

KIC 001724961

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})
001724961-01	OBS	No	0.620596	131.924135	84.4	2.041	9.1	7.3	2.14	7311	2.29	41982.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001724961-01	OBS	FP	0.00	1	0	0	1	LPP_DV—MOD_NONUNIQU_ALT—CENT_SATURATED—EPHEM_MATCH

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.

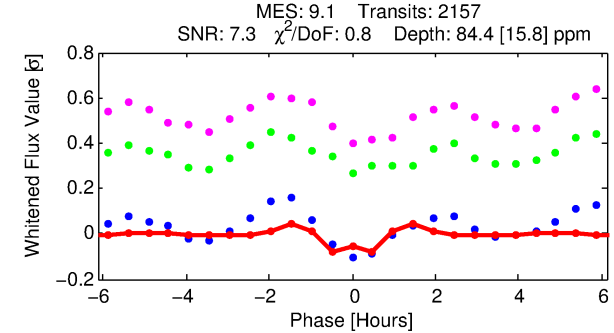
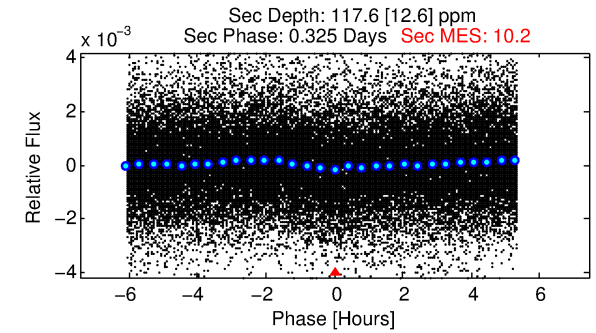
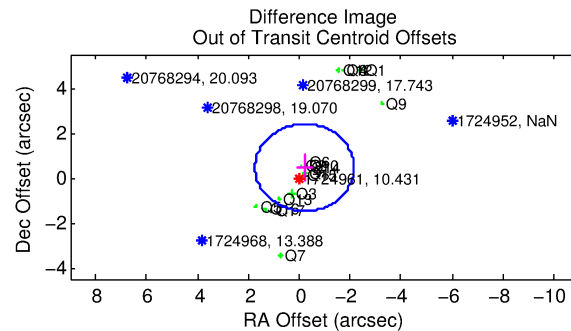
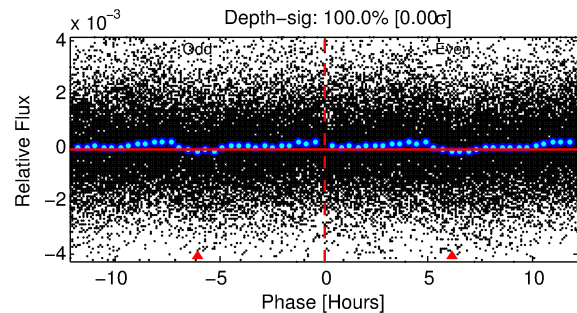
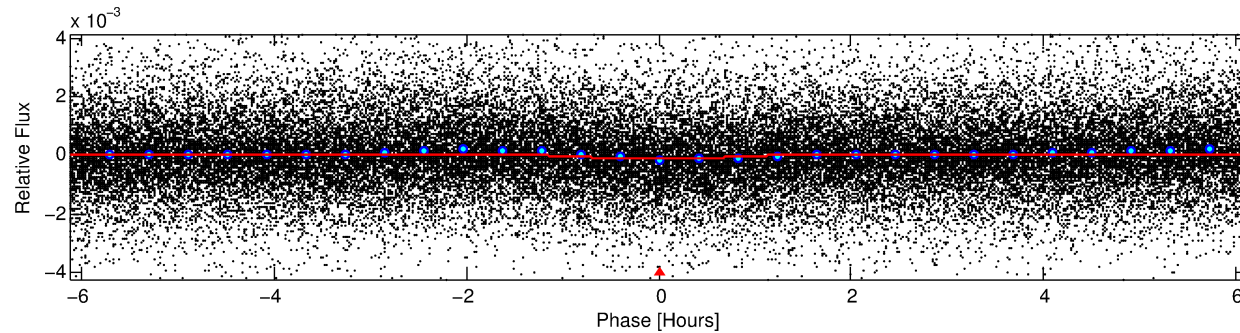
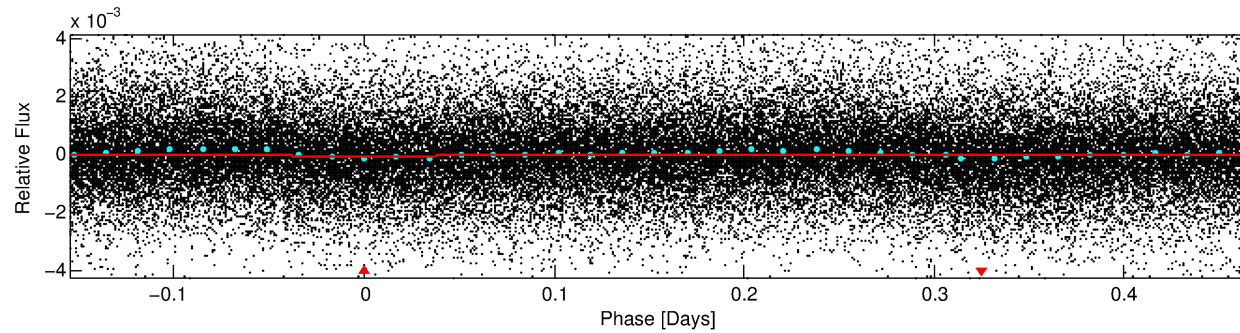
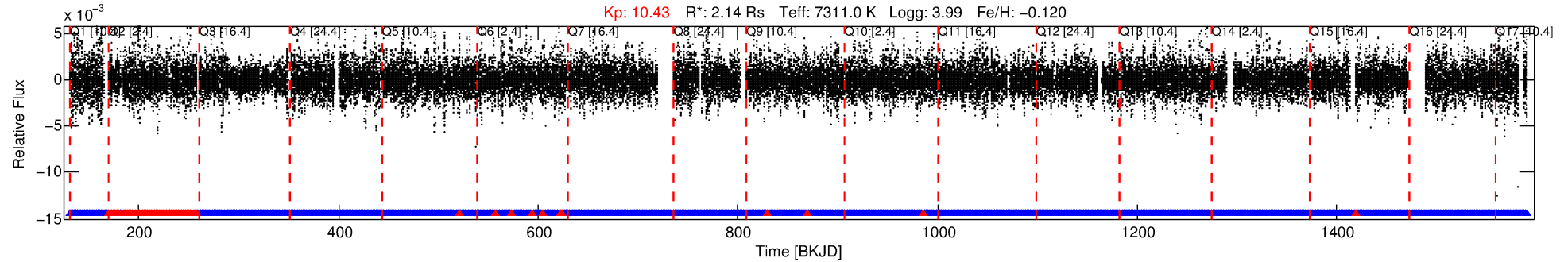
Ephemeris Match Information For 001724961-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
001724961-01	1724961	001724968-01	1724968	1:1	4.7	1	-1	13.39	10.43	2.12	Direct-PRF	0	0.15	1.00

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 1724961 Candidate: 1 of 1 Period: 0.621 d



DV Fit Results:

Period = 0.62060 [0.00001] d
 Epoch = 131.9241 [0.0017] BKJD
 Rp/R* = 0.0098 [0.0034]
 a/R* = 1.42 [1.46]
 b = 0.90 [0.44]
 Seff = 41982.76 [18860.82]
 Teq = 3650 [410] K
 Rp = 2.29 [1.07] Re
 a = 0.0167 [0.0046] AU
 Ag = 3.45 [2.85] [0.86 σ]
 Tefp = 7691 [1394] K [2.78 σ]

