

KIC 005115637

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
005115637-01	OBS	No	1.388152	131.967170	22.9	2.750	8.3	4.1	1.75	7286	0.97	10212.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005115637-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

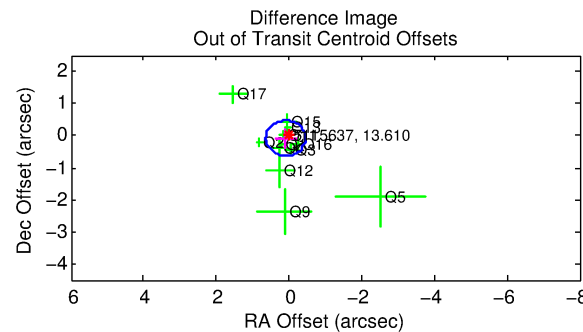
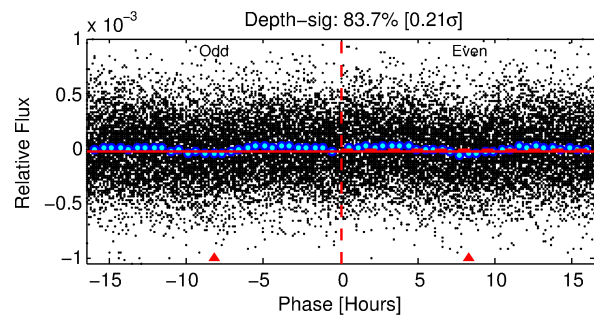
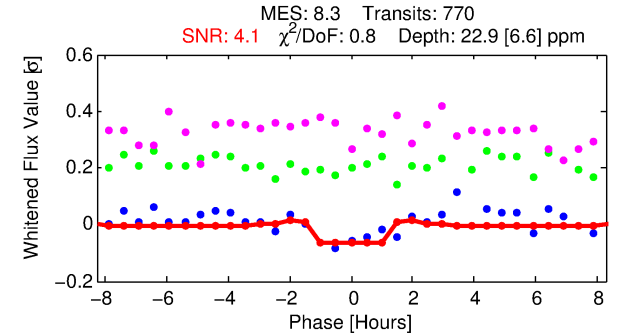
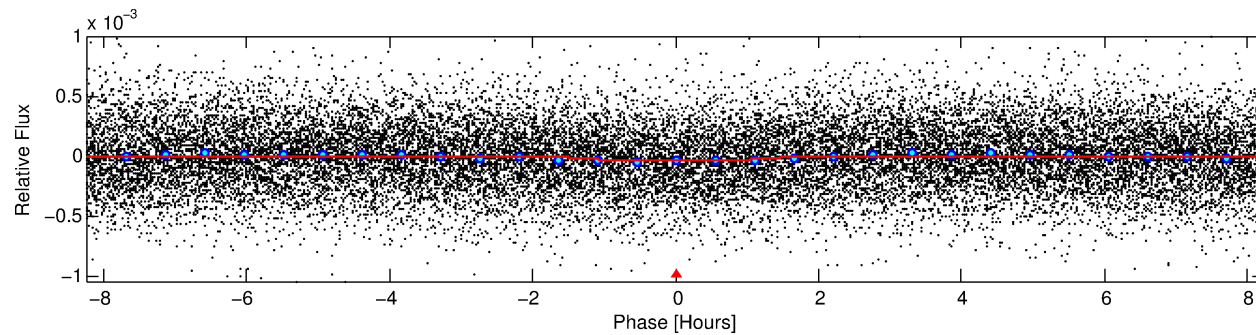
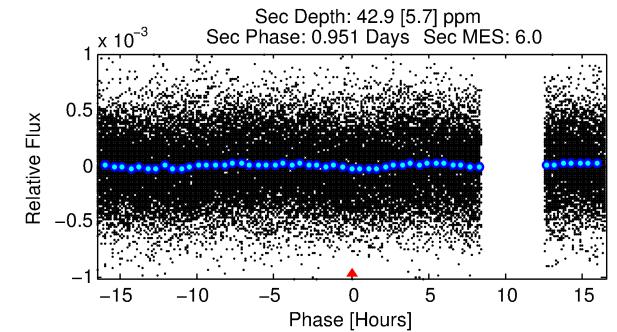
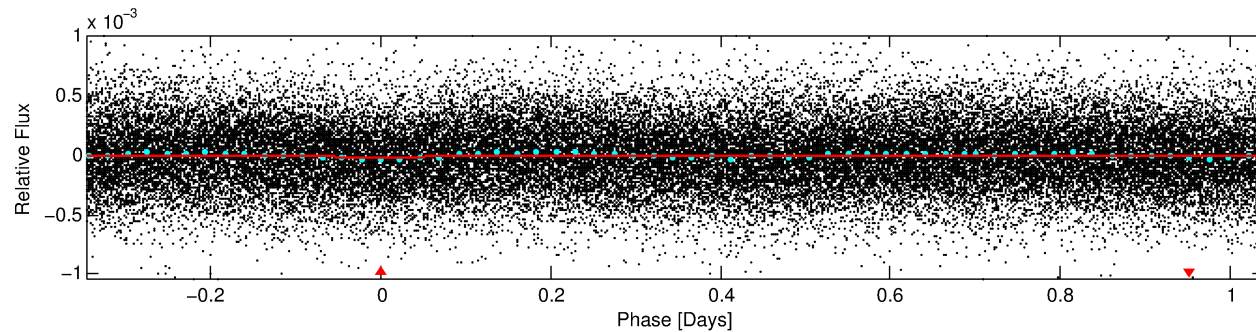
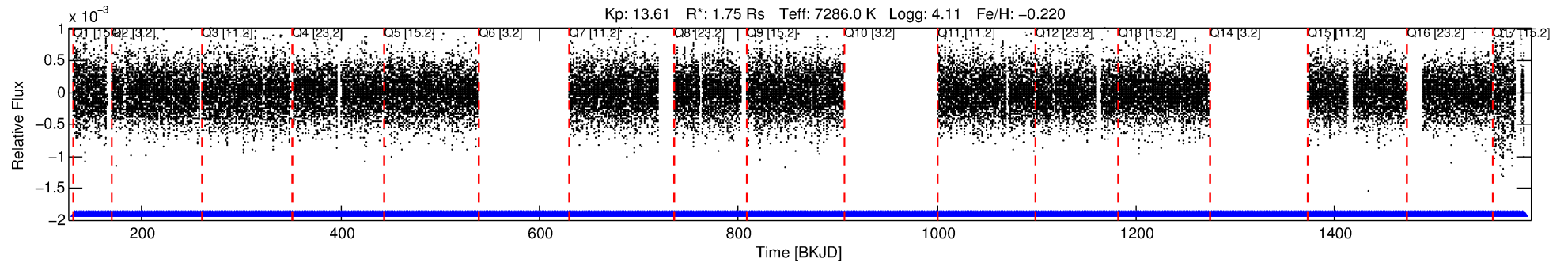
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005115637-01

No Significant Match Found

DV One-Page Summary

KIC: 5115637 Candidate: 1 of 1 Period: 1.388 d



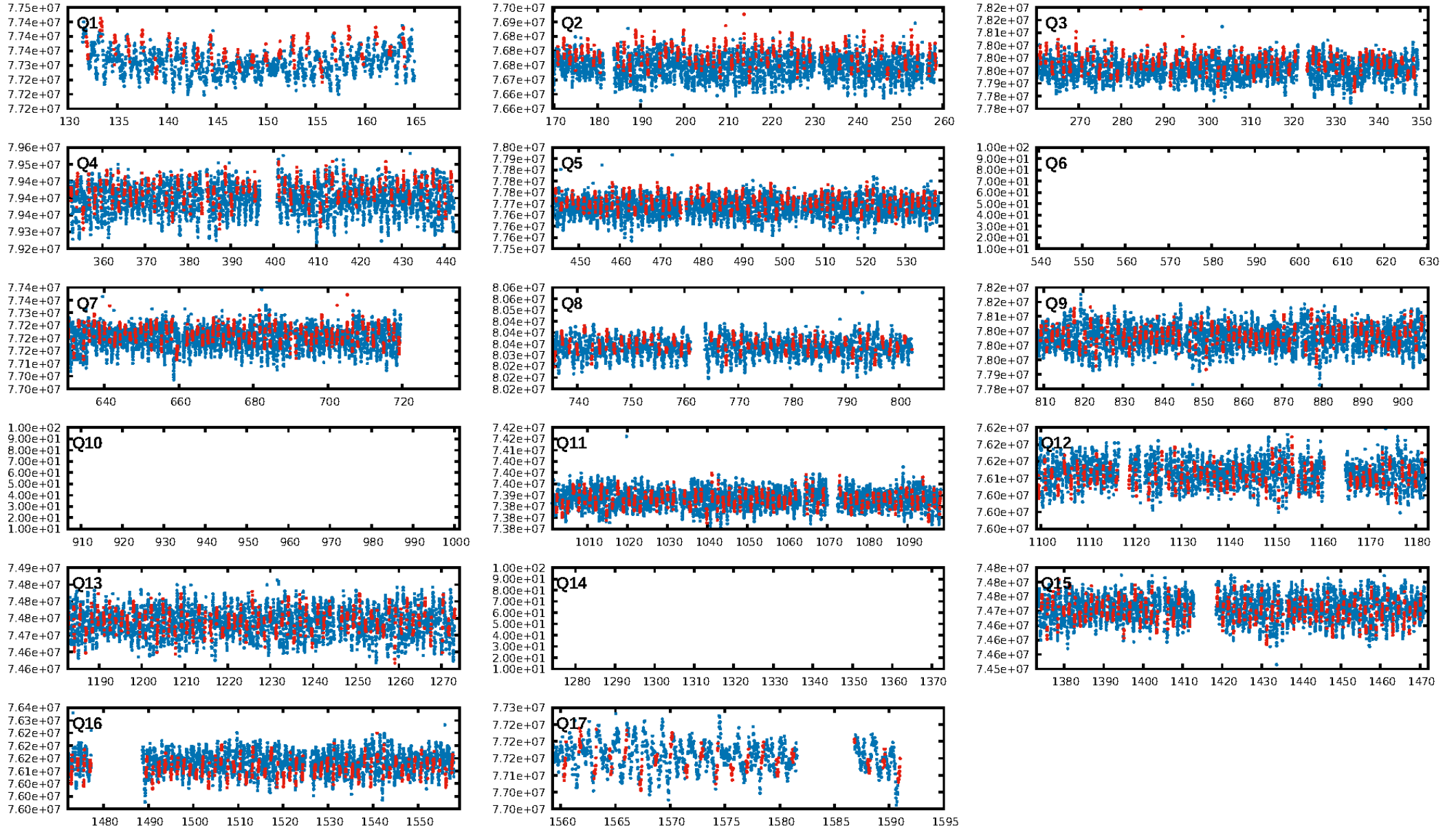
DV Fit Results:

Period = 1.38815 [0.00003] d
Epoch = 131.9672 [0.0057] BKJD
Rp/R* = 0.0051 [0.0024]
a/R* = 2.02 [4.46]
b = 0.89 [0.68]
Seff = 10212.21 [3971.45]
Teff = 2563 [249] K
Rp = 0.97 [0.55] Re
a = 0.0276 [0.0067] AU
Ag = 19.16 [19.51] [0.93σ]
Teffp = 8291 [2035] K [2.79σ]

