

KIC 005686974

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})
005686974-01	OBS	6613.01	4.182168	134.103385	47.9	6.014	9.9	10.9	1.00	6057	0.95	500.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005686974-01	OBS	FP	0.00	0	0	0	1	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.

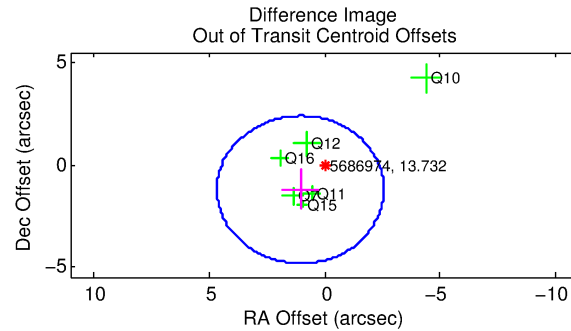
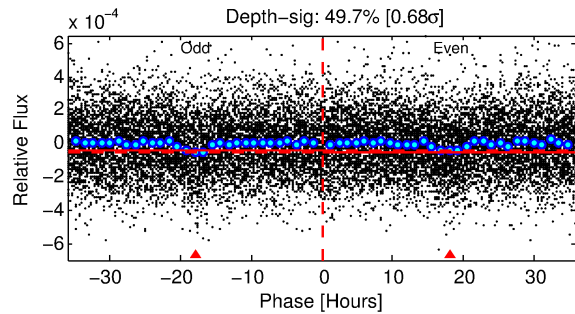
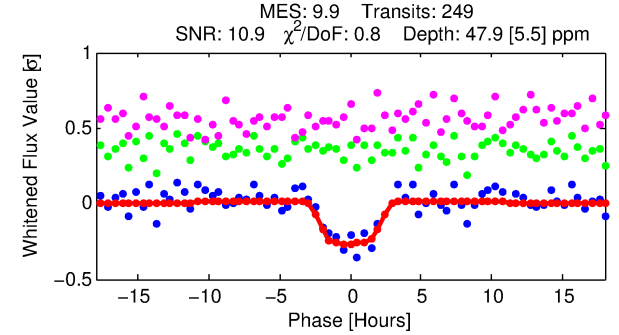
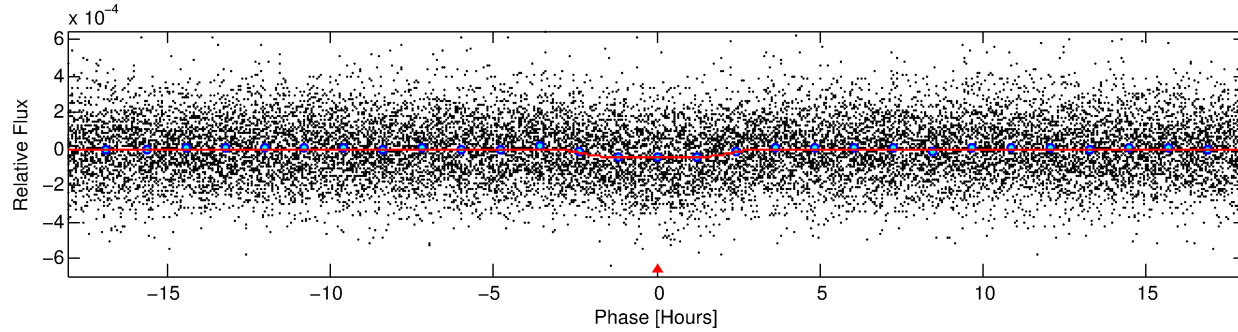
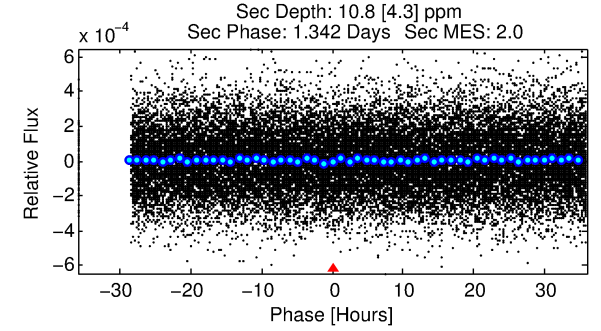
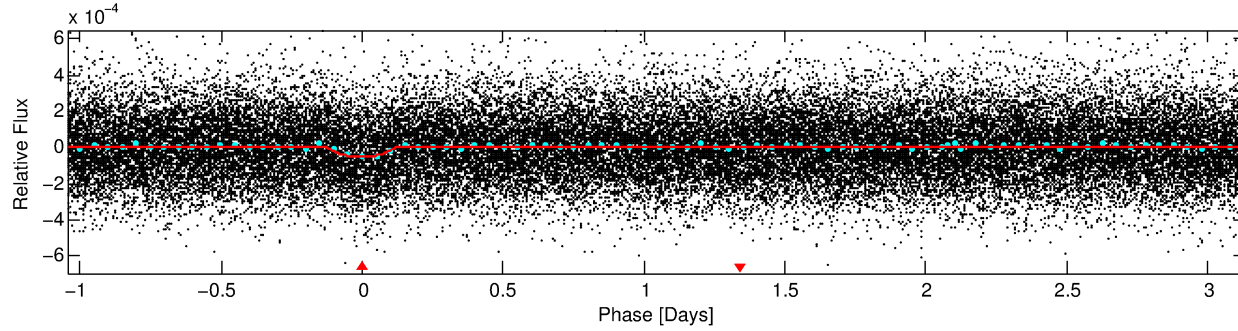
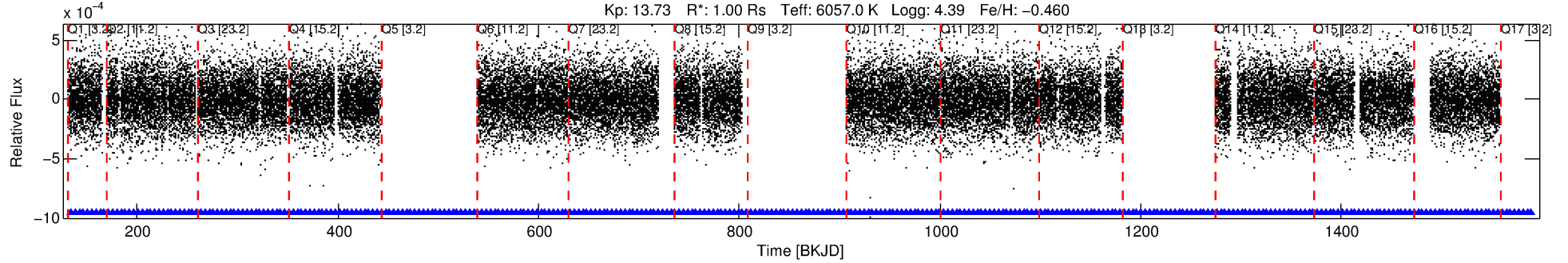
Ephemeris Match Information For 005686974-01

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
005686974-01	5686974	5206.01	5858519	1:1	771.4	194	1	14.74	13.73	4181.00	Col-Anomaly	0	2.49	2.18

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: 5686974 Candidate: 1 of 1 Period: 4.182 d
KOI: K06613.01 Corr: 0.872



DV Fit Results:

Period = 4.18217 [0.00006] d
Epoch = 134.1034 [0.0108] BKJD
Rp/R* = 0.0088 [0.0007]
a/R* = 1.49 [0.22]
b = 0.99 [0.01]
Seff = 500.92 [185.12]
Teq = 1206 [111] K
Rp = 0.95 [0.28] Re
a = 0.0490 [0.0117] AU
Ag = 15.75 [8.68] [1.70σ]
Teffp = 3715 [411] K [5.89σ]

