

KIC 007531677

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})
007531677-01	OBS	2601.01	2.622122	131.873852	73.1	4.475	20.2	22.4	1.37	5864	1.38	1360.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007531677-01	OBS	FP	0.42	0	0	1	0	CENT_UNRESOLVED_OFFSET

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

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

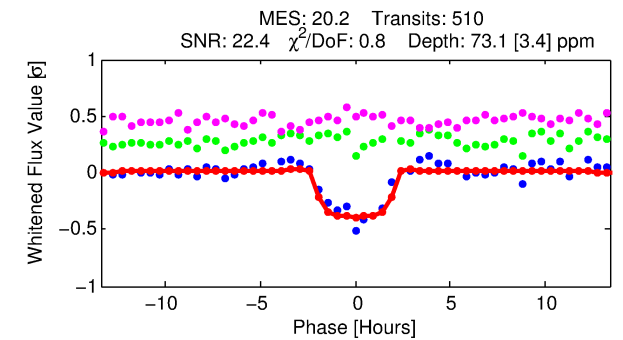
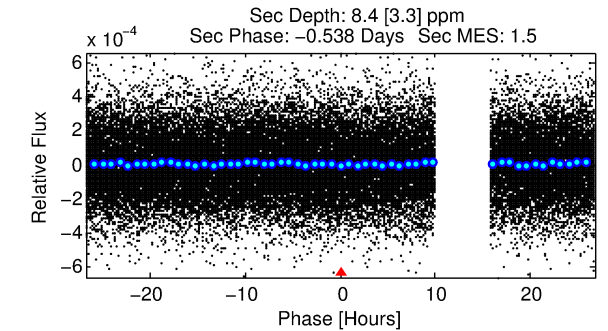
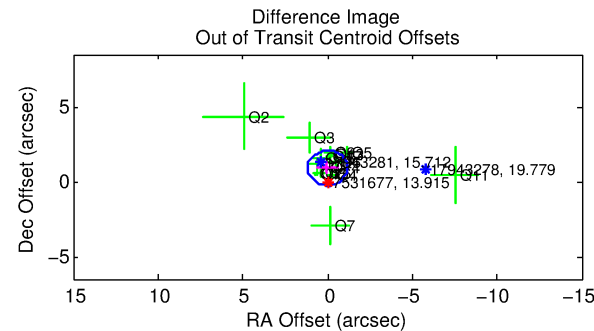
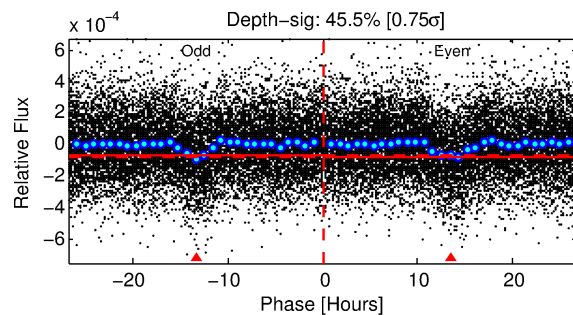
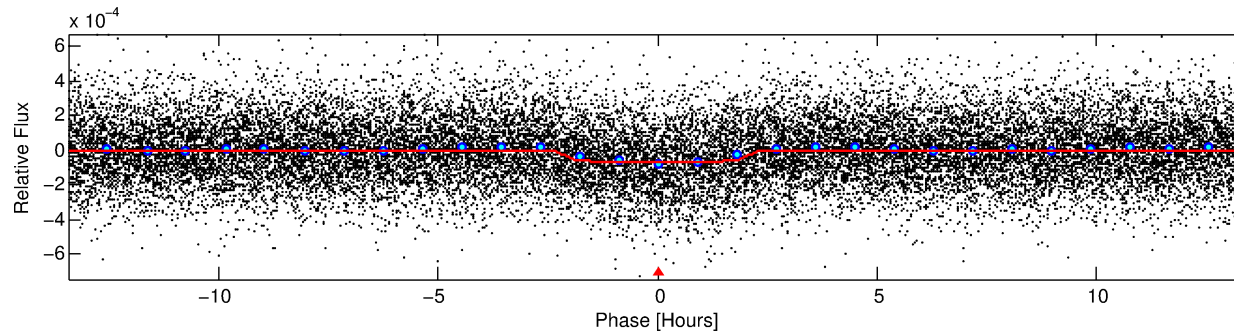
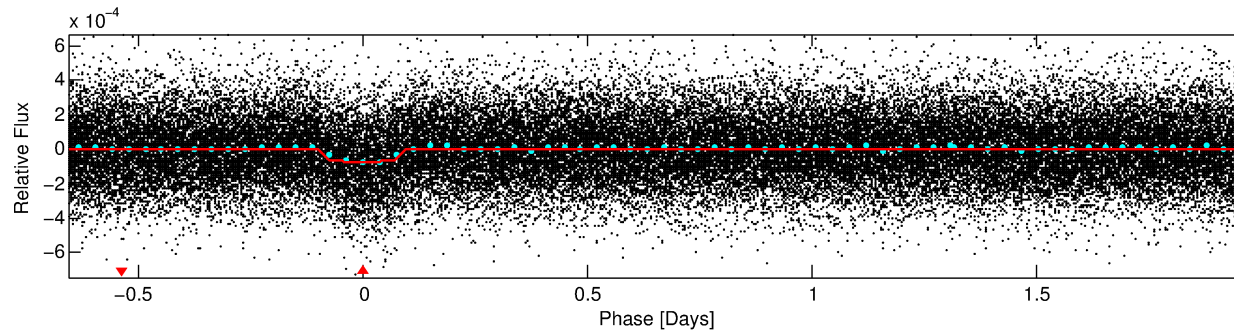
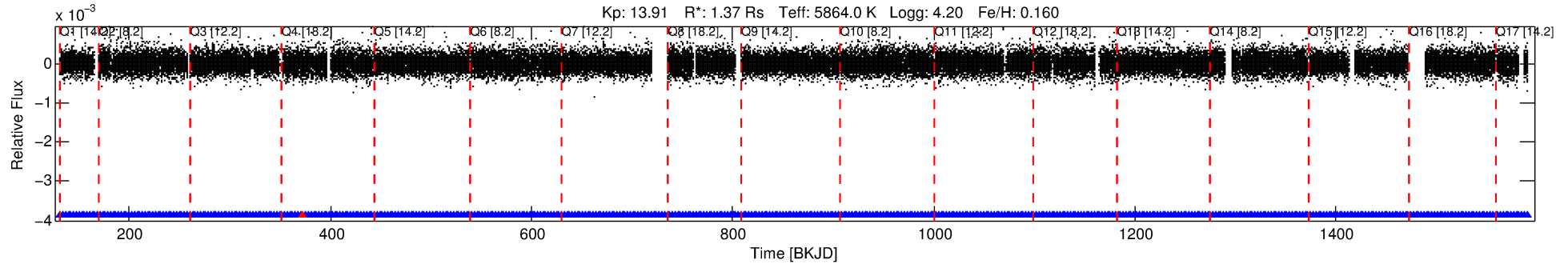
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007531677-01

