

KIC 005166960

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})
005166960-01	OBS	No	0.557923	132.006272	24.4	3.429	9.2	8.1	2.68	7211	1.42	74947.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005166960-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

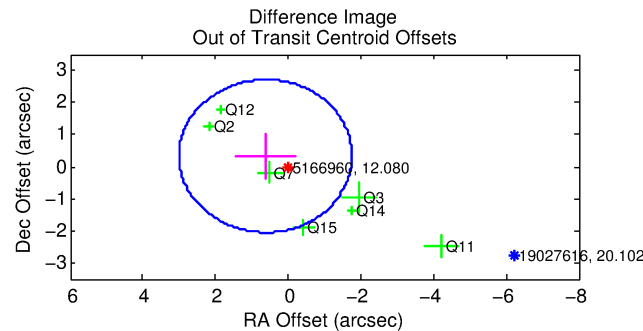
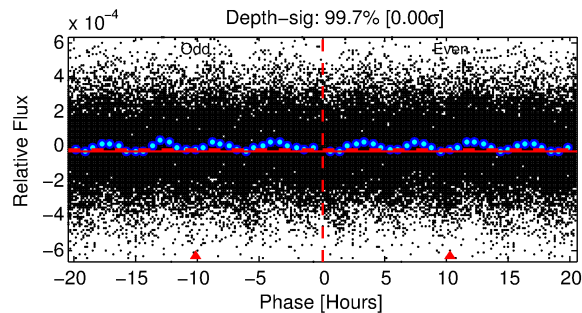
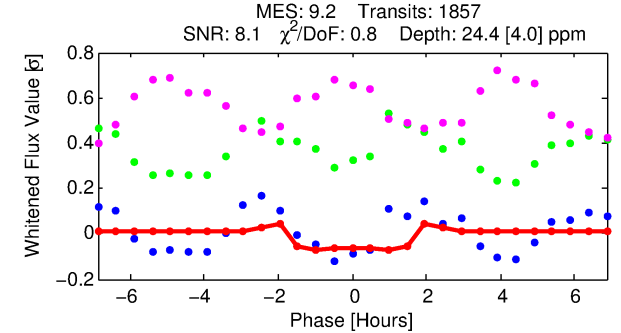
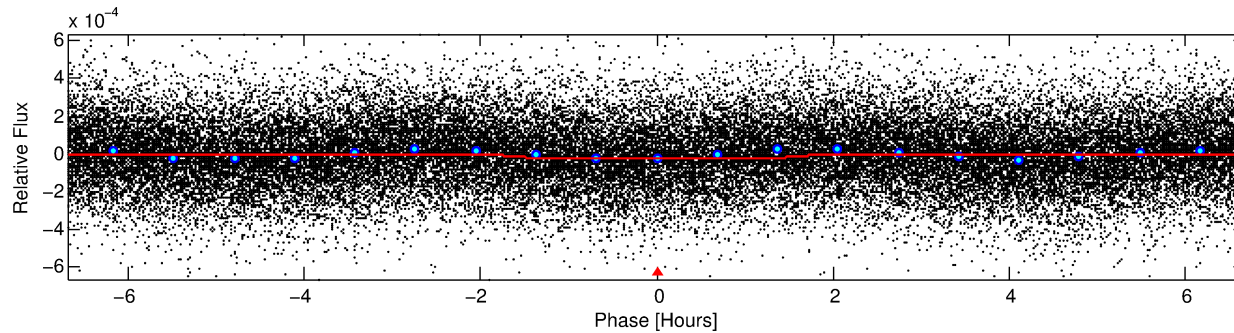
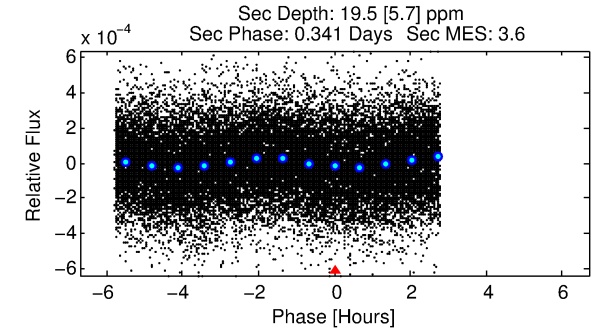
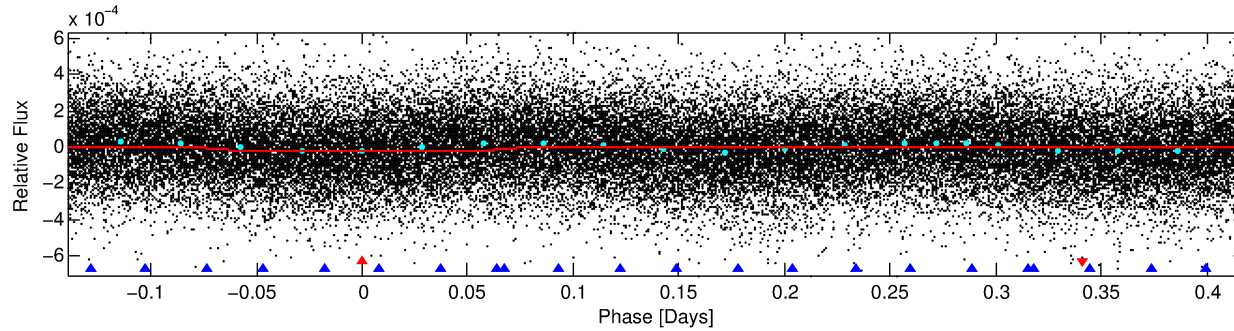
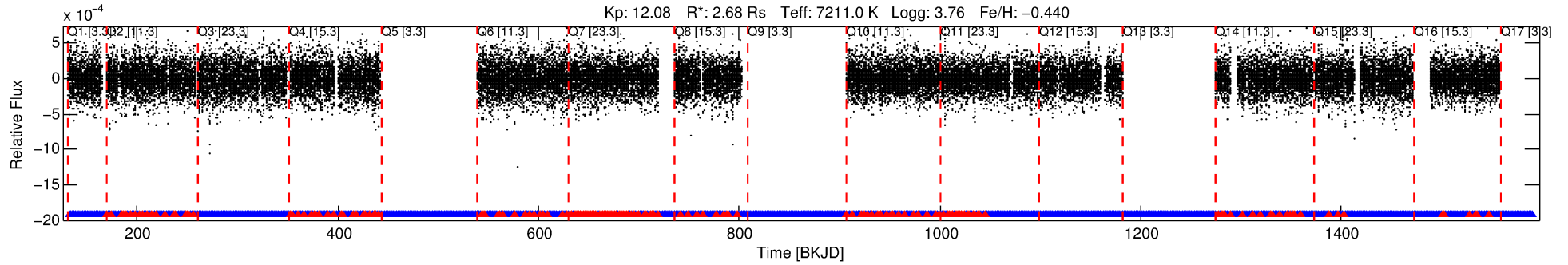
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005166960-01

No Significant Match Found

DV One-Page Summary

KIC: 5166960 Candidate: 1 of 2 Period: 0.558 d



DV Fit Results:

Period = 0.55792 [0.00001] d
Epoch = 132.0063 [0.0023] BKJD
Rp/R* = 0.0049 [0.0012]
a/R* = 1.22 [0.55]
b = 0.70 [1.01]
Seff = 74947.89 [58160.79]
Teq = 4219 [819] K
Rp = 1.42 [0.76] Re
a = 0.0152 [0.0071] AU
Ag = 1.24 [1.18] [0.20σ]
Teffp = 6879 [1042] K [2.01σ]

