

KIC 009892651

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})
009892651-01	OBS	No	339.314093	248.172704	2242.3	2.693	14.4	6.6	0.42	3646	2.04	0.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009892651-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

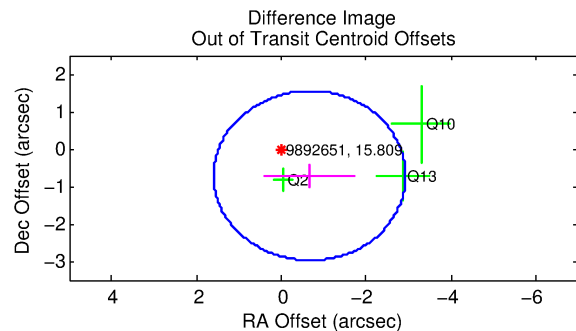
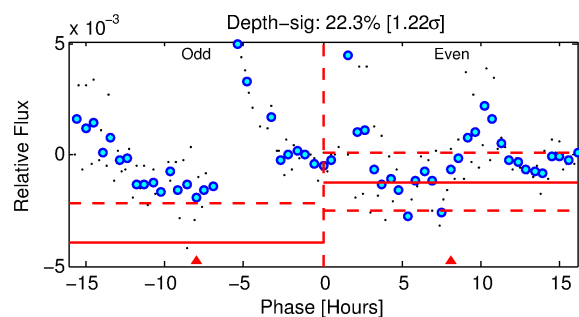
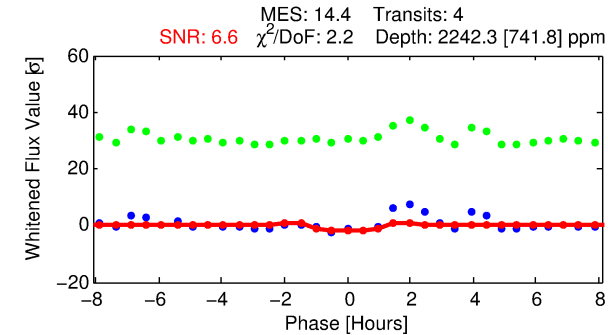
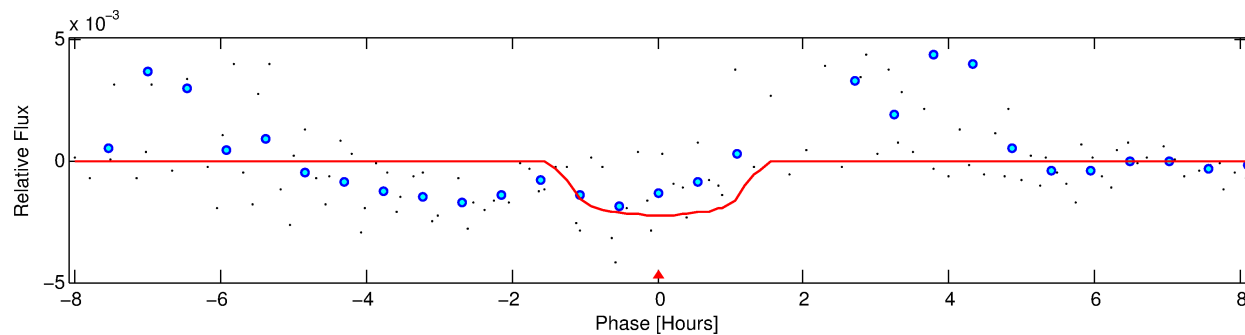
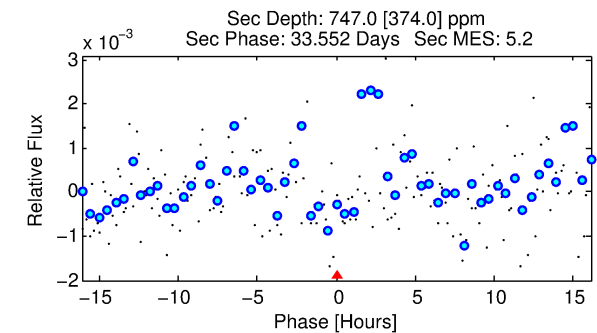
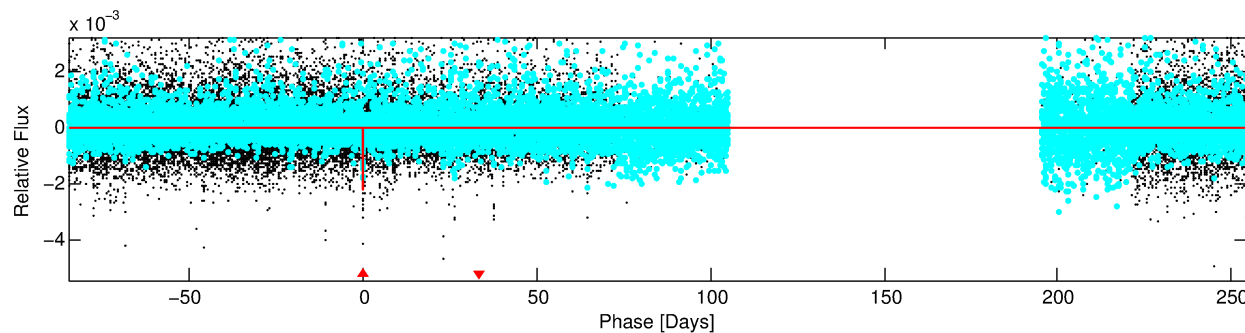
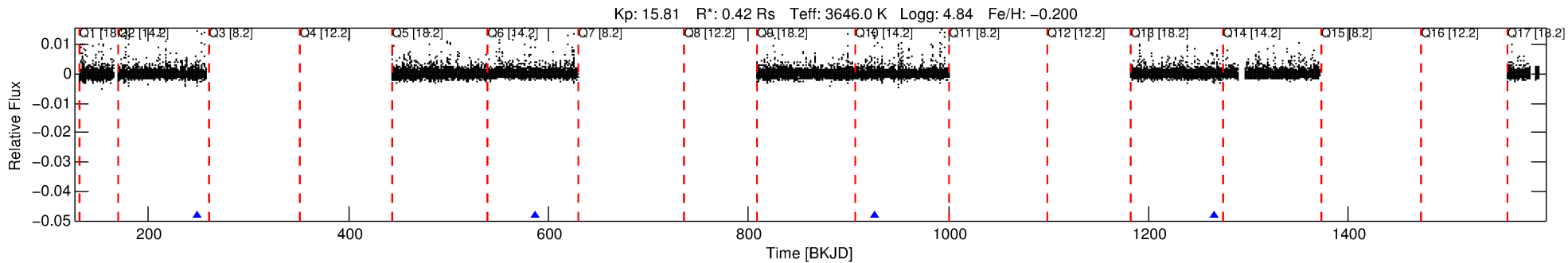
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009892651-01

No Significant Match Found

DV One-Page Summary

KIC: 9892651 Candidate: 1 of 1 Period: 339.314 d



DV Fit Results:

Period = 339.31409 [0.00708] d
Epoch = 248.1727 [0.0161] BKJD
Rp/R* = 0.0441 [0.1355]
a/R* = 915.21 [13007.09]
b = 0.43 [26.78]
Seff = 0.05 [0.01]
Teq = 123 [4] K
Rp = 2.03 [6.26] Re
a = 0.7283 [0.0572] AU
Ag = 52665.21 [324935.76] [0.16σ]
Teffp = 2871 [4428] K [0.62σ]

