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.

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