

KIC 008480642

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})
008480642-01	OBS	5521.01	31.591175	162.501518	1394.3	2.558	73.7	72.4	2.29	5178	15.25	88.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008480642-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED

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

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

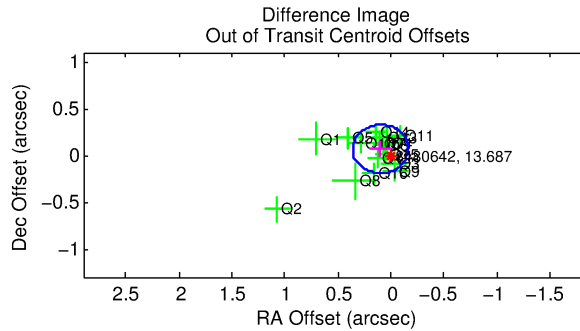
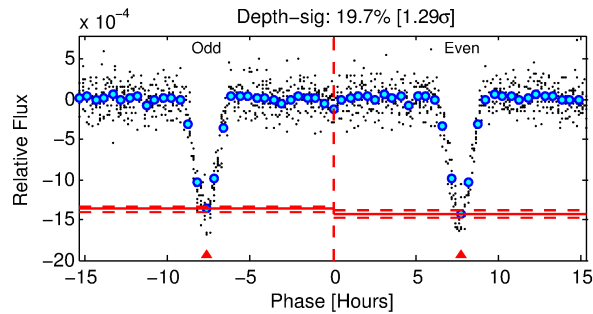
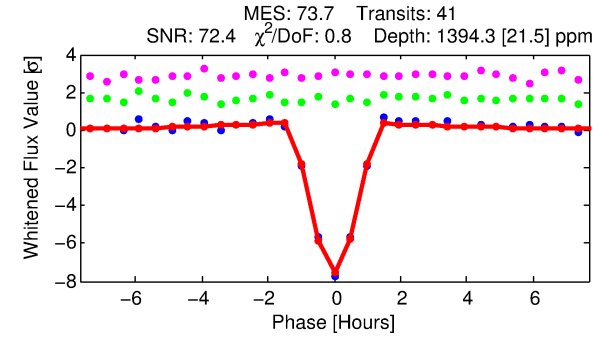
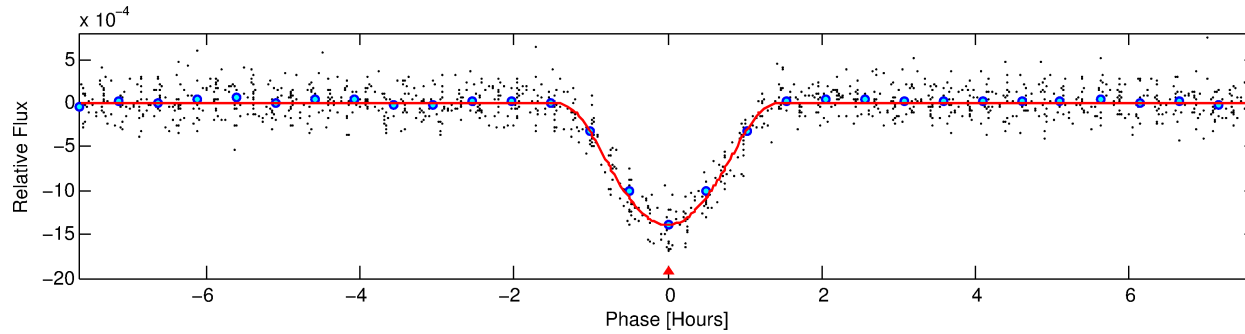
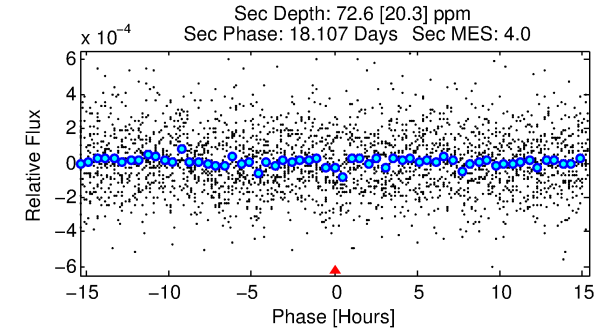
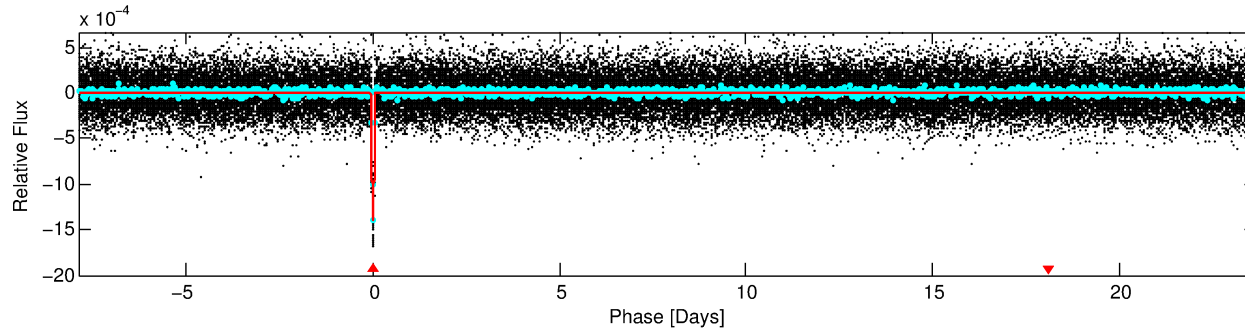
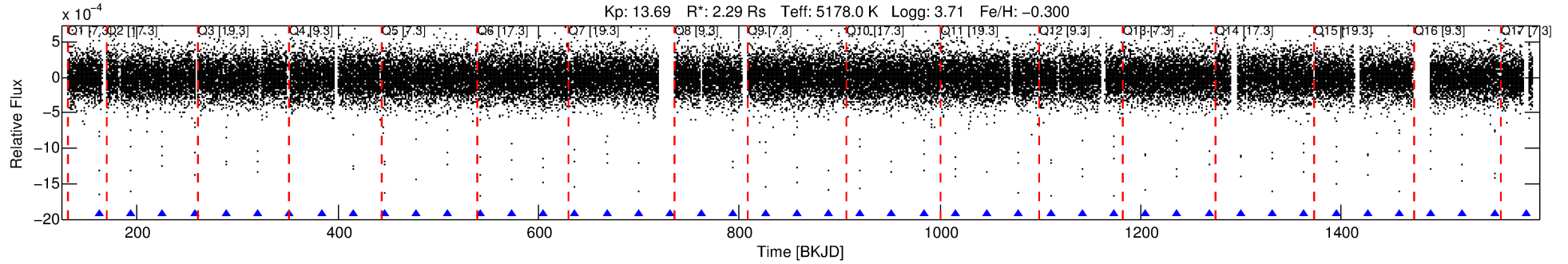
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008480642-01

No Significant Match Found

DV One-Page Summary

KIC: 8480642 Candidate: 1 of 1 Period: 31.591 d
KOI: K05521.01 Corr: 0.991



DV Fit Results:

Period = 31.59117 [0.00003] d
Epoch = 162.5015 [0.0009] BKJD
Rp/R* = 0.0609 [0.0272]
a/R* = 36.24 [4.38]
b = 0.99 [0.04]
Seff = 88.98 [126.41]
Teq = 783 [278] K
Rp = 15.25 [12.01] Re
a = 0.1953 [0.1563] AU
Ag = 6.55 [11.11] [0.50σ]
Teffp = 1937 [457] K [2.16σ]

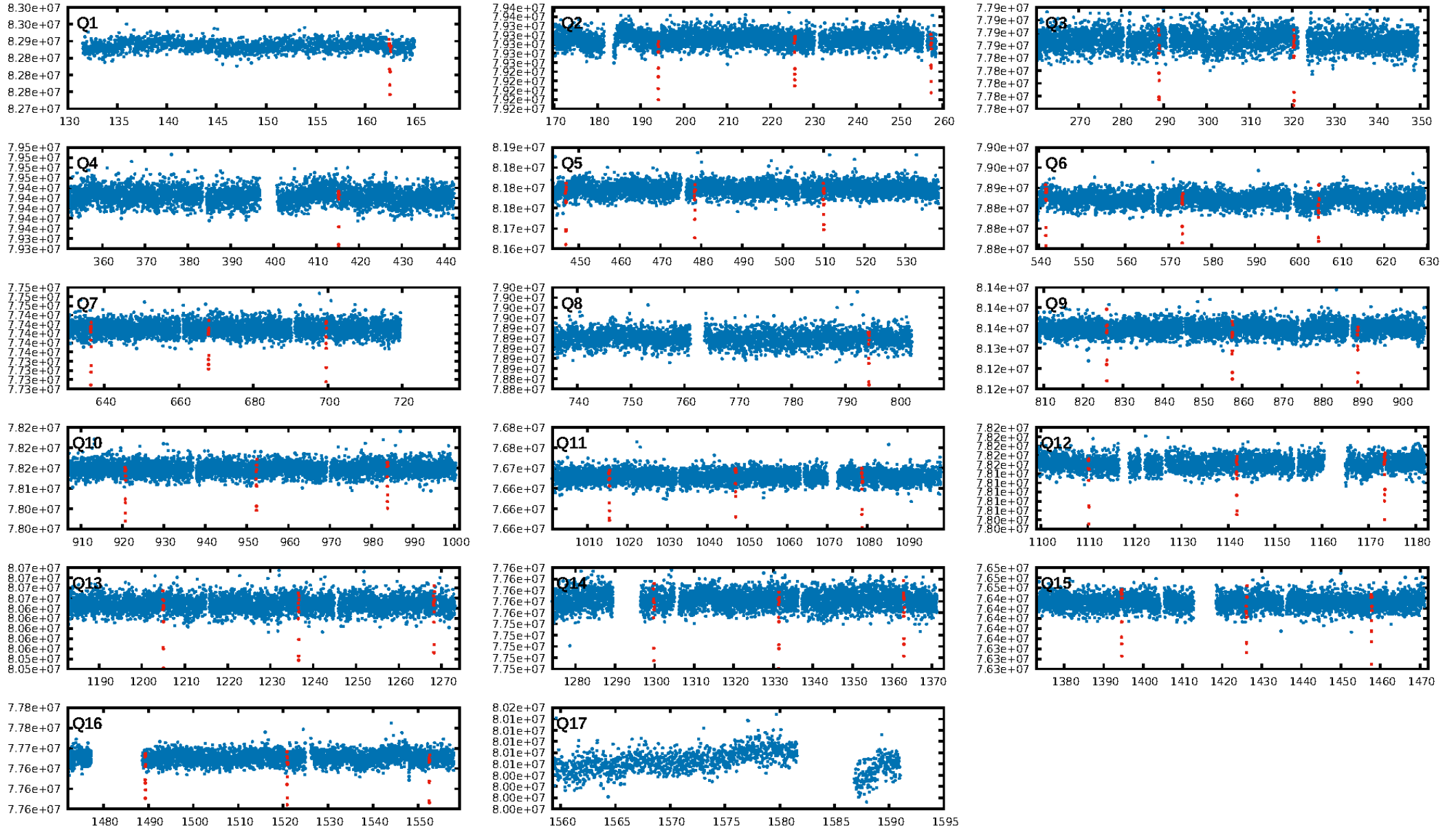
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 90.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [40/40]
GhostDiagnostic-chr: 7.964
Centroid-sig: 1.2%
Centroid-so: 0.178 arcsec [1.34σ]
OotOffset-rm: 0.118 arcsec [1.36σ]
KicOffset-rm: 0.322 arcsec [3.74σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [16/16]

