

KIC 004827352

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})
004827352-01	OBS	No	488.261208	380.908823	978.6	6.570	7.3	7.7	1.00	6039	6.00	0.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004827352-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_ALT—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.

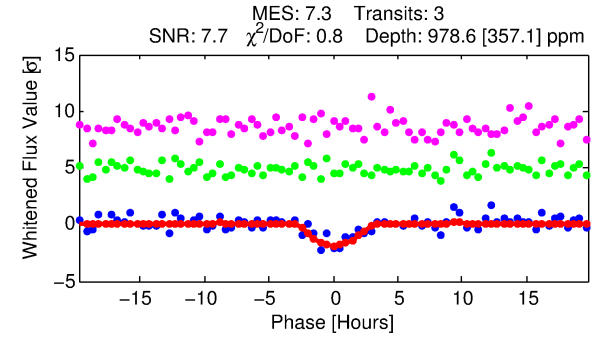
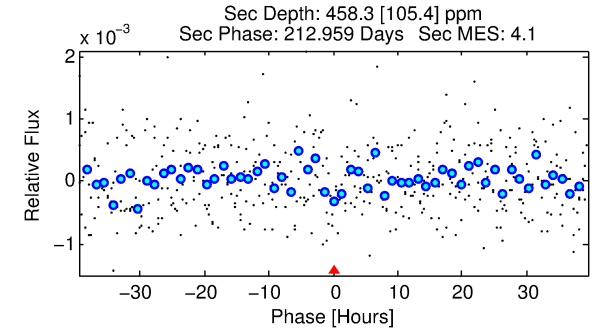
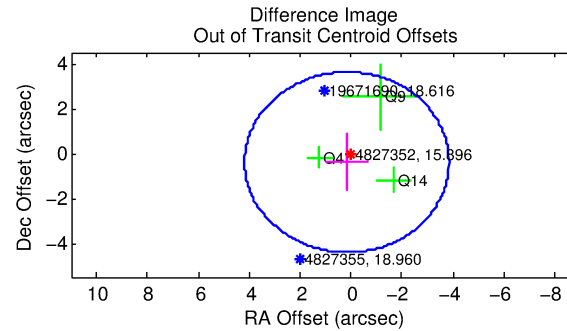
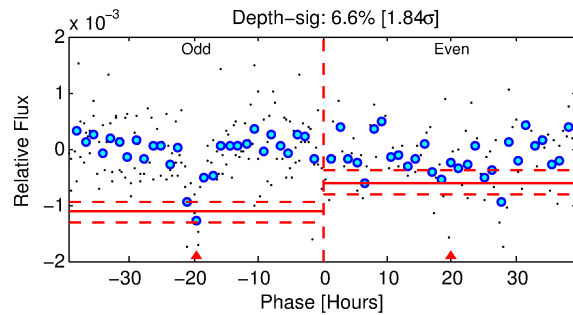
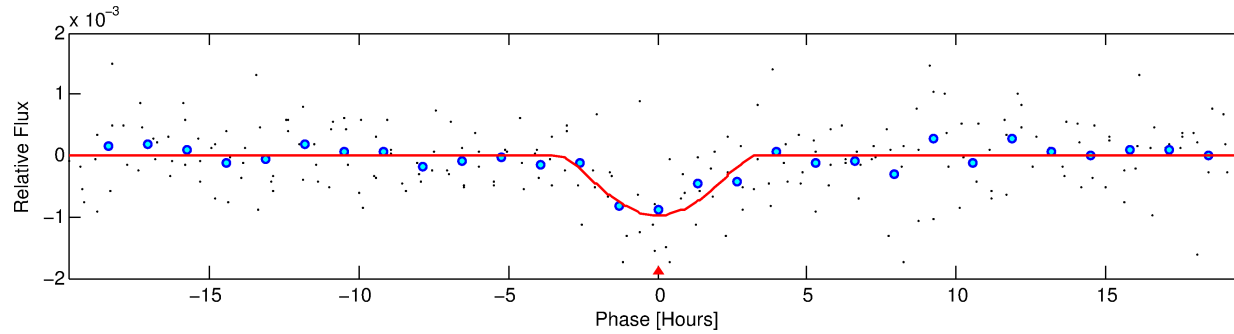
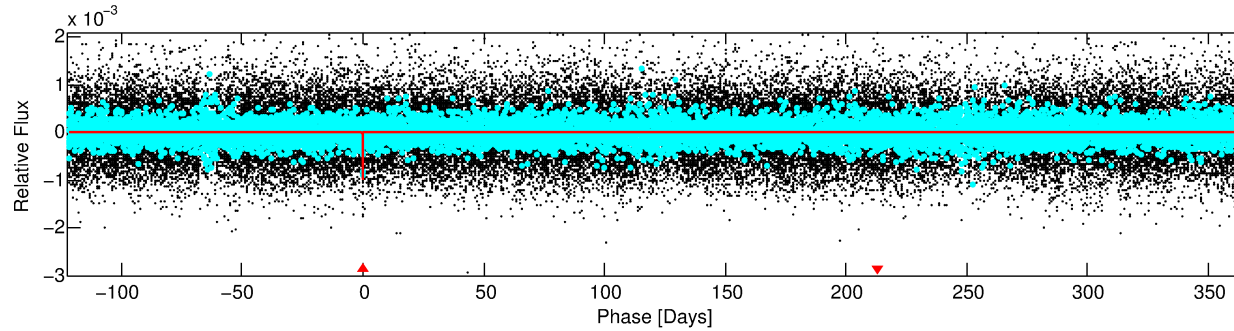
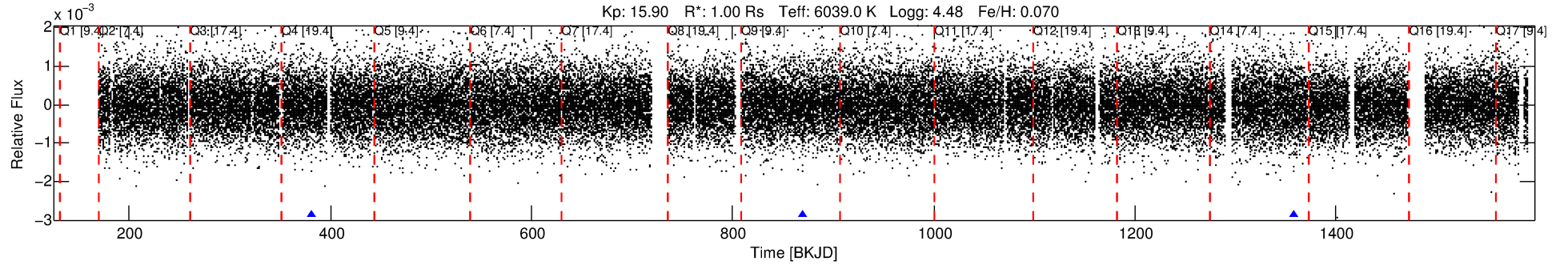
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004827352-01

No Significant Match Found

DV One-Page Summary

KIC: 4827352 Candidate: 1 of 1 Period: 488.261 d



DV Fit Results:

Period = 488.26121 [0.01225] d
Epoch = 380.9088 [0.0139] BKJD
Rp/R* = 0.0547 [0.2890]
a/R* = 192.22 [245.89]
b = 1.00 [0.43]
Seff = 0.76 [0.30]
Teq = 238 [24] K
Rp = 6.00 [31.75] Re
a = 1.2558 [0.3169] AU
Ag = 11032.59 [116592.55] [0.09 σ]
Teffp = 3777 [9973] K [0.35 σ]