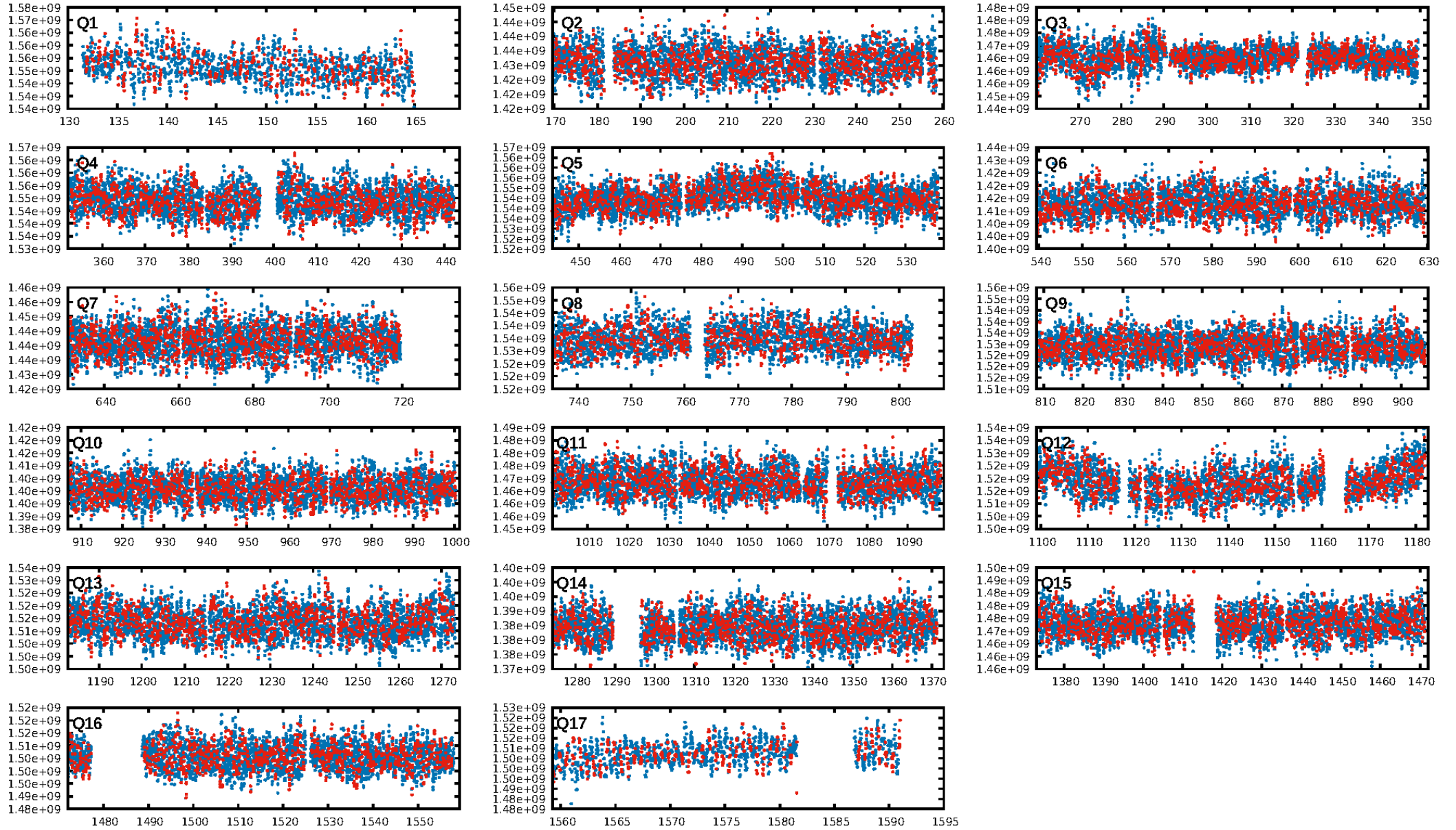
DV Diagnostic Results:

ShortPeriod-sig: N/A
 LongPeriod-sig: N/A
 ModelChiSquare2-sig: N/A
 ModelChiSquareGof-sig: N/A
 Bootstrap-pfa: 1.33e-19
 RollingBand-fgt: 0.93 [1915/2060]
 GhostDiagnostic-chr: N/A
 Centroid-sig: 13.5%
 Centroid-so: 0.499 arcsec [1.64 σ]
 OotOffset-rm: 0.504 arcsec [0.78 σ]
 OotOffset-st: 4/4/4/5 [17]
 KicOffset-rm: 0.917 arcsec [1.37 σ]
 KicOffset-st: 4/4/4/5 [17]
 DiffImageQuality-fgm: 0.53 [9/17]
 DiffImageOverlap-fno: 1.00 [17/17]

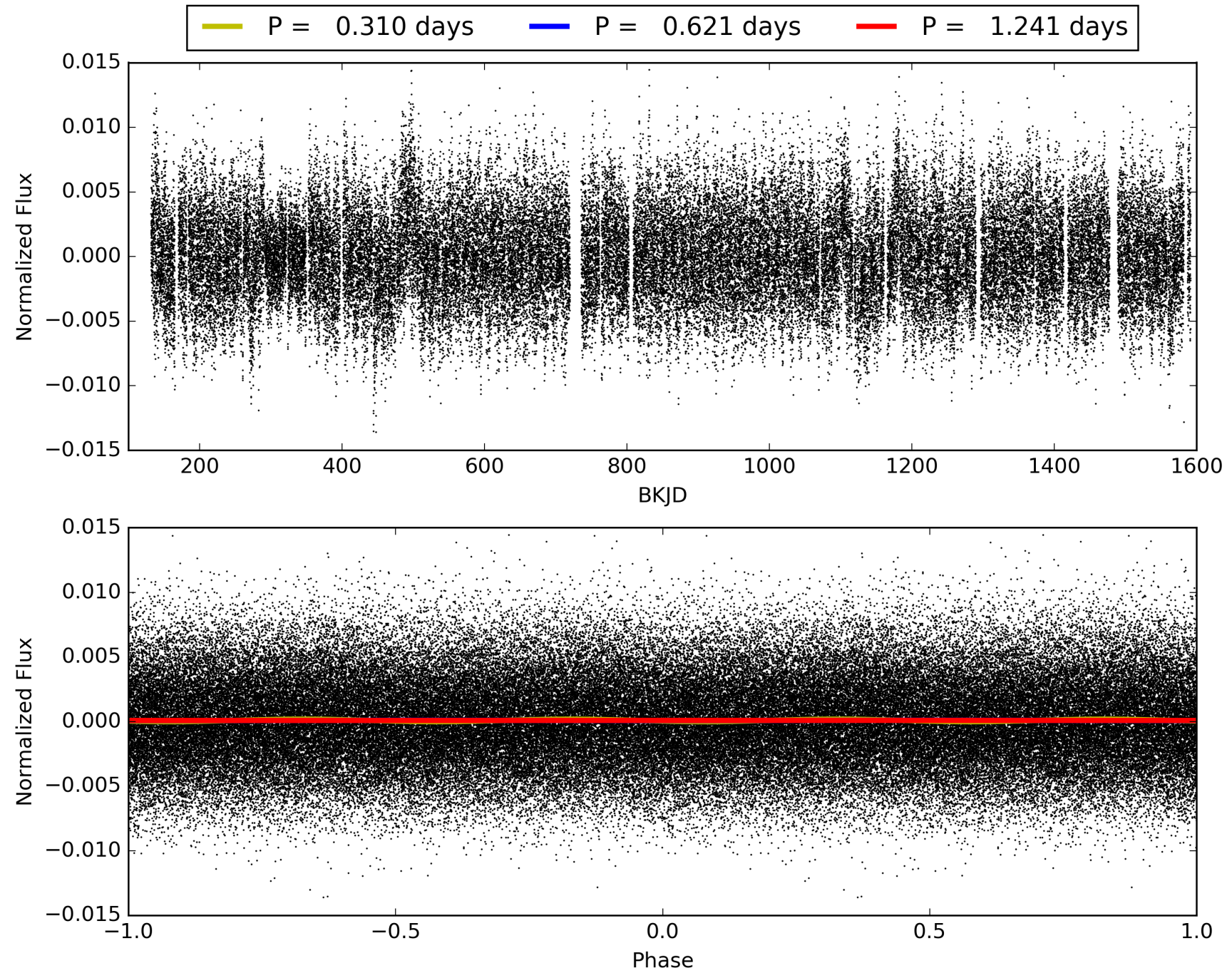
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:40:06 Z

