

KIC 011649962

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})
011649962-01	OBS	No	10.562851	140.151491	564.0	25.813	28.3	37.9	1.37	6756	6.19	333.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011649962-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

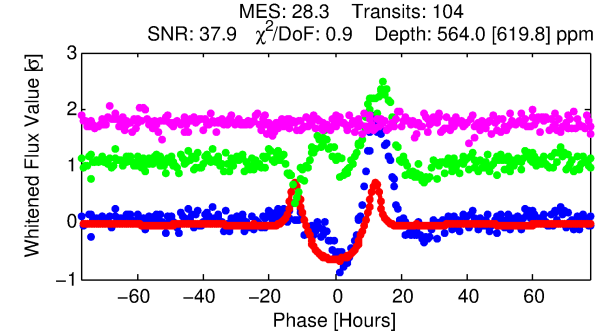
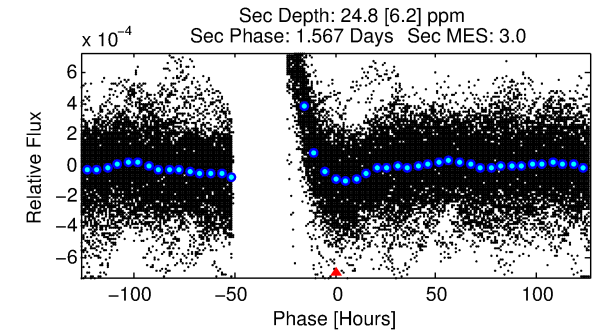
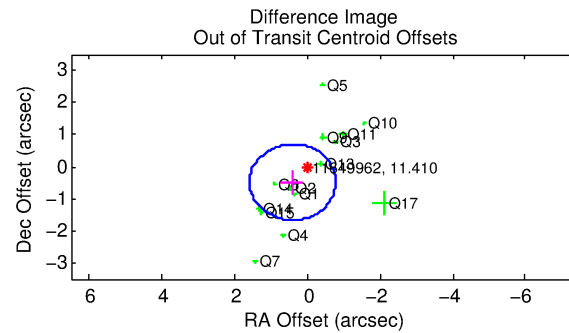
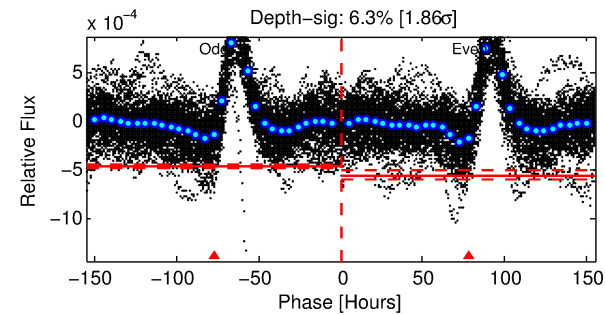
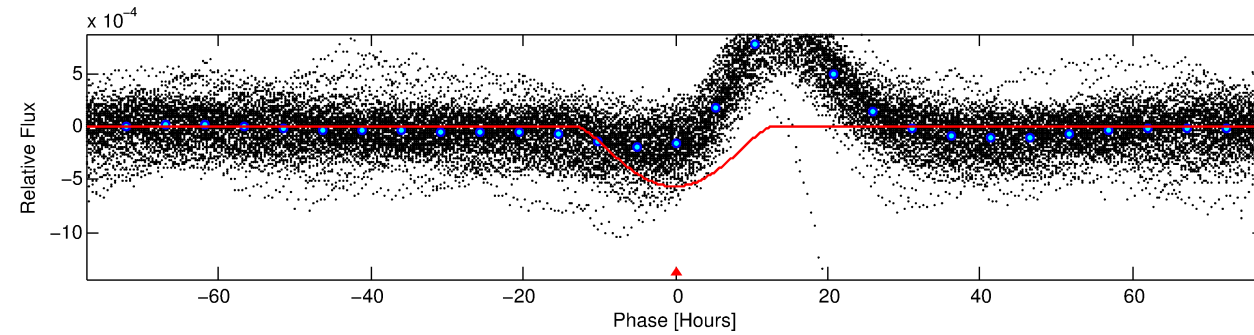
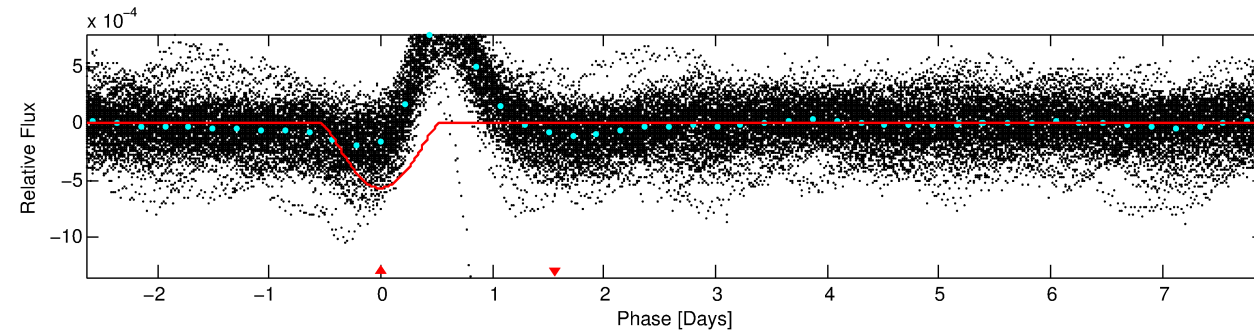
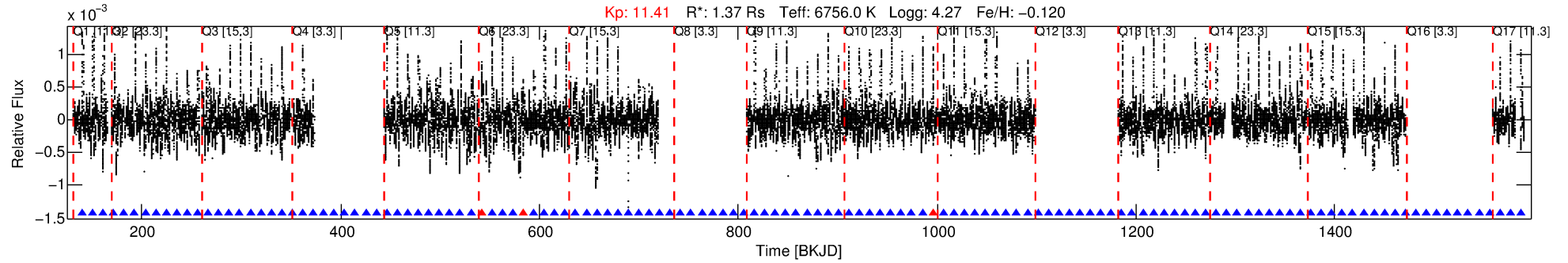
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011649962-01

No Significant Match Found

DV One-Page Summary

KIC: 11649962 Candidate: 1 of 1 Period: 10.563 d



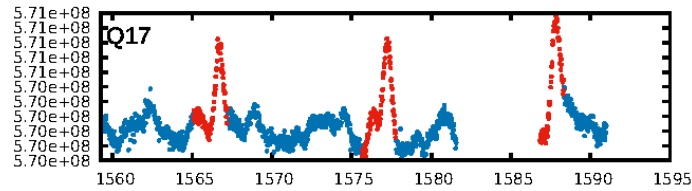
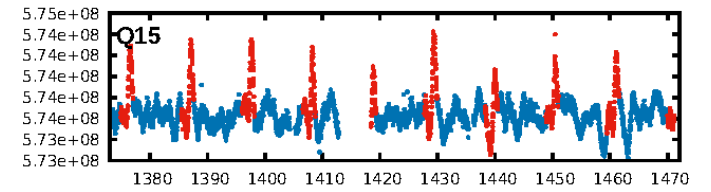
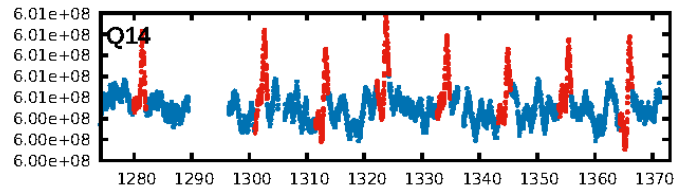
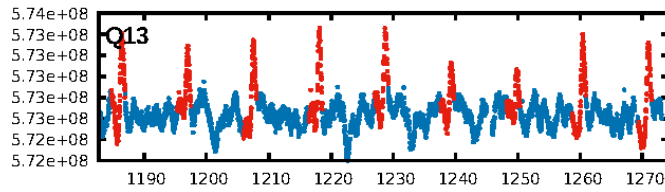
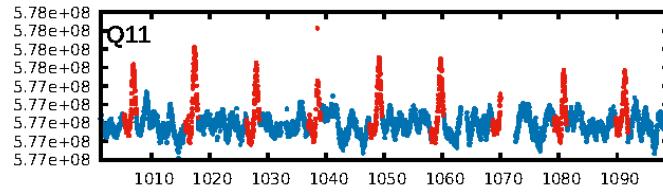
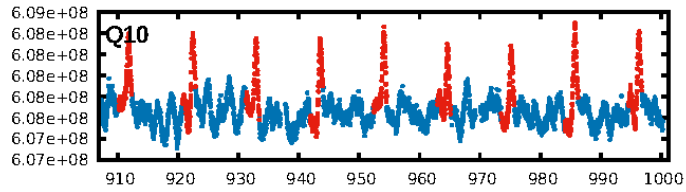
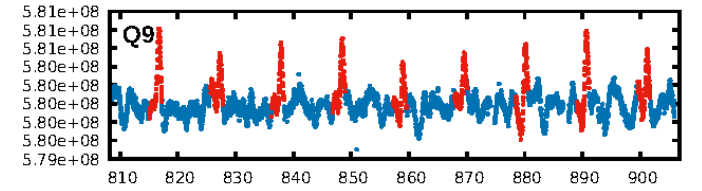
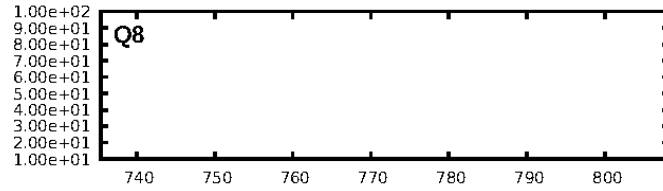
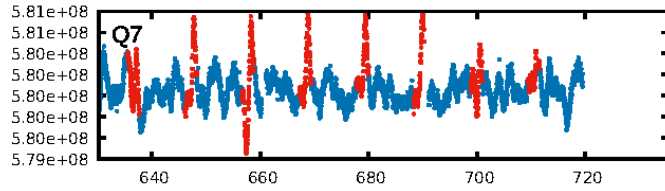
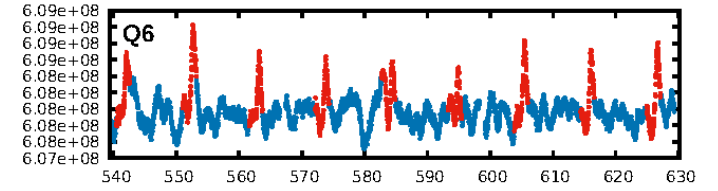
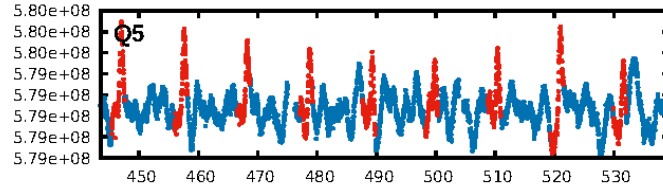
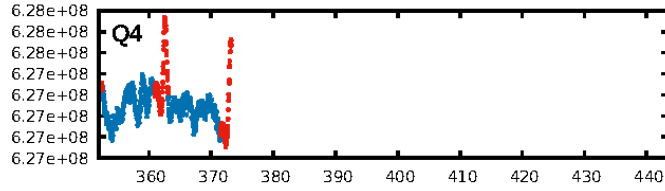
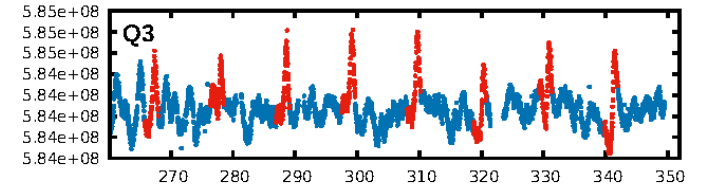
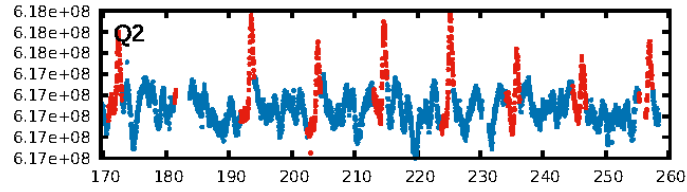
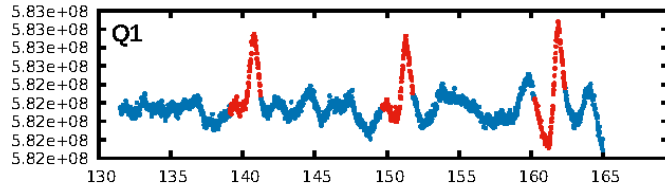
DV Fit Results:

Period = 10.56285 [0.00009] d
Epoch = 140.1515 [0.0067] BKJD
Rp/R* = 0.0415 [0.0067]
a/R* = 1.36 [0.02]
b = 1.00 [0.02]
Seff = 333.17 [96.94]
Teff = 1089 [79] K
Rp = 6.19 [1.73] Re
a = 0.1024 [0.0189] AU
Ag = 3.73 [1.81] [1.51 σ]
Teffp = 2341 [251] K [4.75 σ]

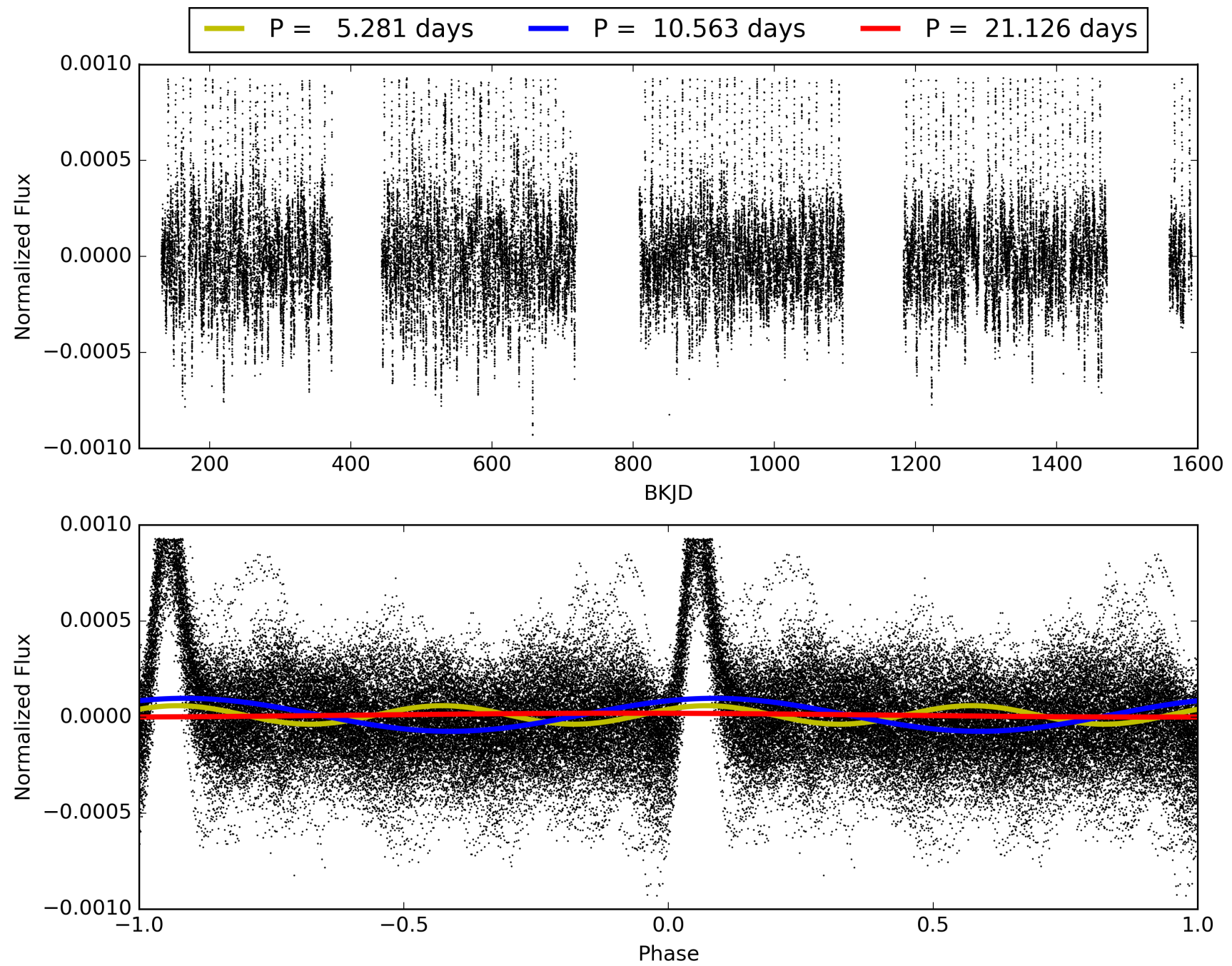
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.22e-160
RollingBand-fgt: 0.97 [93/96]
GhostDiagnostic-chr: 0.7264
Centroid-sig: 9.2%
Centroid-so: 0.242 arcsec [4.10 σ]
OotOffset-rm: 0.632 arcsec [1.60 σ]
KicOffset-rm: 0.745 arcsec [1.74 σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 011649962-01, PDC Light Curves

