

KIC 005879448

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})
005879448-01	OBS	7745.01	533.525994	245.308396	173.7	22.473	7.9	8.4	1.76	6077	2.52	2.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005879448-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—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.

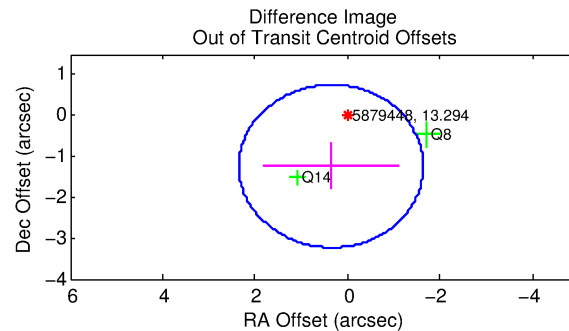
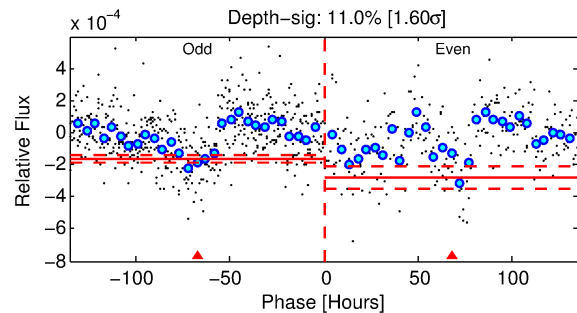
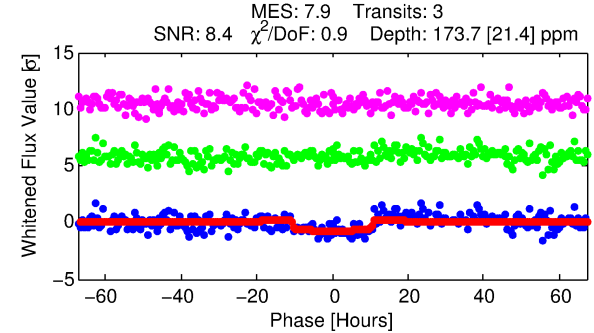
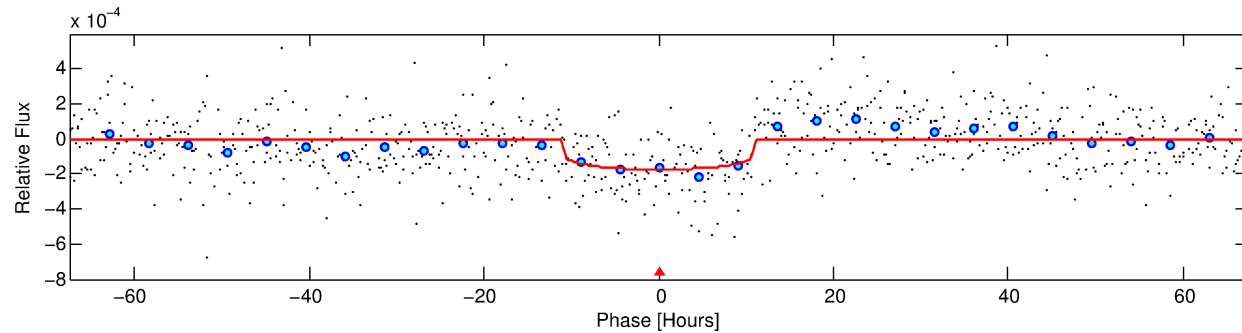
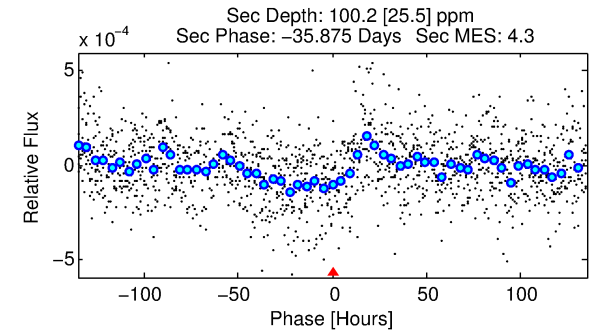
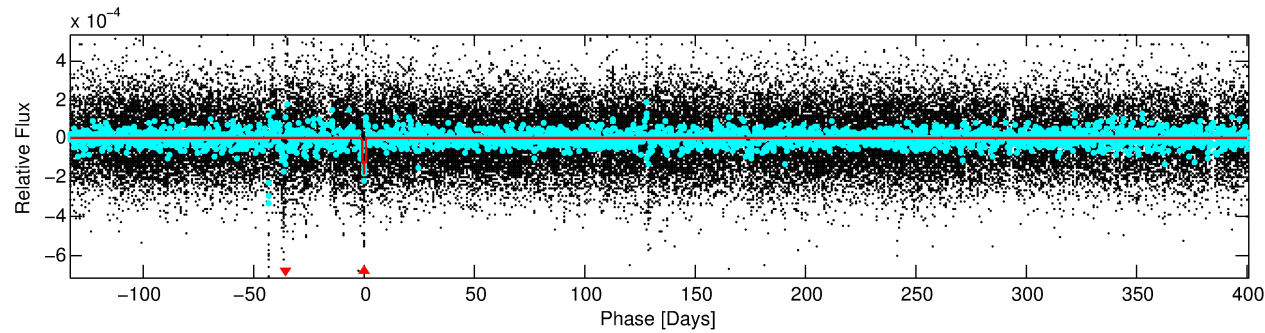
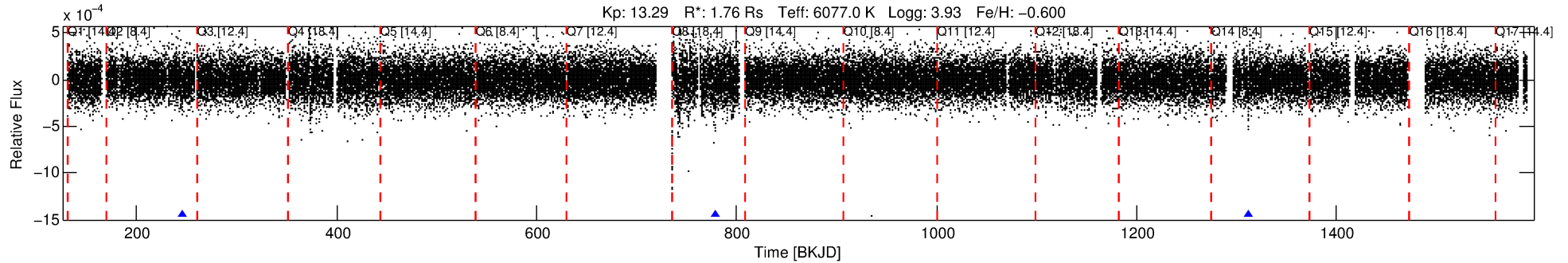
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005879448-01

No Significant Match Found

DV One-Page Summary

KIC: 5879448 Candidate: 1 of 1 Period: 533.526 d



DV Fit Results:

Period = 533.52599 [0.01692] d
Epoch = 245.3084 [0.0218] BKJD
Rp/R* = 0.0132 [0.0025]
a/R* = 121.38 [115.29]
b = 0.76 [0.53]
Seff = 2.34 [1.31]
Teq = 315 [44] K
Rp = 2.53 [0.99] Re
a = 1.2715 [0.4294] AU
Ag = 13981.74 [9985.36] [1.40σ]
Teffp = 5301 [634] K [7.84σ]

