

KIC 010023069

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})
010023069-01	OBS	8192.01	266.980989	240.830843	410.6	8.428	7.8	8.0	3.41	6619	7.41	21.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010023069-01	OBS	FP	0.20	1	0	0	0	ALL_TRANS_CHASES

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

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

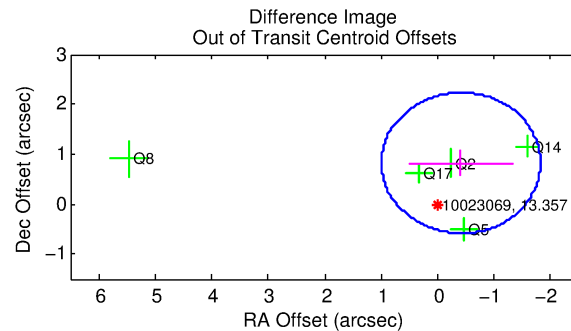
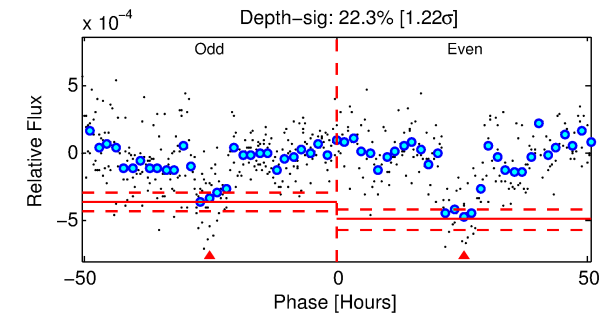
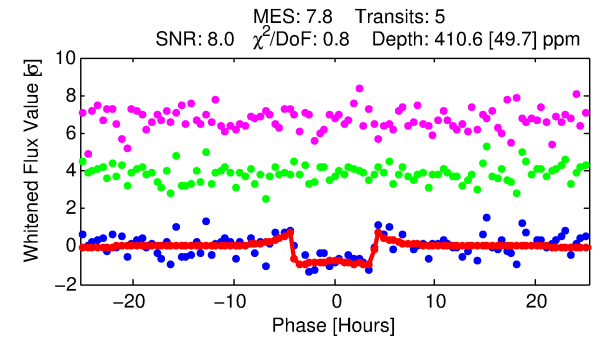
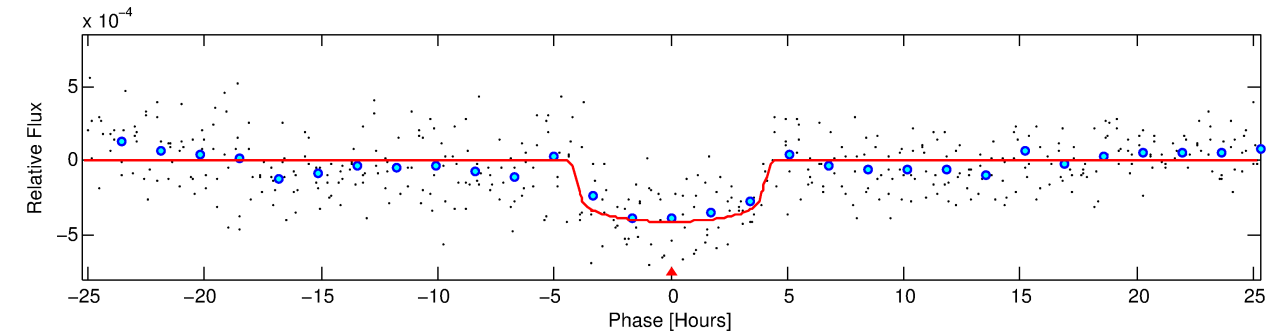
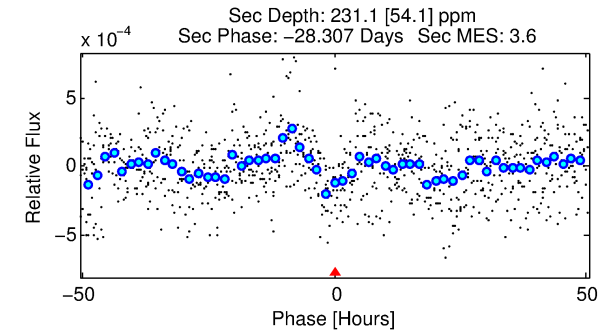
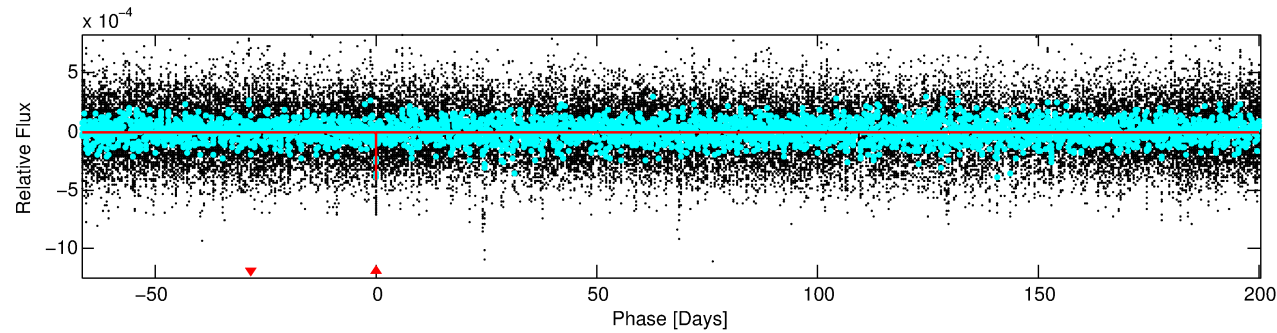
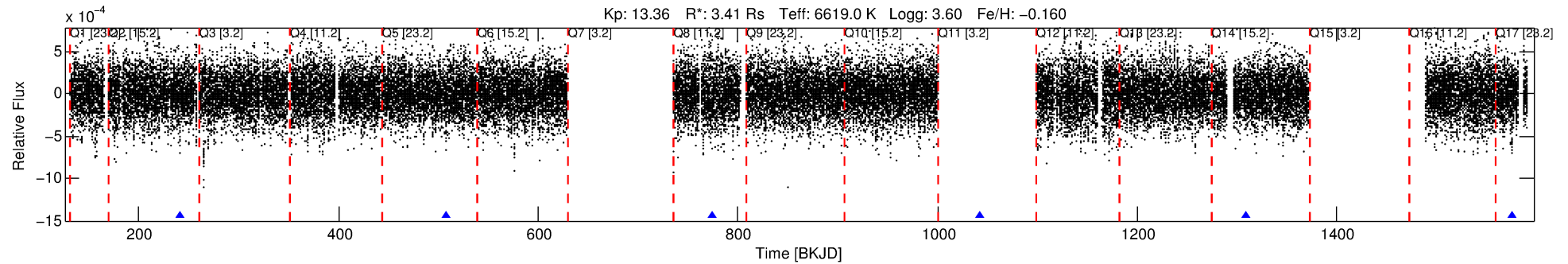
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010023069-01

No Significant Match Found

DV One-Page Summary

KIC: 10023069 Candidate: 1 of 1 Period: 266.981 d



DV Fit Results:

Period = 266.98099 [0.00194] d
Epoch = 240.8308 [0.0064] BKJD
Rp/R* = 0.0199 [0.0050]
a/R* = 178.44 [238.87]
b = 0.70 [0.96]
Seff = 21.57 [11.44]
Teq = 550 [73] K
Rp = 7.41 [3.30] Re
a = 0.9628 [0.3219] AU
Ag = 2148.45 [1629.57] [1.32σ]
Teffp = 5785 [822] K [6.34σ]

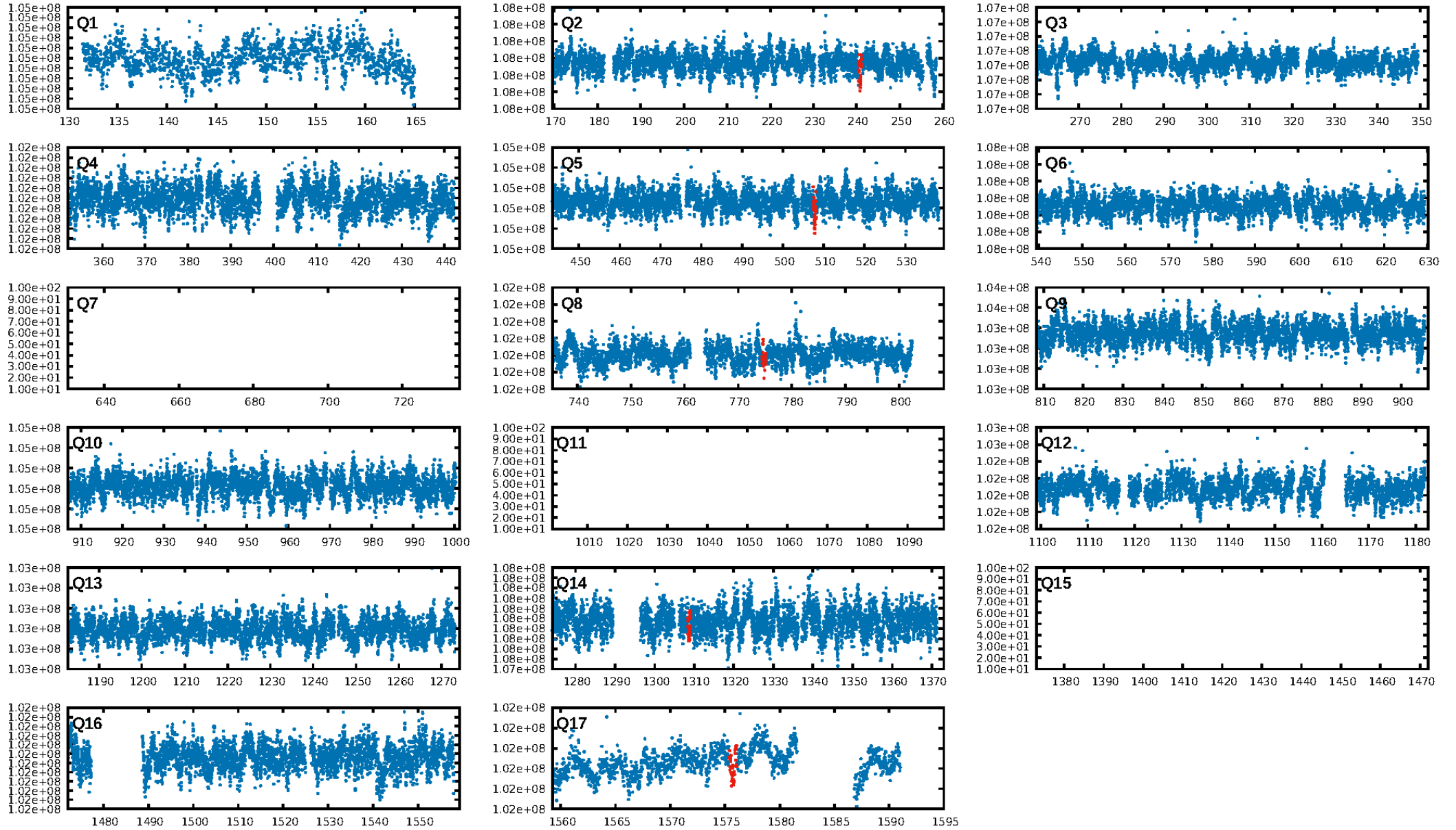
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 31.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.49e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 6.416
Centroid-sig: 1.2%
Centroid-so: 0.716 arcsec [1.25σ]
OotOffset-rm: 0.920 arcsec [1.96σ]
OotOffset-st: 2/0/1/2 [5]
KicOffset-rm: 0.848 arcsec [1.59σ]
KicOffset-st: 2/0/1/2 [5]
DiffImageQuality-fgm: 0.80 [4/5]
DiffImageOverlap-fno: 1.00 [5/5]

