

KIC 010676750

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})
010676750-01	OBS	4804.01	21.086786	135.564677	476.0	0.998	8.8	11.0	0.86	6084	2.13	42.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010676750-01	OBS	PC	0.78	0	0	0	0	NO_COMMENT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

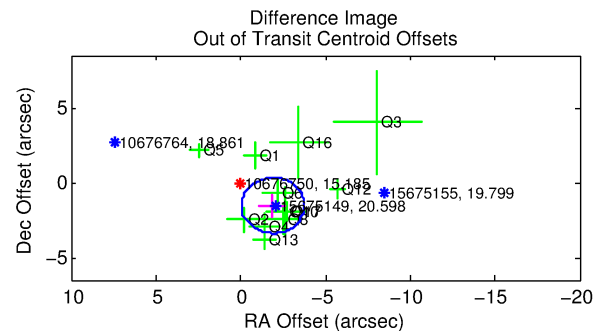
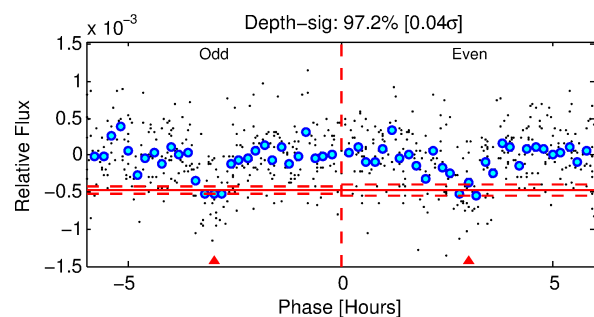
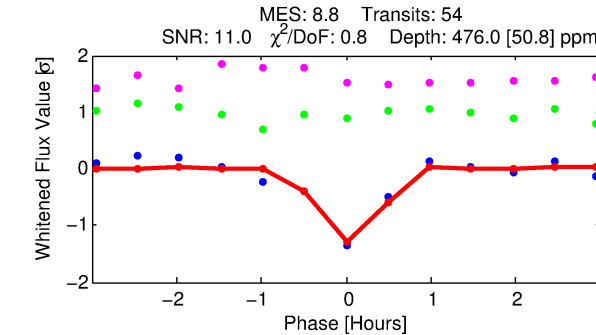
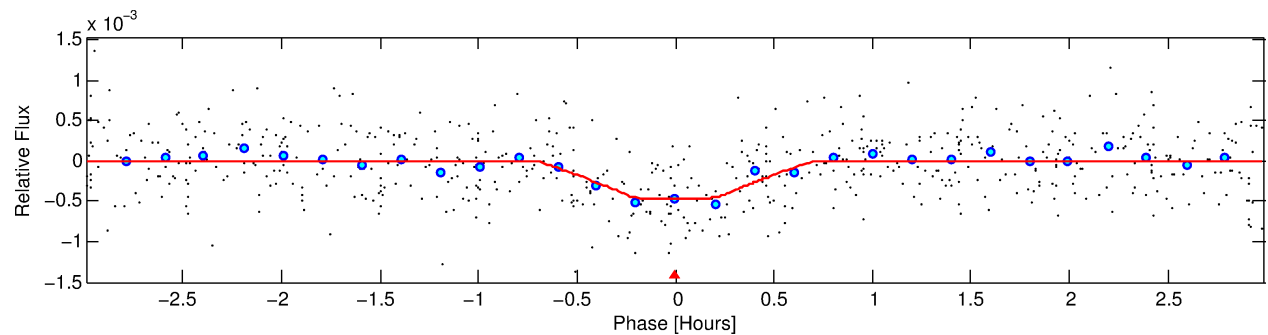
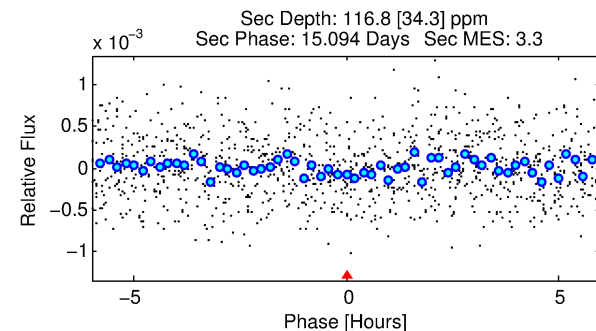
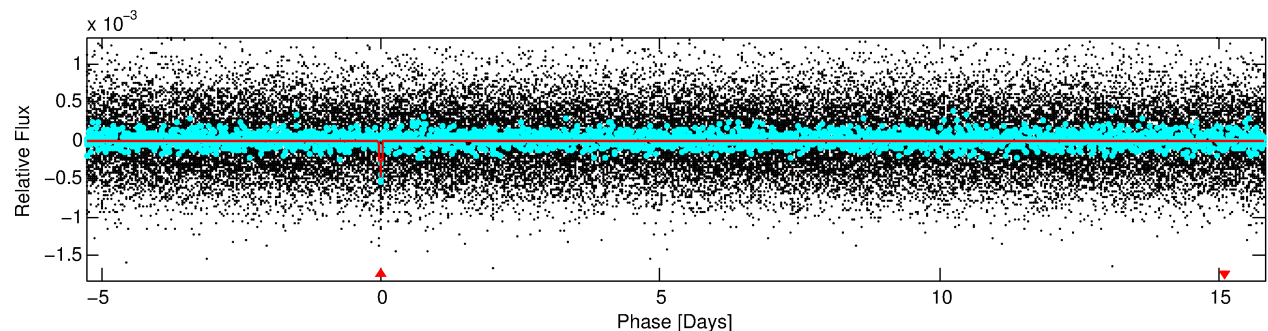
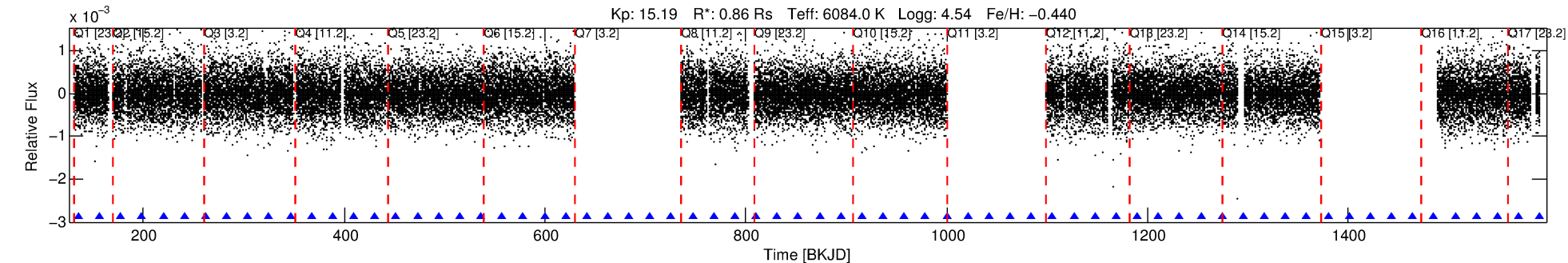
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010676750-01

No Significant Match Found

DV One-Page Summary

KIC: 10676750 Candidate: 1 of 1 Period: 21.087 d
KOI: K04804.01 Corr: 0.933



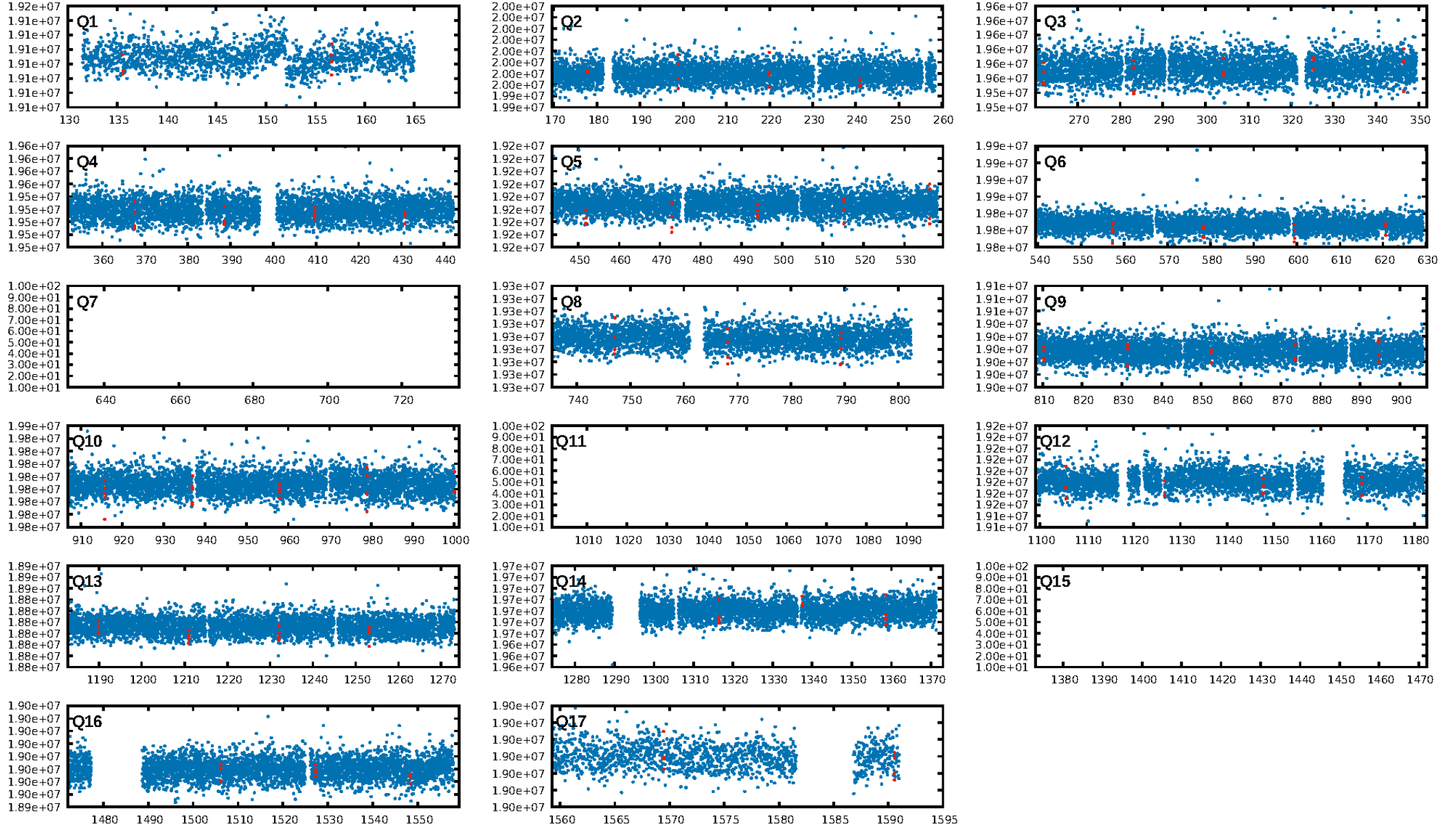
DV Fit Results:

Period = 21.08679 [0.00007] d
Epoch = 135.5647 [0.0026] BKJD
Rp/R* = 0.0226 [0.0221]
a/R* = 96.93 [498.95]
b = 0.83 [1.98]
Seff = 42.49 [14.64]
Teff = 651 [56] K
Rp = 2.13 [2.15] Re
a = 0.1467 [0.0316] AU
Ag = 305.32 [611.15] [0.50σ]
Teffp = 4208 [2084] K [1.71σ]

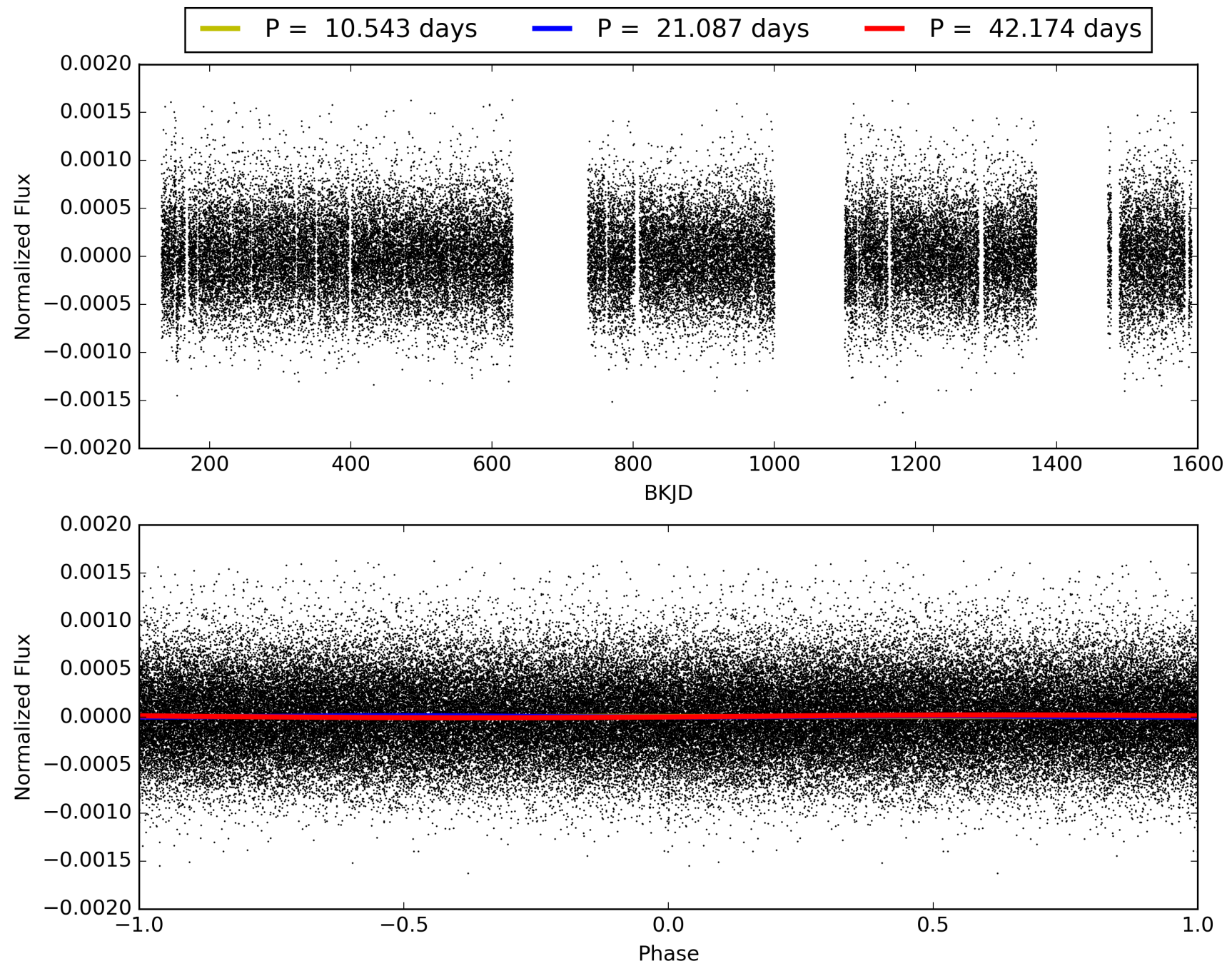
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.61e-18
RollingBand-fgt: 1.00 [50/50]
GhostDiagnostic-chr: 2.308
Centroid-sig: 0.0%
Centroid-so: 4.949 arcsec [3.62σ]
OotOffset-rm: 2.438 arcsec [3.95σ]
KicOffset-rm: 2.320 arcsec [4.11σ]
OotOffset-st: 3/1/4/4 [12]
KicOffset-st: 3/1/4/4 [12]
DiffImageQuality-fgm: 0.17 [2/12]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010676750-01, PDC Light Curves