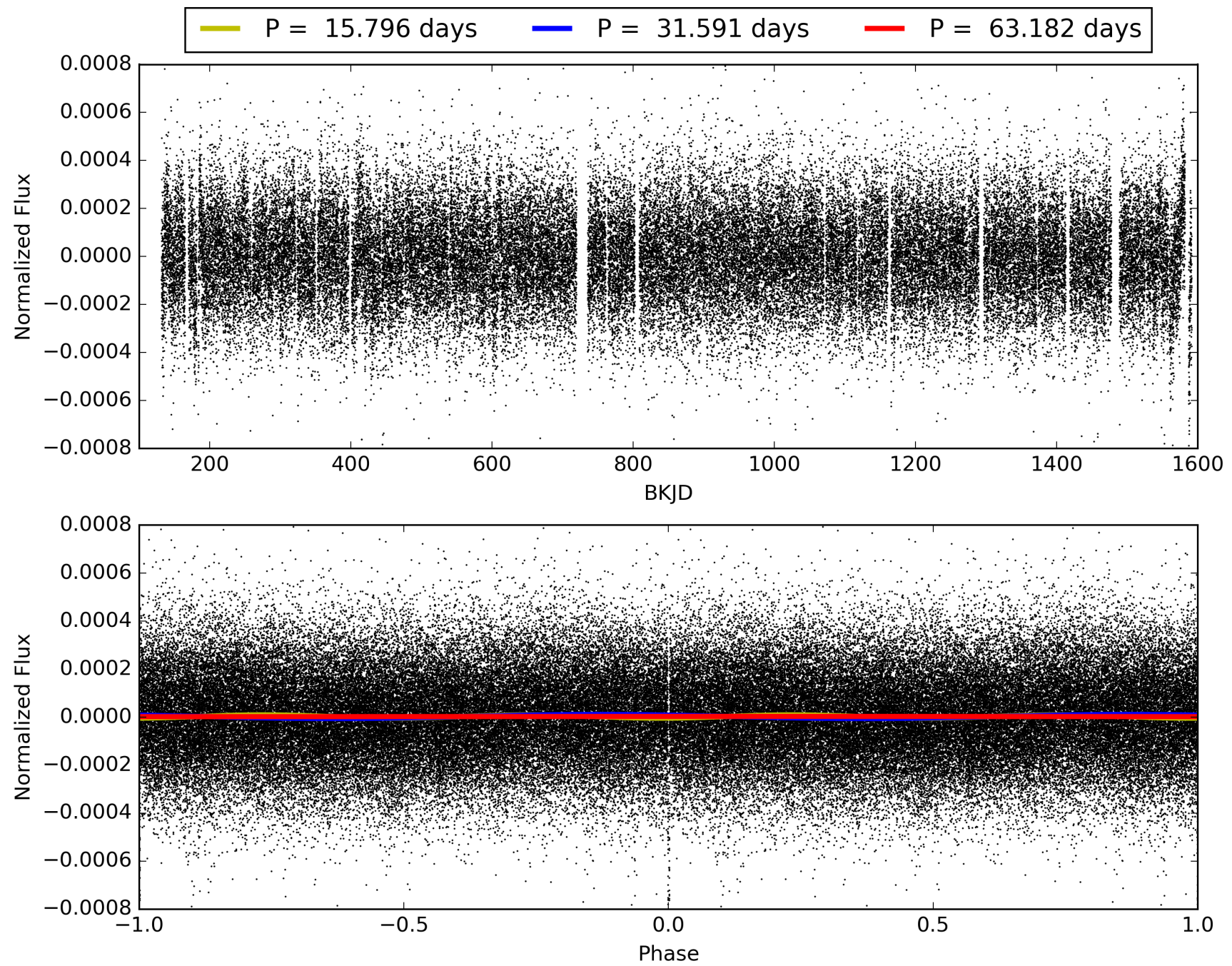
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:44:47 Z