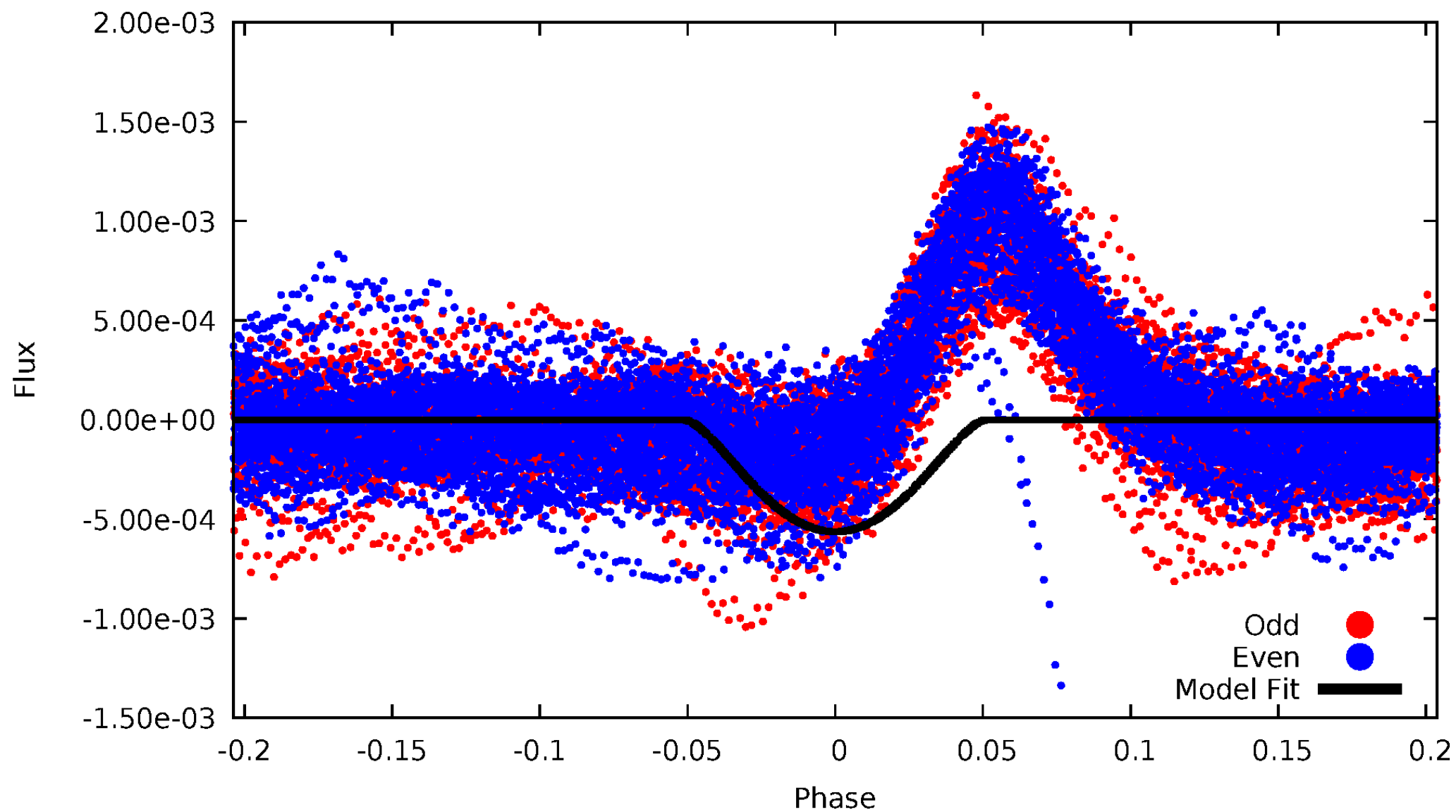


TCE 011649962-01



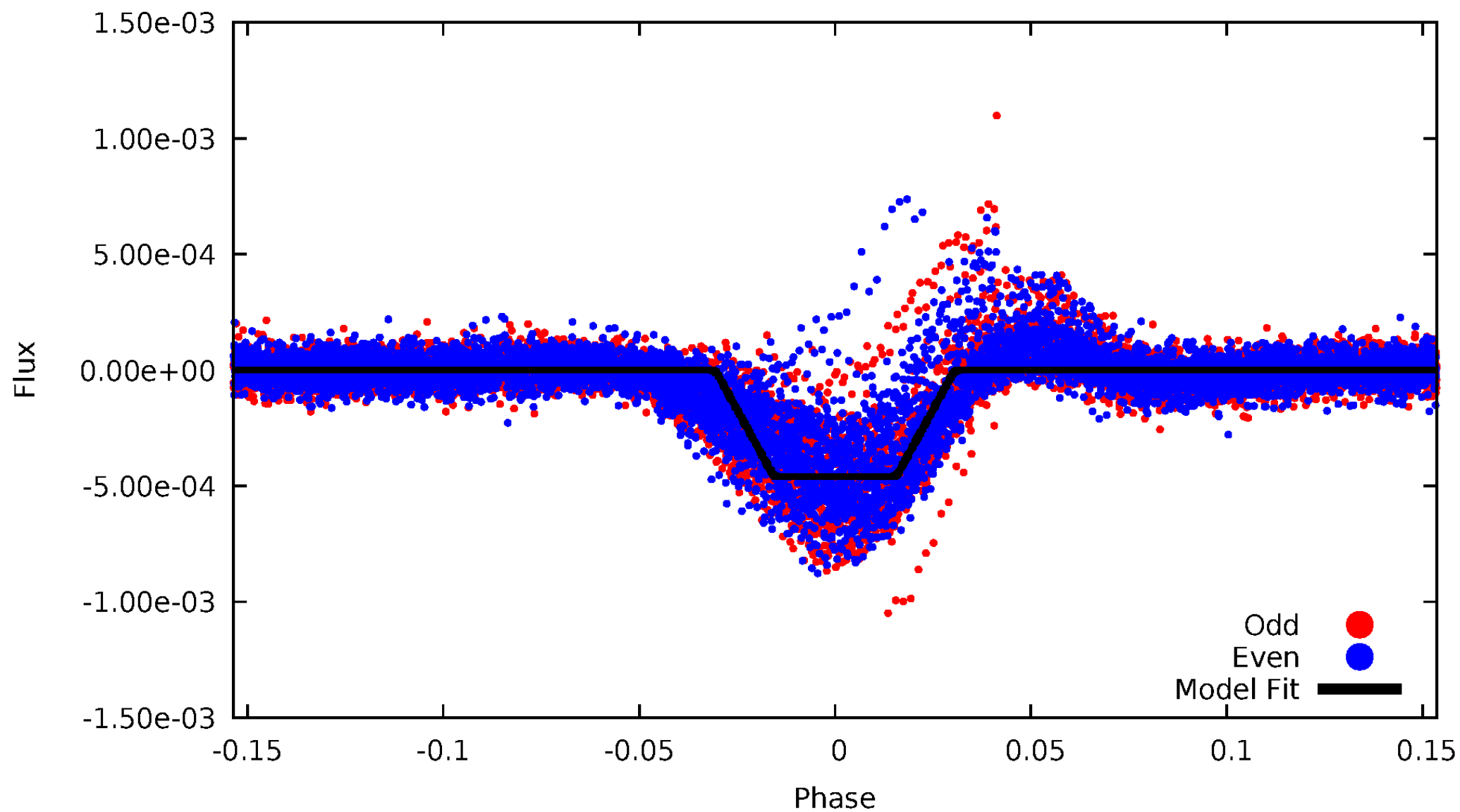
DV Odd/Even

TCE 011649962-01



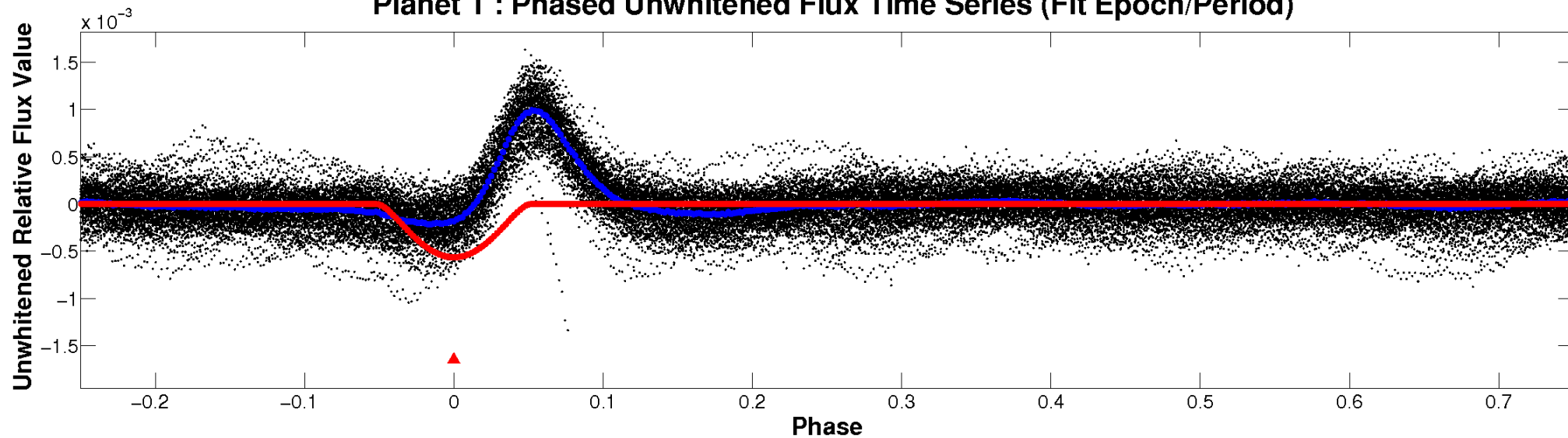
ALT Odd/Even

TCE 011649962-01

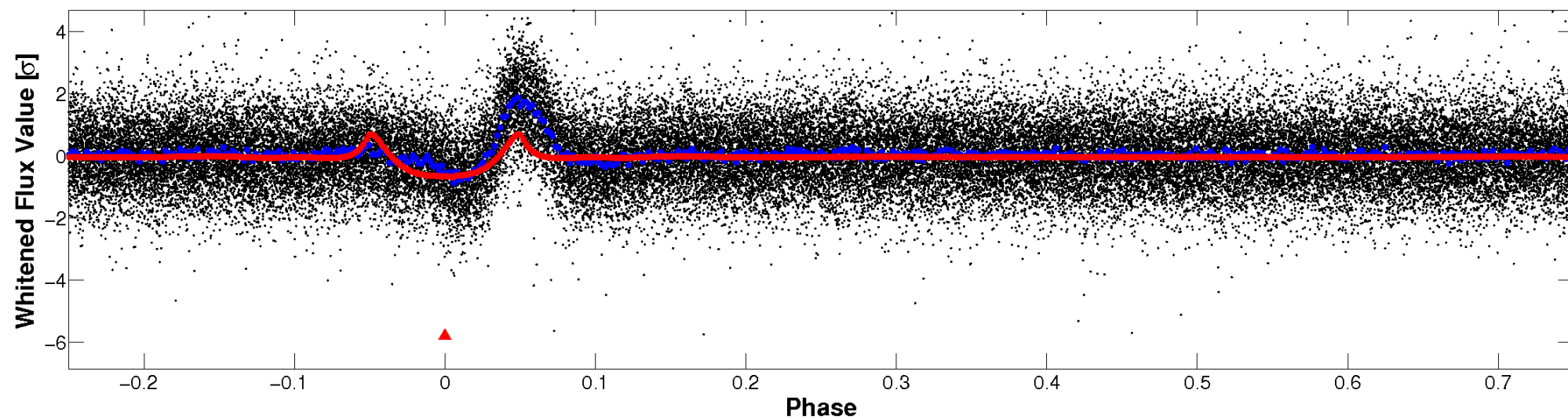


Non-Whitened Vs. Whitened Light Curve

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

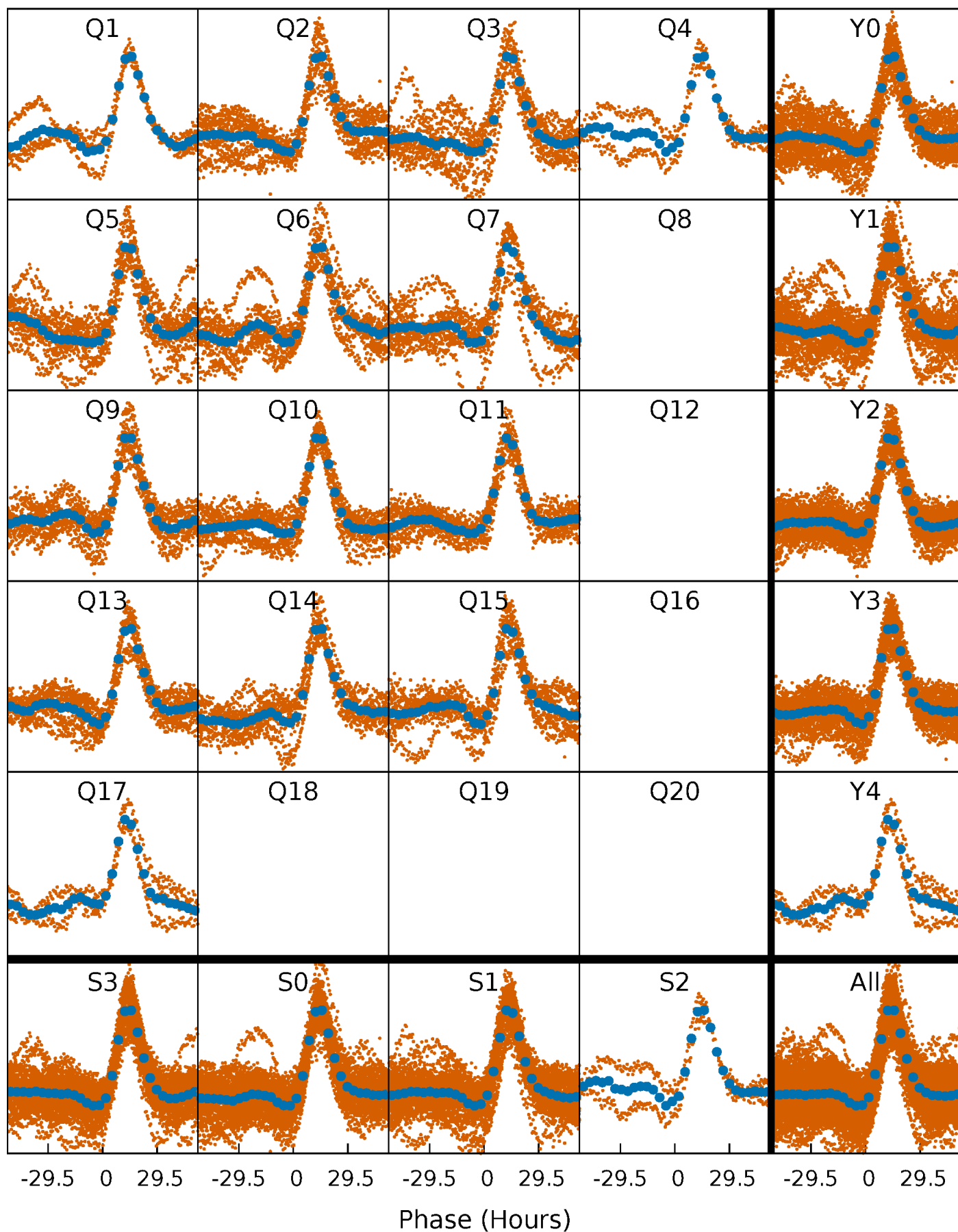


