

KIC 007971298

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})
007971298-01	OBS	No	372.867712	229.766627	1132.5	13.533	7.7	7.2	0.84	5682	2.80	0.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007971298-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

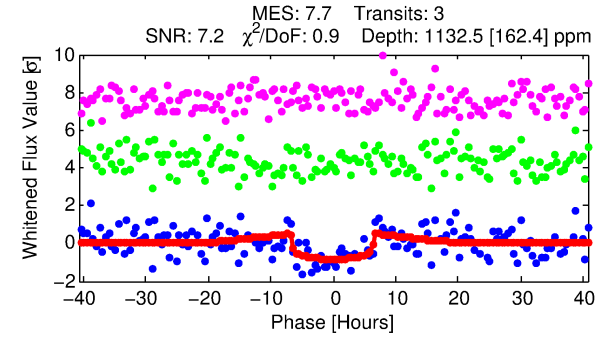
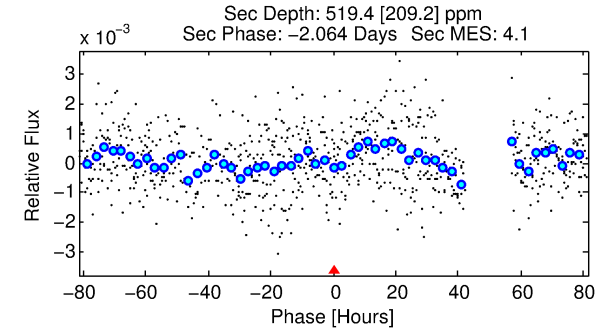
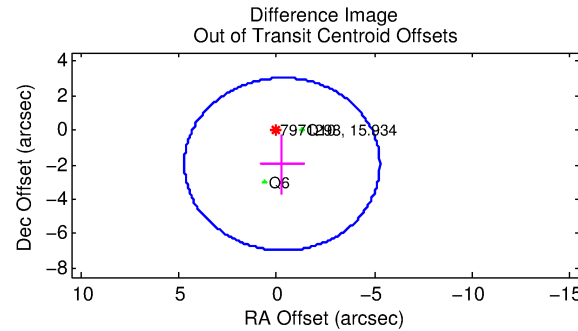
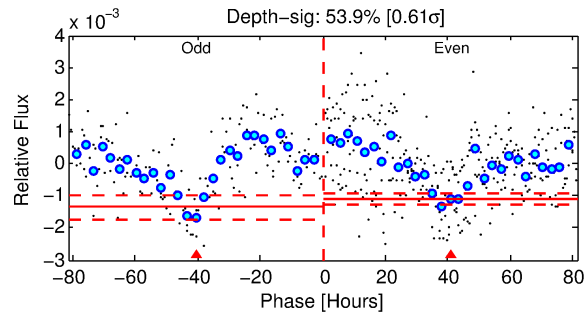
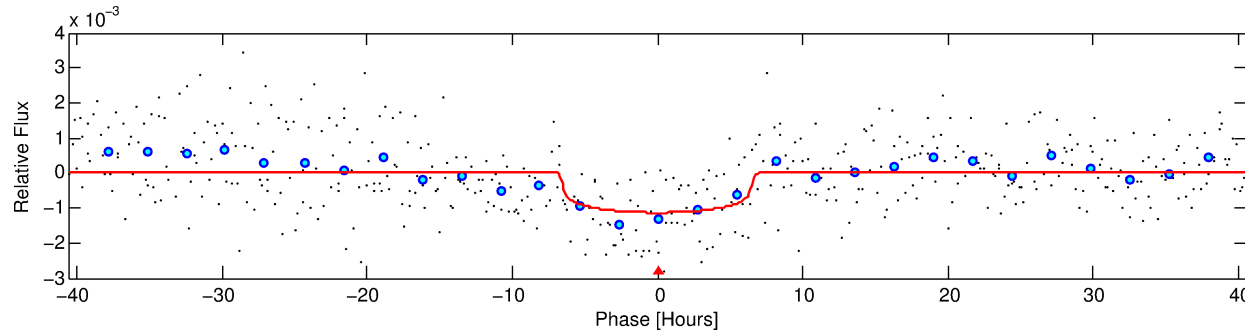
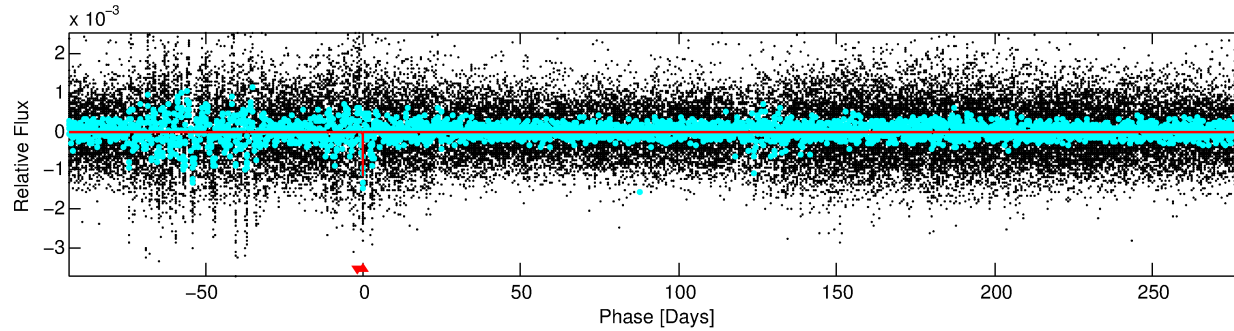
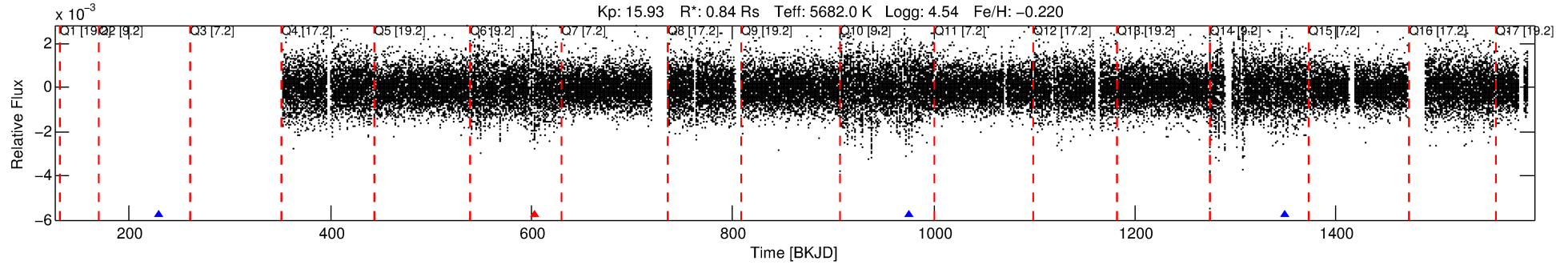
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007971298-01

No Significant Match Found

DV One-Page Summary

KIC: 7971298 Candidate: 1 of 1 Period: 372.868 d



DV Fit Results:

Period = 372.86771 [0.01218] d
Epoch = 229.7666 [0.0265] BKJD
Rp/R* = 0.0305 [0.0253]
a/R* = 216.03 [779.33]
b = 0.09 [38.65]
Seff = 0.69 [0.24]
Teq = 232 [20] K
Rp = 2.80 [2.44] Re
a = 0.9763 [0.2205] AU
Ag = 34845.90 [60418.73] [0.58 σ]
Teffp = 4909 [2097] K [2.23 σ]

