

KIC 010664639

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})
010664639-01	OBS	No	468.432881	171.150620	277.8	16.038	7.4	6.2	0.98	5550	1.88	0.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010664639-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_POS_DV—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.

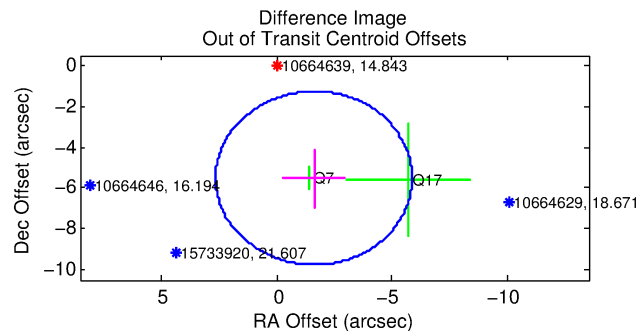
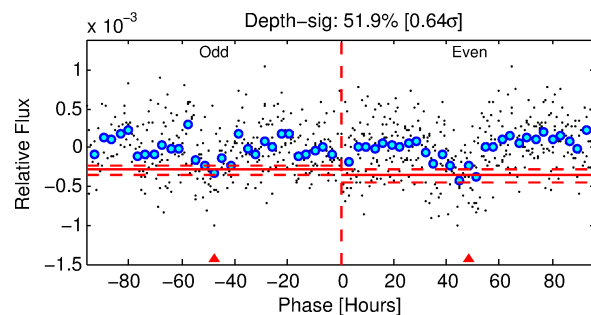
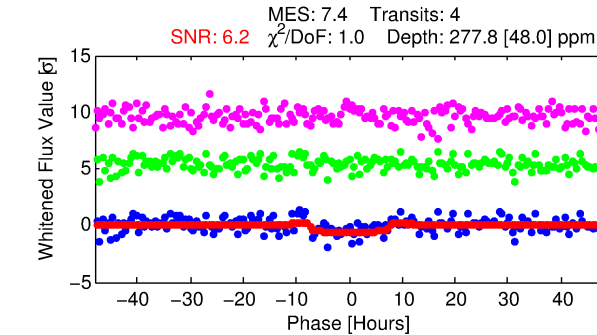
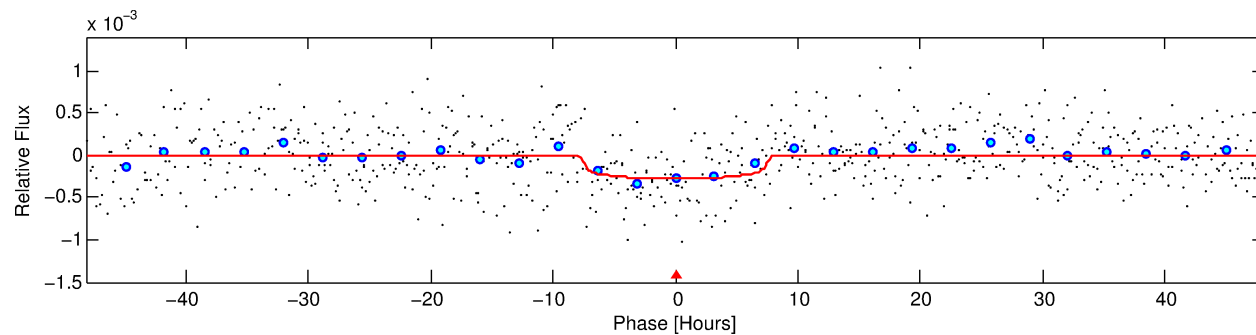
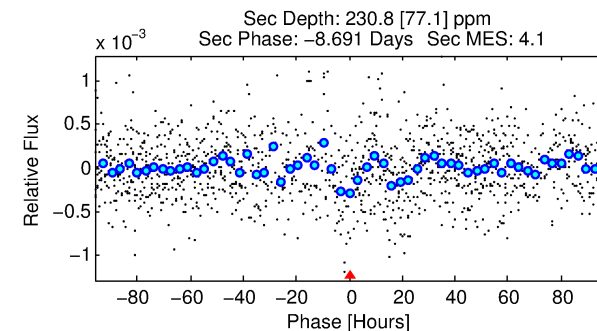
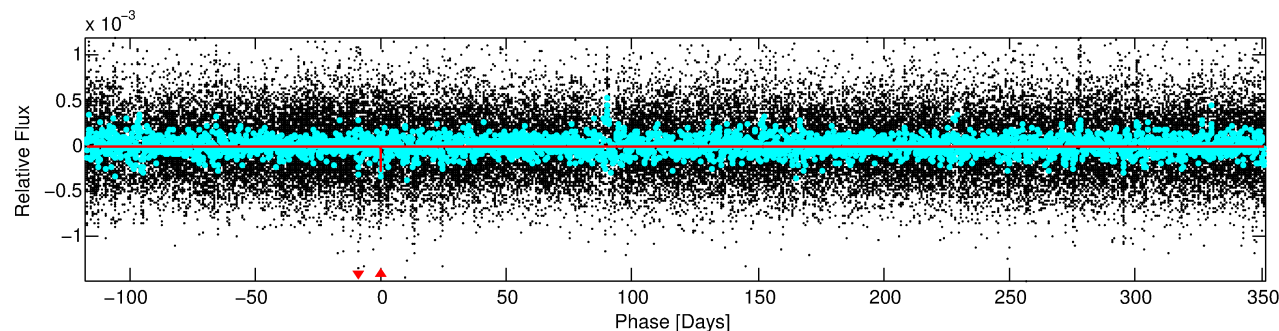
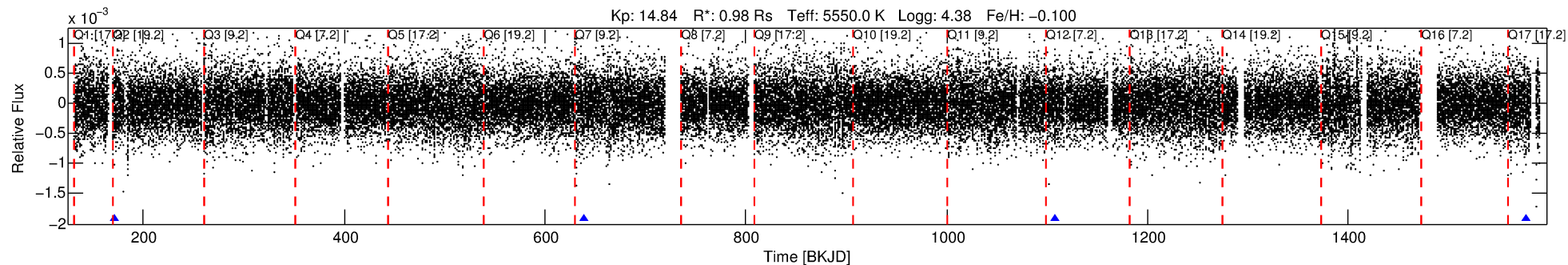
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010664639-01