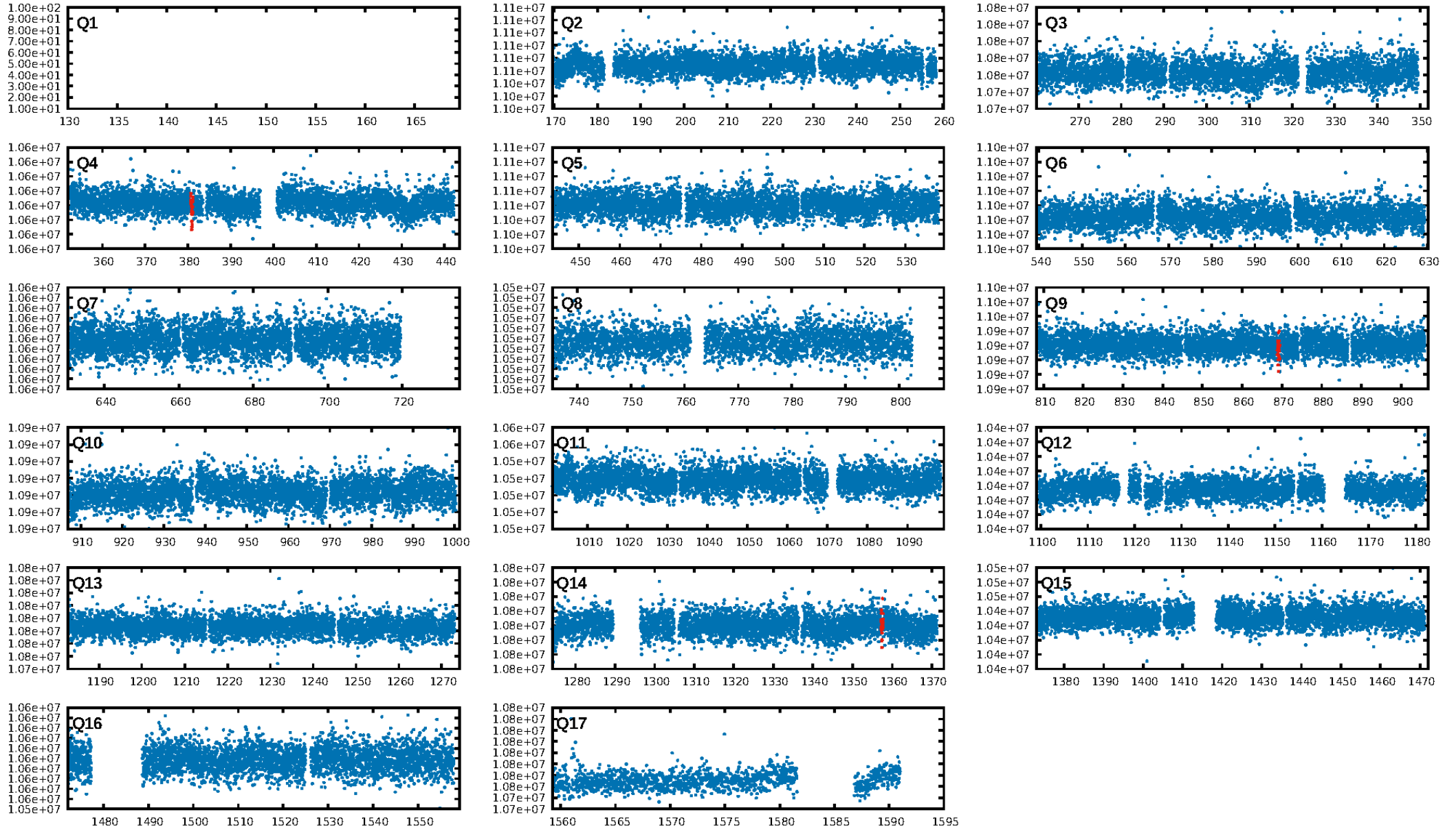
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 37.4%
ModelChiSquareGof-sig: 98.2%
Bootstrap-pfa: 1.03e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 223.7
Centroid-sig: 54.9%
Centroid-so: 1.385 arcsec [0.68 σ]
OotOffset-rm: 0.425 arcsec [0.32 σ]
KicOffset-rm: 0.613 arcsec [0.75 σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

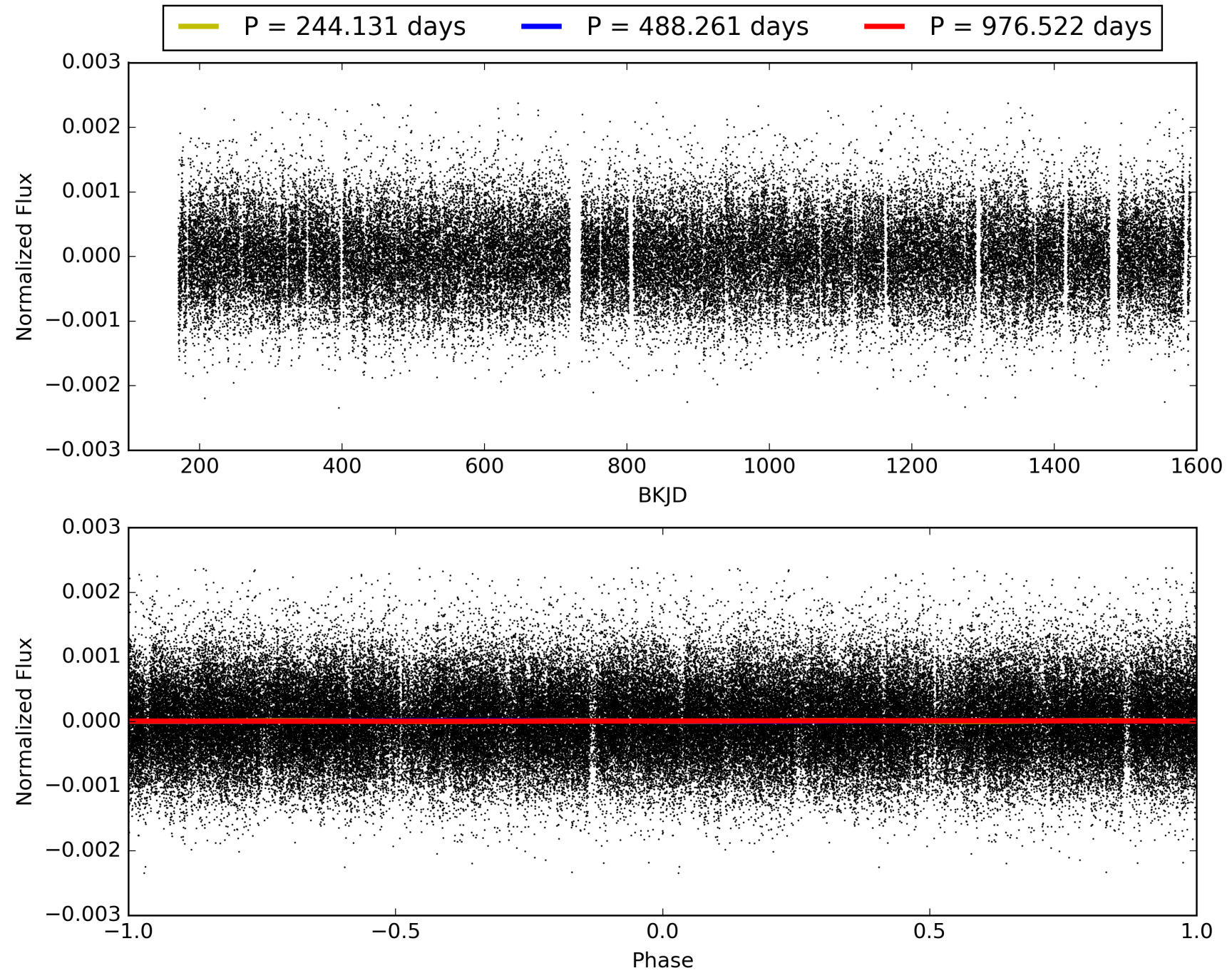
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:44:06 Z

