

KIC 007449976

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})
007449976-01	OBS	No	571.677137	371.961953	1681.8	0.971	12.1	6.3	0.65	4188	2.88	0.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007449976-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—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.

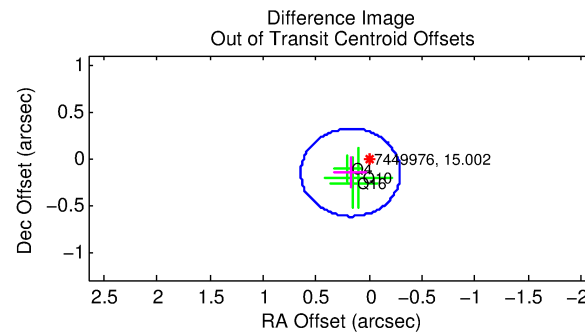
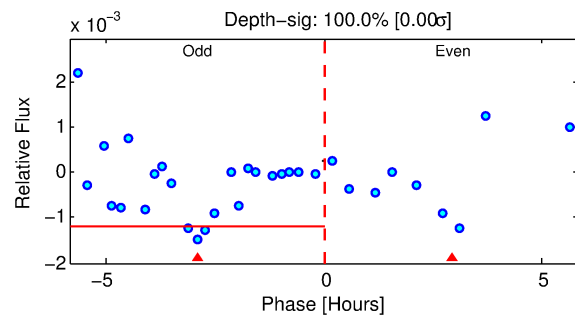
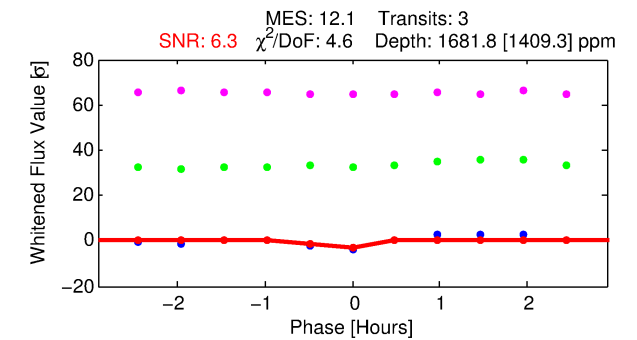
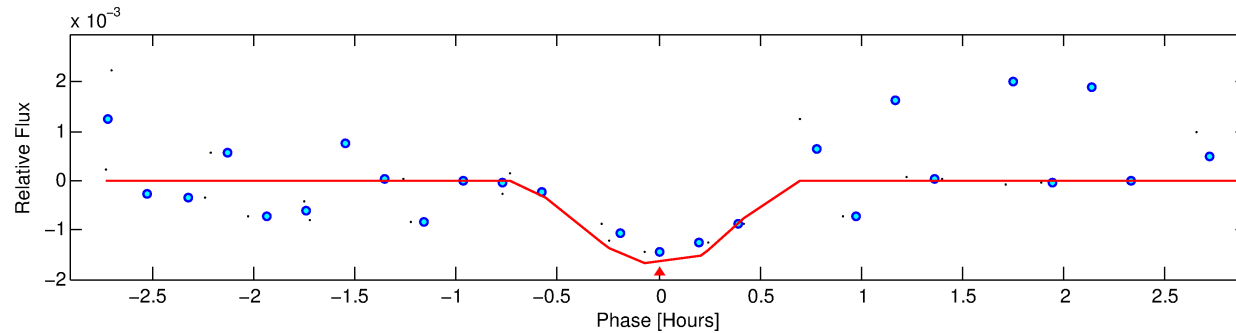
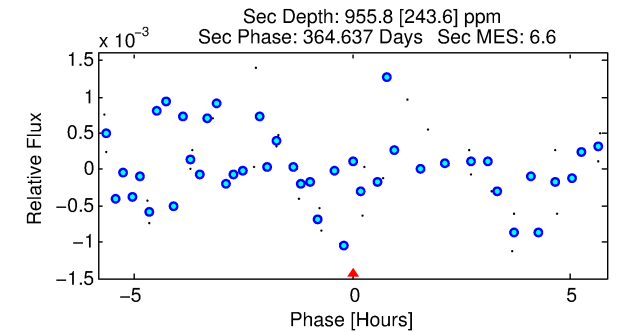
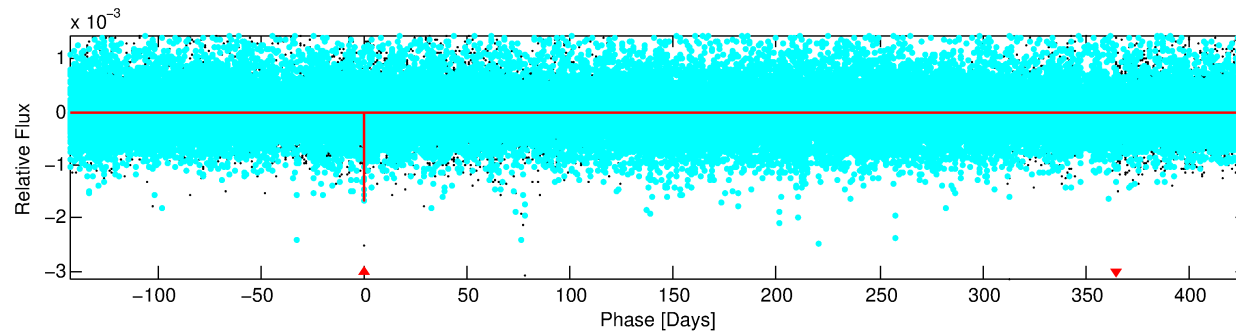
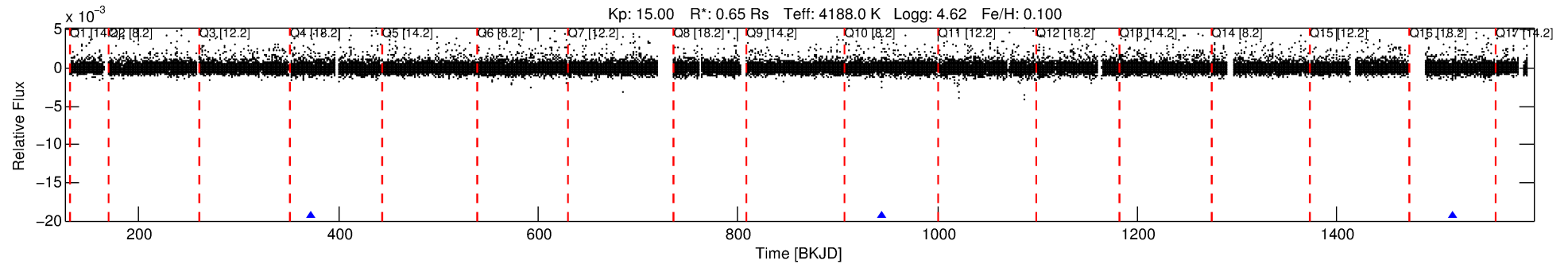
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007449976-01

No Significant Match Found

DV One-Page Summary

KIC: 7449976 Candidate: 1 of 1 Period: 571.677 d



DV Fit Results:

Period = 571.67714 [0.00792] d
Epoch = 371.9620 [0.0104] BKJD
Rp/R* = 0.0407 [0.3318]
a/R* = 3523.39 [88280.74]
b = 0.69 [20.13]
Seff = 0.09 [0.01]
Teq = 138 [6] K
Rp = 2.88 [23.50] Re
a = 1.1658 [0.0811] AU
Ag = 86039.36 [1403357.93] [0.06 σ]
Teffp = 3650 [14885] K [0.24 σ]