No Significant Match Found

DV One-Page Summary

KIC: 10664639 Candidate: 1 of 1 Period: 468.433 d



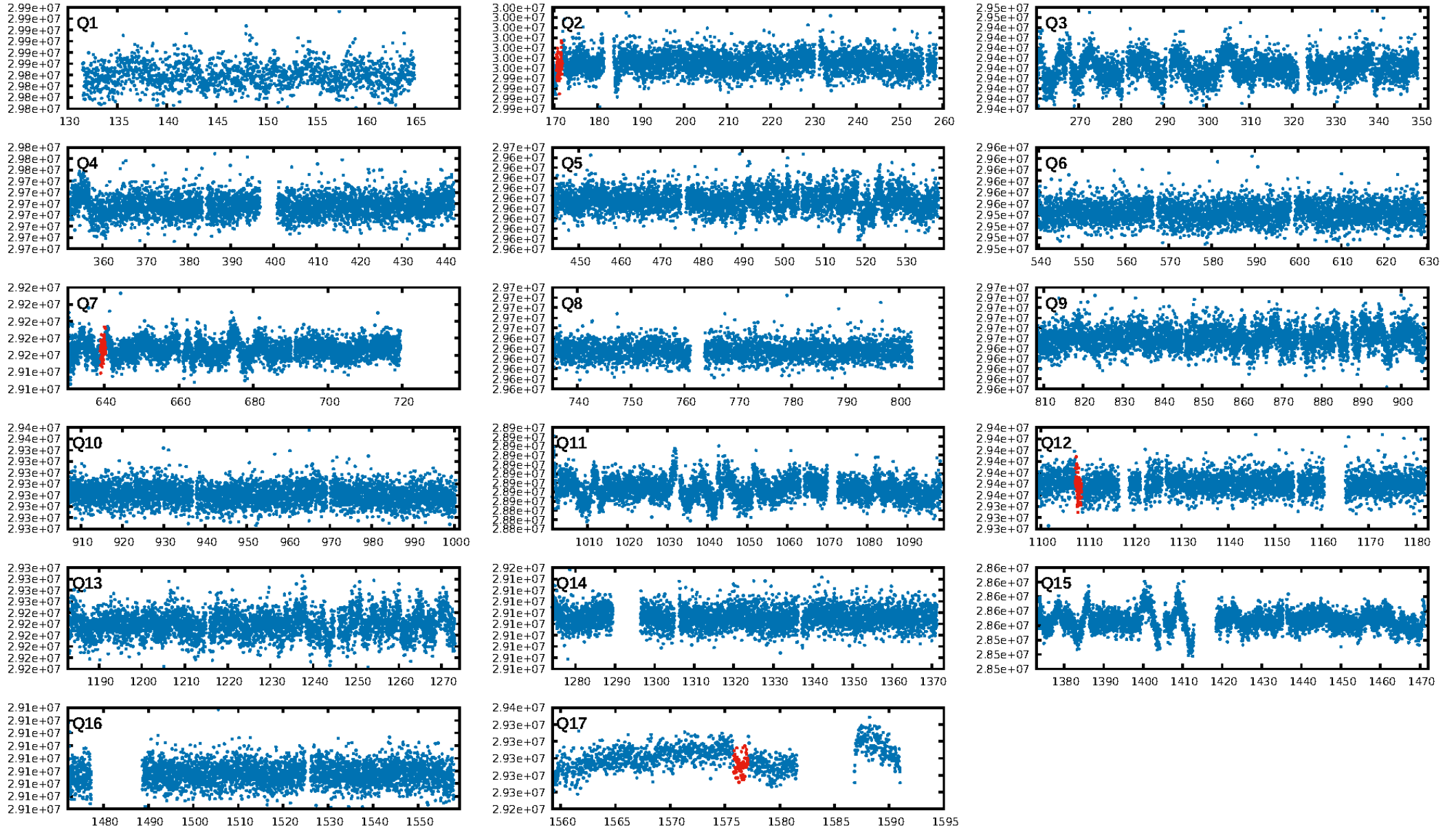
DV Fit Results:

Period = 468.43288 [0.01734] d
Epoch = 171.1506 [0.0312] BKJD
Rp/R* = 0.0175 [0.0049]
a/R* = 124.19 [143.79]
b = 0.85 [0.38]
Seff = 0.66 [0.24]
Teff = 230 [21] K
Rp = 1.88 [0.75] Re
a = 1.1189 [0.2680] AU
Ag = 44952.14 [33087.88] [1.36 σ]
Teffp = 5169 [854] K [5.78 σ]

