

KIC 005613702

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})
005613702-01	OBS	No	410.085165	149.536019	336.7	13.568	11.5	10.3	2.00	6002	3.92	3.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005613702-01	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.

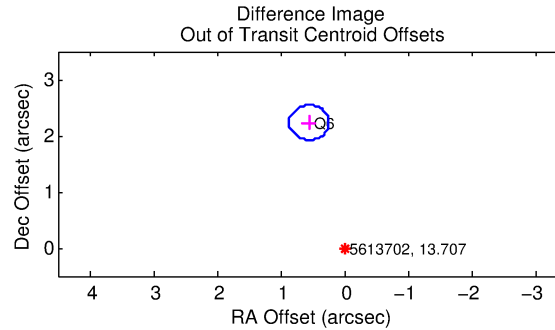
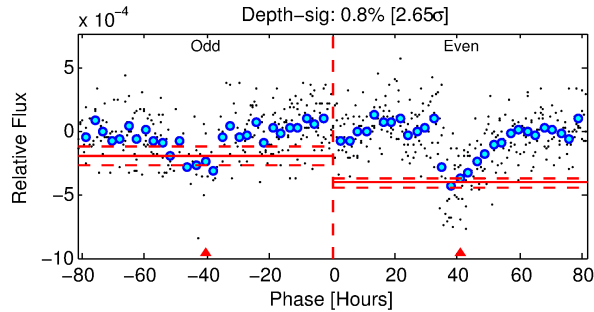
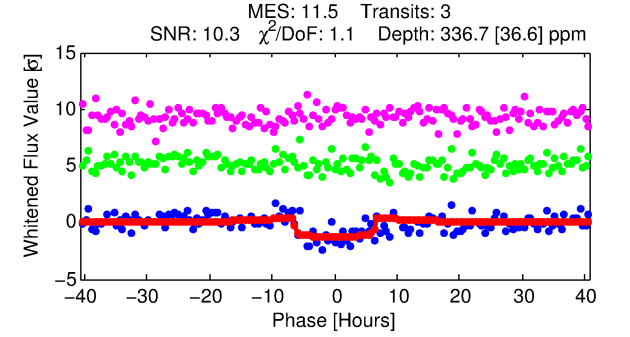
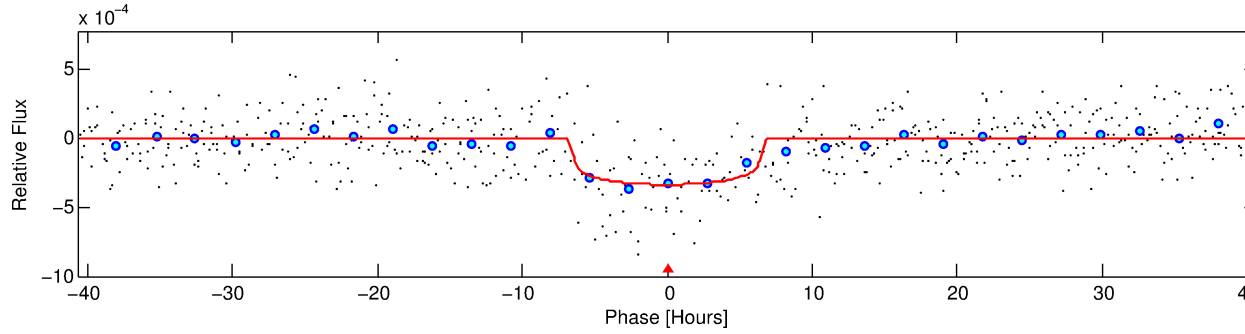
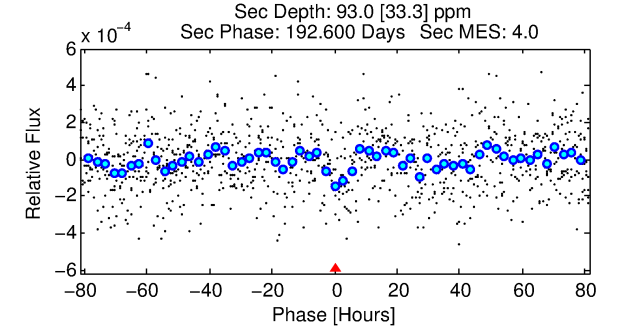
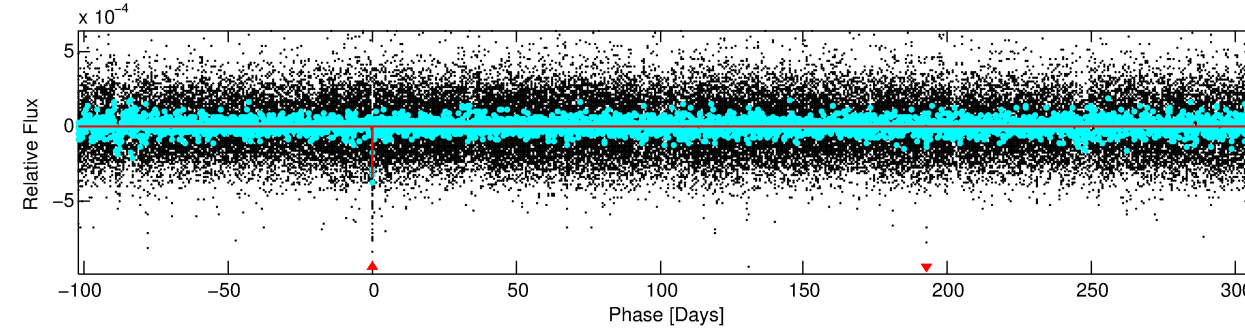
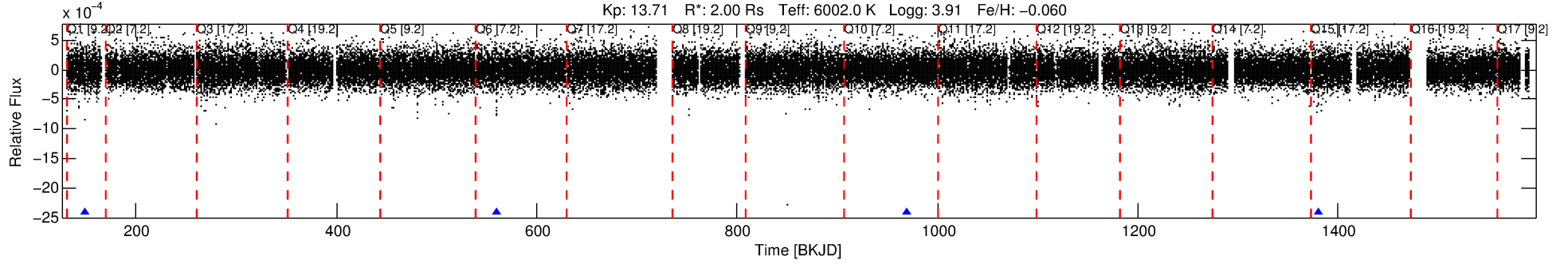
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005613702-01

No Significant Match Found

DV One-Page Summary

KIC: 5613702 Candidate: 1 of 1 Period: 410.085 d



DV Fit Results:

Period = 410.08516 [0.00730] d
Epoch = 149.5360 [0.0135] BKJD
Rp/R* = 0.0180 [0.0052]
a/R* = 169.56 [232.35]
b = 0.70 [0.98]
Seff = 3.53 [1.30]
Teq = 350 [32] K
Rp = 3.92 [1.49] Re
a = 1.1457 [0.2648] AU
Ag = 4372.39 [3370.43] [1.30σ]
Teffp = 4394 [750] K [5.39σ]

