

KIC 009655091

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})
009655091-01	OBS	No	445.178721	162.864114	159.2	2.375	10.9	5.1	154.30	3274	236.76	1751.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009655091-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—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.

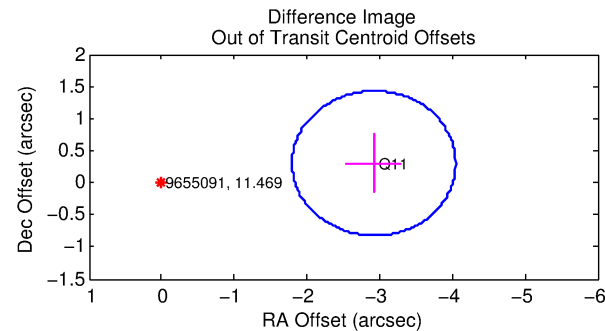
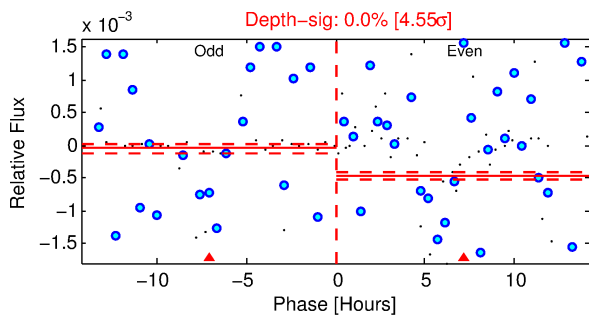
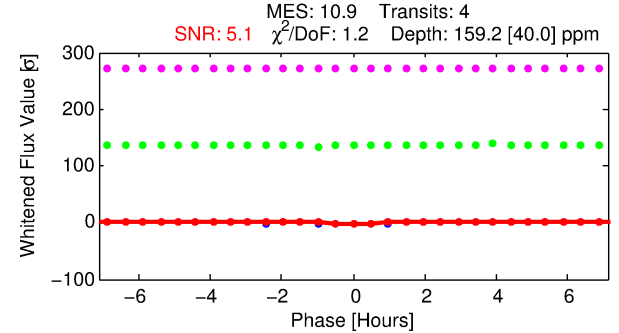
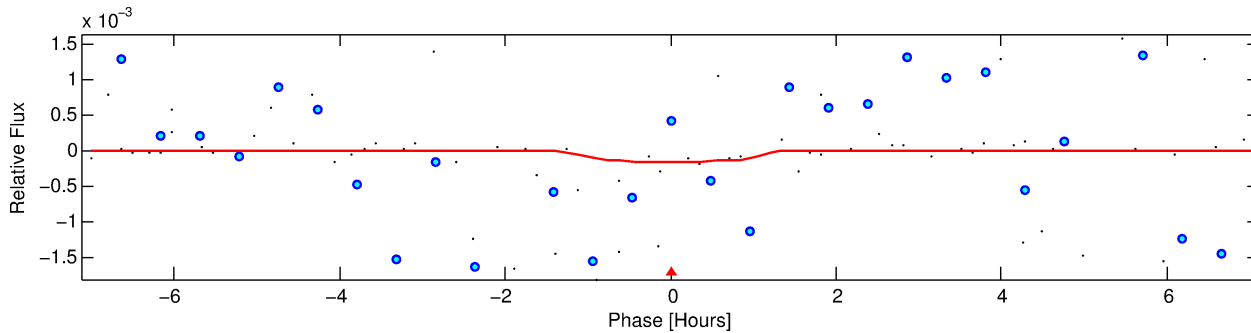
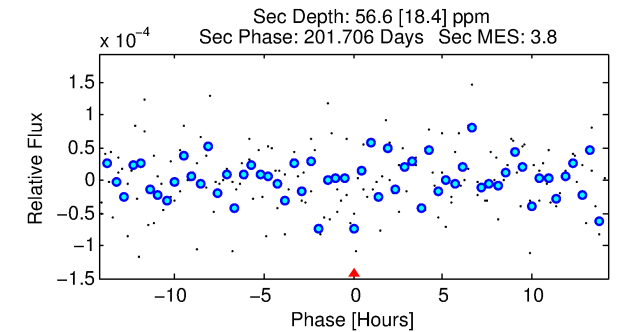
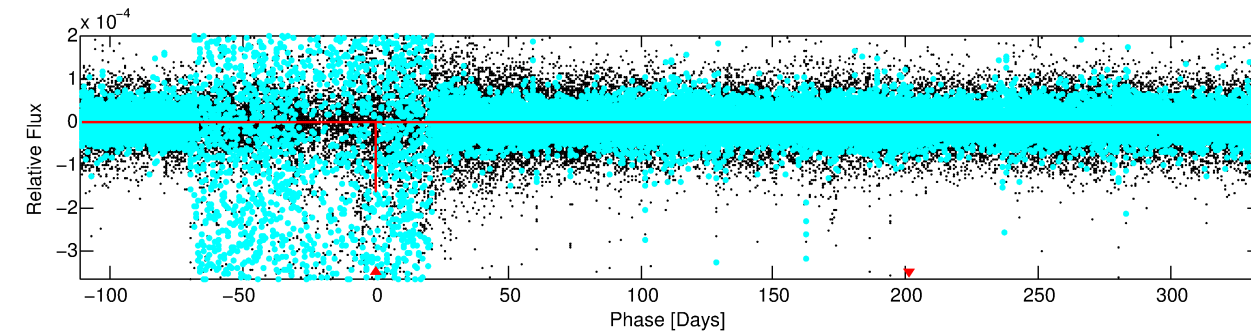
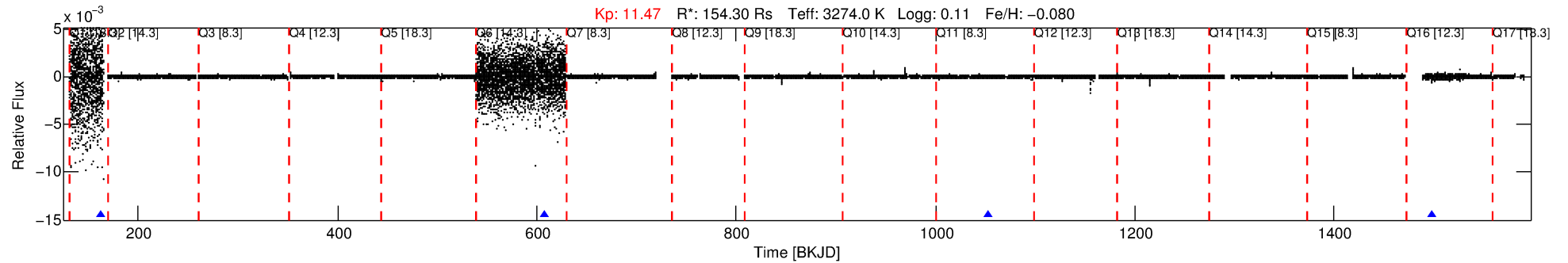
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009655091-01

No Significant Match Found

DV One-Page Summary

KIC: 9655091 Candidate: 1 of 1 Period: 445.179 d



DV Fit Results:

Period = 445.17872 [0.01501] d
Epoch = 162.8641 [0.0366] BKJD
Rp/R* = 0.0141 [0.0325]
a/R* = 778.86 [5154.07]
b = 0.86 [2.13]
Seff = 1751.46 [617.33]
Teq = 1650 [145] K
Rp = 236.76 [548.39] Re
a = 1.1829 [0.2263] AU
Ag = 0.78 [3.61] [-0.06σ]
Teffp = 2395 [2773] K [0.27σ]

