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Protostellar jets and planet-forming disks: Witnessing the formation of Solar System analogues with interferometry

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Propositions accompanying this thesis

Protostellar jets and planet-forming disks:
witnessing the formation of Solar System analogues with interferometry

1. Free-free emission from protostars originates primarily from jets and is well correlated with the bolometric luminosities and outflow forces of these systems.
(Chapter 2)
2. Young protostellar disks are more massive than mature disks by an order of magnitude.
(Chapter 2)
3. Planet formation must begin within the first ~ 0.1 Myr after protostellar collapse starts.
(Chapter 3)
4. Extremely high-velocity molecular jets are ubiquitous in young protostellar systems.
(Chapter 4)
5. Molecular tracers observed with interferometers are a powerful tool to discern the physical components of astrophysical systems, on local and extragalactic scales.
6. Intersections of different sub-fields of astronomy are where most of new discoveries await.
7. A response to raised doubt in scientific arguments should be a discussion, not mockery.
8. Virtual conferences increase accessibility and transparency of discussions and should not be completely withdrawn when regular in-person meetings will be possible again.
9. Any ability is not solely inherited but also has to be trained.
(*Star Wars: Episode VIII*)
10. Work in services (such as restaurants and shops) is an extremely useful experience for a scientist.
11. Increased awareness of mental health during the pandemic should not be abandoned after this crisis is over.
12. The climate crisis needs coordinated response at the same level as the current pandemic.

Łukasz Tychoniec
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