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

TCE 008480642-01, PDC Light Curves

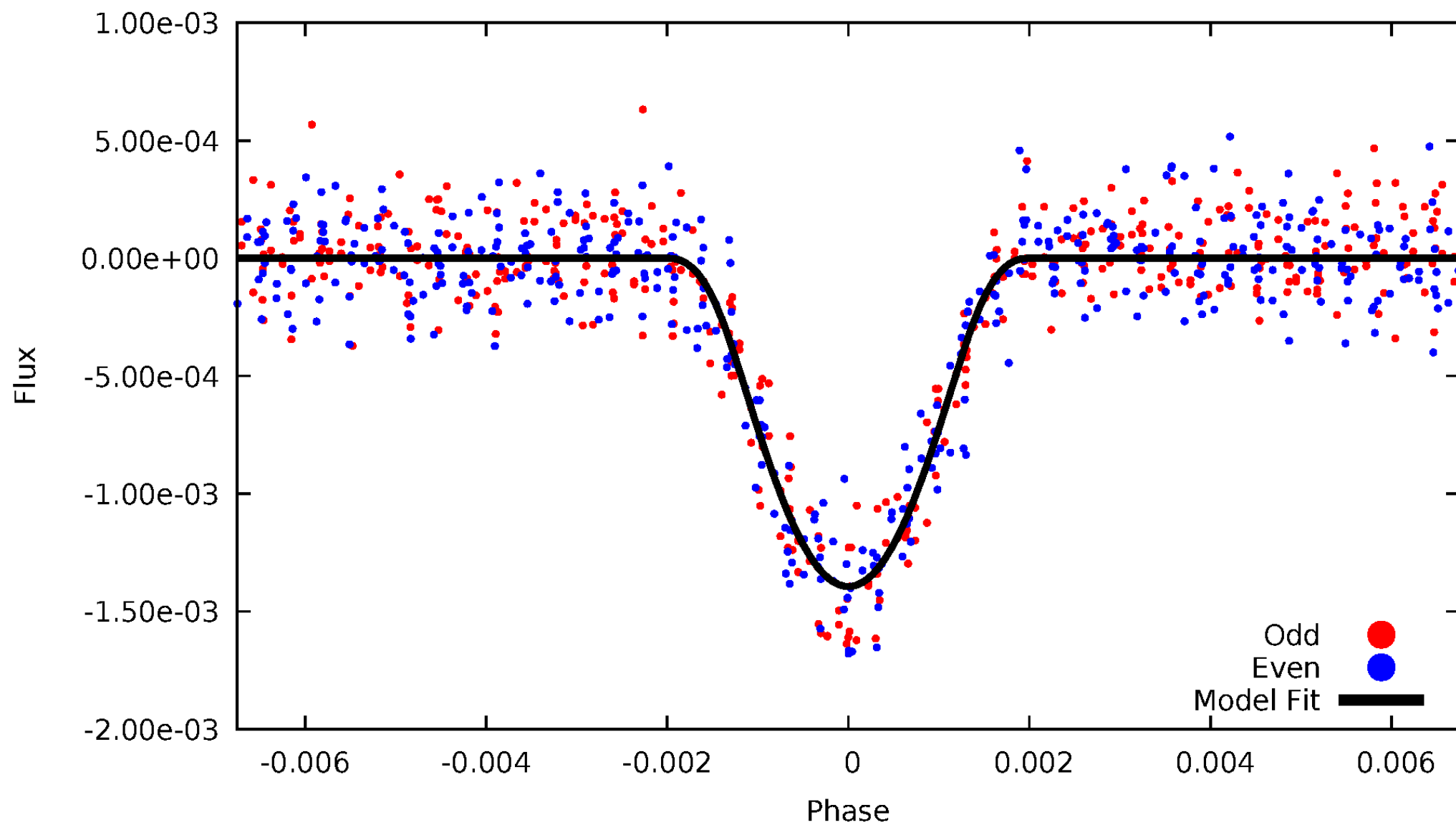


TCE 008480642-01



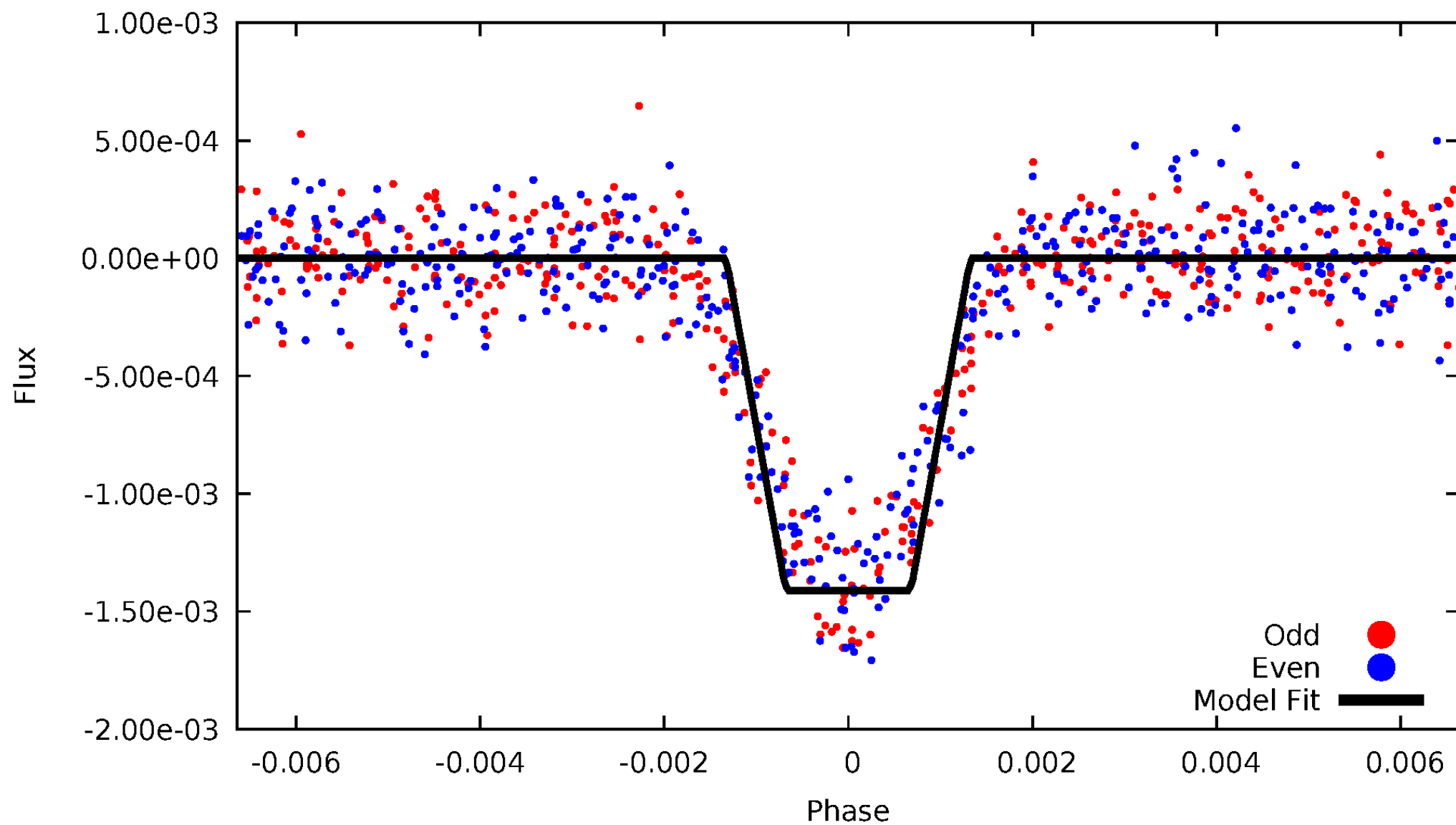
DV Odd/Even

TCE 008480642-01

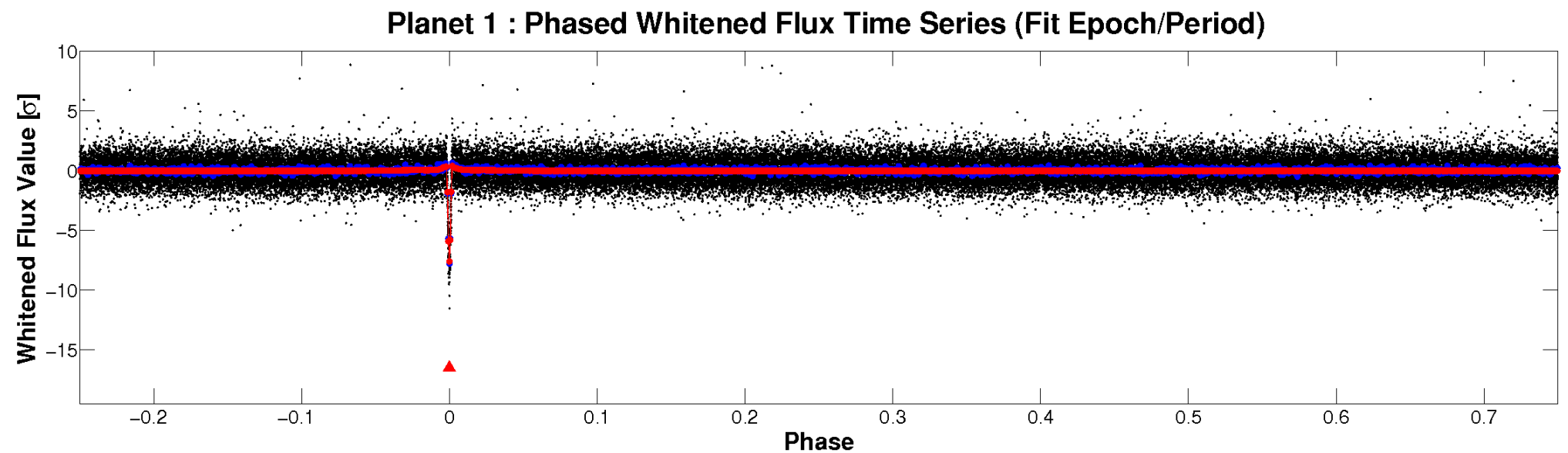
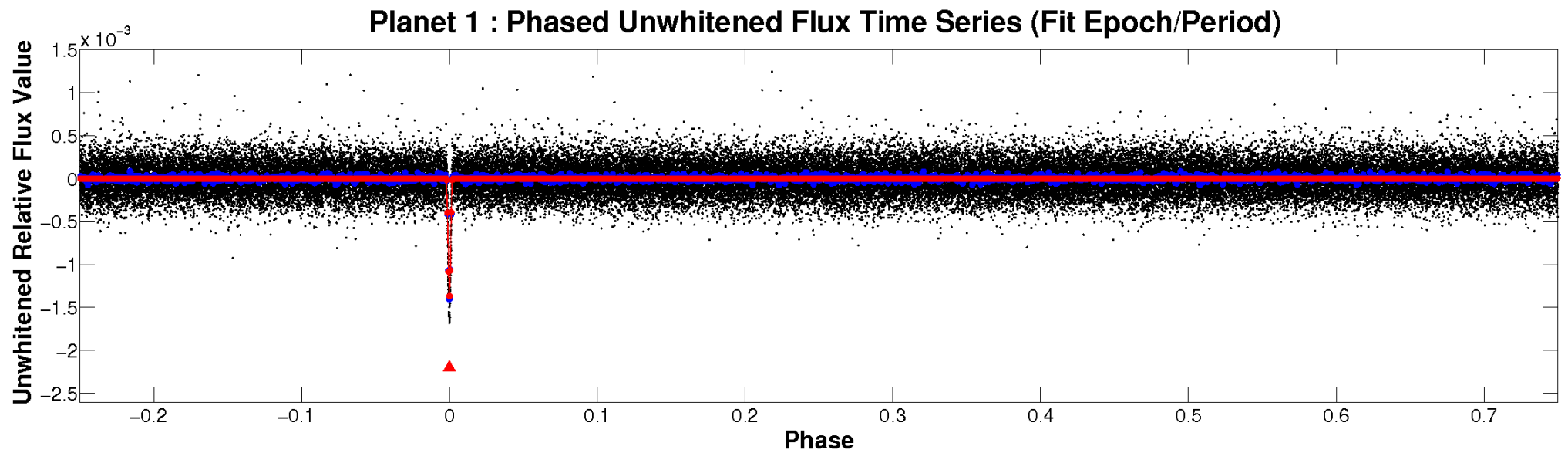