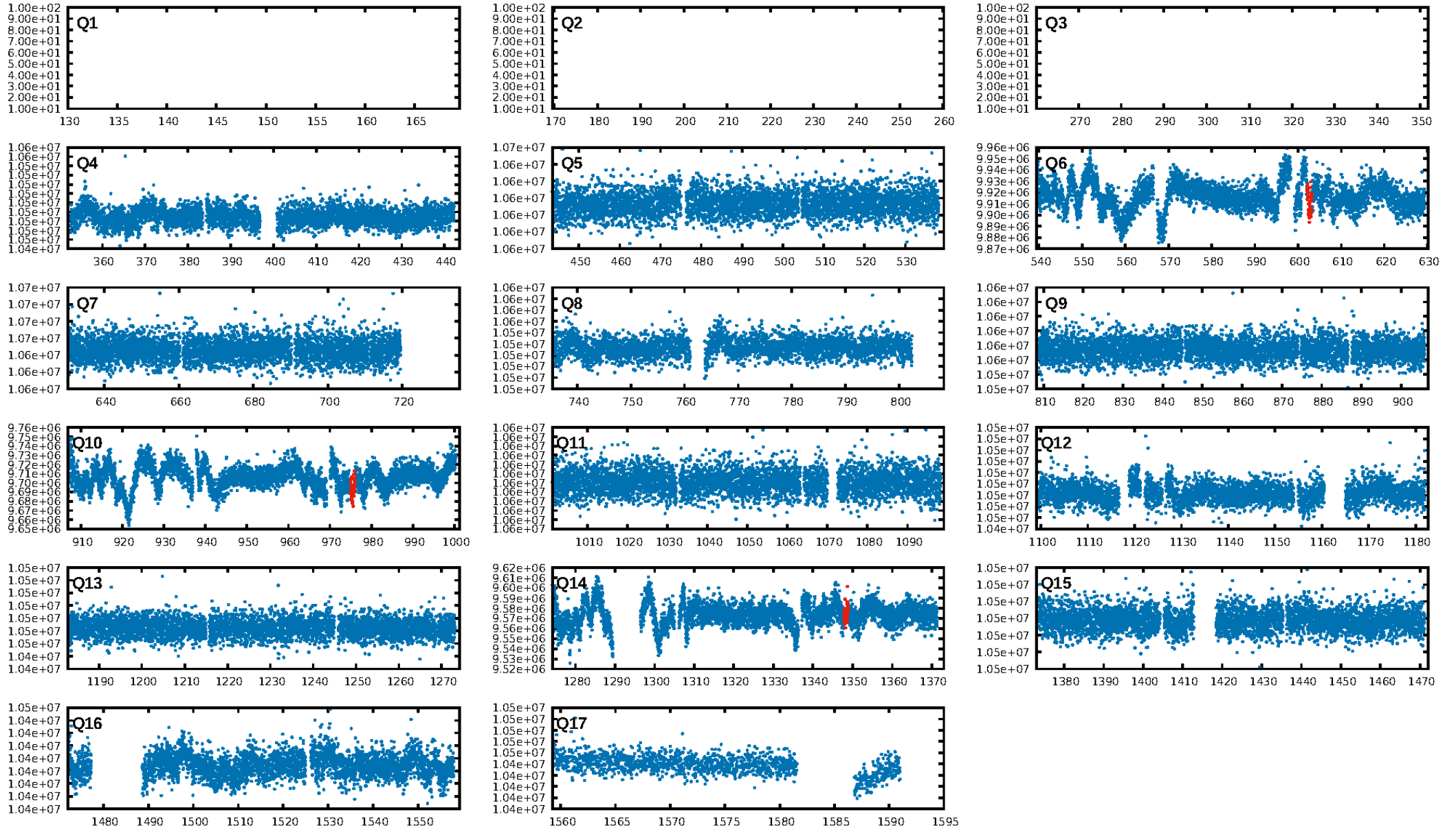
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.51e-09
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: -11.79
Centroid-sig: 30.6%
Centroid-so: 1.711 arcsec [0.86 σ]
OotOffset-rm: 1.995 arcsec [1.20 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-rm: 1.972 arcsec [1.20 σ]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

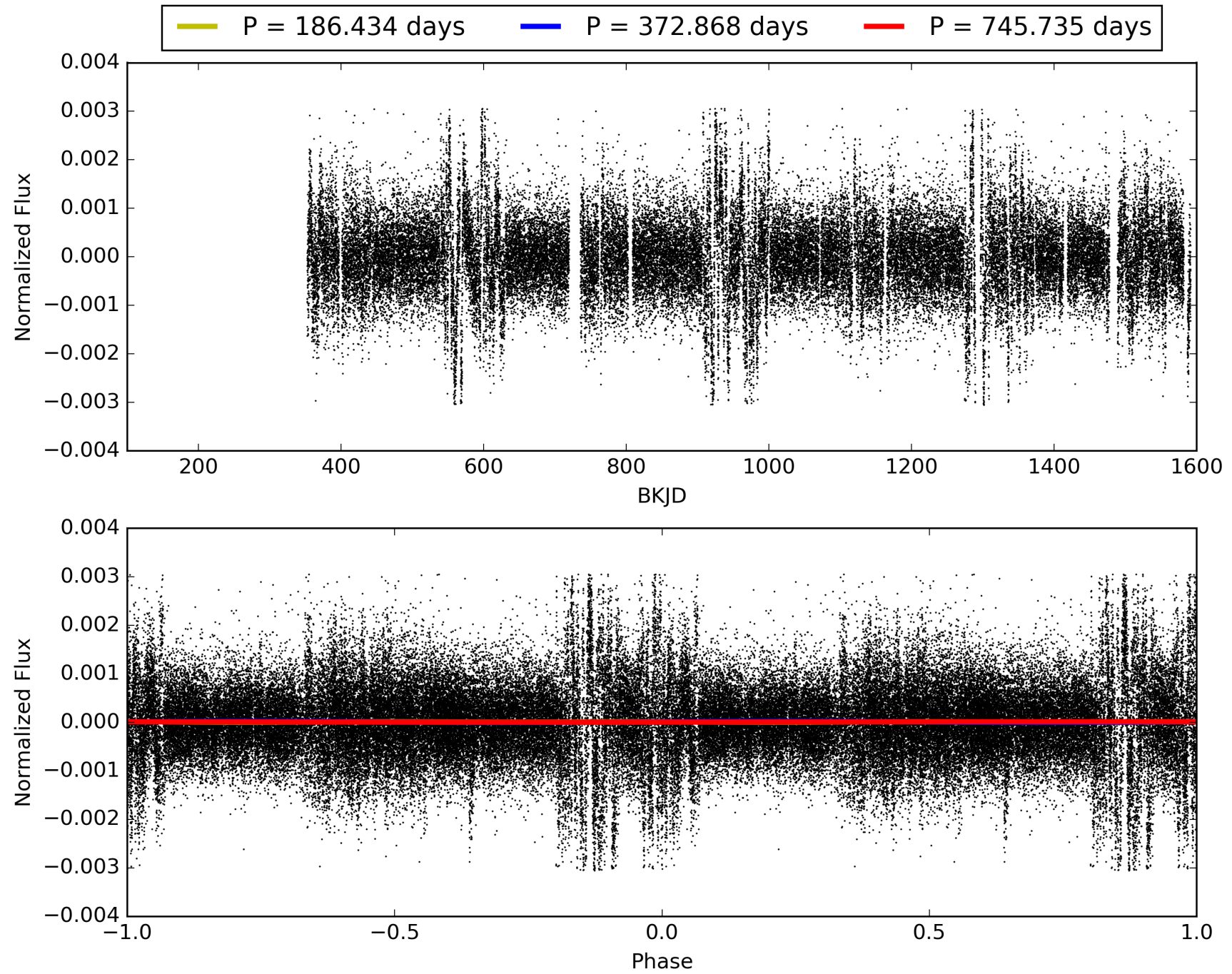
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:23:12 Z

