

INCUS: Small Satellite; Big Science

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INCUS – Investigation of Convective Updrafts

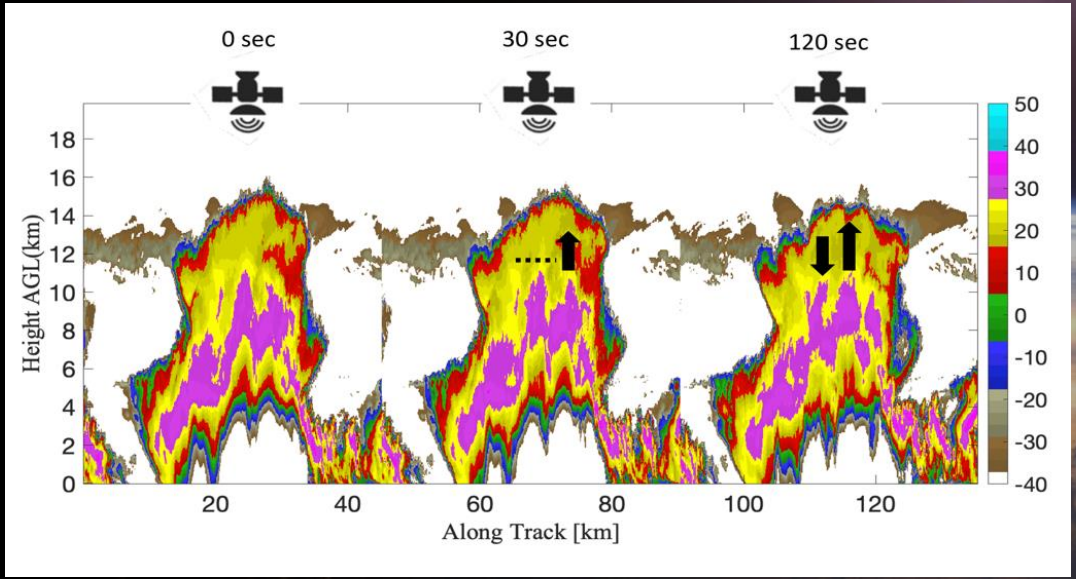
incus.colostate.edu

Overarching Goal:
To understand why, when and where tropical convective storms form, and why only some storms produce extreme weather.

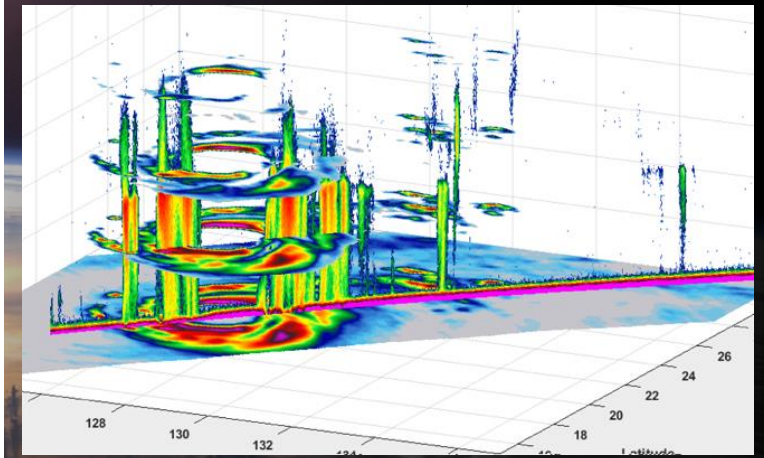


First systematic investigation into CMF and its evolution within deep tropical convection

