

KIC 007516073

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})
007516073-01	OBS	5395.01	300.596443	226.604666	155.1	21.647	8.0	7.8	1.39	5786	2.07	2.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007516073-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--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 007516073-01

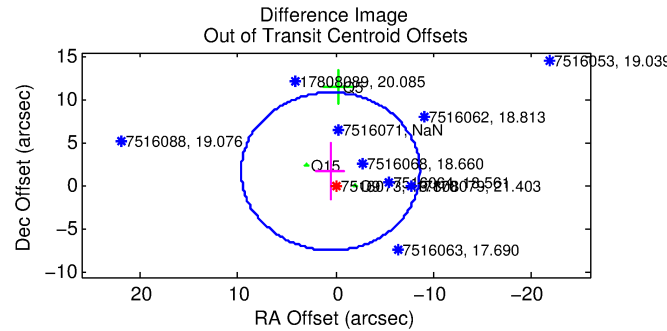
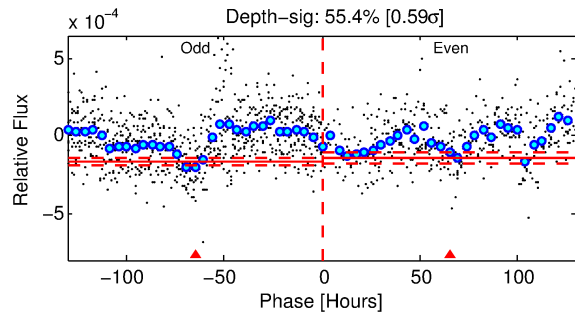
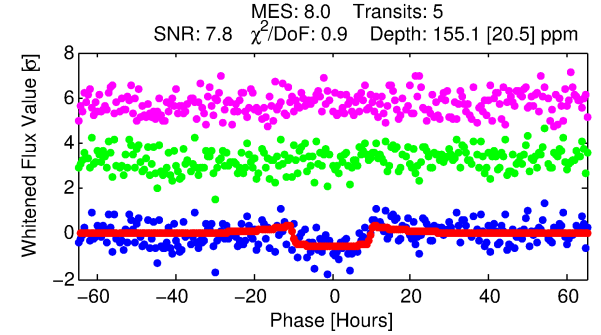
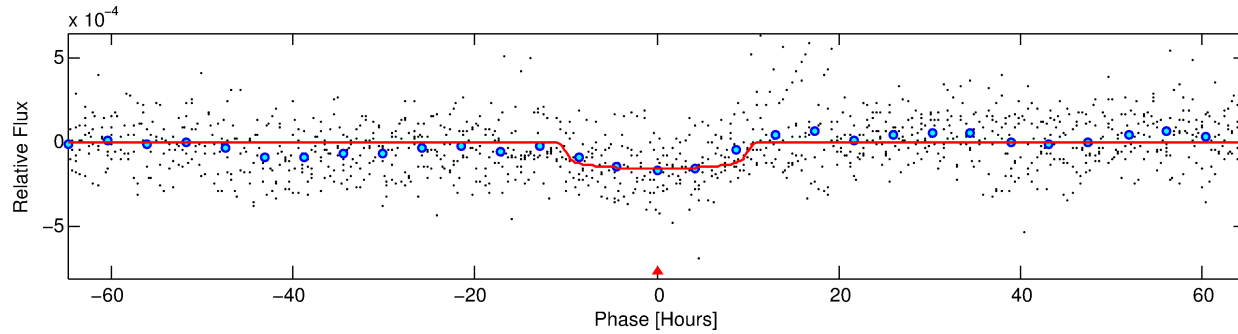
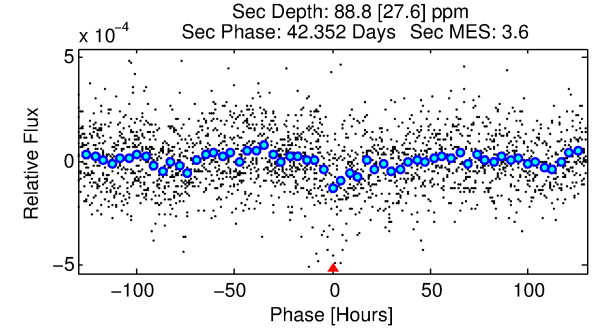
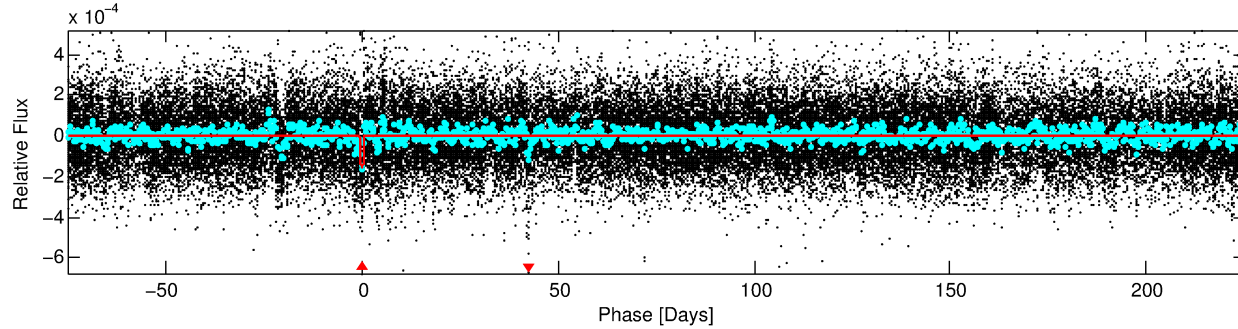
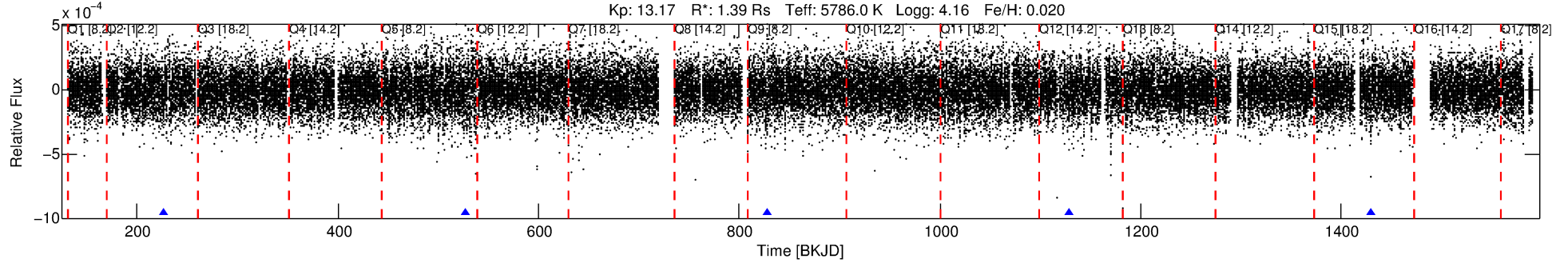
No Significant Match Found

DV One-Page Summary

KIC: 7516073 Candidate: 1 of 1 Period: 300.596 d

KOI: K05395 Corr: No Ephemeris Match

Kp: 13.17 R*: 1.39 Rs Teff: 5786.0 K Logg: 4.16 Fe/H: 0.020



DV Fit Results:

Period = 300.59644 [0.01029] d
Epoch = 226.6047 [0.0261] BKJD
Rp/R* = 0.0137 [0.0016]
a/R* = 47.51 [21.43]
b = 0.91 [0.09]
Seff = 2.50 [1.28]
Teq = 321 [41] K
Rp = 2.07 [0.69] Re
a = 0.8796 [0.2689] AU
Ag = 8799.58 [5545.67] [1.59σ]
Teffp = 4802 [494] K [9.04σ]

