



Theory Group at the University of Milano
Astronuclear Physics of Compact Stars



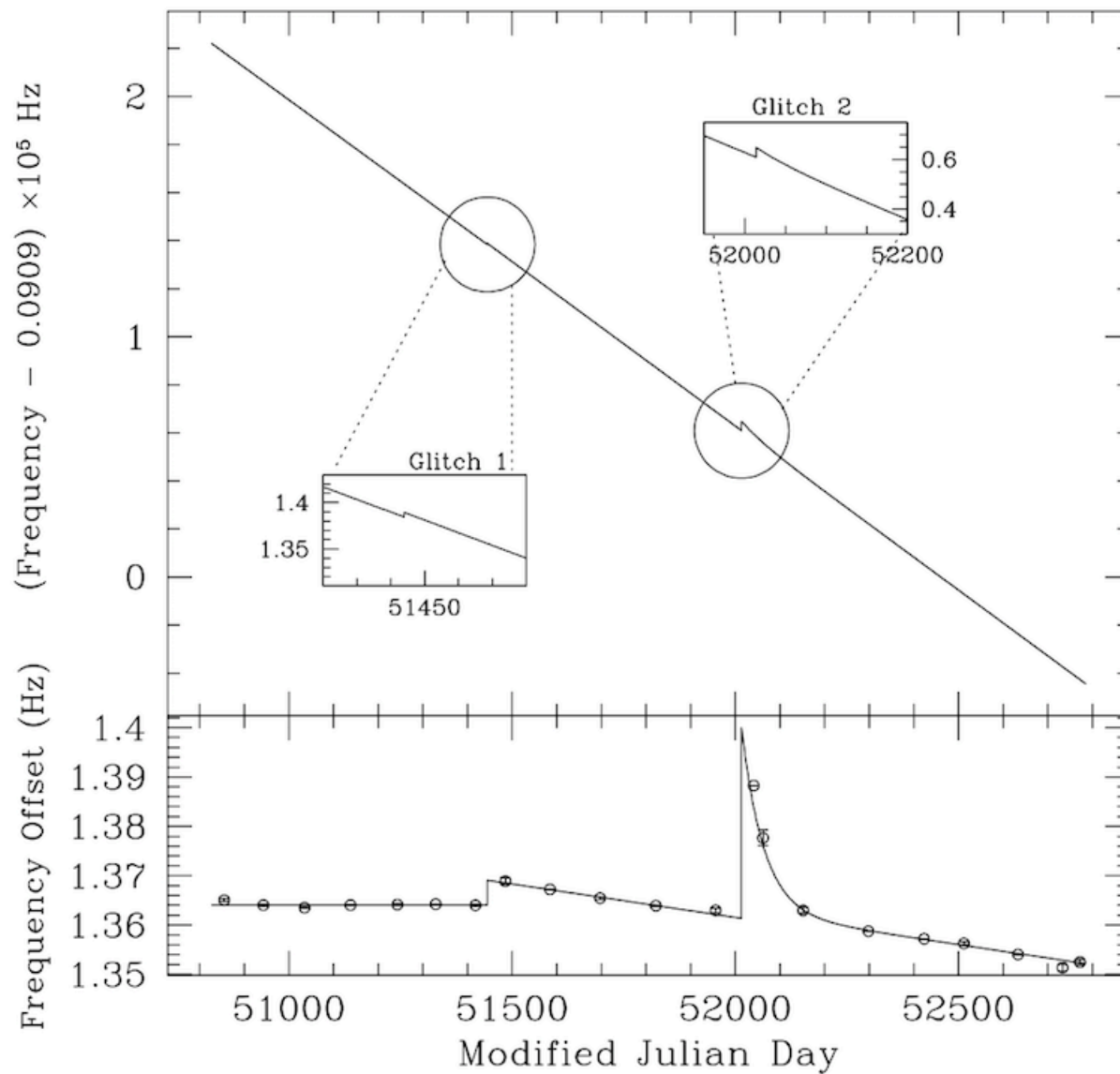
Probing neutron star properties with pulsar glitches

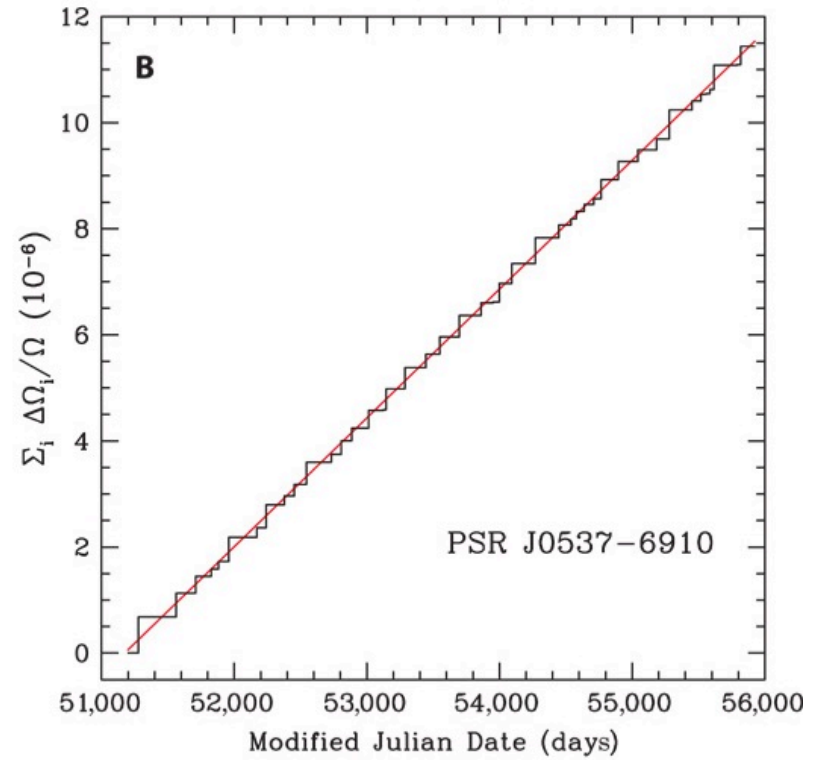
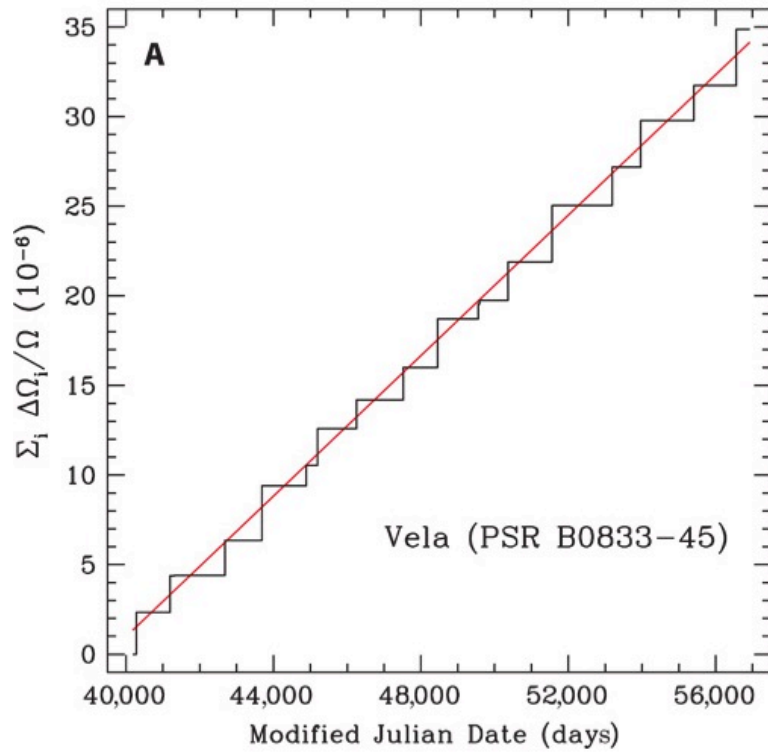
Pierre M. Pizzochero

