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2015 年港灣環境資訊網觀測資料年報 (屏東海域觀測海氣象資料)



交通部運輸研究所

中華民國 106 年 9 月

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著者：蘇青和、李俊穎、陳明宗、劉清松
傅怡釗、陳鈞彥、林珂如、謝佳紘

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摘要： 本港灣環境資訊網觀測海氣象資料年報，包括屏東海域2015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。			
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2015 年港灣環境資訊網觀測資料年報 (屏東海域觀測海氣象資料)

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誌 謝

2015 年港灣環境資訊網觀測風力資料，蒐集之屏東海域風力資料，除本中心自行觀測之外，在小琉球海上浮標(測站 Y)、恆春氣象站(測站 O)、大鵬灣氣象站(測站 I 及測站 D)等觀測風力資料，係交通部中央氣象局(CWB)提供。林邊氣象站(測站 H)、鵝鑾鼻海上浮標 (測站 Z)、大鵬灣海上浮標(測站 U) 等觀測風力資料，係經濟部水利署(WRA)提供。大鵬灣水質氣象站(測站 C) ，係交通部觀光局(TB)所設置，謹致謝忱。

2015 年港灣環境資訊網觀測波浪資料，蒐集之屏東海域波浪資料，除本中心自行觀測之外，在小琉球海上浮標(測站 Y)、大鵬灣海上浮標(測站 U)等觀測波浪資料，係交通部中央氣象局(CWB)提供。鵝鑾鼻海上浮標 (測站 Z)觀測波浪資料，係經濟部水利署(WRA)提供。南灣海上浮標(測站 R)觀測波浪儀，係國立成功大學水文中心(COMC)裝設，謹致謝忱。

2015 年港灣海氣象觀測潮汐資料，蒐集之屏東海域潮汐觀測資料，除本中心自行觀測之外，在小琉球(測站 J)、東港(測站 P)、後壁湖(測站 Q)等觀測潮汐資料，係交通部中央氣象局提供。蟬廣嘴(測站 F)、林邊(測站 K)、嘉和(測站 M)等觀測潮汐資料，係經濟部水利署提供，謹致謝忱。

2015 年港灣環境資訊網觀測海流資料，蒐集之屏東海域海流資料，除本中心自行觀測之外，在小琉球海上浮標(測站 Y)等觀測海流資料，係交通部中央氣象局(CWB)提供。鵝鑾鼻海上浮標(測站 Z)觀測海流資料，係經濟部水利署(WRA)提供，謹致謝忱。

第一章 2015 年屏東海域觀測風力資料

屏東海域風之觀測恆春氣象站(測站 O)屬中央氣象局(CWB)所有，測站之位置如圖 1。大鵬灣氣象站風力觀測站 I(測站 D)也由中央氣象局所設置，測站 Y(小琉球浮標站)之風速儀也屬中央氣象局所有。大鵬灣氣象站風力觀測站 C 為觀光局所設置。

測站 Z(鵝鑾鼻外海浮標站)、測站 U(大鵬灣海上浮標站)、蟬廣嘴氣象站測站 E 及林邊氣象站測站 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 1。

風資料之蒐集係採取每小時測定之風速、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。風力資料以取平均風速及平均風向為主。

本風力年報以取經檢核或修補後之 Y 站資料作為主要觀測站，2015 年主要觀測站修補前(後)每月觀測之風資料記錄期間統計表，如表 1.1a，2015 年風力次要觀測站資料(未補餘)記錄統計表，如表 1.1b，主要觀測站修補前後每月風力歷線比較圖，如圖 1.1，主要觀測站與次要觀測站(或其他觀測站)每月風力歷線比較圖，如圖 1.2 以後。

表 1 屏東海域觀測風力資料蒐集概況表(統計時間至 2015 年 11 月)

測站	緯度	經度	觀測期間	觀測單位	備註
Y	22°18'50"N	120°21'50"E	2003/11-2015/11(觀測中)	中央氣象局	小琉球浮標站
Z	21°54'01"N	120°49'21"E	2000/10-2015/11(觀測中)	水利署	鵝鑾鼻浮標站
E	21°59'9"N	120°42'42"E	2006/12-2015/11(觀測中)	水利署	蟬廣嘴氣象站
H	22°24'53"N	120°31'7"E	2013/09-2015/11(觀測中)	水利署	林邊氣象站
I	22°26'55"N	120°27'9"E	2002/11-2015/11(觀測中)	中央氣象局	大鵬灣氣象站
O	22°00'20"N	120°44'17"E	2013/11-2015/11(觀測中)	中央氣象局	恆春氣象站
U	22°18'50"N	120°21'50"E	2002/11-2013/08	水利署	大鵬灣浮標
D	22°41'01"N	120°42'30"E	2015/03-2015/11(觀測中)	中央氣象局	大鵬灣氣象站
C			2014/11-2015/11(觀測中)	觀光局	大鵬灣氣象站

屏東海域



圖 1 屏東海域風力觀測站位置示意圖

表 1.1a 2015 年每月屏東海域修補前各測站觀測風力資料紀錄統計表

年/月 港區	屏東海域	屏東海域	屏東海域	屏東海域	屏東海域	屏東海域	屏東海域	屏東海域	屏東海域	屏東海域	屏東海域	屏東海域
測站	E	Y	Z	H	I	O	U	C	D	P	J	
2014/12 月	744 (100%)	732 (98.4%)	729 (98.0%)	744 (100%)	744 (100%)	744 (100%)	*	743 (99.9%)	*	*	*	*
2015/ 1 月	743 (99.9%)	731 (98.3%)	723 (97.2%)	744 (100%)	738 (99.2%)	743 (99.9%)	*	743 (99.9%)	*	*	*	*
2015/ 2 月	671 (99.9%)	669 (99.6%)	621 (92.4%)	672 (100%)	664 (98.8%)	672 (100%)	*	670 (99.7%)	*	*	*	*
2015/ 3 月	743 (99.9%)	740 (99.5%)	711 (95.6%)	744 (100%)	739 (99.3%)	744 (100%)	*	742 (99.7%)	83 (11.2%)	*	*	*
2015/ 4 月	715 (99.3%)	698 (96.9%)	671 (93.2%)	720 (100%)	710 (98.6%)	720 (100%)	*	719 (99.9%)	267 (37.1%)	*	*	*
2015/ 5 月	731 (98.3%)	739 (99.3%)	682 (91.7%)	743 (99.9%)	744 (100%)	744 (100%)	*	673 (90.5%)	86 (11.6%)	*	*	*
2015/ 6 月	709 (98.5%)	714 (99.2%)	715 (99.3%)	720 (100%)	718 (99.7%)	720 (100%)	*	713 (99.0%)	*	*	*	*
2015/ 7 月	708 (95.2%)	739 (99.3%)	704 (94.6%)	741 (99.6%)	740 (99.5%)	744 (100%)	*	657 (88.3%)	374 (50.3%)	*	*	*
2015/ 8 月	742 (99.7%)	437 (58.7%)	744 (100%)	744 (100%)	741 (99.6%)	744 (100%)	*	702 (94.4%)	683 (91.8%)	*	*	*
2015/ 9 月	720 (100%)	661 (91.8%)	720 (100%)	720 (100%)	716 (99.4%)	720 (100%)	*	714 (99.2%)	662 (91.9%)	*	*	*
2015/10 月	743 (99.9%)	726 (97.6%)	744 (100%)	744 (100%)	741 (99.6%)	744 (100%)	*	728 (97.8%)	632 (84.9%)	*	*	*
2015/11 月	720 (100%)	719 (99.9%)	718 (99.7%)	719 (99.9%)	716 (99.4%)	720 (100%)	*	710 (98.6%)	635 (88.2%)	*	*	*
2015/冬季	2158 (99.9%)	2132 (98.7%)	2073 (96.0%)	2160 (100%)	2146 (99.4%)	2159 (100.0%)	*	*	*	*	*	*
2015/春季	2189 (99.1%)	2177 (98.6%)	2064 (93.5%)	2207 (100.0%)	2193 (99.3%)	2208 (100%)	*	*	*	*	*	*
2015/夏季	2159 (97.8%)	1890 (85.6%)	2163 (98.0%)	2205 (99.9%)	2199 (99.6%)	2208 (100%)	*	*	*	*	*	*
2015/秋季	2183 (100.0%)	2106 (96.4%)	2182 (99.9%)	2183 (100.0%)	2173 (99.5%)	2184 (100%)	*	*	*	*	*	*
2015/整年	8689 (99.2%)	8305 (94.8%)	8482 (96.8%)	8755 (99.9%)	8711 (99.4%)	8759 (100.0%)	*	*	*	*	*	*
起始年月	2014/12	2014/12	2014/12	2014/12	2014/12	2014/12	*	*	*	*	*	*
結束年月	2015/11	2015/11	2015/11	2015/11	2015/11	2015/11	*	*	*	*	*	*

表1.1b 2015年每月屏東海域修補後各測站風力資料統計表

年/月 港區	屏東海域		屏東海域		屏東海域		屏東海域		屏東海域		屏東海域		屏東海域		屏東海域								
測站	E		Y		Z		H		I		O		U		C		D		P		J		
2014/12月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/ 1月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/ 2月	672	(100%)	672	(100%)	672	(100%)	672	(100%)	672	(100%)	672	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/ 3月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/ 4月	720	(100%)	720	(100%)	720	(100%)	720	(100%)	720	(100%)	720	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/ 5月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/ 6月	720	(100%)	720	(100%)	720	(100%)	720	(100%)	720	(100%)	720	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/ 7月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/ 8月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/ 9月	720	(100%)	720	(100%)	720	(100%)	720	(100%)	720	(100%)	720	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/10月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/11月	720	(100%)	720	(100%)	720	(100%)	720	(100%)	720	(100%)	720	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/冬季	2160	(100%)	2160	(100%)	2160	(100%)	2160	(100%)	2160	(100%)	2160	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/春季	2208	(100%)	2208	(100%)	2208	(100%)	2208	(100%)	2208	(100%)	2208	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/夏季	2208	(100%)	2208	(100%)	2208	(100%)	2208	(100%)	2208	(100%)	2208	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/秋季	2184	(100%)	2184	(100%)	2184	(100%)	2184	(100%)	2184	(100%)	2184	(100%)	*	*	*	*	*	*	*	*	*	*	
2015/整年	8760	(100%)	8760	(100%)	8760	(100%)	8760	(100%)	8760	(100%)	8760	(100%)	*	*	*	*	*	*	*	*	*	*	
起始年月	2014/12		2014/12		2014/12		2014/12		2014/12		2014/12		*		*		*		*		*		*
結束年月	2015/11		2015/11		2015/11		2015/11		2015/11		2015/11		*		*		*		*		*		*

Wind Speed in Peng-Tung Seas of PNY0 at 2015

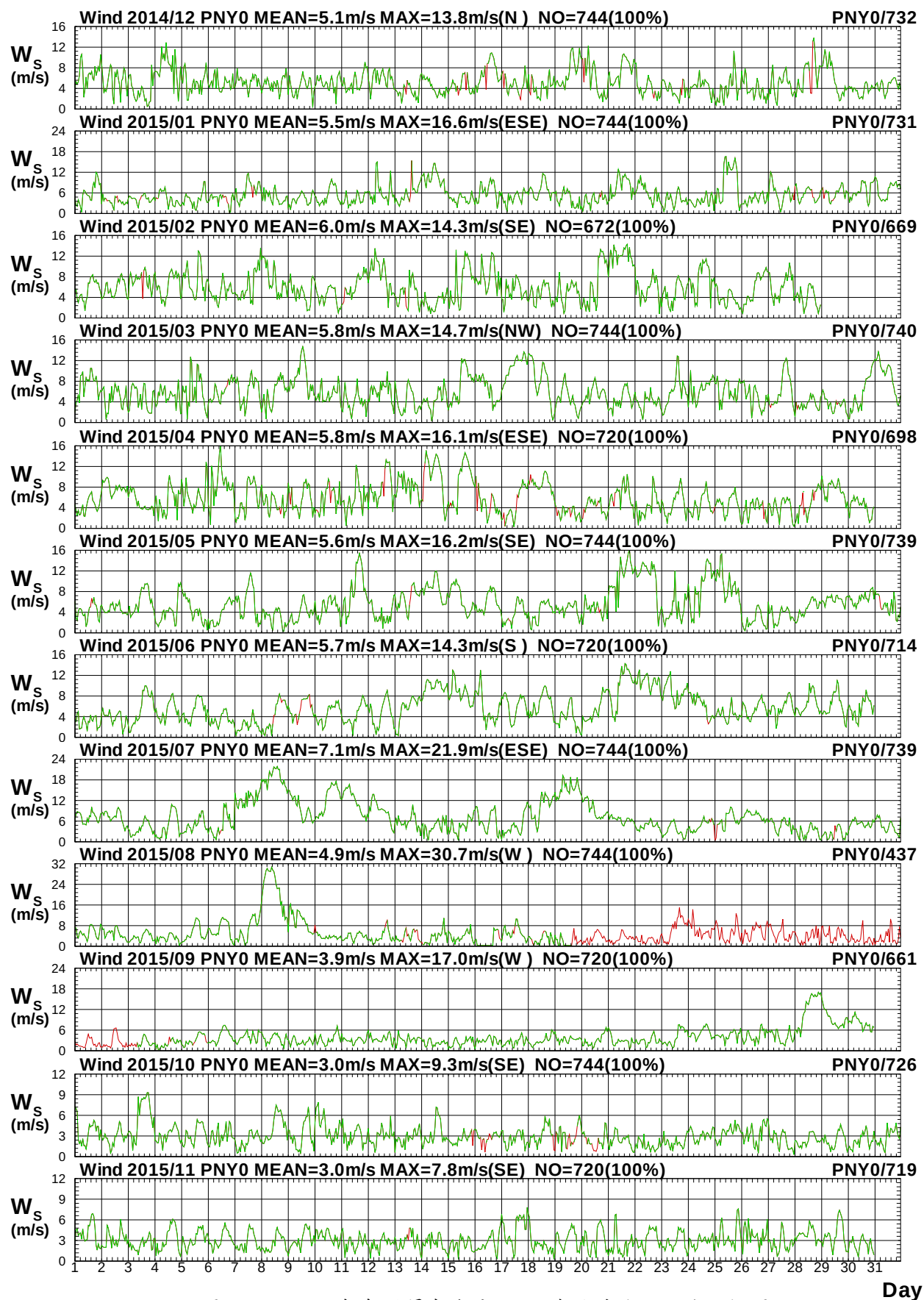


圖 1.1a 2015 年每月屏東海域 Y 站修補前後之風速比較圖

W14CPNY0.1HA W14CPNY0.1H0 W151PNY0.1HA W151PNY0.1H0 W152PNY0.1HA W152PNY0.1H0
W153PNY0.1HA W153PNY0.1H0 W154PNY0.1HA W154PNY0.1H0 W155PNY0.1HA W155PNY0.1H0

Institute of Harbor & Marine Technology

Wind Direction in Peng-Tung Seas of PNY0 at 2015

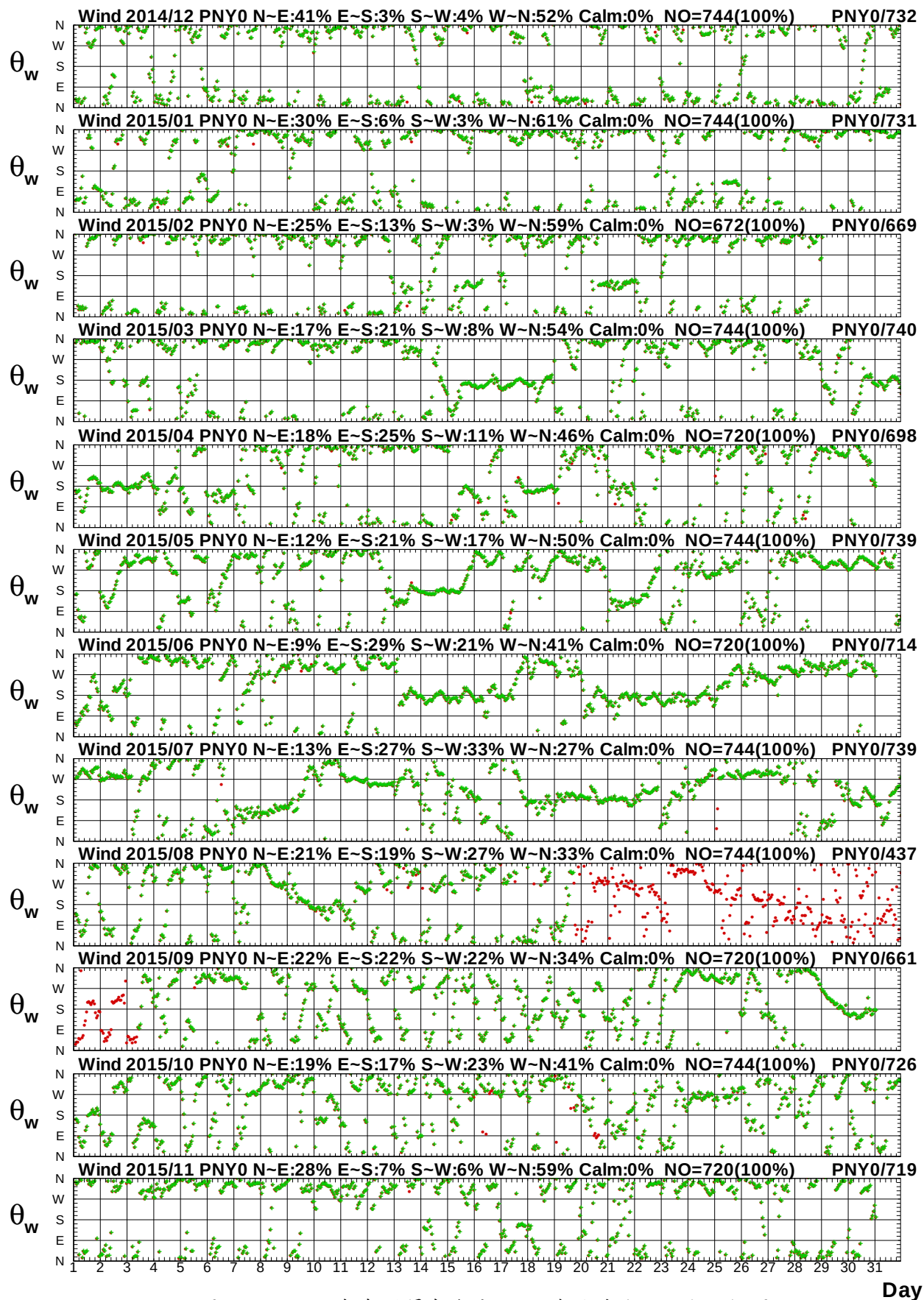


圖 1.1b 2015 年每月屏東海域 Y 站修補前後之風向比較圖

W14CPNY0.1HA W14CPNY0.1H0 W151PNY0.1HA W151PNY0.1H0 W152PNY0.1HA W152PNY0.1H0
W153PNY0.1HA W153PNY0.1H0 W154PNY0.1HA W154PNY0.1H0 W155PNY0.1HA W155PNY0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

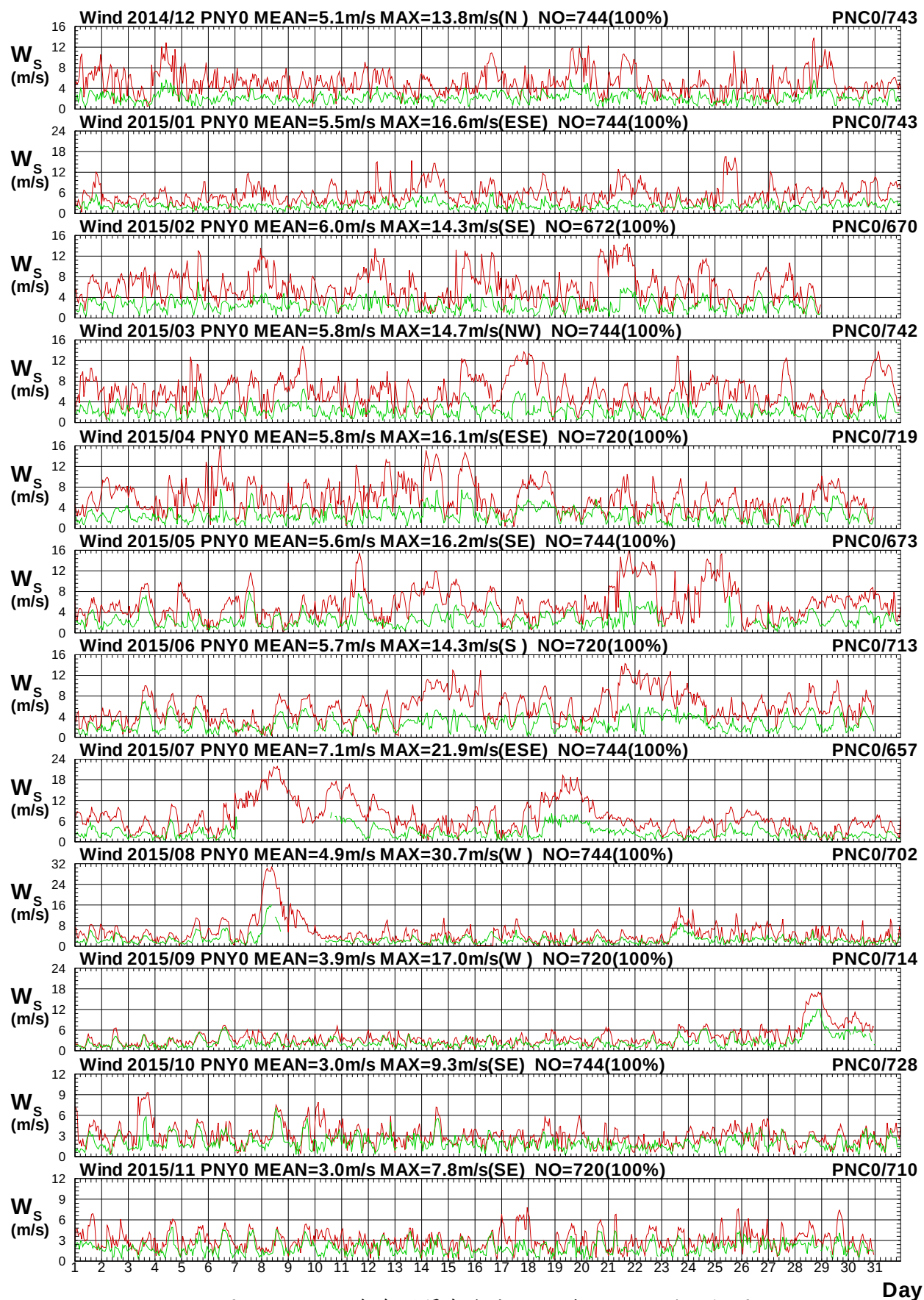


圖 1.2a 2015年每月屏東海域 Y 站與 C 站風速比較圖

W14CPNY0.1HA W14CPNC0.1H0 W151PNY0.1HA W151PNC0.1H0 W152PNY0.1HA W152PNC0.1H0
W153PNY0.1HA W153PNC0.1H0 W154PNY0.1HA W154PNC0.1H0 W155PNY0.1HA W155PNC0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

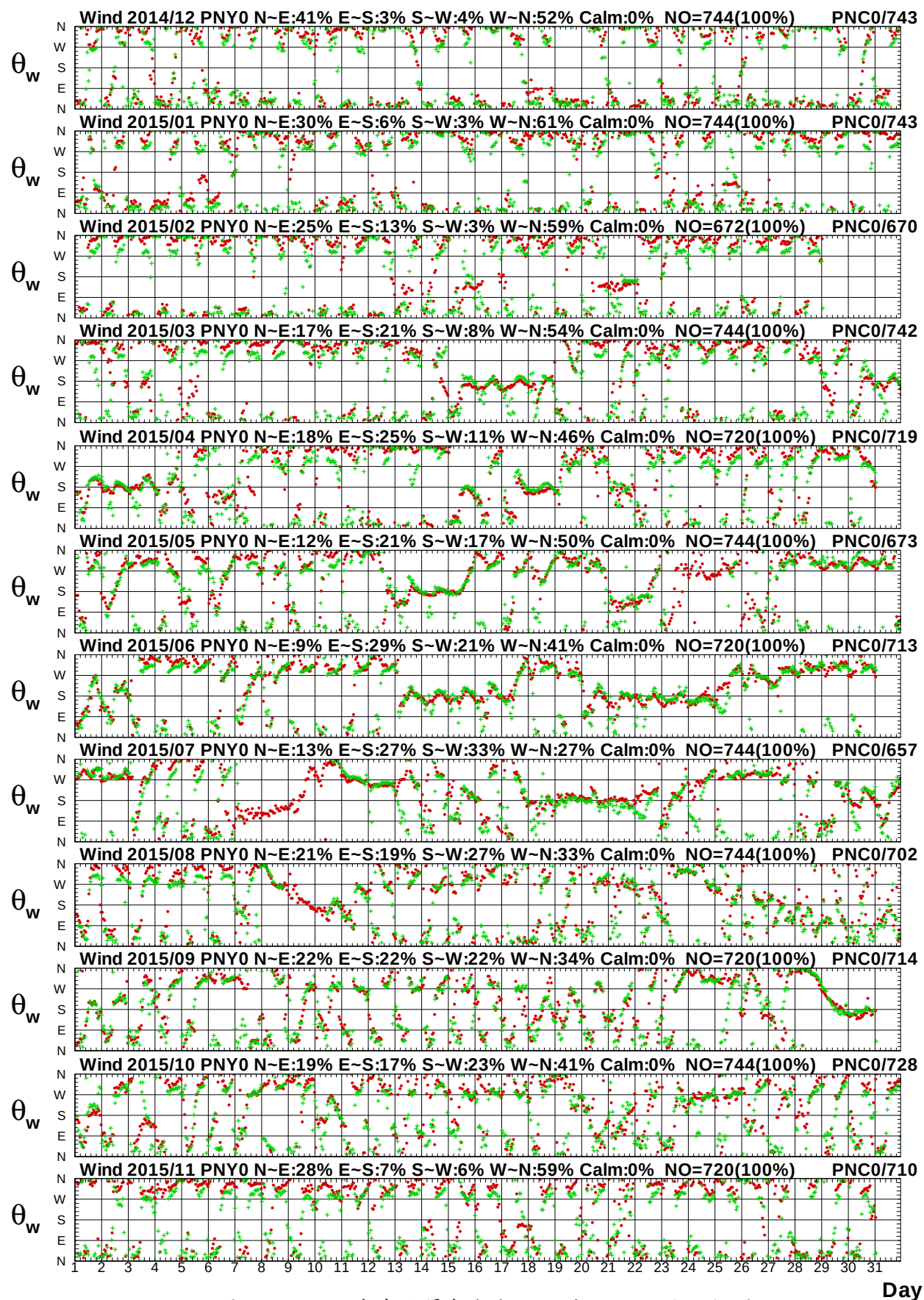


圖 1.2b 2015年每月屏東海域 Y 站與 C 站風向比較圖

W14CPNY0.1HA W14CPNC0.1H0 W151PNY0.1HA W151PNC0.1H0 W152PNY0.1HA W152PNC0.1H0
W153PNY0.1HA W153PNC0.1H0 W154PNY0.1HA W154PNC0.1H0 W155PNY0.1HA W155PNC0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

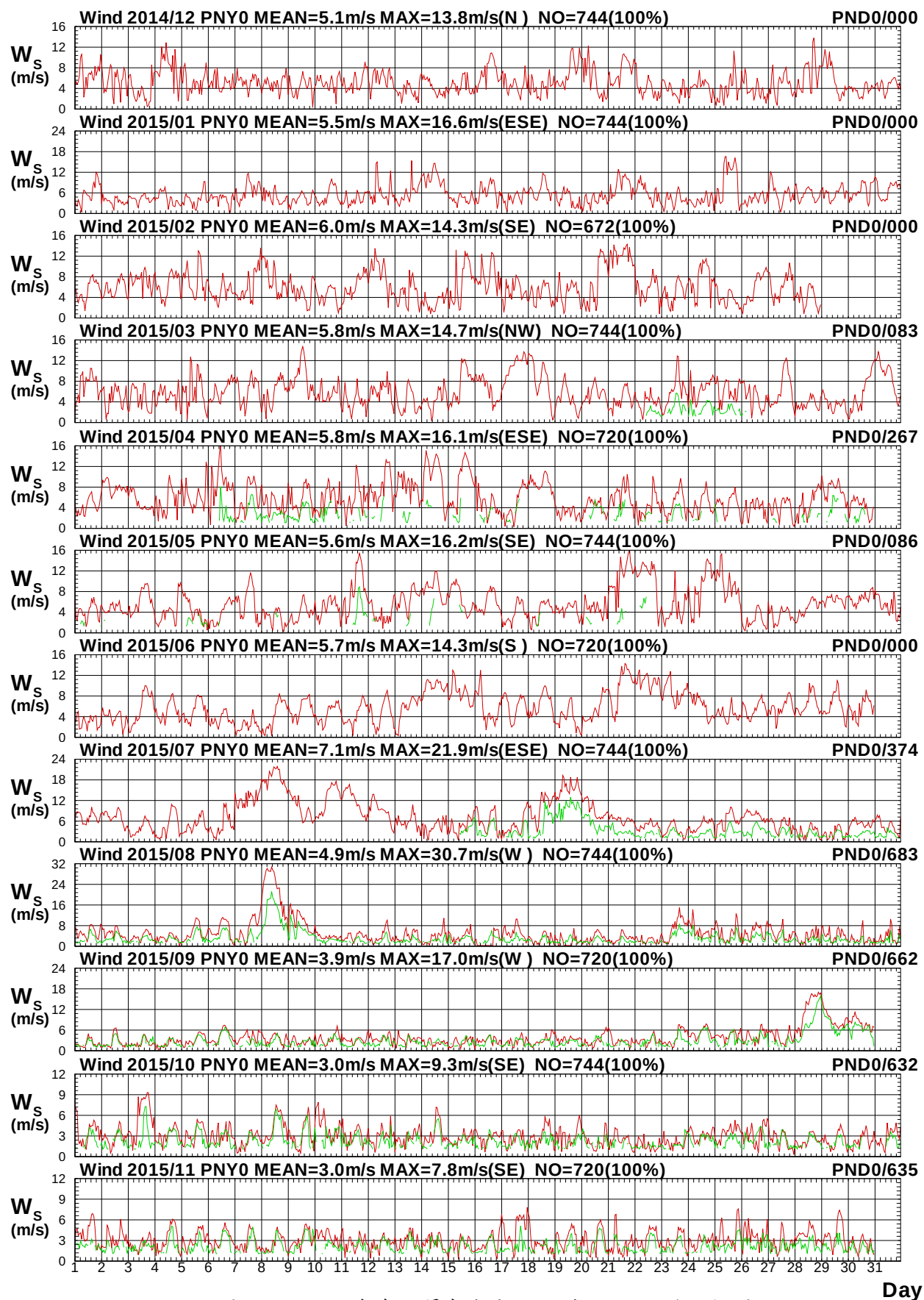


圖 1.3a 2015年每月屏東海域 Y 站與 D 站風速比較圖

W14CPNY0.1HA W14CPND0.1H0 W151PNY0.1HA W151PND0.1H0 W152PNY0.1HA W152PND0.1H0
W153PNY0.1HA W153PND0.1H0 W154PNY0.1HA W154PND0.1H0 W155PNY0.1HA W155PND0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

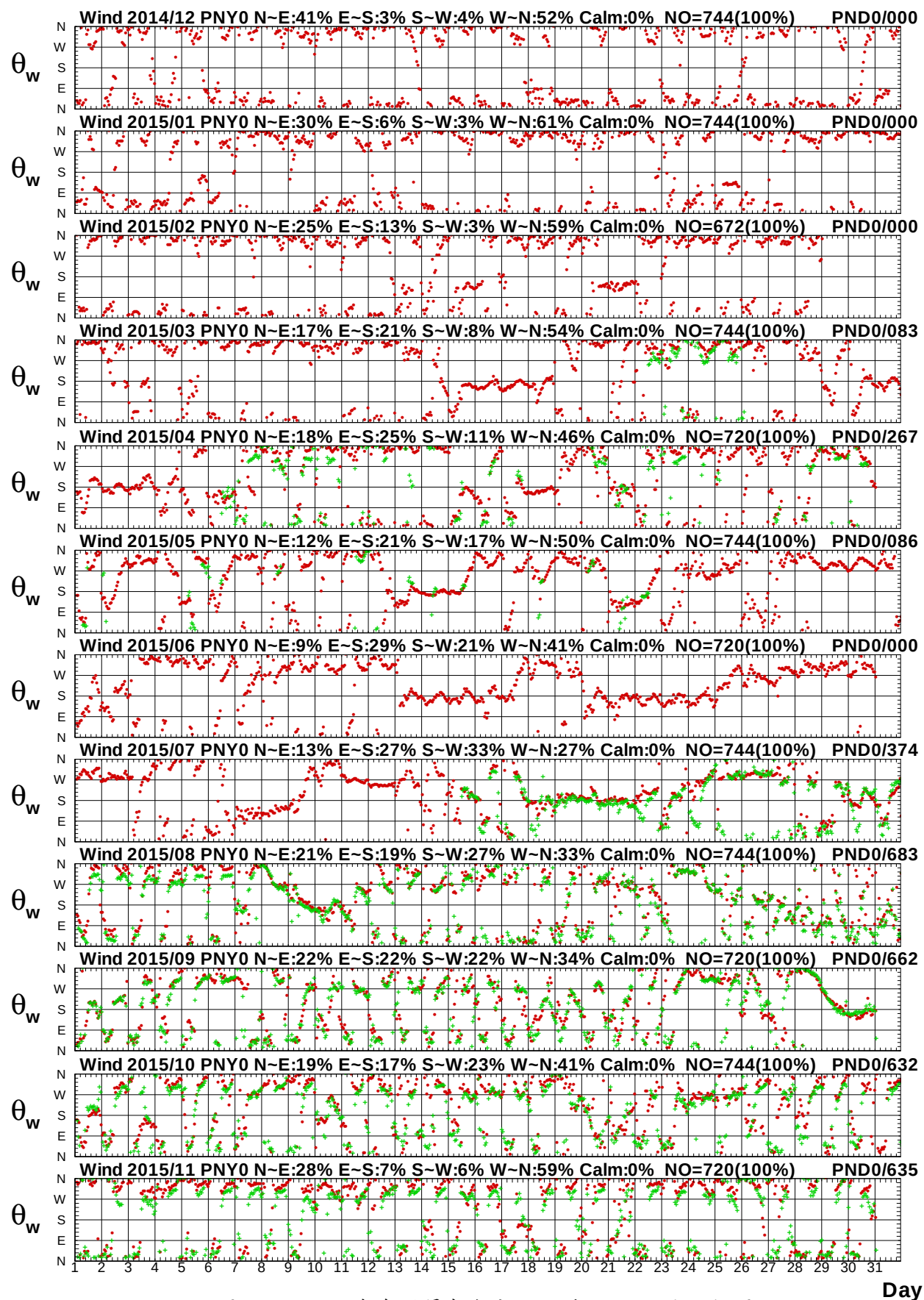


圖 1.3b 2015年每月屏東海域 Y 站與 D 站風向比較圖

W14CPNY0.1HA W14CPND0.1H0 W151PNY0.1HA W151PND0.1H0 W152PNY0.1HA W152PND0.1H0
W153PNY0.1HA W153PND0.1H0 W154PNY0.1HA W154PND0.1H0 W155PNY0.1HA W155PND0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

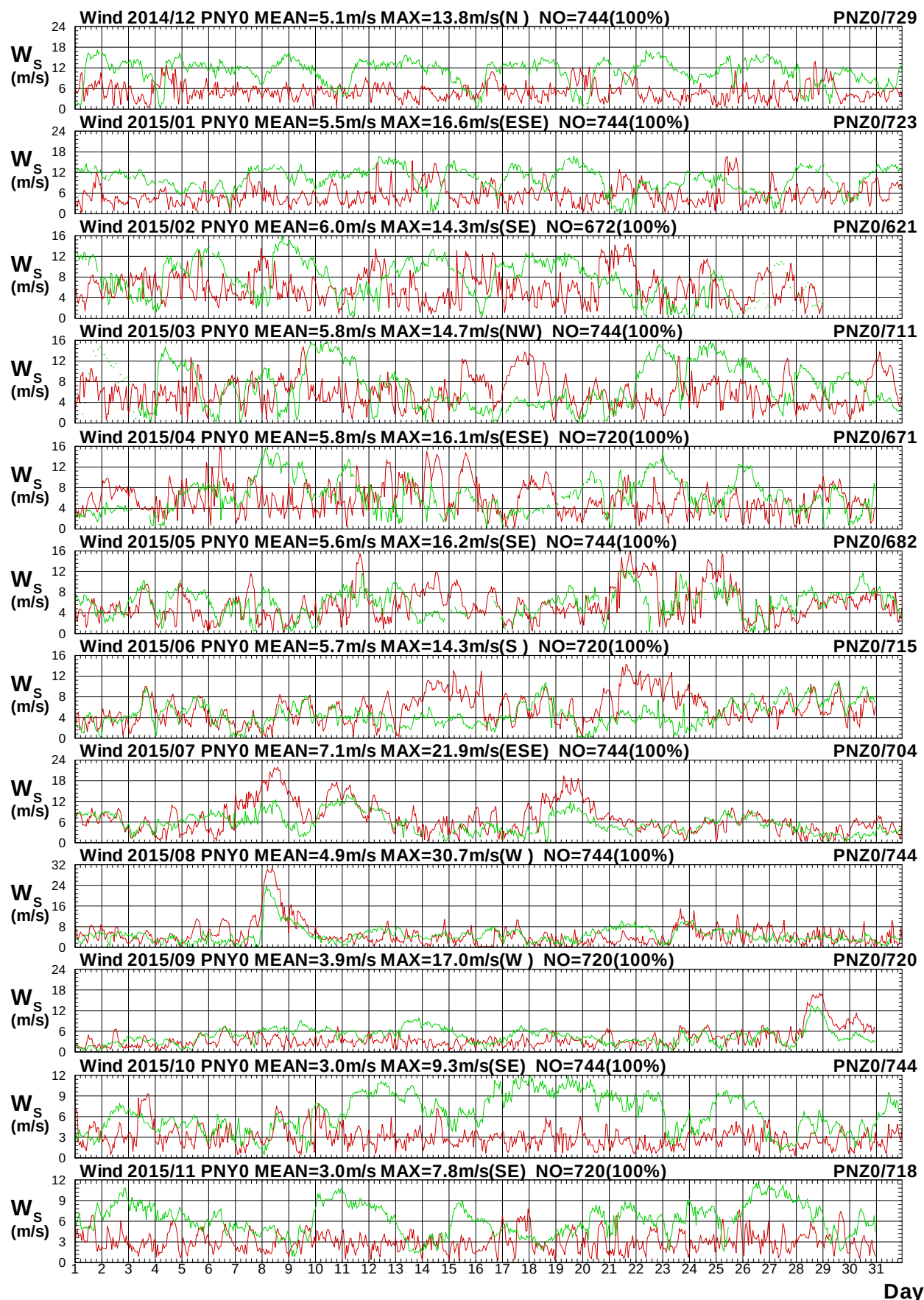


圖 1.4a 2015年每月屏東海域 Y 站與 Z 站風速比較圖

W14CPNY0.1HA W14CPNZ0.1H0 W151PNY0.1HA W151PNZ0.1H0 W152PNY0.1HA W152PNZ0.1H0
W153PNY0.1HA W153PNZ0.1H0 W154PNY0.1HA W154PNZ0.1H0 W155PNY0.1HA W155PNZ0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

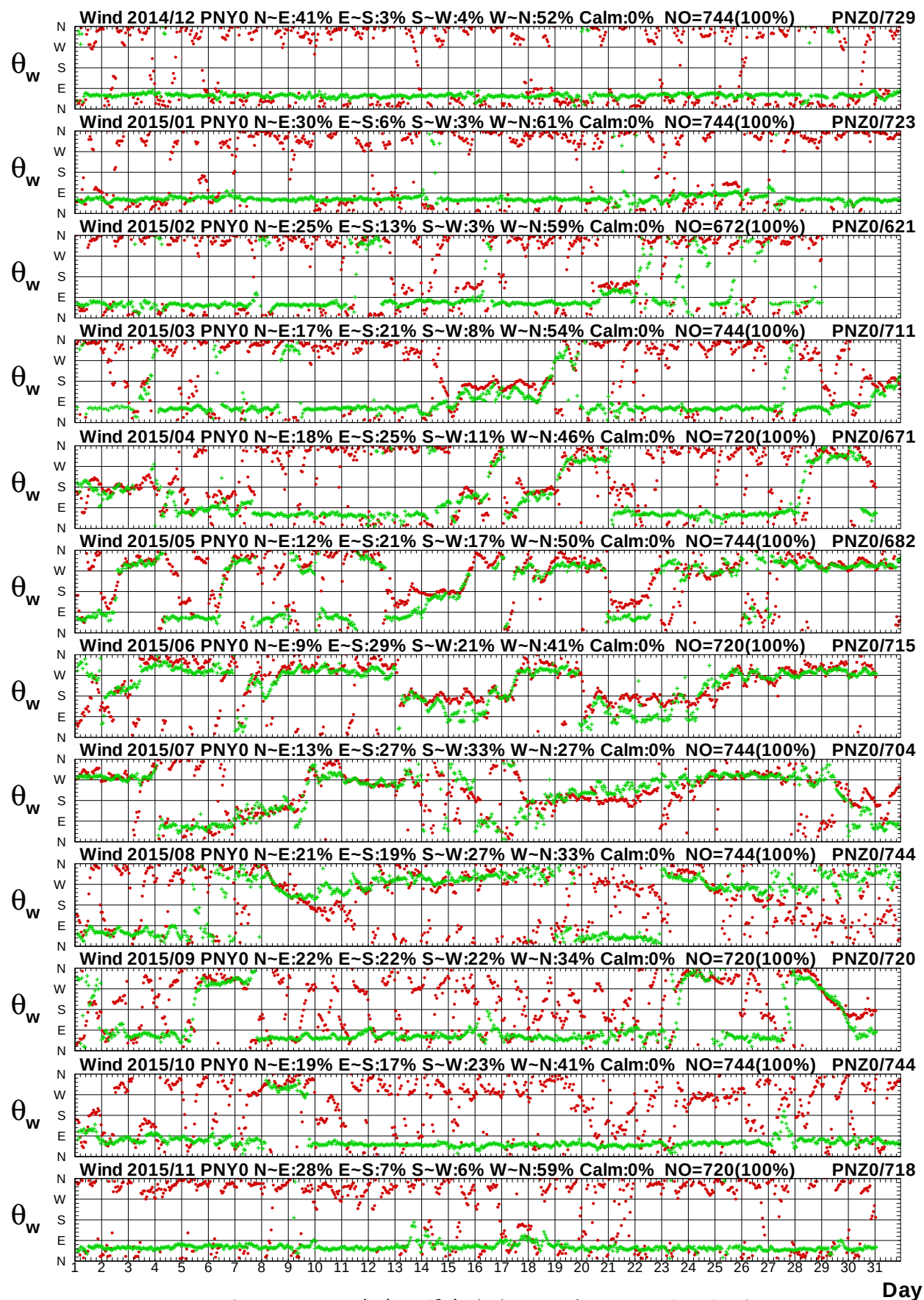


圖 1.4b 2015年每月屏東海域 Y 站與 Z 站風向比較圖

W14CPNY0.1HA W14CPNZ0.1H0 W151PNY0.1HA W151PNZ0.1H0 W152PNY0.1HA W152PNZ0.1H0
W153PNY0.1HA W153PNZ0.1H0 W154PNY0.1HA W154PNZ0.1H0 W155PNY0.1HA W155PNZ0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

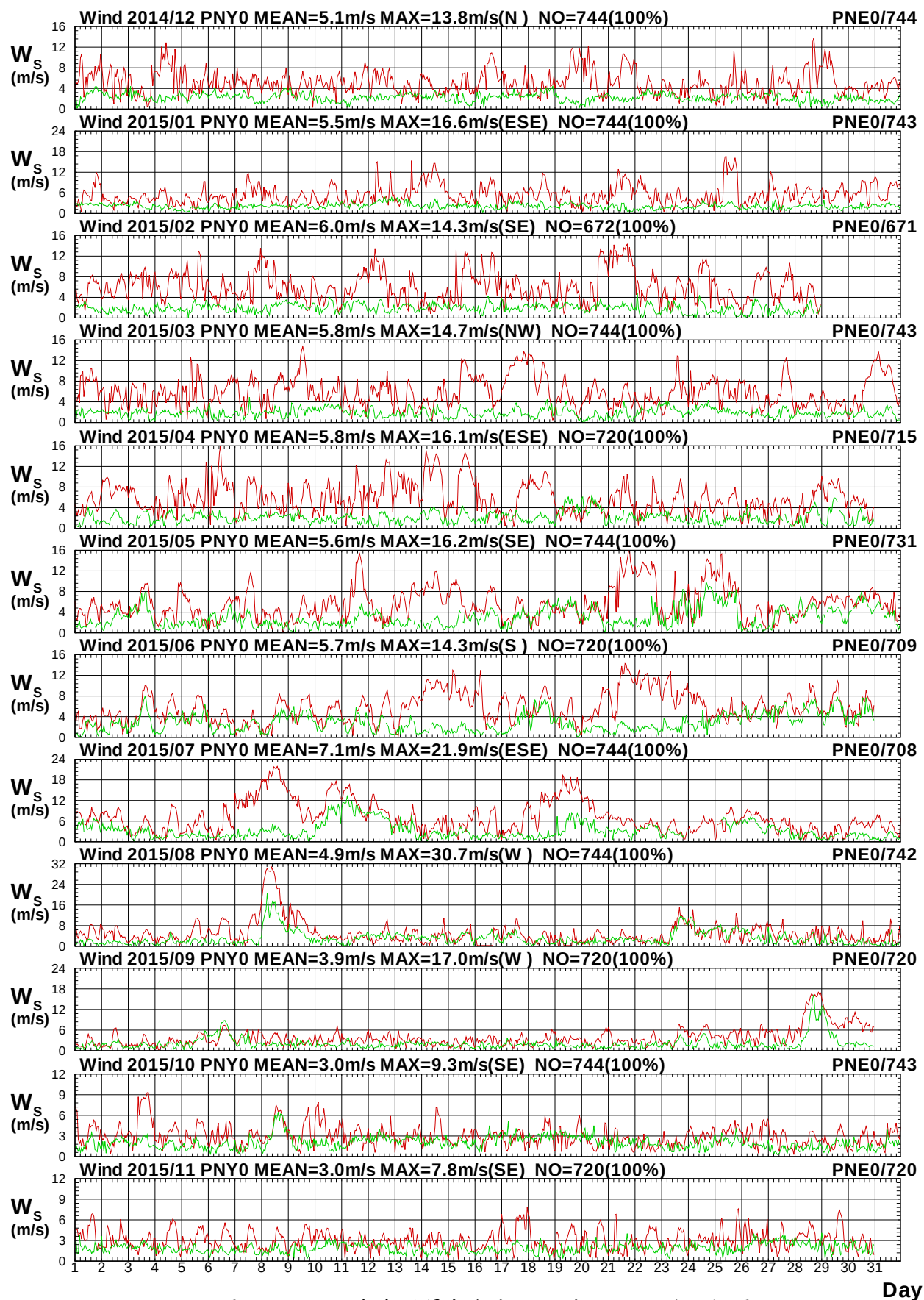


圖 1.5a 2015年每月屏東海域 Y 站與 E 站風速比較圖

W14CPNY0.1HA W14CPNE0.1H0 W151PNY0.1HA W151PNE0.1H0 W152PNY0.1HA W152PNE0.1H0
W153PNY0.1HA W153PNE0.1H0 W154PNY0.1HA W154PNE0.1H0 W155PNY0.1HA W155PNE0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

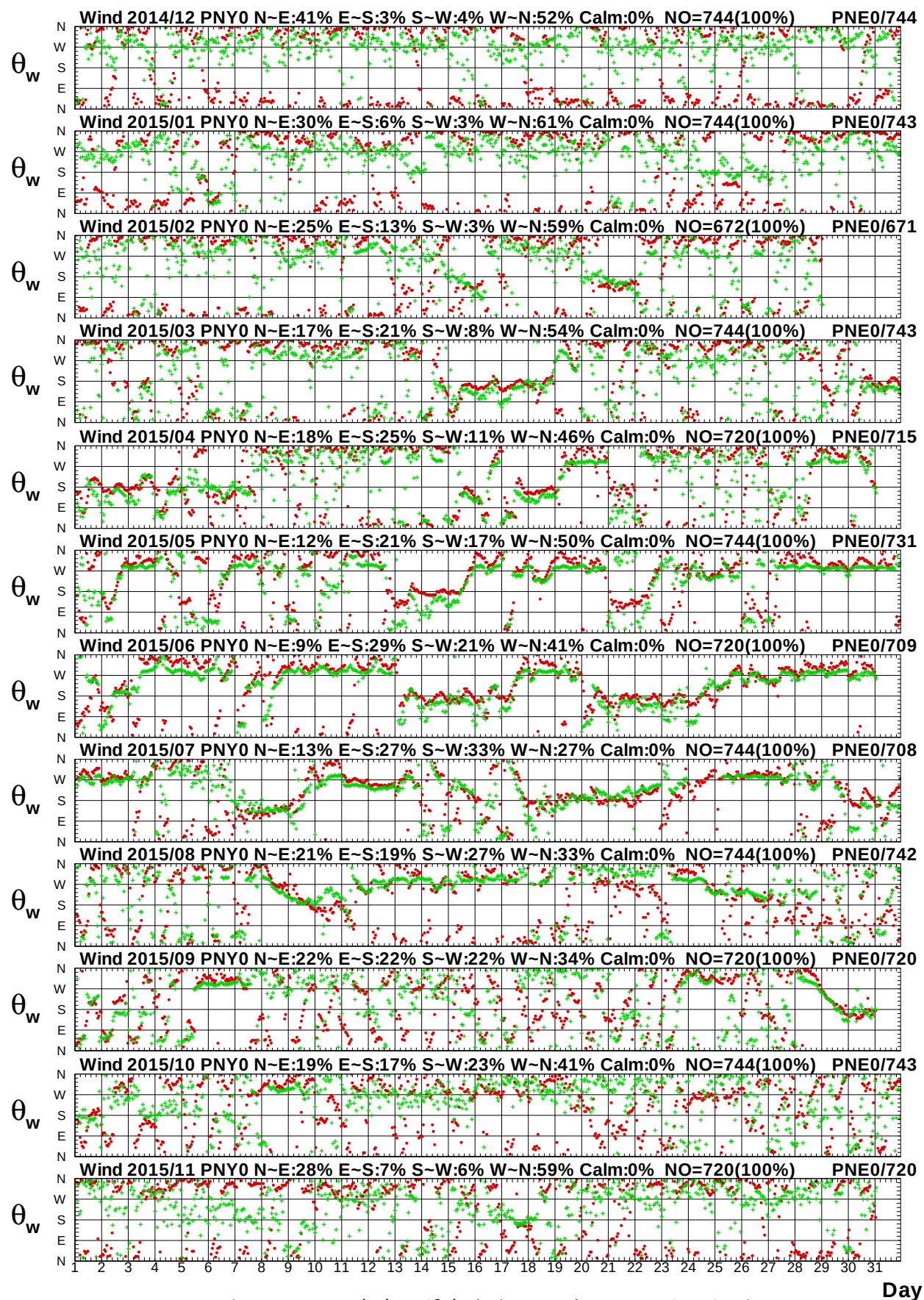


圖 1.5b 2015年每月屏東海域 Y 站與 E 站風向比較圖

W14CPNY0.1HA W14CPNE0.1H0 W151PNY0.1HA W151PNE0.1H0 W152PNY0.1HA W152PNE0.1H0
W153PNY0.1HA W153PNE0.1H0 W154PNY0.1HA W154PNE0.1H0 W155PNY0.1HA W155PNE0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

