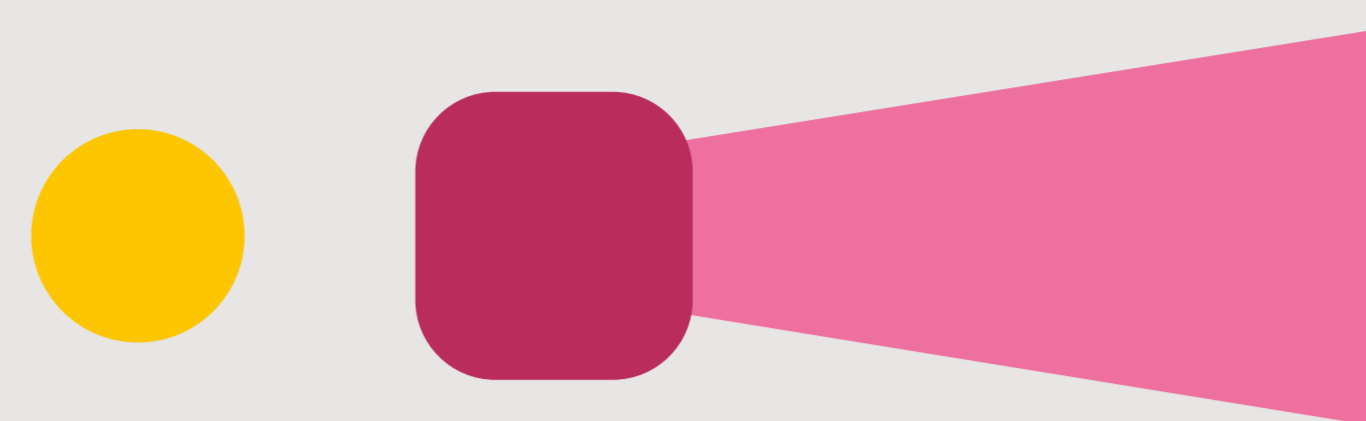


# Evolution of Herbig Ae/Be stars in CO fundamental band spectroscopy

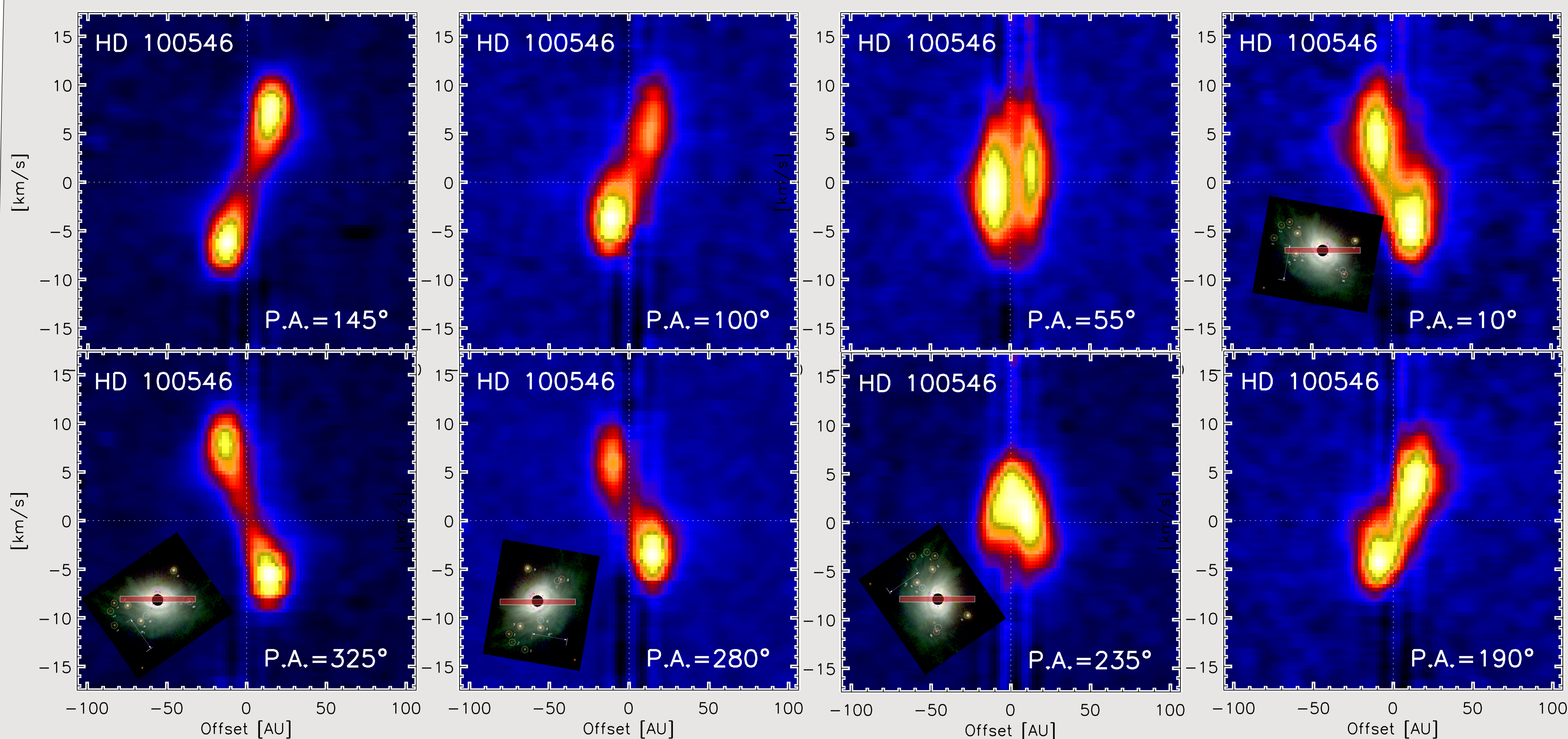
Miwa Goto (University Observatory Munich)