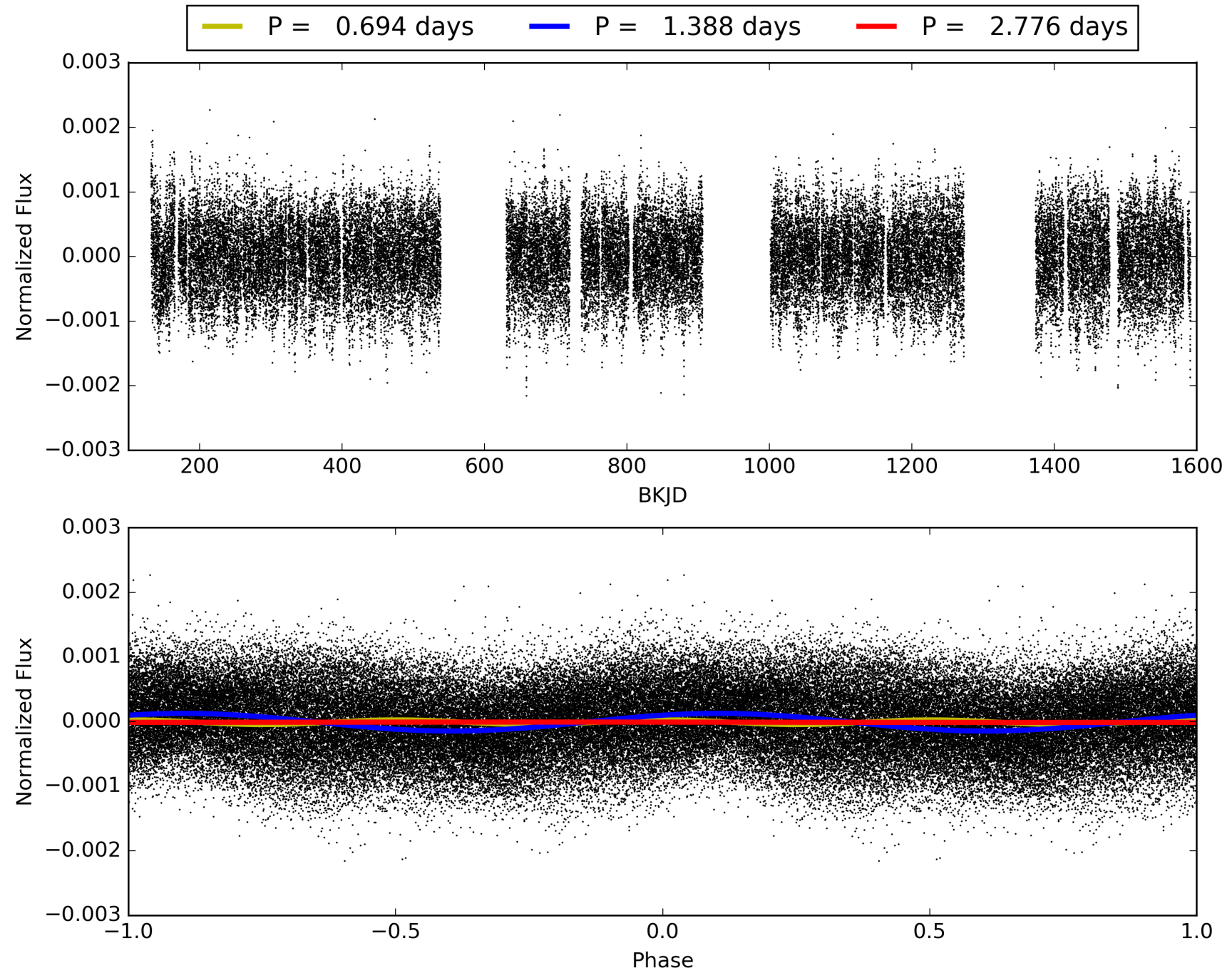
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.29e-15
RollingBand-fgt: 1.00 [727/727]
GhostDiagnostic-chr: -0.8994
Centroid-sig: 73.2%
Centroid-so: 0.845 arcsec [0.48σ]
OotOffset-rm: 0.128 arcsec [0.69σ]
KicOffset-rm: 0.328 arcsec [1.03σ]
OotOffset-st: 1/3/3/5 [12]
KicOffset-st: 1/3/3/5 [12]
DiffImageQuality-fgm: 0.50 [6/12]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 005115637-01, PDC Light Curves