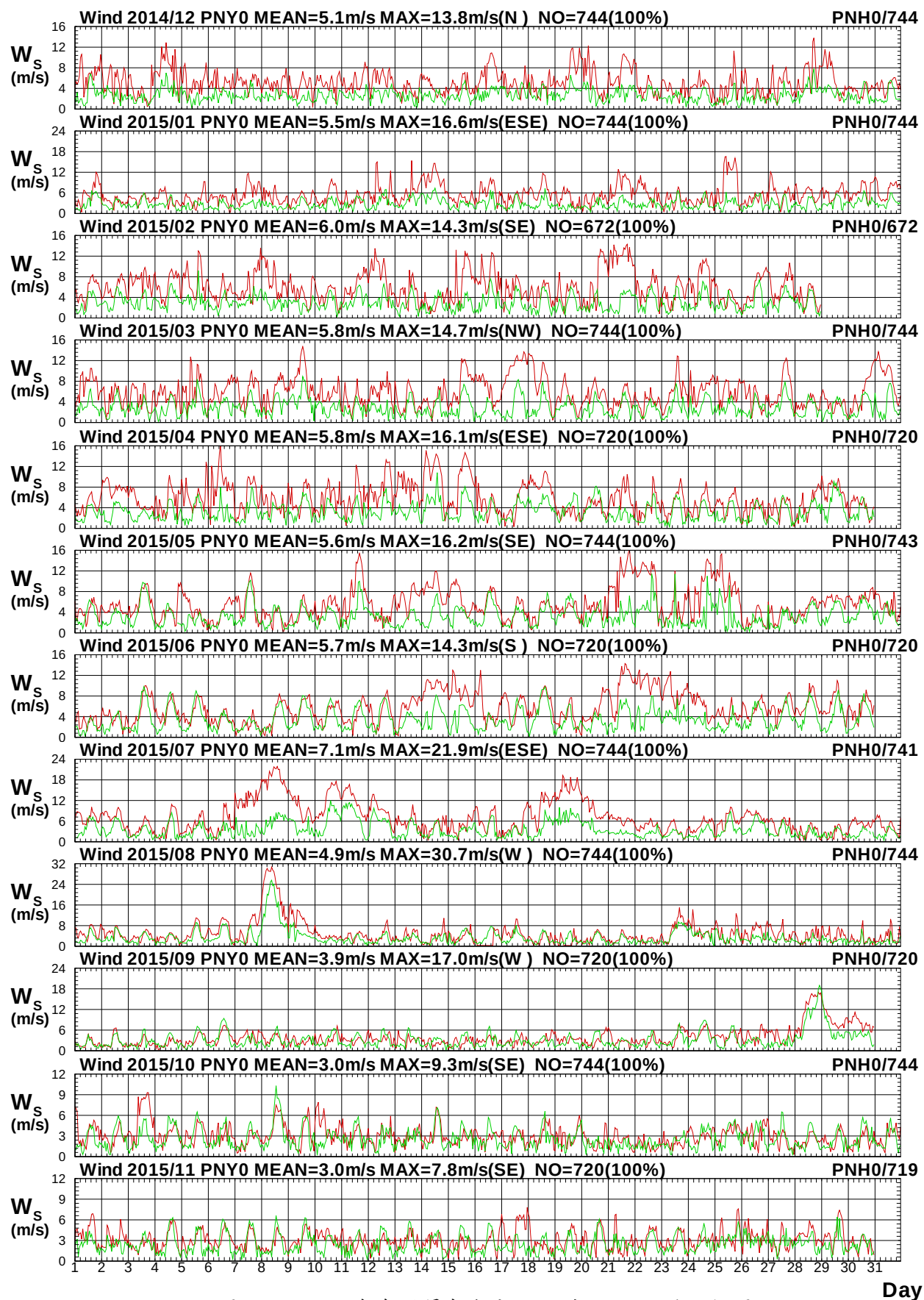


圖 1.6a 2015年每月屏東海域 Y 站與 H 站風速比較圖

W14CPNY0.1HA W14CPNH0.1H0 W151PNY0.1HA W151PNH0.1H0 W152PNY0.1HA W152PNH0.1H0
W153PNY0.1HA W153PNH0.1H0 W154PNY0.1HA W154PNH0.1H0 W155PNY0.1HA W155PNH0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

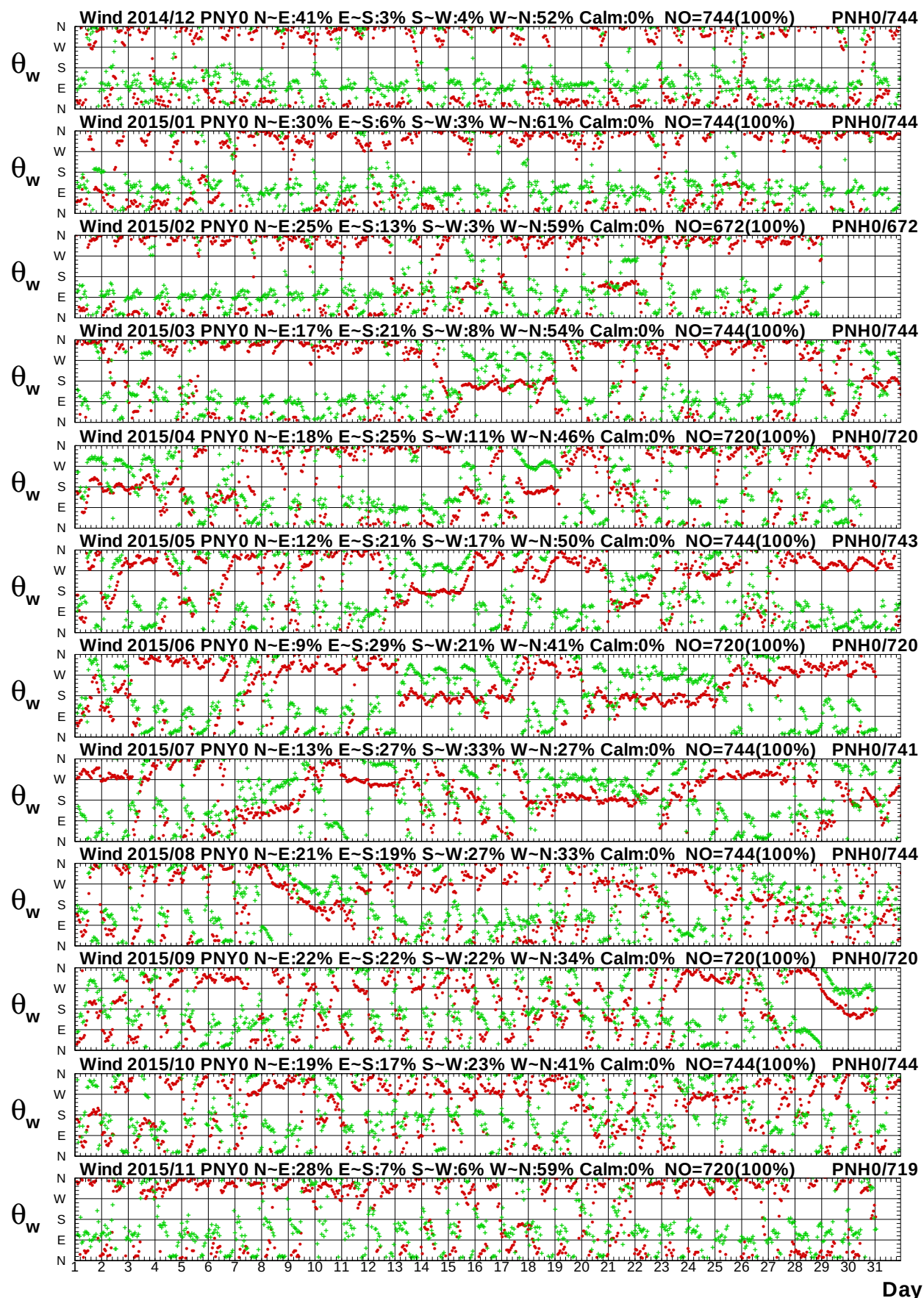


圖 1.6b 2015年每月屏東海域 Y 站與 H 站風向比較圖

W14CPNY0.1HA W14CPNH0.1H0 W151PNY0.1HA W151PNH0.1H0 W152PNY0.1HA W152PNH0.1H0
W153PNY0.1HA W153PNH0.1H0 W154PNY0.1HA W154PNH0.1H0 W155PNY0.1HA W155PNH0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

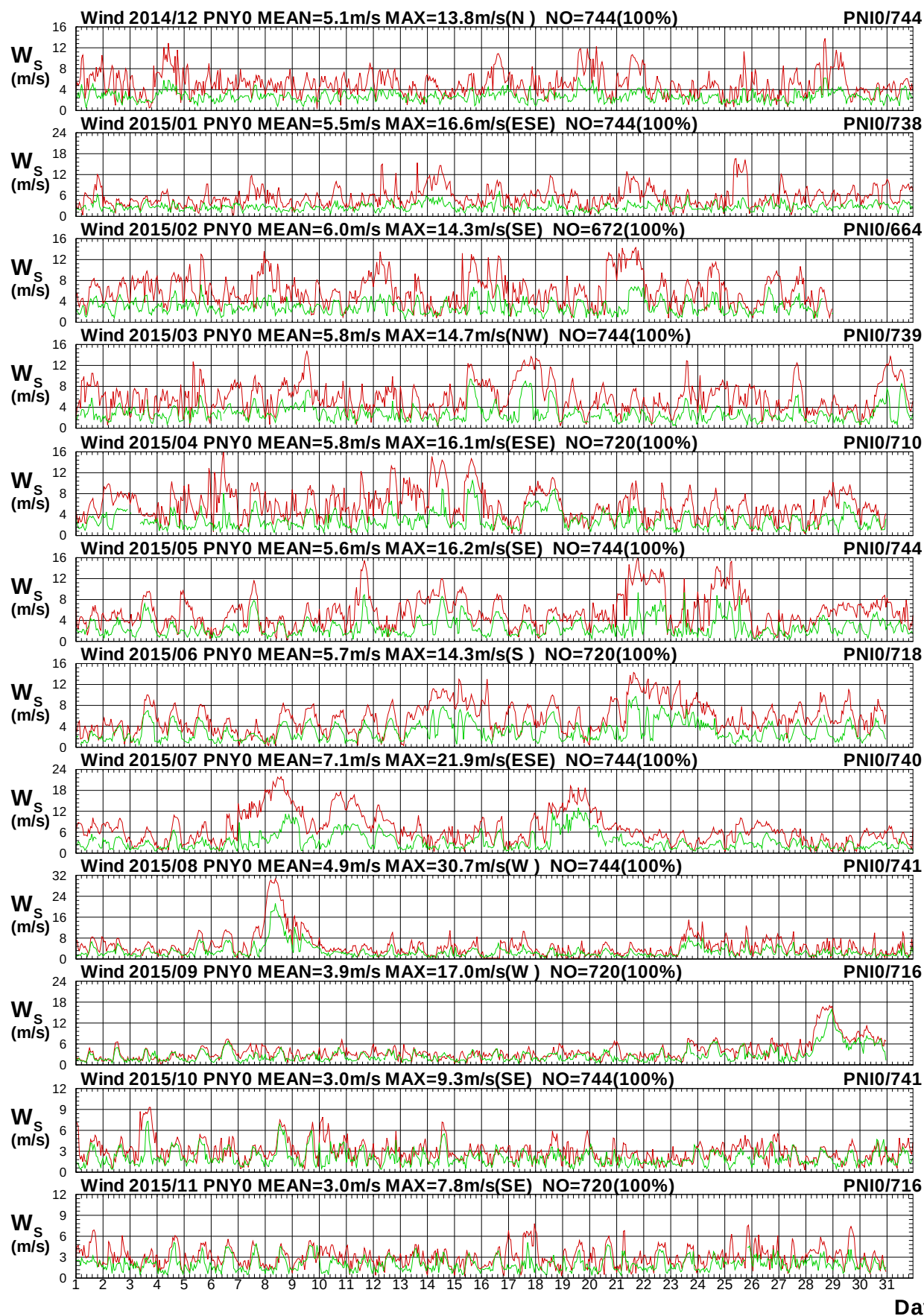


圖 1.7a 2015年每月屏東海域 Y 站與 I 站風速比較圖

W14CPNY0.1HA W14CPNI0.1H0 W151PNY0.1HA W151PNI0.1H0 W152PNY0.1HA W152PNI0.1H0
W153PNY0.1HA W153PNI0.1H0 W154PNY0.1HA W154PNI0.1H0 W155PNY0.1HA W155PNI0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

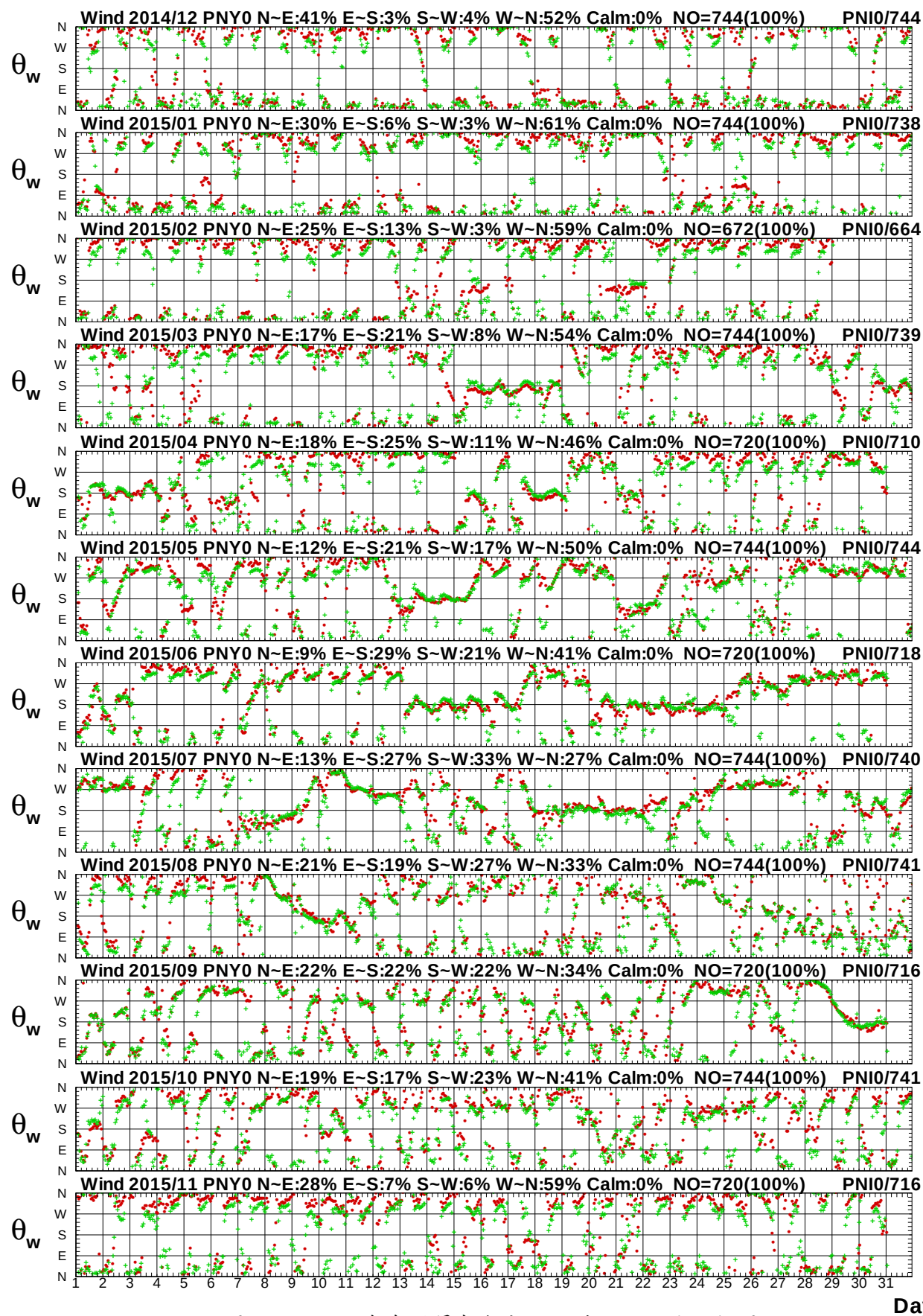


圖 1.7b 2015年每月屏東海域 Y 站與 I 站風向比較圖

W14CPNY0.1HA W14CPNI0.1H0 W151PNY0.1HA W151PNI0.1H0 W152PNY0.1HA W152PNI0.1H0
W153PNY0.1HA W153PNI0.1H0 W154PNY0.1HA W154PNI0.1H0 W155PNY0.1HA W155PNI0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

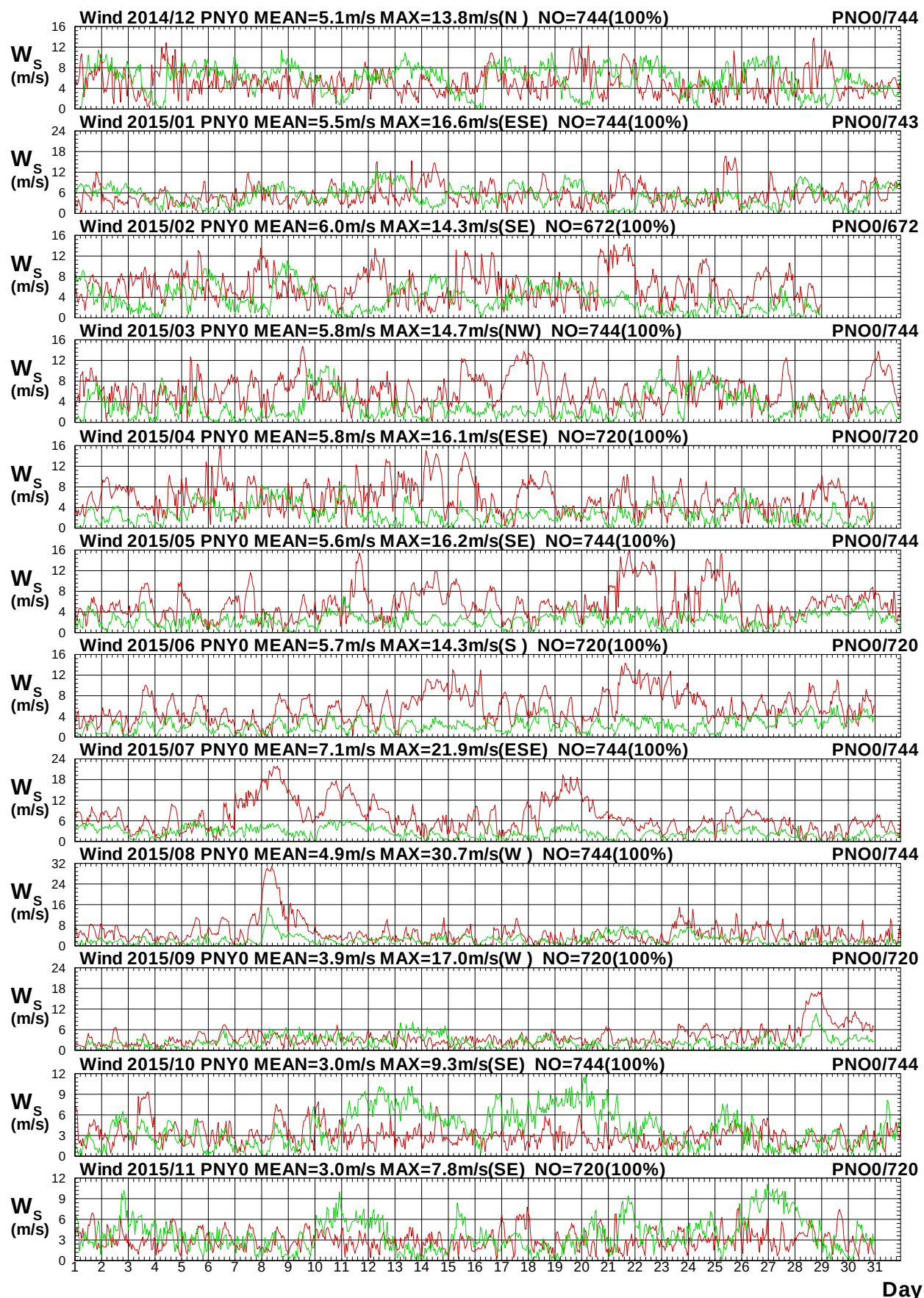


圖 1.8a 2015年每月屏東海域 Y 站與 O 站風速比較圖

W14CPNY0.1HA W14CPNO0.1H0 W151PNY0.1HA W151PNO0.1H0 W152PNY0.1HA W152PNO0.1H0
W153PNY0.1HA W153PNO0.1H0 W154PNY0.1HA W154PNO0.1H0 W155PNY0.1HA W155PNO0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

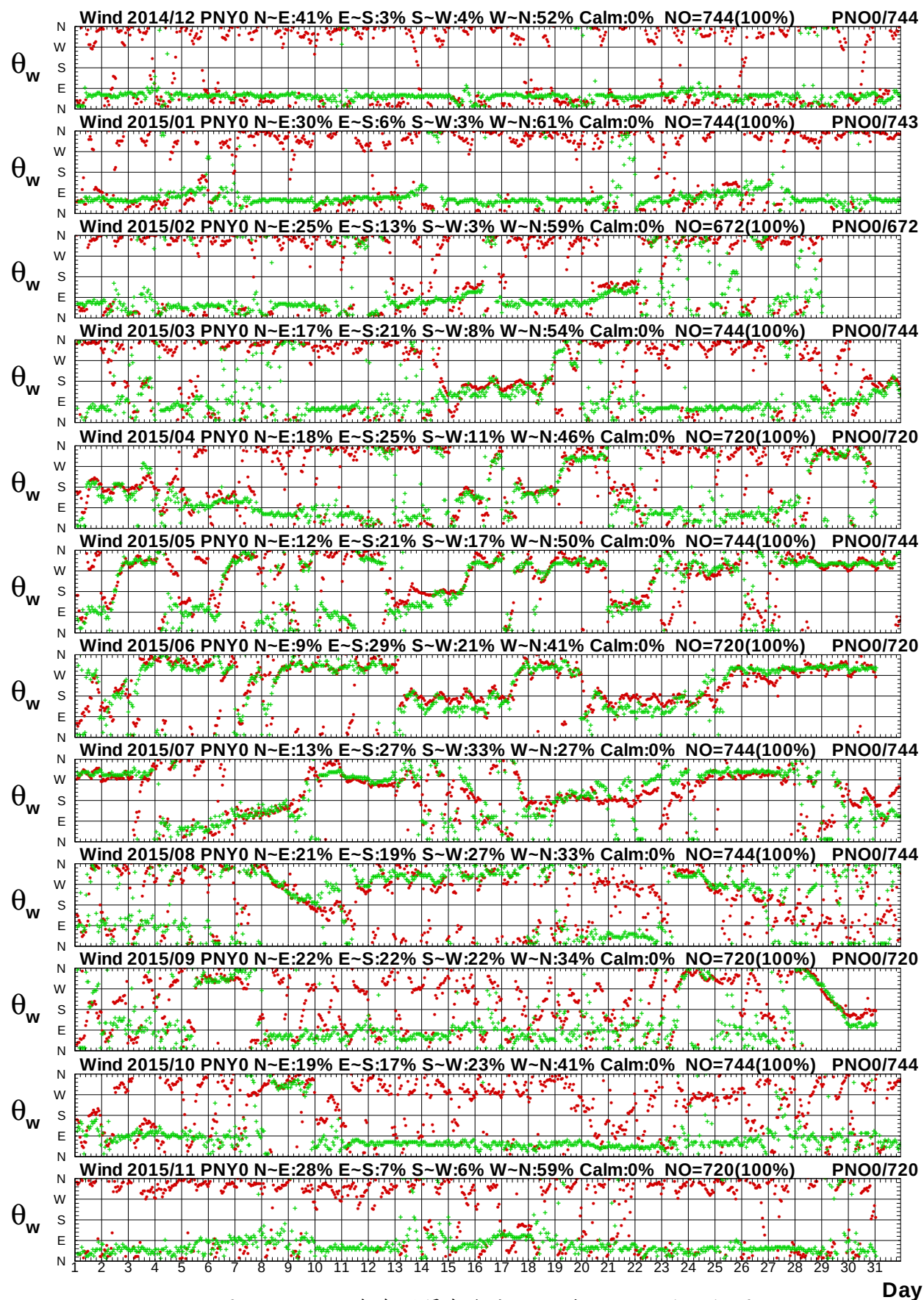


圖 1.8b 2015年每月屏東海域 Y 站與 O 站風向比較圖

W14CPNY0.1HA W14CPNO0.1H0 W151PNY0.1HA W151PNO0.1H0 W152PNY0.1HA W152PNO0.1H0
W153PNY0.1HA W153PNO0.1H0 W154PNY0.1HA W154PNO0.1H0 W155PNY0.1HA W155PNO0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

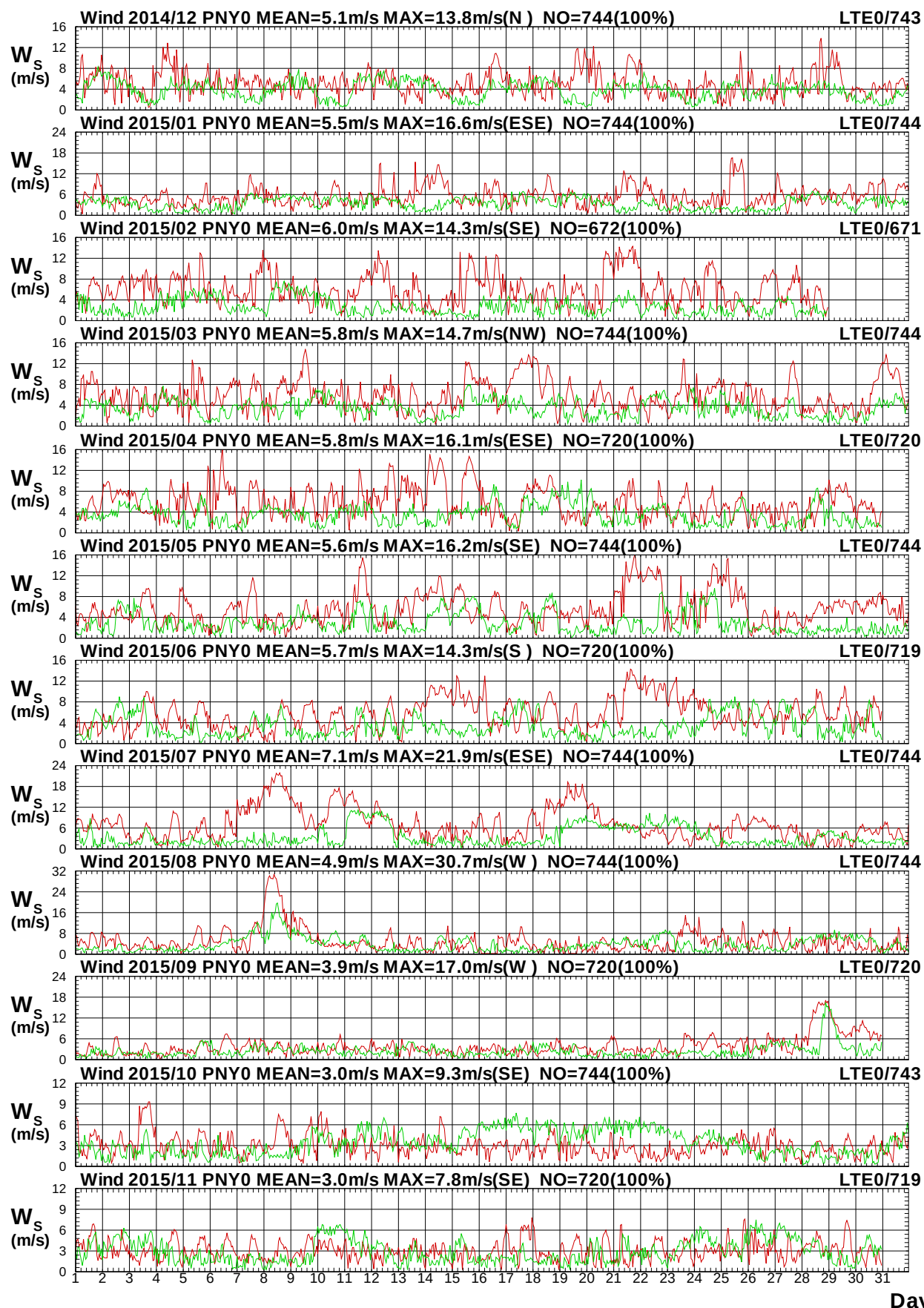


圖 1.9a 2015年每月屏東海域 Y 站與臺東海域 E 站風速圖

W14CPNY0.1HA W14CLTE0.1H0 W151PNY0.1HA W151LTE0.1H0 W152PNY0.1HA W152LTE0.1H0
W153PNY0.1HA W153LTE0.1H0 W154PNY0.1HA W154LTE0.1H0 W155PNY0.1HA W155LTE0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

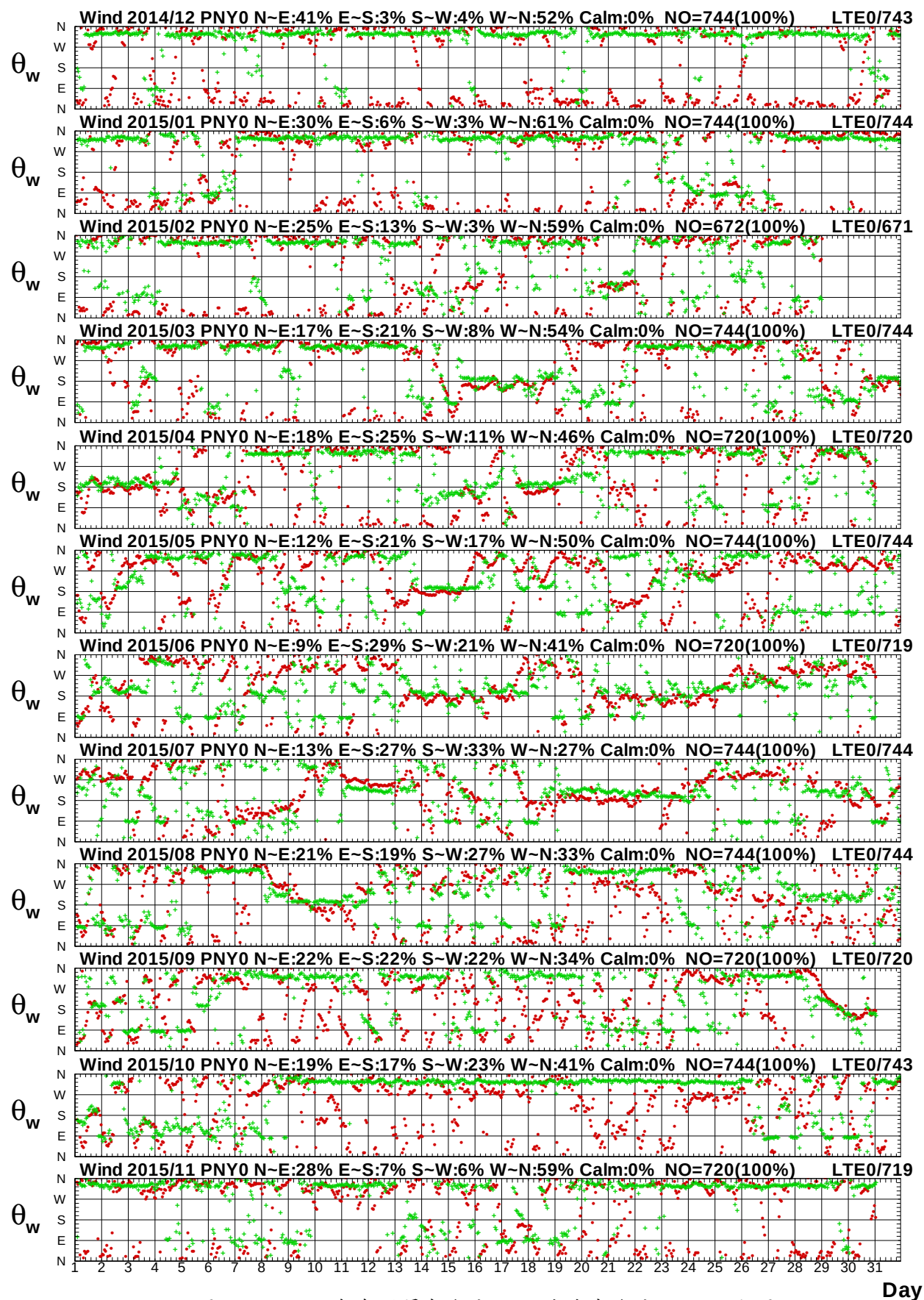


圖 1.9b 2015年每月屏東海域 Y 站與臺東海域 E 站風向圖

W14CPNY0.1HA W14CLTE0.1H0 W151PNY0.1HA W151LTE0.1H0 W152PNY0.1HA W152LTE0.1H0
W153PNY0.1HA W153LTE0.1H0 W154PNY0.1HA W154LTE0.1H0 W155PNY0.1HA W155LTE0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

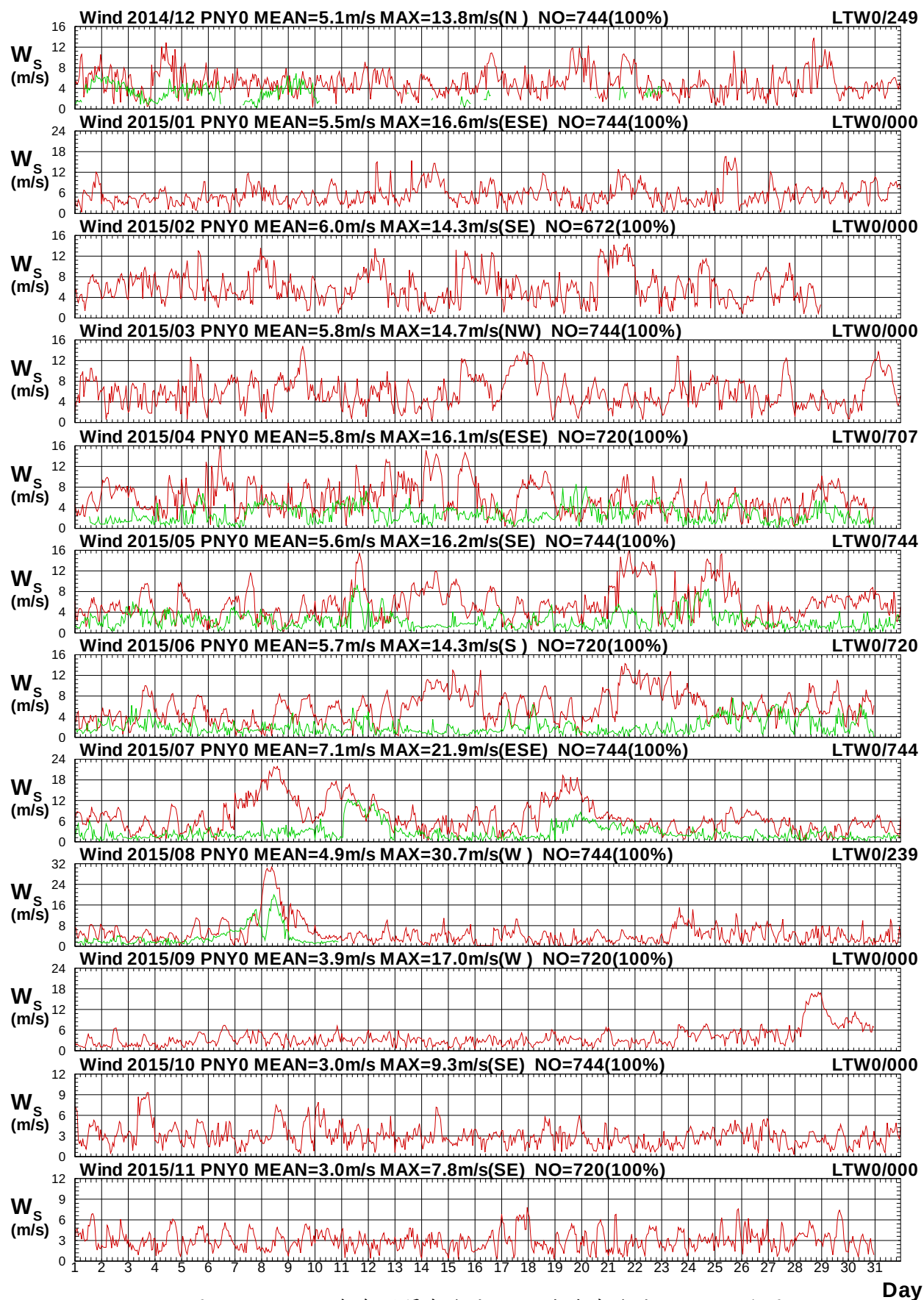


圖 1.10a 2015年每月屏東海域 Y 站與臺東海域 W 站風速圖

W14CPNY0.1HA W14CLTW0.1H0 W151PNY0.1HA W151LTW0.1H0 W152PNY0.1HA W152LTW0.1H0
W153PNY0.1HA W153LTW0.1H0 W154PNY0.1HA W154LTW0.1H0 W155PNY0.1HA W155LTW0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

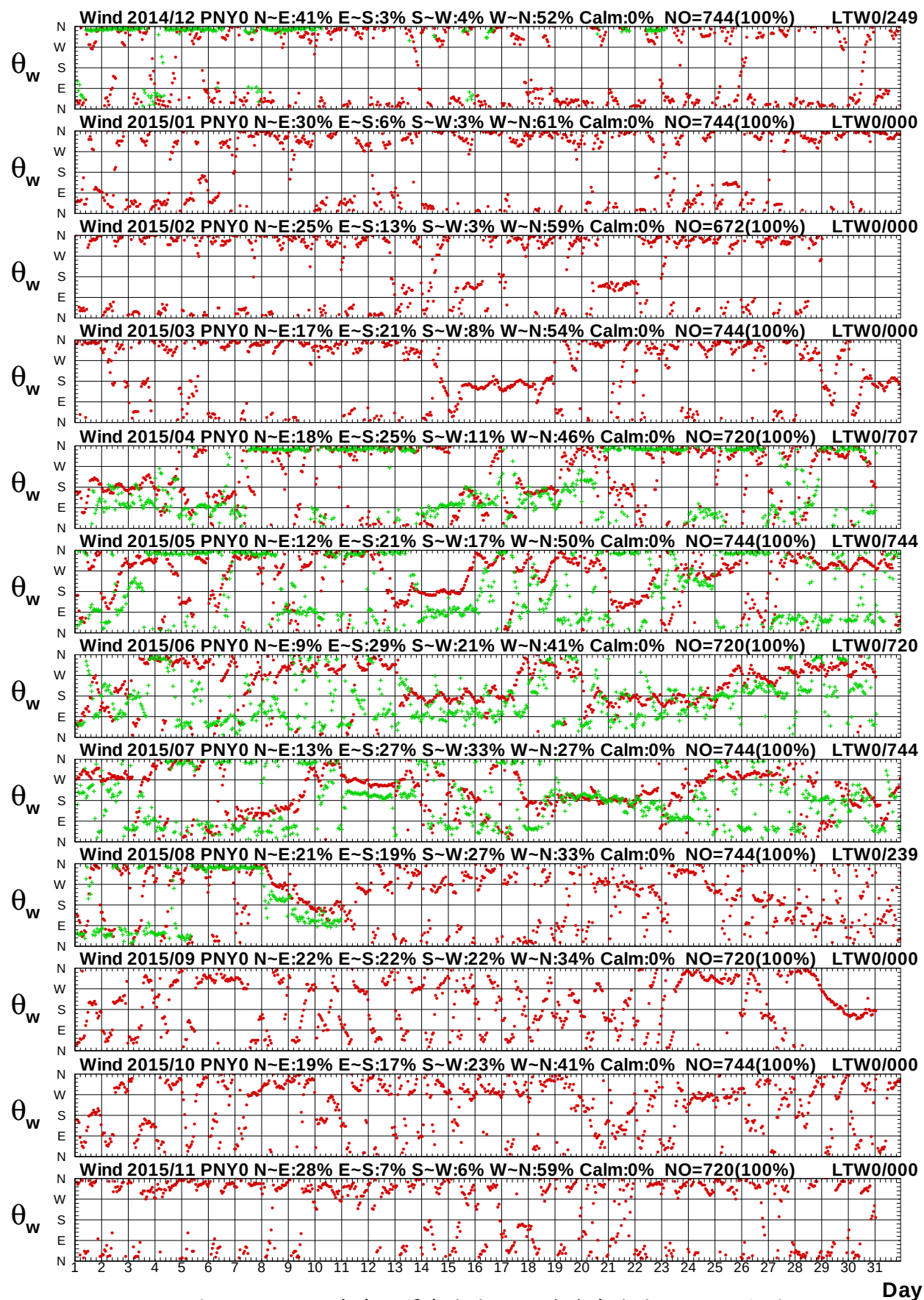


圖 1.10b 2015年每月屏東海域 Y 站與臺東海域 W 站風向圖

W14CPNY0.1HA W14CLTW0.1H0 W151PNY0.1HA W151LTW0.1H0 W152PNY0.1HA W152LTW0.1H0
W153PNY0.1HA W153LTW0.1H0 W154PNY0.1HA W154LTW0.1H0 W155PNY0.1HA W155LTW0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

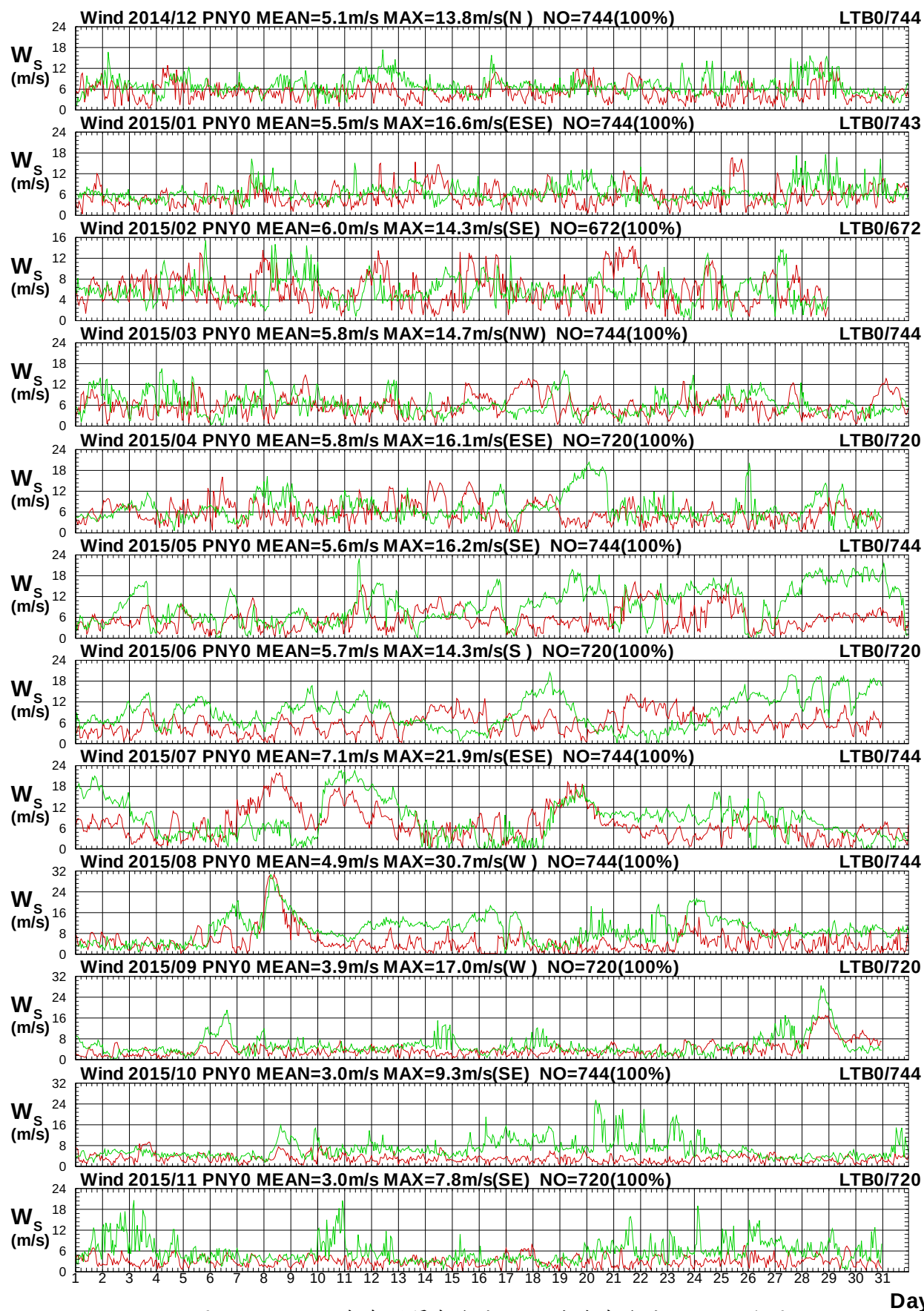


圖 1.11a 2015年每月屏東海域 Y 站與臺東海域 B 站風速圖

W14CPNY0.1HA W14CLTB0.1H0 W151PNY0.1HA W151LTB0.1H0 W152PNY0.1HA W152LTB0.1H0
W153PNY0.1HA W153LTB0.1H0 W154PNY0.1HA W154LTB0.1H0 W155PNY0.1HA W155LTB0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

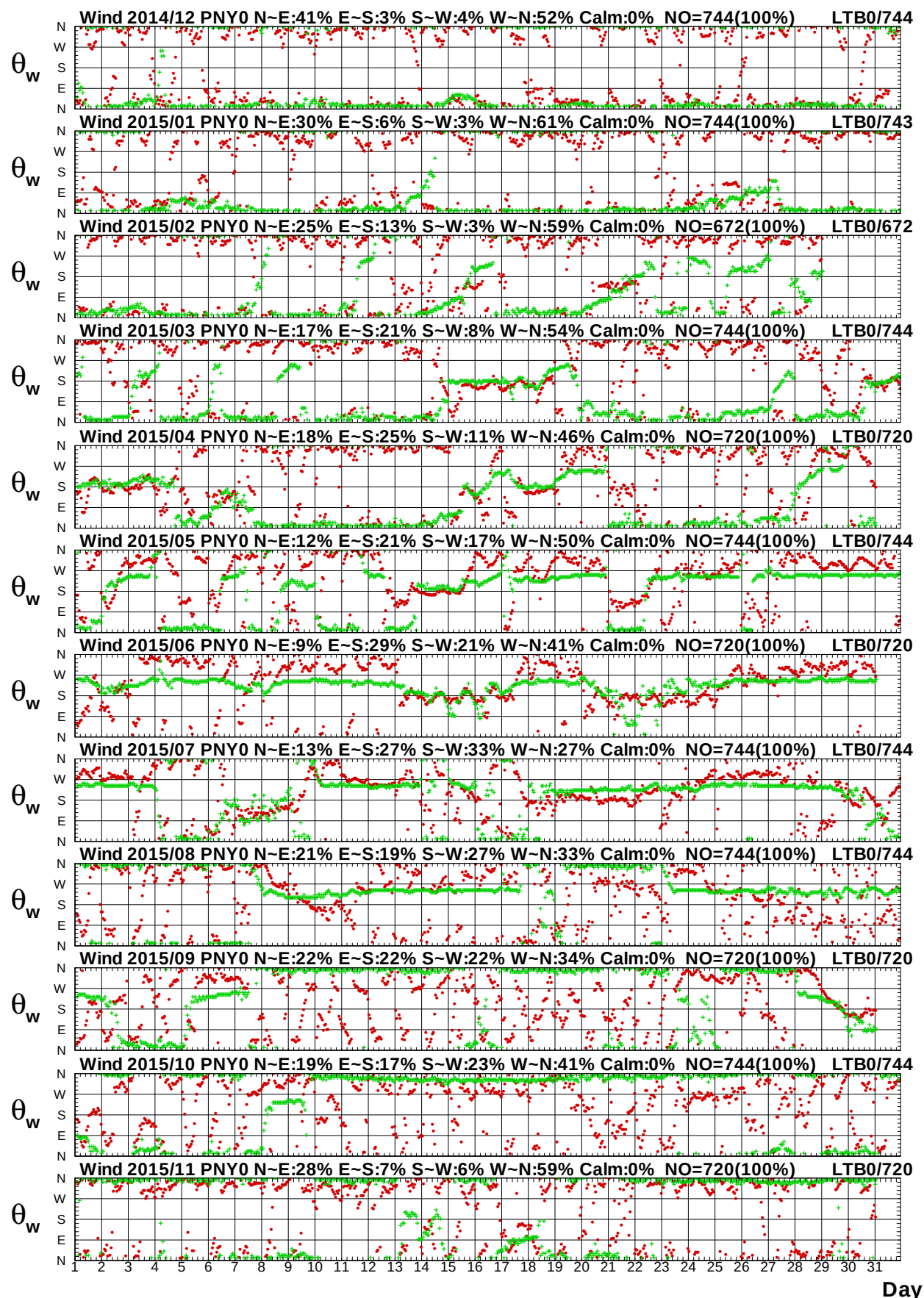


圖 1.11b 2015年每月屏東海域 Y 站與臺東海域 B 站風向圖

W14CPNY0.1HA W14CLTB0.1H0 W151PNY0.1HA W151LTB0.1H0 W152PNY0.1HA W152LTB0.1H0
W153PNY0.1HA W153LTB0.1H0 W154PNY0.1HA W154LTB0.1H0 W155PNY0.1HA W155LTB0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