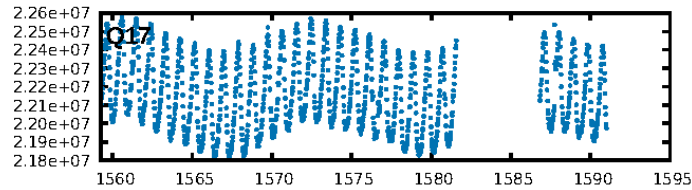
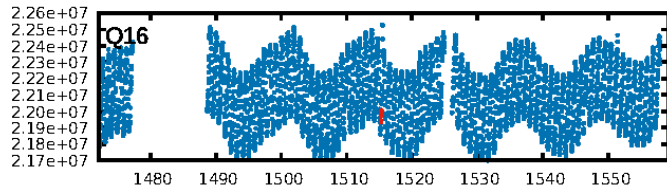
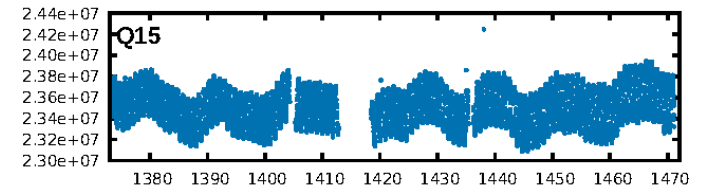
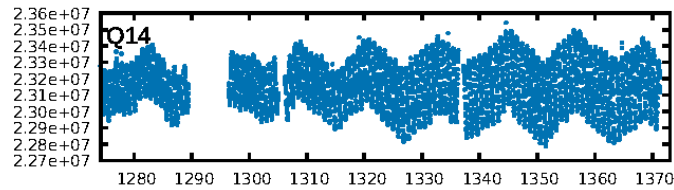
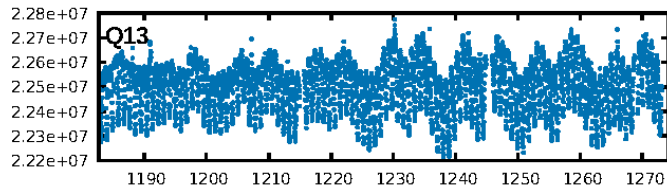
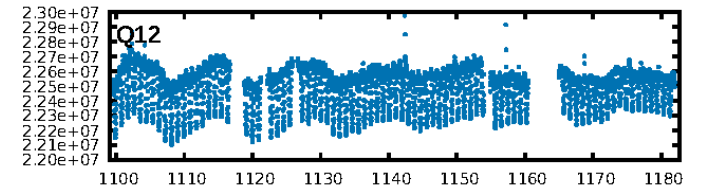
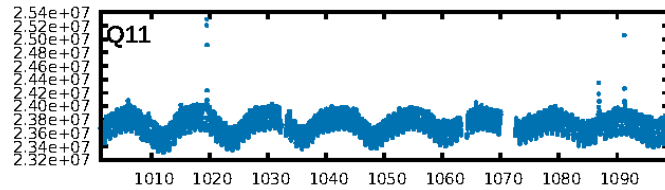
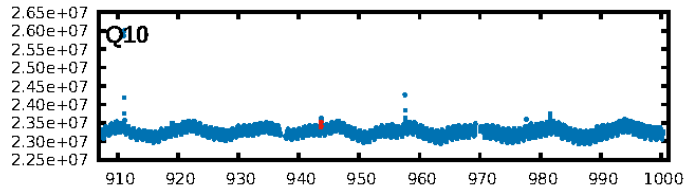
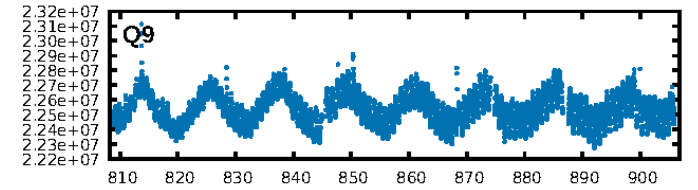
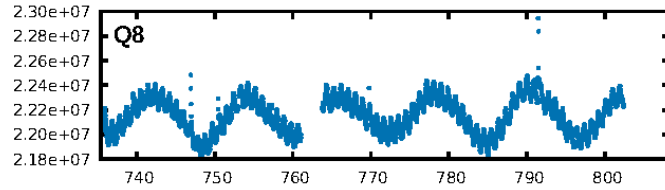
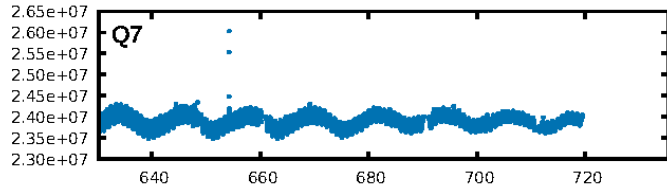
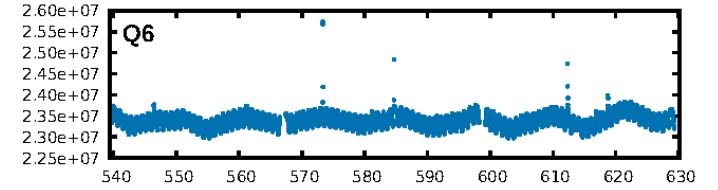
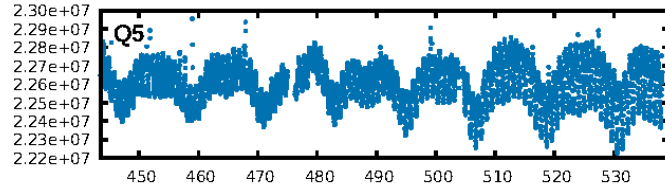
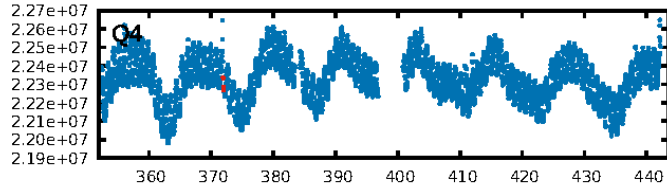
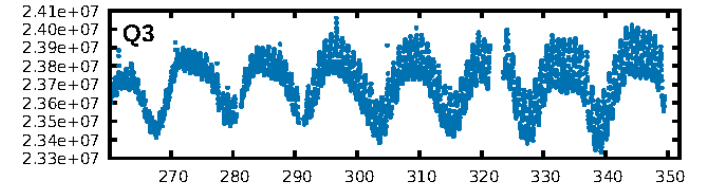
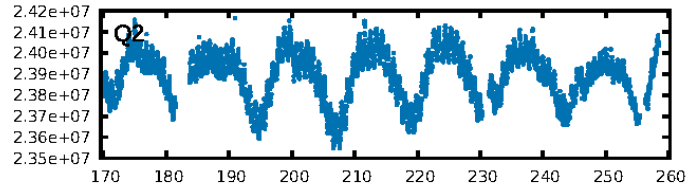
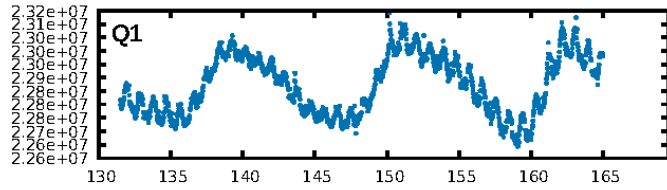
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 10.1%
Bootstrap-pfa: 3.35e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 69.19
Centroid-sig: 89.5%
Centroid-so: 0.282 arcsec [0.24 σ]
OotOffset-rm: 0.232 arcsec [1.48 σ]
OotOffset-st: 1/0/2/0 [3]
KicOffset-rm: 0.350 arcsec [2.23 σ]
KicOffset-st: 1/0/2/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

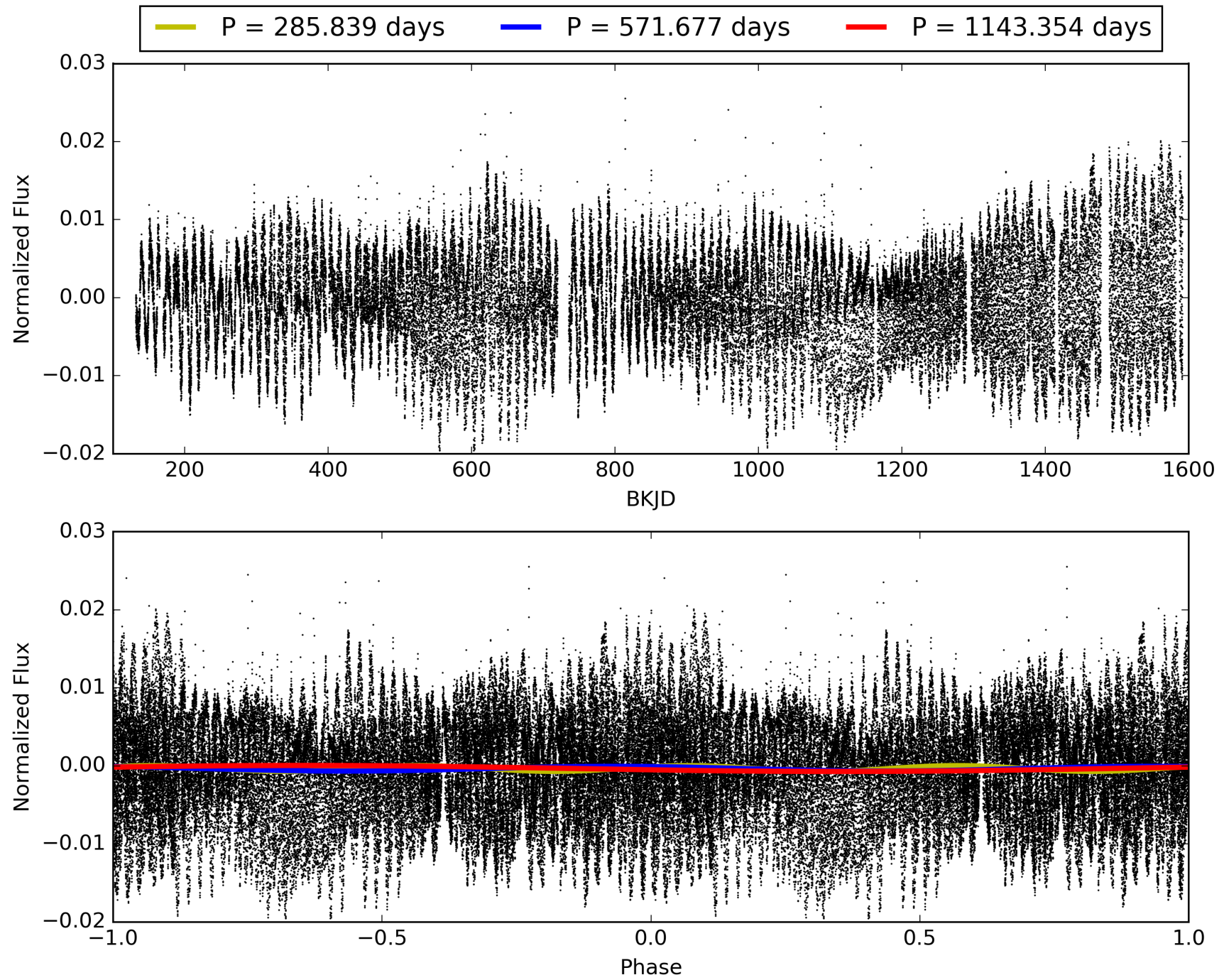
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:19:09 Z

