

KIC 010724619

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})
010724619-01	OBS	No	0.745044	131.856374	41.9	4.396	12.9	10.7	0.94	5999	0.62	4365.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010724619-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_UNRESOLVED_OFFSET—HALO_GHOST—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.

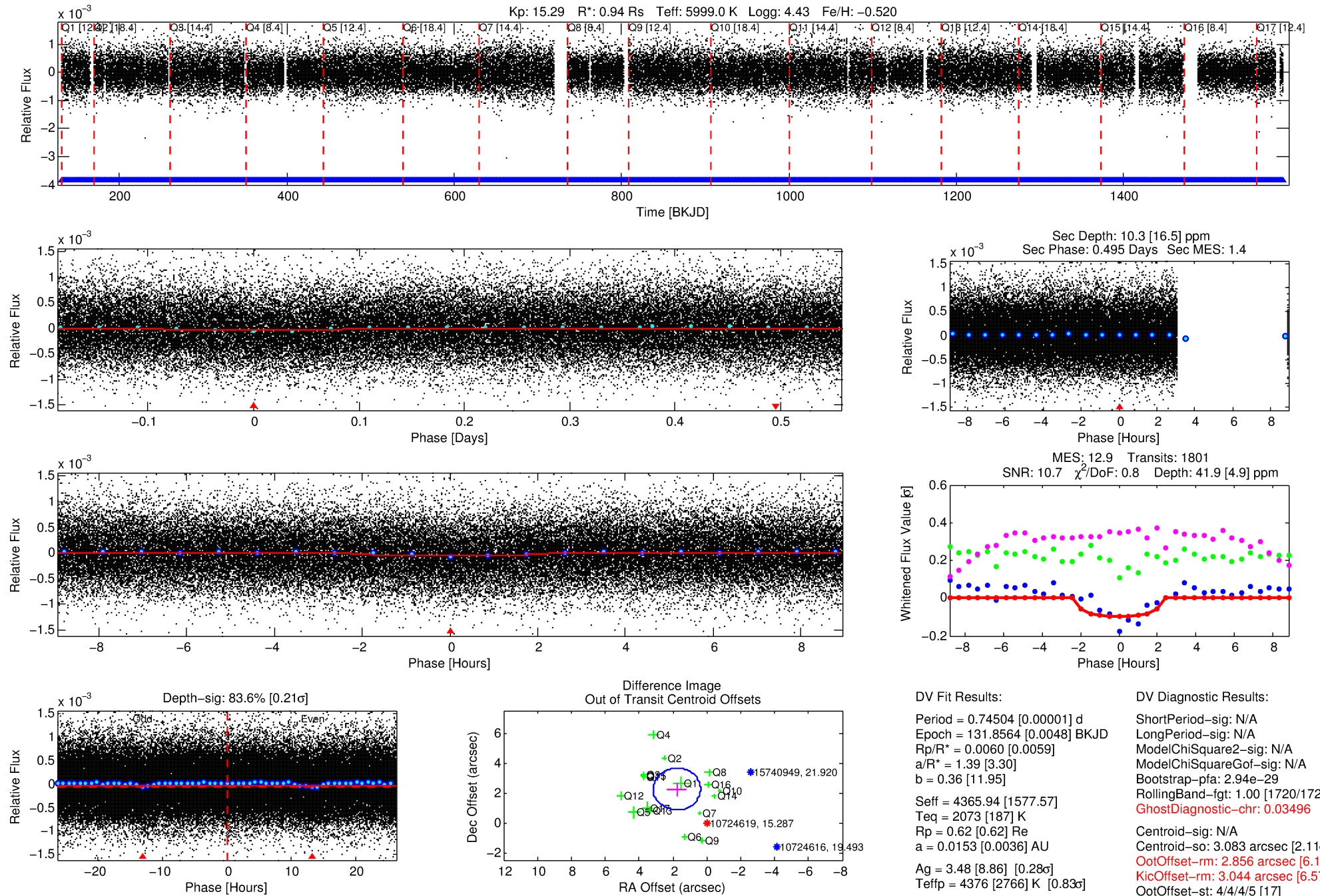
Ephemeris Match Information For 010724619-01

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
010724619-01	10724619	010724569-01	10724569	1:1	54.6	0	-14	15.49	15.29	1.50	Direct-PRF	1	2.71	1.42

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

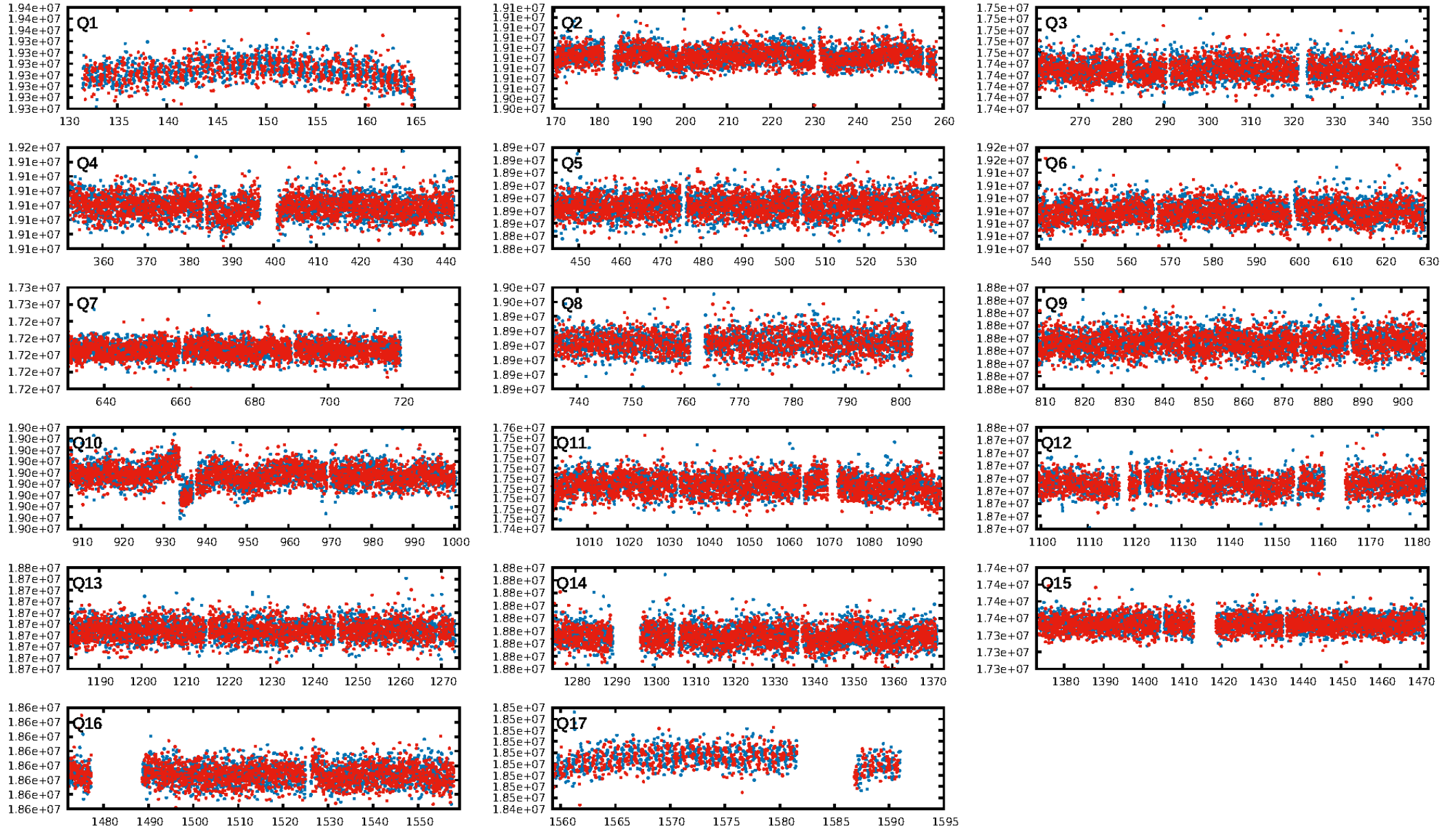
KIC: 10724619 Candidate: 1 of 1 Period: 0.745 d