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

TCE 007971298-01, PDC Light Curves

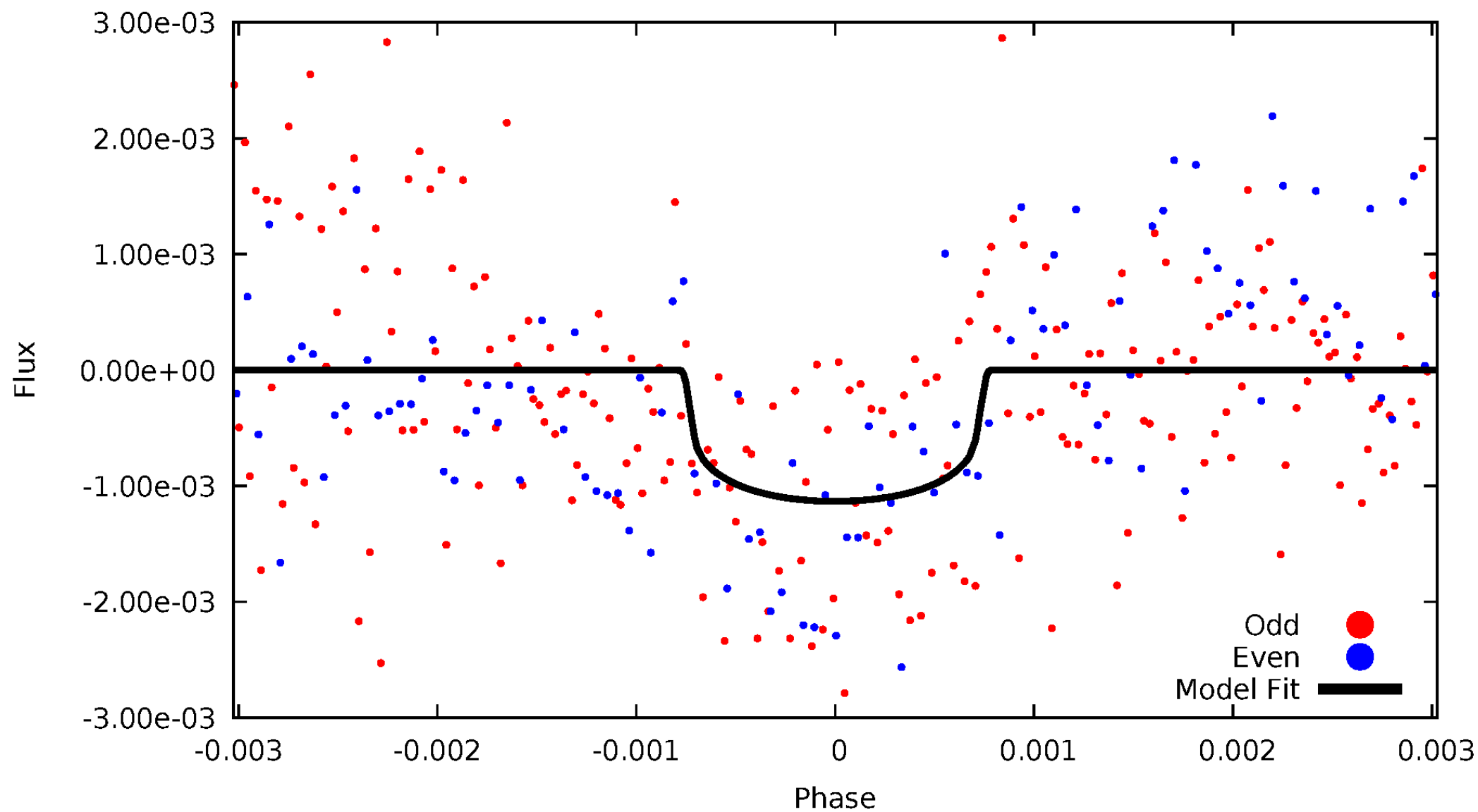


TCE 007971298-01



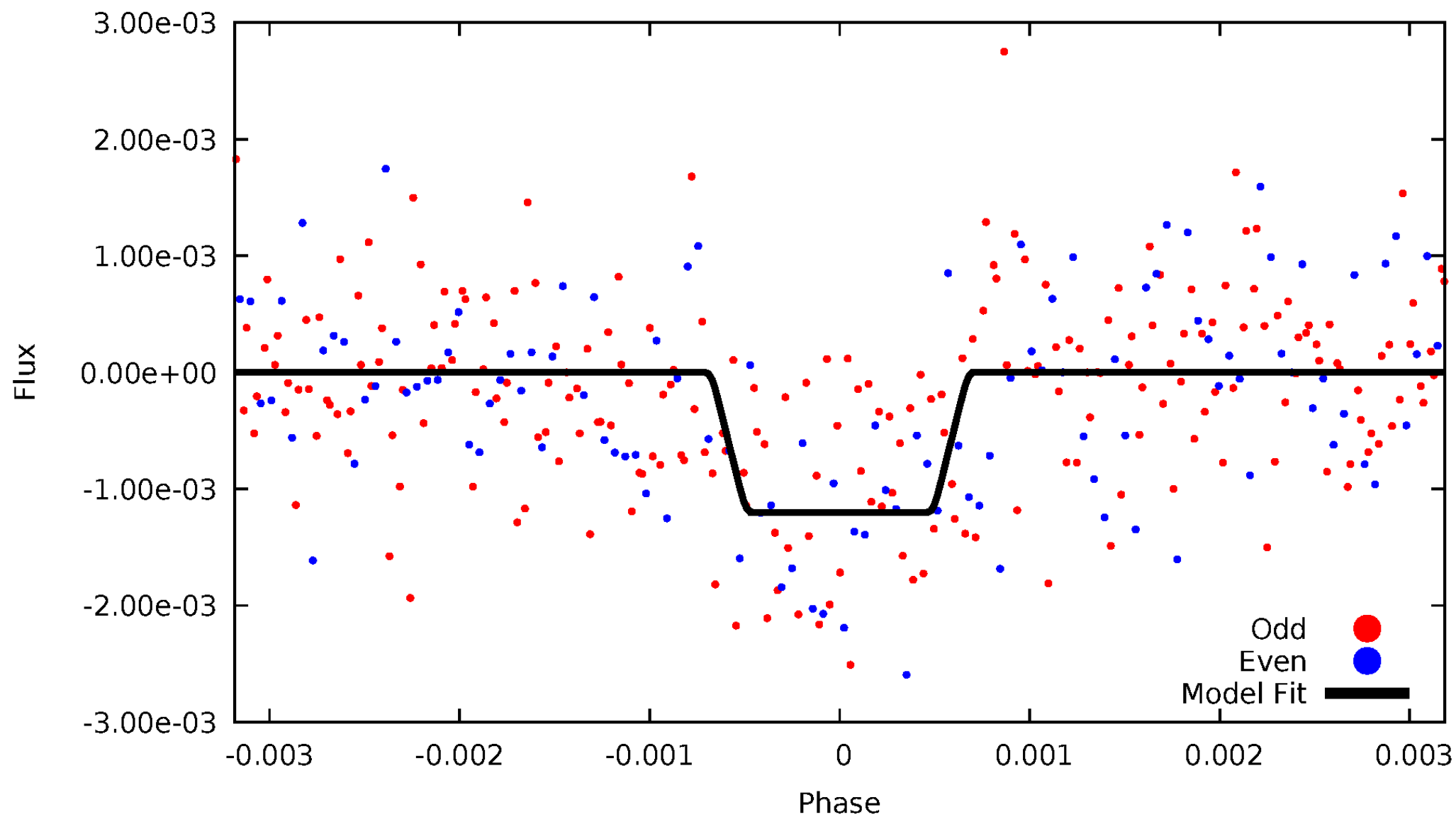
DV Odd/Even

TCE 007971298-01



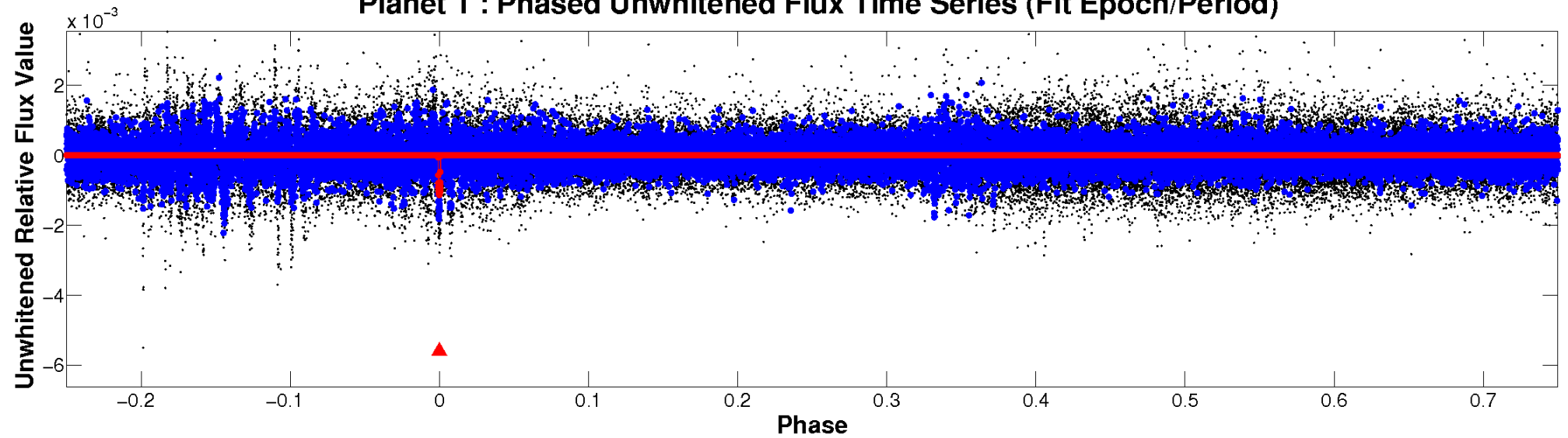
ALT Odd/Even

TCE 007971298-01

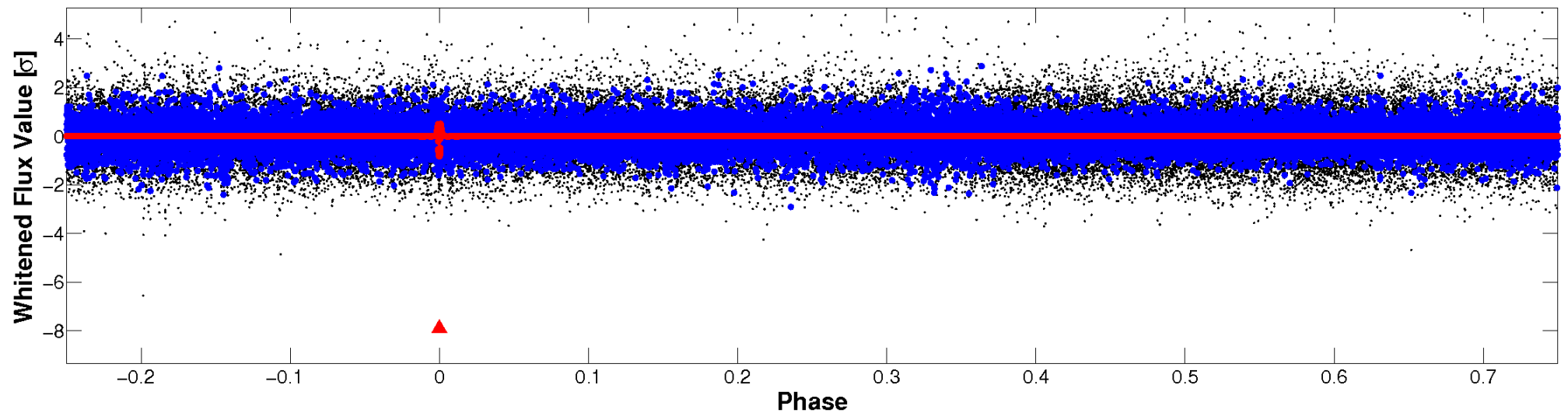


