

KIC 005860968

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})
005860968-01	OBS	4384.01	122.356704	134.343154	386.8	12.015	11.1	11.6	1.14	5998	2.91	6.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005860968-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

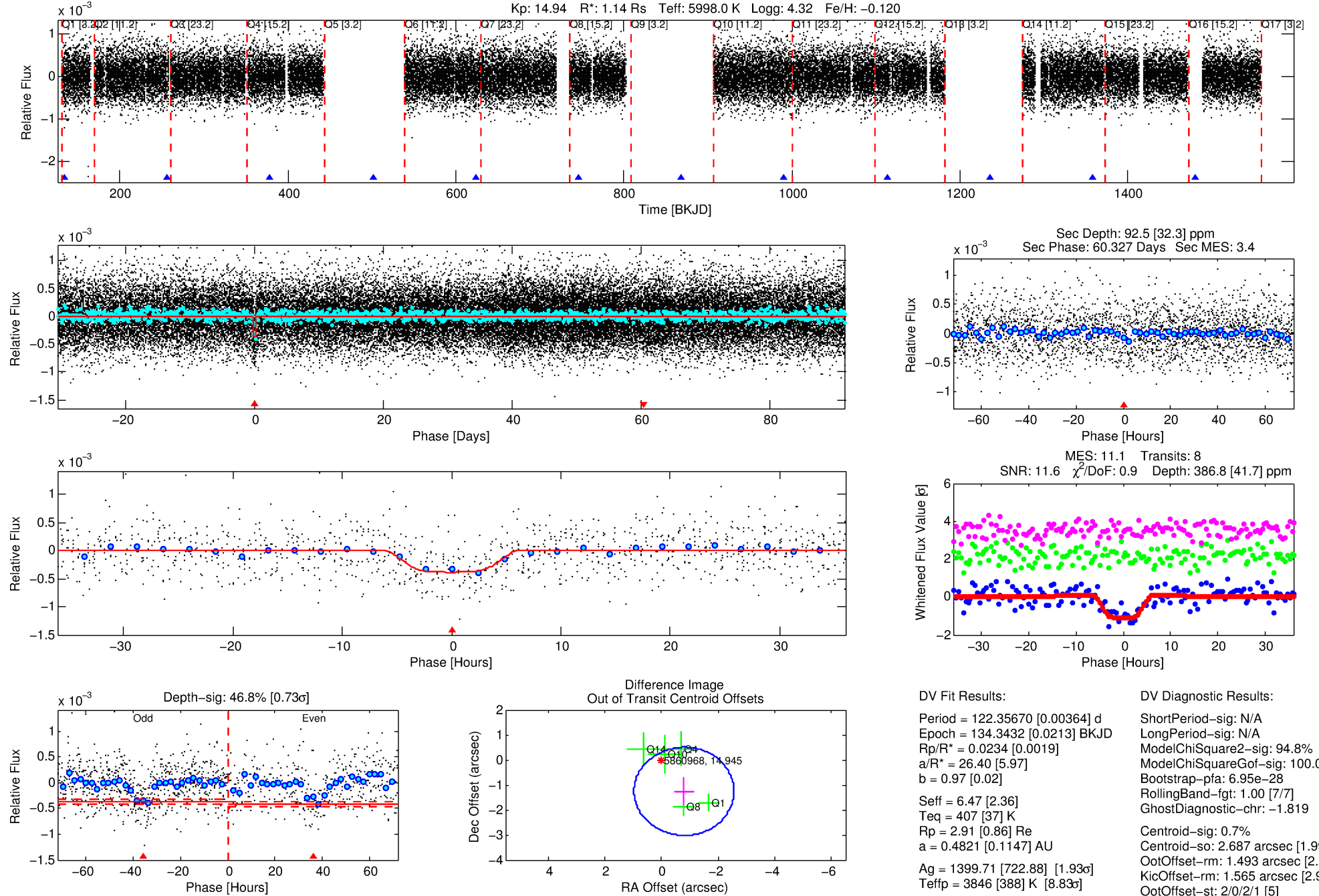
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005860968-01

No Significant Match Found

DV One-Page Summary

KIC: 5860968 Candidate: 1 of 1 Period: 122.357 d
KOI: K04384.01 Corr: 0.879



DV Fit Results:

Period = 122.35670 [0.00364] d
Epoch = 134.3432 [0.0213] BKJD
Rp/R* = 0.0234 [0.0019]
a/R* = 26.40 [5.97]
b = 0.97 [0.02]
Seff = 6.47 [2.36]
Teq = 407 [37] K
Rp = 2.91 [0.86] Re
a = 0.4821 [0.1147] AU
Ag = 1399.71 [722.88] [1.93σ]
Teffp = 3846 [388] K [8.83σ]

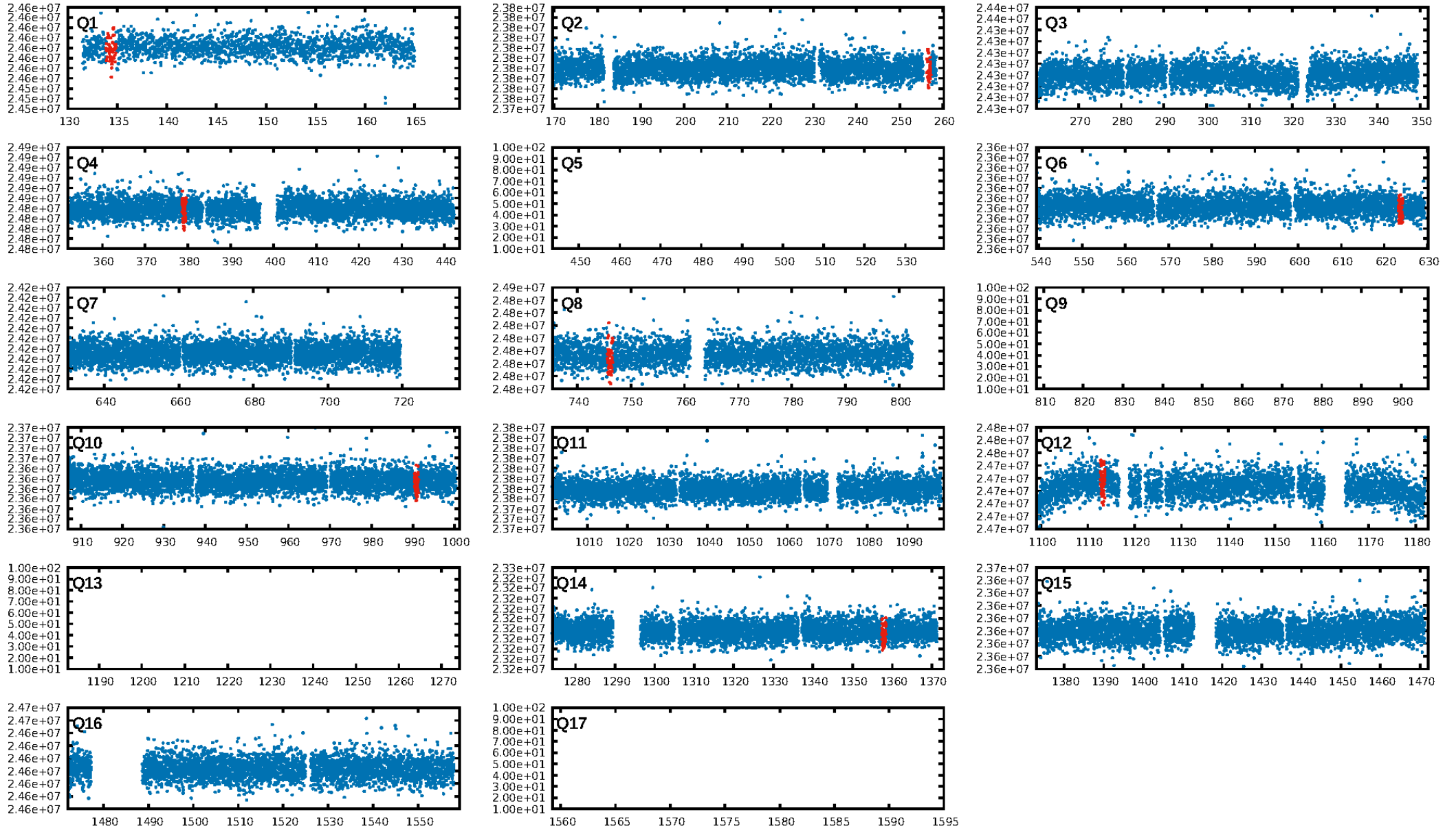
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 94.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.95e-28
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -1.819
Centroid-sig: 0.7%
Centroid-so: 2.687 arcsec [1.99σ]
OotOffset-rm: 1.493 arcsec [2.54σ]
KicOffset-rm: 1.565 arcsec [2.96σ]
OotOffset-st: 2/0/2/1 [5]
KicOffset-st: 2/0/2/1 [5]
DiffImageQuality-fgm: 1.00 [5/5]
DiffImageOverlap-fno: 1.00 [6/6]