No Significant Match Found

DV One-Page Summary

KIC: 7531677 Candidate: 1 of 1 Period: 2.622 d
KOI: K02601.01 Corr: 0.976



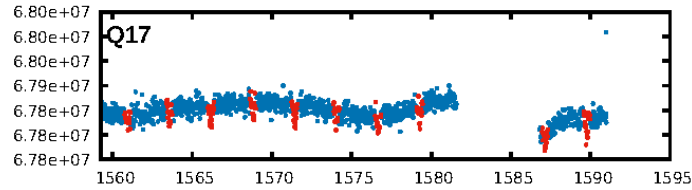
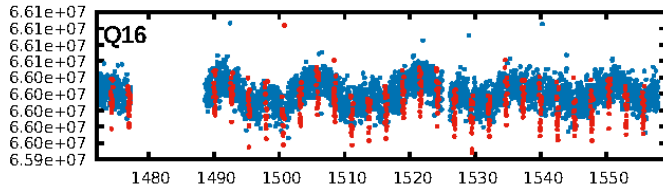
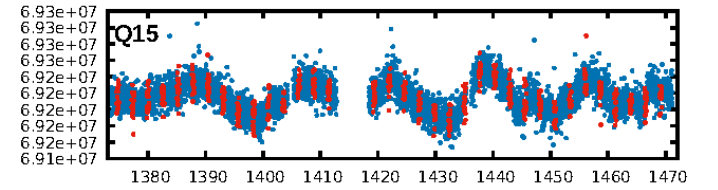
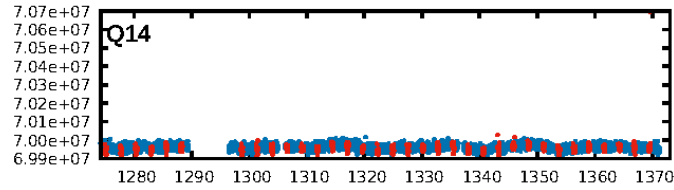
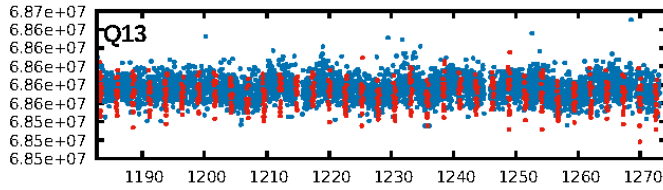
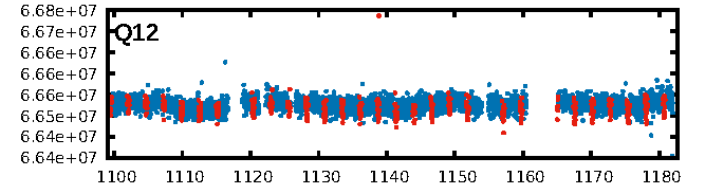
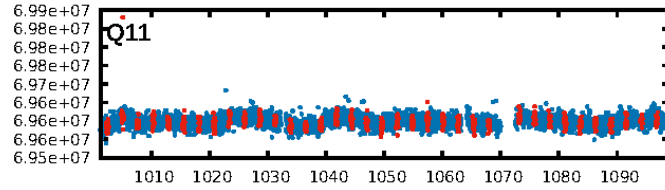
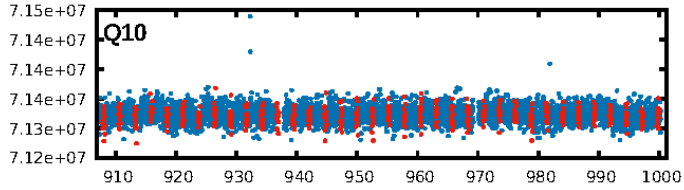
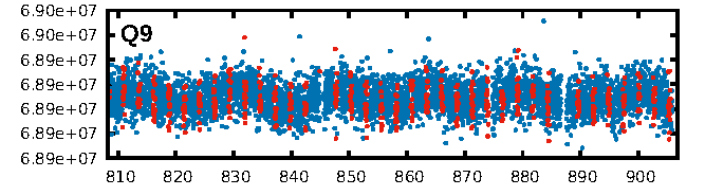
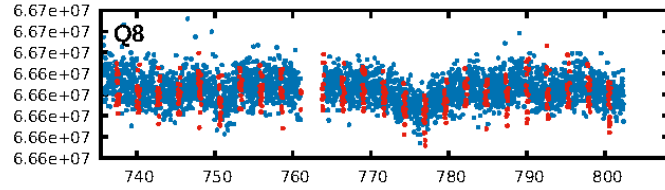
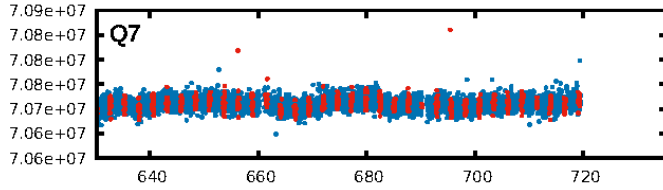
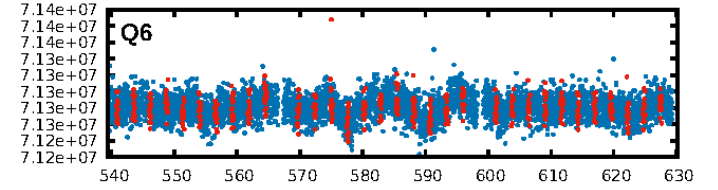
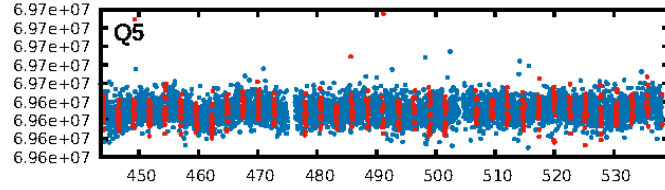
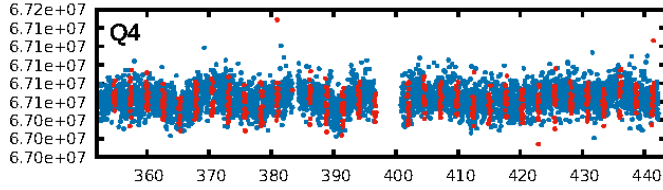
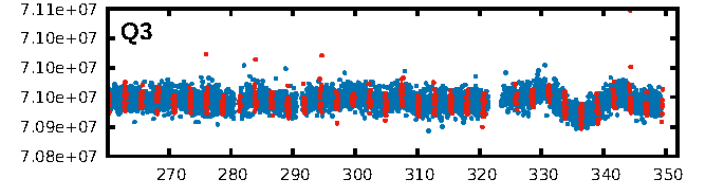
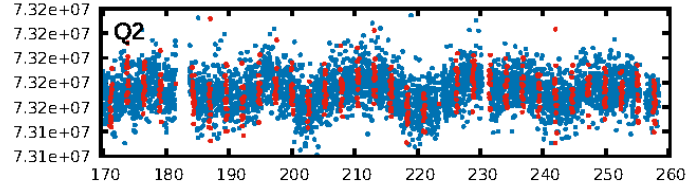
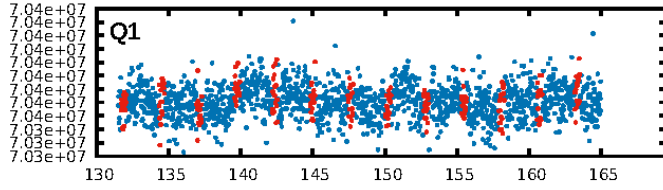
DV Fit Results:

Period = 2.62212 [0.00001] d
Epoch = 131.8739 [0.0026] BKJD
Rp/R* = 0.0092 [0.0023]
a/R* = 2.30 [2.23]
b = 0.89 [0.28]
Seff = 1360.62 [385.53]
Teff = 1549 [110] K
Rp = 1.38 [0.43] Re
a = 0.0382 [0.0067] AU
Ag = 3.52 [2.44] [1.03 σ]
Teffp = 3279 [522] K [3.24 σ]

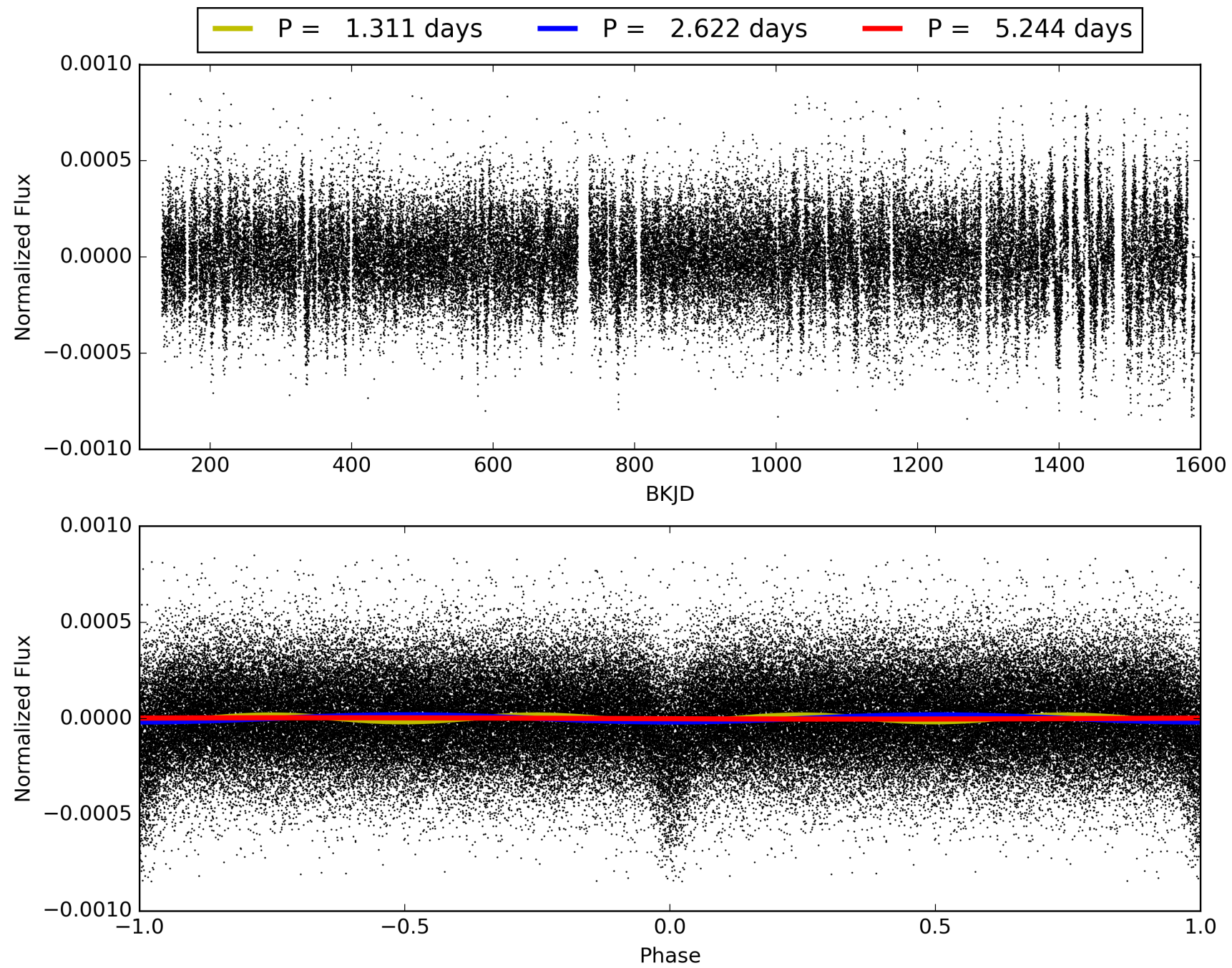
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.61e-84
RollingBand-fgt: 1.00 [486/487]
GhostDiagnostic-chr: 6.486
Centroid-sig: 0.0%
Centroid-so: 2.334 arcsec [4.03 σ]
OotOffset-rm: 0.901 arcsec [2.32 σ]
KicOffset-rm: 0.957 arcsec [2.17 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.81 [13/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007531677-01, PDC Light Curves