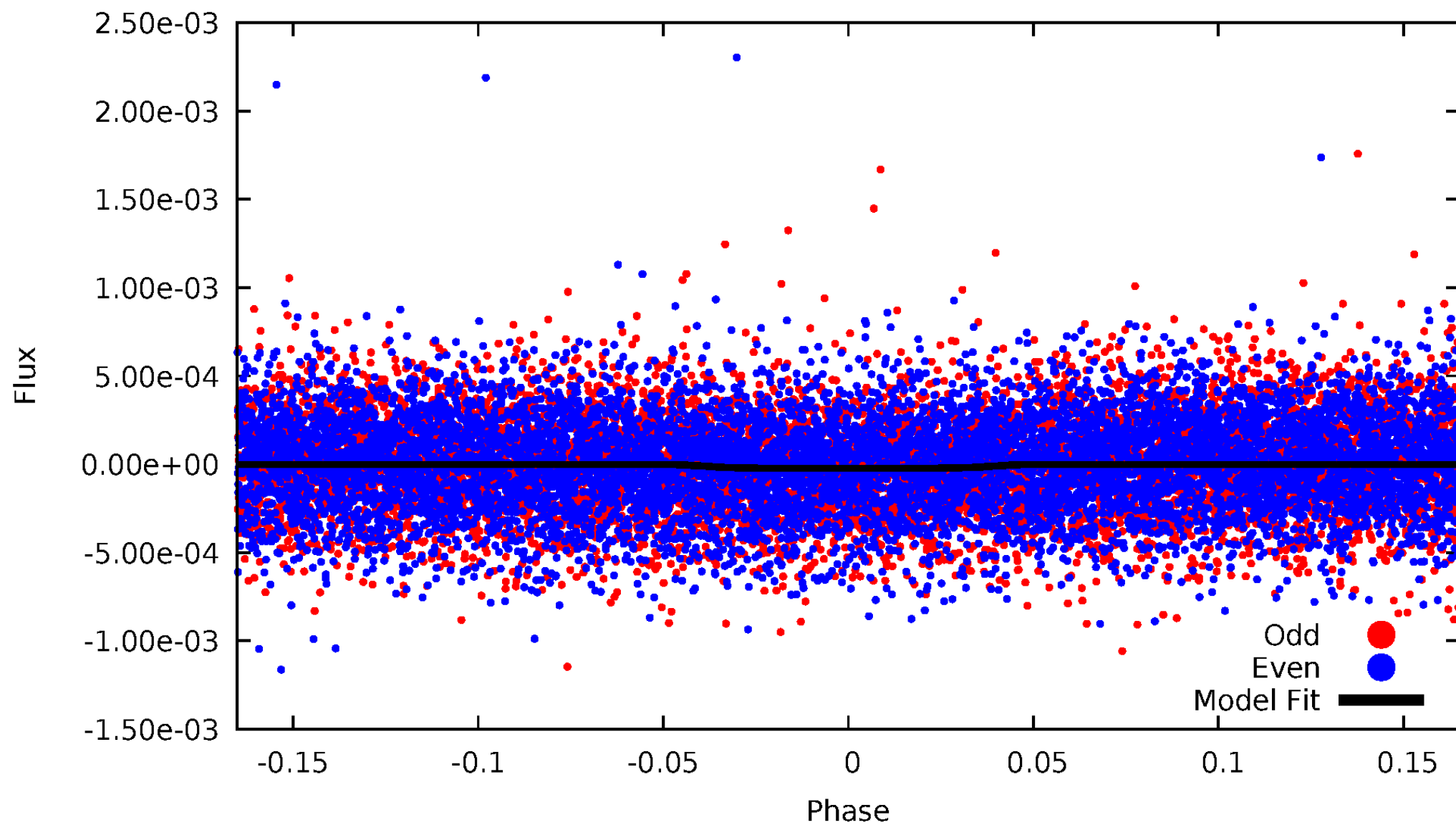


TCE 005115637-01



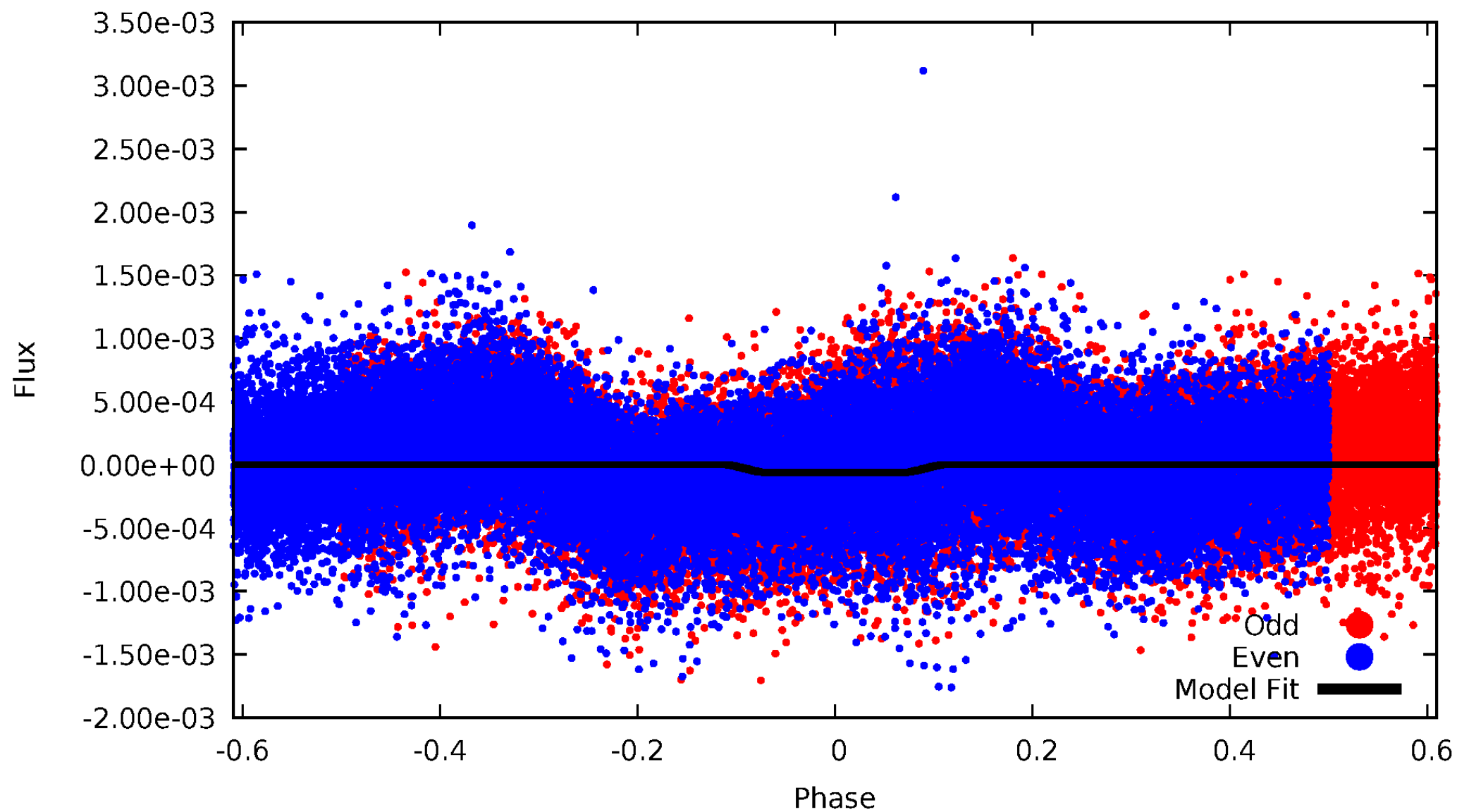
DV Odd/Even

TCE 005115637-01

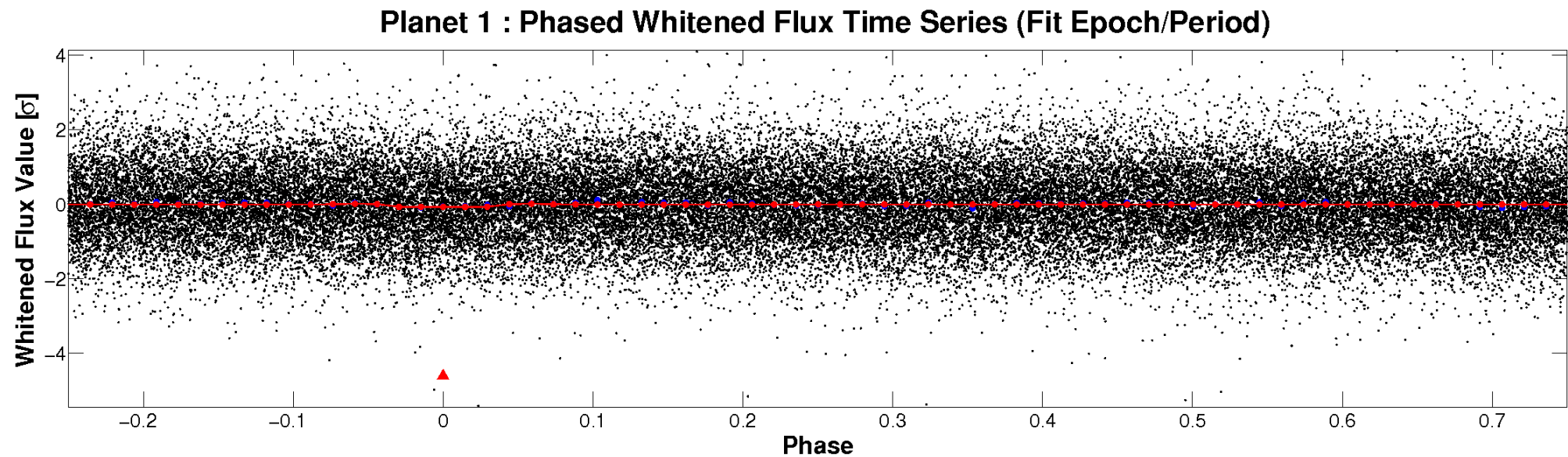
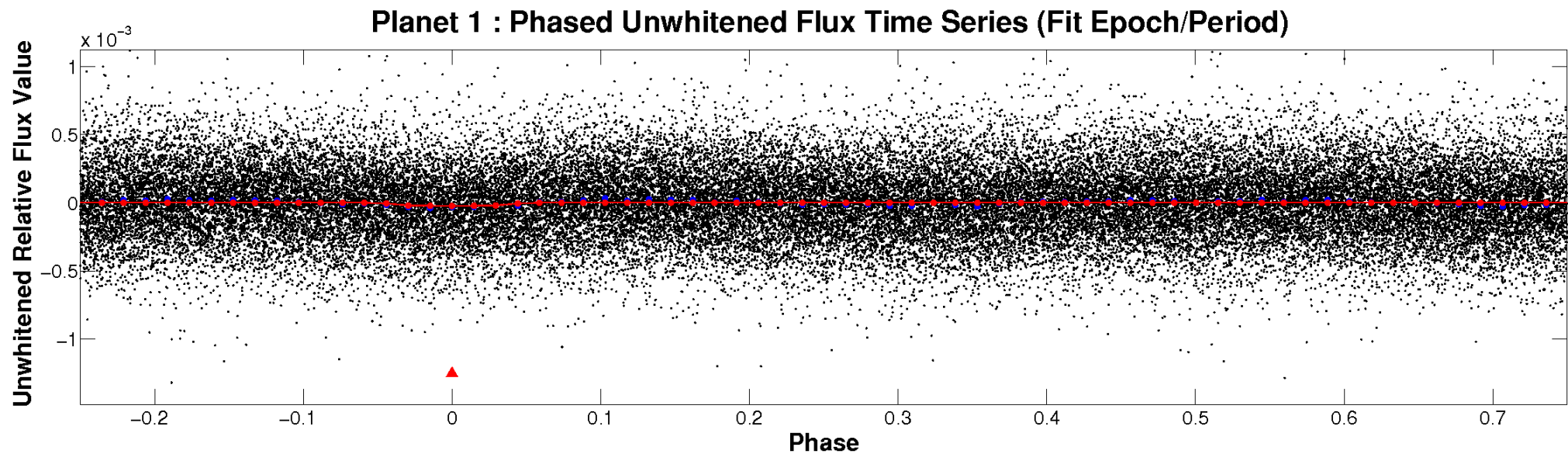


