

KIC 003751292

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})
003751292-01	OBS	No	316.386267	137.384090	1097.4	3.785	10.0	6.8	1.02	6089	3.53	1.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003751292-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—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.

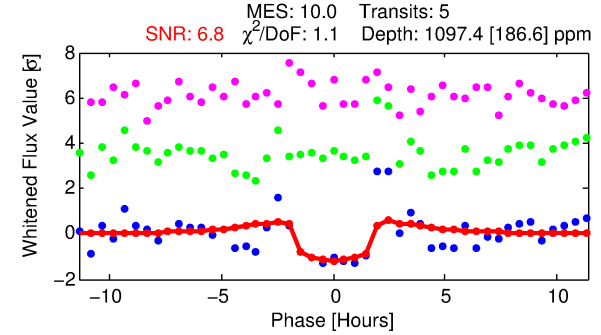
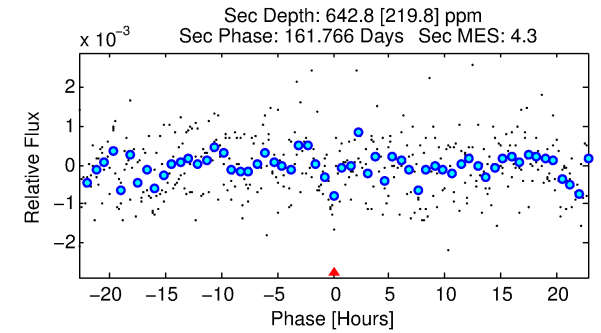
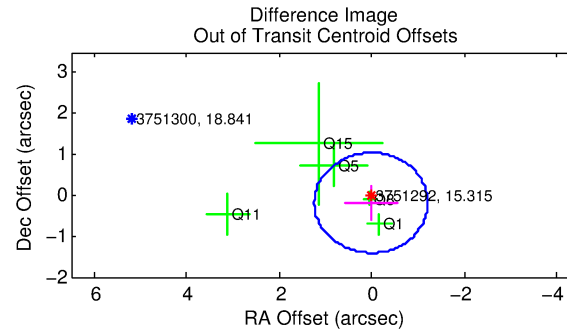
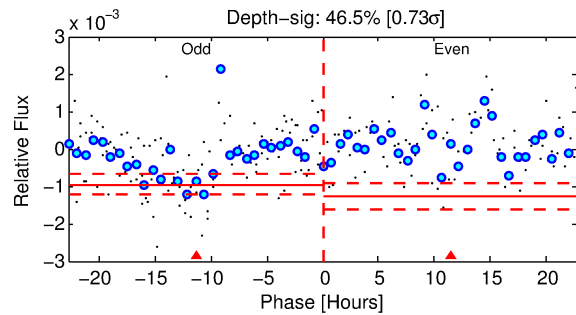
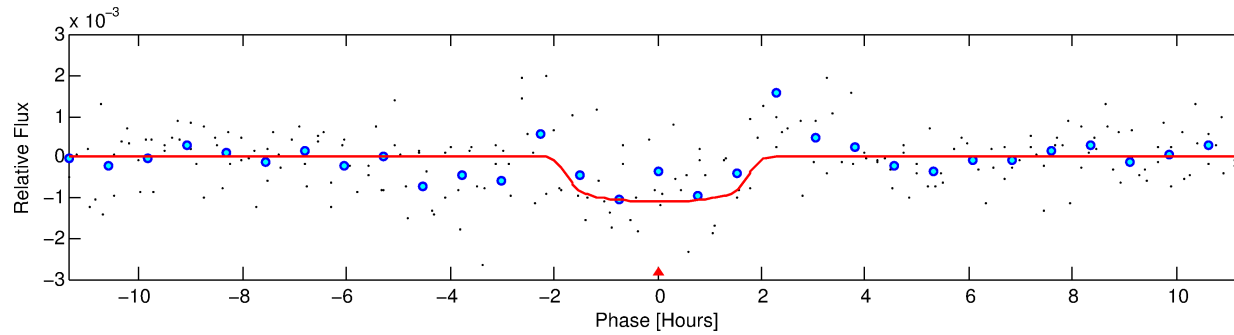
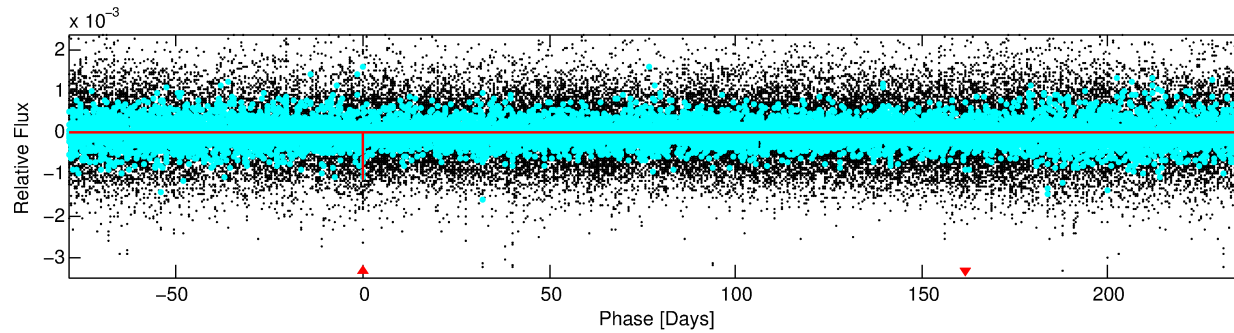
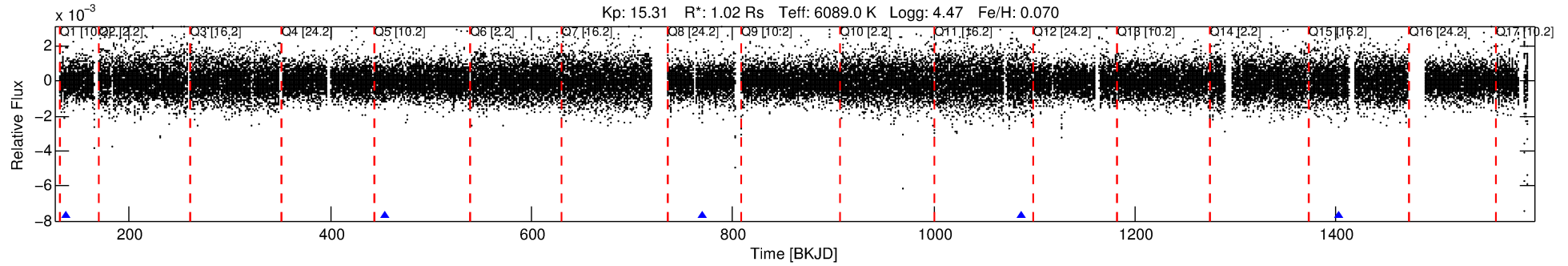
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003751292-01

No Significant Match Found

DV One-Page Summary

KIC: 3751292 Candidate: 1 of 1 Period: 316.386 d



DV Fit Results:

Period = 316.38627 [0.00416] d
Epoch = 137.3841 [0.0083] BKJD
Rp/R* = 0.0316 [0.0395]
a/R* = 540.29 [3143.85]
b = 0.59 [6.49]
Seff = 1.45 [0.60]
Teq = 280 [29] K
Rp = 3.53 [4.55] Re
a = 0.9449 [0.2495] AU
Ag = 25272.30 [64420.42] [0.39σ]
Teffp = 5451 [3441] K [1.50σ]