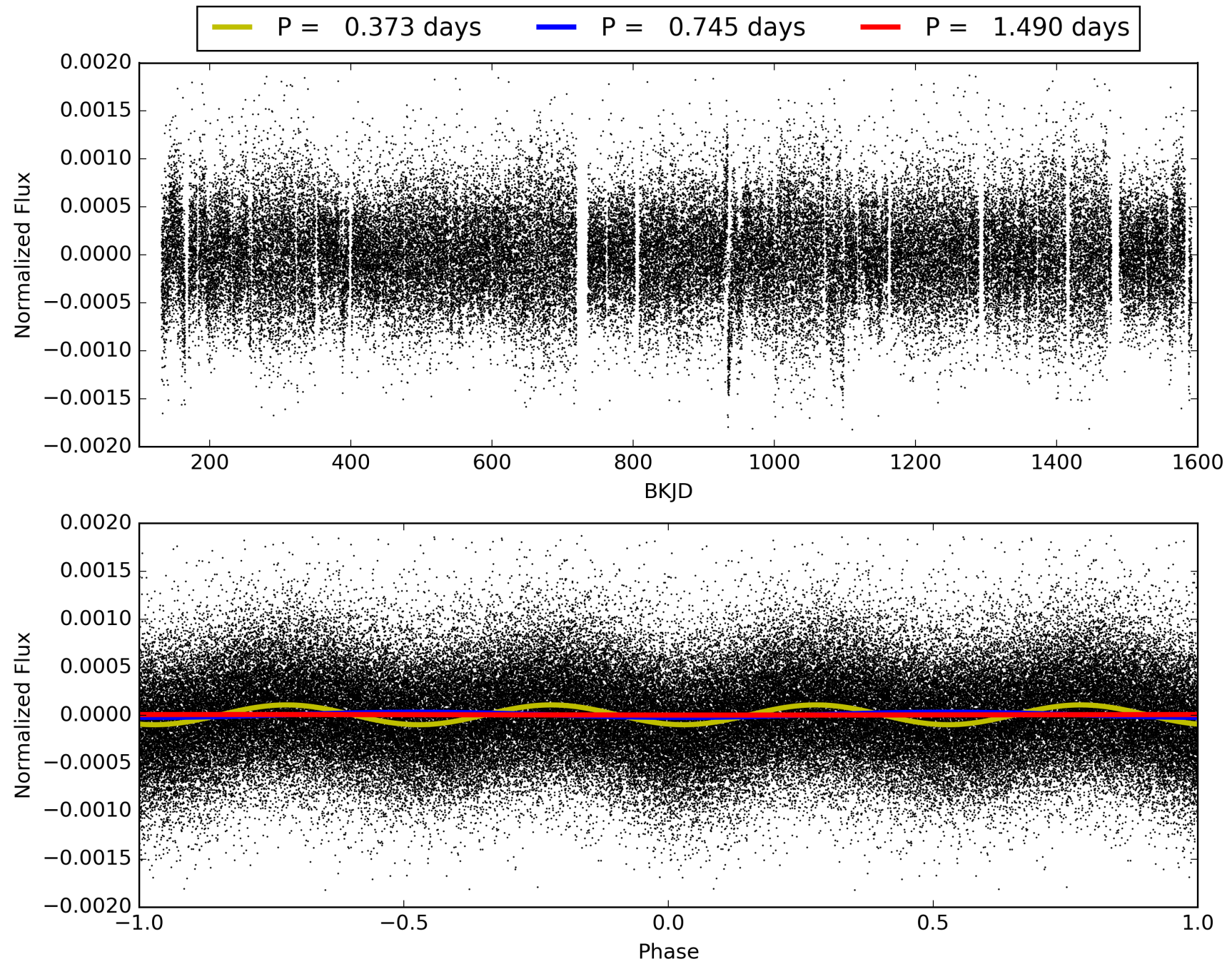
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:12:23 Z

