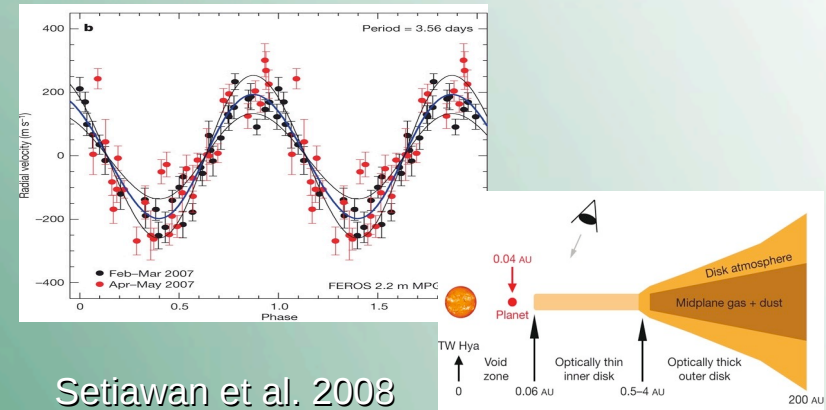


Exoplanet Detection with RV technique : Challenges

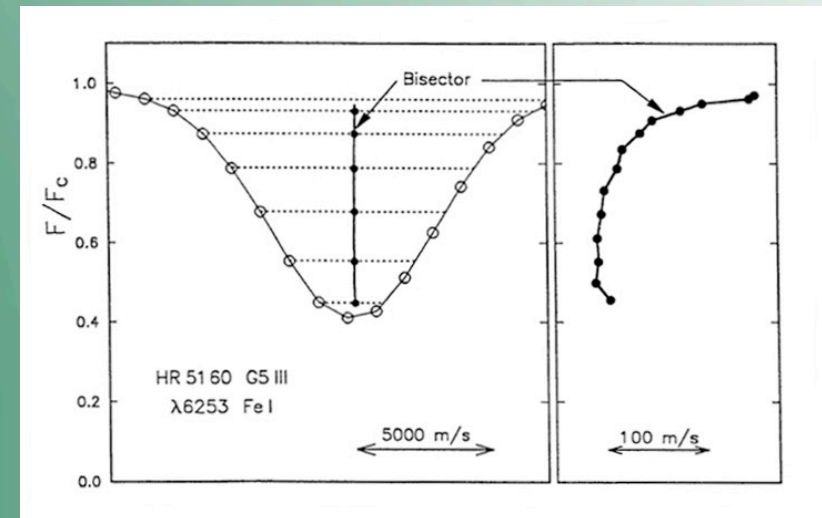
- Mechanisms inherent to stars may cause spurious detections!
magnetic activity, stellar oscillations, granulation etc.

- Fortunately, all these effects leave their imprints on spectral lines as profile asymmetries

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Setiawan et al. 2008



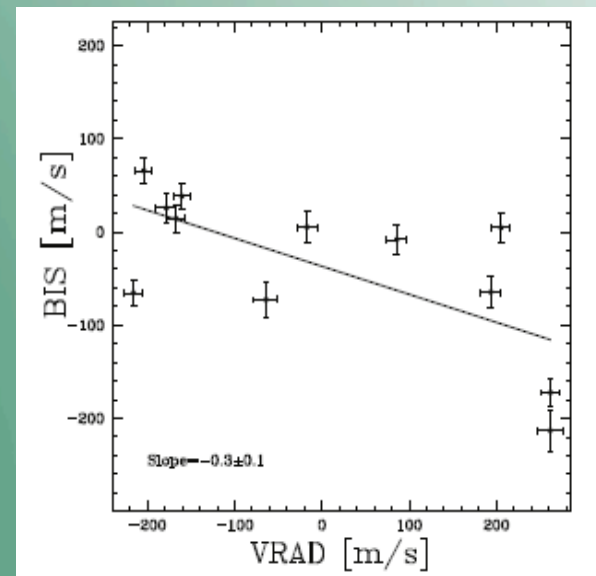
Gray 1989

Analysis of Line Asymmetries

- But detecting these imprints on line profiles is very tricky
high resolution, high S/N spectra →

CCF profiles as “average spectral lines” with intrinsically high S/N

- Different groups of lines (in)sensitive to different phenomena → Designer CCFs.
- Different bisector measures → Different correlations → Different mechanisms



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Huélamo et al. 2008