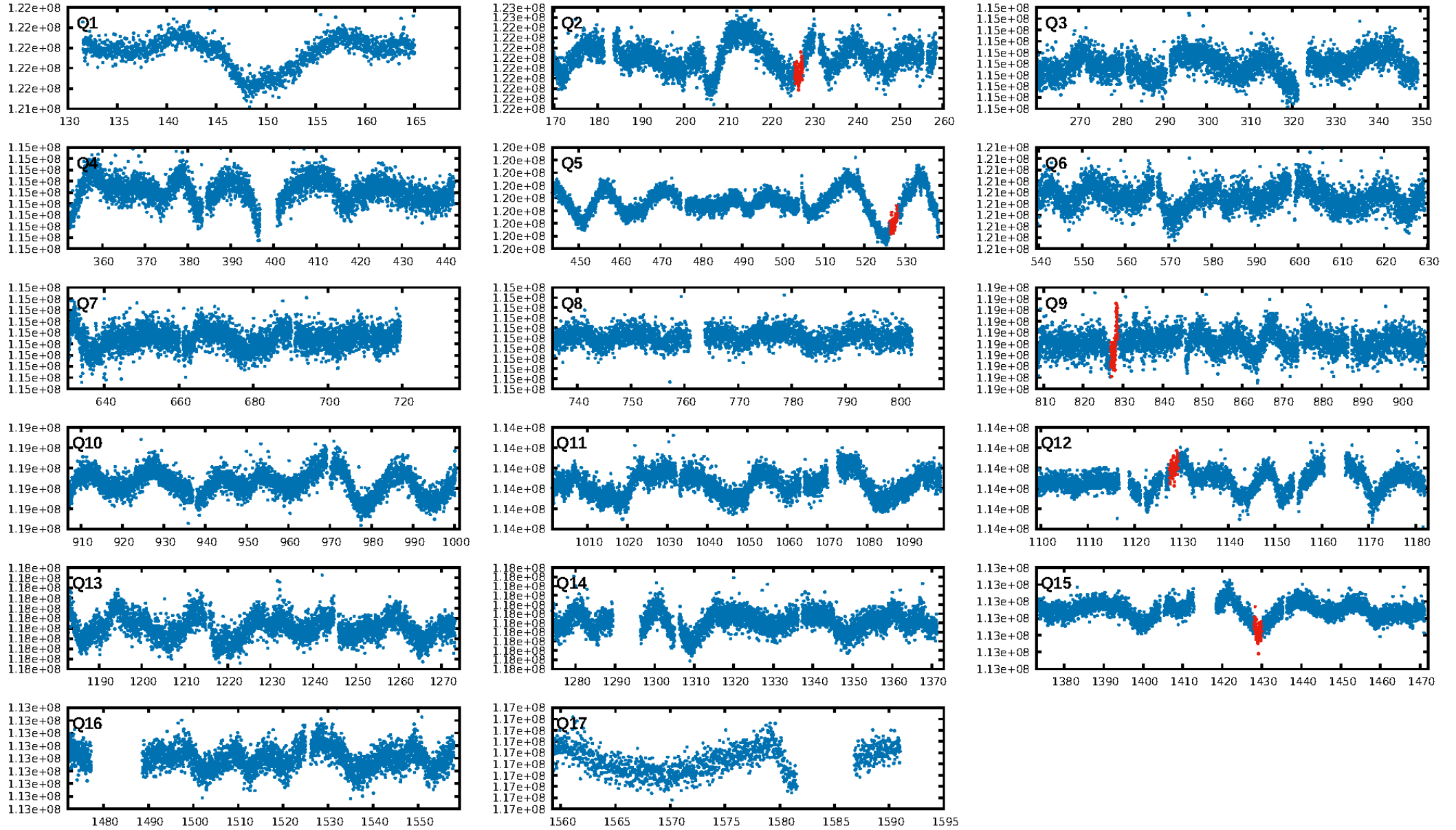
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 76.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.01e-10
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 2.931
Centroid-sig: 28.6%
Centroid-so: 1.259 arcsec [1.19σ]
OotOffset-rm: 1.788 arcsec [0.59σ]
KicOffset-rm: 1.746 arcsec [0.48σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [4/4]

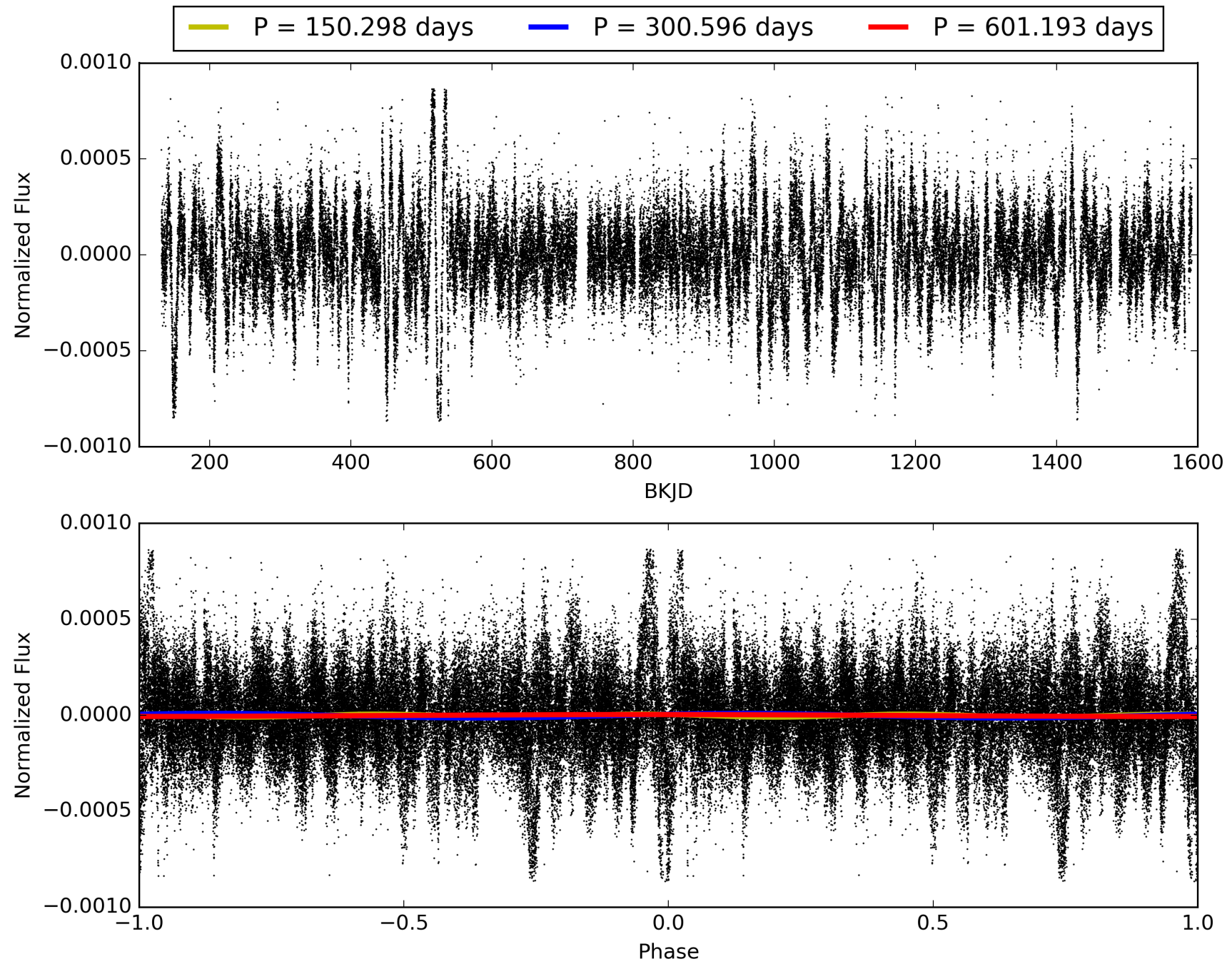
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:48:39 Z