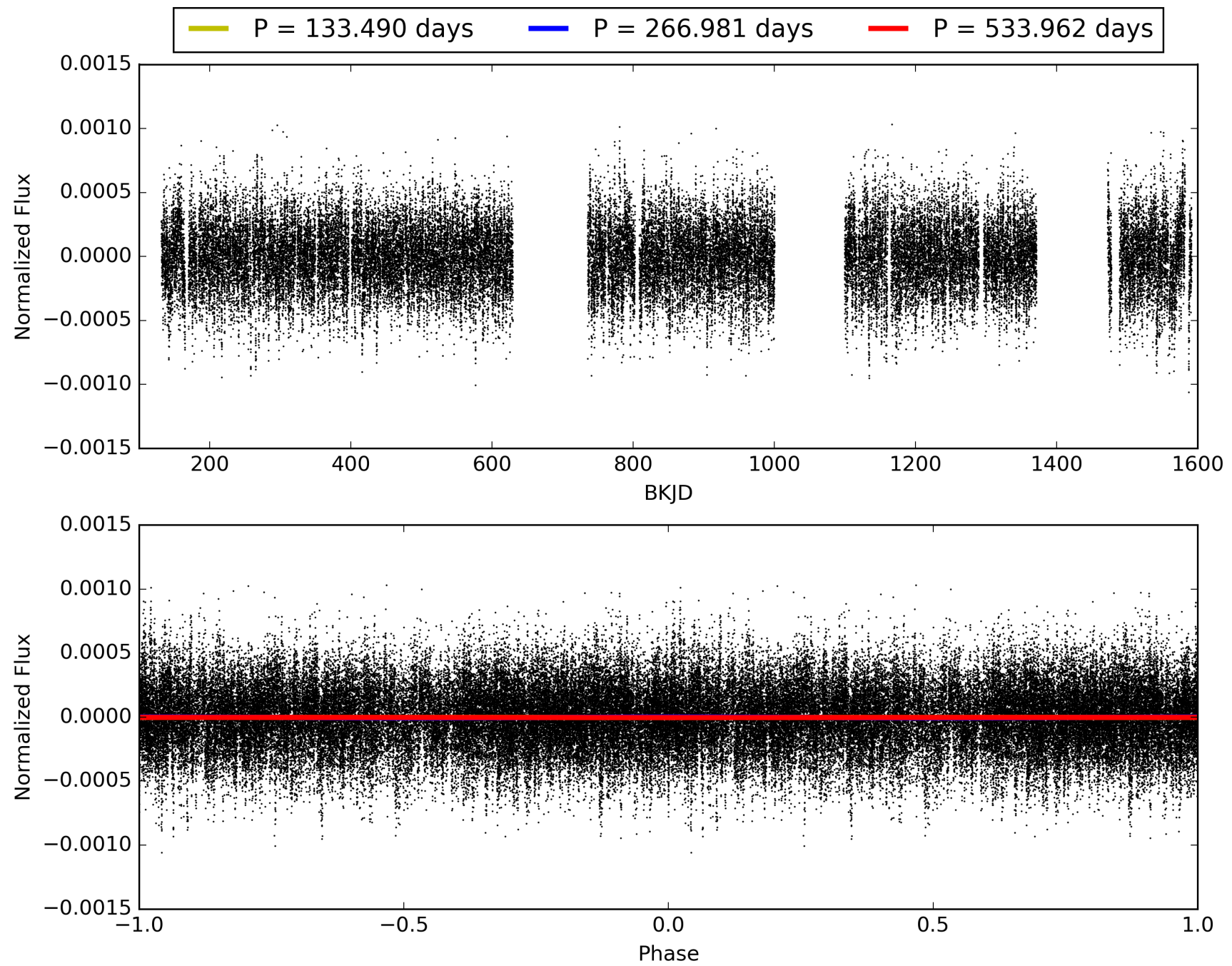
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:25:15 Z