Non-Whitened Vs. Whitened Light Curve

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

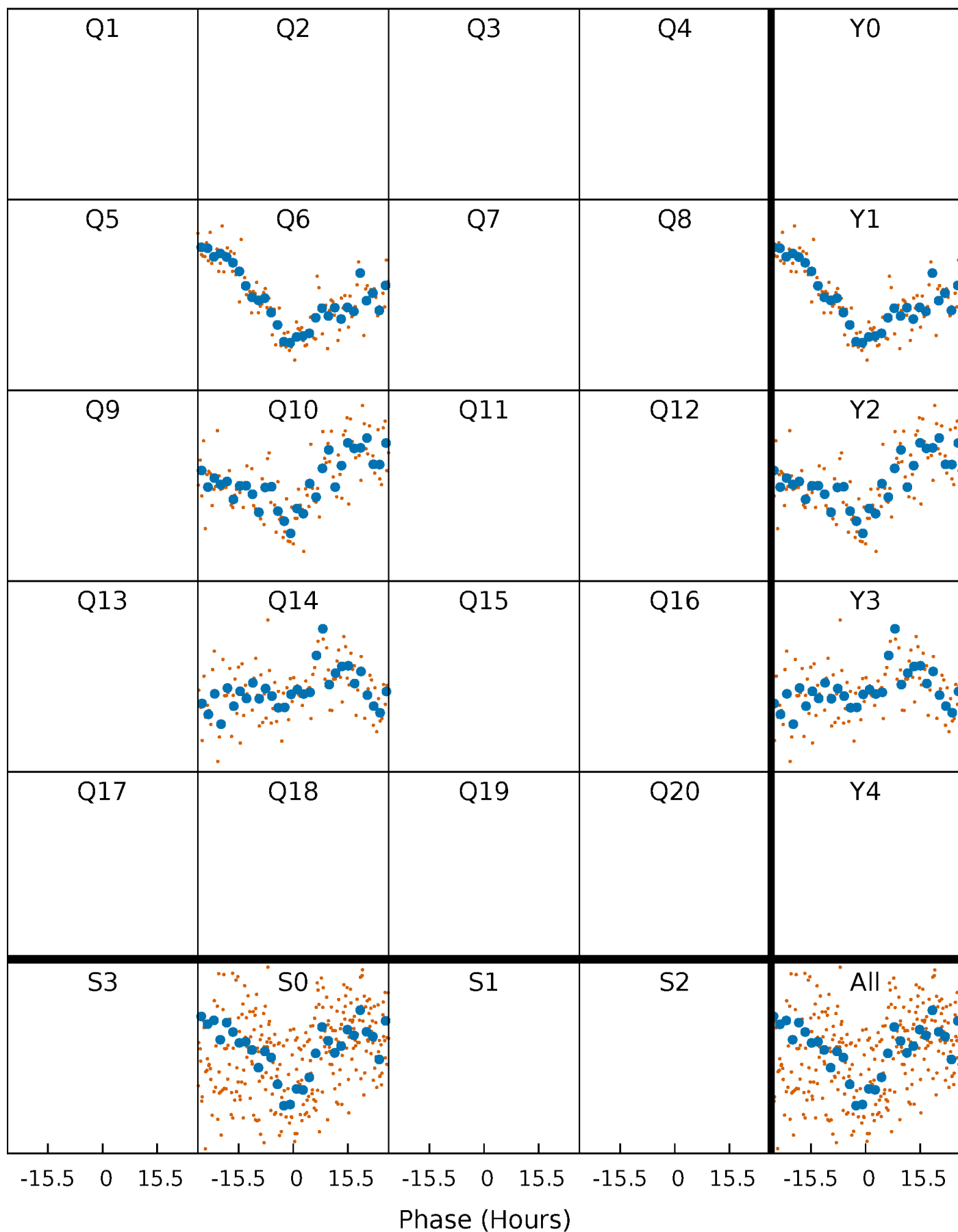


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



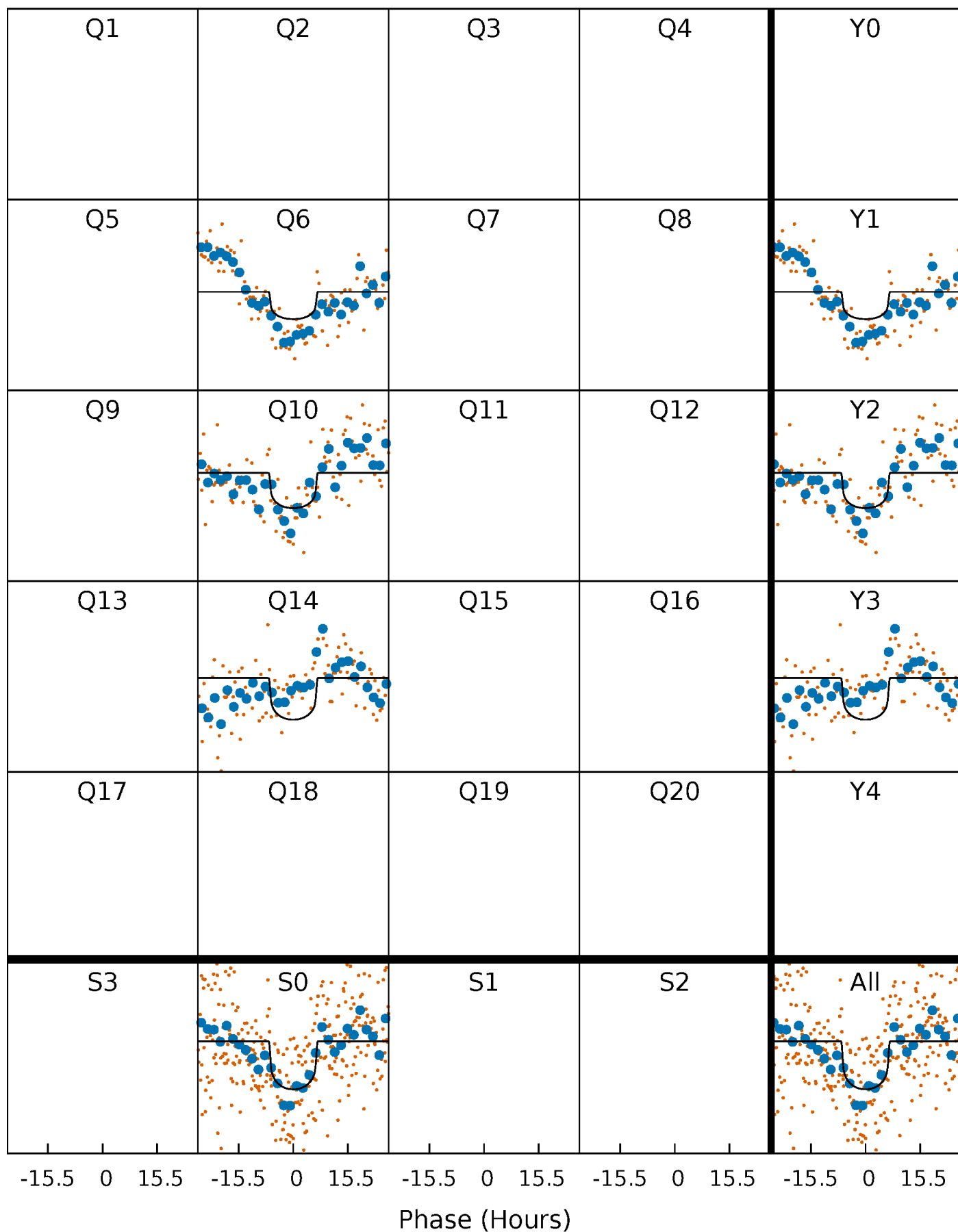
PDC Quarter-Phased Transit Curves

TCE 007971298-01 $P=372.867712$ Days $T_0=229.766627$ (BKJD)