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

TCE 010724619-01, PDC Light Curves

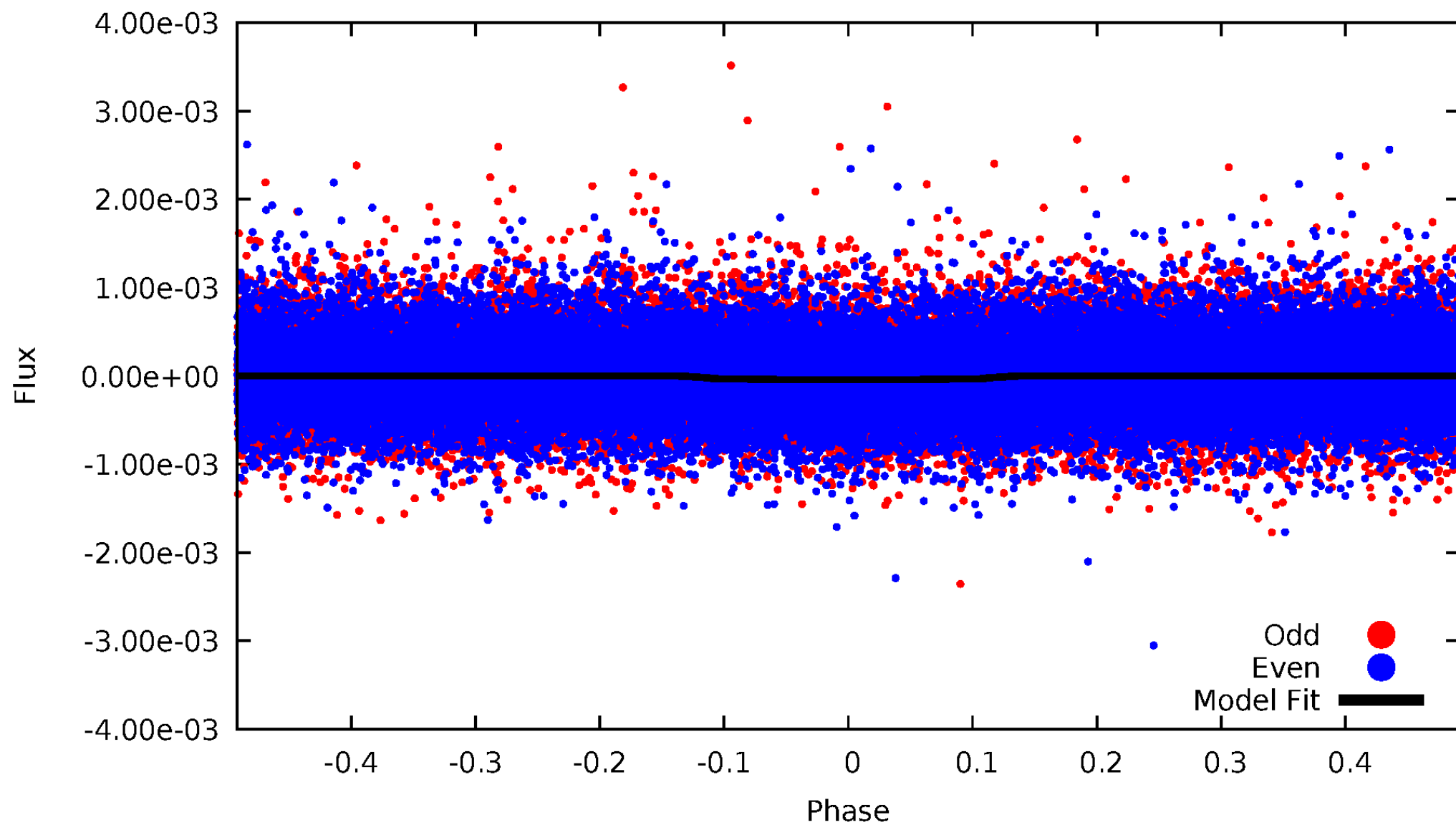


TCE 010724619-01



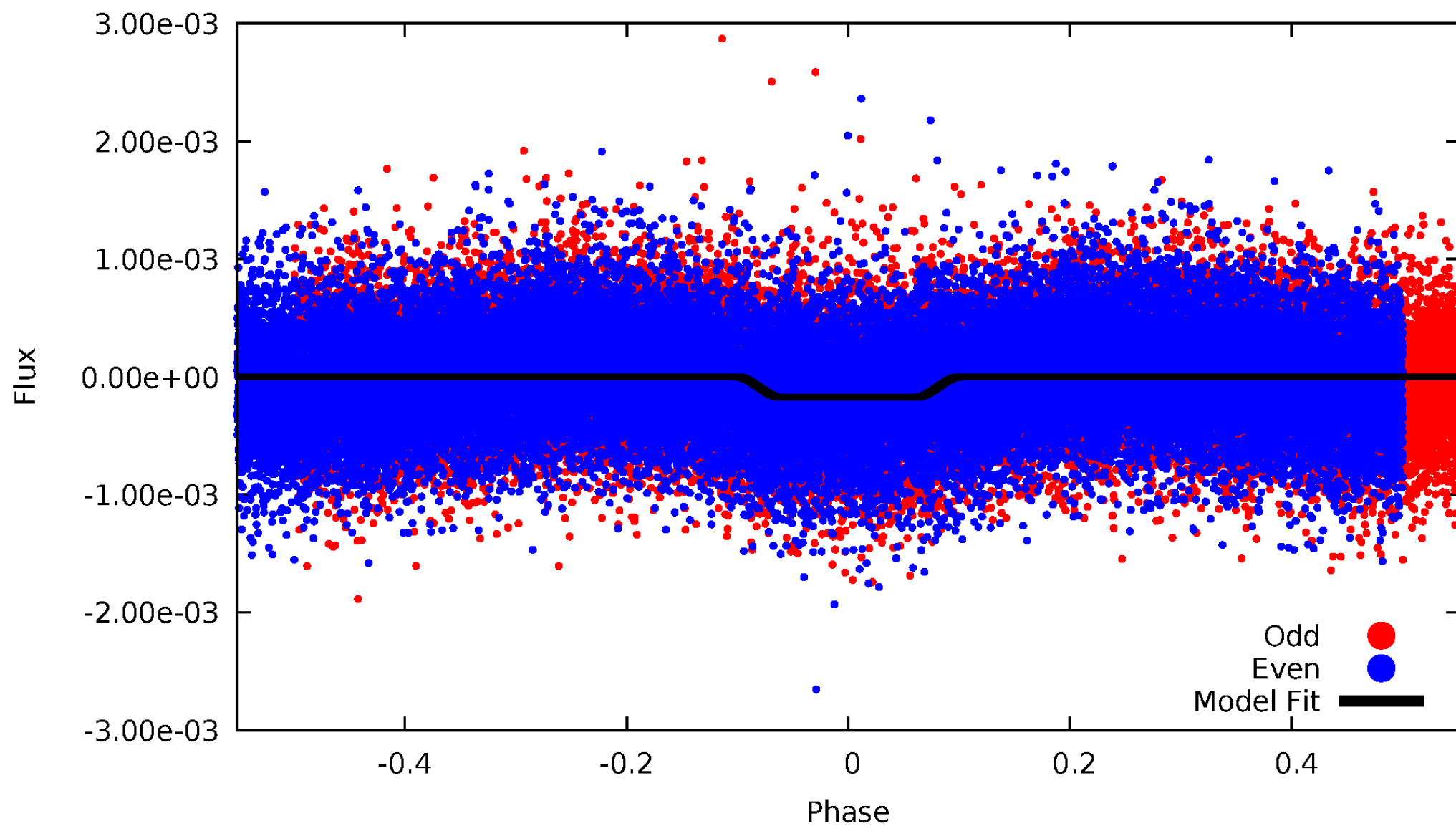
DV Odd/Even

TCE 010724619-01



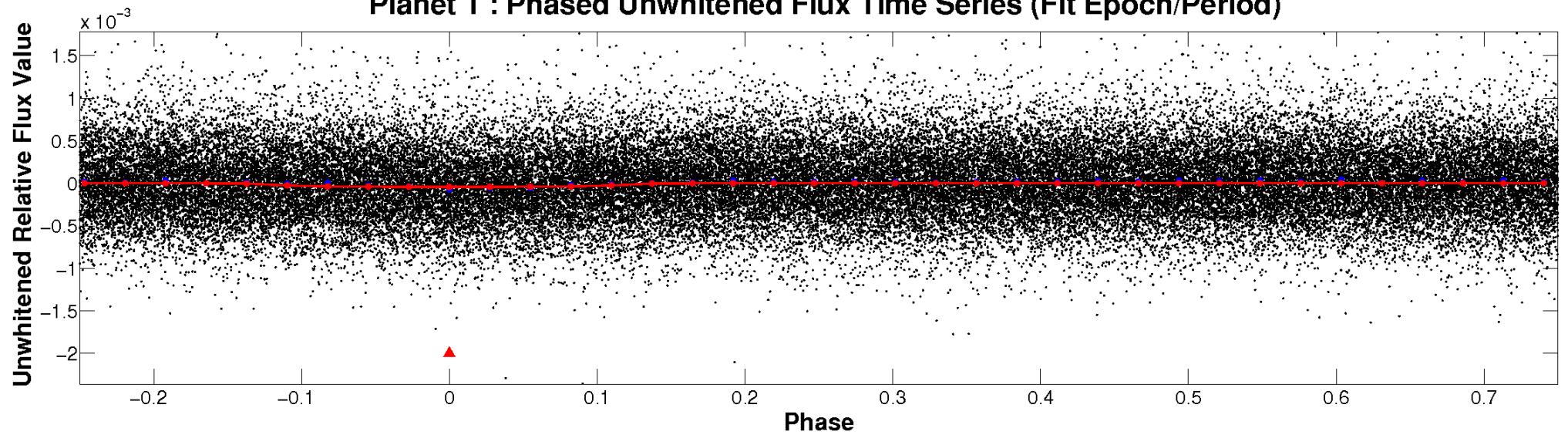
ALT Odd/Even

TCE 010724619-01

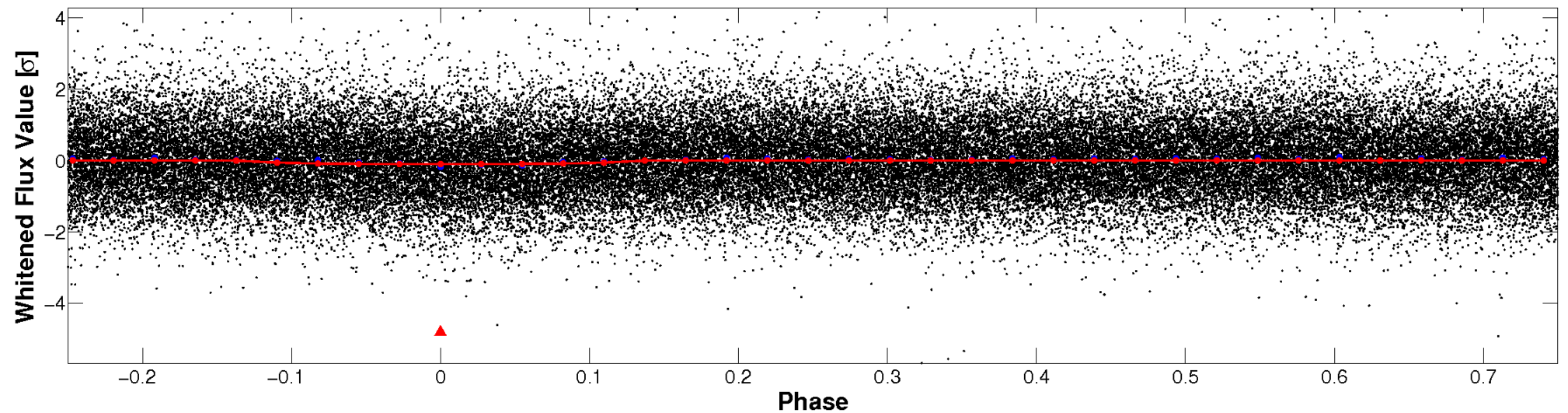


Non-Whitened Vs. Whitened Light Curve

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

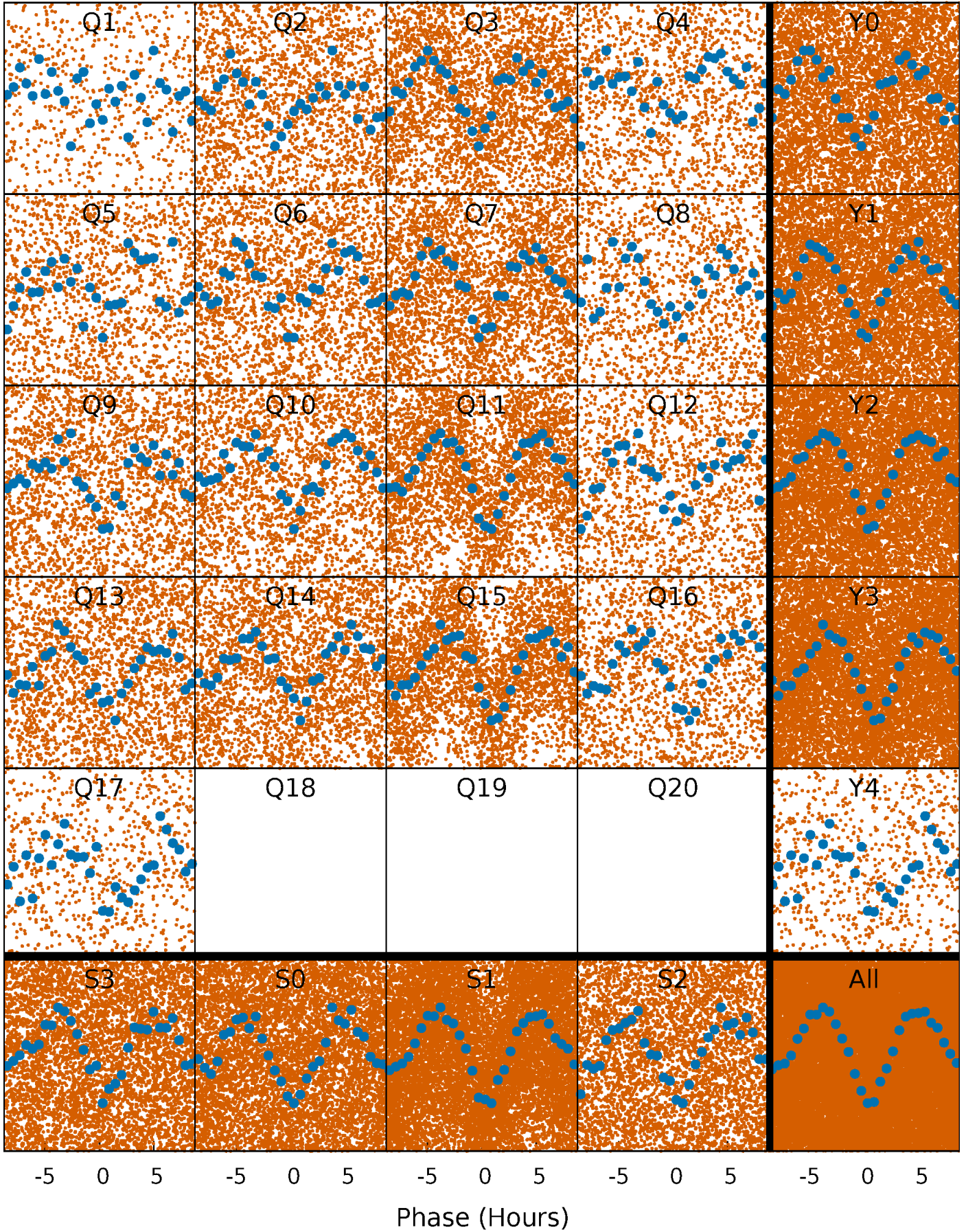


