



Massive star-forming regions with eROSITA

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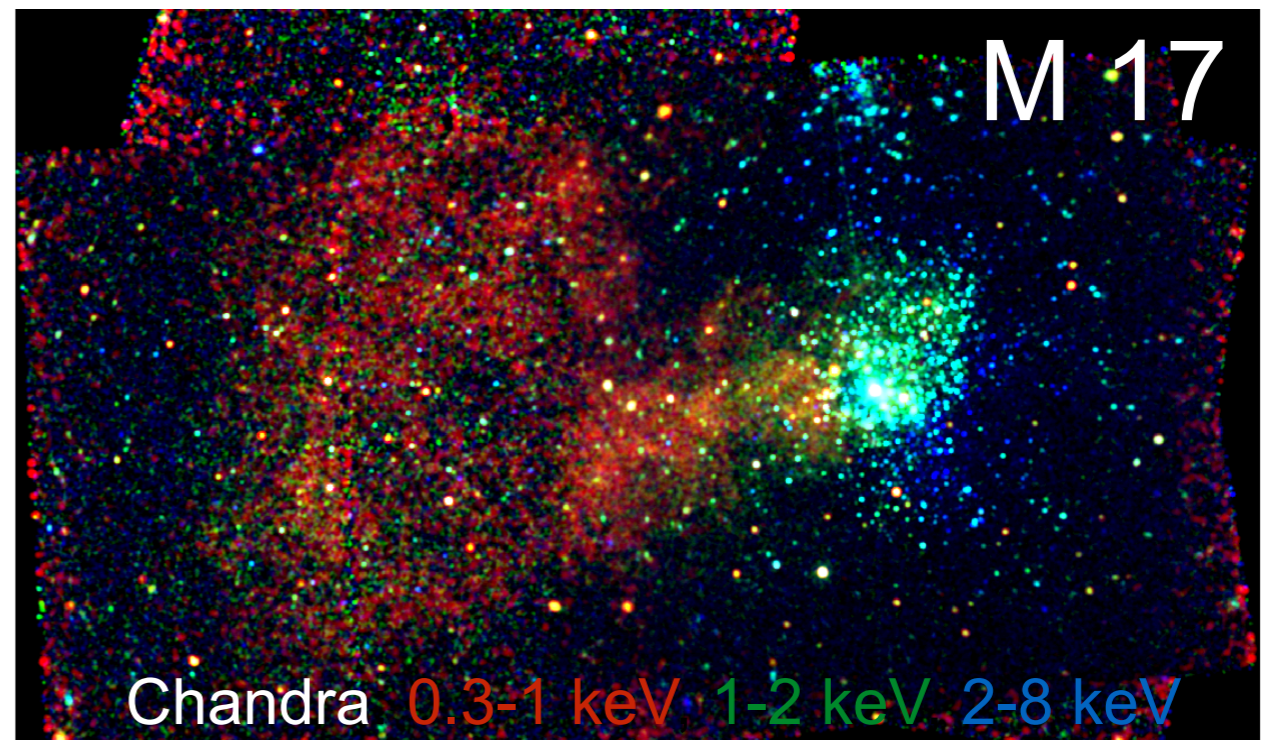
Massive star-forming regions

Massive stars form and evolve together

Stellar winds/SNRs drive cluster winds, superbubbles

- diffuse thermal X-rays
- high energy particles → non-thermal X-rays

Substantial low mass
stellar population
(T-Tauris, etc)





Massive star-forming regions

eROSITA:

will observe more star-forming regions

will observe outer regions of star forming regions

thermal and non-thermal processes

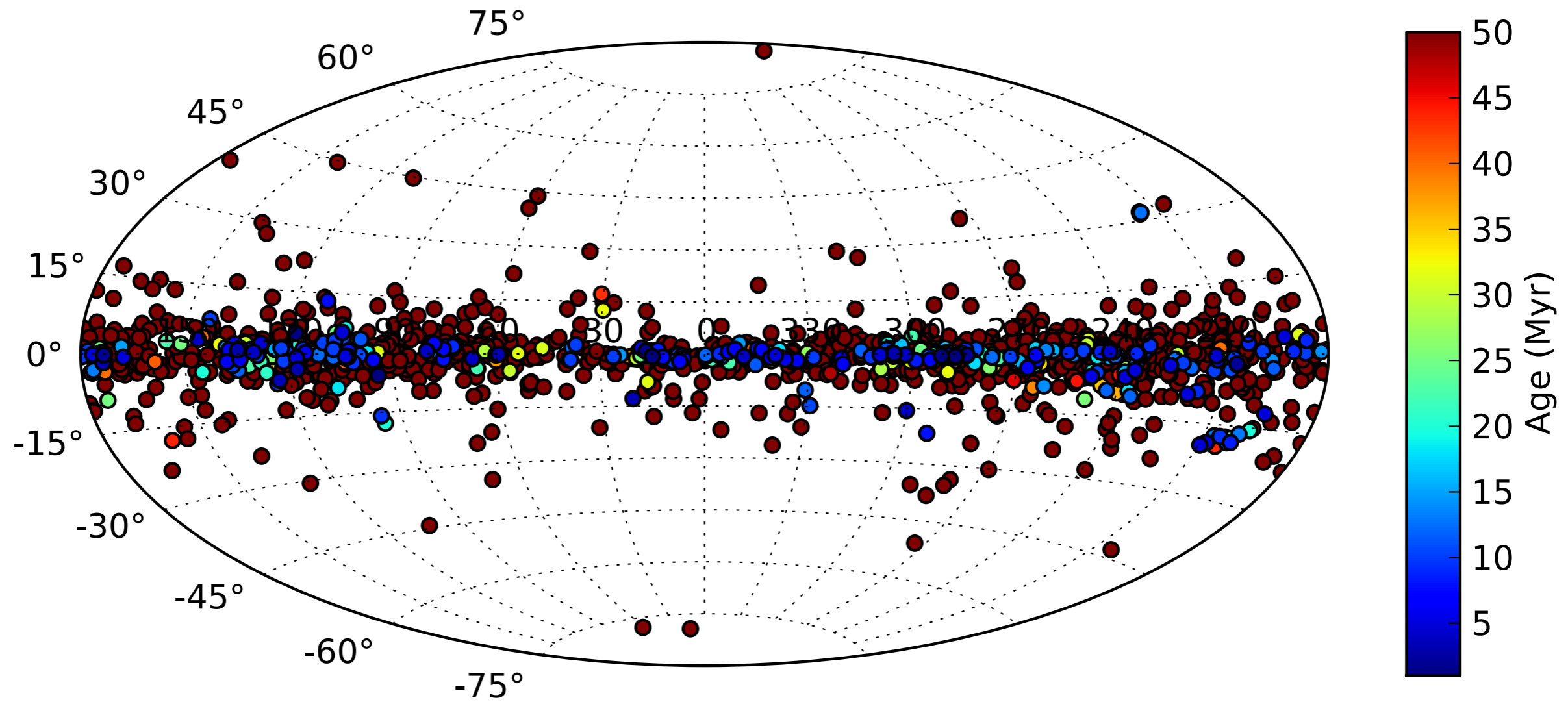
- depending on absorption
- all-sky survey > 2 keV