ALT Odd/Even

TCE 008480642-01

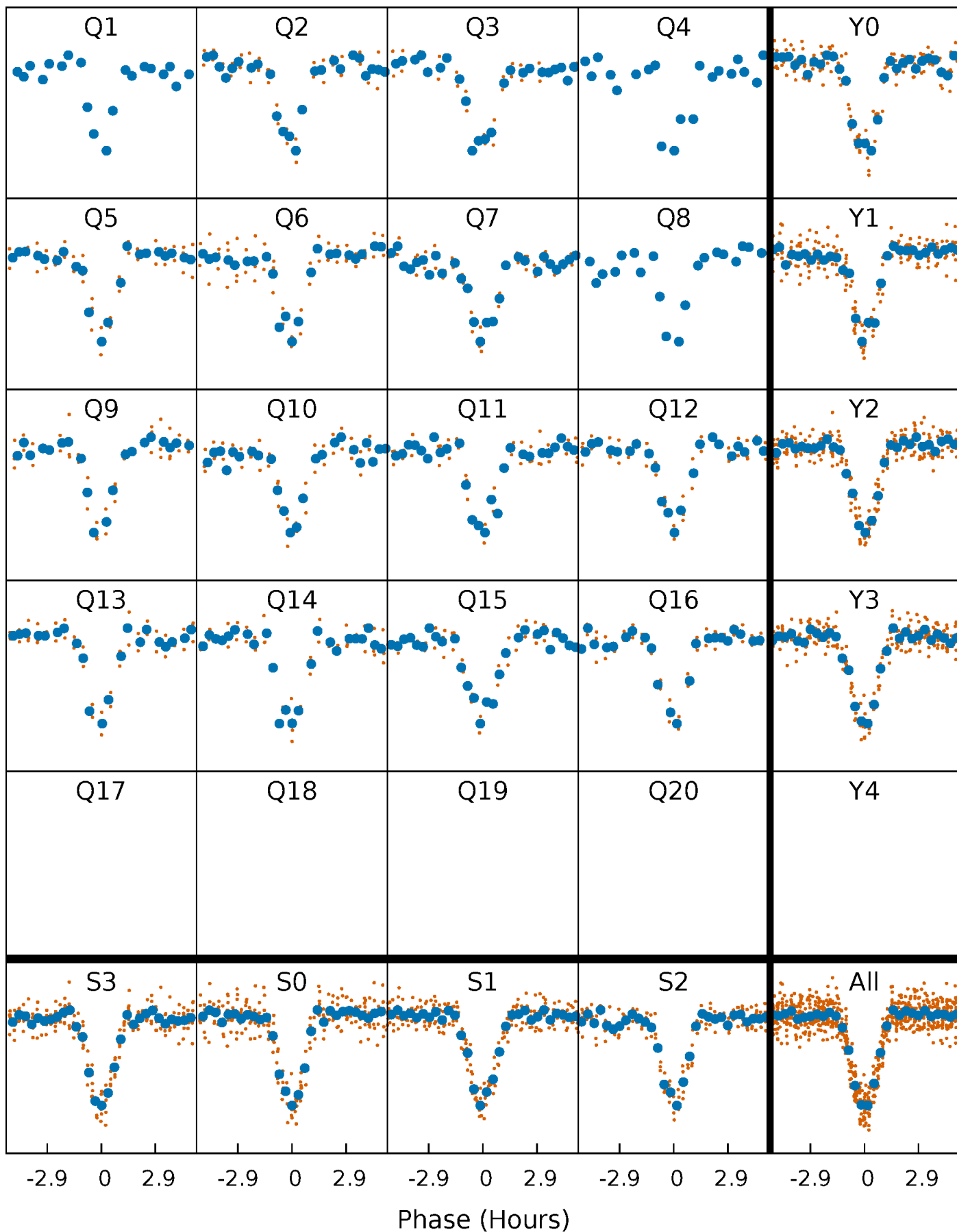


Non-Whitened Vs. Whitened Light Curve



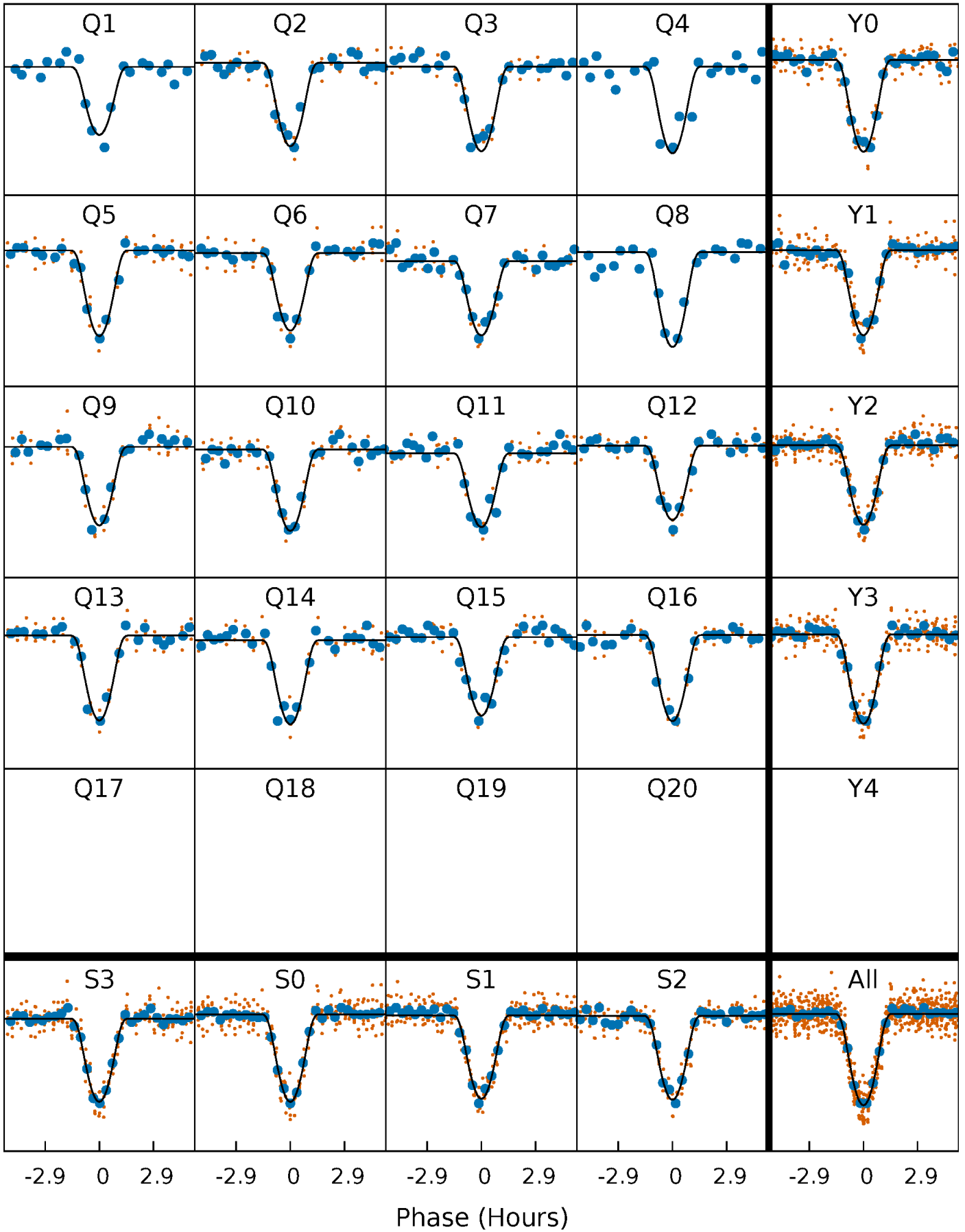
PDC Quarter-Phased Transit Curves

TCE 008480642-01 P= 31.591175 Days $T_0=162.501518$ (BKJD)



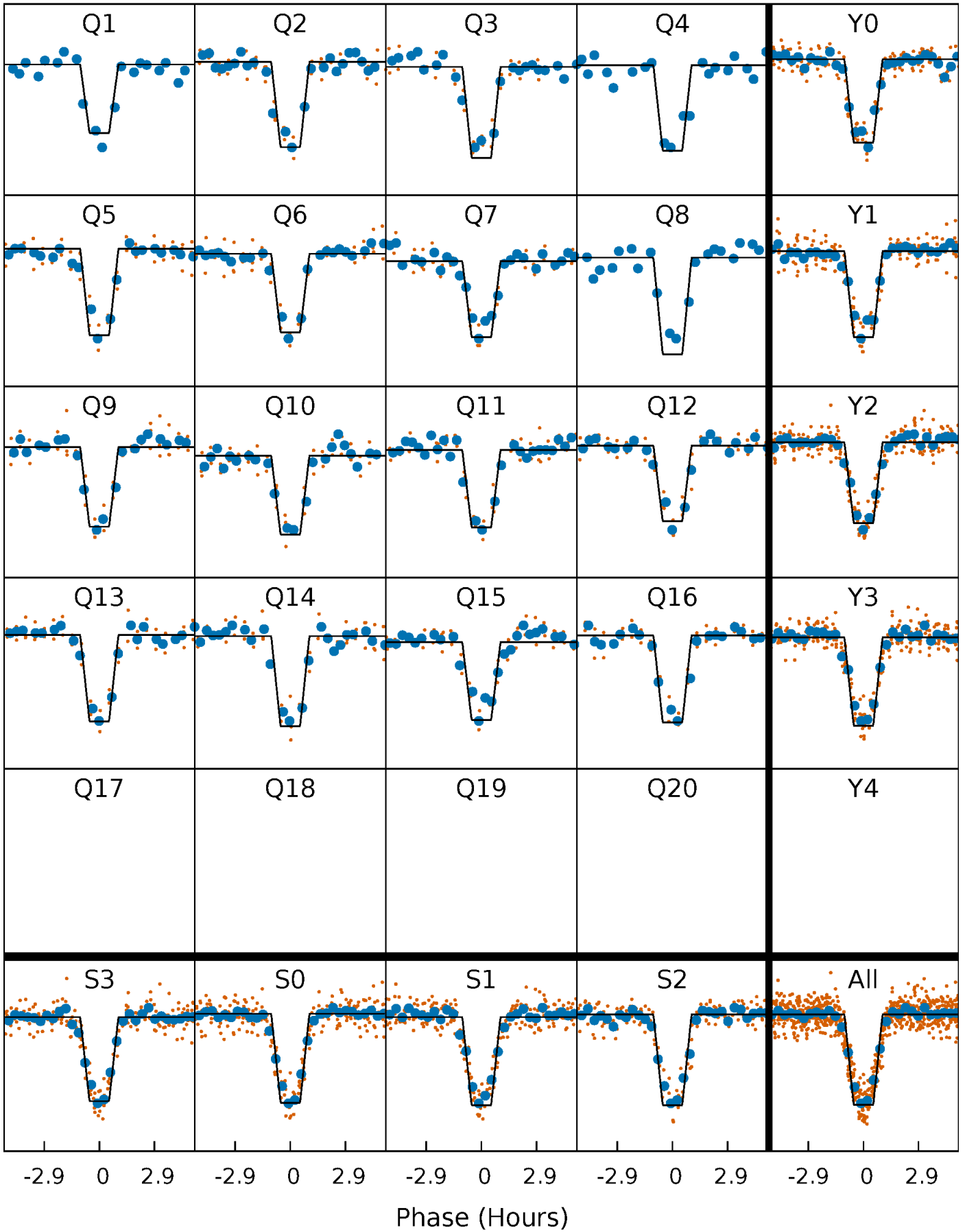
DV Quarter-Phased Transit Curves

TCE 008480642-01 P= 31.591175 Days $T_0=162.501518$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

