

KIC 008313018

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})
008313018-01	OBS	No	603.335393	342.654459	651.8	2.810	38.4	28.1	61.60	3769	151.81	282.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008313018-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_SATURATED

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

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

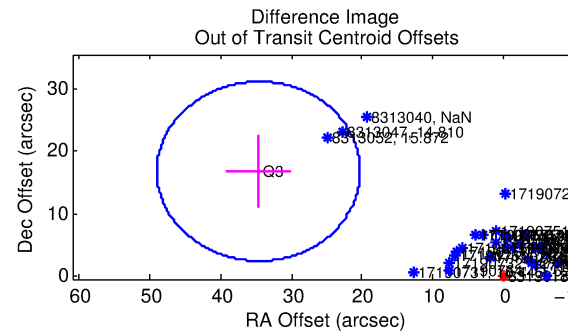
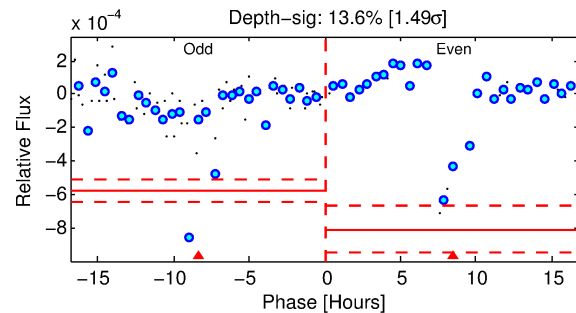
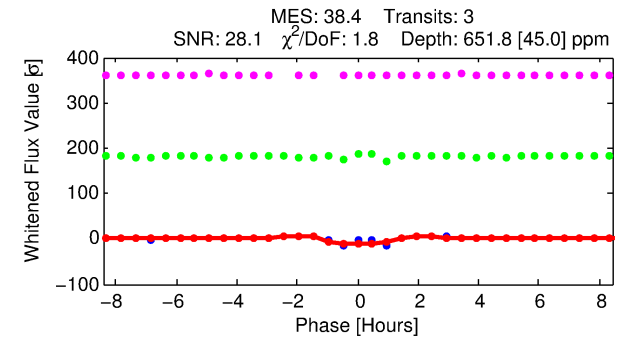
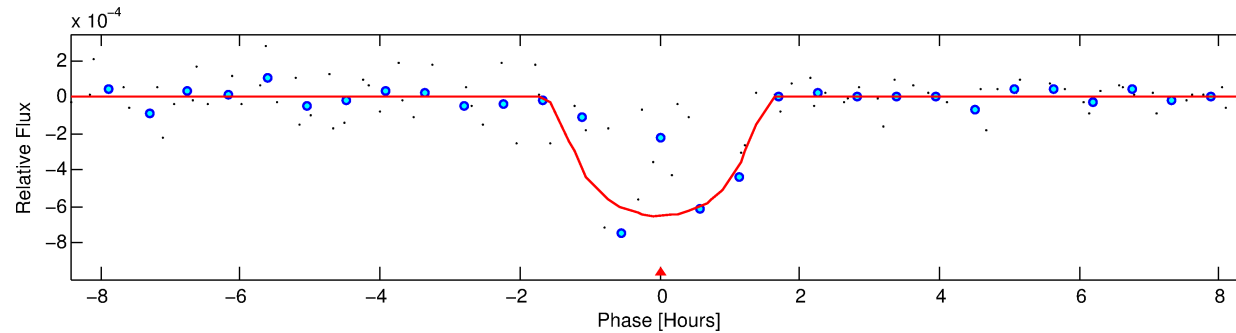
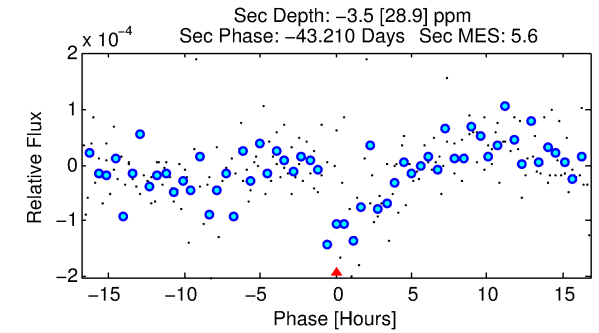
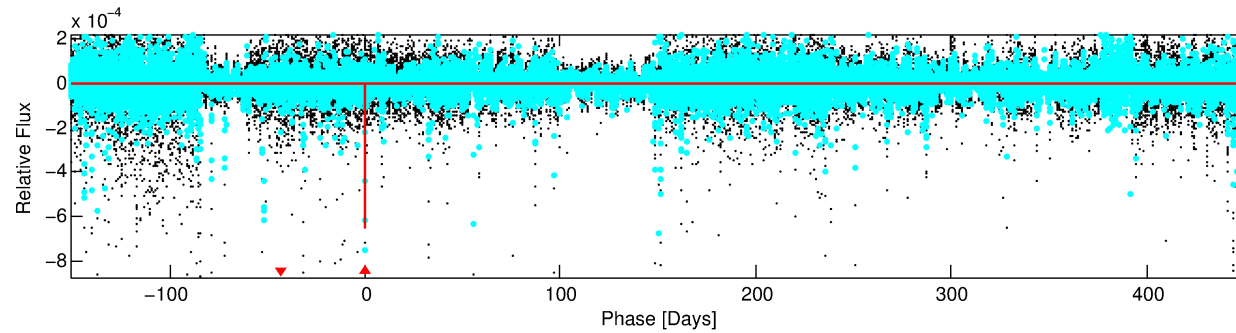
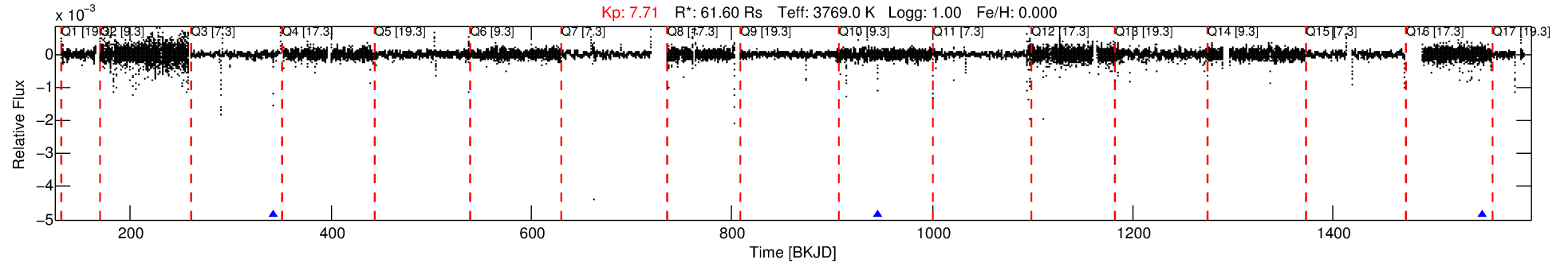
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008313018-01

No Significant Match Found

DV One-Page Summary

KIC: 8313018 Candidate: 1 of 1 Period: 603.335 d



DV Fit Results:

Period = 603.33539 [0.00316] d
Epoch = 342.6545 [0.0020] BKJD
Rp/R* = 0.0226 [0.0159]
a/R* = 1539.20 [2415.95]
b = 0.41 [3.39]
Seff = 282.33 [126.34]
Teq = 1045 [117] K
Rp = 151.82 [115.18] Re
a = 1.5587 [0.4264] AU
Ag = N/A
Teff = N/A

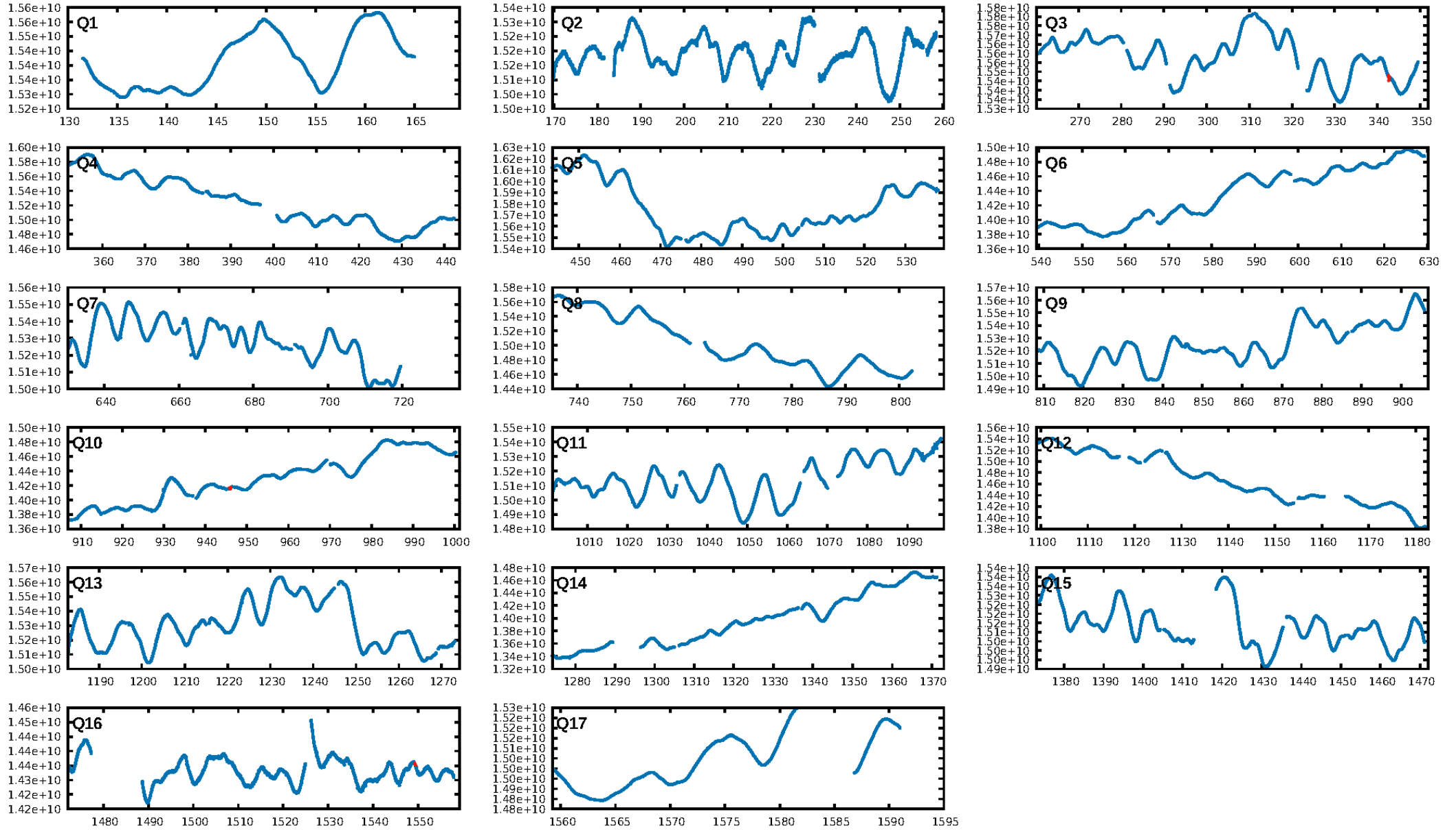
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 91.7%
Bootstrap-pfa: 6.01e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 28.608 arcsec [11.64σ]
OotOffset-rm: 38.494 arcsec [8.04σ]
KicOffset-rm: 39.012 arcsec [8.14σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

