

KIC 003116768

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})
003116768-01	OBS	No	599.753923	141.169007	617.1	14.680	8.7	8.1	0.85	5795	2.14	0.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003116768-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

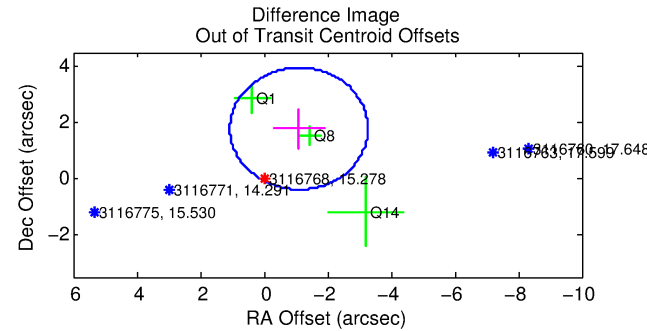
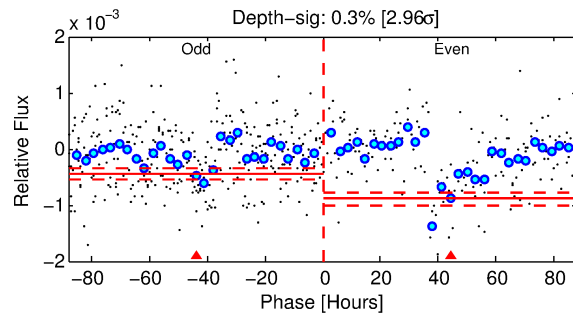
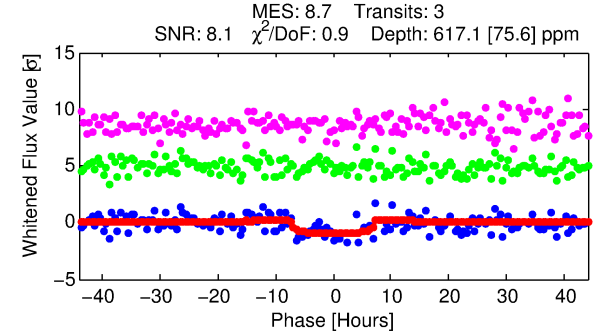
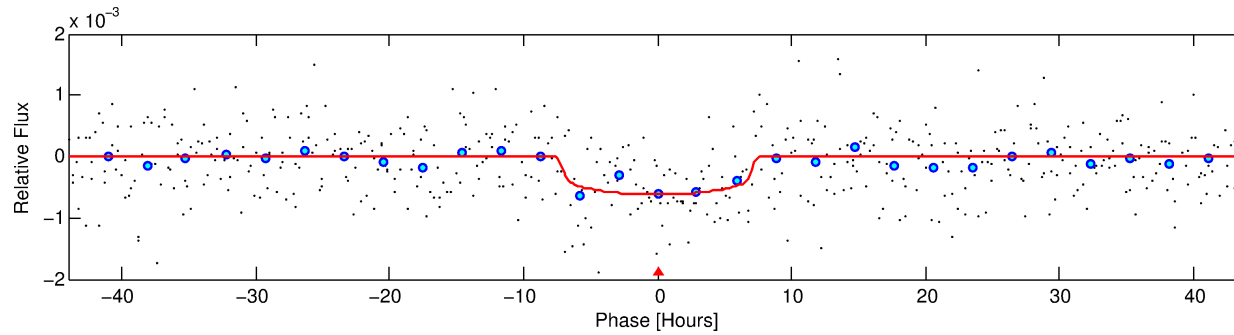
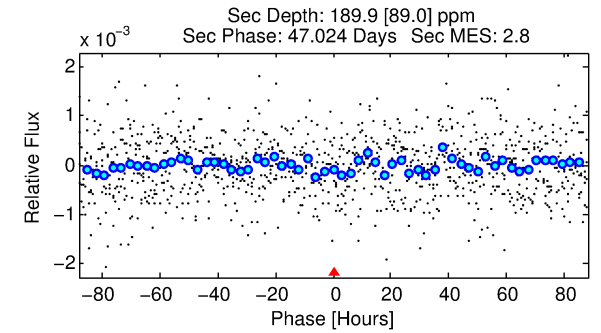
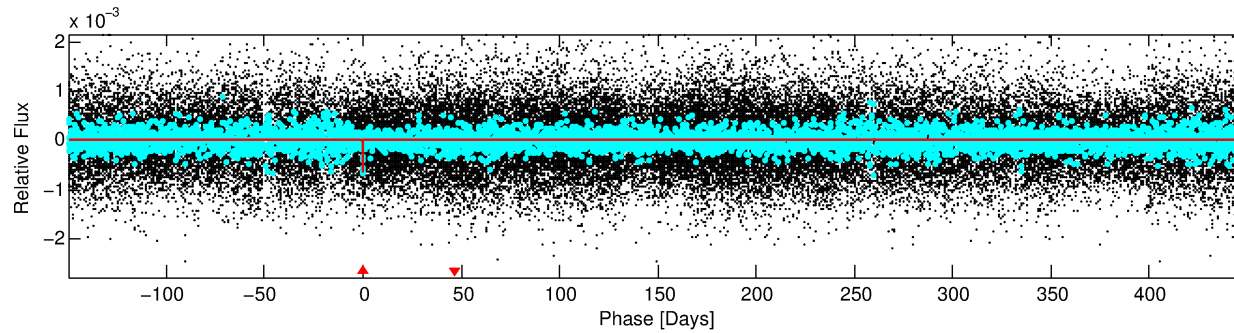
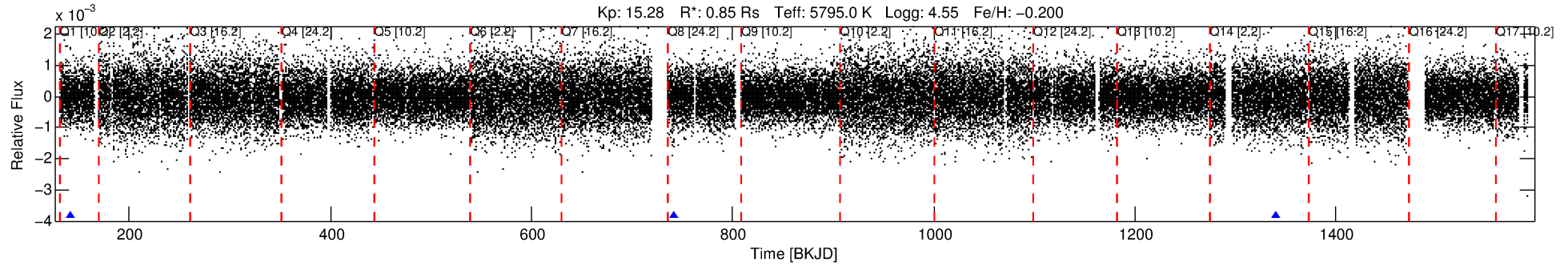
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003116768-01

No Significant Match Found

DV One-Page Summary

KIC: 3116768 Candidate: 1 of 1 Period: 599.754 d



DV Fit Results:

Period = 599.75392 [0.01630] d
Epoch = 141.1690 [0.0173] BKJD
Rp/R* = 0.0231 [0.0192]
a/R* = 289.78 [1085.48]
b = 0.43 [7.15]
Seff = 0.39 [0.12]
Teq = 202 [16] K
Rp = 2.14 [1.84] Re
a = 1.3634 [0.2695] AU
Ag = 42545.39 [74502.98] [0.57σ]
Teff = 4477 [1937] K [2.21σ]

