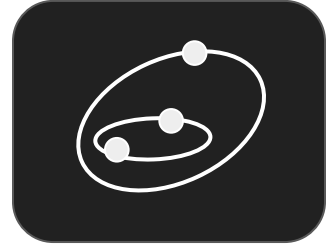


## Compact Hierarchical Triples

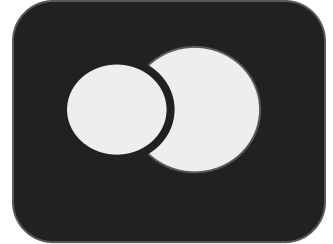
Compact Hierarchical Triples (CHT) are systems with the tertiary star orbiting the inner binary in an orbit shorter than 1000 days. I extract the orbital, stellar and atmospheric properties of all the stars in the system to constrain the evolution of these stars and also check their future dynamical evolution.

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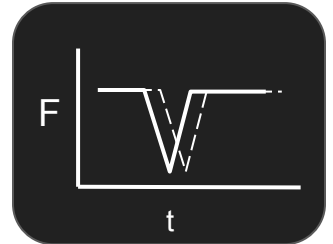
## Detached Eclipsing Binaries

Detached Eclipsing Binaries (DEB) are the source of ultra-precise radii and masses. Using photometry and spectroscopy their measurements can be used to measure distances, calibrate stellar physics and also constrain stellar evolution models.



## Solaris Photometric Survey

**Solaris** network of robotic telescopes monitor a large sample of eclipsing binaries. By measuring the precise time of the eclipse minima and looking for variations over time, we can estimate the orbits and the mass of a companion to the binary.



## Globular Clusters

Globular Clusters (GC) present in the galactic halo are old and metal-poor. Hot stars (usually evolved population) in GC are bright in UV. I use observations from the **Ultraviolet Imaging Telescope (UVIT)** which is onboard the space-observatory ASTROSAT and is operated by the Indian Space Research Organisation.

