

KIC 010098322

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})
010098322-01	OBS	No	3.118945	132.567326	23.9	16.467	9.5	9.8	1.55	6381	0.78	1913.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010098322-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

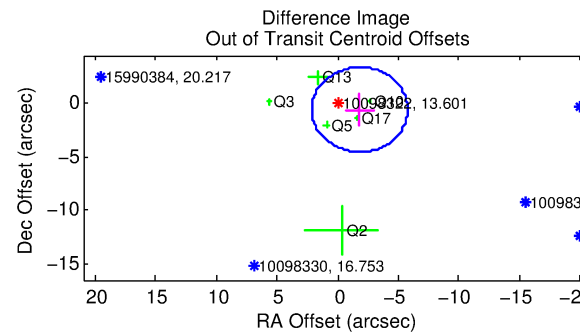
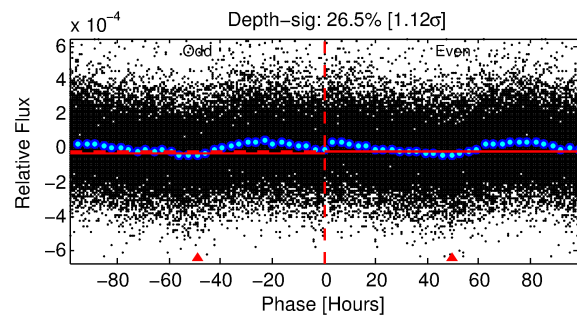
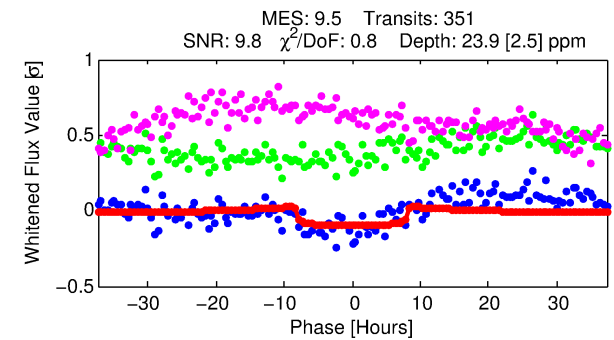
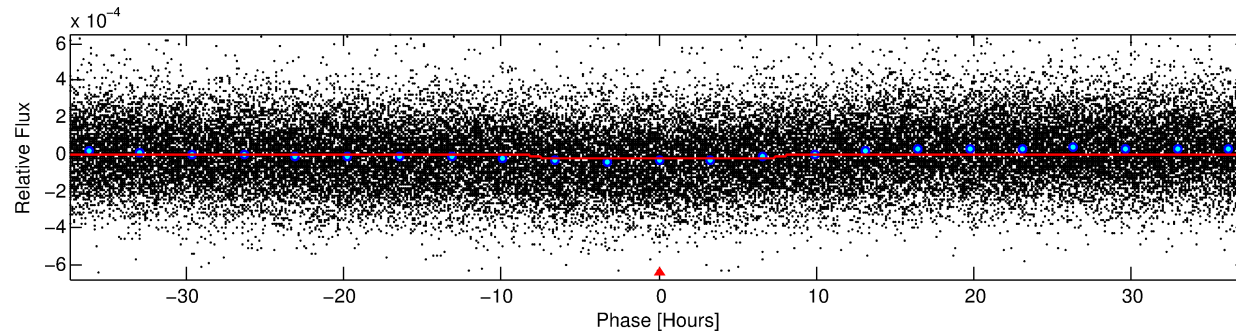
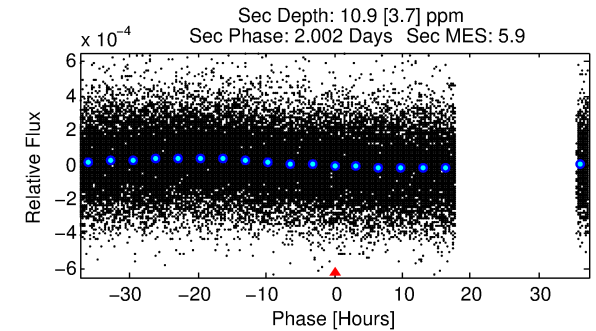
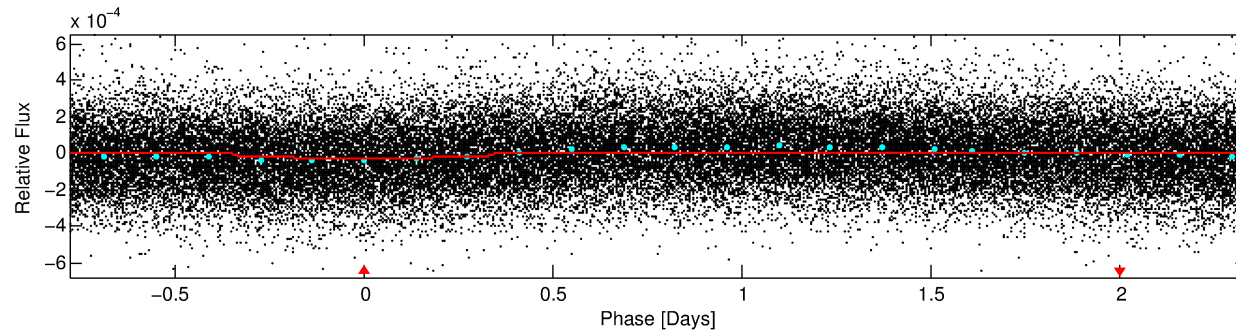
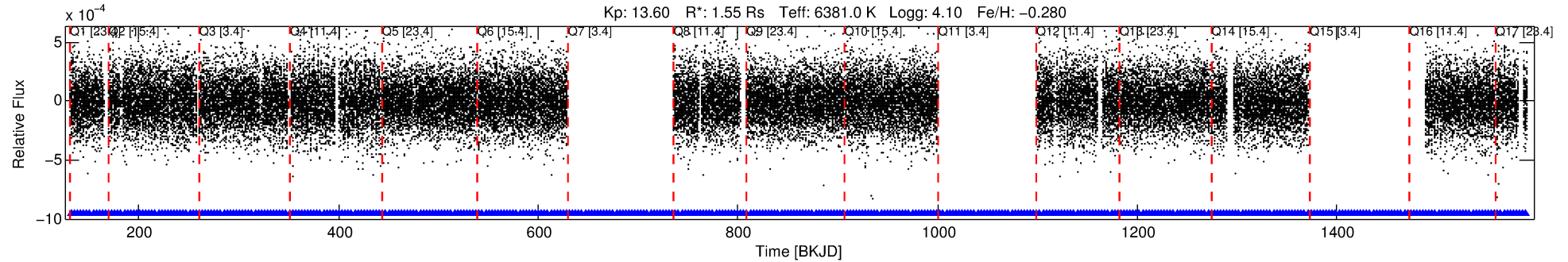
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010098322-01

No Significant Match Found

DV One-Page Summary

KIC: 10098322 Candidate: 1 of 1 Period: 3.119 d



DV Fit Results:

Period = 3.11895 [0.00006] d
Epoch = 132.5673 [0.0117] BKJD
Rp/R* = 0.0046 [0.0027]
a/R* = 1.46 [2.42]
b = 0.49 [4.85]
Seff = 1913.76 [959.70]
Teq = 1687 [211] K
Rp = 0.78 [0.51] Re
a = 0.0433 [0.0127] AU
Ag = 18.29 [23.99] [0.72σ]
Teffp = 5393 [1656] K [2.22σ]

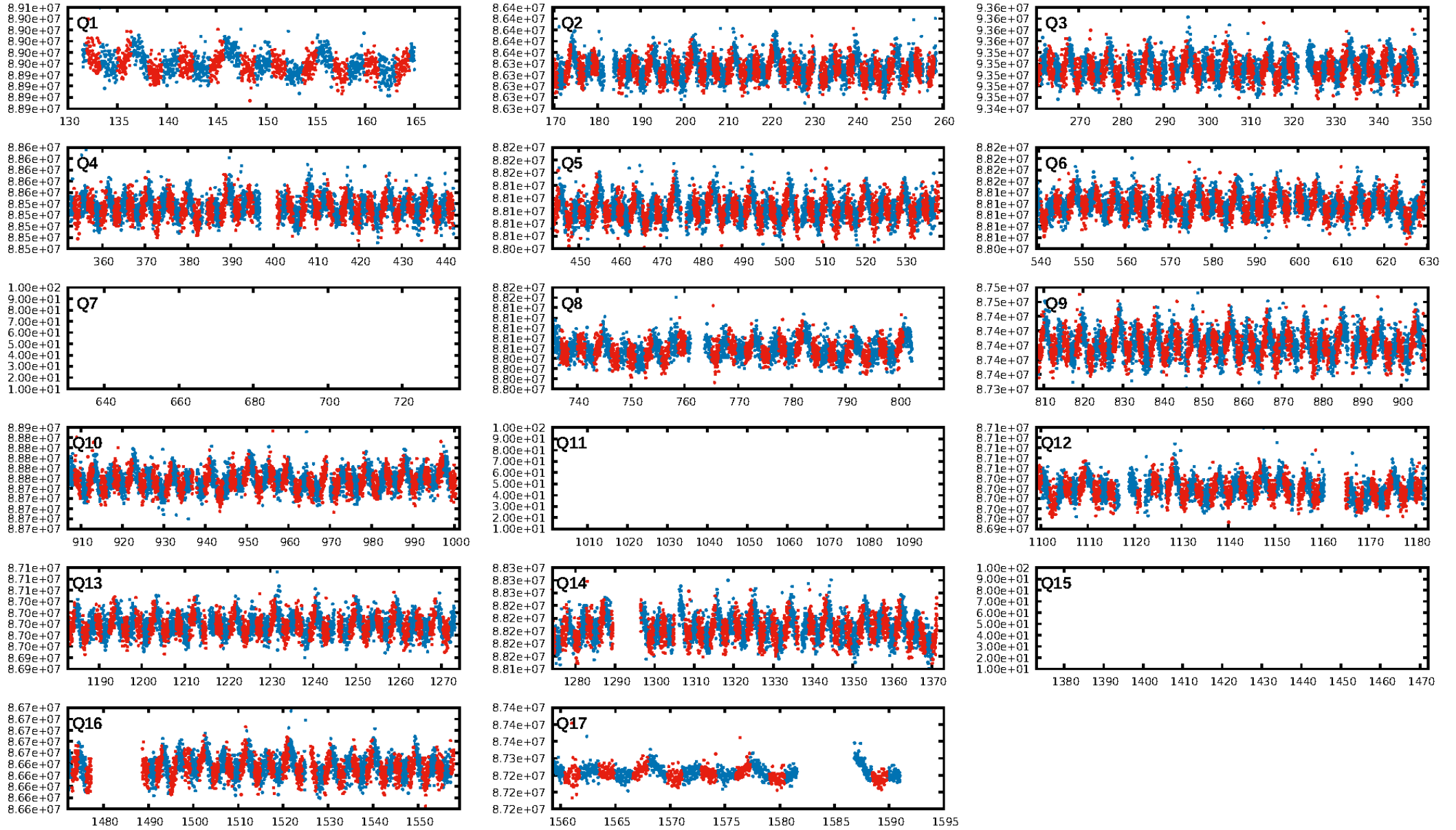
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.99e-17
RollingBand-fgt: 1.00 [332/332]
GhostDiagnostic-chr: 1.19
Centroid-sig: 7.0%
Centroid-so: 1.827 arcsec [1.48σ]
OotOffset-rm: 1.902 arcsec [1.44σ]
KicOffset-rm: 1.910 arcsec [1.25σ]
OotOffset-st: 2/1/0/3 [6]
KicOffset-st: 2/1/0/3 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 1.00 [14/14]