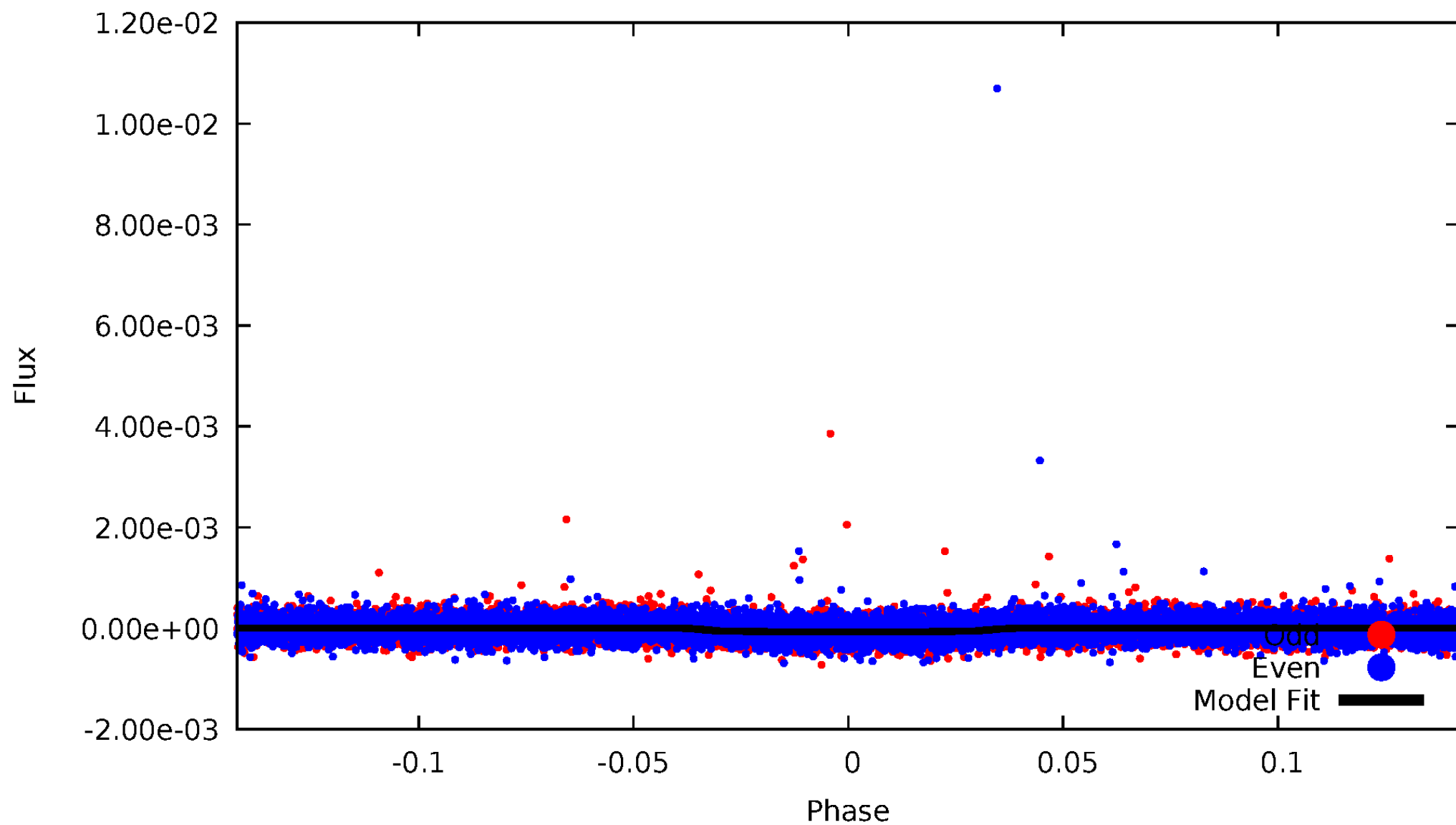


TCE 007531677-01



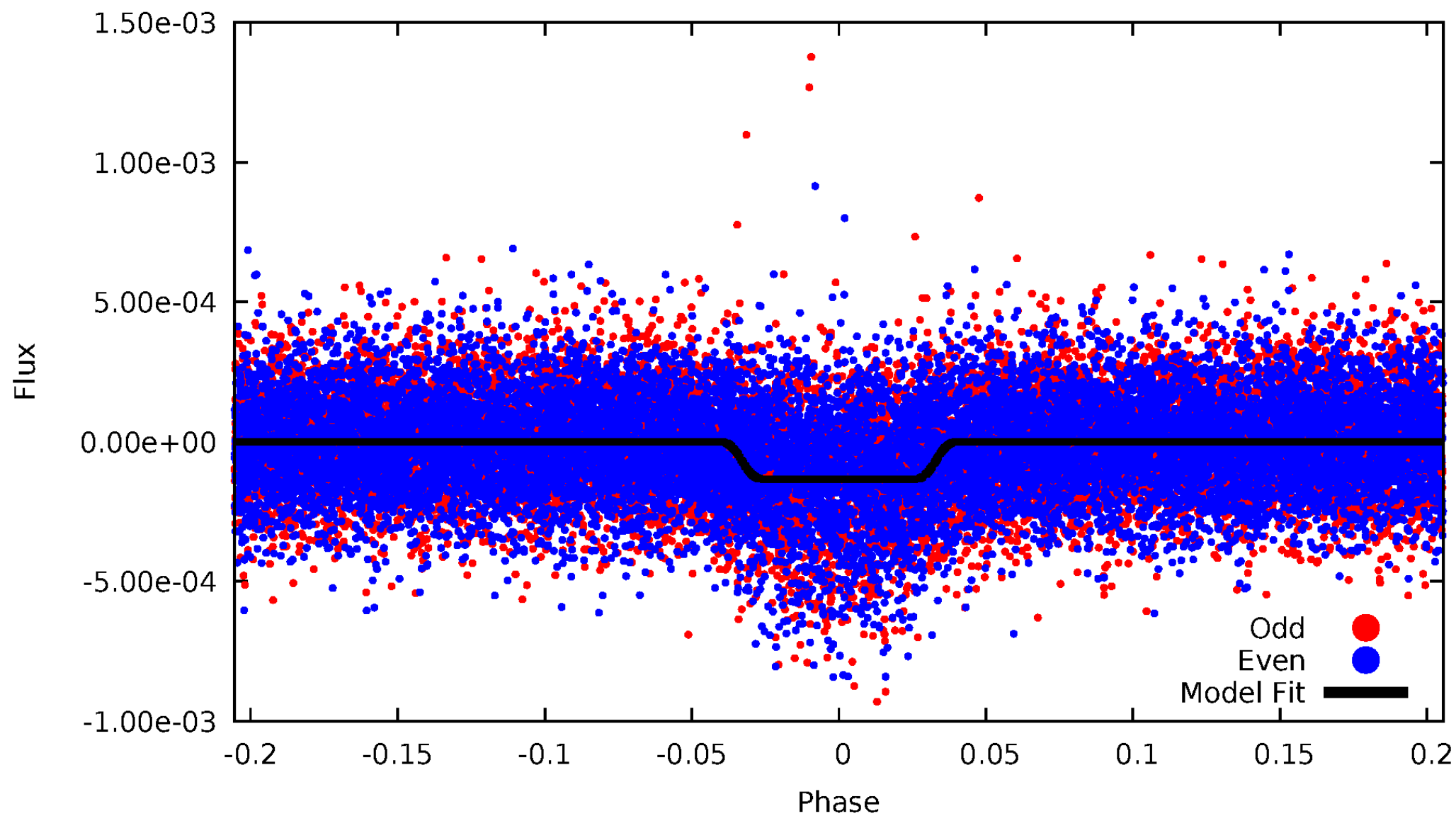
DV Odd/Even

TCE 007531677-01



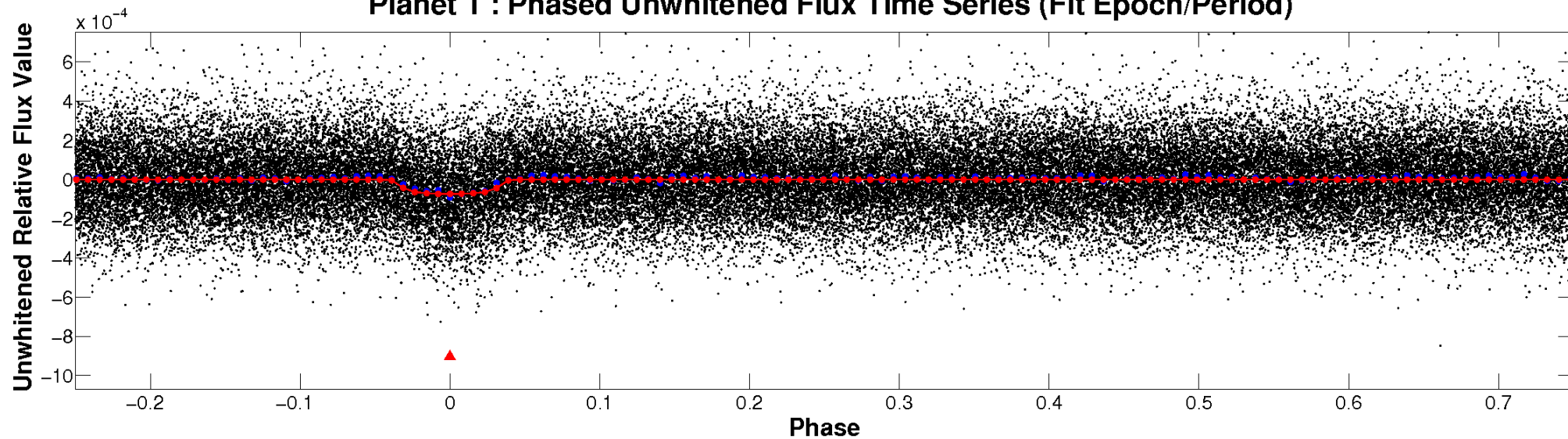
ALT Odd/Even

TCE 007531677-01

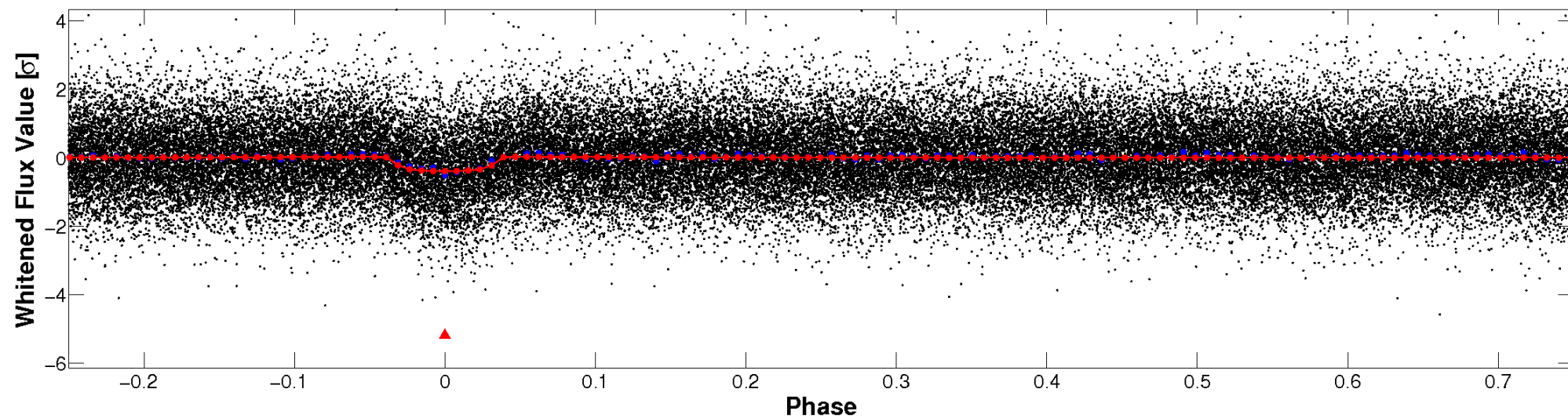


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

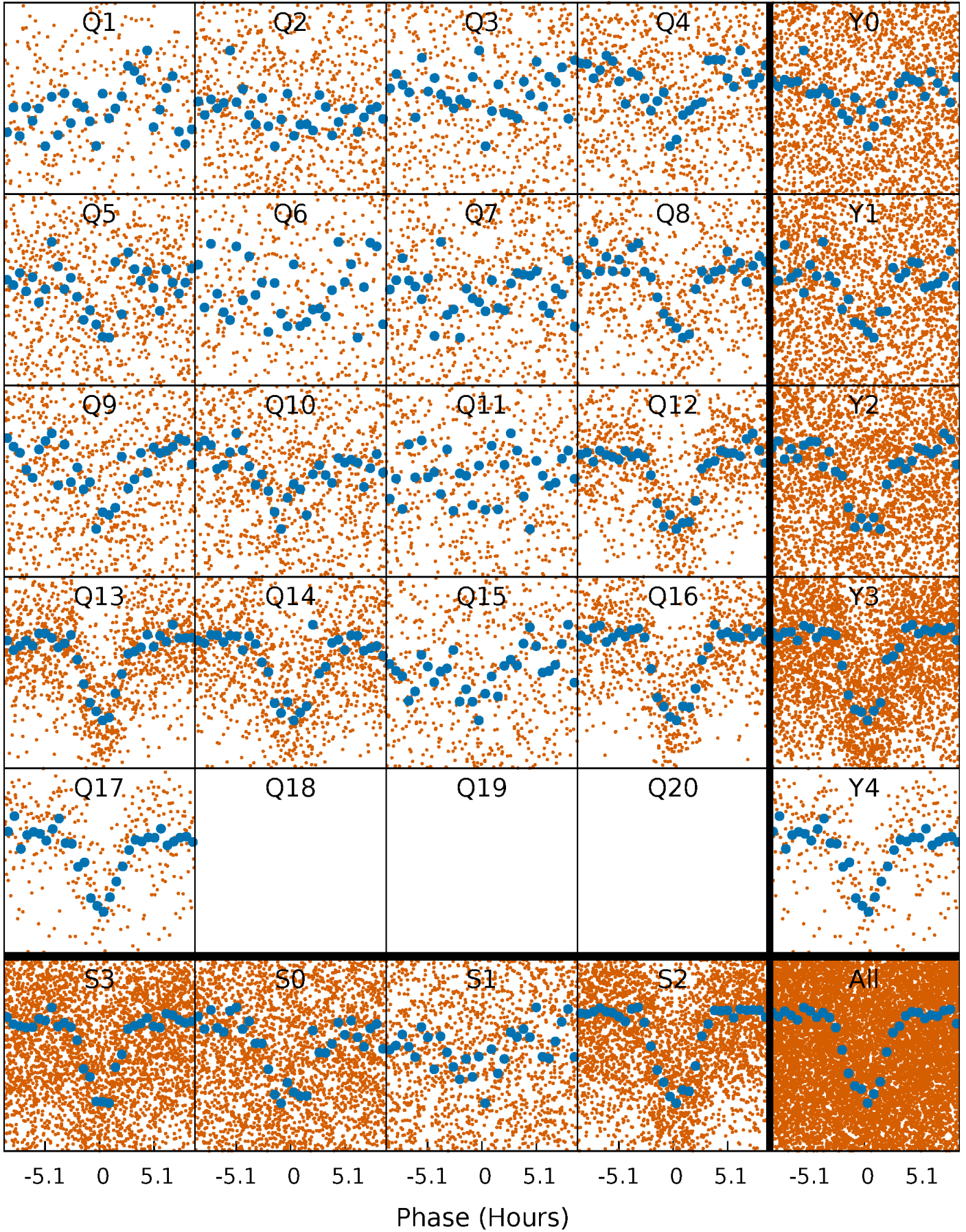


