

KIC 007630354

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})
007630354-01	OBS	No	442.990824	372.676884	320.7	7.152	7.6	9.0	1.26	6178	2.44	1.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007630354-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—CENT_UNCERTAIN

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

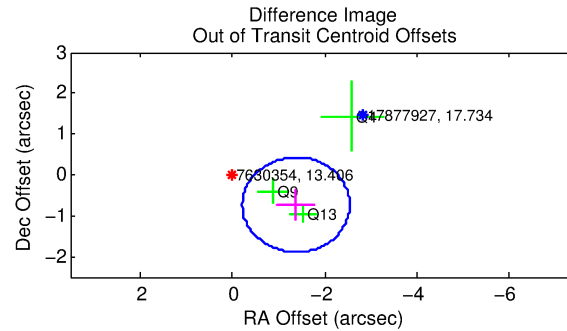
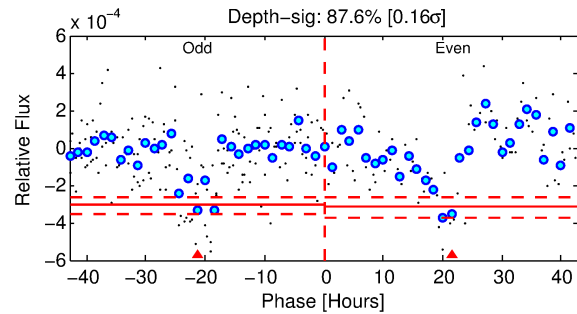
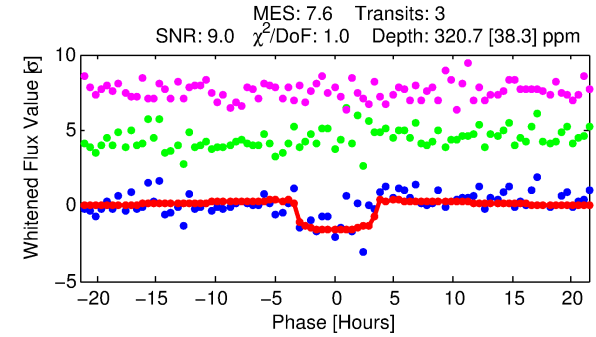
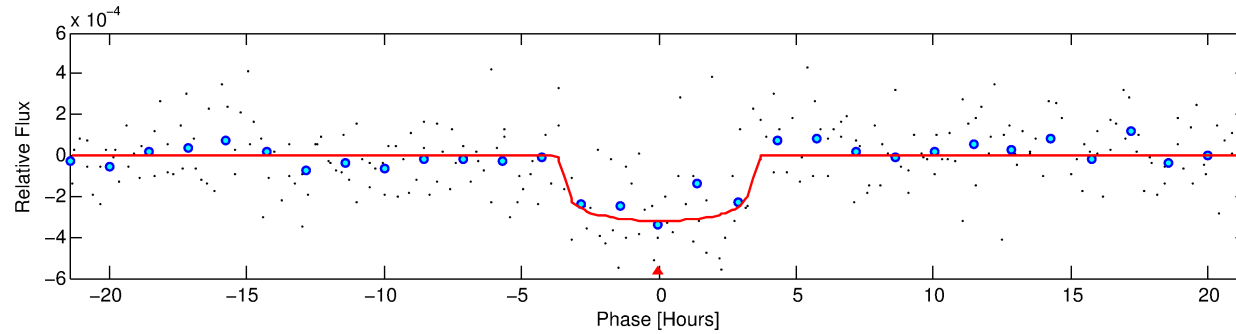
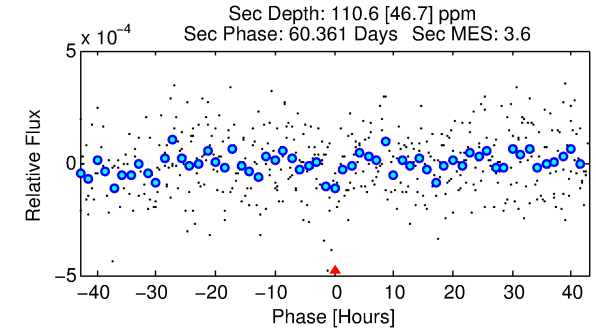
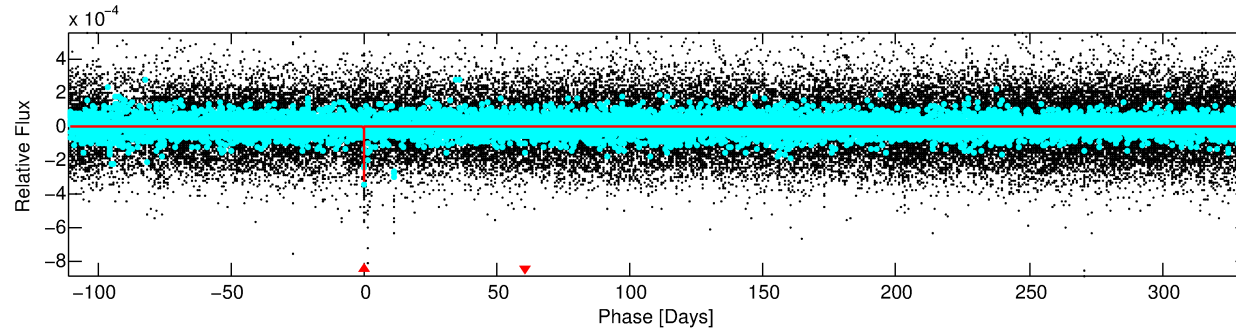
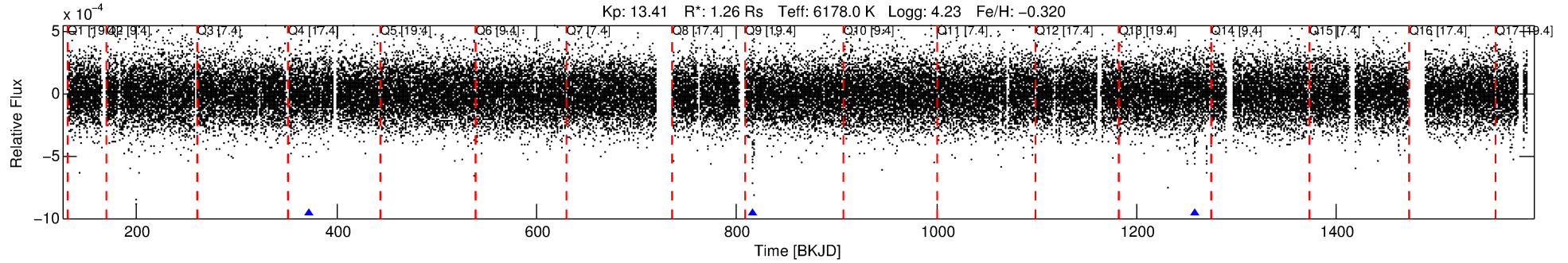
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007630354-01

No Significant Match Found

DV One-Page Summary

KIC: 7630354 Candidate: 1 of 1 Period: 442.991 d



DV Fit Results:

Period = 442.99082 [0.00951] d
Epoch = 372.6769 [0.0124] BKJD
Rp/R* = 0.0177 [0.0082]
a/R* = 332.19 [789.71]
b = 0.74 [1.48]
Seff = 1.62 [0.62]
Teff = 288 [28] K
Rp = 2.44 [1.33] Re
a = 1.1333 [0.2784] AU
Ag = 13098.26 [14100.87] [0.93σ]
Teffp = 4757 [1216] K [3.67σ]