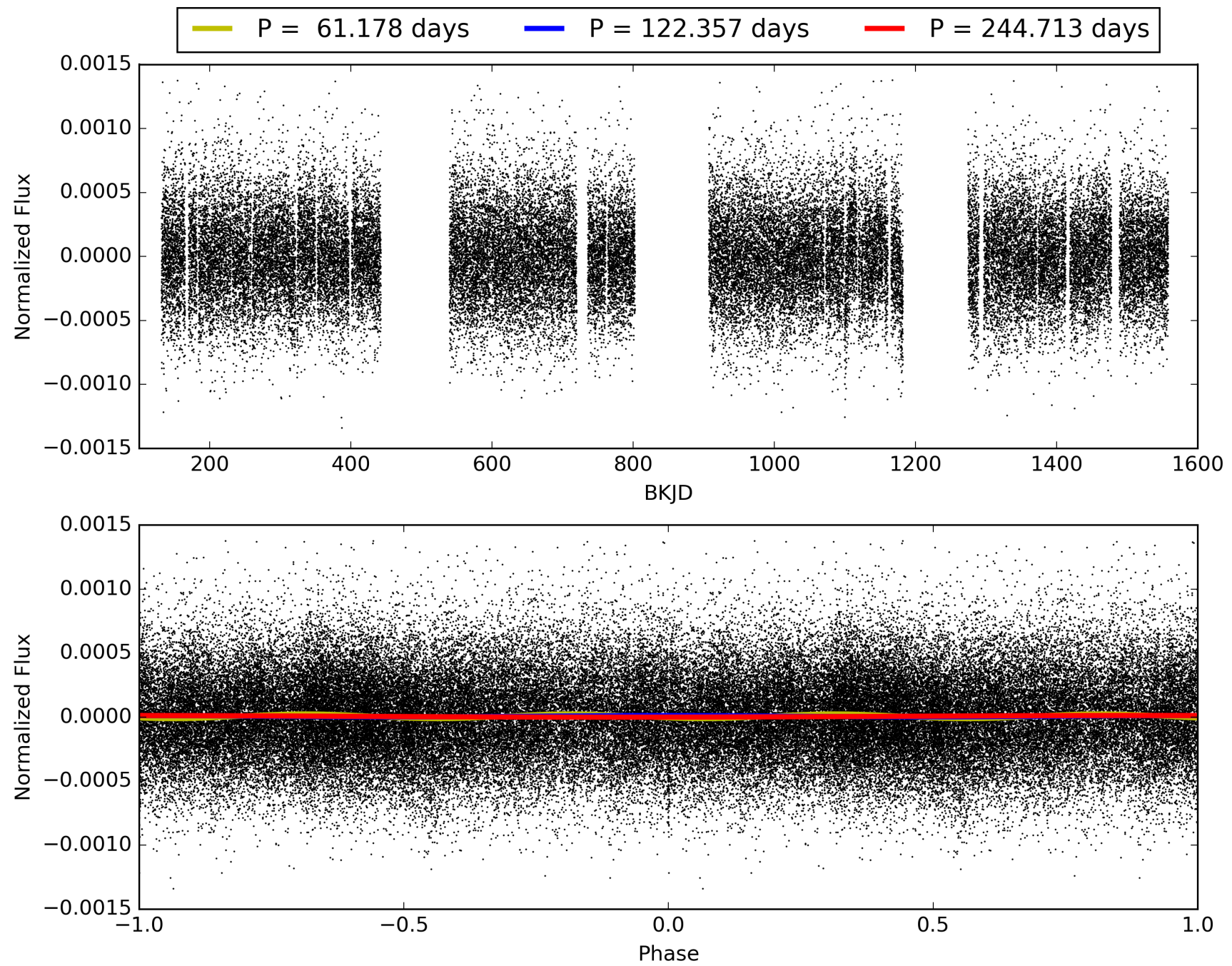
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:25:48 Z