**Annual NewCompStar
Conference 2016**

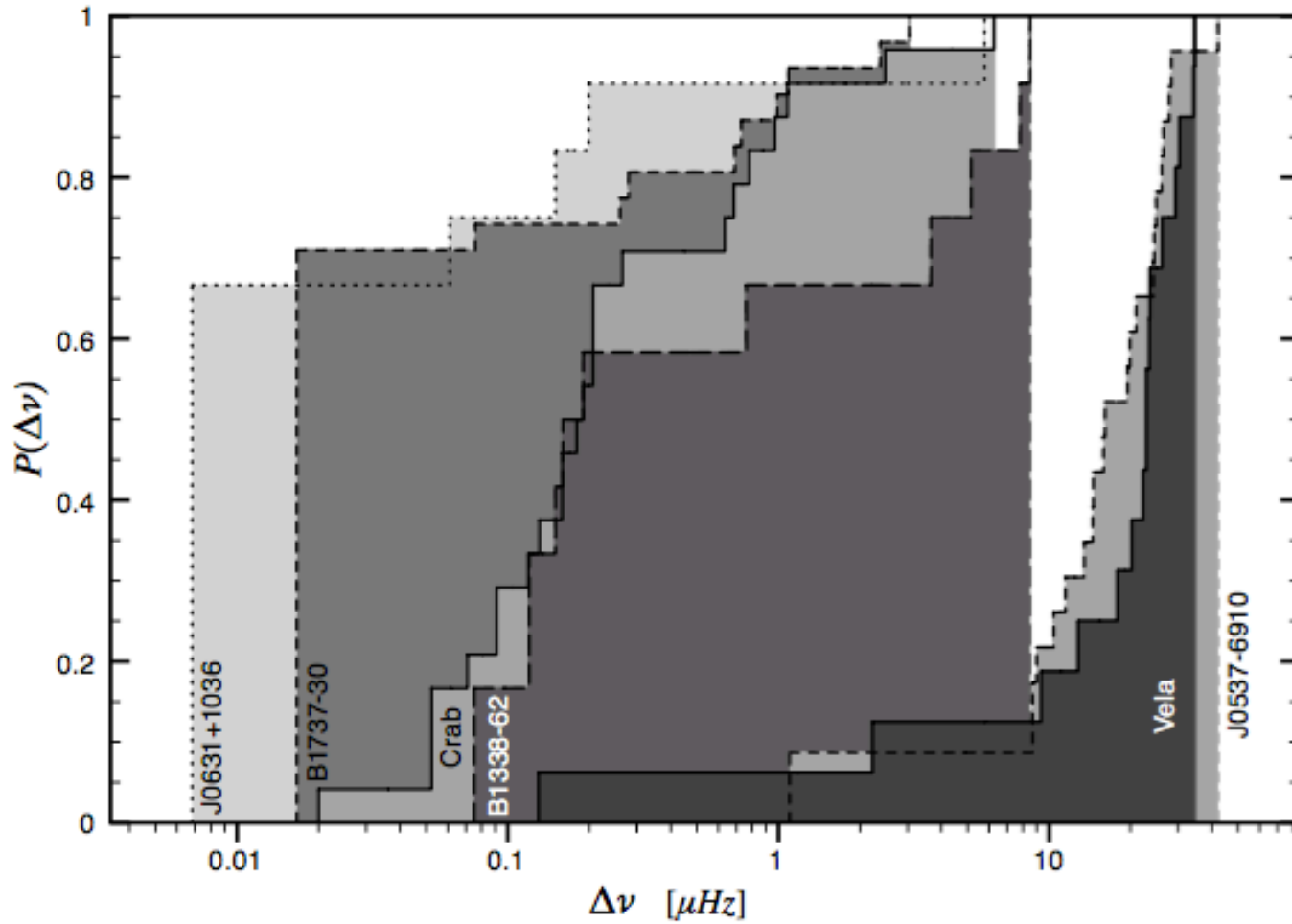
Istanbul, 26/4/2016



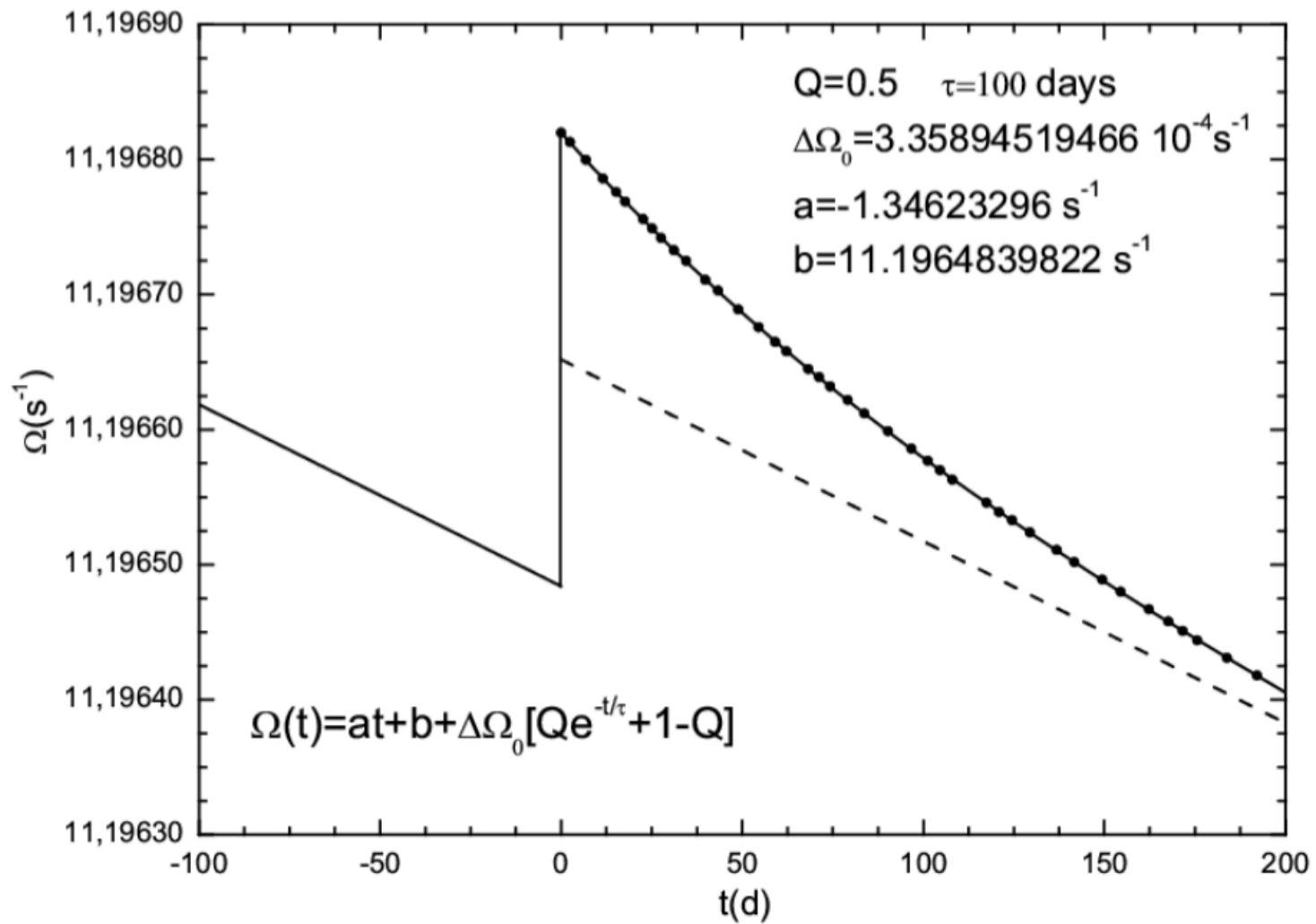


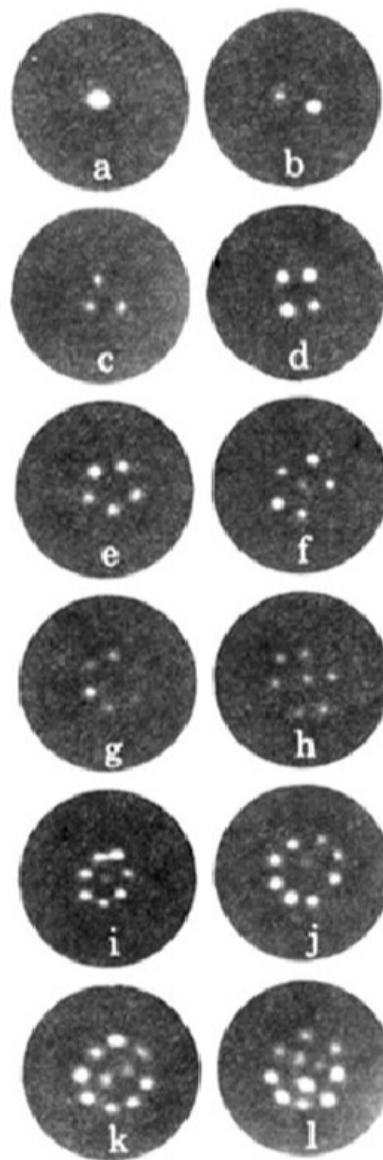
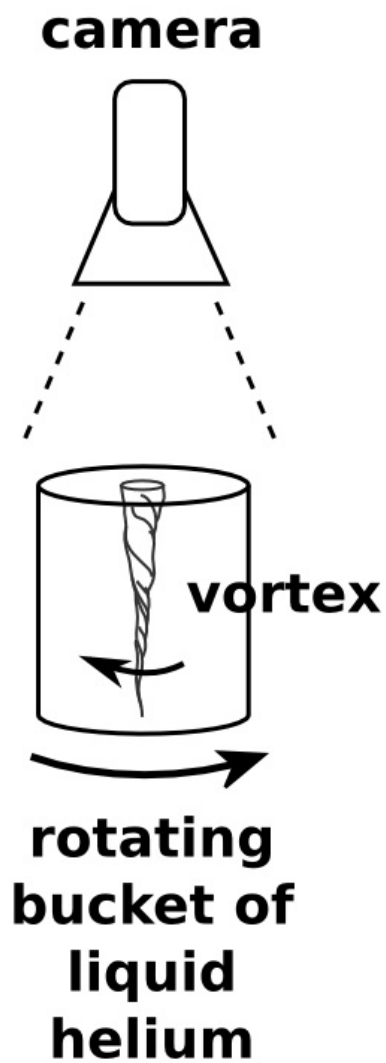


(Ho et al, 2015)



(Espinoza et al, 2011)



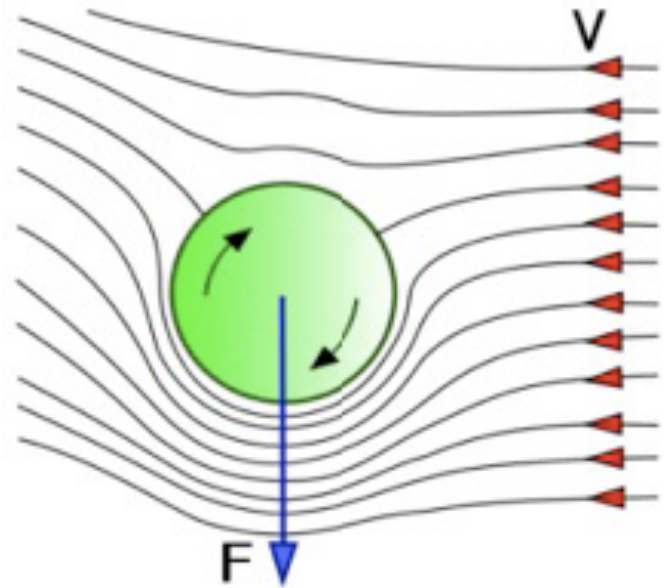
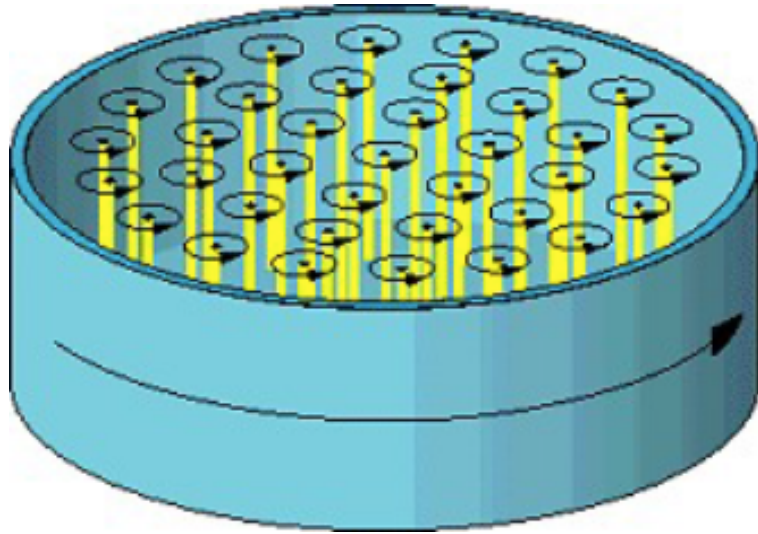


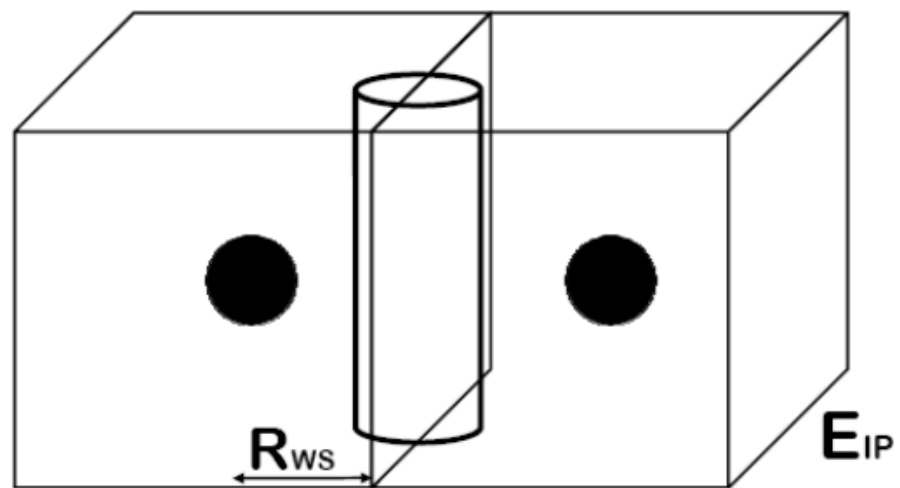
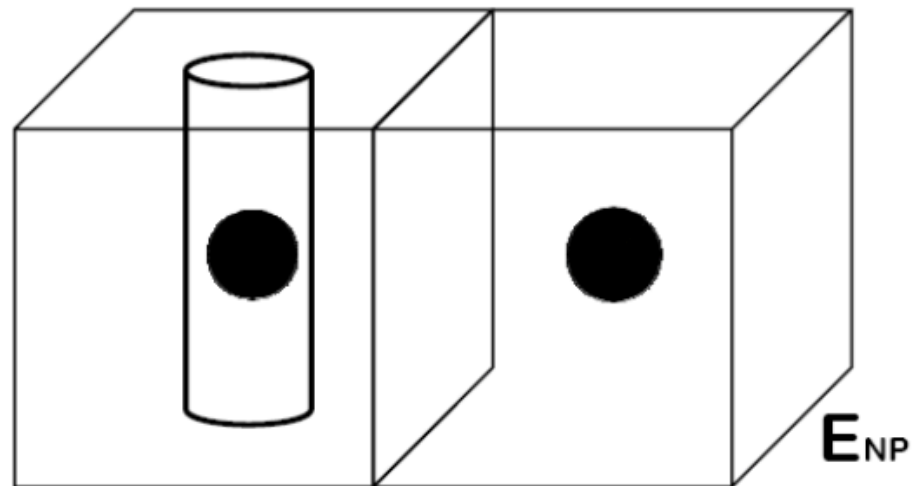
2 mm

