

KIC 011027722

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})
011027722-01	OBS	7402.01	0.678146	132.130152	245.5	0.550	19.4	42.2	0.94	6429	1.79	6334.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011027722-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—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 011027722-01

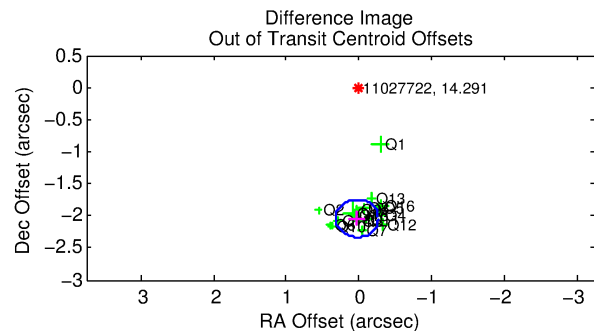
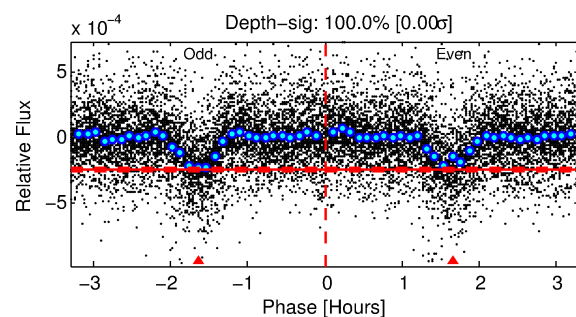
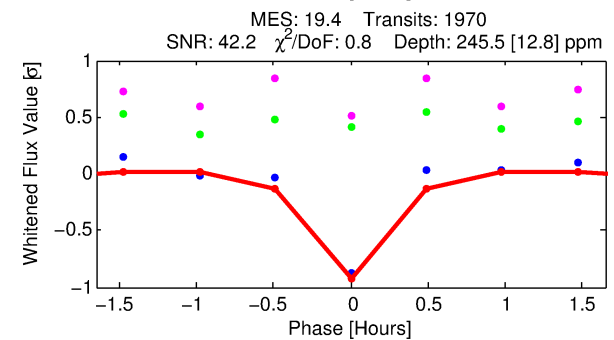
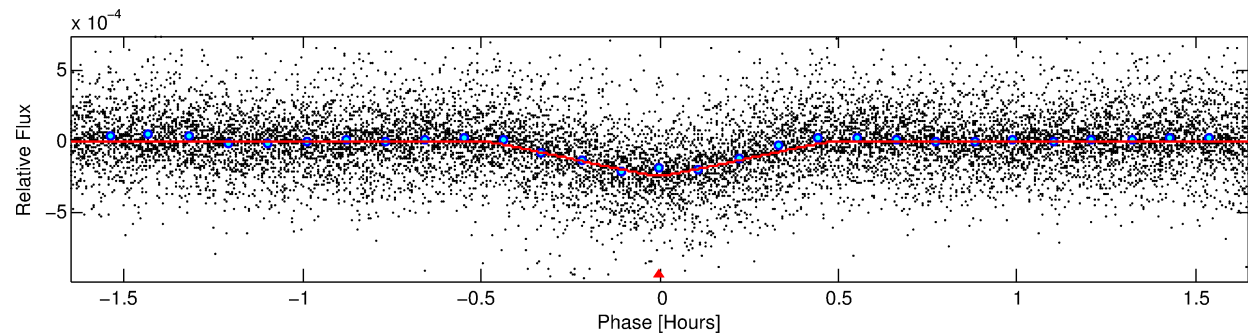
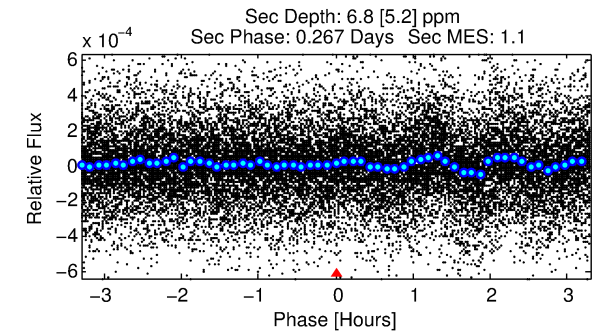
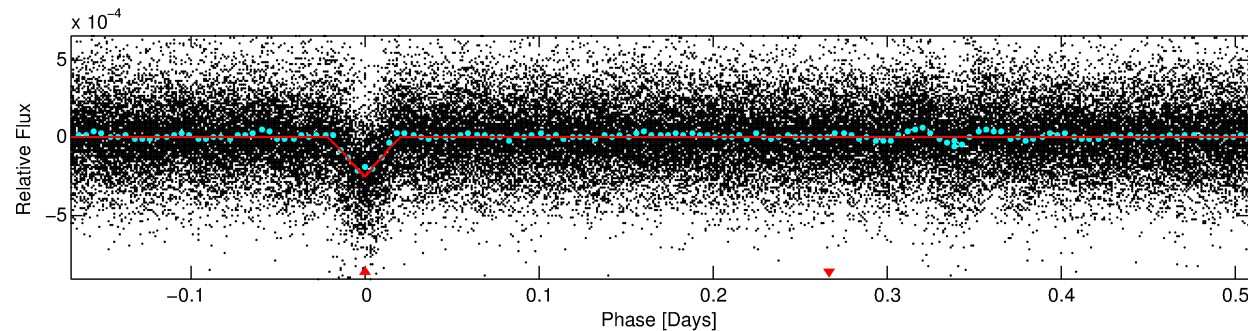
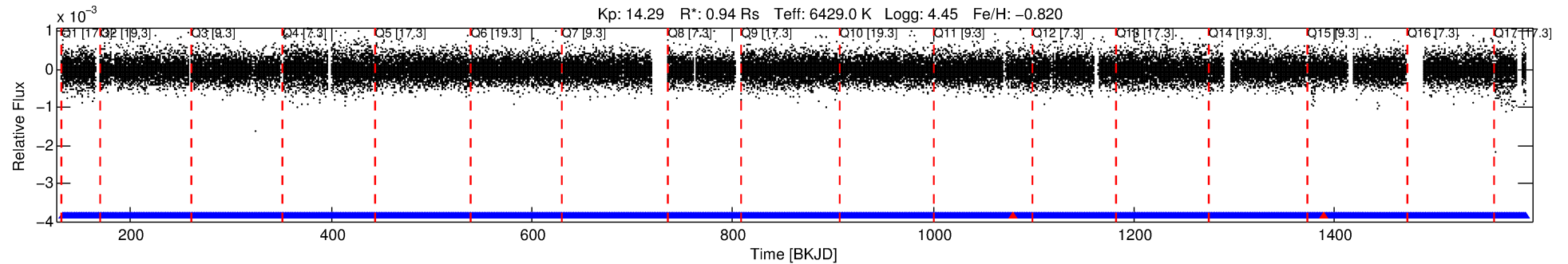
No Significant Match Found

DV One-Page Summary

KIC: 11027722 Candidate: 1 of 1 Period: 0.678 d

KOI: K07402 Corr: No Ephemeris Match

Kp: 14.29 R*: 0.94 Rs Teff: 6429.0 K Logg: 4.45 Fe/H: -0.820



DV Fit Results:

Period = 0.67815 [0.00000] d
Epoch = 132.1302 [0.0003] BKJD
Rp/R* = 0.0174 [0.0014]
a/R* = 4.57 [1.75]
b = 0.90 [0.09]
Seff = 6334.87 [2182.83]
Teq = 2275 [196] K
Rp = 1.79 [0.48] Re
a = 0.0146 [0.0032] AU
Ag = 0.25 [0.21] [-3.53σ]
Teff = 2494 [490] K [0.41σ]