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

TCE 004827352-01, PDC Light Curves

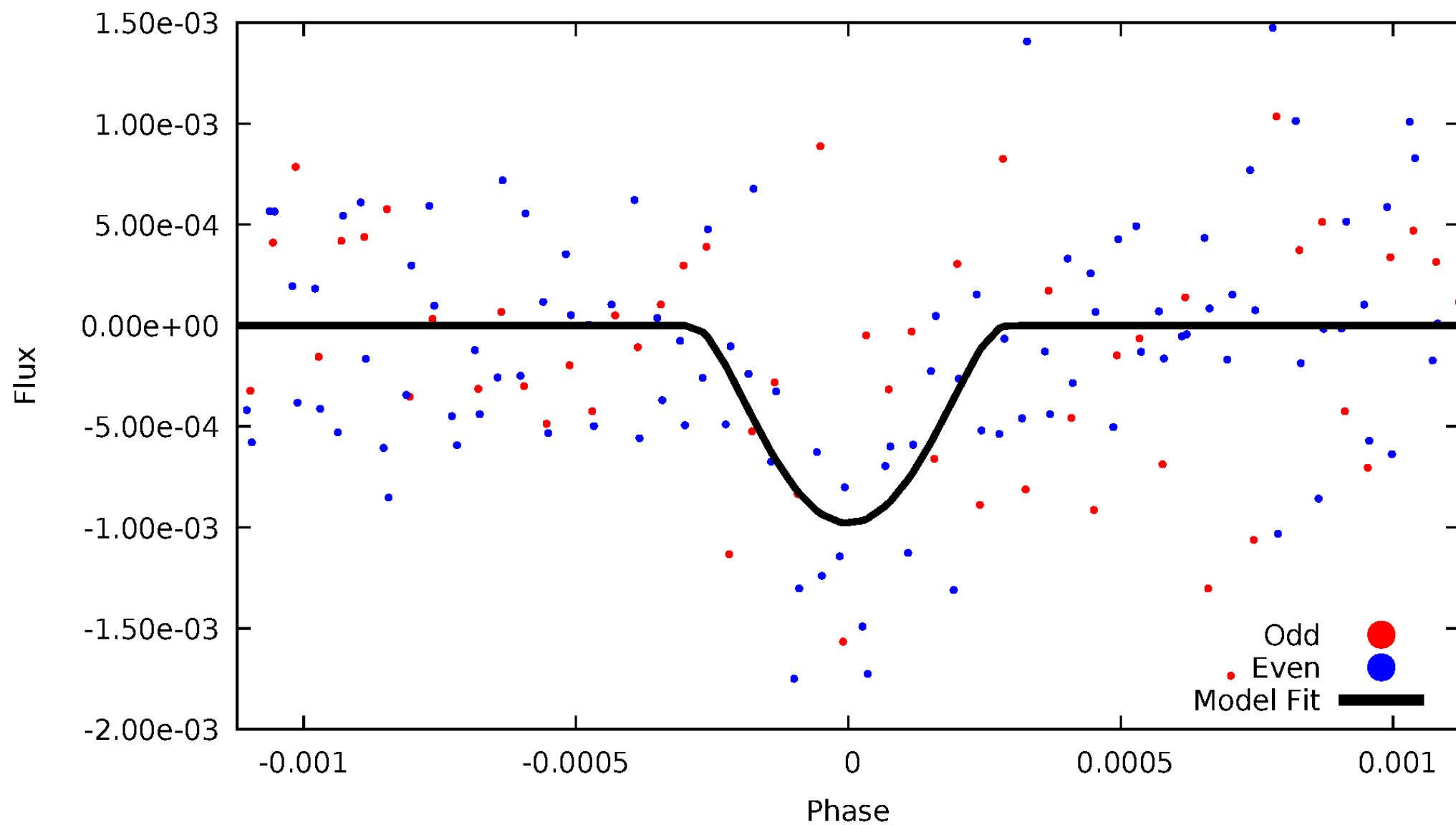


TCE 004827352-01



