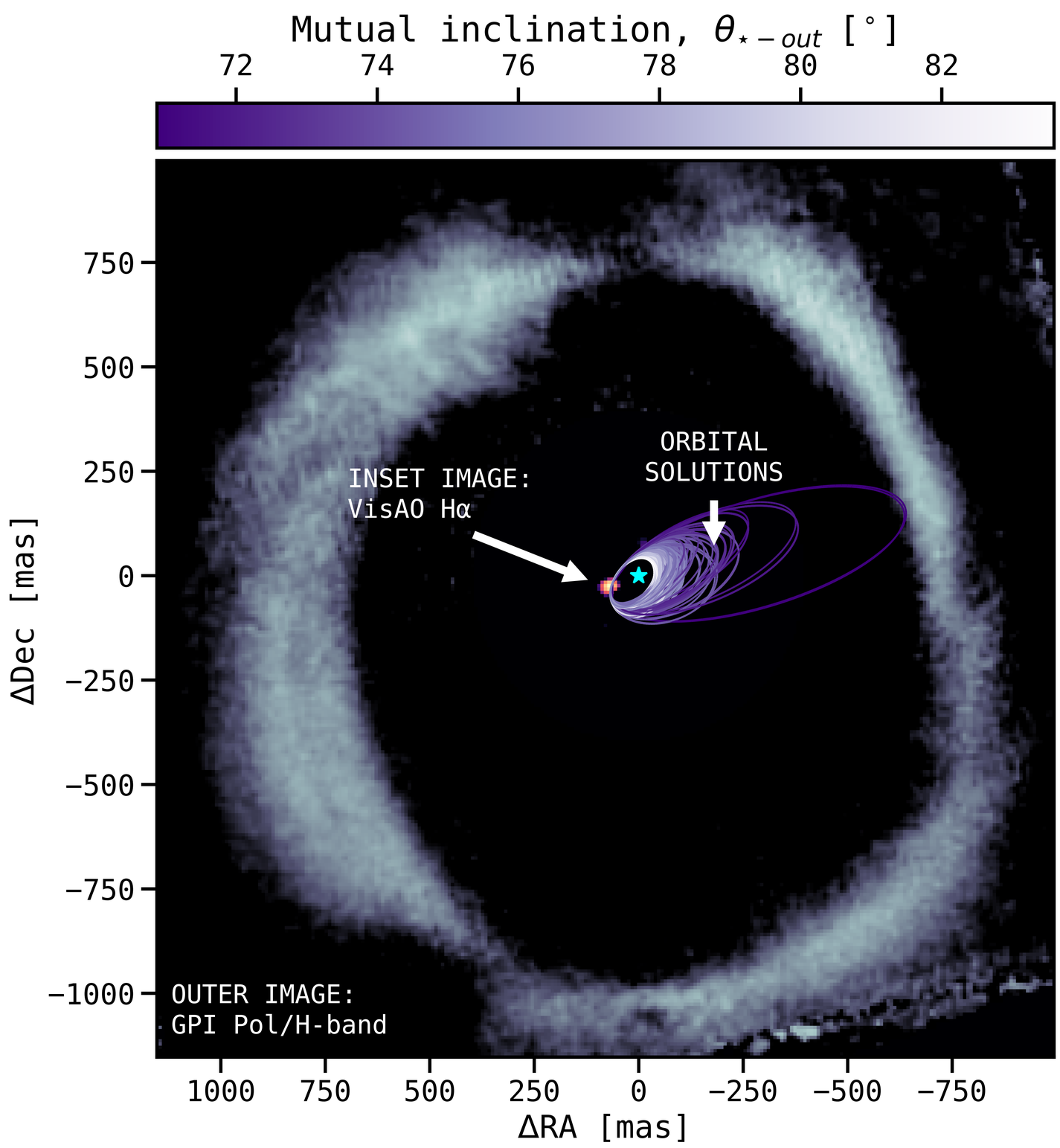
The HD 142527 binary is mutually inclined with respect to inner and outer disk planes