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



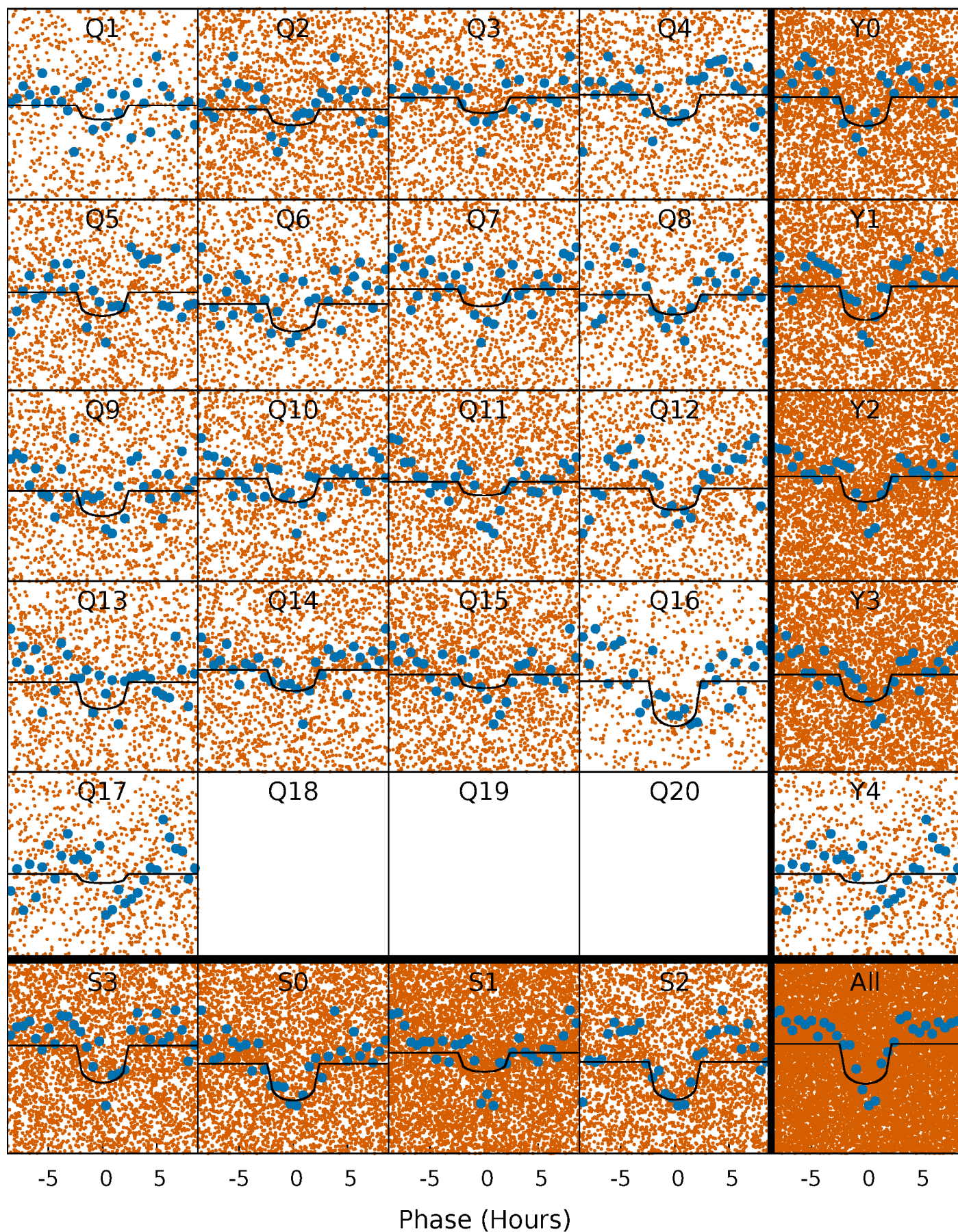
PDC Quarter-Phased Transit Curves

TCE 010724619-01 P= 0.745044 Days $T_0=131.856374$ (BKJD)



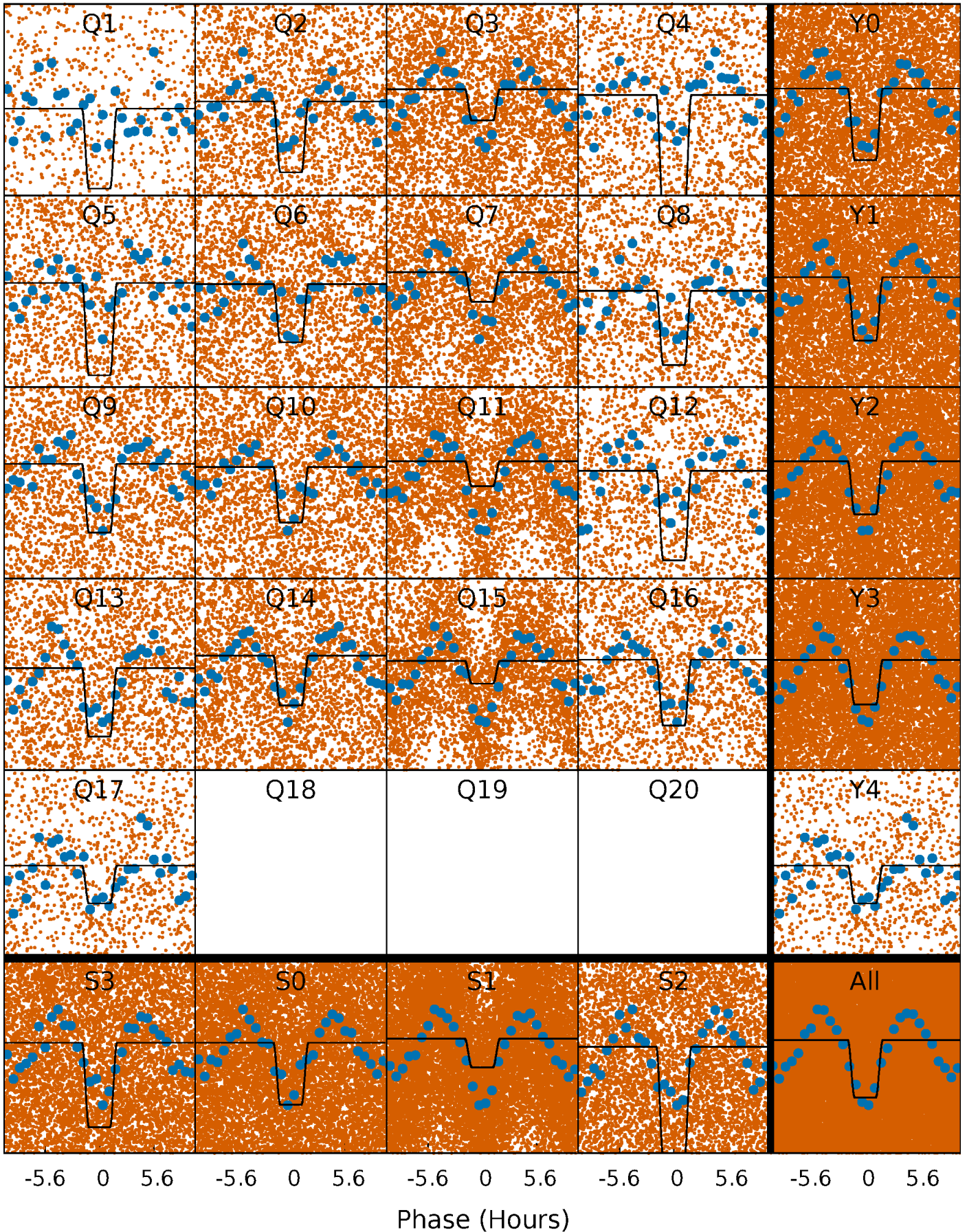
DV Quarter-Phased Transit Curves

TCE 010724619-01 P= 0.745044 Days $T_0=131.856374$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

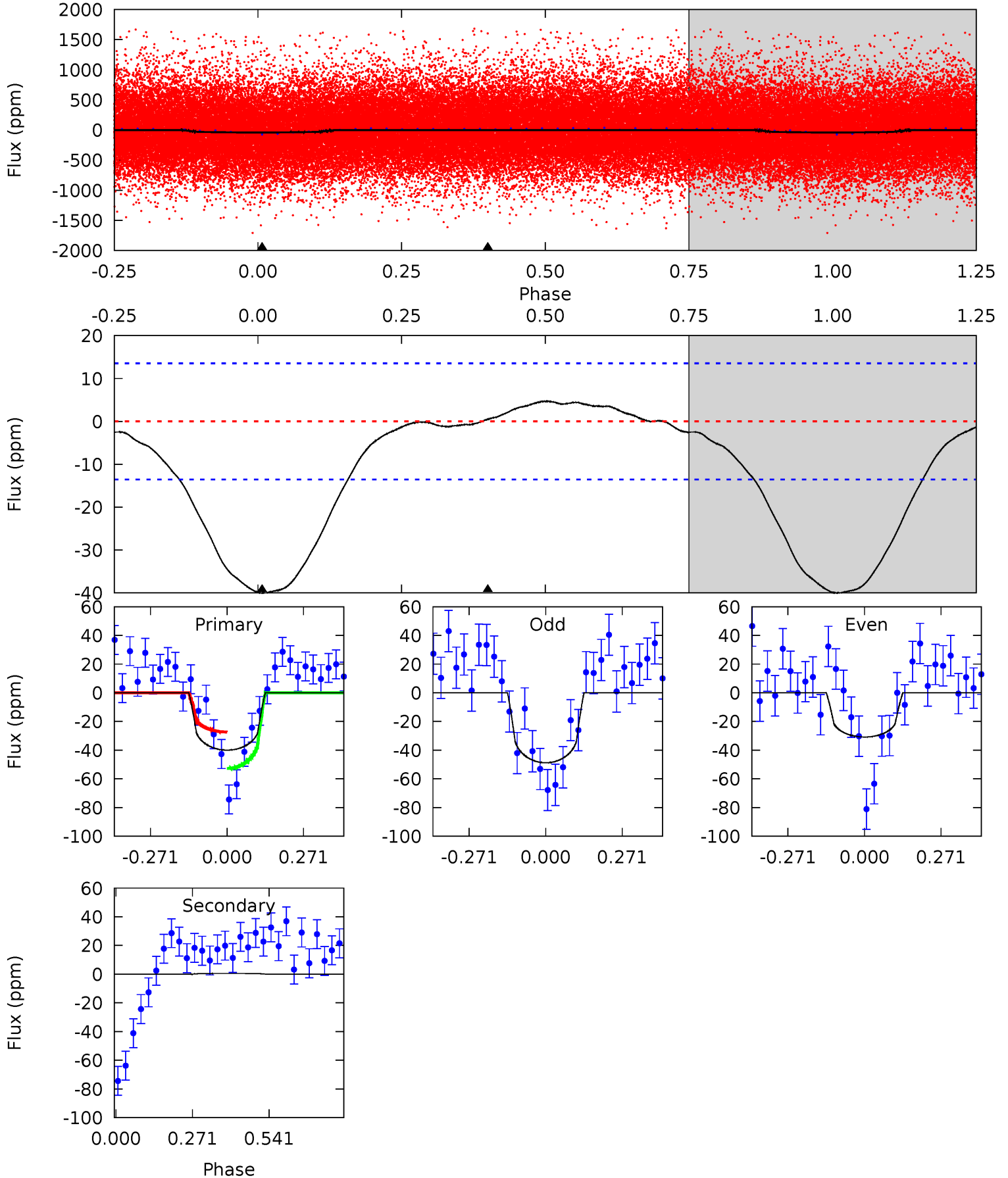
TCE 010724619-01 P= 0.745089 Days $T_0=131.827313$ (BKJD)