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

TCE 007516073-01, PDC Light Curves

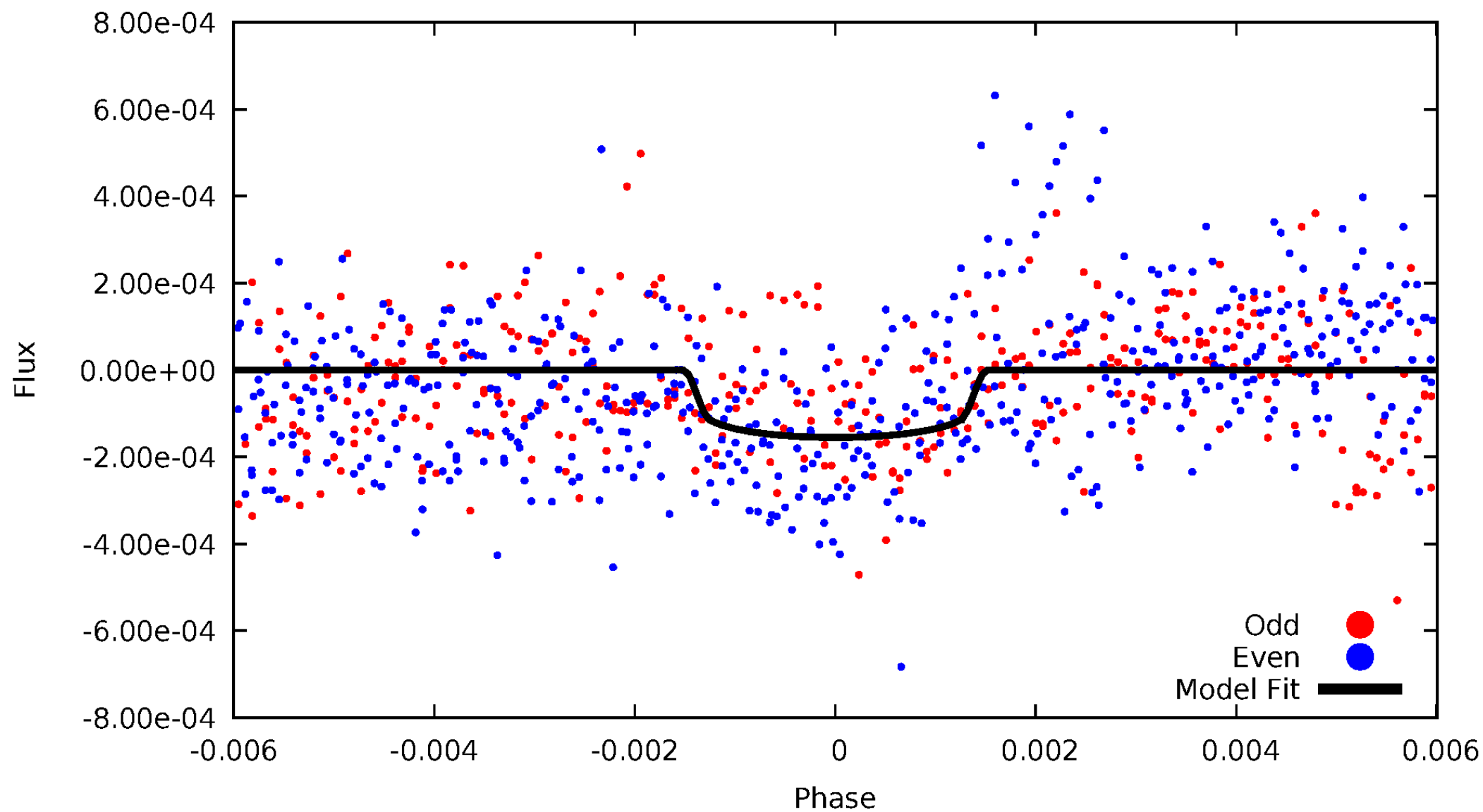


TCE 007516073-01



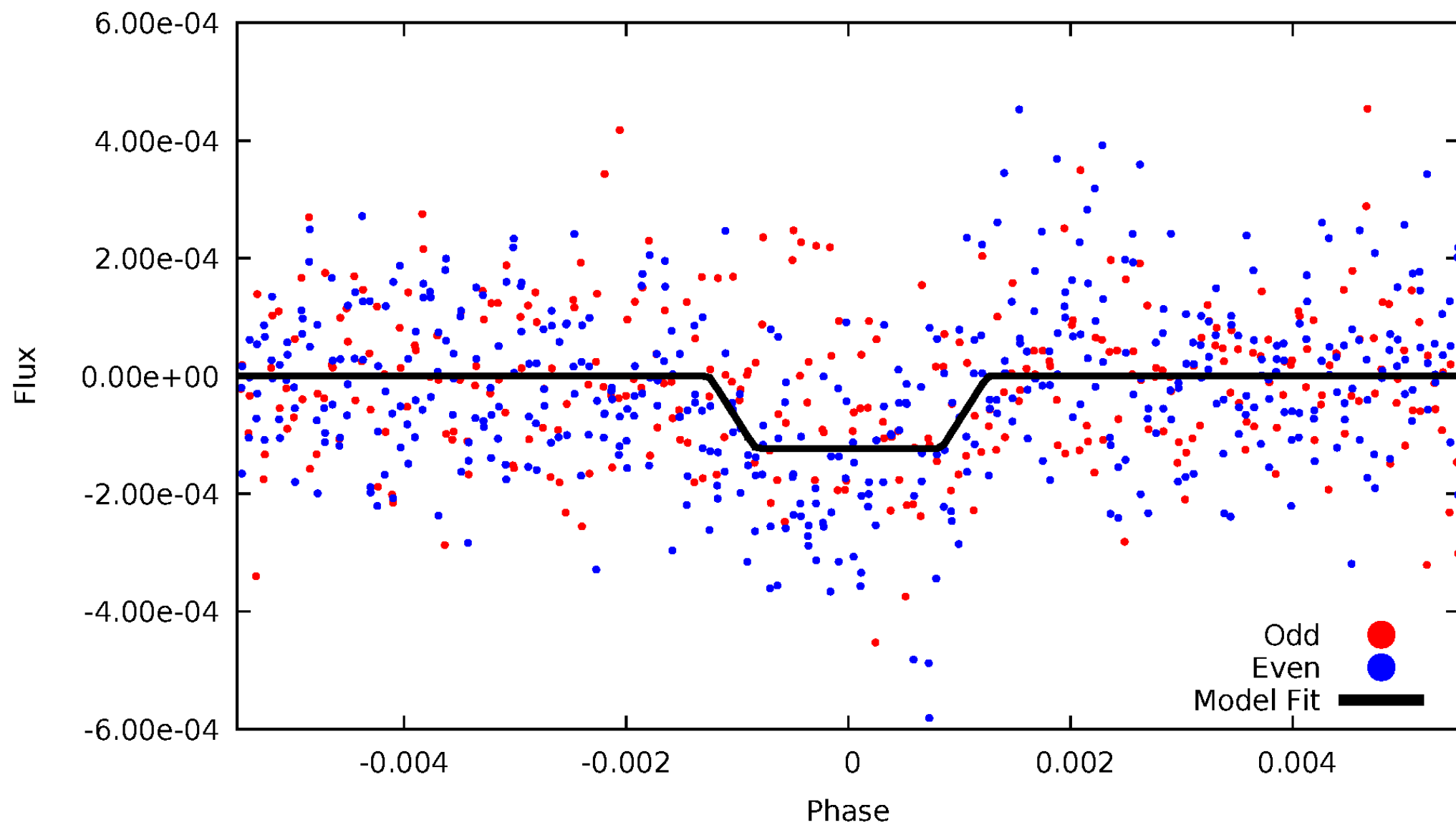
DV Odd/Even

TCE 007516073-01



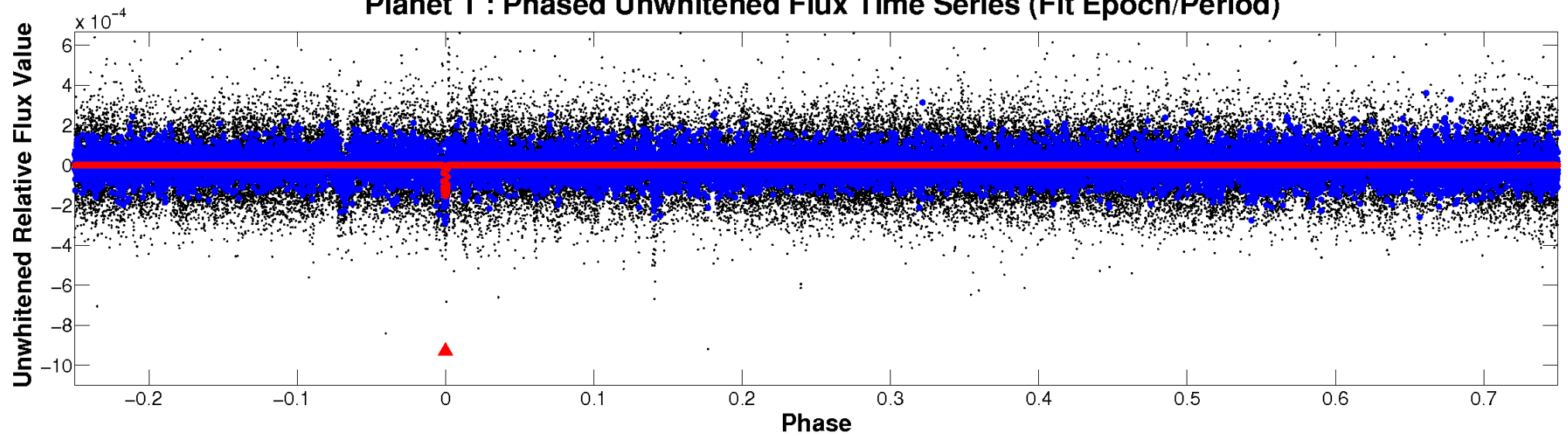
ALT Odd/Even

TCE 007516073-01

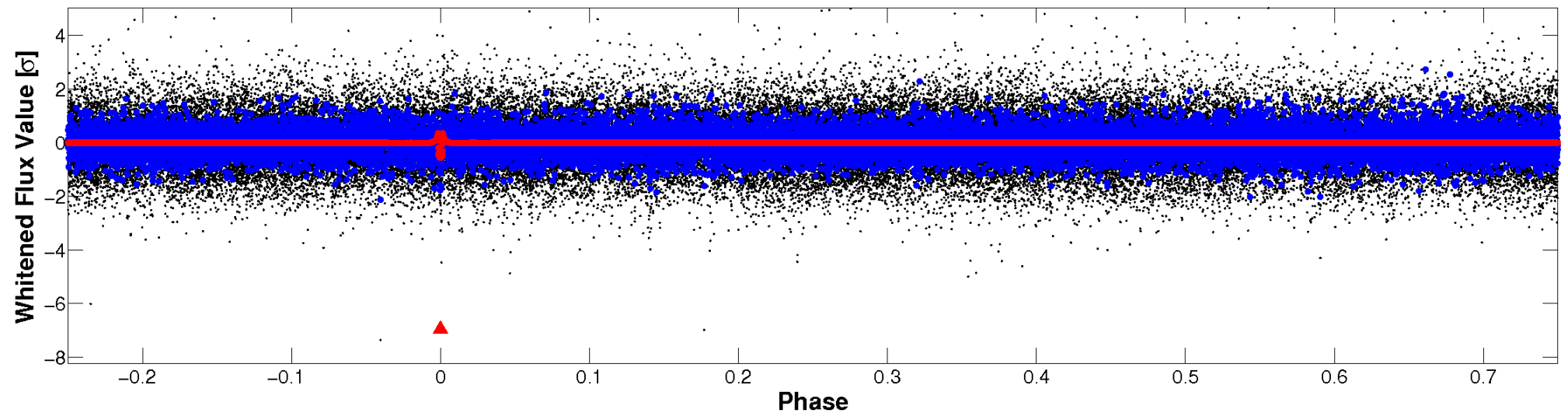


Non-Whitened Vs. Whitened Light Curve

