

# November 2013

## AMVs vs Radiosonde (00 & 12 UTC)

<b>Indian Region (20E-130E ; 50S-50N)</b>	No of Collocation	MVD	RMSVD	SD	Mean Speed Dif (ABS)	Mean Dir Dif (ABS)	Bias	Mean Speed AMV	Mean Speed RS
Low level CMV	418	5.9	6.4	2.2	4.3	22.0	1.7	10.7	8.9
Mid level CMV	1641	7.2	8.3	3.9	5.4	18.0	1.4	15.8	14.4
High level CMV	7502	5.9	7.0	3.8	4.2	16.5	-0.6	13.3	13.9
High level WVWV	7408	6.2	7.5	4.2	4.4	15.9	0.3	15.5	15.2

<b>Northern hemisphere (20E-130E ; 20N-50N)</b>	No of Collocation	MVD	RMSVD	SD	Mean Speed Dif (ABS)	Mean Dir Dif (ABS)	Bias	Mean Speed AMV	Mean Speed RS
Low level CMV	284	6.5	7.0	2.3	4.6	22.5	1.6	11.3	9.7
Mid level CMV	1224	7.3	8.3	3.8	5.6	15.5	0.9	17.1	16.2
High level CMV	1350	7.7	8.8	4.1	5.8	13.0	-0.6	21.5	22.1
High level WVWV	2506	7.8	7.8	5.0	5.7	14.1	0.5	21.9	21.4

<b>Tropics (20E-130E ; 20S-20N)</b>	No of Collocation	MVD	RMSVD	SD	Mean Speed Dif (ABS)	Mean Dir Dif (ABS)	Bias	Mean Speed AMV	Mean Speed RS
Low level CMV	131	5.0	5.2	1.0	3.4	23.2	1.9	9.8	7.9
Mid level CMV	406	6.5	7.0	2.0	4.8	26.0	3.2	10.8	7.6
High level CMV	6126	5.4	6.3	3.2	3.8	17.2	-0.7	11.3	12.0
High level WVWV	4831	5.2	6.0	2.9	3.6	16.7	0.2	12.0	11.9

<b>Southern hemisphere (20E-130E ; 50S-20S)</b>	No of Collocation	MVD	RMSVD	SD	Mean Speed Dif (ABS)	Mean Dir Dif (ABS)	Bias	Mean Speed AMV	Mean Speed RS
Low level CMV	3	10.1	10.1	0.2	8.0	35.3	1.5	11.6	10.1
Mid level CMV	11	8.8	8.9	1.4	5.6	30.7	2.4	13.0	10.6
High level CMV	26	12.0	12.0	0.7	7.3	25.2	6.4	22.5	16.1
High level WVWV	71	10.5	10.6	1.2	7.7	23.6	4.7	19.0	14.3

MVD: Mean vector difference

RMSVD: Root mean square vector difference

SD: Standard Deviation

Mean Speed Dif (ABS): Absolute mean wind speed difference

Mean Dir Dif (ABS): Absolute mean wind direction difference

High level: 100-400hPa

Mid level: 401-700hPa

Low level: 701-975hPa

**MVD, RMSVD, SD, Mean Speed Dif, Mean Speed AMV, Mean Speed RS are in  $\text{ms}^{-1}$ , Mean Dir Dif is in degree.**

**Collocation Criteria:**

- All AMVs within 150km of each radiosonde location and pressure difference  $\pm 20\text{hPa}$  are considered for validation.
- Collocation pairs with speed difference greater than  $30\text{ms}^{-1}$  and direction difference greater than  $60^\circ$  are screened out.
- Quality indicator is not used for the current validation.