

KIC 008106802

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})
008106802-01	OBS	No	474.777584	542.162567	1210.8	16.541	14.1	13.5	0.84	5573	3.06	0.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008106802-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

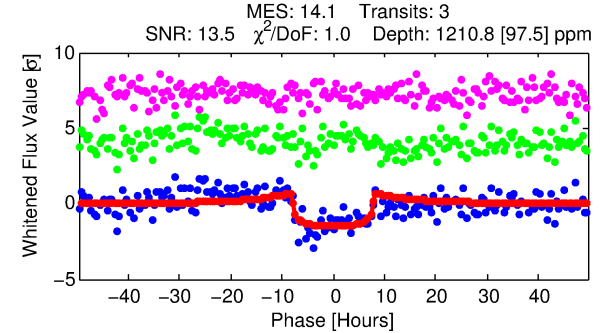
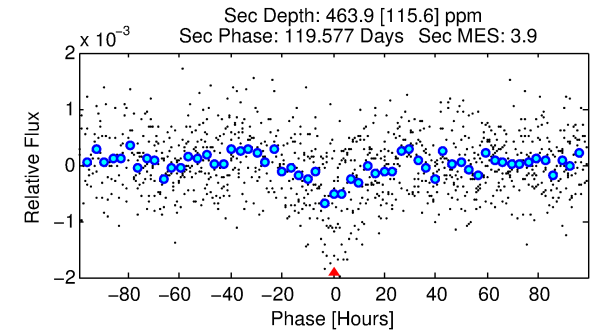
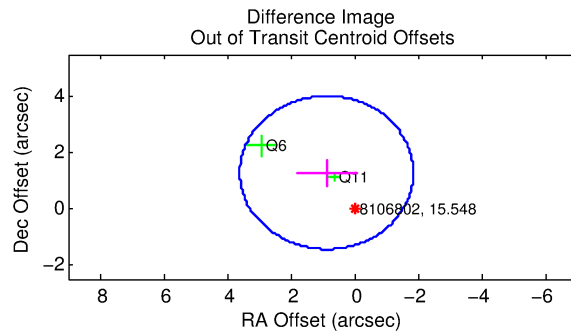
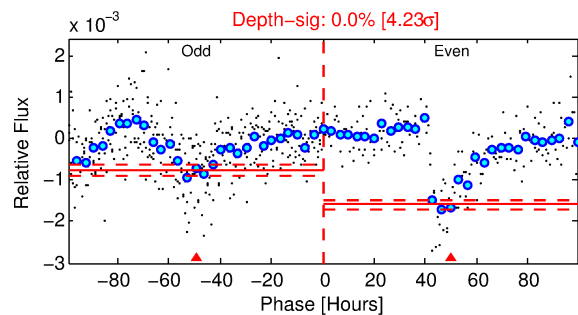
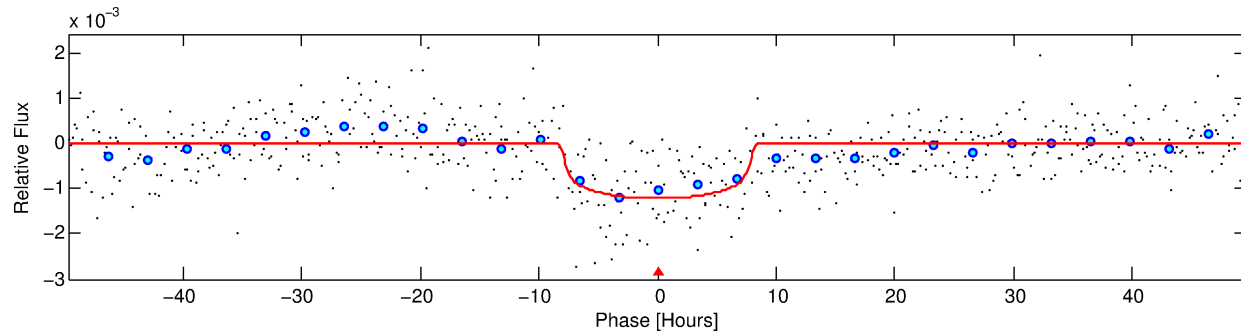
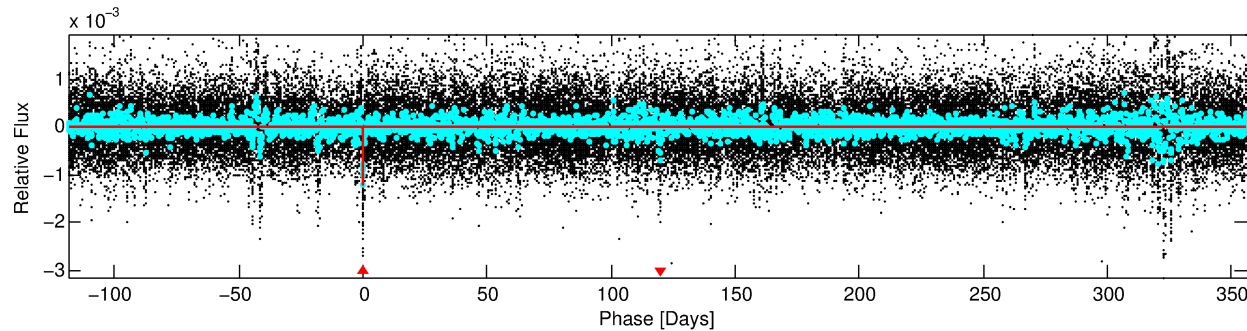
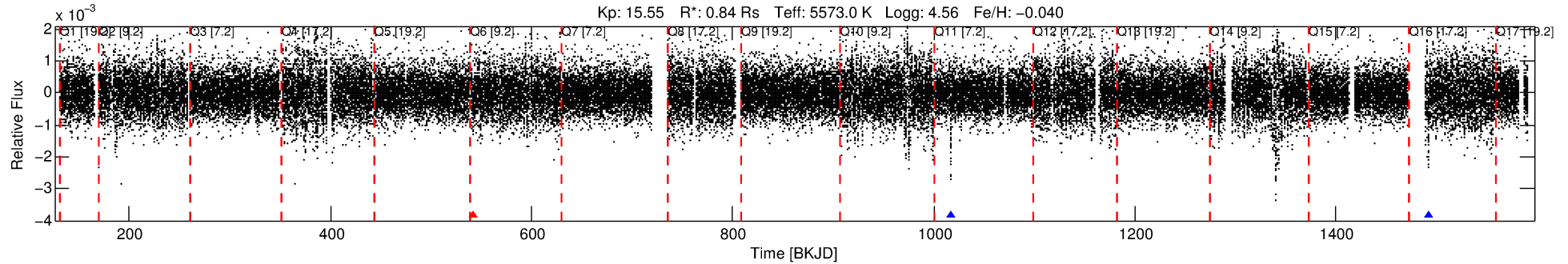
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008106802-01

No Significant Match Found

DV One-Page Summary

KIC: 8106802 Candidate: 1 of 1 Period: 474.778 d



DV Fit Results:

Period = 474.77758 [0.01224] d
Epoch = 542.1626 [0.0148] BKJD
Rp/R* = 0.0334 [0.0072]
a/R* = 178.45 [153.99]
b = 0.64 [0.81]
Seff = 0.45 [0.13]
Teq = 209 [15] K
Rp = 3.06 [0.92] Re
a = 1.1656 [0.2078] AU
Ag = 37076.25 [20911.09] [1.77σ]
Teffp = 4475 [578] K [7.38σ]