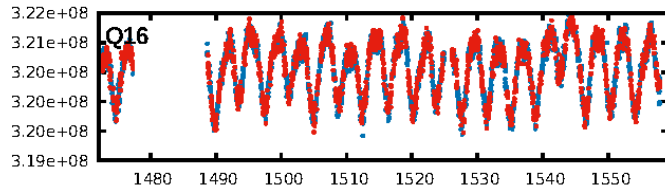
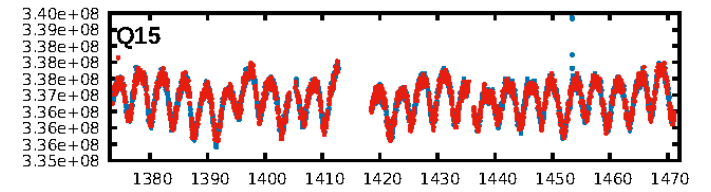
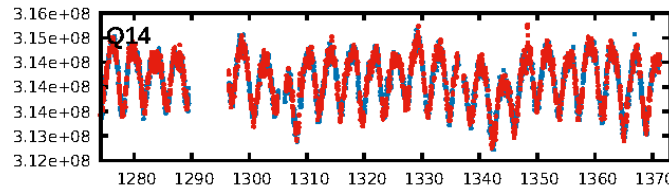
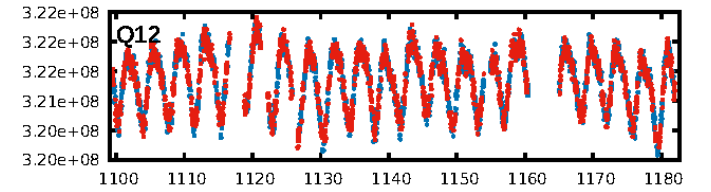
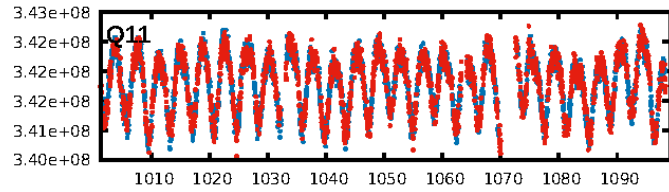
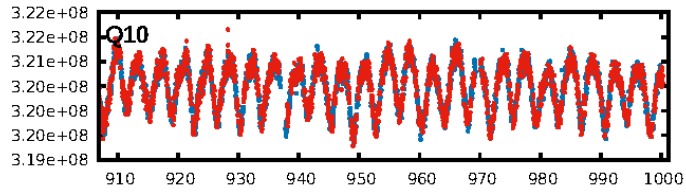
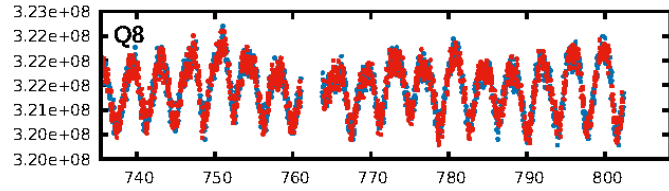
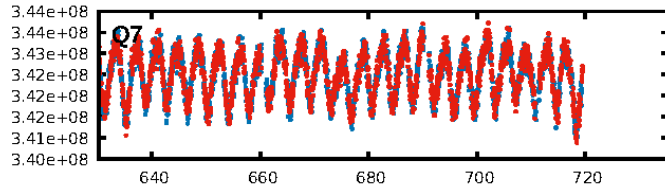
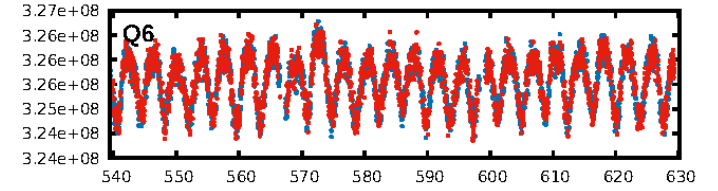
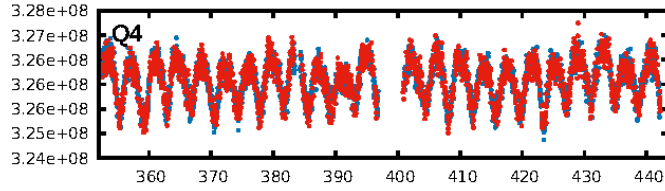
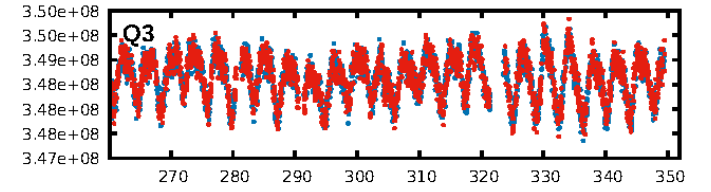
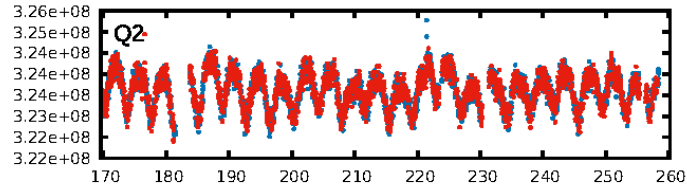
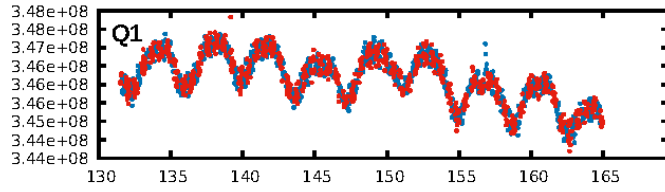
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [271.77σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.01e-23
RollingBand-fgt: 0.87 [1565/1796]
GhostDiagnostic-chr: 0.4013
Centroid-sig: 85.5%
Centroid-so: 0.254 arcsec [0.53σ]
OotOffset-rm: 0.712 arcsec [0.90σ]
OotOffset-st: 2/4/1/0 [7]
KicOffset-rm: 0.843 arcsec [0.91σ]
KicOffset-st: 2/4/1/0 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 1.00 [13/13]

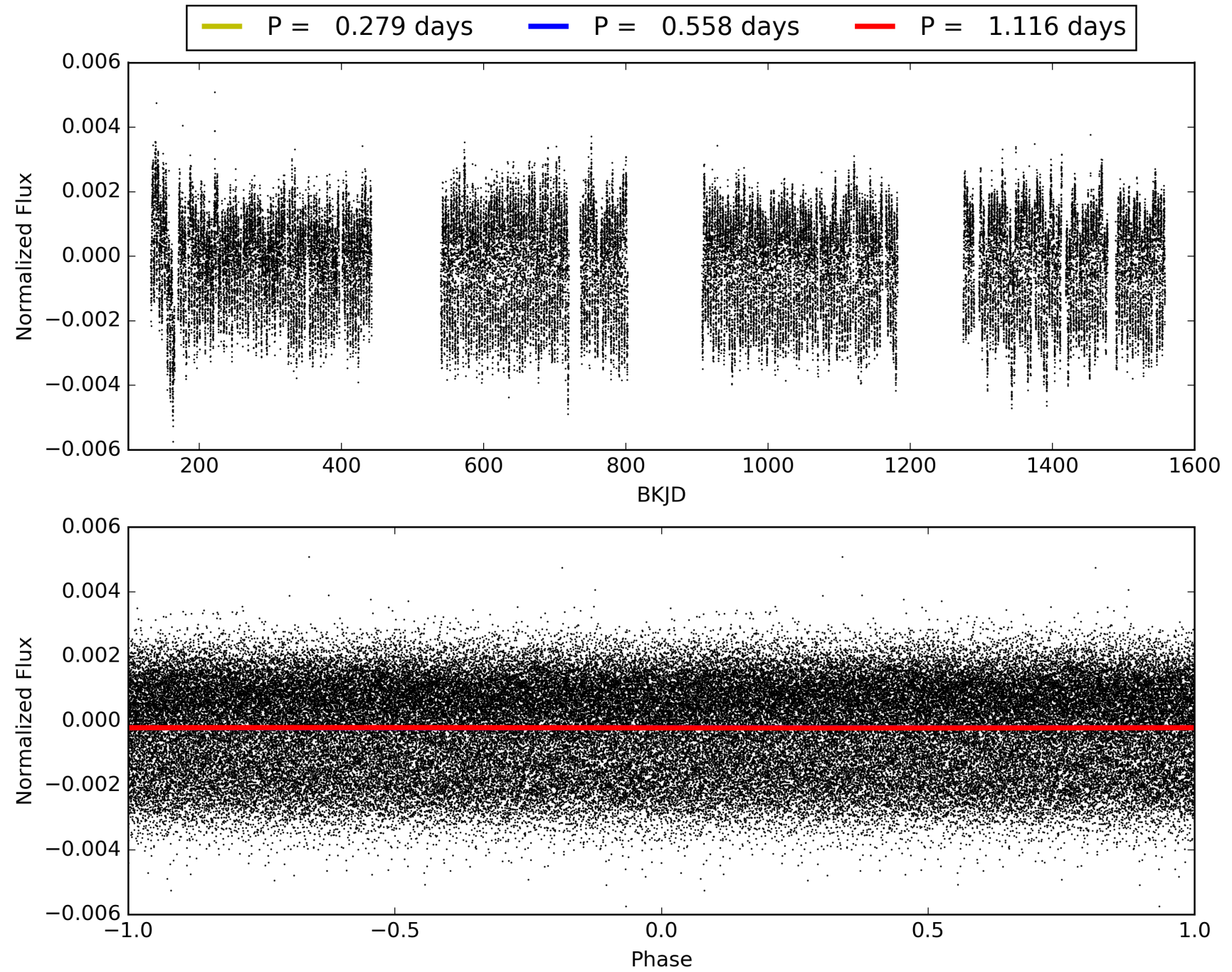
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:31:01 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005166960-01, PDC Light Curves