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

TCE 007449976-01, PDC Light Curves

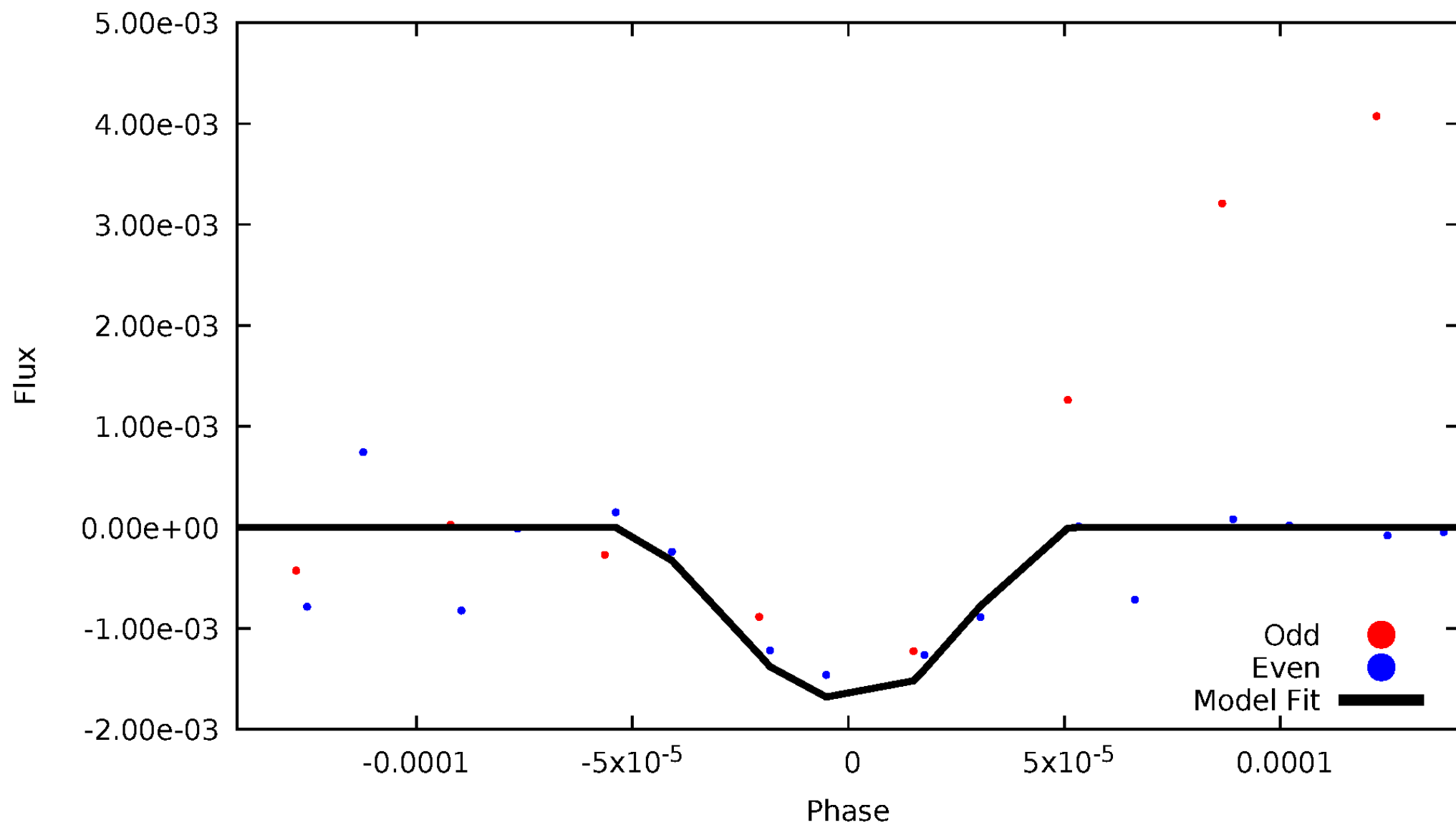


TCE 007449976-01



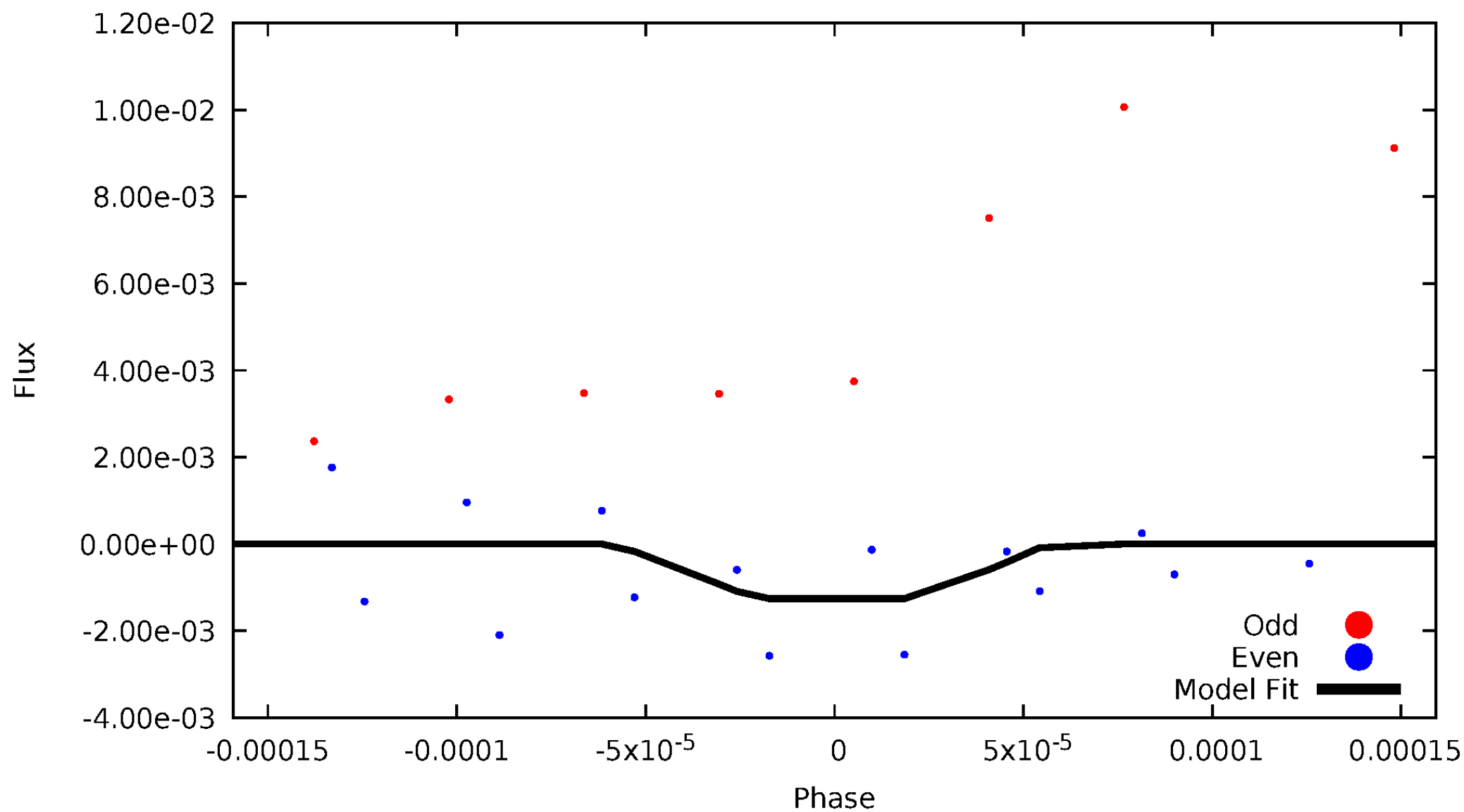
DV Odd/Even

TCE 007449976-01



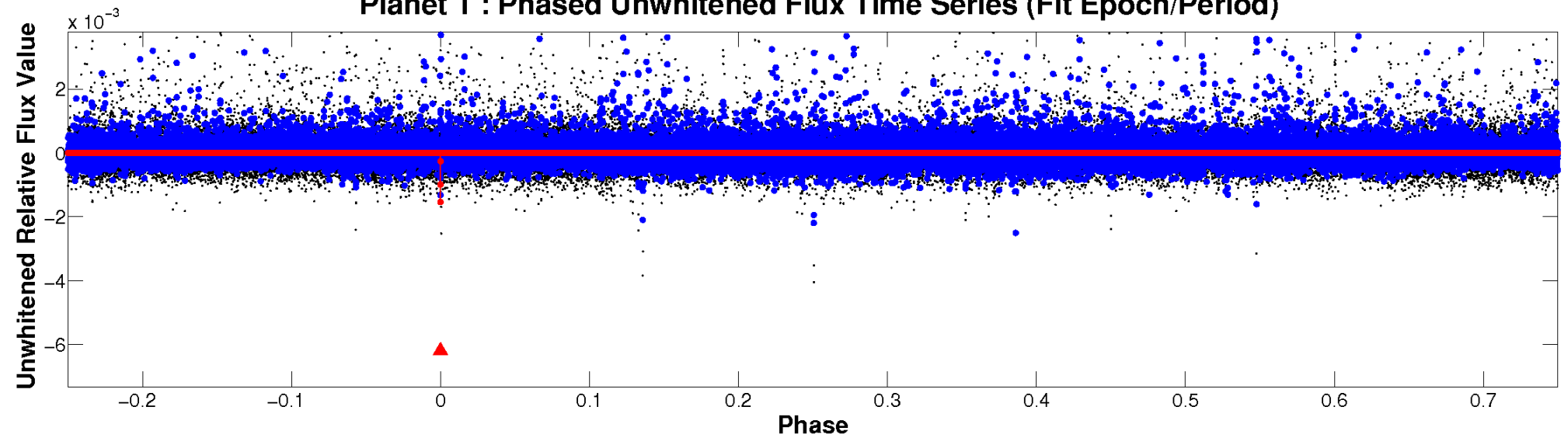
ALT Odd/Even

TCE 007449976-01