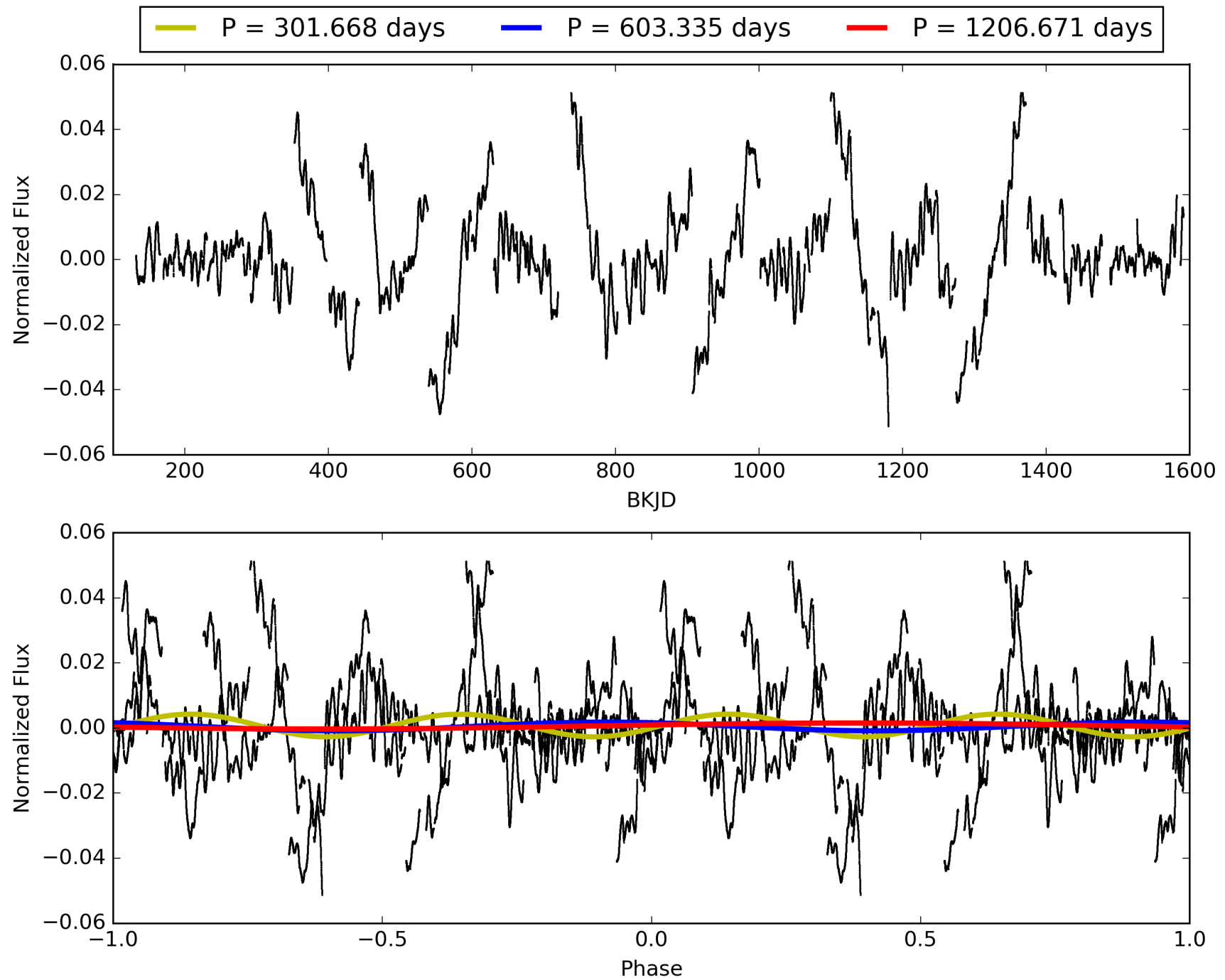
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:09:50 Z

