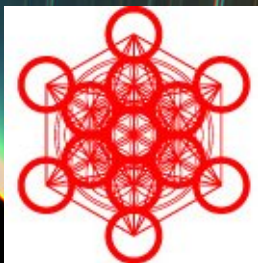




High-density, high-shear conditions in the circumnuclear starburst ring of NGC 7742



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Main collaborator: Peter Anders (KIAA/NAOC)

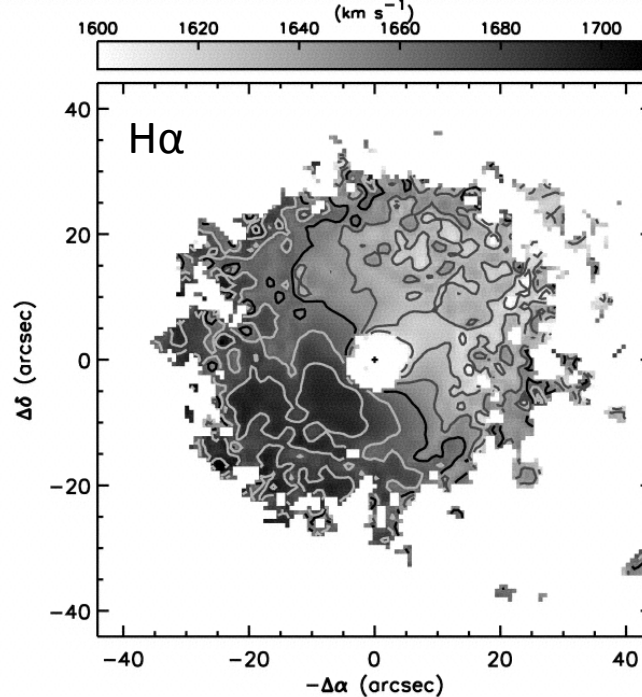
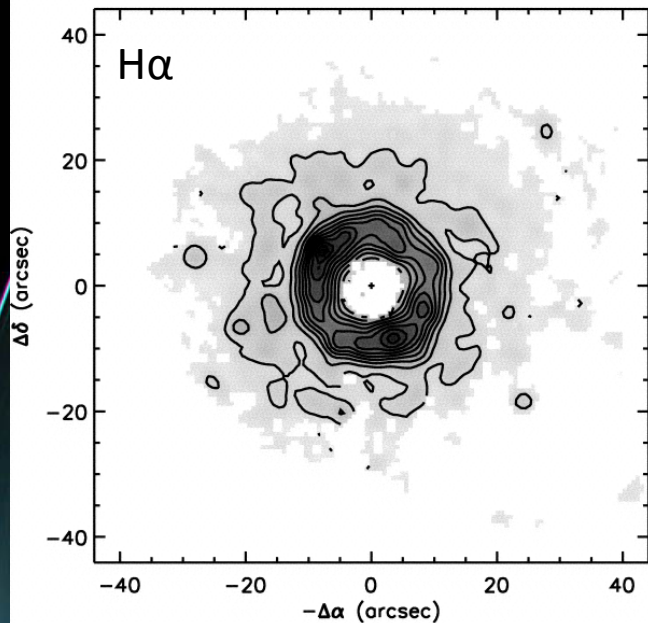
Infant mortality: fact or fiction?