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

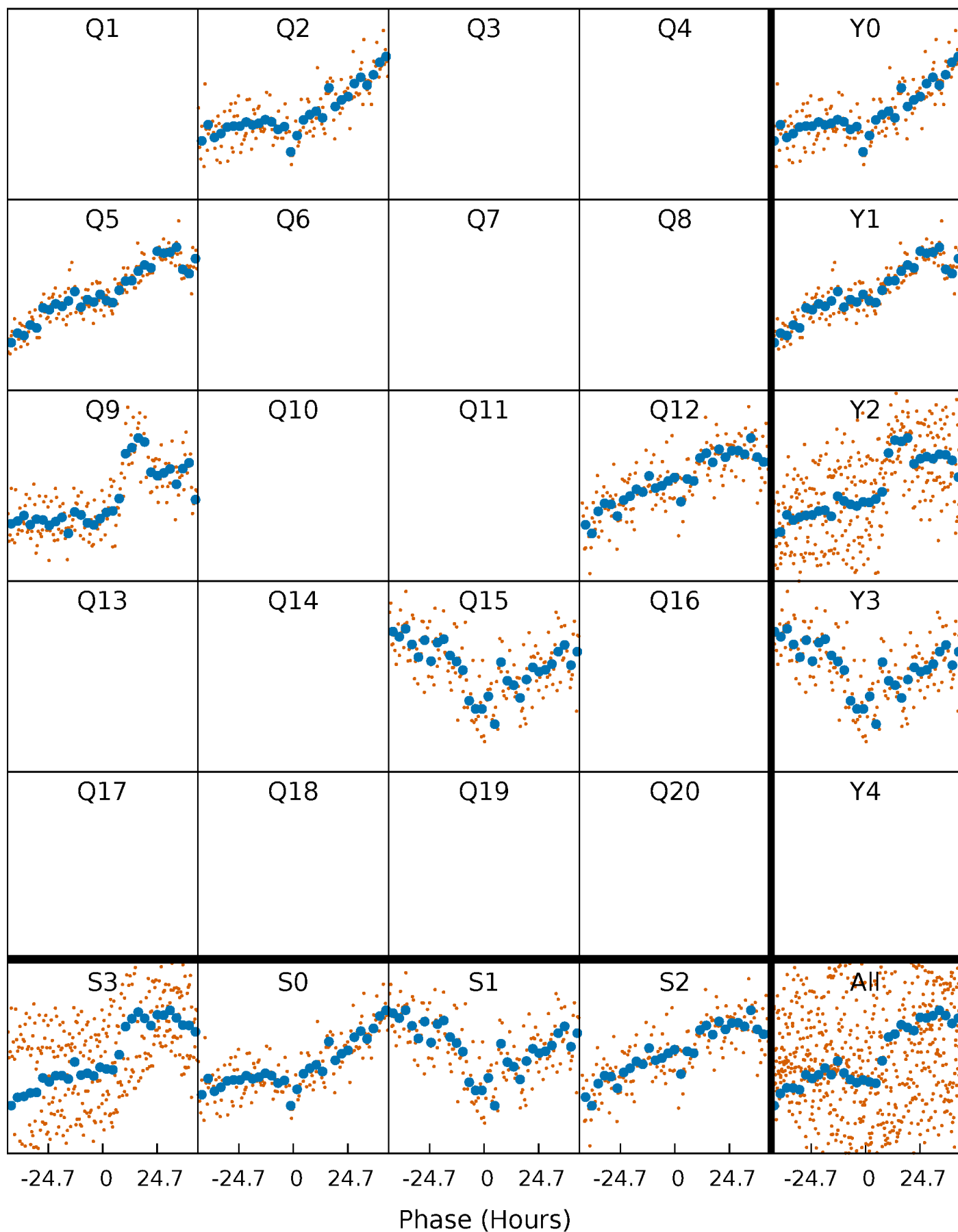


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



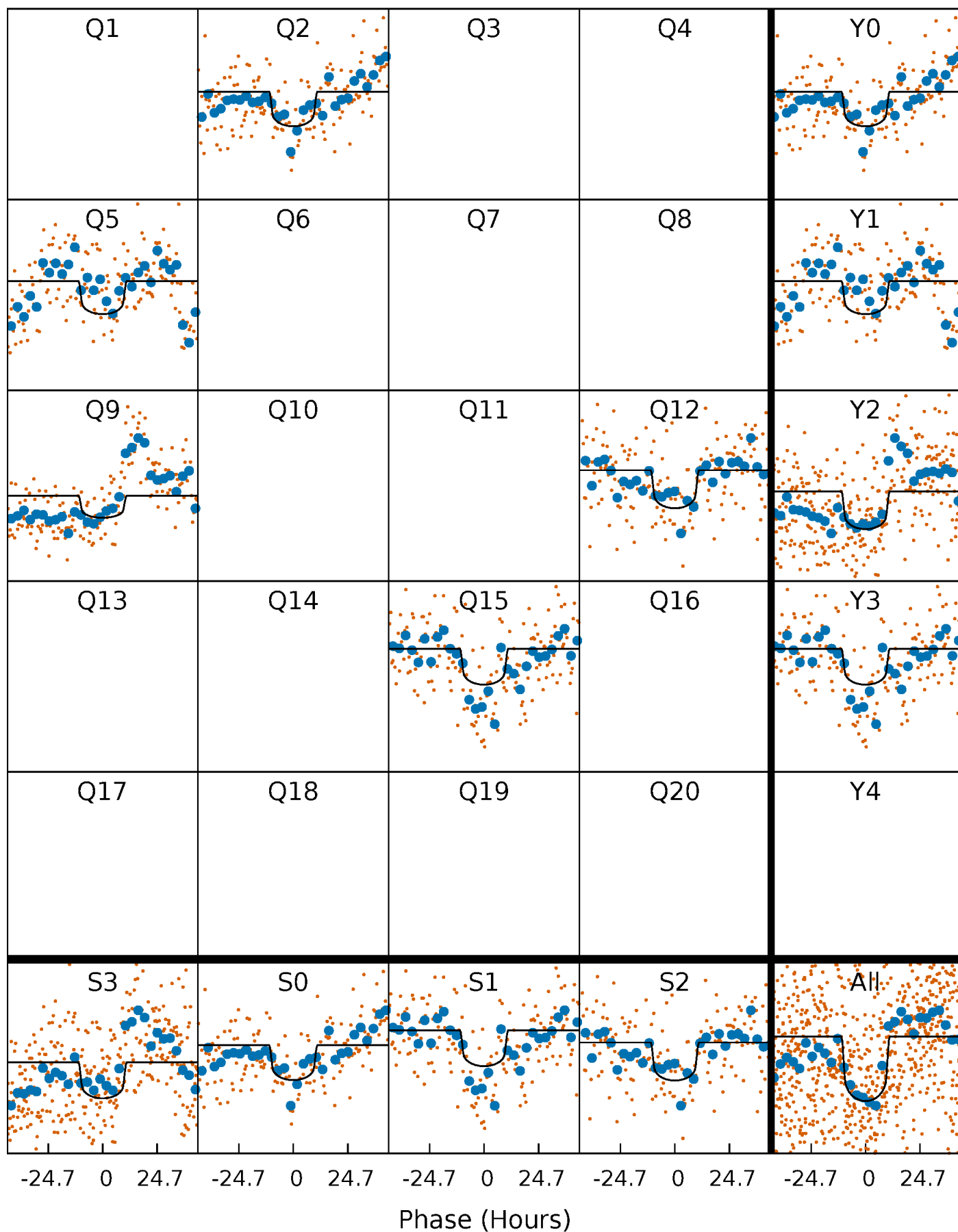
PDC Quarter-Phased Transit Curves

TCE 007516073-01 P=300.596443 Days $T_0=226.604666$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007516073-01 P=300.596443 Days $T_0=226.604666$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

