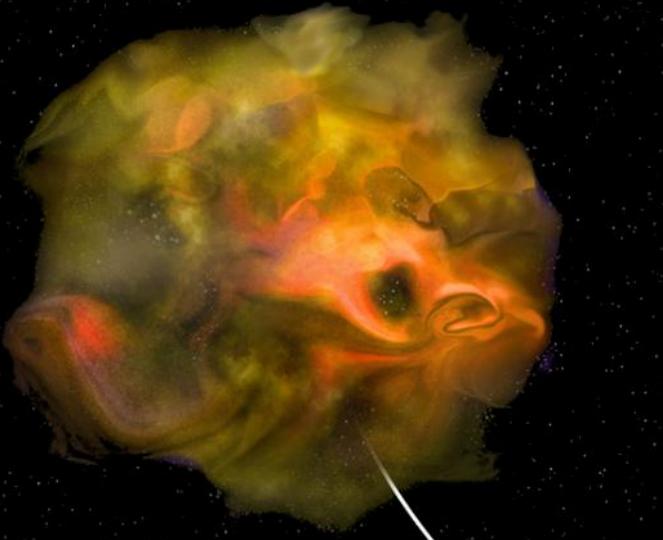




# Joint Growth of young star and protoplanetary disk

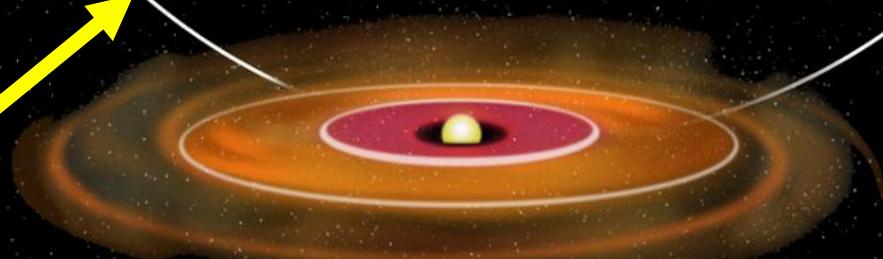
Kévin BAILLIÉ (Institut de Mécanique Céleste de Calcul des Éphémérides)