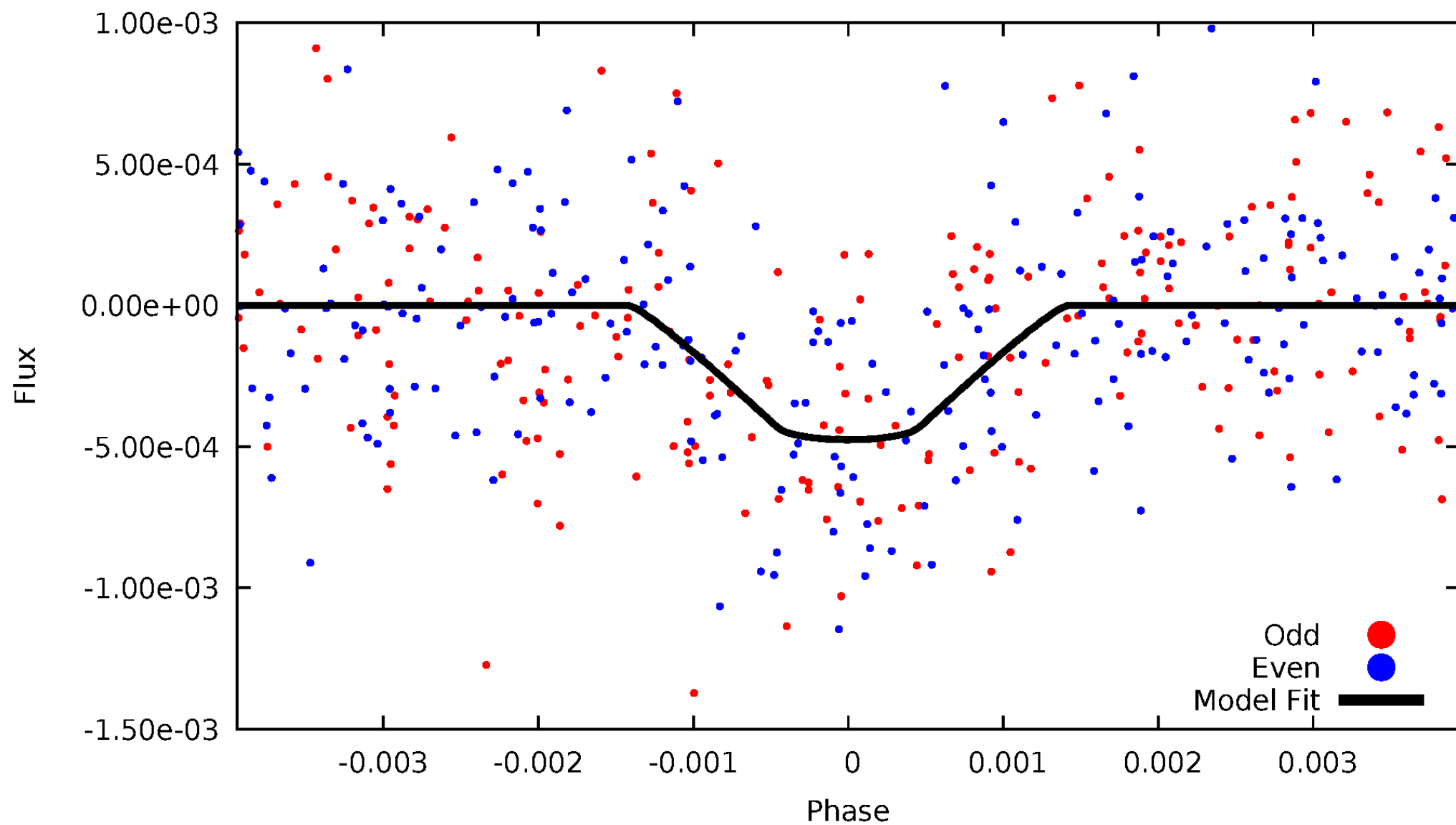


TCE 010676750-01



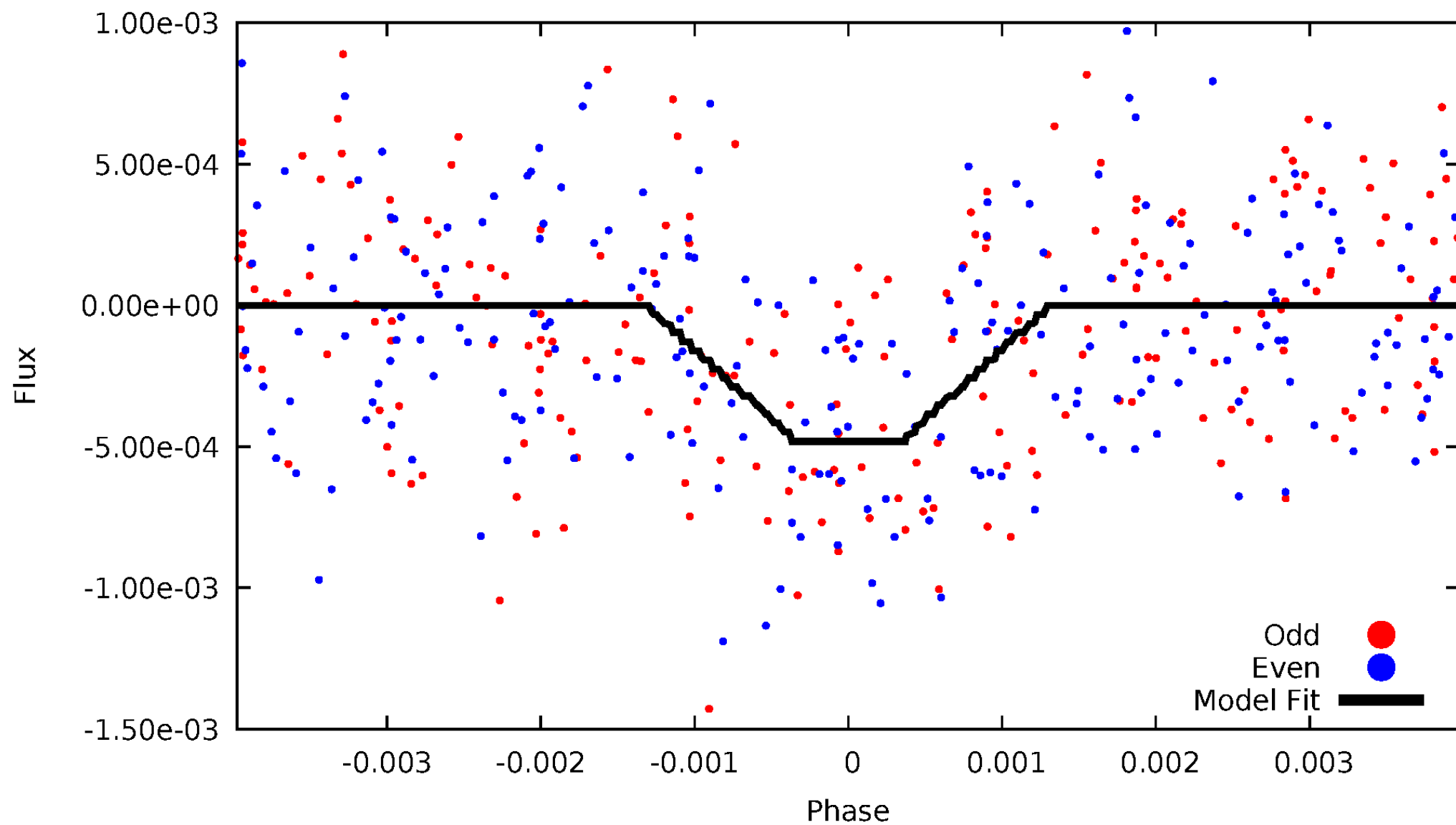
DV Odd/Even

TCE 010676750-01



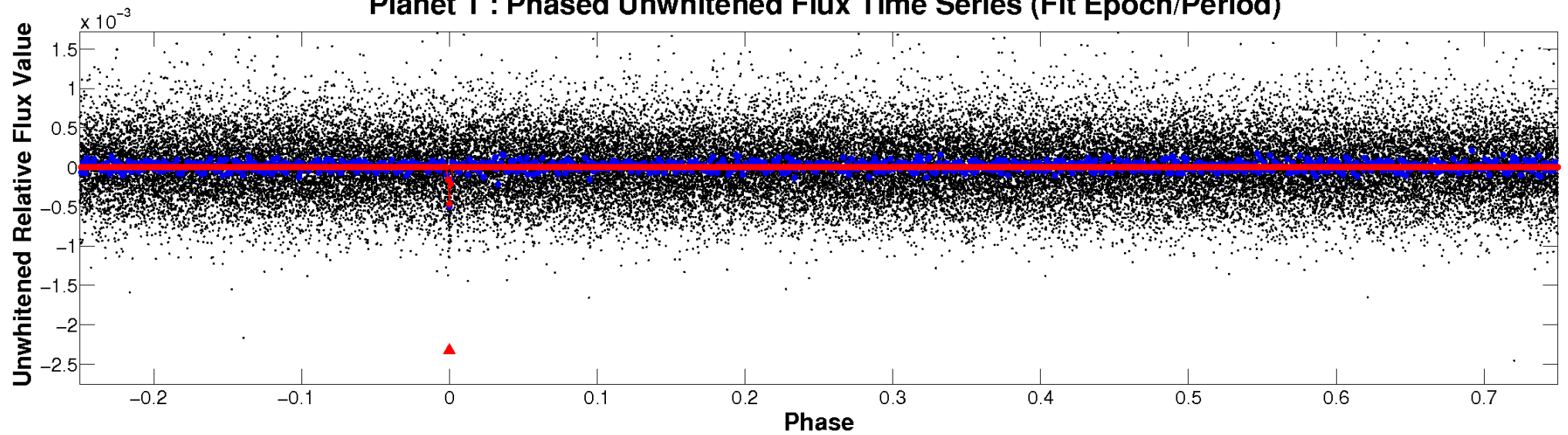
ALT Odd/Even

TCE 010676750-01

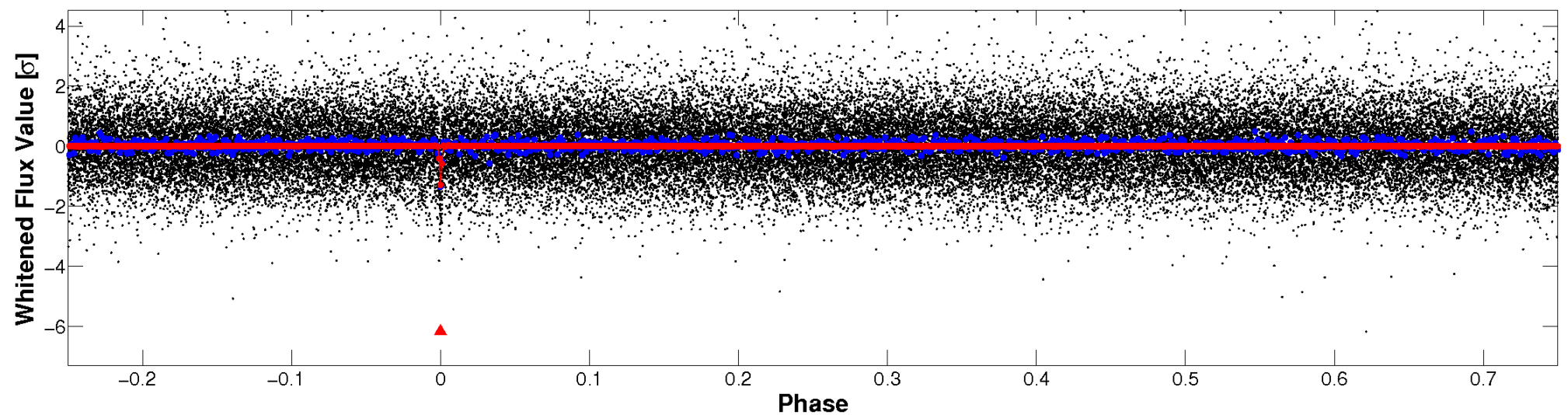


Non-Whitened Vs. Whitened Light Curve

