

# Rocks, Rubble and Rings

25 - 30 September 2016 @Oort

## Science

We are at a very exciting point in understanding how planets and moons are formed around other stars. After twenty years of indirectly detecting planets by the physical effects they have on their parent stars, we are now discovering new phenomena caused by other material in these star systems. Material in the forms of rocks, rubble and rings around extrasolar planets can cast shadows across the universe that we can see here on Earth.

The Workshop firstly brought researchers together who are discovering more and more of these light curves in data from cameras all over the world, and to prepare for an upcoming celestial event in 2017, where an exoplanet will move in front of its star, and we will be able to see if there are any rings surrounding this planet when the transit happens.

The first tangible outcome of the Workshop was a detailed plan of all the different science goals for the upcoming transit of the exoplanet Beta Pictoris b in front of its host star in 2017, and we had all the major partners present in the Lorentz Center talking and coordinating with each other, a significant milestone of preparation for the upcoming year.

Secondly, two separate groups who have extensive data archives, SuperWASP and KELT, discovered that they have an interesting light curve from a young star, and that during the Workshop they agreed to collaborate together and publish their data in a paper which is being written up now for publication, a significant result that will generate press when it is published.

## Organization/Format

We started with a day of lectures, thinning out the lecture format through to the final day where we had the final presentations and the keynote speaker speaking in the late morning. This enabled people to stay for the Friday morning but be able to travel back the Friday afternoon. We found that the breakout sessions worked very well and that the balance was quite reasonable. Setting up a tag list of discussion points and having the breakout sessions worked well and engaged the participants.

We budgeted one half of an afternoon before the dinner for free time, but this was too short for excursions into the town. We should have given a whole free afternoon, but were able to fill the time with excellent discussion.

Printing out interesting light curves on long 3 metre rolls and hanging them along the corridor proved to be a very popular idea, provoking thoughtful discussion and liberal use of pens to decorate them with new hypotheses - we will definitely do that again in the future.

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**Anne-Marie Lagrange** (Grenoble, France)

**Eric Mamajek** (Rochester, NY, USA)