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

TCE 005860968-01, PDC Light Curves

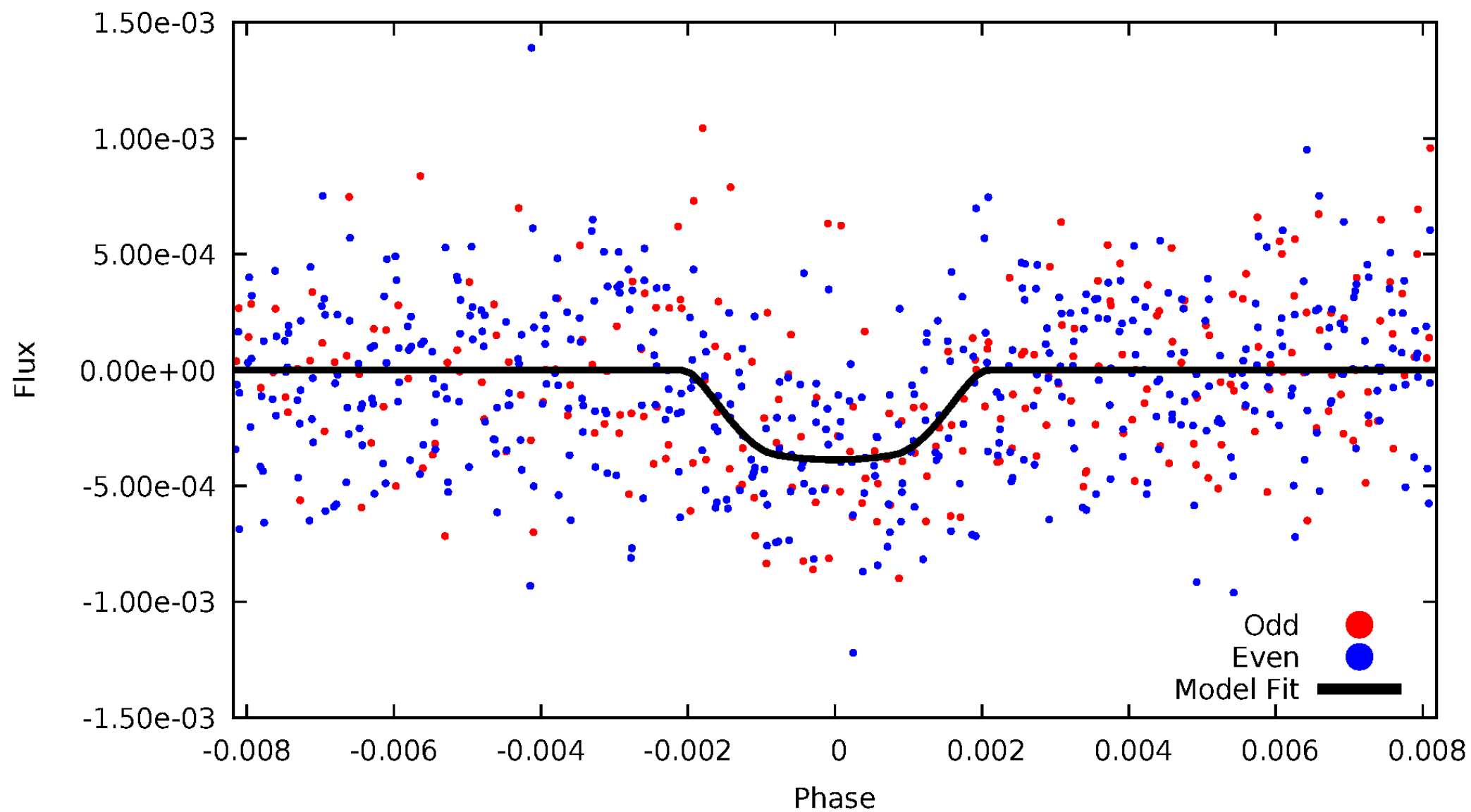


TCE 005860968-01



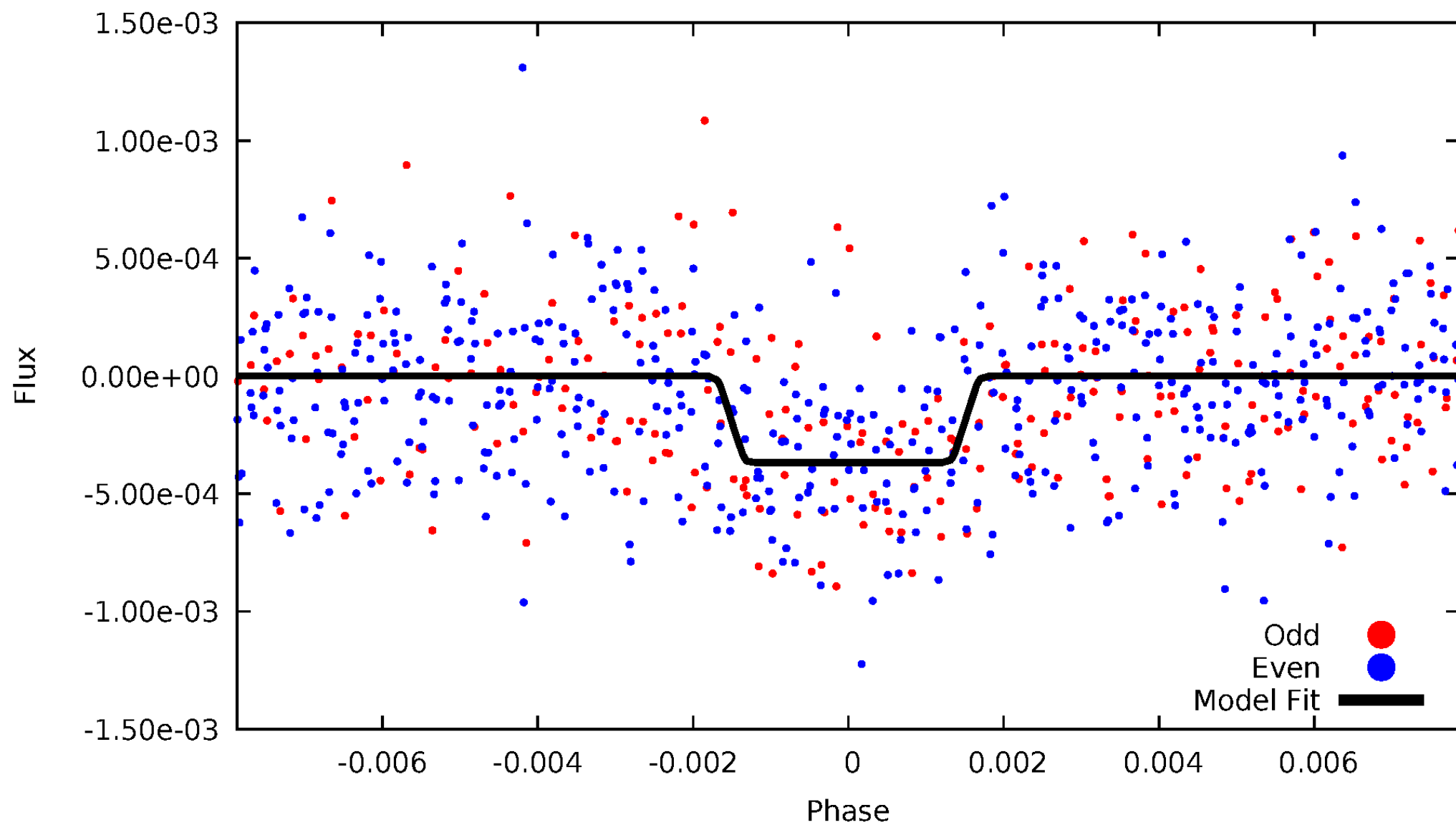
DV Odd/Even

TCE 005860968-01



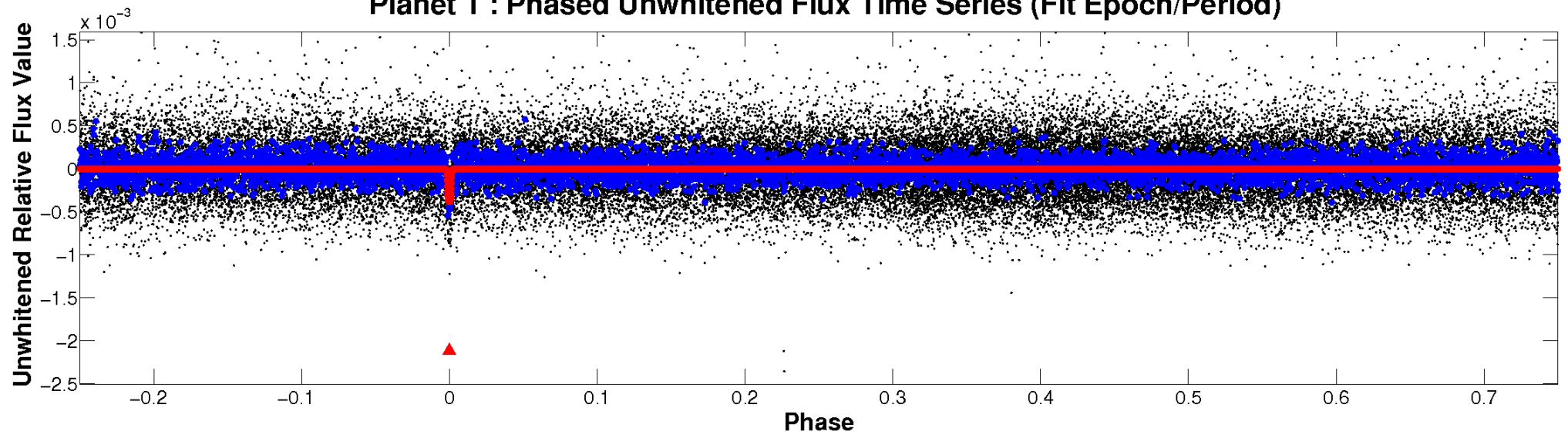
ALT Odd/Even

TCE 005860968-01

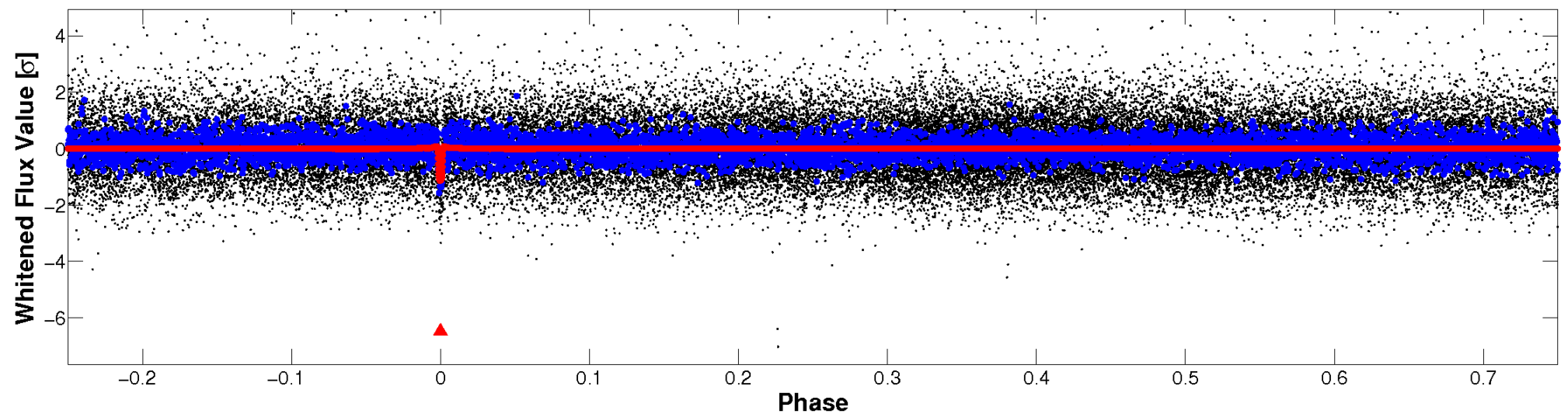


Non-Whitened Vs. Whitened Light Curve

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