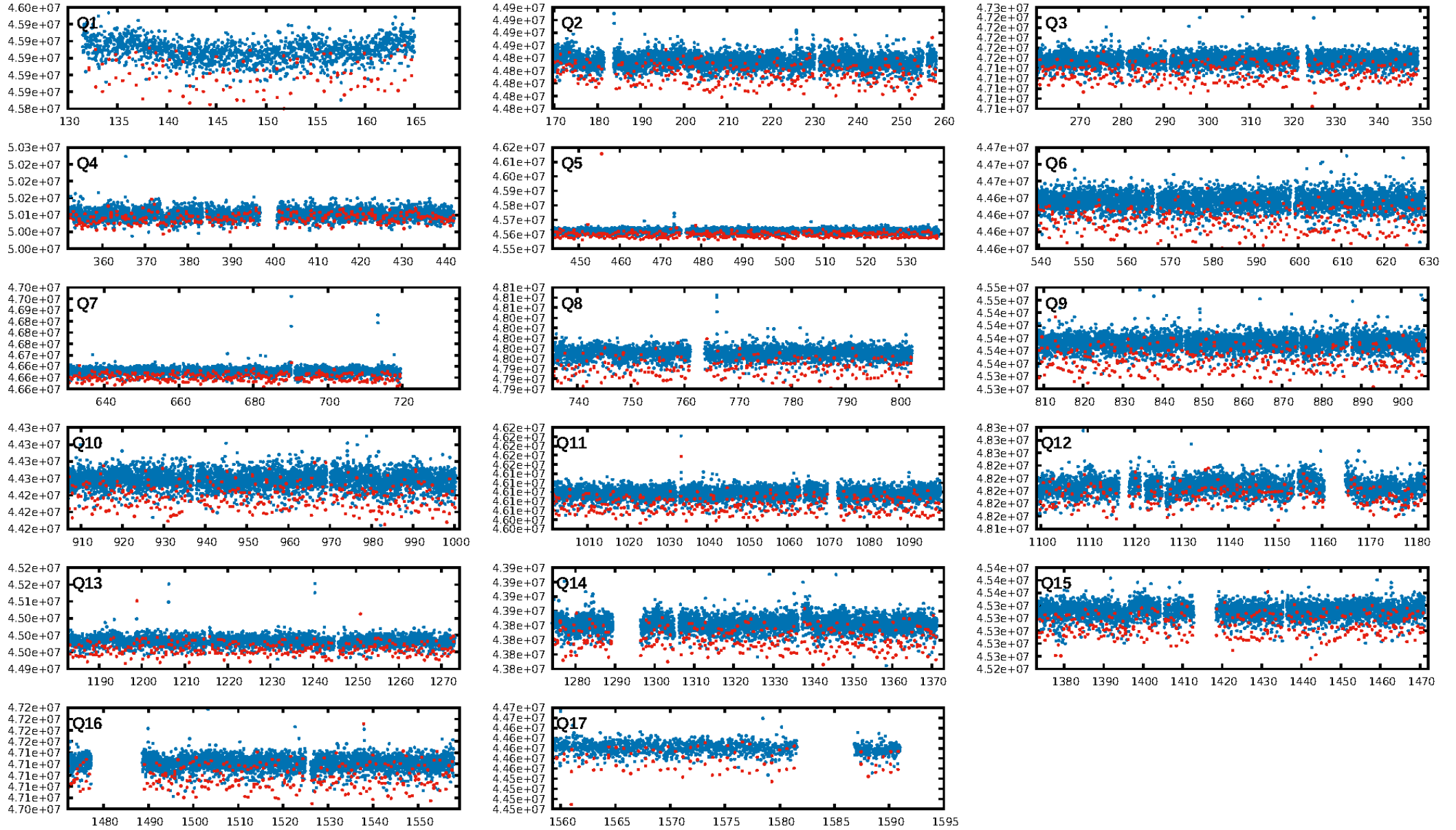
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.52e-75
RollingBand-fgt: 1.00 [1880/1882]
GhostDiagnostic-chr: 1.432
Centroid-sig: 0.0%
Centroid-so: 2.581 arcsec [10.37σ]
OotOffset-rm: 2.042 arcsec [20.87σ]
KicOffset-rm: 1.936 arcsec [20.40σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

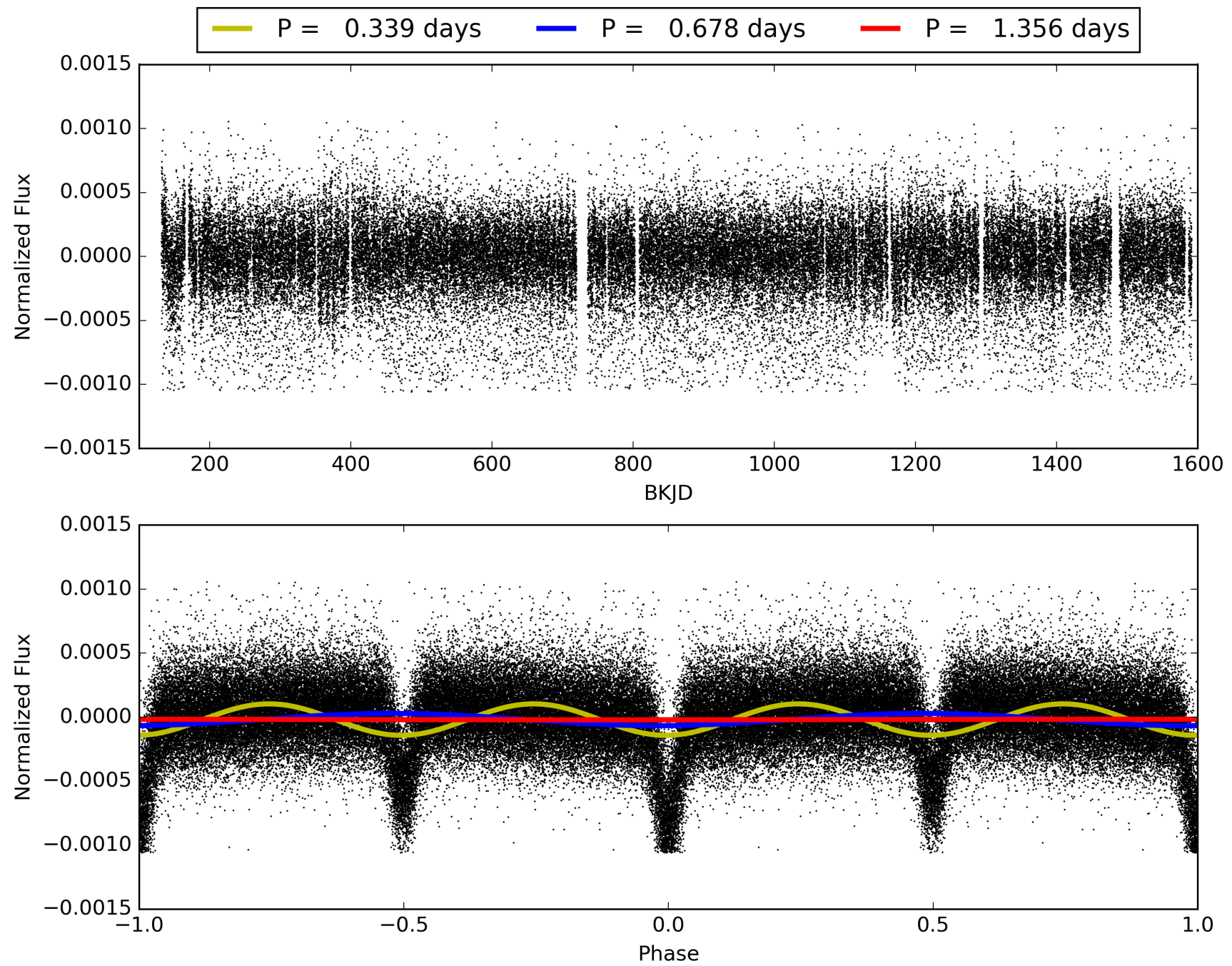
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:30:51 Z

