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# HIRDLS and CALIPSO Observations of Clouds in the Tropical Troposphere

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The HIRDLS and CALIPSO satellite experiments observe clouds in the
upper troposphere using limb view and nadir geometries, respectively. We calculate geospatial seasonal and monthly cloud occurrence frequencies for the two experiments, and find that the geospatial cloud patterns are similar. This is due to the fact that CALIPSO cirrus scales are usually greater than 100 km in horizontal extent. MLS RHI (relative humidity with respect to ice) and cloud frequency are positively correlated, as mandated by ice microphysics. Both experiments observe larger cirrus frequency during the winter months. HIRDLS and CALIPSO laminar cirrus
are associated with regions of higher outgoing longwave radiation (OLR),
(i.e. regions of less convective activity), relative to thicker clouds.