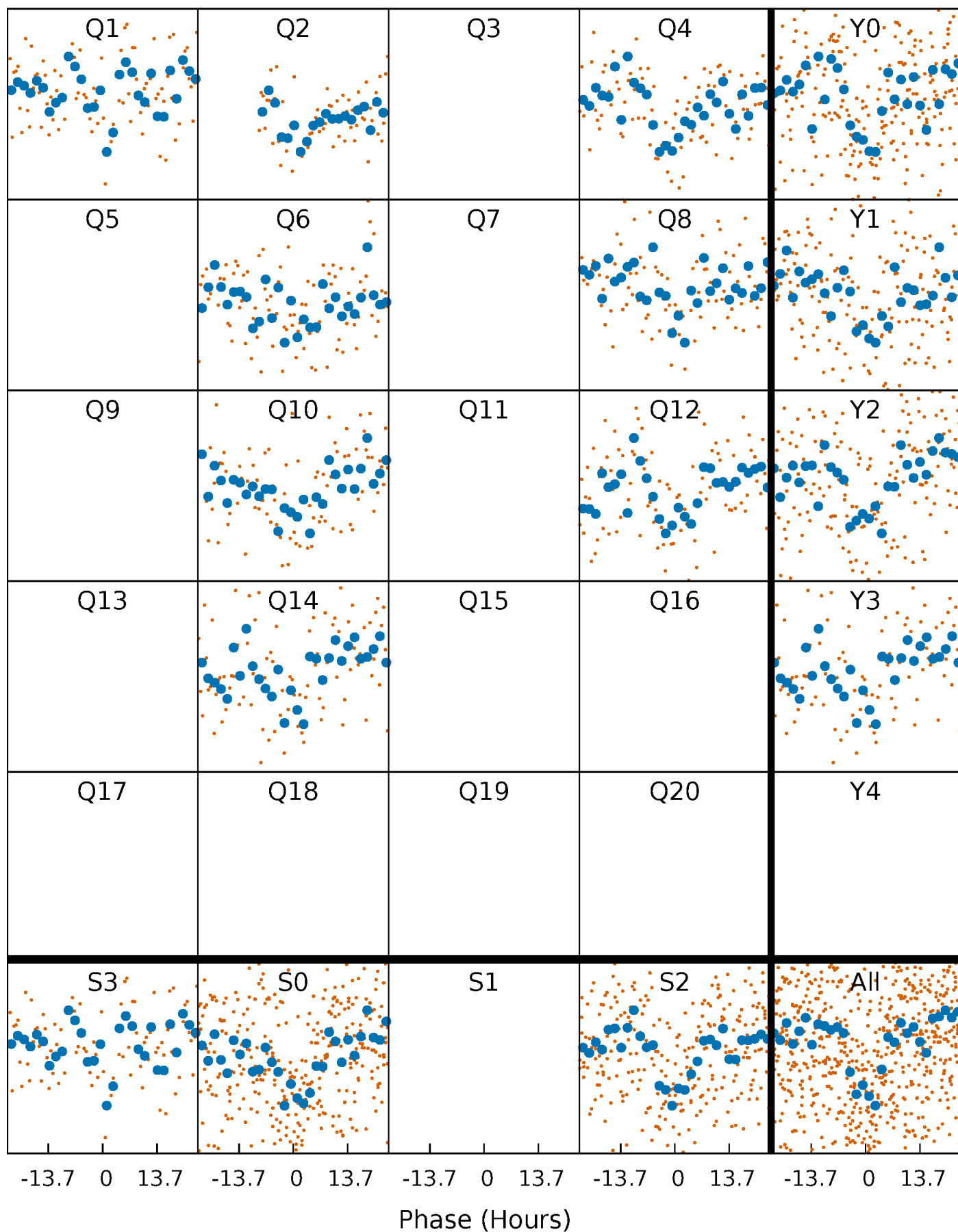


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 005860968-01 P=122.356704 Days $T_0=134.343154$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 005860968-01 P=122.356704 Days $T_0=134.343154$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

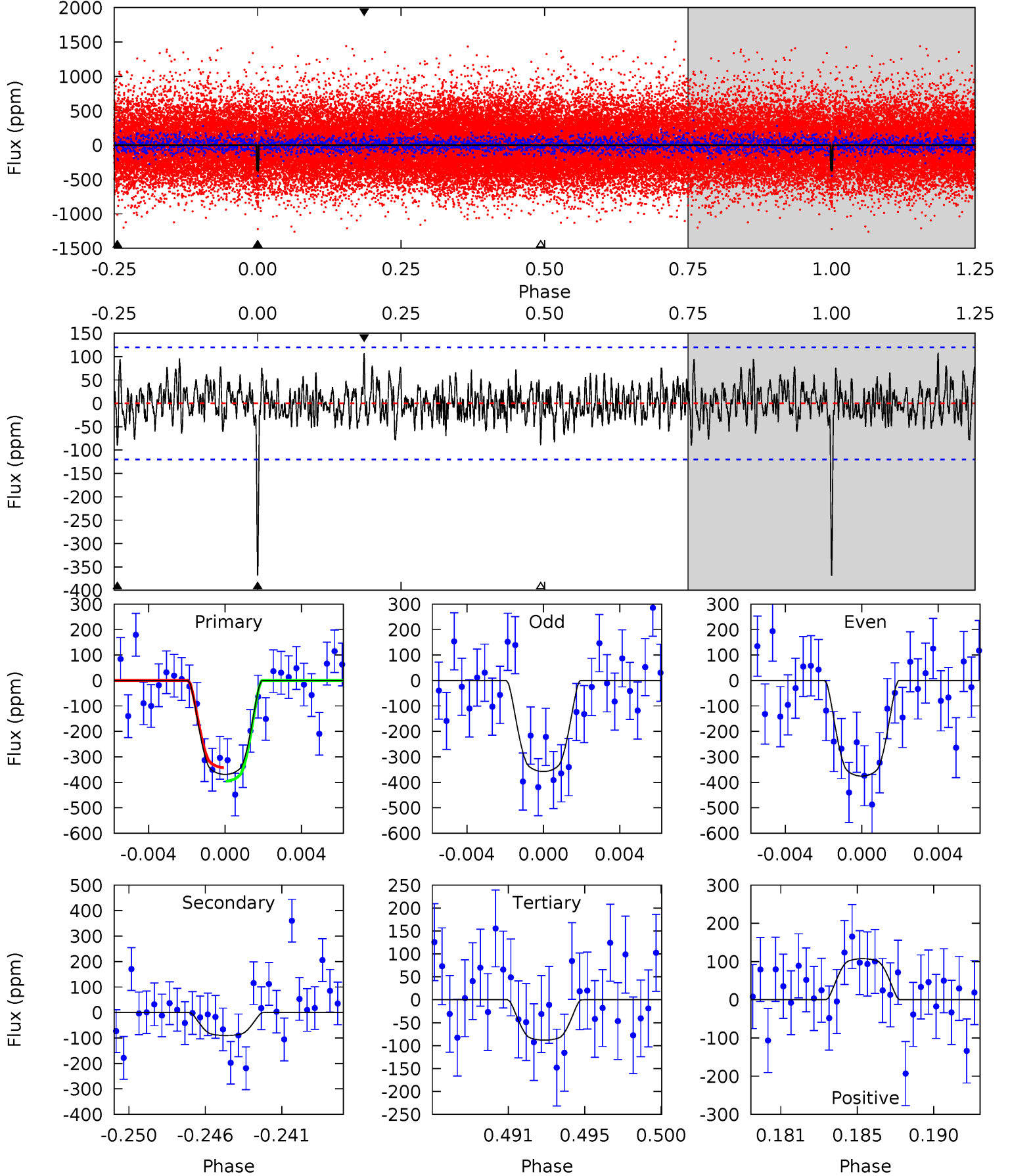
TCE 005860968-01 P=122.356157 Days $T_0=134.352310$ (BKJD)