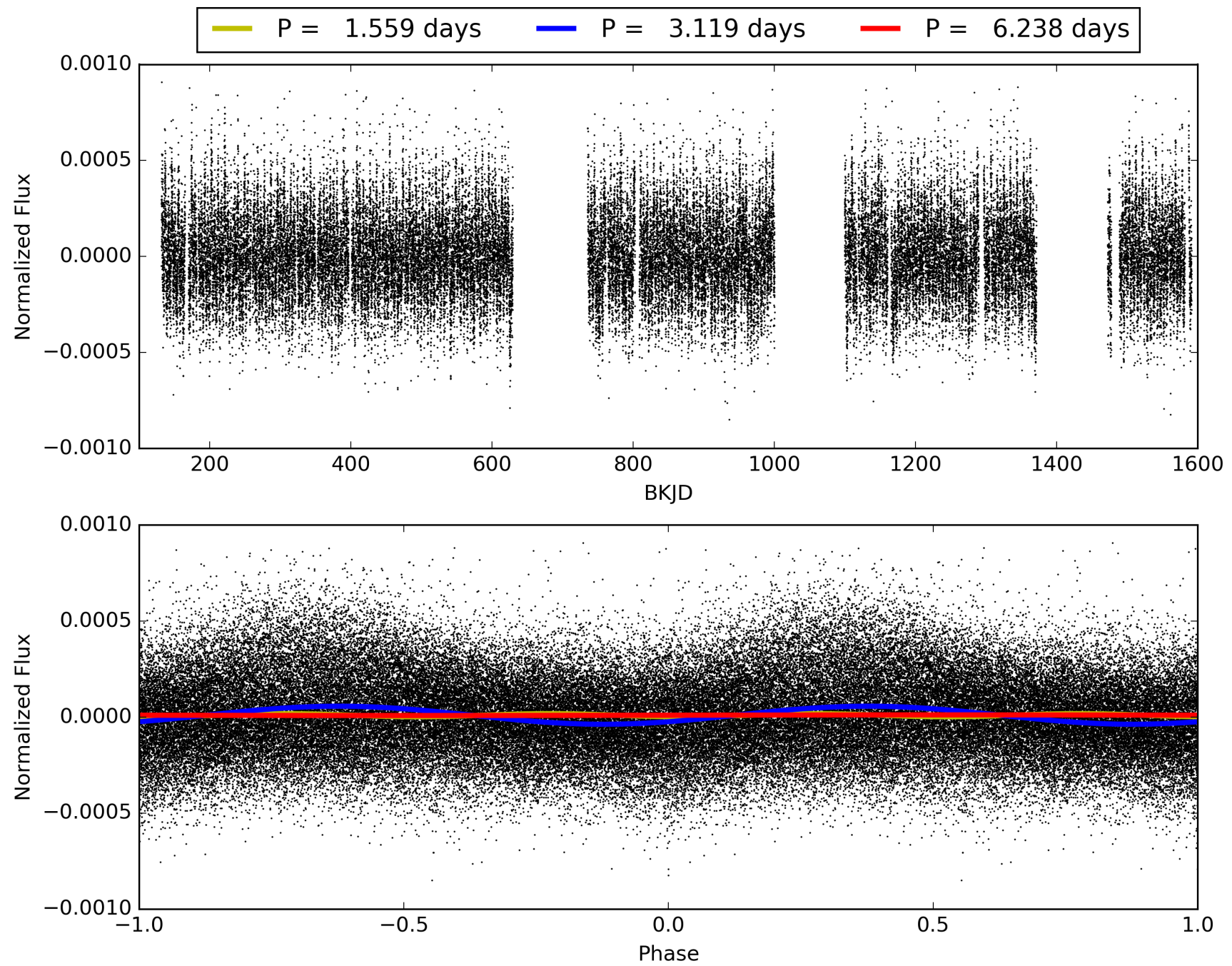
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:07:35 Z