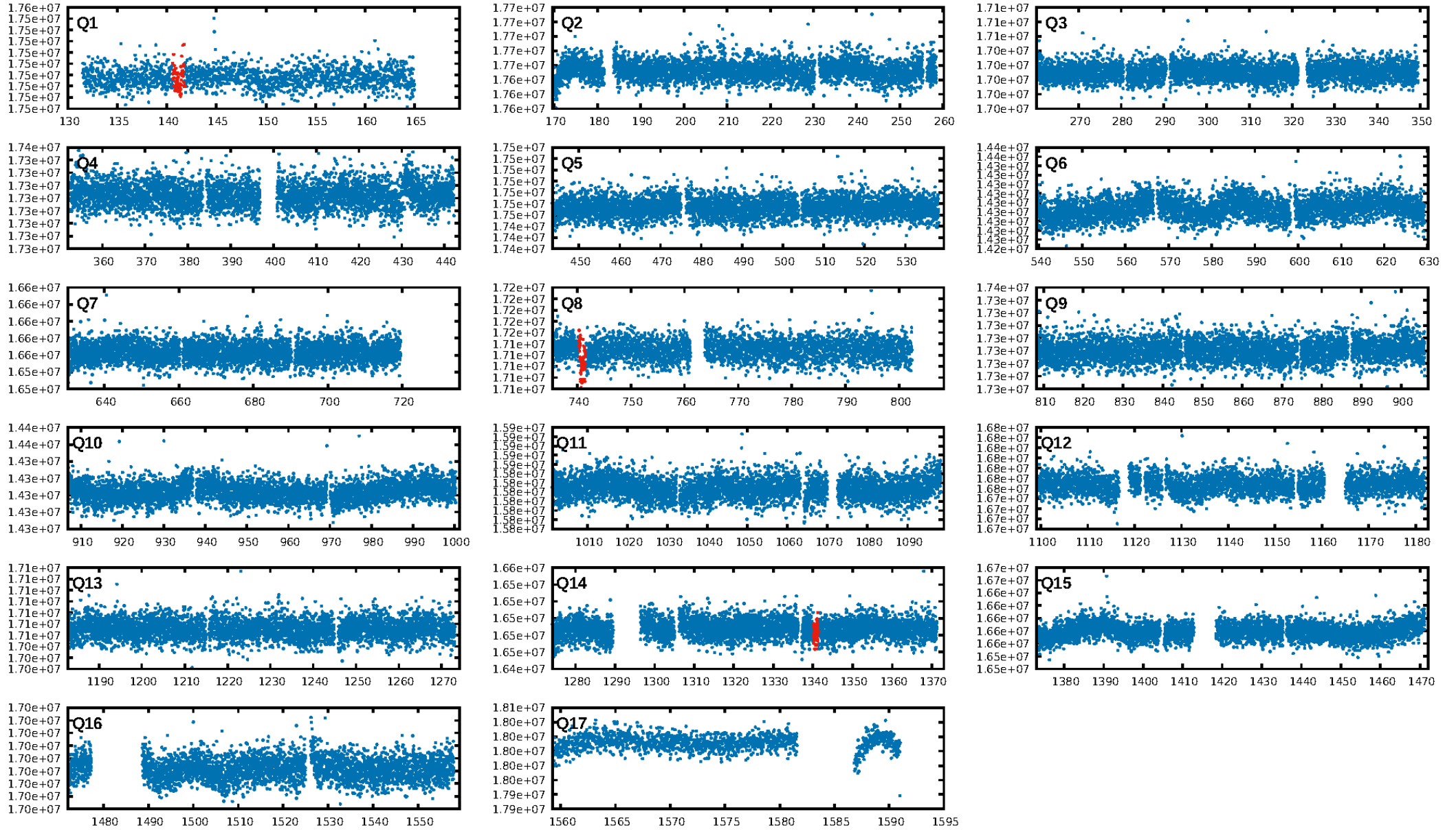
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.64e-15
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.399
Centroid-sig: 51.2%
Centroid-so: 2.414 arcsec [2.34σ]
OotOffset-rm: 2.095 arcsec [2.90σ]
KicOffset-rm: 1.508 arcsec [2.14σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

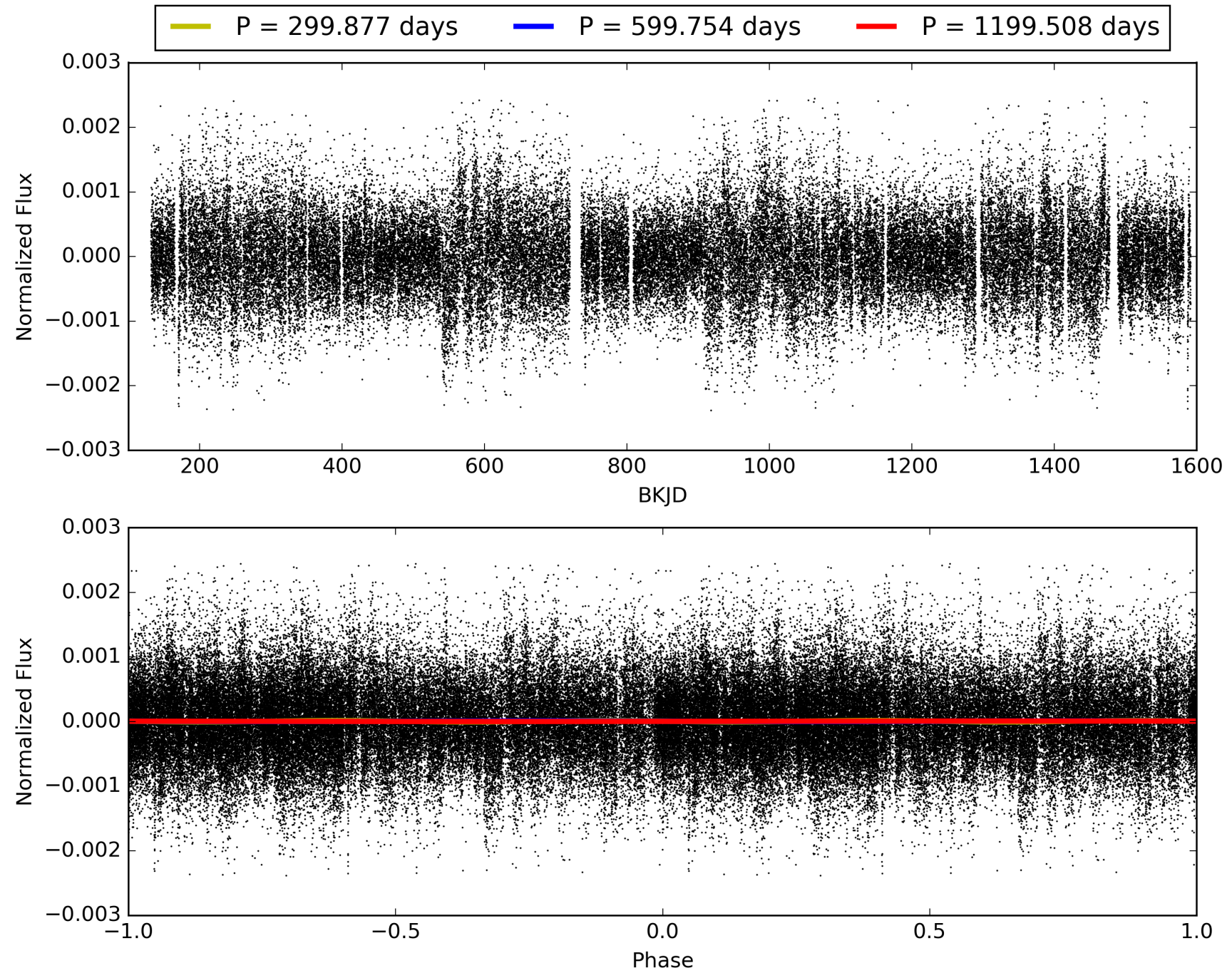
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:55:45 Z