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



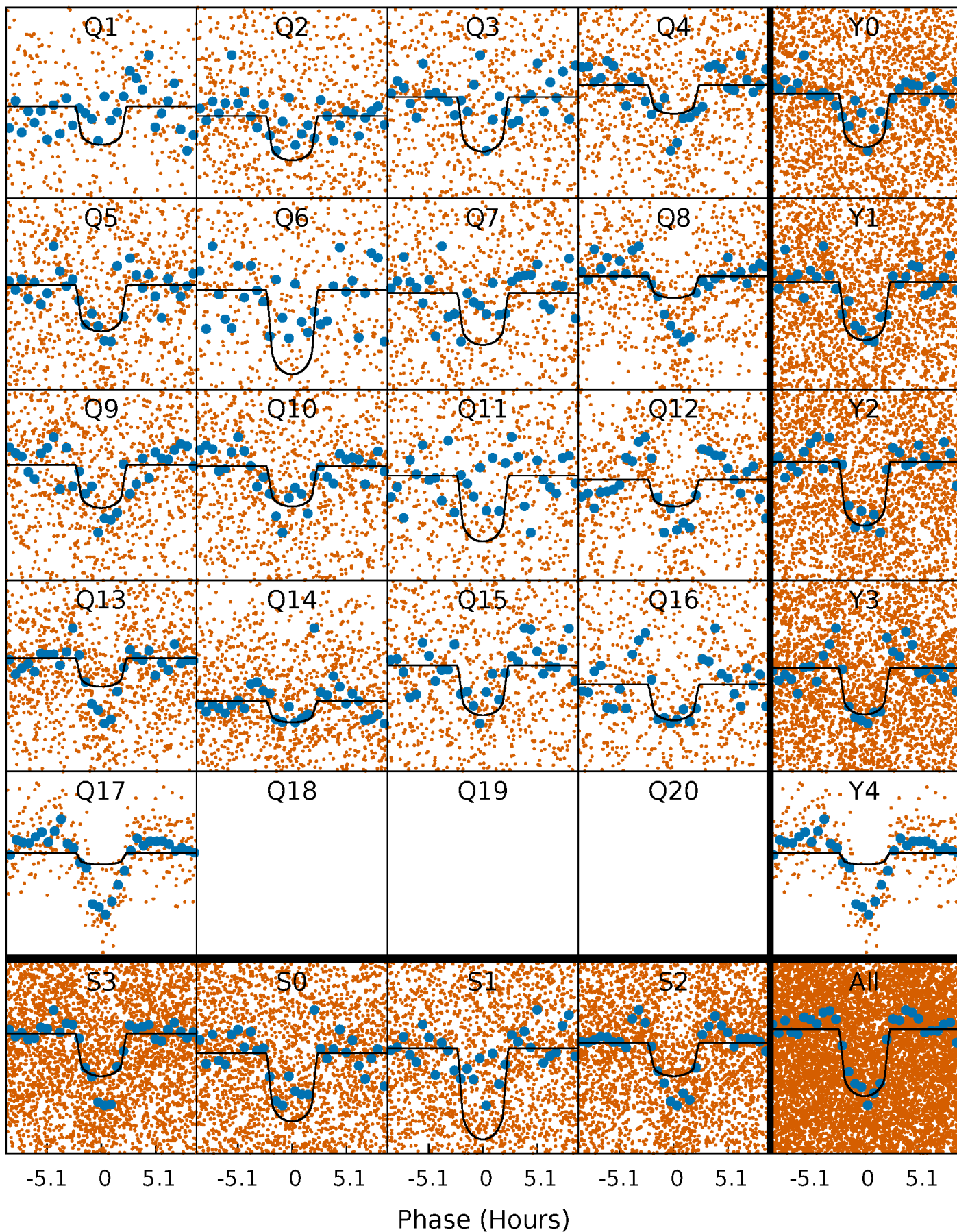
PDC Quarter-Phased Transit Curves

TCE 007531677-01 P= 2.622122 Days $T_0=131.873852$ (BKJD)



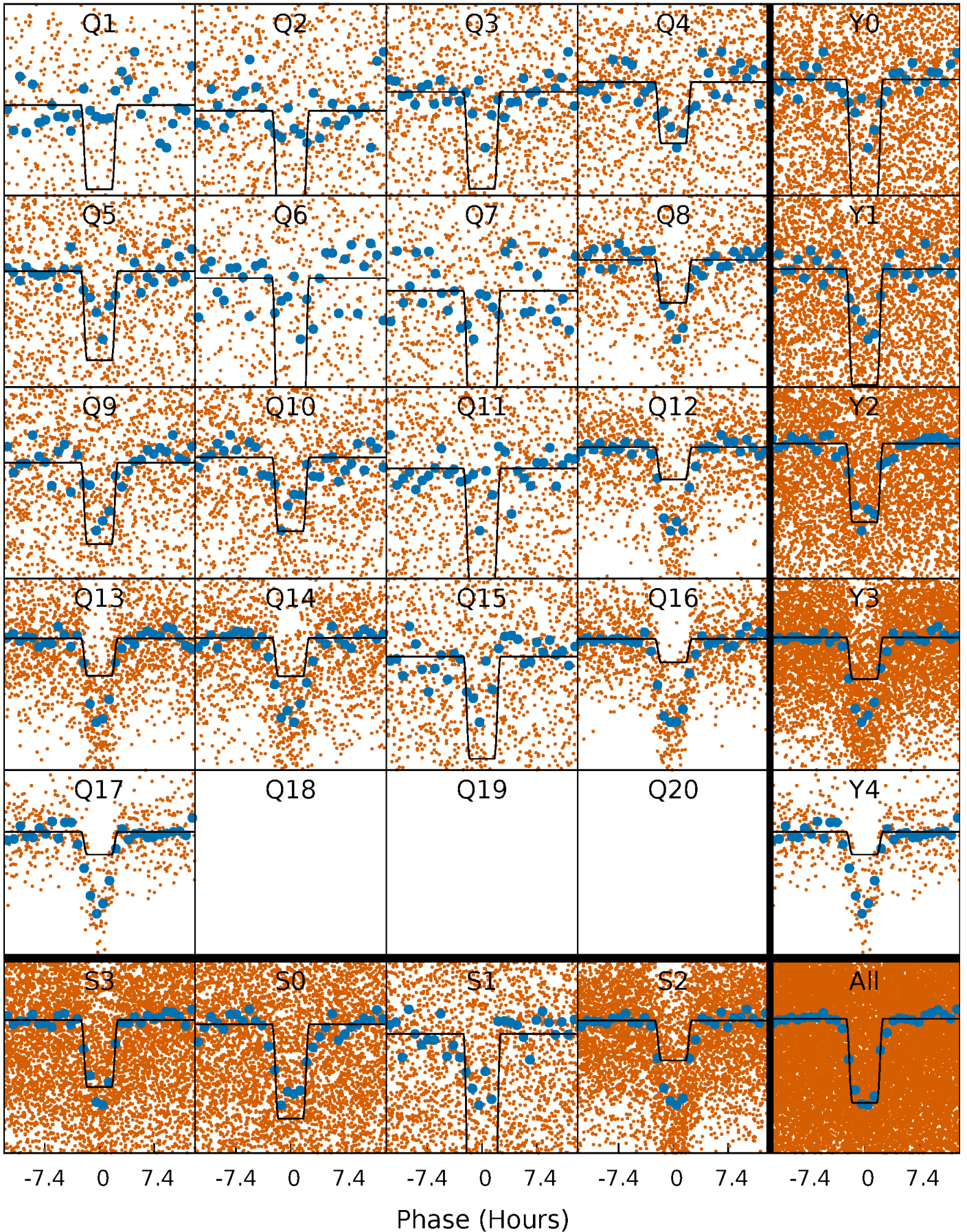
DV Quarter-Phased Transit Curves

TCE 007531677-01 P= 2.622122 Days $T_0=131.873852$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

