Searching for Dark Matter Subhalos in Astronomical Data using Deep Learning

Speaker: **Sven Põder**

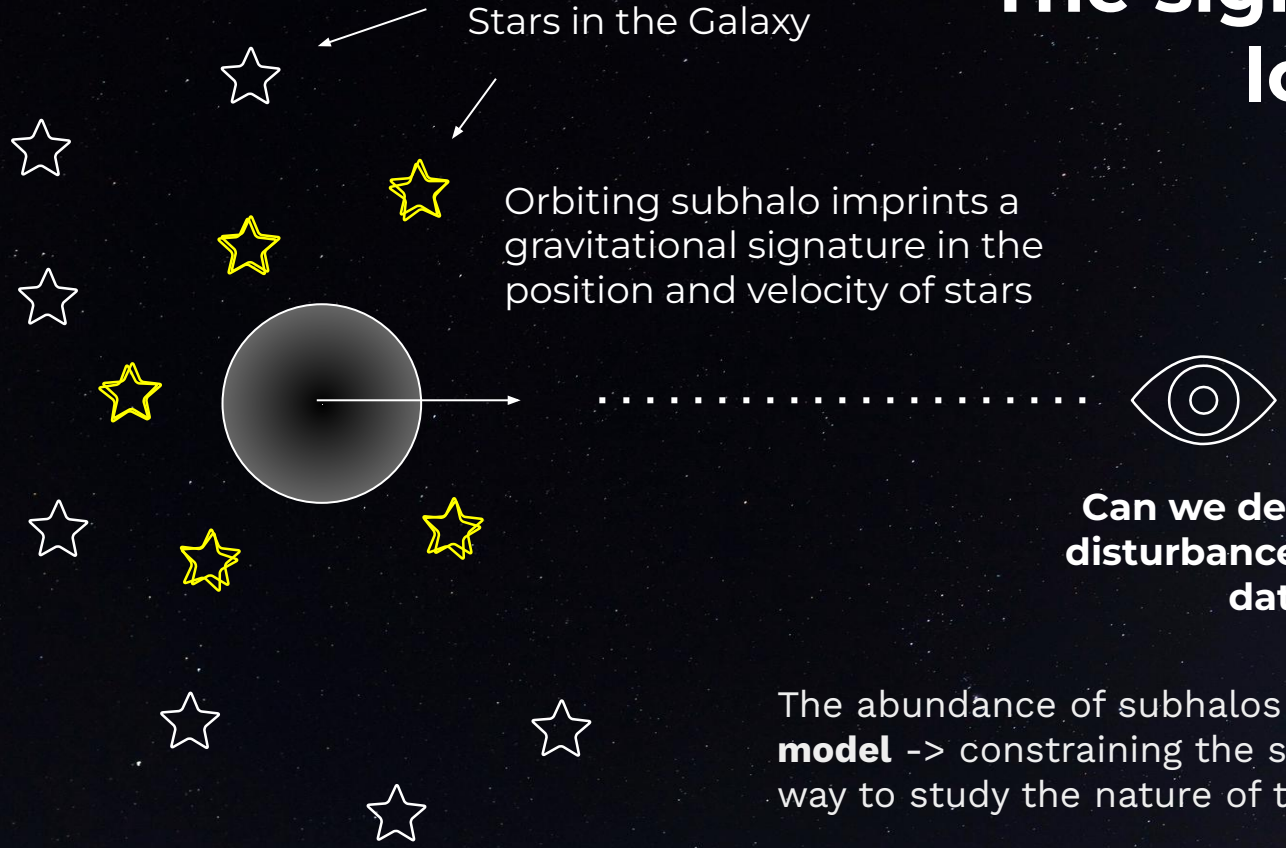
UNIVERSITY OF TARTU
Tartu Observatory
1632

TAL TECH

Also go check out poster of
María Benito Castaño

EuCAIFCon 2024

The signal we are looking for



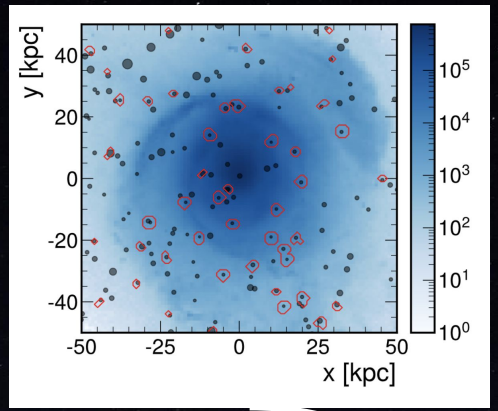
Can we detect these disturbances from the data?

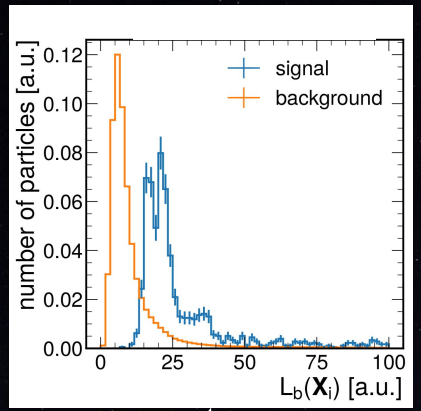
The abundance of subhalos is a **function of the DM model** -> constraining the subhalo mass function a way to study the nature of the DM particle

On constraining the subhalo mass function..

doi:10.1016/j.ascom.2022.100667

Star-by-star anomaly detection in galaxy simulations

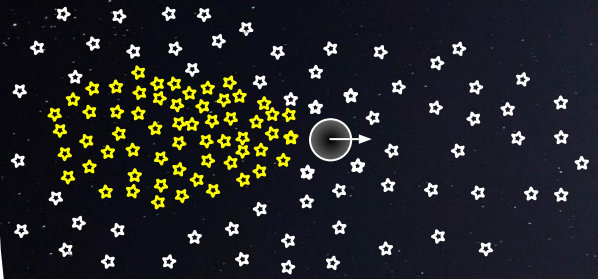


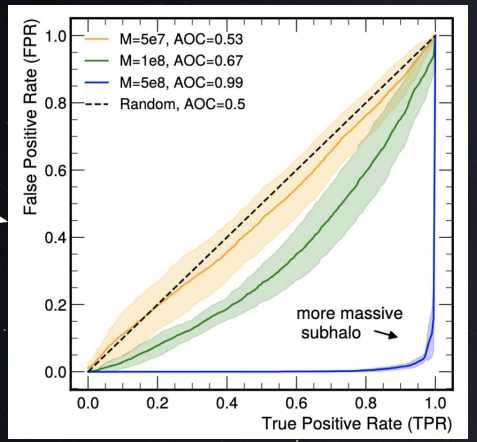


Difference between background and stars near subhalos

Ongoing work

Studying signal detectability in N-body simulations





Sven Põder