□ *NGC 7742*

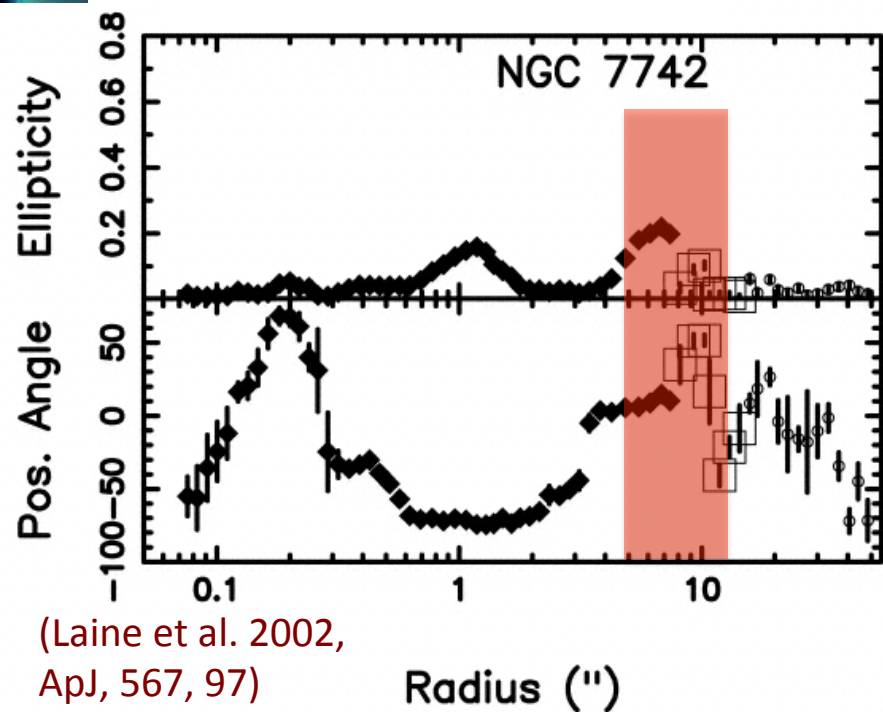


*Circumnuclear starburst
ring + high shear!*

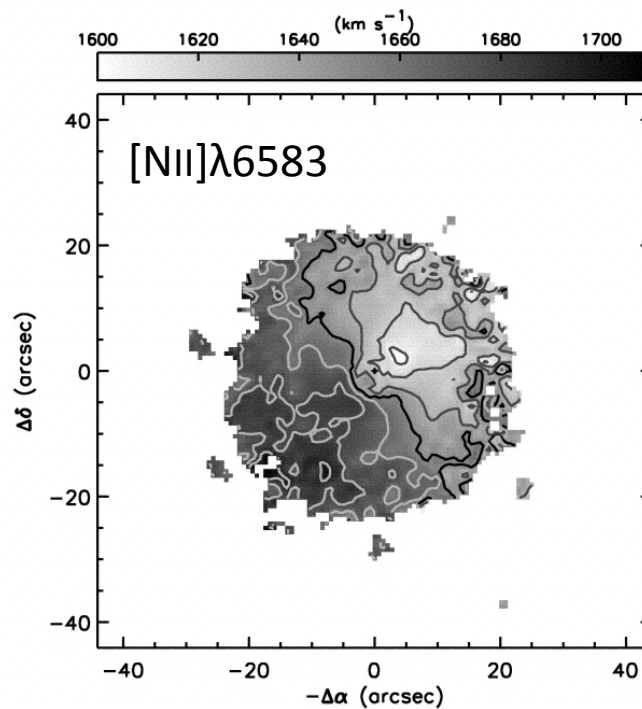
(Sil'chenko & Moiseev 2006, AJ, 131, 1336)