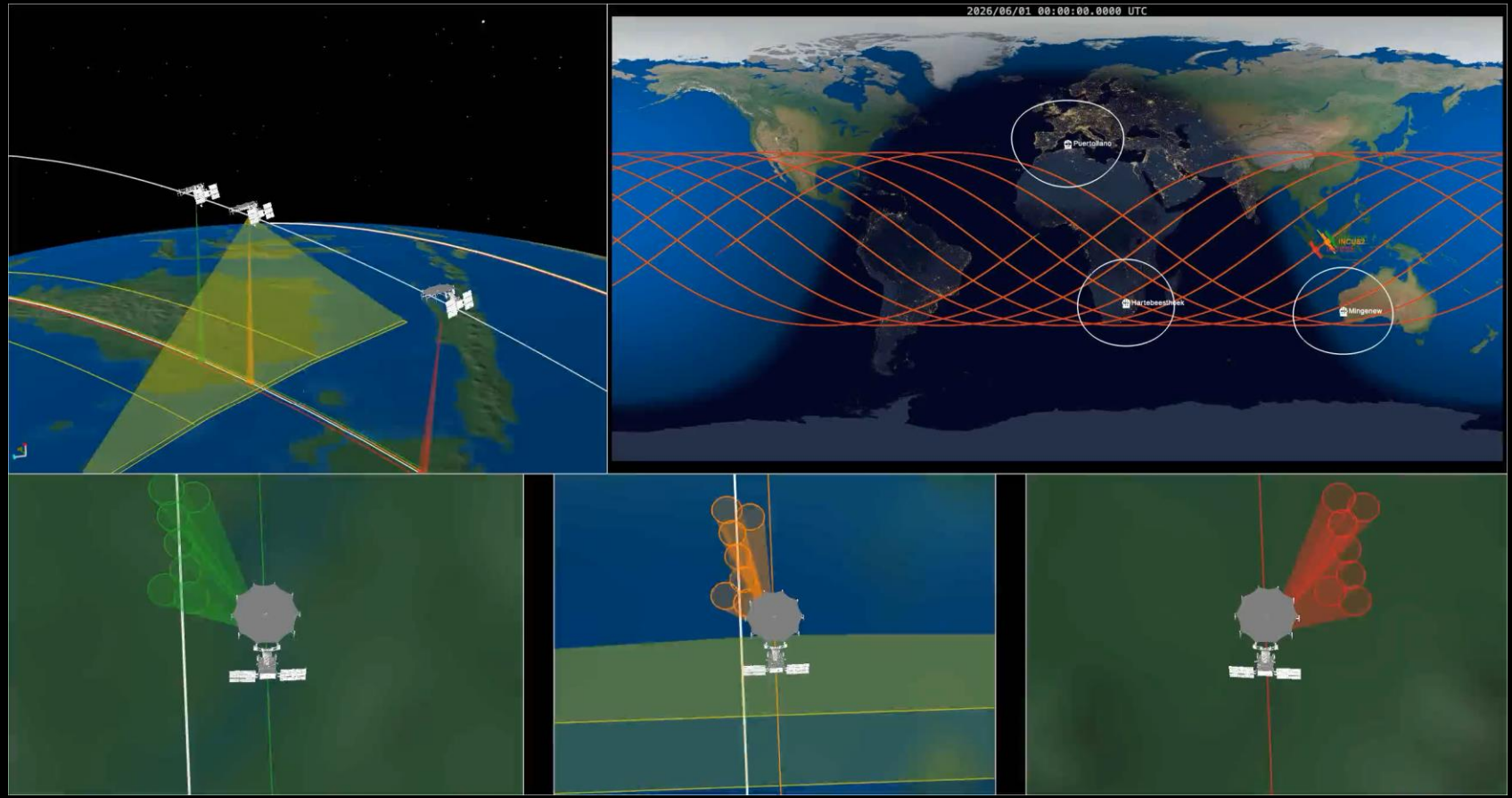
CMF = Vertical velocity (ms^{-1}) x density ($kg\ m^{-3}$) = $kg\ m^{-2}\ s^{-1}$

