

Validation of

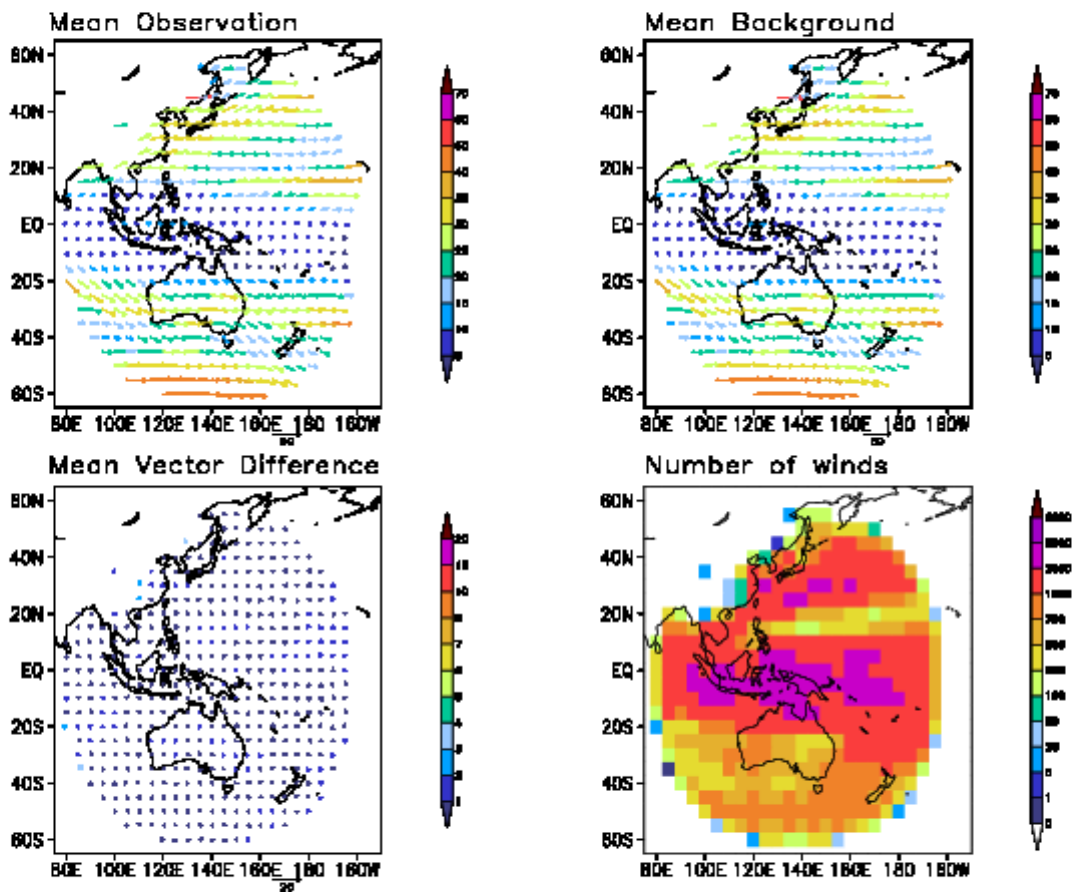
HIMAWARI-9

Atmospheric Motion Vectors

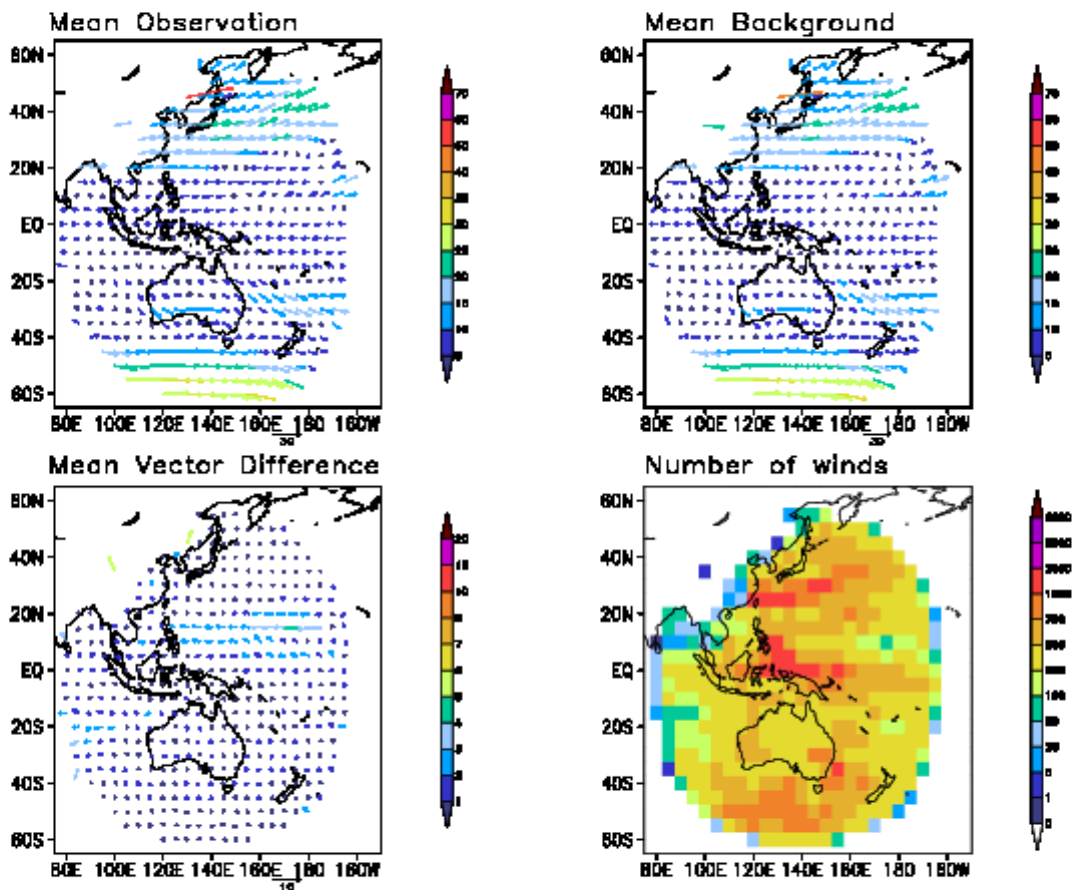
April 2024

Validation Against
NCMRWF NGFS First Guess