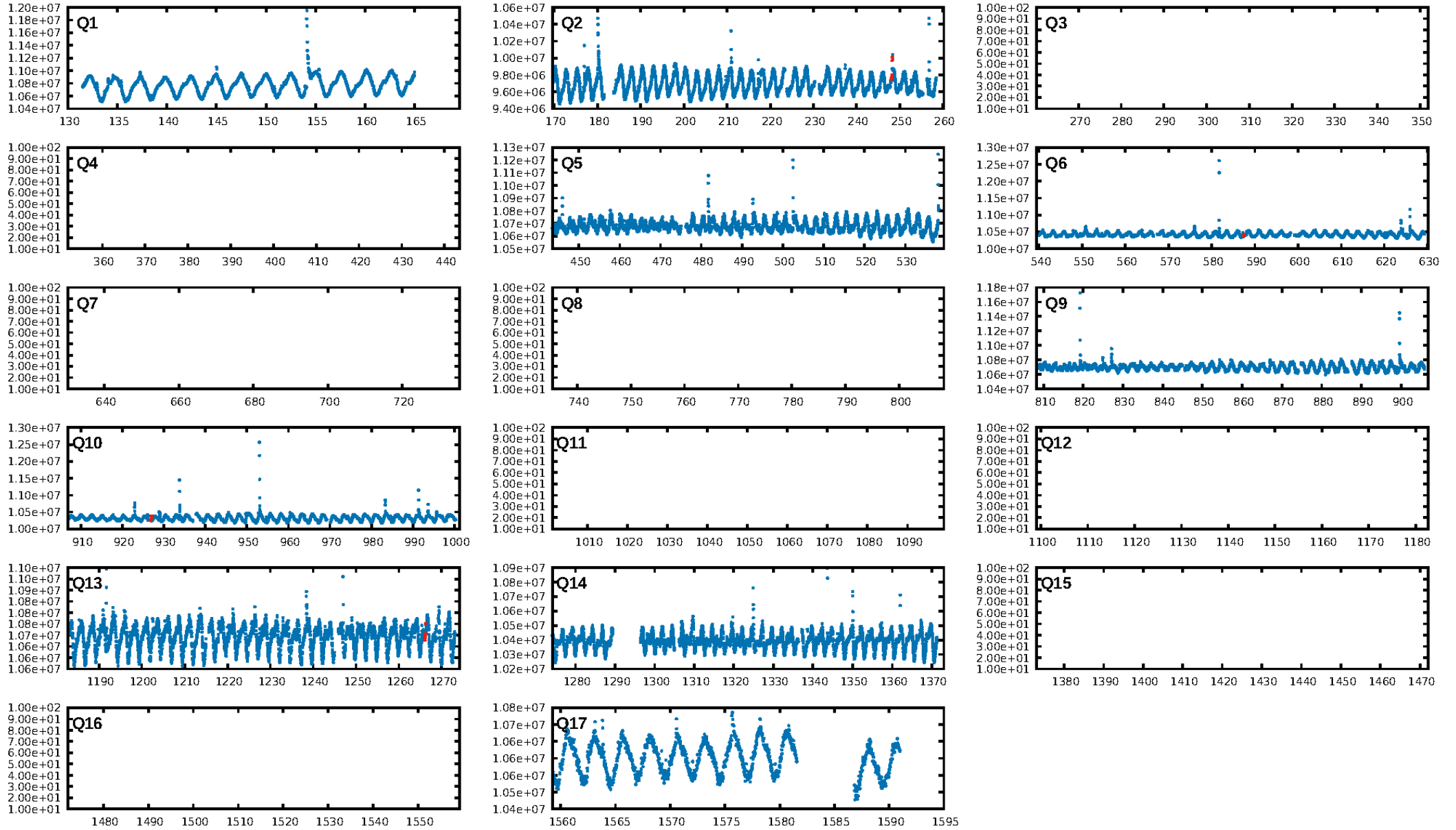
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 1.7%
Bootstrap-pfa: 3.14e-15
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.451
Centroid-sig: 66.2%
Centroid-so: 0.546 arcsec [0.64σ]
OotOffset-rm: 0.982 arcsec [1.30σ]
KicOffset-rm: 0.591 arcsec [0.83σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

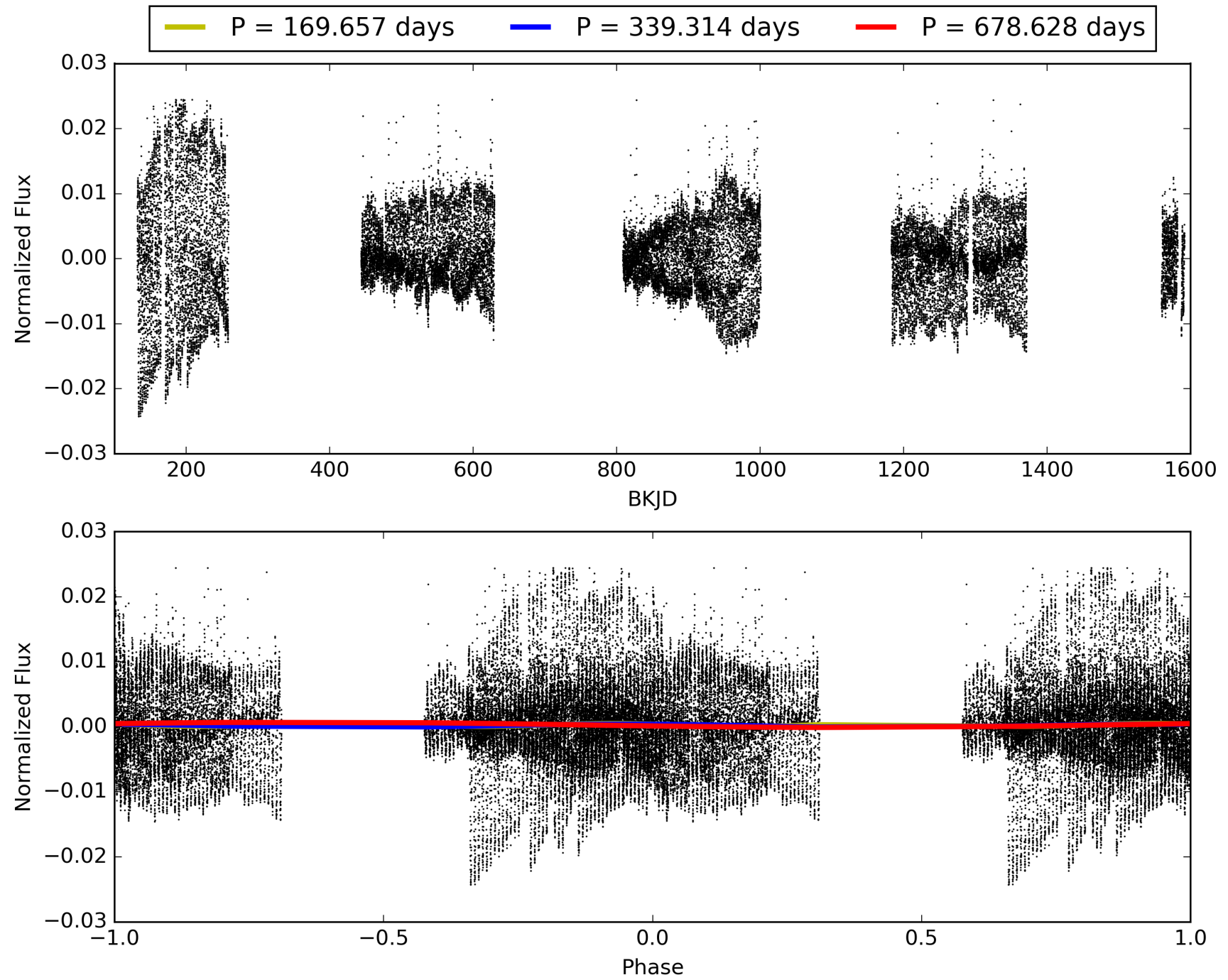
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:05:04 Z