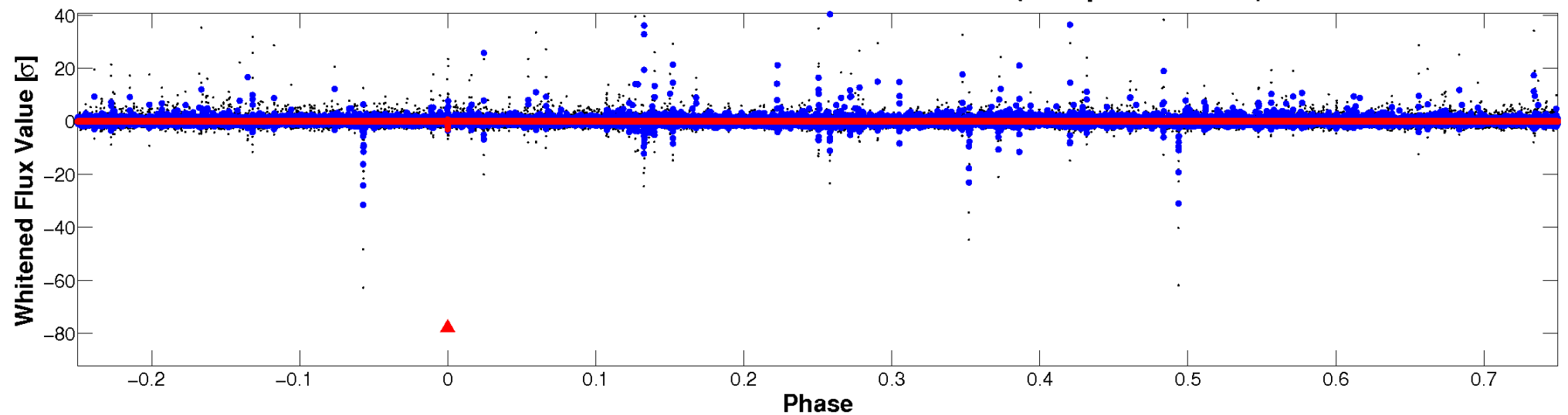


Non-Whitened Vs. Whitened Light Curve

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

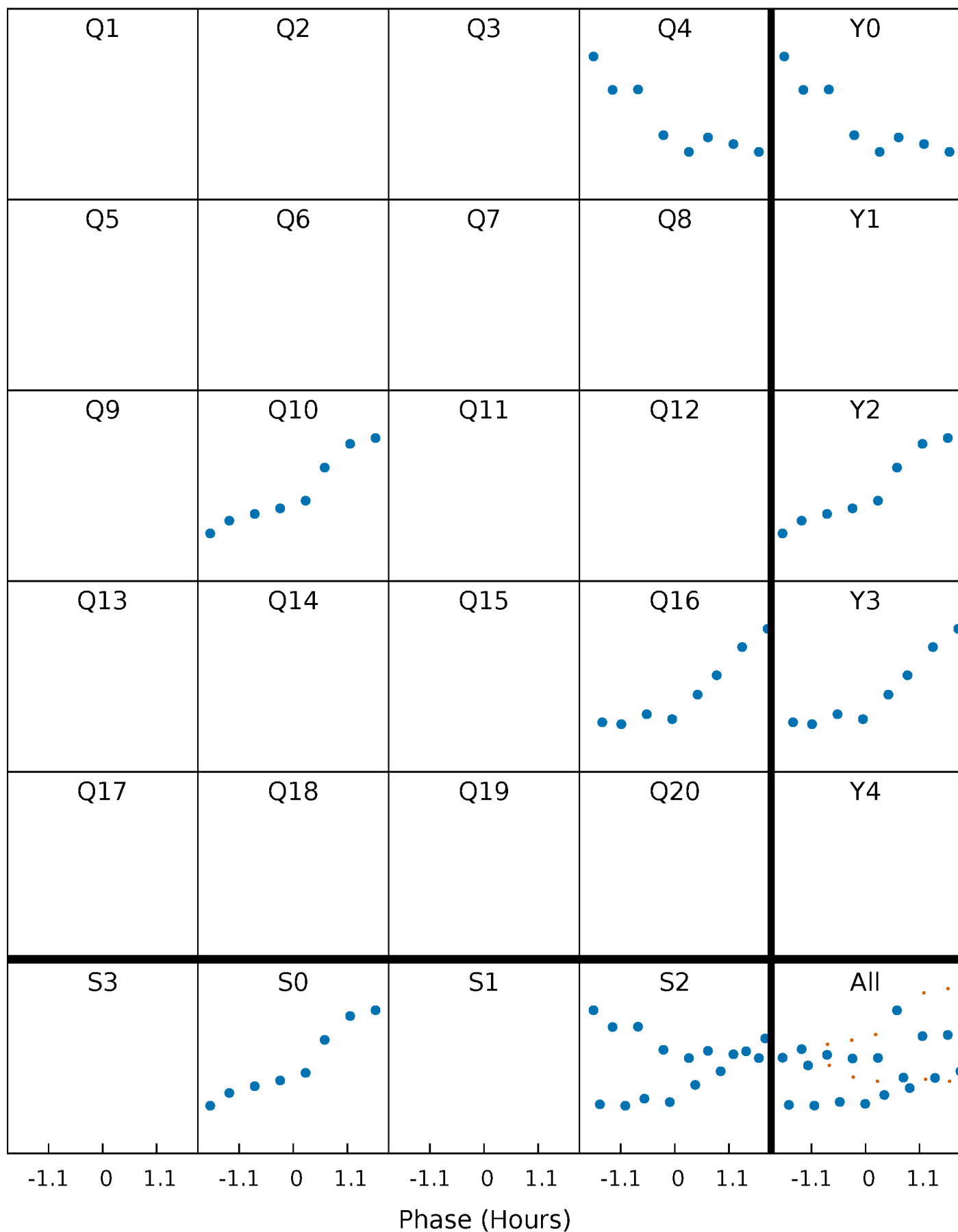


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



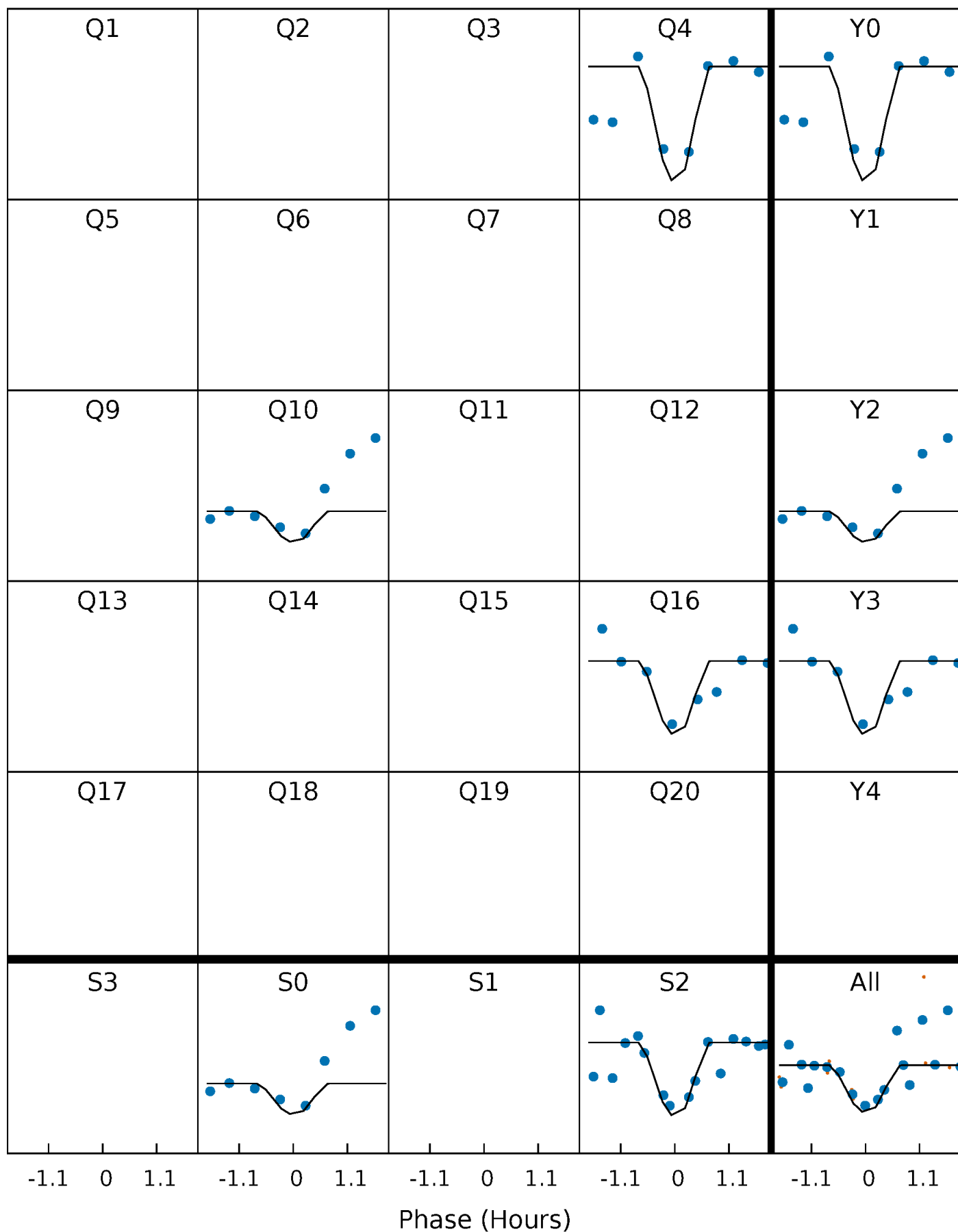
PDC Quarter-Phased Transit Curves