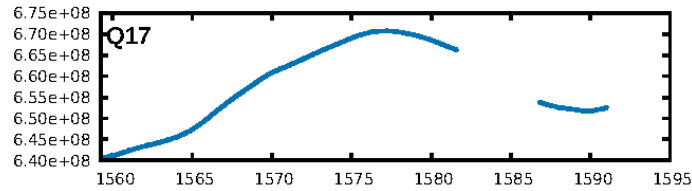
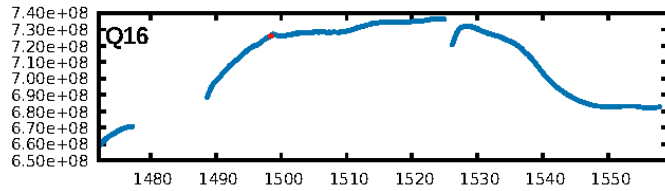
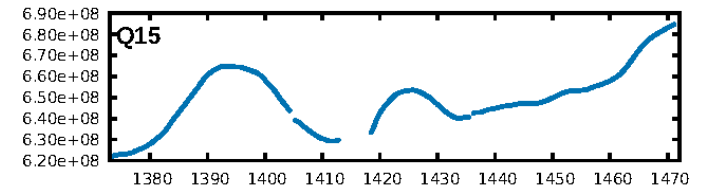
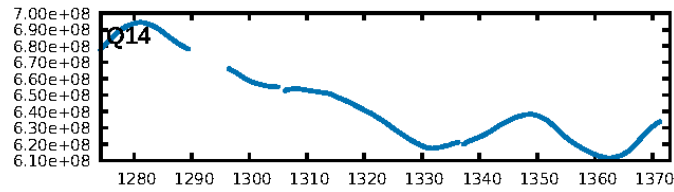
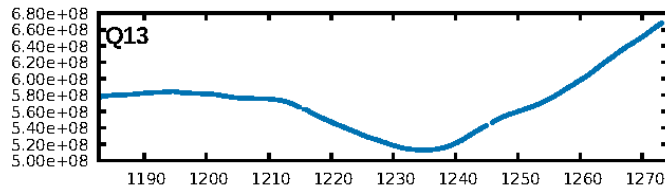
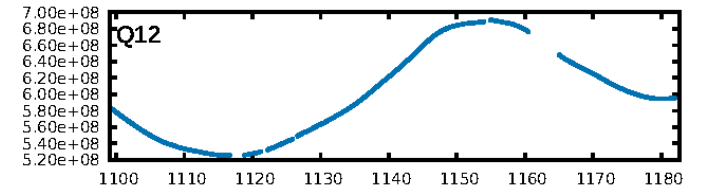
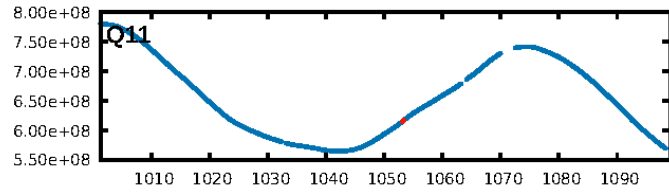
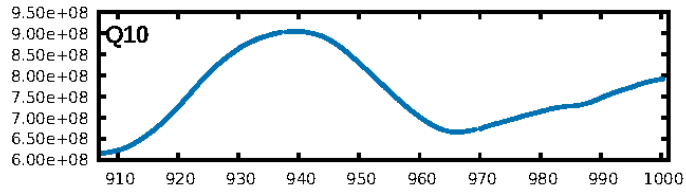
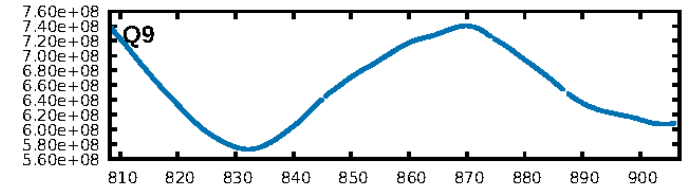
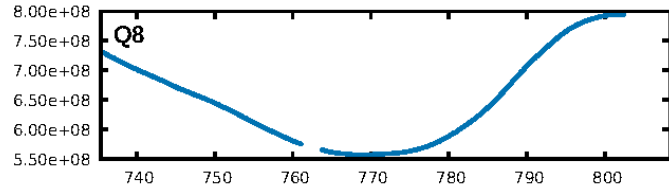
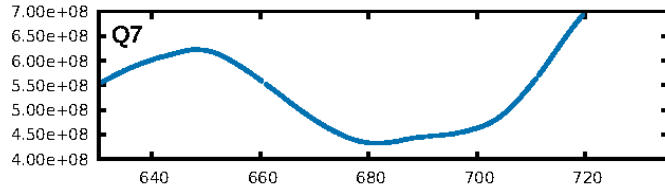
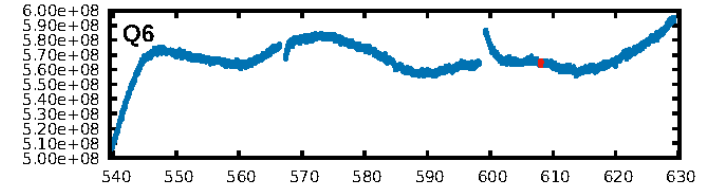
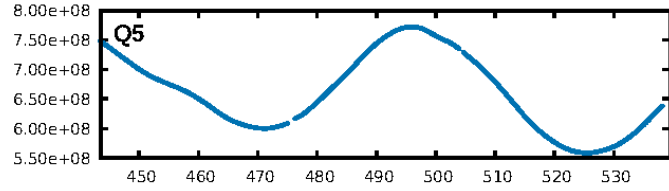
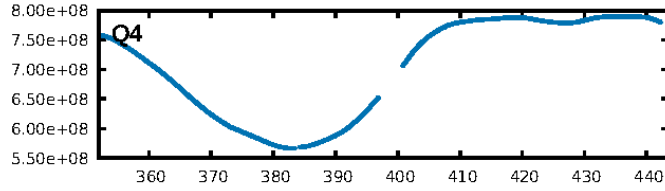
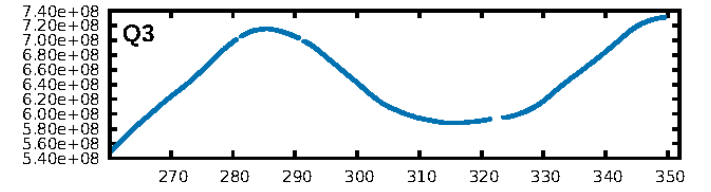
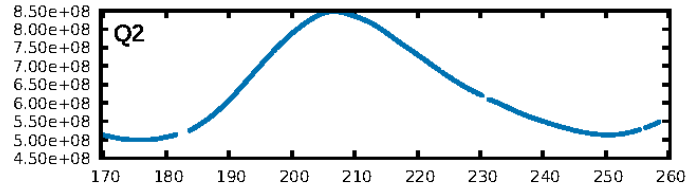
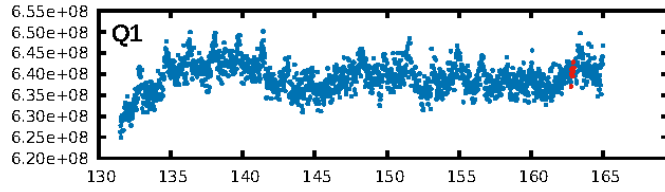
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 57.5%
Bootstrap-pfa: 5.00e-03
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -6.686
Centroid-sig: 65.1%
Centroid-so: 0.722 arcsec [0.40σ]
OotOffset-rm: 2.935 arcsec [7.81σ]
KicOffset-rm: 2.955 arcsec [7.84σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

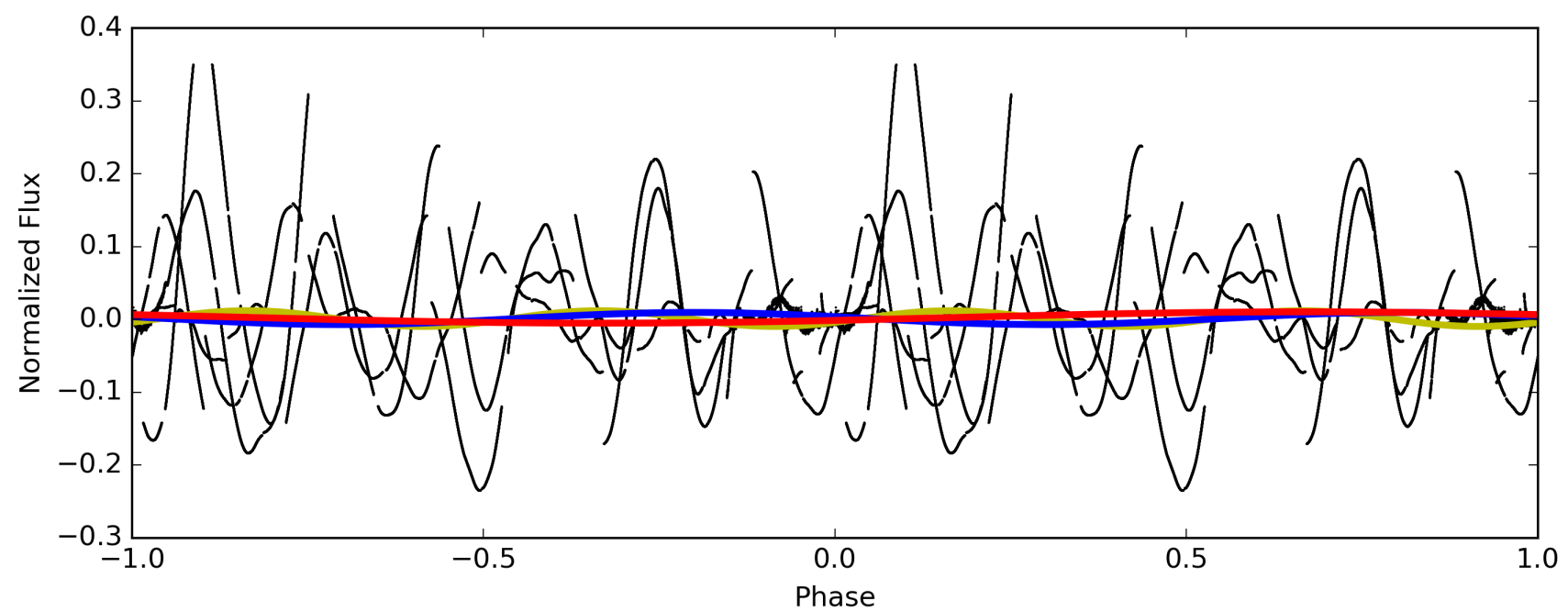
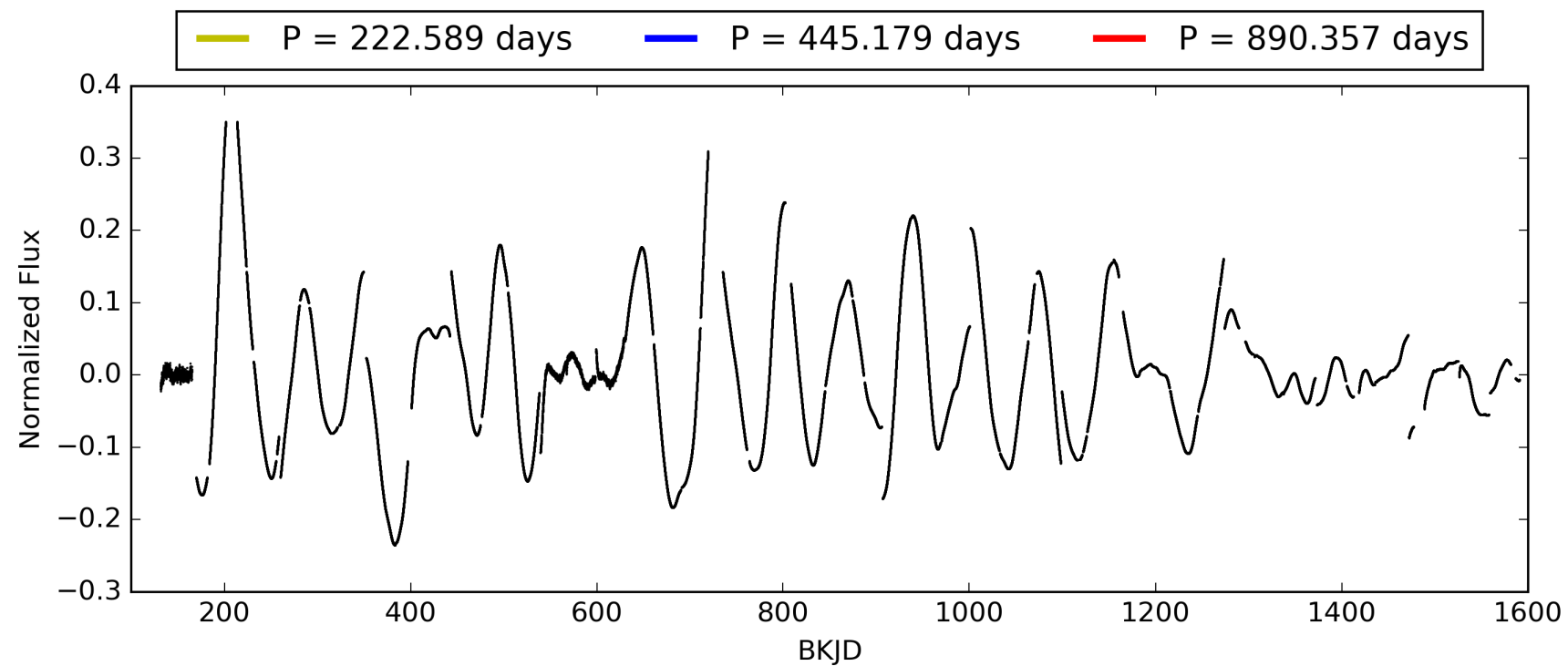
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:48:32 Z