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

TCE 010023069-01, PDC Light Curves

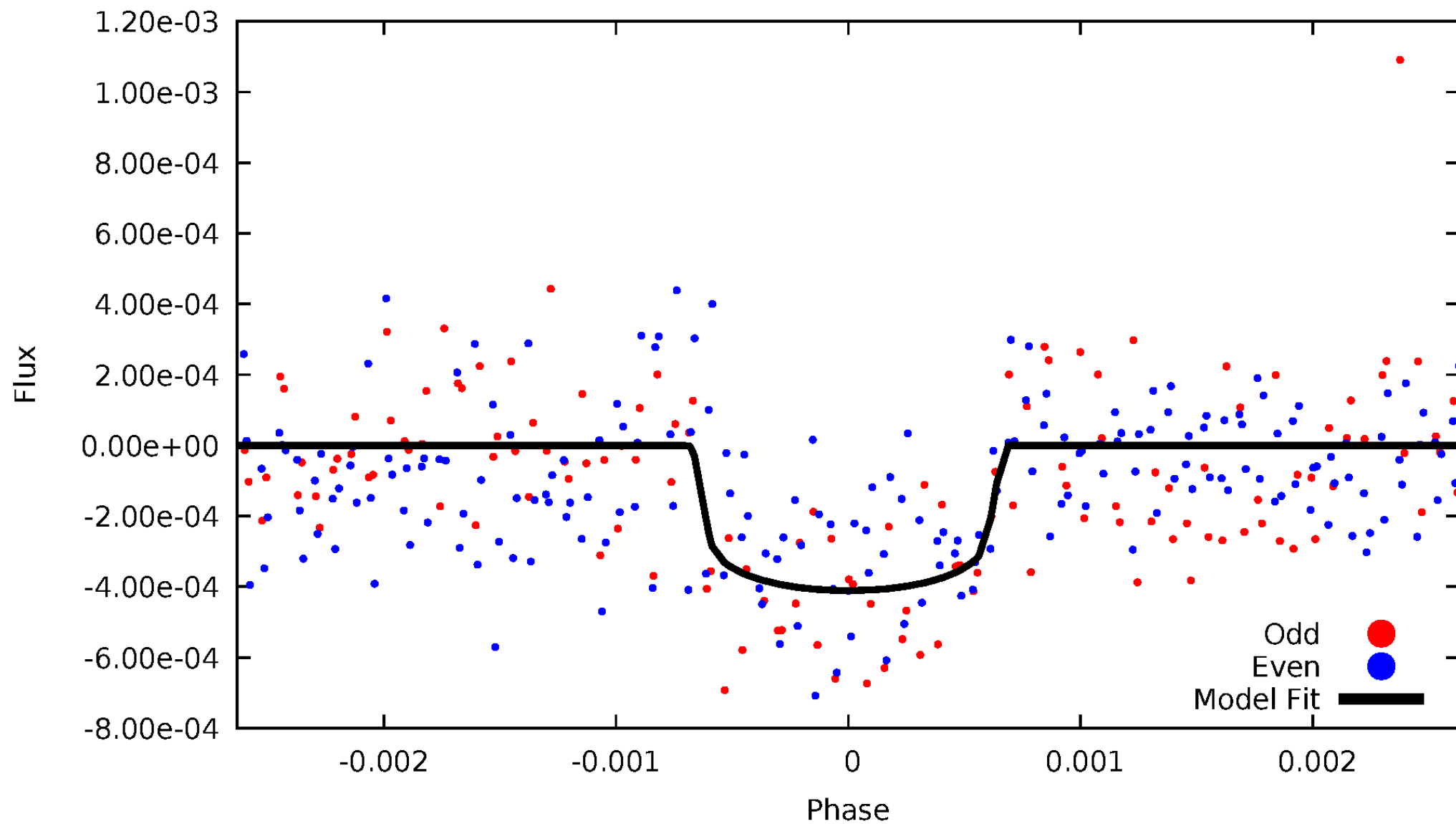


TCE 010023069-01



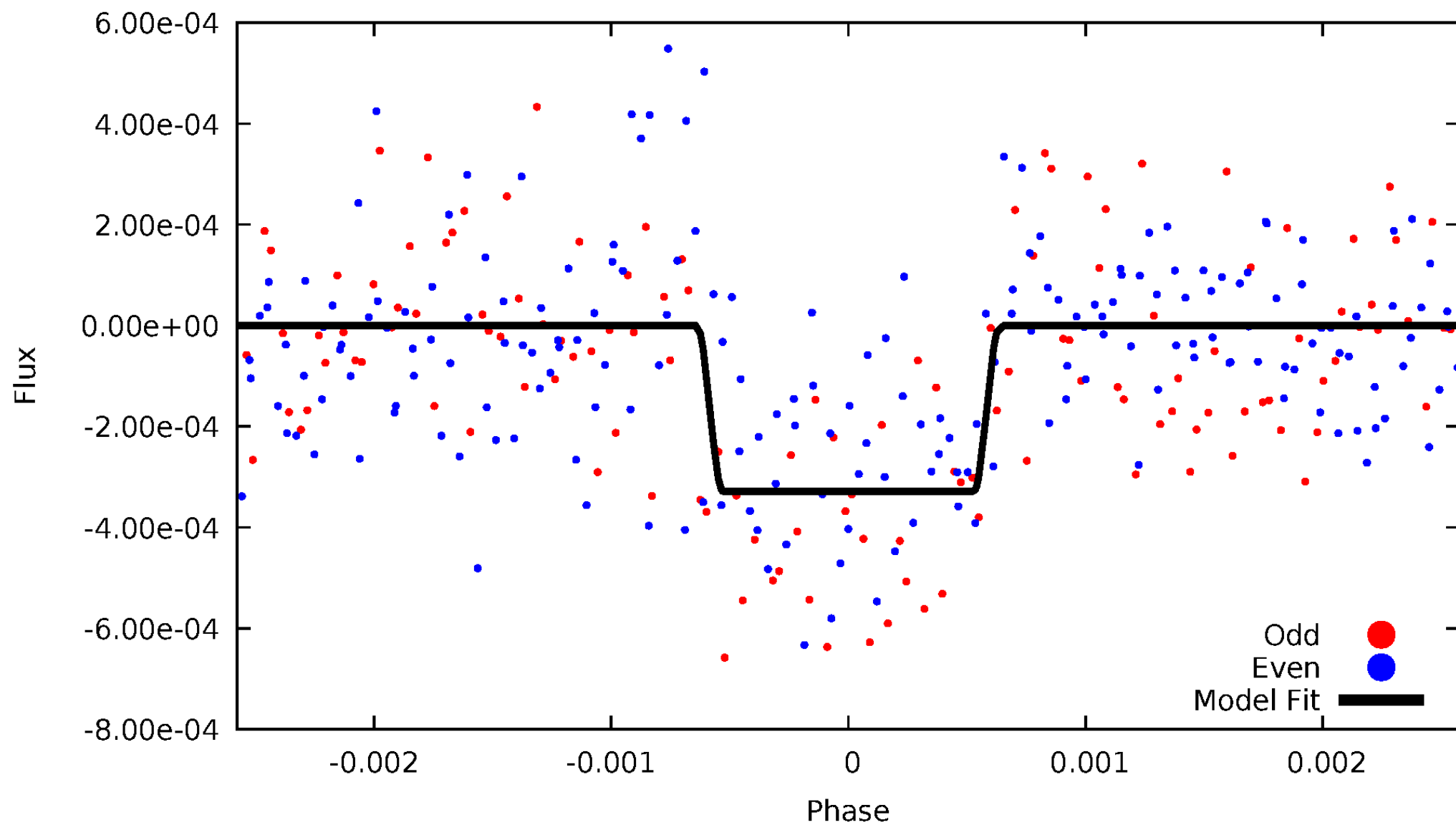
DV Odd/Even

TCE 010023069-01



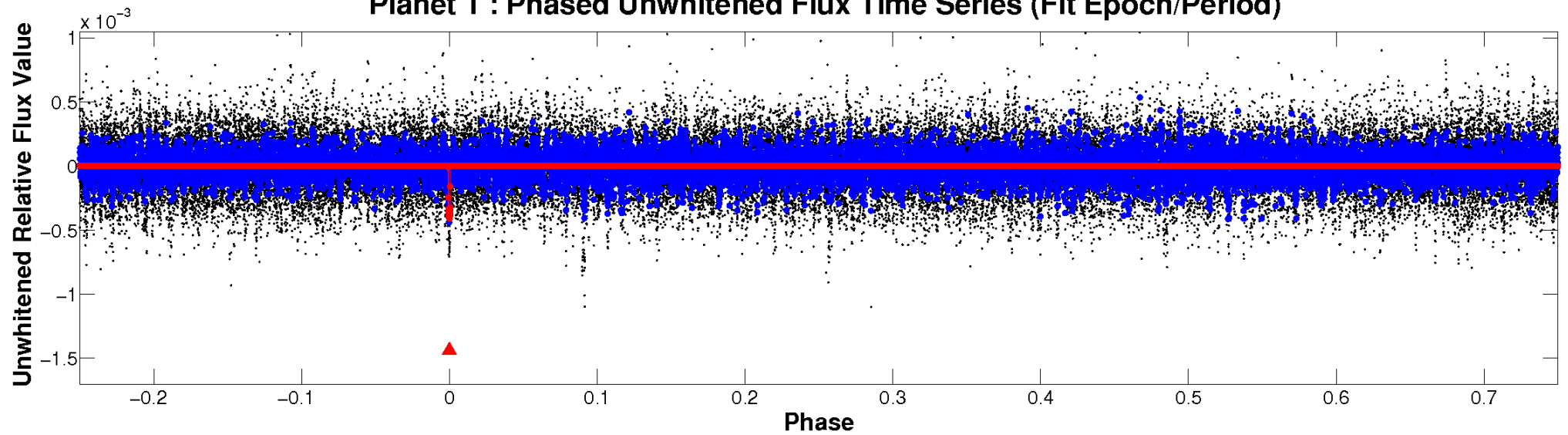
ALT Odd/Even

TCE 010023069-01

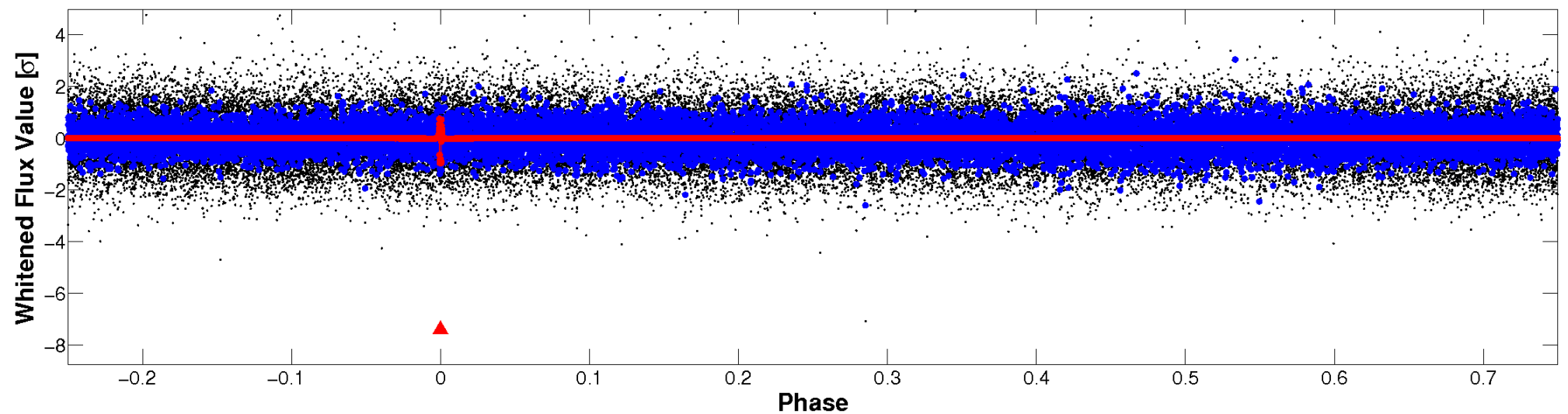


Non-Whitened Vs. Whitened Light Curve

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

