

# August 2013

## AMV 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	188	6.0	6.4	1.6	4.3	25.0	2.7	10.8	8.1
Mid level CMV	548	6.2	6.7	2.5	4.1	22.1	0.9	11.6	10.7
High level CMV	4530	7.3	8.6	4.5	5.4	17.0	-1.7	13.9	15.6
High level WVVV	5253	7.6	9.0	4.9	5.5	17.0	-0.5	15.4	15.9

<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	96	6.5	6.7	0.9	4.5	29.5	3.4	10.3	6.9
Mid level CMV	341	6.2	6.6	2.0	4.0	21.7	0.7	12.2	11.5
High level CMV	1568	6.7	7.7	3.6	4.7	18.4	-0.9	13.3	14.2
High level WVVV	2514	7.0	7.0	4.3	4.9	18.4	-0.2	14.2	14.5

<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	68	5.7	5.9	0.9	4.0	24.2	1.8	9.7	7.9
Mid level CMV	204	5.7	6.1	1.9	3.5	24.0	1.2	10.0	8.9
High level CMV	2962	7.7	9.0	4.7	5.7	16.5	-2.1	14.1	16.2
High level WVVV	2712	7.9	9.3	4.8	5.9	15.8	-0.9	16.0	16.9

<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	24	5.6	5.8	1.0	4.3	12.7	1.4	15.1	13.7
Mid level CMV	3	6.6	6.6	0.2	3.7	25.5	3.7	14.5	10.9
High level CMV	-	-	-	-	-	-	-	-	-
High level WVVV	27	14.6	14.8	1.0	10.5	26.7	6.7	24.3	17.6

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.