EPSC Abstracts,
Vol. 2, EPSC2007-A-00395, 2007
European Planetary Science Congress 2007

Predicting low-frequency radio fluxes of known extrasolar planets

J.-M. Grießmeier (1), P. Zarka (1), H. Spreeuw (2)

(1) LESIA, CNRS-Observatoire de Paris, 92195 Meudon, France
(2) Astronomical Institute "Anton Pannekoek", Kruislaan 403, 1098 SJ Amsterdam, the Netherlands.

All strongly magnetized planets of the solar system are known to be sources of intense nonthermal radio emission. For close-in giant exoplanets ("Hot Jupiters"), the interaction of the planet with the stellar wind is believed to be much stronger than for planets at larger orbital distances. This should result in radio emission much stronger than that of Jupiter, which is one of the strongest radio sources of the solar system. We present the expected characteristics of the low-frequency magnetospheric radio emission of all currently known extrasolar planets, including the maximum emission frequency and the expected radio flux. We also discuss the escape of exoplanetary radio emission from the vicinity of its source, which imposes additional constraints on detectability.