N-E:0% E-S:0% S-W:97% W-N:3%



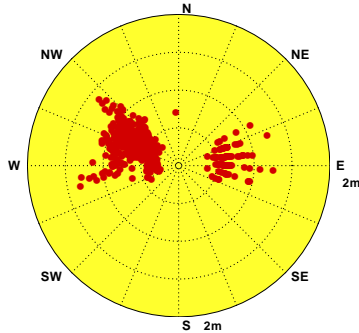
Wave of KHX0 at 2018/08 NO=744(100%)
 Hs : MEAN=1.5m MAX=4.0m(W,9s)
 N-E:0% E-S:0% S-W:99% W-N:0%



Wave of KHX0 at 2018/09 NO=720(100%)
 Hs : MEAN=.9m MAX=4.4m(SSW,12s)
 N-E:0% E-S:2% S-W:64% W-N:34%



Wave of KHX0 at 2018/10 NO=744(100%)
 Hs : MEAN=.6m MAX=1.4m(W,12s)
 N-E:7% E-S:6% S-W:10% W-N:77%



Wave of KHX0 at 2018/11 NO=720(100%)
 Hs : MEAN=.7m MAX=1.6m(W,10s)
 N-E:0% E-S:0% S-W:43% W-N:57%

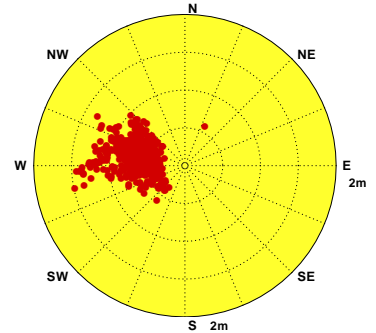


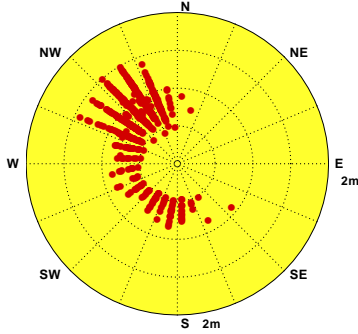
圖2.1.3 2018年高雄海域每月 X 站修補後觀測波高向量分佈圖

V17CKHX0.1HA V181KHX0.1HA V182KHX0.1HA V183KHX0.1HA V184KHX0.1HA V185KHX0.1HA
 V186KHX0.1HA V187KHX0.1HA V188KHX0.1HA V189KHX0.1HA V18AKHX0.1HA V18BKHX0.1HA

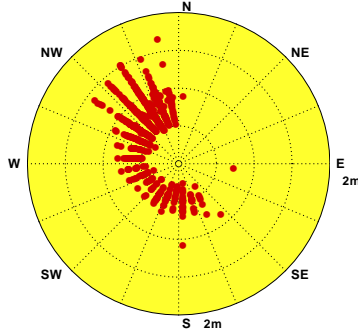
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Distribution of H_s Vectors

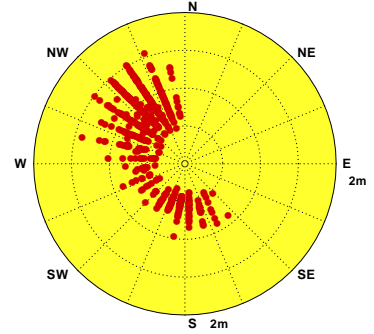
Wave of KHZ0 at 2017/12 NO=744(100%)
Hs : MEAN=.9m MAX=1.5m(NW,5s)
N-E:0% E-S:1% S-W:13% W-N:86%



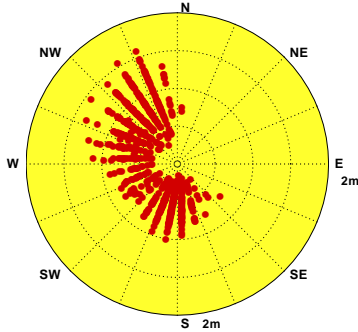
Wave of KHZ0 at 2018/01 NO=744(100%)
Hs : MEAN=.7m MAX=1.6m(NNW,5s)
N-E:0% E-S:3% S-W:15% W-N:82%



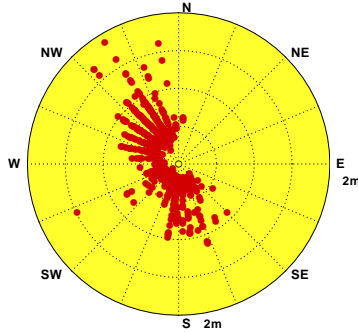
Wave of KHZ0 at 2018/02 NO=672(100%)
Hs : MEAN=.8m MAX=1.5m(NNW,5s)
N-E:0% E-S:4% S-W:23% W-N:73%



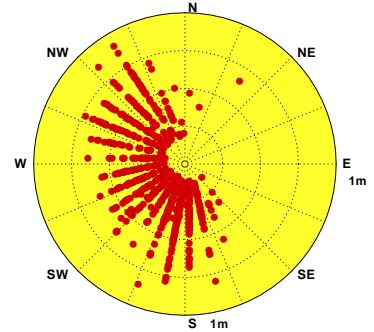
Wave of KHZ0 at 2018/03 NO=744(100%)
Hs : MEAN=.7m MAX=1.5m(NNW,5s)
N-E:0% E-S:4% S-W:43% W-N:53%



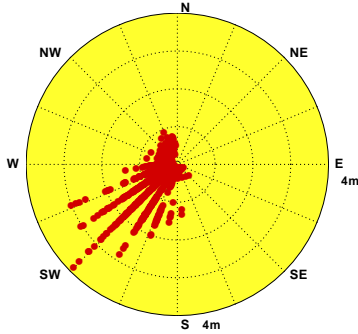
Wave of KHZ0 at 2018/04 NO=720(100%)
Hs : MEAN=.5m MAX=1.9m(NW,5s)
N-E:0% E-S:8% S-W:42% W-N:50%



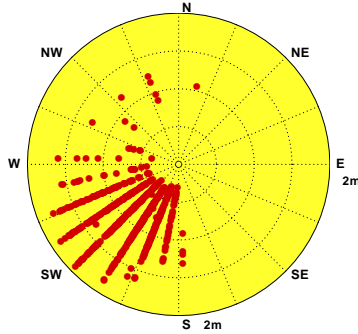
Wave of KHZ0 at 2018/05 NO=744(100%)
Hs : MEAN=.4m MAX=.9m(SSW,4s)
N-E:0% E-S:6% S-W:62% W-N:32%



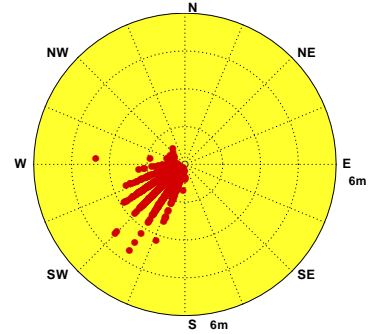
Wave of KHZ0 at 2018/06 NO=720(100%)
Hs : MEAN=1.1m MAX=4.1m(SW,7s)
N-E:0% E-S:1% S-W:88% W-N:11%



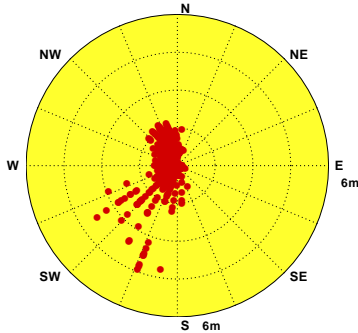
Wave of KHZ0 at 2018/07 NO=744(100%)
Hs : MEAN=1.0m MAX=2.0m(SW,6s)
N-E:0% E-S:0% S-W:97% W-N:3%



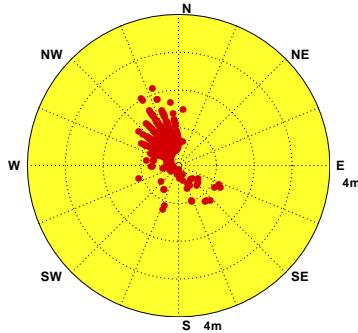
Wave of KHZ0 at 2018/08 NO=744(100%)
Hs : MEAN=1.5m MAX=4.3m(SSW,7s)
N-E:0% E-S:0% S-W:98% W-N:2%



Wave of KHZ0 at 2018/09 NO=720(100%)
Hs : MEAN=.9m MAX=4.7m(SSW,9s)
N-E:1% E-S:0% S-W:54% W-N:45%



Wave of KHZ0 at 2018/10 NO=744(100%)
Hs : MEAN=.7m MAX=2.1m(NNW,5s)
N-E:0% E-S:2% S-W:4% W-N:94%



Wave of KHZ0 at 2018/11 NO=720(100%)
Hs : MEAN=.7m MAX=1.6m(SW,6s)
N-E:2% E-S:1% S-W:21% W-N:76%

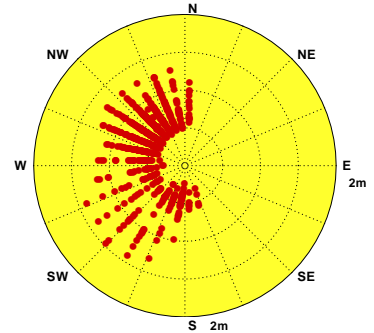


圖2.1.4 2018年高雄海域每月乙站修補後觀測波高向量分佈圖

V17CKHZ0.1HA V181KHZ0.1HA V182KHZ0.1HA V183KHZ0.1HA V184KHZ0.1HA V185KHZ0.1HA
V186KHZ0.1HA V187KHZ0.1HA V188KHZ0.1HA V189KHZ0.1HA V18AKHZ0.1HA V18BKHZ0.1HA

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2.2 2018 年高雄海域各測站修補前 波浪統計量統計表

表2.2.1 2018年高雄海域 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	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	0																			
2018/01	0																			
2018/02	0																			
2018/03	0																			
2018/04	0																			
2018/05	0																			
2018/06	0																			
2018/07	0																			
2018/08	71%	1.76	4.0/ 9.0/wsw	8.9	10.6	.0	28.5	70.6	.9	.0	3.2	87.9	8.9	71%	.0	.0	100.0	.0	ssw/55%	
2018/09	24%	.62	1.1/ 8.0/ssw	6.7	8.5	23.7	76.3	.0	.0	26.0	68.6	5.3	.0	24%	.0	.0	99.4	.6	sw /59%	
2018/10	87%	.64	1.4/12.1/wsw	6.1	15.1	26.8	73.2	.0	.0	66.7	16.9	5.7	10.6	87%	.0	.0	11.4	88.6	wNW/66%	
2018/11	91%	.70	1.6/10.1/wsw	6.1	11.1	10.1	89.6	.3	.0	53.1	38.1	4.0	4.7	91%	.0	.0	40.6	59.4	w /60%	
2018/冬	0																			
2018/春	0																			
2018/夏	24%	1.76	4.0/ 9.0/wsw	8.9	10.6	.0	28.5	70.6	.9	.0	3.2	87.9	8.9	24%	.0	.0	100.0	.0	ssw/55%	
2018/秋	67%	.66	1.6/10.1/wsw	6.2	15.1	19.0	80.8	.1	.0	56.0	32.3	4.9	6.8	67%	.0	.0	34.5	65.5	wNW/41%	
2018/年	23%	.95	4.0/ 9.0/wsw	6.9	15.1	14.0	67.0	18.7	.3	41.2	24.6	26.8	7.4	23%	.0	.0	51.8	48.2	wNW/30%	

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表2.2.2 2018年高雄海域 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	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	96%	.86	1.5/ 5.4/NW	4.6	5.9	.6	99.4	.0	.0	100.0	.0	.0	.0	96%	.3	.8	12.6	86.3	NW /48%
2018/01	96%	.74	1.6/ 4.6/NNW	4.5	5.8	5.7	94.1	.1	.0	100.0	.0	.0	.0	96%	.1	2.7	15.8	81.4	NW /42%
2018/02	94%	.83	1.5/ 4.6/NNW	4.6	6.4	3.5	96.4	.2	.0	98.9	1.1	.0	.0	94%	.0	4.1	23.8	72.1	NW /40%
2018/03	93%	.72	1.5/ 4.6/NNW	4.7	6.1	18.0	81.7	.3	.0	99.6	.4	.0	.0	93%	.3	4.2	43.1	52.4	S /22%
2018/04	93%	.50	1.9/ 4.7/NW	4.2	5.6	62.7	36.4	.9	.0	100.0	.0	.0	.0	93%	.4	6.3	40.6	52.7	NW /23%
2018/05	97%	.37	.9/ 3.9/SSW	4.0	5.6	79.6	20.4	.0	.0	100.0	.0	.0	.0	97%	.4	6.0	60.8	32.8	S /25%
2018/06	98%	1.13	4.1/ 7.1/SW	5.6	7.6	17.5	53.9	26.9	1.7	60.3	39.7	.0	.0	98%	.0	.1	88.5	11.3	SW /48%
2018/07	99%	1.03	2.0/ 5.8/SW	5.6	7.2	3.7	84.1	12.2	.0	66.1	33.9	.0	.0	99%	.1	.0	97.3	2.6	SW /41%
2018/08	99%	1.55	4.3/ 6.9/SSW	6.2	8.2	.8	46.1	51.6	1.5	32.9	66.1	.9	.0	99%	.0	.0	97.7	2.3	SW /53%
2018/09	99%	.89	4.7/ 8.7/SSW	5.1	9.6	21.4	69.3	6.6	2.7	82.1	14.2	3.7	.0	99%	.6	.4	53.7	45.3	SW /25%
2018/10	98%	.71	2.1/ 5.1/NNW	4.5	6.1	17.5	81.4	1.1	.0	99.9	.1	.0	.0	98%	.3	.4	4.1	95.2	NW /52%
2018/11	99%	.71	1.6/ 6.2/SW	4.5	6.2	11.3	88.2	.4	.0	99.3	.7	.0	.0	99%	2.0	.6	21.1	76.3	WNW/29%
2018/冬	96%	.81	1.6/ 4.6/NNW	4.6	6.4	3.2	96.7	.1	.0	99.7	.3	.0	.0	96%	.1	2.5	17.2	80.2	NW /44%
2018/春	94%	.53	1.9/ 4.7/NW	4.3	6.1	53.7	45.9	.4	.0	99.9	.1	.0	.0	94%	.4	5.5	48.4	45.7	S /23%
2018/夏	99%	1.24	4.3/ 6.9/SSW	5.8	8.2	7.2	61.5	30.3	1.1	53.0	46.7	.3	.0	99%	.0	.0	94.6	5.3	SW /47%
2018/秋	99%	.77	4.7/ 8.7/SSW	4.7	9.6	16.8	79.7	2.7	.9	93.8	5.0	1.2	.0	99%	.9	.5	26.1	72.5	NW /33%
2018/年	97%	.84	4.7/ 8.7/SSW	4.9	9.6	20.1	70.8	8.6	.5	86.2	13.4	.4	.0	97%	.4	2.1	47.0	50.5	NW /24%

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2.3 2018 年高雄海域**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 Kao-Hsiung Harbor of KHX0 at 2018

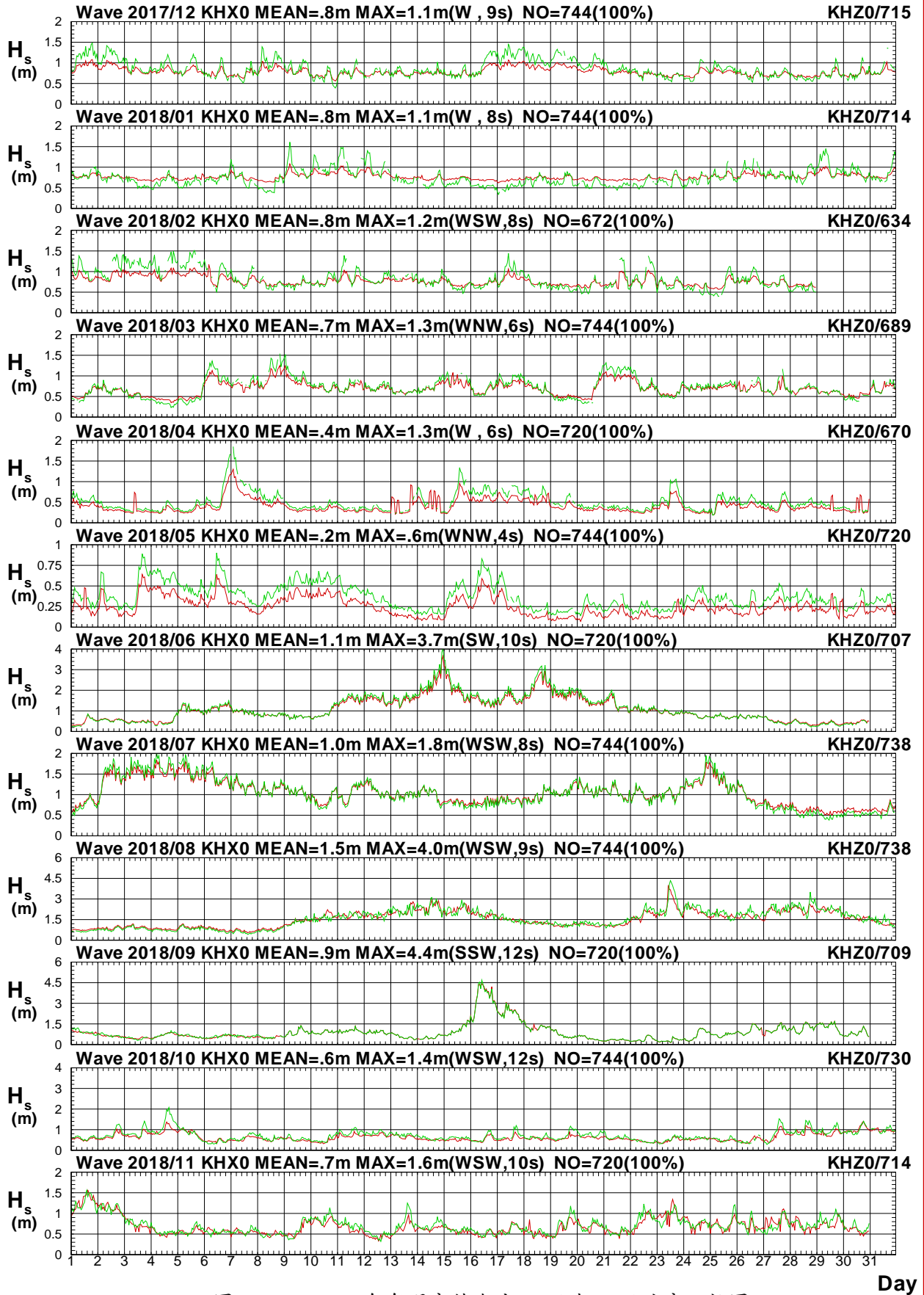


圖2.3.1a 2018年每月高雄海域 X 站與 Z 站波高比較圖

V17CKHX0.1HA V17CKHZ0.1H0 V181KHX0.1HA V181KHZ0.1H0 V182KHX0.1HA V182KHZ0.1H0
 V183KHX0.1HA V183KHZ0.1H0 V184KHX0.1HA V184KHZ0.1H0 V185KHX0.1HA V185KHZ0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHX0 at 2018

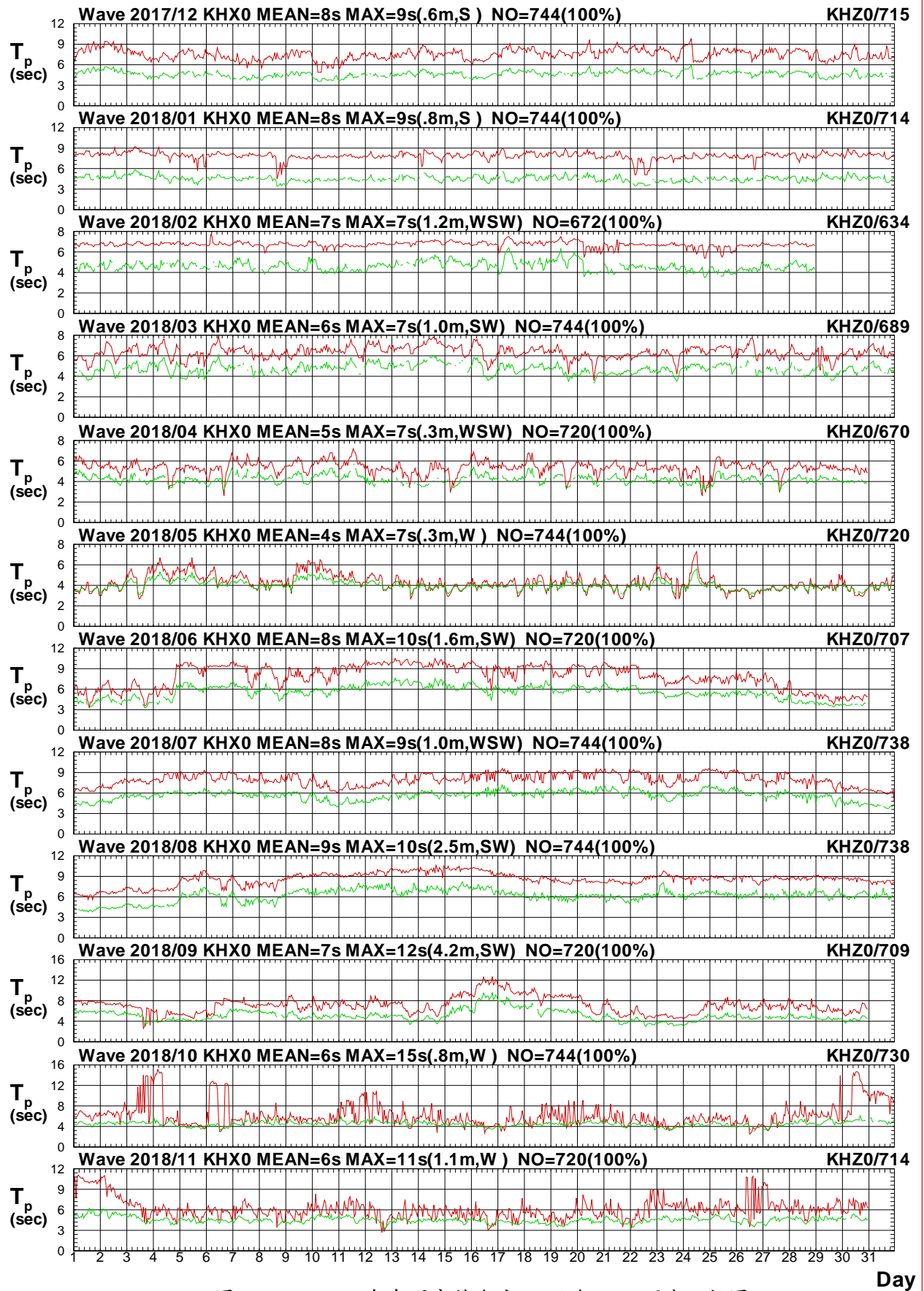


圖2.3.1b 2018年每月高雄海域 X 站與 Z 站週期比較圖

V17CKHX0.1HA V17CKHZ0.1H0 V181KHX0.1HA V181KHZ0.1H0 V182KHX0.1HA V182KHZ0.1H0
 V183KHX0.1HA V183KHZ0.1H0 V184KHX0.1HA V184KHZ0.1H0 V185KHX0.1HA V185KHZ0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHX0 at 2018

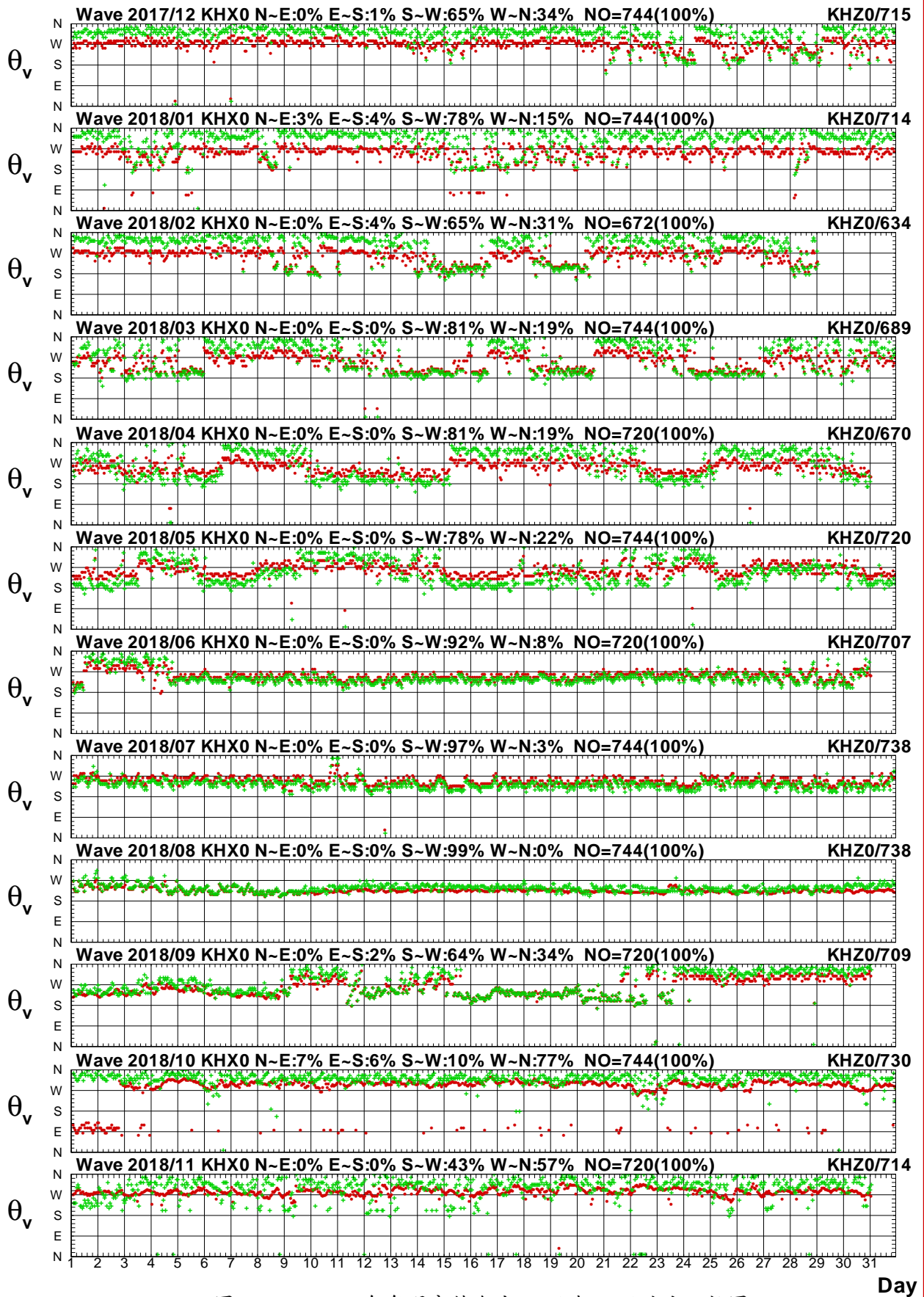


圖2.3.1c 2018年每月高雄海域 X 站與 Z 站波向比較圖

V17CKHX0.1HA V17CKHZ0.1H0 V181KHX0.1HA V181KHZ0.1H0 V182KHX0.1HA V182KHZ0.1H0
 V183KHX0.1HA V183KHZ0.1H0 V184KHX0.1HA V184KHZ0.1H0 V185KHX0.1HA V185KHZ0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHX0 at 2018

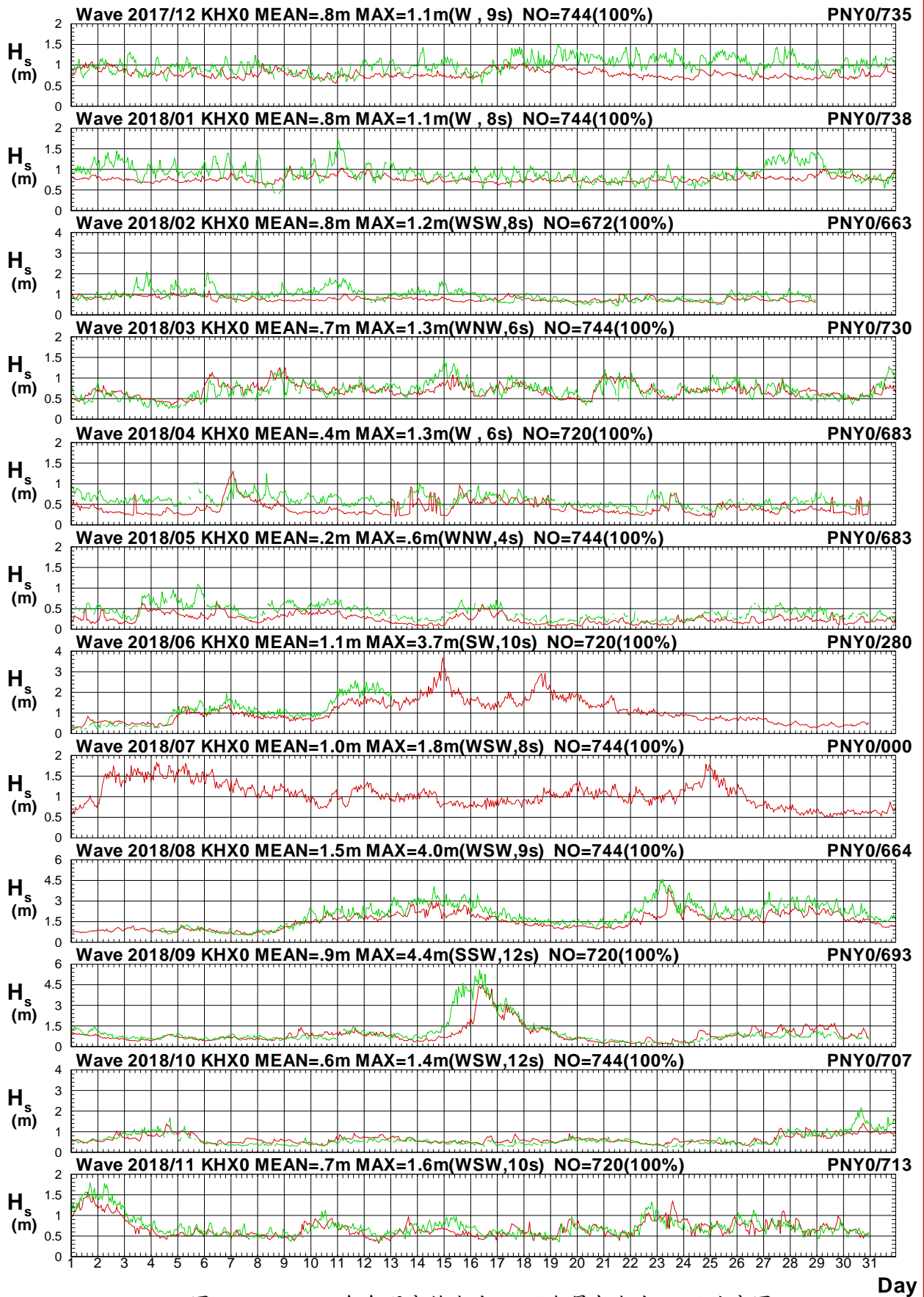


圖2.3.2a 2018年每月高雄海域 X 站與屏東海域 Y 站波高圖

V17CKHX0.1HA V17CPNY0.1H0 V181KHX0.1HA V181PNY0.1H0 V182KHX0.1HA V182PNY0.1H0
 V183KHX0.1HA V183PNY0.1H0 V184KHX0.1HA V184PNY0.1H0 V185KHX0.1HA V185PNY0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHX0 at 2018

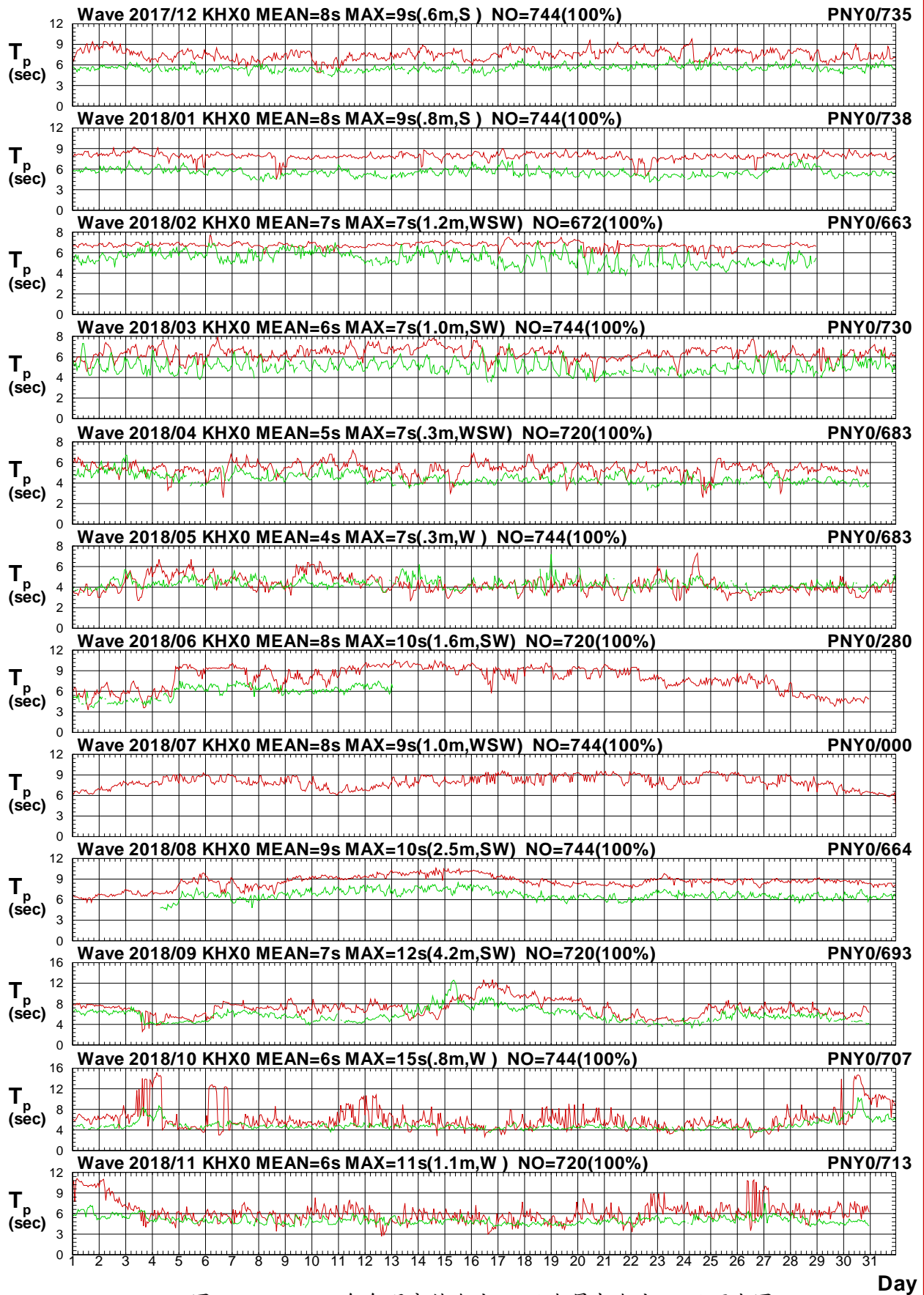


圖2.3.2b 2018年每月高雄海域 X 站與屏東海域 Y 站週期圖

V17CKHX0.1HA V17CPNY0.1H0 V181KHX0.1HA V181PNY0.1H0 V182KHX0.1HA V182PNY0.1H0
 V183KHX0.1HA V183PNY0.1H0 V184KHX0.1HA V184PNY0.1H0 V185KHX0.1HA V185PNY0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHX0 at 2018

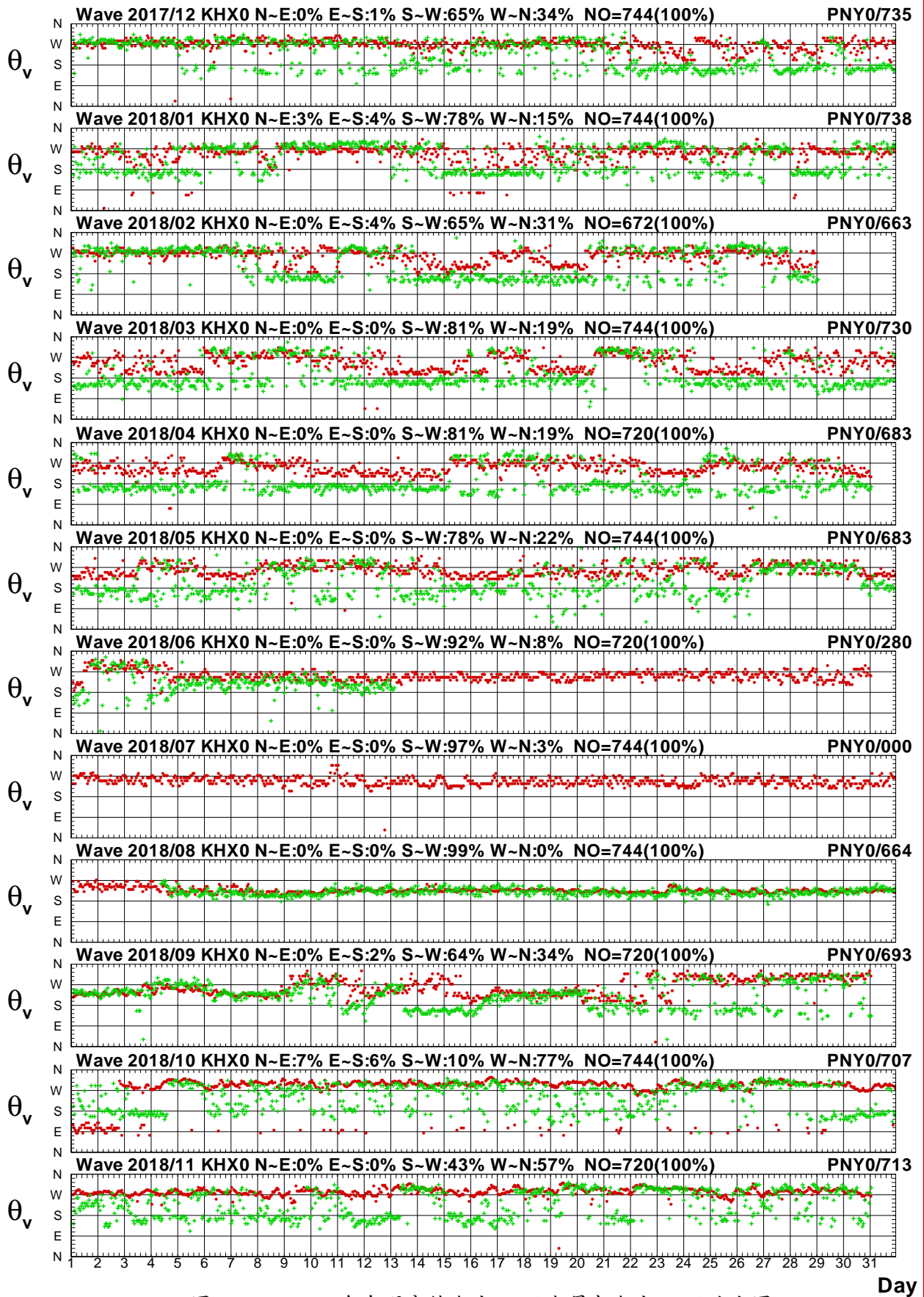


圖2.3.2c 2018年每月高雄海域 X 站與屏東海域 Y 站波向圖

V17CKHX0.1HA V17CPNY0.1H0 V181KHX0.1HA V181PNY0.1H0 V182KHX0.1HA V182PNY0.1H0
 V183KHX0.1HA V183PNY0.1H0 V184KHX0.1HA V184PNY0.1H0 V185KHX0.1HA V185PNY0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHX0 at 2018

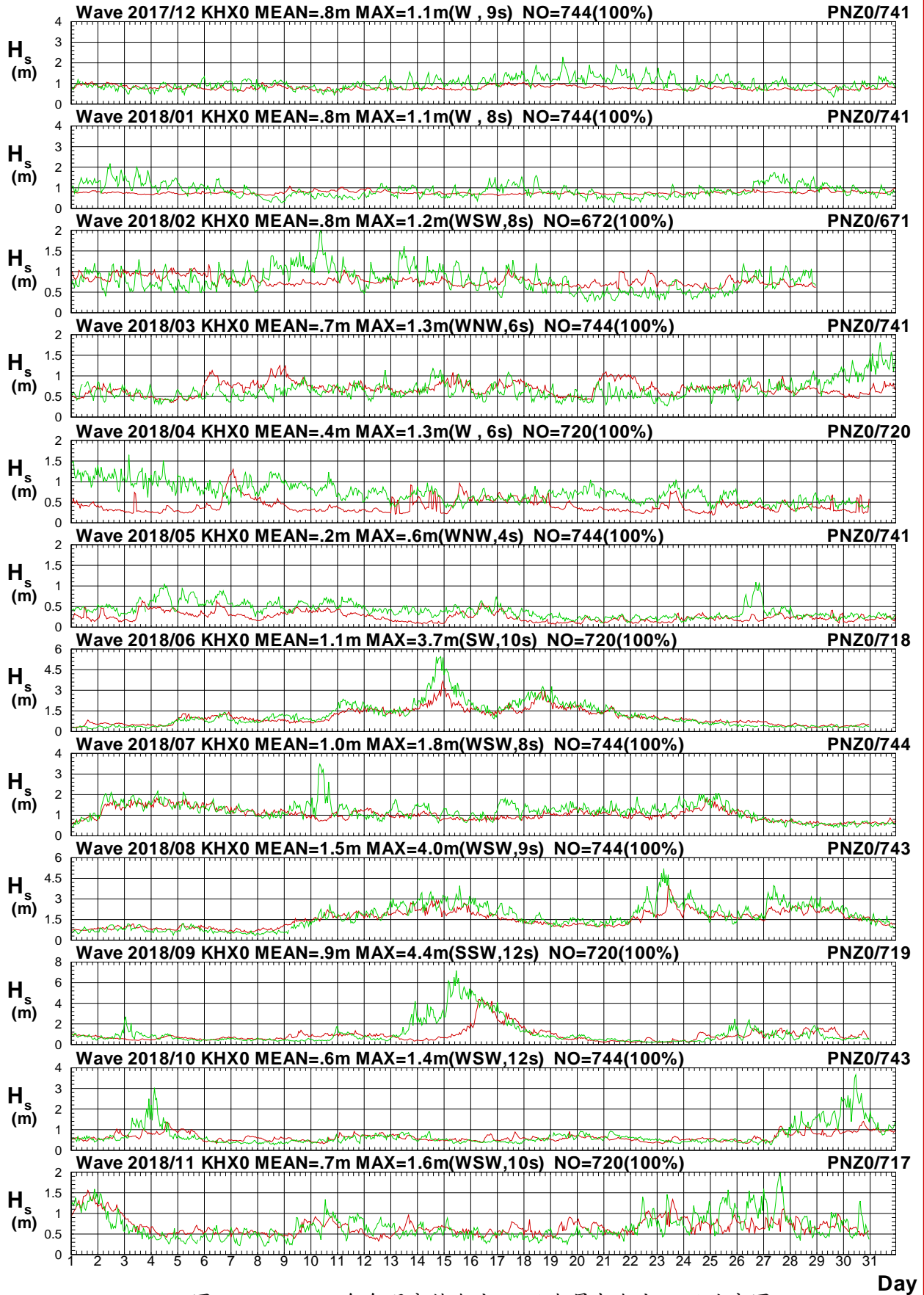


圖2.3.3a 2018年每月高雄海域 X 站與屏東海域 Z 站波高圖

V17CKHX0.1HA V17CPNZ0.1H0 V181KHX0.1HA V181PNZ0.1H0 V182KHX0.1HA V182PNZ0.1H0
 V183KHX0.1HA V183PNZ0.1H0 V184KHX0.1HA V184PNZ0.1H0 V185KHX0.1HA V185PNZ0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHX0 at 2018

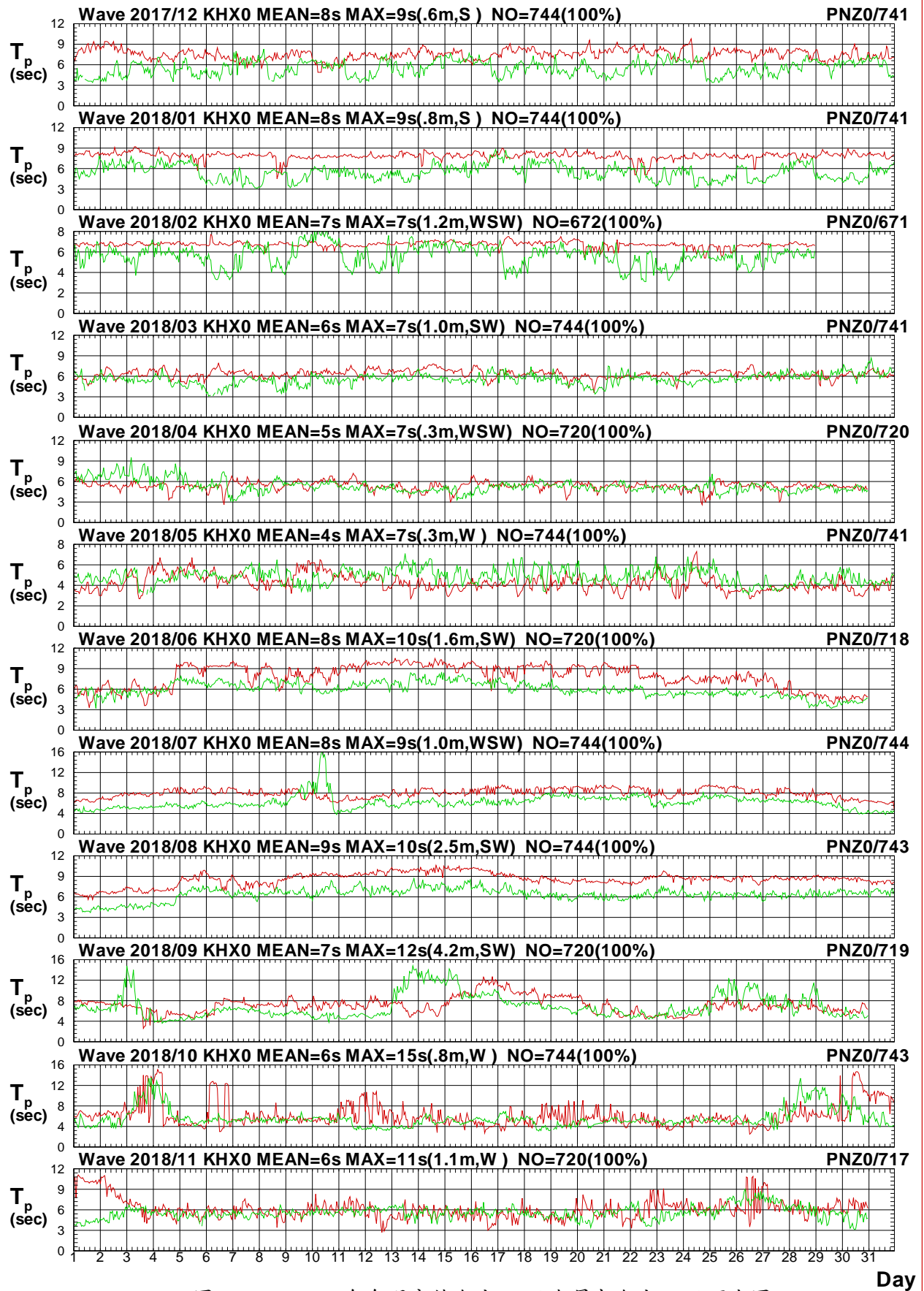


圖2.3.3b 2018年每月高雄海域 X 站與屏東海域 Z 站週期圖

V17CKHX0.1HA V17CPNZ0.1H0 V181KHX0.1HA V181PNZ0.1H0 V182KHX0.1HA V182PNZ0.1H0
 V183KHX0.1HA V183PNZ0.1H0 V184KHX0.1HA V184PNZ0.1H0 V185KHX0.1HA V185PNZ0.1H0

Institute of Harbor & Marine Technology

Wave Direction in Kao-Hsiung Harbor of KHX0 at 2018

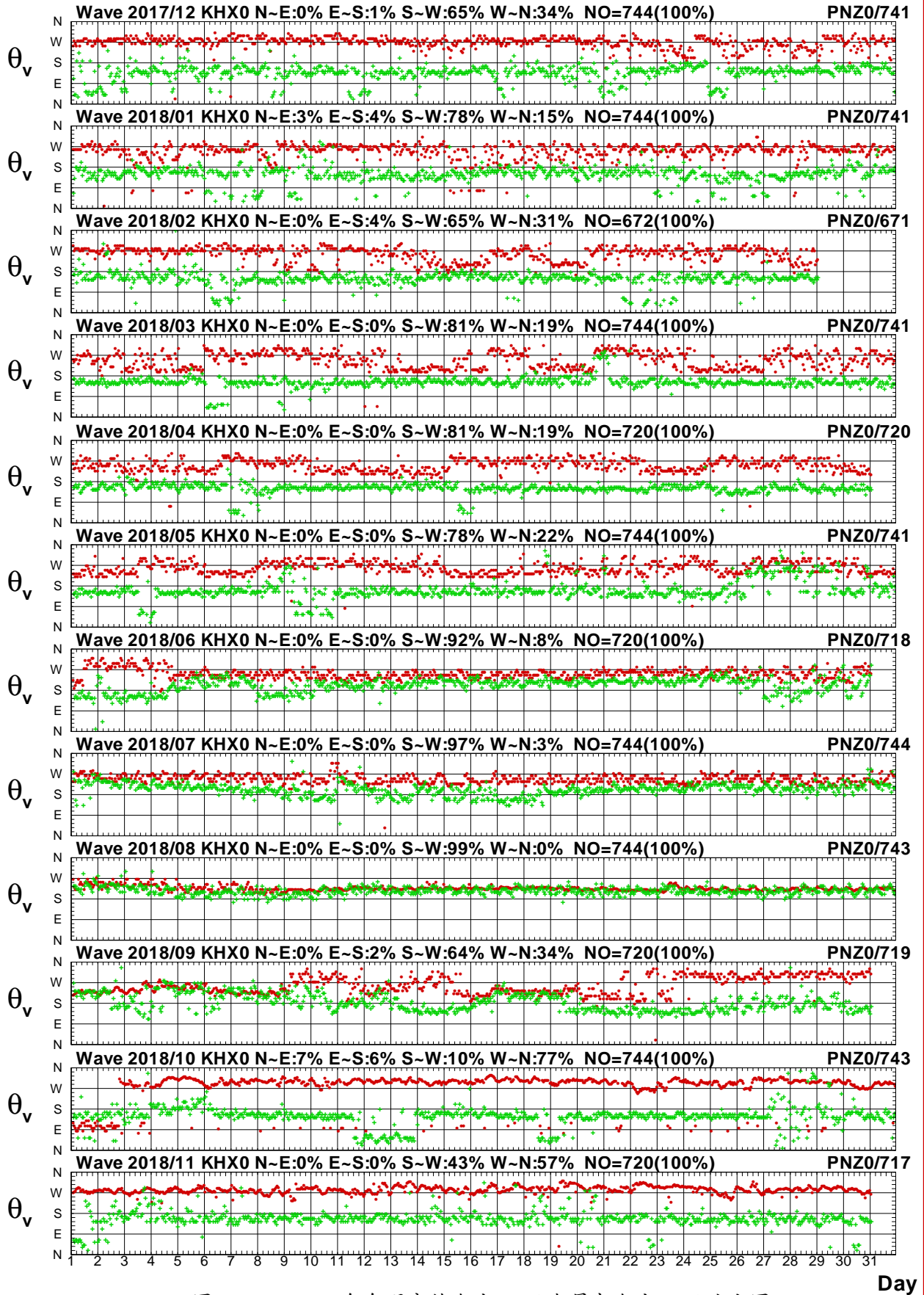


圖2.3.3c 2018年每月高雄海域 X 站與屏東海域 Z 站波向圖

V17CKHX0.1HA V17CPNZ0.1H0 V181KHX0.1HA V181PNZ0.1H0 V182KHX0.1HA V182PNZ0.1H0
 V183KHX0.1HA V183PNZ0.1H0 V184KHX0.1HA V184PNZ0.1H0 V185KHX0.1HA V185PNZ0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHX0 at 2018

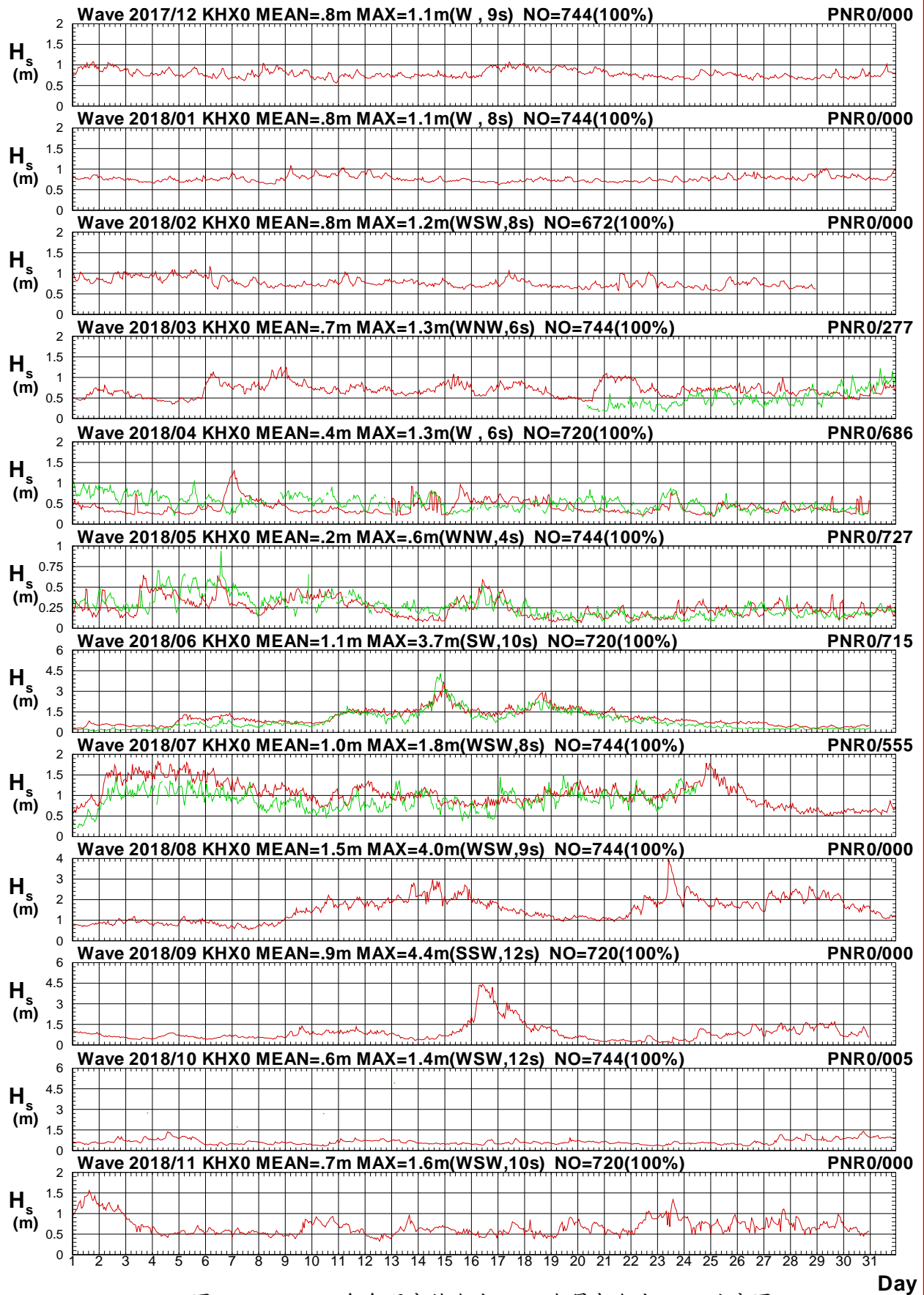


圖2.3.4a 2018年每月高雄海域 X 站與屏東海域 R 站波高圖

V17CKHX0.1HA V17CPNR0.1H0 V181KHX0.1HA V181PNR0.1H0 V182KHX0.1HA V182PNR0.1H0
 V183KHX0.1HA V183PNR0.1H0 V184KHX0.1HA V184PNR0.1H0 V185KHX0.1HA V185PNR0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHX0 at 2018