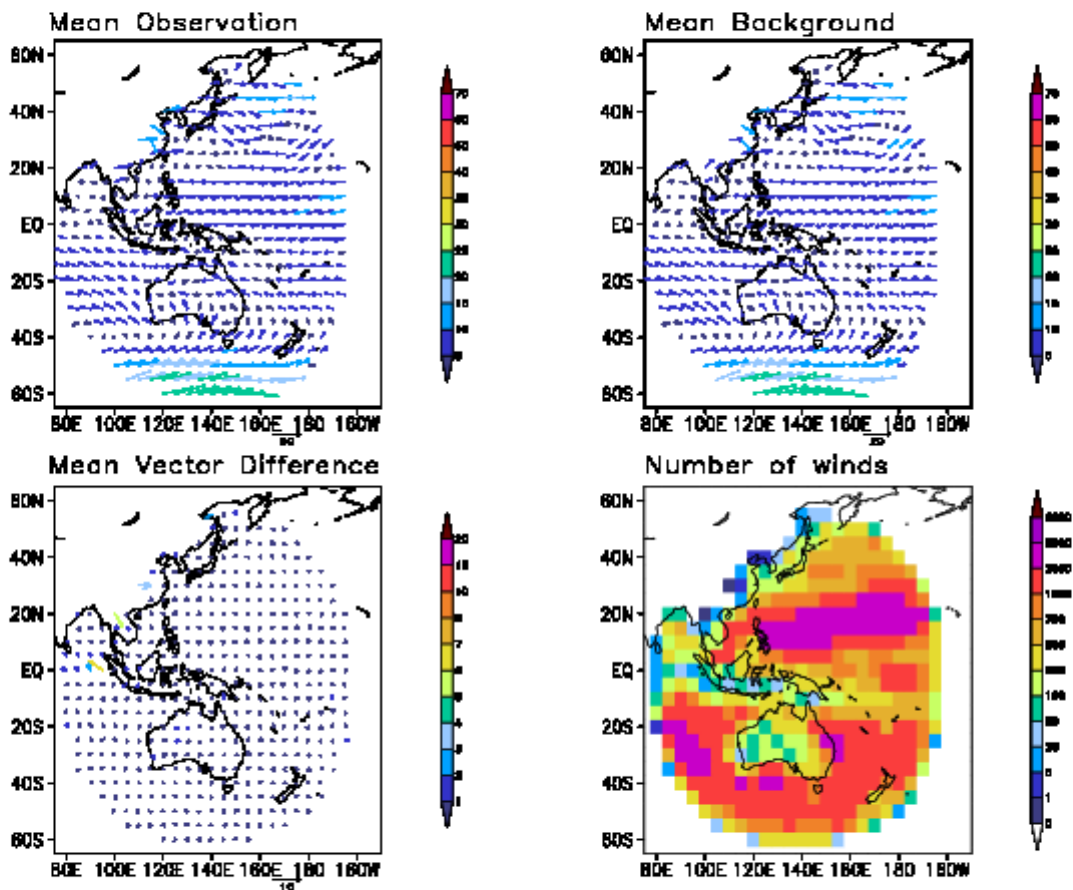
HIMAWARI-9 IR, High Level, Above 400 hPa, April 2024



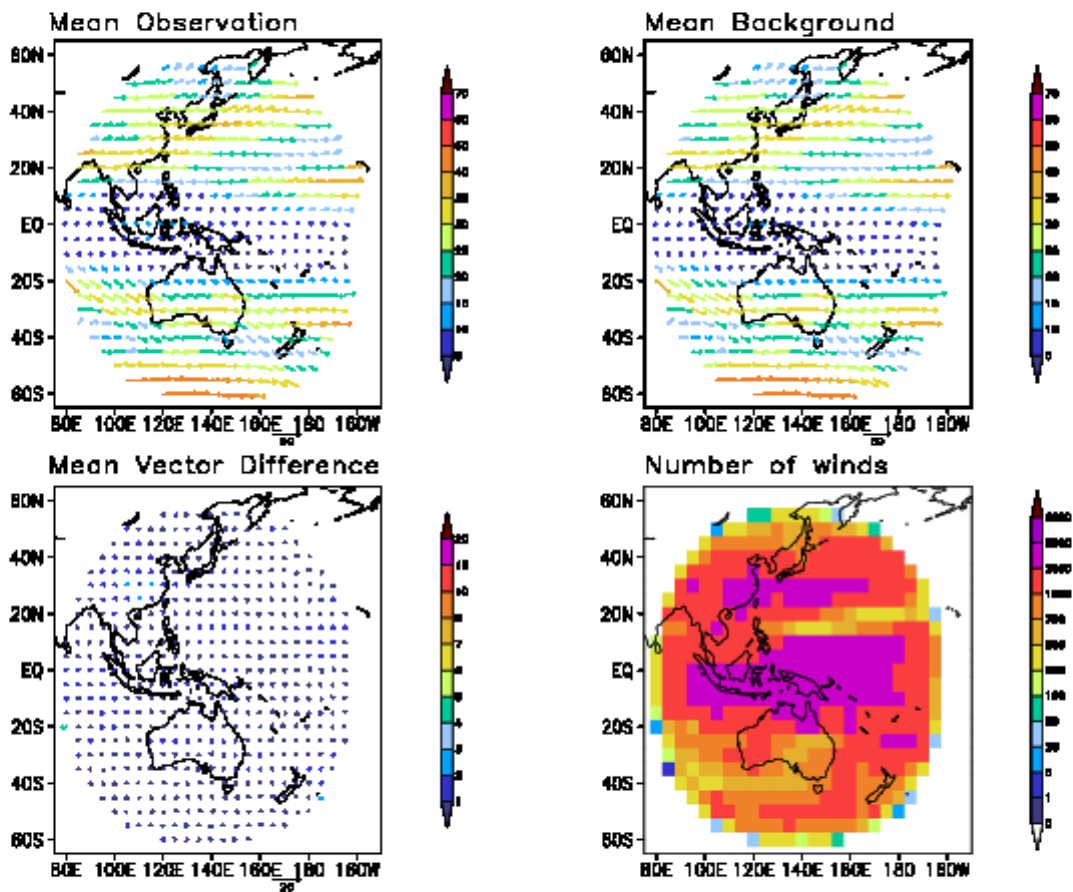
HIMAWARI-9 IR, Mid Level, 700 – 401 hPa, April 2024