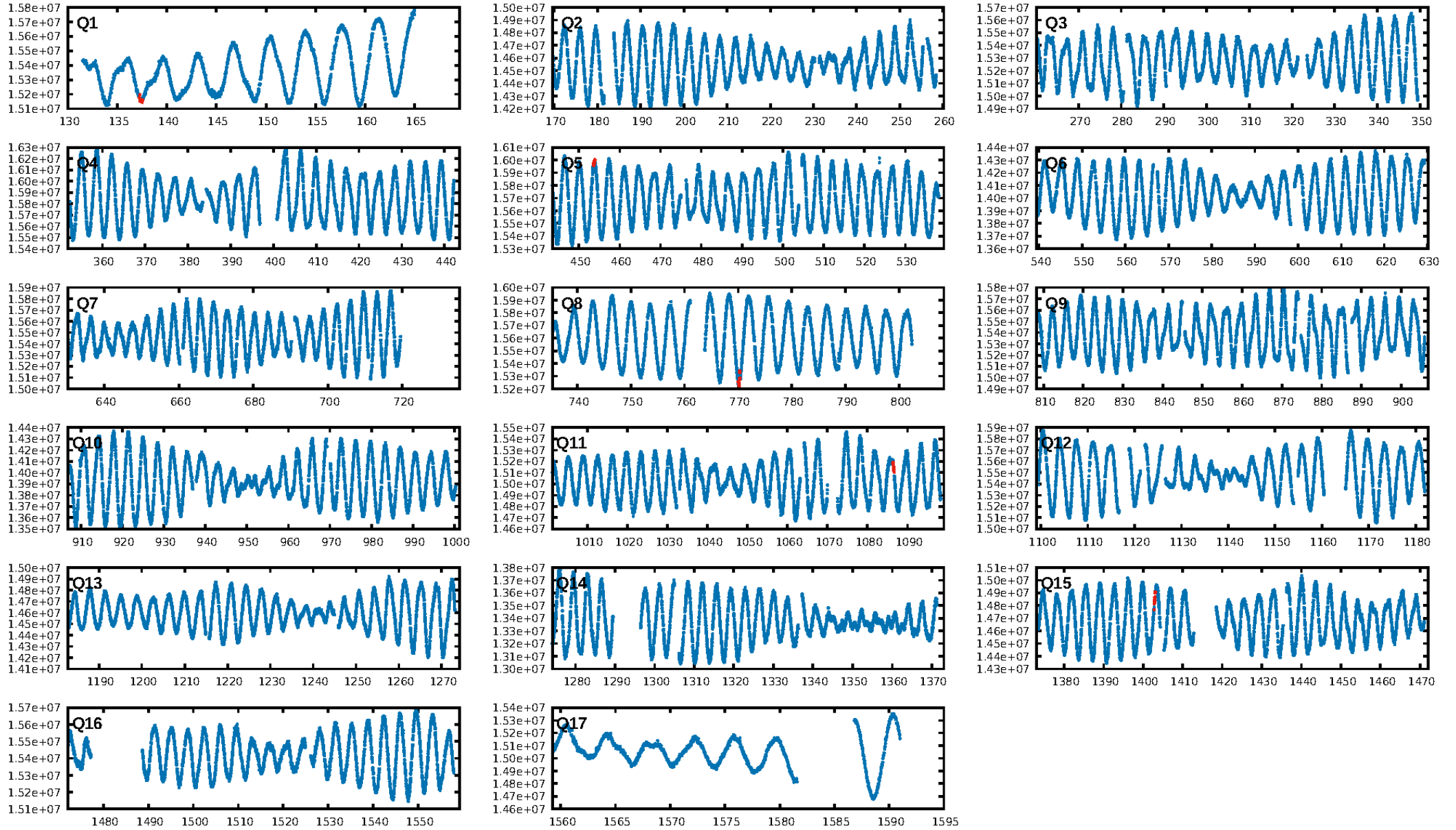
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.0%
ModelChiSquareGof-sig: 95.8%
Bootstrap-pfa: 8.30e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.12
Centroid-sig: 94.4%
Centroid-so: 0.483 arcsec [0.29σ]
OotOffset-rm: 0.186 arcsec [0.45σ]
OotOffset-st: 0/2/1/2 [5]
KicOffset-rm: 0.315 arcsec [0.80σ]
KicOffset-st: 0/2/1/2 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 1.00 [5/5]

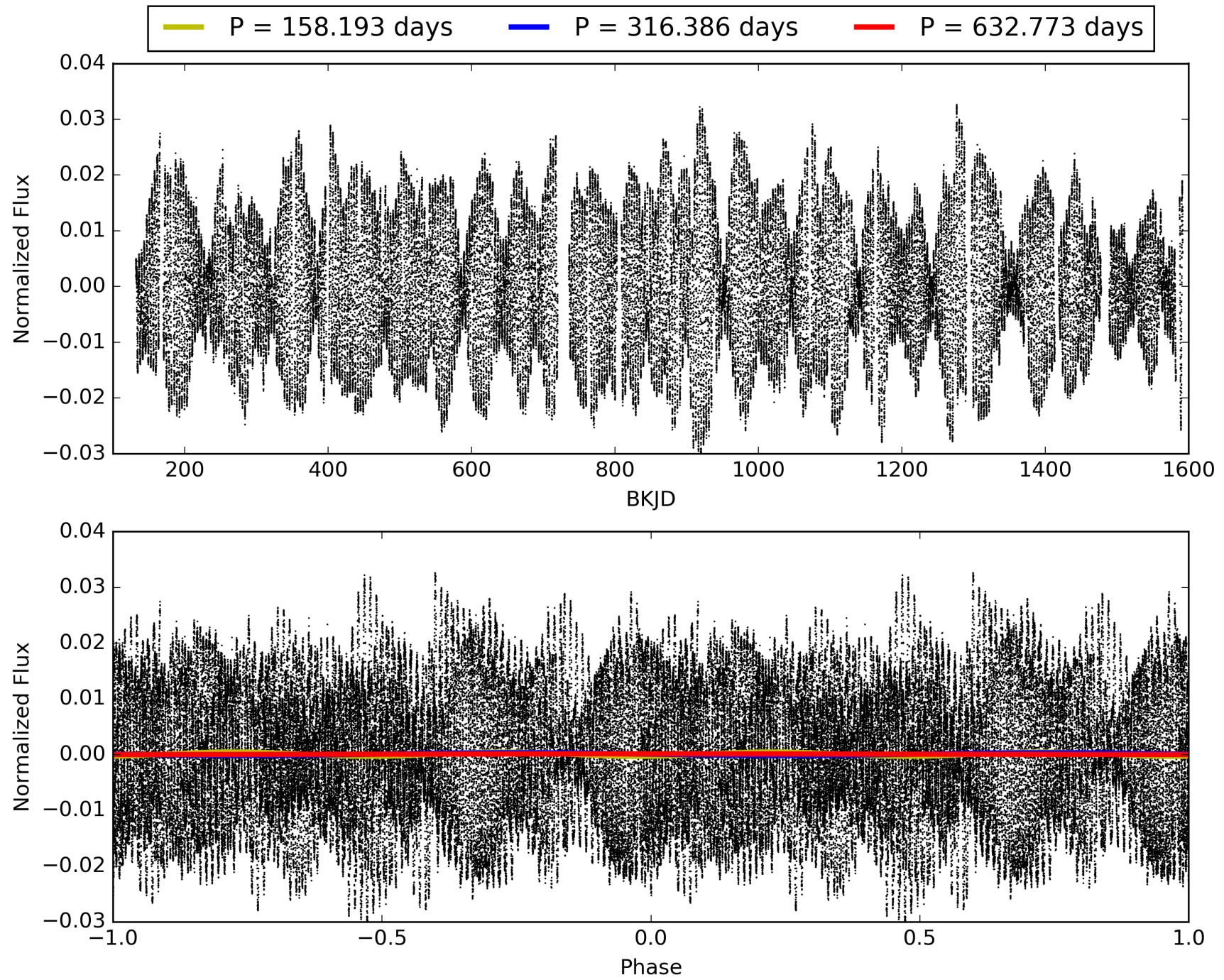
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:37:25 Z