DV Model-Shift Uniqueness Test

010724619-01, P = 0.745044 Days, E = 131.111330 Days

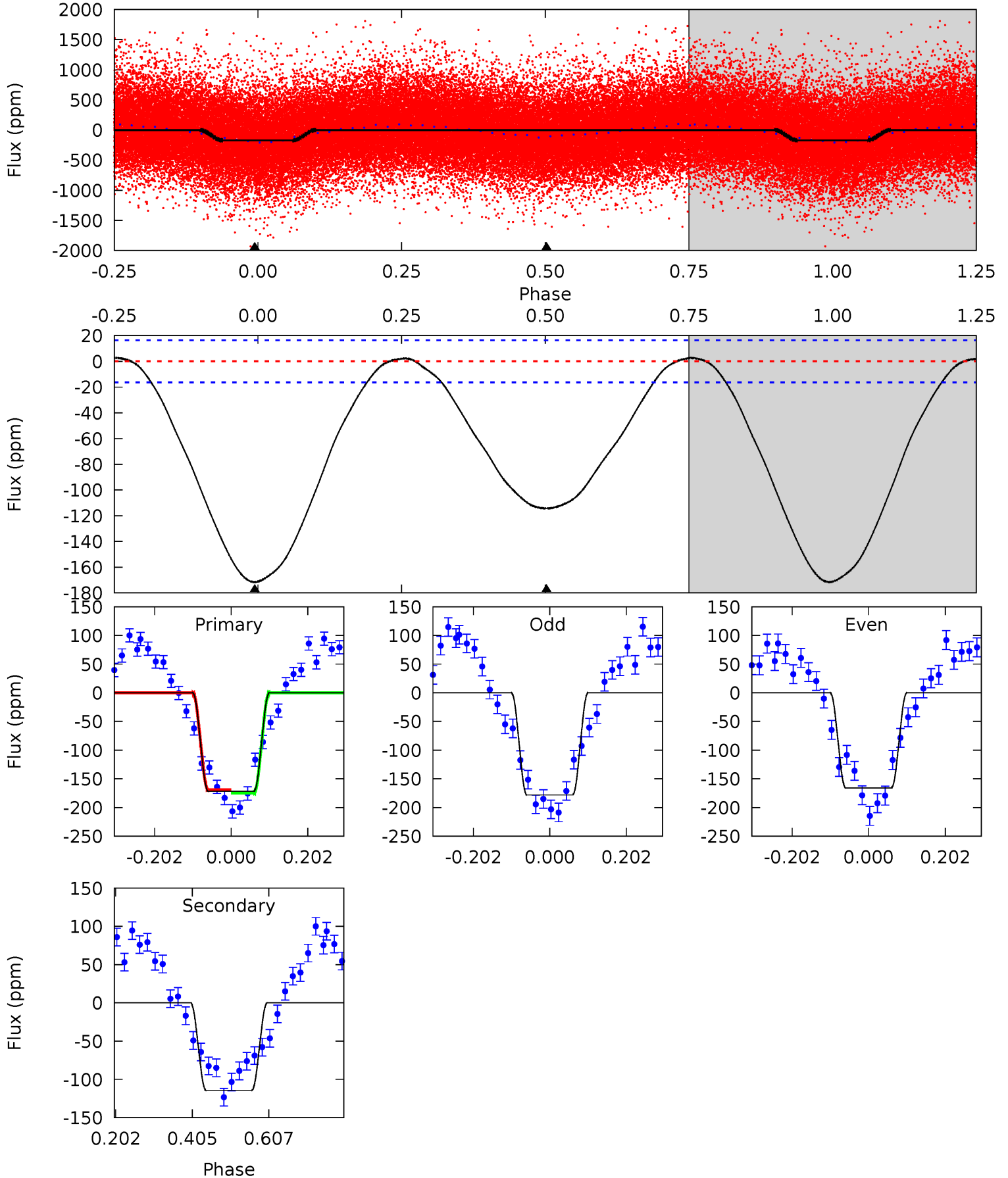
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	-0.16	0	0	4.35	1.10	0.38	12.9	12.9	-0.16	-0.16	2.88	0.91	0.11	4.07



Alt Model-Shift Uniqueness Test

010724619-01, P = 0.745089 Days, E = 131.082224 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.4	30.9	0	0	4.41	1.27	0.92	46.4	46.4	30.9	30.9	1.67	1.09	0.02	0.85



Stellar Parameters For KIC 010724619

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5999^{+179}_{-179}	$4.428^{+0.116}_{-0.188}$	$-0.520^{+0.300}_{-0.300}$	$0.939^{+0.256}_{-0.138}$	$0.860^{+0.108}_{-0.072}$	$1.466^{+0.777}_{-0.693}$
	+3%/-3%	+3%/-4%	+58%/-58%	+27%/-15%	+13%/-8%	+53%/-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 010724619-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	1 ± 3	$0.75^{+0.62}_{-0.43}$	2918^{+209}_{-166}	-3174^{+6285}_{-953}	$-0.083^{+0.757}_{-1.597}$
Alt.	-114 ± 4	$1.38^{+0.62}_{-0.59}$	2923^{+198}_{-155}	5383^{+1718}_{-788}	$7.656^{+16.046}_{-3.953}$

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

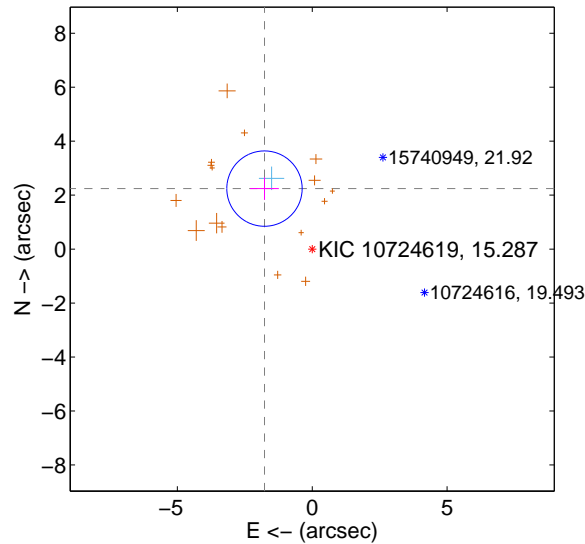
Supplemental centroid analysis for 010724619-01. Kepler magnitude: 15.29. Transit SNR 10.67

There are 1 quarters with good PRF difference image offsets

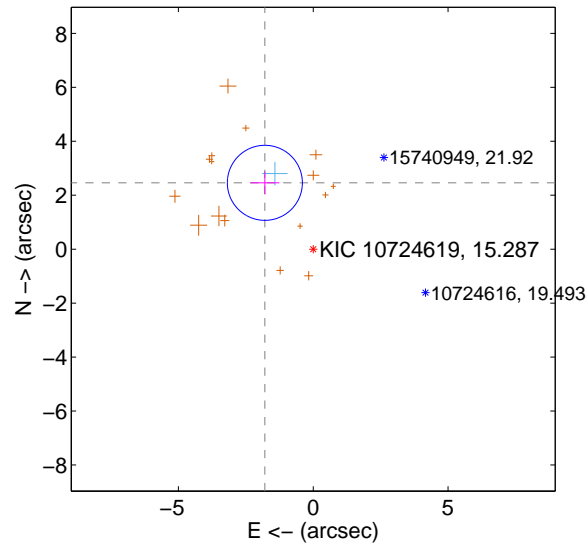
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.856 ± 0.465	6.14	1.769 ± 0.532	2.242 ± 0.419
PRF-fit source offset from KIC position	3.044 ± 0.464	6.57	1.793 ± 0.539	2.460 ± 0.418
photometric centroid source offset	3.08 ± 1.46	2.11	3.08 ± 1.46	0.05 ± 1.39

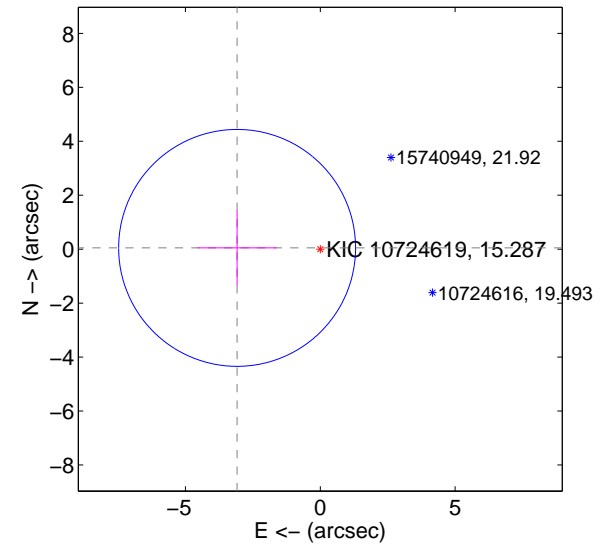
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

