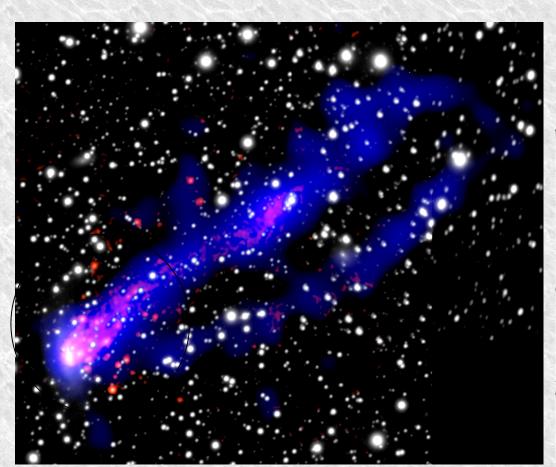
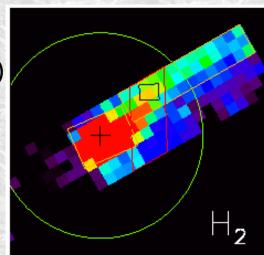
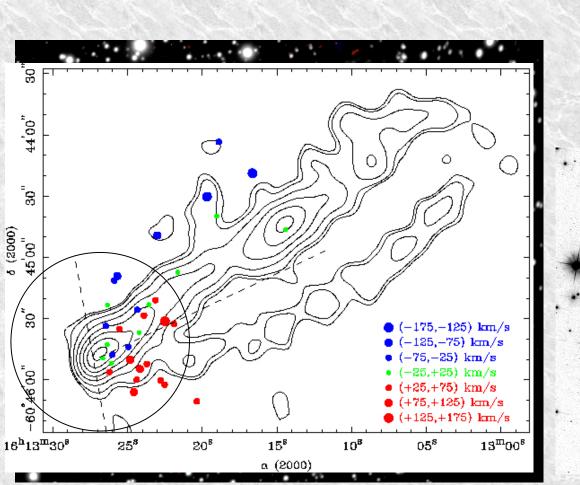
Ming Sun, Univ. Virginia Intracluster star formation (real but how important?) KITP GClusters11, Feb 8, 2011

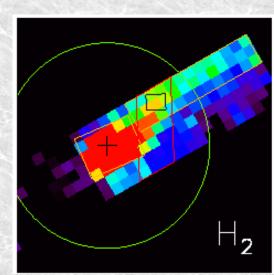
ESO 137-001 In A3627 (z=0.016): 80 kpc X-ray double tails + a 40 kpc H α tail (Sun et al. 2006-2010) + a > 20 kpc H₂ tail (Sivanandam et al. 2010) Over 30 HII regions and more blue star clusters In the stripped gas

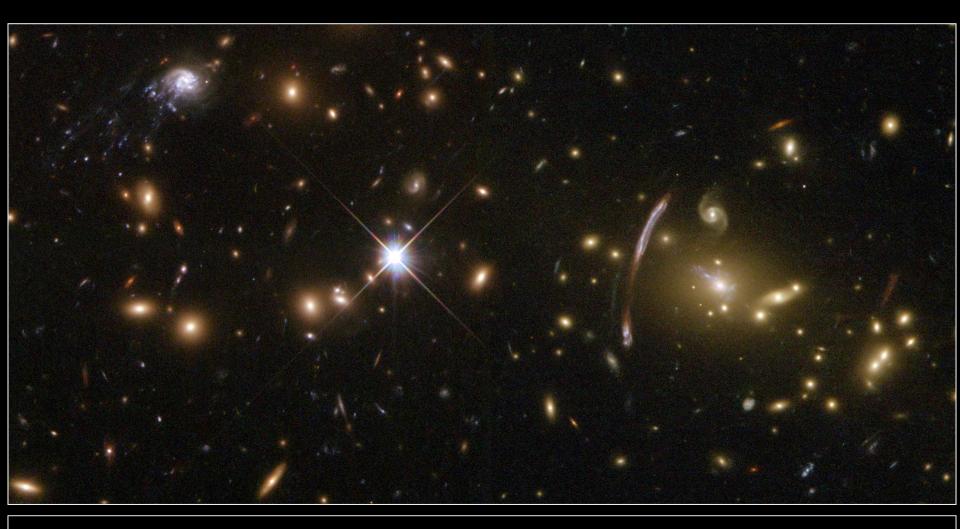




Intracluster star formation (real but how important?)



