

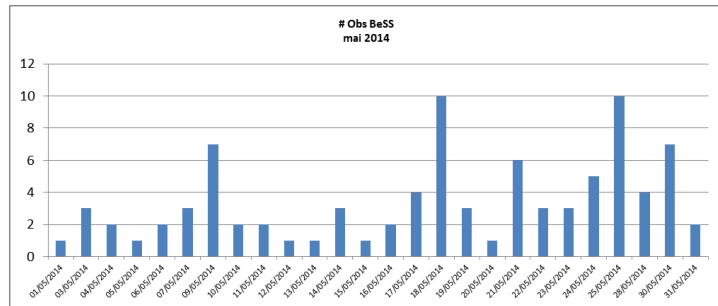
BeSS report – May 2014

Do not miss the new section on the Be projects by E.Pollmann [here](#)

Observateur	Nb spec
Sawicki	23
Guarro Fló	10
Graham	9
GARREL	8
Bohlsen	8
Favaro	8
HOUPERT	6
Fosanelli	6
Pollmann	5
Buil	3
lopez	1
Berardi	1
Martineau	1

- 89 H-alpha spectra acquired
- 44 objects observed
- 13 observers contributed

The most observed objects were Del Sco, bet CMi, 53 Boo



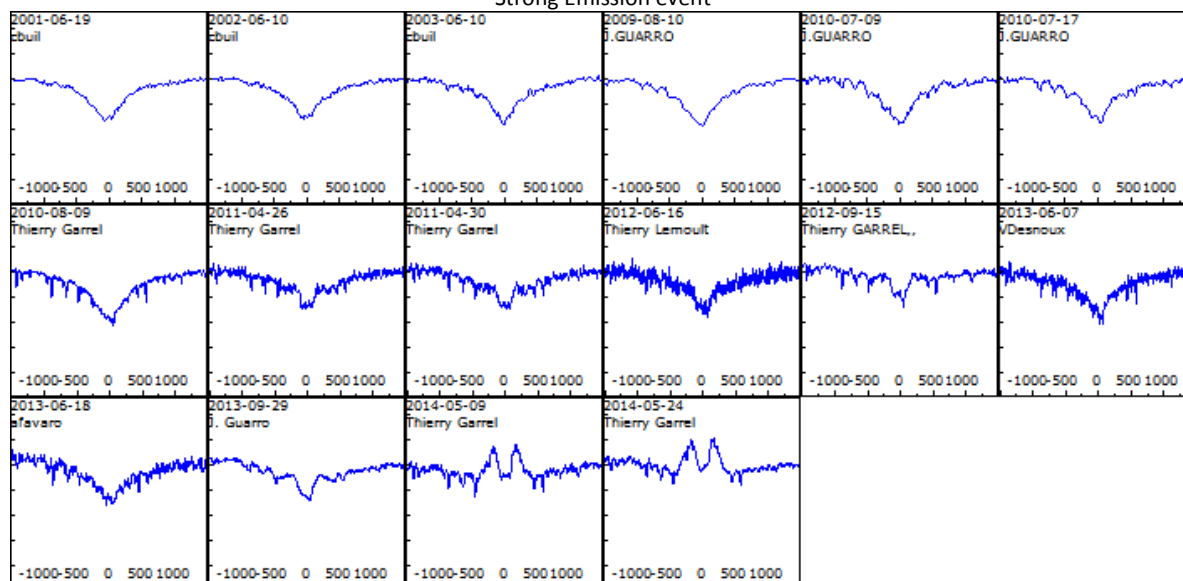
Objects observed

Classique						Classique ou Herbig	Herbig
del Sco	PHECDA	HD 50658	zet Oph	V2119 Cyg	HD 91120		
bet CMi	gam Cas	66 Oph	15 Mon	HD 171780	BD+23 3183		
53 Boo	4 Her	chi Oph	V974 Her	HD 168957	DK Cru		
kap Dra	V532 Lyr	I Hya	HD 94963	17 Sex	V986 Oph		
48 Lib	CQ UMa	HD 162428	V817 Cen	CX Dra	HD 305827		
HL Lib	phi Leo	FF Cam	AG Car	zet Crv	SHELIAK		
tet CrB	HD 79066	QR Vul	CW Cru	ome Car	V338 Car		
omi Her	5 Cnc						

