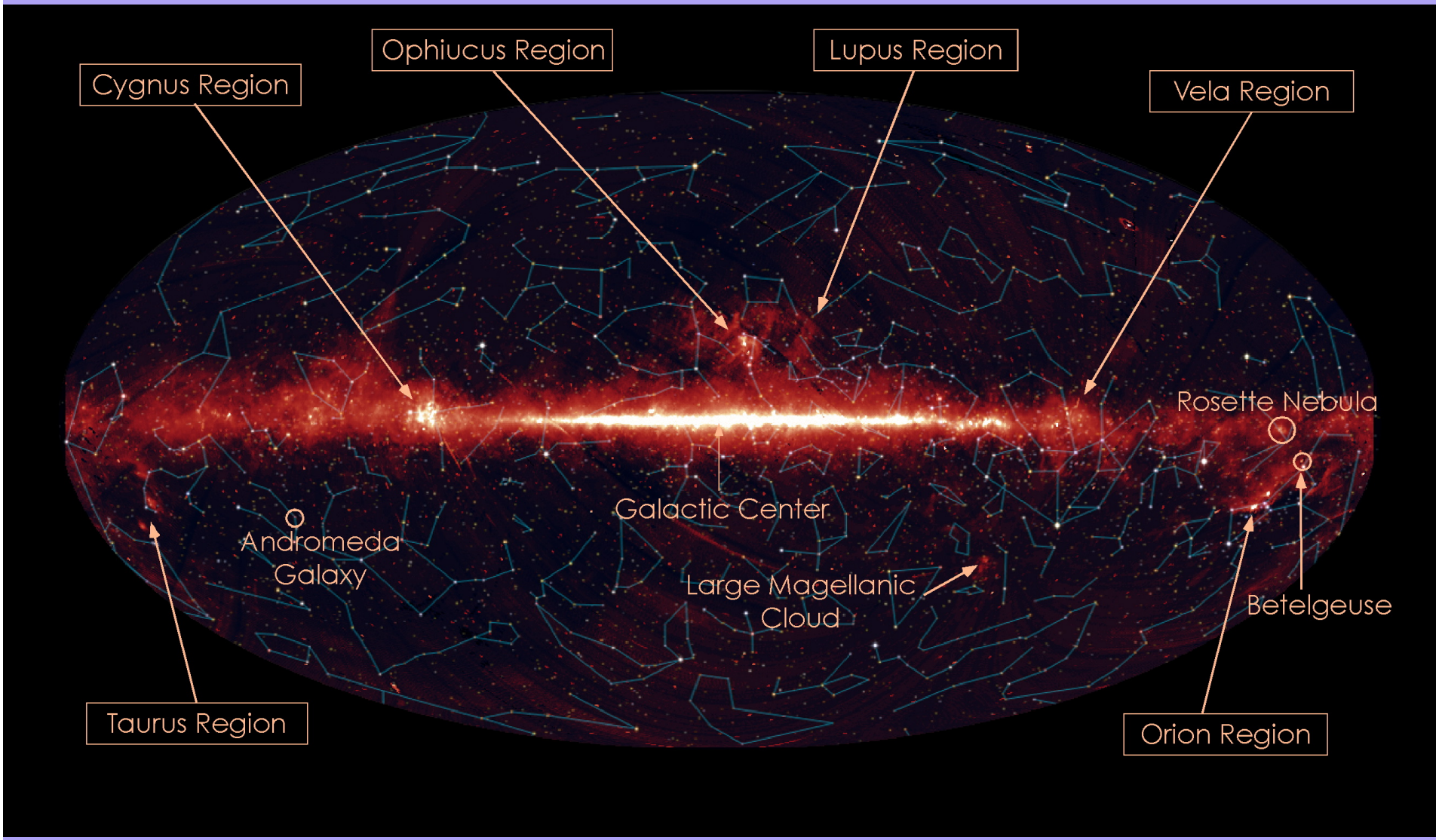
Statistical challenges in the Chandra Cygnus OB2 Survey