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

TCE 009892651-01, PDC Light Curves

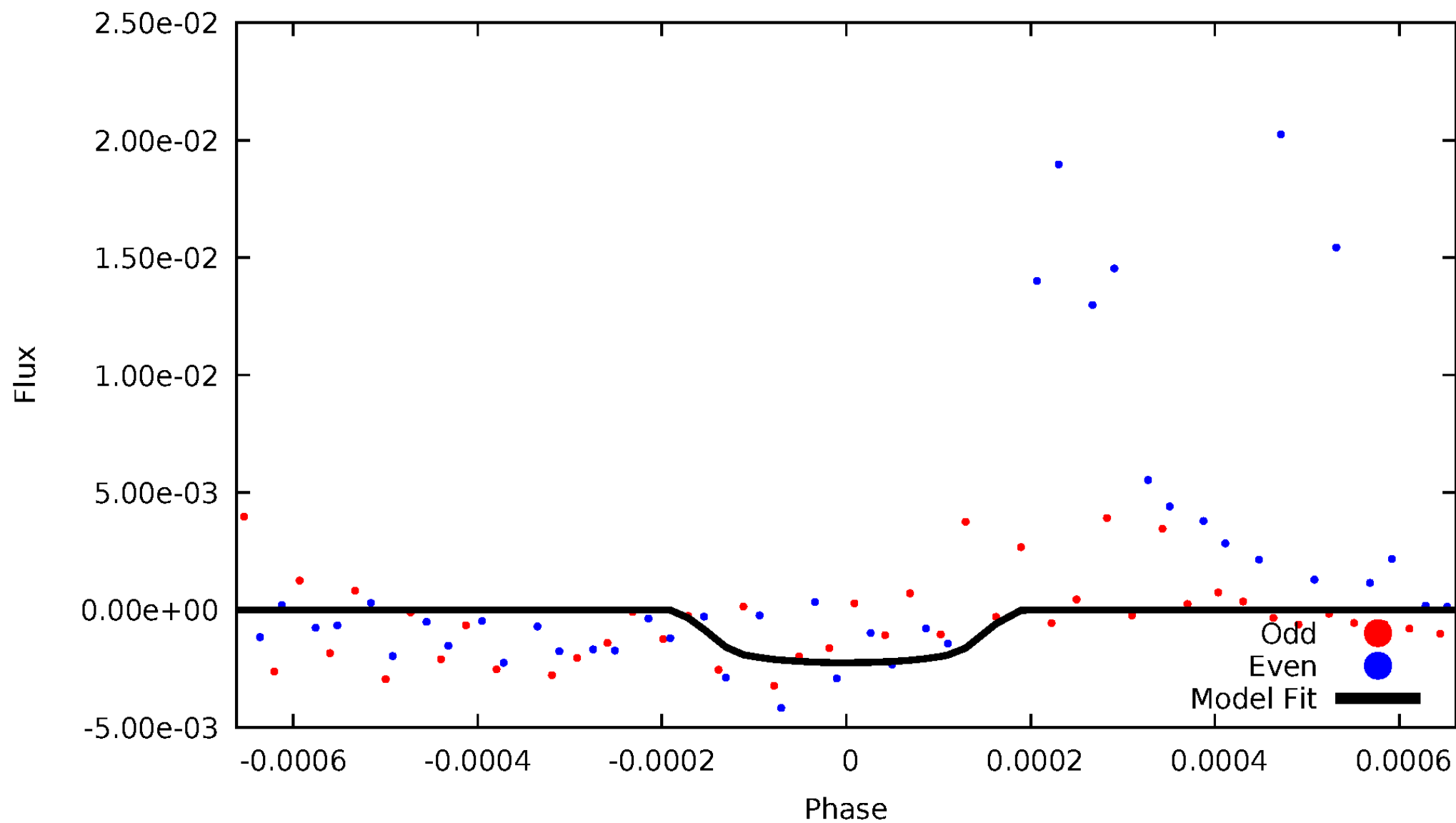


TCE 009892651-01



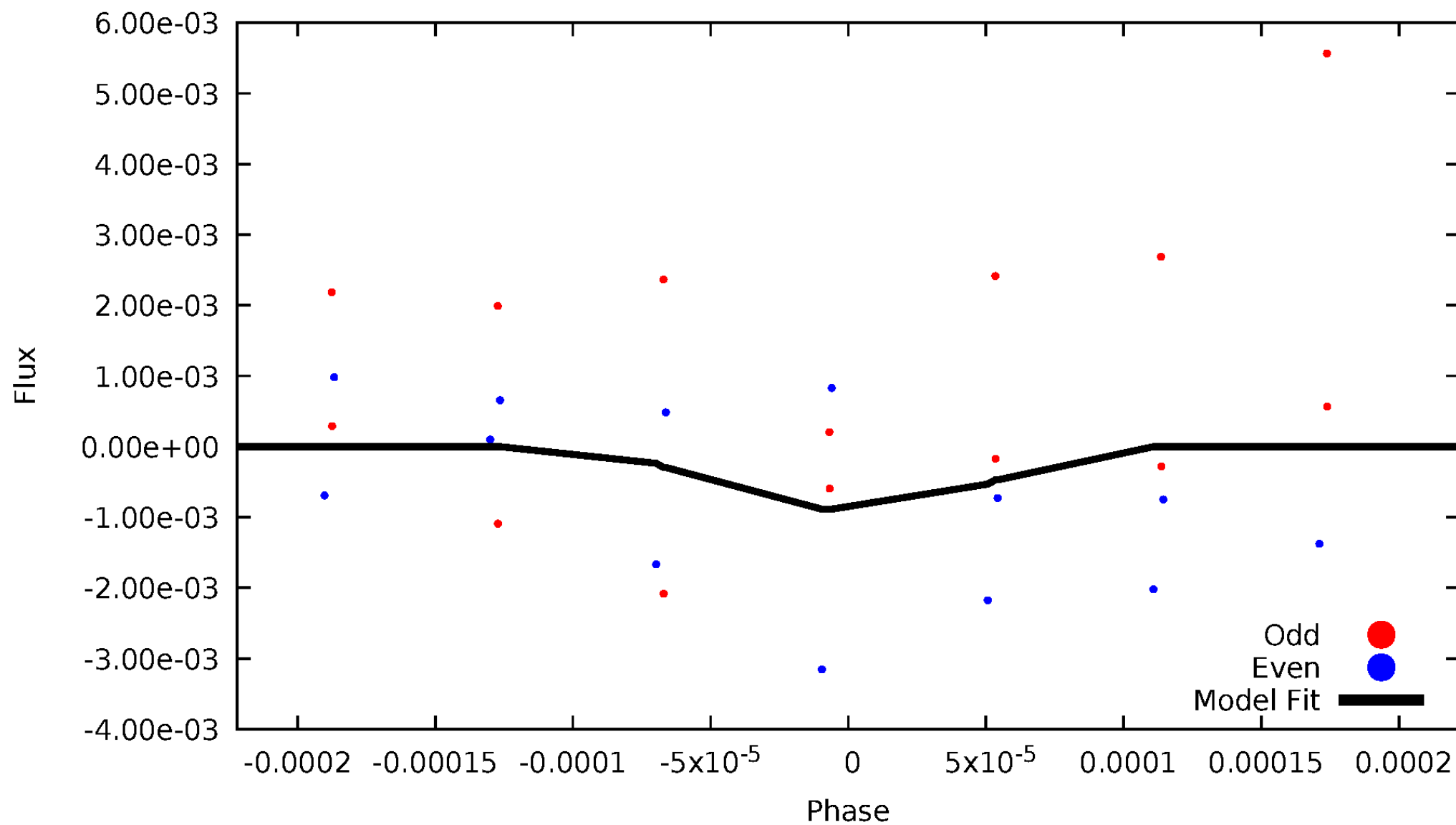
DV Odd/Even

TCE 009892651-01



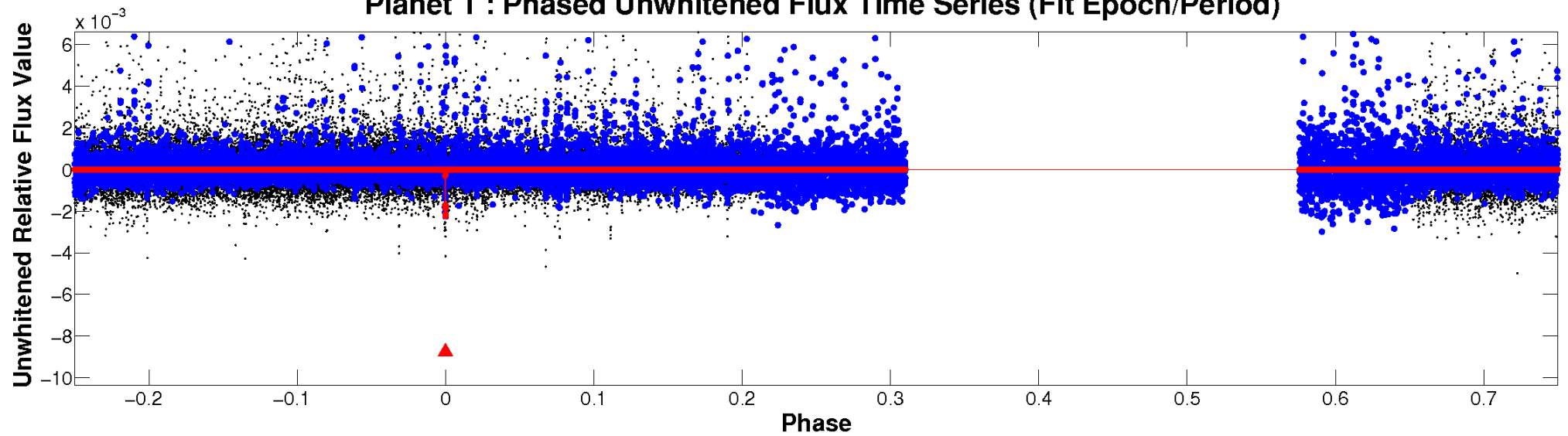
ALT Odd/Even

TCE 009892651-01

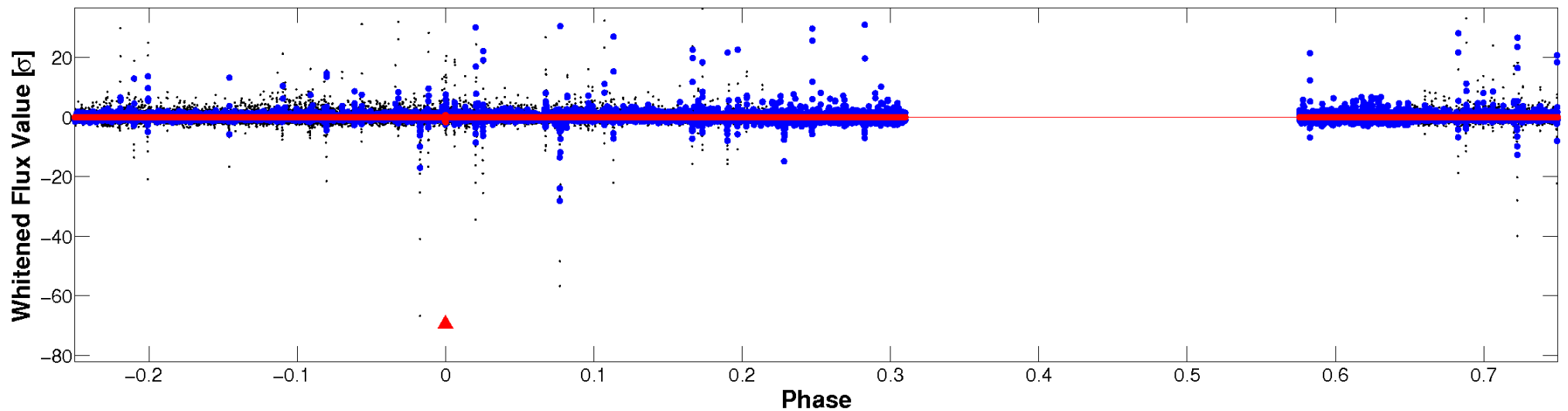