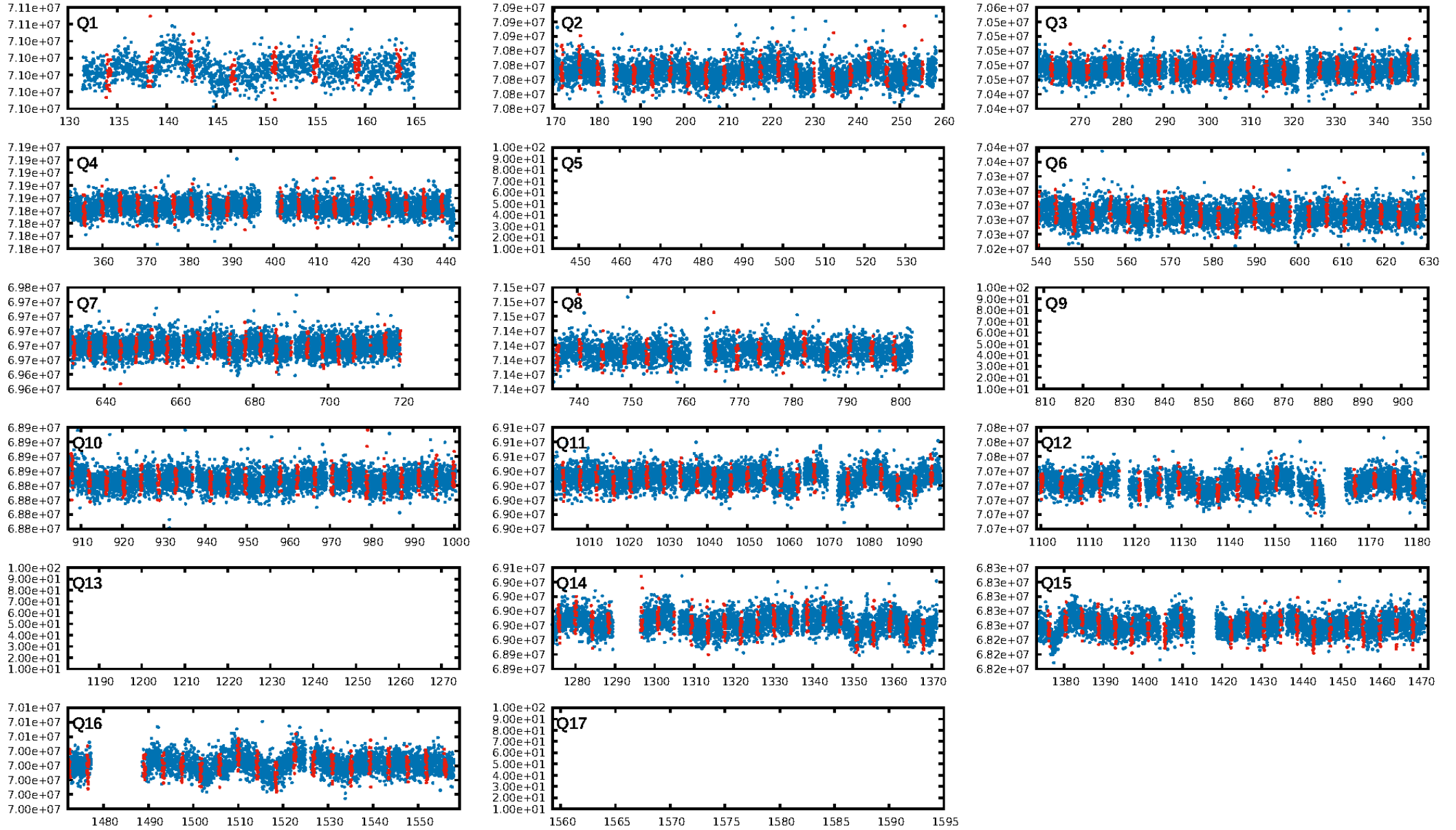
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.38e-22
RollingBand-fgt: 1.00 [241/241]
GhostDiagnostic-chr: -2.388
Centroid-sig: 8.2%
Centroid-so: 1.781 arcsec [1.49σ]
OotOffset-rm: 1.612 arcsec [1.34σ]
KicOffset-rm: 1.678 arcsec [1.20σ]
OotOffset-st: 1/3/2/0 [6]
KicOffset-st: 1/3/2/0 [6]
DiffImageQuality-fgm: 0.83 [5/6]
DiffImageOverlap-fno: 1.00 [13/13]

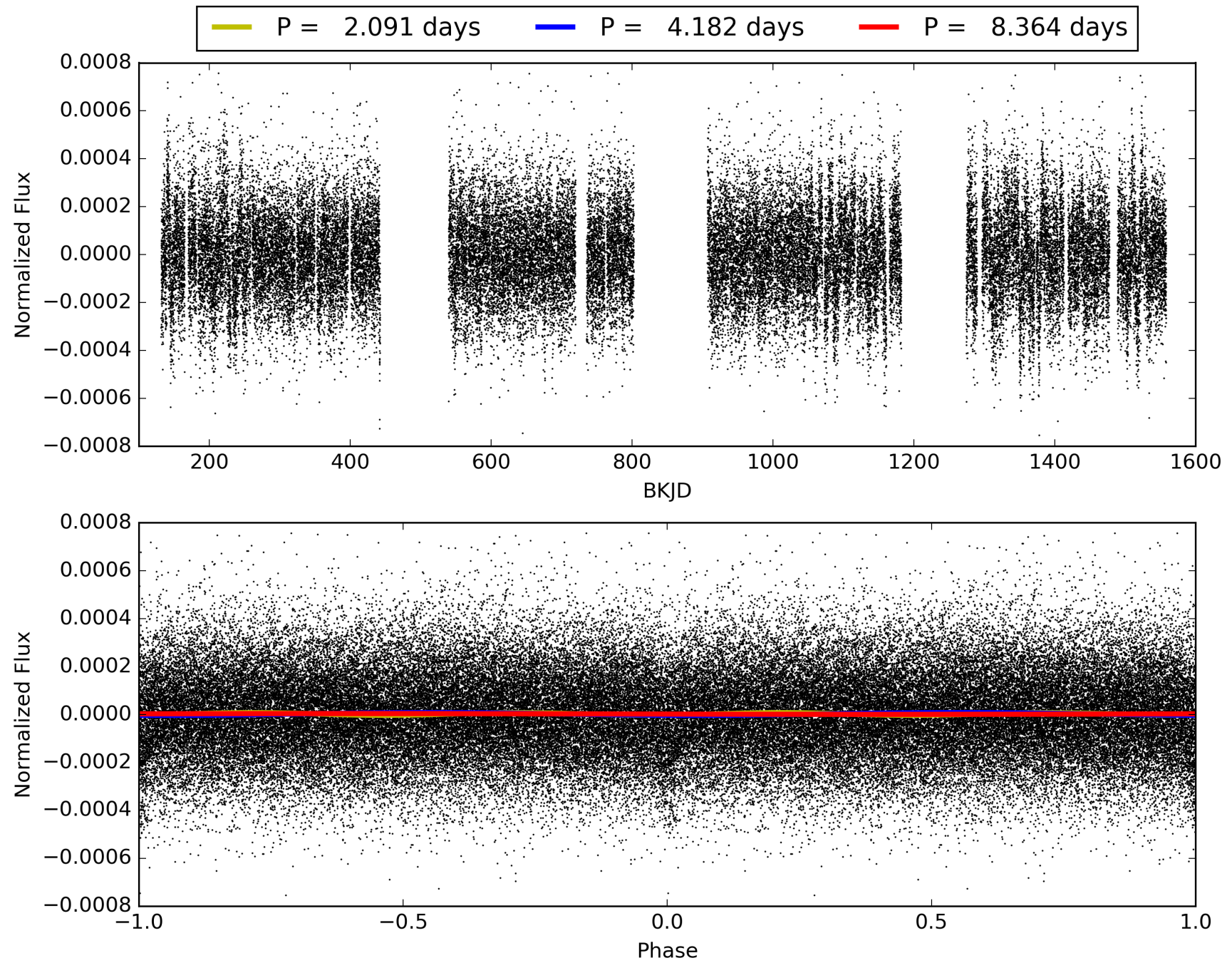
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:50:51 Z