ALT Odd/Even

TCE 005115637-01

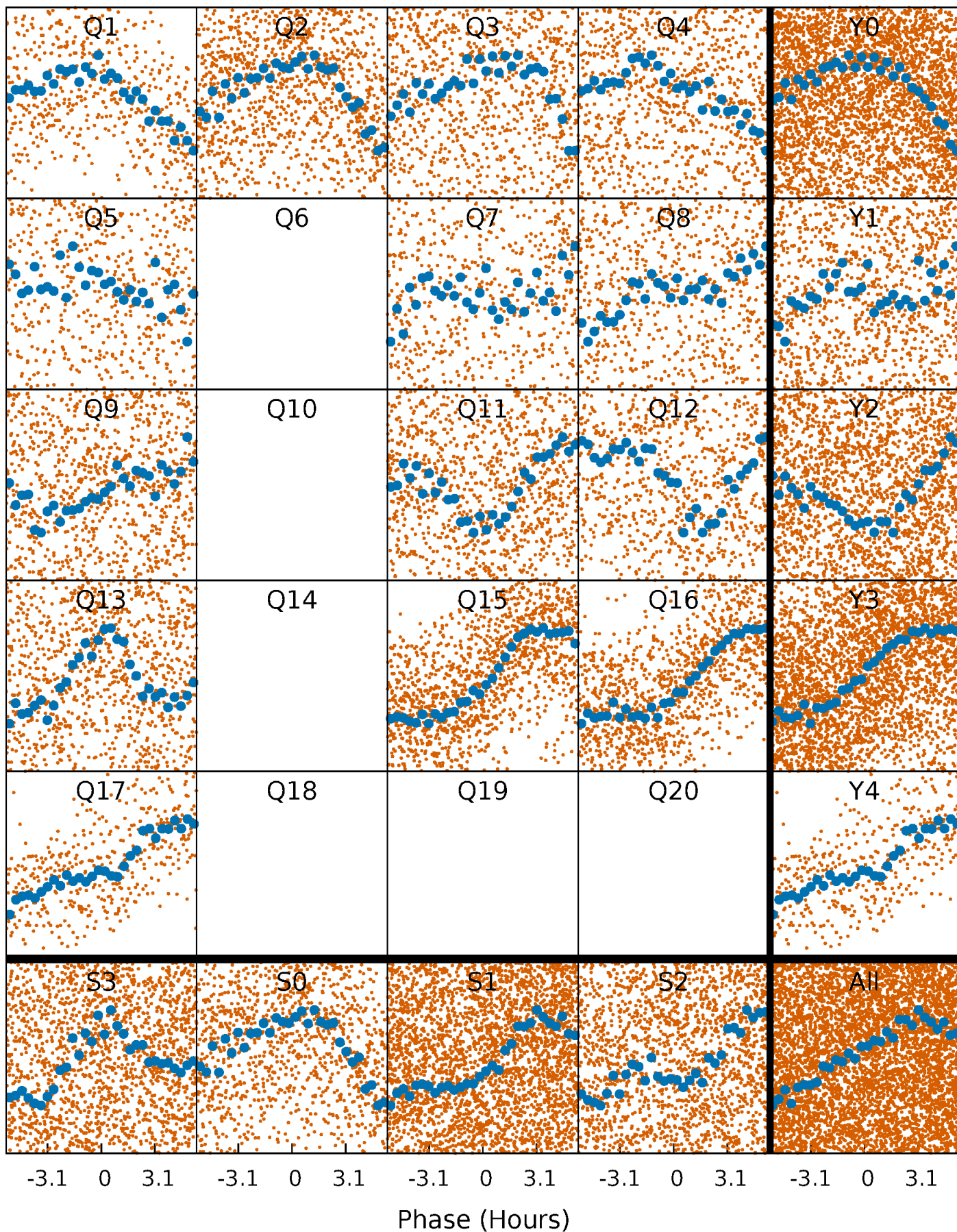


Non-Whitened Vs. Whitened Light Curve



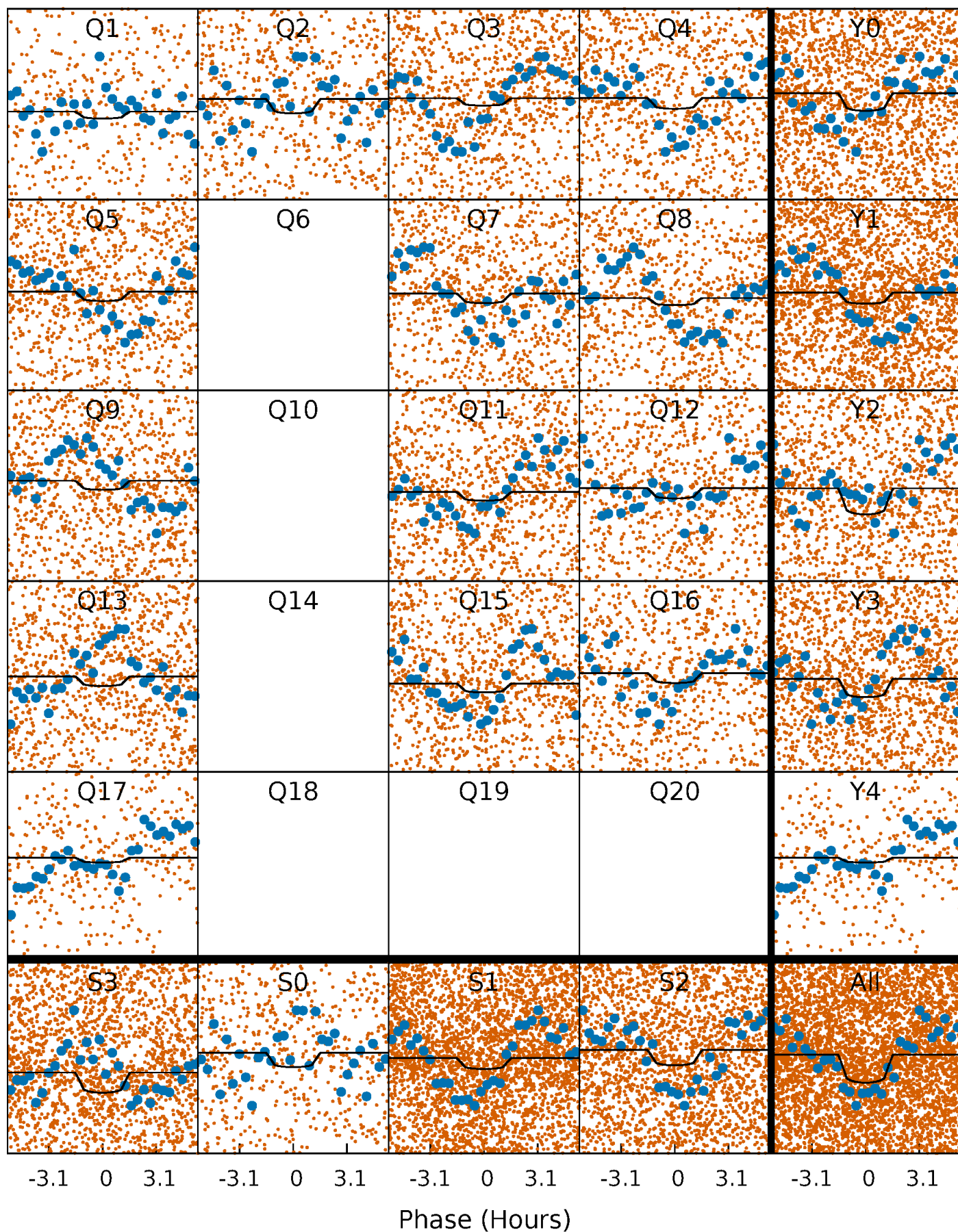
PDC Quarter-Phased Transit Curves

TCE 005115637-01 P= 1.388152 Days $T_0=131.967171$ (BKJD)



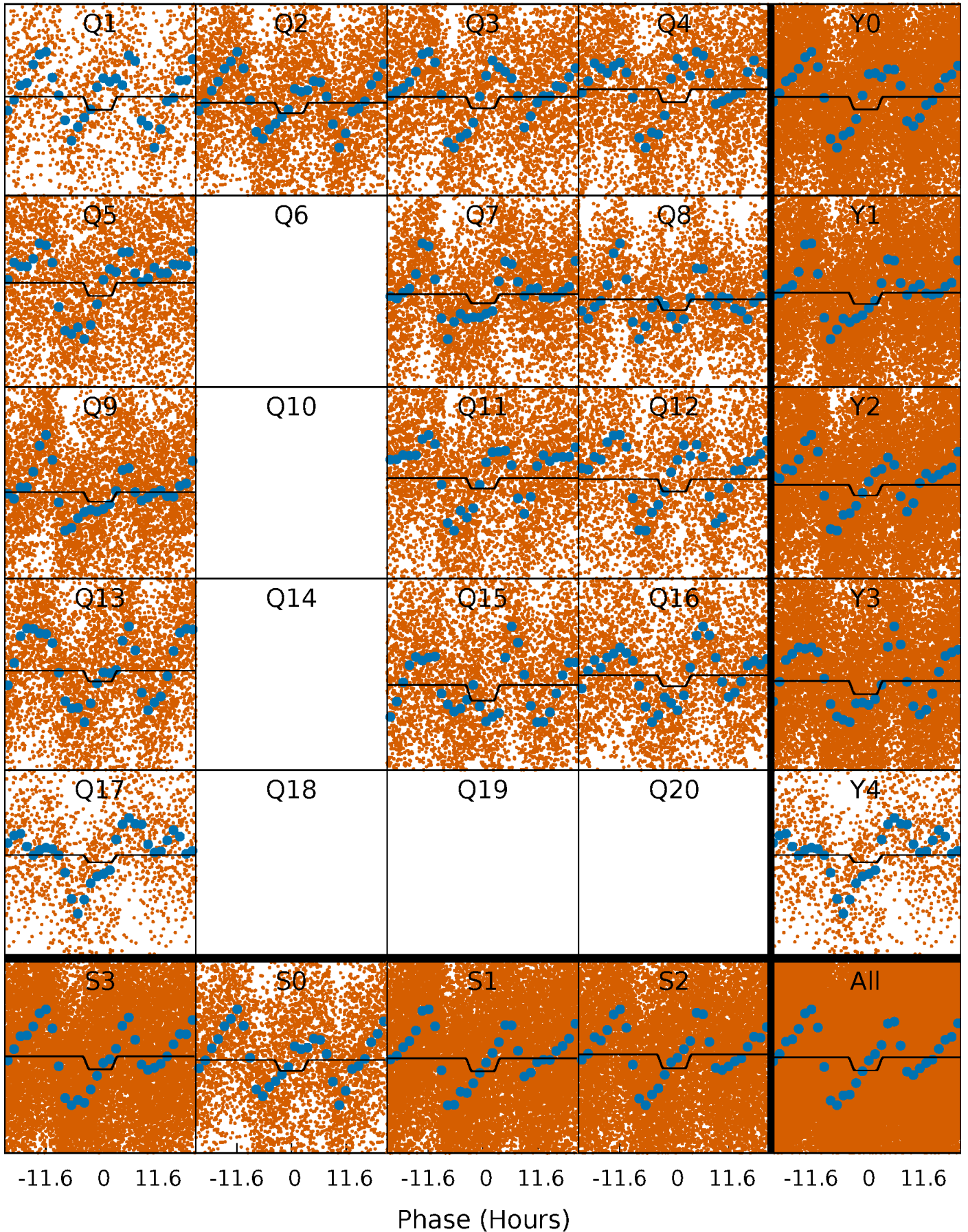
DV Quarter-Phased Transit Curves

TCE 005115637-01 P= 1.388152 Days $T_0=131.967171$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

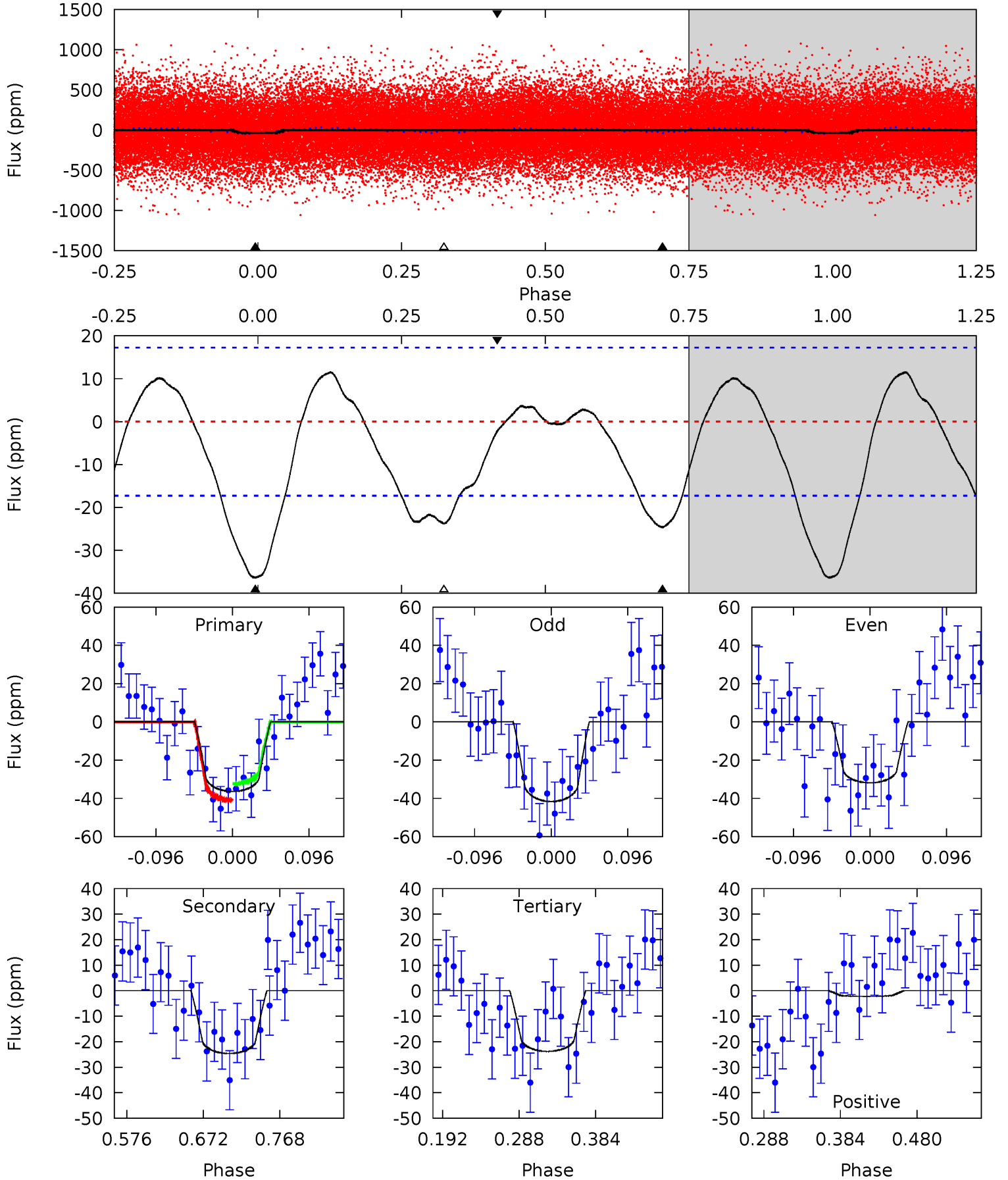
TCE 005115637-01 P= 1.388981 Days $T_0=132.449796$ (BKJD)