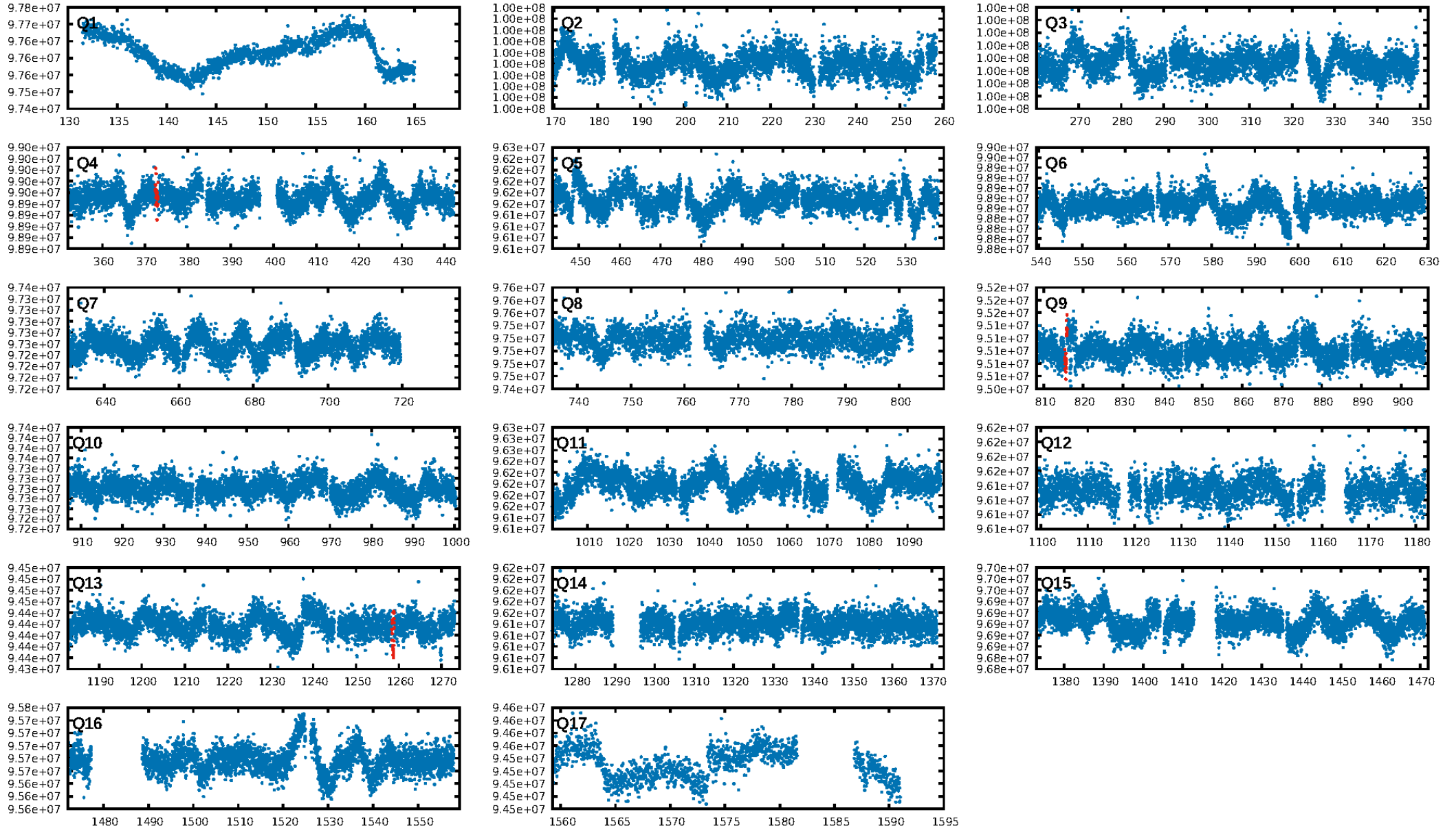
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 93.6%
Bootstrap-pfa: 2.12e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -5.033
Centroid-sig: 2.1%
Centroid-so: 1.432 arcsec [1.18σ]
OotOffset-rm: 1.561 arcsec [4.03σ]
KicOffset-rm: 1.584 arcsec [4.06σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

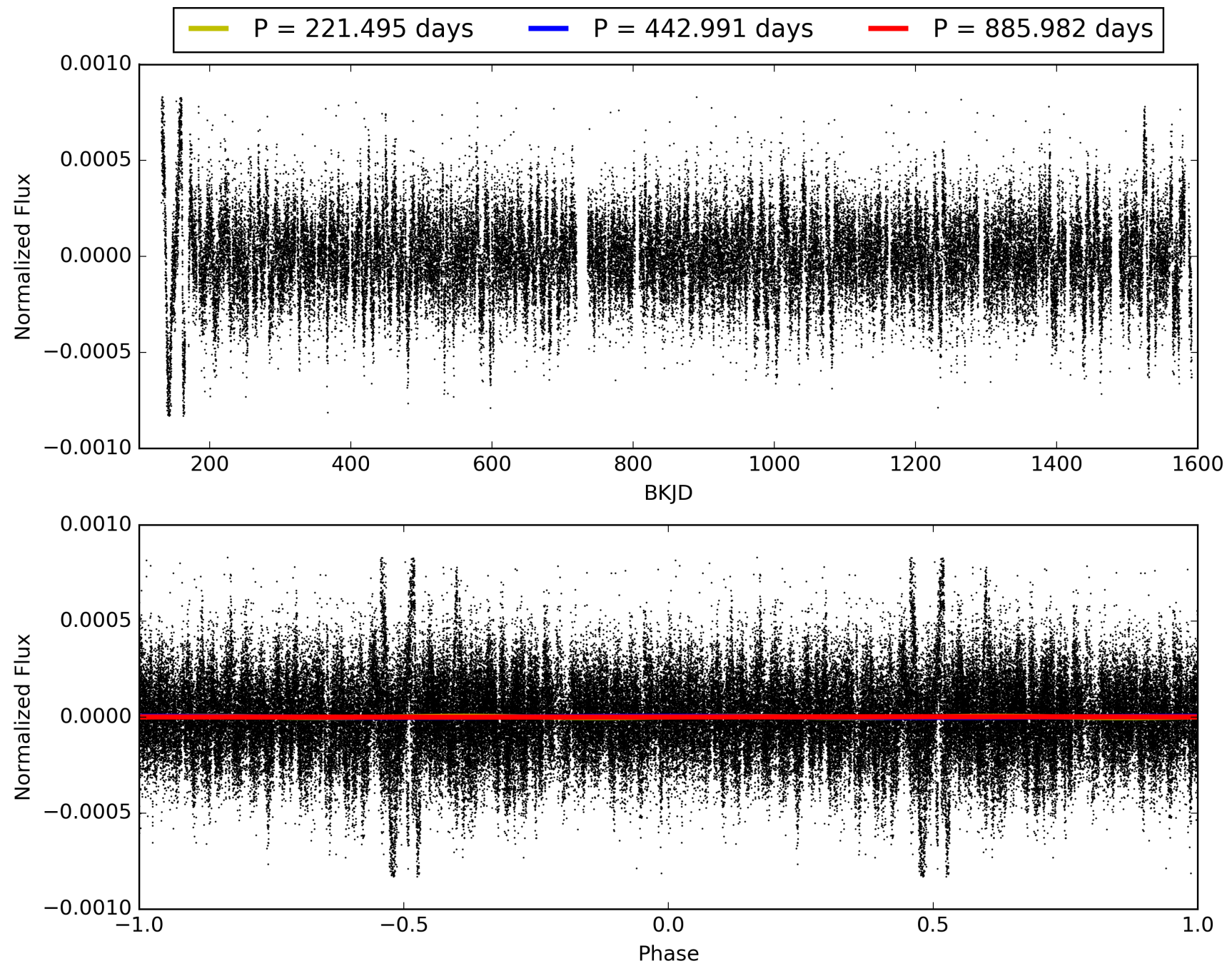
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:50:20 Z