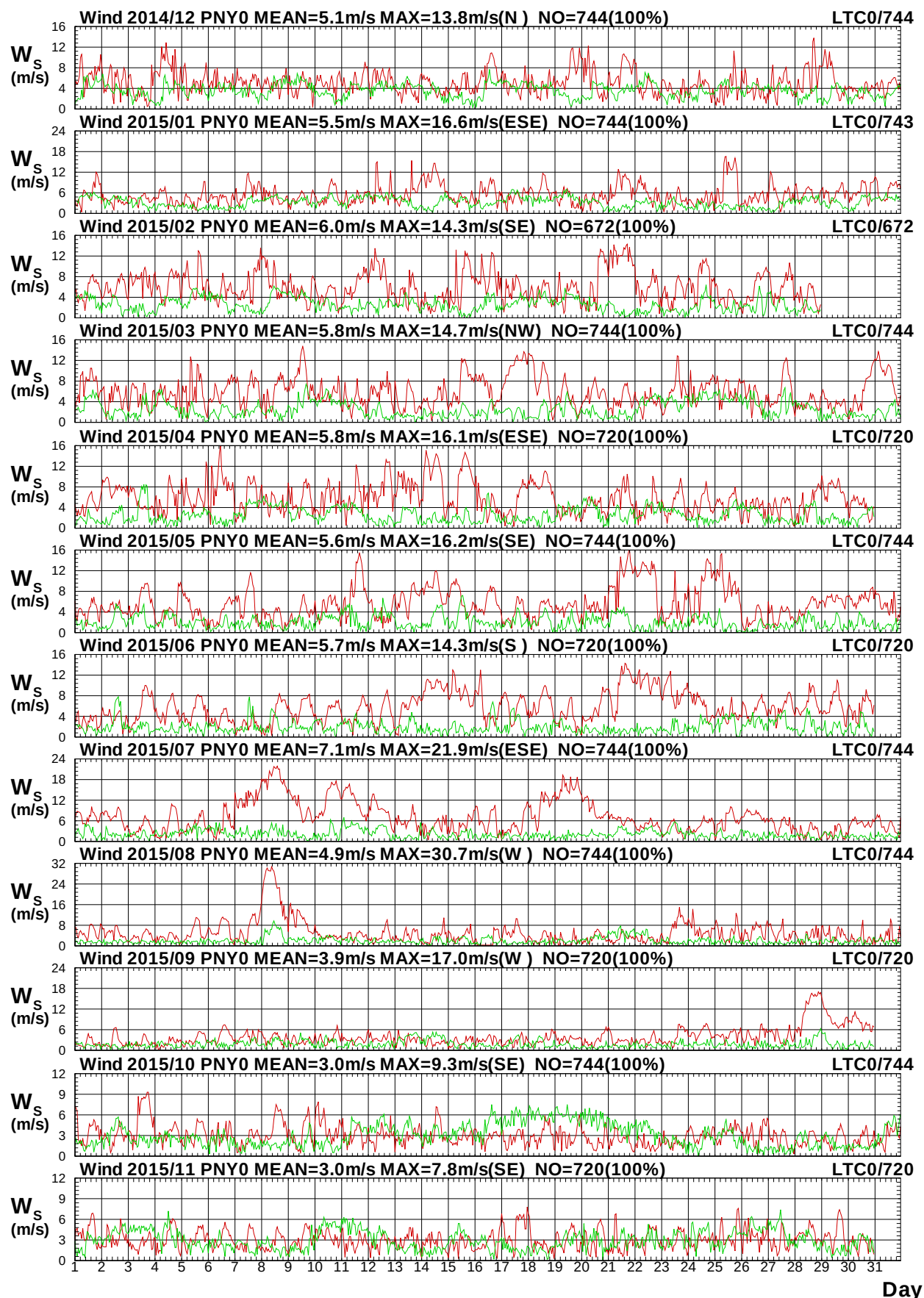


圖 1.12a 2015年每月屏東海域 Y 站與臺東海域 C 站風速圖

W14CPNY0.1HA W14CLTC0.1H0 W151PNY0.1HA W151LTC0.1H0 W152PNY0.1HA W152LTC0.1H0
W153PNY0.1HA W153LTC0.1H0 W154PNY0.1HA W154LTC0.1H0 W155PNY0.1HA W155LTC0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

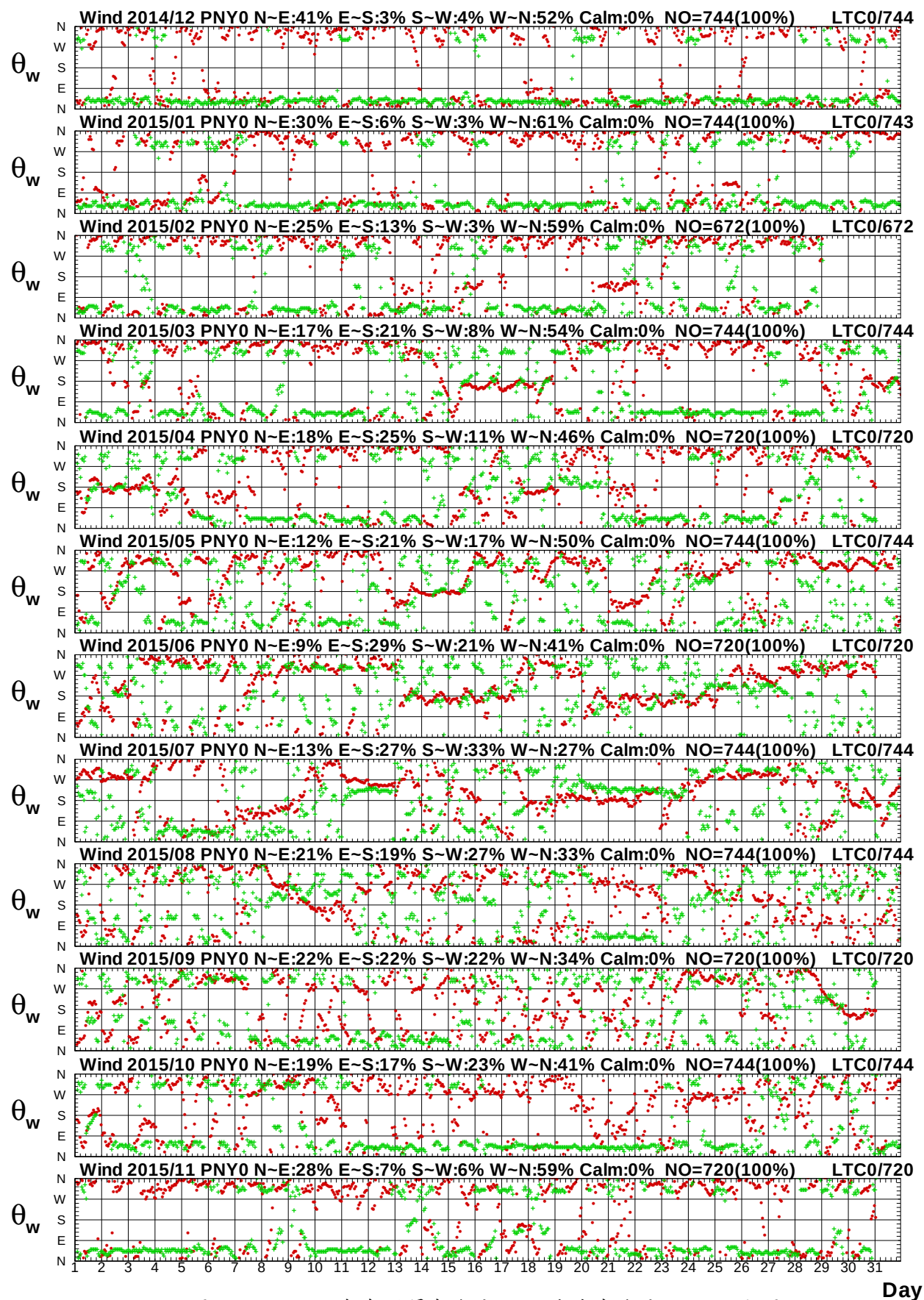


圖 1.12b 2015 年每月屏東海域 Y 站與臺東海域 C 站風向圖

W14CPNY0.1HA W14CLTC0.1H0 W151PNY0.1HA W151LTC0.1H0 W152PNY0.1HA W152LTC0.1H0
W153PNY0.1HA W153LTC0.1H0 W154PNY0.1HA W154LTC0.1H0 W155PNY0.1HA W155LTC0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

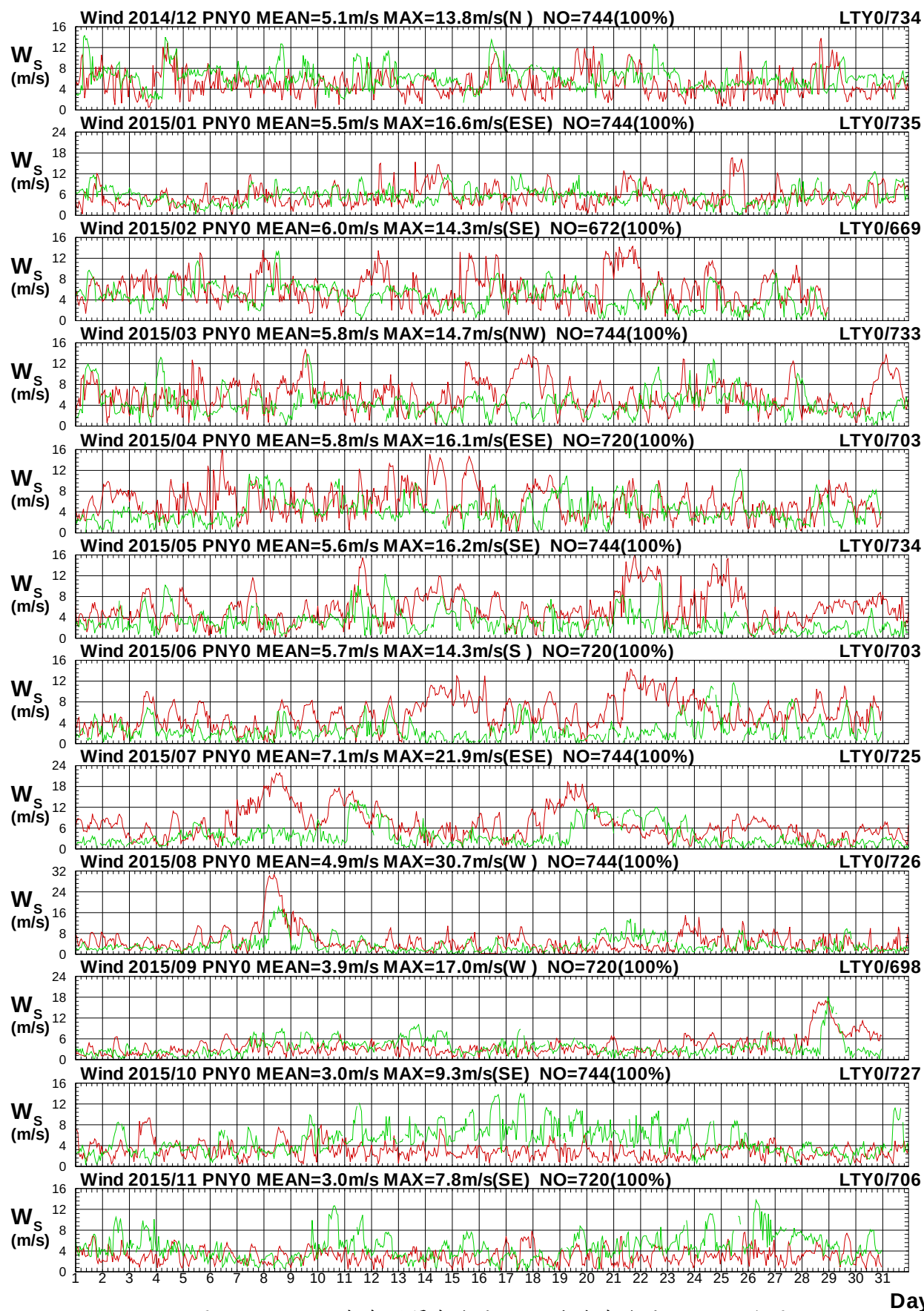


圖 1.13a 2015 年每月屏東海域 Y 站與臺東海域 Y 站風速圖

W14CPNY0.1HA W14CLTY0.1H0 W151PNY0.1HA W151LTY0.1H0 W152PNY0.1HA W152LTY0.1H0
W153PNY0.1HA W153LTY0.1H0 W154PNY0.1HA W154LTY0.1H0 W155PNY0.1HA W155LTY0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

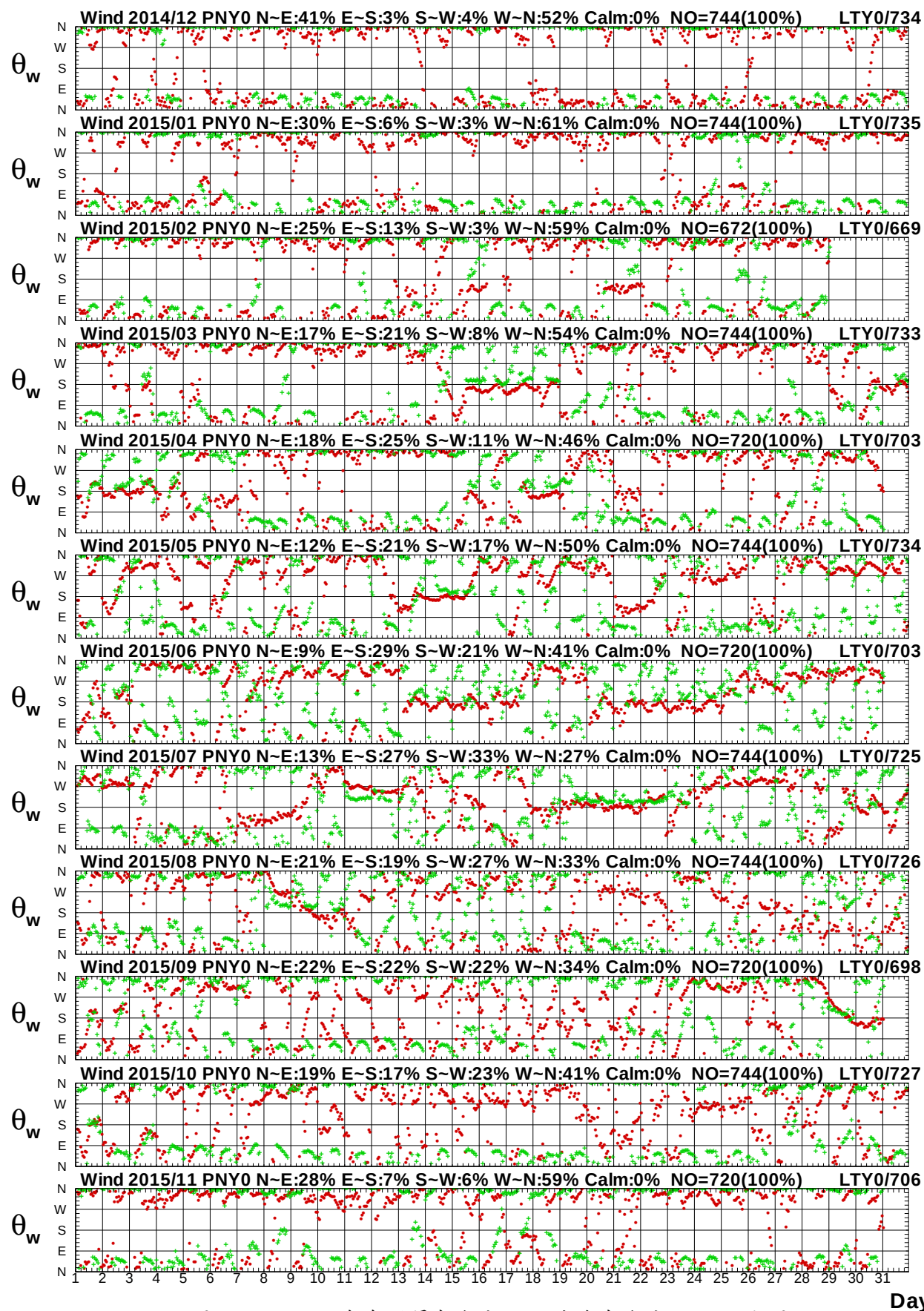


圖 1.13b 2015 年每月屏東海域 Y 站與臺東海域 Y 站風向圖

W14CPNY0.1HA W14CLTY0.1H0 W151PNY0.1HA W151LTY0.1H0 W152PNY0.1HA W152LTY0.1H0
W153PNY0.1HA W153LTY0.1H0 W154PNY0.1HA W154LTY0.1H0 W155PNY0.1HA W155LTY0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

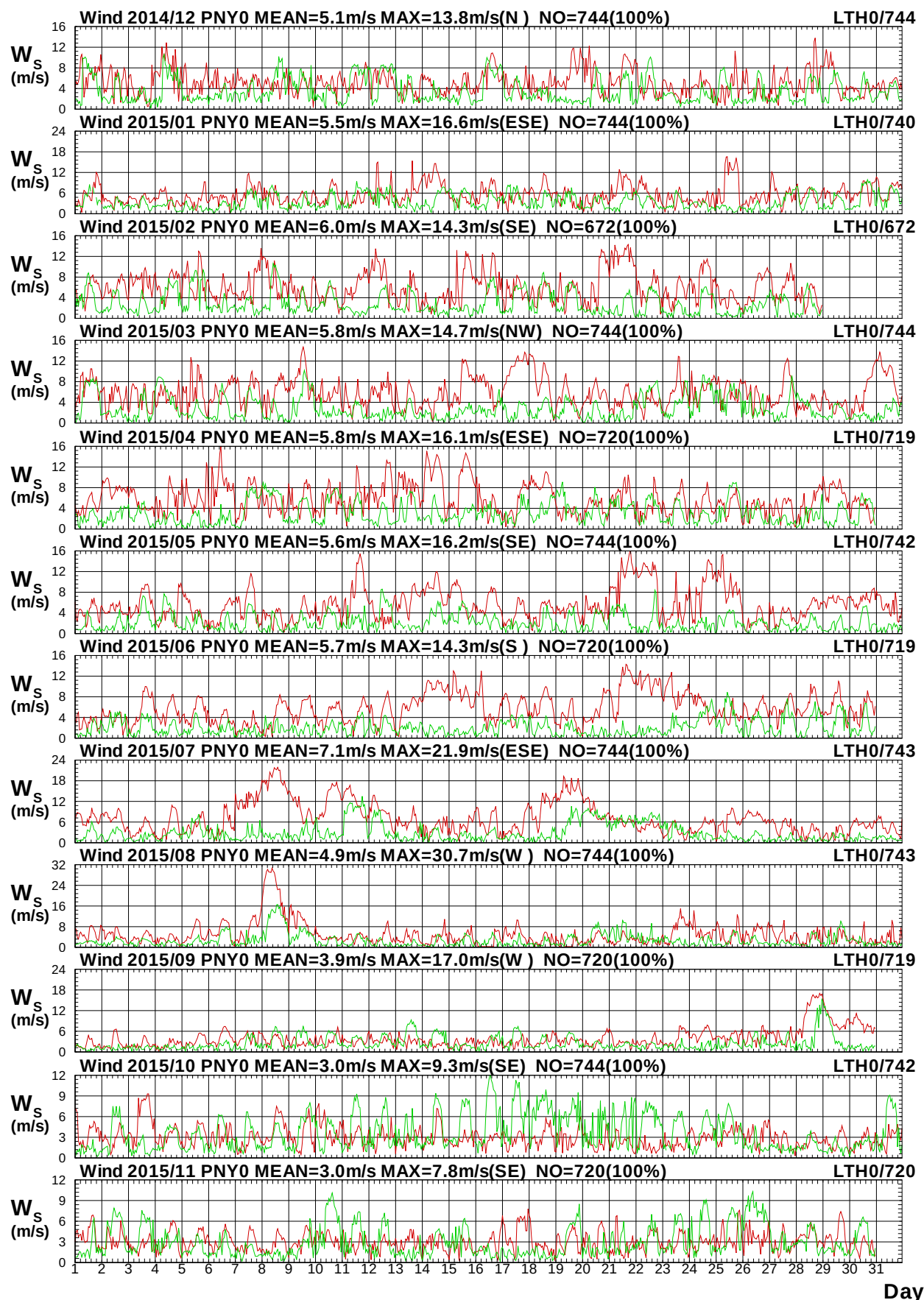


圖 1.14a 2015 年每月屏東海域 Y 站與臺東海域 H 站風速圖

W14CPNY0.1HA W14CLTH0.1H0 W151PNY0.1HA W151LTH0.1H0 W152PNY0.1HA W152LTH0.1H0
W153PNY0.1HA W153LTH0.1H0 W154PNY0.1HA W154LTH0.1H0 W155PNY0.1HA W155LTH0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

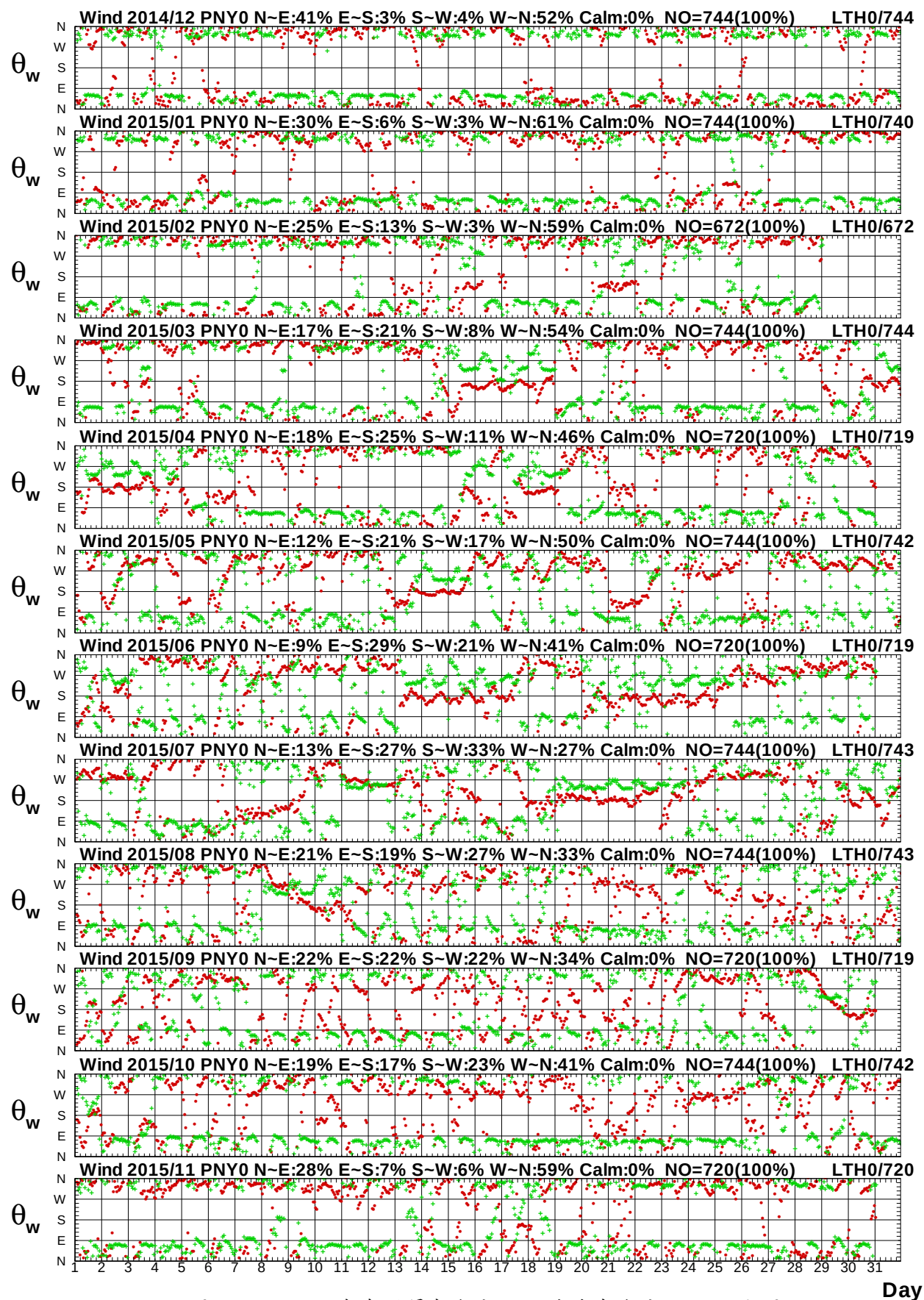


圖 1.14b 2015 年每月屏東海域 Y 站與臺東海域 H 站風向圖

W14CPNY0.1HA W14CLTH0.1H0 W151PNY0.1HA W151LTH0.1H0 W152PNY0.1HA W152LTH0.1H0
W153PNY0.1HA W153LTH0.1H0 W154PNY0.1HA W154LTH0.1H0 W155PNY0.1HA W155LTH0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

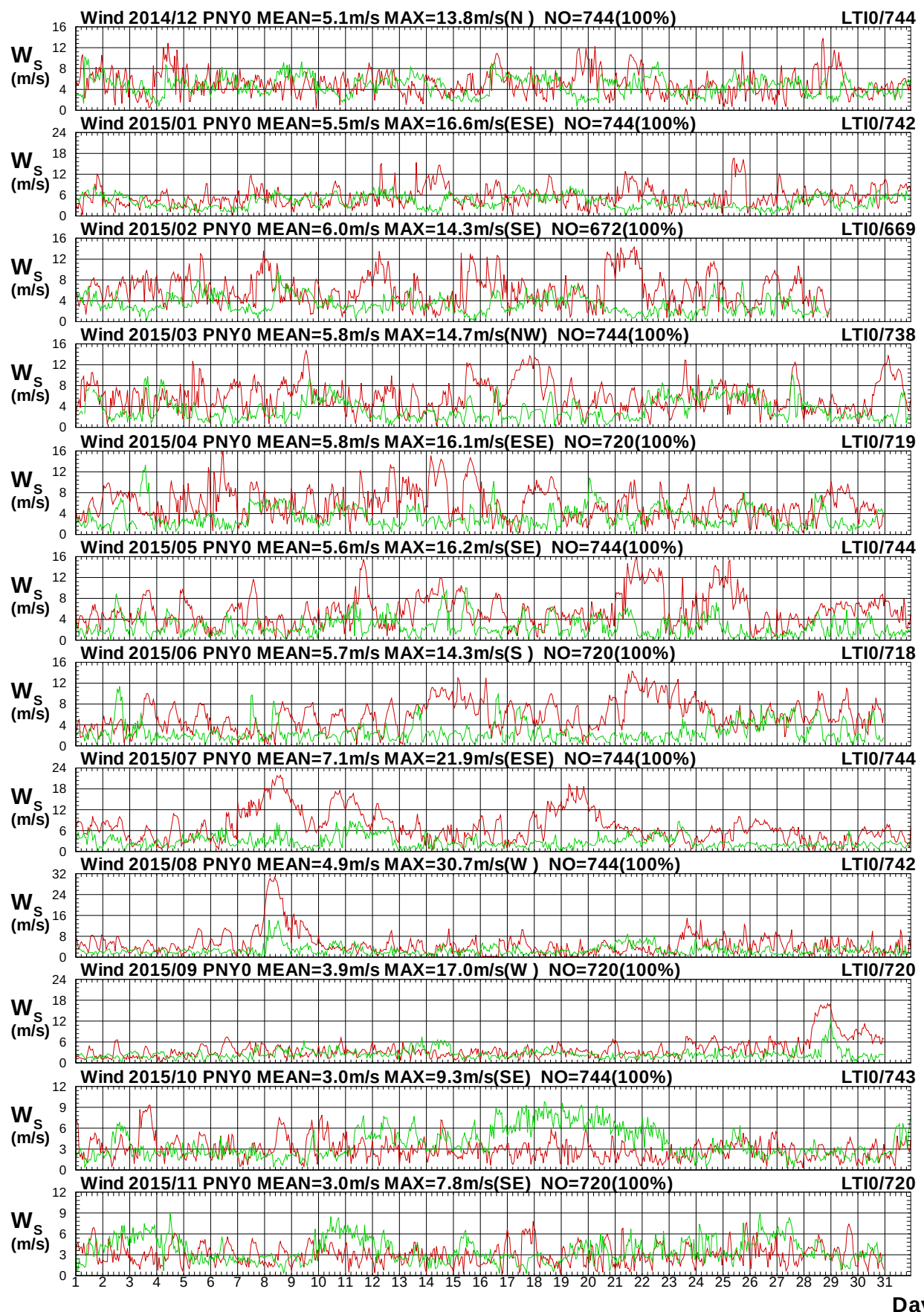


圖 1.15a 2015年每月屏東海域 Y 站與臺東海域 I 站風速圖

W14CPNY0.1HA W14CLTI0.1H0 W151PNY0.1HA W151LTIO.1H0 W152PNY0.1HA W152LTIO.1H0

W153PNY0.1HA W153LTIO.1H0 W154PNY0.1HA W154LTIO.1H0 W155PNY0.1HA W155LTIO.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

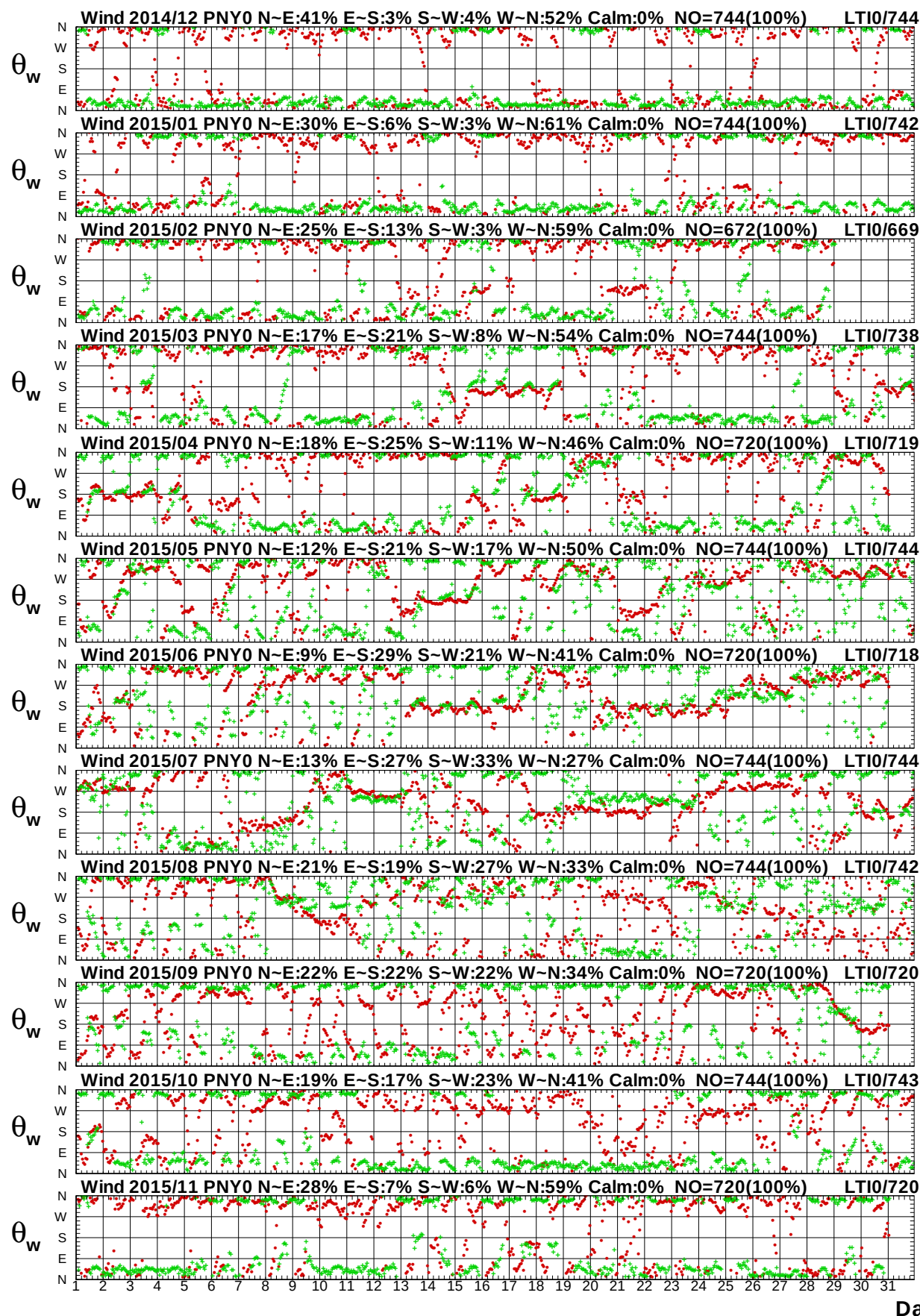


圖 1.15b 2015 年每月屏東海域 Y 站與臺東海域 I 站風向圖

W14CPNY0.1HA W14CLTI0.1H0 W151PNY0.1HA W151LTIO.1H0 W152PNY0.1HA W152LTIO.1H0

W153PNY0.1HA W153LTIO.1H0 W154PNY0.1HA W154LTIO.1H0 W155PNY0.1HA W155LTIO.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

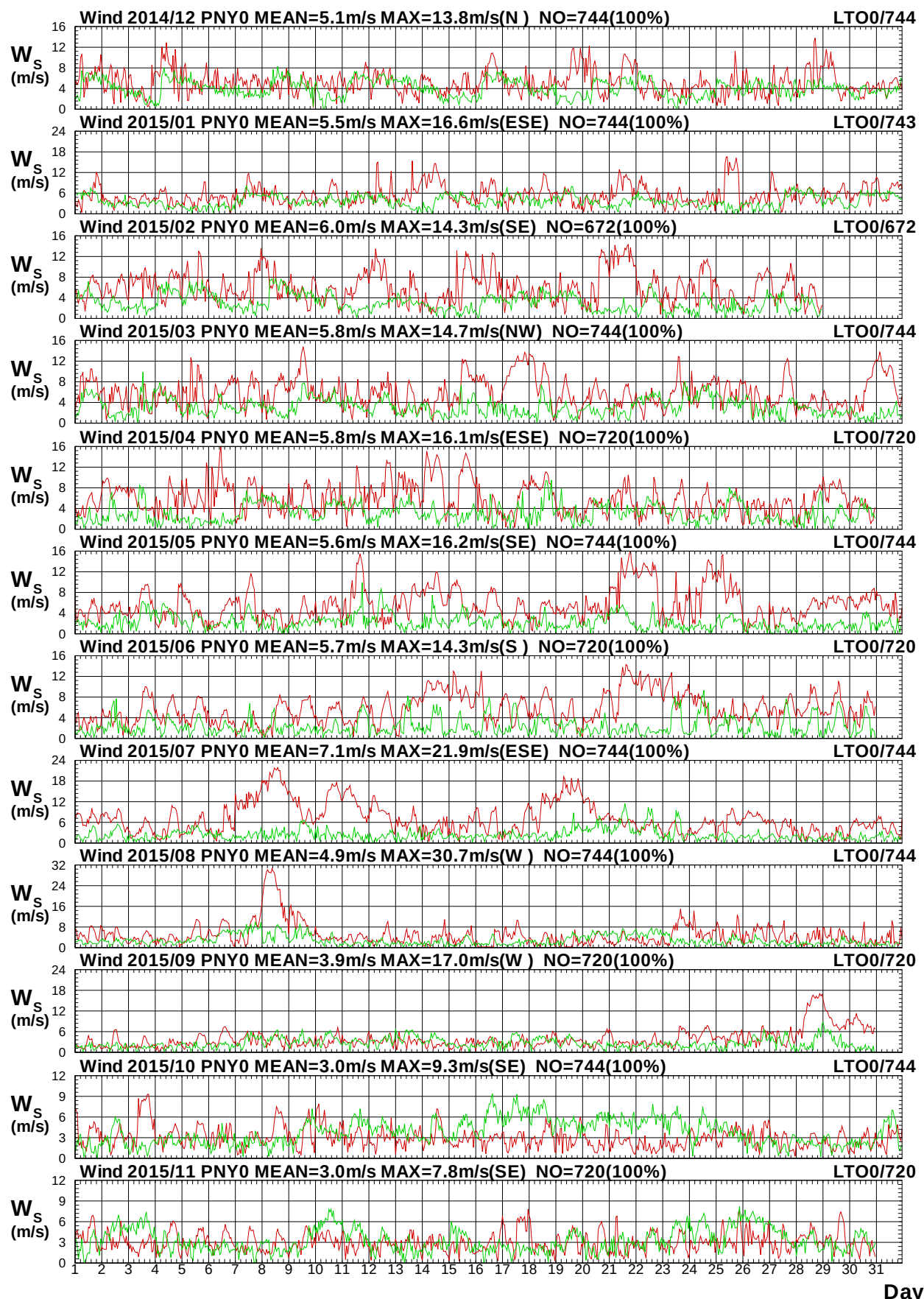


圖 1.16a 2015年每月屏東海域 Y 站與臺東海域 O 站風速圖

W14CPNY0.1HA W14CLTO0.1H0 W151PNY0.1HA W151LTO0.1H0 W152PNY0.1HA W152LTO0.1H0
W153PNY0.1HA W153LTO0.1H0 W154PNY0.1HA W154LTO0.1H0 W155PNY0.1HA W155LTO0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

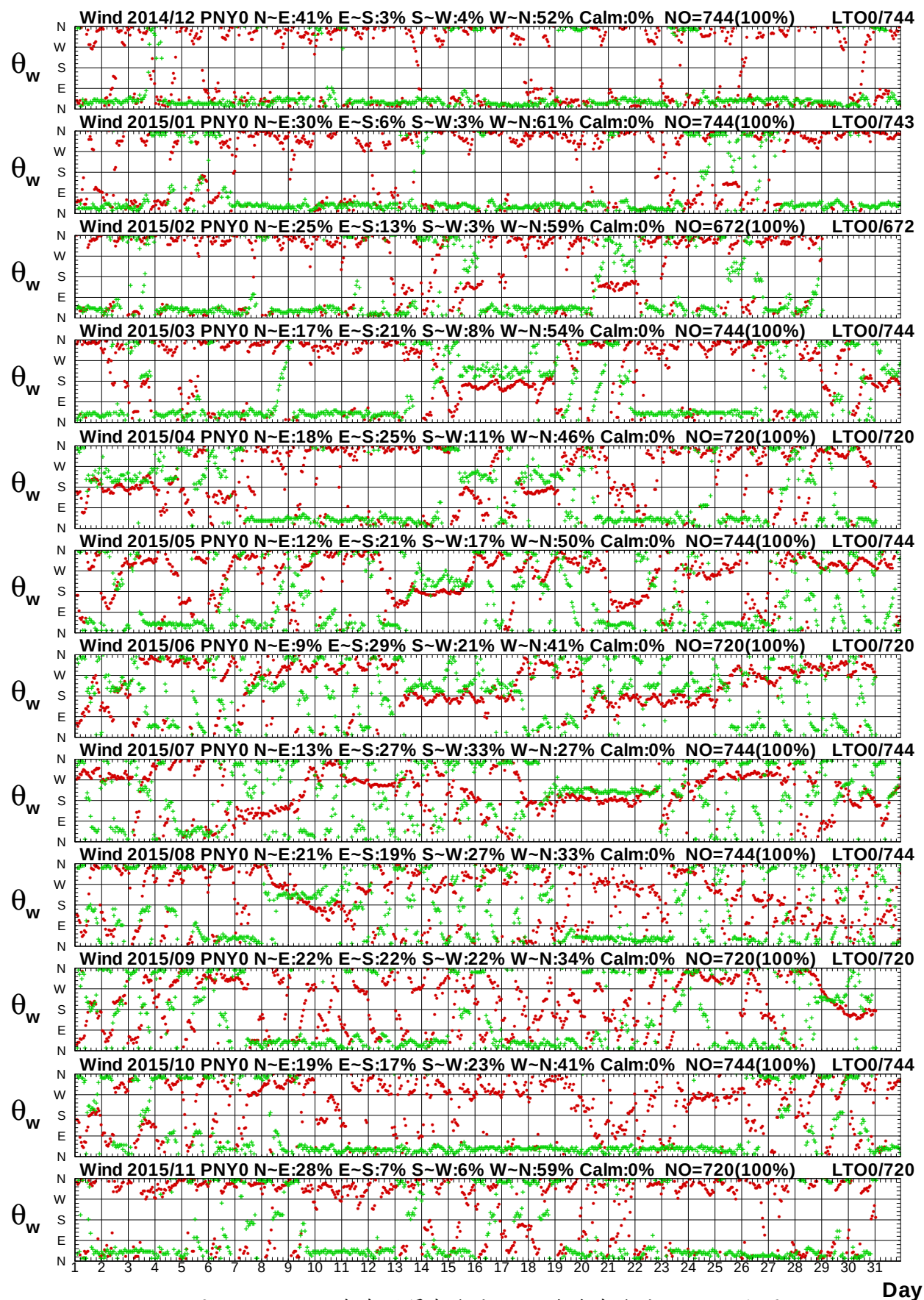


圖 1.16b 2015 年每月屏東海域 Y 站與臺東海域 O 站風向圖

W14CPNY0.1HA W14CLTO0.1H0 W151PNY0.1HA W151LTO0.1H0 W152PNY0.1HA W152LTO0.1H0
W153PNY0.1HA W153LTO0.1H0 W154PNY0.1HA W154LTO0.1H0 W155PNY0.1HA W155LTO0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

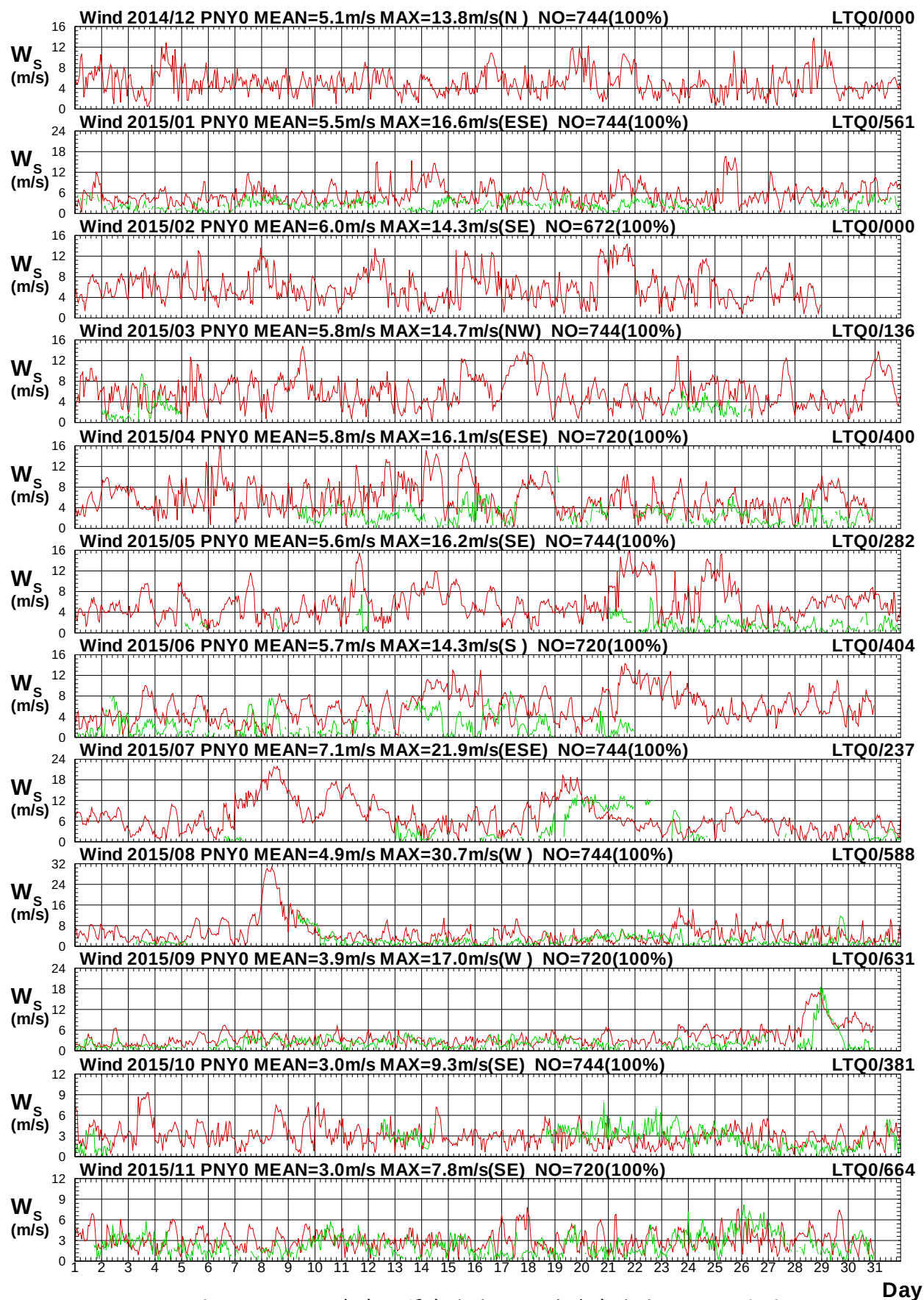


圖 1.17a 2015 年每月屏東海域 Y 站與臺東海域 Q 站風速圖

W14CPNY0.1HA W14CLTQ0.1H0 W151PNY0.1HA W151LTQ0.1H0 W152PNY0.1HA W152LTQ0.1H0
W153PNY0.1HA W153LTQ0.1H0 W154PNY0.1HA W154LTQ0.1H0 W155PNY0.1HA W155LTQ0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

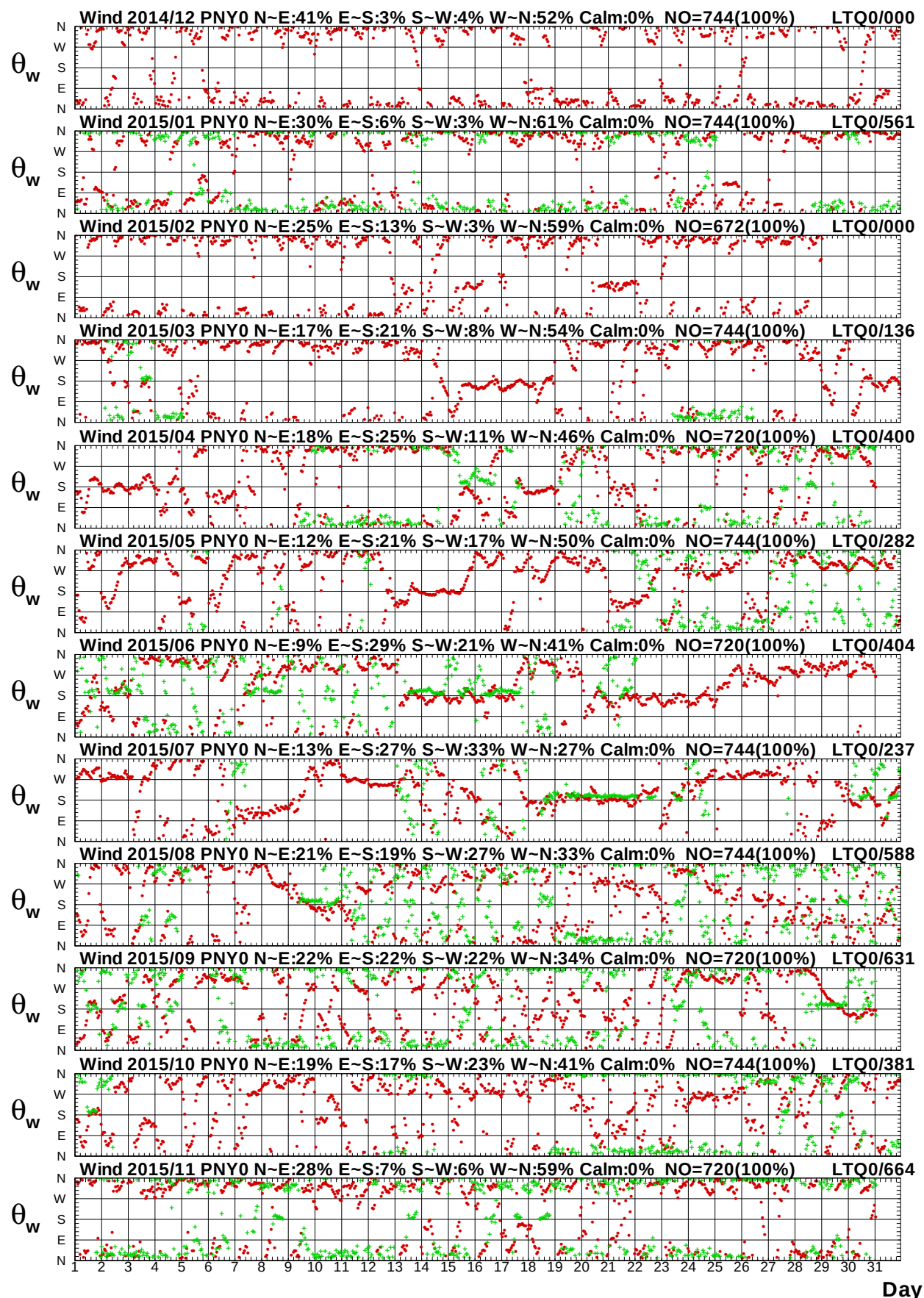


圖 1.17b 2015 年每月屏東海域 Y 站與臺東海域 Q 站風向圖

W14CPNY0.1HA W14CLTQ0.1H0 W151PNY0.1HA W151LTQ0.1H0 W152PNY0.1HA W152LTQ0.1H0
W153PNY0.1HA W153LTQ0.1H0 W154PNY0.1HA W154LTQ0.1H0 W155PNY0.1HA W155LTQ0.1H0