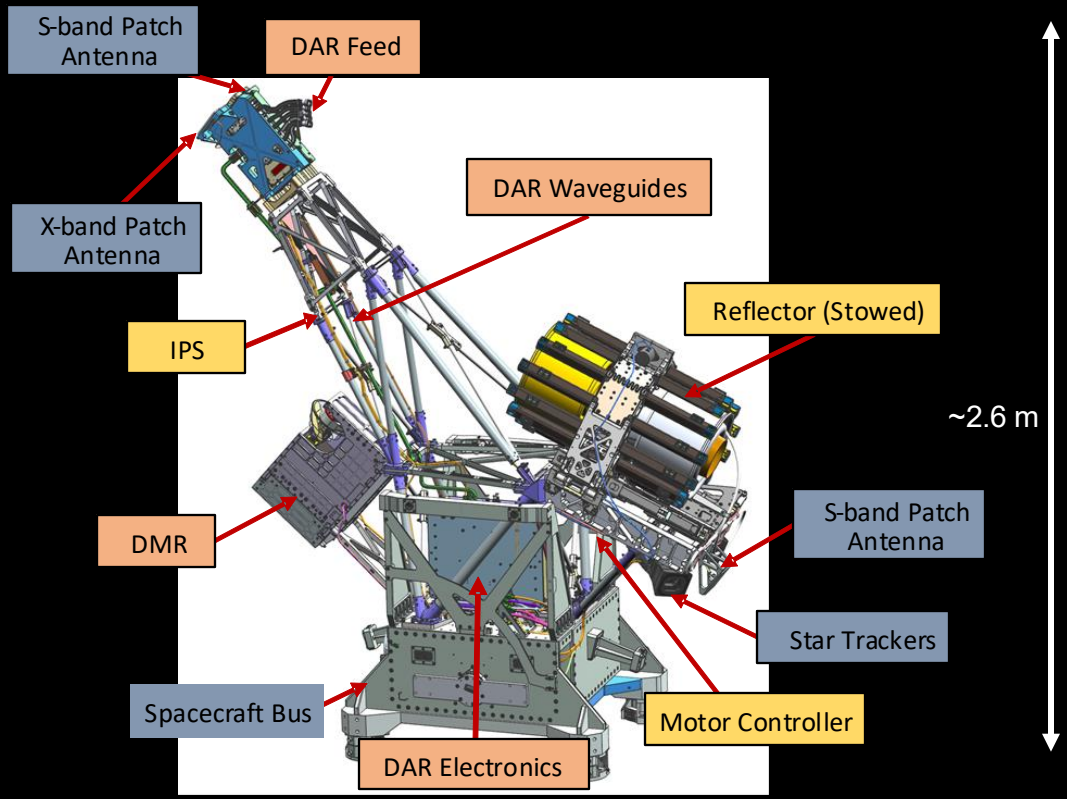


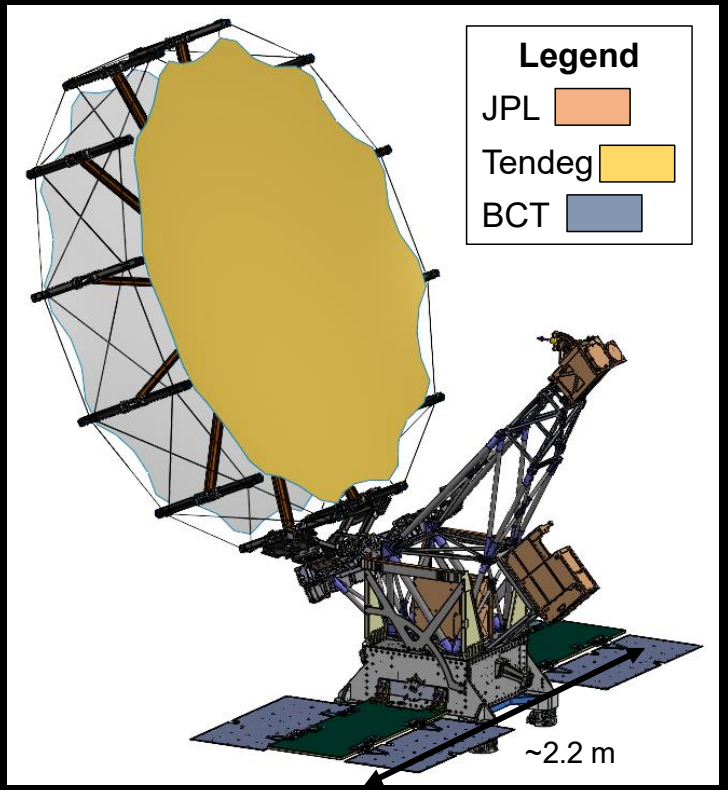
Time Differenced Radar Reflectivity => CMF



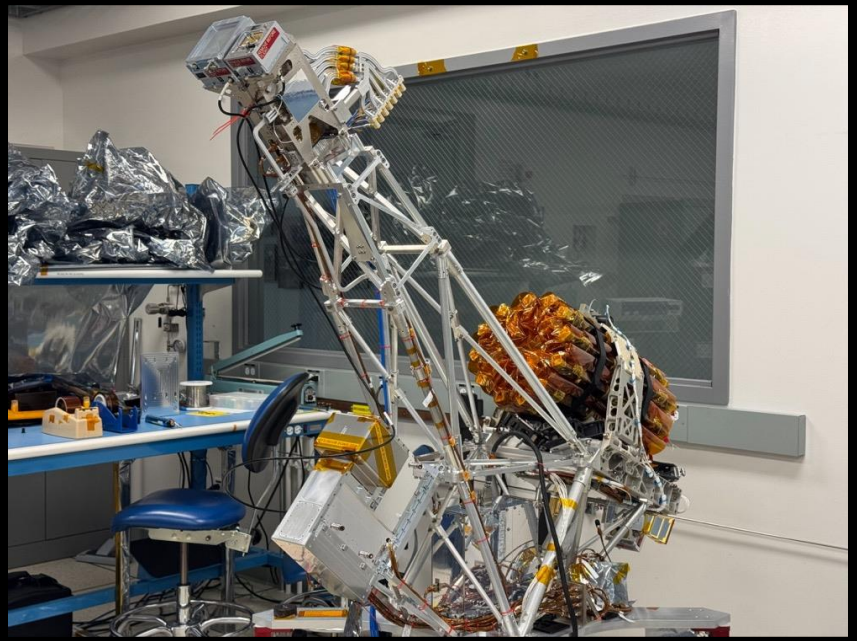
Coincident INCUS (and program of record) radiometer observations will provide estimates of the ice water path over the entire storm system.