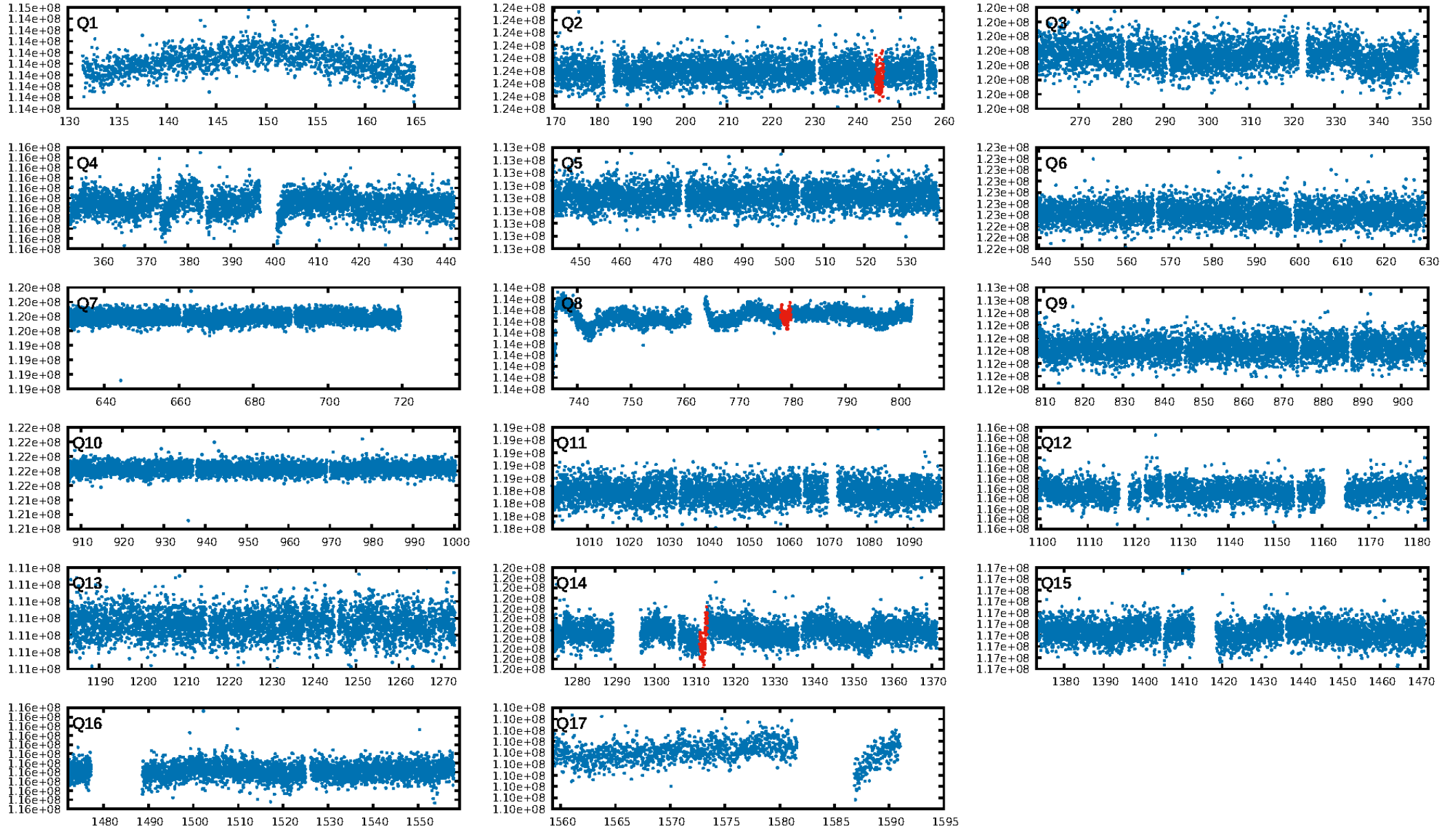
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.27e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 4.811
Centroid-sig: 0.4%
Centroid-so: 2.125 arcsec [1.74σ]
OotOffset-rm: 1.290 arcsec [1.94σ]
KicOffset-rm: 1.361 arcsec [1.69σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

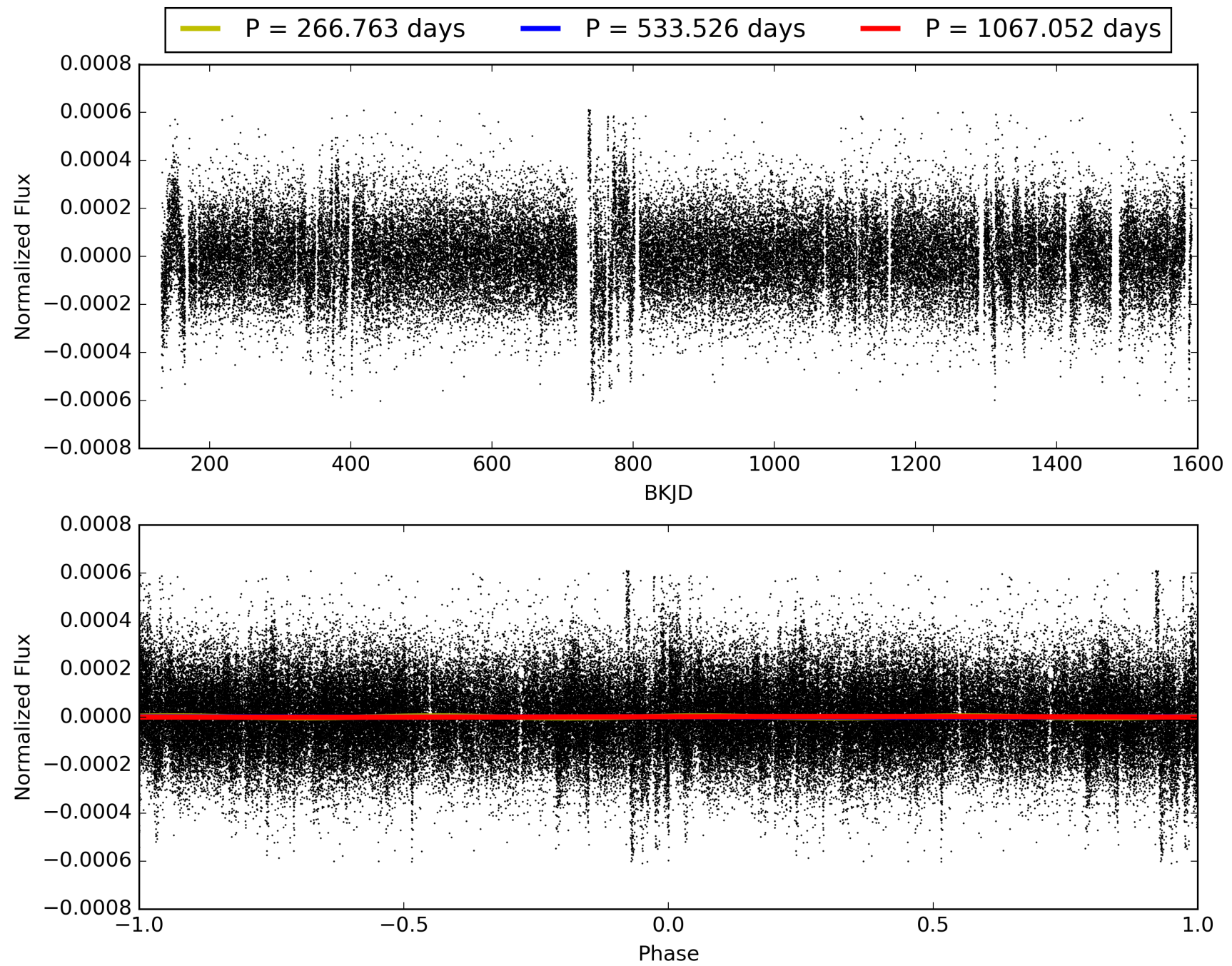
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:50:56 Z