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

TCE 005686974-01, PDC Light Curves

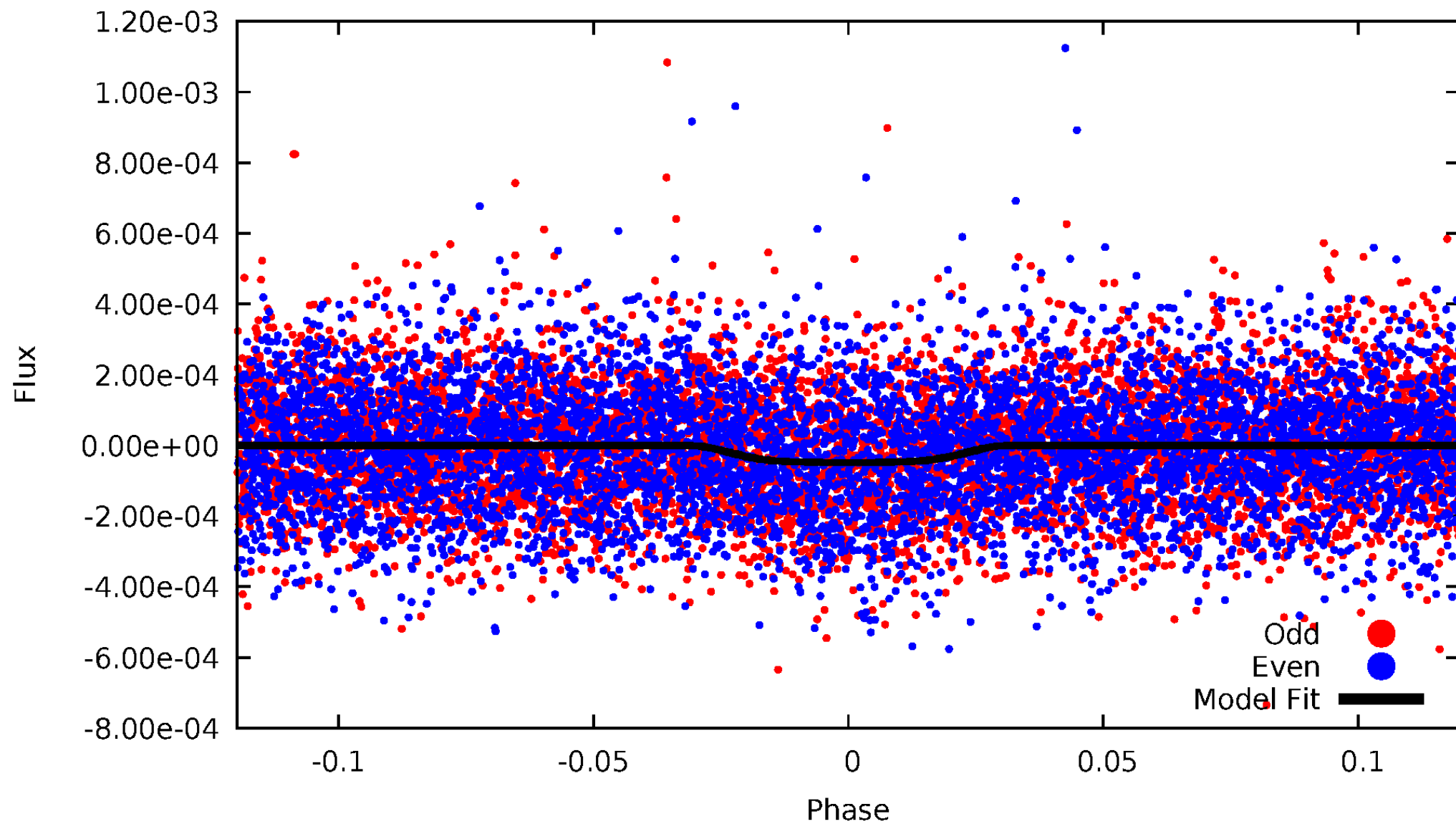


TCE 005686974-01



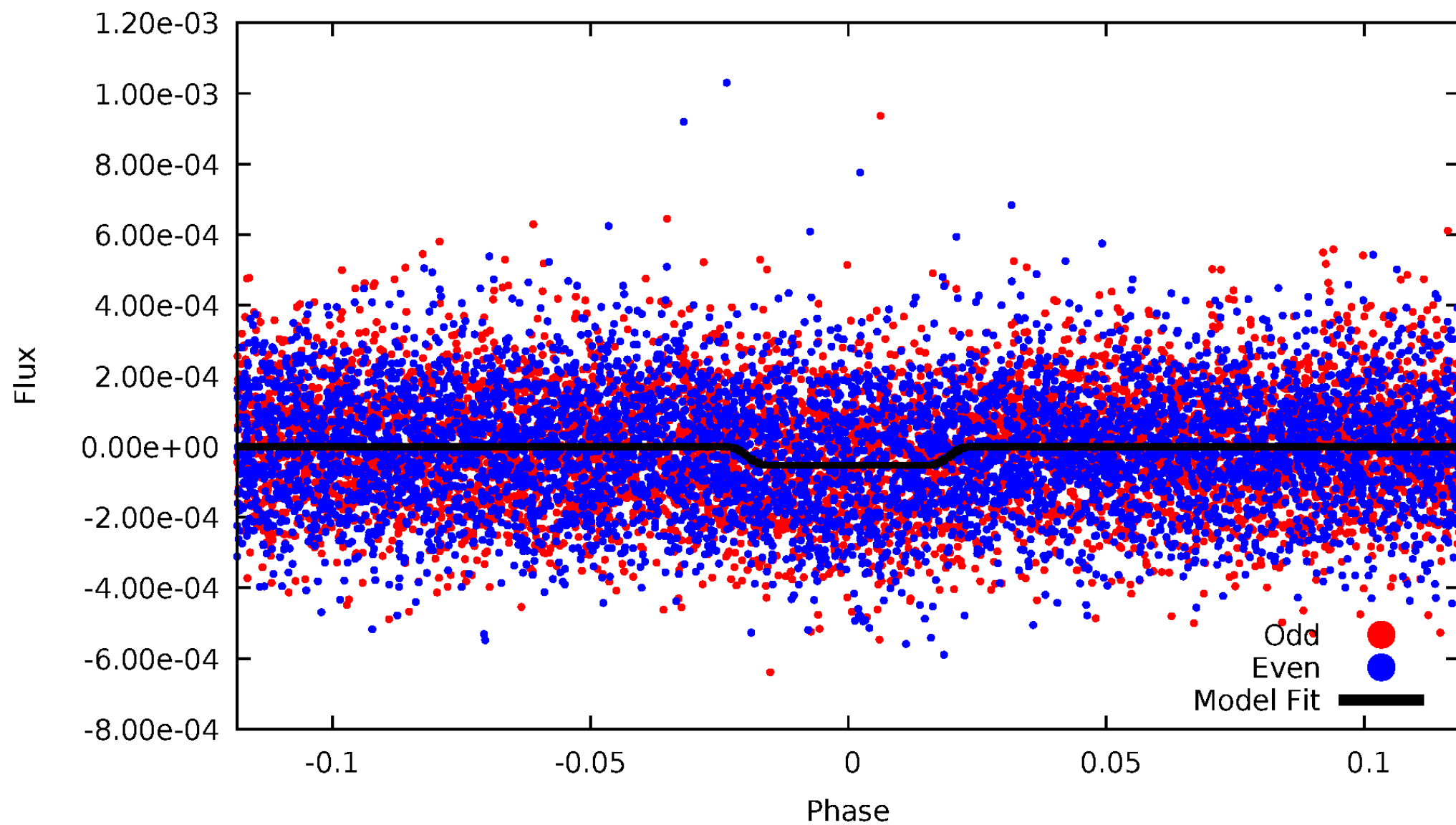
DV Odd/Even

TCE 005686974-01

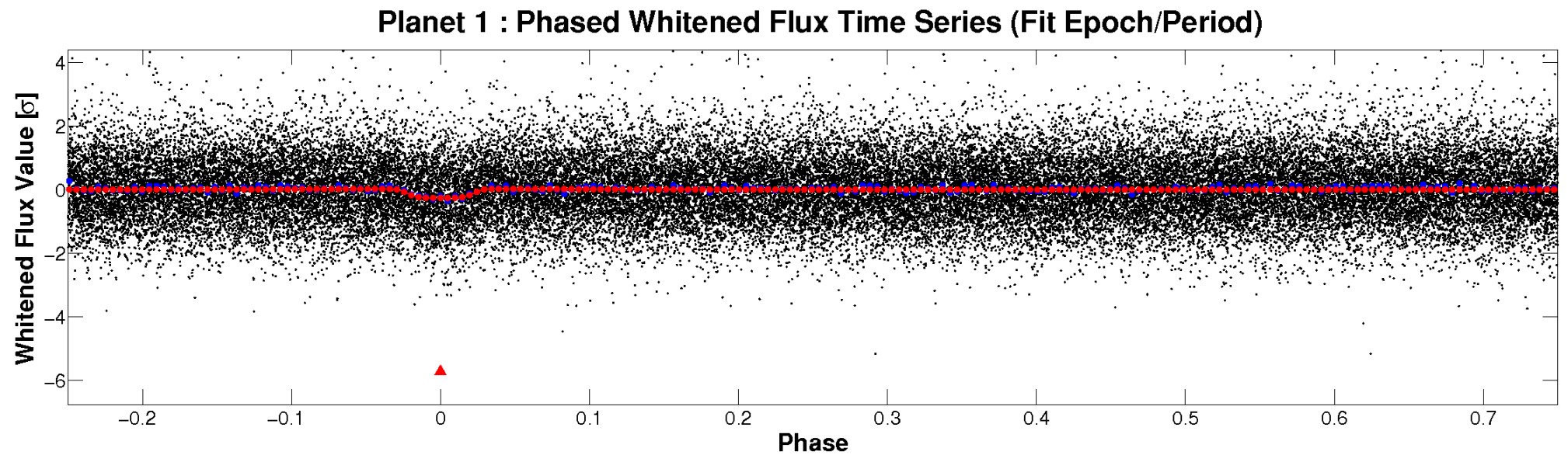
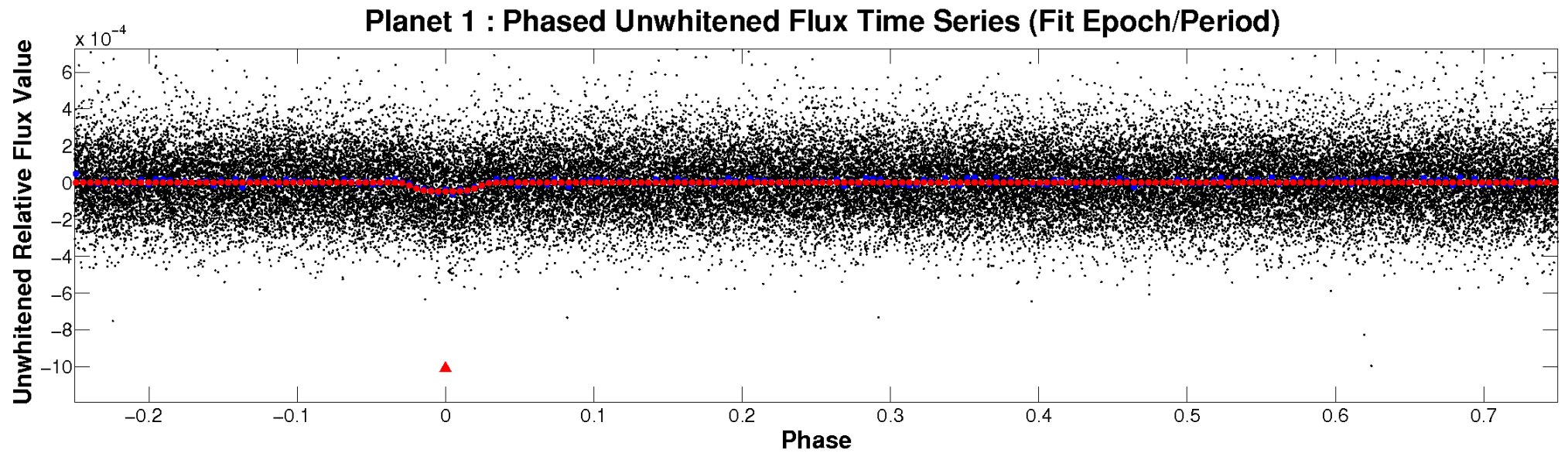