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

TCE 009655091-01, PDC Light Curves

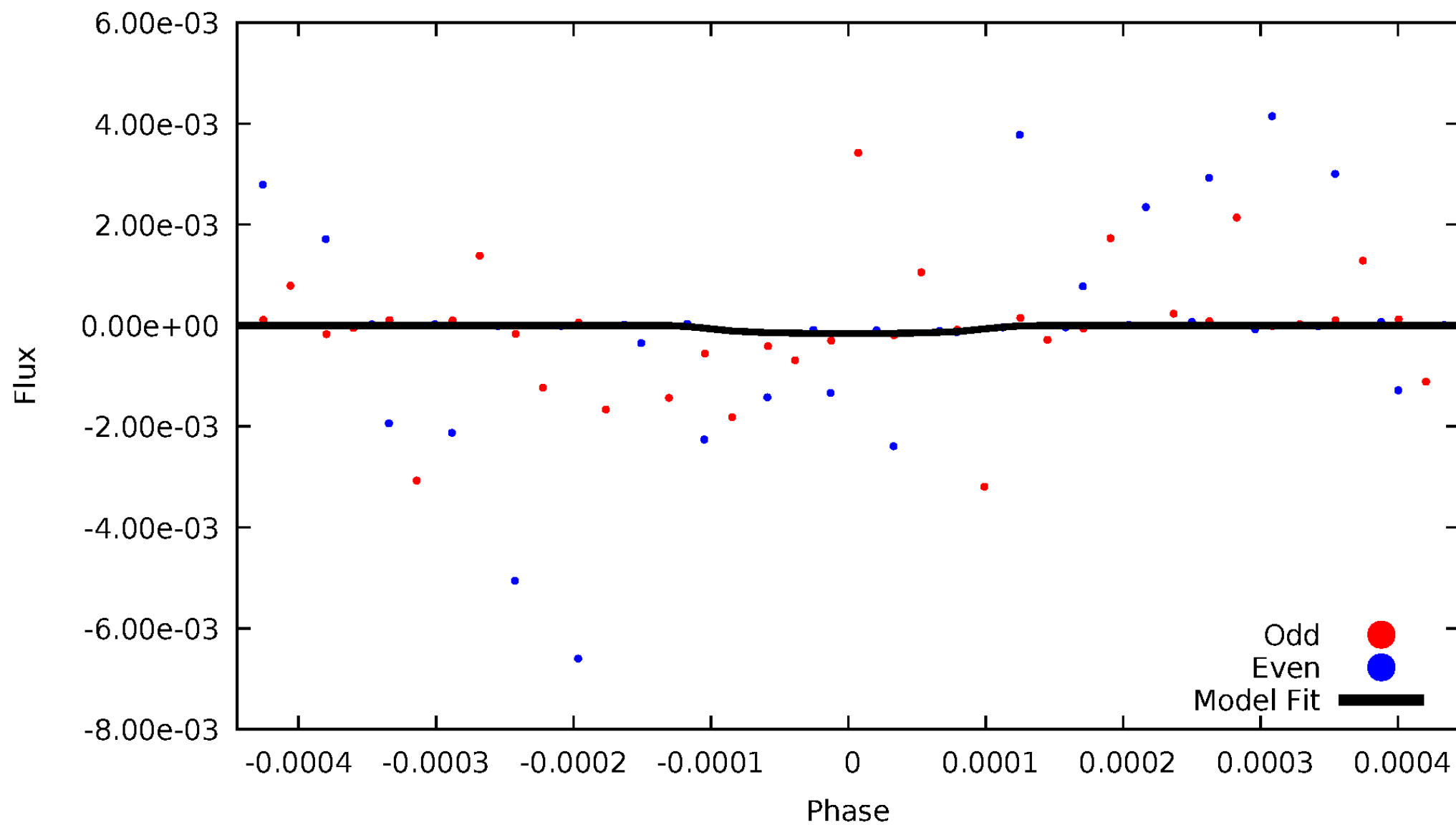


TCE 009655091-01



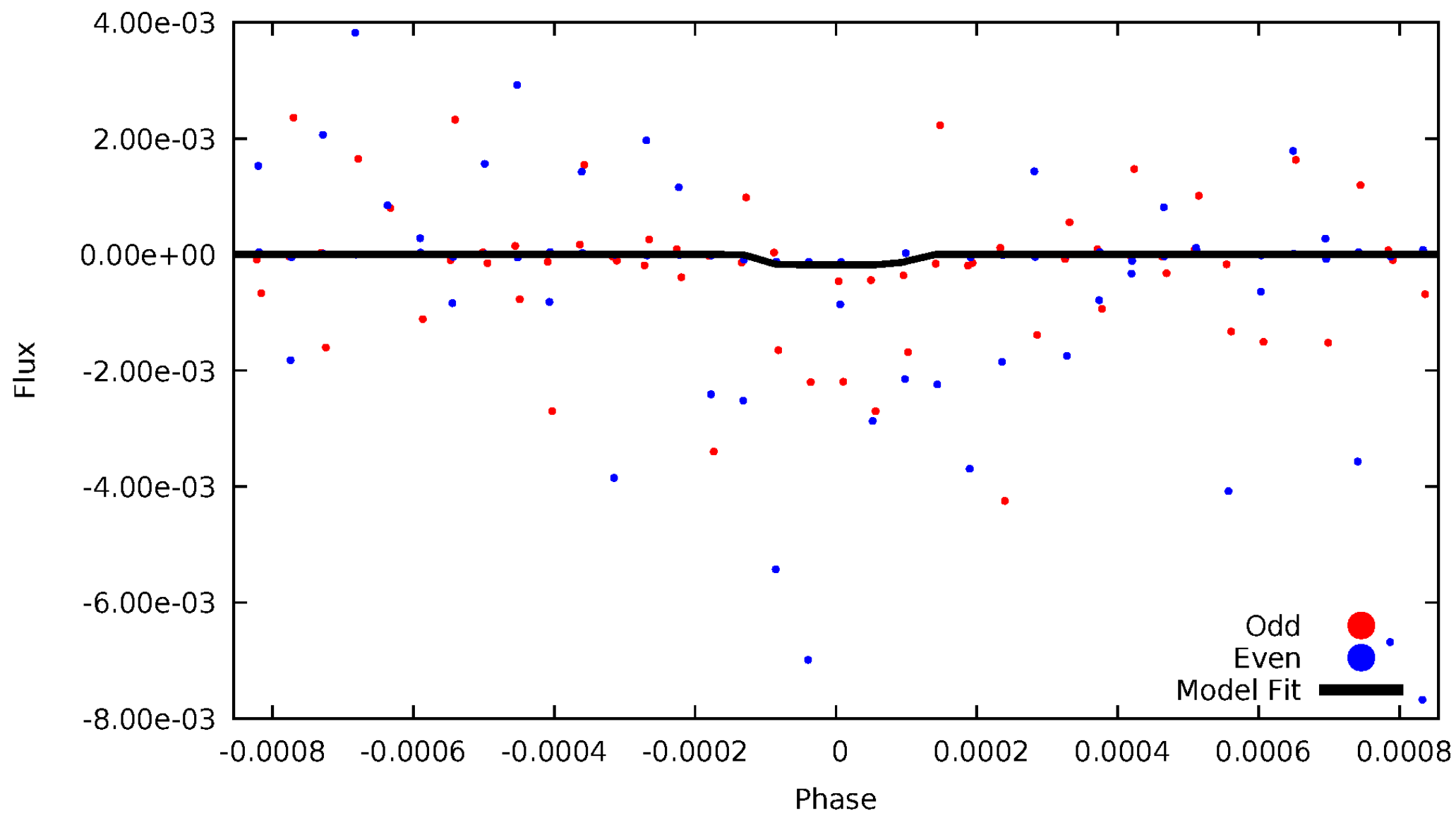
DV Odd/Even

TCE 009655091-01

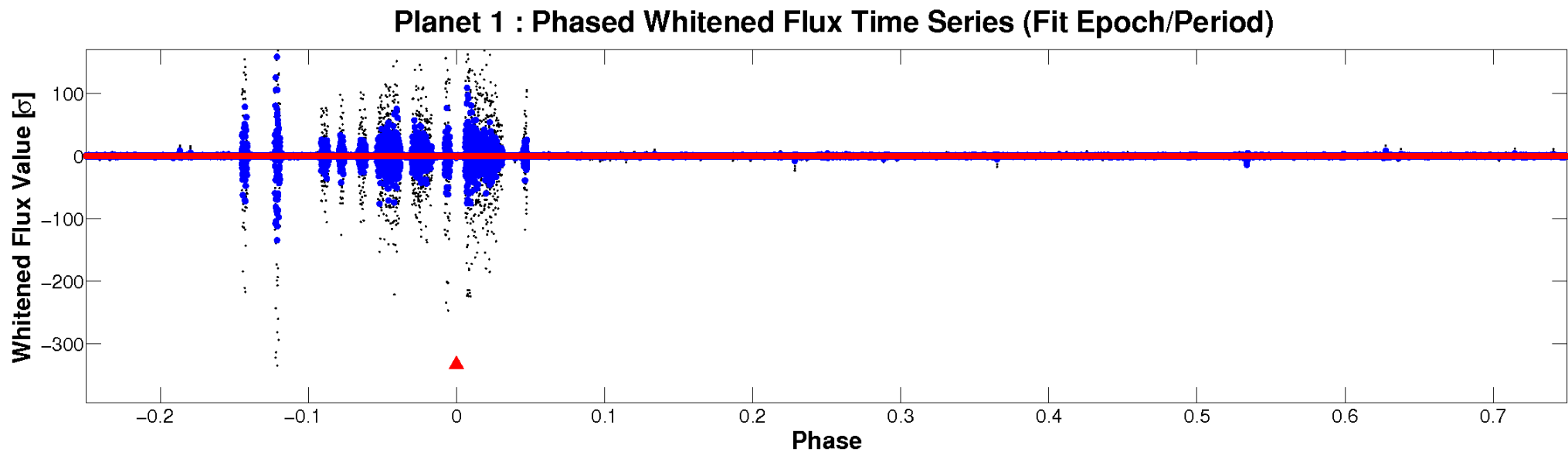
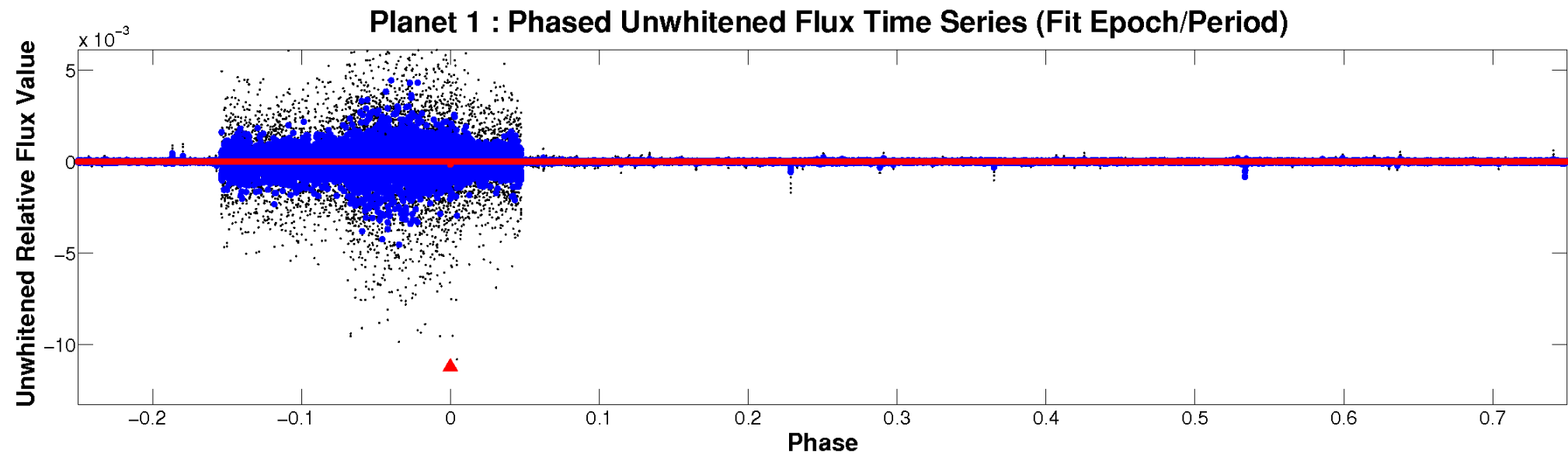