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

TCE 005879448-01, PDC Light Curves

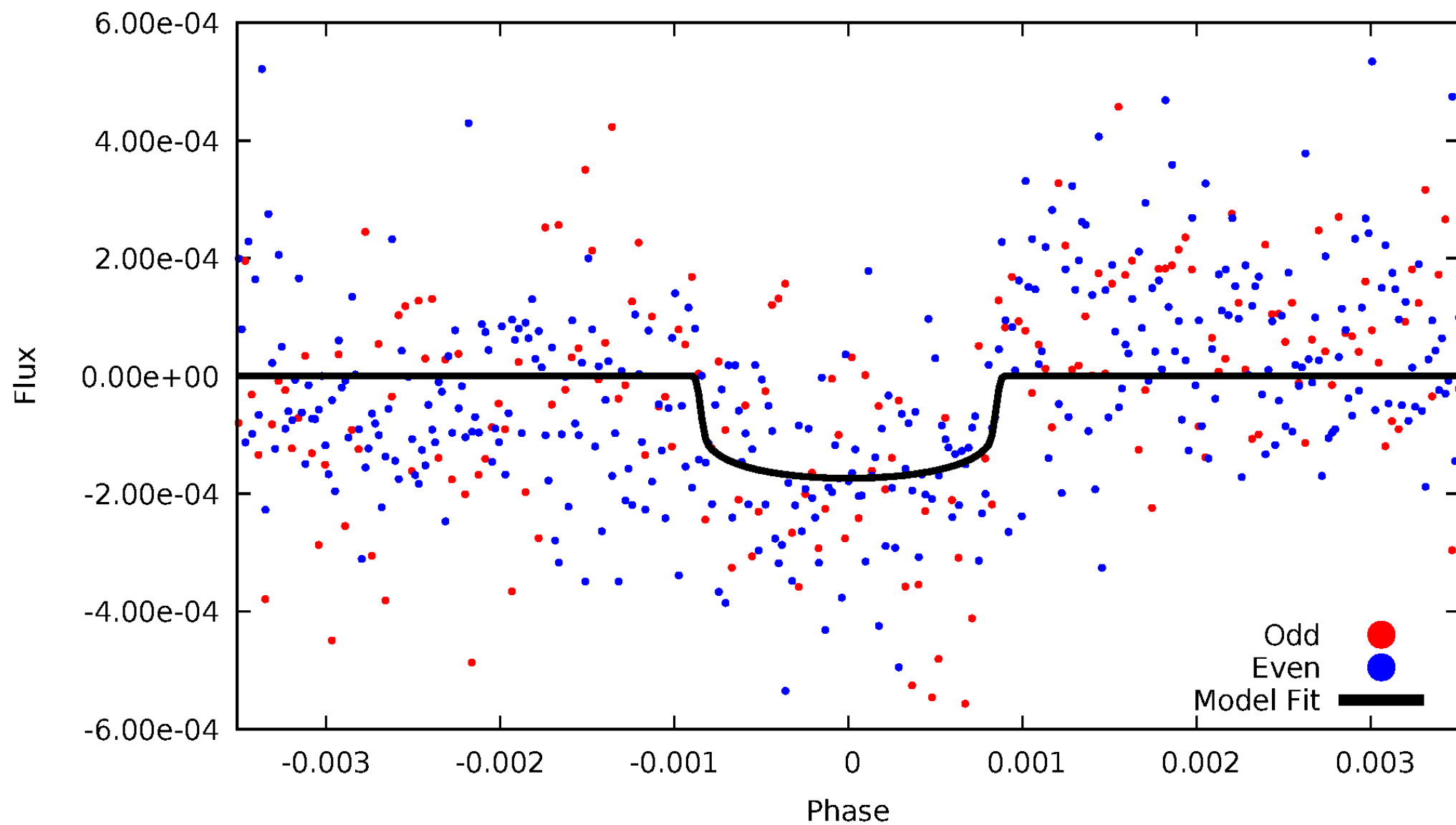


TCE 005879448-01



