

KIC 007138800

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})
007138800-01	OBS	No	697.412571	158.654328	126.8	11.725	8.8	8.9	0.97	5592	1.27	0.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007138800-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

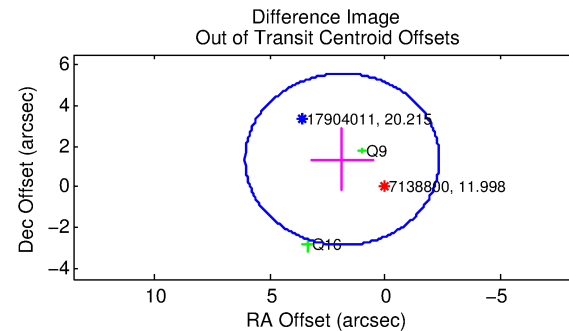
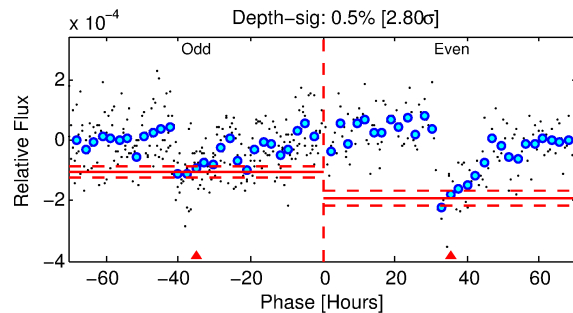
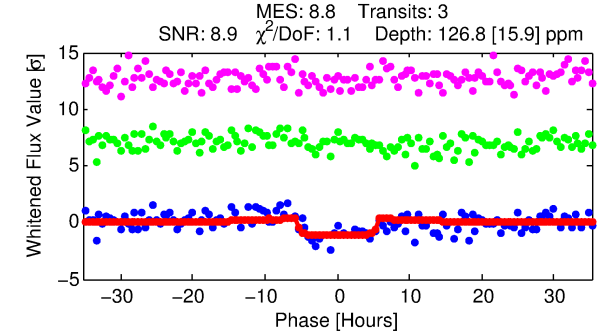
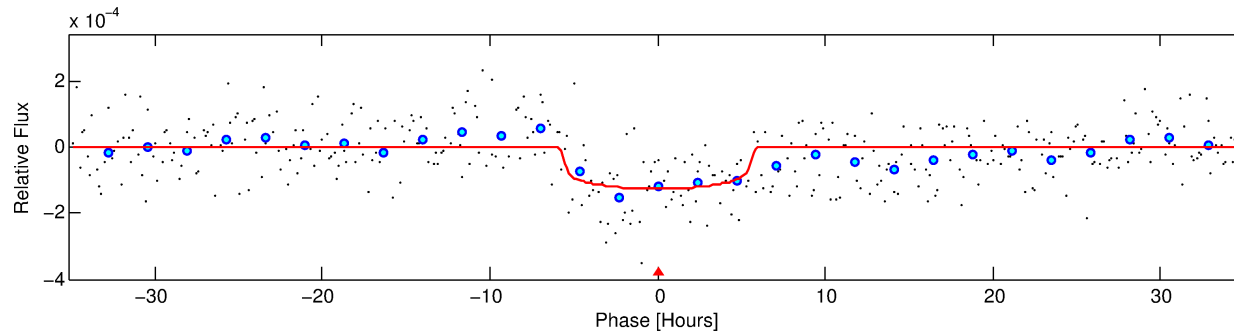
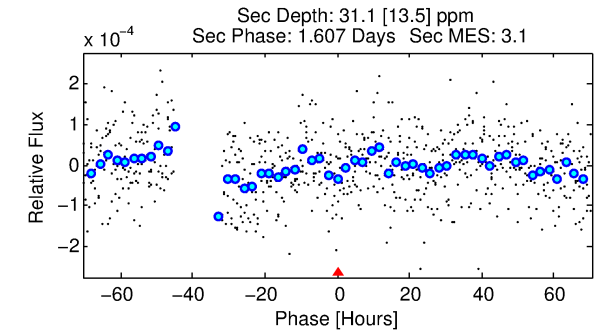
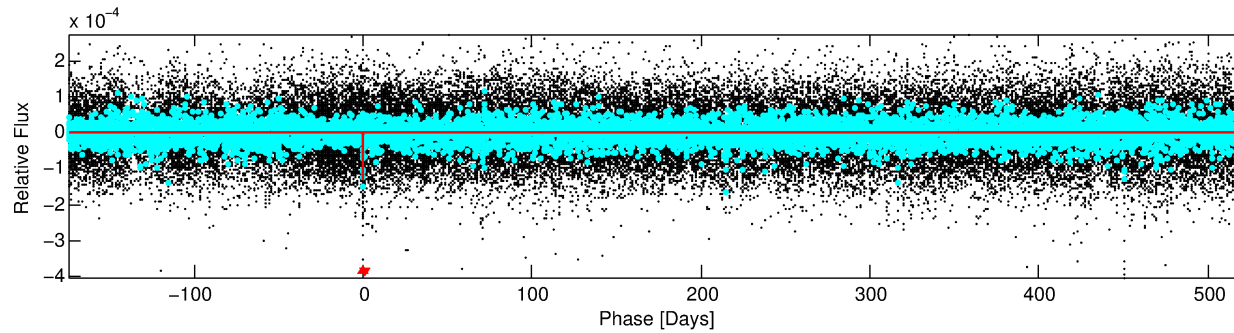
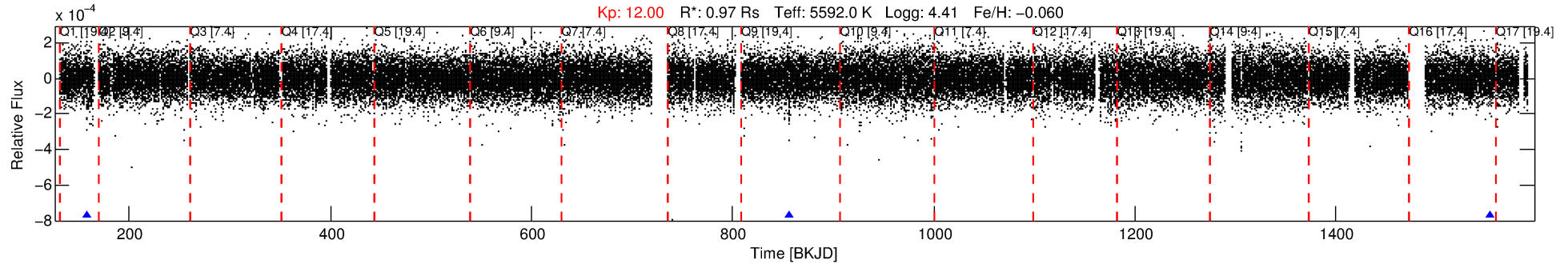
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007138800-01

No Significant Match Found

DV One-Page Summary

KIC: 7138800 Candidate: 1 of 1 Period: 697.413 d



DV Fit Results:

Period = 697.41257 [0.01192] d
Epoch = 158.6543 [0.0161] BKJD
Rp/R* = 0.0120 [0.0029]
a/R* = 235.35 [246.36]
b = 0.87 [0.30]
Seff = 0.38 [0.10]
Teq = 200 [13] K
Rp = 1.27 [0.39] Re
a = 1.4771 [0.2355] AU
Ag = 23003.72 [15765.46] [1.46σ]
Teffp = 3814 [624] K [5.79σ]