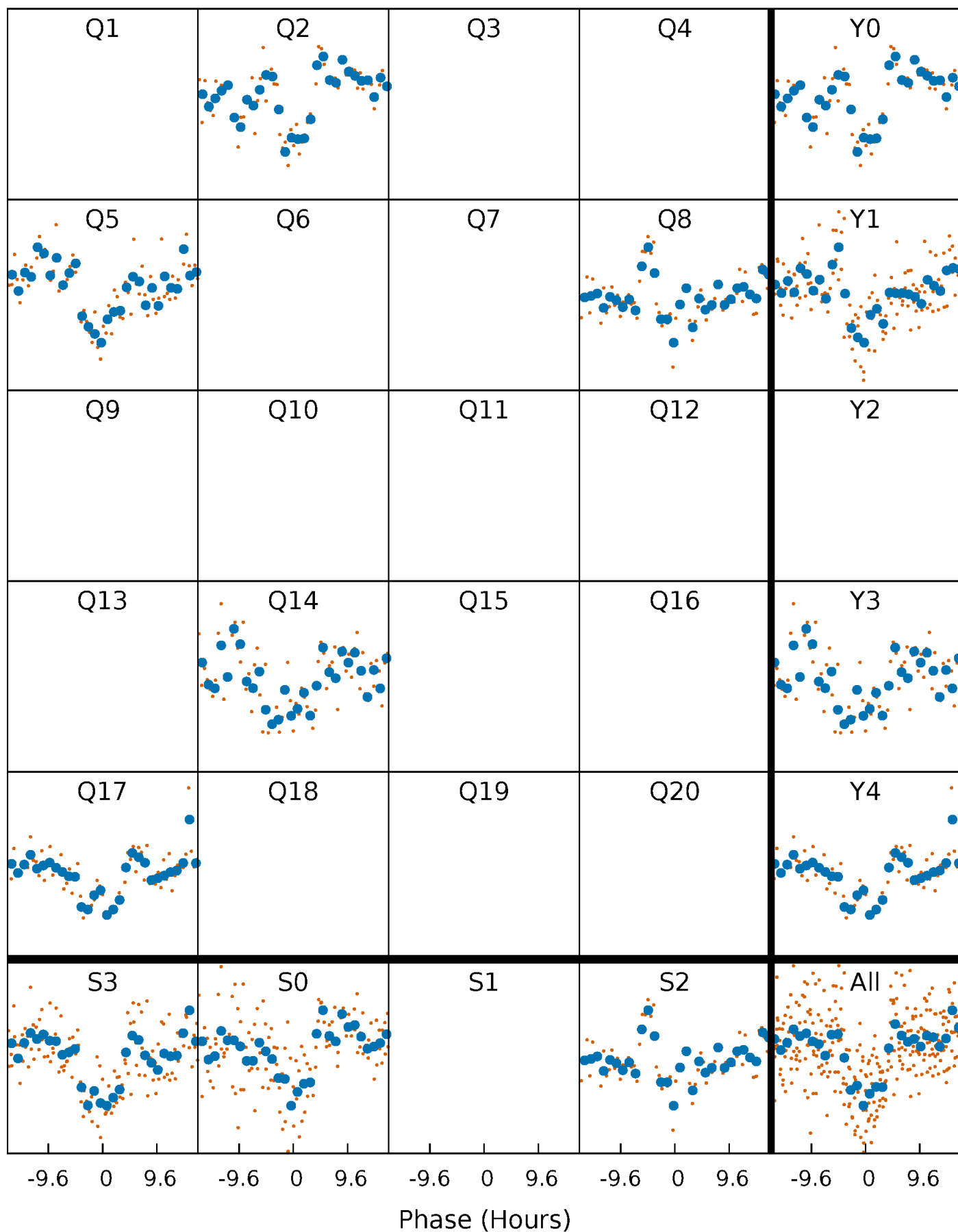


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



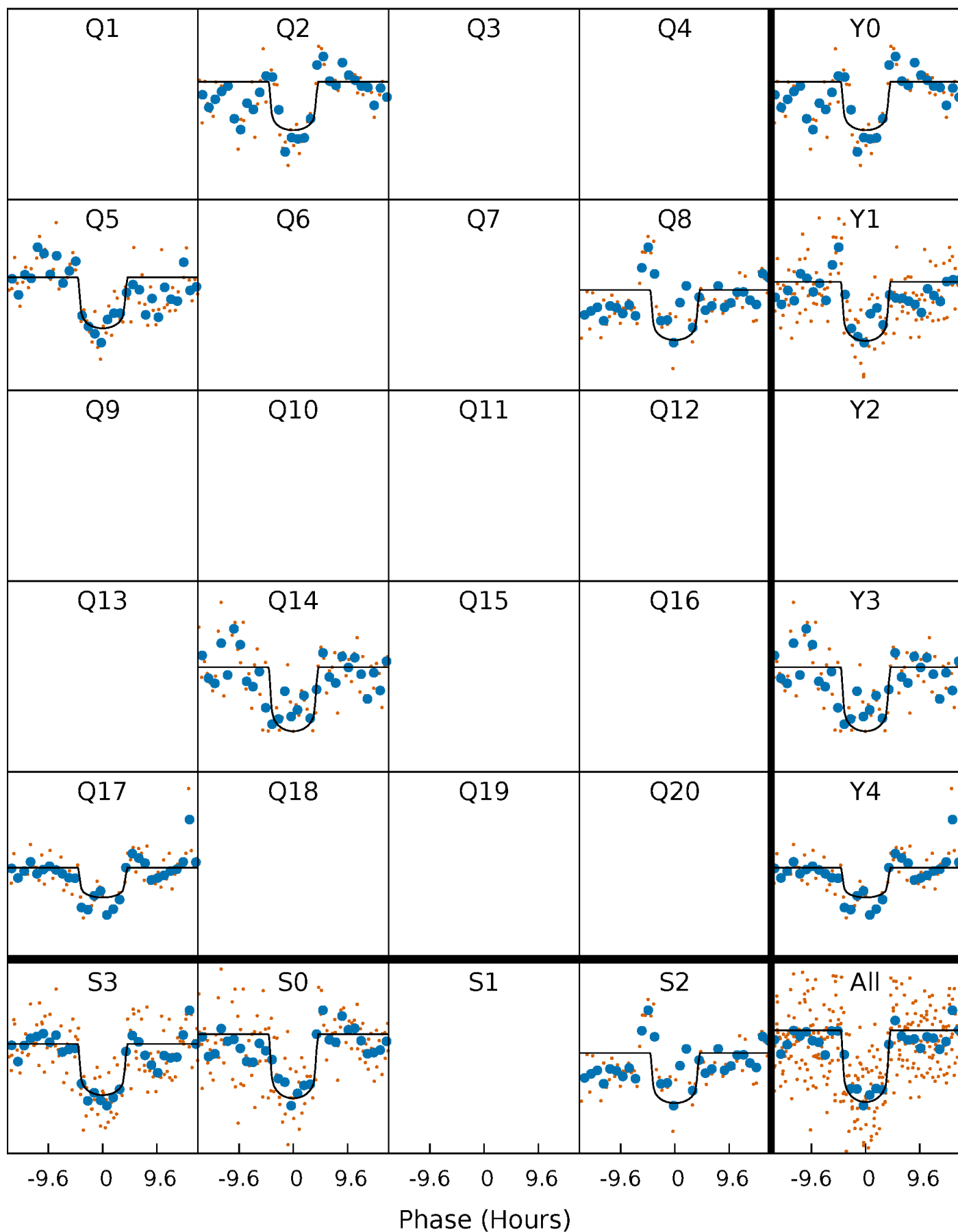
PDC Quarter-Phased Transit Curves

TCE 010023069-01 P=266.980989 Days $T_0=240.830843$ (BKJD)



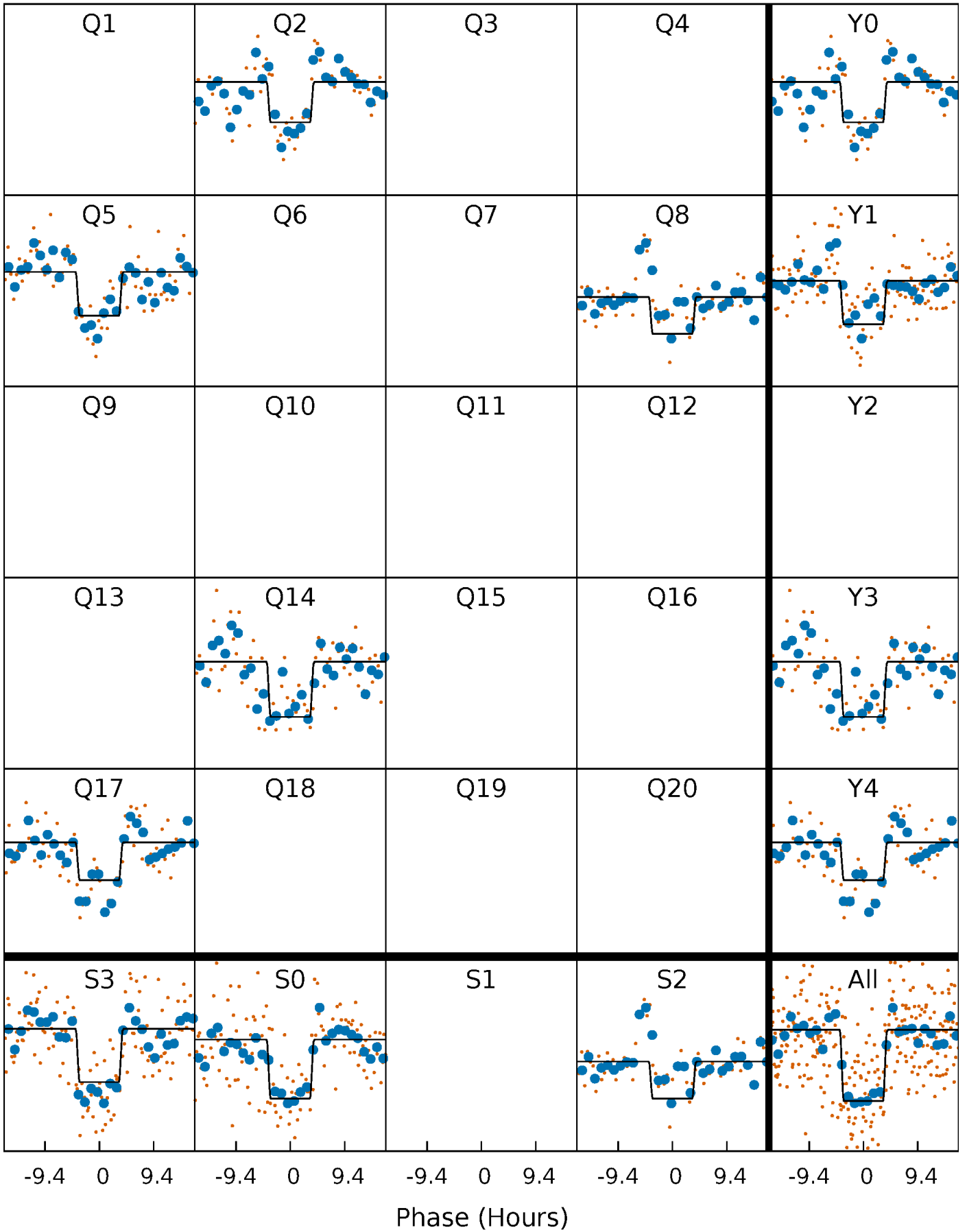
DV Quarter-Phased Transit Curves

TCE 010023069-01 P=266.980989 Days $T_0=240.830843$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