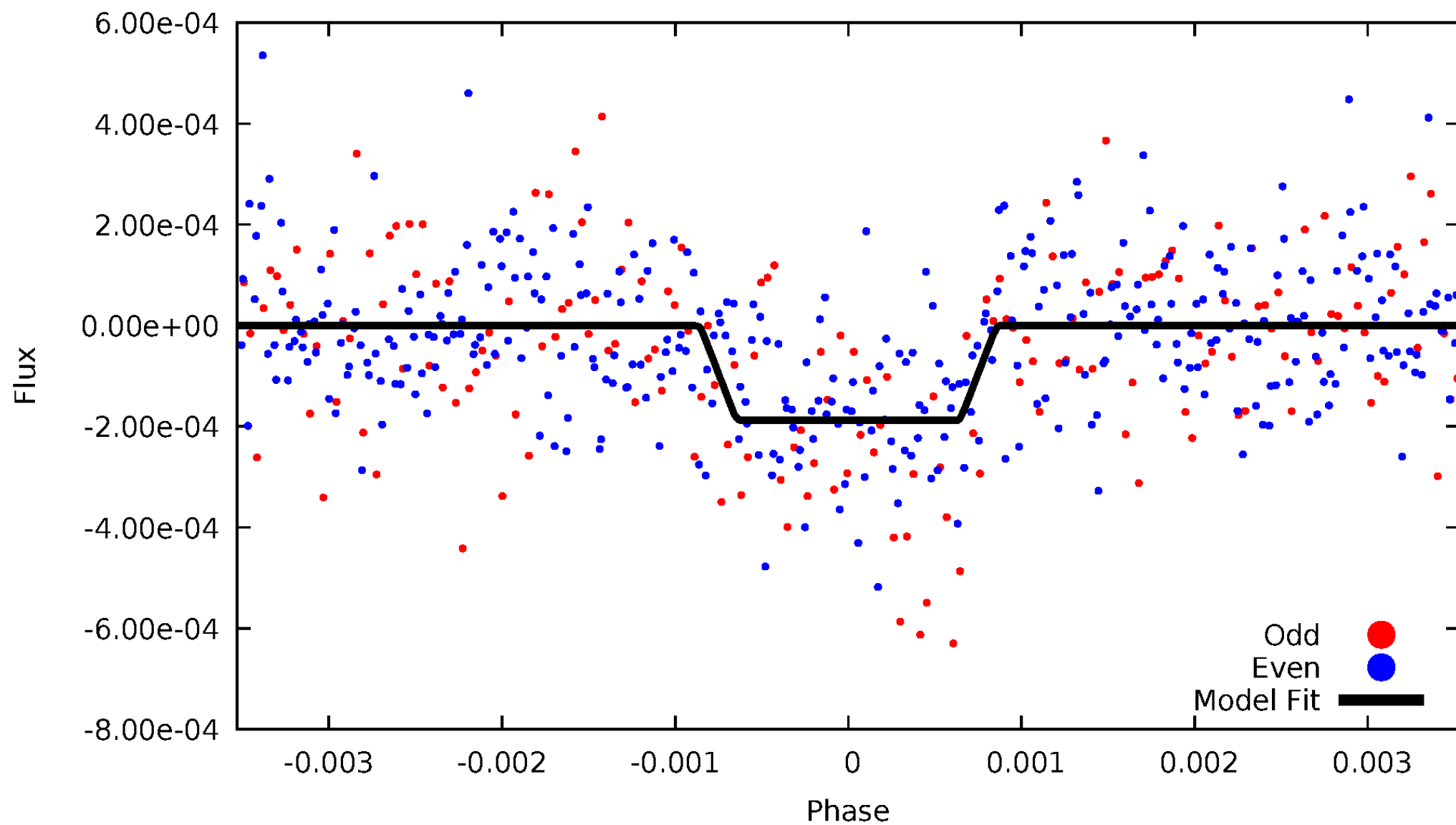
DV Odd/Even

TCE 005879448-01

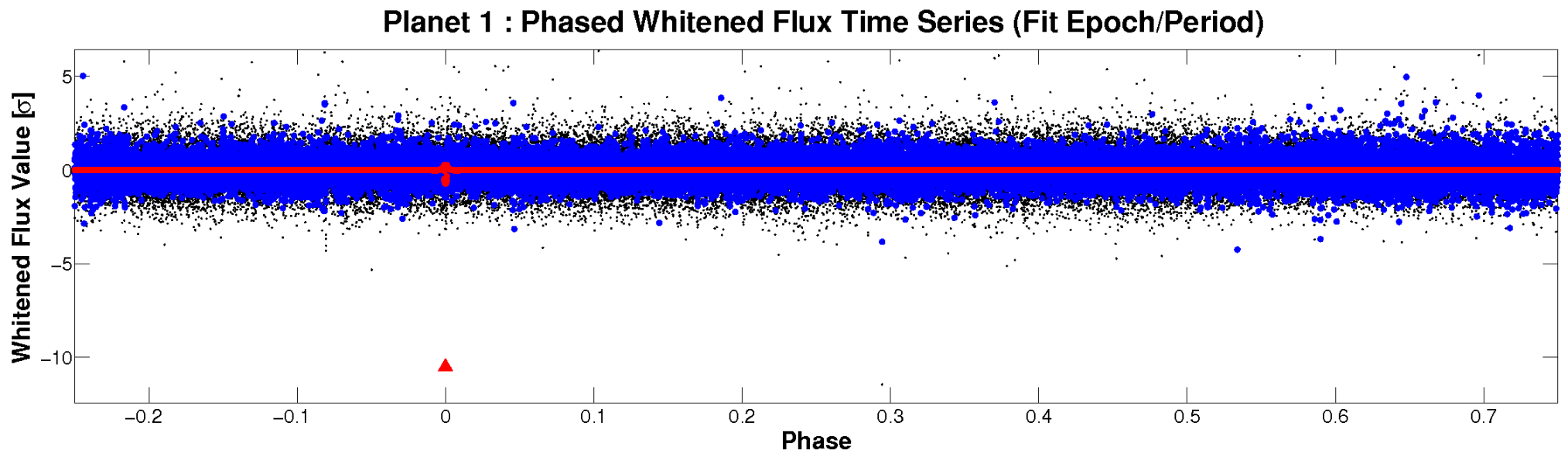
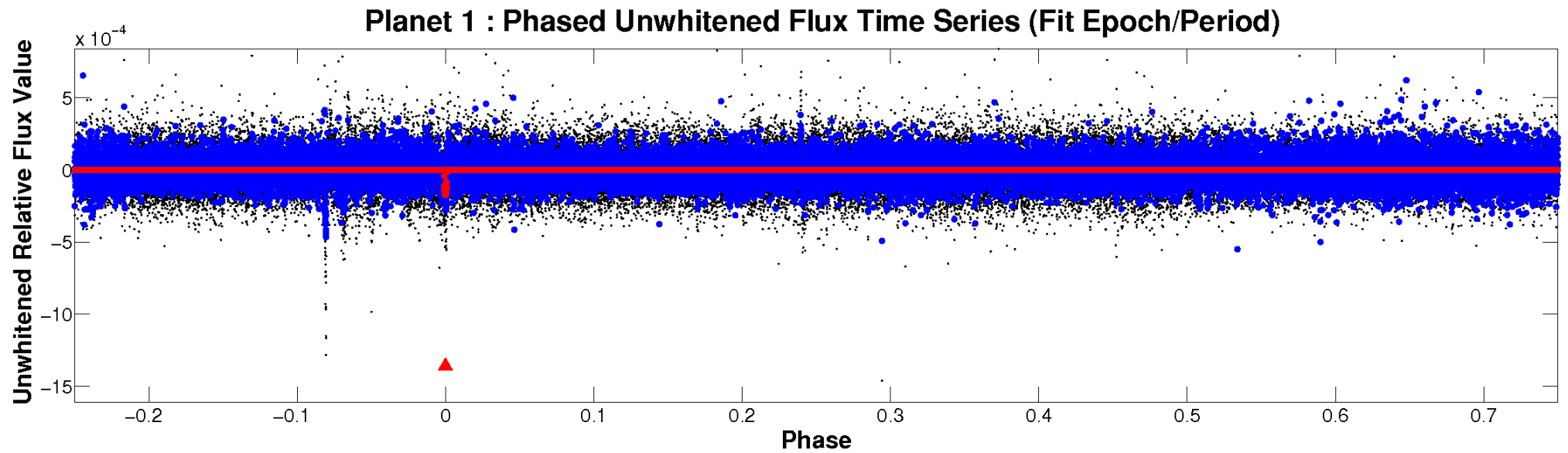