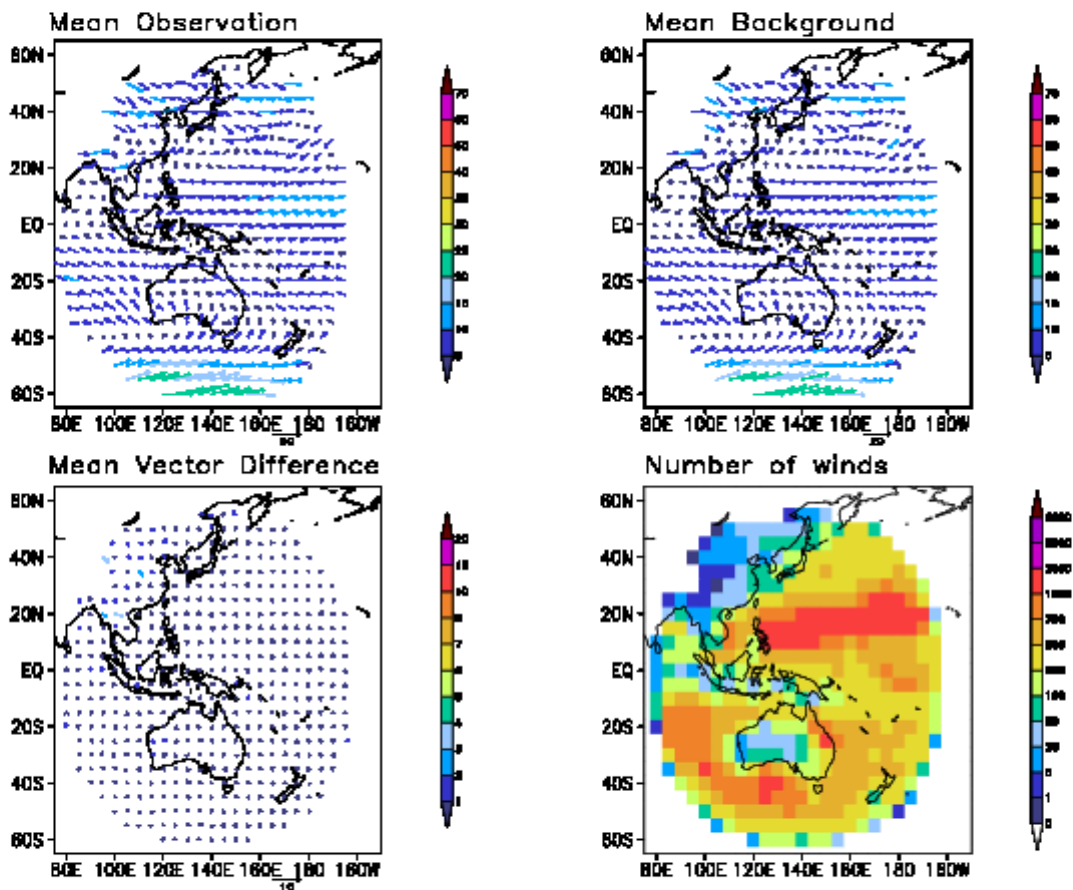
HIMAWARI-9 IR, Low Level, Below 700 hPa, April 2024



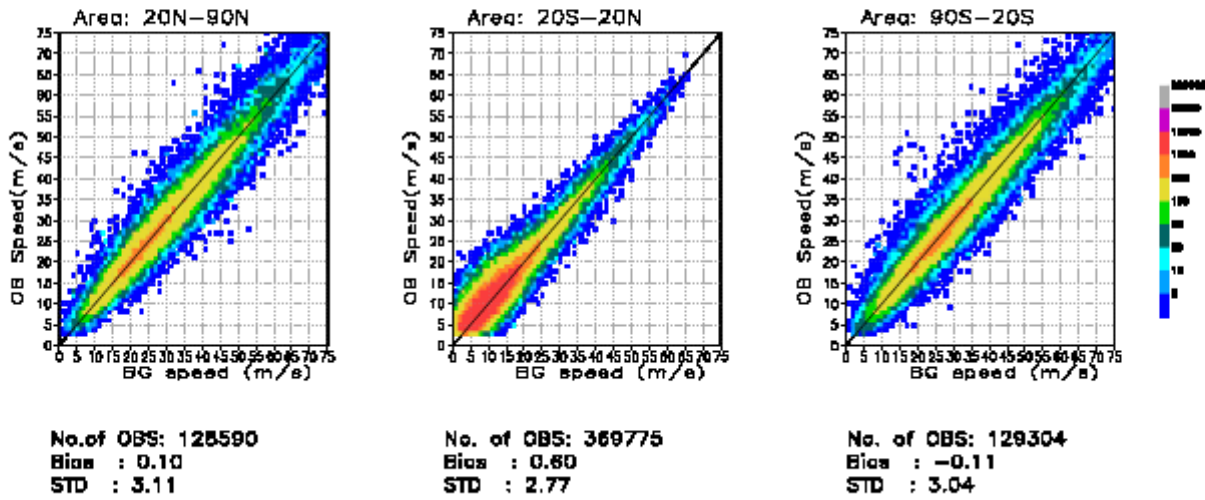
HIMAWARI-9 WV, High Level, Above 400 hPa, April 2024



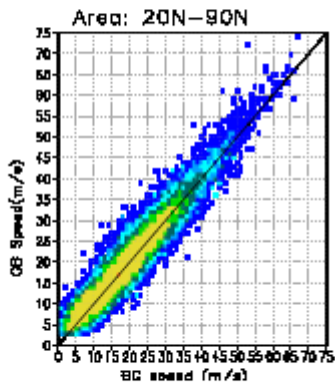
HIMAWARI-9 VIS, Low Level, Below 700 hPa, April 2024



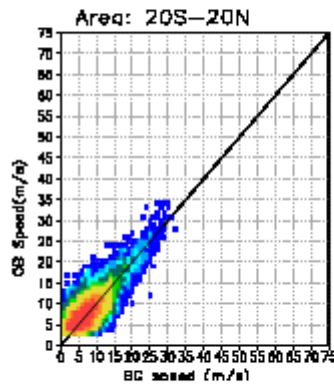
HIMAWARI-9 IR, April 2024, High Level, Above 400 hPa



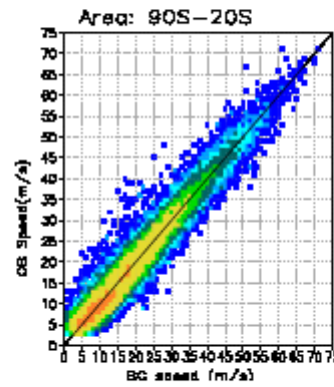
HIMAWARI-9 IR, Mid Level, 700 – 401 hPa, April 2024



No. of OBS: 111476
Bias : 0.10
STD : 1.68



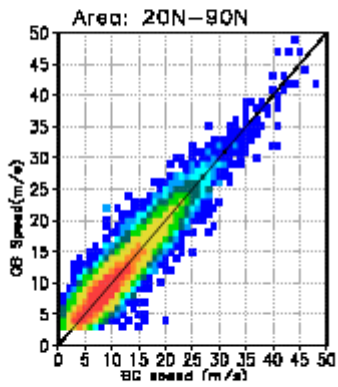
No. of OBS: 220288
Bias : -0.01
STD : 1.59