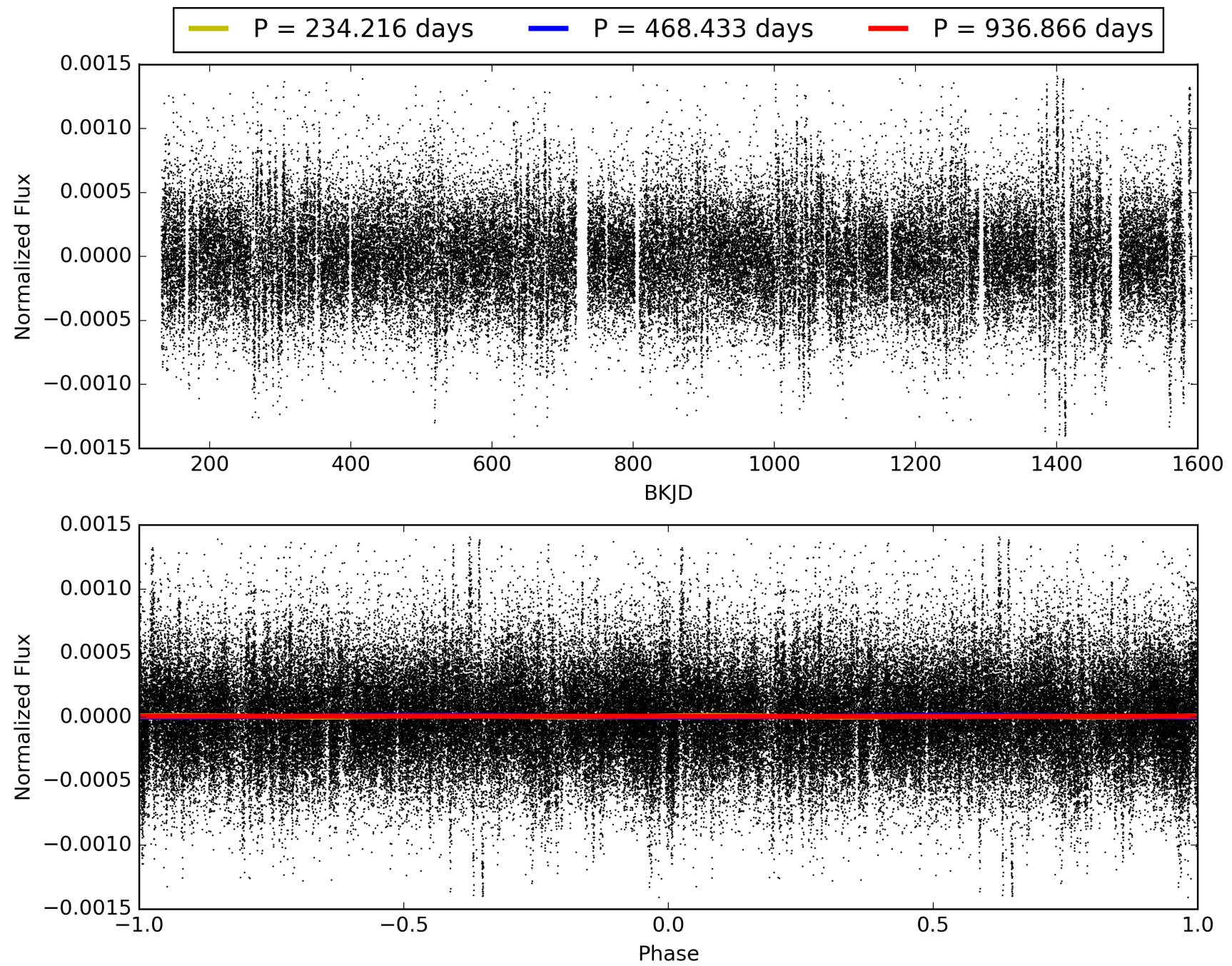
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 38.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.08e-07
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.3563
Centroid-sig: 24.6%
Centroid-so: 3.395 arcsec [1.57 σ]
OotOffset-rm: 5.742 arcsec [4.06 σ]
KicOffset-rm: 5.790 arcsec [4.09 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 010664639-01, PDC Light Curves