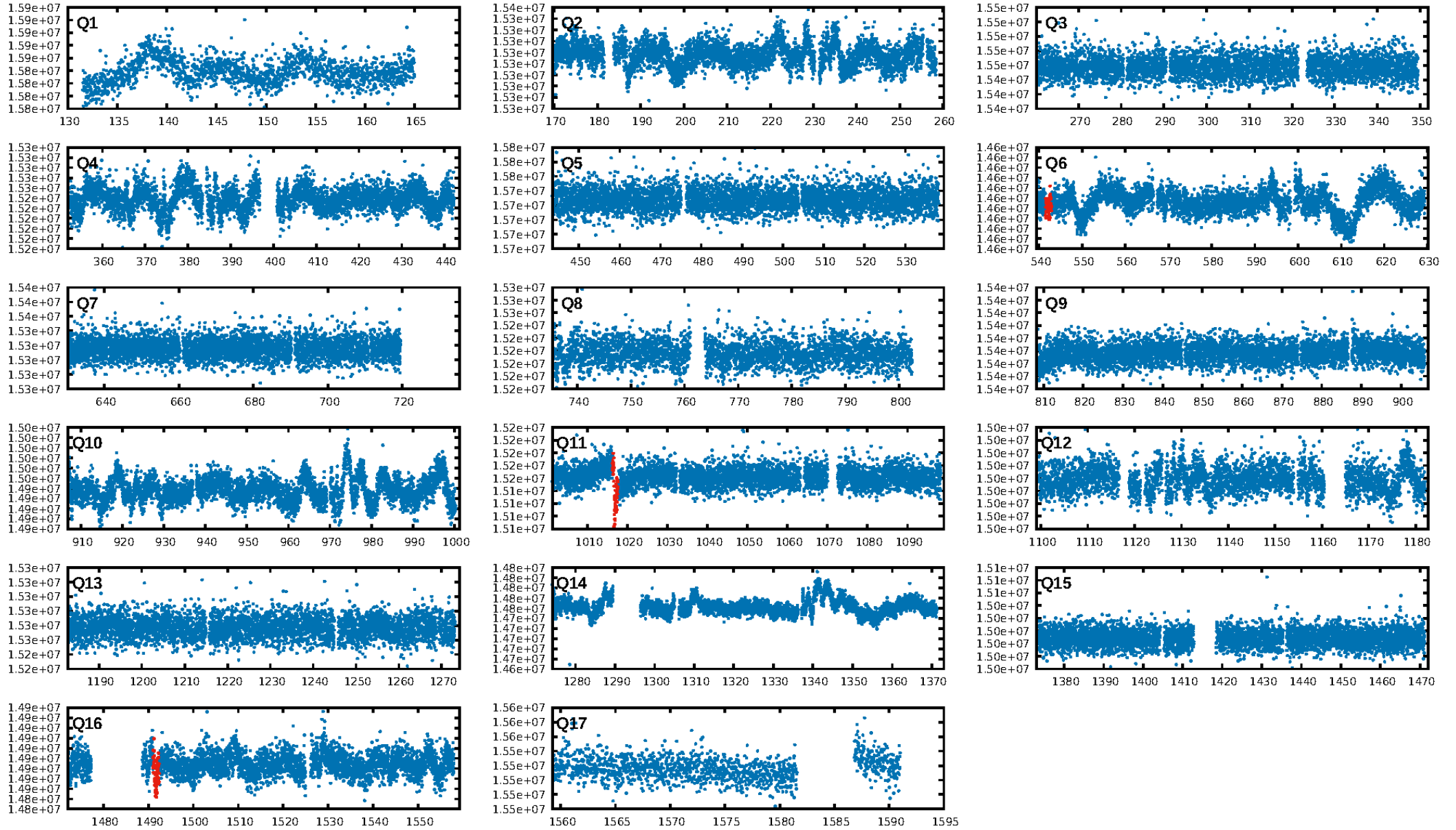
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 90.0%
Bootstrap-pfa: 1.67e-15
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: -3.086
Centroid-sig: 93.8%
Centroid-so: 0.389 arcsec [0.37σ]
OotOffset-rm: 1.556 arcsec [1.71σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-rm: 1.705 arcsec [1.83σ]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

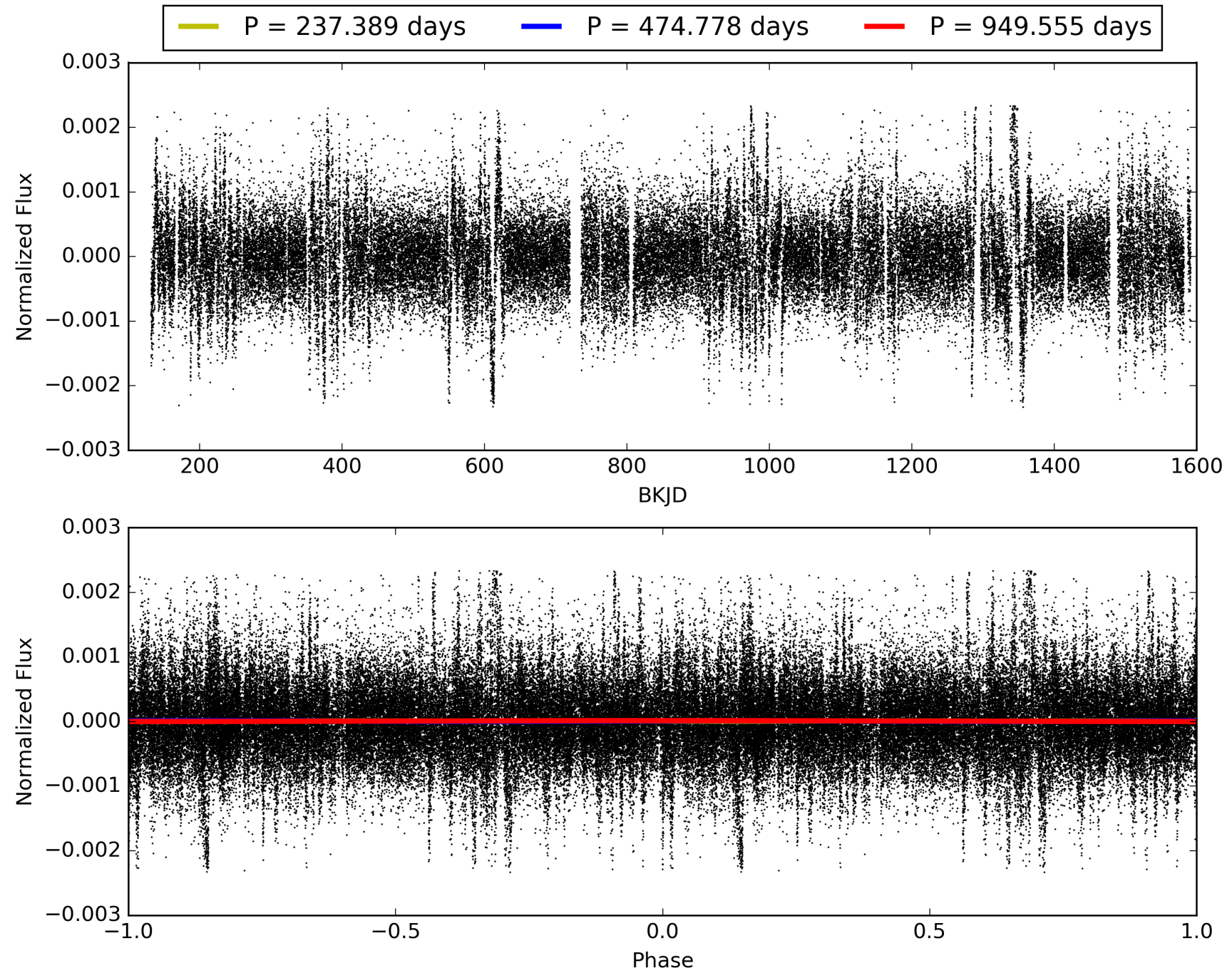
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:37:51 Z