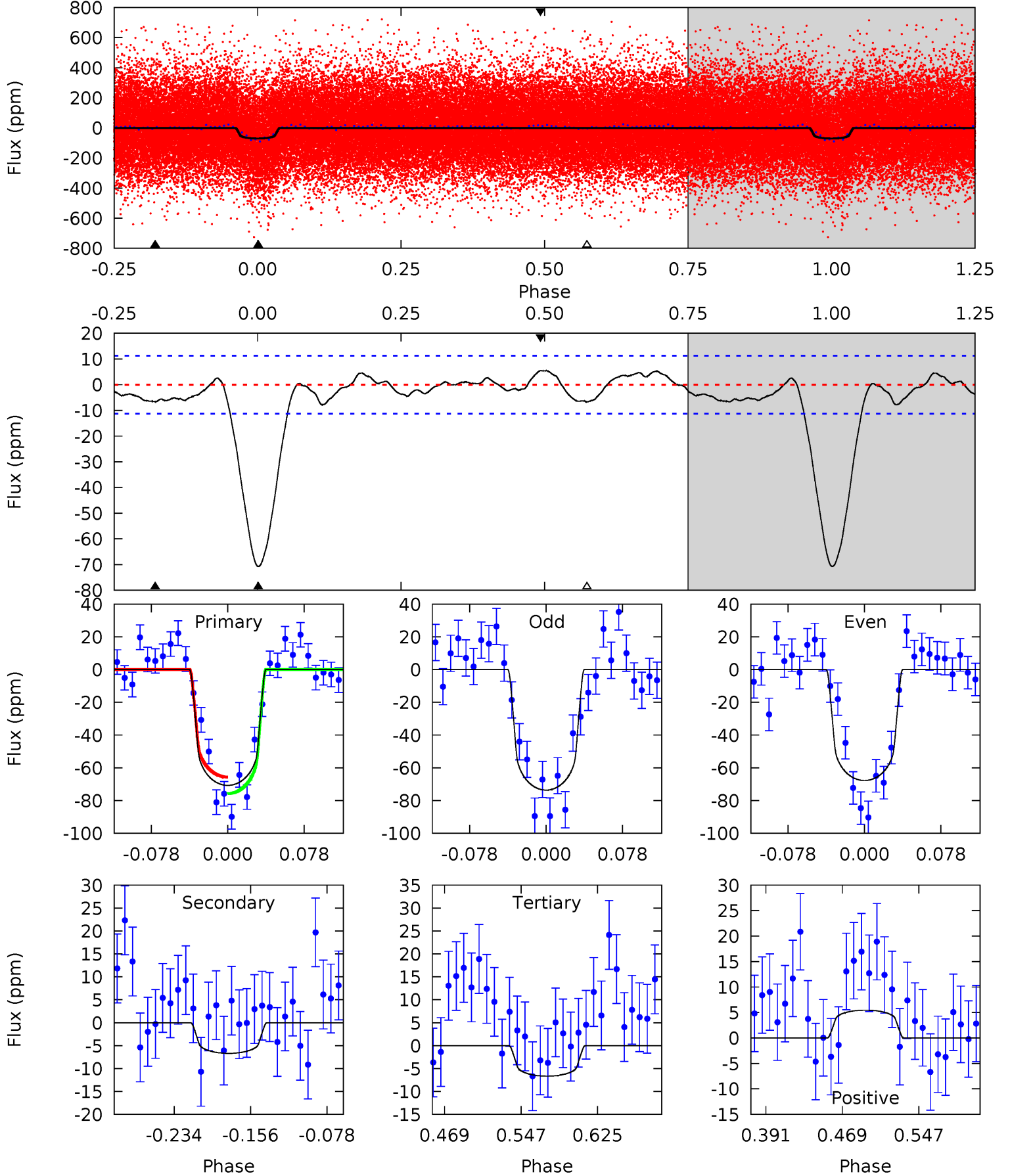
TCE 007531677-01 P= 2.622174 Days $T_0=131.862095$ (BKJD)



DV Model-Shift Uniqueness Test

007531677-01, P = 2.622122 Days, E = 129.251730 Days

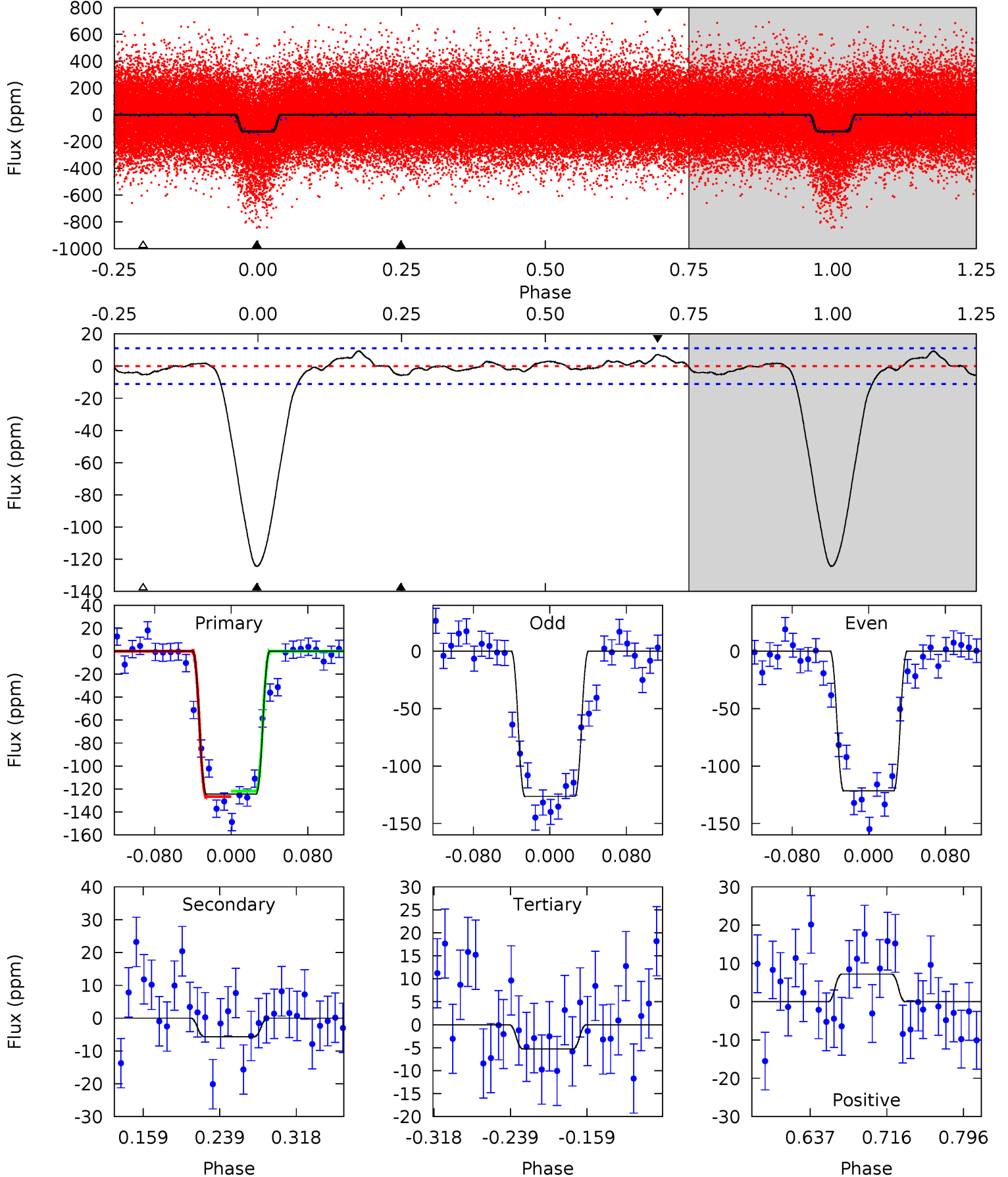
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	2.74	2.73	2.24	4.62	1.76	1.34	26.2	26.7	0.01	0.50	1.20	0.99	0.07	2.06



Alt Model-Shift Uniqueness Test

007531677-01, P = 2.622174 Days, E = 129.239921 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.9	2.35	2.21	3.01	4.61	1.75	1.19	49.7	48.9	0.14	-0.66	0.98	1.40	0.07	1.00



Stellar Parameters For KIC 007531677

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5864^{+79}_{-79}	$4.199^{+0.162}_{-0.108}$	$0.160^{+0.150}_{-0.150}$	$1.369^{+0.233}_{-0.256}$	$1.080^{+0.093}_{-0.070}$	$0.593^{+0.463}_{-0.189}$
	+1%/-1%	+4%/-3%	+94%/-94%	+17%/-19%	+9%/-6%	+78%/-32%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 007531677-01 / KOI 2601.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-7 ± 2	$1.34^{+0.40}_{-0.35}$	2150^{+98}_{-106}	3489^{+436}_{-378}	$2.873^{+2.560}_{-1.416}$
Alt.	-6 ± 2	$1.67^{+0.43}_{-0.36}$	2158^{+97}_{-127}	3121^{+349}_{-412}	$1.494^{+1.326}_{-0.782}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

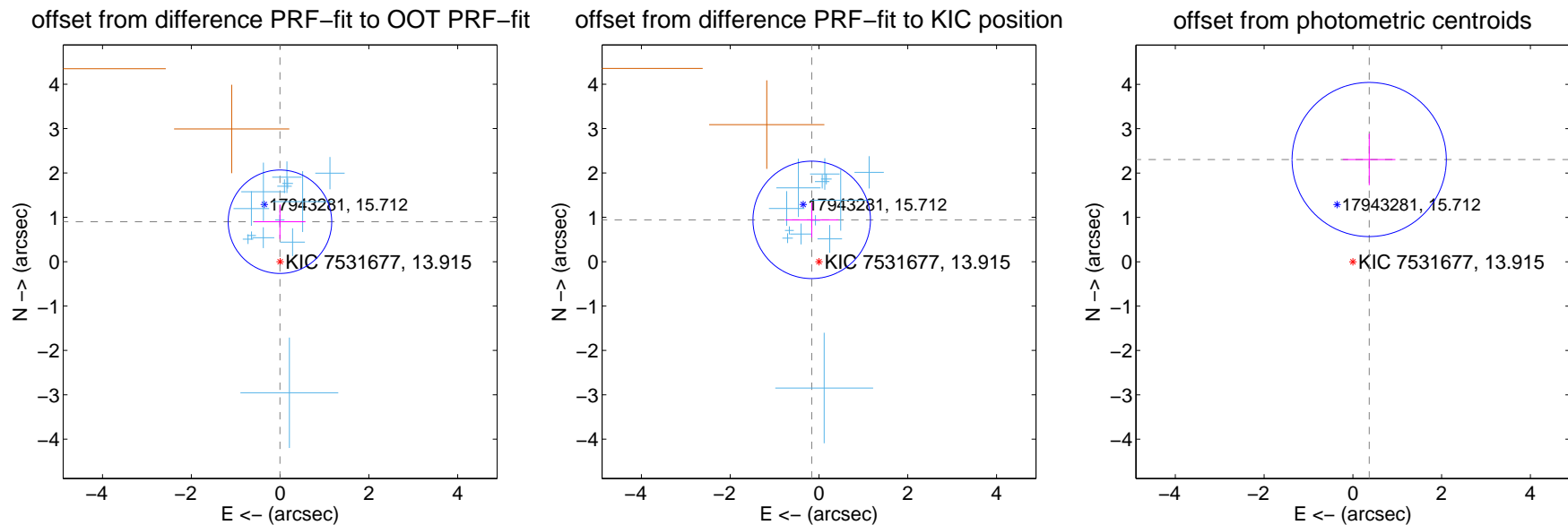
DV Centroid Data

Supplemental centroid analysis for 007531677-01. Kepler magnitude: 13.91. Transit SNR 22.35

