



Comparison of Cloud Properties Derived from MSG SEVIRI and ARM Mobile Facility Observations



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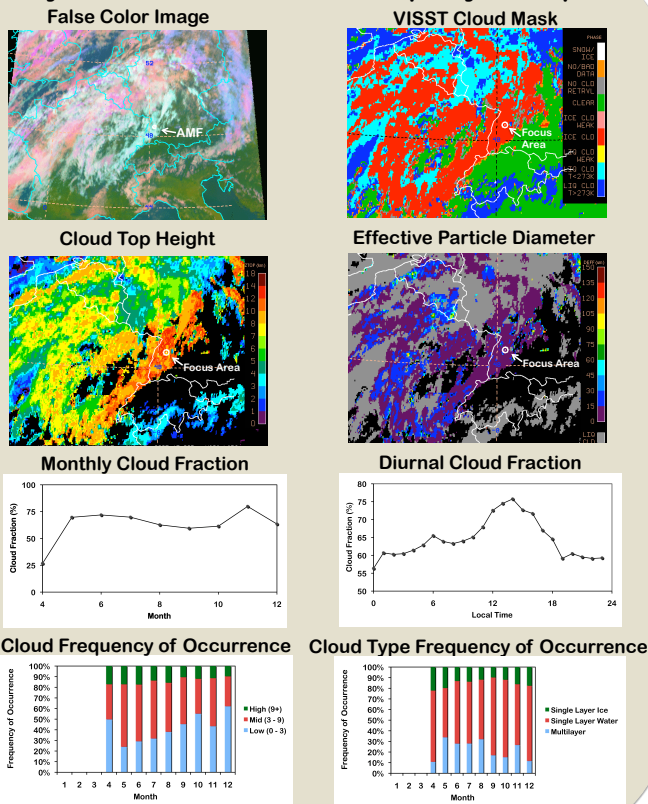
Goal

- Derive cloud properties from Meteosat-9 SEVIRI observations
- Compare results with ARM AMF observations

Approach

- Use VISST[®] algorithm to derive cloud properties over ARM AMF during Black Forest deployment
- Average pixel cloud properties within 10-km Radius of AMF
- Compute daily, monthly, and diurnal means for various cloud properties
- Compare spatial and temporal matched satellite and surface-derived cloud properties

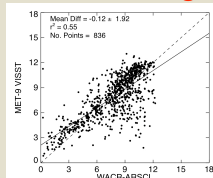
Analysis Domain and Cloud Property Examples



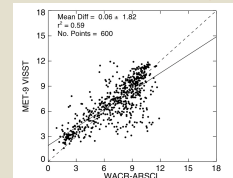
Comparisons

Cloud Top Height

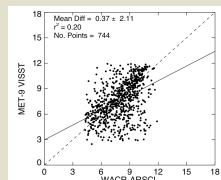
All Clouds - Night



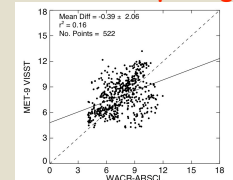
All Clouds - Day



Ice Clouds - All Times

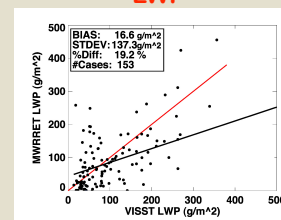


CO2 Cloud Top Height



- Generally good cloud-top height agreement
- Error sources: *partially filled pixels, optically thin clouds, spatial matching*
- LWP values have reasonable agreement, differences need evaluation.

LWP



References

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Satellite derived cloud products are available from [HTTP://WWW-PM.LARC.NASA.GOV](http://WWW-PM.LARC.NASA.GOV)