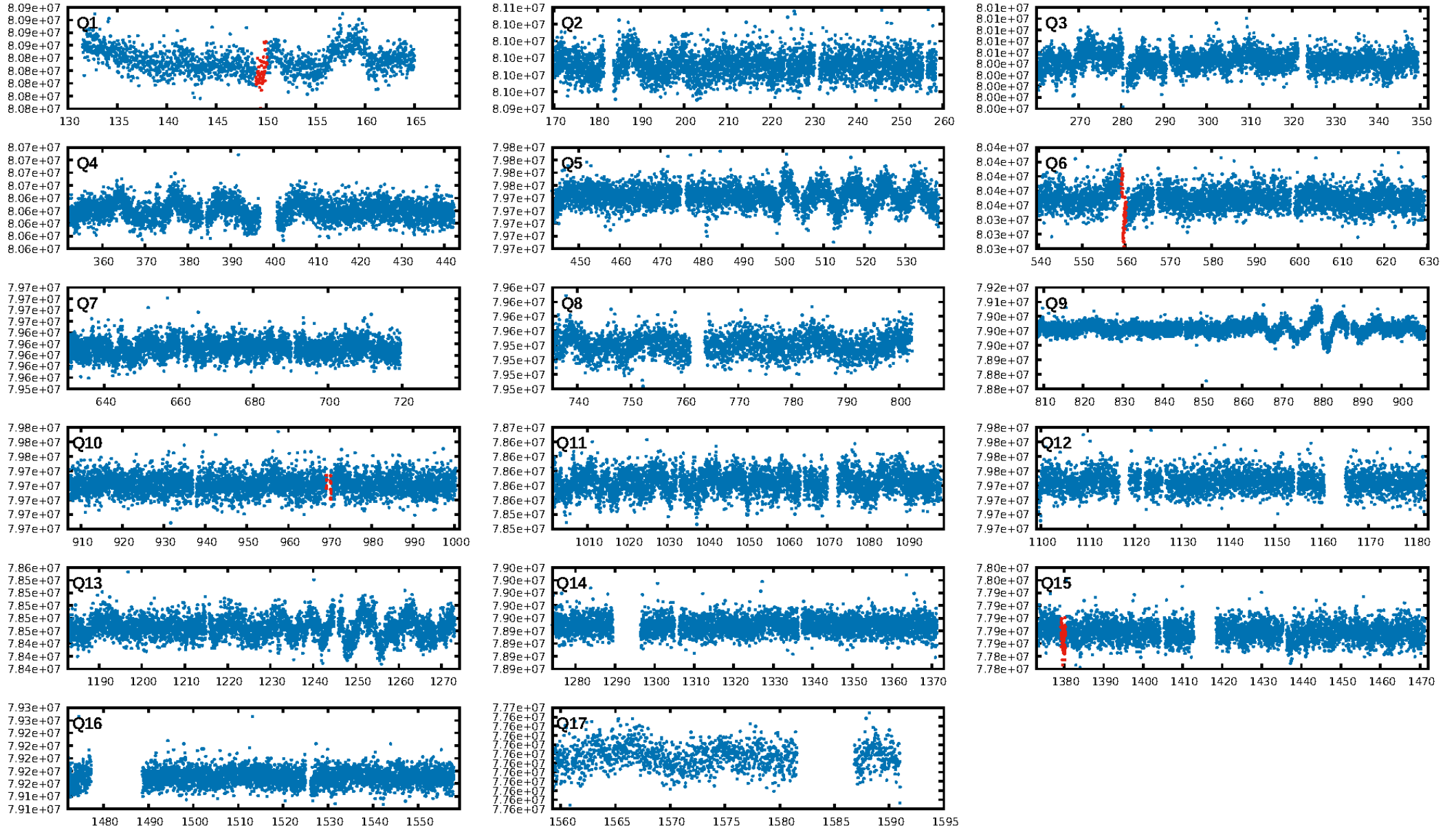
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.2%
ModelChiSquareGof-sig: 63.5%
Bootstrap-pfa: 8.15e-23
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.7615
Centroid-sig: 6.0%
Centroid-so: 1.415 arcsec [1.30σ]
OotOffset-rm: 2.300 arcsec [22.24σ]
KicOffset-rm: 2.046 arcsec [19.78σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

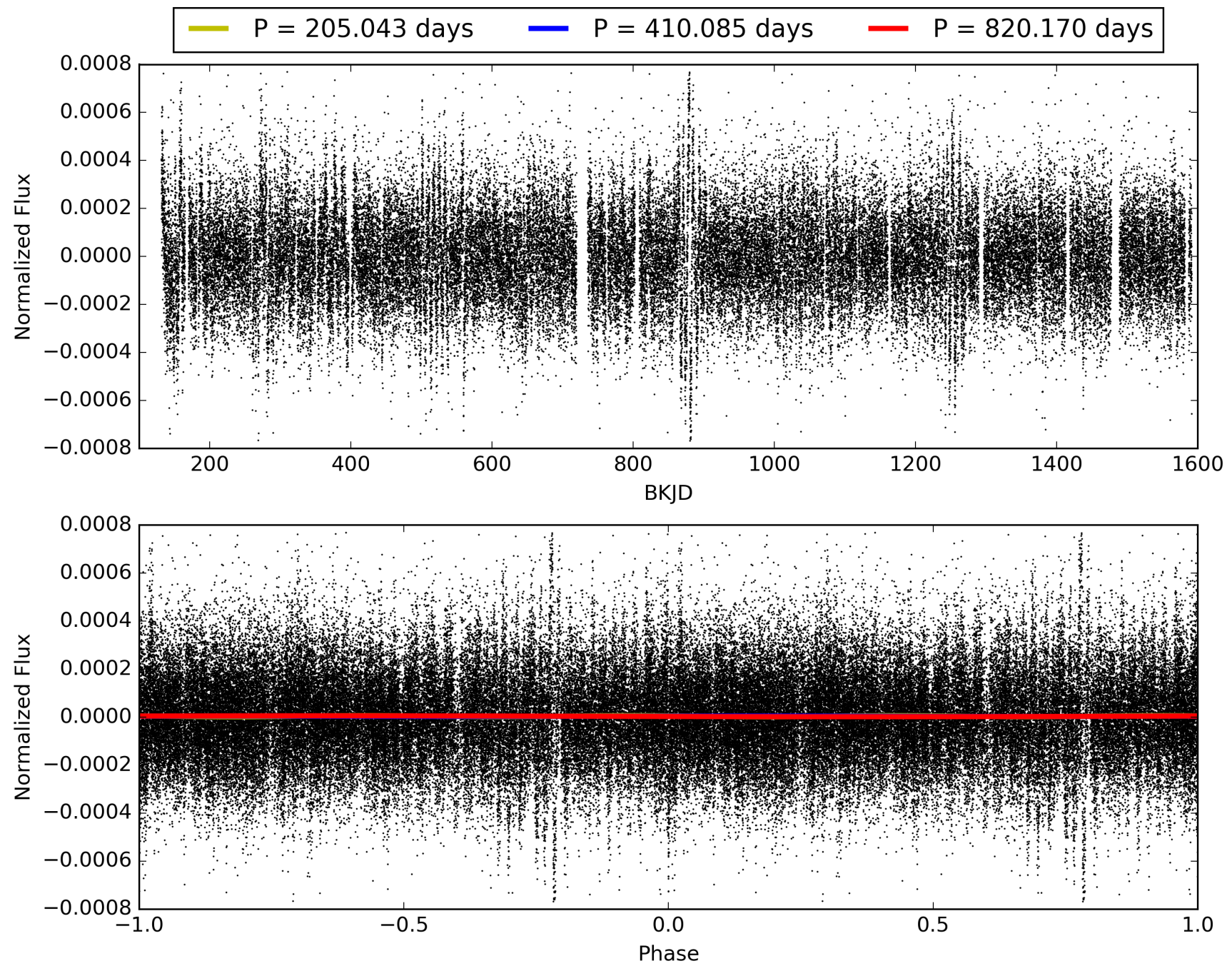
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 17:42:05 Z