DV Model-Shift Uniqueness Test

005115637-01, P = 1.388152 Days, E = 130.579019 Days

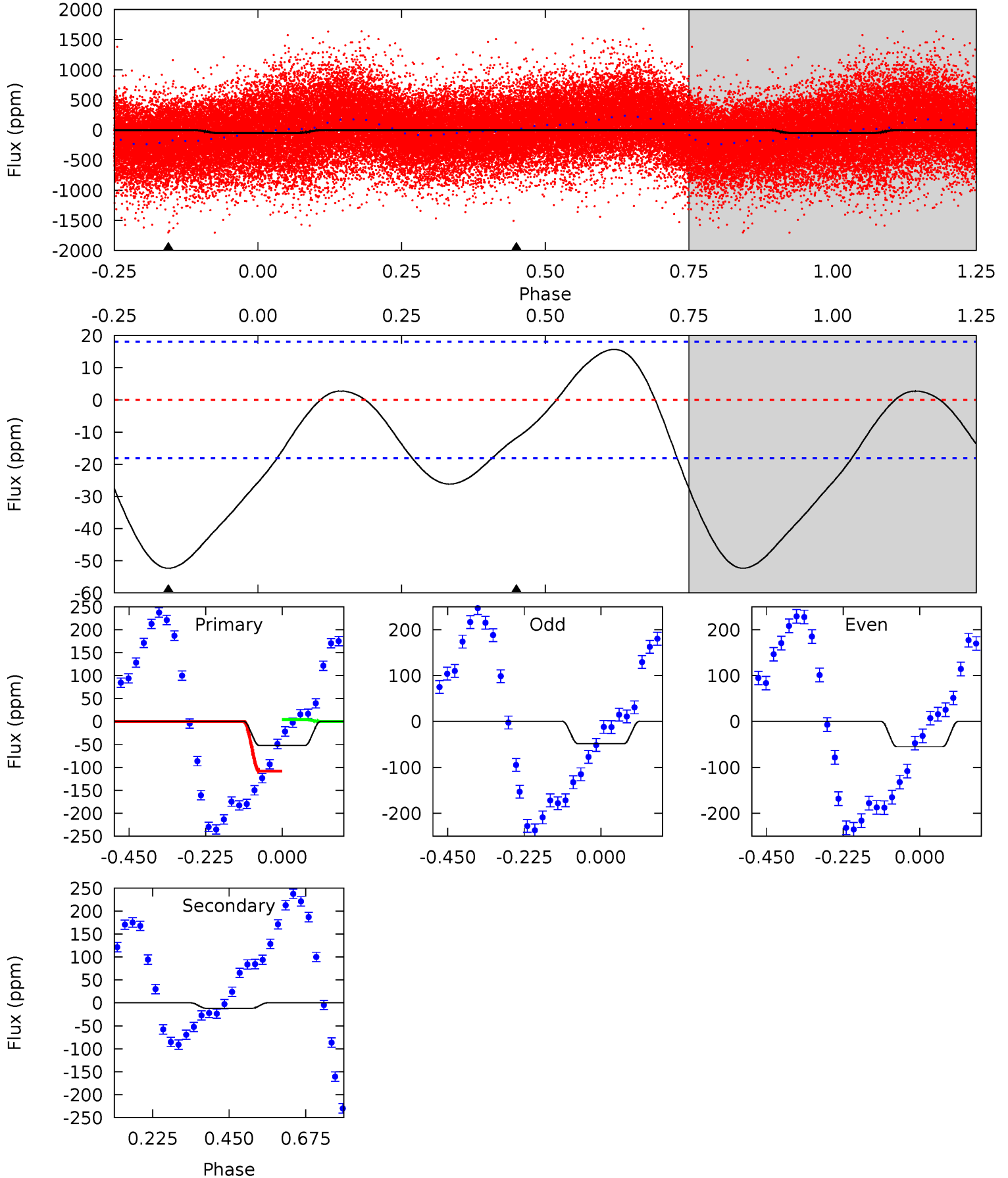
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.64	6.52	6.30	-0.59	4.57	1.66	2.82	3.33	10.2	0.22	7.12	1.30	1.37	0.24	1.16



Alt Model-Shift Uniqueness Test

005115637-01, P = 1.388981 Days, E = 131.060815 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	2.86	0	0	4.39	1.21	0.79	12.7	12.7	2.86	2.86	0.81	1.43	0.23	14.4



Stellar Parameters For KIC 005115637

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7286^{+261}_{-359}	$4.112^{+0.175}_{-0.175}$	$-0.220^{+0.250}_{-0.350}$	$1.755^{+0.528}_{-0.432}$	$1.454^{+0.219}_{-0.241}$	$0.379^{+0.360}_{-0.184}$
	+4%/-5%	+4%/-4%	+114%/-159%	+30%/-25%	+15%/-17%	+95%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005115637-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-25 ± 4	$0.94^{+0.49}_{-0.45}$	3585^{+281}_{-291}	7211^{+3812}_{-1405}	12^{+28}_{-7}
Alt.	-12 ± 4	$1.44^{+0.55}_{-0.44}$	3552^{+293}_{-254}	4732^{+995}_{-730}	$2.226^{+2.806}_{-1.157}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

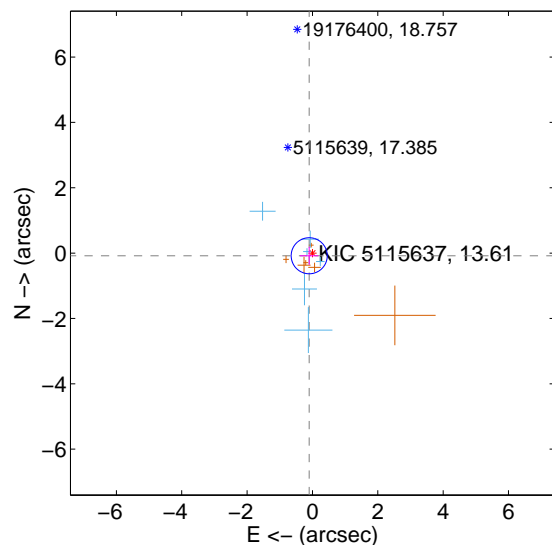
Supplemental centroid analysis for 005115637-01. Kepler magnitude: 13.61. Transit SNR 4.06

There are 6 quarters with good PRF difference image offsets

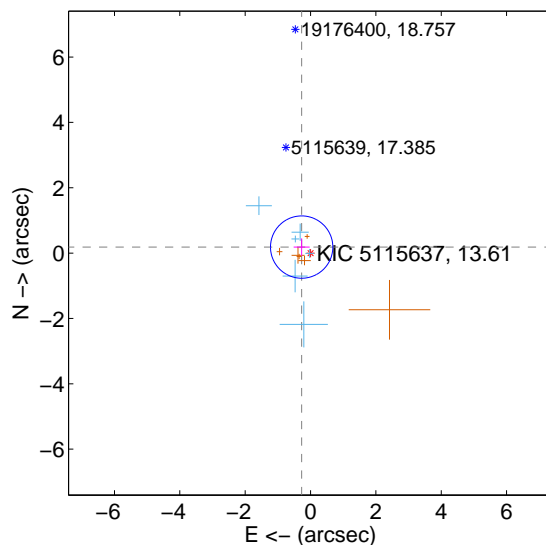
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.128 ± 0.184	0.69	0.099 ± 0.281	-0.081 ± 0.277
PRF-fit source offset from KIC position	0.328 ± 0.318	1.03	0.271 ± 0.246	0.184 ± 0.266
photometric centroid source offset	0.85 ± 1.78	0.48	0.80 ± 1.77	-0.26 ± 1.80

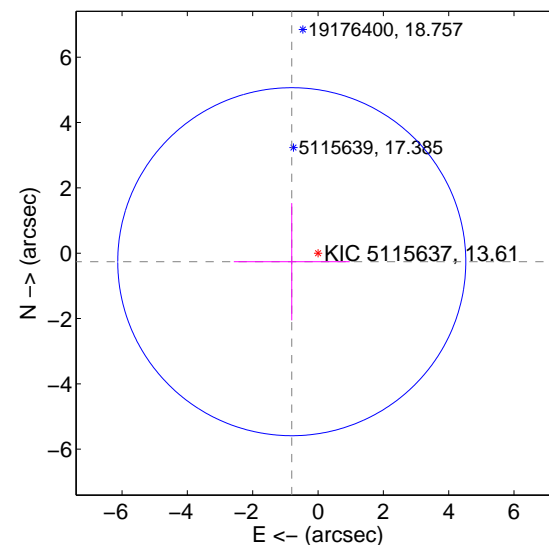
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