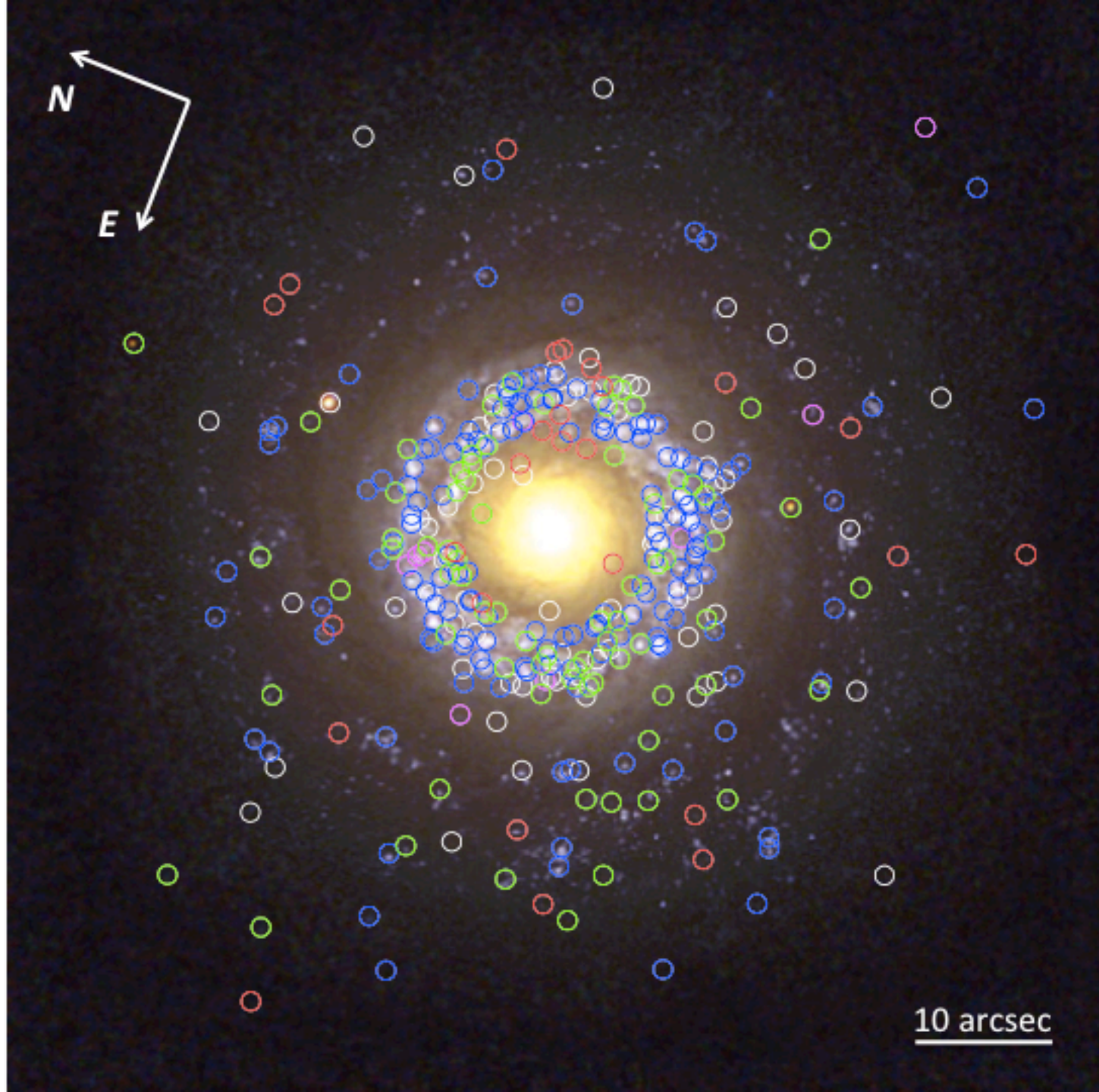


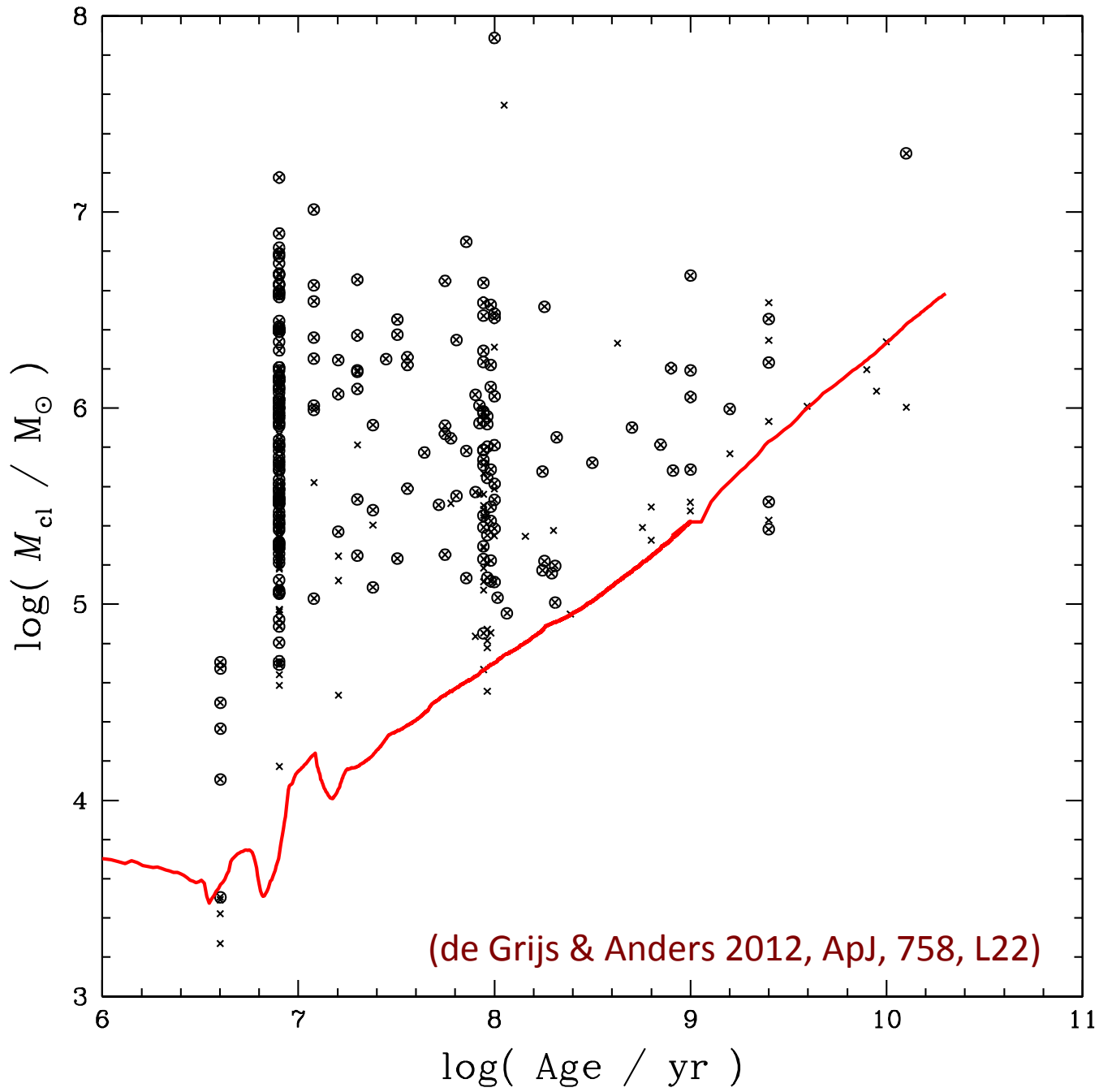
*Barred
or
Non-barred?*



(Laine et al. 2002,
ApJ, 567, 97)