Non-Whitened Vs. Whitened Light Curve

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

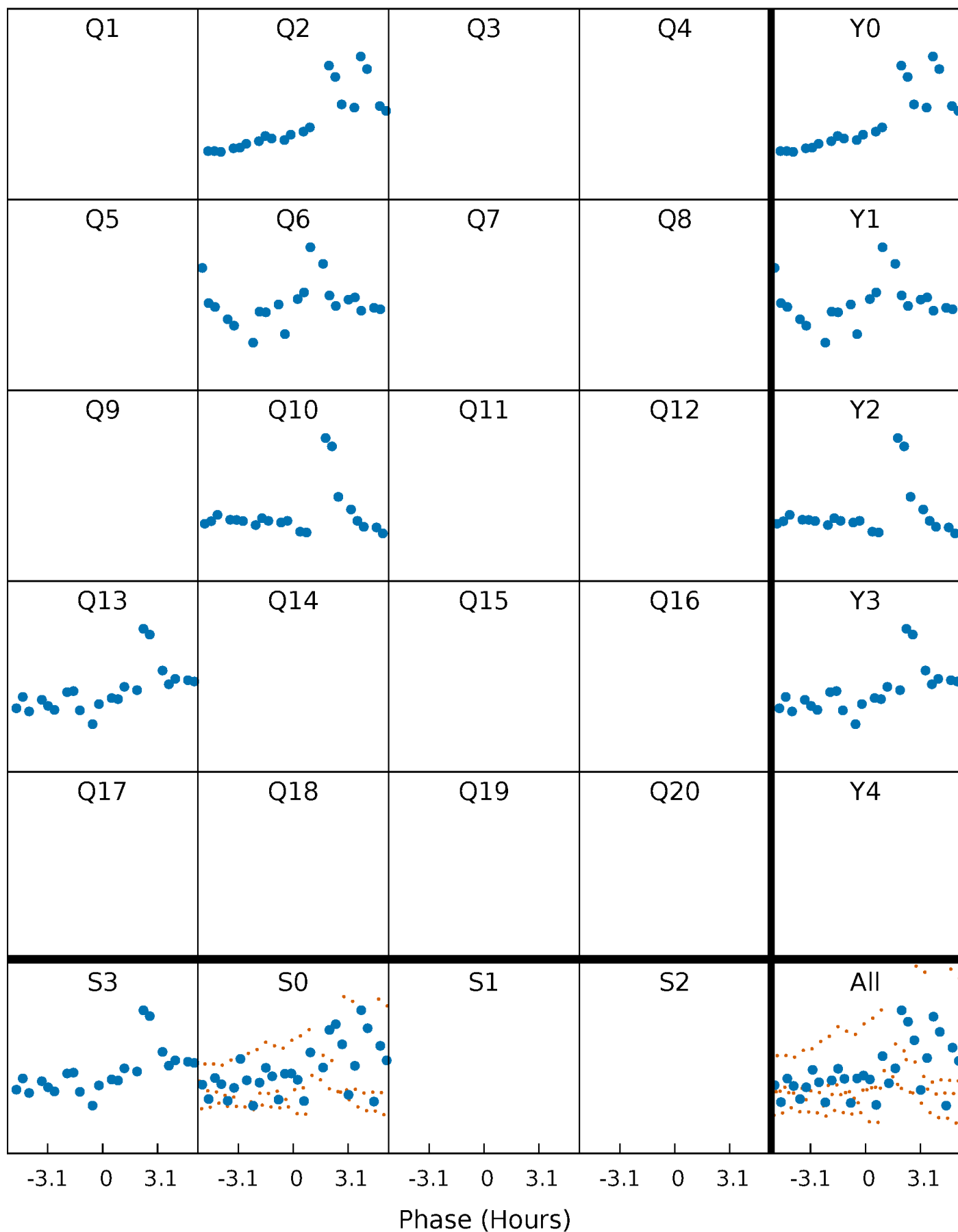


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



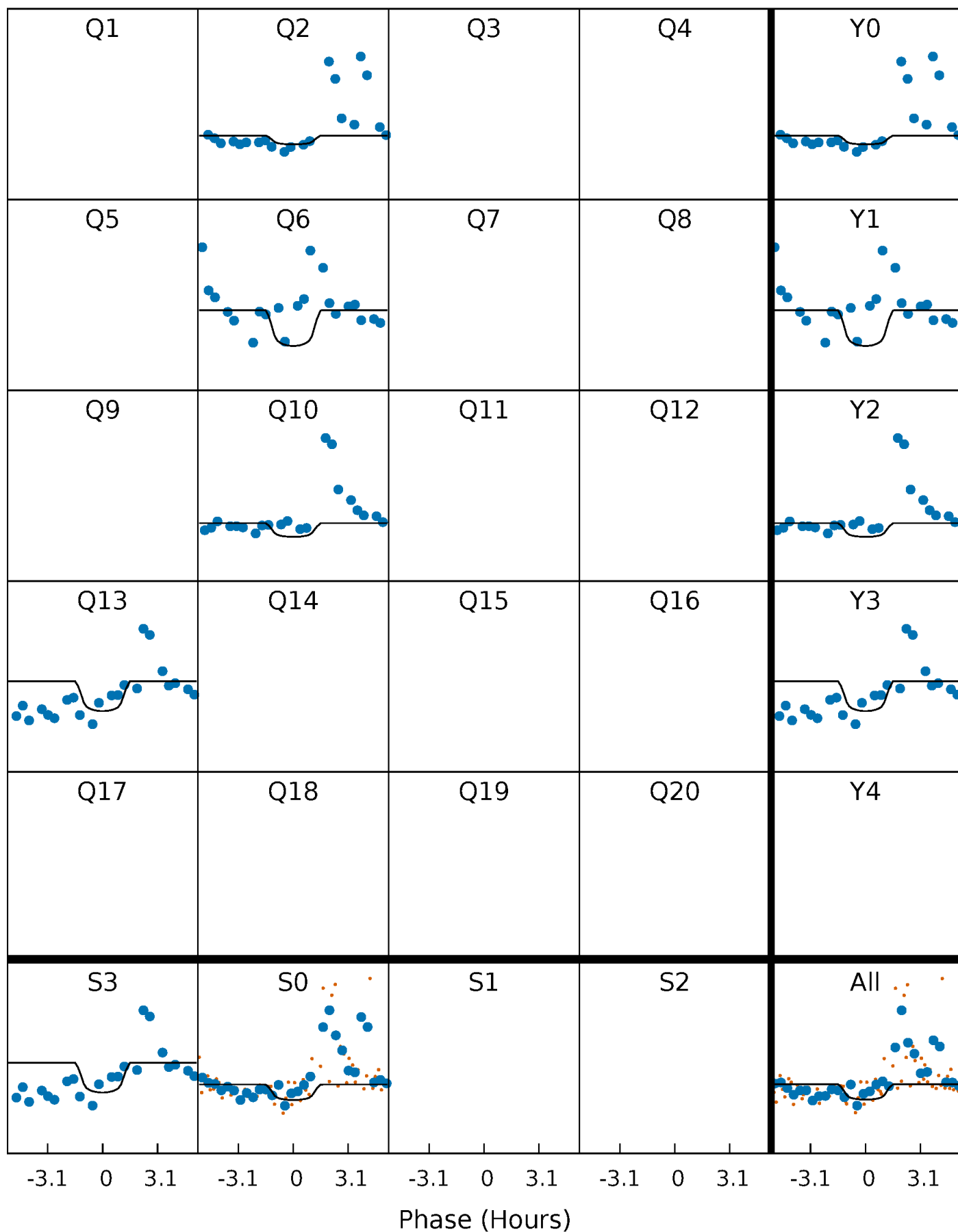
PDC Quarter-Phased Transit Curves

TCE 009892651-01 P=339.314093 Days $T_0=248.172704$ (BKJD)