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

TCE 011027722-01, PDC Light Curves

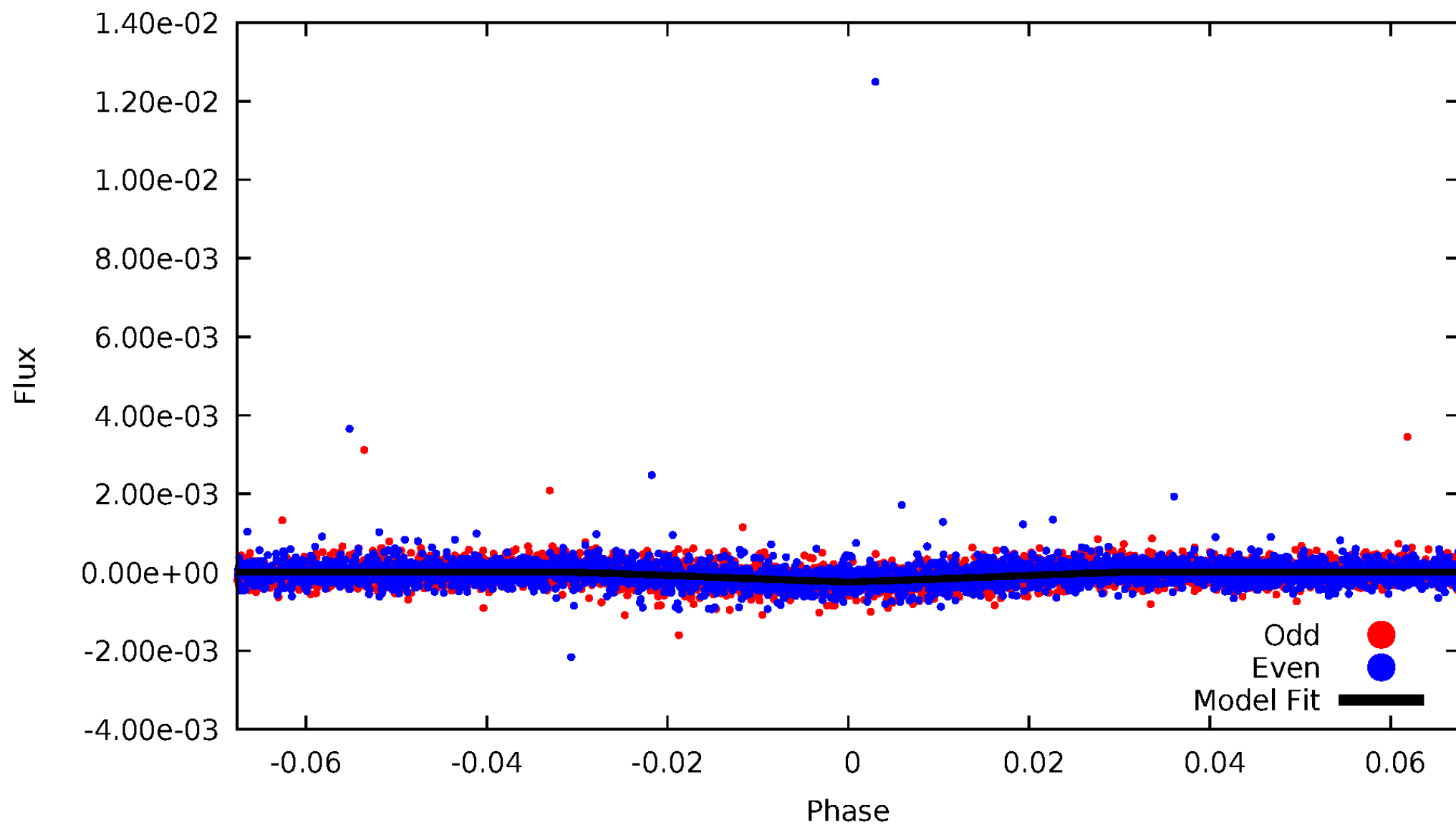


TCE 011027722-01



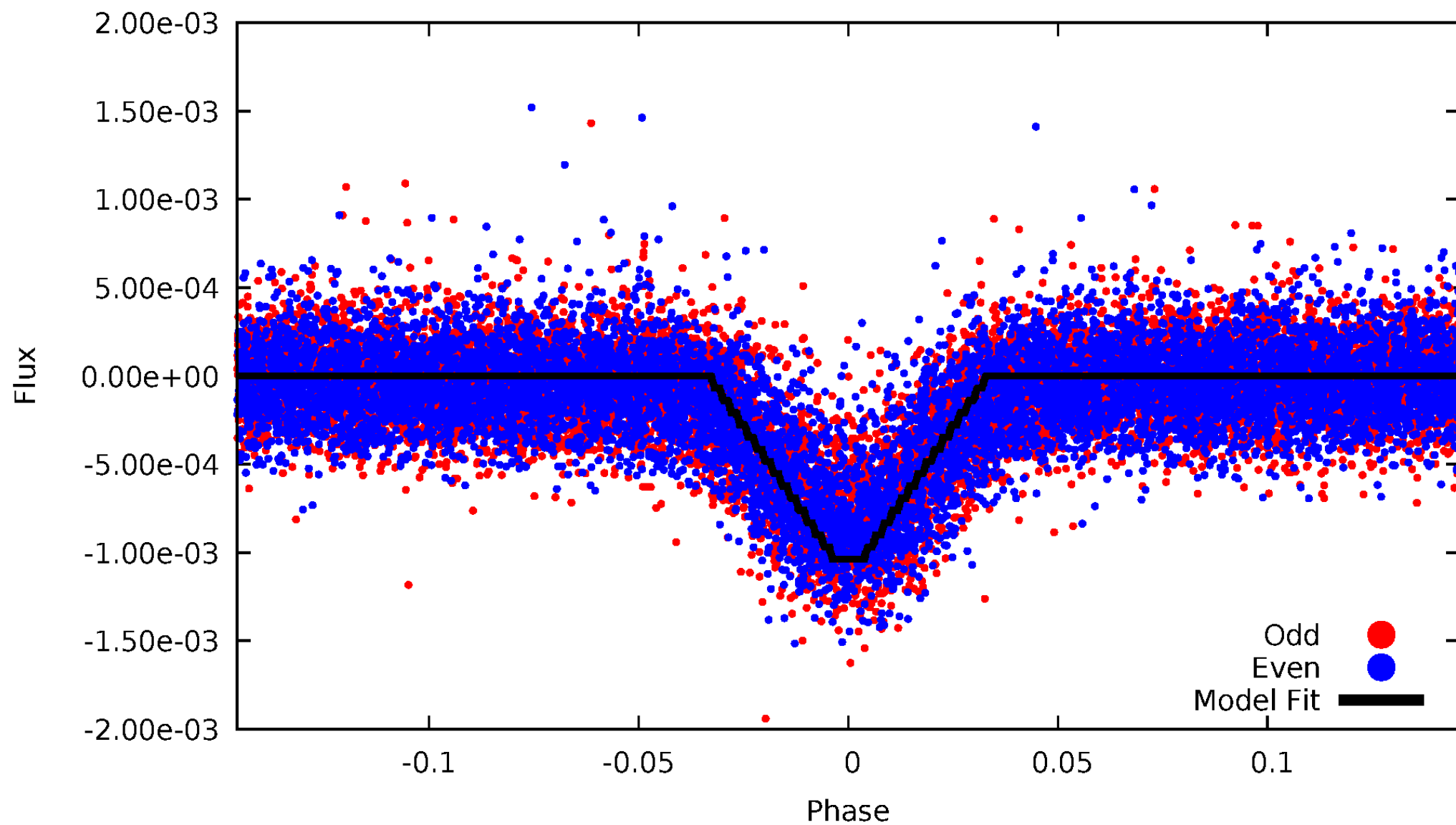
DV Odd/Even

TCE 011027722-01



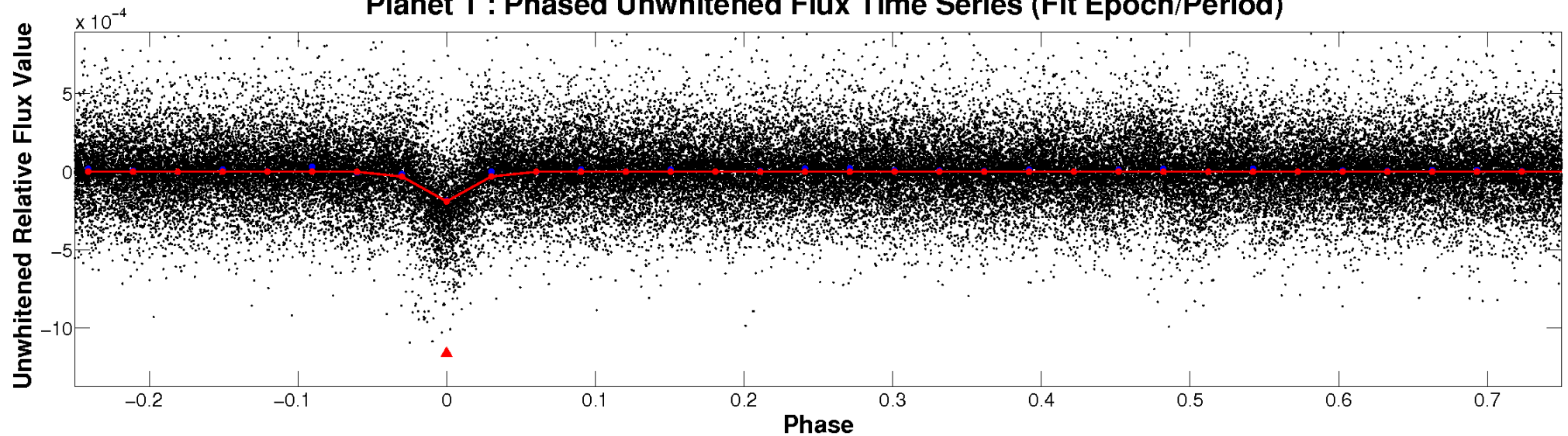
ALT Odd/Even

TCE 011027722-01

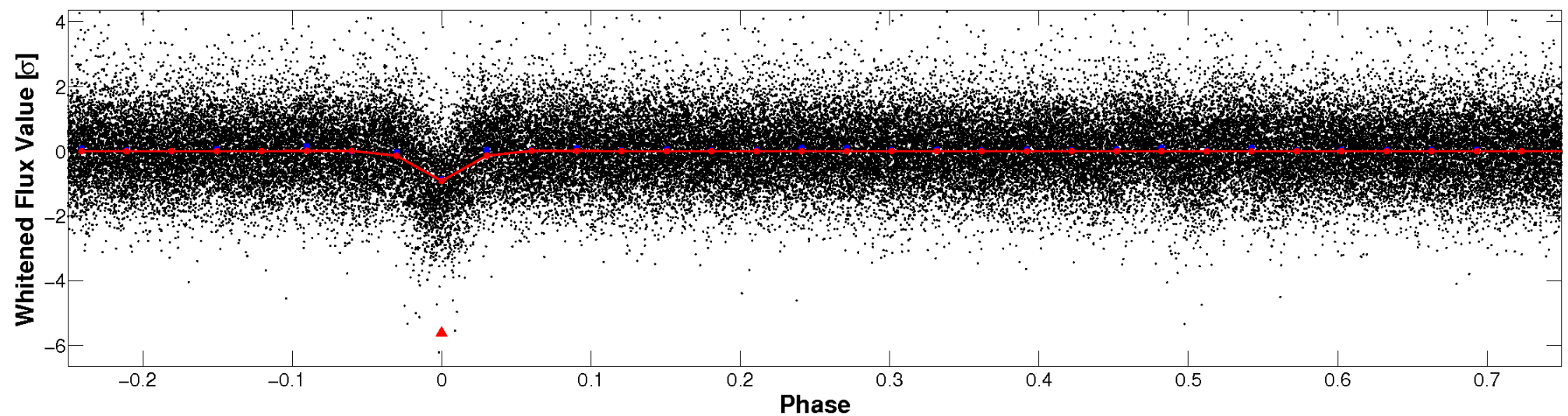