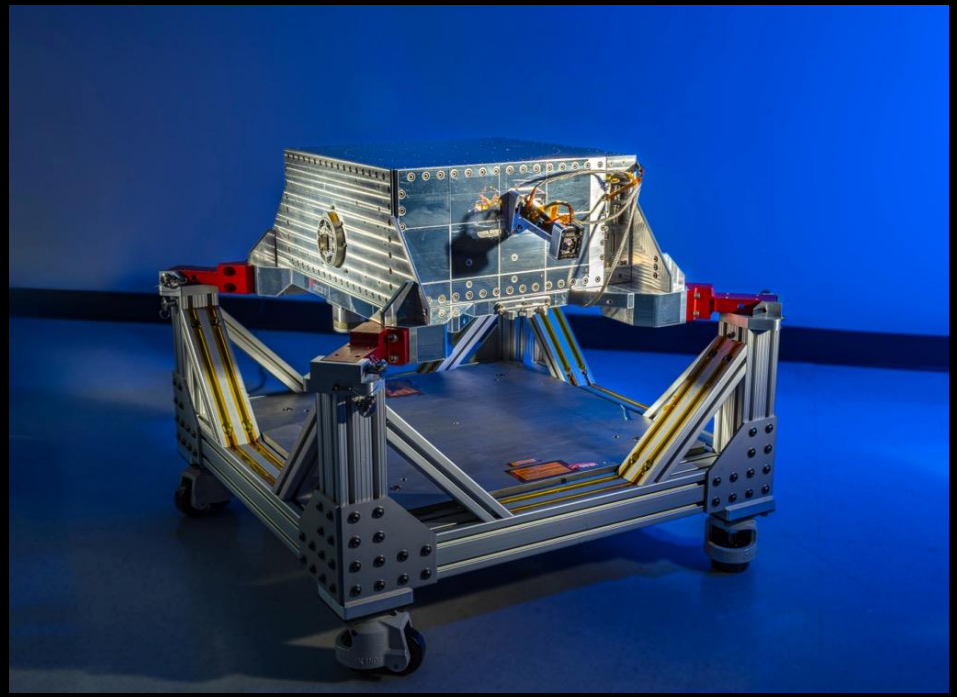

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Puertollano
INCUS2
Hartebeesthoek
Mingenew

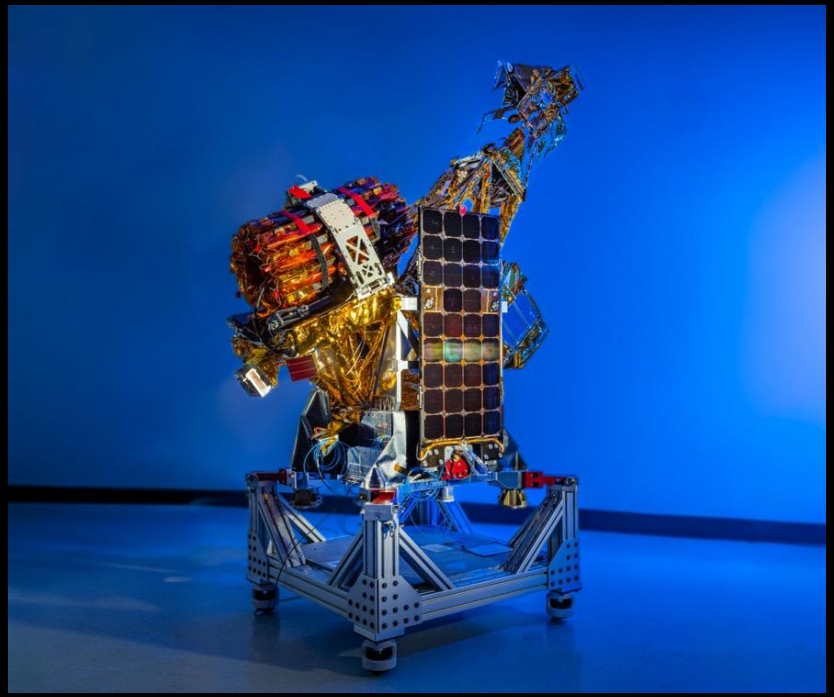

S-band Patch Antenna
DAR Feed
X-band Patch Antenna
DAR Waveguides
IPS
Reflector (Stowed)
DMR
S-band Patch Antenna
Star Trackers
Spacecraft Bus
Motor Controller
DAR Electronics
~2.6 m