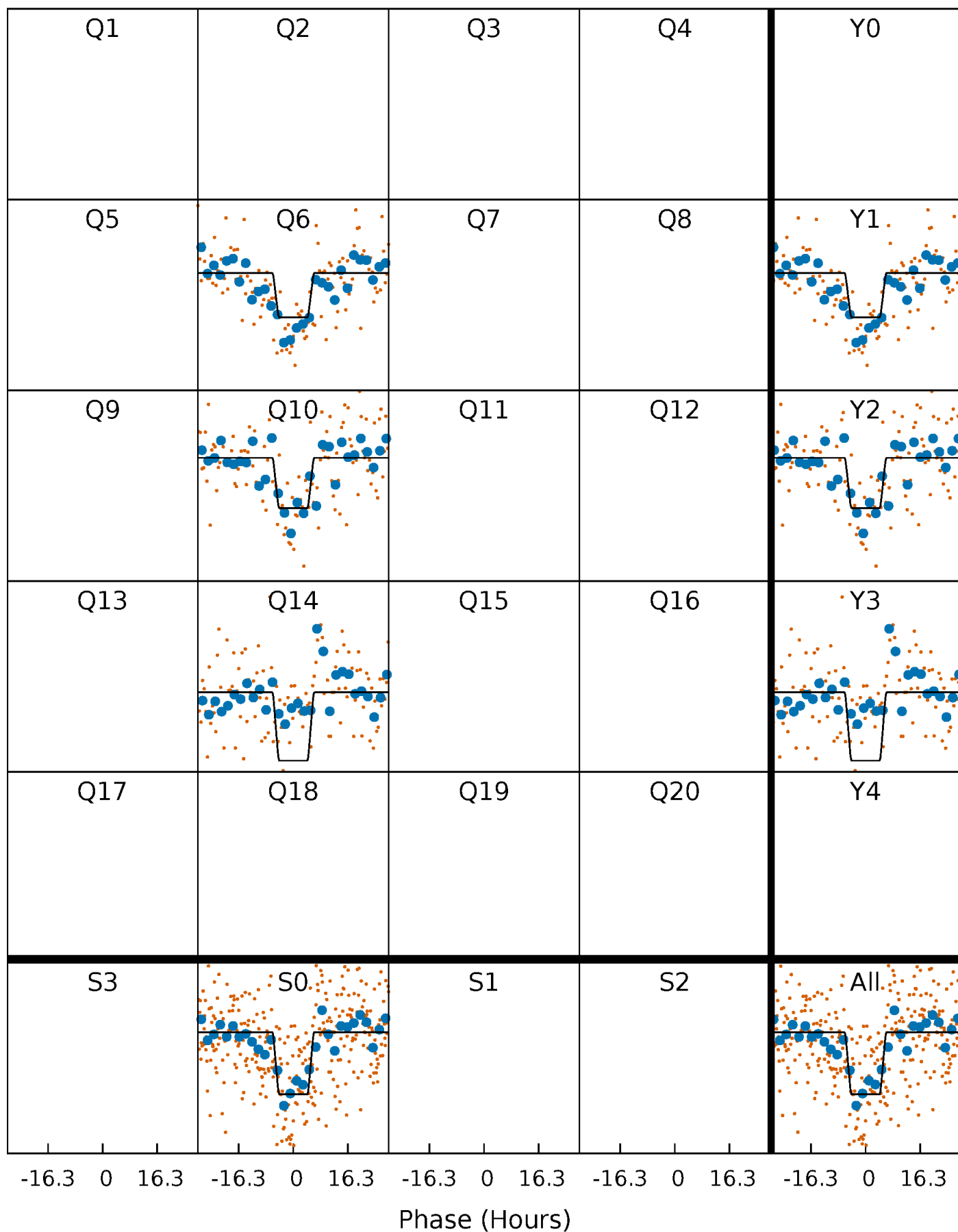
DV Quarter-Phased Transit Curves

TCE 007971298-01 P=372.867712 Days $T_0=229.766627$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

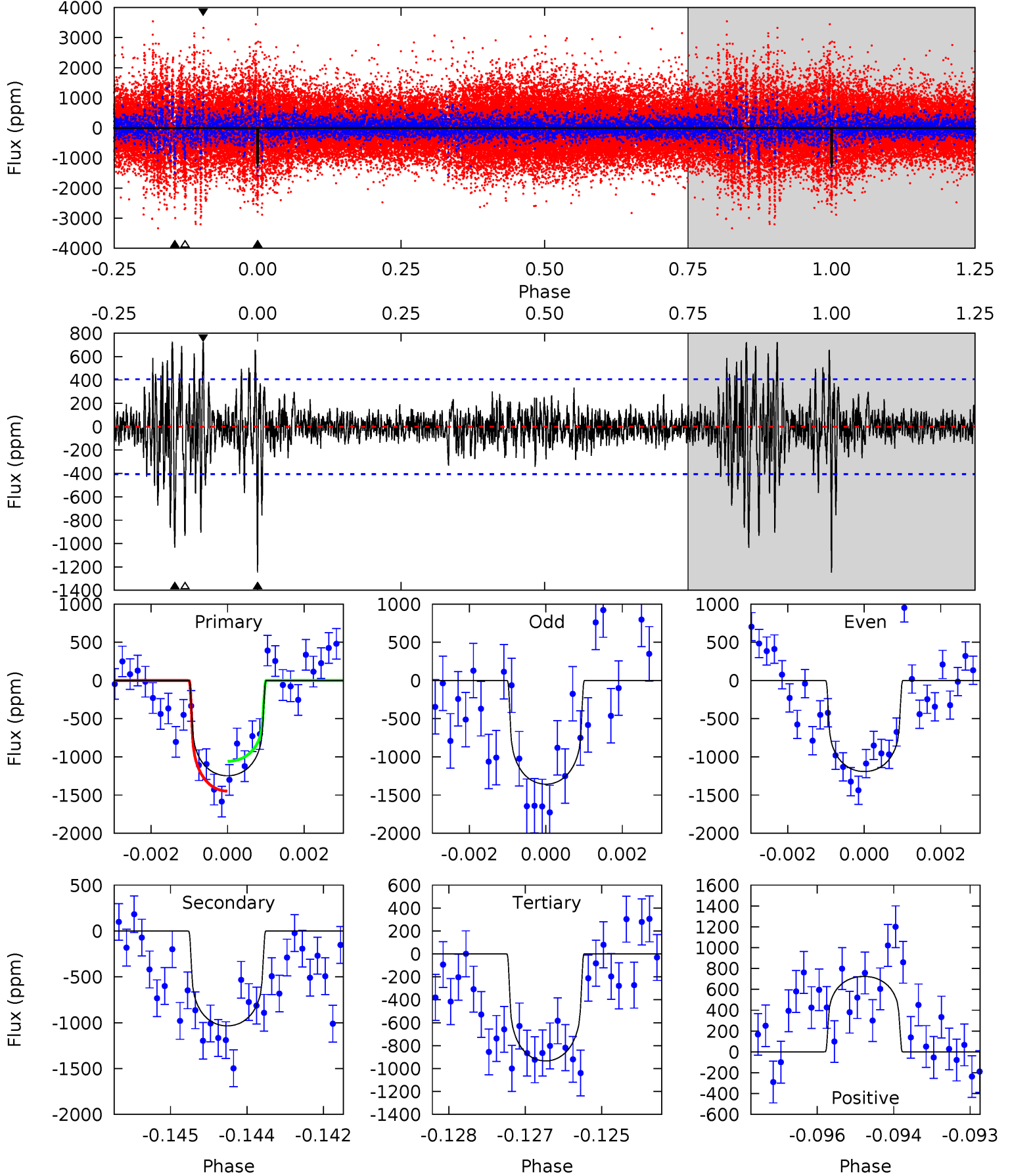
TCE 007971298-01 P=372.864792 Days $T_0=229.765681$ (BKJD)