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

TCE 008313018-01, PDC Light Curves

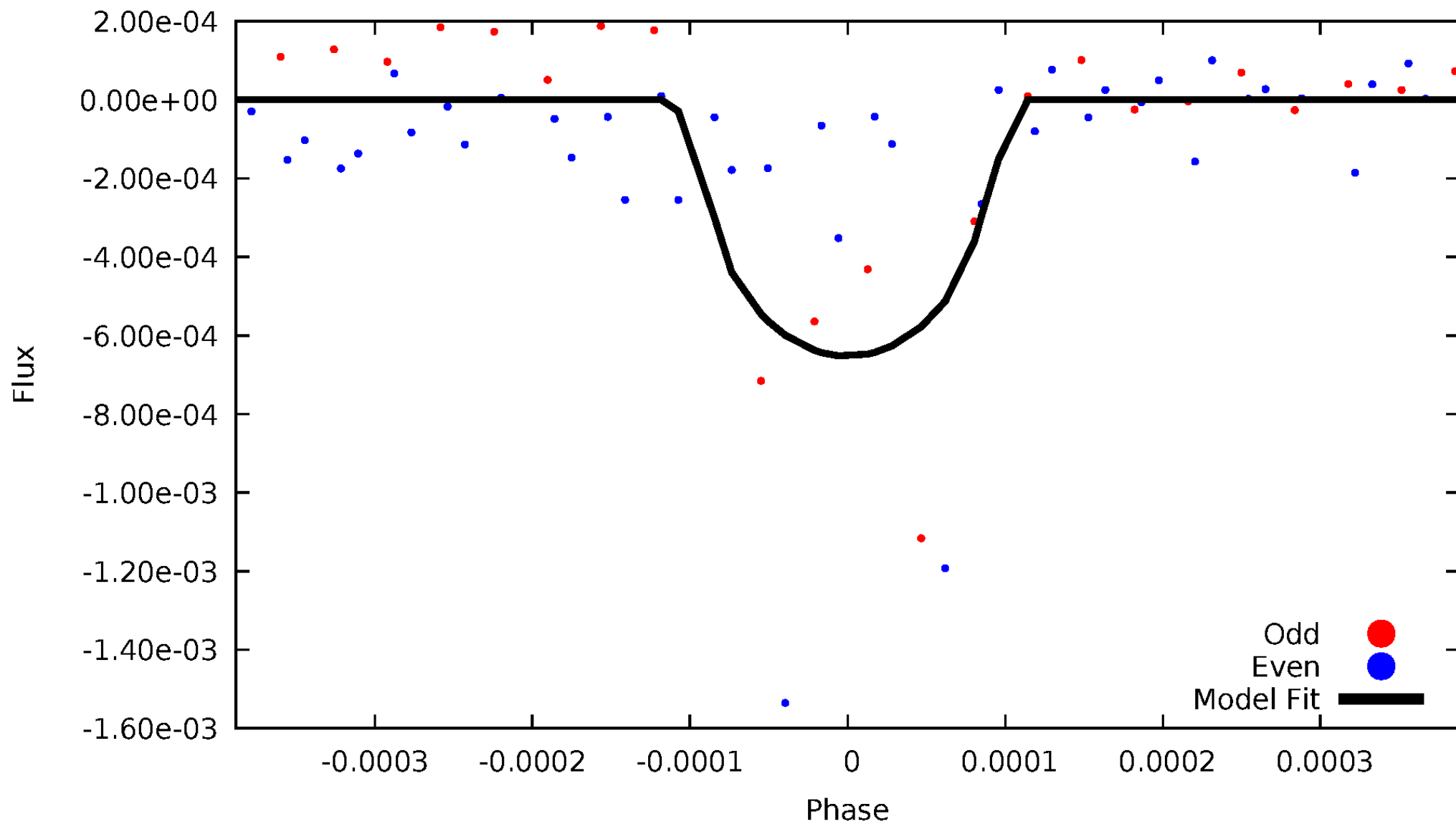


TCE 008313018-01



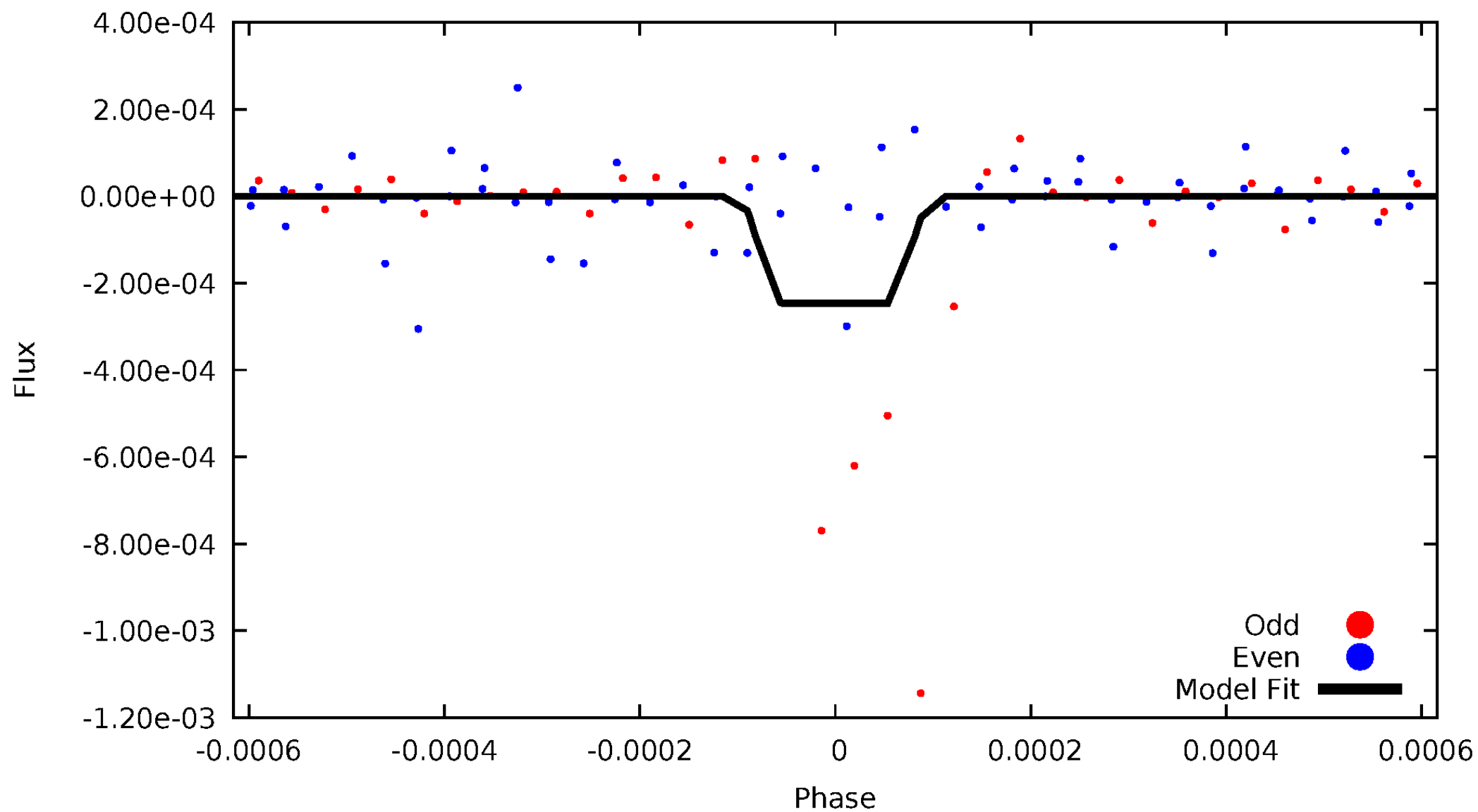
DV Odd/Even

TCE 008313018-01



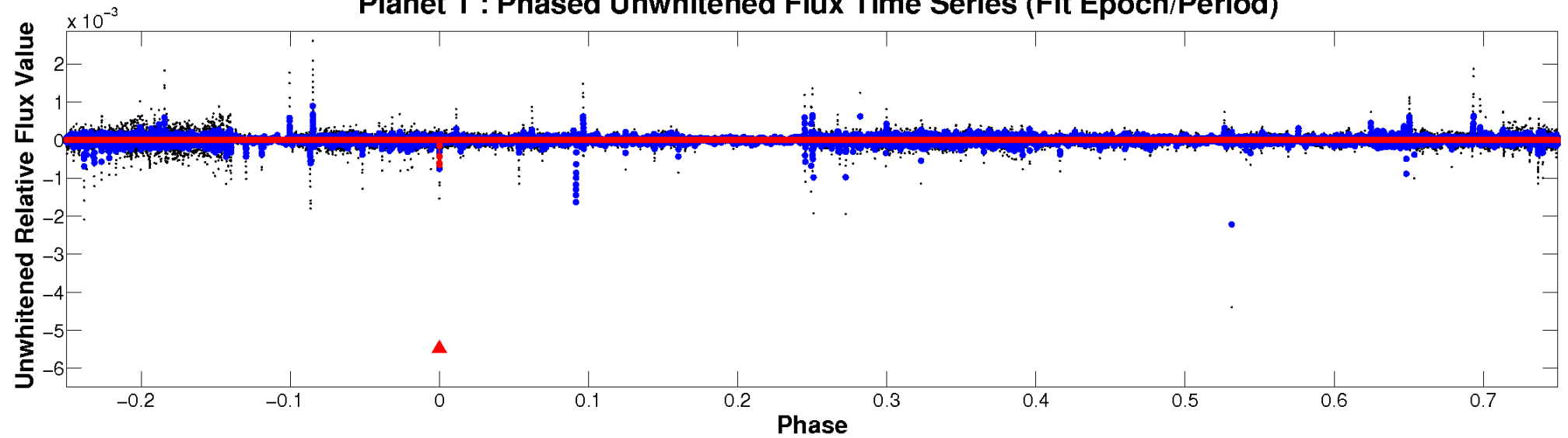
ALT Odd/Even

TCE 008313018-01

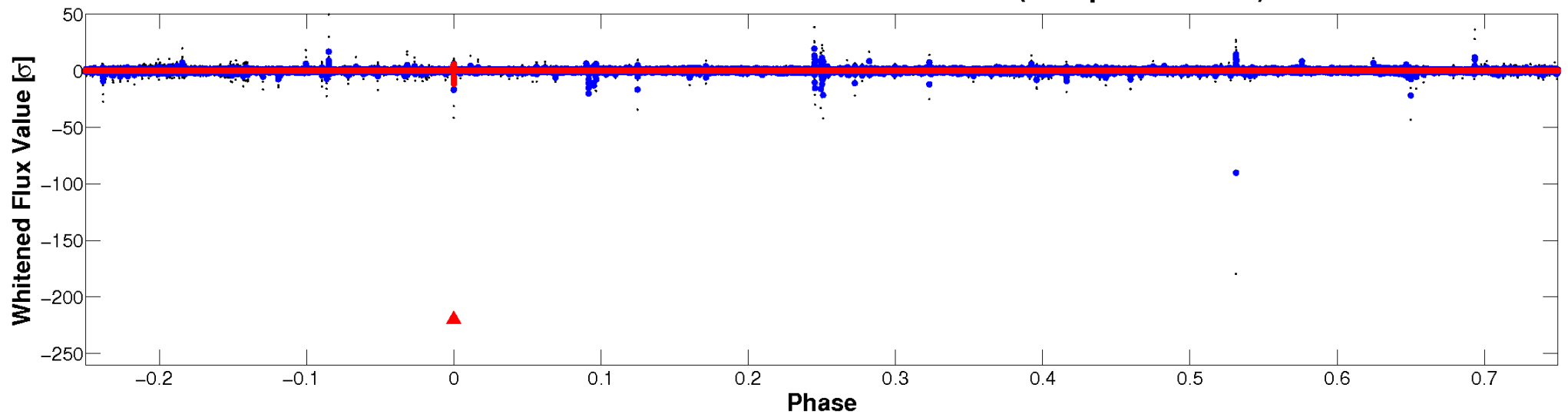


Non-Whitened Vs. Whitened Light Curve

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