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

TCE 001724961-01, PDC Light Curves

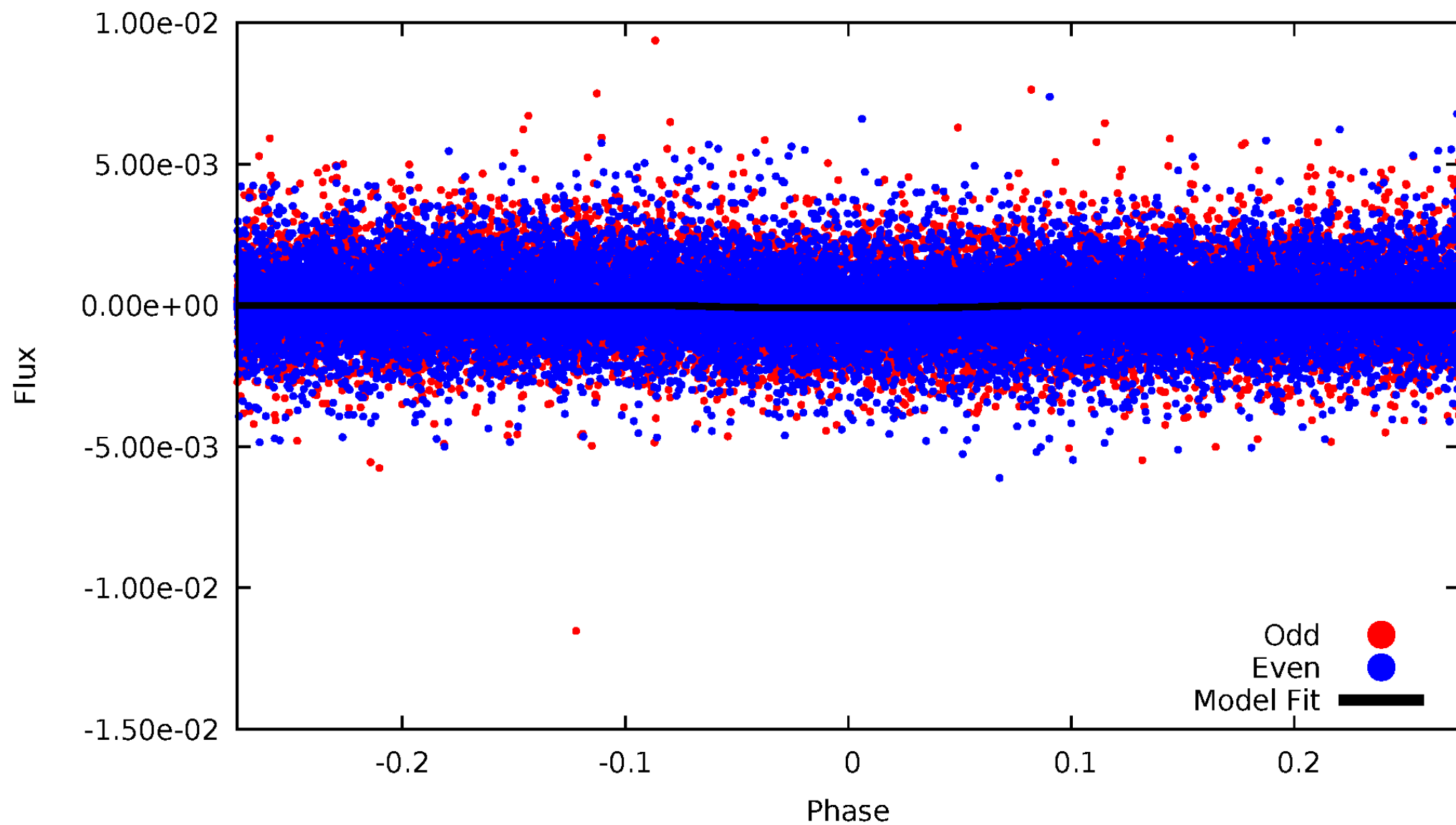


TCE 001724961-01



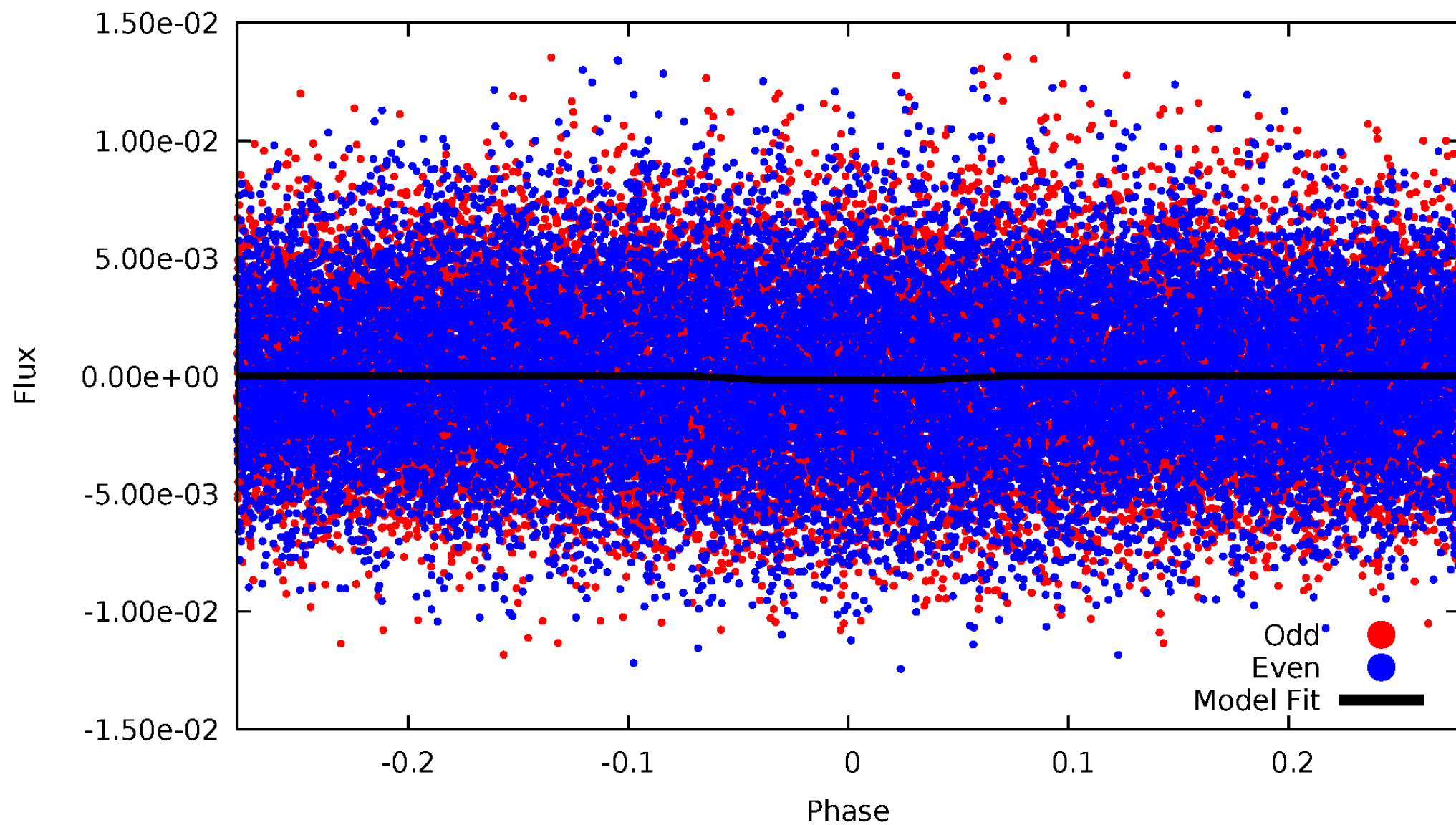
DV Odd/Even

TCE 001724961-01



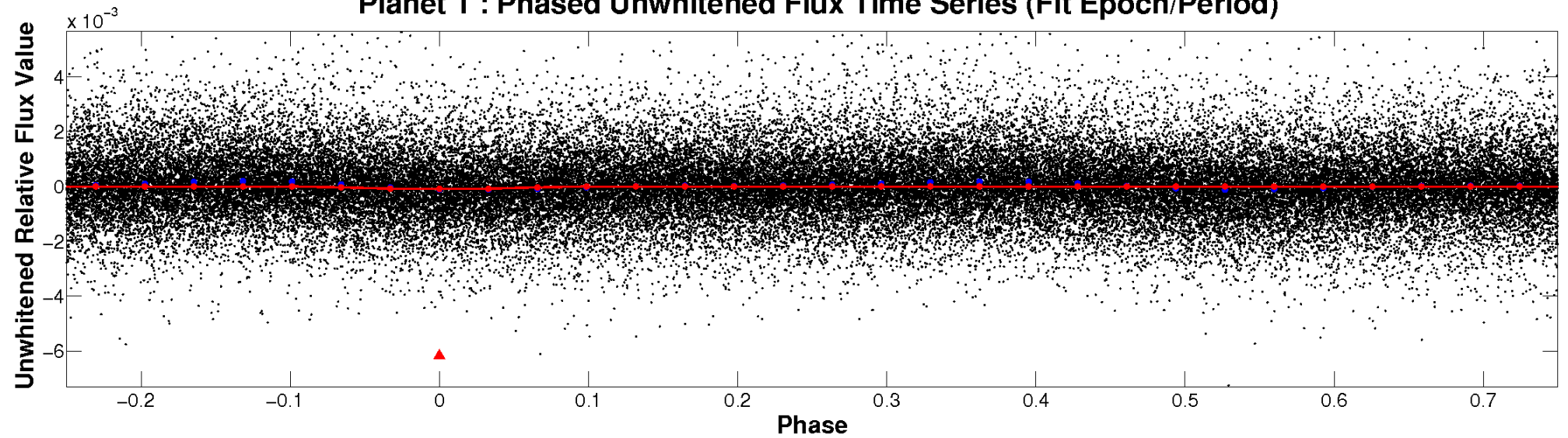
ALT Odd/Even

TCE 001724961-01

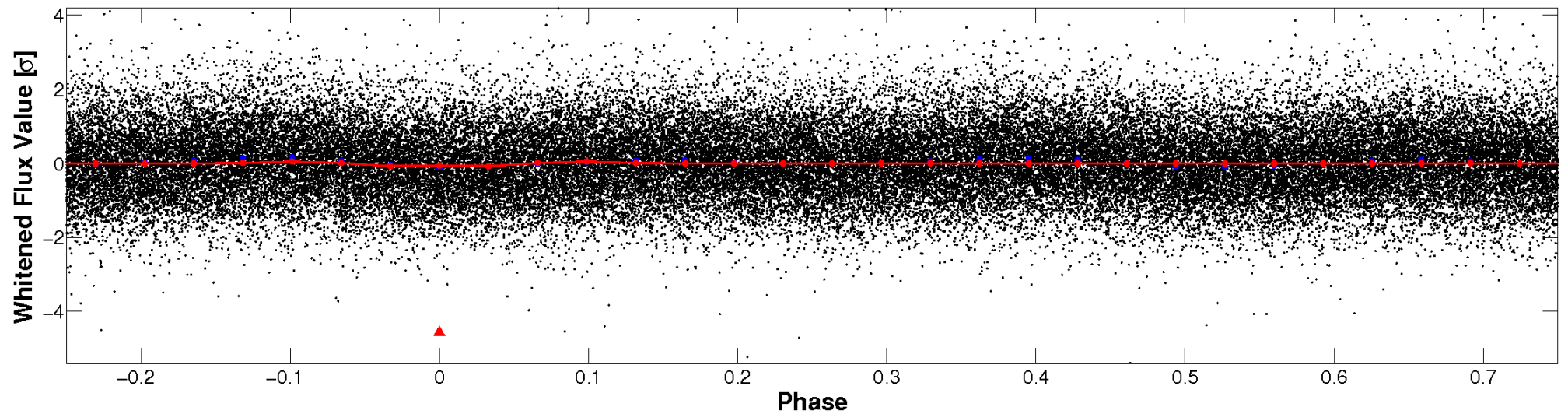


Non-Whitened Vs. Whitened Light Curve

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

