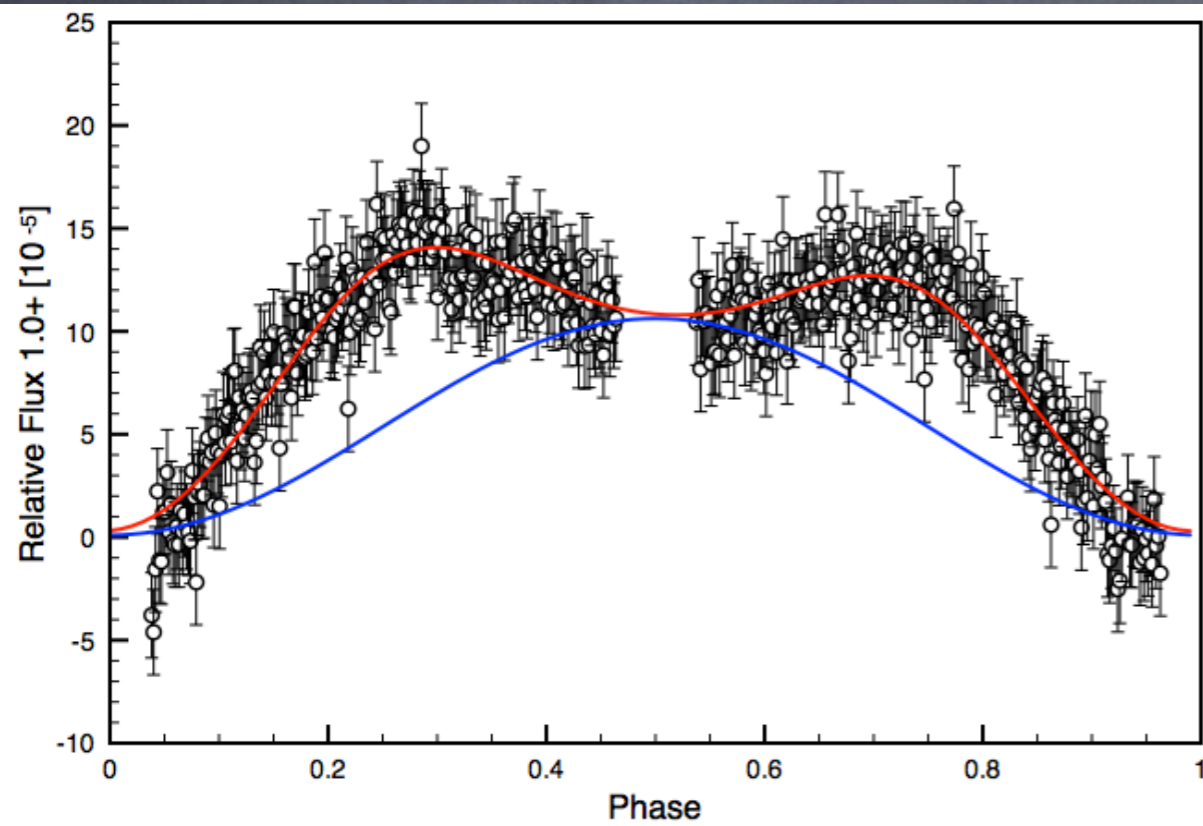


Non-transiting exoplanets & KOI-13b spectra

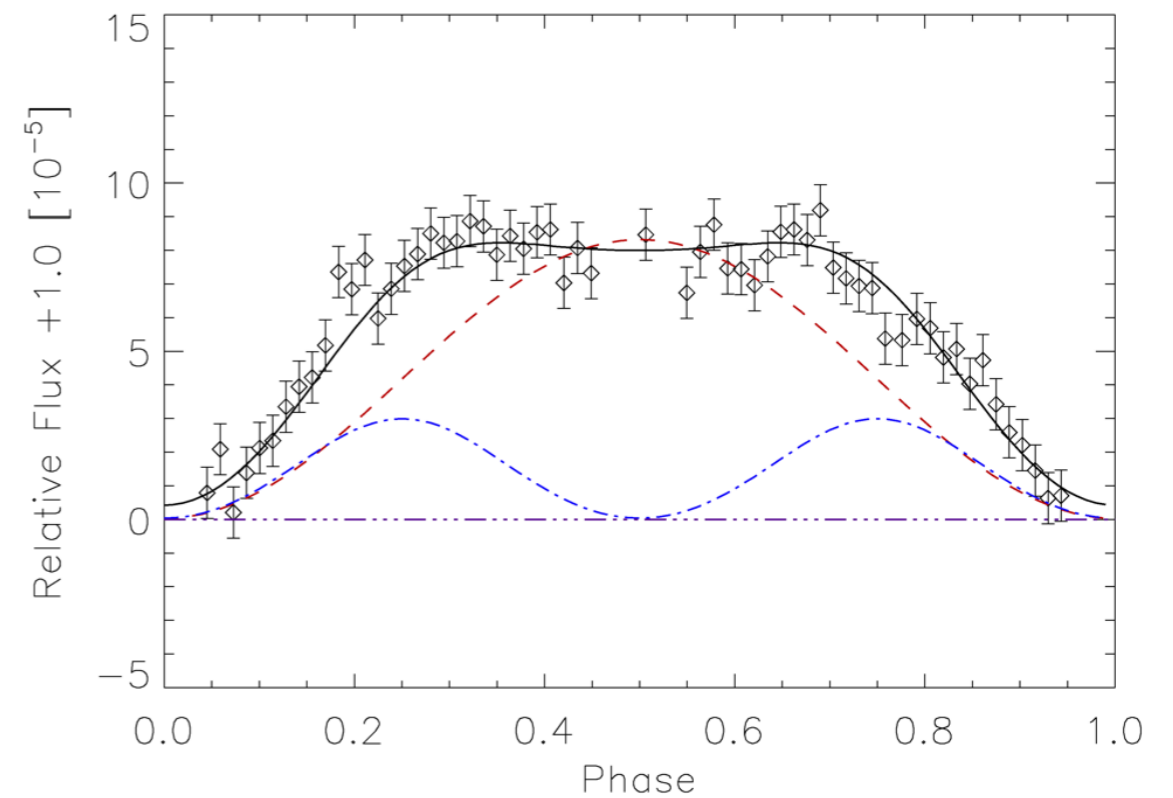
November 2011 - Madrid RoPACS

Dimitris Mislis & Simon Hodgkin
IoA

Ellipsoidal variations



KOI-13b



HAT-P-7b

Non-Transiting planets

55,000 stars

↓
Detection
Algorithm

