

The automatic method for analysis of the jovian decametric radiation using the graphic dynamic spectrum data

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To study about the origin of the arc structure of the jovian decametric radiation (DAM), the method of translation from graphic dynamic spectrum datas to the numeral data sets are developed. Dynamic spectra of DAM observed by the Voyager spacecraft were examined by identifying the arc structures in the dynamic spectra. The arc structures are detected as a trace of intensity peaks in the dynamic spectrum. Some detected arcs showed the structure identified as "Io-A" and "Io-B" arcs. The present method can detect faint arcs comparing with the manual tracking method, however, still there is a problem of miss detection in low S/N condition of spectra. To improve detection skill of the present method, a new method is developed for identification of arc structures in the dynamic spectra.