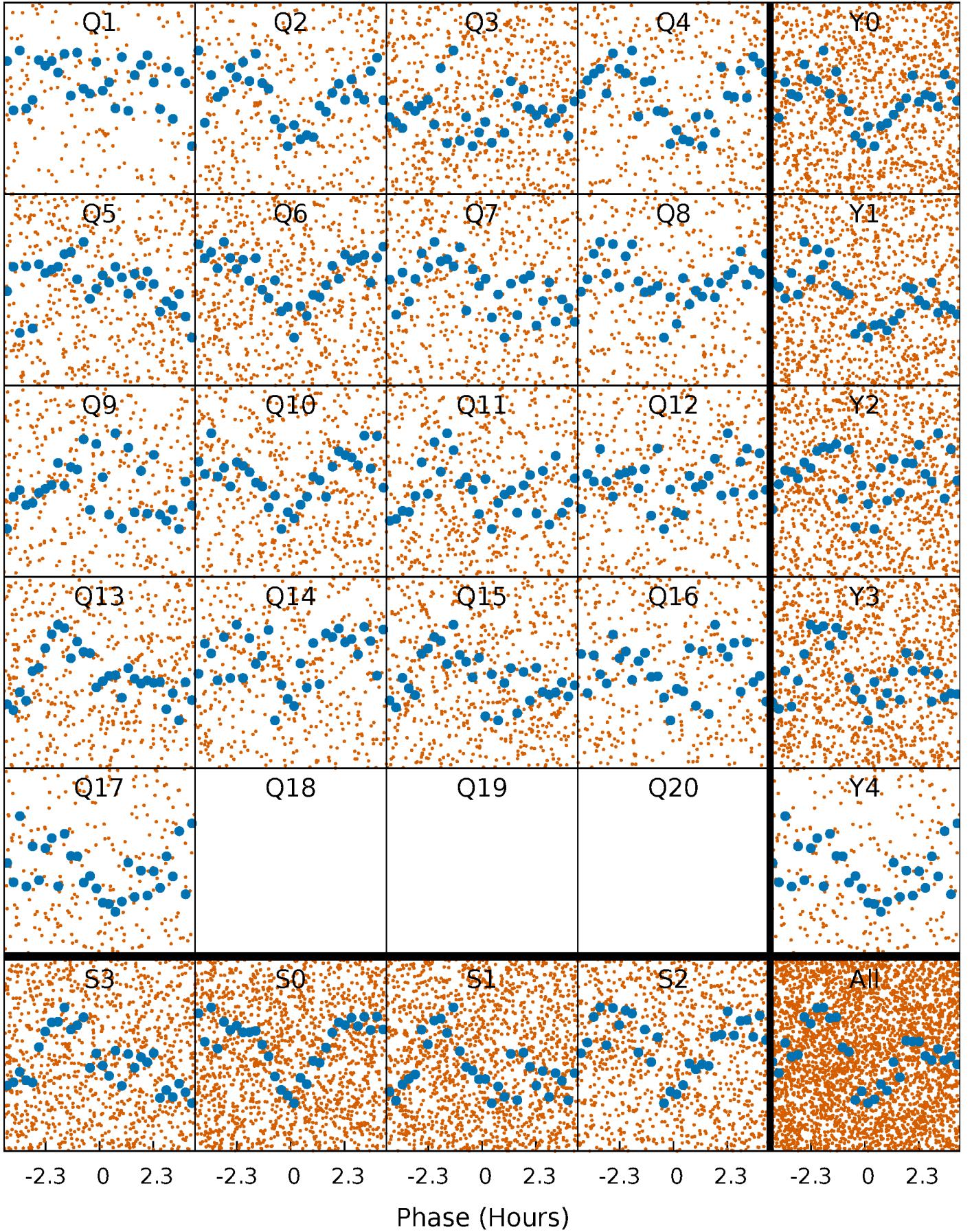


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



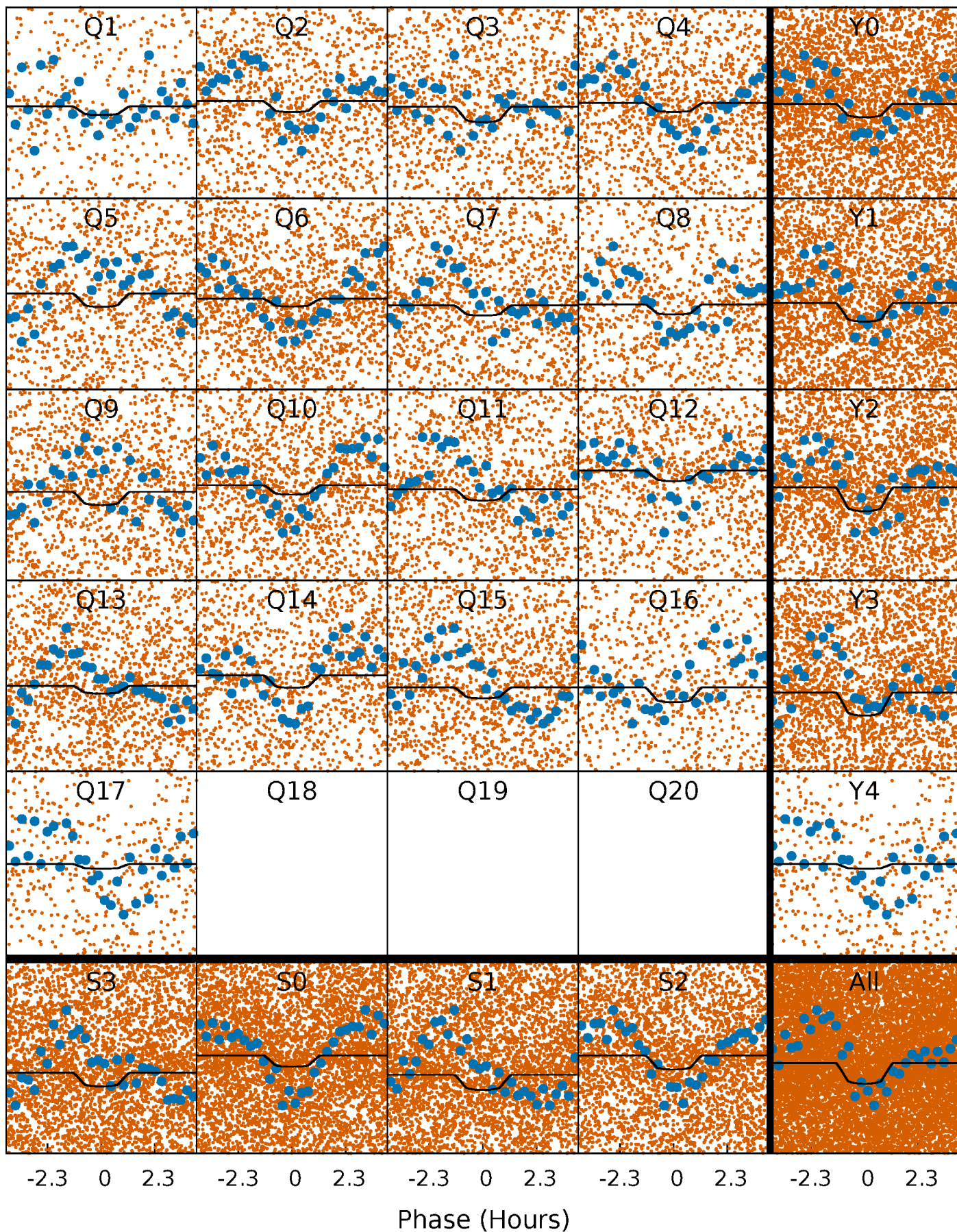
PDC Quarter-Phased Transit Curves

TCE 001724961-01 P= 0.620596 Days $T_0=131.924135$ (BKJD)



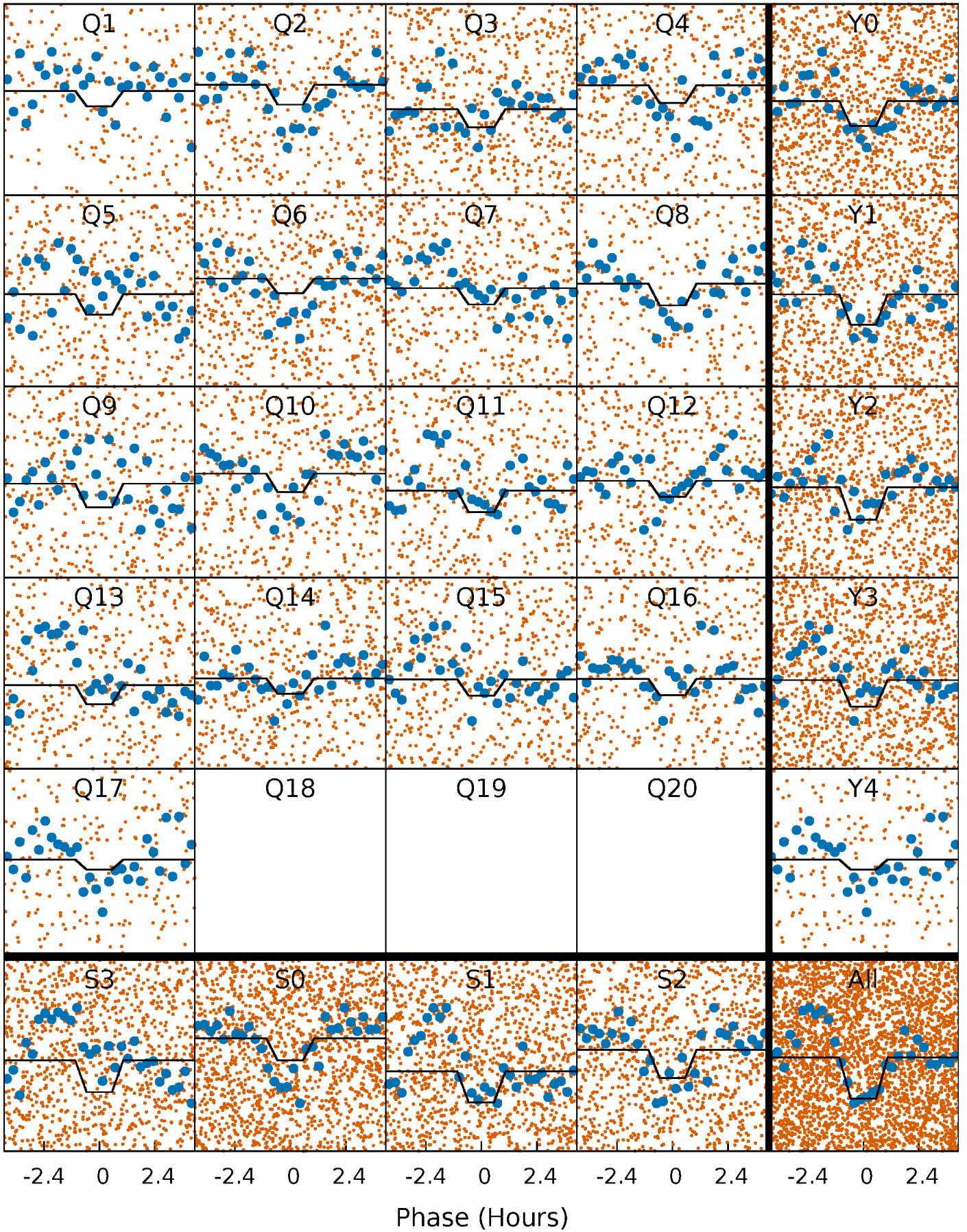
DV Quarter-Phased Transit Curves

TCE 001724961-01 P= 0.620596 Days $T_0=131.924135$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