ALT Odd/Even

TCE 005686974-01

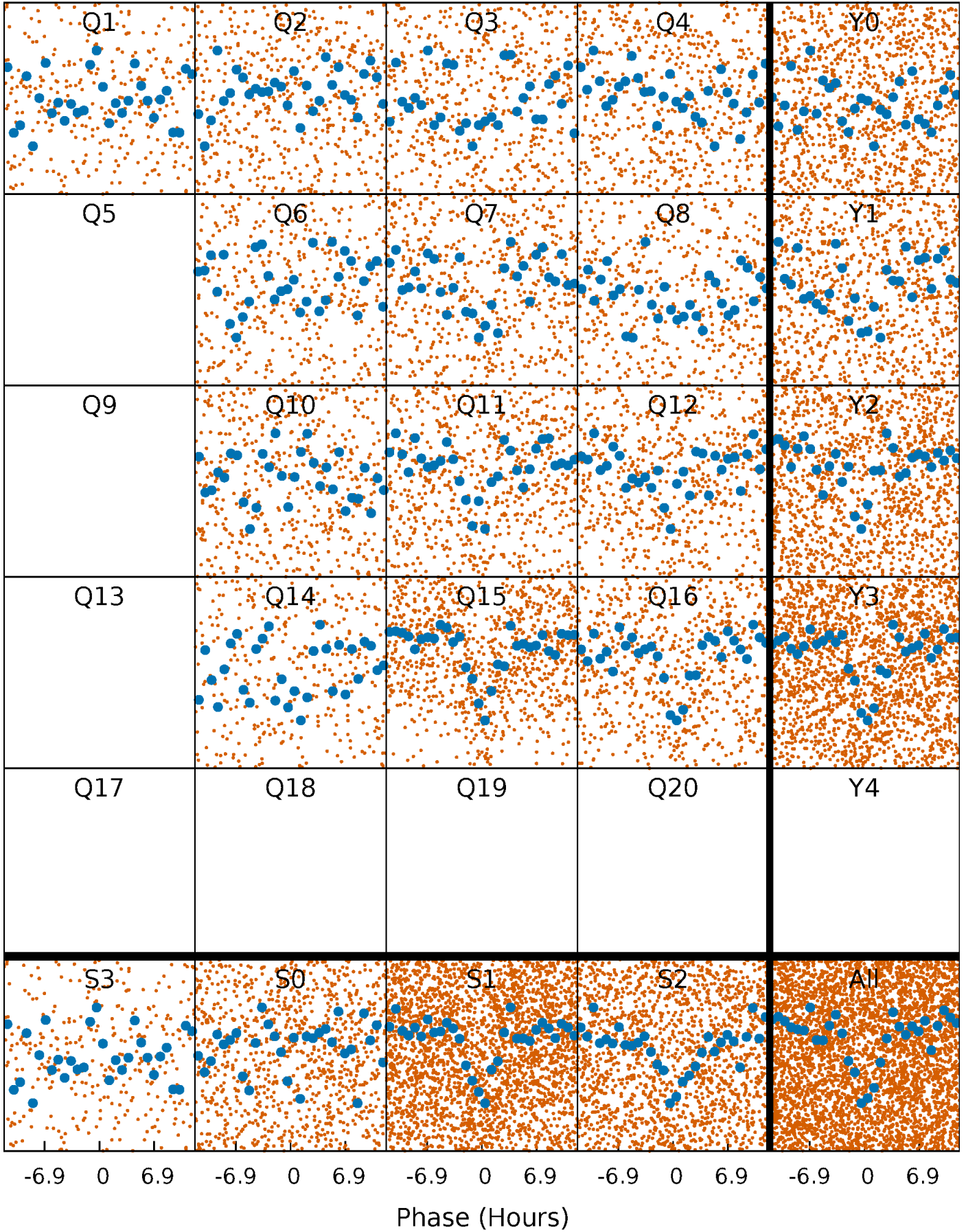


Non-Whitened Vs. Whitened Light Curve



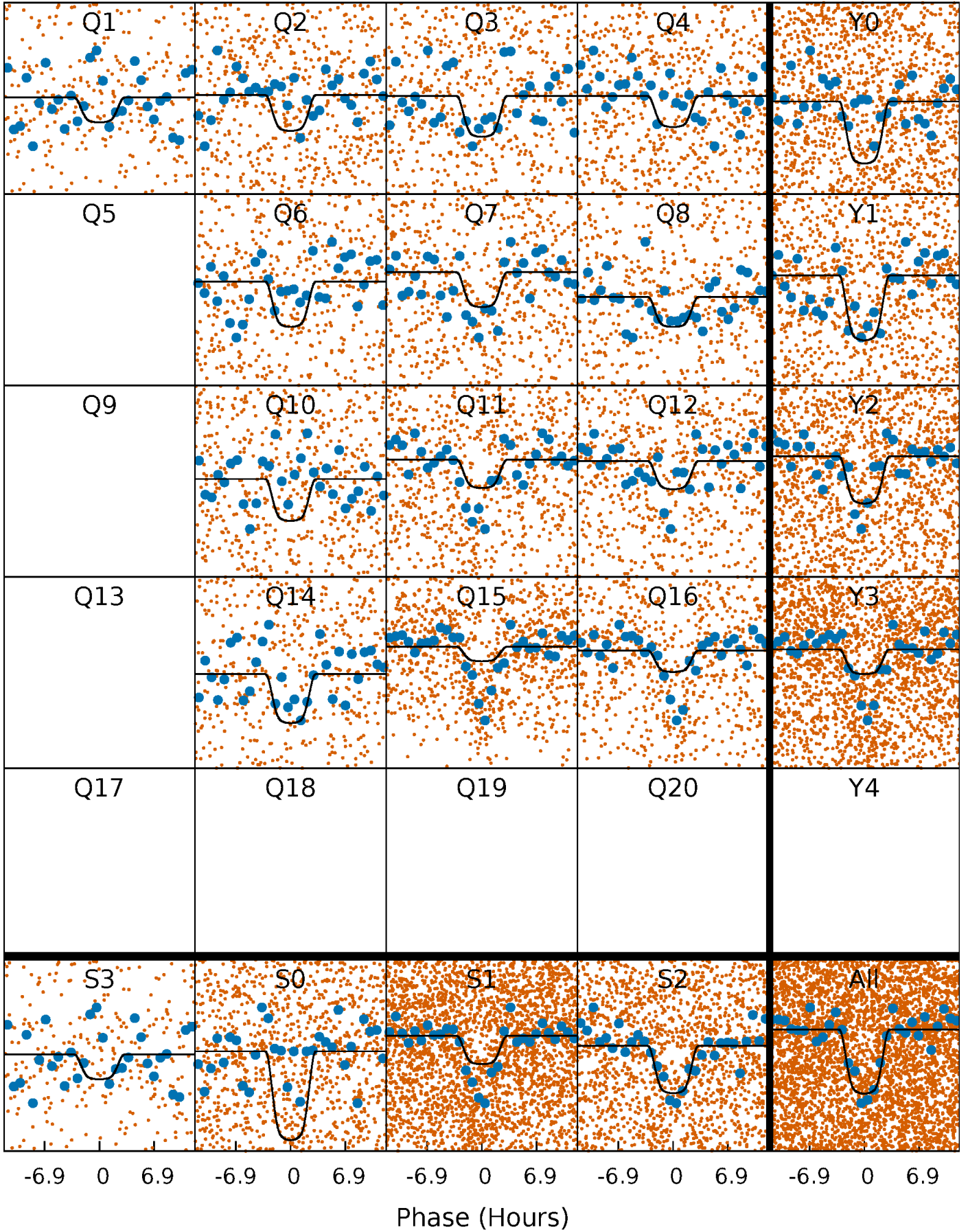
PDC Quarter-Phased Transit Curves

TCE 005686974-01 P= 4.182168 Days $T_0=134.103385$ (BKJD)