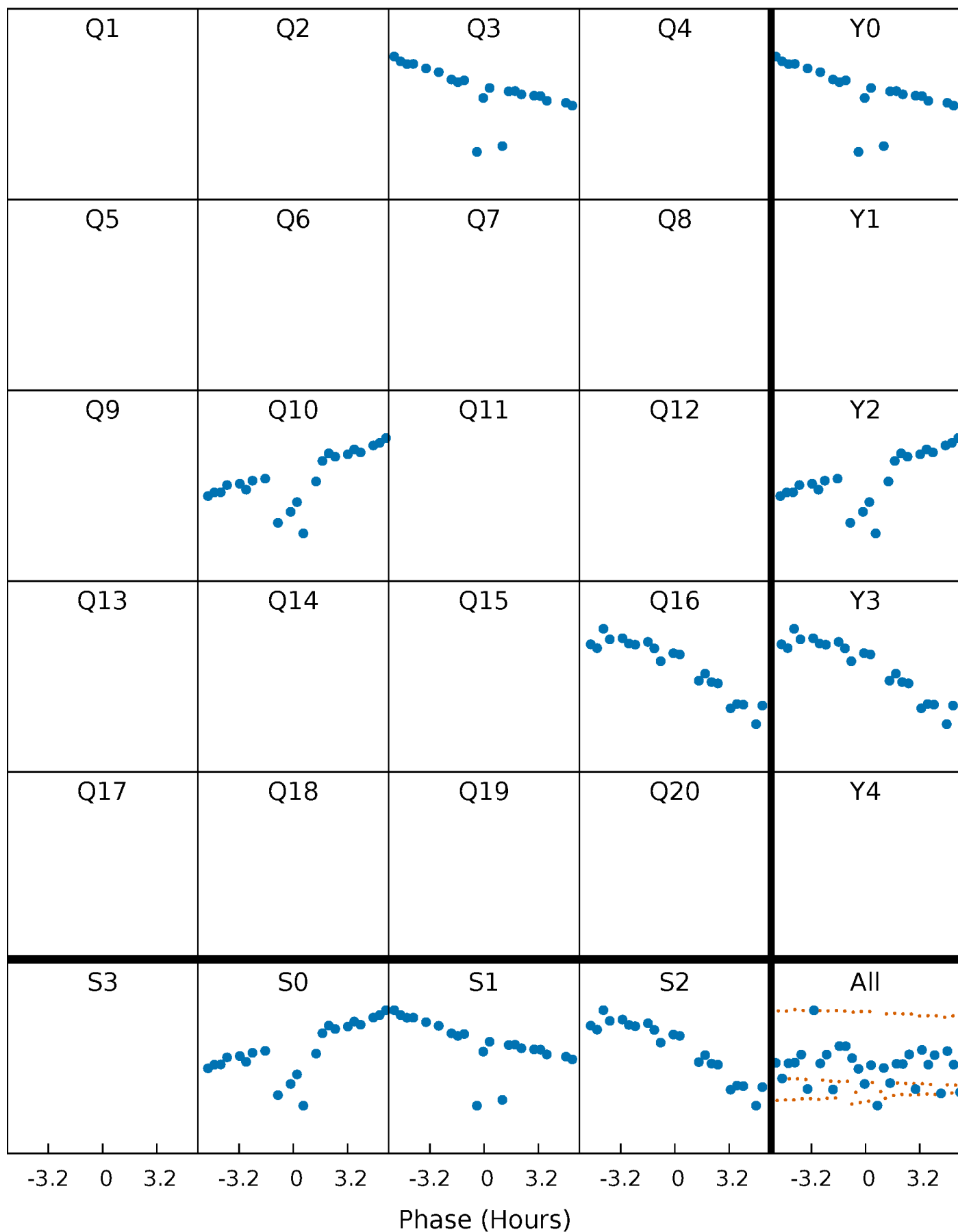


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



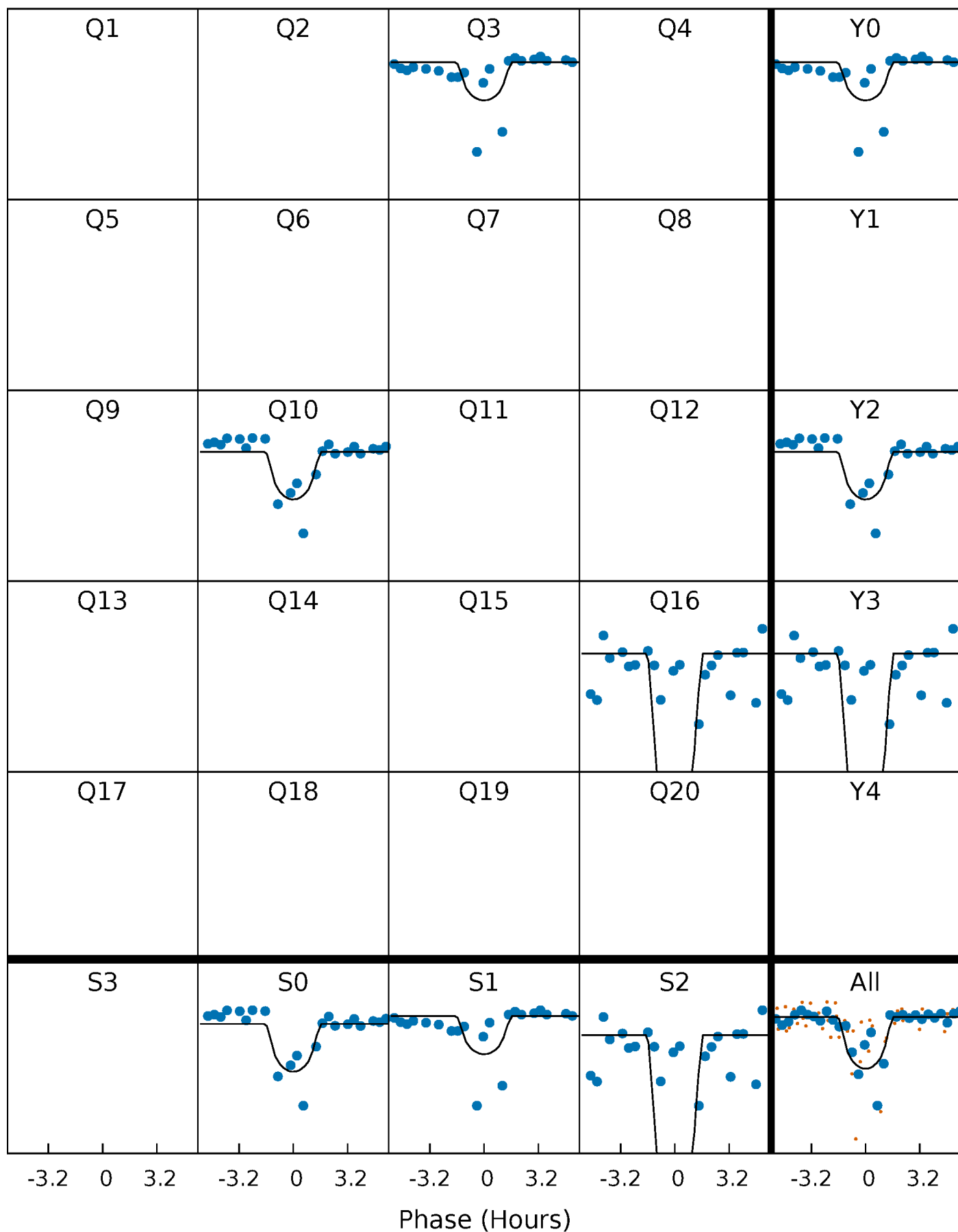
PDC Quarter-Phased Transit Curves

TCE 008313018-01 P=603.335393 Days $T_0=342.654459$ (BKJD)



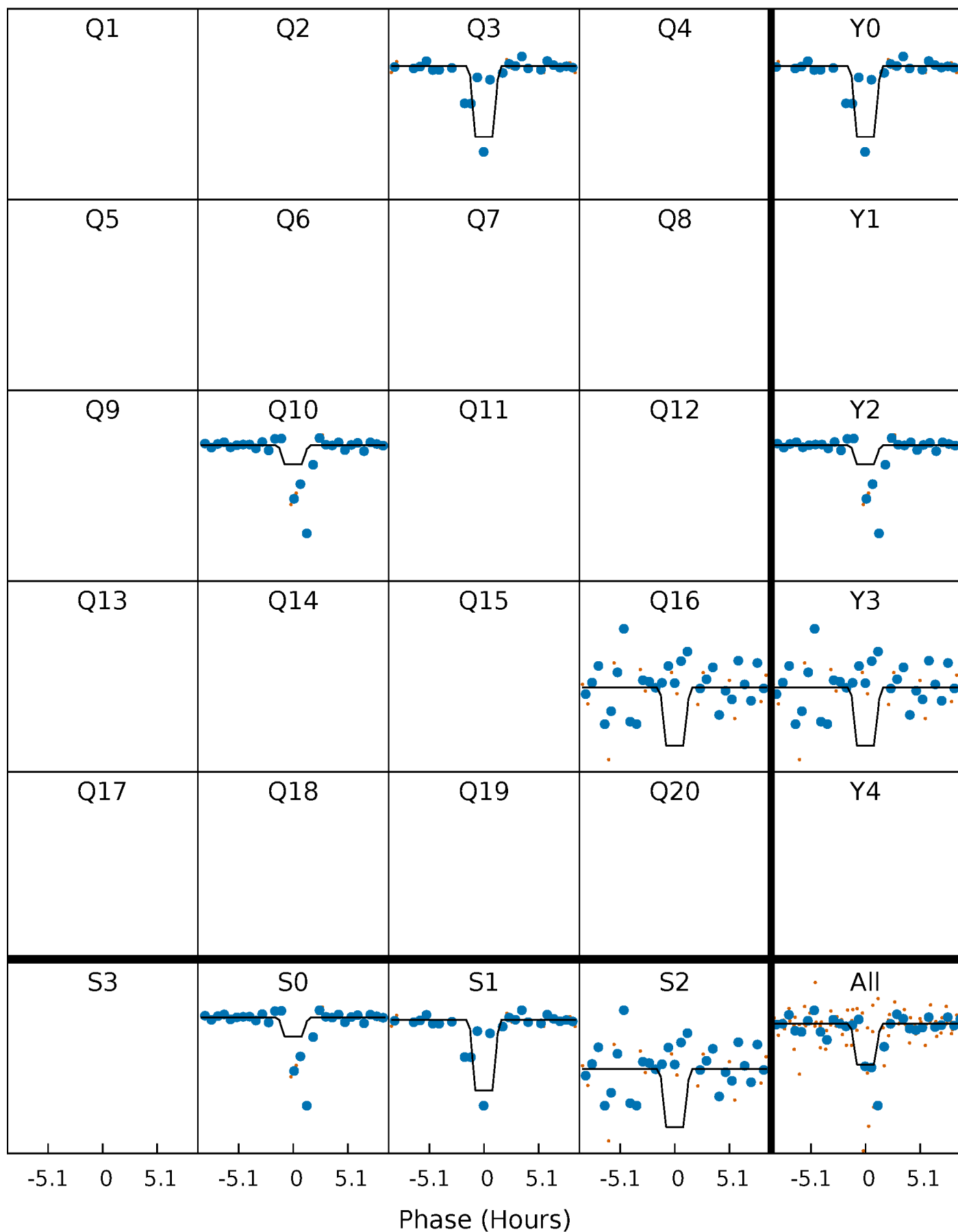
DV Quarter-Phased Transit Curves

TCE 008313018-01 P=603.335393 Days $T_0=342.654459$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