Non-Whitened Vs. Whitened Light Curve

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

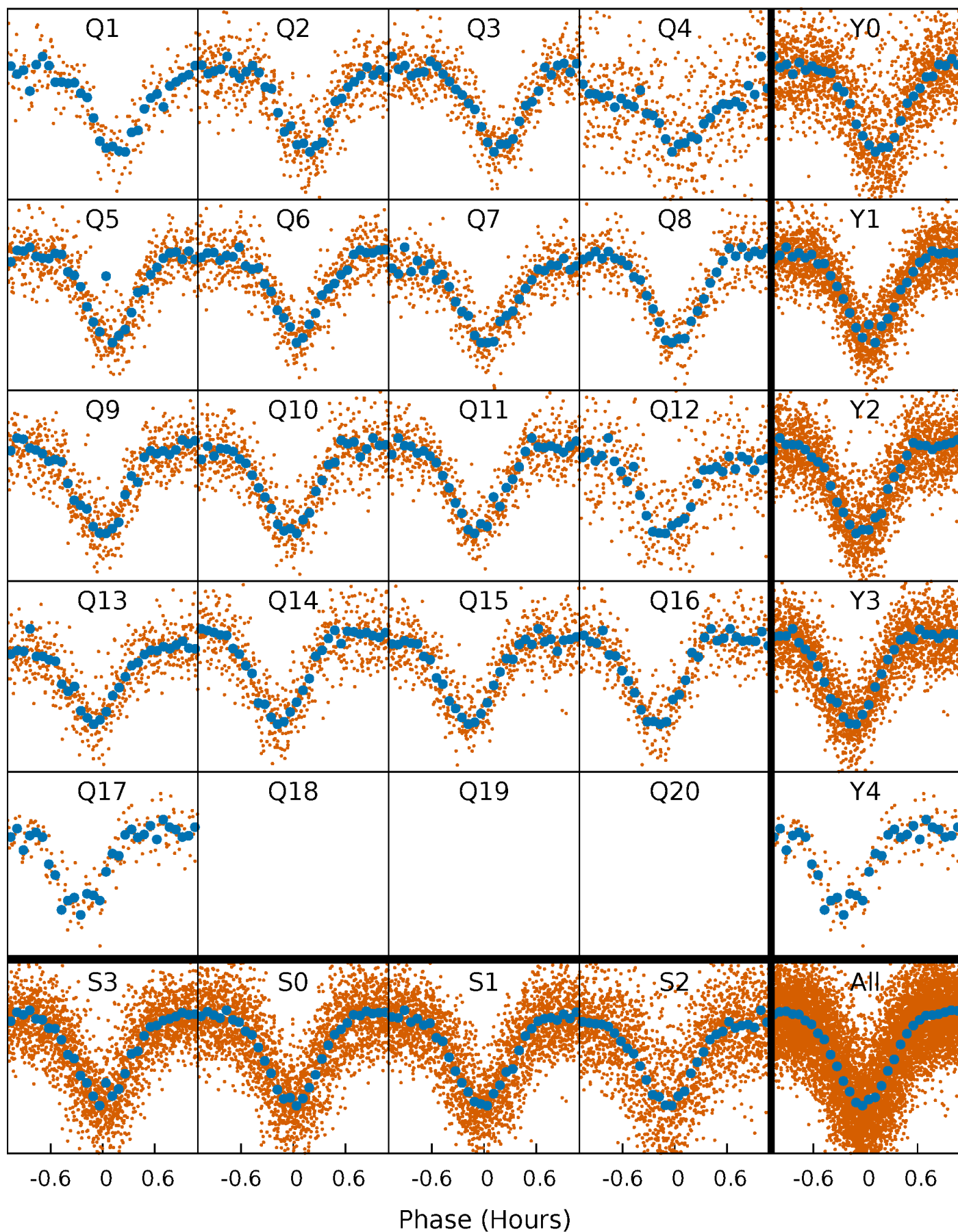


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



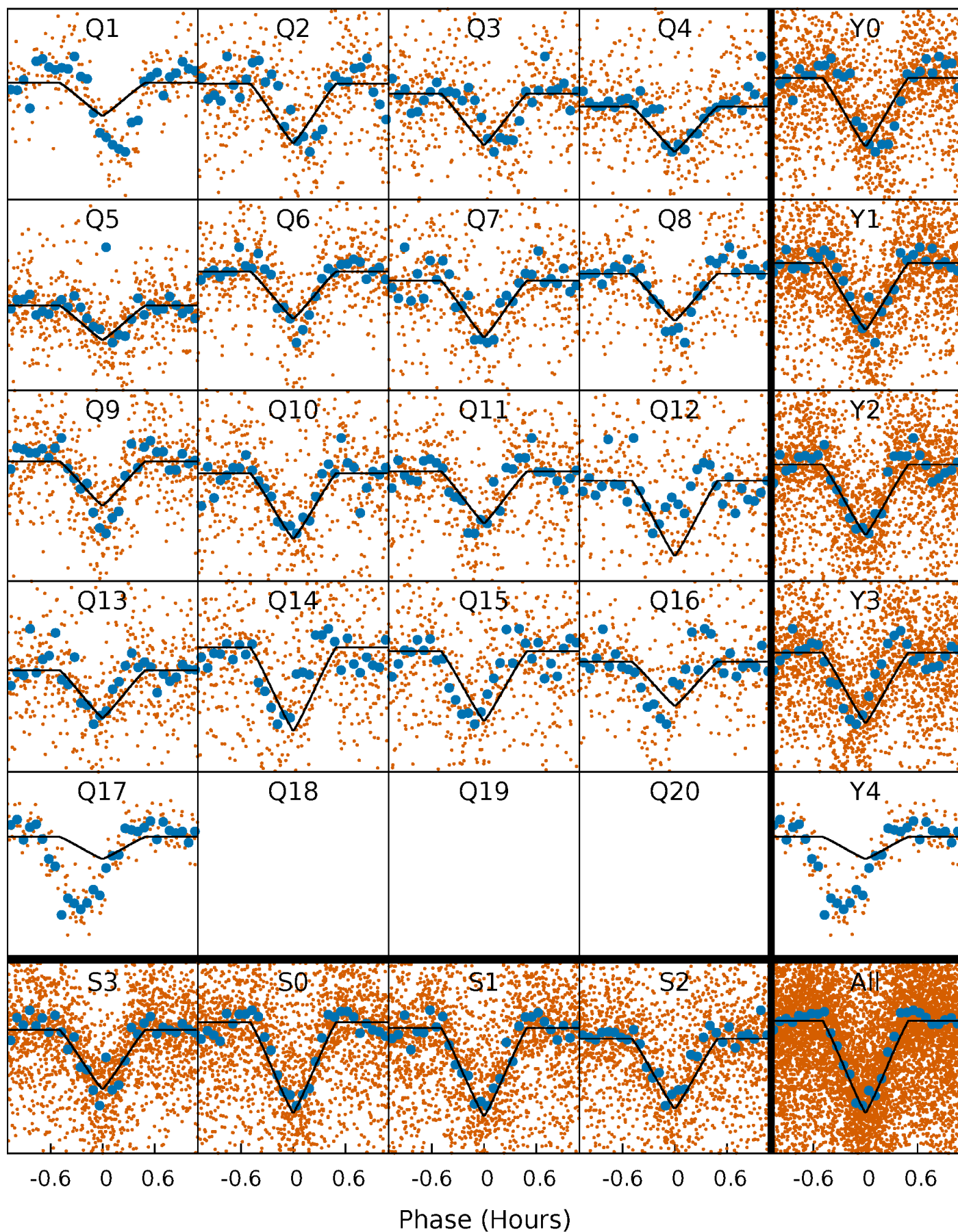
PDC Quarter-Phased Transit Curves

TCE 011027722-01 P= 0.678146 Days $T_0=132.130152$ (BKJD)