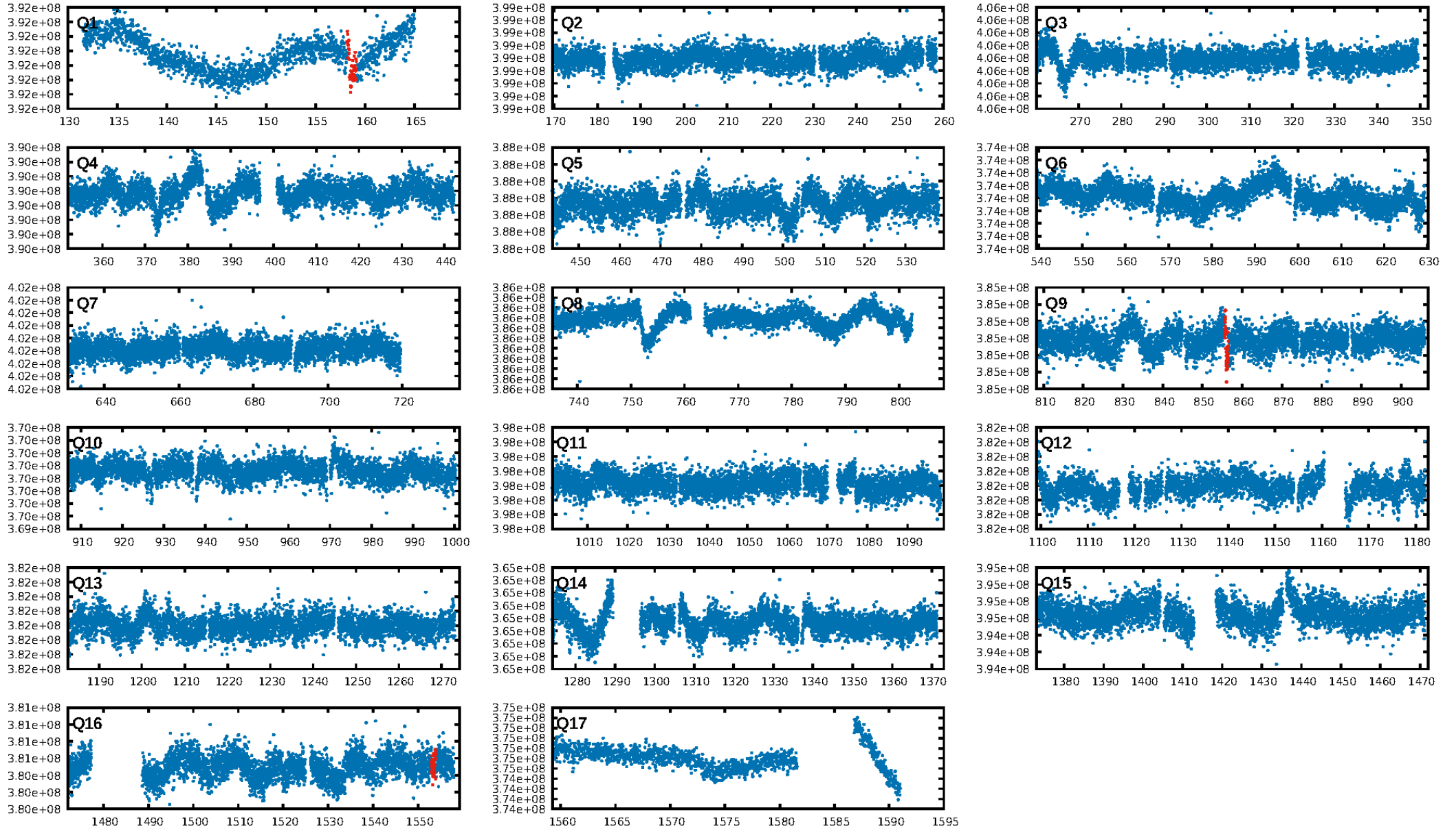
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 97.1%
Bootstrap-pfa: 1.10e-12
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -1.12
Centroid-sig: 24.5%
Centroid-so: 0.909 arcsec [0.87σ]
OotOffset-rm: 2.307 arcsec [1.65σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-rm: 1.911 arcsec [1.35σ]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

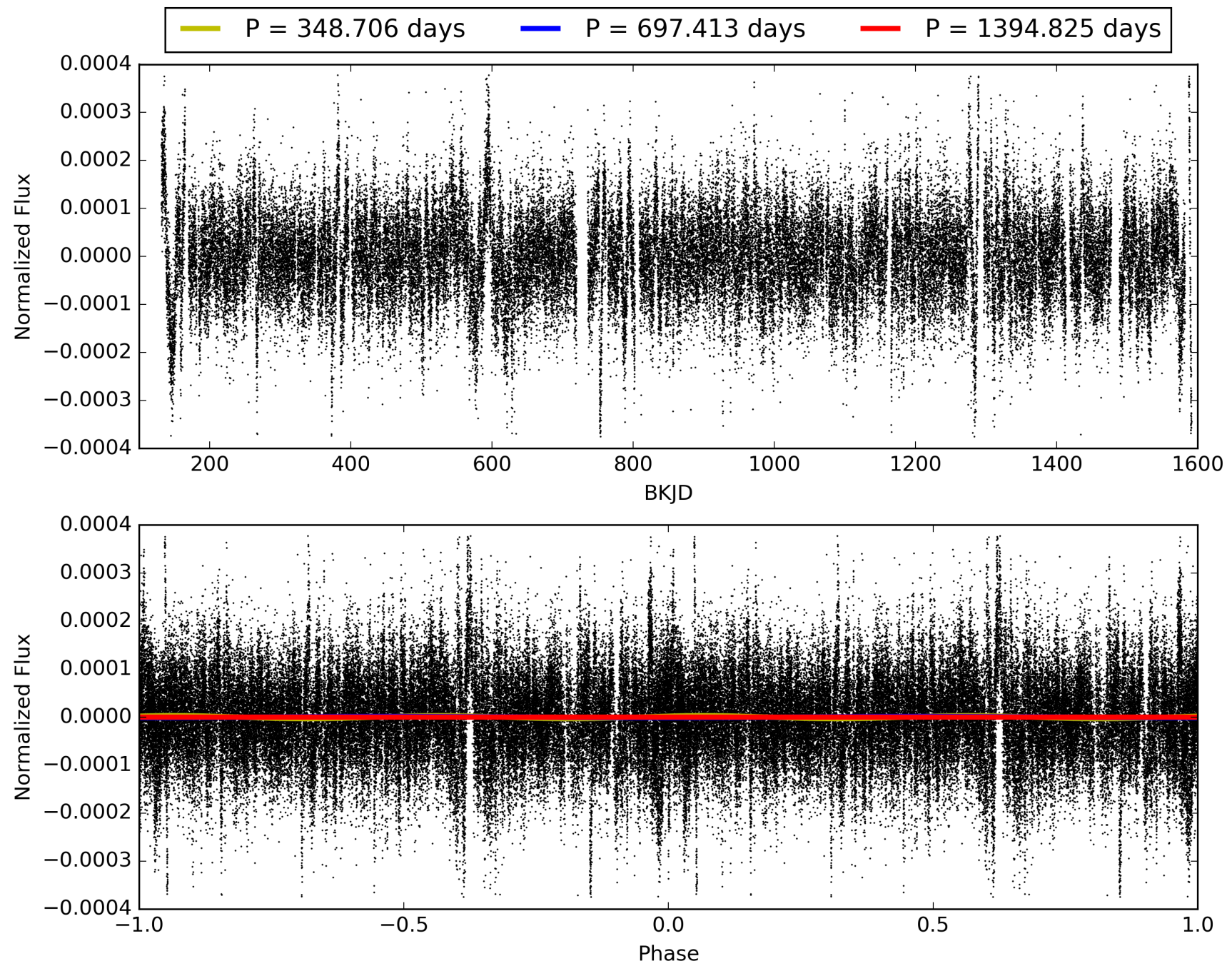
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:06:27 Z

