

KIC 008747453

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})
008747453-01	OBS	No	390.772356	170.358711	1040.2	24.006	8.3	8.7	0.80	4778	3.41	0.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008747453-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—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.

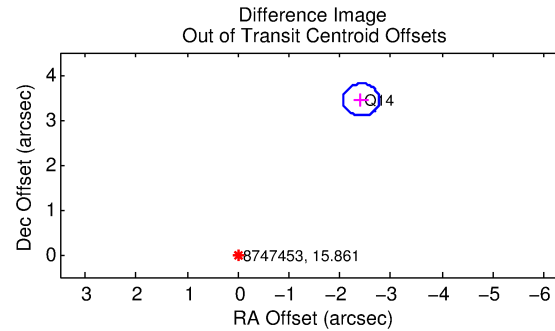
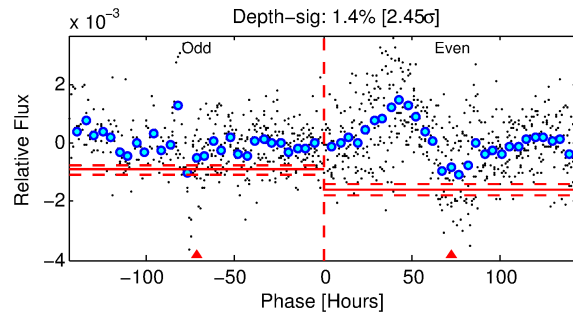
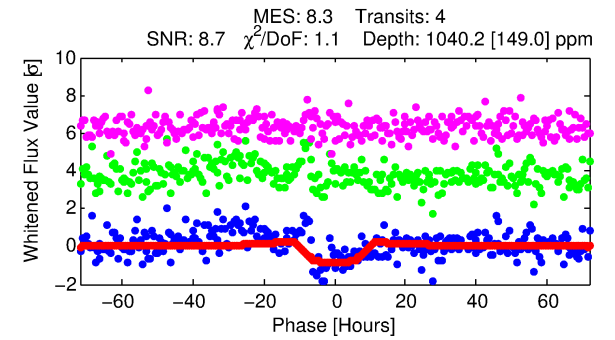
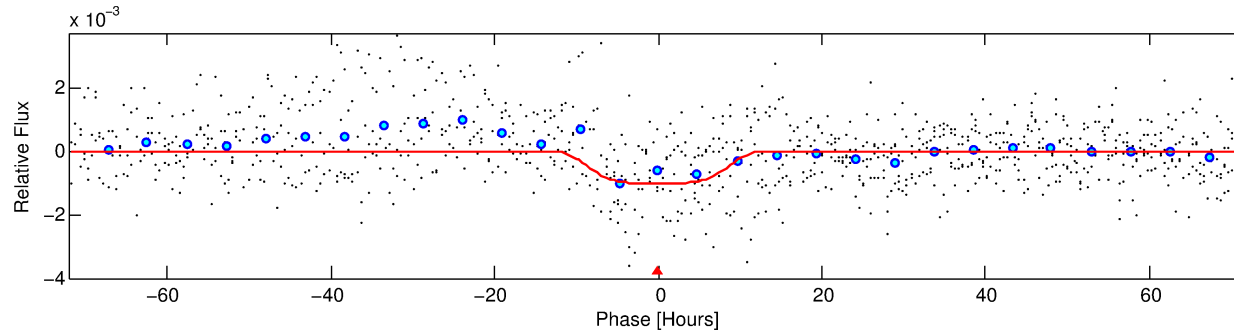
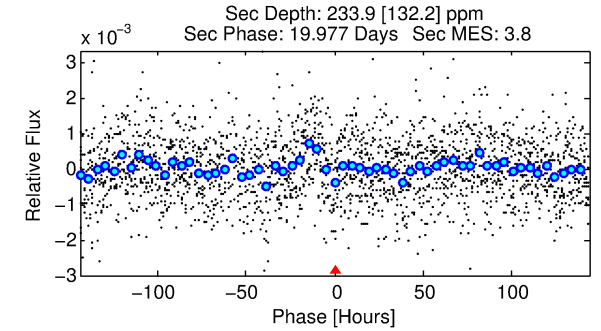
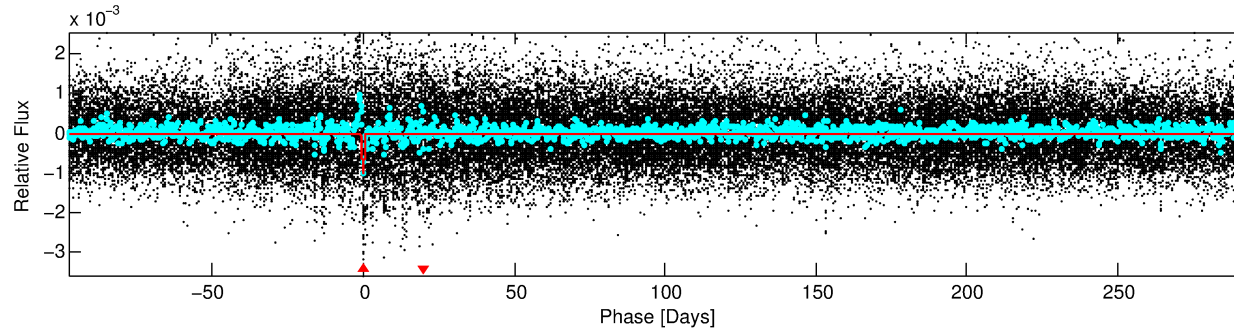
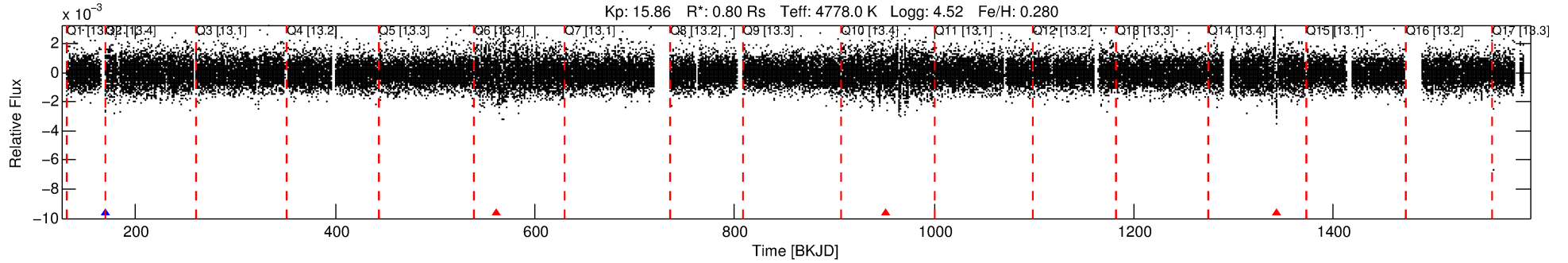
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008747453-01

No Significant Match Found

DV One-Page Summary

KIC: 8747453 Candidate: 1 of 1 Period: 390.772 d



DV Fit Results:

Period = 390.77236 [0.02477] d
Epoch = 170.3587 [0.0481] BKJD
Rp/R* = 0.0390 [0.0044]
a/R* = 54.02 [12.93]
b = 0.94 [0.03]
Seff = 0.32 [0.06]
Teq = 192 [9] K
Rp = 3.41 [0.50] Re
a = 0.9624 [0.0812] AU
Ag = 10263.01 [6385.94] [1.61σ]
Teffp = 2991 [464] K [6.04σ]

