

Synthetic populations of ultraluminous X-ray sources in globular clusters

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NCAC Annual Meeting 2024

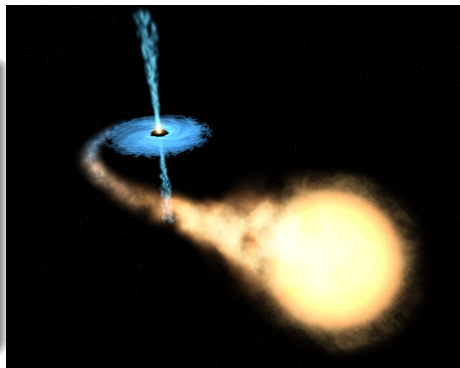
31.01.2024

ULXs in Globular Clusters

ULX

Ultra-luminous X-ray source (ULX) is a point-like off-nuclear X-ray source with X-ray luminosity exceeding the Eddington limit for a $\sim 7M_{\odot}$ black hole.

$$L_X > 10^{39} \text{ erg s}^{-1}$$



Globular Cluster environment

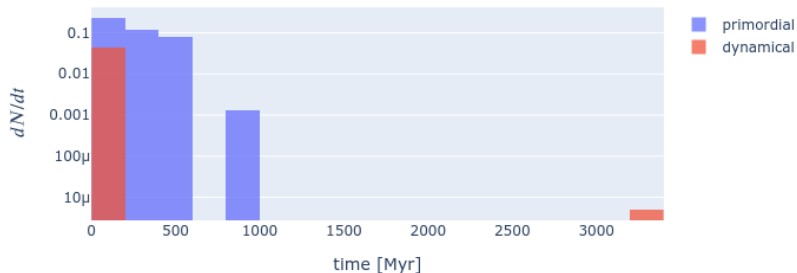
- impacts the formation of close binary systems through interactions
- inherently different from the field (e.g. density, SFH)

MOCCA code

New improvements:

- detailed outputs
- fixed RLOF mass transfer
- new core radii prescriptions
- etc.

Estimated number of ULXs



- Dynamics can mix various accretors and donors on different GC's evolutionary stages
- Comprehensive grid of simulations is on the way!
- Simultaneous analysis of other accreting objects like regular XRBs and CVs
- comparison with observational data and synthetic field populations
- incorporation of other relevant processes (beaming, wind-powered emission, etc.)