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SPIROU: A code to estimate the radio emission from star-planet interaction

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Abstract

We present **SPIROU** (**S**tar-**P**lanet **I**nteraction and **R**adio **O**bservations **U**nited), a code in Python that estimates the radio emission from sub-Alfvénic star-planet interaction. SPIROU is based on the code developed by Pérez-Torres et al. (2021; DOI: 10.1051/0004-6361/202039052. The current version assumes an isothermal stellar wind, whose mass-loss rate is constant, and takes into account the partial suppression of radio emission due to free-free absorption of the thermal electrons in the wind. SPIROU can be useful to constrain the mass-loss rate of the star and/or magnetic field of planet.

My poster in zenodo.org can be found here