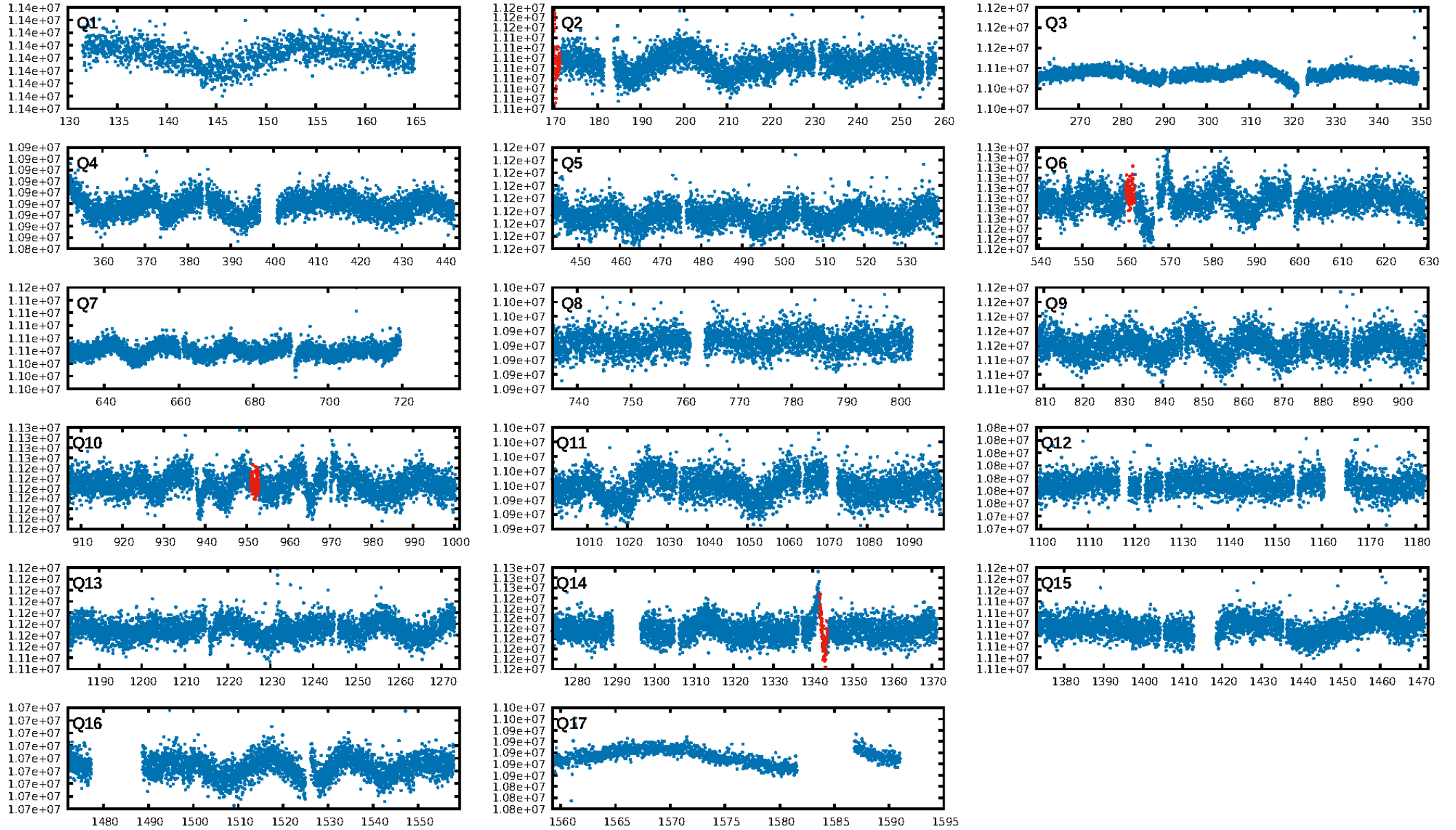
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.86e-10
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 1.156
Centroid-sig: 1.2%
Centroid-so: 4.967 arcsec [2.74σ]
OotOffset-rm: 4.207 arcsec [35.46σ]
KicOffset-rm: 4.219 arcsec [35.52σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

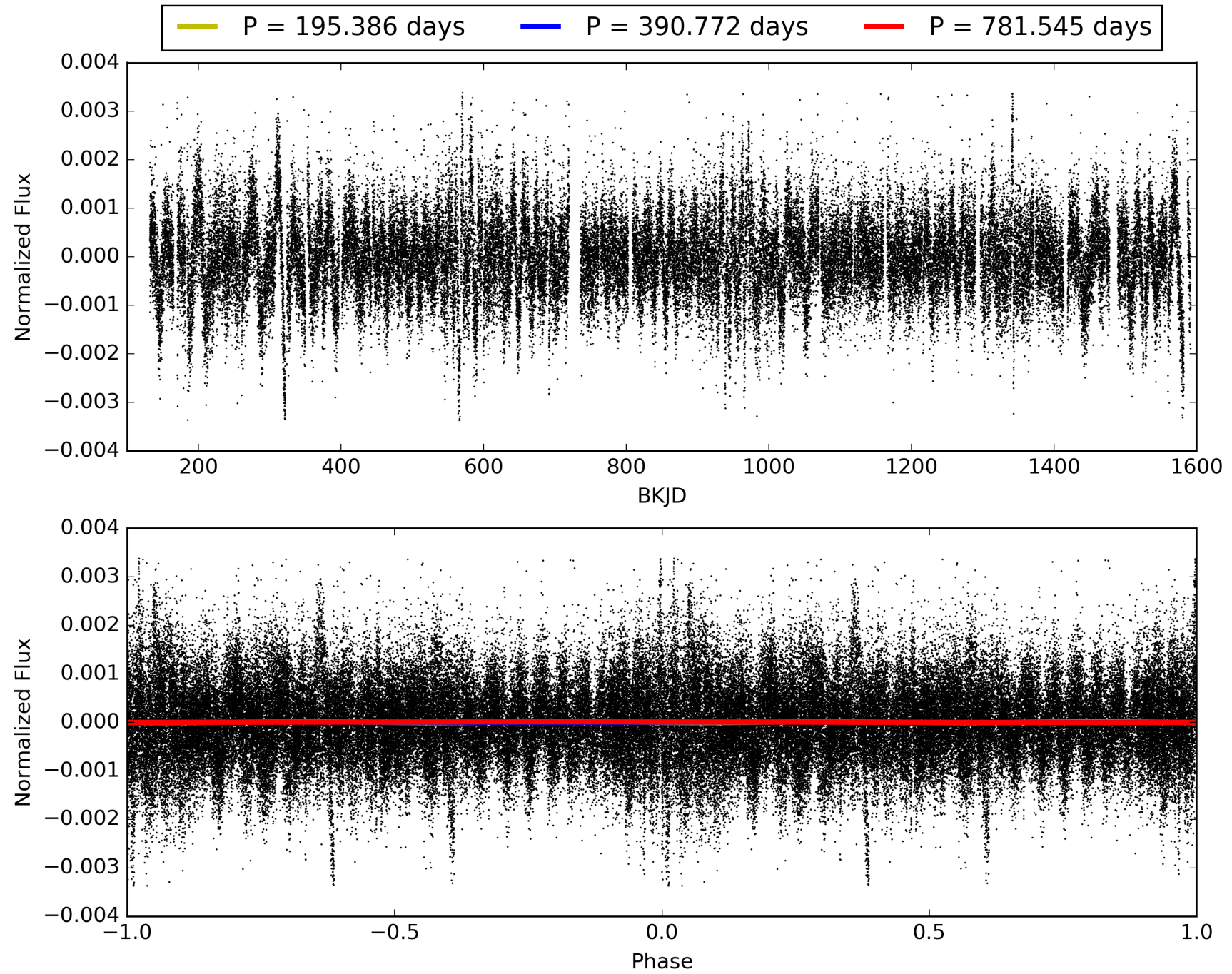
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:59:33 Z