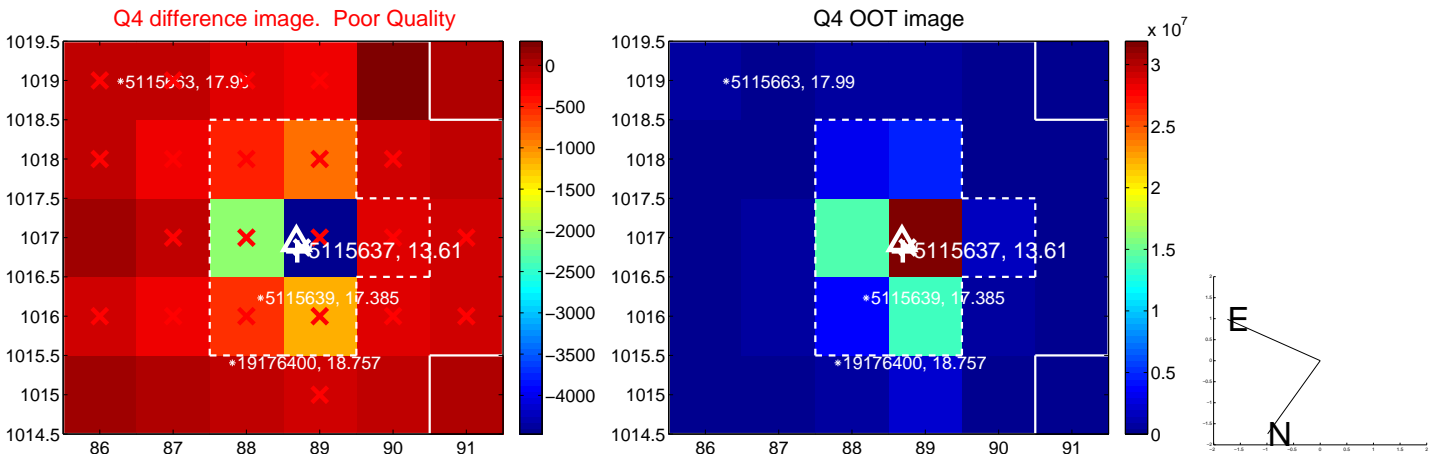
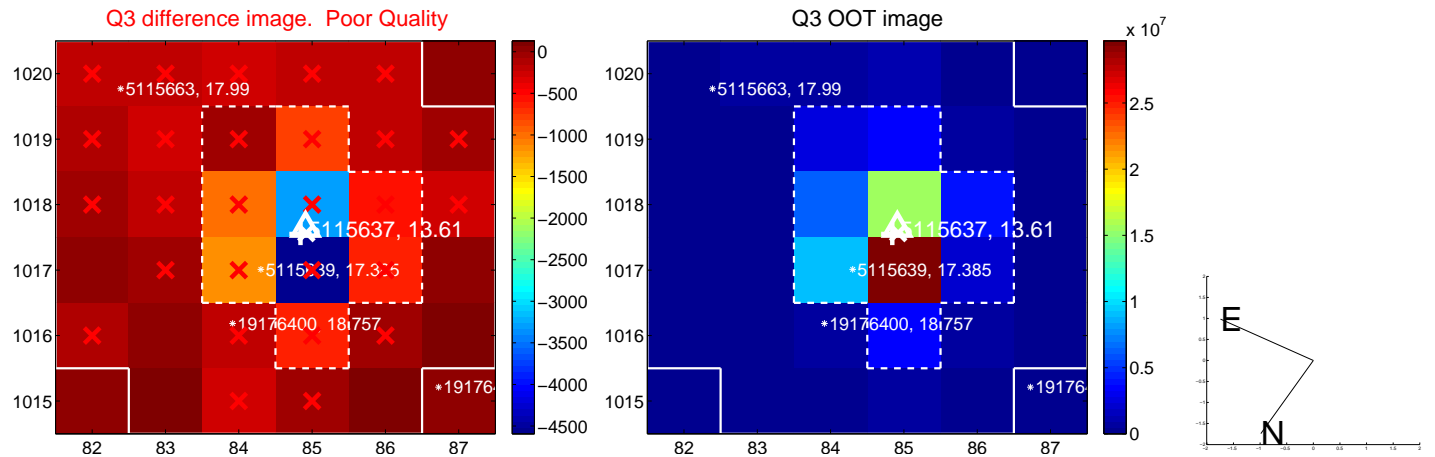
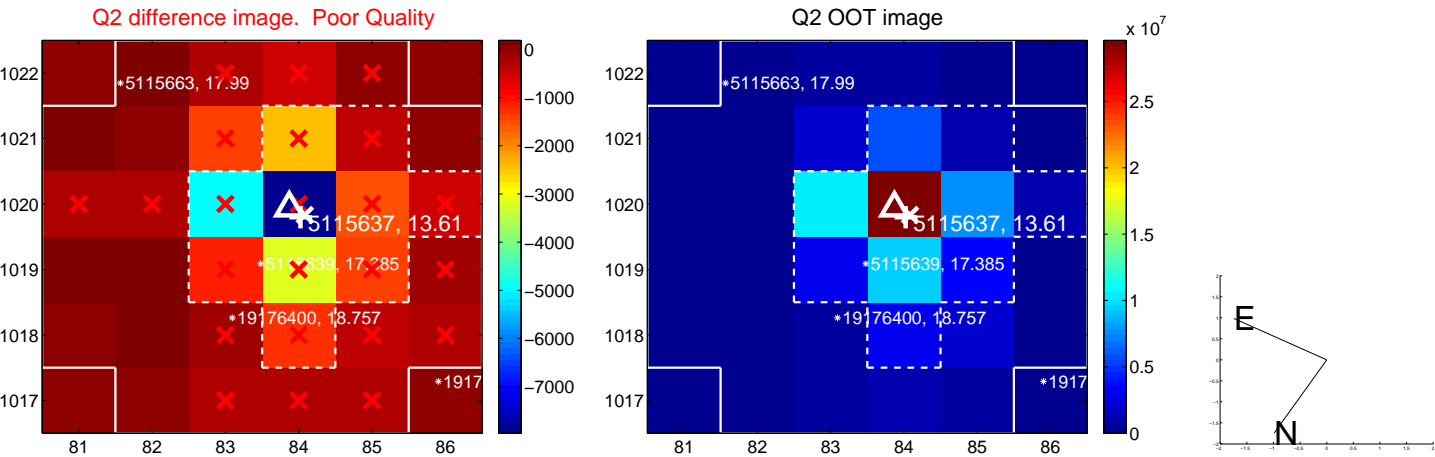
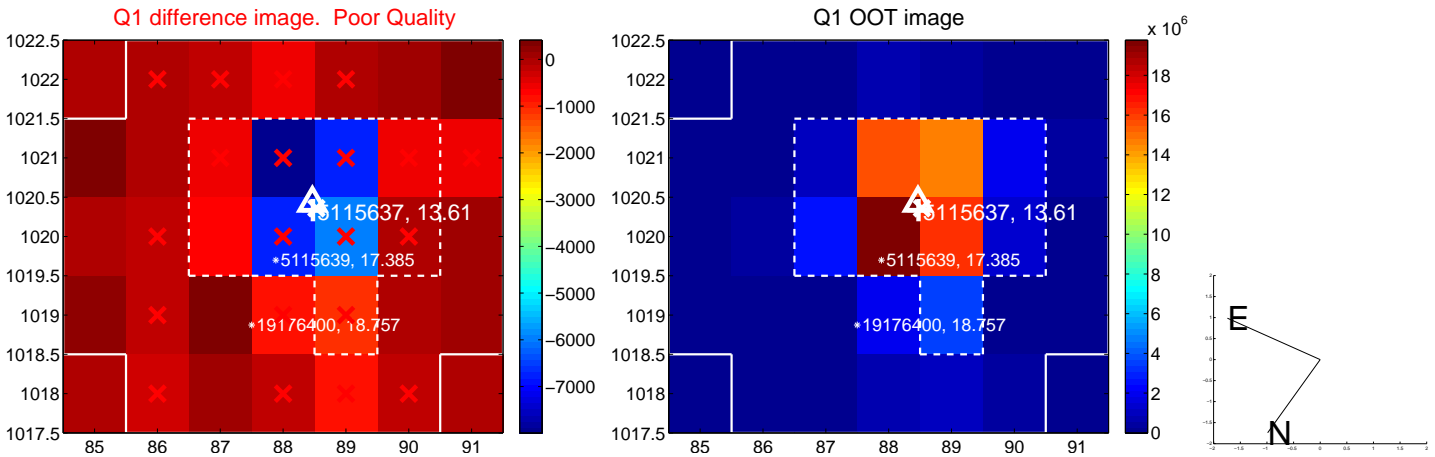


offset from photometric centroids

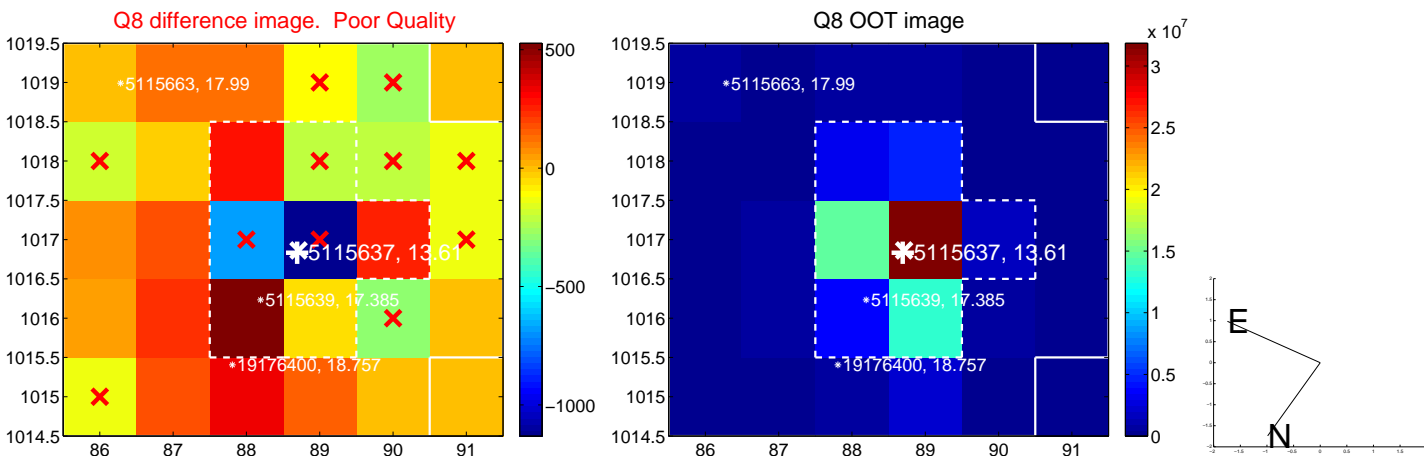
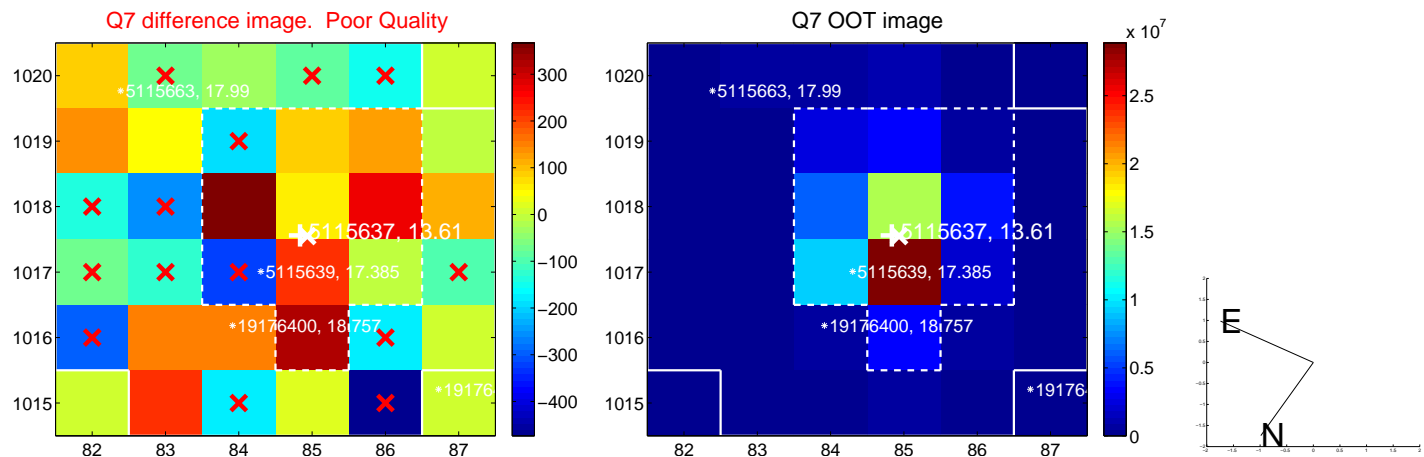
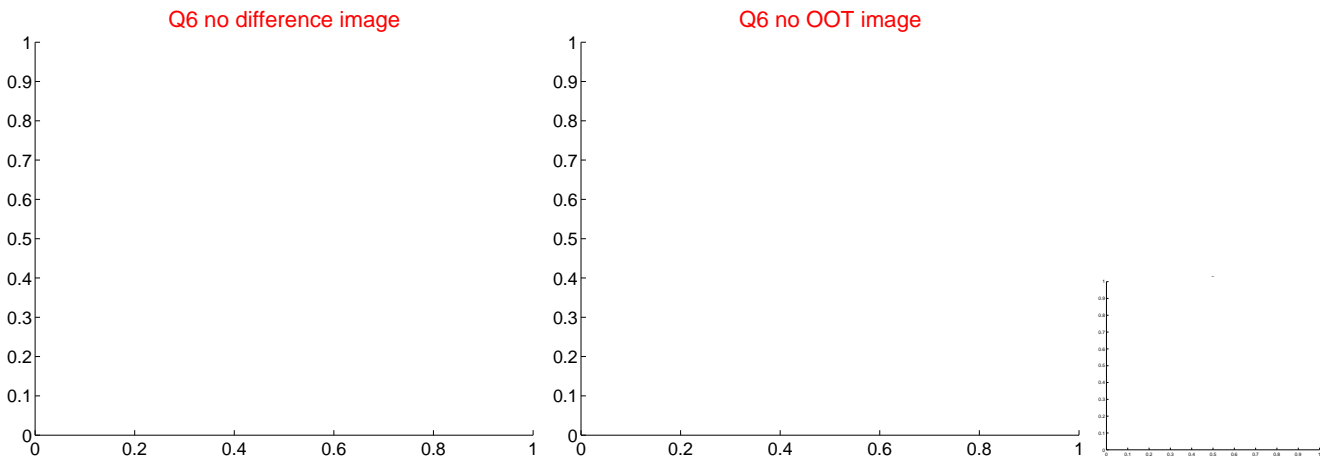
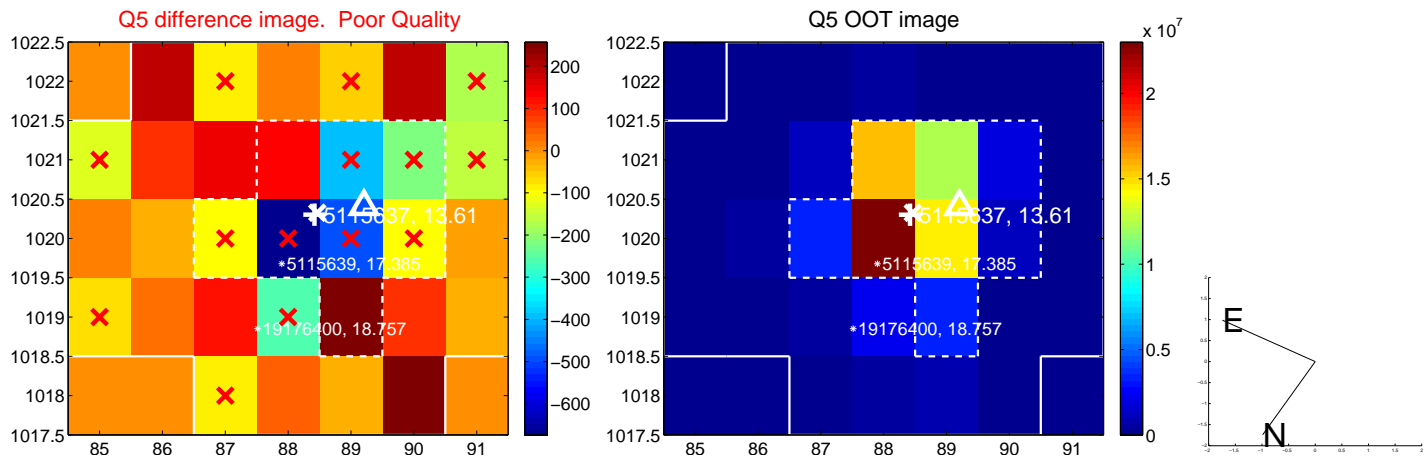