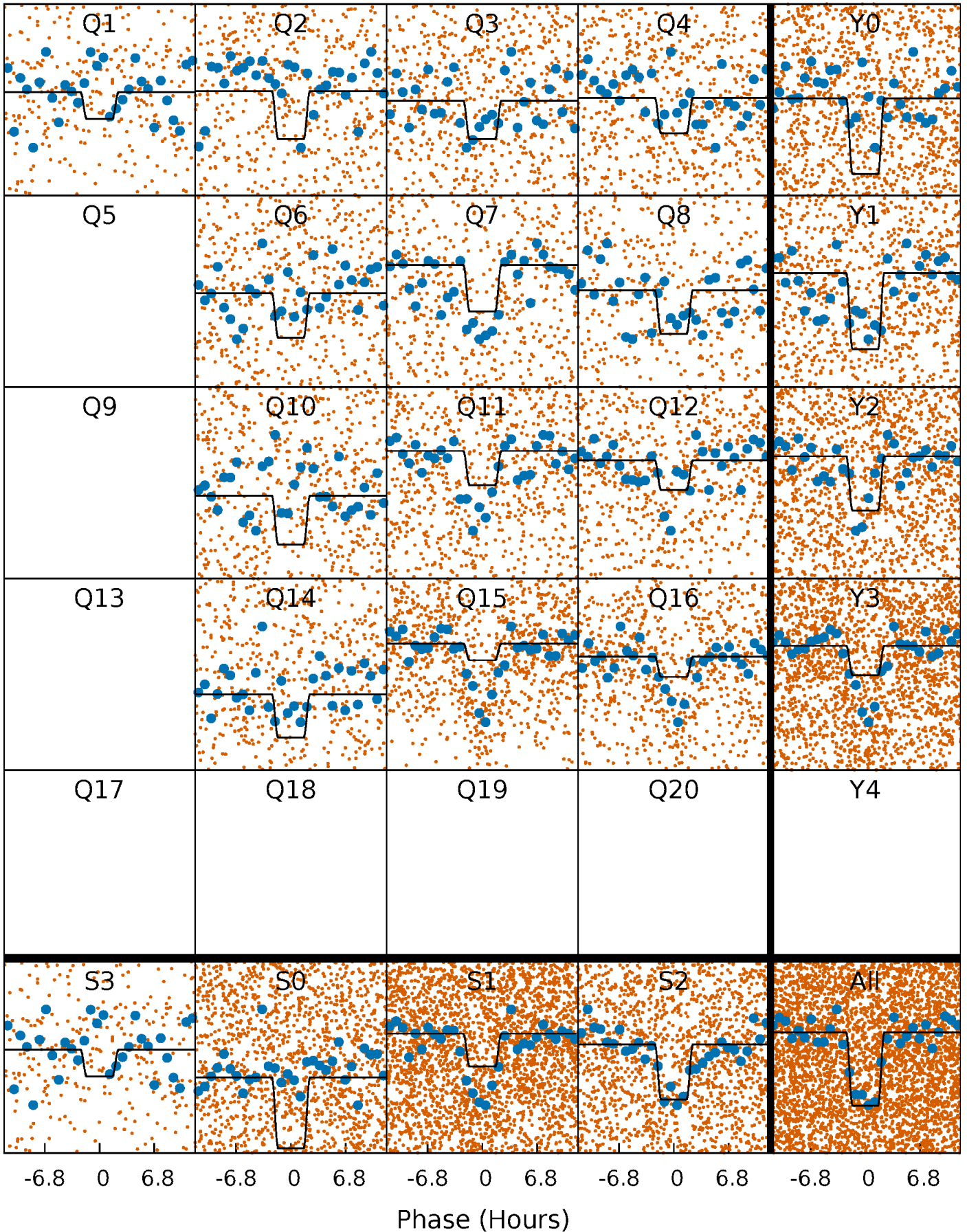
DV Quarter-Phased Transit Curves

TCE 005686974-01 P= 4.182168 Days $T_0=134.103385$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

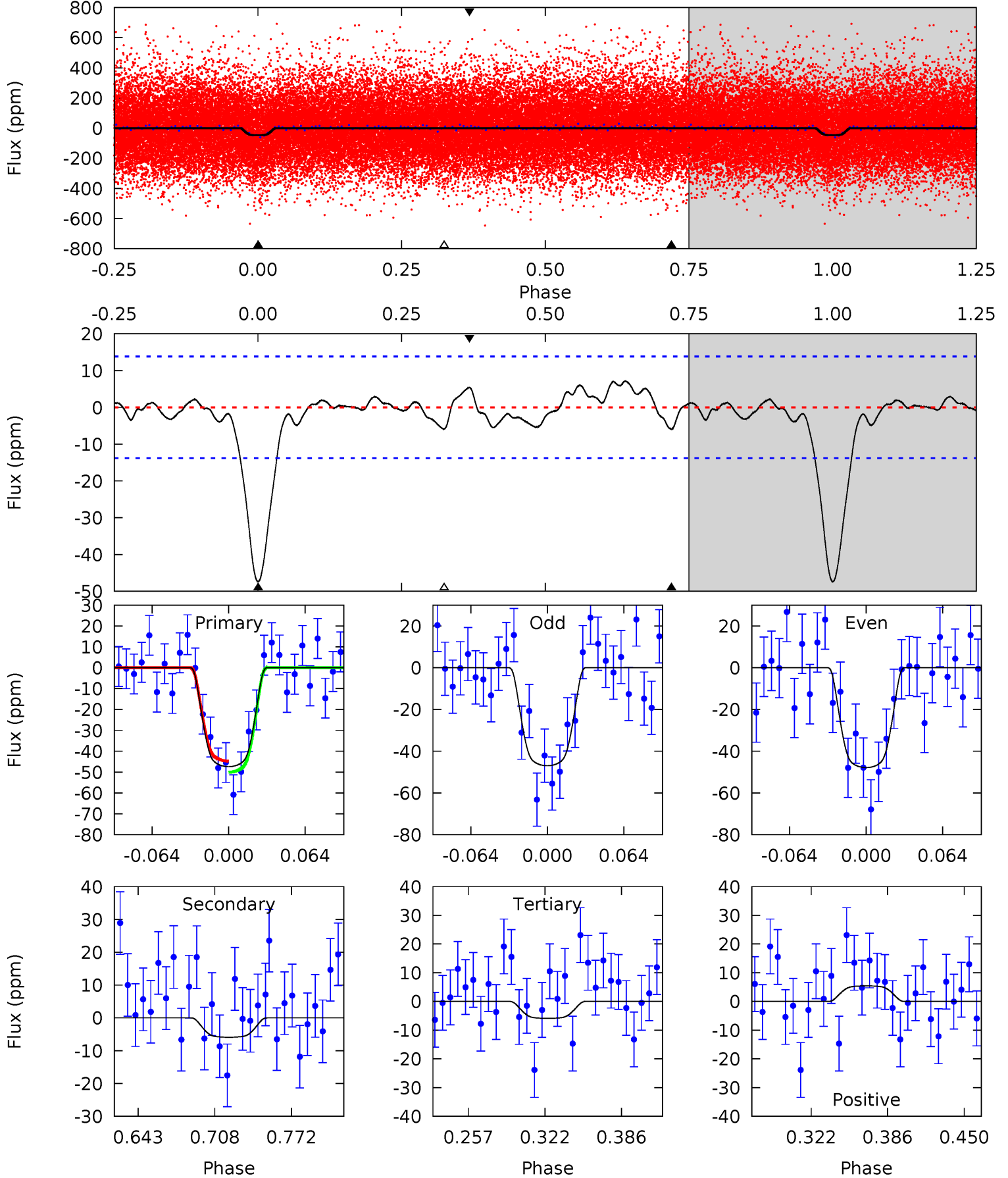
TCE 005686974-01 P= 4.182164 Days $T_0=134.109322$ (BKJD)