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

TCE 003751292-01, PDC Light Curves

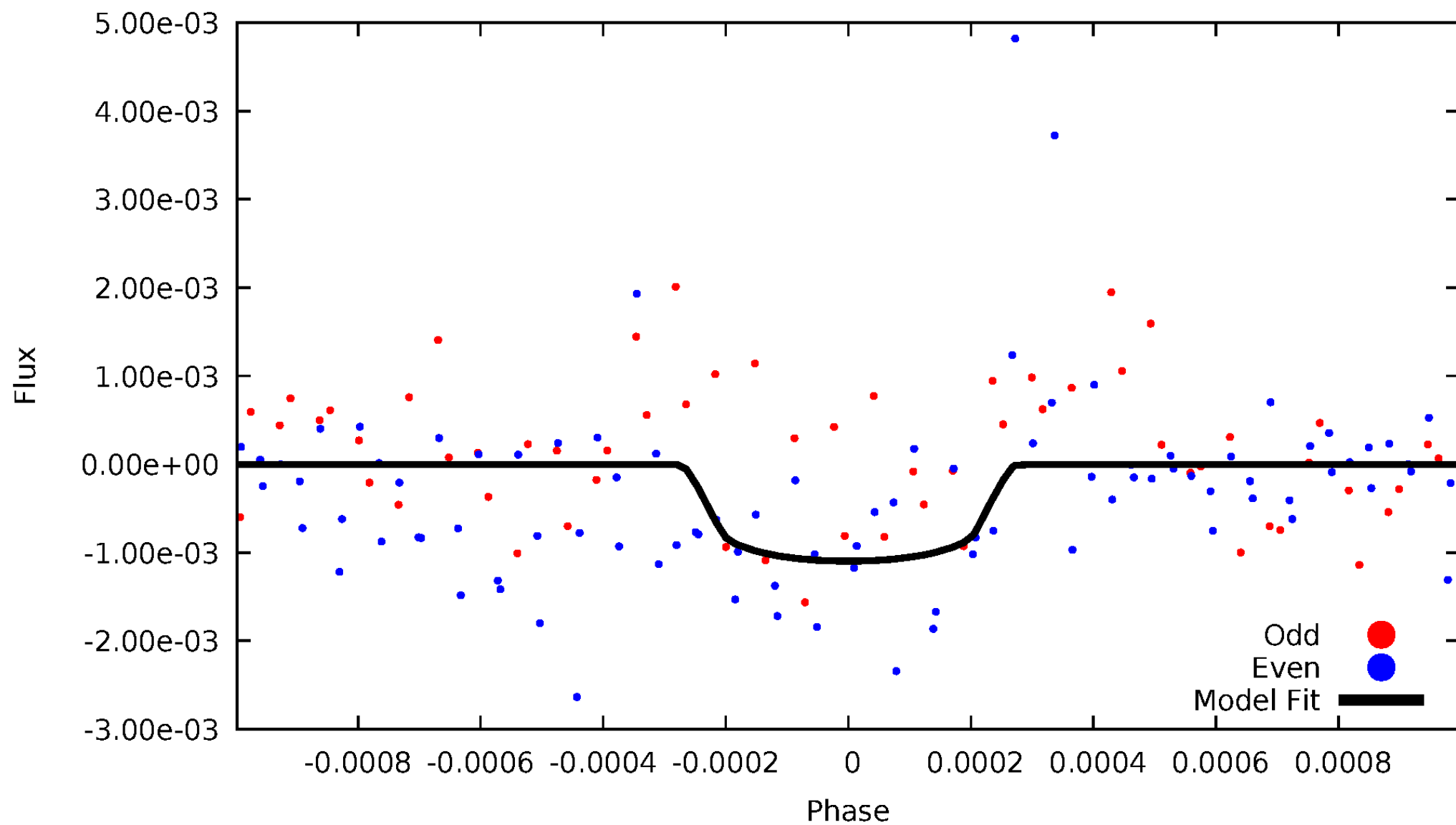


TCE 003751292-01



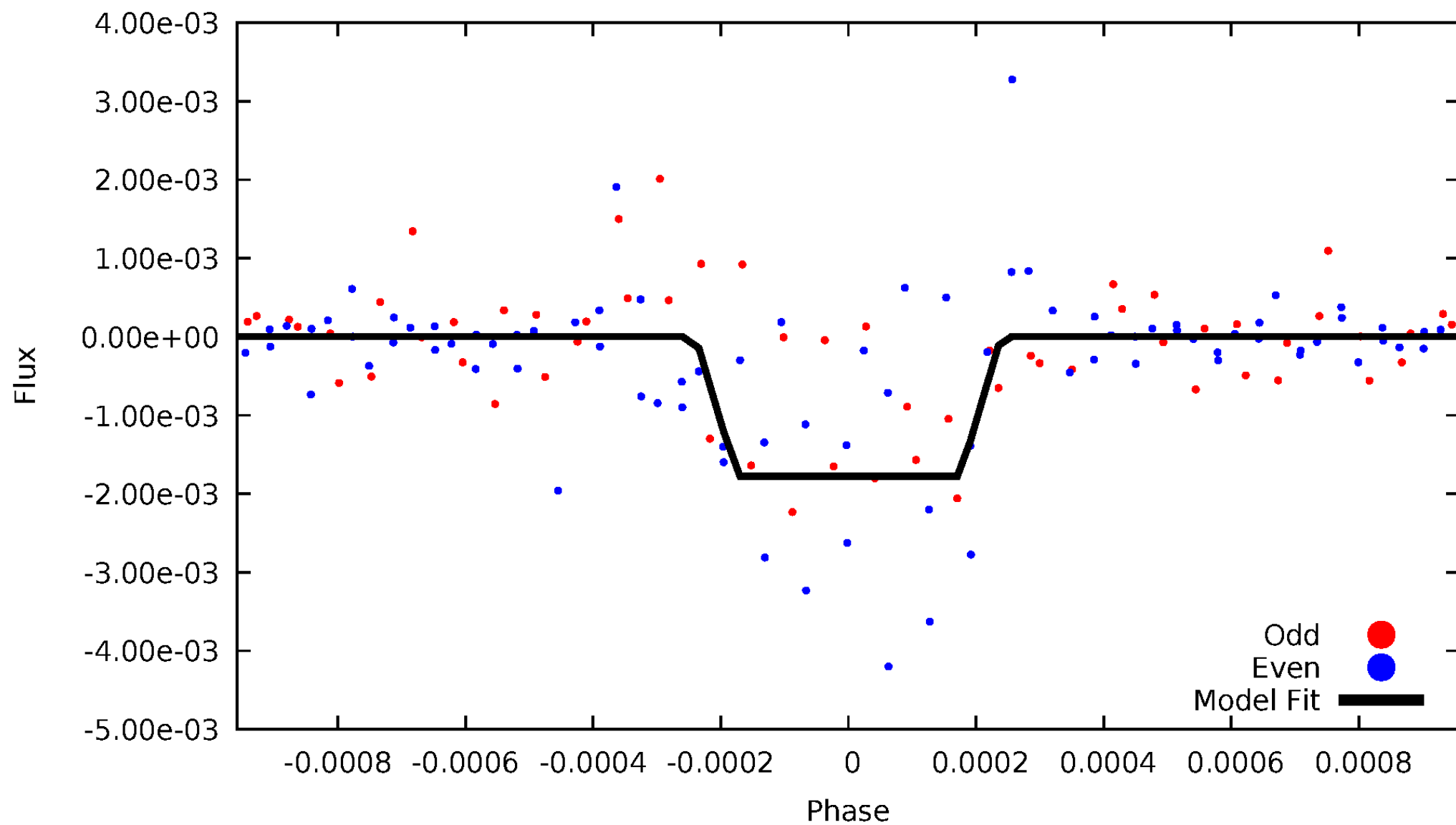
DV Odd/Even

TCE 003751292-01



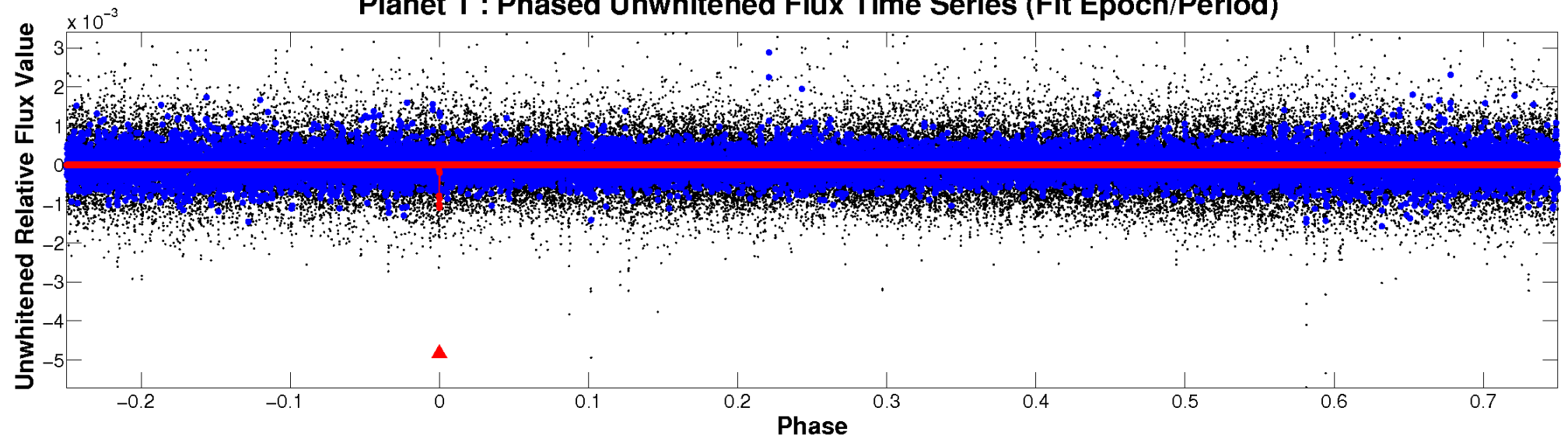
ALT Odd/Even

TCE 003751292-01

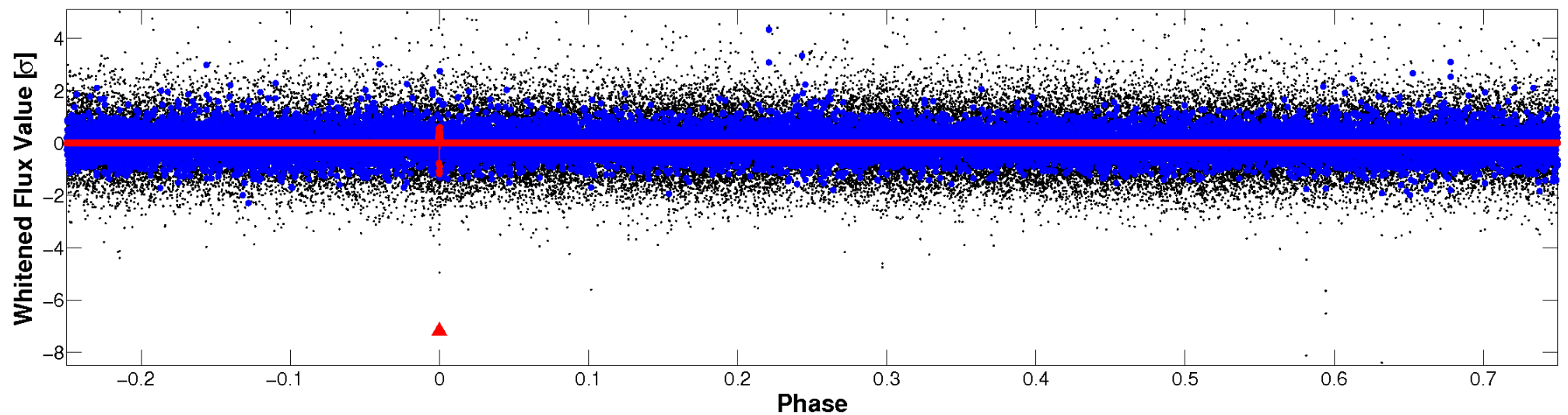