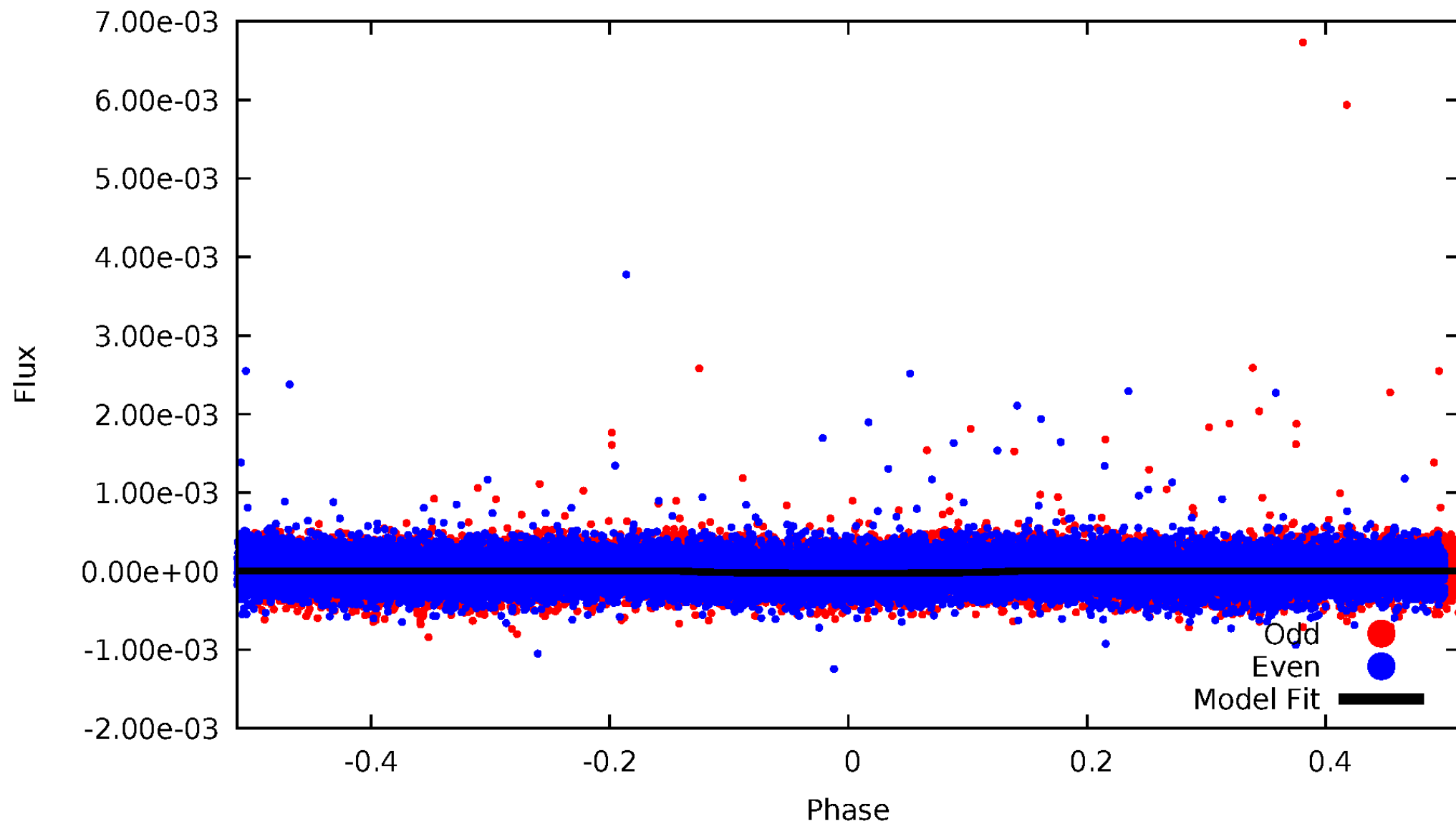


TCE 005166960-01



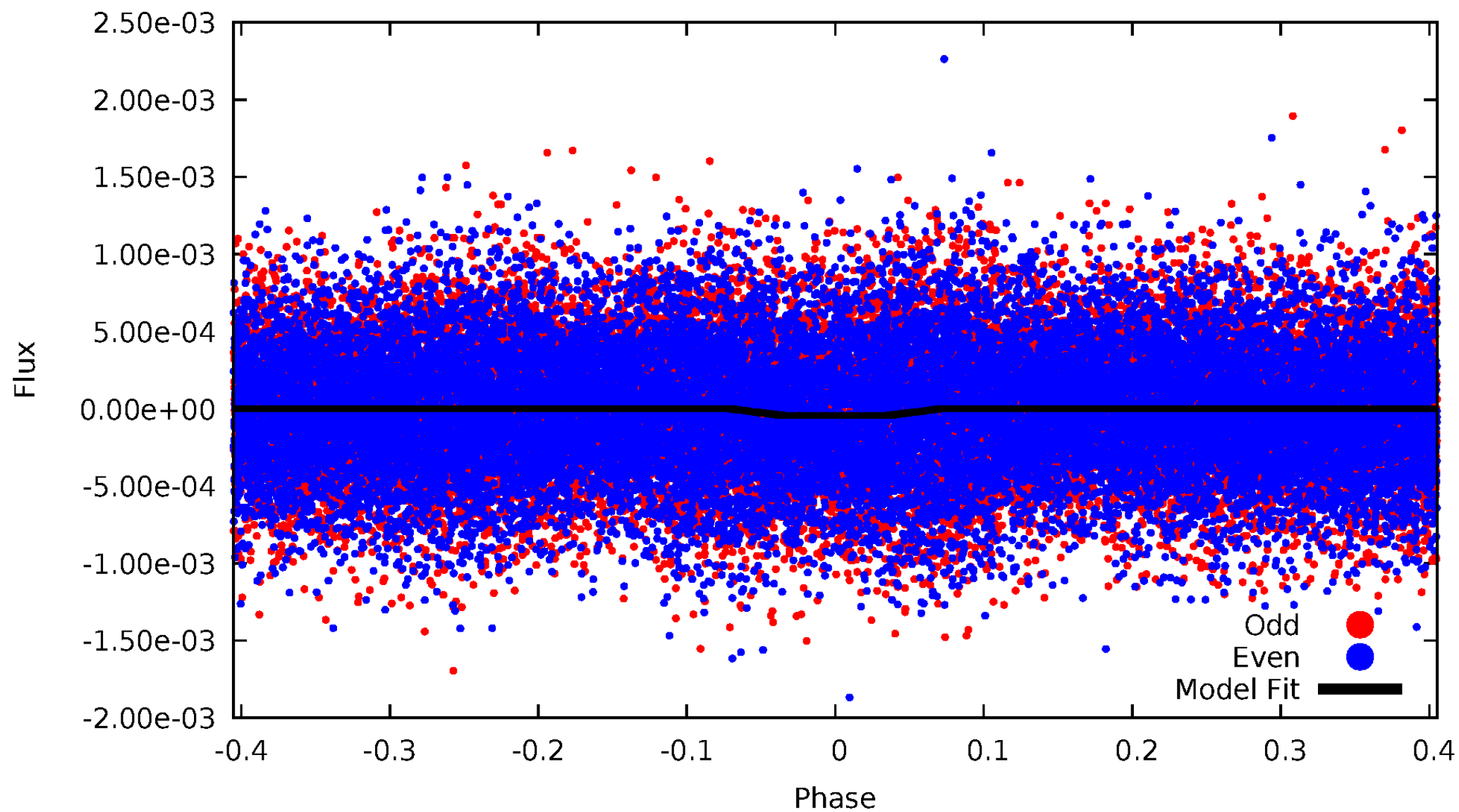
DV Odd/Even

TCE 005166960-01



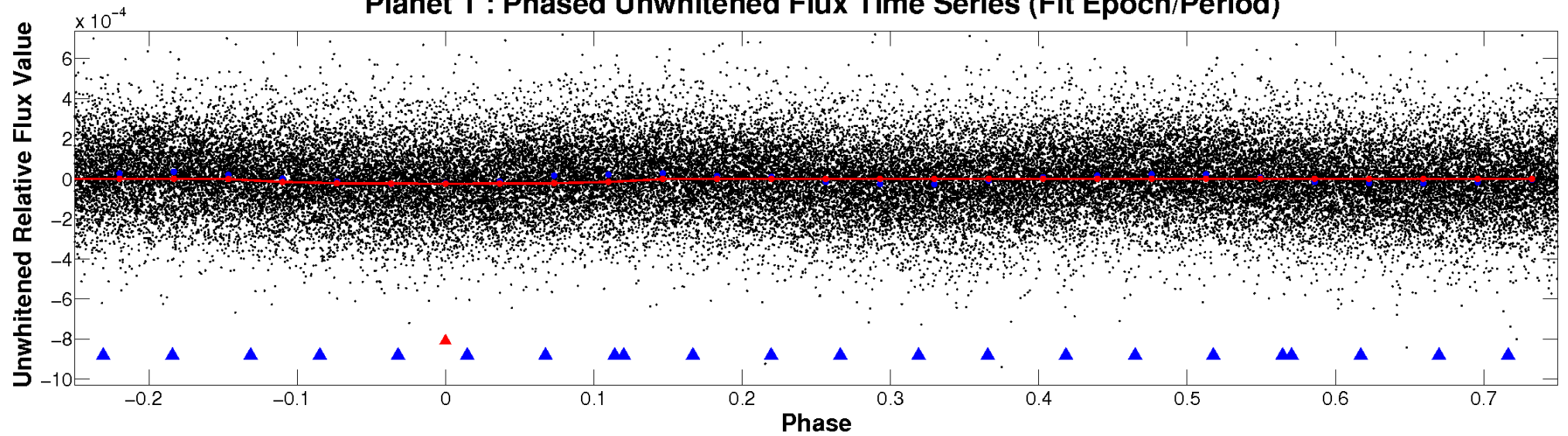
ALT Odd/Even

TCE 005166960-01

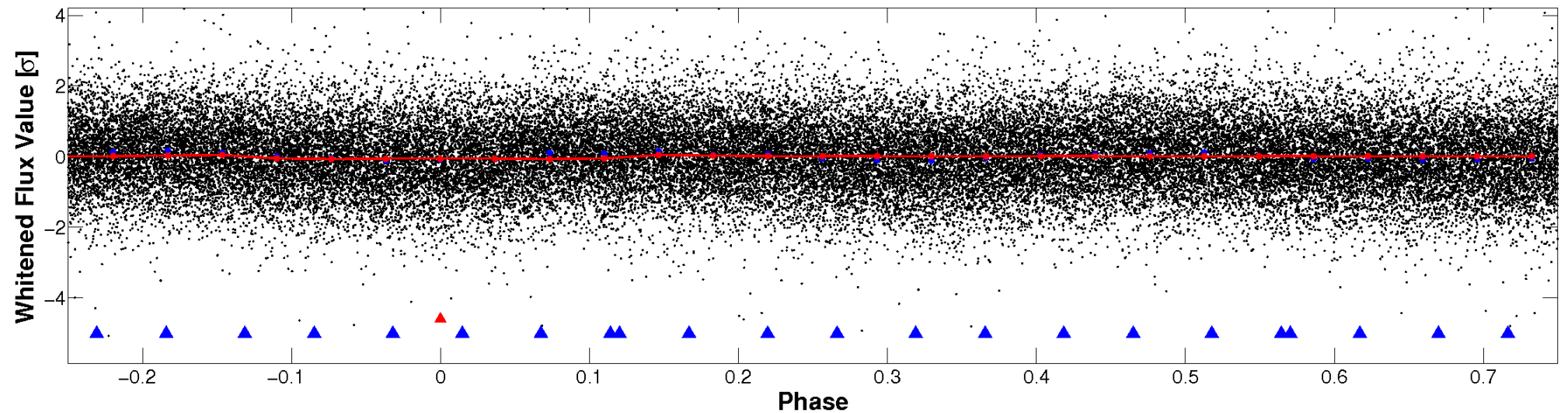


Non-Whitened Vs. Whitened Light Curve

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

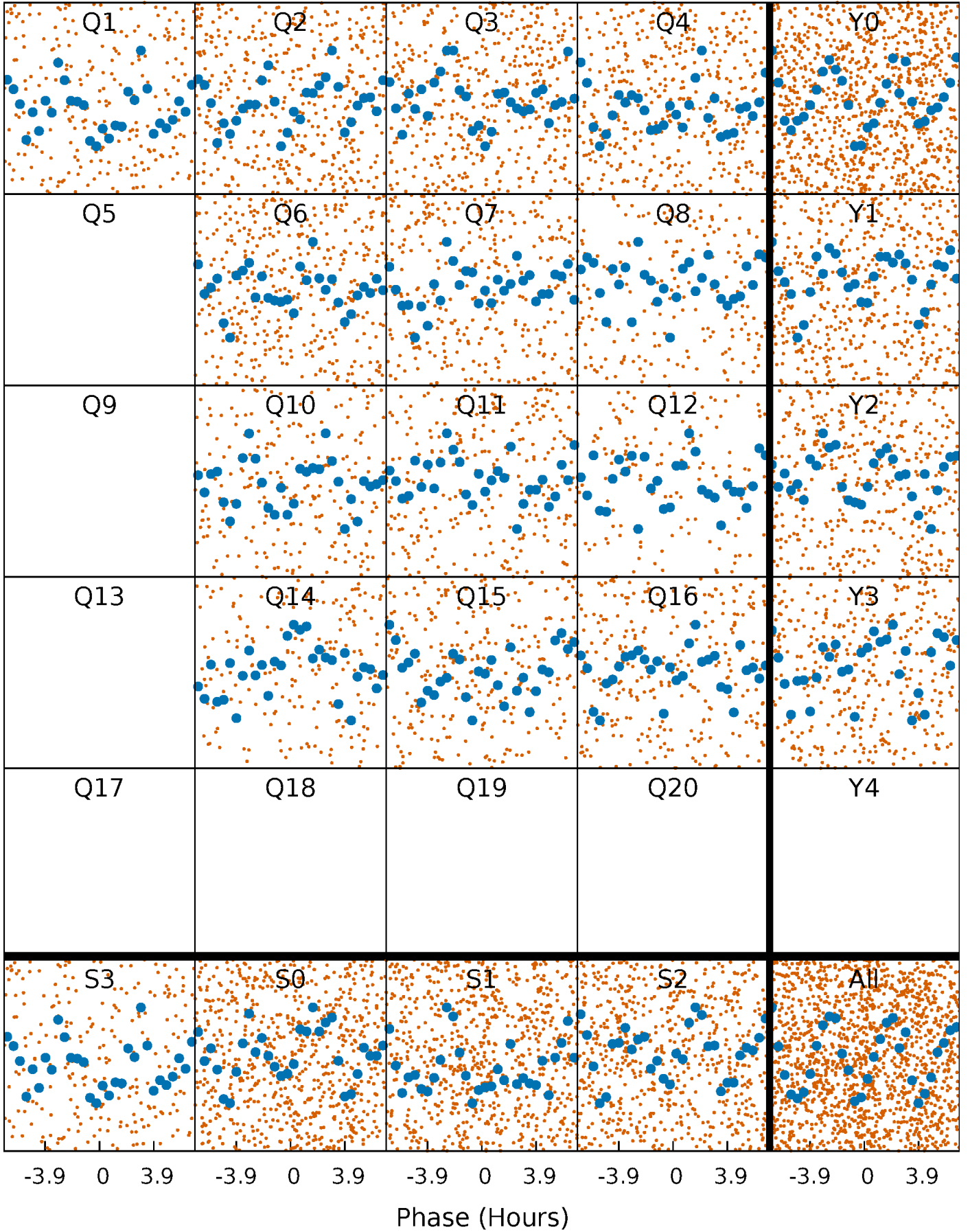