DV Model-Shift Uniqueness Test

005686974-01, P = 4.182168 Days, E = 129.921217 Days

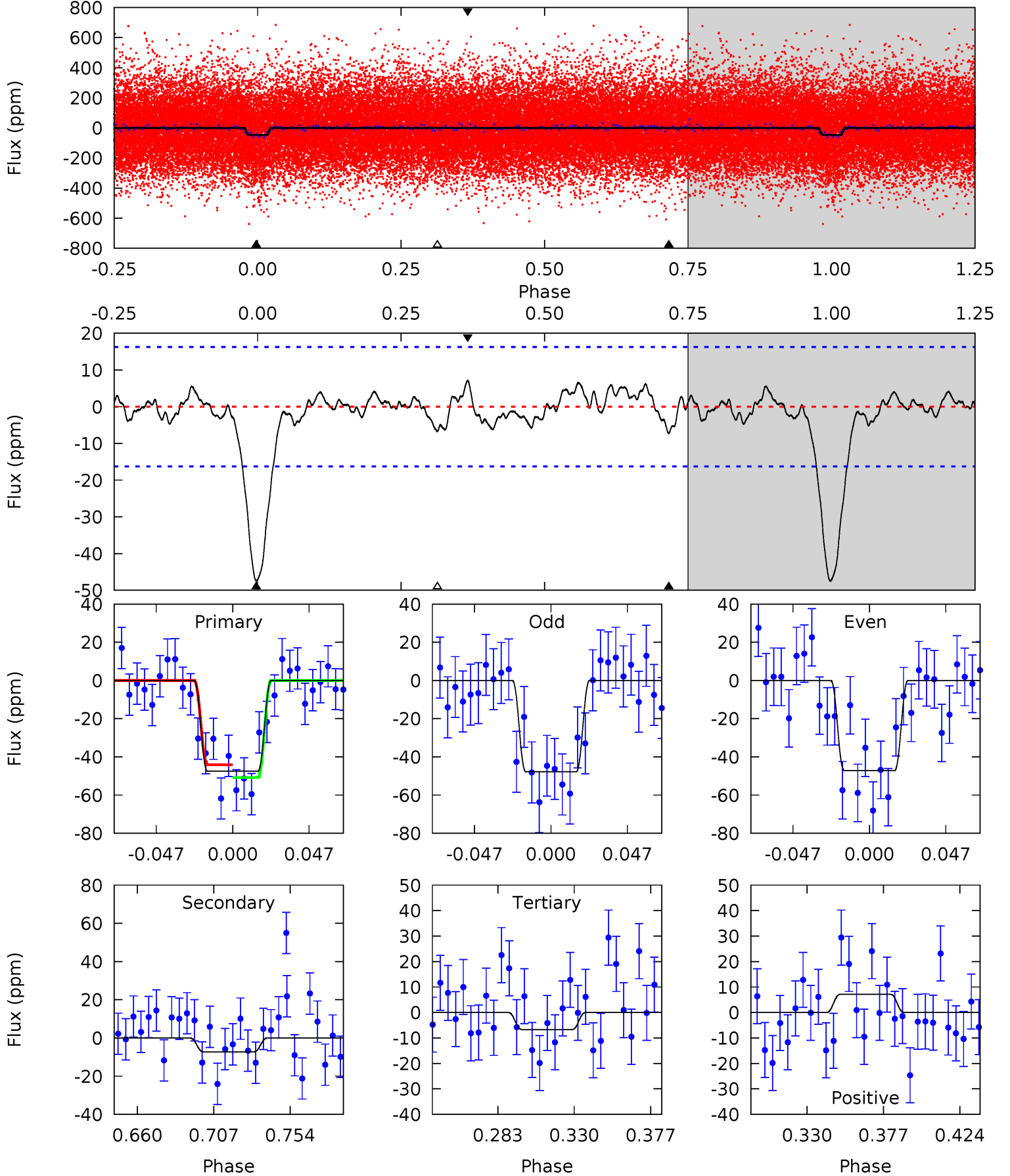
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	1.99	1.99	1.83	4.66	1.85	1.04	14.0	14.1	0.01	0.16	0.15	1.06	0.13	0.90



Alt Model-Shift Uniqueness Test

005686974-01, P = 4.182164 Days, E = 129.927158 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	2.12	1.94	2.07	4.72	1.98	0.87	11.8	11.7	0.18	0.05	0.10	1.25	0.13	0.98



Stellar Parameters For KIC 005686974

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6057^{+163}_{-181}	$4.392^{+0.128}_{-0.192}$	$-0.460^{+0.300}_{-0.300}$	$0.999^{+0.282}_{-0.152}$	$0.896^{+0.119}_{-0.089}$	$1.268^{+0.713}_{-0.615}$
	+3%/-3%	+3%/-4%	+65%/-65%	+28%/-15%	+13%/-10%	+56%/-49%
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 005686974-01 / KOI 6613.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-6 ± 3	$0.96^{+0.17}_{-0.13}$	1698^{+136}_{-108}	3608^{+302}_{-398}	$8.067^{+5.682}_{-4.252}$
Alt.	-7 ± 3	$0.82^{+0.13}_{-0.13}$	1695^{+130}_{-96}	3984^{+358}_{-409}	14^{+10}_{-7}