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

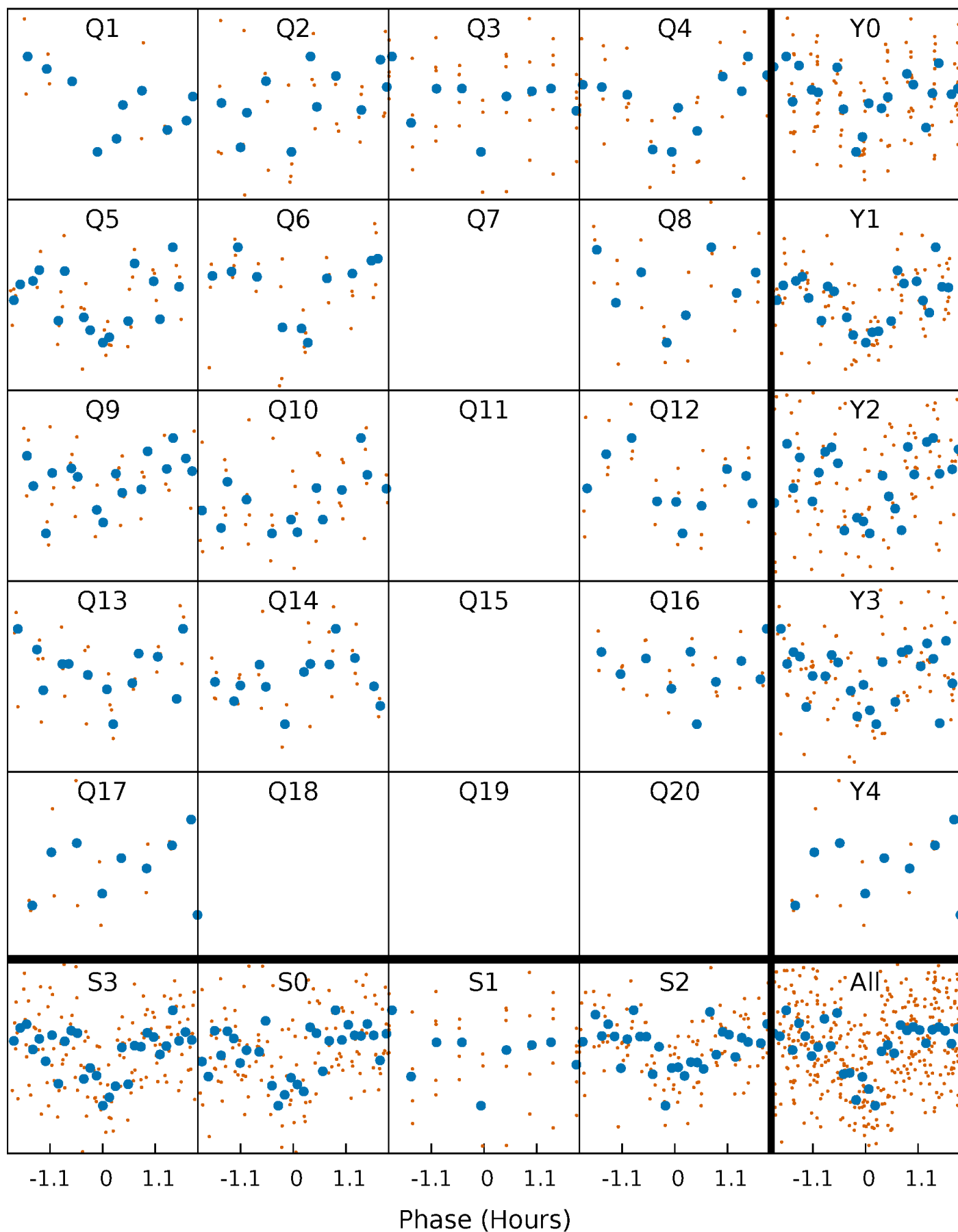


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



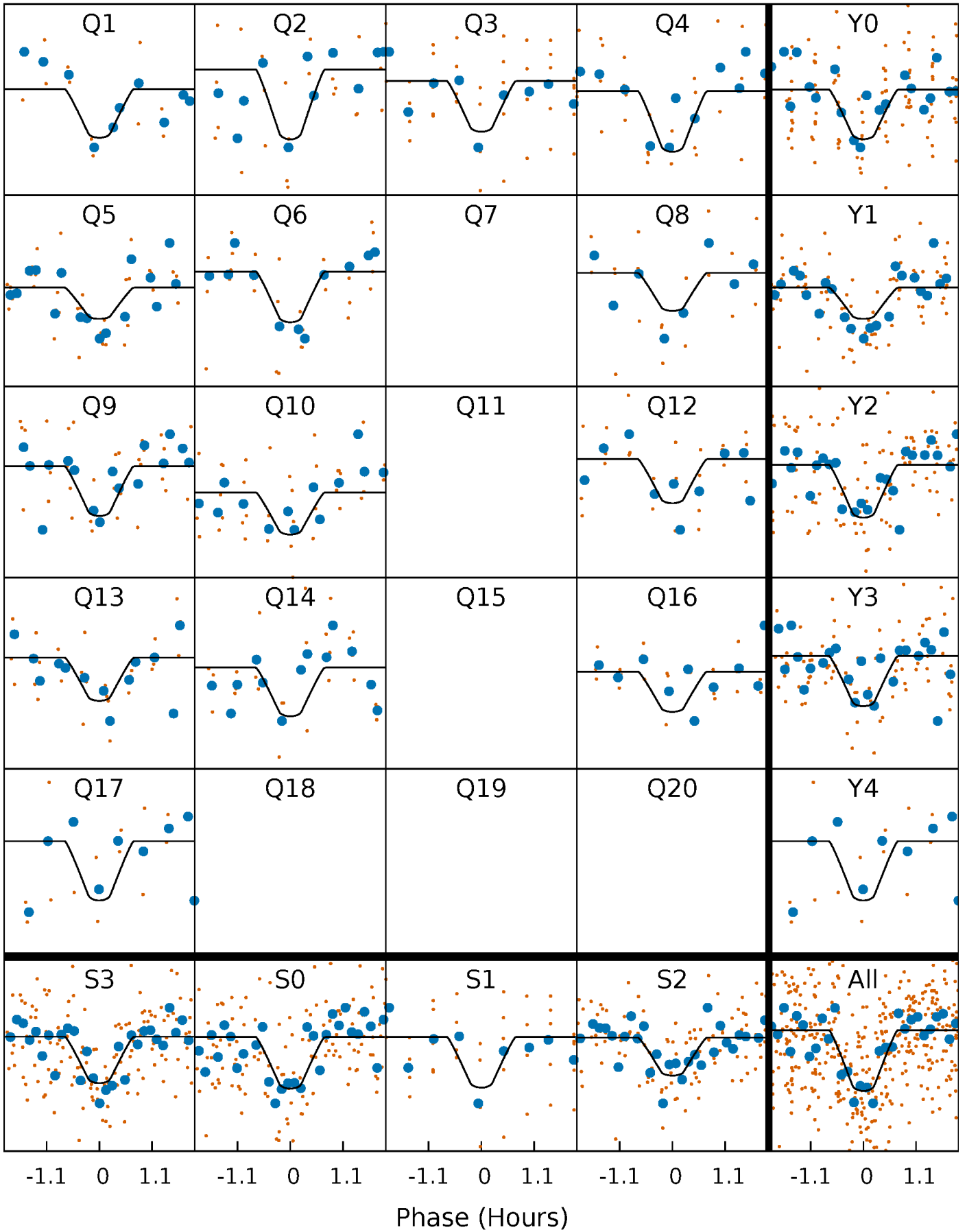
PDC Quarter-Phased Transit Curves

TCE 010676750-01 P= 21.086786 Days $T_0=135.564677$ (BKJD)