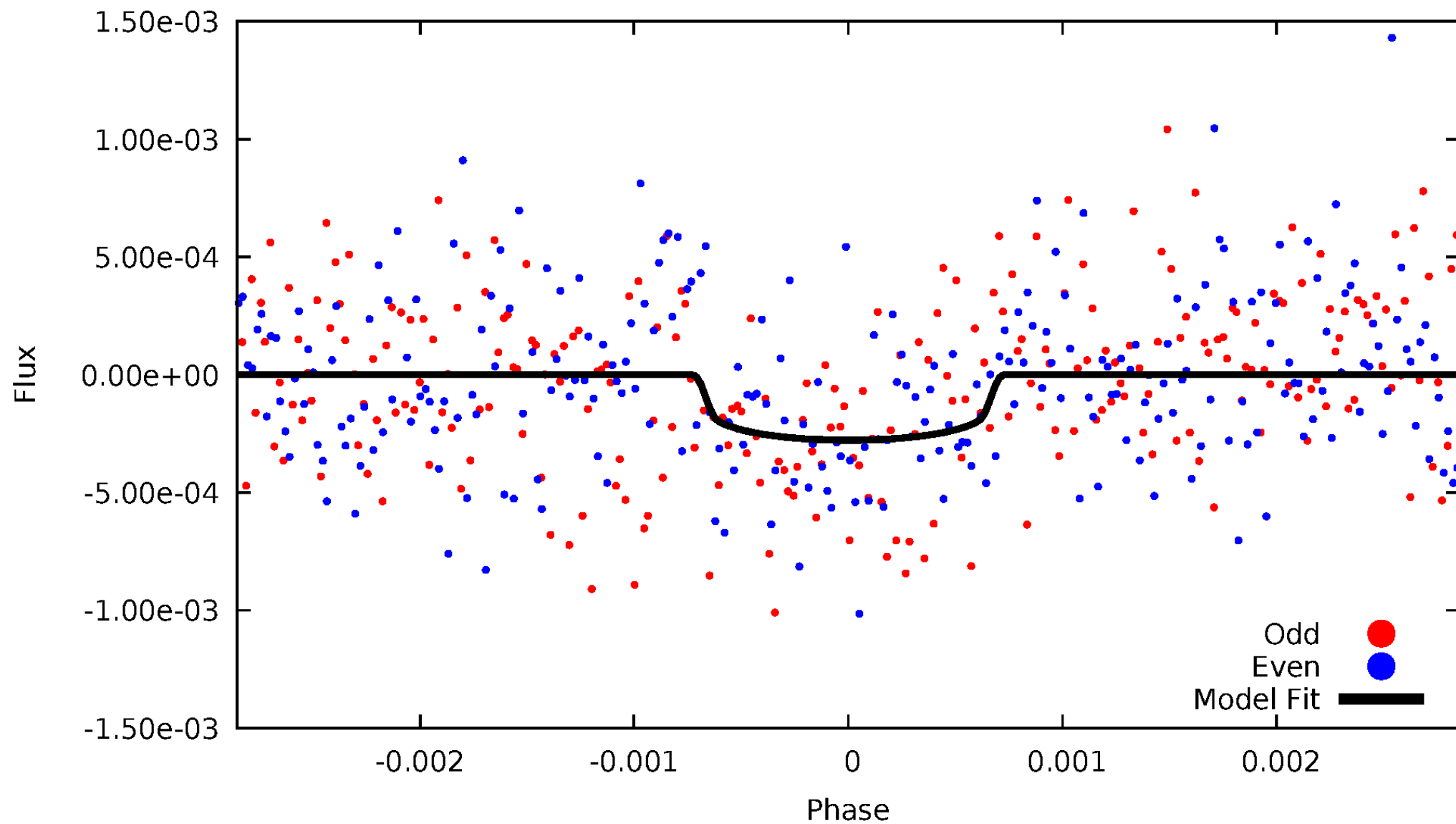


TCE 010664639-01



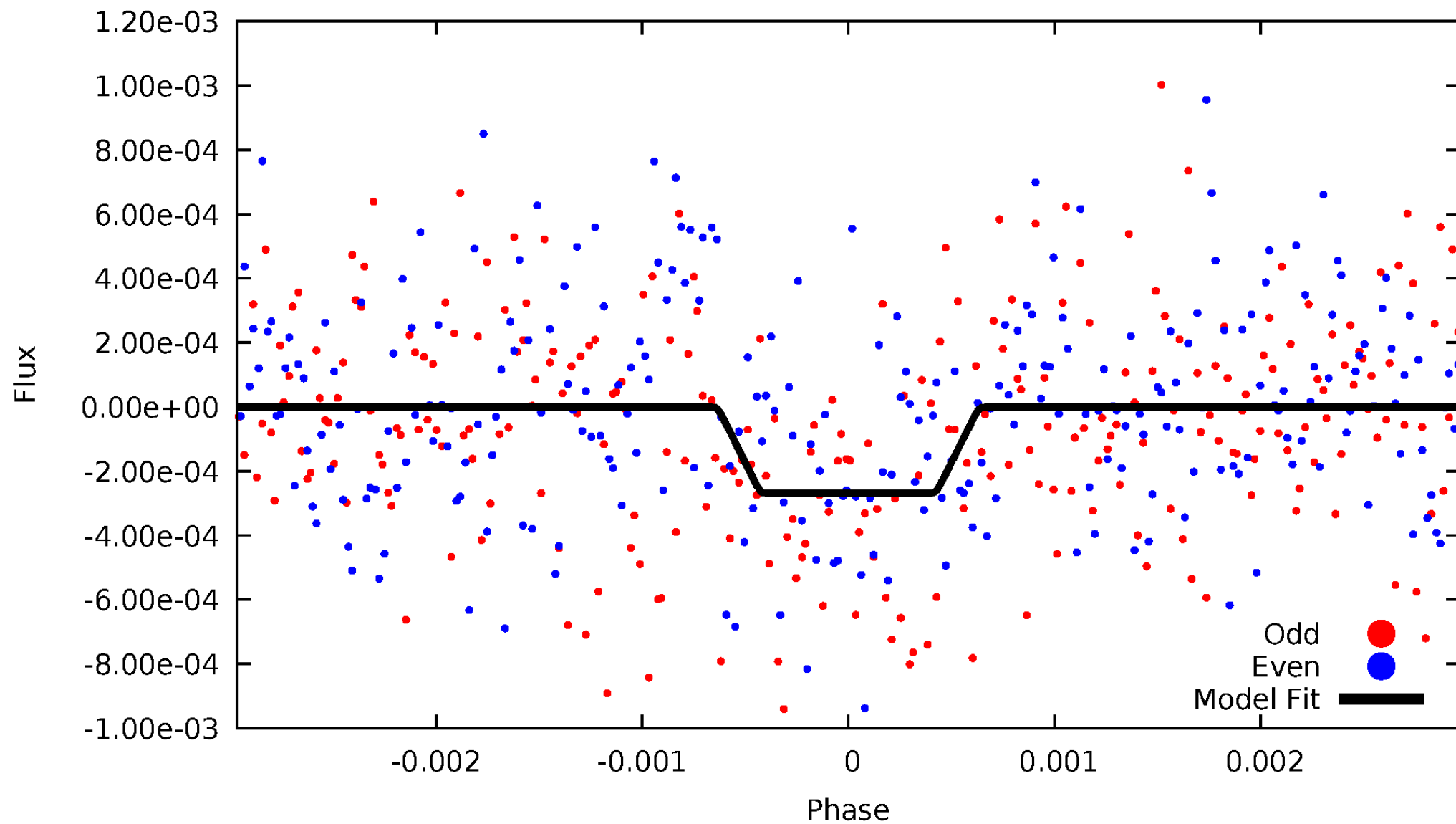
DV Odd/Even

TCE 010664639-01