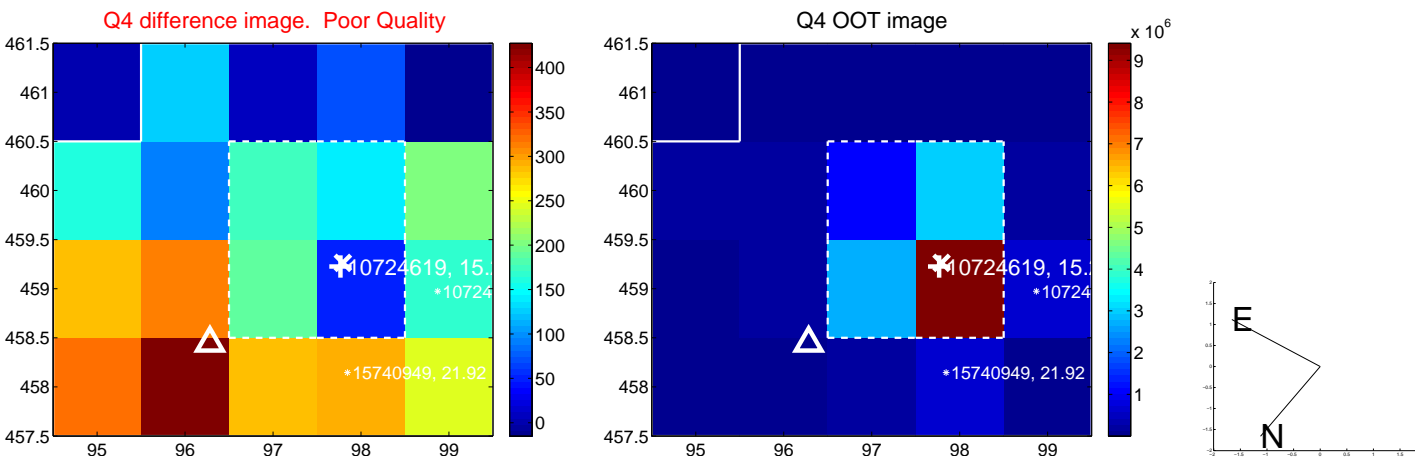
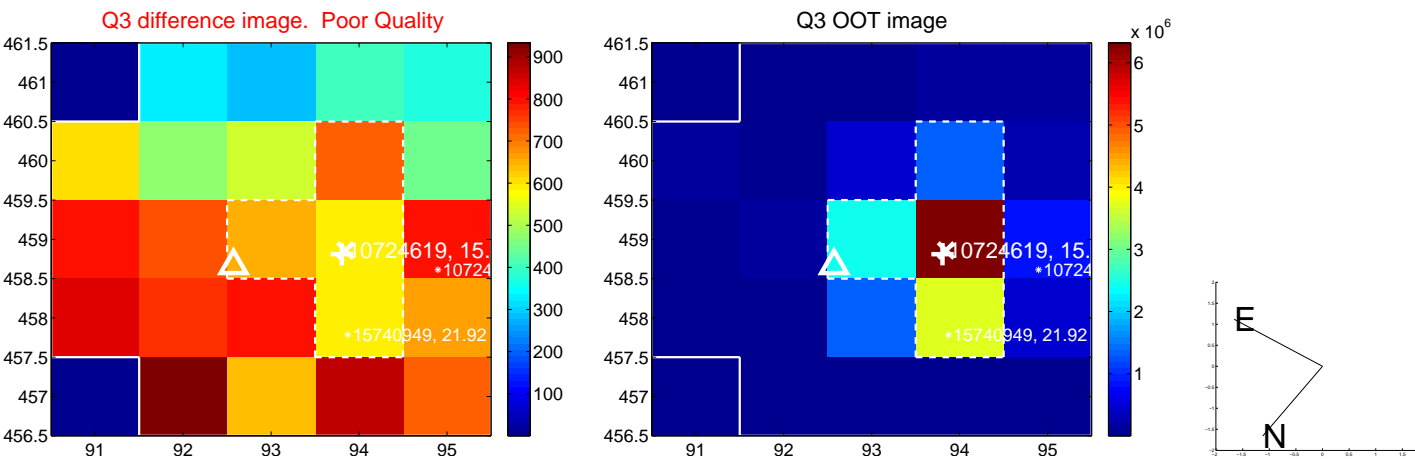
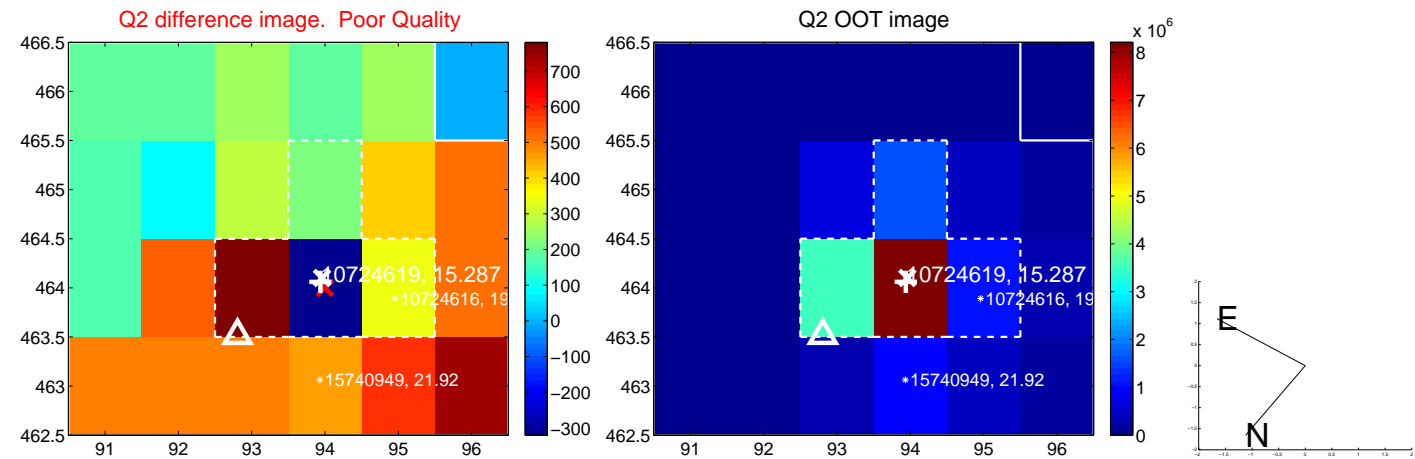
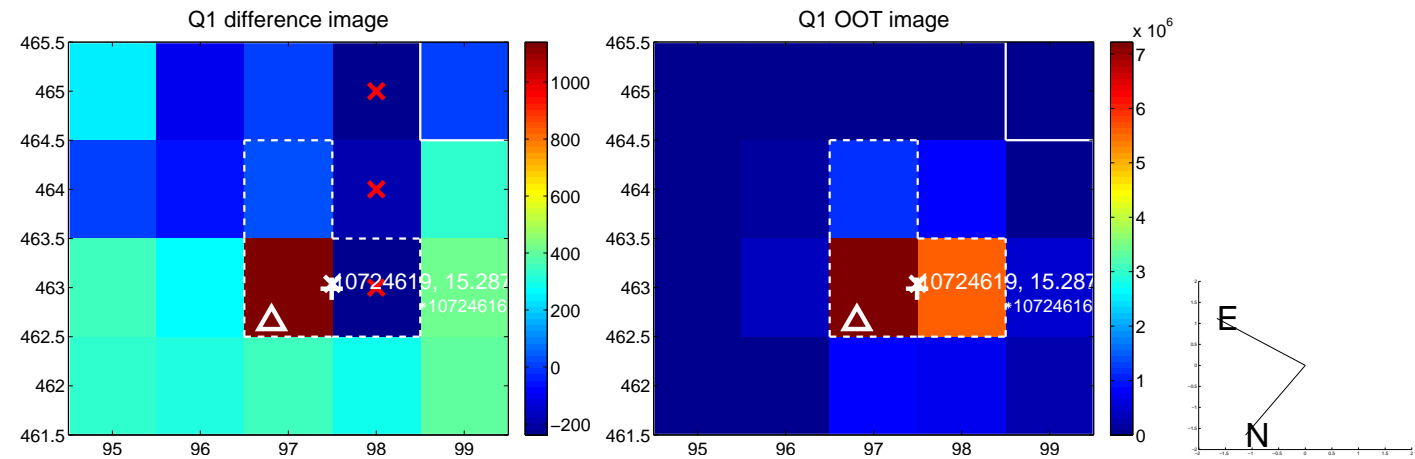