ALT Odd/Even

TCE 009655091-01

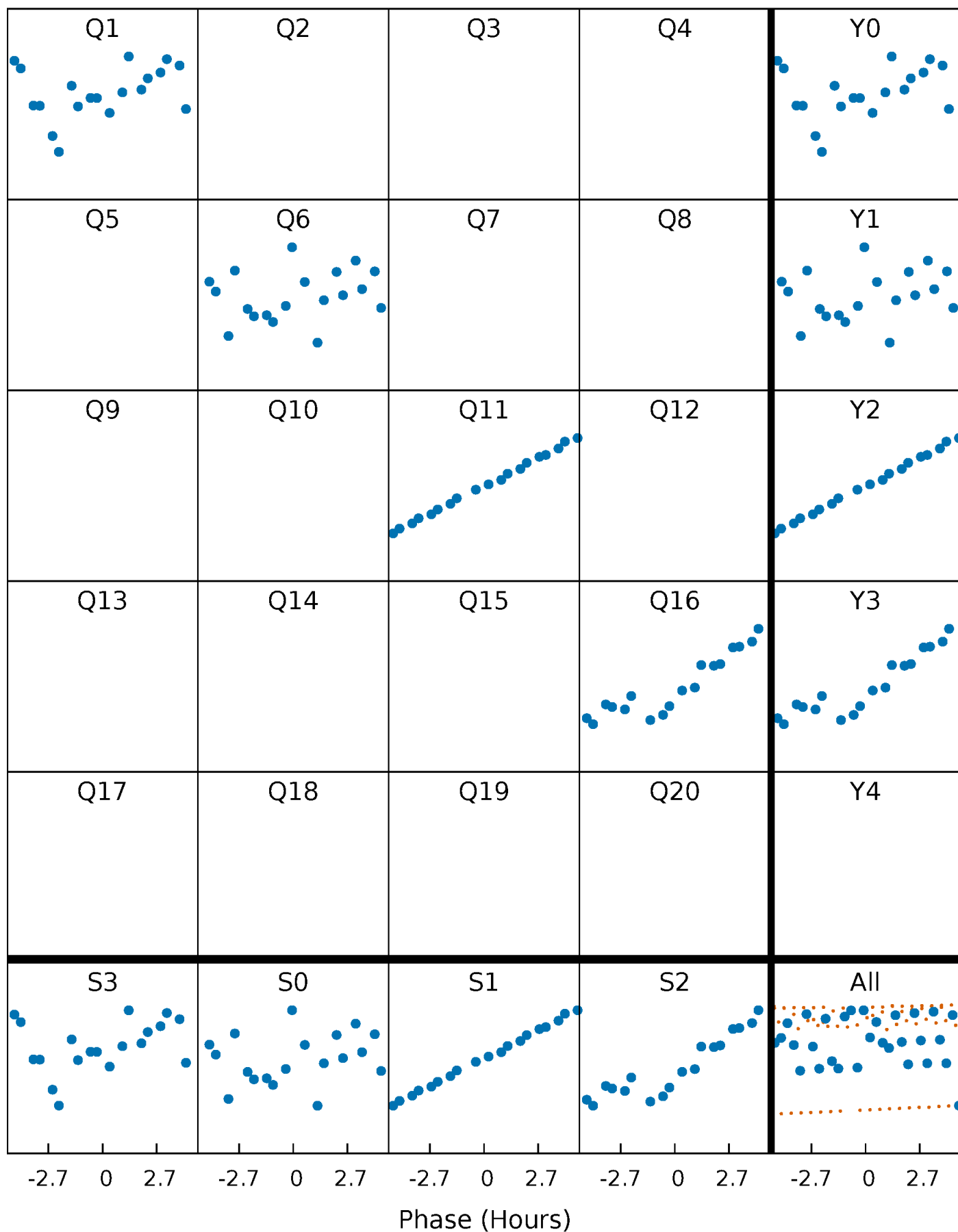


Non-Whitened Vs. Whitened Light Curve



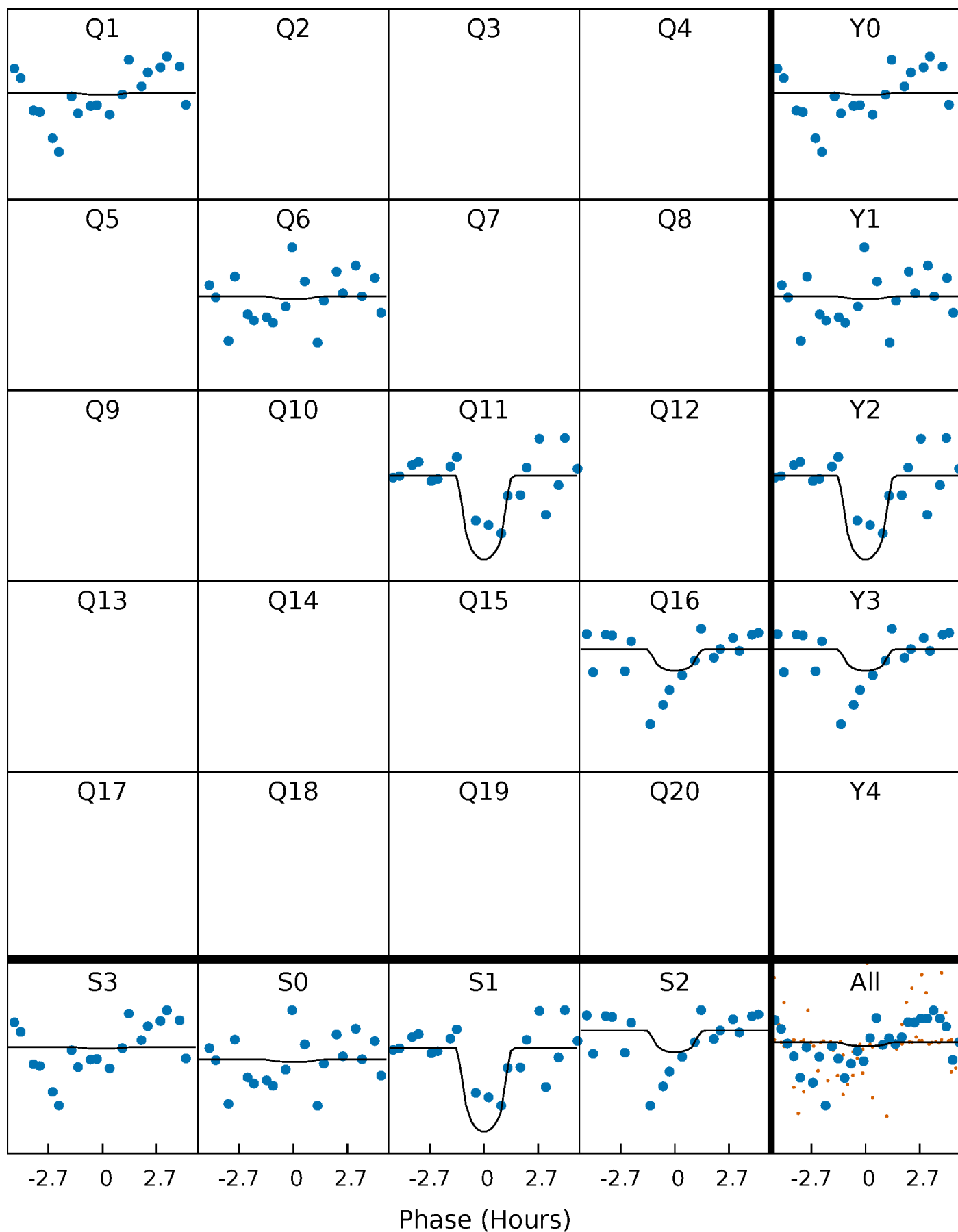
PDC Quarter-Phased Transit Curves

TCE 009655091-01 P=445.178721 Days $T_0=162.864114$ (BKJD)



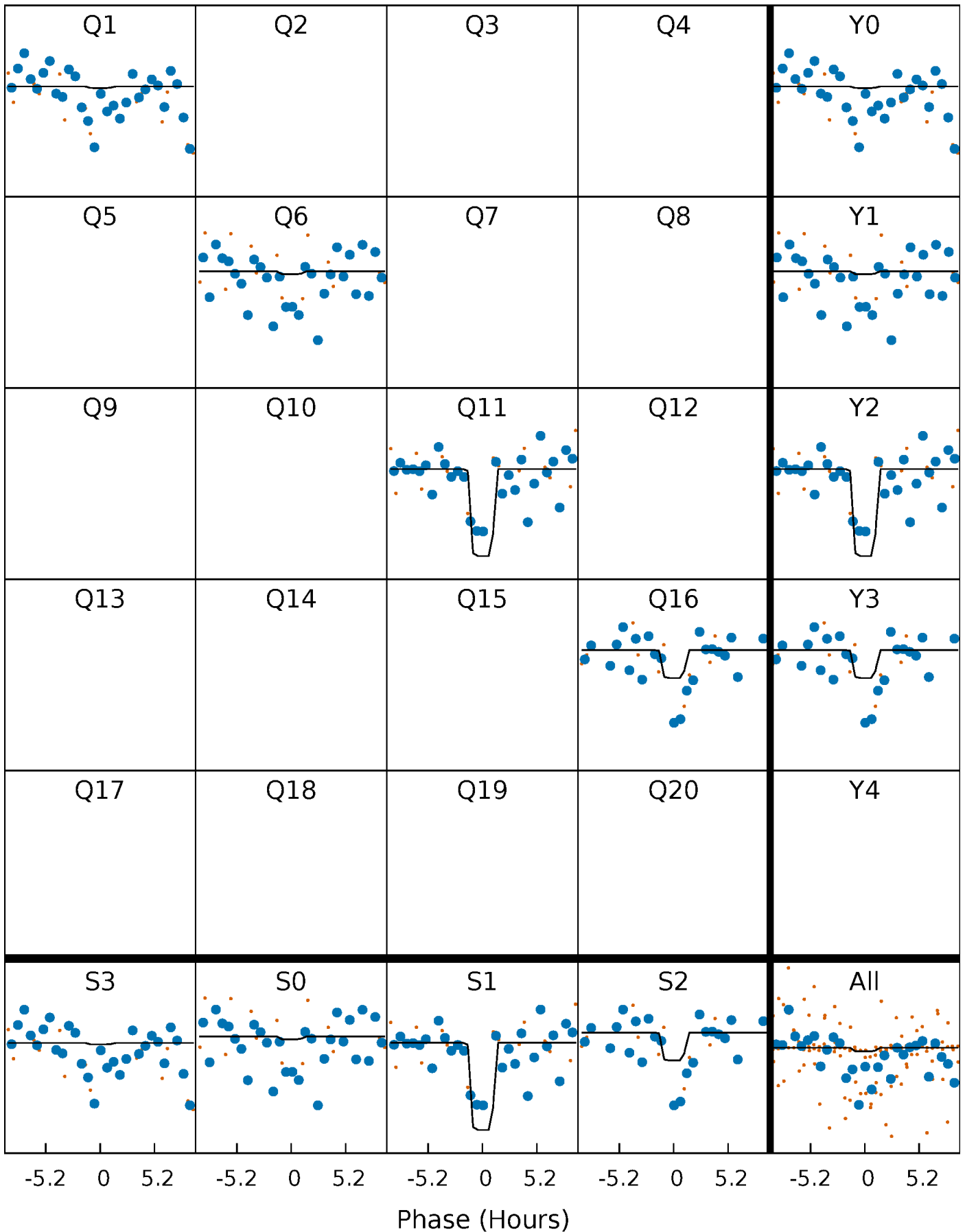
DV Quarter-Phased Transit Curves

TCE 009655091-01 $P=445.178721$ Days $T_0=162.864114$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

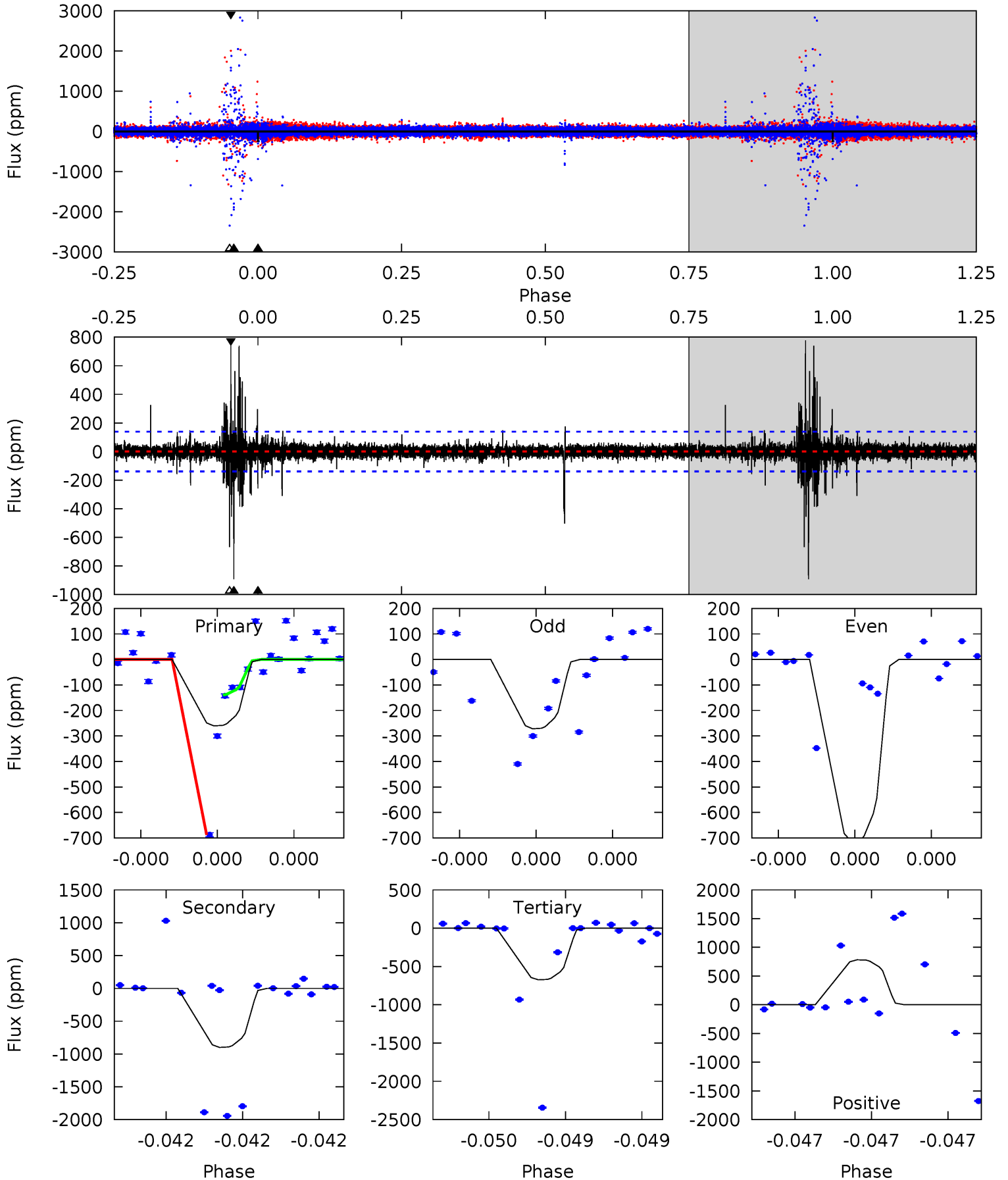
TCE 009655091-01 P=445.185972 Days $T_0=162.794231$ (BKJD)