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

TCE 010098322-01, PDC Light Curves

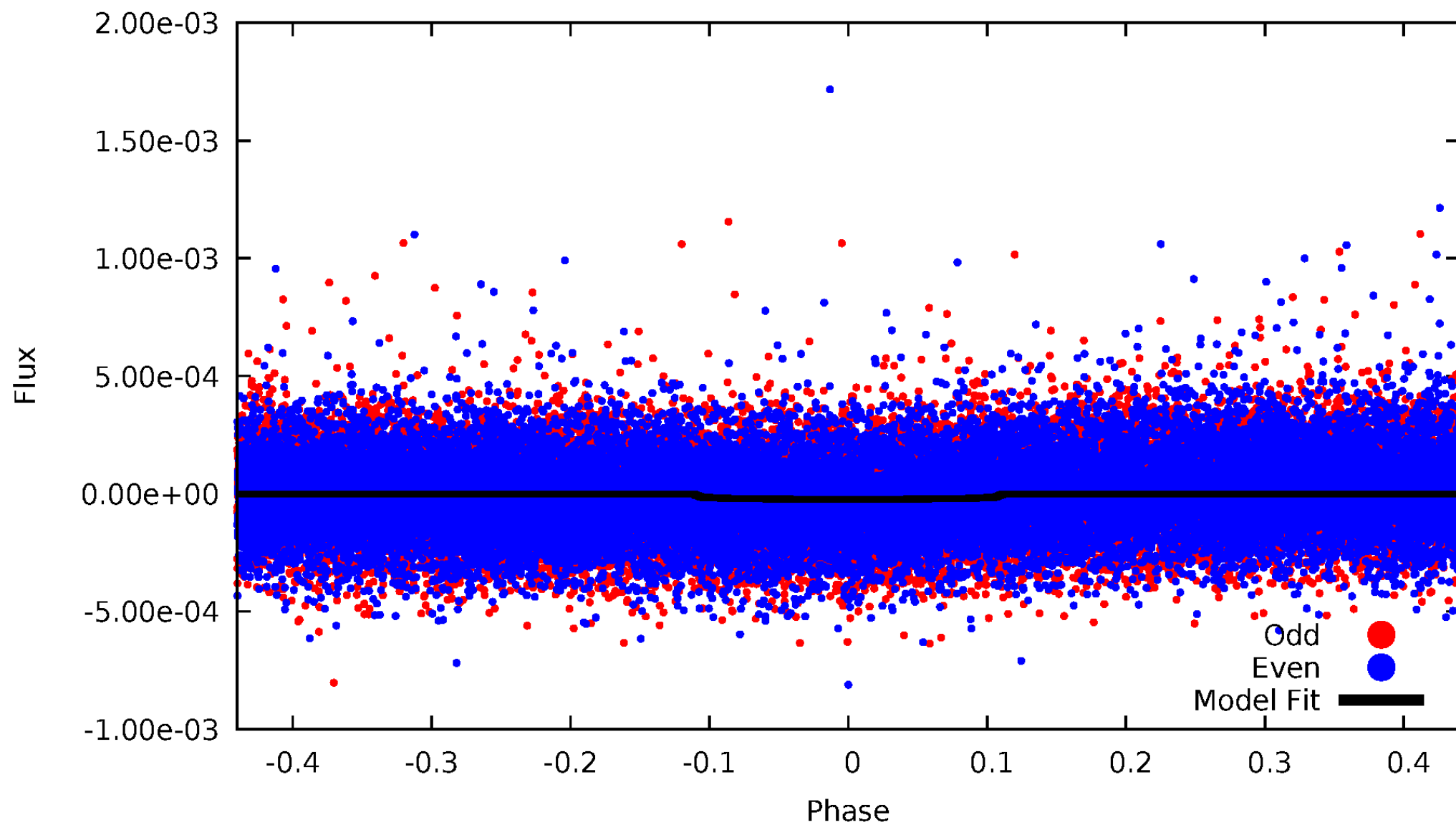


TCE 010098322-01



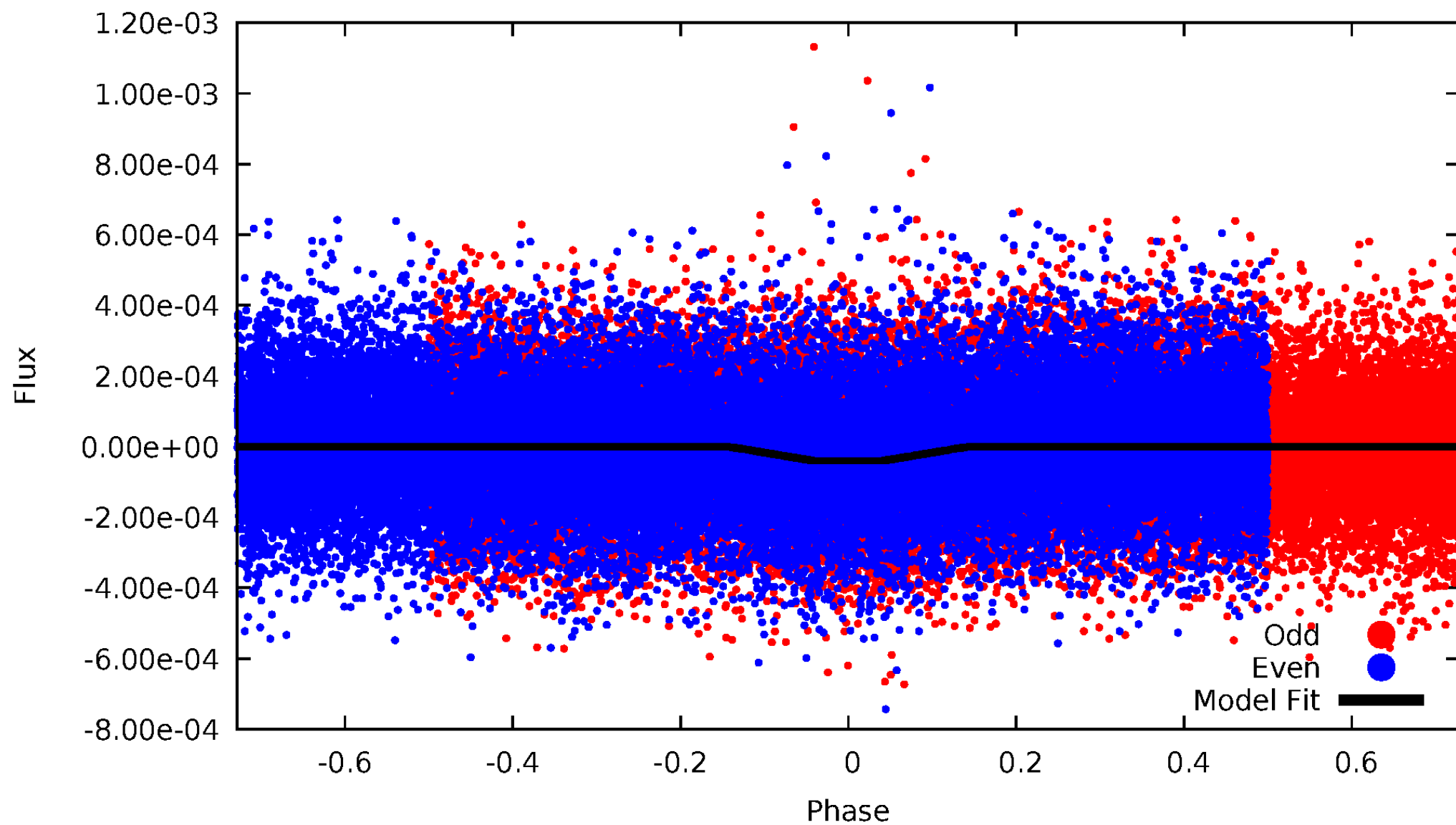
DV Odd/Even

TCE 010098322-01



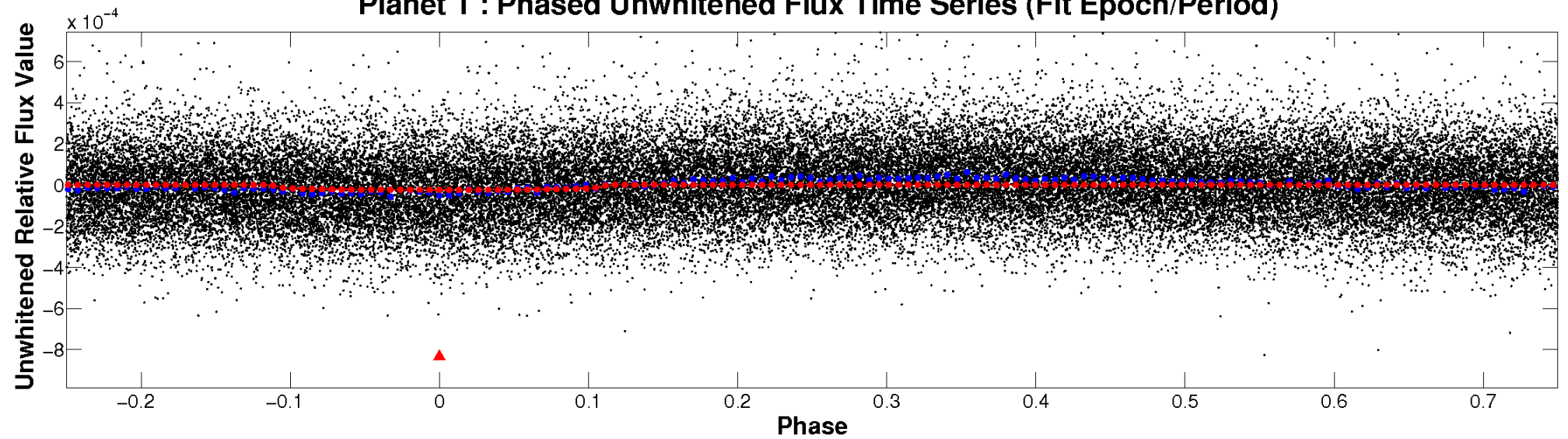
ALT Odd/Even

TCE 010098322-01

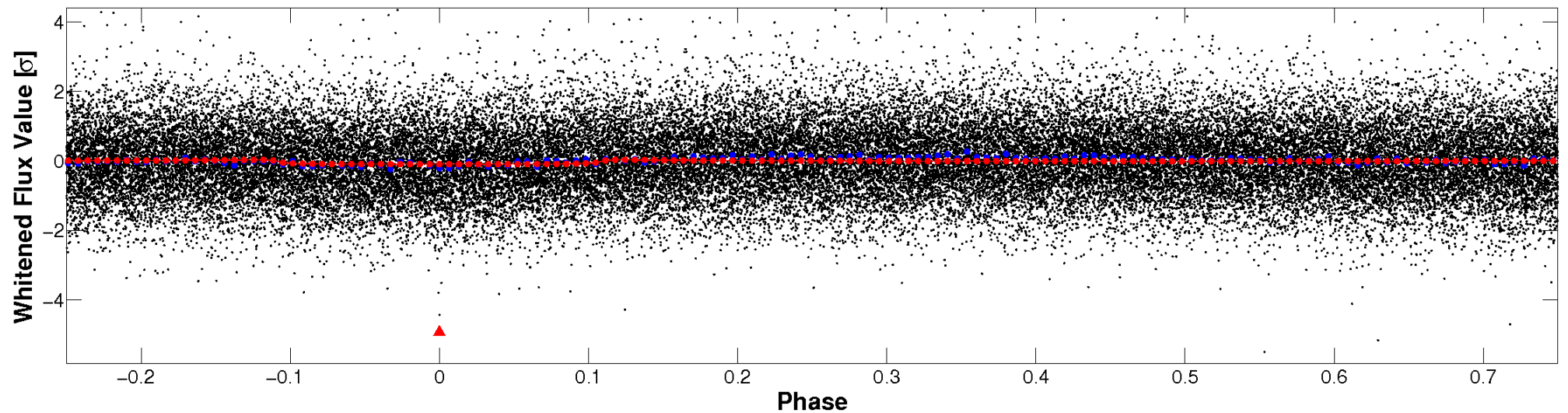


Non-Whitened Vs. Whitened Light Curve

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

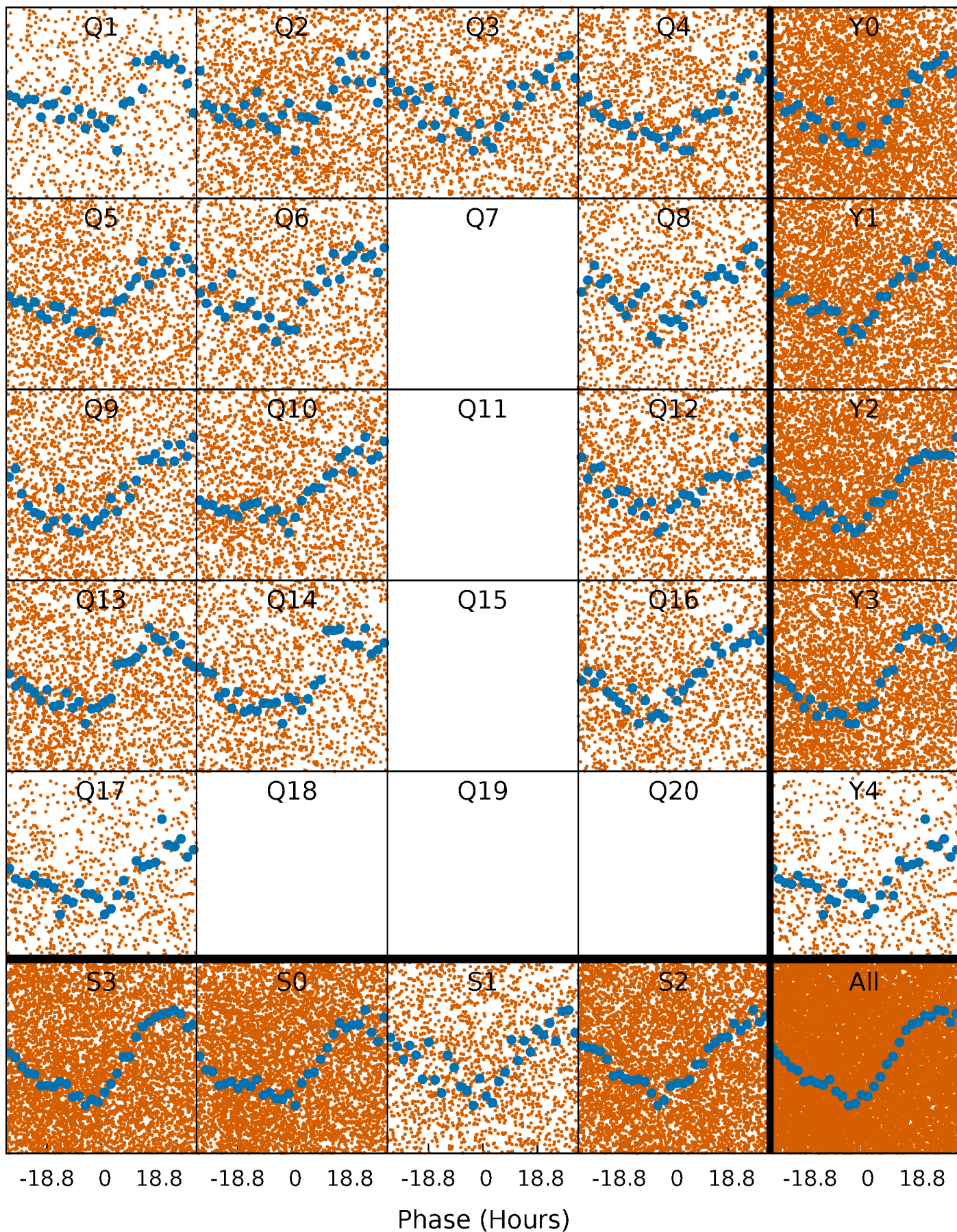