will observe massive stellar populations to ~ 10 kpc

1.5-3 ks exposure of Galactic plane



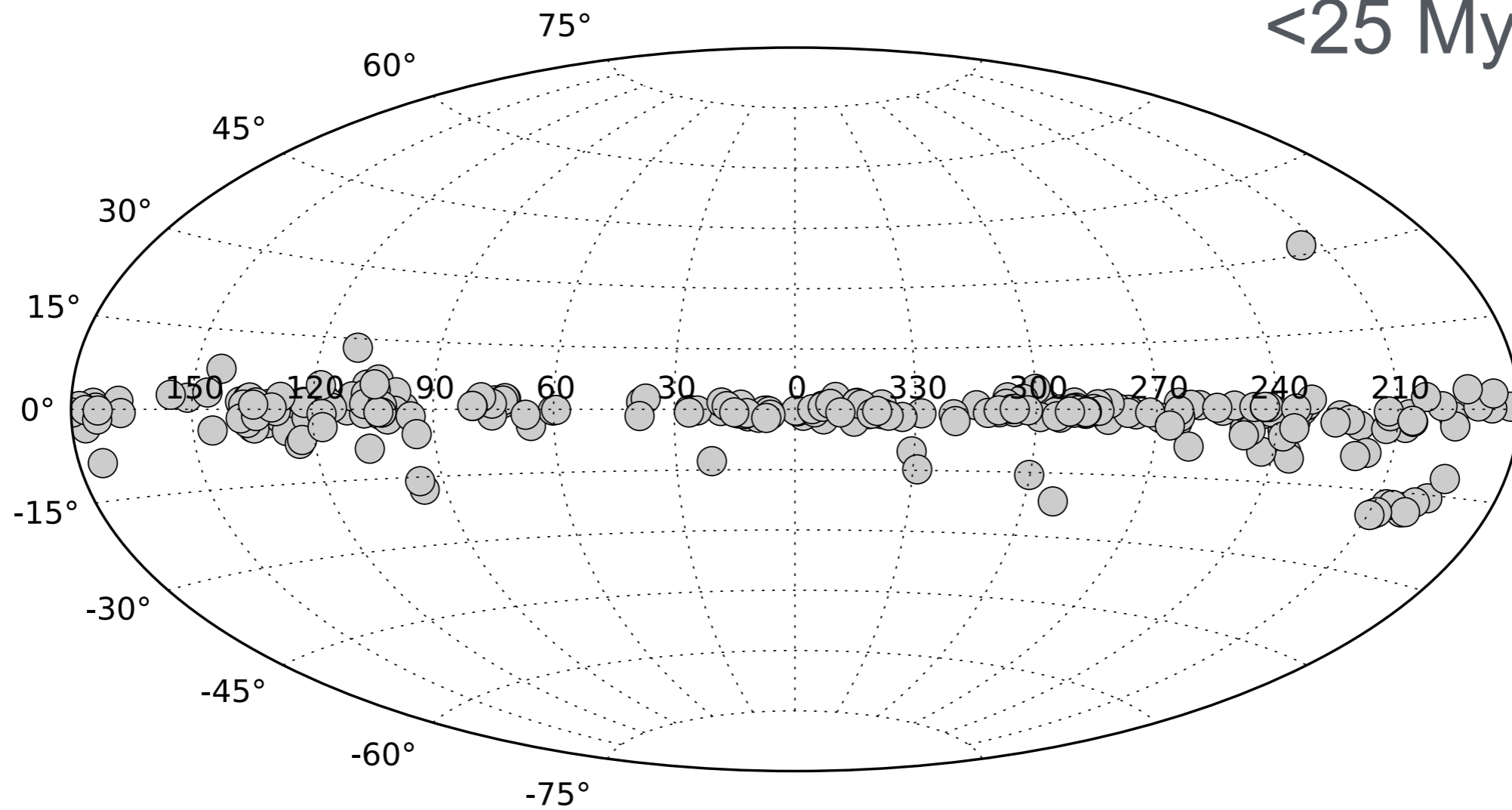
Galactic open clusters (Dias et al. 2002)