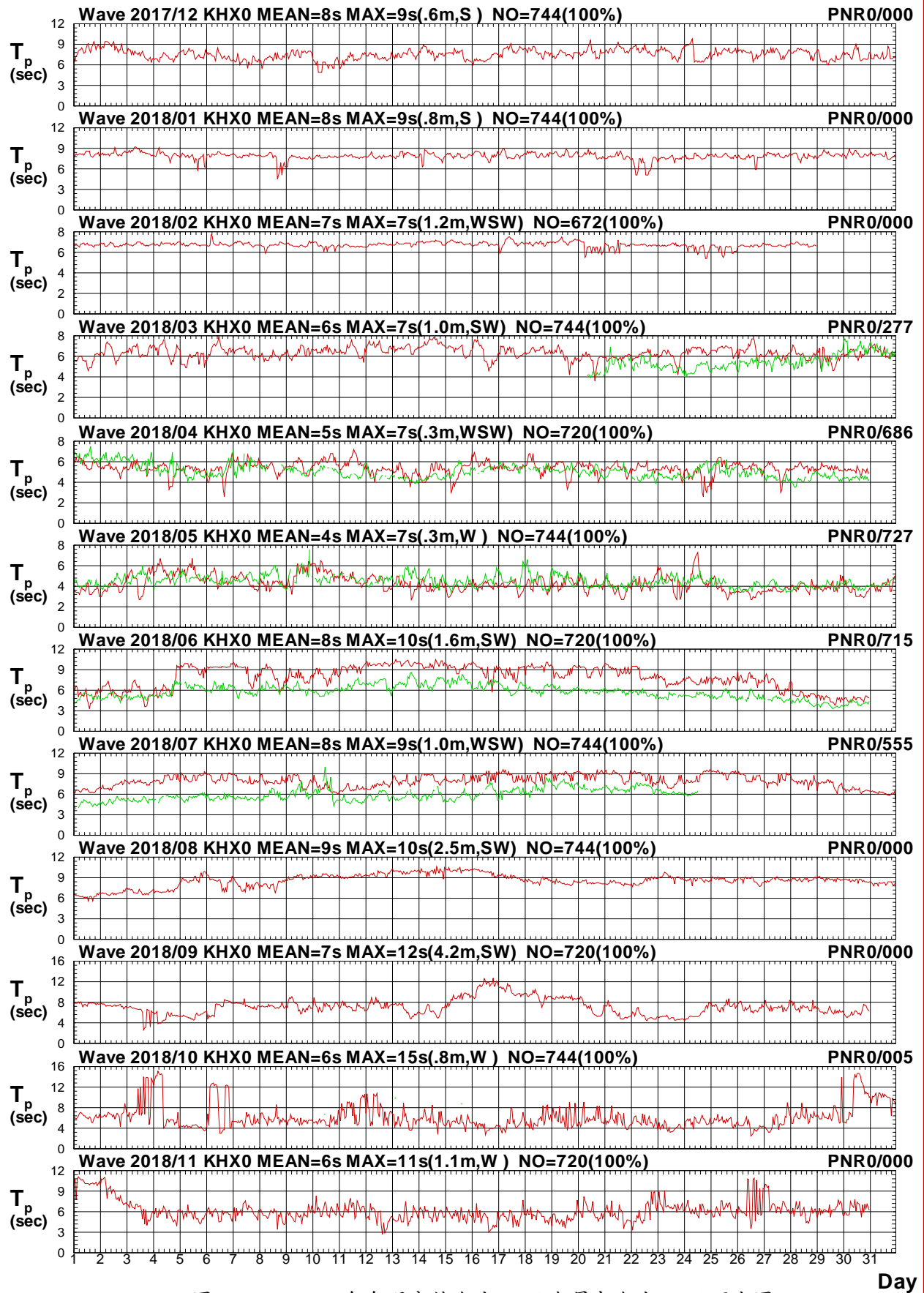


圖2.3.4b 2018年每月高雄海域 X 站與屏東海域 R 站週期圖

V17CKHX0.1HA V17CPNR0.1H0 V181KHX0.1HA V181PNR0.1H0 V182KHX0.1HA V182PNR0.1H0
 V183KHX0.1HA V183PNR0.1H0 V184KHX0.1HA V184PNR0.1H0 V185KHX0.1HA V185PNR0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHX0 at 2018

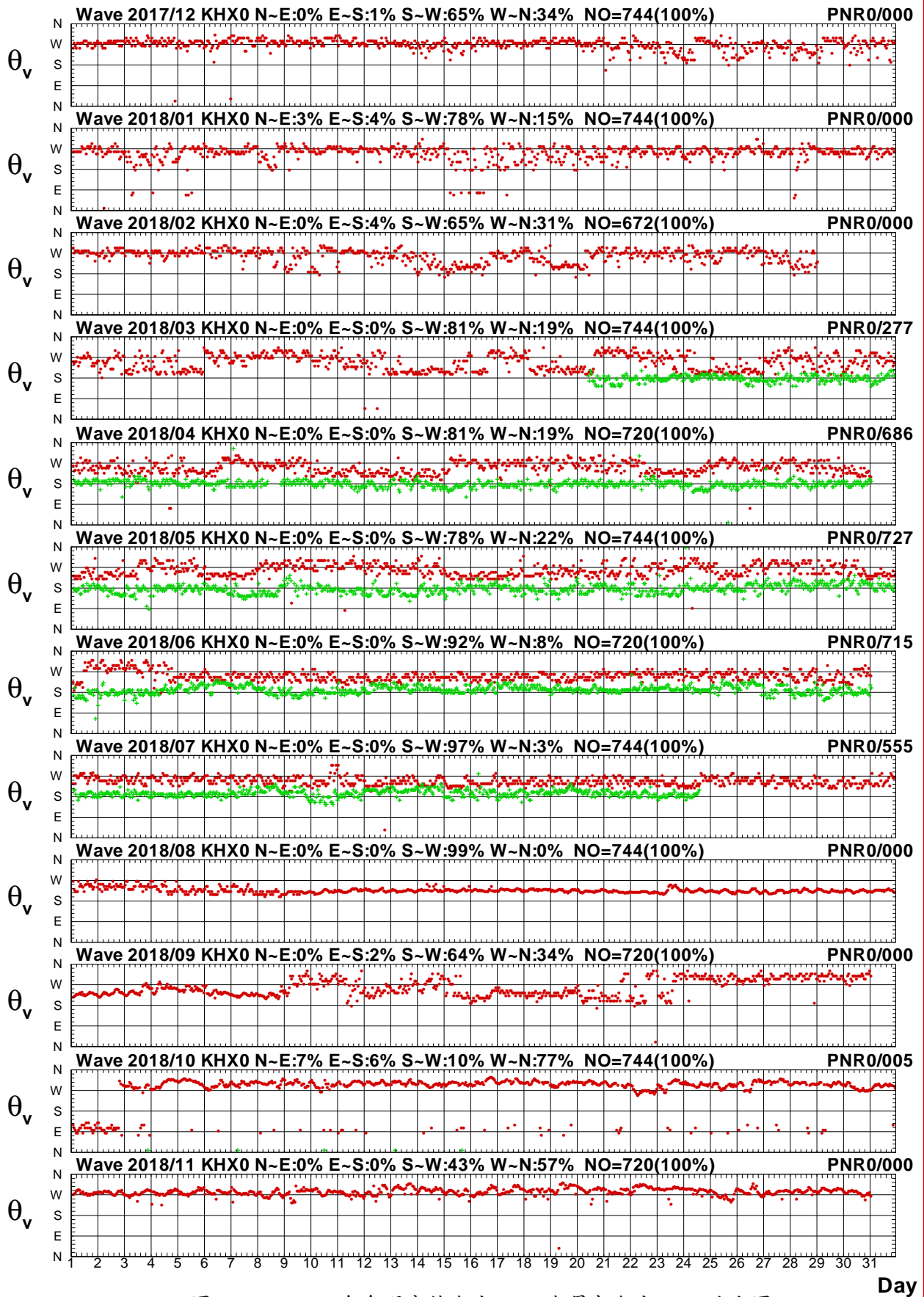


圖2.3.4c 2018年每月高雄海域 X 站與屏東海域 R 站波向圖

V17CKHX0.1HA V17CPNR0.1H0 V181KHX0.1HA V181PNR0.1H0 V182KHX0.1HA V182PNR0.1H0
 V183KHX0.1HA V183PNR0.1H0 V184KHX0.1HA V184PNR0.1H0 V185KHX0.1HA V185PNR0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHX0 at 2018

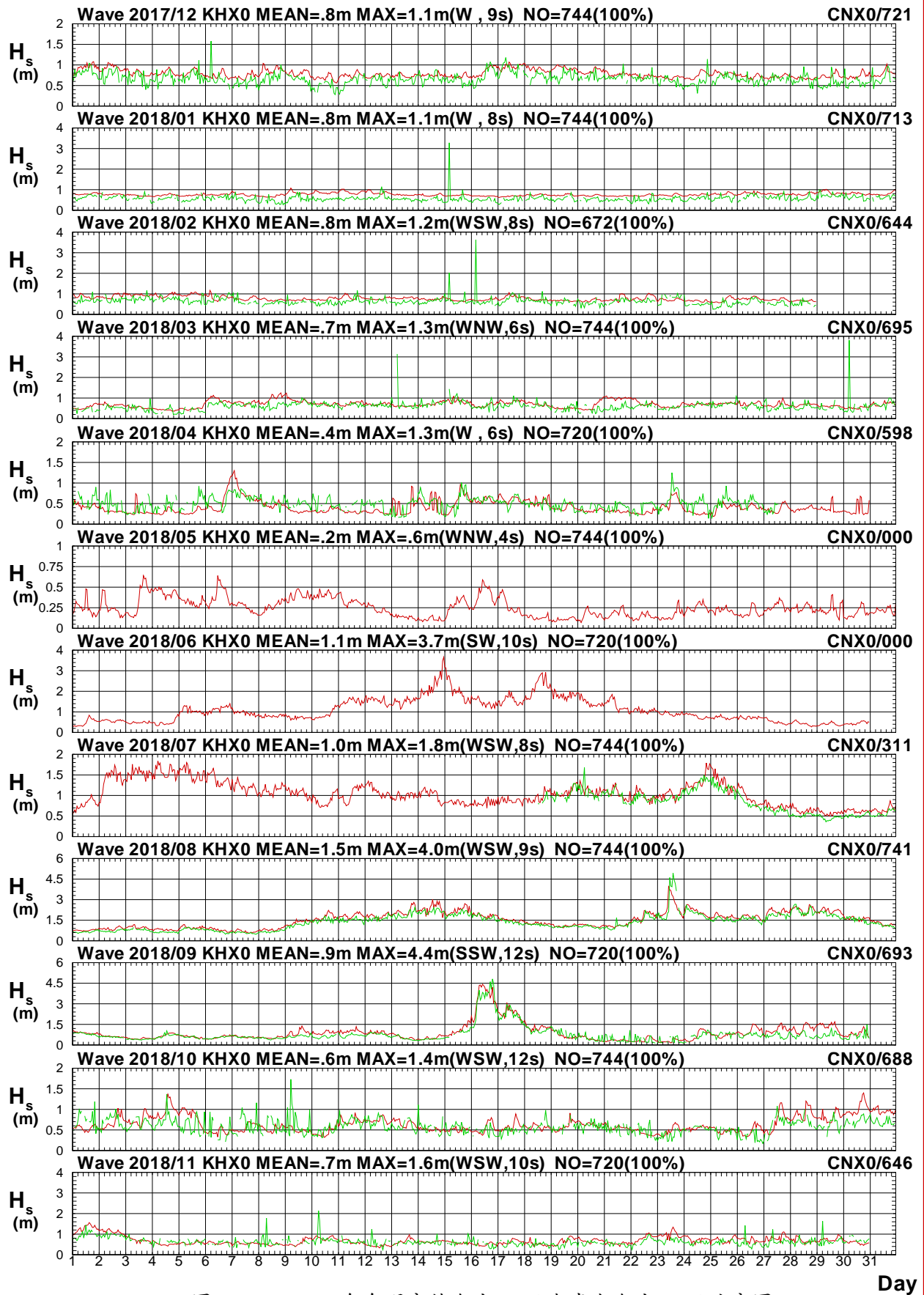


圖2.3.5a 2018年每月高雄海域 X 站與嘉南海域 X 站波高圖

V17CKHX0.1HA V17CCNX0.1H0 V181KHX0.1HA V181CNX0.1H0 V182KHX0.1HA V182CNX0.1H0
 V183KHX0.1HA V183CNX0.1H0 V184KHX0.1HA V184CNX0.1H0 V185KHX0.1HA V185CNX0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHX0 at 2018

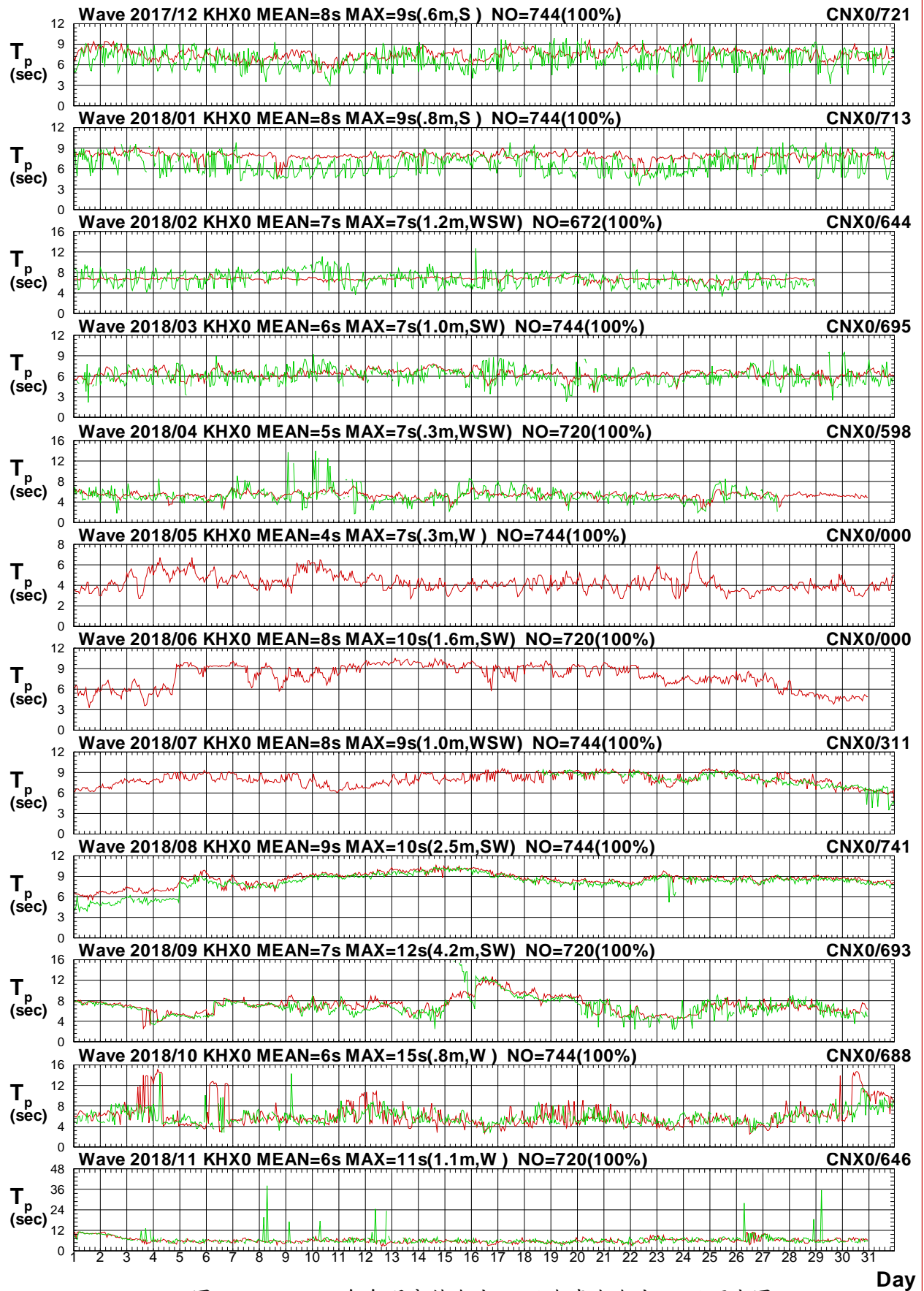


圖2.3.5b 2018年每月高雄海域 X 站與嘉南海域 X 站週期圖

V17CKHX0.1HA V17CCNX0.1H0 V181KHX0.1HA V181CNX0.1H0 V182KHX0.1HA V182CNX0.1H0
 V183KHX0.1HA V183CNX0.1H0 V184KHX0.1HA V184CNX0.1H0 V185KHX0.1HA V185CNX0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHX0 at 2018

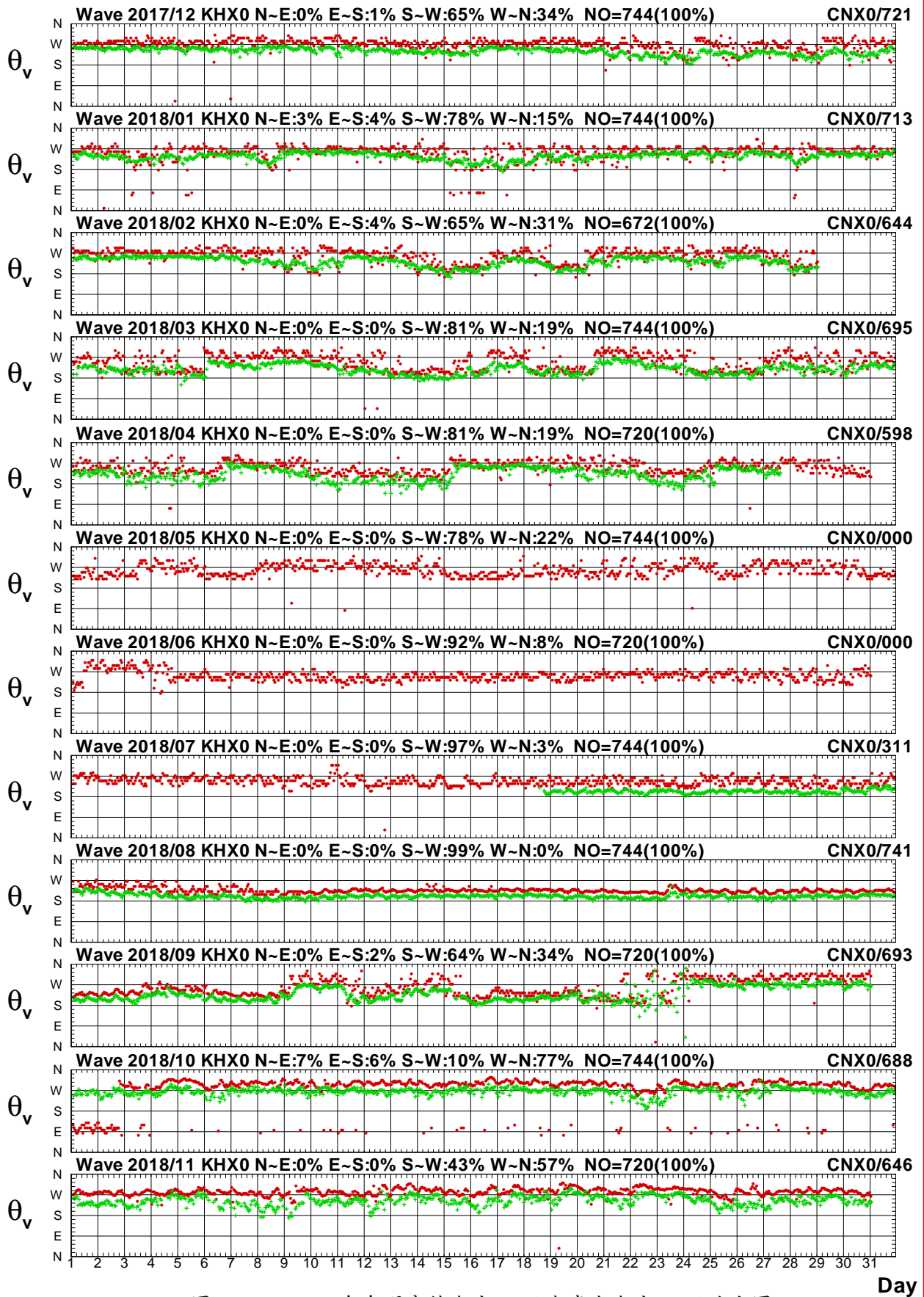


圖2.3.5c 2018年每月高雄海域 X 站與嘉南海域 X 站波向圖

V17CKHX0.1HA V17CCNX0.1H0 V181KHX0.1HA V181CNX0.1H0 V182KHX0.1HA V182CNX0.1H0
 V183KHX0.1HA V183CNX0.1H0 V184KHX0.1HA V184CNX0.1H0 V185KHX0.1HA V185CNX0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHX0 at 2018

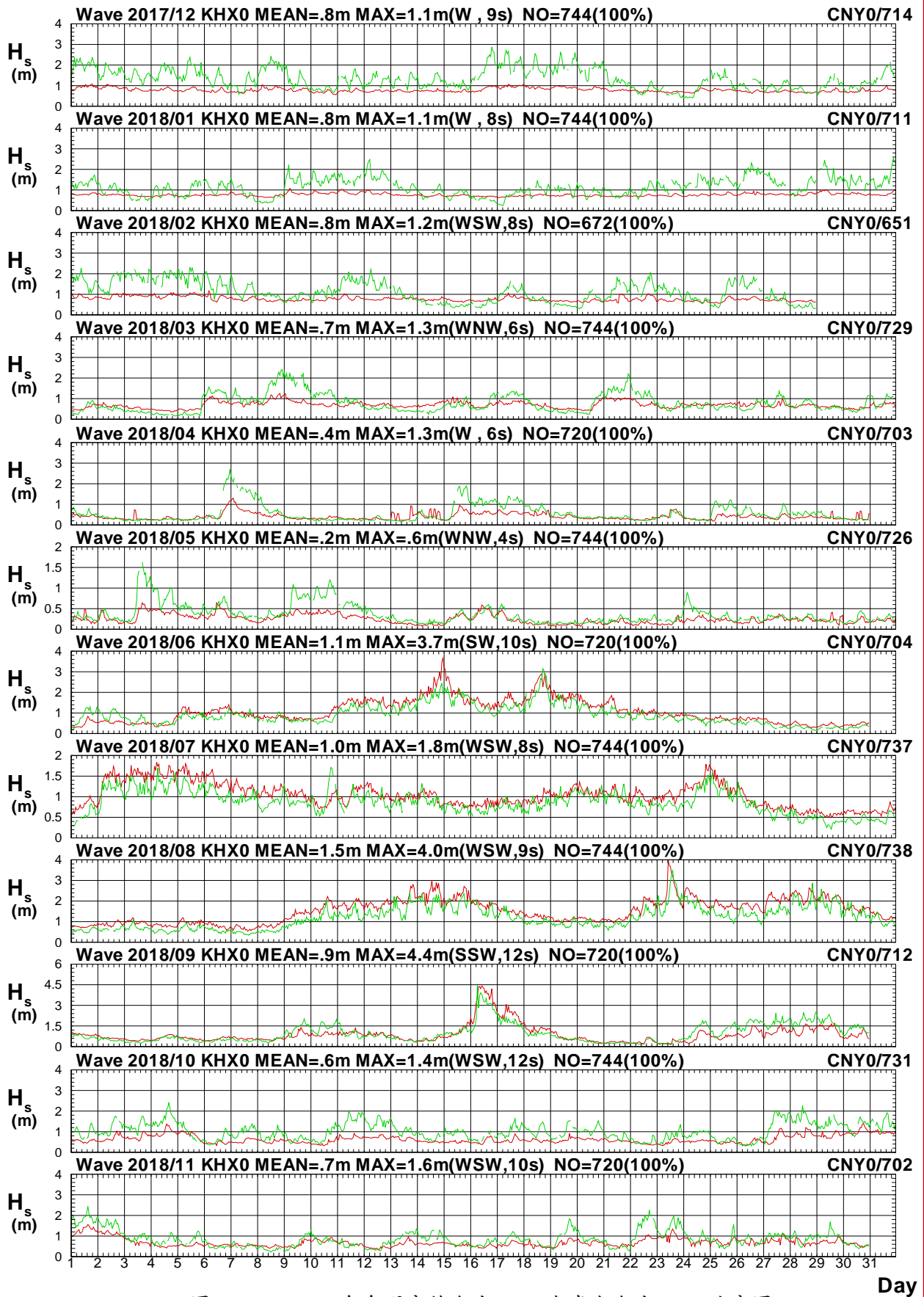


圖2.3.6a 2018年每月高雄海域 X 站與嘉南海域 Y 站波高圖

V17CKHX0.1HA V17CCNY0.1H0 V181KHX0.1HA V181CNY0.1H0 V182KHX0.1HA V182CNY0.1H0
 V183KHX0.1HA V183CNY0.1H0 V184KHX0.1HA V184CNY0.1H0 V185KHX0.1HA V185CNY0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHX0 at 2018

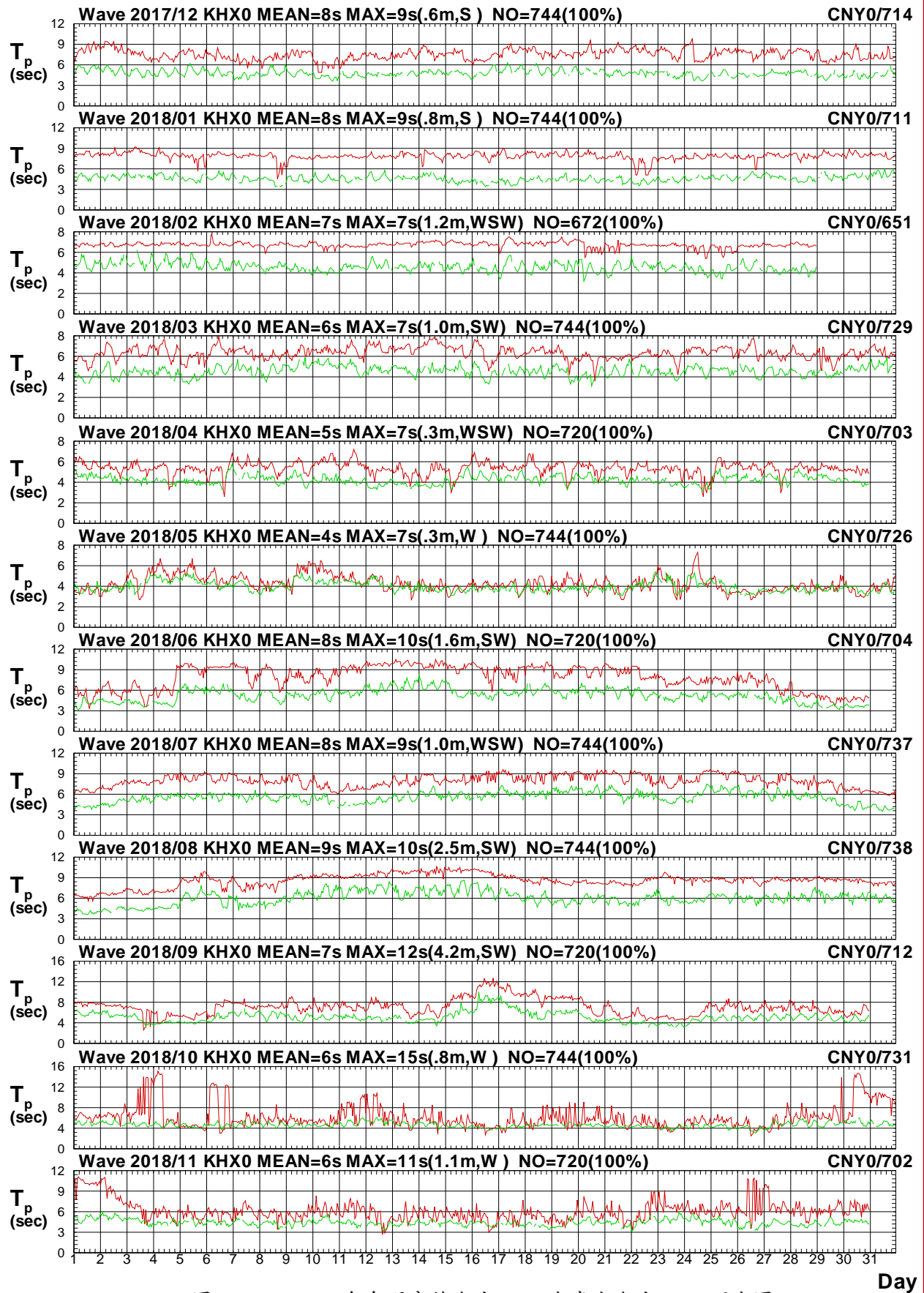


圖2.3.6b 2018年每月高雄海域 X 站與嘉南海域 Y 站週期圖

V17CKHX0.1HA V17CCNY0.1H0 V181KHX0.1HA V181CNY0.1H0 V182KHX0.1HA V182CNY0.1H0
 V183KHX0.1HA V183CNY0.1H0 V184KHX0.1HA V184CNY0.1H0 V185KHX0.1HA V185CNY0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHX0 at 2018

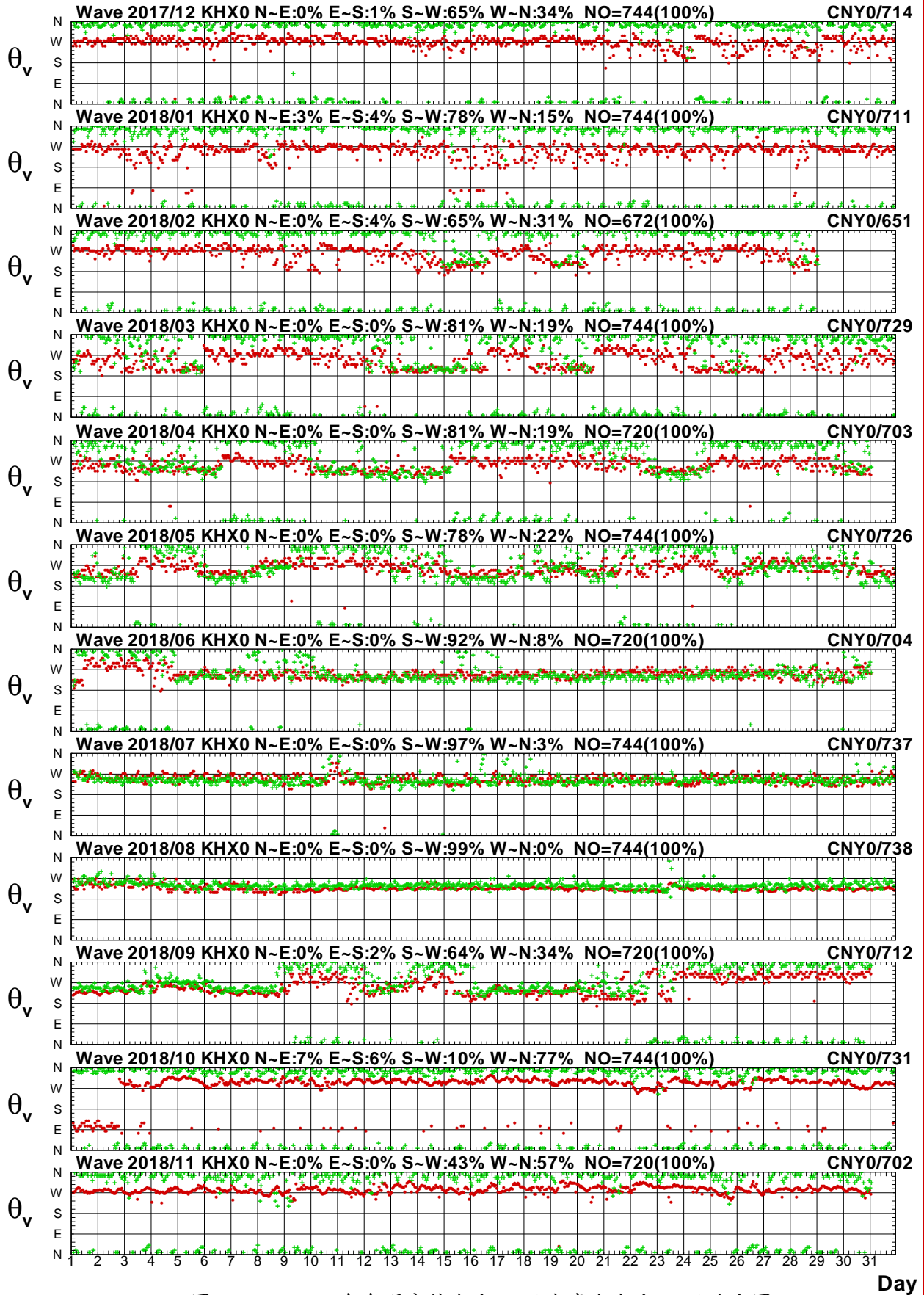


圖2.3.6c 2018年每月高雄海域 X 站與嘉南海域 Y 站波向圖

V17CKHX0.1HA V17CCNY0.1H0 V181KHX0.1HA V181CNY0.1H0 V182KHX0.1HA V182CNY0.1H0
 V183KHX0.1HA V183CNY0.1H0 V184KHX0.1HA V184CNY0.1H0 V185KHX0.1HA V185CNY0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHX0 at 2018

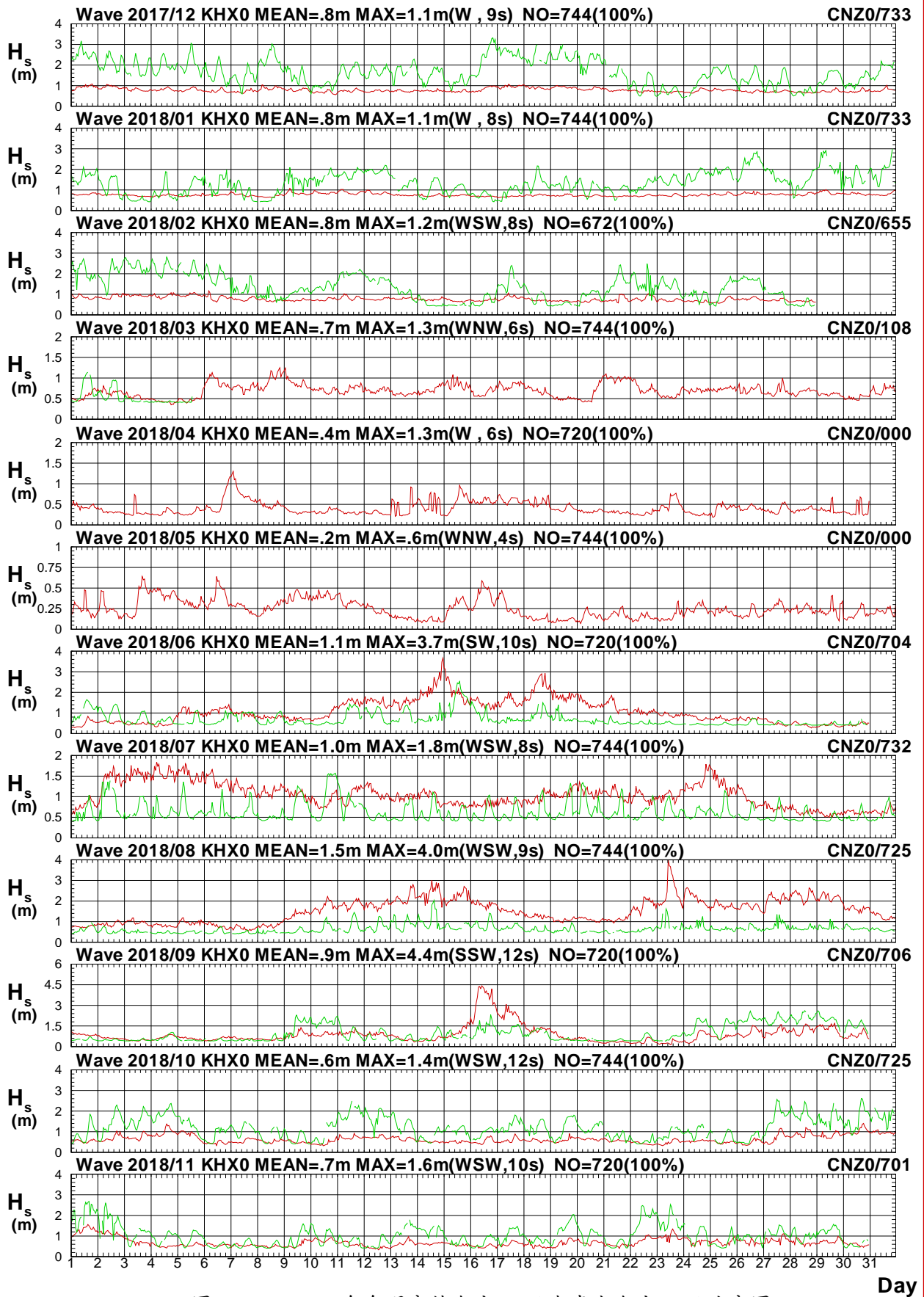


圖2.3.7a 2018年每月高雄海域 X 站與嘉南海域 Z 站波高圖

V17CKHX0.1HA V17CCNZ0.1H0 V181KHX0.1HA V181CNZ0.1H0 V182KHX0.1HA V182CNZ0.1H0
 V183KHX0.1HA V183CNZ0.1H0 V184KHX0.1HA V184CNZ0.1H0 V185KHX0.1HA V185CNZ0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHX0 at 2018

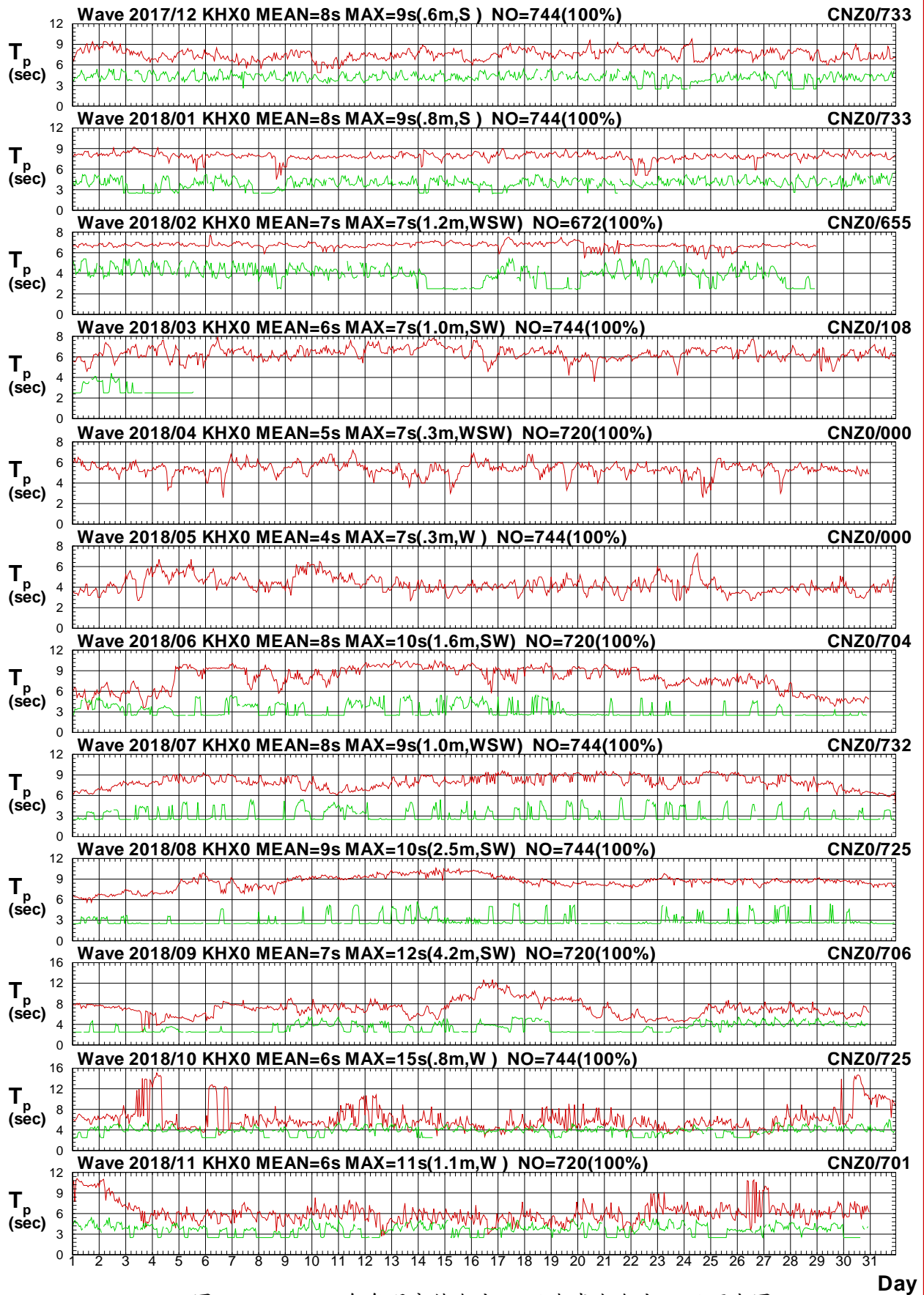


圖2.3.7b 2018年每月高雄海域 X 站與嘉南海域 Z 站週期圖

V17CKHX0.1HA V17CCNZ0.1H0 V181KHX0.1HA V181CNZ0.1H0 V182KHX0.1HA V182CNZ0.1H0
 V183KHX0.1HA V183CNZ0.1H0 V184KHX0.1HA V184CNZ0.1H0 V185KHX0.1HA V185CNZ0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHX0 at 2018

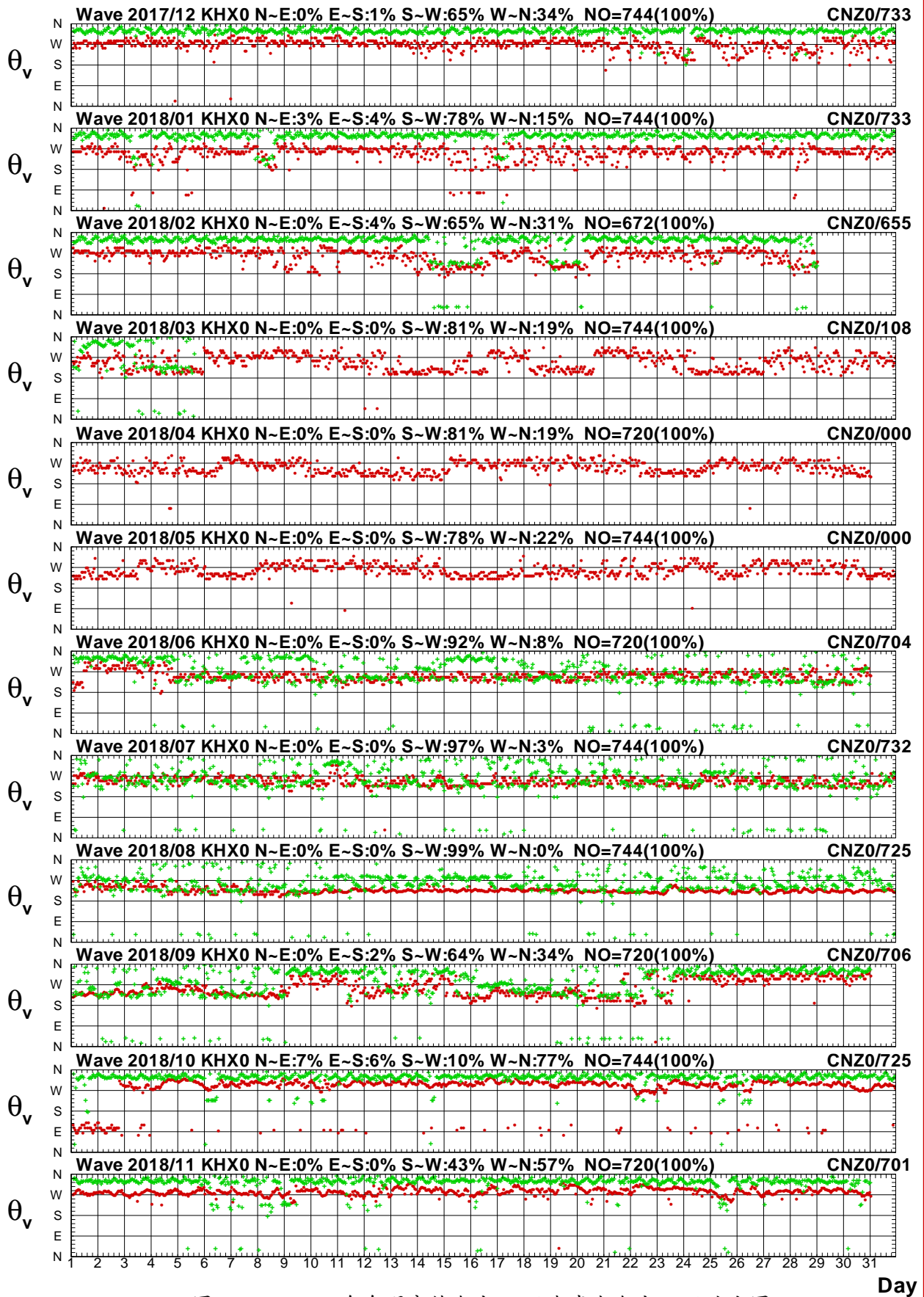


圖2.3.7c 2018年每月高雄海域 X 站與嘉南海域 Z 站波向圖

V17CKHX0.1HA V17CCNZ0.1H0 V181KHX0.1HA V181CNZ0.1H0 V182KHX0.1HA V182CNZ0.1H0
 V183KHX0.1HA V183CNZ0.1H0 V184KHX0.1HA V184CNZ0.1H0 V185KHX0.1HA V185CNZ0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHX0 at 2018

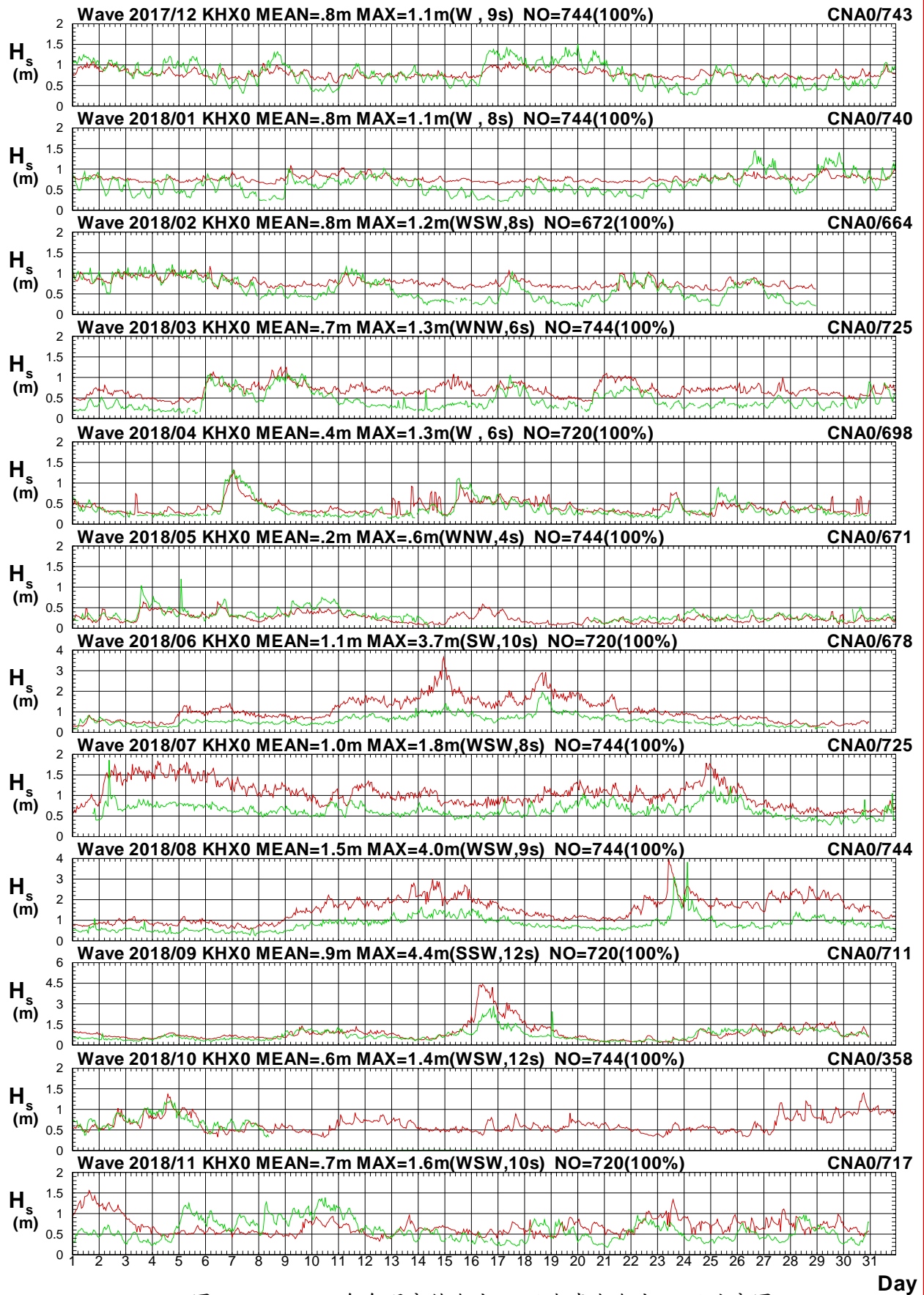


圖2.3.8a 2018年每月高雄海域 X 站與嘉南海域 A 站波高圖

V17CKHX0.1HA V17CCNA0.1H0 V181KHX0.1HA V181CNA0.1H0 V182KHX0.1HA V182CNA0.1H0
 V183KHX0.1HA V183CNA0.1H0 V184KHX0.1HA V184CNA0.1H0 V185KHX0.1HA V185CNA0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHX0 at 2018

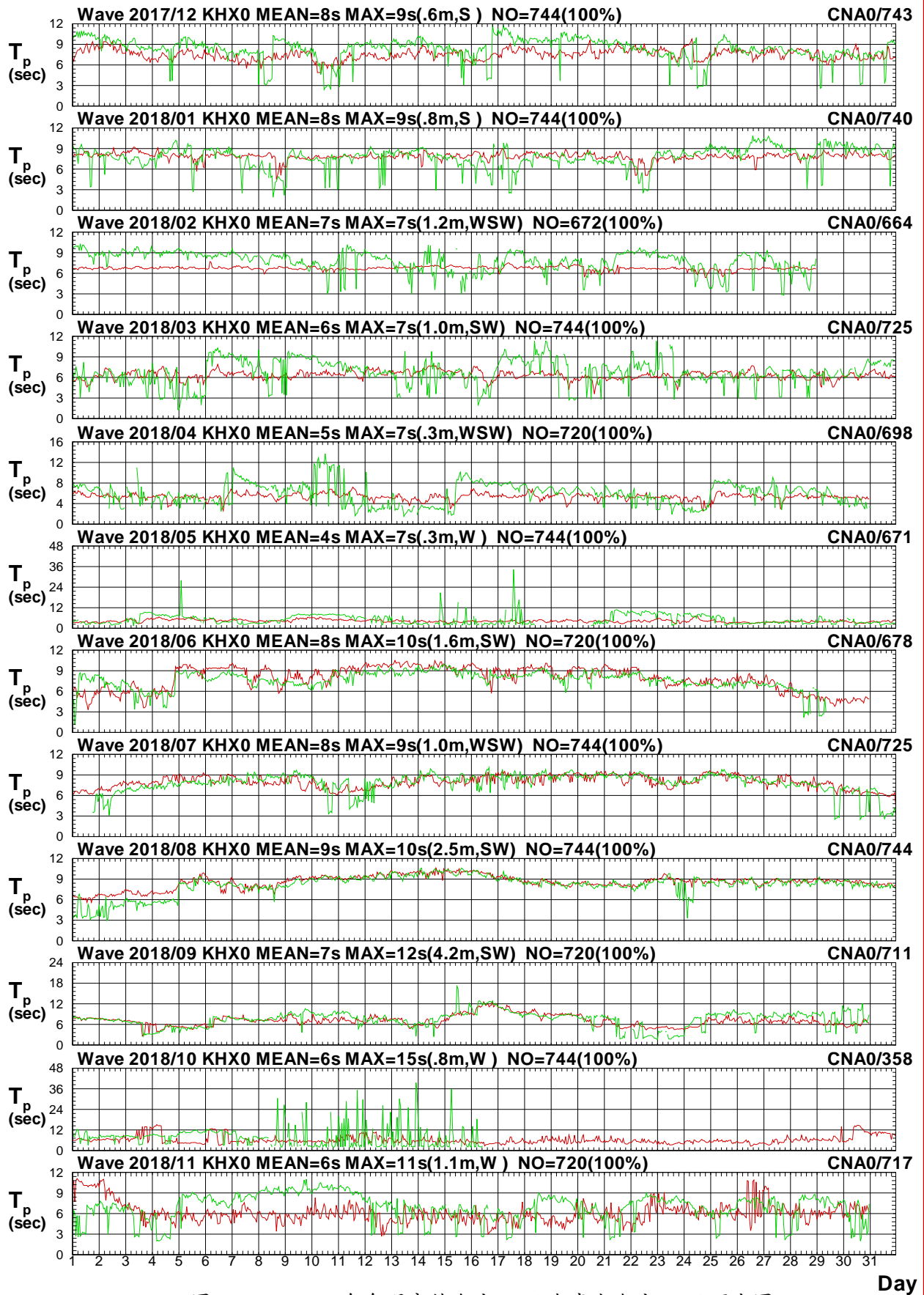


圖2.3.8b 2018年每月高雄海域 X 站與嘉南海域 A 站週期圖

V17CKHX0.1HA V17CCNA0.1H0 V181KHX0.1HA V181CNA0.1H0 V182KHX0.1HA V182CNA0.1H0
 V183KHX0.1HA V183CNA0.1H0 V184KHX0.1HA V184CNA0.1H0 V185KHX0.1HA V185CNA0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHX0 at 2018

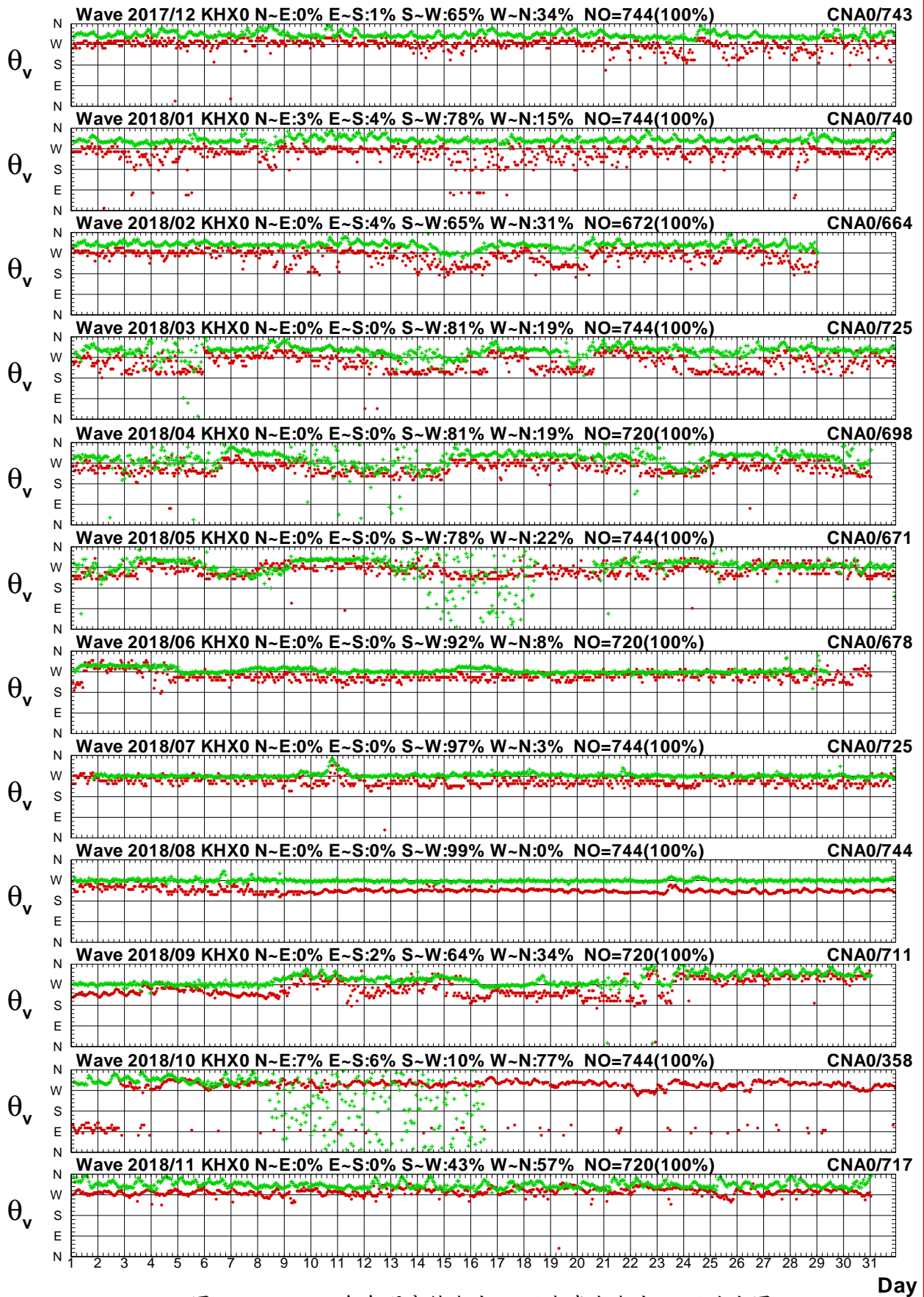


圖2.3.8c 2018年每月高雄海域 X 站與嘉南海域 A 站波向圖

V17CKHX0.1HA V17CCNA0.1H0 V181KHX0.1HA V181CNA0.1H0 V182KHX0.1HA V182CNA0.1H0
 V183KHX0.1HA V183CNA0.1H0 V184KHX0.1HA V184CNA0.1H0 V185KHX0.1HA V185CNA0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHX0 at 2018