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



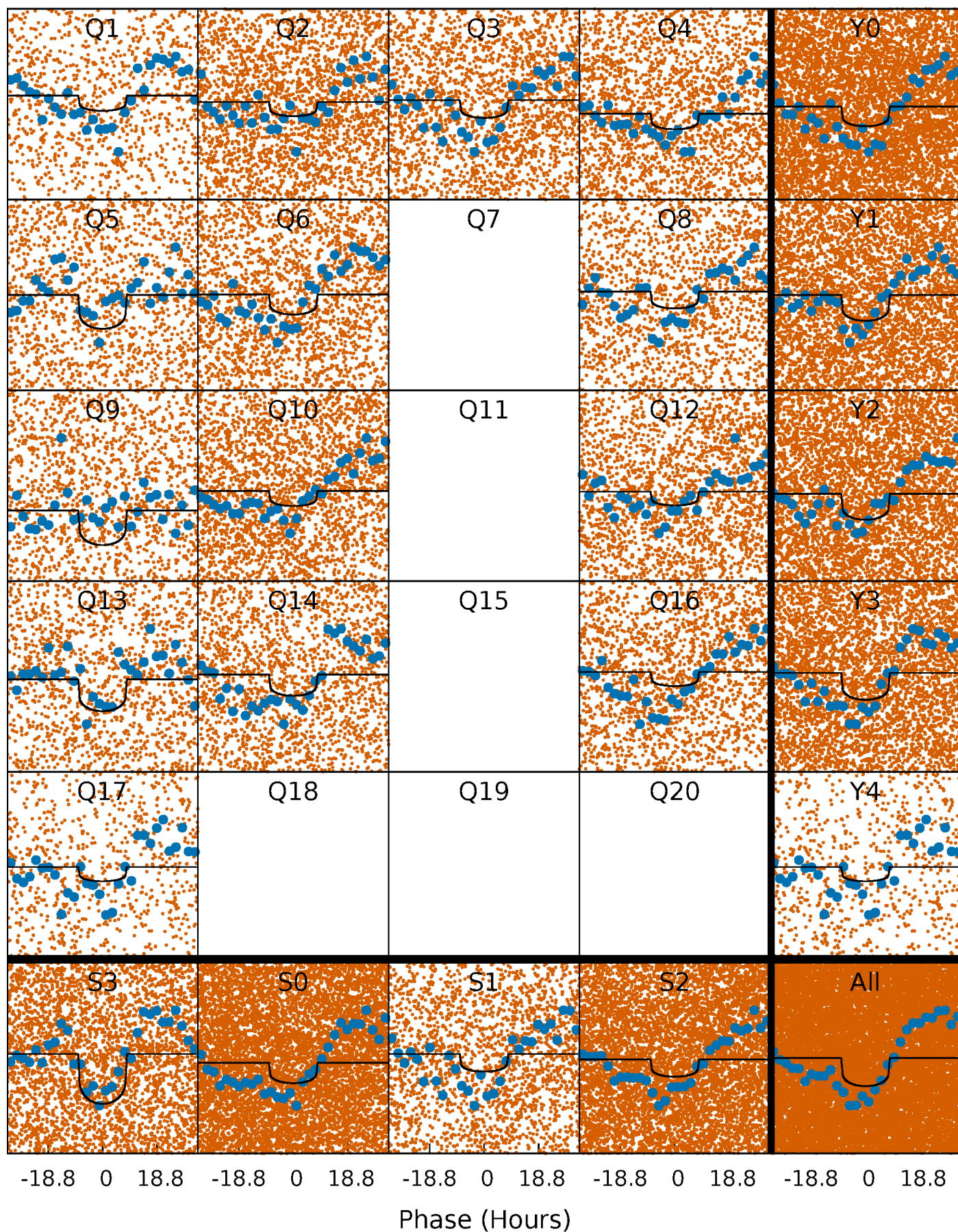
PDC Quarter-Phased Transit Curves

TCE 010098322-01 P= 3.118945 Days $T_0=132.567326$ (BKJD)



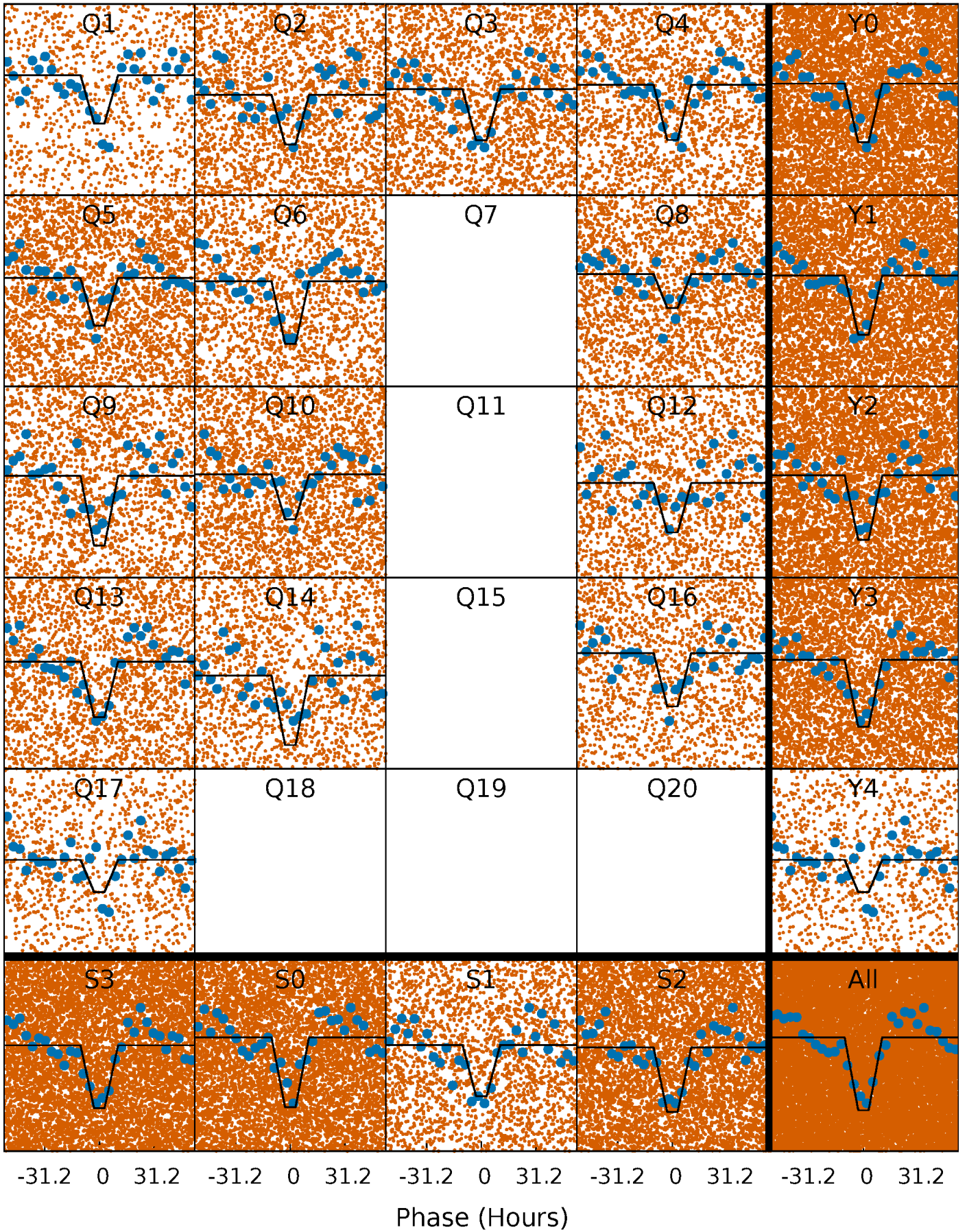
DV Quarter-Phased Transit Curves

TCE 010098322-01 P= 3.118945 Days $T_0=132.567326$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

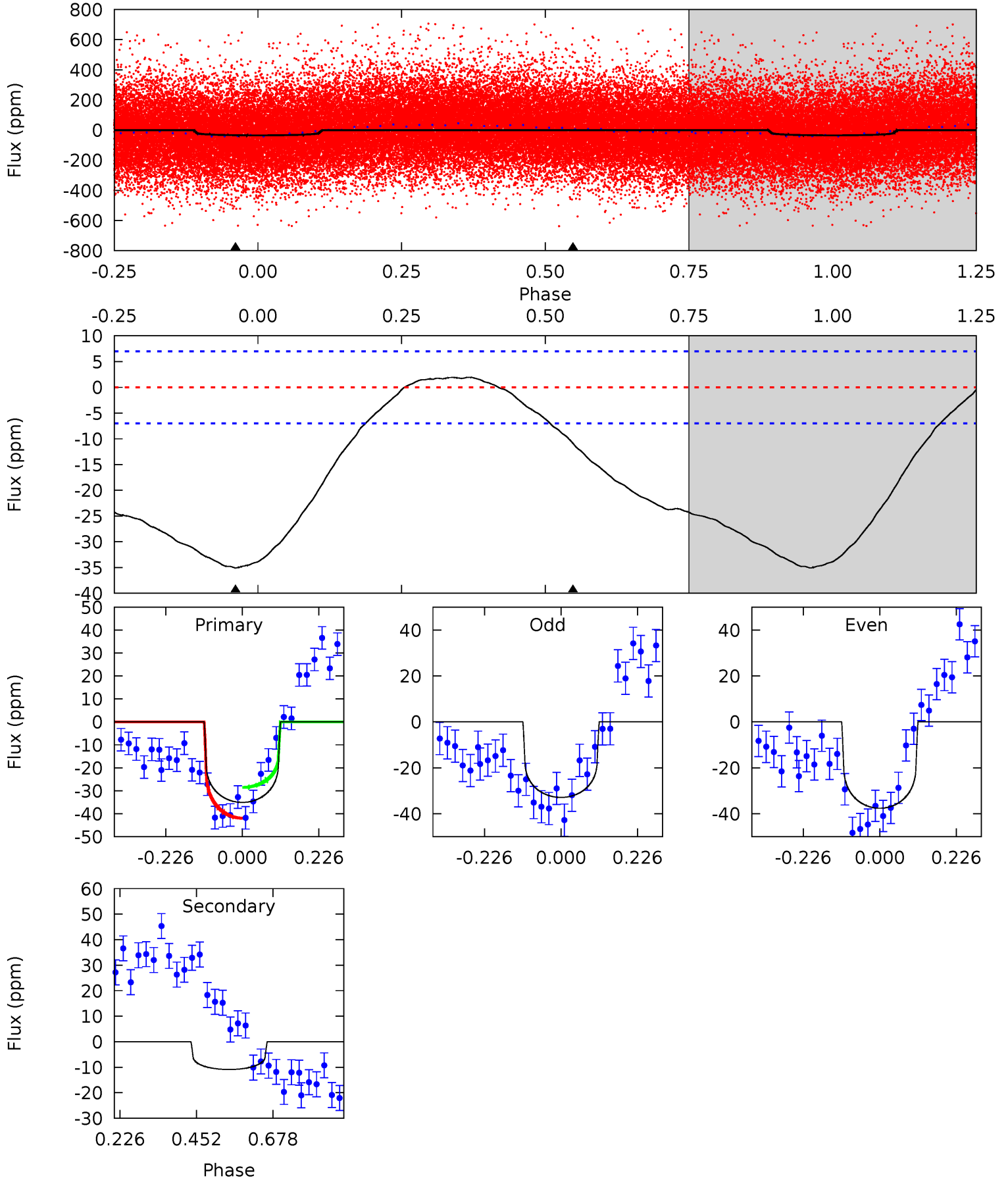
TCE 010098322-01 P= 3.118528 Days $T_0=132.619344$ (BKJD)



