Propositions accompanying the thesis

X-ray spectroscopy of interstellar dust

from the laboratory to the Galaxy

1. X-ray spectroscopy provides a direct approach to measure the average size of interstellar dust particles. (*Chapter 2*)

2. The detection of sulfur in dust by Athena will settle a long discussion about the existence of GEMS. (*Chapter 4*)

3. The detection of larger amounts of crystalline dust in the X-rays compared to the infrared, can be attributed to the sensitivity of XAFS to short range order, whereas, in the infrared, observations are focused on long range disorder in the dust particles. (*Chapter 3*)

4. Detecting scattered X-ray radiation from debris disks will be challenging, but is not impossible using a hypothetical future telescope. (*Chapter 5*)

5. The more abundant a dust species is in space, the harder it becomes to produce the same dust analogue on earth.

6. When working with an X-ray telescope: first blame the instrument, then the optics.

7. It is essential to obtain a dataset where every well-fitted crystalline silicate has an amorphous counterpart, before drawing any definite conclusion on the observed dust content.

8. The study of interstellar dust would profit from a general terminology and a willingness to stick to it.

9. Besides higher spectral resolution, future X-ray telescopes will also need a better spatial resolution.

10. The feasibility of a lifelong career in astronomy should be explained to students before they enroll.

11. Instead of creating dedicated departments to handle outreach, researchers and students themselves should be given the time and opportunity to educate the public and profit from the skills they develop along the way.

12. The infrastructure of bike paths in Utrecht needs to be reconsidered.

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