## HD 100546

B9.5Ve / 103 pc /  $i=50^\circ$   
Rim + atmosphere

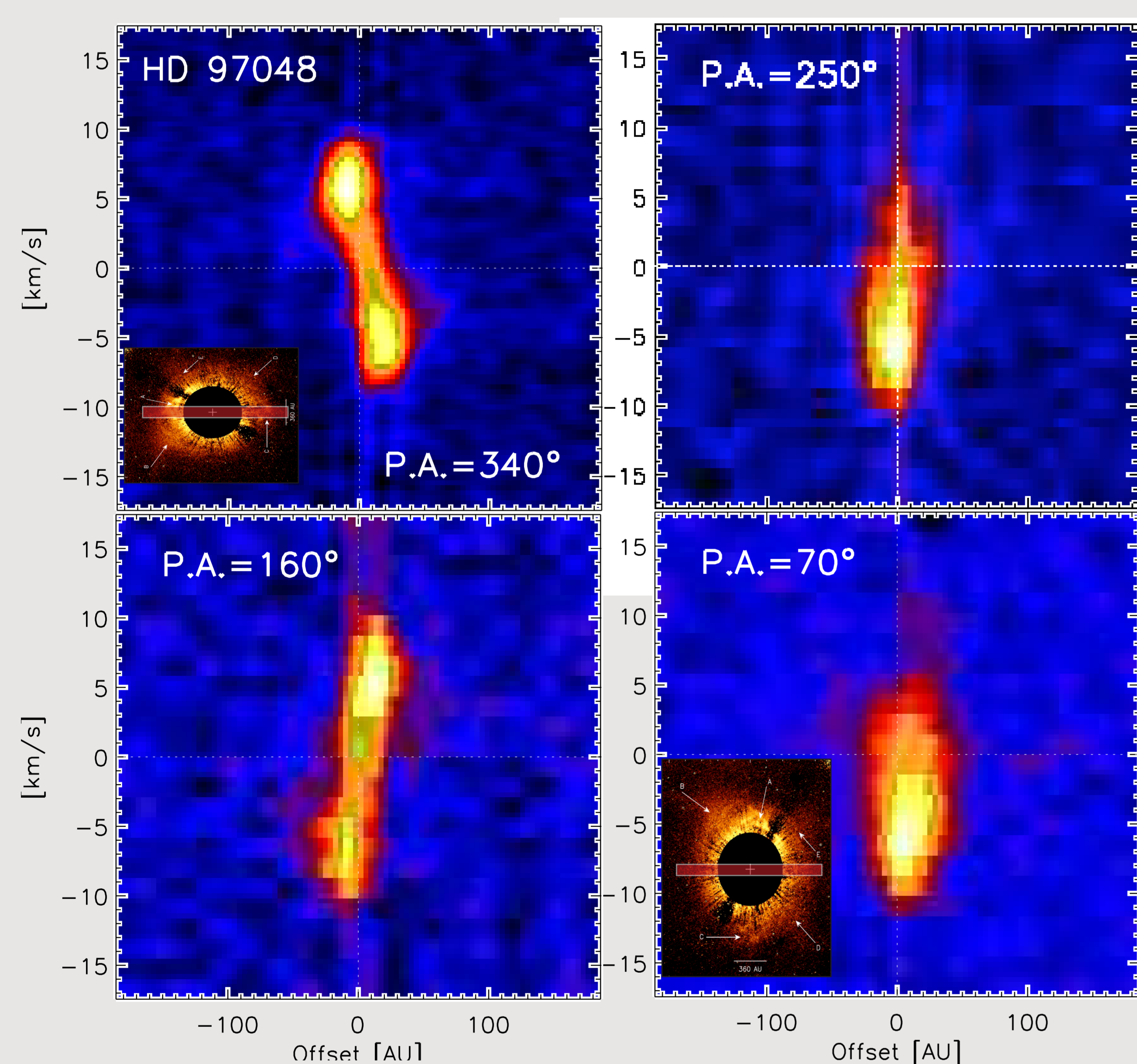


## group I



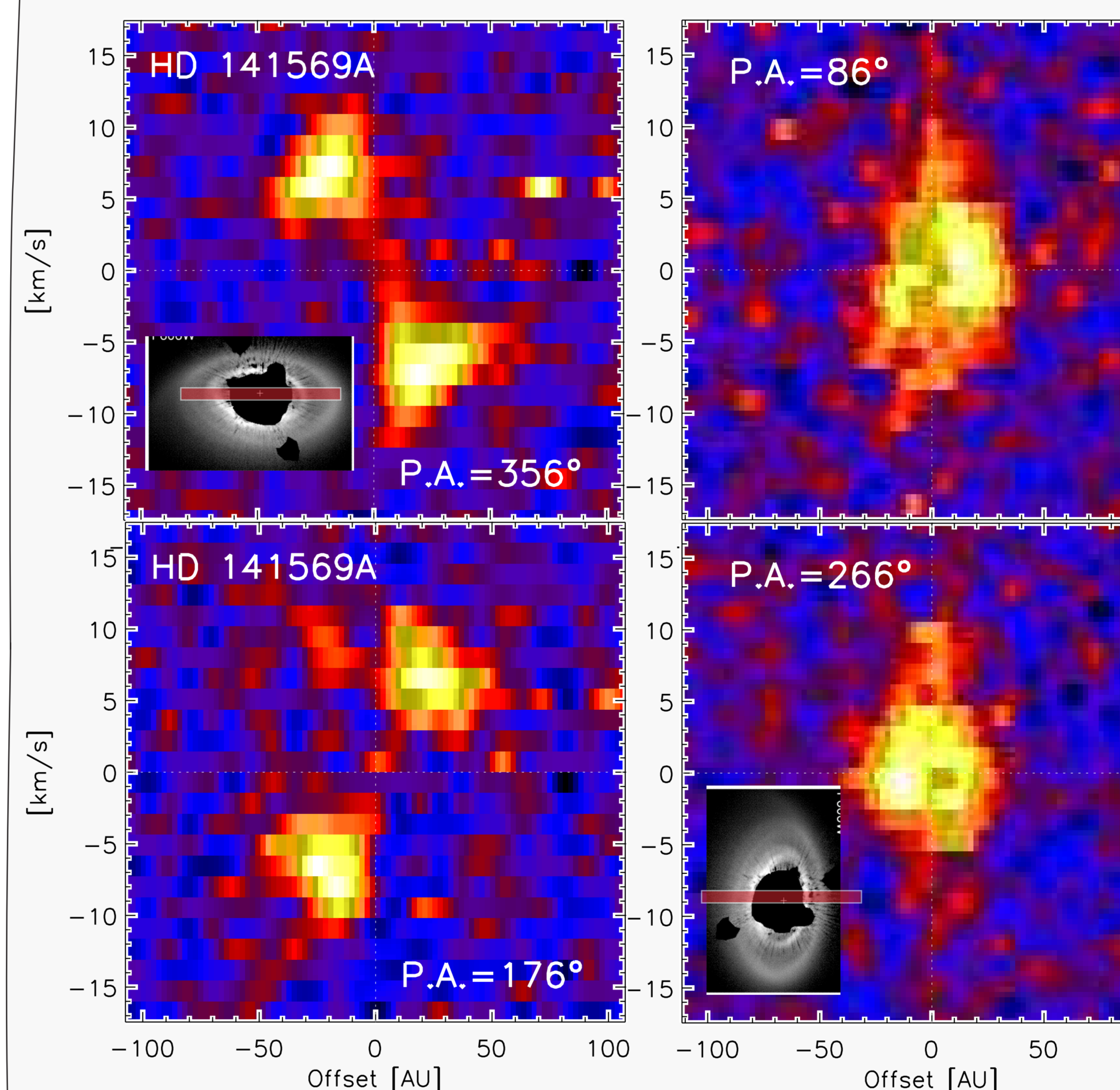