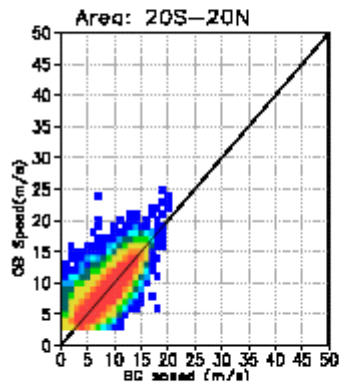
No. of OBS: 203468
Bias : 0.08
STD : 1.74



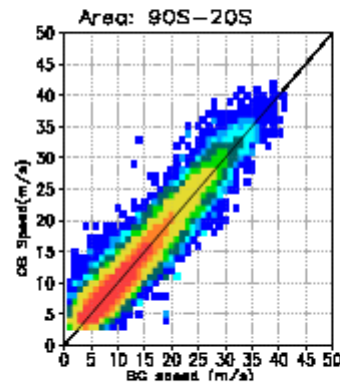
HIMAWARI-9 IR, April 2024, Low Level, Below 700 hPa



No. of OBS: 111476
Bias : 0.10
STD : 1.68

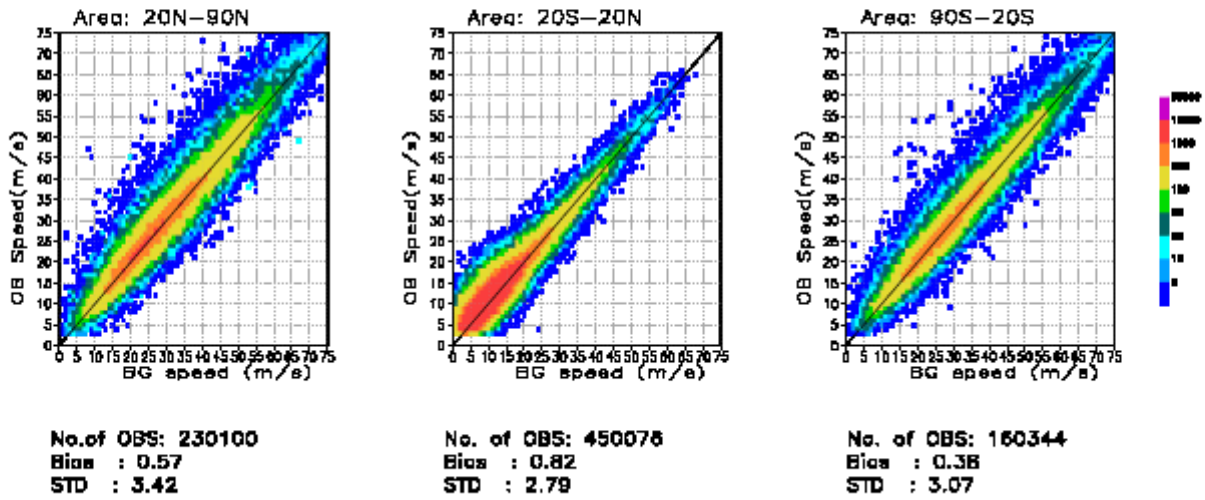


No. of OBS: 220288
Bias : -0.01
STD : 1.59

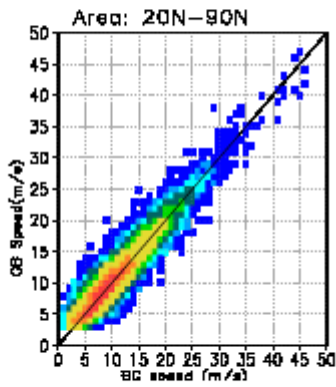


No. of OBS: 203468
Bias : 0.08
STD : 1.74

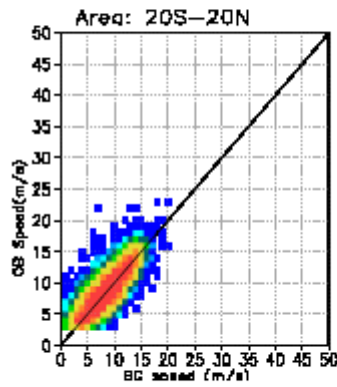
HIMAWARI-9 WV, April 2024, High Level, Above 400 hPa



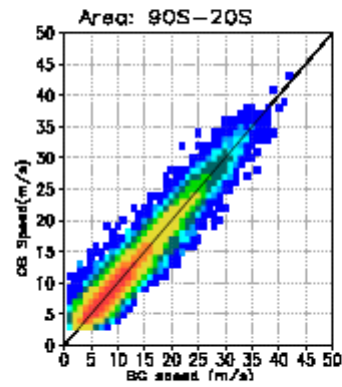
HIMAWARI-9 VIS, April 2024, Low Level, Below 700 hPa



