Validation of

METEOSAT–8

Atmospheric Motion Vectors

May 2022
Validation Against
NCMRWF NGFS First Guess
METEOSAT-8 IR, High Level, Above 400 hPa, May 2022
METEOSAT-8 IR, Low Level, Below 700 hPa, May 2022
METEOSAT-8 WV, High Level, Above 400 hPa, May 2022

Mean Observation

Mean Background

Mean Vector Difference

Number of winds
METEOSAT-8 VIS, Low Level, Below 700 hPa, May 2022

Mean Observation

Mean Background

Mean Vector Difference

Number of winds
METEOSAT-8 IR, May 2022, High Level, Above 400 hPa

Area: 20N–50N
No. of OBS: 241
Bias : -1.00
STD : 3.36

Area: 20S–20N
No. of OBS: 4335
Bias : 0.24
STD : 2.94

Area: 90S–20S
No. of OBS: 2453
Bias : -2.16
STD : 5.23
METEOSAT-8 IR, Mid Level, 700 – 401 hPa, May 2022

Area: 20N–50N
No. of OBS: 81
Bias : -0.89
STD : 1.67

Area: 20S–20N
No. of OBS: 16067
Bias : 0.27
STD : 1.62

Area: 80S–20S
No. of OBS: 6650
Bias : 0.29
STD : 1.75
METEOSAT-8 IR, May 2022, Low Level, Below 700 hPa

Area: 20N-50N

No. of OBS: 81
Bias : -0.89
STD  : 1.67

Area: 20S-20N

No. of OBS: 16067
Bias : 0.27
STD  : 1.62

Area: 80S-20S

No. of OBS: 6550
Bias : 0.29
STD  : 1.76
METEOSAT-8 WV, May 2022, High Level, Above 400 hPa

Area: 20N-50N

No. of OBS: 5661
Bias: -0.49
STD: 4.52

Area: 20S-20N

No. of OBS: 11949
Bias: 0.61
STD: 3.18

Area: 90S-20S

No. of OBS: 6540
Bias: -0.22
STD: 4.55
METEOSAT-8 VIS, May 2022, Low Level, Below 700 hPa

Area: 20N-50N
No. of OBS: 2025
Bias : -0.22
STD : 2.04

Area: 20S-20N
No. of OBS: 24309
Bias : 0.37
STD : 1.65

Area: 90S-20S
No. of OBS: 9144
Bias : 0.23
STD : 1.78
METEOSAT-8 IR, High Level, Above 400 hPa, May 2022

O-B Speed Bias

Mean Vector Difference

Normalized Root Mean Square Vector Diff

Number of Winds
METEOSAT-8 IR, Mid Level, 700 - 401 hPa, May 2022
METEOSAT-8 IR, Low Level, Below 700 hPa, May 2022

O-B Speed Bias

Mean Vector Difference

Normalized Root Mean Square Vector Diff

Number of Winds
METEOSAT–8 WV, Above 400 hPa, May 2022
METEOSAT-8 VIS, Low Level, Below 700 hPa, May 2022

O-B Speed Bias

Mean Vector Difference

Normalized Root Mean Square Vector Diff

Number of Winds
METEOSAT-8 IR, May 2022

O-B Speed Bias

Mean Vector Difference

Normalised Root Mean Square Vector Diff

Number of Winds
Validation against Insitu Observations
## NORTHERN HEMISPHERE

<table>
<thead>
<tr>
<th>Level</th>
<th>AMV WS</th>
<th>INSITU WS</th>
<th>Bias</th>
<th>RMSVD</th>
<th>Collocations</th>
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## TROPICS

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<th>Collocations</th>
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## SOUTHERN HEMISPHERE

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