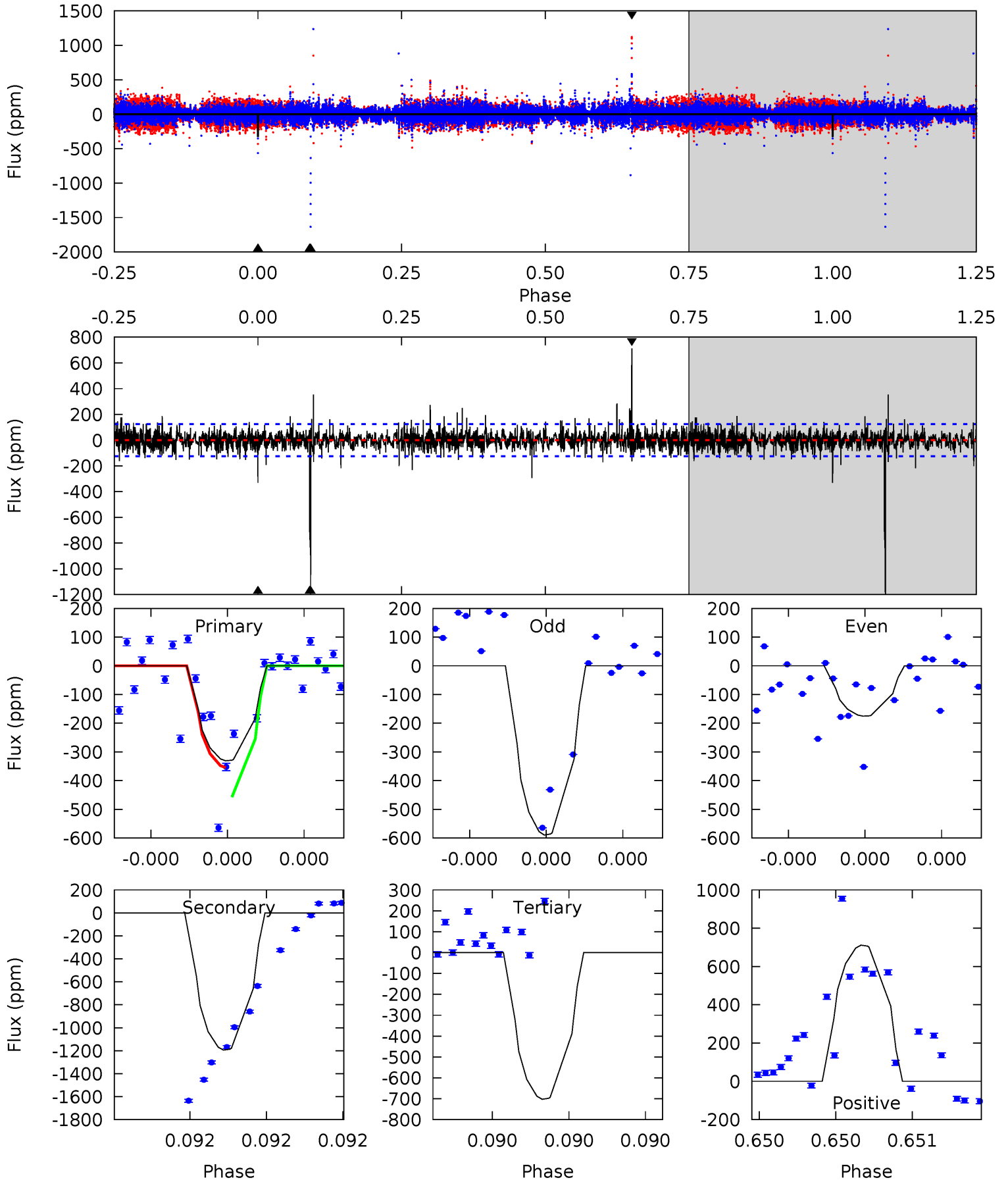
TCE 008313018-01 P=603.321293 Days $T_0=342.643897$ (BKJD)



DV Model-Shift Uniqueness Test

008313018-01, P = 603.335393 Days, E = 342.654459 Days

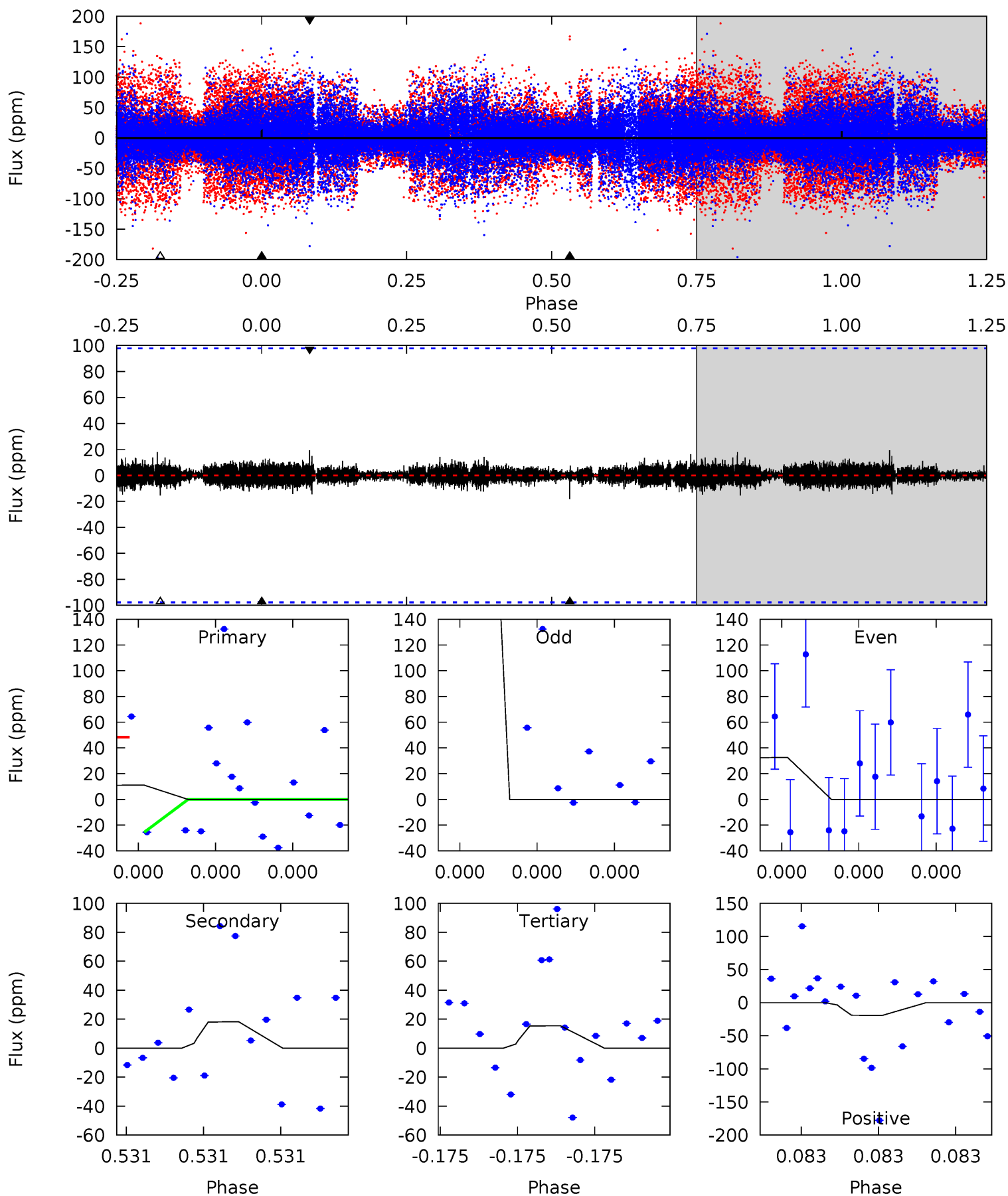
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	54.6	32.1	32.5	5.71	3.69	1.81	-17.0	-17.4	22.5	22.1	8.87	0.73	0.37	2.25



Alt Model-Shift Uniqueness Test

008313018-01, P = 603.321293 Days, E = 342.643897 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.65	1.07	0.91	1.13	5.75	3.75	0.17	-0.26	-0.48	0.16	-0.07	26.6	1.79	0.51	0



Stellar Parameters For KIC 008313018

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3769^{+83}_{-68}	$1.001^{+0.258}_{-0.194}$	$0.000^{+0.250}_{-0.250}$	$61.596^{+14.268}_{-17.439}$	$1.386^{+0.283}_{-0.314}$	$0.000^{+0.000}_{-0.000}$
	+2%/-2%	+26%/-19%	+inf%/-inf%	+23%/-28%	+20%/-23%	+145%/-45%
Source	SPE14	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 008313018-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1195 ± 22	$166.53^{+101.24}_{-95.43}$	1455^{+105}_{-115}	4208^{+1793}_{-650}	59^{+256}_{-36}
Alt.	-18 ± 17	$123.35^{+101.35}_{-76.84}$	1456^{+109}_{-120}	2317^{+775}_{-4338}	$1.231^{+7.409}_{-1.150}$