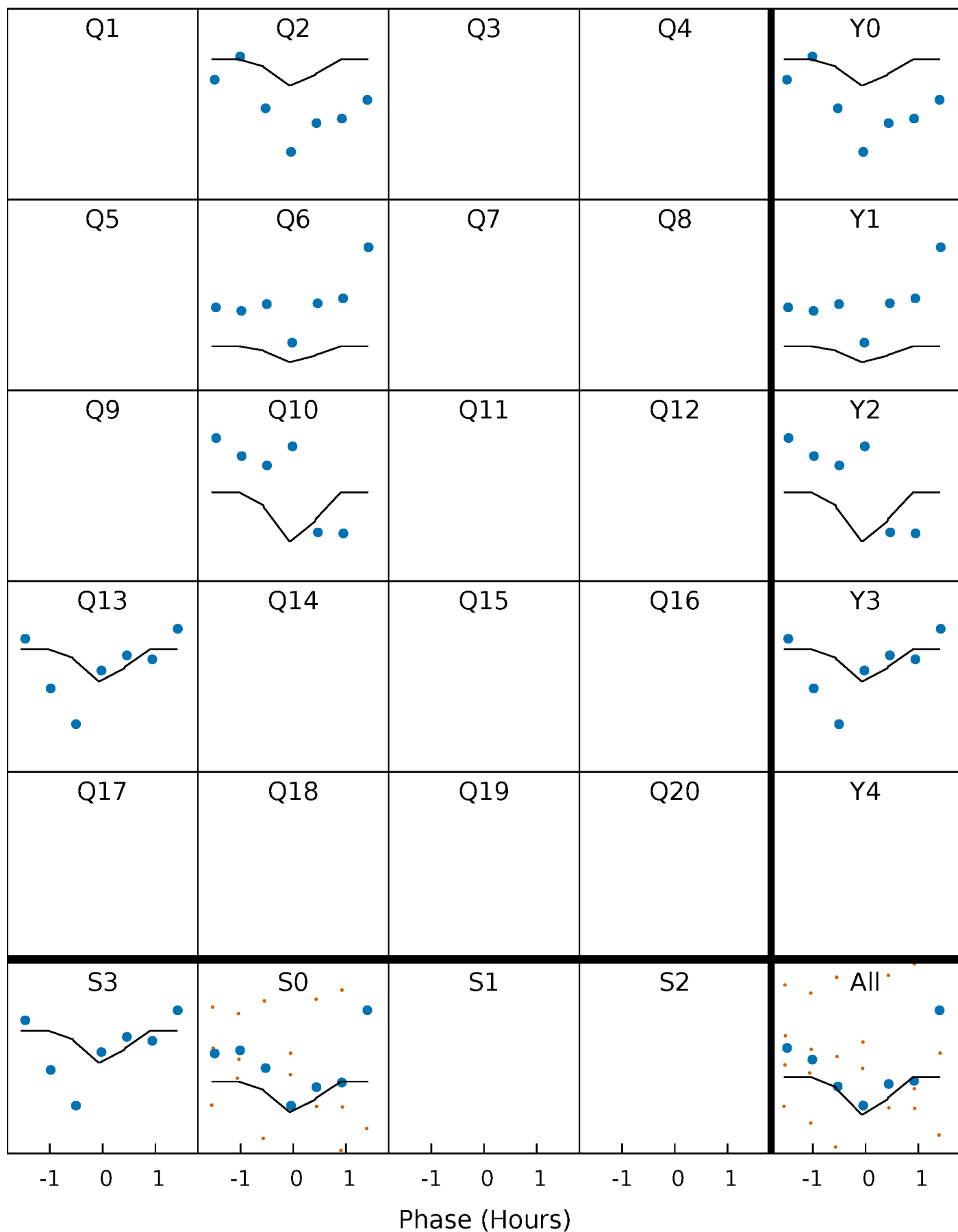
DV Quarter-Phased Transit Curves

TCE 009892651-01 $P=339.314093$ Days $T_0=248.172704$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

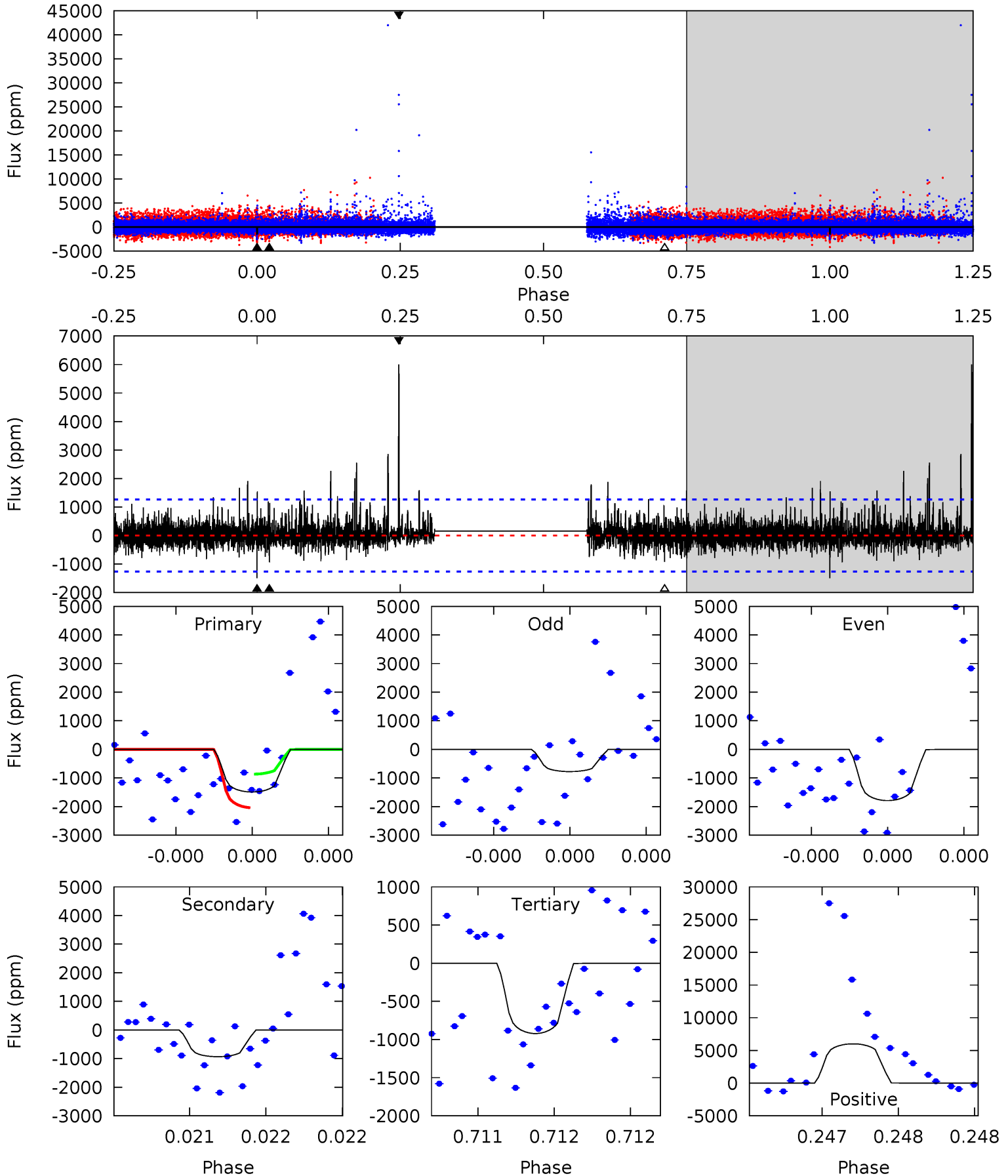
TCE 009892651-01 P=339.319697 Days $T_0=248.152046$ (BKJD)