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

TCE 007630354-01, PDC Light Curves

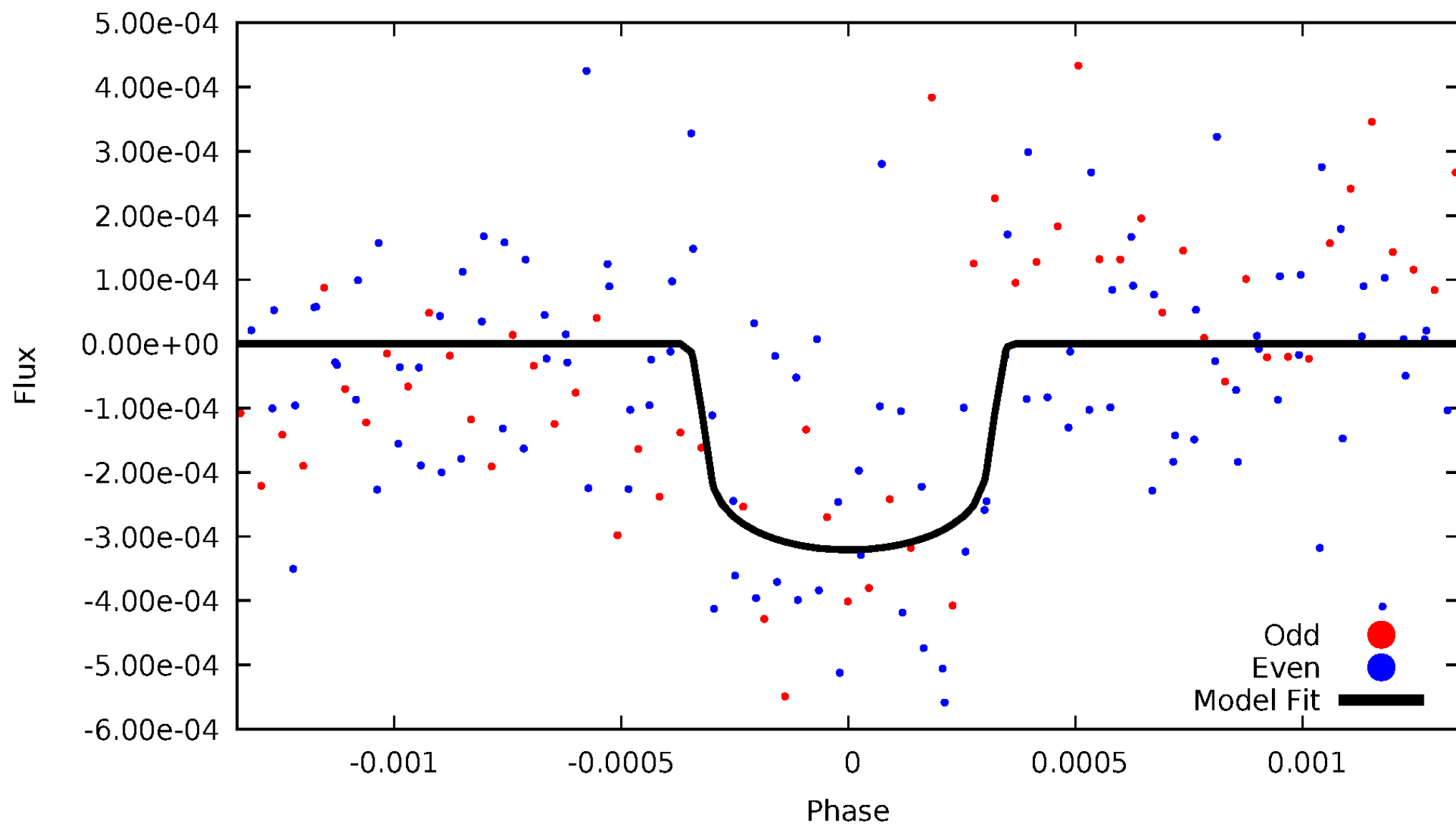


TCE 007630354-01



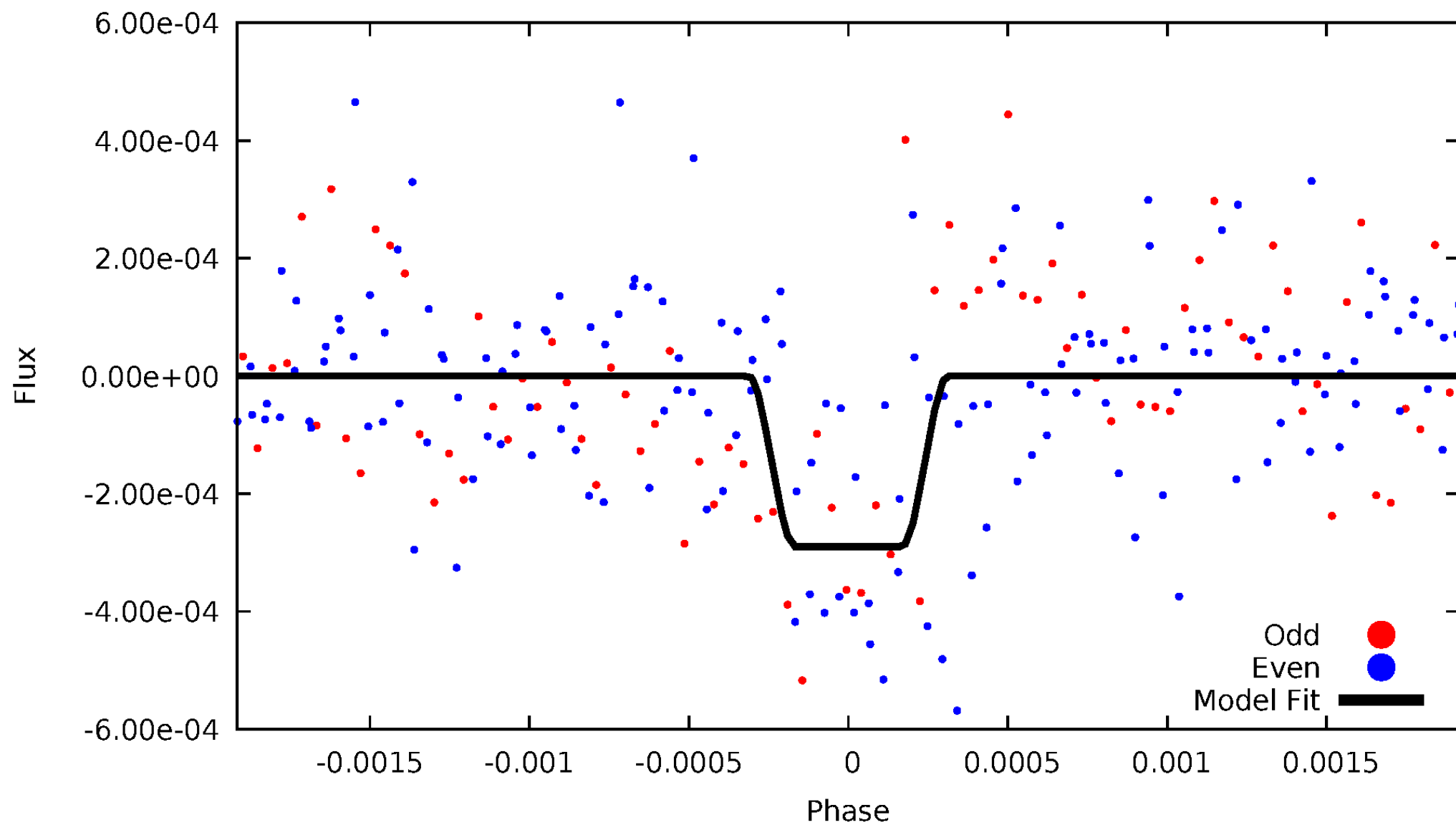
DV Odd/Even

TCE 007630354-01

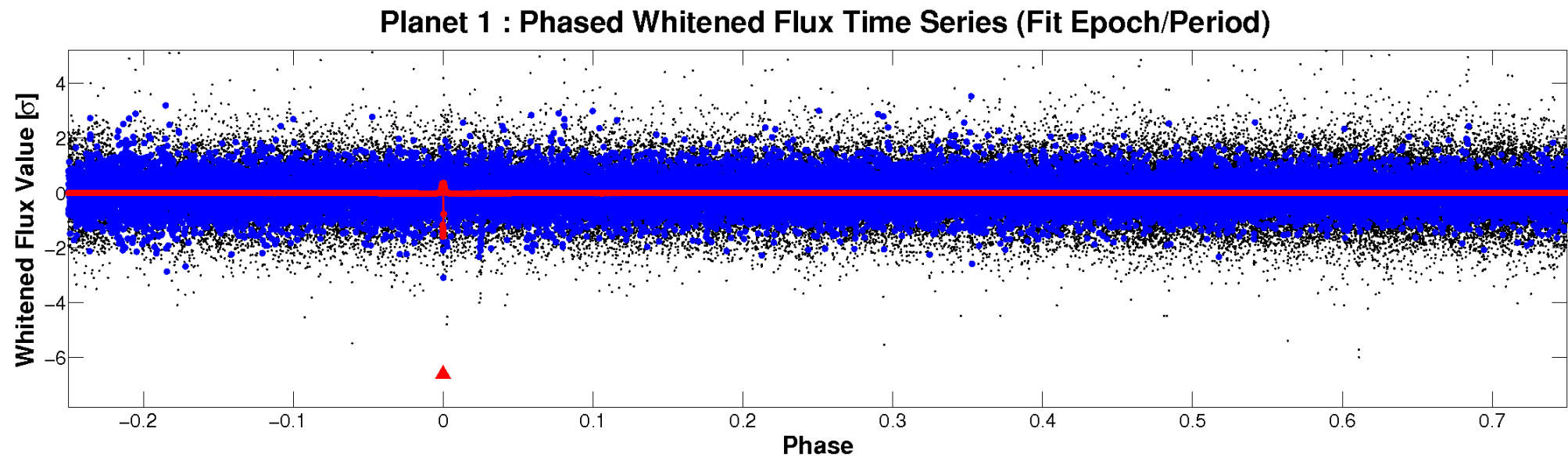
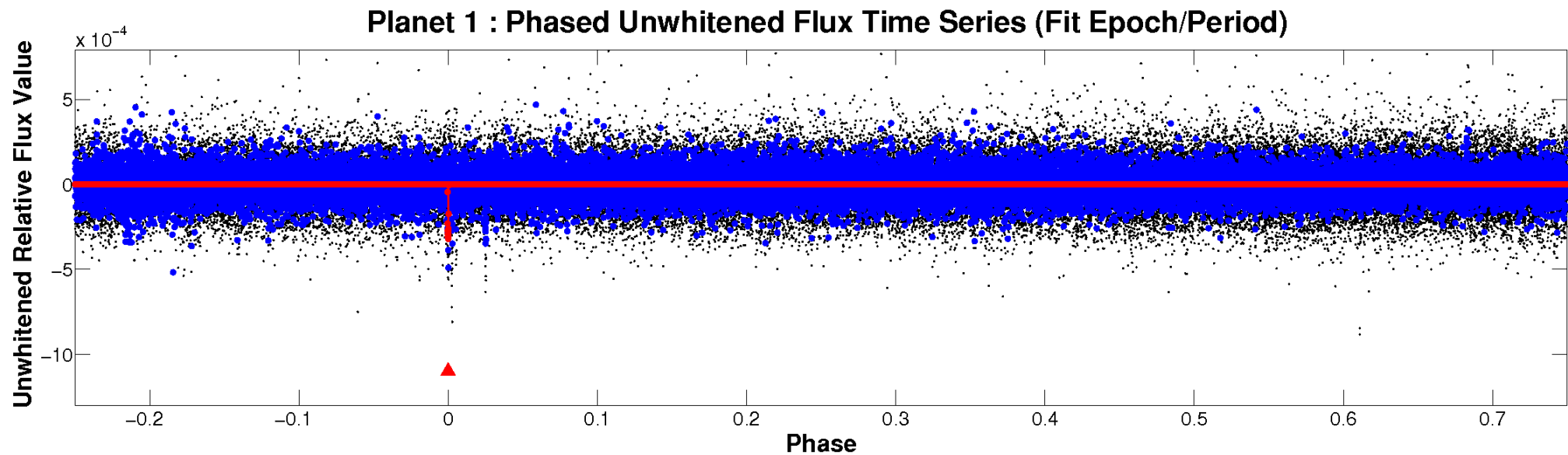


