

Validation of

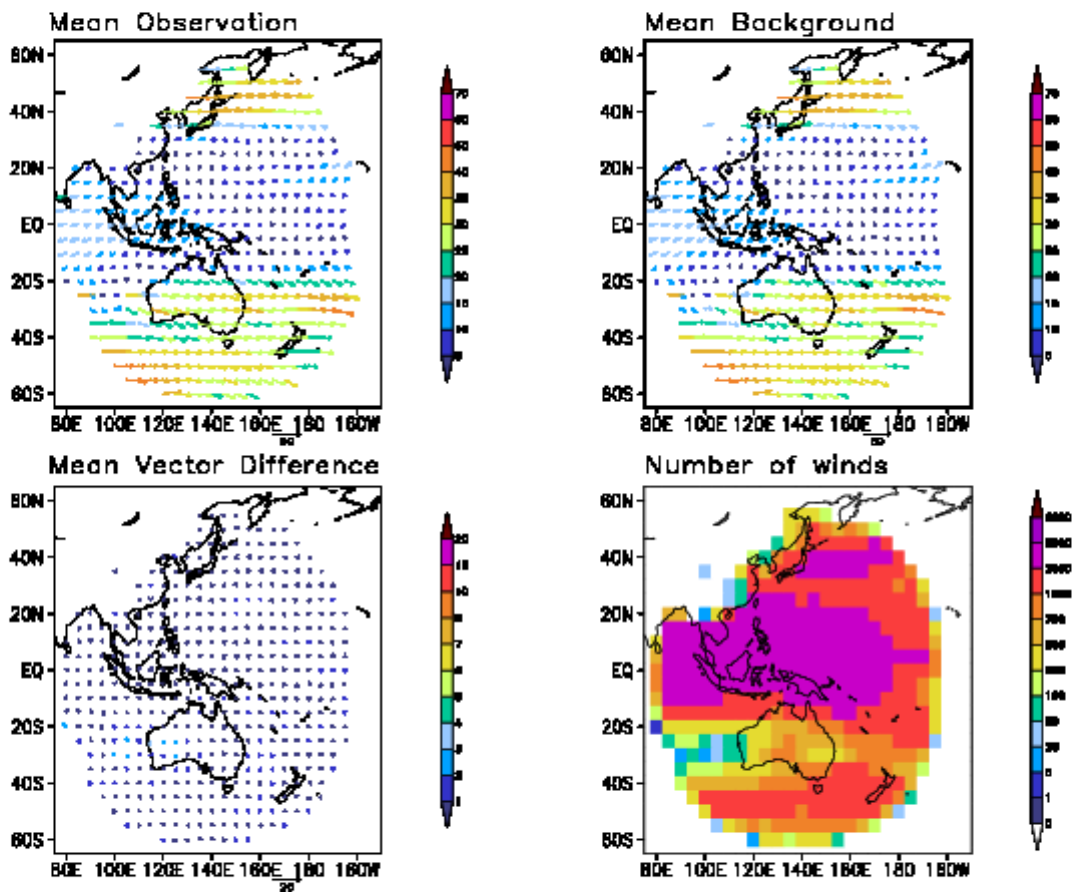
HIMAWARI-9

Atmospheric Motion Vectors

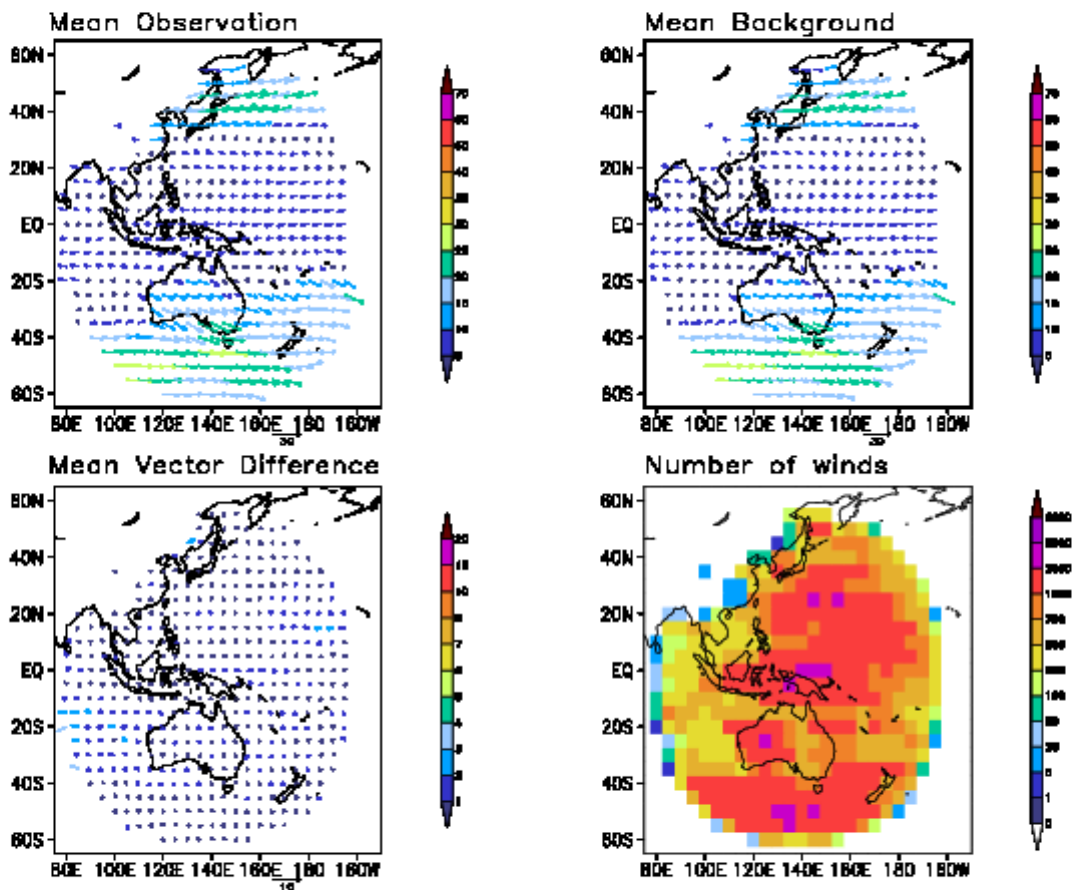
September 2024

Validation Against  
NCMRWF NGFS First Guess