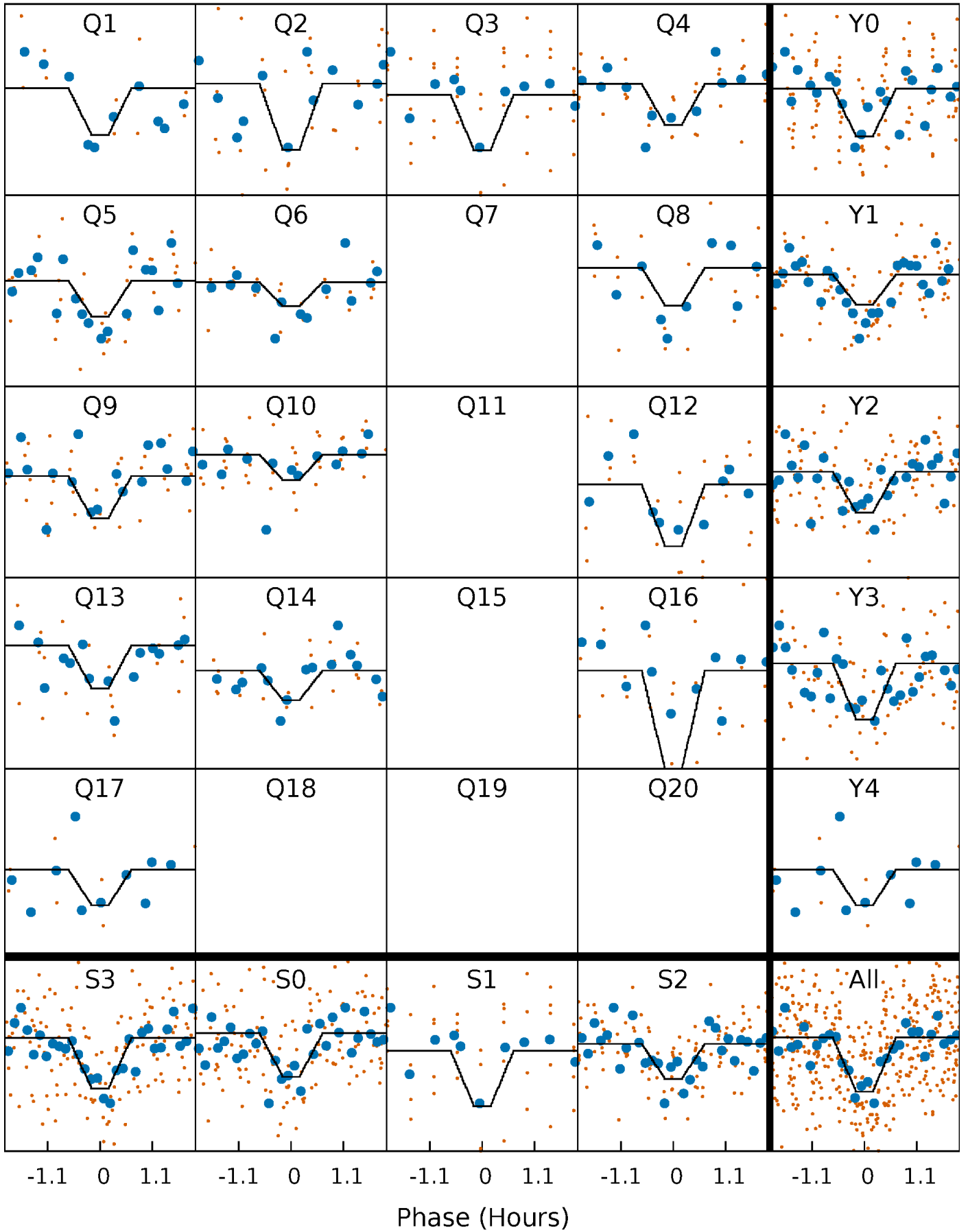
DV Quarter-Phased Transit Curves

TCE 010676750-01 P= 21.086786 Days $T_0=135.564677$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

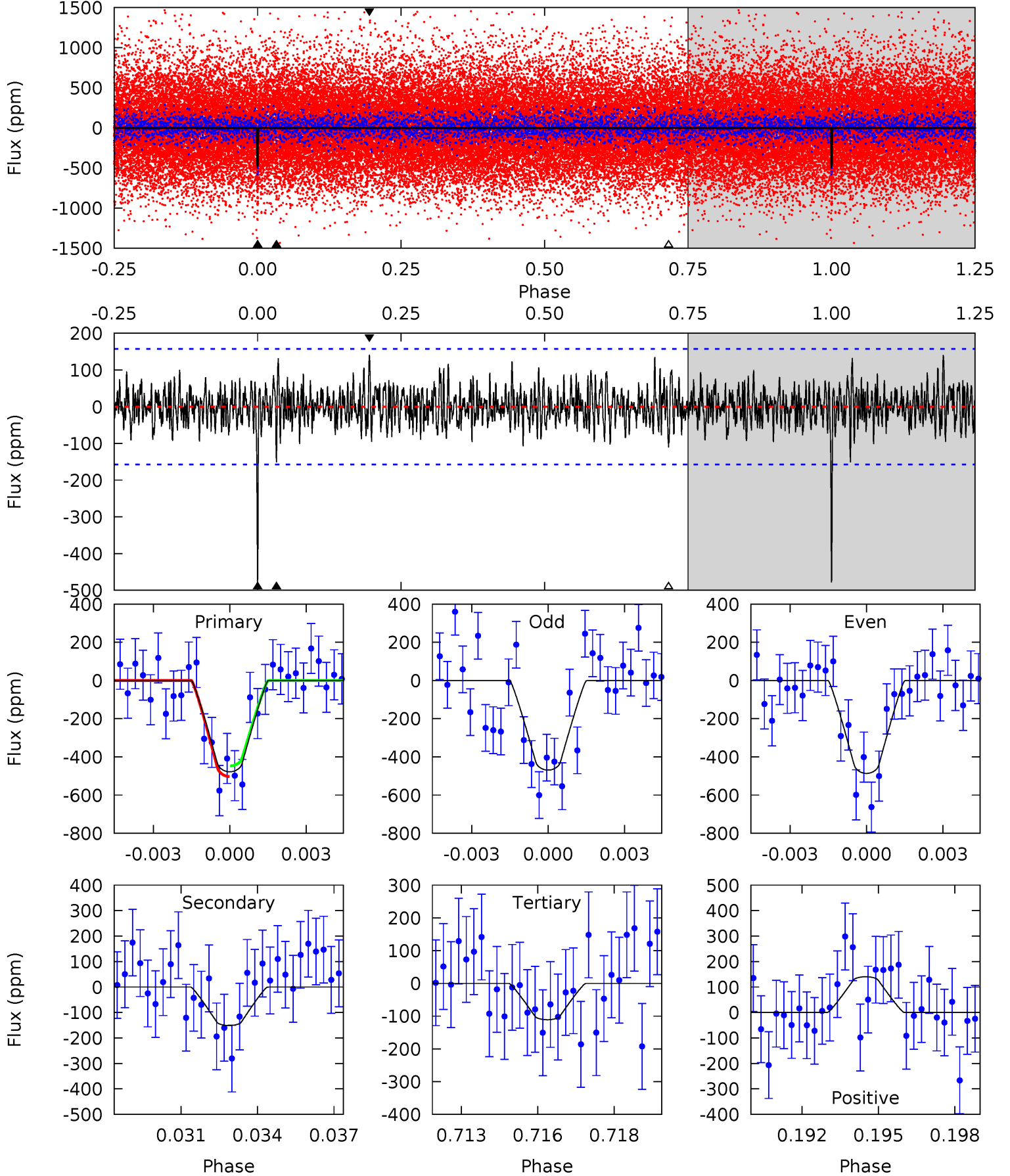
TCE 010676750-01 P= 21.086710 Days $T_0=135.565585$ (BKJD)



DV Model-Shift Uniqueness Test

010676750-01, P = 21.086786 Days, E = 114.477891 Days

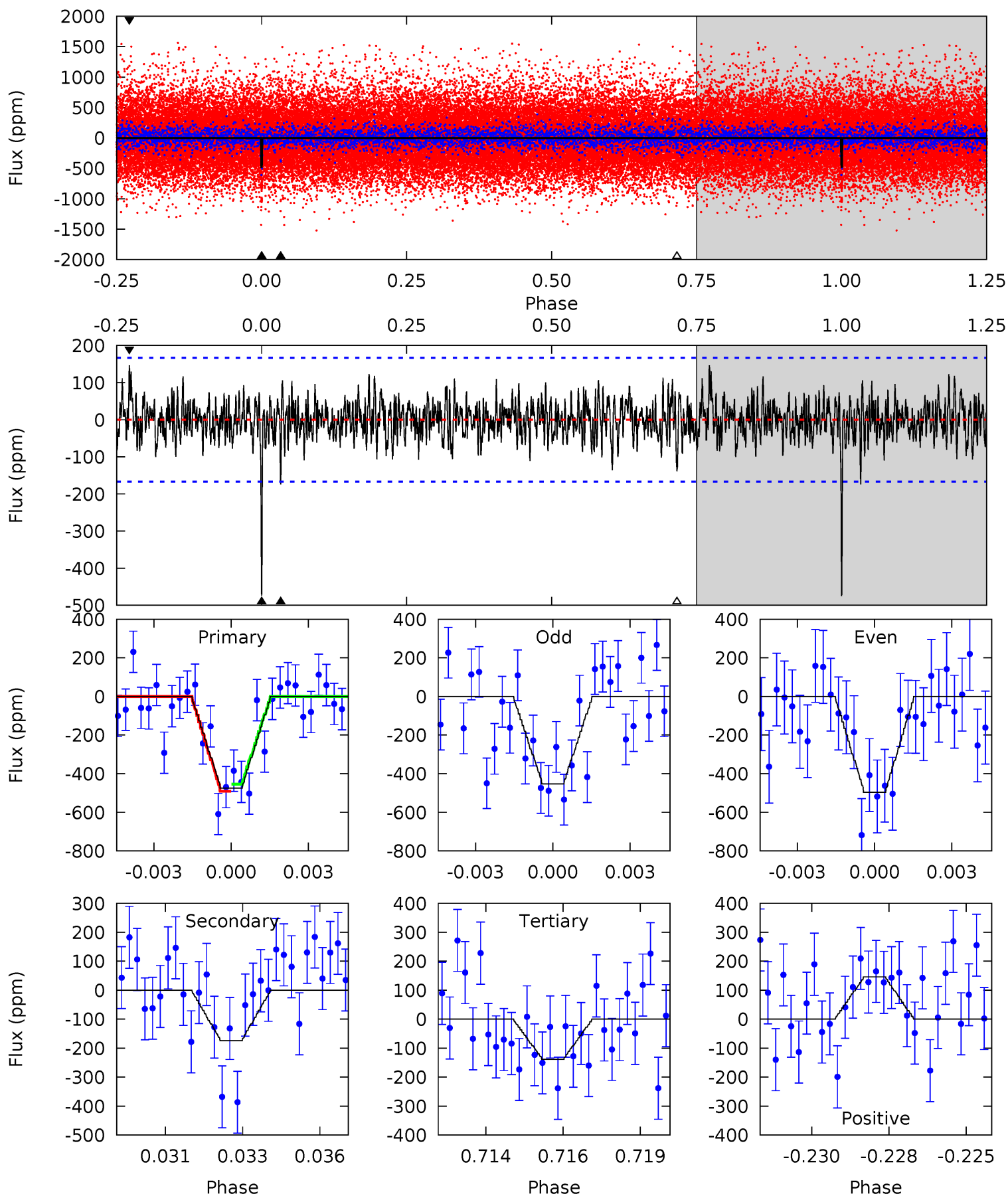
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	5.06	3.71	4.69	5.26	2.99	1.33	12.3	11.3	1.35	0.36	0.29	0.95	0.23	0.93