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

TCE 005613702-01, PDC Light Curves

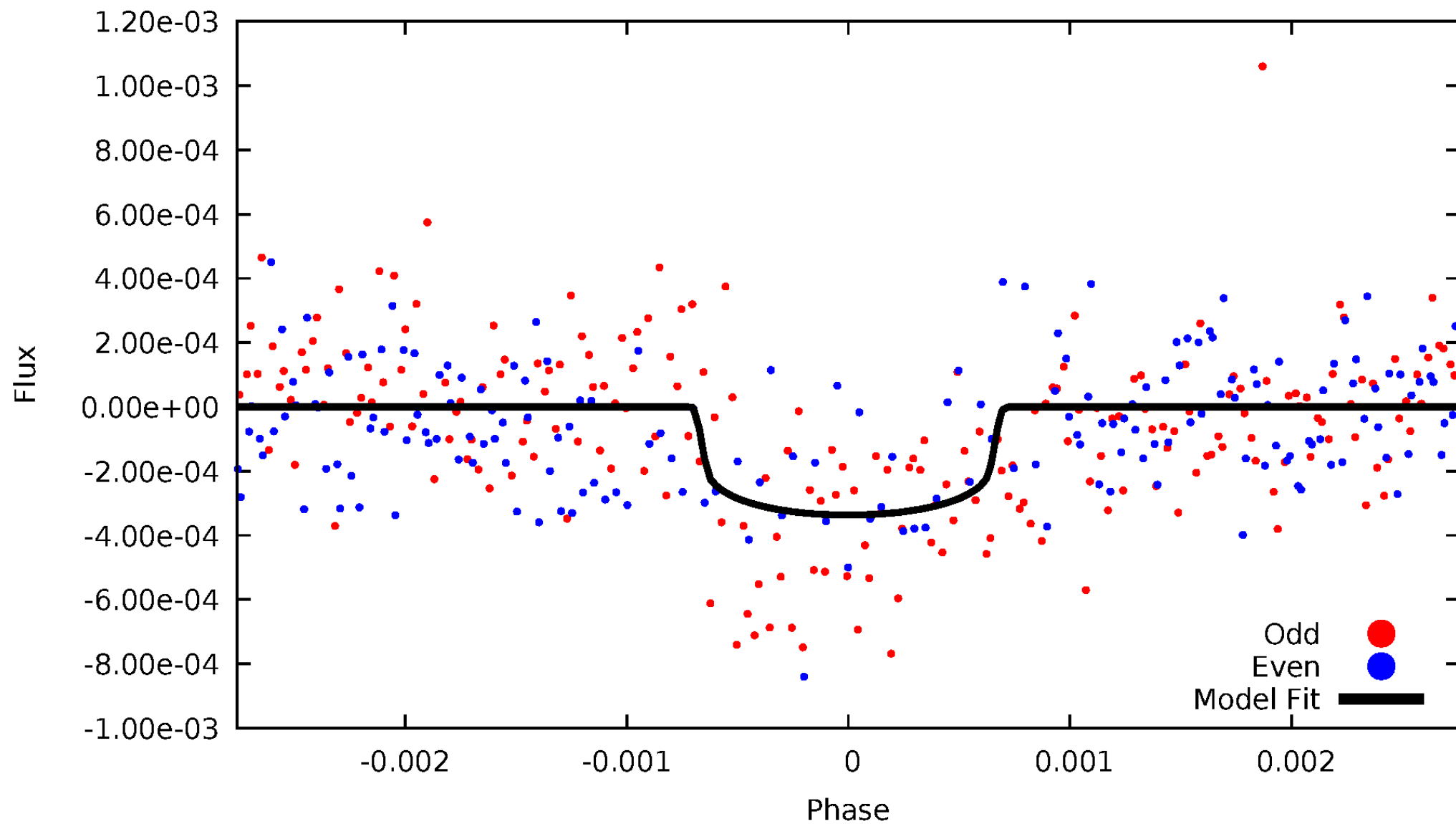


TCE 005613702-01



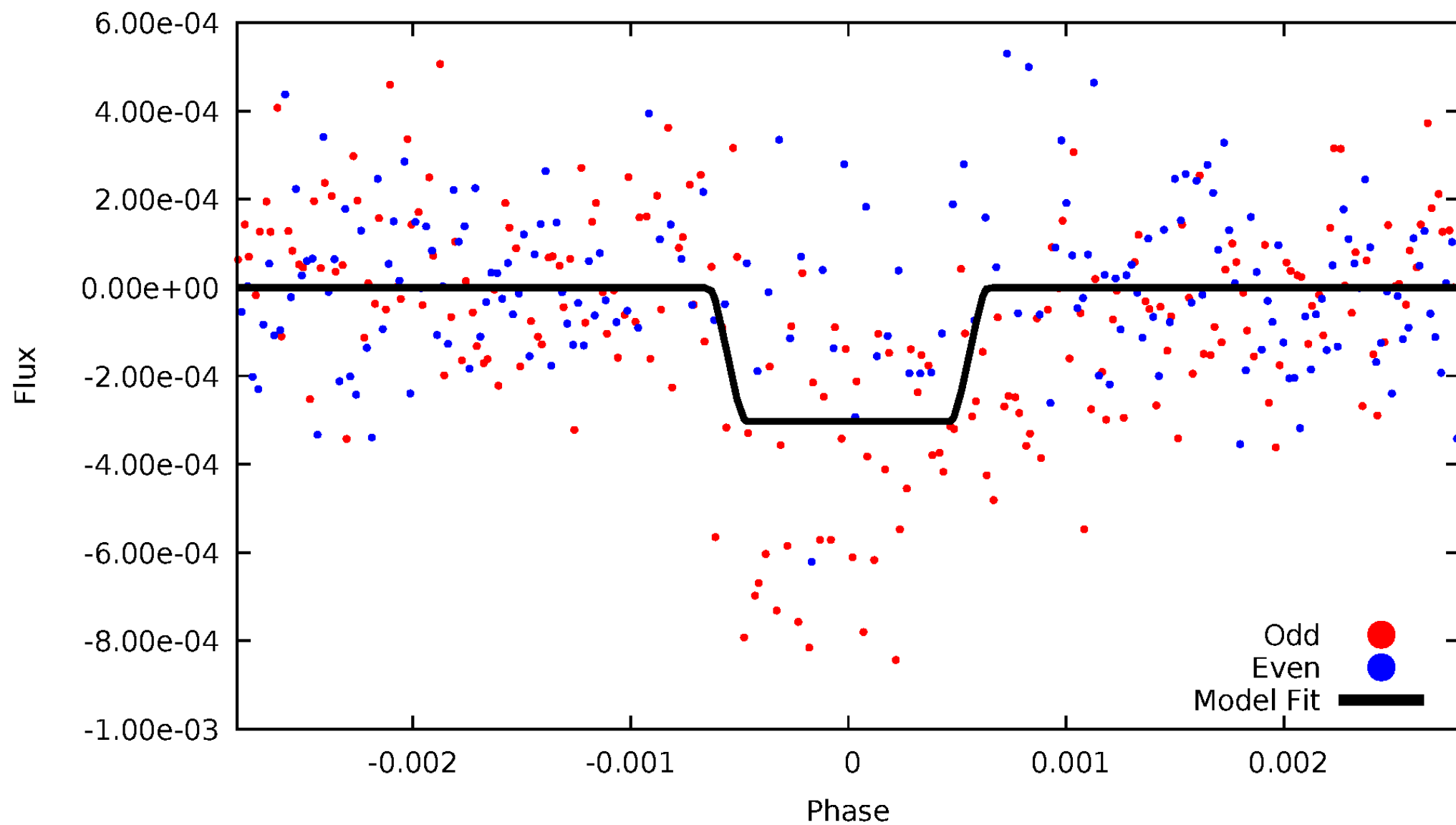
DV Odd/Even

TCE 005613702-01

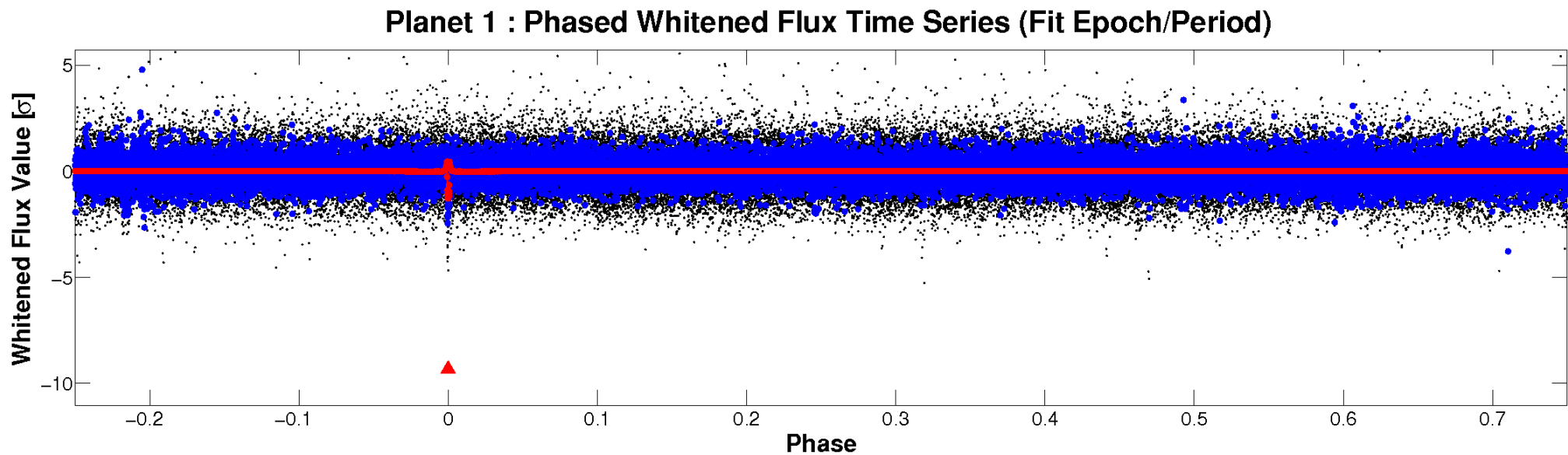
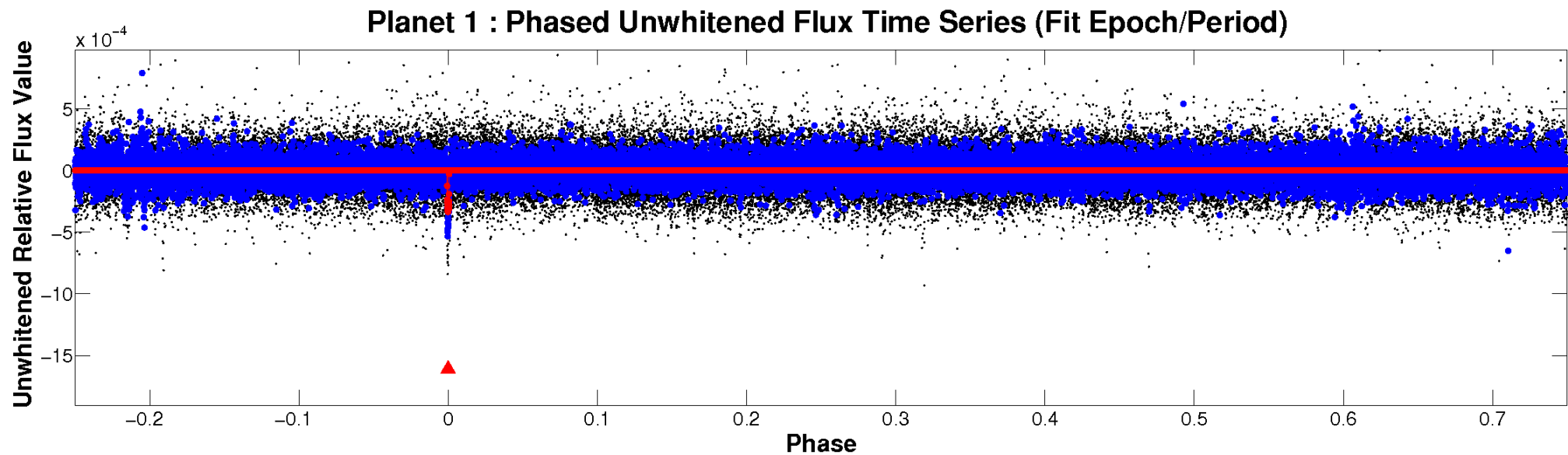


