March 2014
AMVs vs Radiosonde (0000 & 1200 UTC)

Northern hemisphere	No of Collocation	MVD	RMSVD	SD	Mean Speed Dif (ABS)	Mean Dir Dif (ABS)	Bias	Mean Speed AMV	Mean Speed RS
Low level CMV	252	5.7	6.0	1.8	3.7	23.4	1.8	10.1	8.4
Mid level CMV	1273	8.1	9.2	4.3	5.8	16.2	0.0	18.7	18.7
High level CMV	769	8.9	10.2	4.7	6.8	12.5	-1.8	24.6	26.4
High level WVWV	2649	8.9	8.9	6.0	6.3	14.4	-1.4	23.6	25.0

Tropics	No of Collocation	MVD	RMSVD	SD	Mean Speed Dif (ABS)	Mean Dir Dif (ABS)	Bias	Mean Speed AMV	Mean Speed RS
Low level CMV	152	5.4	5.6	1.1	3.7	26.8	2.4	8.5	6.1
Mid level CMV	304	6.3	6.6	1.5	4.4	23.0	3.4	11.7	8.4
High level CMV	3939	6.9	7.9	3.7	4.5	19.8	1.8	14.8	13.0
High level WVWV	3518	6.2	6.9	3.2	4.1	23.0	1.8	11.6	9.8

Southern hemisphere	No of Collocation	MVD	RMSVD	SD	Mean Speed Dif (ABS)	Mean Dir Dif (ABS)	Bias	Mean Speed AMV	Mean Speed RS
Low level CMV	6	5.5	5.5	0.0	4.2	21.1	4.2	10.8	6.6
Mid level CMV	5	5.0	5.0	0.2	3.6	17.3	2.8	9.3	6.5
High level CMV	39	5.3	5.5	0.7	3.1	25.8	2.0	9.7	7.8
High level WVWV	50	10.0	10.4	1.5	5.9	31.5	-0.1	12.8	13.0

Global	No of Collocation	MVD	RMSVD	SD	Mean Speed Dif (ABS)	Mean Dir Dif (ABS)	Bias	Mean Speed AMV	Mean Speed RS
Low level CMV	410	5.4	5.8	2.0	3.6	24.3	1.9	9.4	7.5
Mid level CMV	1582	7.8	9.0	4.3	5.6	17.3	0.7	17.9	17.2
High level CMV	4747	7.3	8.5	4.3	4.9	18.5	1.1	16.9	15.8
High level WVWV	6217	7.3	8.8	4.9	5.0	19.0	0.4	16.8	16.3

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 ms^{-1}, Mean Dir Dif is in degree.

Collocation Criteria:

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