## HD 97048

B9-A0 / 158 pc /  $i=43^\circ$



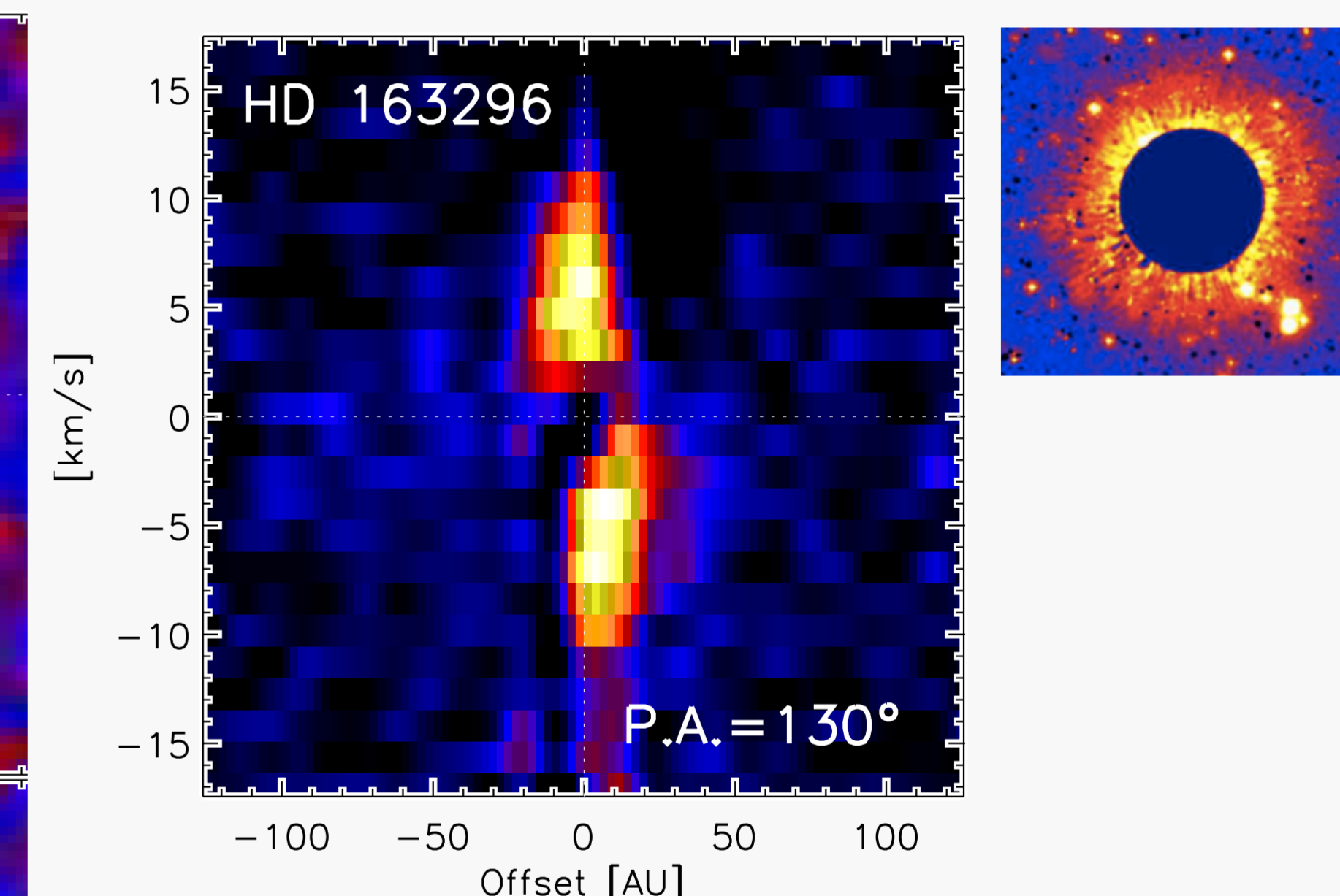
## HD 141569A

A0Ve / 104 pc /  $i=53^\circ$