ALT Odd/Even

TCE 007630354-01

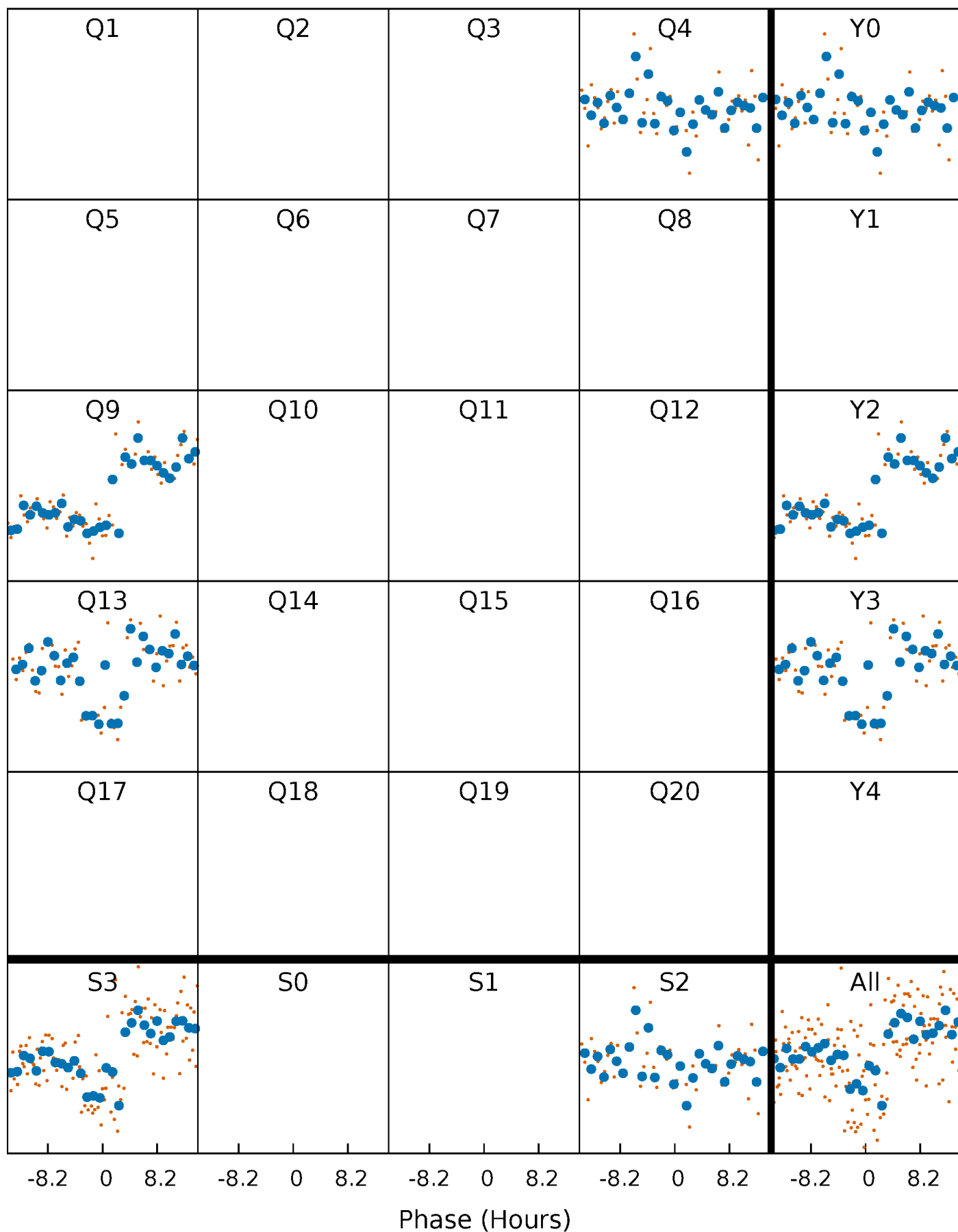


Non-Whitened Vs. Whitened Light Curve



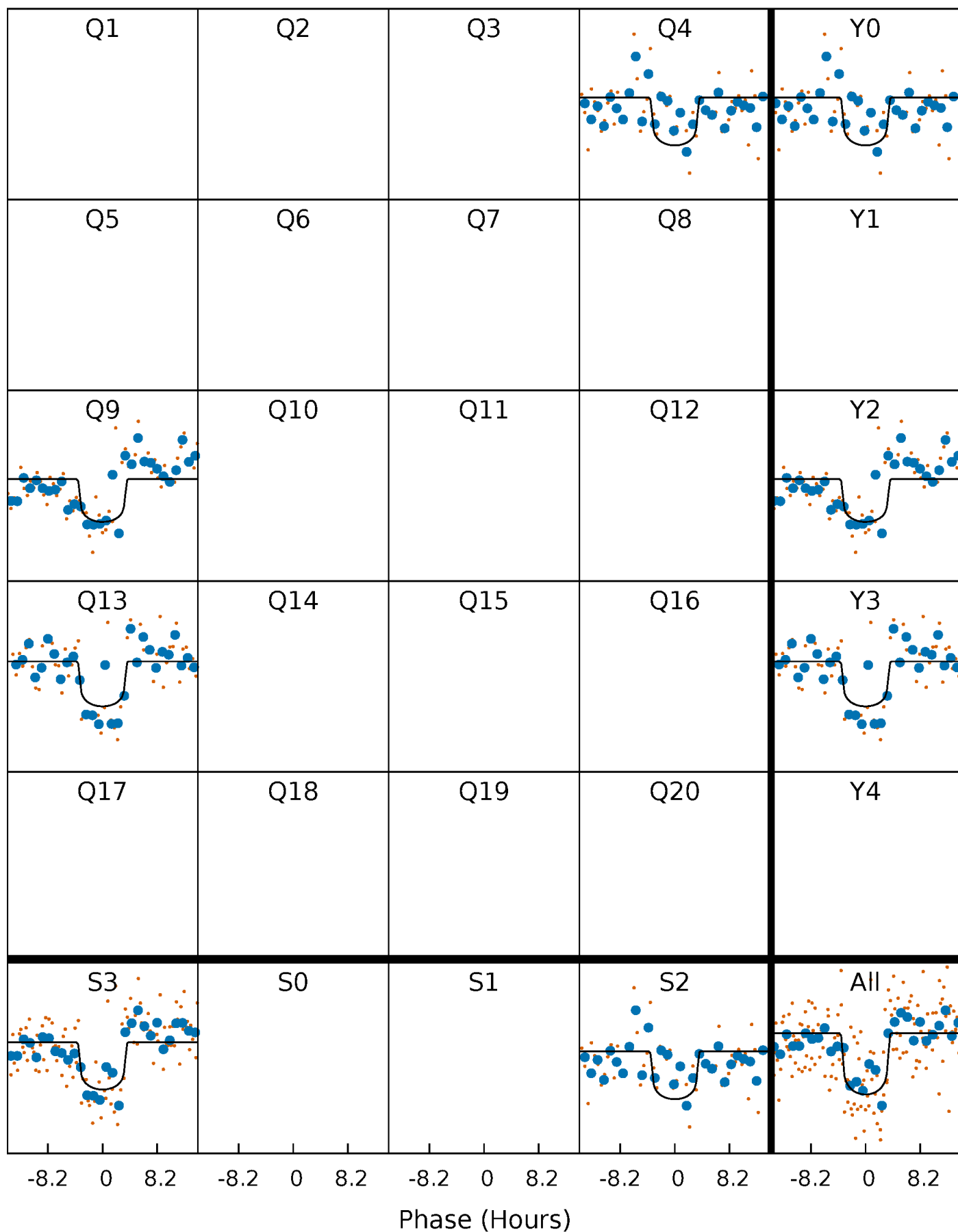
PDC Quarter-Phased Transit Curves

TCE 007630354-01 P=442.990824 Days $T_0=372.676884$ (BKJD)