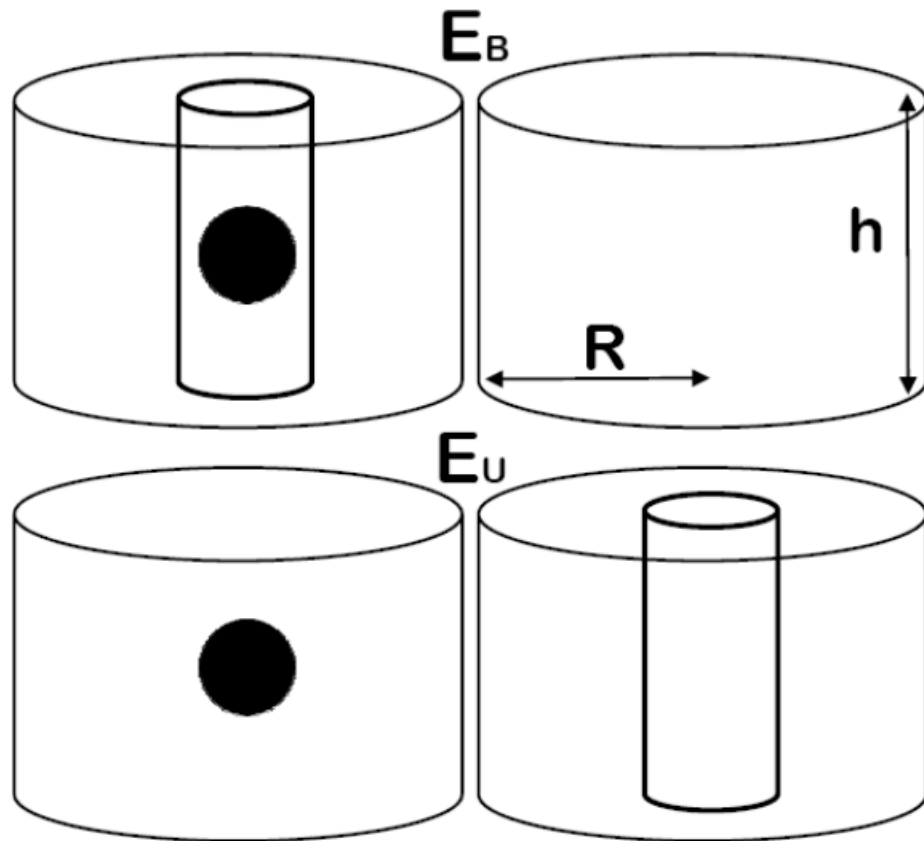
**20 seconds
per revolution**

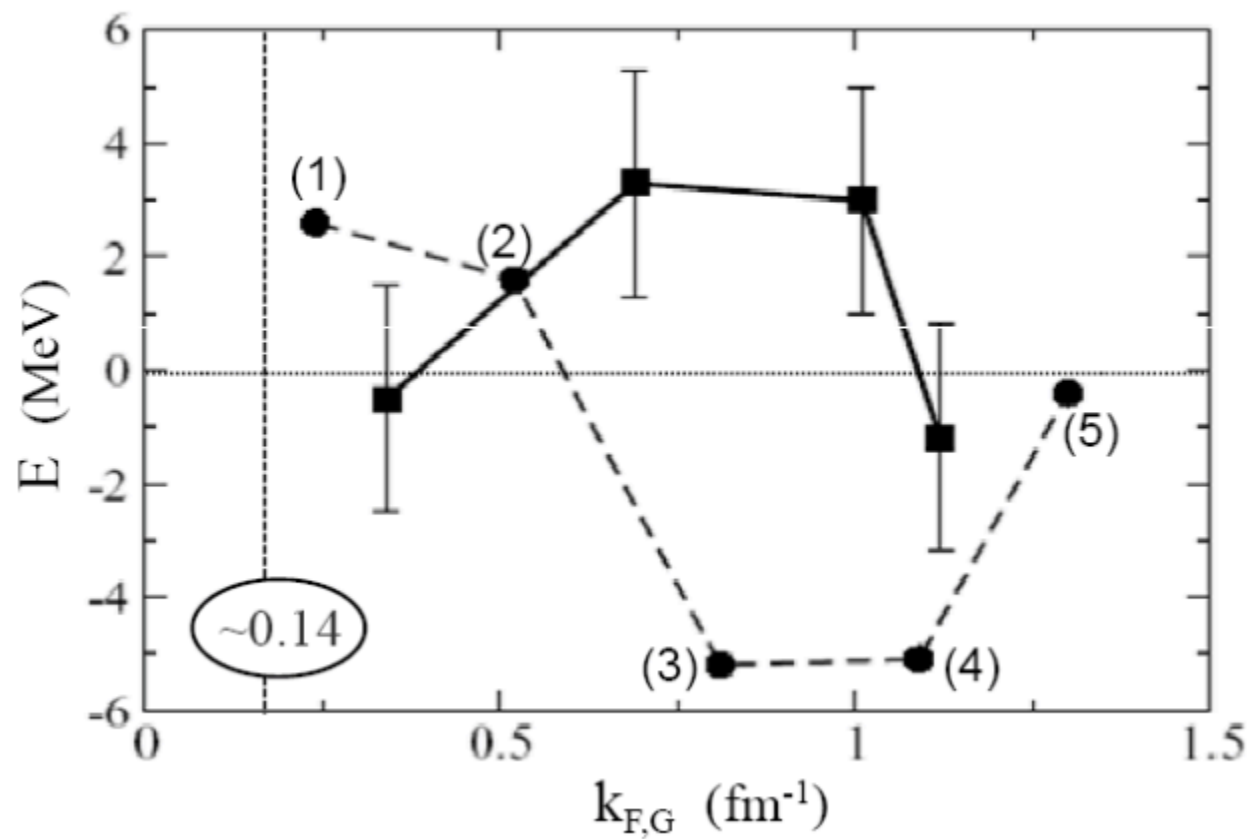


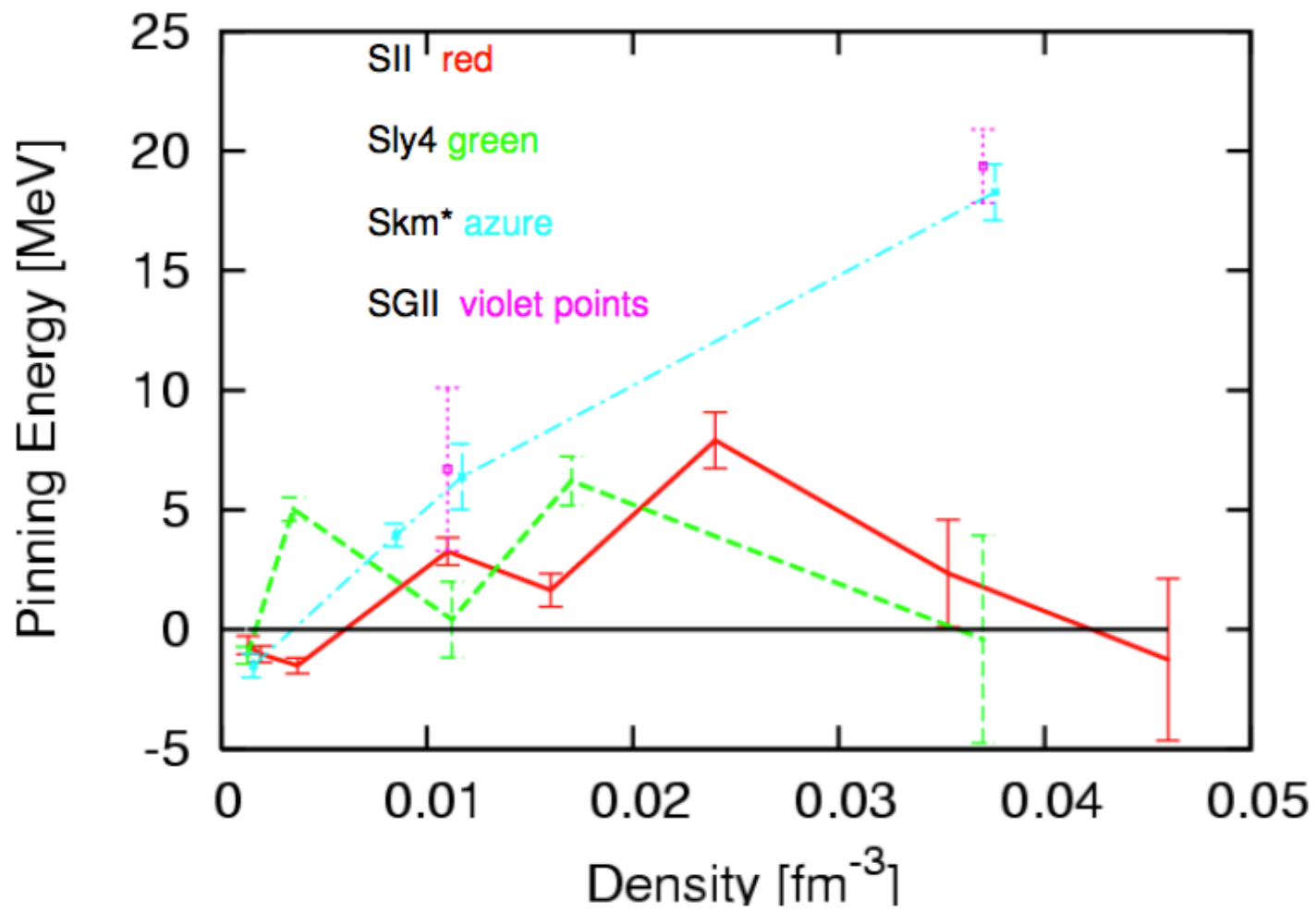
**10 seconds
per revolution**



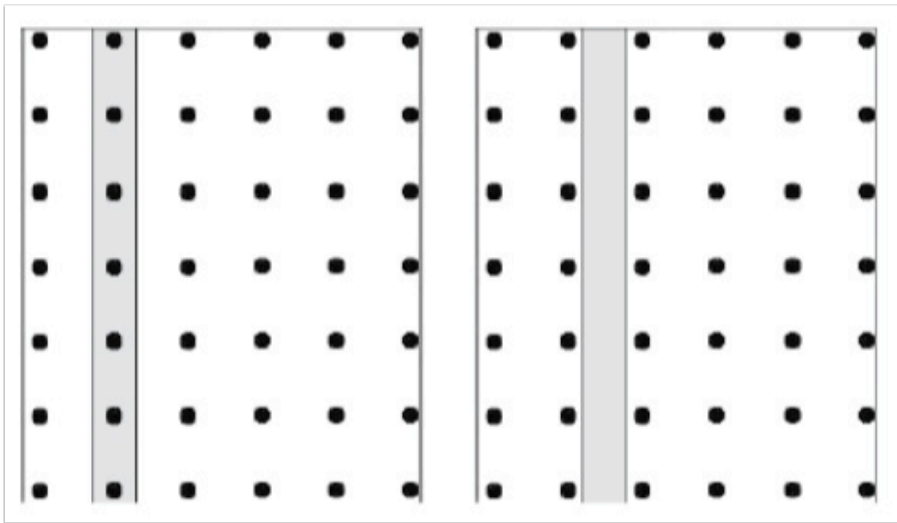


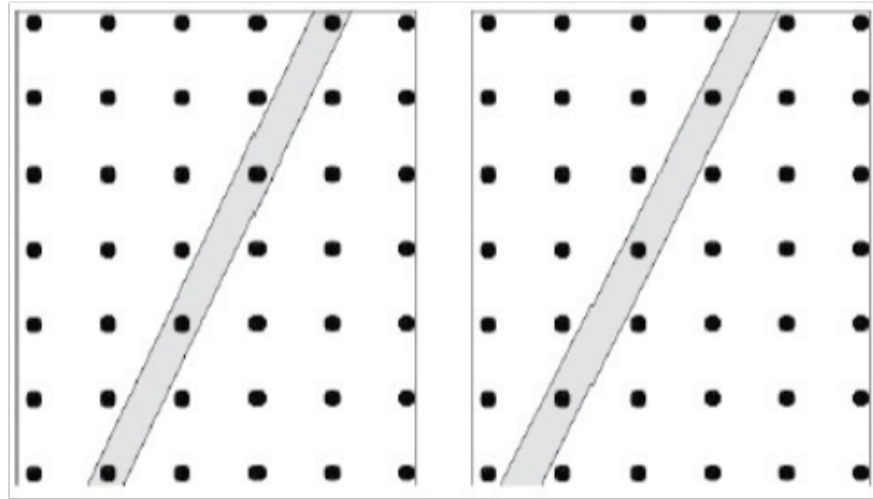


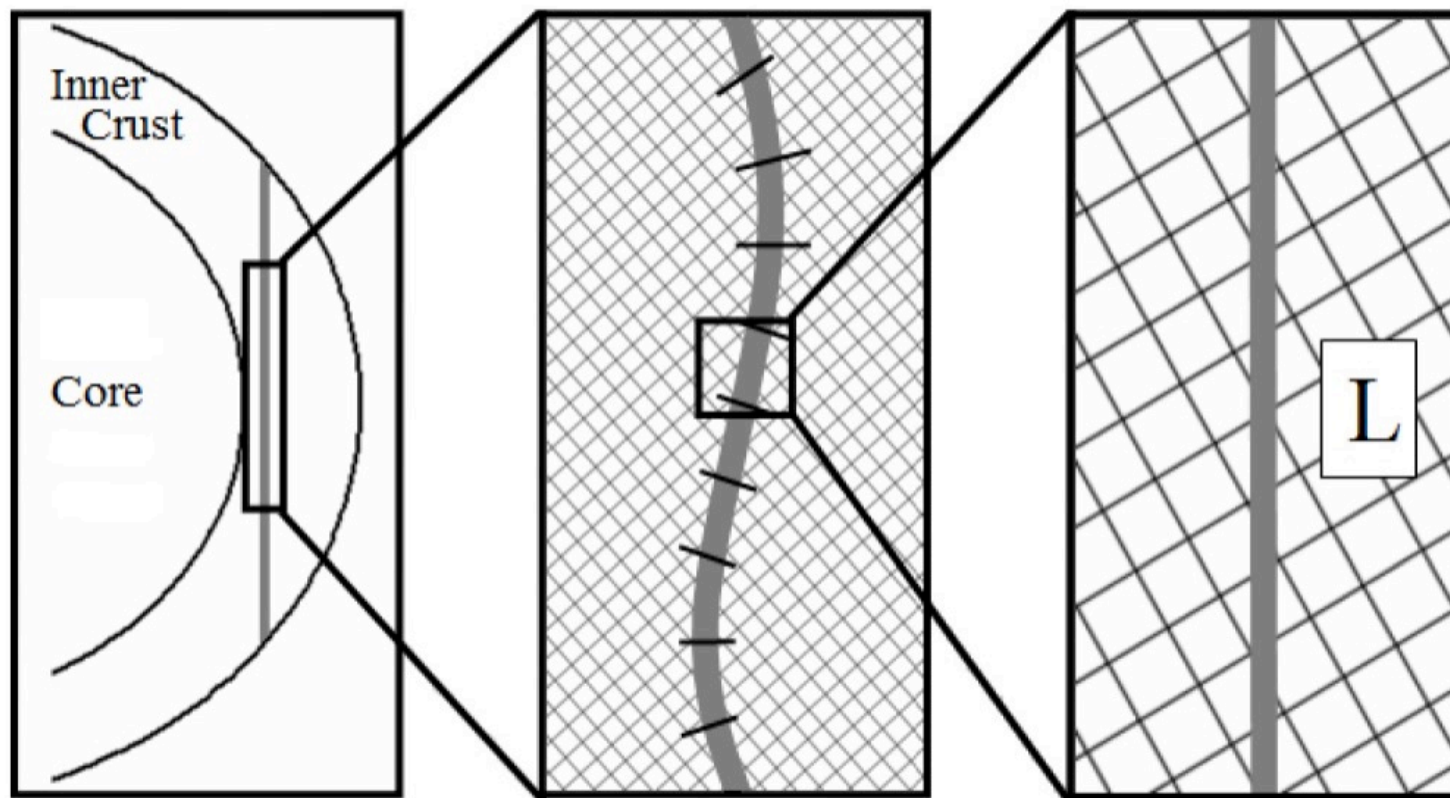


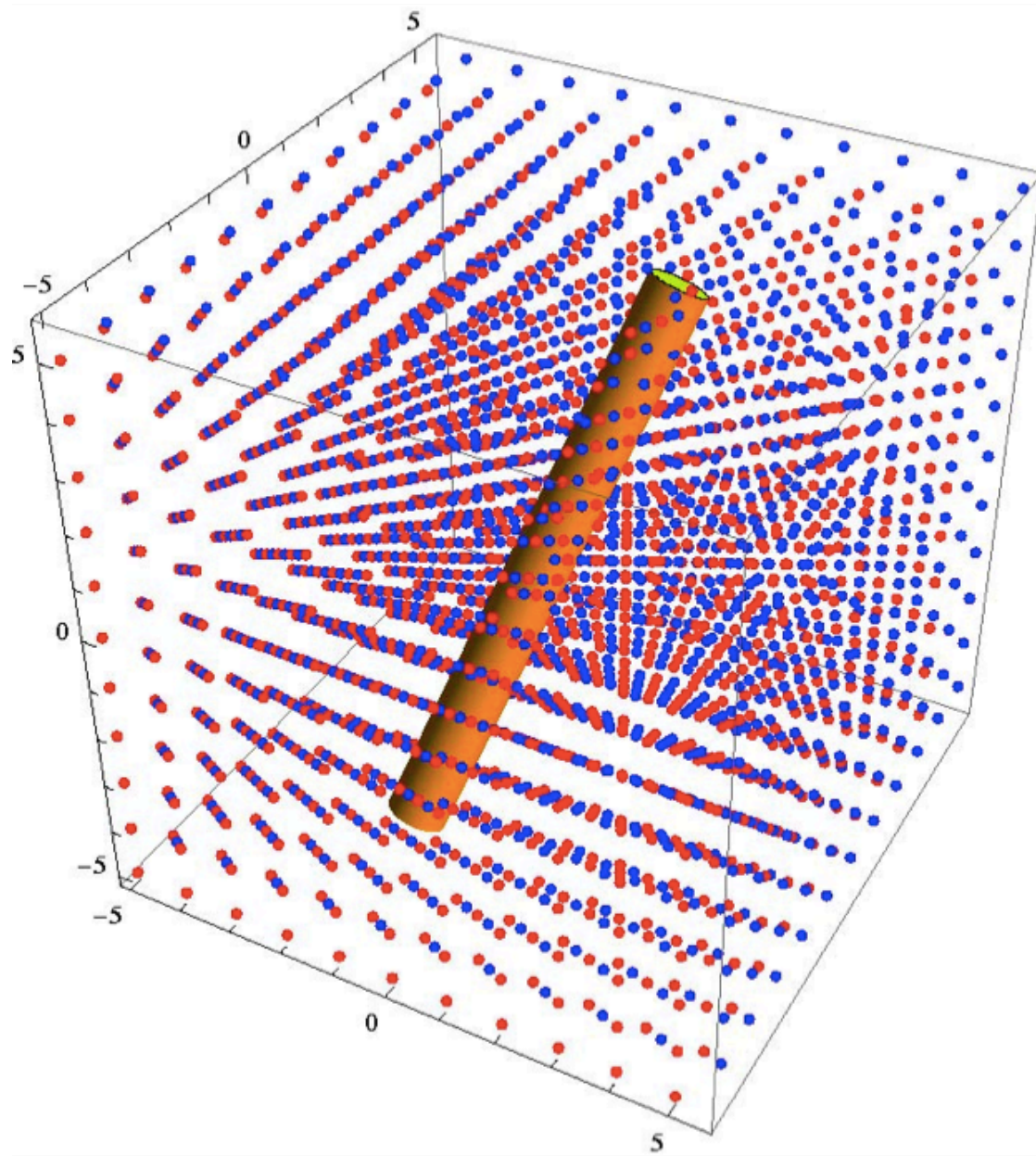


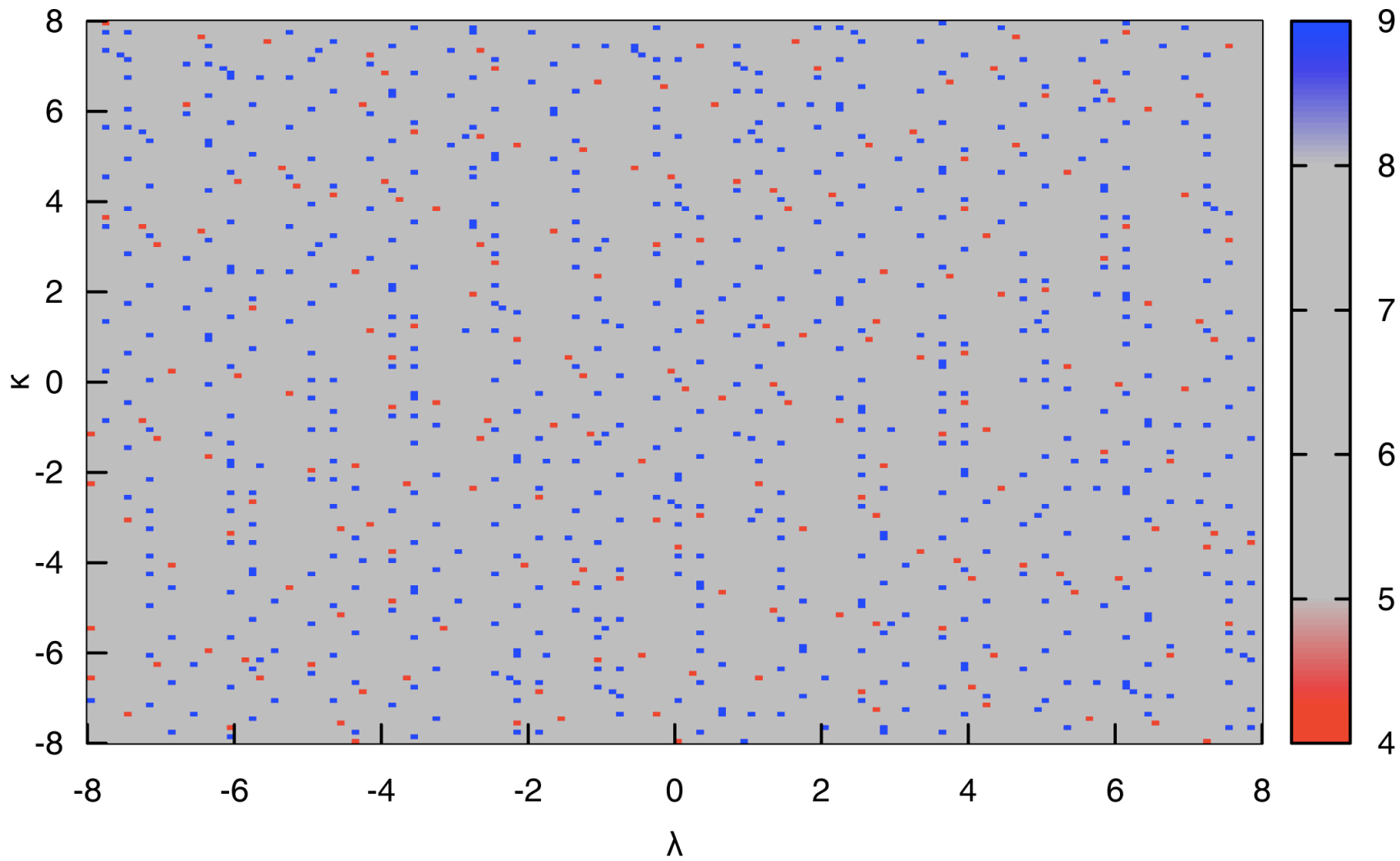
(Avogadro et al, 2007)