DV Model-Shift Uniqueness Test

005860968-01, P = 122.356704 Days, E = 11.986450 Days

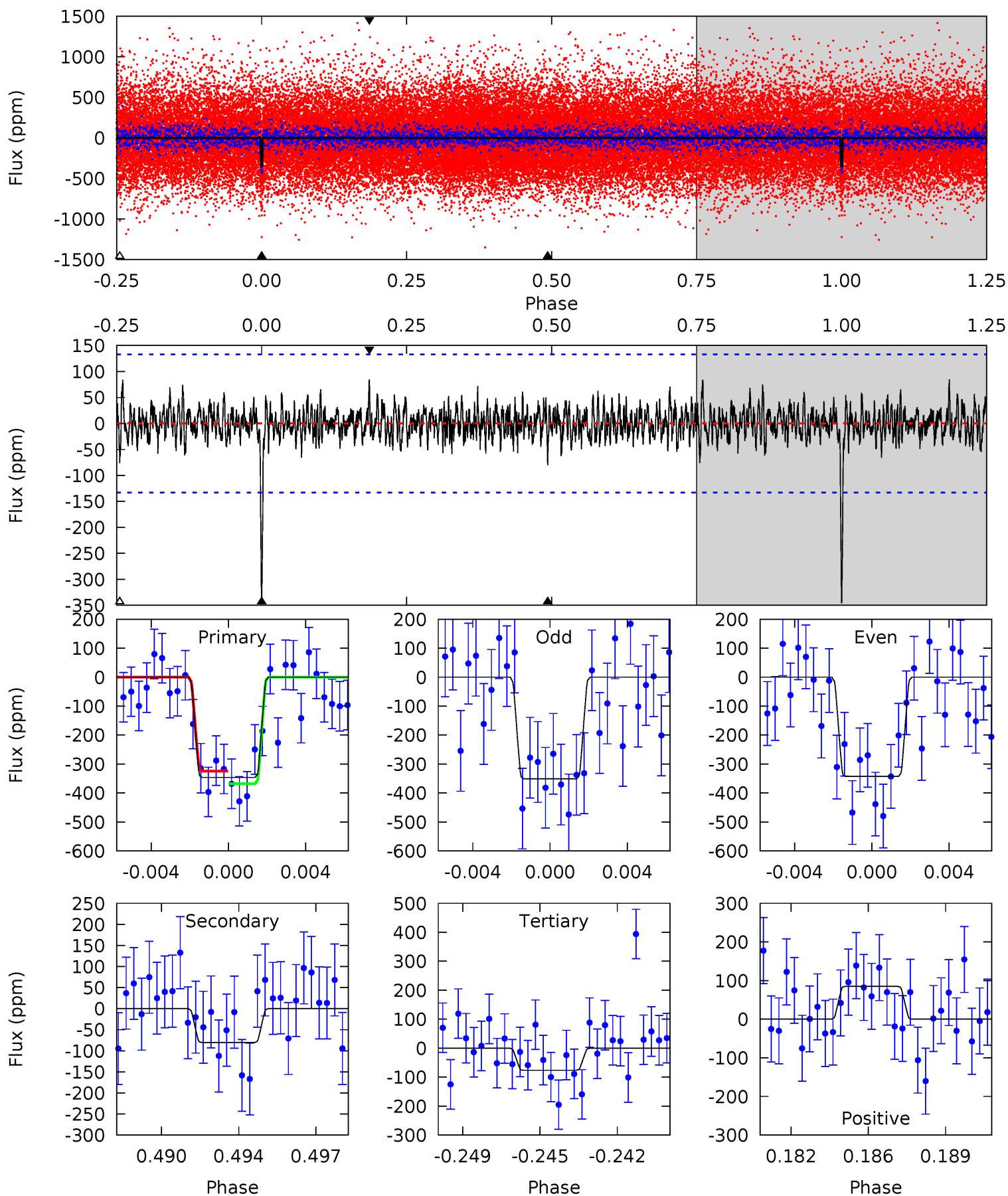
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	3.90	3.81	4.65	5.19	2.85	1.26	12.1	11.3	0.09	-0.75	0.38	0.96	0.23	1.15



Alt Model-Shift Uniqueness Test

005860968-01, $P = 122.356157$ Days, $E = 11.996153$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	3.15	2.99	3.33	5.22	2.92	0.91	10.6	10.3	0.16	-0.18	0.15	0.96	0.20	0.86



Stellar Parameters For KIC 005860968

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5998^{+180}_{-180}	$4.324^{+0.153}_{-0.187}$	$-0.120^{+0.300}_{-0.300}$	$1.139^{+0.324}_{-0.216}$	$0.998^{+0.155}_{-0.116}$	$0.952^{+0.716}_{-0.473}$
	+3%/-3%	+4%/-4%	+250%/-250%	+28%/-19%	+16%/-12%	+75%/-50%
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 005860968-01 / KOI 4384.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-90 ± 23	$2.94^{+0.51}_{-0.47}$	572^{+43}_{-36}	4111^{+255}_{-246}	1303^{+662}_{-435}
Alt.	-80 ± 25	$2.40^{+0.42}_{-0.35}$	571^{+44}_{-38}	4318^{+328}_{-320}	1765^{+906}_{-691}

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 $A_{obs} \gg 1.0$

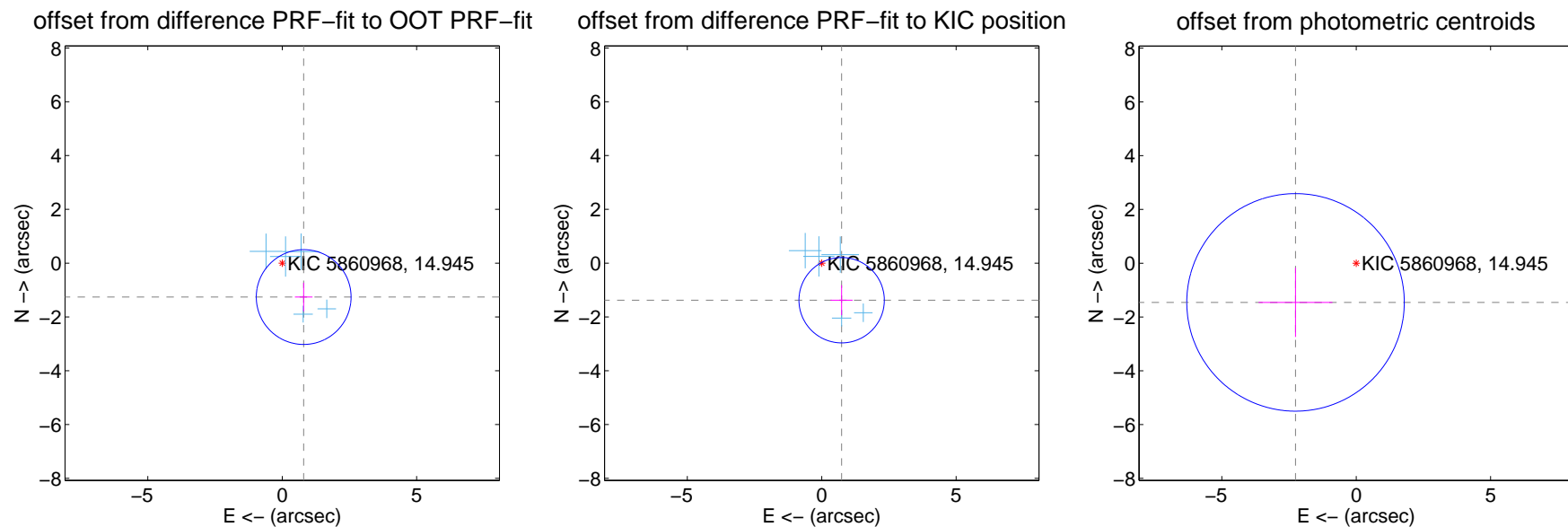
DV Centroid Data

Supplemental centroid analysis for 005860968-01. Kepler magnitude: 14.95. Transit SNR 11.61