Nick Wright

Jeremy Drake, Vinay Kashyap, Tom Aldcroft,

Mario Guarcello, Antonella Fruscione

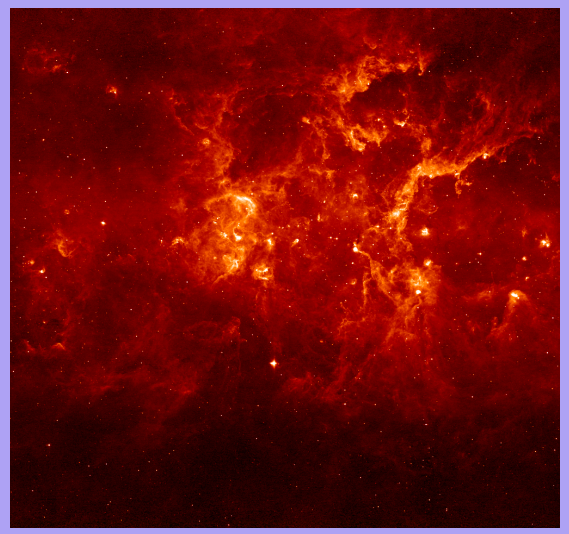

Cygnus Region
Ophiucus Region
Lupus Region
Vela Region
Rosette Nebula
Galactic Center
Andromeda Galaxy
Large Magellanic Cloud
Betelgeuse
Taurus Region
Orion Region