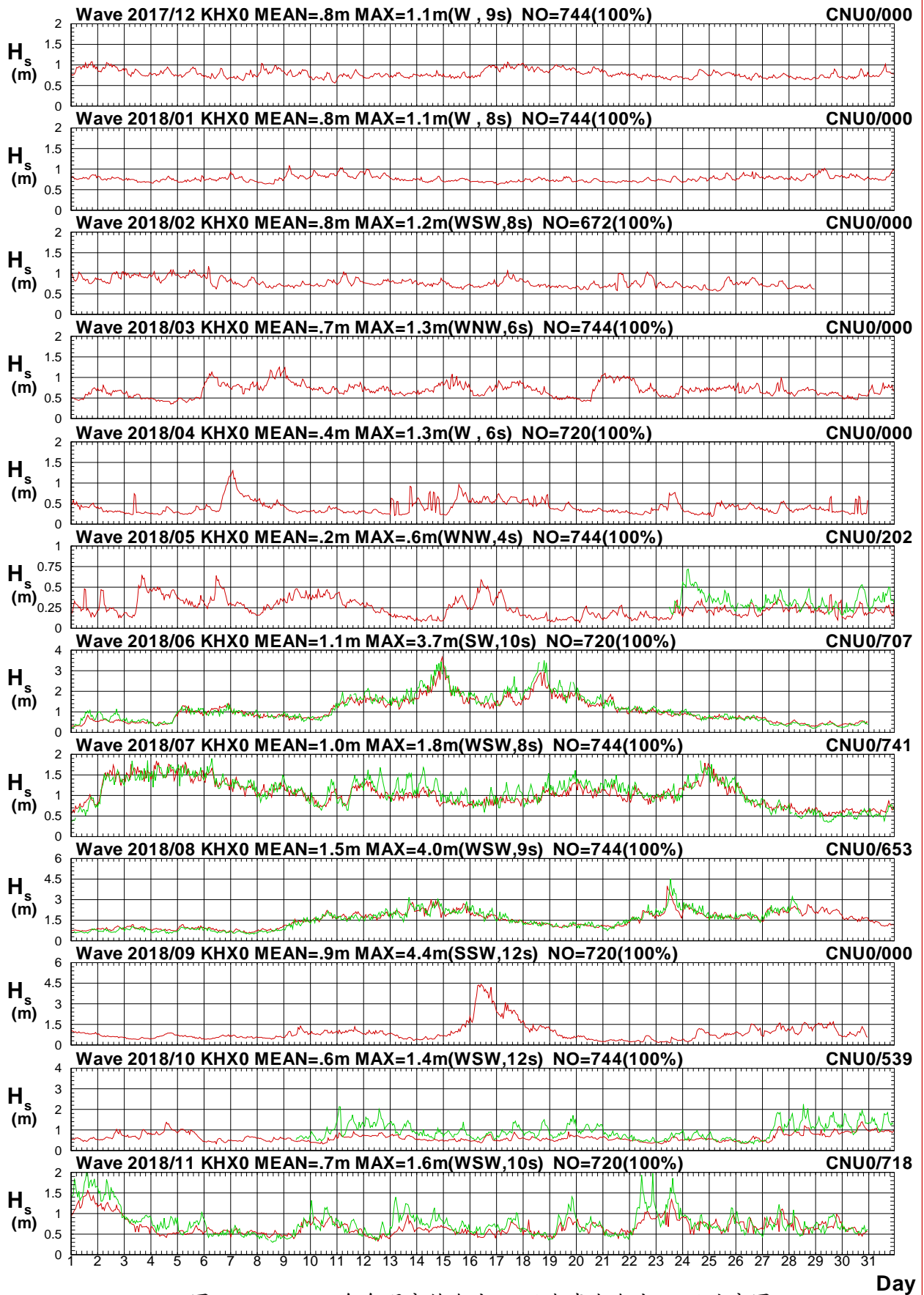


圖2.3.9a 2018年每月高雄海域 X 站與嘉南海域 U 站波高圖

V17CKHX0.1HA V17CCNU0.1H0 V181KHX0.1HA V181CNU0.1H0 V182KHX0.1HA V182CNU0.1H0
 V183KHX0.1HA V183CNU0.1H0 V184KHX0.1HA V184CNU0.1H0 V185KHX0.1HA V185CNU0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHX0 at 2018

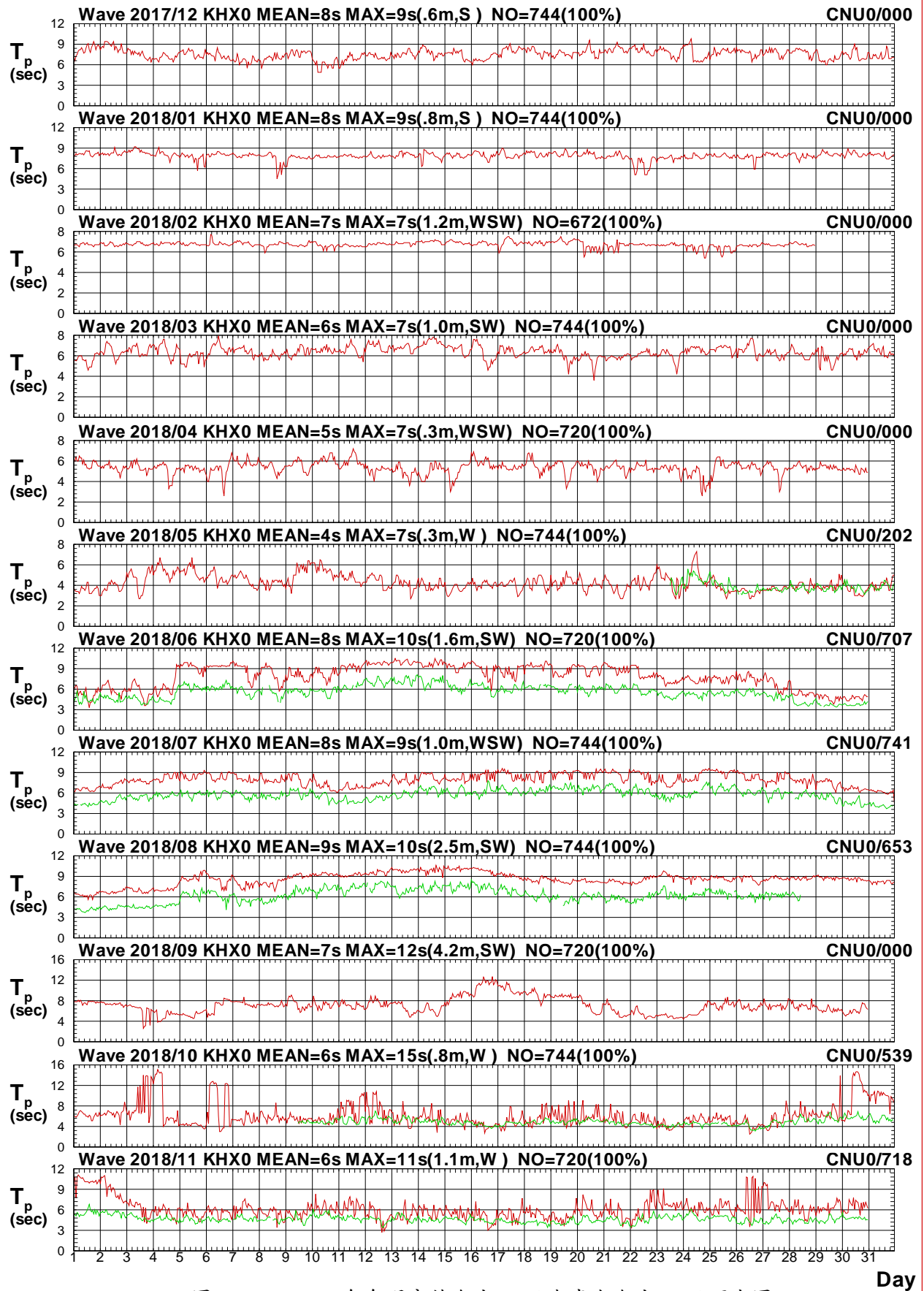


圖2.3.9b 2018年每月高雄海域 X 站與嘉南海域 U 站週期圖

V17CKHX0.1HA V17CCNU0.1H0 V181KHX0.1HA V181CNU0.1H0 V182KHX0.1HA V182CNU0.1H0
 V183KHX0.1HA V183CNU0.1H0 V184KHX0.1HA V184CNU0.1H0 V185KHX0.1HA V185CNU0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHX0 at 2018

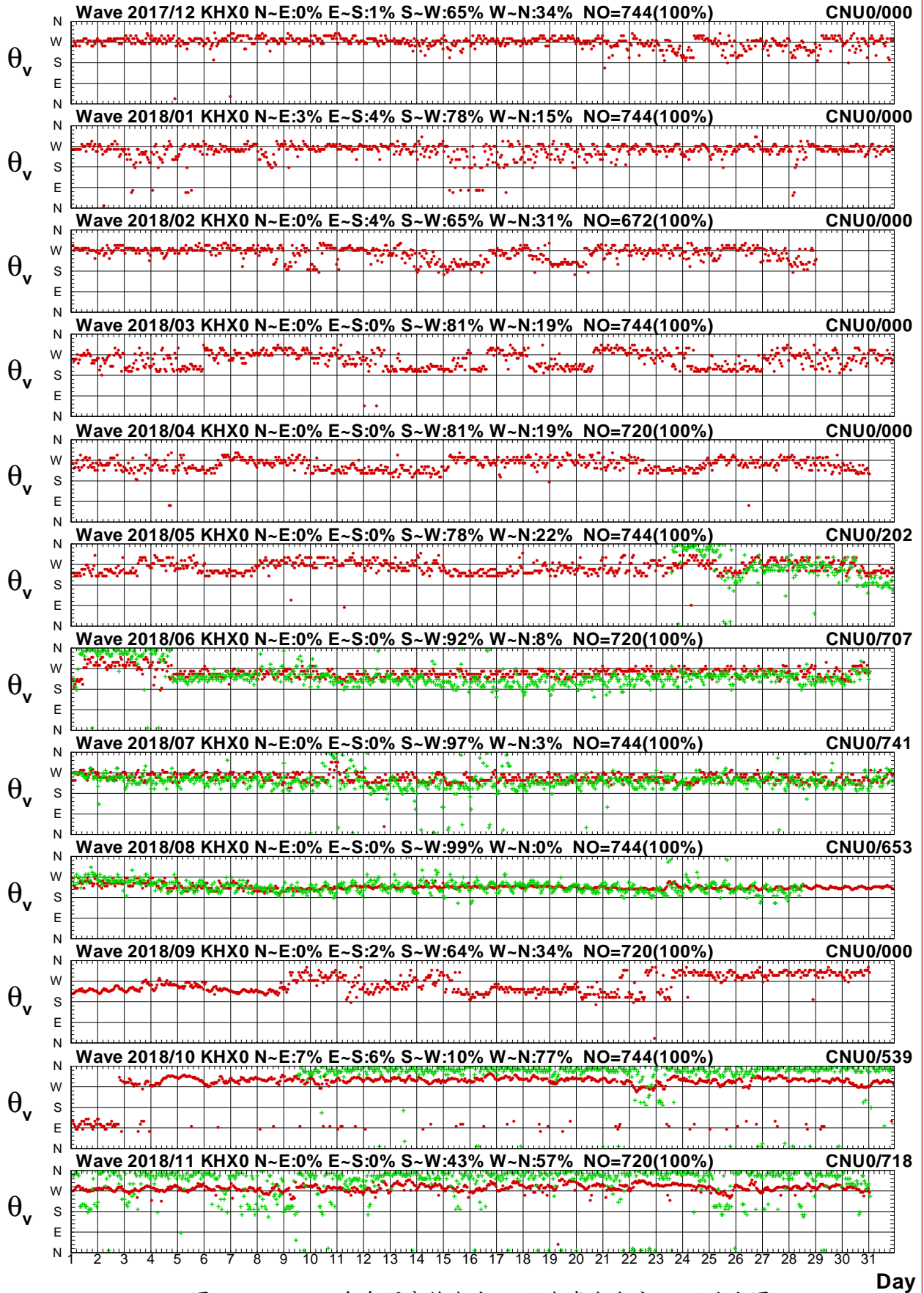


圖2.3.9c 2018年每月高雄海域 X 站與嘉南海域 U 站波向圖

V17CKHX0.1HA V17CCNU0.1H0 V181KHX0.1HA V181CNU0.1H0 V182KHX0.1HA V182CNU0.1H0
 V183KHX0.1HA V183CNU0.1H0 V184KHX0.1HA V184CNU0.1H0 V185KHX0.1HA V185CNU0.1H0

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2.4 2018年高雄海域波浪**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 Kao-Hsiung Harbor of KHZ0 at 2018

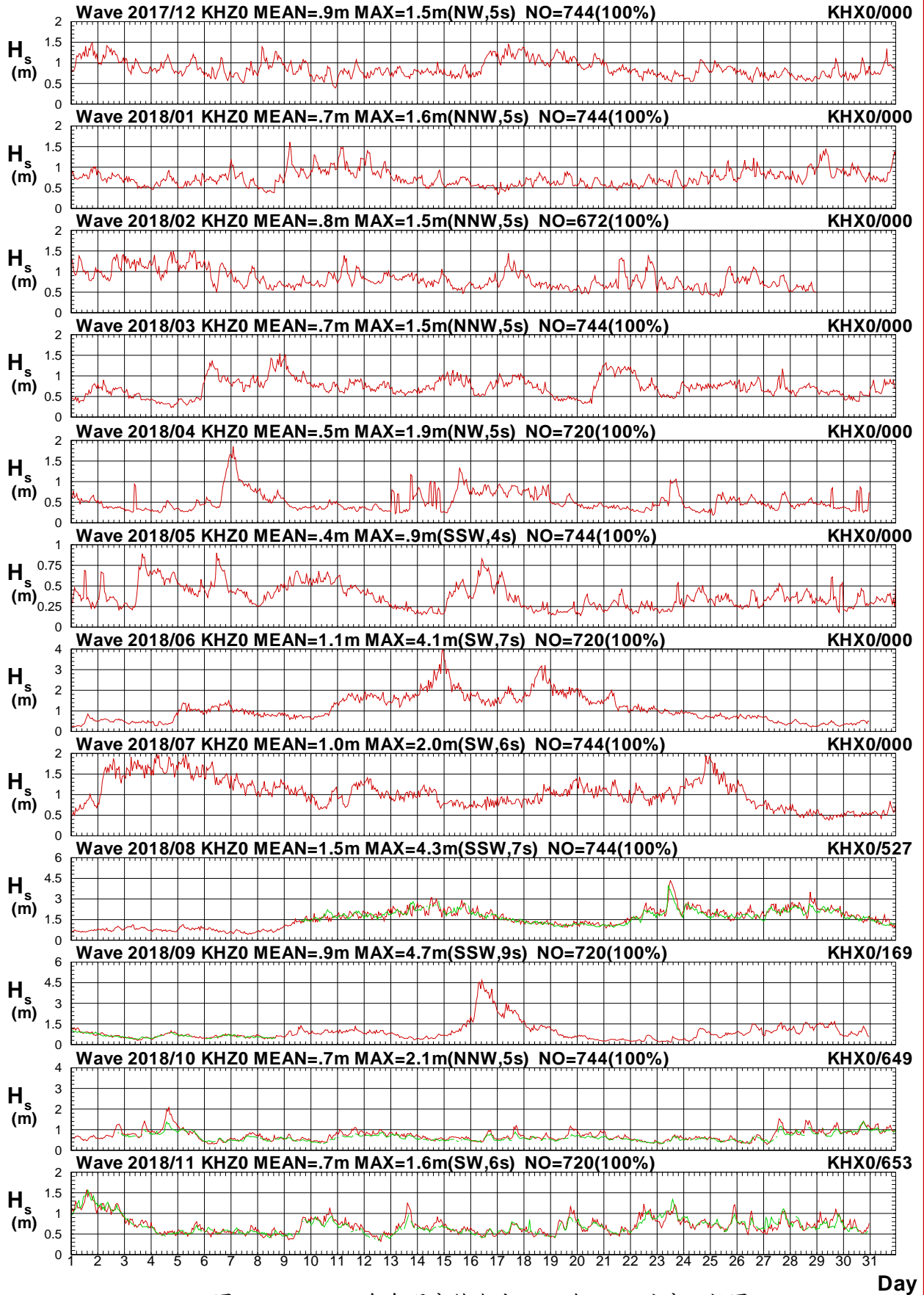


圖2.4.1a 2018年每月高雄海域 Z 站與 X 站波高比較圖

V17CKHZ0.1HA V17CKHX0.1H0 V181KHZ0.1HA V181KHX0.1H0 V182KHZ0.1HA V182KHX0.1H0
 V183KHZ0.1HA V183KHX0.1H0 V184KHZ0.1HA V184KHX0.1H0 V185KHZ0.1HA V185KHX0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHZ0 at 2018

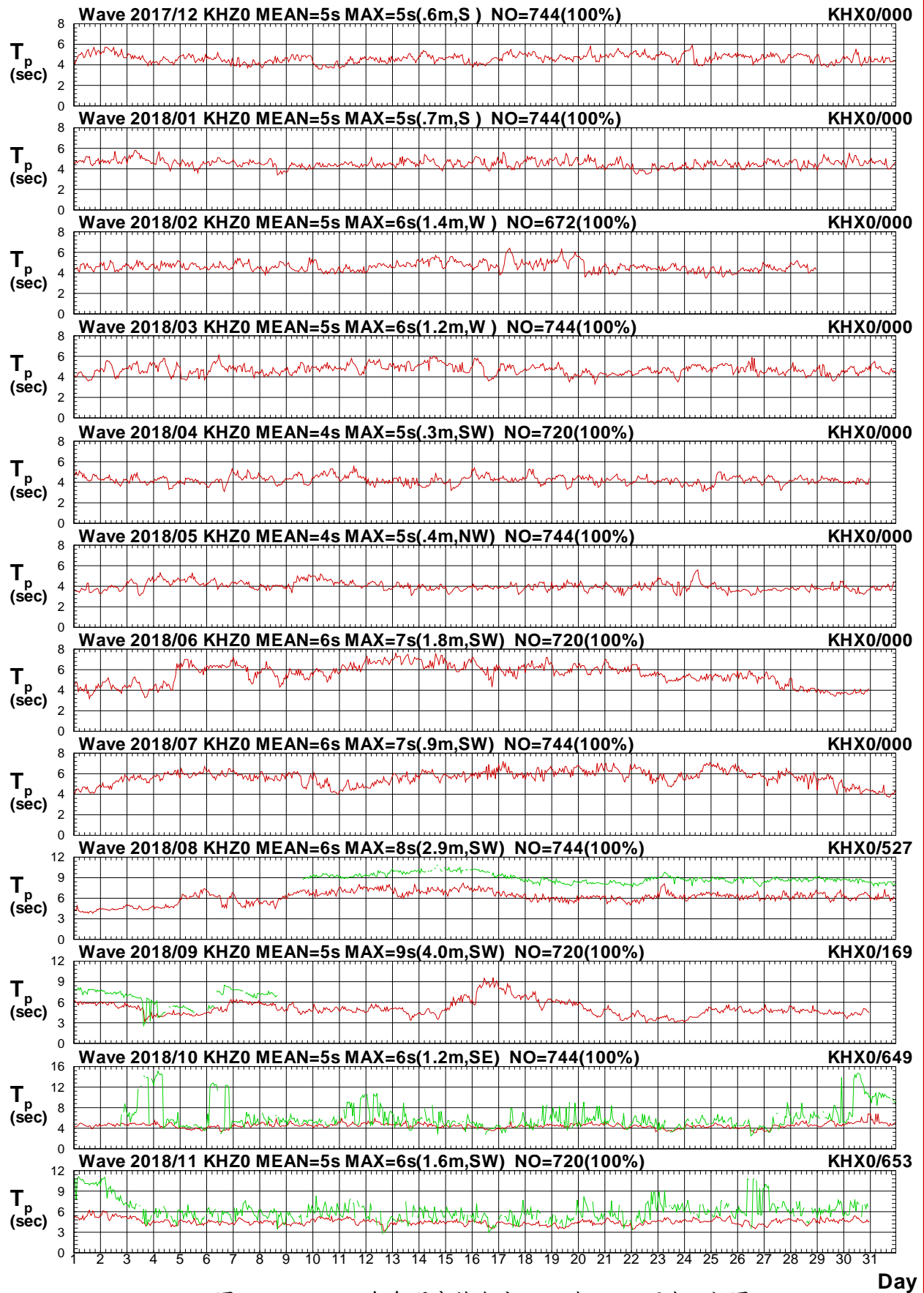


圖2.4.1b 2018年每月高雄海域 Z 站與 X 站週期比較圖

V17CKHZ0.1HA V17CKHX0.1H0 V181KHZ0.1HA V181KHX0.1H0 V182KHZ0.1HA V182KHX0.1H0
 V183KHZ0.1HA V183KHX0.1H0 V184KHZ0.1HA V184KHX0.1H0 V185KHZ0.1HA V185KHX0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHZ0 at 2018

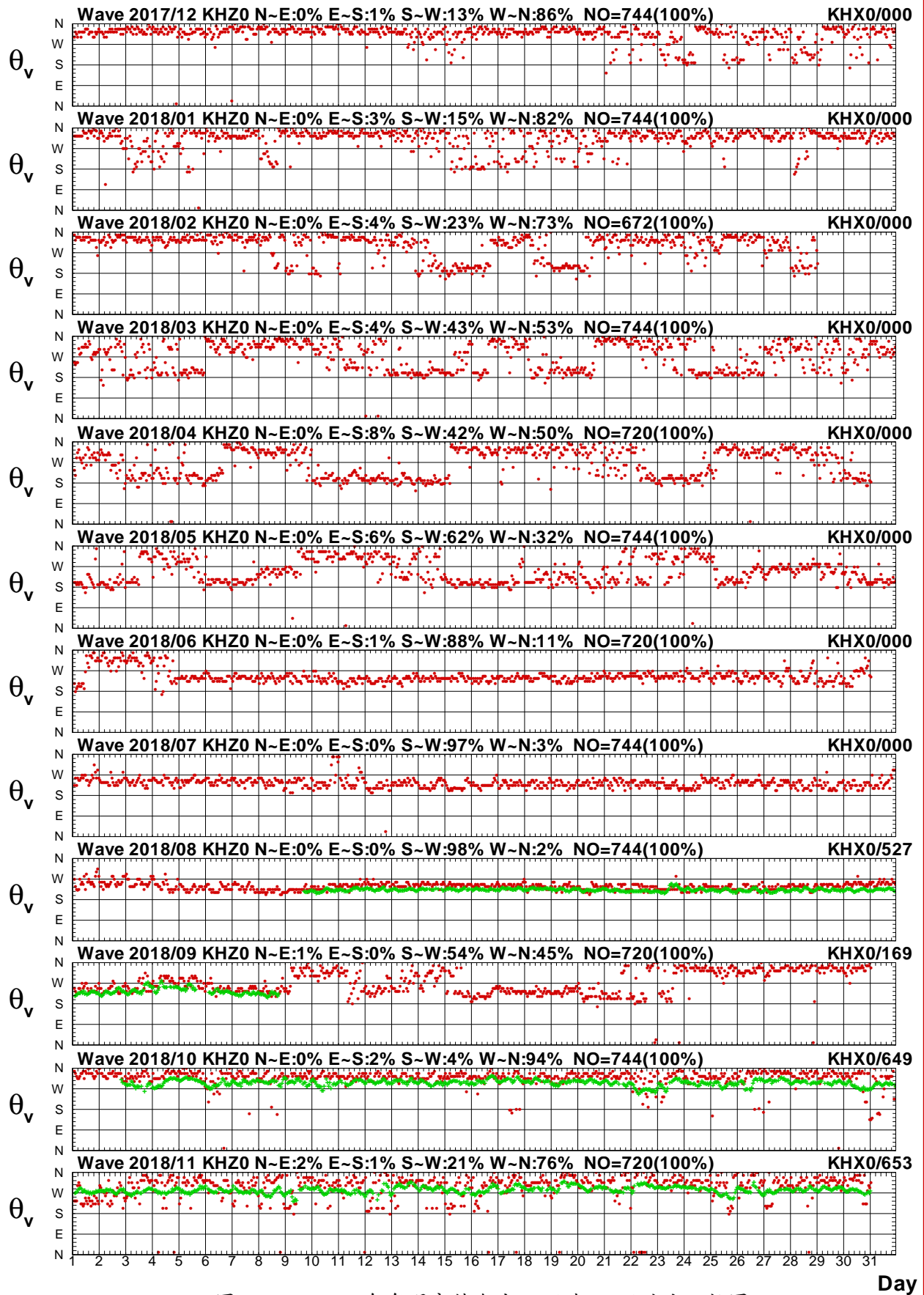


圖2.4.1c 2018年每月高雄海域 Z 站與 X 站波向比較圖

V17CKHZ0.1HA V17CKHX0.1H0 V181KHZ0.1HA V181KHX0.1H0 V182KHZ0.1HA V182KHX0.1H0
 V183KHZ0.1HA V183KHX0.1H0 V184KHZ0.1HA V184KHX0.1H0 V185KHZ0.1HA V185KHX0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHZ0 at 2018

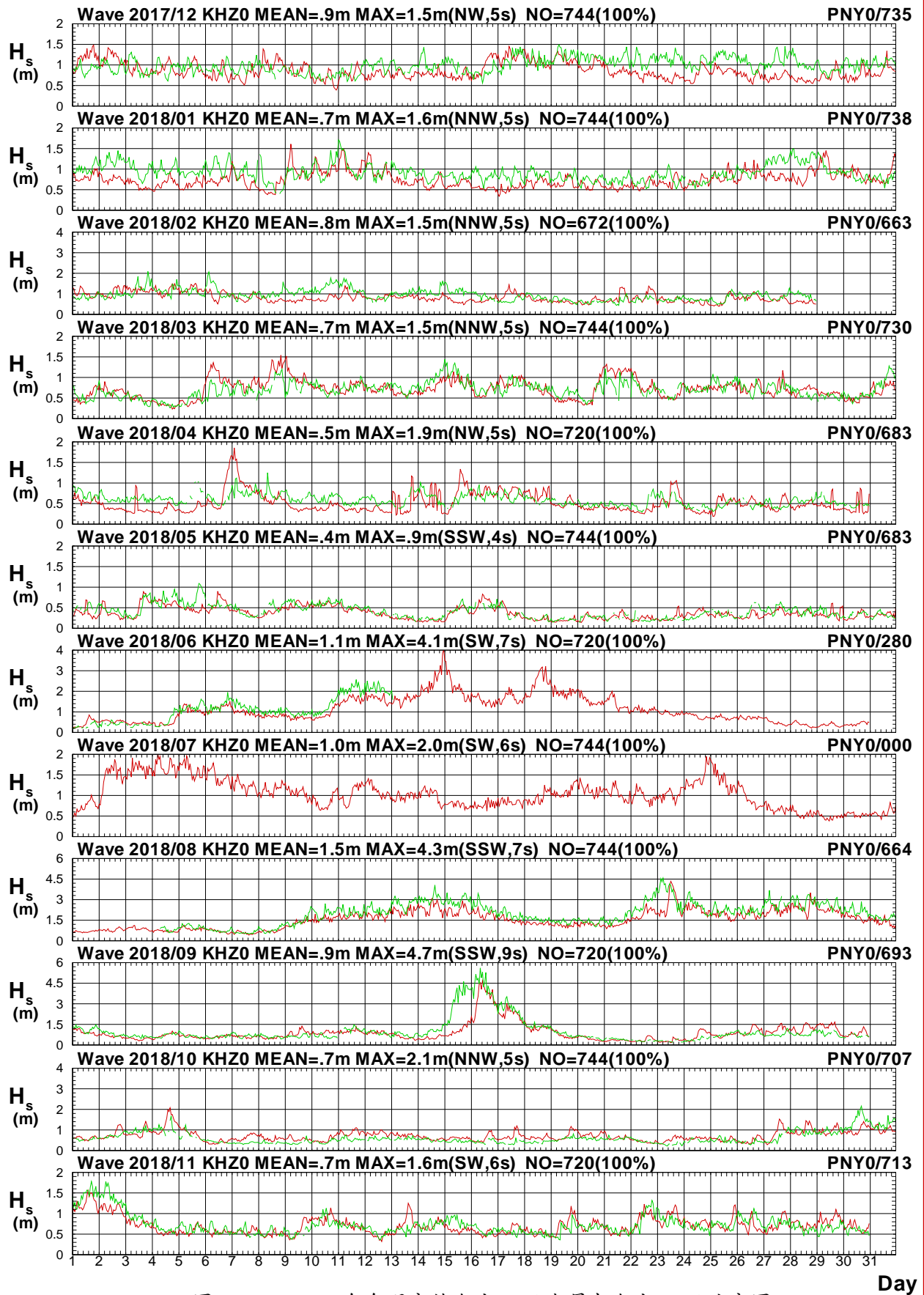


圖2.4.2a 2018年每月高雄海域 Z 站與屏東海域 Y 站波高圖

V17CKHZ0.1HA V17CPNY0.1H0 V181KHZ0.1HA V181PNY0.1H0 V182KHZ0.1HA V182PNY0.1H0
 V183KHZ0.1HA V183PNY0.1H0 V184KHZ0.1HA V184PNY0.1H0 V185KHZ0.1HA V185PNY0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHZ0 at 2018

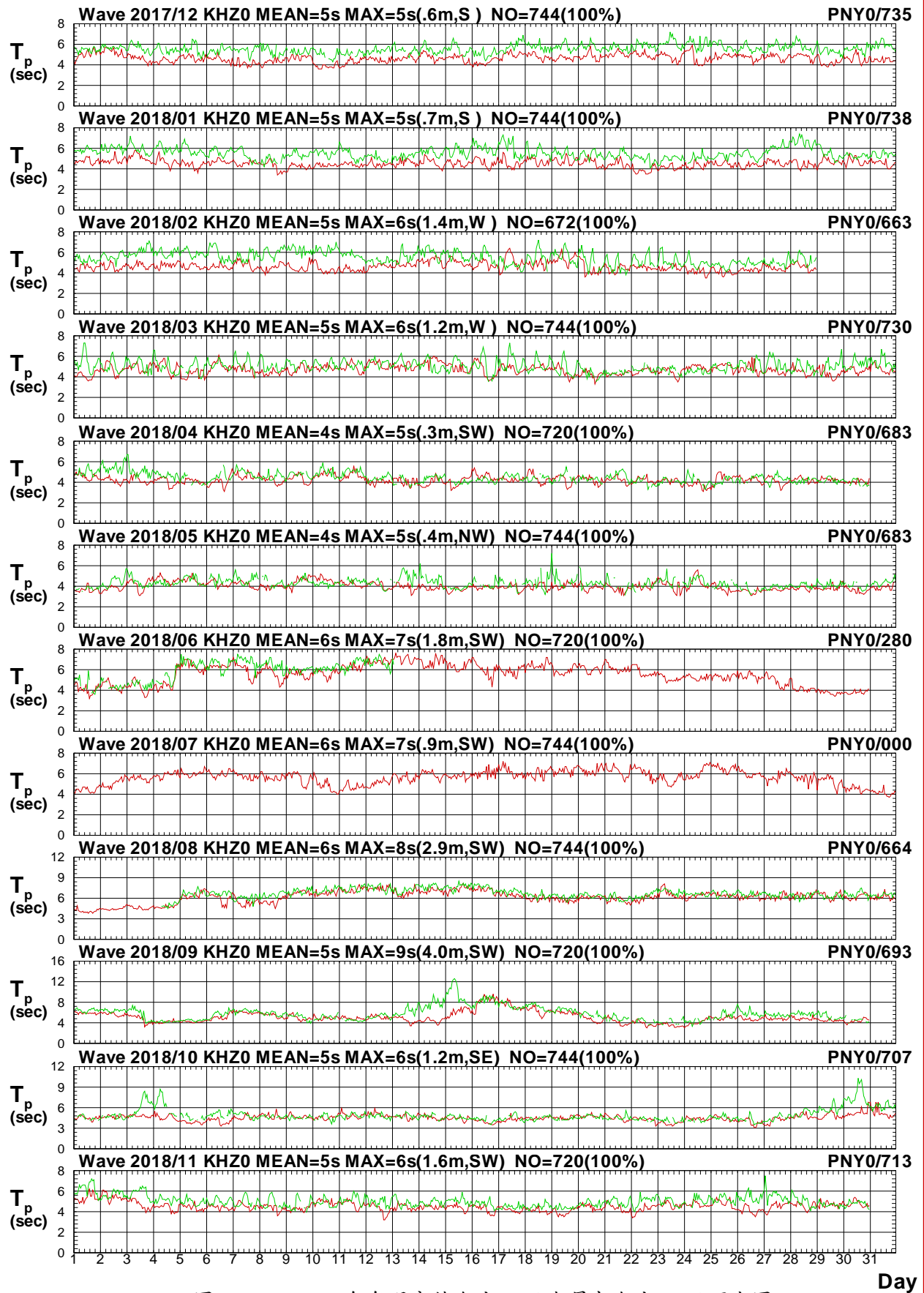


圖2.4.2b 2018年每月高雄海域 Z 站與屏東海域 Y 站週期圖

V17CKHZ0.1HA V17CPNY0.1H0 V181KHZ0.1HA V181PNY0.1H0 V182KHZ0.1HA V182PNY0.1H0
 V183KHZ0.1HA V183PNY0.1H0 V184KHZ0.1HA V184PNY0.1H0 V185KHZ0.1HA V185PNY0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHZ0 at 2018

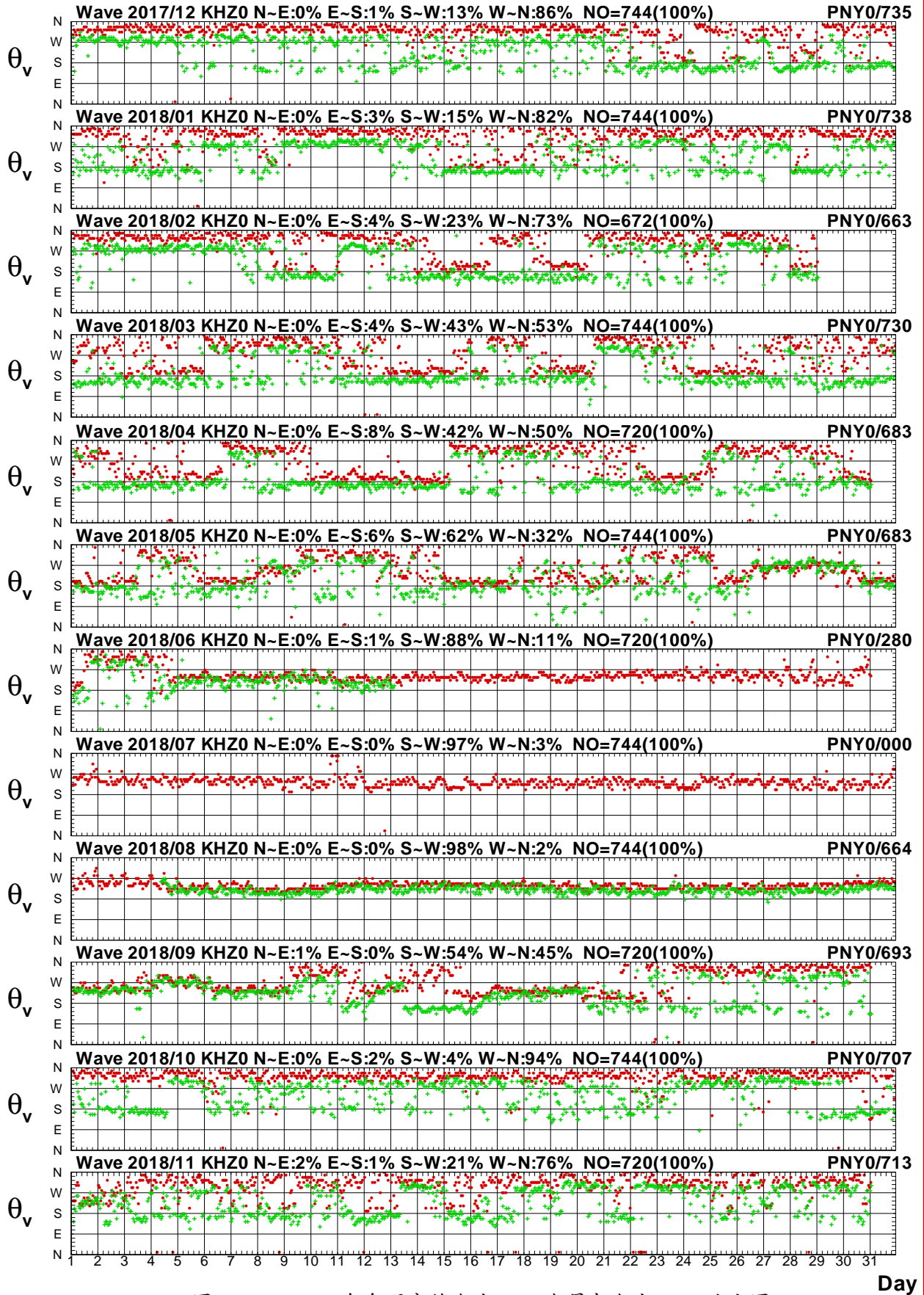


圖2.4.2c 2018年每月高雄海域 Z 站與屏東海域 Y 站波向圖

V17CKHZ0.1HA V17CPNY0.1H0 V181KHZ0.1HA V181PNY0.1H0 V182KHZ0.1HA V182PNY0.1H0
 V183KHZ0.1HA V183PNY0.1H0 V184KHZ0.1HA V184PNY0.1H0 V185KHZ0.1HA V185PNY0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHZ0 at 2018

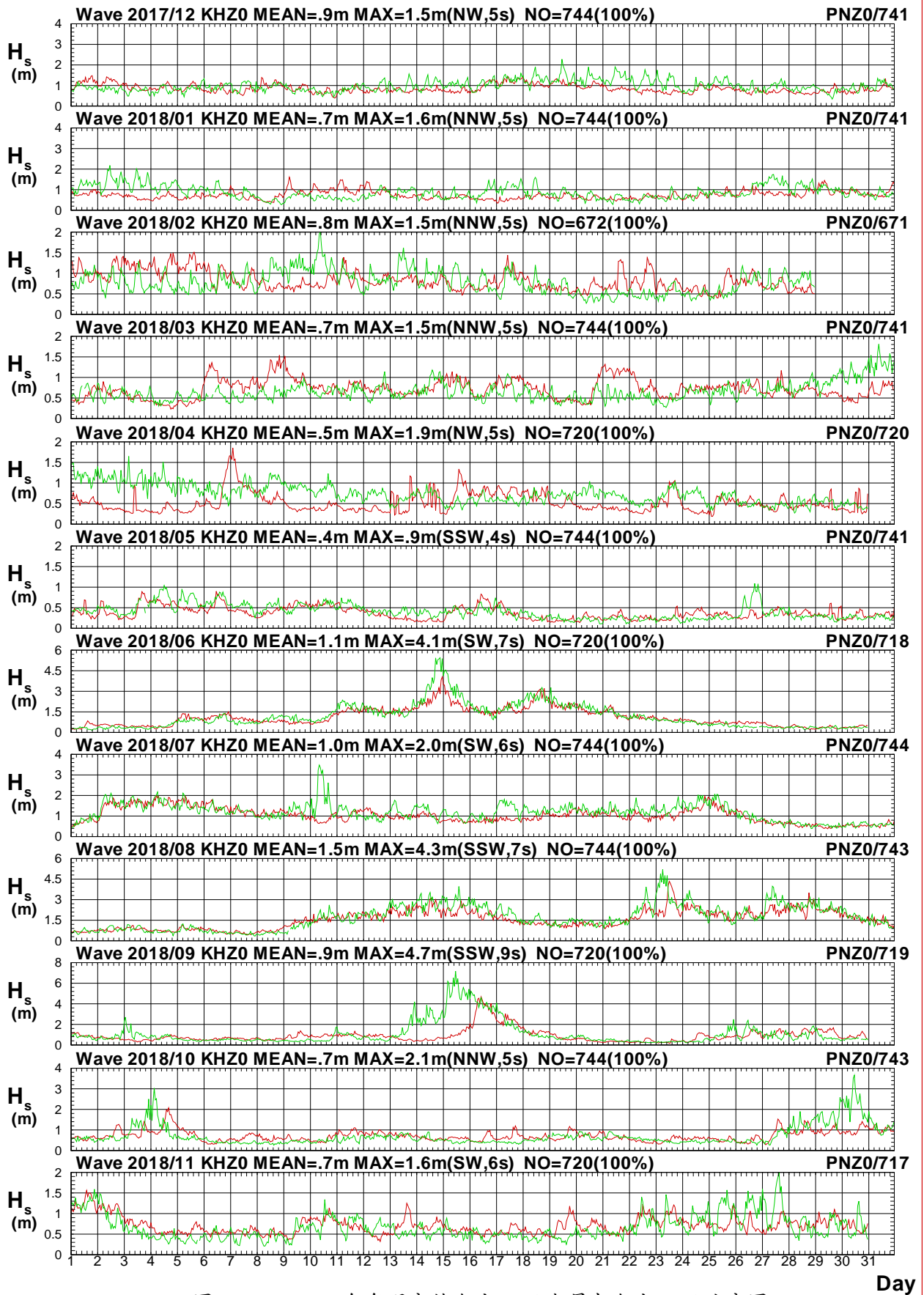


圖2.4.3a 2018年每月高雄海域 Z 站與屏東海域 Z 站波高圖

V17CKHZ0.1HA V17CPNZ0.1H0 V181KHZ0.1HA V181PNZ0.1H0 V182KHZ0.1HA V182PNZ0.1H0
 V183KHZ0.1HA V183PNZ0.1H0 V184KHZ0.1HA V184PNZ0.1H0 V185KHZ0.1HA V185PNZ0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHZ0 at 2018

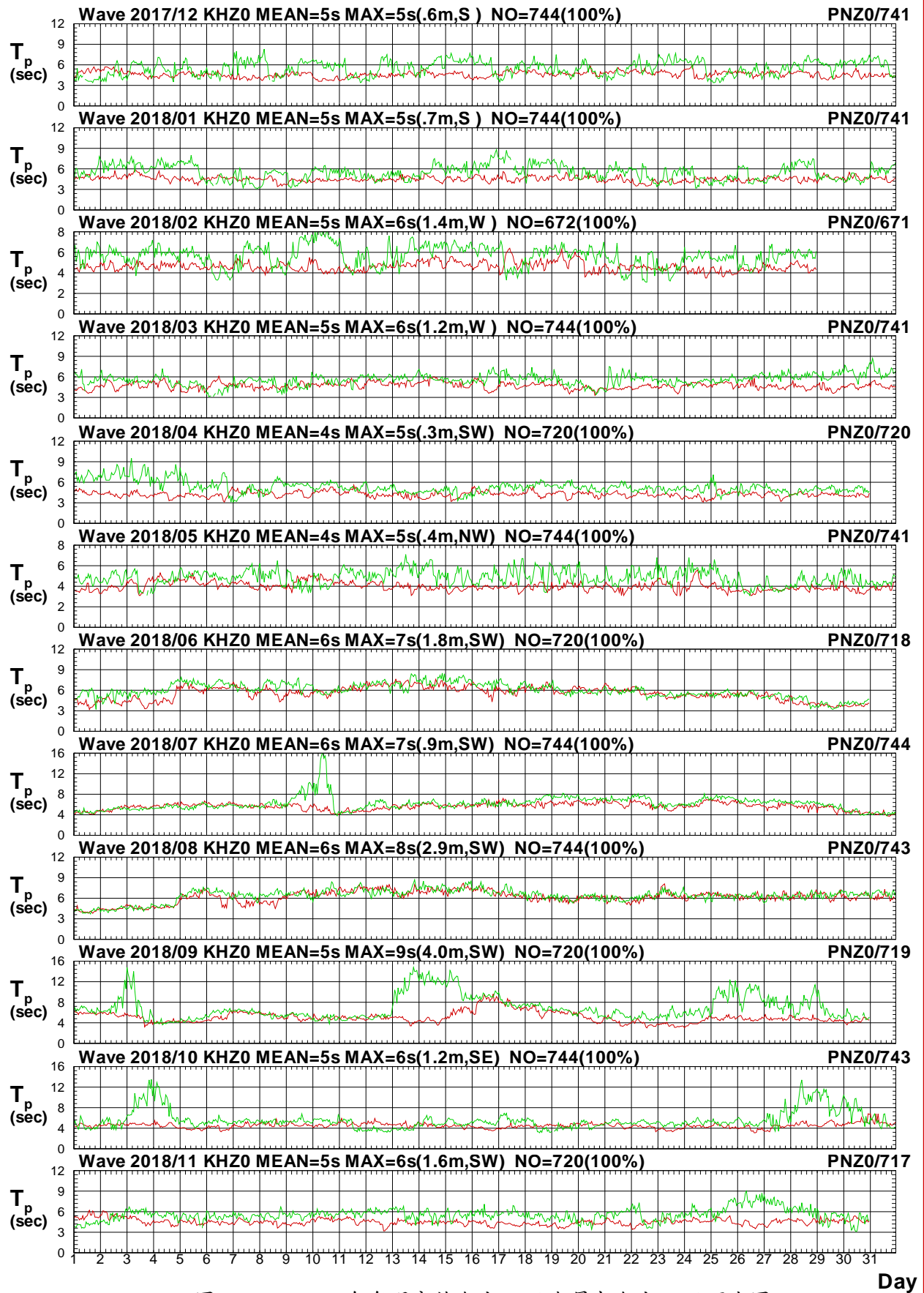


圖2.4.3b 2018年每月高雄海域 Z 站與屏東海域 Z 站週期圖

V17CKHZ0.1HA V17CPNZ0.1H0 V181KHZ0.1HA V181PNZ0.1H0 V182KHZ0.1HA V182PNZ0.1H0
 V183KHZ0.1HA V183PNZ0.1H0 V184KHZ0.1HA V184PNZ0.1H0 V185KHZ0.1HA V185PNZ0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHZ0 at 2018

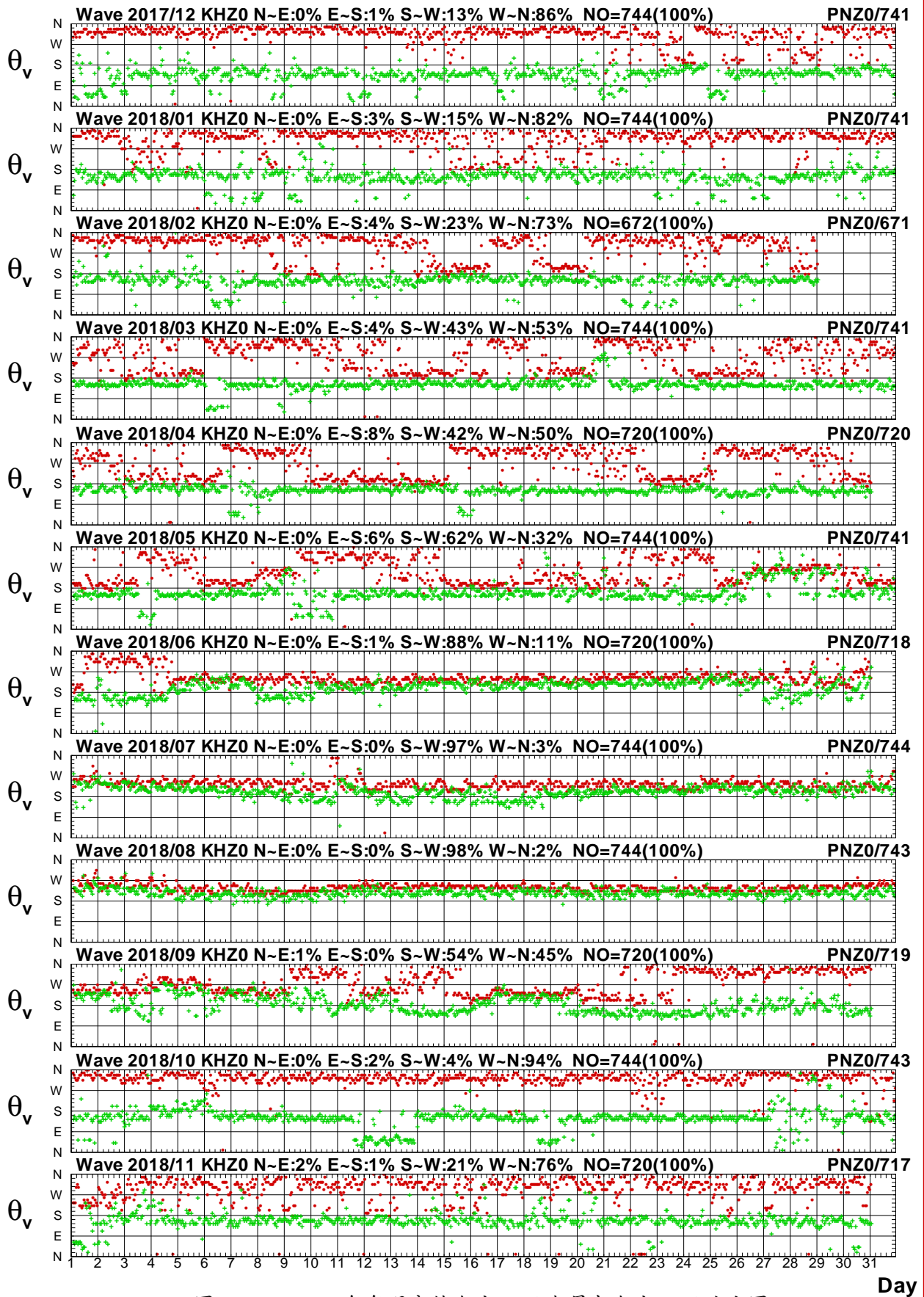


圖2.4.3c 2018年每月高雄海域 Z 站與屏東海域 Z 站波向圖

V17CKHZ0.1HA V17CPNZ0.1H0 V181KHZ0.1HA V181PNZ0.1H0 V182KHZ0.1HA V182PNZ0.1H0
 V183KHZ0.1HA V183PNZ0.1H0 V184KHZ0.1HA V184PNZ0.1H0 V185KHZ0.1HA V185PNZ0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHZ0 at 2018

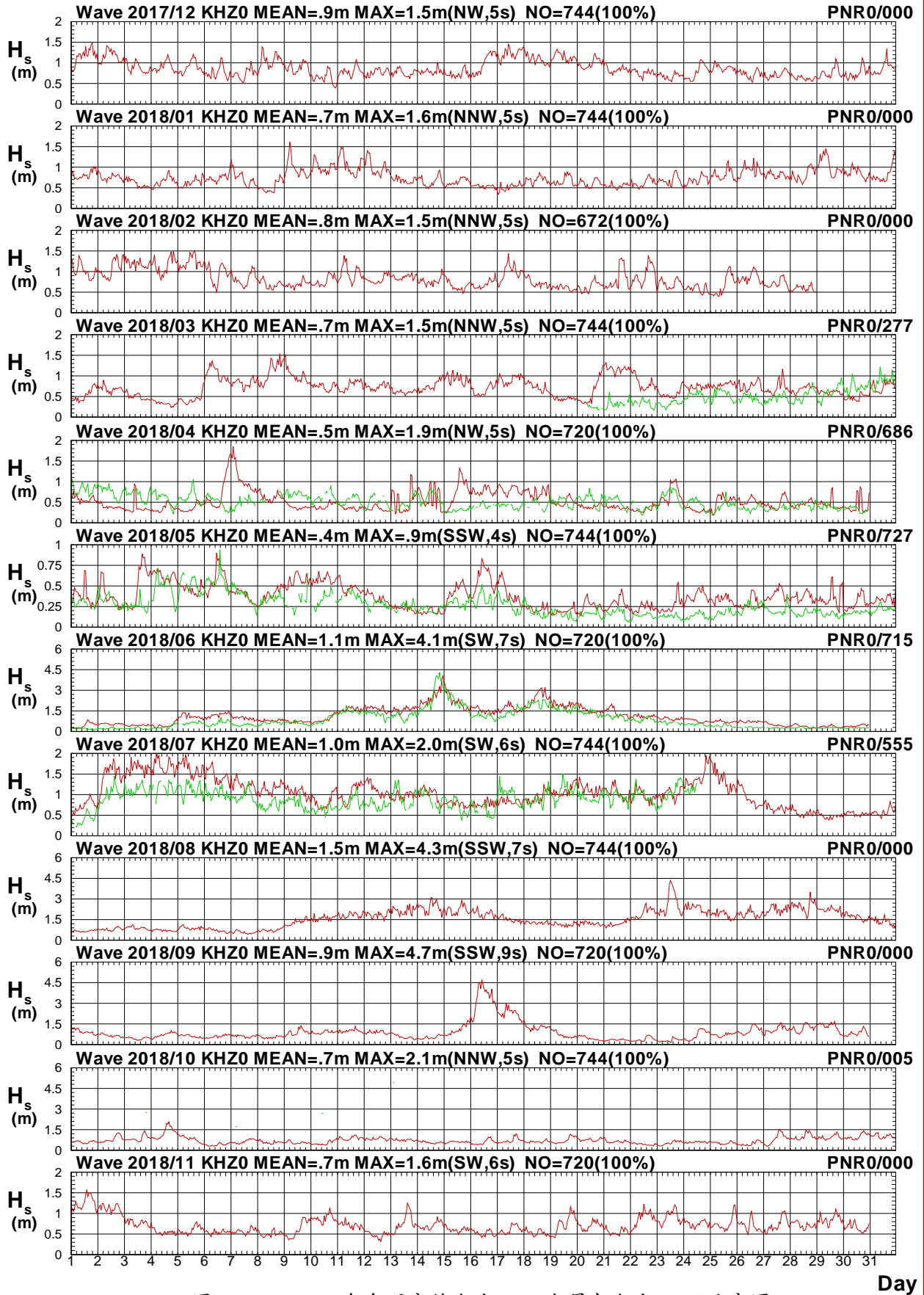


圖2.4.4a 2018年每月高雄海域 Z 站與屏東海域 R 站波高圖

V17CKHZ0.1HA V17CPNR0.1H0 V181KHZ0.1HA V181PNR0.1H0 V182KHZ0.1HA V182PNR0.1H0
 V183KHZ0.1HA V183PNR0.1H0 V184KHZ0.1HA V184PNR0.1H0 V185KHZ0.1HA V185PNR0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHZ0 at 2018

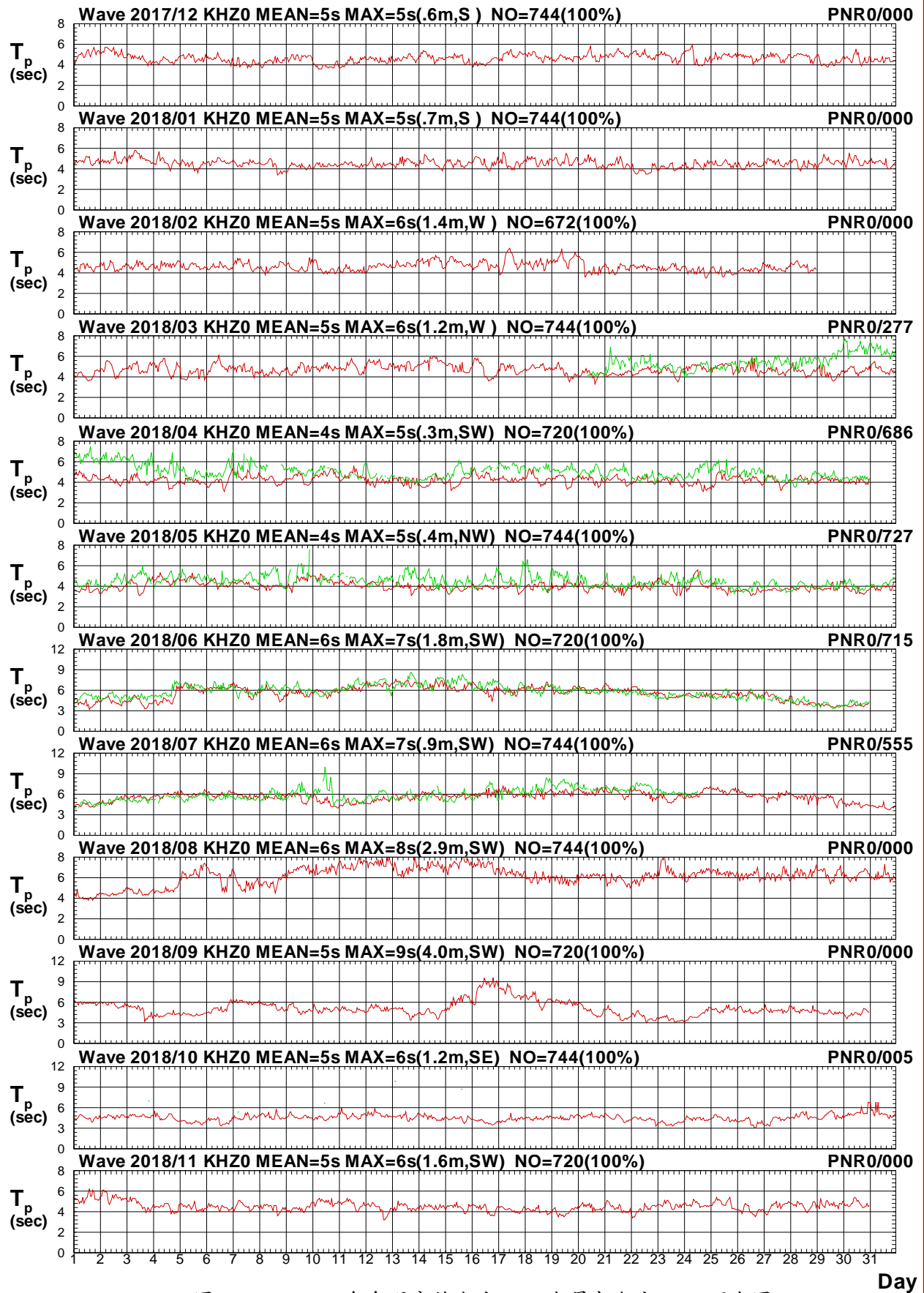


圖2.4.4b 2018年每月高雄海域 Z 站與屏東海域 R 站週期圖

V17CKHZ0.1HA V17CPNR0.1H0 V181KHZ0.1HA V181PNR0.1H0 V182KHZ0.1HA V182PNR0.1H0
 V183KHZ0.1HA V183PNR0.1H0 V184KHZ0.1HA V184PNR0.1H0 V185KHZ0.1HA V185PNR0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHZ0 at 2018