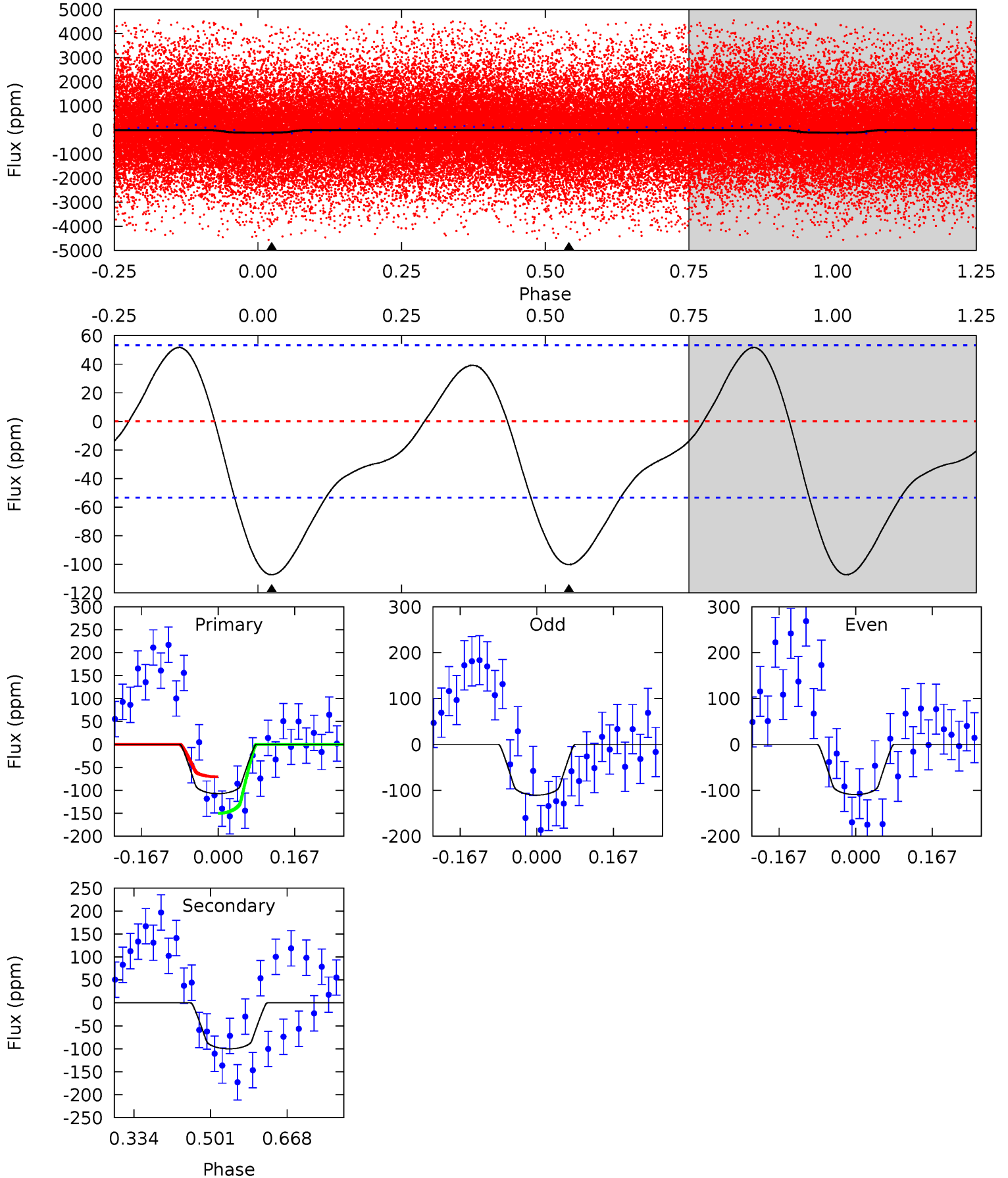
TCE 001724961-01 P= 0.620604 Days $T_0=131.925303$ (BKJD)



DV Model-Shift Uniqueness Test

001724961-01, P = 0.620596 Days, E = 131.303539 Days

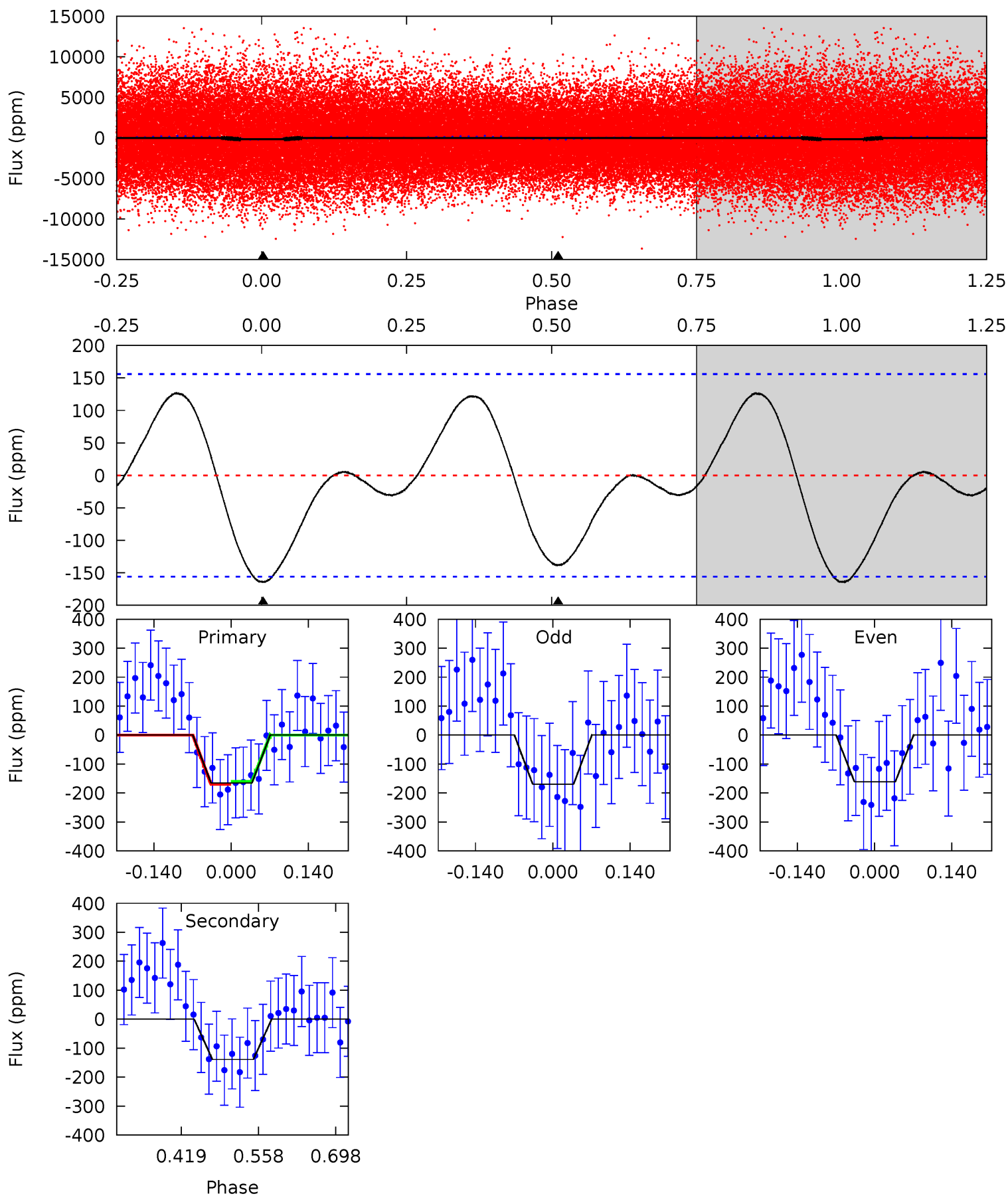
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.95	8.36	0	0	4.46	1.38	2.11	8.95	8.95	8.36	8.36	0.05	0.69	0.33	3.34



Alt Model-Shift Uniqueness Test

001724961-01, P = 0.620604 Days, E = 131.304699 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.76	4.01	0	0	4.49	1.48	1.57	4.76	4.76	4.01	4.01	0.12	0.61	0.44	0.14