ALT Odd/Even

TCE 005613702-01

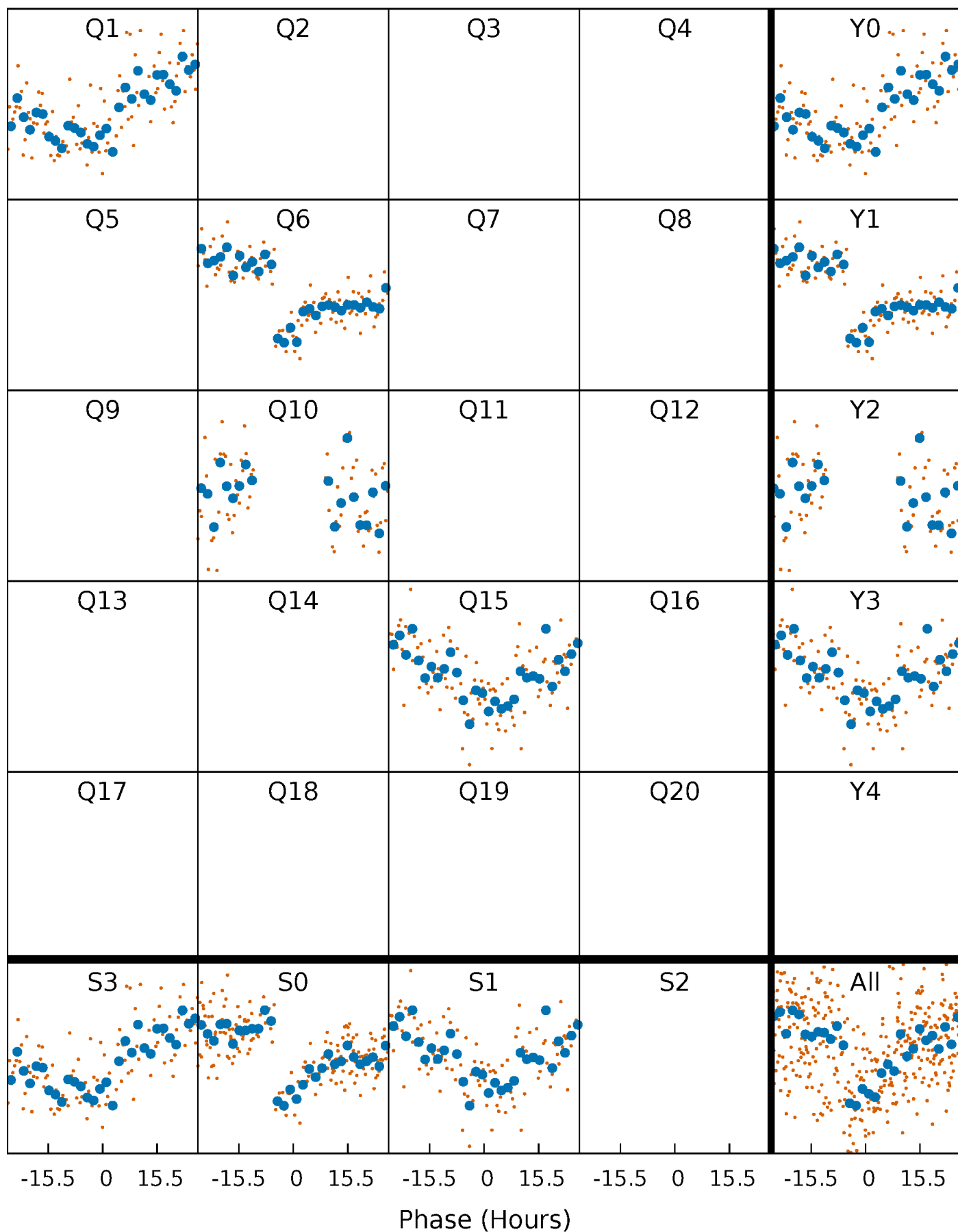


Non-Whitened Vs. Whitened Light Curve



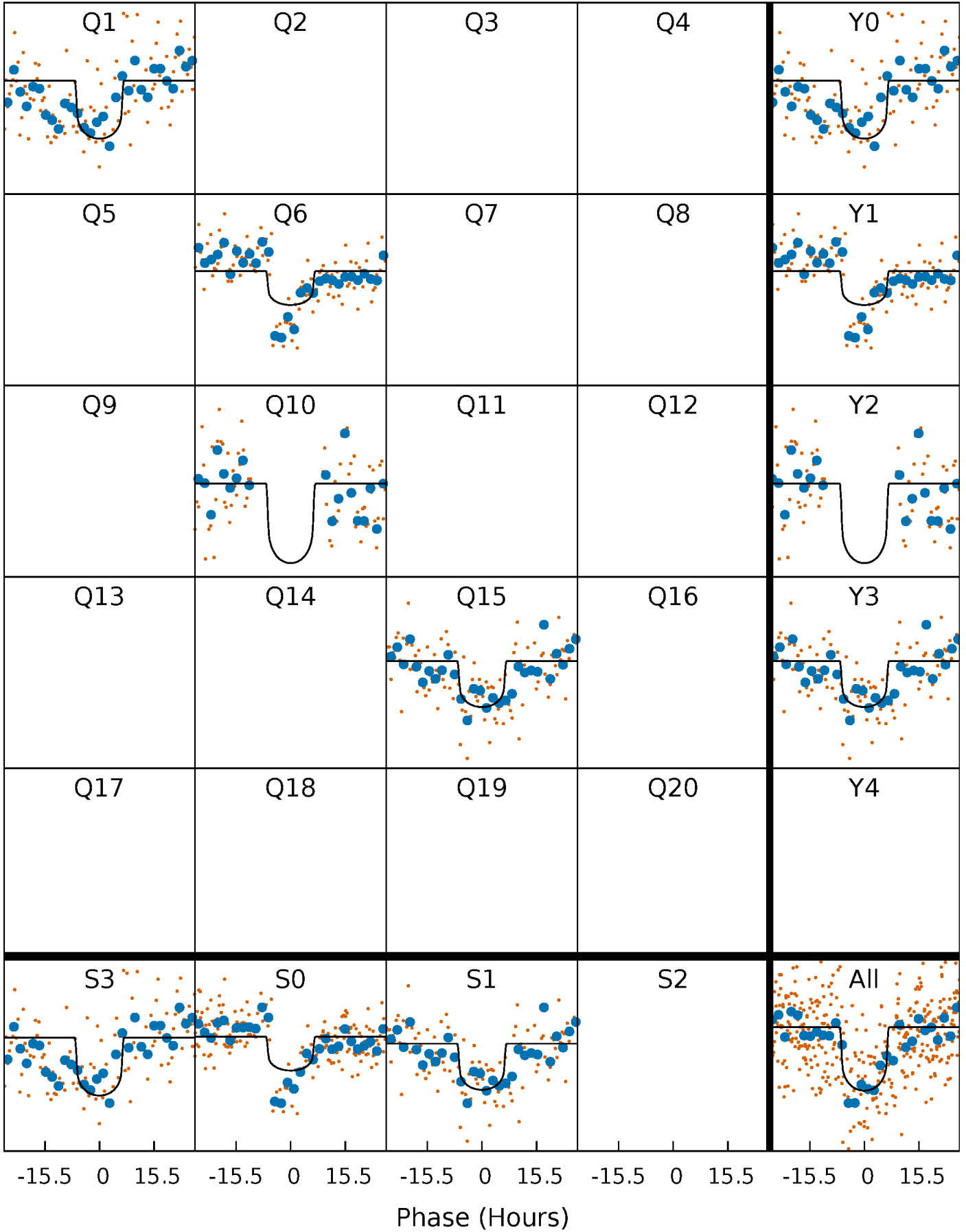
PDC Quarter-Phased Transit Curves

TCE 005613702-01 P=410.085165 Days $T_0=149.536019$ (BKJD)