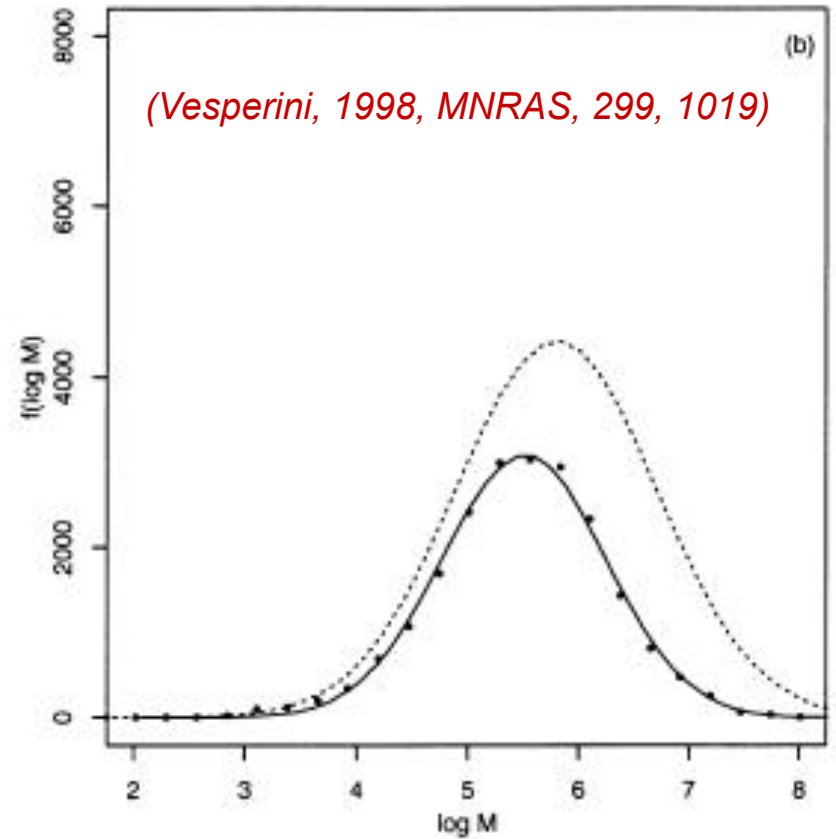
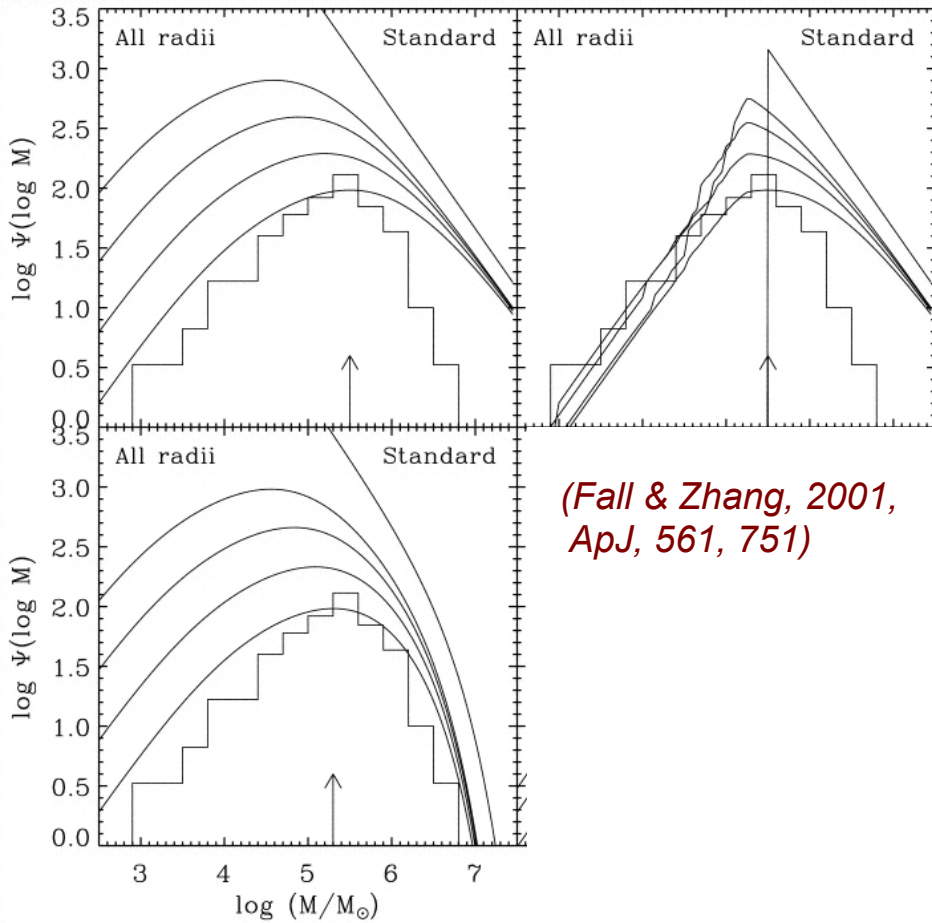