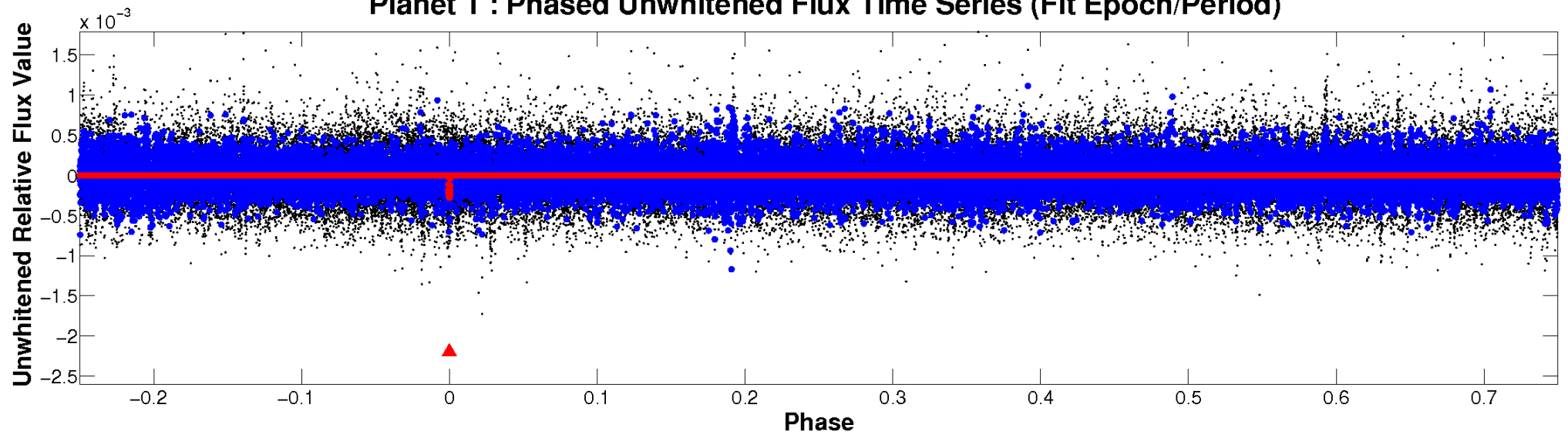
ALT Odd/Even

TCE 010664639-01

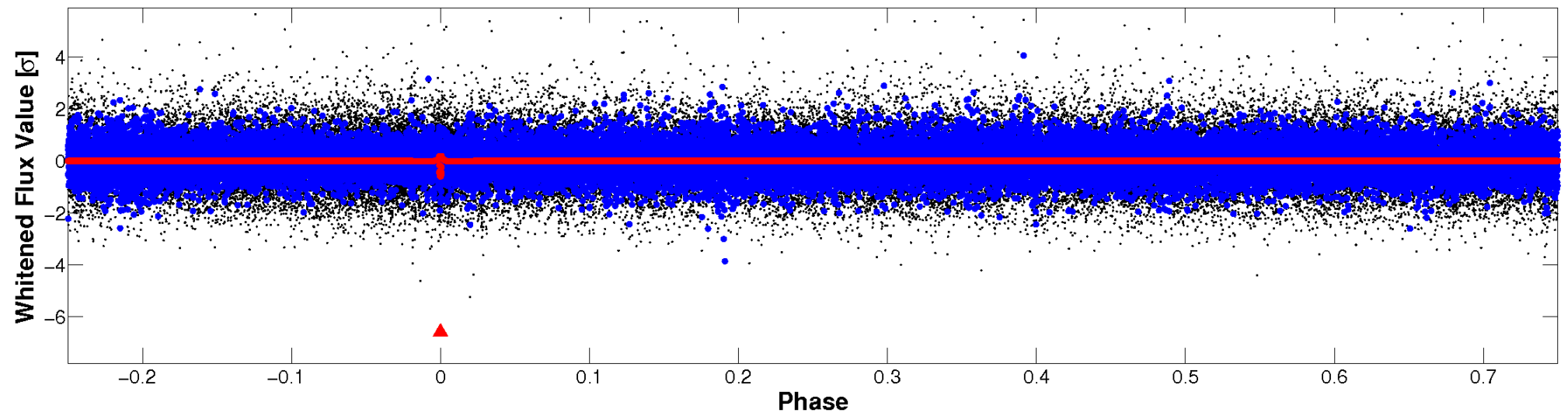


Non-Whitened Vs. Whitened Light Curve