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

TCE 003116768-01, PDC Light Curves

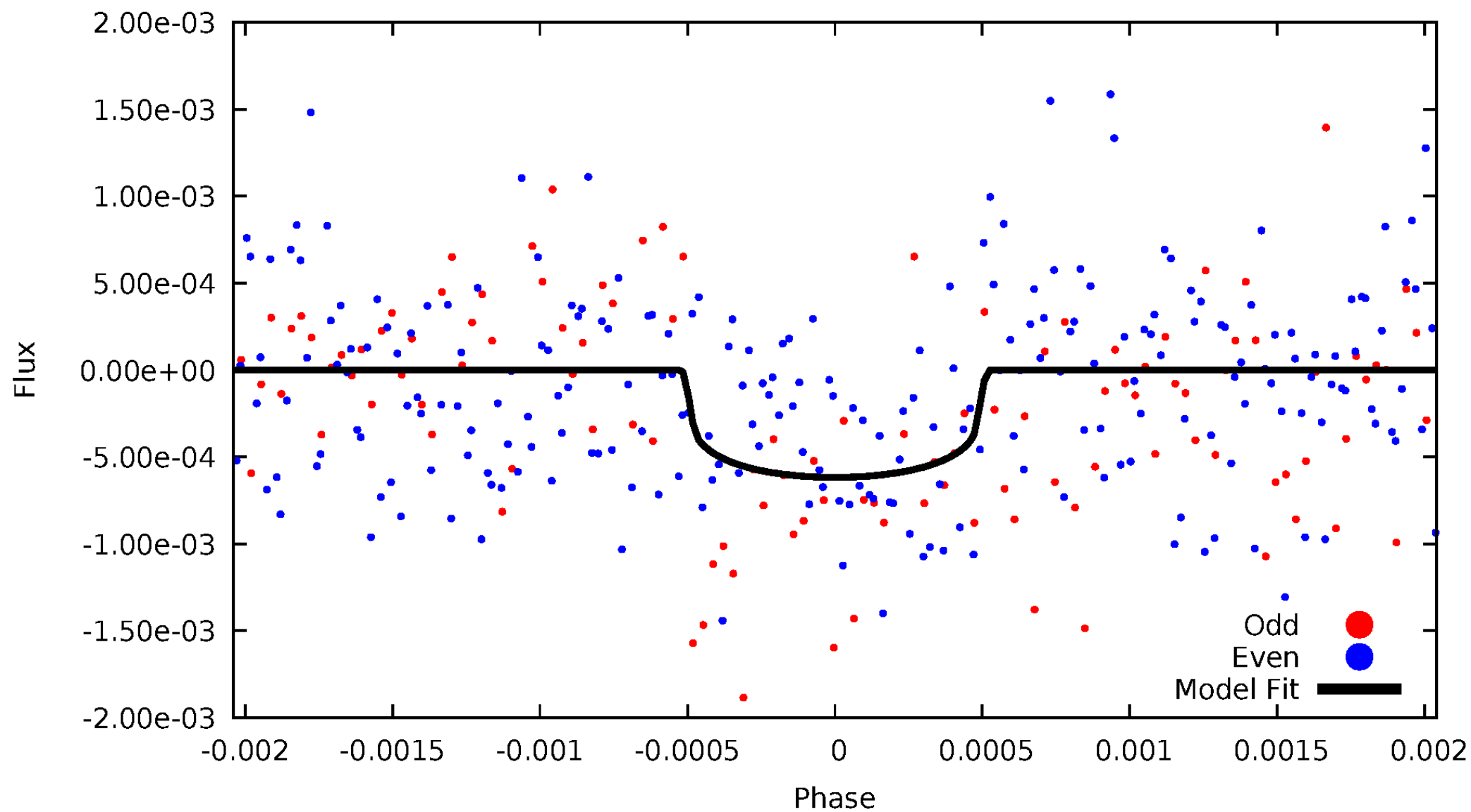


TCE 003116768-01



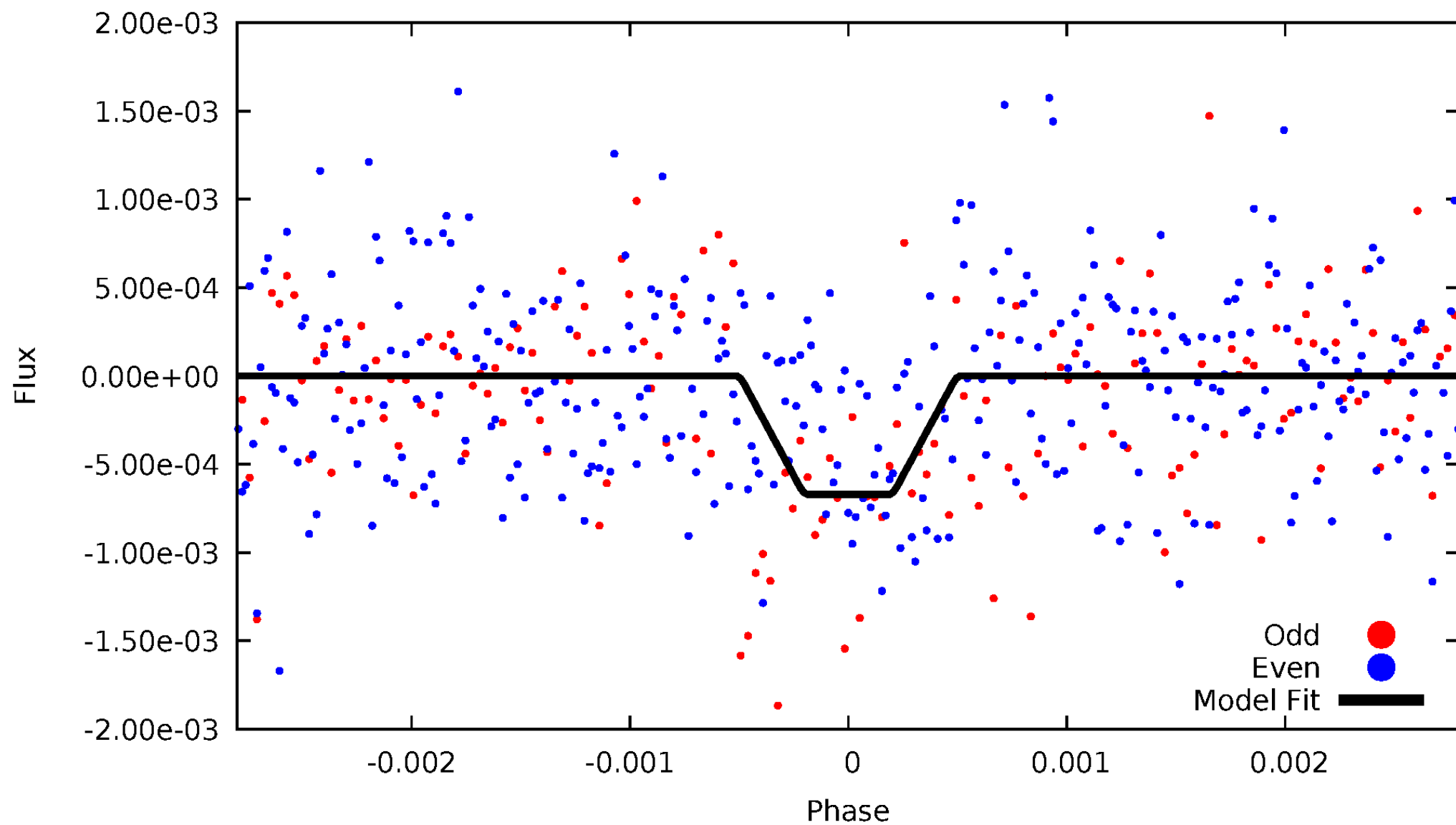
DV Odd/Even

TCE 003116768-01



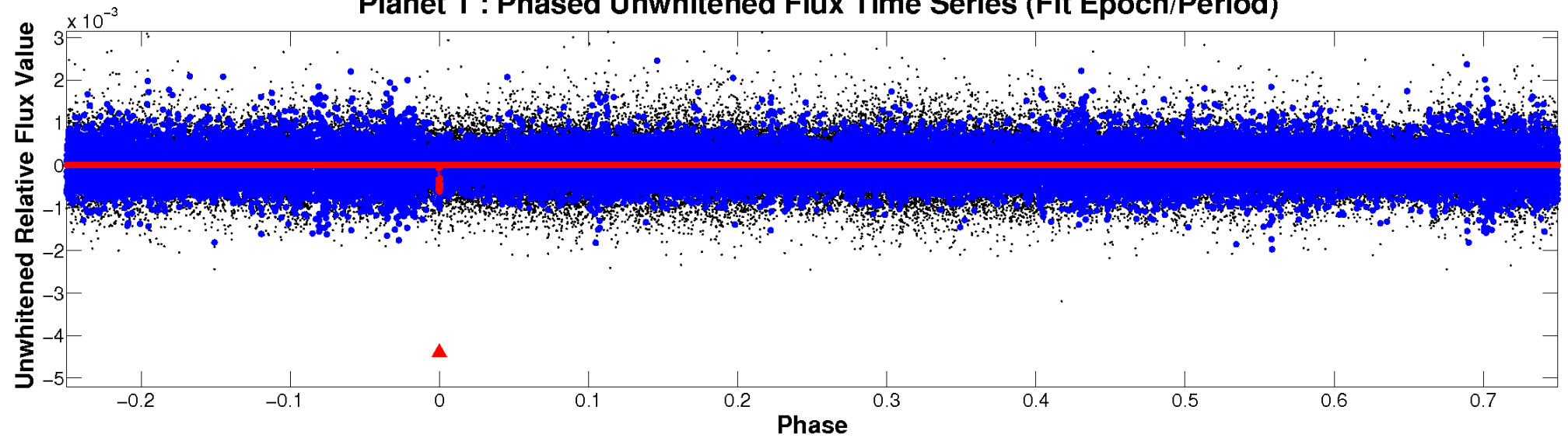
ALT Odd/Even

TCE 003116768-01