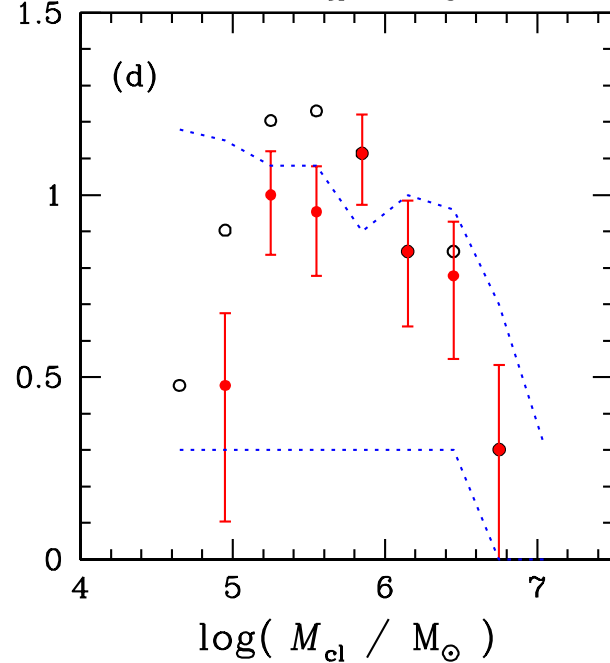
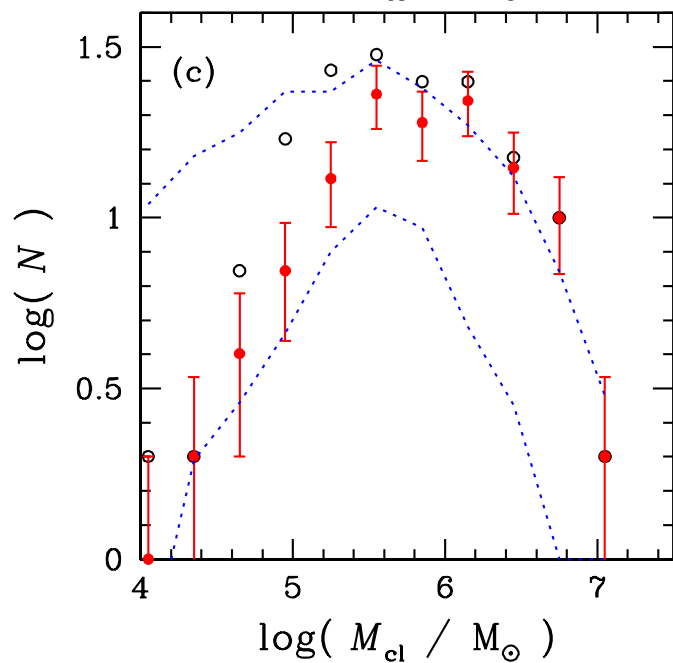
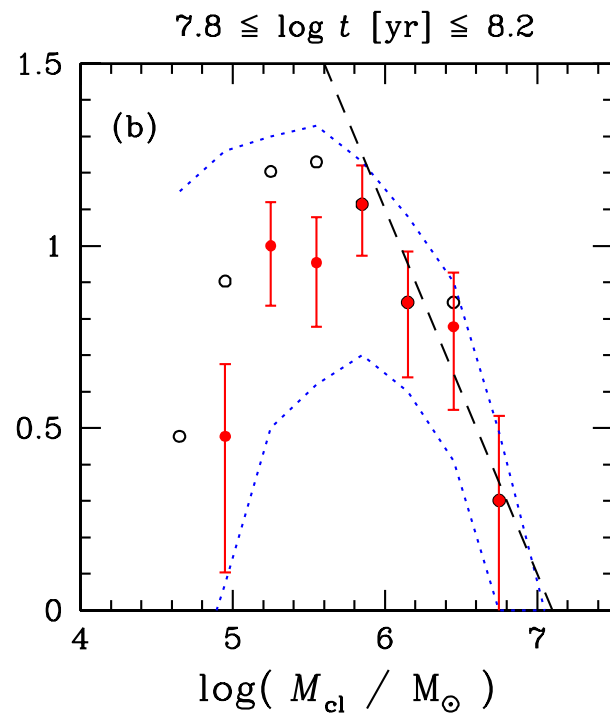
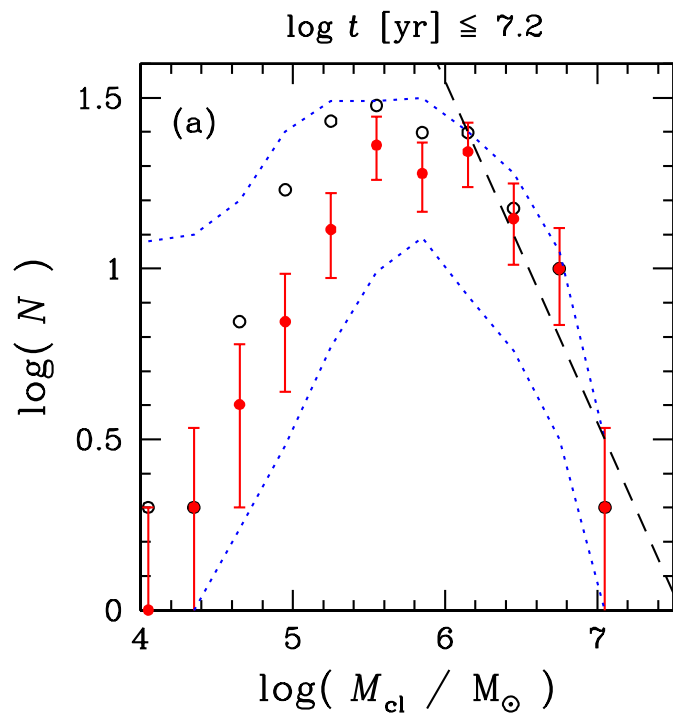




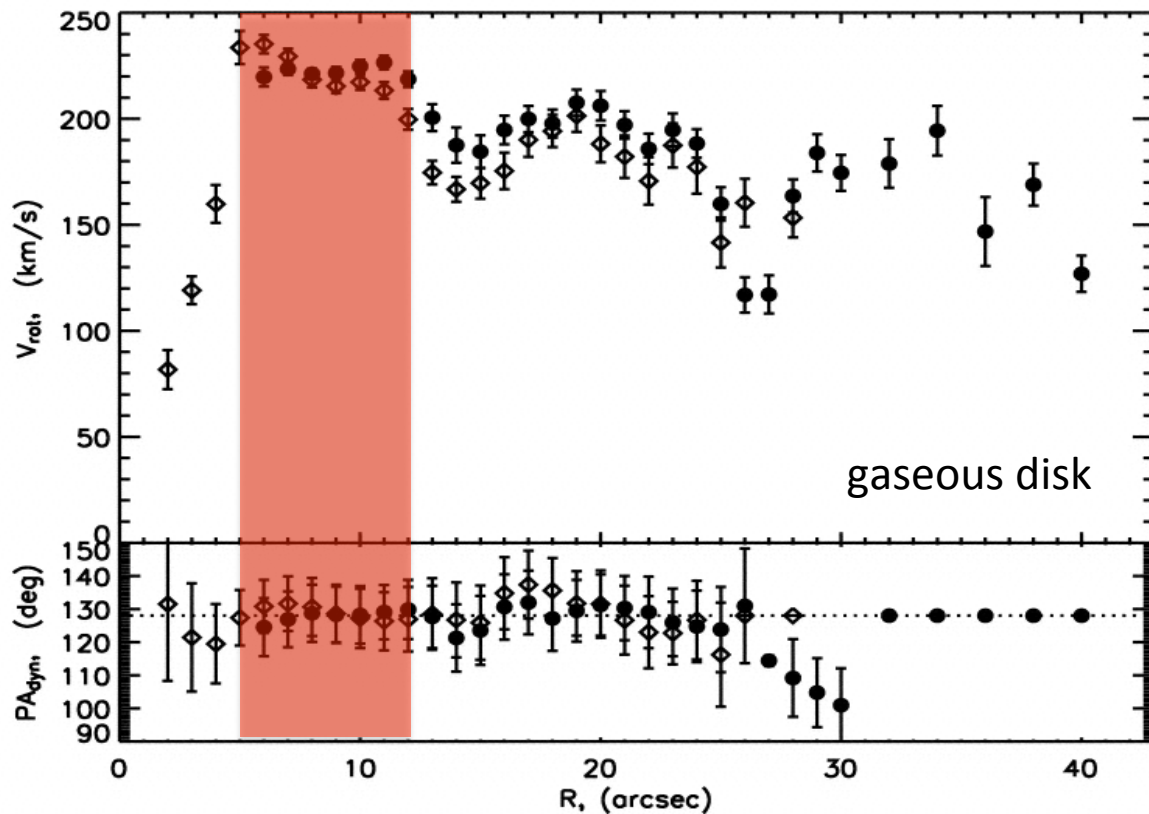
□ Which scenario is more realistic...?