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

TCE 008106802-01, PDC Light Curves

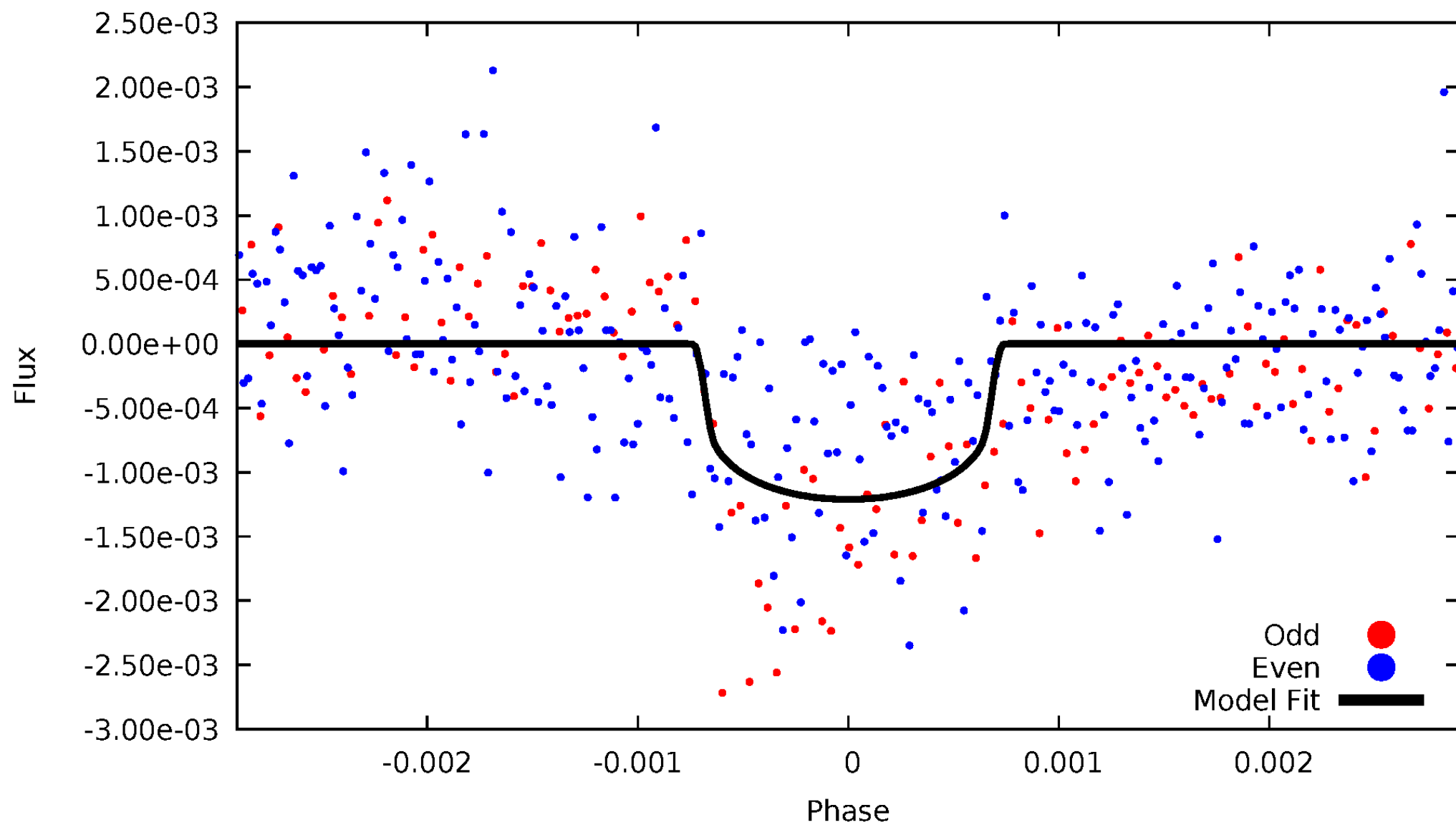


TCE 008106802-01



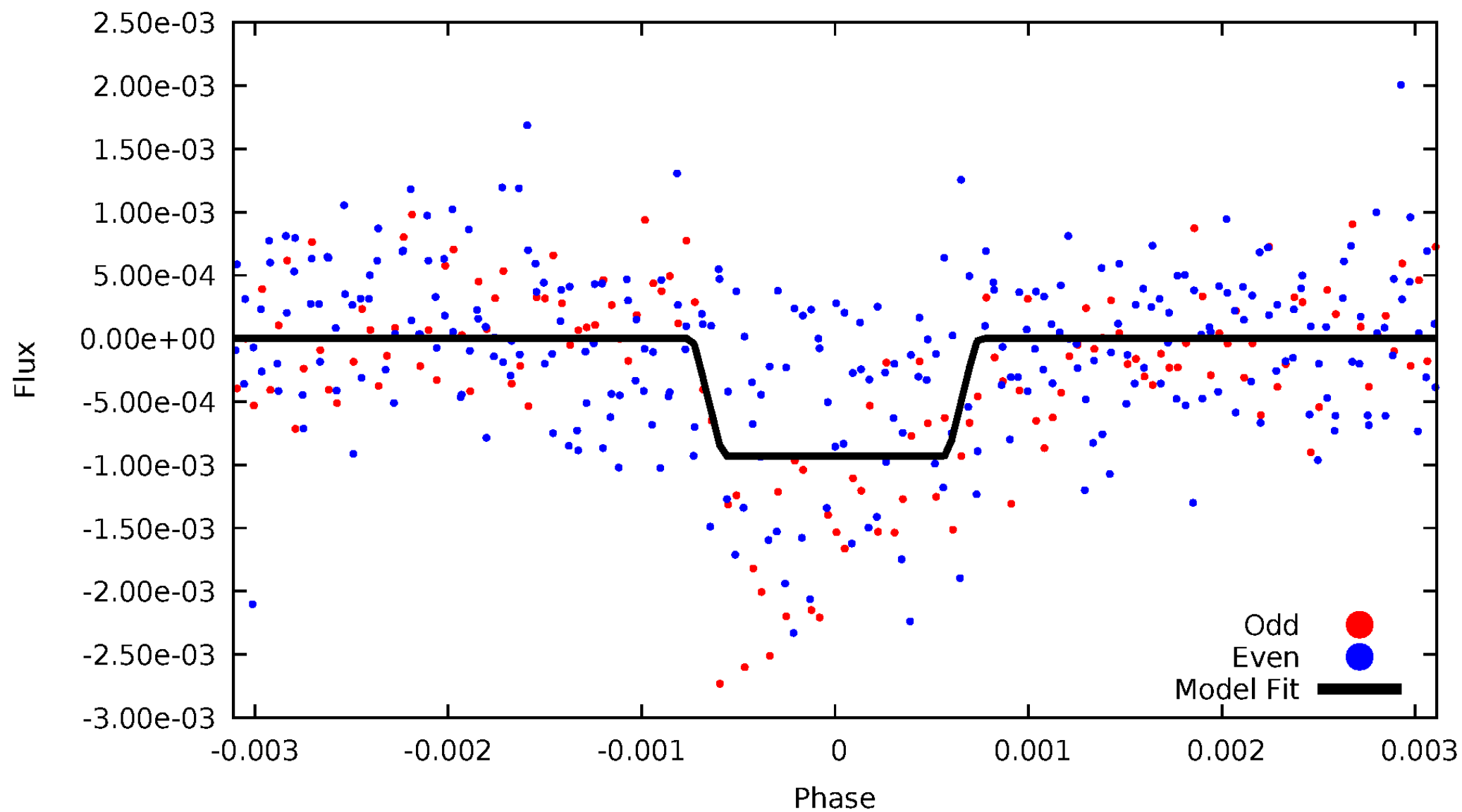
DV Odd/Even

TCE 008106802-01

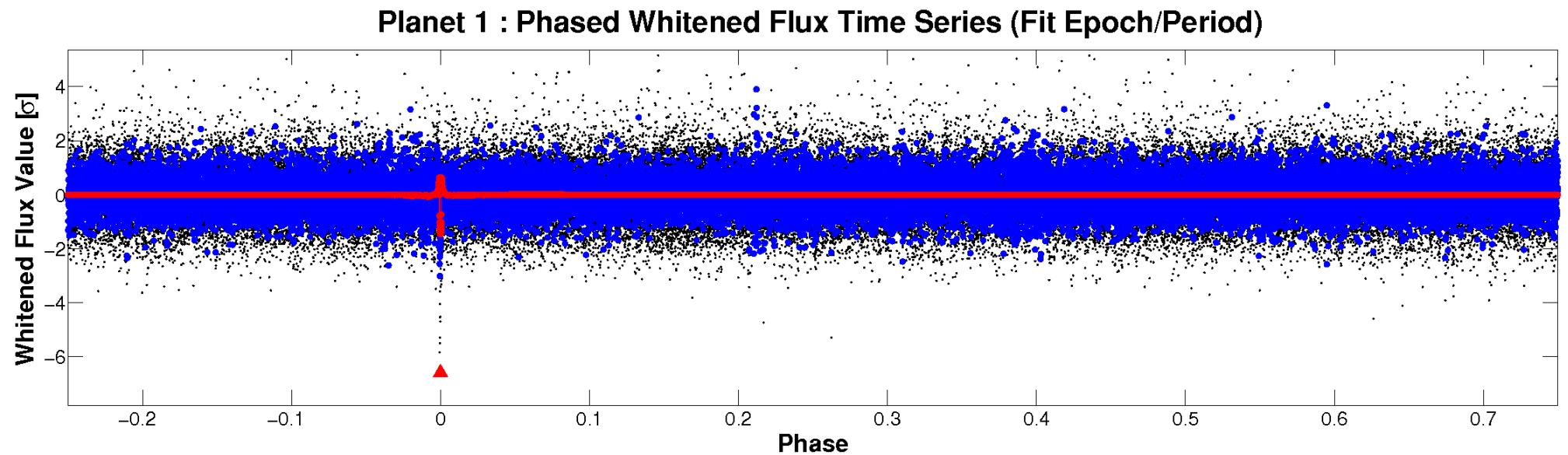
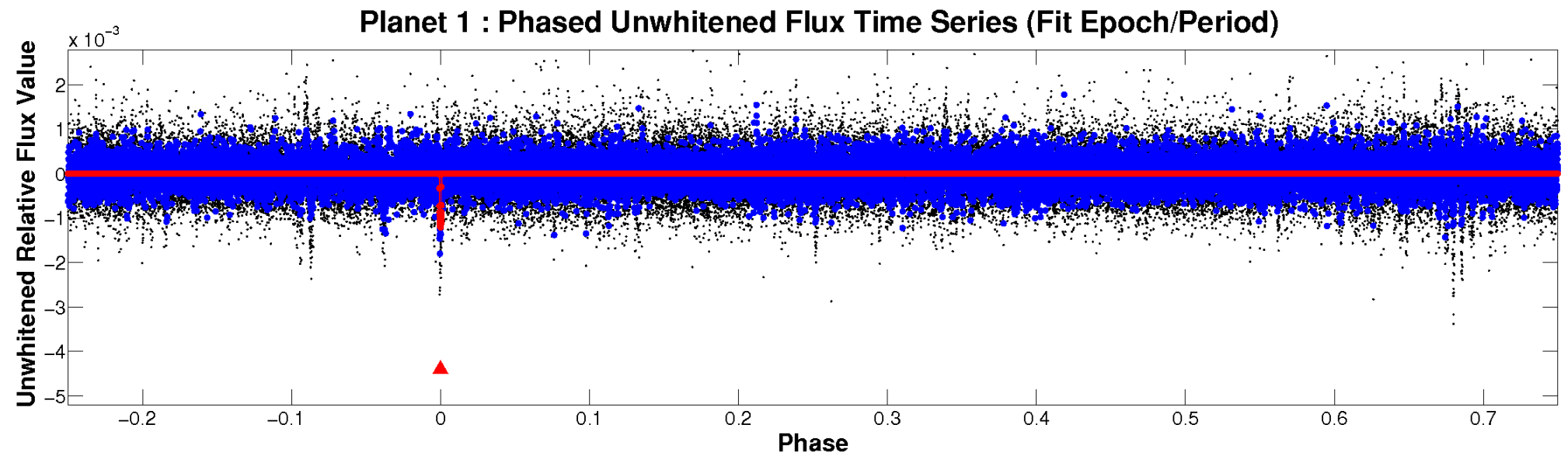


