Propositions

accompanying the thesis

Mind the gap

gas and dust in planet-forming disks

1. Transitional disks with large dust cavities are dust traps.
   (Chapter 2, 3 and 4)

2. Dust cavities of transition disks contain significant amounts of cold molecular gas.
   (Chapter 5, 6 and 7)

3. Embedded planets are most likely responsible for shaping the transition disks with large dust cavities.
   (Chapter 5 and 7)

4. Color criteria provide a robust method to select transition disk candidates with large dust cavities from *Spitzer* catalogs.
   (Chapter 9)

5. With the best telescopes and fastest super computers at hand, observers and modelers have to learn to speak the same language.

6. A research paper is never really finished.

7. The method for determining outflow forces by the method of mass and maximum CO velocity (e.g. Bontemps et al. 1996) is subject to large uncertainties.

8. The challenges of experimental astrochemistry make the building of complex organic molecules in the Universe even more admirable.

9. The most important message in public outreach is to convince your audience of the passion you have for what you do.

10. Astronomers are astronomers, regardless of whether they are women.

11. Writing a successful proposal is less about science than about your capabilities as salesperson.

12. In good times we would like to be unique, but in bad times it is good to know we are not the only one.

Nienke van der Marel
Leiden, 29th September 2015