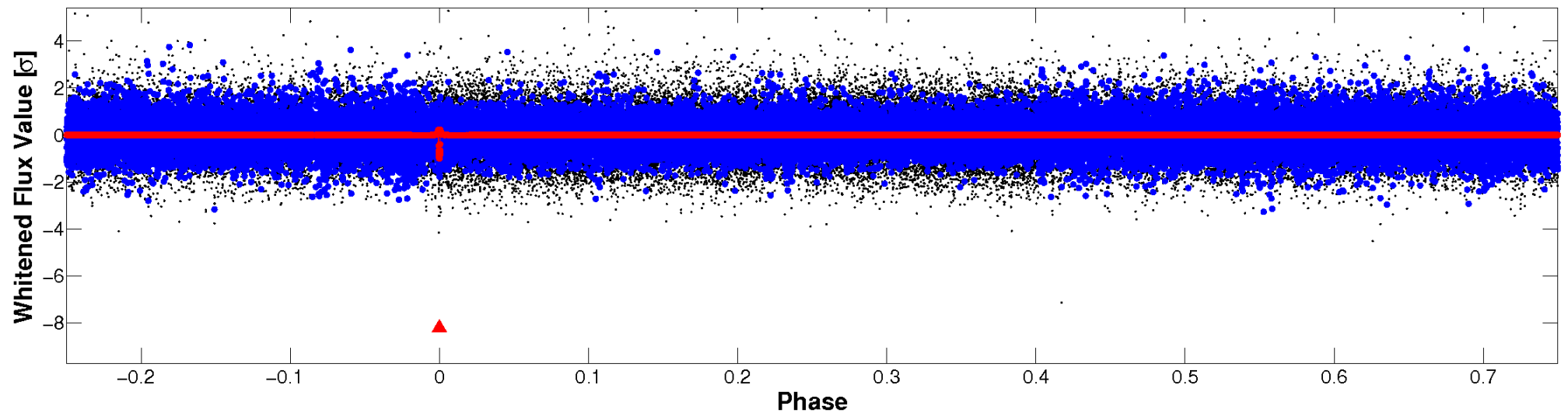


Non-Whitened Vs. Whitened Light Curve

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

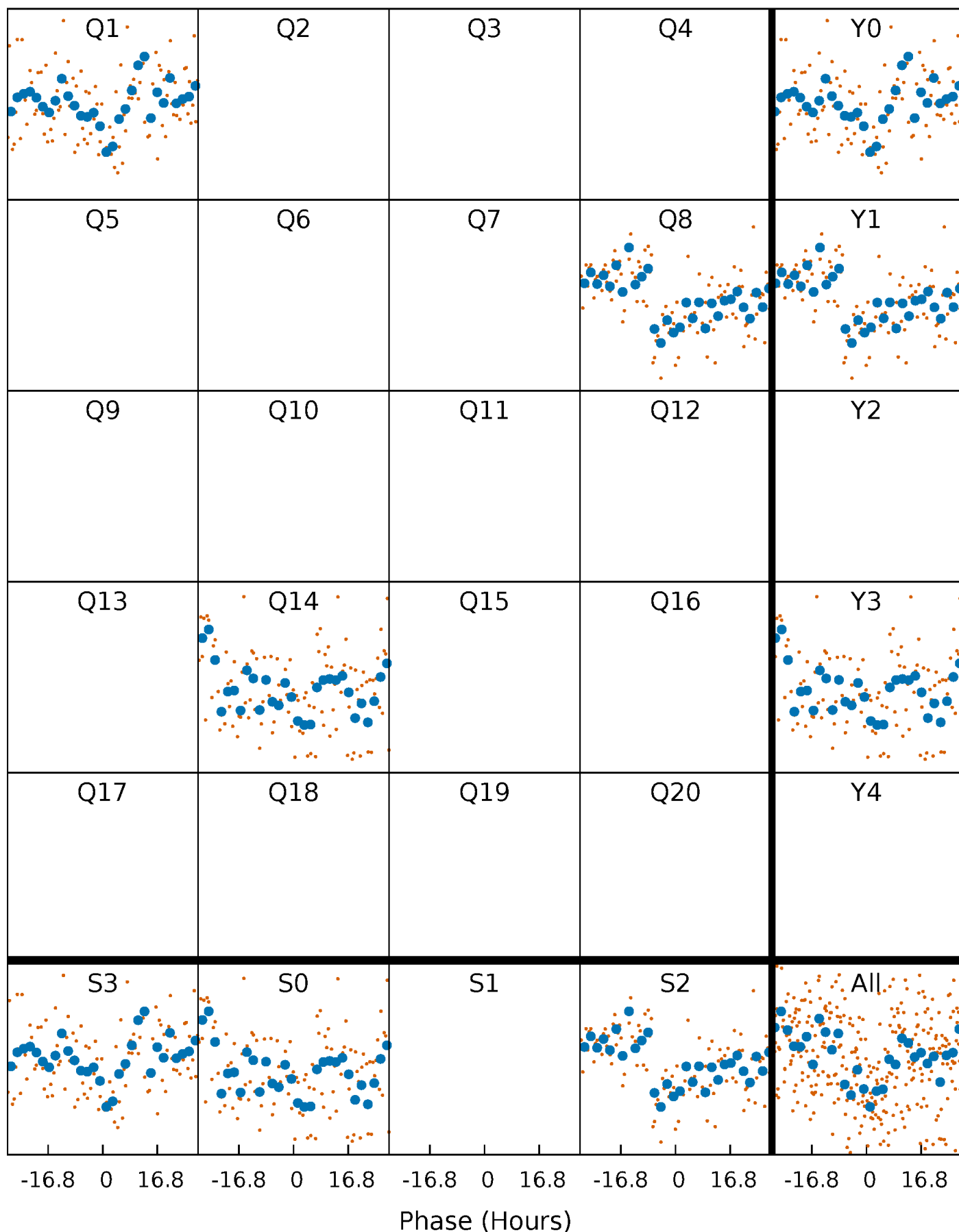


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 003116768-01 P=599.753924 Days $T_0=141.169007$ (BKJD)