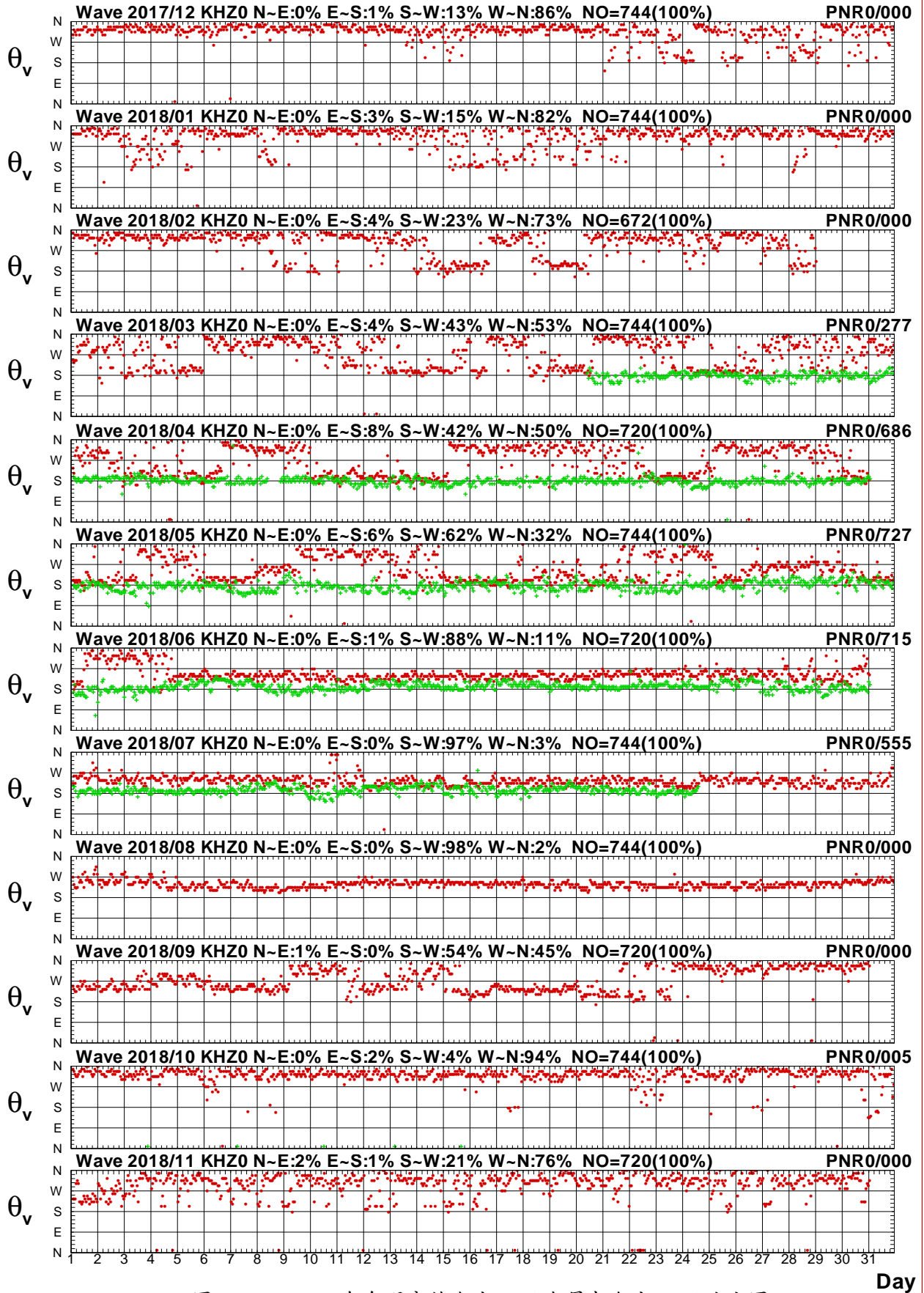


圖2.4.4c 2018年每月高雄海域 Z 站與屏東海域 R 站波向圖

V17CKHZ0.1HA V17CPNR0.1H0 V181KHZ0.1HA V181PNR0.1H0 V182KHZ0.1HA V182PNR0.1H0
 V183KHZ0.1HA V183PNR0.1H0 V184KHZ0.1HA V184PNR0.1H0 V185KHZ0.1HA V185PNR0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHZ0 at 2018

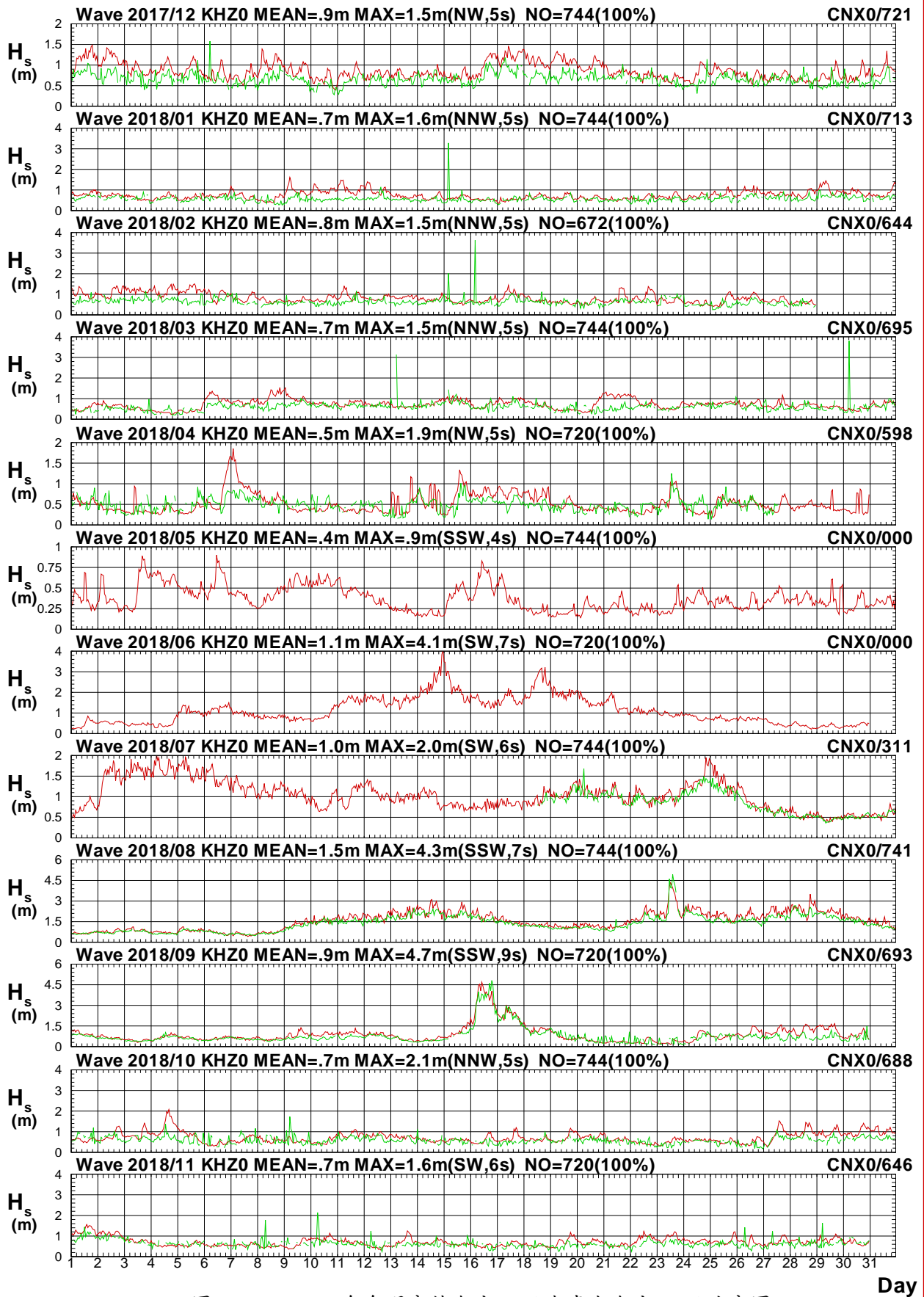


圖2.4.5a 2018年每月高雄海域 Z 站與嘉南海域 X 站波高圖

V17CKHZ0.1HA V17CCNX0.1H0 V181KHZ0.1HA V181CNX0.1H0 V182KHZ0.1HA V182CNX0.1H0
 V183KHZ0.1HA V183CNX0.1H0 V184KHZ0.1HA V184CNX0.1H0 V185KHZ0.1HA V185CNX0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHZ0 at 2018

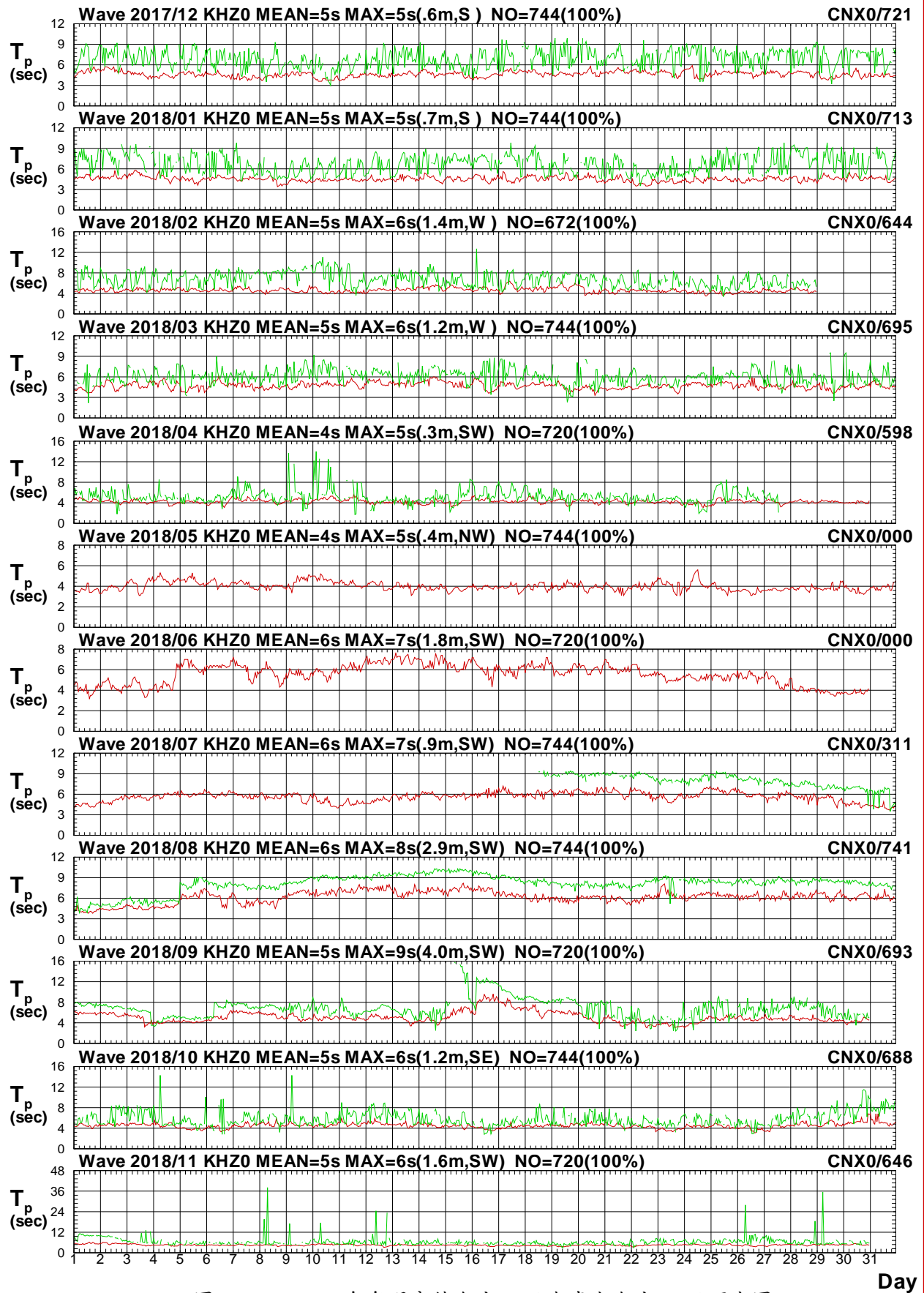


圖2.4.5b 2018年每月高雄海域 Z 站與嘉南海域 X 站週期圖

V17CKHZ0.1HA V17CCNX0.1H0 V181KHZ0.1HA V181CNX0.1H0 V182KHZ0.1HA V182CNX0.1H0
 V183KHZ0.1HA V183CNX0.1H0 V184KHZ0.1HA V184CNX0.1H0 V185KHZ0.1HA V185CNX0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHZ0 at 2018

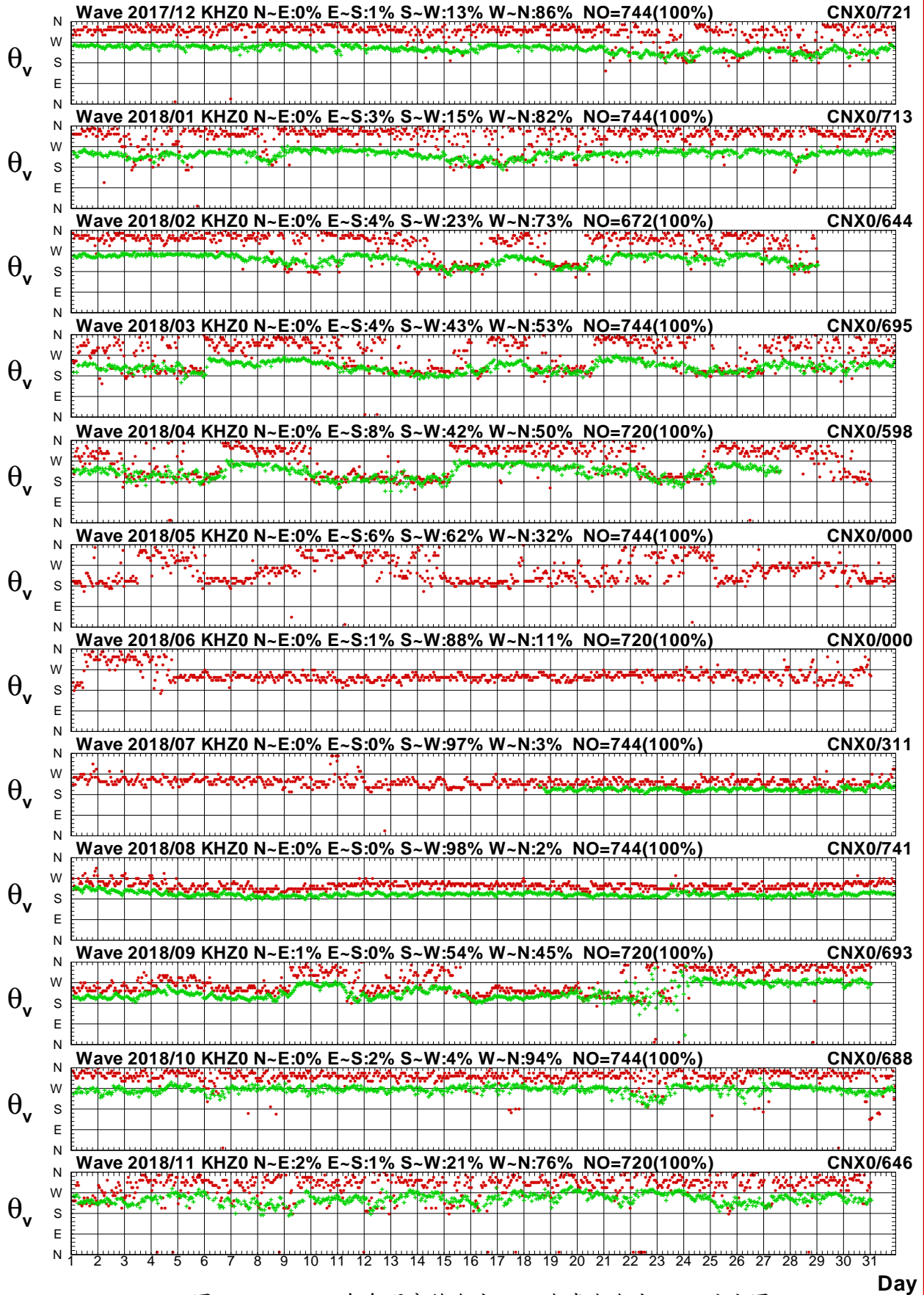


圖2.4.5c 2018年每月高雄海域 Z 站與嘉南海域 X 站波向圖

V17CKHZ0.1HA V17CCNX0.1H0 V181KHZ0.1HA V181CNX0.1H0 V182KHZ0.1HA V182CNX0.1H0
 V183KHZ0.1HA V183CNX0.1H0 V184KHZ0.1HA V184CNX0.1H0 V185KHZ0.1HA V185CNX0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHZ0 at 2018

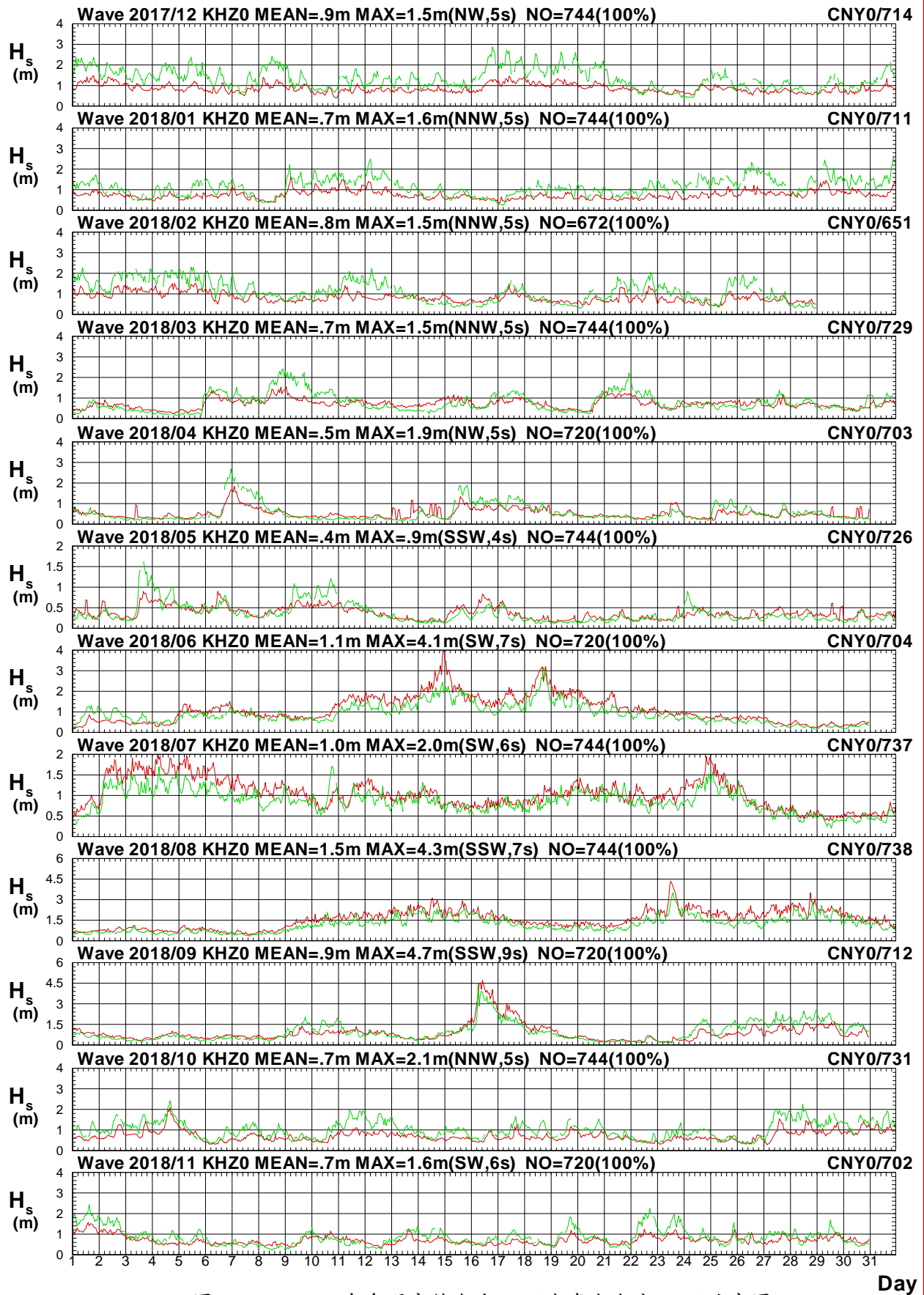


圖2.4.6a 2018年每月高雄海域 Z 站與嘉南海域 Y 站波高圖

V17CKHZ0.1HA V17CCNY0.1H0 V181KHZ0.1HA V181CNY0.1H0 V182KHZ0.1HA V182CNY0.1H0
 V183KHZ0.1HA V183CNY0.1H0 V184KHZ0.1HA V184CNY0.1H0 V185KHZ0.1HA V185CNY0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHZ0 at 2018

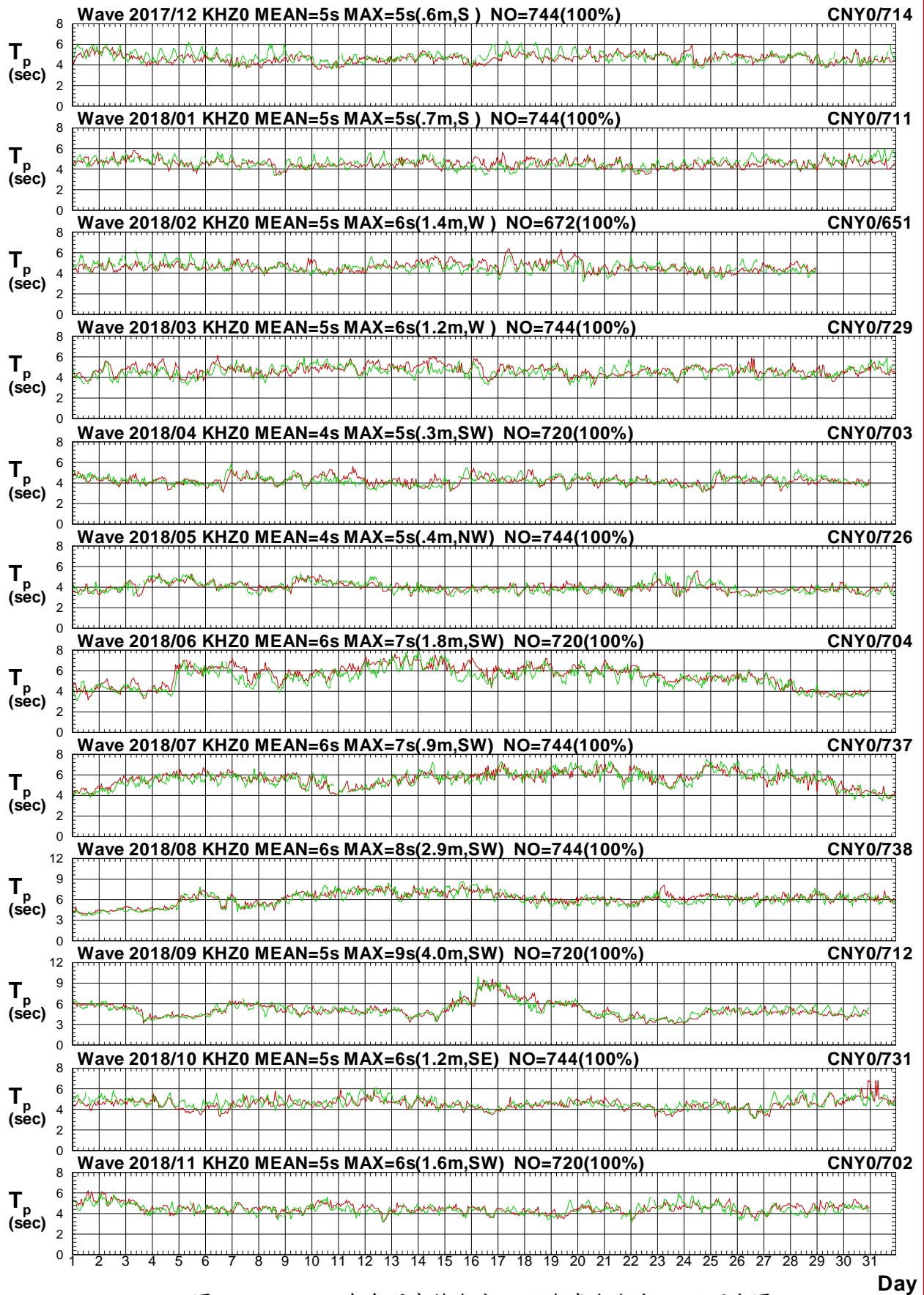


圖2.4.6b 2018年每月高雄海域 Z 站與嘉南海域 Y 站週期圖

V17CKHZ0.1HA V17CCNY0.1H0 V181KHZ0.1HA V181CNY0.1H0 V182KHZ0.1HA V182CNY0.1H0
 V183KHZ0.1HA V183CNY0.1H0 V184KHZ0.1HA V184CNY0.1H0 V185KHZ0.1HA V185CNY0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHZ0 at 2018

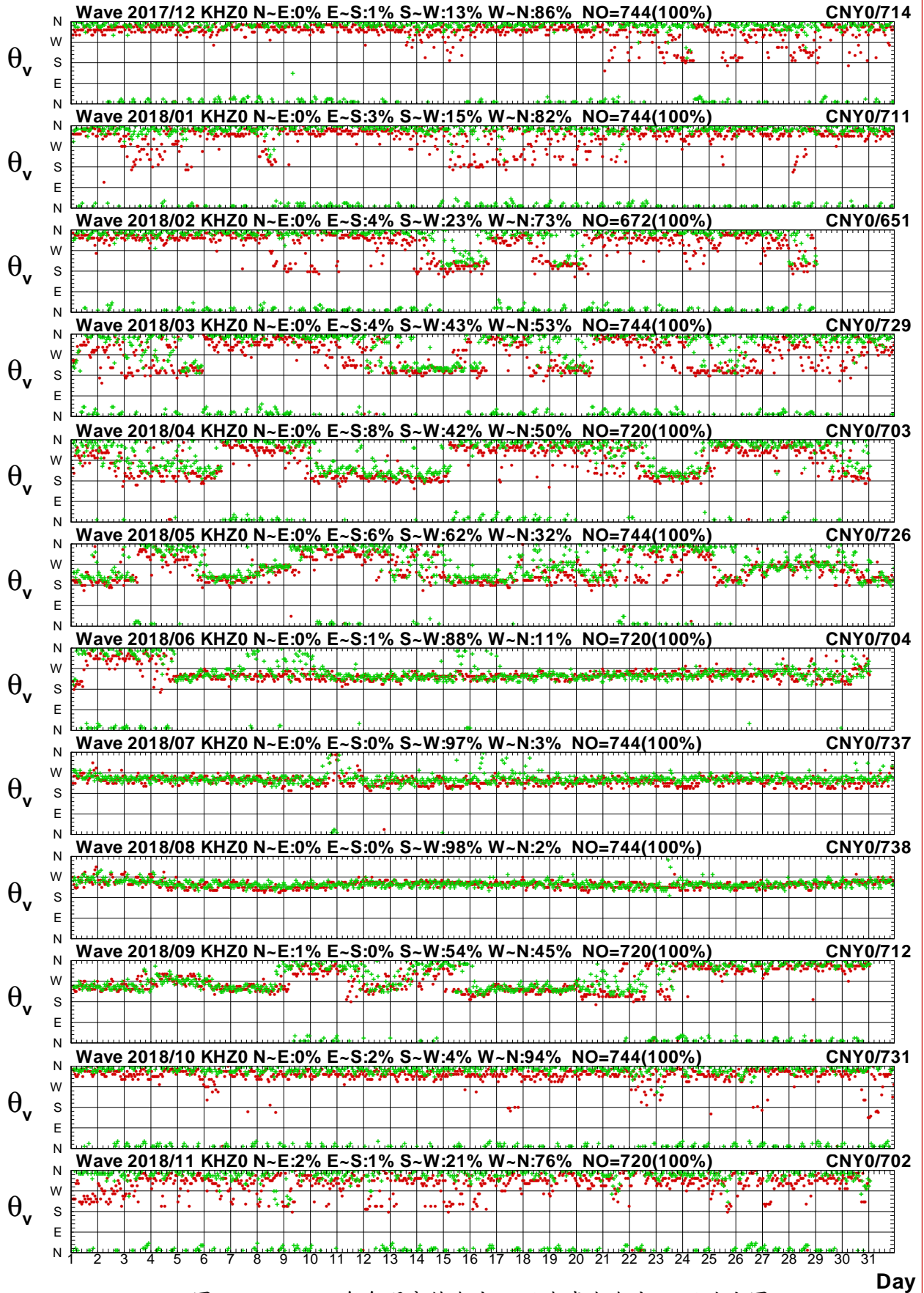


圖2.4.6c 2018年每月高雄海域 Z 站與嘉南海域 Y 站波向圖

V17CKHZ0.1HA V17CCNY0.1H0 V181KHZ0.1HA V181CNY0.1H0 V182KHZ0.1HA V182CNY0.1H0
 V183KHZ0.1HA V183CNY0.1H0 V184KHZ0.1HA V184CNY0.1H0 V185KHZ0.1HA V185CNY0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHZ0 at 2018

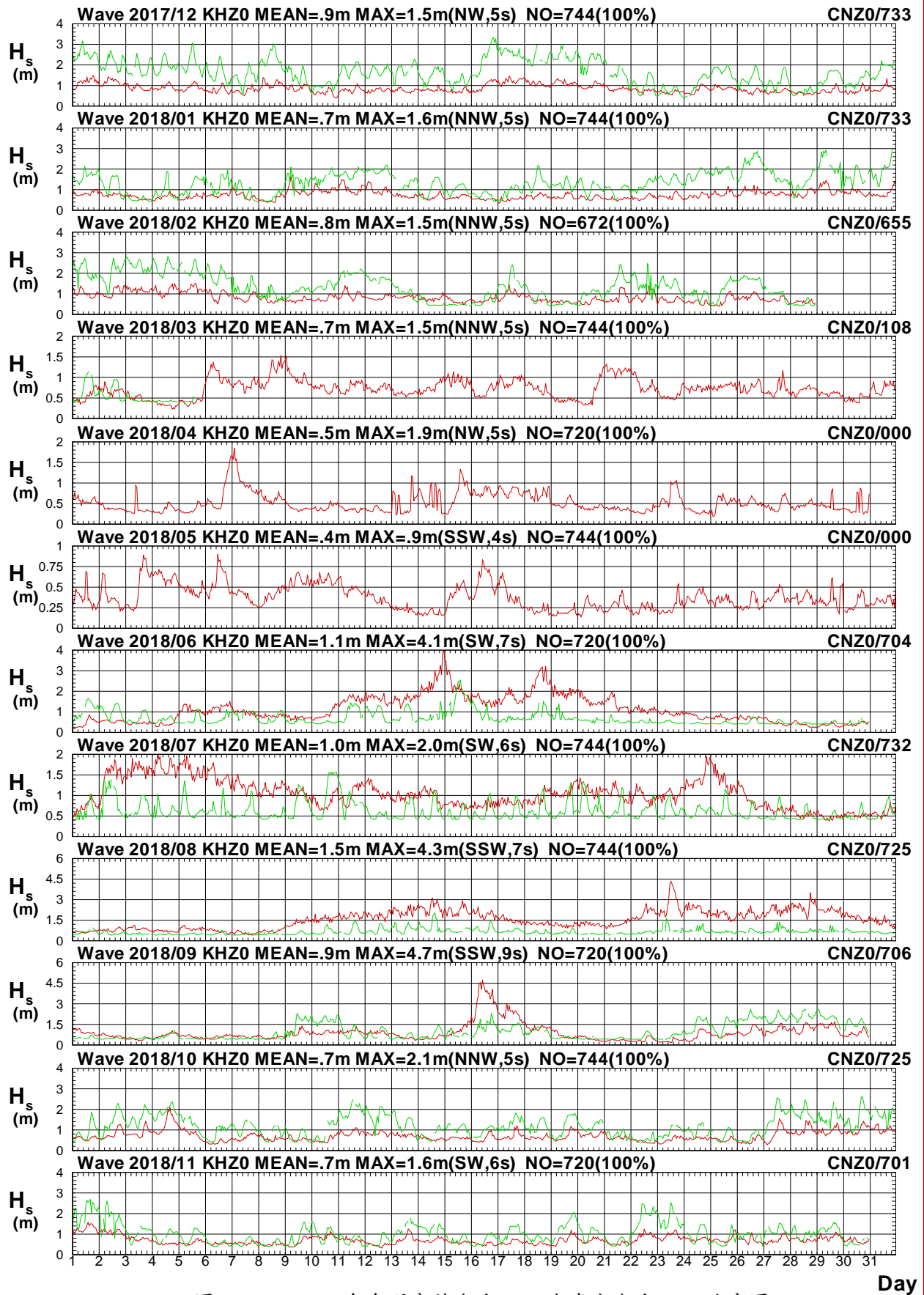


圖2.4.7a 2018年每月高雄海域 Z 站與嘉南海域 Z 站波高圖

V17CKHZ0.1HA V17CCNZ0.1H0 V181KHZ0.1HA V181CNZ0.1H0 V182KHZ0.1HA V182CNZ0.1H0
 V183KHZ0.1HA V183CNZ0.1H0 V184KHZ0.1HA V184CNZ0.1H0 V185KHZ0.1HA V185CNZ0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHZ0 at 2018

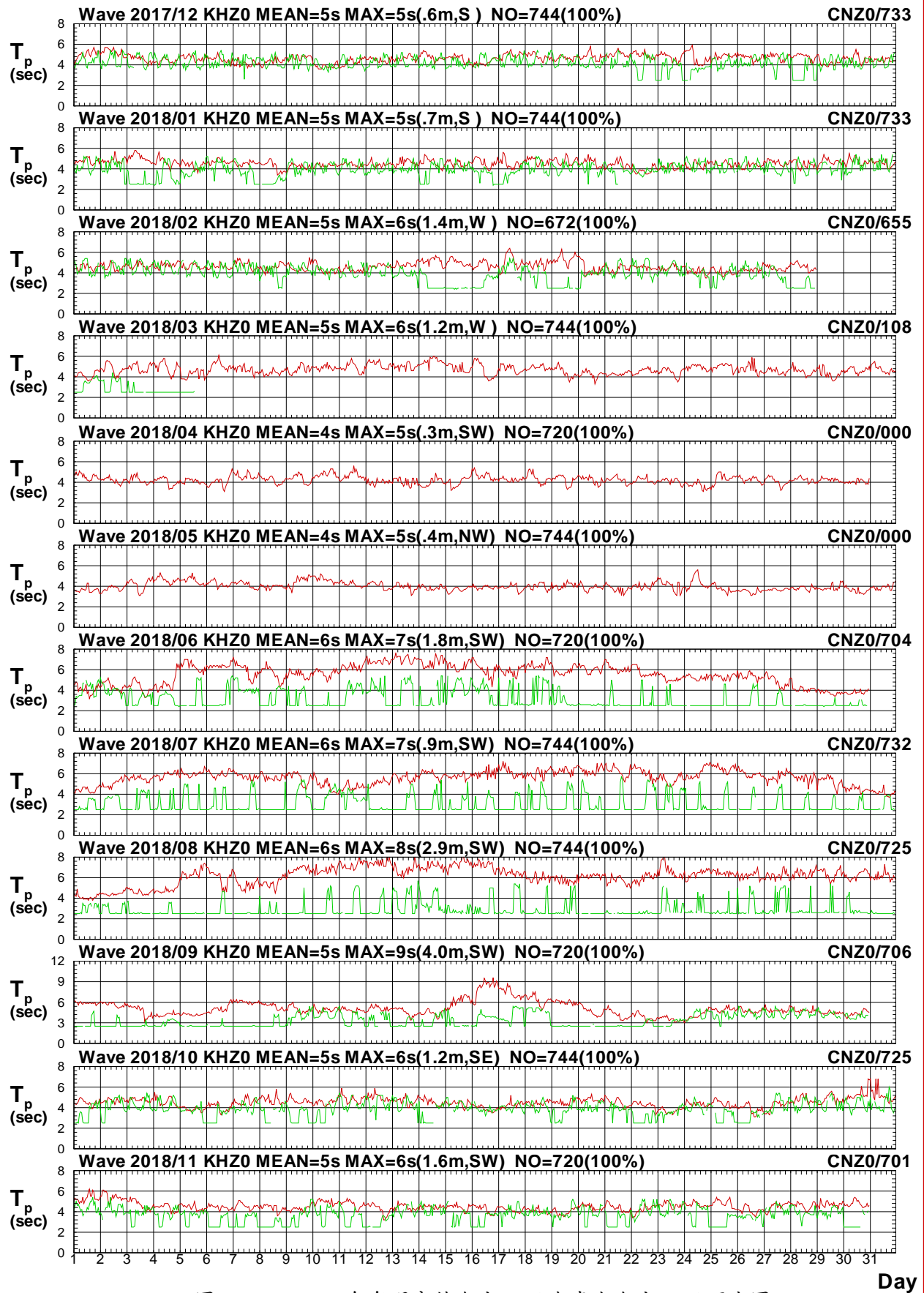


圖2.4.7b 2018年每月高雄海域 Z 站與嘉南海域 Z 站週期圖

V17CKHZ0.1HA V17CCNZ0.1H0 V181KHZ0.1HA V181CNZ0.1H0 V182KHZ0.1HA V182CNZ0.1H0
 V183KHZ0.1HA V183CNZ0.1H0 V184KHZ0.1HA V184CNZ0.1H0 V185KHZ0.1HA V185CNZ0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHZ0 at 2018

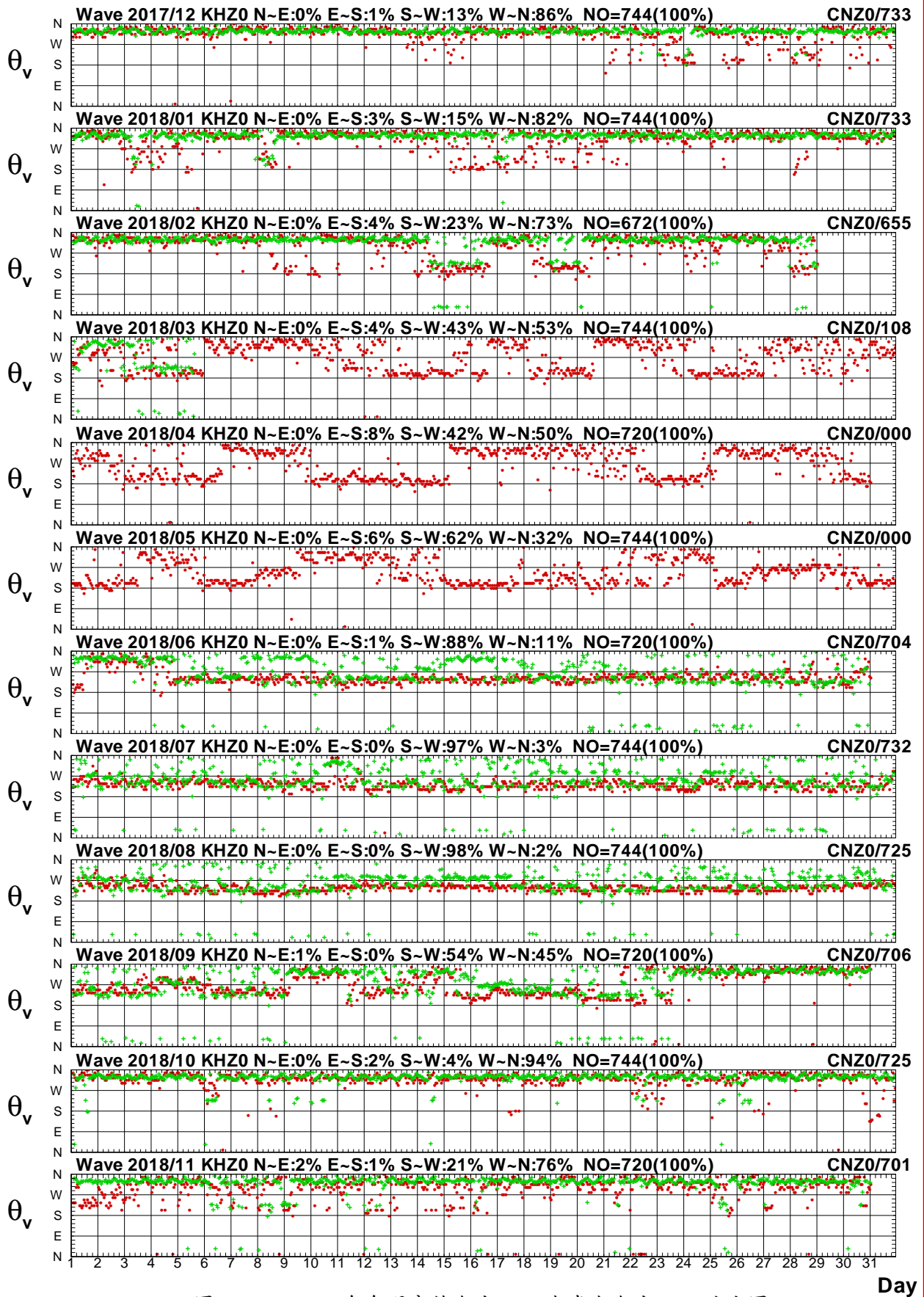


圖2.4.7c 2018年每月高雄海域 Z 站與嘉南海域 Z 站波向圖

V17CKHZ0.1HA V17CCNZ0.1H0 V181KHZ0.1HA V181CNZ0.1H0 V182KHZ0.1HA V182CNZ0.1H0
 V183KHZ0.1HA V183CNZ0.1H0 V184KHZ0.1HA V184CNZ0.1H0 V185KHZ0.1HA V185CNZ0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHZ0 at 2018

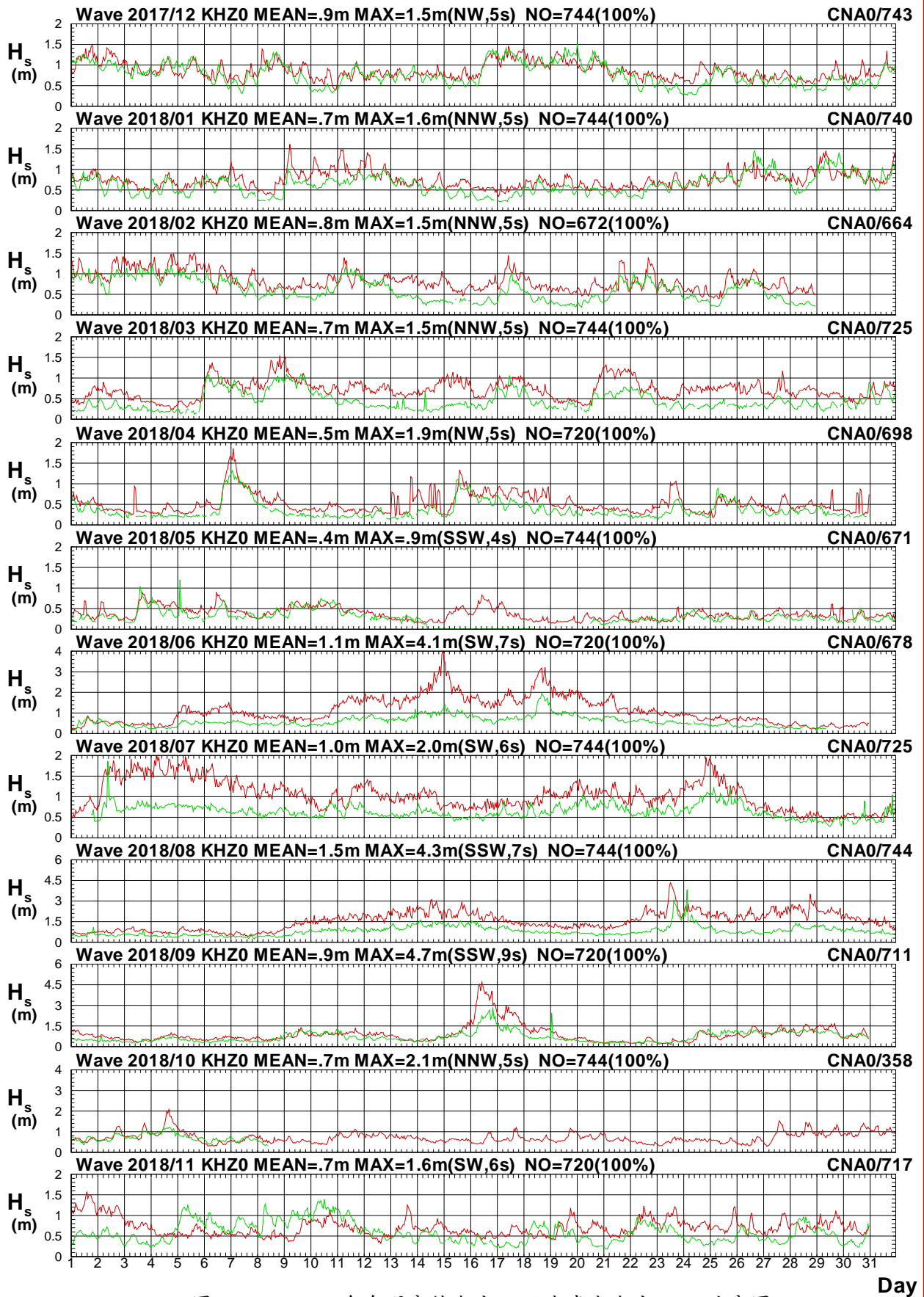


圖2.4.8a 2018年每月高雄海域 Z 站與嘉南海域 A 站波高圖

V17CKHZ0.1HA V17CCNA0.1H0 V181KHZ0.1HA V181CNA0.1H0 V182KHZ0.1HA V182CNA0.1H0
 V183KHZ0.1HA V183CNA0.1H0 V184KHZ0.1HA V184CNA0.1H0 V185KHZ0.1HA V185CNA0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHZ0 at 2018

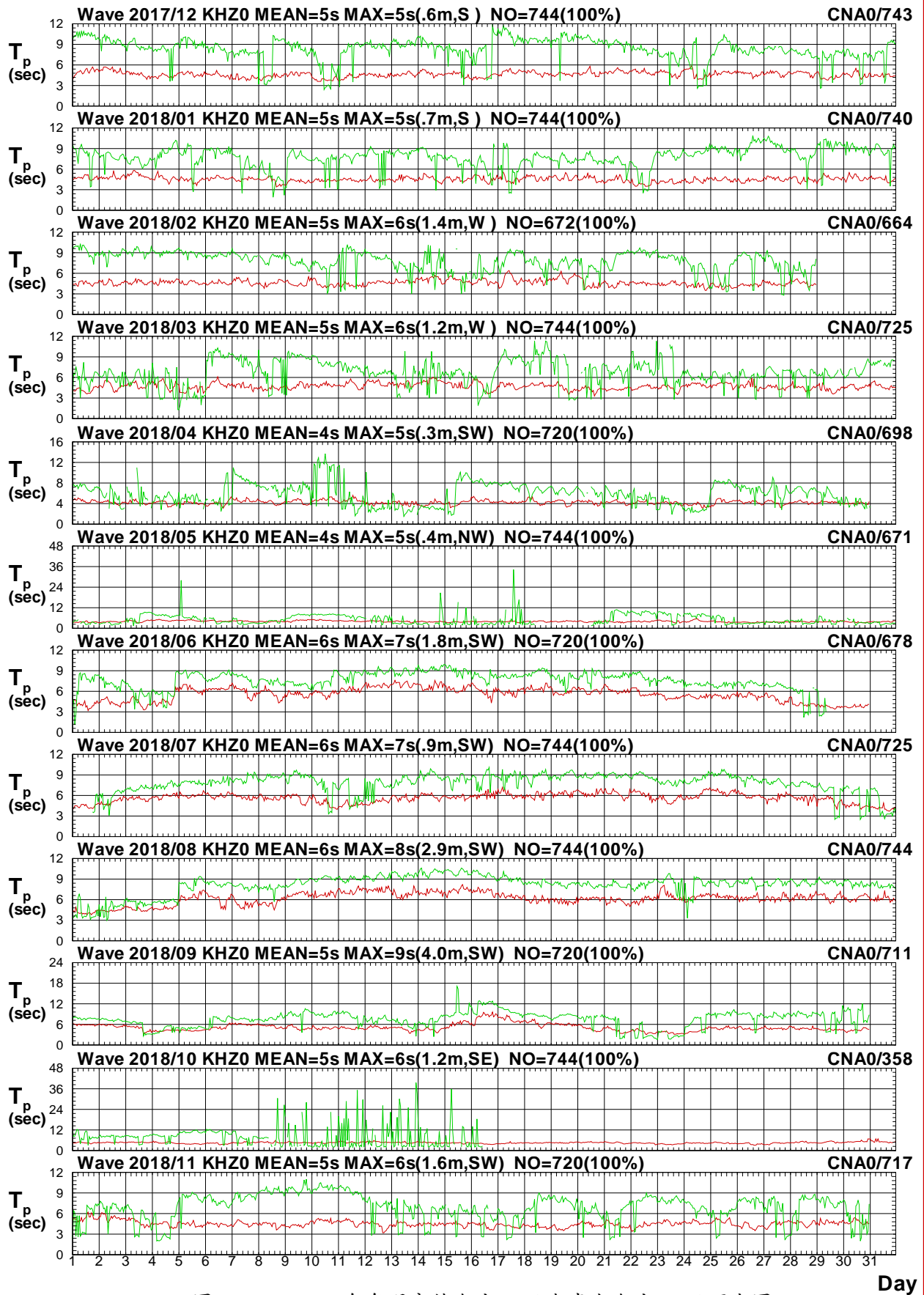


圖2.4.8b 2018年每月高雄海域 Z 站與嘉南海域 A 站週期圖

V17CKHZ0.1HA V17CCNA0.1H0 V181KHZ0.1HA V181CNA0.1H0 V182KHZ0.1HA V182CNA0.1H0
 V183KHZ0.1HA V183CNA0.1H0 V184KHZ0.1HA V184CNA0.1H0 V185KHZ0.1HA V185CNA0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHZ0 at 2018

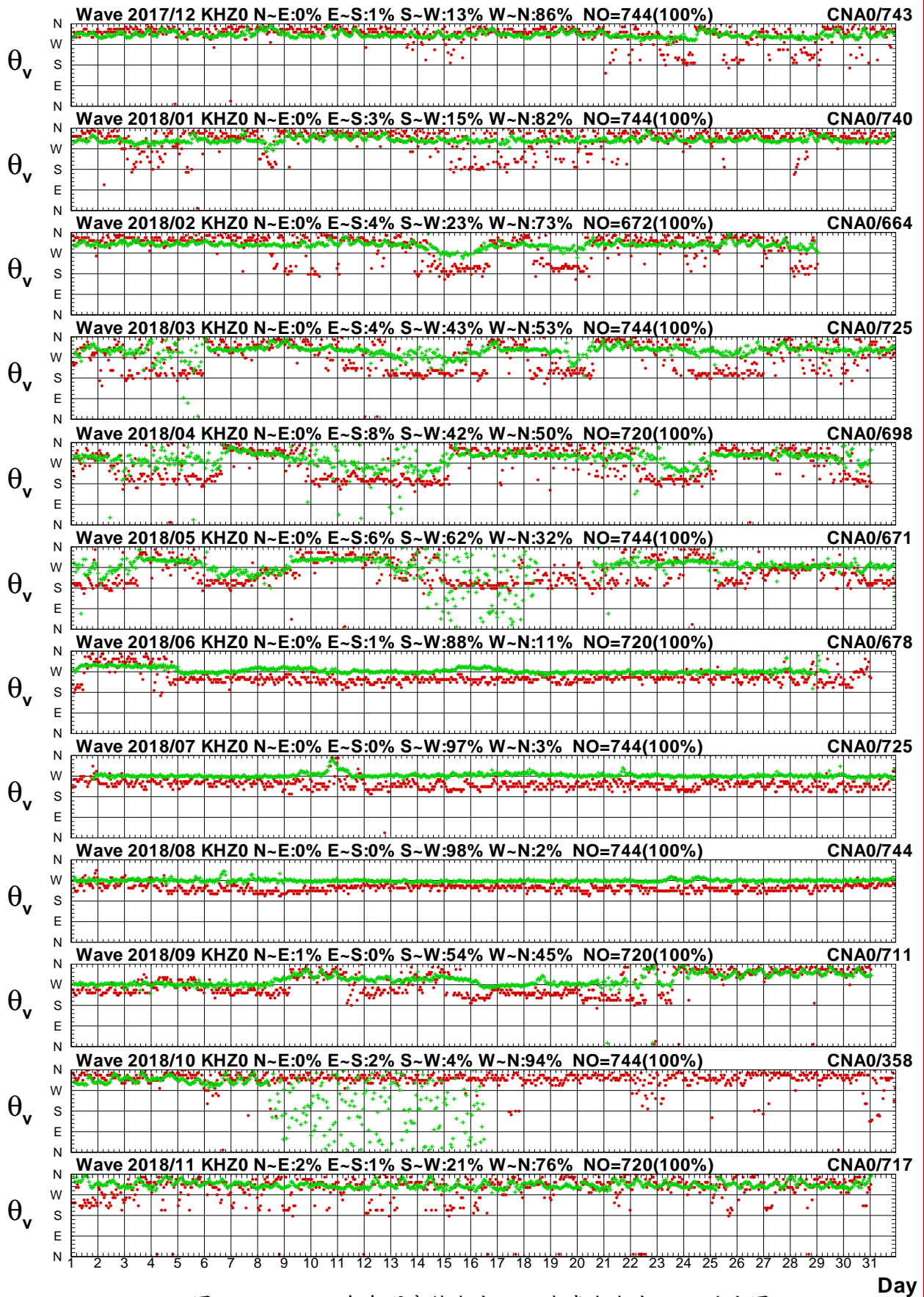


圖2.4.8c 2018年每月高雄海域 Z 站與嘉南海域 A 站波向圖

V17CKHZ0.1HA V17CCNA0.1H0 V181KHZ0.1HA V181CNA0.1H0 V182KHZ0.1HA V182CNA0.1H0
 V183KHZ0.1HA V183CNA0.1H0 V184KHZ0.1HA V184CNA0.1H0 V185KHZ0.1HA V185CNA0.1H0

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Wave H_s in Kao-Hsiung Harbor of KHZ0 at 2018