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

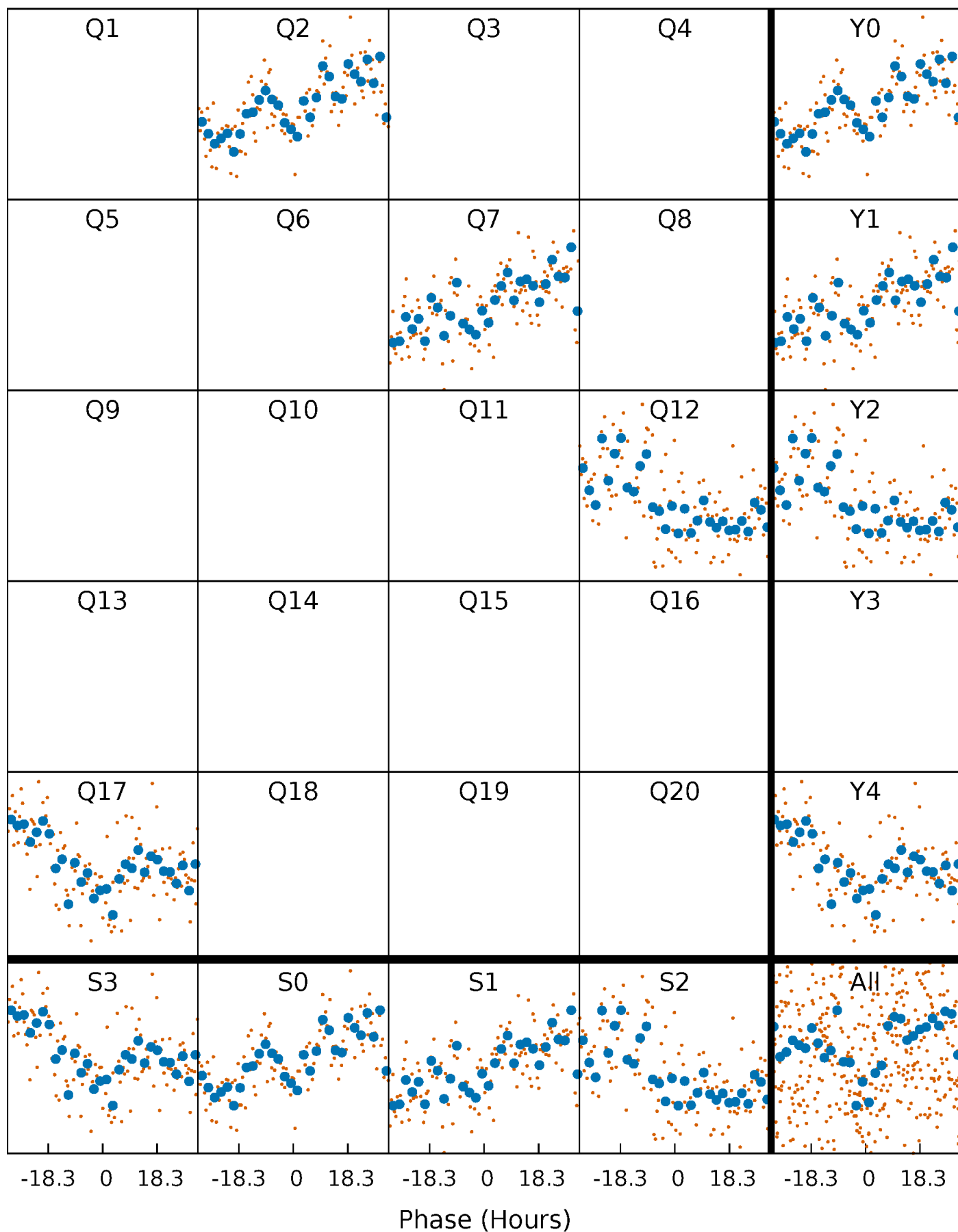


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