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

TCE 008747453-01, PDC Light Curves

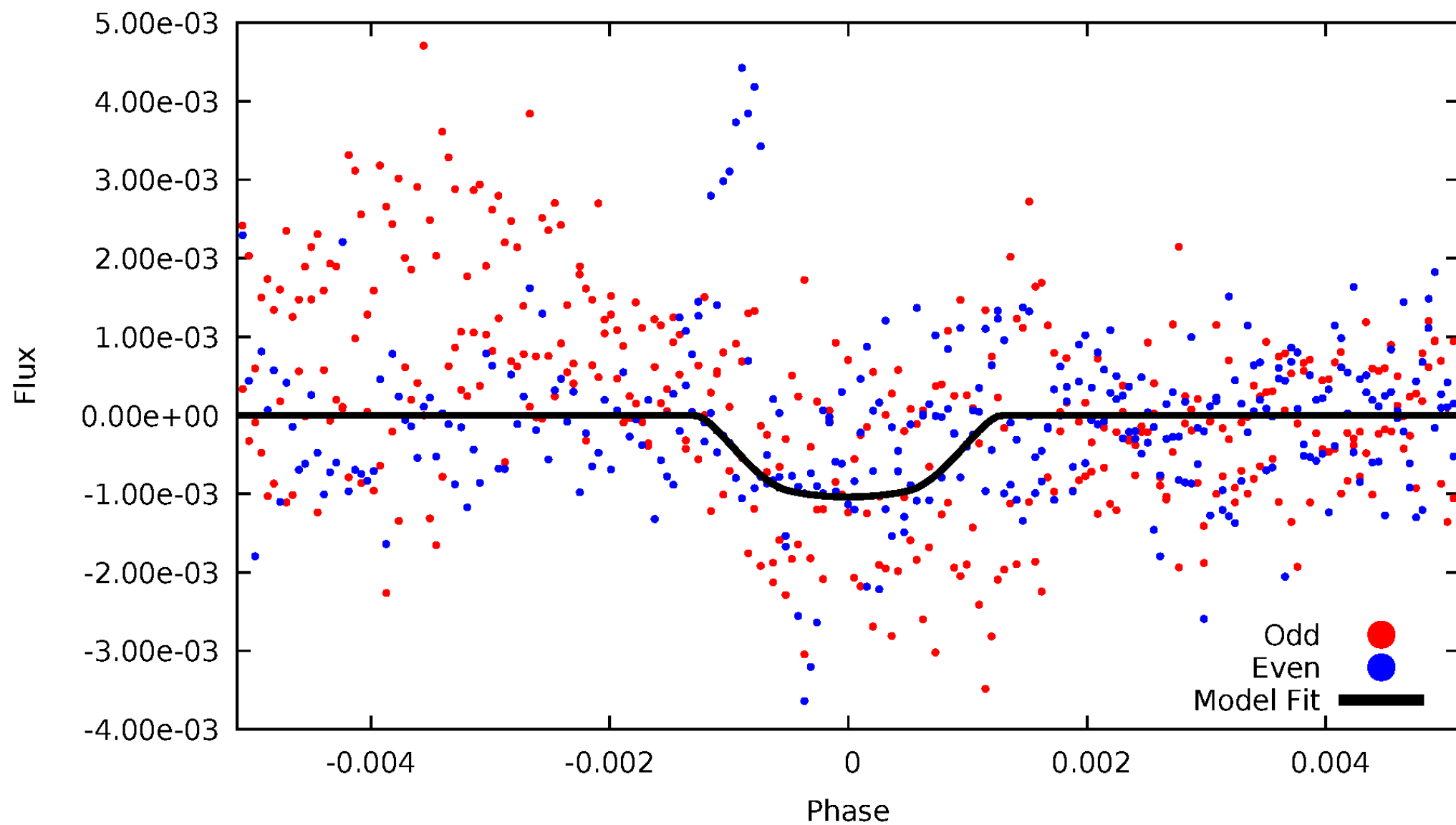


TCE 008747453-01



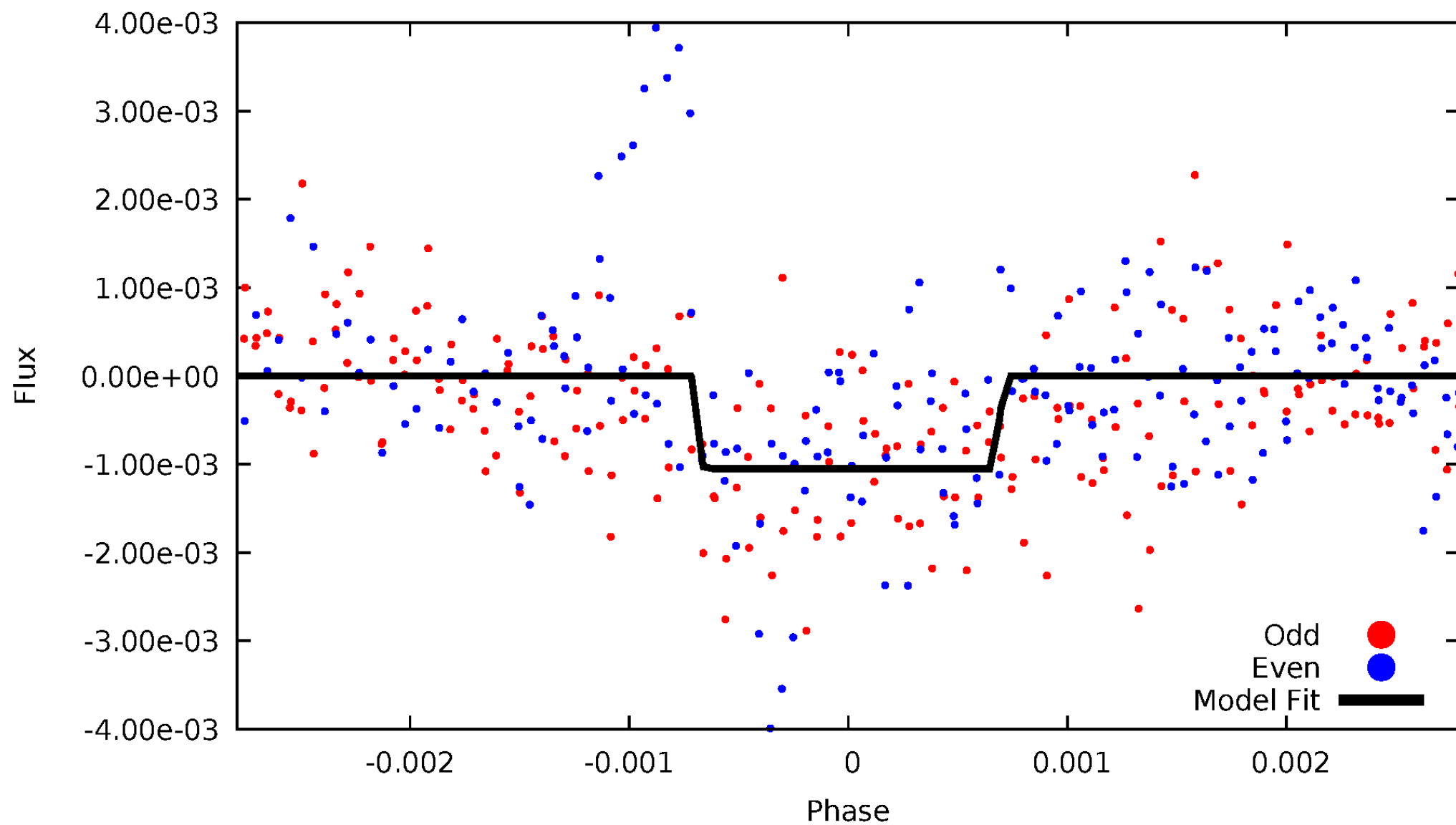
DV Odd/Even

TCE 008747453-01



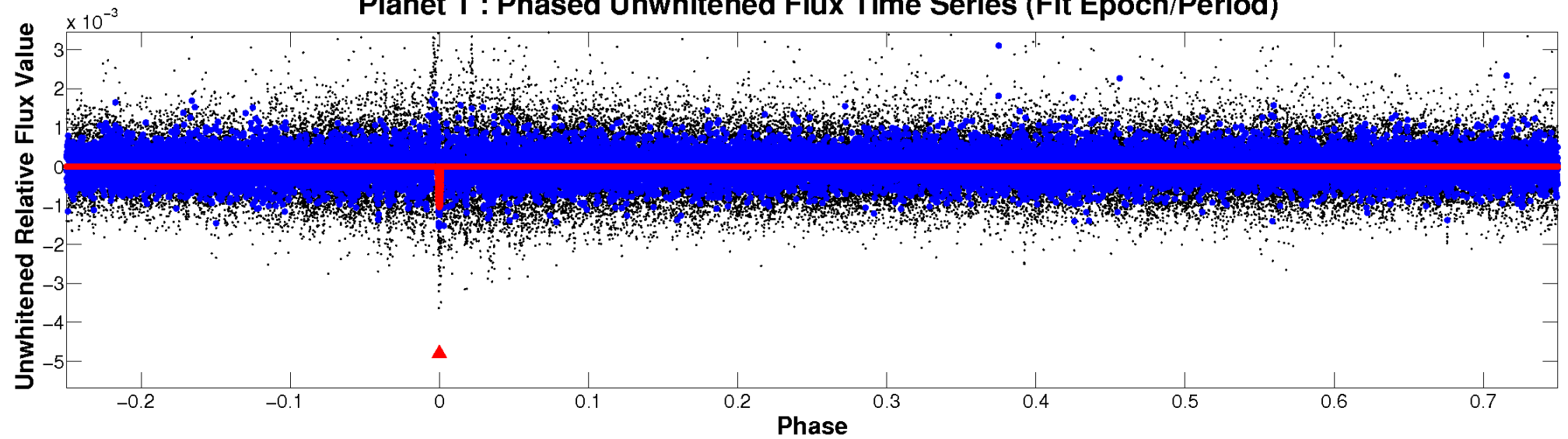
ALT Odd/Even

TCE 008747453-01

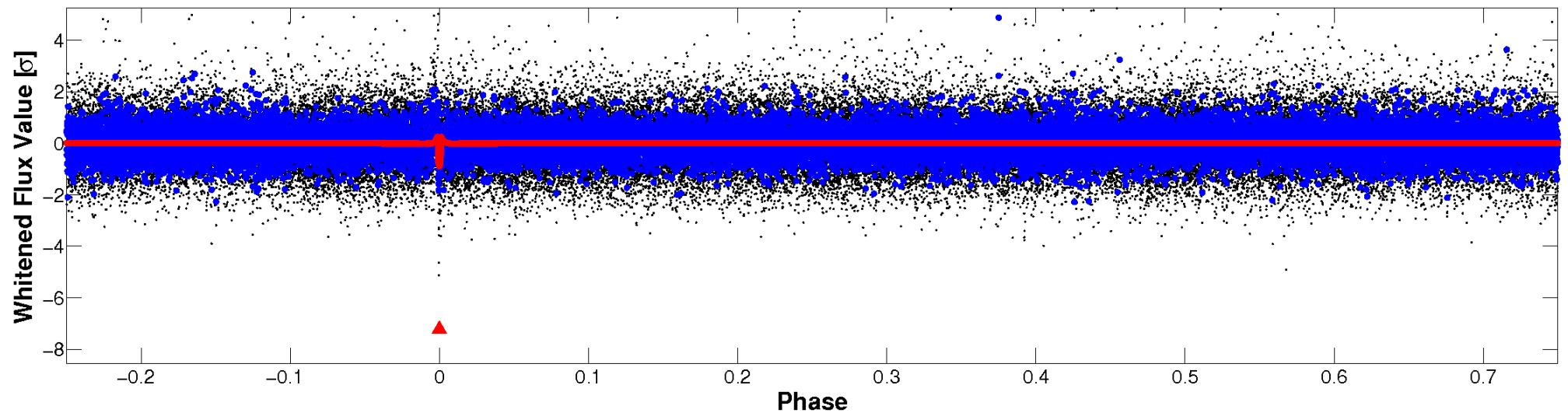