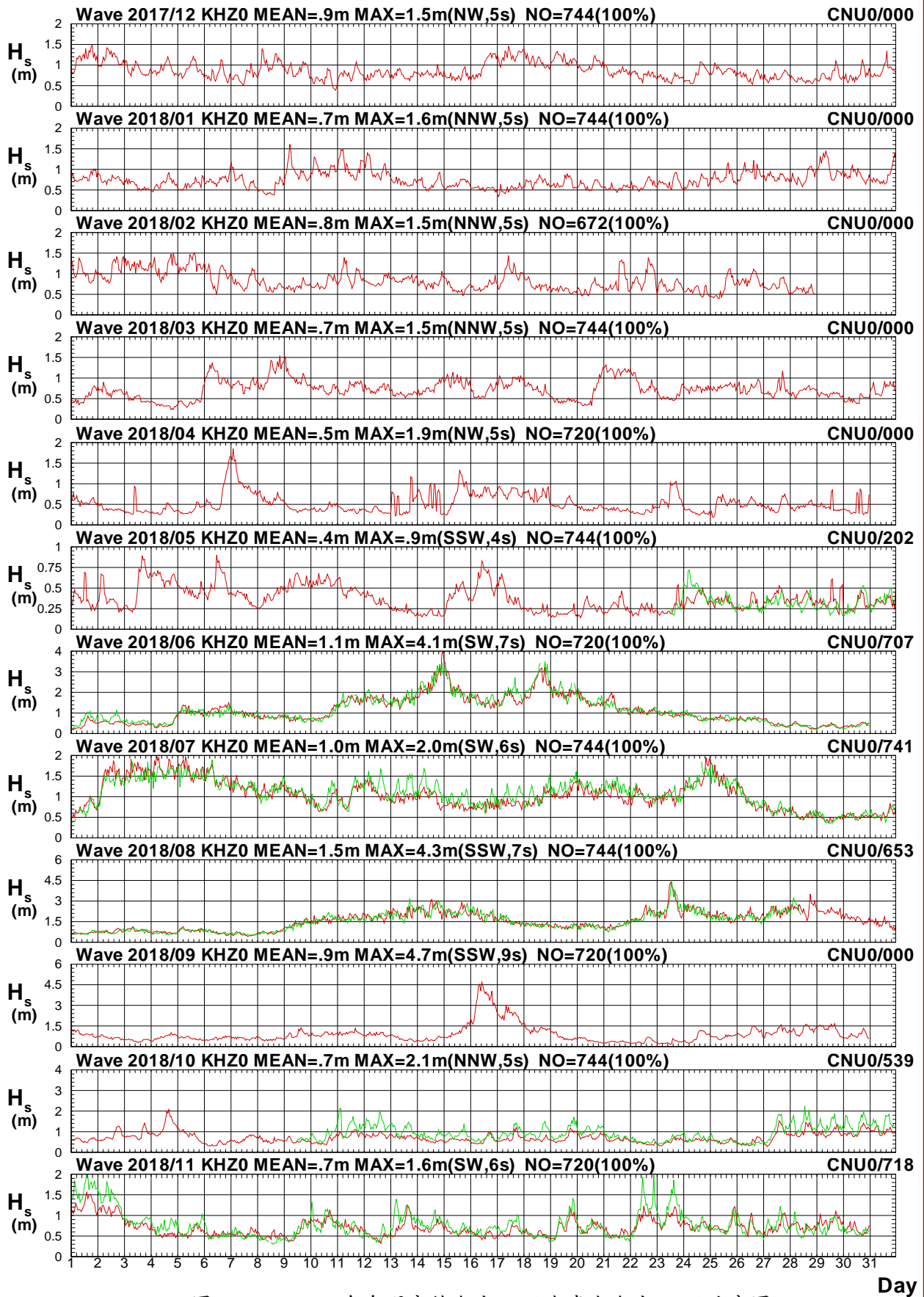


圖2.4.9a 2018年每月高雄海域 Z 站與嘉南海域 U 站波高圖

V17CKHZ0.1HA V17CCNU0.1H0 V181KHZ0.1HA V181CNU0.1H0 V182KHZ0.1HA V182CNU0.1H0
 V183KHZ0.1HA V183CNU0.1H0 V184KHZ0.1HA V184CNU0.1H0 V185KHZ0.1HA V185CNU0.1H0

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Wave T_p in Kao-Hsiung Harbor of KHZ0 at 2018

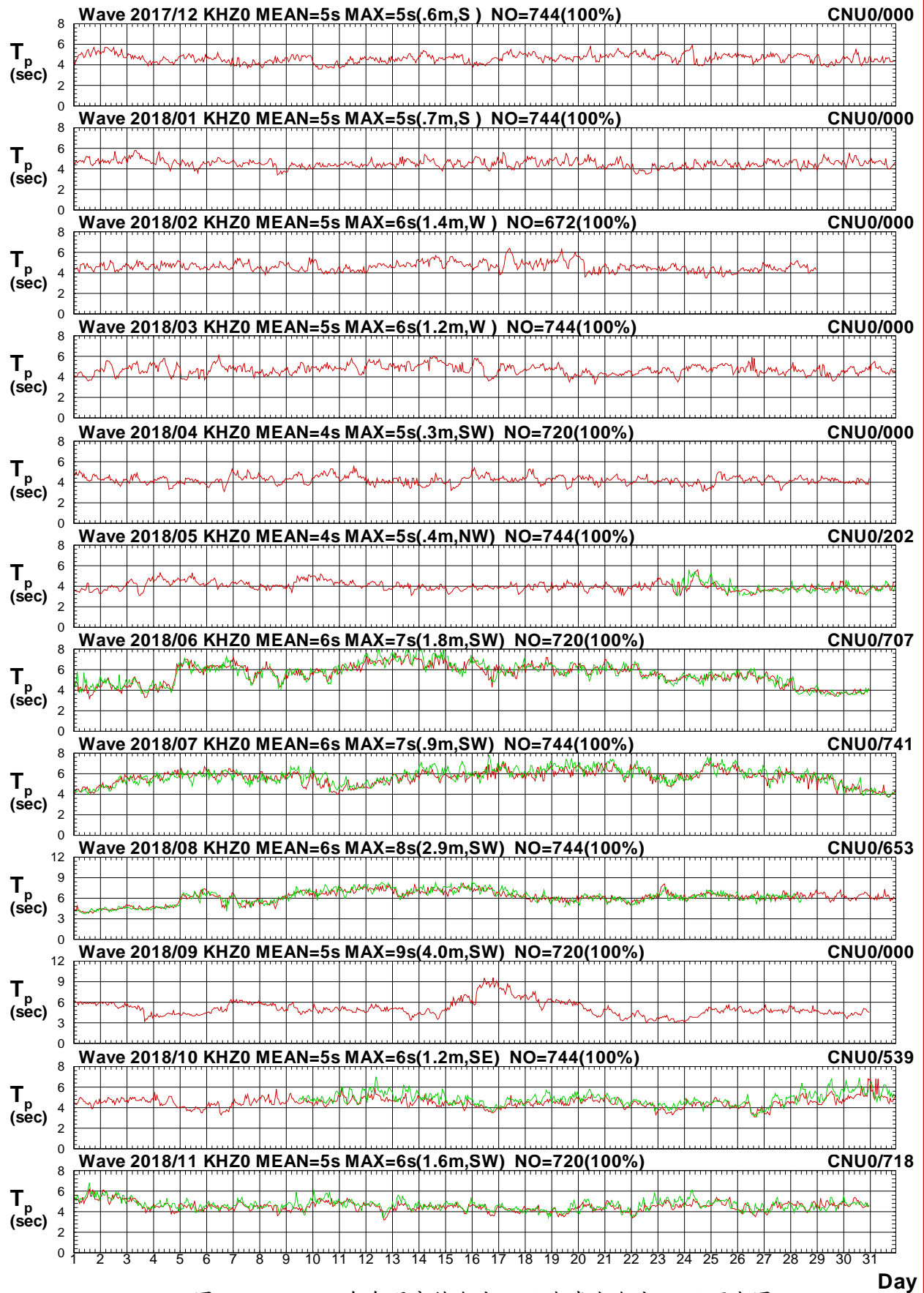


圖2.4.9b 2018年每月高雄海域 Z 站與嘉南海域 U 站週期圖

V17CKHZ0.1HA V17CCNU0.1H0 V181KHZ0.1HA V181CNU0.1H0 V182KHZ0.1HA V182CNU0.1H0
 V183KHZ0.1HA V183CNU0.1H0 V184KHZ0.1HA V184CNU0.1H0 V185KHZ0.1HA V185CNU0.1H0

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Wave Direction in Kao-Hsiung Harbor of KHZ0 at 2018

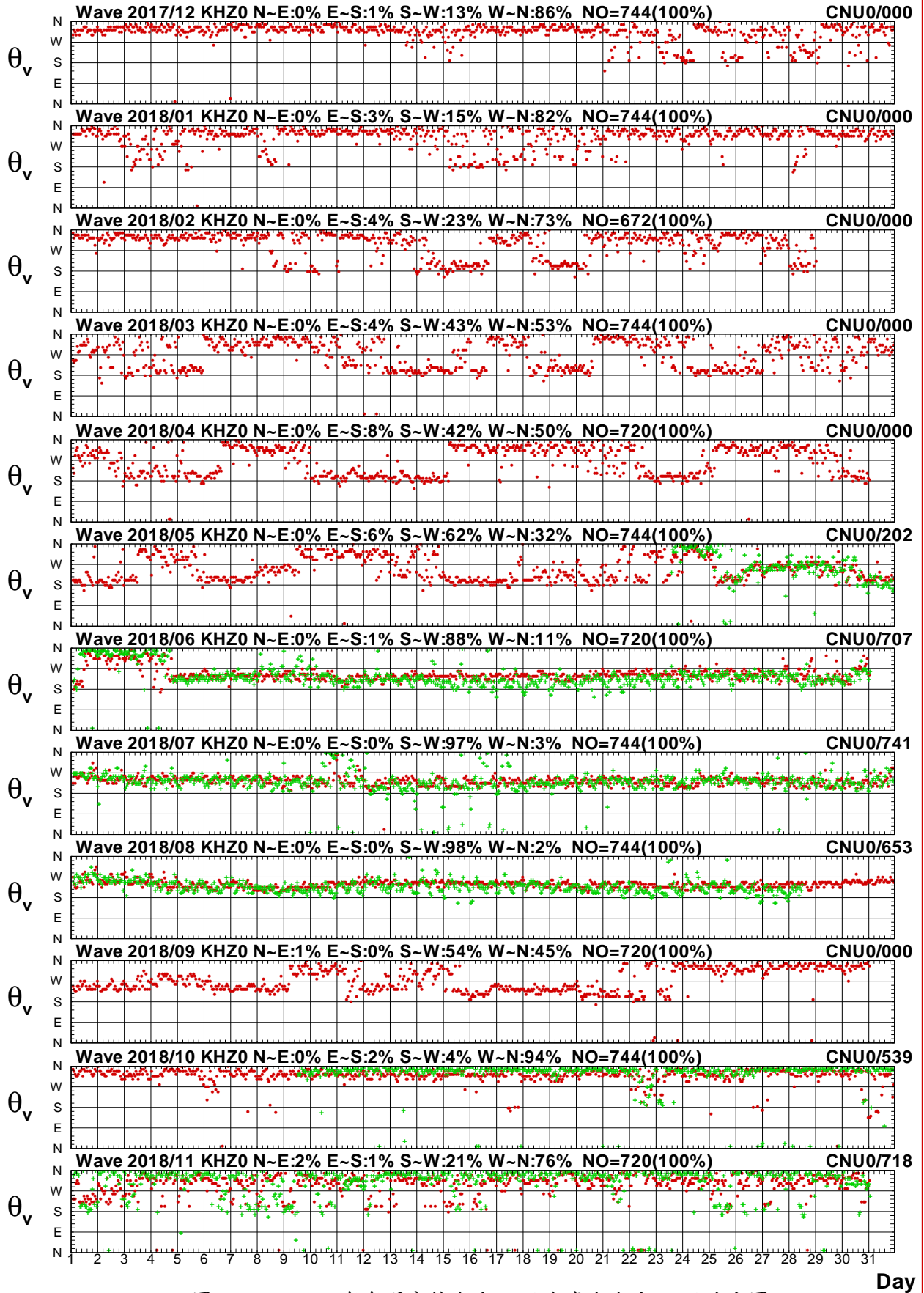


圖2.4.9c 2018年每月高雄海域 Z 站與嘉南海域 U 站波向圖

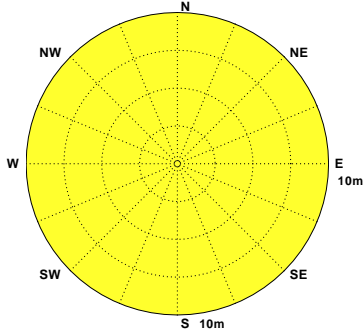
V17CKHZ0.1HA V17CCNU0.1H0 V181KHZ0.1HA V181CNU0.1H0 V182KHZ0.1HA V182CNU0.1H0
 V183KHZ0.1HA V183CNU0.1H0 V184KHZ0.1HA V184CNU0.1H0 V185KHZ0.1HA V185CNU0.1H0

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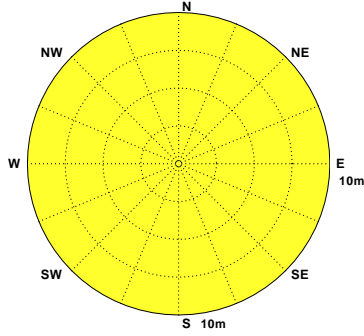
2.5 2018 年高雄海域波浪各測站修補前 波浪向量分佈圖

Distribution of H_s Vectors

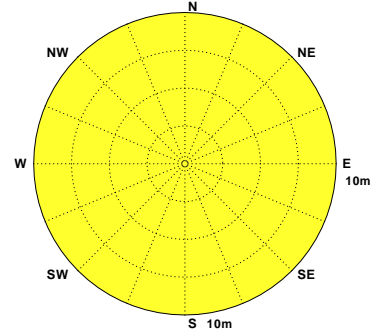
Wave of KHX0 at 2017/12



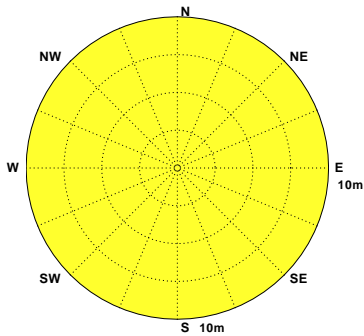
Wave of KHX0 at 2018/01



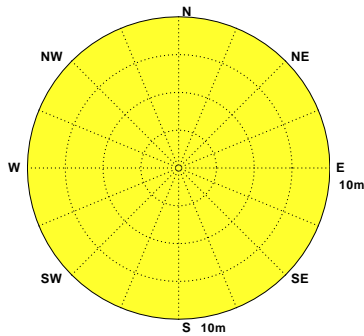
Wave of KHX0 at 2018/02



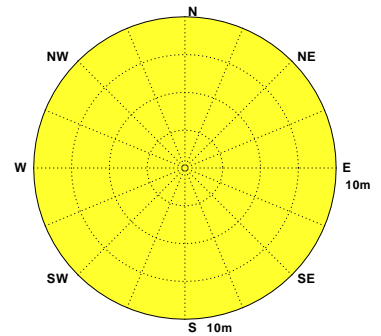
Wave of KHX0 at 2018/03



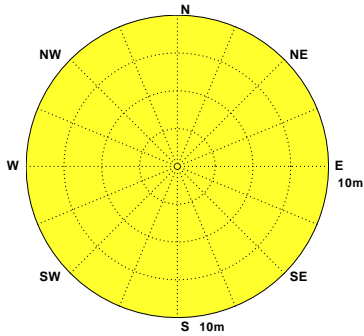
Wave of KHX0 at 2018/04



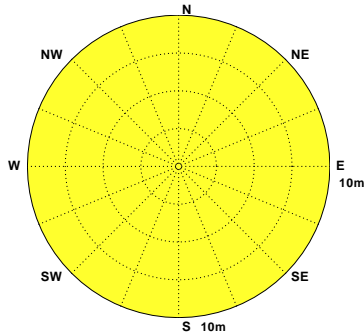
Wave of KHX0 at 2018/05



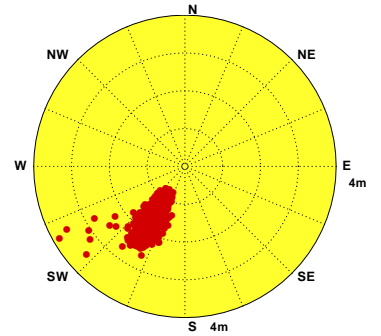
Wave of KHX0 at 2018/06



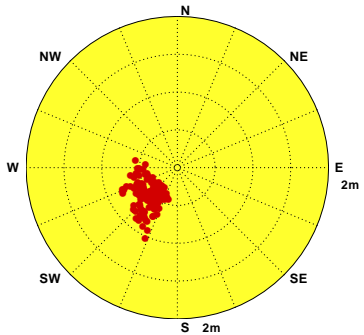
Wave of KHX0 at 2018/07



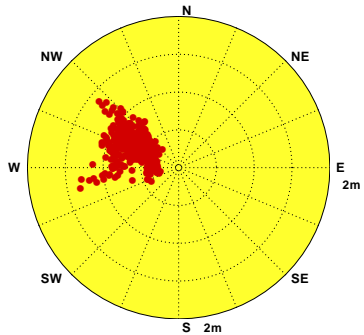
Wave of KHX0 at 2018/08 NO=527(71%)
Hs : MEAN=1.8m MAX=4.0m(WSW,9s)
N-E:0% E-S:0% S-W:99% W-N:0%



Wave of KHX0 at 2018/09 NO=169(23%)
Hs : MEAN=.6m MAX=1.1m(SSW,8s)
N-E:0% E-S:0% S-W:99% W-N:1%



Wave of KHX0 at 2018/10 NO=649(87%)
Hs : MEAN=.6m MAX=1.4m(WSW,12s)
N-E:0% E-S:0% S-W:11% W-N:89%



Wave of KHX0 at 2018/11 NO=653(91%)
Hs : MEAN=.7m MAX=1.6m(WSW,10s)
N-E:0% E-S:0% S-W:41% W-N:59%

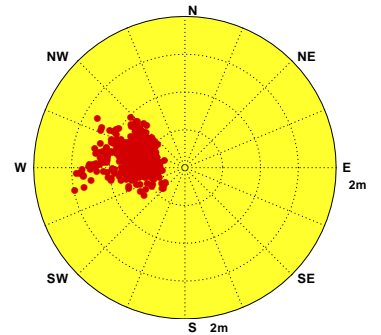


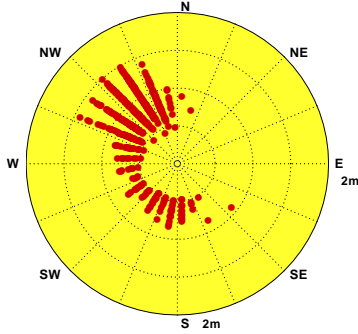
圖2.5.1 2018年高雄海域每月 X 站修補前觀測波高向量分佈圖

V17CKHX0.1H0 V181KHX0.1H0 V182KHX0.1H0 V183KHX0.1H0 V184KHX0.1H0 V185KHX0.1H0
V186KHX0.1H0 V187KHX0.1H0 V188KHX0.1H0 V189KHX0.1H0 V18AKHX0.1H0 V18BKHX0.1H0

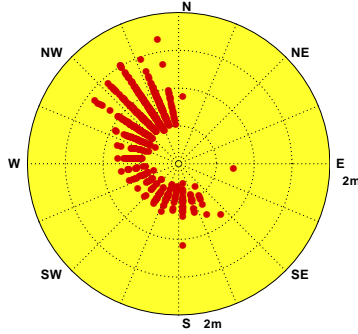
Institute of Harbor & Marine Technology

Distribution of H_s Vectors

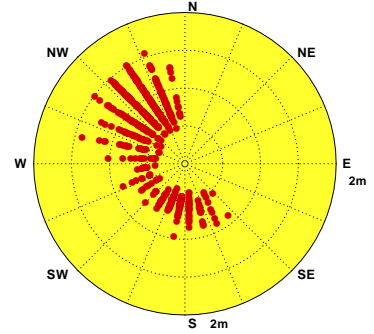
Wave of KHZ0 at 2017/12 NO=715(96%)
 Hs : MEAN=.9m MAX=1.5m(NW,5s)
 N-E:0% E-S:1% S-W:13% W-N:86%



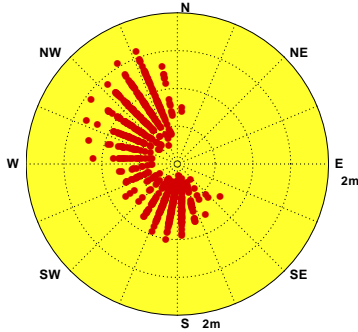
Wave of KHZ0 at 2018/01 NO=714(96%)
 Hs : MEAN=.7m MAX=1.6m(NNW,5s)
 N-E:0% E-S:3% S-W:16% W-N:81%



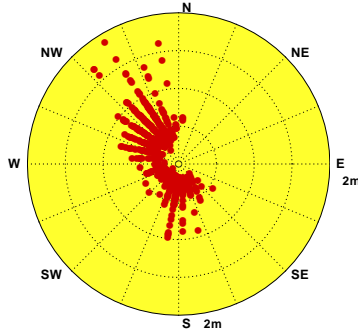
Wave of KHZ0 at 2018/02 NO=634(94%)
 Hs : MEAN=.8m MAX=1.5m(NNW,5s)
 N-E:0% E-S:4% S-W:24% W-N:72%



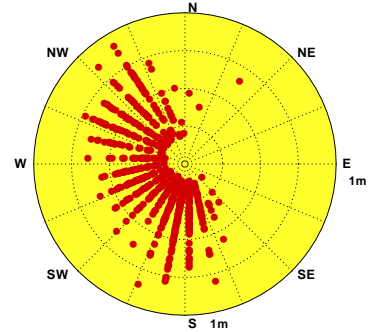
Wave of KHZ0 at 2018/03 NO=689(93%)
 Hs : MEAN=.7m MAX=1.5m(NNW,5s)
 N-E:0% E-S:4% S-W:43% W-N:53%



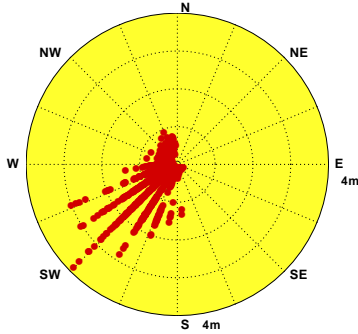
Wave of KHZ0 at 2018/04 NO=670(93%)
 Hs : MEAN=.5m MAX=1.9m(NW,5s)
 N-E:0% E-S:6% S-W:41% W-N:53%



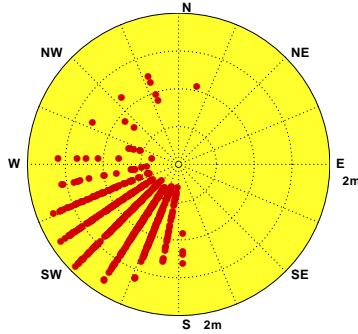
Wave of KHZ0 at 2018/05 NO=720(97%)
 Hs : MEAN=.4m MAX=.9m(SSW,4s)
 N-E:0% E-S:6% S-W:61% W-N:33%



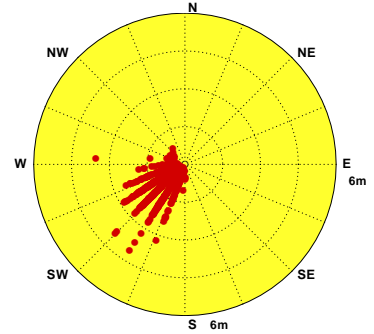
Wave of KHZ0 at 2018/06 NO=707(98%)
 Hs : MEAN=1.1m MAX=4.1m(SW,7s)
 N-E:0% E-S:0% S-W:89% W-N:11%



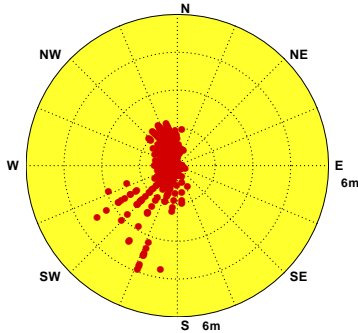
Wave of KHZ0 at 2018/07 NO=738(99%)
 Hs : MEAN=1.0m MAX=2.0m(SW,6s)
 N-E:0% E-S:0% S-W:97% W-N:3%



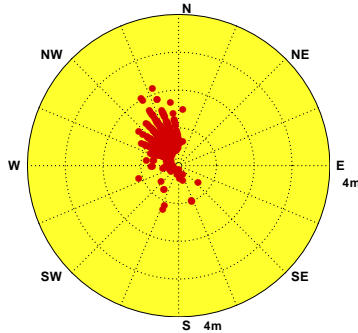
Wave of KHZ0 at 2018/08 NO=738(99%)
 Hs : MEAN=1.6m MAX=4.3m(SSW,7s)
 N-E:0% E-S:0% S-W:98% W-N:2%



Wave of KHZ0 at 2018/09 NO=709(98%)
 Hs : MEAN=.9m MAX=4.7m(SSW,9s)
 N-E:1% E-S:0% S-W:54% W-N:45%



Wave of KHZ0 at 2018/10 NO=730(98%)
 Hs : MEAN=.7m MAX=2.1m(NNW,5s)
 N-E:0% E-S:0% S-W:4% W-N:96%



Wave of KHZ0 at 2018/11 NO=714(99%)
 Hs : MEAN=.7m MAX=1.6m(SW,6s)
 N-E:2% E-S:1% S-W:21% W-N:76%

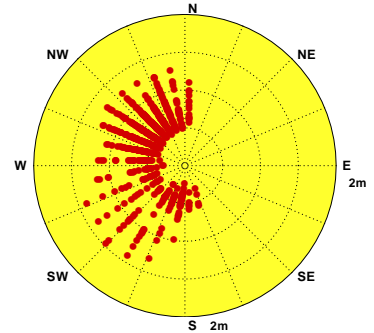


圖2.5.2 2018年高雄海域每月乙站修補前觀測波高向量分佈圖

V17CKHZ0.1H0 V181KHZ0.1H0 V182KHZ0.1H0 V183KHZ0.1H0 V184KHZ0.1H0 V185KHZ0.1H0
 V186KHZ0.1H0 V187KHZ0.1H0 V188KHZ0.1H0 V189KHZ0.1H0 V18AKHZ0.1H0 V18BKHZ0.1H0

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第三章 2018 年高雄海域觀測潮汐資料年報

高雄海域潮汐之觀測包括測站 **T**、測站 **S**、測站 **P**、測站 **Q** 及測站 **X** 等 7 個測站(測站位置如第 0 章圖 TH1)。測站 **T** 與其他 4 個測站特性皆相近。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 **S** 資料作為**主要測站 2**，測站 **X** 資料作為**主要測站 3**。

3.1 2018 年高雄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 年高雄海域**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 年高雄海域**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 年高雄海域**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 年高雄海域**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年每月高雄海域修補前各測站觀測潮汐資料紀錄表

海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域
年月/測站	T	S	X	P	Q	F	L	A	1	2		
2017/12月	549(73.8%)	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	563(78.2%)	720(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 5月	744(100%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 6月	720(100%)	720(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 7月	483(64.9%)	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 8月	744(100%)	744(100%)	527(70.8%)	*	*	*	*	*	*	*	*	*
2018/ 9月	532(73.9%)	720(100%)	169(23.5%)	*	*	*	*	*	*	*	*	*
2018/10月	744(100%)	744(100%)	649(87.2%)	699(94.0%)	697(93.7%)	*	*	*	*	*	*	*
2018/11月	720(100%)	720(100%)	653(90.7%)	712(98.9%)	711(98.8%)	*	*	*	*	*	*	*
2018/冬季	1965(91.0%)	2160(100%)	*	*	*	*	*	*	*	*	*	*
2018/春季	2051(92.9%)	2208(100%)	*	*	*	*	*	*	*	*	*	*
2018/夏季	1947(88.2%)	2208(100%)	527(23.9%)	*	*	*	*	*	*	*	*	*
2018/秋季	1996(91.4%)	2184(100%)	1471(67.4%)	1411(64.6%)	1408(64.5%)	*	*	*	*	*	*	*
2018/整年	7959(90.9%)	8760(100%)	1998(22.8%)	1411(16.1%)	1408(16.1%)	*	*	*	*	*	*	*
起始年月	2017/12	2017/12	2018/08	2018/10	2018/10	*	*	*	*	*	*	*
結束年月	2018/11	2018/11	2018/11	2018/11	2018/11	*	*	*	*	*	*	*

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表 3.1.1b 2018年每月高雄海域修補後各測站潮汐資料紀錄表

海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域
年月/測站	T	S	X									
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年高雄海域主要測站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	48	119	81	114	14.5	26.0	19.7	25.3	48	0	71	-53	744(100%)
2	2018/01	T	49	132	77	107	15.1	26.0	21.5	25.3	46	0	75	-60	744(100%)
3	2018/02	T	47	92	66	80	15.4	26.0	22.3	25.3	36	0	65	-60	672(100%)
4	2018/03	T	46	74	66	73	14.8	26.0	20.6	25.5	43	0	51	-52	744(100%)
5	2018/04	T	52	85	69	82	15.6	26.0	22.5	25.3	39	0	48	-40	720(100%)
6	2018/05	T	53	81	70	76	18.3	26.0	25.1	25.3	30	0	56	-48	744(100%)
7	2018/06	T	58	120	86	116	19.0	26.0	25.4	26.0	27	0	86	-65	720(100%)
8	2018/07	T	49	104	90	102	19.4	26.0	25.3	26.0	32	0	72	-64	744(100%)
9	2018/08	T	47	110	80	102	19.0	26.0	25.2	25.7	32	0	74	-43	744(100%)
10	2018/09	T	49	85	70	81	16.8	26.0	25.1	26.0	31	0	53	-52	720(100%)
11	2018/10	T	51	82	72	82	18.1	27.0	25.6	27.0	17	0	55	-52	744(100%)
12	2018/11	T	65	82	79	82	16.2	26.0	24.9	25.5	23	0	59	-54	720(100%)
13	2018/冬	T	48	132	76	101	15.0	26.0	21.1	25.2	130	0	75	-60	2160(100%)
14	2018/春	T	50	85	69	77	16.0	26.0	23.6	25.4	112	0	56	-52	2208(100%)
15	2018/夏	T	51	120	84	106	19.2	26.0	25.3	26.0	91	0	86	-65	2208(100%)
16	2018/秋	T	55	85	75	82	16.9	27.0	25.1	26.0	71	0	59	-54	2184(100%)
17	2018/年	T	50	132	76	95	16.6	27.0	24.9	25.6	404	0	86	-65	8760(100%)

表3.1.3 2018年高雄海域主要測站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	S	50	118	83	113	13.7	26.0	17.6	25.0	51	0	68	-56	744(100%)
2	2018/01	S	48	115	84	98	14.1	25.0	19.2	25.0	49	0	74	-60	744(100%)
3	2018/02	S	46	92	71	82	15.6	26.0	22.9	25.3	33	0	65	-59	672(100%)
4	2018/03	S	42	73	58	71	14.6	25.0	19.9	25.0	45	0	52	-49	744(100%)
5	2018/04	S	51	84	67	81	15.3	26.0	22.0	25.5	43	0	45	-41	720(100%)
6	2018/05	S	52	98	72	82	17.1	26.0	25.0	25.5	43	0	53	-49	744(100%)
7	2018/06	S	48	128	87	116	16.6	26.0	24.7	25.7	34	0	82	-53	720(100%)
8	2018/07	S	47	119	83	107	15.2	26.0	21.3	25.3	46	0	73	-47	744(100%)
9	2018/08	S	43	80	69	79	15.6	26.0	22.9	25.3	47	0	67	-49	744(100%)
10	2018/09	S	50	79	72	78	14.2	25.0	19.6	25.0	44	0	56	-48	720(100%)
11	2018/10	S	51	89	75	87	14.3	26.0	19.9	25.8	44	0	56	-48	744(100%)
12	2018/11	S	49	75	66	72	14.6	26.0	20.0	25.3	35	0	52	-57	720(100%)
13	2018/冬	S	48	118	81	102	14.3	26.0	19.6	25.2	133	0	74	-60	2160(100%)
14	2018/春	S	48	98	67	78	15.6	26.0	22.7	25.3	131	0	53	-49	2208(100%)
15	2018/夏	S	46	128	79	102	15.7	26.0	22.7	25.3	127	0	82	-53	2208(100%)
16	2018/秋	S	50	89	71	81	14.4	26.0	19.5	25.3	123	0	56	-57	2184(100%)
17	2018/年	S	48	128	74	92	15.0	26.0	21.1	25.3	514	0	82	-60	8760(100%)

表3.1.4 2018年高雄海域主要測站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	X	48	119	81	114	14.5	26.0	19.7	25.3	48	0	71	-53	744(100%)
2	2018/01	X	49	132	77	107	15.1	26.0	21.5	25.3	46	0	75	-60	744(100%)
3	2018/02	X	47	92	66	80	15.4	26.0	22.3	25.3	36	0	65	-60	672(100%)
4	2018/03	X	46	74	66	73	14.8	26.0	20.6	25.5	43	0	51	-52	744(100%)
5	2018/04	X	52	85	69	82	15.6	26.0	22.5	25.3	39	0	48	-40	720(100%)
6	2018/05	X	53	81	70	76	18.3	26.0	25.1	25.3	30	0	56	-48	744(100%)
7	2018/06	X	58	120	86	116	19.0	26.0	25.4	26.0	27	0	86	-65	720(100%)
8	2018/07	X	49	104	90	102	19.4	26.0	25.3	26.0	32	0	72	-64	744(100%)
9	2018/08	X	42	107	80	105	16.2	25.0	24.0	25.0	39	0	65	-45	744(100%)
10	2018/09	X	46	101	74	96	16.1	26.0	24.3	25.7	38	0	53	-52	720(100%)
11	2018/10	X	49	94	72	88	14.1	25.0	18.6	24.8	44	0	53	-53	744(100%)
12	2018/11	X	51	99	73	90	17.0	26.0	25.1	26.0	35	0	55	-54	720(100%)
13	2018/冬	X	48	132	76	101	15.0	26.0	21.1	25.2	130	0	75	-60	2160(100%)
14	2018/春	X	50	85	69	77	16.0	26.0	23.6	25.4	112	0	56	-52	2208(100%)
15	2018/夏	X	49	120	85	106	18.0	26.0	25.1	25.8	98	0	86	-65	2208(100%)
16	2018/秋	X	49	101	72	90	15.6	26.0	22.6	25.5	117	0	55	-54	2184(100%)
17	2018/年	X	49	132	75	96	16.1	26.0	23.7	25.4	457	0	86	-65	8760(100%)

Tidal Level in Kao-Hsiung Harbor of KHT0 at 2018¹ 8 15 22

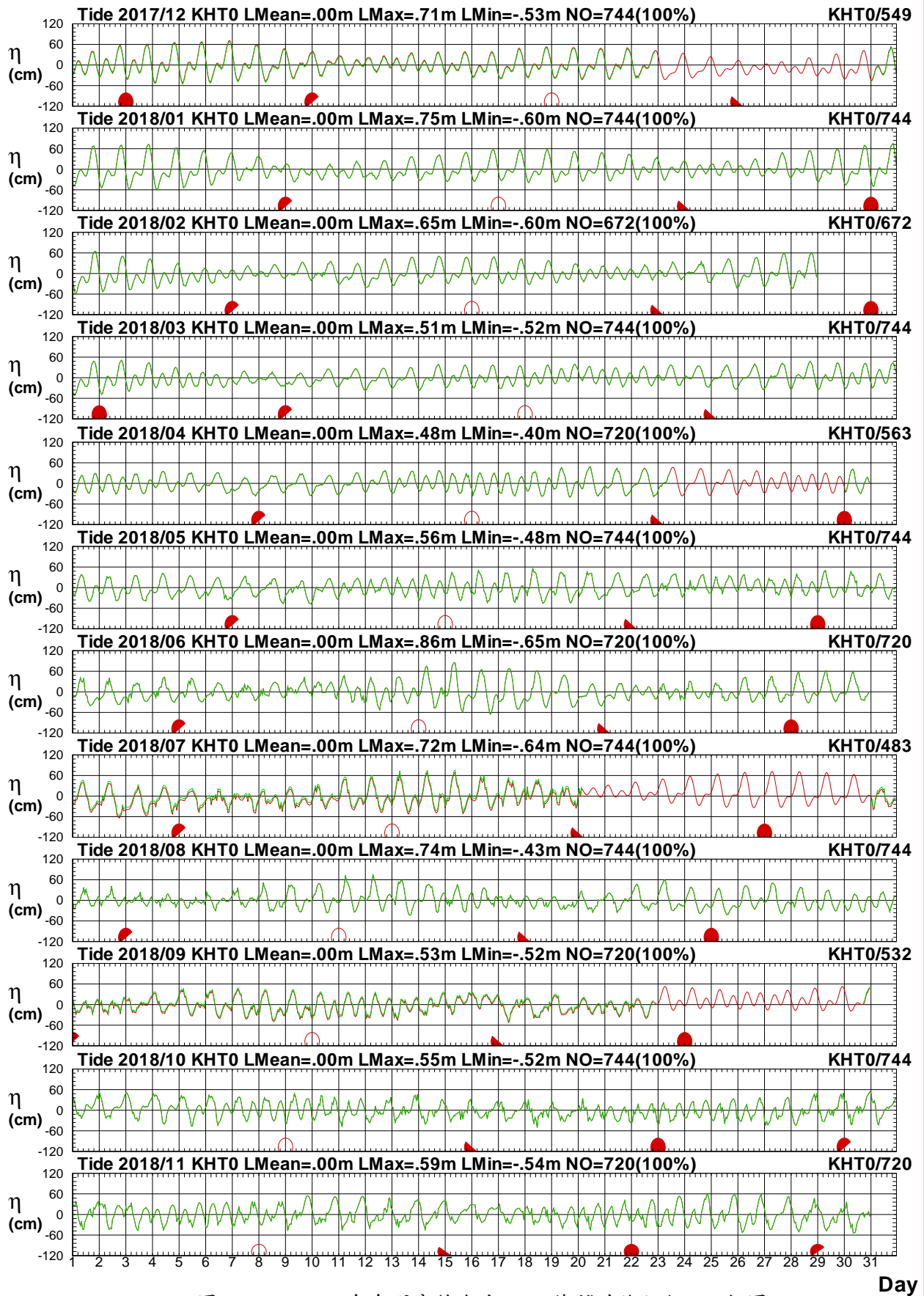


圖3.1.37 2018年每月高雄海域 T 站修補前後之潮位比較圖

T17CKHT0.1HA T17CKHT0.1H0 T181KHT0.1HA T181KHT0.1H0 T182KHT0.1HA T182KHT0.1H0
T183KHT0.1HA T183KHT0.1H0 T184KHT0.1HA T184KHT0.1H0 T185KHT0.1HA T185KHT0.1H0

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Tidal Level in Kao-Hsiung Harbor of KHT0 at 2018 8 15 22

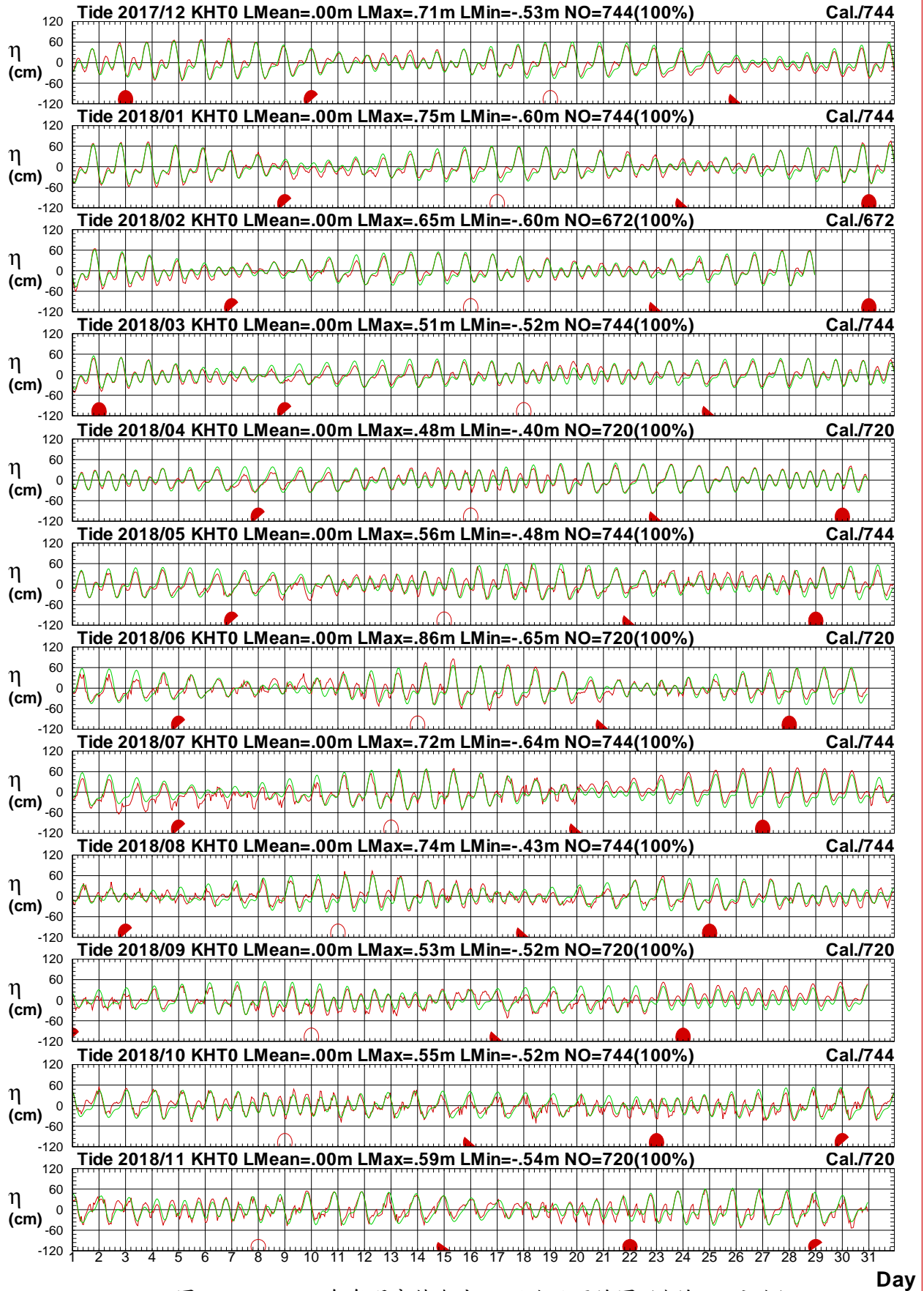


圖3.1.38 2018年每月高雄海域 T 站潮位歷線圖 (綠線: 天文潮)

T17CKHT0.1HA T17CKHT0.1HC T181KHT0.1HA T181KHT0.1HC T182KHT0.1HA T182KHT0.1HC
 T183KHT0.1HA T183KHT0.1HC T184KHT0.1HA T184KHT0.1HC T185KHT0.1HA T185KHT0.1HC

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Tidal Level in Kao-Hsiung Harbor of KHS0 at 2018¹ 8 15 22

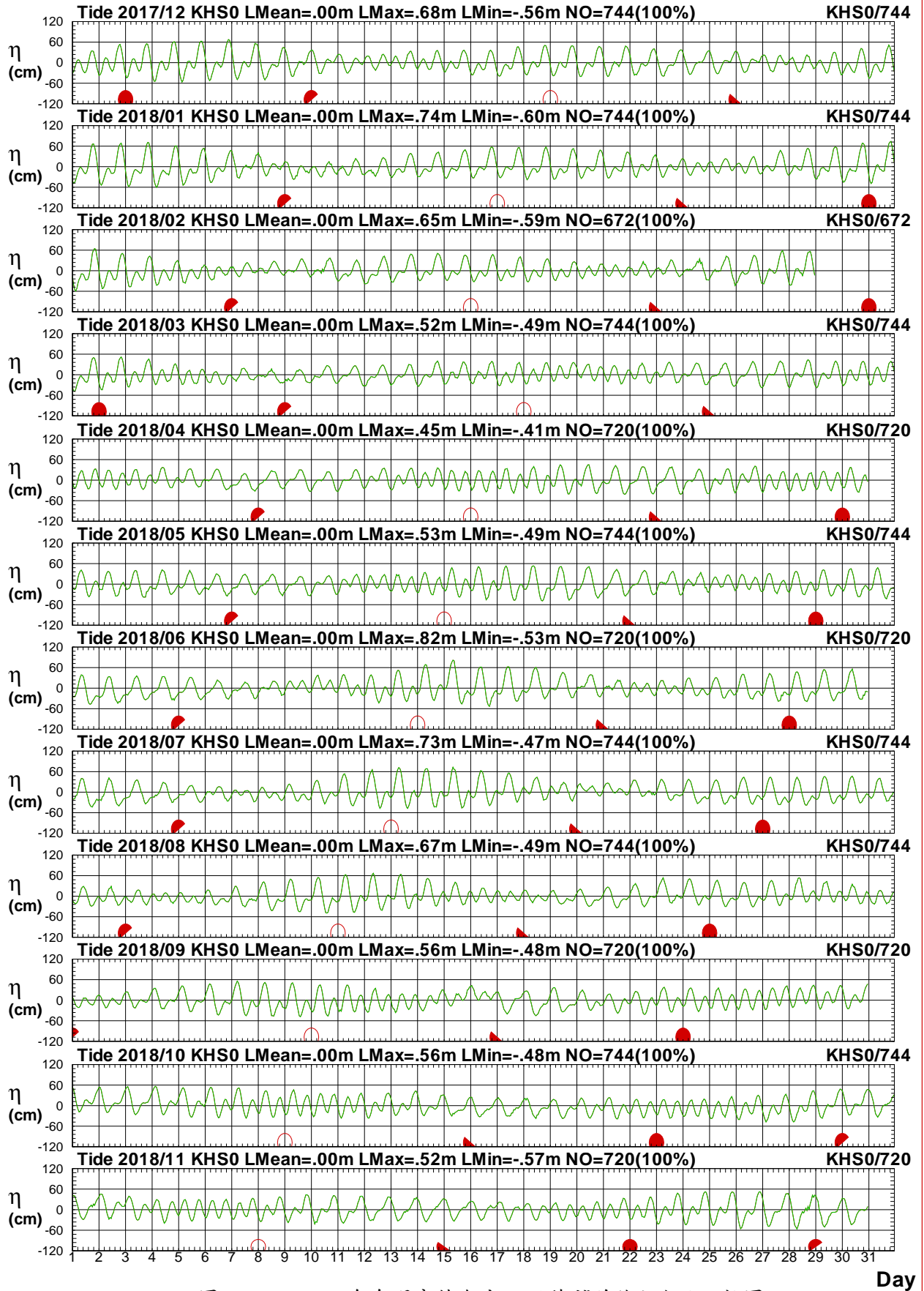


圖3.1.39 2018年每月高雄海域 S 站修補前後之潮位比較圖

T17CKHS0.1HA T17CKHS0.1HO T181KHS0.1HA T181KHS0.1HO T182KHS0.1HA T182KHS0.1HO
 T183KHS0.1HA T183KHS0.1HO T184KHS0.1HA T184KHS0.1HO T185KHS0.1HA T185KHS0.1HO

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Tidal Level in Kao-Hsiung Harbor of KHS0 at 2018¹ 8 15 22

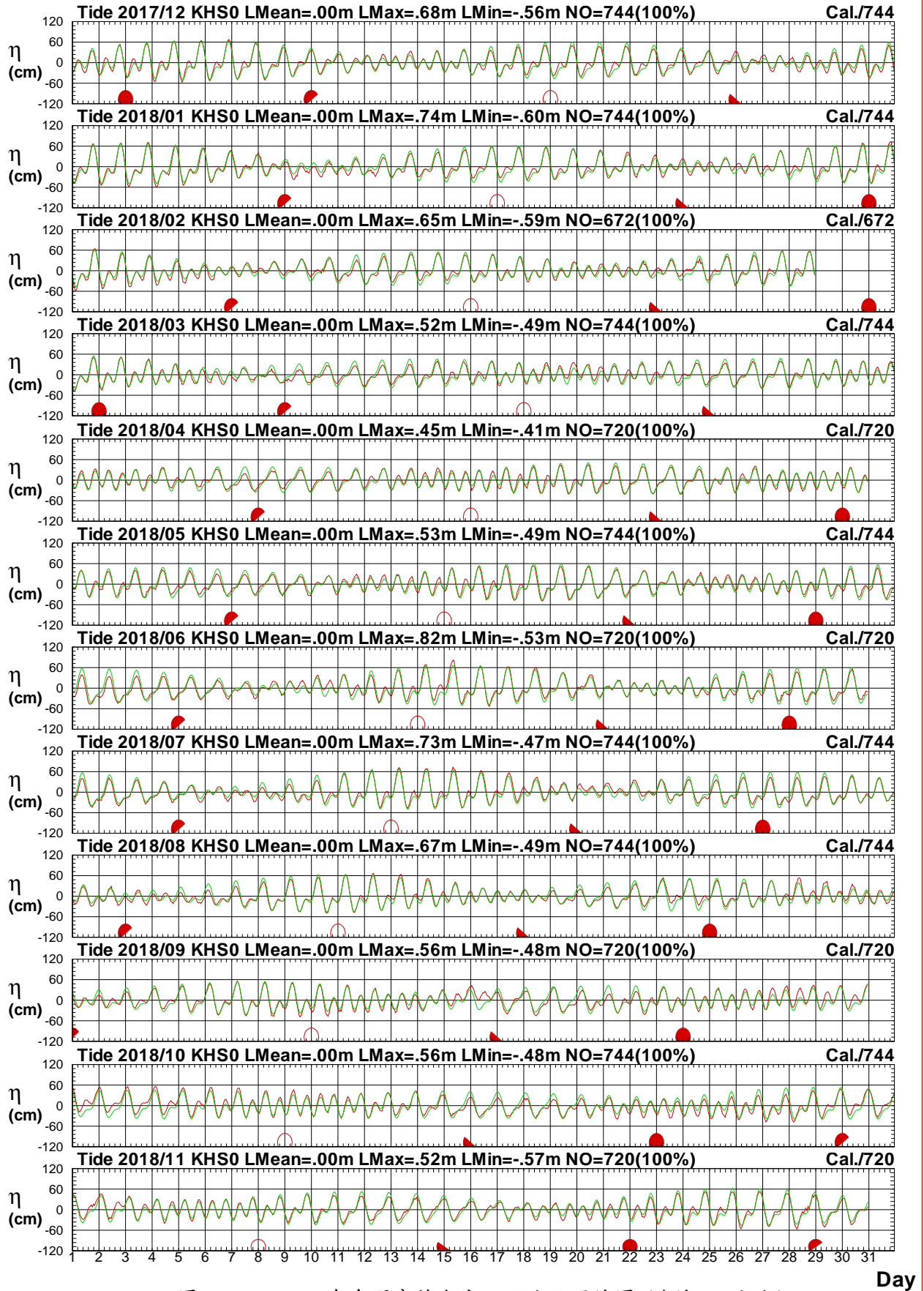


圖3.1.40 2018年每月高雄海域 S 站潮位歷線圖 (綠線: 天文潮)

T17CKHS0.1HA T17CKHT0.1HC T181KHS0.1HA T181KHT0.1HC T182KHS0.1HA T182KHT0.1HC
 T183KHS0.1HA T183KHT0.1HC T184KHS0.1HA T184KHT0.1HC T185KHS0.1HA T185KHT0.1HC

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Tidal Level in Kao-Hsiung Harbor of KHX0 at 2018¹ ○ 8 ● 15 ● 22 ●

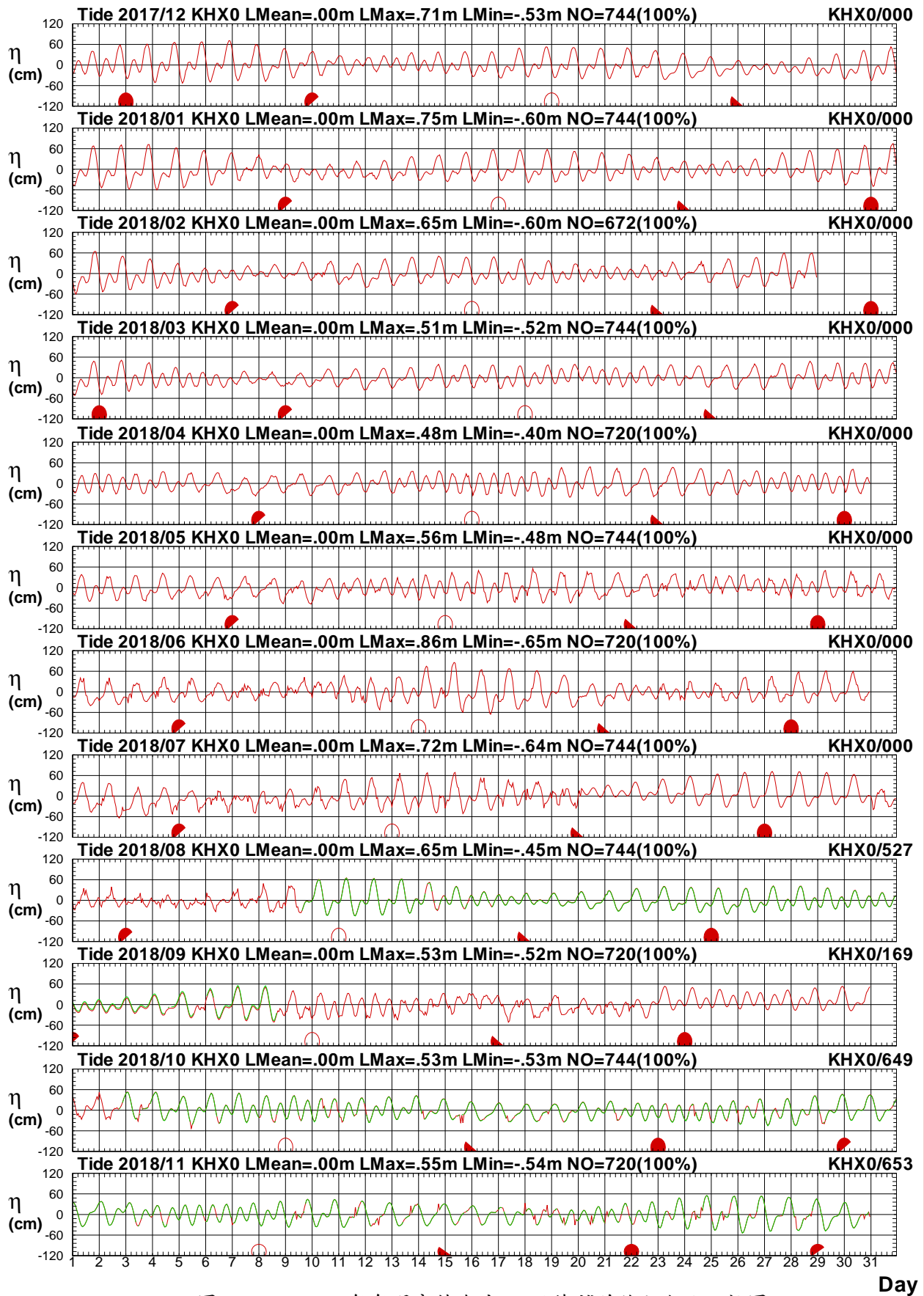


圖3.1.41 2018年每月高雄海域 X 站修補前後之潮位比較圖

T17CKHX0.1HA T17CKHX0.1HO T181KHX0.1HA T181KHX0.1HO T182KHX0.1HA T182KHX0.1HO
 T183KHX0.1HA T183KHX0.1HO T184KHX0.1HA T184KHX0.1HO T185KHX0.1HA T185KHX0.1HO

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Tidal Level in Kao-Hsiung Harbor of KHX0 at 2018¹ ● 8 ▲ 15 ● 22 ▲

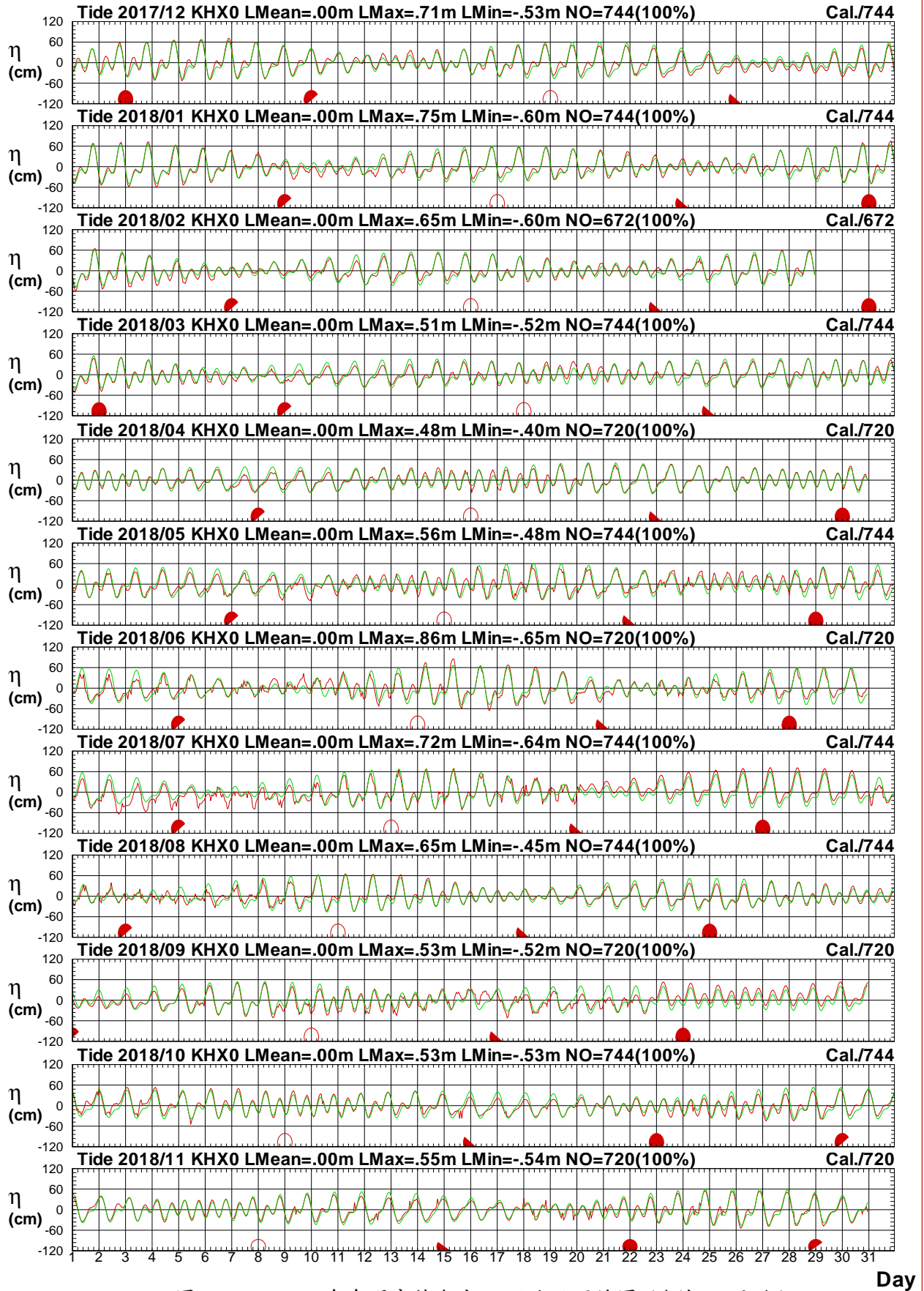


圖3.1.42 2018年每月高雄海域 X 站潮位歷線圖 (綠線: 天文潮)