ALT Odd/Even

TCE 005879448-01

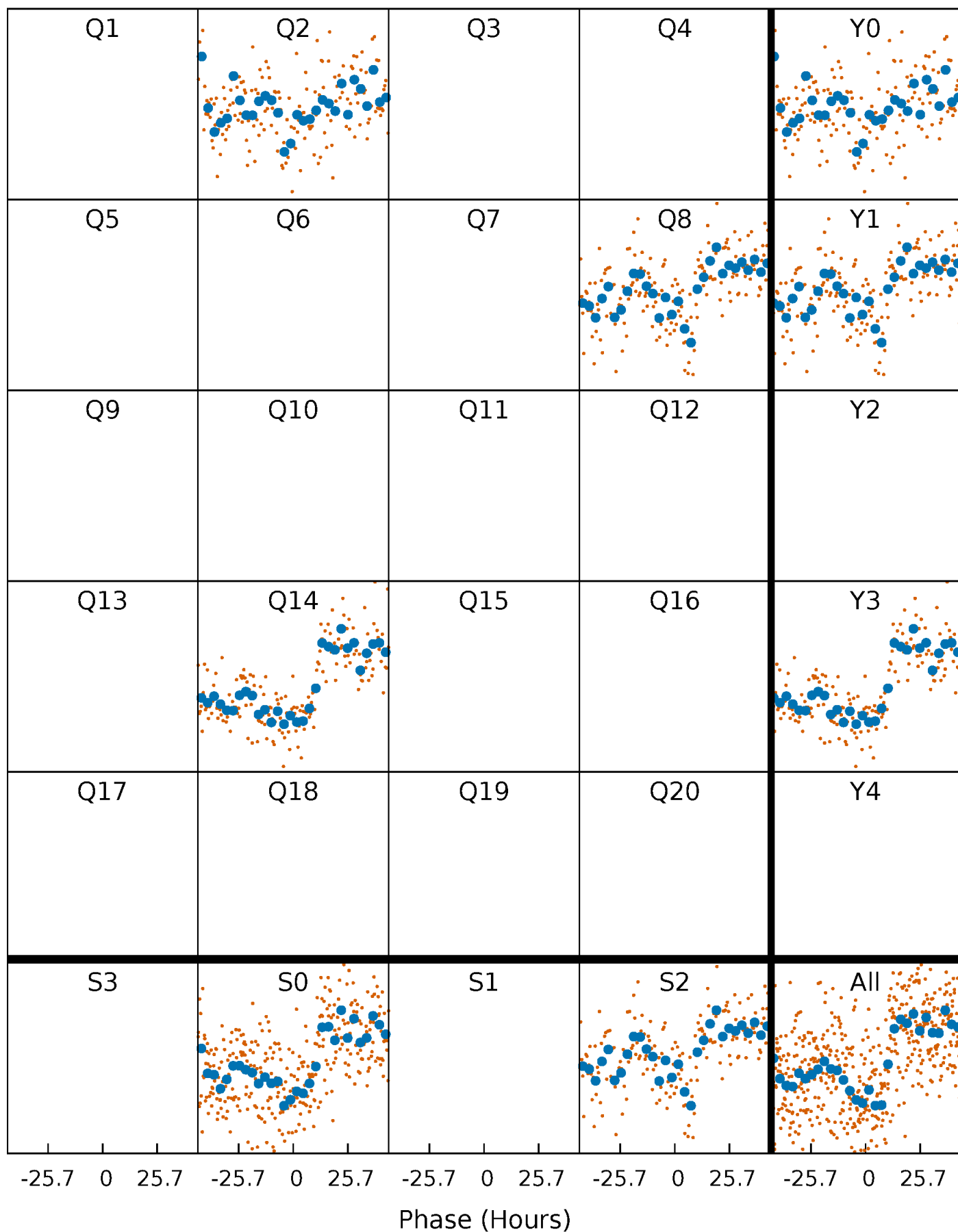


Non-Whitened Vs. Whitened Light Curve



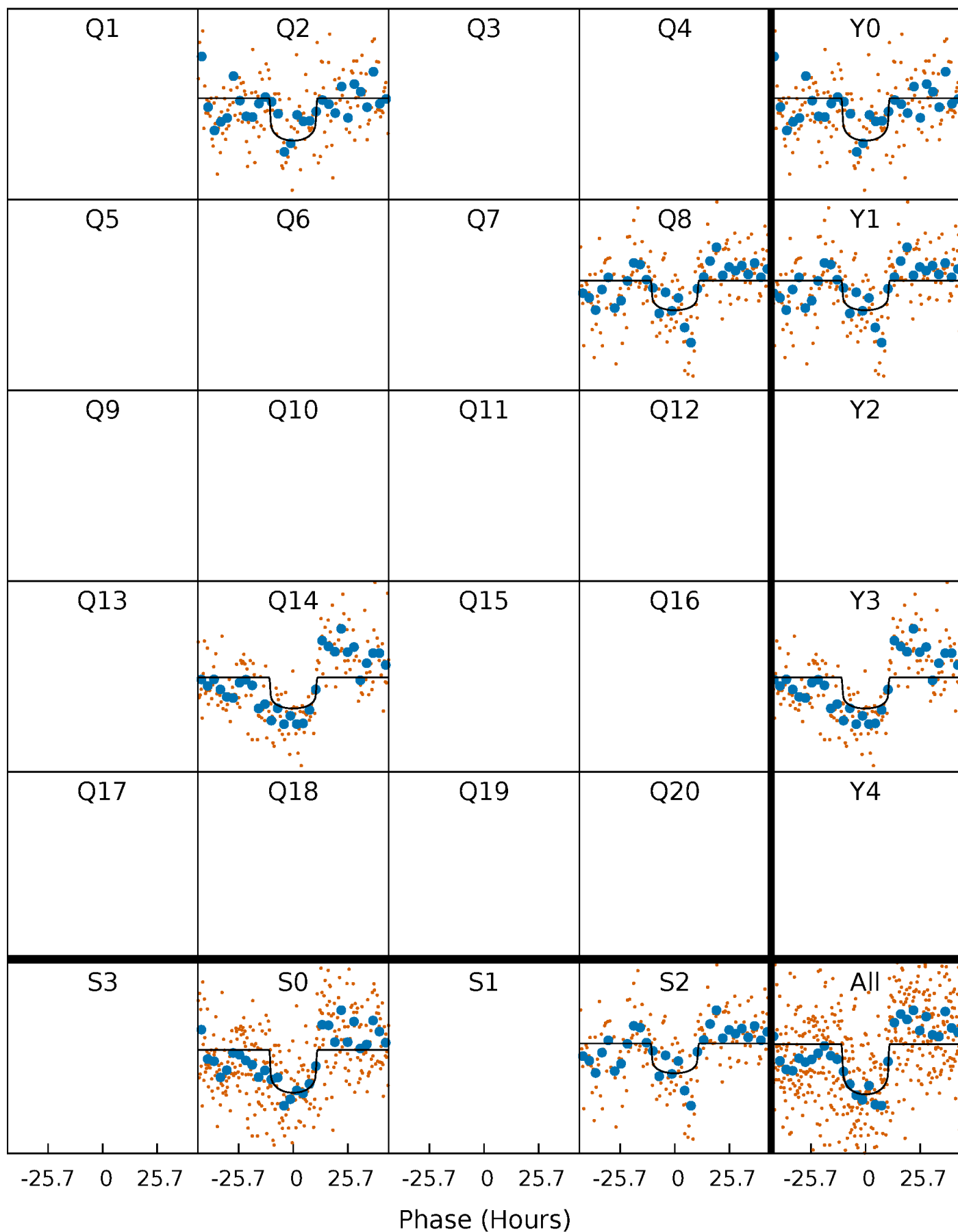
PDC Quarter-Phased Transit Curves

TCE 005879448-01 P=533.525994 Days $T_0=245.308396$ (BKJD)