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



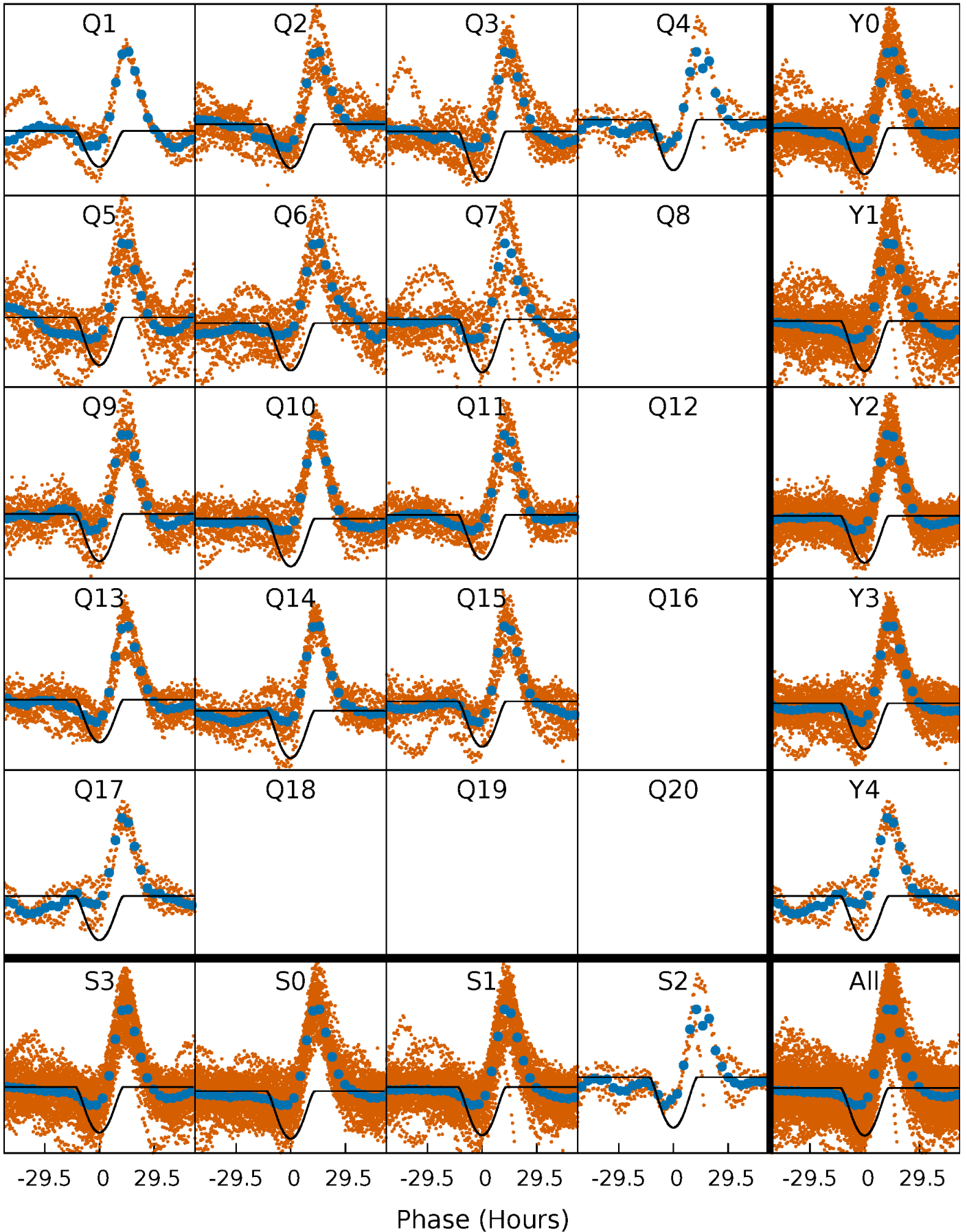
PDC Quarter-Phased Transit Curves

TCE 011649962-01 P= 10.562851 Days $T_0=140.151491$ (BKJD)



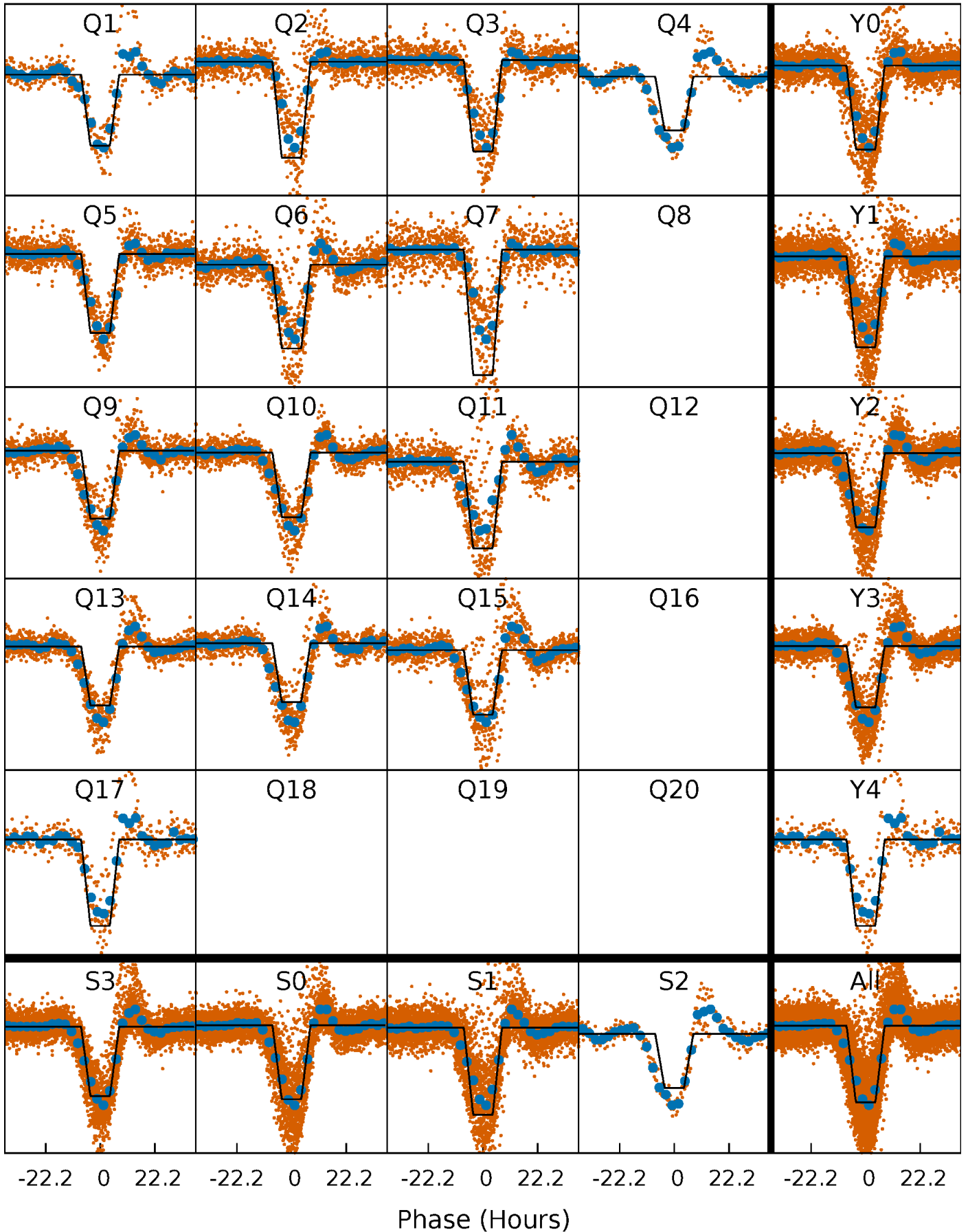
DV Quarter-Phased Transit Curves

TCE 011649962-01 P= 10.562851 Days $T_0=140.151491$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

