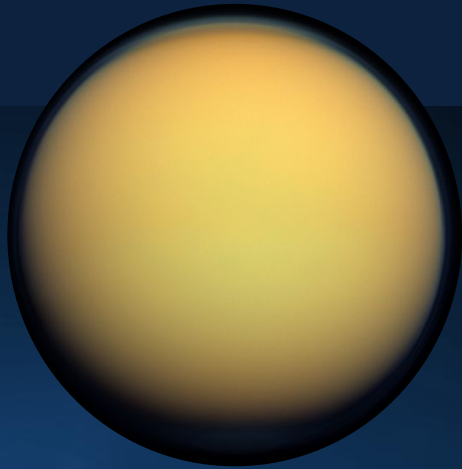


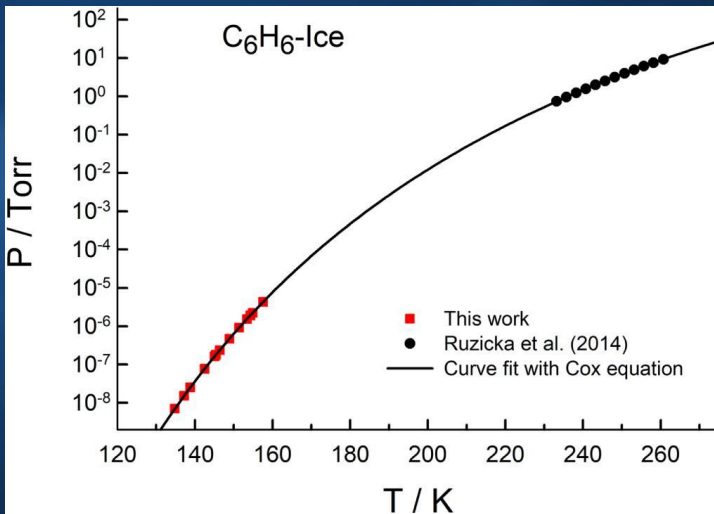
# New Results for Titan's Benzene Crystals



*Titan as seen by the Cassini Spacecraft*

**NASA's Cassini mission found benzene ( $C_6H_6$ ) crystals in the atmosphere of Titan, the largest moon of Saturn. The formation of these crystals is dependent on the vapor pressure of solid benzene, which is poorly constrained.**

- A recent study measured the vapor pressure of crystalline benzene with a quartz-crystal microbalance under ultrahigh vacuum conditions from about 135 K to 160 K, temperatures directly relevant for Titan's atmosphere.
- Results from this study suggest a higher altitude for crystal formation and a smaller size for the resulting crystals.
- Previous data, collected at higher temperatures, allow a smooth connection with this new lower temperature data (bottom figure).
- This research project brought together extensive expertise and technology that is now in place and available for other NASA mission-related science exploring these extremely cold conditions.



*Points at the lower-left are the new Titan-relevant measurements from this study*