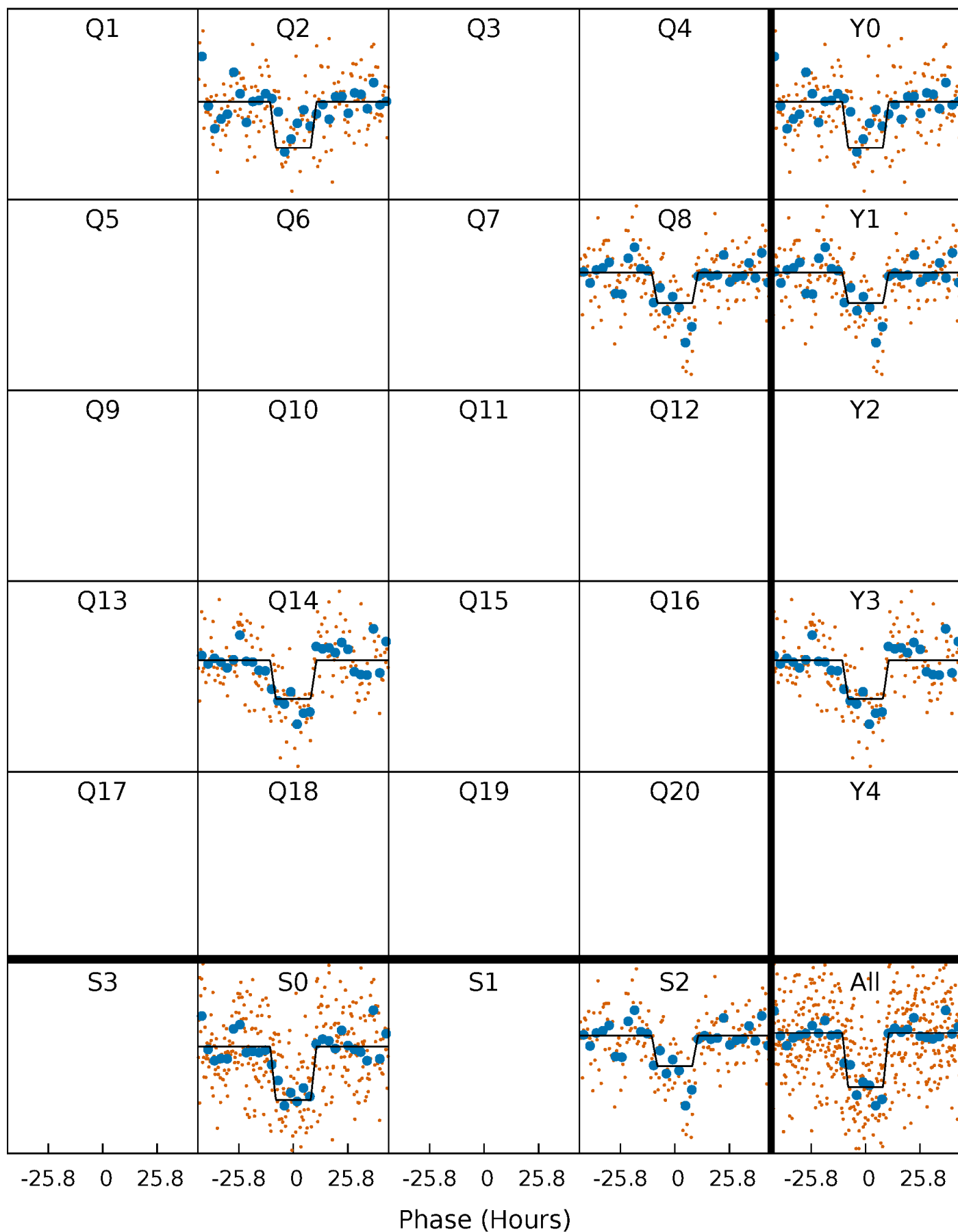
DV Quarter-Phased Transit Curves

TCE 005879448-01 P=533.525994 Days $T_0=245.308396$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

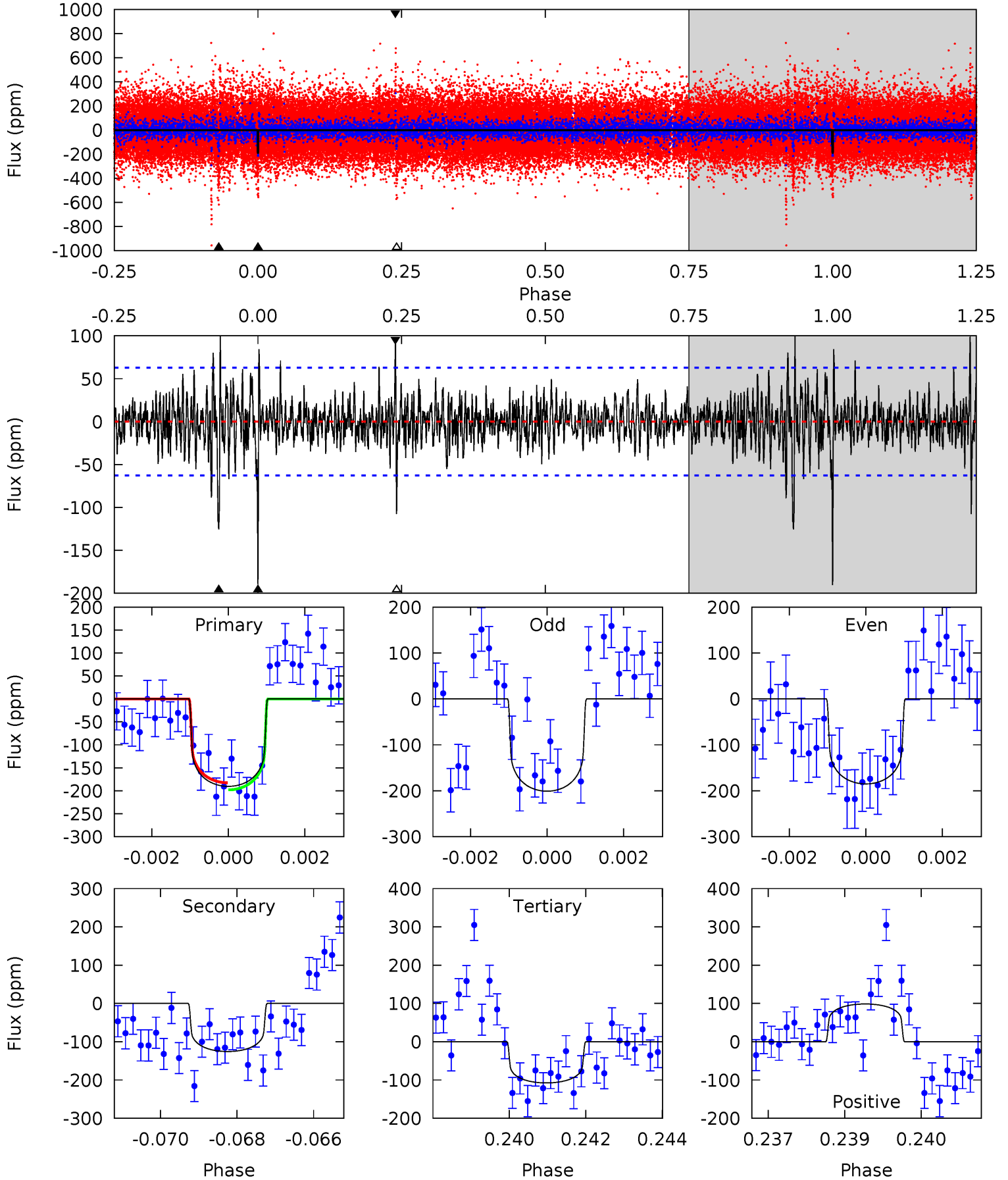
TCE 005879448-01 P=533.554308 Days $T_0=245.314969$ (BKJD)