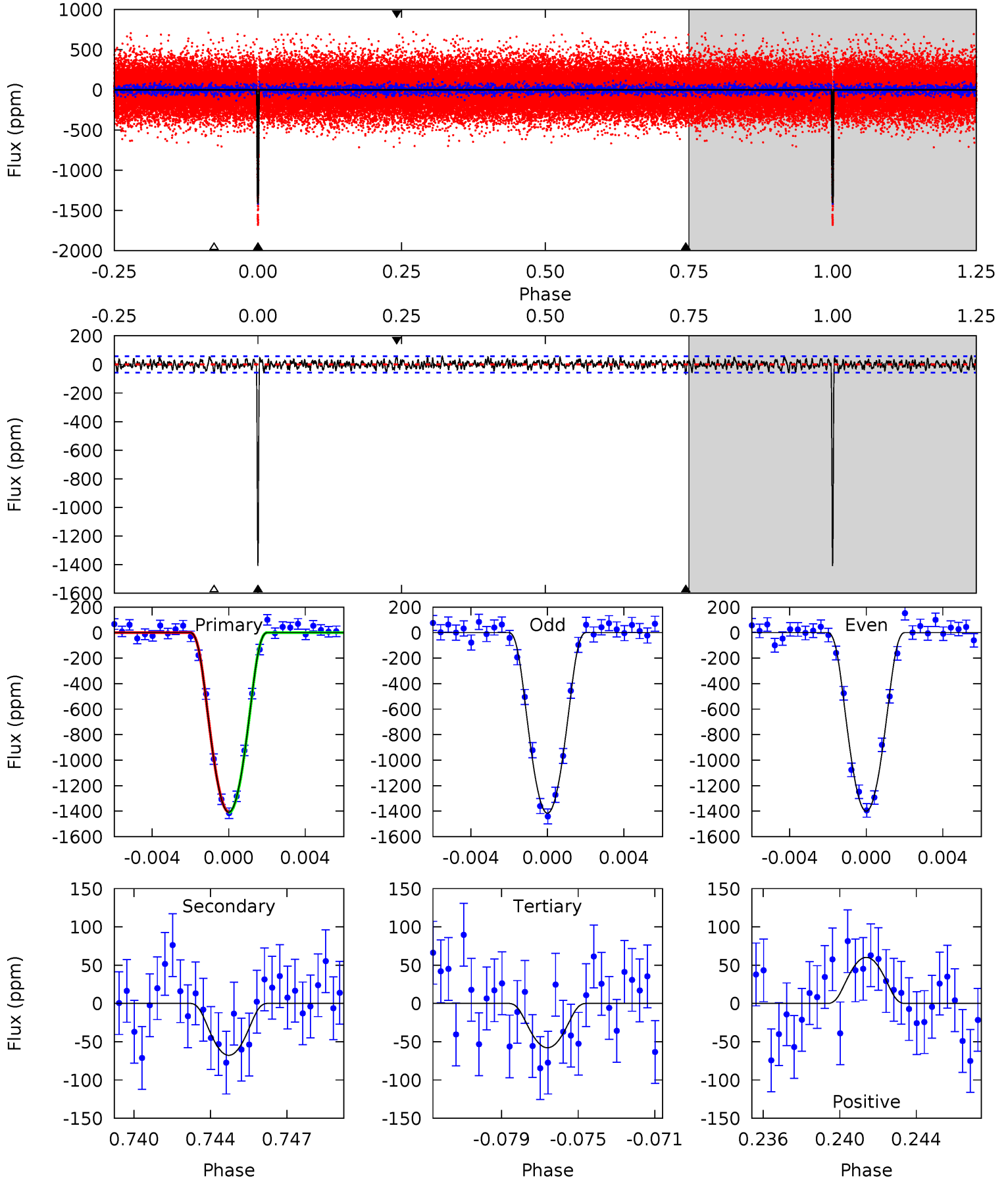
TCE 008480642-01 P= 31.591085 Days $T_0=162.503579$ (BKJD)



DV Model-Shift Uniqueness Test

008480642-01, P = 31.591175 Days, E = 130.910343 Days

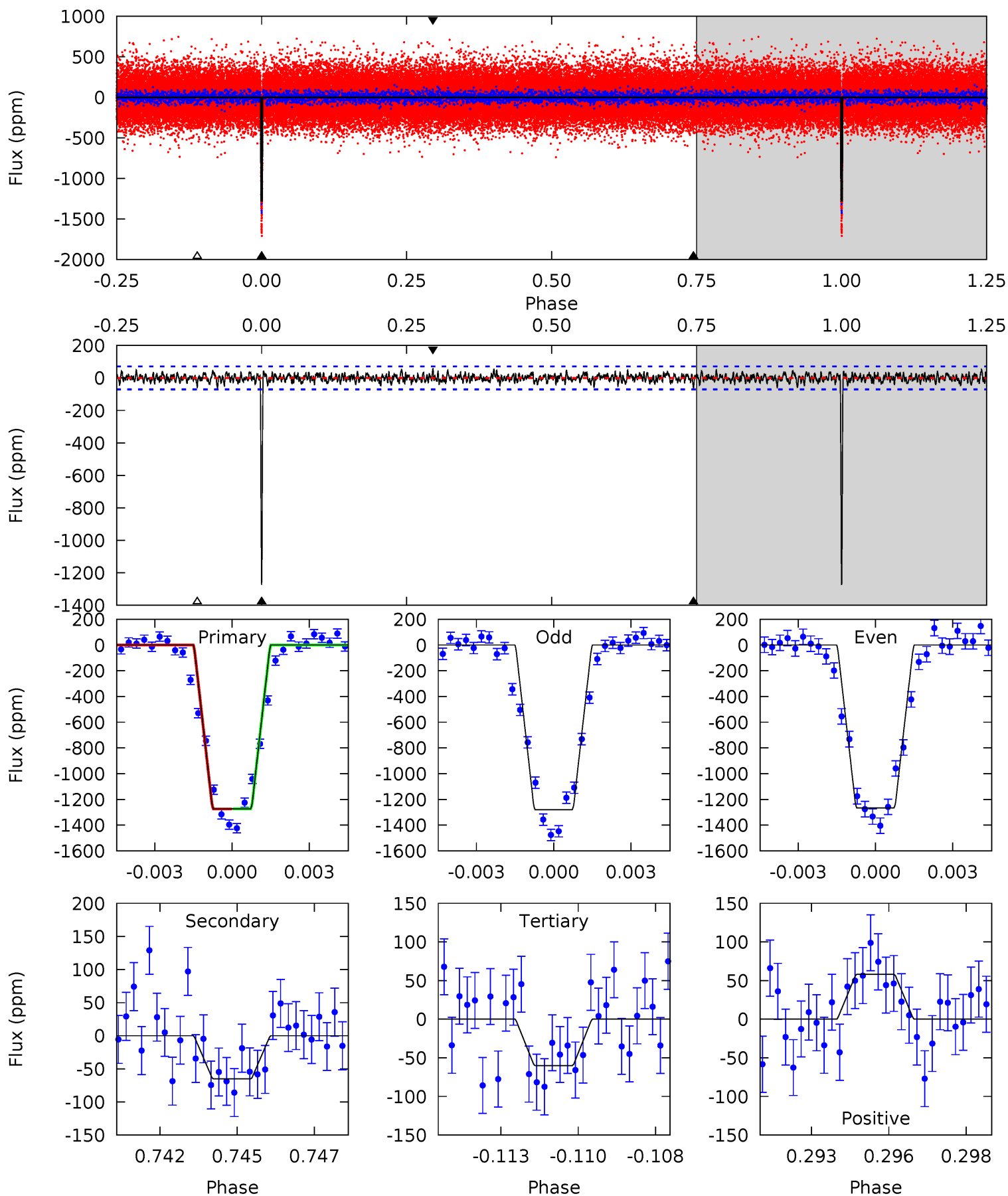
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
127.8	6.15	5.25	5.47	5.20	2.88	1.73	122.6	122.3	0.90	0.69	0.74	1.01	0.04	0.35



Alt Model-Shift Uniqueness Test

008480642-01, $P = 31.591085$ Days, $E = 130.912494$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
94.8	4.85	4.47	4.31	5.27	3.00	1.33	90.3	90.4	0.38	0.54	0.51	1.01	0.04	0.04



Stellar Parameters For KIC 008480642

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5178^{+156}_{-141}	$3.714^{+0.878}_{-0.293}$	$-0.300^{+0.350}_{-0.250}$	$2.295^{+1.218}_{-1.489}$	$0.995^{+0.228}_{-0.228}$	$0.116^{+2.585}_{-0.075}$
	+3%/-3%	+24%/-8%	+117%/-83%	+53%/-65%	+23%/-23%	+2228%/-64%
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 008480642-01 / KOI 5521.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-68 ± 11	$14.00^{+8.77}_{-6.85}$	1076^{+160}_{-220}	2632^{+438}_{-240}	$7.341^{+20.119}_{-4.565}$
Alt.	-65 ± 13	$8.84^{+8.25}_{-5.58}$	1071^{+165}_{-219}	2964^{+887}_{-391}	17^{+112}_{-13}

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

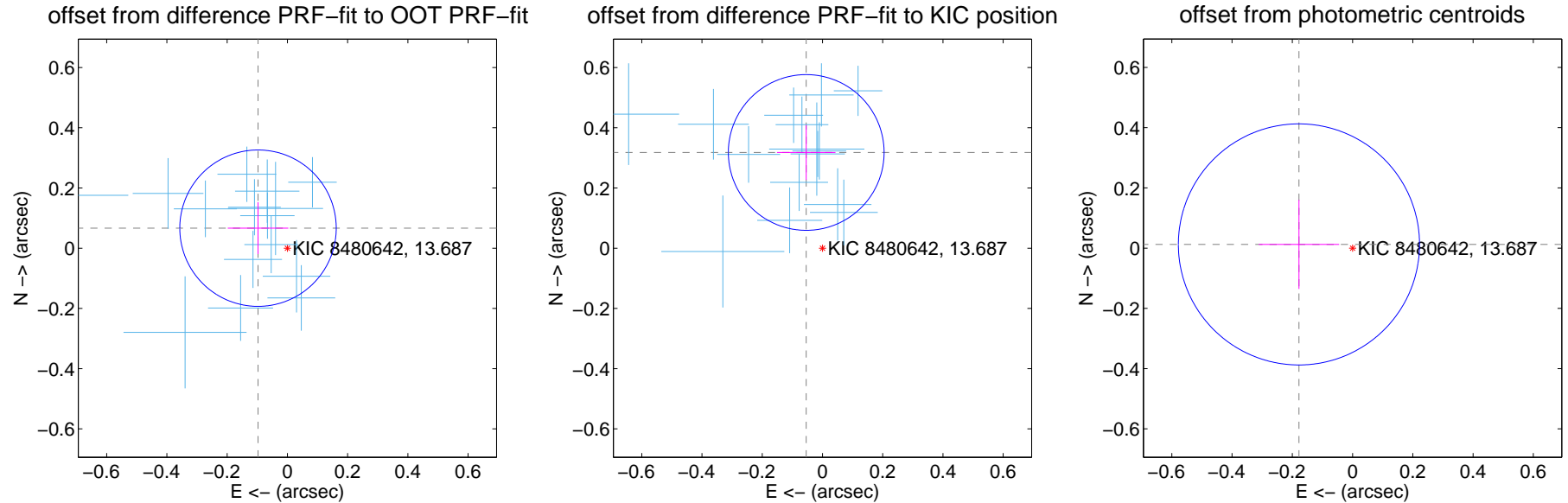
DV Centroid Data

Supplemental centroid analysis for 008480642-01. Kepler magnitude: 13.69. Transit SNR 72.39