DV Model-Shift Uniqueness Test

010098322-01, P = 3.118945 Days, E = 129.448381 Days

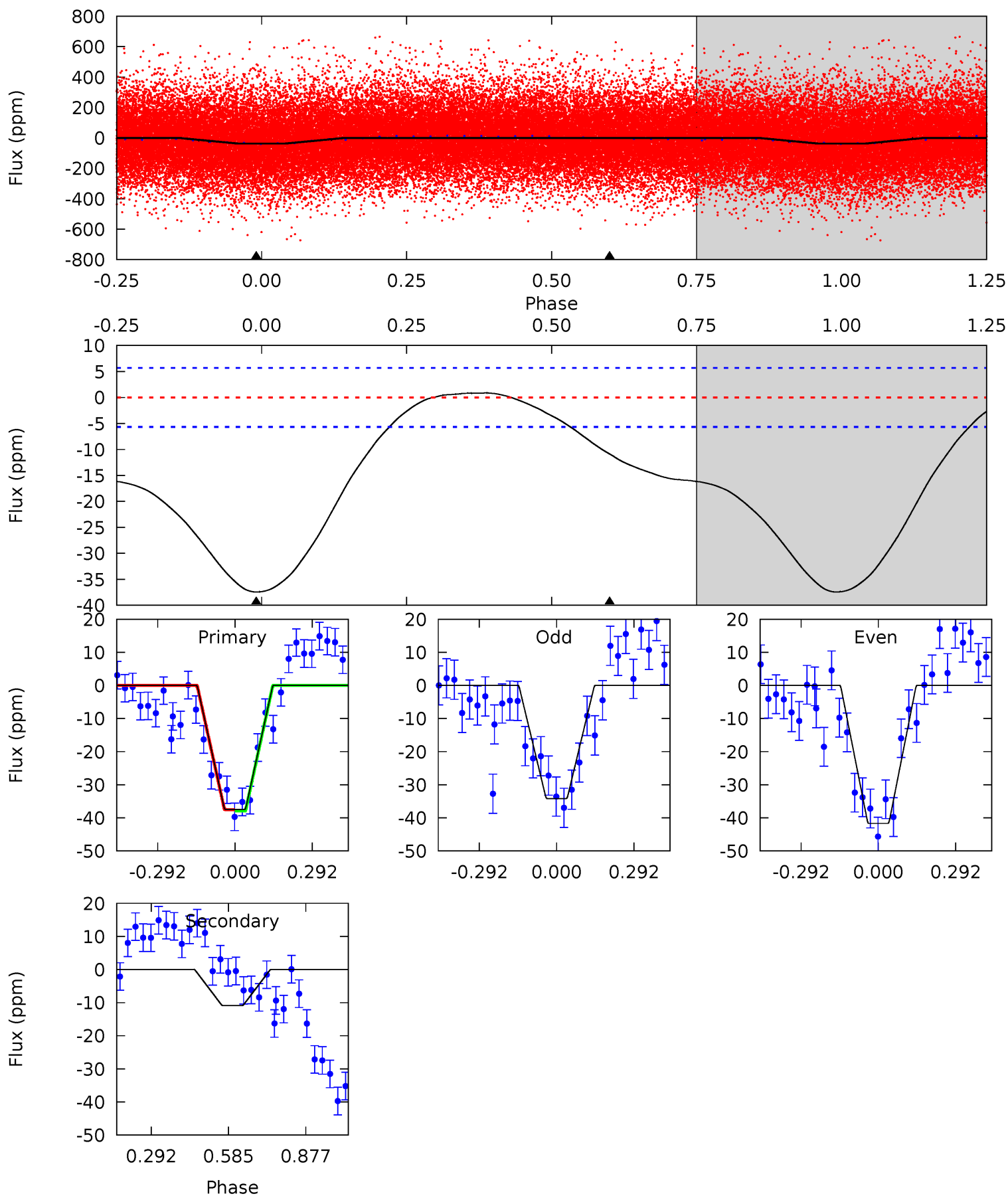
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.0	6.83	0	0	4.39	1.21	1.75	22.0	22.0	6.83	6.83	1.49	0.98	0.05	4.29



Alt Model-Shift Uniqueness Test

010098322-01, P = 3.118528 Days, E = 129.500816 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.6	8.30	0	0	4.33	1.05	0.83	28.6	28.6	8.30	8.30	2.86	0.95	0.02	0.15



Stellar Parameters For KIC 010098322

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6381^{+181}_{-227}	$4.101^{+0.286}_{-0.154}$	$-0.280^{+0.250}_{-0.300}$	$1.553^{+0.411}_{-0.457}$	$1.107^{+0.174}_{-0.157}$	$0.417^{+0.737}_{-0.192}$
	+3%/-4%	+7%/-4%	+89%/-107%	+26%/-29%	+16%/-14%	+177%/-46%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010098322-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-11 ± 2	$0.77^{+0.46}_{-0.40}$	2322^{+198}_{-212}	5267^{+2493}_{-876}	19^{+64}_{-12}
Alt.	-11 ± 1	$1.05^{+0.46}_{-0.48}$	2313^{+179}_{-204}	4648^{+1279}_{-579}	10^{+21}_{-6}

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

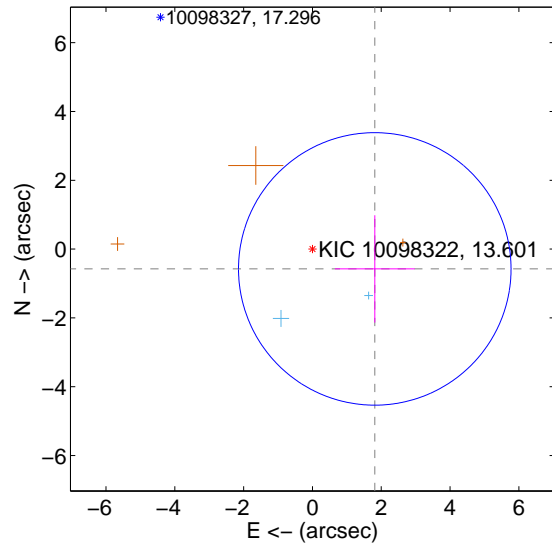
Supplemental centroid analysis for 010098322-01. Kepler magnitude: 13.60. Transit SNR 9.79

There are 2 quarters with good PRF difference image offsets

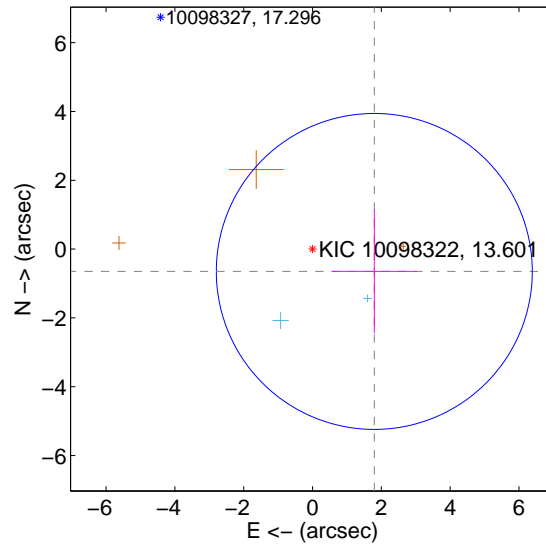
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.902 ± 1.320	1.44	-1.812 ± 1.160	-0.576 ± 1.559
PRF-fit source offset from KIC position	1.910 ± 1.531	1.25	-1.796 ± 1.242	-0.649 ± 1.795
photometric centroid source offset	1.83 ± 1.24	1.48	1.33 ± 1.35	-1.26 ± 1.09

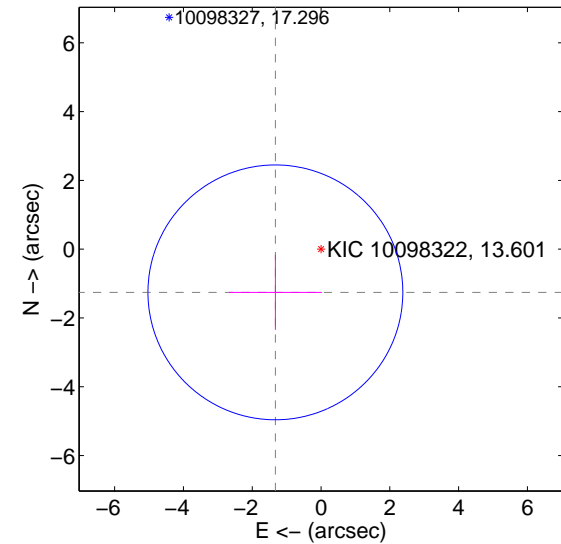
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