TCE 007449976-01 P=571.677136 Days $T_0=371.961953$ (BKJD)



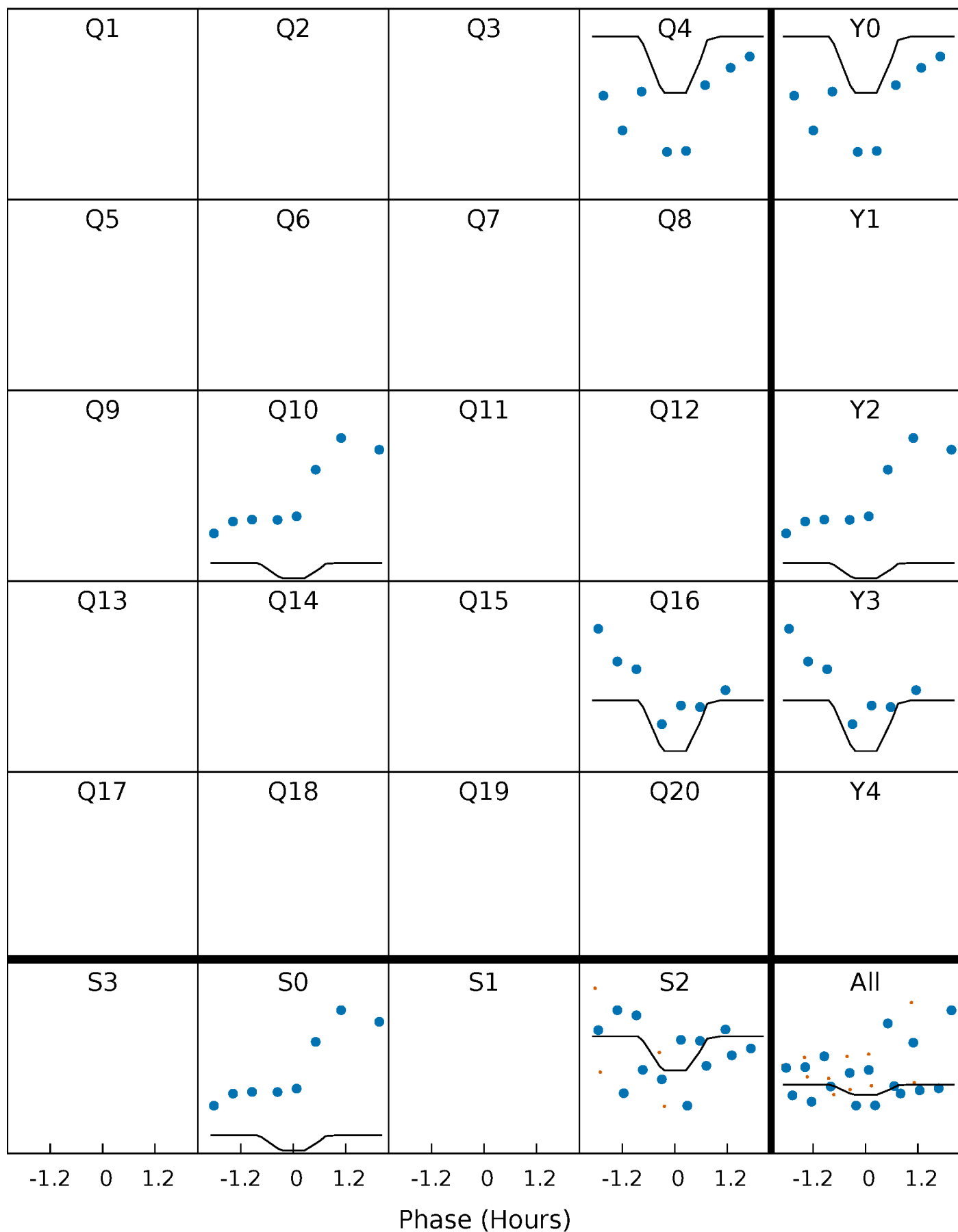
DV Quarter-Phased Transit Curves

TCE 007449976-01 P=571.677136 Days $T_0=371.961953$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

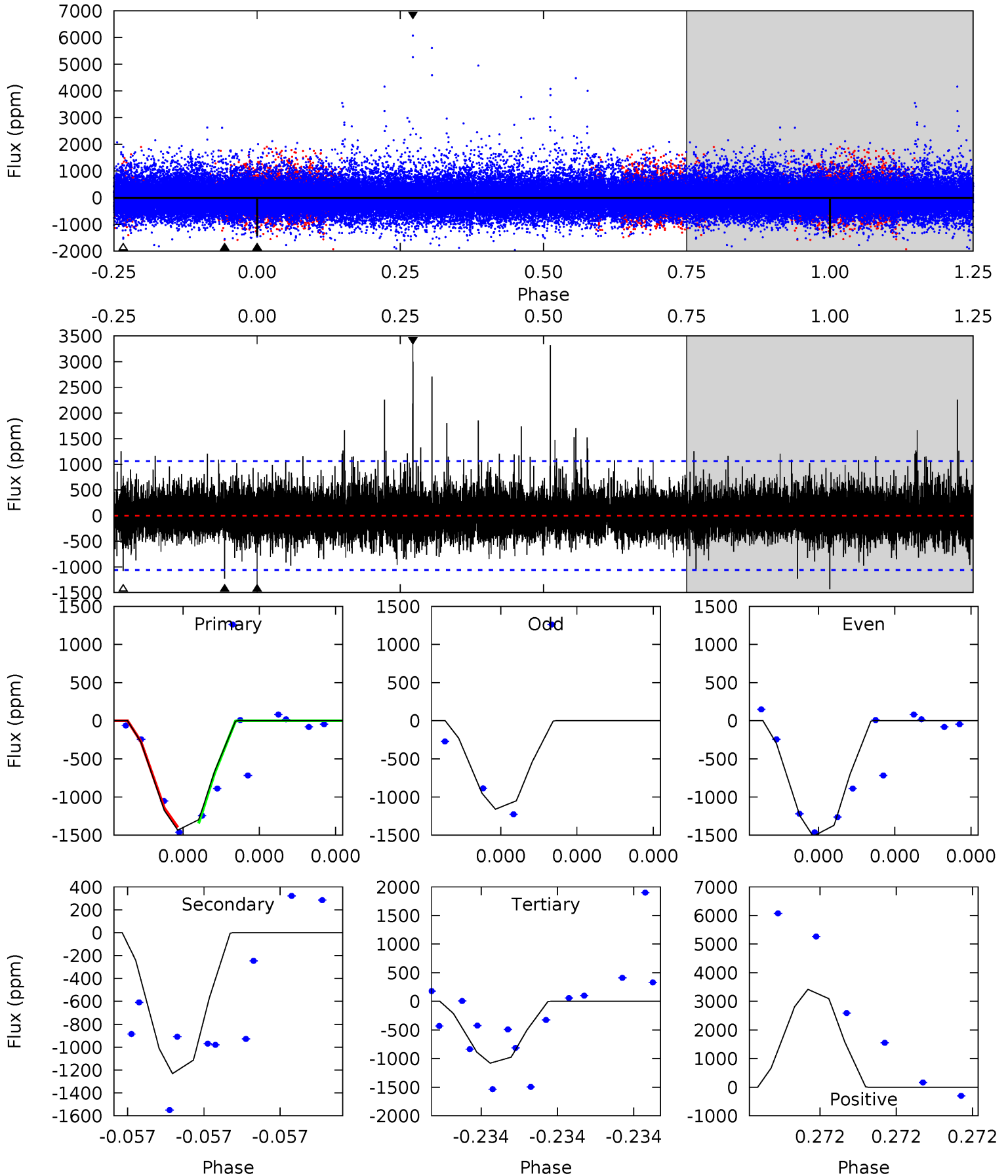
TCE 007449976-01 P=571.683331 Days $T_0=371.961433$ (BKJD)