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



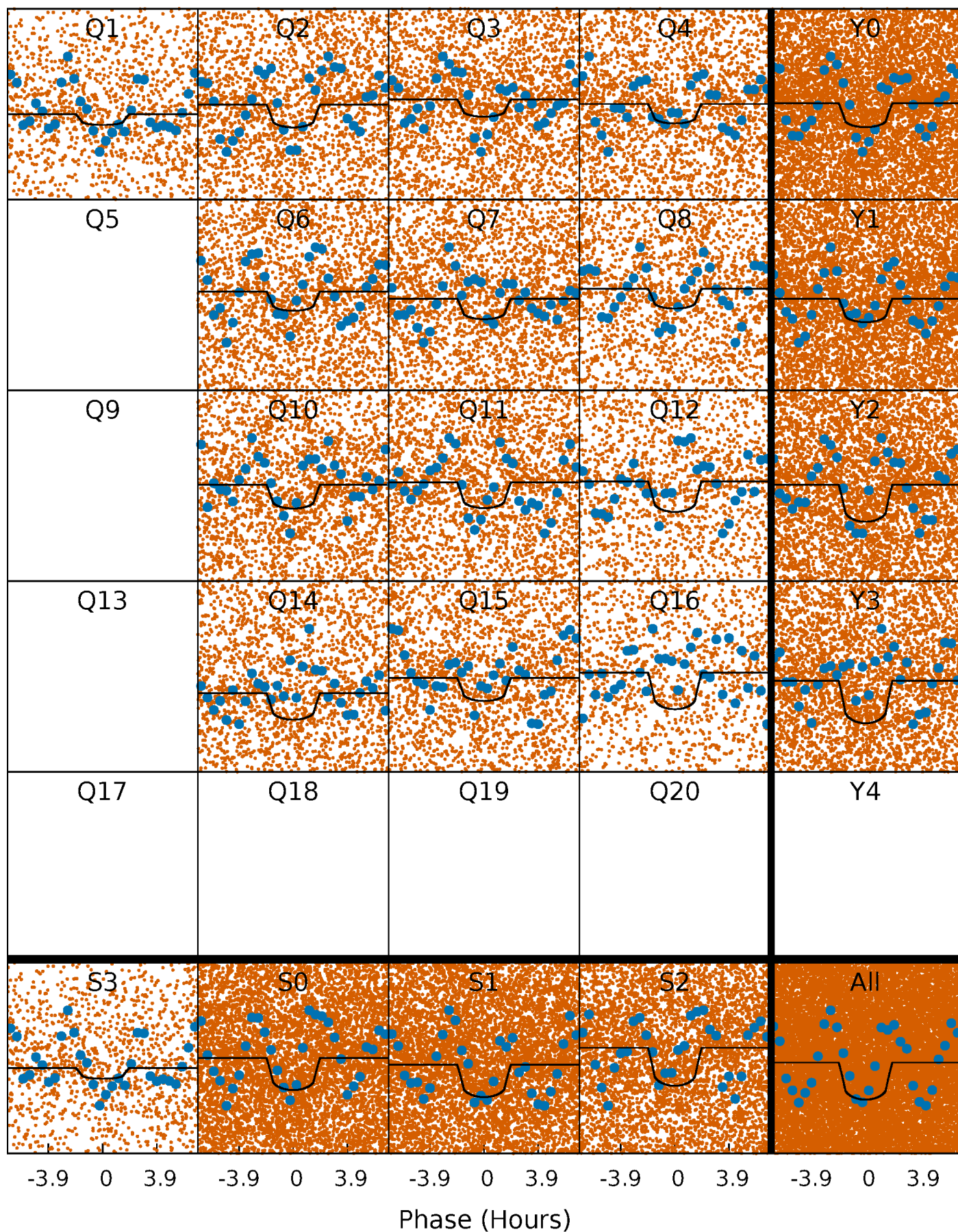
PDC Quarter-Phased Transit Curves

TCE 005166960-01 P= 0.557923 Days $T_0=132.006272$ (BKJD)



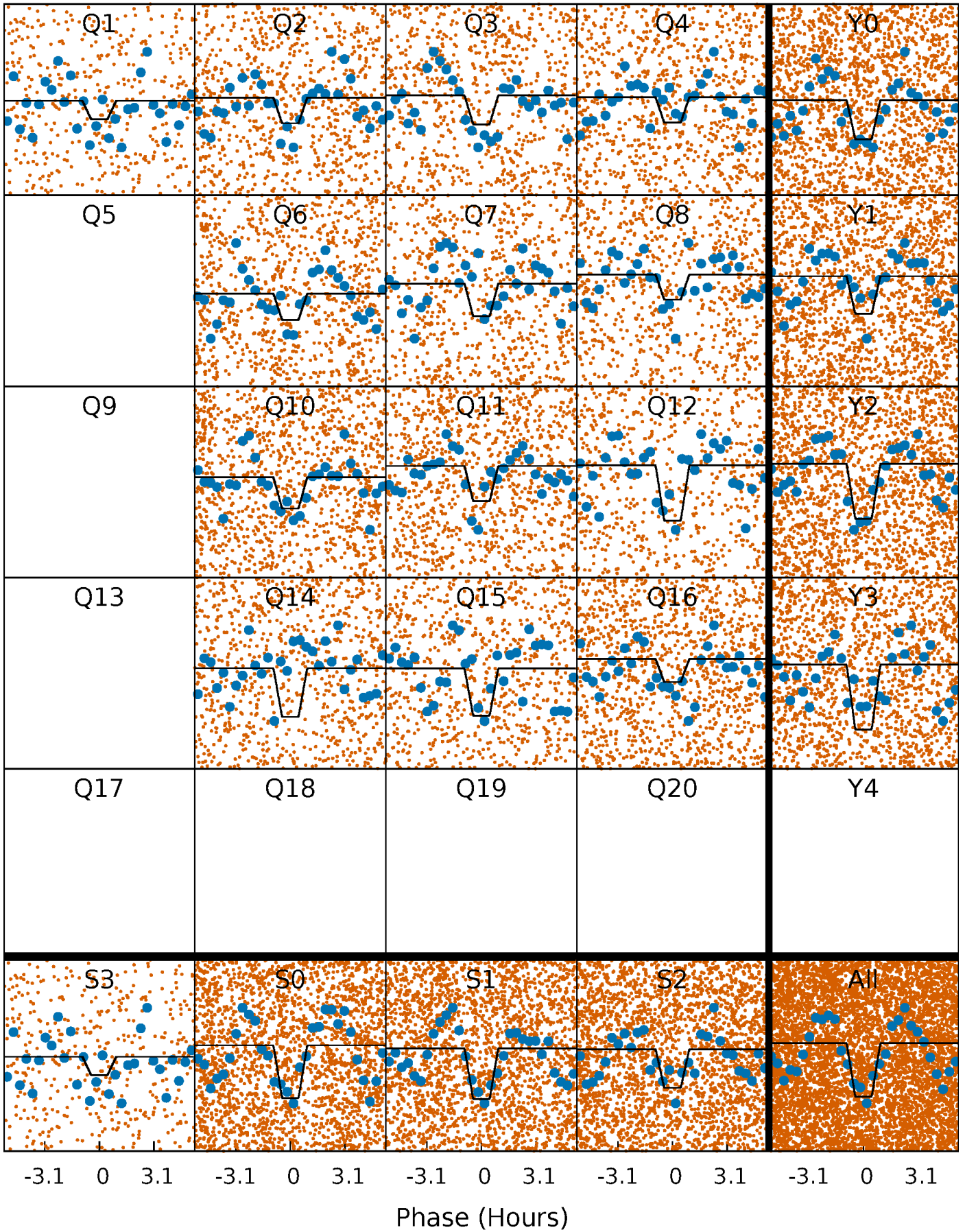
DV Quarter-Phased Transit Curves

TCE 005166960-01 P= 0.557923 Days $T_0=132.006272$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