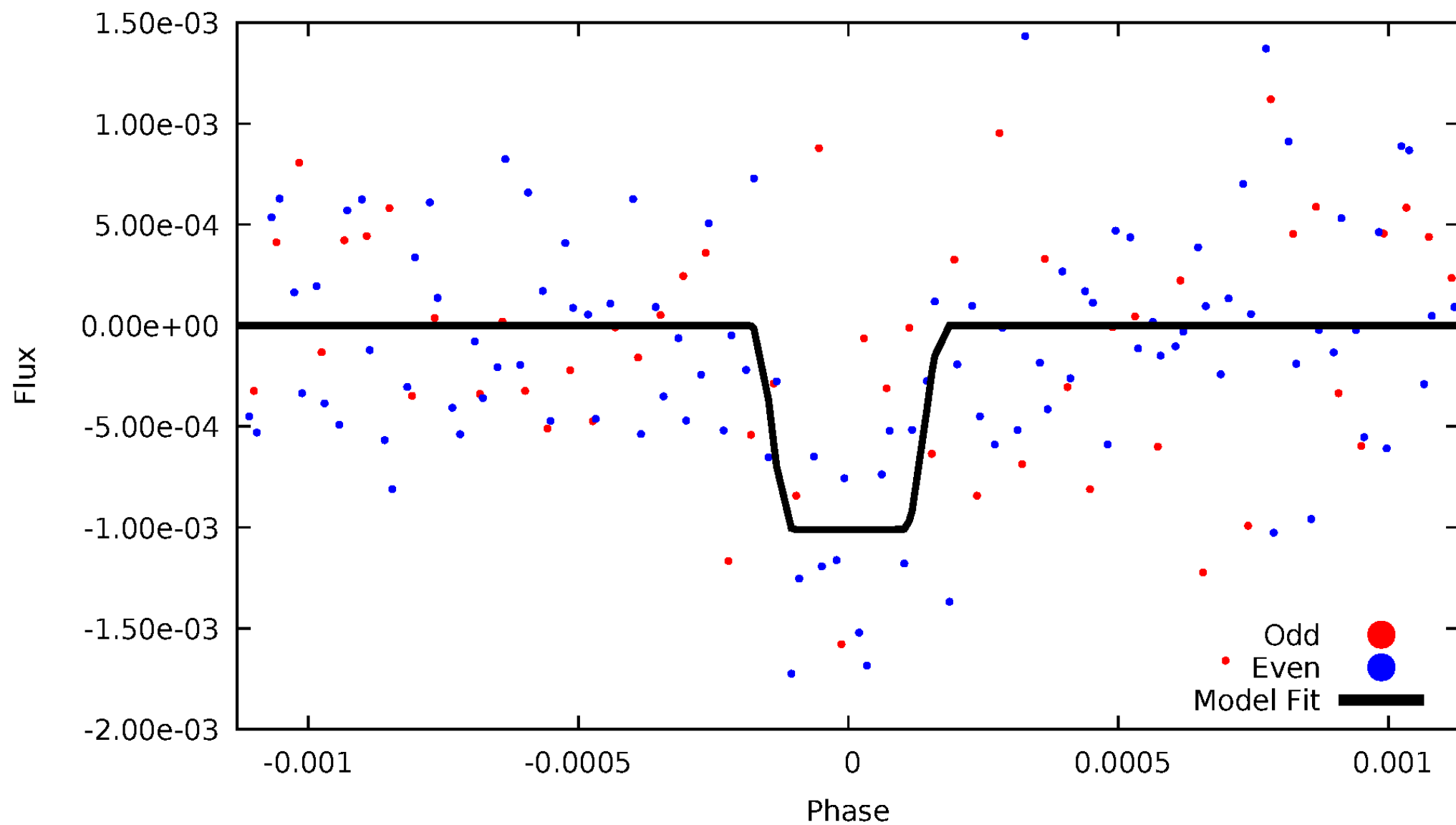
DV Odd/Even

TCE 004827352-01

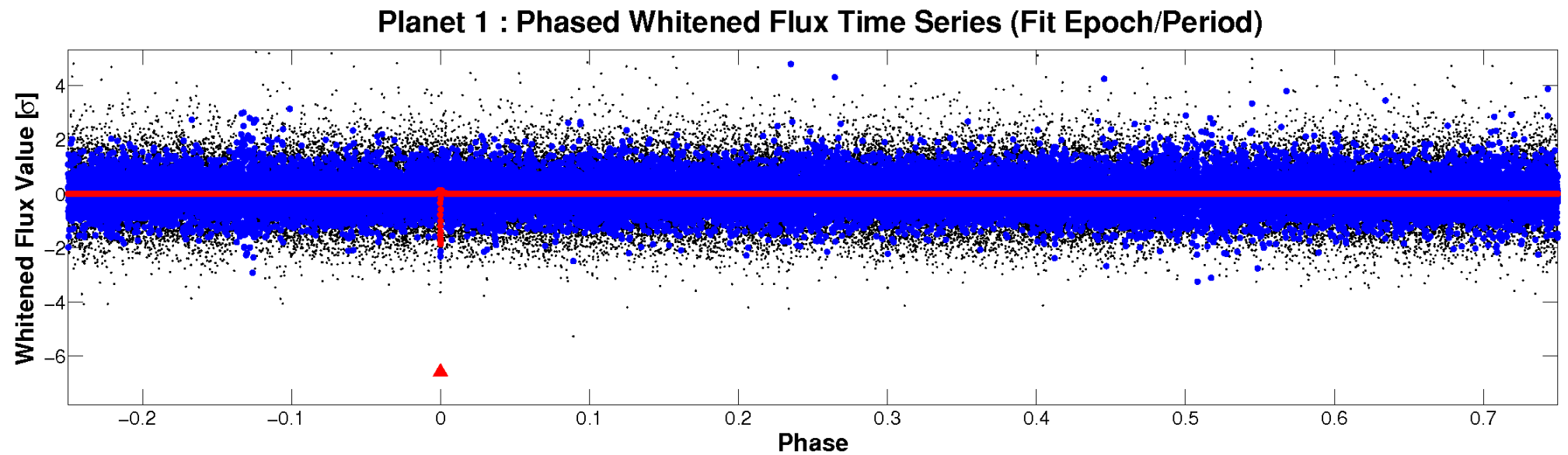
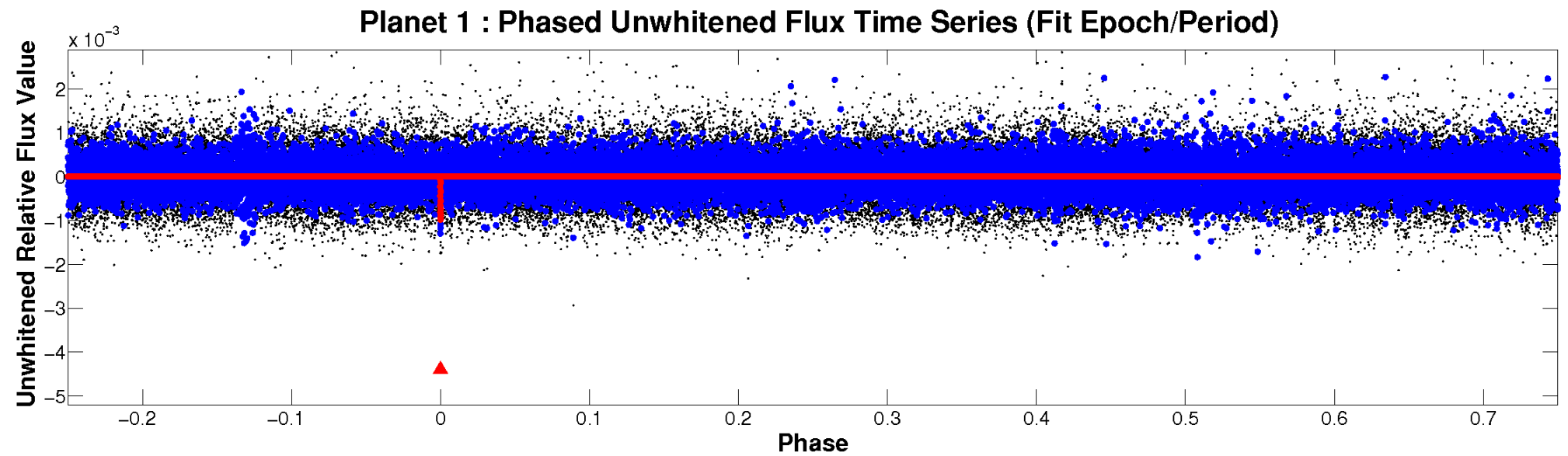


