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# Features of emission cone of Jovian decameter radiation and observation of Jupiter's magnetic field by JUNO

Patrick Galopeau (1) and Mohammed Boudjada (2)

(1) LATMOS - CNRS, UVSQ Université Paris-Saclay, Guyancourt, France (patrick.galopeau@latmos.ipsl.fr), (2) Space Research Institute, Austrian Academy of Sciences, Graz, Austria (mohammed.boudjada@oeaw.ac.at)

A new magnetic field model for Jupiter, based on Juno's first nine orbits observations, JRM09, was recently proposed by Connerney et al. [*Geophys. Res. Lett.*, *45*, 2590-2596, 2018]. We use this model to investigate the angular distribution of the Jovian decameter radiation occurrence probability, relatively to the local magnetic field **B** and its gradient $\nabla B$ in the source region, and we compare the results to those obtained several years ago using older models (O6, VIP4, VIT4 and VIPAL). The JRM09 model confirms the former results: the radio emission is beamed in a hollow cone presenting a flattening in a specific direction. The same assumptions were made as in the previous studies: the Jovian decameter radiation is supposed to be produced by the cyclotron maser instability (CMI) in a plasma where **B** and $\nabla B$ are not parallel. As a consequence, the emission cone does not have any axial symmetry and then presents a flattening in a privileged direction. This flattening appears to be more important for the northern emission (34.8%) than for the southern emission (12.5%) probably due to the fact that the angle between the directions of **B** and $\nabla B$ is greater in the North ($\sim 10°$) than in the South ($\sim 4°$).