Institute of Harbor & Marine Technology

Wind Speed in Peng-Tung Seas of PNY0 at 2015

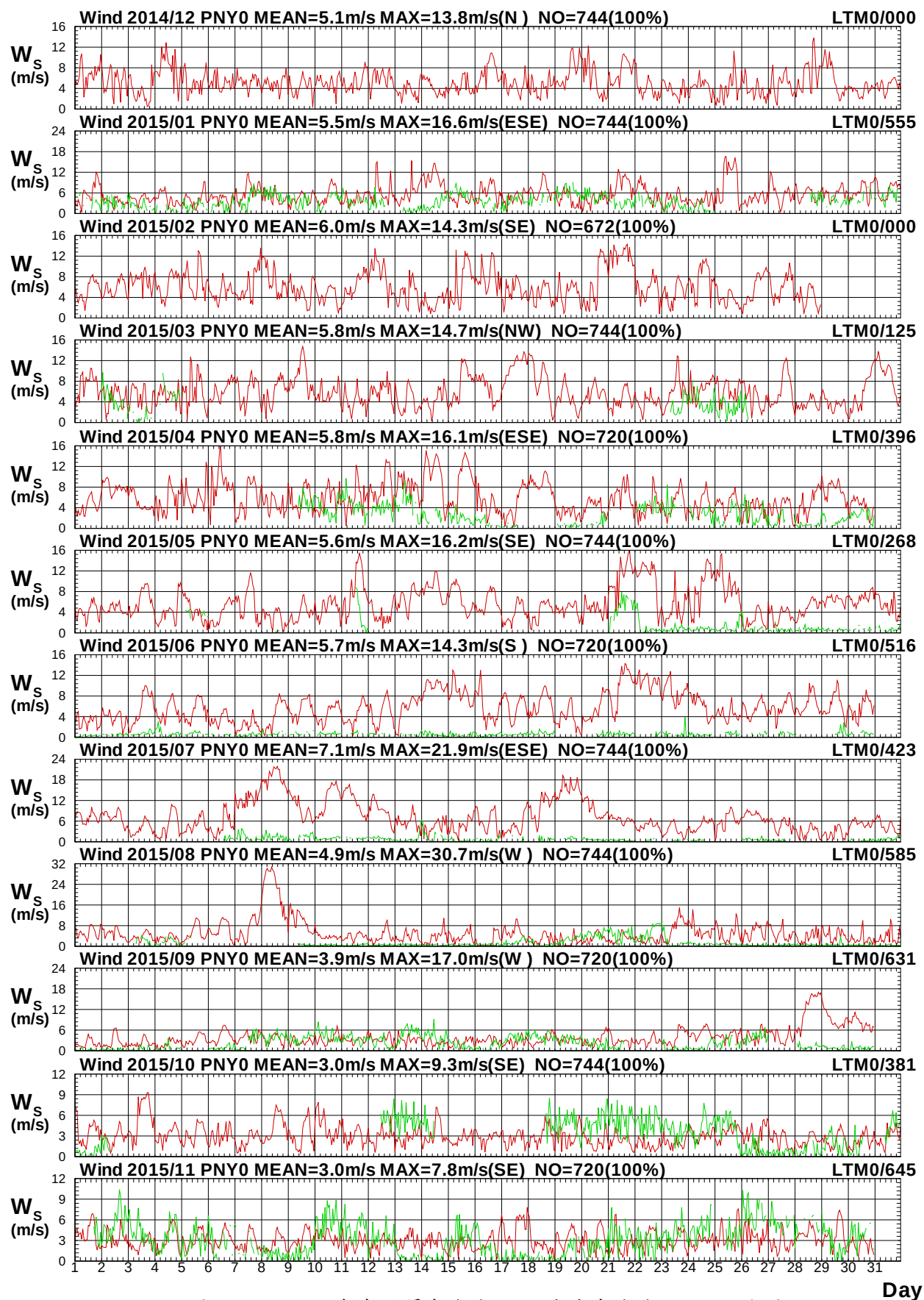


圖 1.18a 2015年每月屏東海域 Y 站與臺東海域 M 站風速圖

W14CPNY0.1HA W14CLTM0.1H0 W151PNY0.1HA W151LTM0.1H0 W152PNY0.1HA W152LTM0.1H0
W153PNY0.1HA W153LTM0.1H0 W154PNY0.1HA W154LTM0.1H0 W155PNY0.1HA W155LTM0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

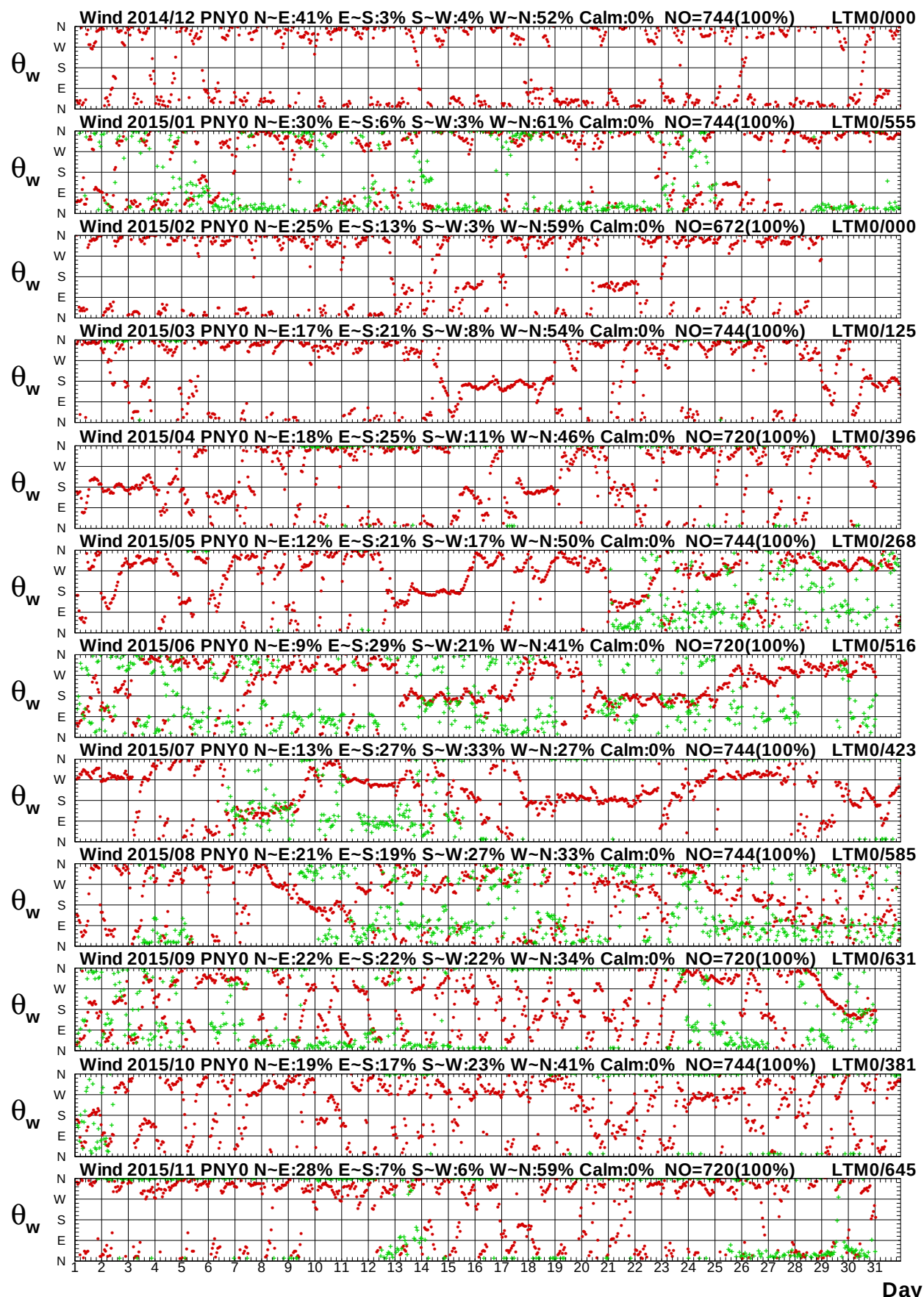


圖 1.18b 2015年每月屏東海域 Y 站與臺東海域 M 站風向圖

W14CPNY0.1HA W14CLTM0.1H0 W151PNY0.1HA W151LTM0.1H0 W152PNY0.1HA W152LTM0.1H0
W153PNY0.1HA W153LTM0.1H0 W154PNY0.1HA W154LTM0.1H0 W155PNY0.1HA W155LTM0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

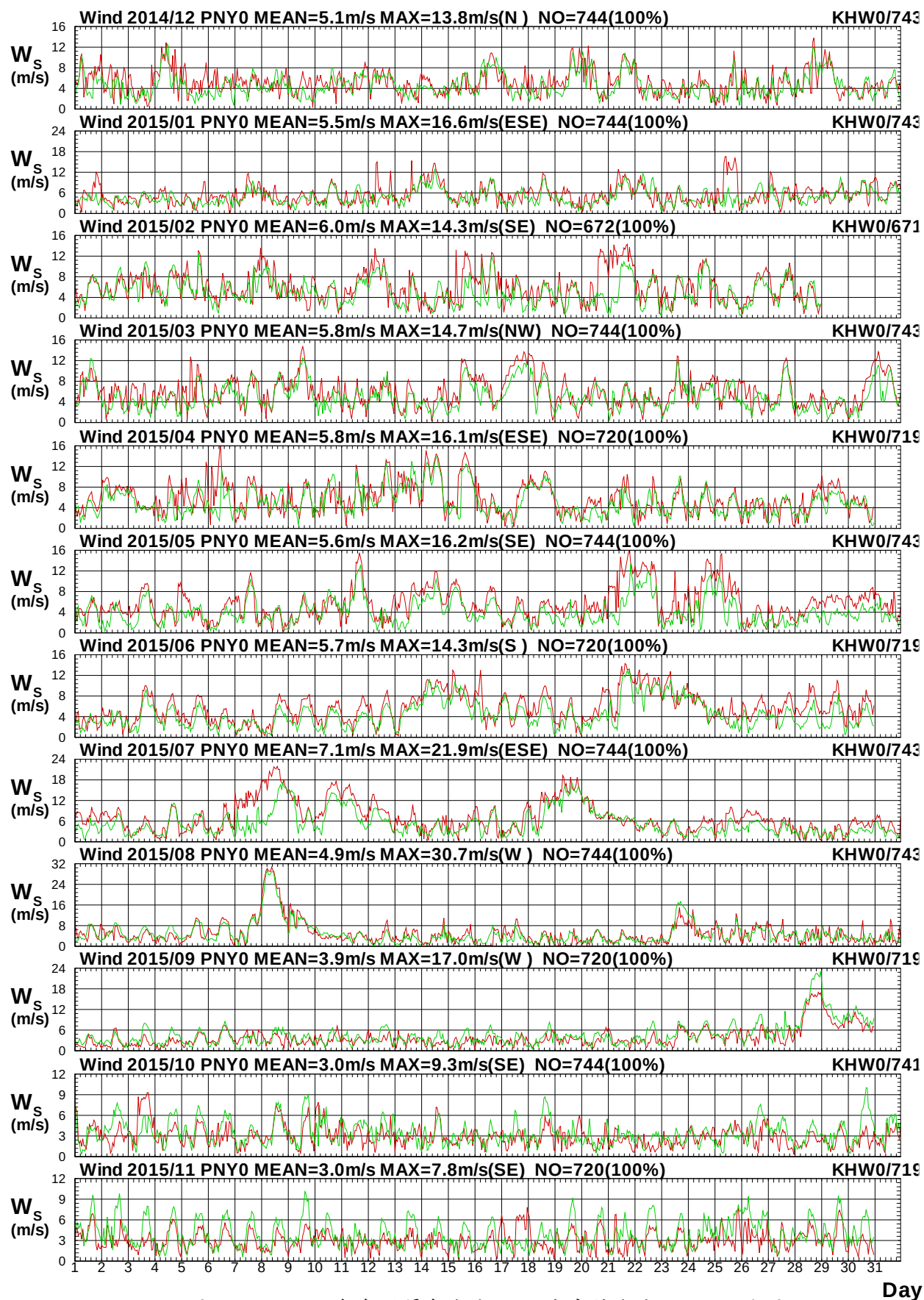


圖 1.19a 2015年每月屏東海域 Y 站與高雄海域 W 站風速圖

W14CPNY0.1HA W14CKHW0.1H0 W151PNY0.1HA W151KHW0.1H0 W152PNY0.1HA W152KHW0.1H0
W153PNY0.1HA W153KHW0.1H0 W154PNY0.1HA W154KHW0.1H0 W155PNY0.1HA W155KHW0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

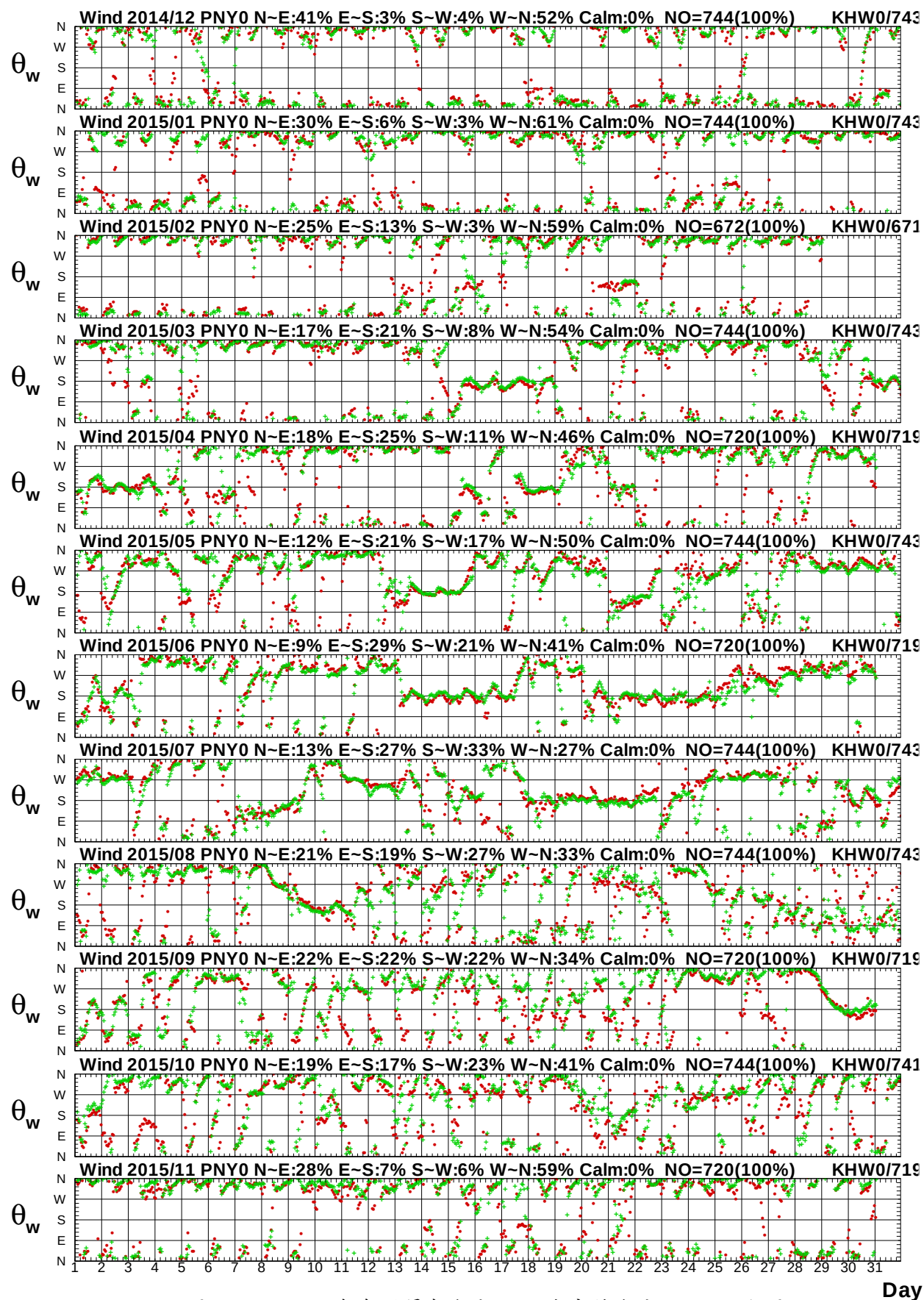


圖 1.19b 2015年每月屏東海域 Y 站與高雄海域 W 站風向圖

W14CPNY0.1HA W14CKHW0.1H0 W151PNY0.1HA W151KHW0.1H0 W152PNY0.1HA W152KHW0.1H0
W153PNY0.1HA W153KHW0.1H0 W154PNY0.1HA W154KHW0.1H0 W155PNY0.1HA W155KHW0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

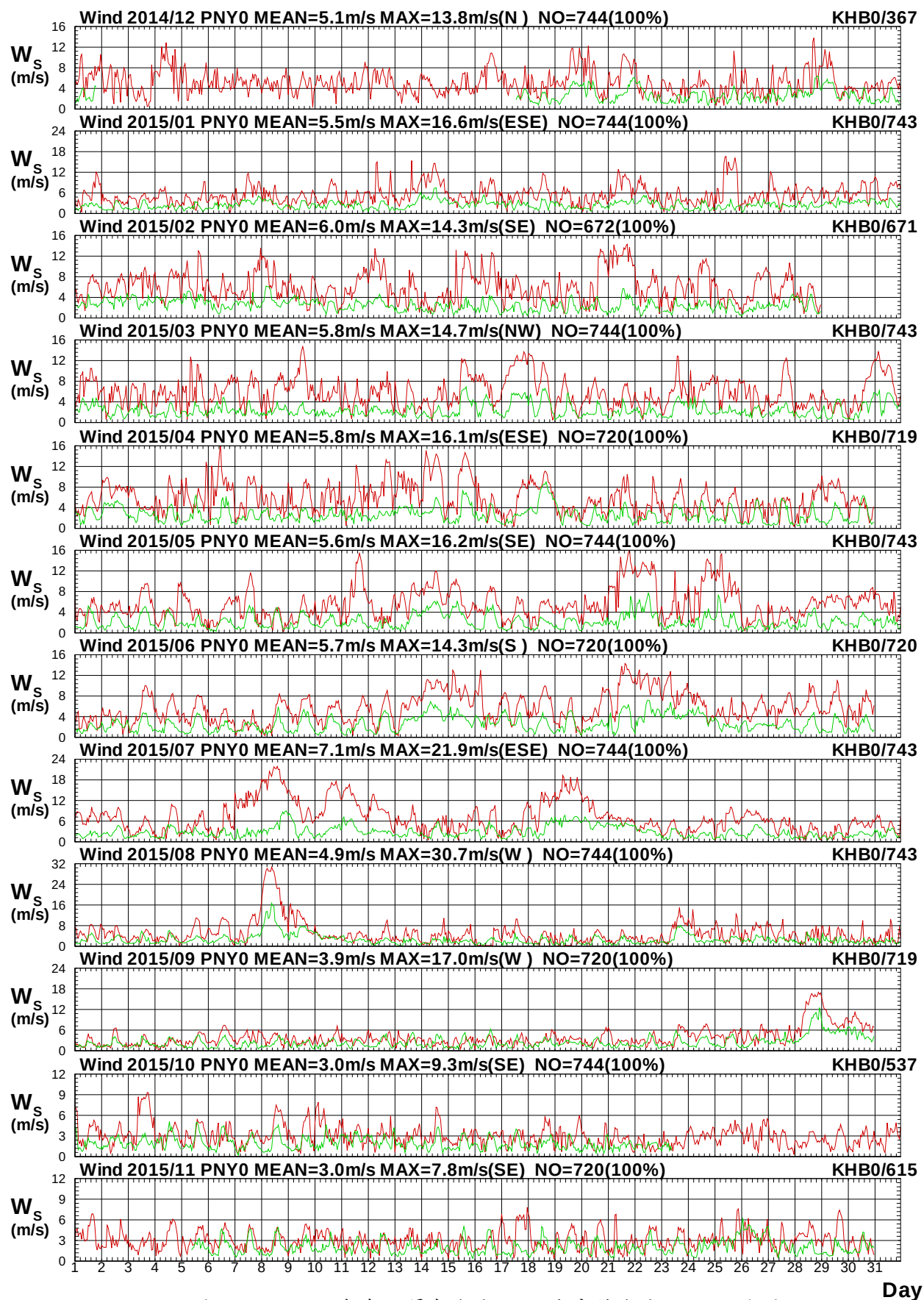


圖 1.20a 2015年每月屏東海域 Y 站與高雄海域 B 站風速圖

W14CPNY0.1HA W14CKHB0.1H0 W151PNY0.1HA W151KHB0.1H0 W152PNY0.1HA W152KHB0.1H0
W153PNY0.1HA W153KHB0.1H0 W154PNY0.1HA W154KHB0.1H0 W155PNY0.1HA W155KHB0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

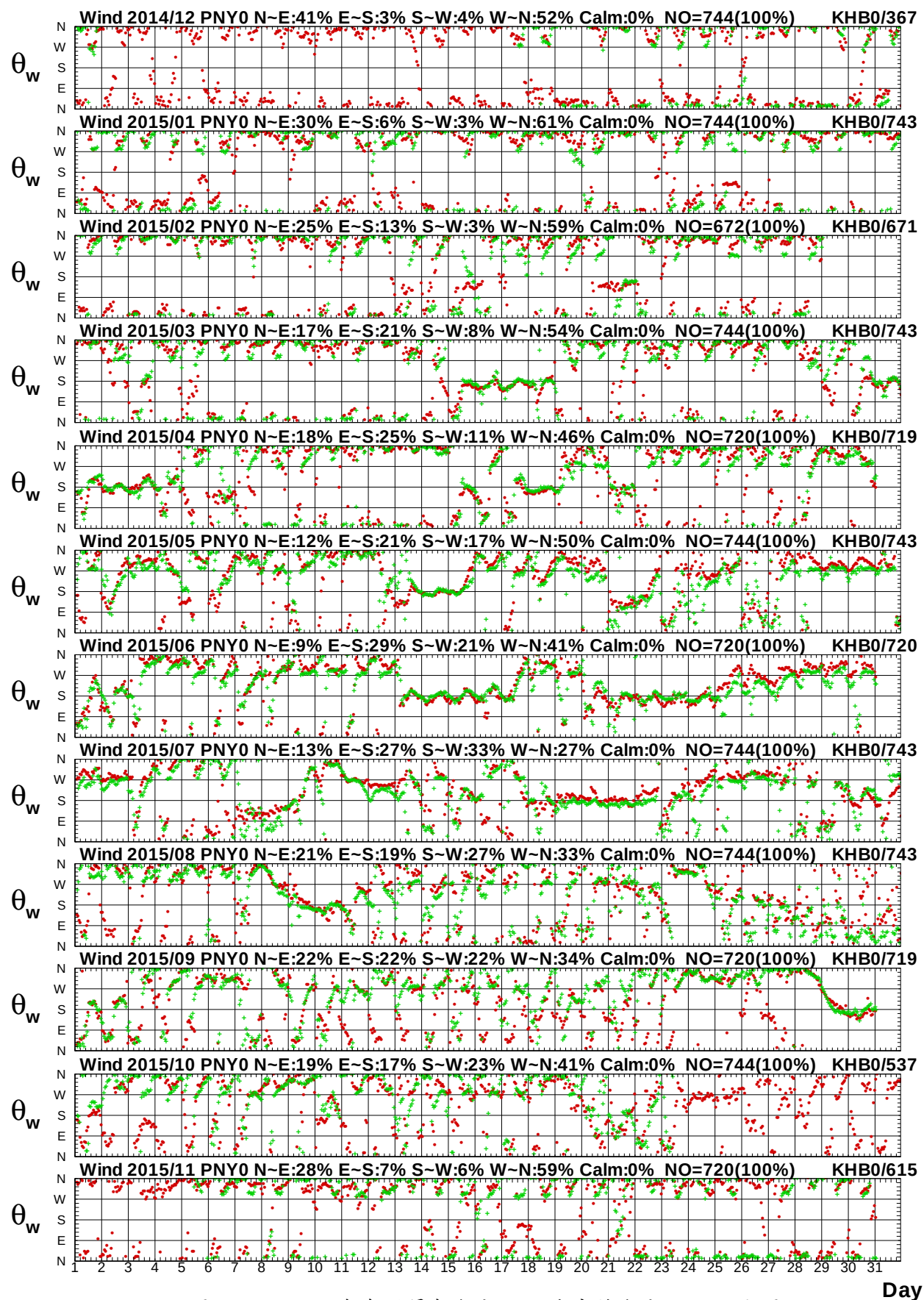


圖 1.20b 2015 年每月屏東海域 Y 站與高雄海域 B 站風向圖

W14CPNY0.1HA W14CKHB0.1H0 W151PNY0.1HA W151KHB0.1H0 W152PNY0.1HA W152KHB0.1H0
W153PNY0.1HA W153KHB0.1H0 W154PNY0.1HA W154KHB0.1H0 W155PNY0.1HA W155KHB0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

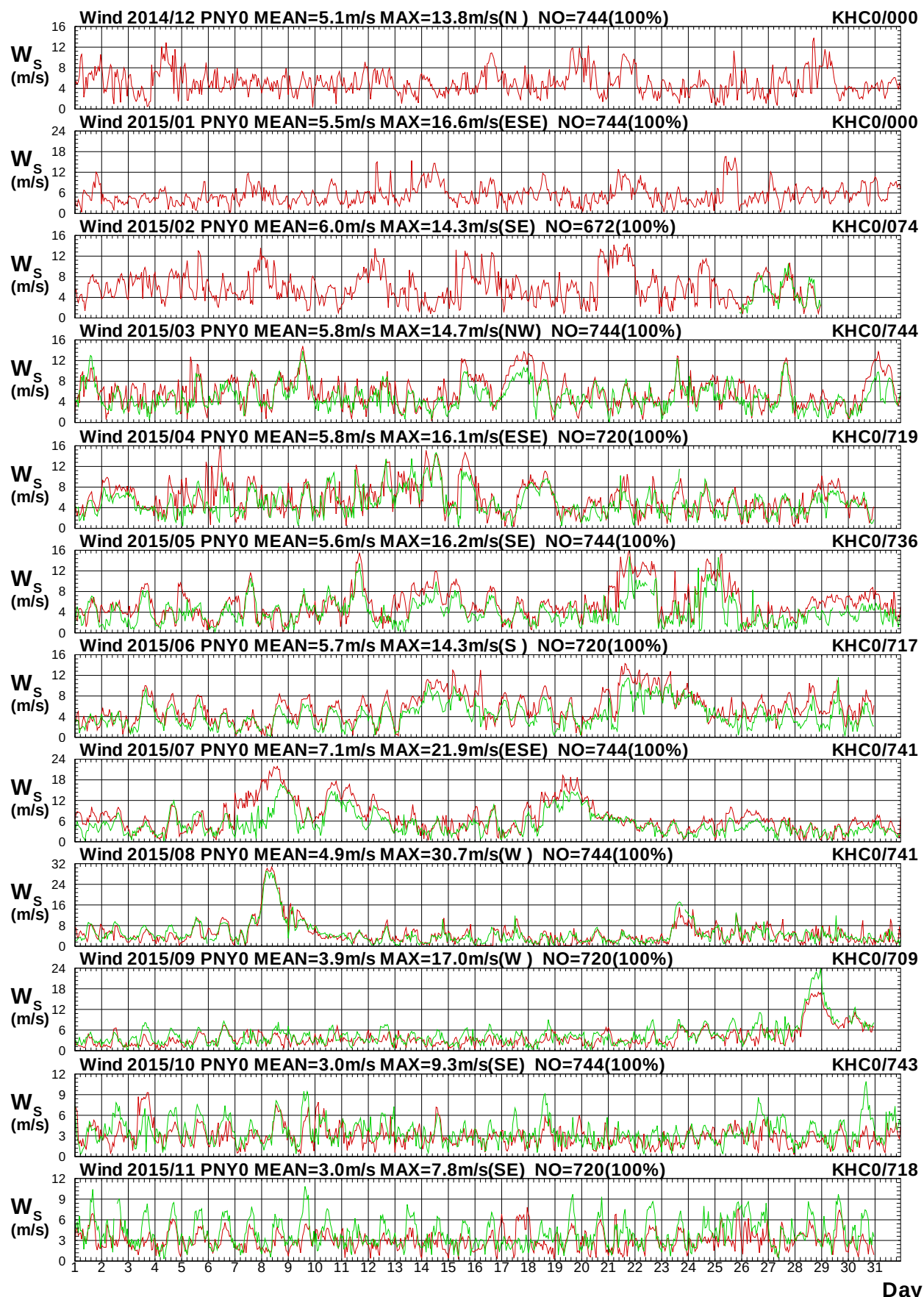


圖 1.21a 2015年每月屏東海域 Y 站與高雄海域 C 站風速圖

W14CPNY0.1HA W14CKHC0.1H0 W151PNY0.1HA W151KHC0.1H0 W152PNY0.1HA W152KHC0.1H0
W153PNY0.1HA W153KHC0.1H0 W154PNY0.1HA W154KHC0.1H0 W155PNY0.1HA W155KHC0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

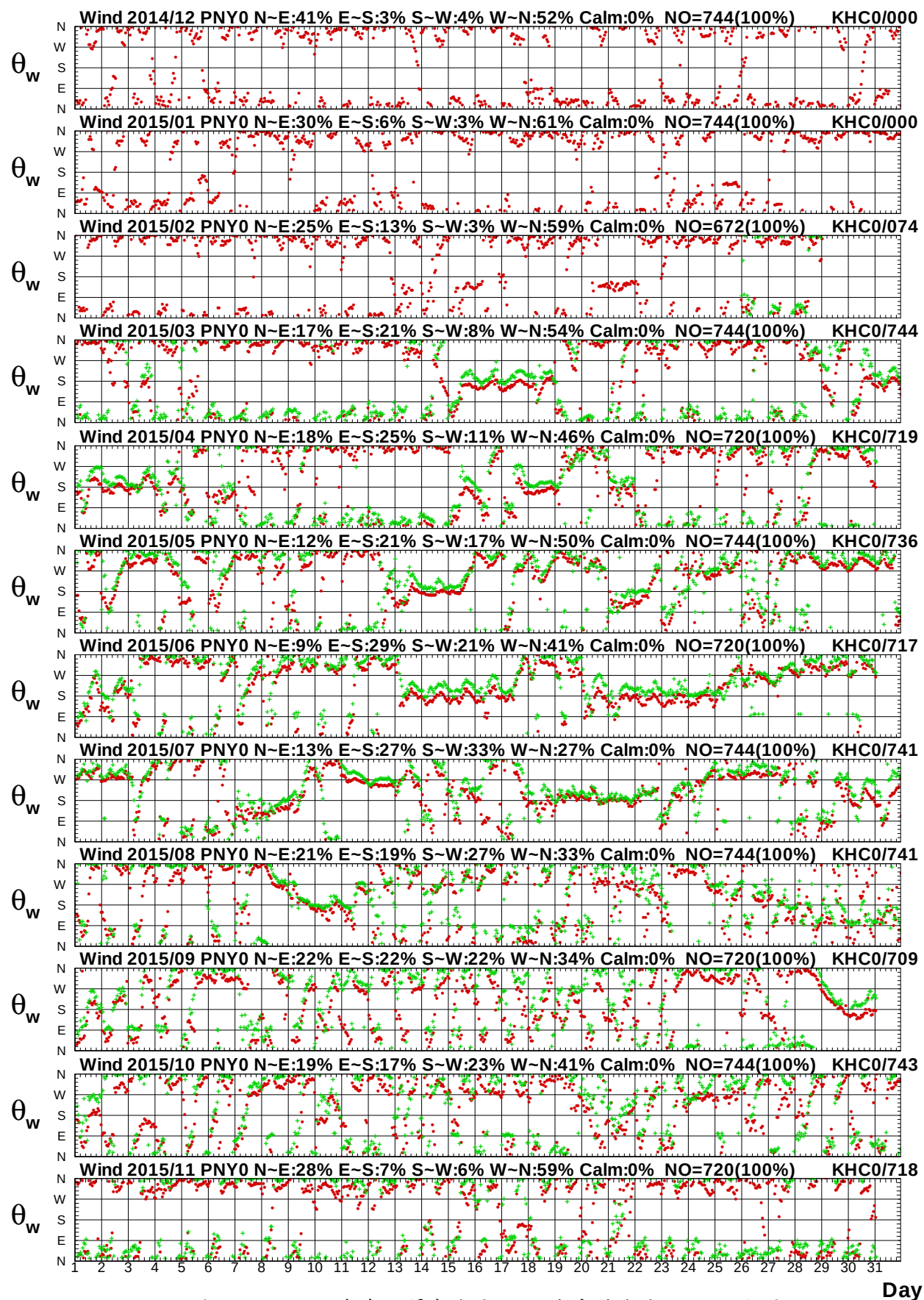


圖 1.21b 2015 年每月屏東海域 Y 站與高雄海域 C 站風向圖

W14CPNY0.1HA W14CKHC0.1H0 W151PNY0.1HA W151KHC0.1H0 W152PNY0.1HA W152KHC0.1H0
W153PNY0.1HA W153KHC0.1H0 W154PNY0.1HA W154KHC0.1H0 W155PNY0.1HA W155KHC0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

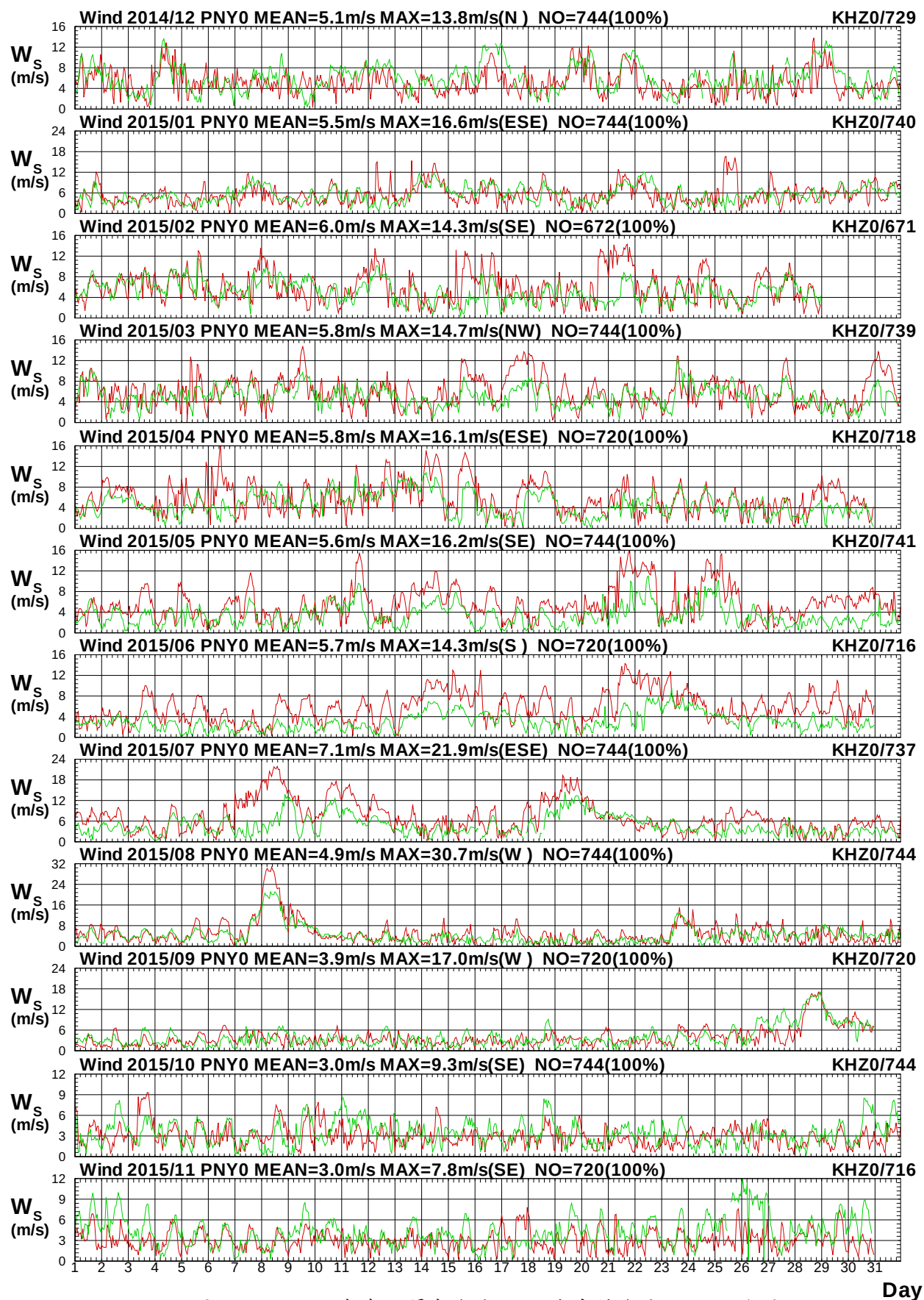


圖 1.22a 2015年每月屏東海域 Y 站與高雄海域 Z 站風速圖

W14CPNY0.1HA W14CKHZ0.1H0 W151PNY0.1HA W151KHZ0.1H0 W152PNY0.1HA W152KHZ0.1H0
W153PNY0.1HA W153KHZ0.1H0 W154PNY0.1HA W154KHZ0.1H0 W155PNY0.1HA W155KHZ0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

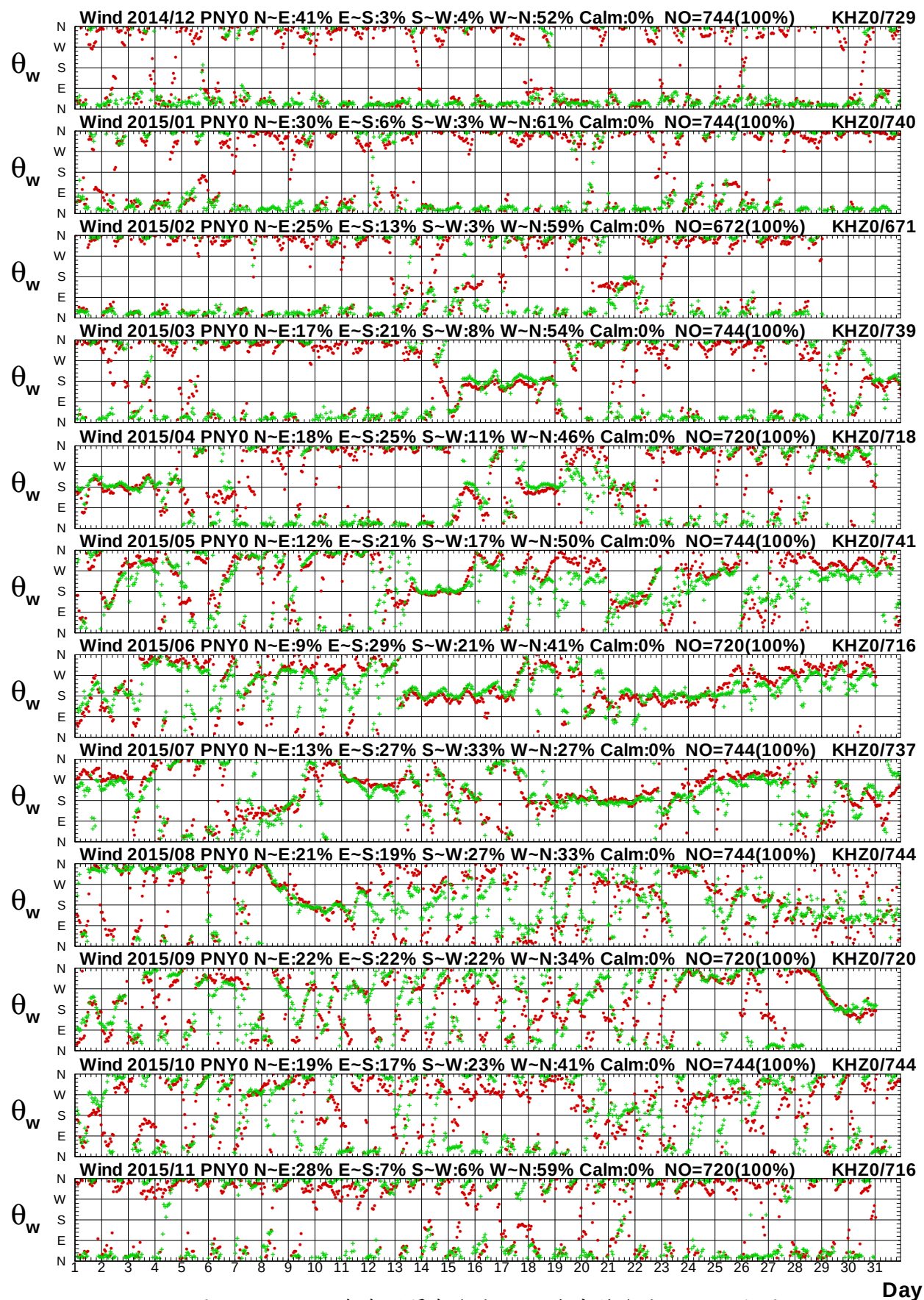


圖 1.22b 2015年每月屏東海域 Y 站與高雄海域 Z 站風向圖

W14CPNY0.1HA W14CKHZ0.1H0 W151PNY0.1HA W151KHZ0.1H0 W152PNY0.1HA W152KHZ0.1H0
W153PNY0.1HA W153KHZ0.1H0 W154PNY0.1HA W154KHZ0.1H0 W155PNY0.1HA W155KHZ0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

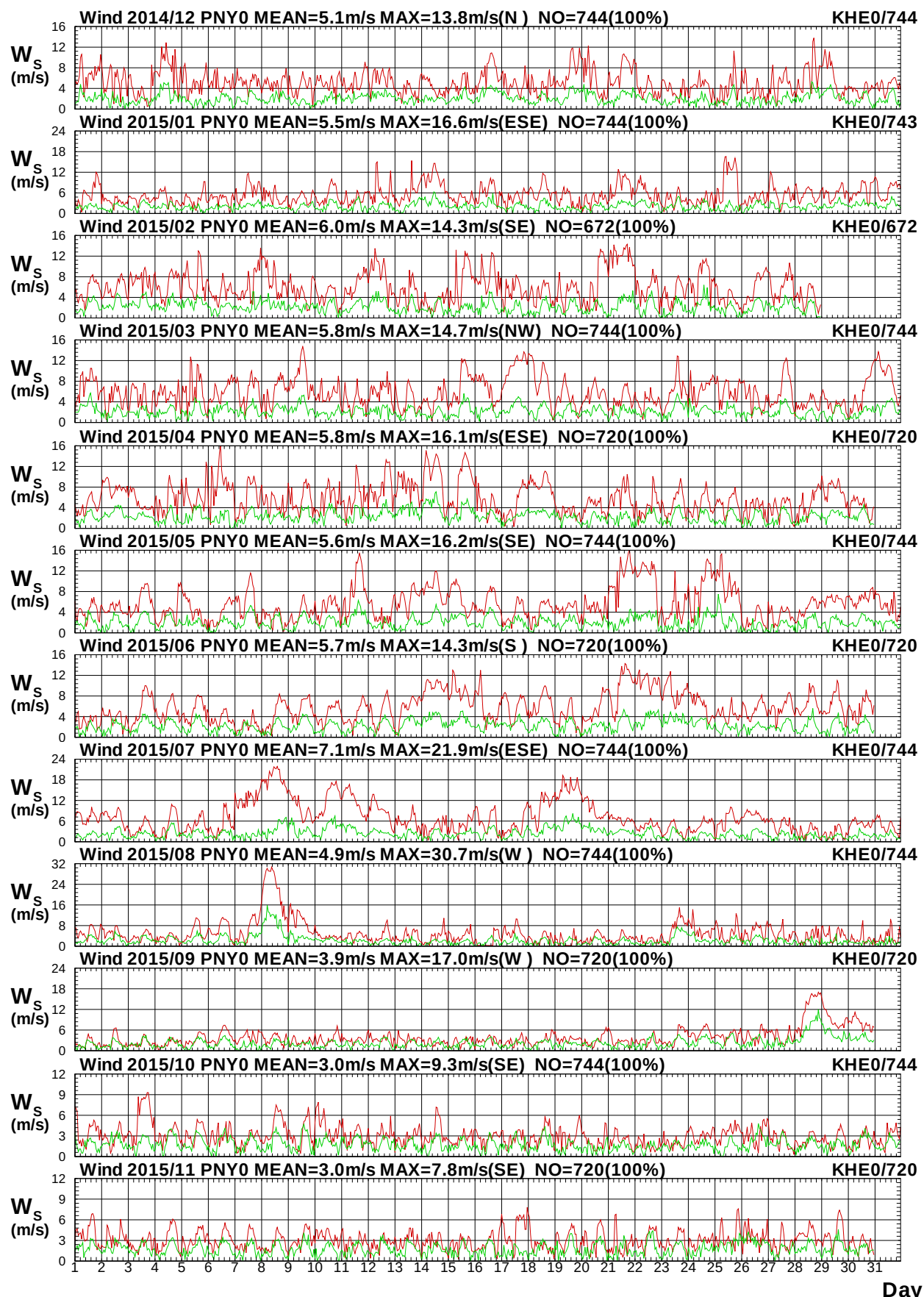


圖 1.23a 2015 年每月屏東海域 Y 站與高雄海域 E 站風速圖

W14CPNY0.1HA W14CKHE0.1H0 W151PNY0.1HA W151KHE0.1H0 W152PNY0.1HA W152KHE0.1H0
W153PNY0.1HA W153KHE0.1H0 W154PNY0.1HA W154KHE0.1H0 W155PNY0.1HA W155KHE0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

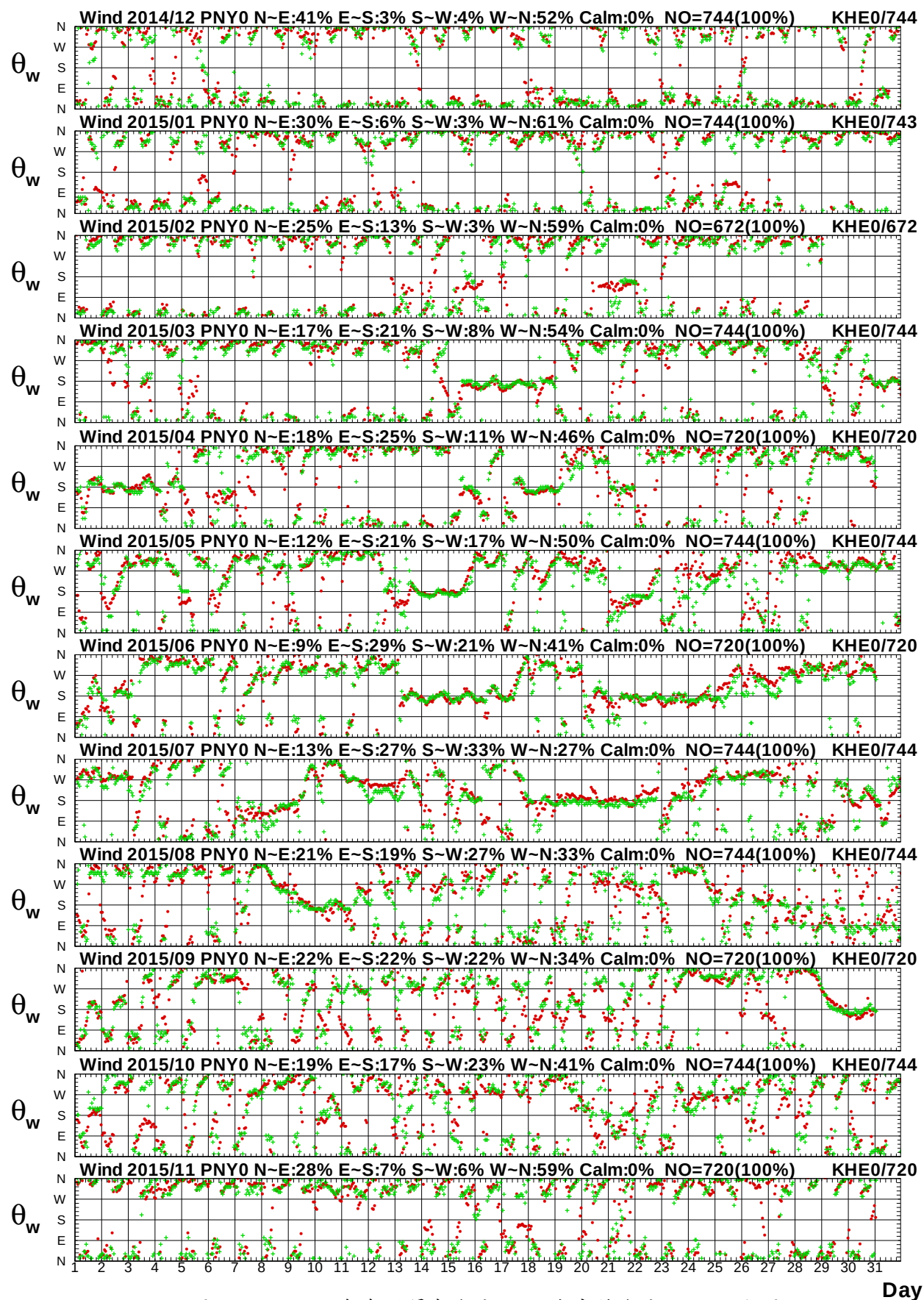


圖 1.23b 2015年每月屏東海域 Y 站與高雄海域 E 站風向圖

W14CPNY0.1HA W14CKHE0.1H0 W151PNY0.1HA W151KHE0.1H0 W152PNY0.1HA W152KHE0.1H0
W153PNY0.1HA W153KHE0.1H0 W154PNY0.1HA W154KHE0.1H0 W155PNY0.1HA W155KHE0.1H0

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Wind Speed in Peng-Tung Seas of PNY0 at 2015

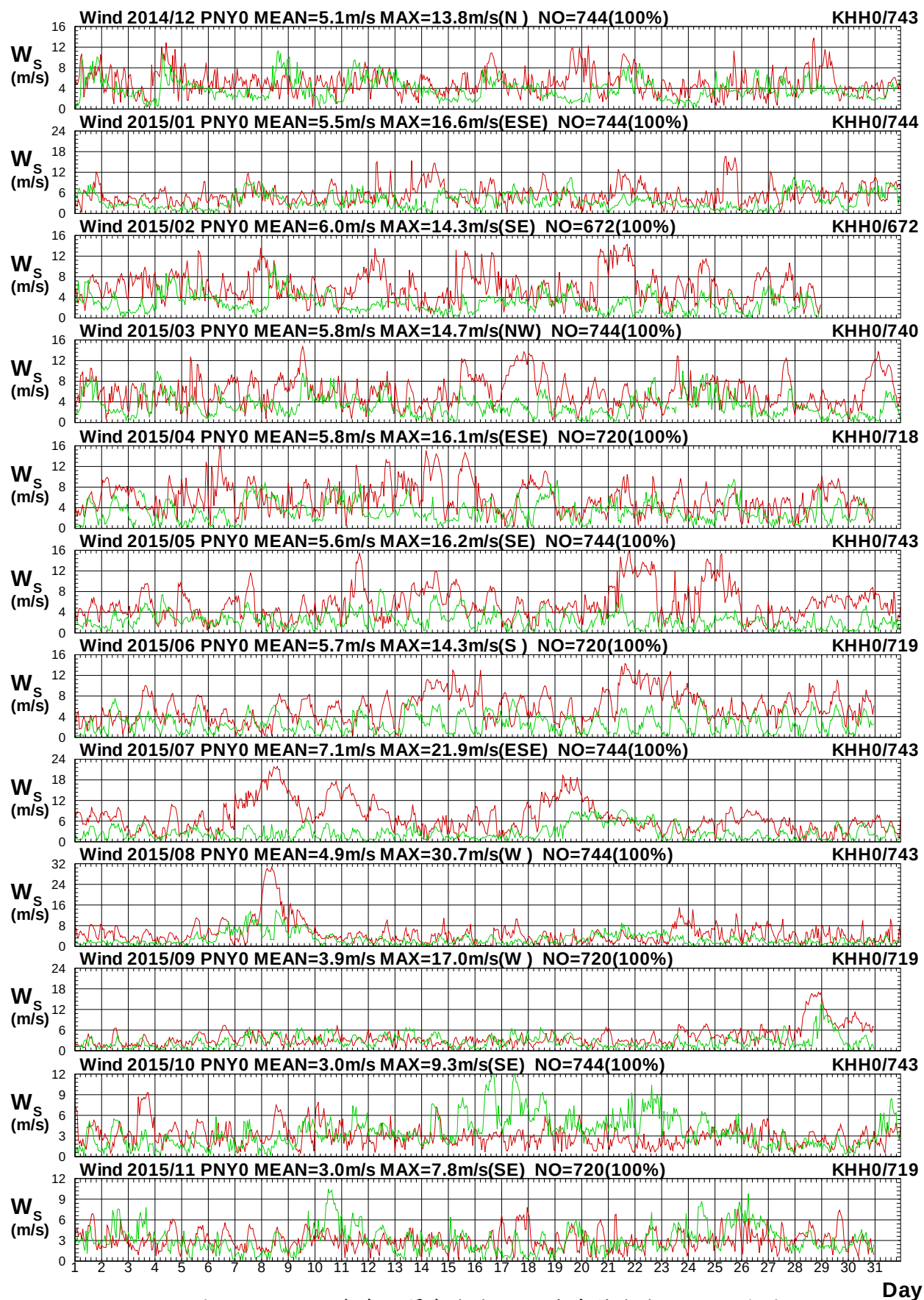


圖 1.24a 2015 年每月屏東海域 Y 站與高雄海域 H 站風速圖

W14CPNY0.1HA W14CKHH0.1H0 W151PNY0.1HA W151KHH0.1H0 W152PNY0.1HA W152KHH0.1H0
W153PNY0.1HA W153KHH0.1H0 W154PNY0.1HA W154KHH0.1H0 W155PNY0.1HA W155KHH0.1H0

