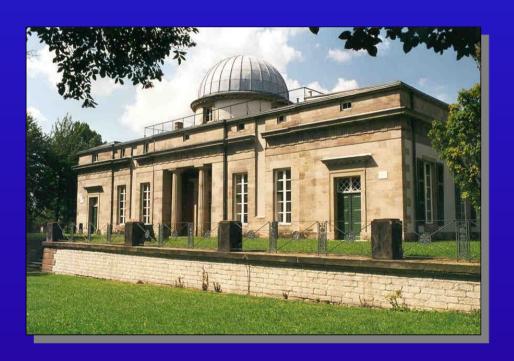
## SALT Science Programs at Göttingen

Wolfram Kollatschny Warszawa, May 2013

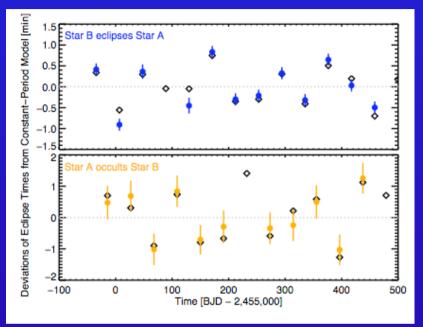




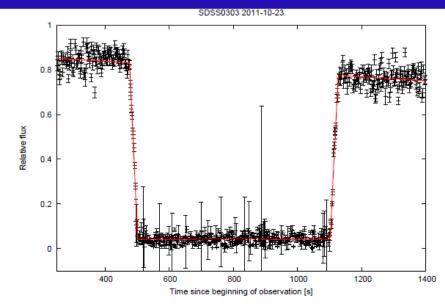
**University Observatory** 

Institute for Astrophysics

# Substellar companions to common envelope eclipsing binaries (Stefan Dreizler et al.)

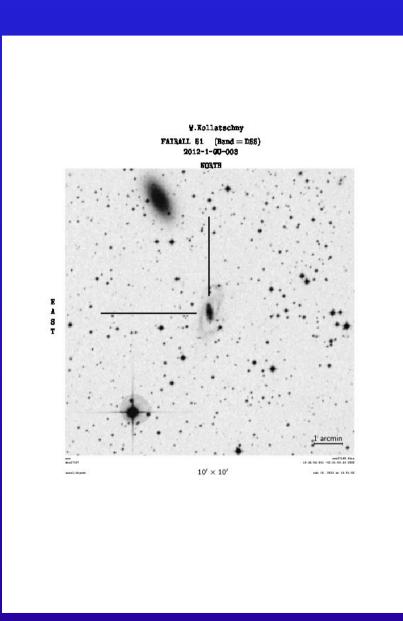


Kepler 16 - transiting planet in an eclipsing binary (Doyle et al., 2011)



SALT:- eclipse of WD by M-star
- deviations of eclipse time
due to planets

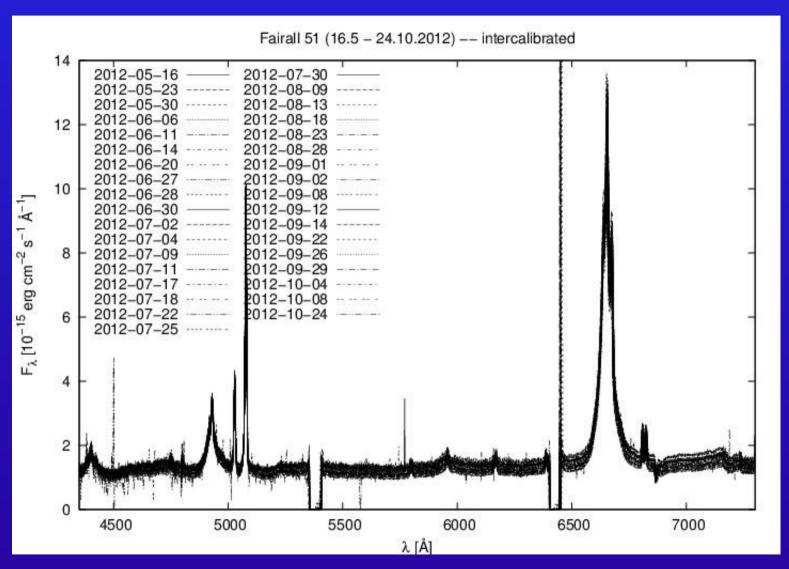
## Spectral variability of Fairall 51



- Seyfert 1 galaxy
- mv ~ 15
- 35 SALT spectra between May 16 and October 24, 2012

## Spectral variability of Fairall 51

#### SALT spectra taken between May and October, 2012



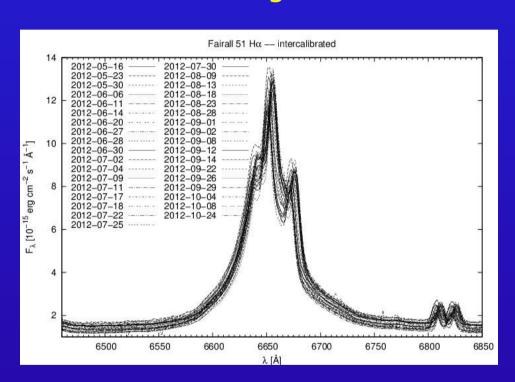
calibrated with respect to the [OIII] lines