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

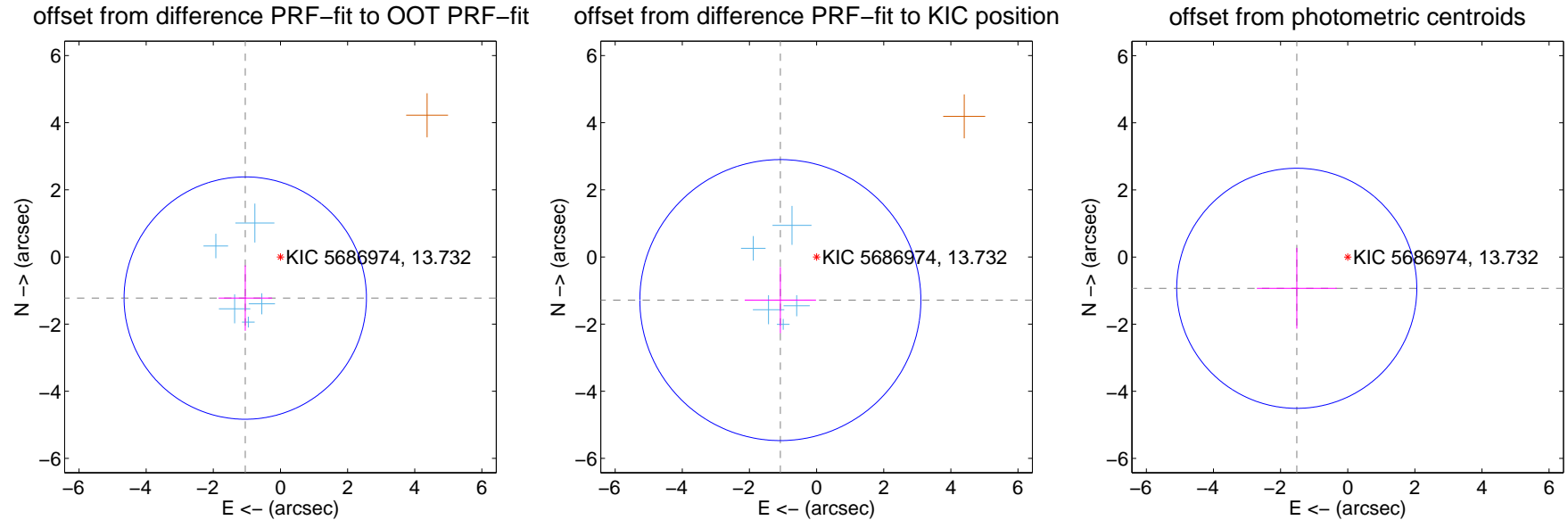
DV Centroid Data

Supplemental centroid analysis for 005686974-01. Kepler magnitude: 13.73. Transit SNR 10.94

There are 5 quarters with good PRF difference image offsets

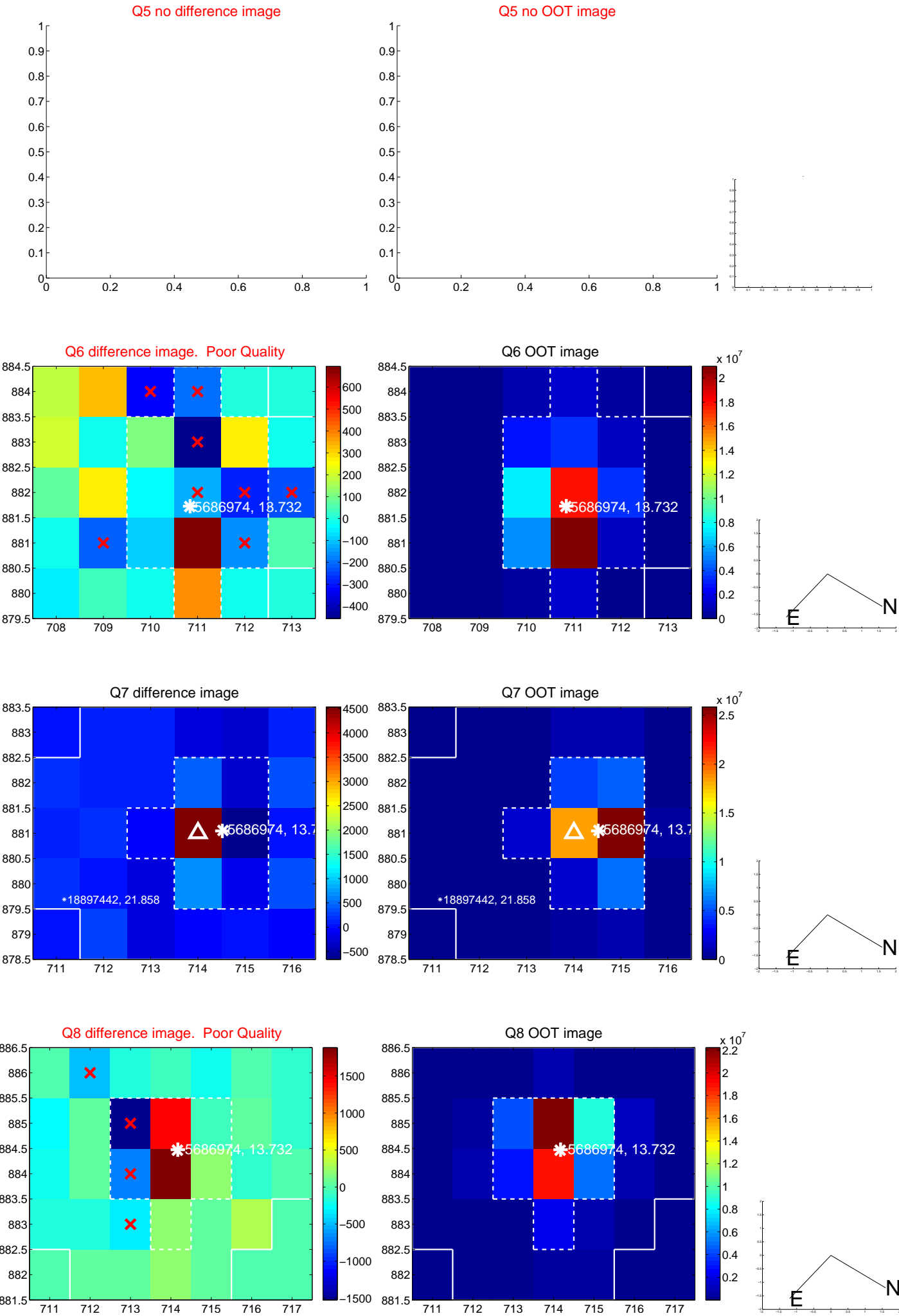
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.612 ± 1.203	1.34	1.049 ± 0.797	-1.225 ± 0.975
PRF-fit source offset from KIC position	1.678 ± 1.395	1.20	1.079 ± 1.061	-1.284 ± 0.984
photometric centroid source offset	1.78 ± 1.19	1.49	1.52 ± 1.19	-0.93 ± 1.20