offset from photometric centroids

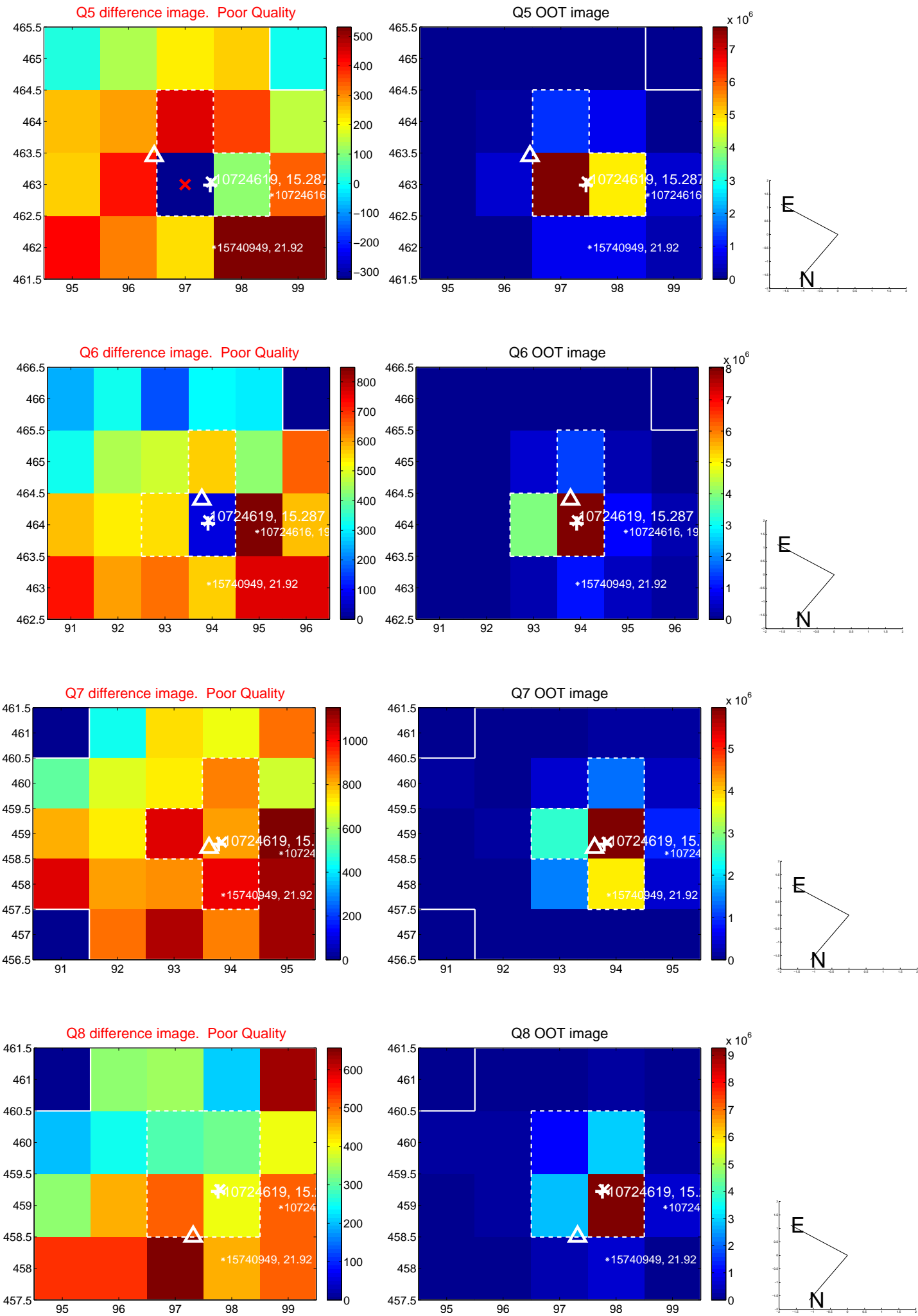


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

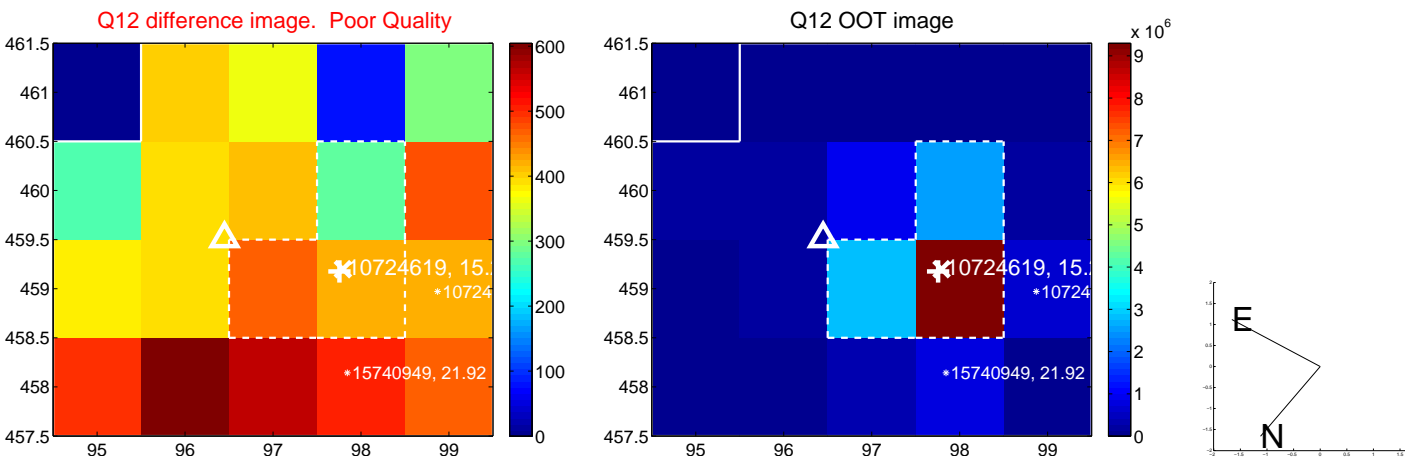
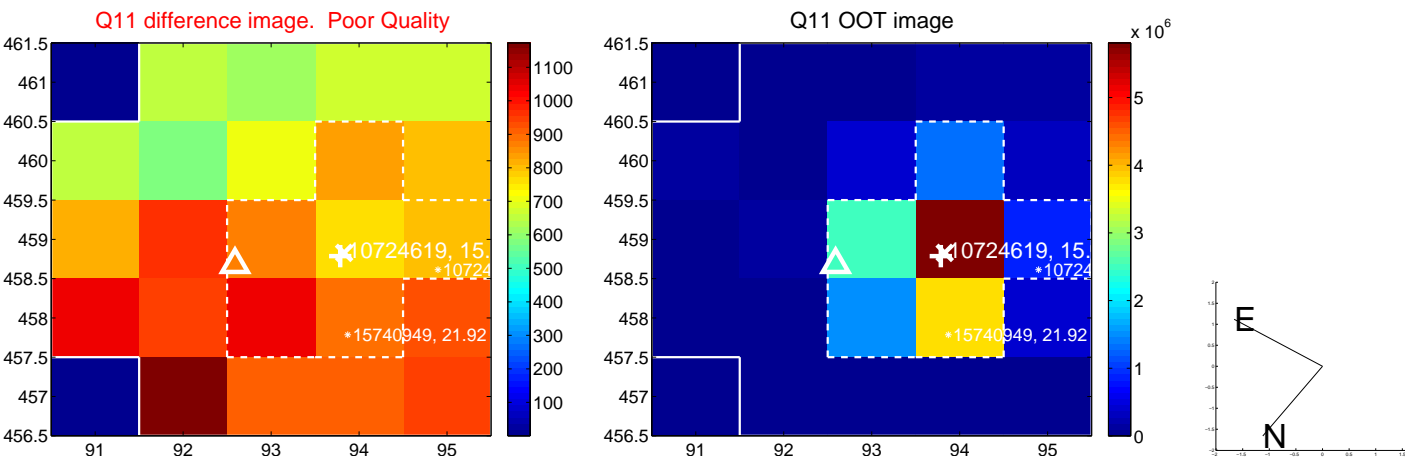
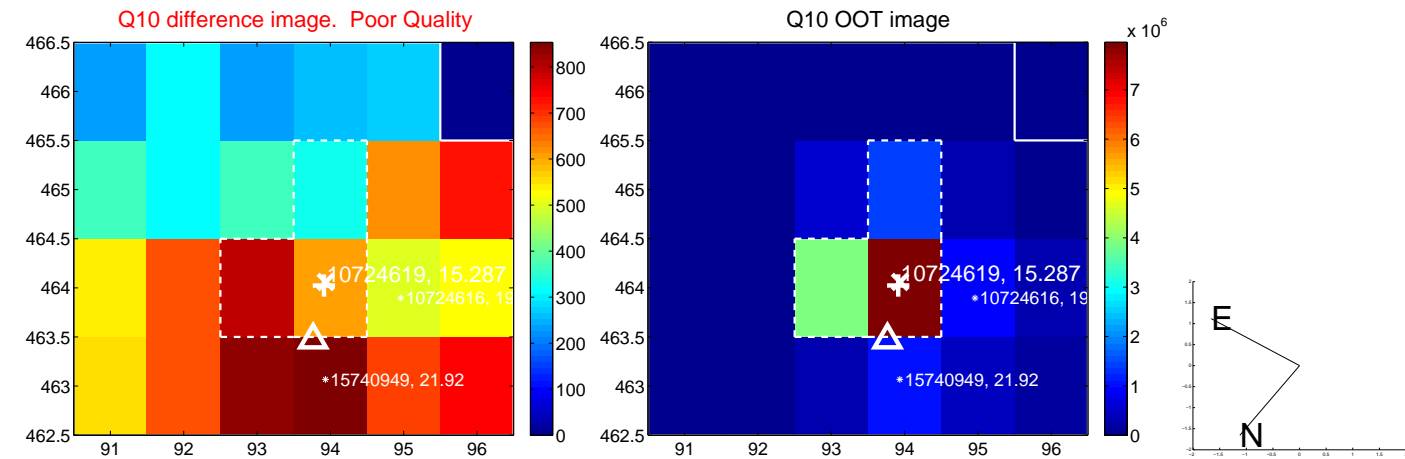
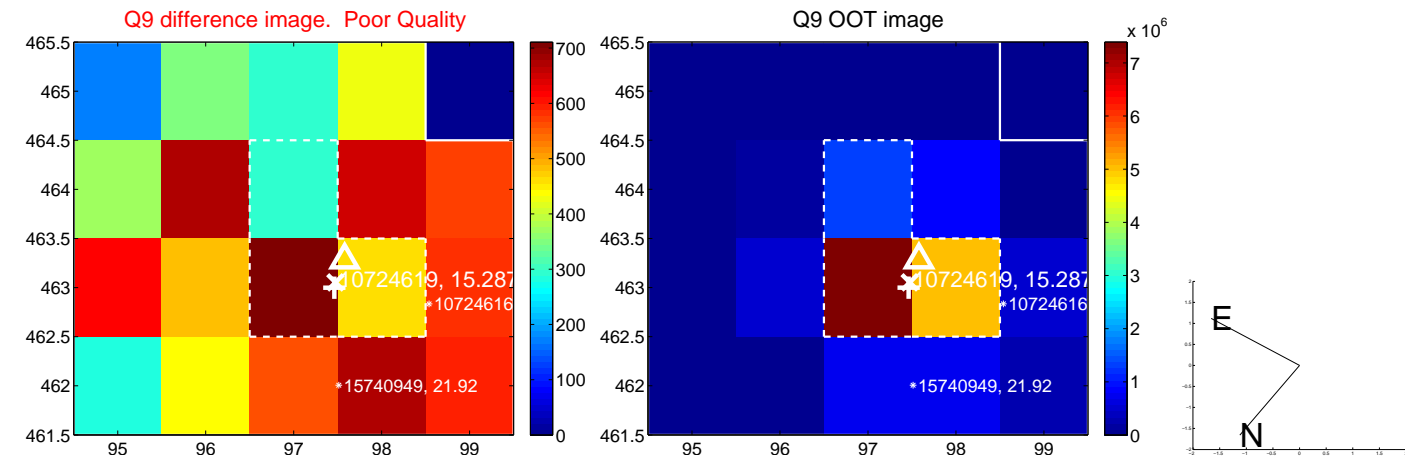
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