Emission increase since last observations

V532 Lyr

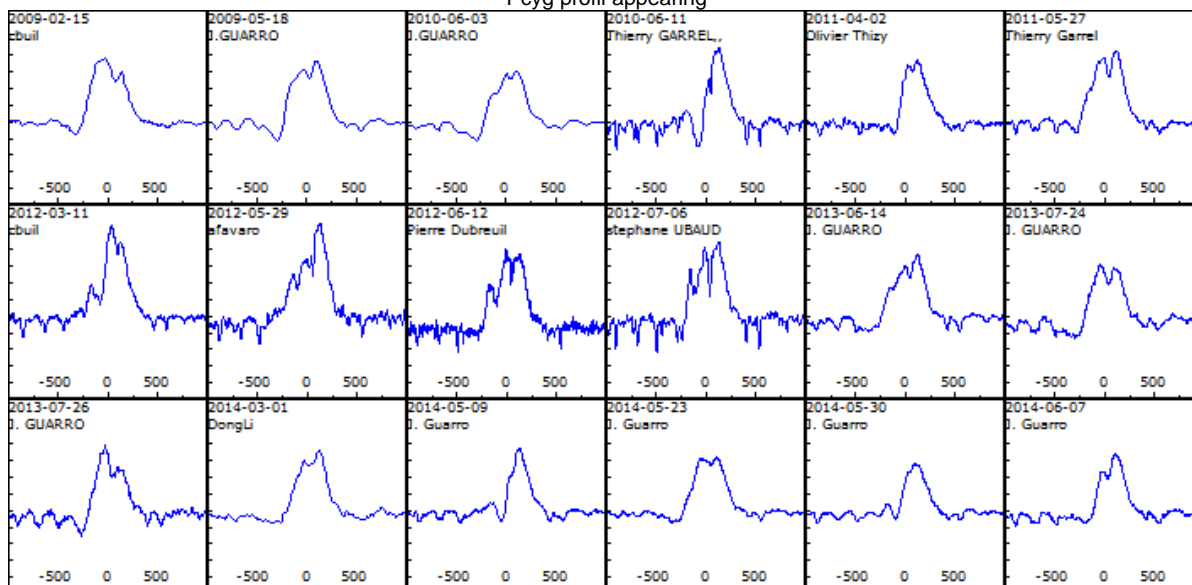
Strong Emission event



Moderate evolutions of H-alpha line

HL Lib

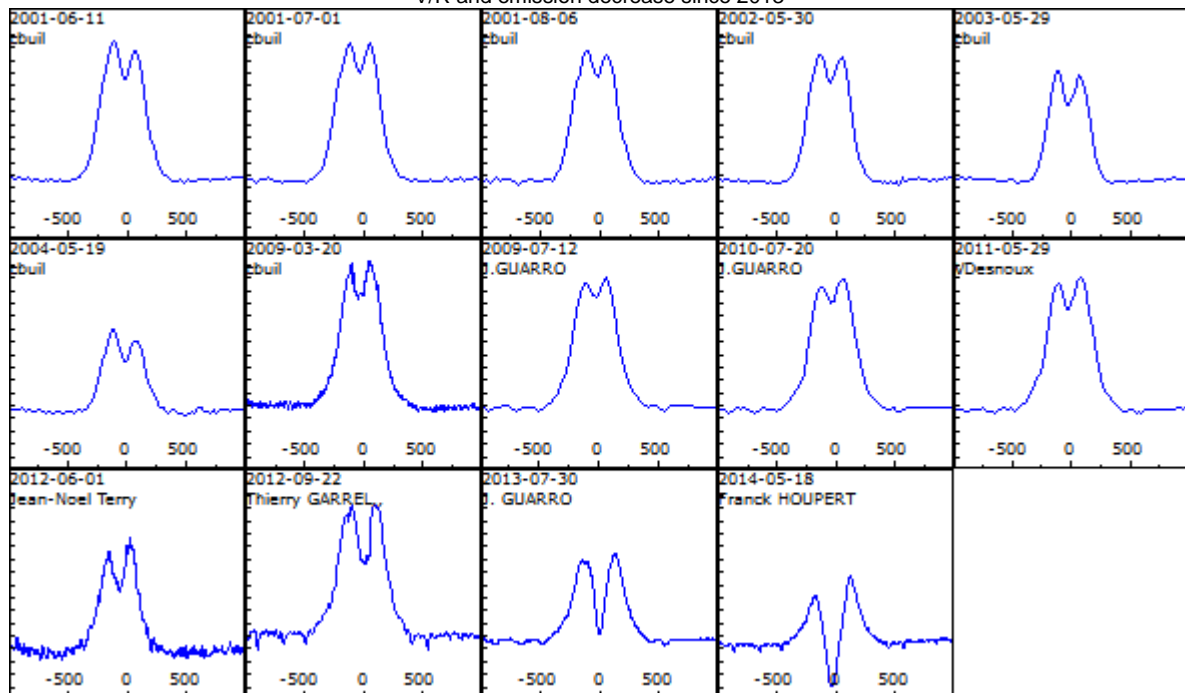
Pcyg profil appearing



Emission decrease of H-alpha line

V162428

V/R and emission decrease since 2013



Be monitoring projects

By Ernst Pollmann

Del Sco

The almost unchanged EW since JD 2455850 shows, that the transfer of matter into the disk is more or less constant (upper Fig.). And since on the other hand the secondary companion goes (after the periastron 2011) away from the primary, the primary's disk can grow outwards. The intensity peaks in the H α profile become closer to one another that most likely means that the peaks are form further away from the star where the disk material velocity is lower.

We are using the FWHM velocity (Fig.bottom) as inverse indicator for the average disk diameter. It shows a linear decreasing of the velocity and hence an increasing of the diameter. If the visual brightness (Fig. middle) and the line EW stay the same, but the FWHM changes, then

- either the amount of material near the inner boundary of the disk gets down and the disk becomes a ring,
- or the disk is re-structuring at the moment, so that the highest density moves away from the star

In order to get more clarity, the line peak intensity and/or the line width at the continuum level (FWZI or Full Width at Zero Intensity) could be interesting. If FWZI increases, it means that more material is getting from the star into disk, but this material only affects the line wings at the moment. If the mass loss continues to increase, we should expect a higher object brightness and a stronger line intensity at peak.

The actual situation can be quite complicated. A few processes can go in the disk of delta Sco at the same time (see Sect. 3.2 in Rivinius et al., 2001, A&A, 379, 257). We would expect a visual brightness drop if an inner cavity is forming, because the highest density region gets cleared. Since this is not observed, something else may be going on there. This is why it is important to measure more line parameters than just the EW and FWHM.

See graphic below

Ernst Pollmann

International Working Group ASPA

Active Spectroscopy in Astronomy

<http://www.astrospectroscopy.de>

<http://www.astronomie.de/astronomische-fachgebiete>

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