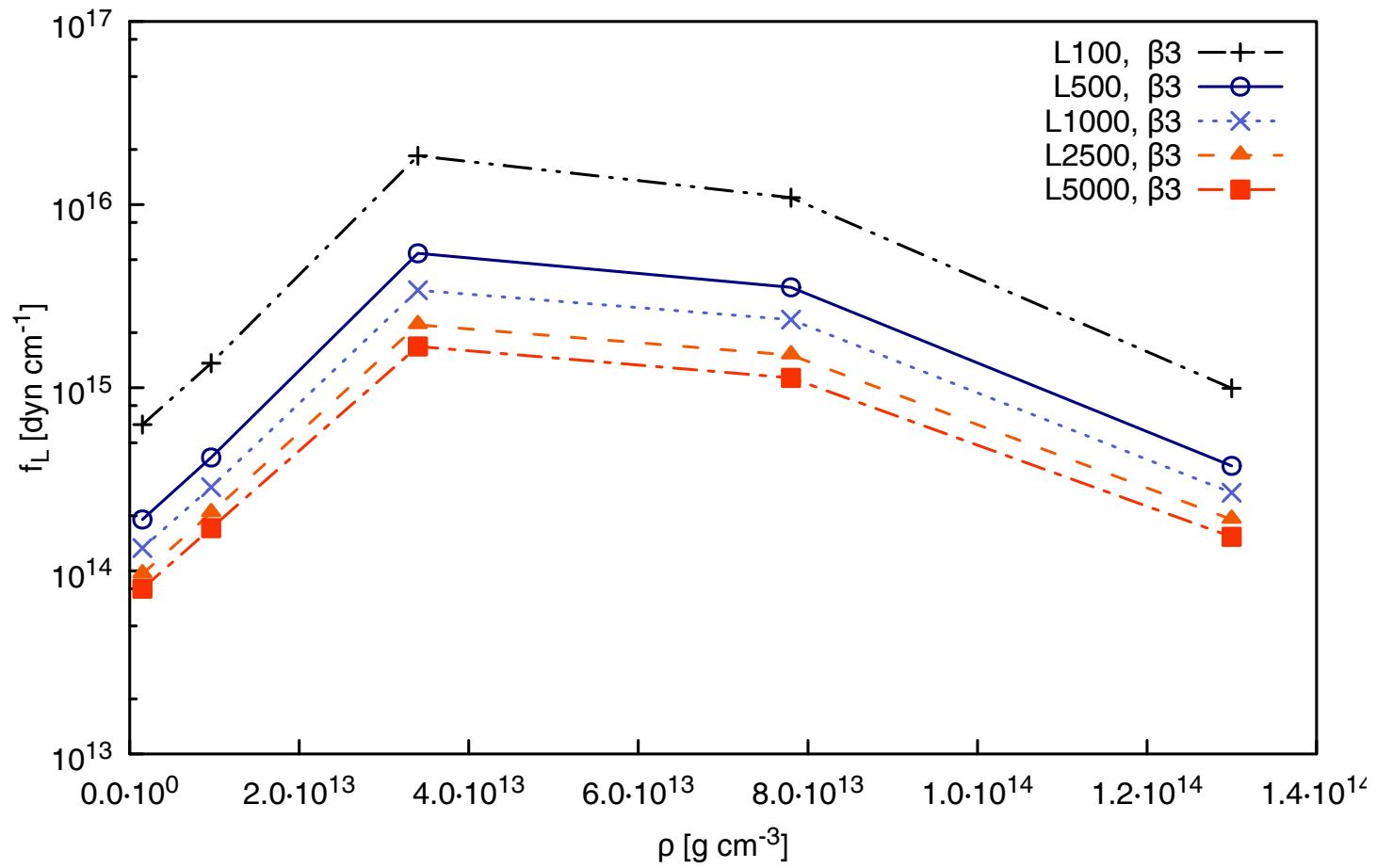


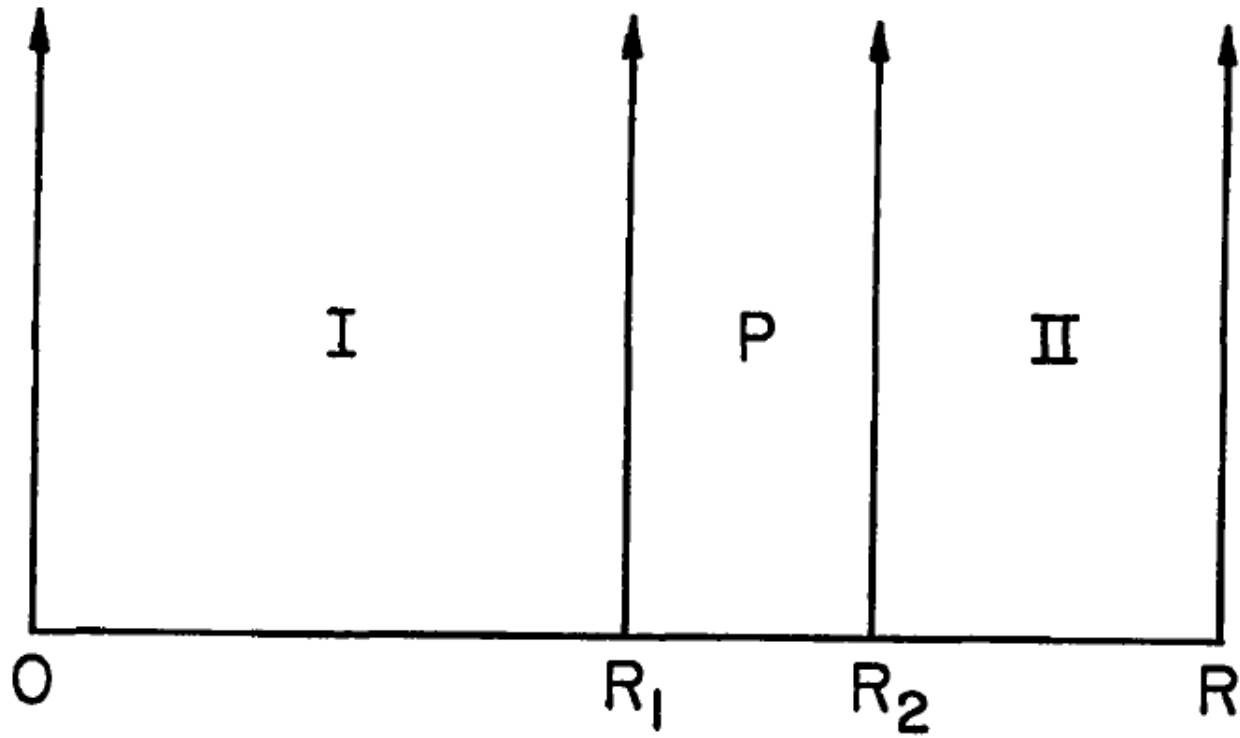




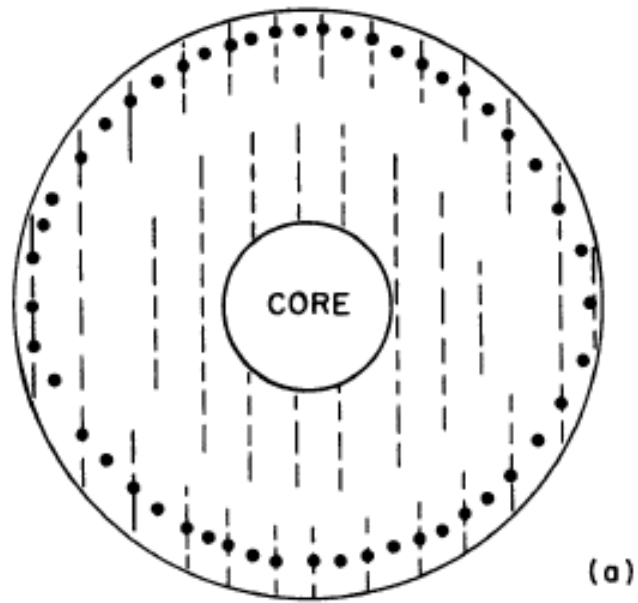




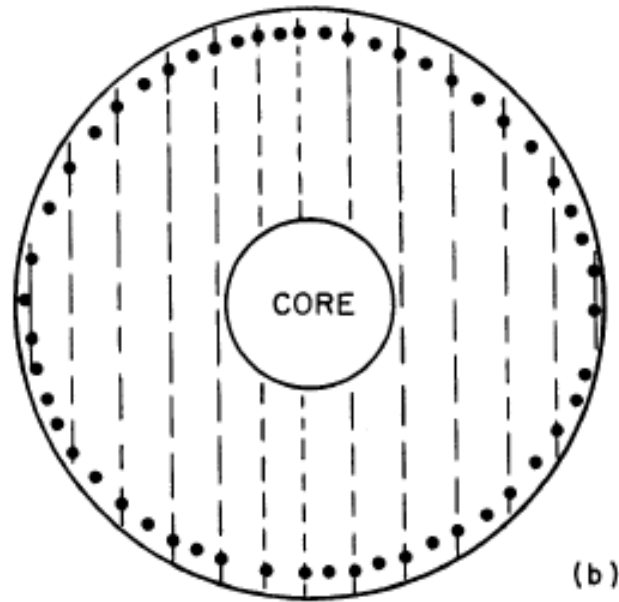




(Pines et al, 1980)

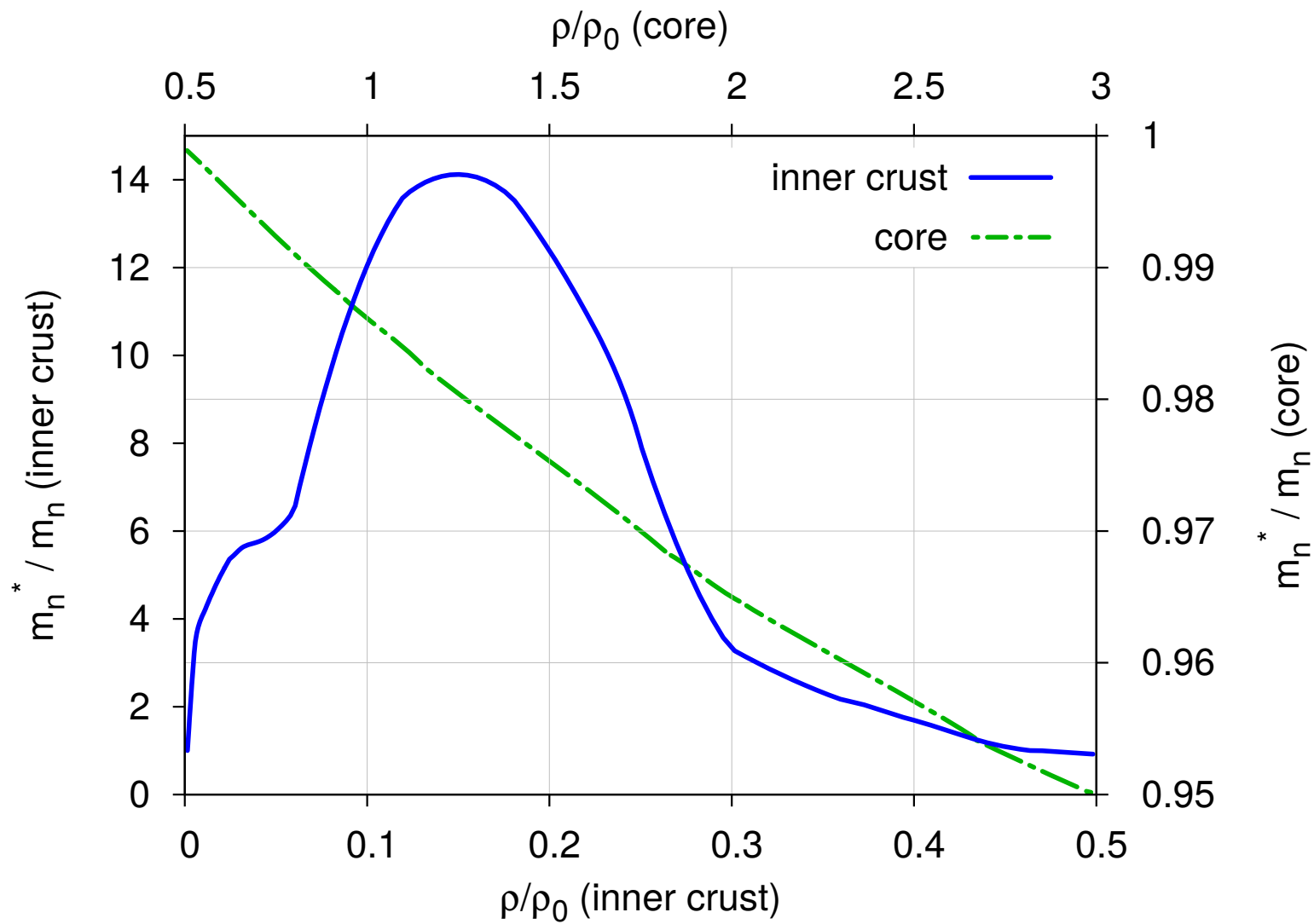


(a)