DV Model-Shift Uniqueness Test

007971298-01, P = 372.867712 Days, E = 229.766627 Days

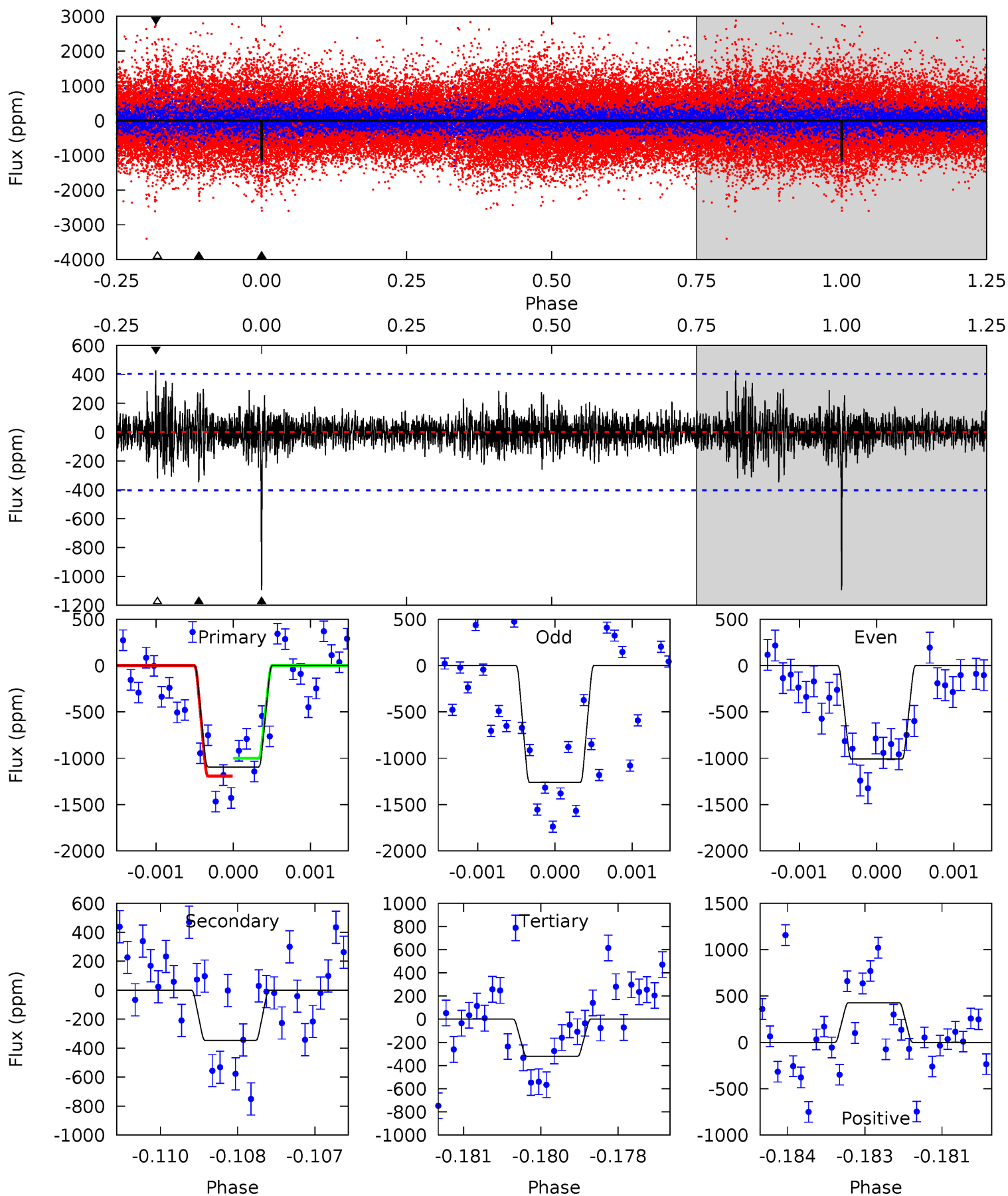
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	13.7	12.3	9.58	5.37	3.17	1.97	4.15	6.92	1.34	4.11	1.02	0.91	0.37	2.57



Alt Model-Shift Uniqueness Test

007971298-01, P = 372.864792 Days, E = 229.765681 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	4.64	4.29	5.72	5.39	3.19	1.03	10.4	8.93	0.34	-1.08	1.58	0.86	0.28	1.29



Stellar Parameters For KIC 007971298

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5682^{+186}_{-186}	$4.541^{+0.046}_{-0.173}$	$-0.220^{+0.300}_{-0.300}$	$0.839^{+0.230}_{-0.092}$	$0.893^{+0.097}_{-0.097}$	$2.131^{+0.515}_{-1.024}$
	+3%/-3%	+1%/-4%	+136%/-136%	+27%/-11%	+11%/-11%	+24%/-48%
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 007971298-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1035 ± 76	$3.24^{+2.38}_{-1.93}$	332^{+23}_{-16}	5516^{+3623}_{-1108}	$51366^{+261521}_{-34102}$
Alt.	-346 ± 75	$3.41^{+2.36}_{-1.97}$	331^{+23}_{-15}	4320^{+1859}_{-743}	15778^{+68203}_{-10532}

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

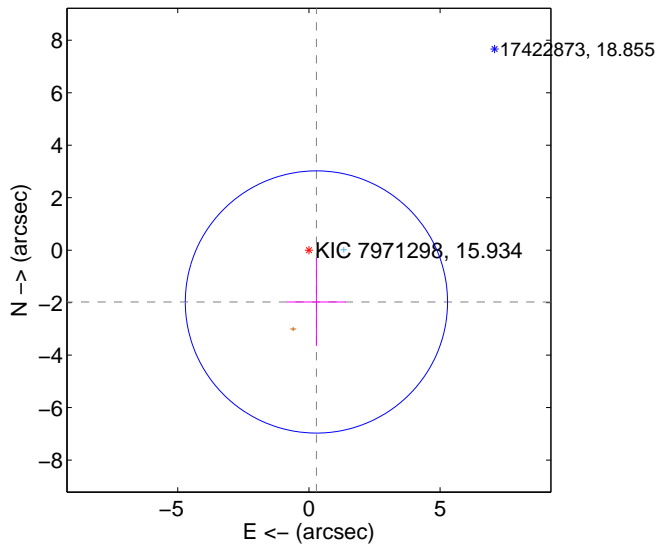
Supplemental centroid analysis for 007971298-01. Kepler magnitude: 15.93. Transit SNR 7.18

There are 1 quarters with good PRF difference image offsets

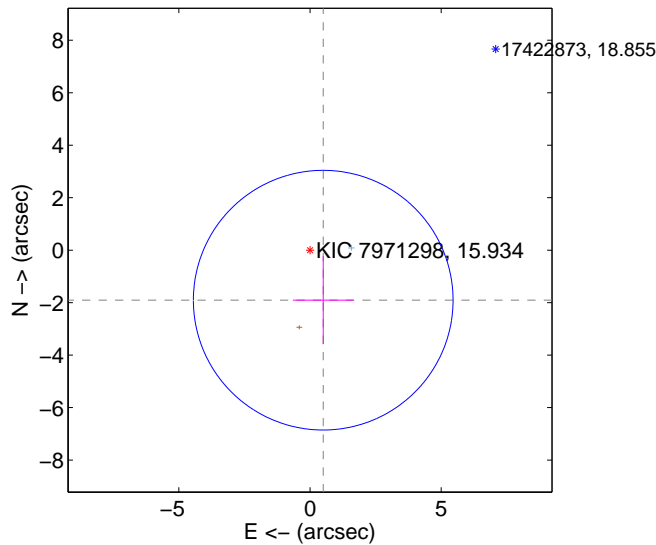
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.995 ± 1.666	1.20	-0.286 ± 1.123	-1.975 ± 1.675
PRF-fit source offset from KIC position	1.972 ± 1.650	1.20	-0.503 ± 1.158	-1.906 ± 1.678
photometric centroid source offset	1.71 ± 1.99	0.86	0.75 ± 1.92	1.54 ± 2.01

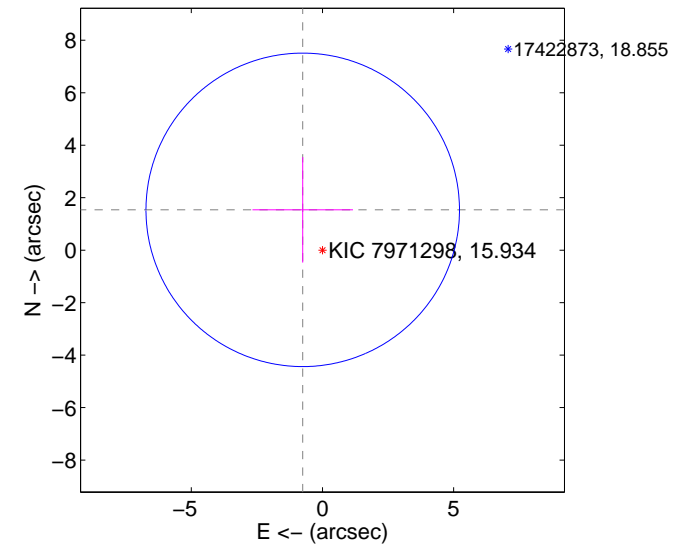
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