Alt Model-Shift Uniqueness Test

010676750-01, $P = 21.086710$ Days, $E = 114.478875$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	5.53	4.39	4.63	5.28	3.02	1.33	10.7	10.4	1.14	0.90	0.68	0.95	0.24	0.58



Stellar Parameters For KIC 010676750

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6084^{+165}_{-202}	$4.542^{+0.044}_{-0.176}$	$-0.440^{+0.300}_{-0.300}$	$0.863^{+0.217}_{-0.072}$	$0.944^{+0.097}_{-0.118}$	$2.071^{+0.464}_{-0.943}$
	+3%/-3%	+1%/-4%	+68%/-68%	+25%/-8%	+10%/-12%	+22%/-46%
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 010676750-01 / KOI 4804.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-151 ± 30	$2.74^{+1.96}_{-1.66}$	931^{+57}_{-46}	4275^{+2137}_{-715}	226^{+1228}_{-146}
Alt.	-174 ± 32	$2.47^{+1.95}_{-1.40}$	928^{+57}_{-43}	4546^{+2149}_{-853}	331^{+1293}_{-229}

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 $A_{obs} \gg 1.0$

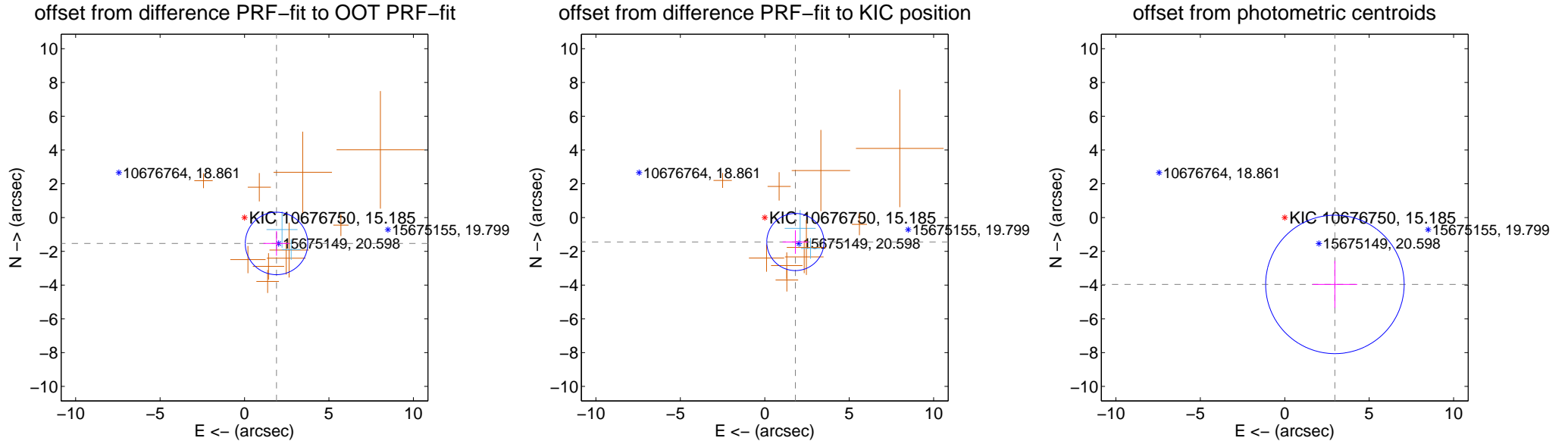
DV Centroid Data

Supplemental centroid analysis for 010676750-01. Kepler magnitude: 15.19. Transit SNR 11.01

There are 2 quarters with good PRF difference image offsets

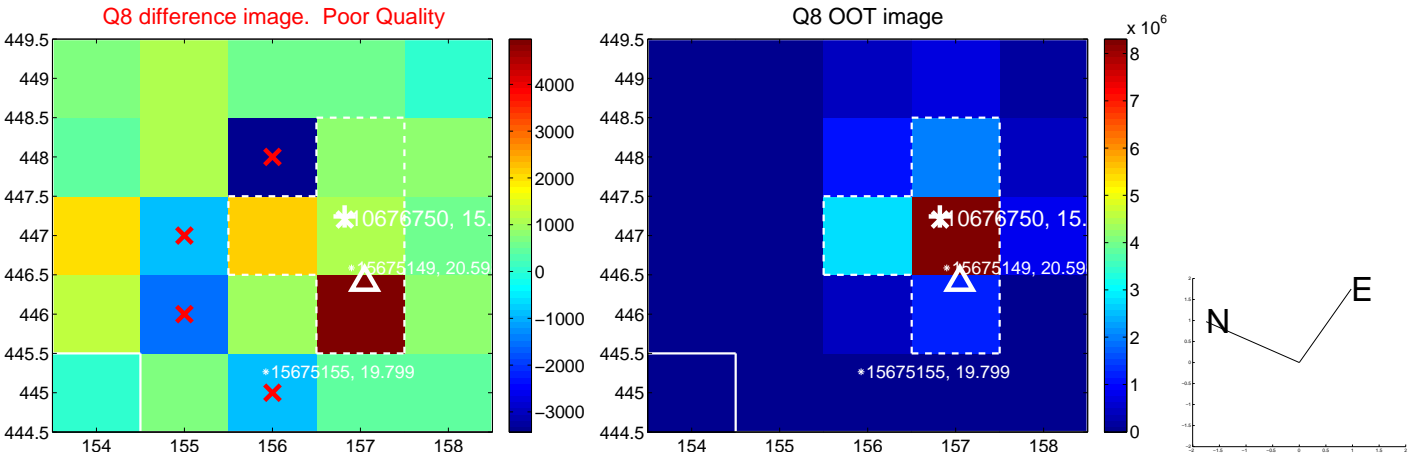
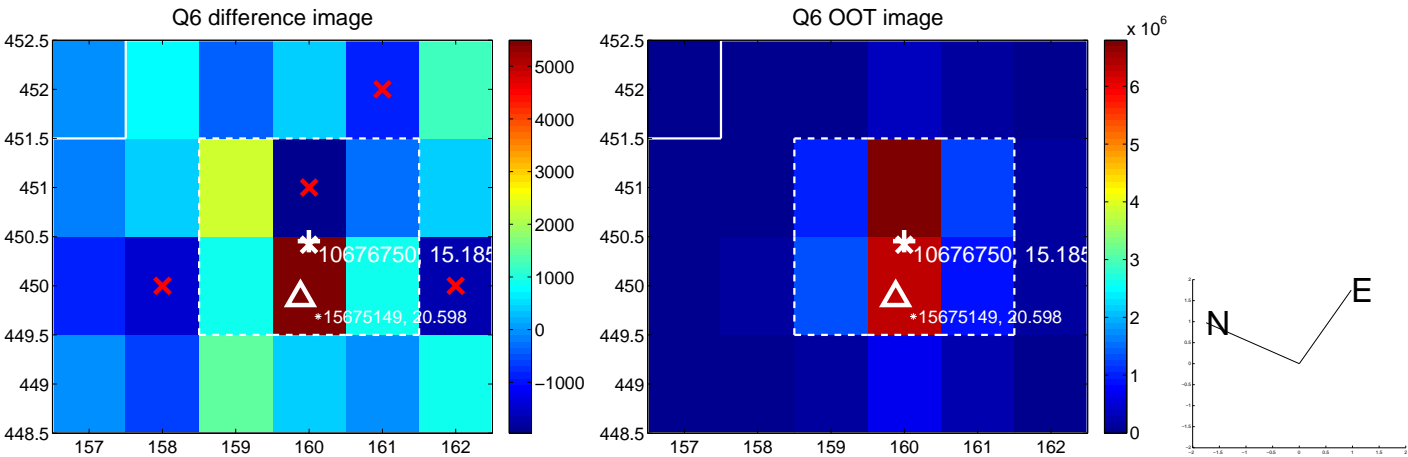
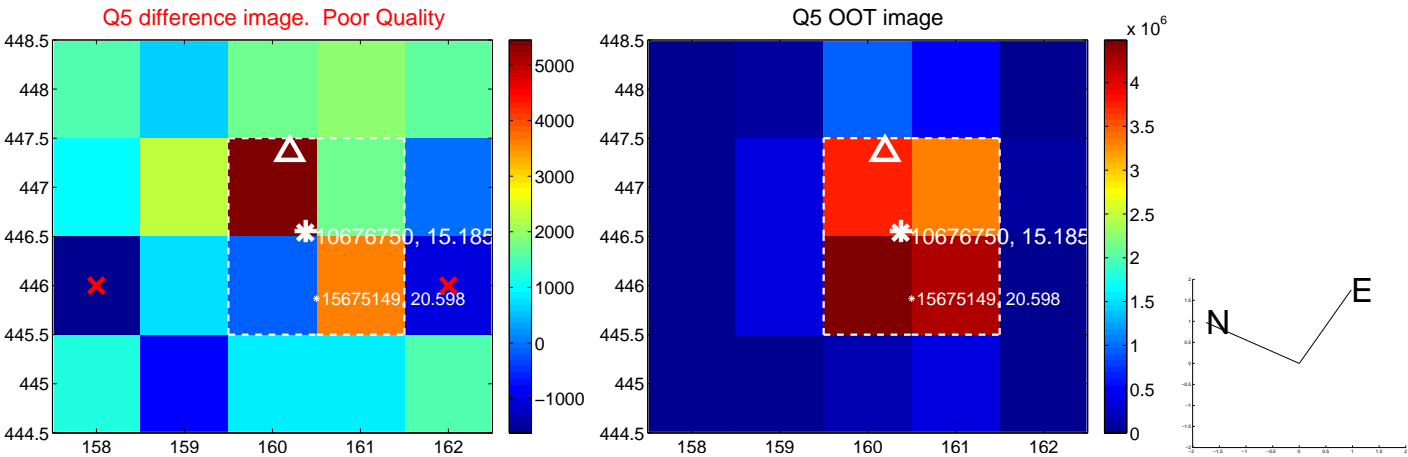
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.438 ± 0.617	3.95	-1.895 ± 0.776	-1.533 ± 0.732
PRF-fit source offset from KIC position	2.320 ± 0.564	4.11	-1.812 ± 0.755	-1.449 ± 0.698
photometric centroid source offset	4.95 ± 1.37	3.62	-2.97 ± 1.32	-3.96 ± 1.39