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

TCE 007138800-01, PDC Light Curves

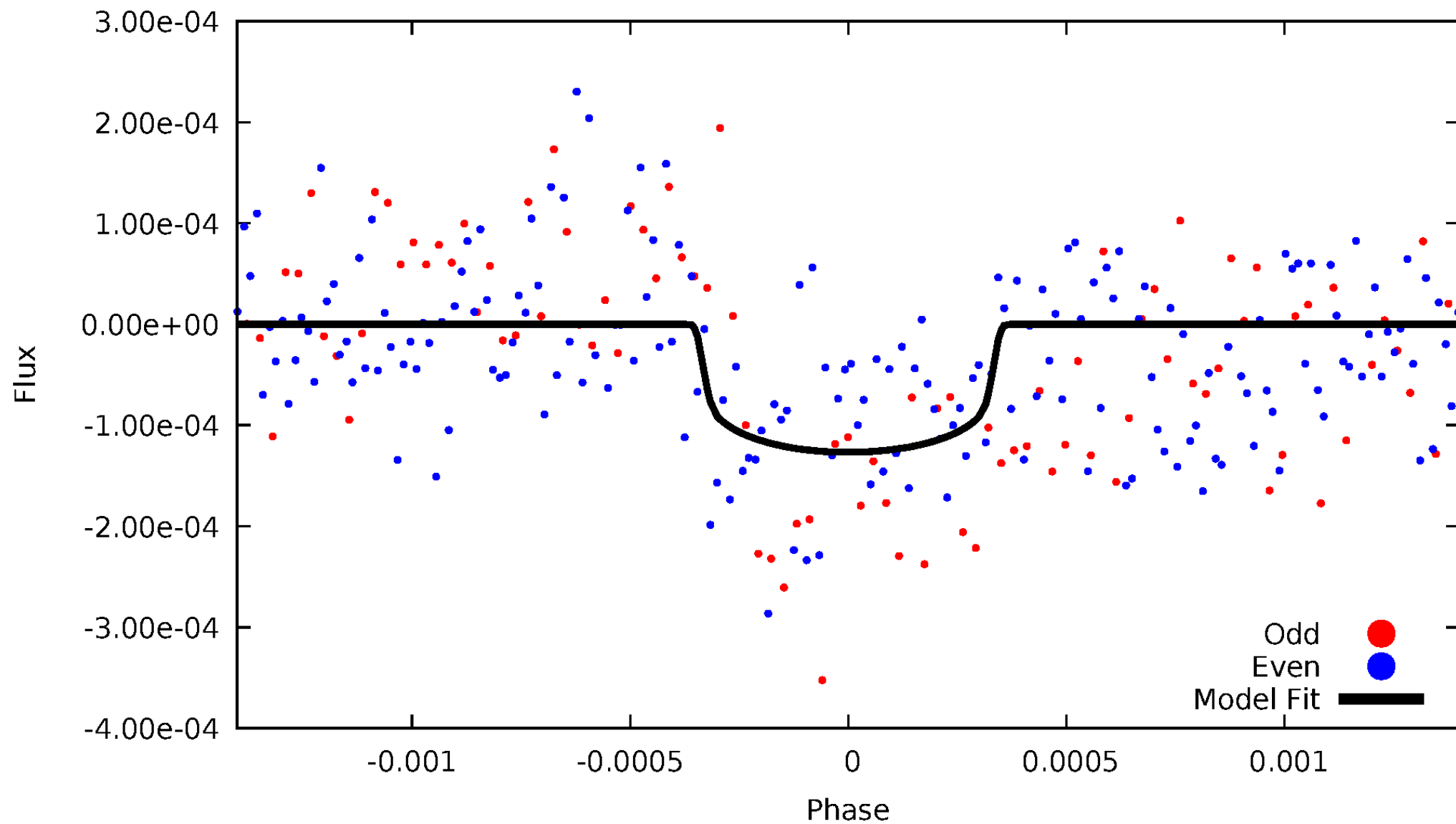


TCE 007138800-01



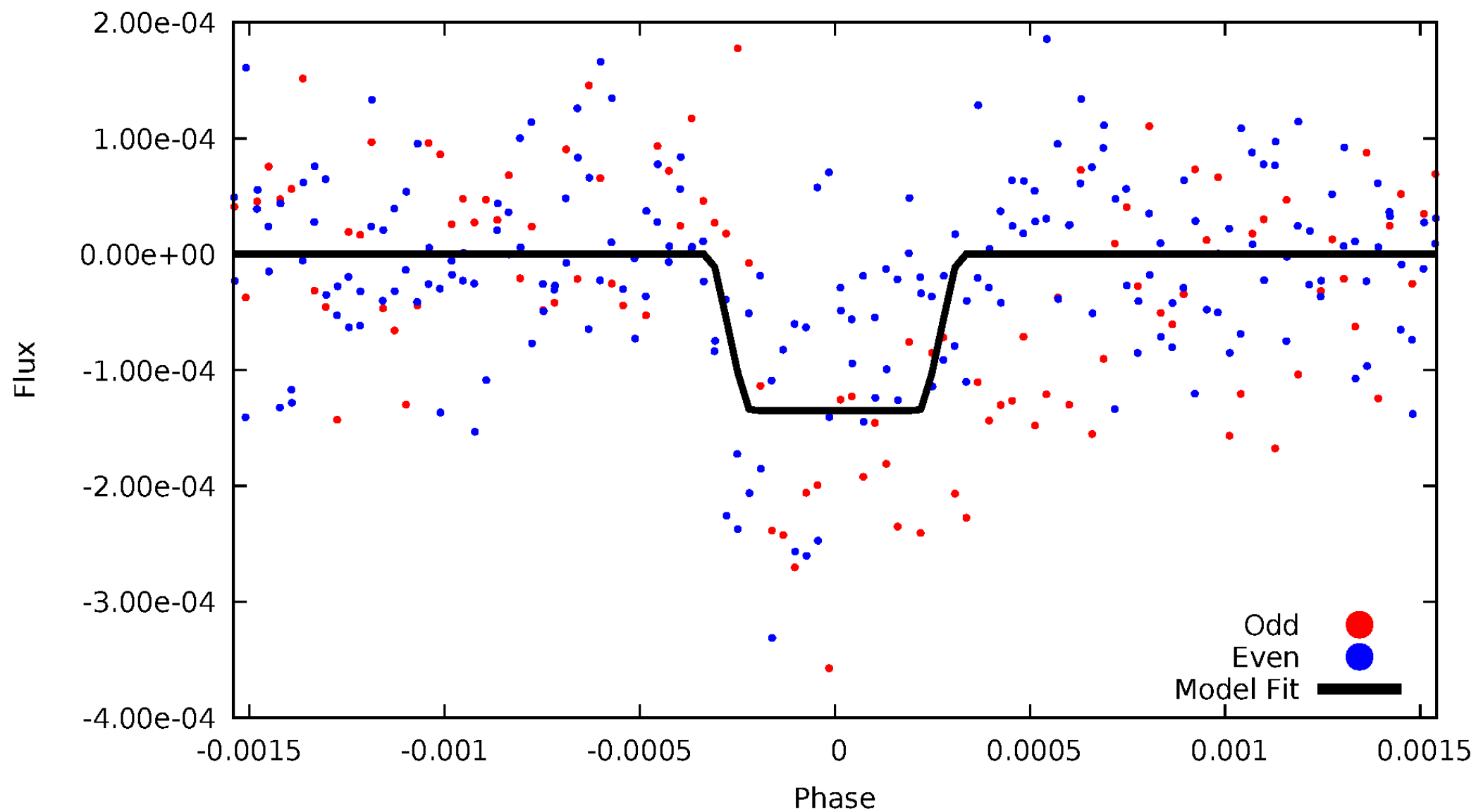
DV Odd/Even

TCE 007138800-01

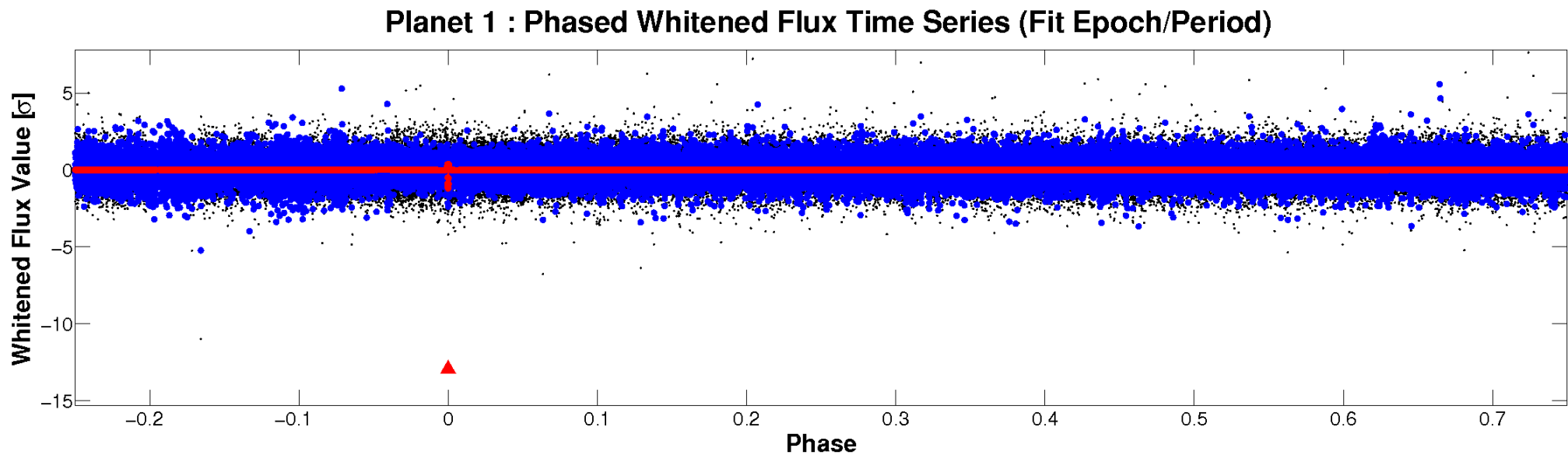
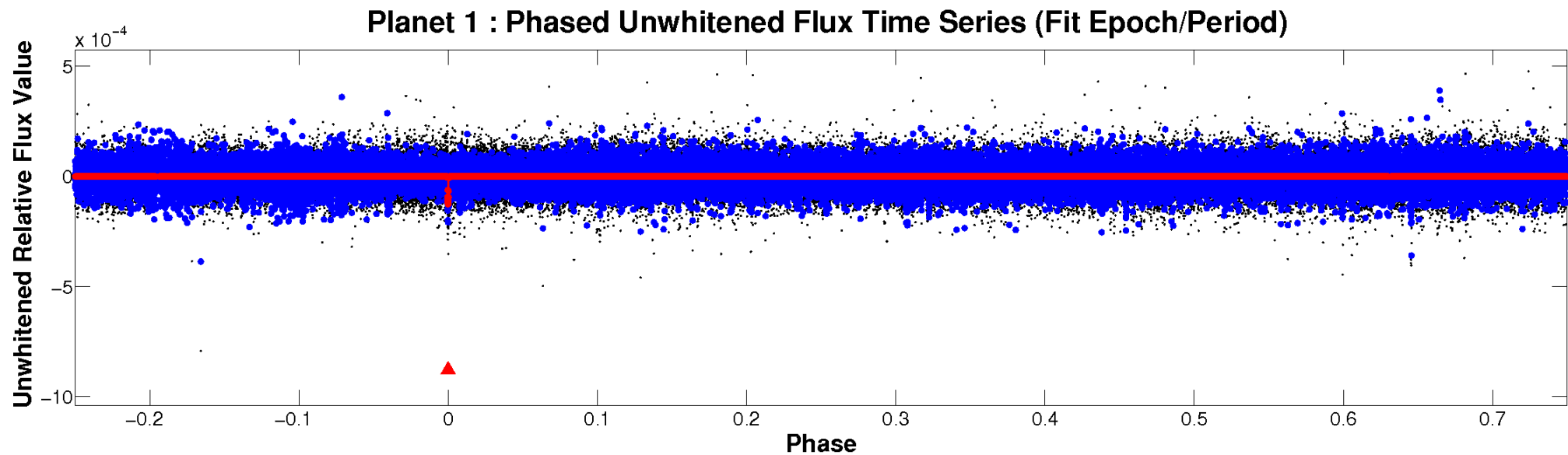