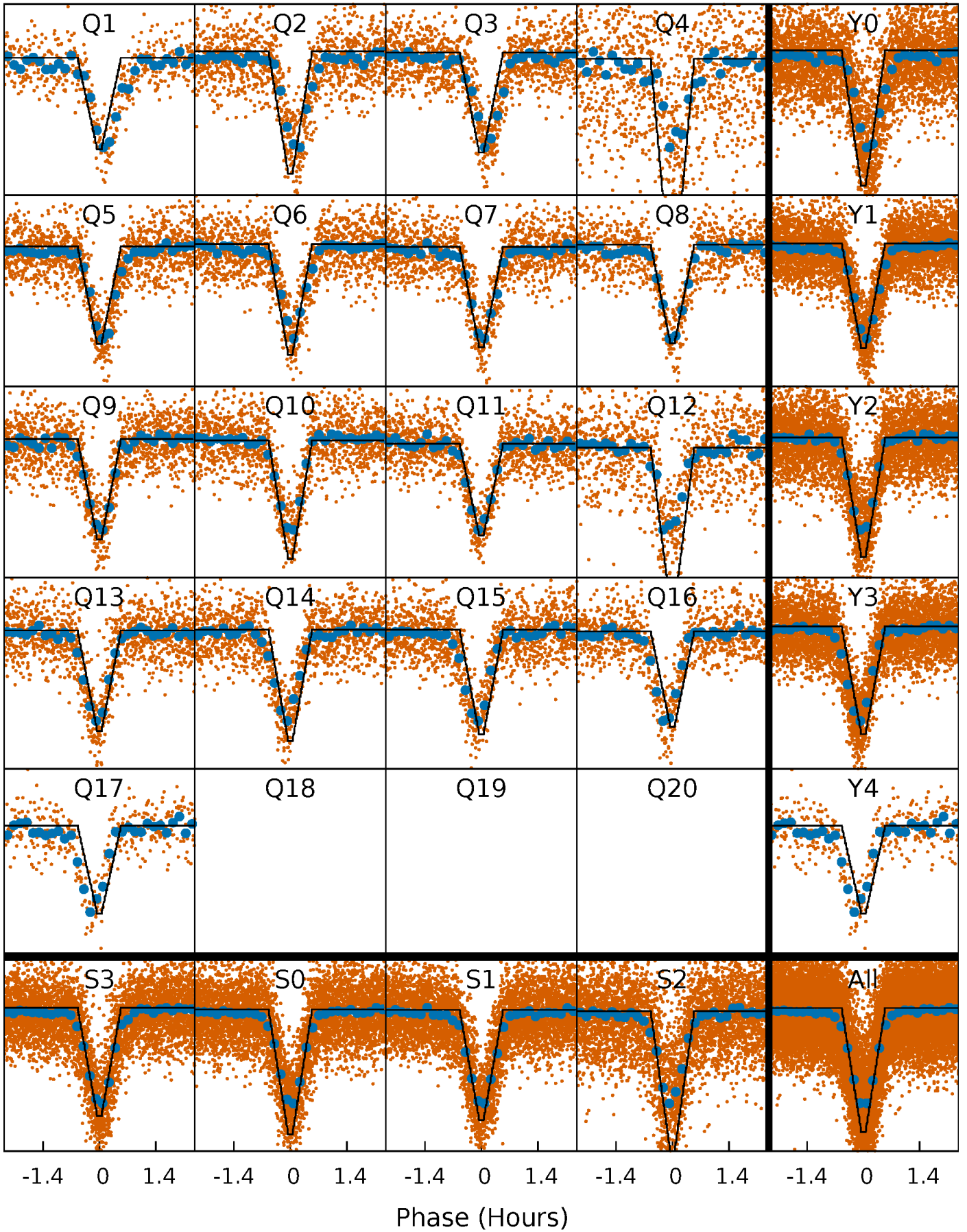
DV Quarter-Phased Transit Curves

TCE 011027722-01 P= 0.678146 Days $T_0=132.130152$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

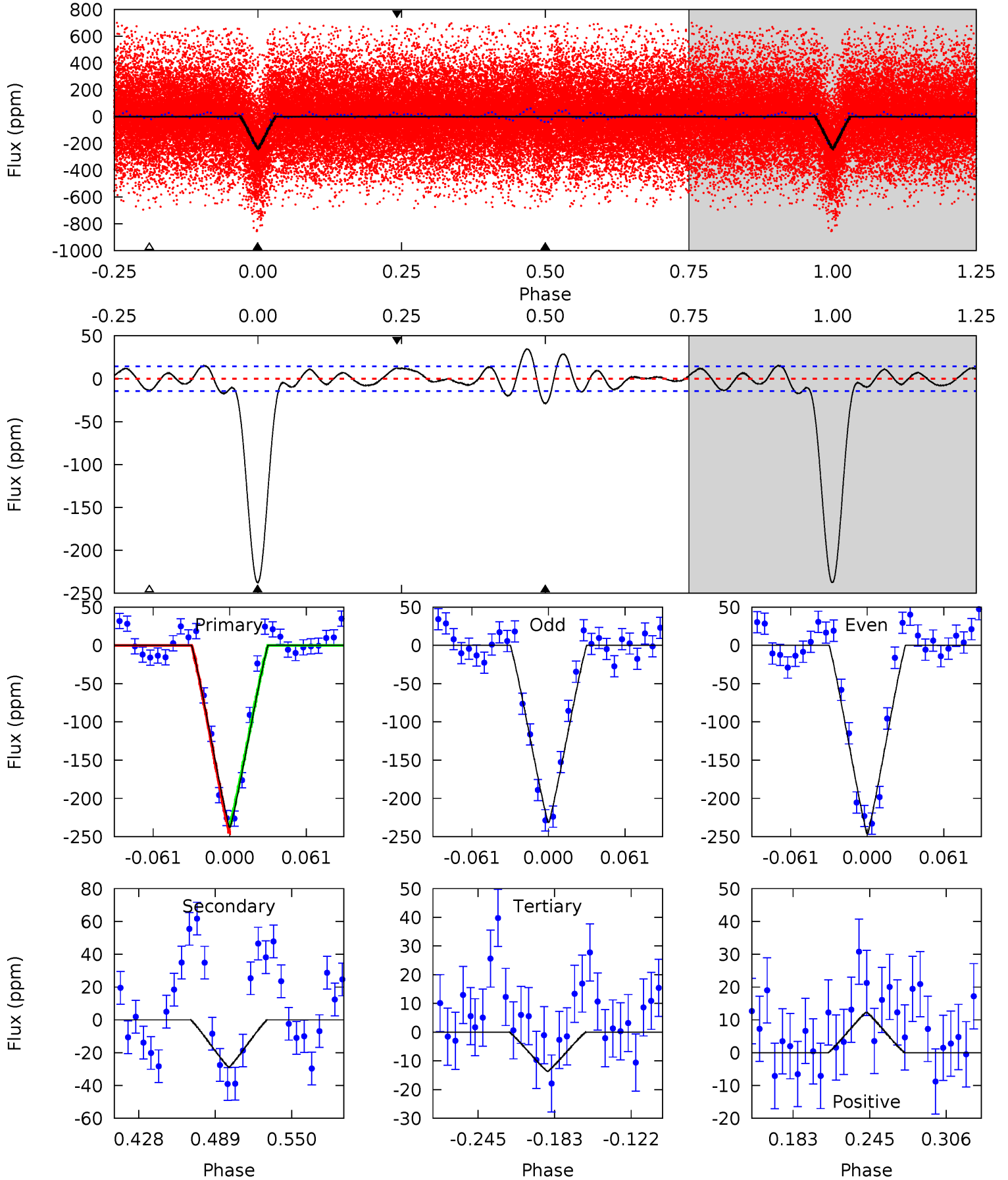
TCE 011027722-01 P= 0.678144 Days $T_0=132.131352$ (BKJD)



DV Model-Shift Uniqueness Test

011027722-01, P = 0.678146 Days, E = 131.452006 Days

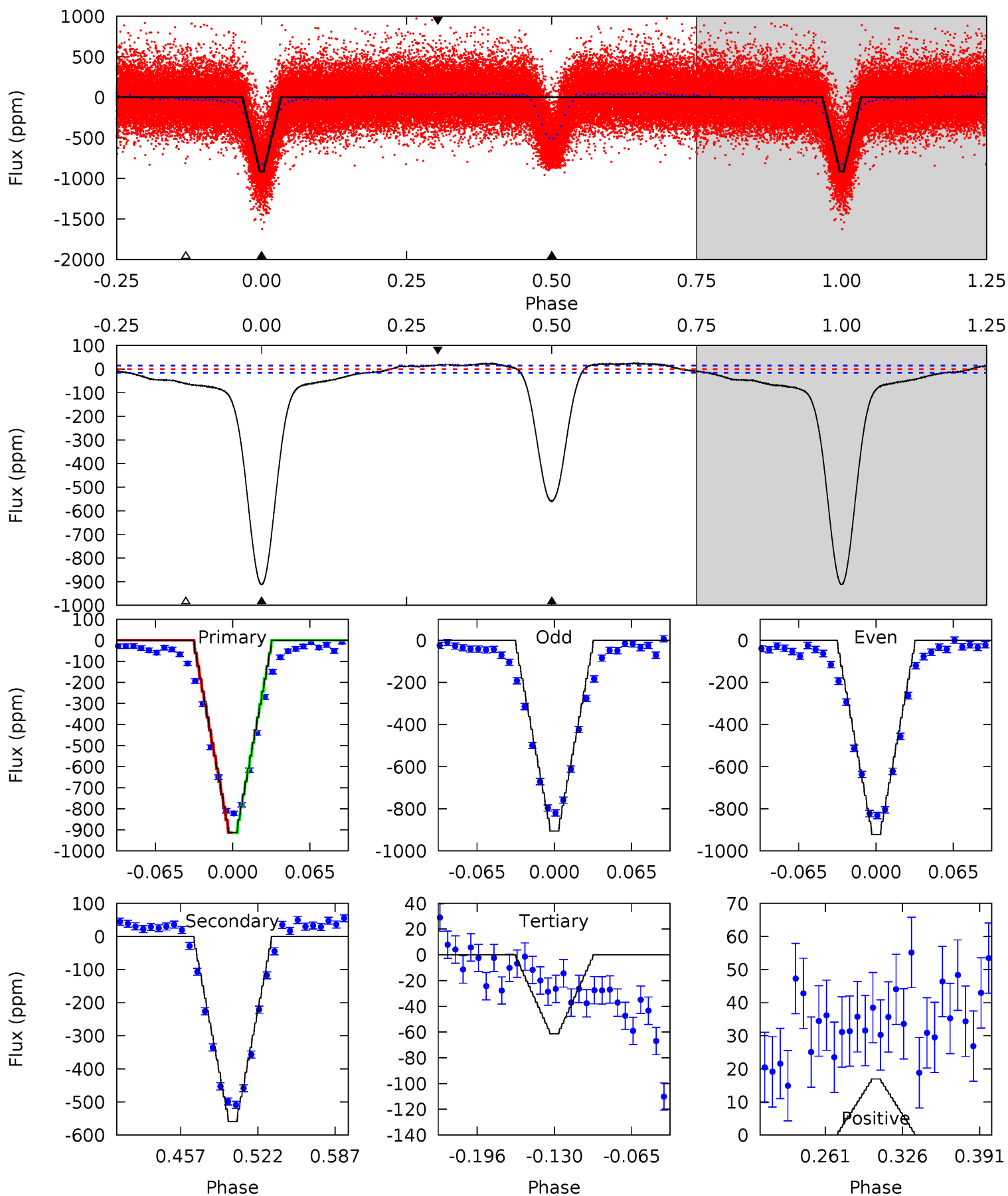
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
77.0	9.32	4.41	3.98	4.67	1.87	2.40	72.6	73.0	4.91	5.33	2.38	0.98	0.13	1.78