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Wind Direction in Peng-Tung Seas of PNY0 at 2015

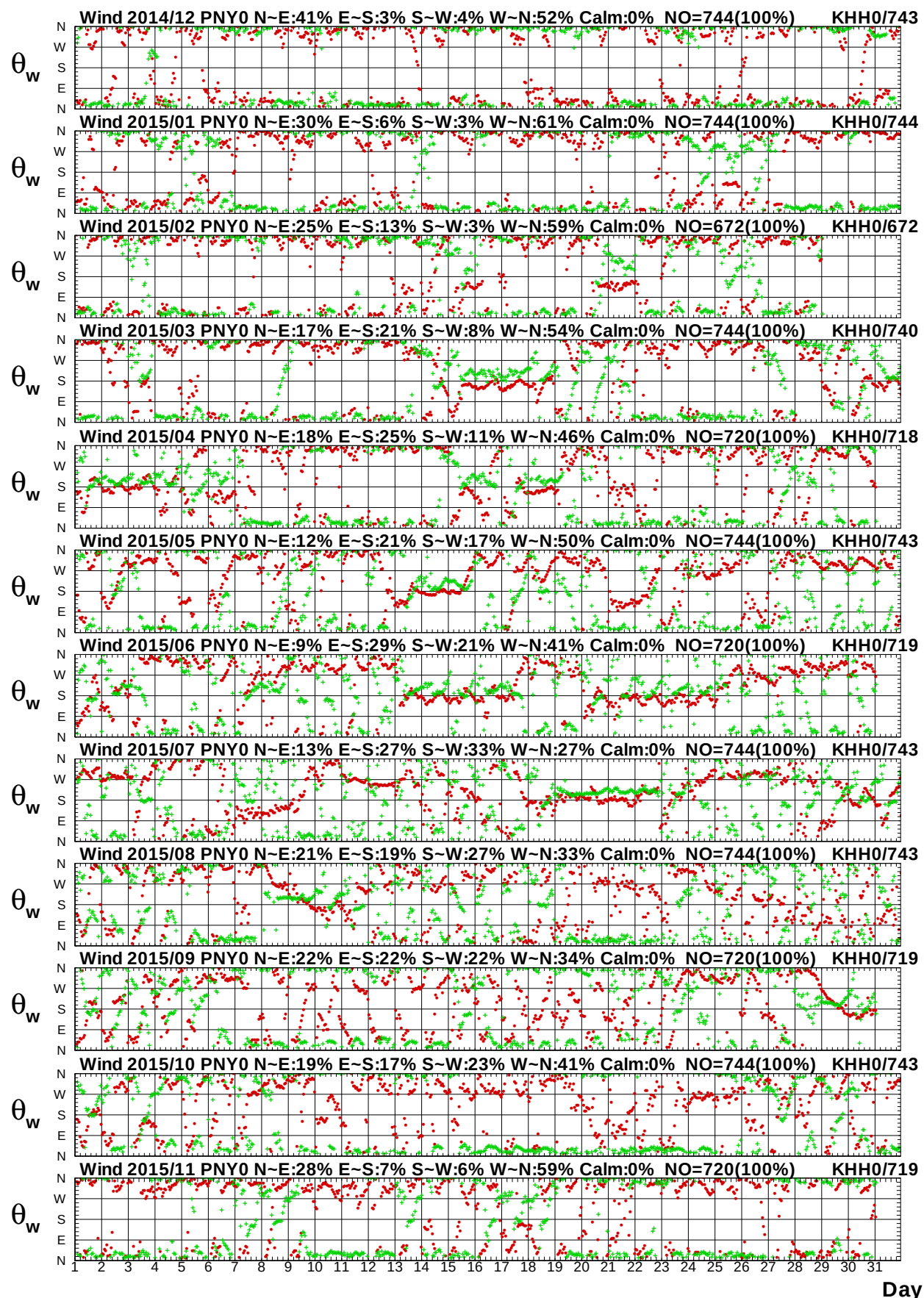


圖 1.24b 2015 年每月屏東海域 Y 站與高雄海域 H 站風向圖

W14CPNY0.1HA W14CKHH0.1H0 W151PNY0.1HA W151KHH0.1H0 W152PNY0.1HA W152KHH0.1H0
W153PNY0.1HA W153KHH0.1H0 W154PNY0.1HA W154KHH0.1H0 W155PNY0.1HA W155KHH0.1H0

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第二章 2015 年屏東海域觀測波浪資料

屏東海域波浪之觀測小琉球海上浮標(測站 Y) 屬中央氣象局(CWB)所有，測站之位置如圖 2。

測站 Z(鵝鑾鼻外海浮標站)、測站 U(大鵬灣海上浮標站) 之波浪儀則屬水利署(WRA)所有。

南灣海上浮標(測站 R) 波浪儀，係國立成功大學水文中心(COMC)裝設。各測站歷年觀測風資料蒐集概況如表 2。

本波浪年報以取經檢核或修補後之 Y 站資料作為主要觀測站，2015 年主要觀測站修補前(後)每月觀測之波浪資料記錄期間統計表，如表 2.1a，2015 年波浪次要觀測站資料(未補餘)記錄統計表，如表 2.1b，主要觀測站修補前後每月波浪歷線比較圖，如圖 2.1，主要觀測站與次要觀測站(或其他觀測站)每月波浪歷線比較圖，如圖 2.2 以後。

表 2 屏東海域觀測波浪資料蒐集概況表(統計時間至 2015 年 11 月)

測站	緯度	經度	觀測期間	觀測單位	備註
Y	22°18'50"N	120°21'50"E	2003/11-2015/11(觀測中)	中央氣象局	小琉球浮標站
Z	21°54'01"N	120°49'21"E	2000/10-2015/11(觀測中)	水利署	鵝鑾鼻浮標站
U	22°18'50"N	120°21'50"E	2002/11-2013/08	水利署	大鵬灣浮標
R	22°18'50"N	120°21'50"E	2003/11-2015/11(觀測中)	水文中心	南灣海上浮標

屏東海域



WRA 浮標波浪站



CWB 浮標波浪站



COMC 浮標波浪站



圖 2 屏東海域波浪觀測站位置示意圖

表 2.1a 2015 年每月屏東海域修補前各測站觀測波浪資料紀錄統計表

年/月 港區	屏東海域	屏東海域	屏東海域	屏東海域	屏東海域	屏東海域	屏東海域	屏東海域
測站	Y	Z	R	U				
2014/12 月	732 (98.4%)	736 (98.9%)	619 (83.2%)	*	*	*	*	*
2015/ 1 月	731 (98.3%)	731 (98.3%)	727 (97.7%)	*	*	*	*	*
2015/ 2 月	669 (99.6%)	630 (93.8%)	500 (74.4%)	*	*	*	*	*
2015/ 3 月	740 (99.5%)	708 (95.2%)	695 (93.4%)	*	*	*	*	*
2015/ 4 月	697 (96.8%)	702 (97.5%)	696 (96.7%)	*	*	*	*	*
2015/ 5 月	739 (99.3%)	739 (99.3%)	732 (98.4%)	*	*	*	*	*
2015/ 6 月	714 (99.2%)	718 (99.7%)	703 (97.6%)	*	*	*	*	*
2015/ 7 月	737 (99.1%)	728 (97.8%)	738 (99.2%)	*	*	*	*	*
2015/ 8 月	729 (98.0%)	737 (99.1%)	738 (99.2%)	*	*	*	*	*
2015/ 9 月	704 (97.8%)	717 (99.6%)	713 (99.0%)	*	*	*	*	*
2015/10 月	715 (96.1%)	743 (99.9%)	727 (97.7%)	*	*	*	*	*
2015/11 月	708 (98.3%)	716 (99.4%)	706 (98.1%)	*	*	*	*	*
2015/冬季	2132 (98.7%)	2097 (97.1%)	1846 (85.5%)	*	*	*	*	*
2015/春季	2176 (98.6%)	2149 (97.3%)	2123 (96.2%)	*	*	*	*	*
2015/夏季	2180 (98.7%)	2183 (98.9%)	2179 (98.7%)	*	*	*	*	*
2015/秋季	2127 (97.4%)	2176 (99.6%)	2146 (98.3%)	*	*	*	*	*
2015/整年	8615 (98.3%)	8605 (98.2%)	8294 (94.7%)	*	*	*	*	*
起始年月	2014/12	2014/12	2014/12	*	*	*	*	*
結束年月	2015/11	2015/11	2015/11	*	*	*	*	*

表2.1b 2015年每月屏東海域修補後各測站波浪資料統計表

年/月 港區	屏東海域		屏東海域		屏東海域		屏東海域		屏東海域	
測站	Y		Z		R		U			
2014/12 月	744	(100%)	744	(100%)	744	(100%)	*	*	*	*
2015/ 1 月	744	(100%)	744	(100%)	744	(100%)	*	*	*	*
2015/ 2 月	672	(100%)	672	(100%)	672	(100%)	*	*	*	*
2015/ 3 月	744	(100%)	744	(100%)	744	(100%)	*	*	*	*
2015/ 4 月	720	(100%)	720	(100%)	720	(100%)	*	*	*	*
2015/ 5 月	744	(100%)	744	(100%)	744	(100%)	*	*	*	*
2015/ 6 月	720	(100%)	720	(100%)	720	(100%)	*	*	*	*
2015/ 7 月	744	(100%)	744	(100%)	744	(100%)	*	*	*	*
2015/ 8 月	744	(100%)	744	(100%)	744	(100%)	*	*	*	*
2015/ 9 月	720	(100%)	720	(100%)	720	(100%)	*	*	*	*
2015/10 月	744	(100%)	744	(100%)	744	(100%)	*	*	*	*
2015/11 月	720	(100%)	720	(100%)	720	(100%)	*	*	*	*
2015/冬季	2160	(100%)	2160	(100%)	2160	(100%)	*	*	*	*
2015/春季	2208	(100%)	2208	(100%)	2208	(100%)	*	*	*	*
2015/夏季	2208	(100%)	2208	(100%)	2208	(100%)	*	*	*	*
2015/秋季	2184	(100%)	2184	(100%)	2184	(100%)	*	*	*	*
2015/整年	8760	(100%)	8760	(100%)	8760	(100%)	*	*	*	*
起始年月	2014/12		2014/12		2014/12		*	*	*	*
結束年月	2015/11		2015/11		2015/11		*	*	*	*

Wave H_s in Peng-Tung Seas of PNY0 at 2015

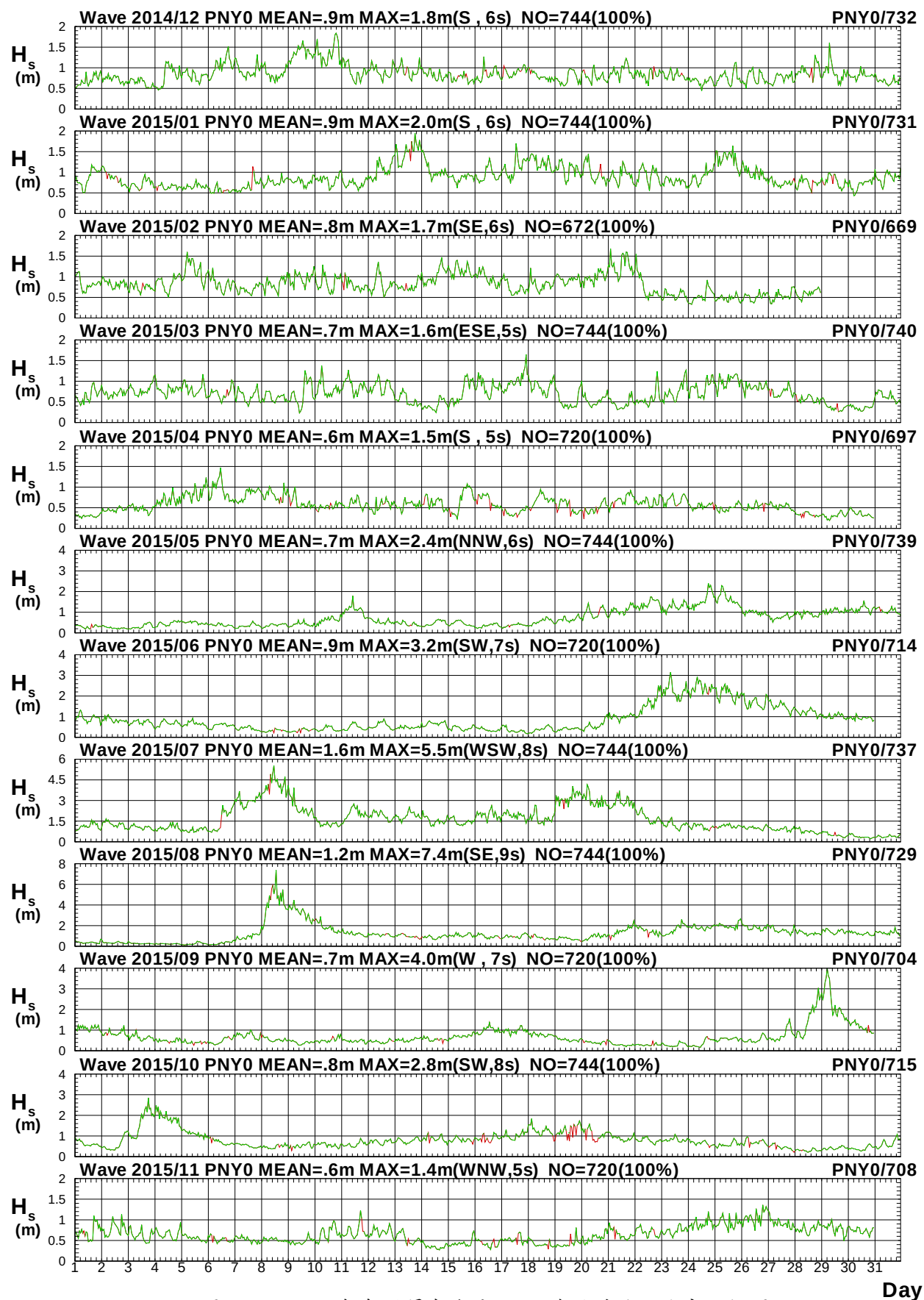


圖 2.1a 2015年每月屏東海域 Y 站修補前後之波高比較圖

V14CPNY0.1HA V14CPNY0.1H0 V151PNY0.1HA V151PNY0.1H0 V152PNY0.1HA V152PNY0.1H0
V153PNY0.1HA V153PNY0.1H0 V154PNY0.1HA V154PNY0.1H0 V155PNY0.1HA V155PNY0.1H0

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Wave T_p in Peng-Tung Seas of PNY0 at 2015

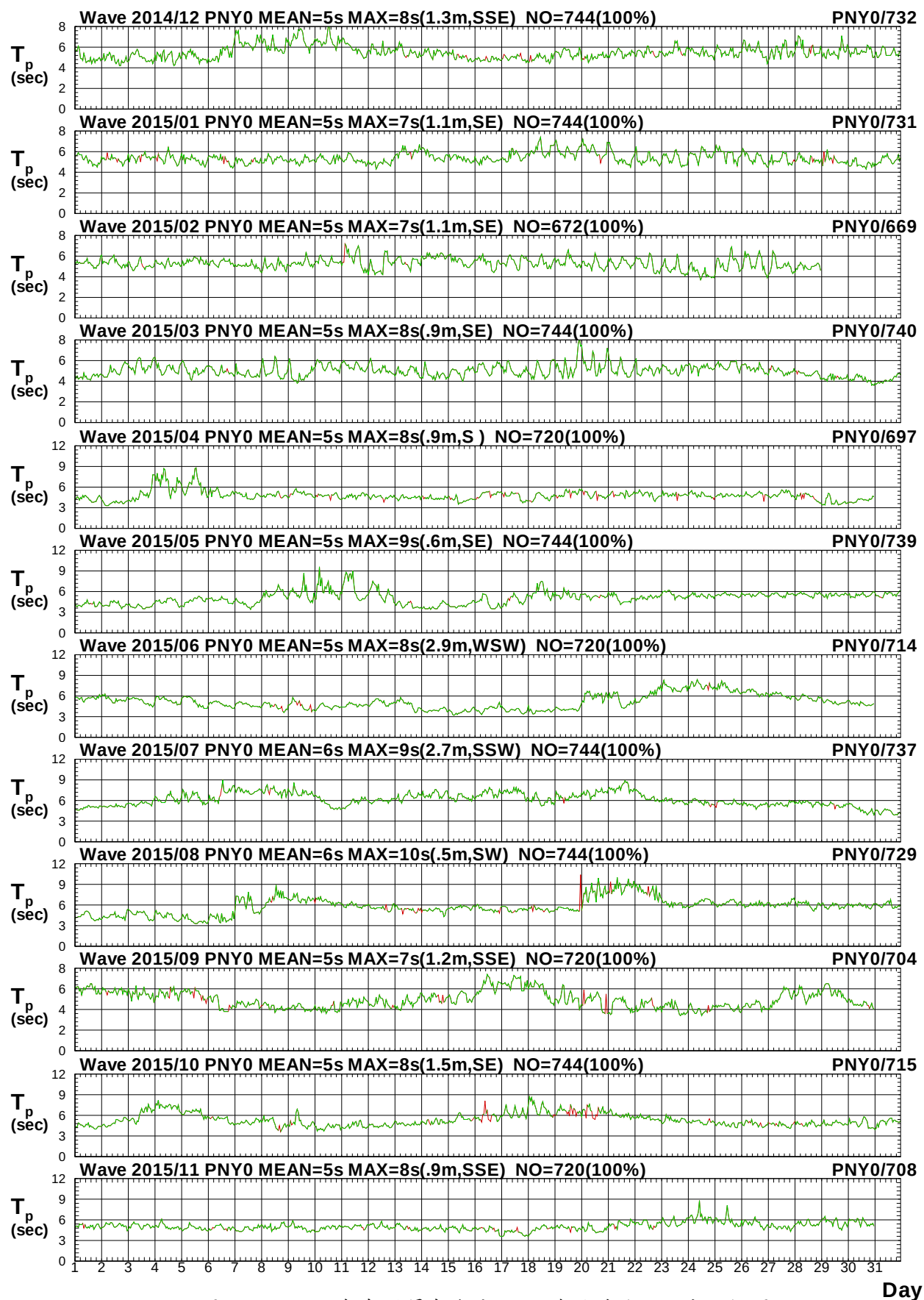


圖 2.1b 2015年每月屏東海域 Y 站修補前後之週期比較圖

V14CPNY0.1HA V14CPNY0.1H0 V151PNY0.1HA V151PNY0.1H0 V152PNY0.1HA V152PNY0.1H0
V153PNY0.1HA V153PNY0.1H0 V154PNY0.1HA V154PNY0.1H0 V155PNY0.1HA V155PNY0.1H0

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Wave Direction in Peng-Tung Seas of PNY0 at 2015

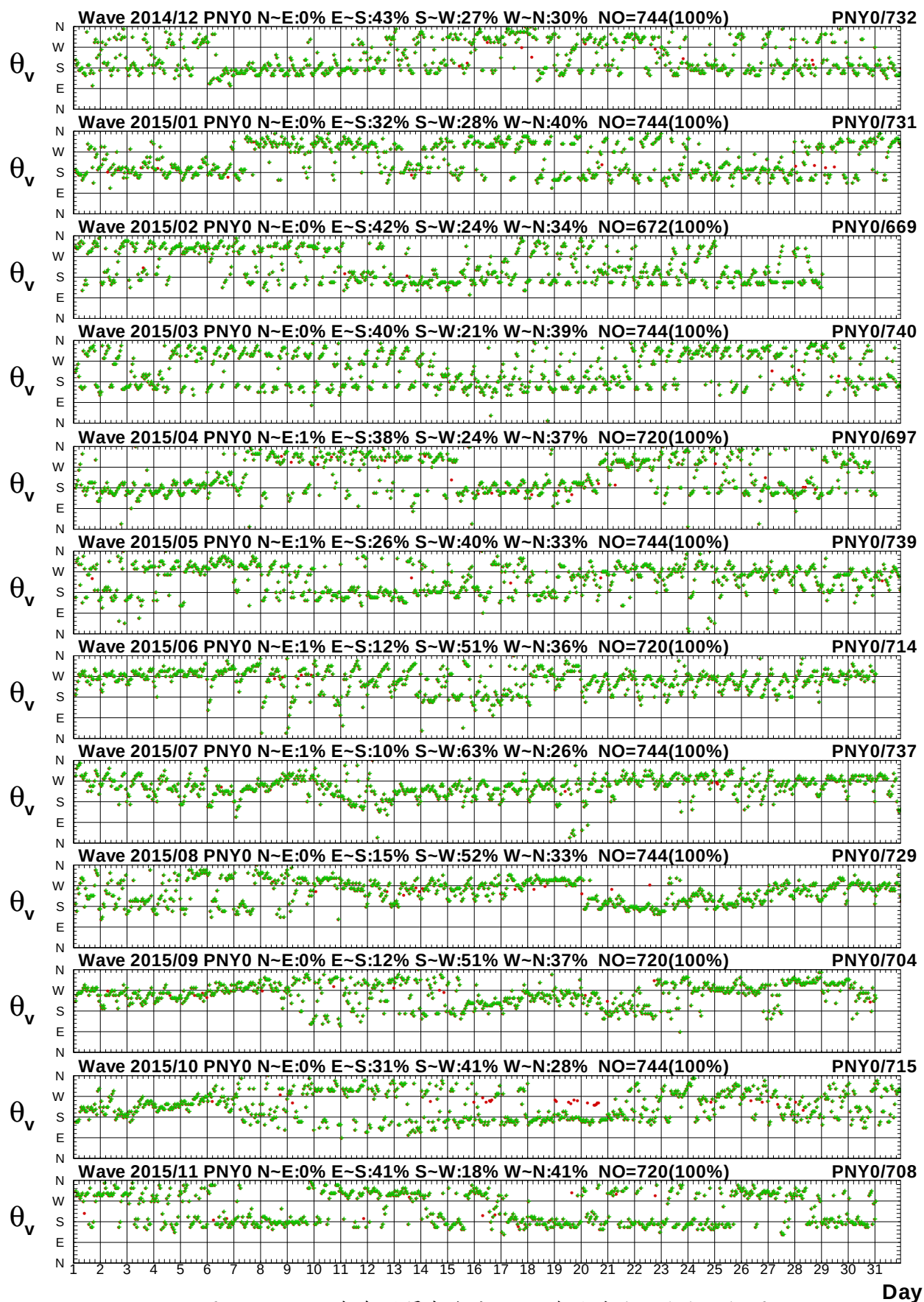


圖 2.1c 2015 年每月屏東海域 Y 站修補前後之波向比較圖

V14CPNY0.1HA V14CPNY0.1H0 V151PNY0.1HA V151PNY0.1H0 V152PNY0.1HA V152PNY0.1H0
V153PNY0.1HA V153PNY0.1H0 V154PNY0.1HA V154PNY0.1H0 V155PNY0.1HA V155PNY0.1H0

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Wave H_s in Peng-Tung Seas of PNY0 at 2015

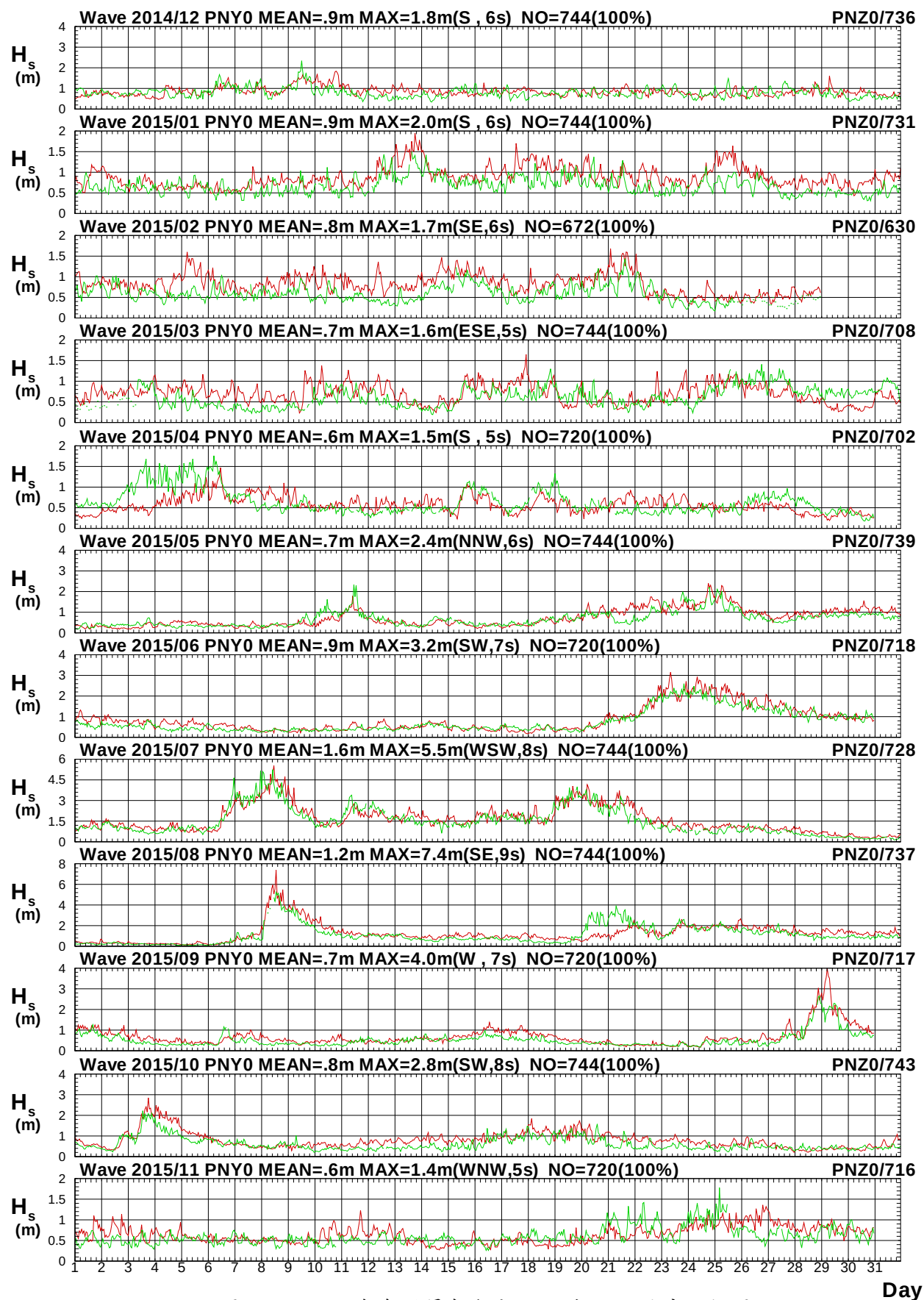


圖 2.2a 2015年每月屏東海域 Y 站與 Z 站波高比較圖

V14CPNY0.1HA V14CPNZ0.1H0 V151PNY0.1HA V151PNZ0.1H0 V152PNY0.1HA V152PNZ0.1H0
V153PNY0.1HA V153PNZ0.1H0 V154PNY0.1HA V154PNZ0.1H0 V155PNY0.1HA V155PNZ0.1H0

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Wave T_p in Peng-Tung Seas of PNY0 at 2015

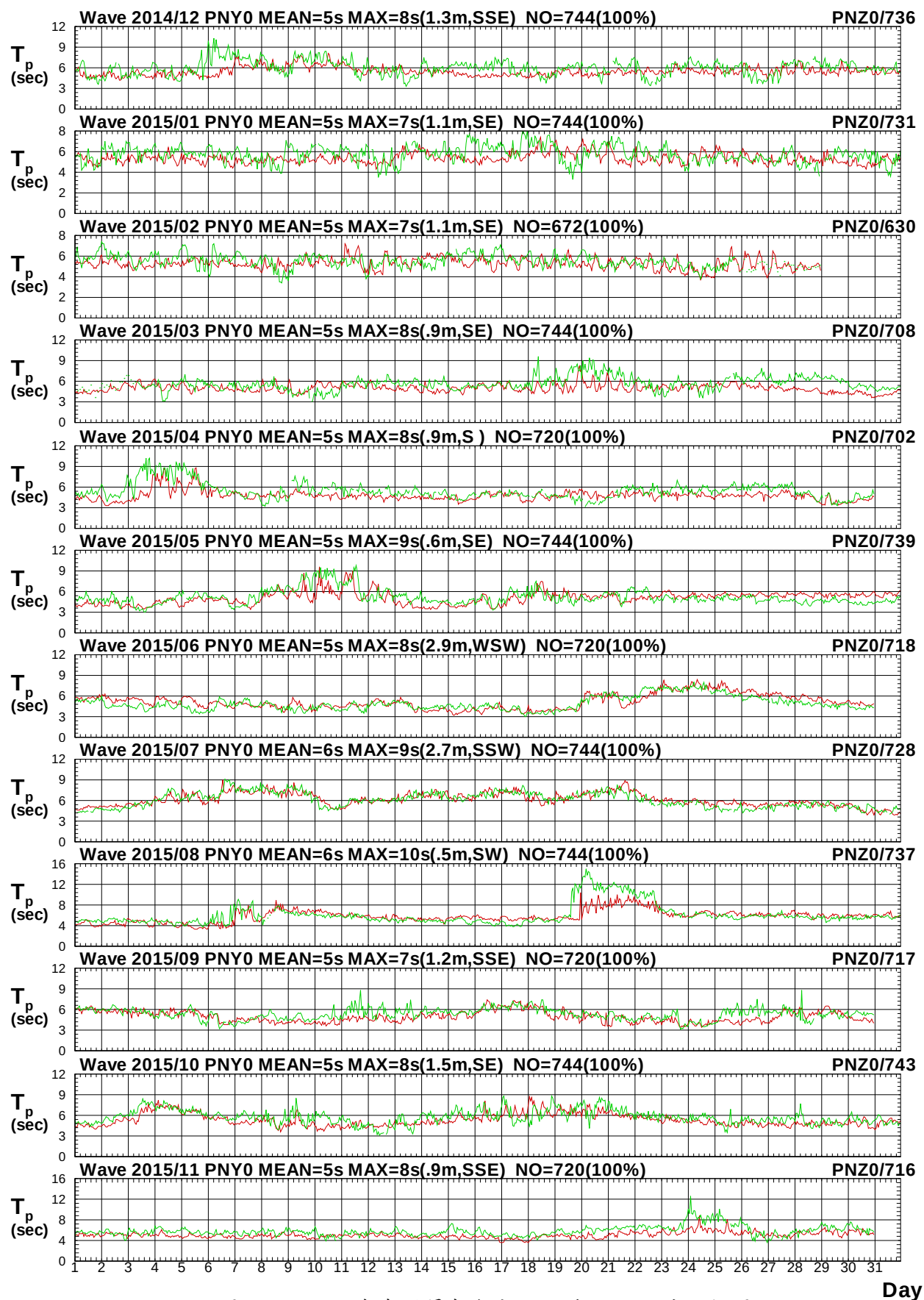


圖 2.2b 2015年每月屏東海域 Y 站與 Z 站週期比較圖

V14CPNY0.1HA V14CPNZ0.1H0 V151PNY0.1HA V151PNZ0.1H0 V152PNY0.1HA V152PNZ0.1H0
V153PNY0.1HA V153PNZ0.1H0 V154PNY0.1HA V154PNZ0.1H0 V155PNY0.1HA V155PNZ0.1H0

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Wave Direction in Peng-Tung Seas of PNY0 at 2015

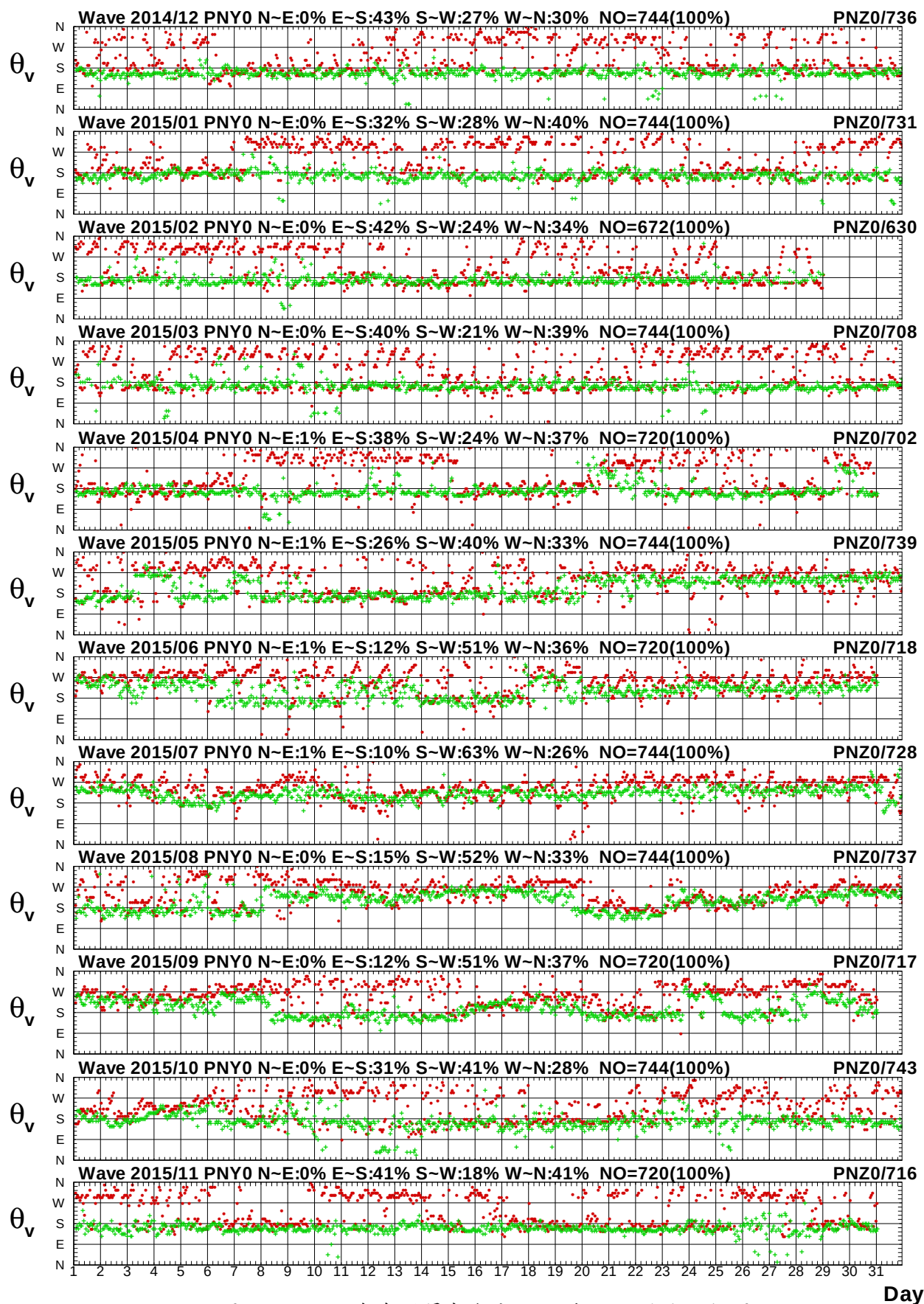


圖 2.2c 2015 年每月屏東海域 Y 站與 Z 站波向比較圖

V14CPNY0.1HA V14CPNZ0.1H0 V151PNY0.1HA V151PNZ0.1H0 V152PNY0.1HA V152PNZ0.1H0
V153PNY0.1HA V153PNZ0.1H0 V154PNY0.1HA V154PNZ0.1H0 V155PNY0.1HA V155PNZ0.1H0

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Wave H_s in Peng-Tung Seas of PNY0 at 2015

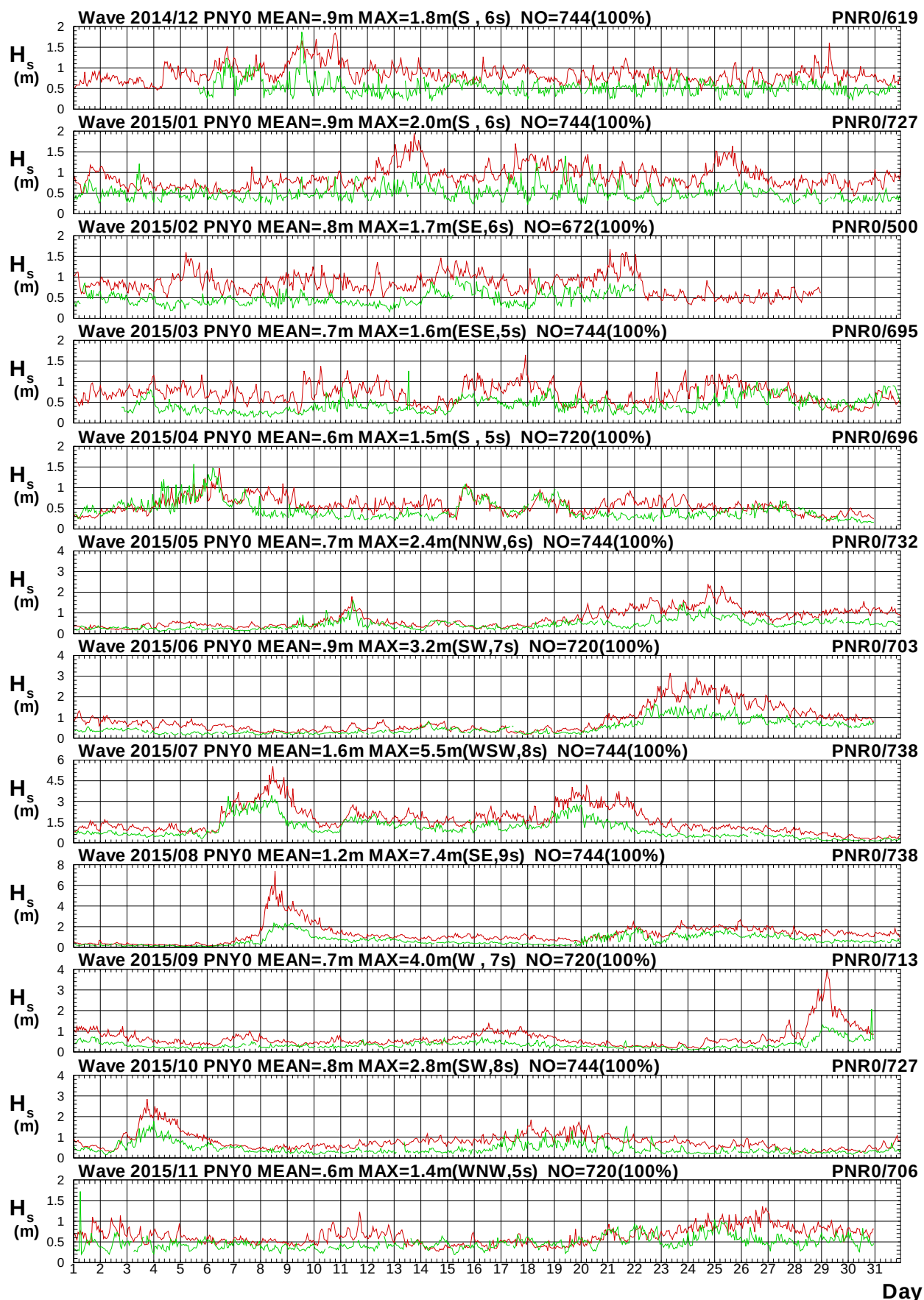


圖 2.3a 2015年每月屏東海域 Y 站與 R 站波高比較圖

V14CPNY0.1HA V14CPNR0.1H0 V151PNY0.1HA V151PNR0.1H0 V152PNY0.1HA V152PNR0.1H0
V153PNY0.1HA V153PNR0.1H0 V154PNY0.1HA V154PNR0.1H0 V155PNY0.1HA V155PNR0.1H0

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Wave T_p in Peng-Tung Seas of PNY0 at 2015

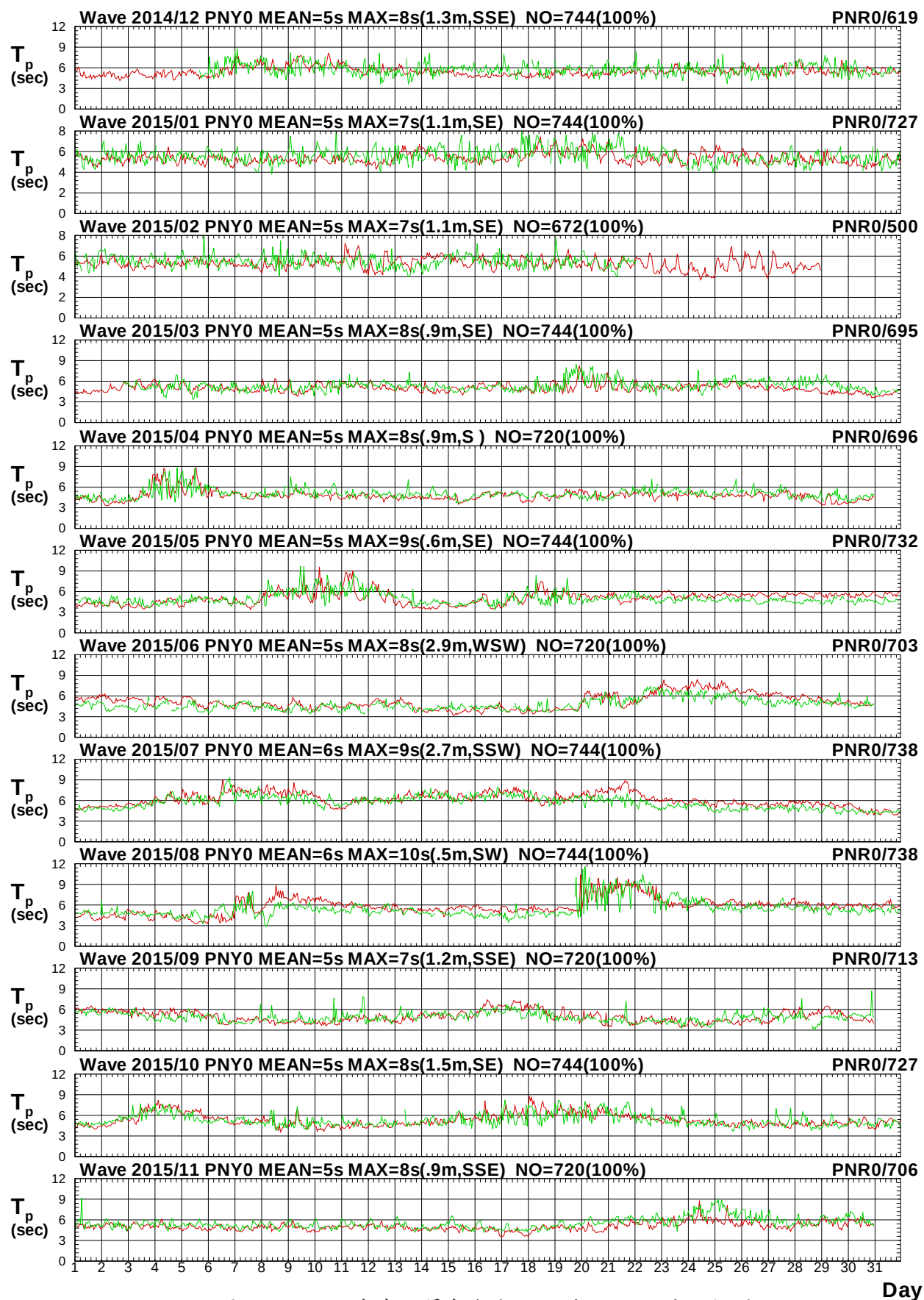


圖 2.3b 2015年每月屏東海域 Y 站與 R 站週期比較圖

V14CPNY0.1HA V14CPNR0.1H0 V151PNY0.1HA V151PNR0.1H0 V152PNY0.1HA V152PNR0.1H0
V153PNY0.1HA V153PNR0.1H0 V154PNY0.1HA V154PNR0.1H0 V155PNY0.1HA V155PNR0.1H0

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Wave Direction in Peng-Tung Seas of PNY0 at 2015

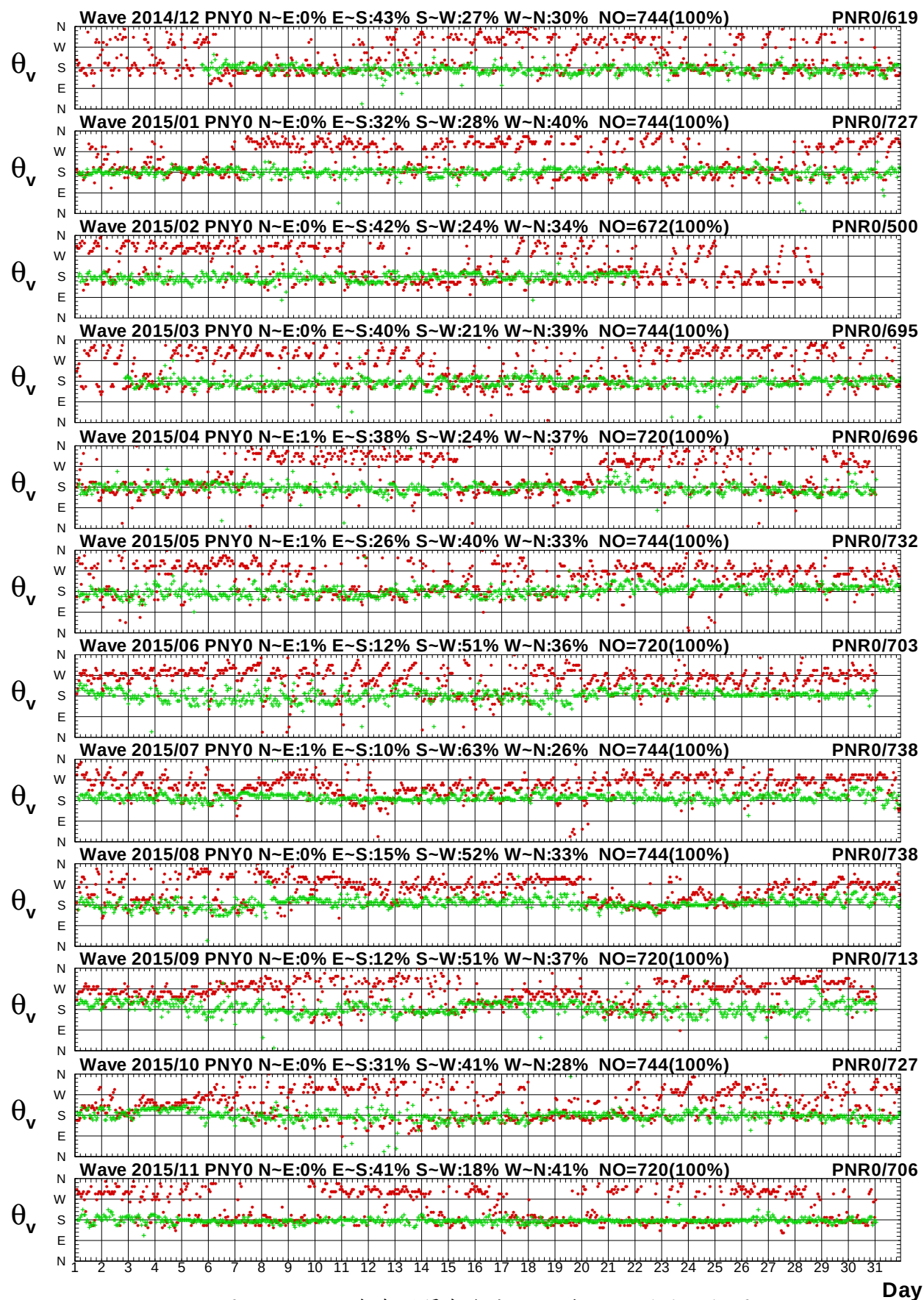


圖 2.3c 2015年每月屏東海域 Y 站與 R 站波向比較圖

V14CPNY0.1HA V14CPNR0.1H0 V151PNY0.1HA V151PNR0.1H0 V152PNY0.1HA V152PNR0.1H0
V153PNY0.1HA V153PNR0.1H0 V154PNY0.1HA V154PNR0.1H0 V155PNY0.1HA V155PNR0.1H0

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Wave H_s in Peng-Tung Seas of PNY0 at 2015