DV Model-Shift Uniqueness Test

009892651-01, P = 339.314093 Days, E = 248.172704 Days

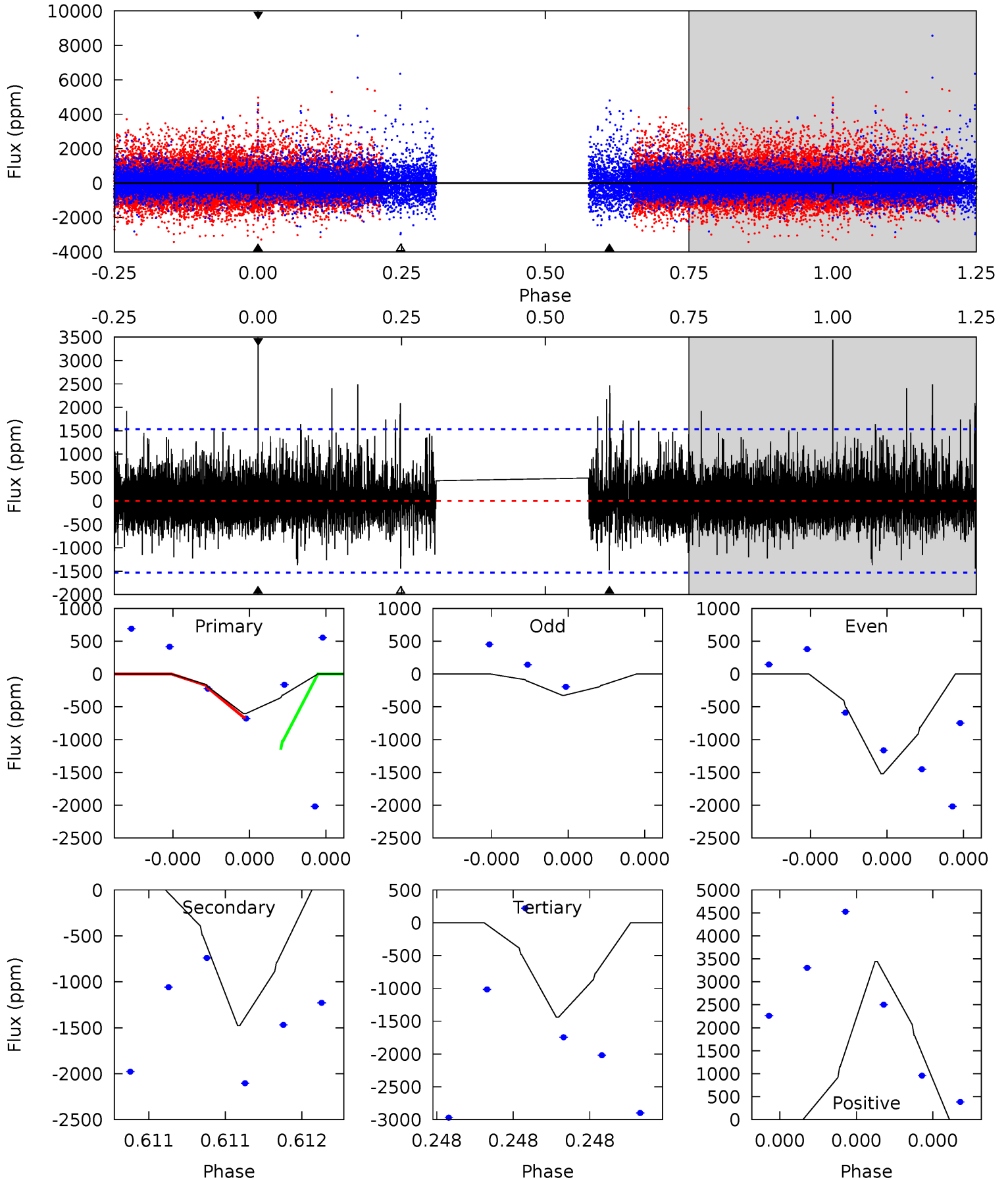
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.64	4.16	4.10	26.7	5.62	3.55	1.54	2.54	-20.1	0.06	-22.5	1.42	1.02	0.80	2.54



Alt Model-Shift Uniqueness Test

009892651-01, P = 339.319697 Days, E = 248.152046 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.29	5.60	5.46	13.1	5.81	3.84	1.35	-3.17	-10.8	0.14	-7.45	2.18	2.12	0.70	0.74



Stellar Parameters For KIC 009892651

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3646^{+58}_{-65}	$4.836^{+0.044}_{-0.036}$	$-0.200^{+0.100}_{-0.100}$	$0.423^{+0.030}_{-0.045}$	$0.445^{+0.028}_{-0.048}$	$8.302^{+2.035}_{-1.127}$
	+2%/-2%	+1%/-1%	+50%/-50%	+7%/-11%	+6%/-11%	+25%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 009892651-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-934 ± 225	$5.23^{+5.13}_{-3.45}$	172^{+4}_{-5}	2506^{+891}_{-357}	9720^{+80739}_{-7233}
Alt.	-1477 ± 264	$4.86^{+4.55}_{-3.43}$	171^{+4}_{-4}	2703^{+1209}_{-400}	$18026^{+202807}_{-13303}$

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 $A_{obs} \gg 1.0$

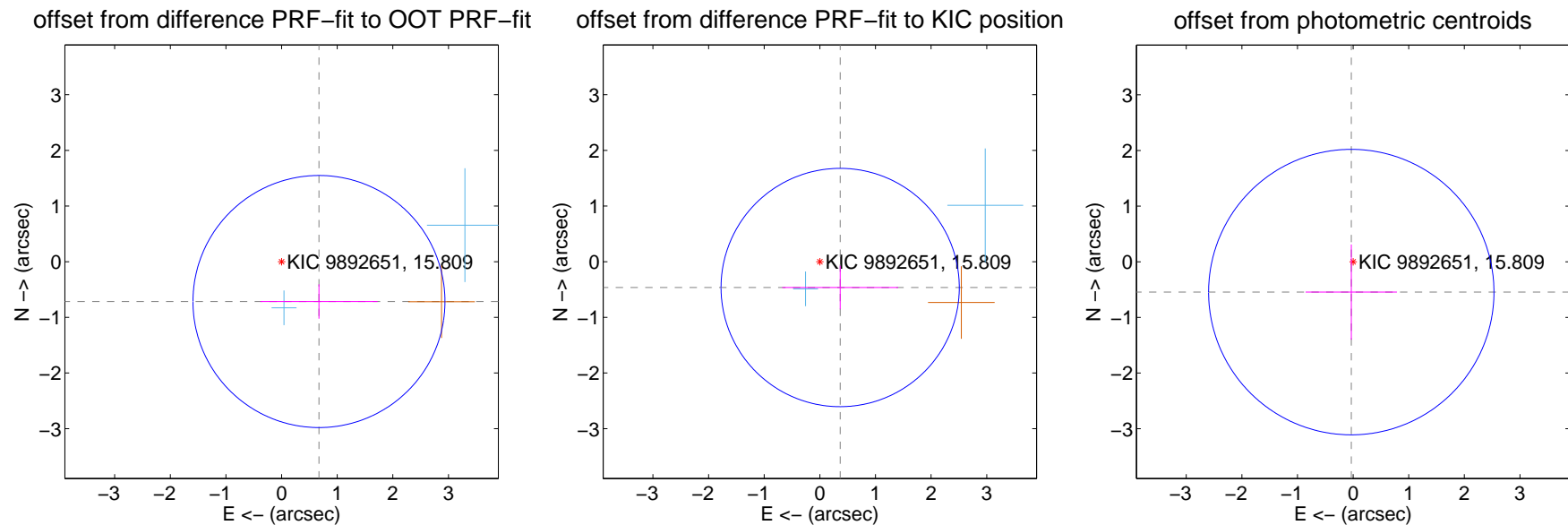
DV Centroid Data

Supplemental centroid analysis for 009892651-01. Kepler magnitude: 15.81. Transit SNR 6.58

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.982 ± 0.755	1.30	-0.672 ± 1.053	-0.716 ± 0.309
PRF-fit source offset from KIC position	0.591 ± 0.714	0.83	-0.365 ± 1.041	-0.464 ± 0.390
photometric centroid source offset	0.55 ± 0.86	0.64	0.03 ± 0.82	-0.55 ± 0.86



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.

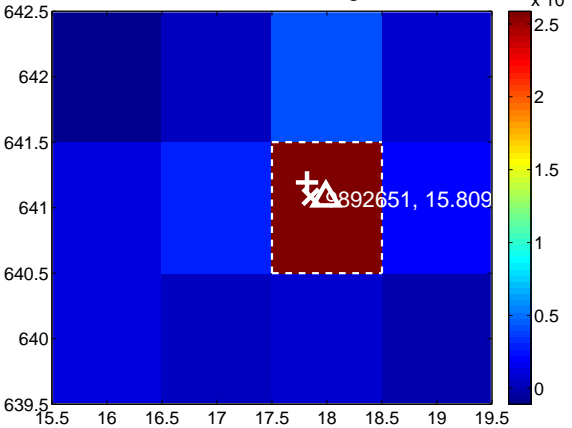
Q1 no difference image



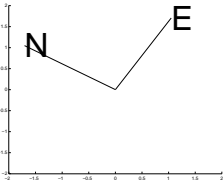
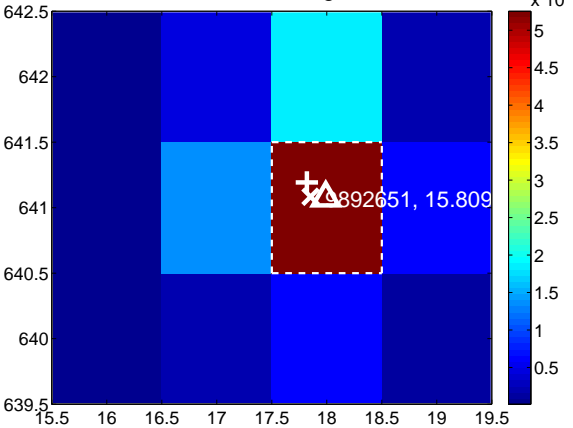
Q1 no OOT image