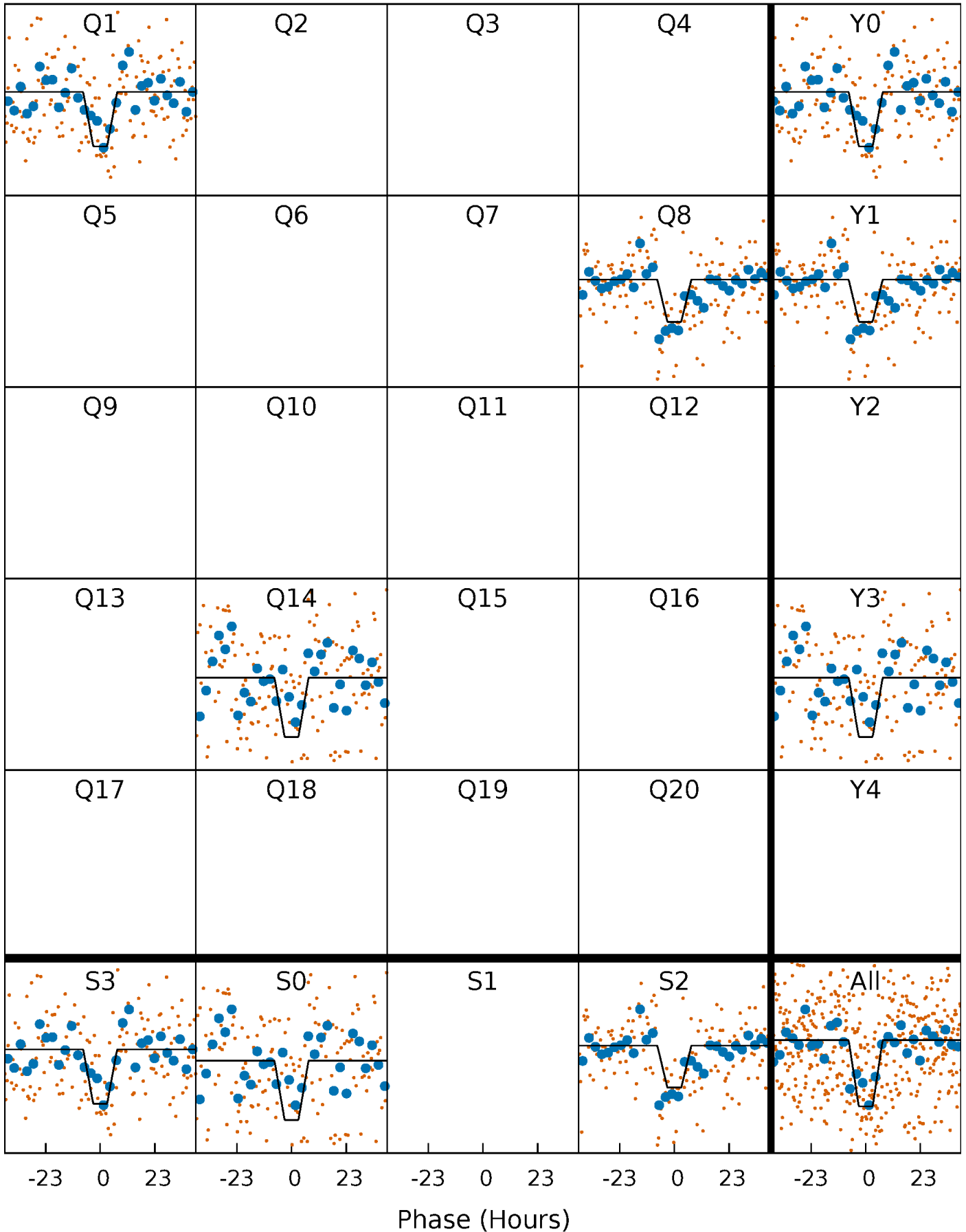
DV Quarter-Phased Transit Curves

TCE 003116768-01 P=599.753924 Days $T_0=141.169007$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

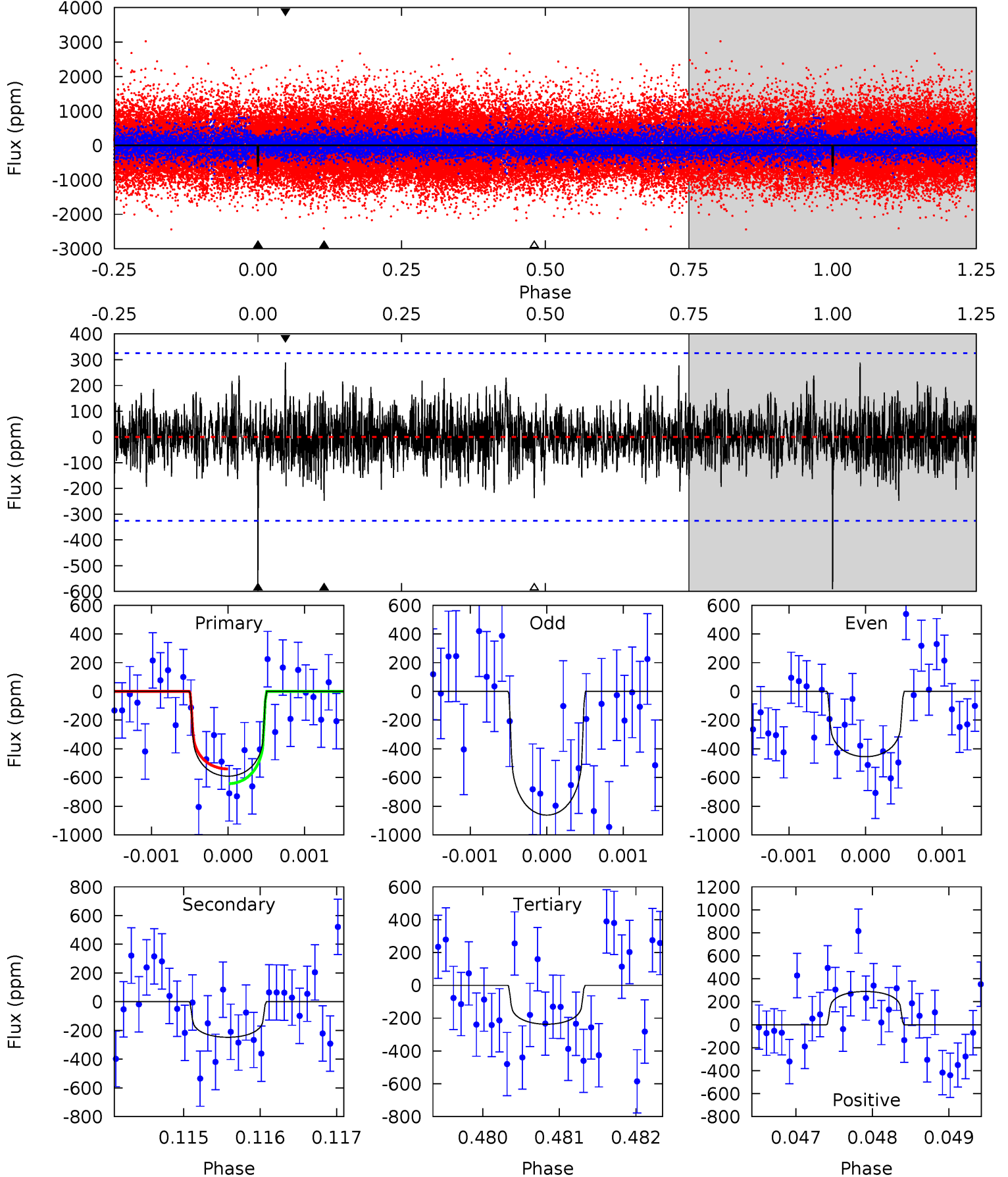
TCE 003116768-01 P=599.752231 Days $T_0=141.178130$ (BKJD)