ALT Odd/Even

TCE 004827352-01

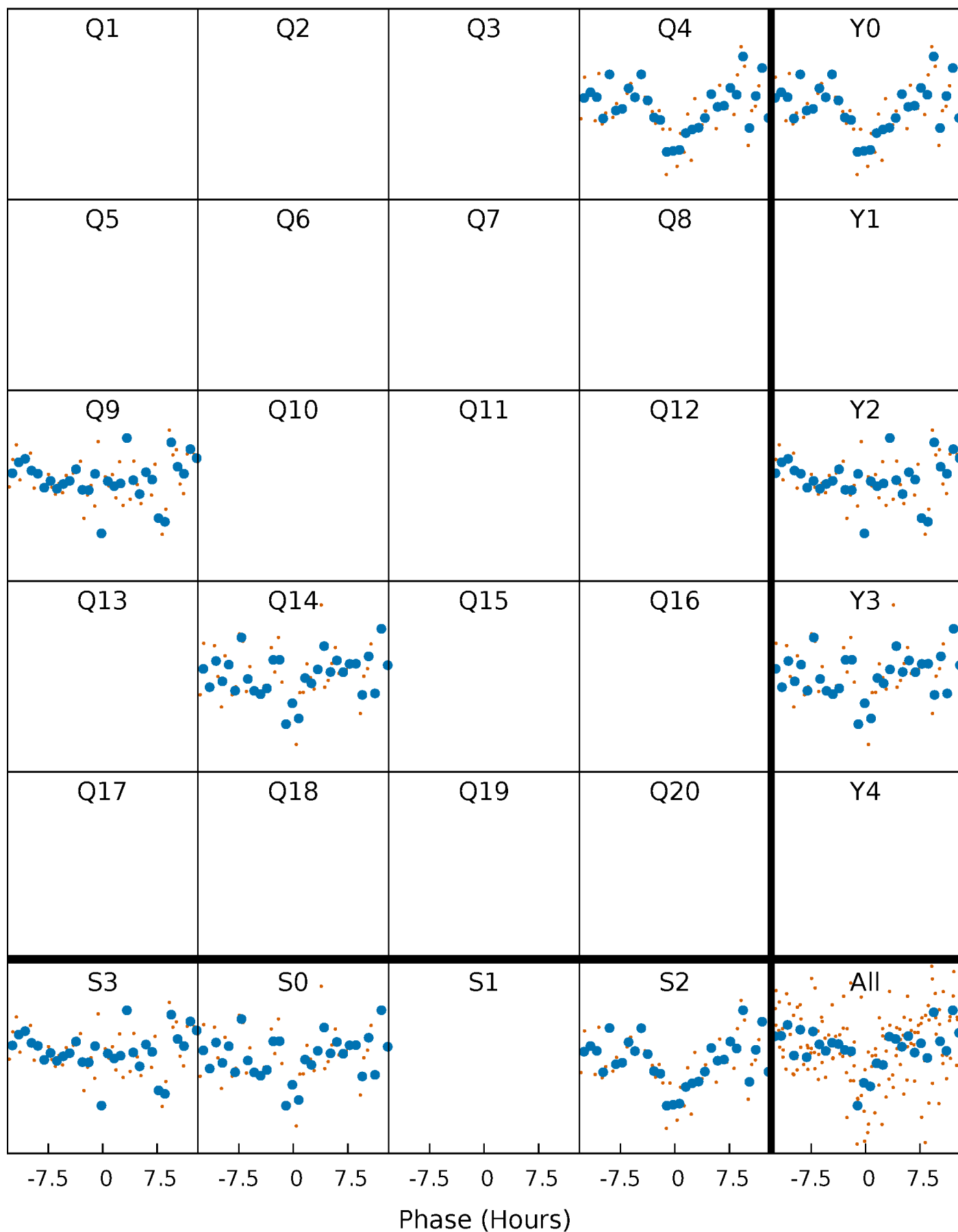


Non-Whitened Vs. Whitened Light Curve



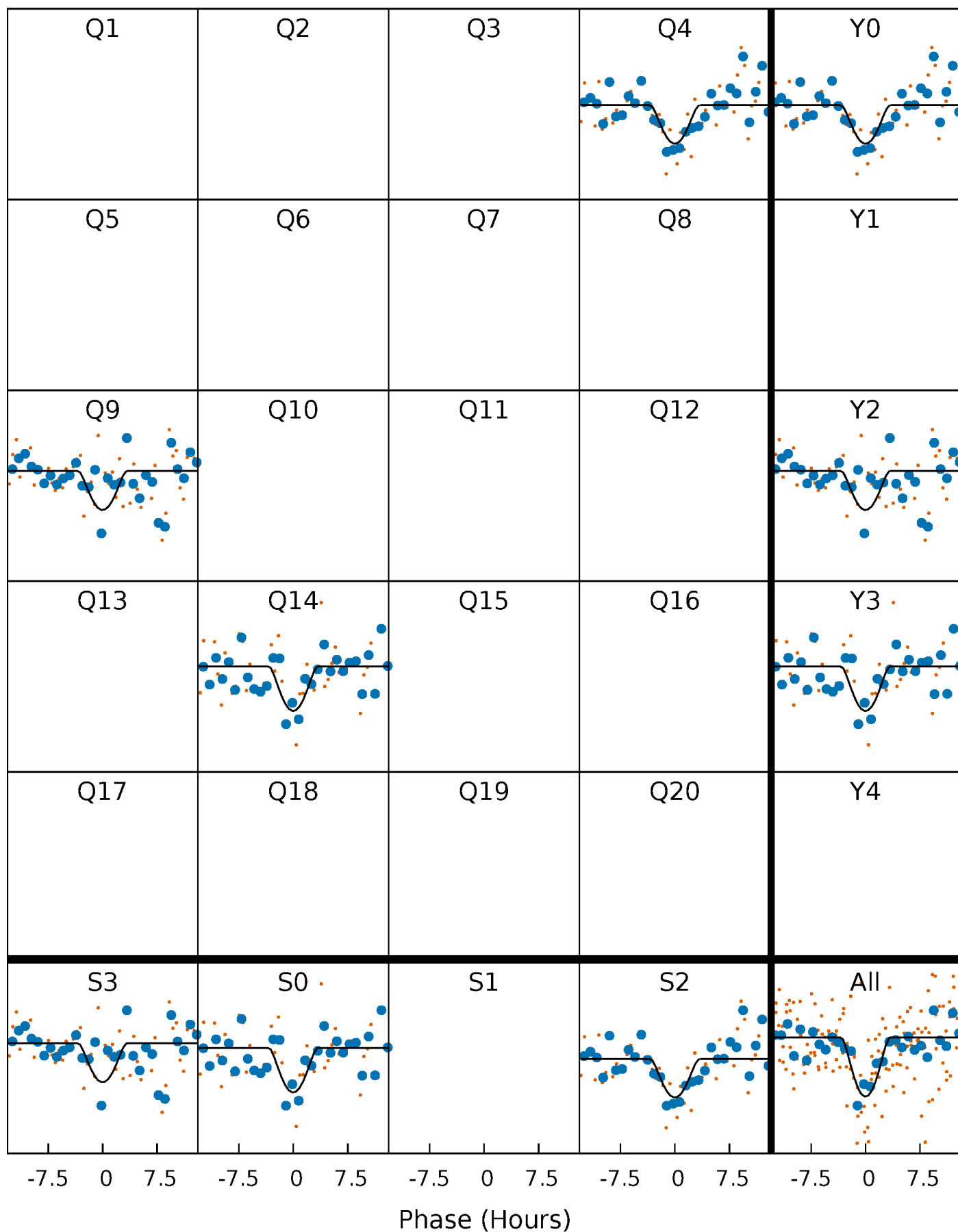
PDC Quarter-Phased Transit Curves

TCE 004827352-01 P=488.261208 Days $T_0=380.908823$ (BKJD)



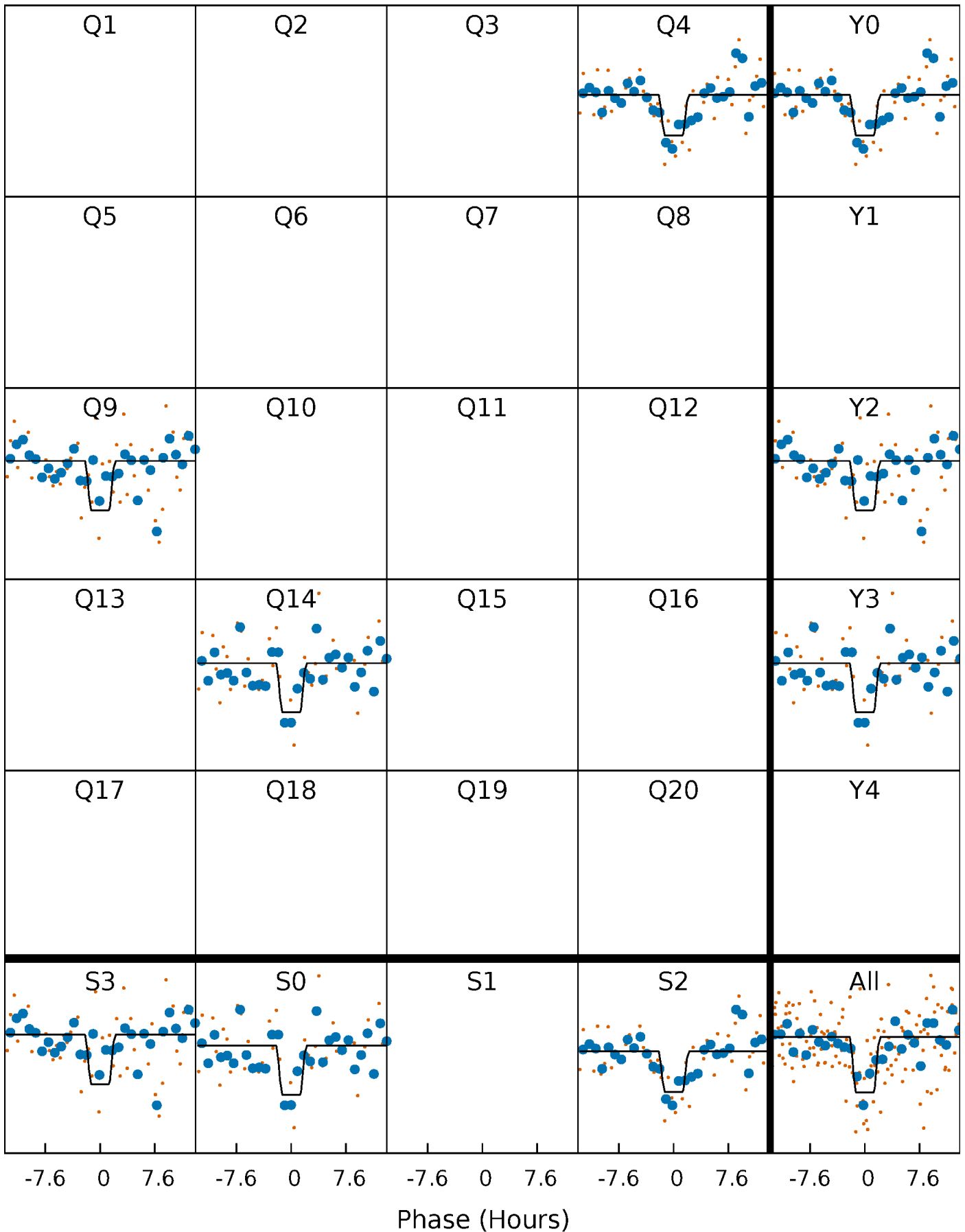
DV Quarter-Phased Transit Curves

TCE 004827352-01 P=488.261208 Days $T_0=380.908823$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