Orion

1 O star

1-2 Myr old

3,000 M_{sun}

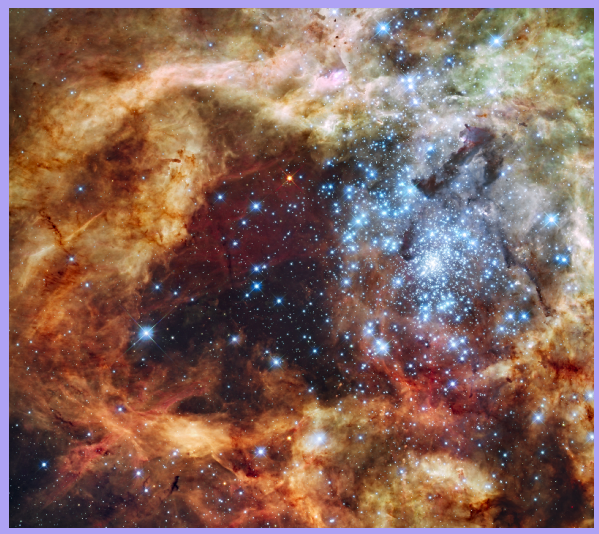


Cygnus OB2

65 O stars

1-5 Myr old

20,000 M_{sun}

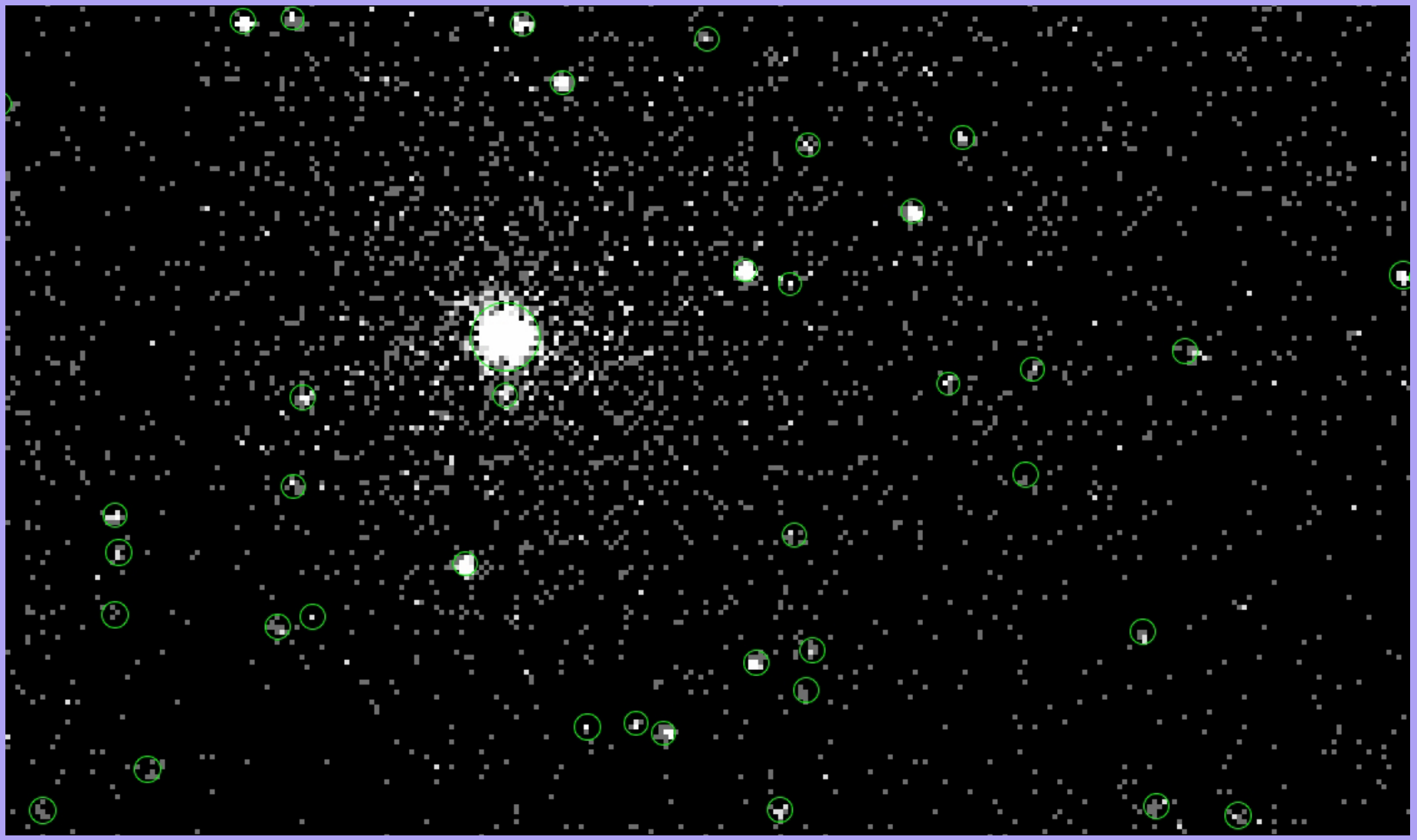


