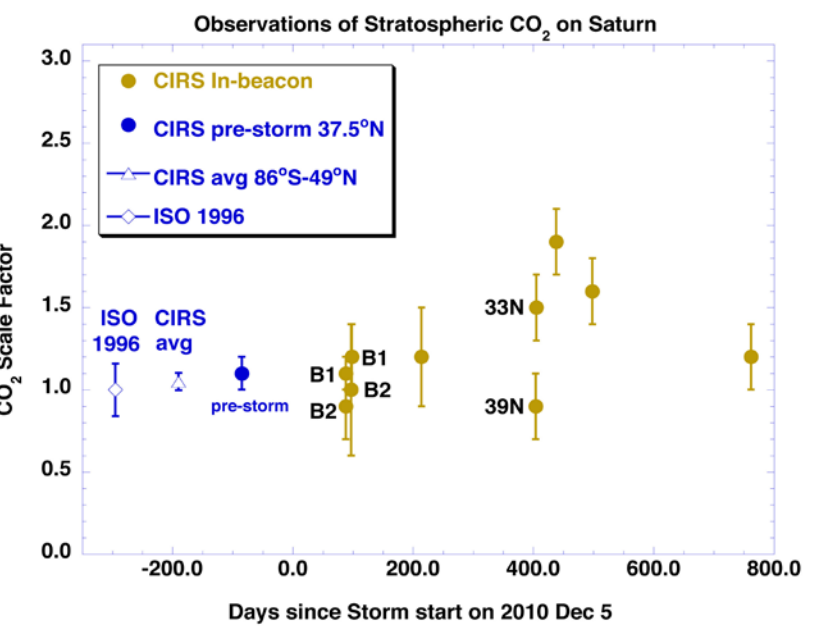
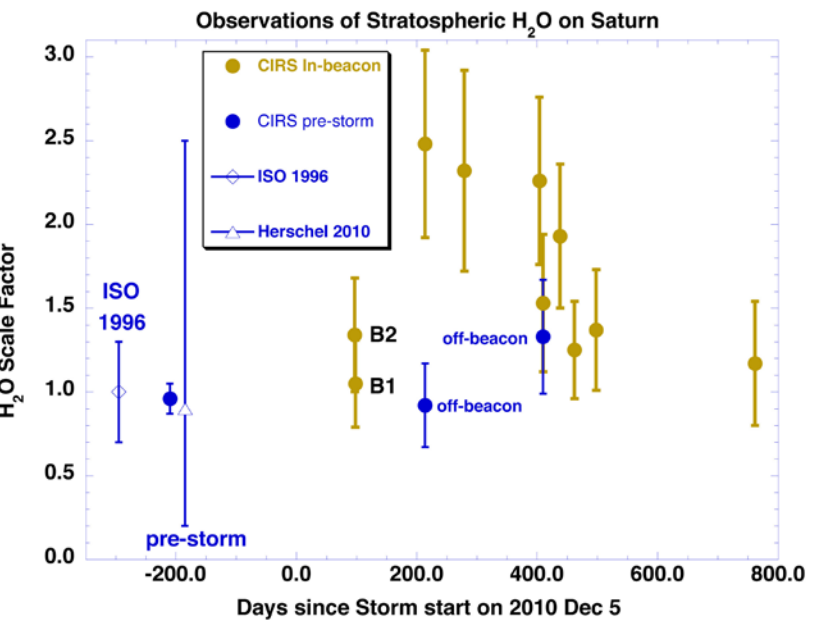


Oxygen Compounds in Saturn's Stratosphere During the 2010 Northern Storm



- Both H₂O and CO₂ pre-storm CIRS results are consistent with ISO and Herschel measurements.
- H₂O in the beacon reaches a maximum value of 2.5 times pre-storm in July 2011 and slowly decays back to pre-storm values by Jan 2013.
- H₂O is not enhanced at longitudes outside of the beacon.
- CIRS In-beacon H₂O abundances are lower than the 3-10x increase measured by Herschel/PACS (Cavalié et al. 2012 & private communication).
- Little or no CO₂ enhancement in either of the 2 beacons was observed in March 2011.
- CO₂ exhibits a 1.5 to 2x enhancement over pre-storm values somewhat later than the peak in H₂O, but it also decays back to nominal values by Jan 2013.
- Heating in the beacon may have caused sublimation of water ice-bearing aerosols resulting in increased gas abundances of H₂O. This, in turn, may have altered the photochemistry in Saturn's stratosphere for a year or more before returning to normal.