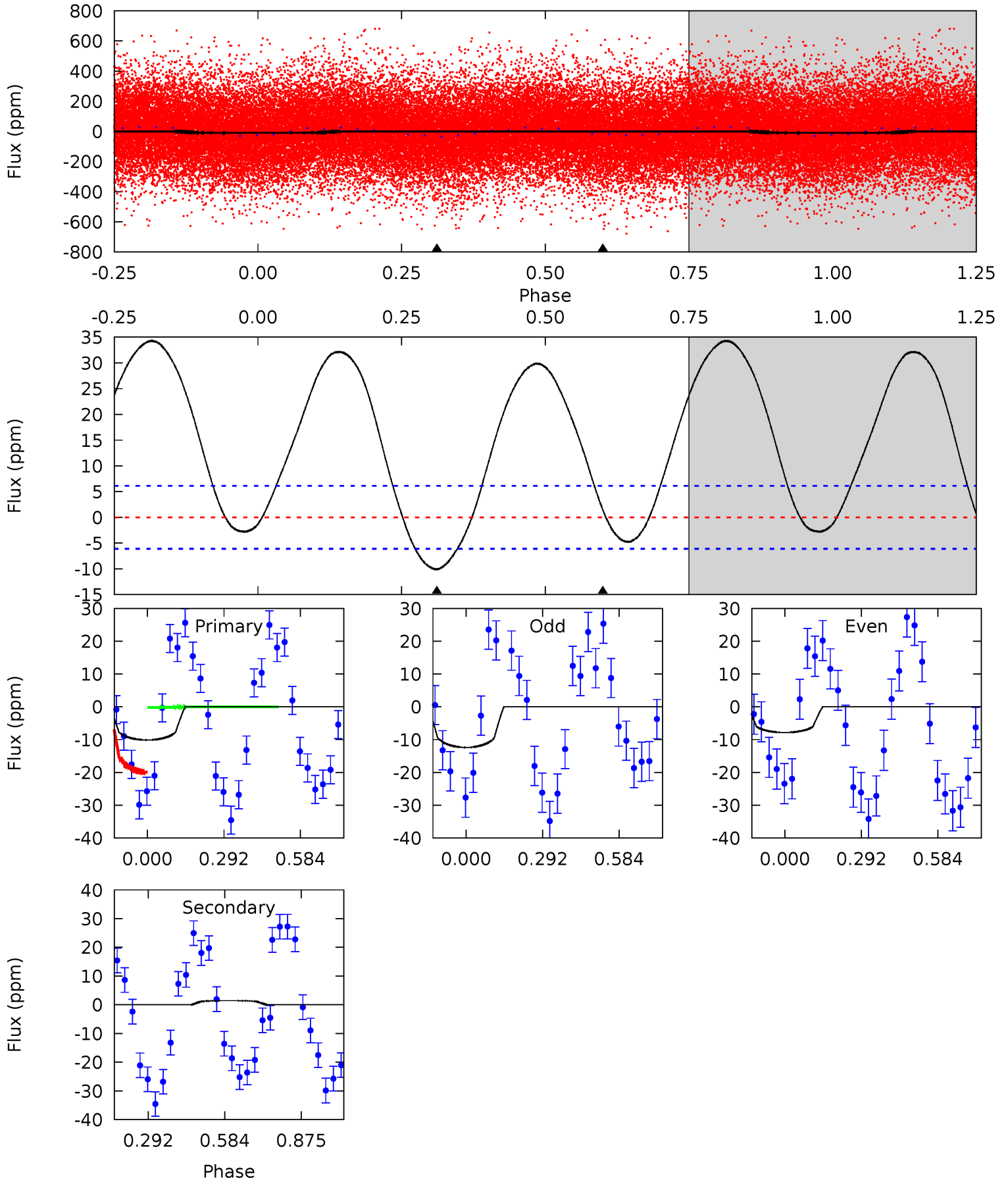
TCE 005166960-01 P= 0.557909 Days $T_0=132.005260$ (BKJD)



DV Model-Shift Uniqueness Test

005166960-01, P = 0.557923 Days, E = 131.448349 Days

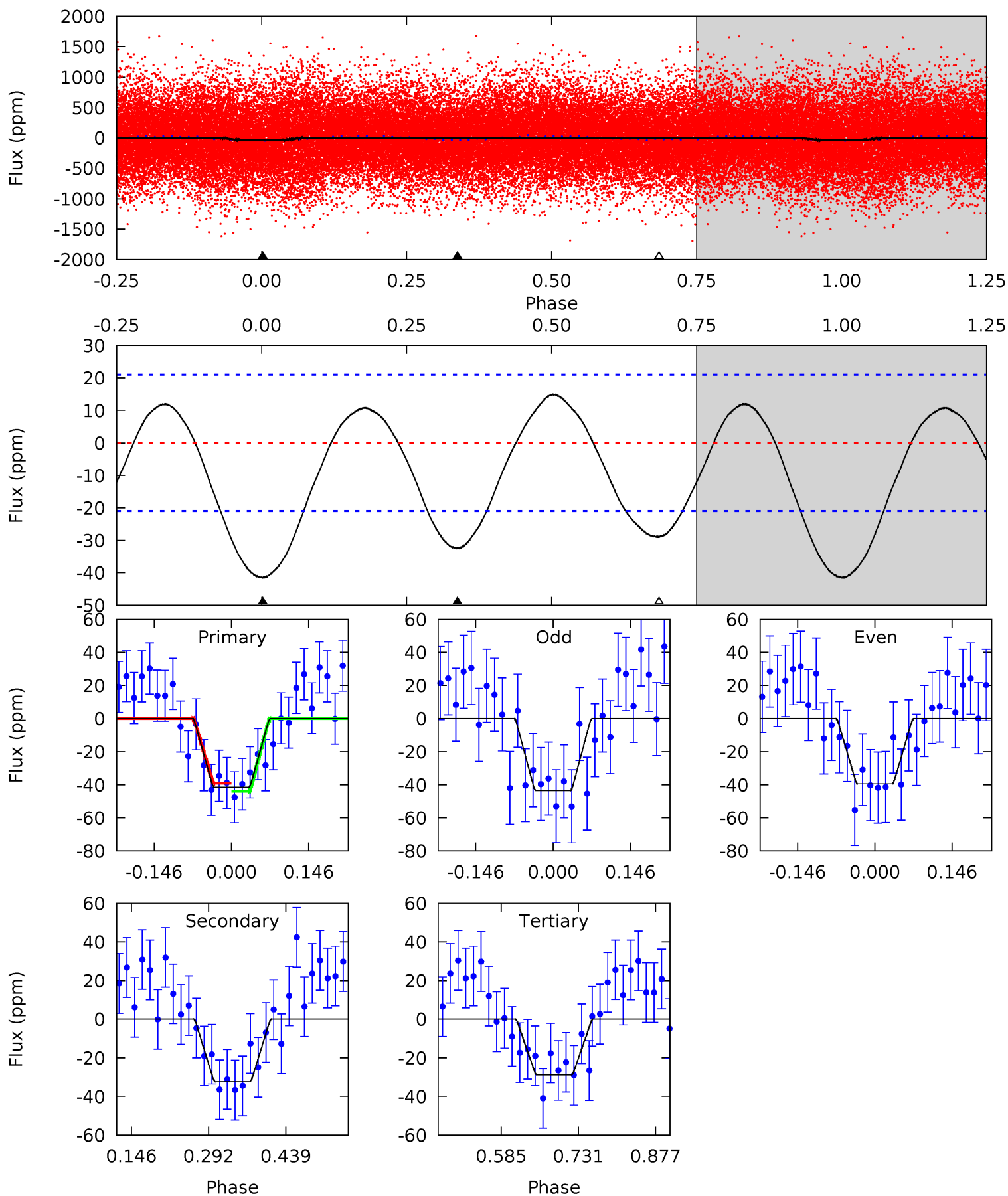
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.16	-1.03	0	0	4.33	1.05	4.14	7.16	7.16	-1.03	-1.03	1.61	1.04	0.77	6.98



Alt Model-Shift Uniqueness Test

005166960-01, P = 0.557909 Days, E = 131.447351 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.86	6.92	6.16	0	4.48	1.45	3.30	2.70	8.86	0.76	6.92	0.44	0.70	0.26	0.52



