

KIC 010470779

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})
010470779-01	OBS	5796.01	495.859109	241.491743	552.5	8.853	9.0	8.8	1.04	5613	2.72	0.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010470779-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—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.

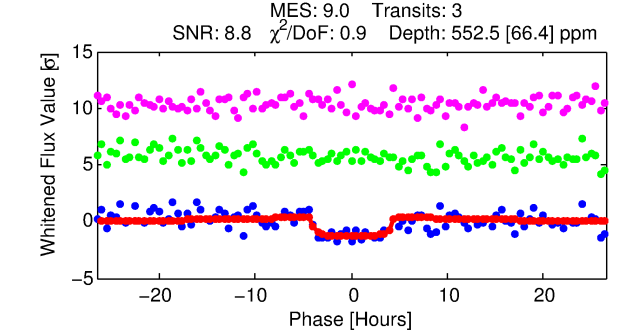
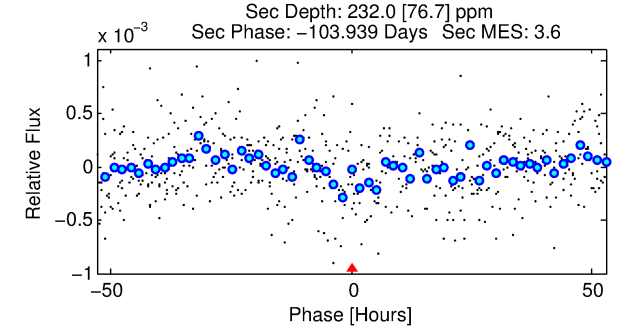
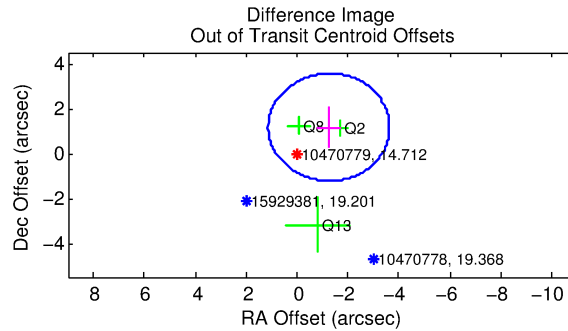
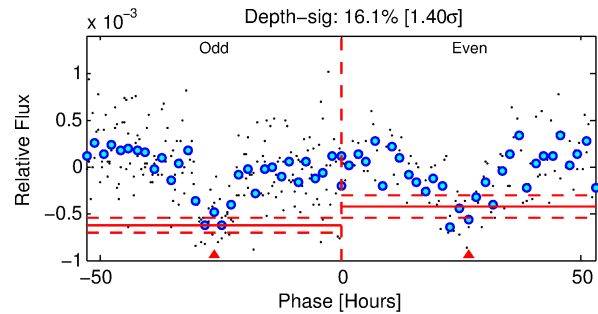
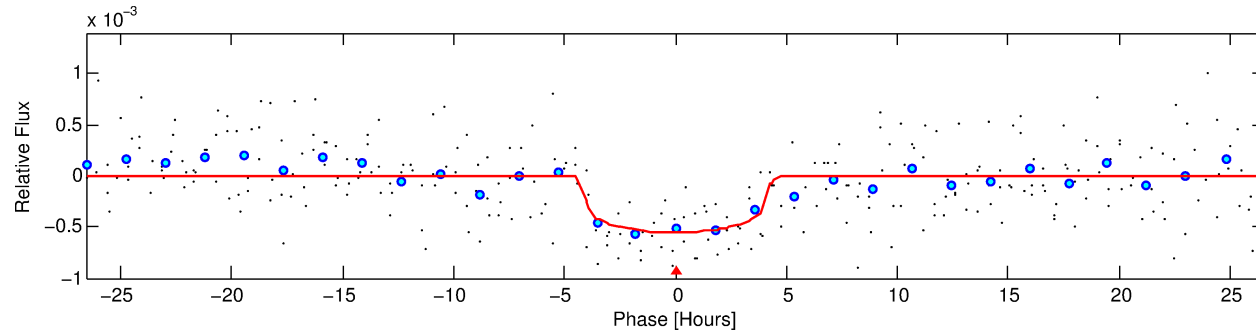
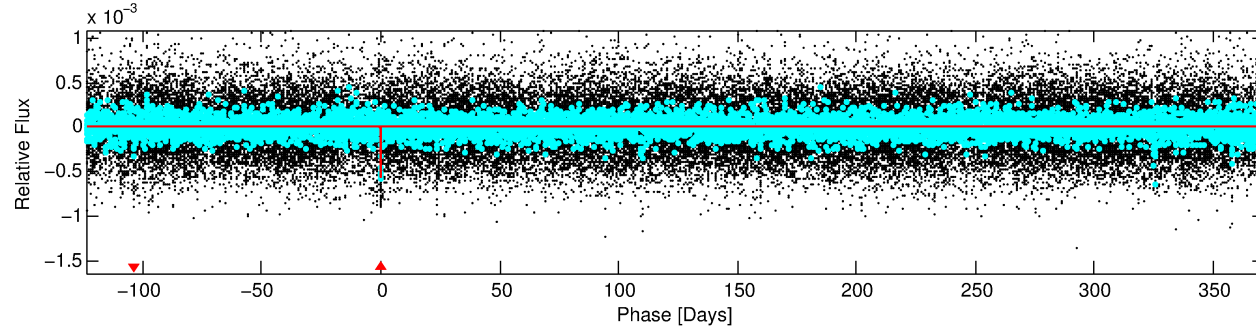
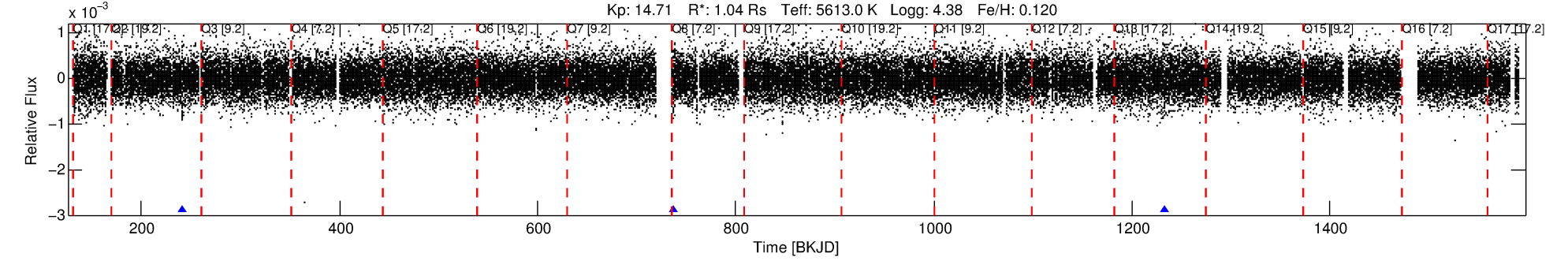
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010470779-01

No Significant Match Found

DV One-Page Summary

KIC: 10470779 Candidate: 1 of 1 Period: 495.859 d
KOI: K05796.01 Corr: 0.951



DV Fit Results:

Period = 495.85911 [0.01065] d
Epoch = 241.4917 [0.0127] BKJD
Rp/R* = 0.0238 [0.0084]
a/R* = 278.53 [401.05]
b = 0.79 [0.69]
Seff = 0.67 [0.13]
Teq = 230 [12] K
Rp = 2.72 [1.03] Re
a = 1.2052 [0.1533] AU
Ag = 25136.47 [20076.63] [1.25σ]
Teffp = 4487 [871] K [4.88σ]

