

Planets and debris discs around low mass stars

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In many respects, planetary systems of low mass stars, so called red dwarfs or M-stars, differ from systems around medium or high mass stars. They contain different populations of planets. Many of these low mass stars host Earth to Neptune-mass planets but only a few harbor gas giants, like Jupiter or Saturn. Another peculiarity is related to debris discs around these cool stars. Debris discs are second generation, dusty circumstellar discs. They formed by collisions of planetesimals left over from the period of planet formation. Our Solar System, with a medium mass star, hosts a debris disc. It mainly consists of the Kuiper and Asteroid belt. But while during the last few decades many debris discs have been found and resolved around medium to high mass stars, only a handful of them have been discovered around low mass stars. In my current paper I look at this missing disc problem from the observational side. Is it possible that we do not see these discs because the telescopes are not able to detect them or is it more likely that they do not exist?

Author: LUPPE, Patricia (Friedrich-Schiller-Universität Jena)

Presenter: LUPPE, Patricia (Friedrich-Schiller-Universität Jena)

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