Galactic clusters

<25 Myr

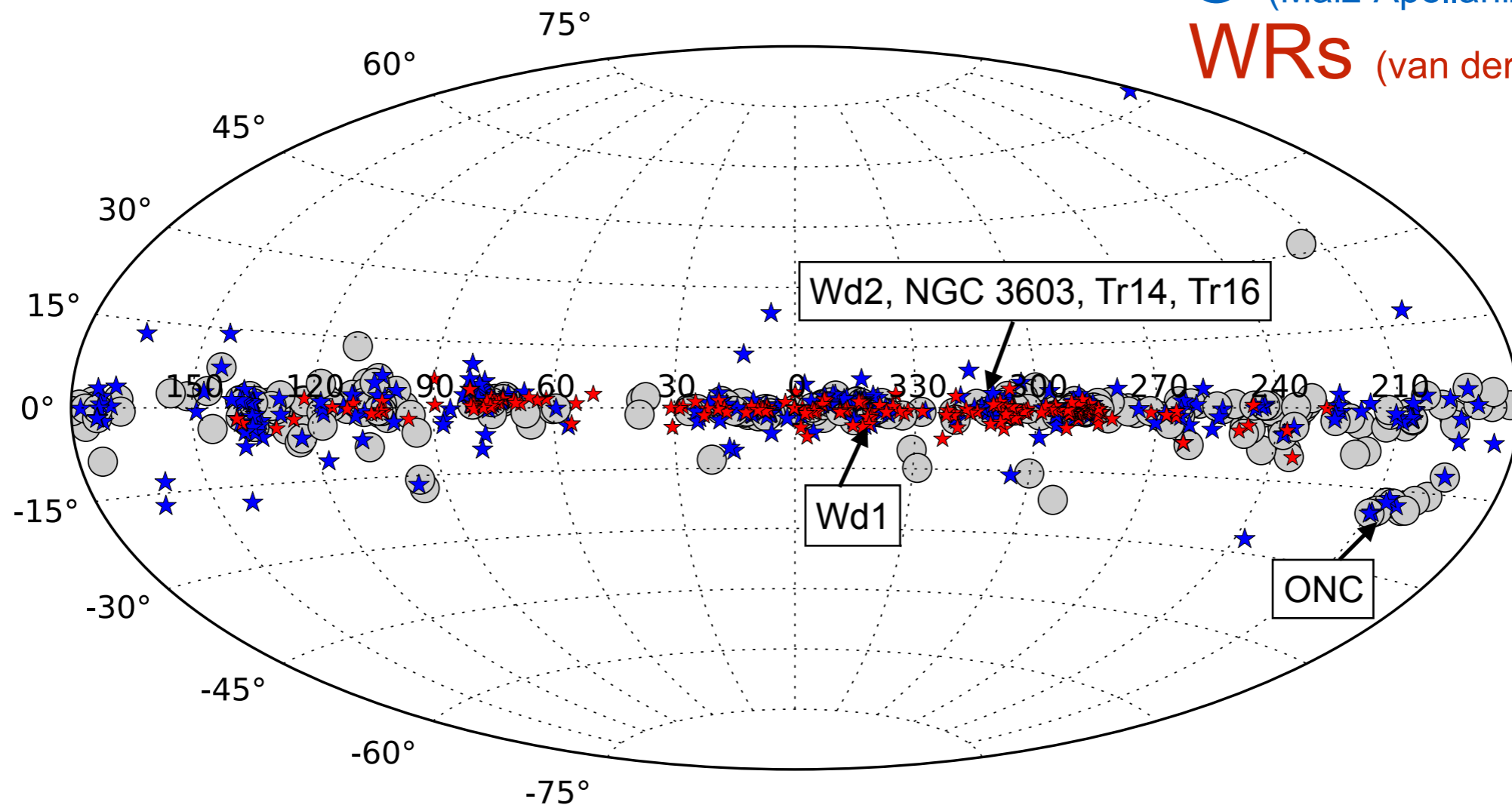




<25 Myr

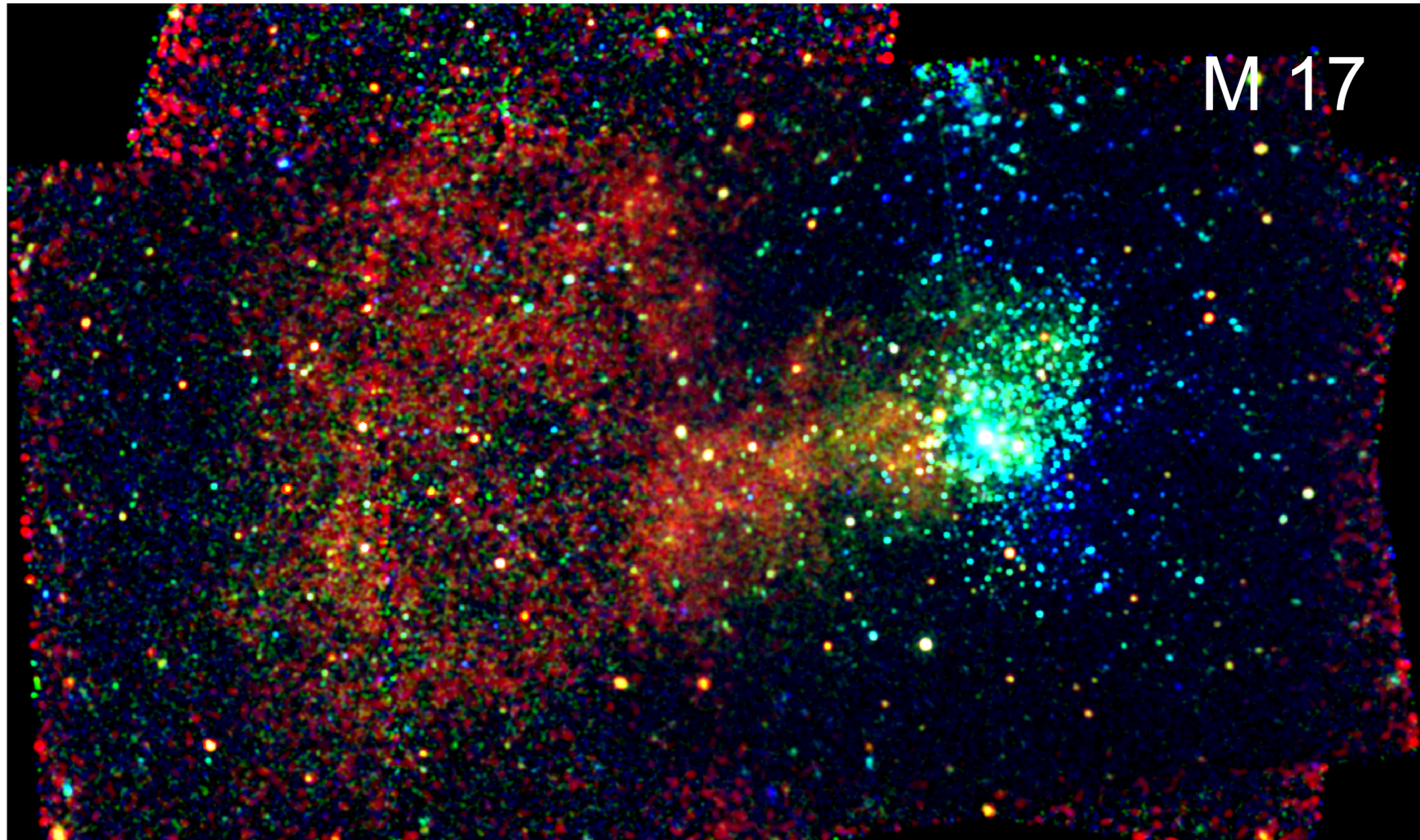
 (Maiz-Apellaniz et al. 2004)

