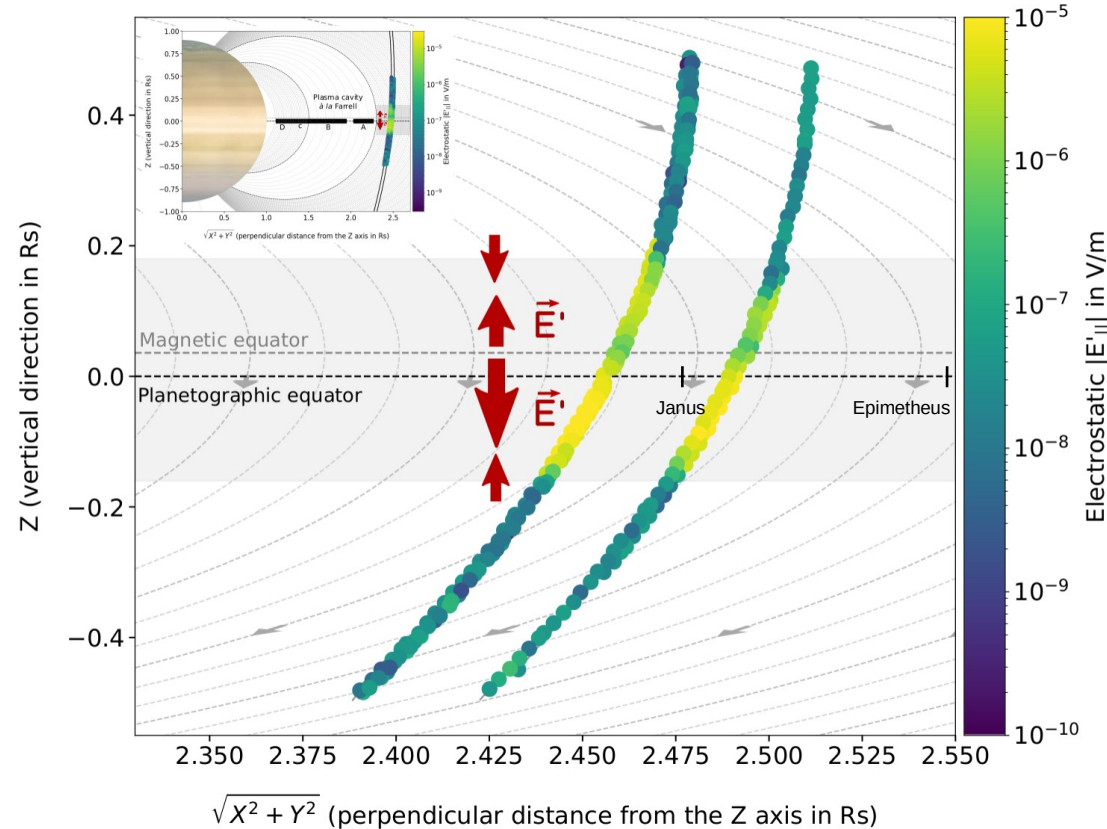


# Polarization electrostatic field in the presence of negatively charged nm grains: implications for electrons and dust levitation near Saturn's F ring

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## Cassini's F ring grazing orbits (Revs 253, 254, 266, 268)



We present the effect of the negatively charged dust on the polarization  $E_{||}$  field using the Cassini RPWS/LP during the F-ring grazing orbits.

Main results:

- A general expression for  $E_{||}$  and estimate  $E_{||}$  near Janus and Epimetheus rings.
- $E_{||}$  is asymmetric with respect to the magnetic equator
- The charged dust amplifies  $E_{||}$  x10 & reverses its direction (ring plane +/-0.1 Rs).
- Implications on electrons and dust levitation from the Kronographic equator.