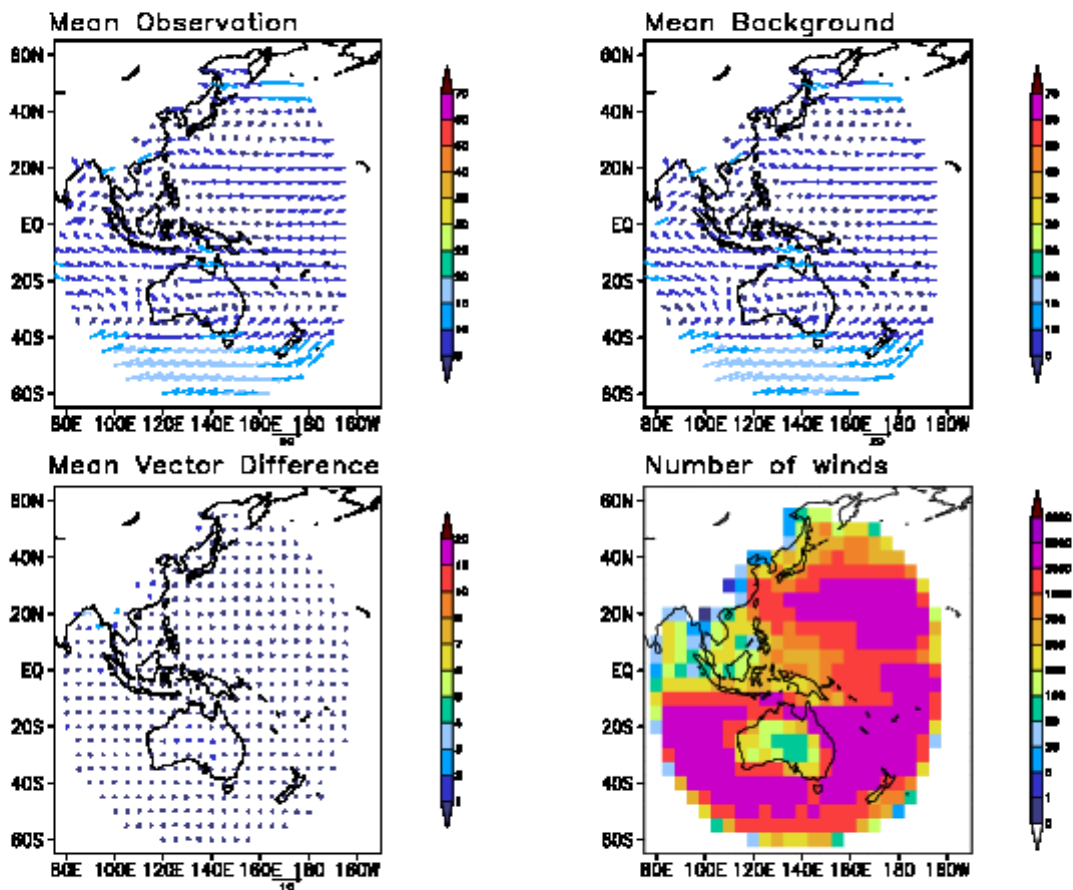
# HIMAWARI-9 IR, High Level, Above 400 hPa, September 2024



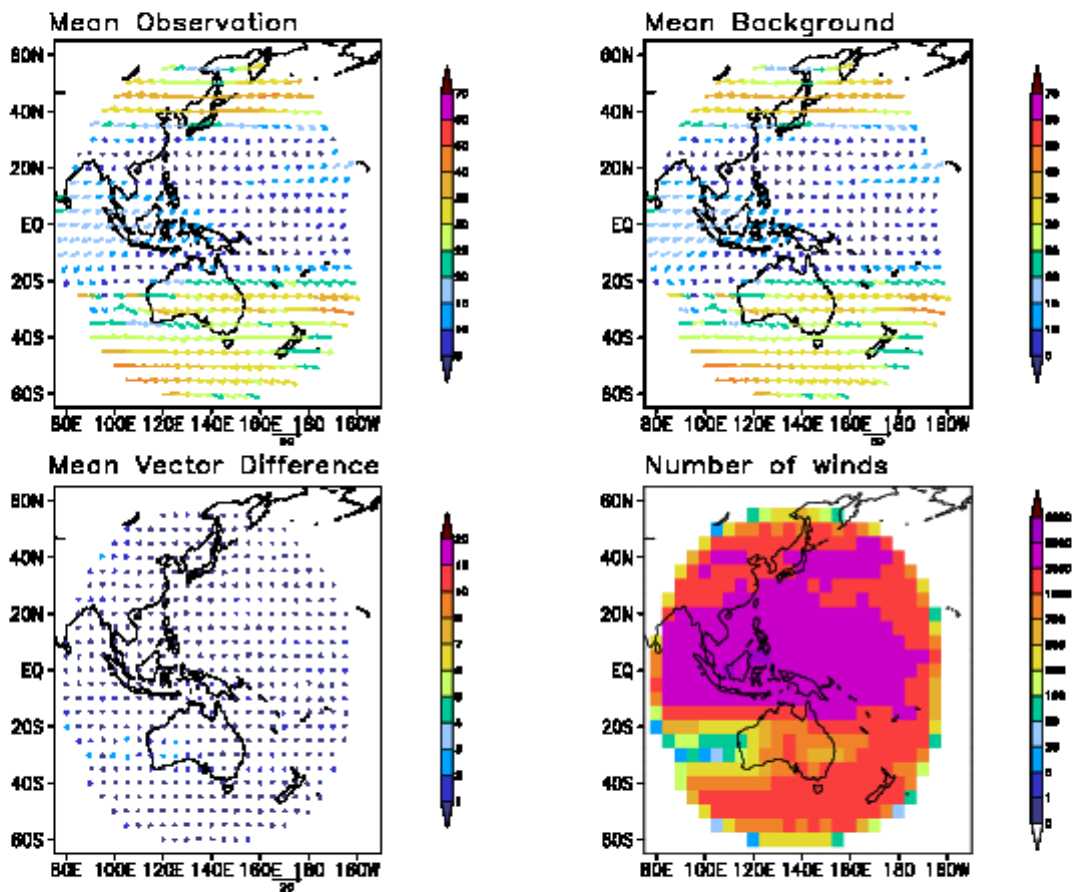
HIMAWARI-9 IR, Mid Level, 700 – 401 hPa, September 2024