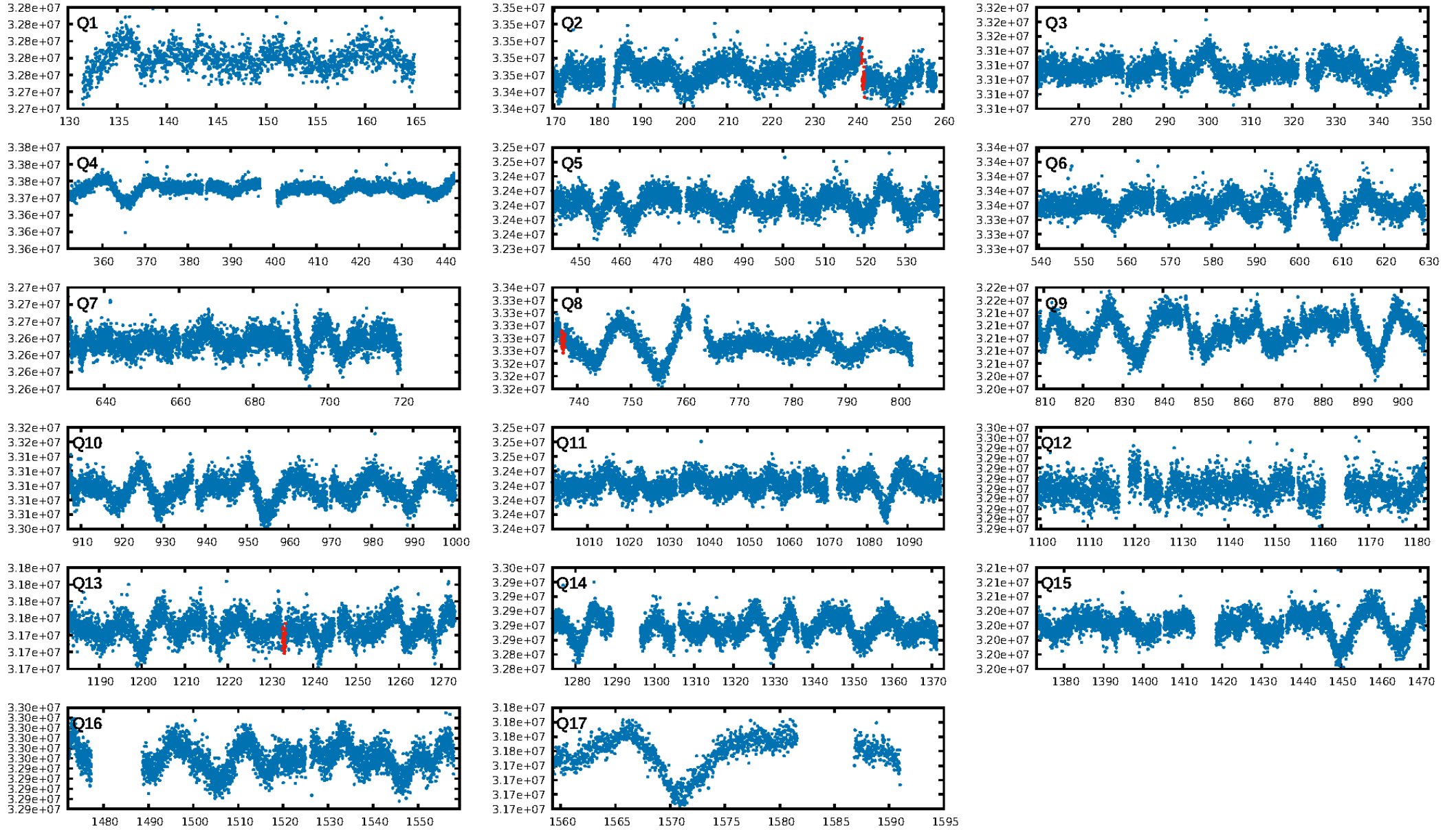
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 59.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.80e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -8.782
Centroid-sig: 93.4%
Centroid-so: 0.117 arcsec [0.09σ]
OotOffset-rm: 1.714 arcsec [2.15σ]
KicOffset-rm: 1.834 arcsec [1.54σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

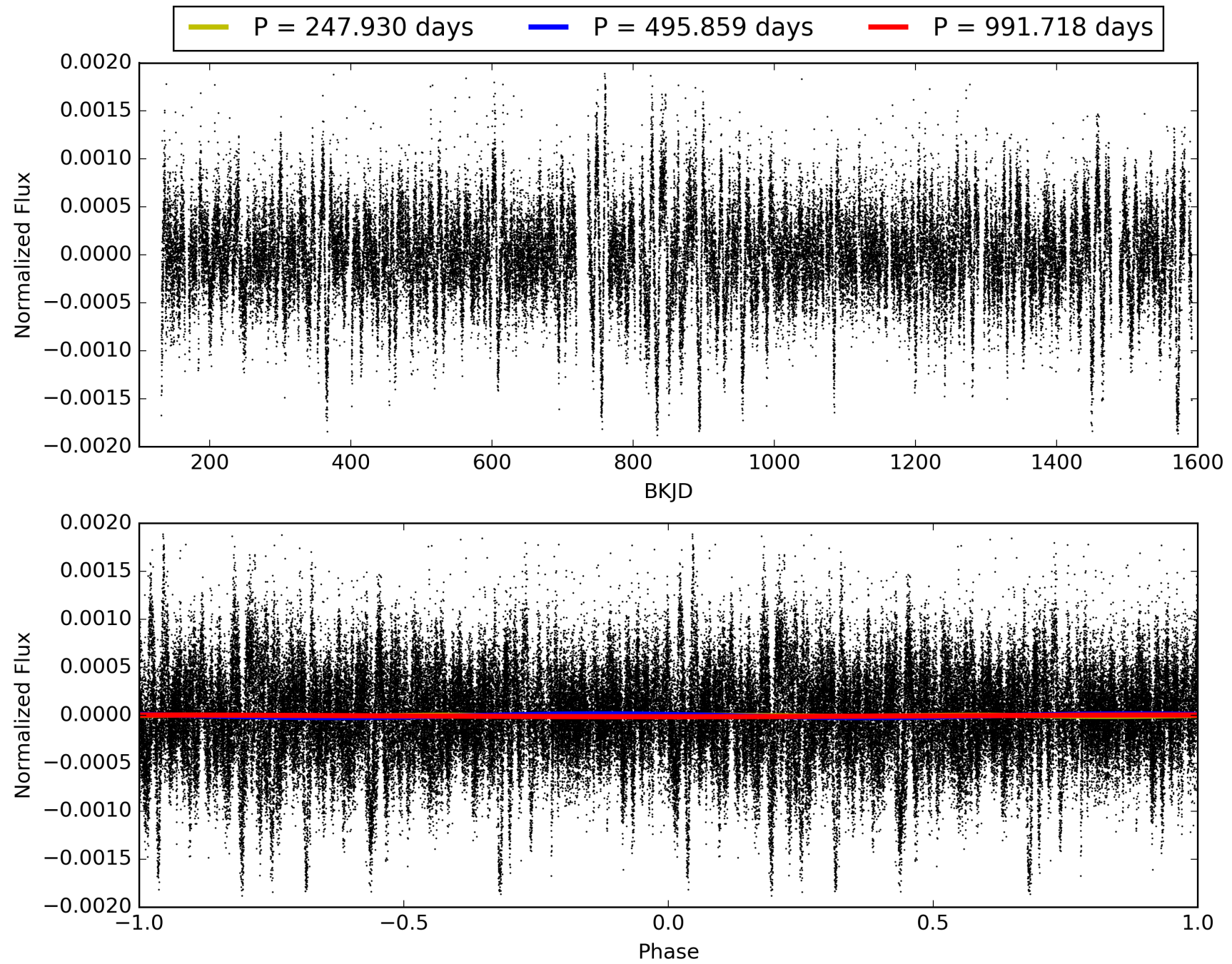
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:24:47 Z