DV Model-Shift Uniqueness Test

009655091-01, P = 445.178721 Days, E = 162.864114 Days

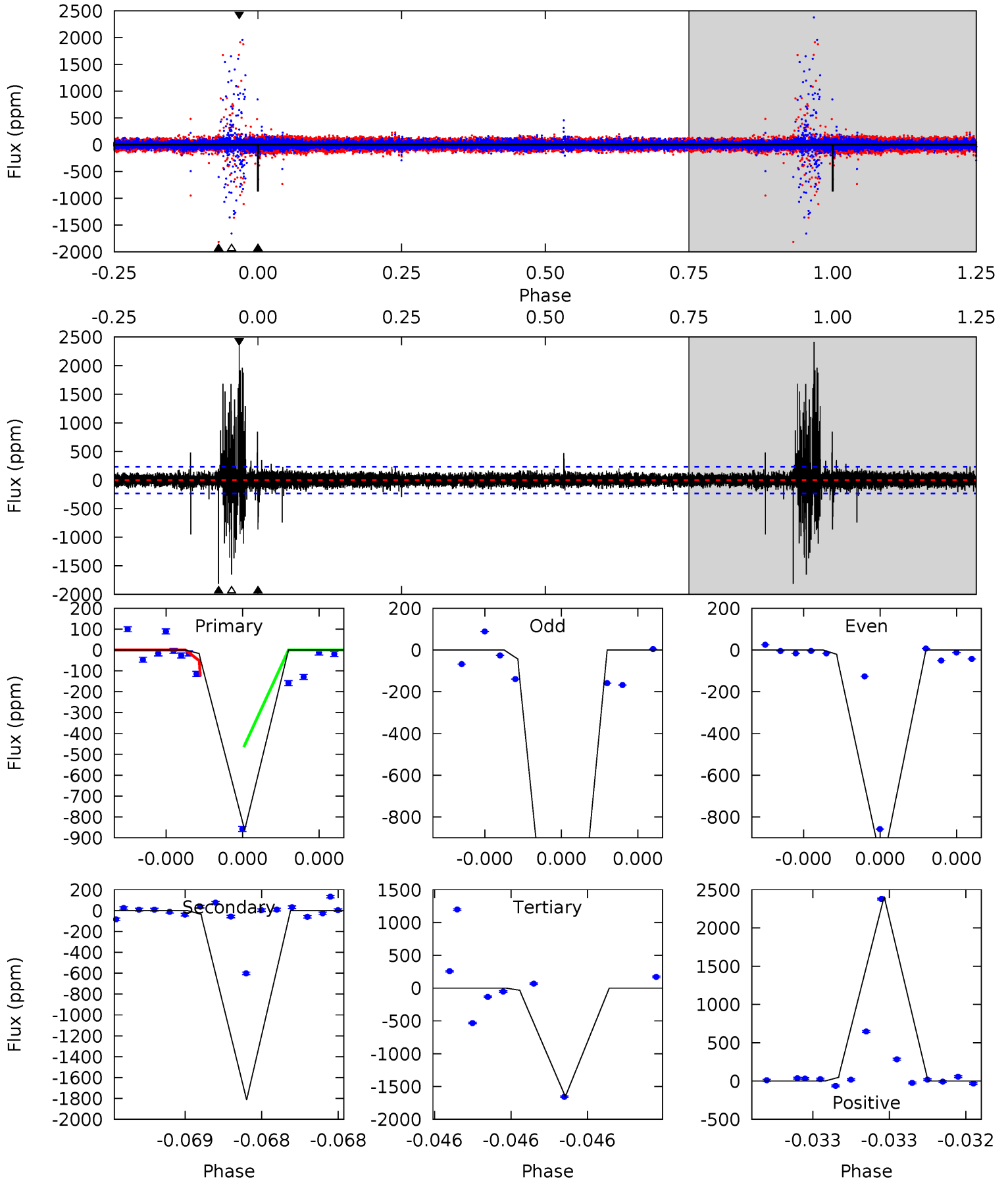
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	36.6	27.4	31.8	5.68	3.64	1.32	-16.8	-21.2	9.18	4.74	4.85	2.05	0.47	0



Alt Model-Shift Uniqueness Test

009655091-01, P = 445.185972 Days, E = 162.794231 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.0	44.2	40.3	58.8	5.70	3.68	1.42	-19.3	-37.7	3.89	-14.5	1.00	1.30	0.57	0



Stellar Parameters For KIC 009655091

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3274^{+117}_{-78}	$0.108^{+0.195}_{-0.052}$	$-0.080^{+0.250}_{-0.100}$	$154.296^{+9.192}_{-27.576}$	$1.114^{+0.207}_{-0.128}$	$0.000^{+0.000}_{-0.000}$
	+4%/-2%	+181%/-48%	+312%/-125%	+6%/-18%	+19%/-11%	+90%/-14%
Source	KIC0	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 009655091-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-893 ± 24	$445.94^{+426.07}_{-309.58}$	2277^{+104}_{-114}	3322^{+1945}_{-670}	$3.549^{+35.302}_{-2.604}$
Alt.	-1814 ± 41	$450.43^{+461.71}_{-308.81}$	2276^{+98}_{-124}	3746^{+2255}_{-790}	$7.010^{+64.141}_{-5.264}$

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

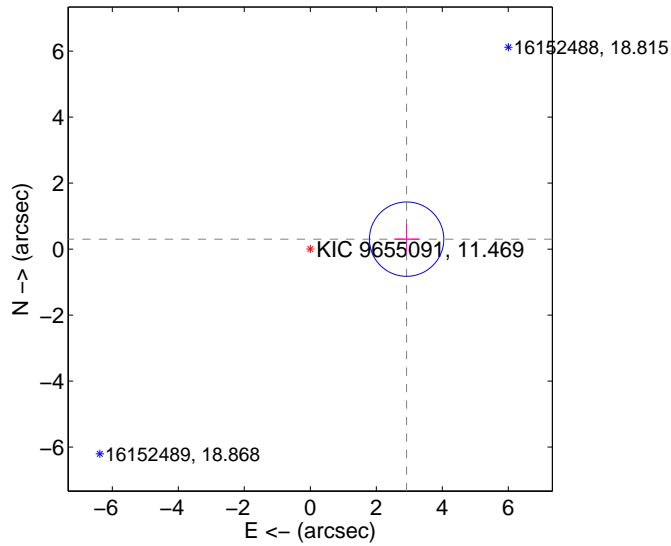
Supplemental centroid analysis for 009655091-01. **Kepler magnitude: 11.47.** Transit SNR 5.06

There are 0 quarters with good PRF difference image offsets

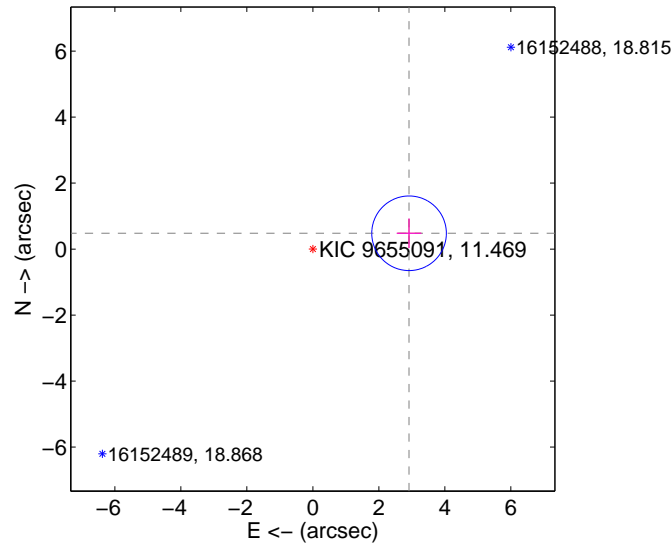
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.935 ± 0.376	7.81	-2.920 ± 0.375	0.302 ± 0.449
PRF-fit source offset from KIC position	2.955 ± 0.377	7.84	-2.916 ± 0.375	0.480 ± 0.449
photometric centroid source offset	0.72 ± 1.80	0.40	-0.49 ± 1.73	0.53 ± 1.85

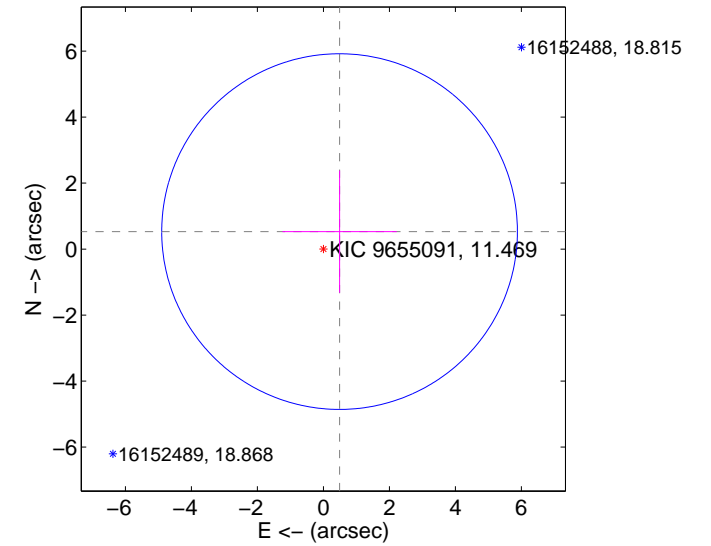
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