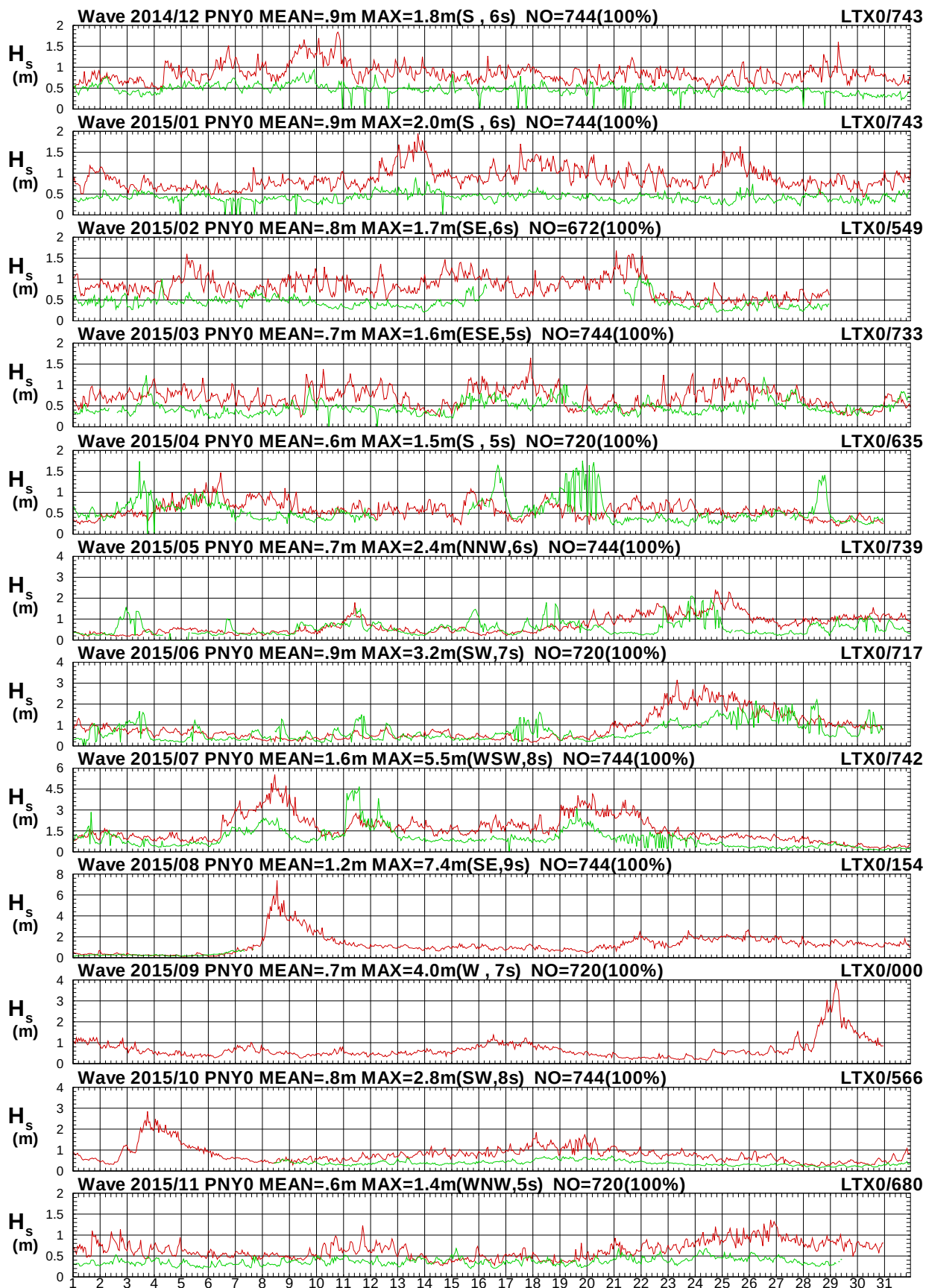


圖 2.4a 2015年每月屏東海域 Y 站與臺東海域 X 站波高圖

V14CPNY0.1HA V14CLTX0.1H0 V151PNY0.1HA V151LTX0.1H0 V152PNY0.1HA V152LTX0.1H0
V153PNY0.1HA V153LTX0.1H0 V154PNY0.1HA V154LTX0.1H0 V155PNY0.1HA V155LTX0.1H0

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Wave T_p in Peng-Tung Seas of PNY0 at 2015

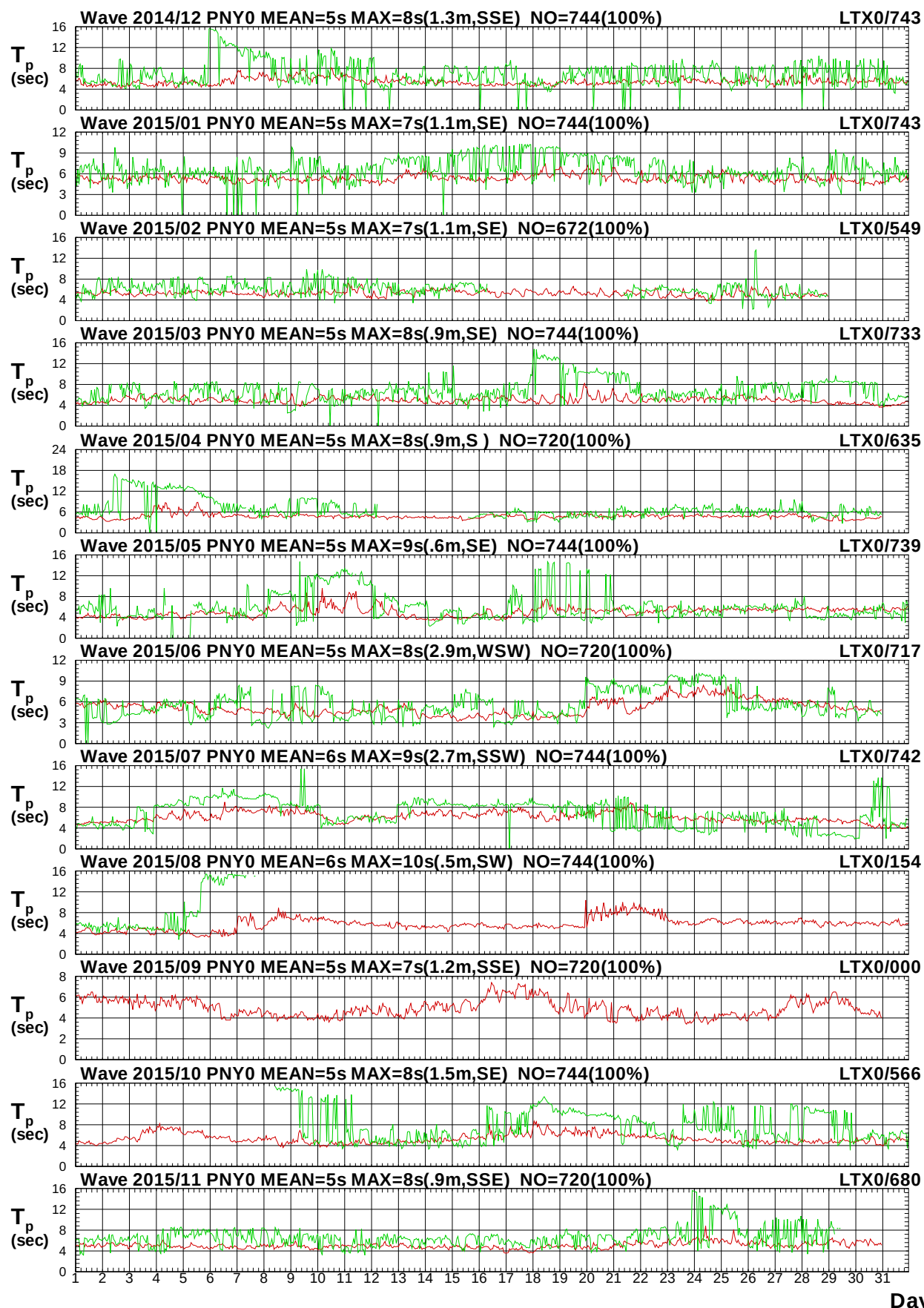


圖 2.4b 2015年每月屏東海域 Y 站與臺東海域 X 站週期圖

V14CPNY0.1HA V14CLTX0.1H0 V151PNY0.1HA V151LTX0.1H0 V152PNY0.1HA V152LTX0.1H0
V153PNY0.1HA V153LTX0.1H0 V154PNY0.1HA V154LTX0.1H0 V155PNY0.1HA V155LTX0.1H0

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Wave Direction in Peng-Tung Seas of PNY0 at 2015

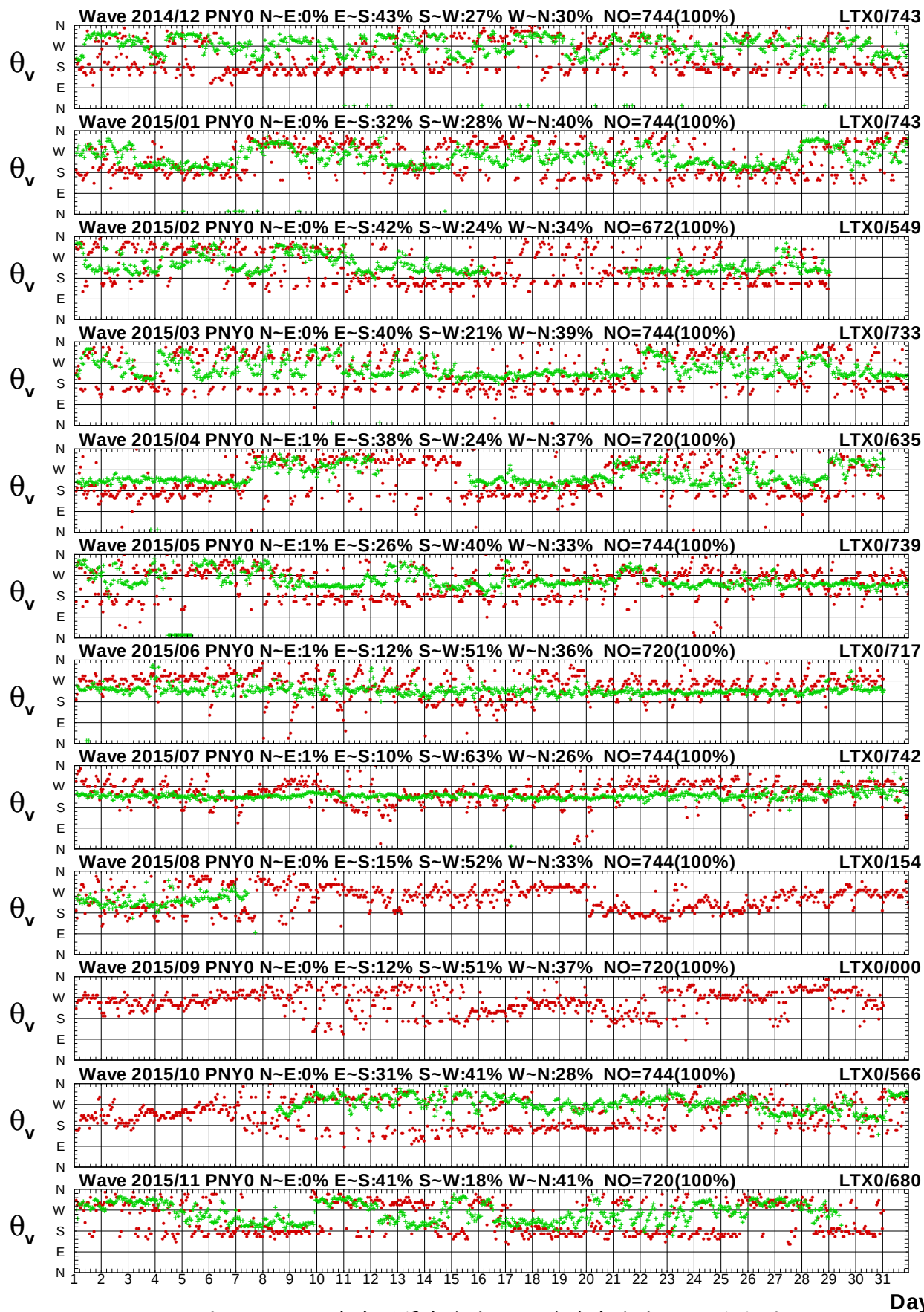


圖 2.4c 2015 年每月屏東海域 Y 站與臺東海域 X 站波向圖

V14CPNY0.1HA V14CLTX0.1H0 V151PNY0.1HA V151LTX0.1H0 V152PNY0.1HA V152LTX0.1H0
V153PNY0.1HA V153LTX0.1H0 V154PNY0.1HA V154LTX0.1H0 V155PNY0.1HA V155LTX0.1H0

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Wave H_s in Peng-Tung Seas of PNY0 at 2015

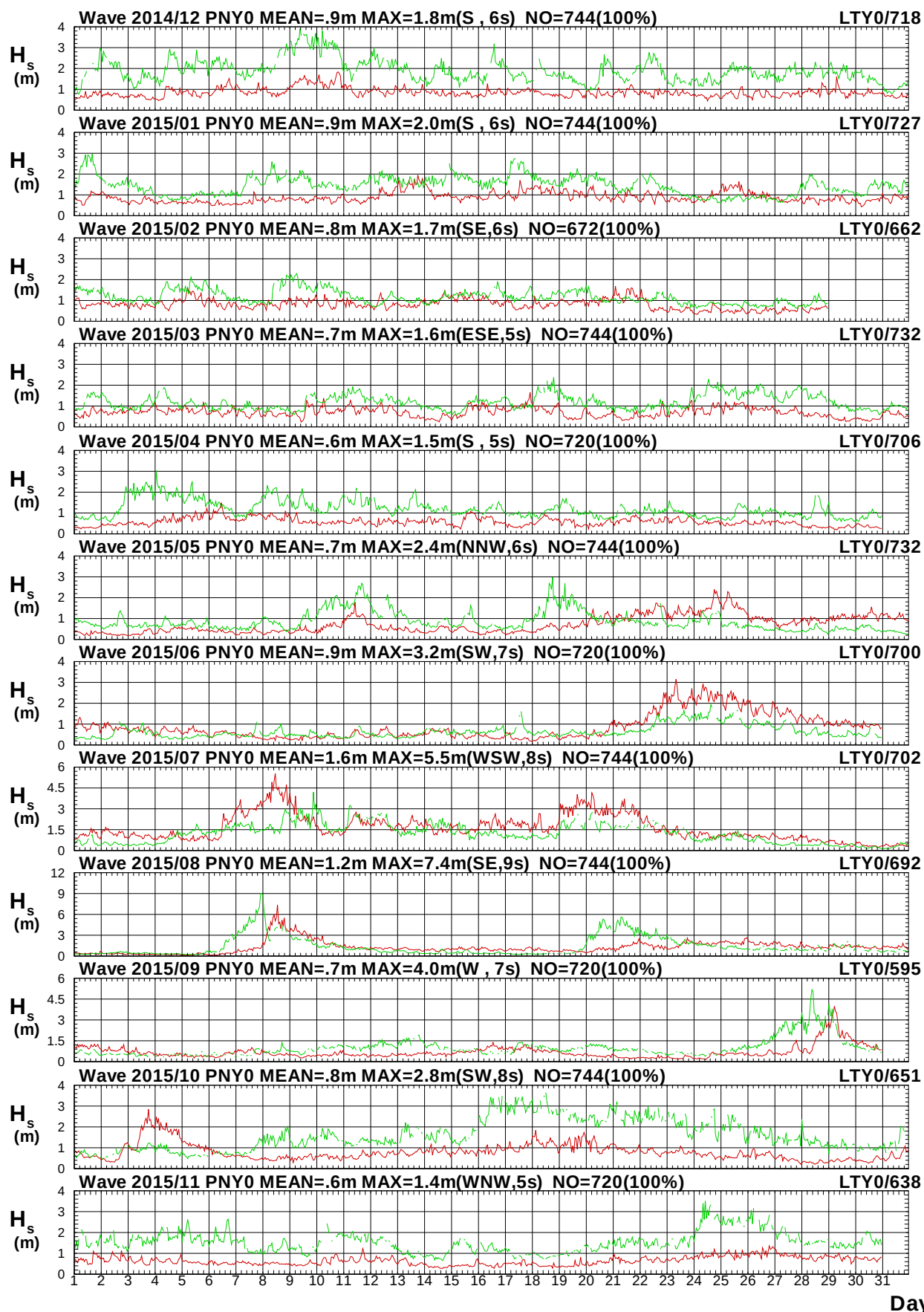


圖 2.5a 2015年每月屏東海域 Y 站與臺東海域 Y 站波高圖

V14CPNY0.1HA V14CLTY0.1H0 V151PNY0.1HA V151LTY0.1H0 V152PNY0.1HA V152LTY0.1H0
V153PNY0.1HA V153LTY0.1H0 V154PNY0.1HA V154LTY0.1H0 V155PNY0.1HA V155LTY0.1H0

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Wave T_p in Peng-Tung Seas of PNY0 at 2015

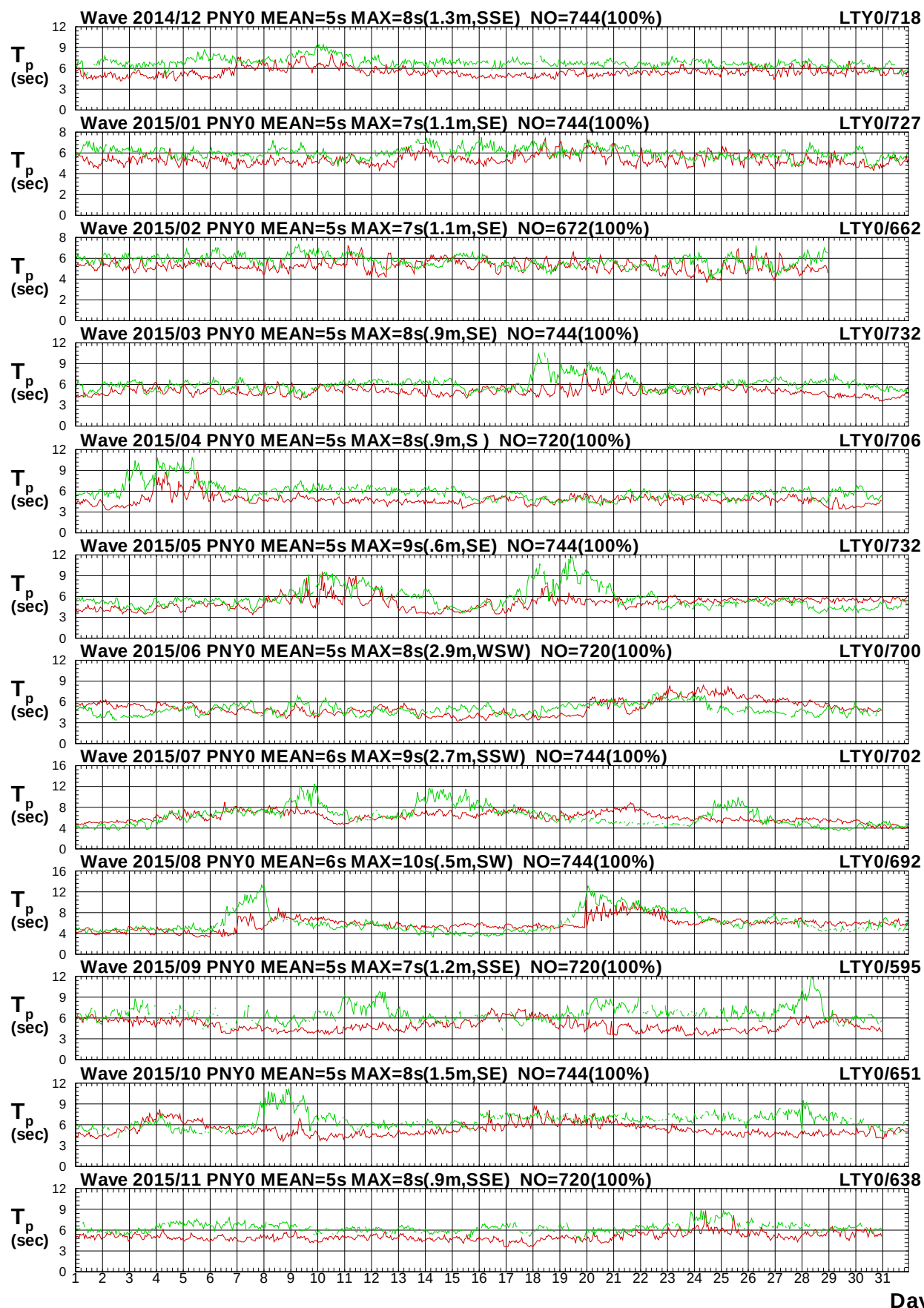


圖 2.5b 2015年每月屏東海域 Y 站與臺東海域 Y 站週期圖

V14CPNY0.1HA V14CLTY0.1H0 V151PNY0.1HA V151LTY0.1H0 V152PNY0.1HA V152LTY0.1H0
V153PNY0.1HA V153LTY0.1H0 V154PNY0.1HA V154LTY0.1H0 V155PNY0.1HA V155LTY0.1H0

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Wave Direction in Peng-Tung Seas of PNY0 at 2015

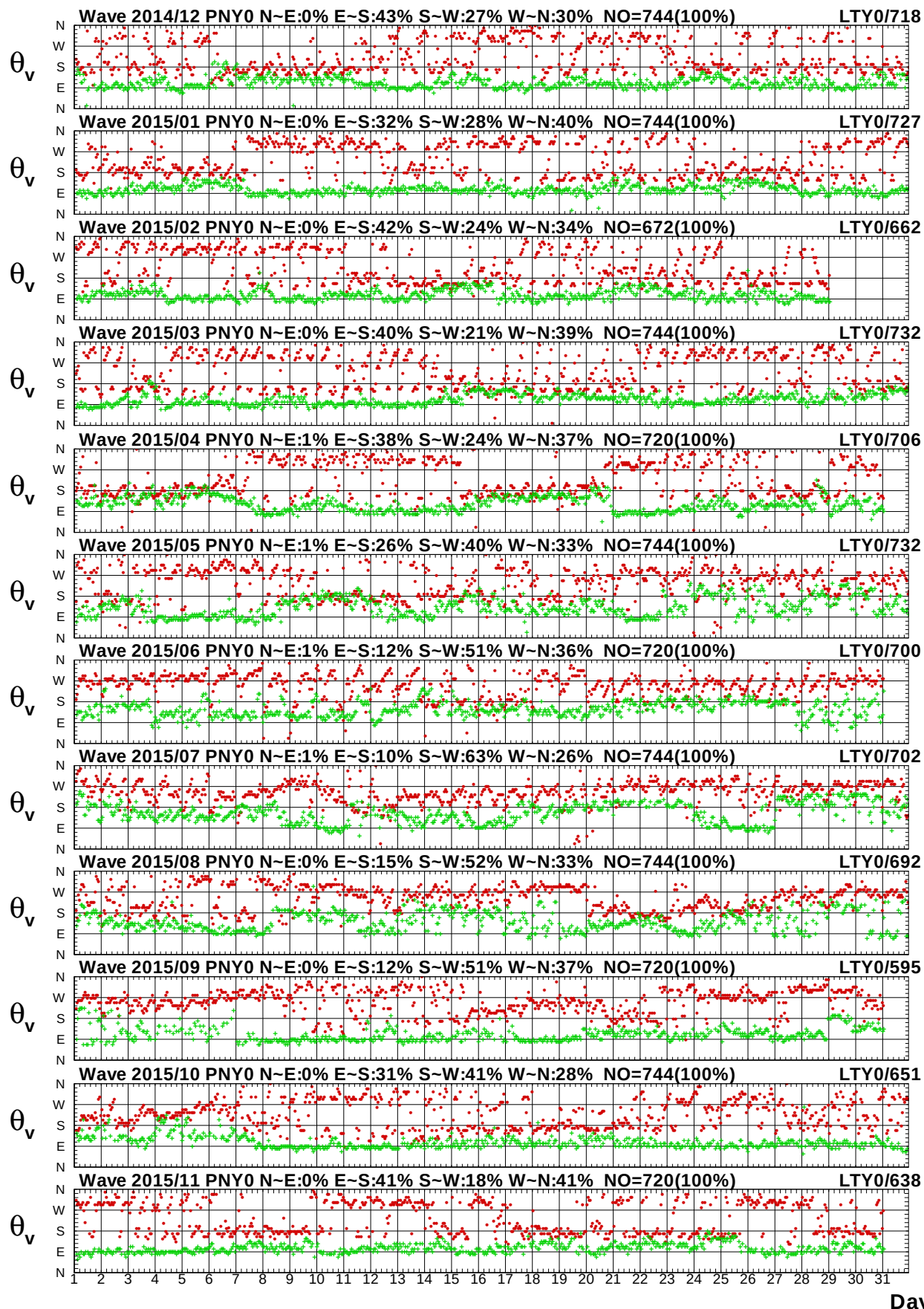


圖 2.5c 2015年每月屏東海域 Y 站與臺東海域 Y 站波向圖

V14CPNY0.1HA V14CLTY0.1H0 V151PNY0.1HA V151LTY0.1H0 V152PNY0.1HA V152LTY0.1H0
V153PNY0.1HA V153LTY0.1H0 V154PNY0.1HA V154LTY0.1H0 V155PNY0.1HA V155LTY0.1H0

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Wave H_s in Peng-Tung Seas of PNY0 at 2015

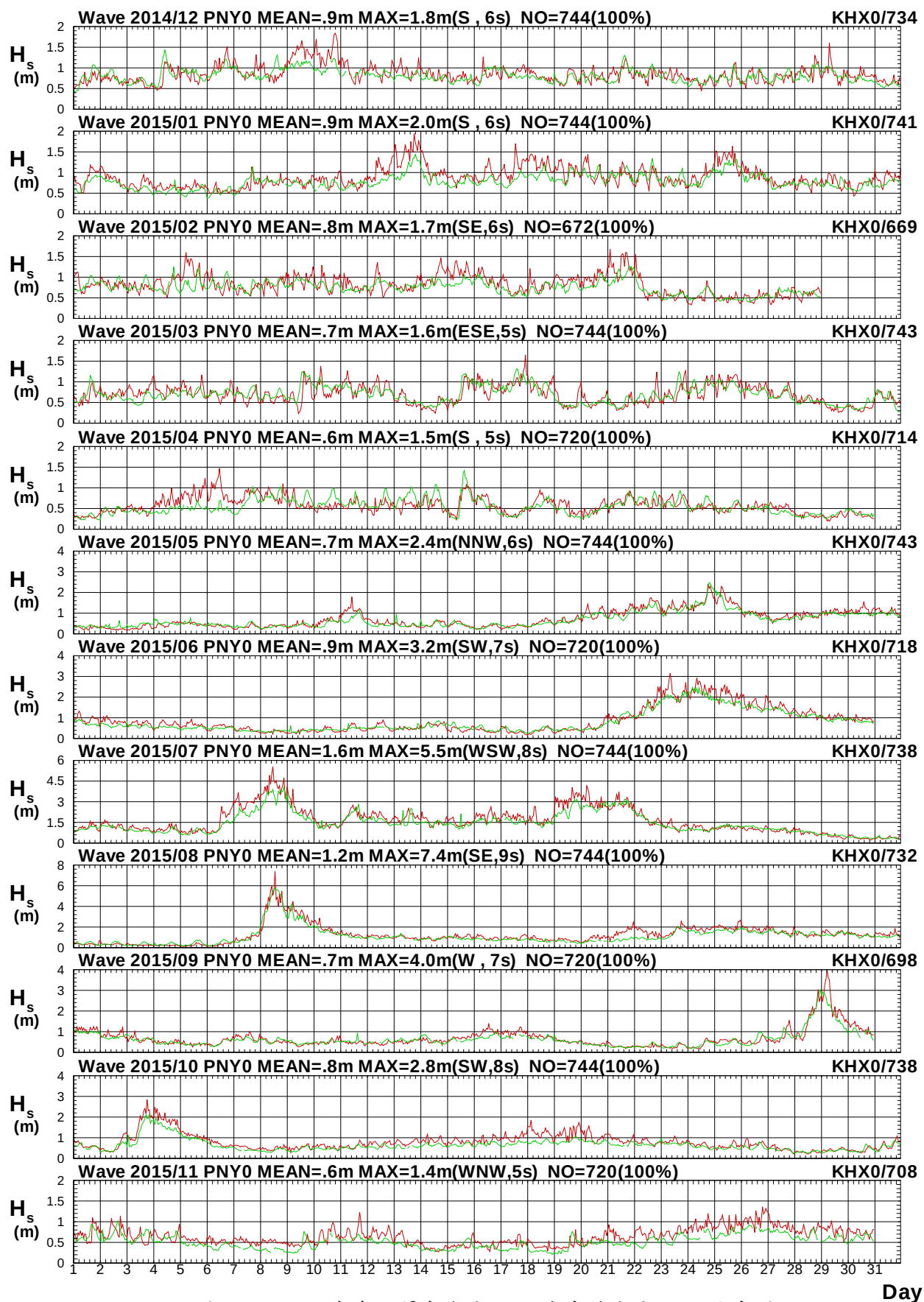


圖 2.6a 2015年每月屏東海域 Y 站與高雄海域 X 站波高圖

V14CPNY0.1HA V14CKHX0.1H0 V151PNY0.1HA V151KHX0.1H0 V152PNY0.1HA V152KHX0.1H0
V153PNY0.1HA V153KHX0.1H0 V154PNY0.1HA V154KHX0.1H0 V155PNY0.1HA V155KHX0.1H0

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Wave T_p in Peng-Tung Seas of PNY0 at 2015

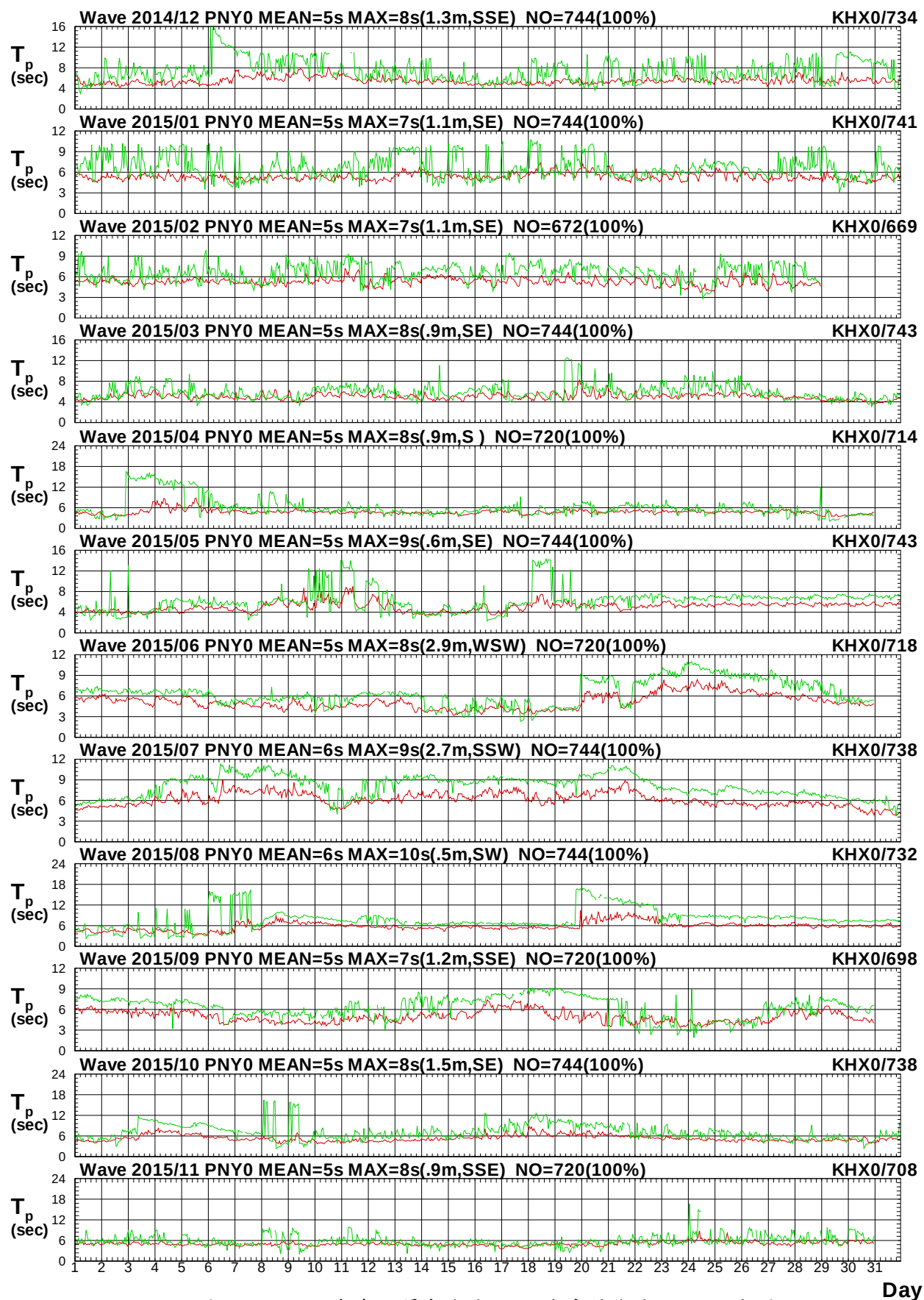


圖 2.6b 2015年每月屏東海域 Y 站與高雄海域 X 站週期圖

V14CPNY0.1HA V14CKHX0.1H0 V151PNY0.1HA V151KHX0.1H0 V152PNY0.1HA V152KHX0.1H0
V153PNY0.1HA V153KHX0.1H0 V154PNY0.1HA V154KHX0.1H0 V155PNY0.1HA V155KHX0.1H0

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Wave Direction in Peng-Tung Seas of PNY0 at 2015

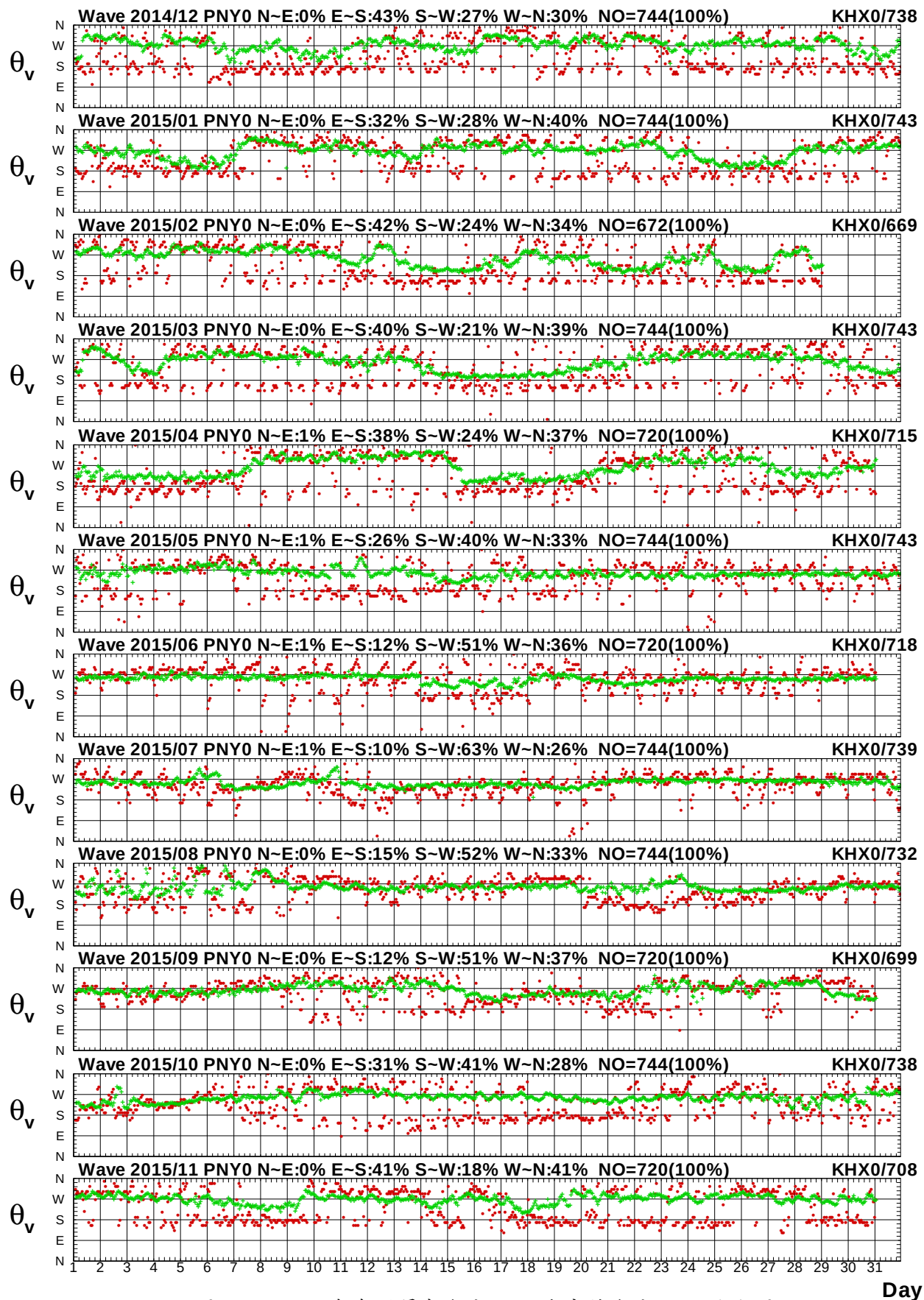


圖 2.6c 2015年每月屏東海域 Y 站與高雄海域 X 站波向圖

V14CPNY0.1HA V14CKHX0.1H0 V151PNY0.1HA V151KHX0.1H0 V152PNY0.1HA V152KHX0.1H0
V153PNY0.1HA V153KHX0.1H0 V154PNY0.1HA V154KHX0.1H0 V155PNY0.1HA V155KHX0.1H0

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Wave H_s in Peng-Tung Seas of PNY0 at 2015

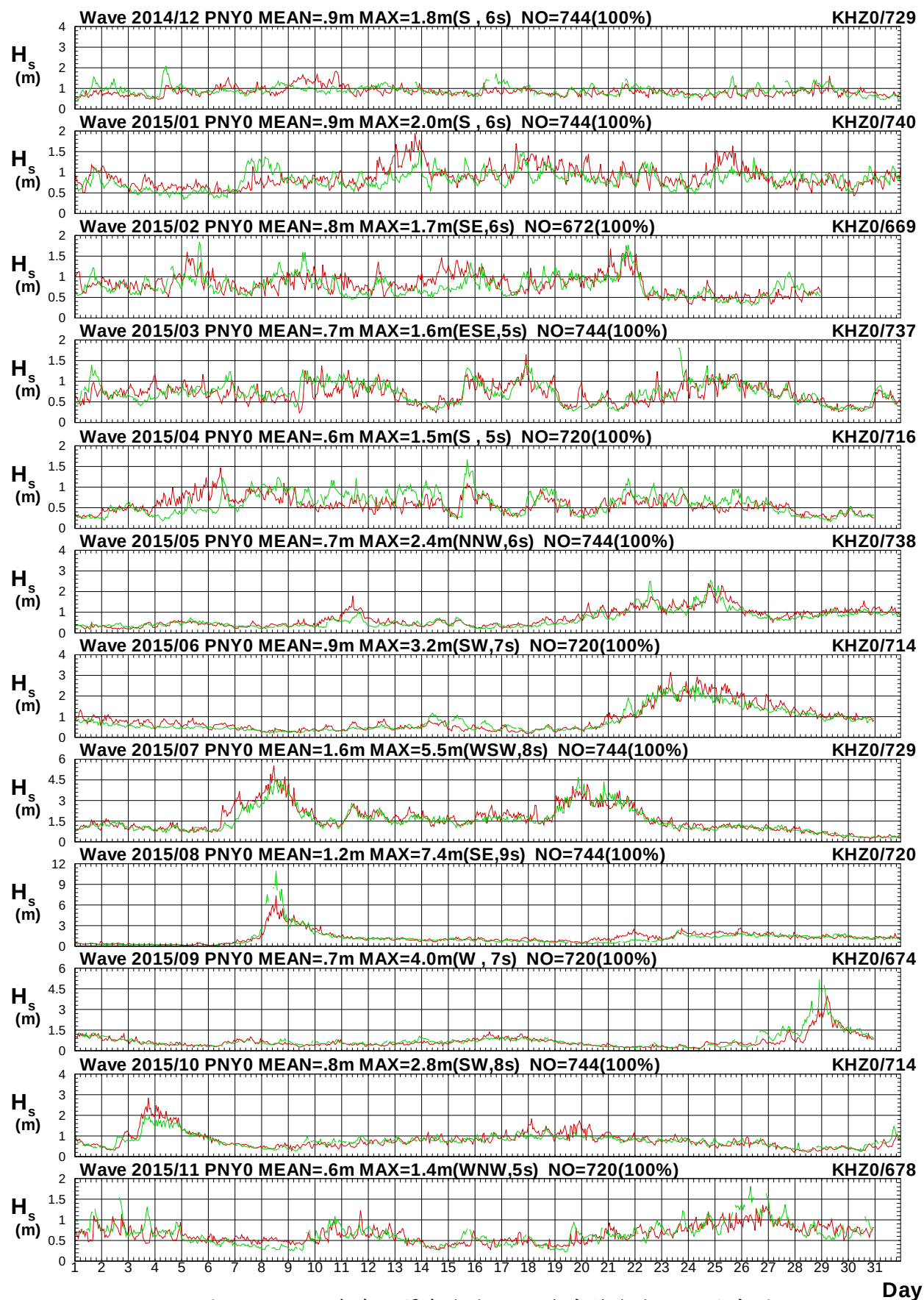


圖 2.7a 2015 年每月屏東海域 Y 站與高雄海域 Z 站波高圖

V14CPNY0.1HA V14CKHZ0.1H0 V151PNY0.1HA V151KHZ0.1H0 V152PNY0.1HA V152KHZ0.1H0
V153PNY0.1HA V153KHZ0.1H0 V154PNY0.1HA V154KHZ0.1H0 V155PNY0.1HA V155KHZ0.1H0

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Wave T_p in Peng-Tung Seas of PNY0 at 2015

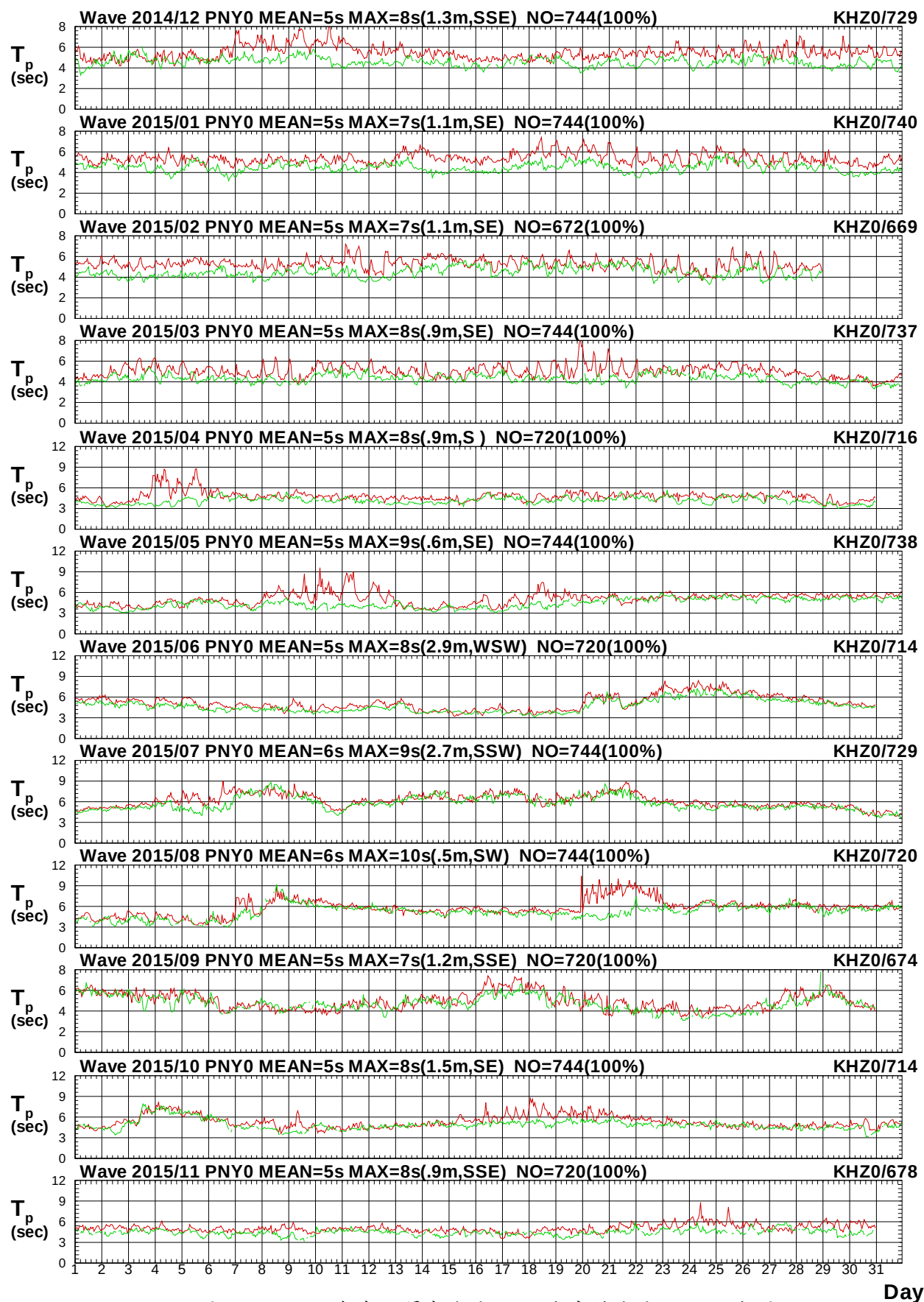


圖 2.7b 2015年每月屏東海域 Y 站與高雄海域 Z 站週期圖

V14CPNY0.1HA V14CKHZ0.1H0 V151PNY0.1HA V151KHZ0.1H0 V152PNY0.1HA V152KHZ0.1H0
V153PNY0.1HA V153KHZ0.1H0 V154PNY0.1HA V154KHZ0.1H0 V155PNY0.1HA V155KHZ0.1H0

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Wave Direction in Peng-Tung Seas of PNY0 at 2015

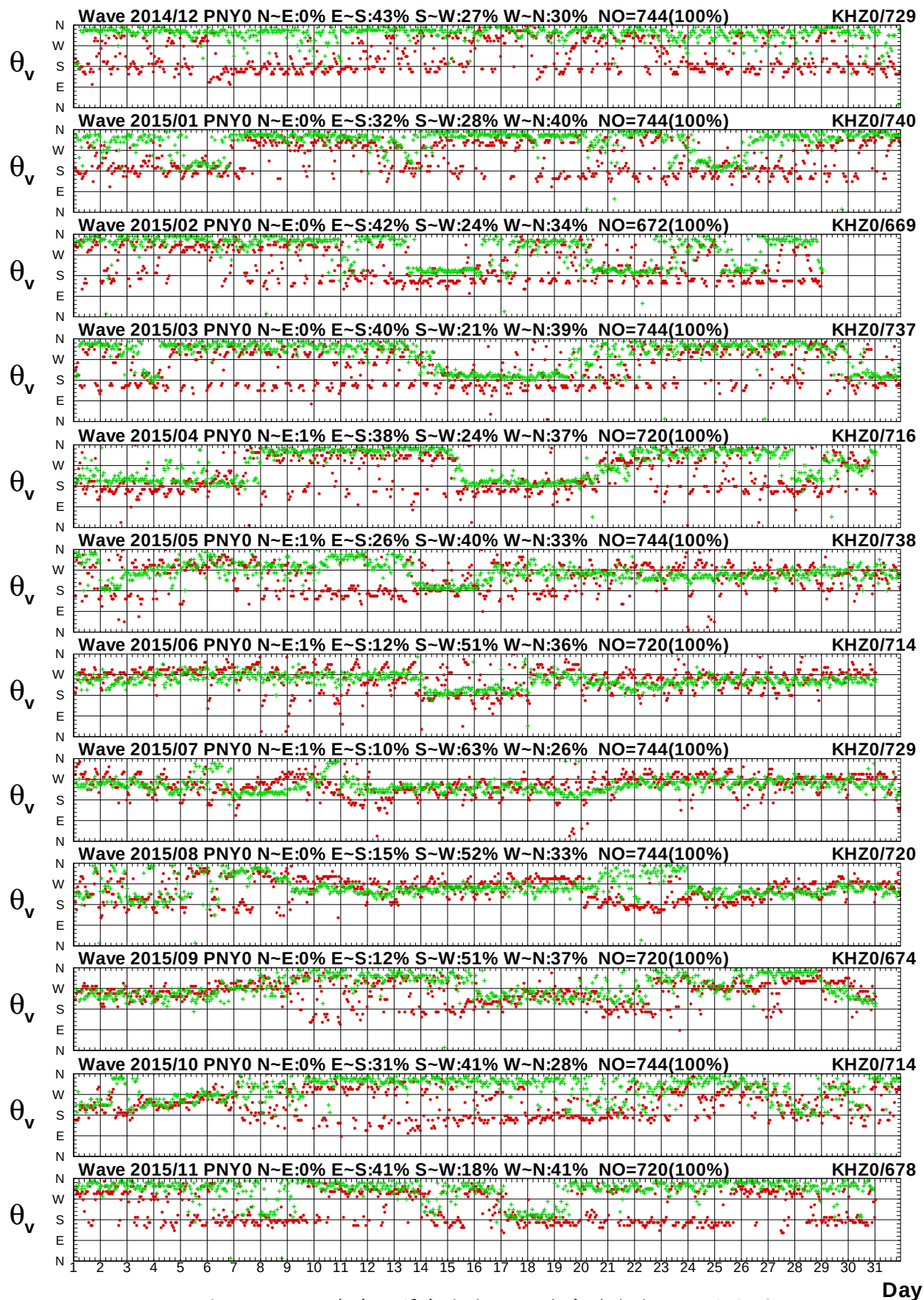


圖 2.7c 2015 年每月屏東海域 Y 站與高雄海域 Z 站波向圖

V14CPNY0.1HA V14CKHZ0.1H0 V151PNY0.1HA V151KHZ0.1H0 V152PNY0.1HA V152KHZ0.1H0
V153PNY0.1HA V153KHZ0.1H0 V154PNY0.1HA V154KHZ0.1H0 V155PNY0.1HA V155KHZ0.1H0

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Wave H_s in Peng-Tung Seas of PNY0 at 2015

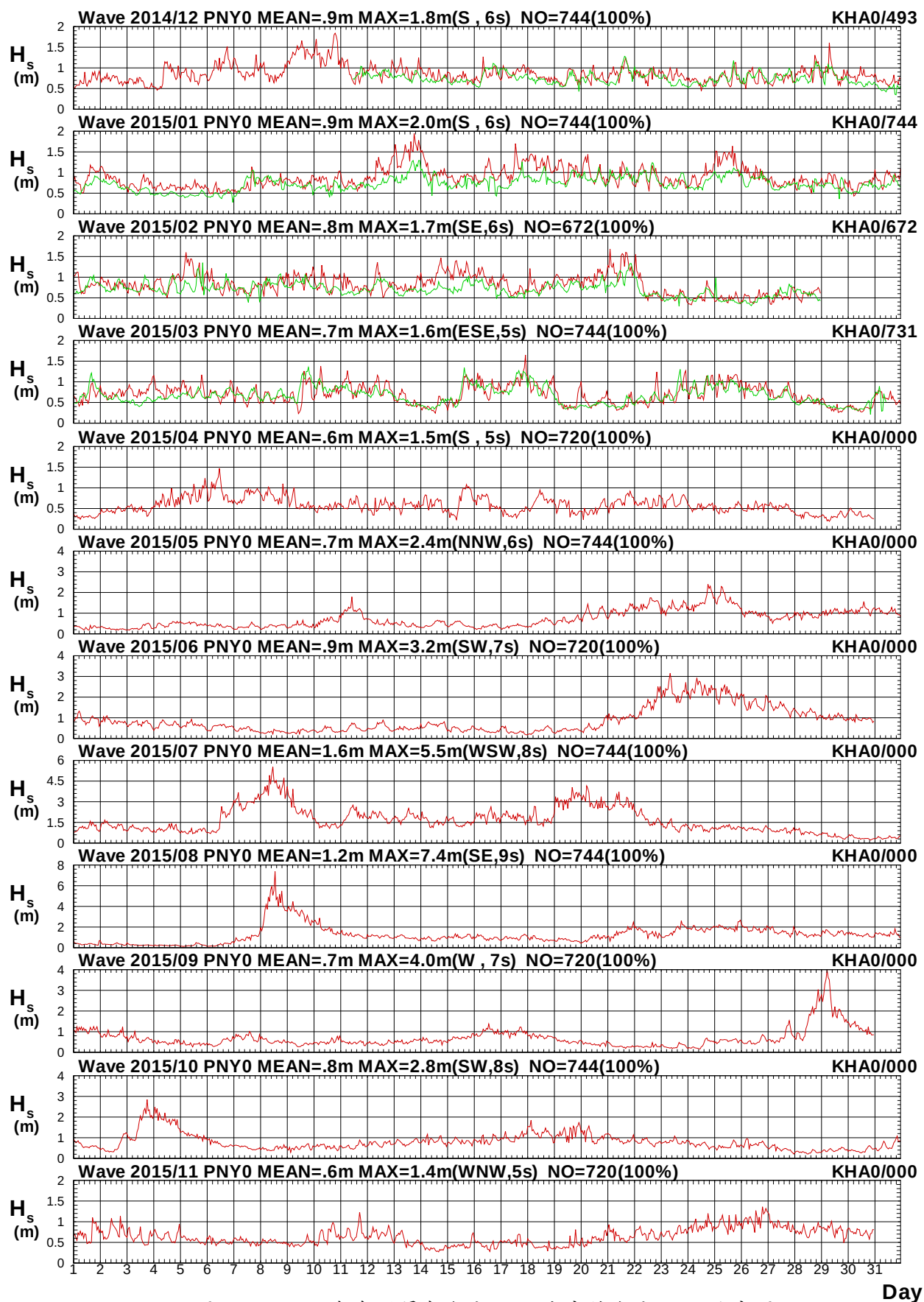


圖 2.8a 2015年每月屏東海域 Y 站與高雄海域 A 站波高圖

V14CPNY0.1HA V14CKHA0.1H0 V151PNY0.1HA V151KHA0.1H0 V152PNY0.1HA V152KHA0.1H0
V153PNY0.1HA V153KHA0.1H0 V154PNY0.1HA V154KHA0.1H0 V155PNY0.1HA V155KHA0.1H0