44 candidates

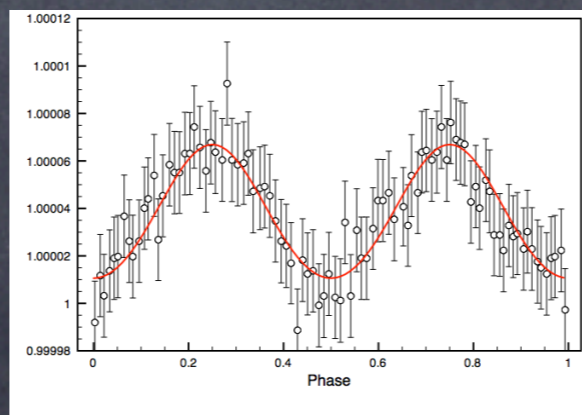
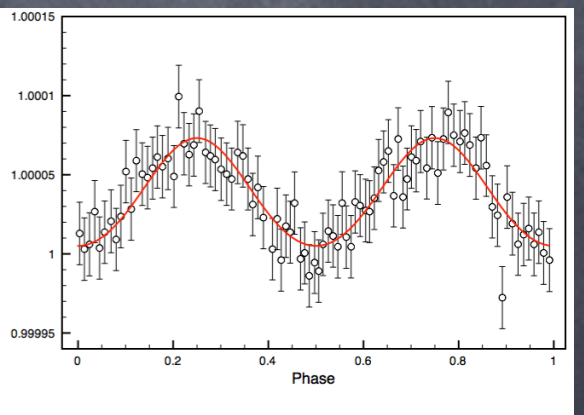
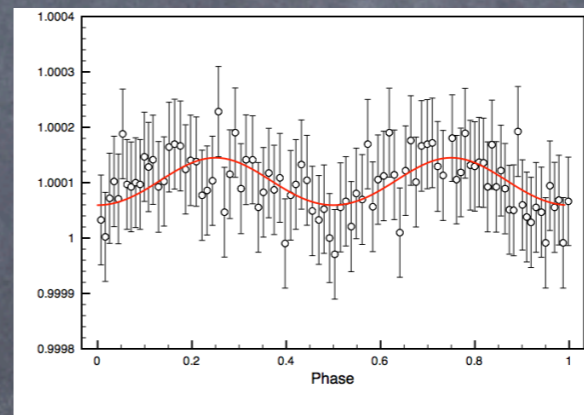
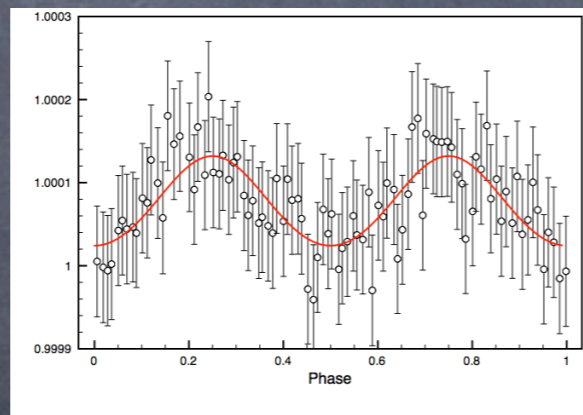
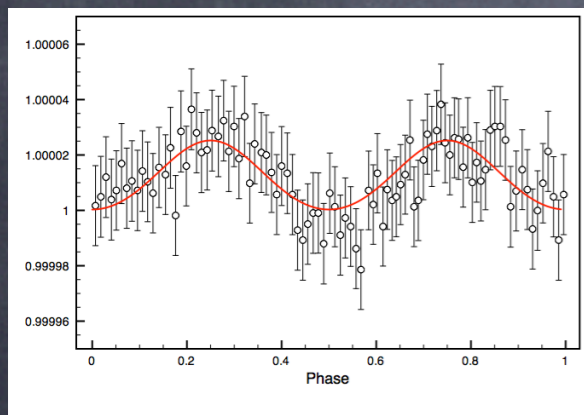
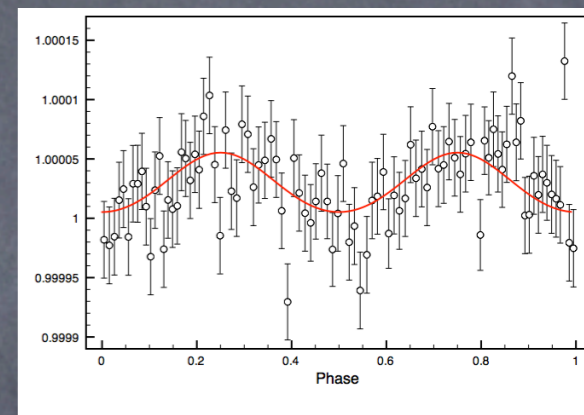
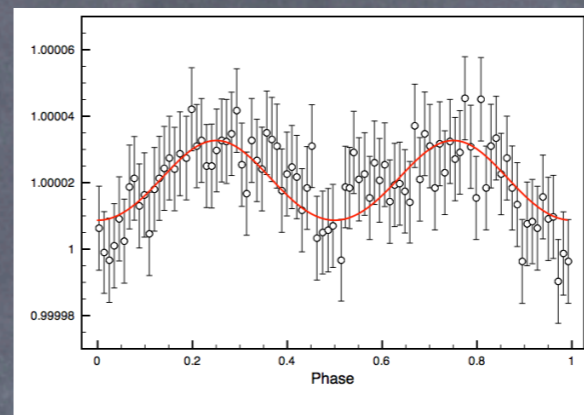
