

Activity of M-type stars and its influence on planetary habitability

P. Odert (1), M. Leitzinger (1), A. Hanslmeier (1), H. Lammer (2), M. Khodachenko (2), I. Ribas (3), M. Vanko (4), A. A. Konovalenko (5), H. O. Rucker (2)

(1) Institute of Physics/IGAM, University of Graz, Austria, (2) Space Research Institute, Austrian Academy of Sciences, Graz, Austria, (3) Institut d'Estudis Espacials de Catalunya/CSIC, Bellaterra, Spain, (4) Astronomical Institute, Slovak Academy of Sciences, Tatranska Lomnica, Slovakia, (5) Institute of Radio Astronomy, Ukrainian Academy of Sciences, Kharkov, Ukraine

Since the discovery of a Super-Earth in the habitable zone of a nearby M star the question if M stars are suitable hosts for habitable worlds is more interesting than ever. In earlier times these objects have often been ruled out in this context because of the extreme activity levels which they exhibit during the first few billion years of their life on the main-sequence. Future missions dedicated to the search of extrasolar planets will probably discover more Earth-like planets in the vicinity of these cool stars, therefore a profound knowledge of the radiation and particle environment of these stars and the impact on planetary atmospheres is desirable. To address this topic we are working on the compilation of a catalogue of nearby M stars including all relevant data to categorize these diverse objects. This catalogue will be a useful tool for generating target lists for observations as well as deriving input parameters for theoretical models.