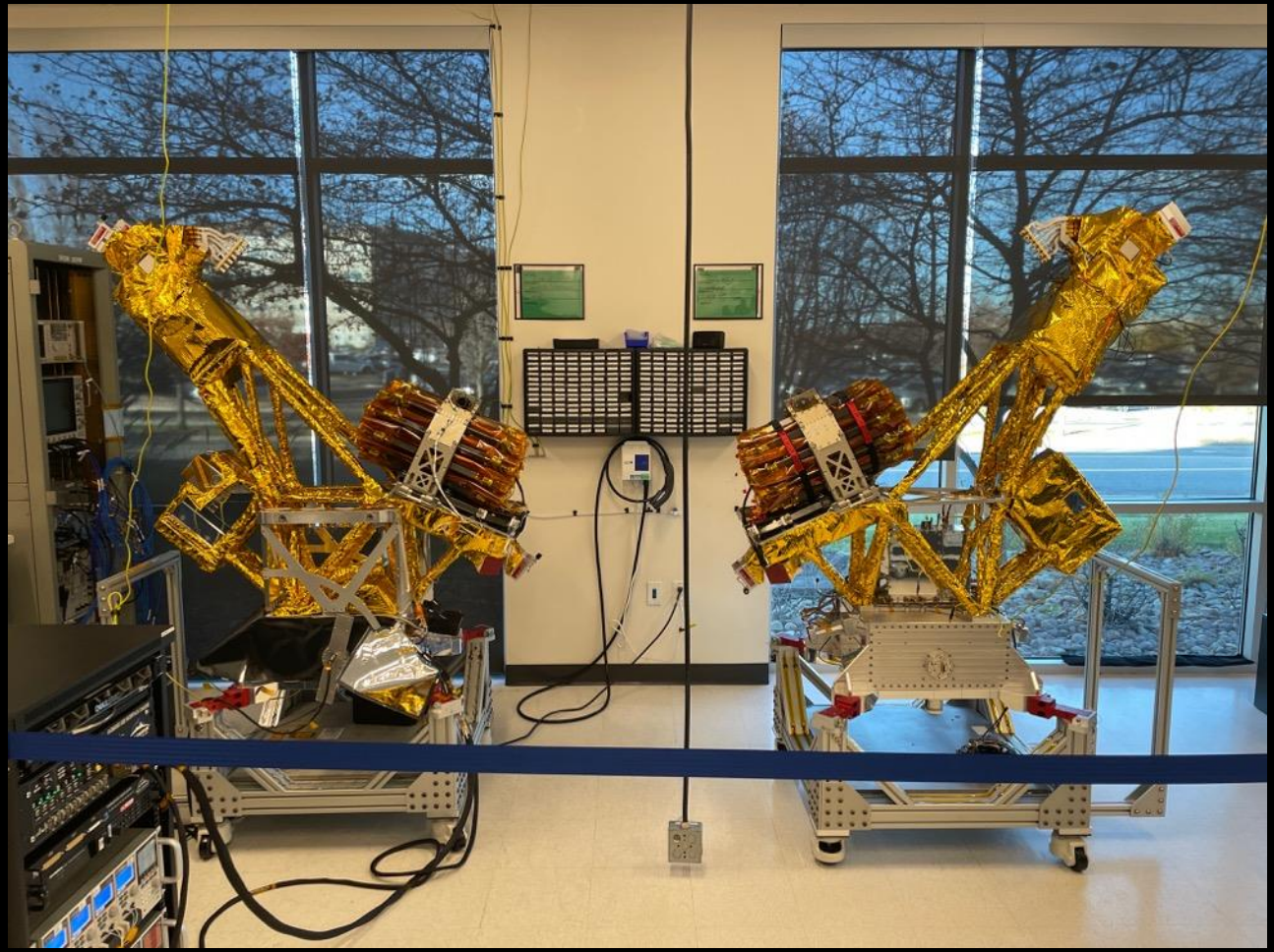

Legend
JPL
Tendeg
BCT
~2.2 m


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