DV Model-Shift Uniqueness Test

003116768-01, P = 599.753924 Days, E = 141.169007 Days

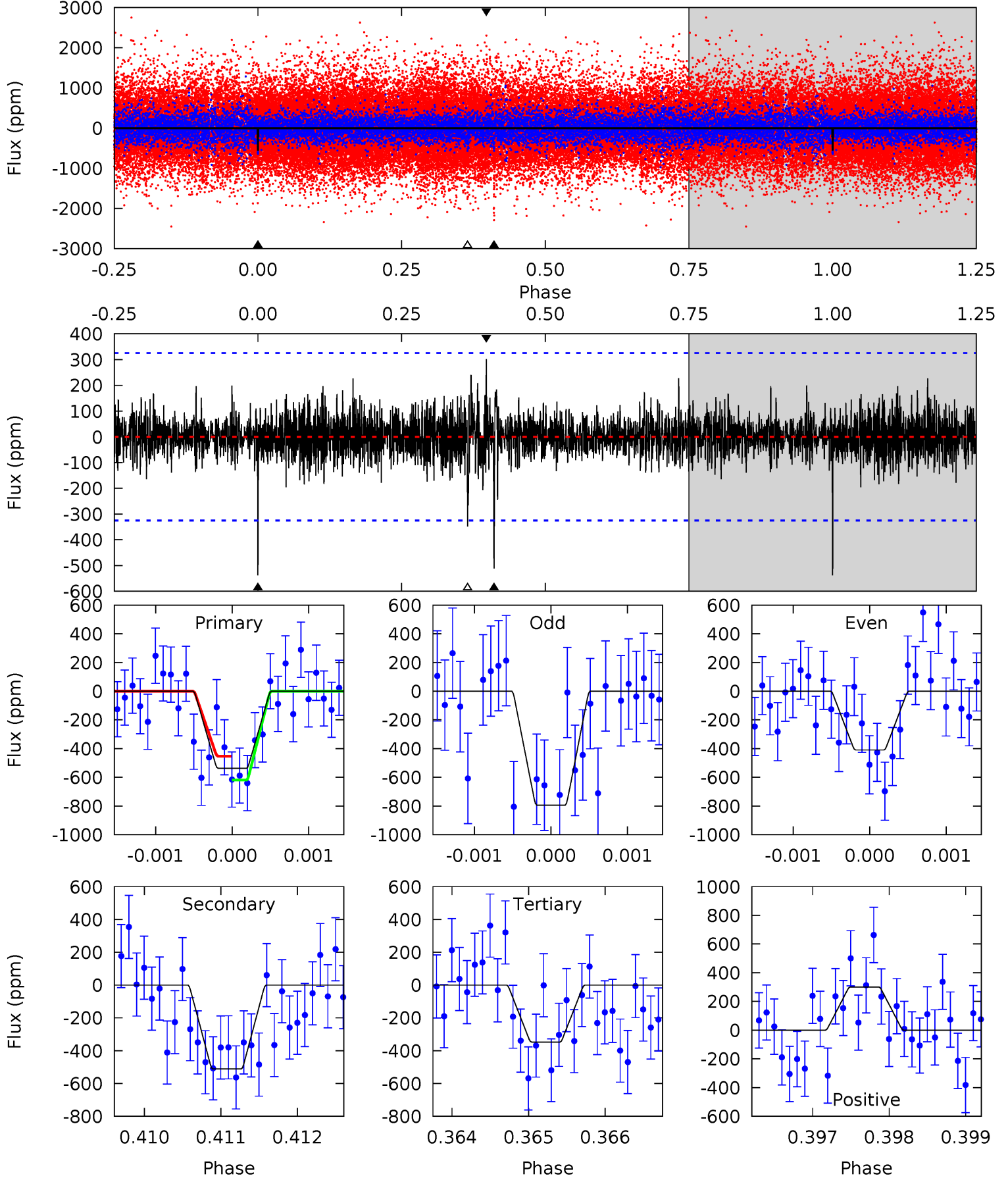
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.89	4.14	3.97	4.84	5.44	3.28	1.18	5.92	5.05	0.18	-0.70	3.20	1.25	0.33	0.86



Alt Model-Shift Uniqueness Test

003116768-01, P = 599.752231 Days, E = 141.178130 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.01	8.57	5.82	5.04	5.45	3.29	1.05	3.19	3.97	2.74	3.52	3.03	1.02	0.36	1.39



Stellar Parameters For KIC 003116768

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5795^{+143}_{-172}	$4.554^{+0.040}_{-0.160}$	$-0.200^{+0.250}_{-0.300}$	$0.848^{+0.197}_{-0.071}$	$0.938^{+0.100}_{-0.110}$	$2.167^{+0.451}_{-0.937}$
	+2%/-3%	+1%/-4%	+125%/-150%	+23%/-8%	+11%/-12%	+21%/-43%
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 003116768-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-248 ± 60	$2.44^{+1.77}_{-1.43}$	286^{+16}_{-11}	4640^{+2553}_{-809}	$39357^{+202455}_{-25455}$
Alt.	-511 ± 60	$2.71^{+1.76}_{-1.58}$	287^{+16}_{-12}	5212^{+3047}_{-969}	$70007^{+314923}_{-44983}$

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

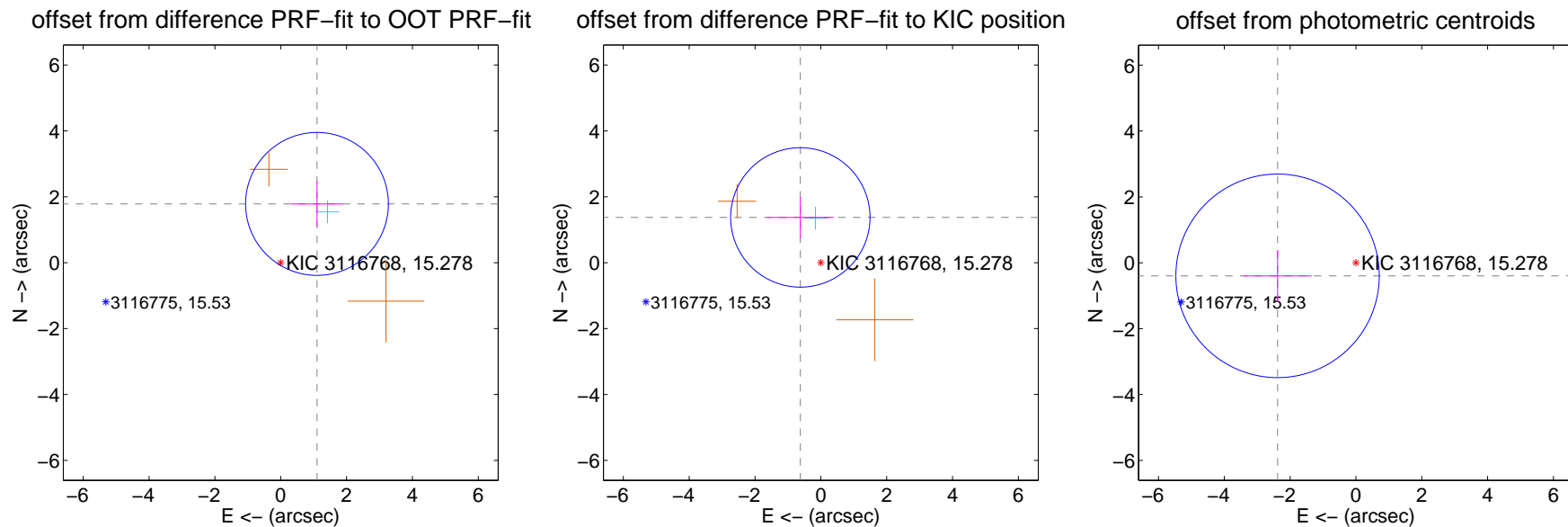
DV Centroid Data

Supplemental centroid analysis for 003116768-01. Kepler magnitude: 15.28. Transit SNR 8.14

There are 1 quarters with good PRF difference image offsets

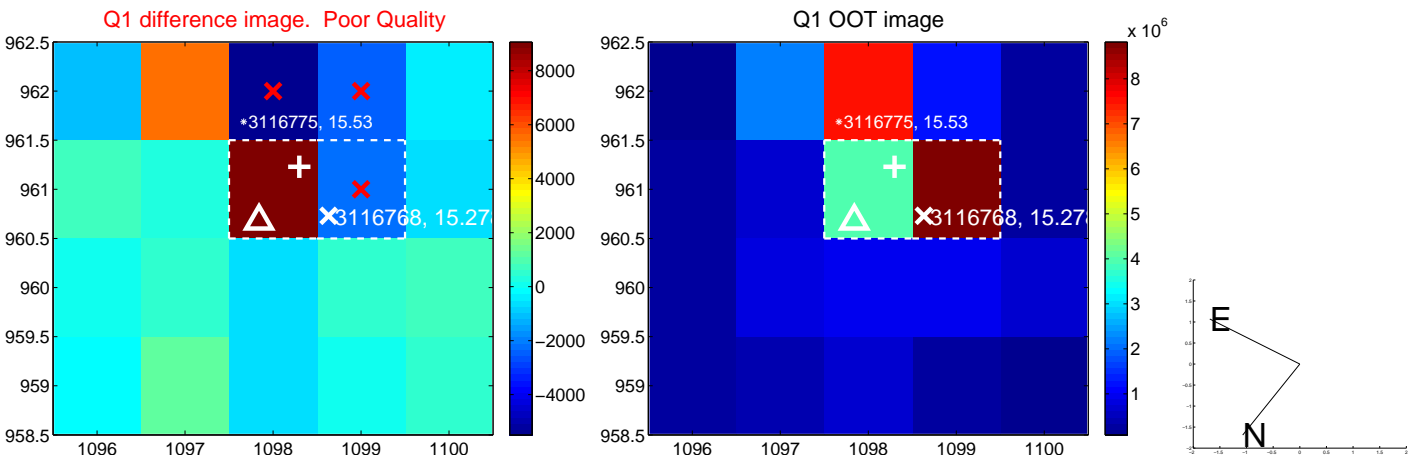
The direct PRF centroid is offset from the target star catalog position by about 1.66 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.095 ± 0.723	2.90	-1.100 ± 0.798	1.783 ± 0.692
PRF-fit source offset from KIC position	1.508 ± 0.705	2.14	0.623 ± 1.013	1.374 ± 0.623
photometric centroid source offset	2.41 ± 1.03	2.34	2.38 ± 1.04	-0.40 ± 0.78