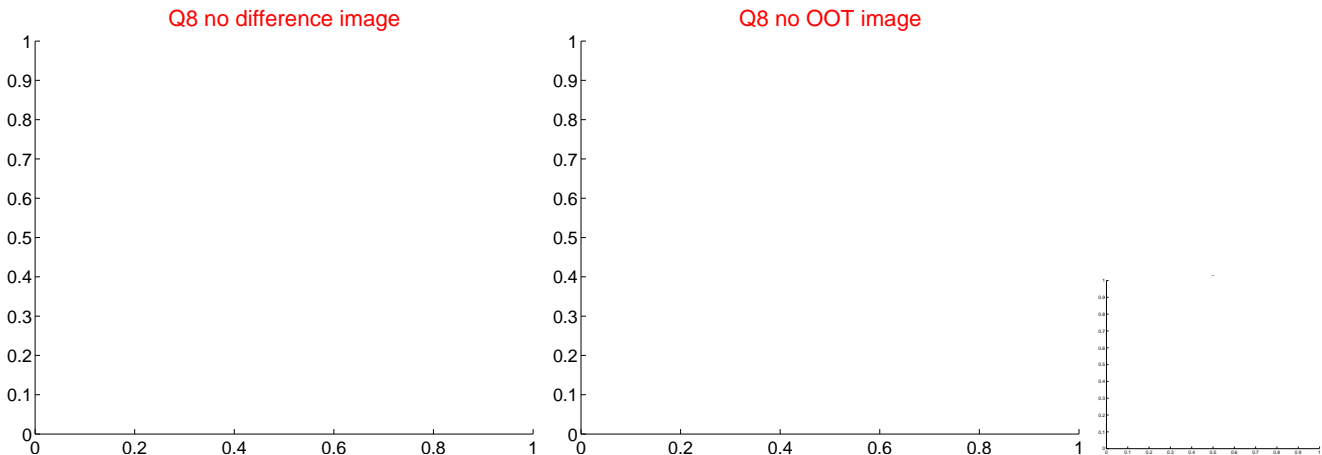
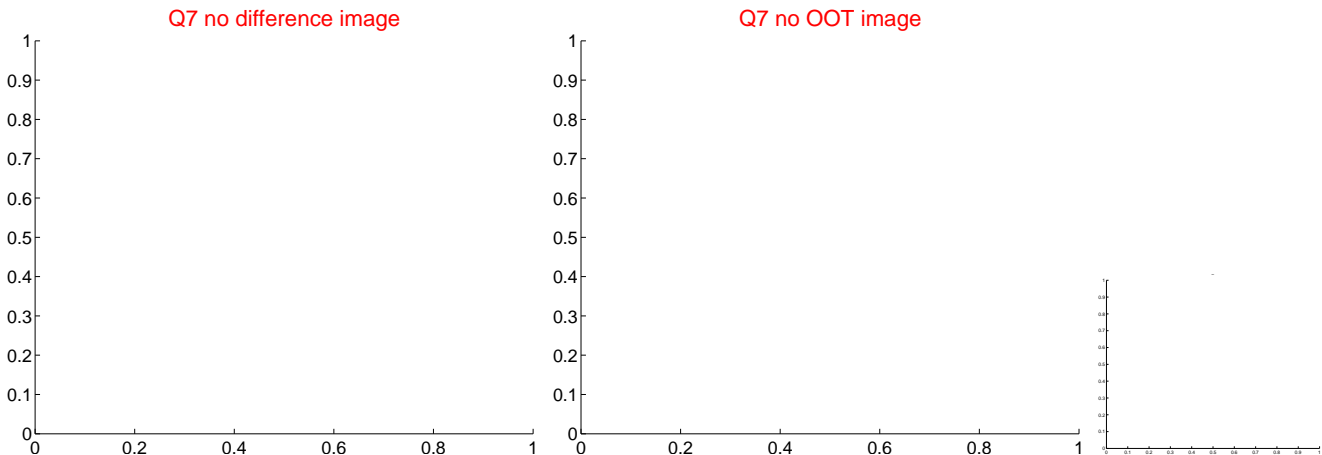
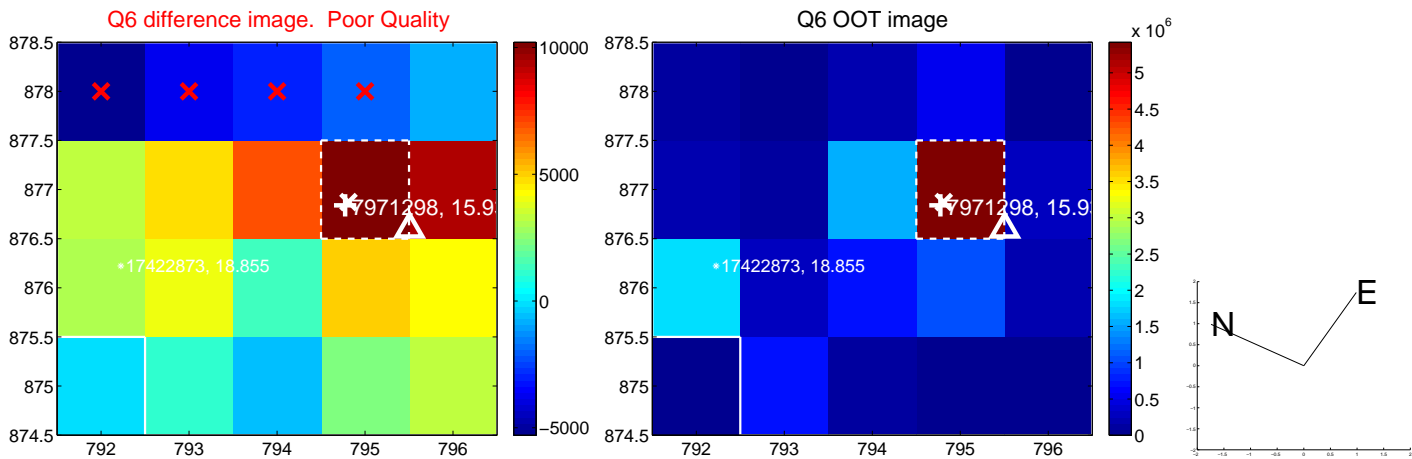
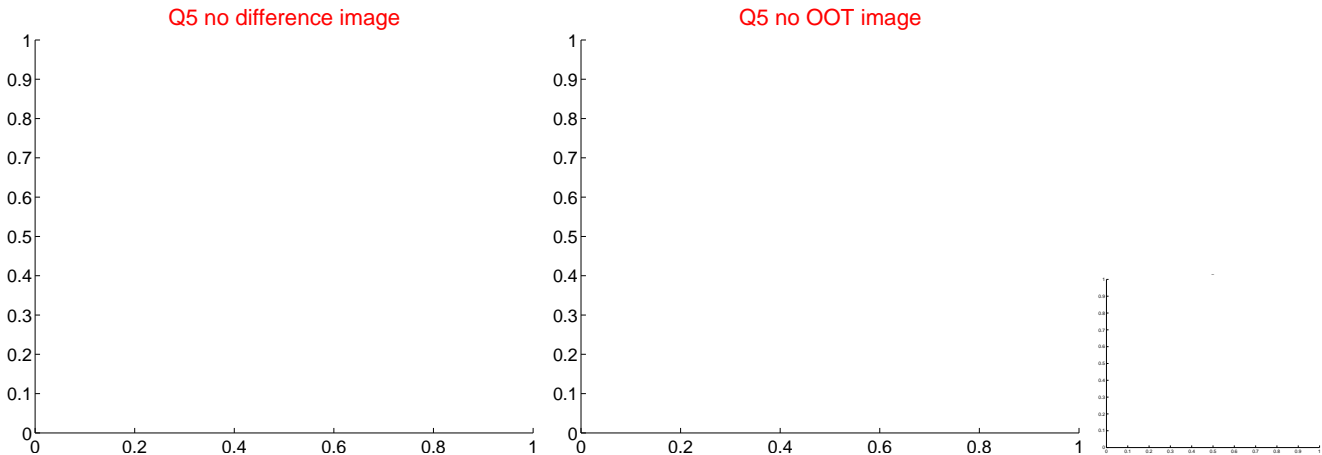


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

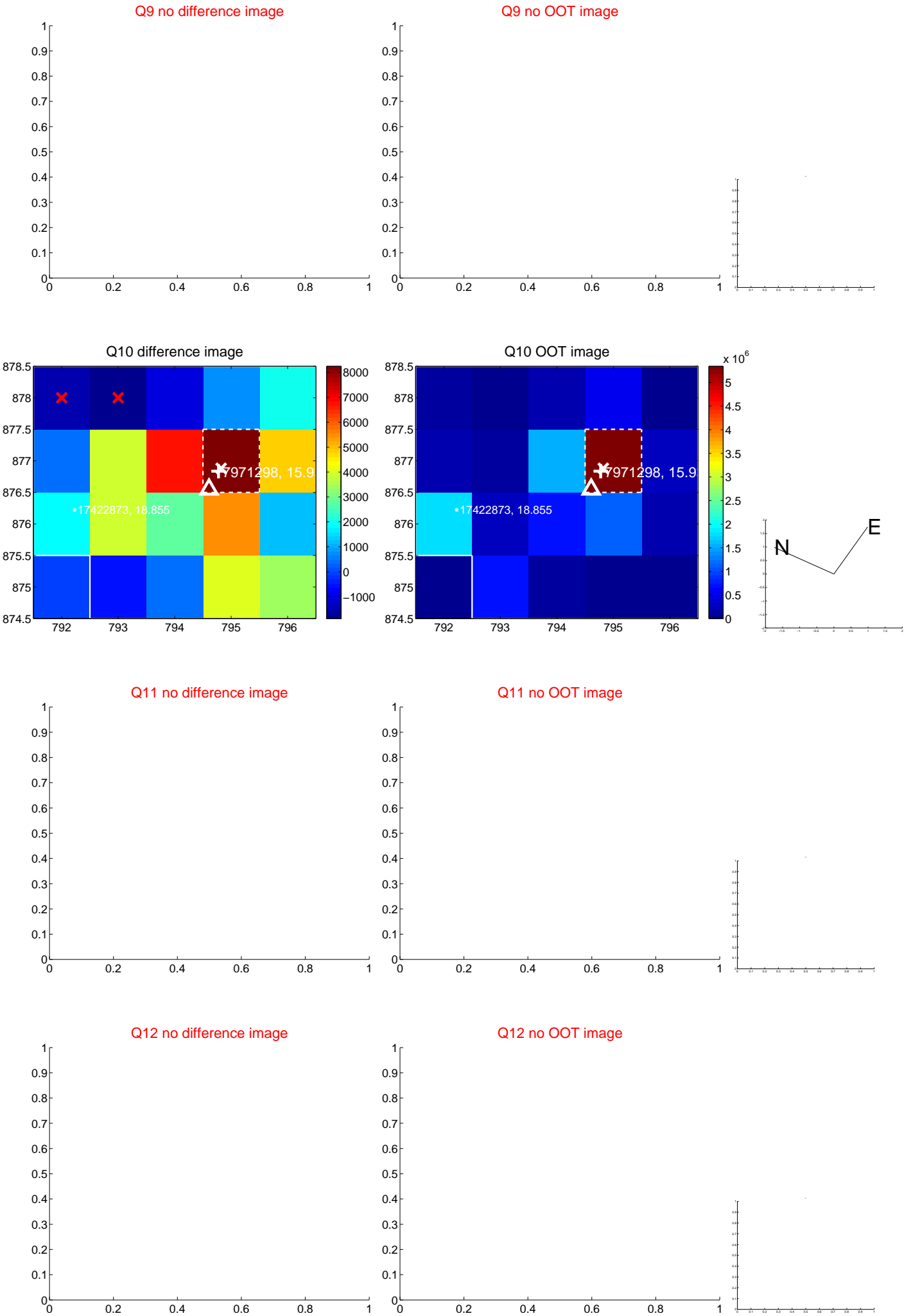
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