No. of OBS: 57358
Bias : 0.22
STD : 1.60

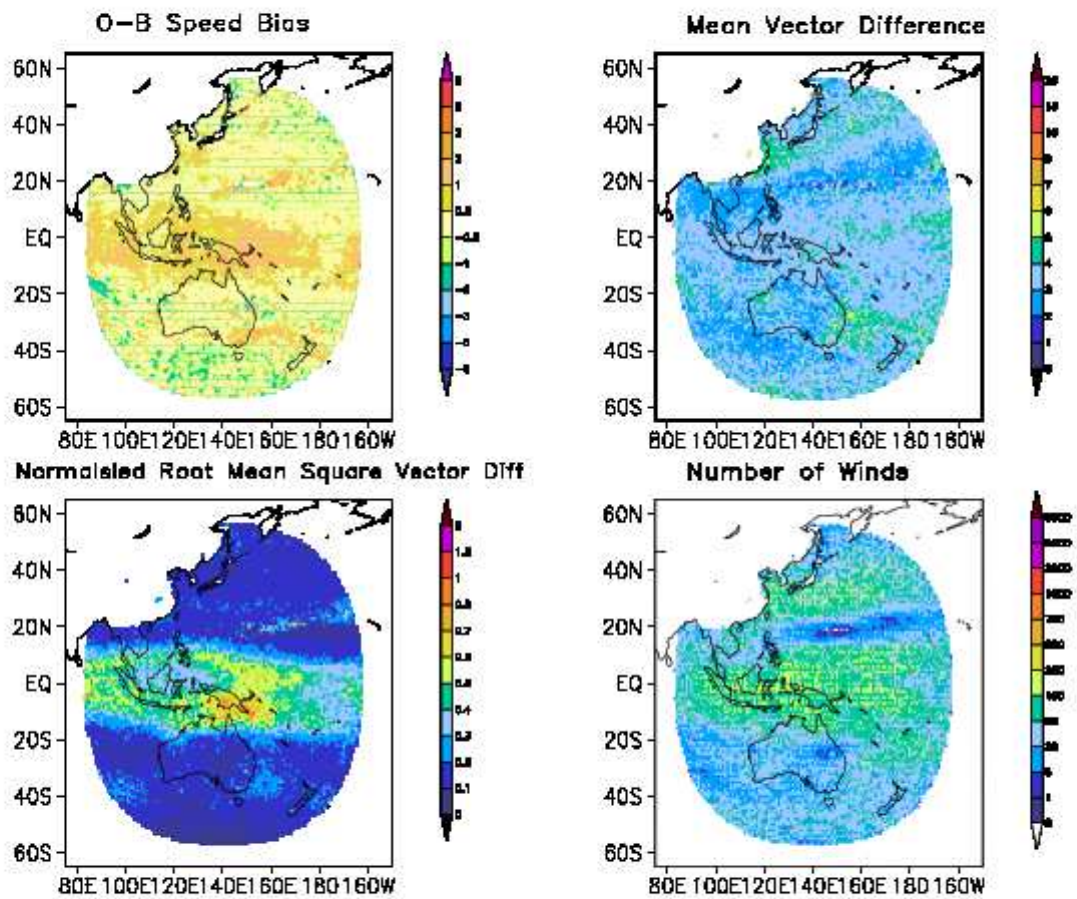


No. of OBS: 121089
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STD : 1.53

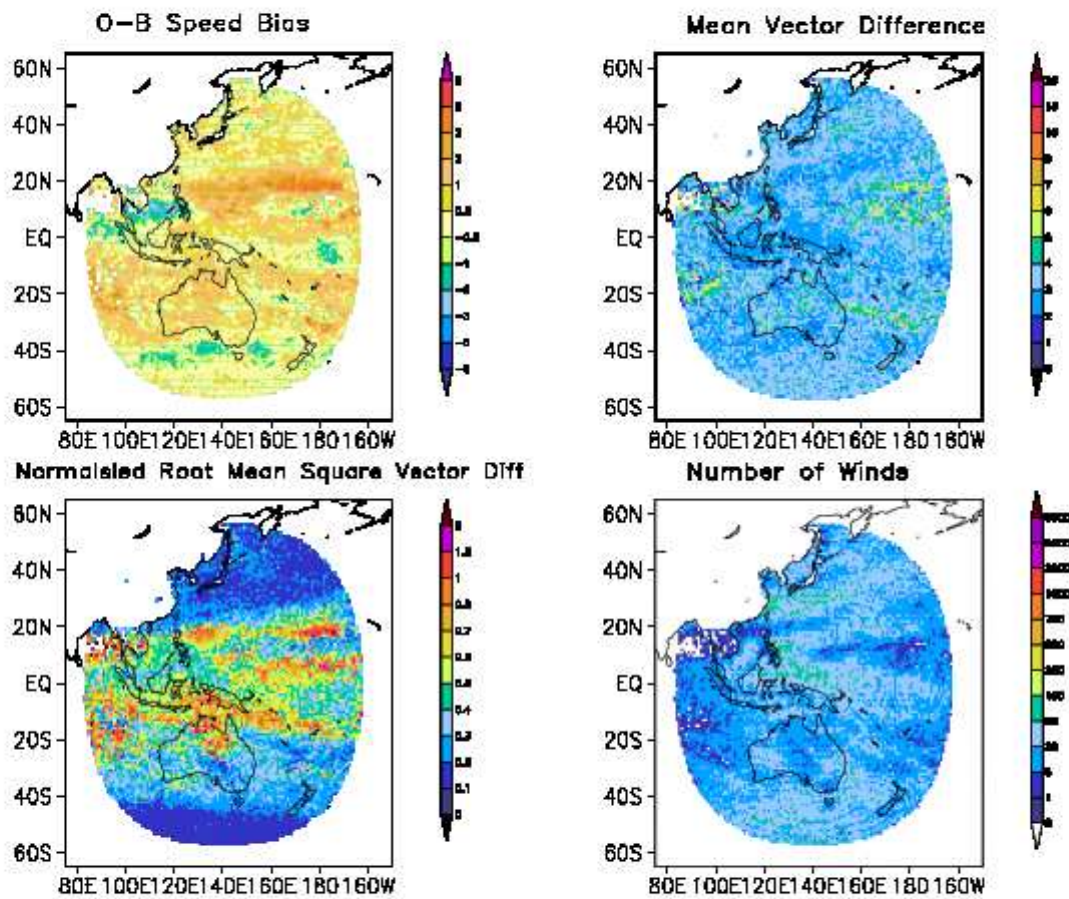


No. of OBS: 60434
Bias : 0.04
STD : 1.64

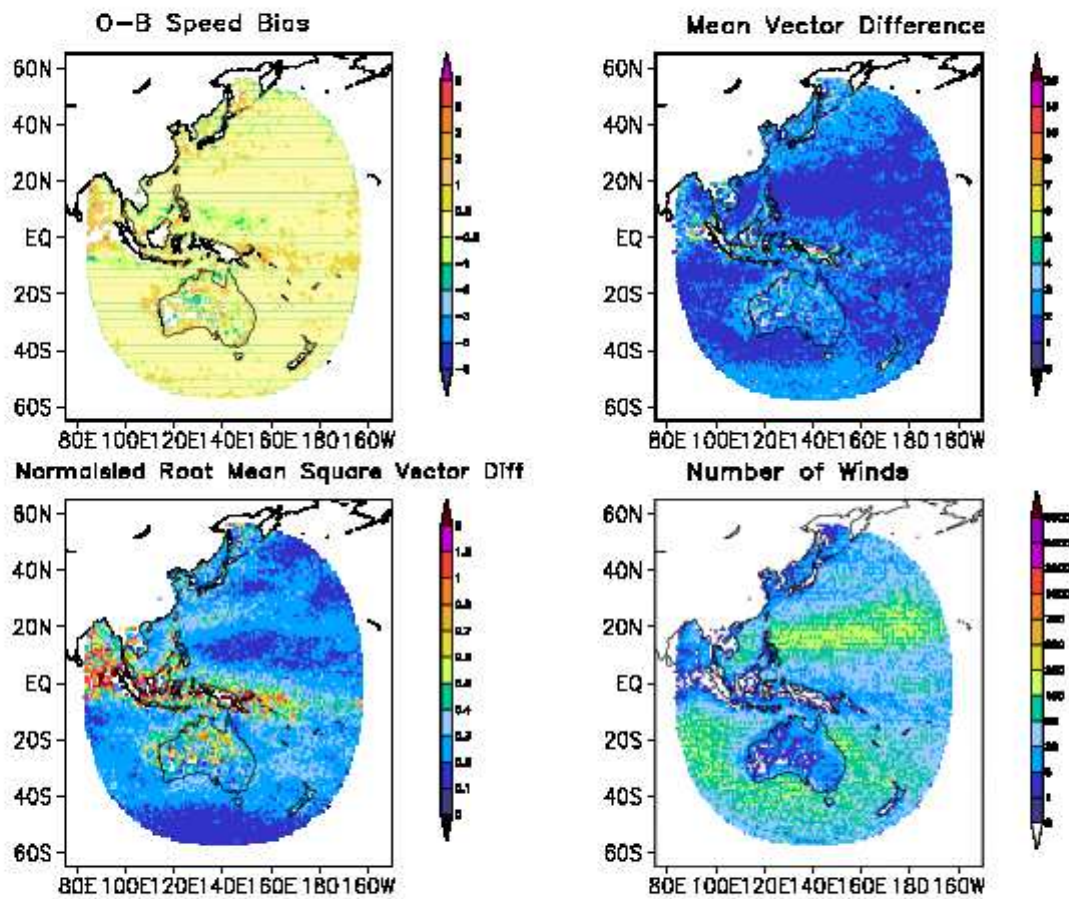
HIMAWARI-9 IR, High Level, Above 400 hPa, April 2024