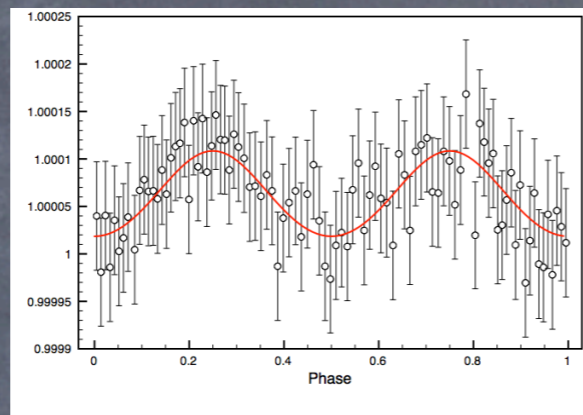
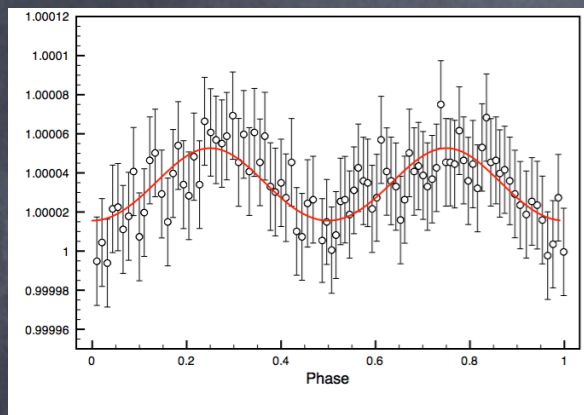
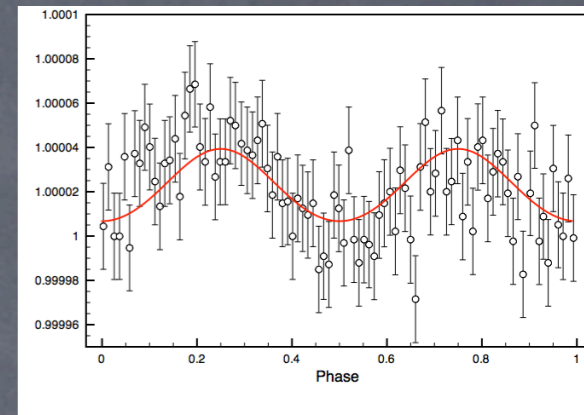
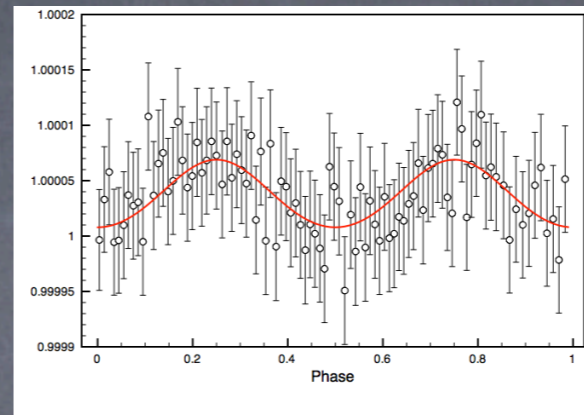
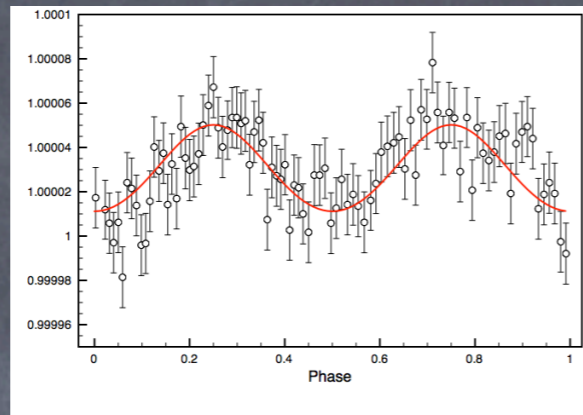
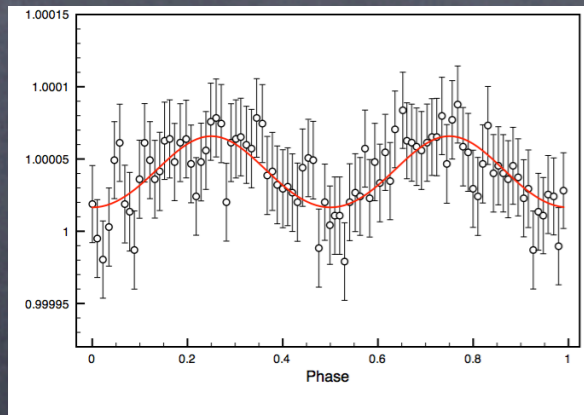
Thresholds

Mag < 13.0

Period < 10.0 d

small amplitude

(< 50.0 Mj)