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

TCE 010470779-01, PDC Light Curves

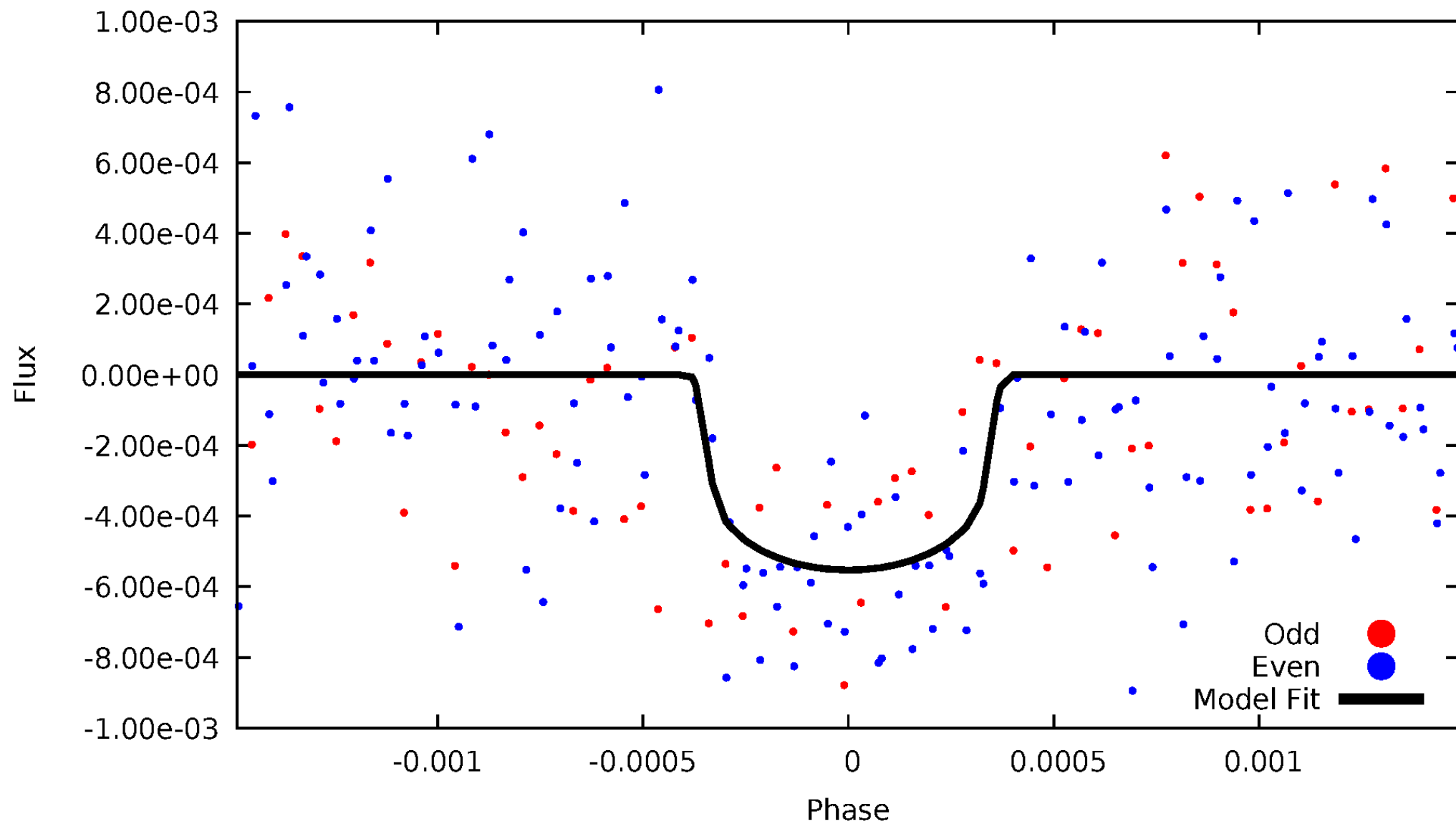


TCE 010470779-01



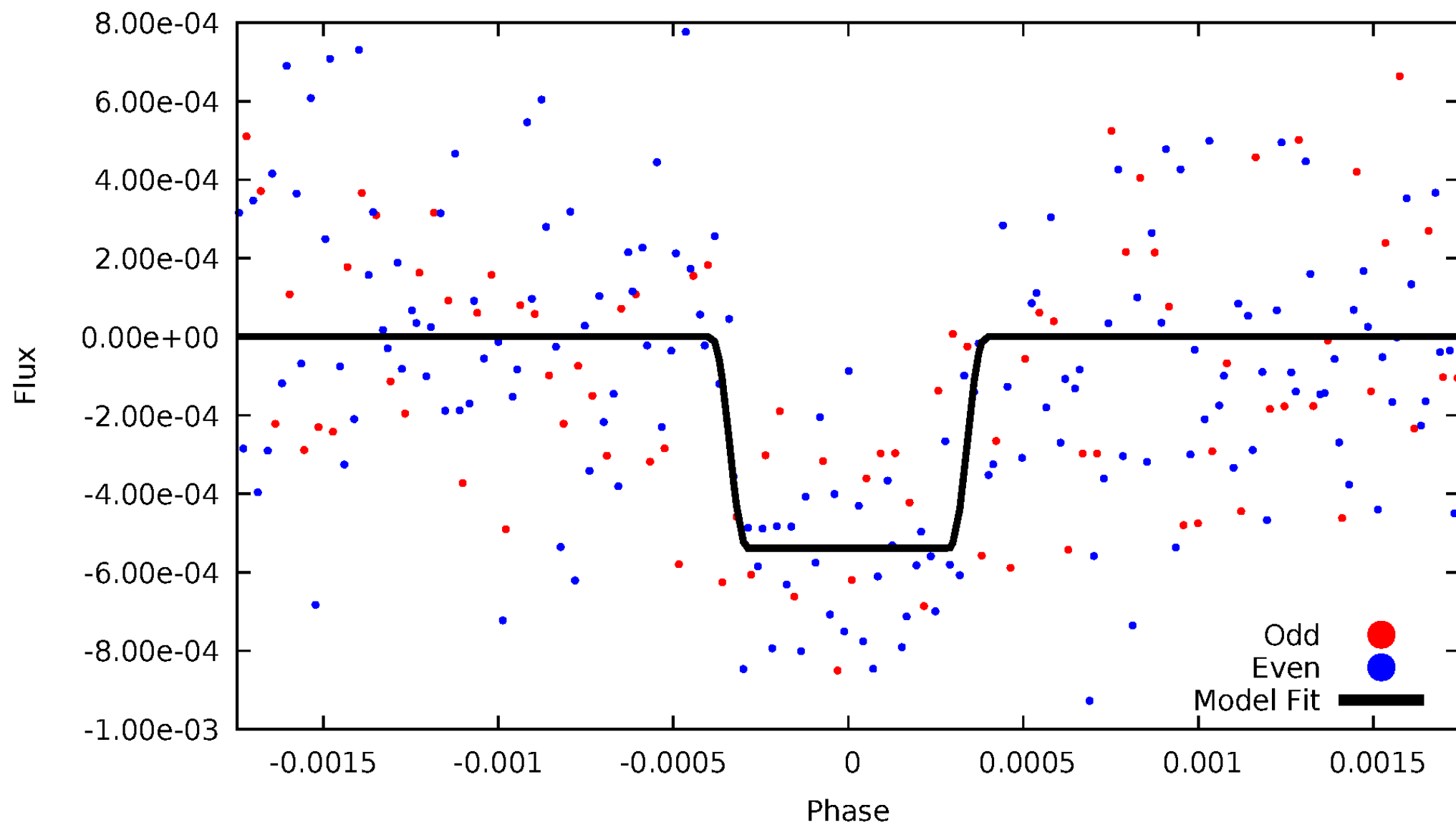
DV Odd/Even

TCE 010470779-01



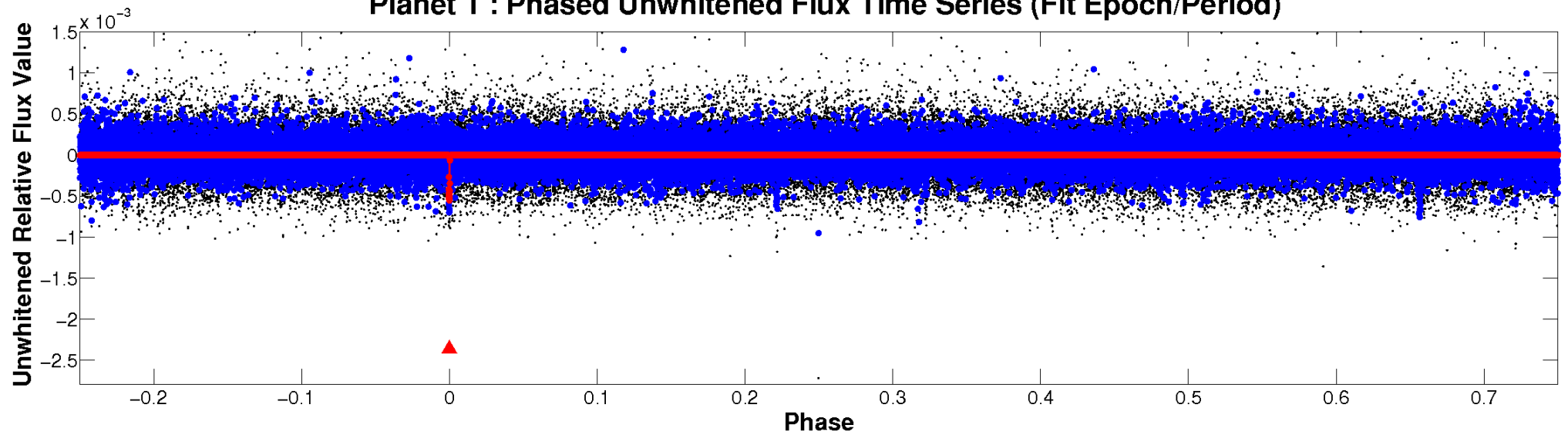
ALT Odd/Even

TCE 010470779-01