ALT Odd/Even

TCE 007138800-01

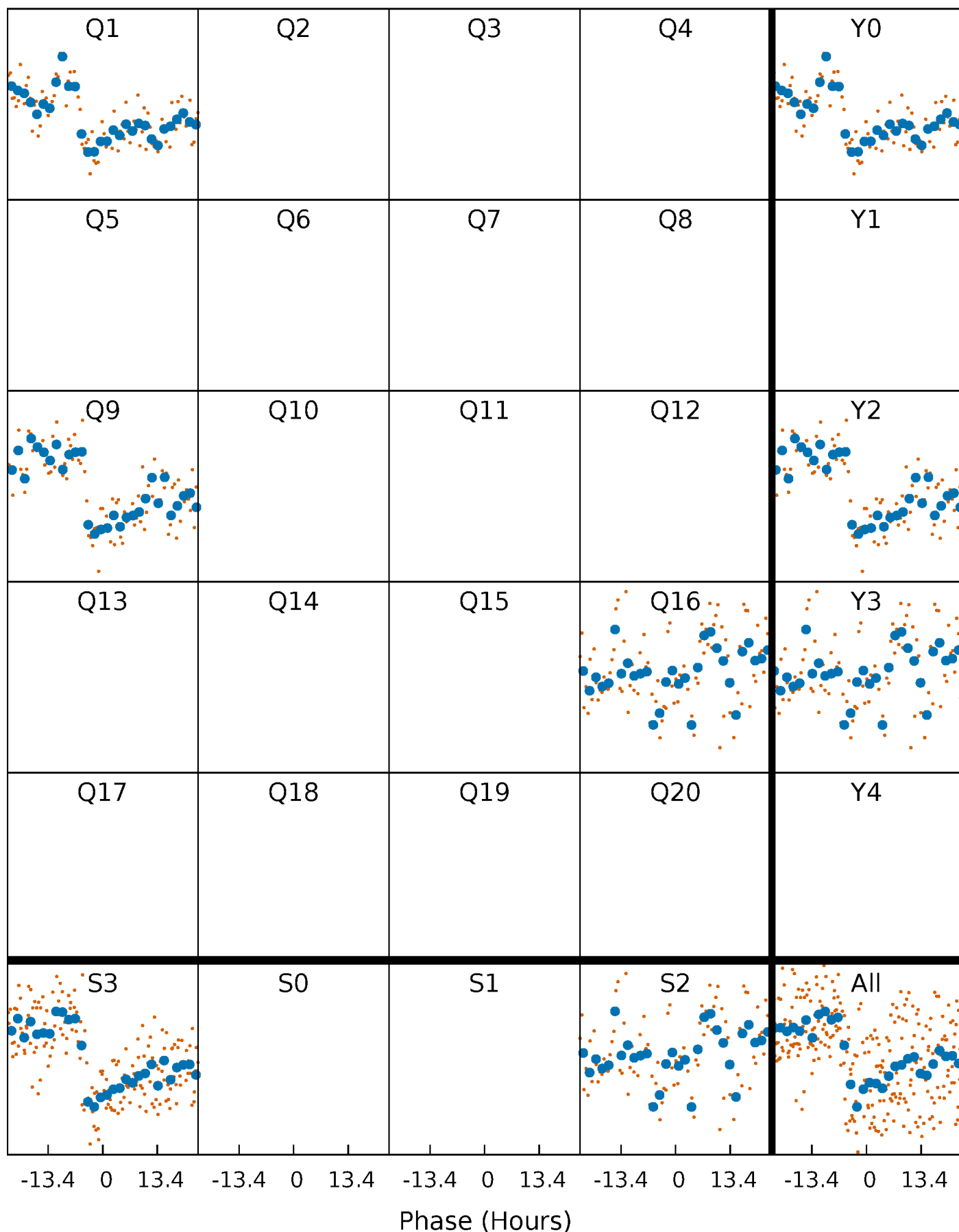


Non-Whitened Vs. Whitened Light Curve



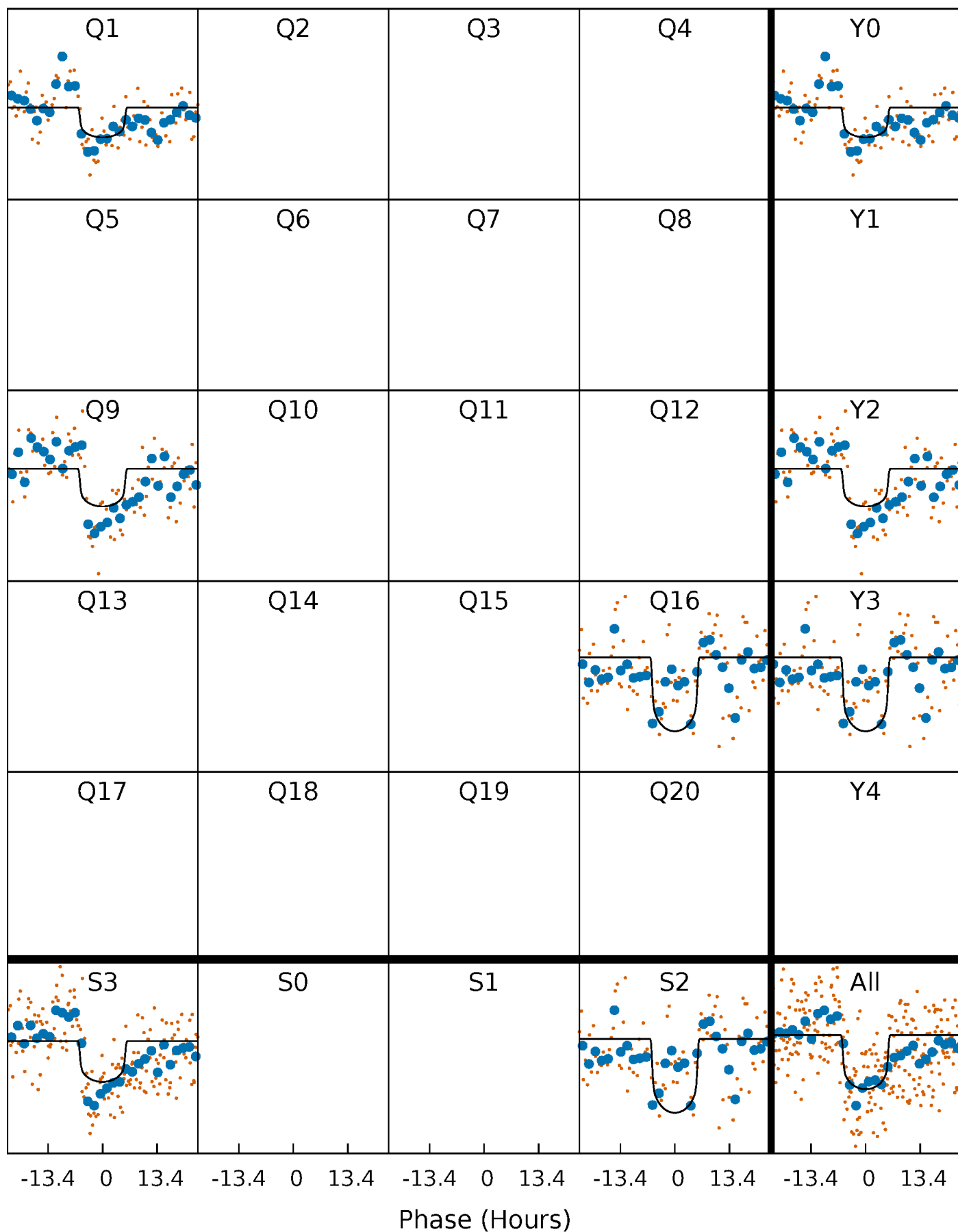
PDC Quarter-Phased Transit Curves

TCE 007138800-01 P=697.412571 Days $T_0=158.654328$ (BKJD)