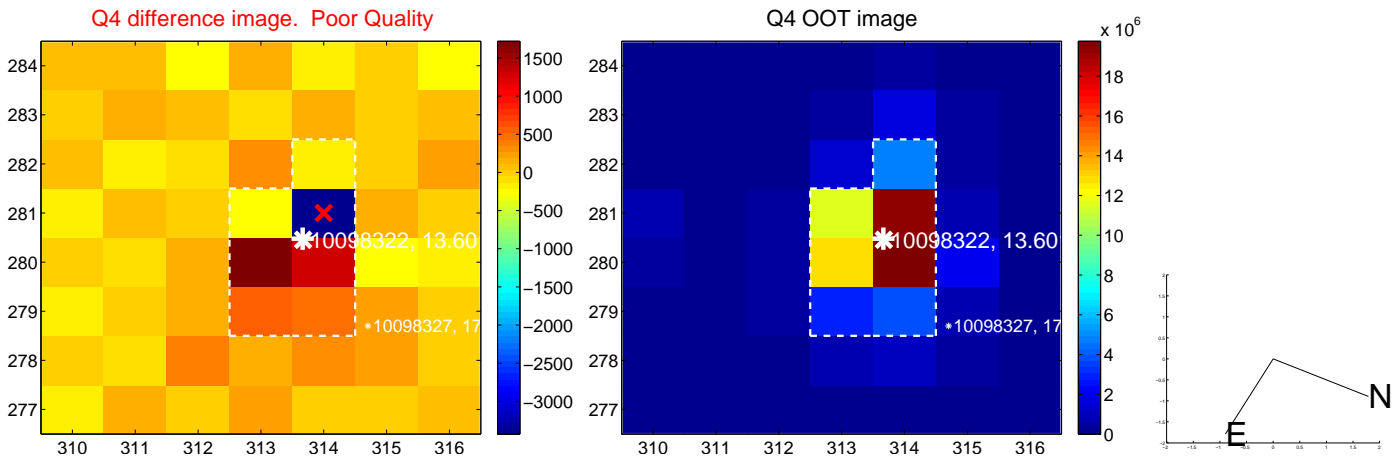
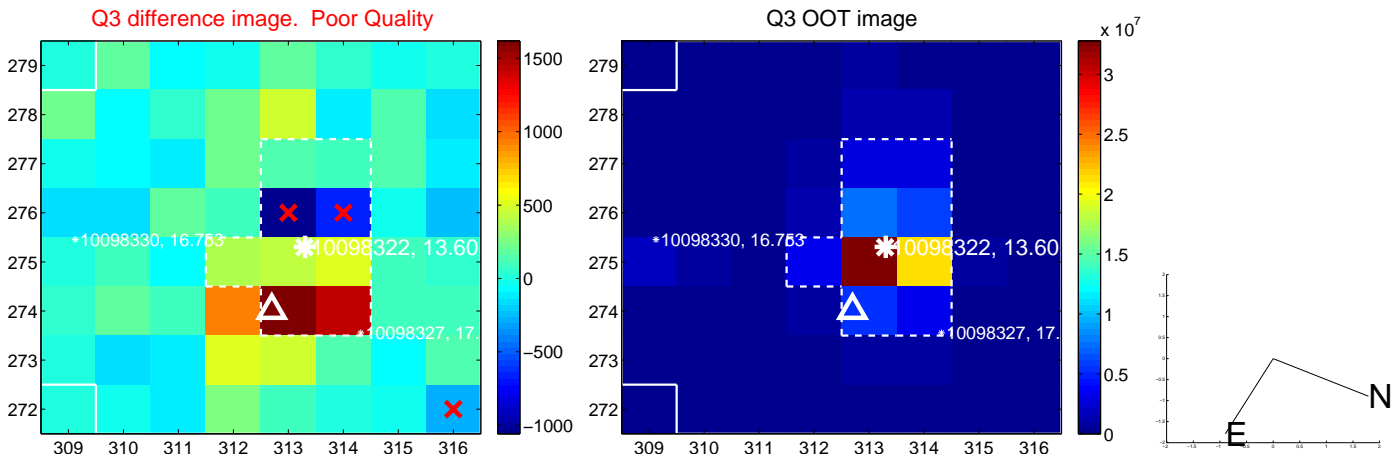
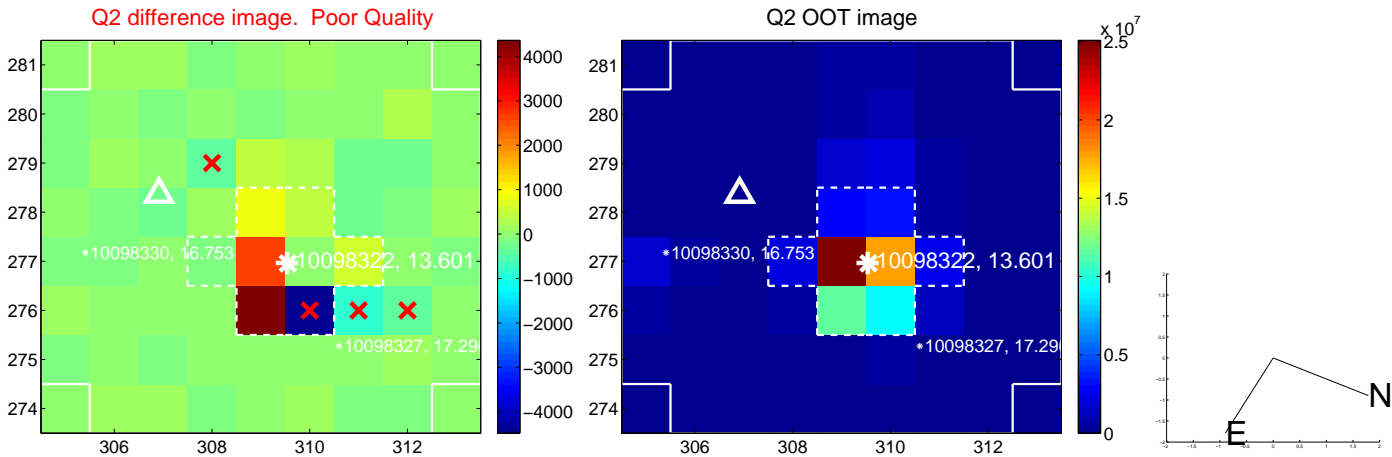
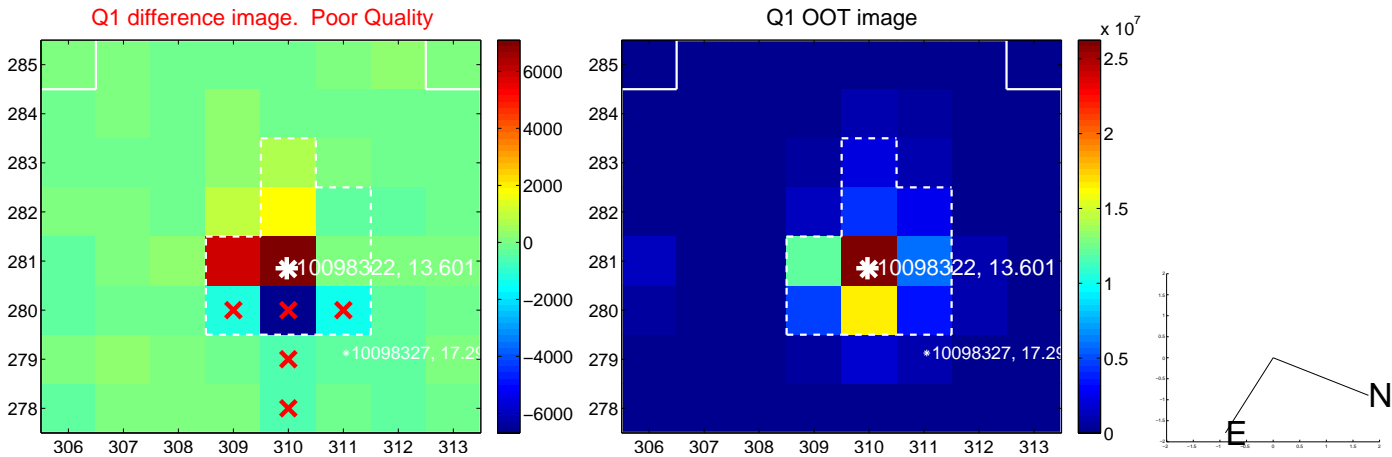


offset from photometric centroids

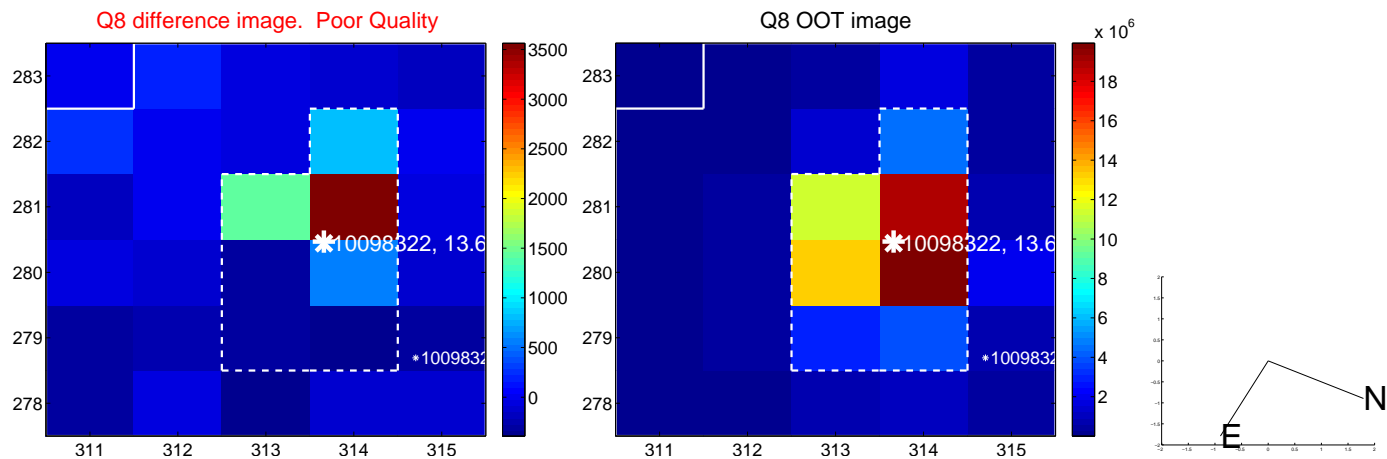
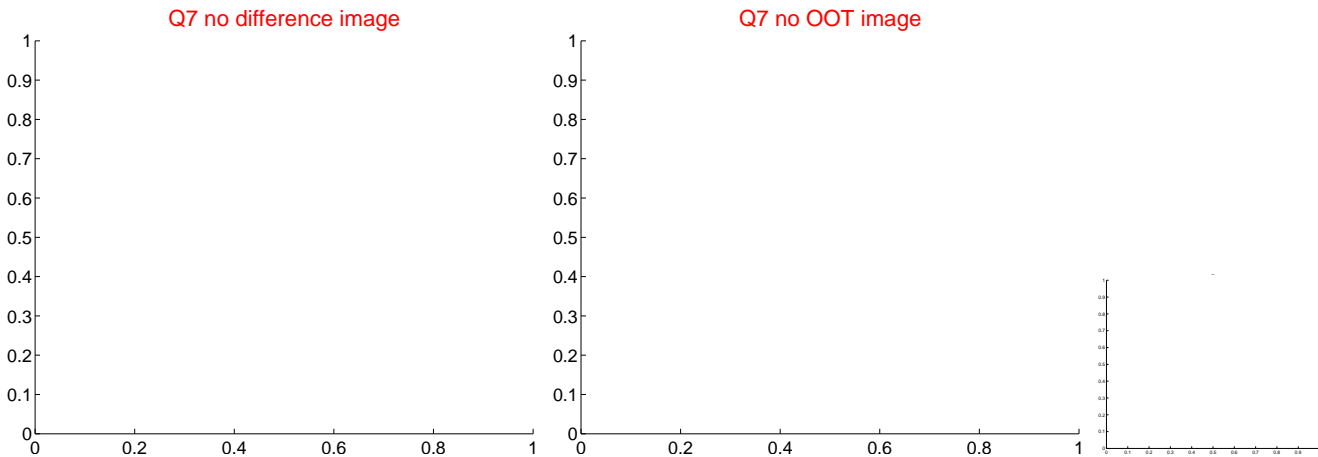
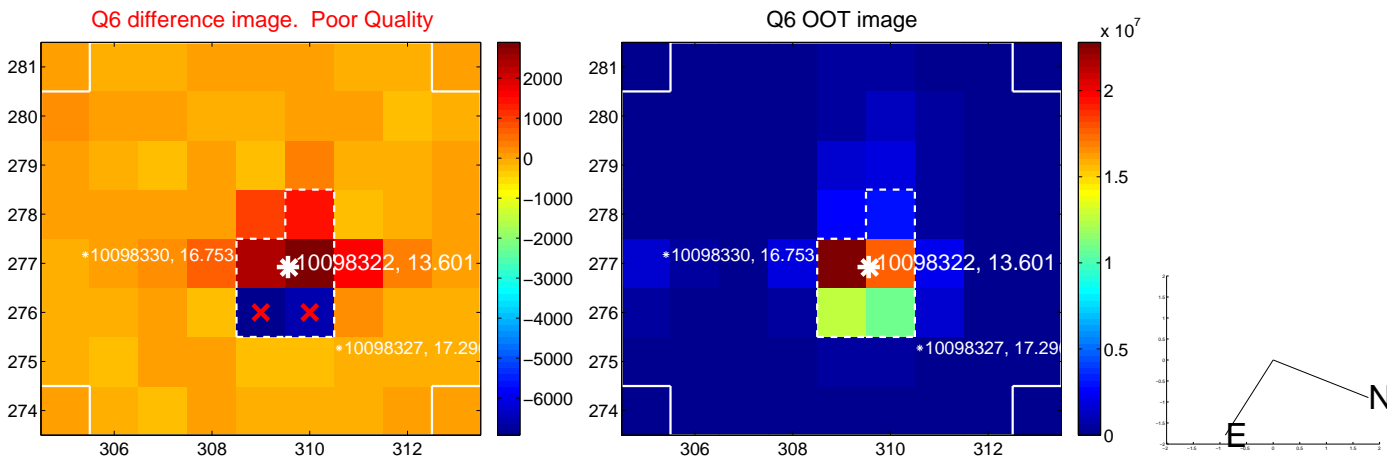
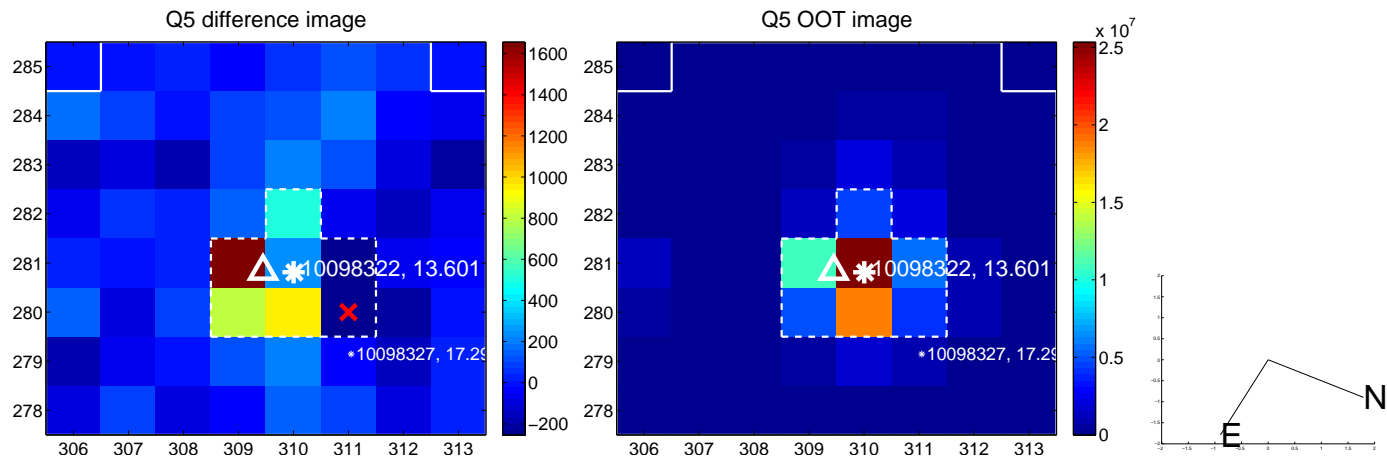