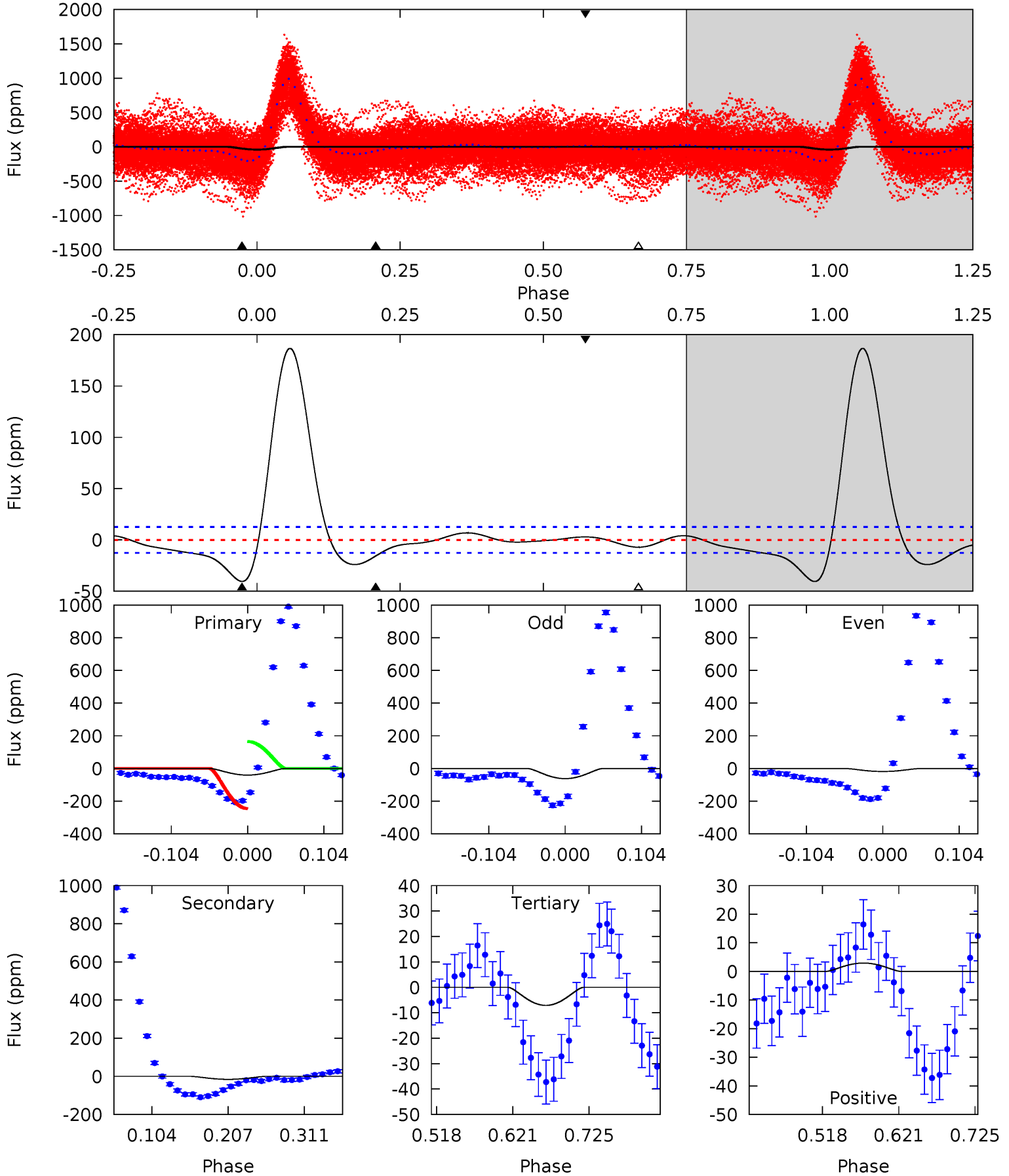
TCE 011649962-01 P= 10.562654 Days $T_0=140.236405$ (BKJD)



DV Model-Shift Uniqueness Test

011649962-01, P = 10.562851 Days, E = 129.588640 Days

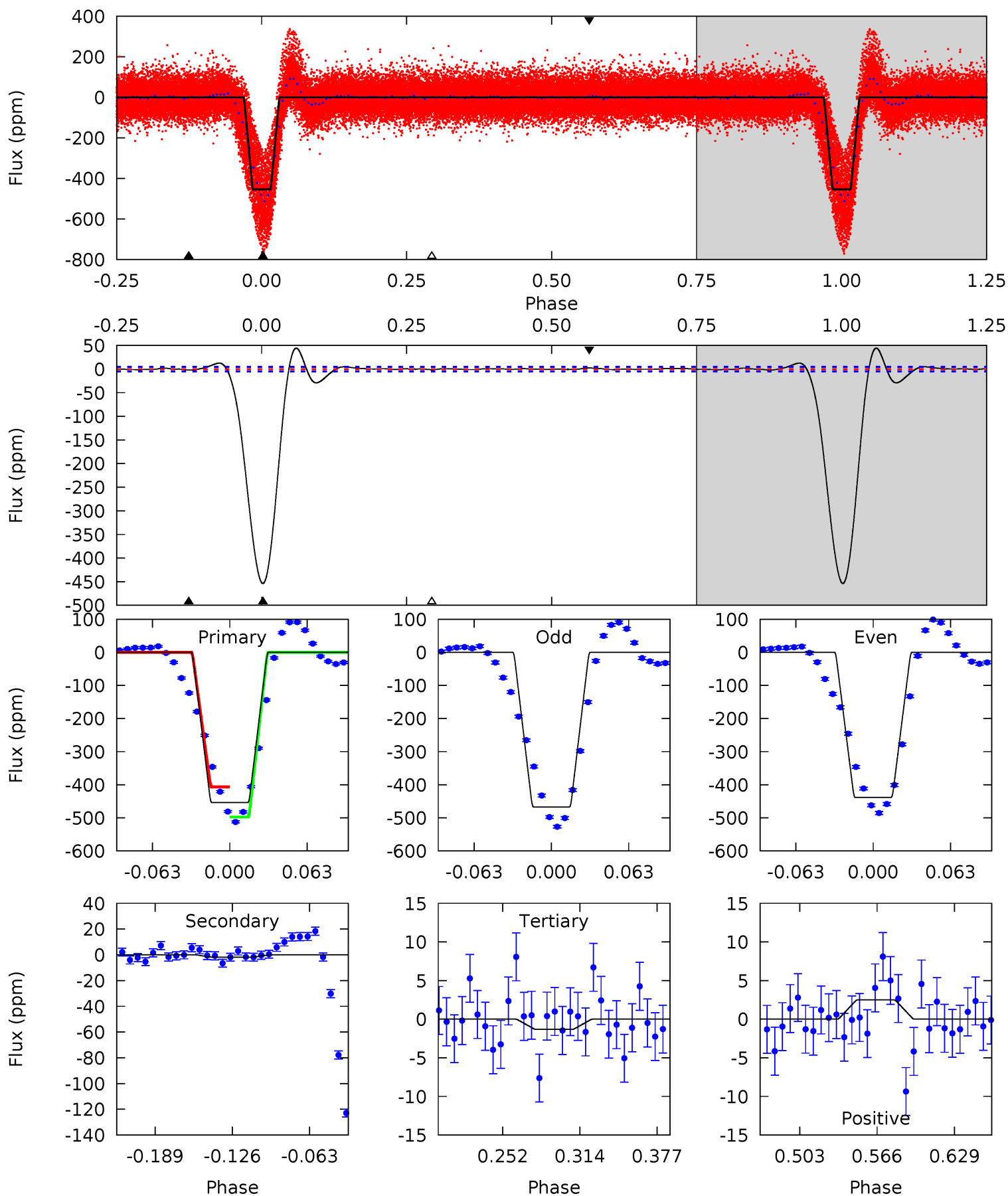
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	5.66	2.56	1.06	4.56	1.63	8.35	12.1	13.6	3.10	4.60	7.89	1.04	0.82	15.5



Alt Model-Shift Uniqueness Test

011649962-01, P = 10.562654 Days, E = 129.673751 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
439.6	1.87	1.28	2.43	4.66	1.86	5.74	438.3	437.2	0.59	-0.55	14.0	0.93	0.09	43.7



Stellar Parameters For KIC 011649962

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6756^{+151}_{-219}	$4.274^{+0.092}_{-0.138}$	$-0.120^{+0.250}_{-0.300}$	$1.368^{+0.311}_{-0.181}$	$1.291^{+0.147}_{-0.196}$	$0.710^{+0.297}_{-0.290}$
	+2%/-3%	+2%/-3%	+208%/-250%	+23%/-13%	+11%/-15%	+42%/-41%
Source	PHO1	FLK73	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 011649962-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-16 ± 3	$6.17^{+1.21}_{-1.06}$	1523^{+83}_{-70}	2766^{+166}_{-150}	$2.344^{+1.230}_{-0.802}$
Alt.	-2 ± 1	$3.30^{+1.10}_{-1.07}$	1525^{+88}_{-74}	2404^{+362}_{-640}	$0.920^{+1.398}_{-0.586}$

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 $A_{\text{obs}} \gg 1.0$

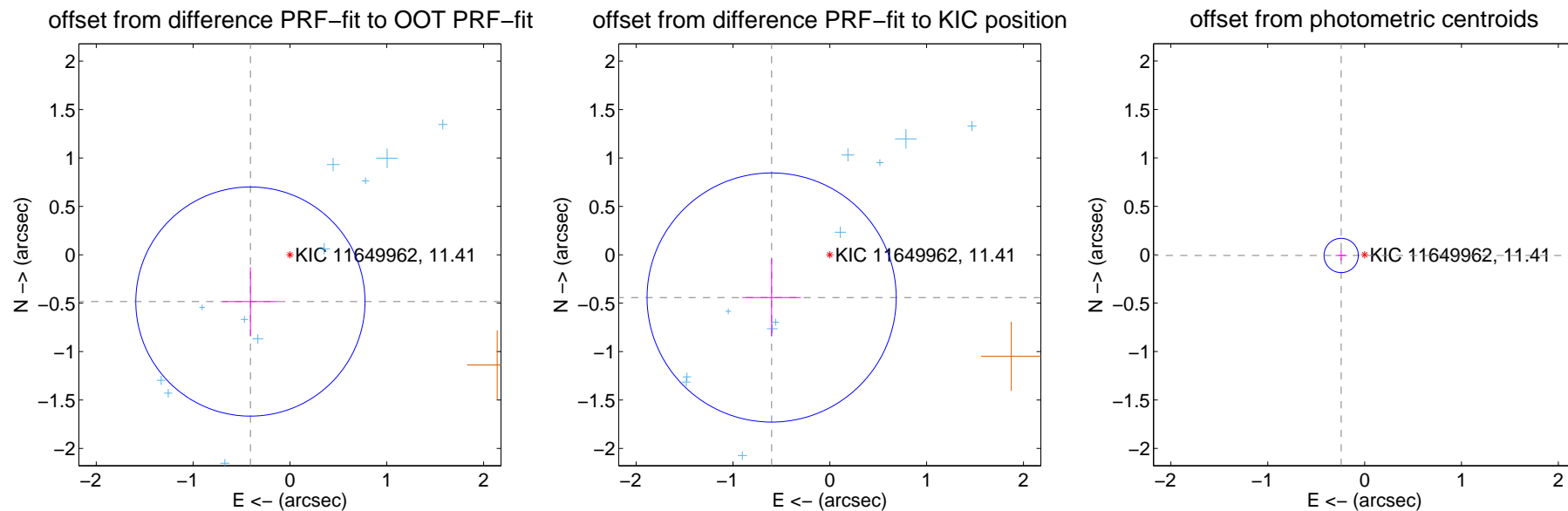
DV Centroid Data

Supplemental centroid analysis for 011649962-01. **Kepler magnitude: 11.41.** Transit SNR 37.89