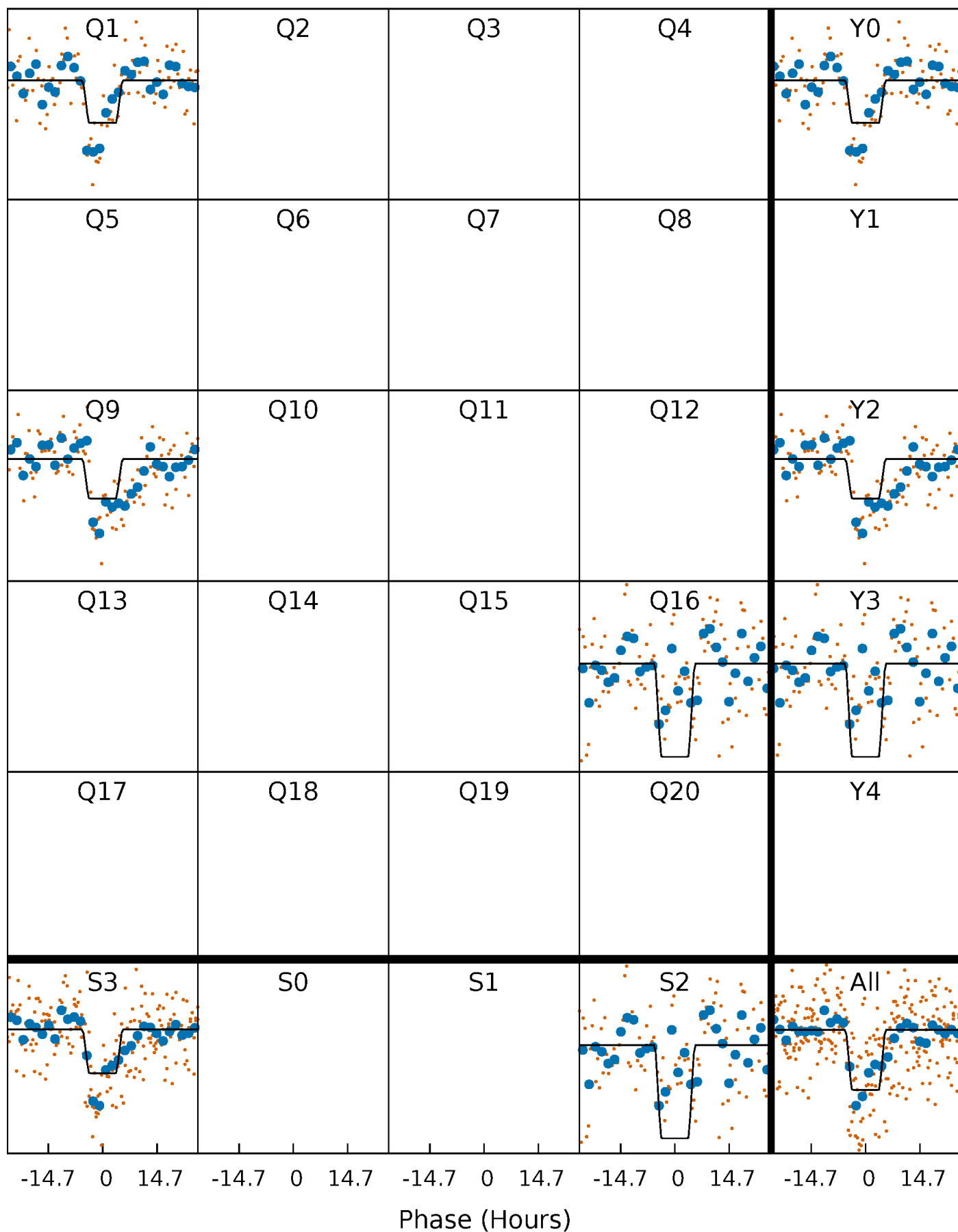
DV Quarter-Phased Transit Curves

TCE 007138800-01 P=697.412571 Days $T_0=158.654328$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

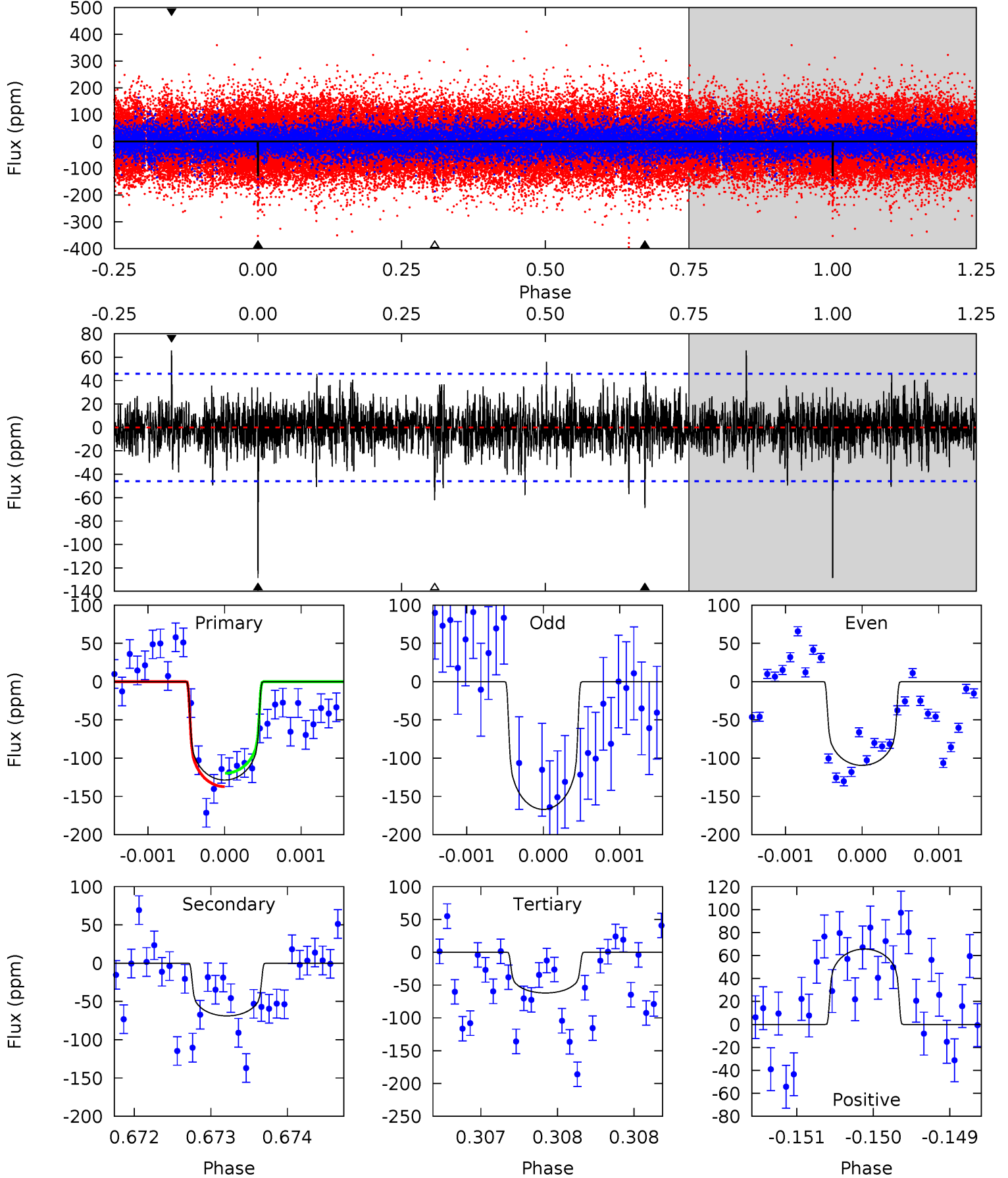
TCE 007138800-01 P=697.397403 Days $T_0=158.638344$ (BKJD)



DV Model-Shift Uniqueness Test

007138800-01, $P = 697.412571$ Days, $E = 158.654328$ Days

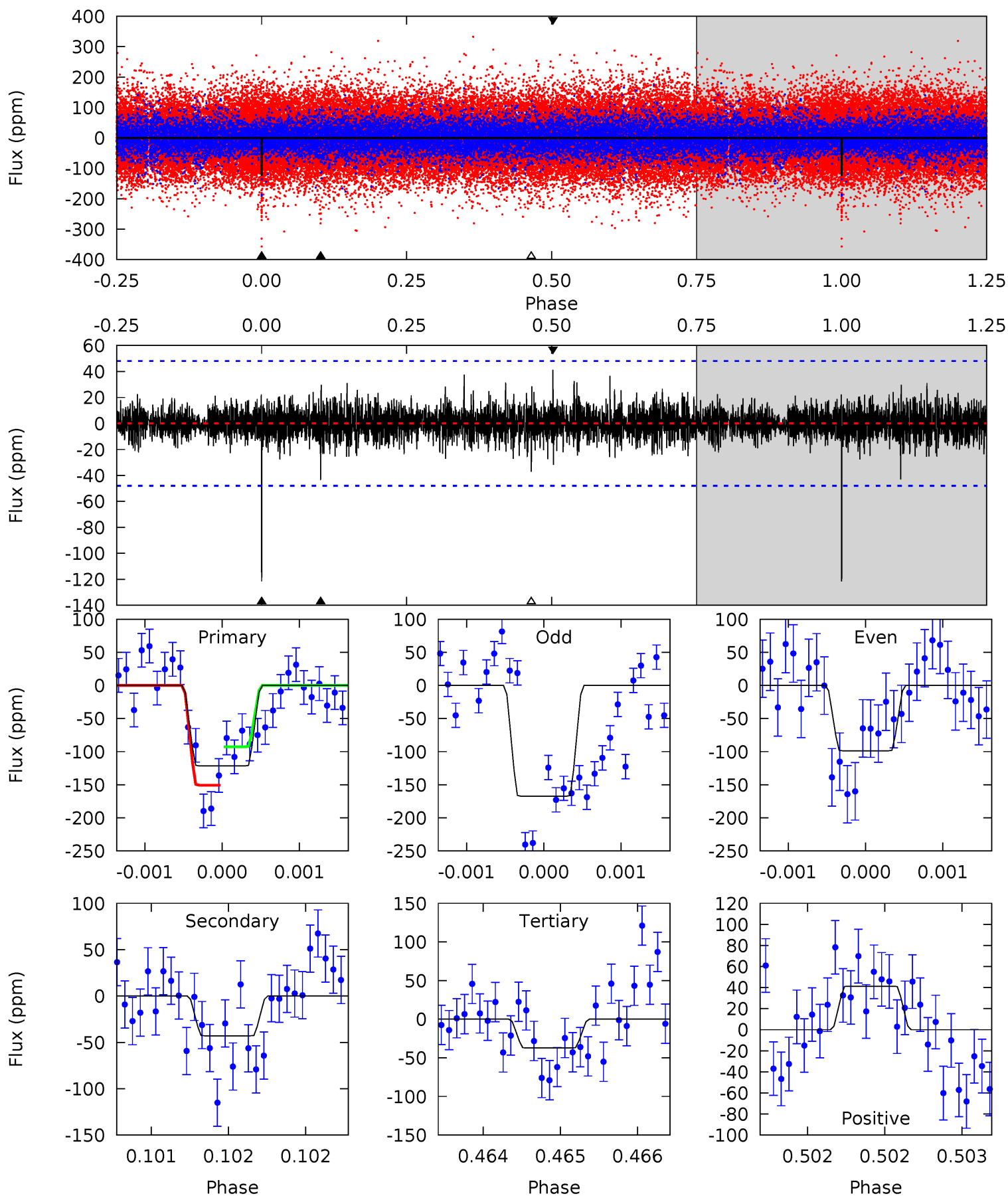
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	8.26	7.45	7.87	5.51	3.38	1.63	7.98	7.55	0.81	0.39	3.27	0.85	0.34	1.04