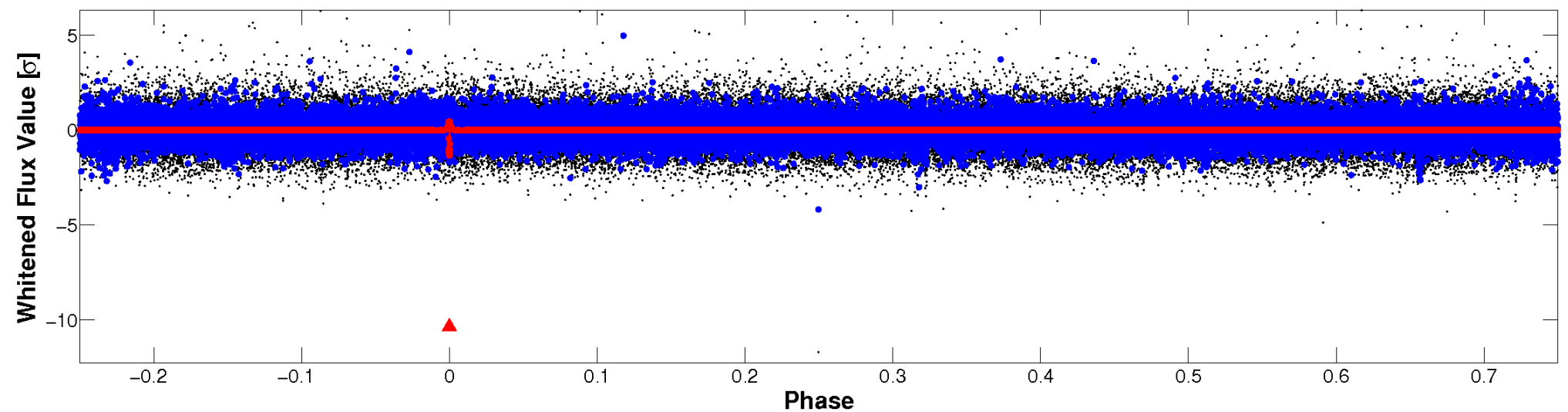


Non-Whitened Vs. Whitened Light Curve

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



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



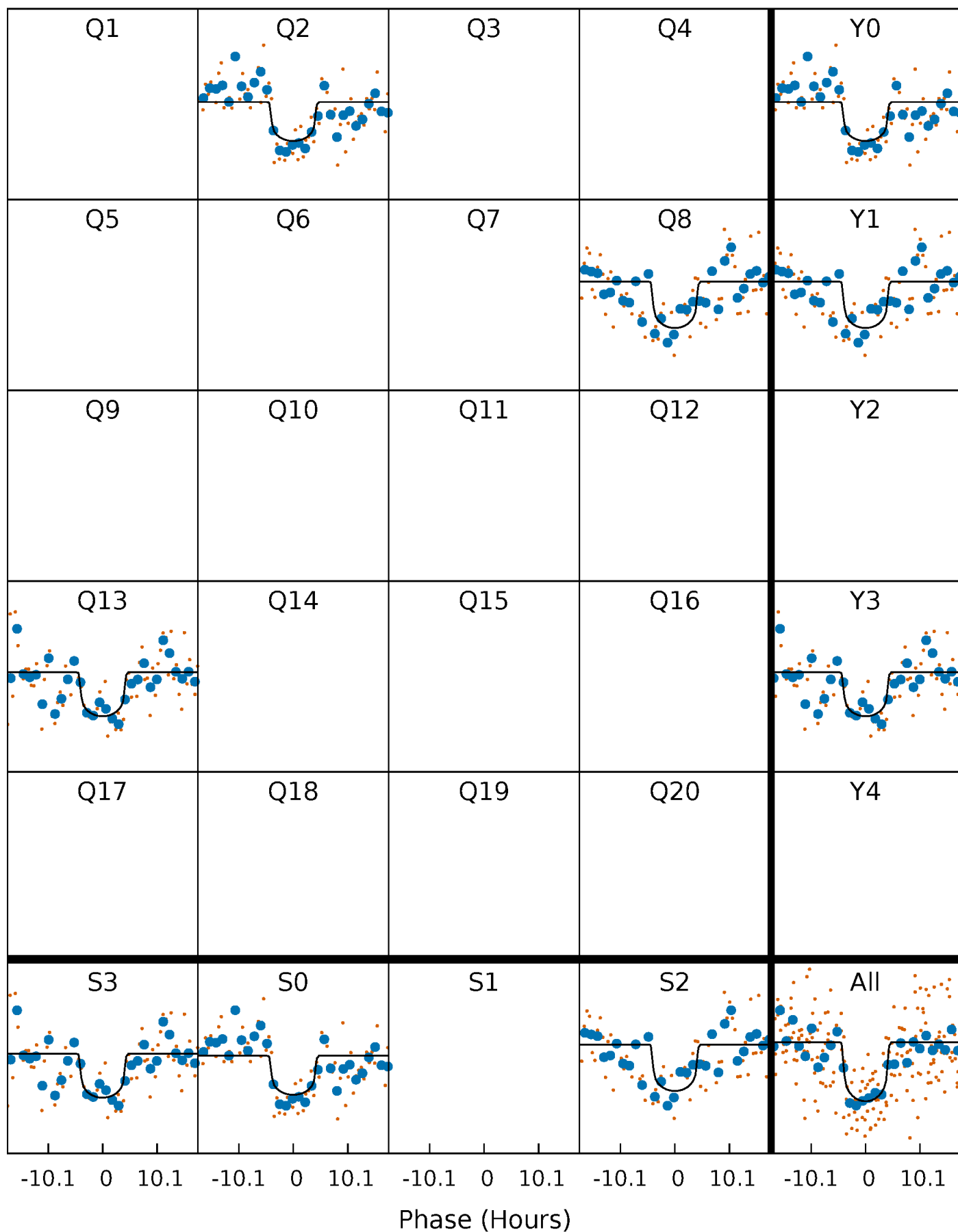
PDC Quarter-Phased Transit Curves

TCE 010470779-01 P=495.859109 Days $T_0=241.491743$ (BKJD)