ALT Odd/Even

TCE 008106802-01

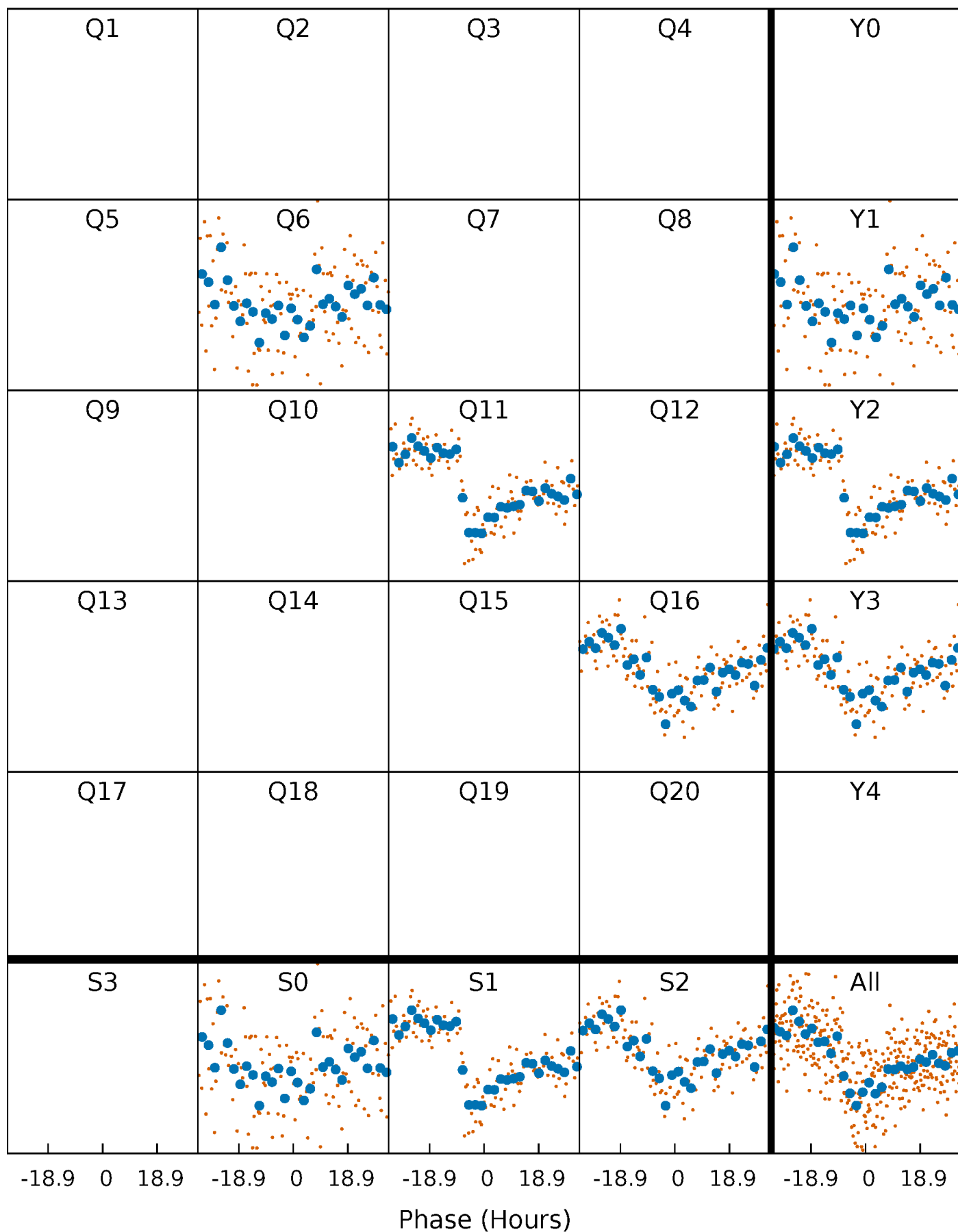


Non-Whitened Vs. Whitened Light Curve



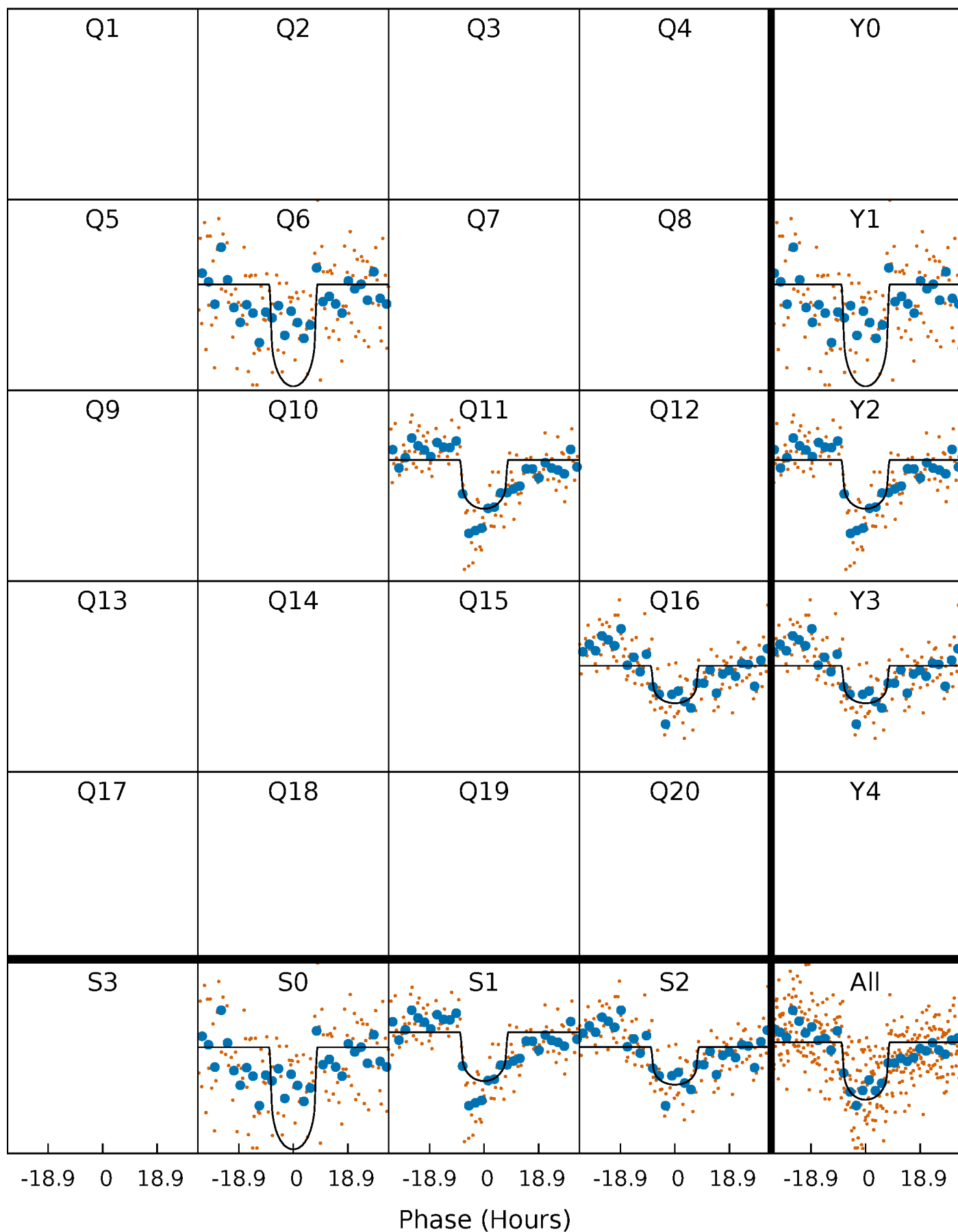
PDC Quarter-Phased Transit Curves

TCE 008106802-01 P=474.777584 Days $T_0=542.162567$ (BKJD)



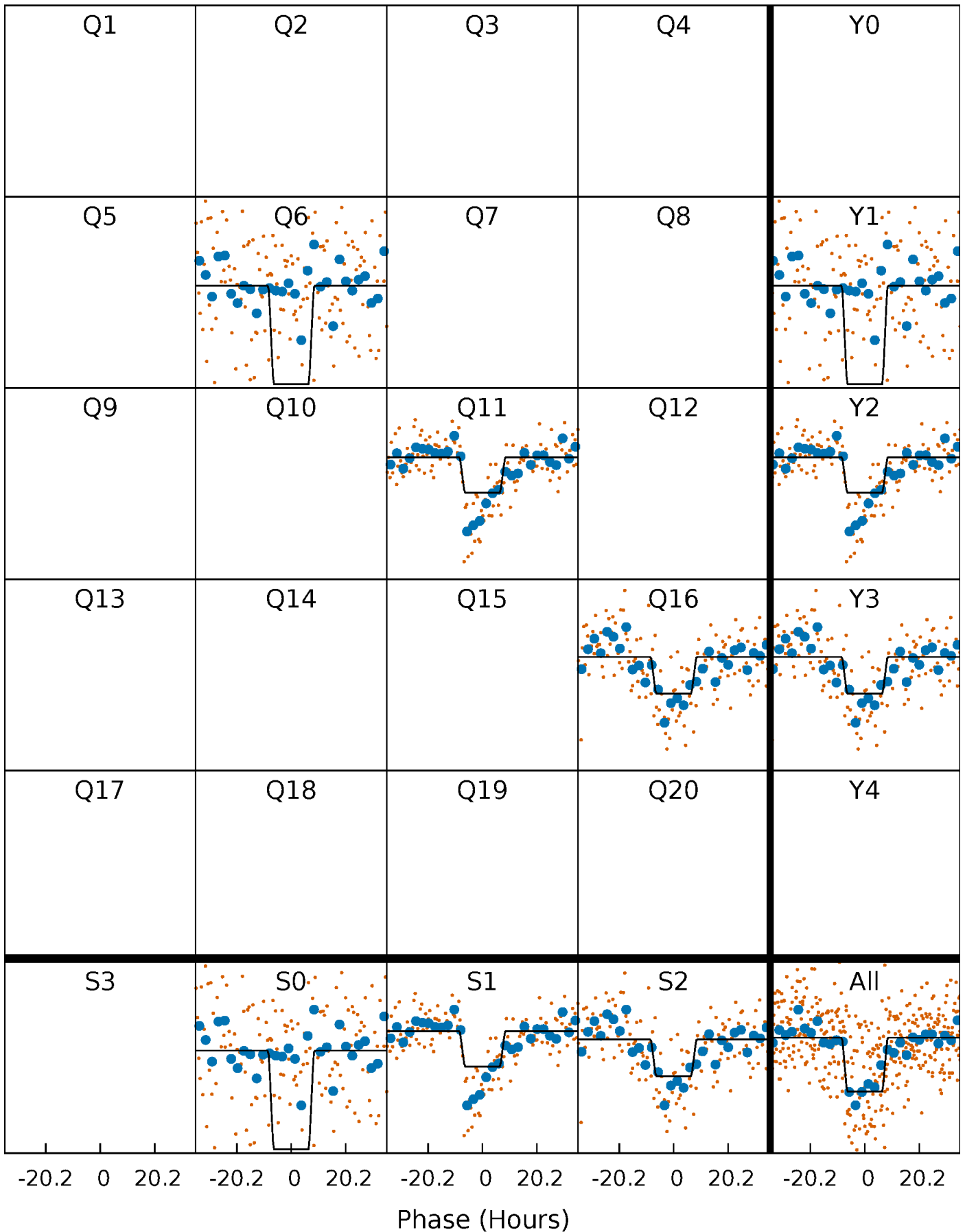
DV Quarter-Phased Transit Curves

TCE 008106802-01 P=474.777584 Days $T_0=542.162567$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