Alt Model-Shift Uniqueness Test

007138800-01, $P = 697.397403$ Days, $E = 158.638344$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	4.94	4.28	4.75	5.53	3.41	0.98	9.72	9.25	0.66	0.19	3.70	0.77	0.25	3.33



Stellar Parameters For KIC 007138800

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5592^{+152}_{-152}	$4.407^{+0.112}_{-0.125}$	$-0.060^{+0.300}_{-0.250}$	$0.974^{+0.186}_{-0.140}$	$0.882^{+0.104}_{-0.076}$	$1.347^{+0.655}_{-0.519}$
	+3%/-3%	+3%/-3%	+500%/-417%	+19%/-14%	+12%/-9%	+49%/-39%
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 007138800-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-69 ± 8	$1.27^{+0.34}_{-0.30}$	281^{+15}_{-14}	4776^{+566}_{-381}	51723^{+36619}_{-20275}
Alt.	-43 ± 9	$1.23^{+0.35}_{-0.32}$	281^{+15}_{-13}	4417^{+597}_{-416}	33999^{+31031}_{-14076}

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

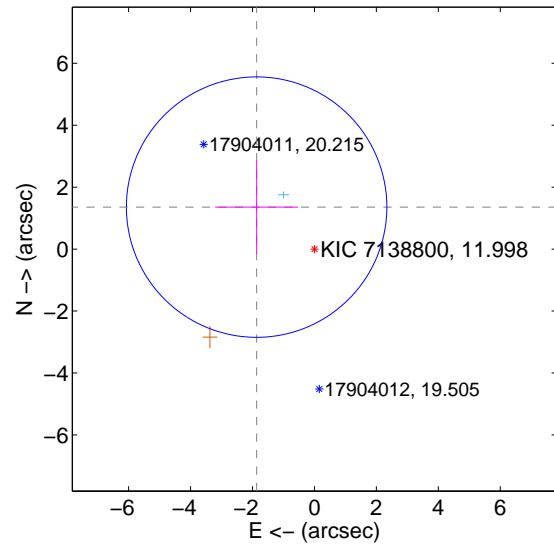
Supplemental centroid analysis for 007138800-01. **Kepler magnitude: 12.00.** Transit SNR 8.91

There are 1 quarters with good PRF difference image offsets

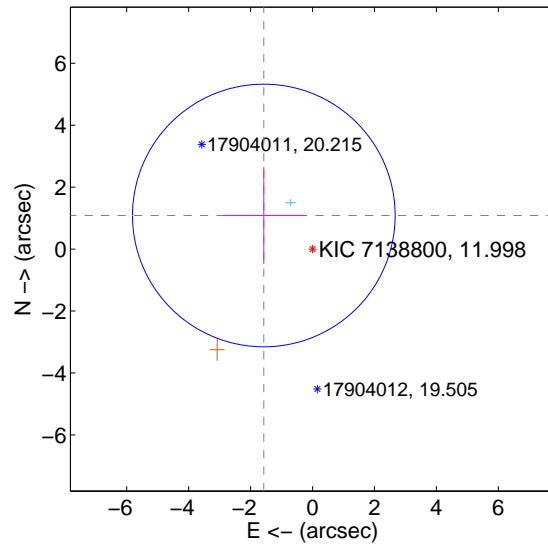
The direct PRF centroid is offset from the target star catalog position by about 0.50 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.307 ± 1.401	1.65	1.867 ± 1.339	1.355 ± 1.513
PRF-fit source offset from KIC position	1.911 ± 1.413	1.35	1.573 ± 1.336	1.085 ± 1.562
photometric centroid source offset	0.91 ± 1.04	0.87	0.80 ± 1.03	-0.43 ± 1.09

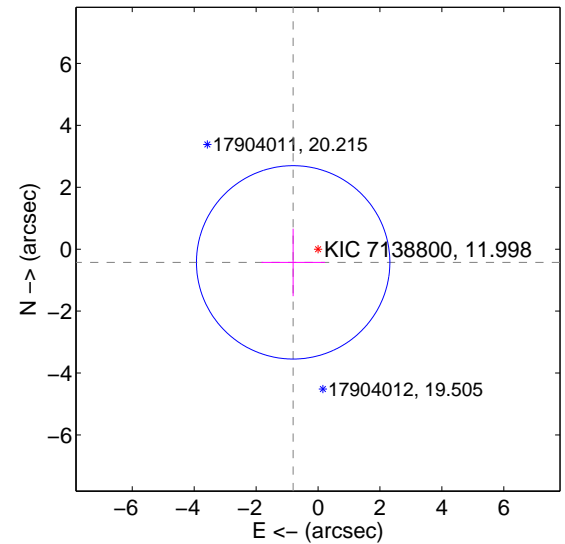
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

