L-shell of Jupiter's decametric Non-Io-A source

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http://www.ee.kochi-ct.ac.jp/~imai/jupiter/

Up to the present, the L-shell at which the Non-Io-A source of emission is located has been unknown. By using our model for the production of modulation lanes and by adjusting the L-shell of the source, we have been able to fit a distribution of values of modulation lane slopes provided by Riihimaa. Assuming a 60 degree cone half-angle, we found that L-shell values between 4 to 8, centered around 6, fit the distribution fairly well. Our results locate the L-shell of the source within the Io plasma torus, implying that the location of the energy source of the electrons responsible for the emission in the Io plasma torus.

We propose the model of Non-Io-A source located around the L-shell value of 6.