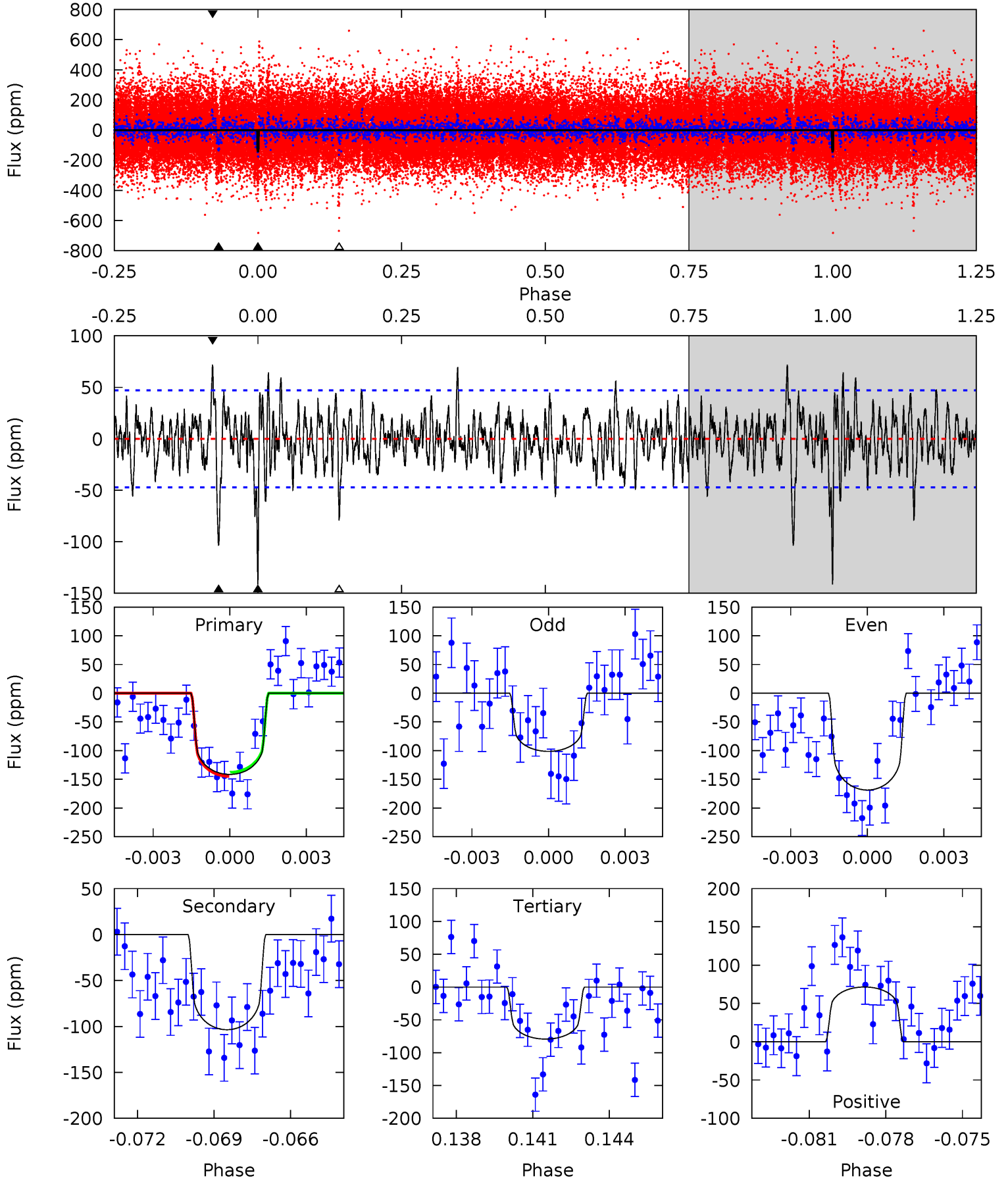
TCE 007516073-01 P=300.577668 Days $T_0=226.658322$ (BKJD)



DV Model-Shift Uniqueness Test

007516073-01, P = 300.596443 Days, E = 226.604666 Days

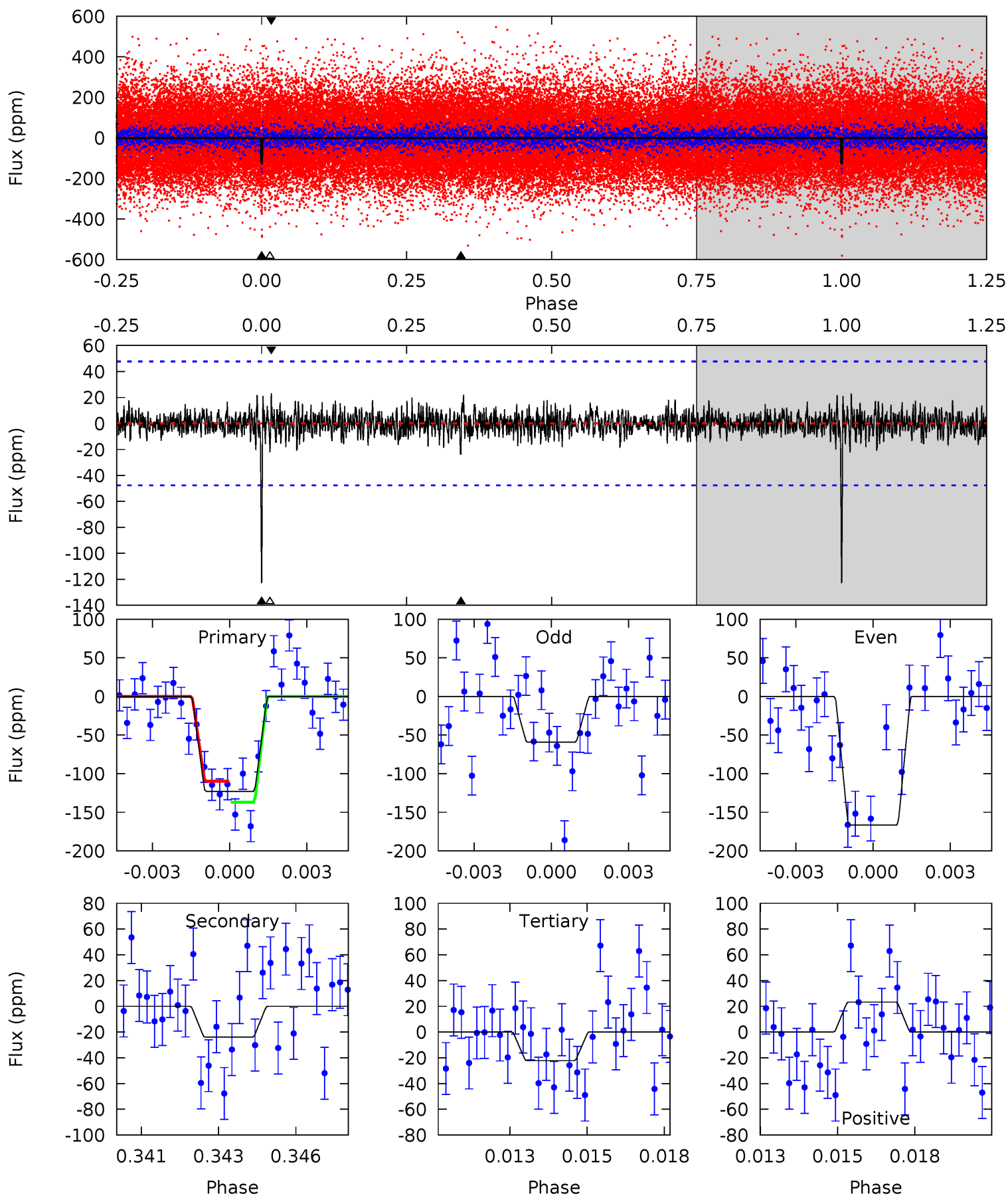
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	11.5	8.83	7.97	5.25	2.97	2.27	6.94	7.80	2.71	3.57	3.65	0.98	0.34	0.40



Alt Model-Shift Uniqueness Test

007516073-01, P = 300.577668 Days, E = 226.658322 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	2.65	2.46	2.58	5.28	3.01	0.69	11.1	11.0	0.19	0.07	5.82	1.05	0.16	1.51



Stellar Parameters For KIC 007516073

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5786^{+173}_{-190}	$4.155^{+0.293}_{-0.158}$	$0.020^{+0.250}_{-0.300}$	$1.388^{+0.353}_{-0.431}$	$1.003^{+0.134}_{-0.121}$	$0.528^{+0.959}_{-0.221}$
	+3%/-3%	+7%/-4%	+1250%/-1500%	+25%/-31%	+13%/-12%	+182%/-42%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007516073-01 / KOI 5395.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-104 ± 9	$2.00^{+0.43}_{-0.37}$	442^{+34}_{-40}	5049^{+376}_{-298}	10886^{+6135}_{-3418}
Alt.	-24 ± 9	$1.63^{+0.38}_{-0.31}$	442^{+35}_{-38}	4101^{+356}_{-393}	3644^{+2911}_{-1631}

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

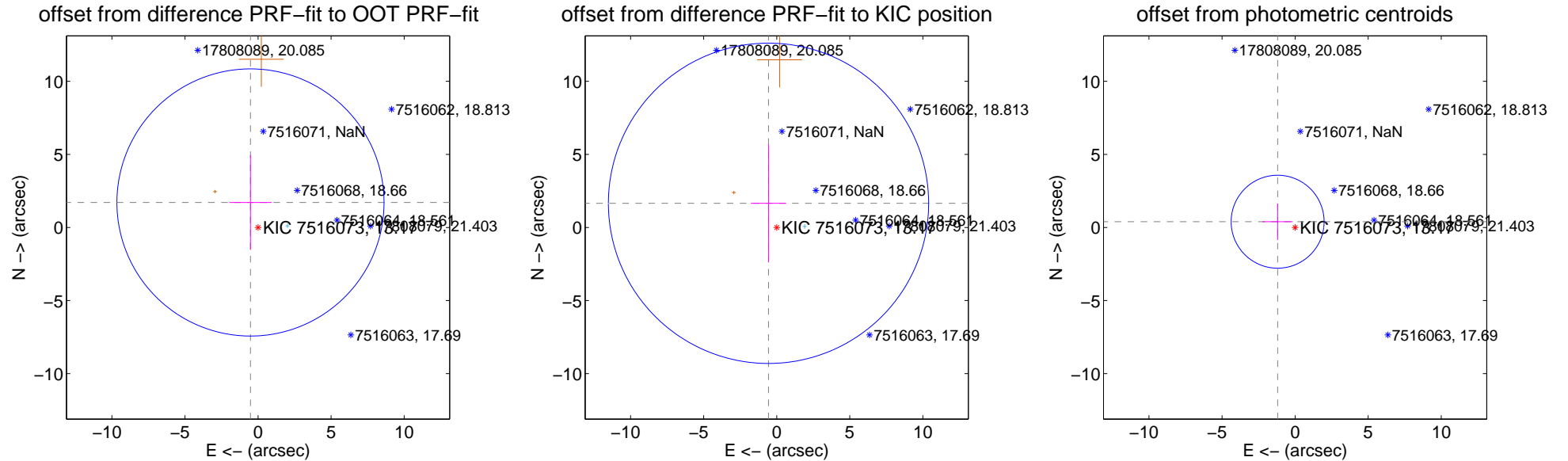
DV Centroid Data

Supplemental centroid analysis for 007516073-01. Kepler magnitude: 13.17. Transit SNR 7.82