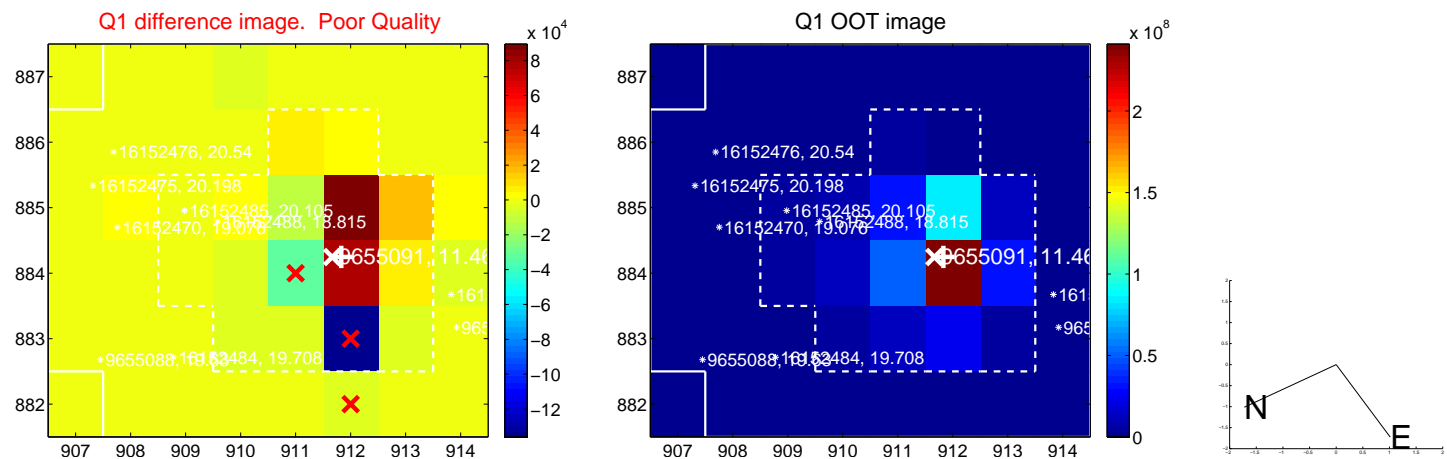


offset from photometric centroids



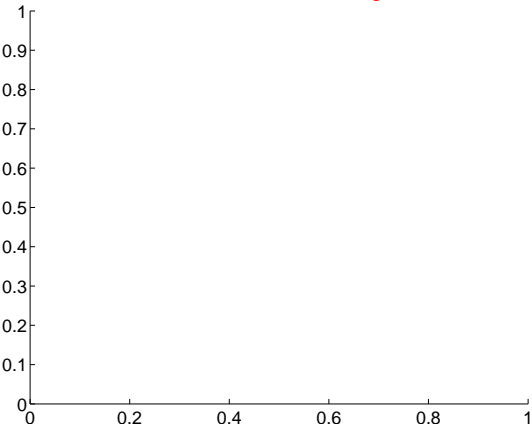
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