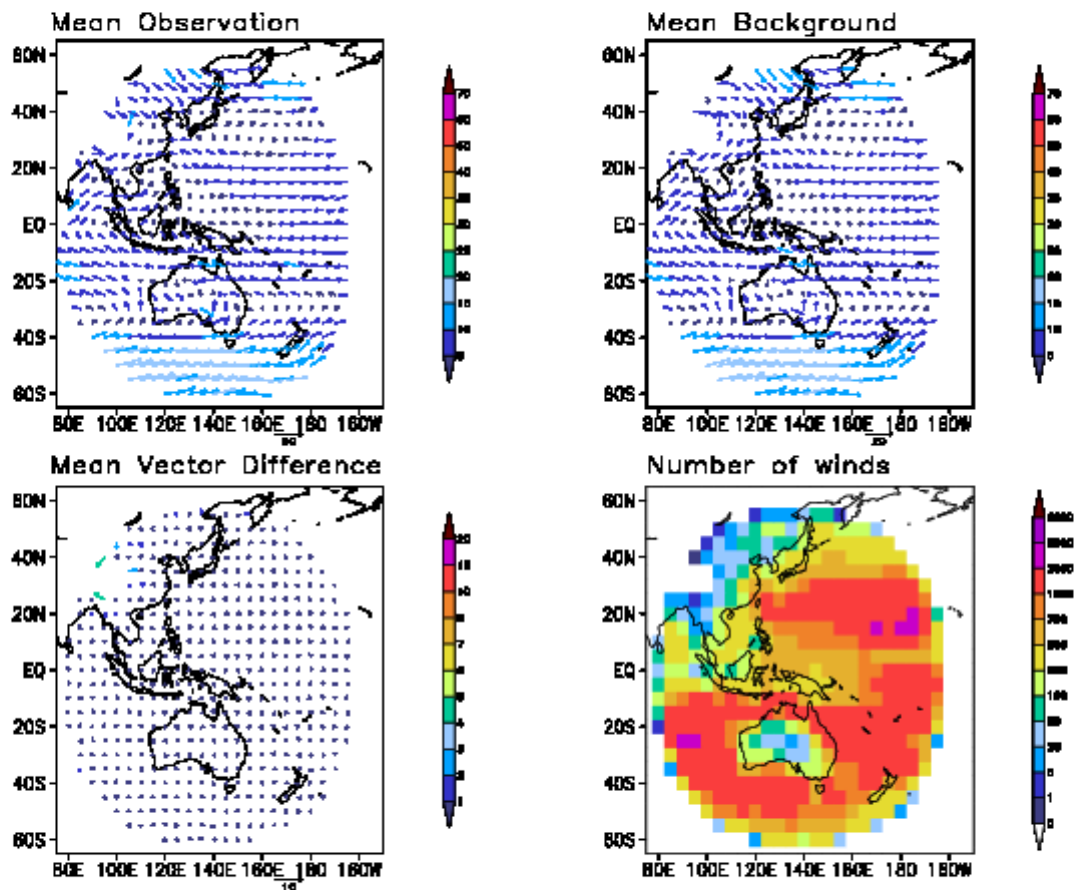
# HIMAWARI-9 IR, Low Level, Below 700 hPa, September 2024



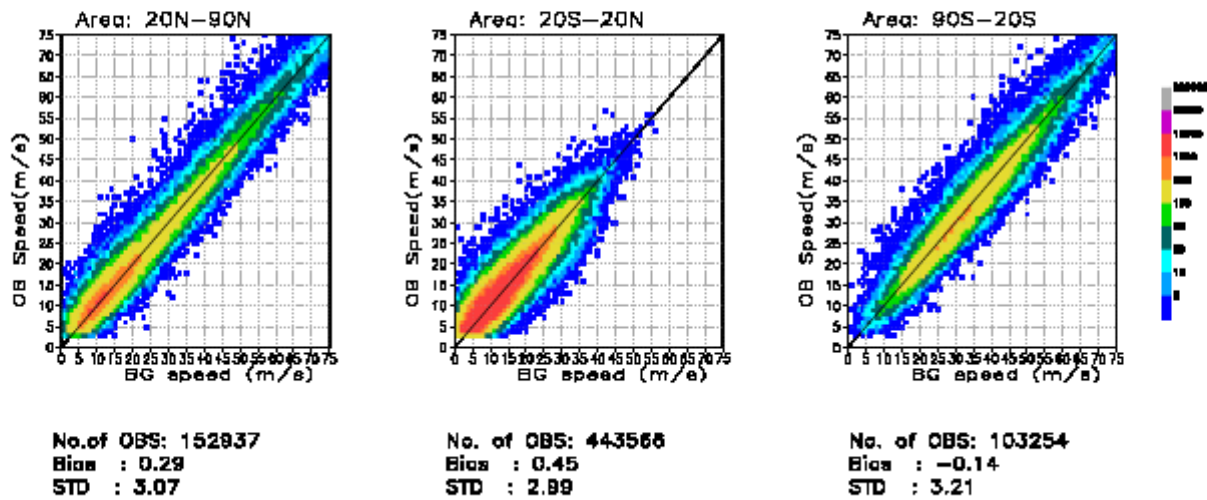
# HIMAWARI-9 WV, High Level, Above 400 hPa, September 2024



HIMAWARI-9 VIS, Low Level, Below 700 hPa, September 2024

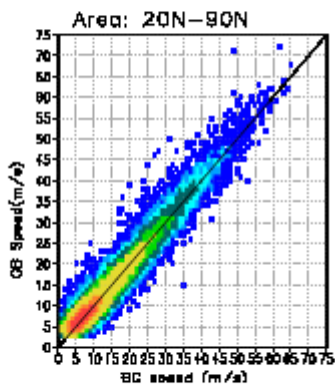


# HIMAWARI-9 IR, September 2024, High Level, Above 400 hPa

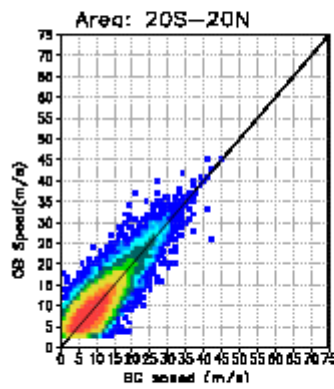




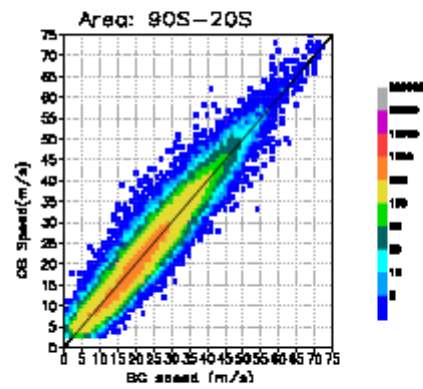
# HIMAWARI-9 IR, Mid Level, 700 – 401 hPa, September 2024