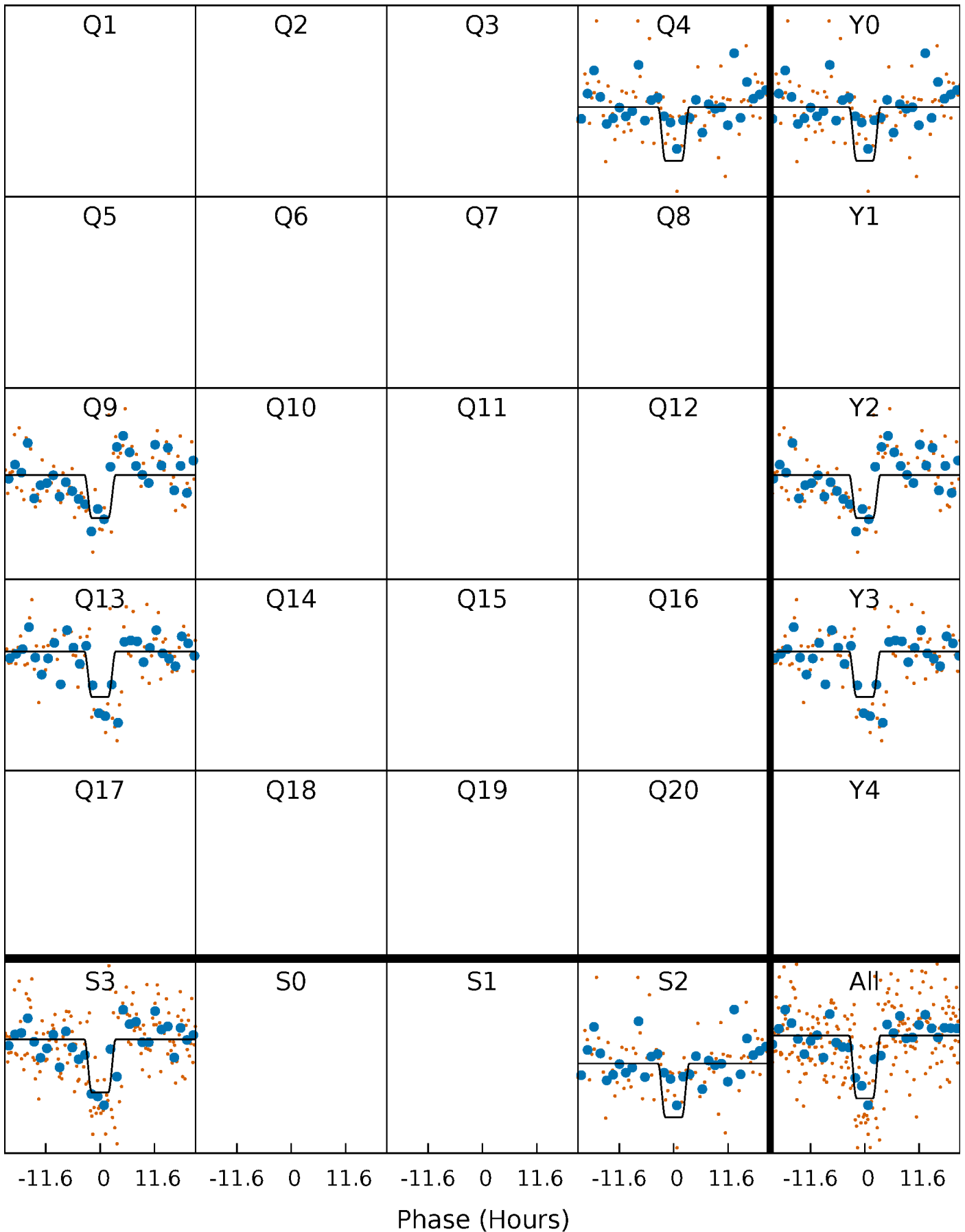
DV Quarter-Phased Transit Curves

TCE 007630354-01 P=442.990824 Days $T_0=372.676884$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

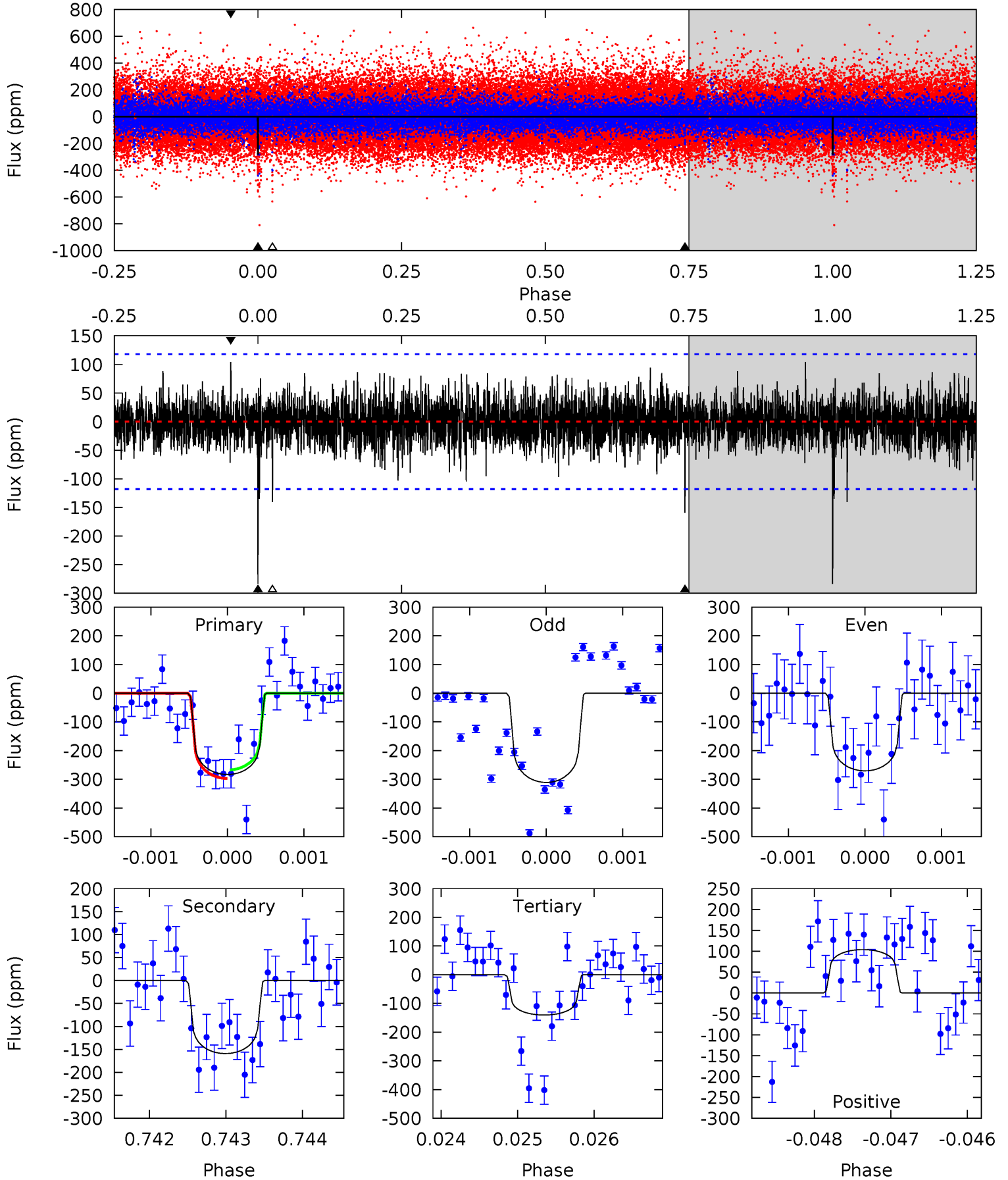
TCE 007630354-01 P=442.931469 Days $T_0=372.738616$ (BKJD)



DV Model-Shift Uniqueness Test

007630354-01, P = 442.990824 Days, E = 372.676884 Days

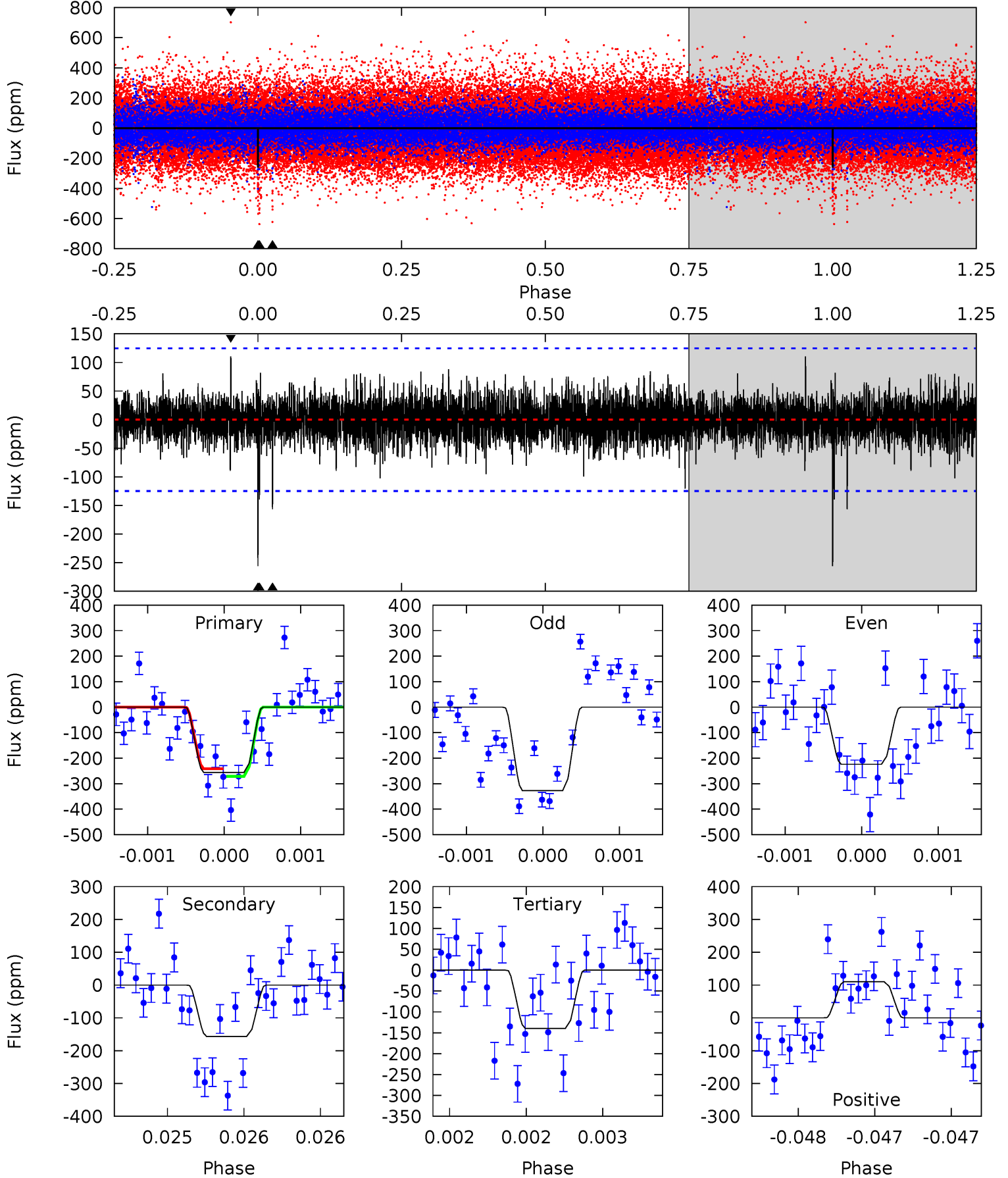
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	7.44	6.56	4.86	5.51	3.38	1.29	6.68	8.39	0.88	2.58	0.88	1.04	0.27	0.69