There are 5 quarters with good PRF difference image offsets

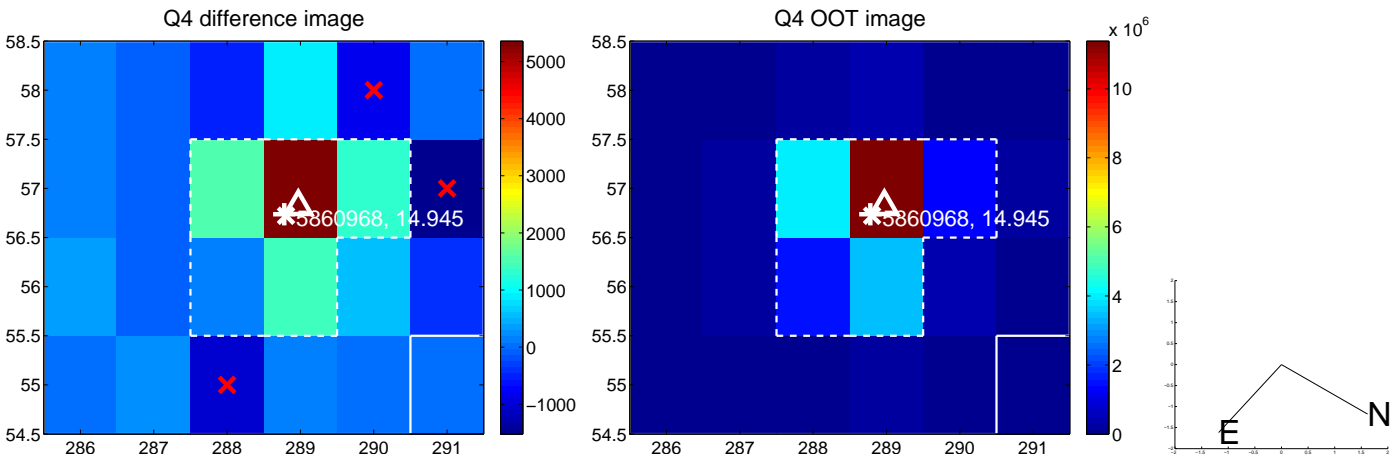
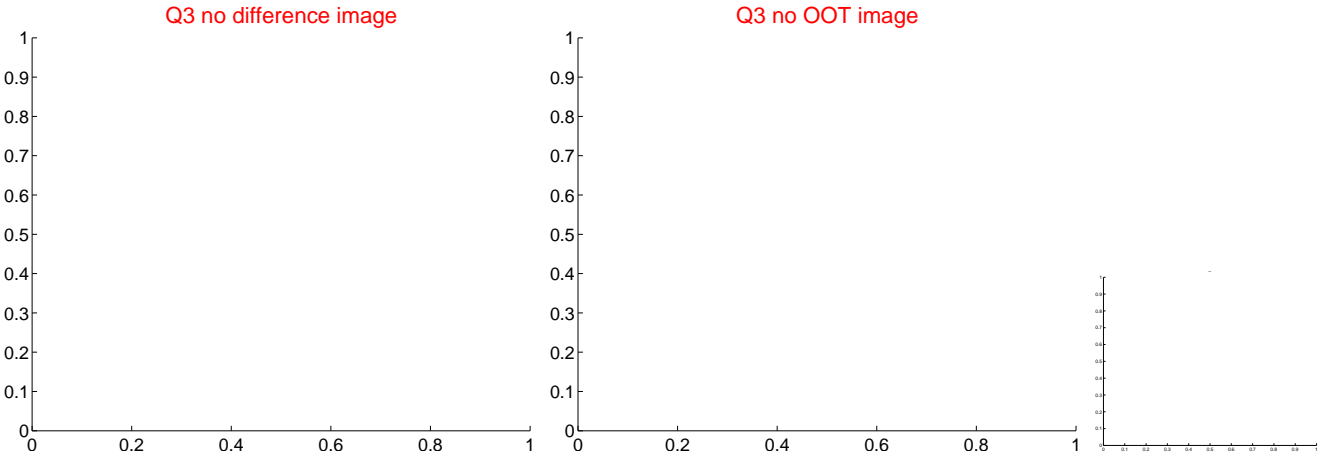
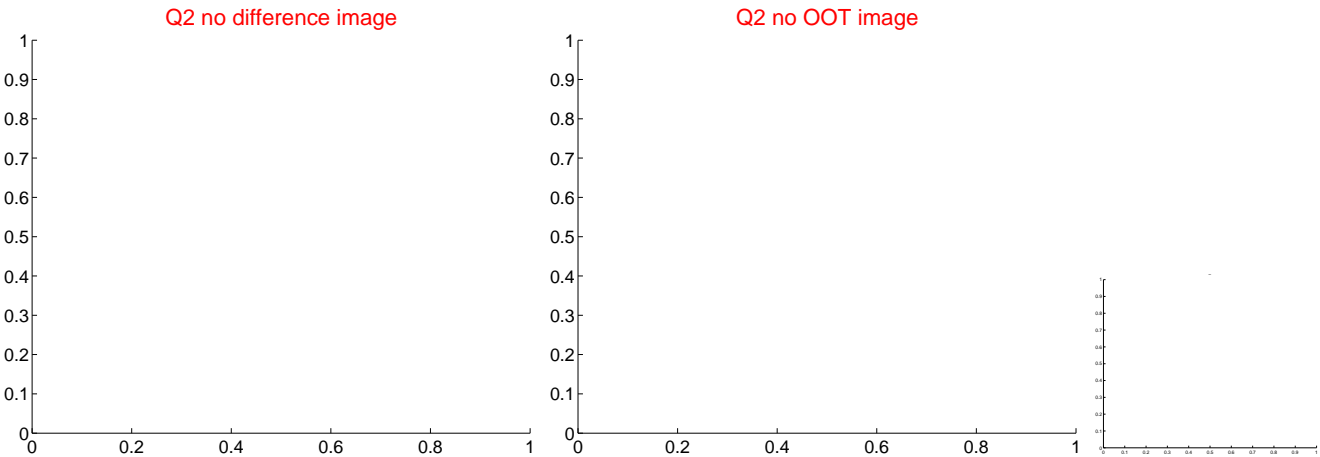
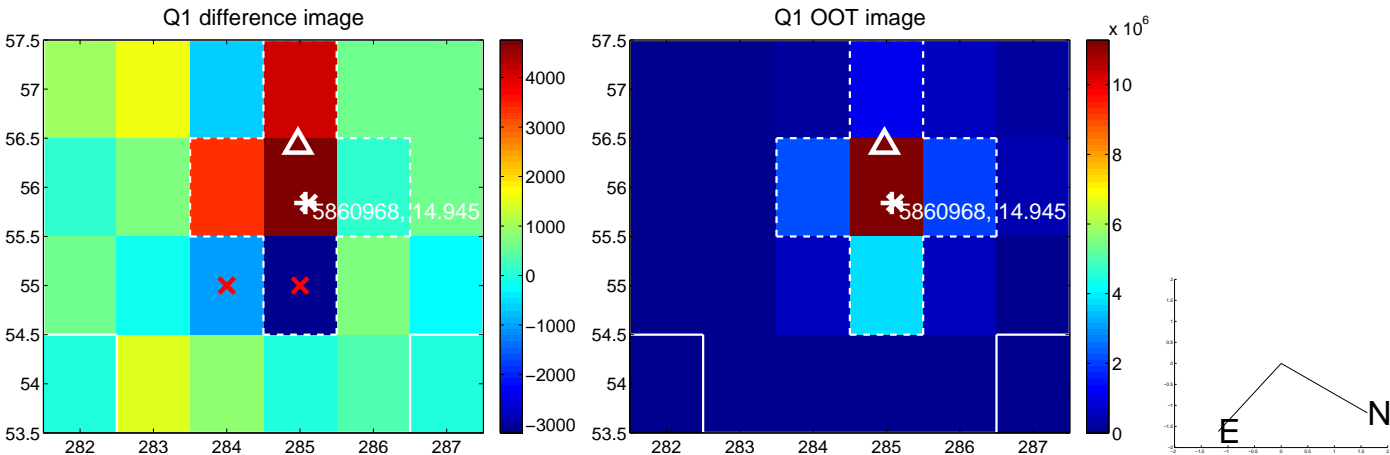
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.493 ± 0.588	2.54	-0.798 ± 0.328	-1.261 ± 0.532
PRF-fit source offset from KIC position	1.565 ± 0.529	2.96	-0.741 ± 0.409	-1.379 ± 0.559
photometric centroid source offset	2.69 ± 1.35	1.99	2.26 ± 1.37	-1.46 ± 1.29



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.

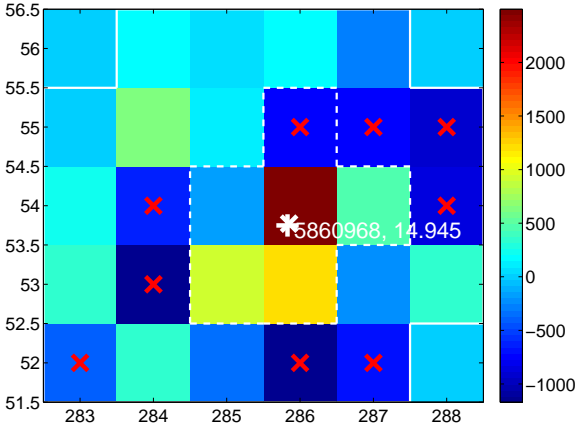
Q5 no difference image



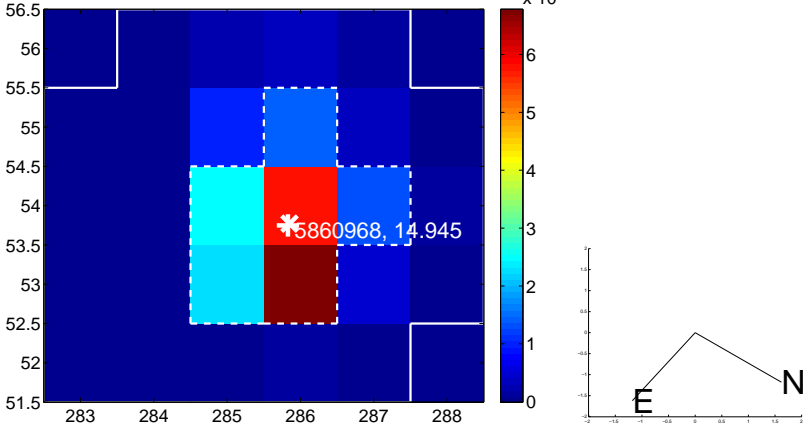
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