There are 13 quarters with good PRF difference image offsets

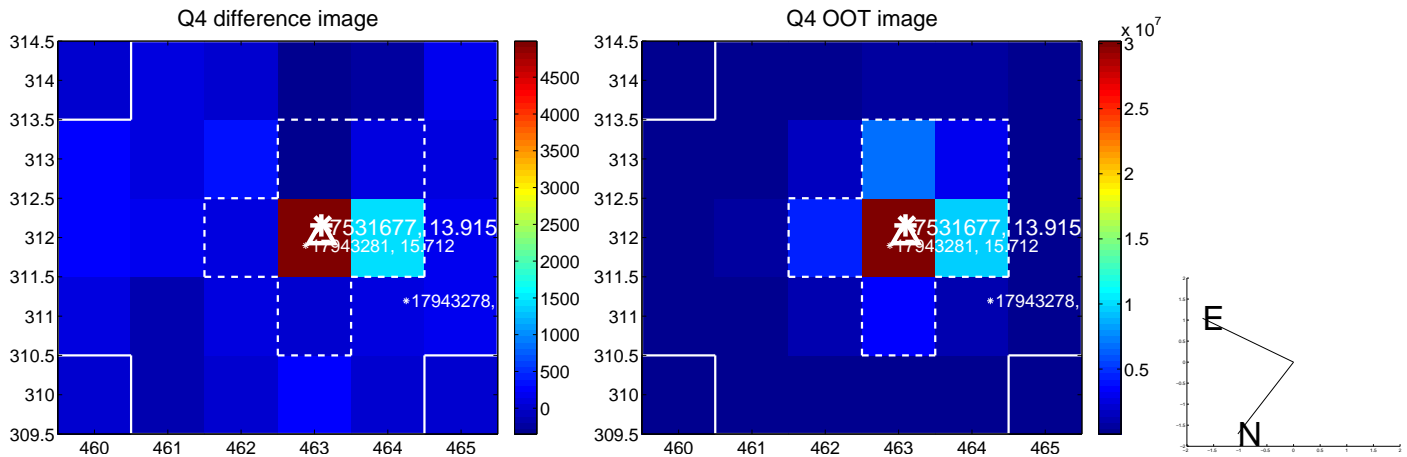
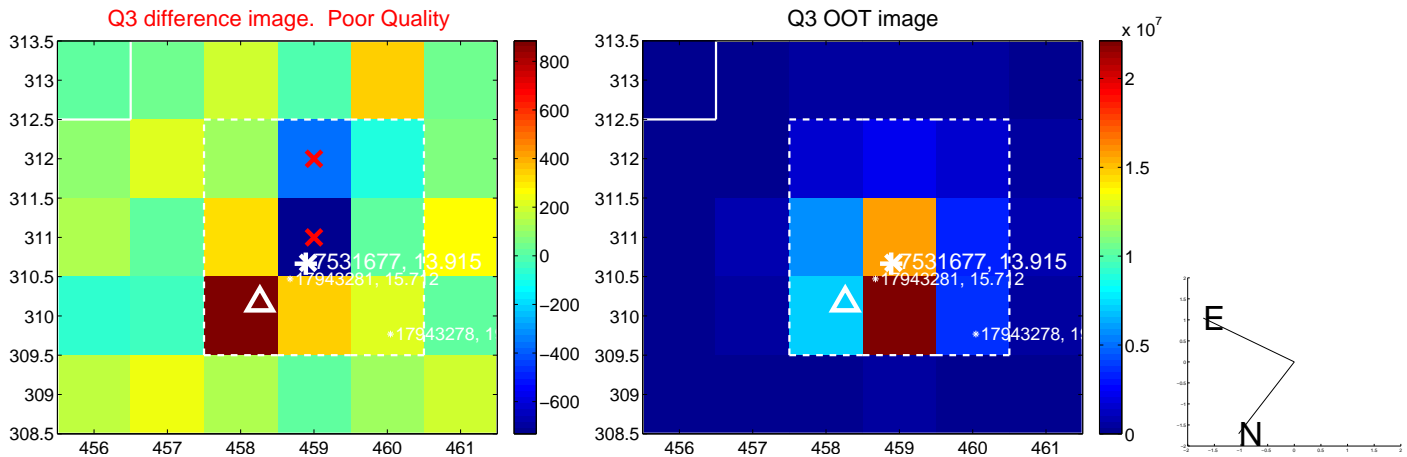
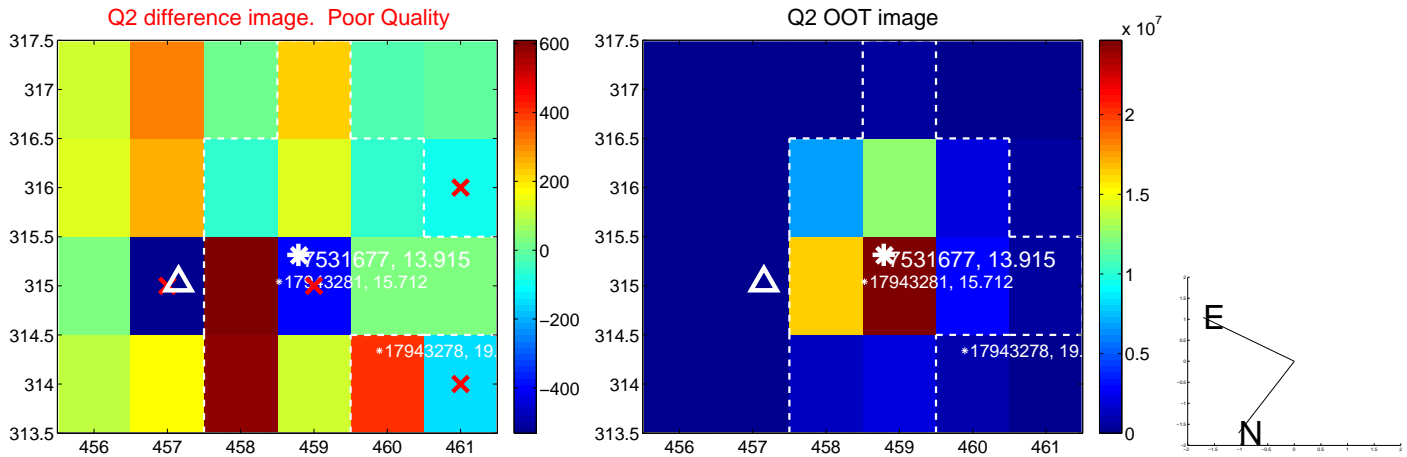
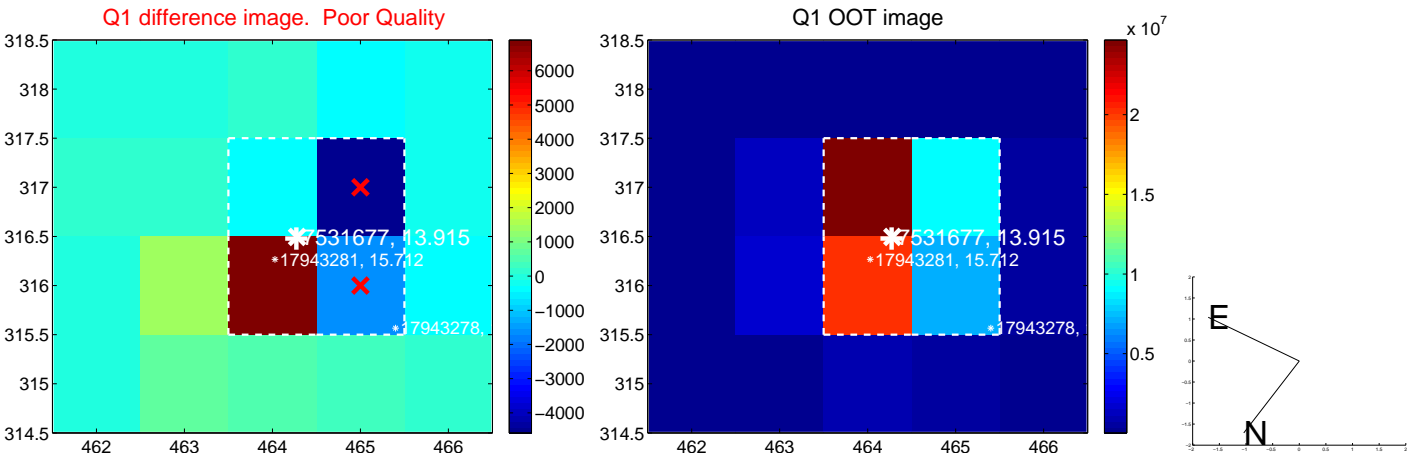
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.901 ± 0.389	2.32	0.003 ± 0.576	0.901 ± 0.388
PRF-fit source offset from KIC position	0.957 ± 0.441	2.17	0.164 ± 0.601	0.942 ± 0.392
photometric centroid source offset	2.33 ± 0.58	4.03	-0.37 ± 0.59	2.31 ± 0.58