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 $A_{obs} \gg 1.0$

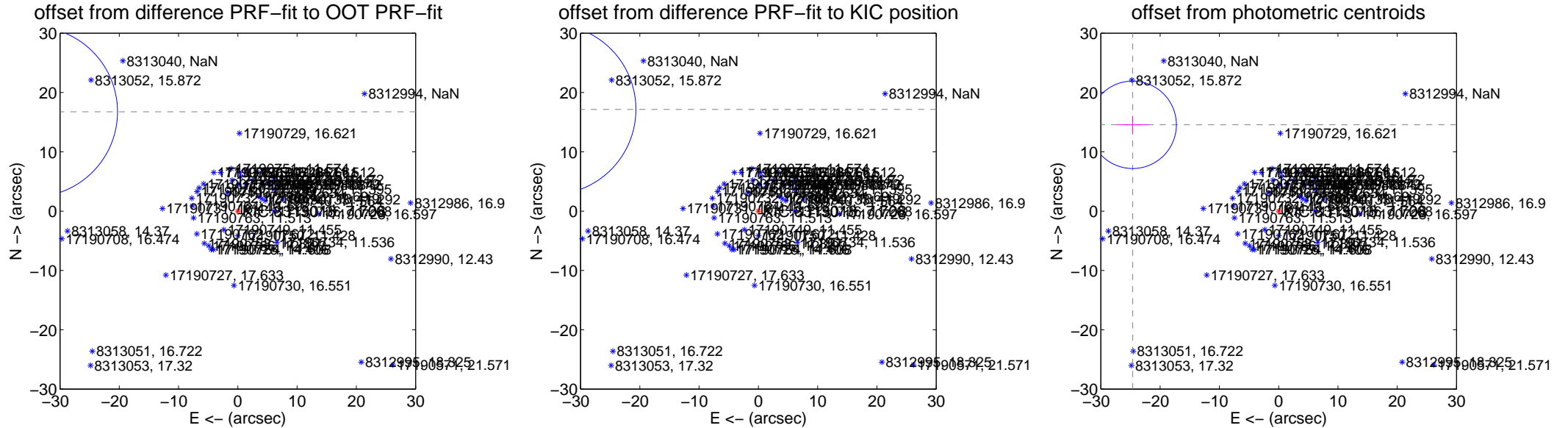
DV Centroid Data

Supplemental centroid analysis for 008313018-01. **Kepler magnitude: 7.71.** Transit SNR 28.11

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.55 arcsec

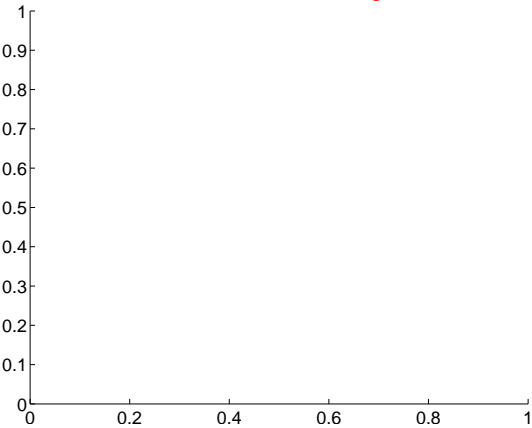
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	38.494 ± 4.788	8.04	34.660 ± 4.534	16.747 ± 5.751
PRF-fit source offset from KIC position	39.012 ± 4.793	8.14	35.040 ± 4.534	17.149 ± 5.751
photometric centroid source offset	28.61 ± 2.46	11.64	24.63 ± 2.72	14.55 ± 1.46



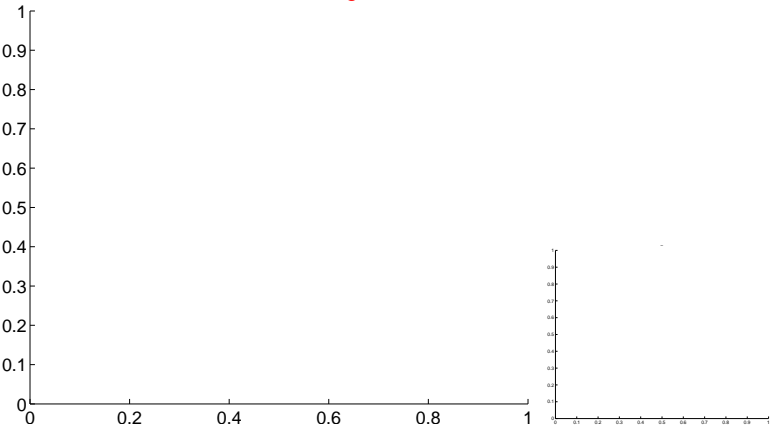
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

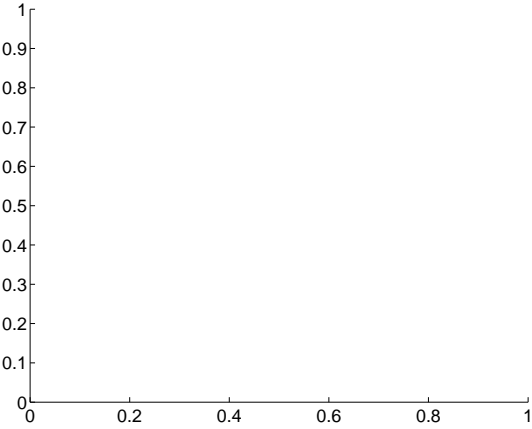
Q1 no difference image



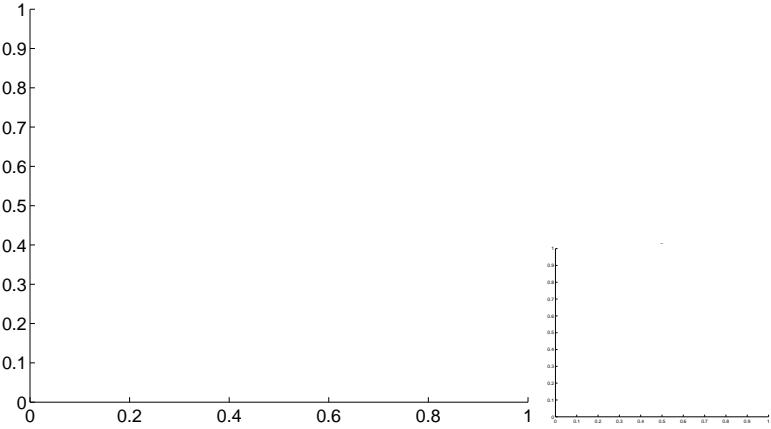
Q1 no OOT image



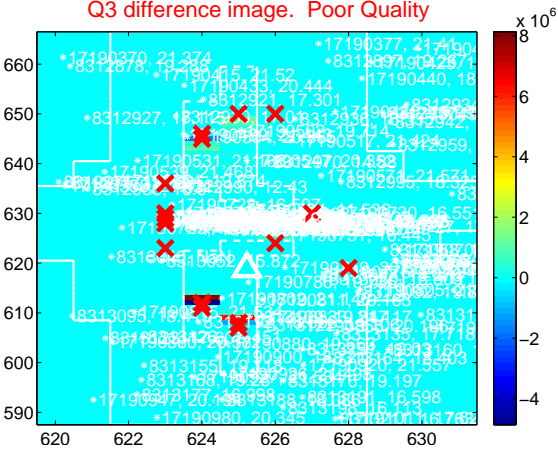
Q2 no difference image



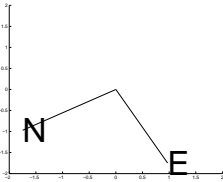
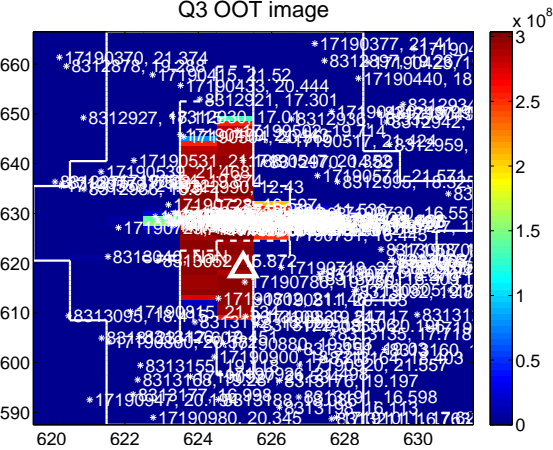
Q2 no OOT image