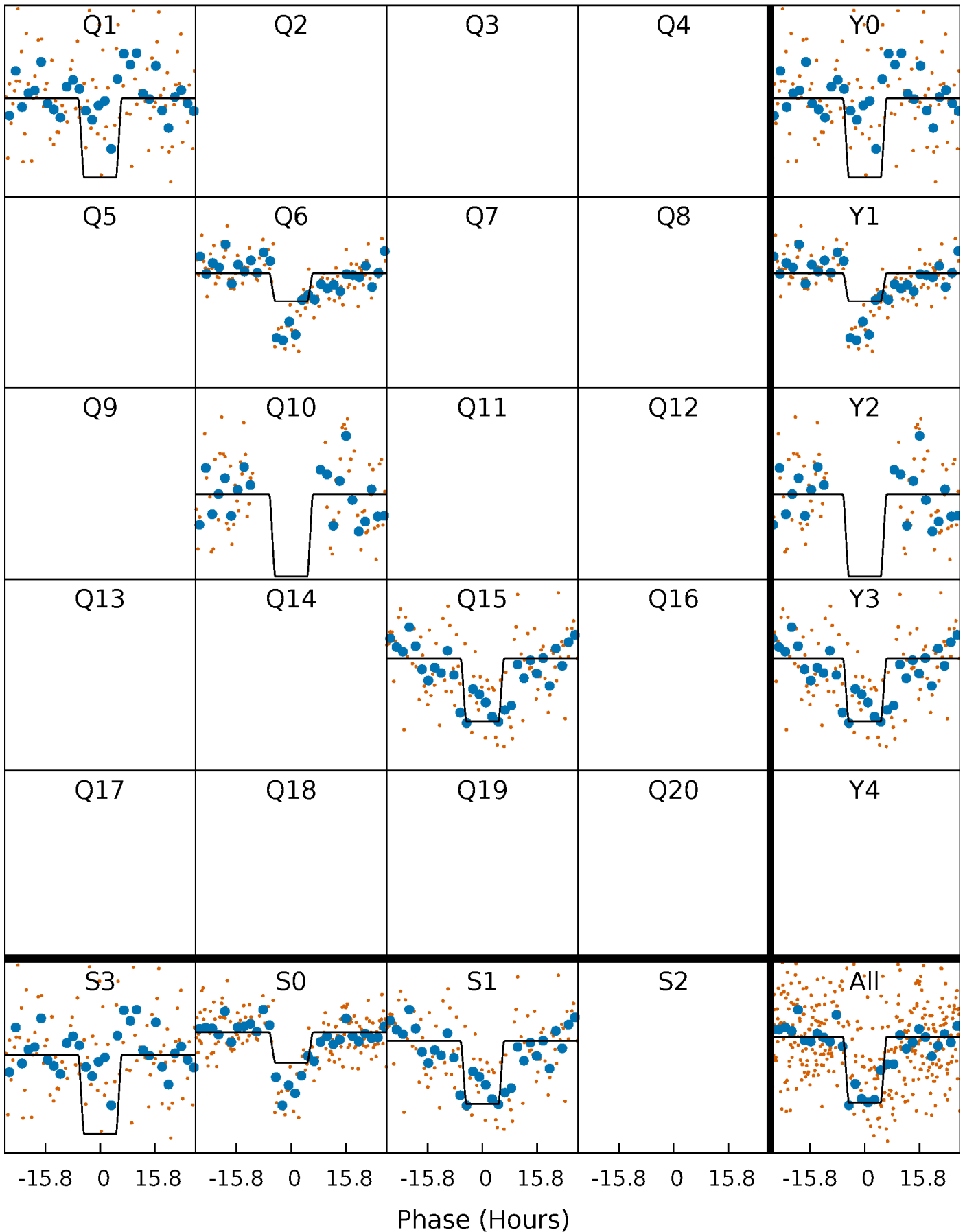
DV Quarter-Phased Transit Curves

TCE 005613702-01 $P=410.085165$ Days $T_0=149.536019$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

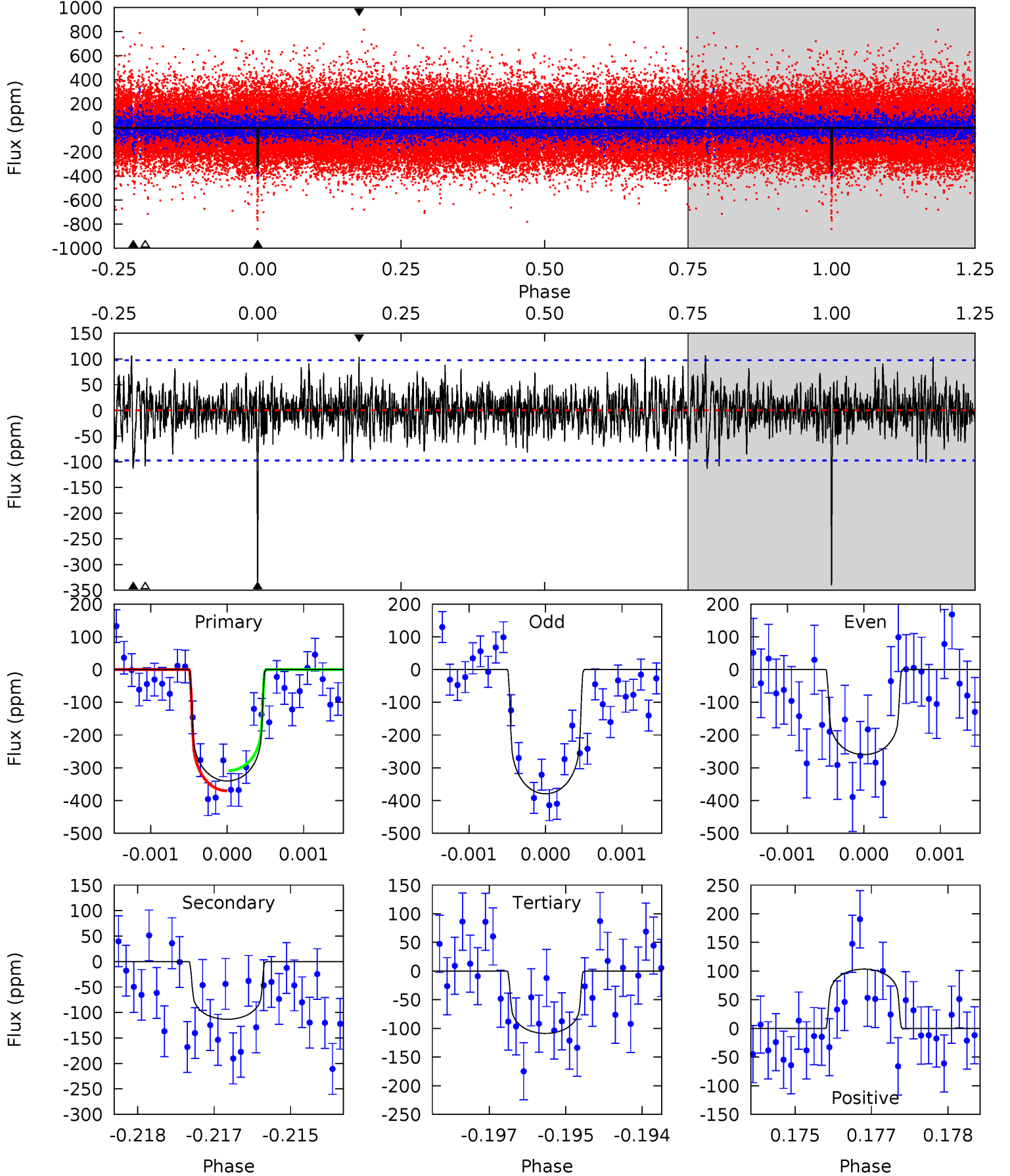
TCE 005613702-01 P=410.087927 Days $T_0=149.522883$ (BKJD)