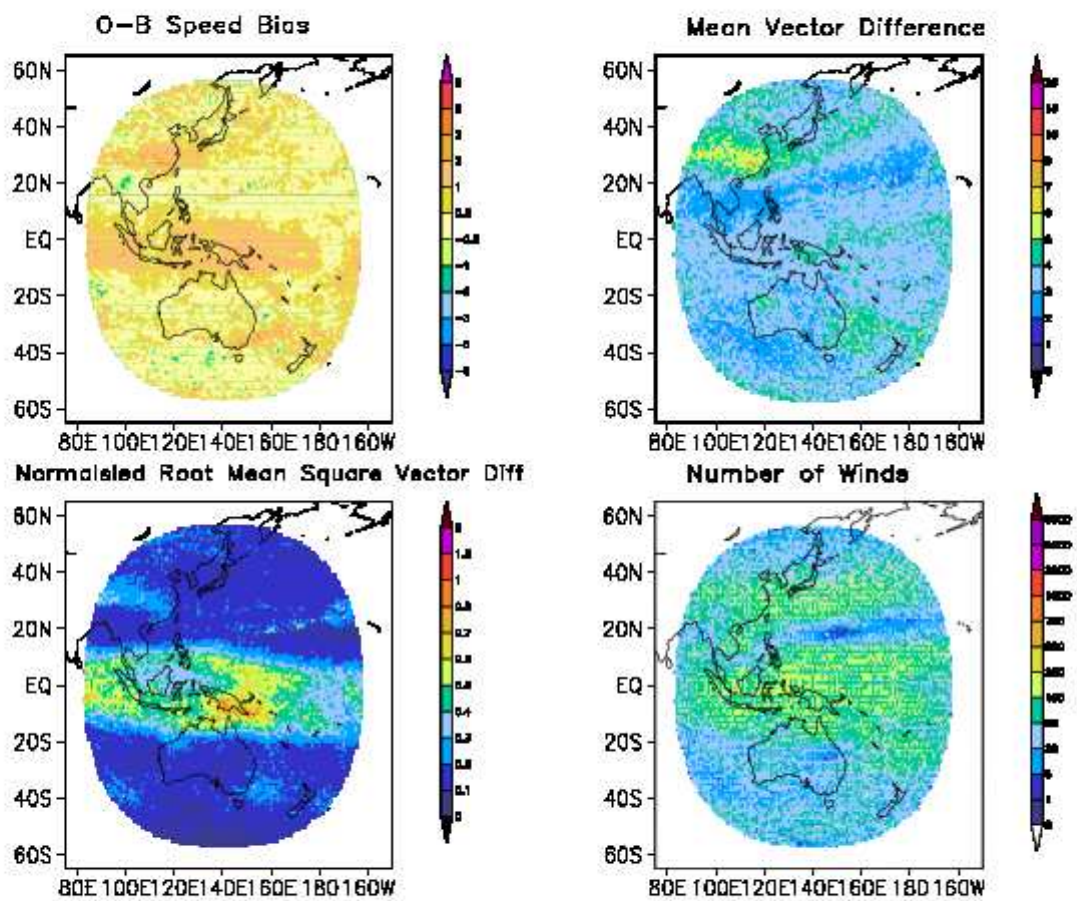
HIMAWARI-9 IR, Mid Level, 700 – 401 hPa, April 2024



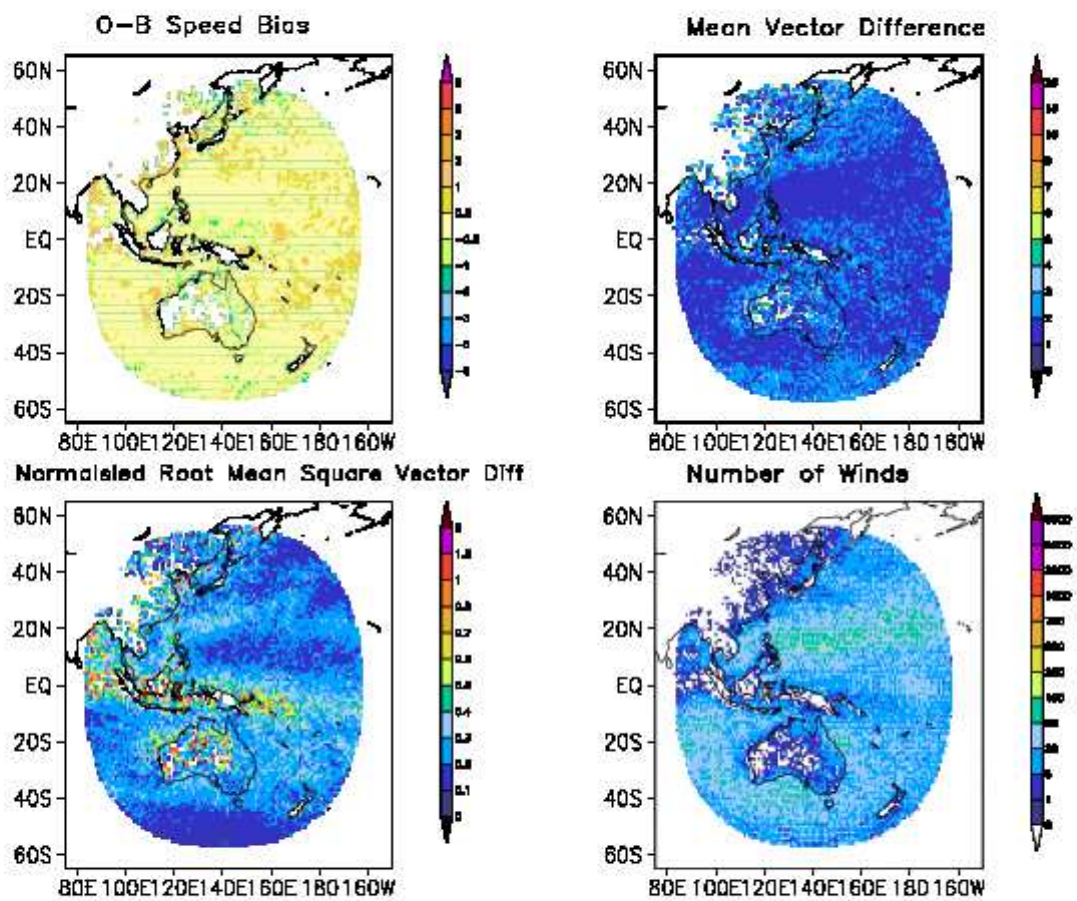
HIMAWARI-9 IR, Low Level, Below 700 hPa, April 2024



