

Auroral Processes at the Galilean Satellites

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Abstract

Jupiter's satellites Io, Europa, and Ganymede exhibit distinct auroral emission patterns, which are immensely diagnostic for a variety of properties. The auroral emission can be used to probe the satellites' atmospheres and surfaces, the plasma interactions with Jupiter's magnetosphere and even provide a means to search for sub-surface oceans within the satellites. In this talk, we provide an overview of mostly Hubble Space Telescope observations of the auroral emissions of Io, Europa and Ganymede and discuss their scientific interpretation. For Callisto we provide upper limits of its auroral emissions.