Alt Model-Shift Uniqueness Test

011027722-01, P = 0.678144 Days, E = 131.453208 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
278.5	170.7	18.7	5.17	4.65	1.84	10.1	259.8	273.4	152.0	165.6	2.51	0.98	0.03	0.08



Stellar Parameters For KIC 011027722

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6429^{+173}_{-211}	$4.449^{+0.081}_{-0.175}$	$-0.820^{+0.300}_{-0.300}$	$0.942^{+0.242}_{-0.104}$	$0.910^{+0.095}_{-0.087}$	$1.533^{+0.586}_{-0.686}$
	+3%/-3%	+2%/-4%	+37%/-37%	+26%/-11%	+10%/-10%	+38%/-45%
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 011027722-01 / KOI 7402.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-29 ± 3	$1.83^{+0.27}_{-0.19}$	3204^{+219}_{-139}	3660^{+207}_{-178}	$0.995^{+0.298}_{-0.244}$
Alt.	-559 ± 3	$3.37^{+0.46}_{-0.29}$	3217^{+207}_{-162}	5463^{+172}_{-184}	$5.770^{+1.051}_{-1.273}$

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

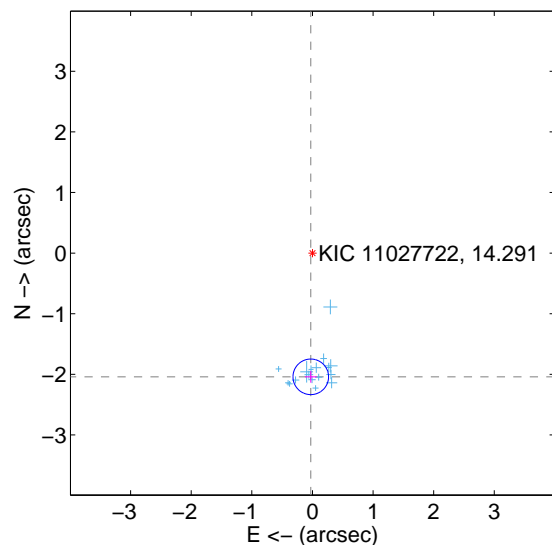
Supplemental centroid analysis for 011027722-01. Kepler magnitude: 14.29. Transit SNR 42.22

There are 17 quarters with good PRF difference image offsets

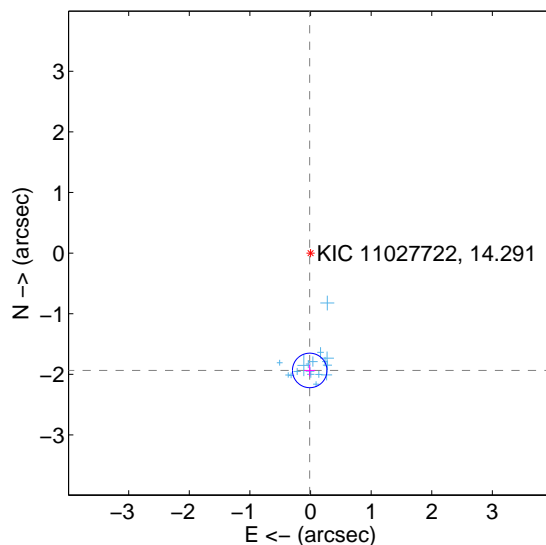
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.042 ± 0.098	20.87	0.027 ± 0.096	-2.042 ± 0.098
PRF-fit source offset from KIC position	1.936 ± 0.095	20.40	0.014 ± 0.089	-1.936 ± 0.095
photometric centroid source offset	2.58 ± 0.25	10.37	-1.28 ± 0.24	-2.24 ± 0.25

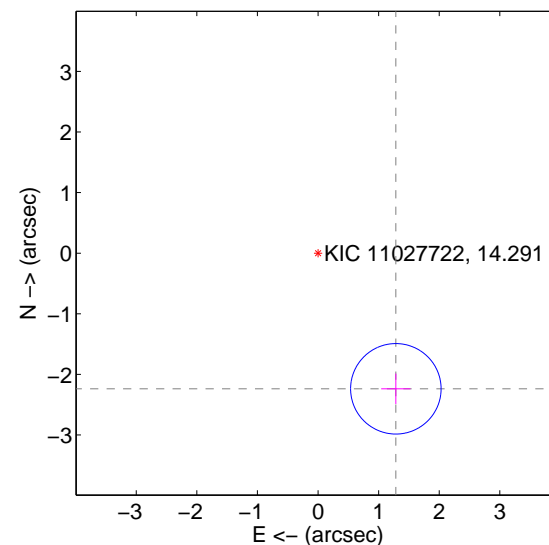
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