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

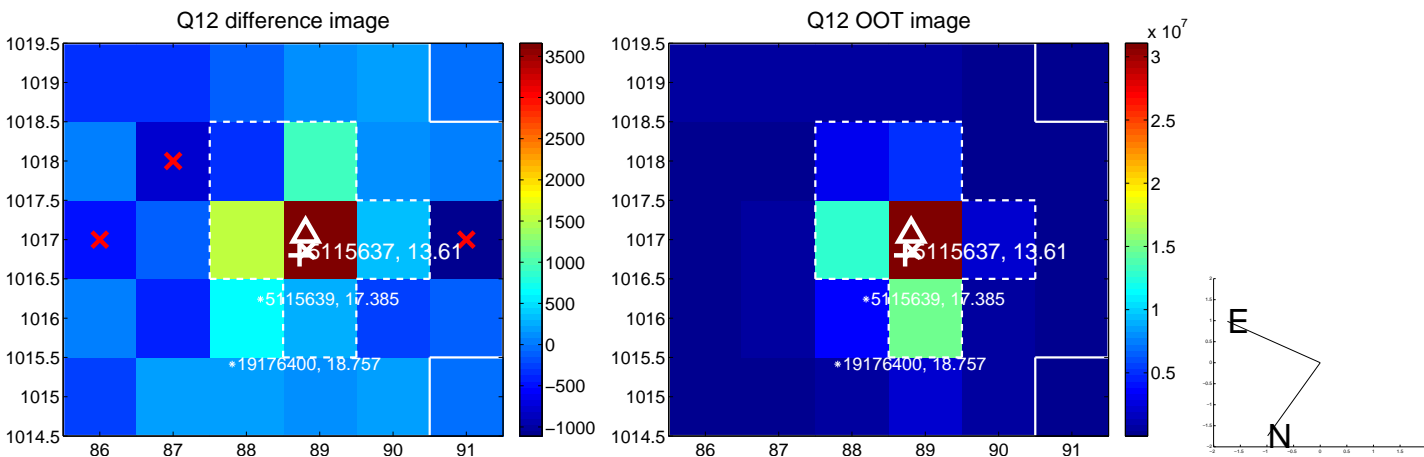
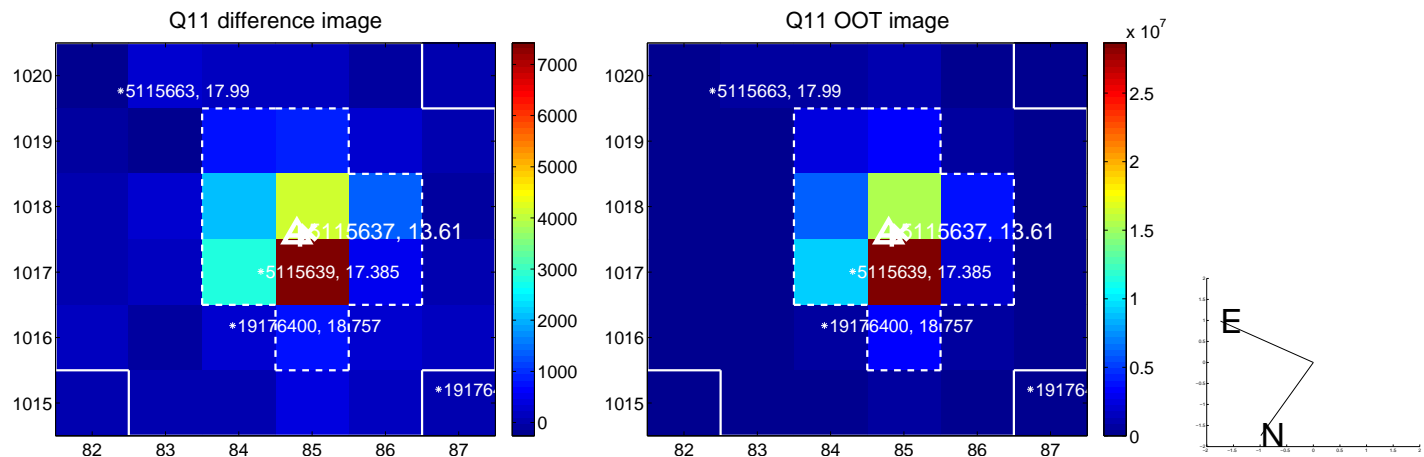
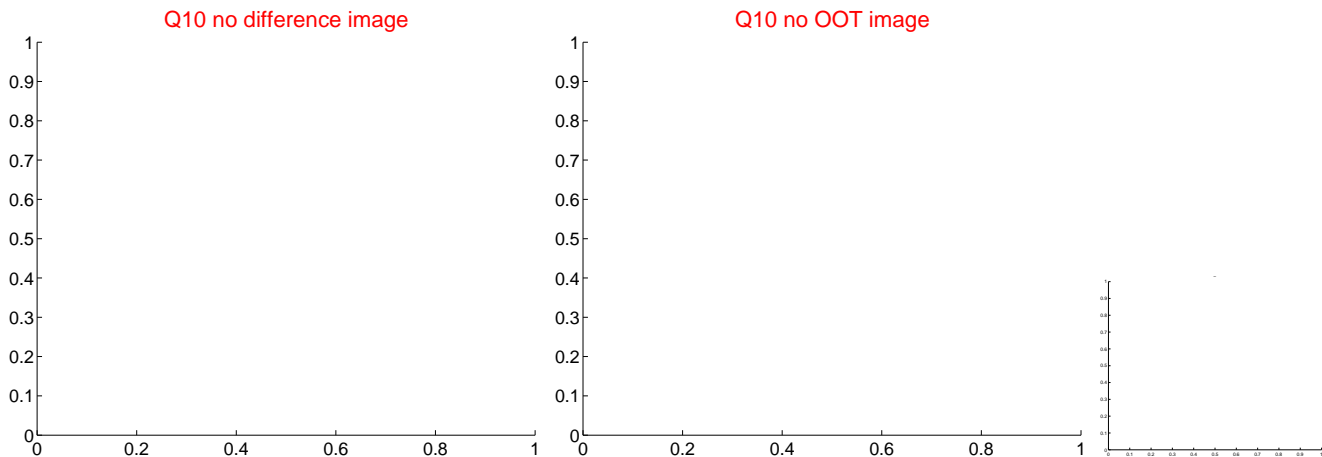
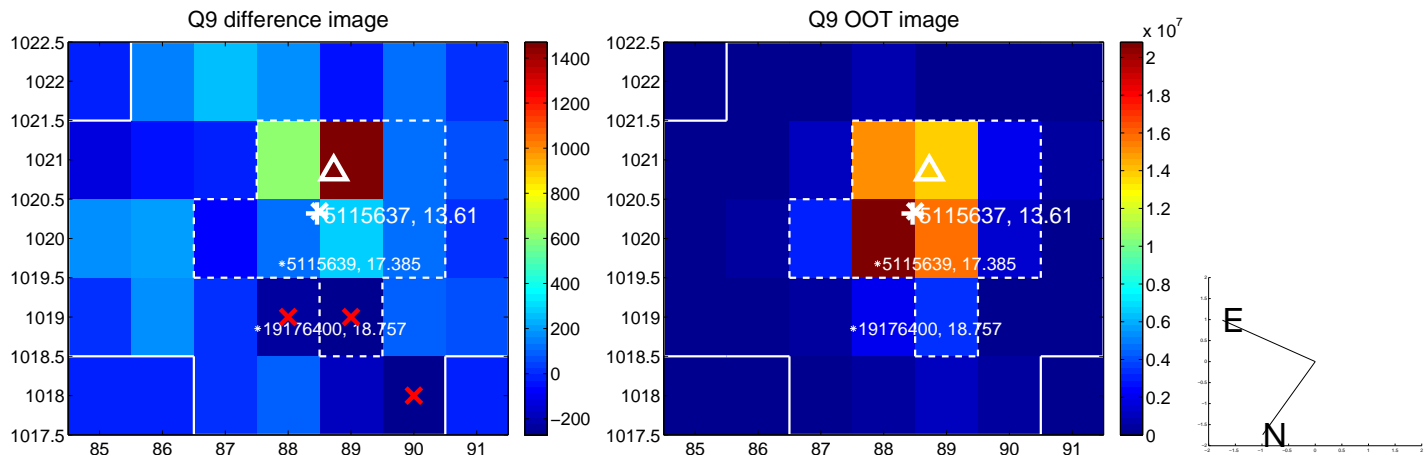
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