Non-Whitened Vs. Whitened Light Curve

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

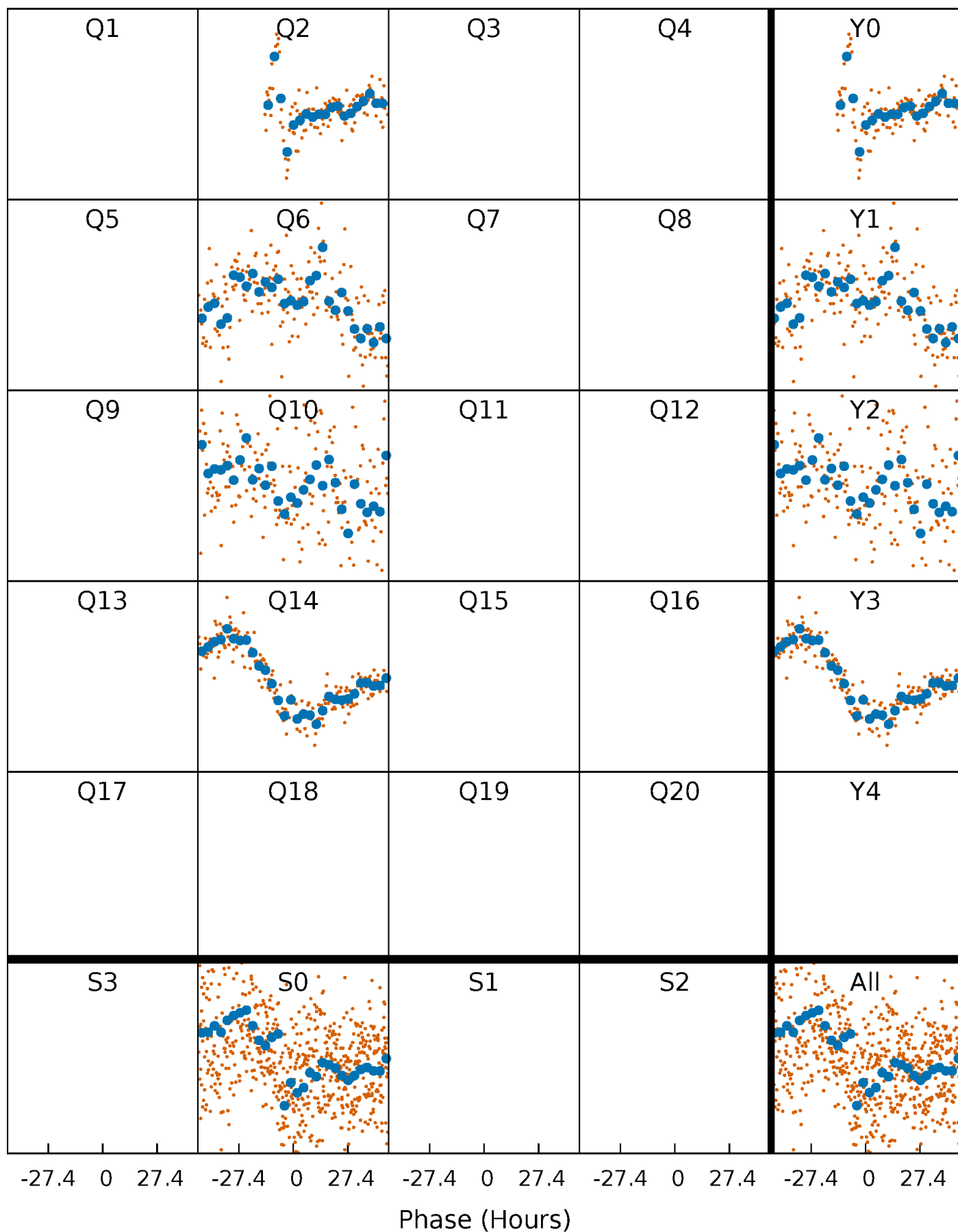


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



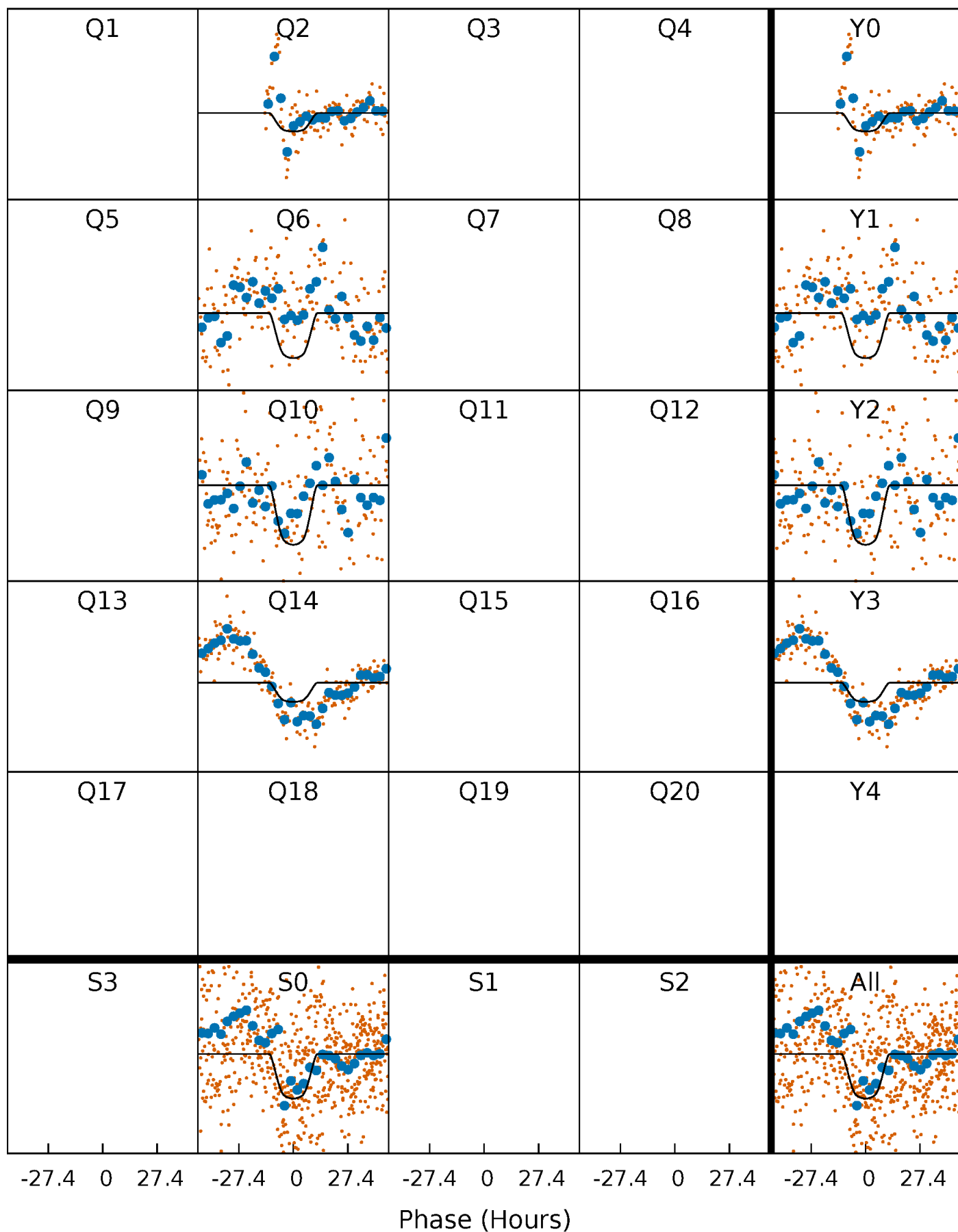
PDC Quarter-Phased Transit Curves

TCE 008747453-01 P=390.772356 Days $T_0=170.358711$ (BKJD)



