

Variability of Jupiter's extended sodium nebula in the past decade

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Io's atmosphere has its origin in volcanoes on Io. Particles which constitute Io's atmosphere escape Io to Jovian magnetosphere as plasma and neutral components. Neutral sodium atoms, which also originate from the Io's volcano, form sodium cloud extending as far as 1000 jovian radii. Studies in the past revealed that brightness in the sodium nebula and atmospheric escape are strongly dependent on the Io's volcanic activity. We have made observations of D-line emissions from the sodium clouds during the past decade. Data of these observations are now being analysed to investigate relations between the Io's volcanic activity and changes in the Jovian magnetosphere. Results of the analysis will be shown in this presentation.