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Ingredients of the planet-formation puzzle: Gas substructures and kinematics in transition discs

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Propositions
accompanying the thesis

Ingredients of the planet-formation puzzle

- Gas substructures and kinematics in transition discs -

1. Gas phase depletion of carbon results in stronger photoevaporative winds causing higher mass-loss rates and more extended mass-loss profiles. (*Chapter 2*)
2. The spiral structures observed in the kinematics and brightness temperatures of the CQ Tau disc support a planet-disc interaction scenario. (*Chapter 3*)
3. Many of the discs that show spirals in near-infrared scattered light show at least tentative features in CO at the current resolution. (*Chapter 4*)
4. The kinematical analysis of multiple CO lines observed in the HD 100546 system supports ongoing planet formation in the disc. (*Chapter 5*)
5. Thoroughness in scientific work is necessary, perfectionism rather a hindrance.
6. Asking the right questions is just as important, if not more important, than knowing how to answer them.
7. Finding the right colormap is a science in its own.
8. The beneficial effects of positive feedback are often underestimated.
9. Scientists should not only ask themselves whether something can be investigated but also whether it should be investigated.
10. The most beautiful thing about science is that there always remains more to be explored.
11. Life is not about being happy all the time but about learning how to deal with the full range of human emotions.
12. The concept of listening to your gut is not really applicable to a person that tends to overthink.

Lisa Wölfer
Leiden, 28 March 2023