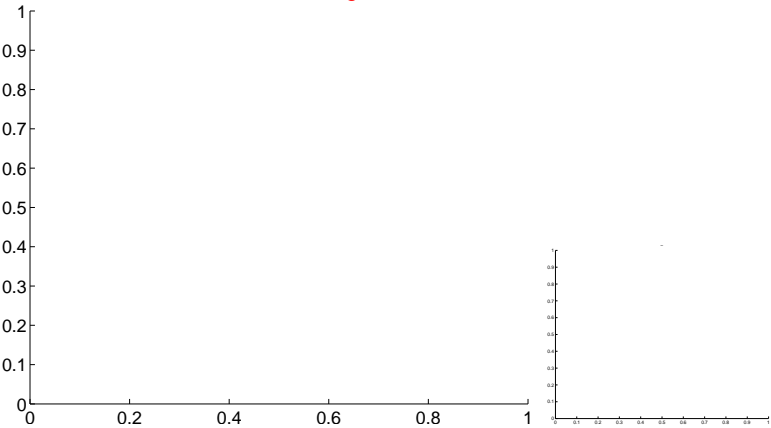


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

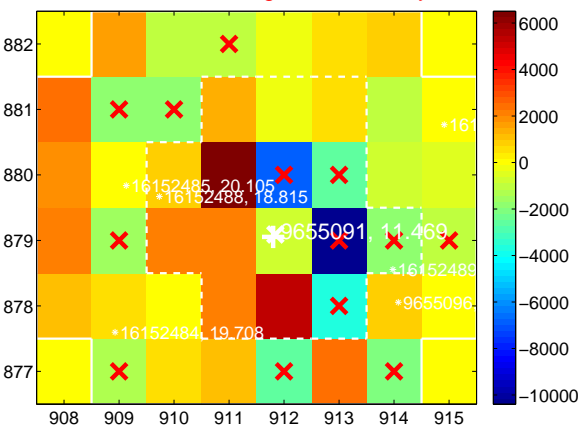
Q5 no difference image



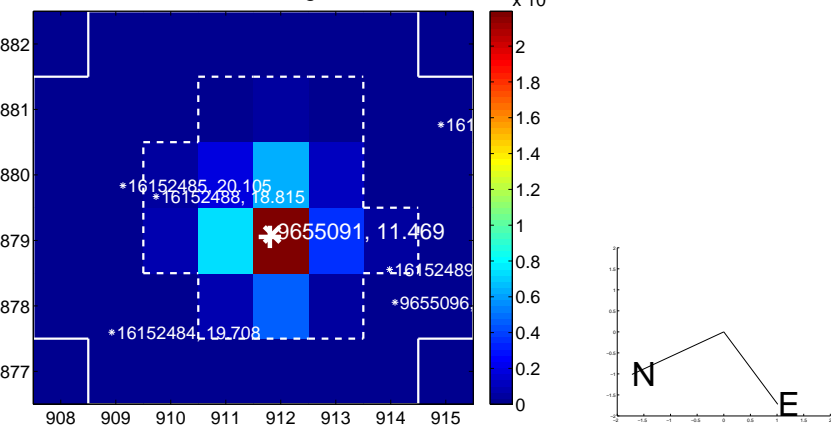
Q5 no OOT image



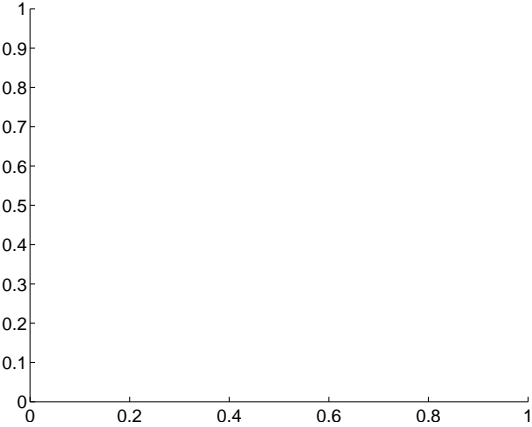
Q6 difference image. Poor Quality



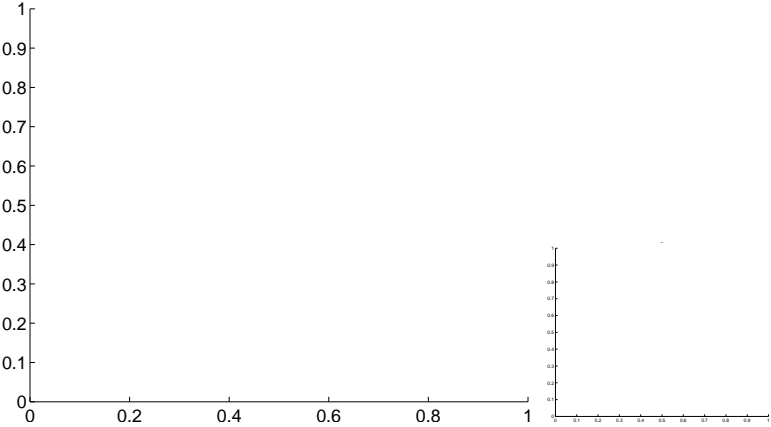
Q6 OOT image



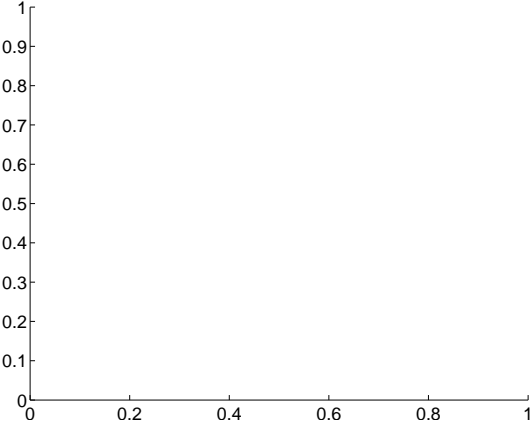
Q7 no difference image



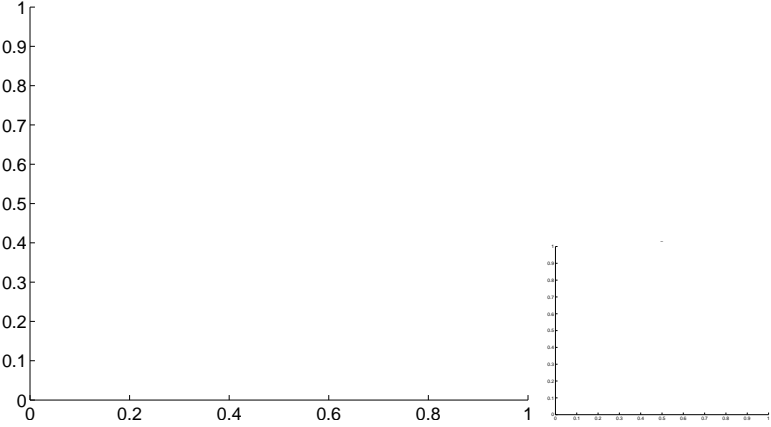
Q7 no OOT image



Q8 no difference image

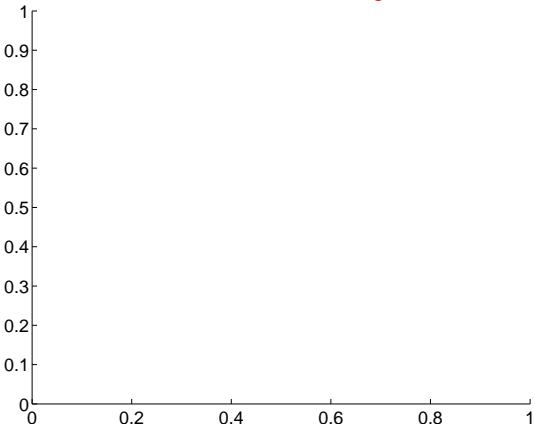


Q8 no OOT image



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