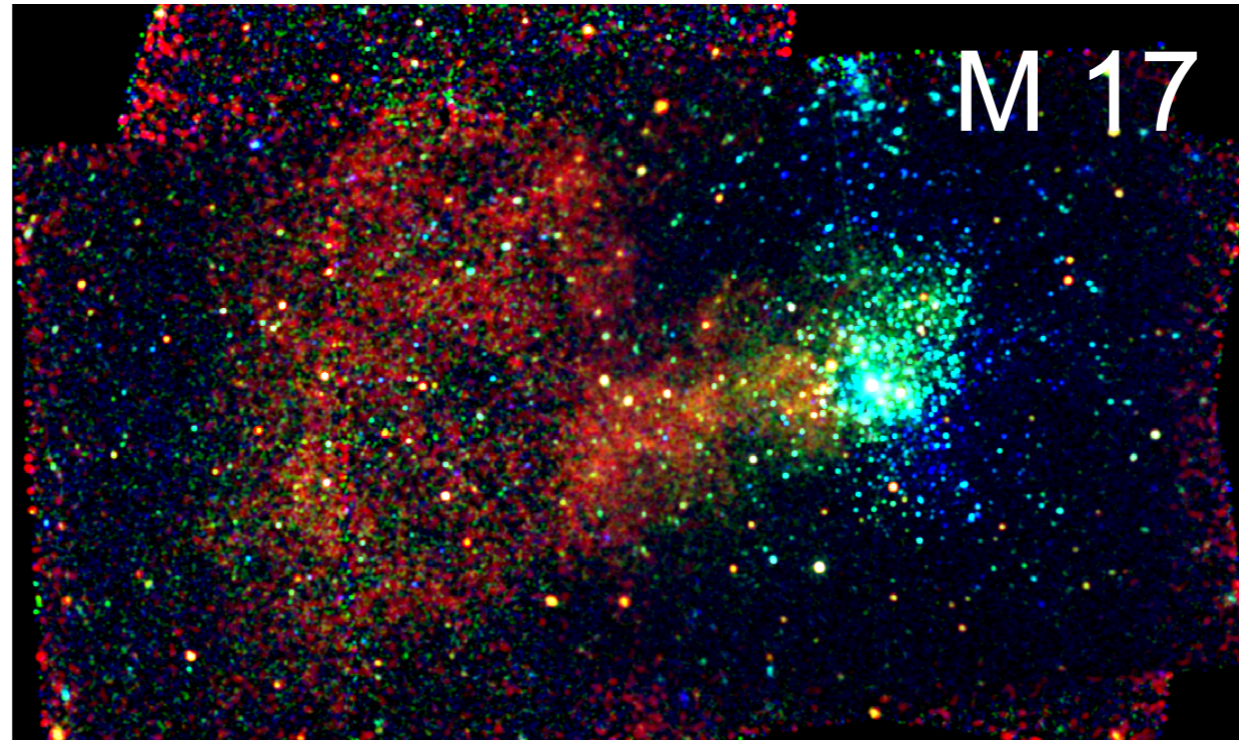
WRs (van der Hucht, 2001)