No. of OBS: 127125  
Bias : 0.02  
STD : 1.49

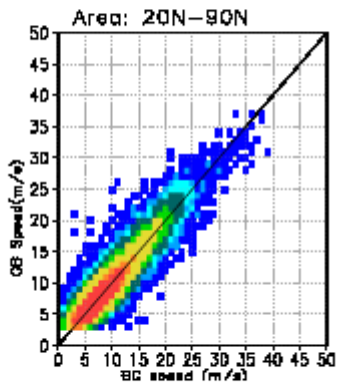


No. of OBS: 263238  
Bias : 0.08  
STD : 1.73

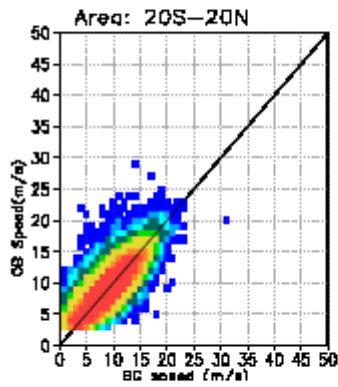


No. of OBS: 269492  
Bias : 0.08  
STD : 1.82

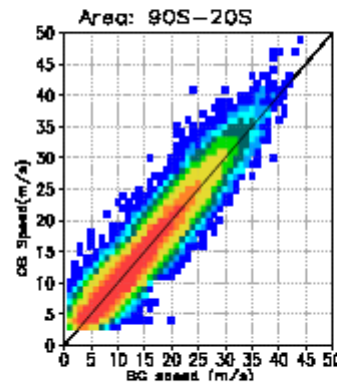
# HIMAWARI-9 IR, September 2024, Low Level, Below 700 hPa



No. of OBS: 127125  
Bias : 0.02  
STD : 1.46

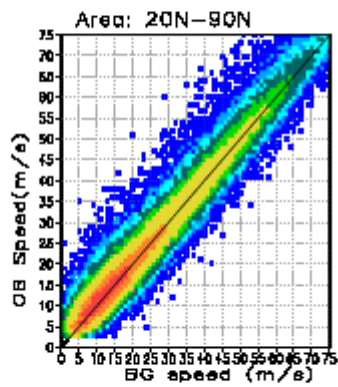


No. of OBS: 263238  
Bias : 0.06  
STD : 1.73

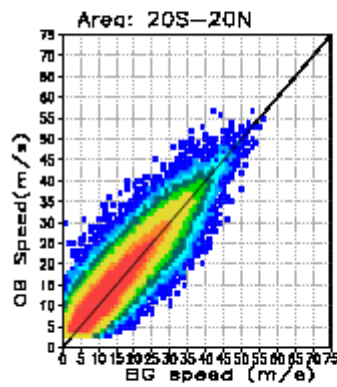


No. of OBS: 269492  
Bias : 0.06  
STD : 1.82

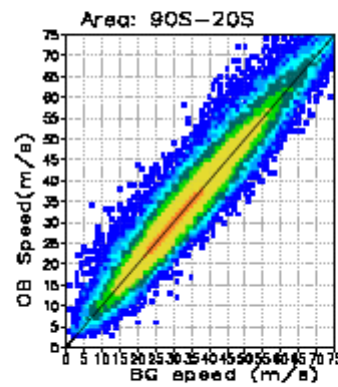
HIMAWARI-9 WV, September 2024, High Level, Above 400 hPa



No. of OBS: 252602  
Bias : 0.63  
STD : 3.17



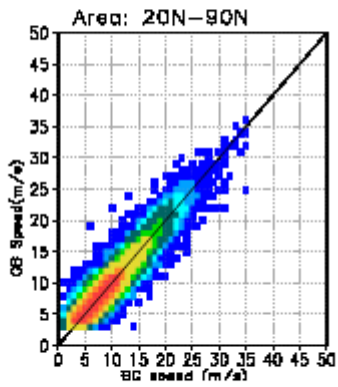
No. of OBS: 551600  
Bias : 0.78  
STD : 3.04



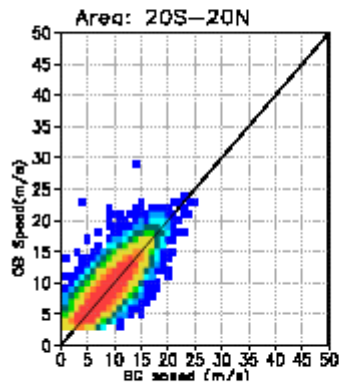
No. of OBS: 127610  
Bias : 0.34  
STD : 3.28



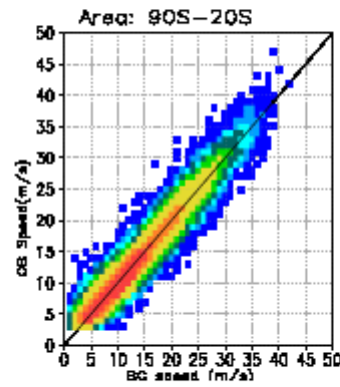
# HIMAWARI-9 VIS, September 2024, Low Level, Below 700 hPa