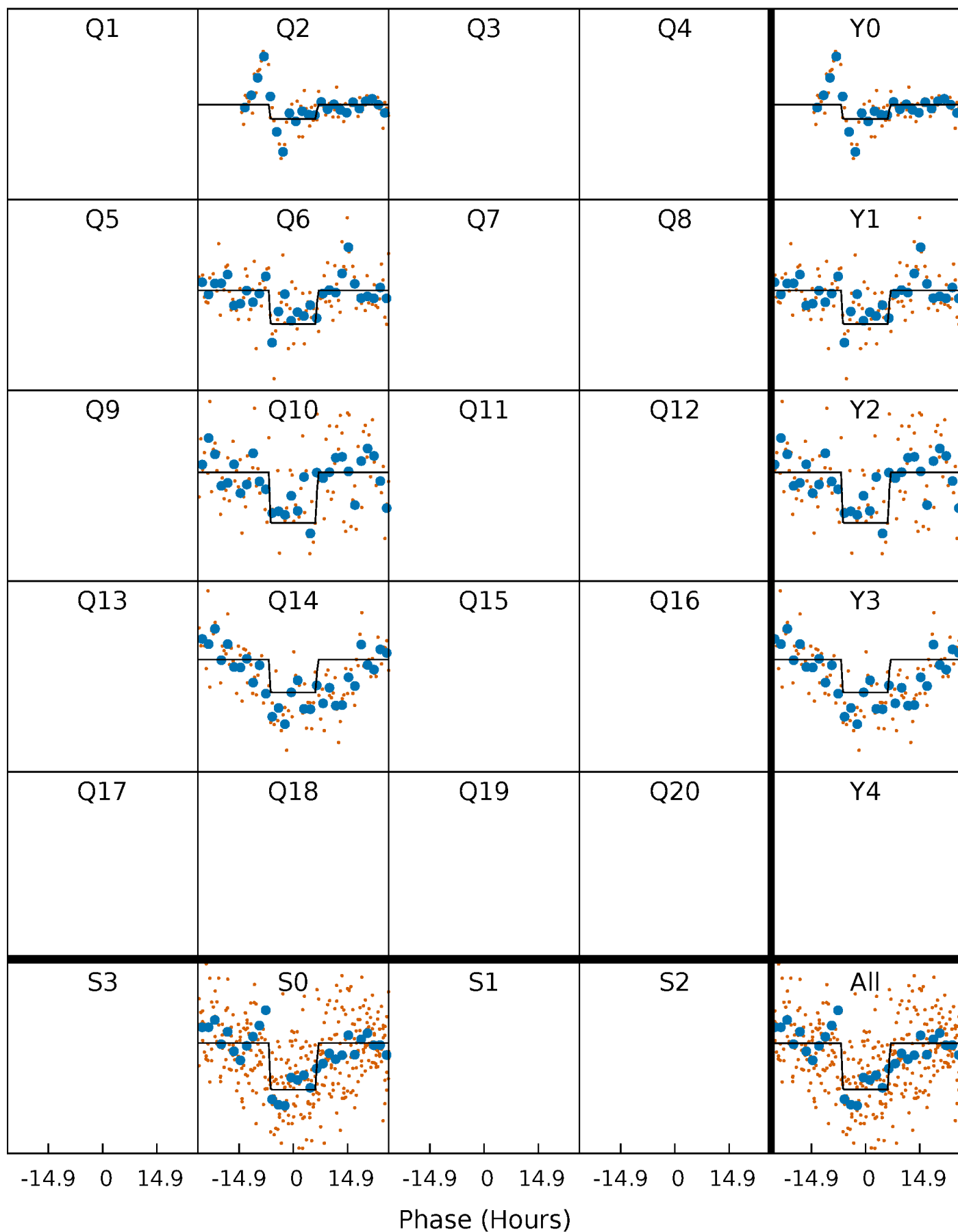
DV Quarter-Phased Transit Curves

TCE 008747453-01 P=390.772356 Days $T_0=170.358711$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

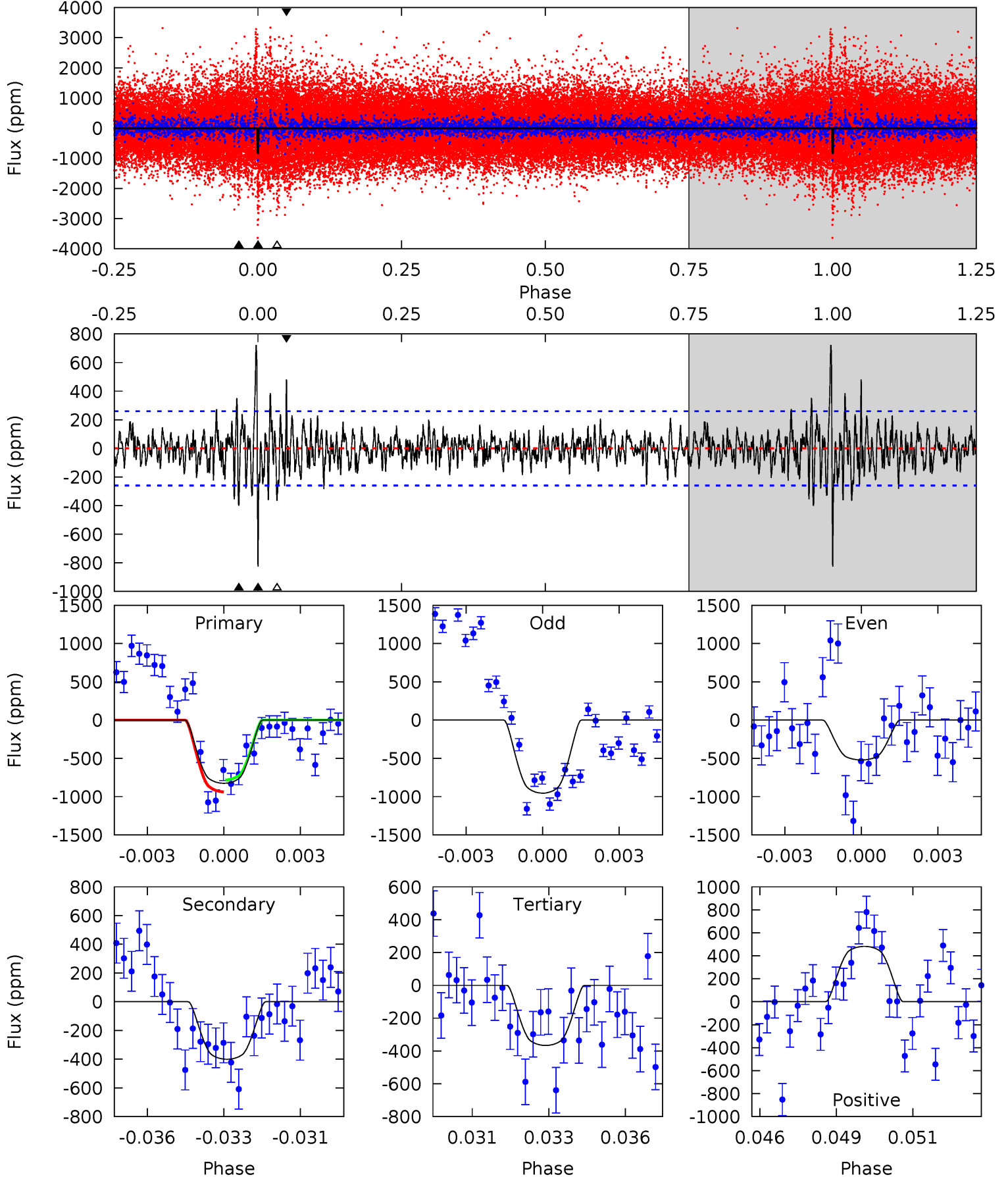
TCE 008747453-01 P=390.750968 Days $T_0=170.353875$ (BKJD)



DV Model-Shift Uniqueness Test

008747453-01, P = 390.772356 Days, E = 170.358711 Days

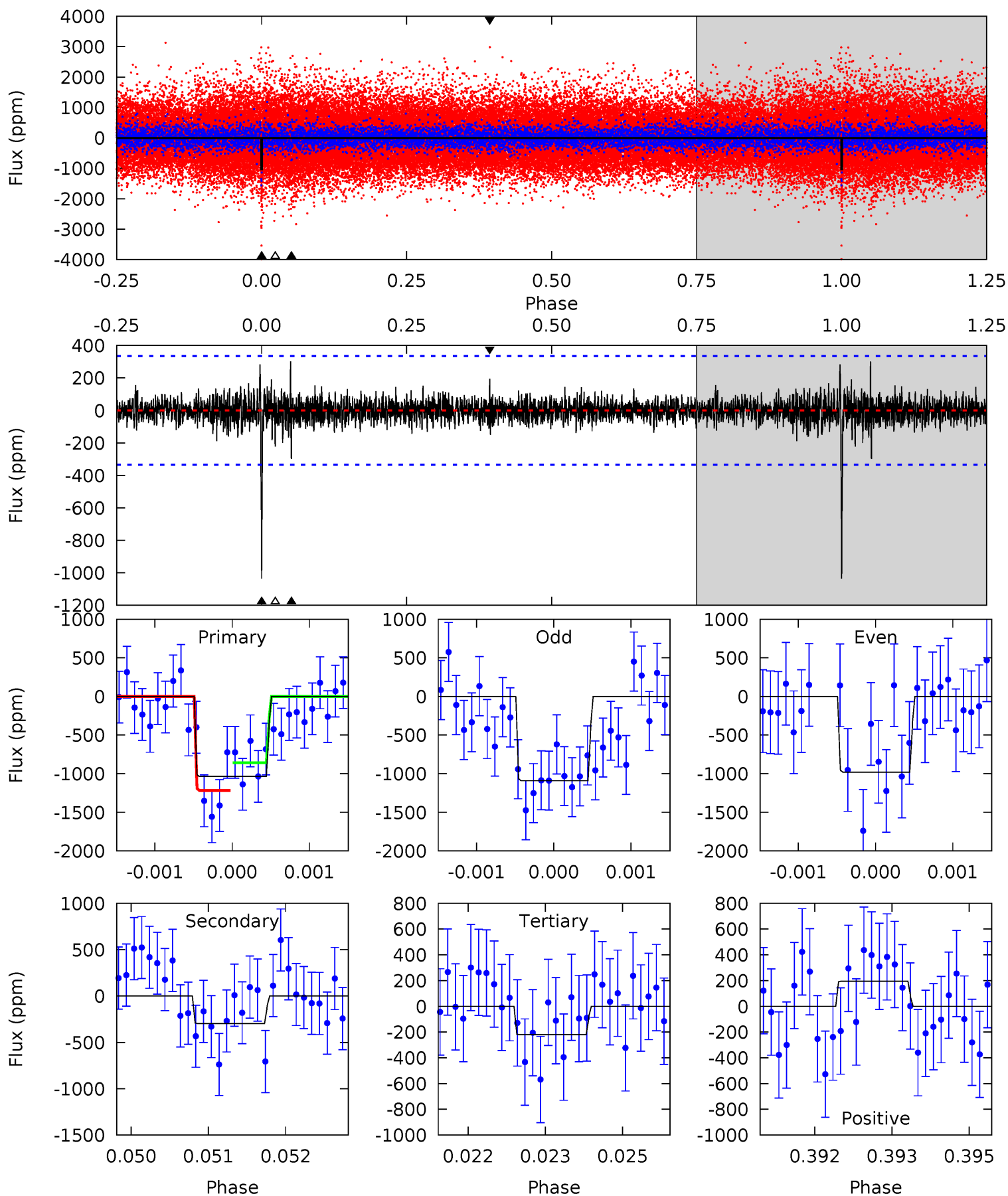
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	8.16	7.46	9.81	5.28	3.02	1.98	9.35	7.00	0.70	-1.65	4.47	1.53	0.47	1.56