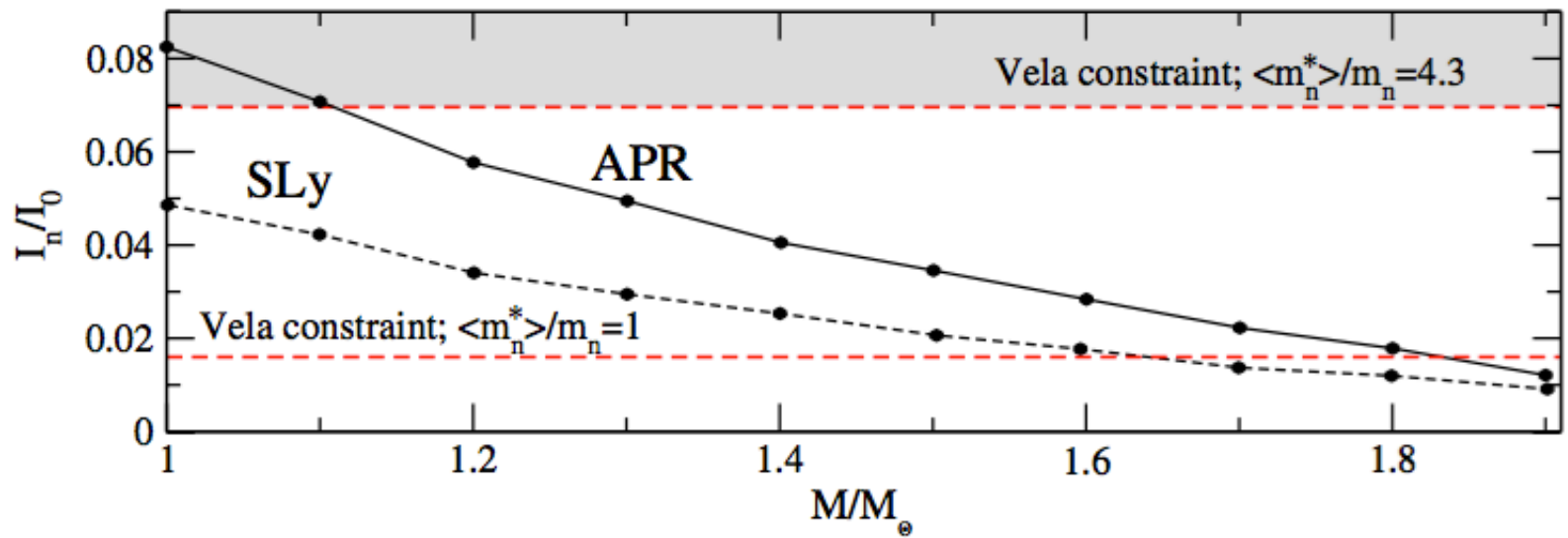


(b)

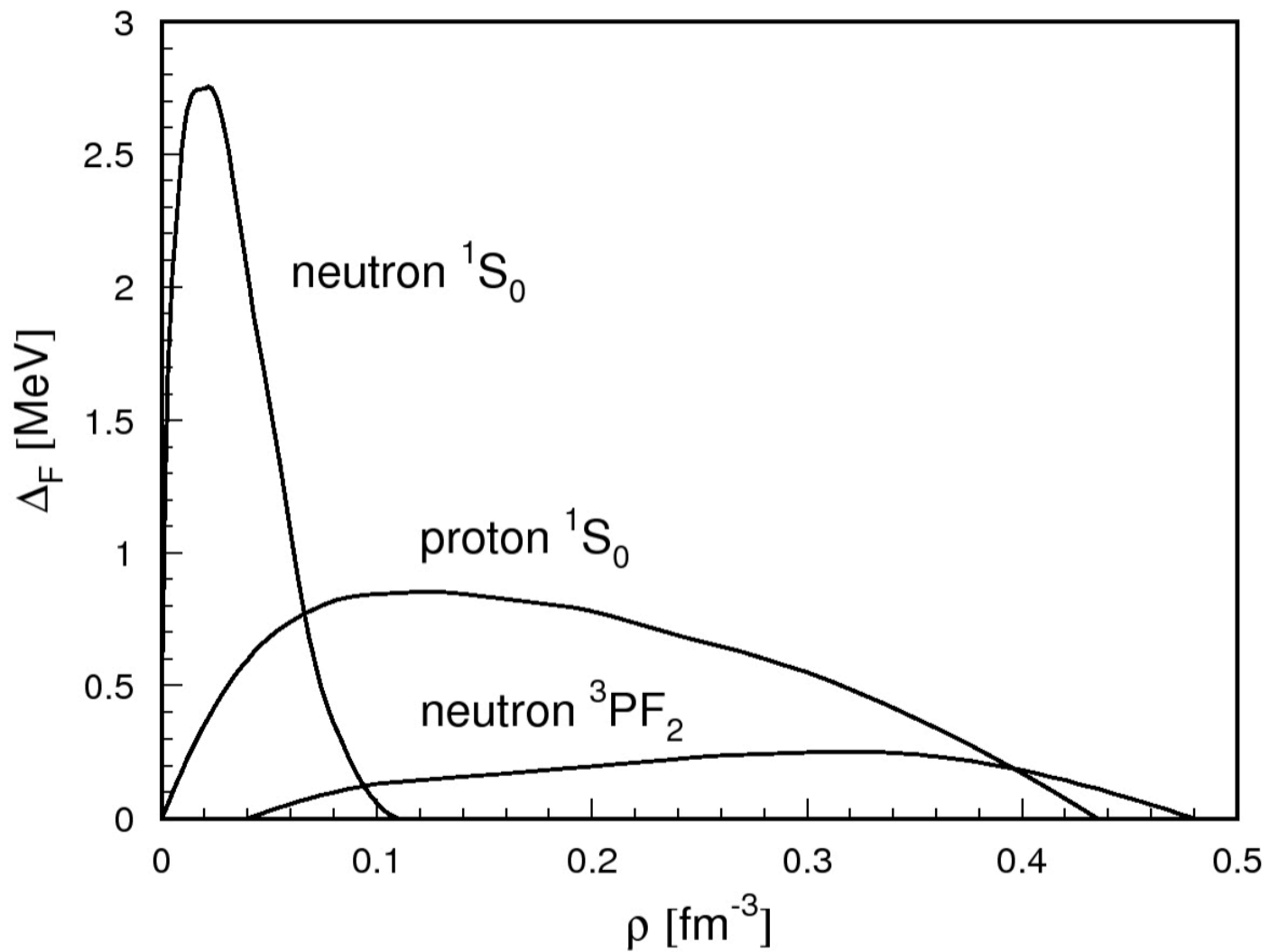
(Ruderman, 1976)



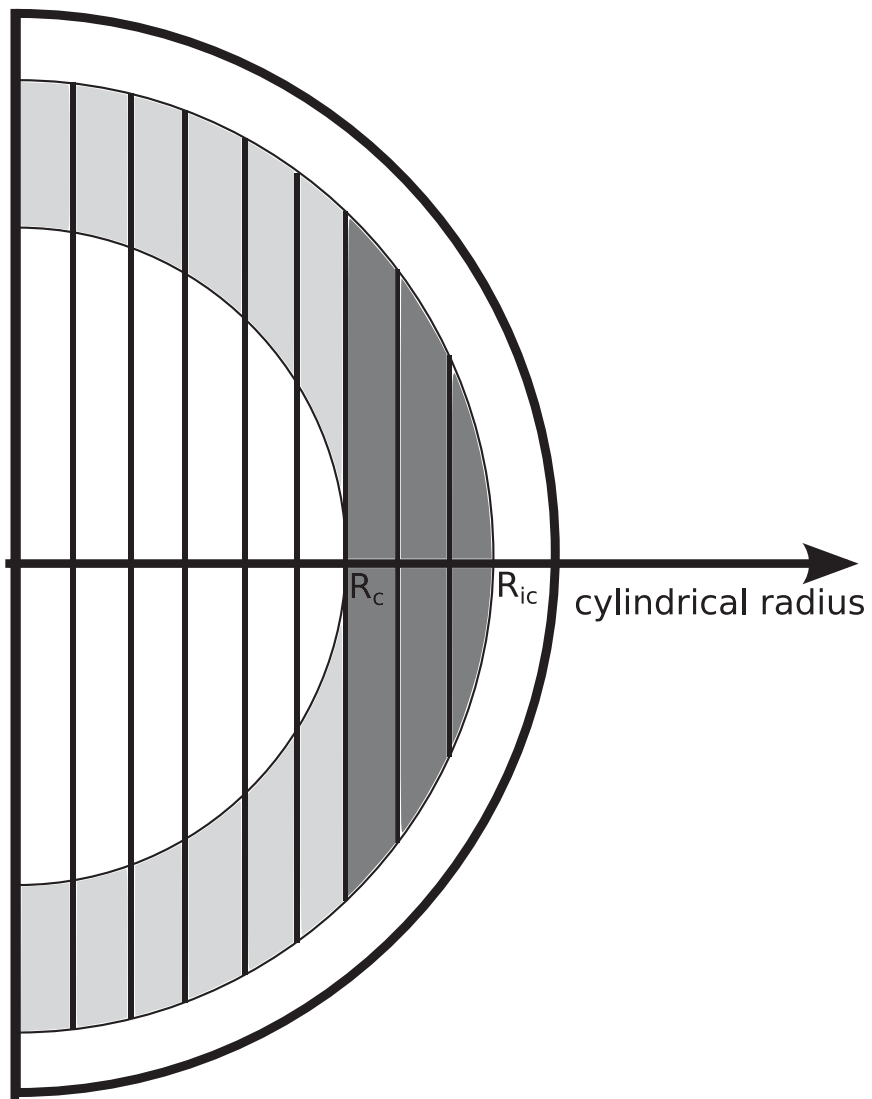
(Chamel, 2012)



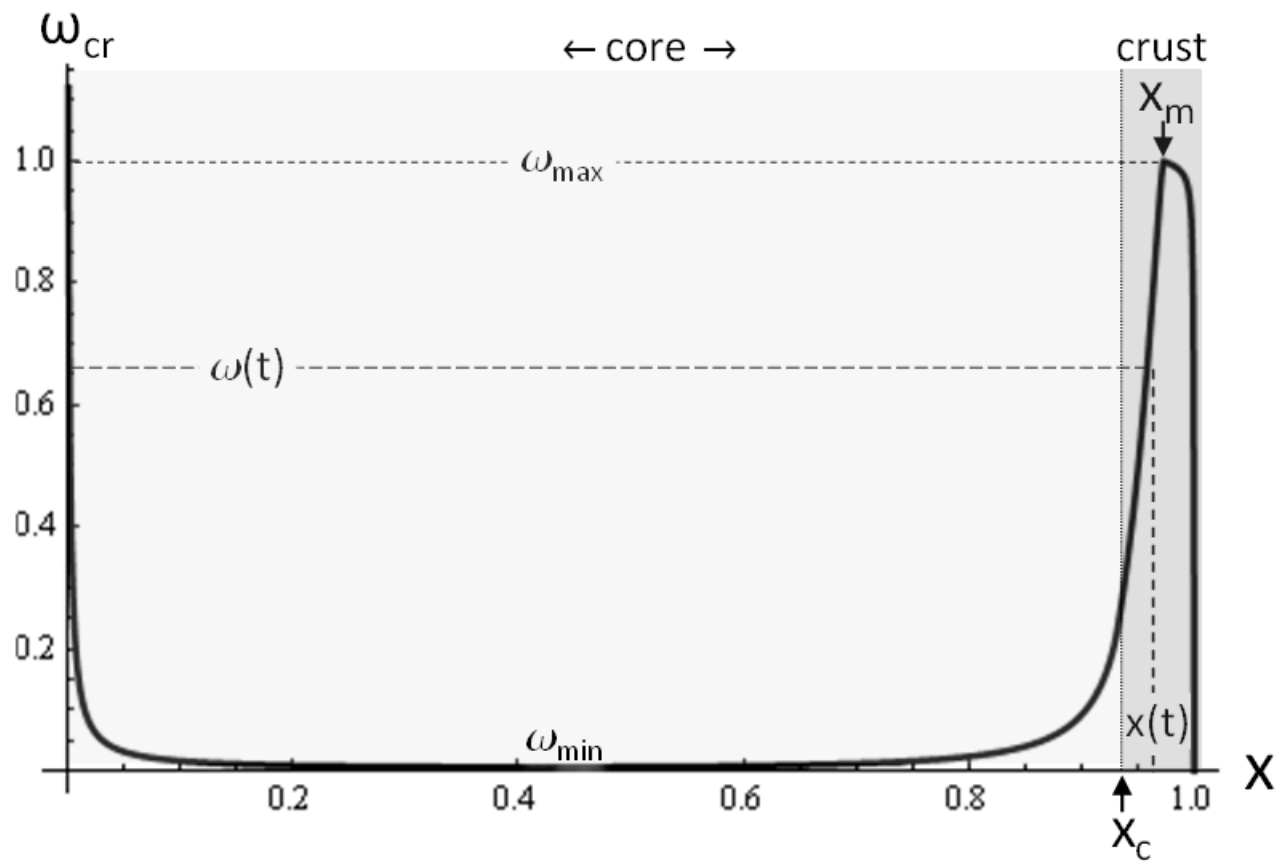
(Andersson et al, 2012)