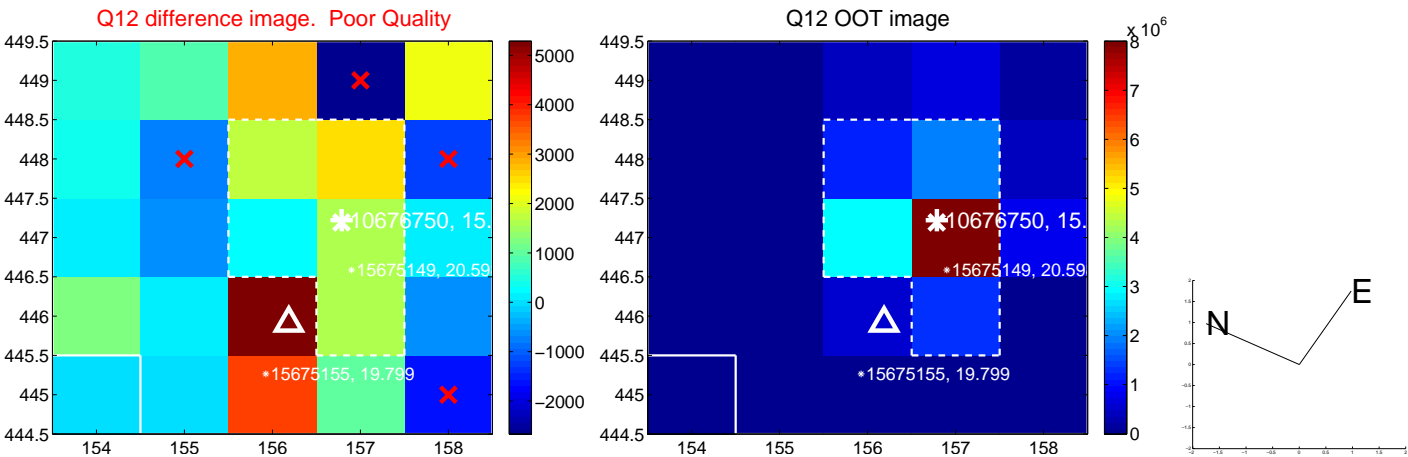
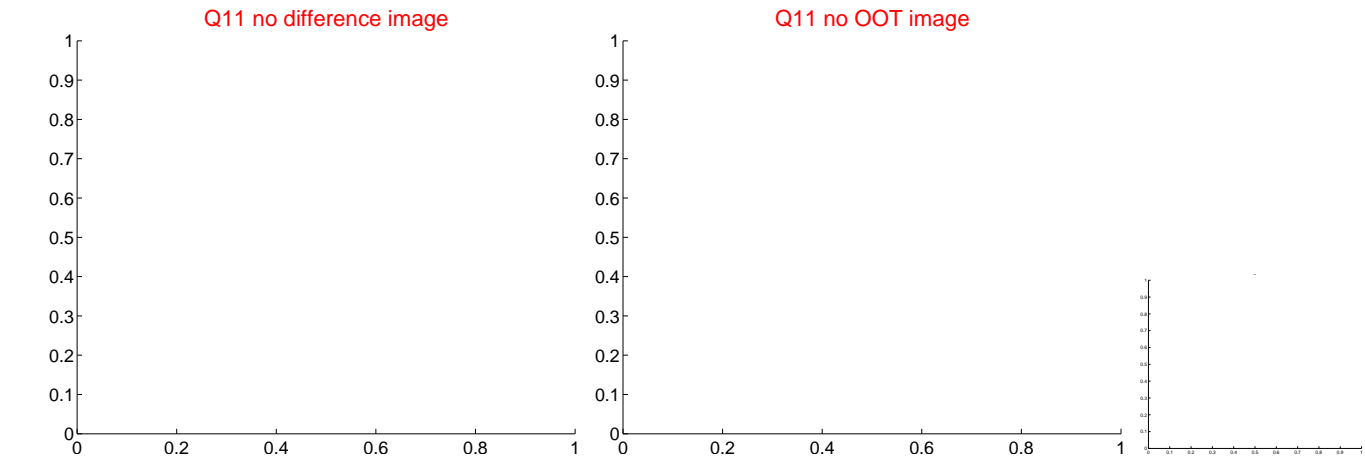
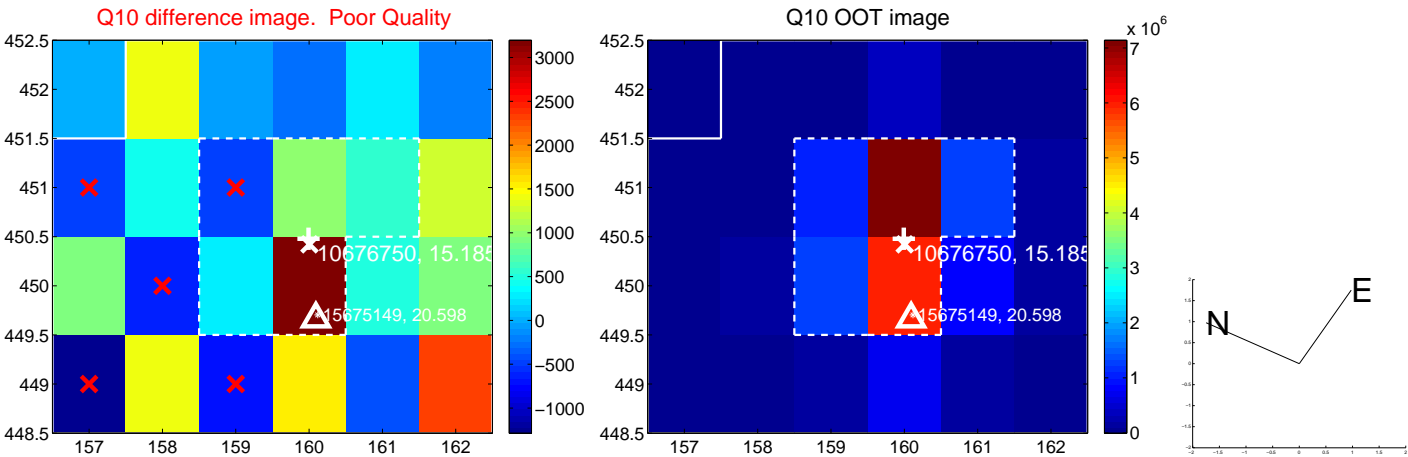
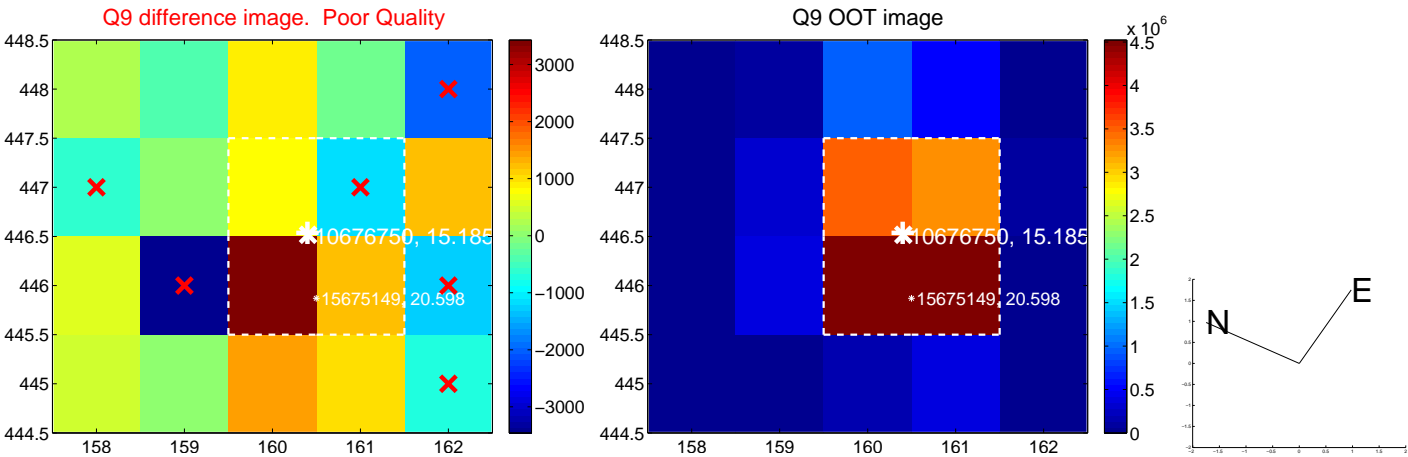