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Wave T_p in Peng-Tung Seas of PNY0 at 2015

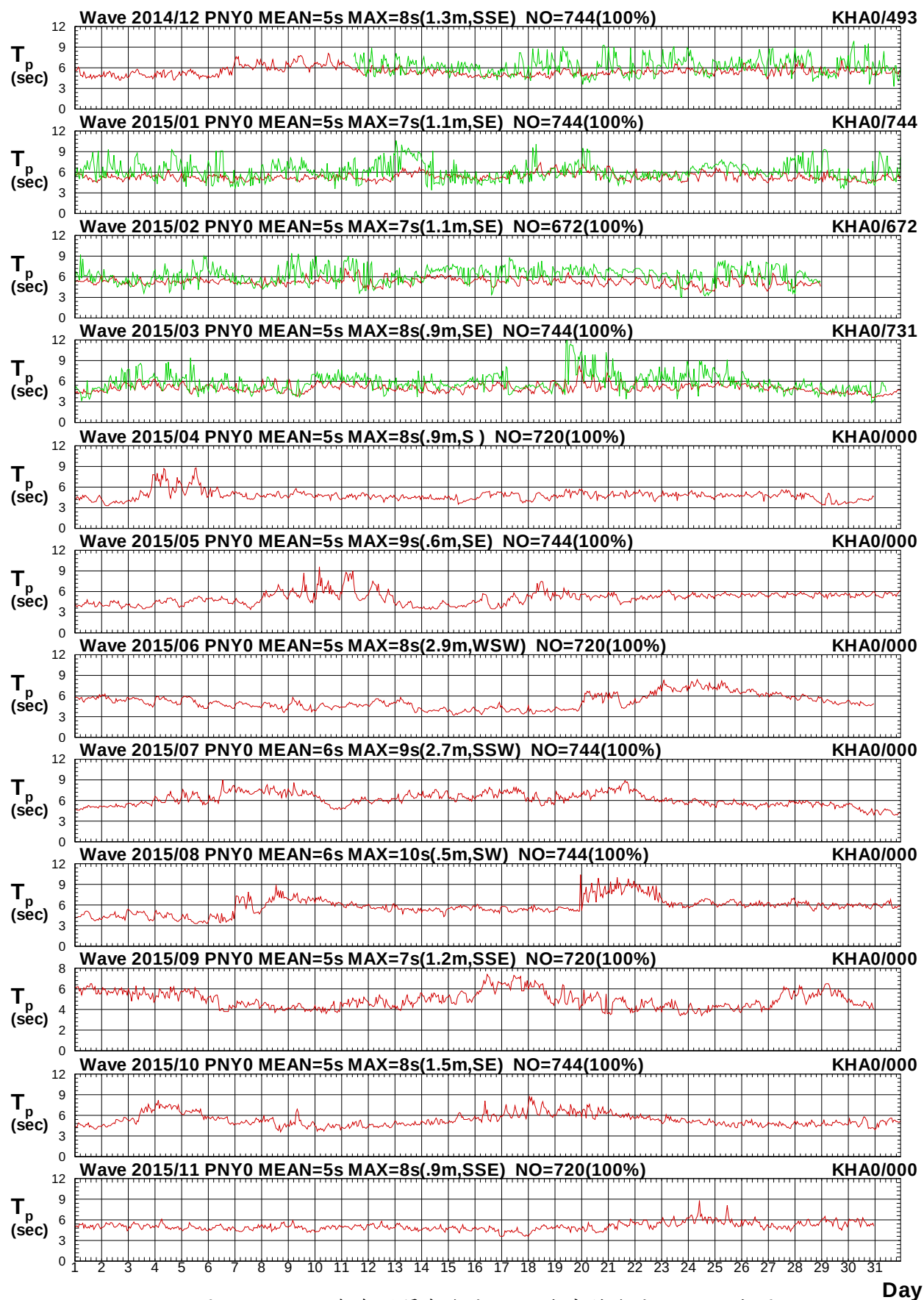


圖 2.8b 2015年每月屏東海域 Y 站與高雄海域 A 站週期圖

V14CPNY0.1HA V14CKHA0.1H0 V151PNY0.1HA V151KHA0.1H0 V152PNY0.1HA V152KHA0.1H0
V153PNY0.1HA V153KHA0.1H0 V154PNY0.1HA V154KHA0.1H0 V155PNY0.1HA V155KHA0.1H0

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Wave Direction in Peng-Tung Seas of PNY0 at 2015

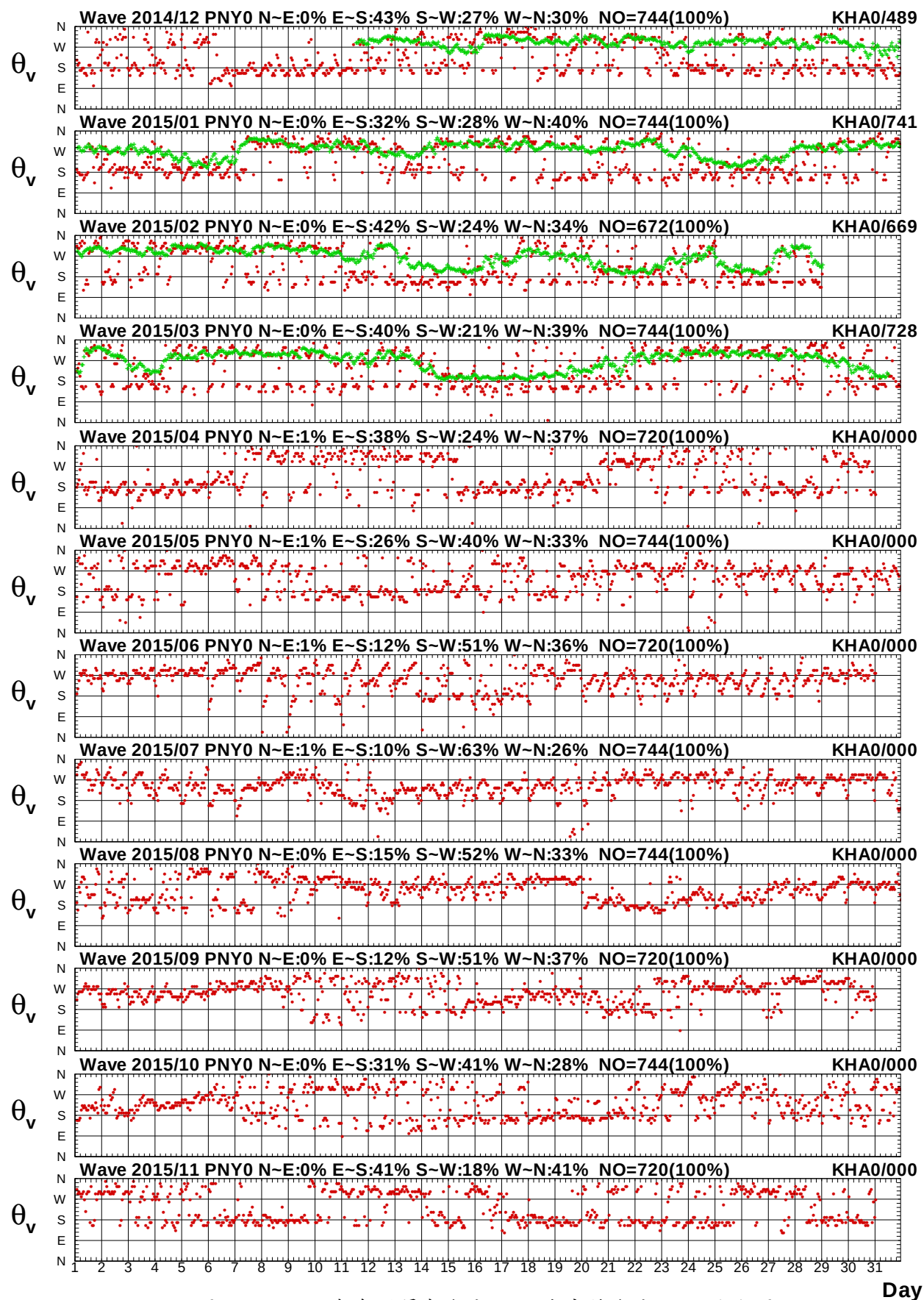


圖 2.8c 2015 年每月屏東海域 Y 站與高雄海域 A 站波向圖

V14CPNY0.1HA V14CKHA0.1H0 V151PNY0.1HA V151KHA0.1H0 V152PNY0.1HA V152KHA0.1H0

V153PNY0.1HA V153KHA0.1H0 V154PNY0.1HA V154KHA0.1H0 V155PNY0.1HA V155KHA0.1H0

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Wave H_s in Peng-Tung Seas of PNY0 at 2015

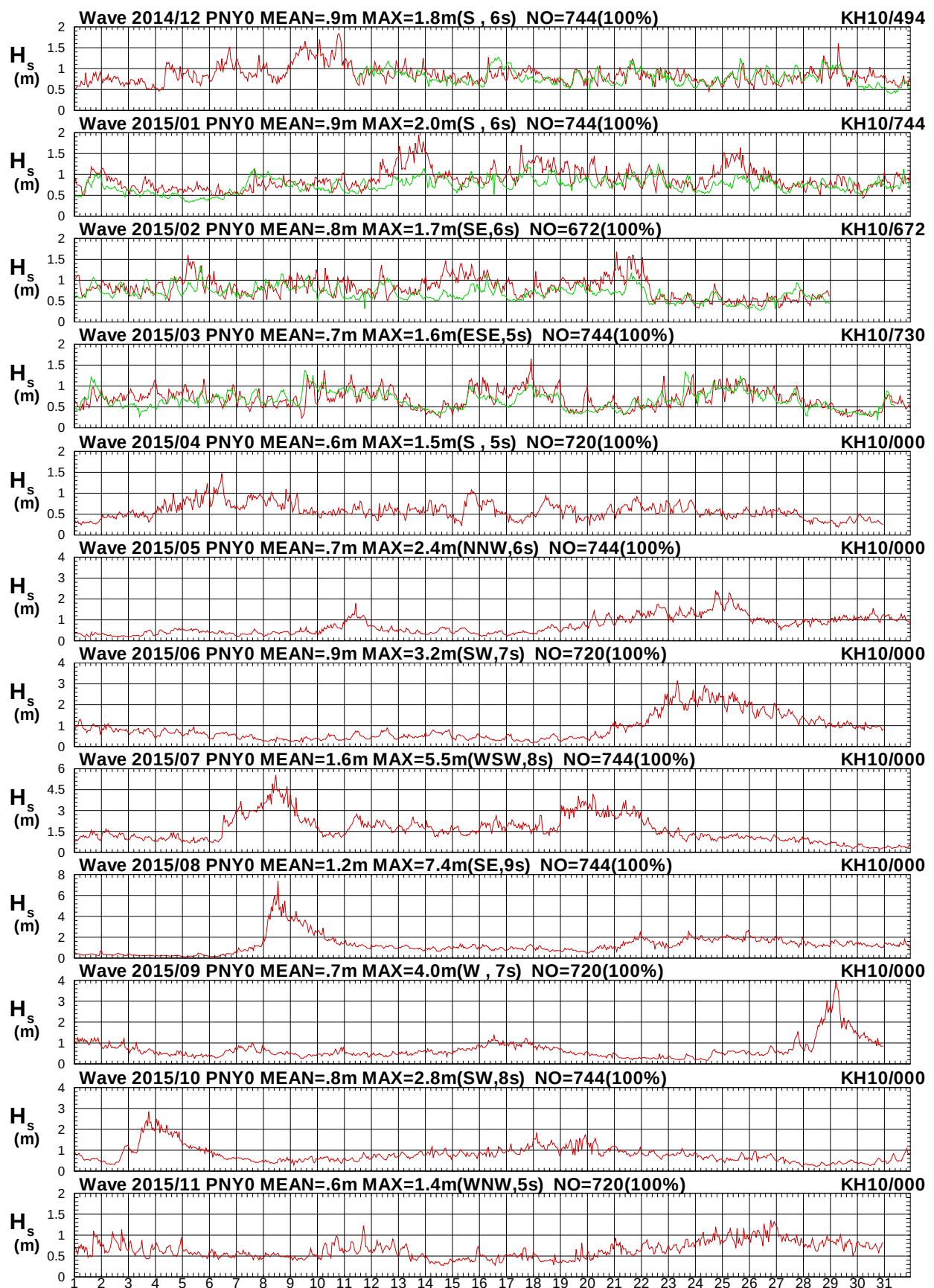


圖 2.9a 2015年每月屏東海域 Y 站與高雄海域 1 站波高圖

V14CPNY0.1HA V14CKH10.1H0 V151PNY0.1HA V151KH10.1H0 V152PNY0.1HA V152KH10.1H0
V153PNY0.1HA V153KH10.1H0 V154PNY0.1HA V154KH10.1H0 V155PNY0.1HA V155KH10.1H0

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Wave T_p in Peng-Tung Seas of PNY0 at 2015

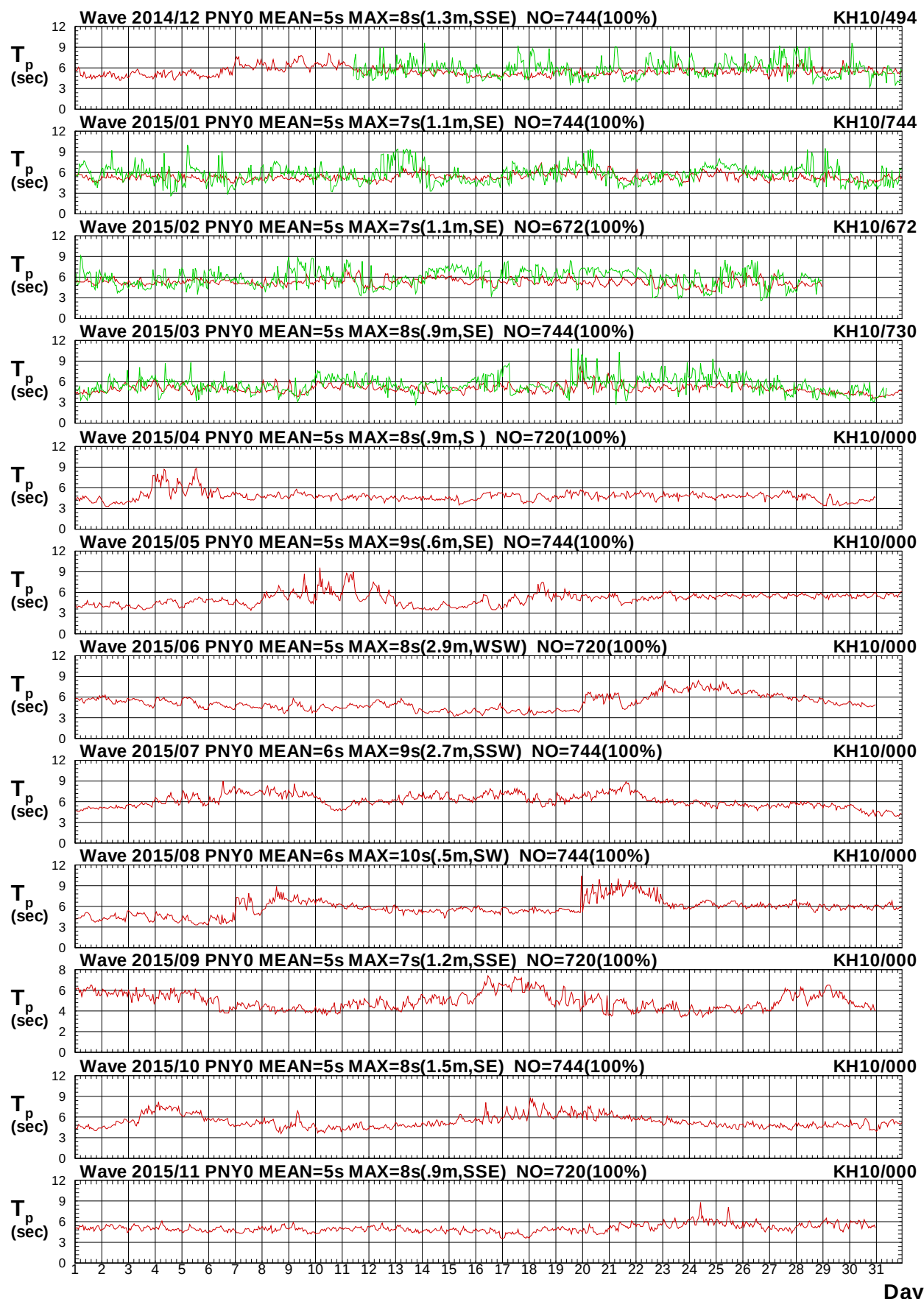


圖 2.9b 2015年每月屏東海域 Y 站與高雄海域 1 站週期圖

V14CPNY0.1HA V14CKH10.1H0 V151PNY0.1HA V151KH10.1H0 V152PNY0.1HA V152KH10.1H0
V153PNY0.1HA V153KH10.1H0 V154PNY0.1HA V154KH10.1H0 V155PNY0.1HA V155KH10.1H0

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Wave Direction in Peng-Tung Seas of PNY0 at 2015

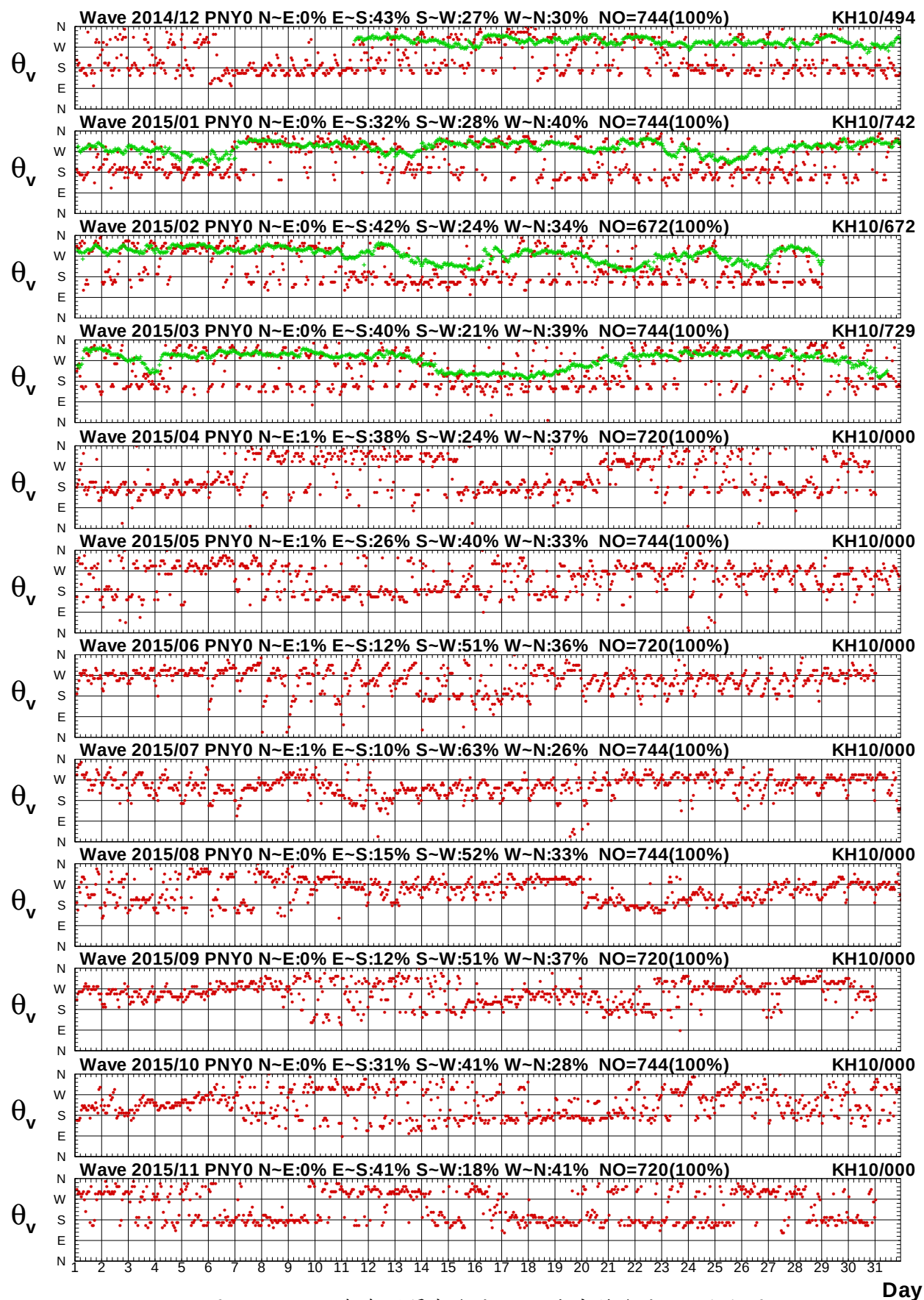


圖 2.9c 2015 年每月屏東海域 Y 站與高雄海域 1 站波向圖

V14CPNY0.1HA V14CKH10.1H0 V151PNY0.1HA V151KH10.1H0 V152PNY0.1HA V152KH10.1H0
V153PNY0.1HA V153KH10.1H0 V154PNY0.1HA V154KH10.1H0 V155PNY0.1HA V155KH10.1H0

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第三章 2015 年屏東海域觀測潮汐資料

屏東海域之潮汐觀測，小琉球(測站 J)、東港(測站 P)、後壁湖(測站 Q)等之潮汐儀屬中央氣象局所有，測站之位置如圖 3。蟬廣嘴(測站 F)、林邊(測站 K)、嘉和(測站 M) 之潮汐儀皆屬水利署所有。潮位資料分別由中央氣象局及水利署提供。屏東海域各測站歷年觀測潮汐資料蒐集概況如表 3。

本潮汐年報以取經檢核或修補後之 T 站資料作為主要觀測站，2015 年各觀測站修補前每月觀測潮汐資料記錄期間統計表，如表 3.1a，2015 年各觀測站修補後每月觀測潮汐資料記錄期間統計表 3.1b，主要觀測站修補前後每月潮汐歷線比較圖，如圖 3.1.1，主要觀測站與調和分析計算潮位每月潮汐歷線比較圖，如圖 3.1.2，主要觀測站與次要觀測站每月潮汐歷線比較圖，如圖 3.1.3 以後。

表 3 屏東海域觀測潮汐資料蒐集概況表(統計時間至 2015 年 11 月)

測站	緯度	經度	觀測期間	觀測單位	備註
F			2009/01-2015/11(觀測中)	水利署	蟬廣嘴潮位站
K			2010/12-2015/11(觀測中)	水利署	林邊潮位站
M			2009/01-2010/07	水利署	嘉和潮位站
J	22°21'13"N	120°22'42"E	2013/12-2015/11(觀測中)	中央氣象局	小琉球潮位站
P	22°27'50"N	120°26'15"	2013/12-2015/11(觀測中)	中央氣象局	東港潮位站
Q			2013/12-2015/11(觀測中)	中央氣象局	後壁湖潮位站

屏東海域



圖 3 屏東海域潮汐觀測站位置示意圖

表 3.1a 2015 年每月屏東海域修補前各測站觀測潮汐資料紀錄統計表

年/月 港區	臺東海域	臺東海域	臺東海域	臺東海域	臺東海域	臺東海域	臺東海域	臺東海域
測站	F	J	K	P	Q	M		
2014/12 月	536 (72.0%)	744 (100%)	729 (98.0%)	743 (99.9%)	744 (100%)	*	*	*
2015/ 1 月	705 (94.8%)	544 (73.1%)	726 (97.6%)	553 (74.3%)	576 (77.4%)	*	*	*
2015/ 2 月	643 (95.7%)	*	663 (98.7%)	*	*	*	*	*
2015/ 3 月	707 (95.0%)	143 (19.2%)	737 (99.1%)	129 (17.3%)	121 (16.3%)	*	*	*
2015/ 4 月	687 (95.4%)	425 (59.0%)	715 (99.3%)	404 (56.1%)	413 (57.4%)	*	*	*
2015/ 5 月	693 (93.1%)	264 (35.5%)	738 (99.2%)	279 (37.5%)	256 (34.4%)	*	*	*
2015/ 6 月	668 (92.8%)	519 (72.1%)	708 (98.3%)	536 (74.4%)	513 (71.3%)	*	*	*
2015/ 7 月	663 (89.1%)	420 (56.5%)	730 (98.1%)	432 (58.1%)	306 (41.1%)	*	*	*
2015/ 8 月	744 (100%)	578 (77.7%)	728 (97.8%)	589 (79.2%)	471 (63.3%)	*	*	*
2015/ 9 月	720 (100%)	622 (86.4%)	694 (96.4%)	586 (81.4%)	596 (82.8%)	*	*	*
2015/10 月	744 (100%)	382 (51.3%)	723 (97.2%)	382 (51.3%)	381 (51.2%)	*	*	*
2015/11 月	719 (99.9%)	606 (84.2%)	700 (97.2%)	639 (88.8%)	579 (80.4%)	*	*	*
2015/冬季	1884 (87.2%)	1288 (59.6%)	2118 (98.1%)	1296 (60.0%)	1320 (61.1%)	*	*	*
2015/春季	2087 (94.5%)	832 (37.7%)	2190 (99.2%)	812 (36.8%)	790 (35.8%)	*	*	*
2015/夏季	2075 (94.0%)	1517 (68.7%)	2166 (98.1%)	1557 (70.5%)	1290 (58.4%)	*	*	*
2015/秋季	2183 (100.0%)	1610 (73.7%)	2117 (96.9%)	1607 (73.6%)	1556 (71.2%)	*	*	*
2015/整年	8229 (93.9%)	5247 (59.9%)	8591 (98.1%)	5272 (60.2%)	4956 (56.6%)	*	*	*
起始年月	2014/12	2014/12	2014/12	2014/12	2014/12	*	*	*
結束年月	2015/11	2015/11	2015/11	2015/11	2015/11	*	*	*

表3.1b 2015年每月屏東海域修補後各測站潮汐資料統計表

年/月 港區	臺東海域		臺東海域		臺東海域		臺東海域		臺東海域		臺東海域		臺東海域	
測站	F		J		K		P		Q		M			
2014/12 月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*		*	*
2015/ 1 月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*		*	*
2015/ 2 月	672	(100%)	*		672	(100%)	*		*		*		*	*
2015/ 3 月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*		*	*
2015/ 4 月	720	(100%)	720	(100%)	720	(100%)	720	(100%)	720	(100%)	*		*	*
2015/ 5 月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*		*	*
2015/ 6 月	720	(100%)	720	(100%)	720	(100%)	720	(100%)	720	(100%)	*		*	*
2015/ 7 月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*		*	*
2015/ 8 月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*		*	*
2015/ 9 月	720	(100%)	720	(100%)	720	(100%)	720	(100%)	720	(100%)	*		*	*
2015/10 月	744	(100%)	744	(100%)	744	(100%)	744	(100%)	744	(100%)	*		*	*
2015/11 月	720	(100%)	720	(100%)	720	(100%)	720	(100%)	720	(100%)	*		*	*
2015/冬季	2160	(100%)	1488	(68.9%)	2160	(100%)	1488	(68.9%)	1488	(68.9%)	*		*	*
2015/春季	2208	(100%)	2208	(100%)	2208	(100%)	2208	(100%)	2208	(100%)	*		*	*
2015/夏季	2208	(100%)	2208	(100%)	2208	(100%)	2208	(100%)	2208	(100%)	*		*	*
2015/秋季	2184	(100%)	2184	(100%)	2184	(100%)	2184	(100%)	2184	(100%)	*		*	*
2015/整年	8760	(100%)	8088	(92.3%)	8760	(100%)	8088	(92.3%)	8088	(92.3%)	*		*	*
起始年月	2014/12		2014/12		2014/12		2014/12		2014/12		*		*	*
結束年月	2015/11		2015/11		2015/11		2015/11		2015/11		*		*	*

Tidal Level in Peng-Tung Seas of PNF0 at 2015

1 ○ 8 ● 15 ● 22 ●

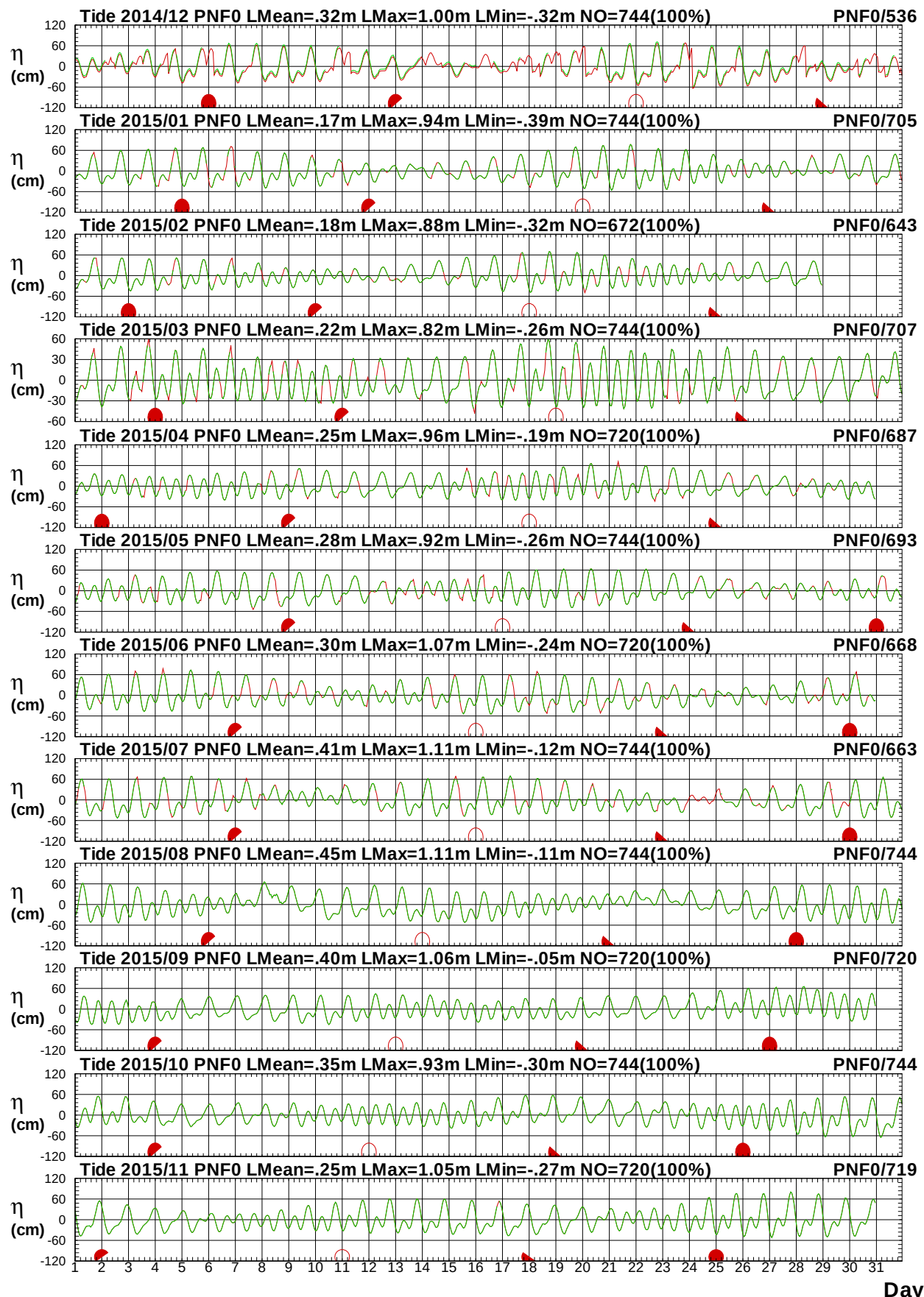


圖 3.1.1 2015 年每月屏東海域 F 站修補前後之潮位比較圖

T14CPNF0.1HA T14CPNF0.1H0 T151PNF0.1HA T151PNF0.1H0 T152PNF0.1HA T152PNF0.1H0
T153PNF0.1HA T153PNF0.1H0 T154PNF0.1HA T154PNF0.1H0 T155PNF0.1HA T155PNF0.1H0

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Tidal Level in Peng-Tung Seas of PNF0 at 2015

1 ○ 8 ● 15 ● 22 ●

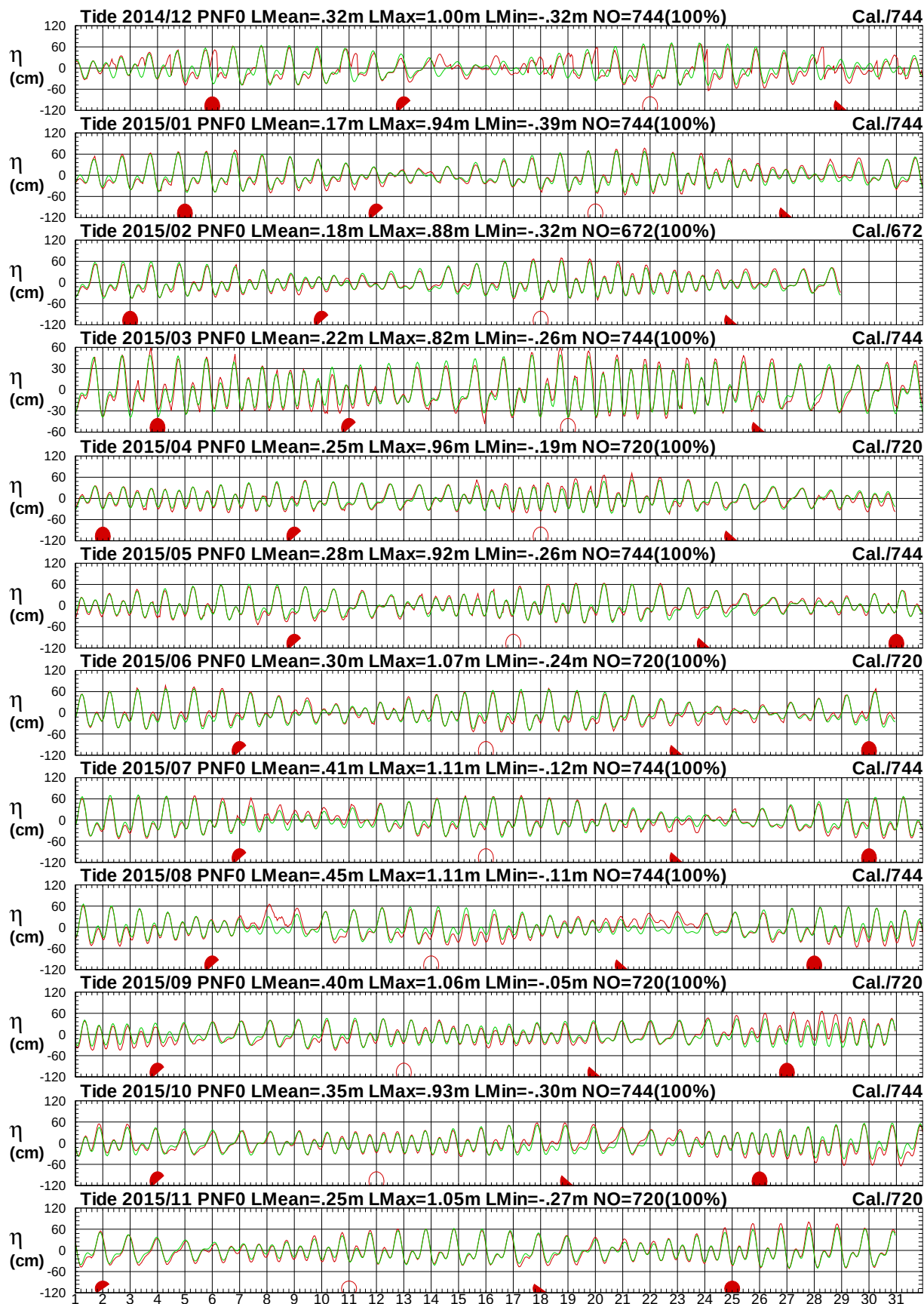


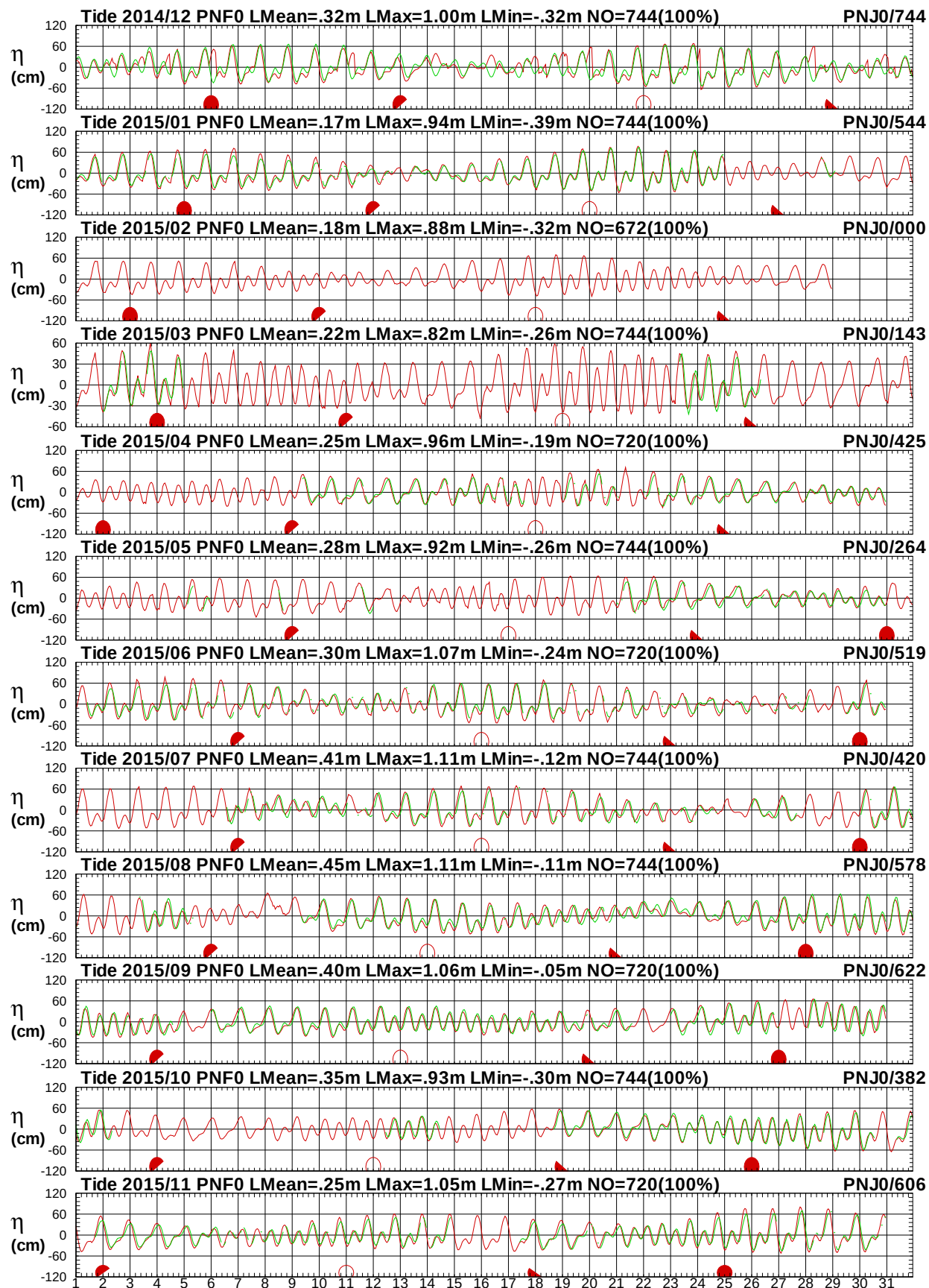
圖 3.1.2 2015 年每月屏東海域 F 站潮位歷線圖 (綠線: 天文潮)

T14CPNF0.1HA T14CPNT0.1HC T151PNF0.1HA T151PNT0.1HC T152PNF0.1HA T152PNT0.1HC
T153PNF0.1HA T153PNT0.1HC T154PNF0.1HA T154PNT0.1HC T155PNF0.1HA T155PNT0.1HC

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Tidal Level in Peng-Tung Seas of PNF0 at 2015

1 ○ 8 ● 15 ● 22 ●



Day

圖 3.1.3 2015年每月屏東海域 F 站與 J 站潮位比較圖

T14CPNF0.1HA T14CPNJ0.1H0 T151PNF0.1HA T151PNJ0.1H0 T152PNF0.1HA T152PNJ0.1H0

T153PNF0.1HA T153PNJ0.1H0 T154PNF0.1HA T154PNJ0.1H0 T155PNF0.1HA T155PNJ0.1H0

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Tidal Level in Peng-Tung Seas of PNF0 at 2015

1 ○ 8 ● 15 ● 22 ●

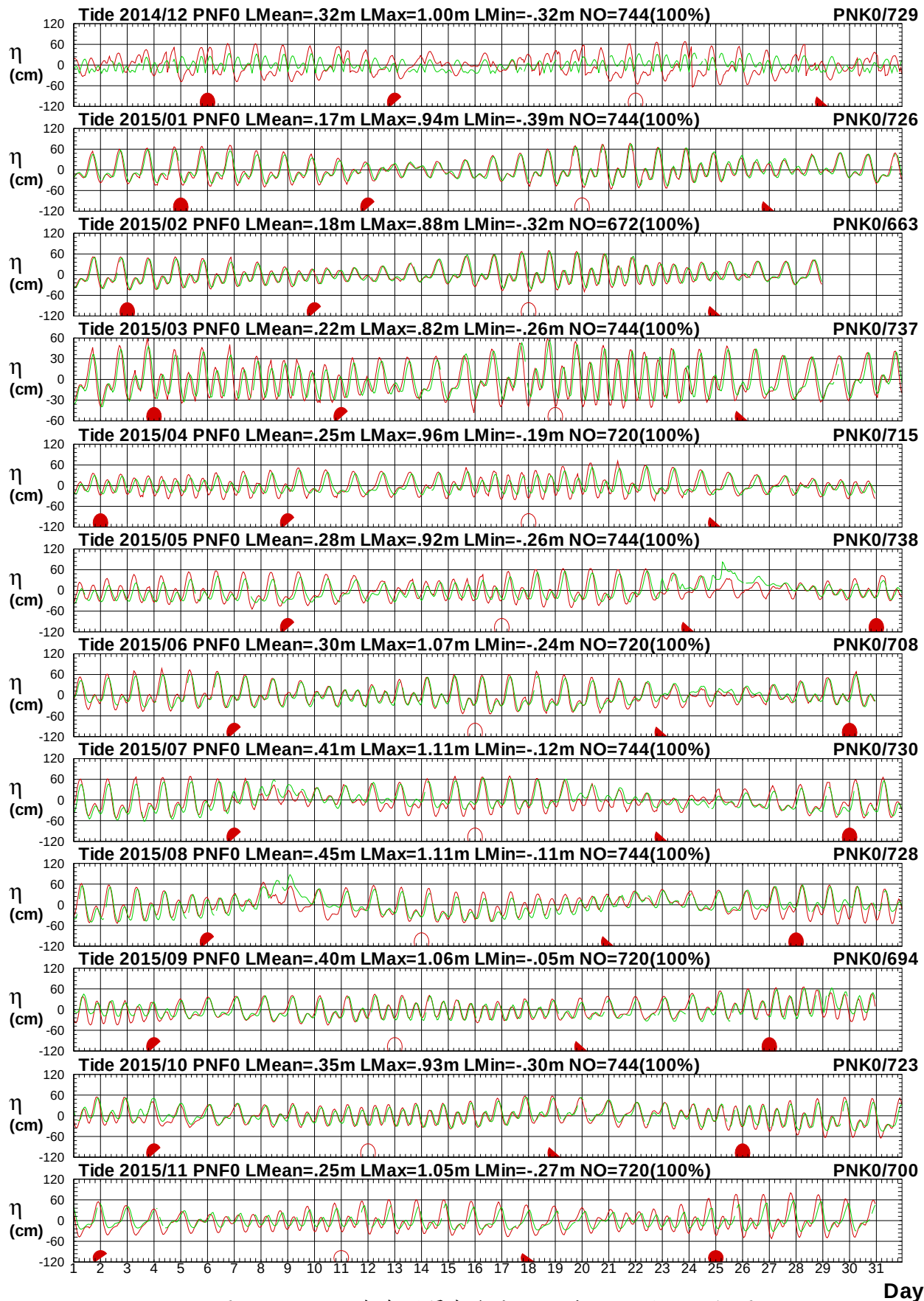


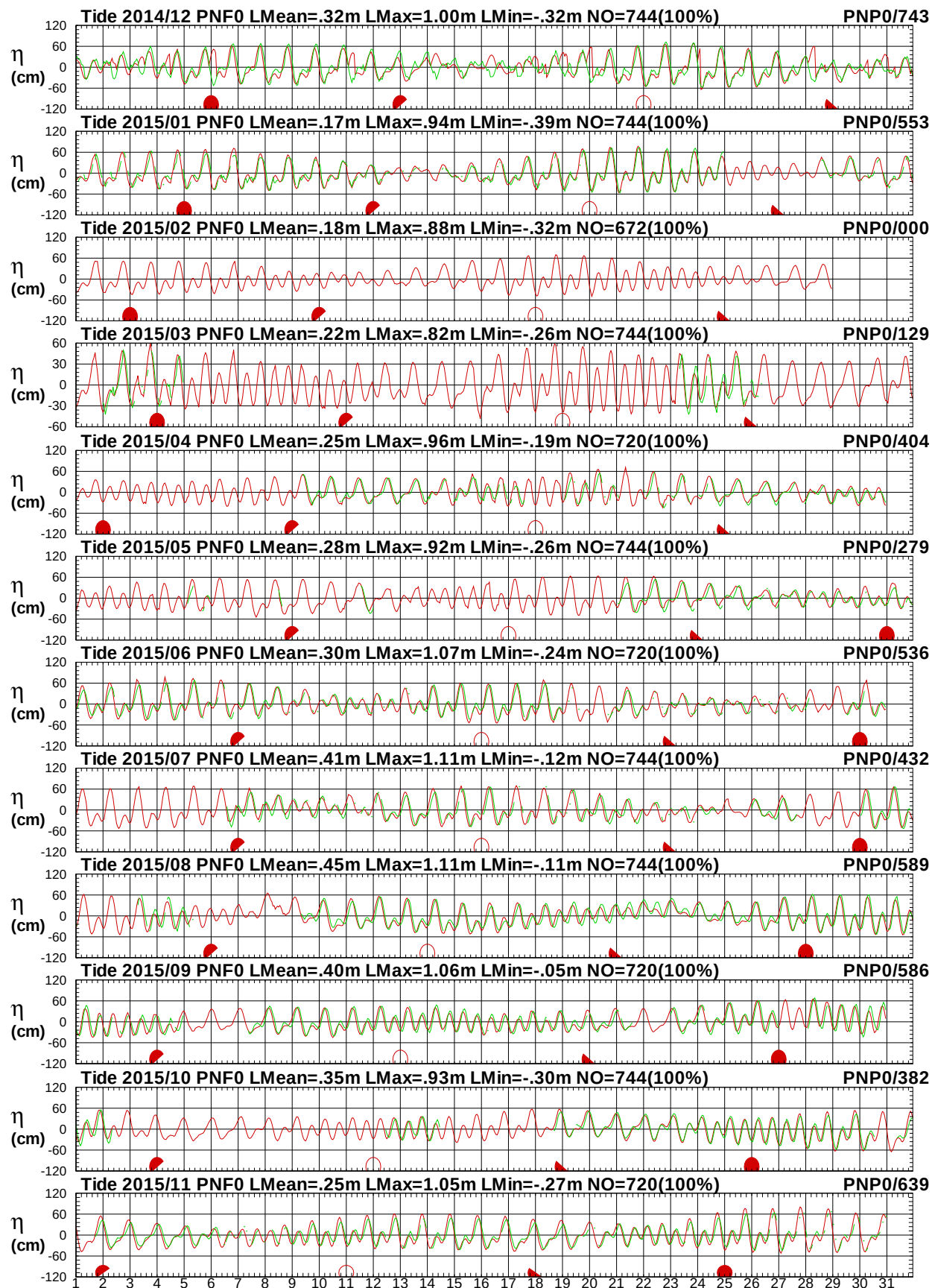
圖3.1.4 2015年每月屏東海域 F 站與 K 站潮位比較圖

T14CPNF0.1HA T14CPNK0.1H0 T151PNF0.1HA T151PNK0.1H0 T152PNF0.1HA T152PNK0.1H0
T153PNF0.1HA T153PNK0.1H0 T154PNF0.1HA T154PNK0.1H0 T155PNF0.1HA T155PNK0.1H0

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Tidal Level in Peng-Tung Seas of PNF0 at 2015

1 ○ 8 ● 15 ● 22 ●



Day

圖 3.1.5 2015年每月屏東海域 F 站與 P 站潮位比較圖

T14CPNF0.1HA T14CPNP0.1H0 T151PNF0.1HA T151PNP0.1H0 T152PNF0.1HA T152PNP0.1H0

T153PNF0.1HA T153PNP0.1H0 T154PNF0.1HA T154PNP0.1H0 T155PNF0.1HA T155PNP0.1H0

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Tidal Level in Peng-Tung Seas of PNF0 at 2015