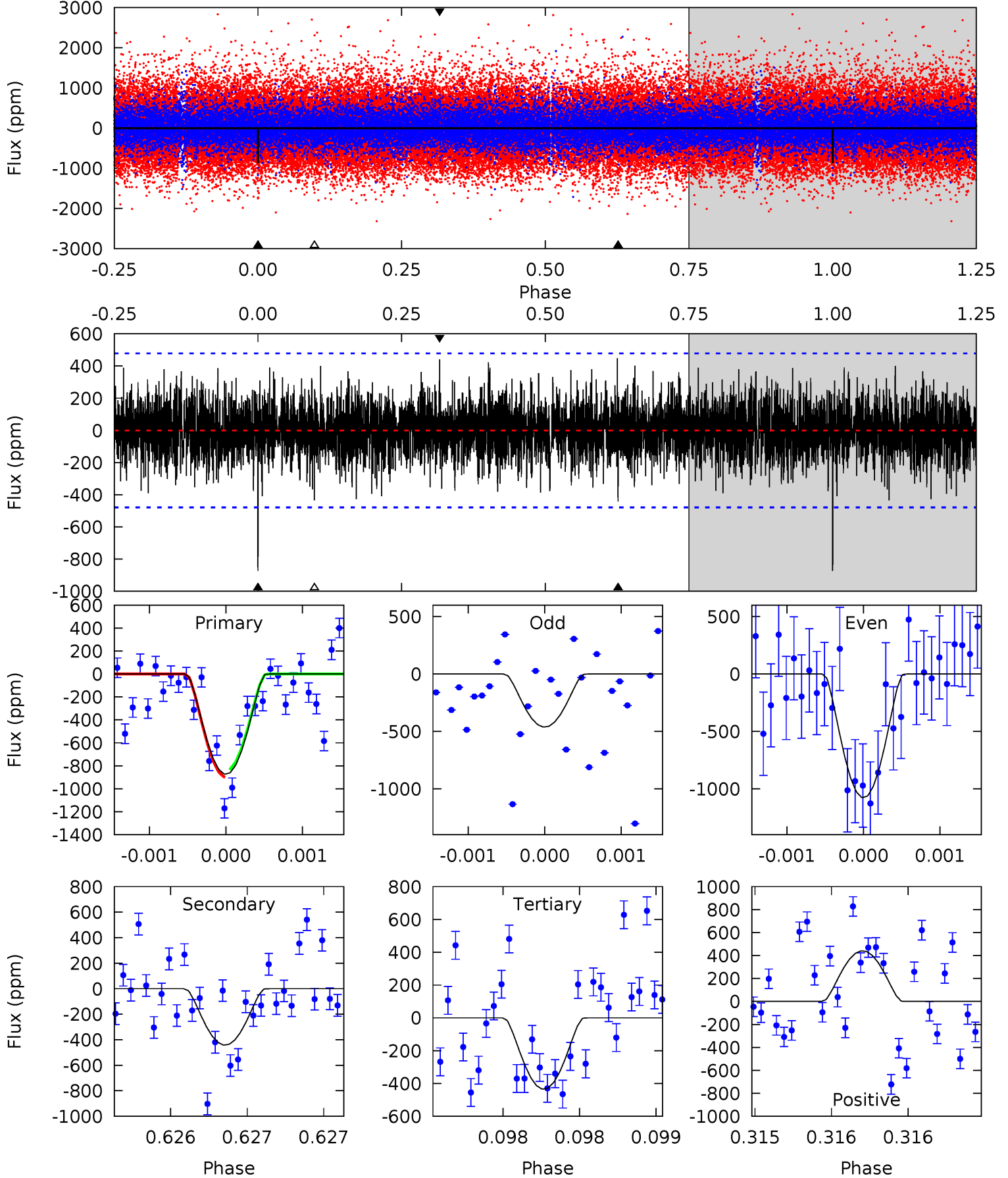
TCE 004827352-01 P=488.259916 Days $T_0=380.911748$ (BKJD)



DV Model-Shift Uniqueness Test

004827352-01, P = 488.261208 Days, E = 380.908823 Days

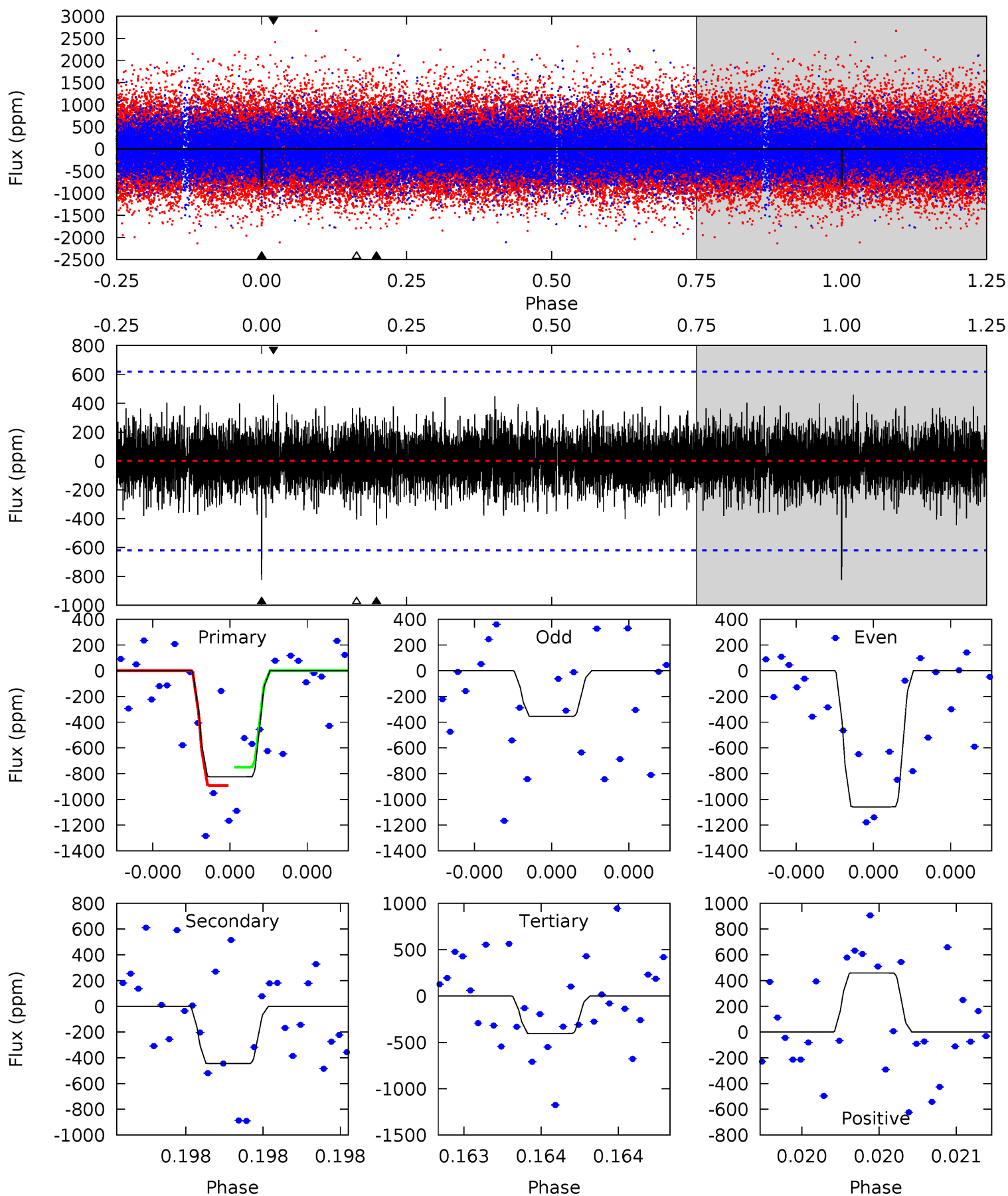
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	5.13	5.04	5.11	5.56	3.45	1.41	5.09	5.02	0.09	0.02	3.43	0.92	0.34	0.38



Alt Model-Shift Uniqueness Test

004827352-01, P = 488.259916 Days, E = 380.911748 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.49	4.04	3.69	4.17	5.63	3.57	1.06	3.80	3.32	0.35	-0.13	3.04	0.86	0.36	0.65



Stellar Parameters For KIC 004827352

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6039^{+190}_{-232}	$4.478^{+0.050}_{-0.200}$	$0.070^{+0.250}_{-0.350}$	$1.005^{+0.302}_{-0.101}$	$1.108^{+0.130}_{-0.159}$	$1.537^{+0.404}_{-0.769}$
	+3%/-4%	+1%/-4%	+357%/-500%	+30%/-10%	+12%/-14%	+26%/-50%
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 004827352-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-442 ± 86	$24.68^{+27.07}_{-17.26}$	338^{+24}_{-16}	2653^{+1114}_{-410}	620^{+5774}_{-480}
Alt.	-445 ± 110	$24.05^{+25.03}_{-17.57}$	340^{+26}_{-16}	2713^{+1306}_{-459}	679^{+8709}_{-538}

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

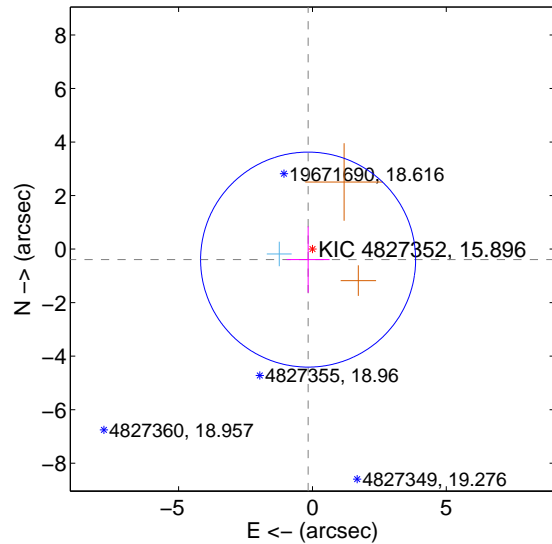
Supplemental centroid analysis for 004827352-01. Kepler magnitude: 15.90. Transit SNR 7.67