Alt Model-Shift Uniqueness Test

008747453-01, P = 390.750968 Days, E = 170.353875 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	4.78	3.55	3.13	5.38	3.18	0.78	13.1	13.5	1.22	1.65	0.91	1.04	0.23	2.89



Stellar Parameters For KIC 008747453

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4778^{+143}_{-129}	$4.523^{+0.075}_{-0.035}$	$0.280^{+0.150}_{-0.300}$	$0.800^{+0.037}_{-0.074}$	$0.778^{+0.051}_{-0.051}$	$2.138^{+0.672}_{-0.273}$
	+3%/-3%	+2%/-1%	+54%/-107%	+5%/-9%	+7%/-7%	+31%/-13%
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 008747453-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-401 ± 49	$3.39^{+0.41}_{-0.44}$	267^{+9}_{-9}	3734^{+198}_{-169}	17908^{+6344}_{-3896}
Alt.	-297 ± 62	$2.81^{+0.40}_{-0.41}$	267^{+8}_{-9}	3770^{+237}_{-215}	19044^{+7977}_{-5691}

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

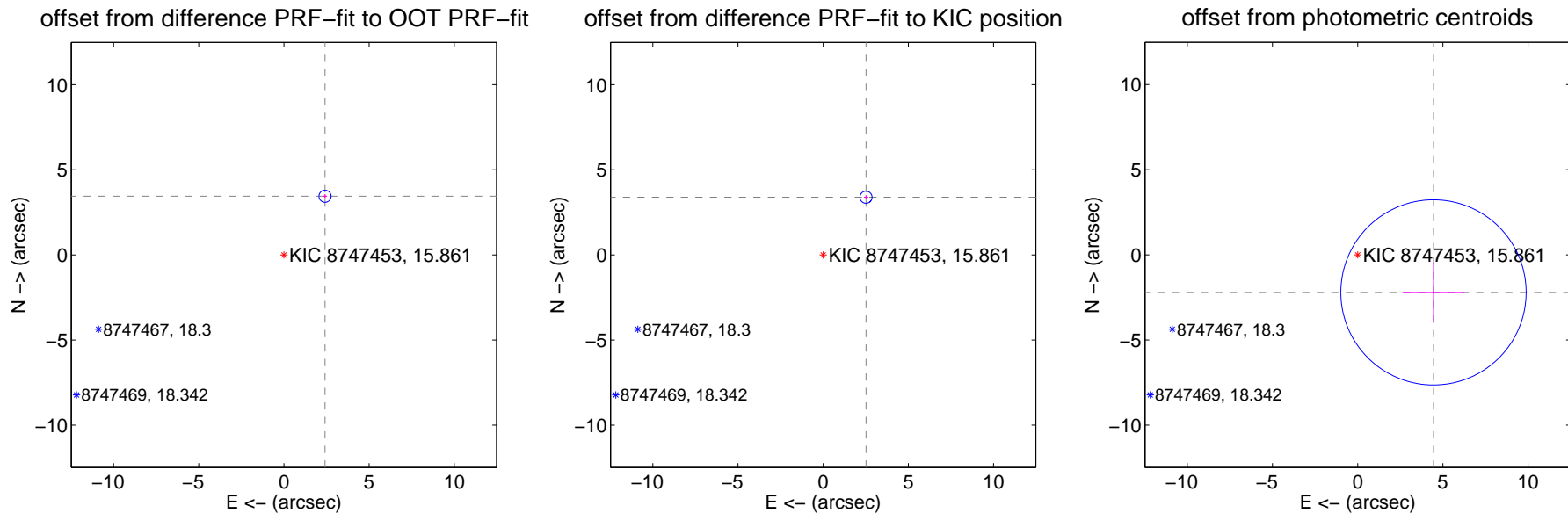
DV Centroid Data

Supplemental centroid analysis for 008747453-01. Kepler magnitude: 15.86. Transit SNR 8.68

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.207 ± 0.119	35.46	-2.414 ± 0.122	3.445 ± 0.117
PRF-fit source offset from KIC position	4.219 ± 0.119	35.52	-2.515 ± 0.122	3.388 ± 0.117
photometric centroid source offset	4.97 ± 1.81	2.74	-4.45 ± 1.82	-2.21 ± 1.78

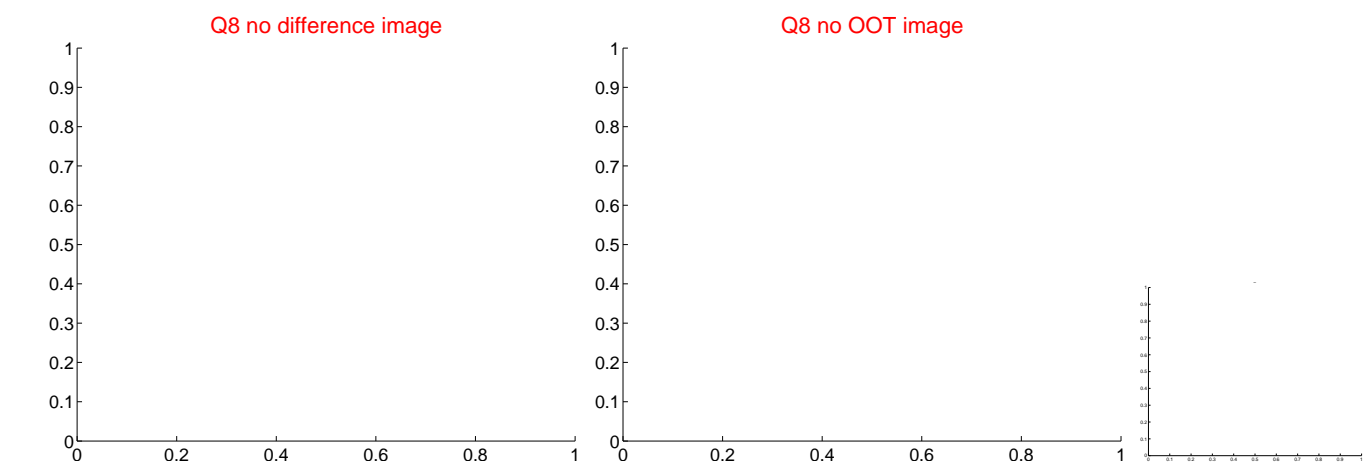
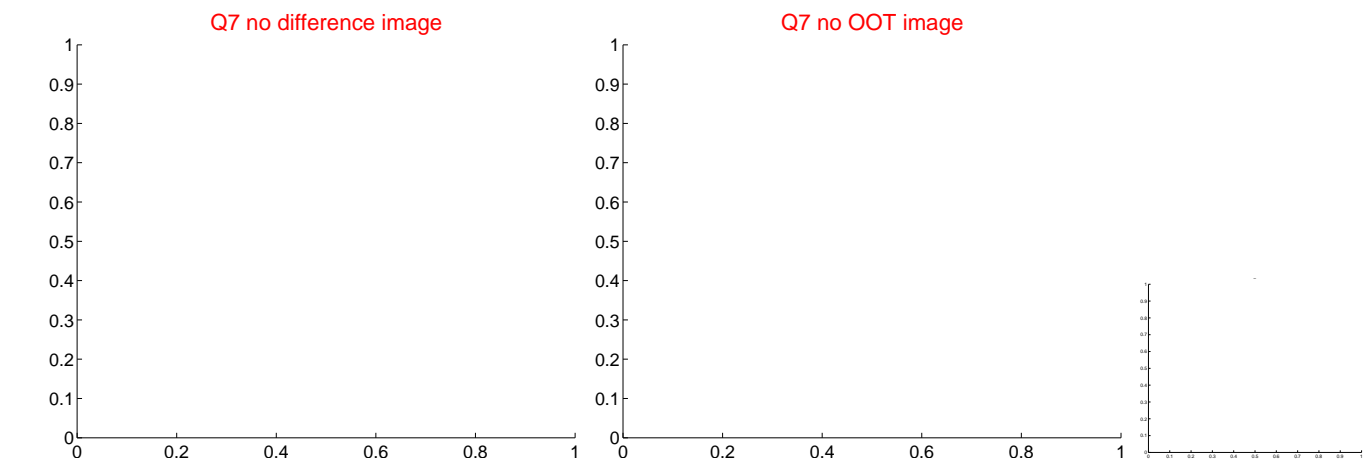
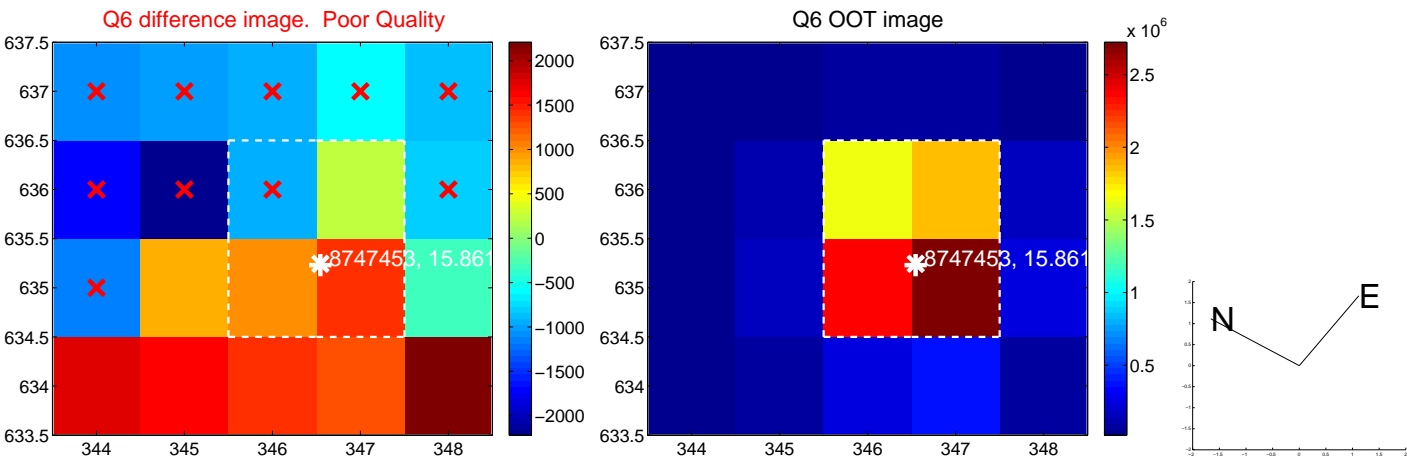
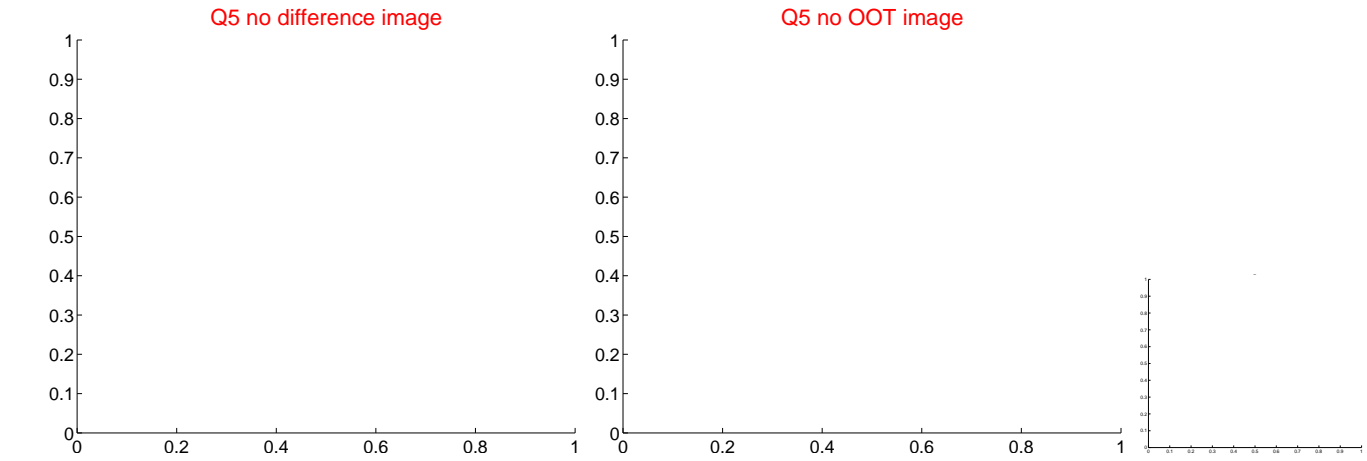