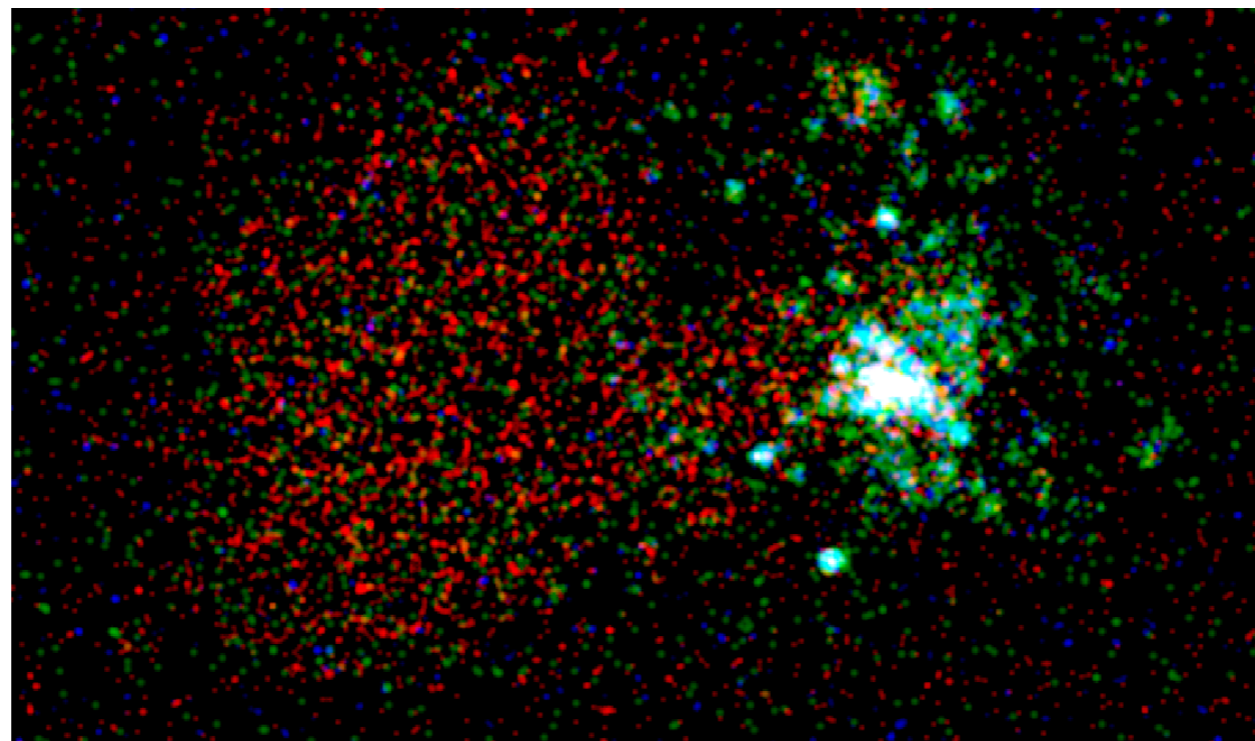


Chandra: 0.3-1 keV, 1-2 keV, 2-8 keV





Chandra



eROSITA
(2 ks, pointed)



Colliding Wind Binaries (CWBs)