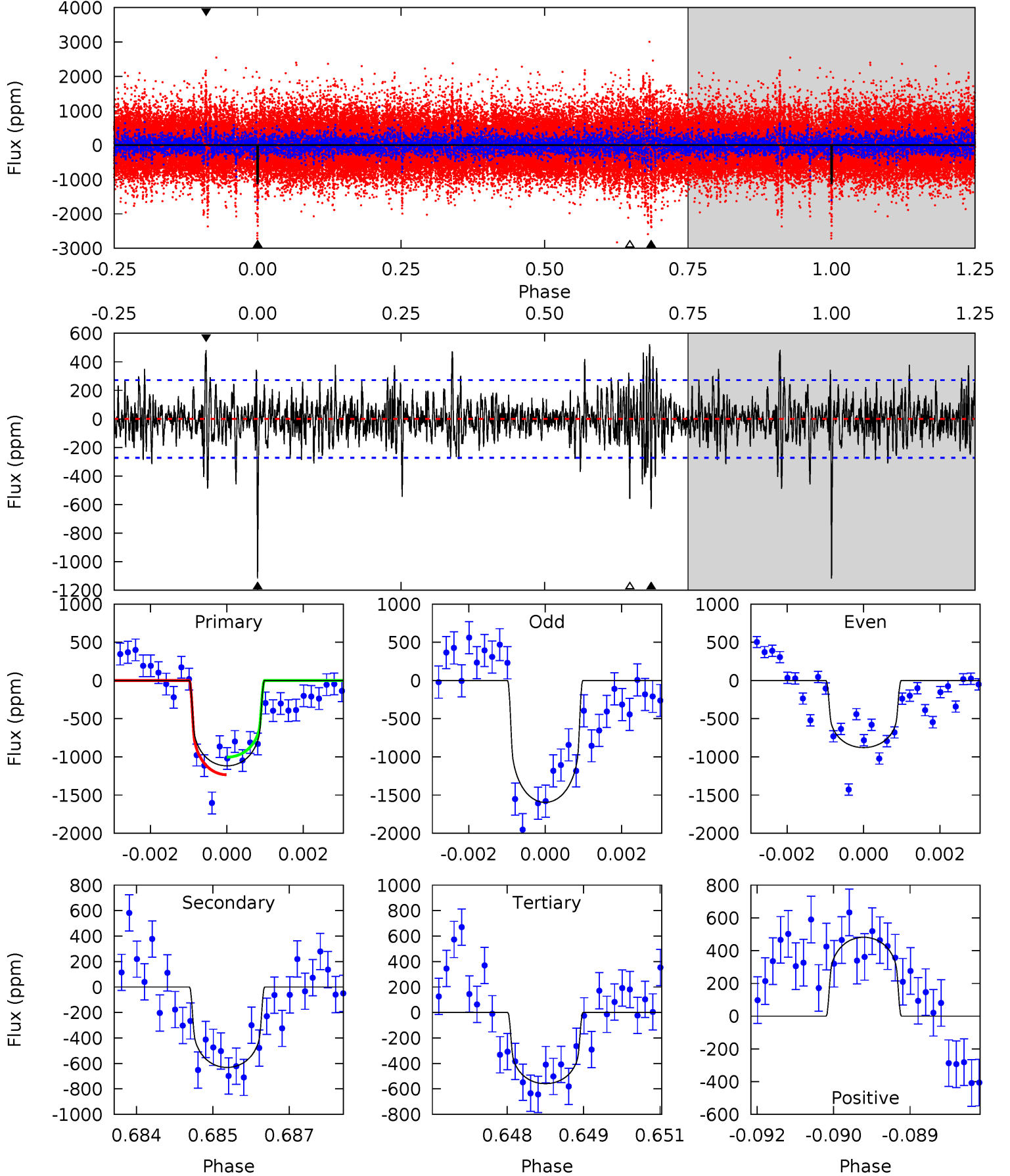
TCE 008106802-01 P=474.732899 Days $T_0=542.205768$ (BKJD)



DV Model-Shift Uniqueness Test

008106802-01, $P = 474.777584$ Days, $E = 67.384983$ Days

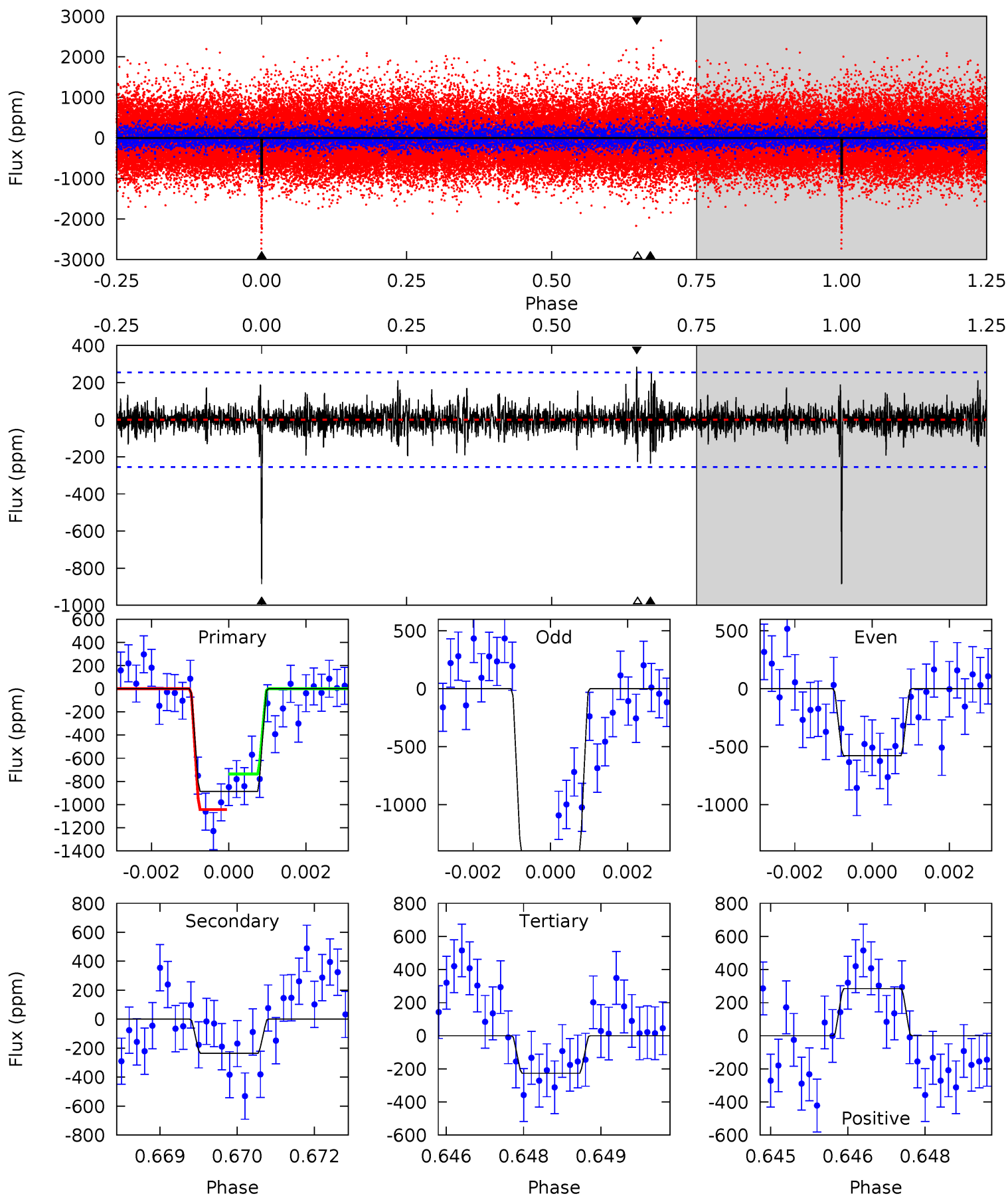
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.1	12.5	11.1	9.53	5.38	3.17	2.37	11.1	12.6	1.43	2.97	6.75	0.88	0.32	2.27



Alt Model-Shift Uniqueness Test

008106802-01, P = 474.732899 Days, E = 67.472869 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	4.97	4.78	6.02	5.38	3.17	1.00	13.9	12.7	0.19	-1.05	8.47	0.75	0.24	3.25



Stellar Parameters For KIC 008106802

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5573^{+149}_{-182}	$4.562^{+0.036}_{-0.144}$	$-0.040^{+0.300}_{-0.300}$	$0.839^{+0.176}_{-0.075}$	$0.939^{+0.083}_{-0.111}$	$2.238^{+0.418}_{-0.897}$
	+3%/-3%	+1%/-3%	+750%/-750%	+21%/-9%	+9%/-12%	+19%/-40%
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 008106802-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-631 ± 51	$3.19^{+0.75}_{-0.72}$	296^{+16}_{-12}	4881^{+576}_{-385}	45217^{+29140}_{-15729}
Alt.	-236 ± 47	$2.88^{+0.76}_{-0.73}$	296^{+16}_{-12}	4195^{+514}_{-358}	20640^{+17021}_{-8240}