Stellar Parameters For KIC 005166960

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7211^{+228}_{-304}	$3.762^{+0.448}_{-0.084}$	$-0.440^{+0.300}_{-0.300}$	$2.679^{+0.425}_{-1.276}$	$1.512^{+0.215}_{-0.349}$	$0.111^{+0.512}_{-0.028}$
	+3%/-4%	+12%/-2%	+68%/-68%	+16%/-48%	+14%/-23%	+462%/-26%
Source	KIC0	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 005166960-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	1 ± 1	$1.27^{+0.46}_{-0.45}$	5708^{+406}_{-680}	-5057^{+441}_{-452}	$-0.105^{+0.103}_{-0.228}$
Alt.	-32 ± 5	$1.78^{+0.50}_{-0.51}$	5717^{+372}_{-716}	6176^{+946}_{-777}	$1.312^{+1.200}_{-0.500}$

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 $A_{obs} \gg 1.0$

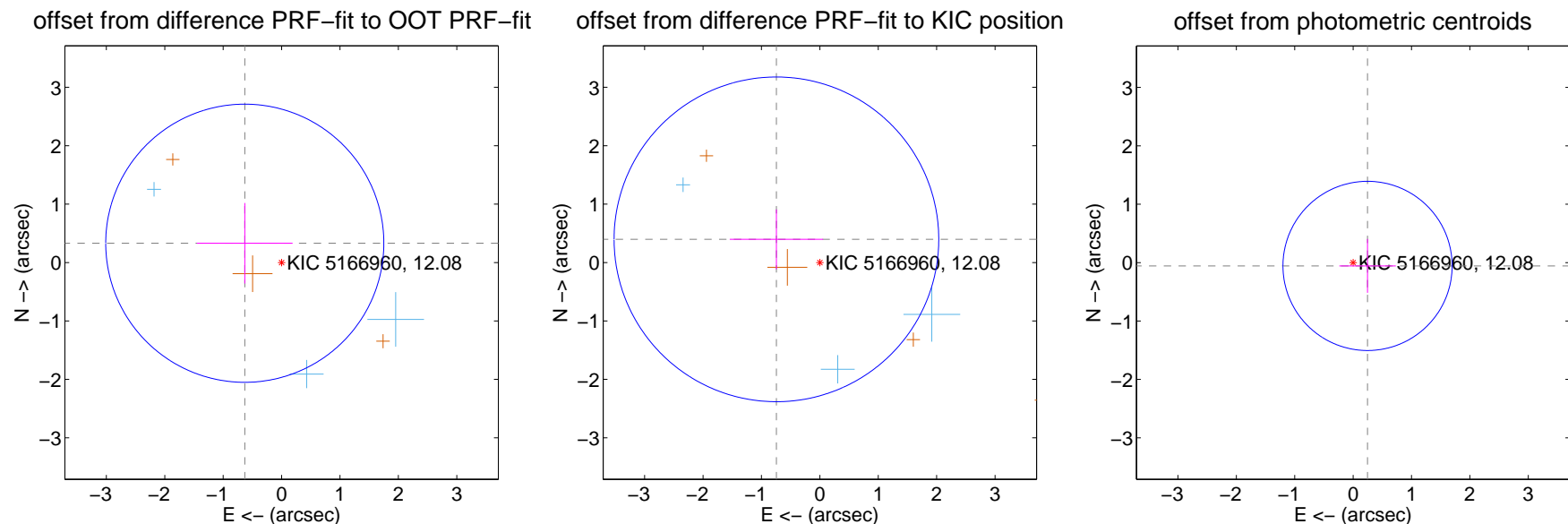
DV Centroid Data

Supplemental centroid analysis for 005166960-01. Kepler magnitude: 12.08. Transit SNR 8.05

There are 3 quarters with good PRF difference image offsets

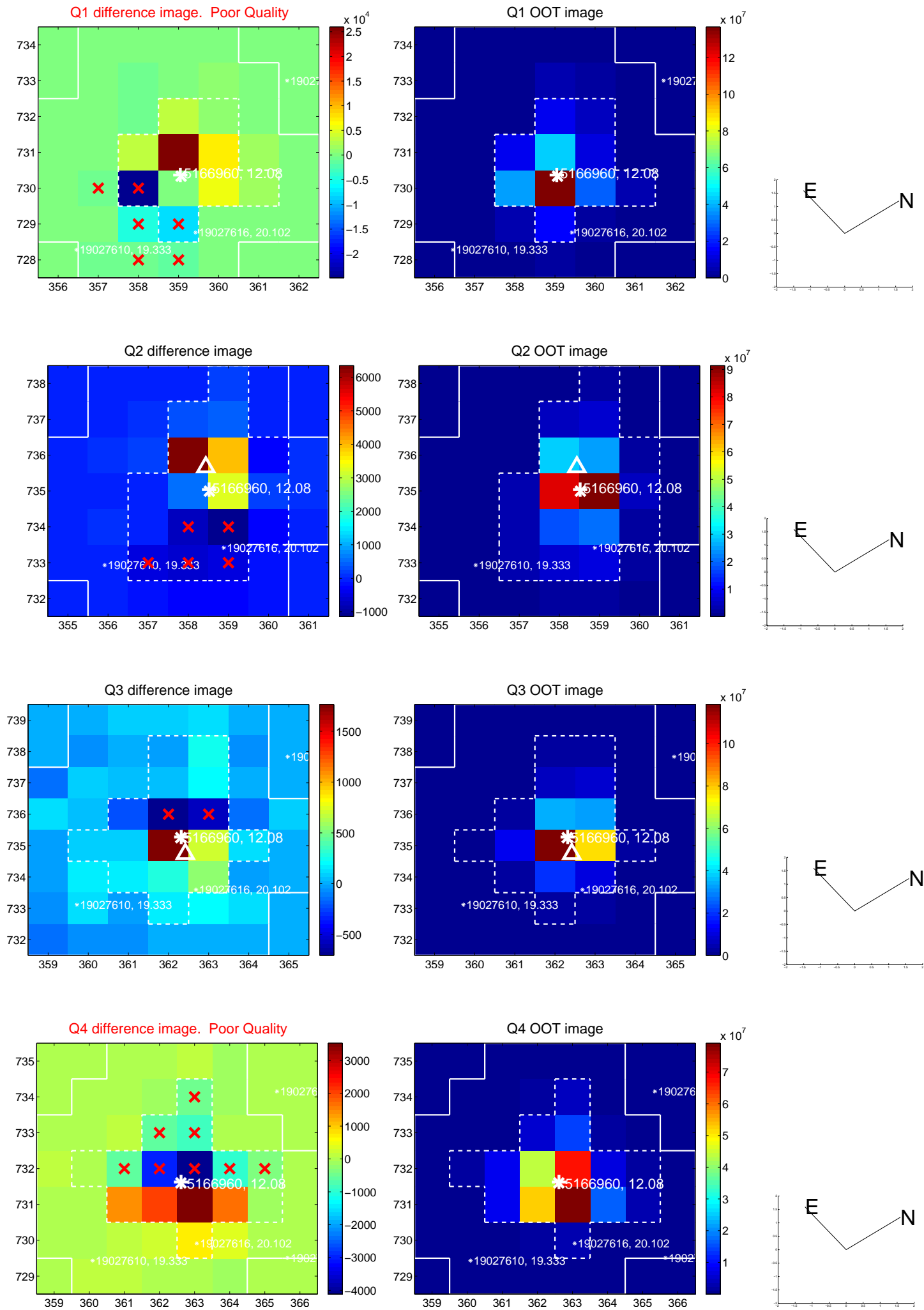
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.712 ± 0.794	0.90	0.630 ± 0.820	0.330 ± 0.690
PRF-fit source offset from KIC position	0.843 ± 0.927	0.91	0.744 ± 0.799	0.397 ± 0.512
photometric centroid source offset	0.25 ± 0.48	0.53	-0.25 ± 0.48	-0.06 ± 0.46



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.

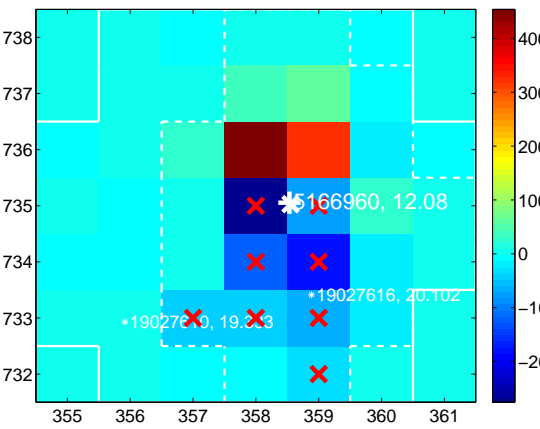
Q5 no difference image



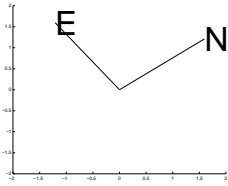
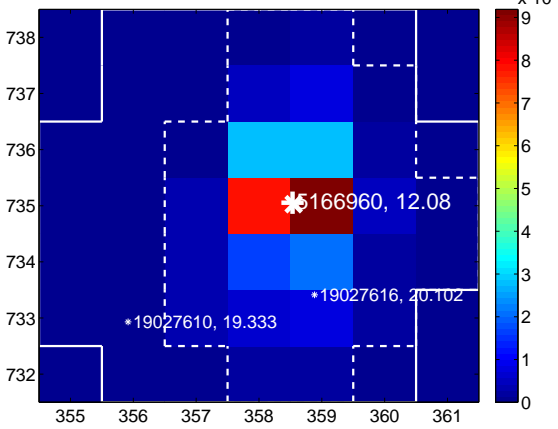
Q5 no OOT image