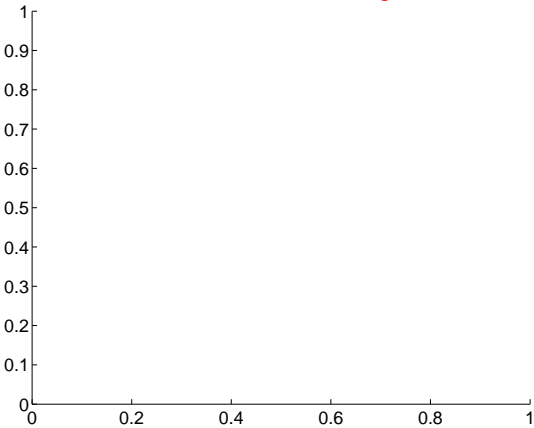
Q9 no difference image



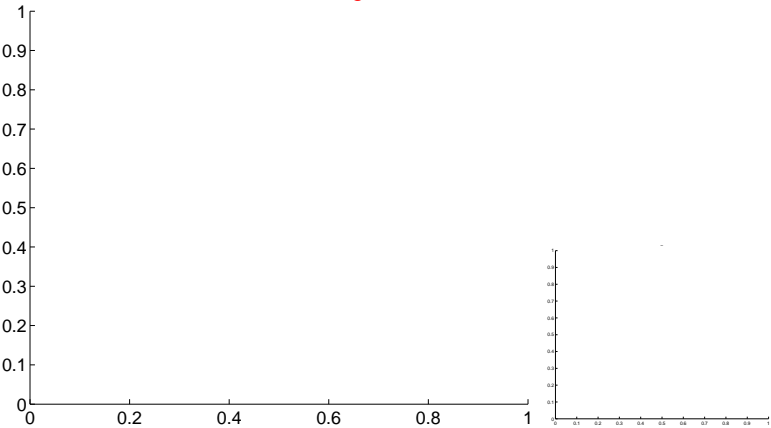
Q9 no OOT image



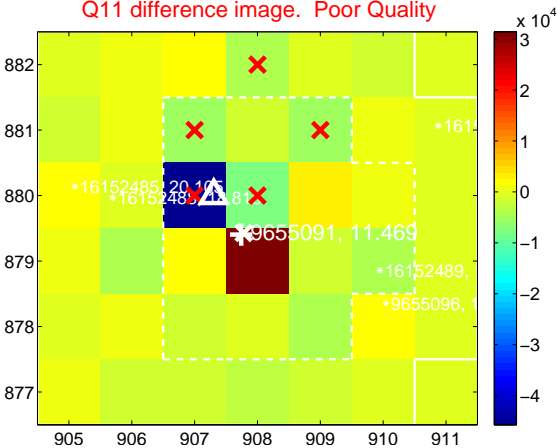
Q10 no difference image



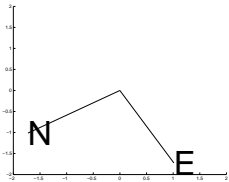
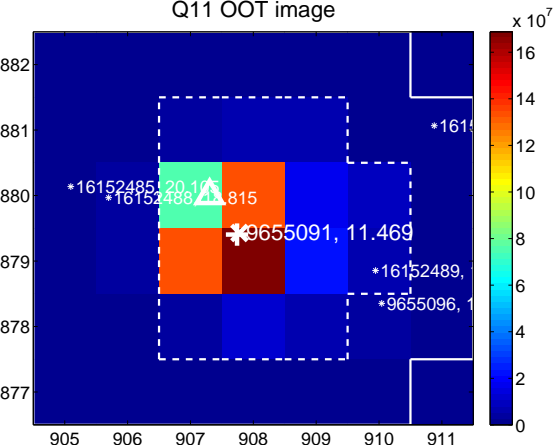
Q10 no OOT image



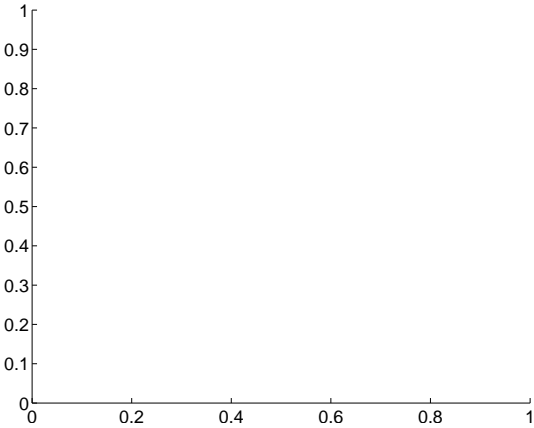
Q11 difference image. Poor Quality



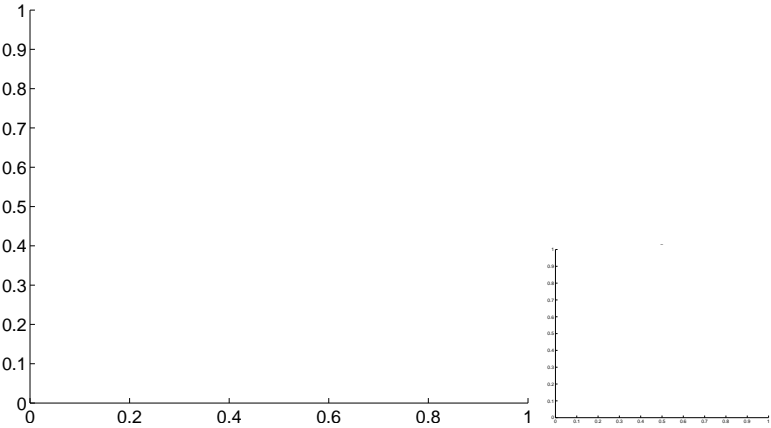
Q11 OOT image



Q12 no difference image



Q12 no OOT image



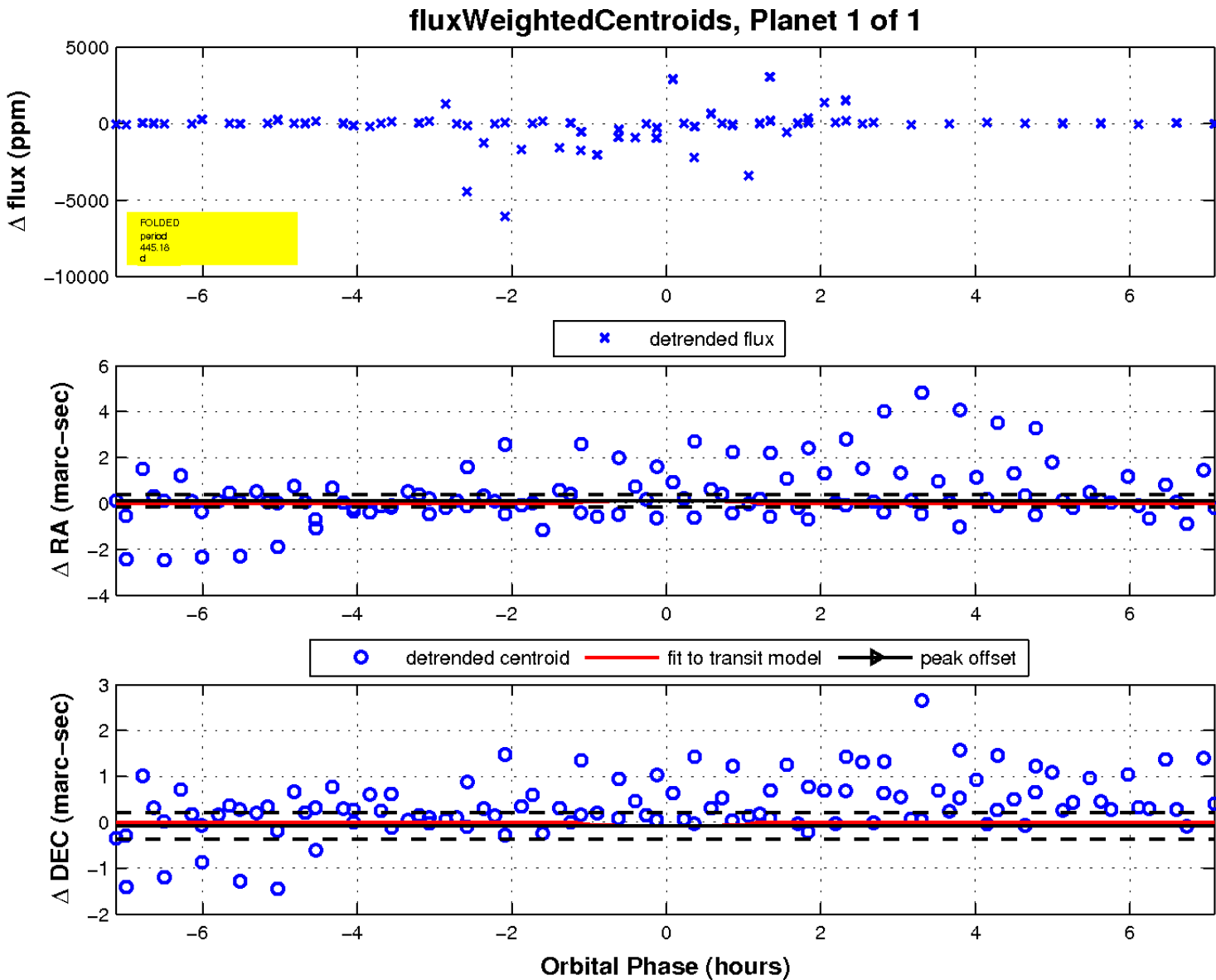
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Q17 no difference image

Q17 no OOT image



UKIRT Image

Declination