Non-Transiting planets

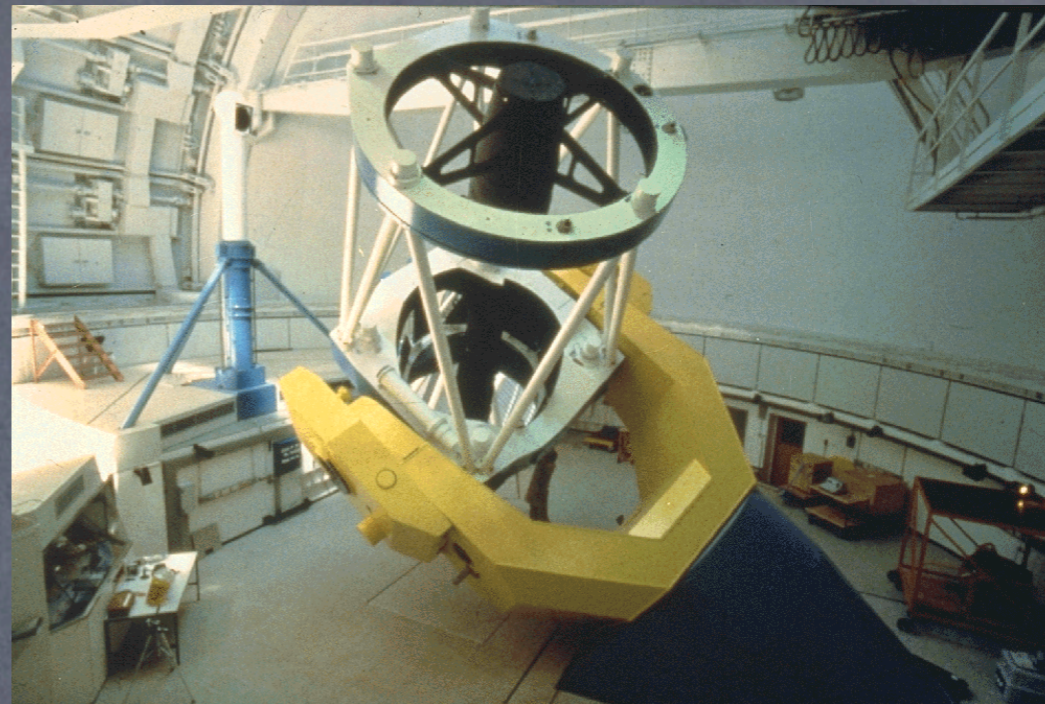
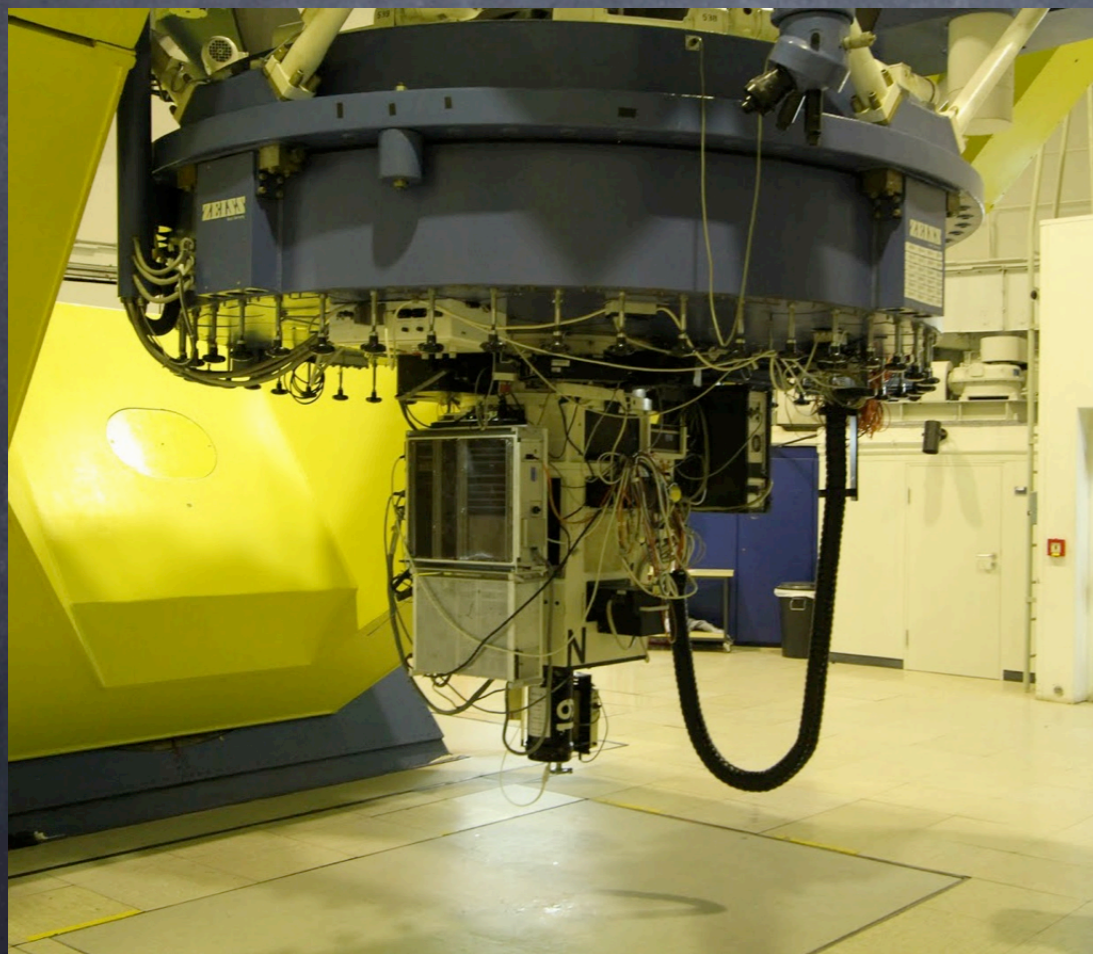
Kplr	Mp [Mj]	Ms [Mo]	Tef	Mag	Period
1292798	13.7	1.66	8327	10.5	2.36
1718222	17.9	1.77	8258	9.2	3.17
2837133	8.1	1.13	5143	11.5	1.67
3123191	6.2	1.26	6226	9.8	2.02
3326304	19.9	1.90	8716	10.0	3.18
3337621	7.1	1.14	6445	12.0	1.05
3848385	5.3	1.68	8638	9.0	2.00
3937717	1.9	1.00	5593	10.8	0.66
4276892	6.0	1.92	8958	9.2	2.81
4568215	17.3	1.46	7943	12.3	1.80
4669577	45.5	1.60	7838	12.6	2.74
4679692	42.6	1.98	8585	10.0	4.08
4833039	11.7	1.80	8892	9.8	2.23