Non-Whitened Vs. Whitened Light Curve

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

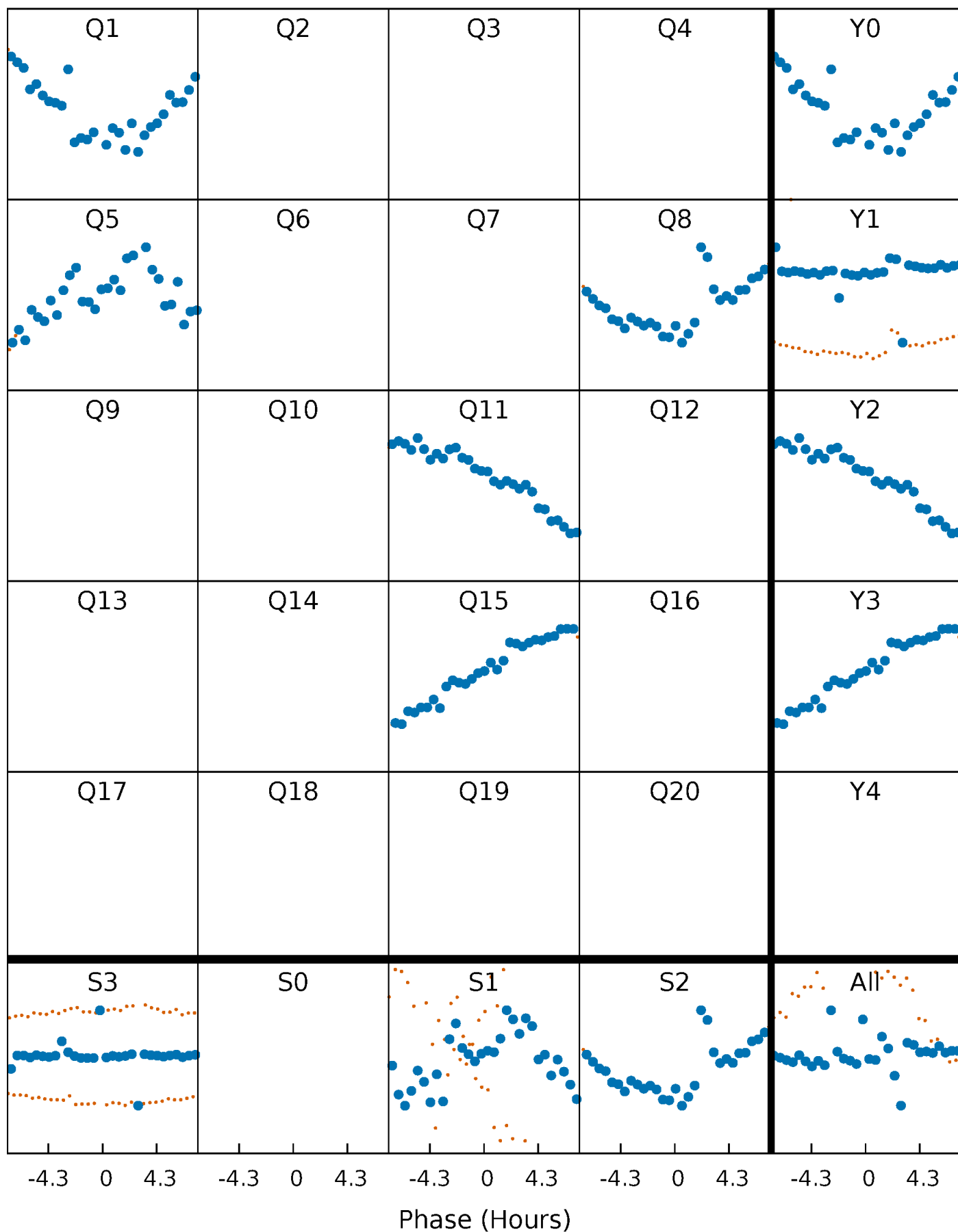


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



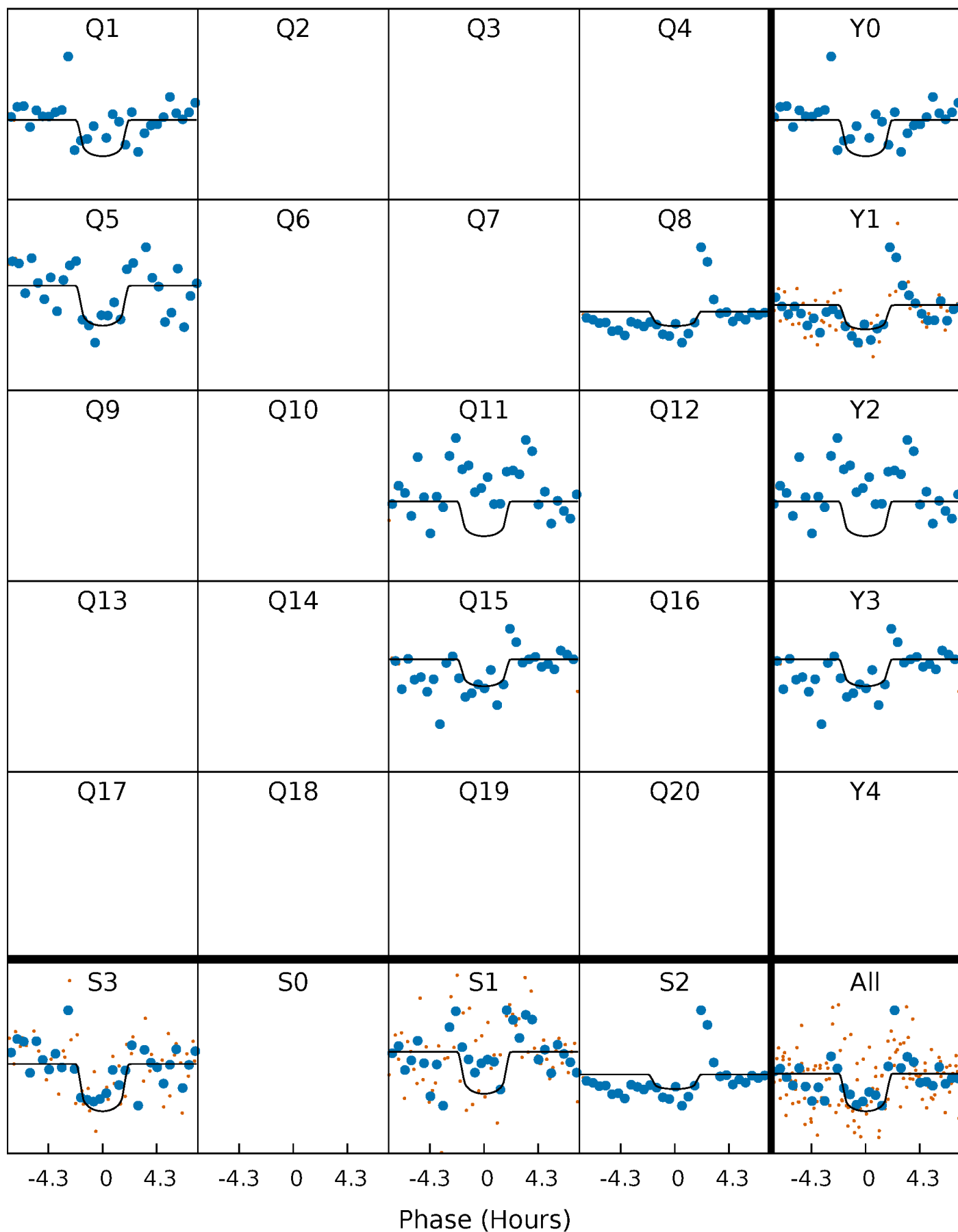
PDC Quarter-Phased Transit Curves

TCE 003751292-01 P=316.386267 Days $T_0=137.384090$ (BKJD)