DV Model-Shift Uniqueness Test

005613702-01, $P = 410.085165$ Days, $E = 149.536019$ Days

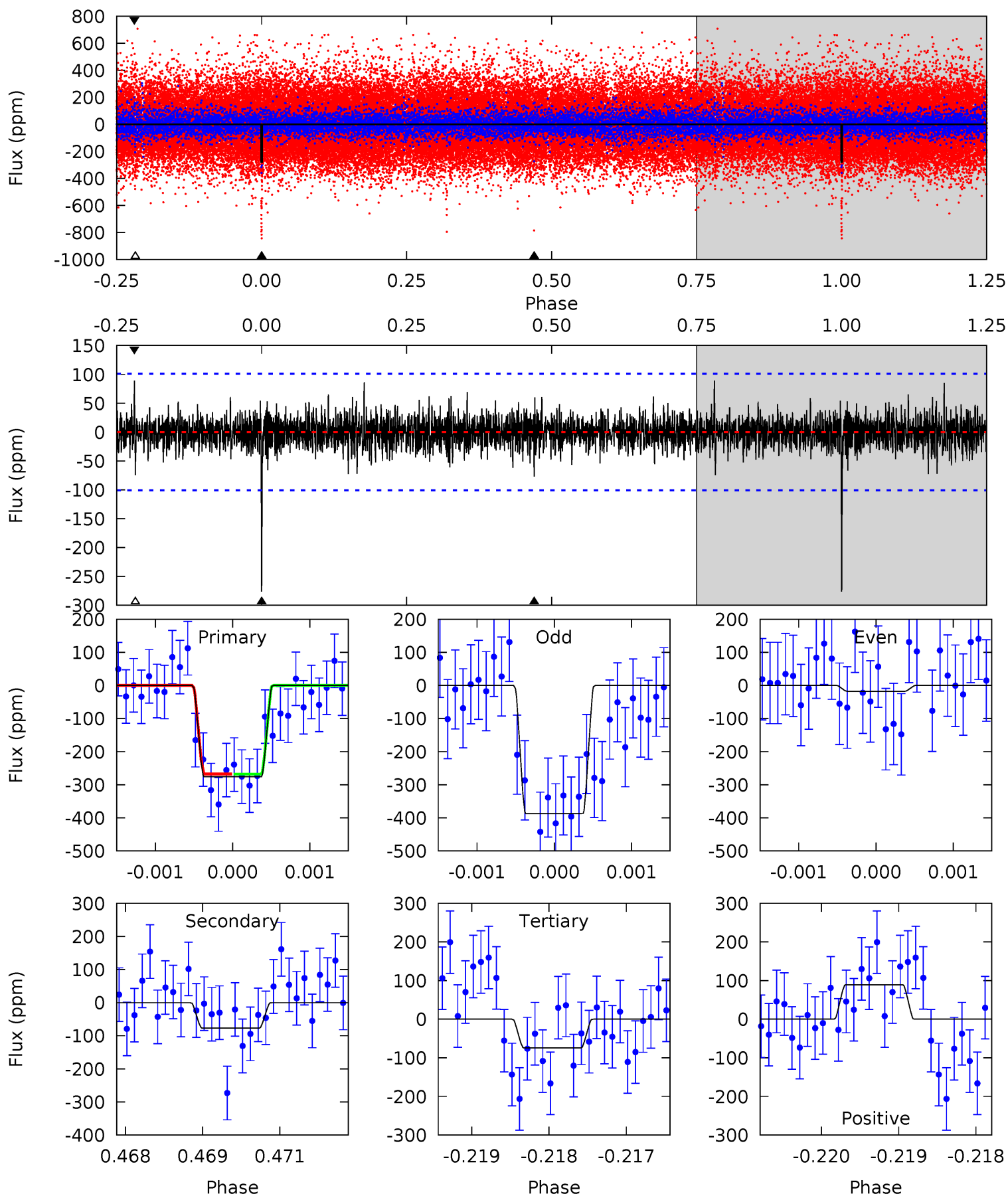
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.8	6.26	6.01	5.72	5.39	3.19	1.59	12.8	13.1	0.25	0.54	3.11	1.06	0.24	1.70



Alt Model-Shift Uniqueness Test

005613702-01, P = 410.087927 Days, E = 149.522883 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	4.12	3.99	4.77	5.41	3.23	1.02	10.8	10.0	0.13	-0.65	9.25	1.09	0.24	0.01



Stellar Parameters For KIC 005613702

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6002^{+90}_{-81}	$3.914^{+0.210}_{-0.070}$	$-0.060^{+0.150}_{-0.150}$	$1.996^{+0.267}_{-0.496}$	$1.193^{+0.136}_{-0.150}$	$0.211^{+0.252}_{-0.048}$
	+1%/-1%	+5%/-2%	+250%/-250%	+13%/-25%	+11%/-13%	+119%/-23%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005613702-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-113 ± 18	$3.67^{+1.30}_{-1.13}$	484^{+19}_{-31}	4795^{+760}_{-522}	6134^{+6657}_{-2931}
Alt.	-77 ± 19	$3.67^{+1.18}_{-1.12}$	482^{+19}_{-30}	4430^{+708}_{-448}	4058^{+4736}_{-1758}

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 $A_{obs} \gg 1.0$

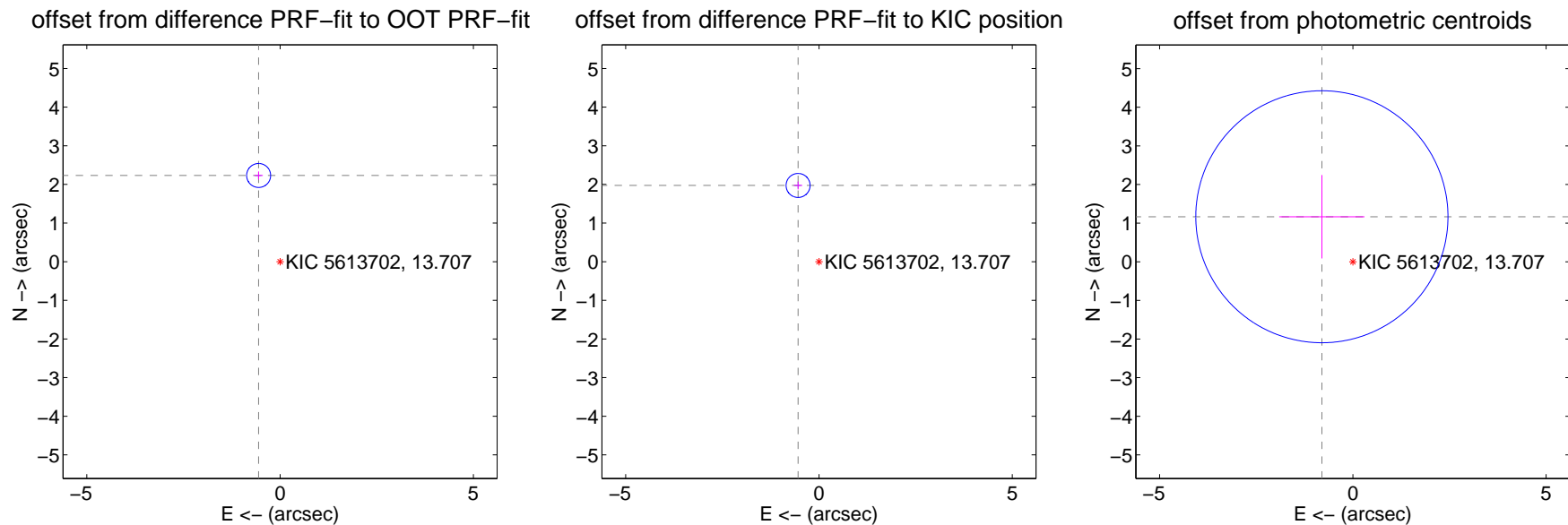
DV Centroid Data

Supplemental centroid analysis for 005613702-01. Kepler magnitude: 13.71. Transit SNR 10.32