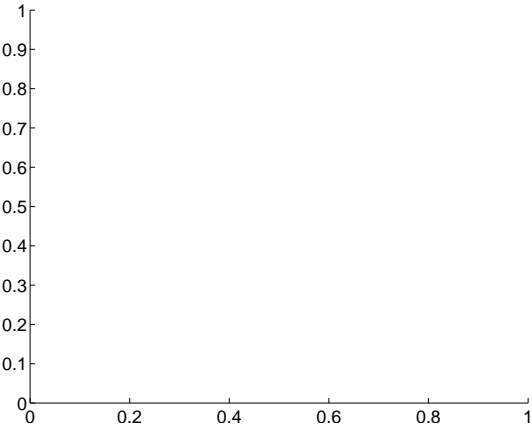
Q3 difference image. Poor Quality



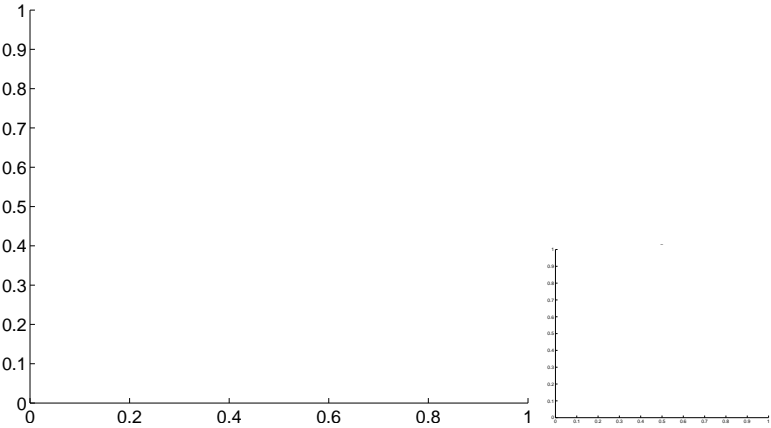
Q3 OOT image



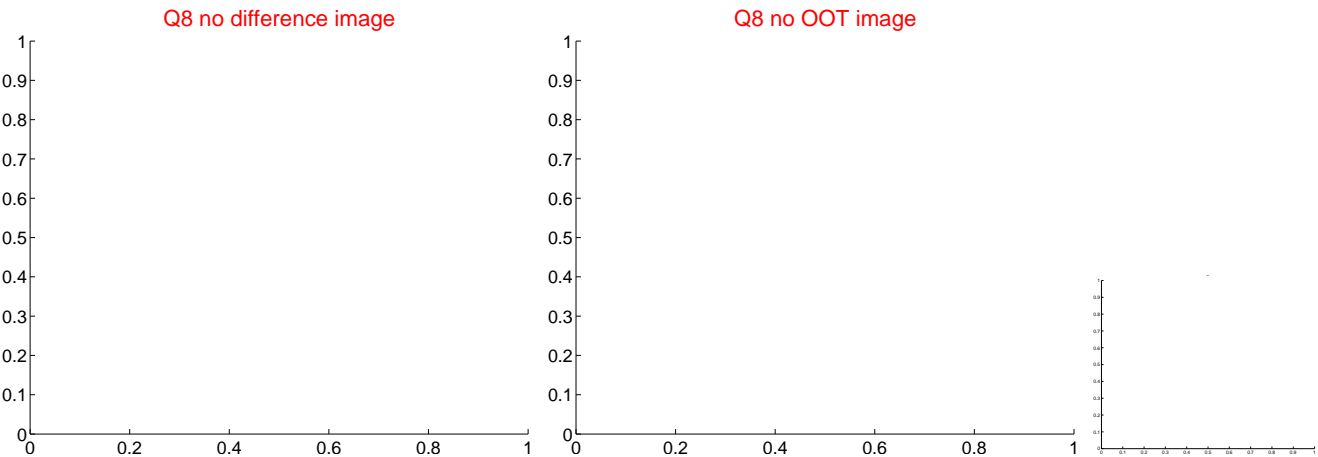
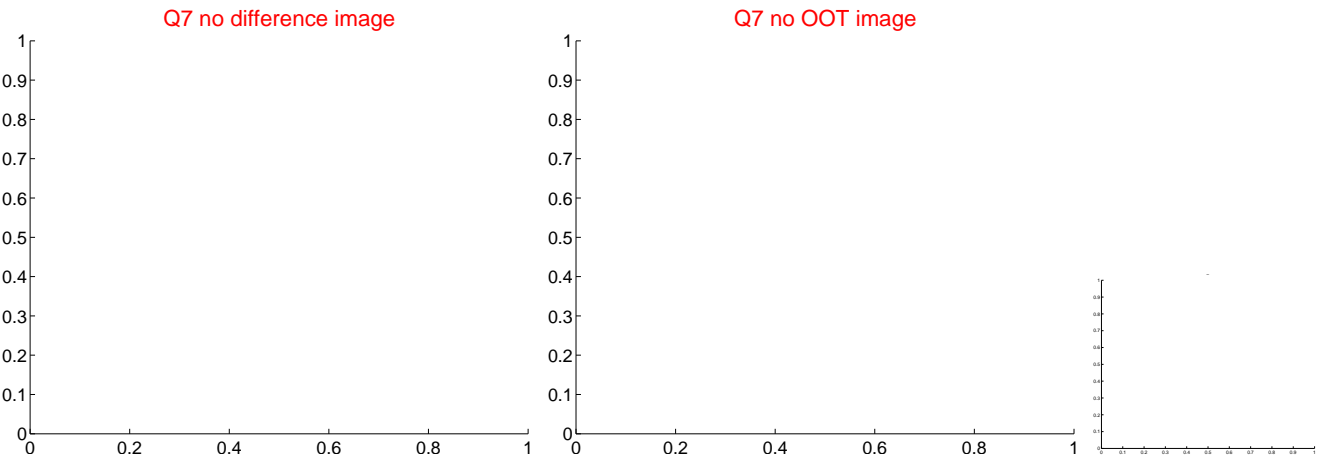
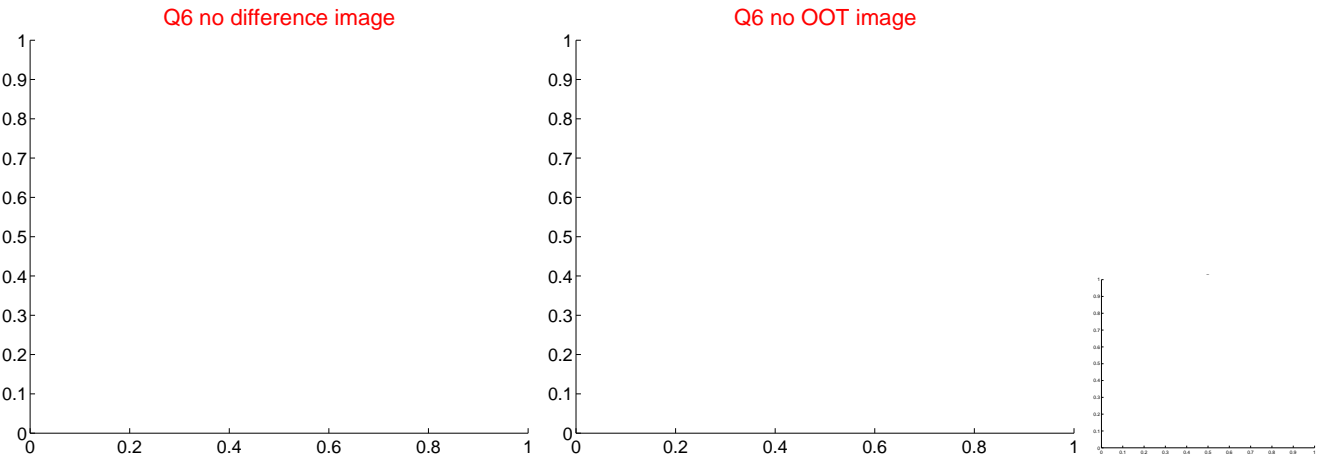
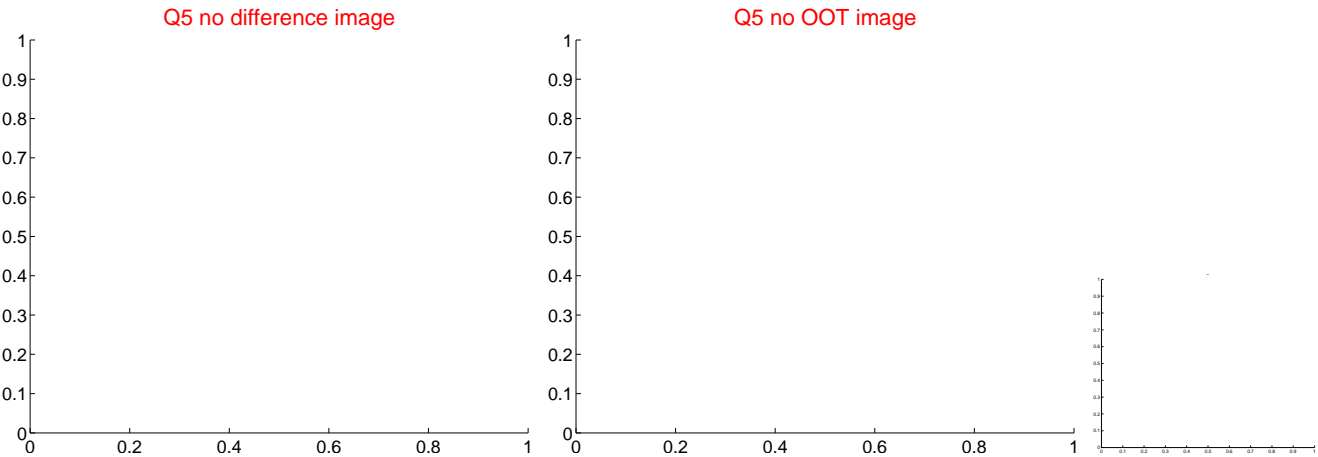
Q4 no difference image