No. of OBS: 72601  
Bias : 0.08  
STD : 1.47

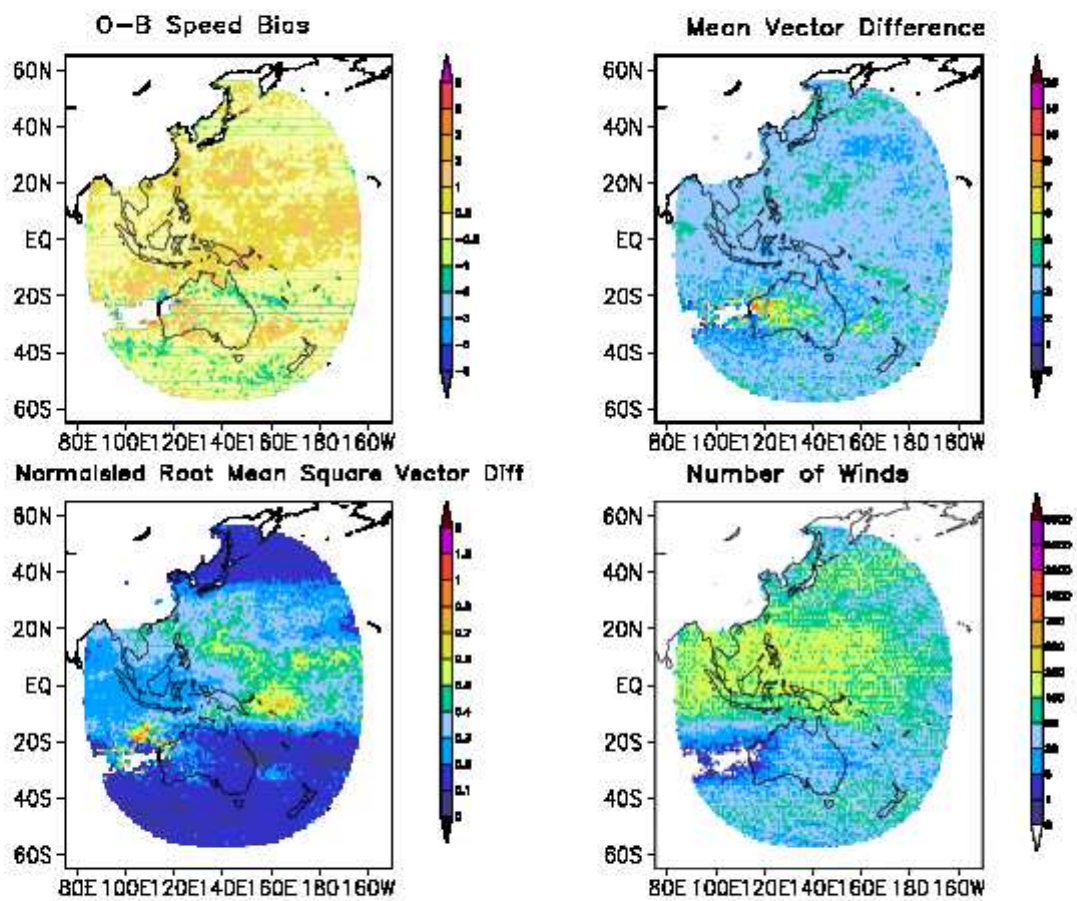


No. of OBS: 153714  
Bias : 0.12  
STD : 1.59

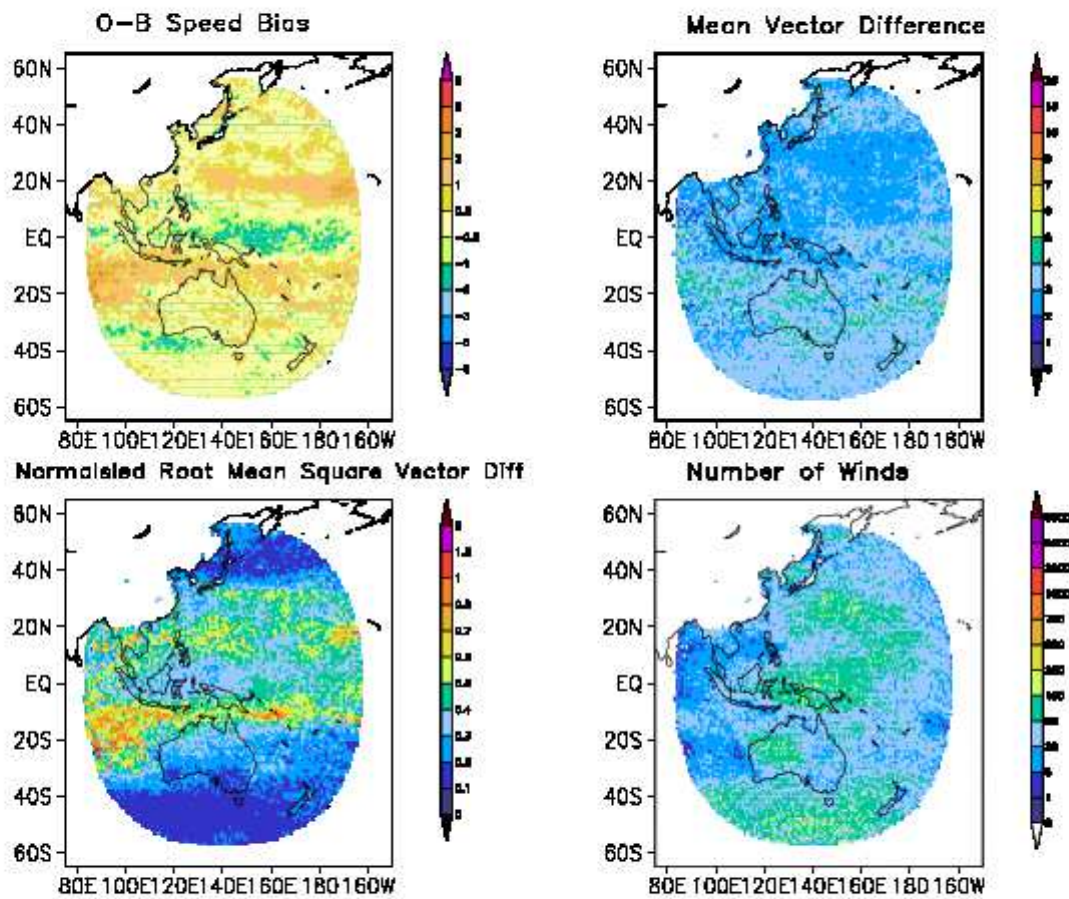


No. of OBS: 125450  
Bias : 0.07  
STD : 1.70

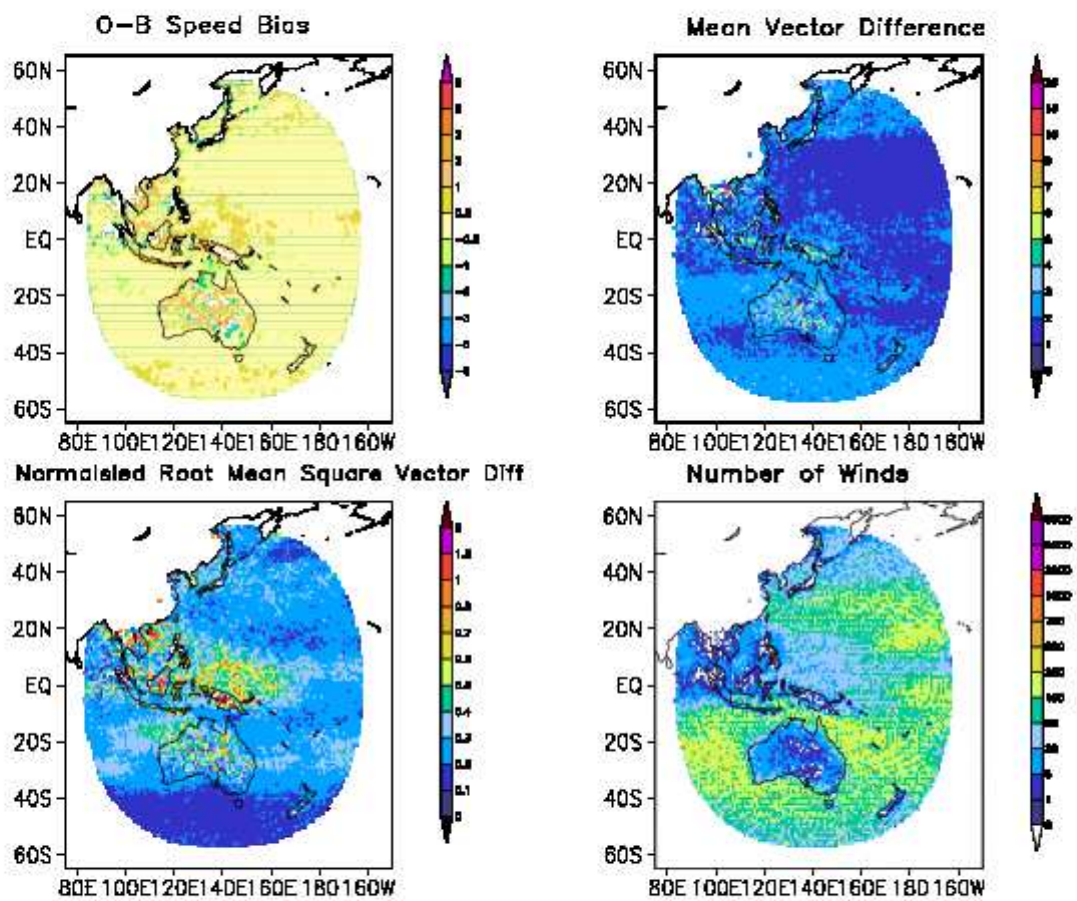
# HIMAWARI-9 IR, High Level, Above 400 hPa, September 2024