There are 16 quarters with good PRF difference image offsets

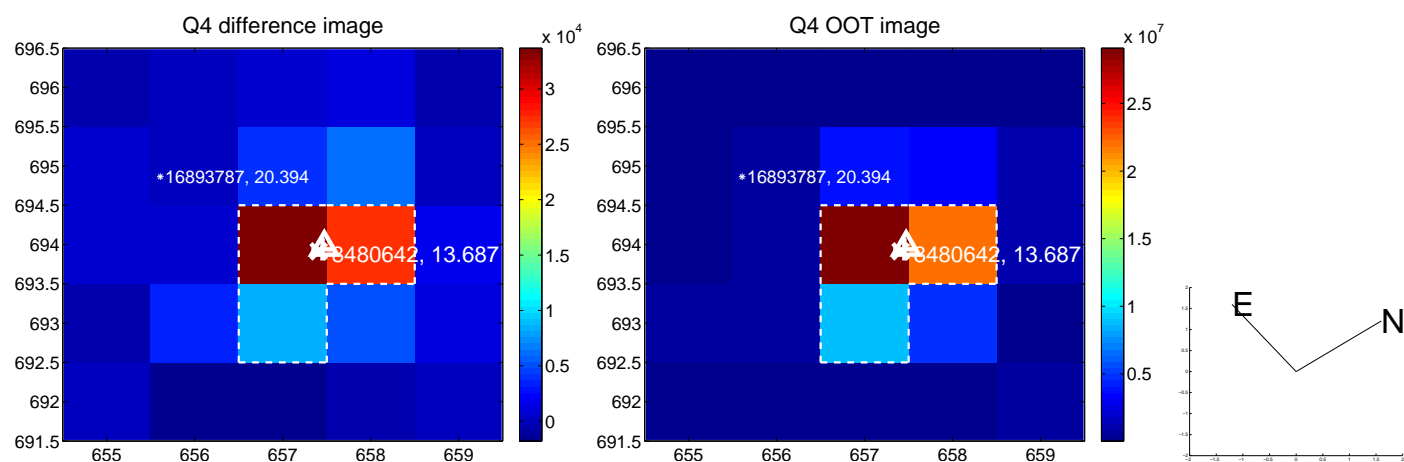
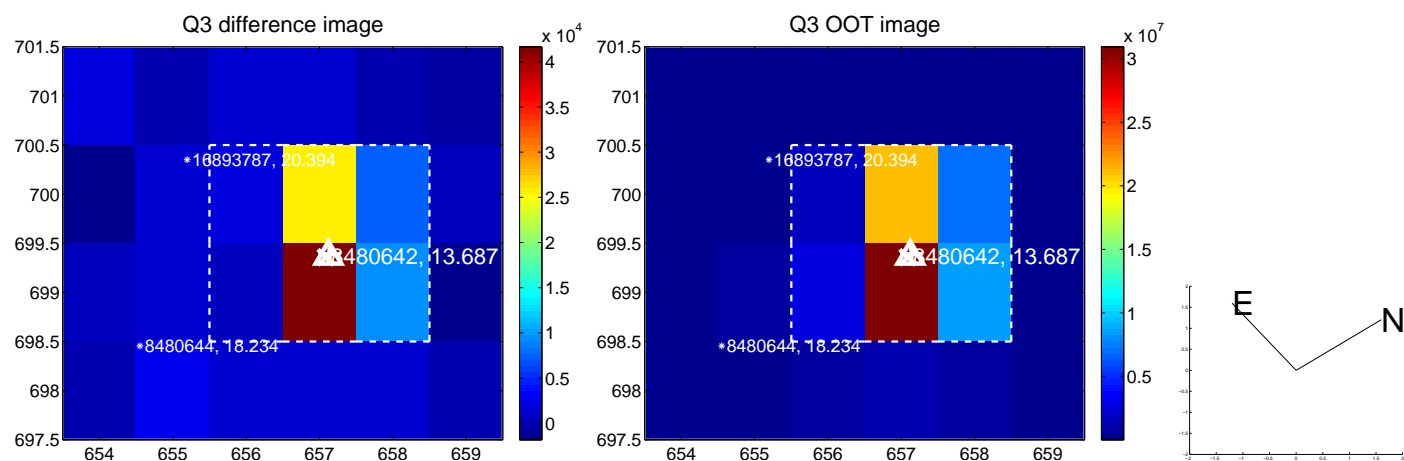
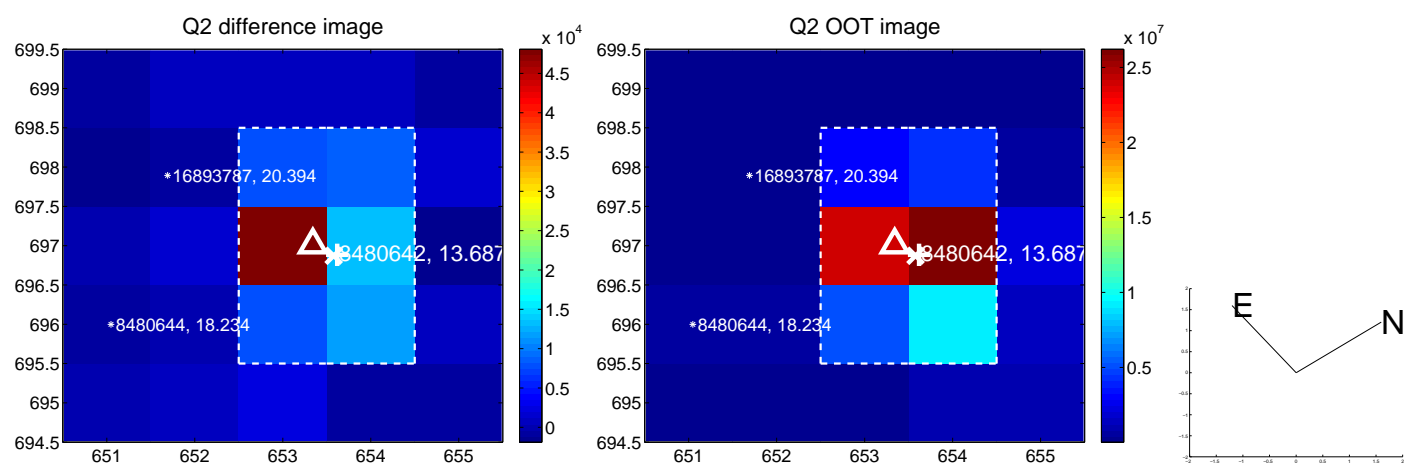
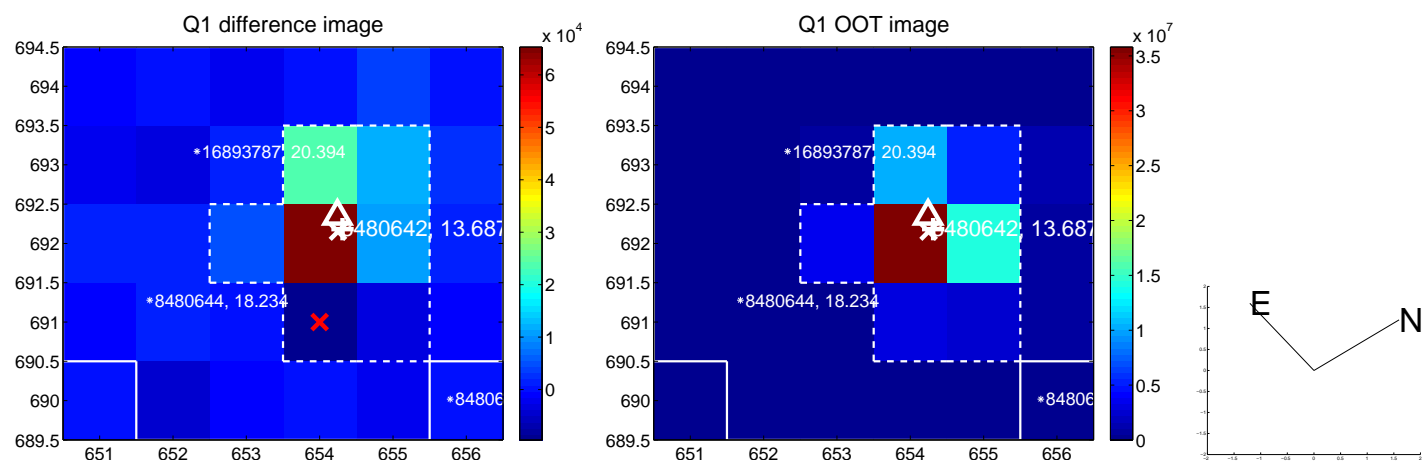
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.118 ± 0.087	1.36	0.098 ± 0.101	0.066 ± 0.086
PRF-fit source offset from KIC position	0.322 ± 0.086	3.74	0.054 ± 0.097	0.318 ± 0.091
photometric centroid source offset	0.18 ± 0.13	1.34	0.18 ± 0.13	0.01 ± 0.15