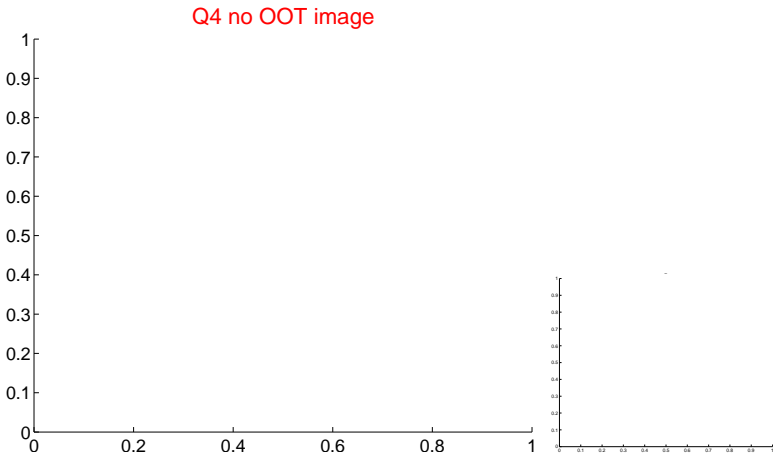
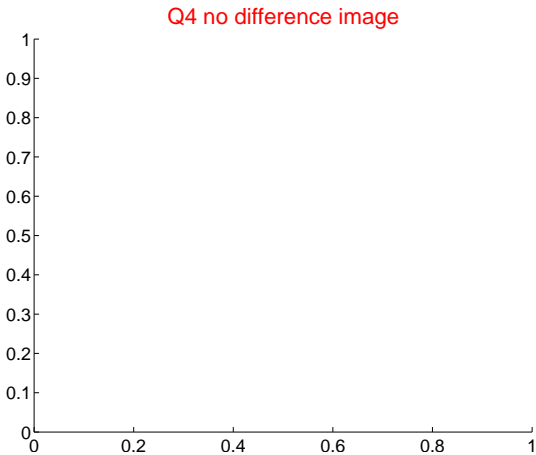
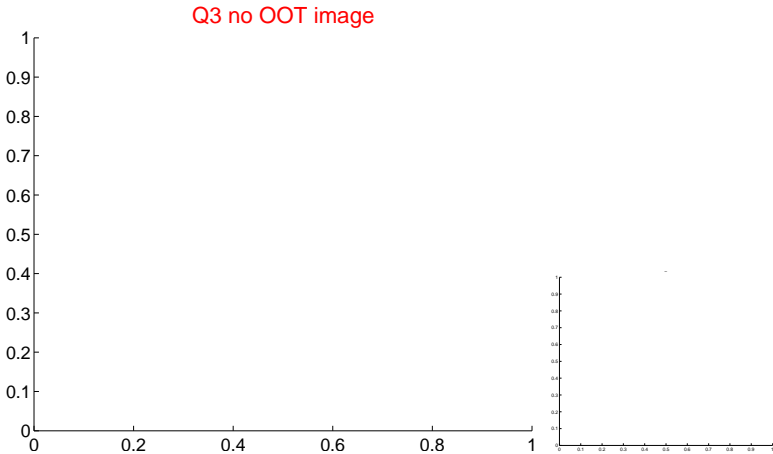
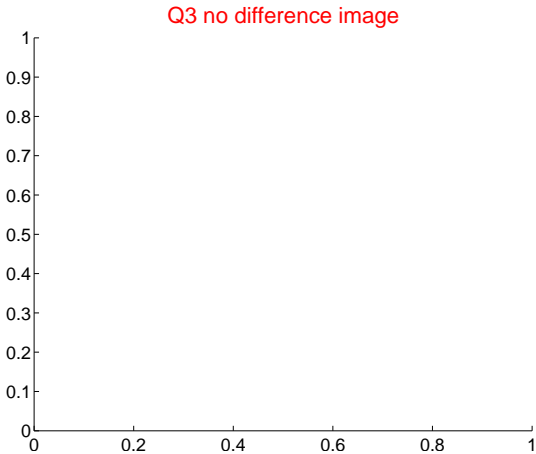
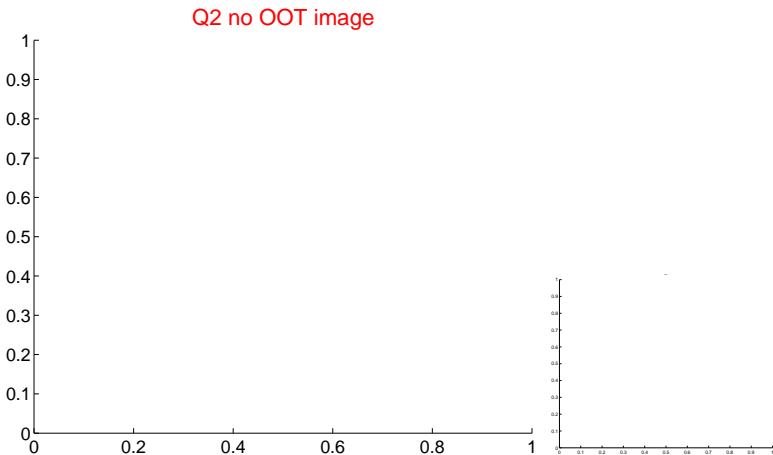
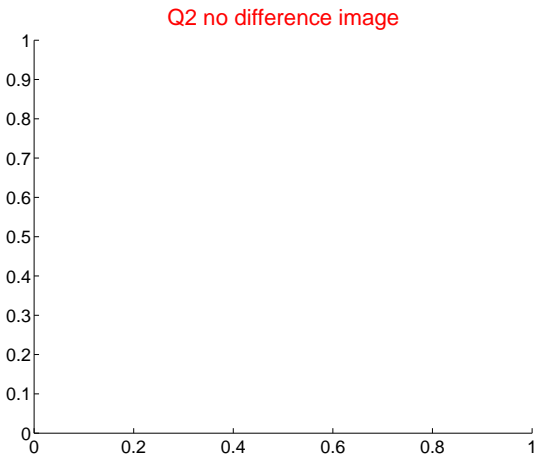
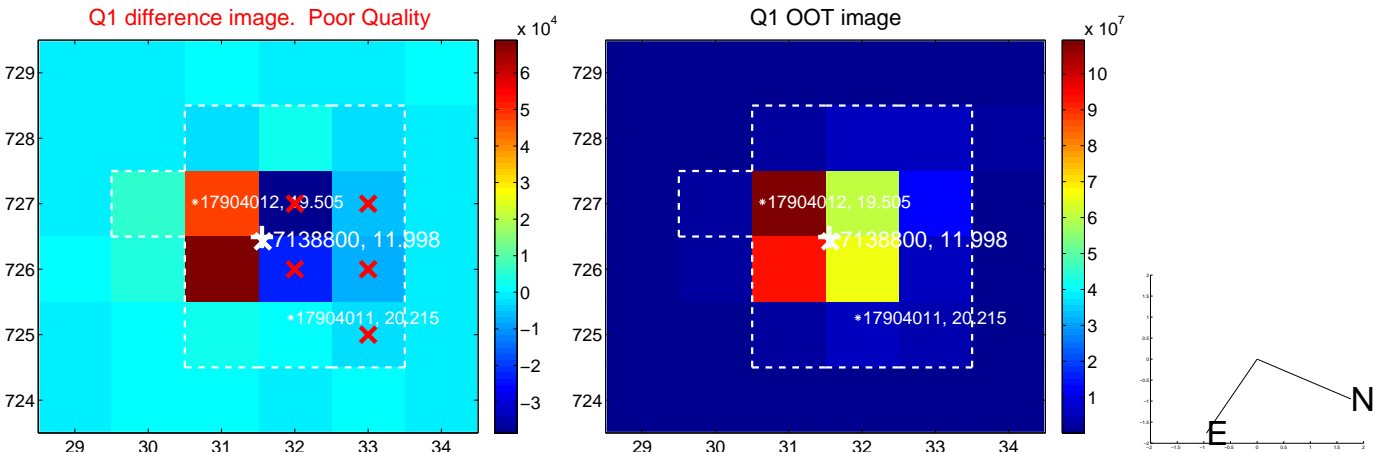


offset from photometric centroids

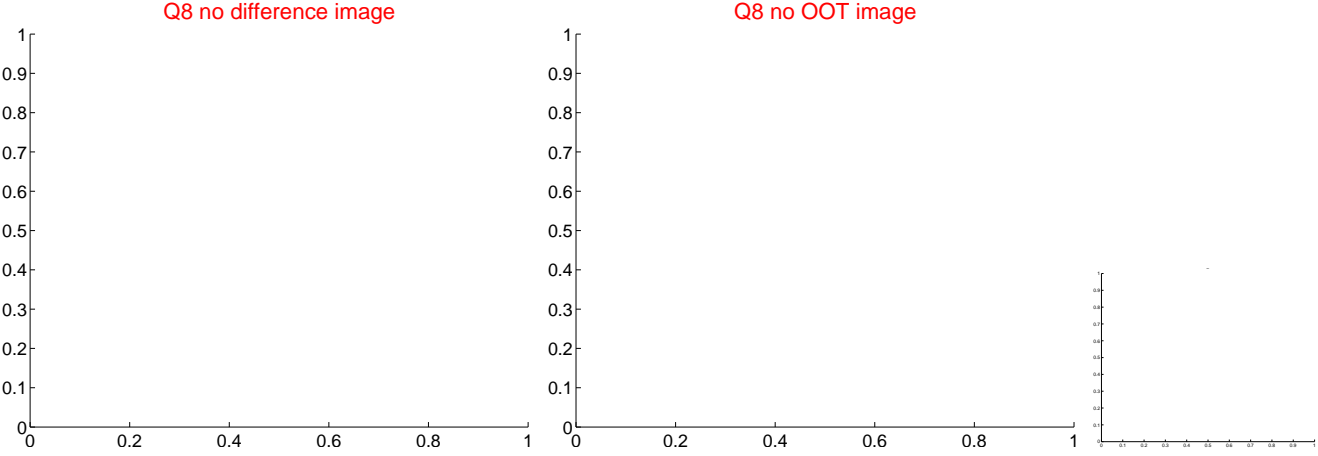
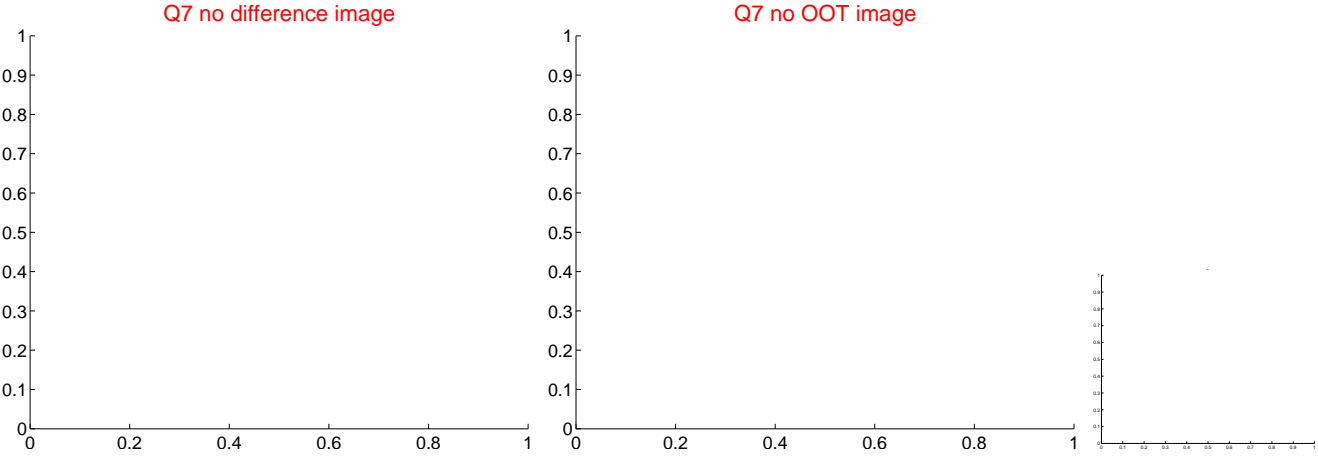