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

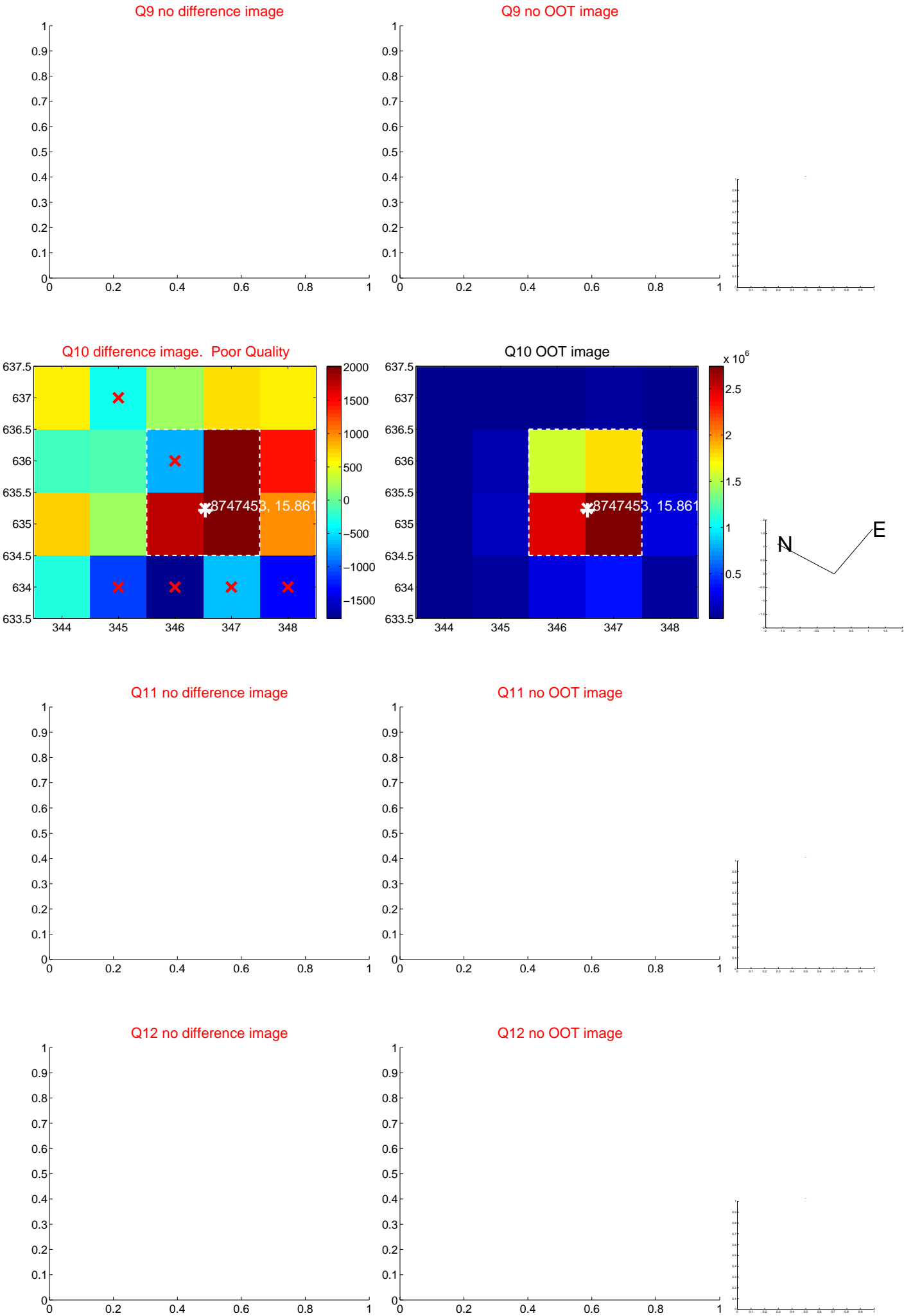
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