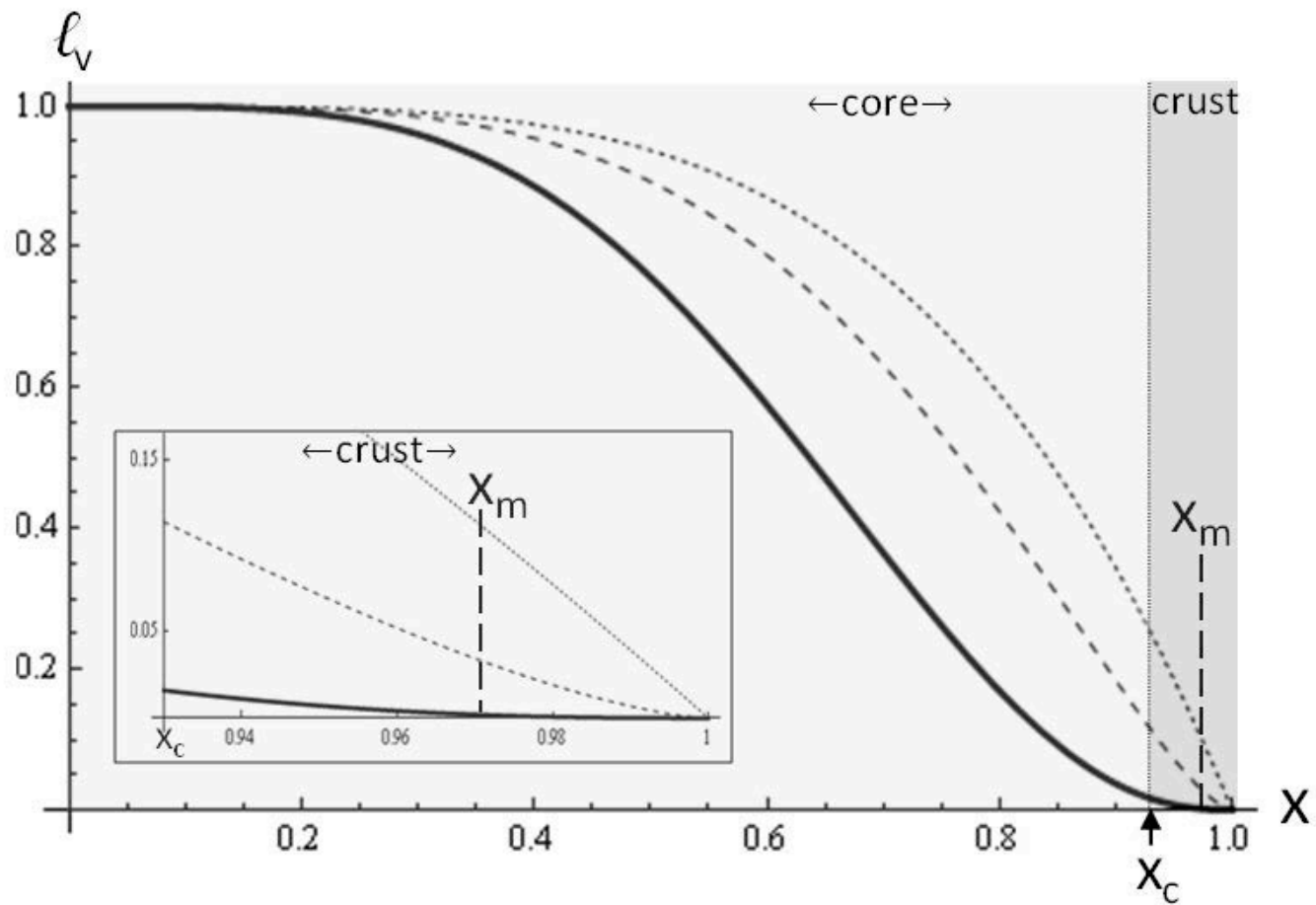


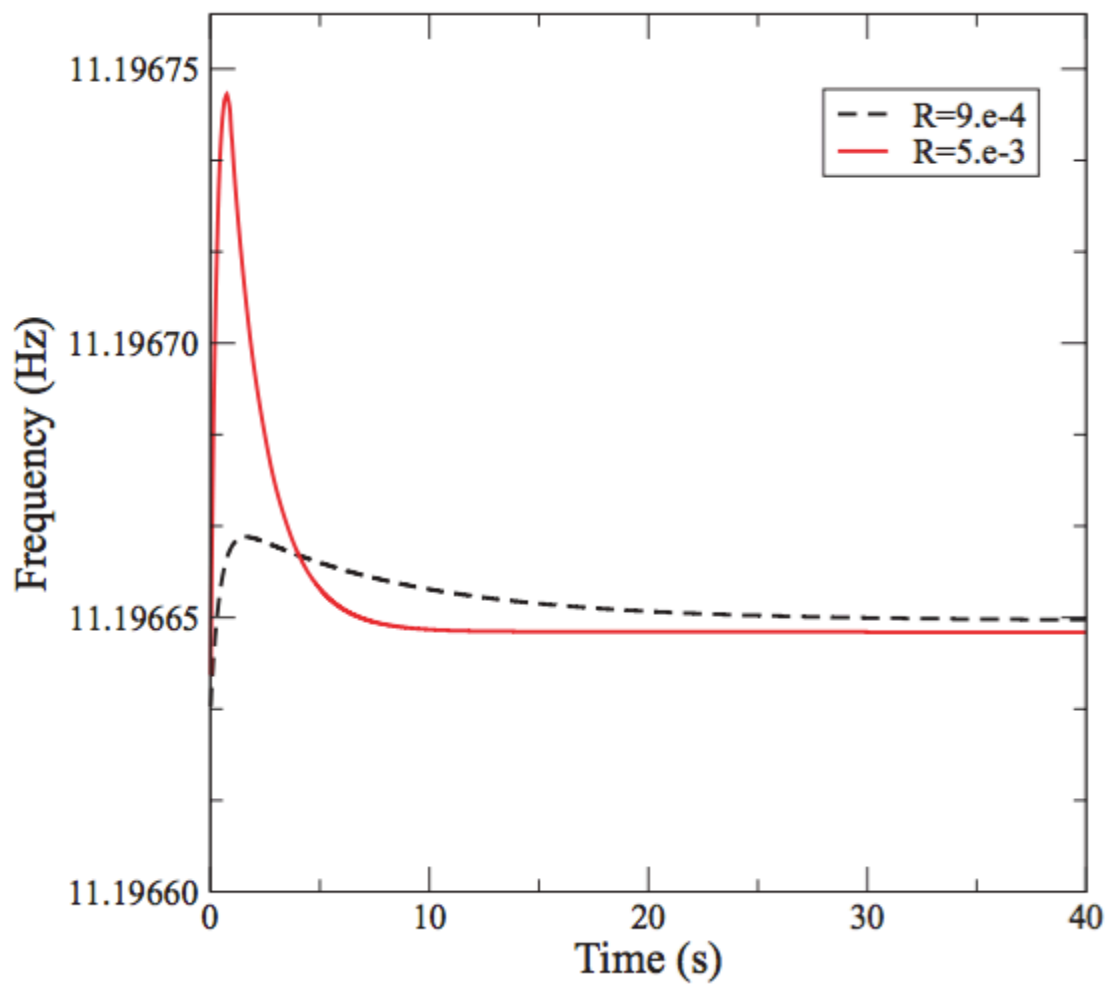
(Lombardo et al, 2000)

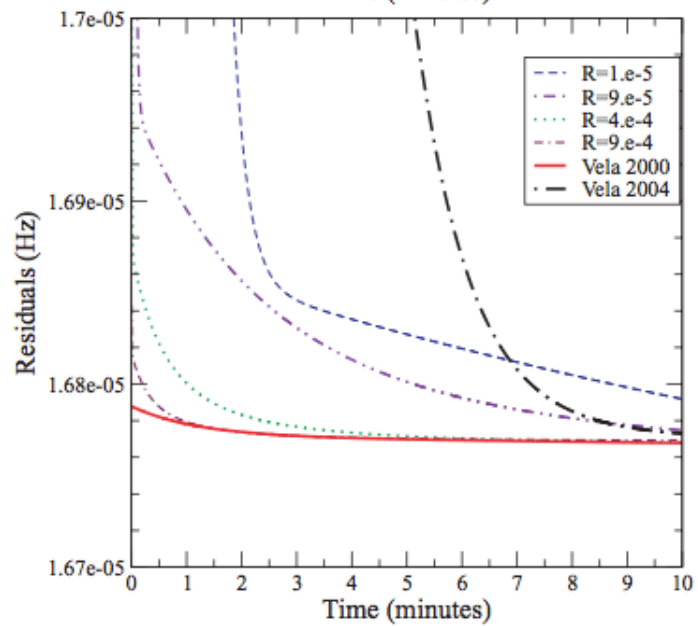
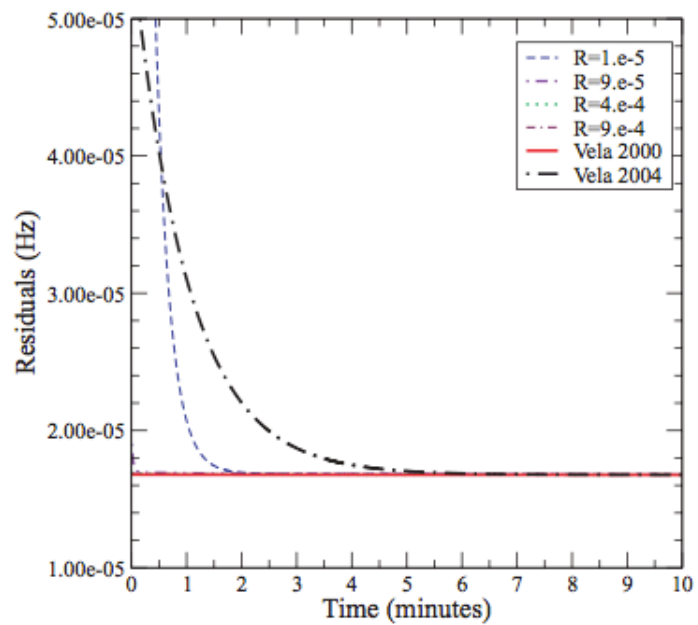


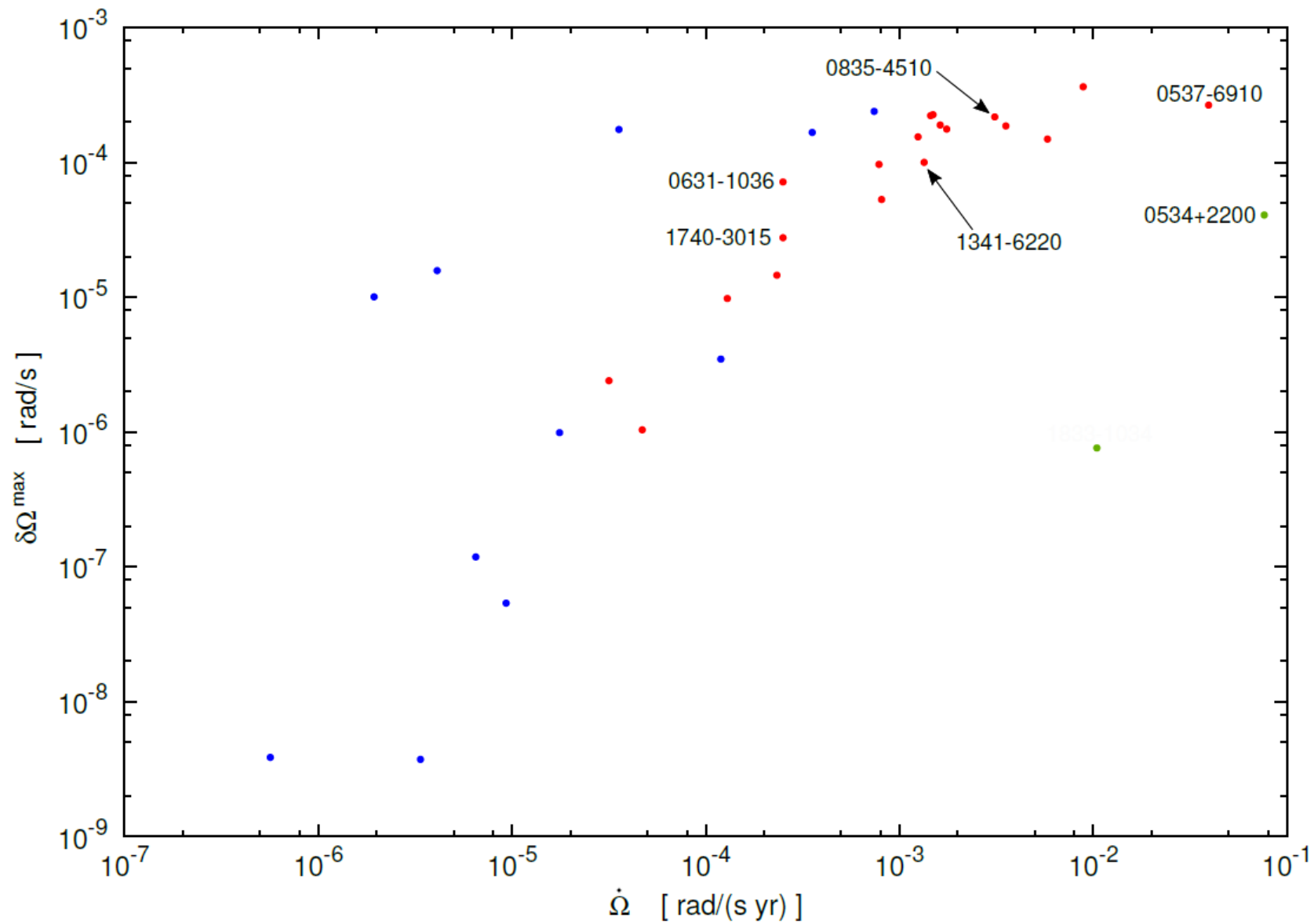
weak pinning region strong pinning region

