

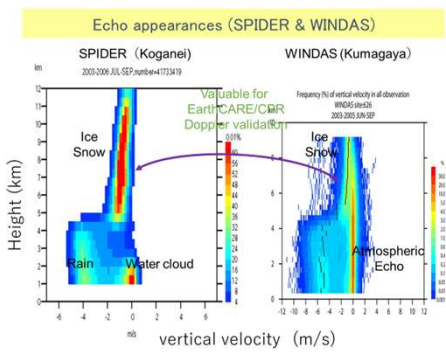
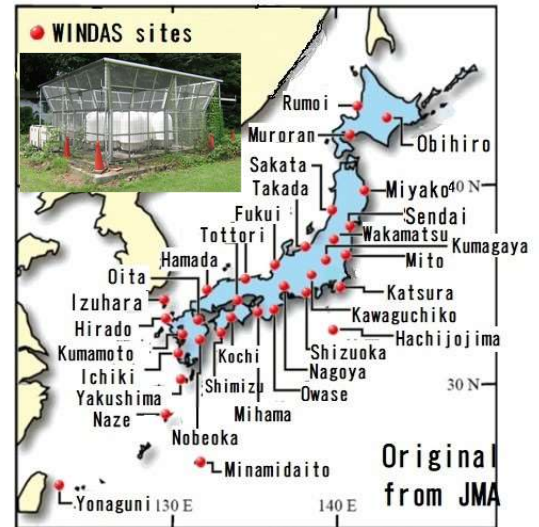
52. CPR Doppler validation using WINDAS

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For non-movable ground validation sites of the EarthCARE/CPR, simultaneous observation chance to the satellite will be few because of narrow footprint size of CPR and revisiting cycle of 25 days.

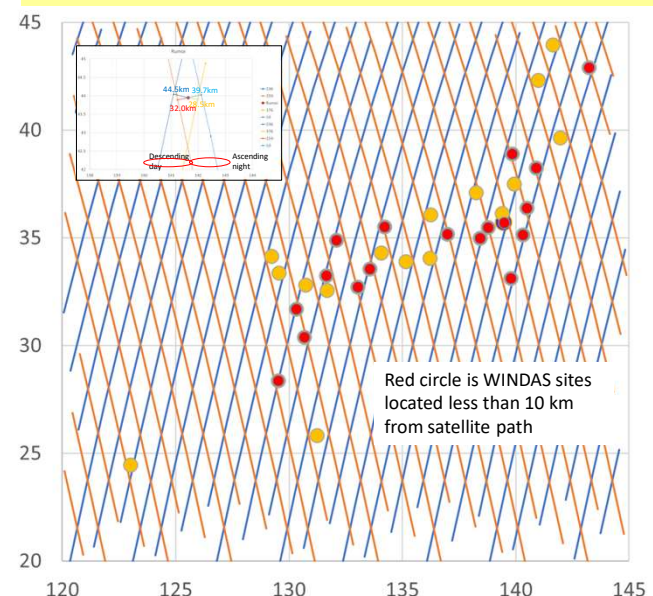
In order to validate vertical Doppler velocity of CPR, we are planning to utilize the data obtained by Japanese wind profiler networks (WINDAS) operated by Japan Meteorological Agency. WINDAS consist of 33 sites of L-band wind profilers from north to south of Japan. Main object of WINDAS observation is horizontal wind measurement in the troposphere, however vertical velocity is also observed by vertical pointing observation.

Echo target of L-band wind profiler is not only atmospheric turbulent, but also ice cloud and/or rain particle. We plan to identify ice cloud echo from WINDAS observation. Then, we validate CPR Doppler velocity using its vertical velocity. WINDAS measures vertical velocity every 10 minutes and is operated in 24 hours continuously. Since WINDAS has 33 sites in Japan, there may be at least one WINDAS site which locate near the EarthCARE satellite path.

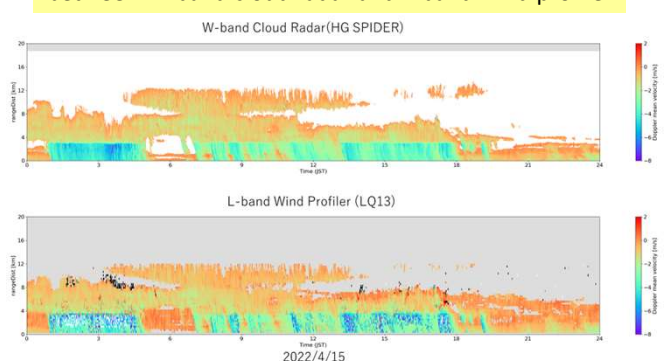


Status of funding and instruments
 WINDAS sites are operated by Japan Meteorological Agency. JAXA collaborate with JMA for EarthCARE validation using WINDAS.

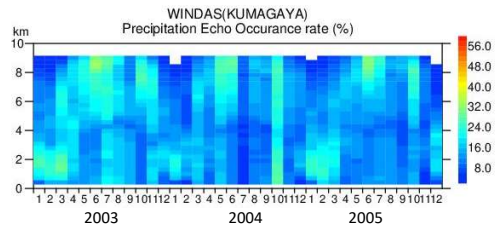
EC satellite path of ascending node longitudes = 0.8 degree



Comparison of vertical velocity time-height sections between W-band cloud radar and L-band wind profiler



Cloud/rain echo monthly mean appearance at Kumagaya WINDAS (2003-2005)



Number of WINDAS sites near the EC satellite path

	0.0	0.2	0.4	0.6	0.8
<10km	17	14	16	20	18
<1km	1	1	1	1	0

We thank the observation division of Japan Meteorological Agency for distributing us WINDAS data.