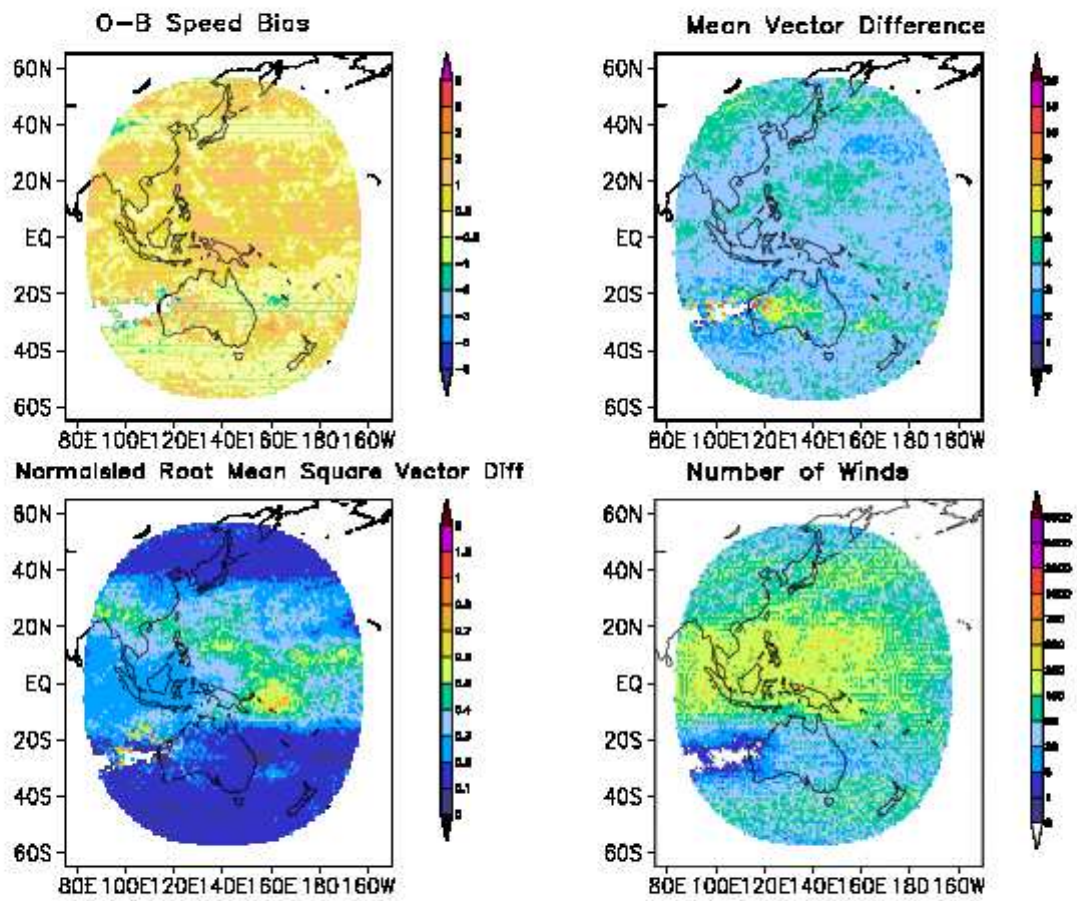
HIMAWARI-9 IR, Mid Level, 700 – 401 hPa, September 2024