Stellar Parameters For KIC 001724961

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7311^{+203}_{-279}	$3.986^{+0.240}_{-0.160}$	$-0.120^{+0.250}_{-0.350}$	$2.143^{+0.544}_{-0.665}$	$1.620^{+0.199}_{-0.323}$	$0.232^{+0.355}_{-0.109}$
	+3%/-4%	+6%/-4%	+208%/-292%	+25%/-31%	+12%/-20%	+153%/-47%
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 001724961-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-100 ± 12	$2.20^{+0.89}_{-0.82}$	5062^{+370}_{-412}	7202^{+2352}_{-1232}	$3.173^{+4.601}_{-1.530}$
Alt.	-139 ± 35	$2.96^{+1.02}_{-0.84}$	5081^{+356}_{-442}	6573^{+1503}_{-969}	$2.323^{+2.417}_{-1.043}$

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 $A_{\text{obs}} \gg 1.0$

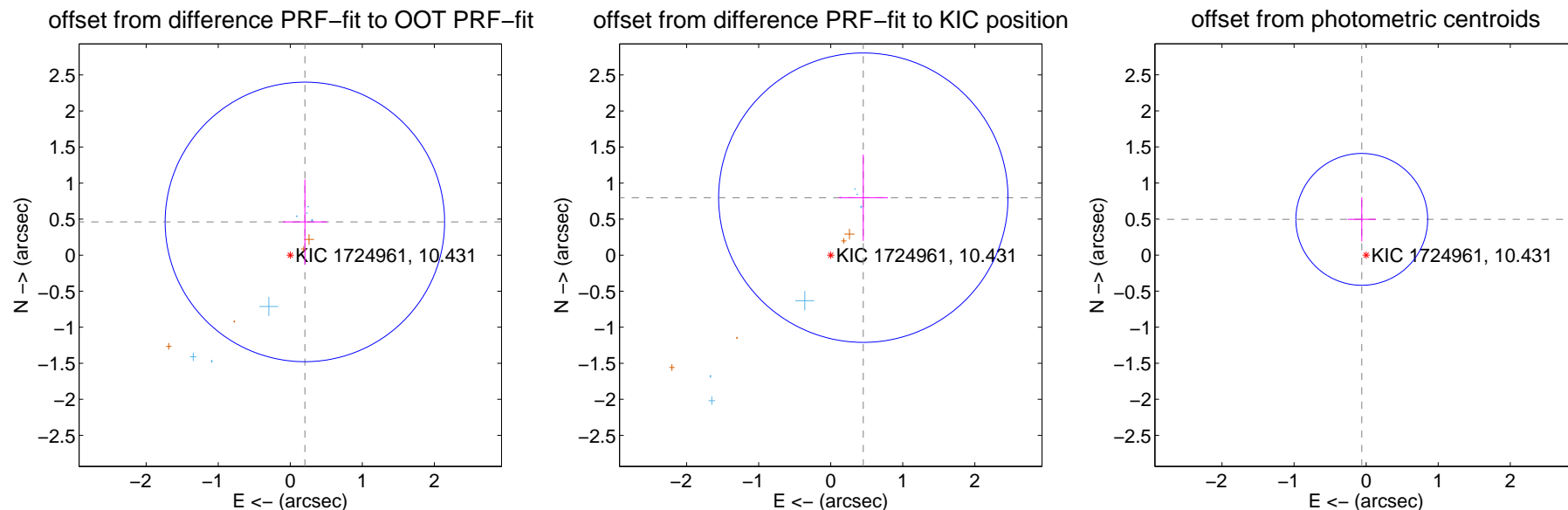
DV Centroid Data

Supplemental centroid analysis for 001724961-01. **Kepler magnitude: 10.43.** Transit SNR 7.27

There are 9 quarters with good PRF difference image offsets

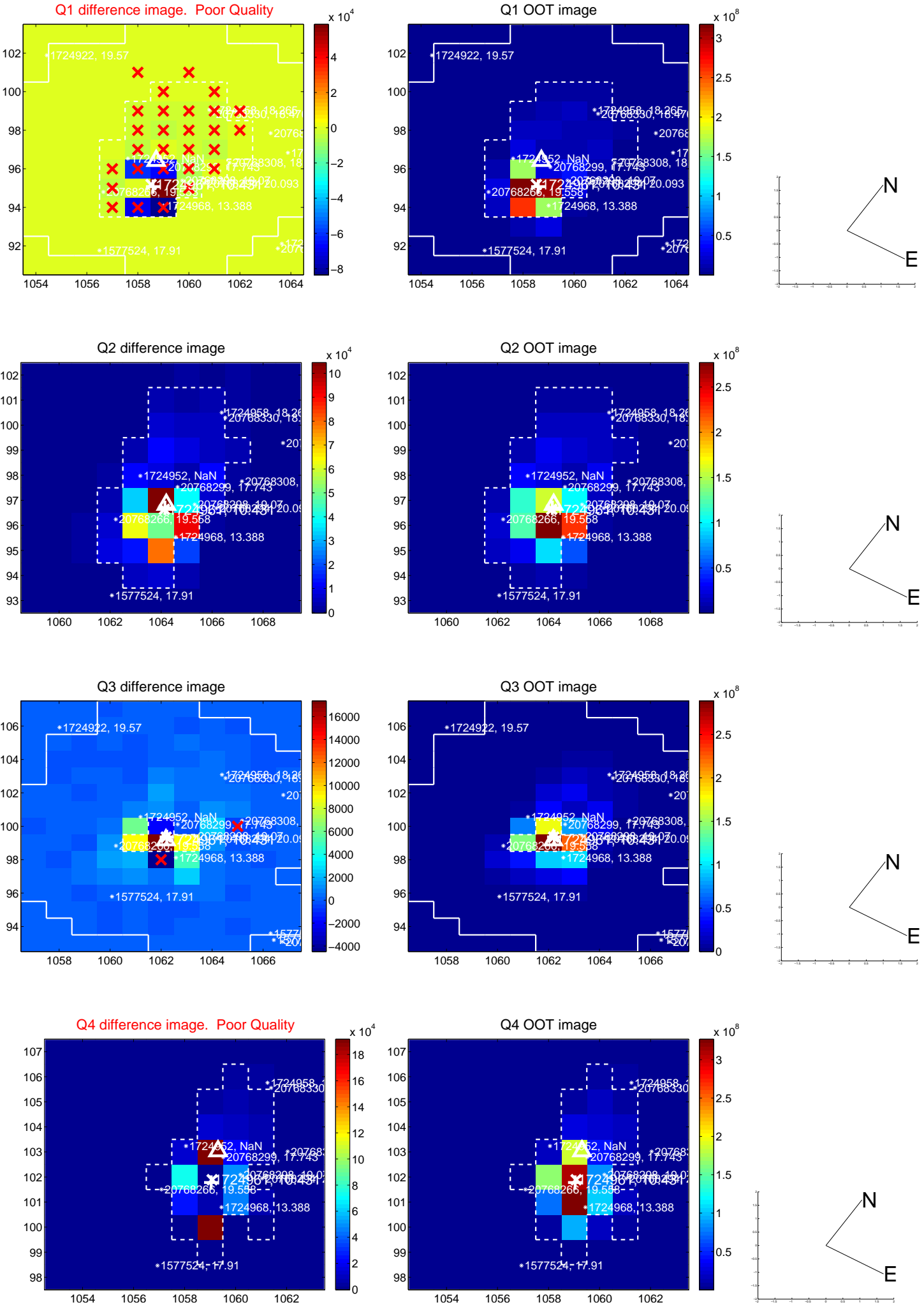
The direct PRF centroid is offset from the target star catalog position by about 0.62 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.504 ± 0.646	0.78	-0.203 ± 0.305	0.461 ± 0.590
PRF-fit source offset from KIC position	0.917 ± 0.669	1.37	-0.452 ± 0.341	0.797 ± 0.598
photometric centroid source offset	0.50 ± 0.30	1.64	0.06 ± 0.20	0.50 ± 0.31