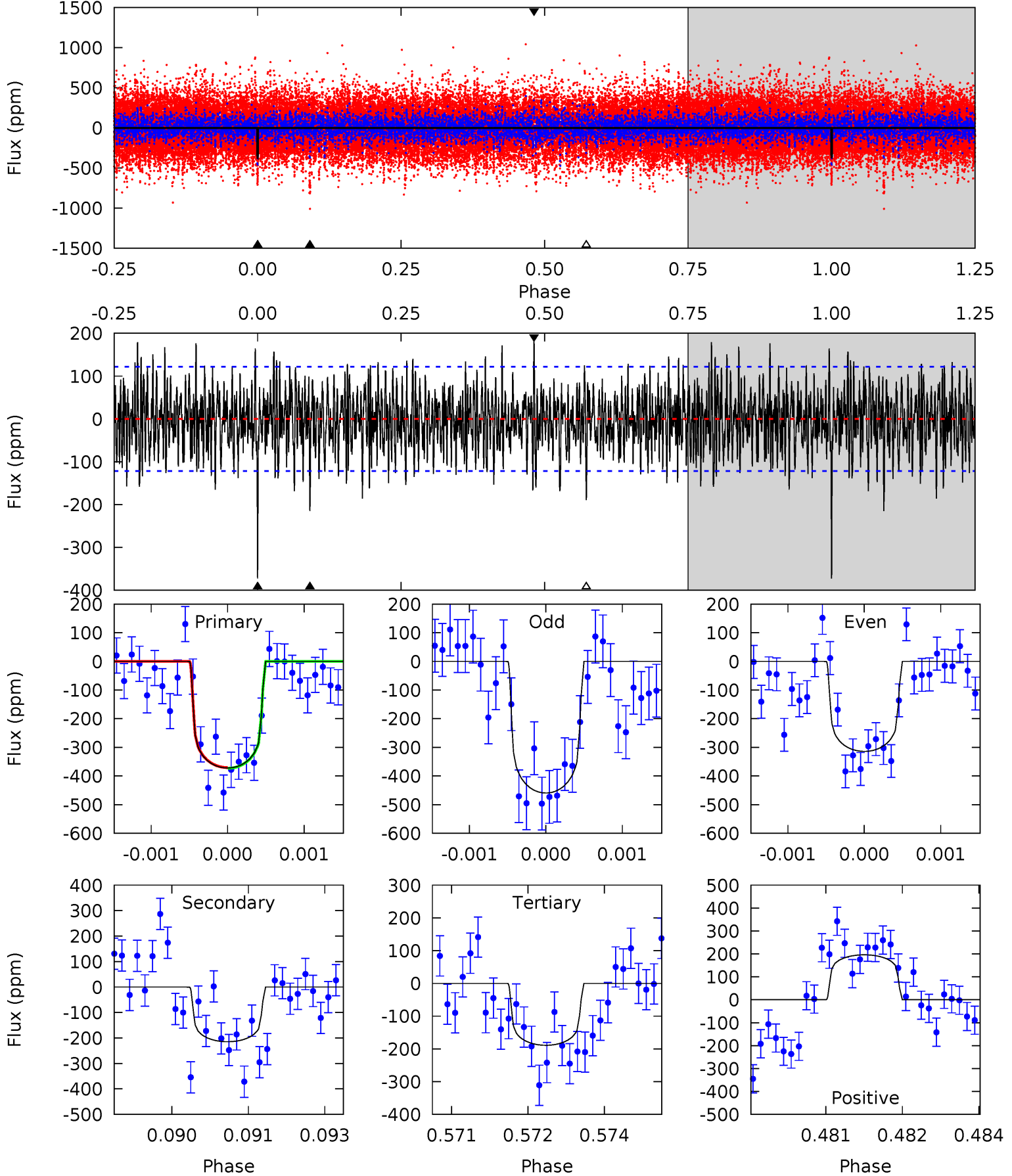
TCE 010023069-01 P=266.978084 Days $T_0=240.842450$ (BKJD)



DV Model-Shift Uniqueness Test

010023069-01, P = 266.980989 Days, E = 240.830843 Days

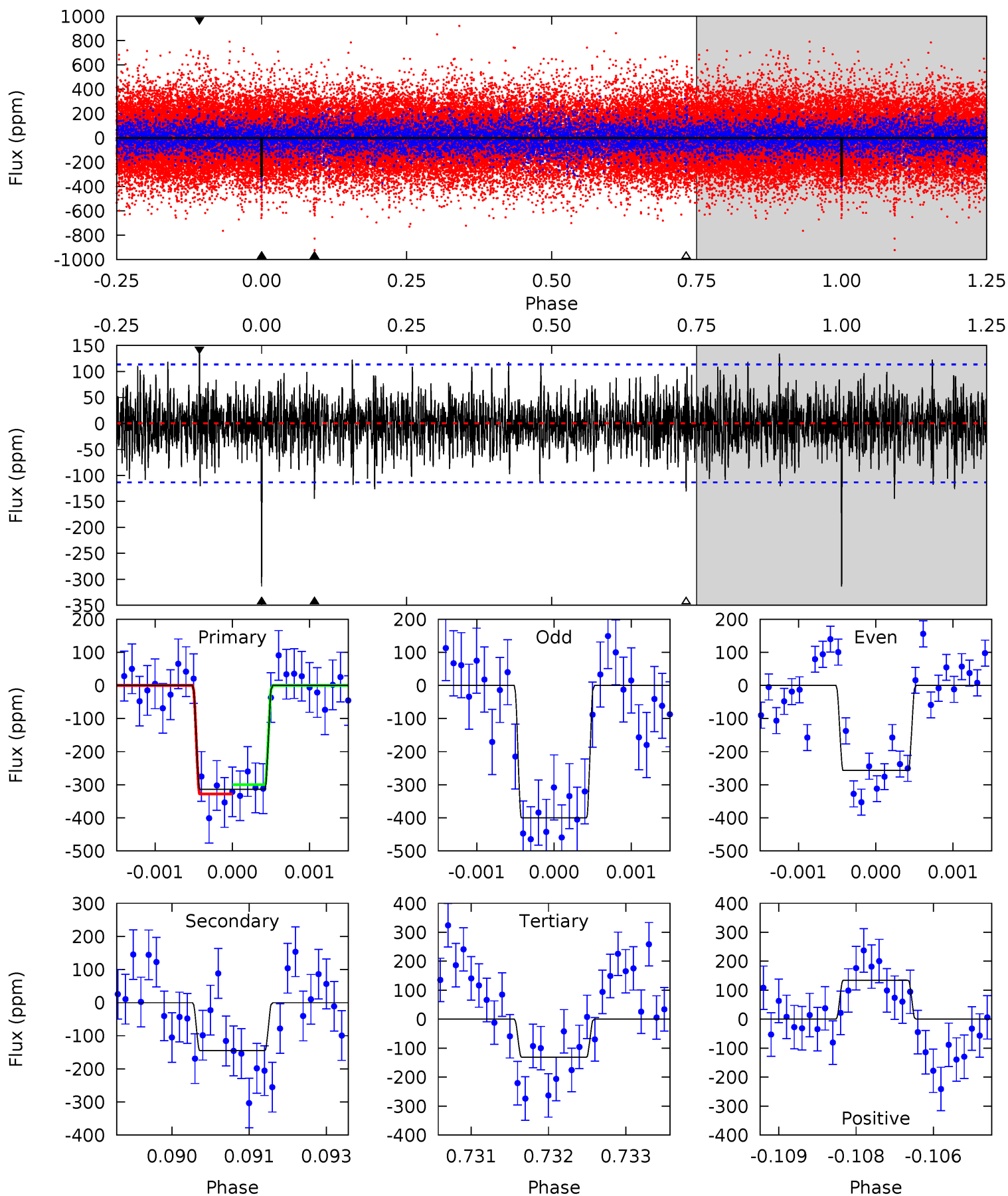
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	9.51	8.37	8.68	5.39	3.20	2.60	8.11	7.80	1.14	0.84	3.14	0.92	0.34	0.06



Alt Model-Shift Uniqueness Test

010023069-01, P = 266.978084 Days, E = 240.842450 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	6.90	6.24	6.39	5.41	3.23	1.73	8.72	8.57	0.66	0.51	3.31	0.91	0.30	0.67



Stellar Parameters For KIC 010023069

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6619^{+180}_{-200}	$3.595^{+0.296}_{-0.074}$	$-0.160^{+0.300}_{-0.250}$	$3.410^{+0.418}_{-1.255}$	$1.670^{+0.229}_{-0.314}$	$0.059^{+0.127}_{-0.015}$
	+3%/-3%	+8%/-2%	+188%/-156%	+12%/-37%	+14%/-19%	+214%/-25%
Source	PHO1	FLK73	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 010023069-01 / KOI 8192.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-215 ± 23	$6.90^{+2.04}_{-2.01}$	749^{+44}_{-61}	5724^{+965}_{-634}	2363^{+2319}_{-1001}
Alt.	-145 ± 21	$6.37^{+1.99}_{-1.91}$	754^{+42}_{-66}	5382^{+886}_{-547}	1774^{+1924}_{-733}

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

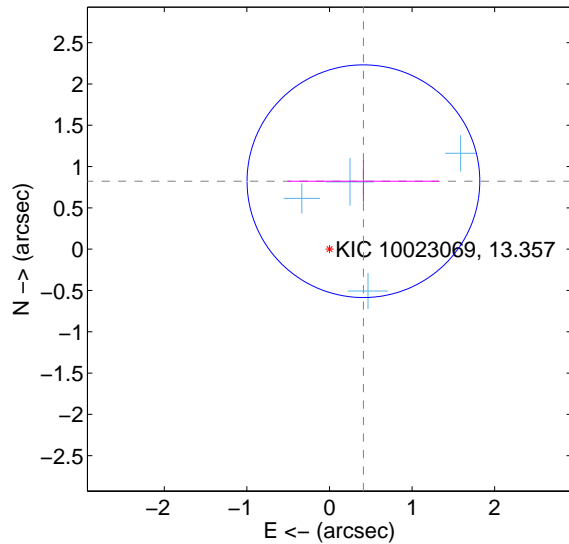
Supplemental centroid analysis for 010023069-01. Kepler magnitude: 13.36. Transit SNR 8.02

There are 4 quarters with good PRF difference image offsets

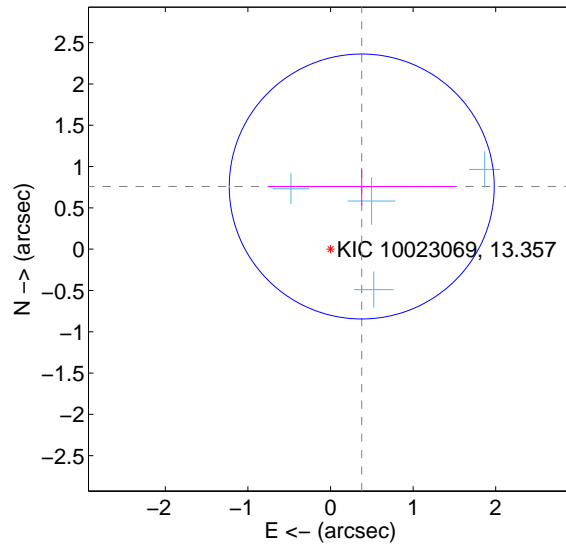
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.920 ± 0.470	1.96	-0.411 ± 0.917	0.823 ± 0.256
PRF-fit source offset from KIC position	0.848 ± 0.535	1.59	-0.378 ± 1.134	0.759 ± 0.223
photometric centroid source offset	0.72 ± 0.57	1.25	-0.32 ± 0.57	0.64 ± 0.58