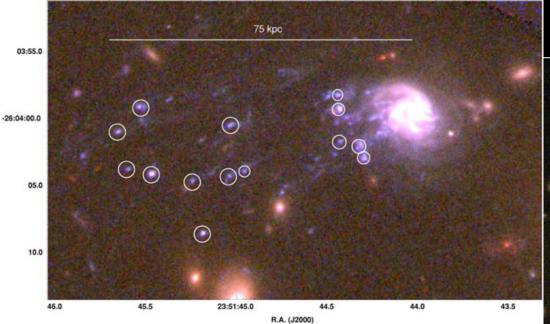


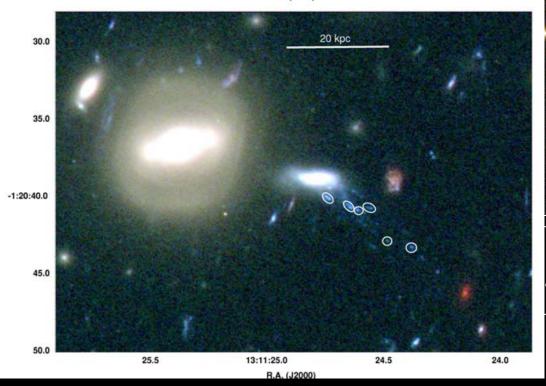


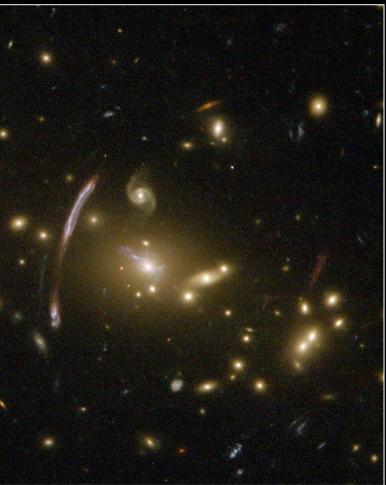
Galaxy Cluster Abell 2667 Hubble Space Telescope • WFPC2

NASA, ESA, and J.-P. Kneib (Laboratorie d'Astrophysique de Marseille)

Young star clusters in A2667 and A1689, Cortese et al. 2007



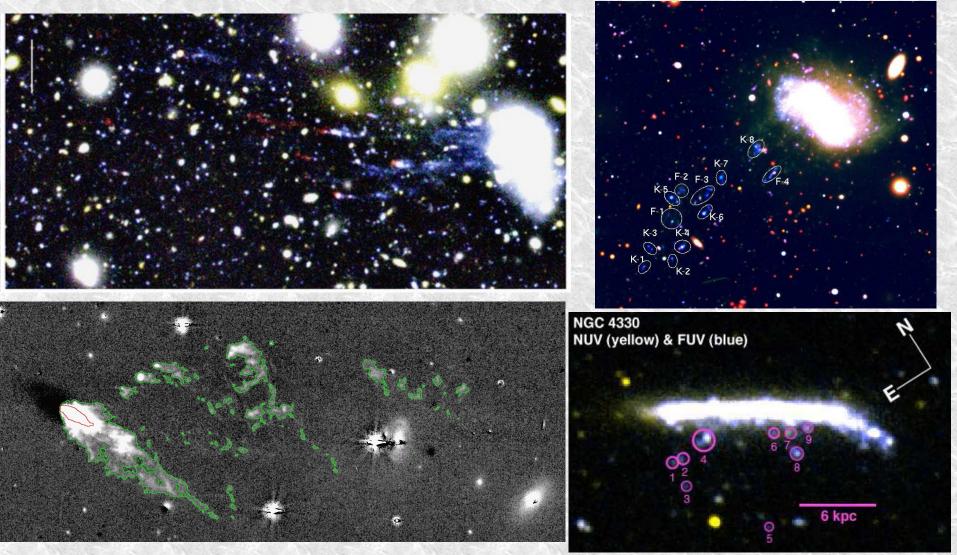




2667 WFPC2

Young star clusters in STScI-PRC07-12 A2667 and A1689, Cortese et al. 2007

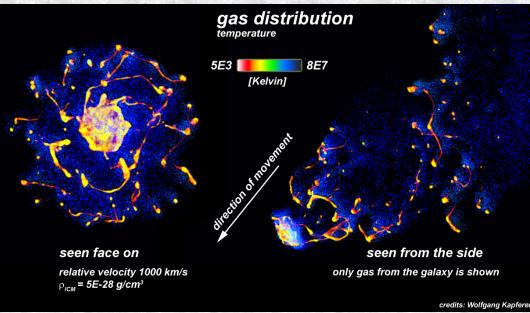
Over 20 more examples from 2008 ...



Coma: ~ **20** more (Yoshida et al. 2008; Yagi et al. 2010; Smith et al. 2010) Virgo: IC 3418 (Chung et al. 2009; Hester et al. 2010; Fumagalli et al. 2011) NGC 4330 (Abramson et al. 2011)

If you believe simulations ...

Up to 30% of stars in ICL are formed *in situ* (Puchwein et al. 2010) --- materials stripped out of small infalling haloes



Kapferer et al. 2009

Intracluster SF is real but how important?

- 1) If 1% efficiency --- contribute to at most several % of ICL light But if 10% !
- 2) SF conditions and transport processes
- 3) Multi-phase gas --- similar conditions as in cool cores