## Line and cont. intensity variations in Fairall 51

### Hβ region

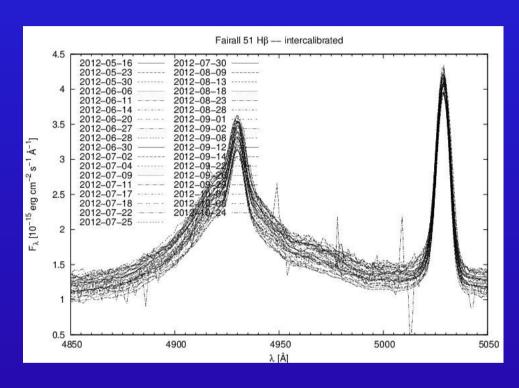
#### Fairall 51 HB - intercalibrated 2012-07-30 2012-05-16 2012-05-23 2012-08-09 2012-05-30 2012-08-13 2012-08-18 2012-06-06 2012-06-11 2012-06-14 2012-08-28 2012-06-20 2012-06-27 2012-09-02 $F_{\lambda}$ [10<sup>-15</sup> erg cm<sup>-2</sup> s<sup>-1</sup> Å<sup>-1</sup>] 2012-06-30 2012-07-02 2012-07-04 2012-07-09 2012-07-11 4850 4900 4950 5000 5050 λ [Å]

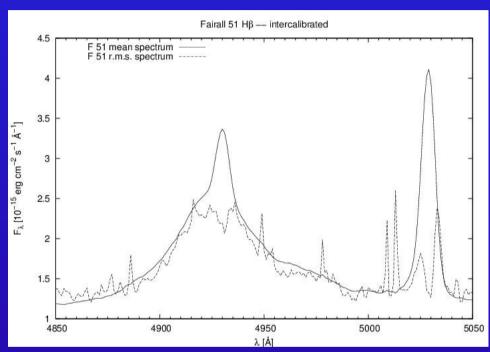
#### Hα region



calibrated with respect to the [OIII] lines

## Line profile variability in Fairall 51

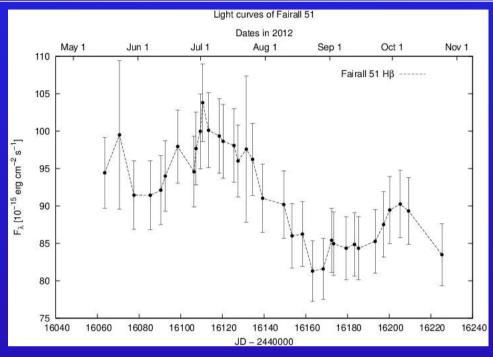


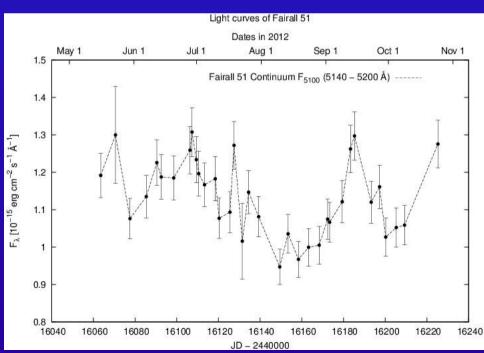


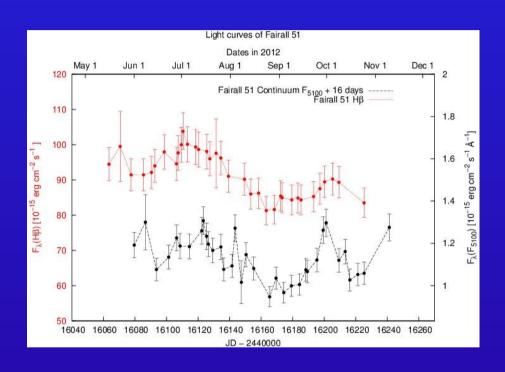
normalized mean and rms line profiles

- the rms spectrum shows the variable part of the spectrum

## Hβ and continuum light curves in Fairall 51

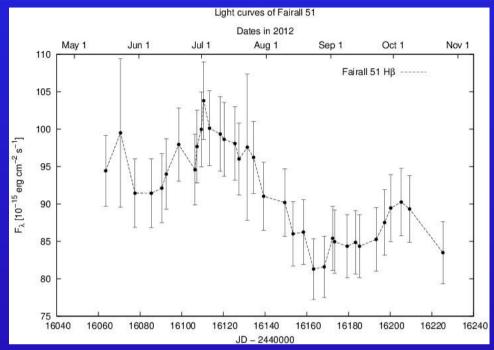


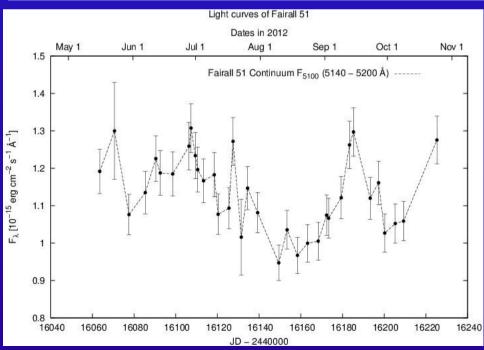




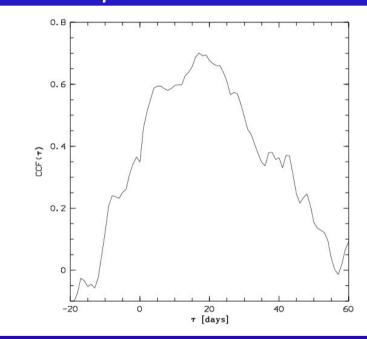
Hβ and continuum light curves: continuum light curve delayed by 16 light days

## Hβ and continuum light curves in Fairall 51





Cros-correlation function of  $H\beta$  lc. with respect to the continuum lc.



mean distance of H $\beta$  line emitting region: 16  $\pm$  5 light days