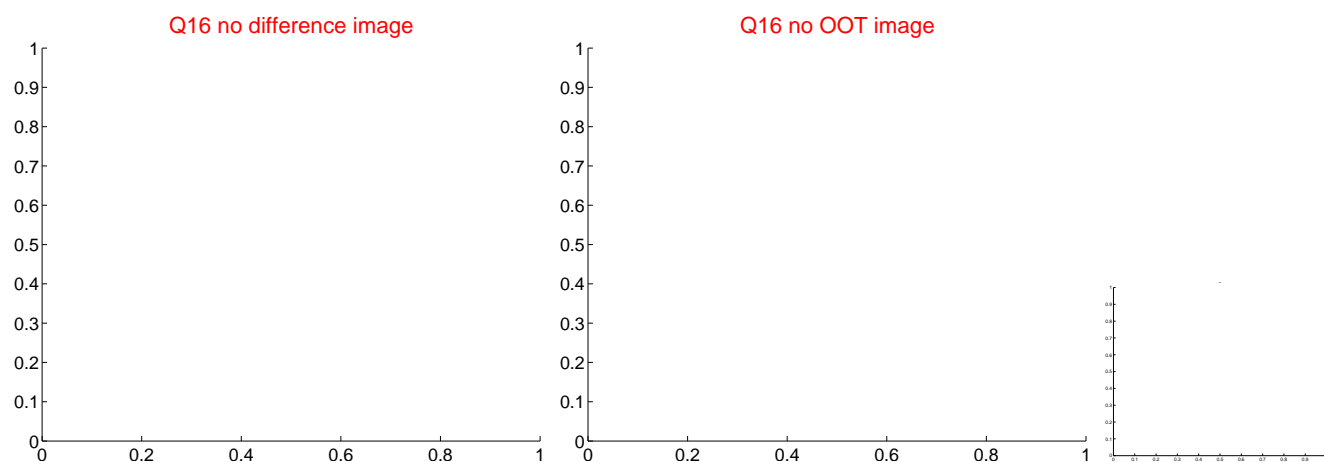
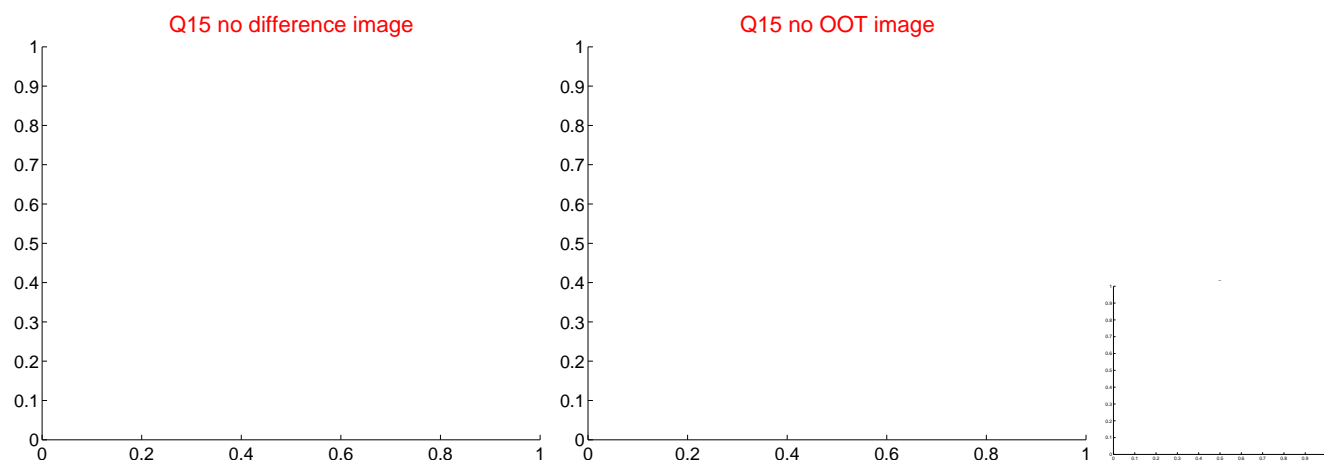
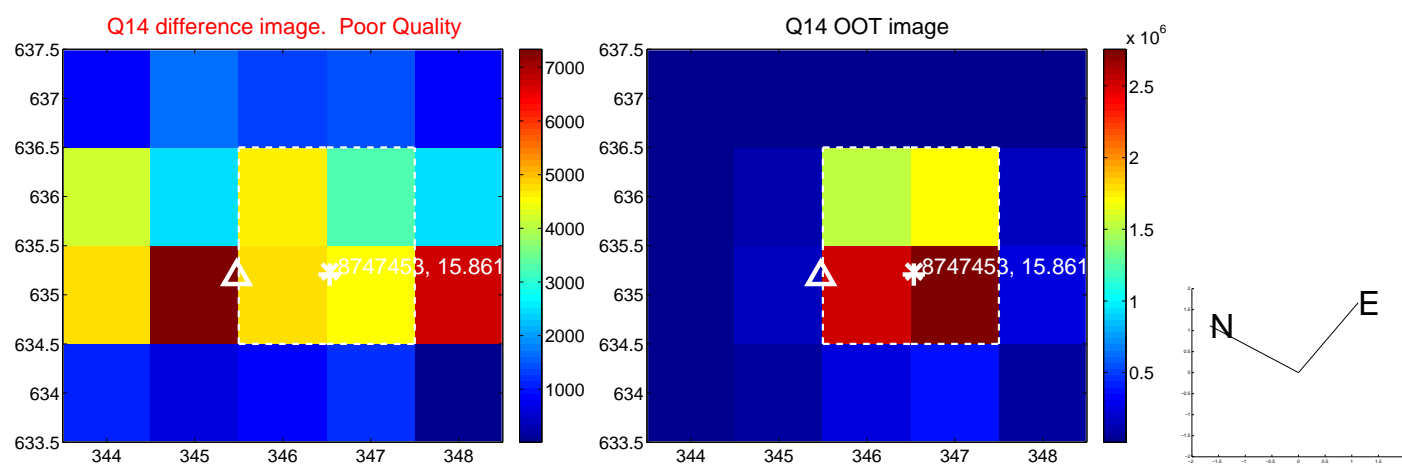
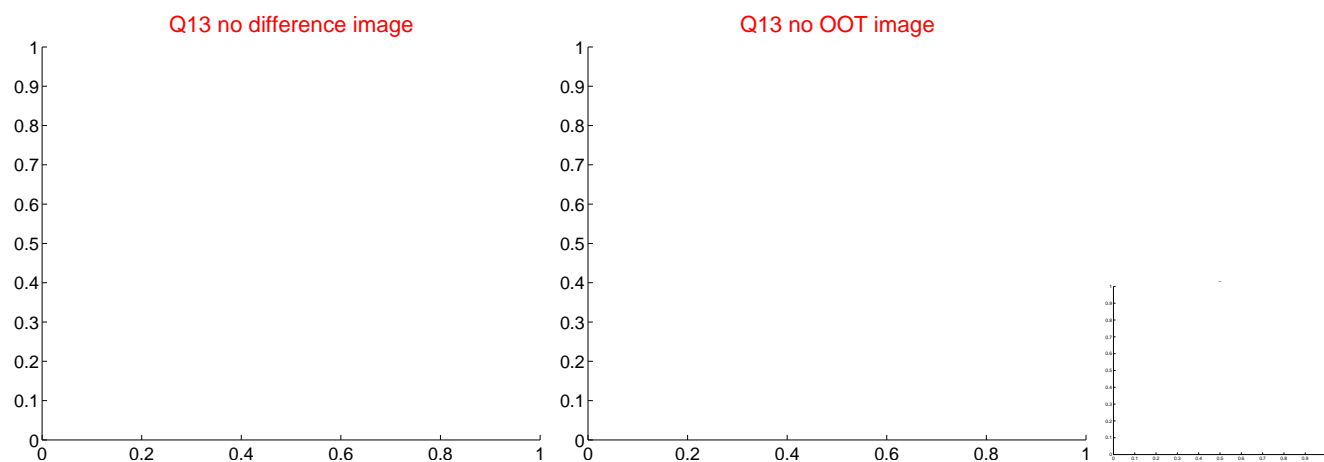
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



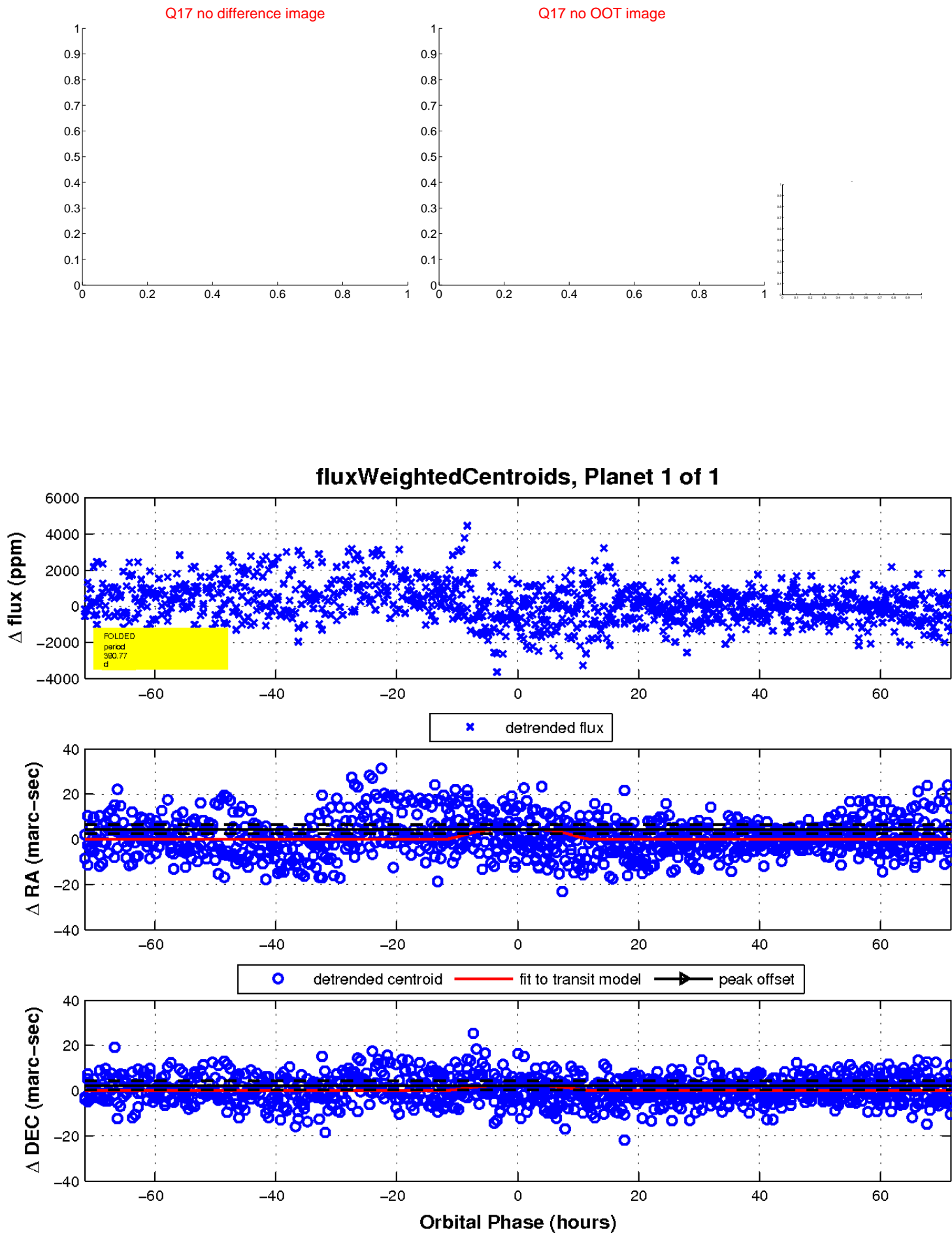
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