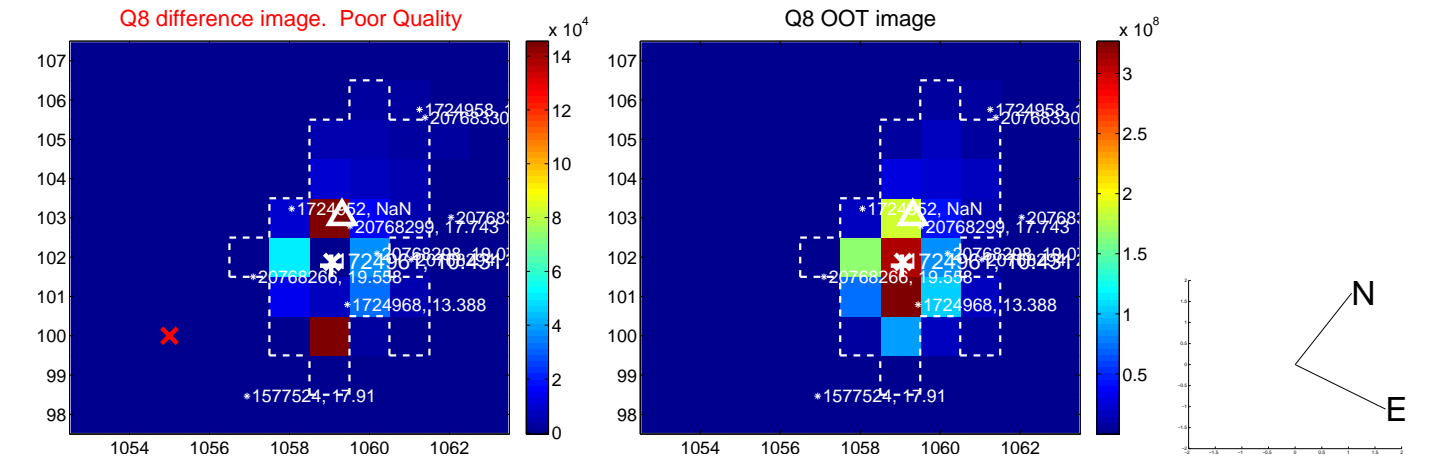
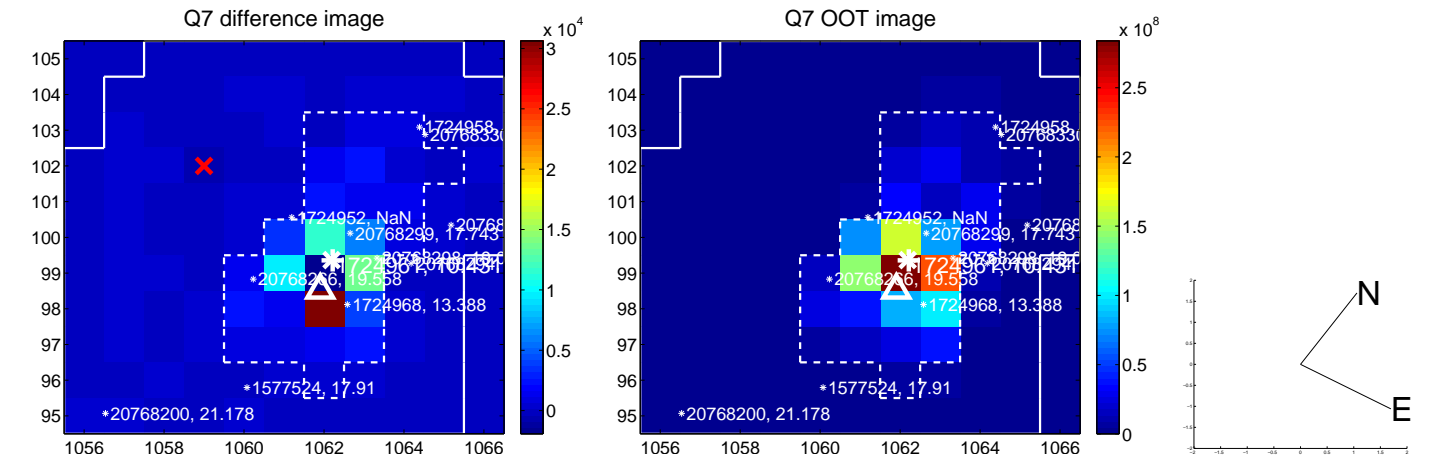
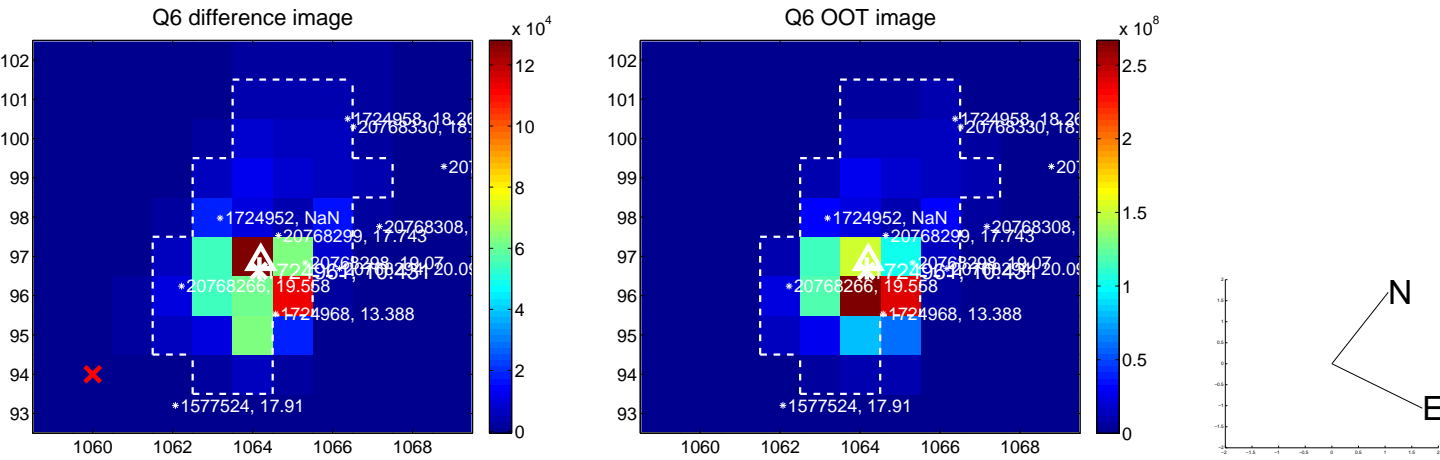
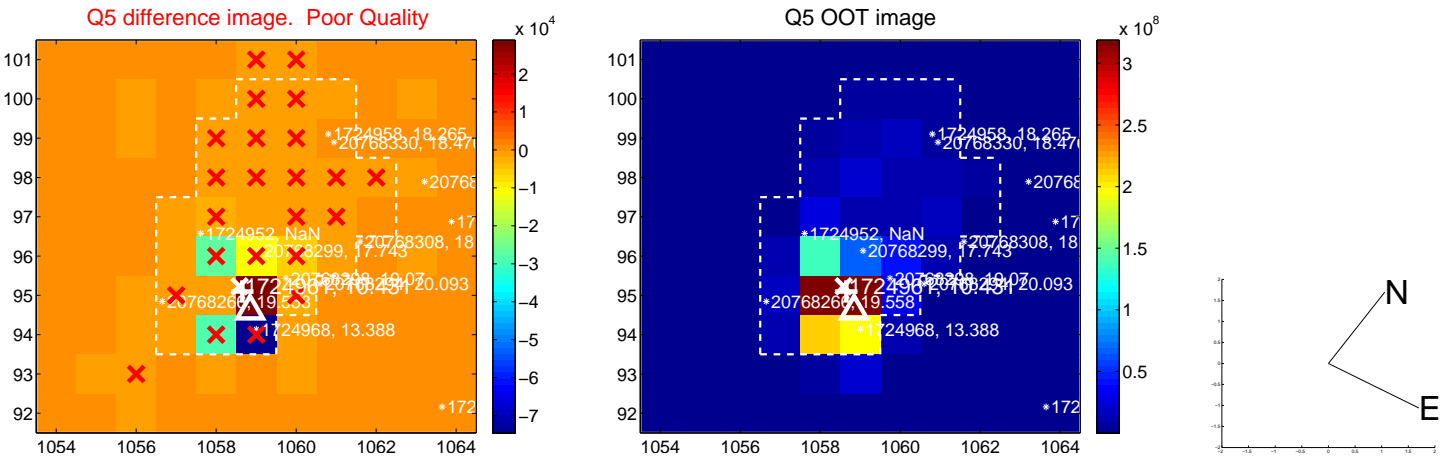


