



seit 1558



Two graduate student positions on debris disks

The Astrophysical Institute and University Observatory (AIU) of the Friedrich Schiller University, Jena, Germany, is seeking candidates for two graduate student positions.

The positions are to work in the Research Unit FOR 2285 “Debris Disks in Planetary Systems”, newly established by the German Research Foundation (DFG). The successful candidates will join the theory group at the AIU and will work for one of the following two projects.

In the first project (P1, “Collisional modeling of resolved debris disks”), we plan to extend our knowledge of planetary systems harboring debris disks with the help of state-of-the-art collisional models. Such modeling is a powerful tool to decipher information encrypted in the observed dust and to connect the dust to its parent bodies, directly unobservable planetesimals. Constraints can be placed on locations and masses of planetesimal belts, their size and radial distribution, degree of dynamical excitation, material properties, etc. The graduate student is expected to refine our collisional code, incorporate recent advances from theory and laboratory work, and use the code to study a suite of resolved debris disks.

The second project (P2, “Sculpturing of debris disks by planets and companions”) aims at modeling of observed asymmetries in debris disks. Common disk features include, for instance, sharp radial boundaries, eccentric offsets, and azimuthal asymmetry. All these are signposts of underlying perturbations that shape the disks. A variety of possible mechanisms have been put forward to explain these phenomena. Many involve the gravitational influence of suggested but yet unseen planets and companions. To study this fascinating connection, the graduate student will combine the dynamical treatment (that describes these perturbations) with the collisional treatment (that describe the dust production) to construct a single numerical model.

Both students will work in close collaboration with other projects of the Research Unit that will provide key ingredients for the collisional models and calculation of observables. They will greatly benefit from the expertise available in the Unit, in general, and our group, in particular.

The positions are for three years and can start at any time, but no later than in **the early 2016**. The salary is standard for postdoc positions in Germany (1/2 TV-L E-13 of the German federal public service scale) and includes a number of social and family-related benefits.

The applicants should have a strong educational record and hold a Masters’ degree or equivalent in physics or astronomy. Previous experience with numerics and astronomical research, preferably with debris disk and/or exoplanet studies, would be an advantage.

Applications as a single document in the PDF format should include a CV, a brief statement of research interests, and two names of reference. All applications received by **September 30, 2015** will be given full consideration.

The Friedrich Schiller University is an equal opportunity employer and explicitly encourages women to apply. Disabled persons with equal aptitude, competence and qualification will be given preference.

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