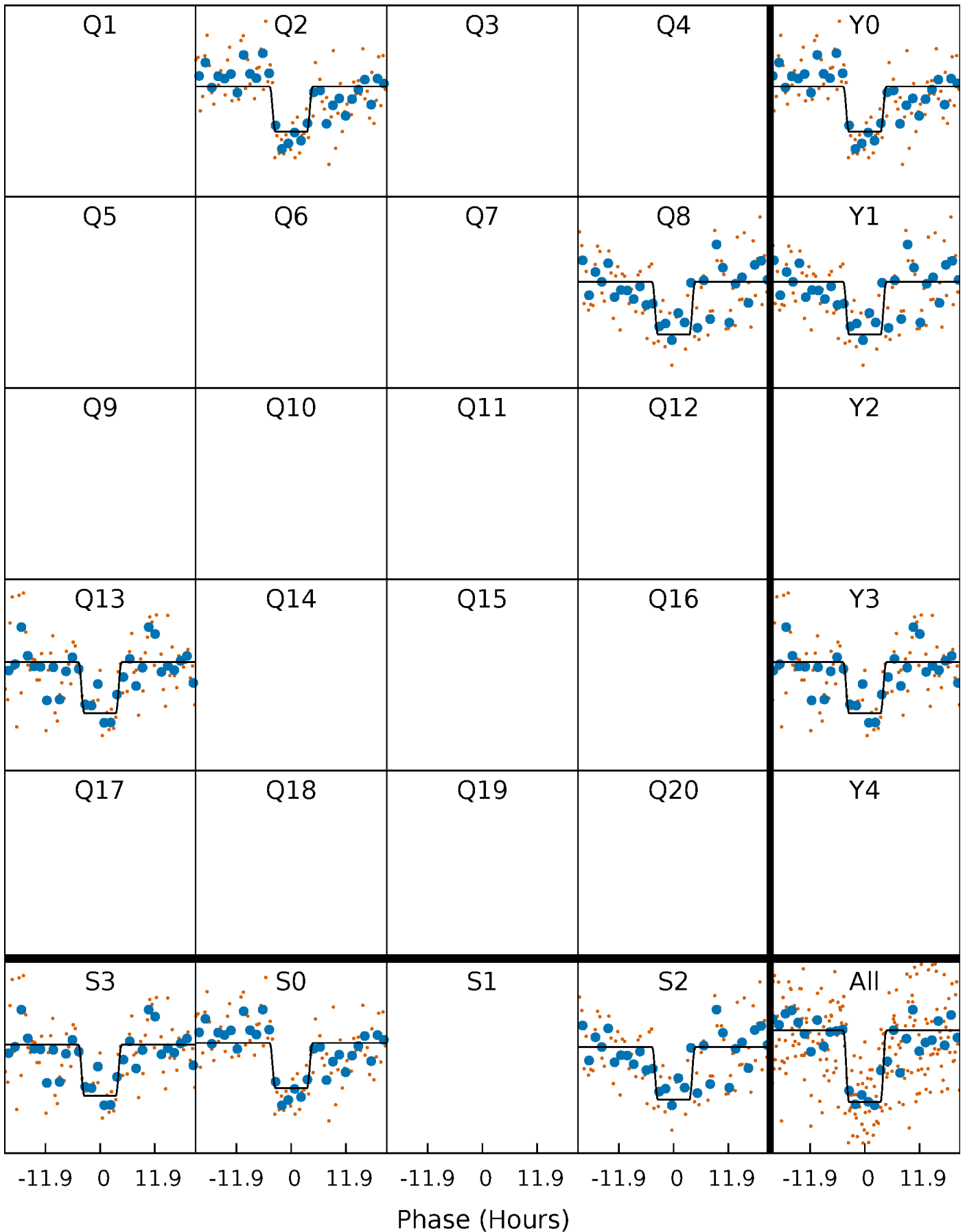
DV Quarter-Phased Transit Curves

TCE 010470779-01 P=495.859109 Days $T_0=241.491743$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

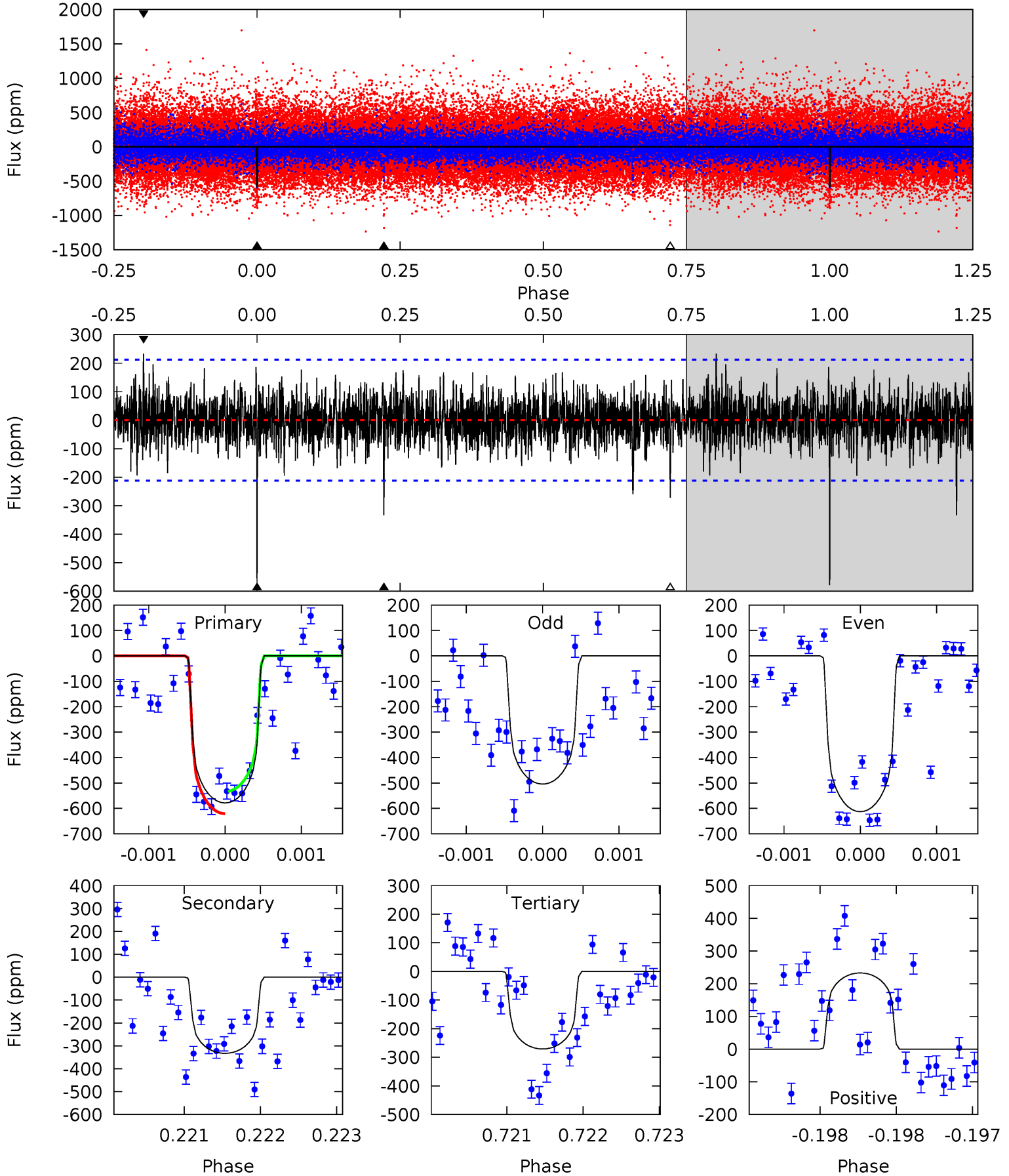
TCE 010470779-01 P=495.868012 Days $T_0=241.493065$ (BKJD)