Non-Transiting planets

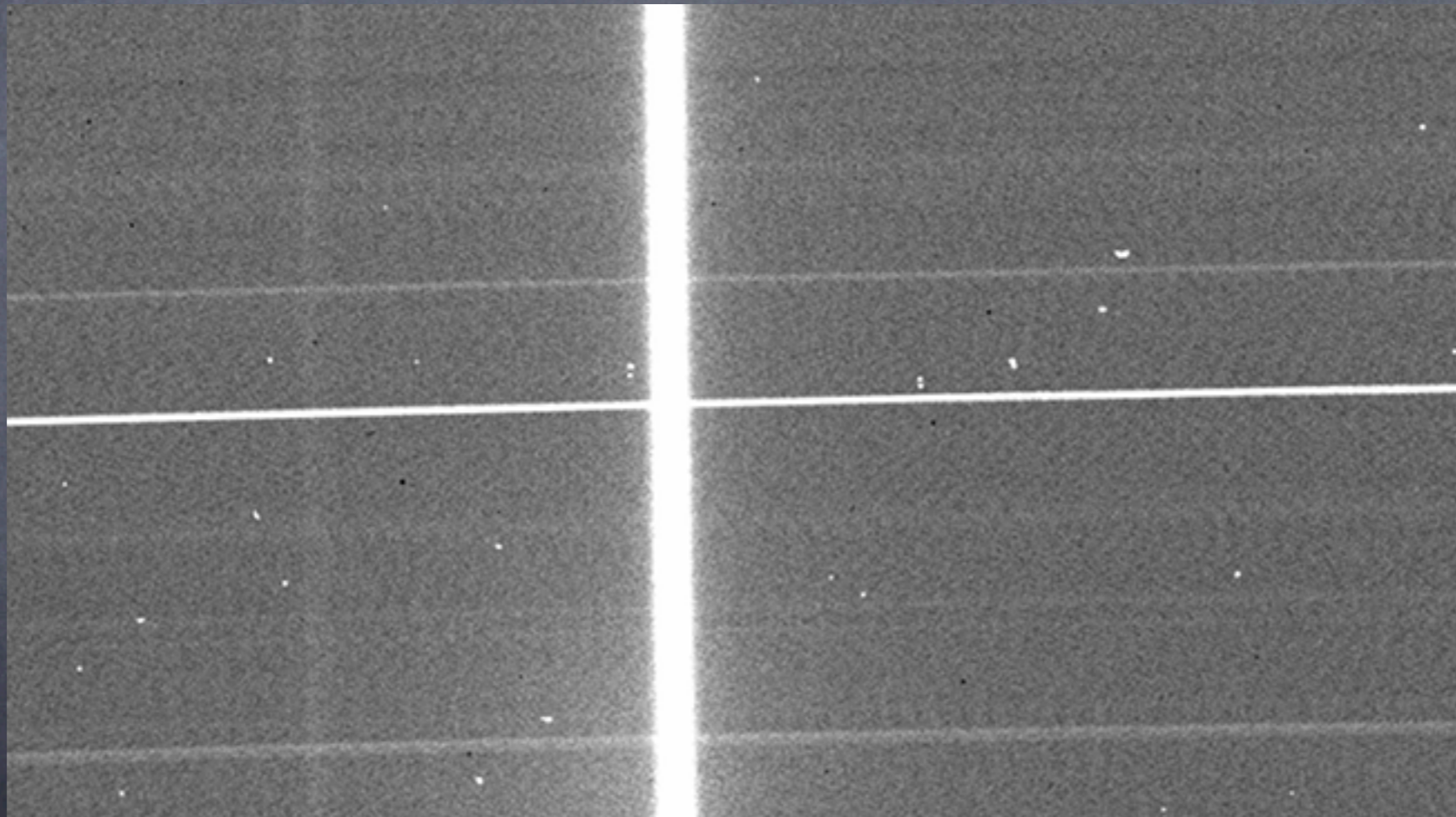
Kplr	Mp [Mj]	Ms [Mo]	Mag	Period	Kv (m/sec)
3123191	6.2	1.26	9.8	2.02	760
3848385	5.3	1.68	9.0	2.00	500
3937717	1.9	1.00	10.8	0.66	410
4276892	6.0	1.92	9.2	2.81	550