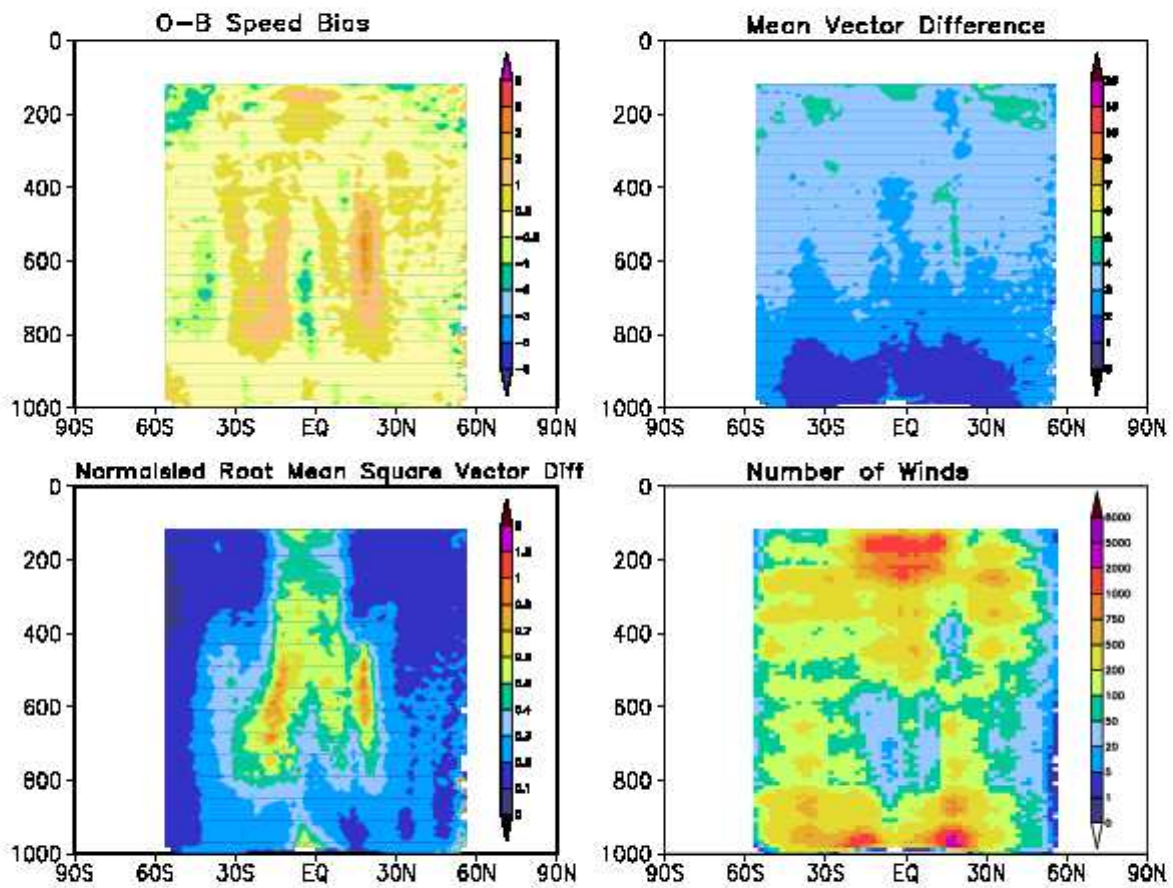
HIMAWARI-9 WV, Above 400 hPa, April 2024