DV Model-Shift Uniqueness Test

010470779-01, P = 495.859109 Days, E = 241.491743 Days

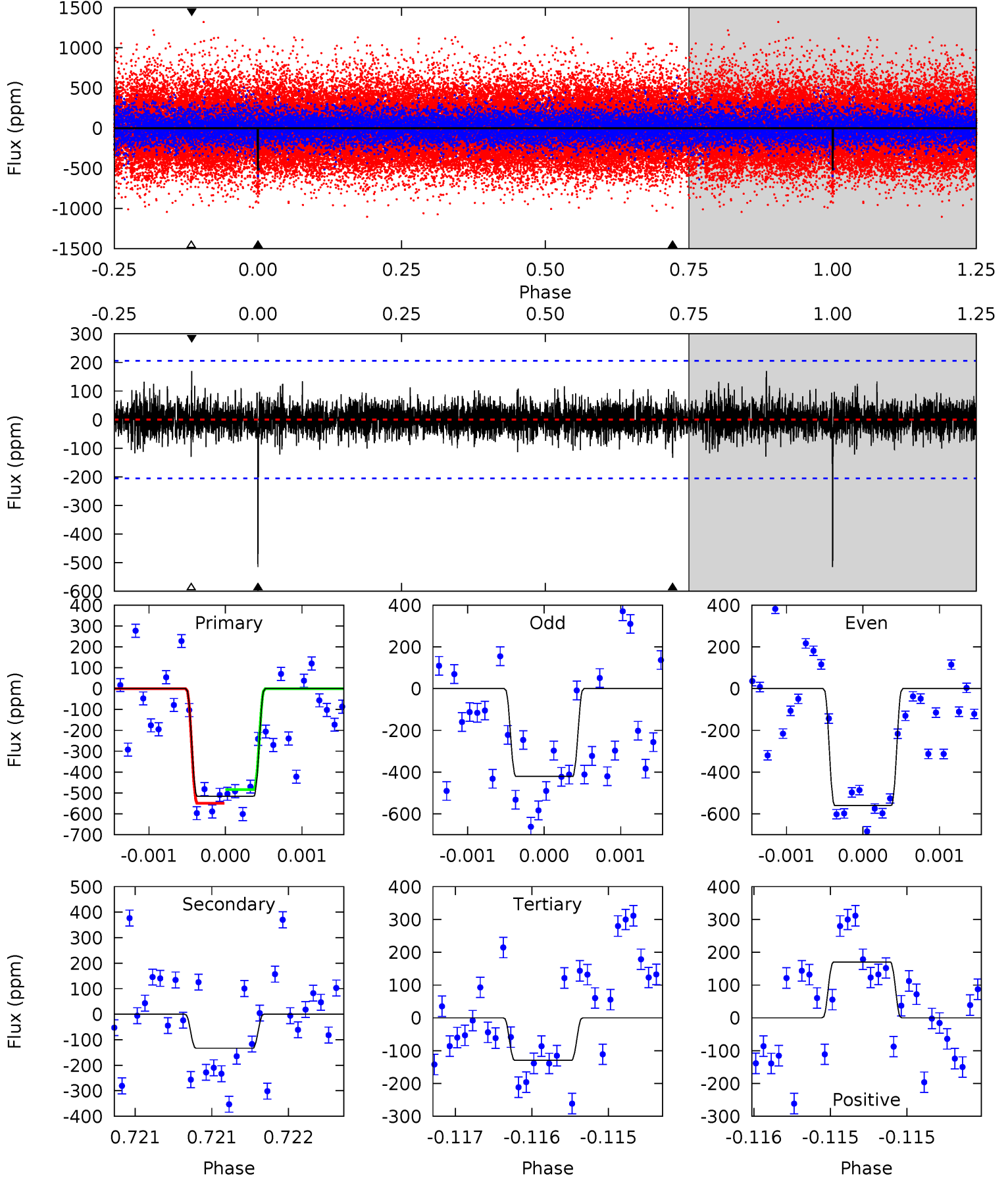
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	8.62	7.02	6.03	5.50	3.36	1.46	7.96	8.95	1.60	2.59	1.31	1.03	0.29	1.14



Alt Model-Shift Uniqueness Test

010470779-01, P = 495.868012 Days, E = 241.493065 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	3.57	3.46	4.55	5.50	3.36	0.93	10.3	9.24	0.11	-0.98	1.78	1.05	0.25	0.87



Stellar Parameters For KIC 010470779

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5613^{+76}_{-76}	$4.378^{+0.110}_{-0.110}$	$0.120^{+0.150}_{-0.150}$	$1.044^{+0.149}_{-0.122}$	$0.948^{+0.060}_{-0.054}$	$1.175^{+0.523}_{-0.362}$
	+1%/-1%	+3%/-3%	+125%/-125%	+14%/-12%	+6%/-6%	+45%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 010470779-01 / KOI 5796.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-333 ± 39	$2.70^{+0.95}_{-0.89}$	322^{+14}_{-12}	4981^{+988}_{-559}	35916^{+44847}_{-16088}
Alt.	-133 ± 37	$2.60^{+1.05}_{-0.88}$	321^{+14}_{-12}	4184^{+802}_{-467}	14974^{+22095}_{-7660}

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 $A_{obs} \gg 1.0$

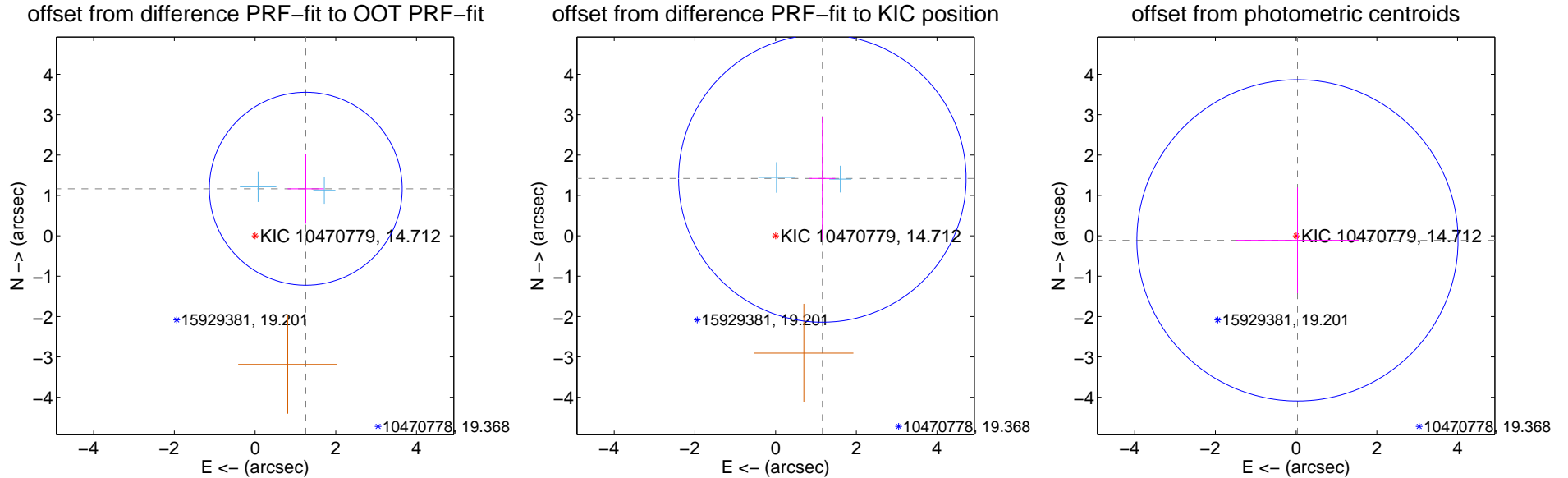
DV Centroid Data

Supplemental centroid analysis for 010470779-01. Kepler magnitude: 14.71. Transit SNR 8.76