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 $A_{\text{obs}} \gg 1.0$

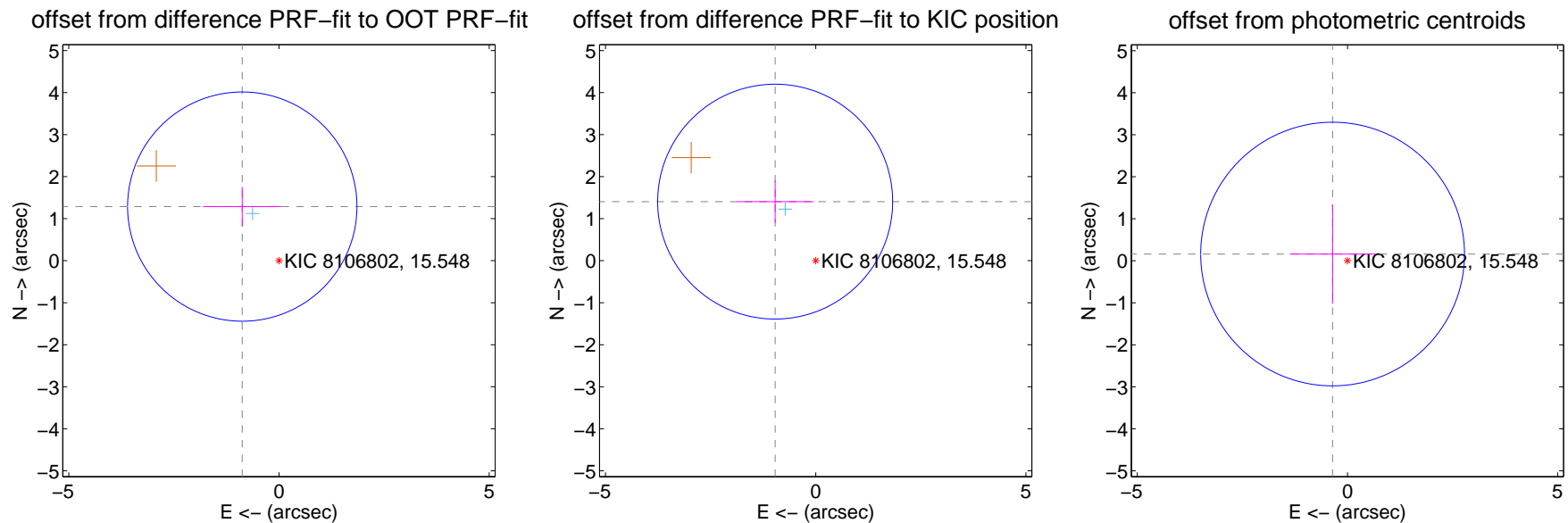
DV Centroid Data

Supplemental centroid analysis for 008106802-01. Kepler magnitude: 15.55. Transit SNR 13.48

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.556 ± 0.909	1.71	0.873 ± 0.936	1.287 ± 0.467
PRF-fit source offset from KIC position	1.705 ± 0.931	1.83	0.965 ± 0.915	1.406 ± 0.505
photometric centroid source offset	0.39 ± 1.05	0.37	0.35 ± 1.02	0.16 ± 1.18