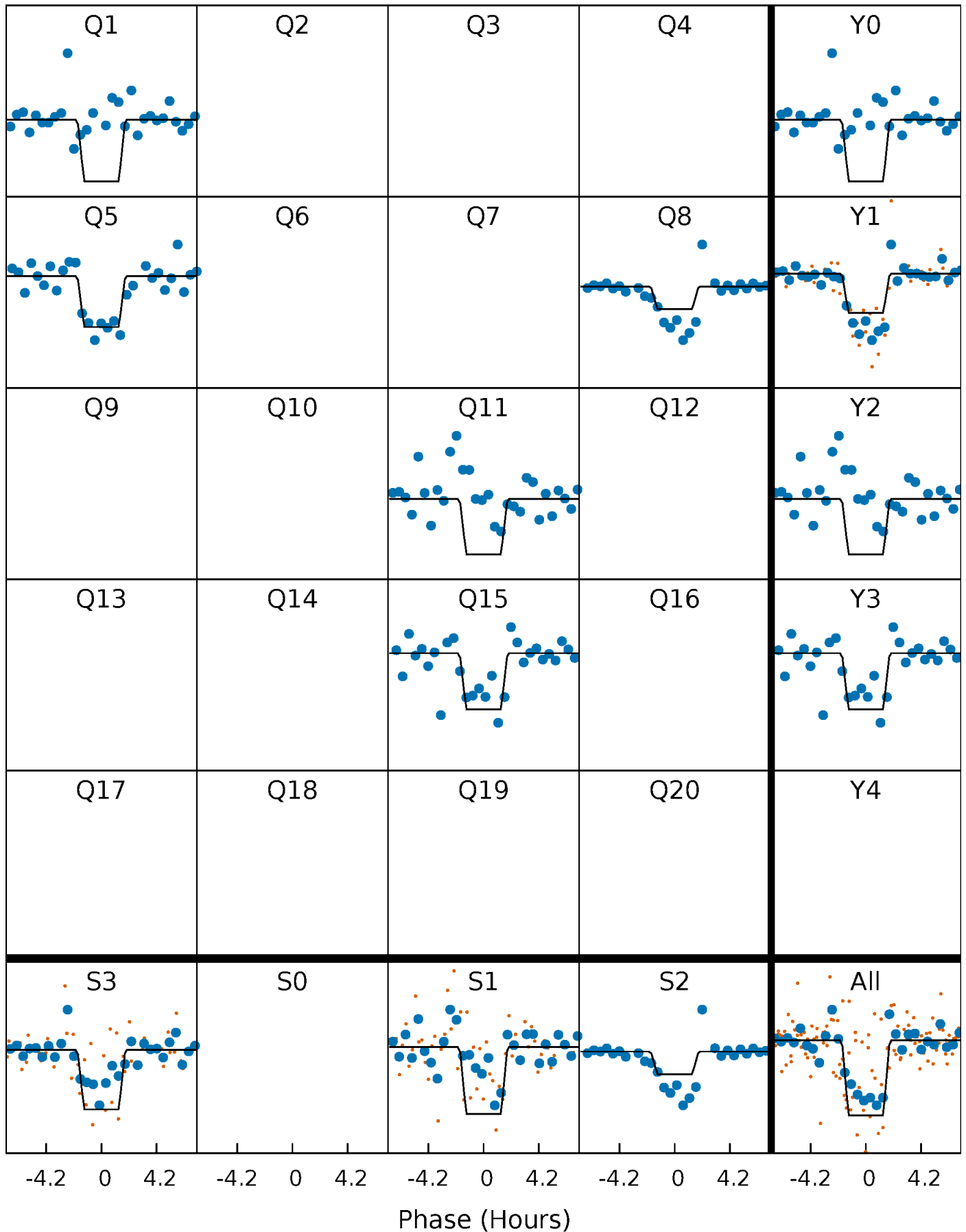
DV Quarter-Phased Transit Curves

TCE 003751292-01 P=316.386267 Days $T_0=137.384090$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

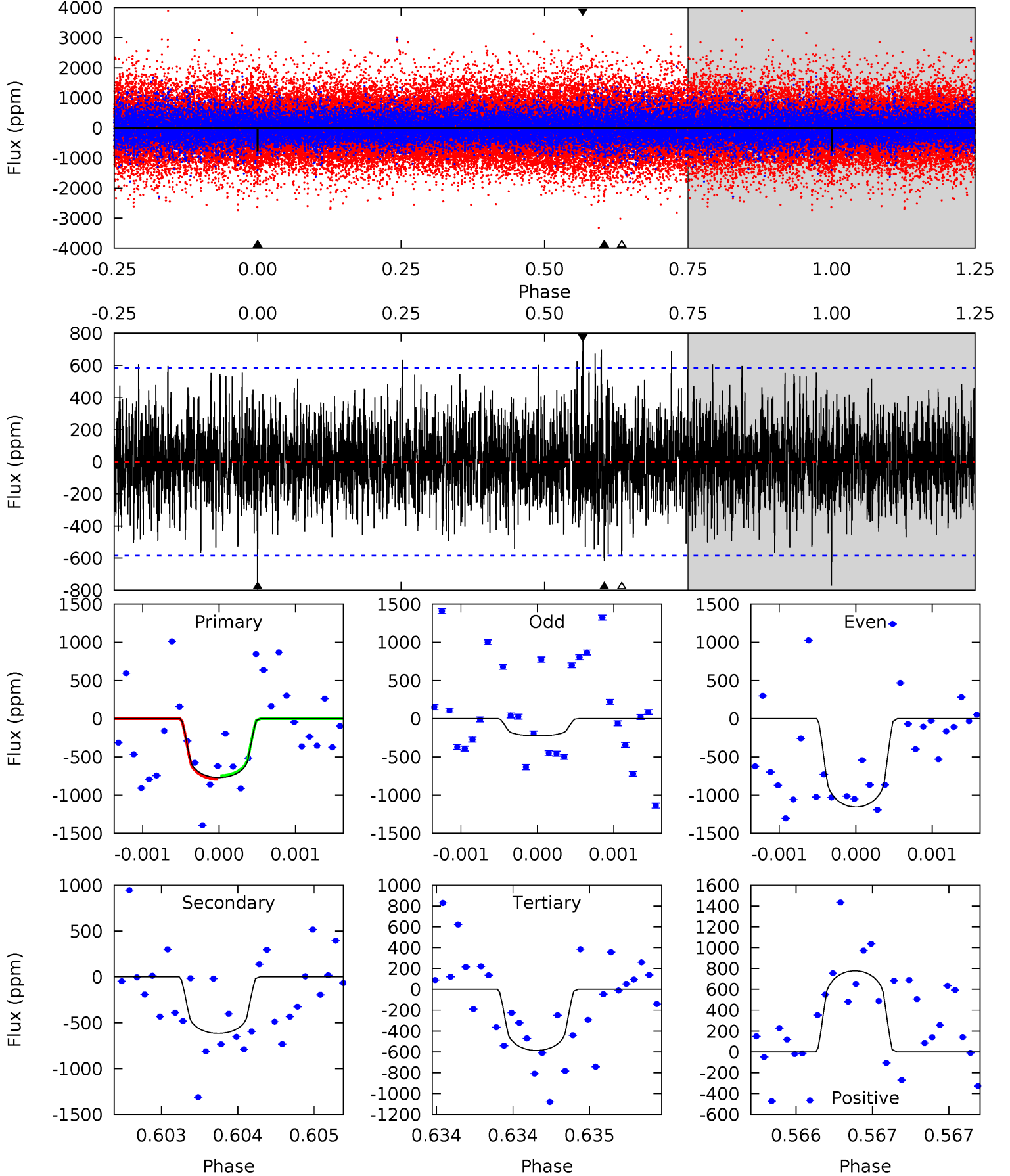
TCE 003751292-01 P=316.385735 Days $T_0=137.390009$ (BKJD)



DV Model-Shift Uniqueness Test

003751292-01, P = 316.386267 Days, E = 137.384090 Days

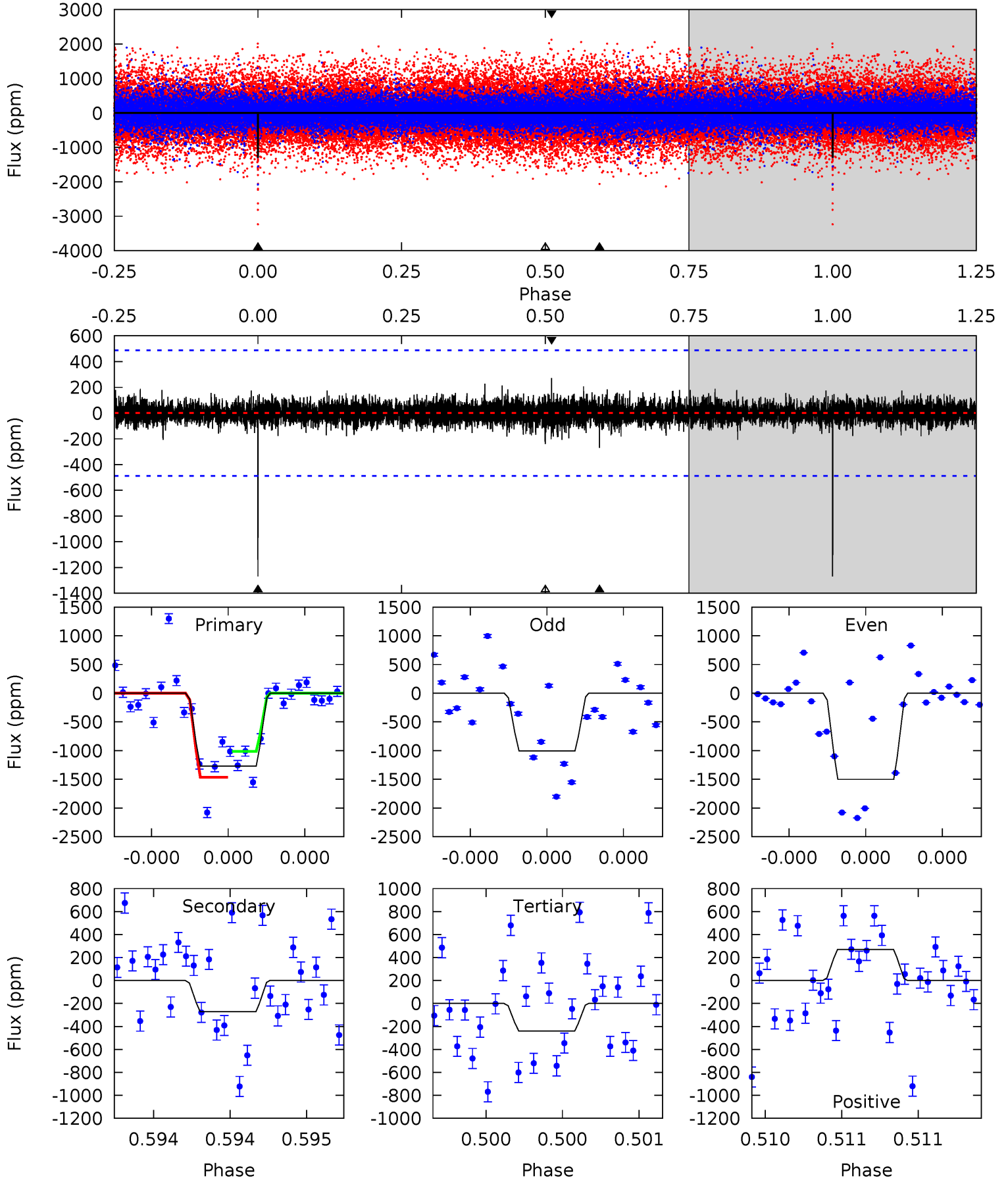
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.32	5.85	5.57	7.39	5.56	3.46	1.72	1.75	-0.07	0.29	-1.53	4.33	0.75	0.50	0.22