Alt Model-Shift Uniqueness Test

007630354-01, P = 442.931469 Days, E = 372.738616 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	6.94	6.18	4.89	5.54	3.42	1.14	5.17	6.46	0.76	2.05	2.14	0.92	0.30	0.66



Stellar Parameters For KIC 007630354

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6178^{+169}_{-206}	$4.231^{+0.200}_{-0.180}$	$-0.320^{+0.300}_{-0.300}$	$1.262^{+0.363}_{-0.297}$	$0.988^{+0.158}_{-0.115}$	$0.692^{+0.839}_{-0.333}$
	+3%/-3%	+5%/-4%	+94%/-94%	+29%/-24%	+16%/-12%	+121%/-48%
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 007630354-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-159 ± 21	$2.39^{+1.18}_{-0.98}$	402^{+30}_{-31}	5233^{+1630}_{-764}	19283^{+38344}_{-10534}
Alt.	-156 ± 23	$2.39^{+1.23}_{-1.14}$	399^{+32}_{-26}	5298^{+2011}_{-823}	20073^{+50898}_{-11465}

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

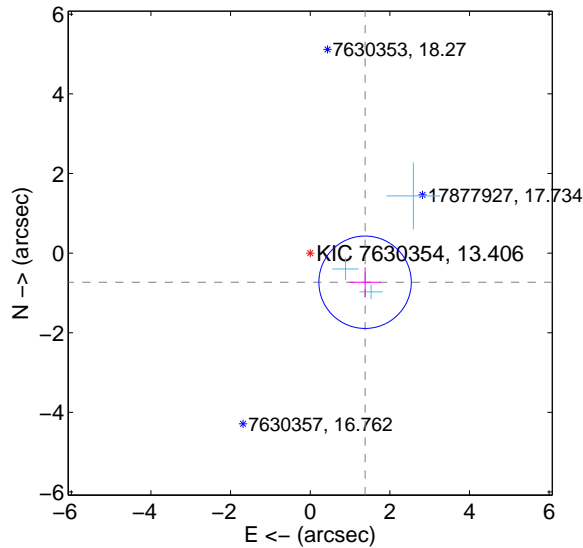
Supplemental centroid analysis for 007630354-01. Kepler magnitude: 13.41. Transit SNR 9.01

There are 3 quarters with good PRF difference image offsets

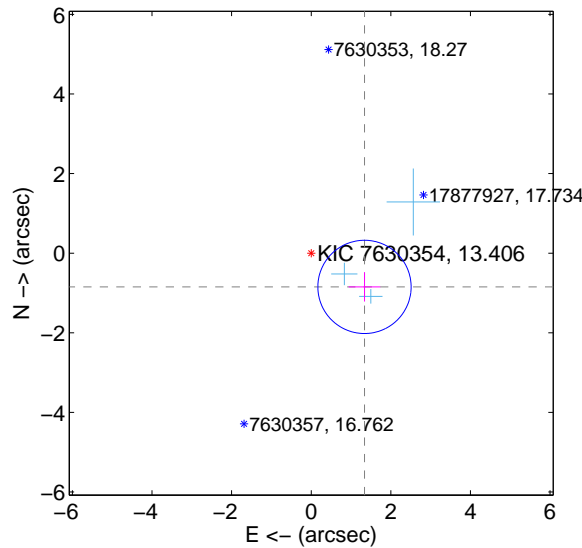
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.561 ± 0.387	4.03	-1.378 ± 0.390	-0.732 ± 0.376
PRF-fit source offset from KIC position	1.584 ± 0.391	4.06	-1.338 ± 0.399	-0.847 ± 0.369
photometric centroid source offset	1.43 ± 1.21	1.18	1.37 ± 1.24	-0.42 ± 0.89

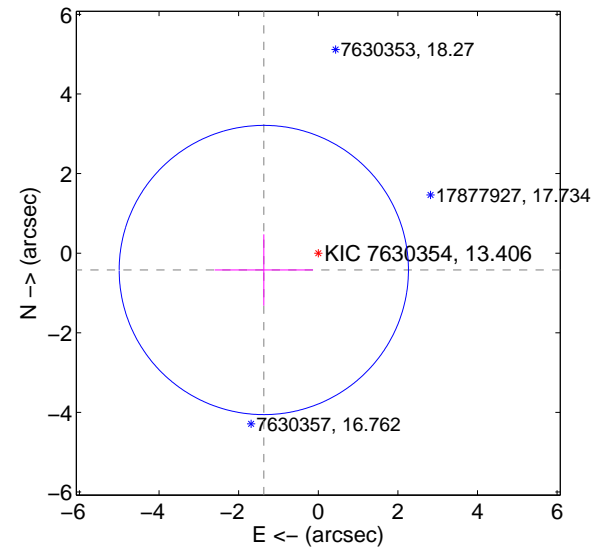
offset from difference PRF-fit to OOT PRF-fit



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.