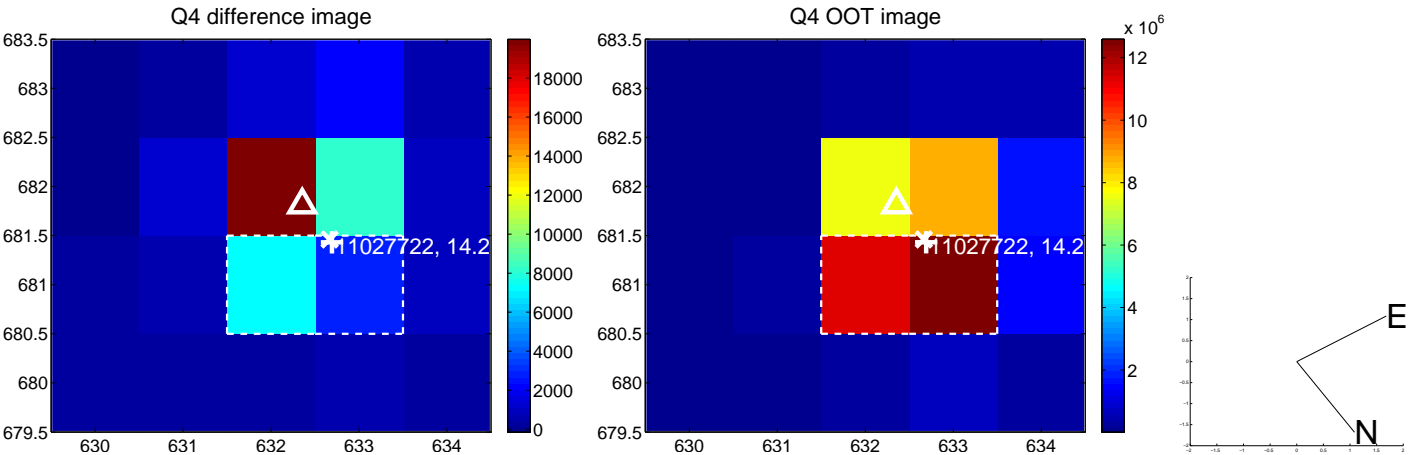
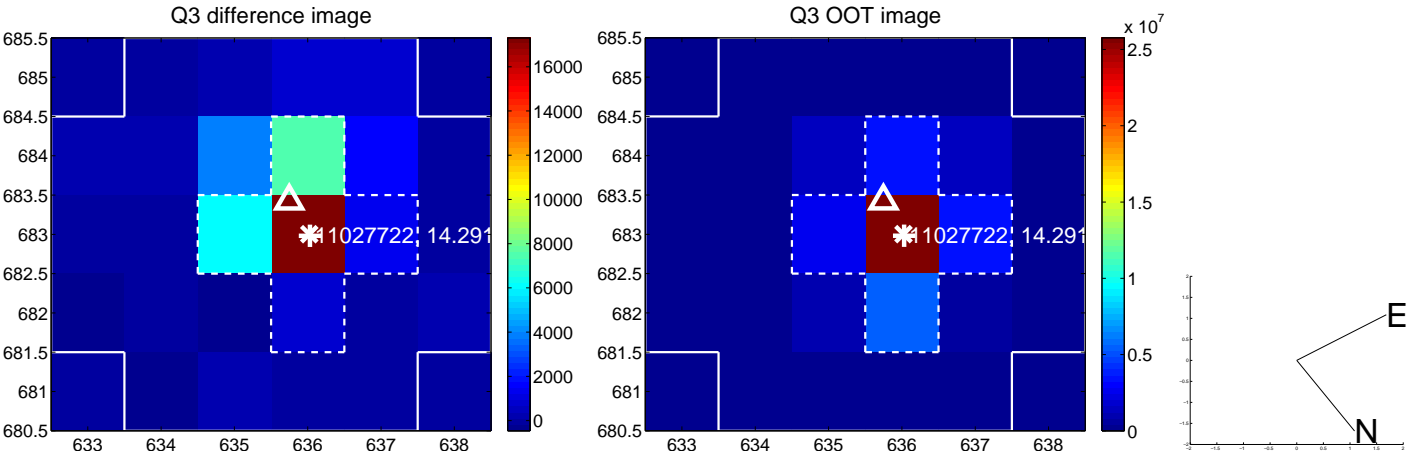
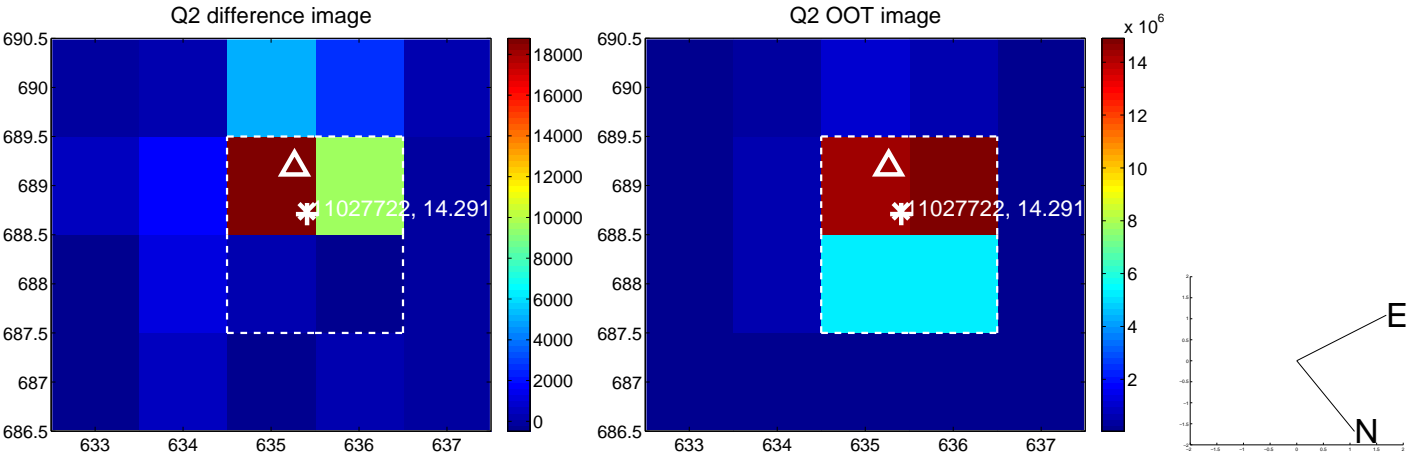
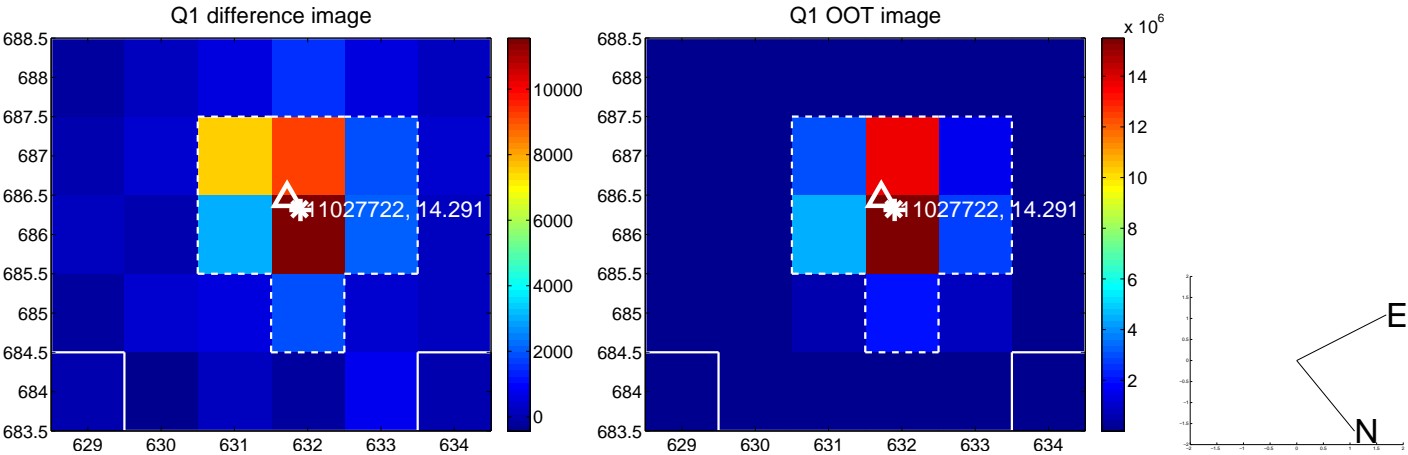