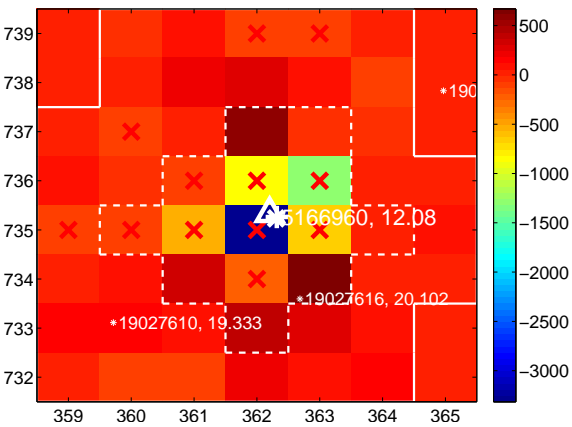
Q6 difference image. Poor Quality



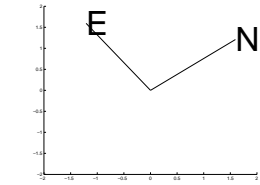
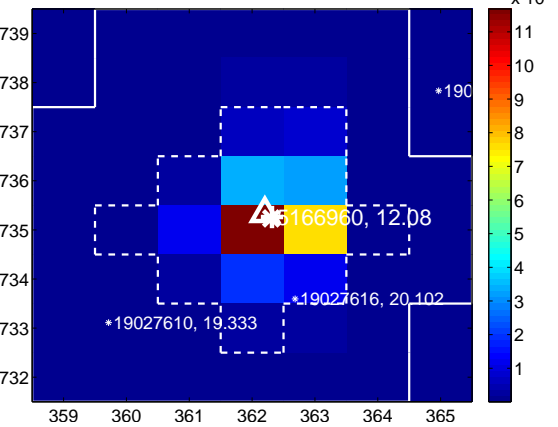
Q6 OOT image



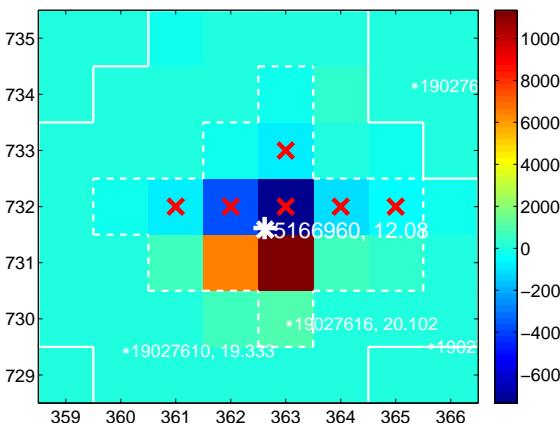
Q7 difference image. Poor Quality



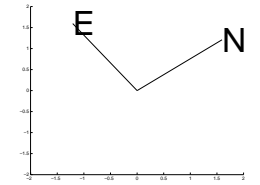
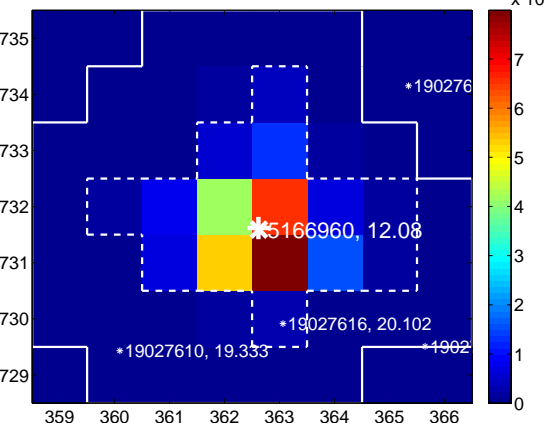
Q7 OOT image



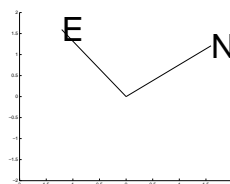
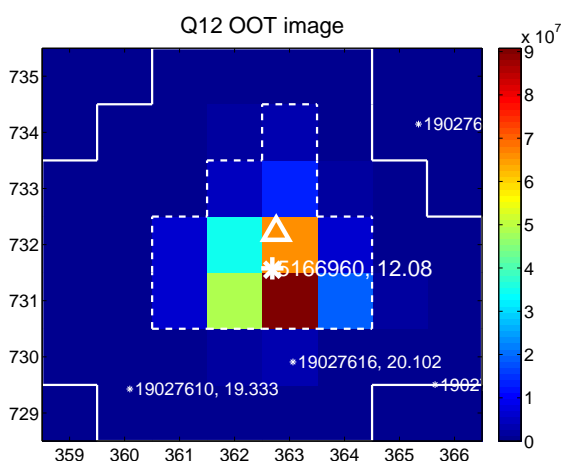
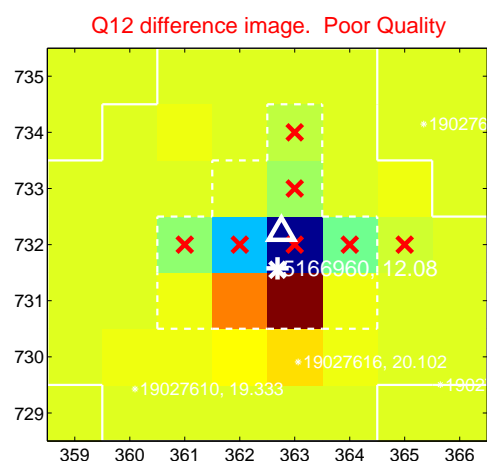
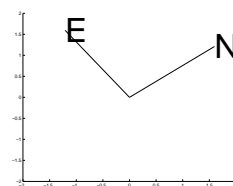
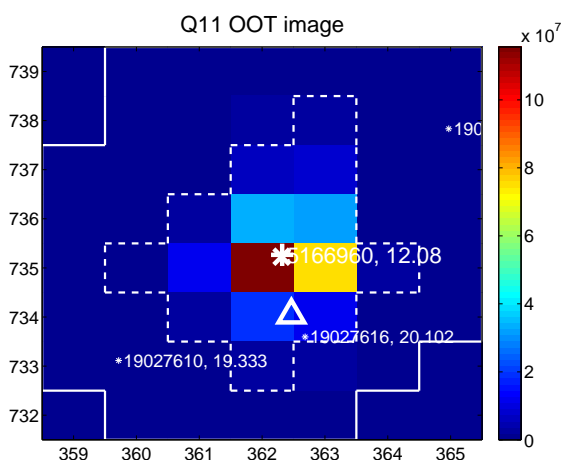
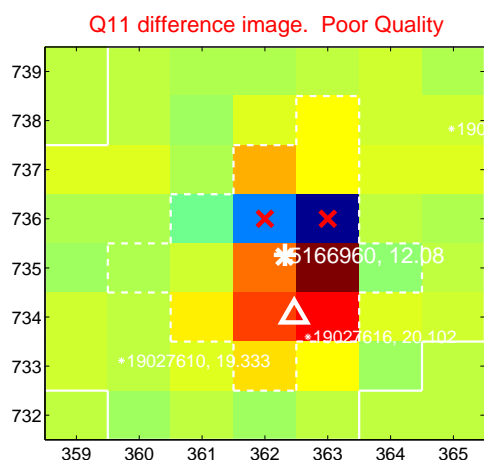
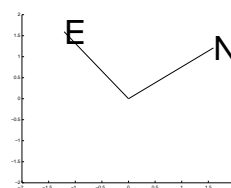
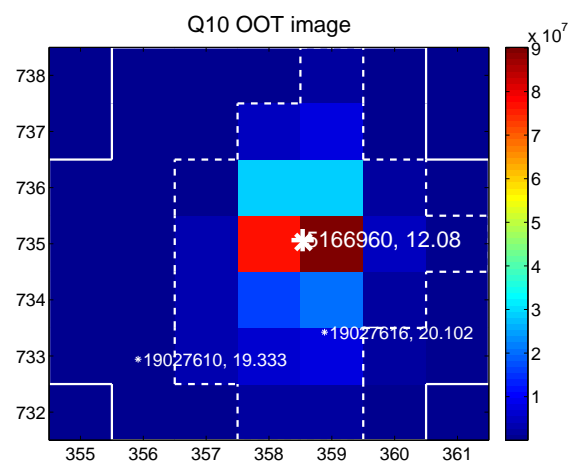
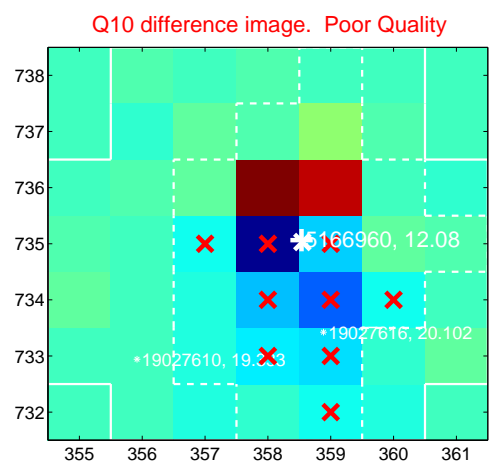
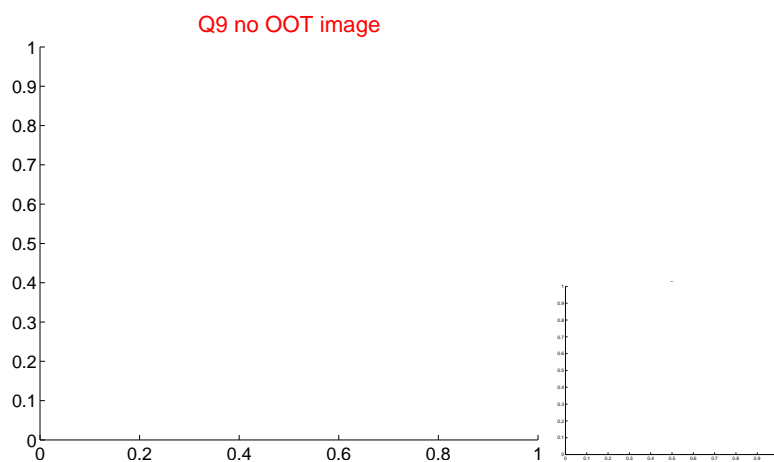
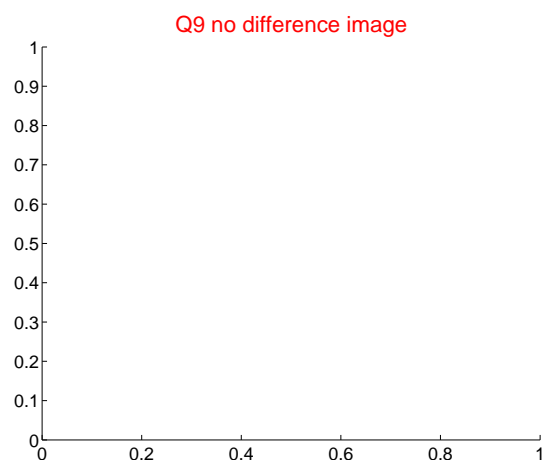
Q8 difference image. Poor Quality



Q8 OOT image



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.