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.714 ± 0.797	2.15	-1.257 ± 0.448	1.165 ± 0.865
PRF-fit source offset from KIC position	1.834 ± 1.187	1.54	-1.158 ± 0.320	1.421 ± 1.524
photometric centroid source offset	0.12 ± 1.33	0.09	-0.03 ± 1.53	-0.11 ± 1.31



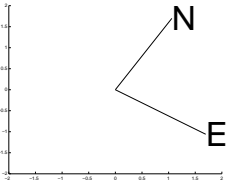
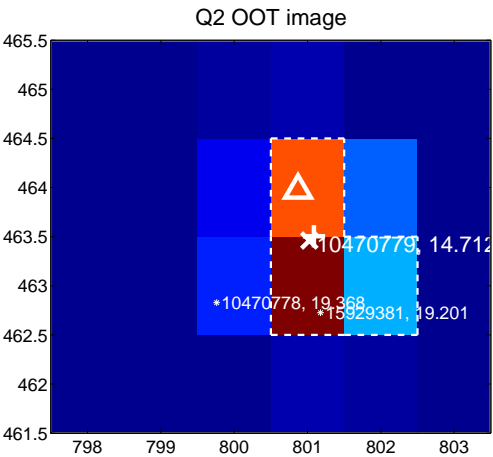
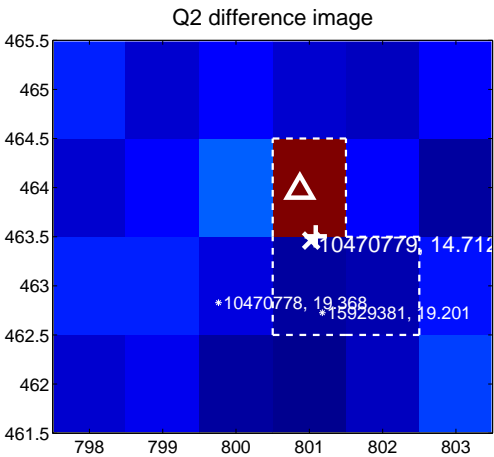
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