DV Model-Shift Uniqueness Test

007449976-01, P = 571.677136 Days, E = 371.961953 Days

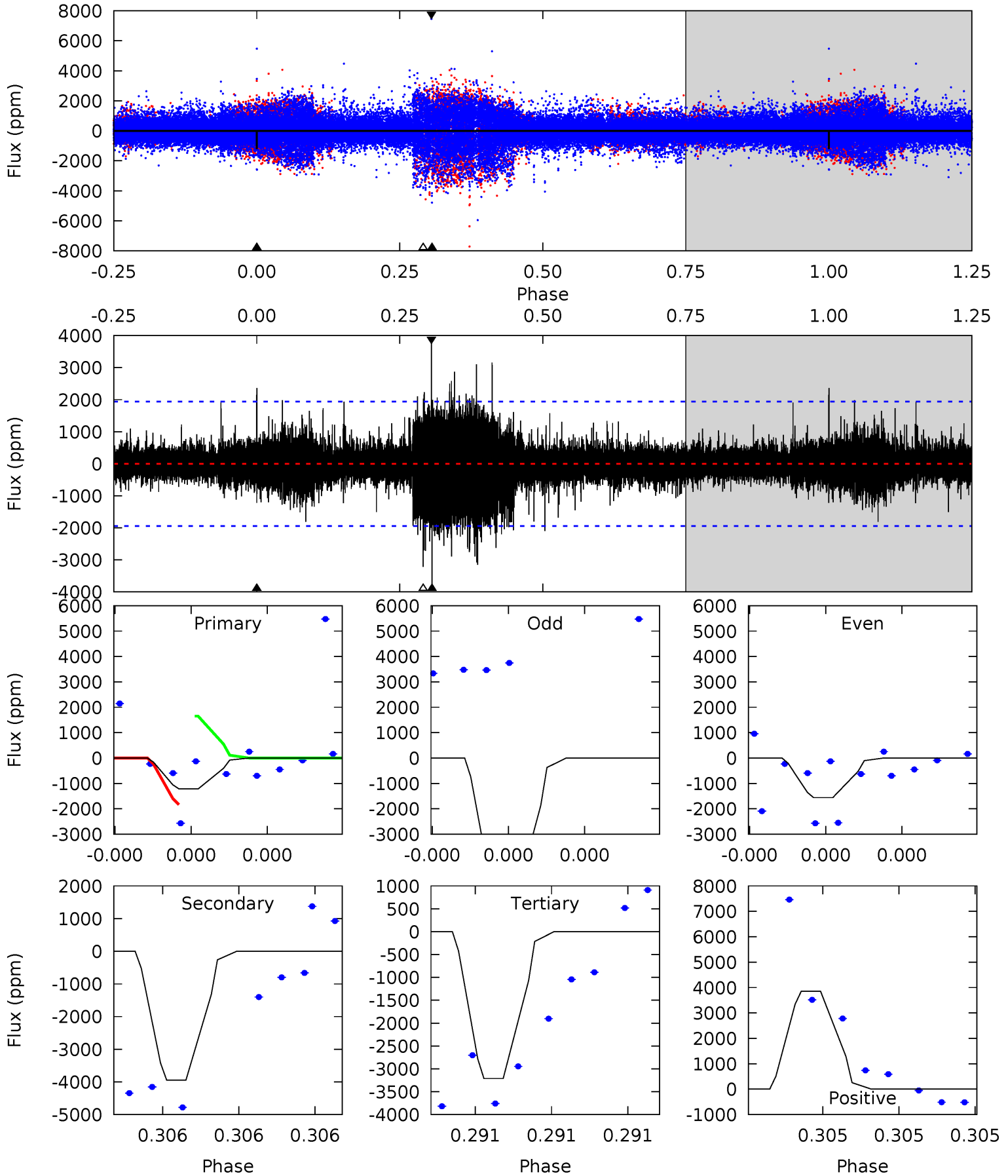
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.96	6.84	5.99	19.0	5.90	3.96	1.36	1.97	-11.0	0.85	-12.2	0.44	0.96	0.70	0.14



Alt Model-Shift Uniqueness Test

007449976-01, P = 571.683331 Days, E = 371.961433 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.65	11.9	9.65	11.6	5.84	3.87	1.47	-6.00	-7.94	2.21	0.27	5.83	-2.27	0.49	0.31



Stellar Parameters For KIC 007449976

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4188^{+138}_{-138}	$4.624^{+0.049}_{-0.021}$	$0.100^{+0.250}_{-0.300}$	$0.649^{+0.036}_{-0.057}$	$0.646^{+0.051}_{-0.057}$	$3.330^{+0.719}_{-0.287}$
	+3%/-3%	+1%/-0%	+250%/-300%	+6%/-9%	+8%/-9%	+22%/-9%
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 007449976-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1232 ± 180	$16.30^{+18.32}_{-11.58}$	191^{+7}_{-6}	2421^{+964}_{-379}	3600^{+39287}_{-2840}
Alt.	-3946 ± 333	$17.35^{+16.64}_{-11.75}$	191^{+7}_{-7}	2748^{+1109}_{-423}	10210^{+84242}_{-7609}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

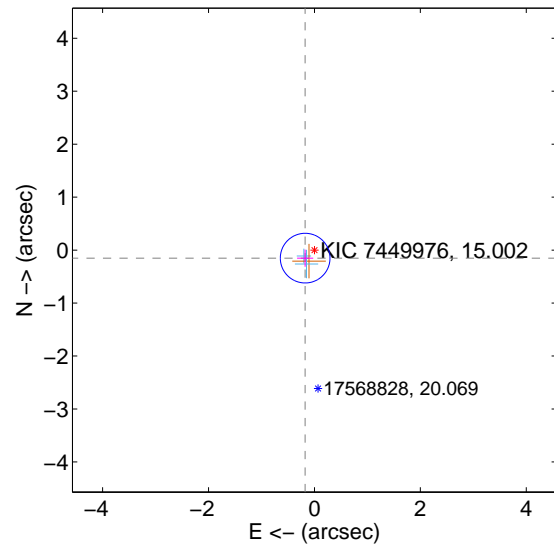
Supplemental centroid analysis for 007449976-01. Kepler magnitude: 15.00. Transit SNR 6.27

There are 2 quarters with good PRF difference image offsets

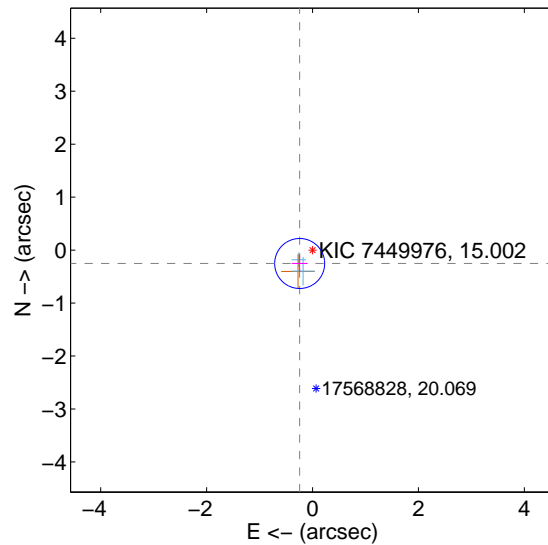
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.232 ± 0.156	1.48	0.175 ± 0.152	-0.152 ± 0.162
PRF-fit source offset from KIC position	0.350 ± 0.157	2.23	0.243 ± 0.152	-0.253 ± 0.162
photometric centroid source offset	0.28 ± 1.18	0.24	0.07 ± 1.59	-0.27 ± 1.14

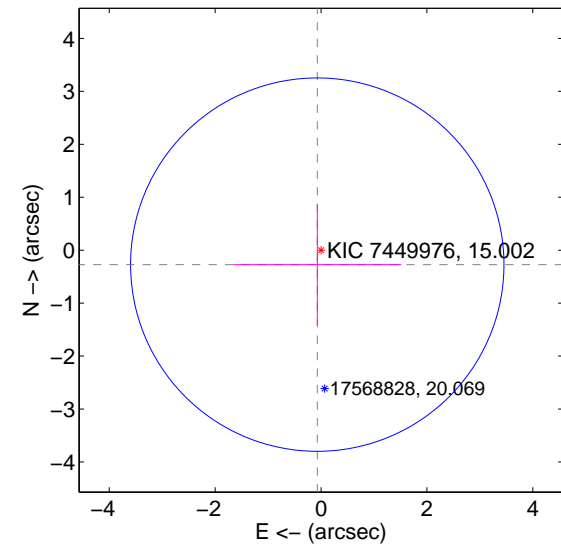
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