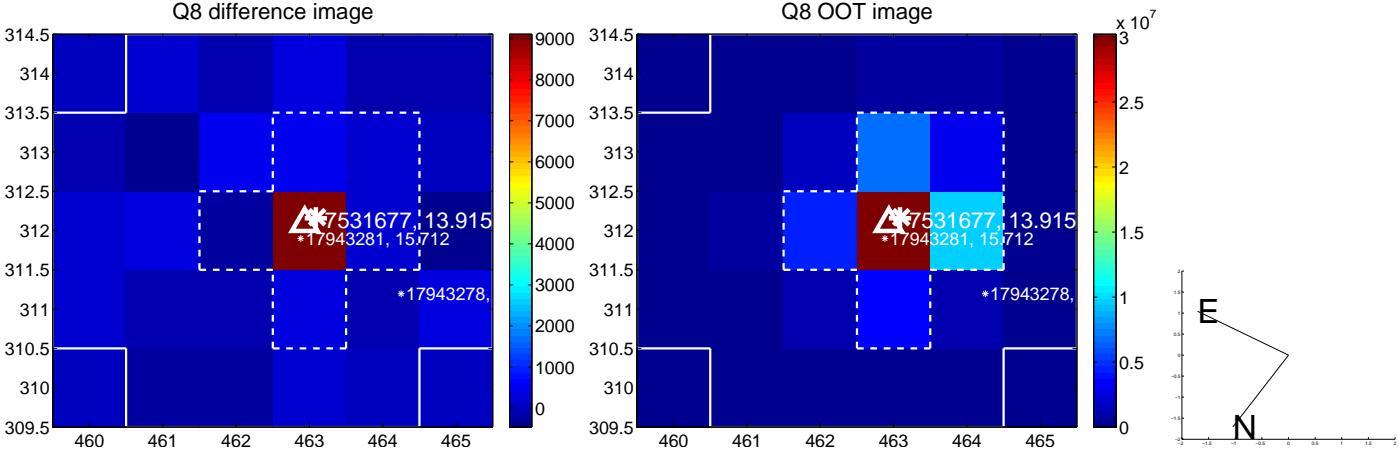
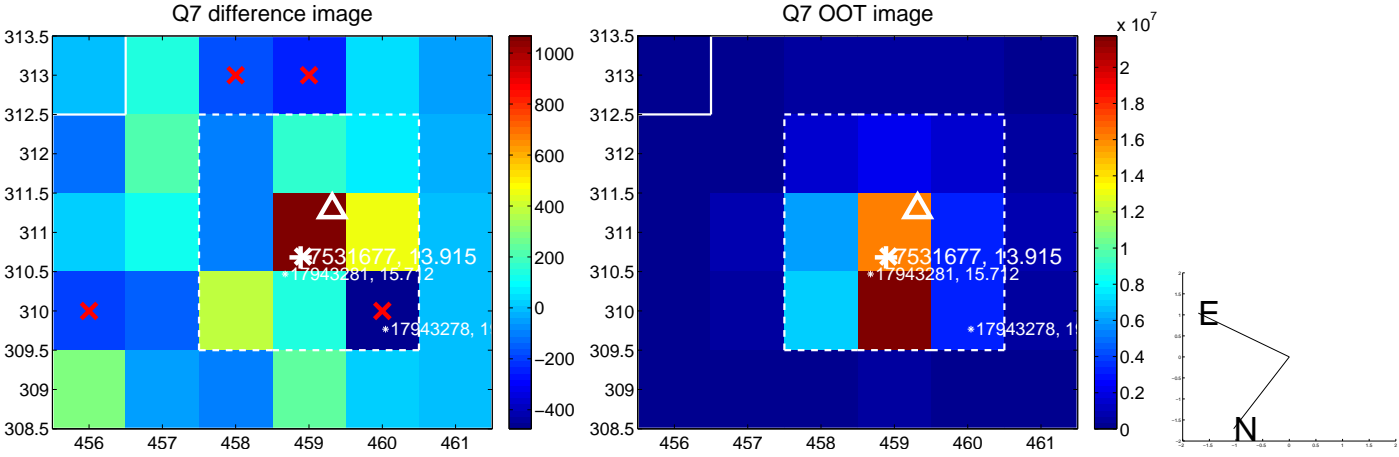
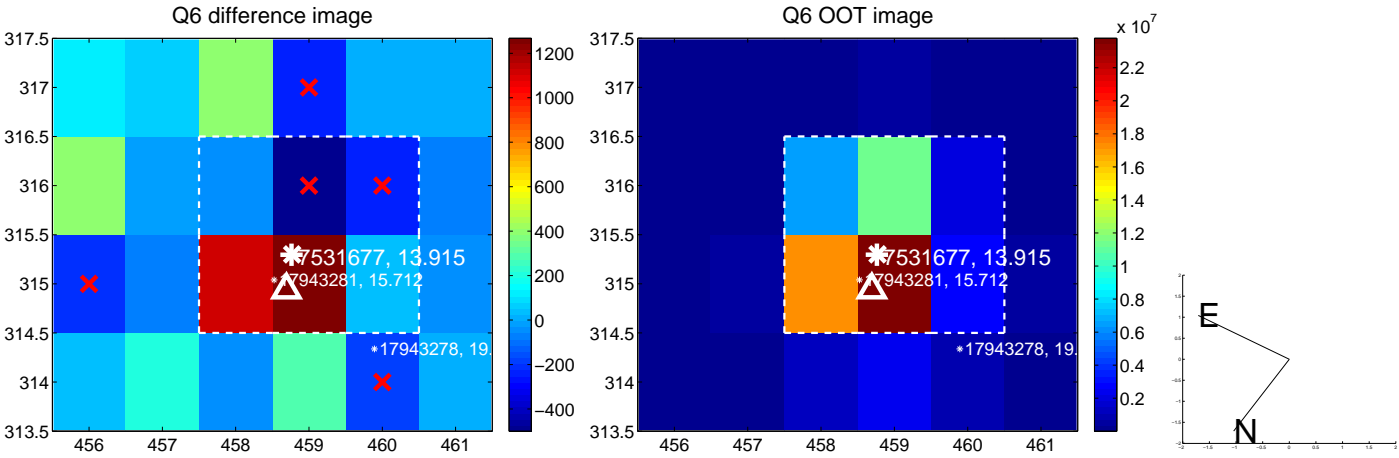
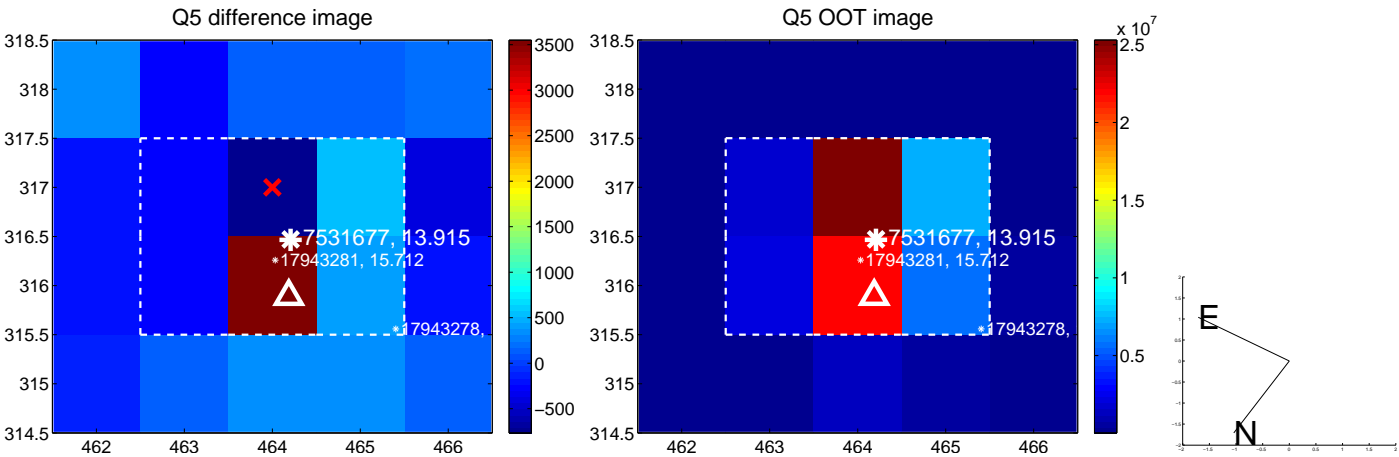


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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.