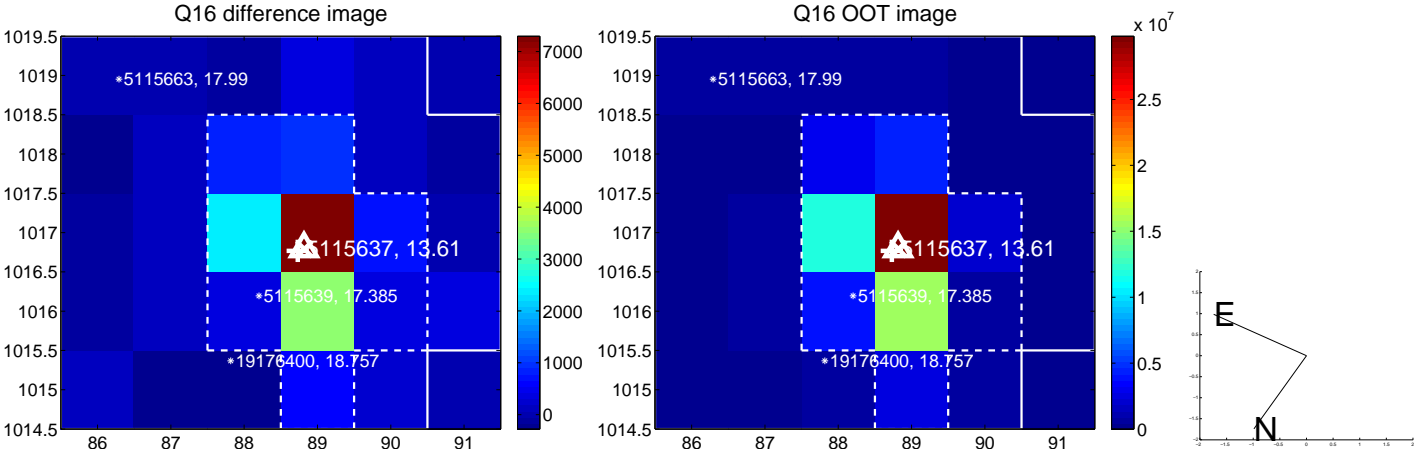
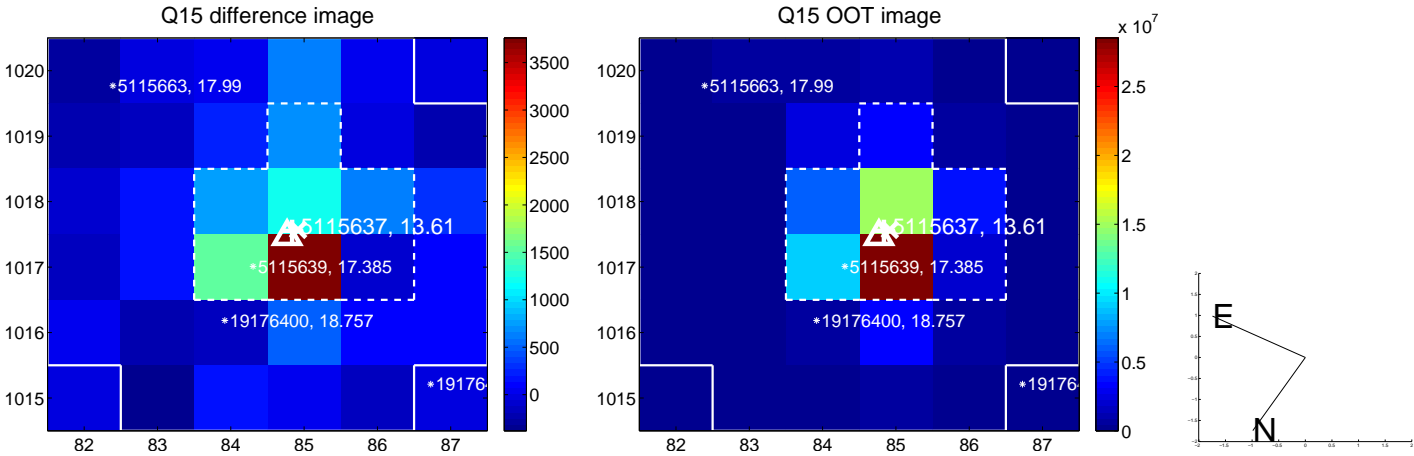
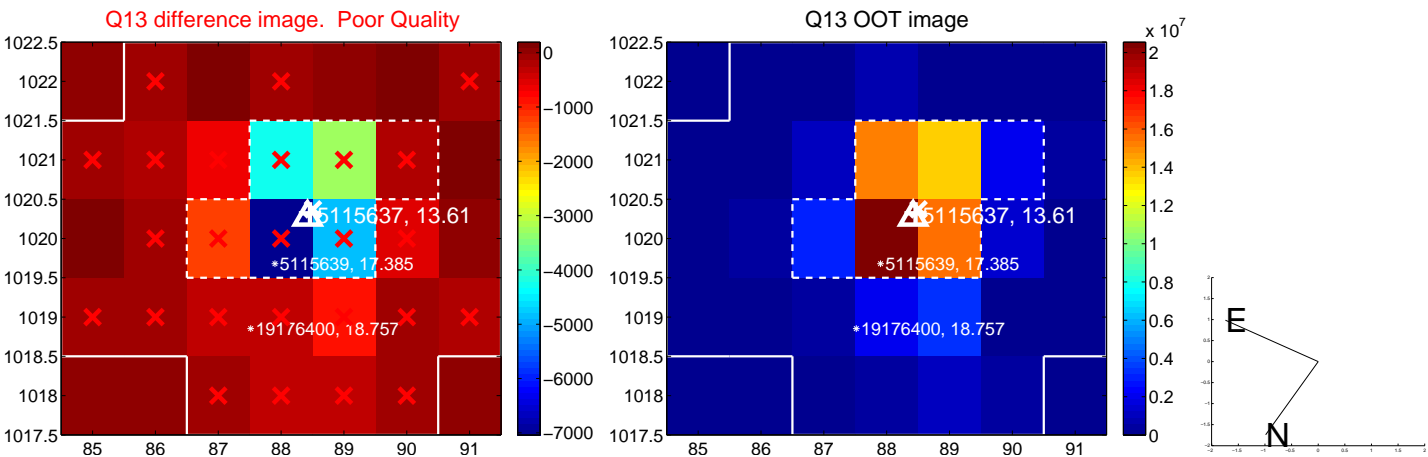
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



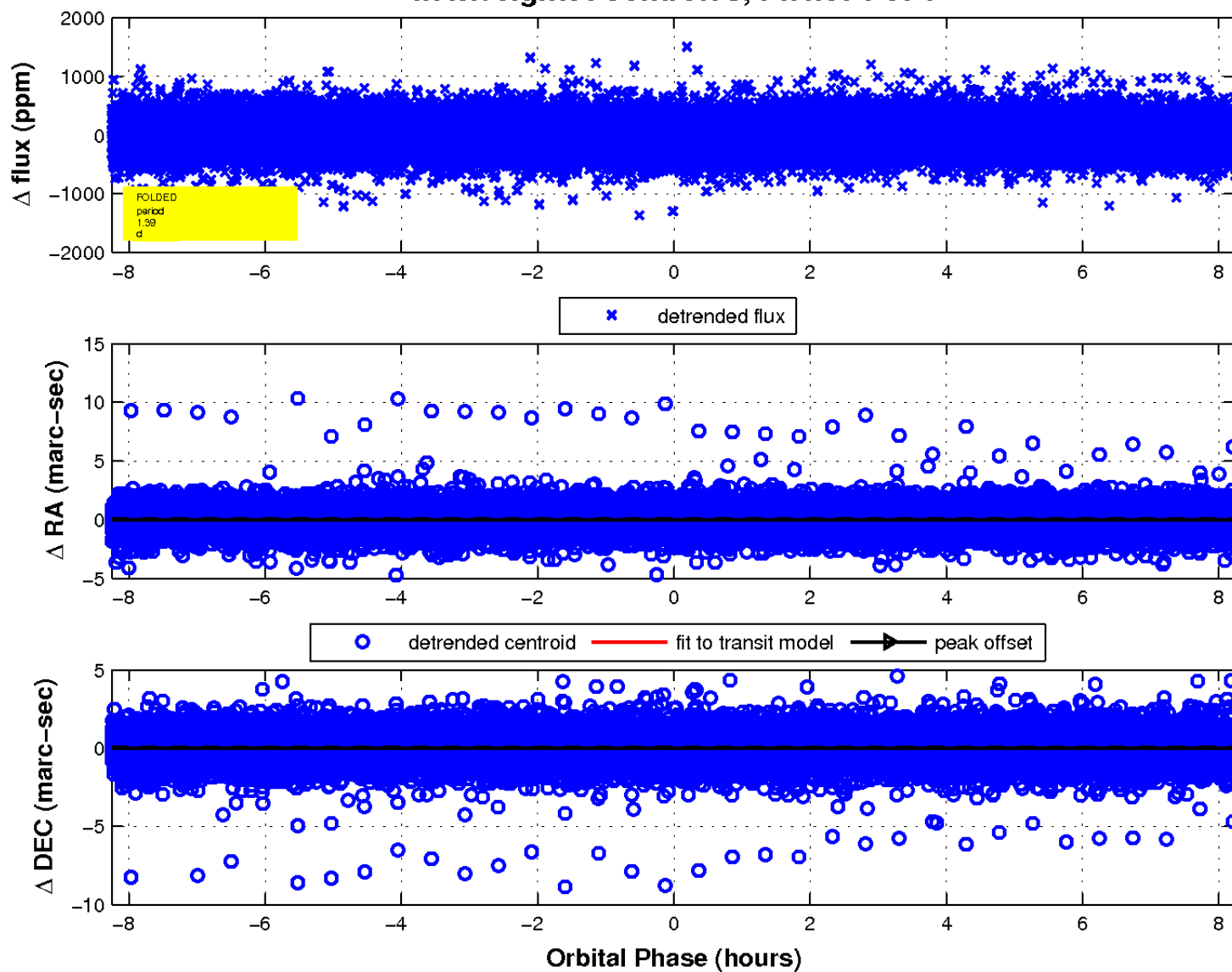
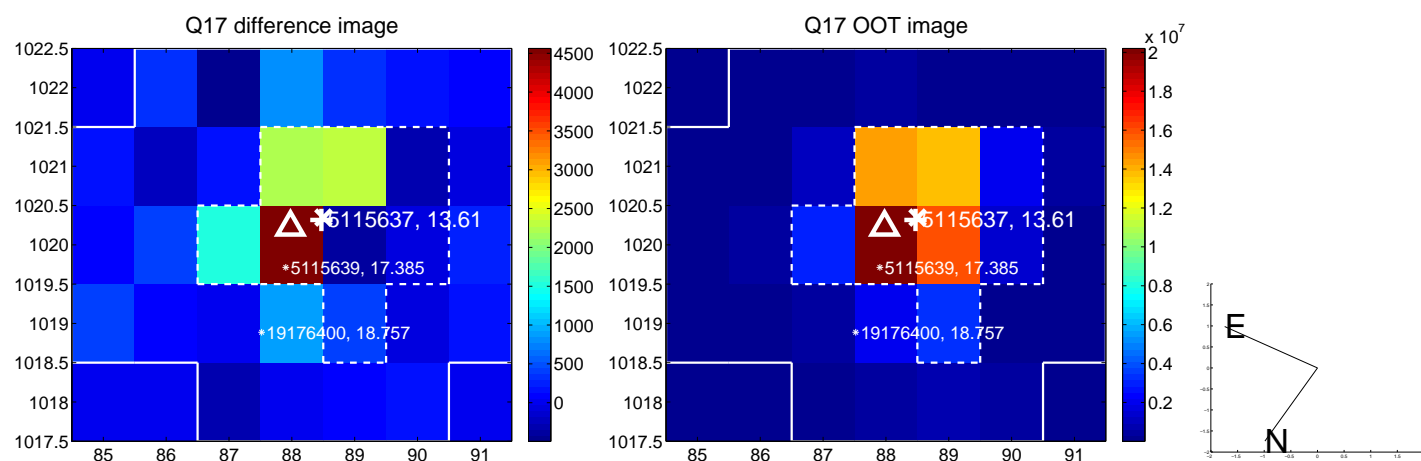
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

