**Jupiter ‘s conjugate ultraviolet aurora**

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**Abstract:**

We present comparisons of the northern and southern far ultraviolet (FUV) auroral emissions of Jupiter observed with the Hubble Space Telescope (HST). The field of view of the ACS and STIS cameras on board HST is too narrow to provide images of the full Jovian disk.

We compare the morphology of the north and south aurora observed 55 minutes apart and we point out similarities. We find that most morphological features identified in one hemisphere have a conjugate counterpart in the other hemisphere. Differences are also observed such as the extent of the main oval discontinuity frequently observed in the morning-noon sector.

On one occasion, images of the two polar regions were obtained within only two minutes of separation. In this case, we can compare the quasi-simultaneous emission structures and the FUV emitted power of corresponding conjugate regions. The FUV emitted auroral power is different in the North and in the South, but their ratio neither proportional to the local magnetic field strength B nor to 1/B. We conclude that processes occurring along the magnetic field line possibly induce hemispheric asymmetries in the electron precipitated power.