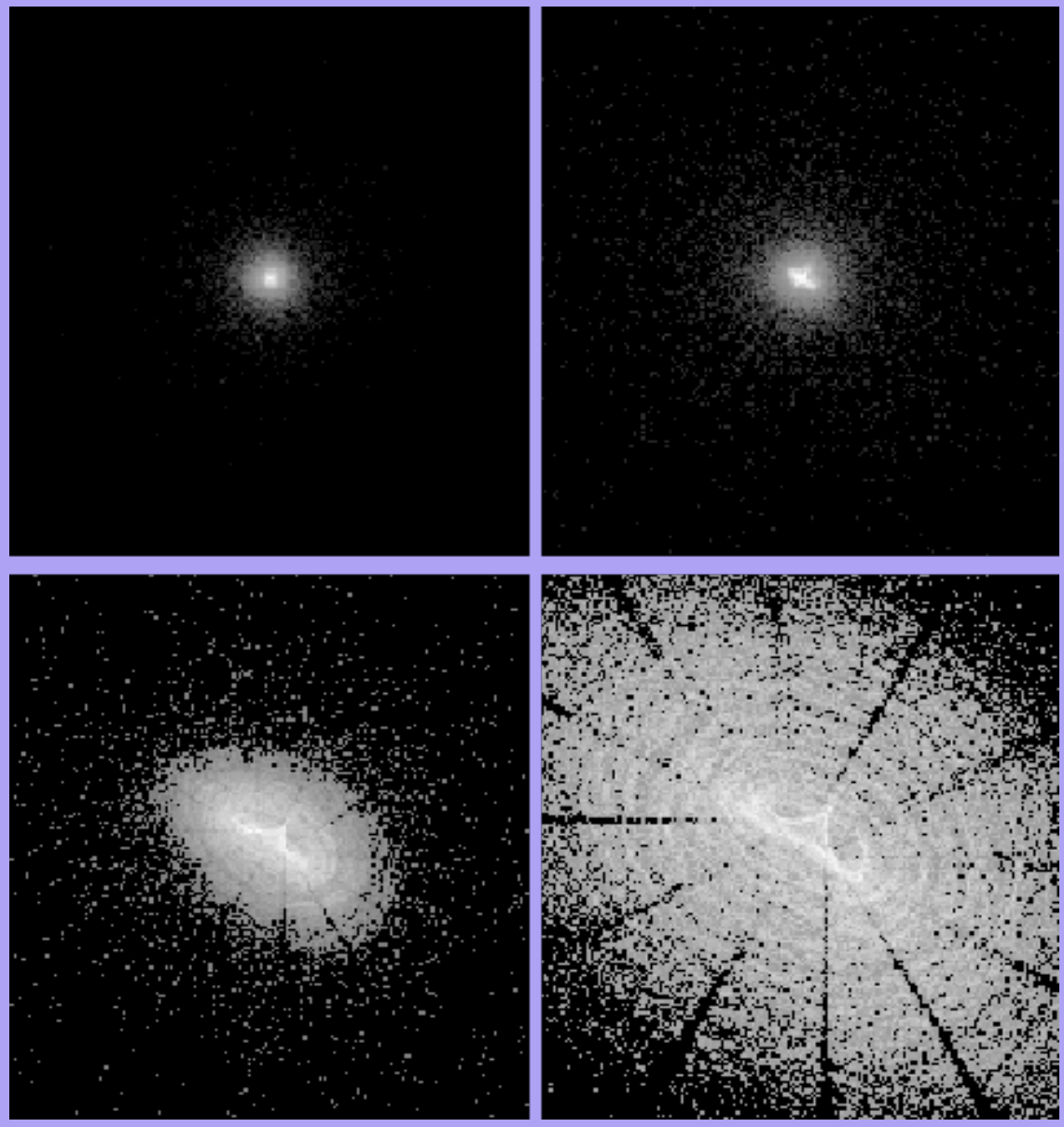
30 Doradus

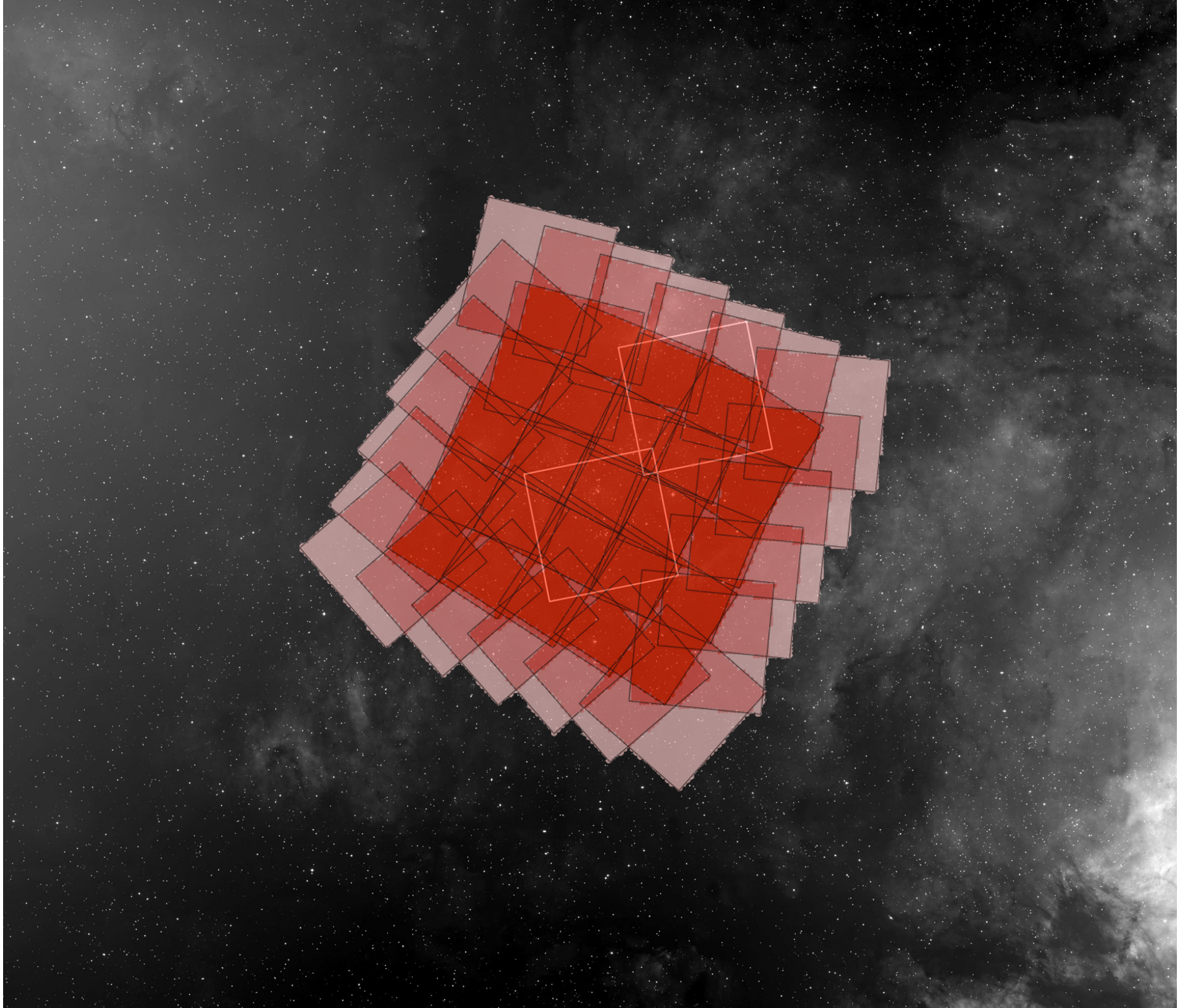
150 O stars

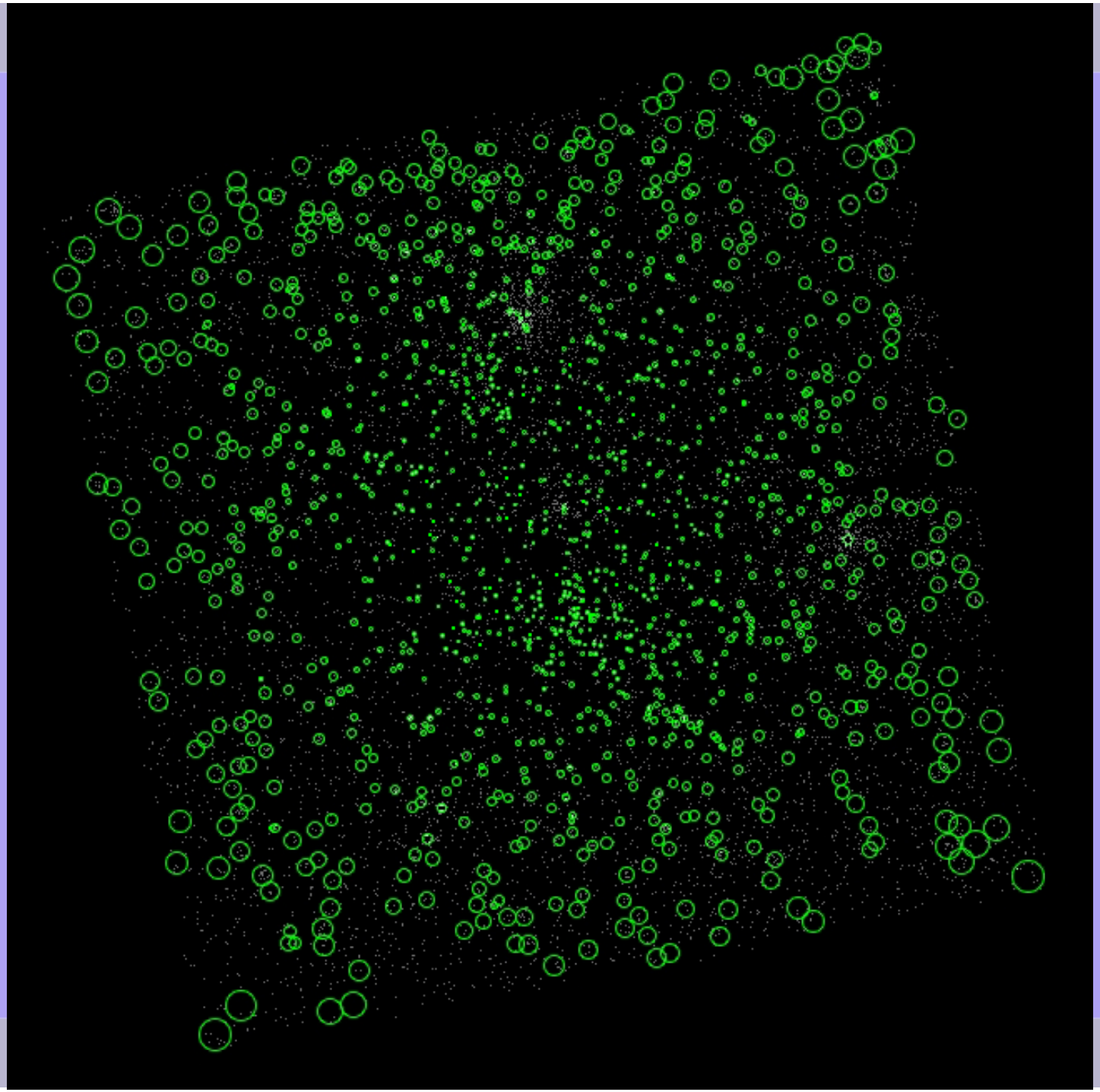
1-5 Myr old