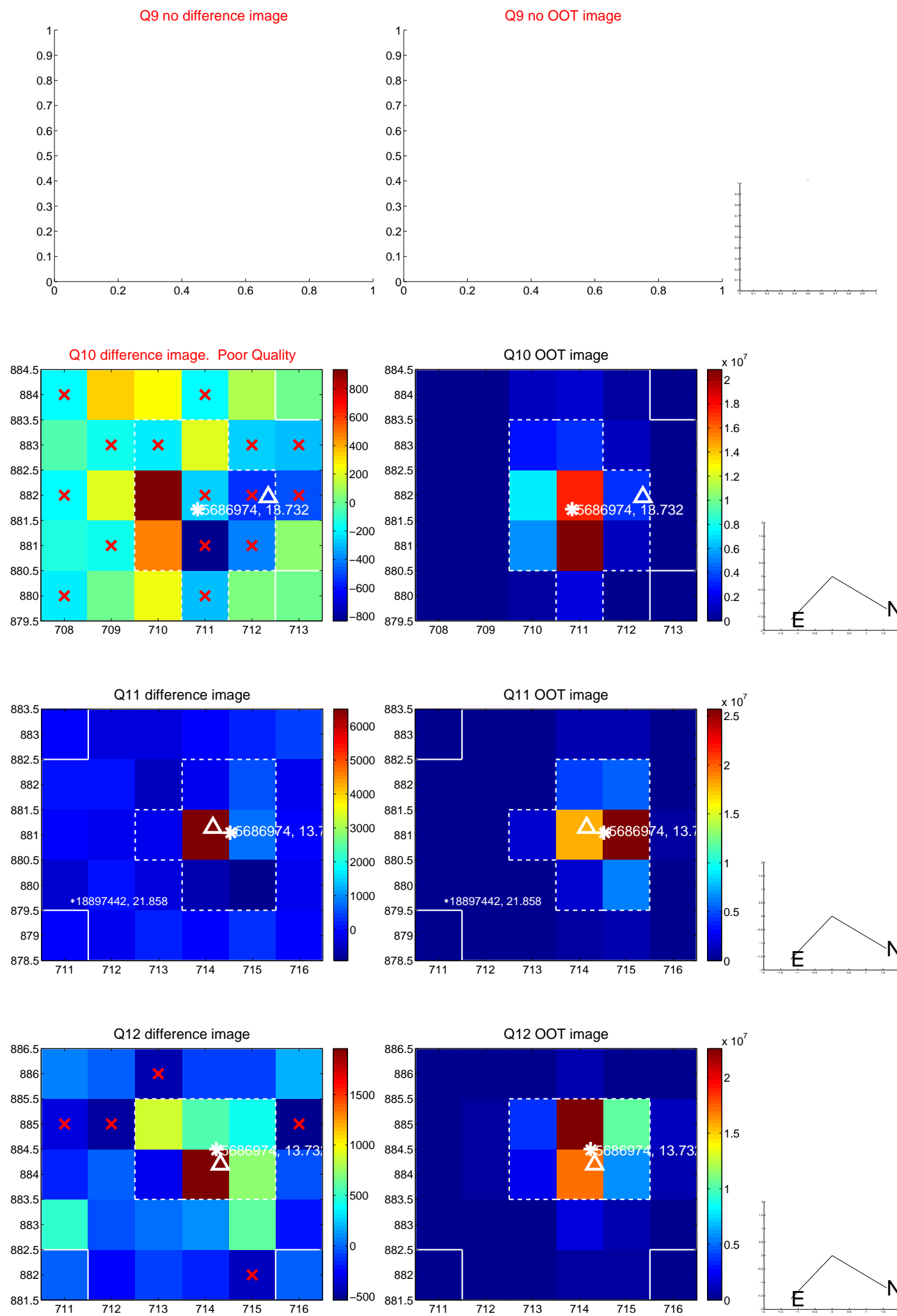


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

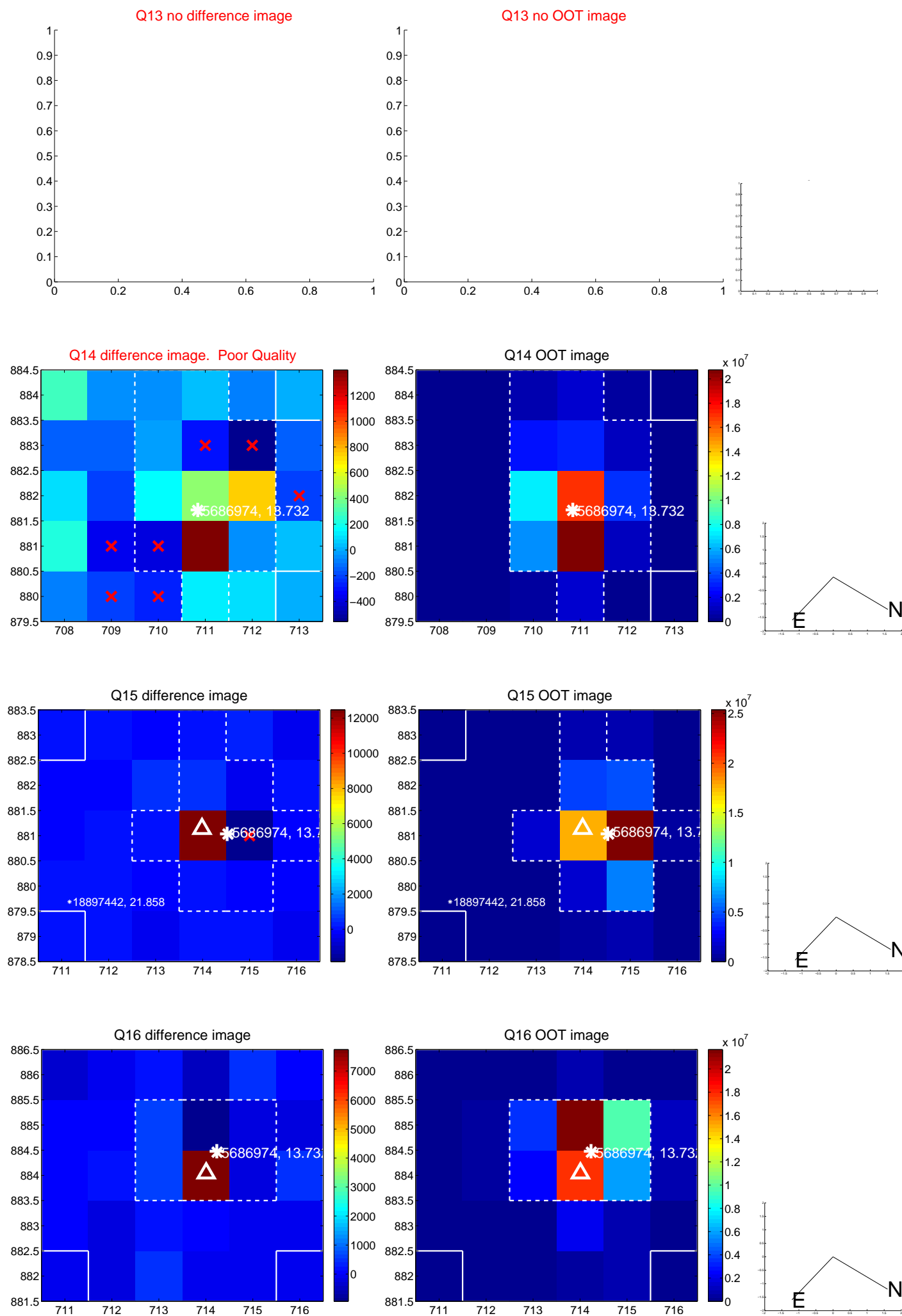
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



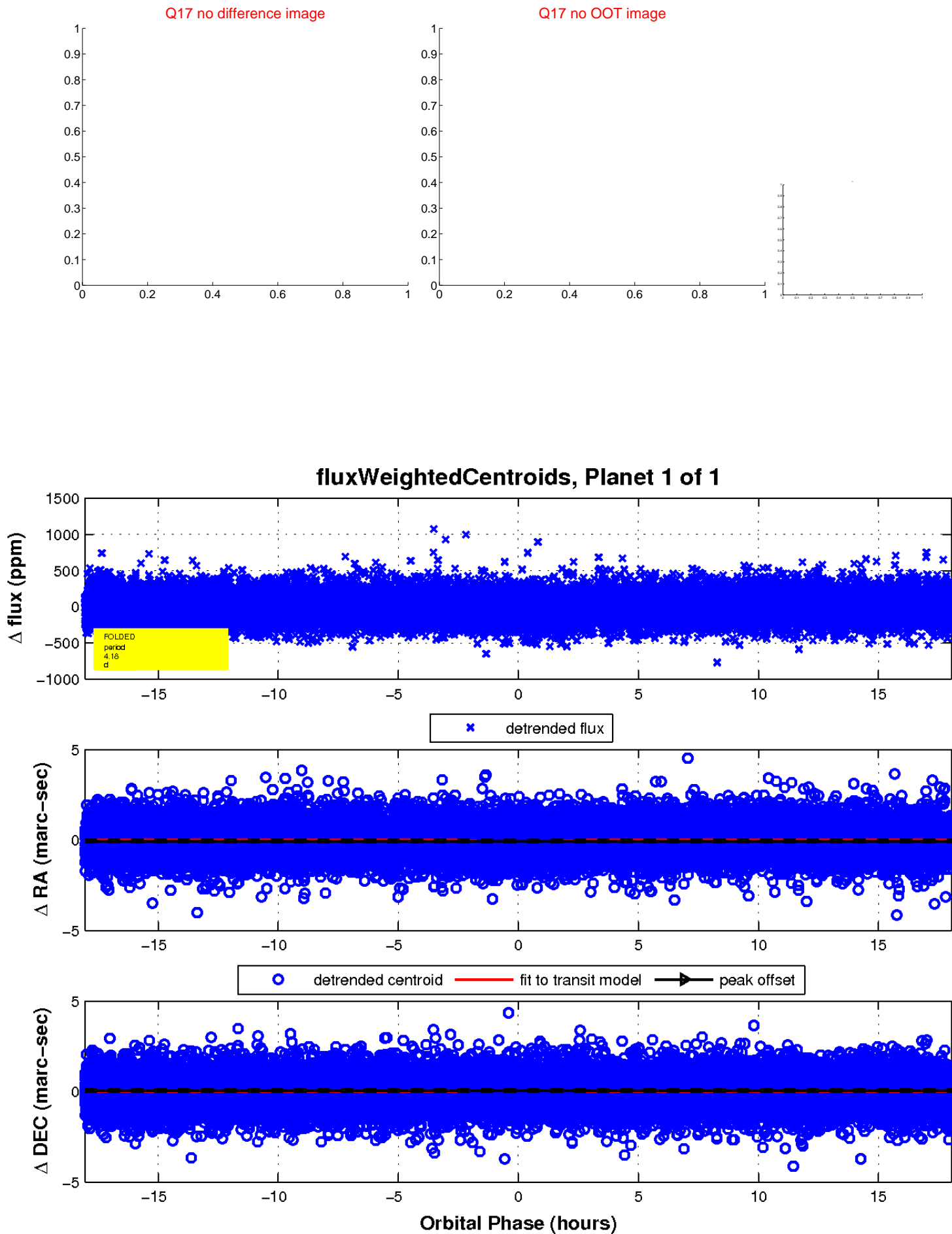
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