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



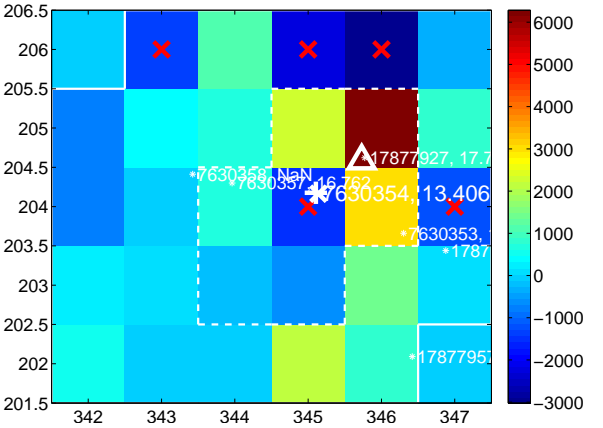
Q3 no difference image



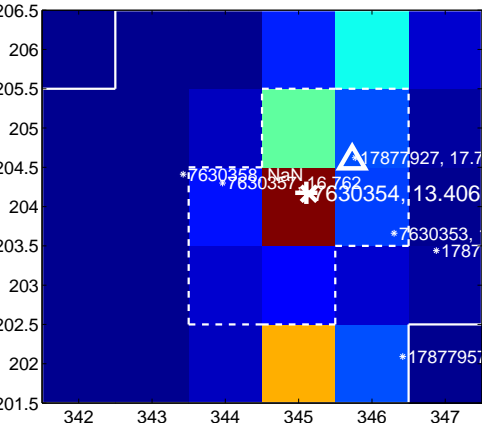
Q3 no OOT image



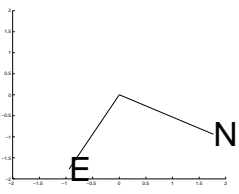
Q4 difference image



Q4 OOT image



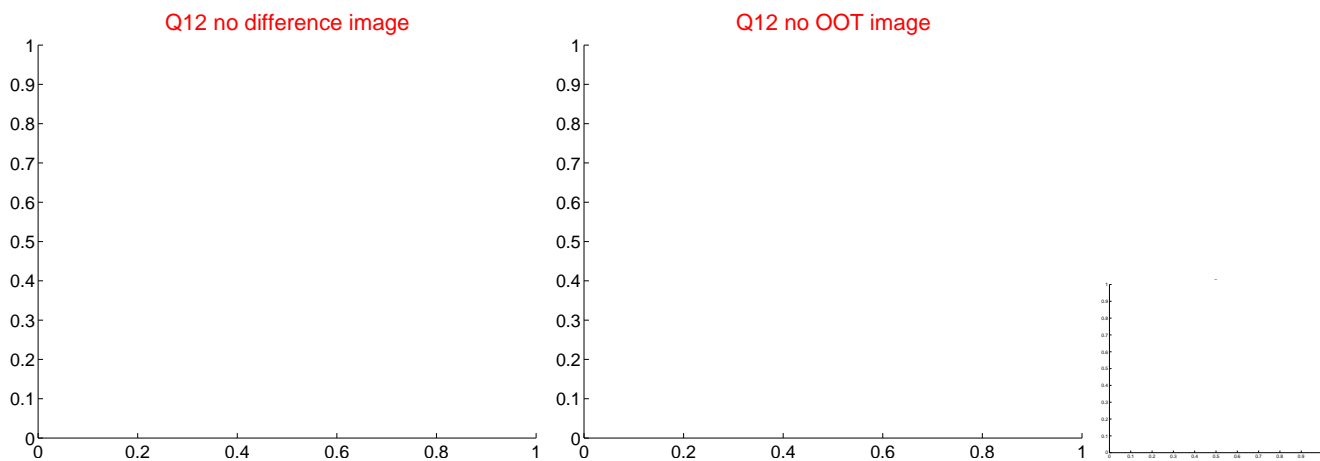
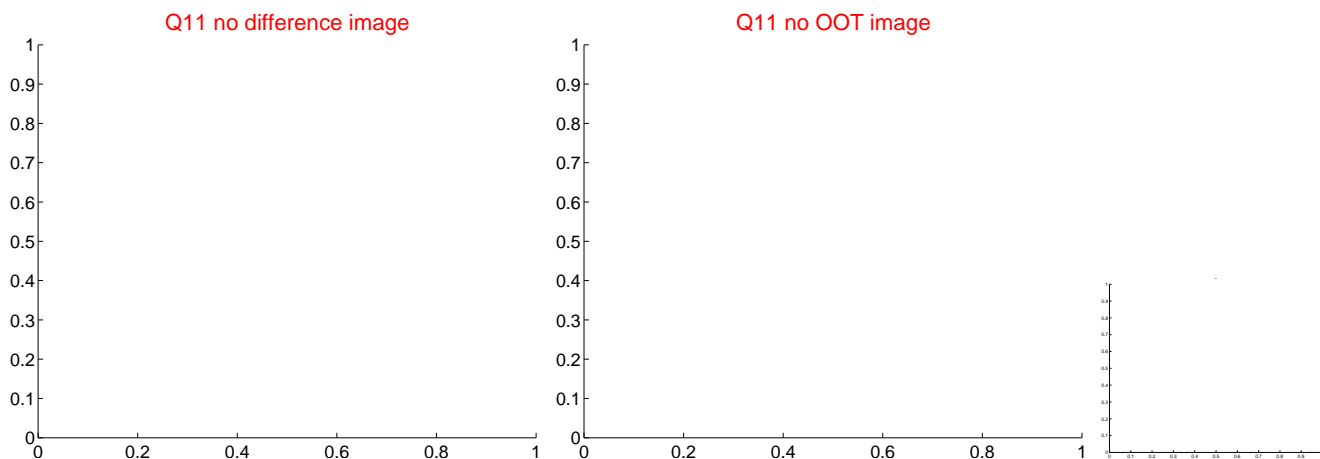
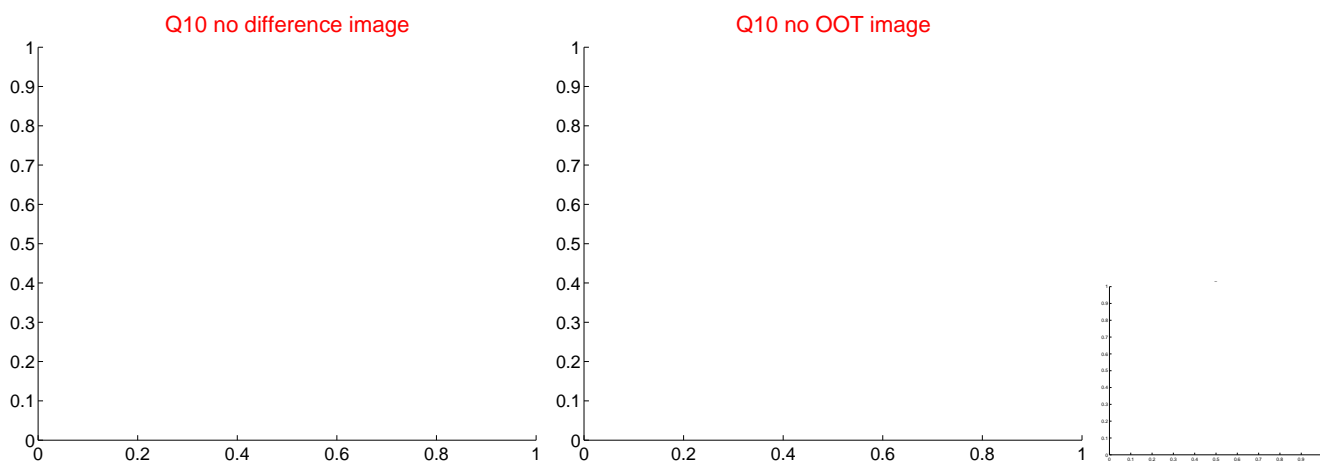
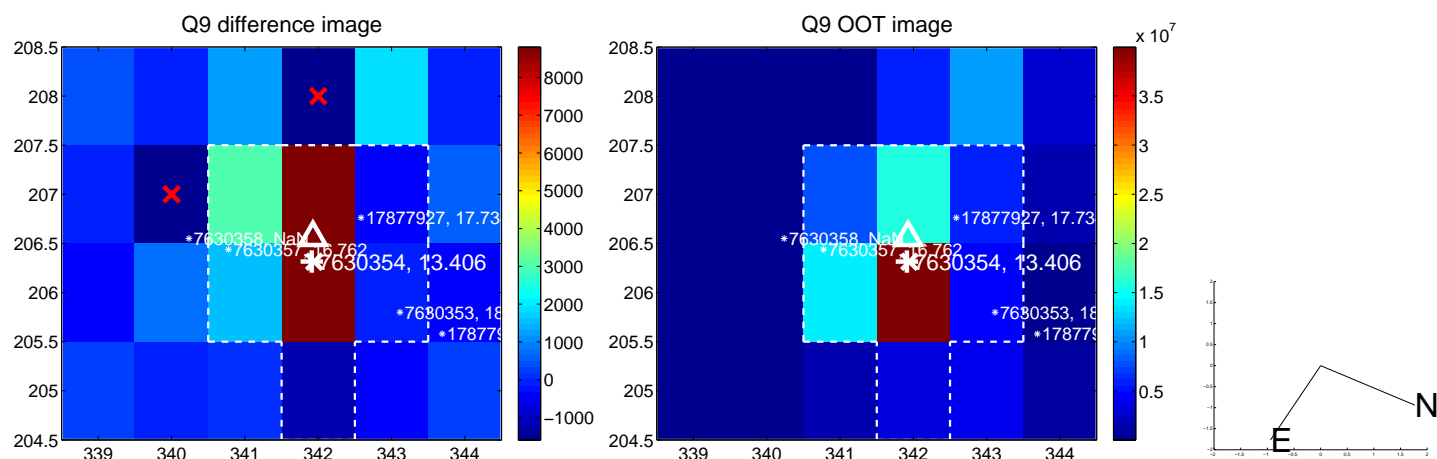
$\times 10^7$



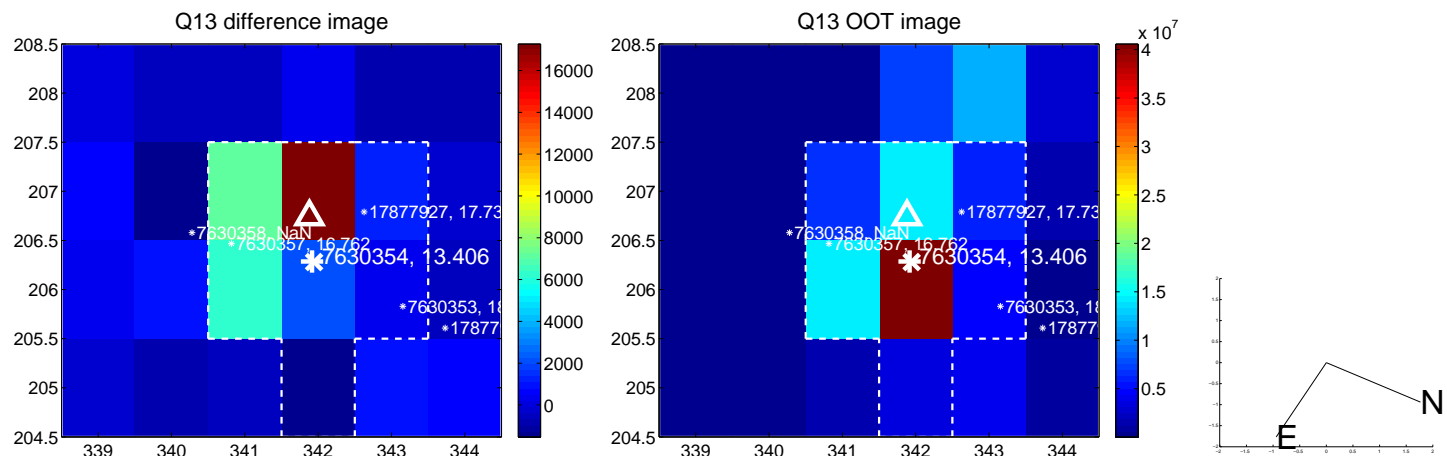
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