KOI-13

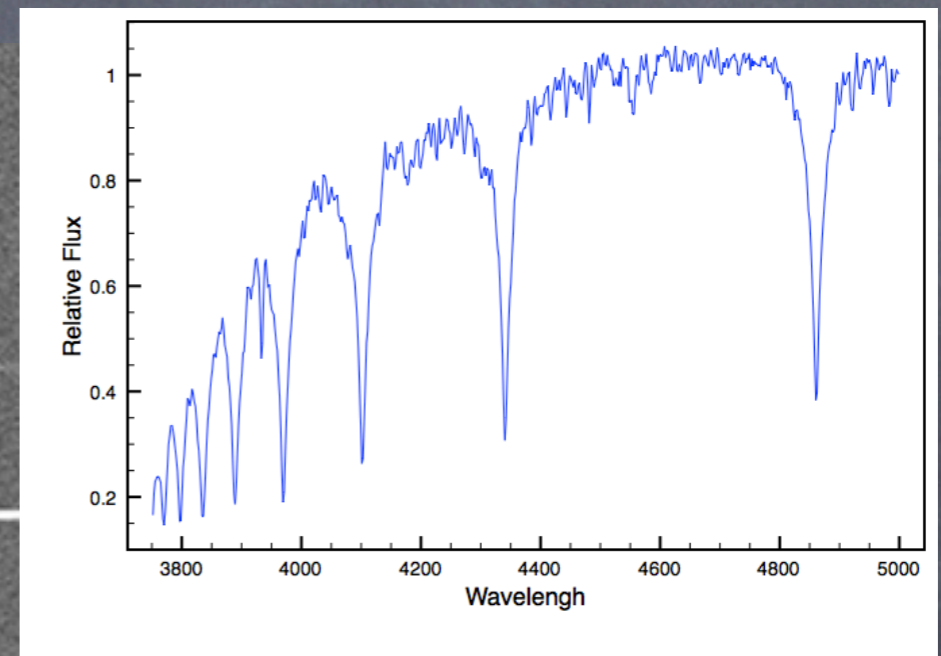
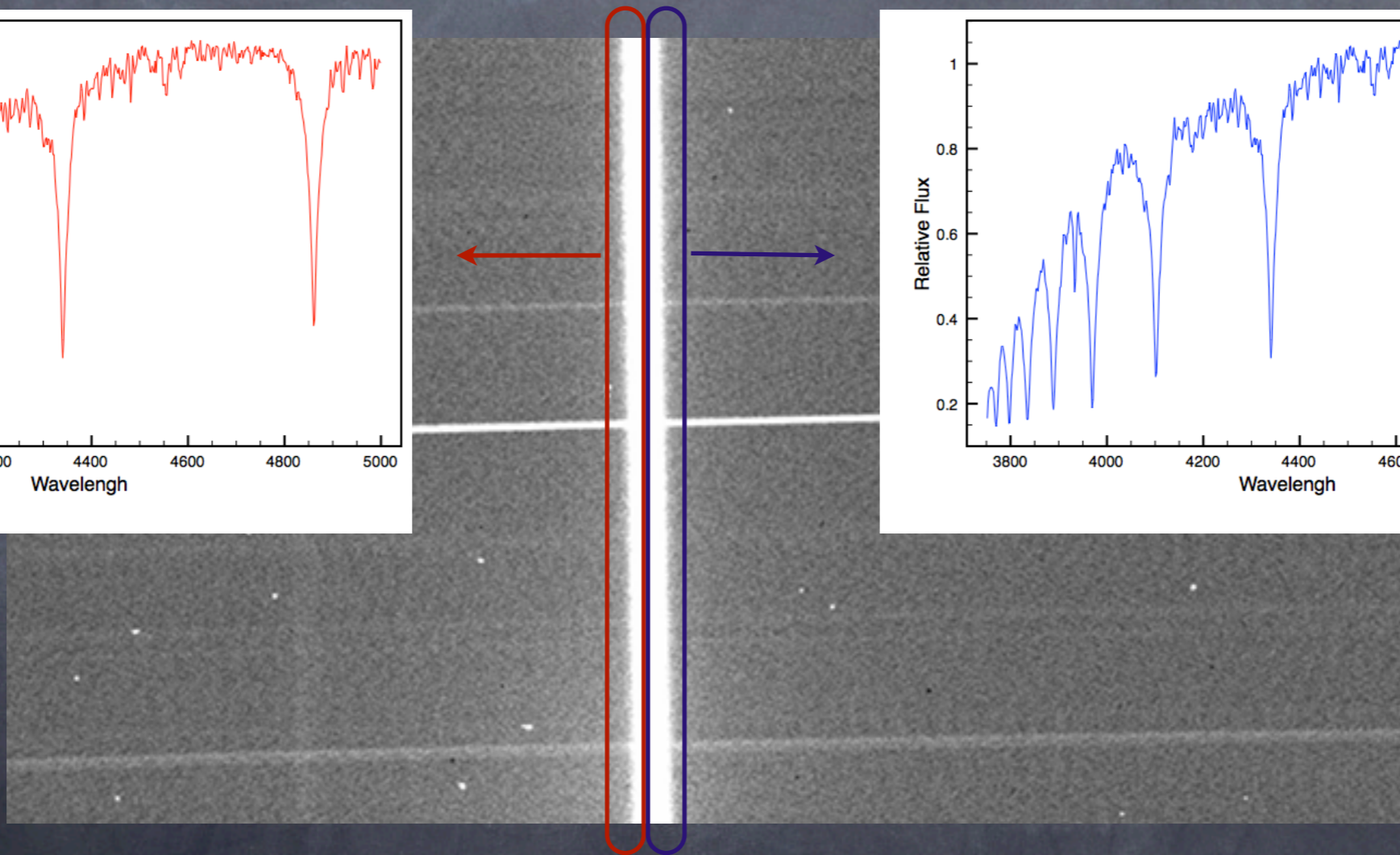
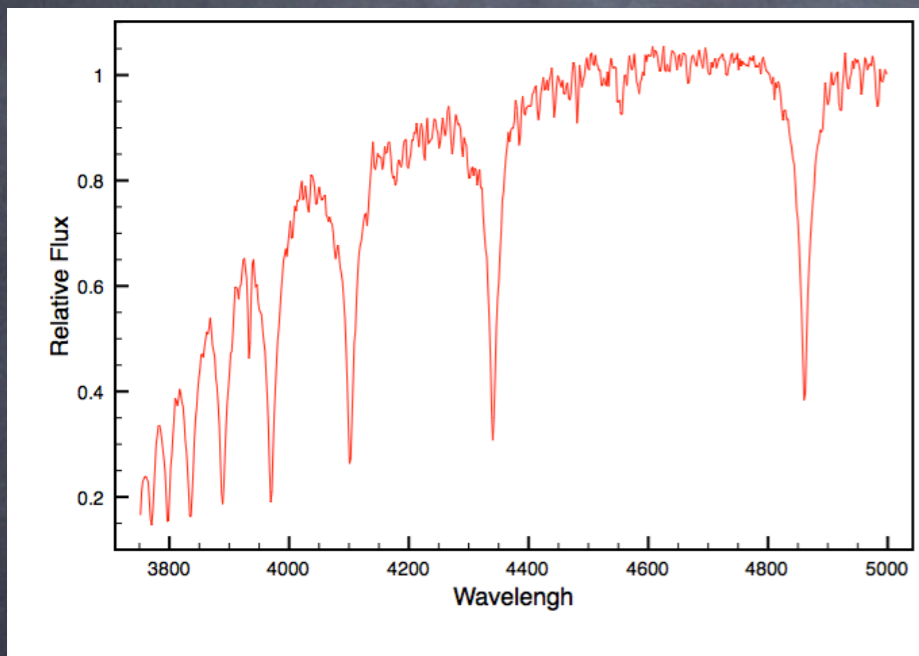
Calar Alto :2 nights
2.2m CAFOS