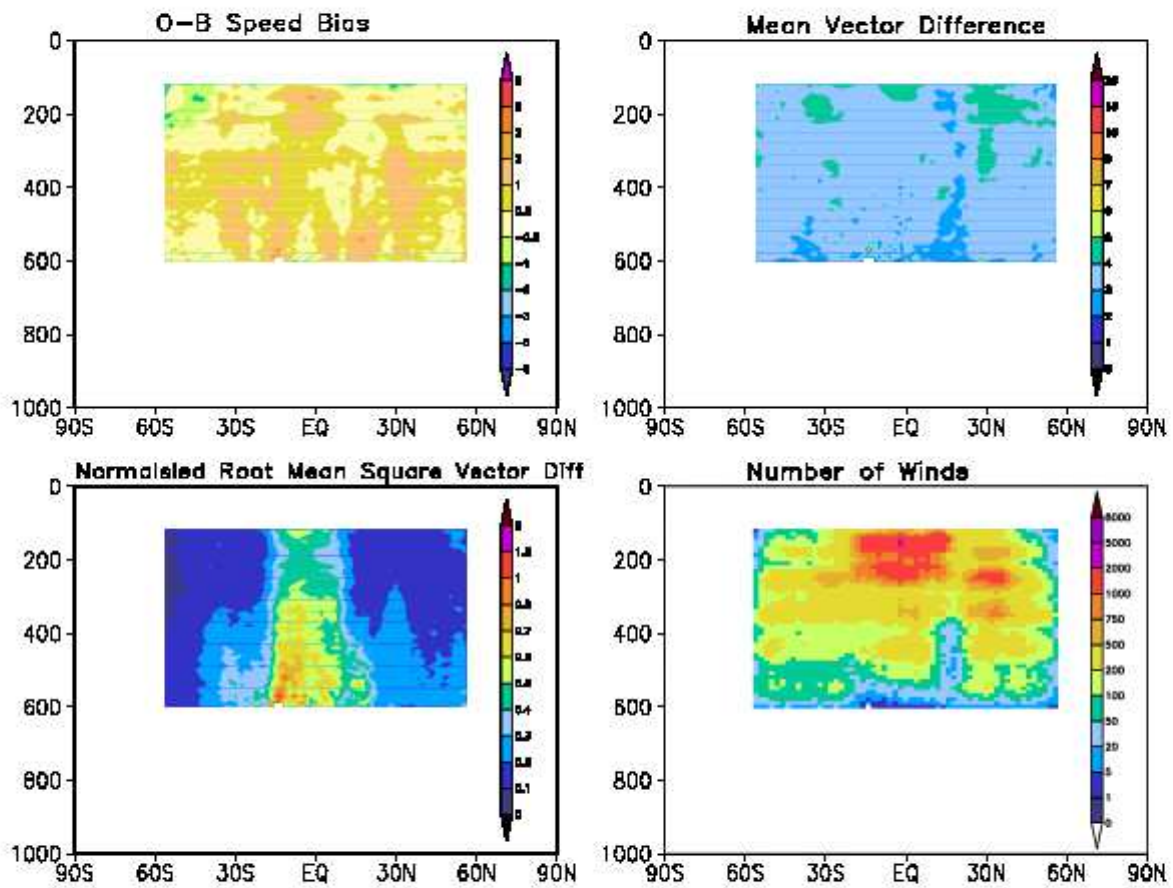
HIMAWARI-9 VIS, Low Level, Below 700 hPa, April 2024



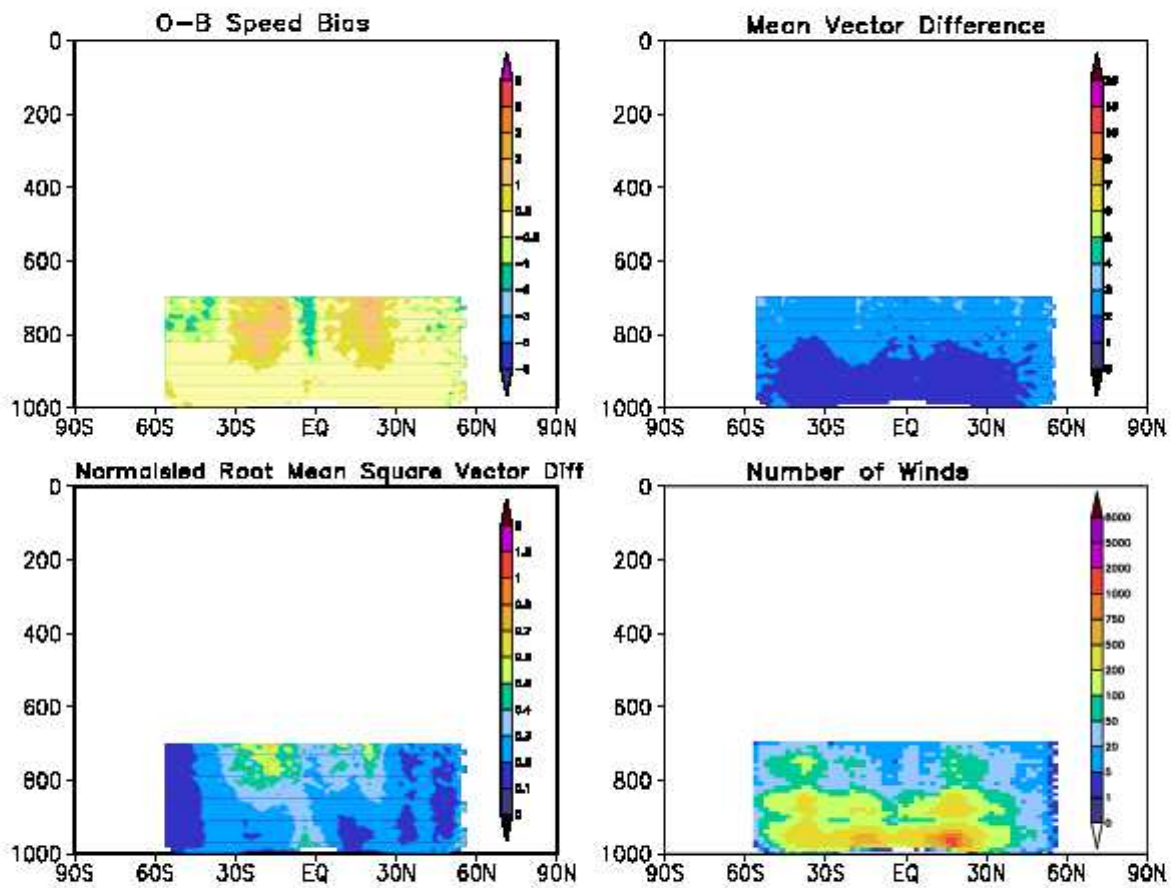
HIMAWARI-9 IR, April 2024



HIMAWARI-9 WV, April 2024



HIMAWARI-9 VIS, April 2024



Validation against
Insitu Observations

HIMAWARI-9 SATELLITE AMVS
(Comparison against Insitu Observations)
Reporting Period: 01 04 2024 - 30 04 2024

NORTHERN HEMISPHERE

	Mean AMV WS	Mean INSITU WS	Speed Bias	RMSVD	Number of Collocations
Hig Lev IR:	32.40	33.35	-0.96	6.66	190
Mid Lev IR:	19.31	18.85	0.46	5.05	49
Low Lev IR:	9.18	7.32	1.86	4.84	19
Hig Lev WV:	32.93	33.08	-0.15	7.42	1168
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:	10.54	10.92	-0.39	5.25	4148
Mid Lev IR:	6.51	7.22	-0.71	4.07	491
Low Lev IR:	6.69	5.73	0.96	3.82	363
Hig Lev WV:	11.05	11.25	-0.20	5.33	3349
Low Lev VIS:	5.00	6.17	-1.17	1.47	1

SOUTHERN HEMISPHERE

	Mean AMV WS	Mean INSITU WS	Speed Bias	RMSVD	Number of Collocations
Hig Lev IR:	27.62	27.75	-0.13	8.61	190
Mid Lev IR:	10.25	9.68	0.57	4.87	21
Low Lev IR:	9.73	9.04	0.69	4.86	66
Hig Lev WV:	29.37	28.70	0.68	5.99	44
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