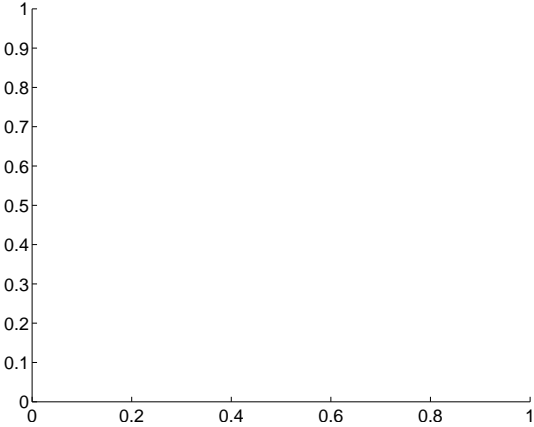
Q2 difference image



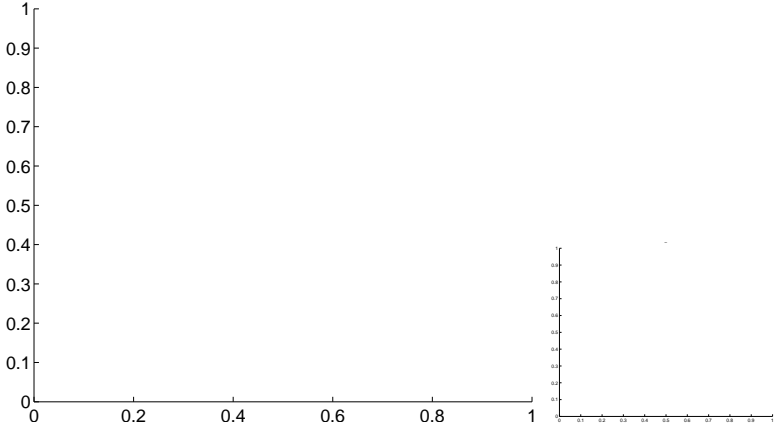
Q2 OOT image



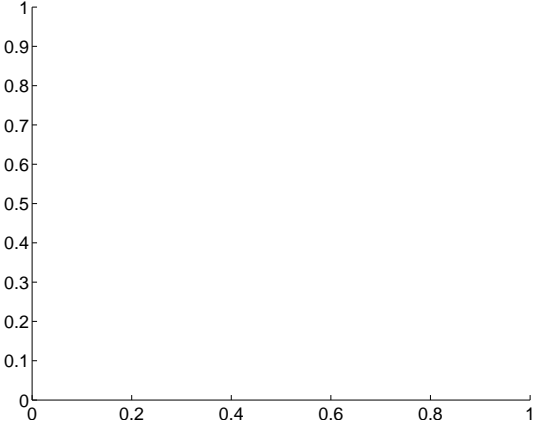
Q3 no difference image



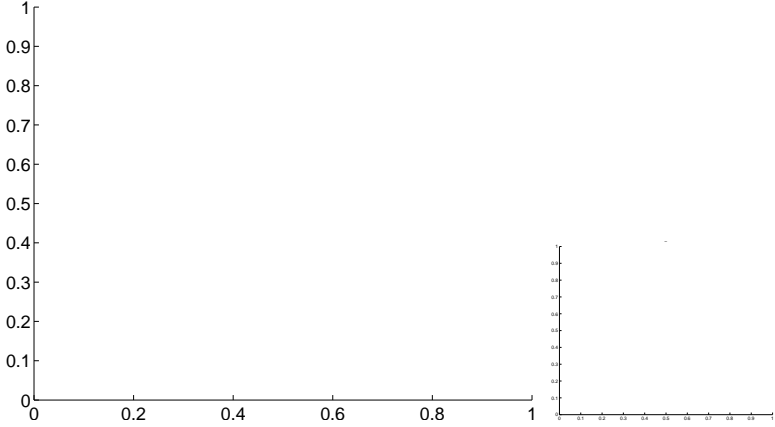
Q3 no OOT image



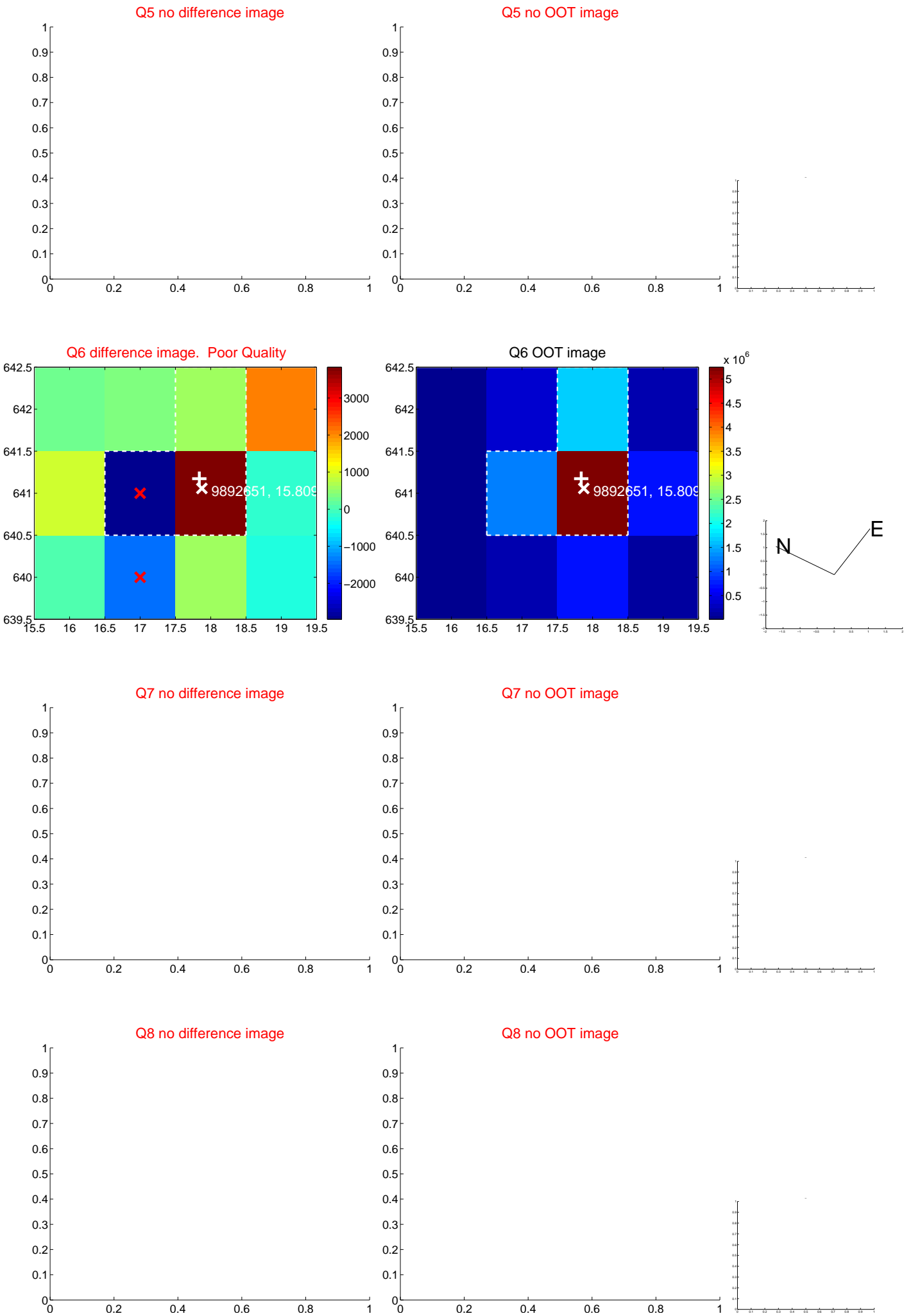