### HIMAWARI-9 IR, Low Level, Below 700 hPa, September 2024

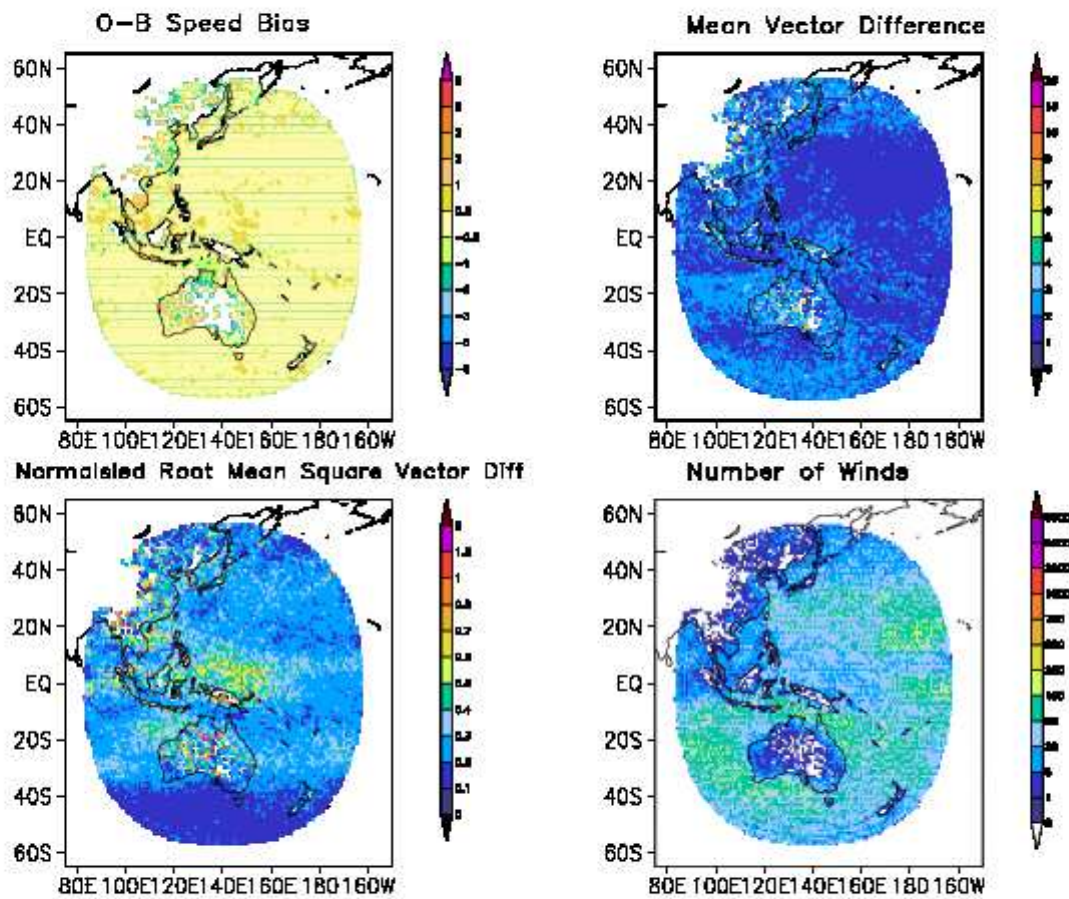


# HIMAWARI-9 WV, Above 400 hPa, September 2024

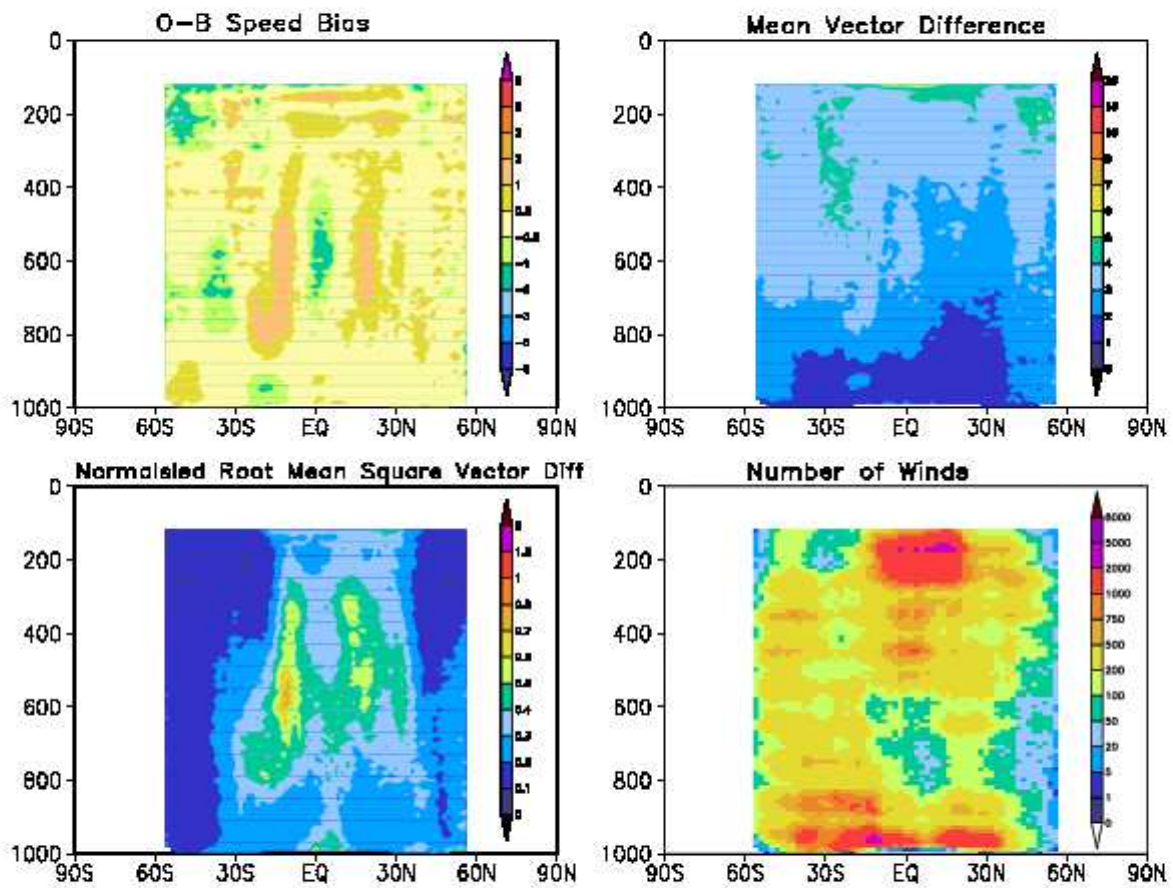




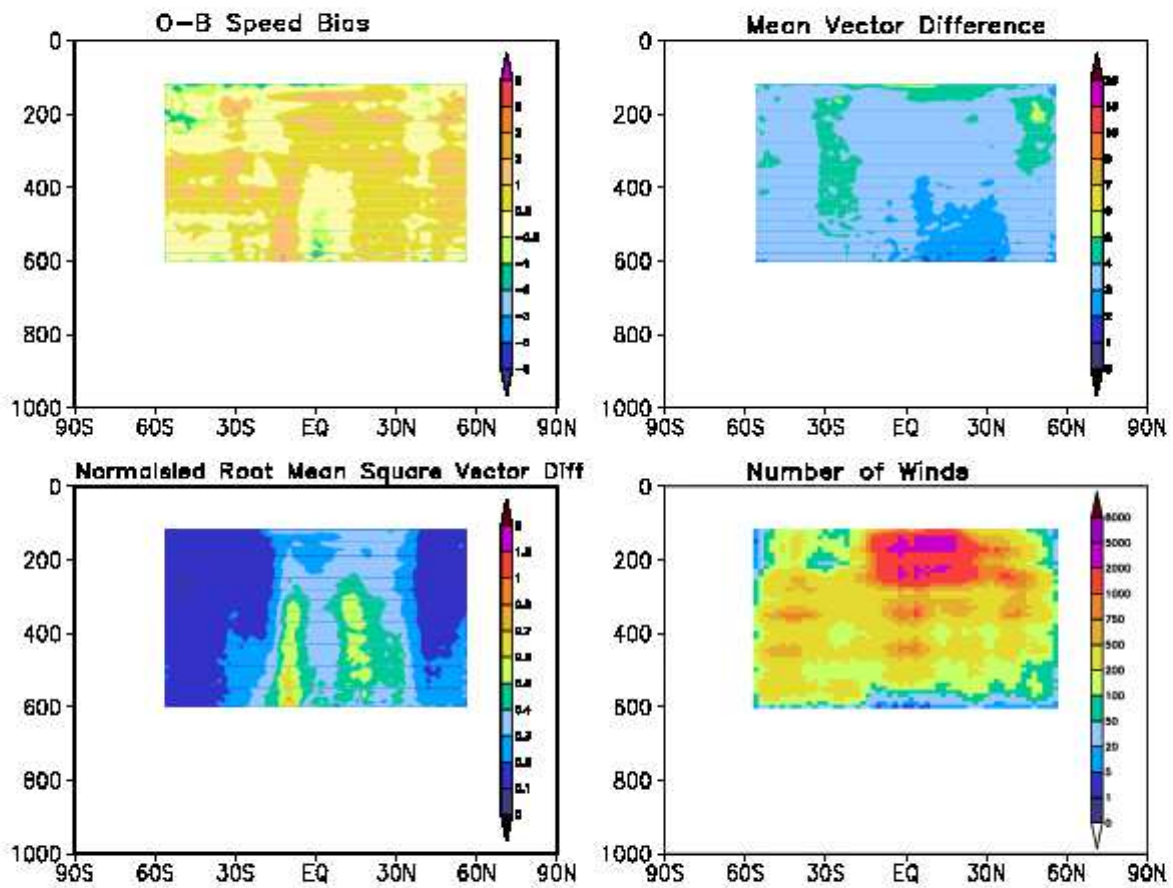
# HIMAWARI-9 VIS, Low Level, Below 700 hPa, September 2024