There are 12 quarters with good PRF difference image offsets

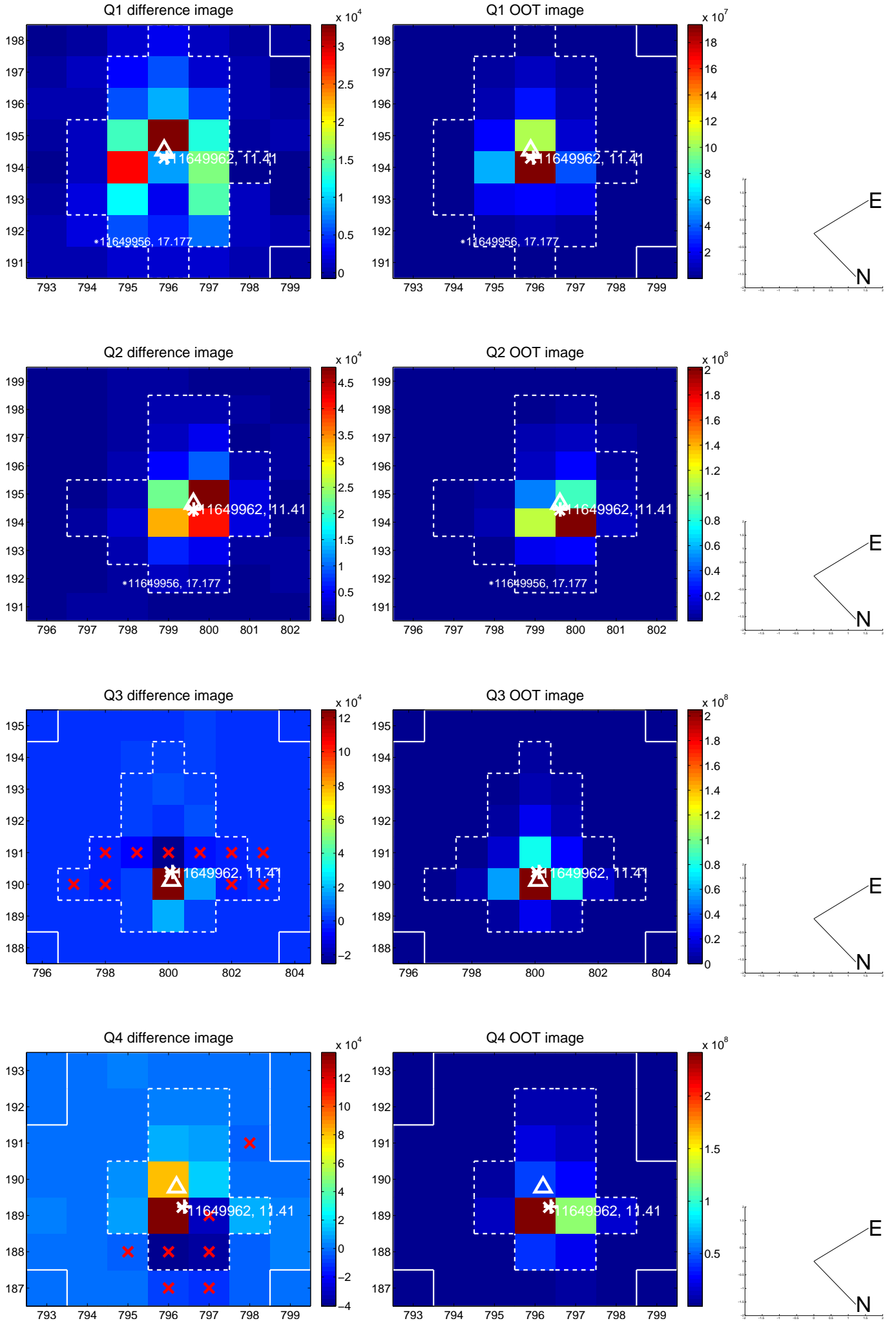
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.632 ± 0.394	1.60	0.408 ± 0.284	-0.483 ± 0.354
PRF-fit source offset from KIC position	0.745 ± 0.429	1.74	0.600 ± 0.302	-0.441 ± 0.399
photometric centroid source offset	0.24 ± 0.06	4.10	0.24 ± 0.06	-0.01 ± 0.05

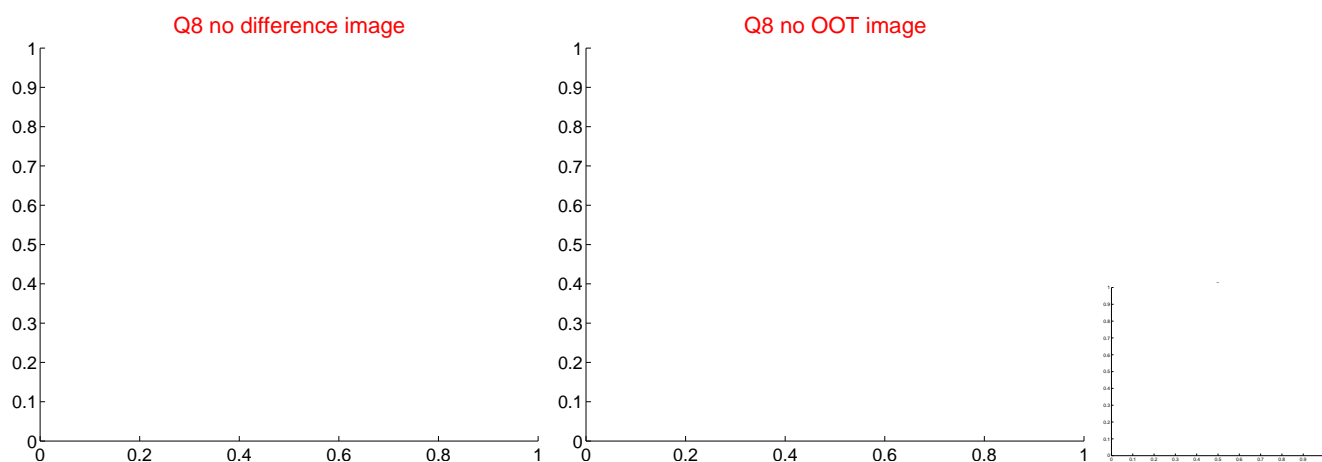
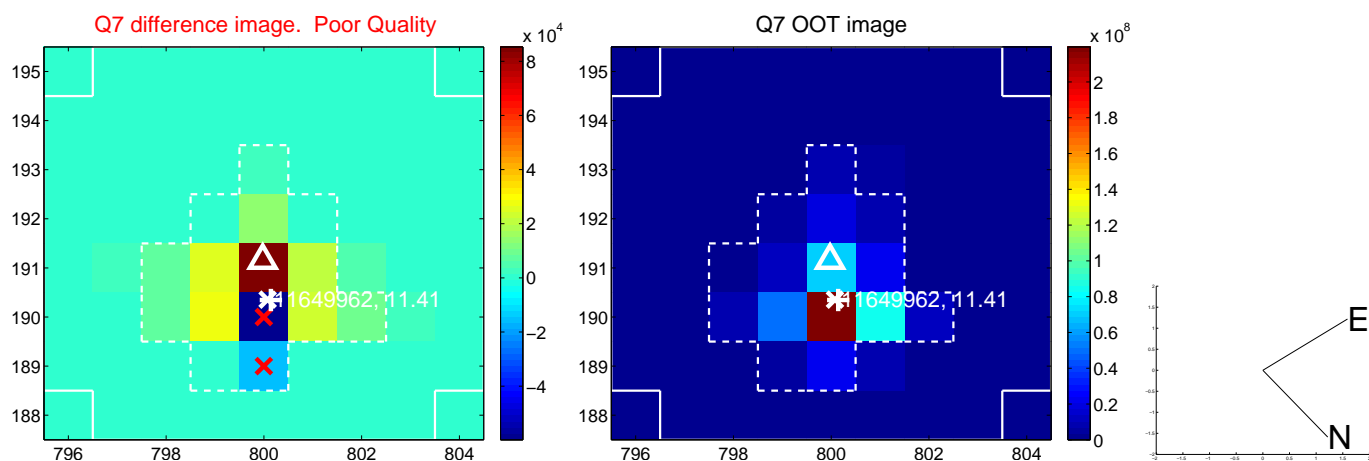
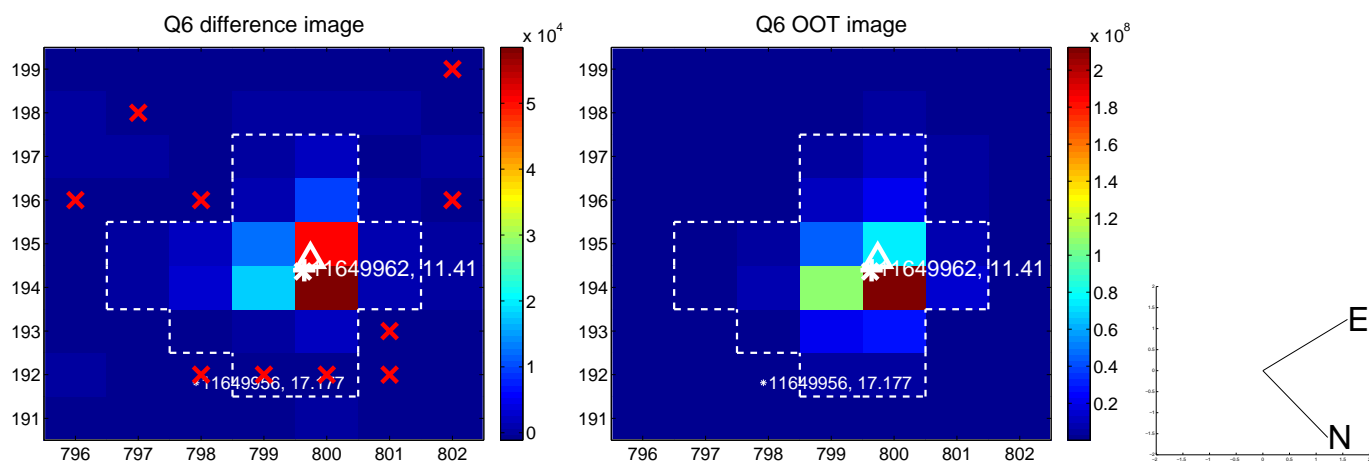
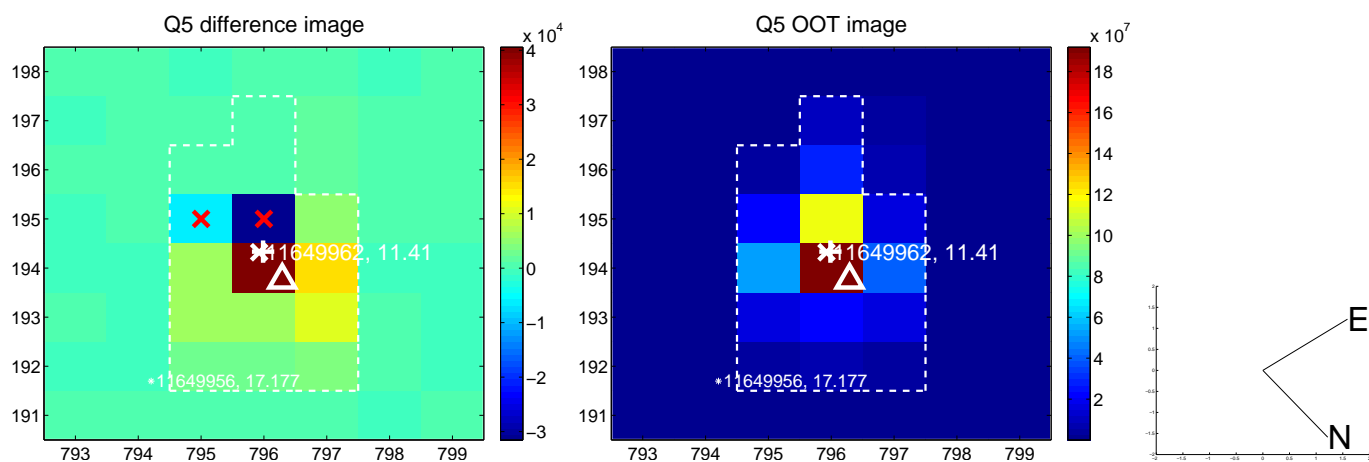