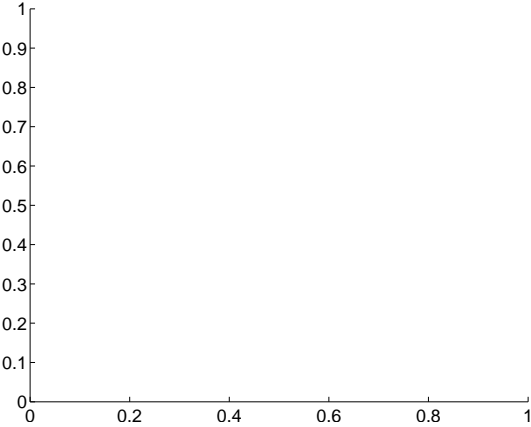
Q1 no difference image



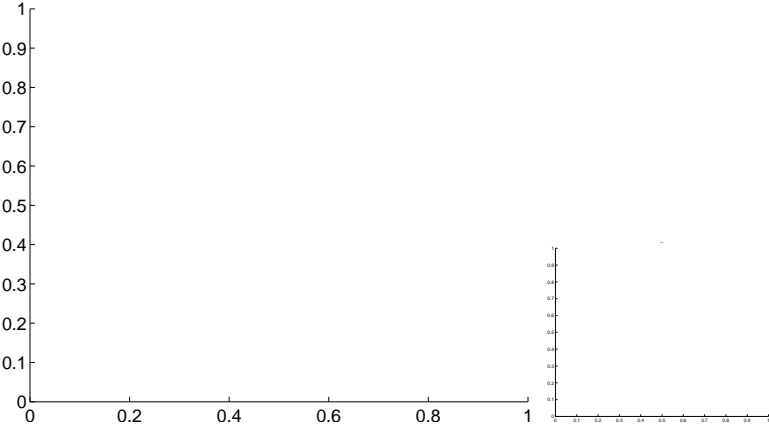
Q1 no OOT image



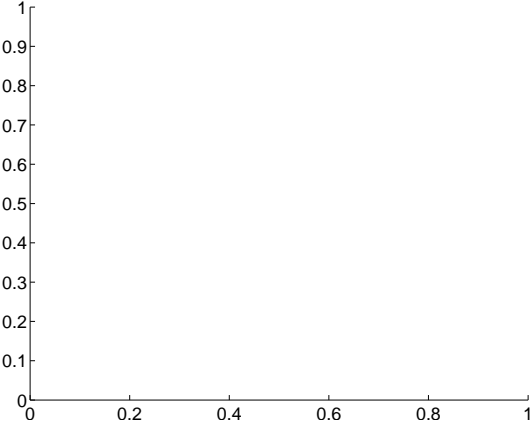
Q3 no difference image



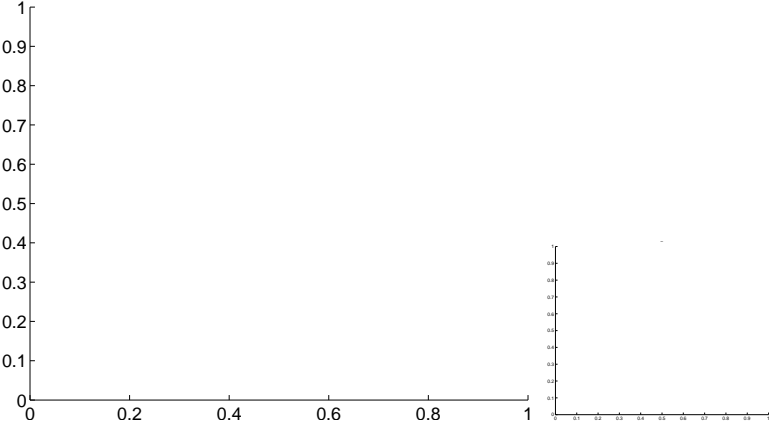
Q3 no OOT image



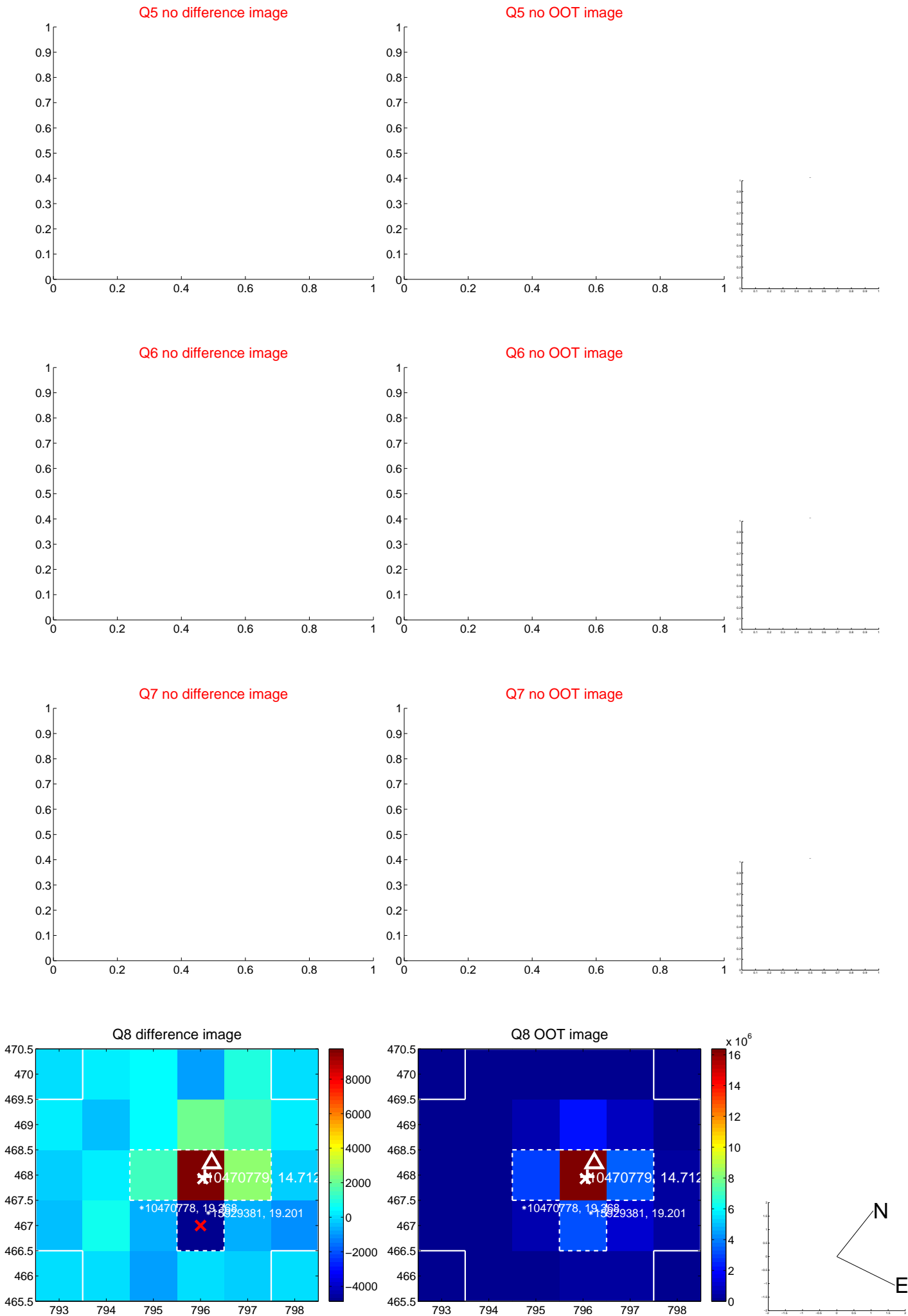
Q4 no difference image



Q4 no OOT image



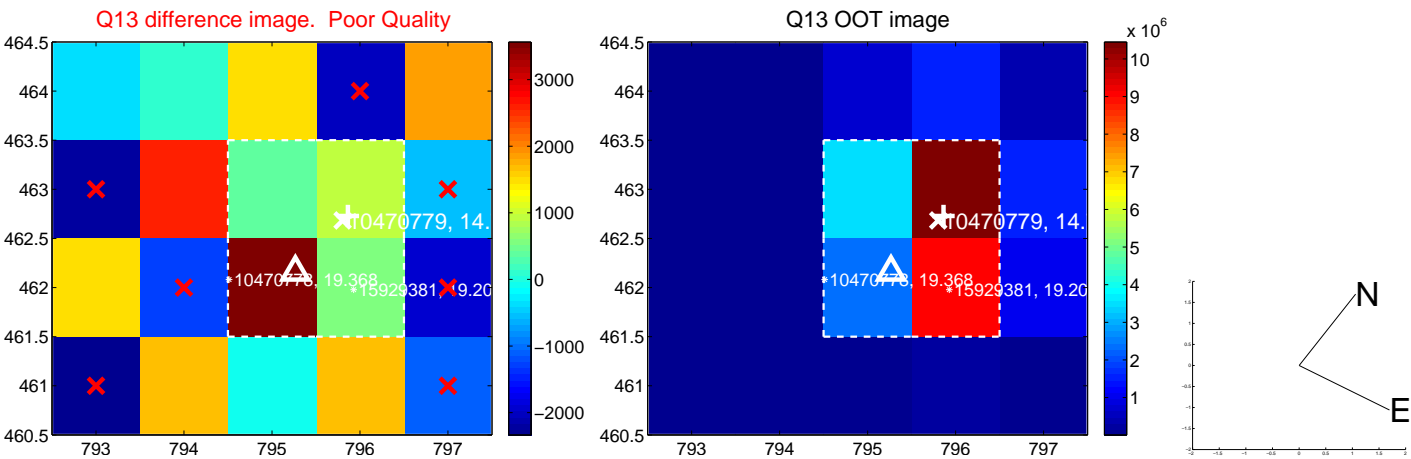
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



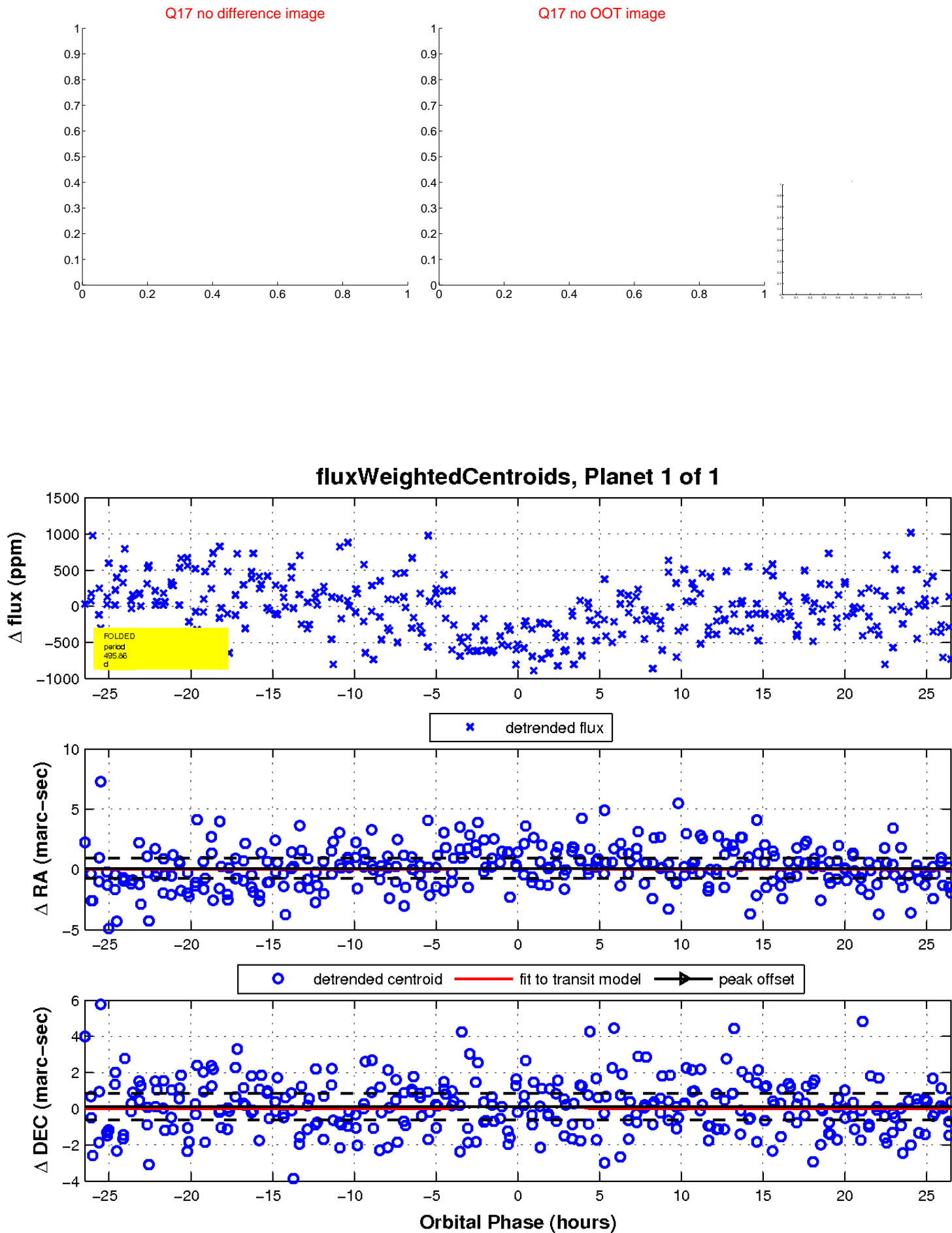
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