There are 1 quarters with good PRF difference image offsets

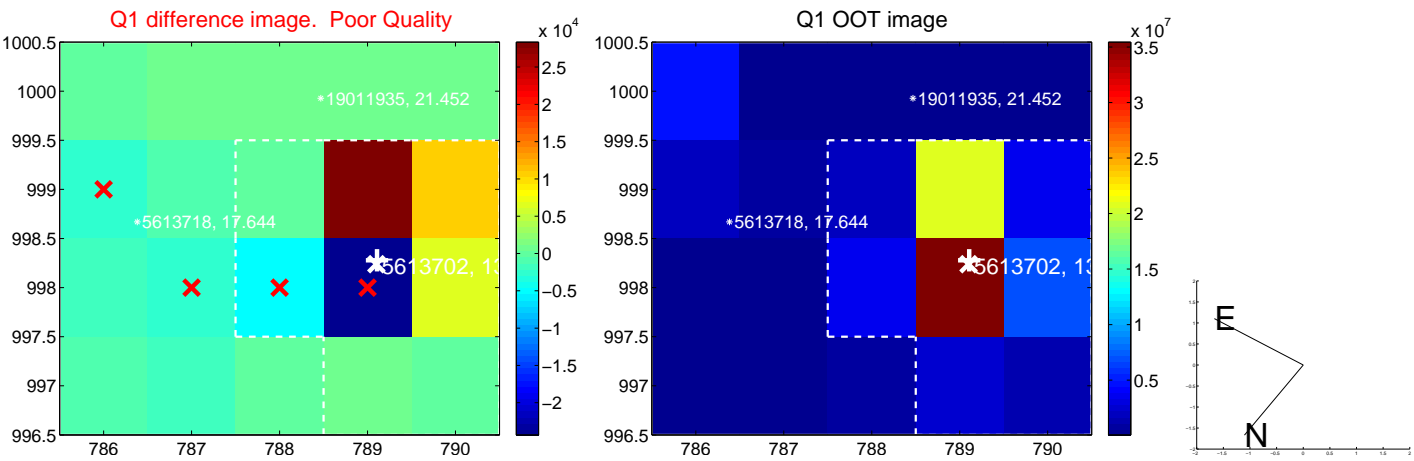
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.300 ± 0.103	22.24	0.555 ± 0.107	2.232 ± 0.103
PRF-fit source offset from KIC position	2.046 ± 0.103	19.78	0.540 ± 0.107	1.974 ± 0.103
photometric centroid source offset	1.41 ± 1.09	1.30	0.80 ± 1.10	1.17 ± 1.08



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.