T17CKHX0.1HA T17CKHT0.1HC T181KHX0.1HA T181KHT0.1HC T182KHX0.1HA T182KHT0.1HC
 T183KHX0.1HA T183KHT0.1HC T184KHX0.1HA T184KHT0.1HC T185KHX0.1HA T185KHT0.1HC

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3.2 2018 年高雄海域各測站修補前 潮汐統計量統計表

表3.2.1 2018年高雄海域 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	51	119	86	116	13.9	25.0	18.2	25.0	34	0	68	-56	549(74%)
2	2018/01	T	49	132	77	107	15.1	26.0	21.5	25.3	46	0	75	-60	744(100%)
3	2018/02	T	47	92	66	80	15.4	26.0	22.3	25.3	36	0	65	-60	672(100%)
4	2018/03	T	46	74	66	73	14.8	26.0	20.6	25.5	43	0	51	-52	744(100%)
5	2018/04	T	50	85	69	82	16.2	25.0	24.8	25.0	26	0	49	-39	563(78%)
6	2018/05	T	53	81	70	76	18.3	26.0	25.1	25.3	30	0	56	-48	744(100%)
7	2018/06	T	58	120	86	116	19.0	26.0	25.4	26.0	27	0	86	-65	720(100%)
8	2018/07	T	48	101	92	101	20.4	26.0	25.6	26.0	16	0	75	-58	483(65%)
9	2018/08	T	47	110	80	102	19.0	26.0	25.2	25.7	32	0	74	-43	744(100%)
10	2018/09	T	51	74	69	74	19.5	26.0	25.5	26.0	18	0	52	-48	532(74%)
11	2018/10	T	51	82	72	82	18.1	27.0	25.6	27.0	17	0	55	-52	744(100%)
12	2018/11	T	65	82	79	82	16.2	26.0	24.9	25.5	23	0	59	-54	720(100%)
13	2018/冬	T	49	132	77	105	14.8	26.0	20.9	25.2	116	0	75	-60	1965(91%)
14	2018/春	T	49	85	68	76	16.2	26.0	24.0	25.3	99	0	56	-52	2051(93%)
15	2018/夏	T	51	120	84	108	19.3	26.0	25.4	26.0	75	0	86	-65	1947(88%)
16	2018/秋	T	57	82	75	81	17.8	27.0	25.3	26.2	58	0	59	-54	1996(91%)
17	2018/年	T	51	132	76	95	16.7	27.0	24.9	25.6	348	0	86	-65	7959(91%)

3-2-1

表3.2.2 2018年高雄海域 S 站修補前潮差週期及潮位重要統計量統計表

序 號	日期 (年/月)	測 站	平均 潮差 (公分)	最大 潮差 (公分)	1/3 潮差 (公分)	1/10 潮差 (公分)	平均 週期 (時)	最大 週期 (時)	1/3 週期 (時)	1/10 週期 (時)	潮差 個數 (個)	平均 潮位 (公分)	最高 潮位 (公分)	最低 潮位 (公分)	水位 點數 (個)
1	2017/12	S	50	118	83	113	13.7	26.0	17.6	25.0	51	0	68	-56	744(100%)
2	2018/01	S	48	115	84	98	14.1	25.0	19.2	25.0	49	0	74	-60	744(100%)
3	2018/02	S	46	92	71	82	15.6	26.0	22.9	25.3	33	0	65	-59	672(100%)
4	2018/03	S	42	73	58	71	14.6	25.0	19.9	25.0	45	0	52	-49	744(100%)
5	2018/04	S	51	84	67	81	15.3	26.0	22.0	25.5	43	0	45	-41	720(100%)
6	2018/05	S	52	98	72	82	17.1	26.0	25.0	25.5	43	0	53	-49	744(100%)
7	2018/06	S	48	128	87	116	16.6	26.0	24.7	25.7	34	0	82	-53	720(100%)
8	2018/07	S	47	119	83	107	15.2	26.0	21.3	25.3	46	0	73	-47	744(100%)
9	2018/08	S	43	80	69	79	15.6	26.0	22.9	25.3	47	0	67	-49	744(100%)
10	2018/09	S	50	79	72	78	14.2	25.0	19.6	25.0	44	0	56	-48	720(100%)
11	2018/10	S	51	89	75	87	14.3	26.0	19.9	25.8	44	0	56	-48	744(100%)
12	2018/11	S	49	75	66	72	14.6	26.0	20.0	25.3	35	0	52	-57	720(100%)
13	2018/冬	S	48	118	81	102	14.3	26.0	19.6	25.2	133	0	74	-60	2160(100%)
14	2018/春	S	48	98	67	78	15.6	26.0	22.7	25.3	131	0	53	-49	2208(100%)
15	2018/夏	S	46	128	79	102	15.7	26.0	22.7	25.3	127	0	82	-53	2208(100%)
16	2018/秋	S	50	89	71	81	14.4	26.0	19.5	25.3	123	0	56	-57	2184(100%)
17	2018/年	S	48	128	74	92	15.0	26.0	21.1	25.3	514	0	82	-60	8760(100%)

表3.2.3 2018年高雄海域 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													
2	2018/01	X													
3	2018/02	X													
4	2018/03	X													
5	2018/04	X													
6	2018/05	X													
7	2018/06	X													
8	2018/07	X													
9	2018/08	X	42	110	78	108	16.7	25.0	24.8	25.0	29	0	64	-46	527(71%)
10	2018/09	X	39	95	72	95	16.0	25.0	25.0	25.0	11	0	55	-47	169(24%)
11	2018/10	X	50	85	72	84	17.8	26.0	25.0	25.5	27	0	52	-45	649(87%)
12	2018/11	X	50	77	68	76	20.2	26.0	25.4	26.0	24	0	55	-54	653(91%)
13	2018/冬	X													
14	2018/春	X													
15	2018/夏	X	42	110	78	108	16.7	25.0	24.8	25.0	29	0	64	-46	527(24%)
16	2018/秋	X	48	95	70	83	18.4	26.0	25.2	25.7	62	0	56	-54	1471(67%)
17	2018/年	X	46	110	72	94	17.9	26.0	25.1	25.4	91	0	64	-54	1998(23%)

3-2-3

表3.2.4 2018年高雄海域 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													
2	2018/01	P													
3	2018/02	P													
4	2018/03	P													
5	2018/04	P													
6	2018/05	P													
7	2018/06	P													
8	2018/07	P													
9	2018/08	P													
10	2018/09	P													
11	2018/10	P	52	88	72	85	15.8	25.0	22.9	25.0	36	0	58	-48	699(94%)
12	2018/11	P	47	83	70	79	15.0	26.0	20.9	25.3	34	0	52	-57	712(99%)
13	2018/冬	P													
14	2018/春	P													
15	2018/夏	P													
16	2018/秋	P	50	88	71	82	15.4	26.0	22.0	25.1	70	0	58	-57	1411(65%)
17	2018/年	P	50	88	71	82	15.4	26.0	22.0	25.1	70	0	58	-57	1411(16%)

3-2-4

表3.2.5 2018年高雄海域 Q 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	Q													
2	2018/01	Q													
3	2018/02	Q													
4	2018/03	Q													
5	2018/04	Q													
6	2018/05	Q													
7	2018/06	Q													
8	2018/07	Q													
9	2018/08	Q													
10	2018/09	Q													
11	2018/10	Q	51	88	71	84	16.4	25.0	24.4	25.0	42	0	61	-53	697(94%)
12	2018/11	Q	48	86	72	83	17.3	26.0	25.2	25.7	38	0	54	-56	711(99%)
13	2018/冬	Q													
14	2018/春	Q													
15	2018/夏	Q													
16	2018/秋	Q	49	88	71	83	16.8	26.0	25.0	25.3	80	0	61	-56	1408(65%)
17	2018/年	Q	49	88	71	83	16.8	26.0	25.0	25.3	80	0	61	-56	1408(16%)

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3.3 2018 年高雄海域**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 Kao-Hsiung Seas of KHT0 at 2018 1 ○ 8 ● 15 ● 22 ●

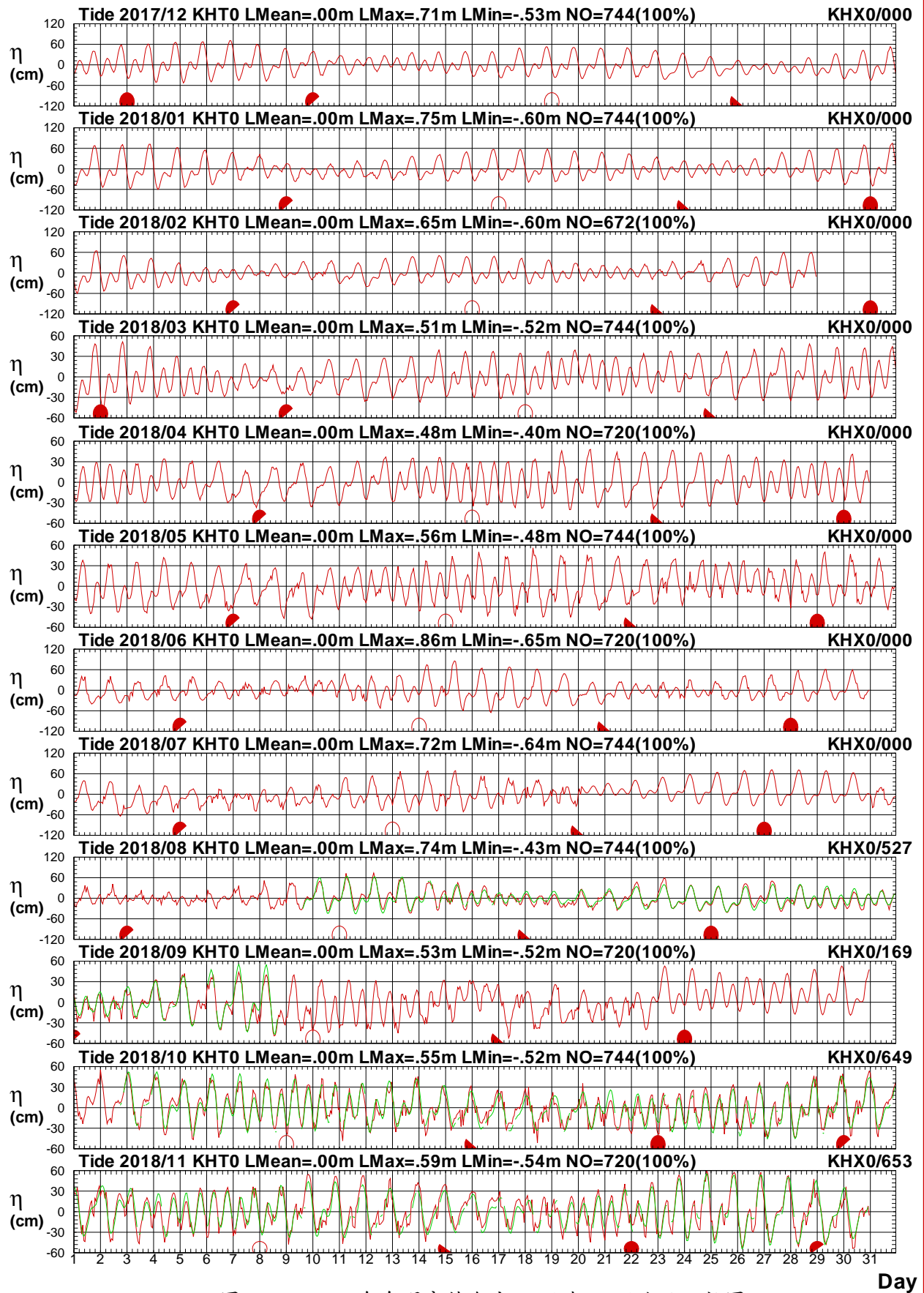


圖3.3.1 2018年每月高雄海域 T 站與 X 站潮位比較圖

T17CKHT0.1HA T17CKHX0.1H0 T181KHT0.1HA T181KHX0.1H0 T182KHT0.1HA T182KHX0.1H0
 T183KHT0.1HA T183KHX0.1H0 T184KHT0.1HA T184KHX0.1H0 T185KHT0.1HA T185KHX0.1H0

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Tidal Level in Kao-Hsiung Seas of KHT0 at 2018 1 ○ 8 ● 15 ● 22 ●

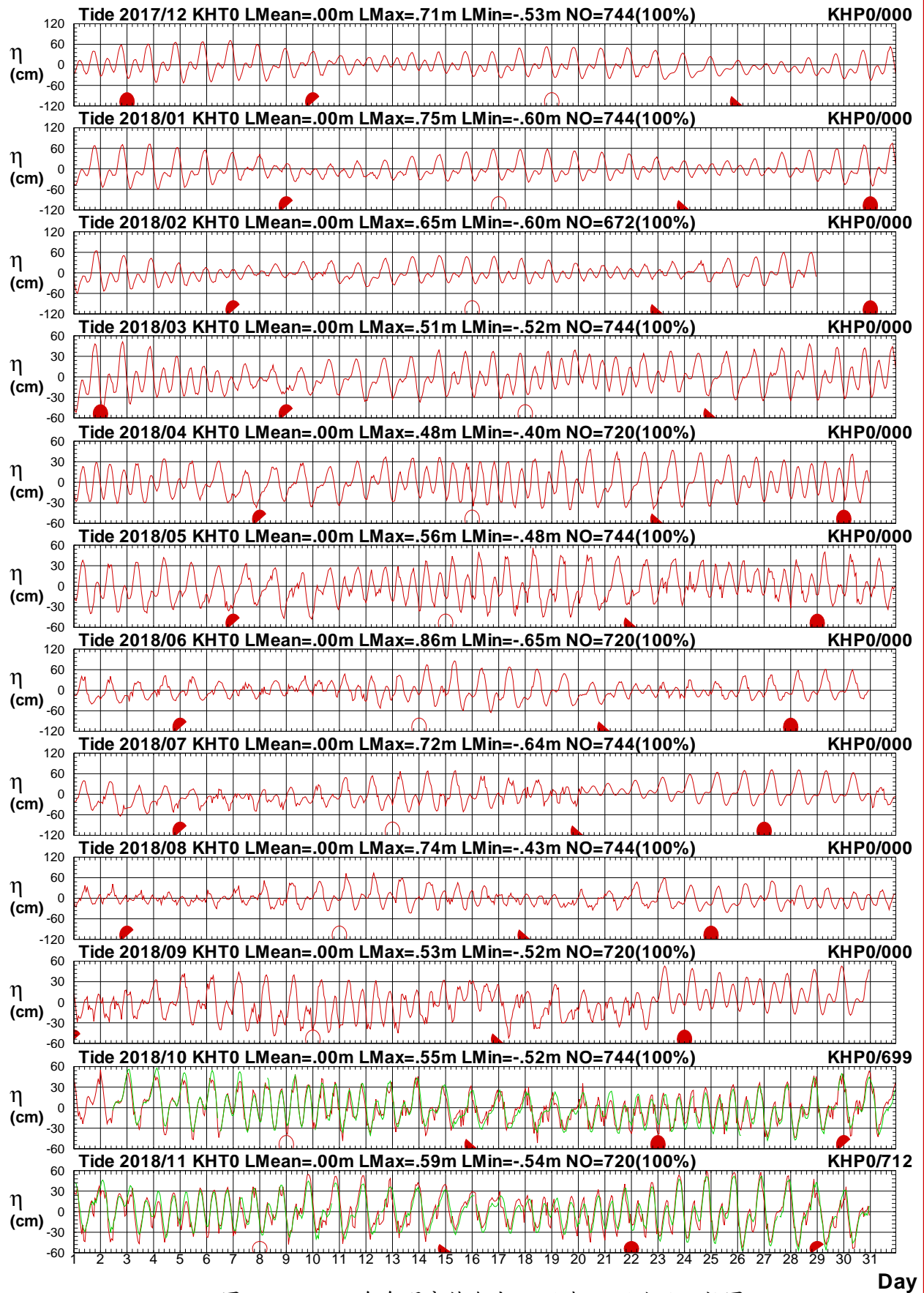


圖3.3.2 2018年每月高雄海域 T 站與 P 站潮位比較圖

T17CKHT0.1HA T17CKHP0.1H0 T181KHT0.1HA T181KHP0.1H0 T182KHT0.1HA T182KHP0.1H0
 T183KHT0.1HA T183KHP0.1H0 T184KHT0.1HA T184KHP0.1H0 T185KHT0.1HA T185KHP0.1H0

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Tidal Level in Kao-Hsiung Seas of KHT0 at 2018 1 ○ 8 ● 15 ● 22 ●

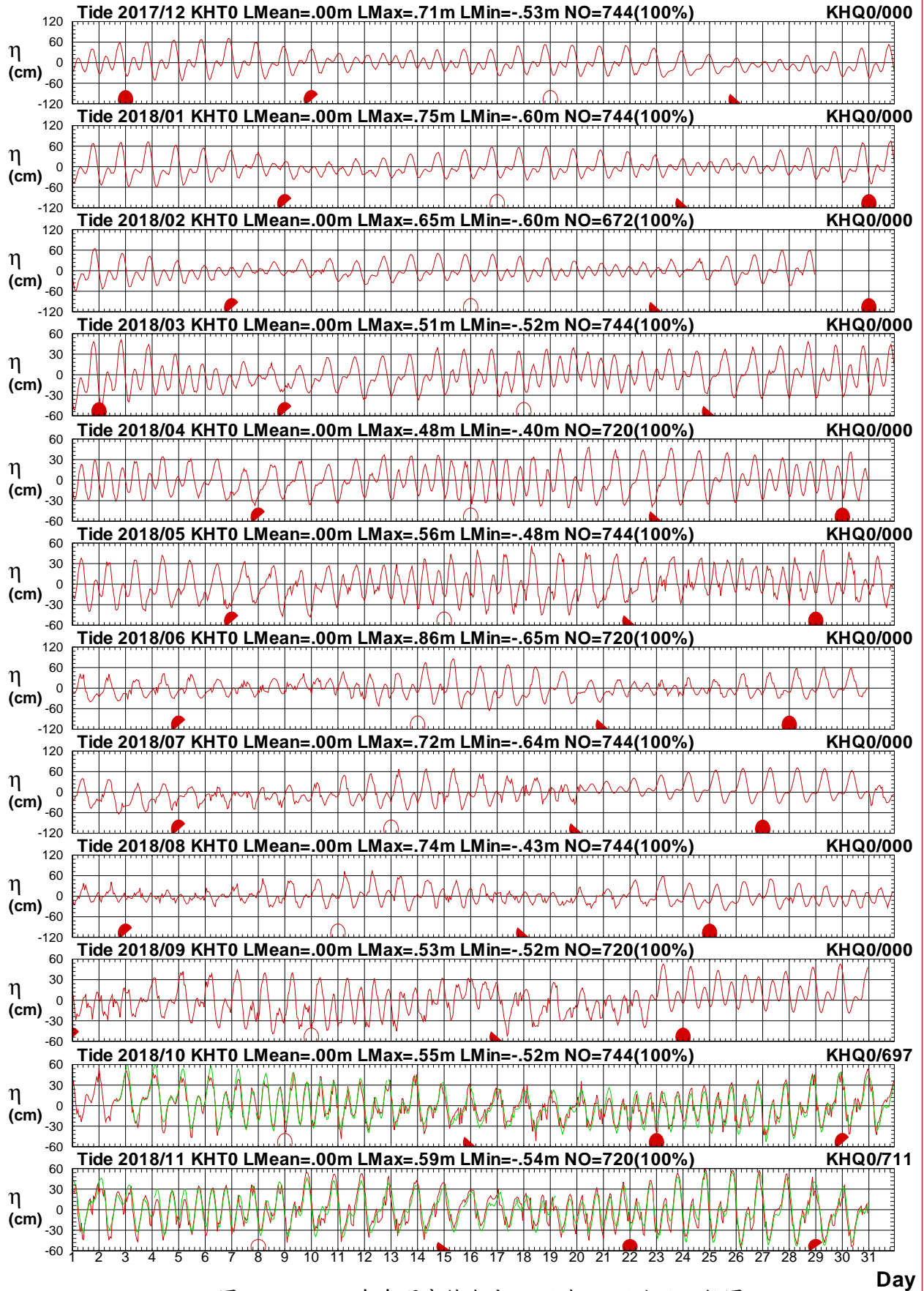


圖3.3.3 2018年每月高雄海域 T 站與 Q 站潮位比較圖

T17CKHT0.1HA T17CKHQ0.1HO T181KHT0.1HA T181KHQ0.1HO T182KHT0.1HA T182KHQ0.1HO
 T183KHT0.1HA T183KHQ0.1HO T184KHT0.1HA T184KHQ0.1HO T185KHT0.1HA T185KHQ0.1HO

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Tidal Level in Kao-Hsiung Seas of KHT0 at 2018 1 ○ 8 ● 15 ● 22 ●

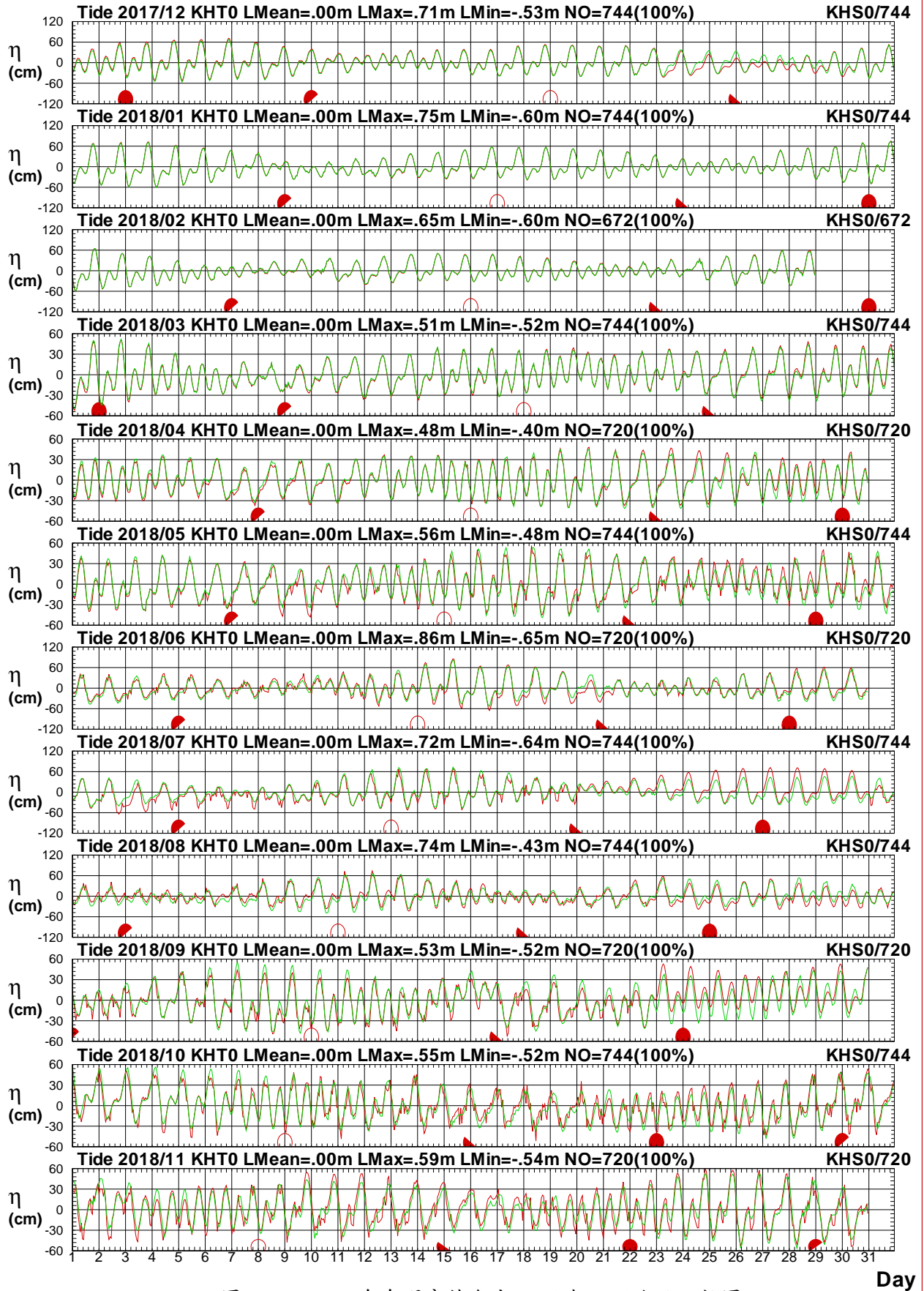


圖3.3.4 2018年每月高雄海域 T 站與 S 站潮位比較圖

T17CKHT0.1HA T17CKHS0.1H0 T181KHT0.1HA T181KHS0.1H0 T182KHT0.1HA T182KHS0.1H0
 T183KHT0.1HA T183KHS0.1H0 T184KHT0.1HA T184KHS0.1H0 T185KHT0.1HA T185KHS0.1H0

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3.4 2018 年高雄海域**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 Kao-Hsiung Seas of KHS0 at 2018 ¹ ○ 8 ● 15 ● 22 ●

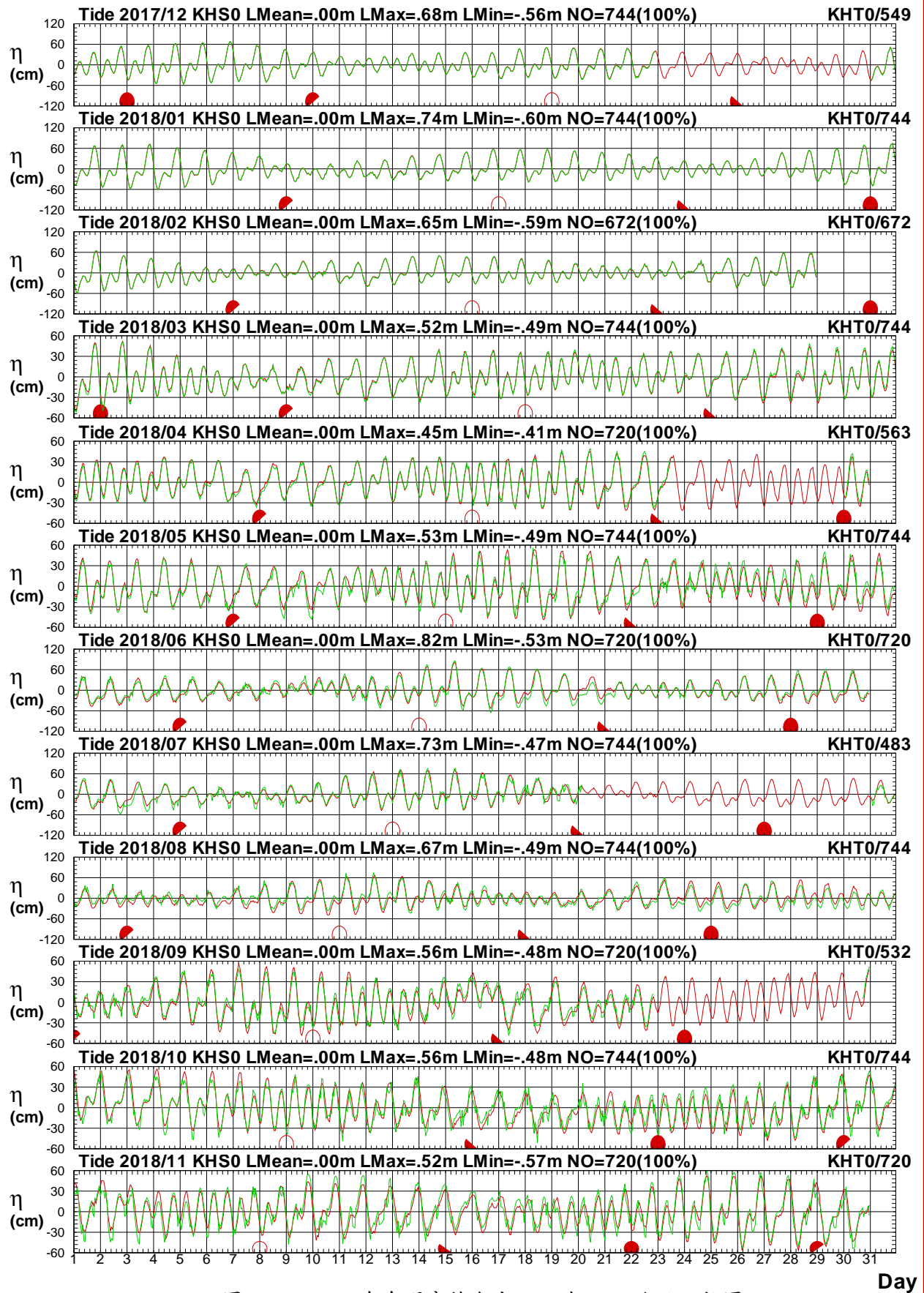


圖3.4.1 2018年每月高雄海域 S 站與 T 站潮位比較圖

T17CKHS0.1HA T17CKHT0.1HO T181KHS0.1HA T181KHT0.1HO T182KHS0.1HA T182KHT0.1HO
 T183KHS0.1HA T183KHT0.1HO T184KHS0.1HA T184KHT0.1HO T185KHS0.1HA T185KHT0.1HO

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Tidal Level in Kao-Hsiung Seas of KHS0 at 2018 ¹ ○ 8 ● 15 ● 22 ●

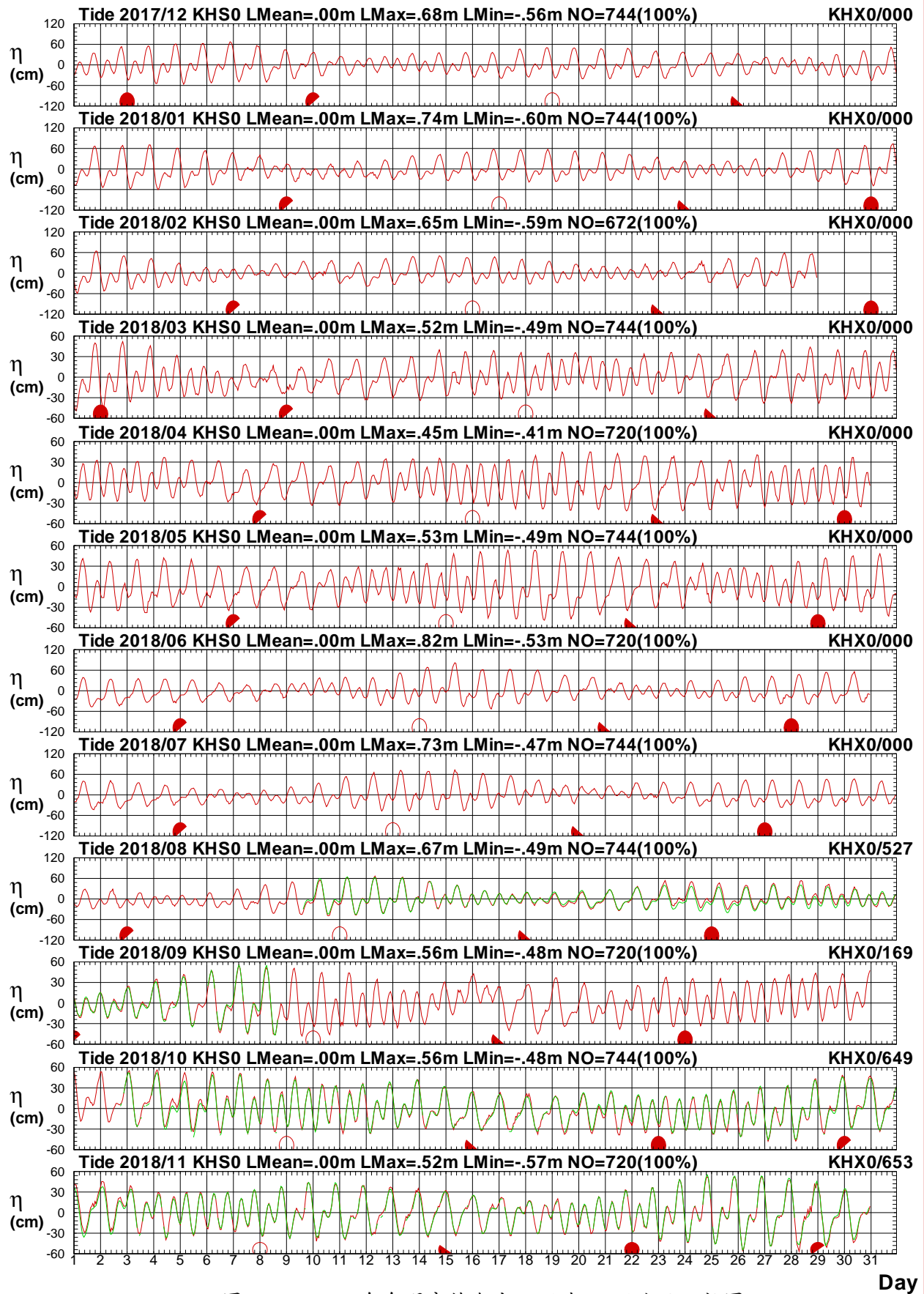


圖3.4.2 2018年每月高雄海域 S 站與 X 站潮位比較圖

T17CKHS0.1HA T17CKHX0.1HO T181KHS0.1HA T181KHX0.1HO T182KHS0.1HA T182KHX0.1HO
 T183KHS0.1HA T183KHX0.1HO T184KHS0.1HA T184KHX0.1HO T185KHS0.1HA T185KHX0.1HO

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Tidal Level in Kao-Hsiung Seas of KHS0 at 2018 ¹ ○ 8 ● 15 ● 22 ●

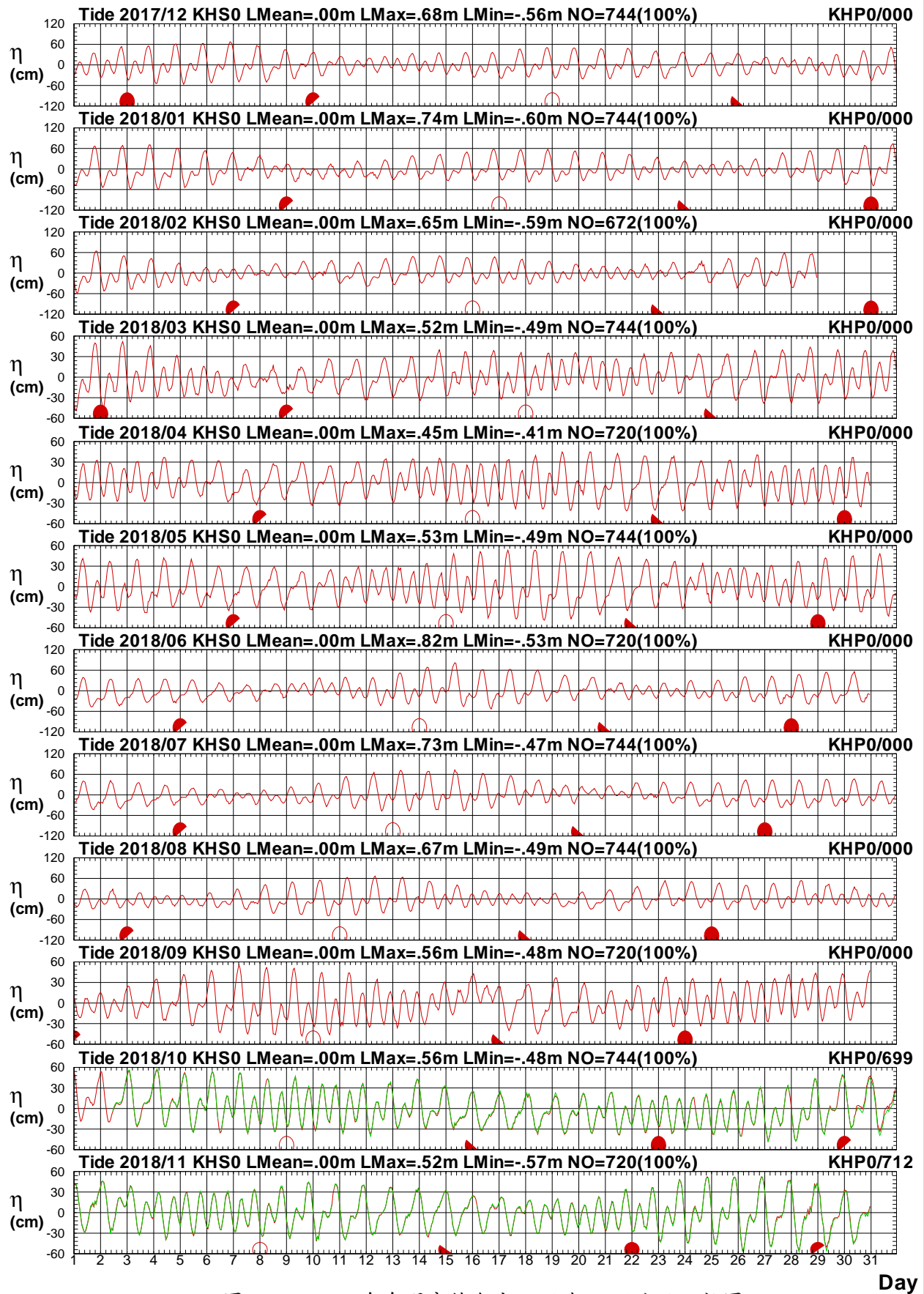


圖3.4.3 2018年每月高雄海域 S 站與 P 站潮位比較圖

T17CKHS0.1HA T17CKHP0.1HO T181KHS0.1HA T181KHP0.1HO T182KHS0.1HA T182KHP0.1HO
 T183KHS0.1HA T183KHP0.1HO T184KHS0.1HA T184KHP0.1HO T185KHS0.1HA T185KHP0.1HO

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Tidal Level in Kao-Hsiung Seas of KHS0 at 2018 ¹ ○ 8 ● 15 ● 22 ●

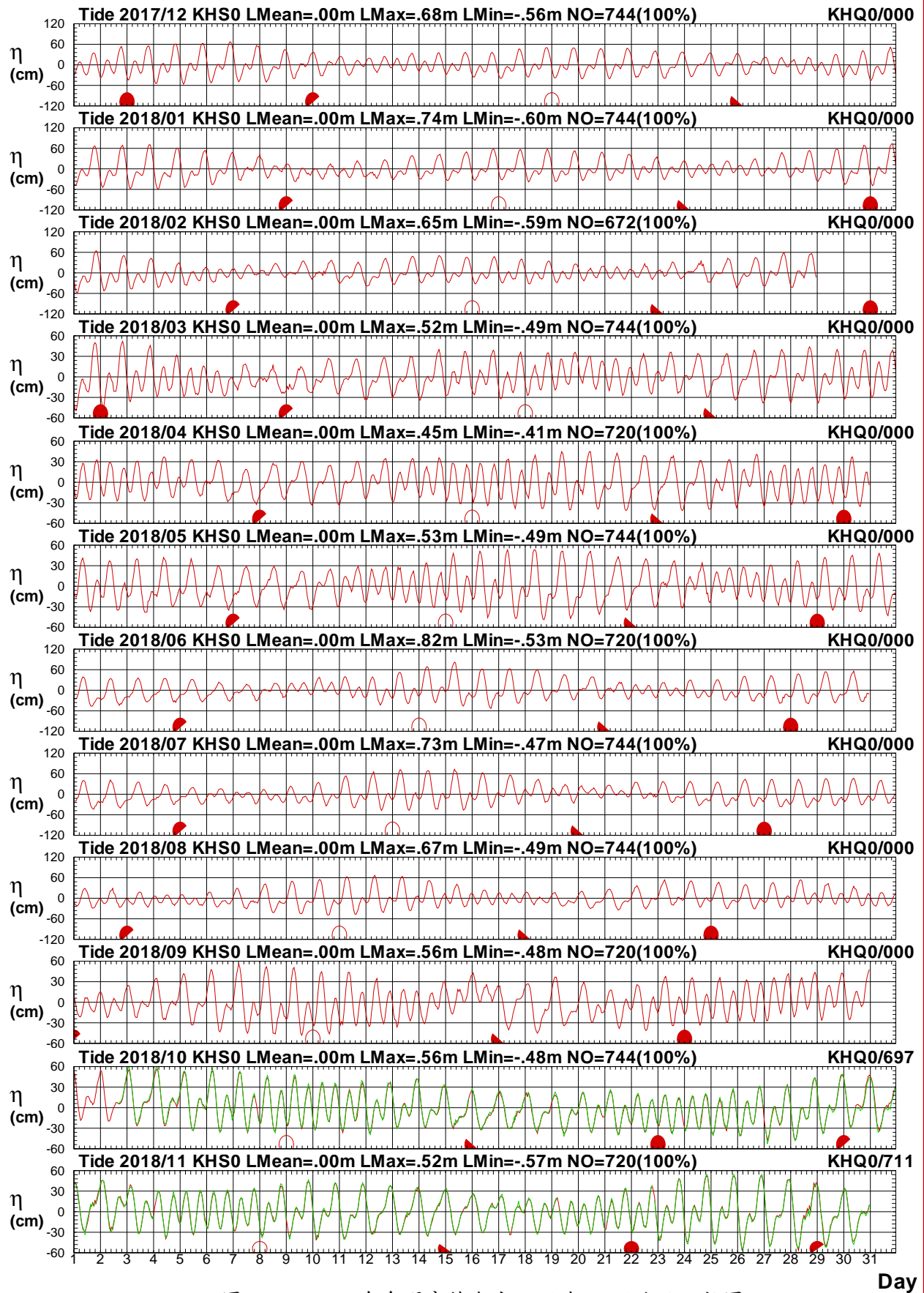


圖3.4.4 2018年每月高雄海域 S 站與 Q 站潮位比較圖

T17CKHS0.1HA T17CKHQ0.1HO T181KHS0.1HA T181KHQ0.1HO T182KHS0.1HA T182KHQ0.1HO
 T183KHS0.1HA T183KHQ0.1HO T184KHS0.1HA T184KHQ0.1HO T185KHS0.1HA T185KHQ0.1HO

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3.5 2018 年高雄海域**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 Kao-Hsiung Seas of KHX0 at 2018 ¹ ○ 8 ● 15 ● 22 ●

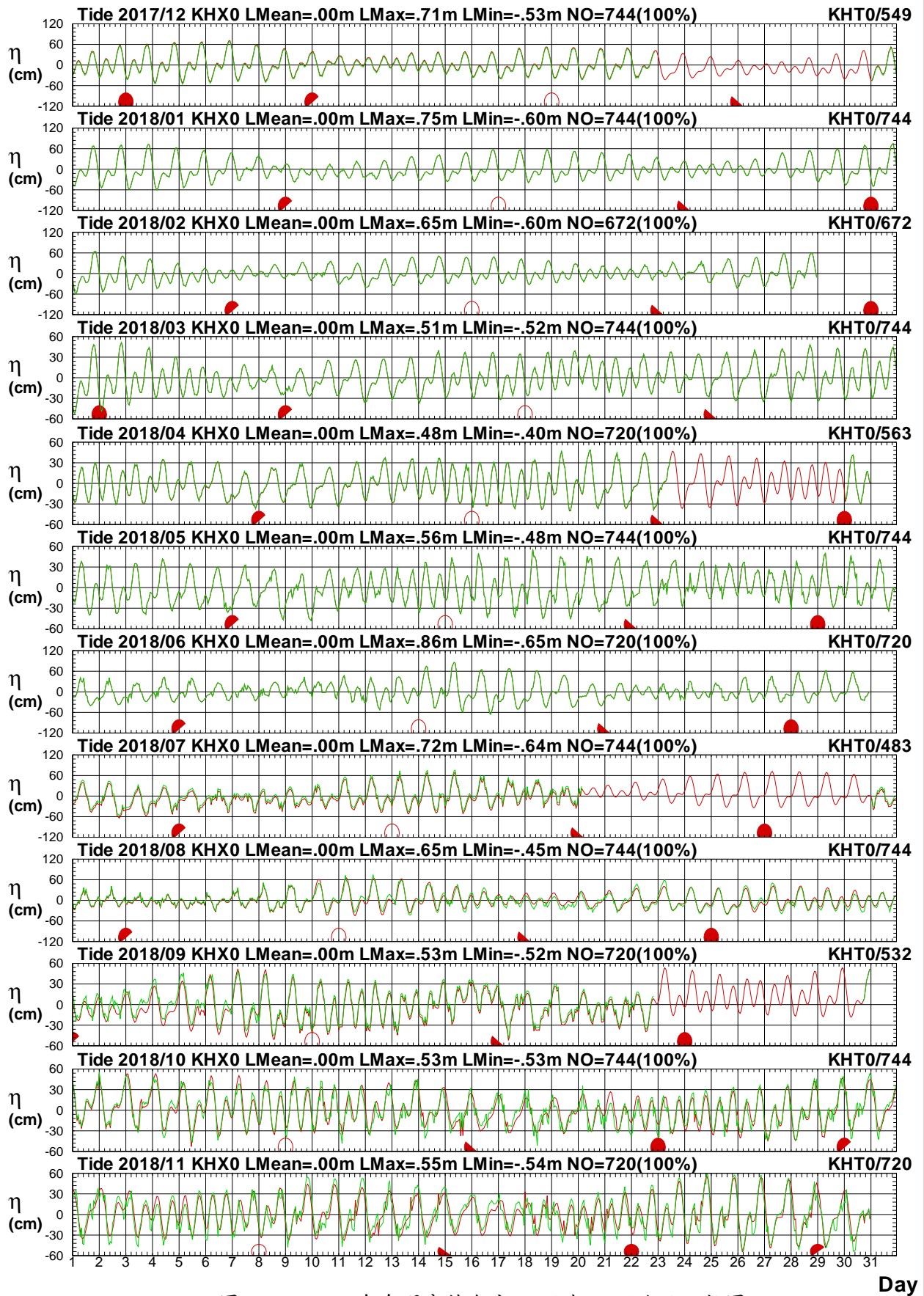


圖3.5.1 2018年每月高雄海域 X 站與 T 站潮位比較圖

T17CKHX0.1HA T17CKHT0.1HO T181KHX0.1HA T181KHT0.1HO T182KHX0.1HA T182KHT0.1HO
 T183KHX0.1HA T183KHT0.1HO T184KHX0.1HA T184KHT0.1HO T185KHX0.1HA T185KHT0.1HO

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Tidal Level in Kao-Hsiung Seas of KHX0 at 2018 ¹ ○ ⁸ ● ¹⁵ ● ²² ●

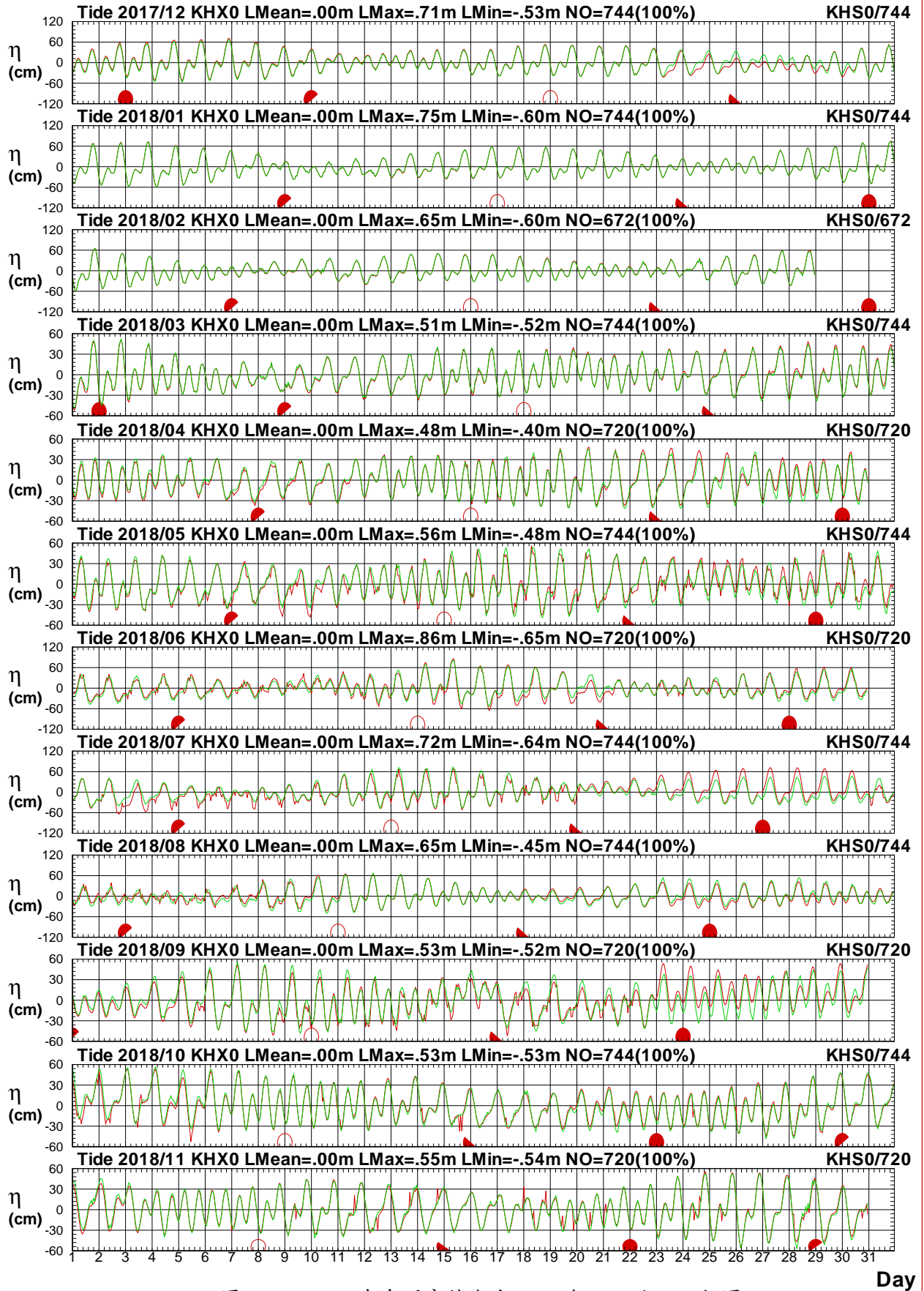


圖3.5.2 2018年每月高雄海域 X 站與 S 站潮位比較圖

T17CKHX0.1HA T17CKHS0.1HO T181KHX0.1HA T181KHS0.1HO T182KHX0.1HA T182KHS0.1HO
 T183KHX0.1HA T183KHS0.1HO T184KHX0.1HA T184KHS0.1HO T185KHX0.1HA T185KHS0.1HO

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Tidal Level in Kao-Hsiung Seas of KHX0 at 2018 ¹ ○ ⁸ ● ¹⁵ ● ²² ●

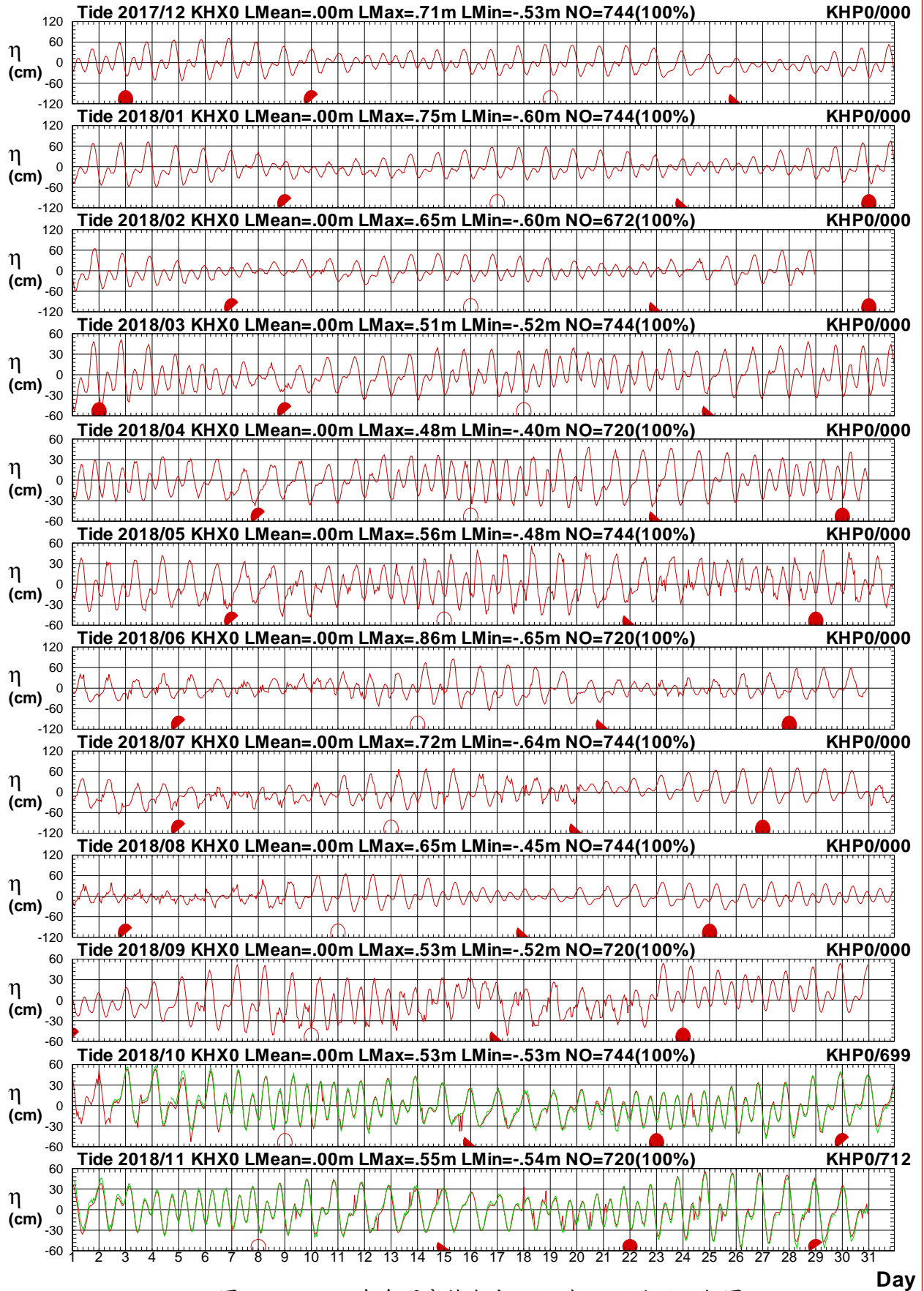


圖3.5.3 2018年每月高雄海域 X 站與 P 站潮位比較圖

T17CKHX0.1HA T17CKHP0.1HO T181KHX0.1HA T181KHP0.1HO T182KHX0.1HA T182KHP0.1HO
 T183KHX0.1HA T183KHP0.1HO T184KHX0.1HA T184KHP0.1HO T185KHX0.1HA T185KHP0.1HO

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Tidal Level in Kao-Hsiung Seas of KHX0 at 2018 ¹ ○ 8 ● 15 ● 22 ●