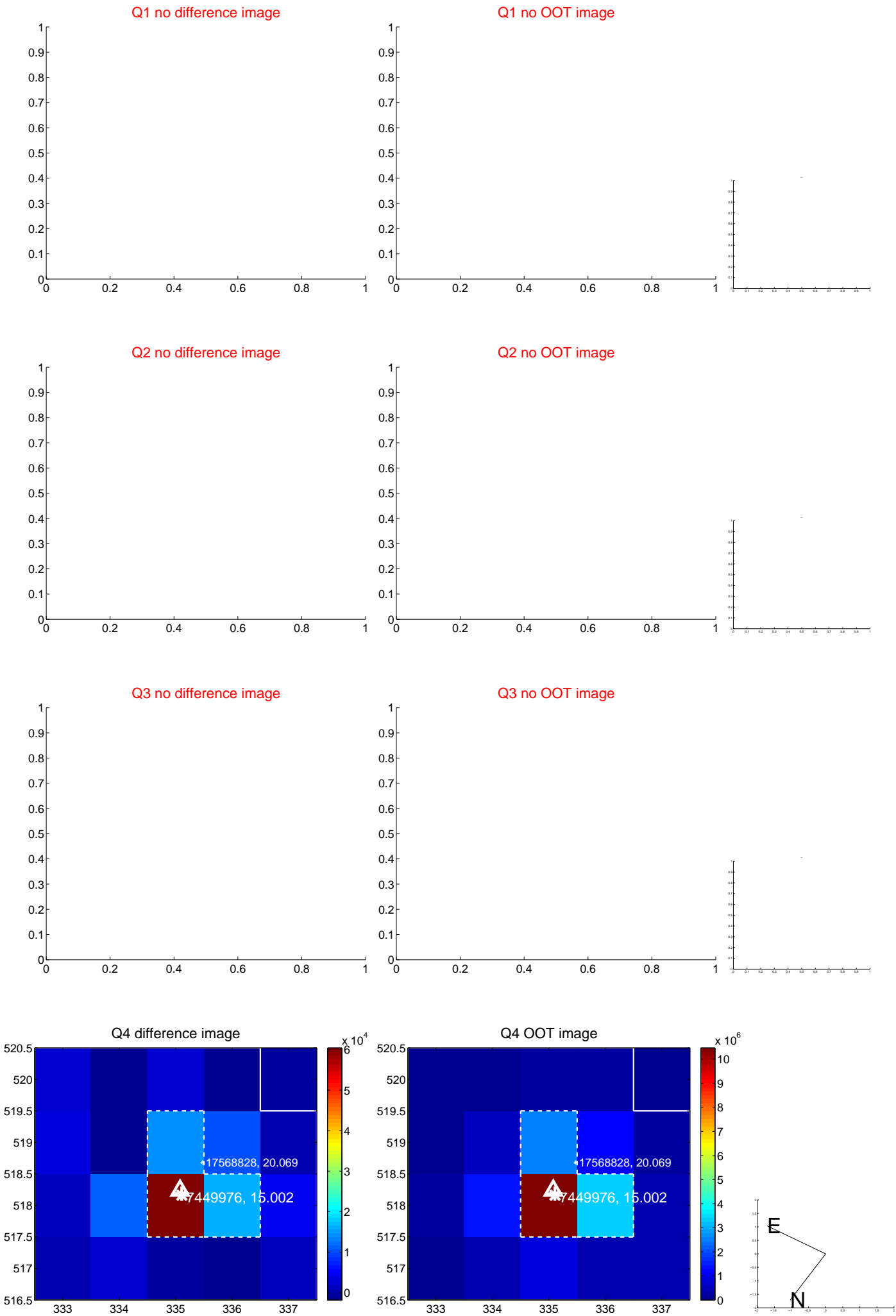


offset from photometric centroids



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.

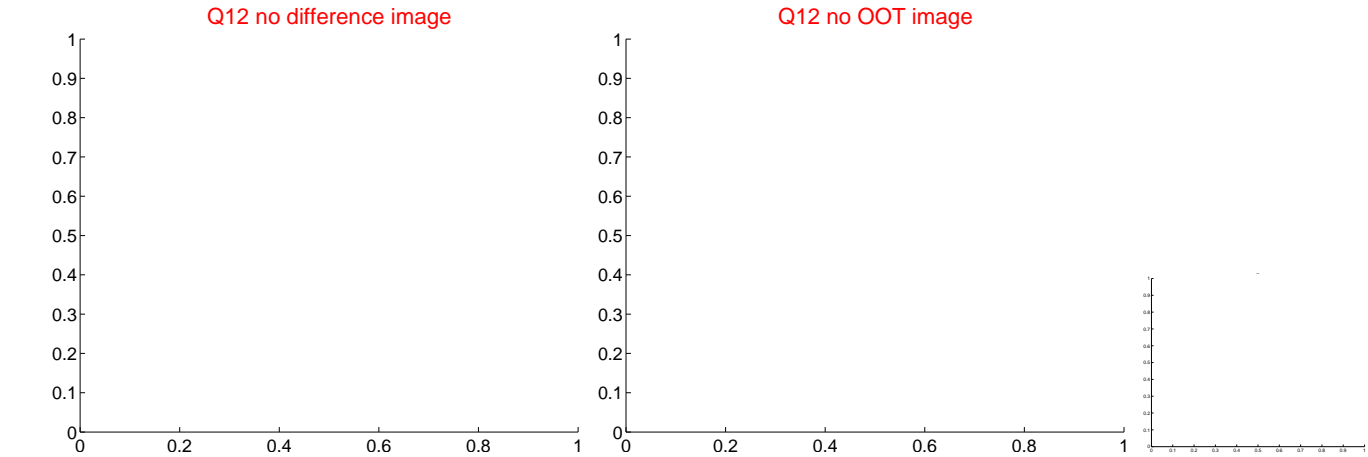
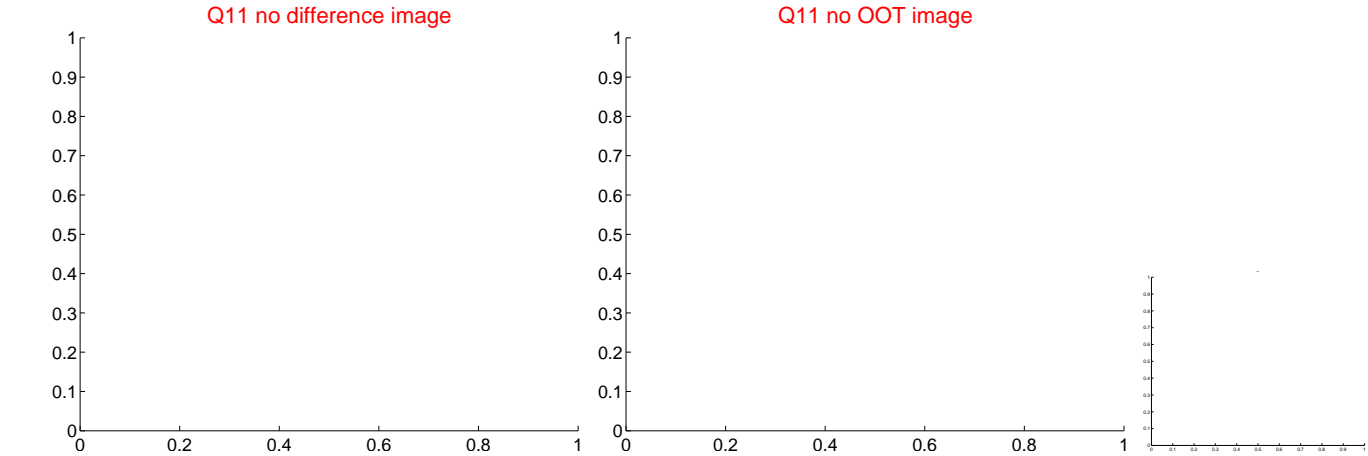
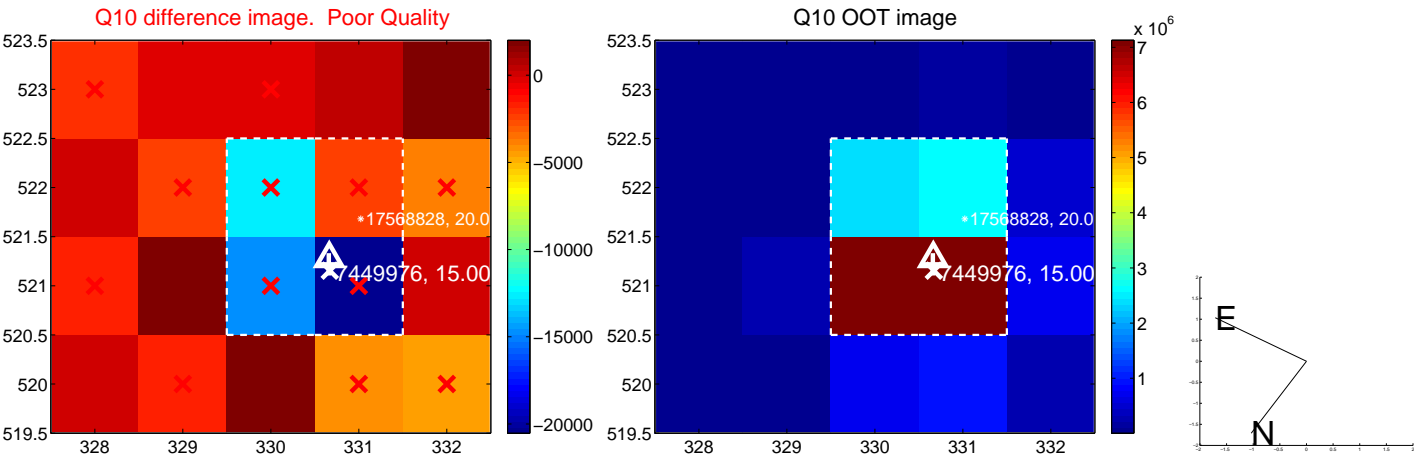
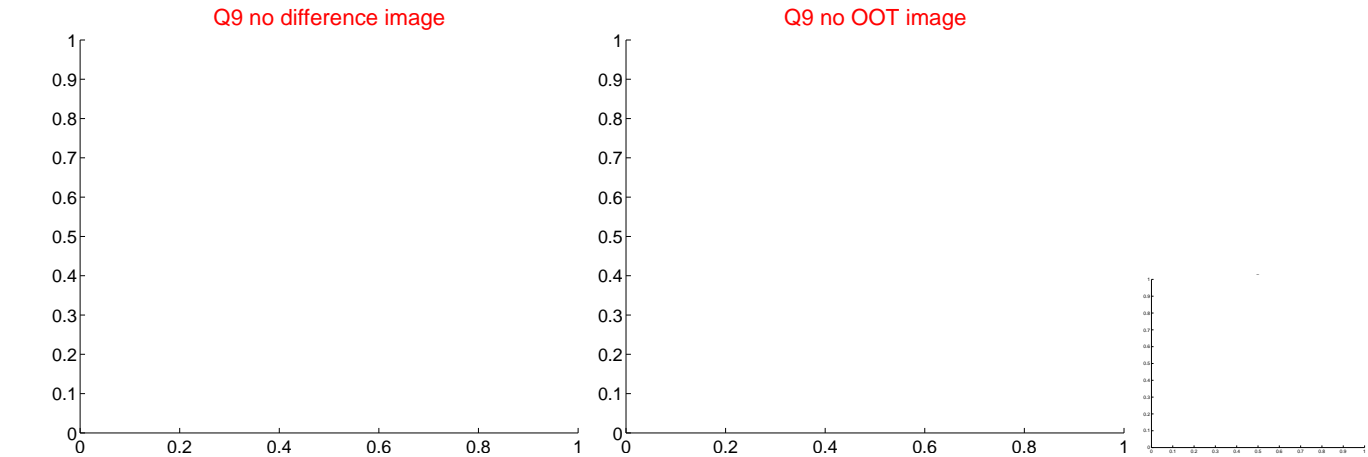
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