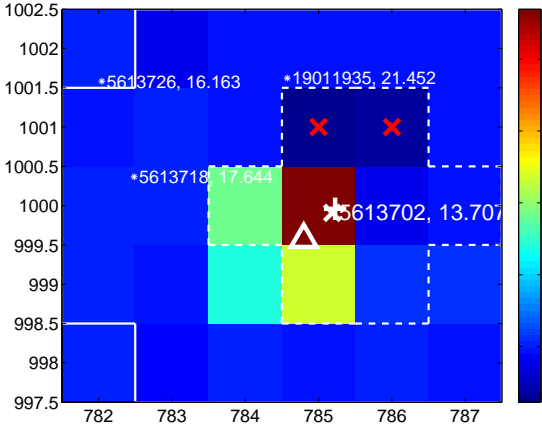
Q5 no difference image



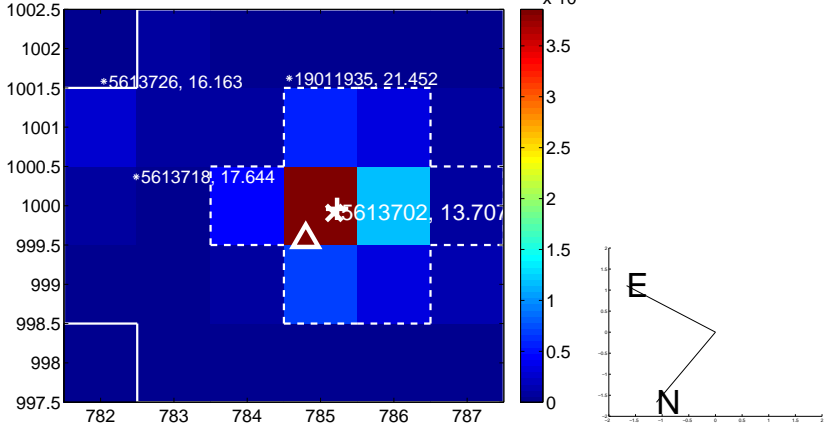
Q5 no OOT image



Q6 difference image



Q6 OOT image



Q7 no difference image



Q7 no OOT image



Q8 no difference image



Q8 no OOT image

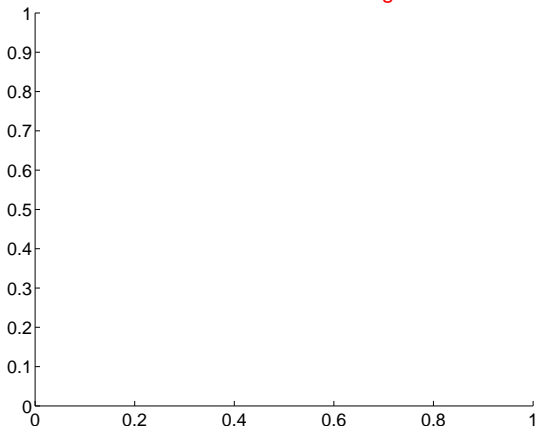


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

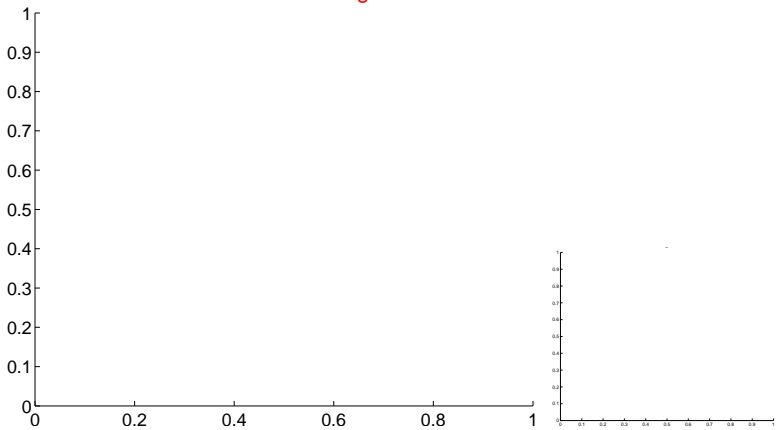


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

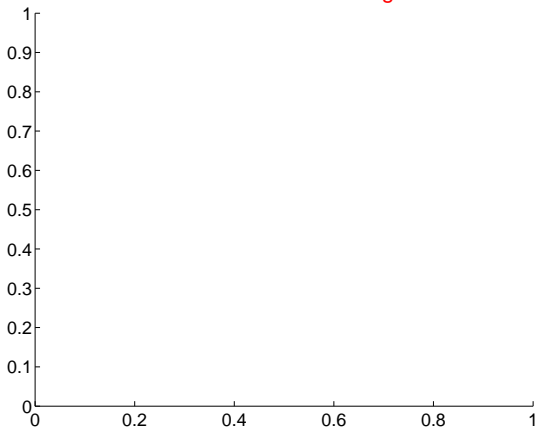
Q13 no difference image



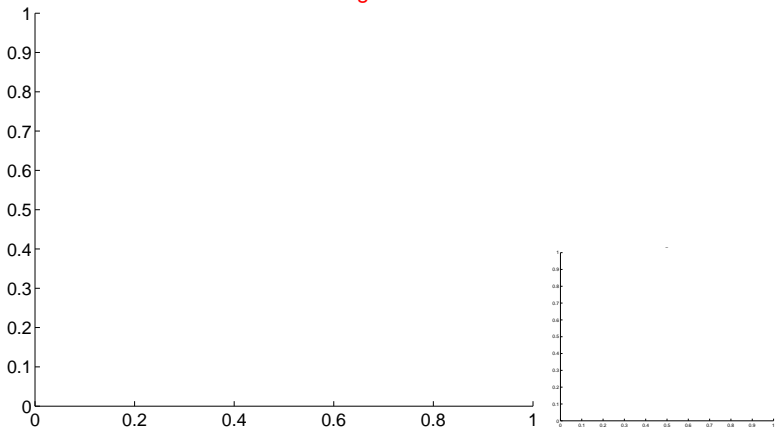
Q13 no OOT image



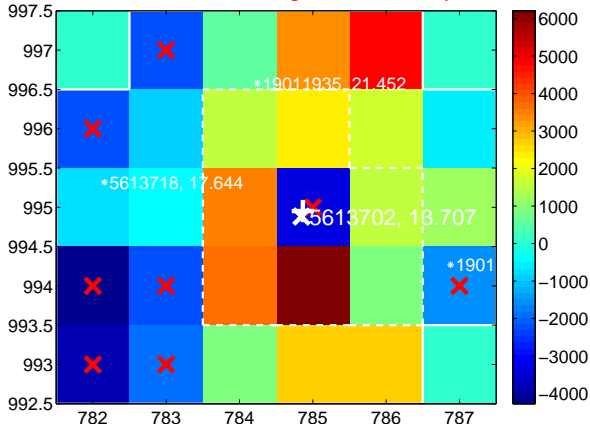
Q14 no difference image



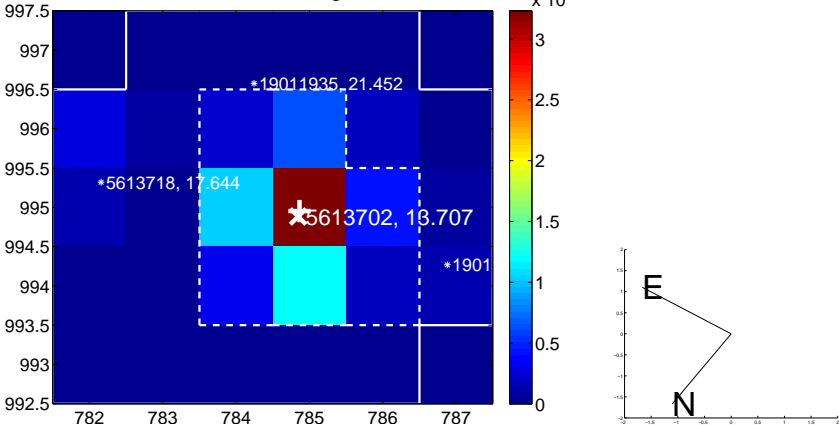
Q14 no OOT image



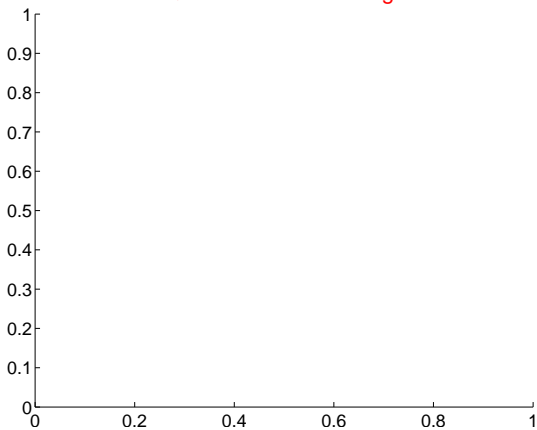
Q15 difference image. Poor Quality



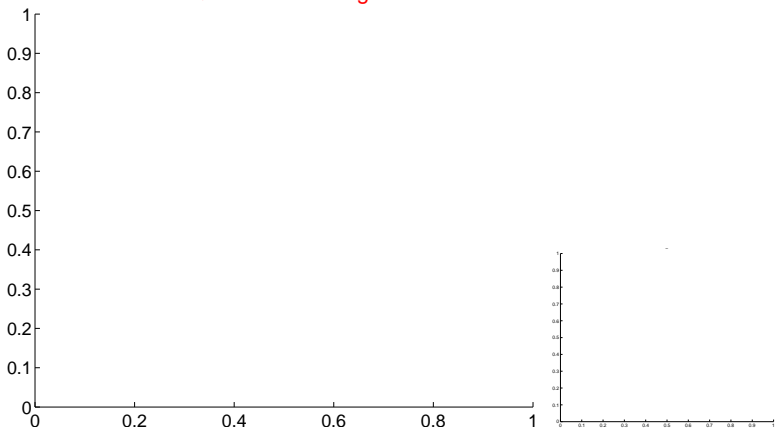
Q15 OOT image



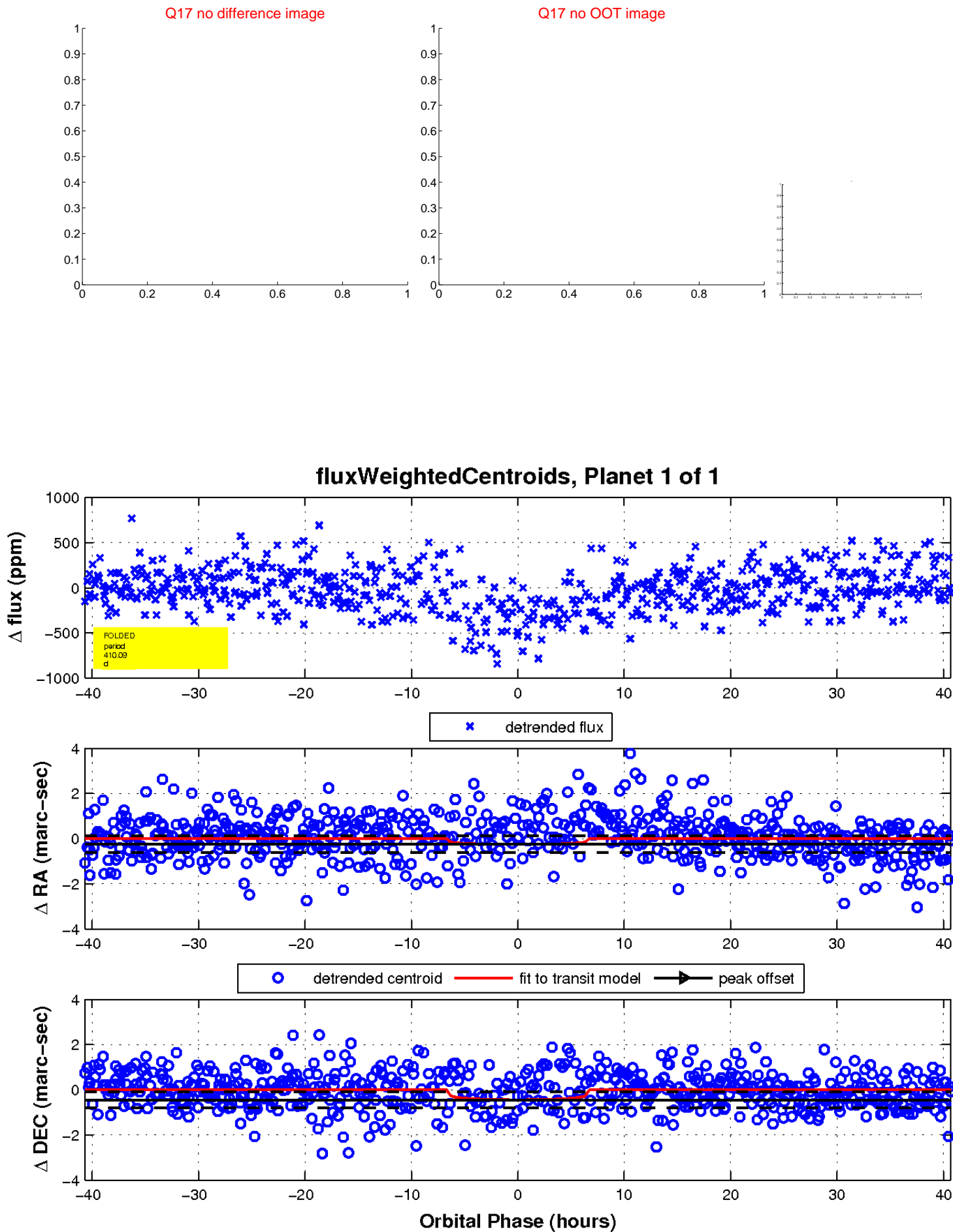
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