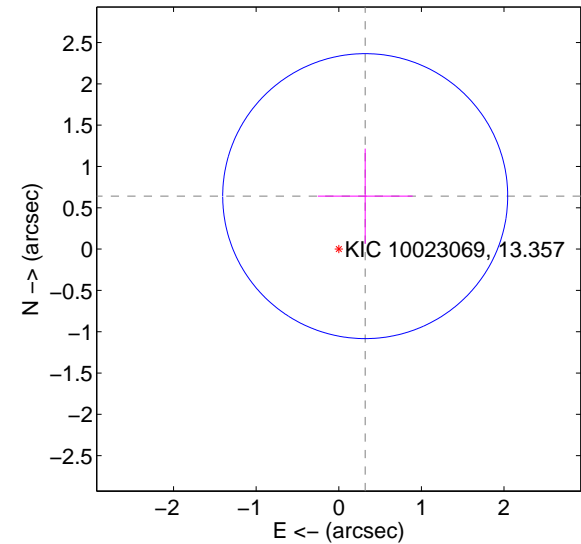
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

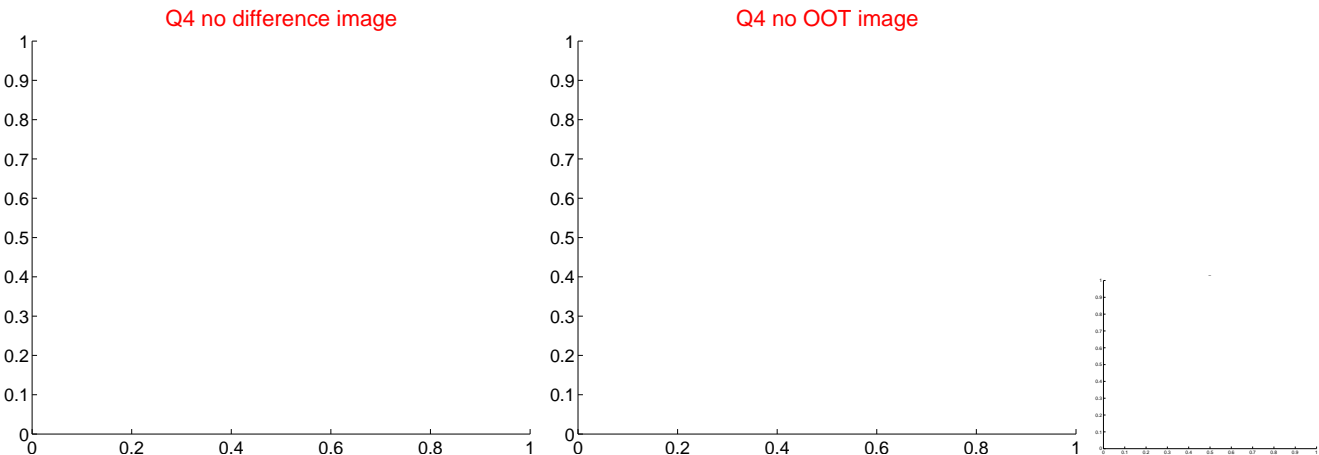
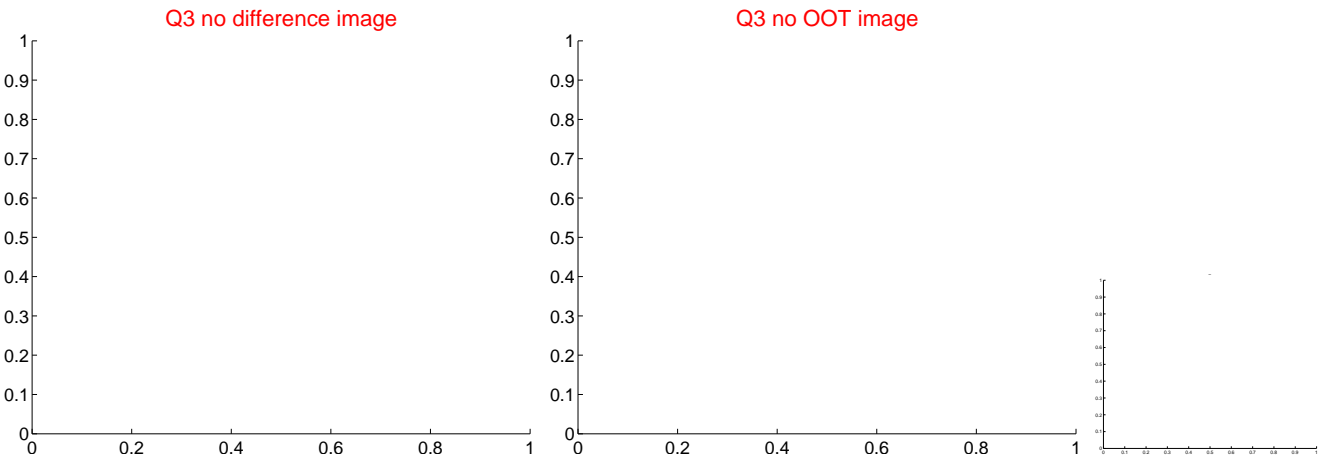
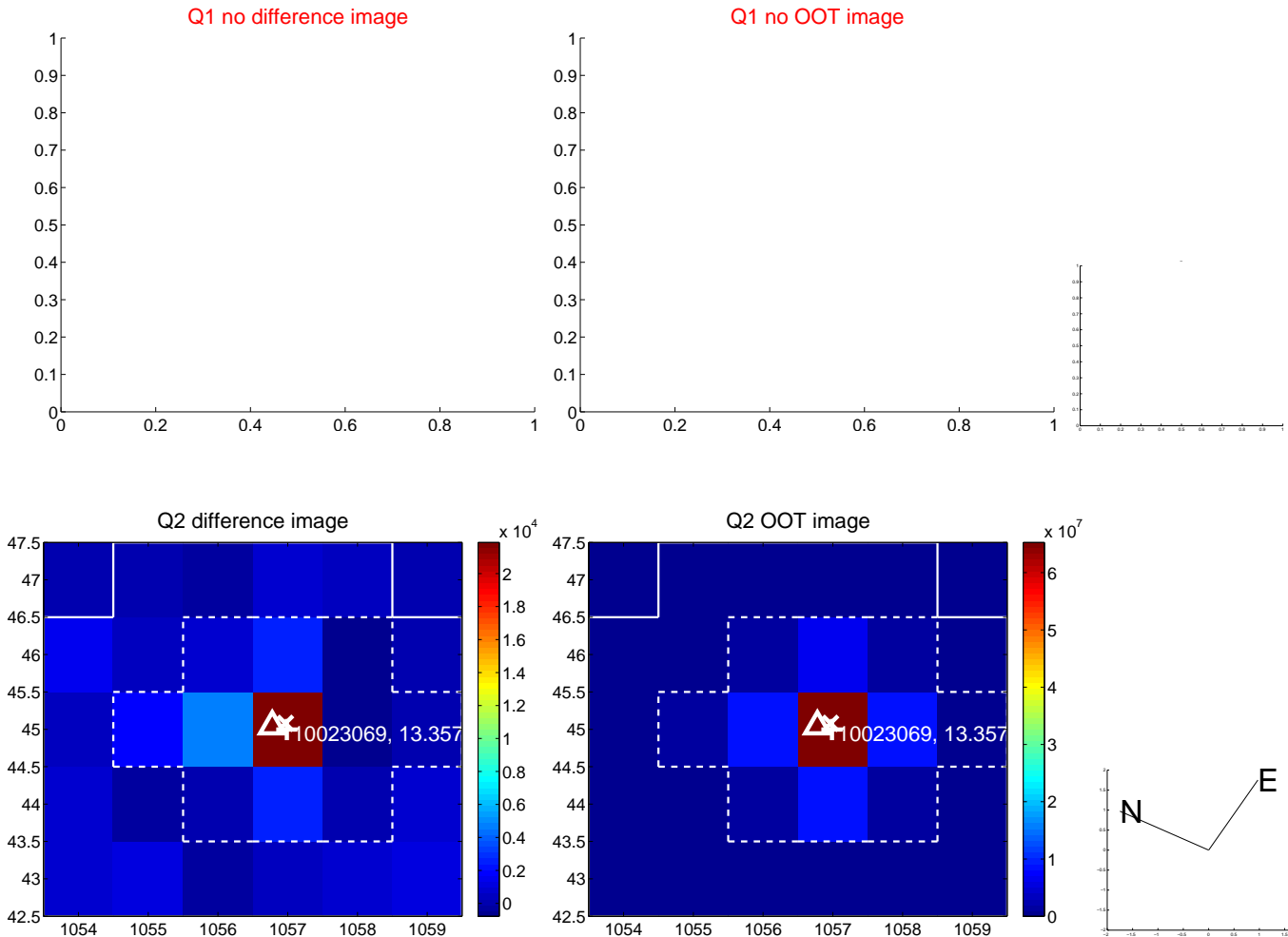