There are 1 quarters with good PRF difference image offsets

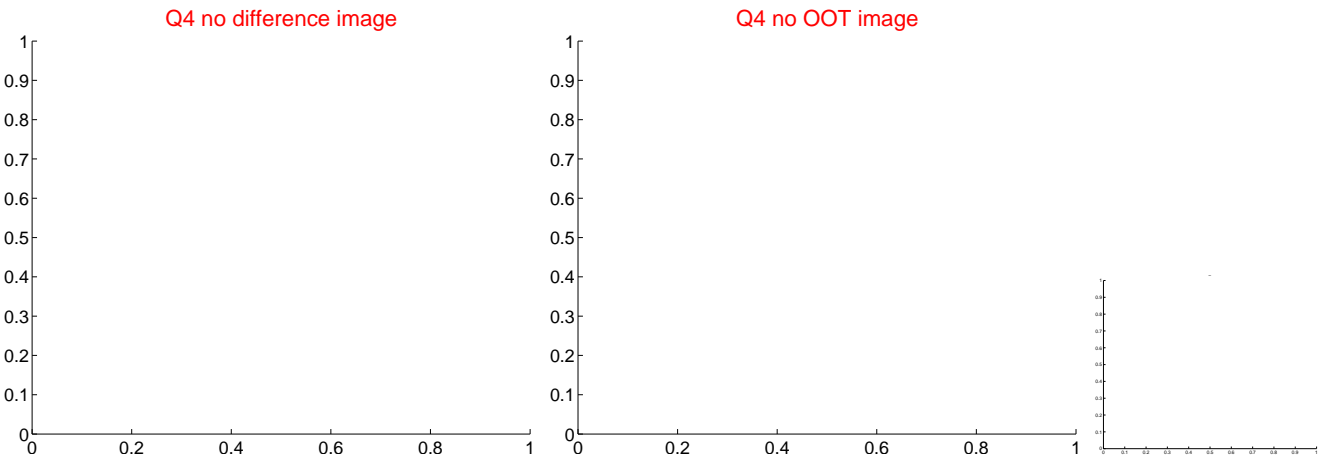
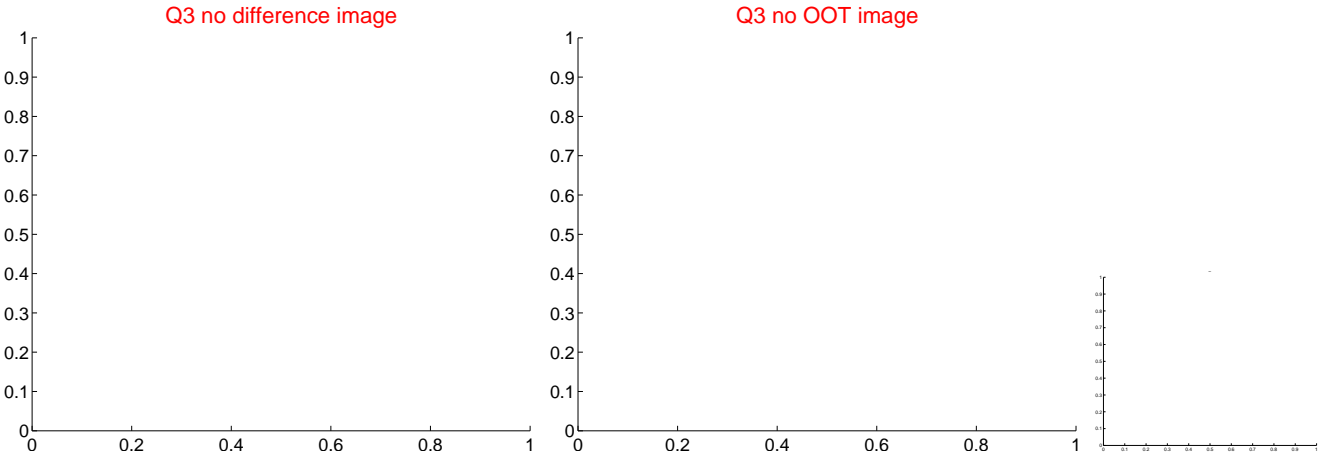
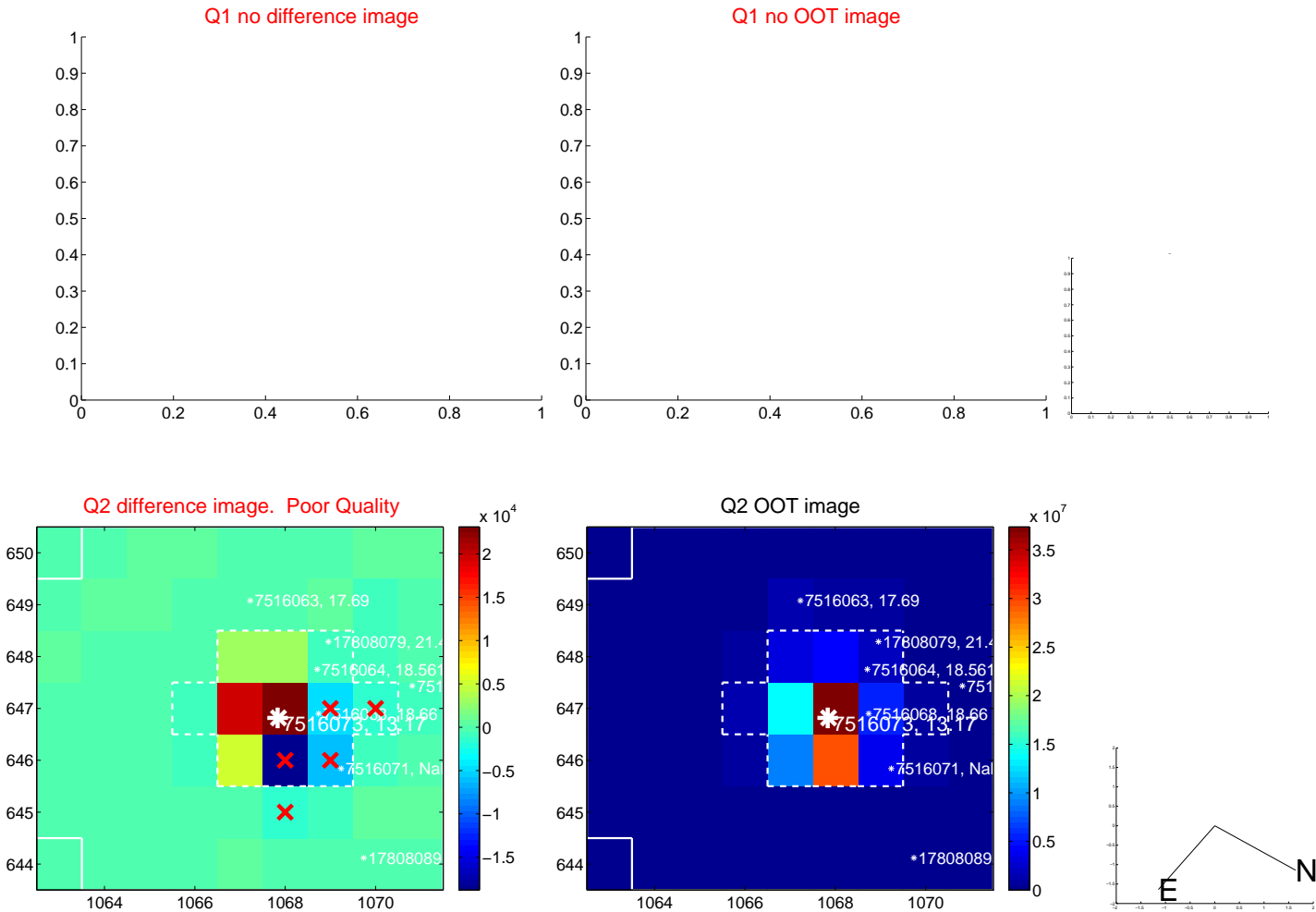
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.788 ± 3.047	0.59	0.518 ± 1.444	1.711 ± 3.232
PRF-fit source offset from KIC position	1.746 ± 3.653	0.48	0.562 ± 1.211	1.653 ± 4.027
photometric centroid source offset	1.26 ± 1.06	1.19	1.20 ± 1.04	0.39 ± 1.25