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

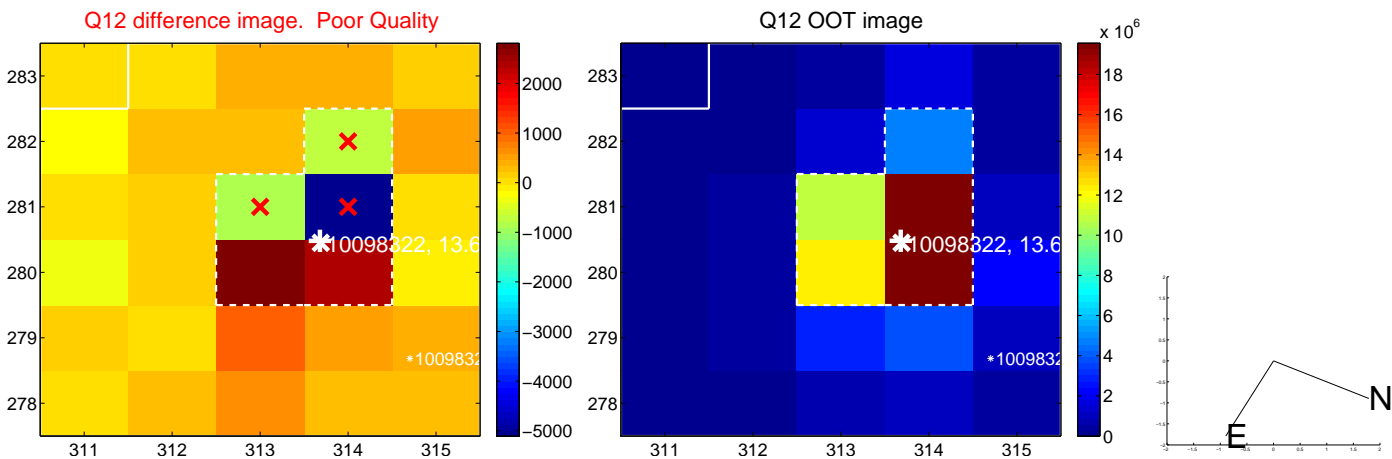
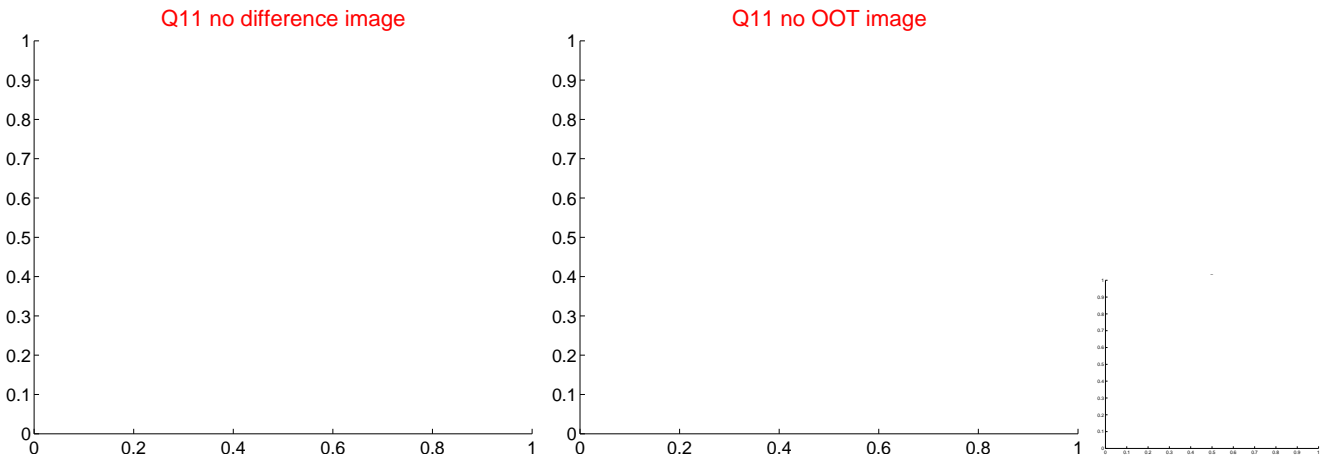
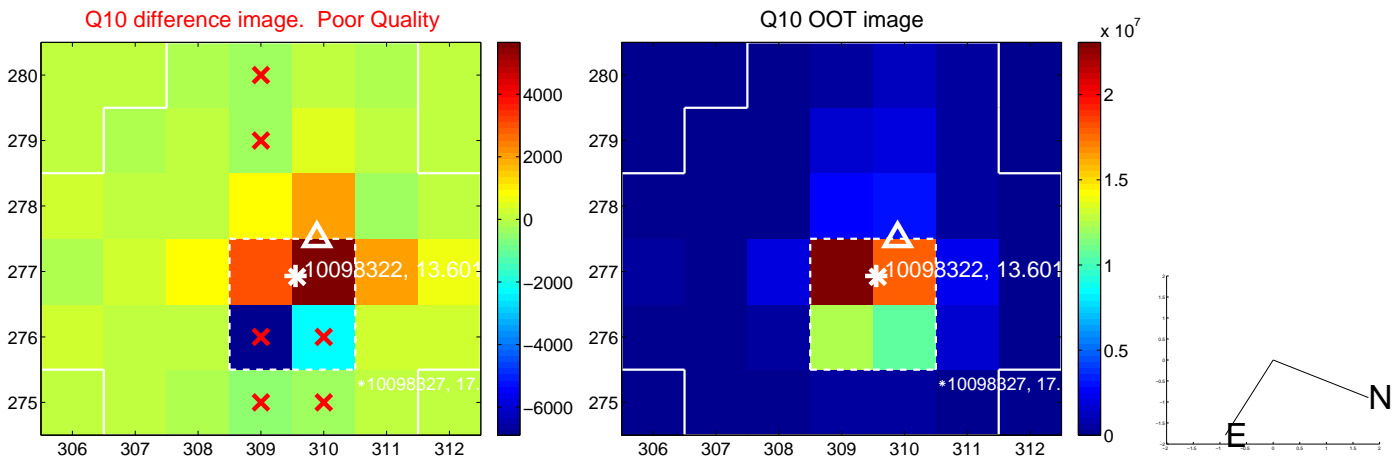
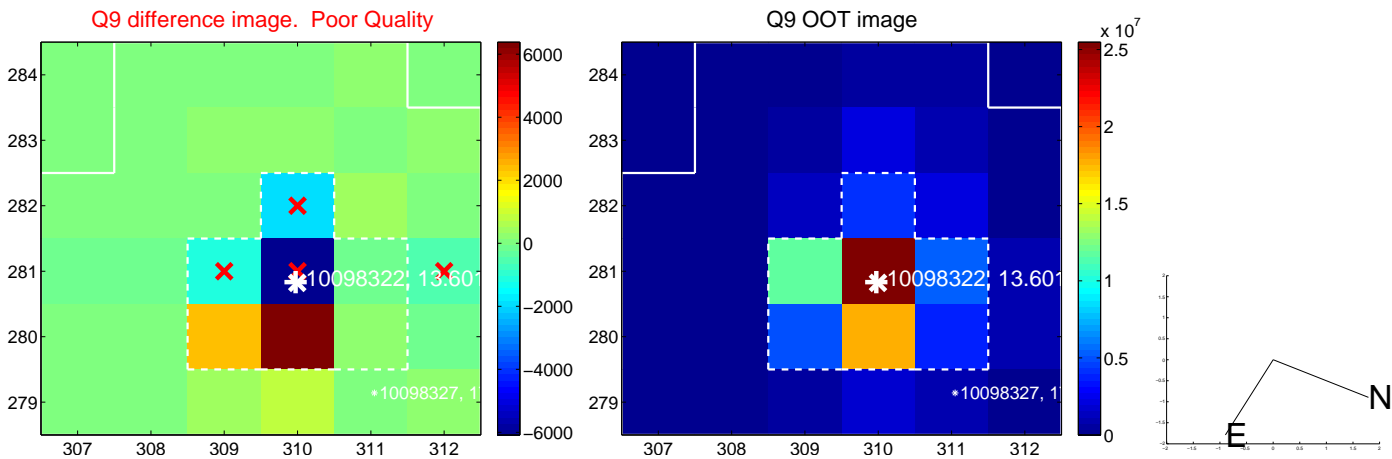
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