Q4 no difference image



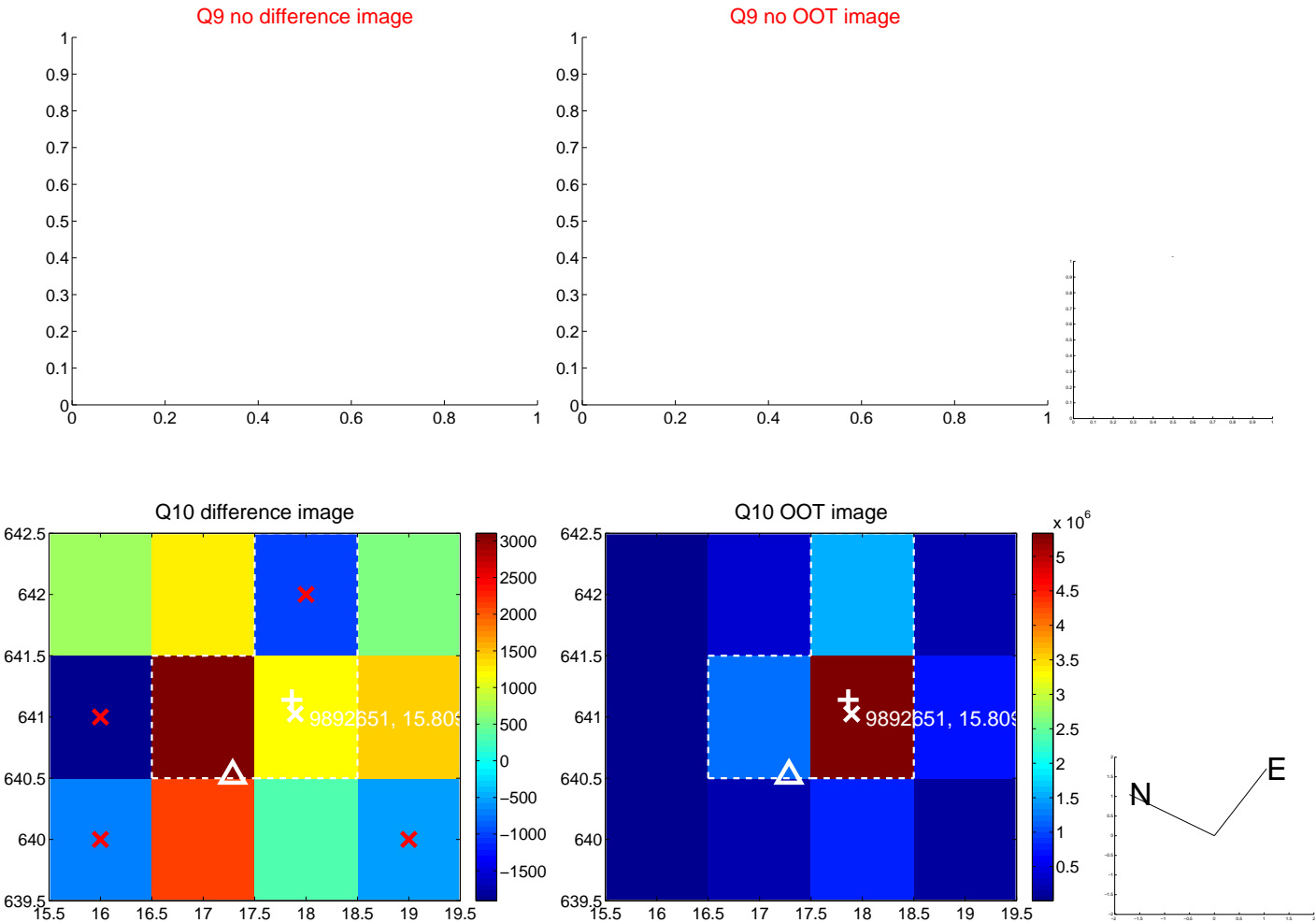
Q4 no OOT image



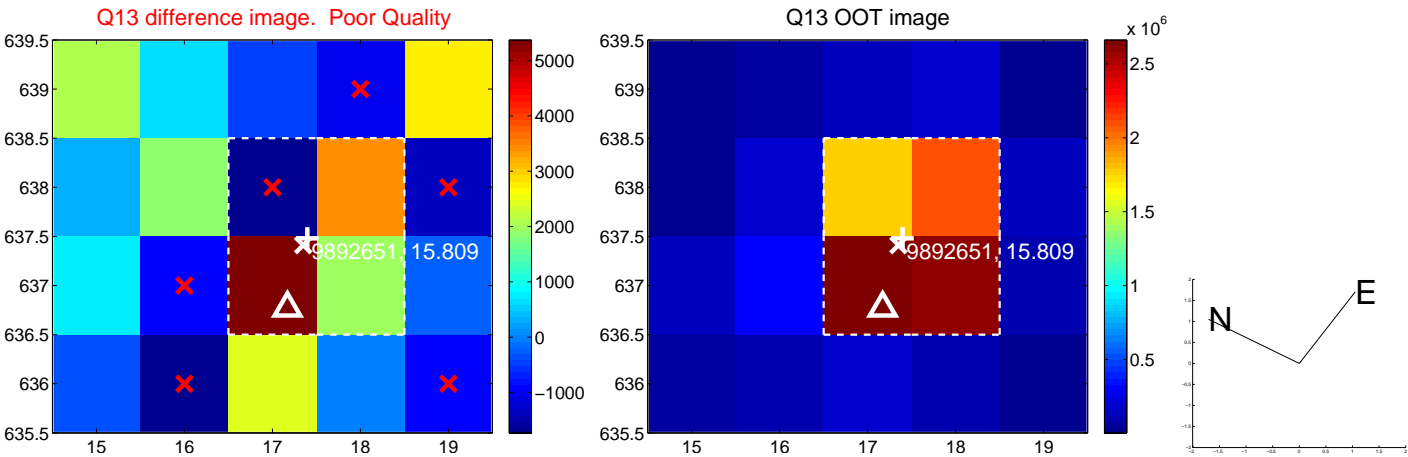
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



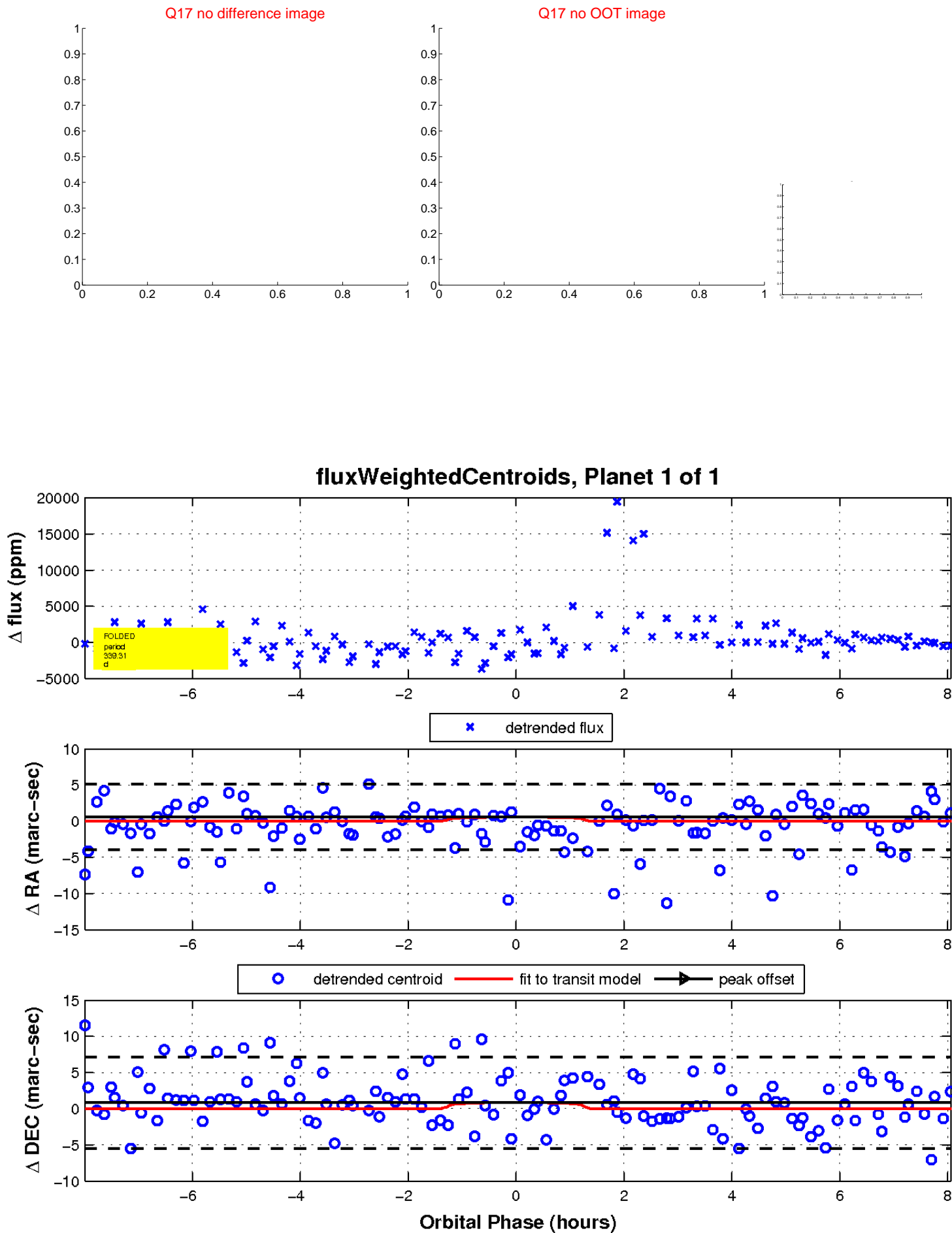
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