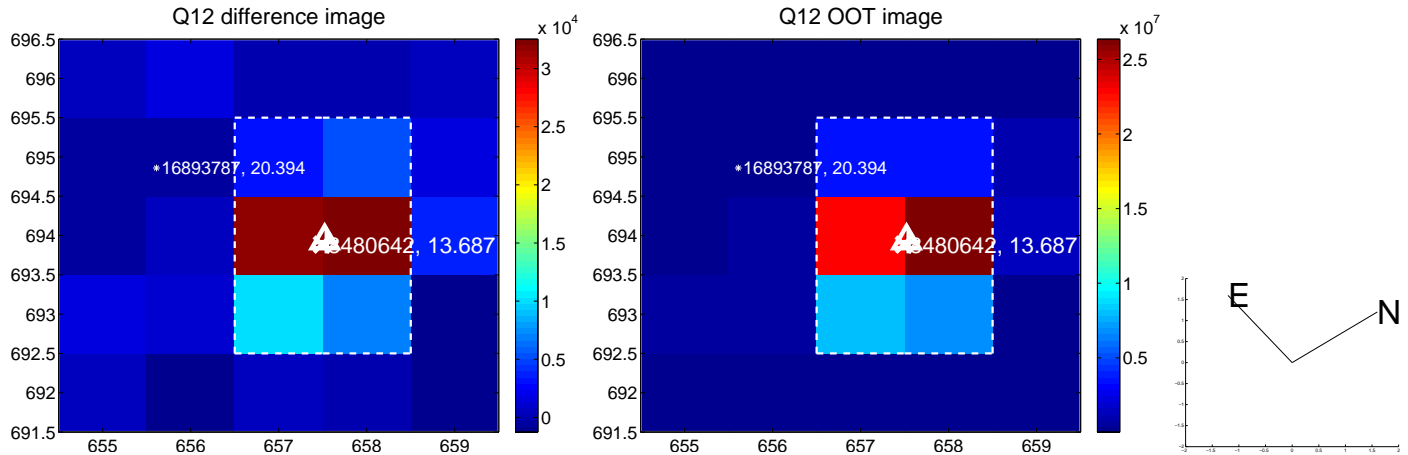
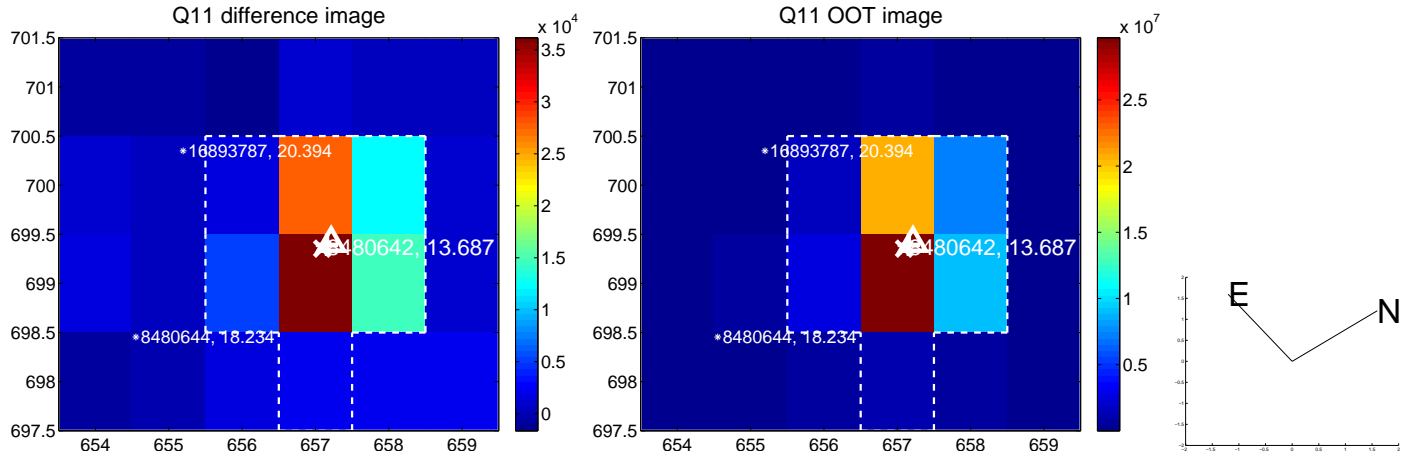
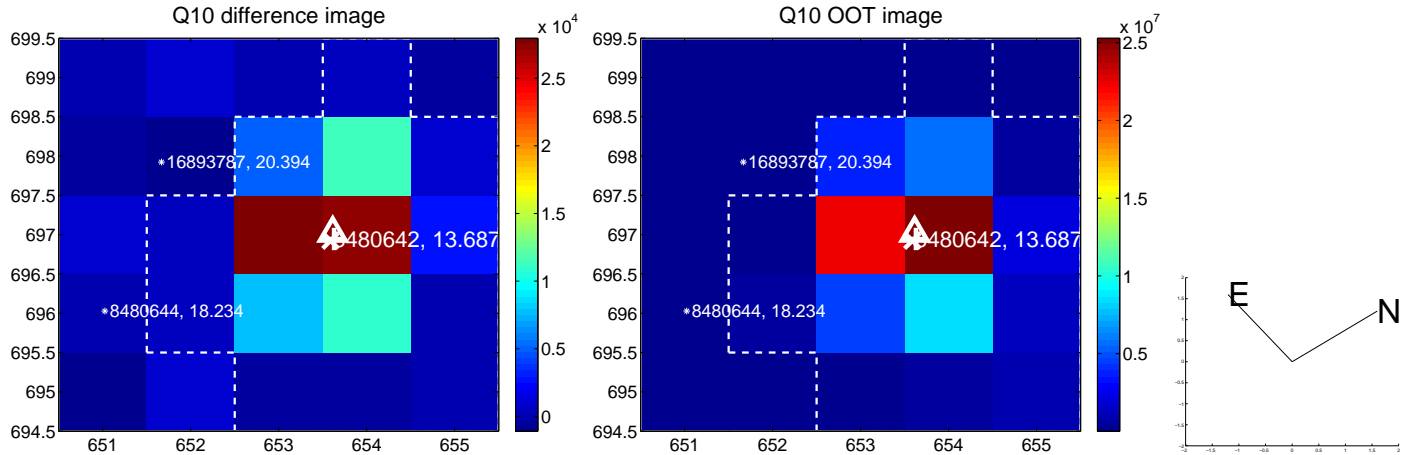
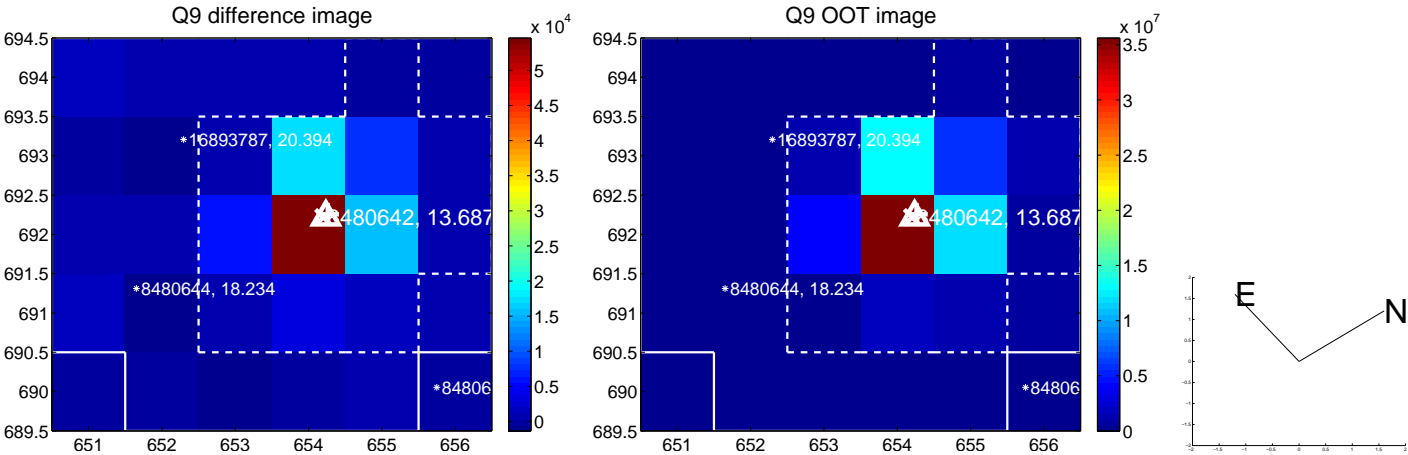