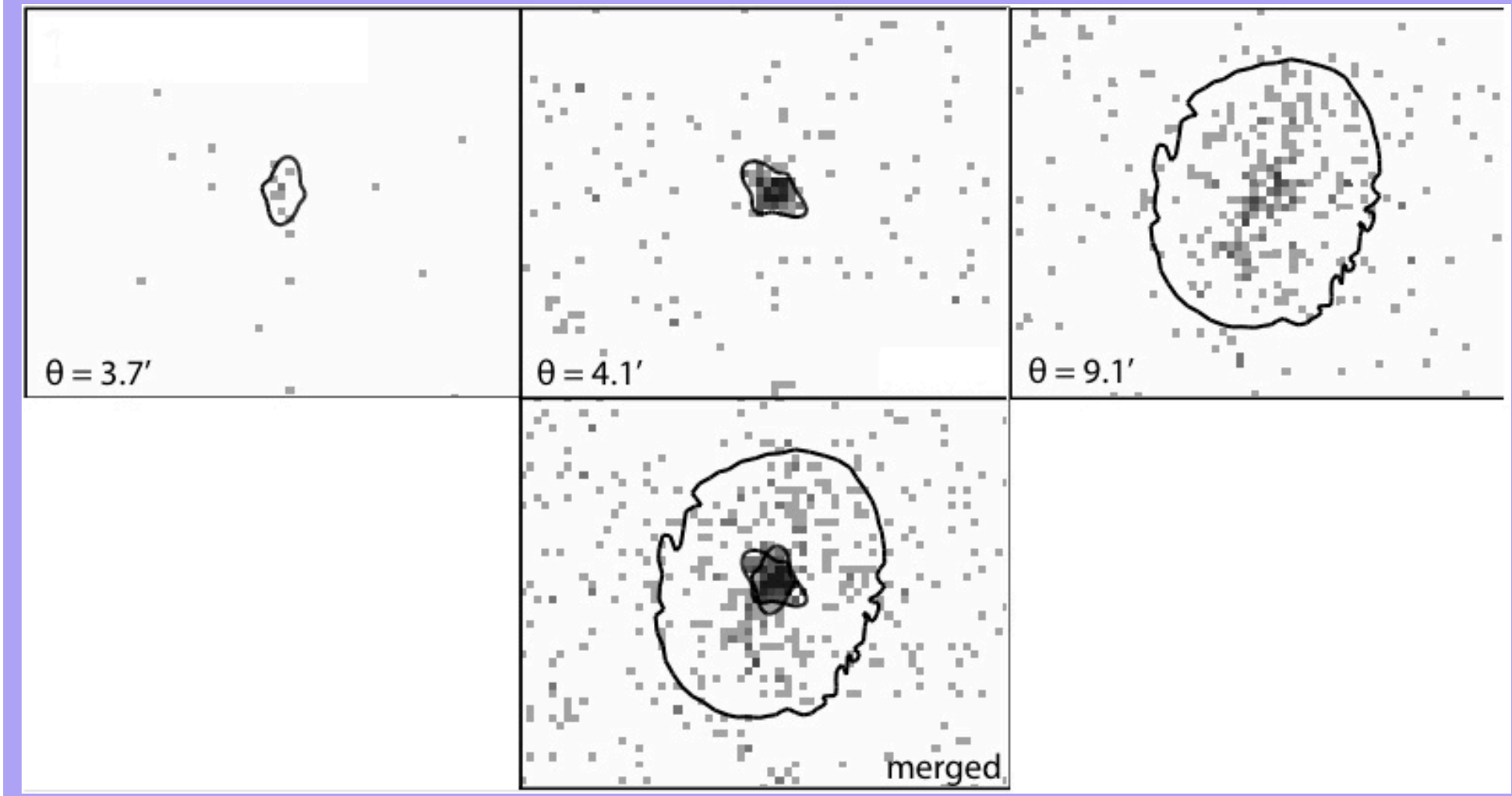
63,000 M_{sun}

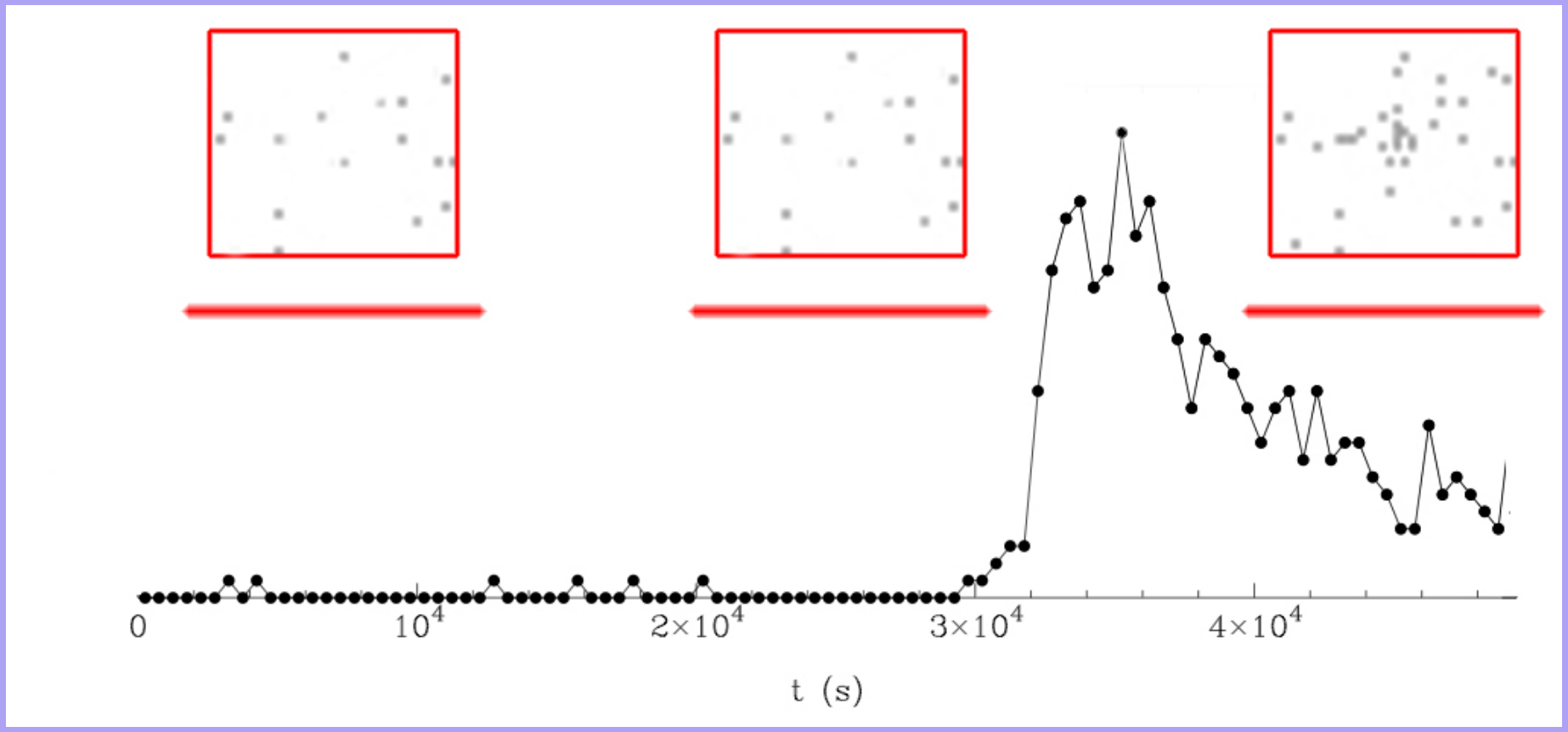




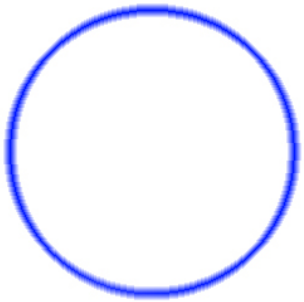




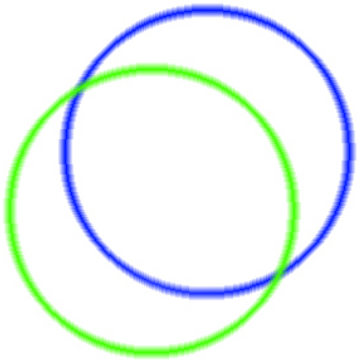