DV Model-Shift Uniqueness Test

005879448-01, P = 533.525994 Days, E = 245.308396 Days

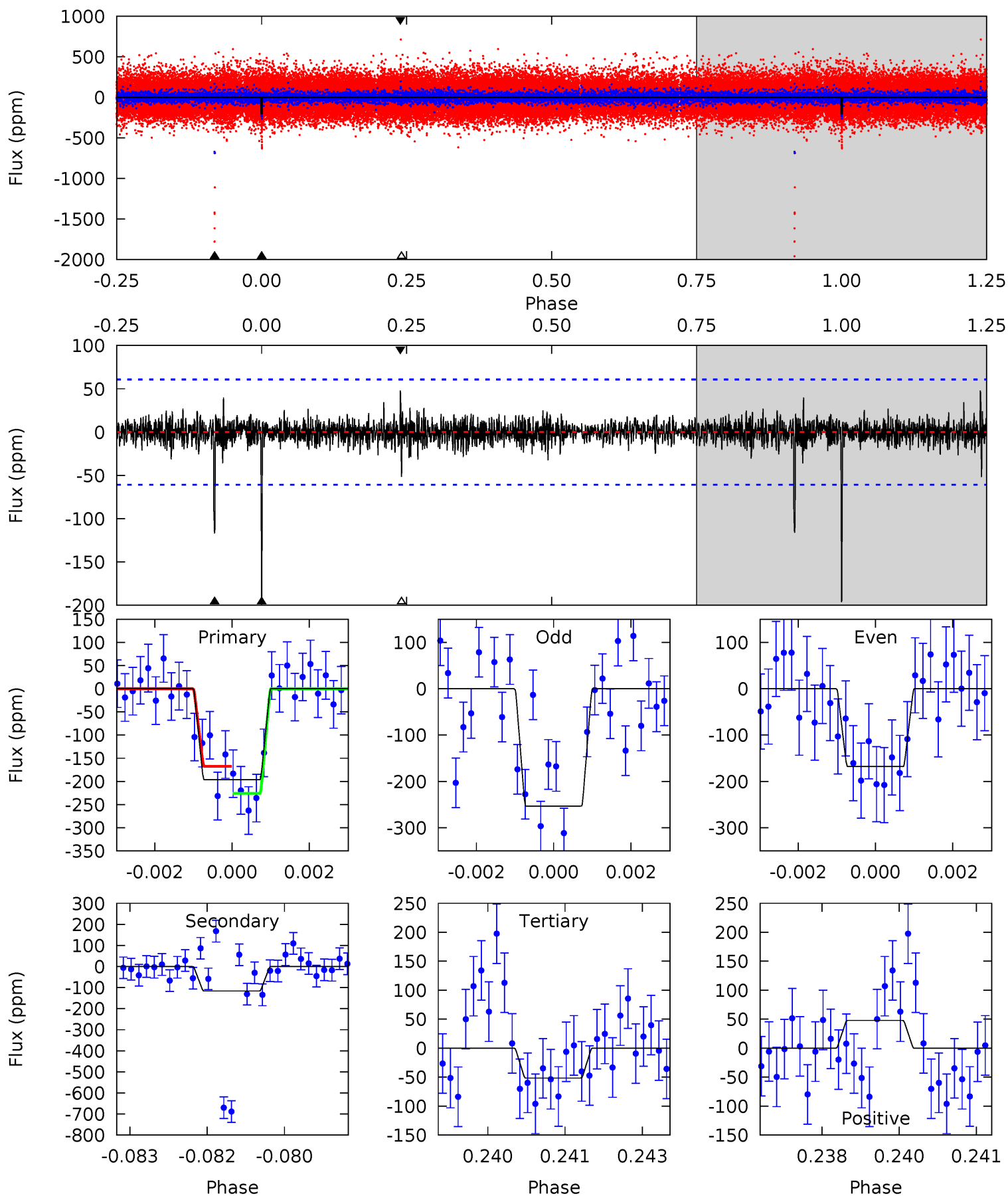
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	10.7	9.17	8.41	5.35	3.13	1.71	7.06	7.82	1.54	2.30	0.63	0.95	0.34	0.65



Alt Model-Shift Uniqueness Test

005879448-01, P = 533.554308 Days, E = 245.314969 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	10.2	4.55	4.21	5.35	3.13	0.79	12.7	13.1	5.70	6.03	3.53	0.85	0.20	2.58



Stellar Parameters For KIC 005879448

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6077^{+201}_{-164}	$3.931^{+0.323}_{-0.129}$	$-0.600^{+0.350}_{-0.250}$	$1.759^{+0.373}_{-0.605}$	$0.964^{+0.154}_{-0.126}$	$0.249^{+0.507}_{-0.095}$
	+3%/-3%	+8%/-3%	+58%/-42%	+21%/-34%	+16%/-13%	+203%/-38%
Source	PHO1	FLK73	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 005879448-01 / KOI 7745.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-126 ± 12	$2.43^{+0.62}_{-0.58}$	437^{+28}_{-39}	5657^{+647}_{-492}	19213^{+13634}_{-7195}
Alt.	-116 ± 11	$2.50^{+0.63}_{-0.58}$	435^{+31}_{-43}	5427^{+605}_{-428}	16437^{+11206}_{-5927}

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 $A_{obs} \gg 1.0$

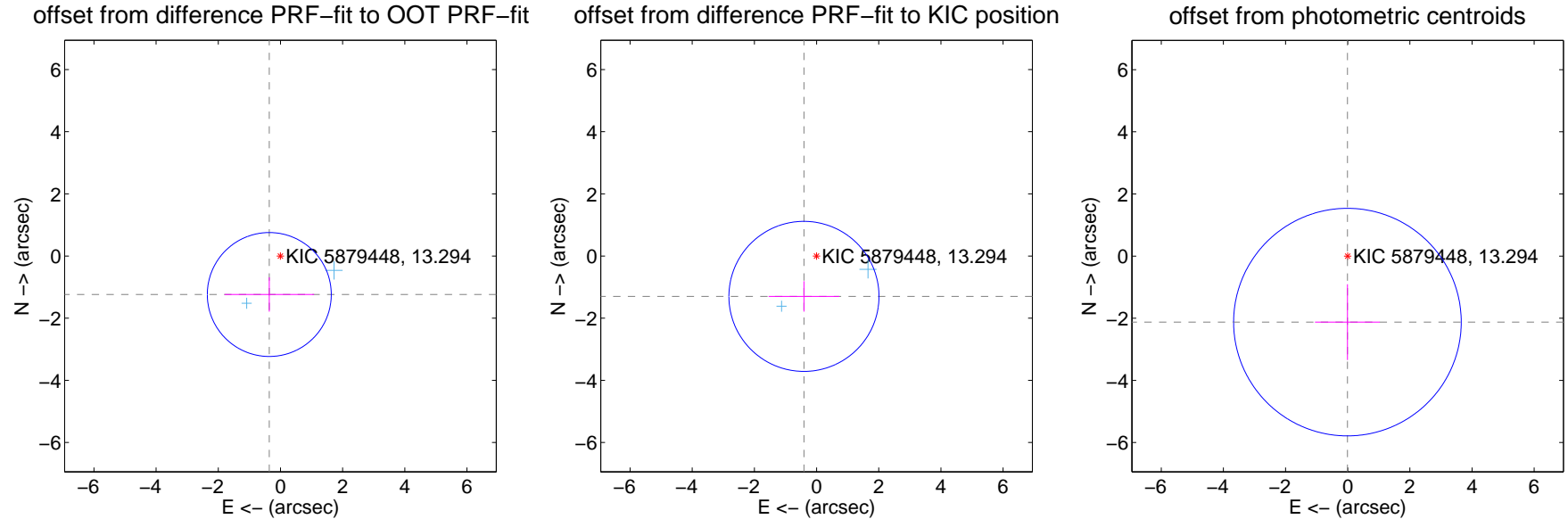
DV Centroid Data

Supplemental centroid analysis for 005879448-01. Kepler magnitude: 13.29. Transit SNR 8.37

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.290 ± 0.665	1.94	0.359 ± 1.440	-1.239 ± 0.552
PRF-fit source offset from KIC position	1.361 ± 0.805	1.69	0.406 ± 1.137	-1.299 ± 0.490
photometric centroid source offset	2.12 ± 1.22	1.74	0.01 ± 1.04	-2.12 ± 1.22