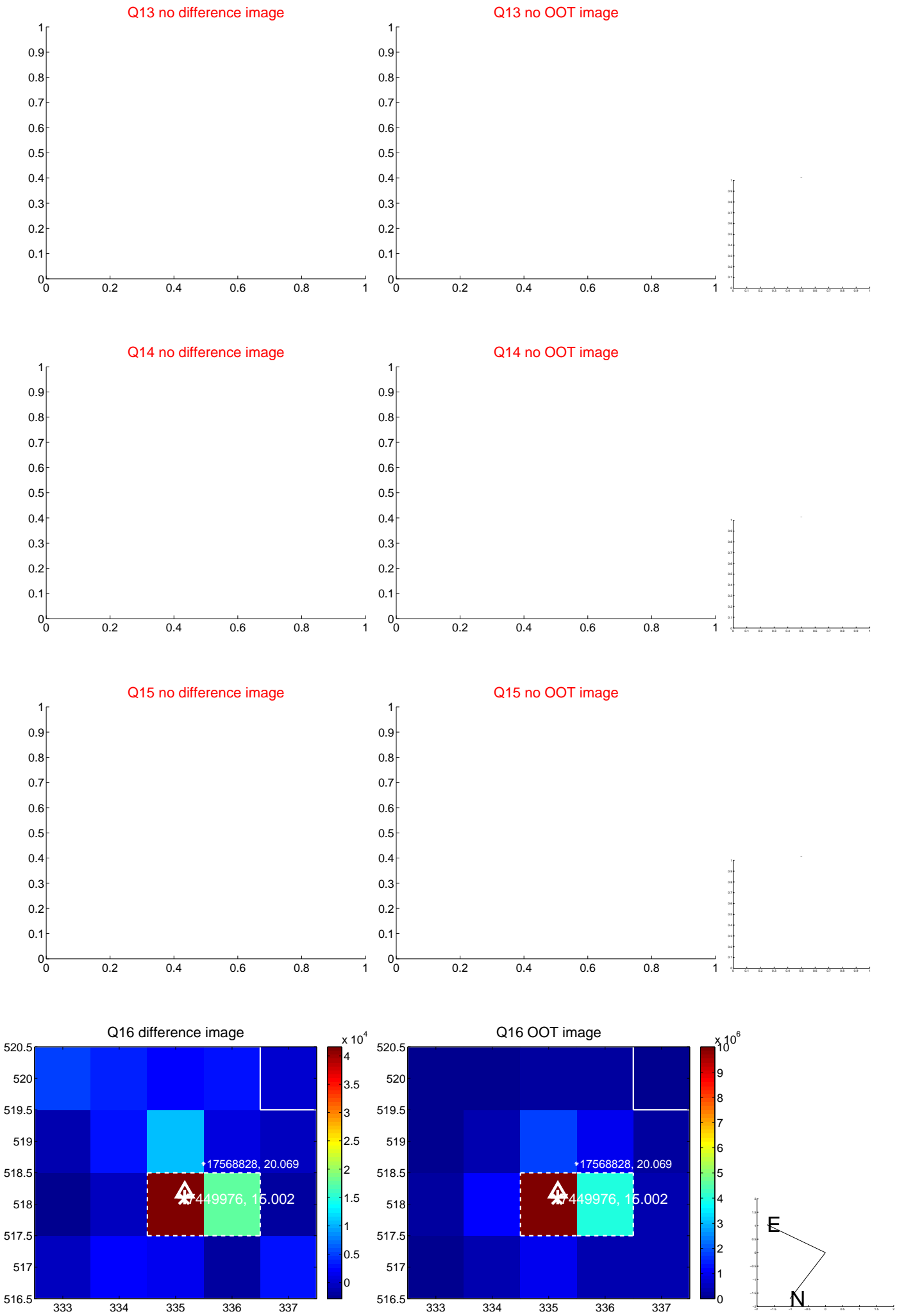
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



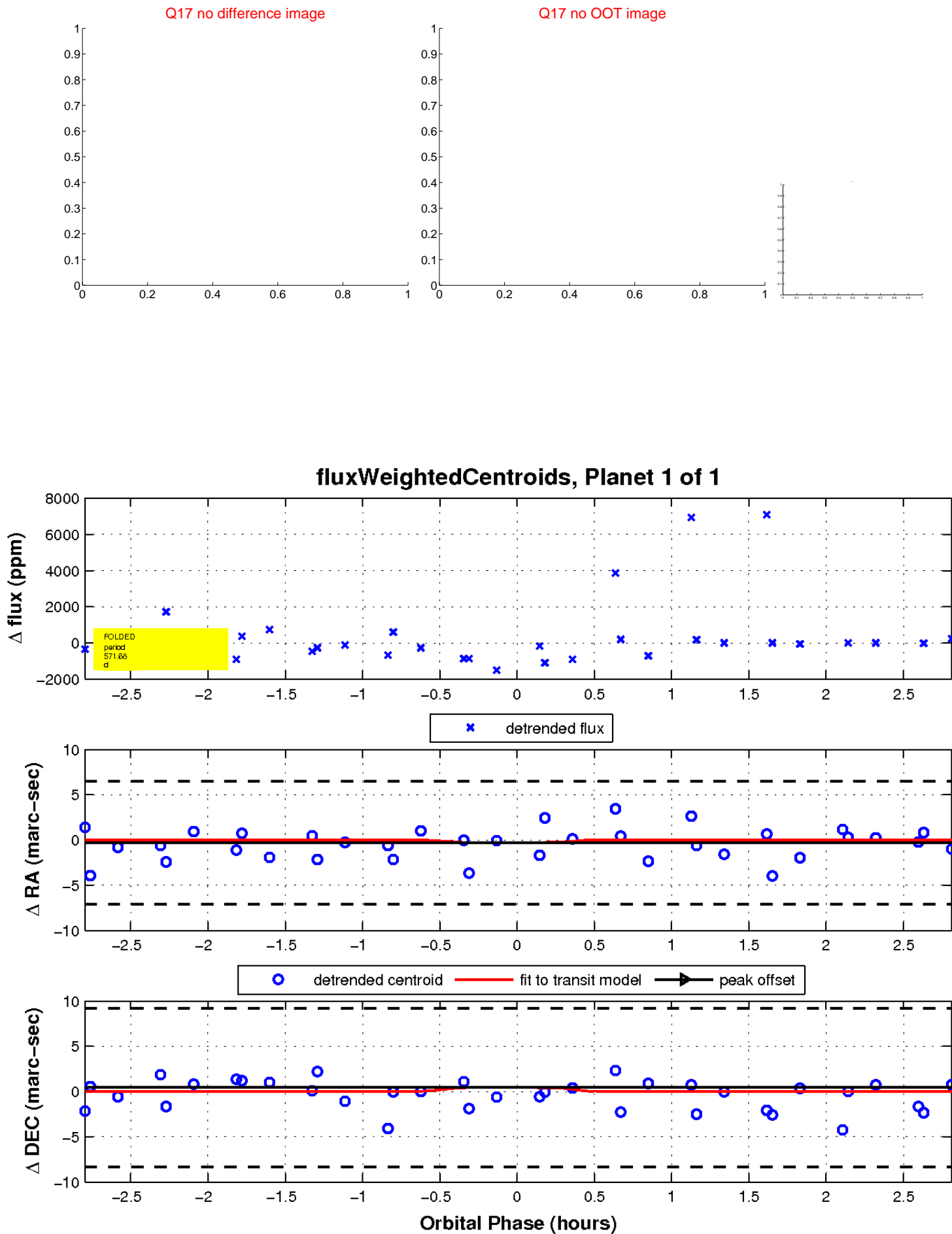
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