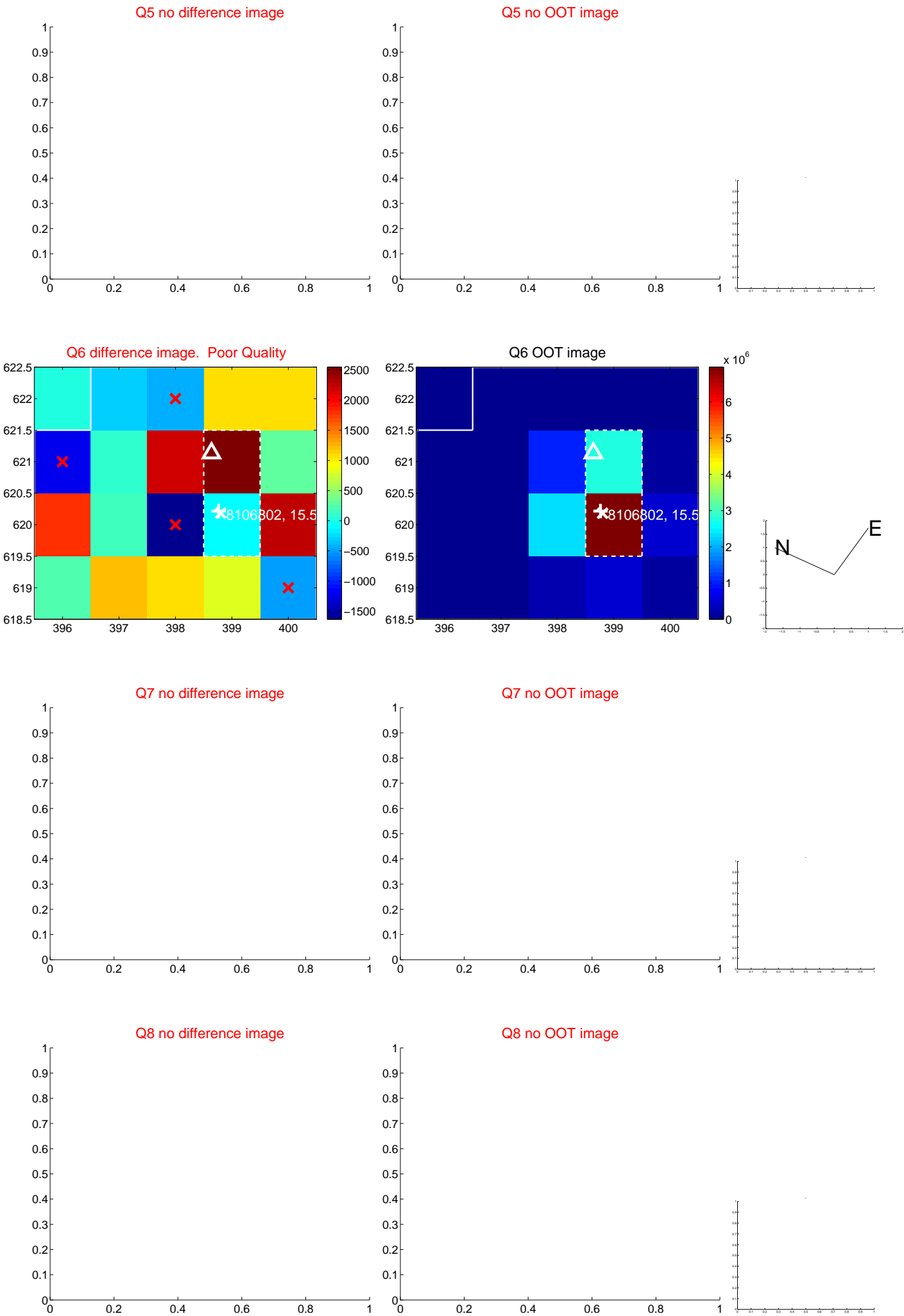


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

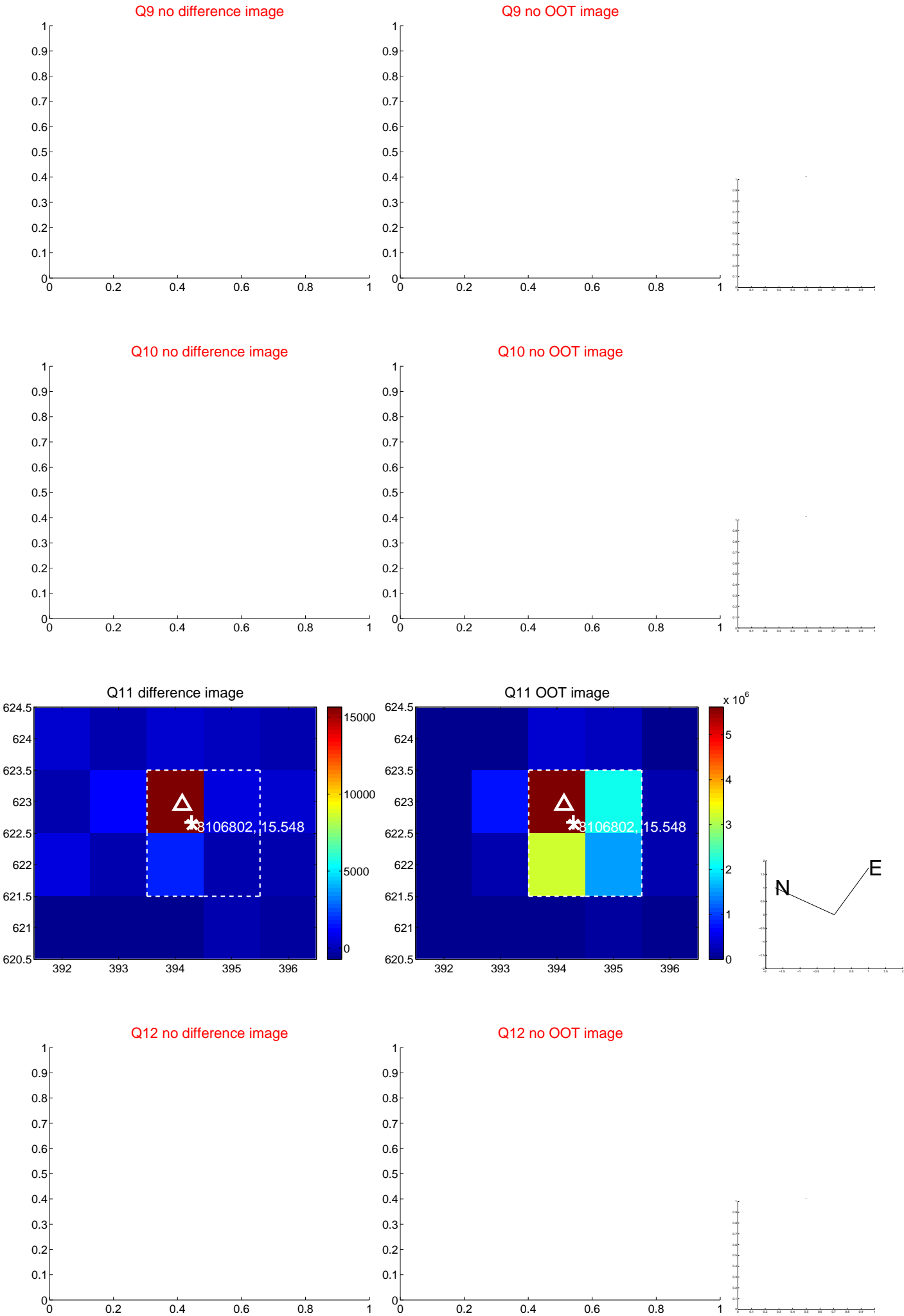
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



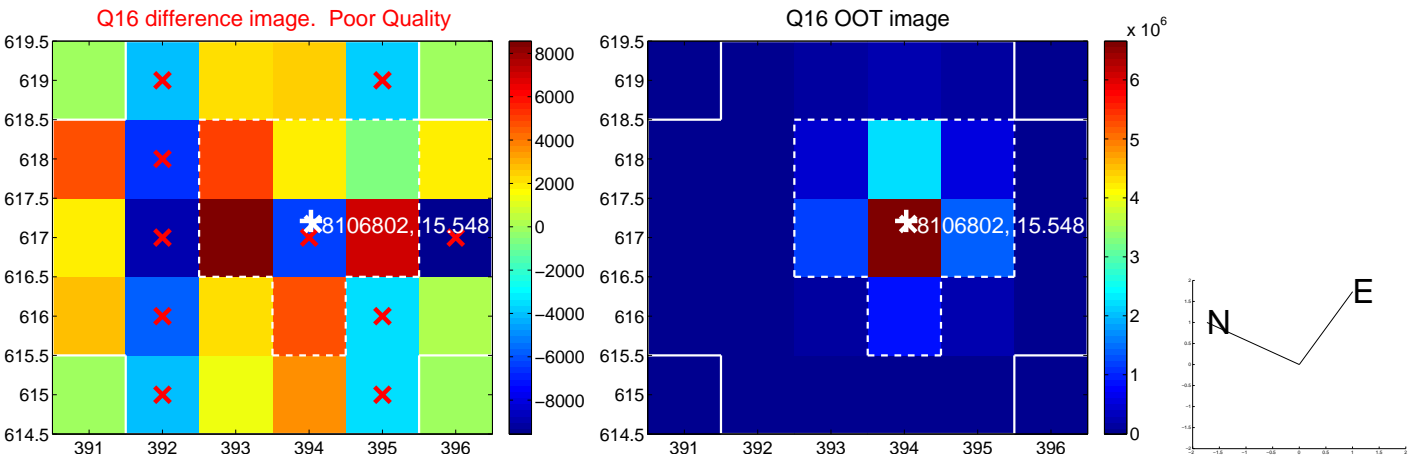