There are 1 quarters with good PRF difference image offsets

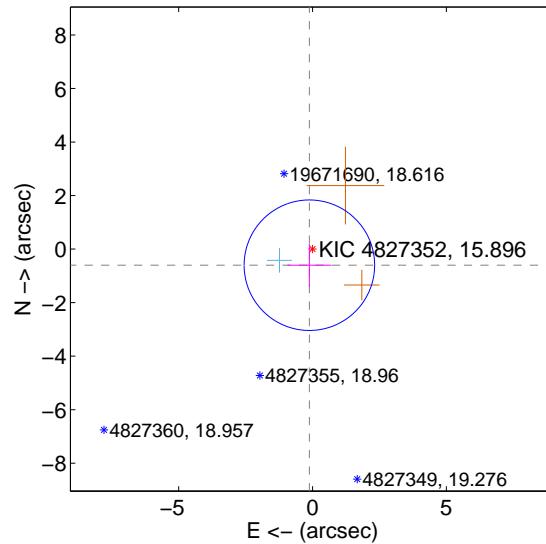
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.425 ± 1.339	0.32	0.162 ± 0.801	-0.393 ± 1.236
PRF-fit source offset from KIC position	0.613 ± 0.813	0.75	0.118 ± 0.822	-0.602 ± 0.794
photometric centroid source offset	1.39 ± 2.05	0.68	1.38 ± 2.05	0.17 ± 1.79

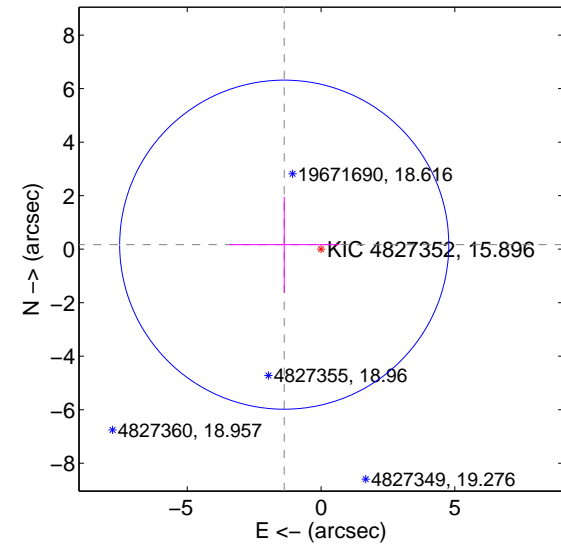
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

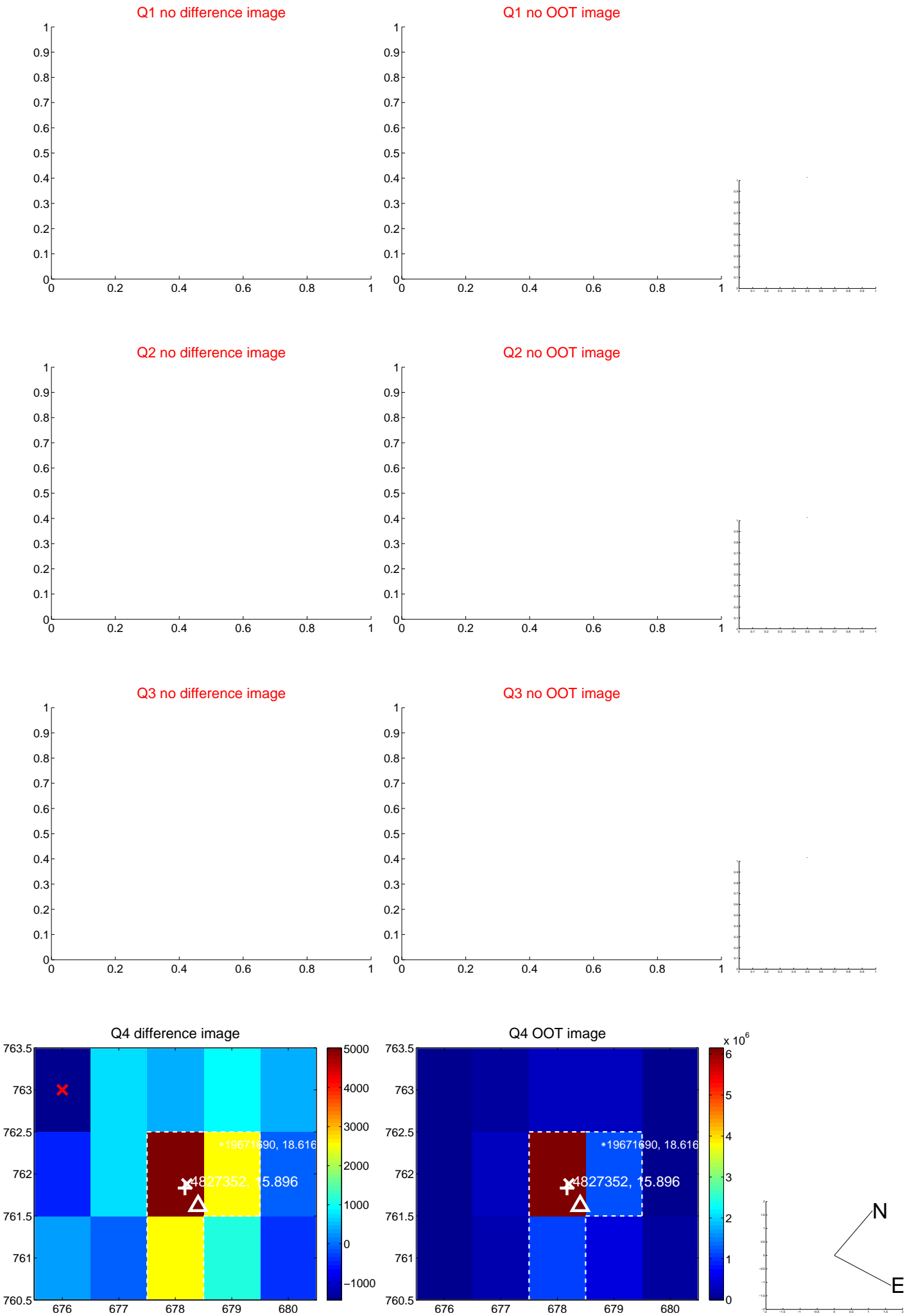


offset from photometric centroids



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.

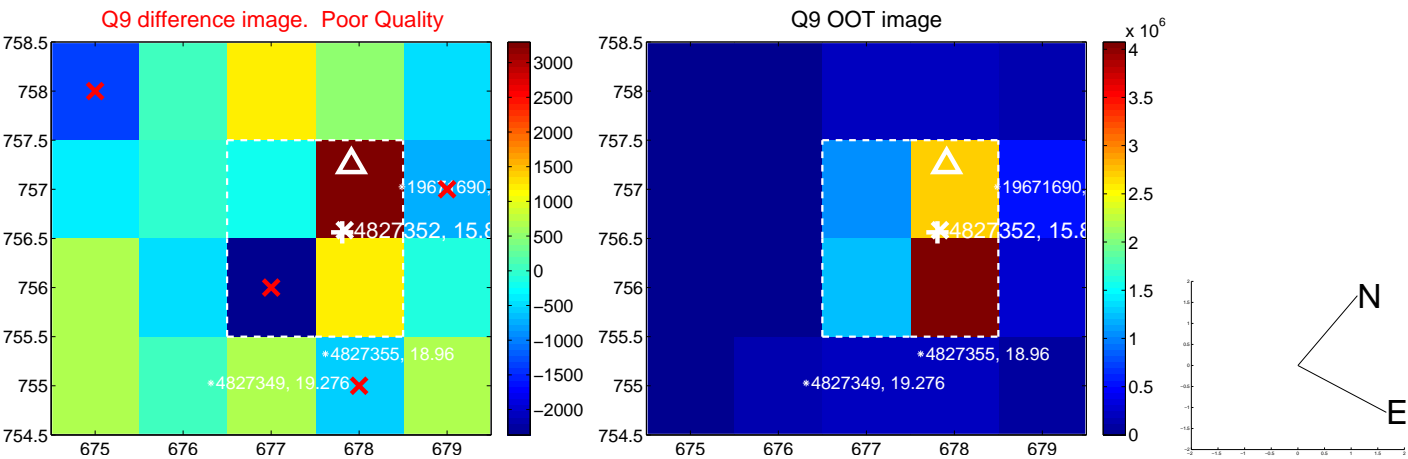
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