Alt Model-Shift Uniqueness Test

003751292-01, P = 316.385735 Days, E = 137.390009 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	3.10	2.75	3.10	5.59	3.50	0.56	11.8	11.4	0.34	-0.01	2.94	0.91	0.18	2.58



Stellar Parameters For KIC 003751292

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6089^{+172}_{-236}	$4.468^{+0.052}_{-0.208}$	$0.070^{+0.250}_{-0.300}$	$1.024^{+0.323}_{-0.108}$	$1.125^{+0.141}_{-0.156}$	$1.475^{+0.386}_{-0.768}$
	+3%/-4%	+1%/-5%	+357%/-429%	+32%/-11%	+13%/-14%	+26%/-52%
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 003751292-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-617 ± 105	$4.90^{+4.24}_{-3.10}$	400^{+29}_{-21}	4758^{+3155}_{-916}	12511^{+74306}_{-8907}
Alt.	-271 ± 87	$5.75^{+4.57}_{-3.61}$	395^{+32}_{-19}	3876^{+1890}_{-707}	3990^{+23047}_{-2858}

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

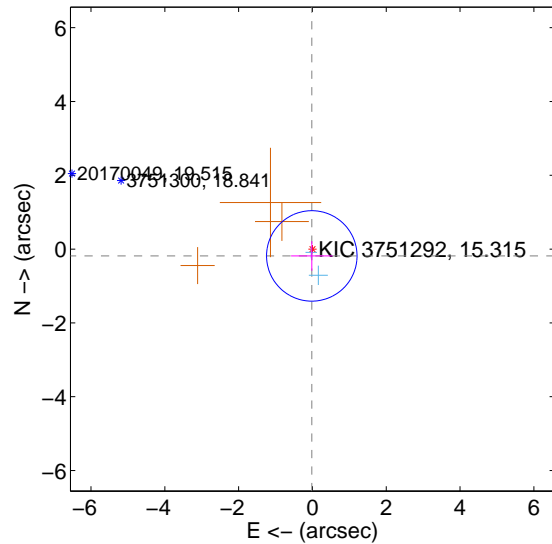
Supplemental centroid analysis for 003751292-01. Kepler magnitude: 15.31. Transit SNR 6.75

There are 2 quarters with good PRF difference image offsets

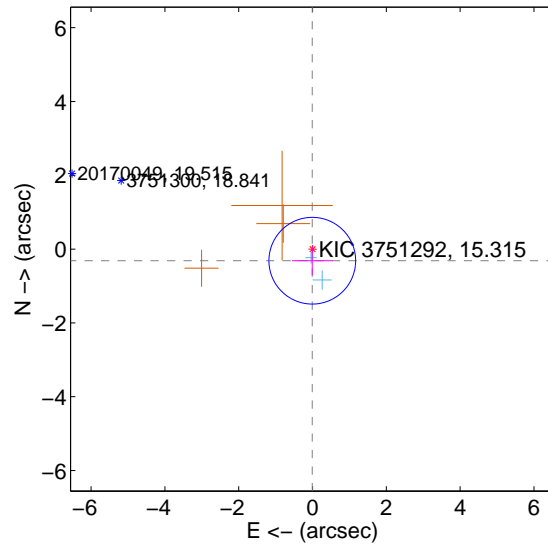
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.186 ± 0.409	0.45	0.017 ± 0.561	-0.185 ± 0.400
PRF-fit source offset from KIC position	0.315 ± 0.392	0.80	0.007 ± 0.555	-0.315 ± 0.394
photometric centroid source offset	0.48 ± 1.66	0.29	-0.39 ± 1.69	-0.29 ± 1.60

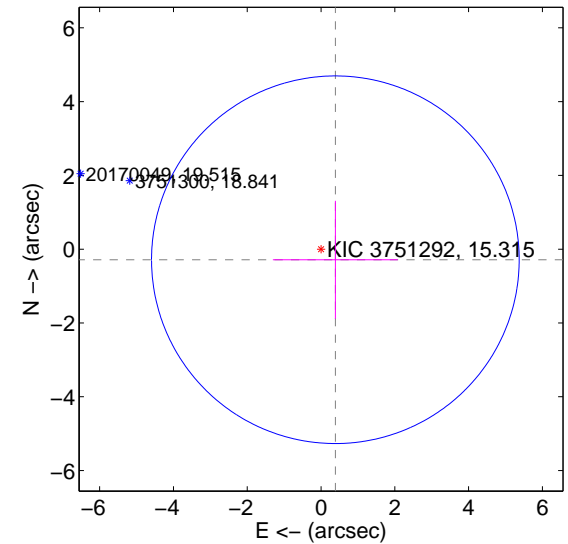
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

