Kalpana-1 AMV: August 2016
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	418	4.3	4.6	1.5	3.0	24.0	0.7	6.6	6.0
Mid level CMV	433	4.4	4.8	1.7	2.8	20.0	-0.4	9.1	9.4
High level CMV	2672	5.7	6.6	3.2	3.9	19.0	-0.7	11.5	12.2
High level WVWV	5442	6.3	6.3	4.0	4.3	17.7	1.1	14.5	13.4

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	167	4.9	5.0	1.0	3.3	25.8	1.4	8.3	6.9
Mid level CMV	150	4.3	4.6	1.0	3.0	16.5	2.0	9.9	7.9
High level CMV	5656	6.9	8.0	4.0	5.0	15.3	-0.3	15.9	16.2
High level WVWV	7805	7.6	9.0	4.7	5.6	15.1	2.6	19.1	16.4

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	82	6.0	6.1	1.0	3.9	21.1	0.6	11.8	11.3
Mid level CMV	14	4.1	4.1	0.4	3.6	6.9	-0.9	11.6	12.5
High level CMV	9	8.7	8.8	0.8	5.9	22.4	-5.9	21.1	27.0
High level WVWV	27	9.8	9.8	0.8	6.2	12.8	1.0	27.6	26.6

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	667	4.6	5.0	1.9	3.1	23.7	0.4	7.5	7.1
Mid level CMV	597	4.4	5.0	2.1	2.9	19.2	0.2	9.3	9.2
High level CMV	8337	6.5	7.5	3.8	4.6	16.5	-0.5	14.4	14.8
High level WVWV	13274	7.1	8.5	4.6	5.1	16.3	1.9	17.1	15.2

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.