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

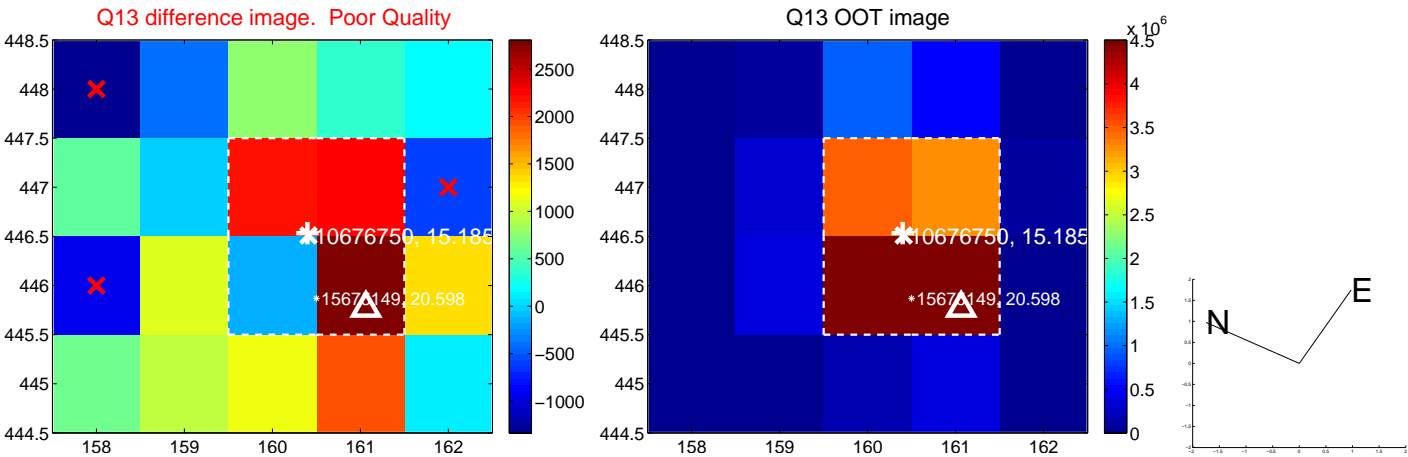
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



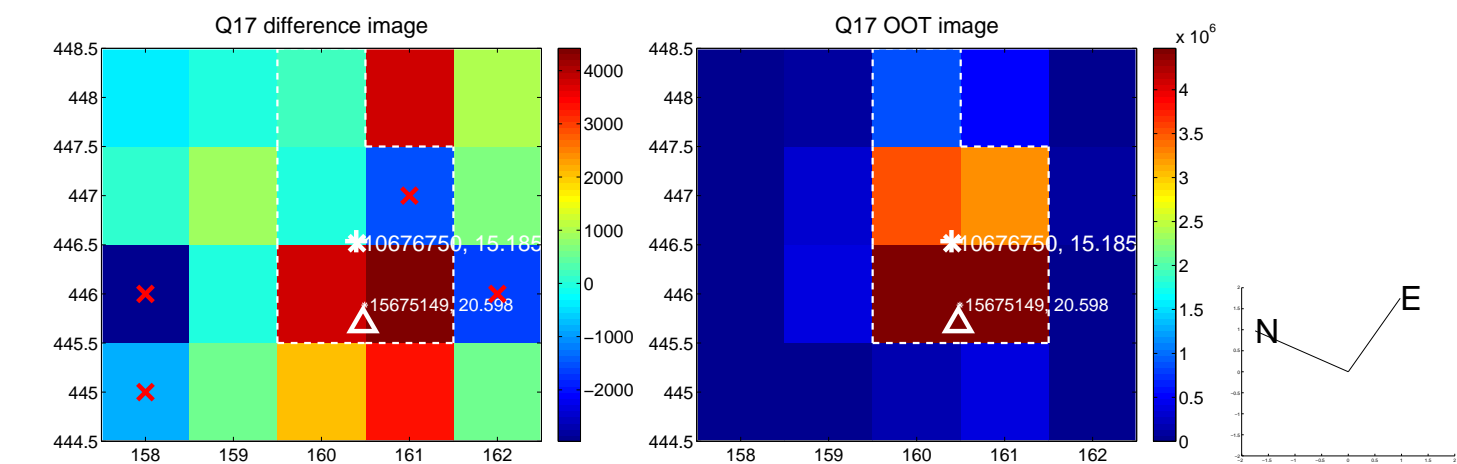
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



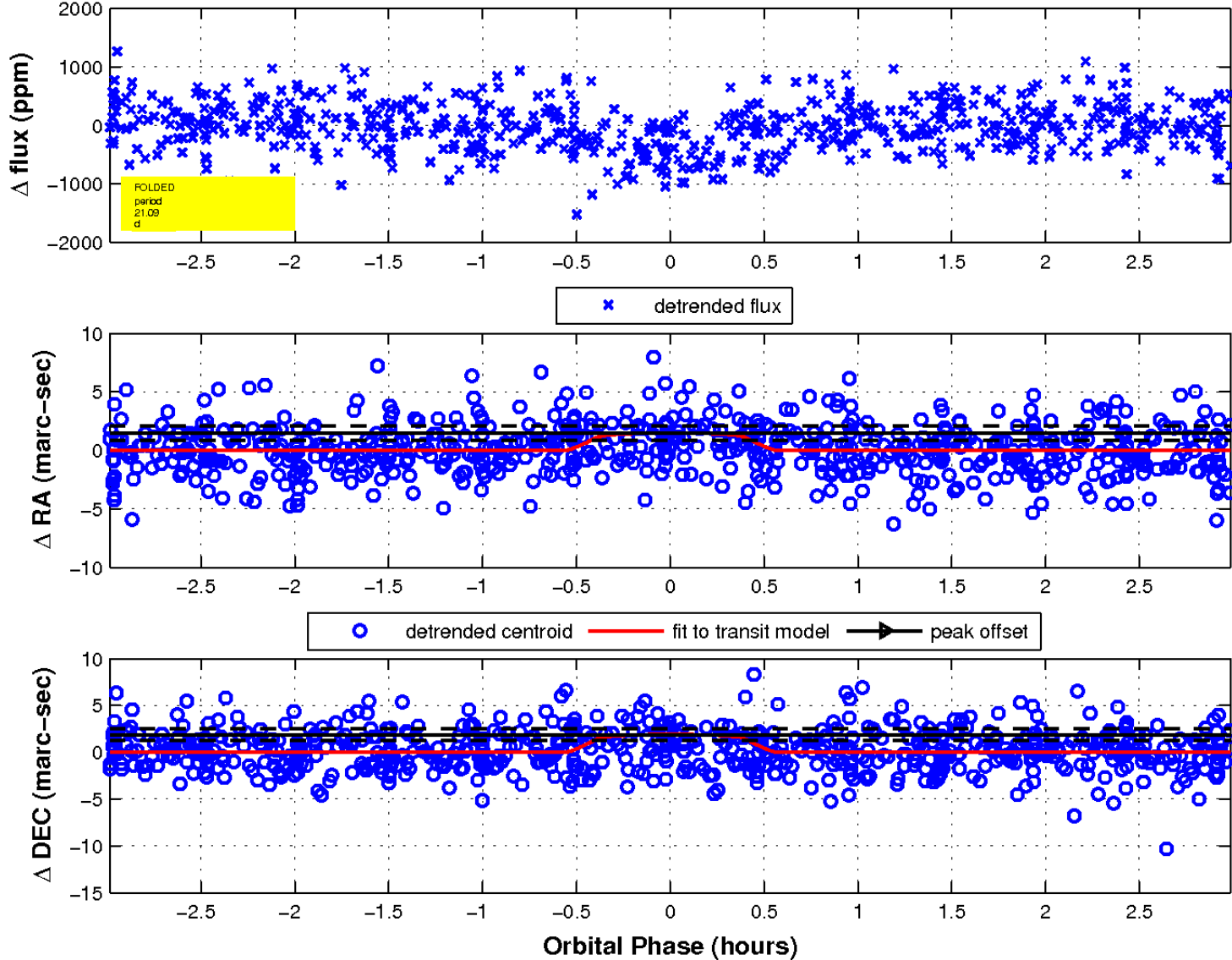
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