θ = 3.7′
θ = 4.1′
θ = 9.1′
merged


0
10^4
2×10^4
3×10^4
4×10^4
t (s)

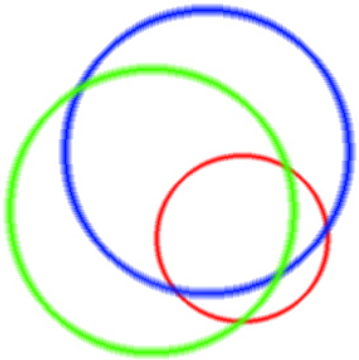
Source detection : 1 detection = 1 source



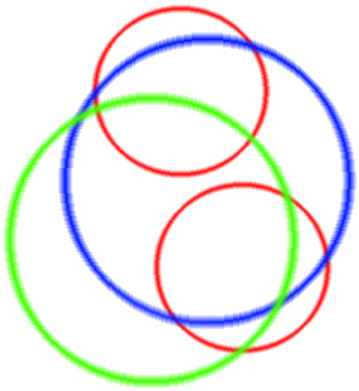
Source detection : 2 overlapping detections = 1 source



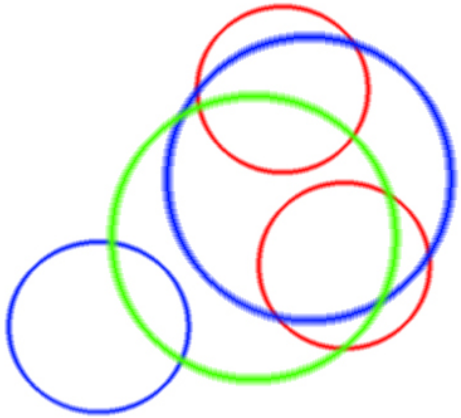
Source detection : 3 overlapping detection = 1 source