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

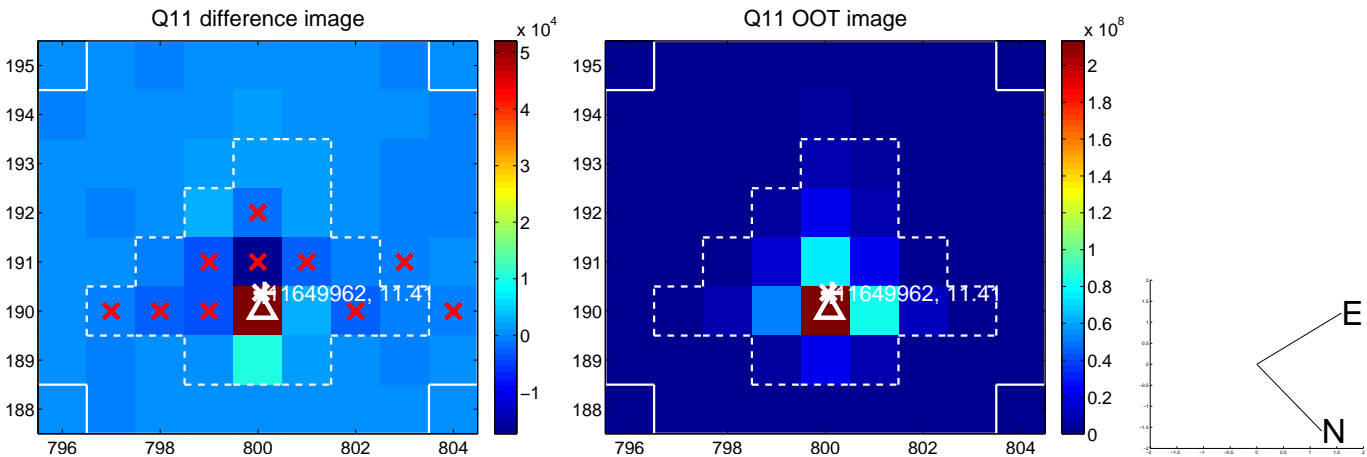
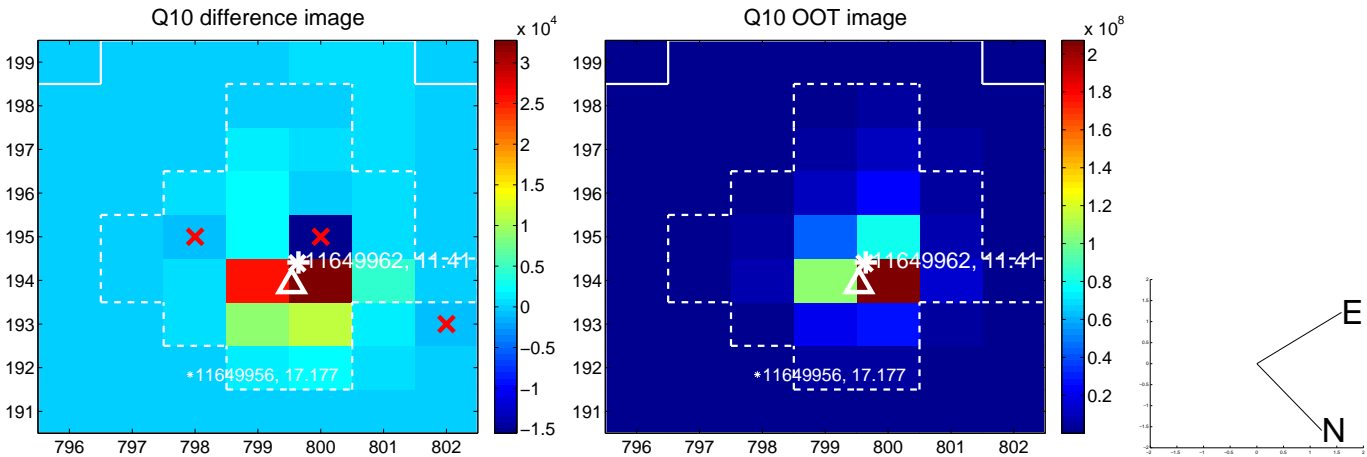
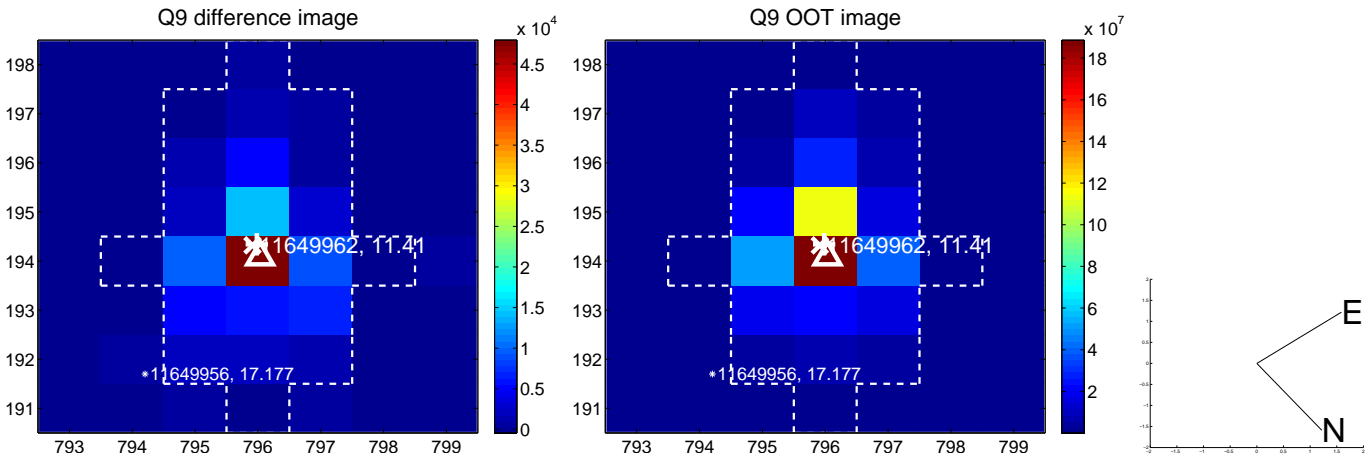
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