Wind-wind collision in massive binary system

Can be very bright in X-rays

Monitoring with *eROSITA*

- spectra and timing in
each all-sky pass

Dominated by thermal emission

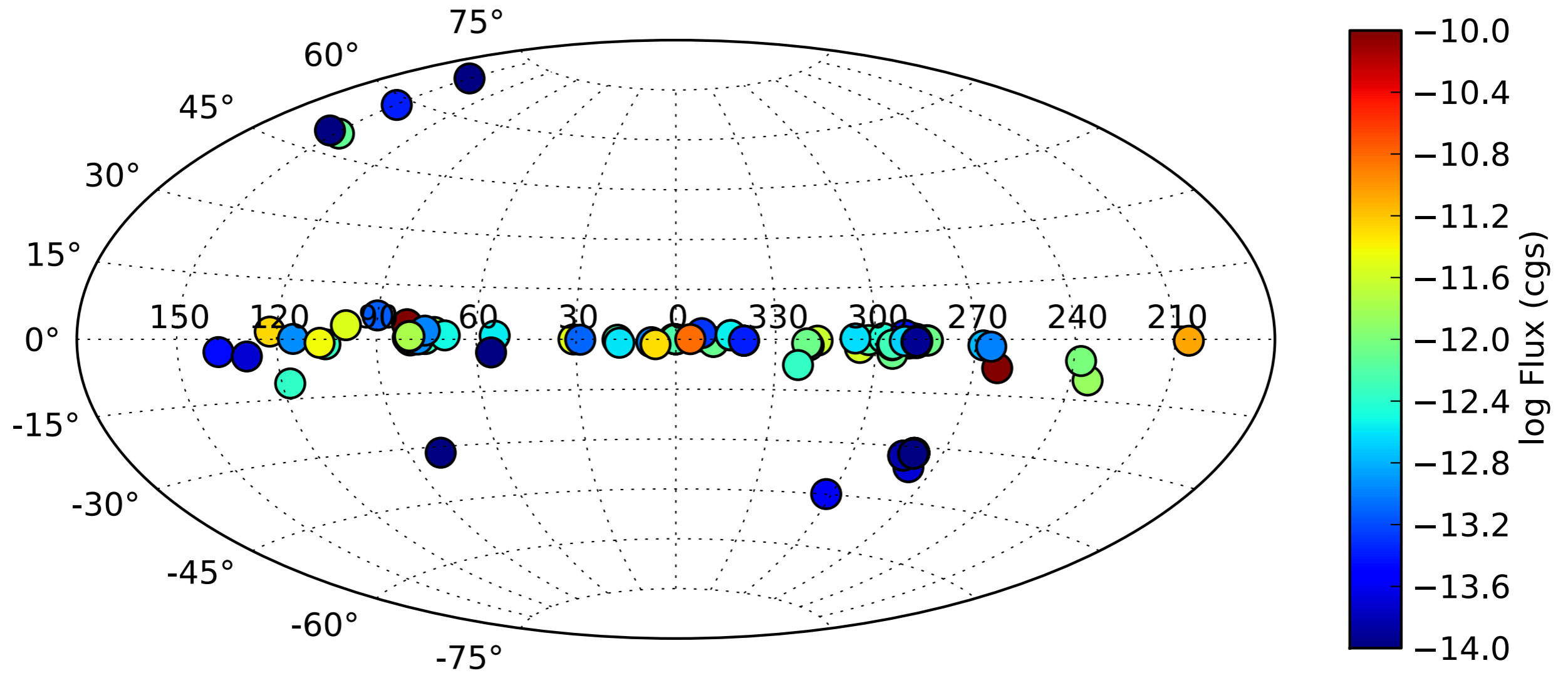
Particle accelerating CWBs?
(De Becker & Raucq 2013)



(Credit: NASA/C. Reed)