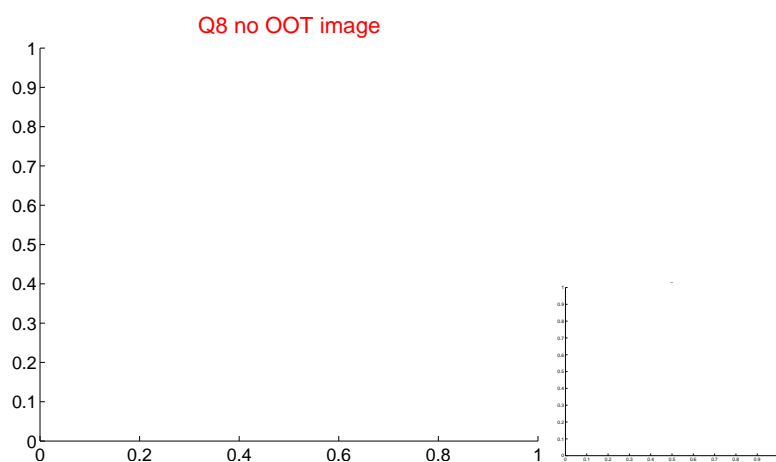
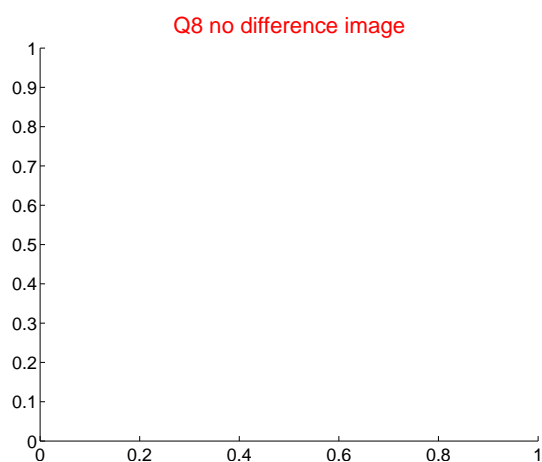
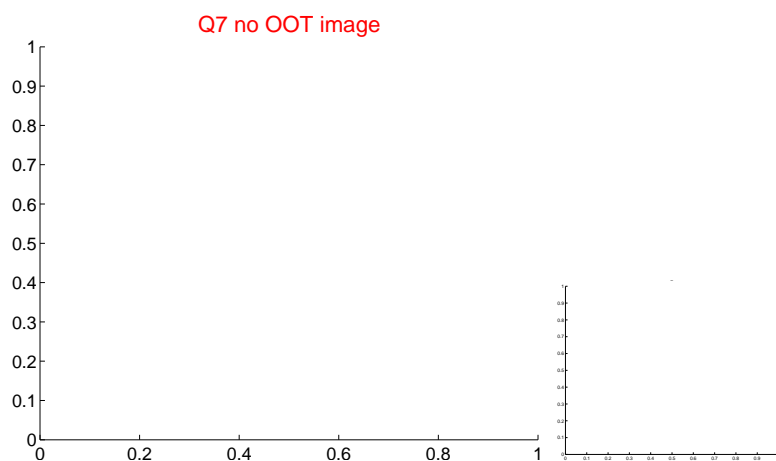
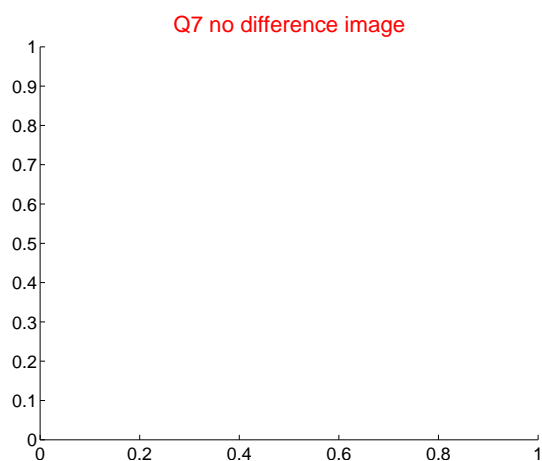
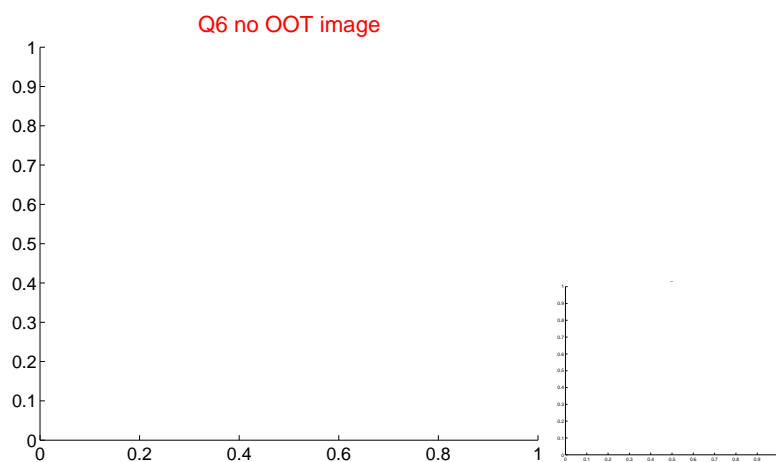
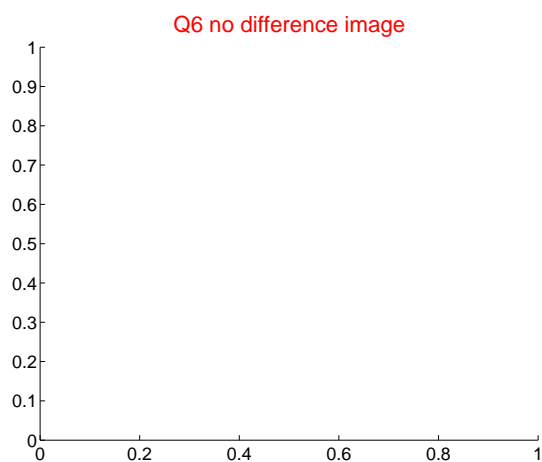
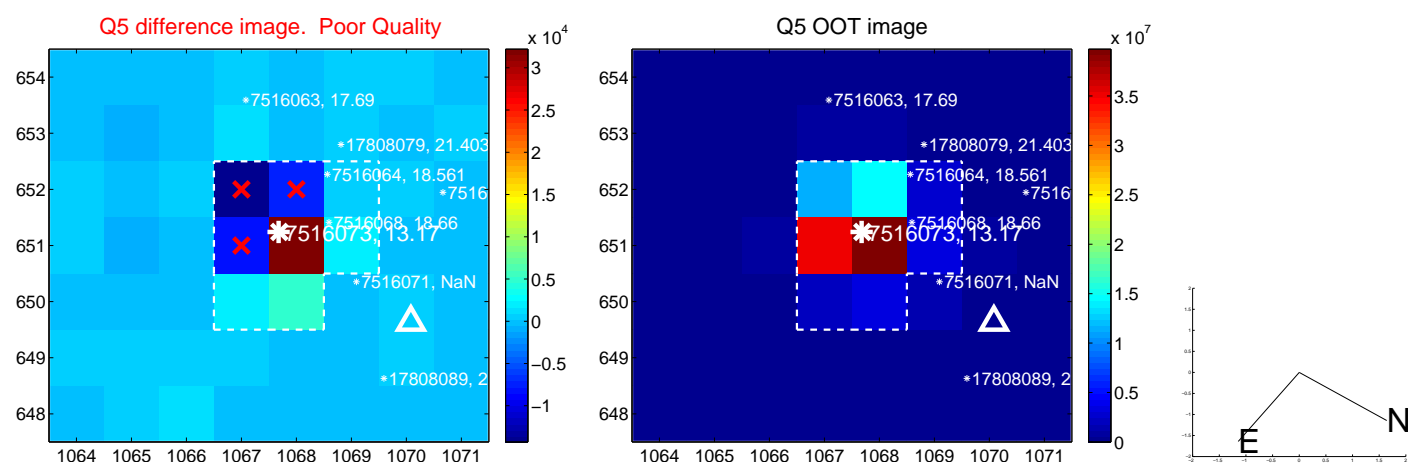