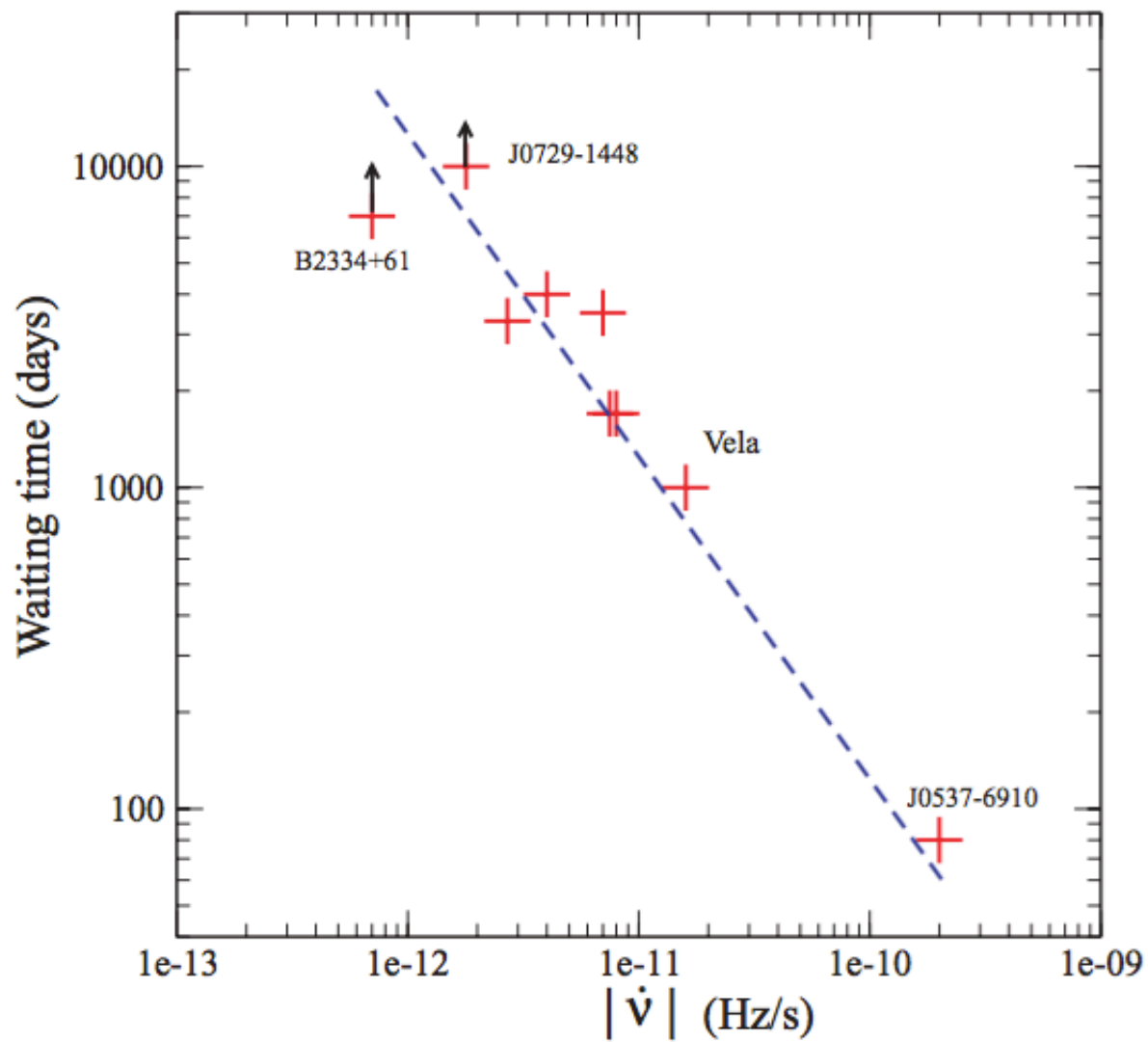


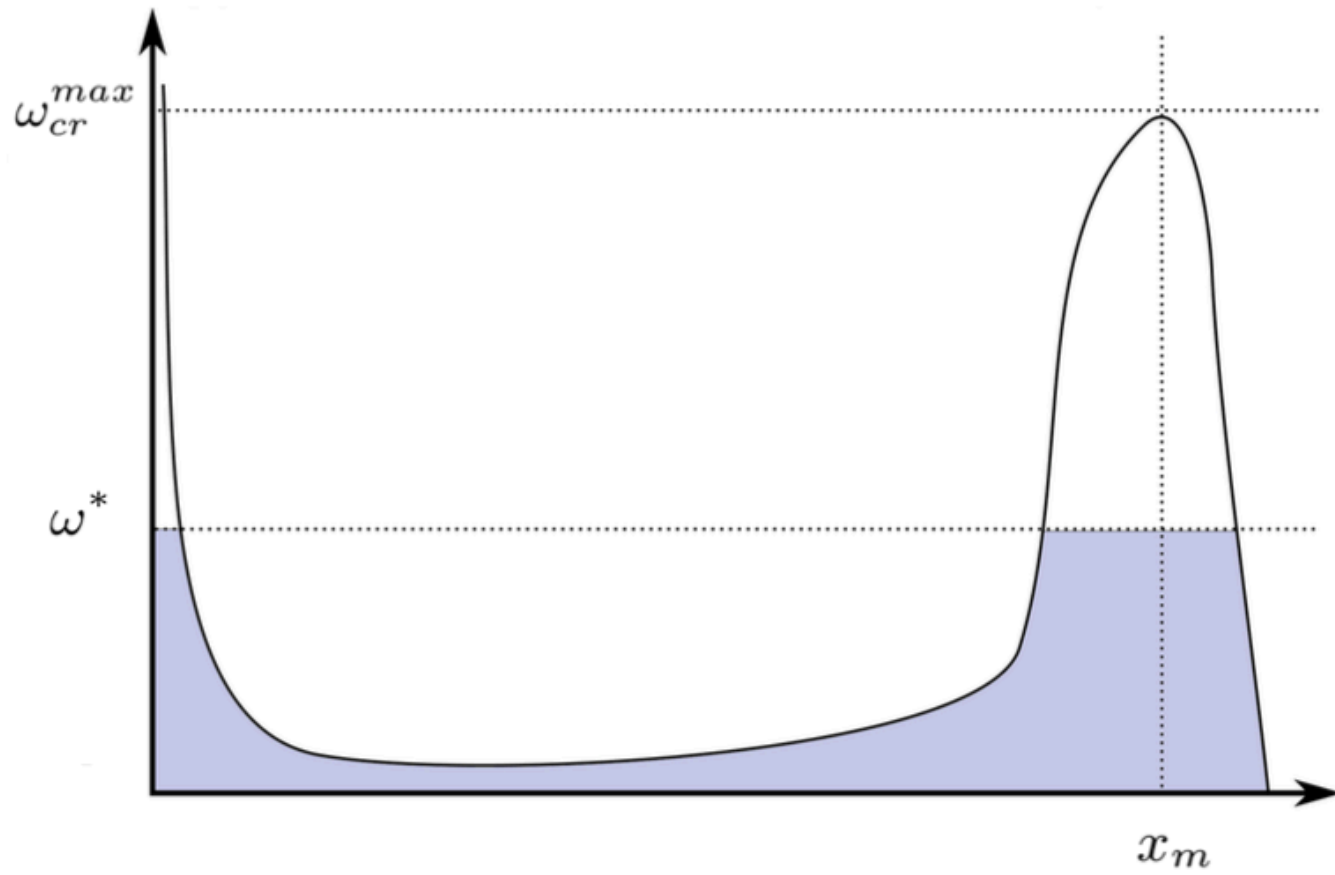


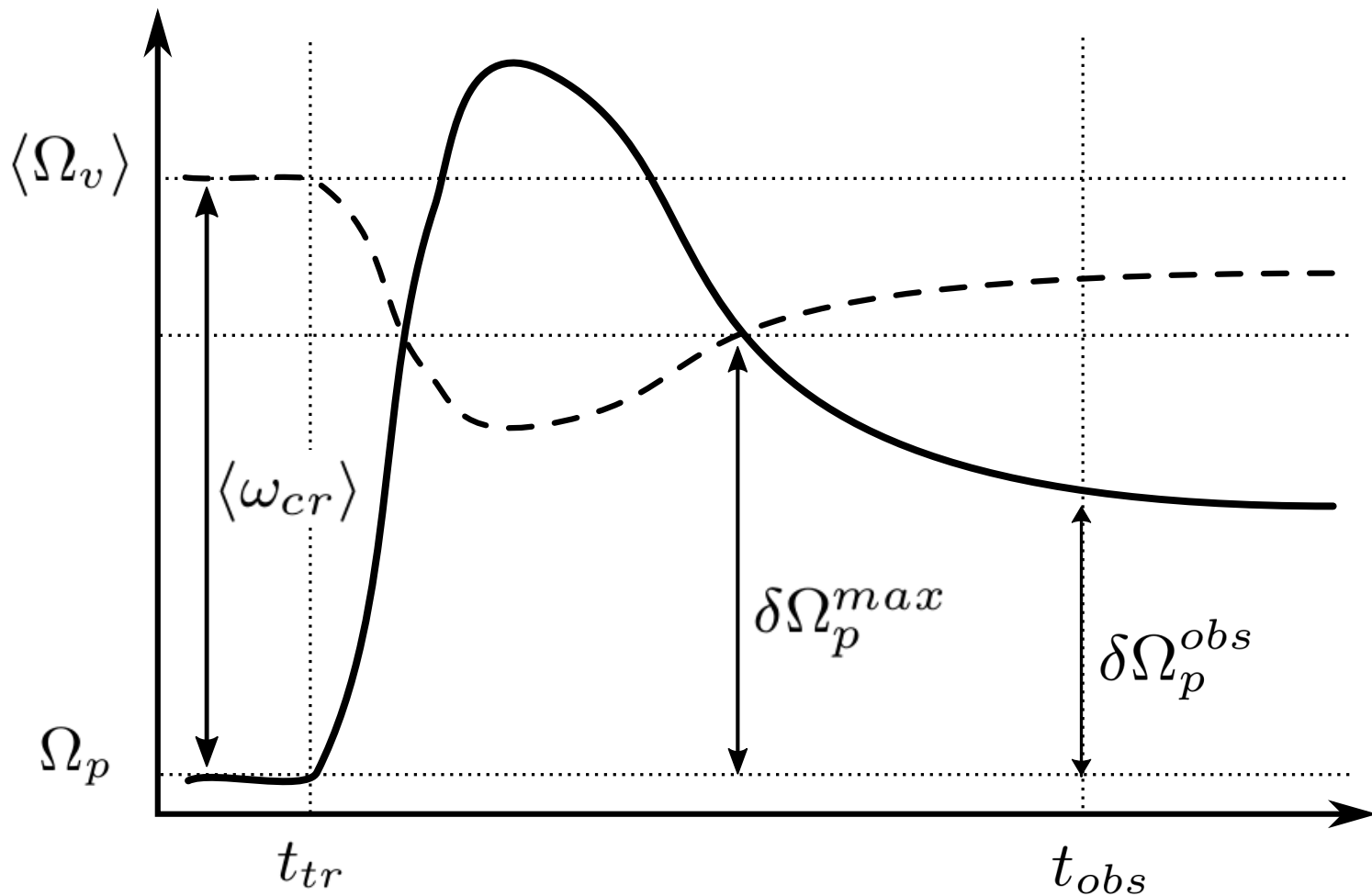




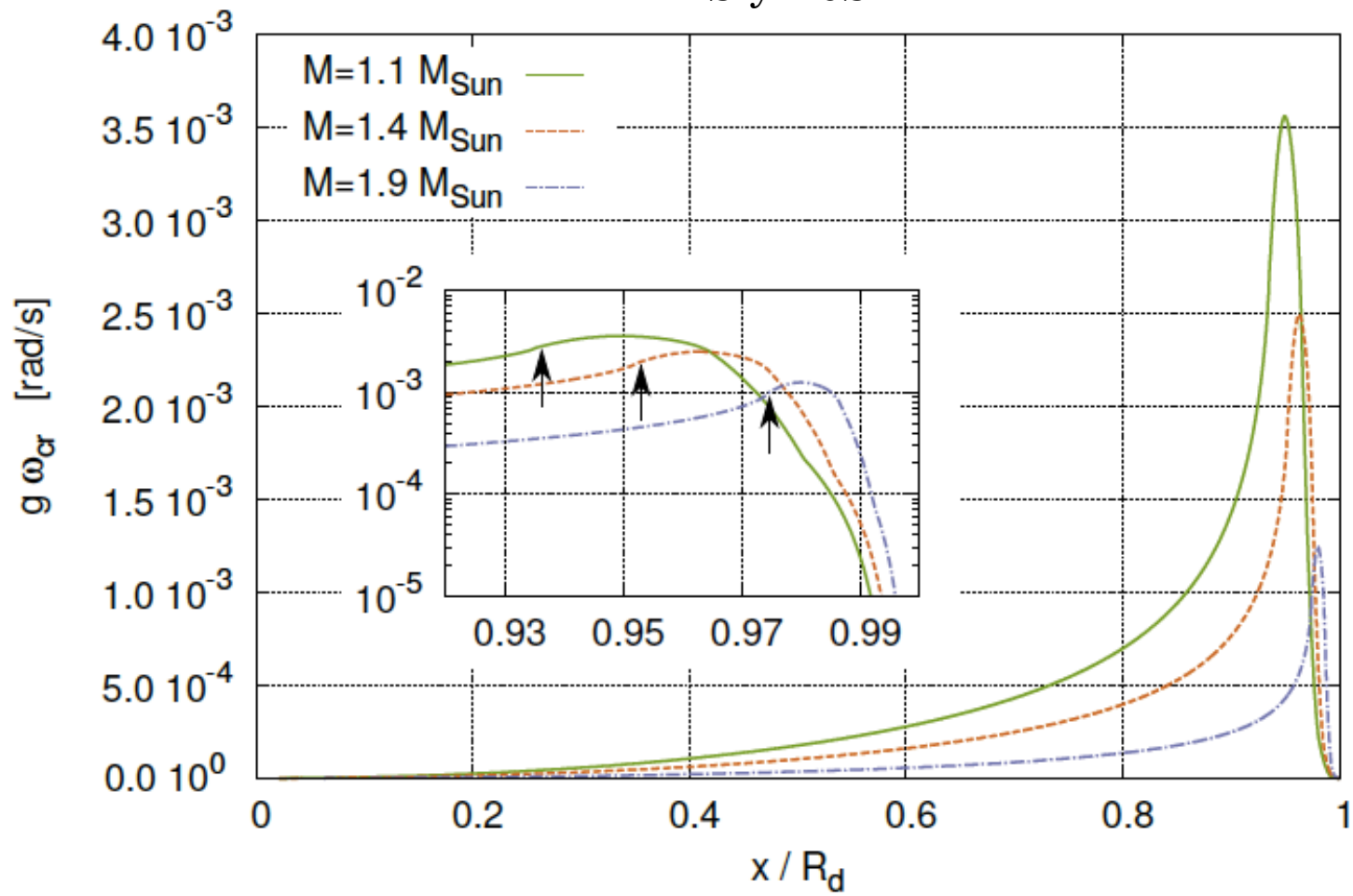


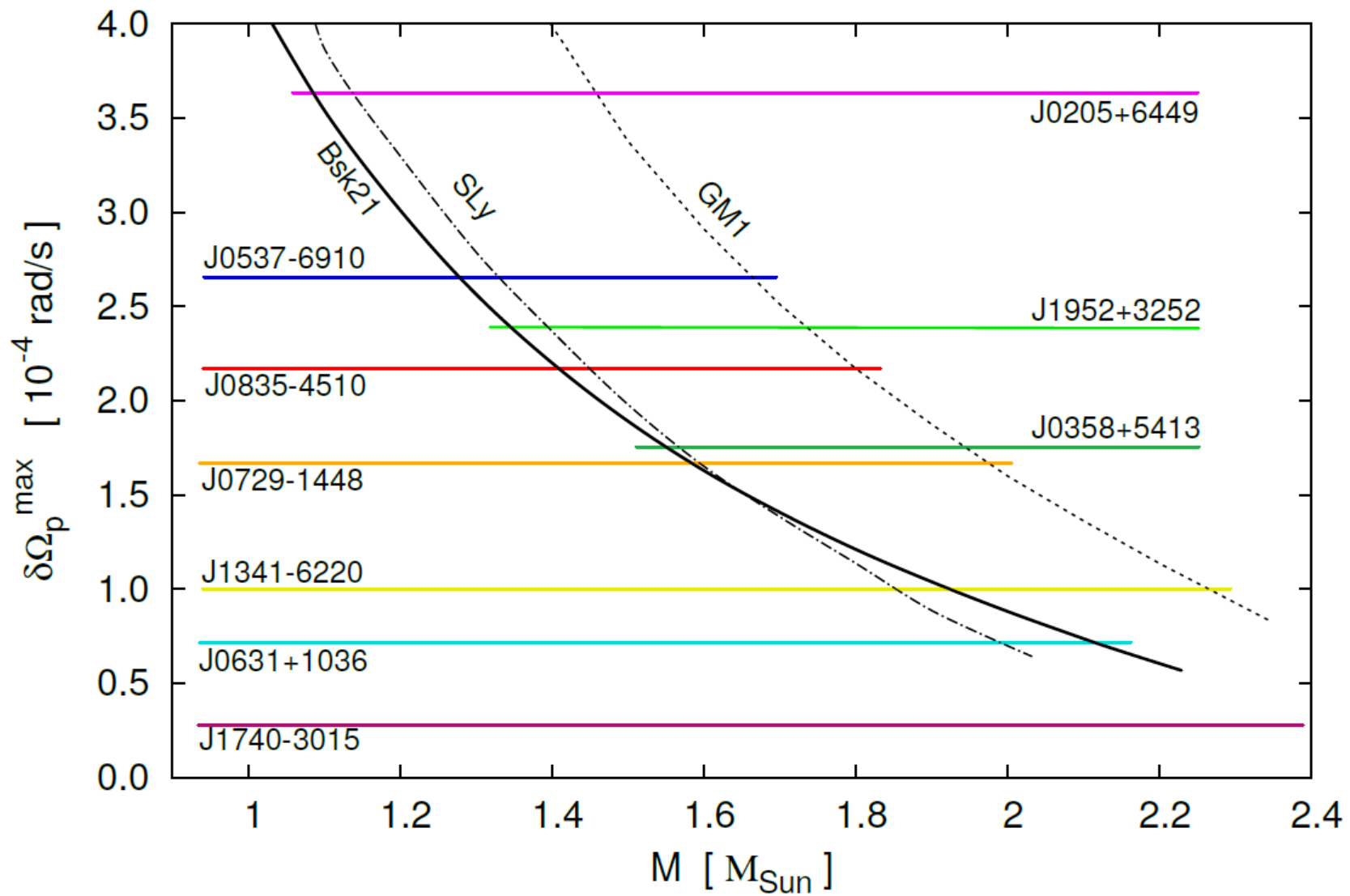


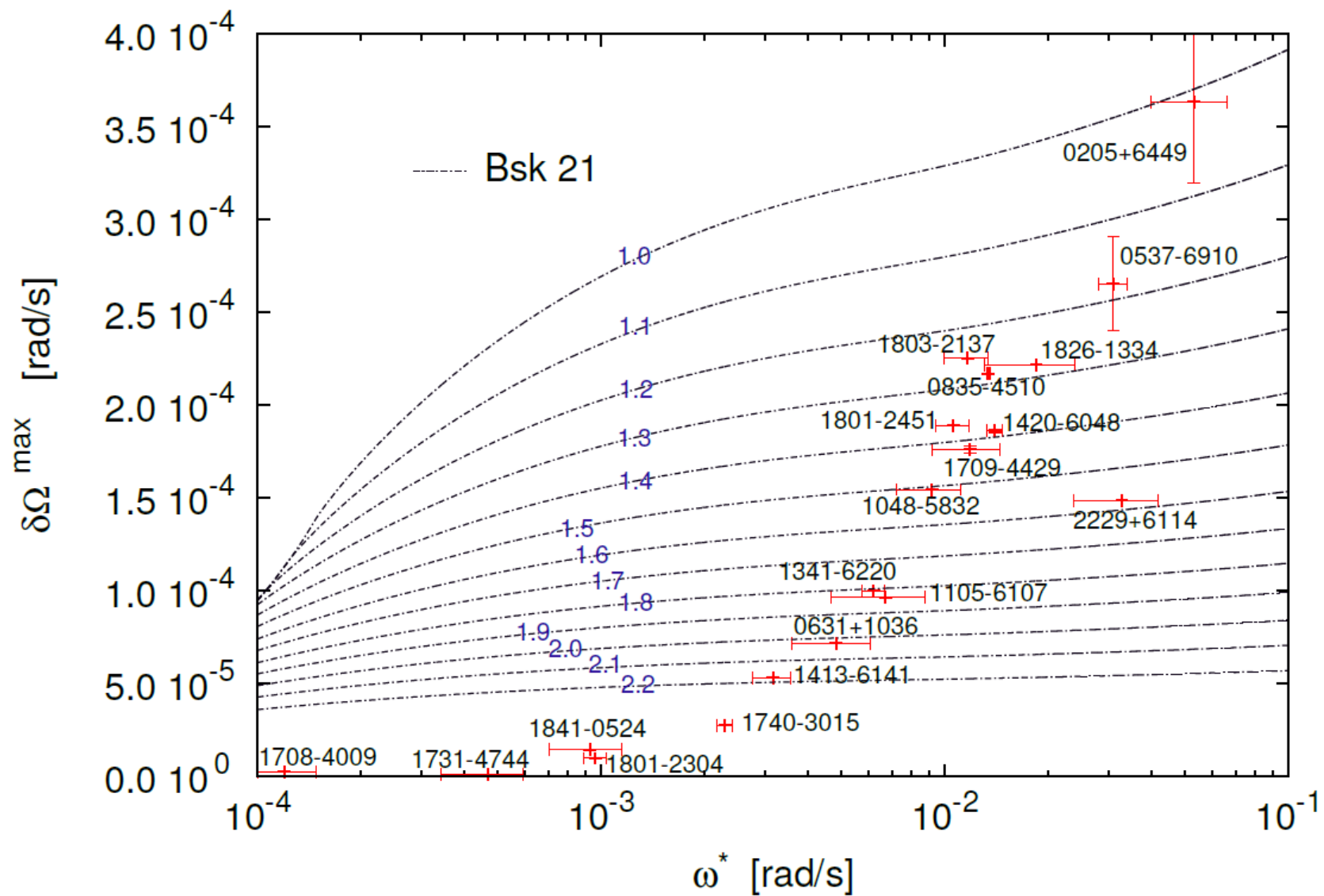


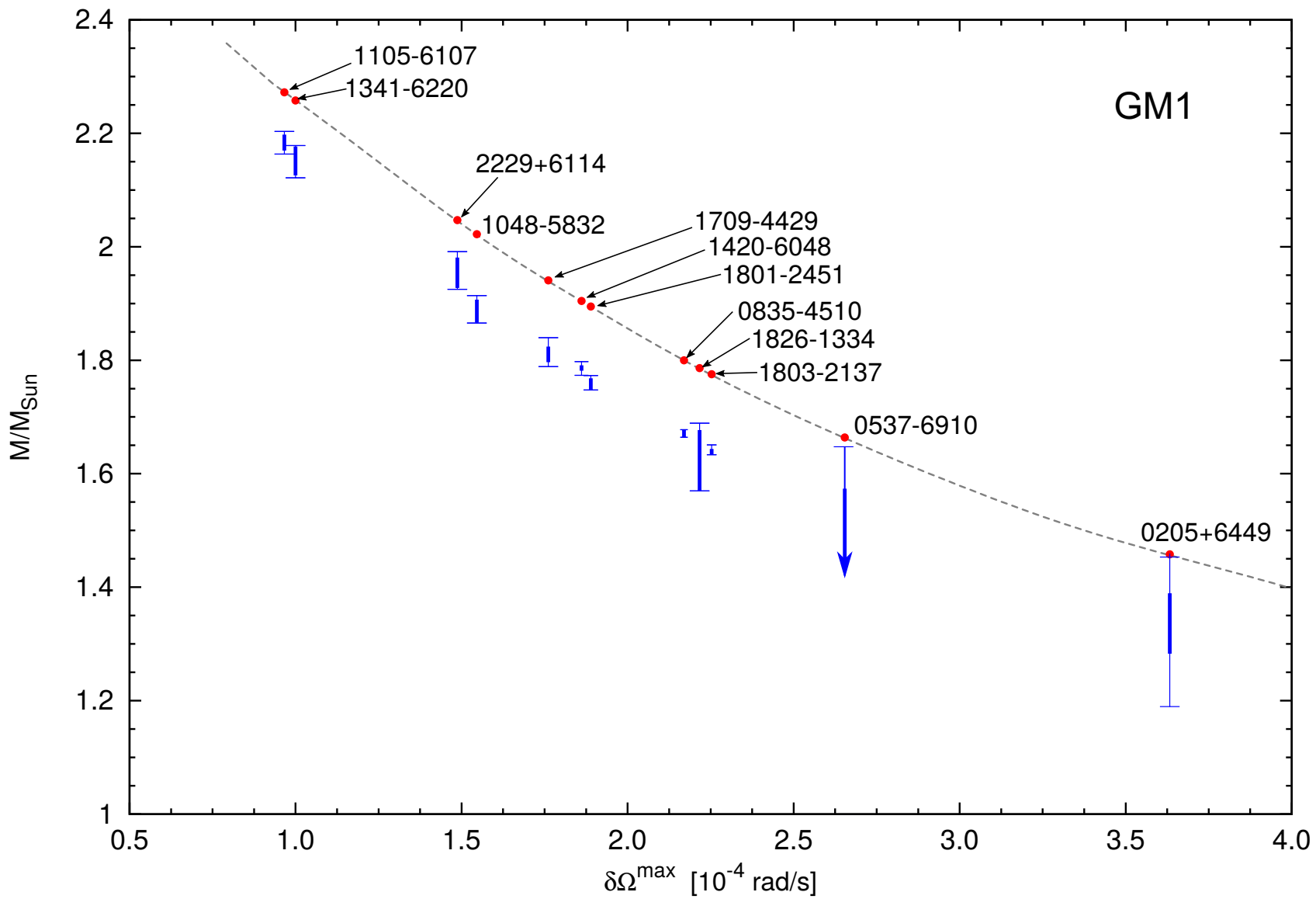


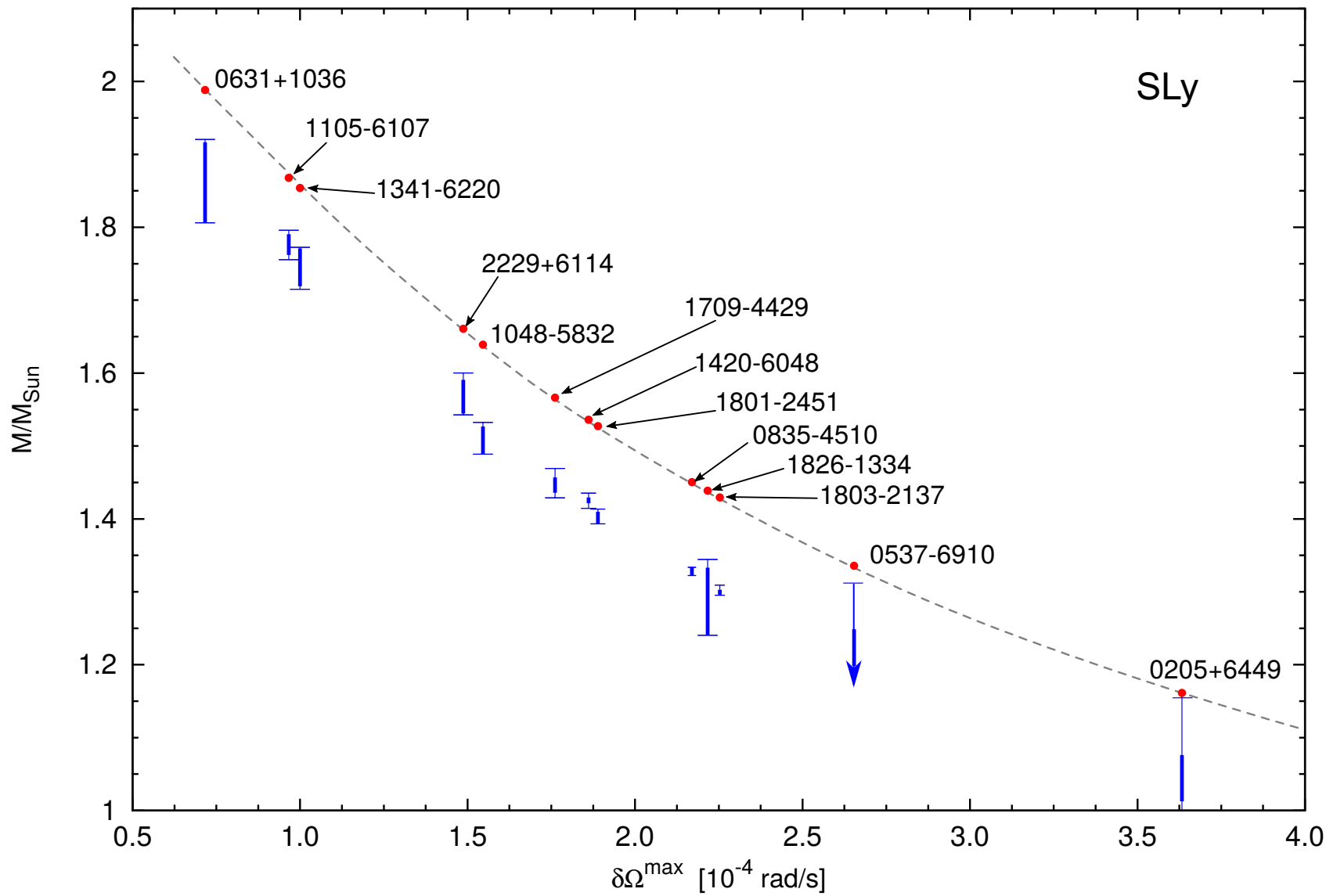
Sly EoS