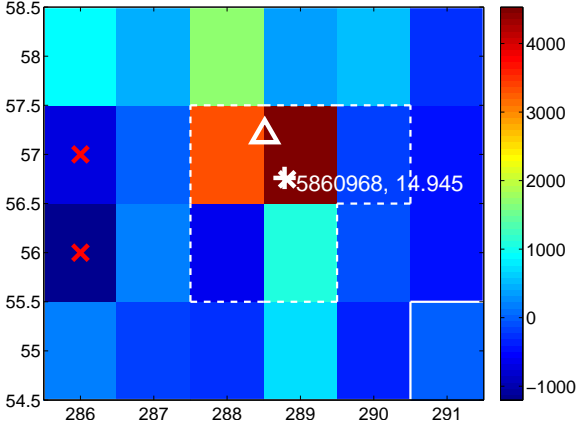
Q7 no difference image



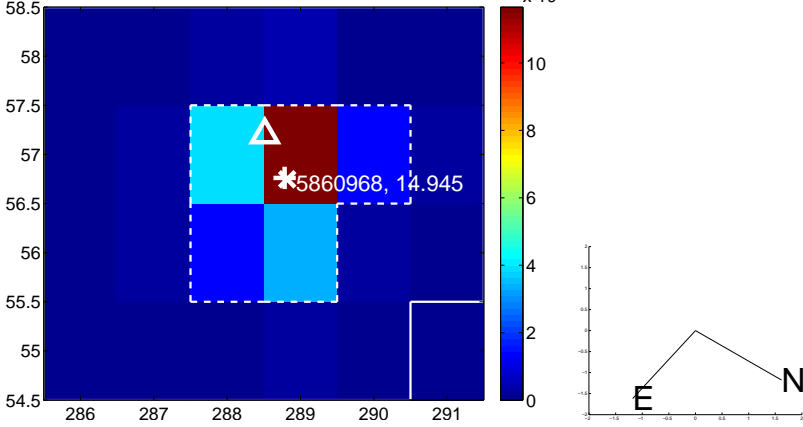
Q7 no OOT image



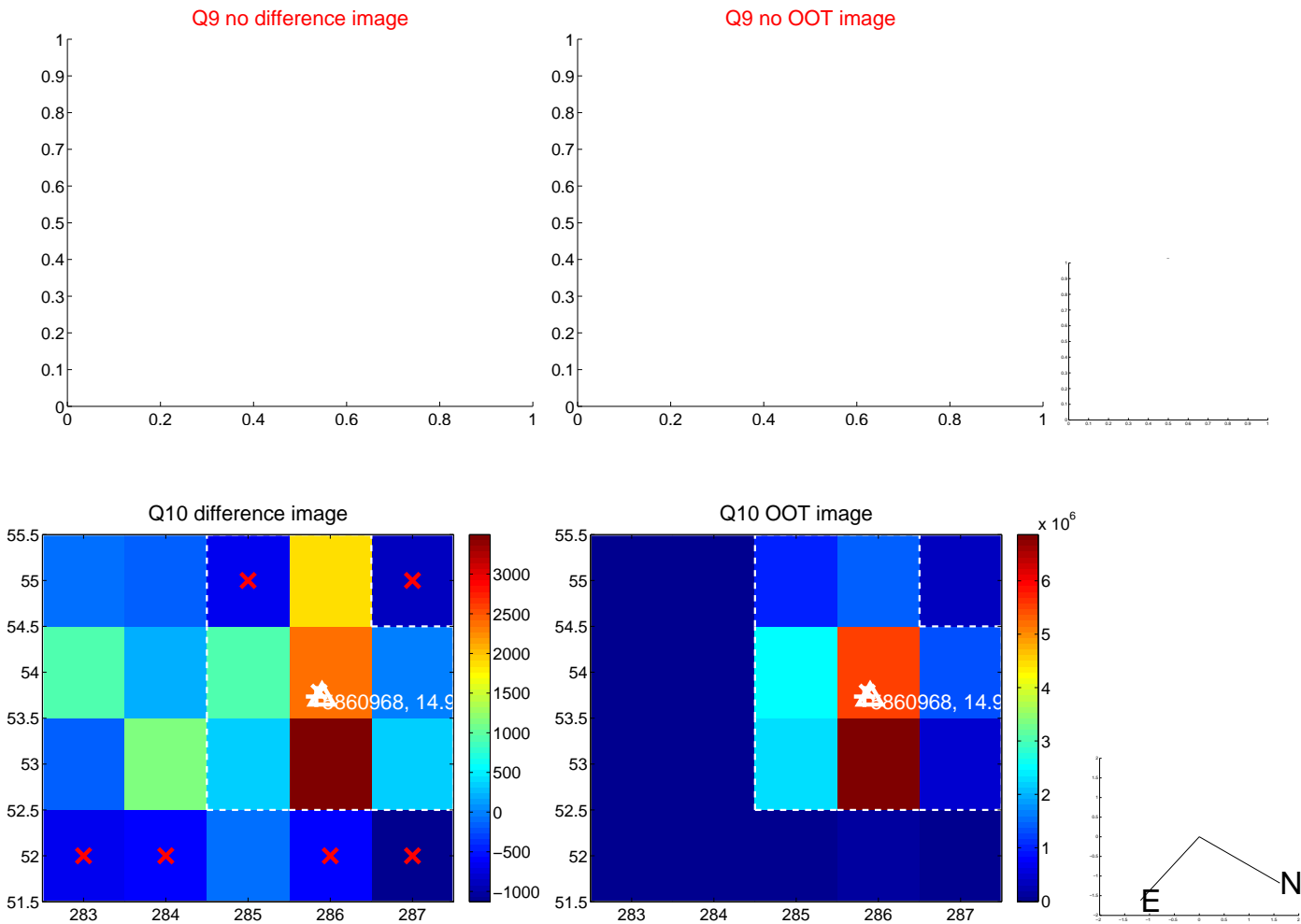
Q8 difference image



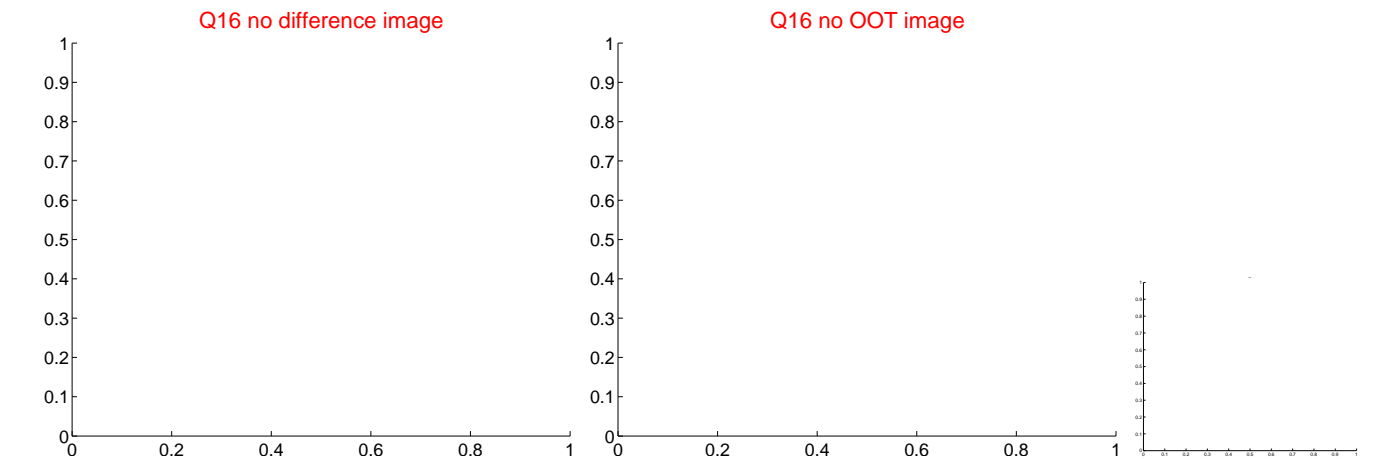