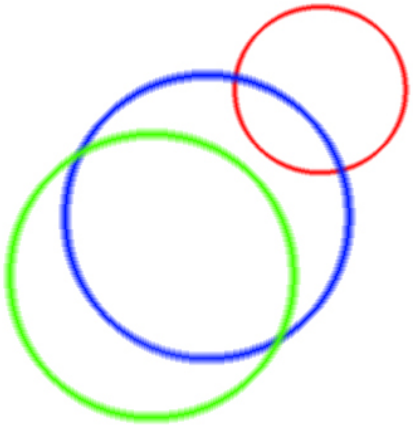
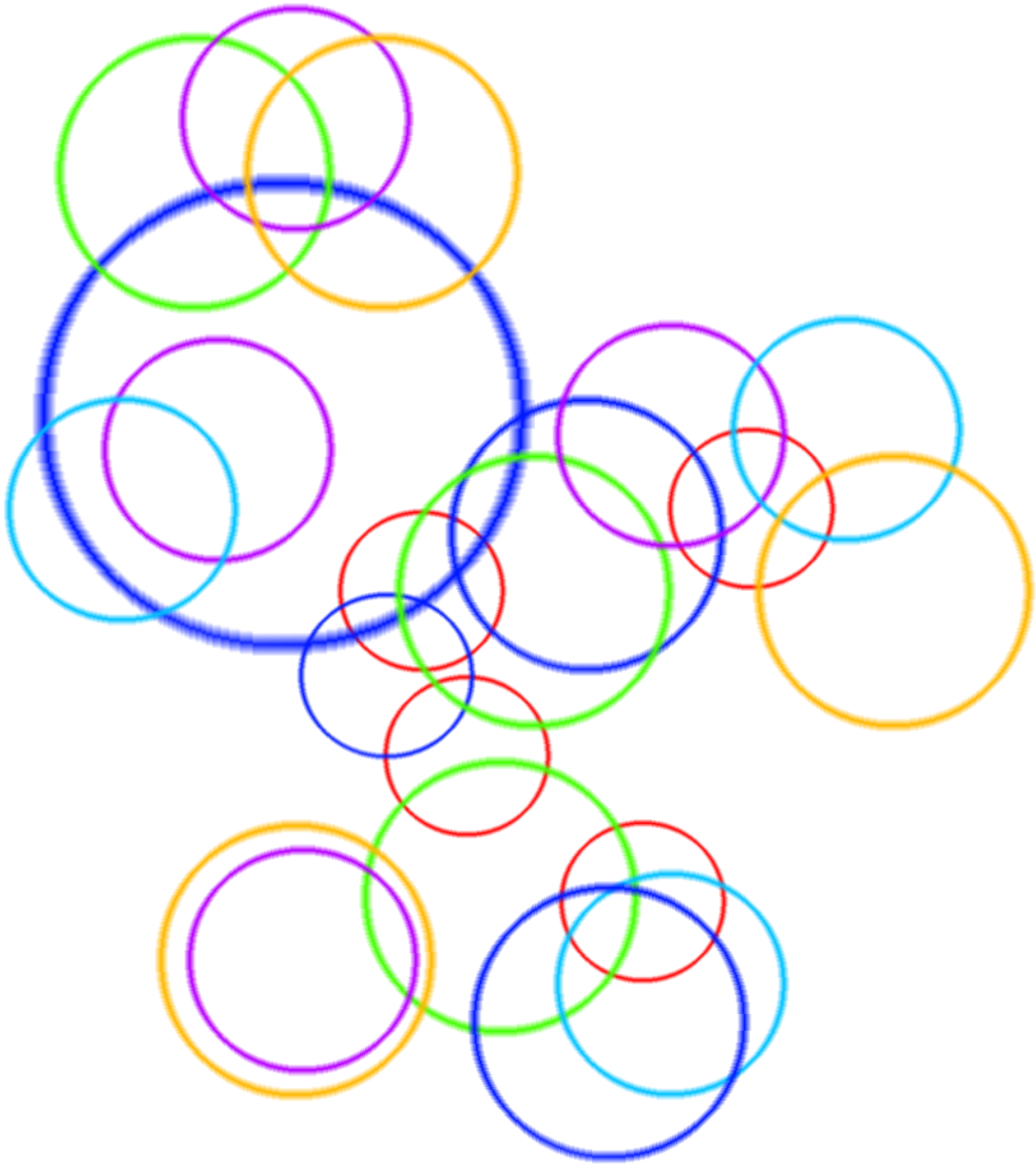
Source detection : 4 non-overlapping detections = 2 sources



Source detection : 5 non-overlapping detections = 3 sources?



Source detection : 3 non-overlapping detections = ? sources



Source detection : 21 non-overlapping detections = ?$!#^&!#*