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

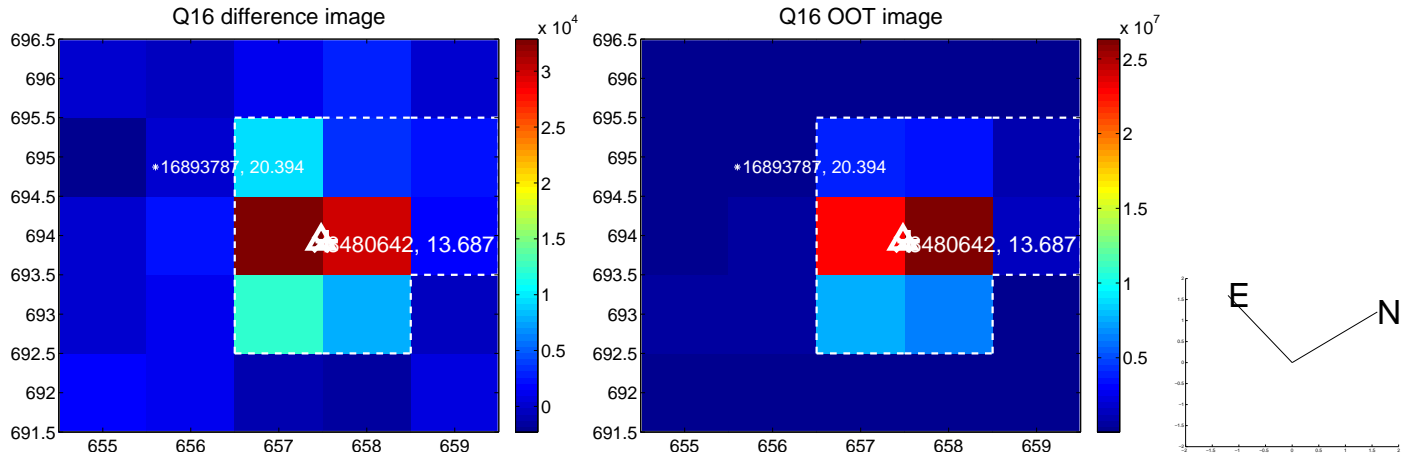
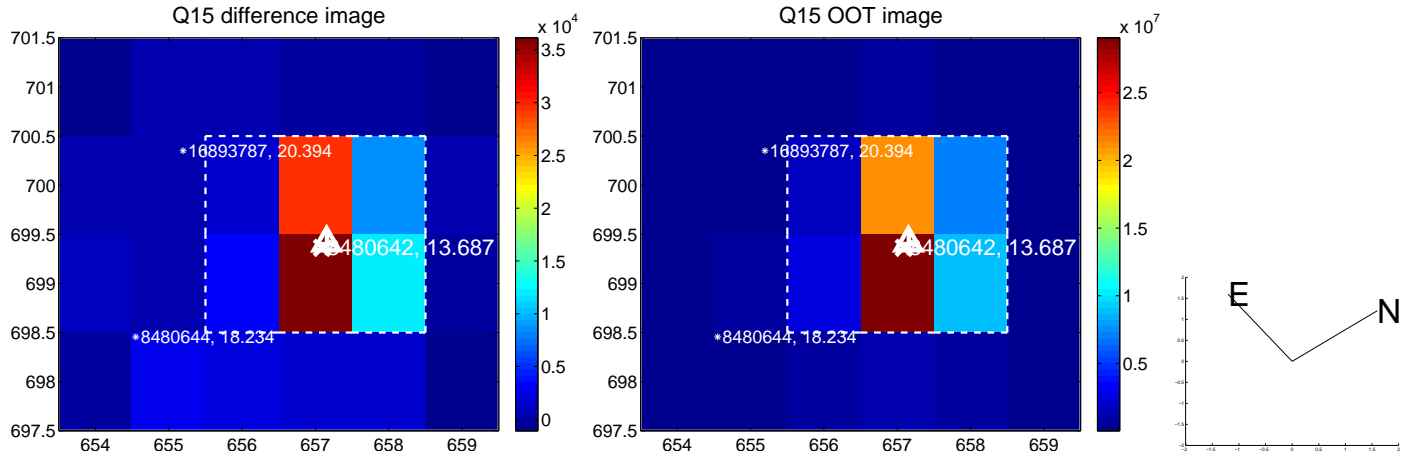
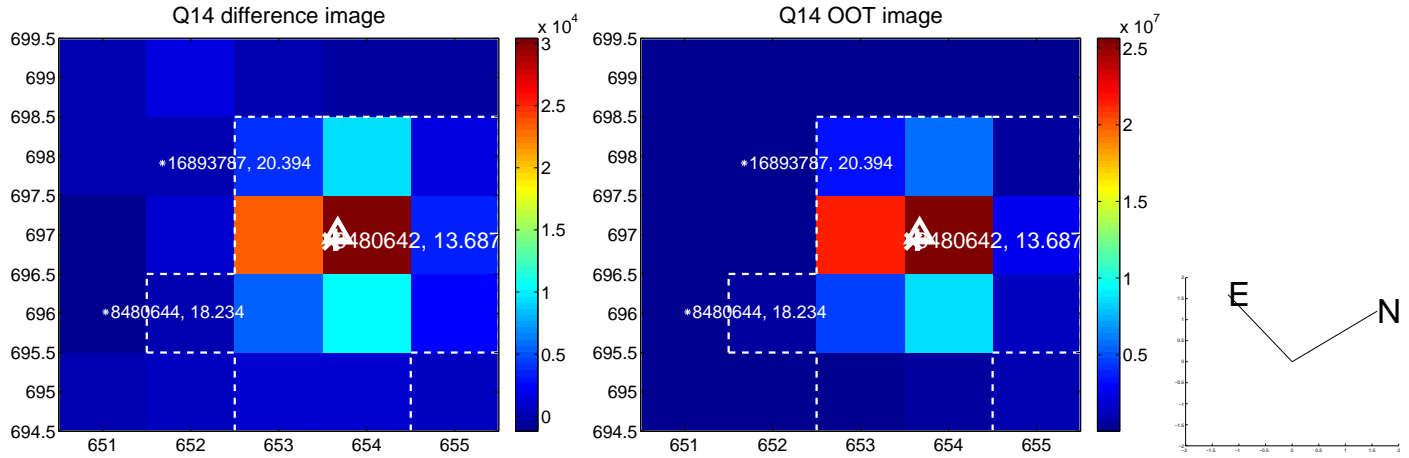
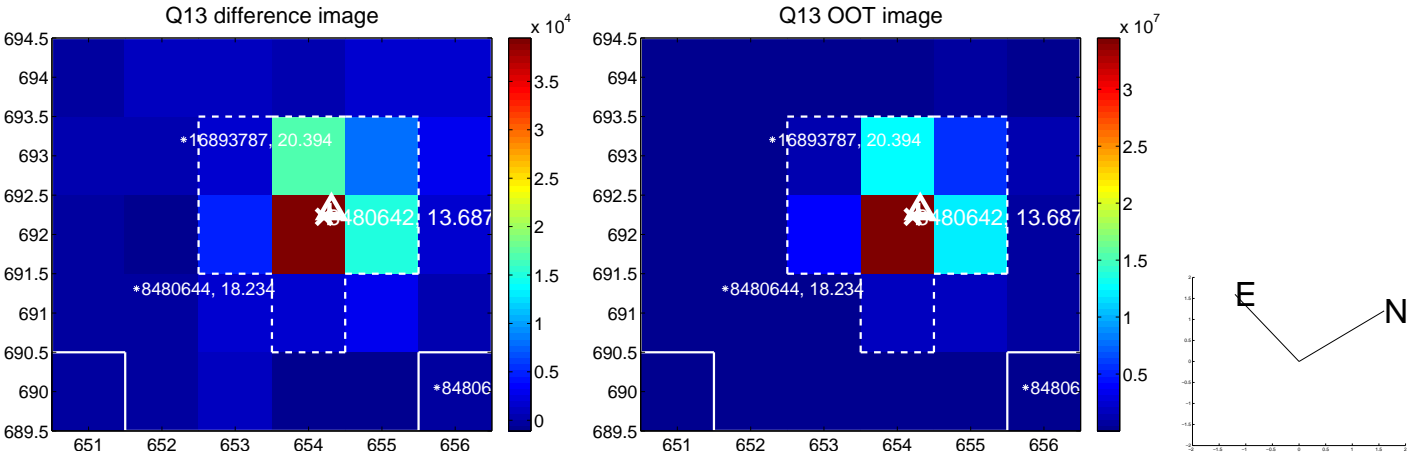
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



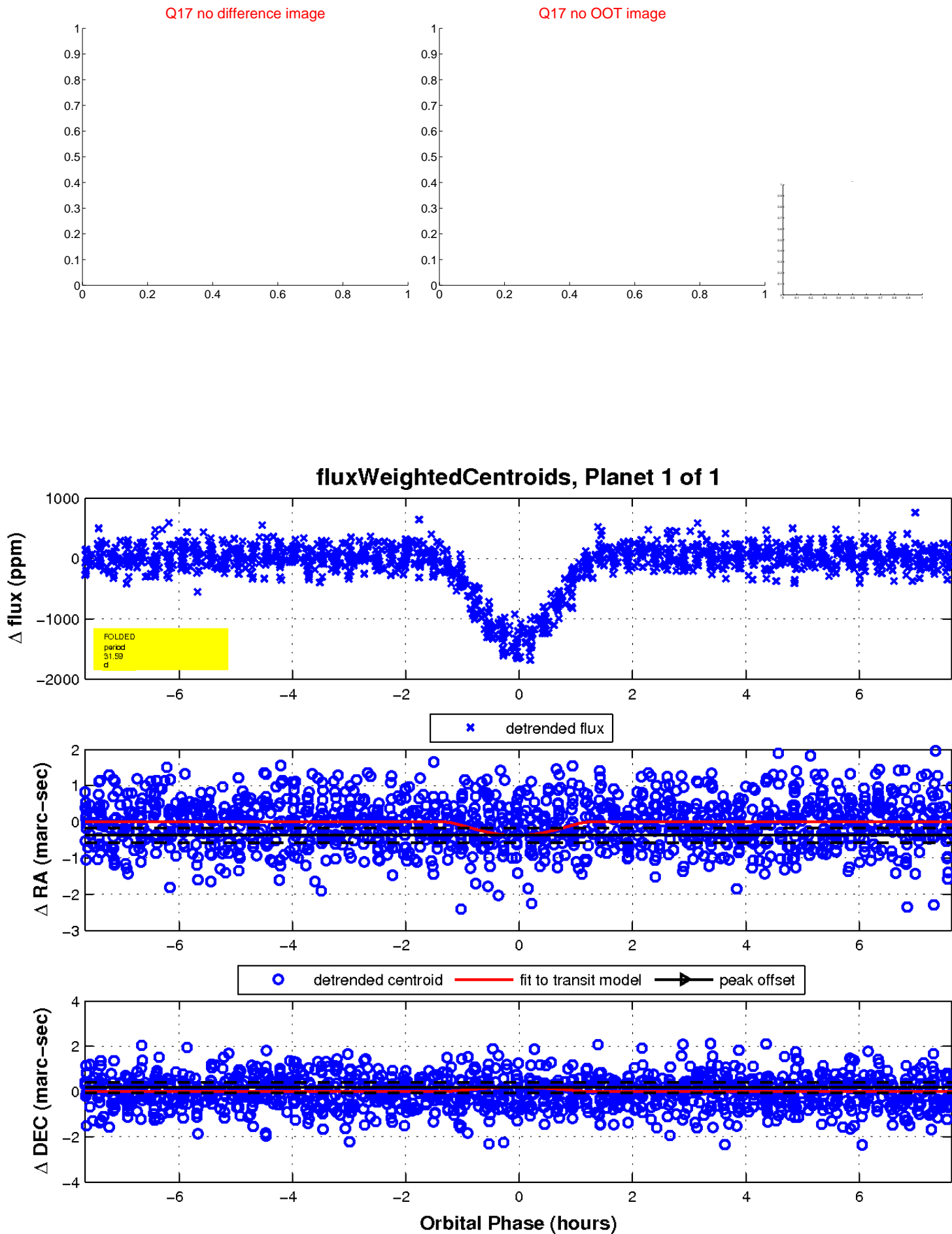
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