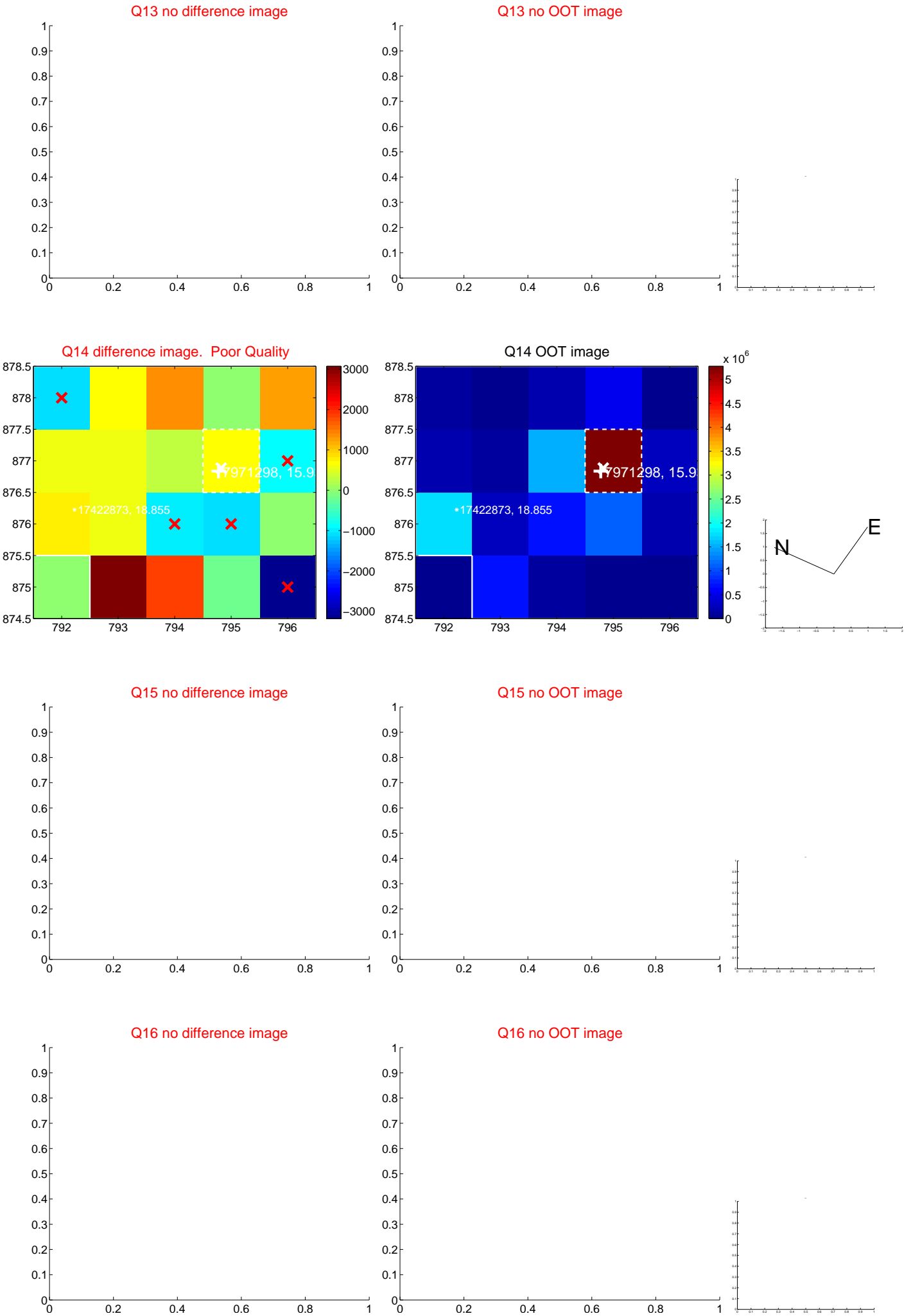
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



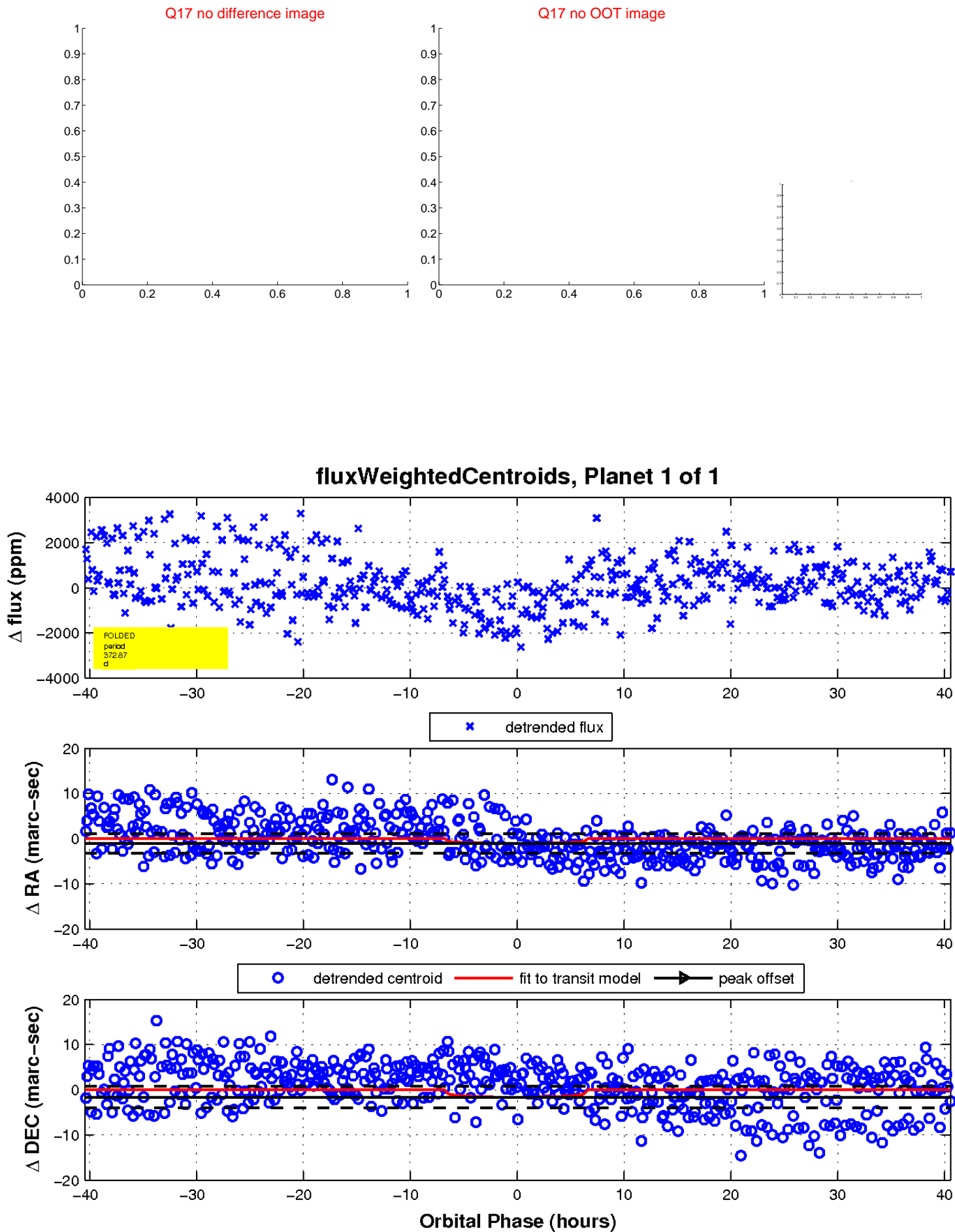
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