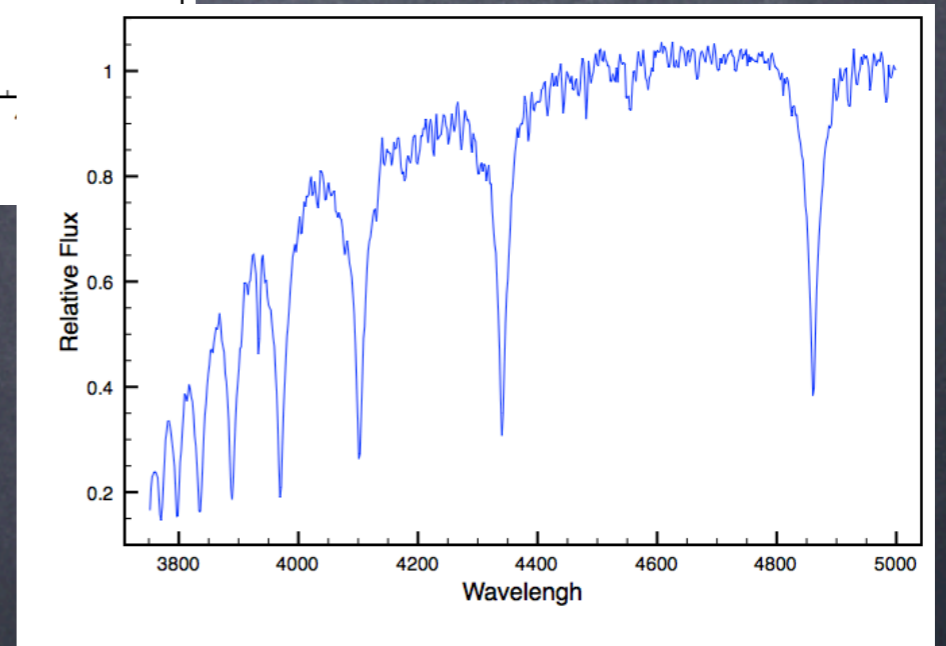
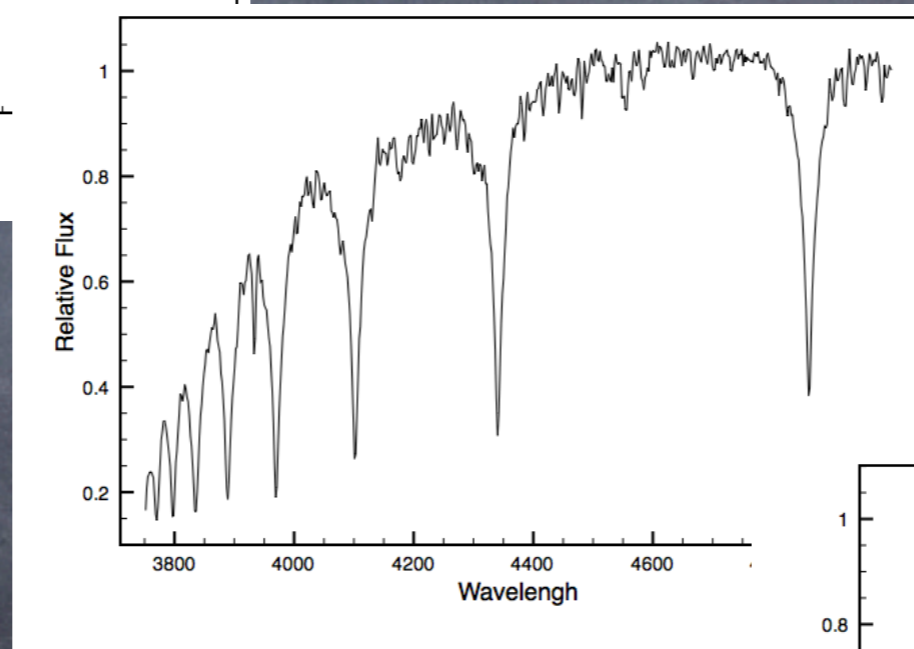
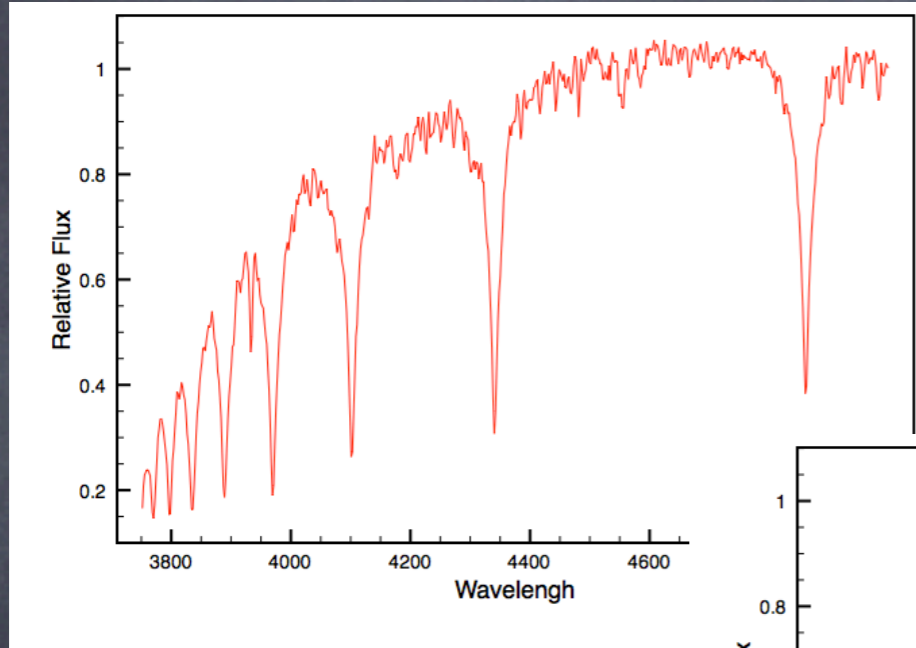
KOI-13