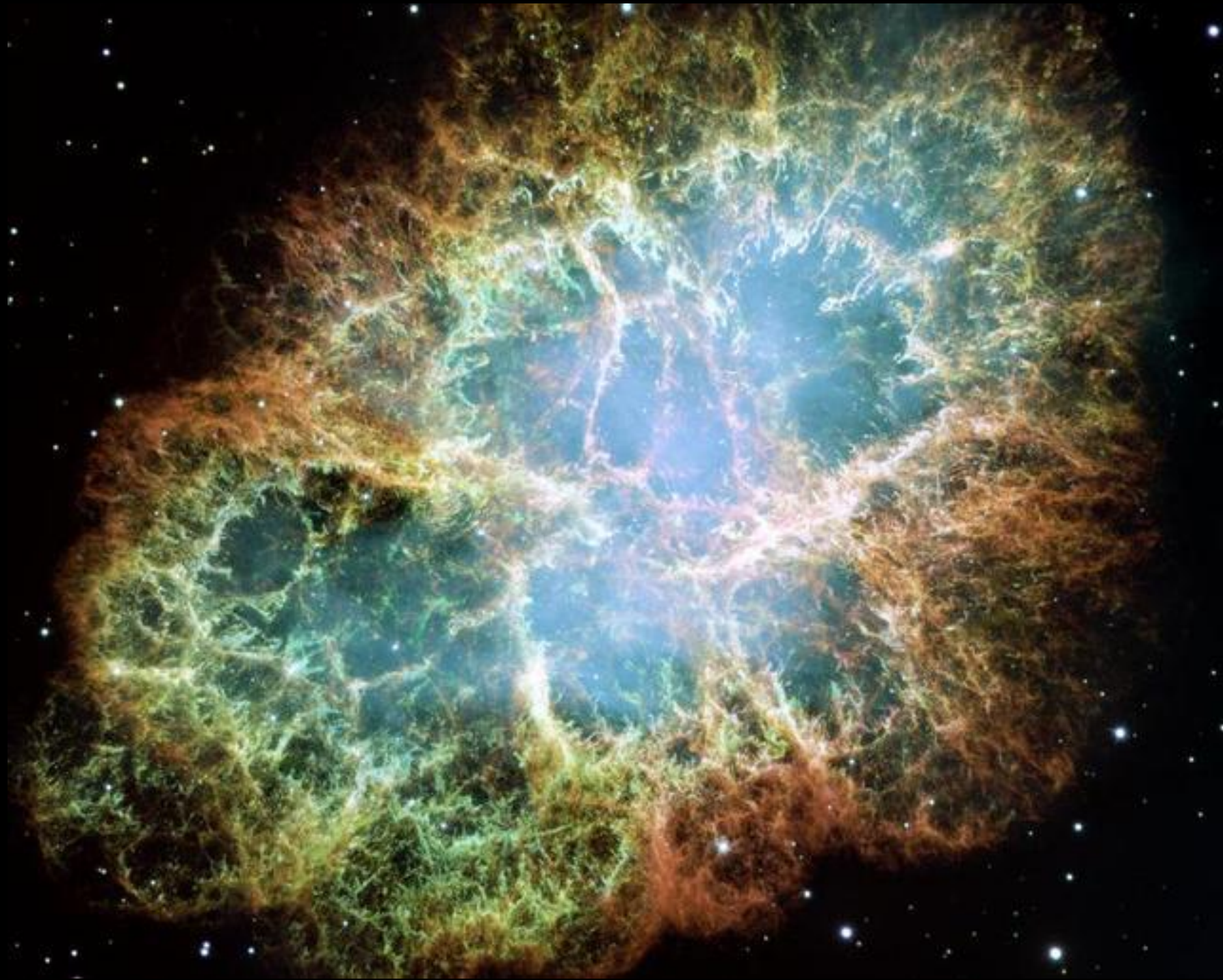












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Modelling pulsar glitches with realistic pinning forces: a hydrodynamical approach
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Mesosopic pinning forces in neutron star crusts
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arXiv:1603.02838 - Submitted to MNRAS (2016)