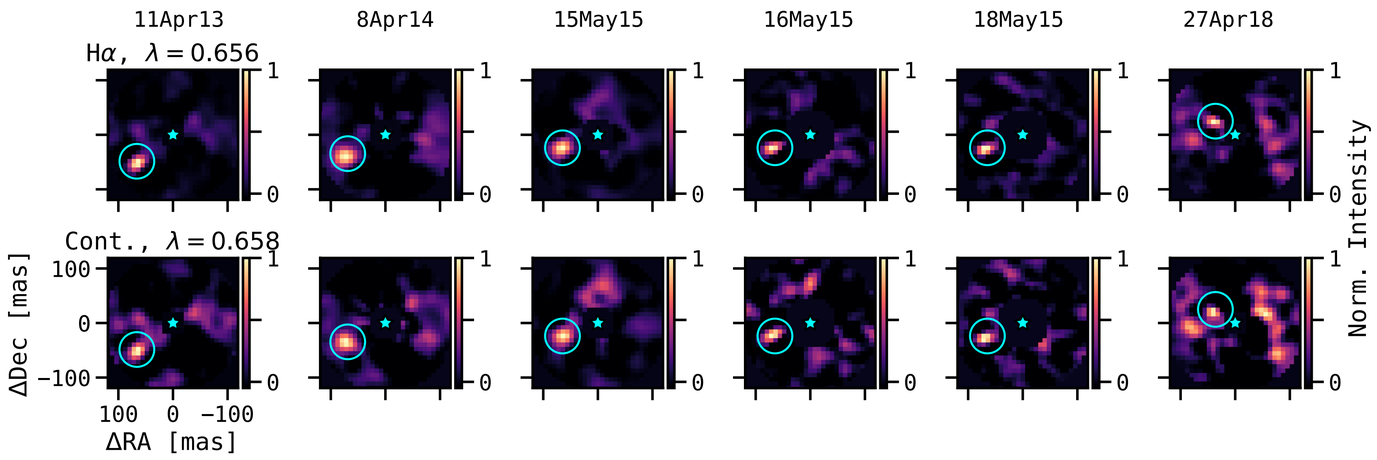


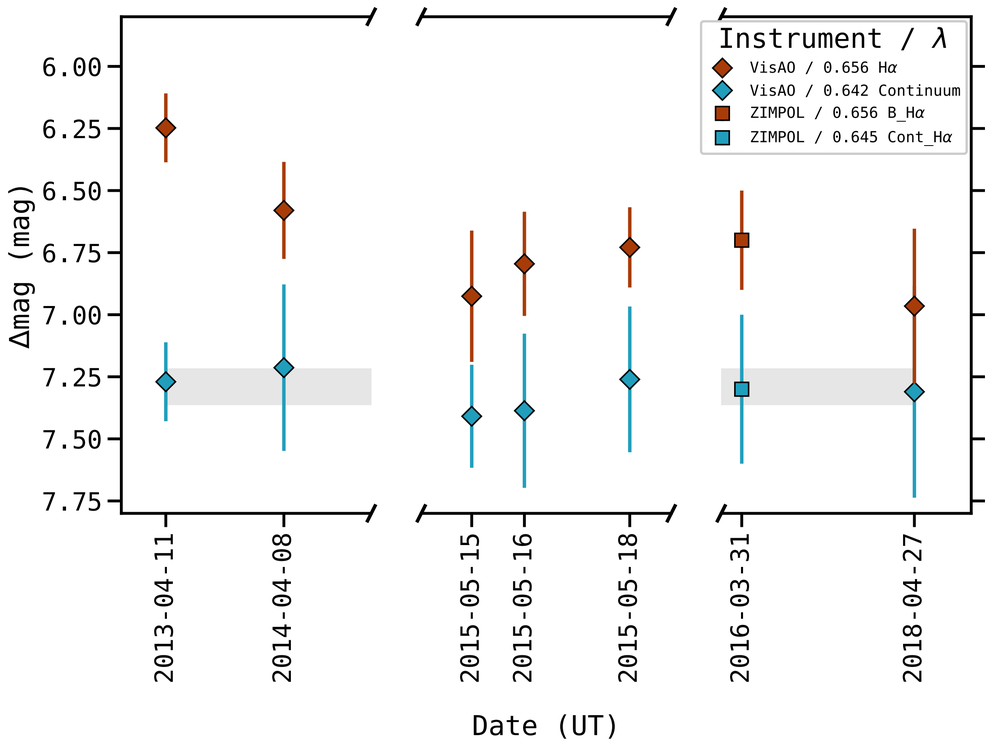
HD 142527 is a well studied circumbinary disk with a large cavity and dramatic spirals.

The central star is a 2 solar mass, F-type pre-main-sequence protostar and hosts an inner M-dwarf on a 15au orbit. How could such a close orbit be responsible for the 100+au cavity in the disk?

Recent hydrodynamical studies indicate that an orbit perpendicular to the circumbinary disk could generate the cavity and spiral features.

We used 5 years of visible-light adaptive optics data to track the M-dwarf's orbit (images bottom left) and fit the orbit, verifying it is inclined at about 80 degrees with respect to the disk.





Left: images of HD 142527 B after the starlight from HD 142527 A has been removed using the KLIP algorithm.

Right: our **Hα photometry is suggestive of variable accretion onto B** (check out Julio Morales' poster for more on Hα variability)

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Read our paper!
Scan the QR code to view a digital copy of this poster, read our paper (accepted to AJ), and contact me!