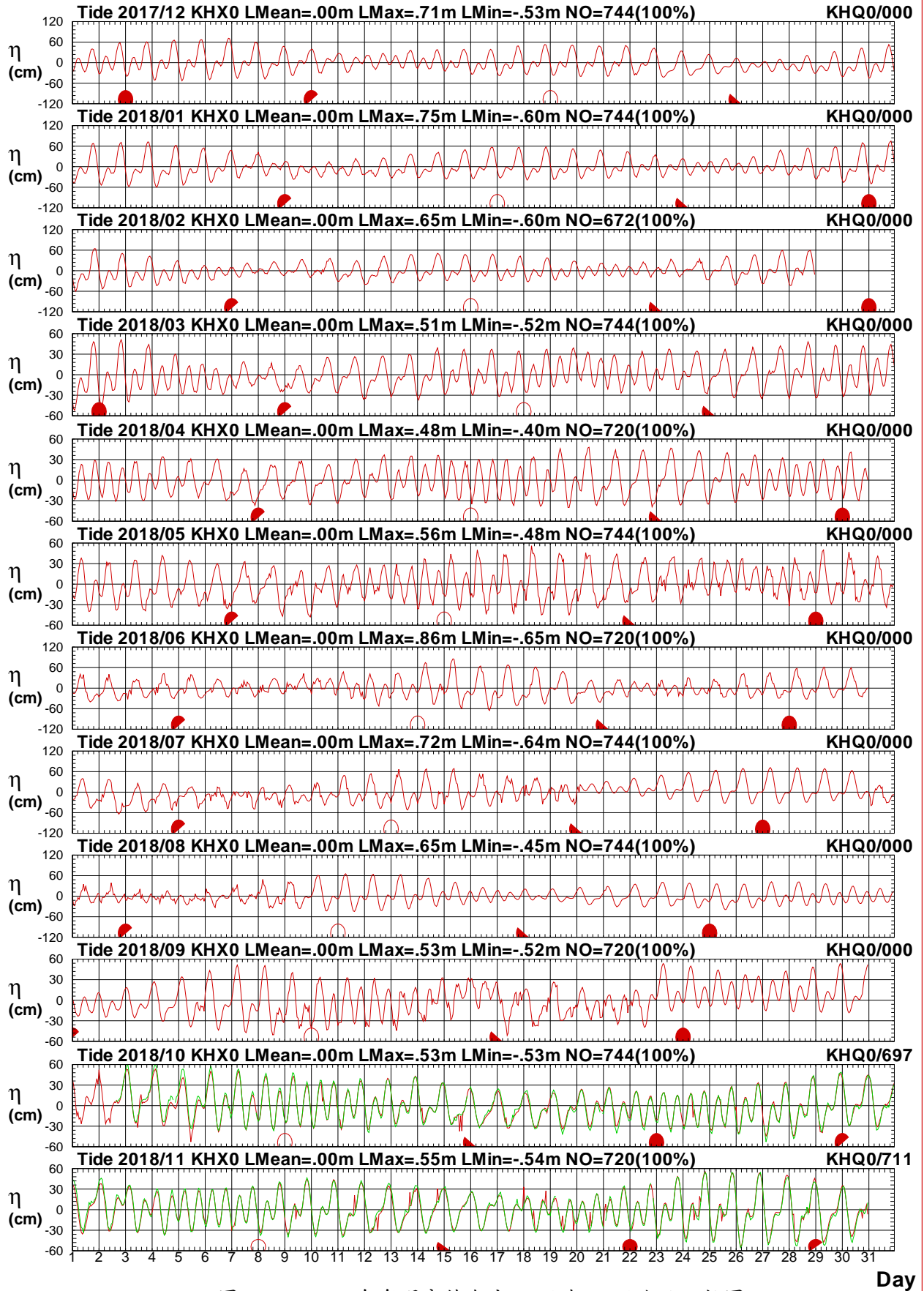


圖3.5.4 2018年每月高雄海域 X 站與 Q 站潮位比較圖

T17CKHX0.1HA T17CKHQ0.1HO T181KHX0.1HA T181KHQ0.1HO T182KHX0.1HA T182KHQ0.1HO
 T183KHX0.1HA T183KHQ0.1HO T184KHX0.1HA T184KHQ0.1HO T185KHX0.1HA T185KHQ0.1HO

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第四章 2018 年高雄海域觀測海流資料年報

高雄海域海流之觀測包括測站 X 及測站 Z 等 2 個測站(測站位置如第 0 章圖 CH1)。

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 年高雄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年每月高雄海域各測站觀測海流資料紀錄表

海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域
年月/測站	X	Z	A	1	2							
2017/12月	*	741(99.6%)	*	*	*	*	*	*	*	*	*	*
2018/ 1月	*	744(100%)	*	*	*	*	*	*	*	*	*	*
2018/ 2月	*	658(97.9%)	*	*	*	*	*	*	*	*	*	*
2018/ 3月	*	695(93.4%)	*	*	*	*	*	*	*	*	*	*
2018/ 4月	*	685(95.1%)	*	*	*	*	*	*	*	*	*	*
2018/ 5月	*	722(97.0%)	*	*	*	*	*	*	*	*	*	*
2018/ 6月	*	701(97.4%)	*	*	*	*	*	*	*	*	*	*
2018/ 7月	*	739(99.3%)	*	*	*	*	*	*	*	*	*	*
2018/ 8月	527(70.8%)	735(98.8%)	*	*	*	*	*	*	*	*	*	*
2018/ 9月	169(23.5%)	713(99.0%)	*	*	*	*	*	*	*	*	*	*
2018/10月	649(87.2%)	739(99.3%)	*	*	*	*	*	*	*	*	*	*
2018/11月	653(90.7%)	713(99.0%)	*	*	*	*	*	*	*	*	*	*
2018/冬季	*	2143(99.2%)	*	*	*	*	*	*	*	*	*	*
2018/春季	*	2102(95.2%)	*	*	*	*	*	*	*	*	*	*
2018/夏季	527(23.9%)	2175(98.5%)	*	*	*	*	*	*	*	*	*	*
2018/秋季	1471(67.4%)	2165(99.1%)	*	*	*	*	*	*	*	*	*	*
2018/整年	1998(22.8%)	8585(98.0%)	*	*	*	*	*	*	*	*	*	*
起始年月	2018/08	2017/12	*	*	*	*	*	*	*	*	*	*
結束年月	2018/11	2018/11	*	*	*	*	*	*	*	*	*	*

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表 4.1.1b 2018年每月高雄海域計算潮流各測站資料紀錄表

海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域	高雄海域
年月/測站	X	Z	A	1	2							
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 年高雄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 年高雄海域 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													
2	2018/01													
3	2018/02													
4	2018/03													
5	2018/04													
6	2018/05													
7	2018/06													
8	2018/07													
9	2018/08	527(71%)	36.6	17.8/WNW	147.3/NNW	32.8	47.8	18.4	.9	3.6	16.3	20.1	60.0	NW /27.3%
10	2018/09	169(24%)	31.4	4.0/SW	87.8/NE	38.5	49.7	11.8	.0	13.0	33.1	26.6	27.2	SSE/10.1%
11	2018/10	649(87%)	29.9	13.3/SSW	87.2/S	43.8	47.5	8.8	.0	6.3	27.3	40.7	25.7	S /18.8%
12	2018/11	653(91%)	25.5	15.8/S	70.9/S	54.8	40.1	5.1	.0	4.7	46.2	31.4	17.6	SSE/23.0%
13	2018/冬													
14	2018/春													
15	2018/夏	527(24%)	36.6	17.8/WNW	147.3/NNW	32.8	47.8	18.4	.9	3.6	16.3	20.1	60.0	NW /27.3%
16	2018/秋	1471(67%)	28.2	12.9/S	87.8/NE	48.1	44.5	7.5	.0	6.4	36.4	34.9	22.3	S /18.0%
17	2018/年	1998(23%)	30.4	8.9/SW	147.3/NNW	44.0	45.3	10.4	.3	5.7	31.1	31.0	32.2	S /16.9%

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表4.2.1b 2018年高雄海域 X 站潮流流速及流向重要統計量統計表

序 號	日期 (年/月)	觀測 點數	流速	平均流	最大流	1/2節流	1節流	2節流	大流	流向	流向	流向	流向	主要流向 方向/百分比
			平均值 (cm/s)	流速/流向 (cm/s)/(來向)	流速/流向 (cm/s)/(來向)	<25.7 (%)	~51.4 (%)	~103 (%)	>103 (%)	N~E (%)	E~S (%)	S~W (%)	W~N (%)	
1	2017/12	744(100%)	16.5	8.8/SW	39.8/S	86.2	13.8	.0	.0	.0	26.6	36.3	37.1	S /20.3%
2	2018/01	744(100%)	14.2	8.8/SW	34.1/S	95.4	4.6	.0	.0	.5	10.8	58.7	30.0	S /25.9%
3	2018/02	672(100%)	12.3	8.8/SW	26.3/S	99.6	.4	.0	.0	4.0	8.5	68.6	18.9	SSW/27.1%
4	2018/03	744(100%)	13.2	8.8/SW	33.9/S	96.4	3.6	.0	.0	4.3	20.7	56.9	18.1	WSW/17.2%
5	2018/04	720(100%)	15.6	8.8/SW	39.2/S	90.3	9.7	.0	.0	1.8	29.2	36.7	32.4	WNW/18.2%
6	2018/05	744(100%)	17.2	8.8/SW	40.9/SSE	86.6	13.4	.0	.0	.0	31.6	29.6	38.8	WNW/20.6%
7	2018/06	720(100%)	16.7	8.9/SW	38.0/S	86.3	13.8	.0	.0	.0	25.4	36.7	37.9	S /20.7%
8	2018/07	744(100%)	14.4	8.9/SW	31.4/S	93.4	6.6	.0	.0	.5	11.7	56.6	31.2	S /26.2%
9	2018/08	744(100%)	12.2	8.9/SW	24.7/S	100.0	.0	.0	.0	4.6	8.3	68.0	19.1	SSW/28.2%
10	2018/09	720(100%)	13.0	8.9/SW	28.9/S	97.2	2.8	.0	.0	4.6	22.9	56.4	16.1	WSW/17.8%
11	2018/10	744(100%)	15.8	8.9/SW	35.2/S	90.3	9.7	.0	.0	1.6	29.6	36.2	32.7	WNW/18.3%
12	2018/11	720(100%)	17.5	8.9/SW	39.5/S	84.0	16.0	.0	.0	.3	30.7	28.8	40.3	WNW/20.6%
13	2018/冬	2160(100%)	14.4	8.8/SW	39.8/S	93.5	6.5	.0	.0	1.4	15.5	54.1	29.0	SSW/19.4%
14	2018/春	2208(100%)	15.3	8.8/SW	40.9/SSE	91.1	8.9	.0	.0	2.0	27.1	41.1	29.8	WNW/14.5%
15	2018/夏	2208(100%)	14.4	8.9/SW	38.0/S	93.3	6.7	.0	.0	1.7	15.0	53.9	29.3	SSW/19.7%
16	2018/秋	2184(100%)	15.4	8.9/SW	39.5/S	90.5	9.5	.0	.0	2.2	27.7	40.4	29.7	WNW/14.7%
17	2018/年	8760(100%)	14.9	8.9/SW	40.9/SSE	92.1	7.9	.0	.0	1.8	21.4	47.4	29.4	S /14.9%

4-2-2

表4.2.1c 2018年高雄海域 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													
2	2018/01													
3	2018/02													
4	2018/03													
5	2018/04													
6	2018/05													
7	2018/06													
8	2018/07													
9	2018/08	527(71%)	35.0	19.0/NNW	139.8/NNW	38.5	41.0	19.5	.9	8.7	20.9	10.2	60.2	NNW/28.5%
10	2018/09	169(24%)	28.1	4.7/NE	91.3/NNE	52.1	37.3	10.7	.0	26.0	35.5	10.7	27.8	SSE/11.2%
11	2018/10	649(87%)	25.3	5.3/S	78.3/S	57.5	37.3	5.2	.0	14.8	35.7	21.7	27.7	S /17.1%
12	2018/11	653(91%)	22.8	11.4/SE	68.4/SSE	64.2	33.2	2.6	.0	20.7	54.5	12.3	12.6	SSE/23.1%
13	2018/冬													
14	2018/春													
15	2018/夏	527(24%)	35.0	19.0/NNW	139.8/NNW	38.5	41.0	19.5	.9	8.7	20.9	10.2	60.2	NNW/28.5%
16	2018/秋	1471(67%)	24.5	7.1/SSE	91.3/NNE	59.8	35.5	4.7	.0	18.7	44.1	16.2	21.0	SSE/18.9%
17	2018/年	1998(23%)	27.3	.3/ESE	139.8/NNW	54.2	36.9	8.6	.3	16.1	37.9	14.7	31.3	SSE/16.7%

4-2-3

表 4.2.2a 2018年高雄海域 Z 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	741(100%)	19.5	1.3/NNE	64.0/N	71.1	28.1	.8	.0	21.9	31.6	17.9	28.6	S /19.6%
2	2018/01	744(100%)	24.3	3.1/SE	69.0/N	59.3	35.8	5.0	.0	21.1	36.7	16.1	26.1	N /19.1%
3	2018/02	658(98%)	29.1	3.1/NNW	100.0/NNW	51.7	35.0	13.4	.0	16.7	31.0	14.6	37.7	NNW/17.6%
4	2018/03	695(93%)	30.8	3.9/ESE	119.0/N	46.8	38.6	14.2	.4	22.9	46.6	6.9	23.6	SSE/20.9%
5	2018/04	685(95%)	26.5	2.0/W	78.0/N	53.6	37.5	8.9	.0	13.9	27.9	24.2	34.0	S /25.5%
6	2018/05	722(97%)	34.2	18.3/S	110.0/SSE	42.0	35.7	21.9	.4	9.6	41.7	28.7	20.1	S /29.9%
7	2018/06	701(97%)	39.2	5.6/SW	134.0/NNW	37.8	33.4	27.1	1.7	13.6	21.5	33.2	31.7	S /21.5%
8	2018/07	739(99%)	35.8	13.5/S	109.0/NNW	38.6	37.9	23.4	.1	17.5	29.4	34.4	18.8	S /27.7%
9	2018/08	735(99%)	38.5	1.9/WSW	134.0/N	34.1	41.2	23.1	1.5	21.0	23.5	29.3	26.3	S /24.8%
10	2018/09	713(99%)	29.3	5.3/W	127.0/NNW	47.0	41.1	11.5	.4	19.6	12.6	36.6	31.1	N /16.1%
11	2018/10	739(99%)	29.4	2.1/W	86.0/N	49.4	36.1	14.5	.0	18.5	21.4	30.0	30.0	S /25.2%
12	2018/11	713(99%)	25.4	12.5/NNW	93.0/N	57.9	33.2	8.8	.0	18.4	17.0	19.2	45.4	N /29.2%
13	2018/冬	2143(99%)	24.1	1.0/NE	100.0/NNW	61.0	32.9	6.1	.0	20.0	33.2	16.3	30.5	N /18.5%
14	2018/春	2102(95%)	30.6	6.8/S	119.0/N	47.3	37.3	15.1	.3	15.4	38.8	20.0	25.8	S /24.0%
15	2018/夏	2175(99%)	37.8	6.4/SSW	134.0/NNW	36.8	37.6	24.5	1.1	17.4	24.9	32.3	25.5	S /24.7%
16	2018/秋	2165(99%)	28.0	5.5/NW	127.0/NNW	51.4	36.8	11.6	.1	18.8	17.0	28.6	35.5	N /20.9%
17	2018/年	8585(98%)	30.2	2.1/SSW	134.0/NNW	49.1	36.1	14.4	.4	17.9	28.4	24.4	29.3	S /20.7%

4-2-4

表 4.2.2b 2018 年高雄海域 Z 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%)	21.5	2.1/SSW	58.4/N	64.4	34.5	1.1	.0	18.1	27.8	25.8	28.2	S /37.8%
2	2018/01	744(100%)	21.9	2.1/SSW	59.3/N	62.8	35.5	1.7	.0	19.8	27.2	26.2	26.9	S /39.0%
3	2018/02	672(100%)	21.2	2.2/SSW	57.0/N	64.0	35.3	.7	.0	18.8	28.1	25.9	27.2	S /39.9%
4	2018/03	744(100%)	21.3	2.0/SSW	50.2/N	62.0	38.0	.0	.0	18.5	26.1	27.6	27.8	S /39.1%
5	2018/04	720(100%)	21.0	2.1/SSW	48.1/N	62.4	37.6	.0	.0	19.0	23.6	29.2	28.2	S /38.1%
6	2018/05	744(100%)	21.3	2.1/SSW	54.7/N	65.2	34.4	.4	.0	20.3	25.8	27.3	26.6	S /37.0%
7	2018/06	720(100%)	21.4	2.1/SSW	58.5/N	64.6	34.0	1.4	.0	19.0	27.4	26.1	27.5	S /37.2%
8	2018/07	744(100%)	21.4	2.2/SSW	57.9/N	64.5	34.4	1.1	.0	17.9	27.7	26.1	28.4	S /39.5%
9	2018/08	744(100%)	21.0	2.2/SSW	55.1/N	63.8	35.3	.8	.0	18.0	28.6	24.5	28.9	S /40.5%
10	2018/09	720(100%)	20.9	2.2/SSW	48.7/N	62.9	37.1	.0	.0	18.1	26.8	26.9	28.2	S /39.9%
11	2018/10	744(100%)	21.1	2.2/SSW	49.3/N	63.0	37.0	.0	.0	19.2	25.4	28.4	27.0	S /38.0%
12	2018/11	720(100%)	21.3	2.2/SSW	54.4/N	64.7	34.6	.7	.0	19.2	25.7	26.9	28.2	S /36.4%
13	2018/冬	2160(100%)	21.5	2.1/SSW	59.3/N	63.7	35.1	1.2	.0	18.9	27.7	26.0	27.5	S /38.8%
14	2018/春	2208(100%)	21.2	2.1/SSW	54.7/N	63.2	36.7	.1	.0	19.3	25.2	28.0	27.5	S /38.0%
15	2018/夏	2208(100%)	21.3	2.2/SSW	58.5/N	64.3	34.6	1.1	.0	18.3	27.9	25.5	28.3	S /39.1%
16	2018/秋	2184(100%)	21.1	2.2/SSW	54.4/N	63.6	36.2	.2	.0	18.8	26.0	27.4	27.8	S /38.1%
17	2018/年	8760(100%)	21.3	2.1/SSW	59.3/N	63.7	35.7	.7	.0	18.8	26.7	26.7	27.8	S /38.5%

4-2-5

表 4.2.2c 2018 年高雄海域 Z 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	741(100%)	13.3	3.6/NNE	58.3/NNW	91.6	8.0	.4	.0	29.7	29.0	10.5	30.8	N /14.6%
2	2018/01	744(100%)	14.8	3.3/E	45.5/SSE	90.3	9.7	.0	.0	25.7	37.4	13.4	23.5	SSE/14.0%
3	2018/02	658(98%)	23.7	5.2/N	68.5/NNW	59.3	37.5	3.2	.0	17.9	32.2	9.6	40.3	NNW/19.1%
4	2018/03	695(93%)	20.1	4.5/E	73.8/NNW	73.1	23.6	3.3	.0	24.9	48.3	8.2	18.6	SSE/18.6%
5	2018/04	685(95%)	15.1	2.9/NNW	48.2/NNW	87.7	12.3	.0	.0	18.8	26.9	15.2	39.1	NNW/16.5%
6	2018/05	722(97%)	23.2	16.9/S	102.3/SSE	65.8	25.5	8.7	.0	9.1	46.4	31.3	13.2	S /21.5%
7	2018/06	701(97%)	29.7	3.9/SW	107.5/N	51.2	34.4	14.3	.1	13.6	23.8	26.1	36.5	S /16.8%
8	2018/07	739(99%)	25.1	11.4/S	116.0/N	60.8	33.4	5.7	.1	12.0	36.7	35.0	16.2	S /21.8%
9	2018/08	735(99%)	28.1	1.7/NNW	154.7/N	60.1	27.9	10.2	1.8	13.9	32.2	27.5	26.4	S /15.5%
10	2018/09	713(99%)	22.6	5.4/NW	95.9/N	68.6	25.9	5.5	.0	16.7	17.5	30.9	34.9	NNW/12.3%
11	2018/10	739(99%)	18.1	2.5/NNW	67.4/NNW	77.8	20.8	1.4	.0	18.0	24.1	24.0	34.0	S /16.9%
12	2018/11	713(99%)	20.3	14.2/N	81.5/N	74.1	22.2	3.8	.0	27.6	12.1	10.0	50.4	N /29.7%
13	2018/冬	2143(99%)	17.0	3.2/NNE	68.5/NNW	81.2	17.6	1.1	.0	24.7	32.9	11.2	31.2	N /14.5%
14	2018/春	2102(95%)	19.6	5.3/SSE	102.3/SSE	75.4	20.6	4.1	.0	17.5	40.7	18.4	23.4	SSE/15.0%
15	2018/夏	2175(99%)	27.6	4.3/SSW	154.7/N	57.5	31.9	10.0	.7	13.1	31.0	29.6	26.2	S /18.1%
16	2018/秋	2165(99%)	20.3	6.9/NNW	95.9/N	73.5	23.0	3.5	.0	20.7	18.0	21.6	39.7	N /18.0%
17	2018/年	8585(98%)	21.1	.0/NNW	154.7/N	71.8	23.3	4.7	.2	19.0	30.6	20.3	30.2	N /12.5%

4-2-6

4.3 2018 年高雄海域各測站觀測海流與 計算潮流(殘流)歷線比較圖

Current Speed in Kao-Hsiung Harbor of KHX0 at 2018

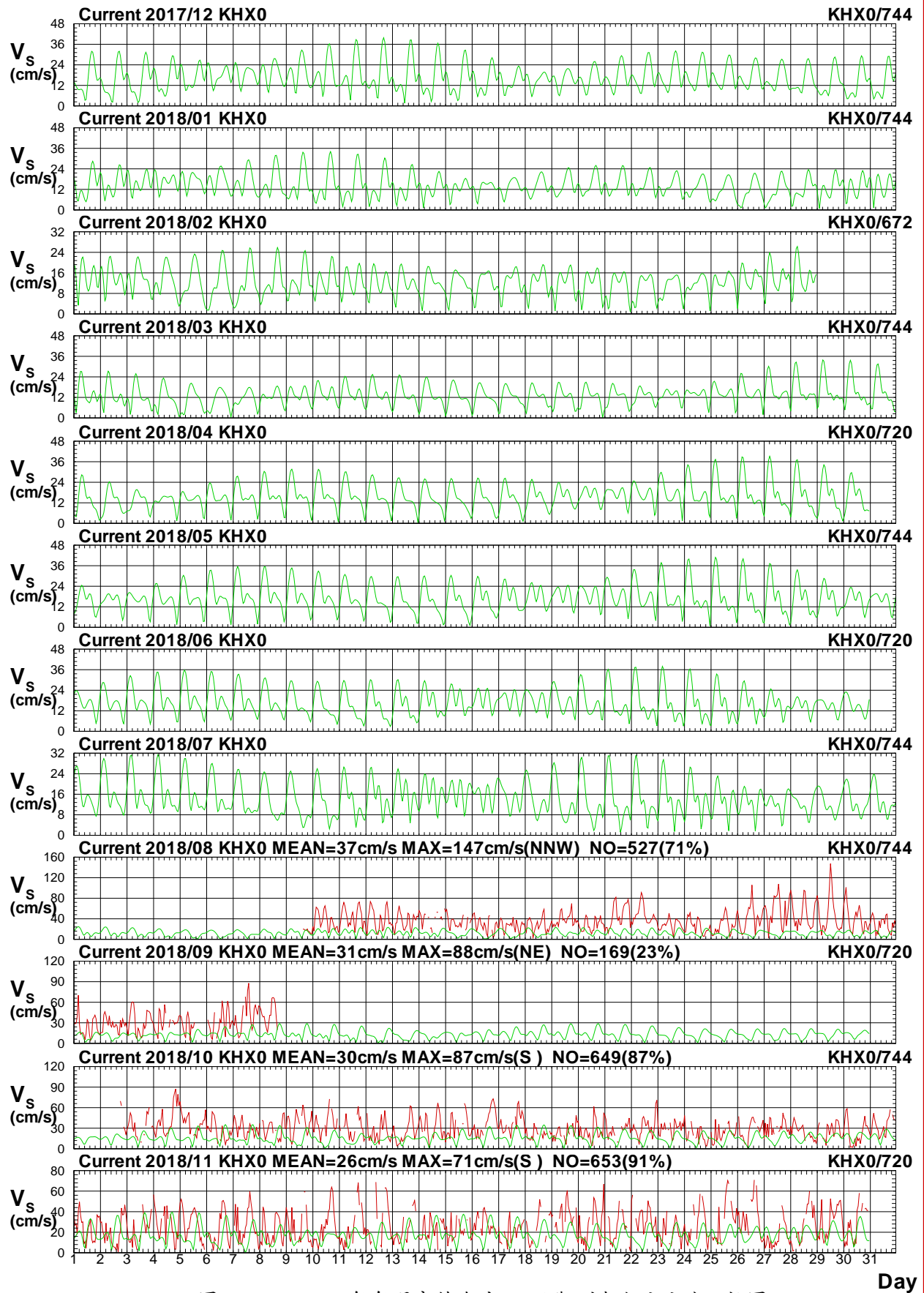


圖4.3.1a 2018年每月高雄海域 X 站觀測與潮流流速比較圖

C17CKHX0.1H0 C17CKHX0.1HD C181KHX0.1H0 C181KHX0.1HD C182KHX0.1H0 C182KHX0.1HD
 C183KHX0.1H0 C183KHX0.1HD C184KHX0.1H0 C184KHX0.1HD C185KHX0.1H0 C185KHX0.1HD

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Current Direction in Kao-Hsiung Harbor of KHX0 at 2018

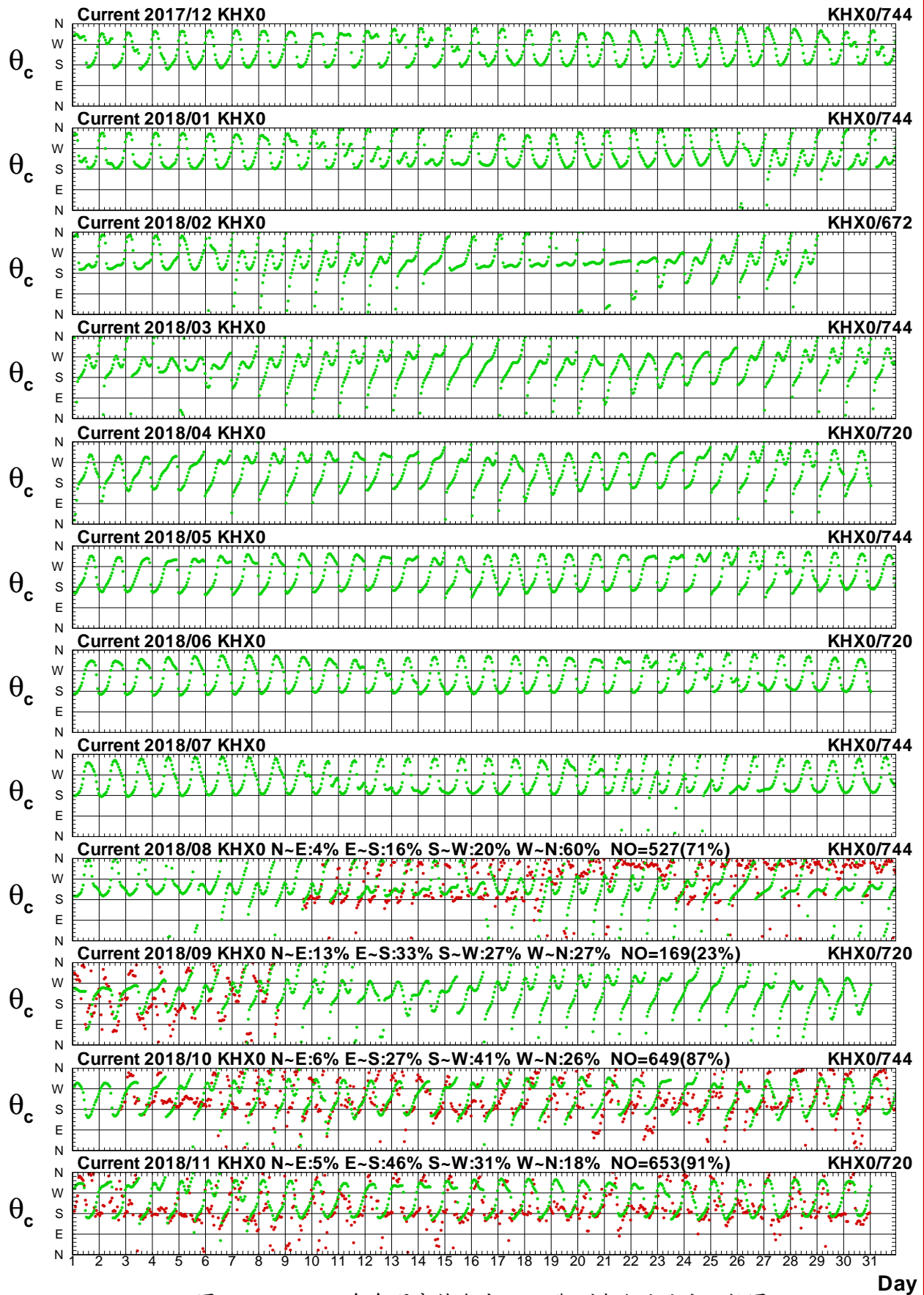


圖4.3.1b 2018年每月高雄海域 X 站觀測與潮流流向比較圖

C17CKHX0.1H0 C17CKHX0.1HD C181KHX0.1H0 C181KHX0.1HD C182KHX0.1H0 C182KHX0.1HD
 C183KHX0.1H0 C183KHX0.1HD C184KHX0.1H0 C184KHX0.1HD C185KHX0.1H0 C185KHX0.1HD

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Current Speed in Kao-Hsiung Harbor of KHX0 at 2018

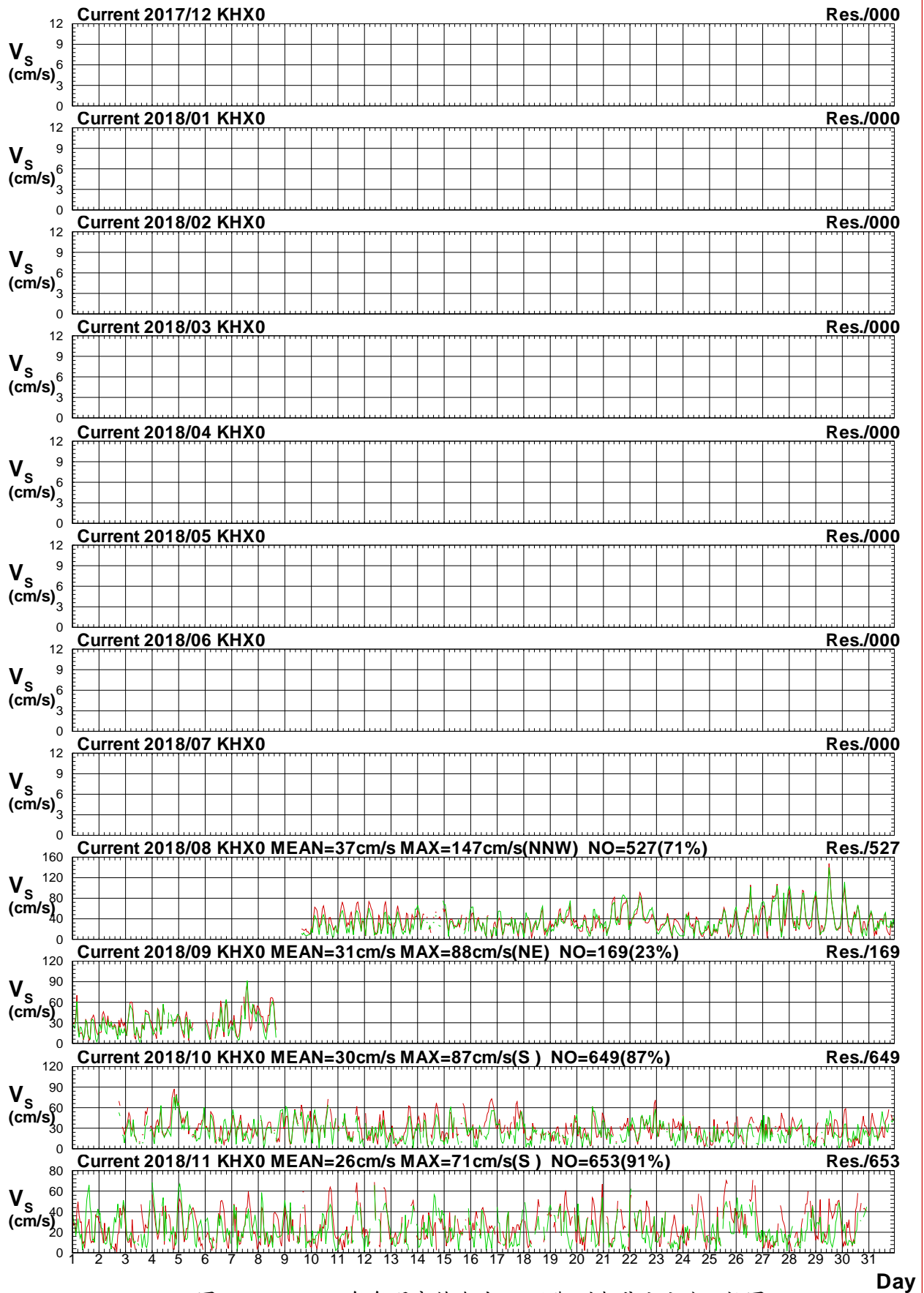


圖4.3.2a 2018年每月高雄海域 X 站觀測與殘流流速比較圖

C17CKHX0.1H0 C17CKHX0.1HR C181KHX0.1H0 C181KHX0.1HR C182KHX0.1H0 C182KHX0.1HR
 C183KHX0.1H0 C183KHX0.1HR C184KHX0.1H0 C184KHX0.1HR C185KHX0.1H0 C185KHX0.1HR

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Current Direction in Kao-Hsiung Harbor of KHX0 at 2018

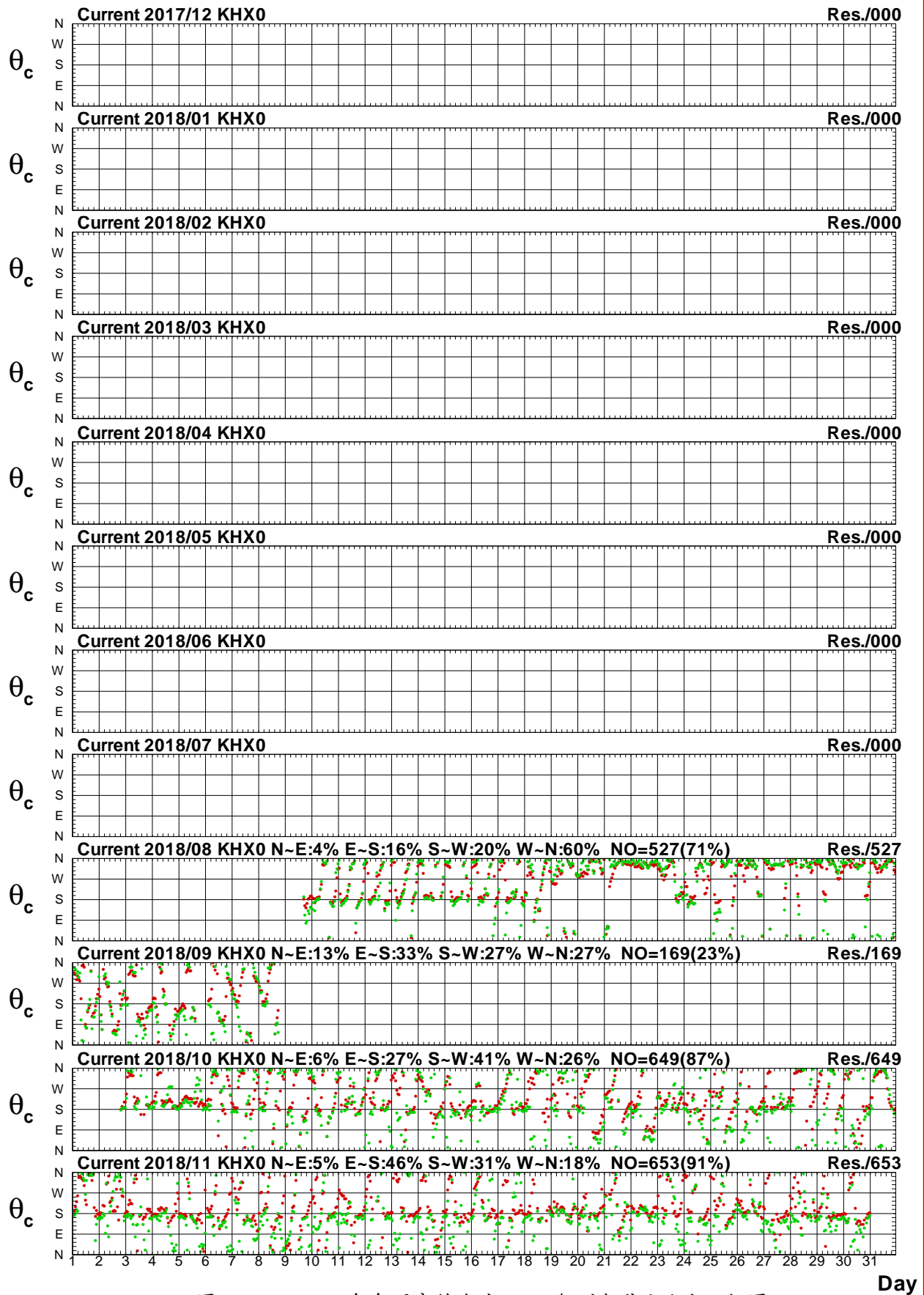


圖4.3.2b 2018年每月高雄海域 X 站觀測與殘流流向比較圖

C17CKHX0.1H0 C17CKHX0.1HR C181KHX0.1H0 C181KHX0.1HR C182KHX0.1H0 C182KHX0.1HR
 C183KHX0.1H0 C183KHX0.1HR C184KHX0.1H0 C184KHX0.1HR C185KHX0.1H0 C185KHX0.1HR

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Current Speed in Kao-Hsiung Harbor of KHZ0 at 2018

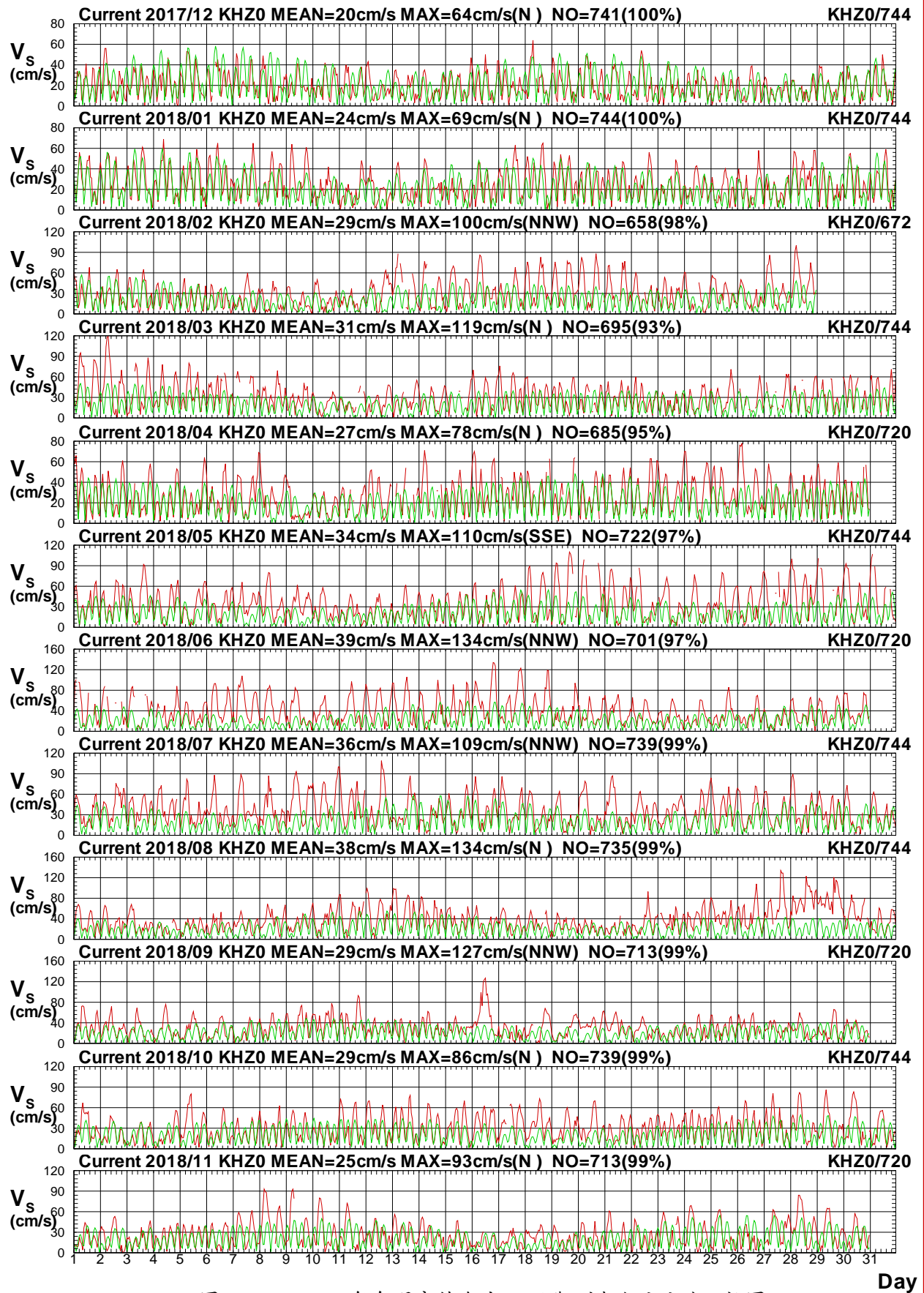


圖4.3.3a 2018年每月高雄海域 Z 站觀測與潮流流速比較圖

C17CKHZ0.1HD C17CKHZ0.1HD C181KHZ0.1HD C181KHZ0.1HD C182KHZ0.1HD C182KHZ0.1HD
 C183KHZ0.1HD C183KHZ0.1HD C184KHZ0.1HD C184KHZ0.1HD C185KHZ0.1HD C185KHZ0.1HD

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Current Direction in Kao-Hsiung Harbor of KHZ0 at 2018

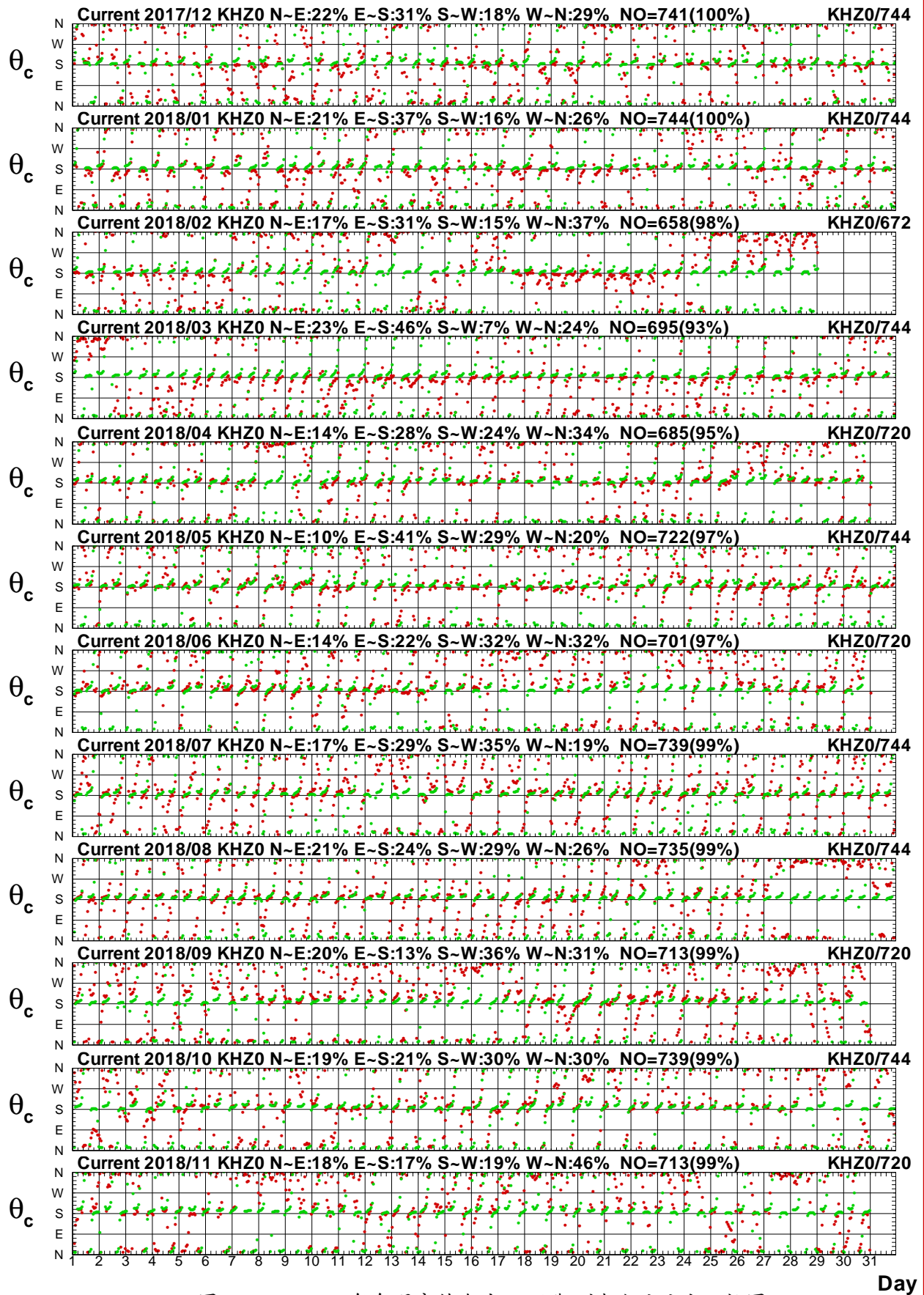


圖4.3.3b 2018年每月高雄海域 Z 站觀測與潮流流向比較圖

C17CKHZ0.1H0 C177CKHZ0.1HD C181KHZ0.1H0 C181KHZ0.1HD C182KHZ0.1H0 C182KHZ0.1HD
 C183KHZ0.1H0 C183KHZ0.1HD C184KHZ0.1H0 C184KHZ0.1HD C185KHZ0.1H0 C185KHZ0.1HD

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Current Speed in Kao-Hsiung Harbor of KHZ0 at 2018

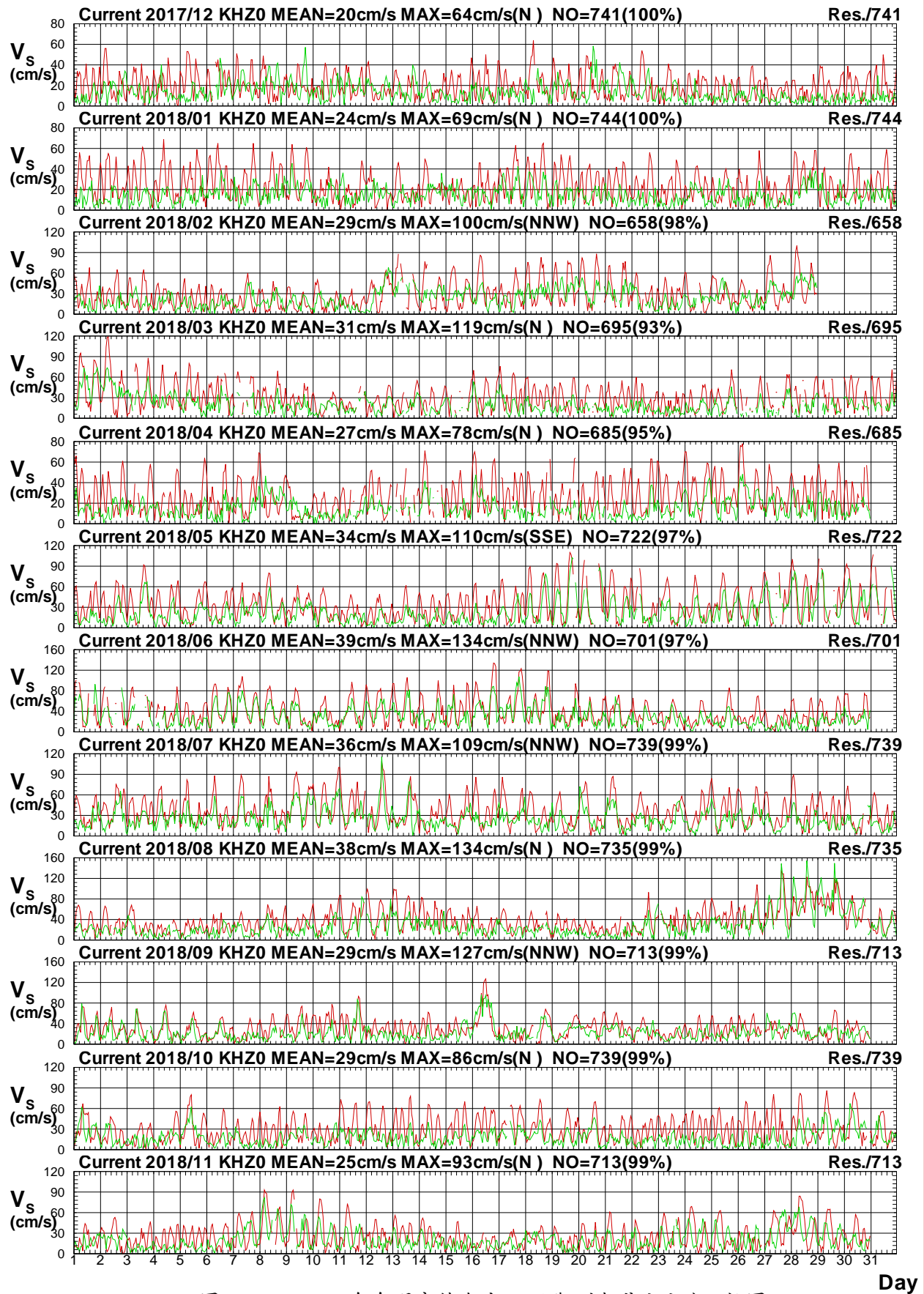


圖4.3.4a 2018年每月高雄海域 Z 站觀測與殘流流速比較圖

C17CKHZ0.1H0 C17CKHZ0.1HR C181KHZ0.1H0 C181KHZ0.1HR C182KHZ0.1H0 C182KHZ0.1HR
 C183KHZ0.1H0 C183KHZ0.1HR C184KHZ0.1H0 C184KHZ0.1HR C185KHZ0.1H0 C185KHZ0.1HR

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Current Direction in Kao-Hsiung Harbor of KHZ0 at 2018

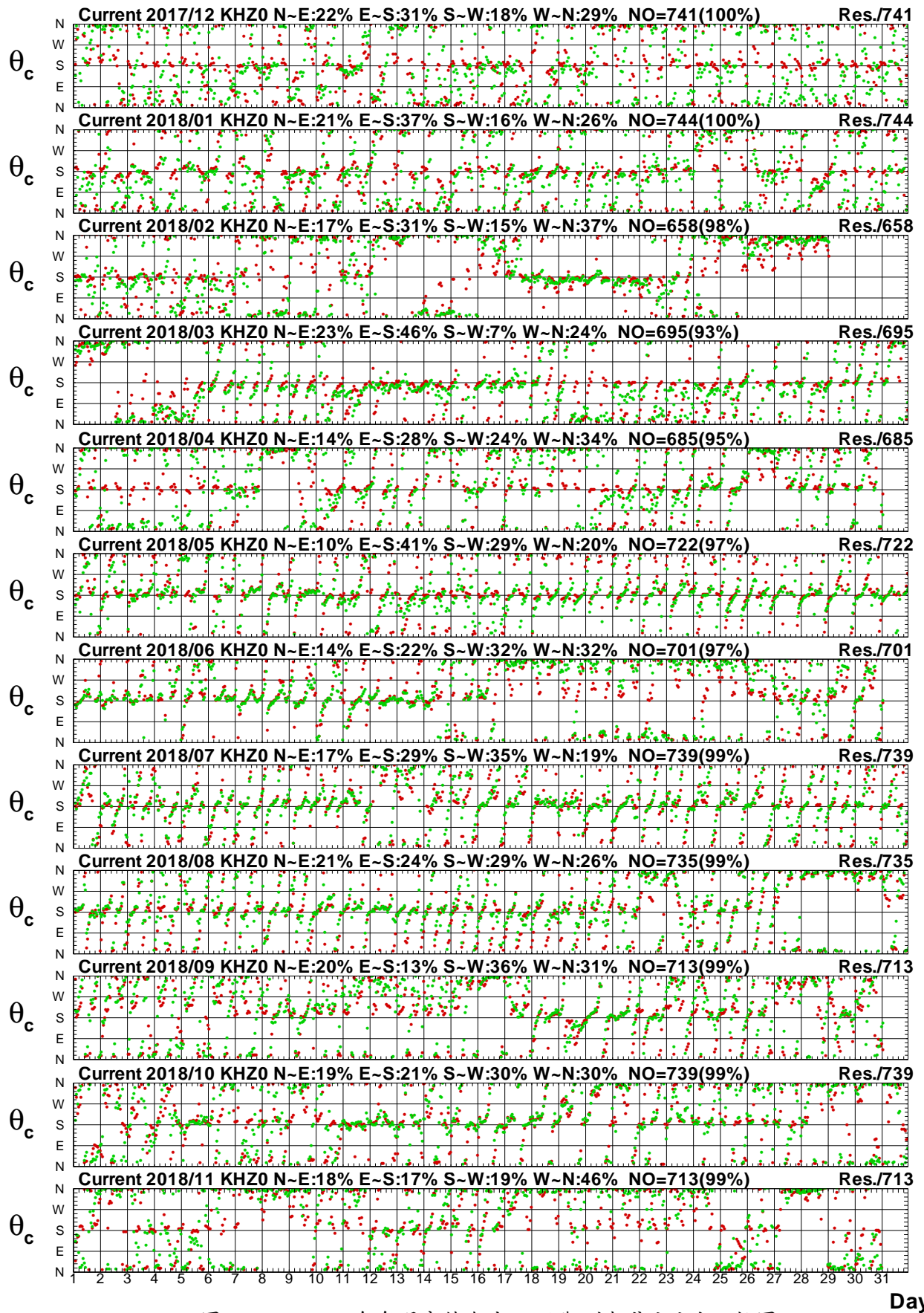


圖4.3.4b 2018年每月高雄海域 Z 站觀測與殘流流向比較圖

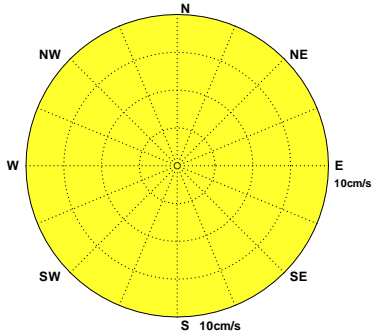
C17CKHZ0.1H0 C17CKHZ0.1HR C181KHZ0.1H0 C181KHZ0.1HR C182KHZ0.1H0 C182KHZ0.1HR
 C183KHZ0.1H0 C183KHZ0.1HR C184KHZ0.1H0 C184KHZ0.1HR C185KHZ0.1H0 C185KHZ0.1HR

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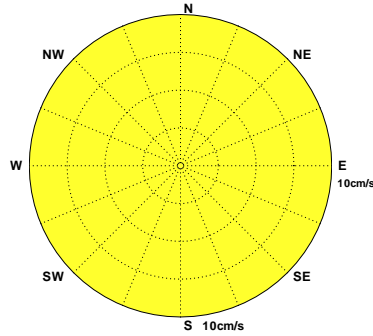
4.4 2018 年高雄海域各測站觀測海流與 計算潮流(殘流)向量分佈圖