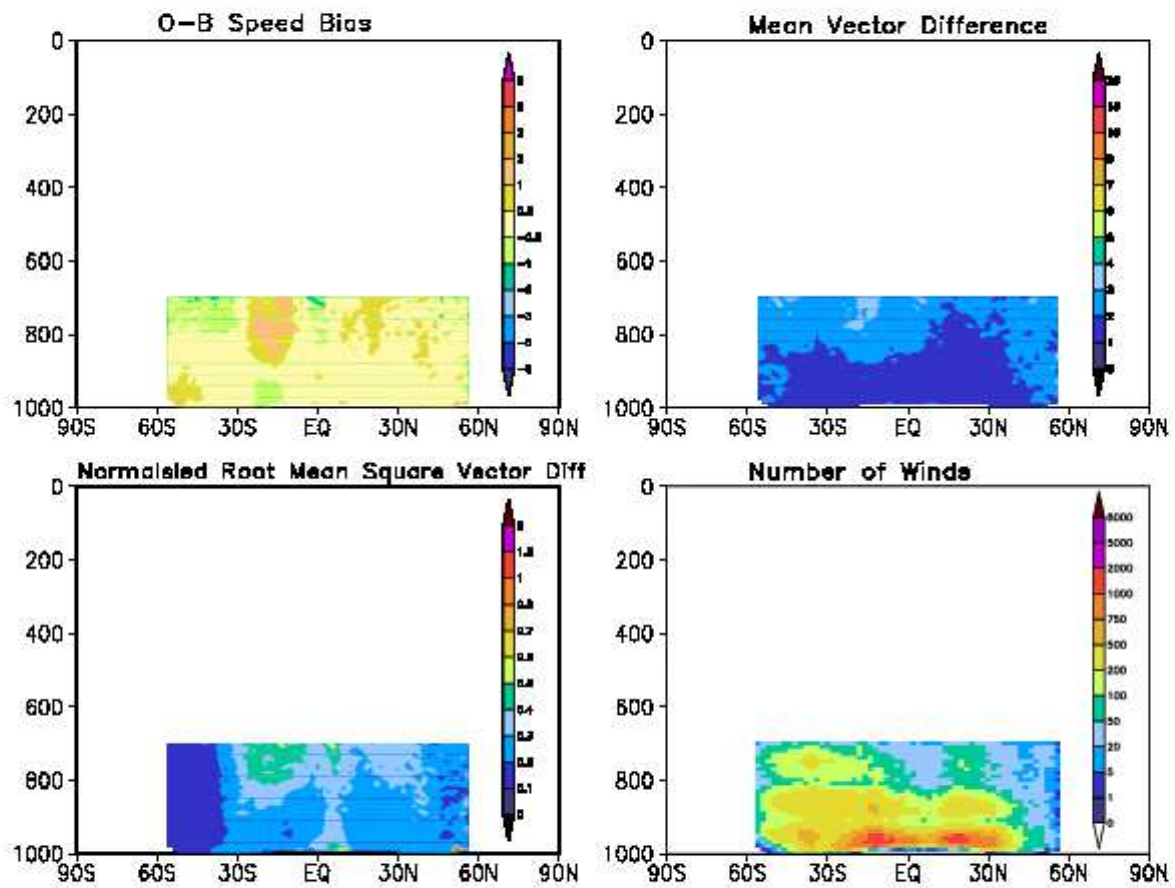
### HIMAWARI-9 IR, September 2024



### HIMAWARI-9 WV, September 2024



## HIMAWARI-9 VIS, September 2024



Validation against  
Insitu Observations

HIMAWARI-9 SATELLITE AMVS  
(Comparison against Insitu Observations)  
Reporting Period: 01 09 2024 - 30 09 2024

NORTHERN HEMISPHERE

	Mean AMV WS	Mean INSITU WS	Speed Bias	RMSVD	Number of Collocations
Hig Lev IR:	11.46	10.42	1.04	5.04	111
Mid Lev IR:	7.66	7.03	0.63	3.34	16
Low Lev IR:	7.50	7.89	-0.38	4.00	4
Hig Lev WV:	11.42	10.81	0.61	5.08	502
Low Lev VIS:	0.00	0.00	0.00	0.00	0

TROPICS

	Mean AMV WS	Mean INSITU WS	Speed Bias	RMSVD	Number of Collocations
Hig Lev IR:	15.78	16.47	-0.69	6.65	4489
Mid Lev IR:	7.20	7.38	-0.17	4.03	611
Low Lev IR:	8.17	6.43	1.73	4.55	816
Hig Lev WV:	15.41	16.04	-0.64	7.93	722
Low Lev VIS:	0.00	0.00	0.00	0.00	0

SOUTHERN HEMISPHERE

	Mean AMV WS	Mean INSITU WS	Speed Bias	RMSVD	Number of Collocations
Hig Lev IR:	18.91	20.27	-1.36	3.90	8
Mid Lev IR:	0.00	0.00	0.00	0.00	0
Low Lev IR:	0.00	0.00	0.00	0.00	0
Hig Lev WV:	0.00	0.00	0.00	0.00	0
Low Lev VIS:	0.00	0.00	0.00	0.00	0

Hig Lev = Above 400 hPa  
Mid Lev = 700 - 401 hPa  
Low Lev = Below 700 hPa