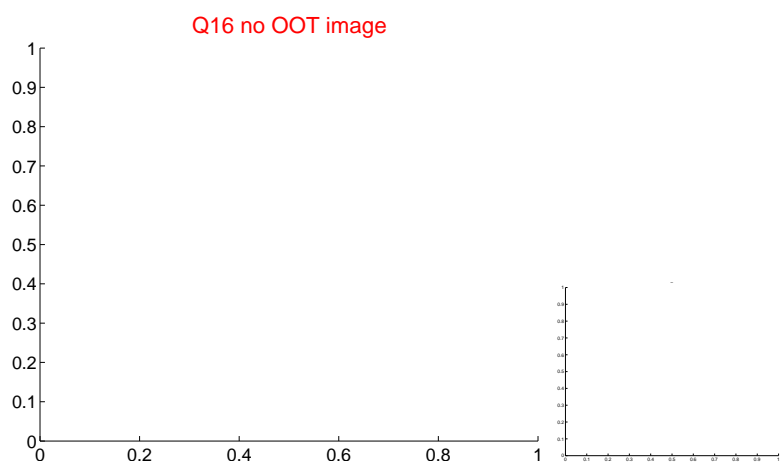
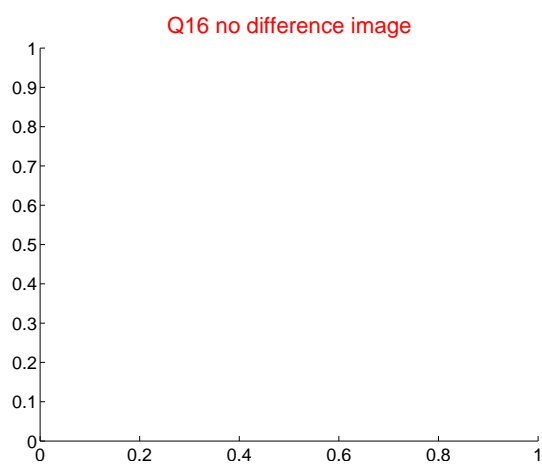
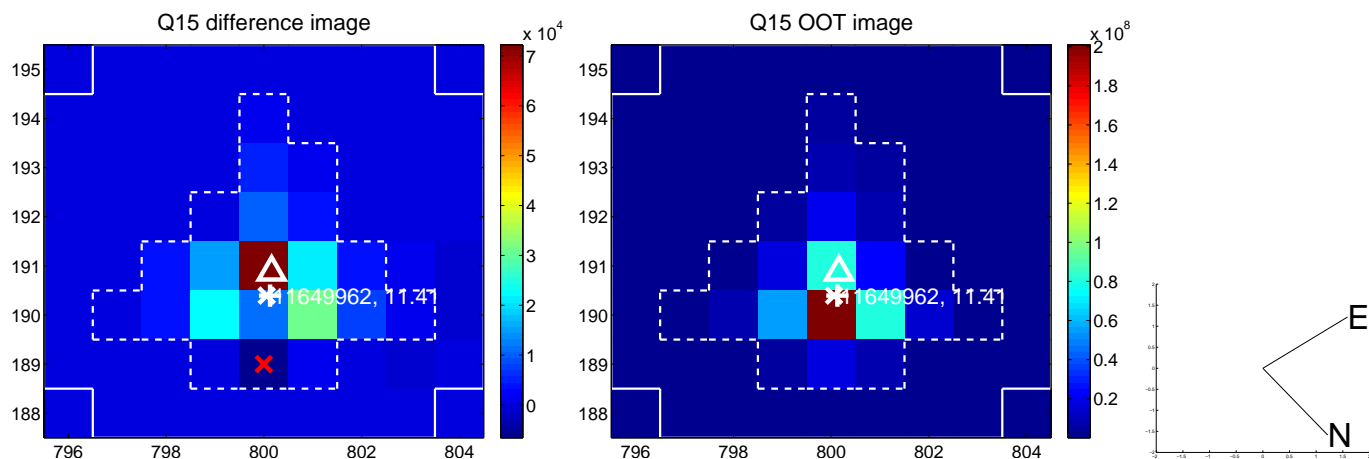
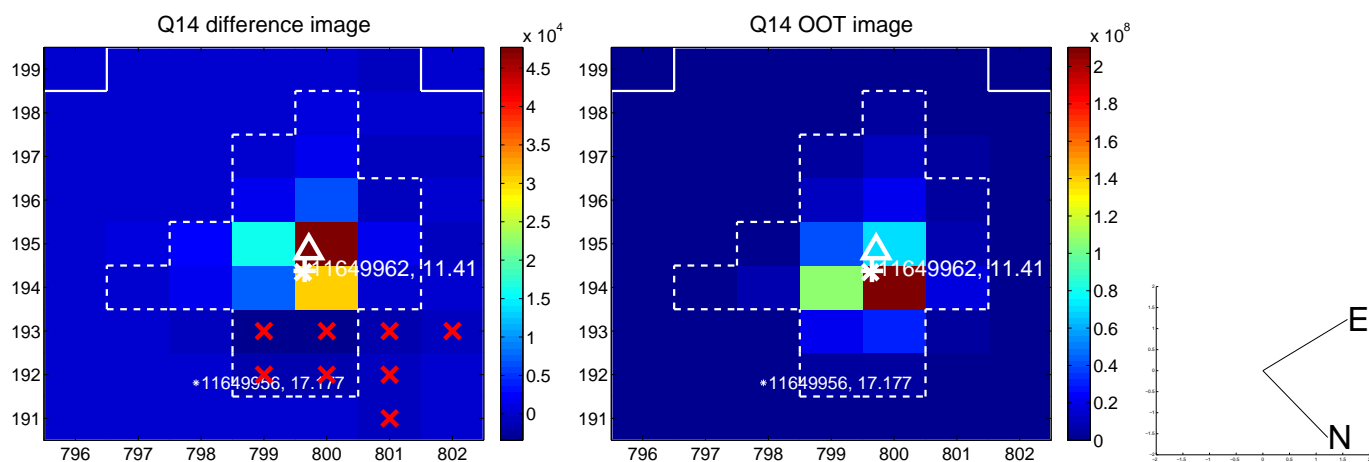
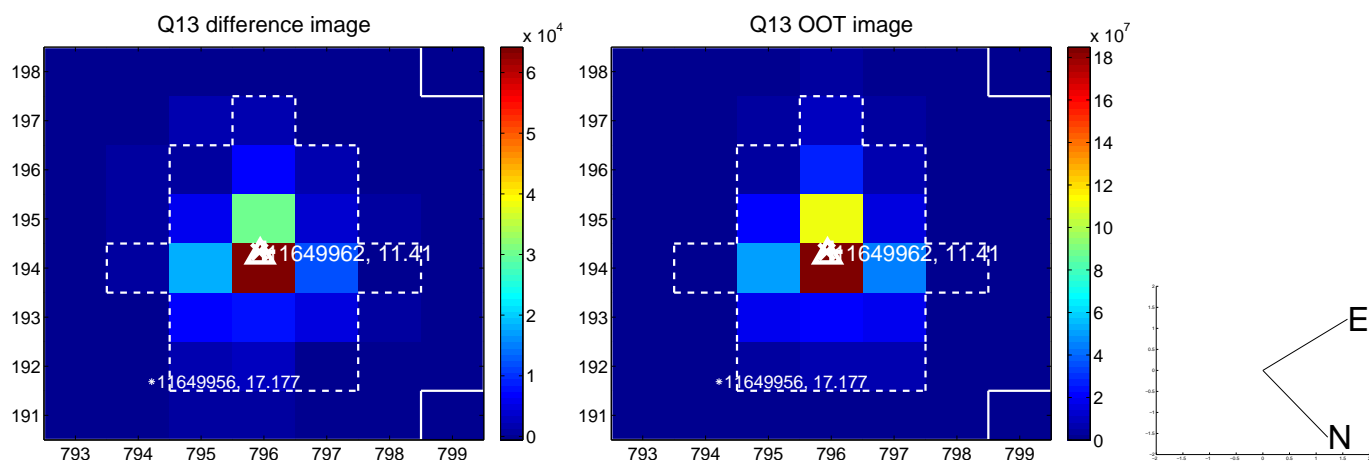
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



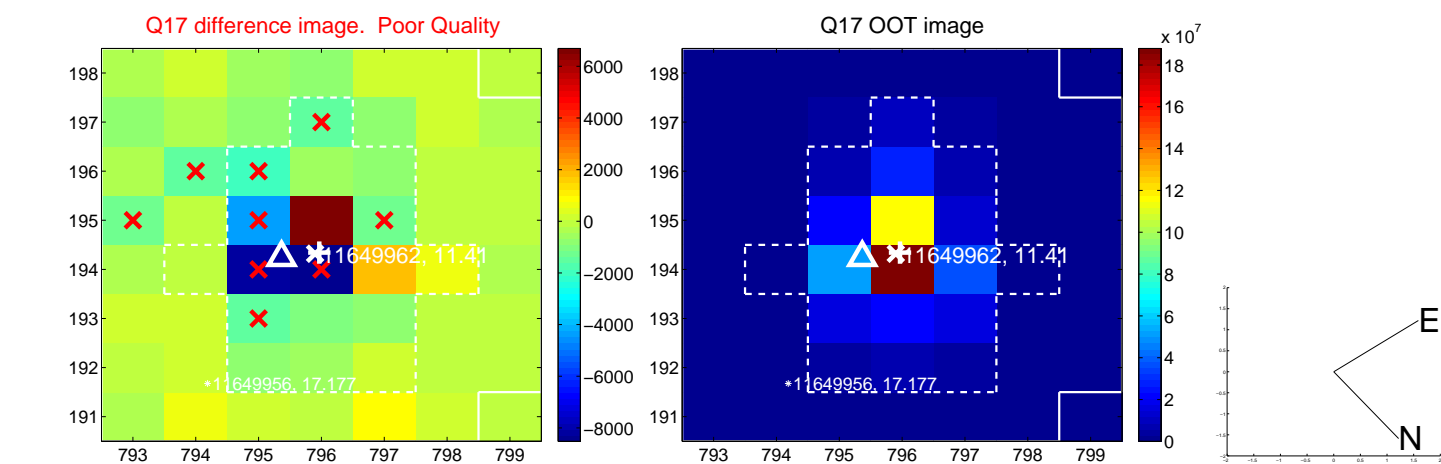
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



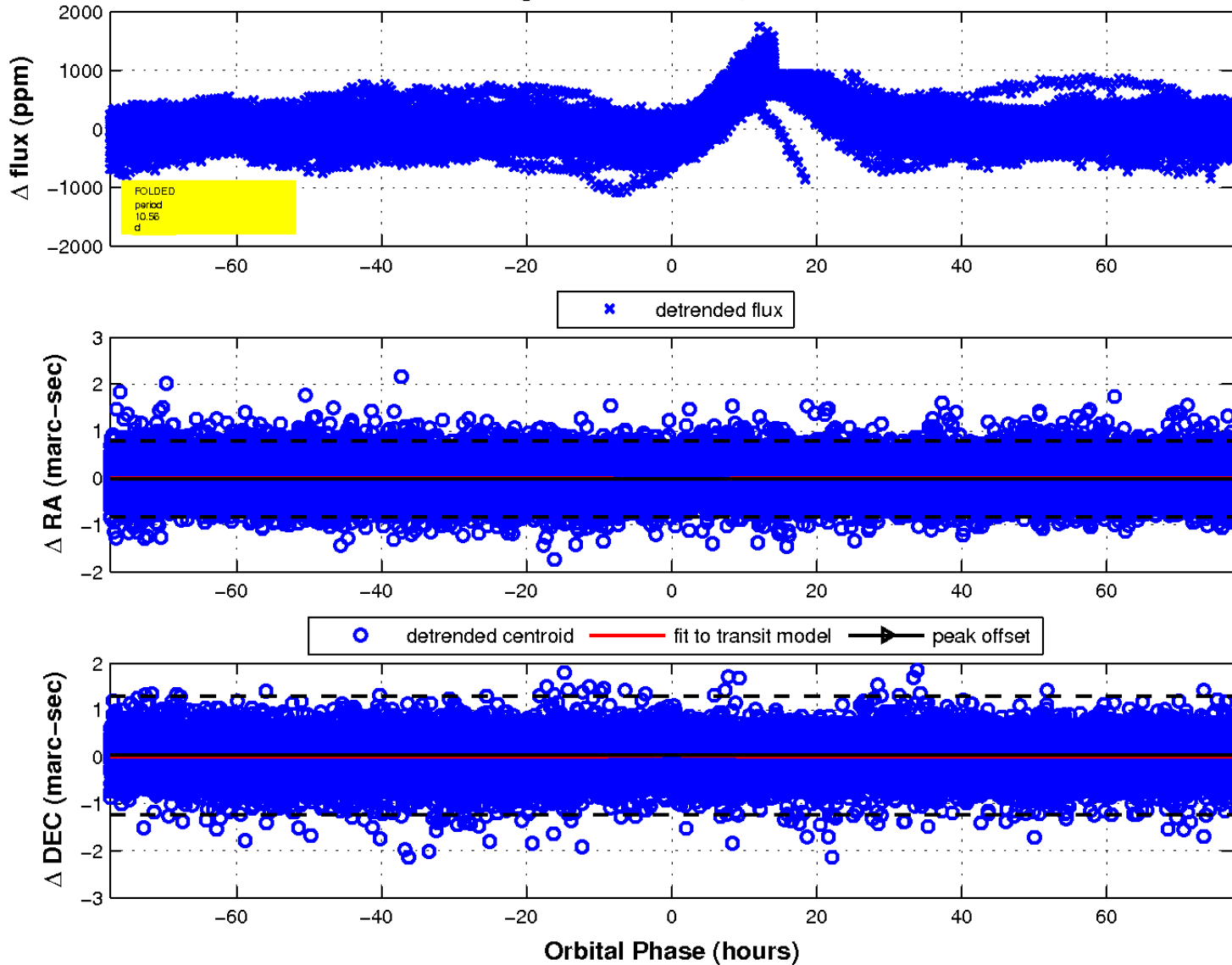
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