1 ○ 8 ● 15 ● 22 ●

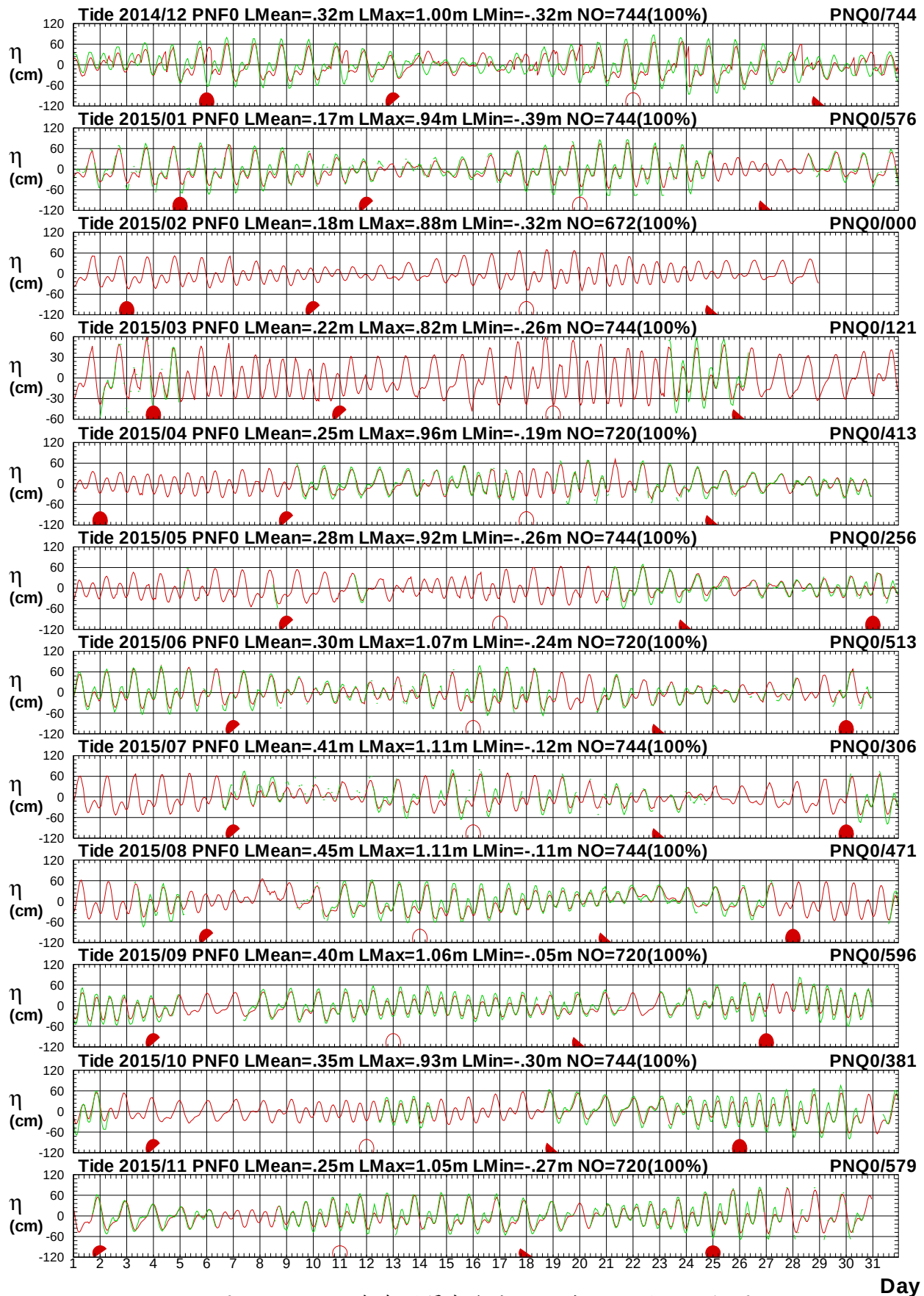


圖3.1.6 2015年每月屏東海域 F 站與 Q 站潮位比較圖

T14CPNF0.1HA T14CPNQ0.1H0 T151PNF0.1HA T151PNQ0.1H0 T152PNF0.1HA T152PNQ0.1H0
T153PNF0.1HA T153PNQ0.1H0 T154PNF0.1HA T154PNQ0.1H0 T155PNF0.1HA T155PNQ0.1H0

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第四章 2015 年屏東海域觀測海流資料

屏東海域海流之觀測小琉球海上浮標(測站 Y) 屬中央氣象局(CWB)所有，測站之位置如圖 4。測站 Z(鵝鑾鼻外海浮標站) 之海流儀則屬水利署(WRA)所有。各測站歷年觀測風資料蒐集概況如表 4。

本海流年報 2015 年各觀測站每月觀測海流資料記錄期間統計表，如表 4.1a，2015 年各觀測站每月計算潮流資料統計表，如表 4.1b。2015 年各觀測站觀測海流與計算潮流(殘餘流)歷線比較圖，各觀測站觀測海流與其他測站觀測海流歷線比較圖，如圖 4.1 以後。

表 4 屏東海域觀測海流資料蒐集概況表(統計時間至 2015 年 11 月)

測站	緯度	經度	觀測期間	觀測單位	備註
Y	22°18'50"N	120°21'50"E	2003/11-2015/11(觀測中)	中央氣象局	小琉球浮標站
Z	21°54'01"N	120°49'21"E	2000/10-2015/11(觀測中)	水利署	鵝鑾鼻浮標站

屏東海域



WRA 浮標海流站



CWB 浮標海流站



小琉球浮標



鵝鑾鼻浮標

圖 4 屏東海域海流觀測站位置示意圖

表4.1a 2015年每月屏東海域各測站觀測海流資料紀錄統計表

年/月 港區	臺東海域	臺東海域	臺東海域	臺東海域	臺東海域	臺東海域	臺東海域	臺東海域
測站	Y	Z						
2014/12 月	662 (89.0%)	730 (98.1%)	*	*	*	*	*	*
2015/ 1 月	668 (89.8%)	660 (88.7%)	*	*	*	*	*	*
2015/ 2 月	569 (84.7%)	543 (80.8%)	*	*	*	*	*	*
2015/ 3 月	503 (67.6%)	89 (12.0%)	*	*	*	*	*	*
2015/ 4 月	466 (64.7%)	19 (2.6%)	*	*	*	*	*	*
2015/ 5 月	693 (93.1%)	691 (92.9%)	*	*	*	*	*	*
2015/ 6 月	637 (88.5%)	668 (92.8%)	*	*	*	*	*	*
2015/ 7 月	701 (94.2%)	622 (83.6%)	*	*	*	*	*	*
2015/ 8 月	686 (92.2%)	675 (90.7%)	*	*	*	*	*	*
2015/ 9 月	48 (6.7%)	700 (97.2%)	*	*	*	*	*	*
2015/10 月	*	671 (90.2%)	*	*	*	*	*	*
2015/11 月	*	688 (95.6%)	*	*	*	*	*	*
2015/冬季	1899 (87.9%)	1933 (89.5%)	*	*	*	*	*	*
2015/春季	1662 (75.3%)	799 (36.2%)	*	*	*	*	*	*
2015/夏季	2024 (91.7%)	1965 (89.0%)	*	*	*	*	*	*
2015/秋季	48 (2.2%)	2059 (94.3%)	*	*	*	*	*	*
2015/整年	5633 (64.3%)	6756 (77.1%)	*	*	*	*	*	*
起始年月	2014/12	2014/12	*	*	*	*	*	*
結束年月	2015/09	2015/11	*	*	*	*	*	*

ST-X: 港灣技術研究中心觀測 X 站流速資料

表4.1b 2015年每月屏東海域計算潮流各測站資料統計表

年/月 港區	臺東海域		臺東海域		臺東海域		臺東海域		臺東海域	
測站	Y		Z							
2014/12 月	744	(100%)	744	(100%)	*	*	*	*	*	*
2015/ 1 月	744	(100%)	744	(100%)	*	*	*	*	*	*
2015/ 2 月	672	(100%)	672	(100%)	*	*	*	*	*	*
2015/ 3 月	744	(100%)	744	(100%)	*	*	*	*	*	*
2015/ 4 月	720	(100%)	720	(100%)	*	*	*	*	*	*
2015/ 5 月	744	(100%)	744	(100%)	*	*	*	*	*	*
2015/ 6 月	720	(100%)	720	(100%)	*	*	*	*	*	*
2015/ 7 月	744	(100%)	744	(100%)	*	*	*	*	*	*
2015/ 8 月	744	(100%)	744	(100%)	*	*	*	*	*	*
2015/ 9 月	720	(100%)	720	(100%)	*	*	*	*	*	*
2015/10 月	744	(100%)	744	(100%)	*	*	*	*	*	*
2015/11 月	720	(100%)	720	(100%)	*	*	*	*	*	*
2015/冬季	*		*		*	*	*	*	*	*
2015/春季	*		*		*	*	*	*	*	*
2015/夏季	*		*		*	*	*	*	*	*
2015/秋季	*		*		*	*	*	*	*	*
2015/整年	*		*		*	*	*	*	*	*
起始年月	*		*		*	*	*	*	*	*
結束年月	*		*		*	*	*	*	*	*

Cal.X: 港灣技術研究中心潮流 X 站計算資料

Current Speed in Peng-Tung Seas of PNY0 at 2015

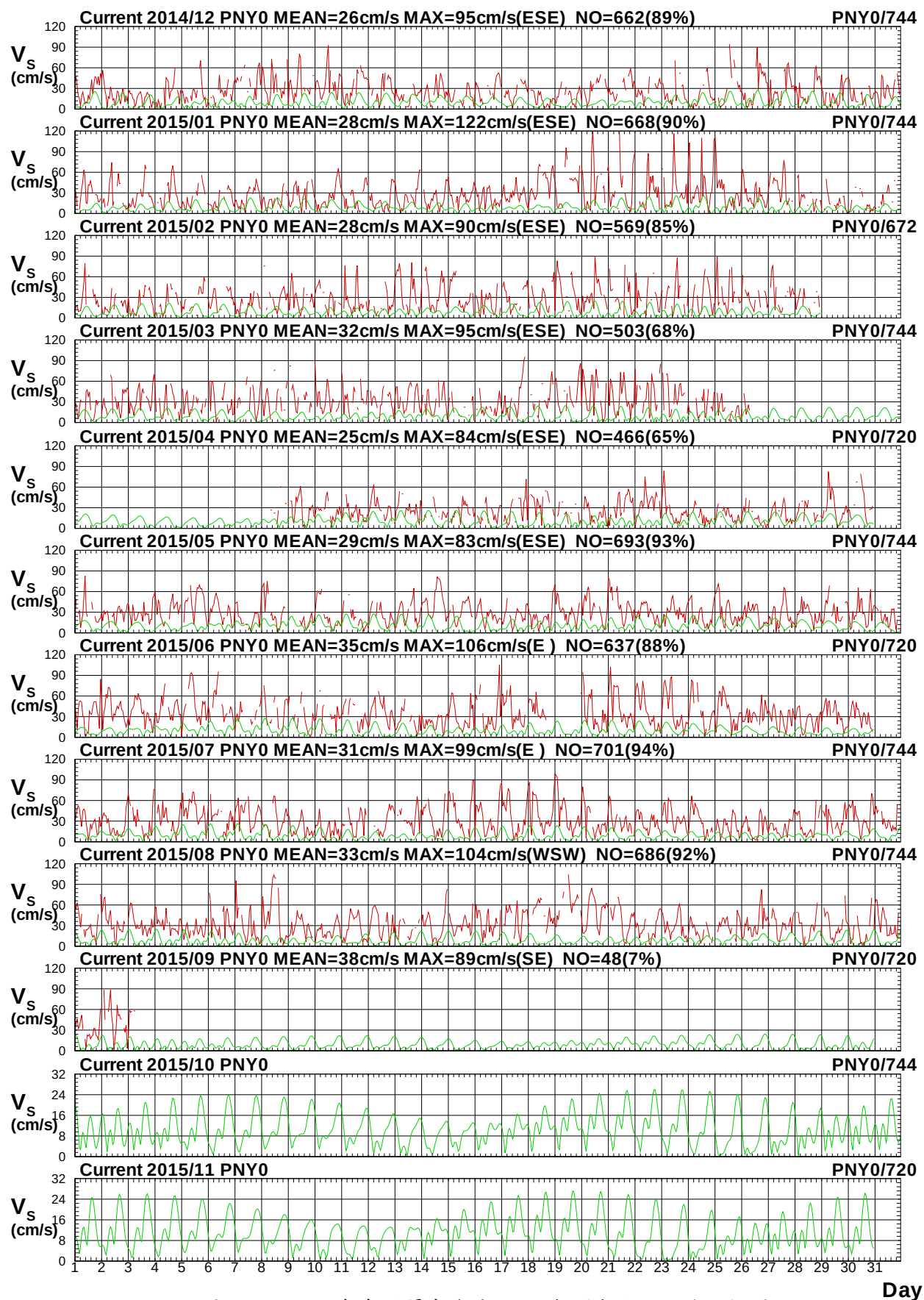


圖 4.1a 2015 年每月屏東海域 Y 站觀測與潮流流速比較圖

C14CPNY0.1H0 C14CPNY0.1HD C151PNY0.1H0 C151PNY0.1HD C152PNY0.1H0 C152PNY0.1HD
C153PNY0.1H0 C153PNY0.1HD C154PNY0.1H0 C154PNY0.1HD C155PNY0.1H0 C155PNY0.1HD

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Current Direction in Peng-Tung Seas of PNY0 at 2015

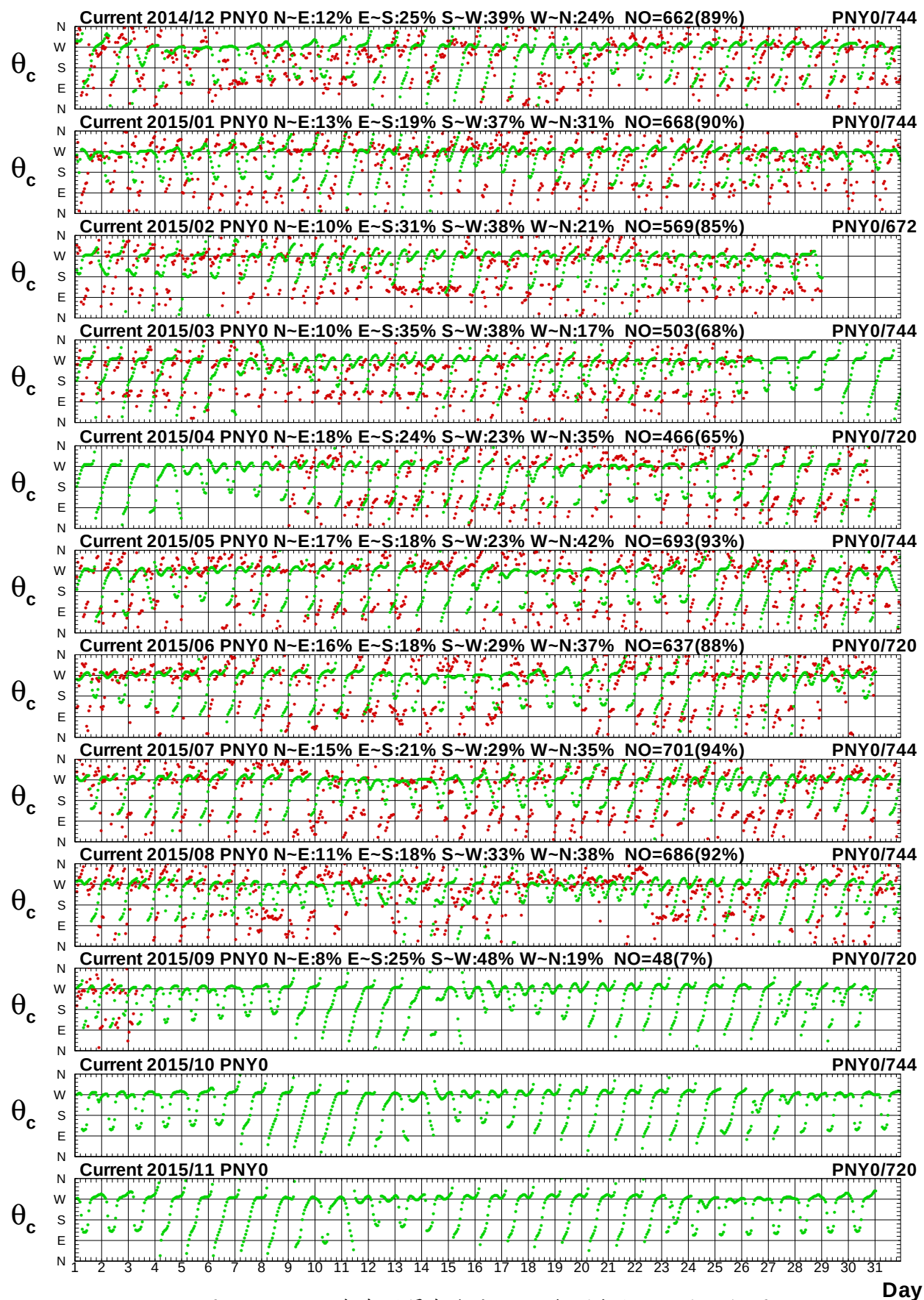


圖 4.1b 2015 年每月屏東海域 Y 站觀測與潮流流向比較圖

C14CPNY0.1H0 C14CPNY0.1HD C151PNY0.1H0 C151PNY0.1HD C152PNY0.1H0 C152PNY0.1HD
C153PNY0.1H0 C153PNY0.1HD C154PNY0.1H0 C154PNY0.1HD C155PNY0.1H0 C155PNY0.1HD

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Current Speed in Peng-Tung Seas of PNY0 at 2015

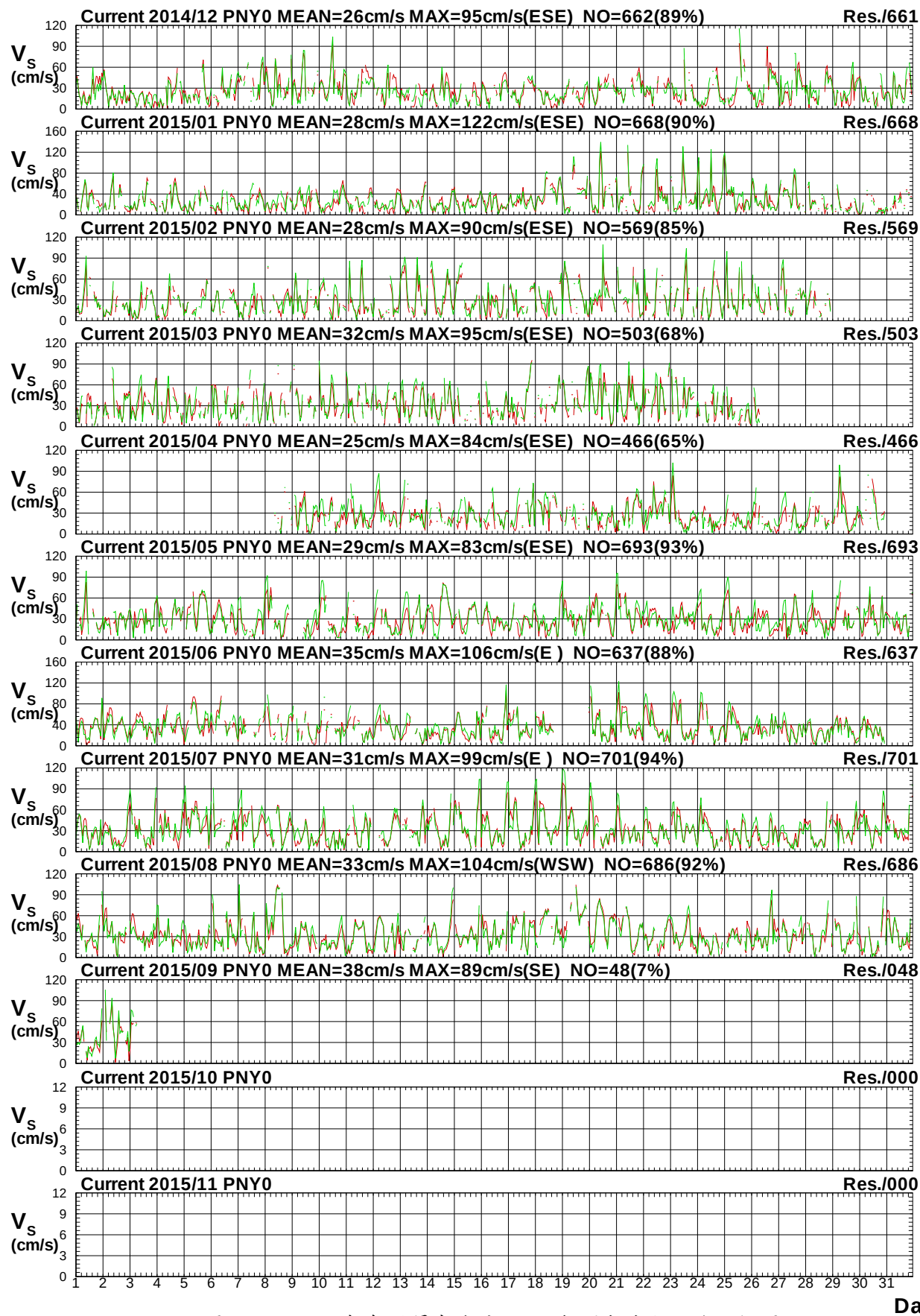


圖 4.2a 2015 年每月屏東海域 Y 站觀測與非潮流速比較圖

C14CPNY0.1H0 C14CPNY0.1HR C151PNY0.1H0 C151PNY0.1HR C152PNY0.1H0 C152PNY0.1HR
C153PNY0.1H0 C153PNY0.1HR C154PNY0.1H0 C154PNY0.1HR C155PNY0.1H0 C155PNY0.1HR

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Current Direction in Peng-Tung Seas of PNY0 at 2015

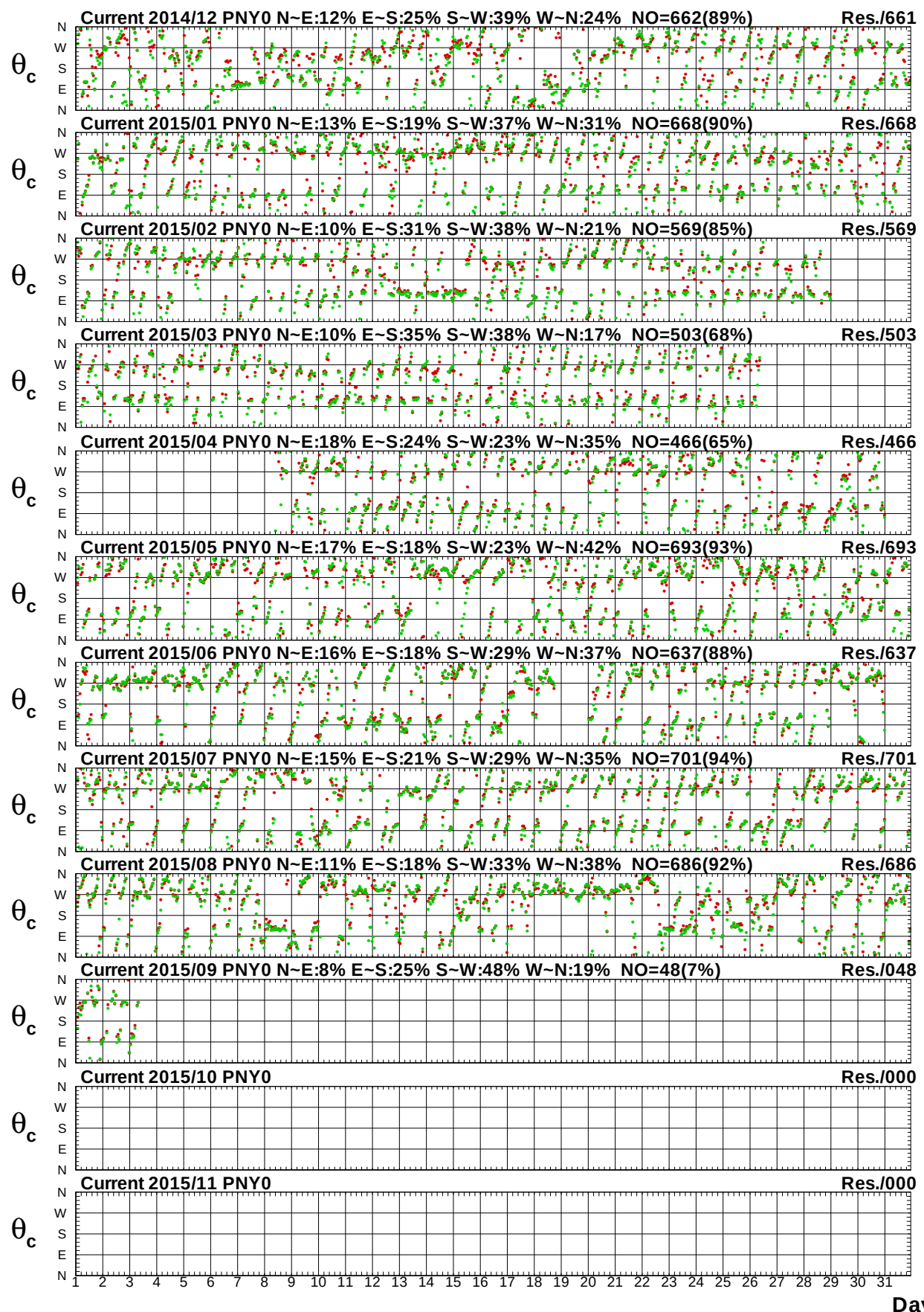


圖 4.2b 2015 年每月屏東海域 Y 站觀測與非潮流向比較圖

C14CPNY0.1H0 C14CPNY0.1HR C151PNY0.1H0 C151PNY0.1HR C152PNY0.1H0 C152PNY0.1HR
C153PNY0.1H0 C153PNY0.1HR C154PNY0.1H0 C154PNY0.1HR C155PNY0.1H0 C155PNY0.1HR

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Current Speed in Peng-Tung Seas of PNZ0 at 2015

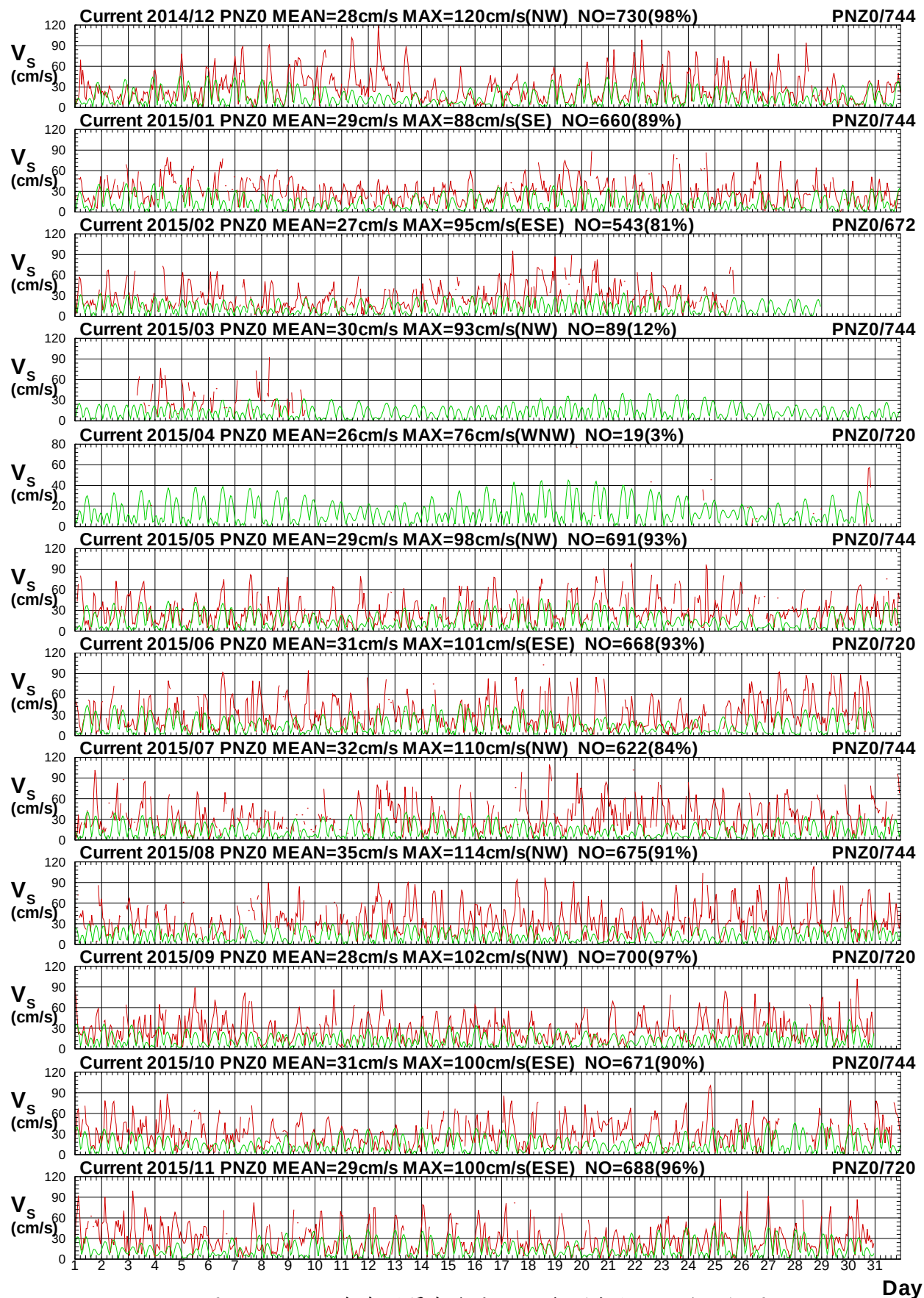


圖 4.3a 2015 年每月屏東海域 Z 站觀測與潮流流速比較圖

C14CPNZ0.1H0 C14CPNZ0.1HD C151PNZ0.1H0 C151PNZ0.1HD C152PNZ0.1H0 C152PNZ0.1HD
C153PNZ0.1H0 C153PNZ0.1HD C154PNZ0.1H0 C154PNZ0.1HD C155PNZ0.1H0 C155PNZ0.1HD

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Current Direction in Peng-Tung Seas of PNZ0 at 2015

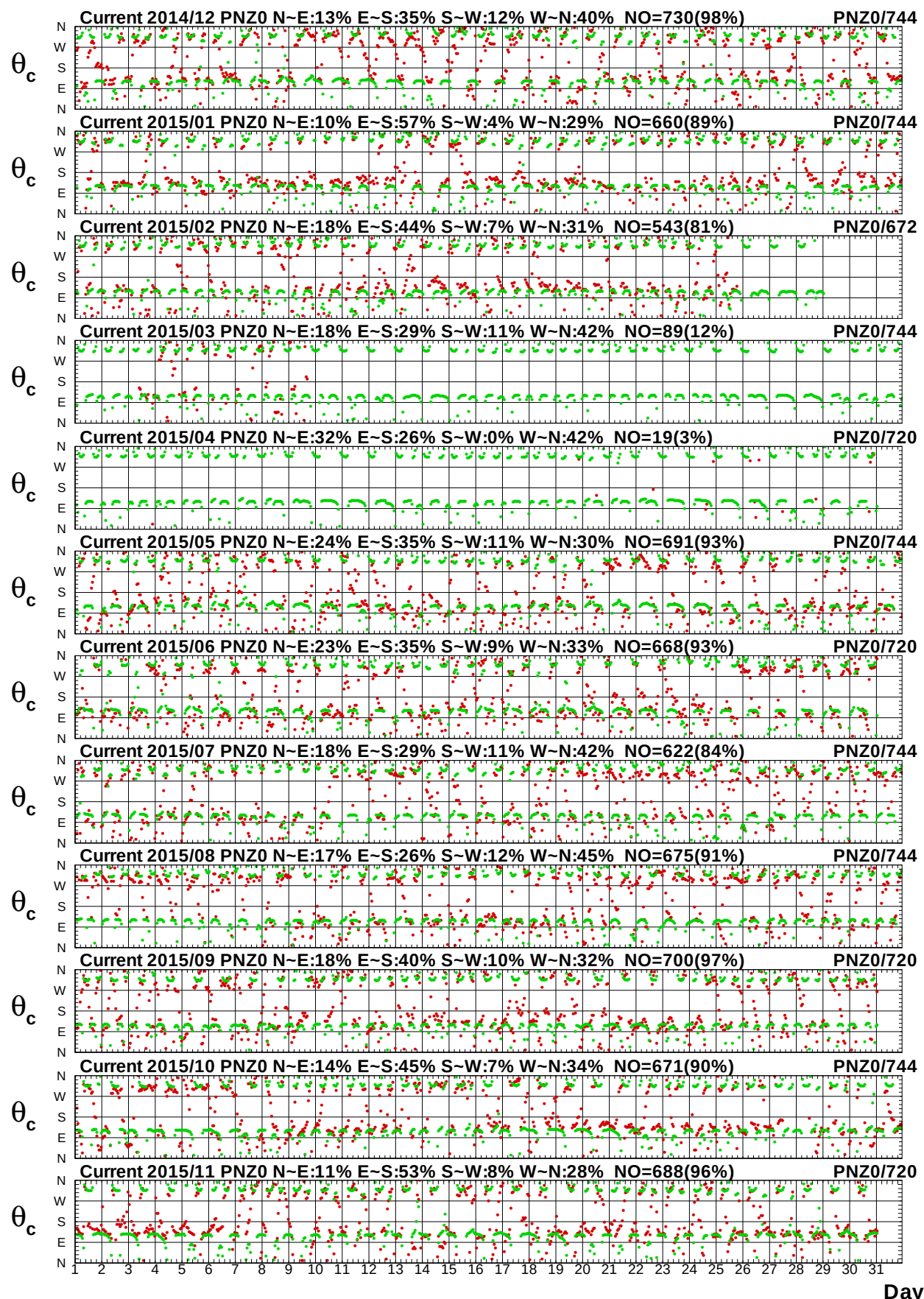


圖 4.3b 2015 年每月屏東海域 Z 站觀測與潮流流向比較圖

C14CPNZ0.1H0 C14CPNZ0.1HD C151PNZ0.1H0 C151PNZ0.1HD C152PNZ0.1H0 C152PNZ0.1HD
C153PNZ0.1H0 C153PNZ0.1HD C154PNZ0.1H0 C154PNZ0.1HD C155PNZ0.1H0 C155PNZ0.1HD

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Current Speed in Peng-Tung Seas of PNZ0 at 2015

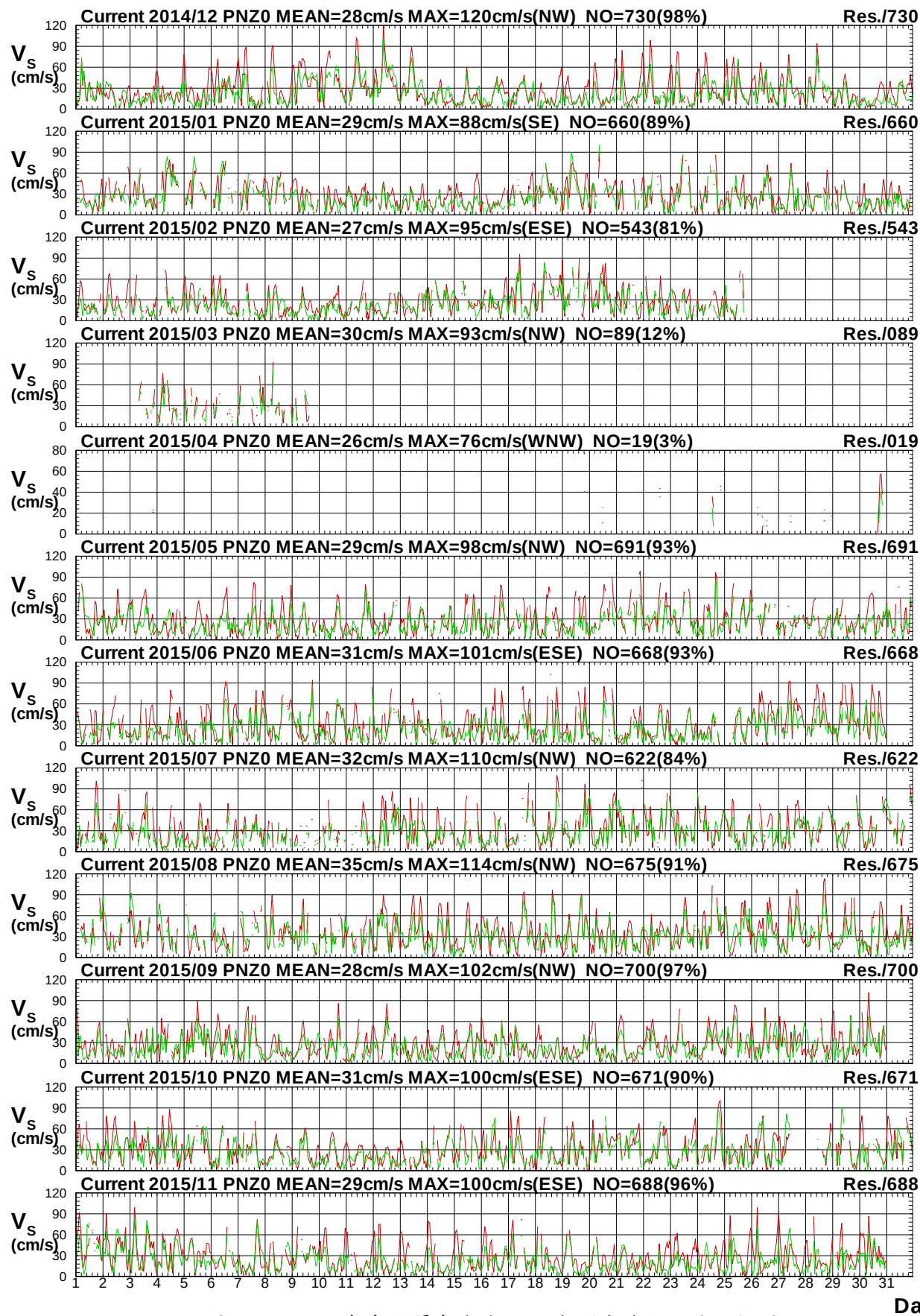


圖 4.4a 2015 年每月屏東海域 Z 站觀測與非潮流速比較圖

C14CPNZ0.1H0 C14CPNZ0.1HR C151PNZ0.1H0 C151PNZ0.1HR C152PNZ0.1H0 C152PNZ0.1HR
C153PNZ0.1H0 C153PNZ0.1HR C154PNZ0.1H0 C154PNZ0.1HR C155PNZ0.1H0 C155PNZ0.1HR

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Current Direction in Peng-Tung Seas of PNZ0 at 2015

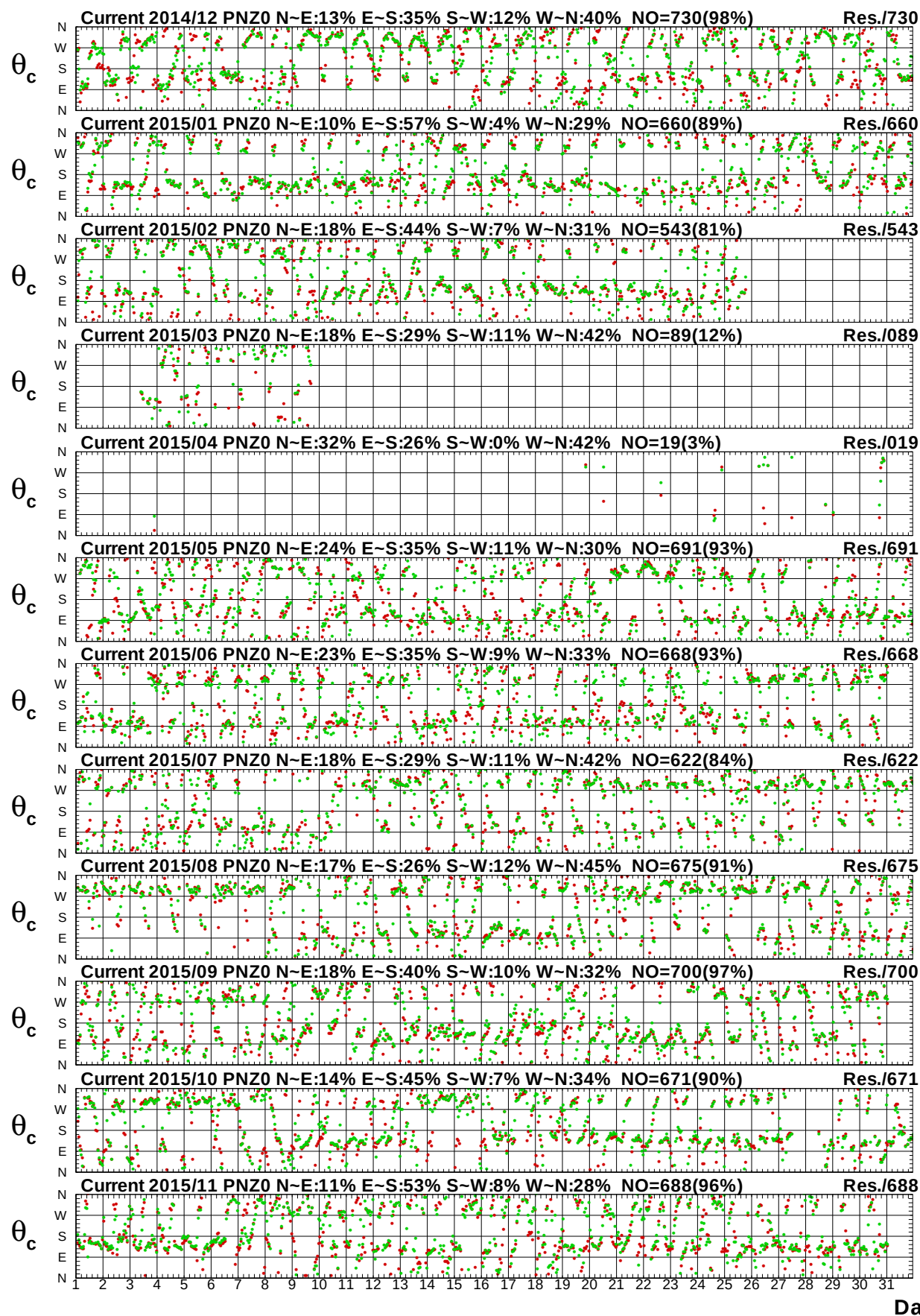


圖 4.4b 2015 年每月屏東海域 Z 站觀測與非潮流向比較圖

C14CPNZ0.1H0 C14CPNZ0.1HR C151PNZ0.1H0 C151PNZ0.1HR C152PNZ0.1H0 C152PNZ0.1HR
C153PNZ0.1H0 C153PNZ0.1HR C154PNZ0.1H0 C154PNZ0.1HR C155PNZ0.1H0 C155PNZ0.1HR

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Current Speed in Peng-Tung Seas of PNY0 at 2015

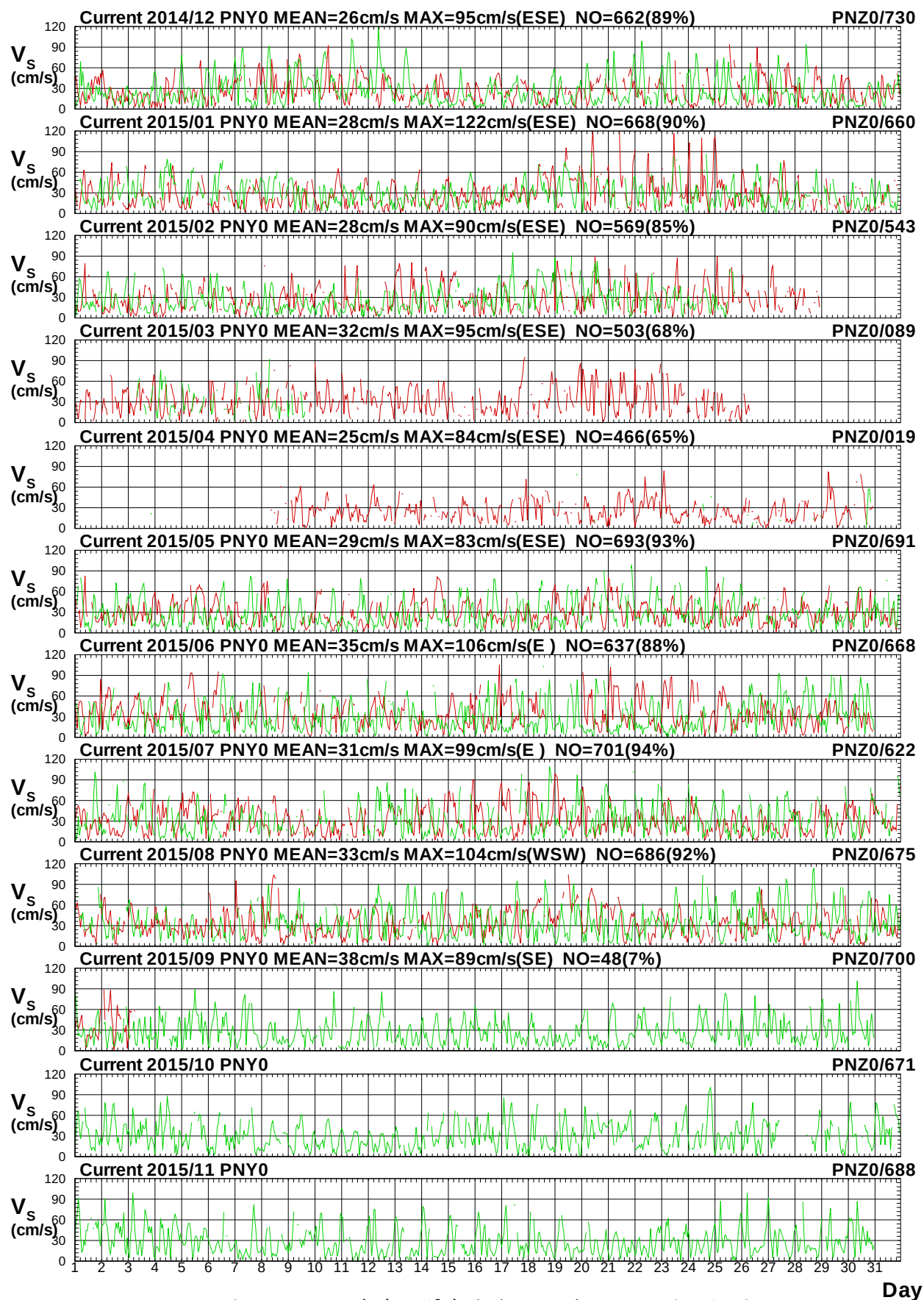


圖 4.5a 2015年每月屏東海域 Y 站與 Z 站流速比較圖

C14CPNY0.1H0 C14CPNZ0.1H0 C151PNY0.1H0 C151PNZ0.1H0 C152PNY0.1H0 C152PNZ0.1H0
C153PNY0.1H0 C153PNZ0.1H0 C154PNY0.1H0 C154PNZ0.1H0 C155PNY0.1H0 C155PNZ0.1H0

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Current Direction in Peng-Tung Seas of PNY0 at 2015

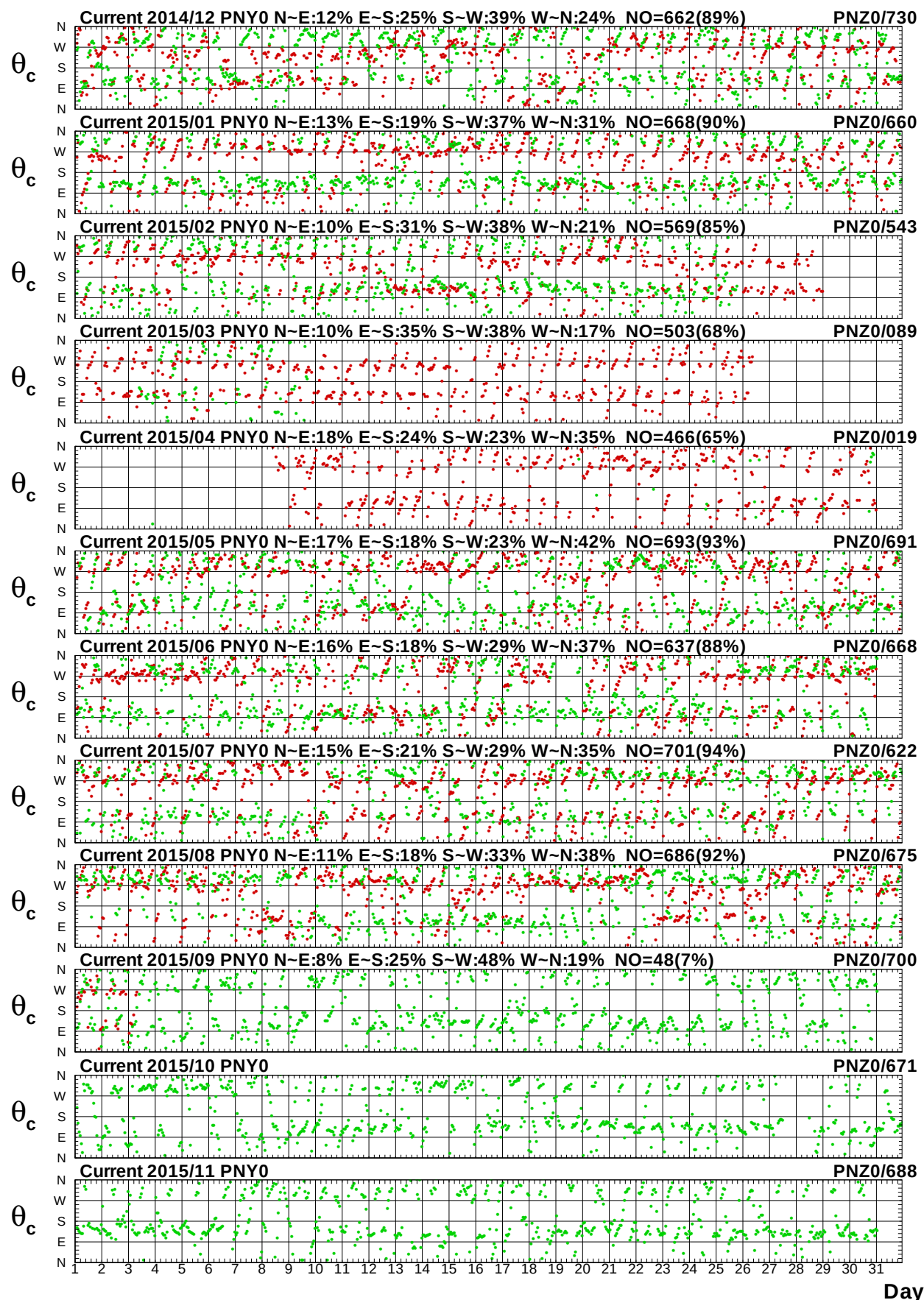


圖 4.5b 2015年每月屏東海域 Y 站與 Z 站流向比較圖

C14CPNY0.1H0 C14CPNZ0.1H0 C151PNY0.1H0 C151PNZ0.1H0 C152PNY0.1H0 C152PNZ0.1H0
C153PNY0.1H0 C153PNZ0.1H0 C154PNY0.1H0 C154PNZ0.1H0 C155PNY0.1H0 C155PNZ0.1H0

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