offset from photometric centroids

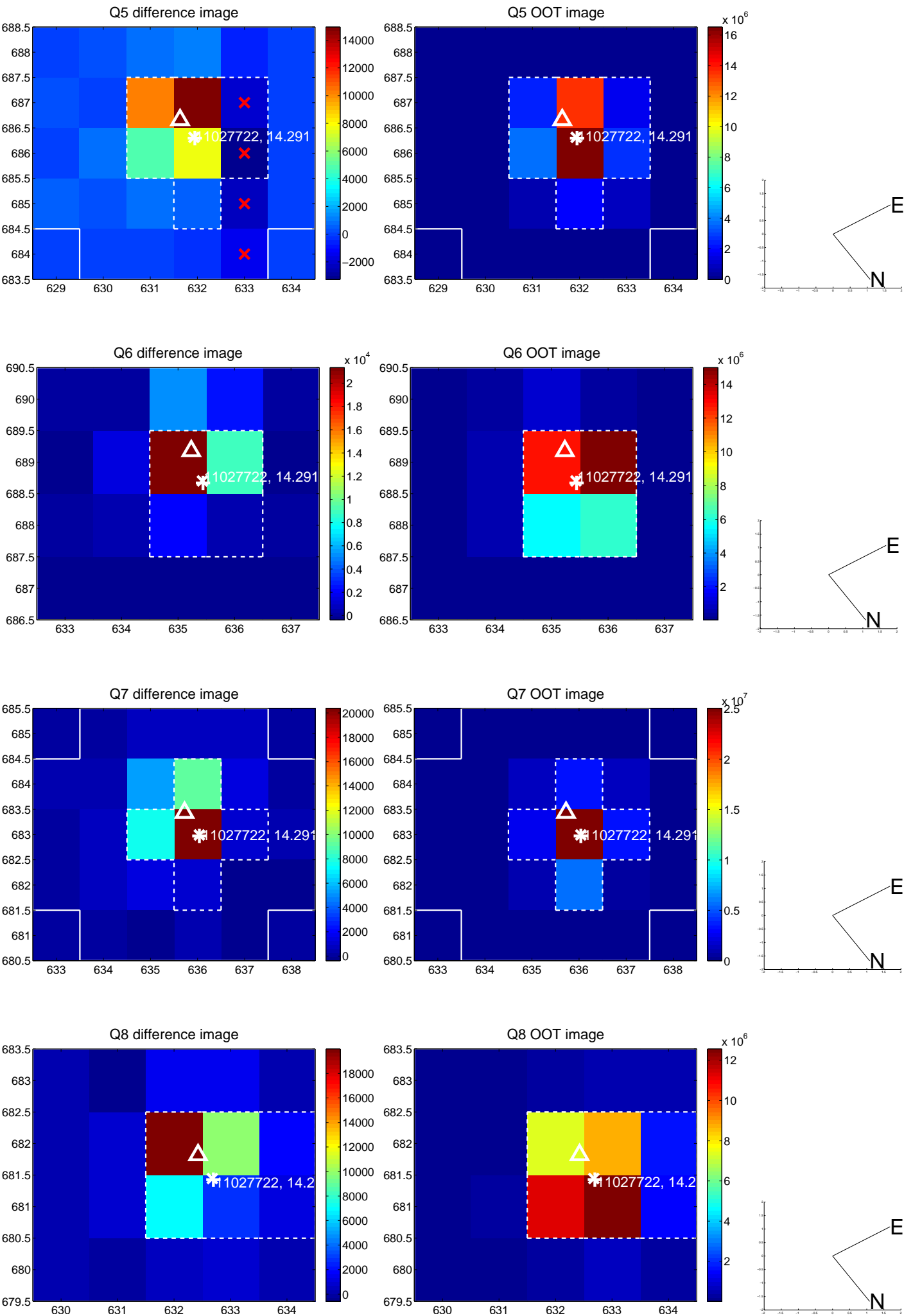


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

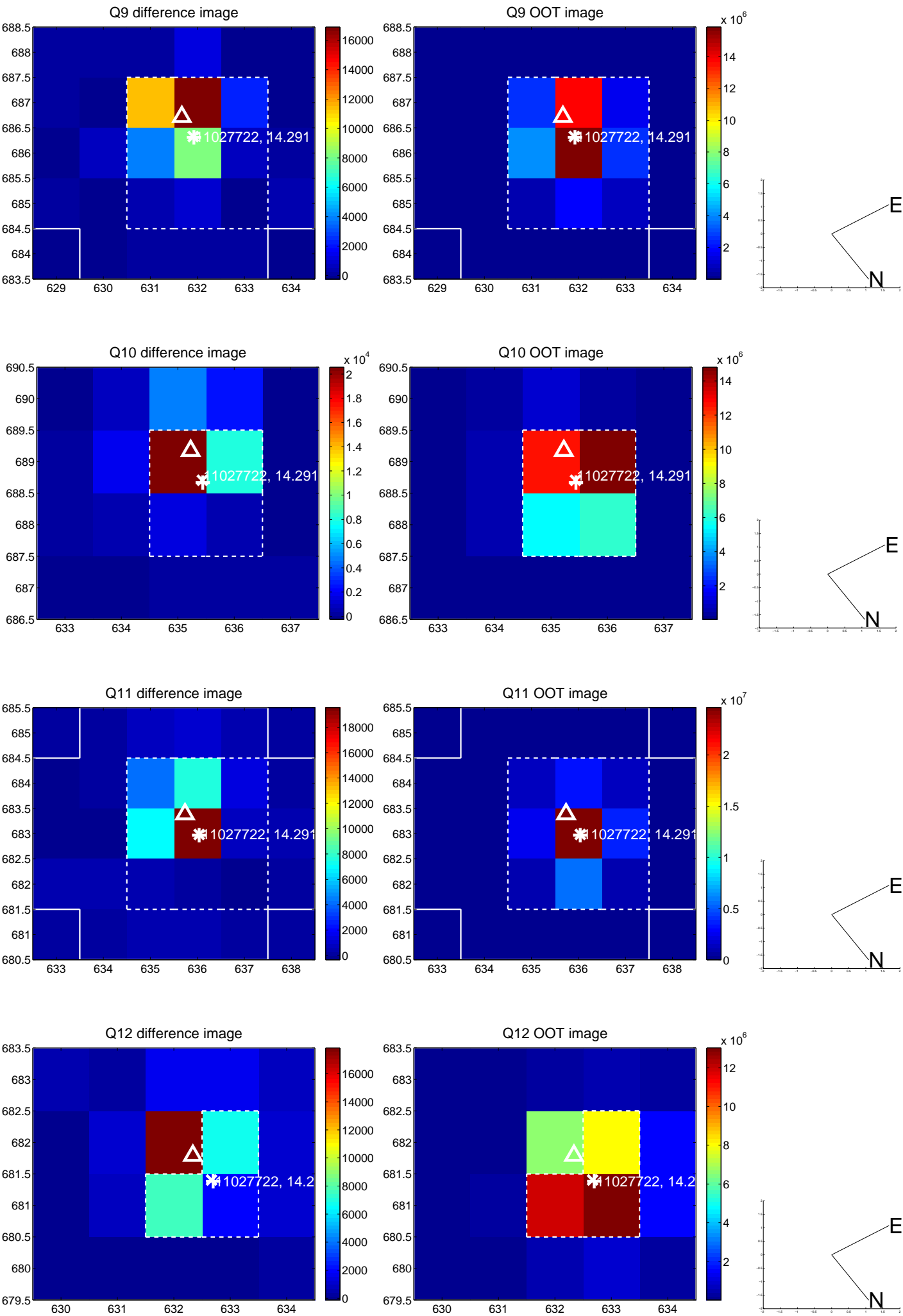
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



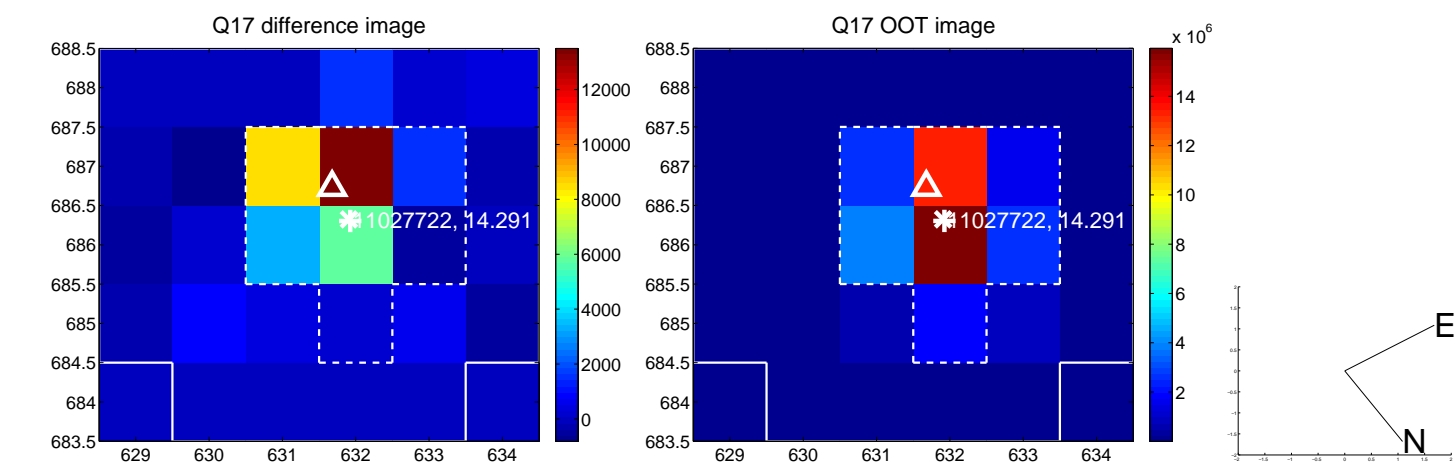
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



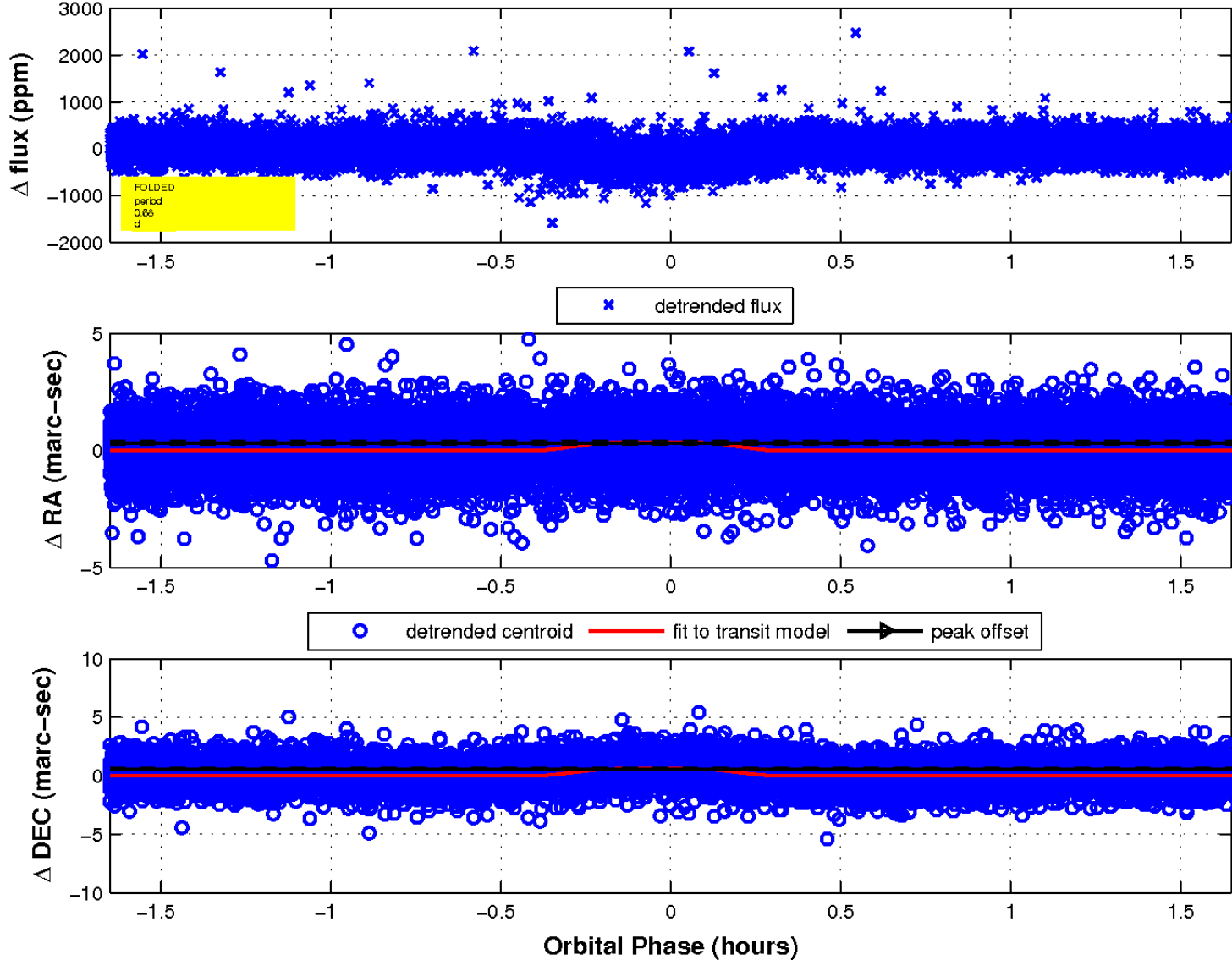
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