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

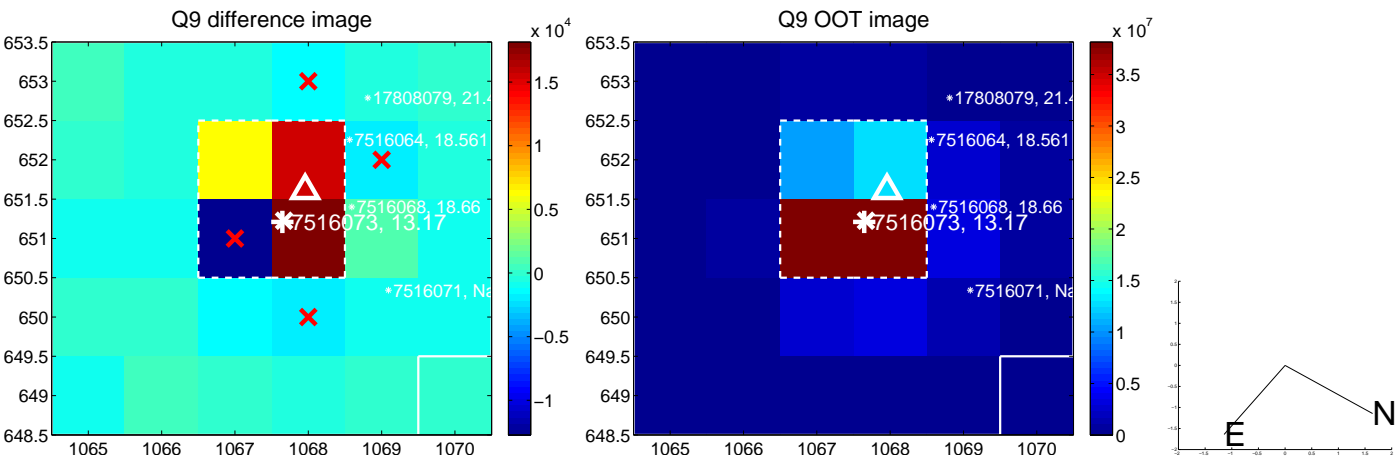
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



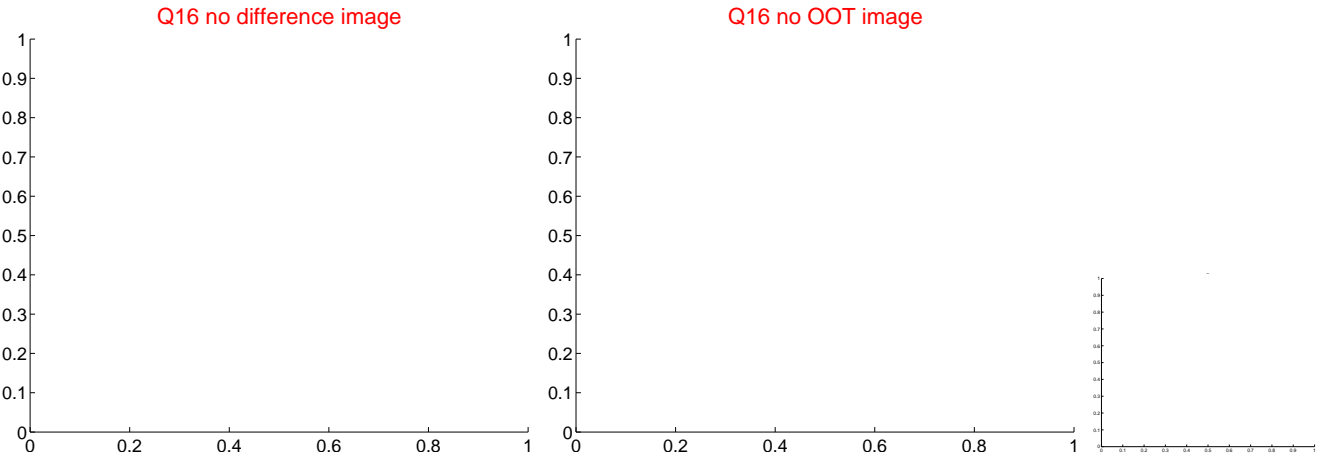
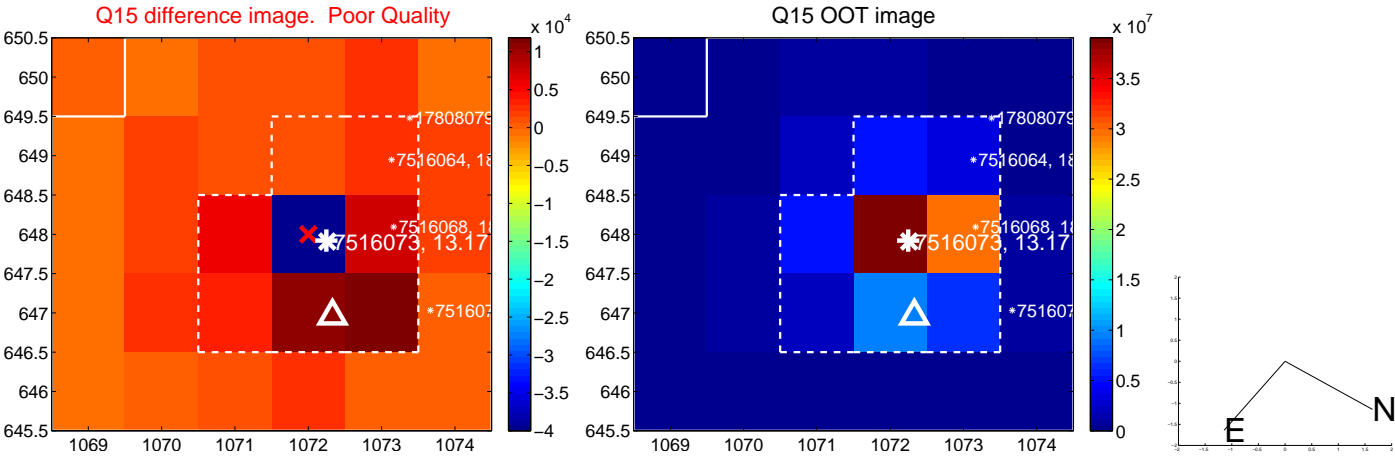
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



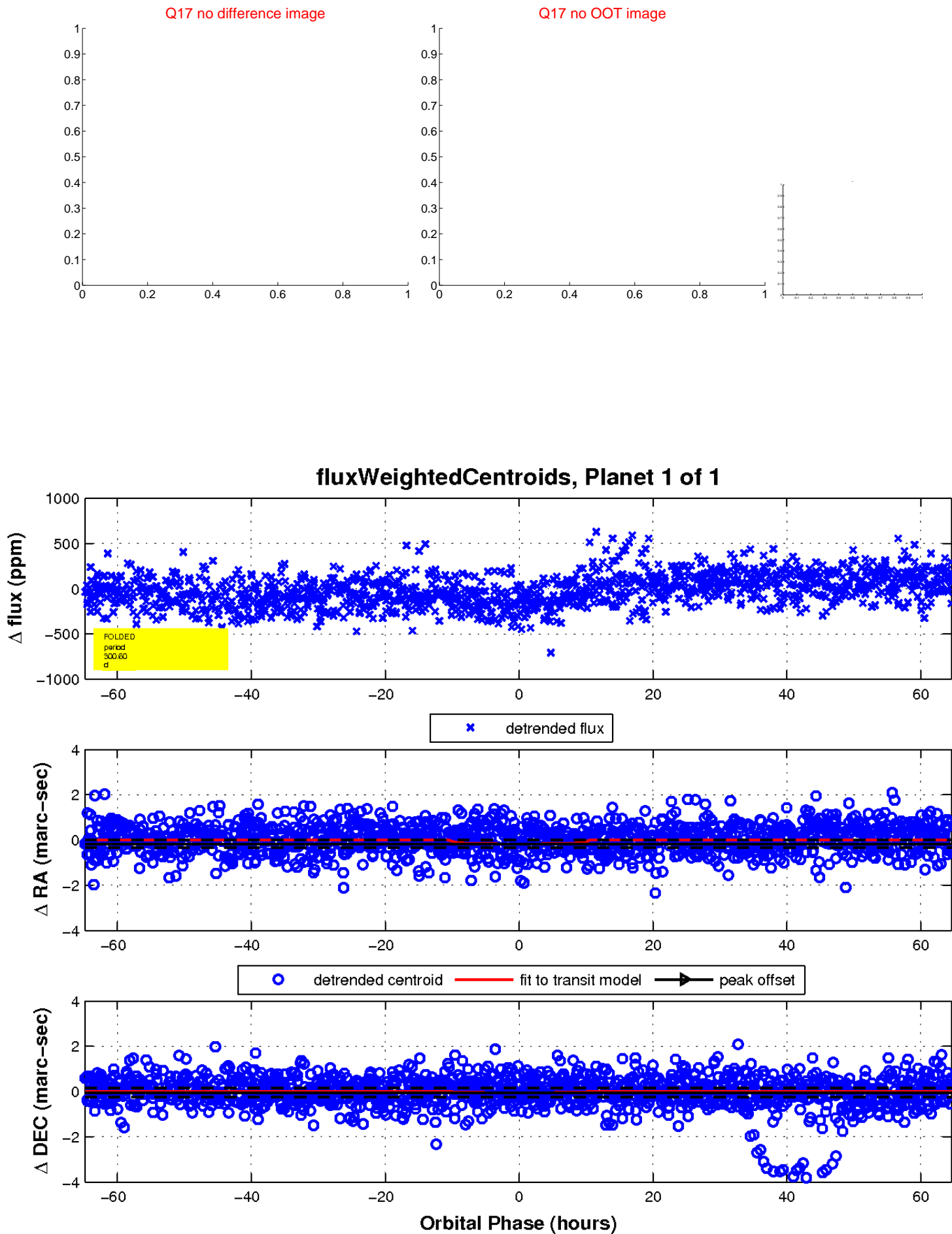
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