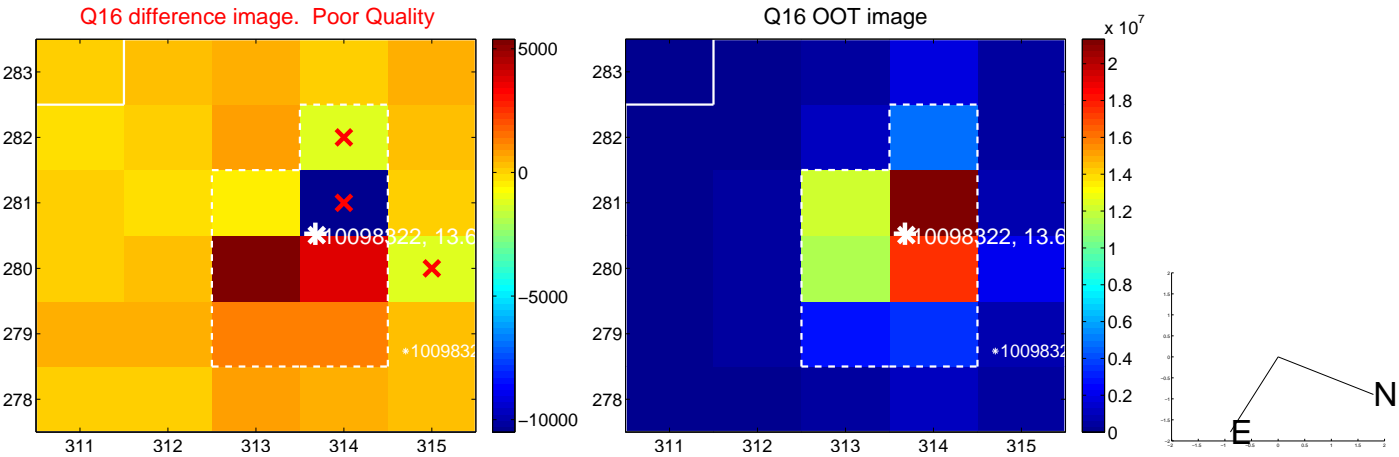
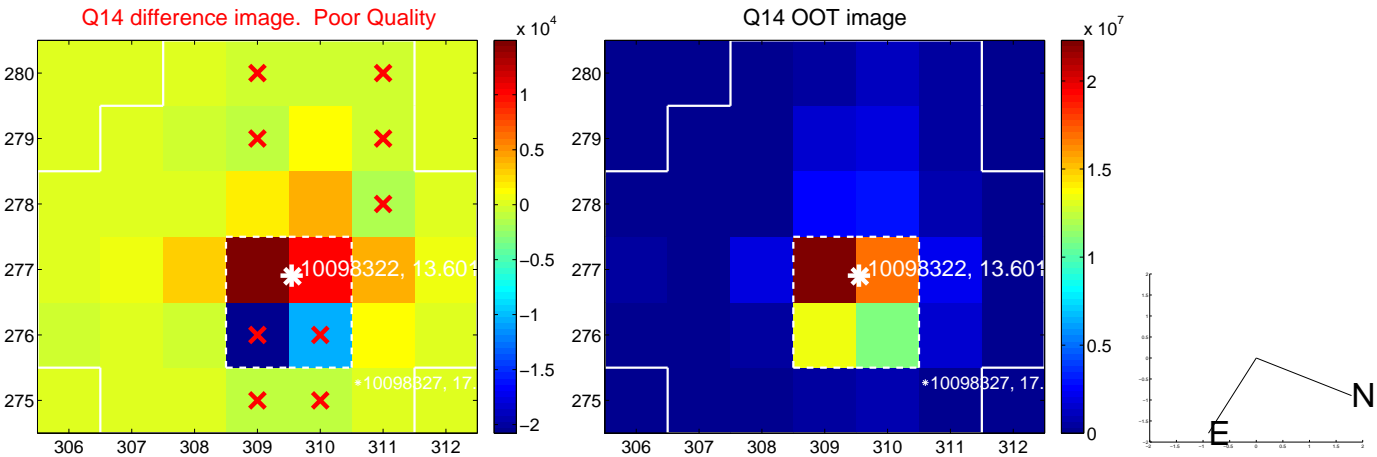
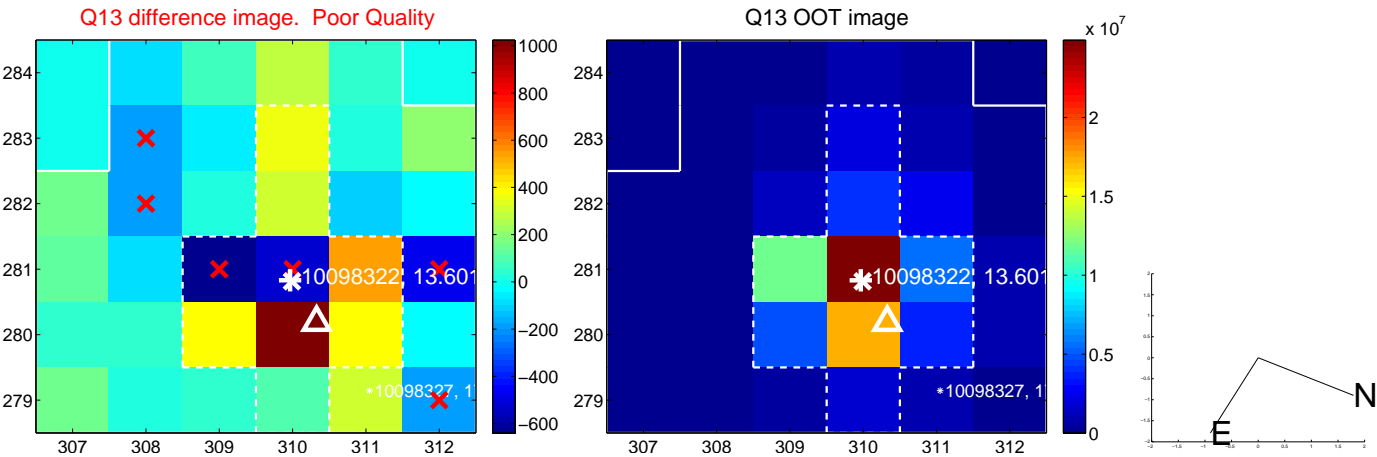
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



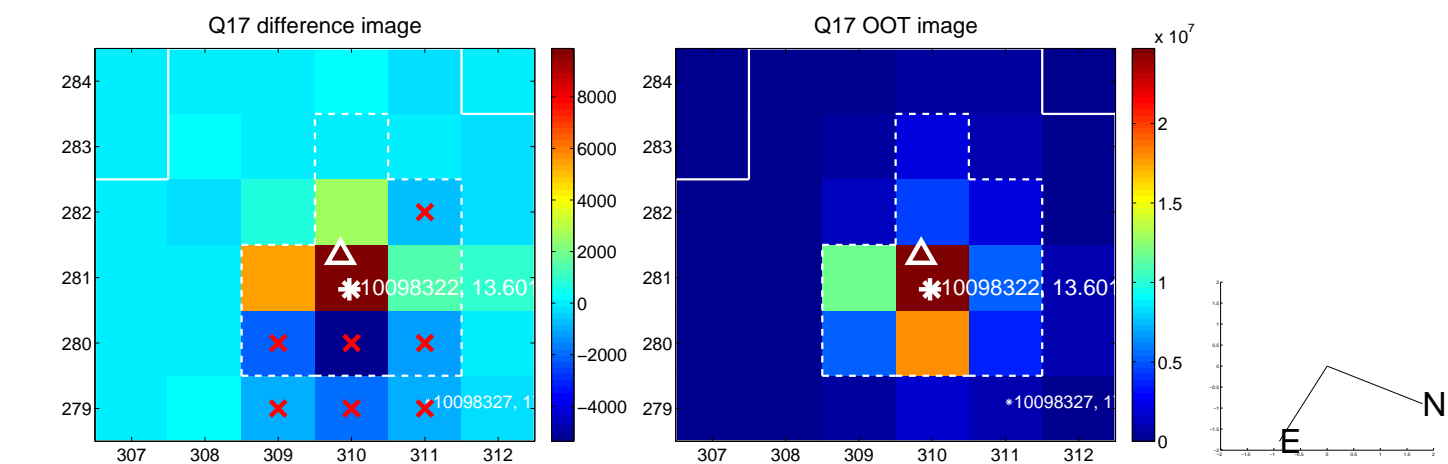
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



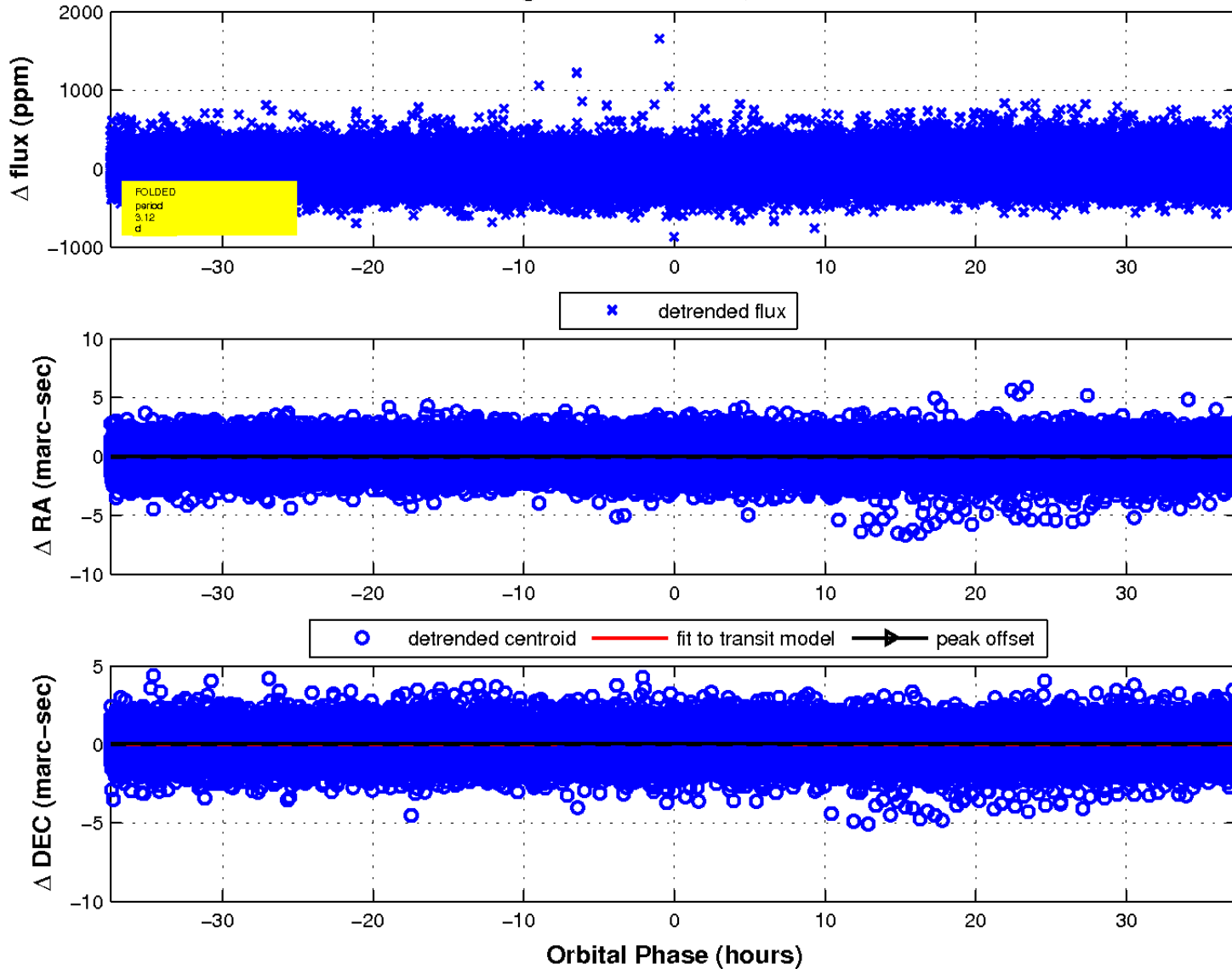
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