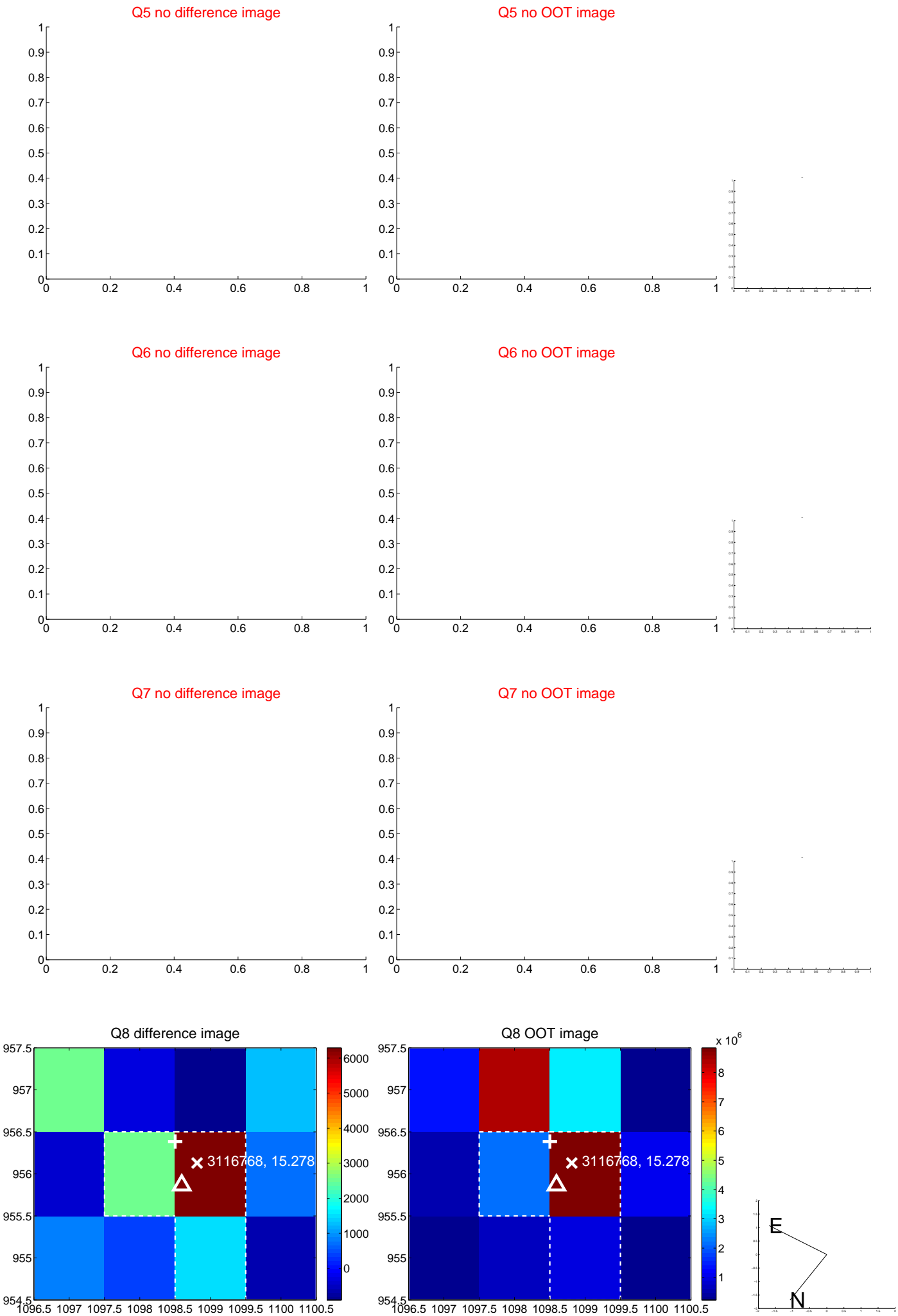


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



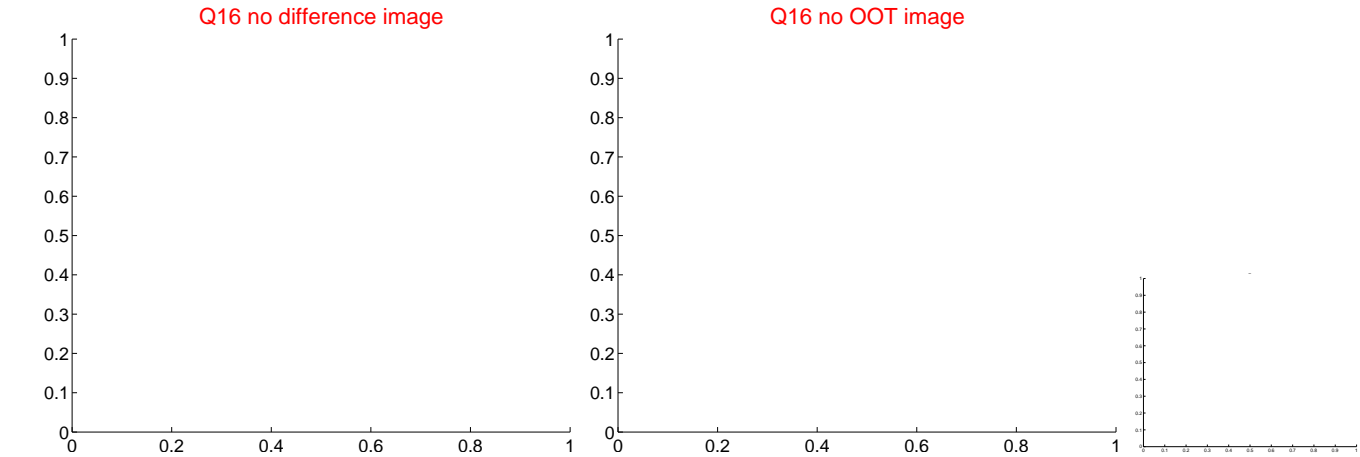
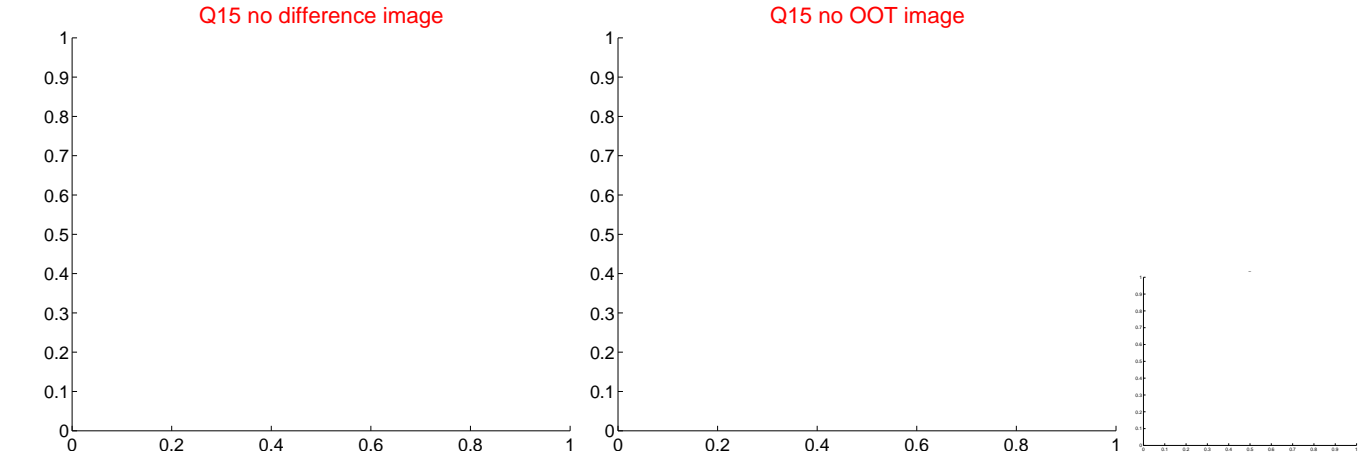
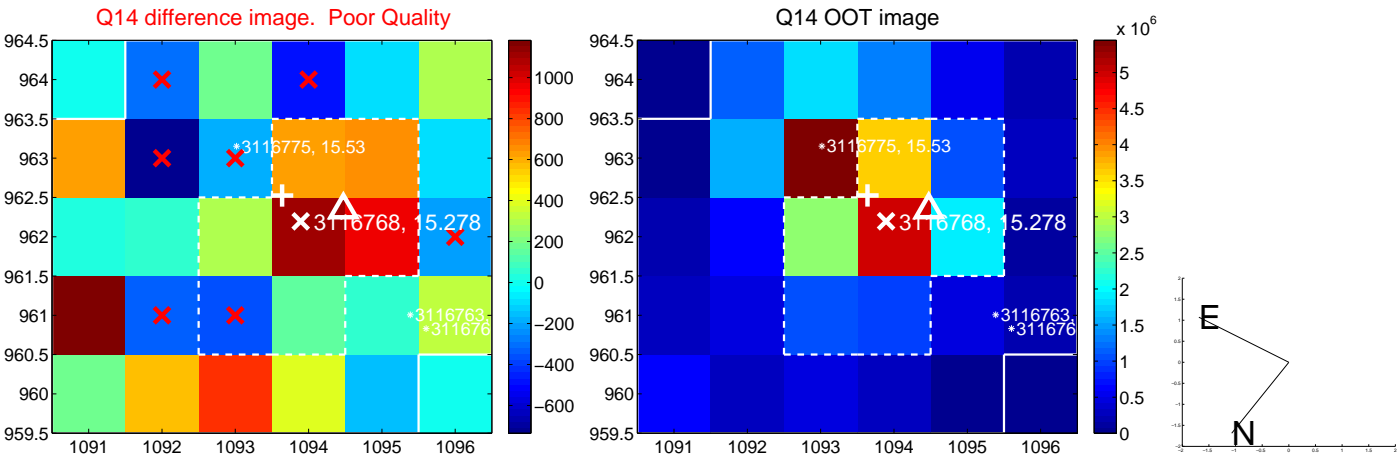