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

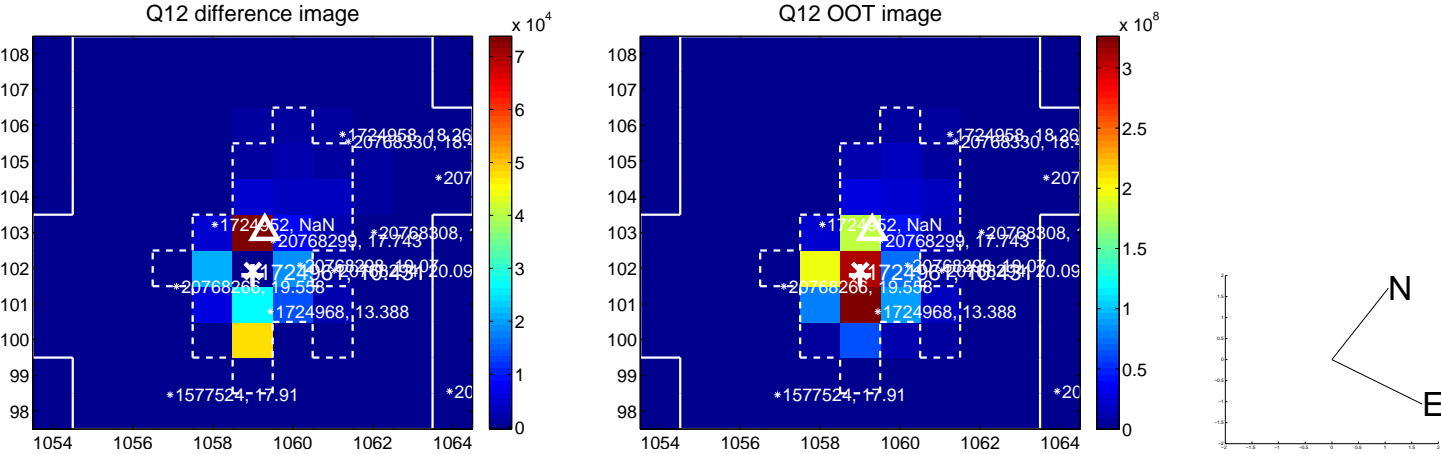
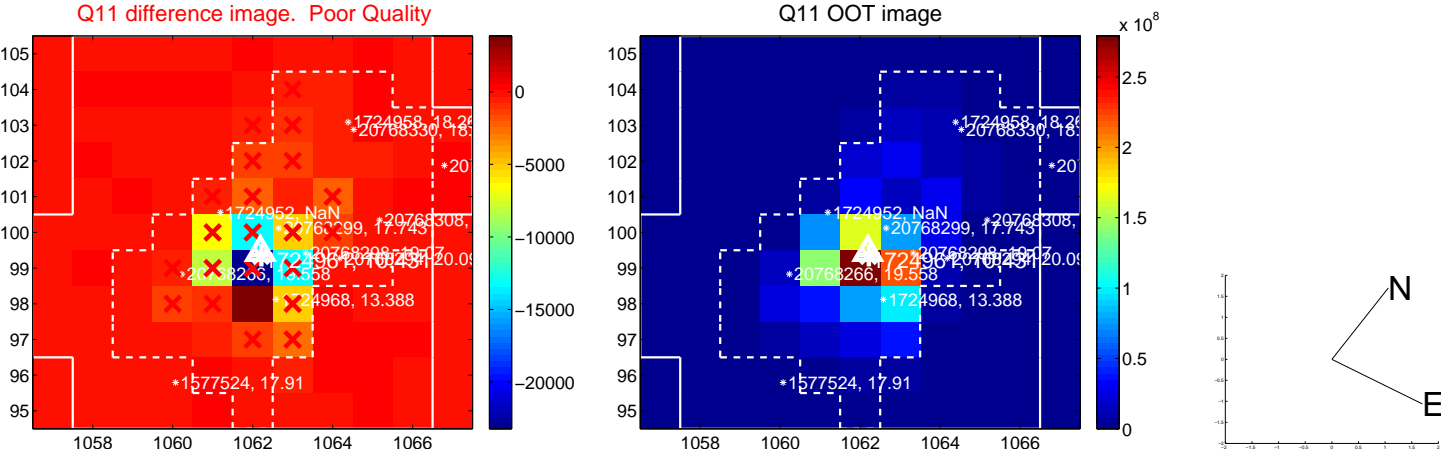
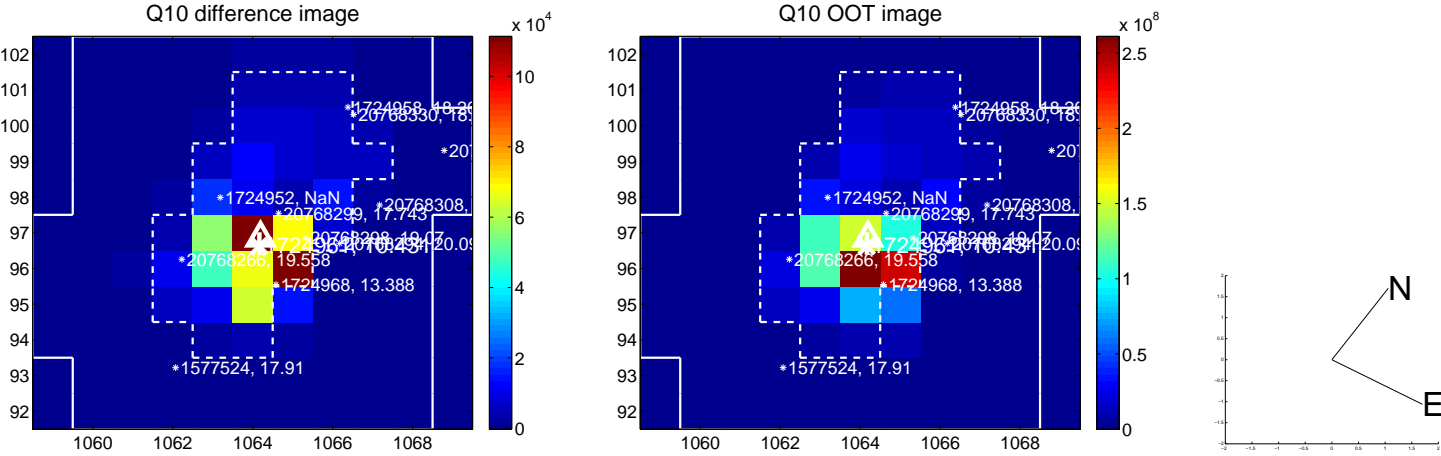
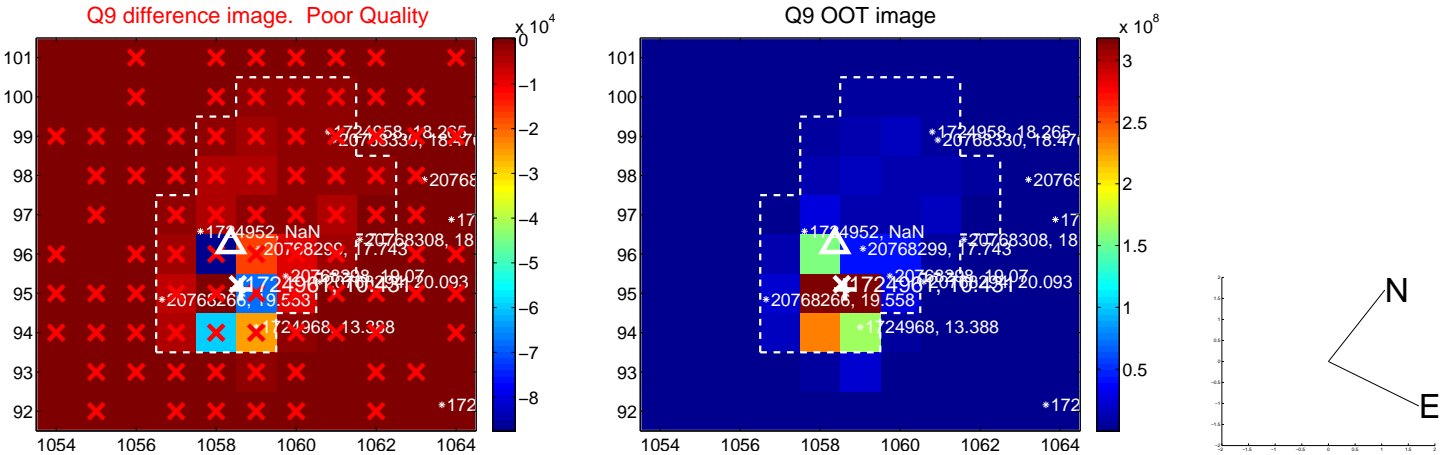
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



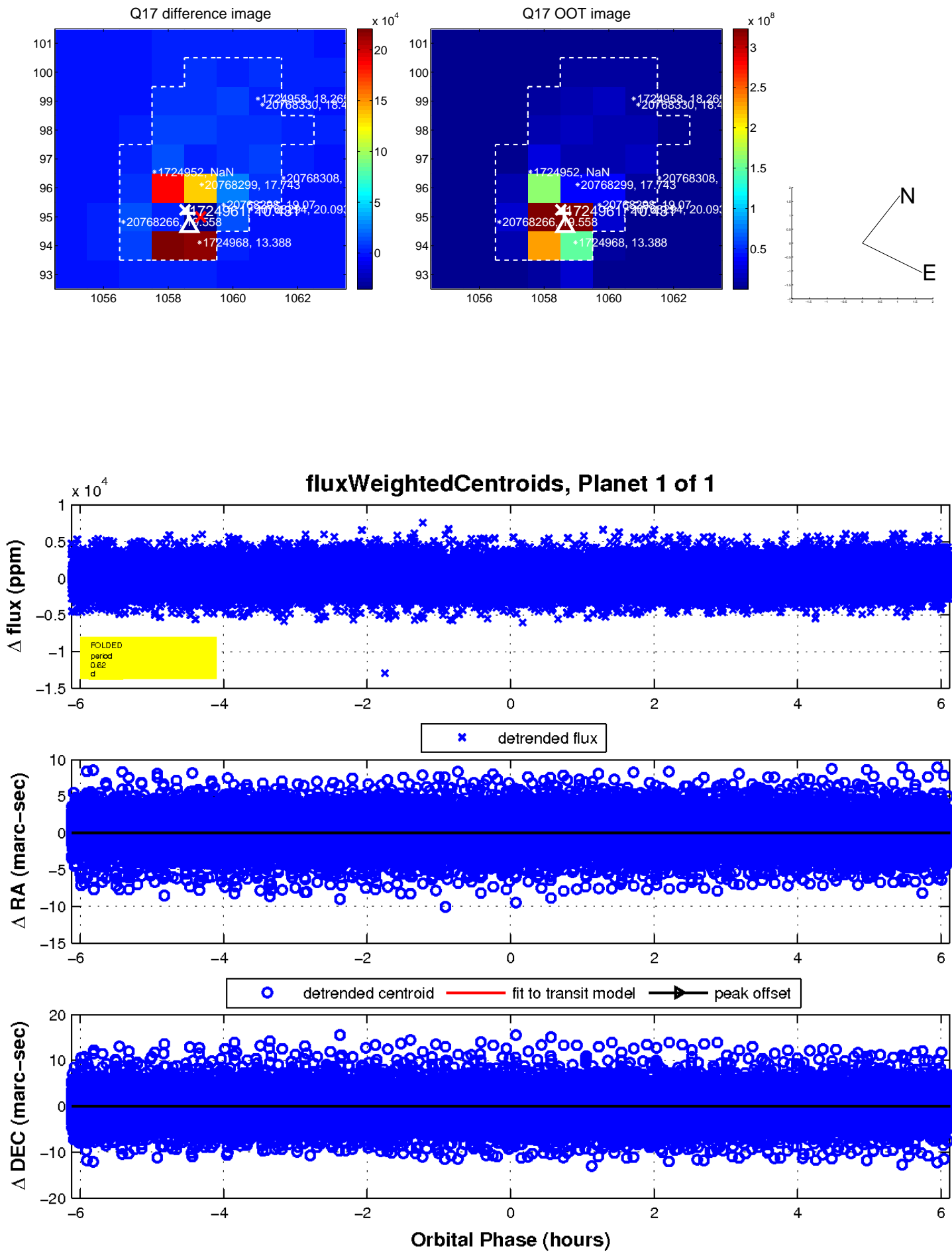
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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UKIRT Image