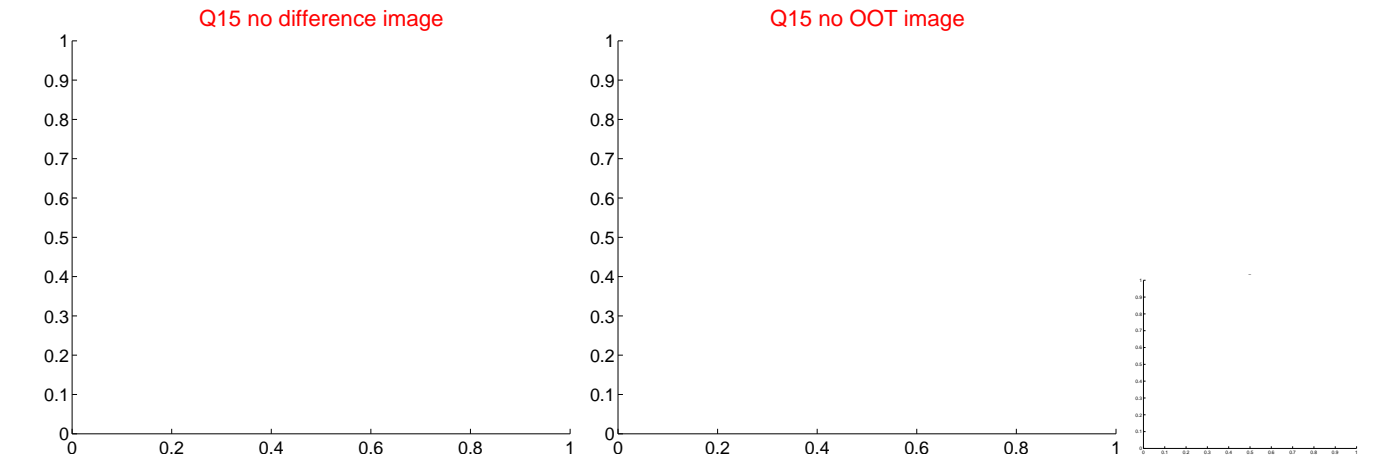
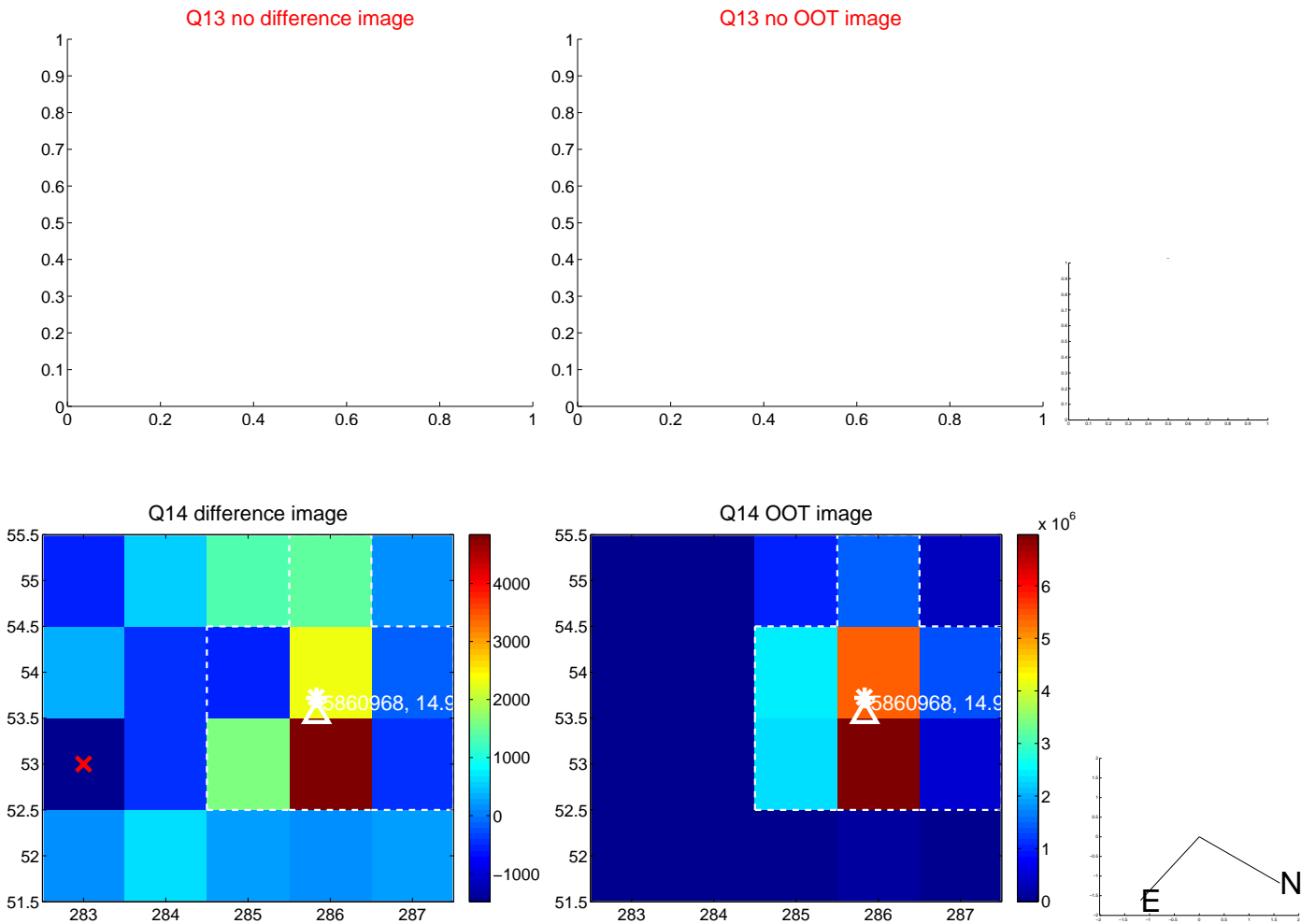
Q8 OOT image



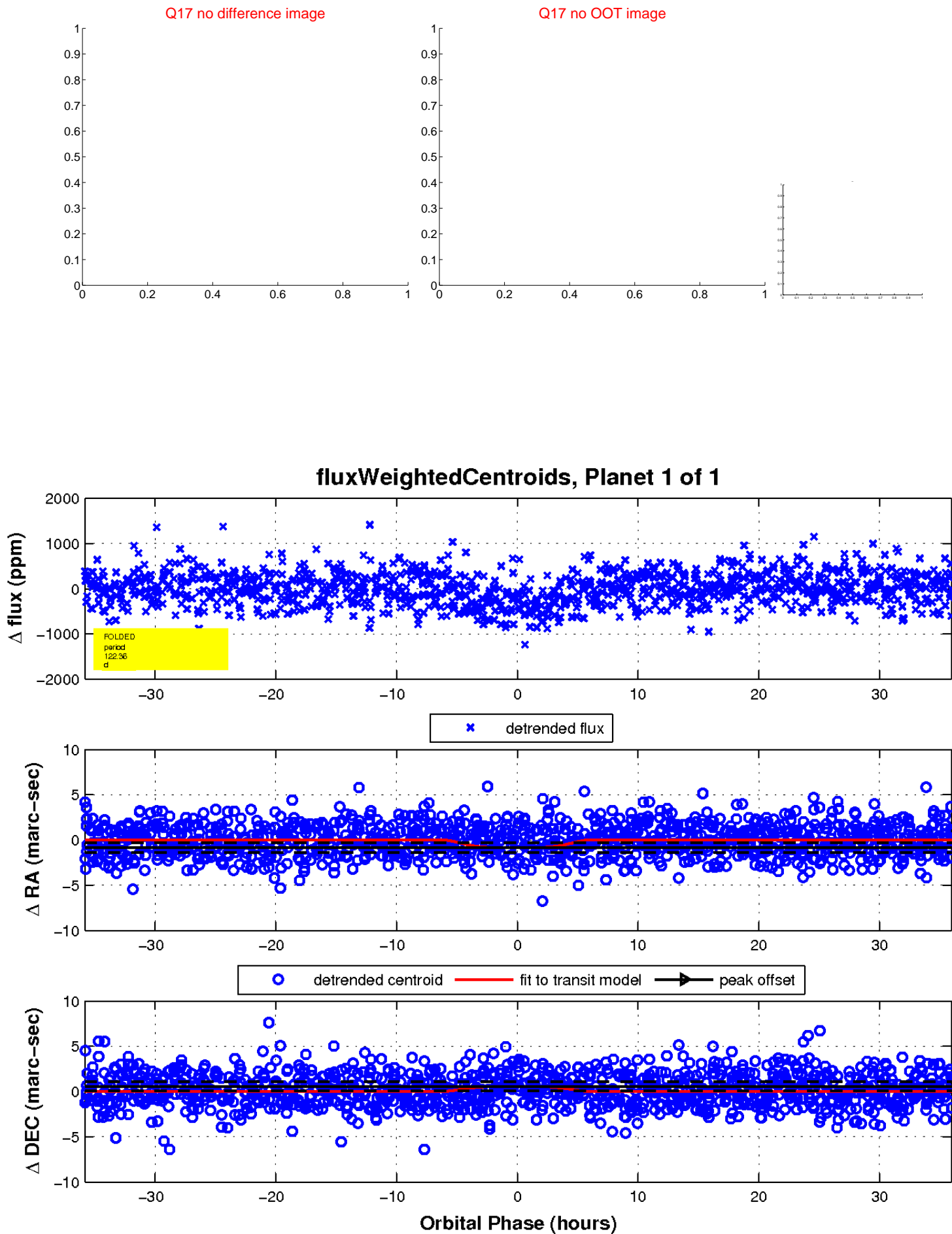
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