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

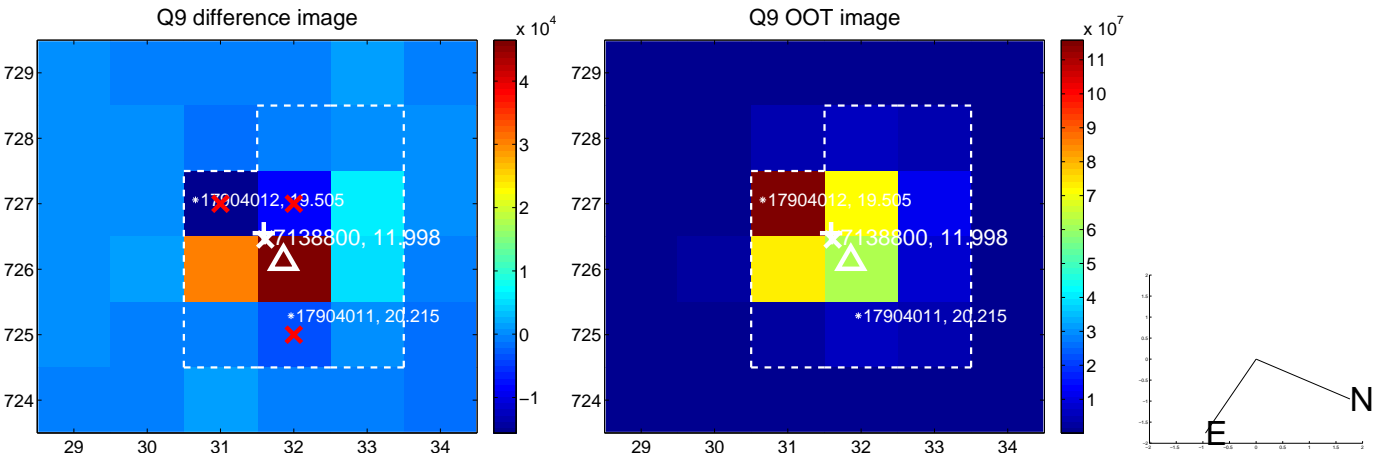
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



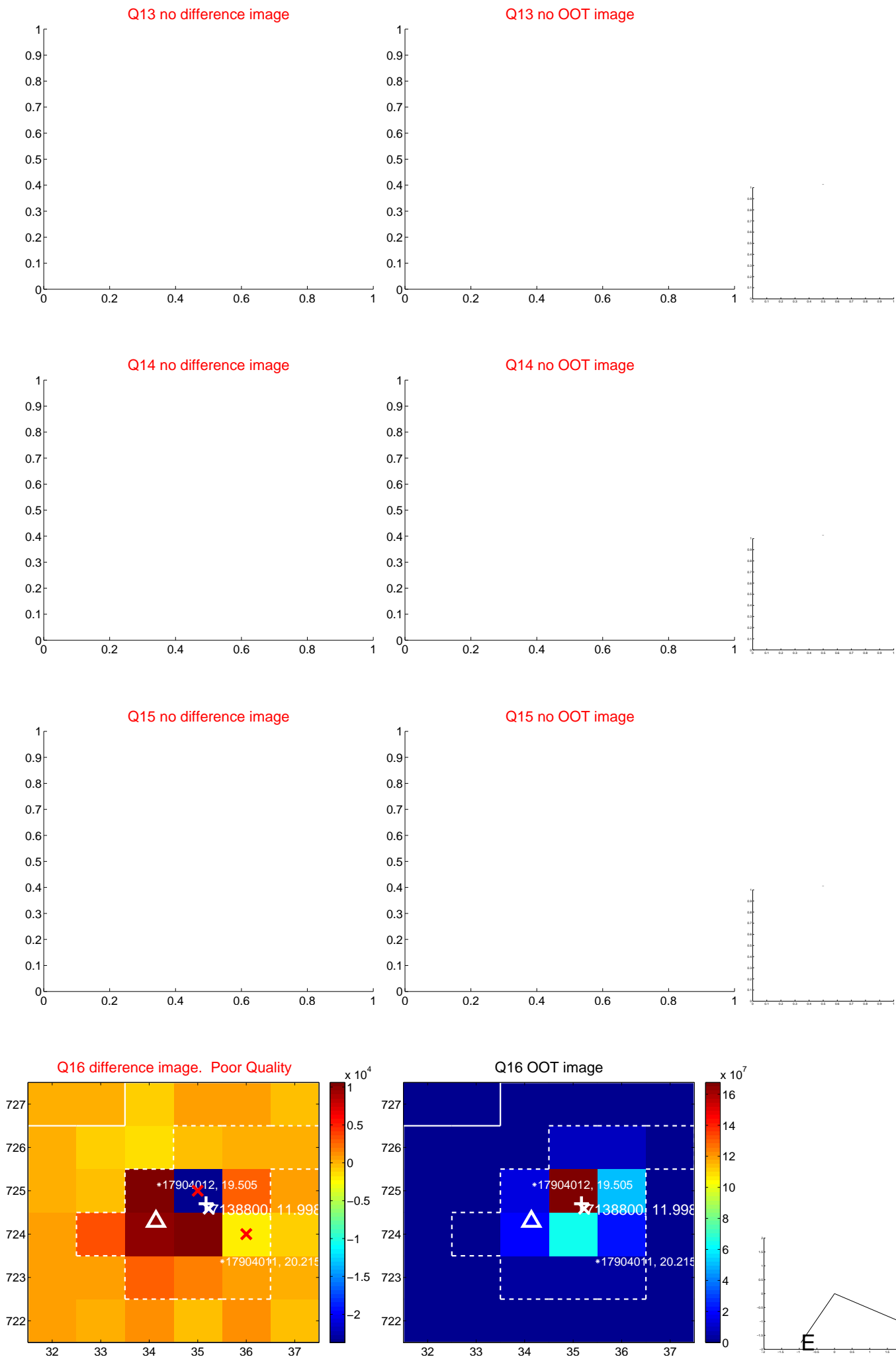
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



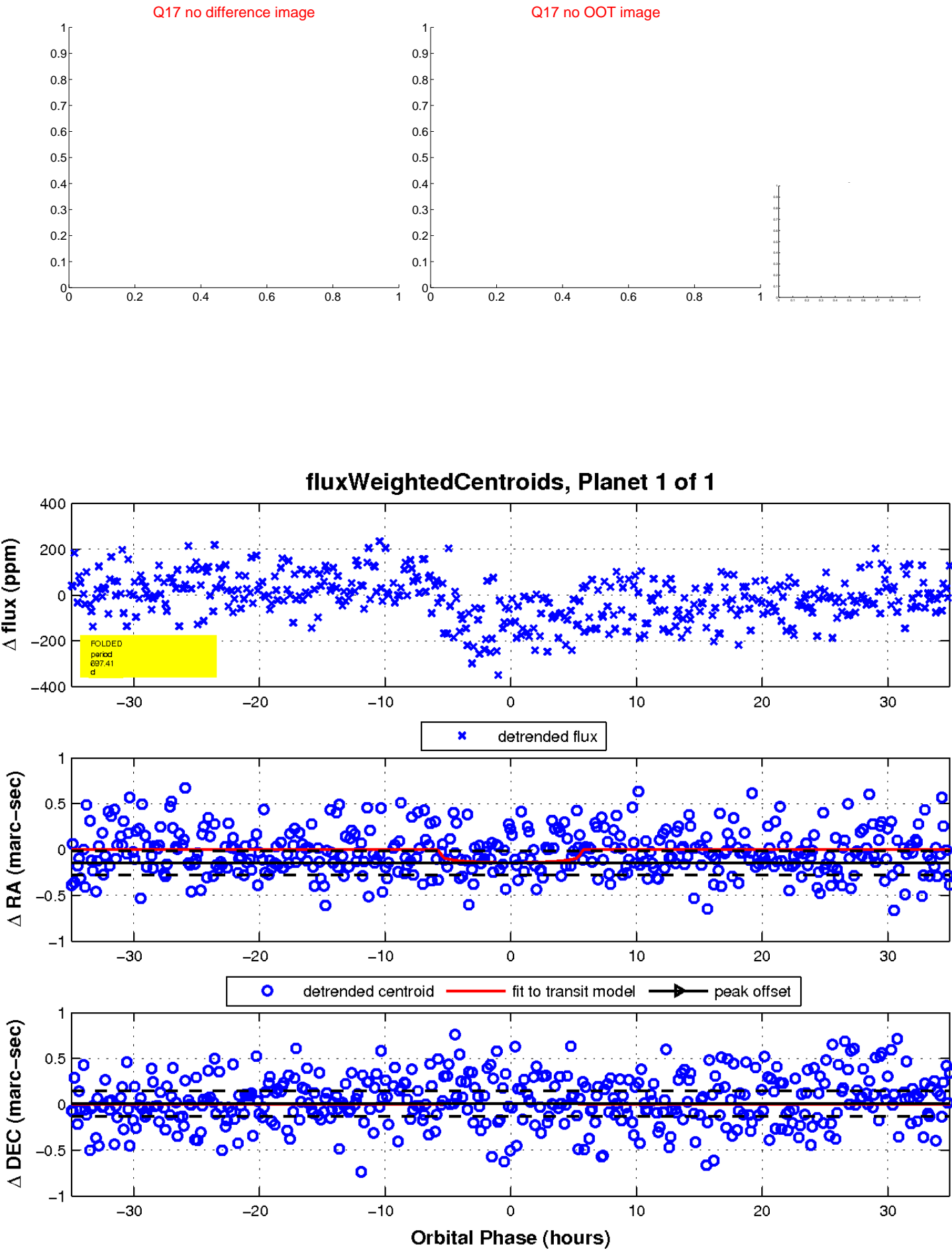
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