# How do planetary systems form ?



Molecular  
cloud

Disk+star  
formation

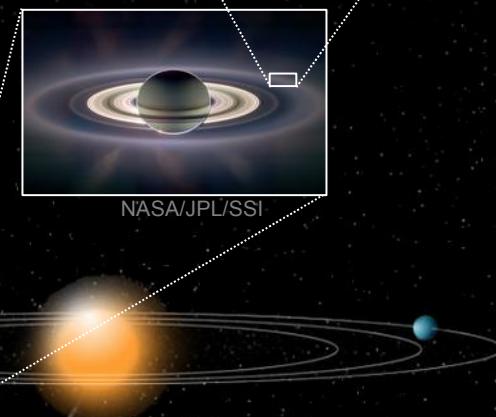


Protoplanetary  
disk

Solar  
system

Planetary  
systems

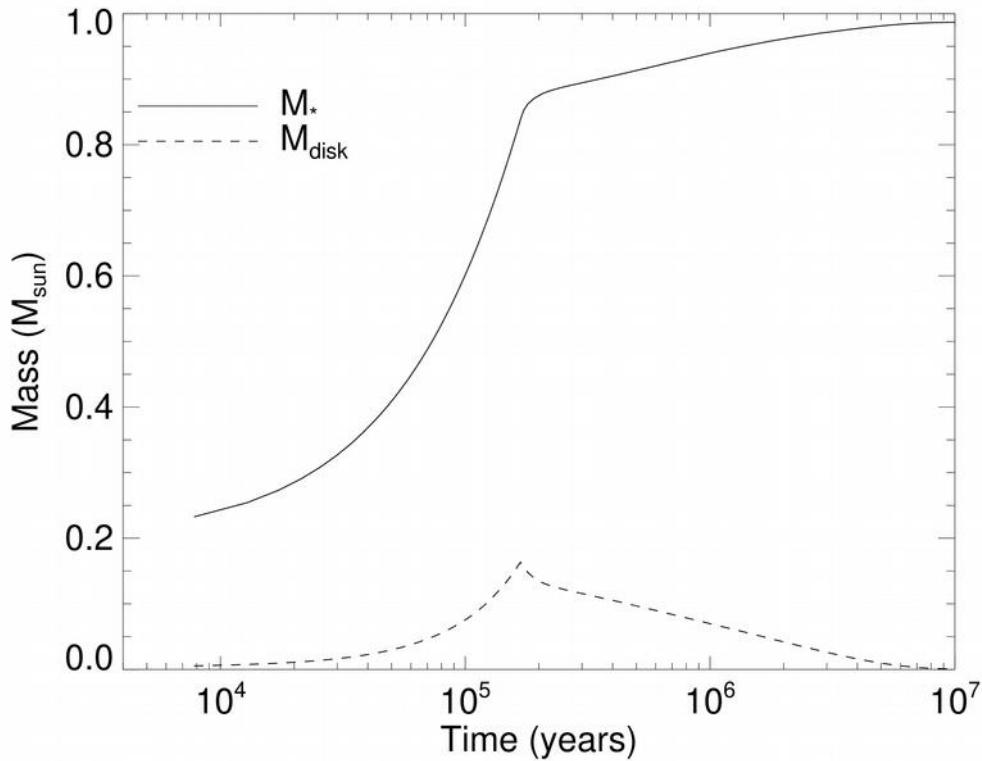
Satellite  
systems



NASA/JPL/SSI

NASA/JPL/Galileo

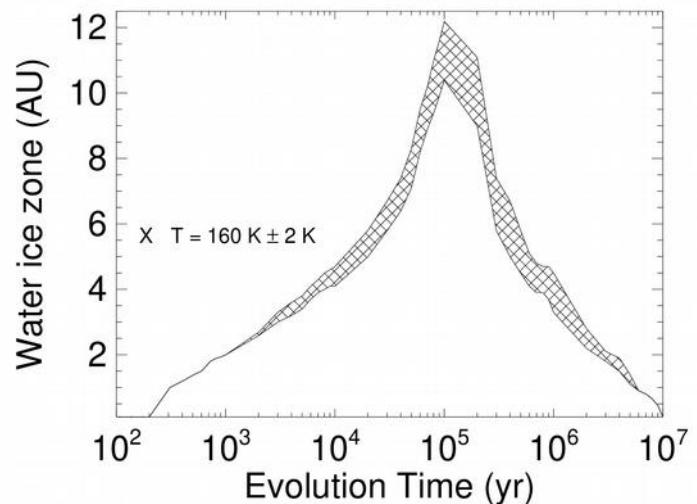
# Building the {star + disk} system



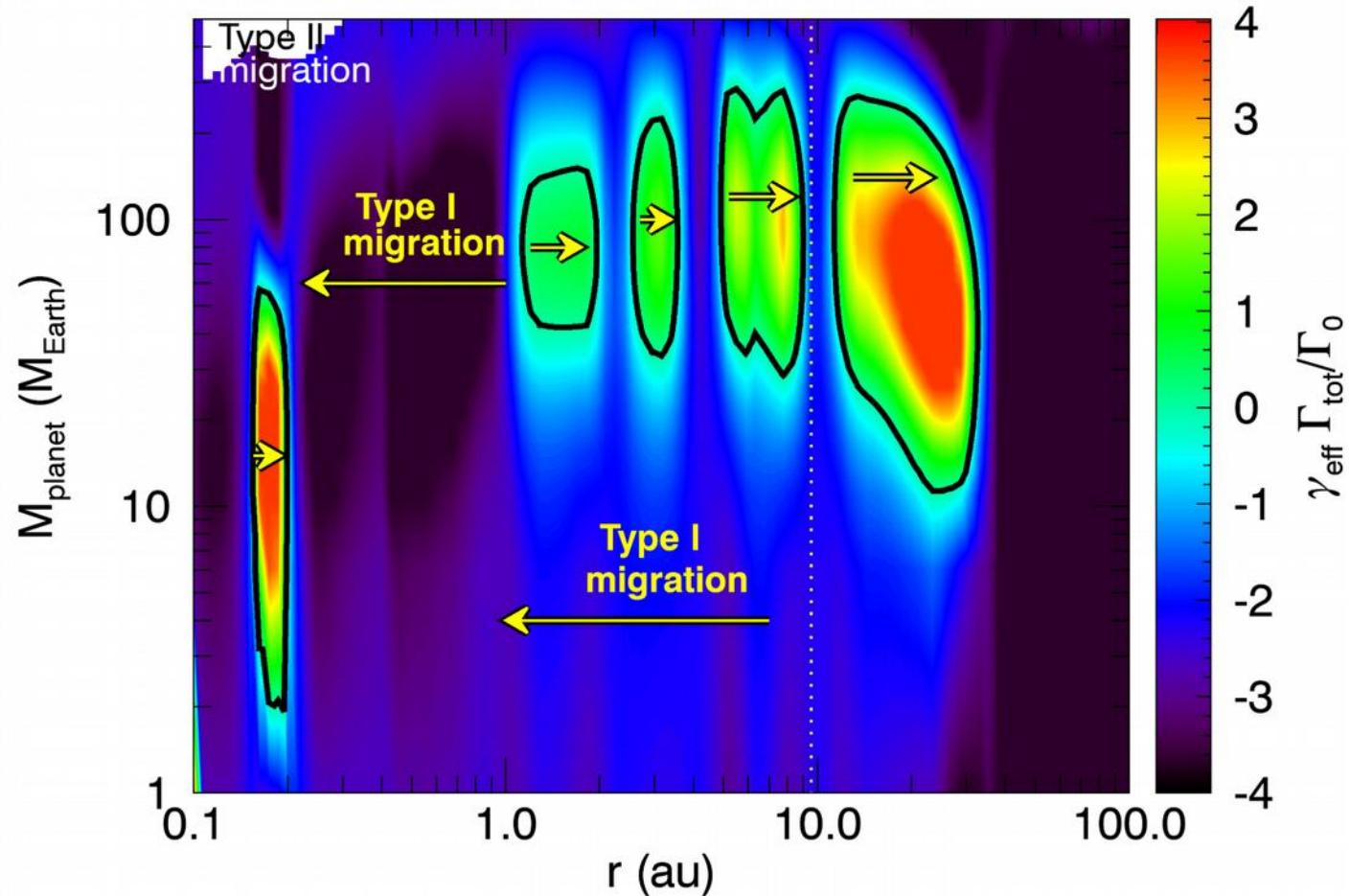
Formation by collapse  
in 170 kyr

Modeling disk formation  
and viscous evolution using  
the hydrocode PHYVE  
(Baillié et al., 2014-2018)

Snowline evolution



# Planet migration maps



Results :

- Planet traps at the snowlines
- Hot Jupiters
- Super-Earths