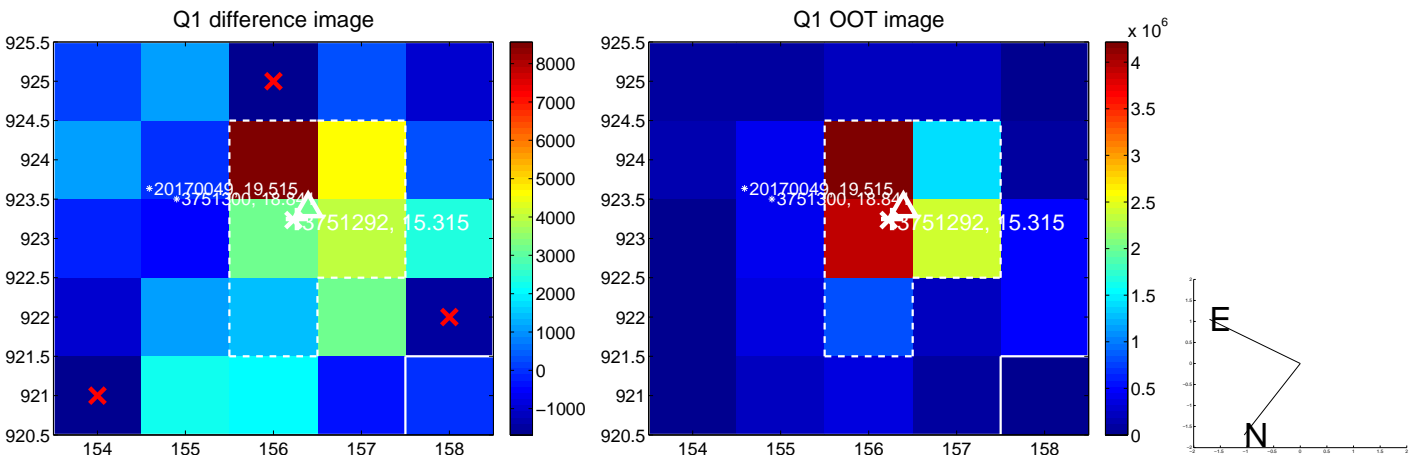


offset from photometric centroids

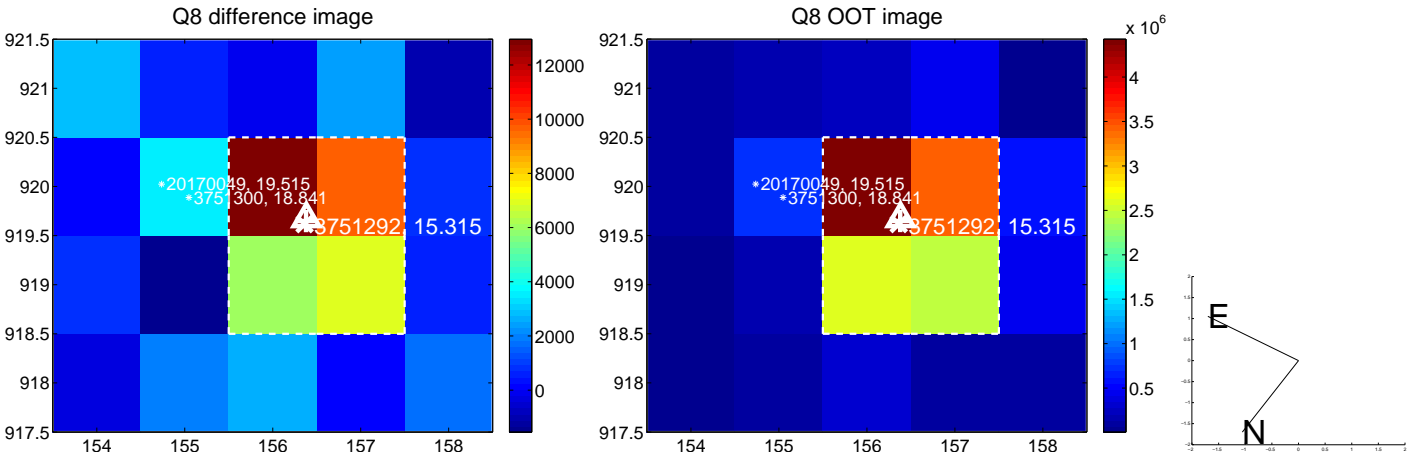
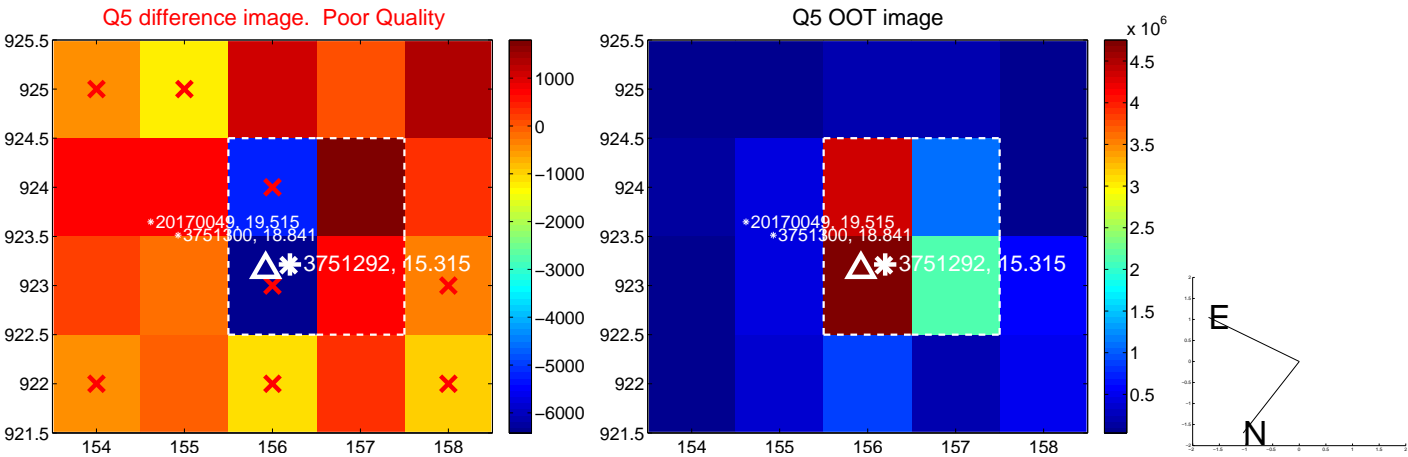


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

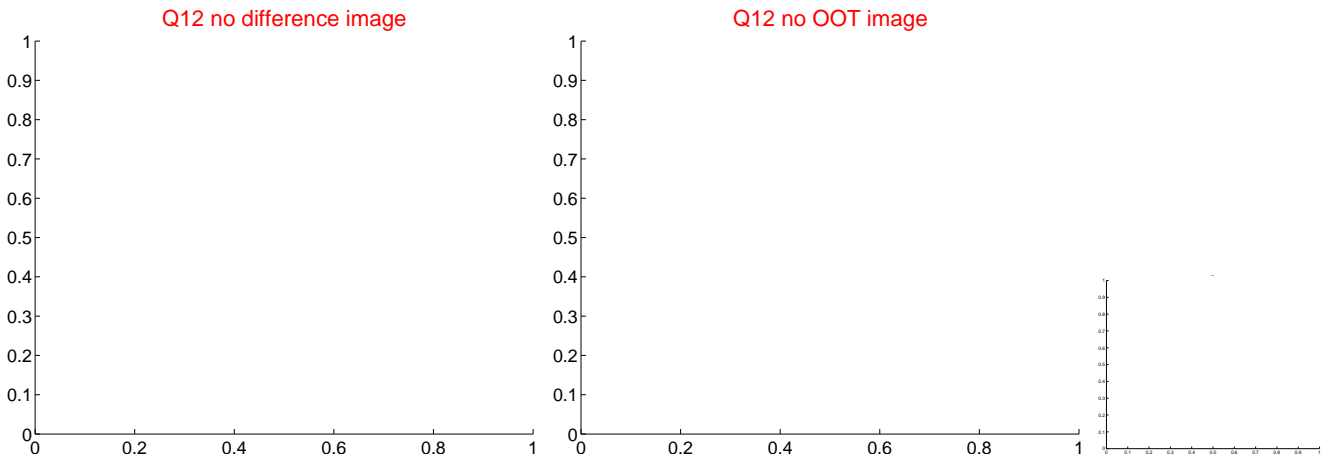
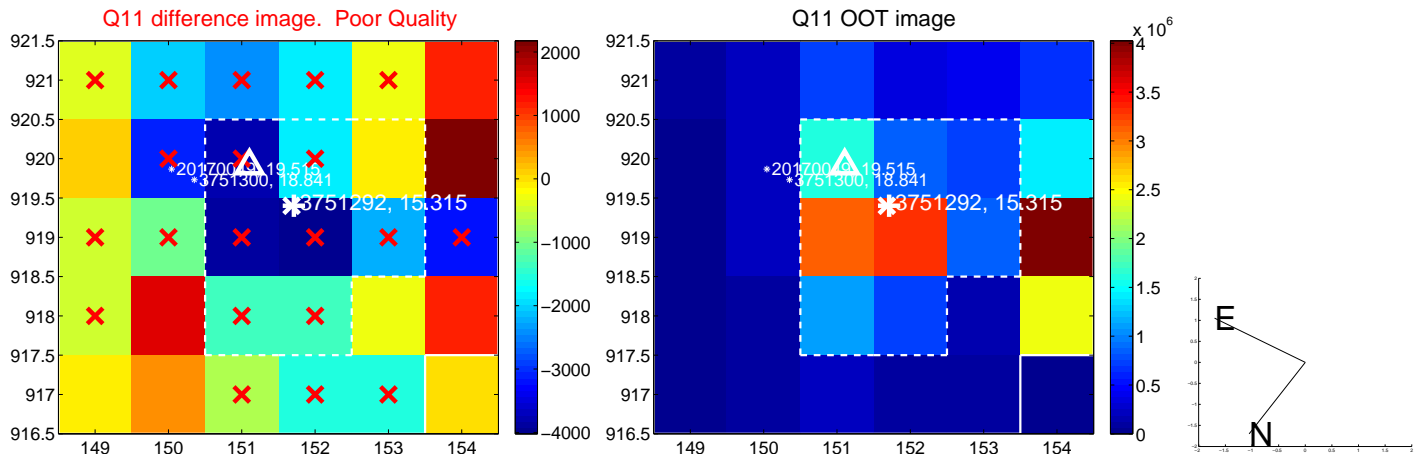
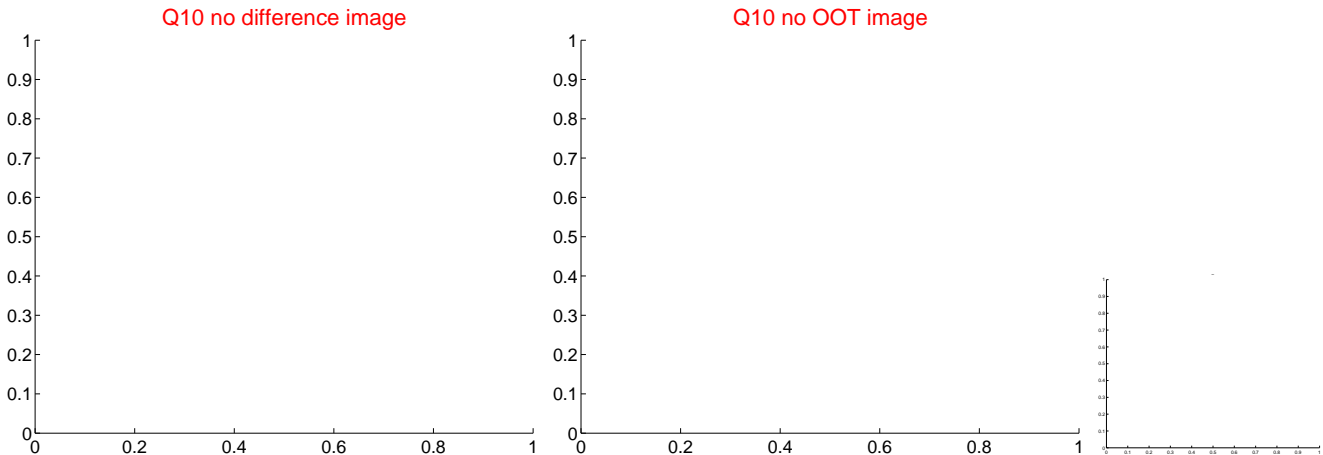
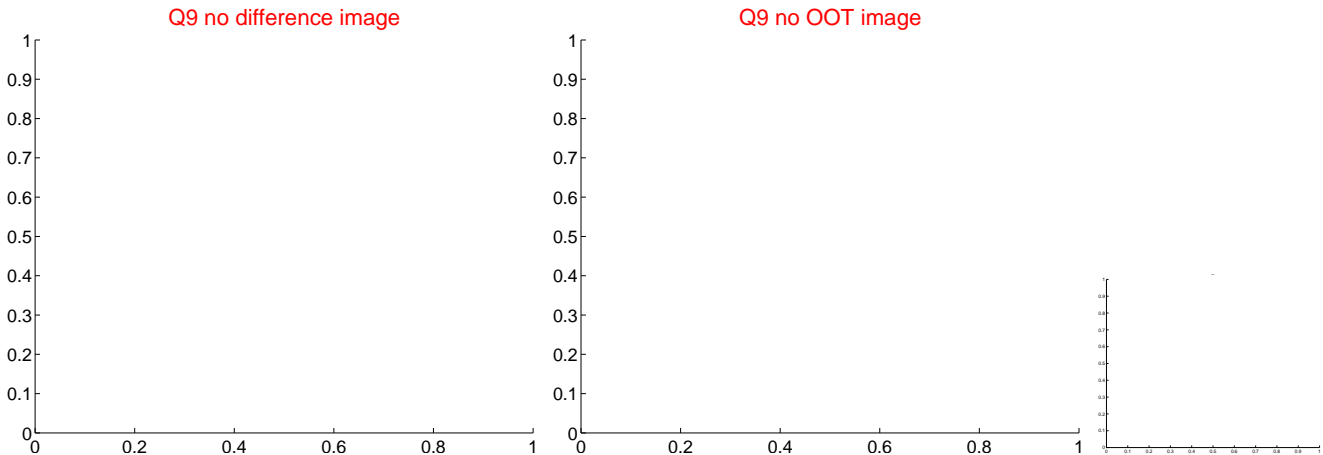
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