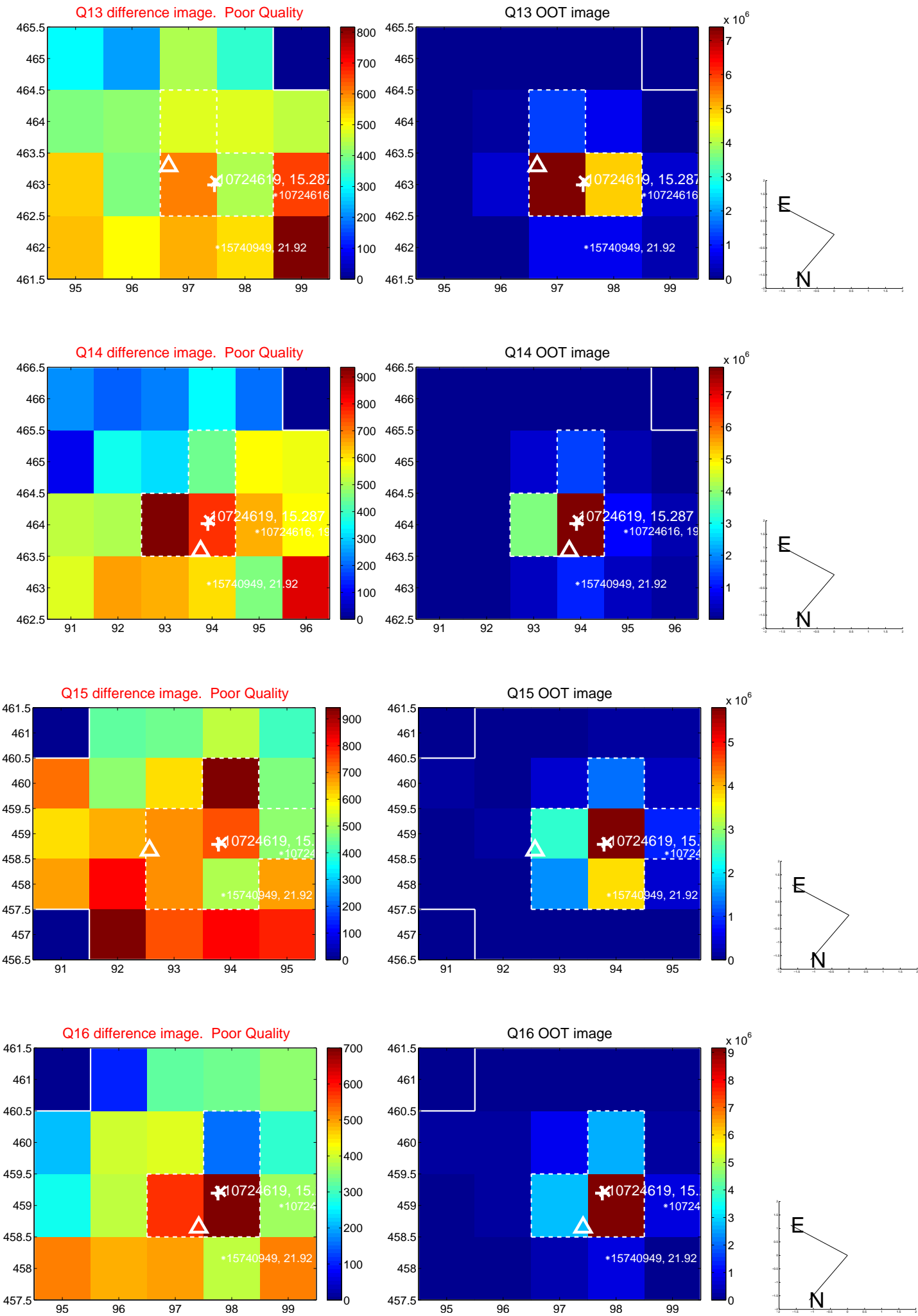
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



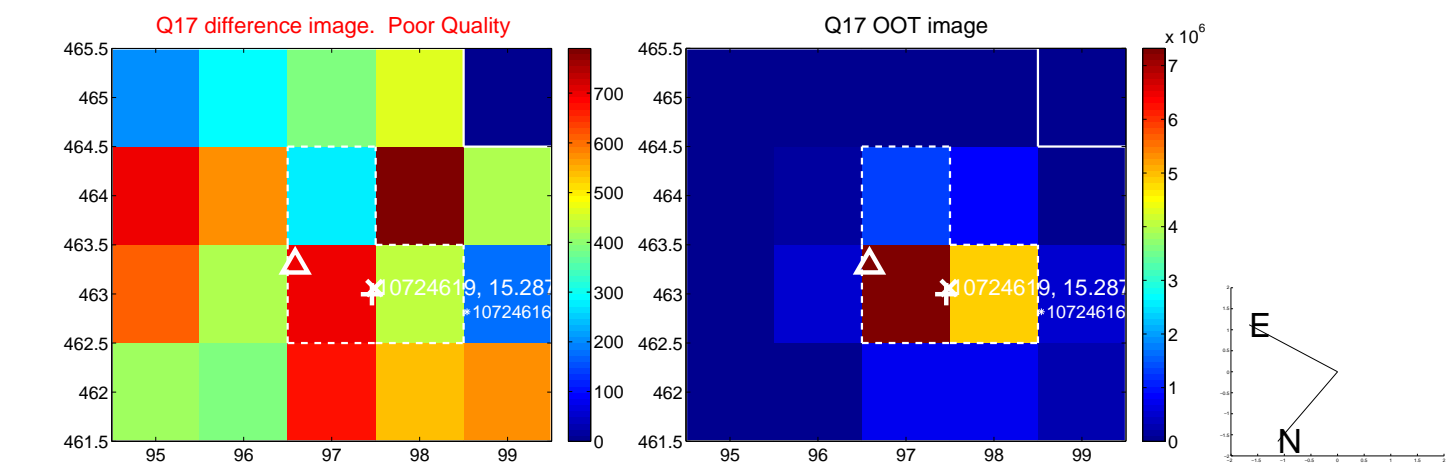
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



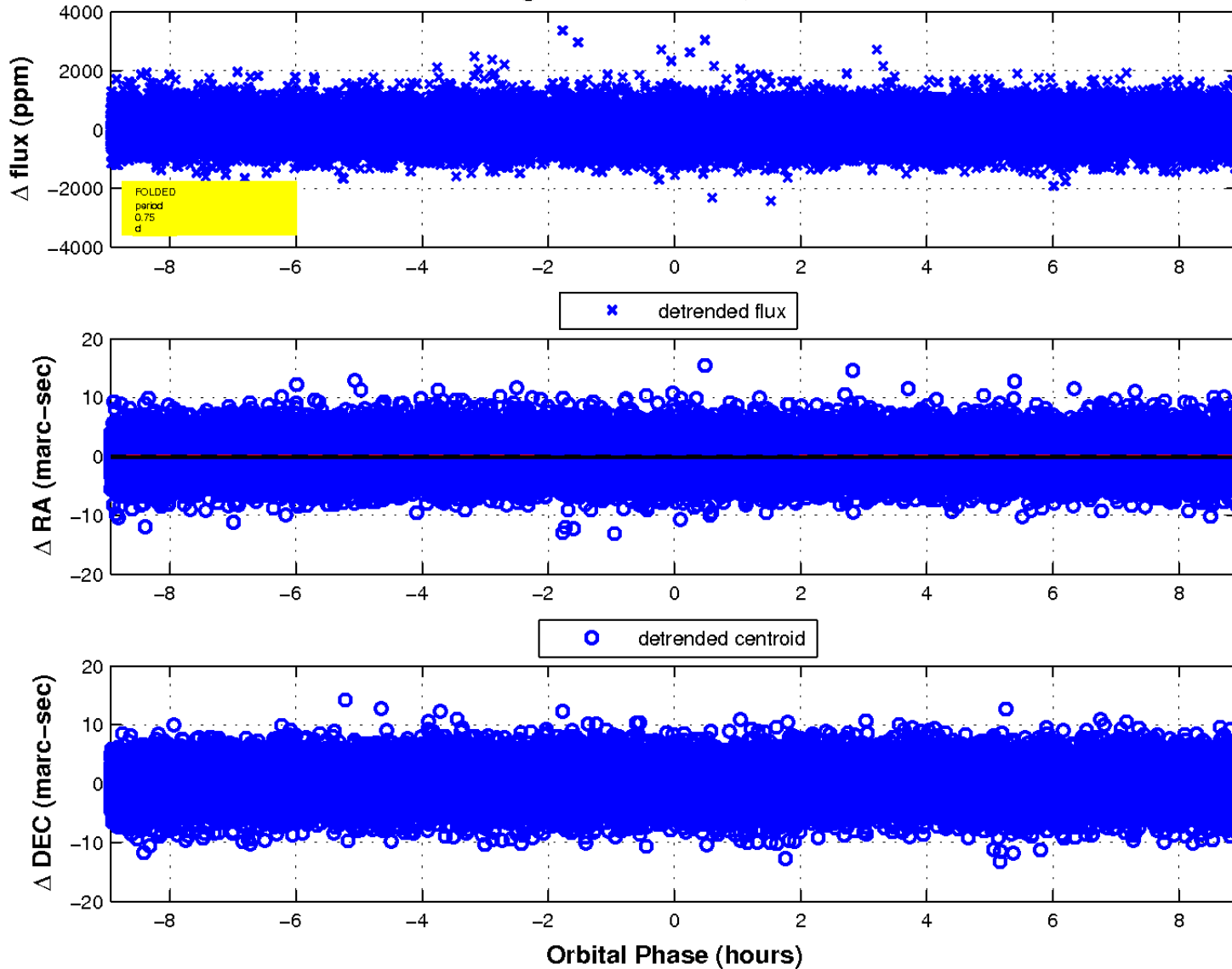
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