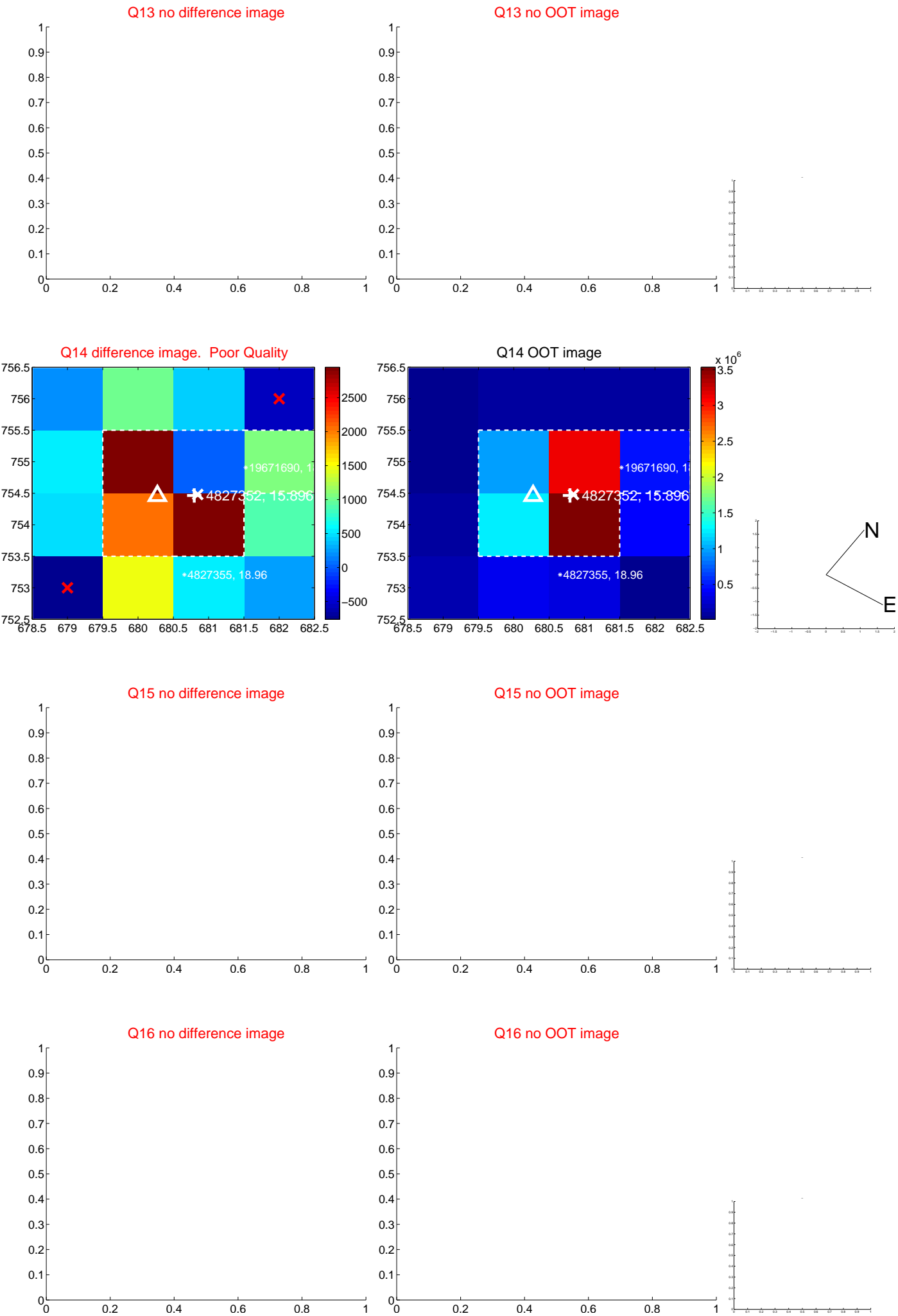
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



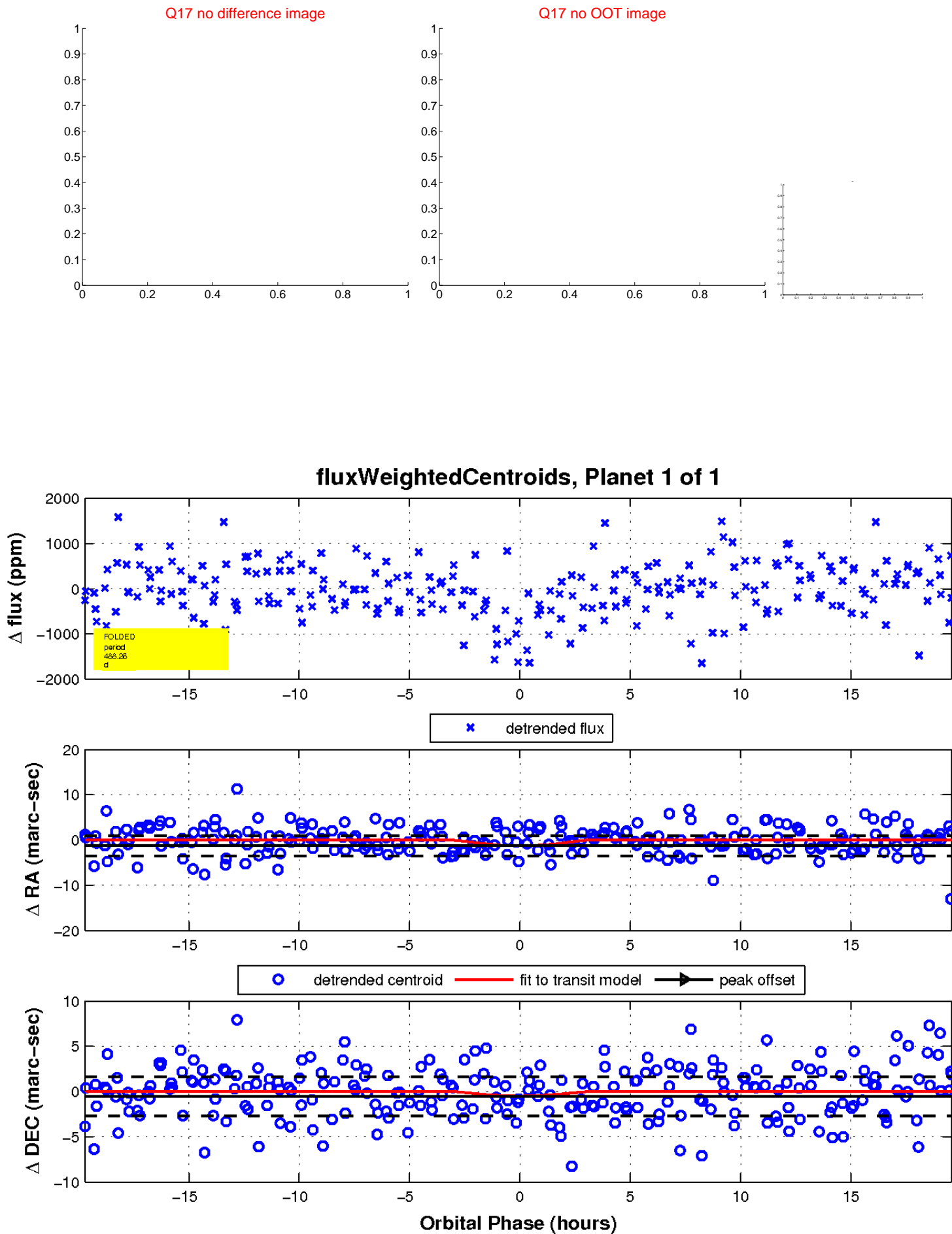
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