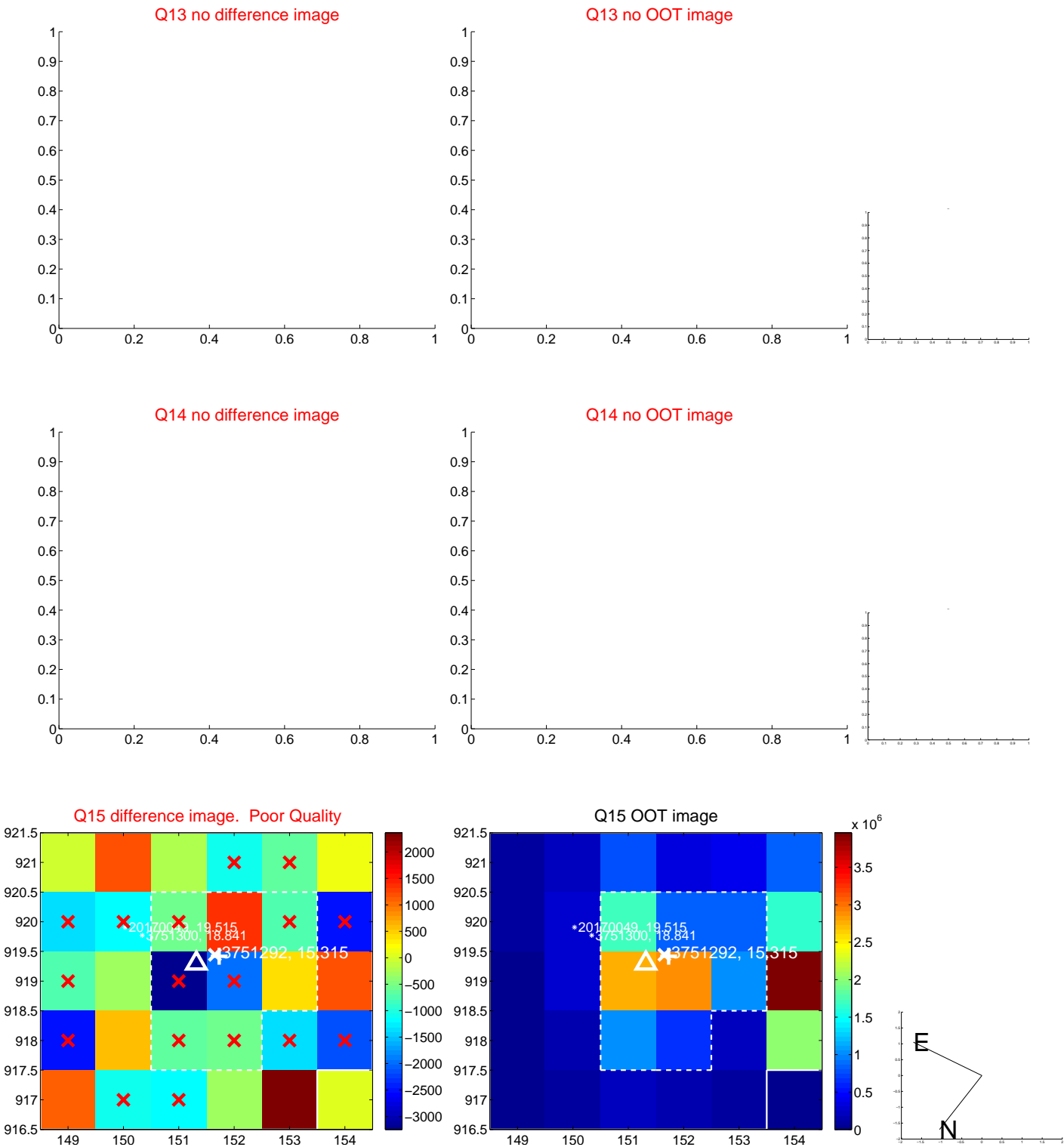
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



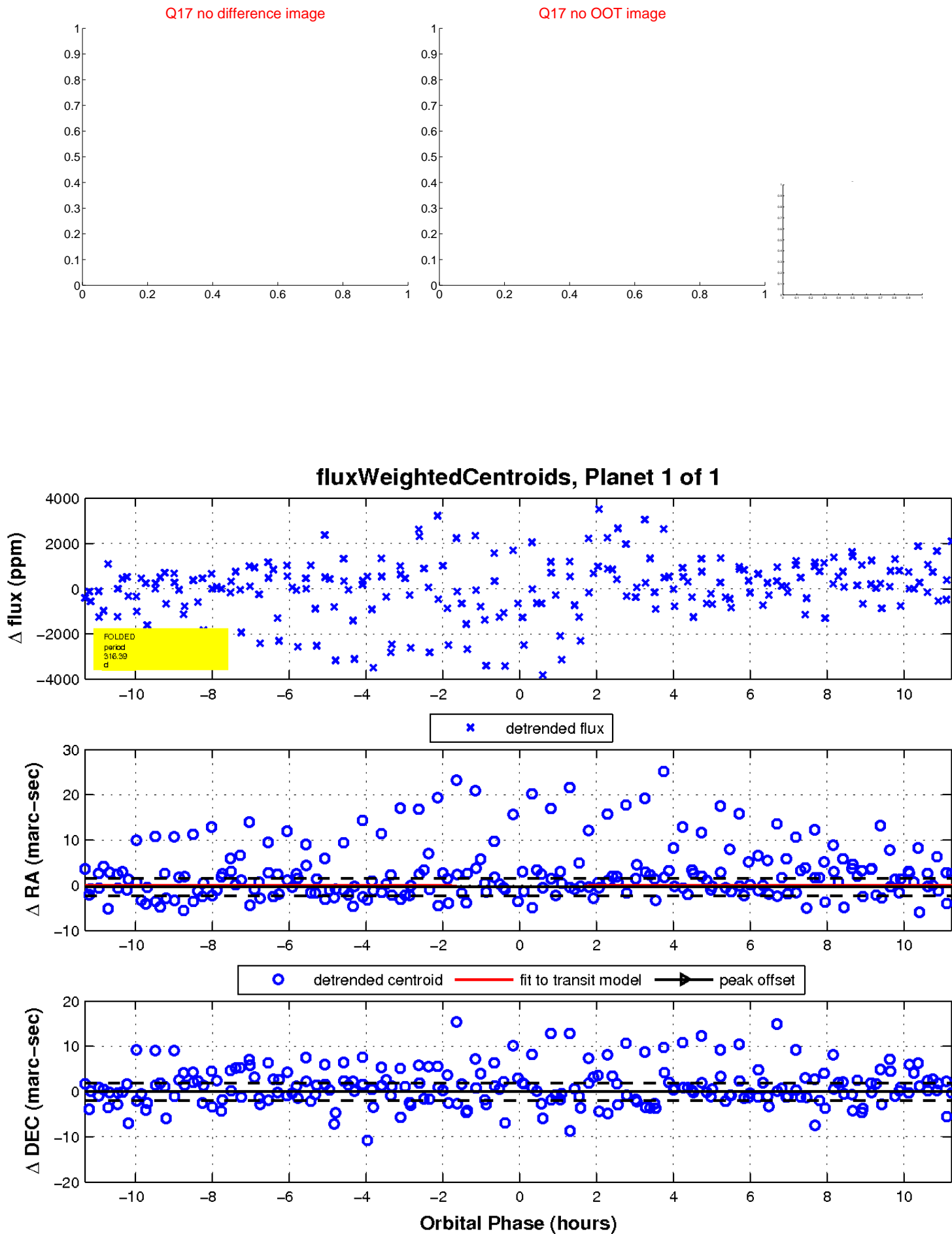
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