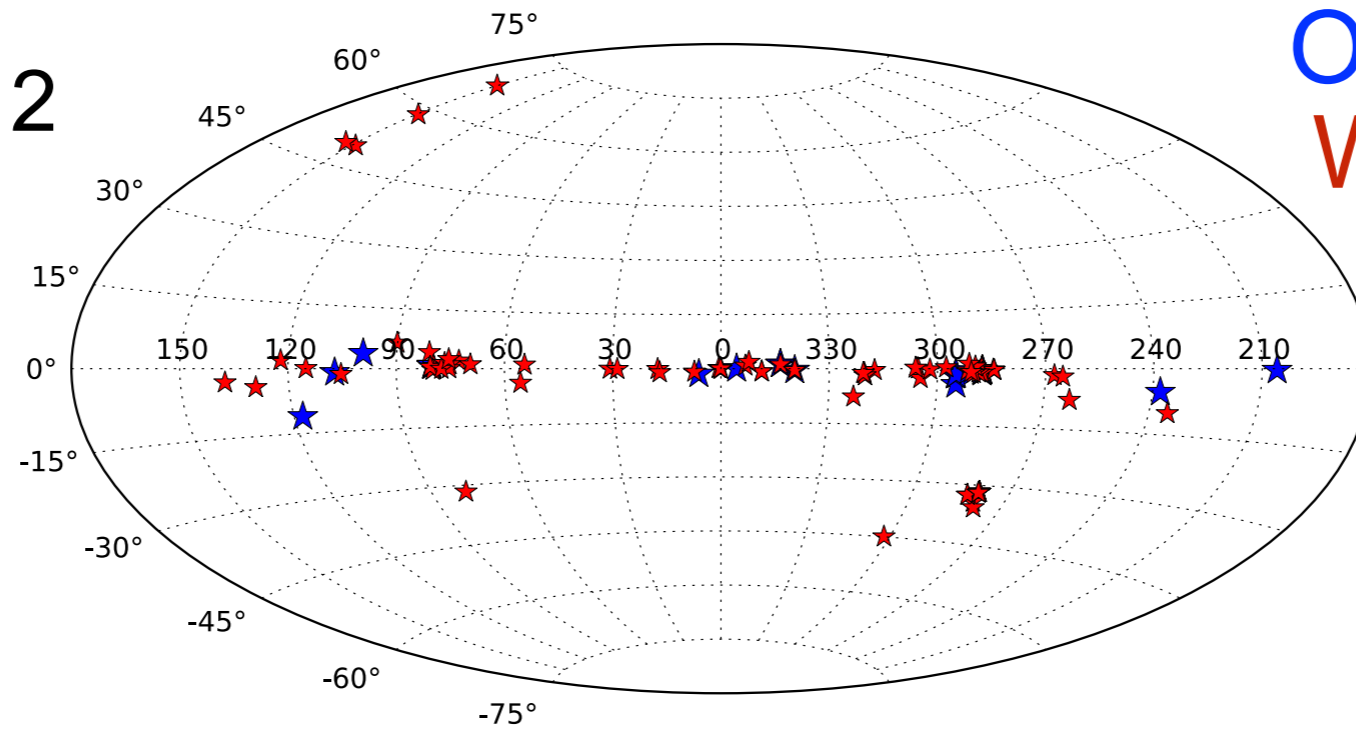


Gagne et al 2012



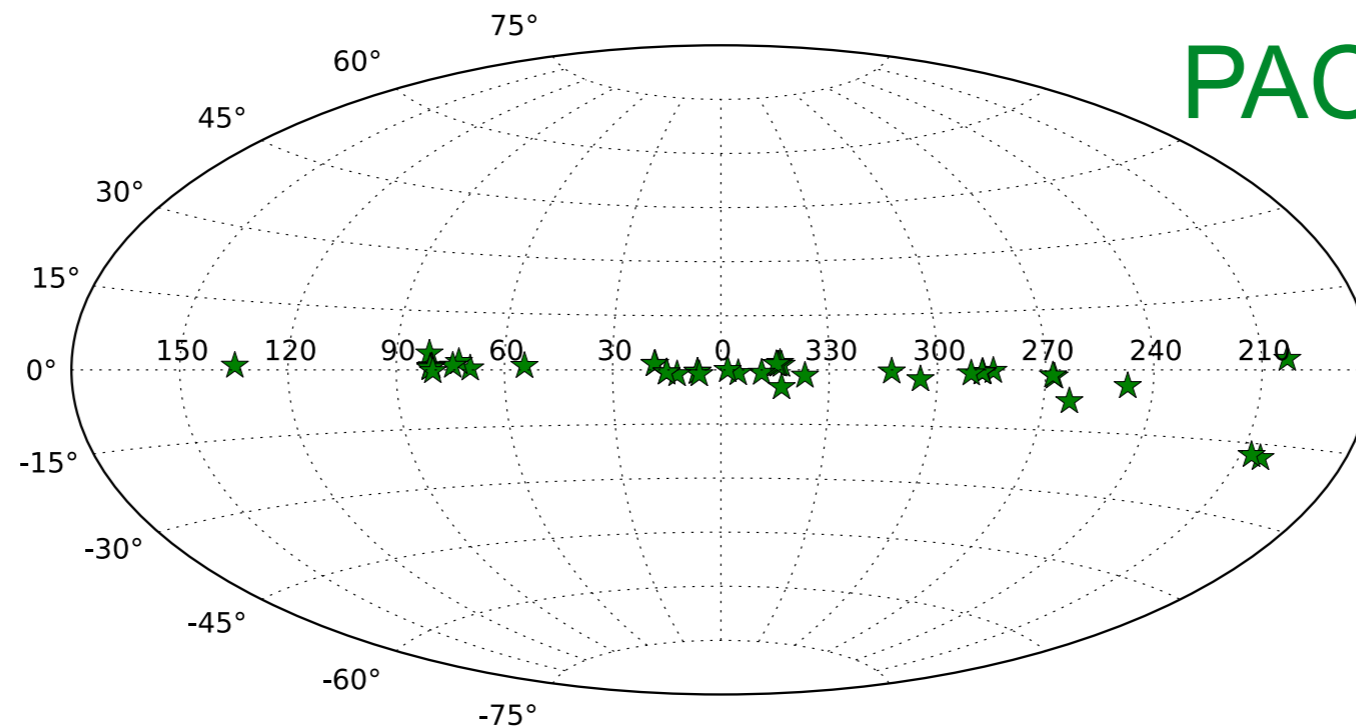


Gagne et al. 2012



O+O
WR

De Becker &
Raucq 2013



PACWBS