offset from photometric centroids

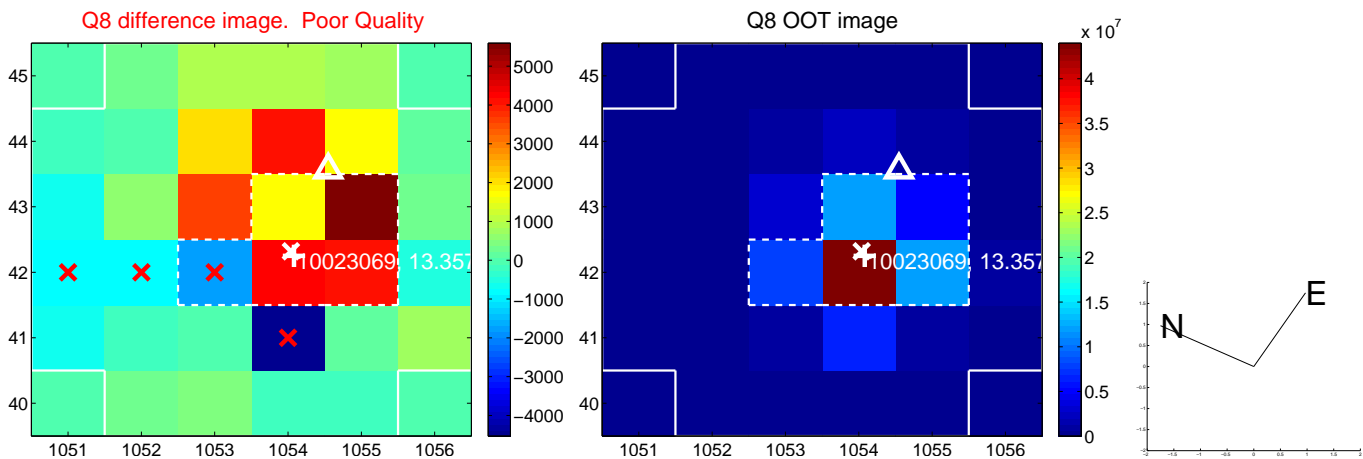
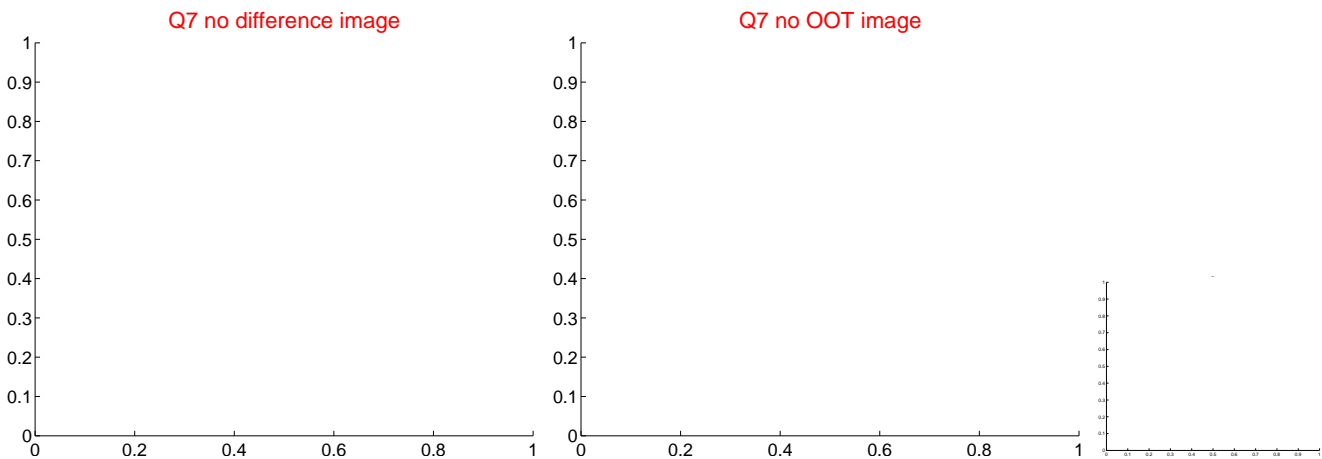
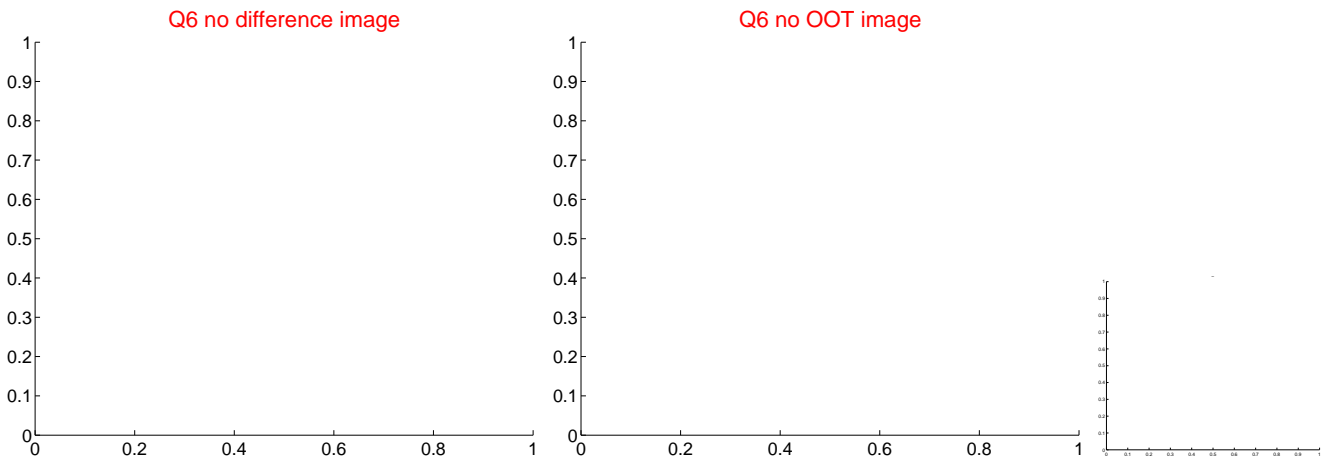
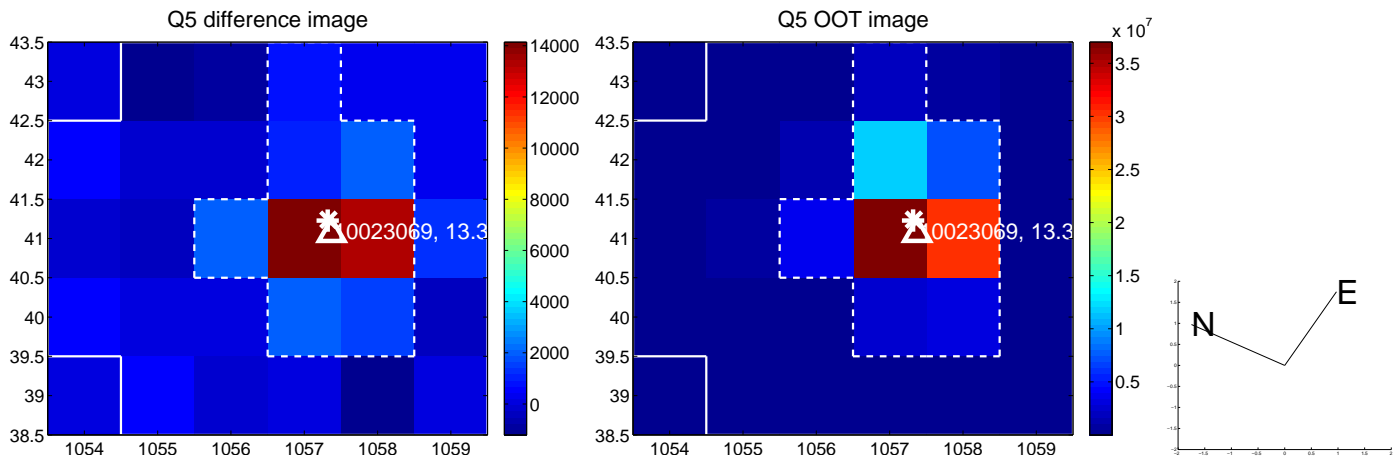