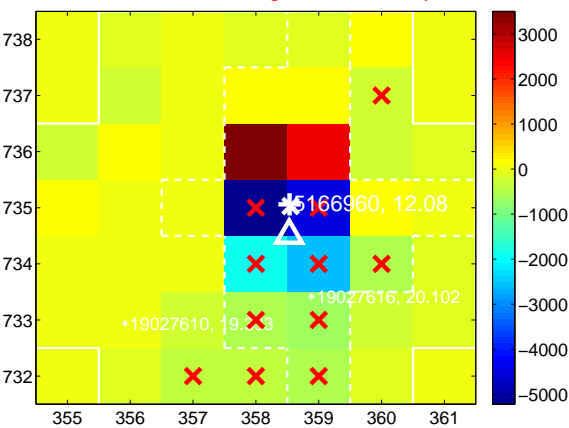
Q13 no difference image



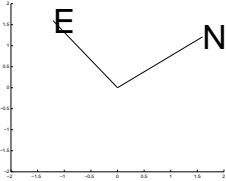
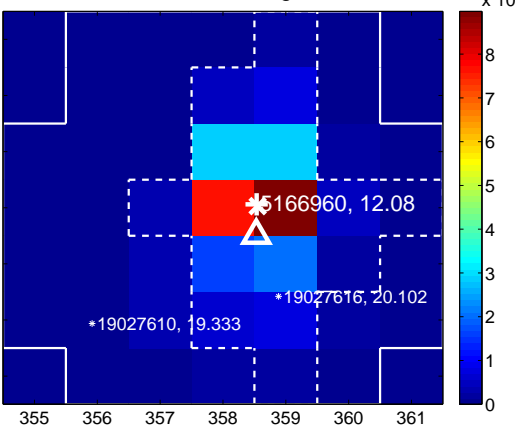
Q13 no OOT image



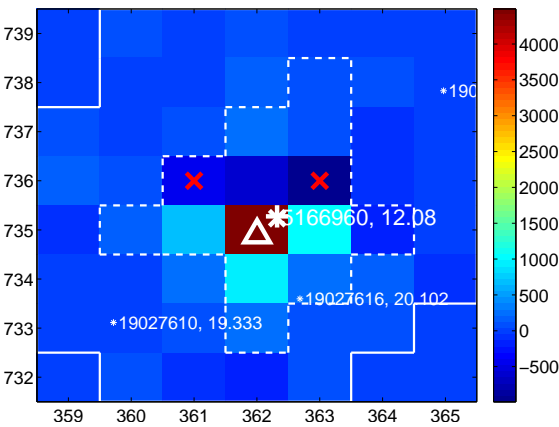
Q14 difference image. Poor Quality



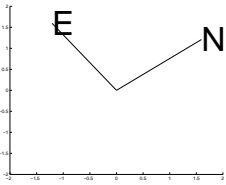
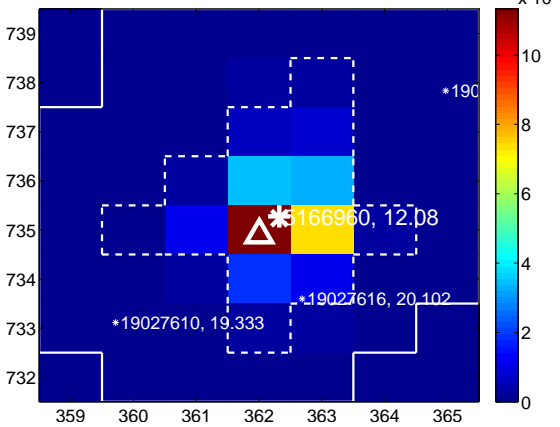
Q14 OOT image



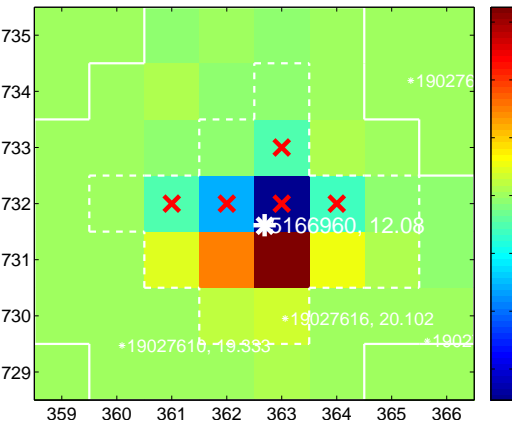
Q15 difference image



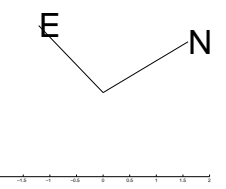
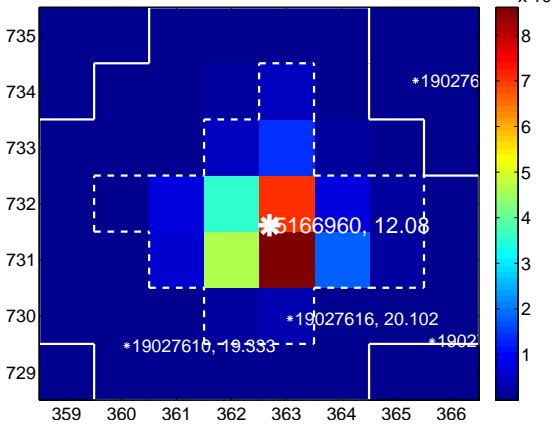
Q15 OOT image



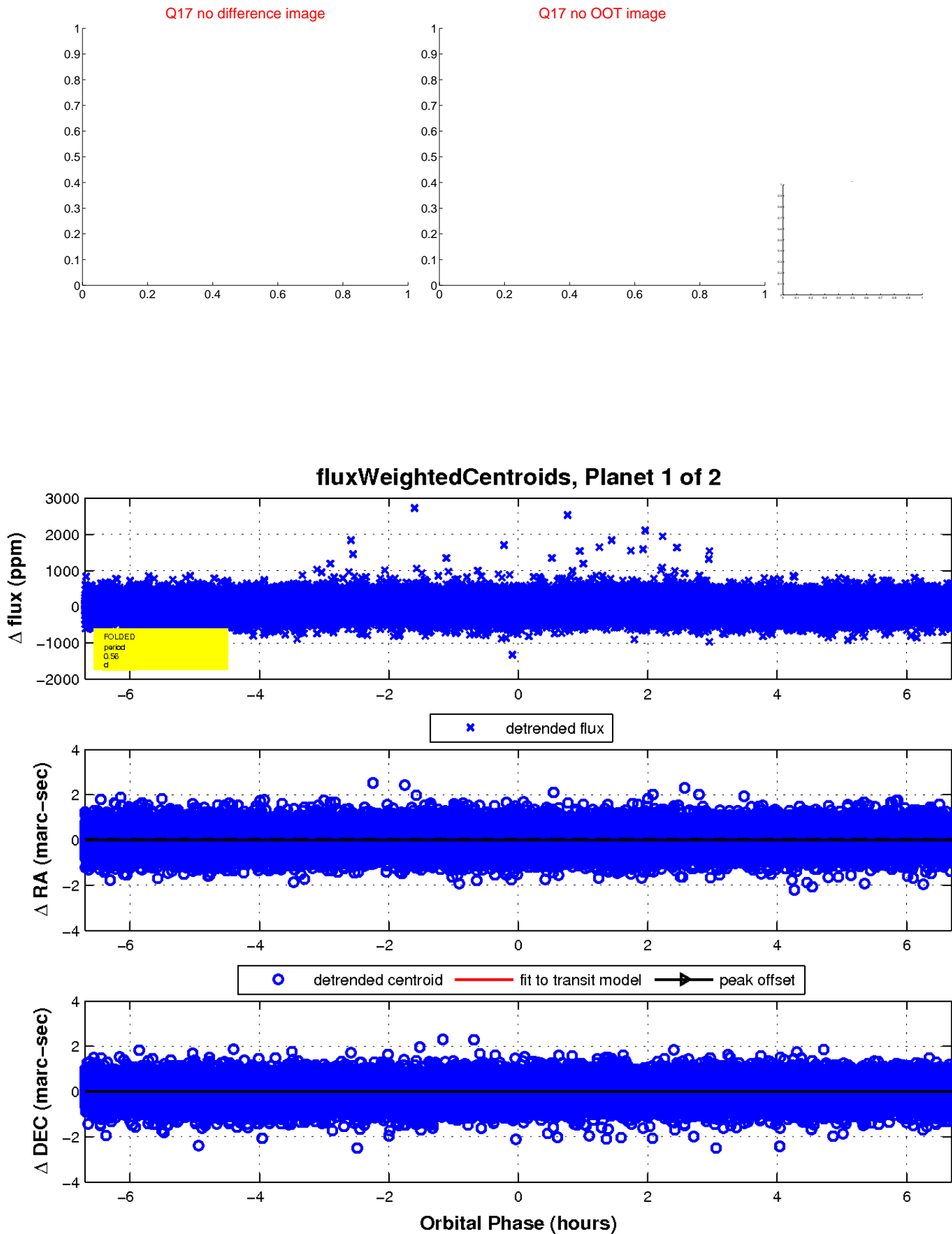
Q16 difference image. Poor Quality



Q16 OOT image



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



UKIRT Image

Declination