Cluster Mass Functions

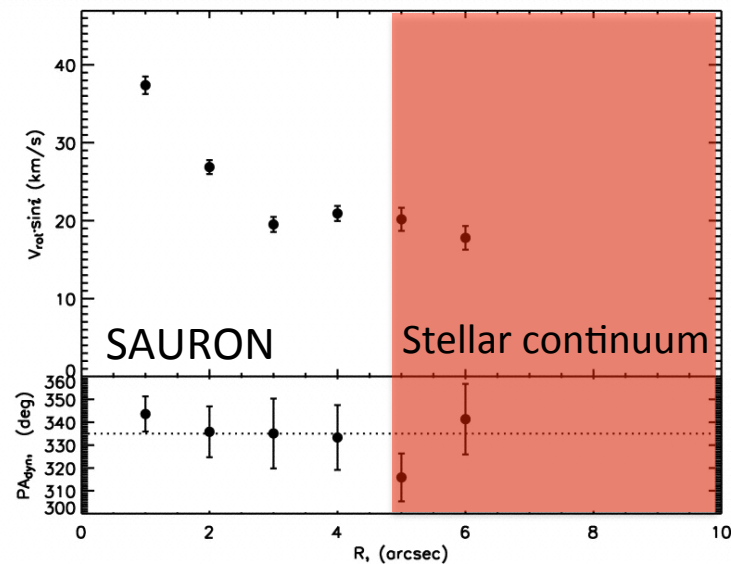
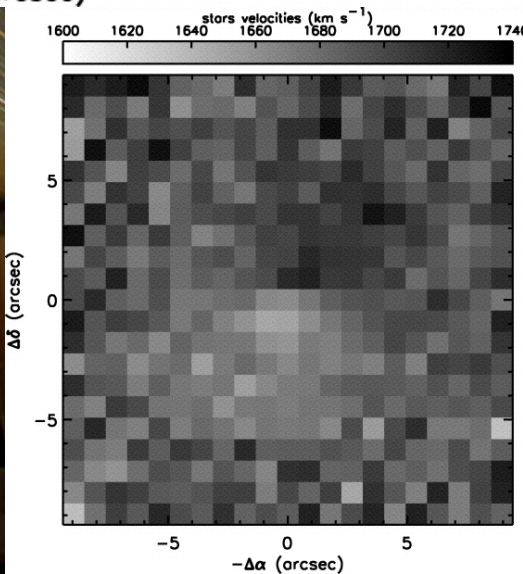
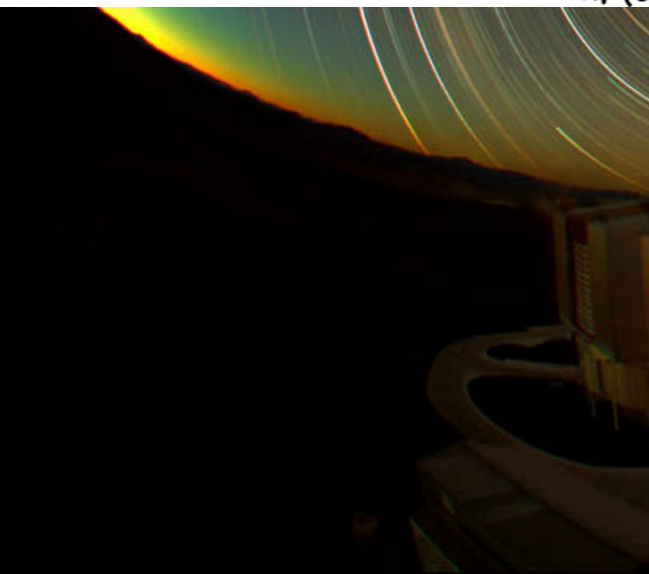
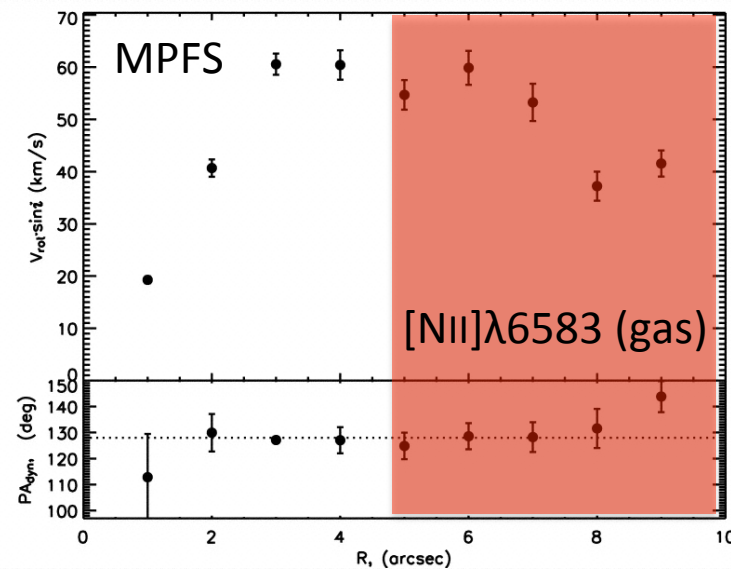