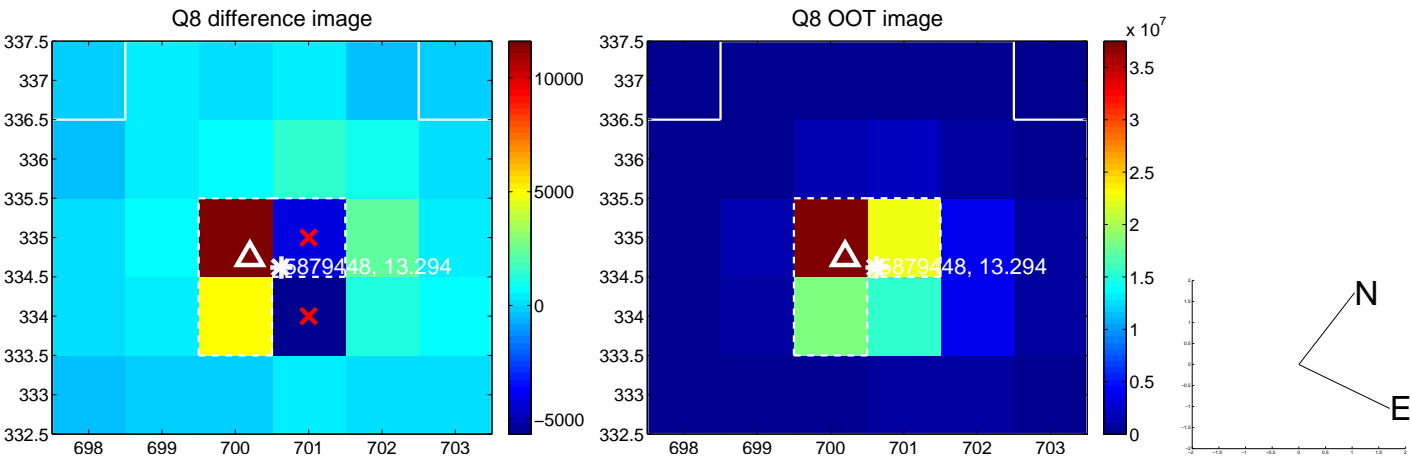


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



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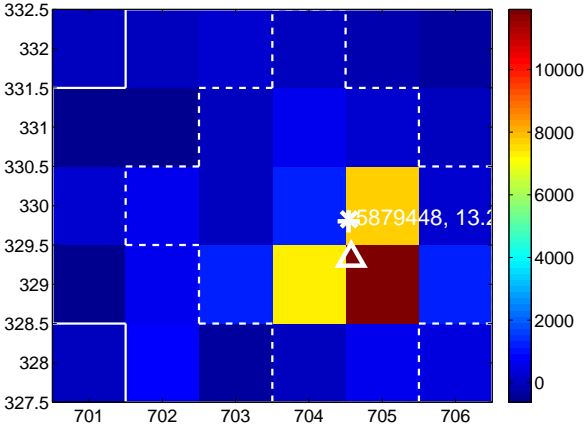
Q13 no difference image



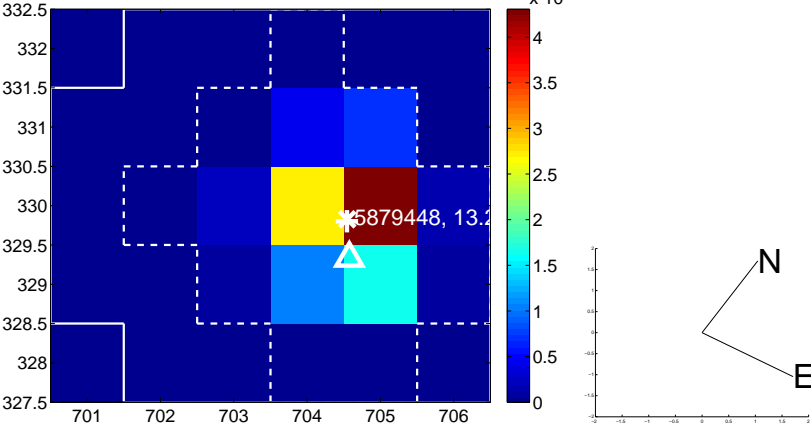
Q13 no OOT image



Q14 difference image



Q14 OOT image



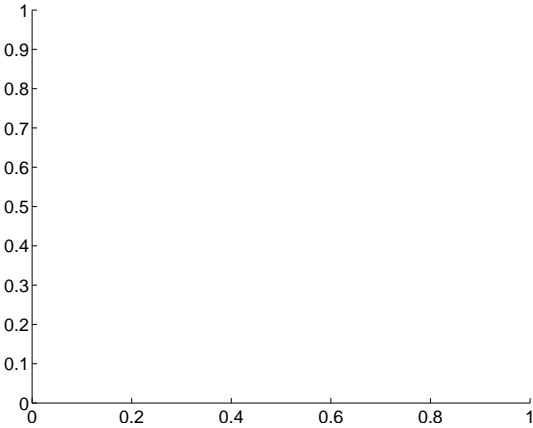
Q15 no difference image



Q15 no OOT image



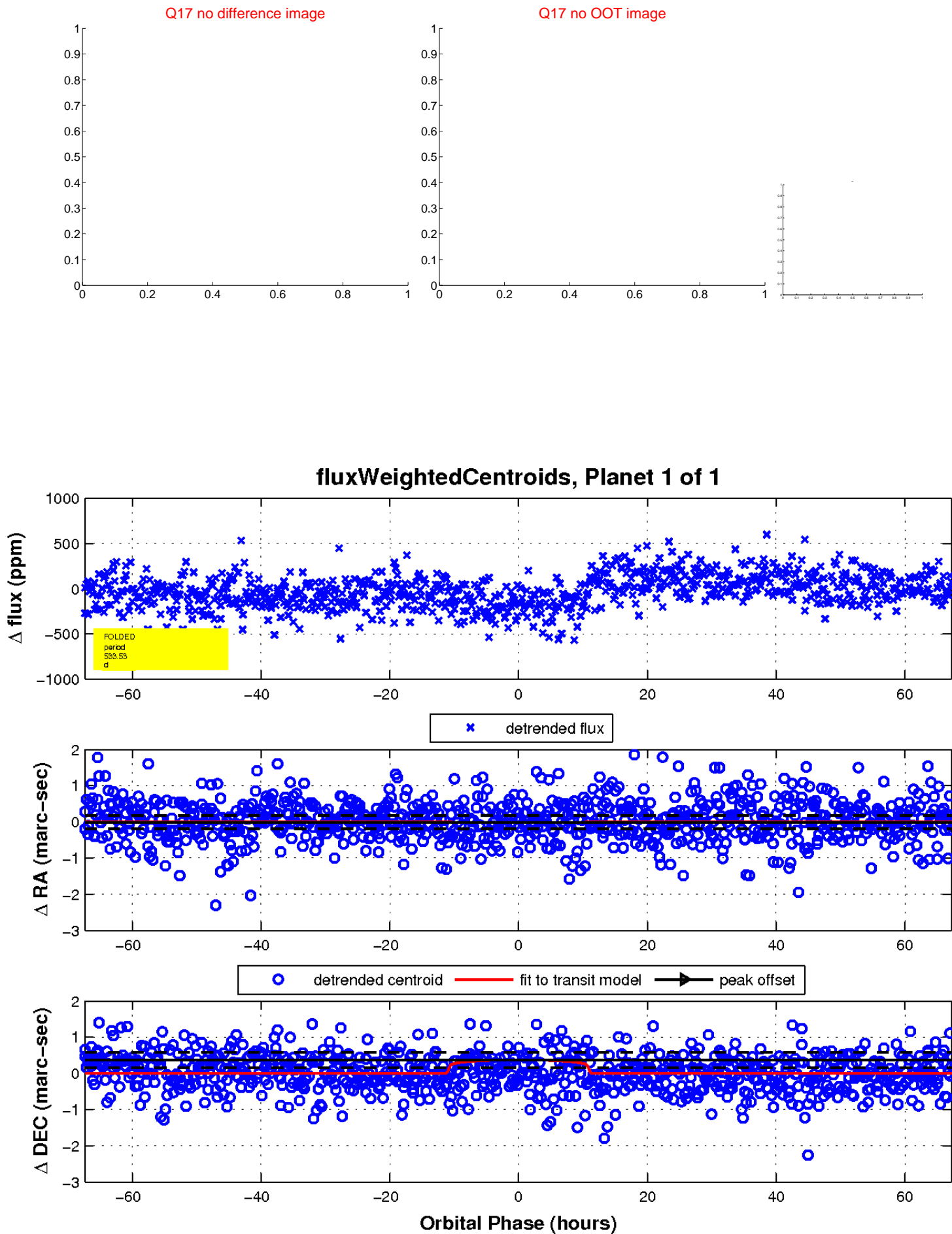
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