KOI-13

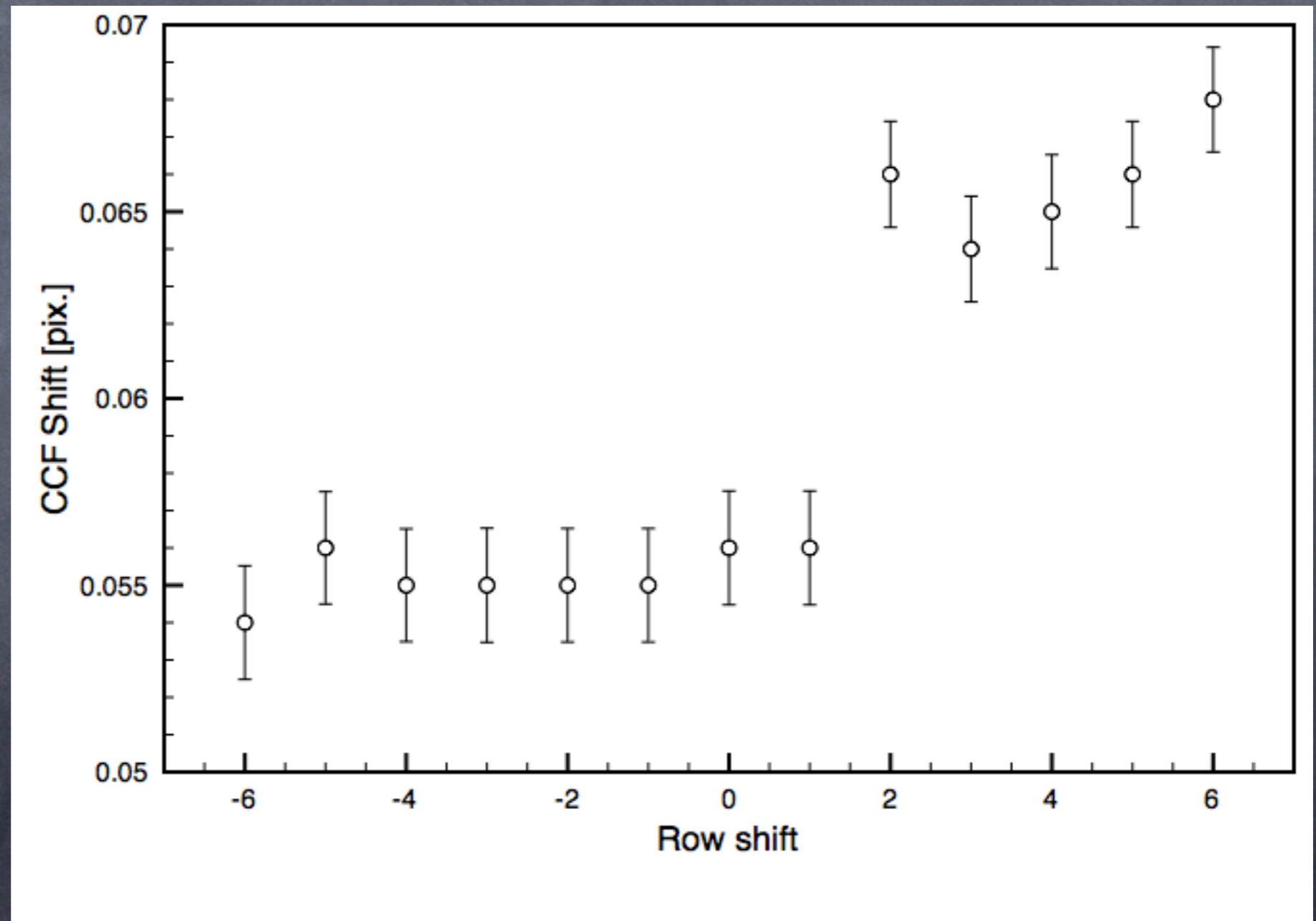


KOI-13



KOI-13

1 epoch
13 spectra



Future work

non-transiting : RV follow-up
(help - Calar Alto / IAC ?)

KOI-13b : Mass determination
(RV)

Thank you