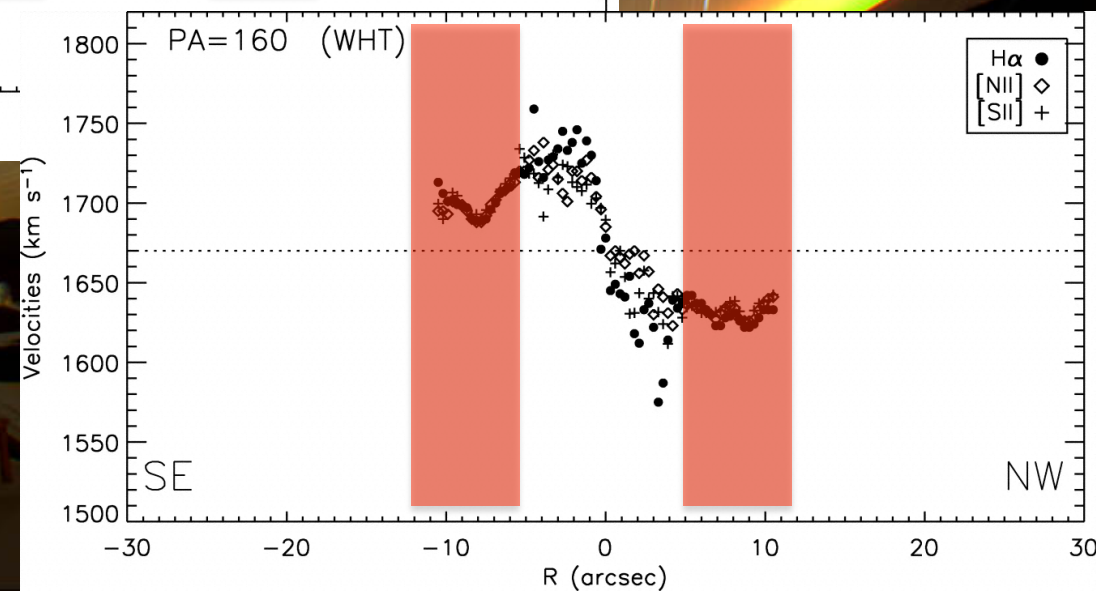
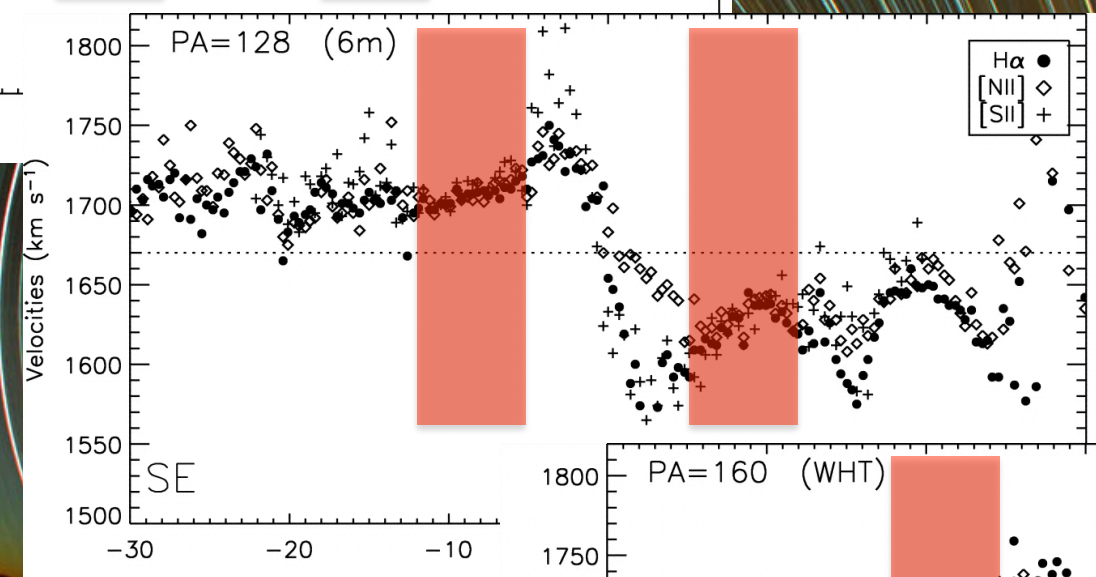
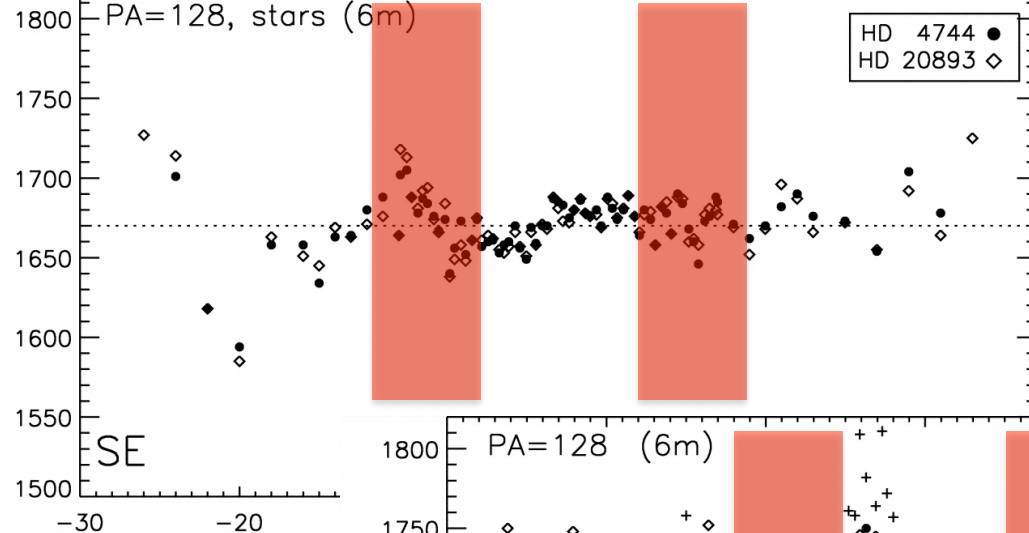
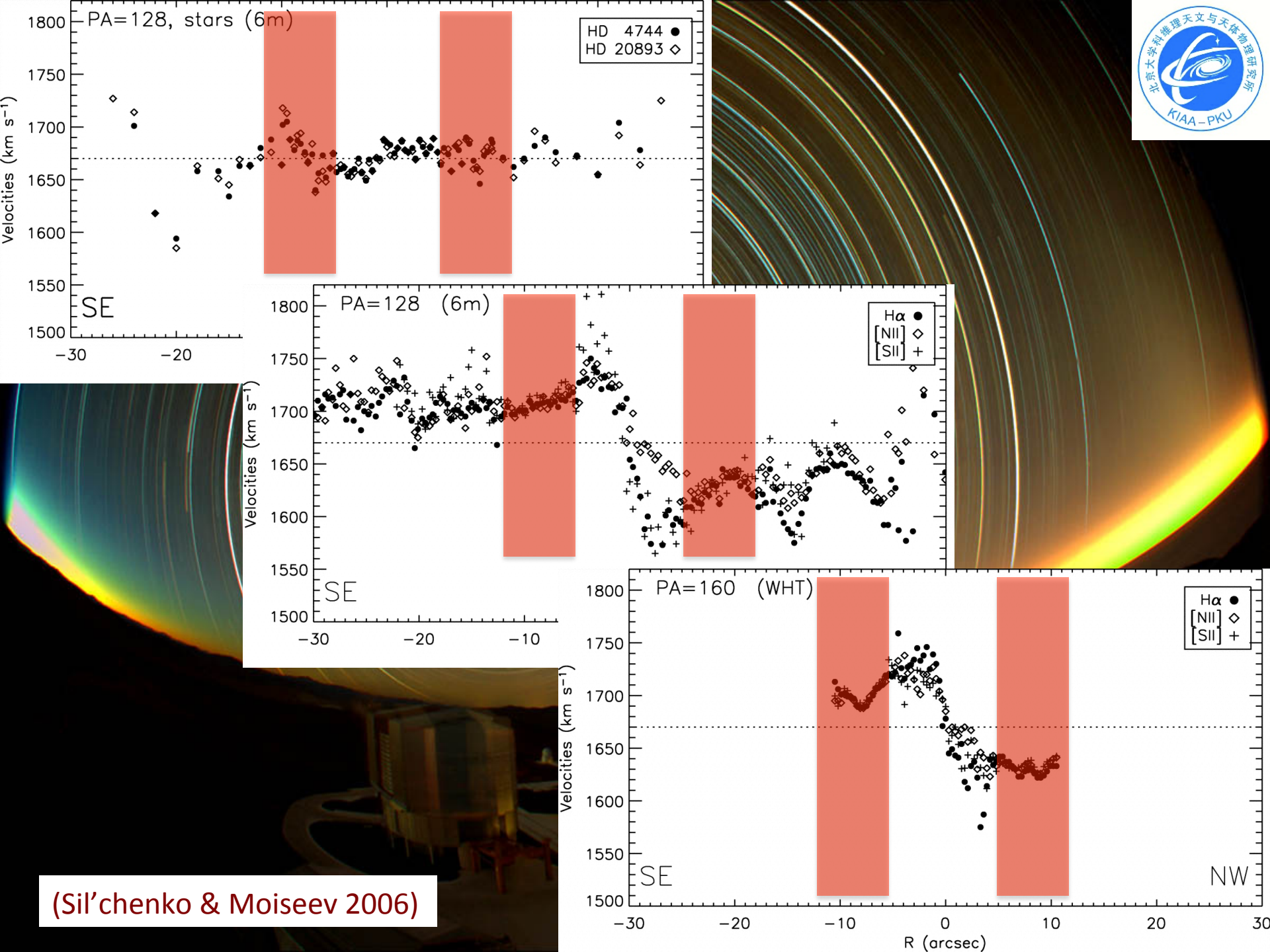


(de Grijs & Anders 2012, *ApJ*, 758, L22)



(Sil'chenko & Moiseev 2006)





(Sil'chenko & Moiseev 2006)

Take-home messages

- Star clusters will eventually populate the field, but the timescales governing different galaxies may differ.
- We have discovered evidence of *extremely rapid cluster disruption* in the circumnuclear ring of NGC 7742.
- This is likely facilitated by the *counterrotating* gas and stellar disks in that galaxy.



Visit on Friday 28 June, after lunch: contact me