

Questions and Answers

The Formation of Stars and Planetary Systems, 2010, September 6-9, Särö, Sweden

Section & Talk by W. Benz

Name/Question A. Maita

Any observed disk profiles I know of (e.g., mass, accretion rate, temperature etc.) show a large spread (in some case, more than two orders of magnitude) - for the same stellar mass and age -
How could this change the results of planet population synthesis?

Name/Answer

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Section & Talk by Willy Benz

Name/Question David ARDINA

Given that the pop. synt. models do not include dynamical interactions btw bodies (because they include only one body), how relevant are they to reality? (The architecture of systems like Fomalhaut is likely determined by grav. resonances...)

Name/Answer W. Benz

The models do not yet take into account interactions between growing objects. Hence the models are relevant for systems for which these interactions can be neglected.

New models (e.g. Ida and Lin 2010) allow to take these interactions into account.

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Section & Talk by W. BENZ

Name/Question..... A. CARMONA

It is possible to form a giant planet before 1 Myr? or
(a few M_J)
1-5 Myr?

Name/Answer..... W. Benz

How fast you can build a giant planet will depend on how much heavy elements are available to grow a massive core fast. In addition, it will depend upon location. Further away from the star will take longer.

If all these requirements are met, then yes you can grow a giant planet fast.

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Name/Question Frank Muldison

What value of α do you use to get $M_{\text{disk}} \propto M_{\star}^{1.2}$?
If this varies will it change the population?

Name/Answer W. Benz

The calculations were done with $\alpha = 7 \cdot 10^{-3}$.
We have not investigated yet if varying α with stellar mass would be another way of accounting for the observed M - M_{star} correlation.

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Section & Talk by W. Bille

Name/Question..... M. Fridlund

How sure are you about the non-presence of ~~the~~ 'hot Jupiters' / warm planets around massive stars. Is there not observational biases polluting an already small sample?

Name/Answer..... W. Bille

So far ~~not~~^{close} massive planet ($M > \text{few } M_J$) has been reported in ~~orbit~~^($a < 0.2 \text{ AU}$) about a star with $M > 1.8 M_\odot$. Yet these massive objects should be relatively easy to detect. Besides this, we cannot be sure of anything!