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



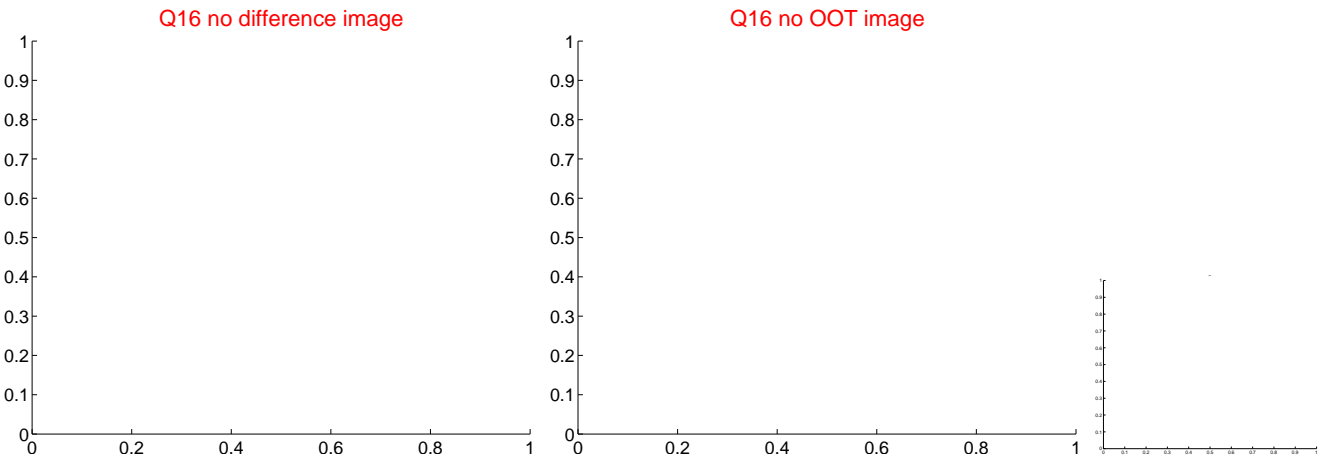
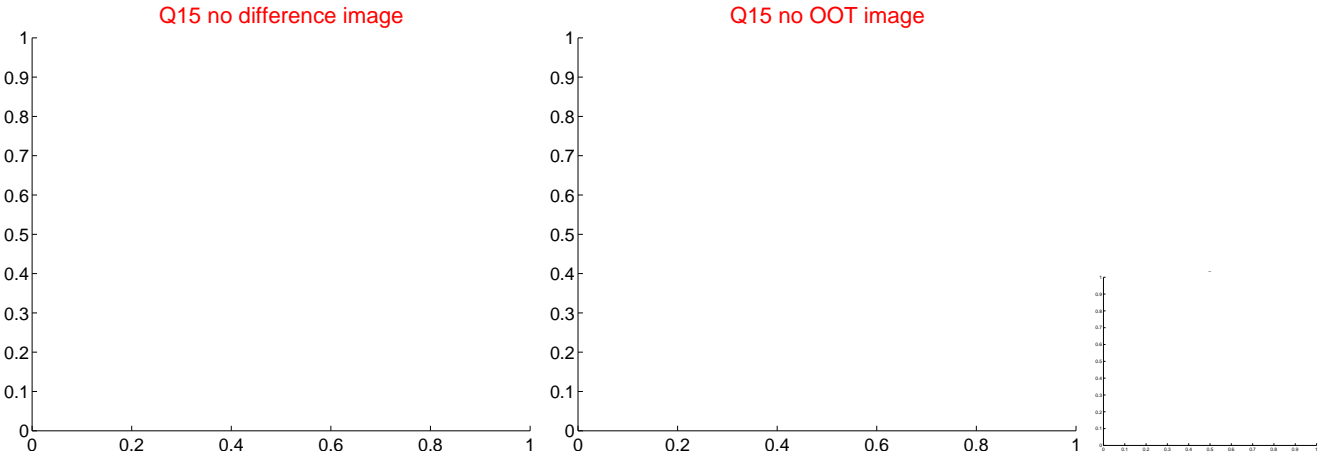
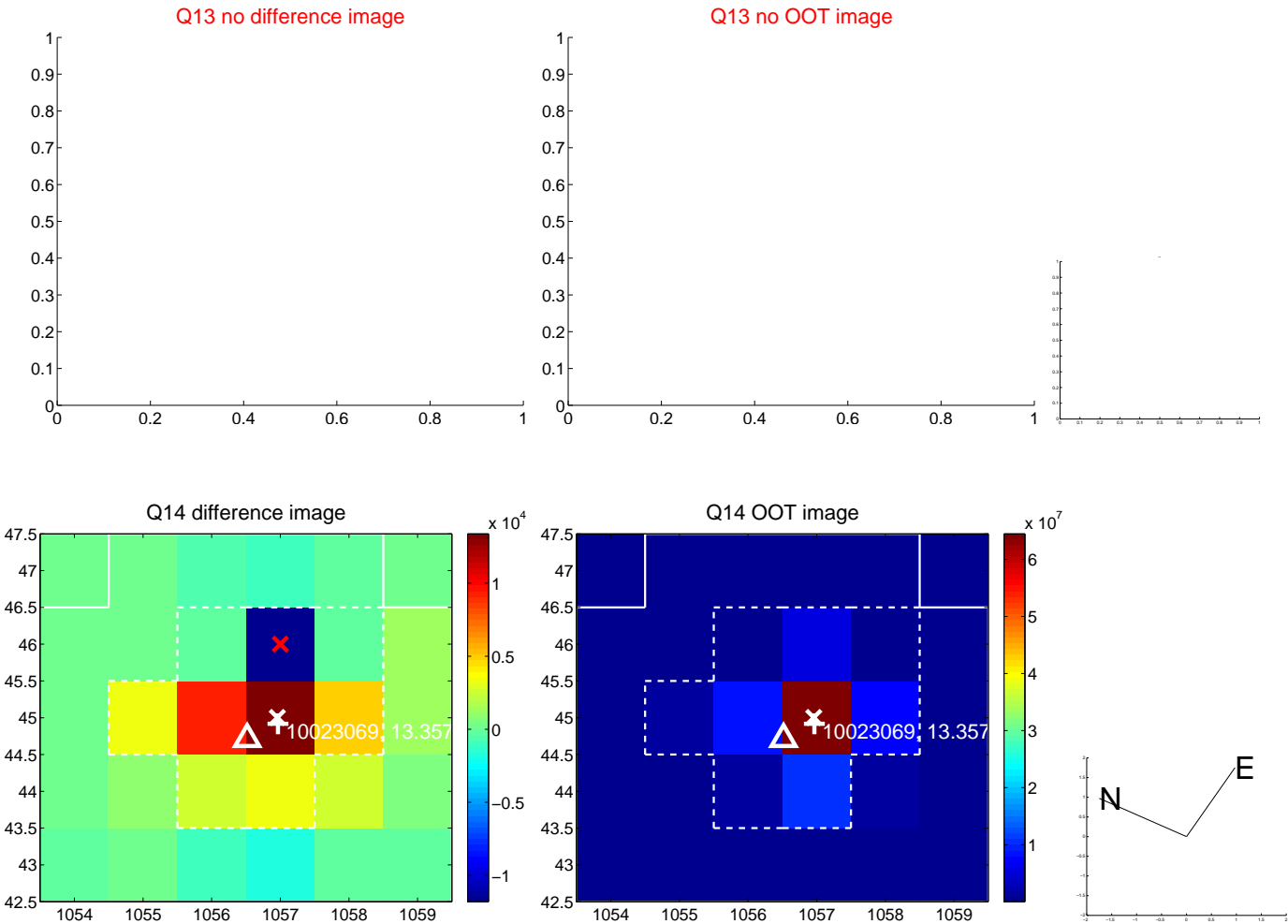
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



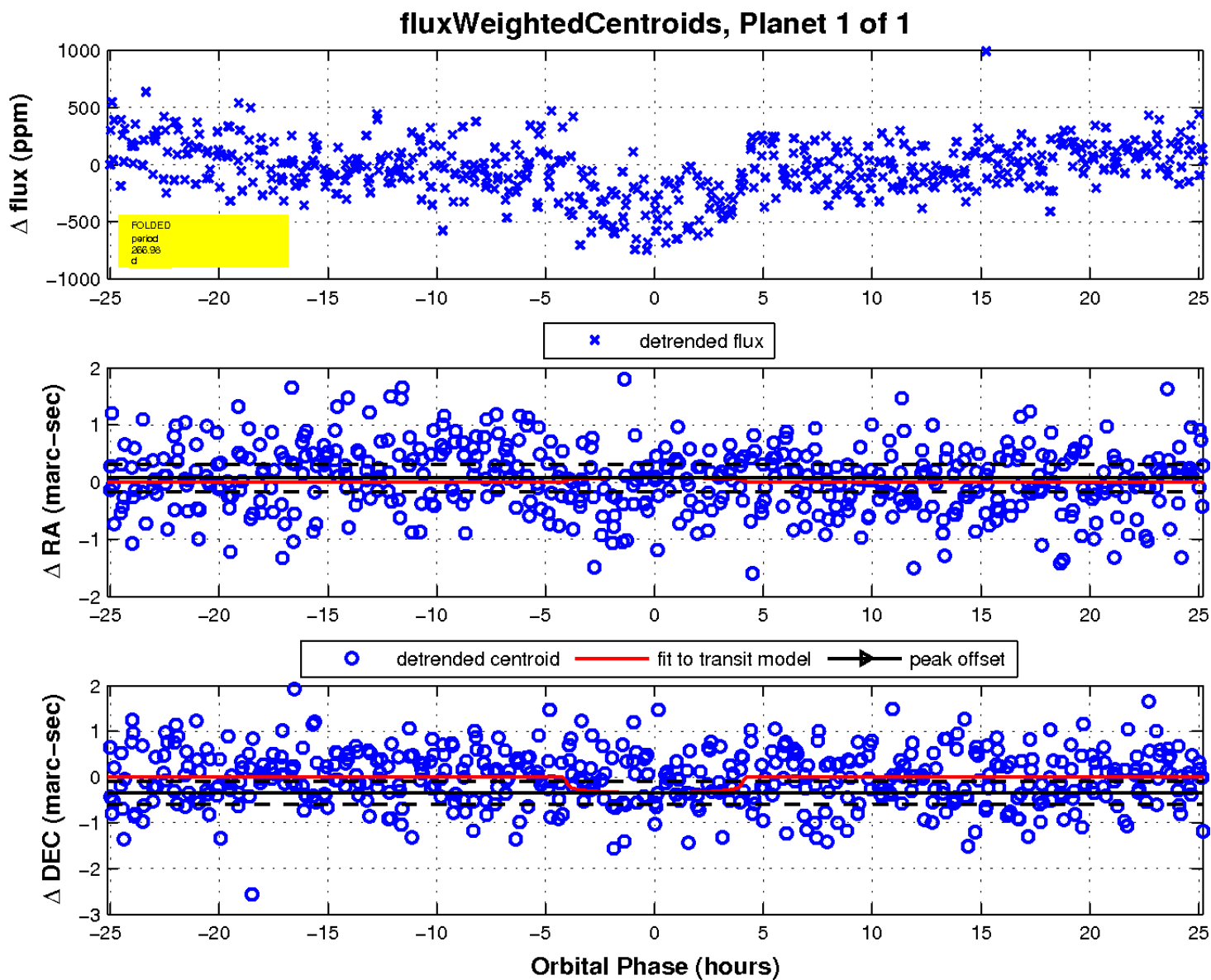
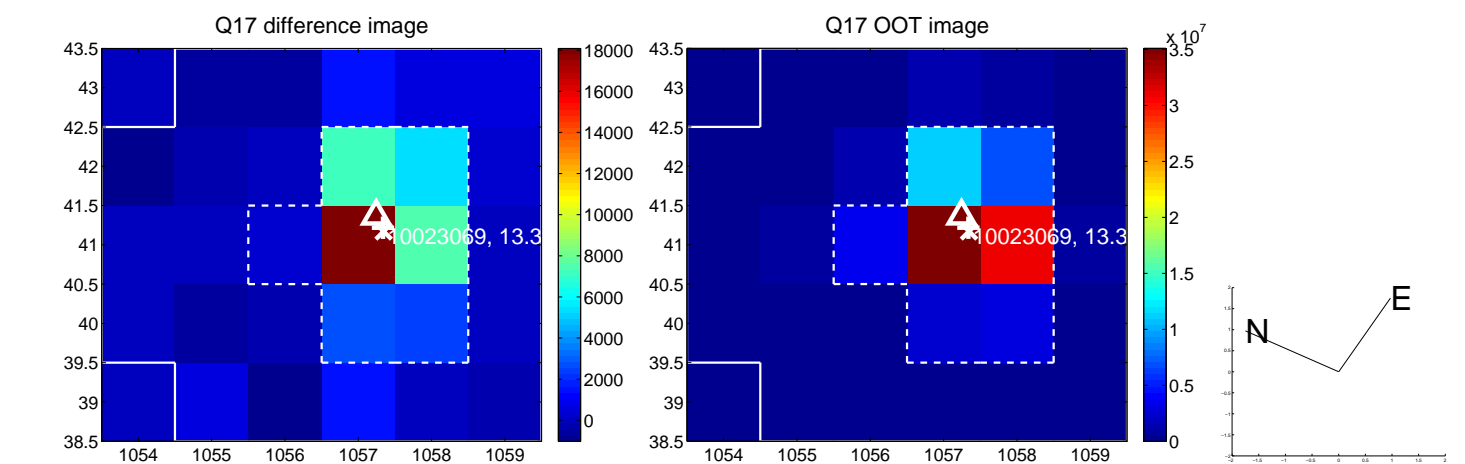
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