Q4 no OOT image

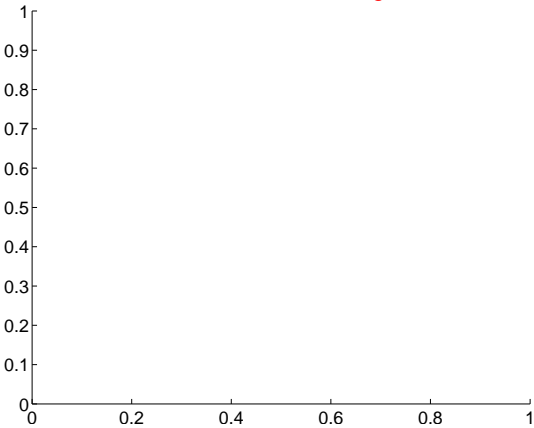


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

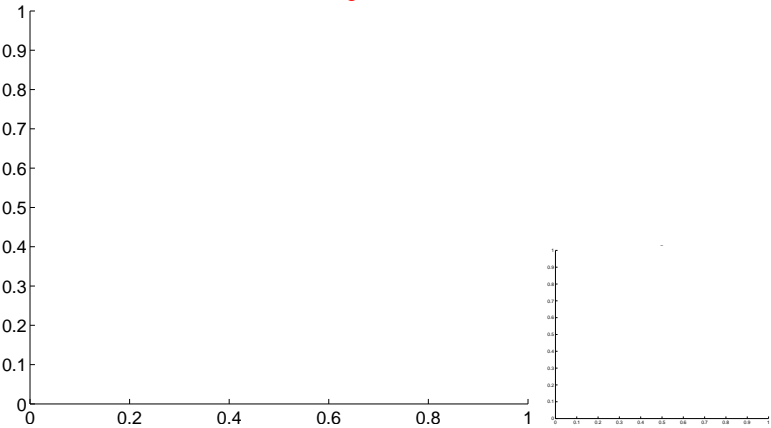


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

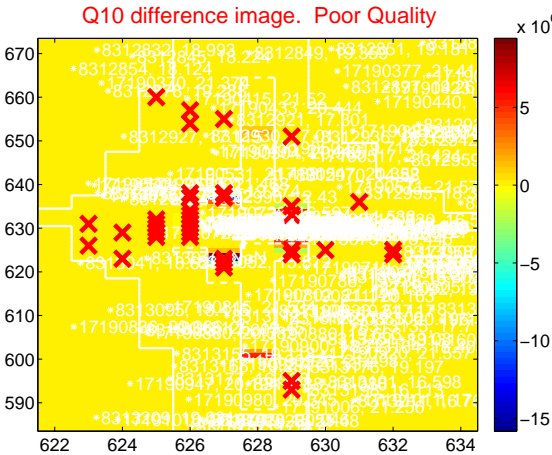
Q9 no difference image



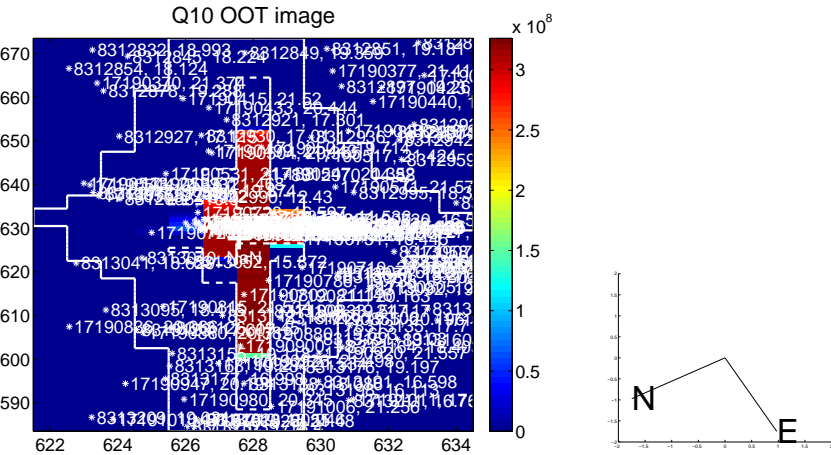
Q9 no OOT image



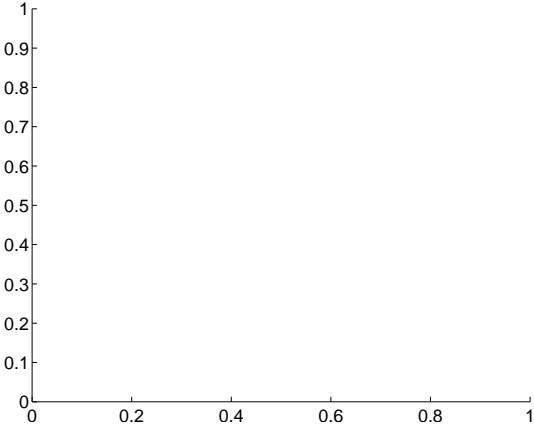
Q10 difference image. Poor Quality



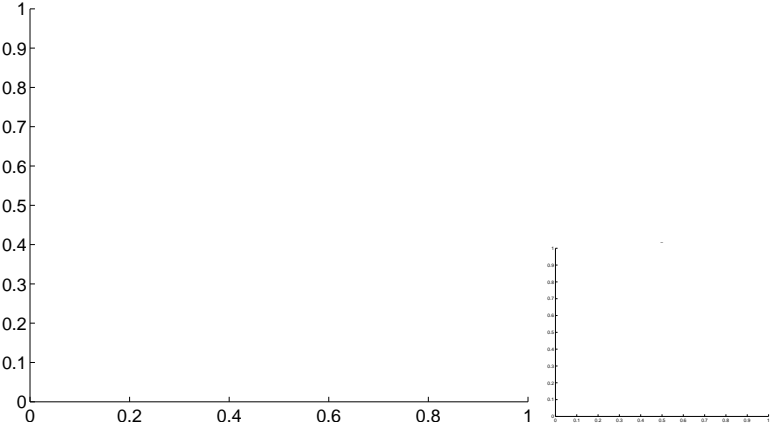
Q10 OOT image



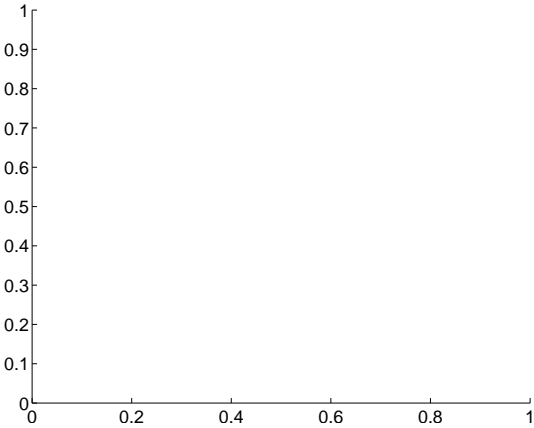
Q11 no difference image



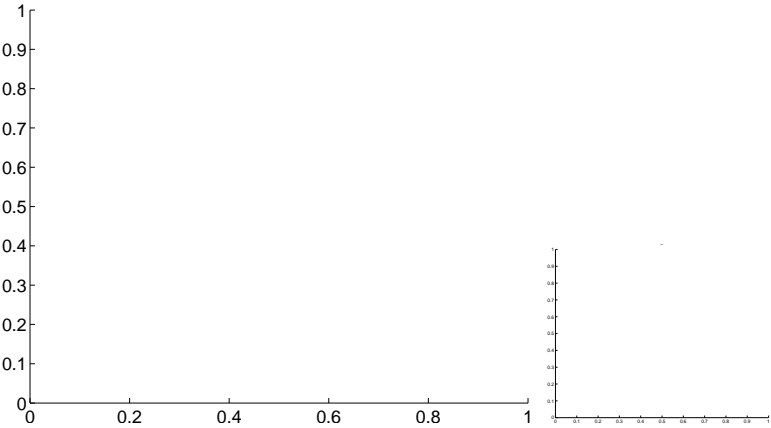
Q11 no OOT image



Q12 no difference image



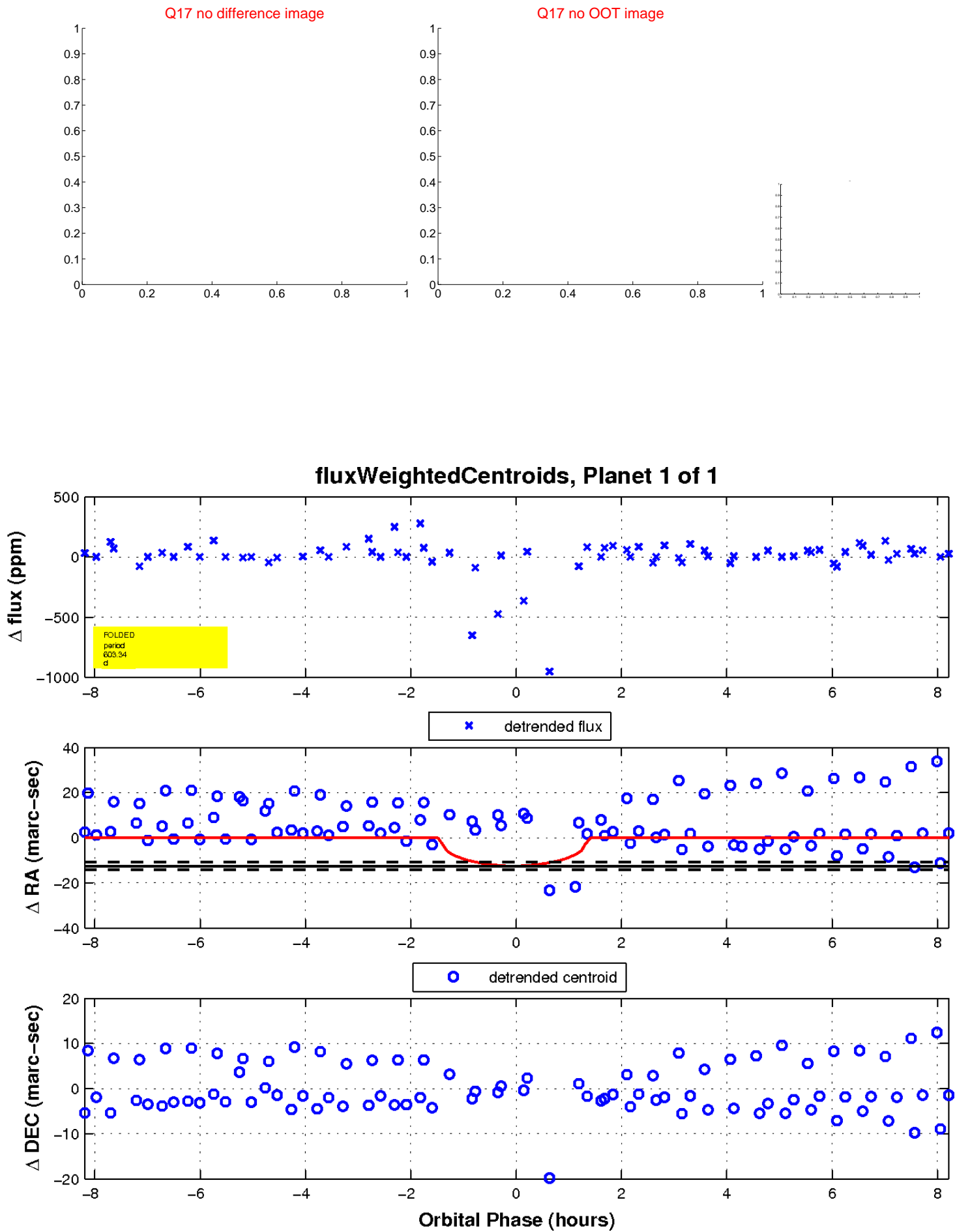
Q12 no OOT image



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.



UKIRT Image