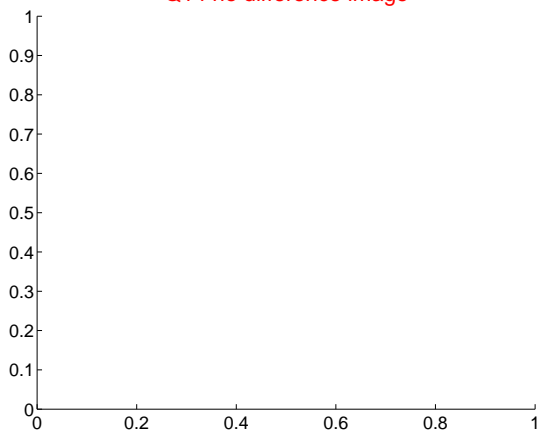
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



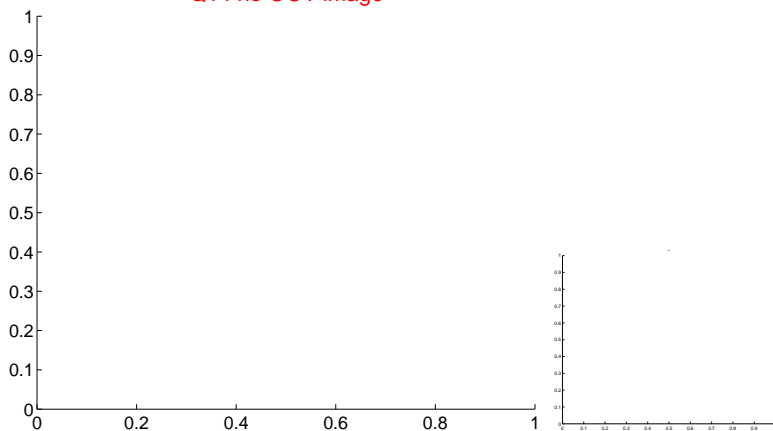
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



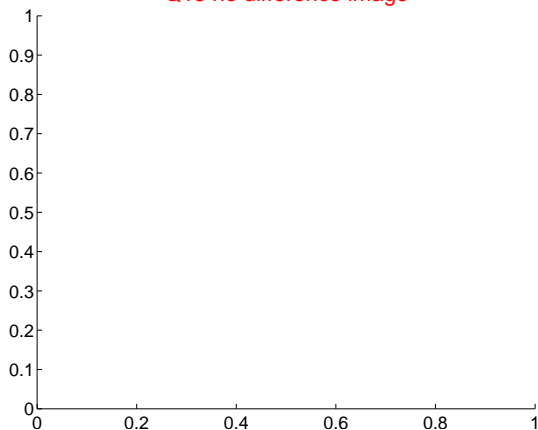
Q14 no difference image



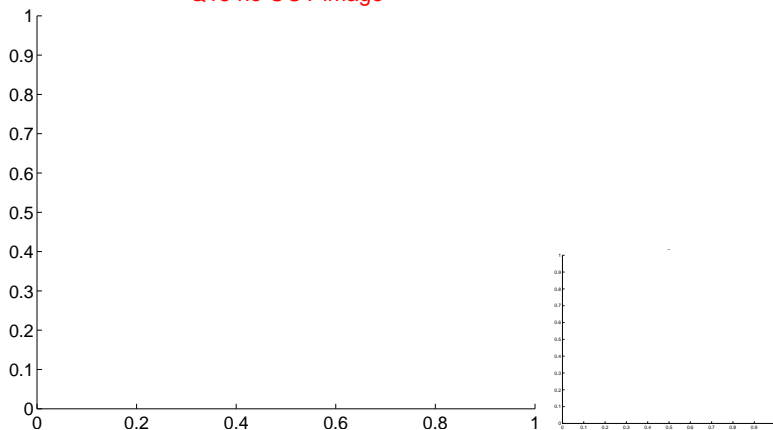
Q14 no OOT image



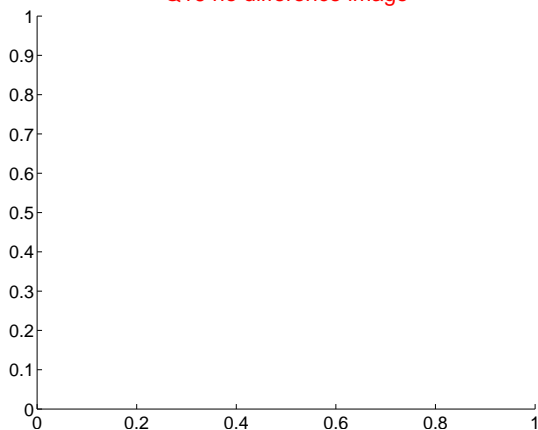
Q15 no difference image



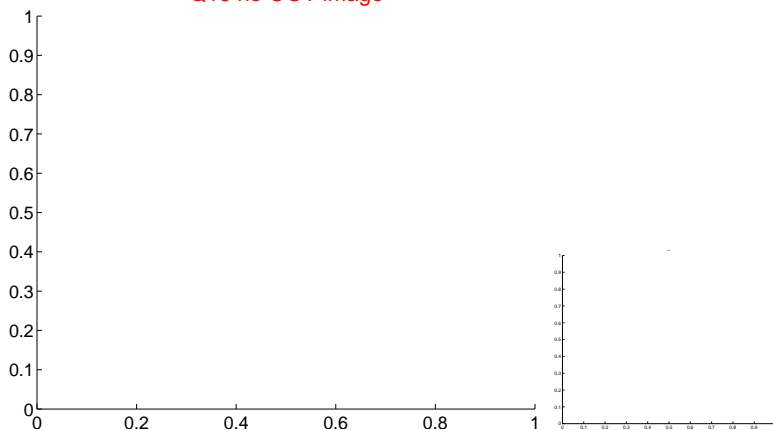
Q15 no OOT image



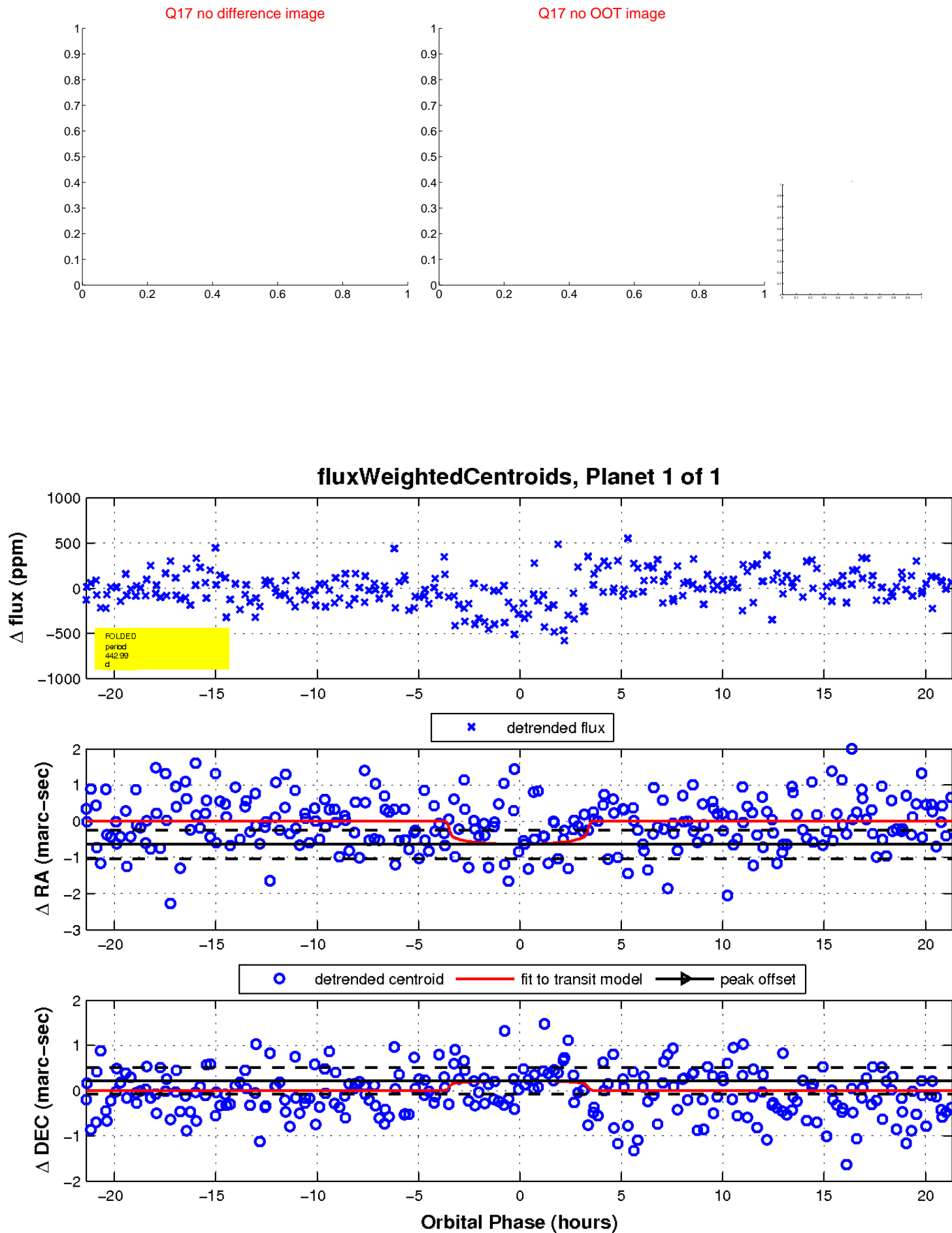
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