Distribution of Current Vectors

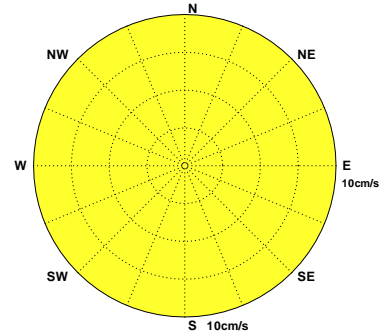
Current of KHX0 at 2017/12



Current of KHX0 at 2018/01



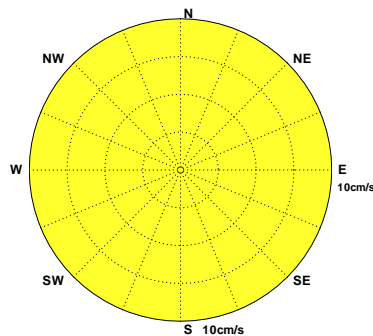
Current of KHX0 at 2018/02



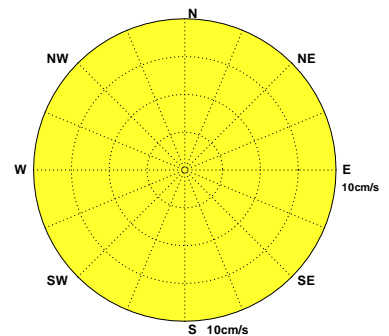
Current of KHX0 at 2018/03



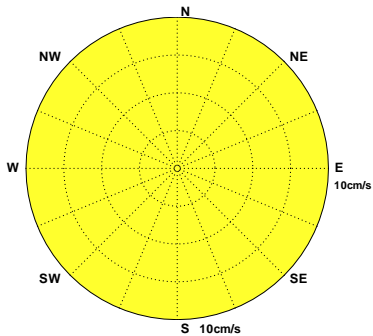
Current of KHX0 at 2018/04



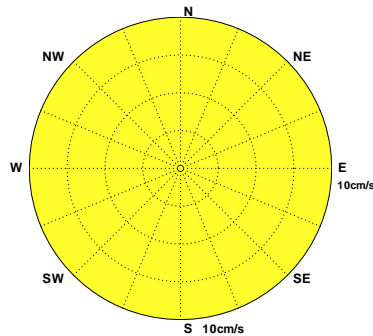
Current of KHX0 at 2018/05



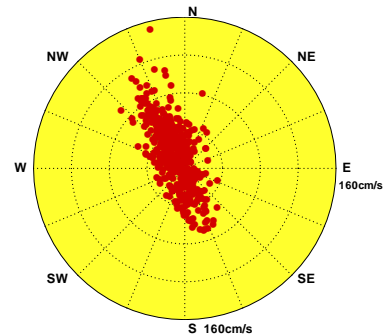
Current of KHX0 at 2018/06



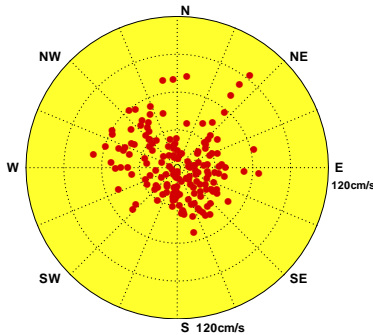
Current of KHX0 at 2018/07



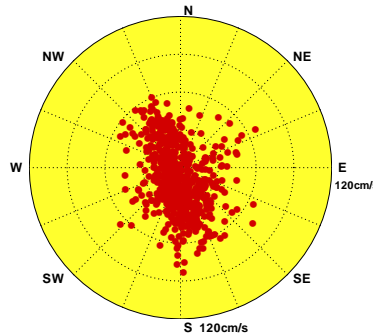
Current of KHX0 at 2018/08 NO=527(71%)
MEAN=37cm/s MAX=147cm/s(NNW)
N-E:4% E-S:16% S-W:20% W-N:60%



Current of KHX0 at 2018/09 NO=169(23%)
MEAN=31cm/s MAX=88cm/s(NE)
N-E:13% E-S:33% S-W:27% W-N:27%



Current of KHX0 at 2018/10 NO=649(87%)
MEAN=30cm/s MAX=87cm/s(S)
N-E:6% E-S:27% S-W:41% W-N:26%



Current of KHX0 at 2018/11 NO=653(91%)
MEAN=26cm/s MAX=71cm/s(S)
N-E:5% E-S:46% S-W:31% W-N:18%

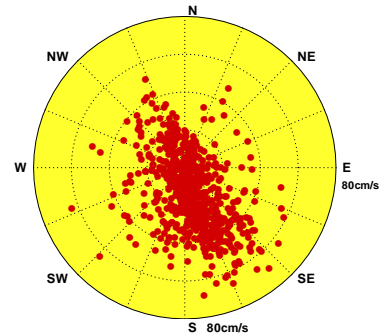


圖4.4.1a 2018年高雄海域每月測站 X 觀測海流向量分佈圖

C17CKHX0.1H0 C181KHX0.1H0 C182KHX0.1H0 C183KHX0.1H0 C184KHX0.1H0 C185KHX0.1H0
C186KHX0.1H0 C187KHX0.1H0 C188KHX0.1H0 C189KHX0.1H0 C18AKHX0.1H0 C18BKHX0.1H0

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Distribution of Current Vectors

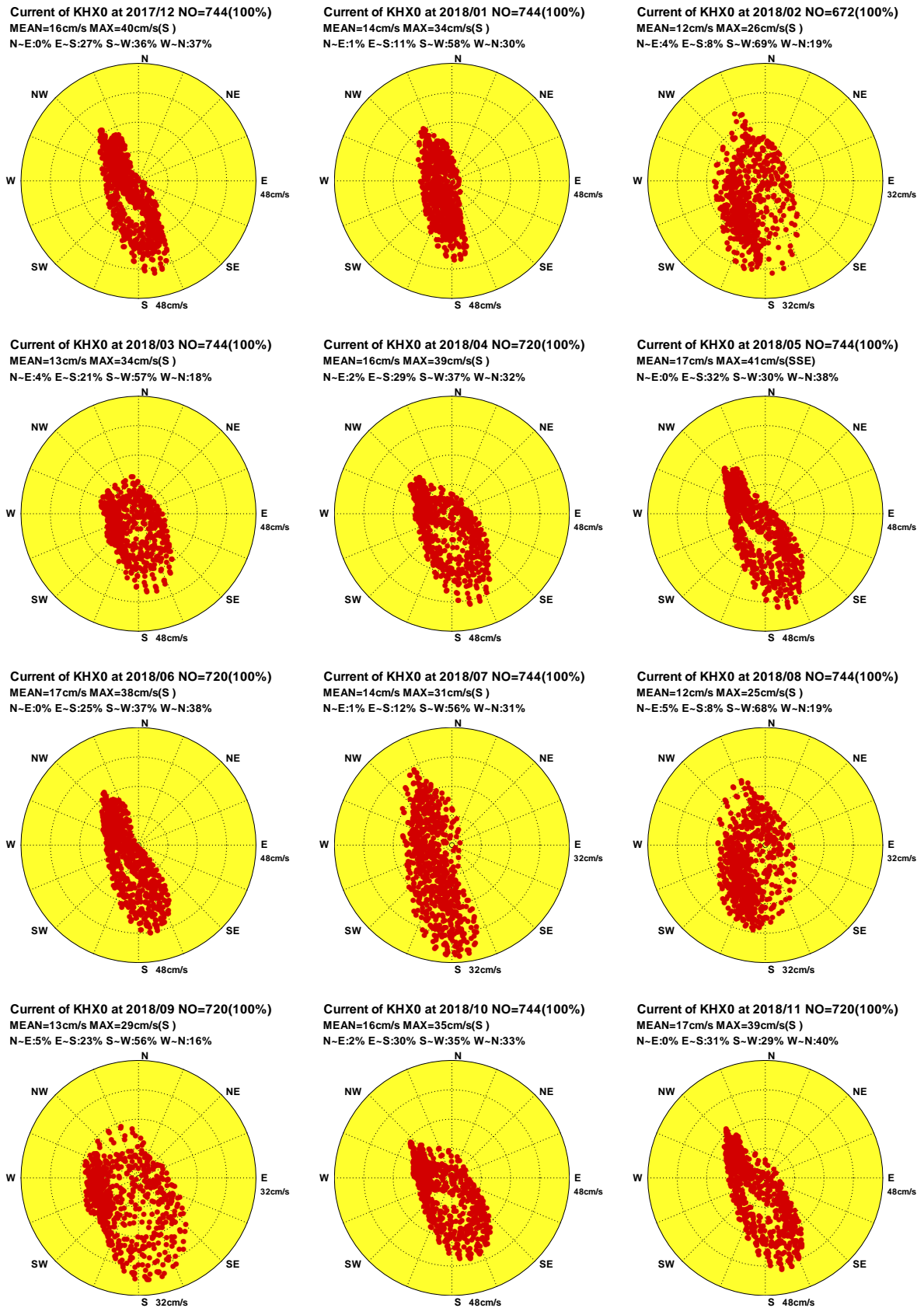


圖4.4.1b 2018年高雄海域每月測站 X 計算潮流向量分佈圖

C17CKHX0.1HD C181KHX0.1HD C182KHX0.1HD C183KHX0.1HD C184KHX0.1HD C185KHX0.1HD
 C186KHX0.1HD C187KHX0.1HD C188KHX0.1HD C189KHX0.1HD C18AKHX0.1HD C18BKHX0.1HD

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Distribution of Current Vectors

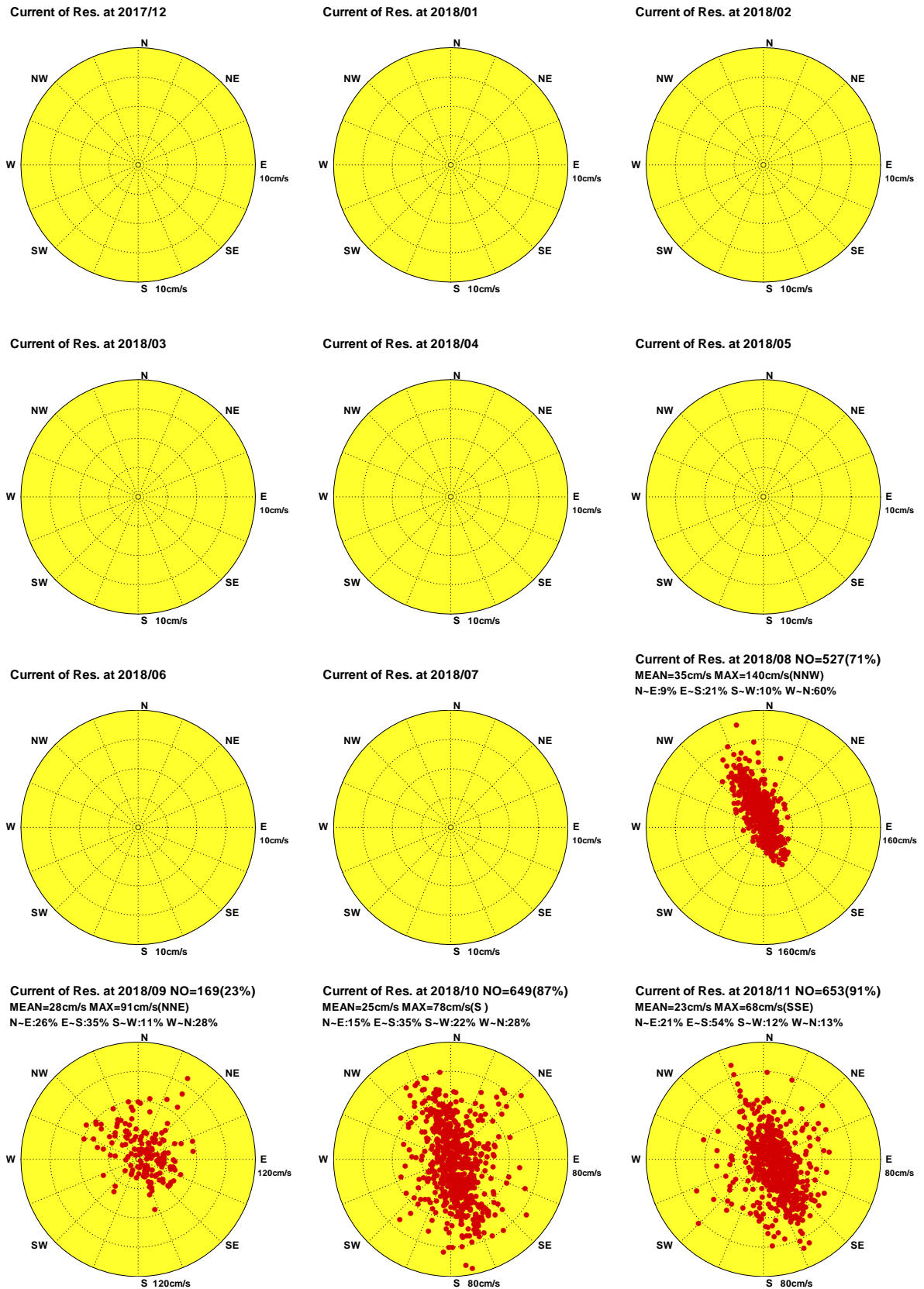


圖4.4.1c 2018年高雄海域每月測站 X 計算殘流向量分佈圖

C17CKHX0.1HR C181KHX0.1HR C182KHX0.1HR C183KHX0.1HR C184KHX0.1HR C185KHX0.1HR
C186KHX0.1HR C187KHX0.1HR C188KHX0.1HR C189KHX0.1HR C18AKHX0.1HR C18BKHX0.1HR

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Distribution of Current Vectors

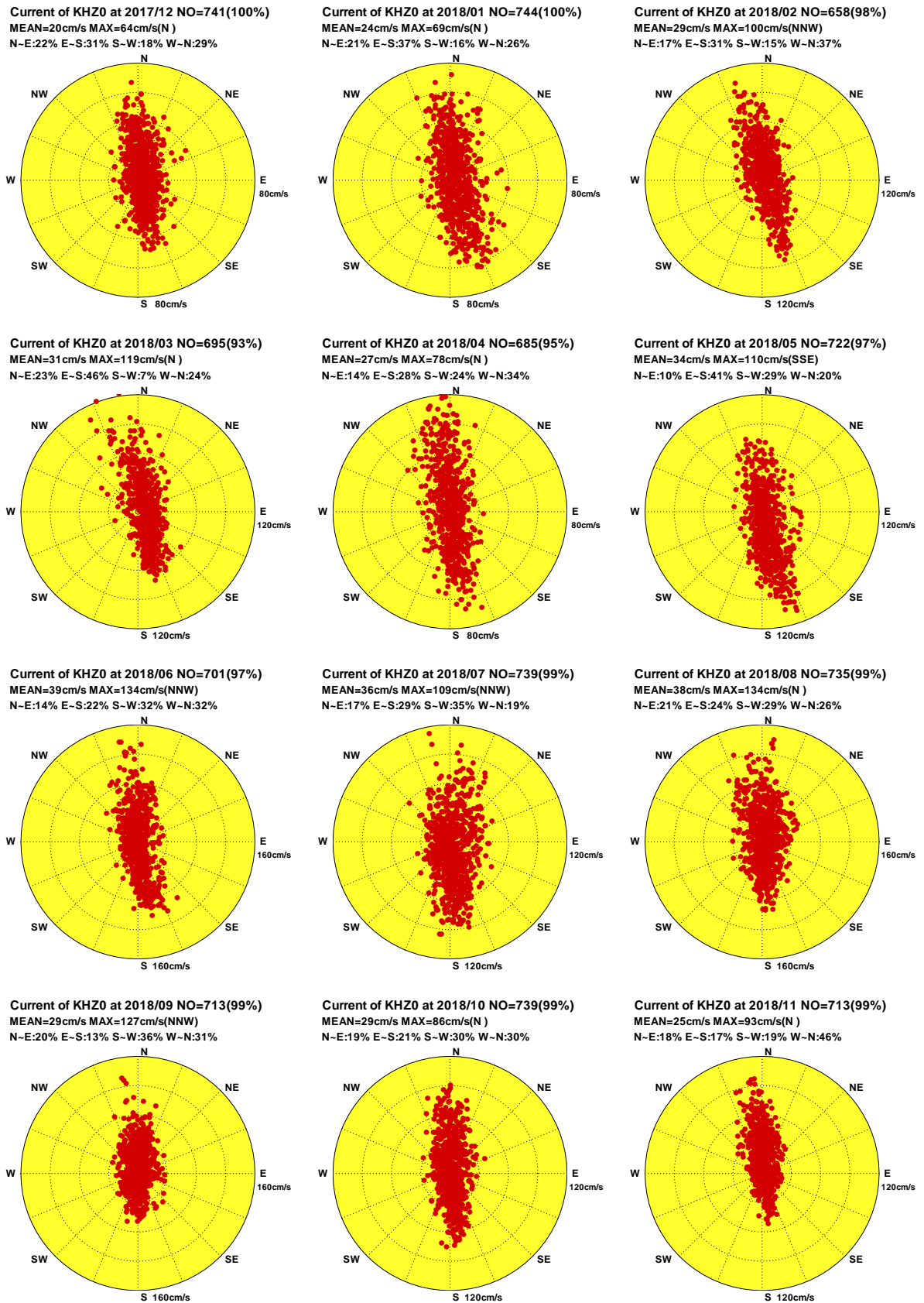


圖4.4.2a 2018年高雄海域每月測站 Z 觀測海流向量分佈圖

C17CKHZ0.1H0 C181KHZ0.1H0 C182KHZ0.1H0 C183KHZ0.1H0 C184KHZ0.1H0 C185KHZ0.1H0
 C186KHZ0.1H0 C187KHZ0.1H0 C188KHZ0.1H0 C189KHZ0.1H0 C18AKHZ0.1H0 C18BKHZ0.1H0

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Distribution of Current Vectors

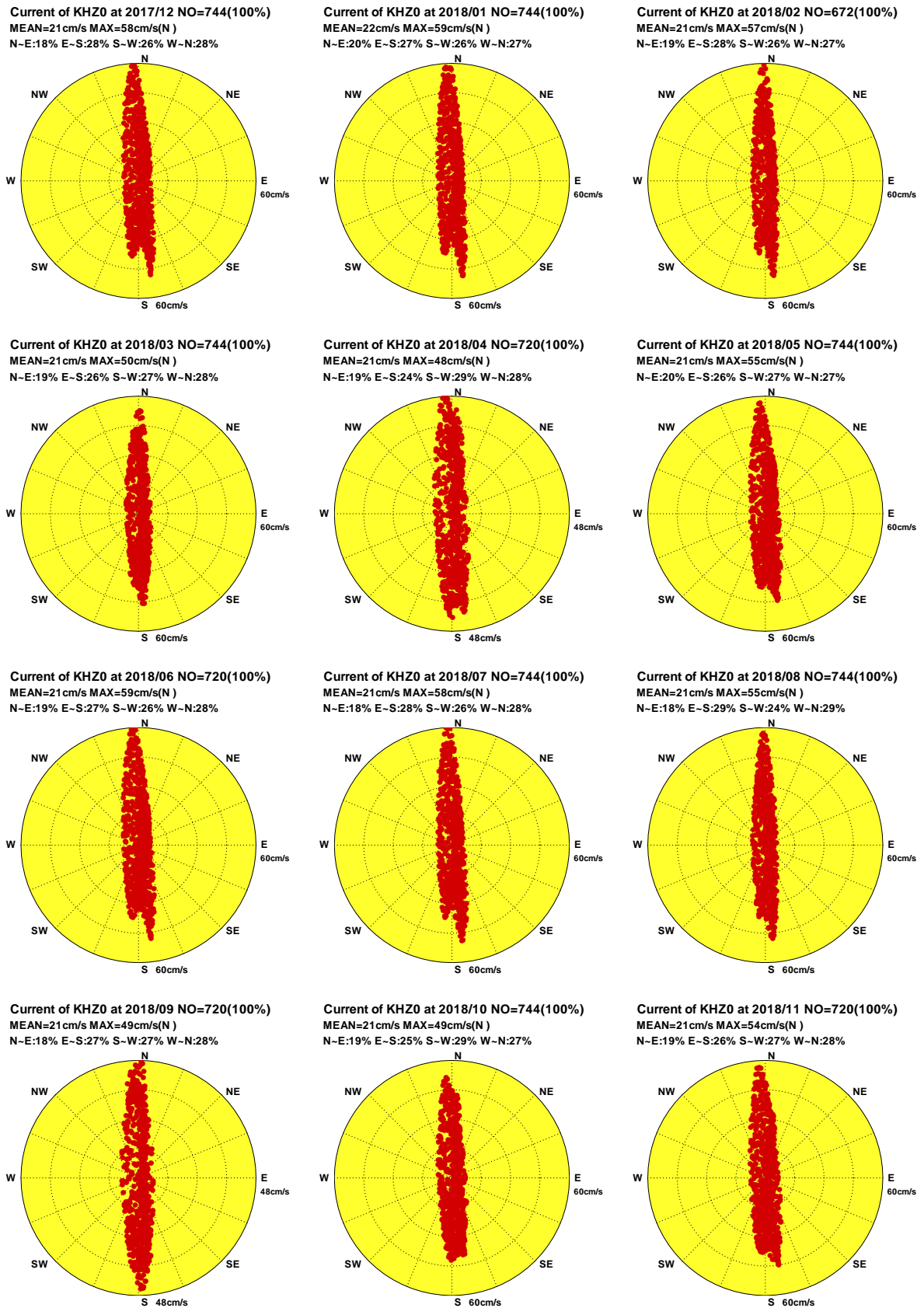


圖4.4.2b 2018年高雄海域每月測站 Z 計算潮流向量分佈圖

C17CKHZ0.1HD C181KHZ0.1HD C182KHZ0.1HD C183KHZ0.1HD C184KHZ0.1HD C185KHZ0.1HD
 C186KHZ0.1HD C187KHZ0.1HD C188KHZ0.1HD C189KHZ0.1HD C18AKHZ0.1HD C18BKHZ0.1HD

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Distribution of Current Vectors

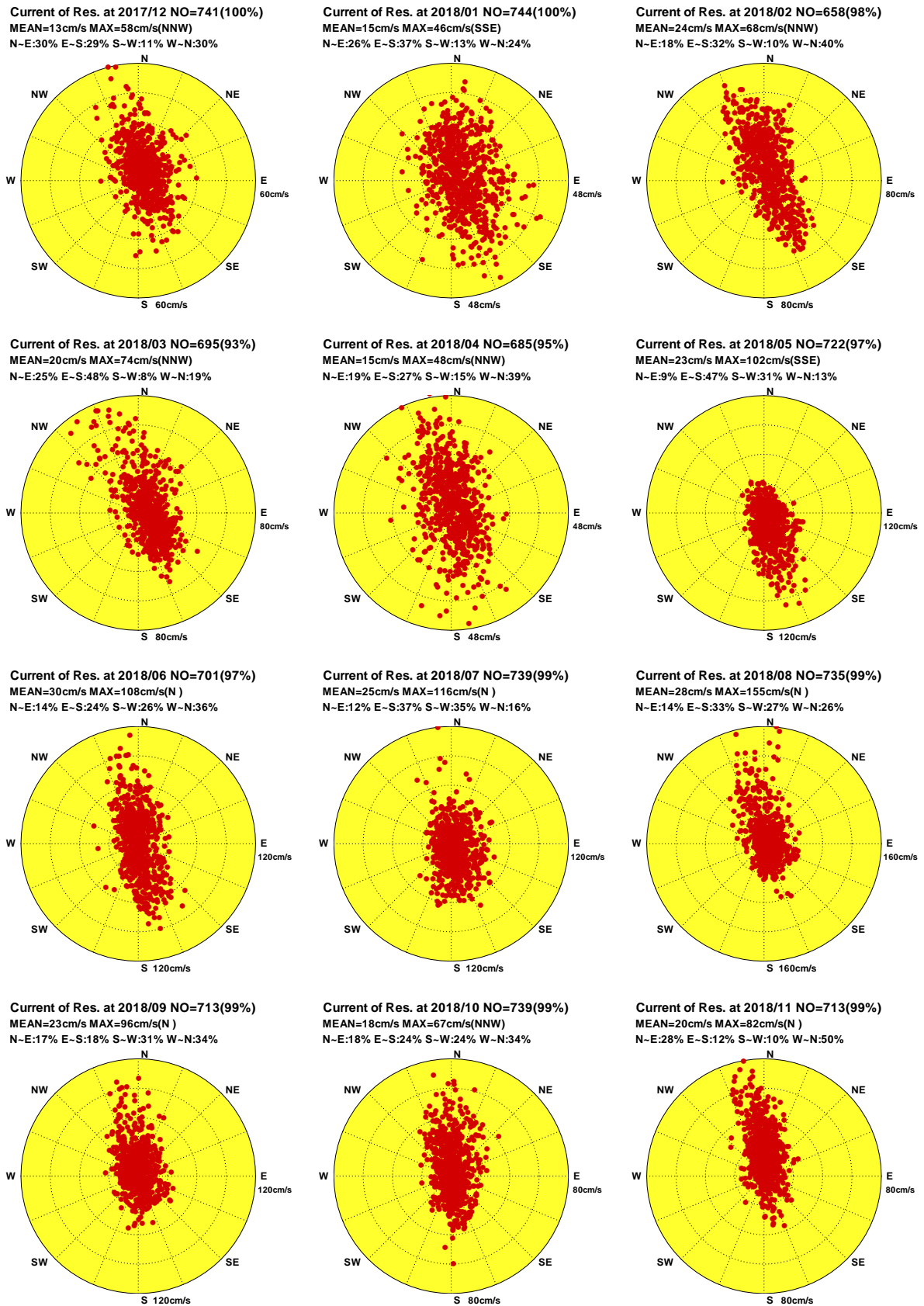


圖4.4.2c 2018年高雄海域每月測站 Z 計算殘流向量分佈圖

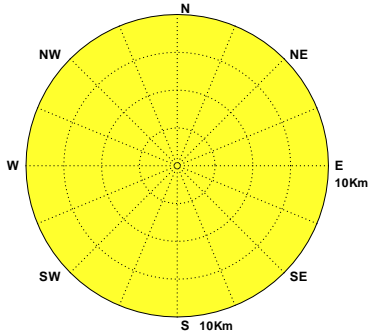
C17CKHZ0.1HR C181KHZ0.1HR C182KHZ0.1HR C183KHZ0.1HR C184KHZ0.1HR C185KHZ0.1HR
 C186KHZ0.1HR C187KHZ0.1HR C188KHZ0.1HR C189KHZ0.1HR C18AKHZ0.1HR C18BKHZ0.1HR

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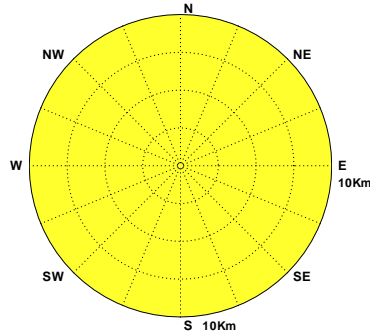
4.5 2018 年高雄海域各測站觀測海流與 計算潮流(殘流)向量行進圖

Progressive Vector Diagram of Current

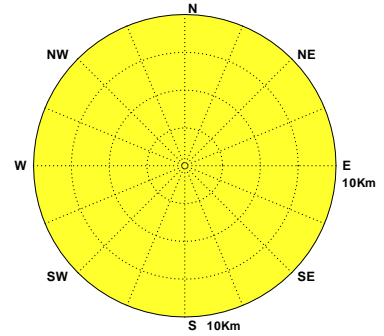
Current of KHX0 at 2017/12



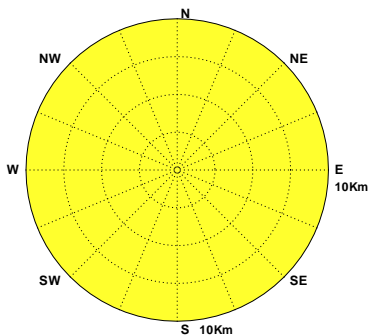
Current of KHX0 at 2018/01



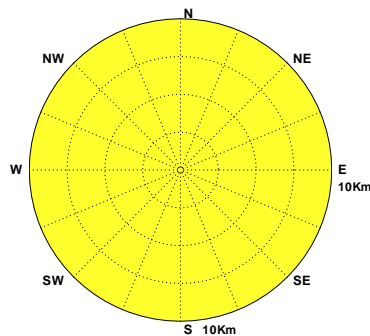
Current of KHX0 at 2018/02



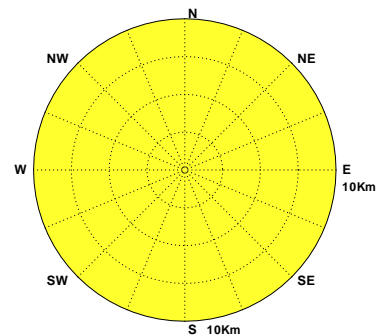
Current of KHX0 at 2018/03



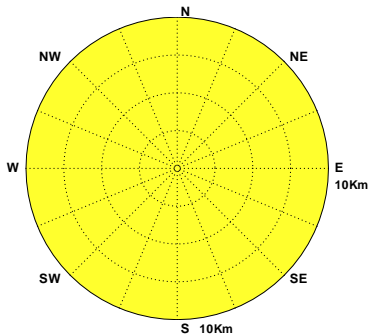
Current of KHX0 at 2018/04



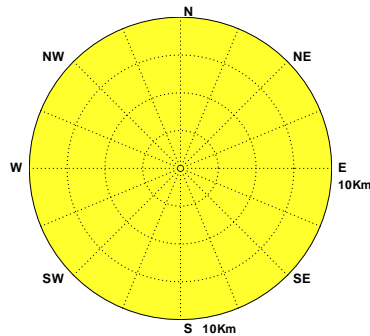
Current of KHX0 at 2018/05



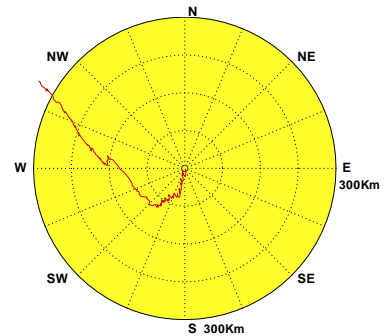
Current of KHX0 at 2018/06



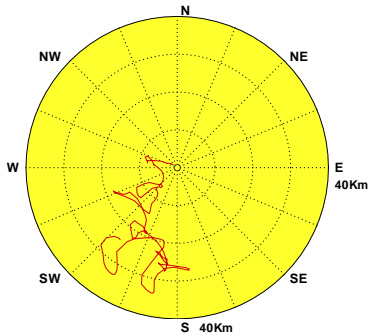
Current of KHX0 at 2018/07



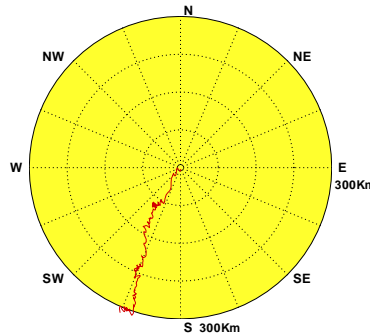
Current of KHX0 at 2018/08 NO=527(71%)
MEAN=37cm/s MAX=147cm/s(NNW)
N-E:4% E-S:16% S-W:20% W-N:60%



Current of KHX0 at 2018/09 NO=169(23%)
MEAN=31 cm/s MAX=88cm/s(NE)
N-E:13% E-S:33% S-W:27% W-N:27%



Current of KHX0 at 2018/10 NO=649(87%)
MEAN=30cm/s MAX=87cm/s(S)
N-E:6% E-S:27% S-W:41% W-N:26%



Current of KHX0 at 2018/11 NO=653(91%)
MEAN=26cm/s MAX=71 cm/s(S)
N-E:5% E-S:46% S-W:31% W-N:18%

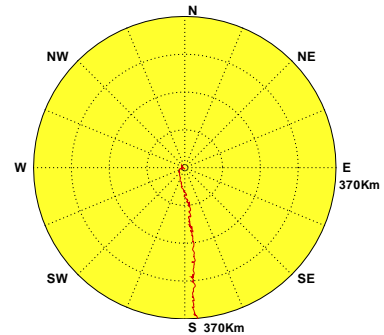


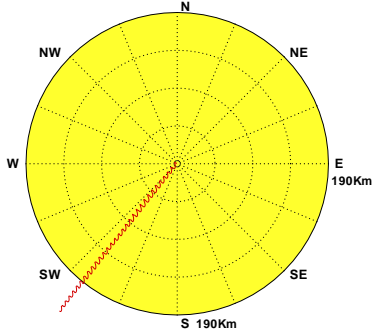
圖4.5.1a 2018年高雄海域每月測站 X 觀測海流向量行進圖

C17CKHX0.1H0 C181KHX0.1H0 C182KHX0.1H0 C183KHX0.1H0 C184KHX0.1H0 C185KHX0.1H0
C186KHX0.1H0 C187KHX0.1H0 C188KHX0.1H0 C189KHX0.1H0 C18AKHX0.1H0 C18BKHX0.1H0

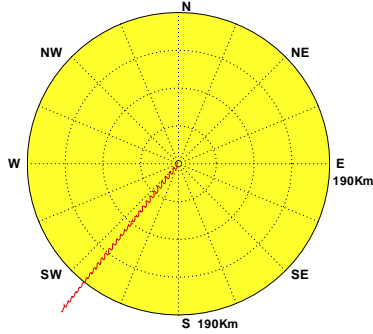
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Progressive Vector Diagram of Current

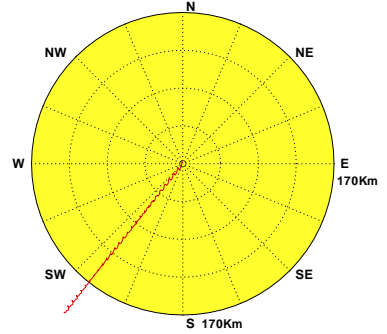
Current of KHX0 at 2017/12 NO=744(100%)
MEAN=16cm/s MAX=40cm/s(S)
N-E:0% E-S:27% S-W:36% W-N:37%



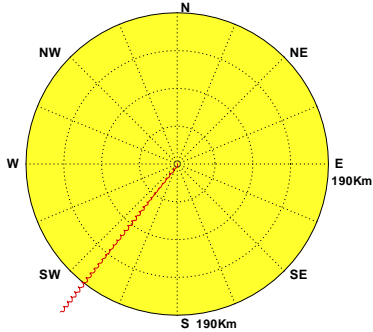
Current of KHX0 at 2018/01 NO=744(100%)
MEAN=14cm/s MAX=34cm/s(S)
N-E:1% E-S:11% S-W:58% W-N:30%



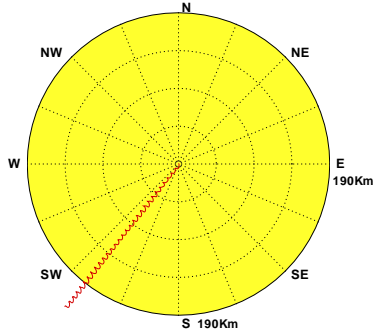
Current of KHX0 at 2018/02 NO=672(100%)
MEAN=12cm/s MAX=26cm/s(S)
N-E:4% E-S:8% S-W:69% W-N:19%



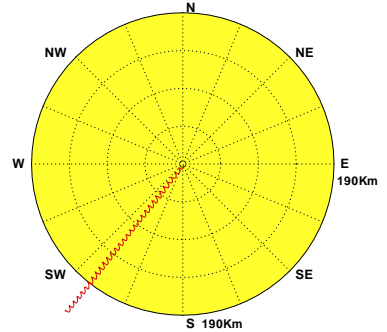
Current of KHX0 at 2018/03 NO=744(100%)
MEAN=13cm/s MAX=34cm/s(S)
N-E:4% E-S:21% S-W:57% W-N:18%



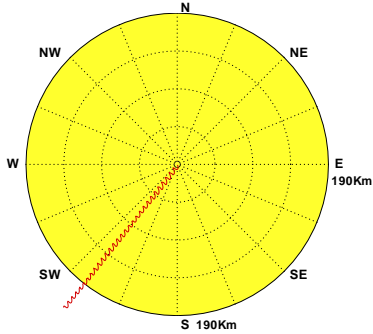
Current of KHX0 at 2018/04 NO=720(100%)
MEAN=16cm/s MAX=39cm/s(S)
N-E:2% E-S:29% S-W:37% W-N:32%



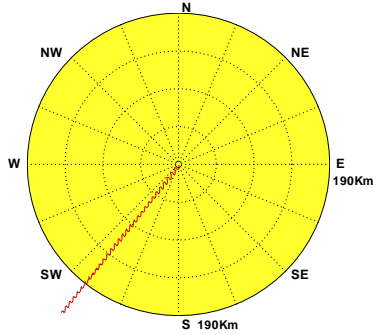
Current of KHX0 at 2018/05 NO=744(100%)
MEAN=17cm/s MAX=41cm/s(SSE)
N-E:0% E-S:32% S-W:30% W-N:38%



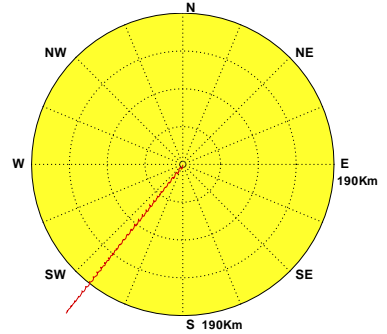
Current of KHX0 at 2018/06 NO=720(100%)
MEAN=17cm/s MAX=38cm/s(S)
N-E:0% E-S:25% S-W:37% W-N:38%



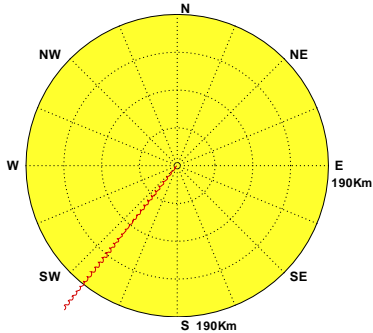
Current of KHX0 at 2018/07 NO=744(100%)
MEAN=14cm/s MAX=31cm/s(S)
N-E:1% E-S:12% S-W:56% W-N:31%



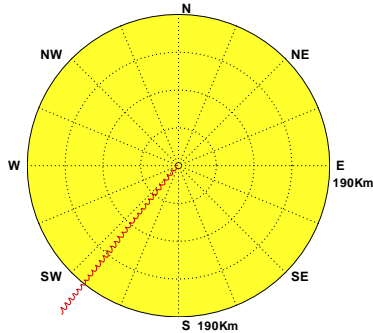
Current of KHX0 at 2018/08 NO=744(100%)
MEAN=12cm/s MAX=25cm/s(S)
N-E:5% E-S:8% S-W:68% W-N:19%



Current of KHX0 at 2018/09 NO=720(100%)
MEAN=13cm/s MAX=29cm/s(S)
N-E:5% E-S:23% S-W:56% W-N:16%



Current of KHX0 at 2018/10 NO=744(100%)
MEAN=16cm/s MAX=35cm/s(S)
N-E:2% E-S:30% S-W:35% W-N:33%



Current of KHX0 at 2018/11 NO=720(100%)
MEAN=17cm/s MAX=39cm/s(S)
N-E:0% E-S:31% S-W:29% W-N:40%

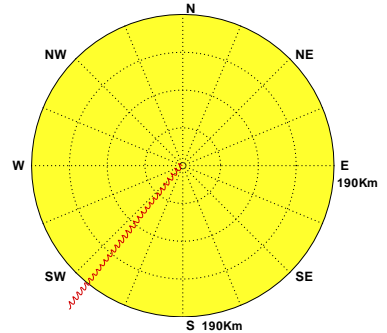


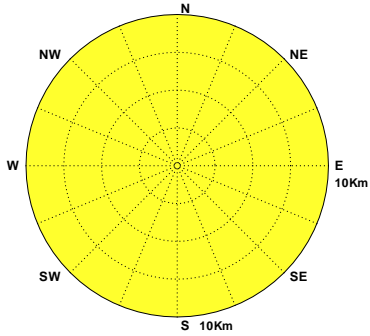
圖4.5.1b 2018年高雄海域每月測站 X 計算潮流向量行進圖

C17CKHX0.1HD C181KHX0.1HD C182KHX0.1HD C183KHX0.1HD C184KHX0.1HD C185KHX0.1HD
C186KHX0.1HD C187KHX0.1HD C188KHX0.1HD C189KHX0.1HD C18AKHX0.1HD C18BKHX0.1HD

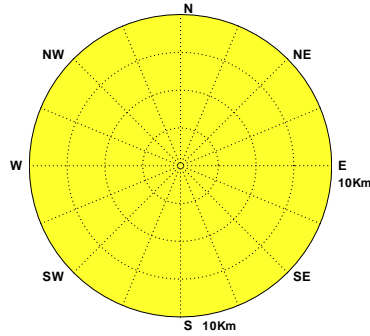
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Progressive Vector Diagram of Current

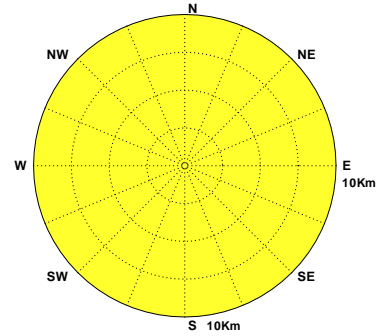
Current of Res. at 2017/12



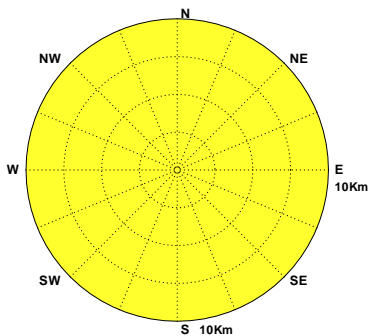
Current of Res. at 2018/01



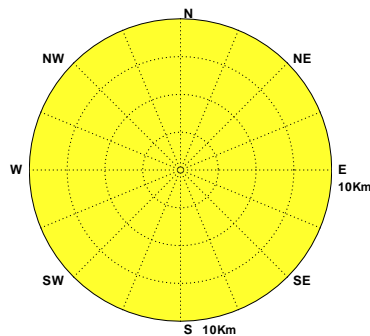
Current of Res. at 2018/02



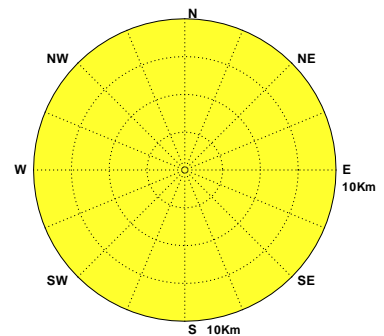
Current of Res. at 2018/03



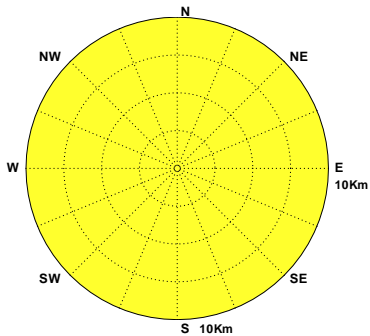
Current of Res. at 2018/04



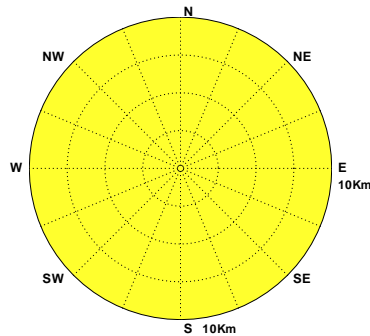
Current of Res. at 2018/05



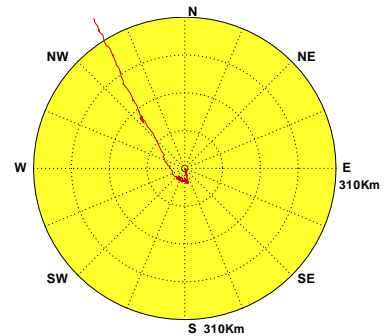
Current of Res. at 2018/06



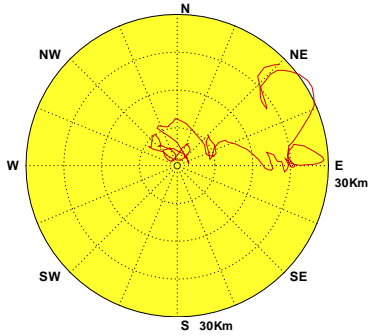
Current of Res. at 2018/07



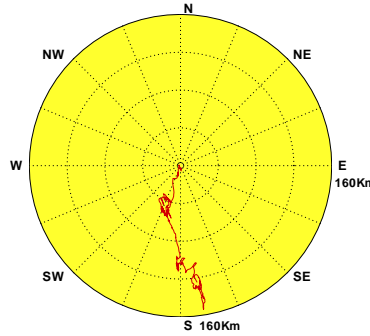
Current of Res. at 2018/08 NO=527(71%)
MEAN=35cm/s MAX=140cm/s(NNW)
N-E:9% E-S:21% S-W:10% W-N:60%



Current of Res. at 2018/09 NO=169(23%)
MEAN=28cm/s MAX=91cm/s(NNE)
N-E:26% E-S:35% S-W:11% W-N:28%



Current of Res. at 2018/10 NO=649(87%)
MEAN=25cm/s MAX=78cm/s(S)
N-E:15% E-S:35% S-W:22% W-N:28%



Current of Res. at 2018/11 NO=653(91%)
MEAN=23cm/s MAX=68cm/s(SSE)
N-E:21% E-S:54% S-W:12% W-N:13%

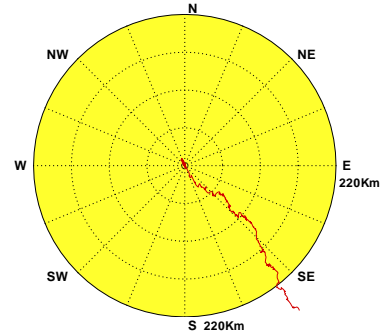


圖4.5.1c 2018年高雄海域每月測站 X 計算殘流向量行進圖

C17CKHX0.1HR C181KHX0.1HR C182KHX0.1HR C183KHX0.1HR C184KHX0.1HR C185KHX0.1HR
C186KHX0.1HR C187KHX0.1HR C188KHX0.1HR C189KHX0.1HR C18AKHX0.1HR C18BKHX0.1HR

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Progressive Vector Diagram of Current

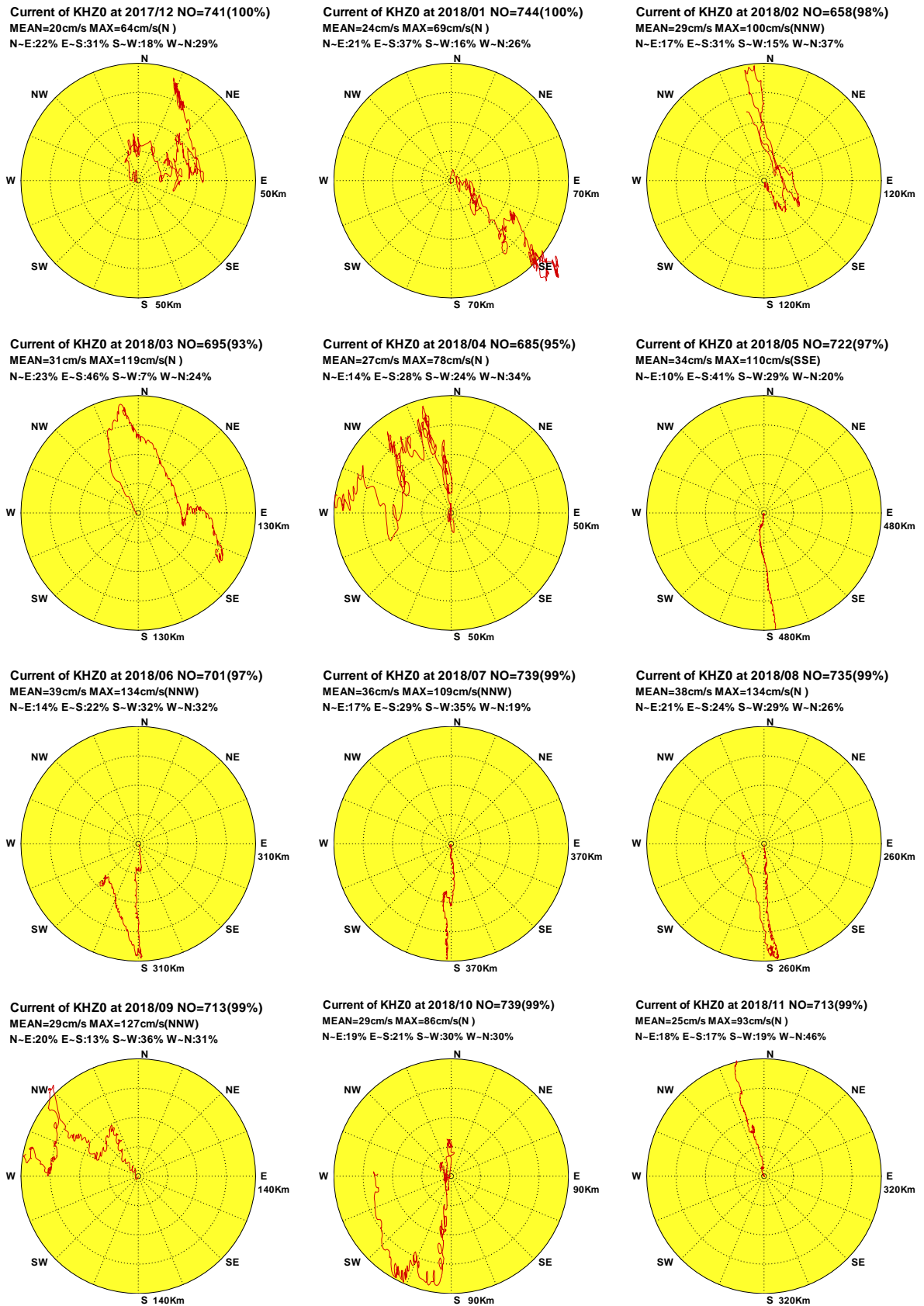


圖4.5.2a 2018年高雄海域每月測站 Z 觀測海流向量行進圖

C17CKHZ0.1H0 C181KHZ0.1H0 C182KHZ0.1H0 C183KHZ0.1H0 C184KHZ0.1H0 C185KHZ0.1H0
C186KHZ0.1H0 C187KHZ0.1H0 C188KHZ0.1H0 C189KHZ0.1H0 C18AKHZ0.1H0 C18BKHZ0.1H0

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Progressive Vector Diagram of Current

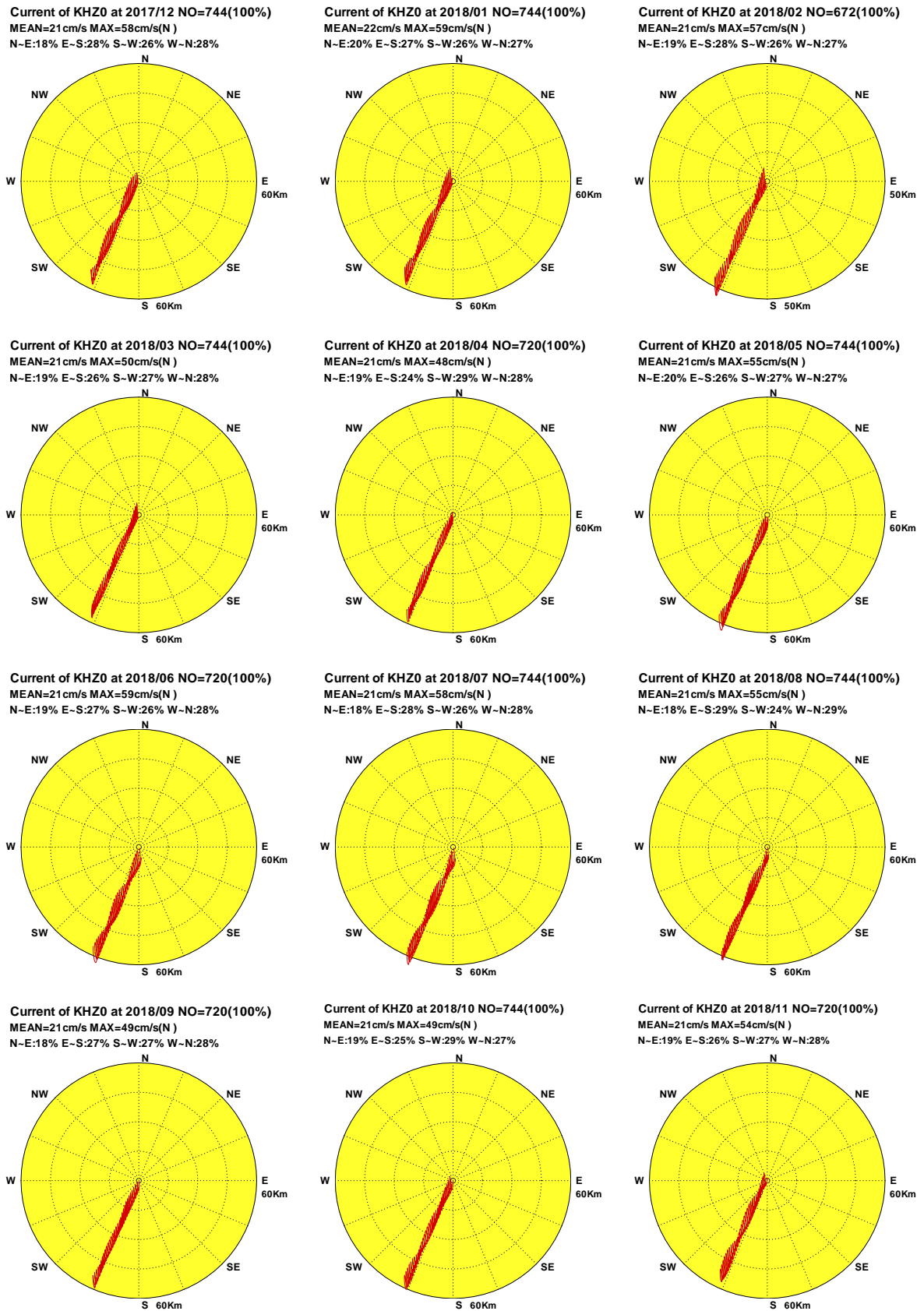


圖4.5.2b 2018年高雄海域每月測站 Z 計算潮流向量行進圖

C17CKHZ0.1HD C181KHZ0.1HD C182KHZ0.1HD C183KHZ0.1HD C184KHZ0.1HD C185KHZ0.1HD
C186KHZ0.1HD C187KHZ0.1HD C188KHZ0.1HD C189KHZ0.1HD C18AKHZ0.1HD C18BKHZ0.1HD

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Progressive Vector Diagram of Current

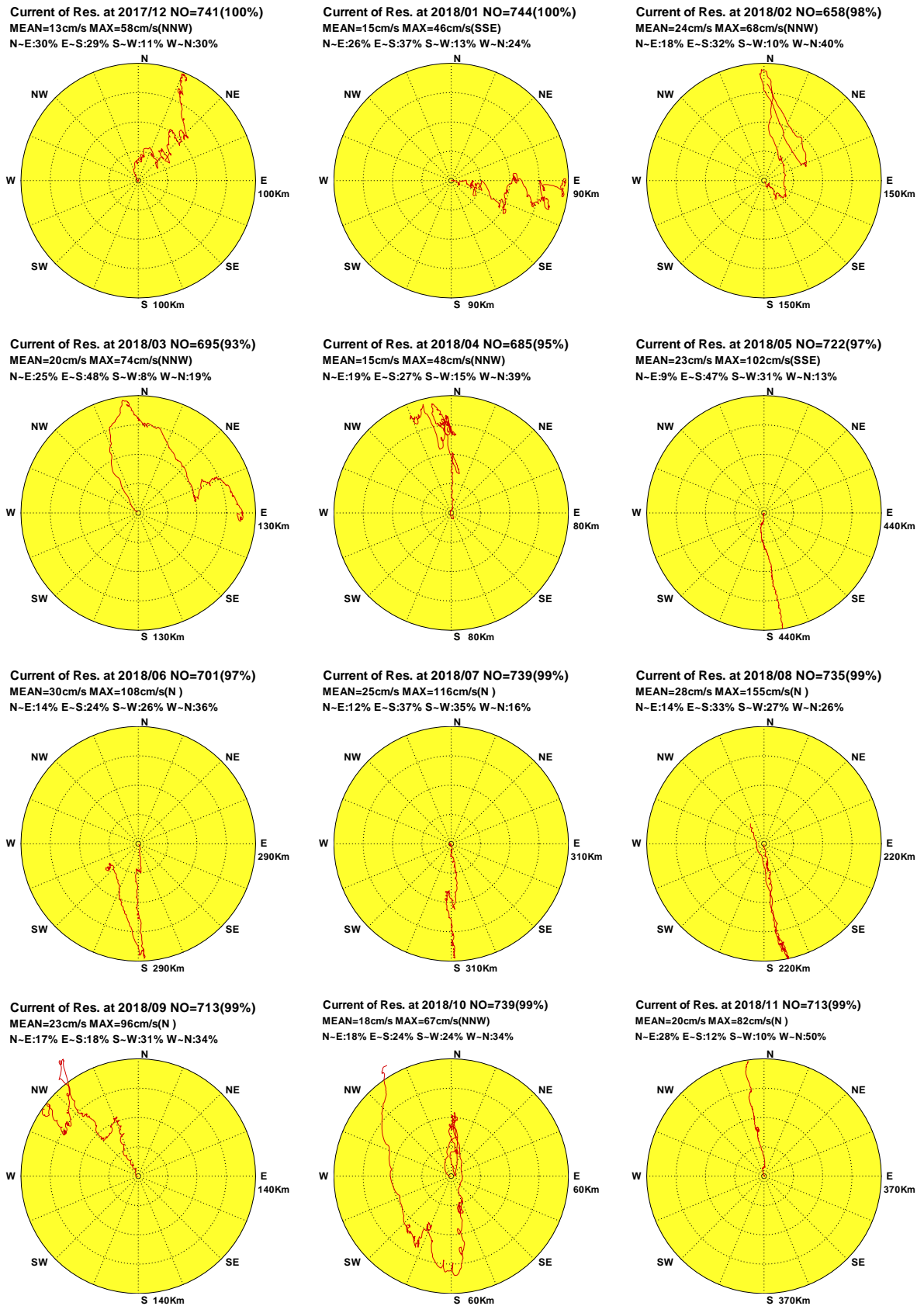


圖4.5.2c 2018年高雄海域每月測站 Z 計算殘流向量行進圖

C17CKHZ0.1HR C181KHZ0.1HR C182KHZ0.1HR C183KHZ0.1HR C184KHZ0.1HR C185KHZ0.1HR
 C186KHZ0.1HR C187KHZ0.1HR C188KHZ0.1HR C189KHZ0.1HR C18AKHZ0.1HR C18BKHZ0.1HR

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