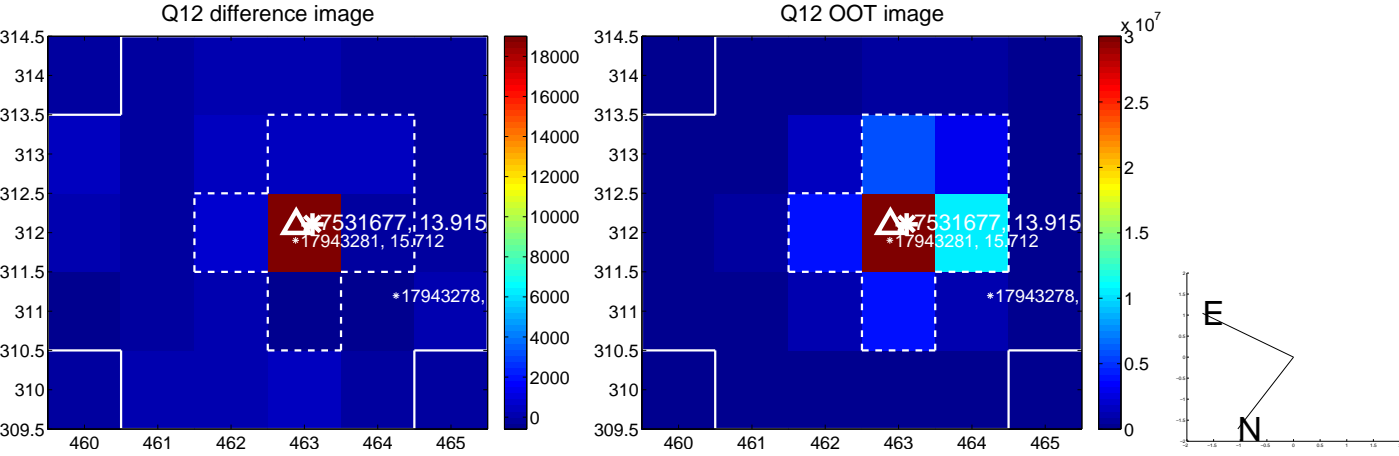
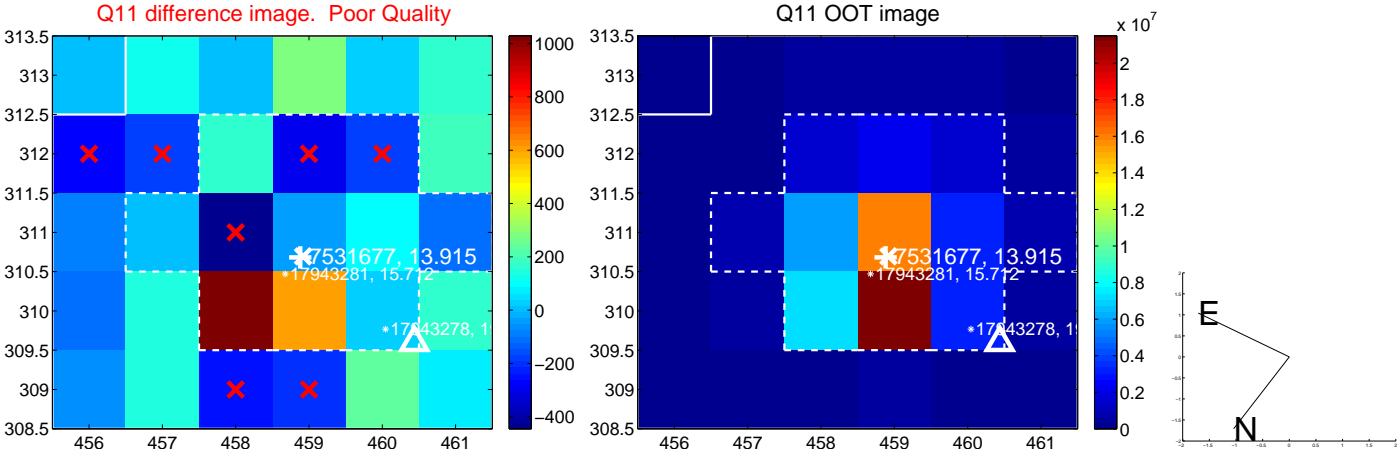
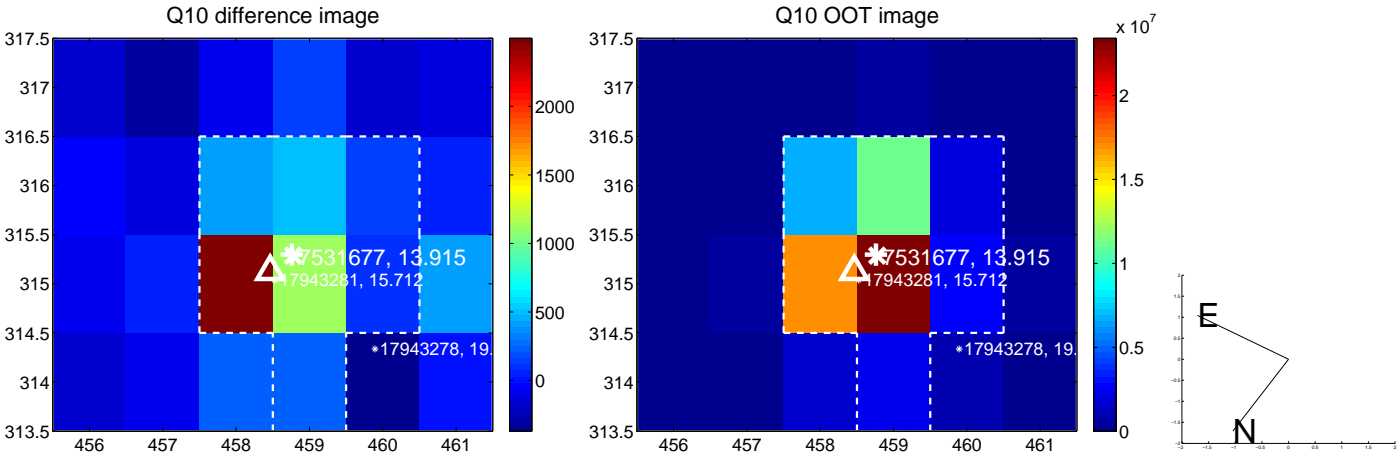
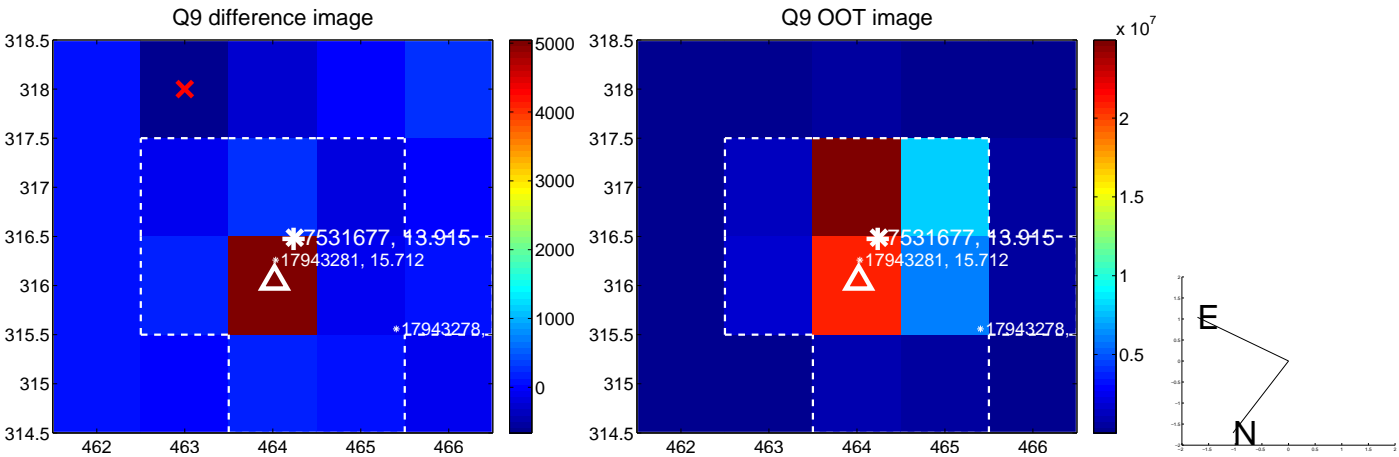
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



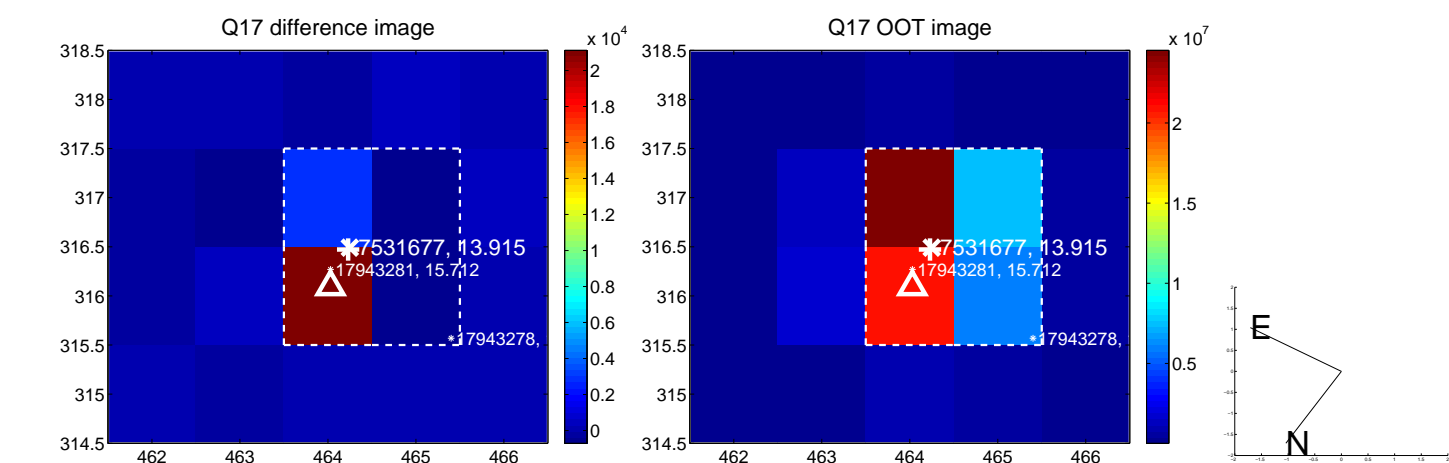
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



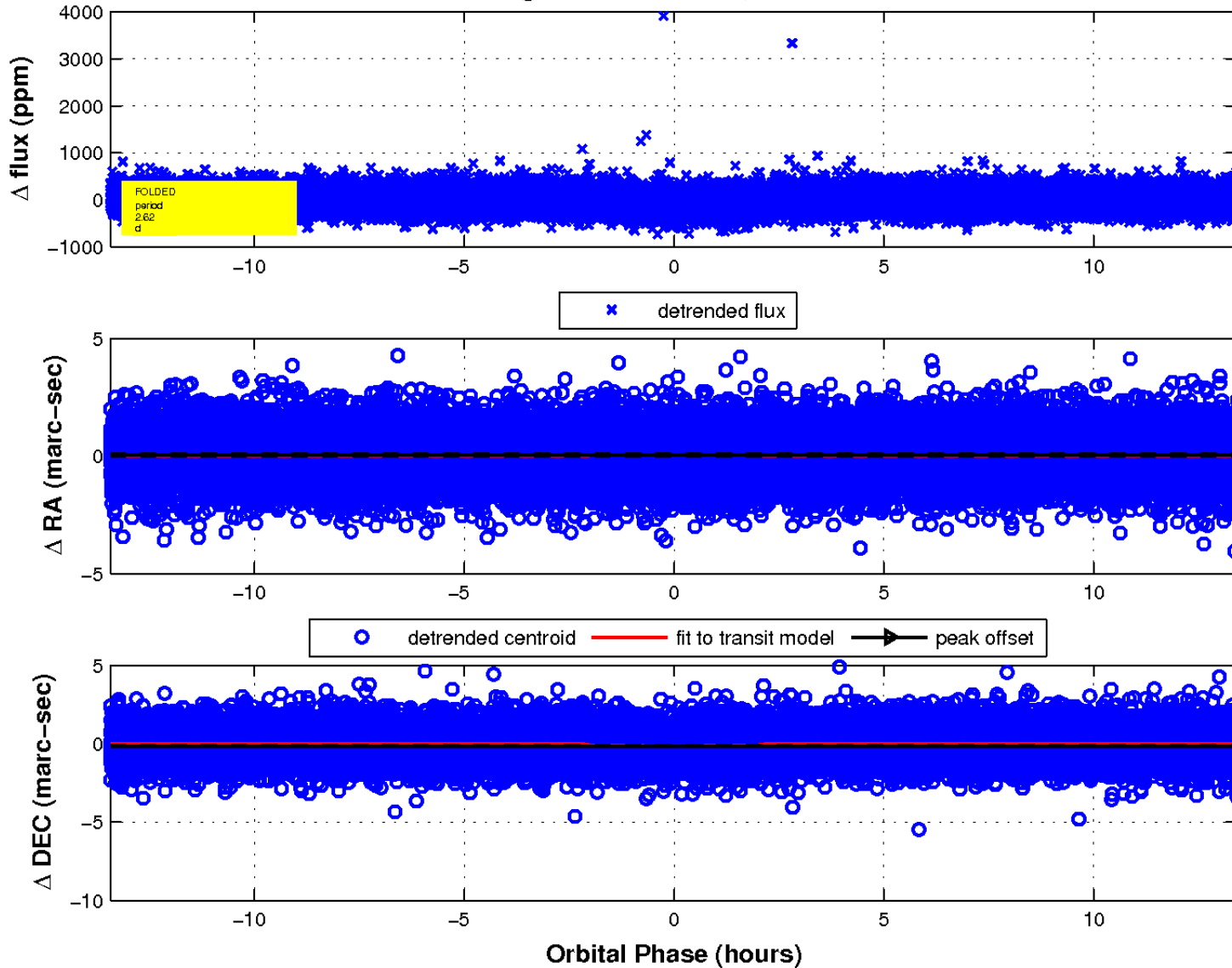
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