## HD 163296

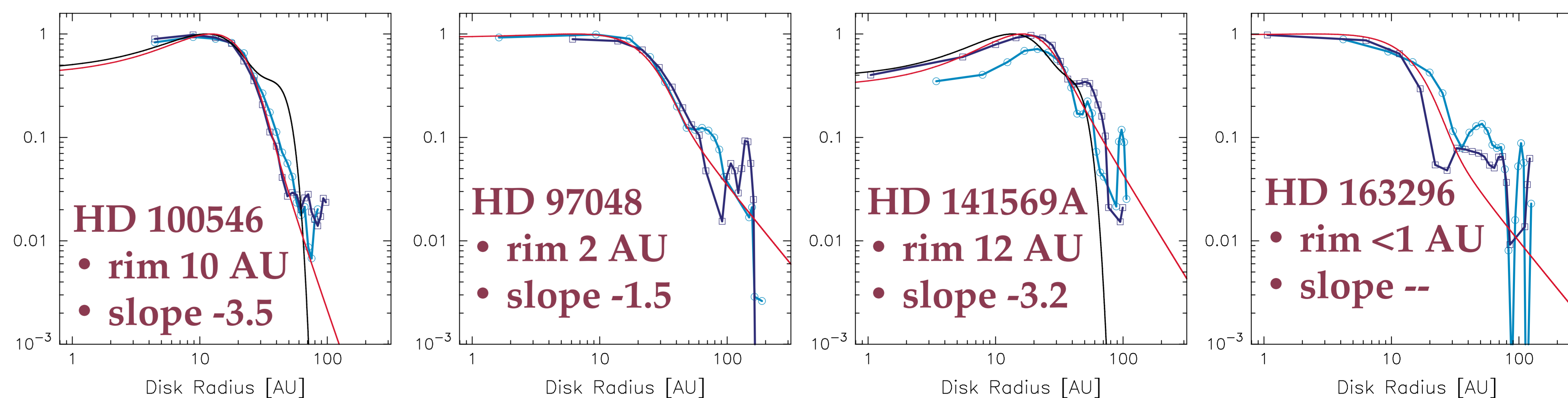
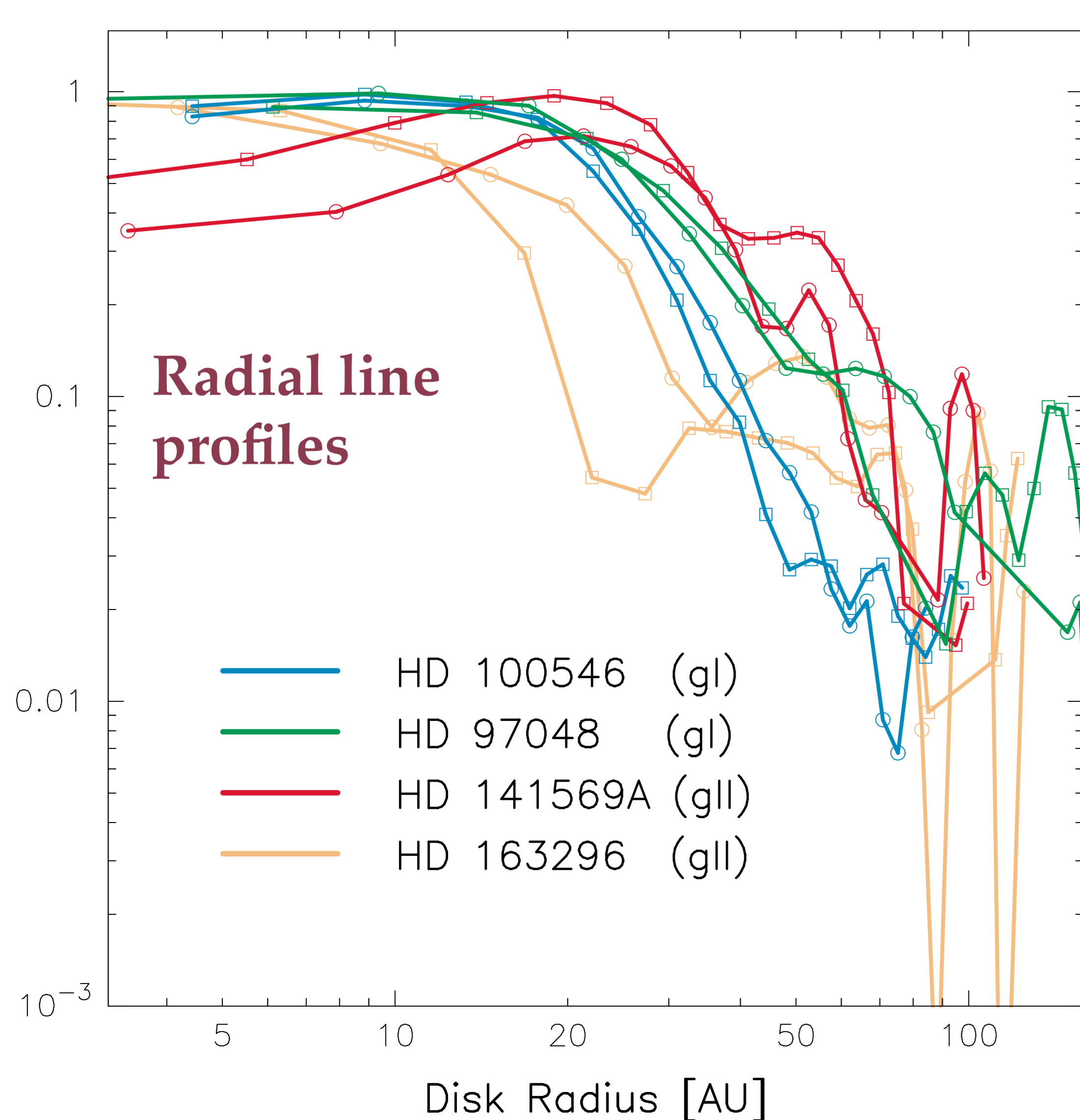
A1Ve / 122 pc /  $i=50^\circ$   
unresolved



Rim only.

## group II

No rim.



- 1) line imaging of gas disk on the scale of <10 AU is presented.
- 2) group I has rim and disk atmosphere.
- 3) group II has inner rim only, or disk atmosphere only.
- 4) It is not clear if rim declines first, or disk atmosphere does.
- 5) Asymmetry at inner disk (<20 AU) is more a rule.