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



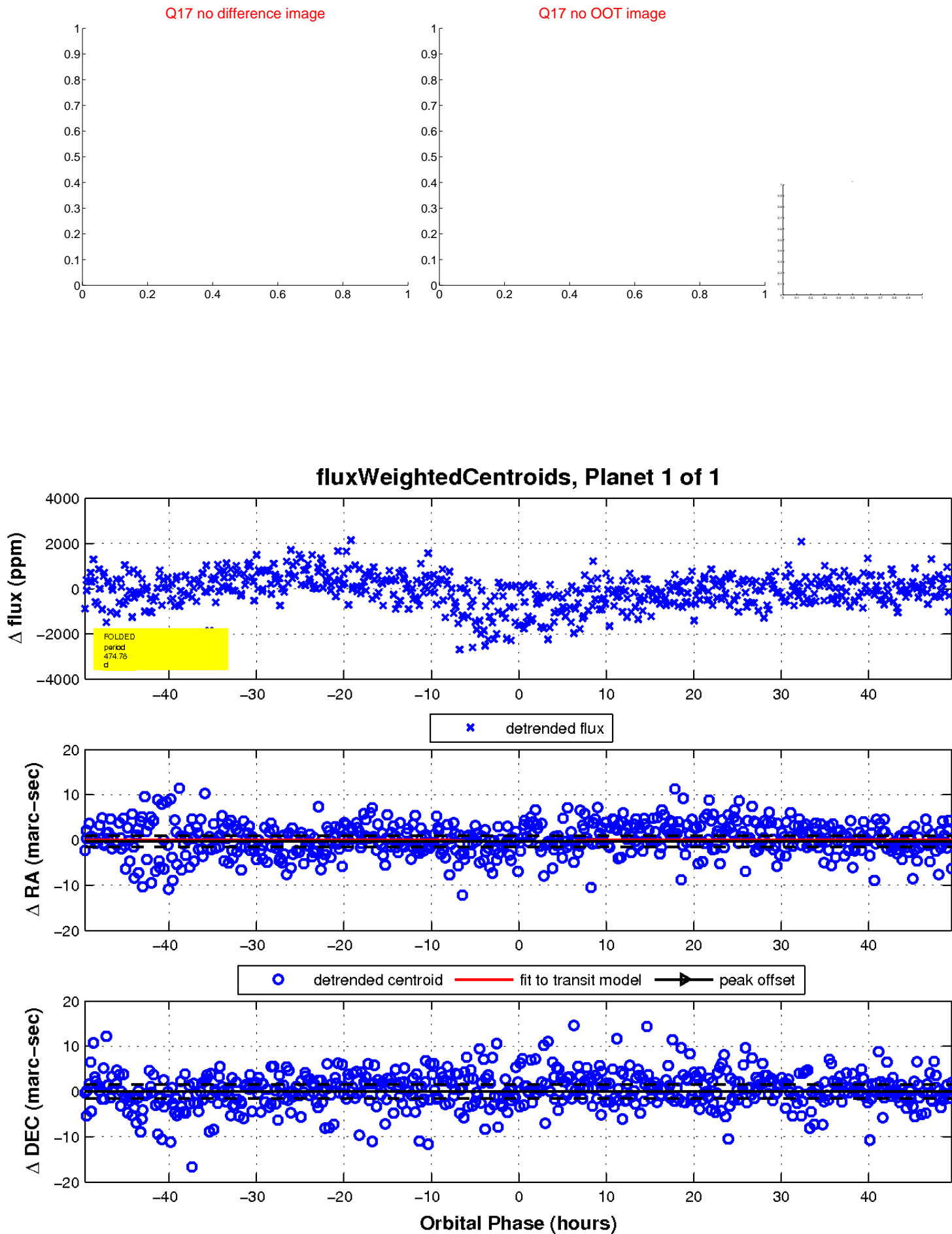
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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