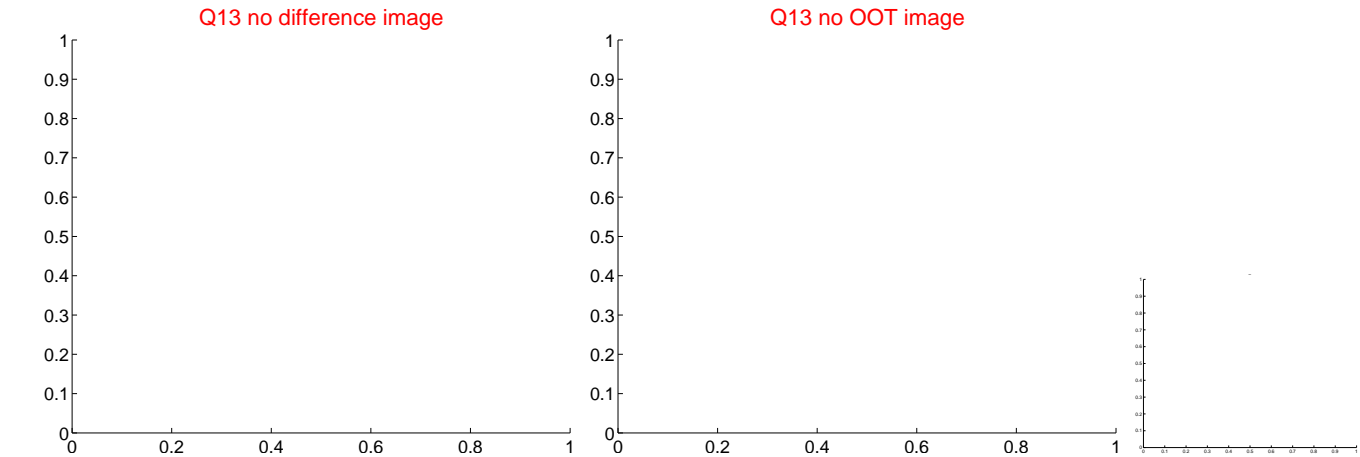
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



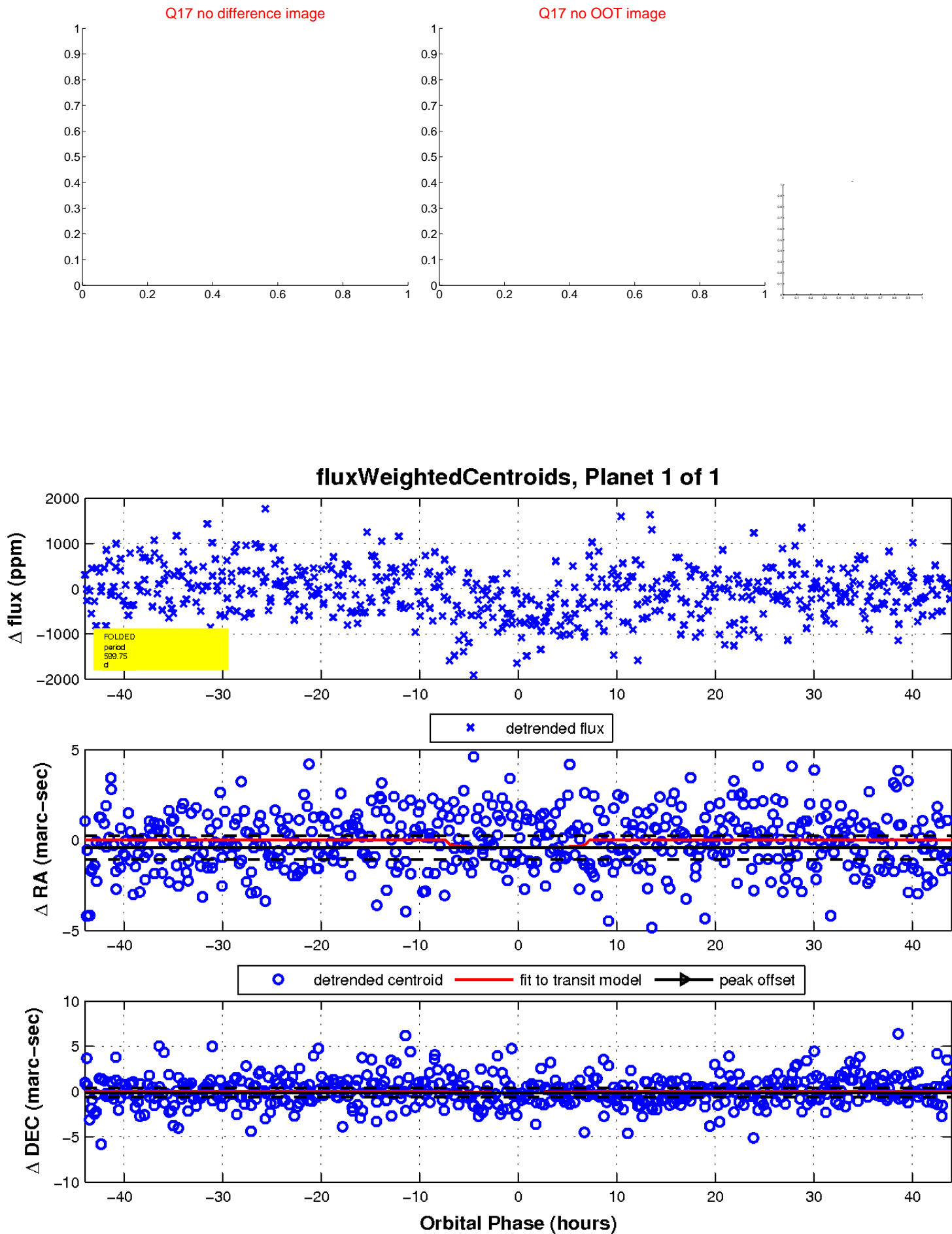
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Declination