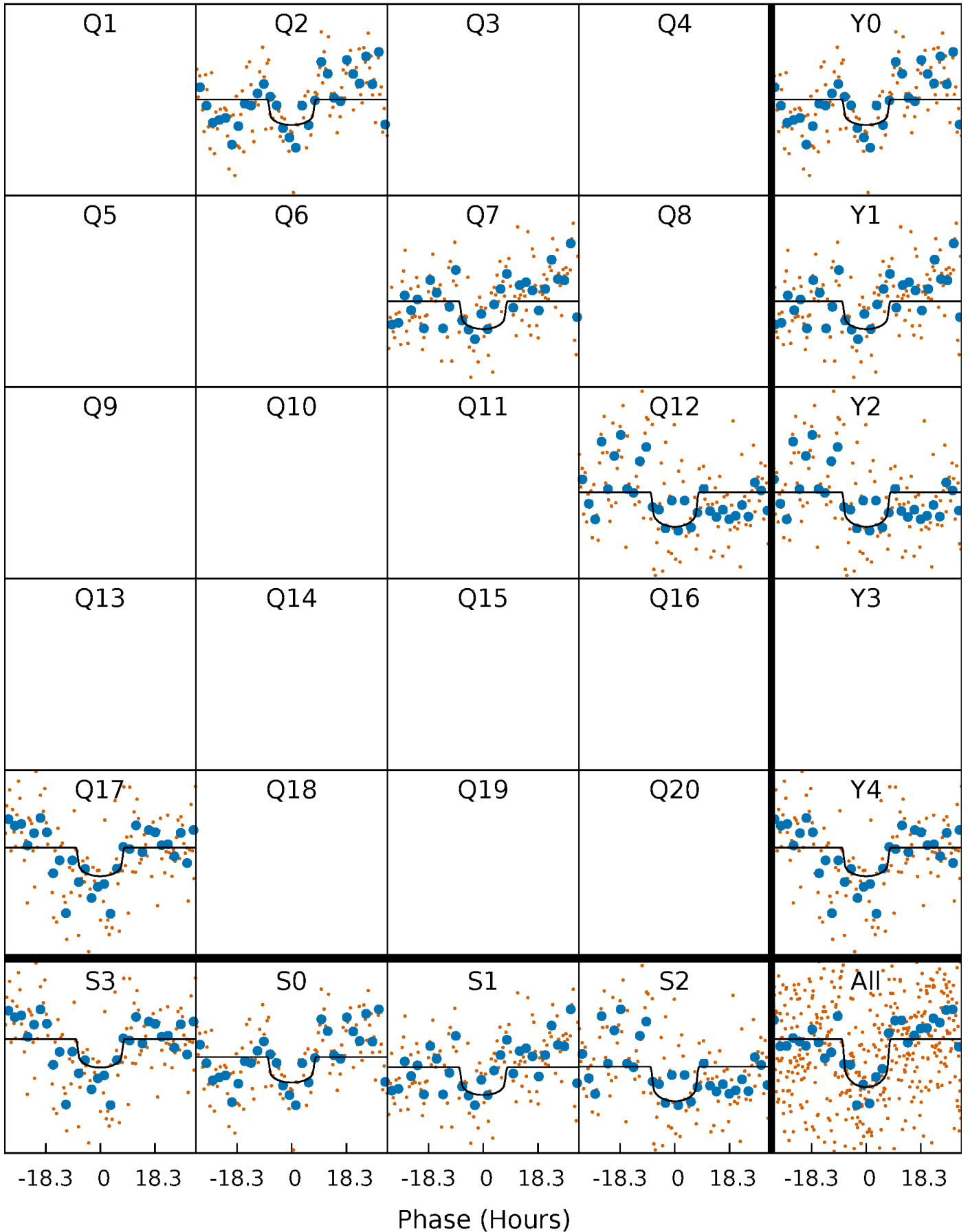
PDC Quarter-Phased Transit Curves

TCE 010664639-01 P=468.432881 Days $T_0=171.150620$ (BKJD)



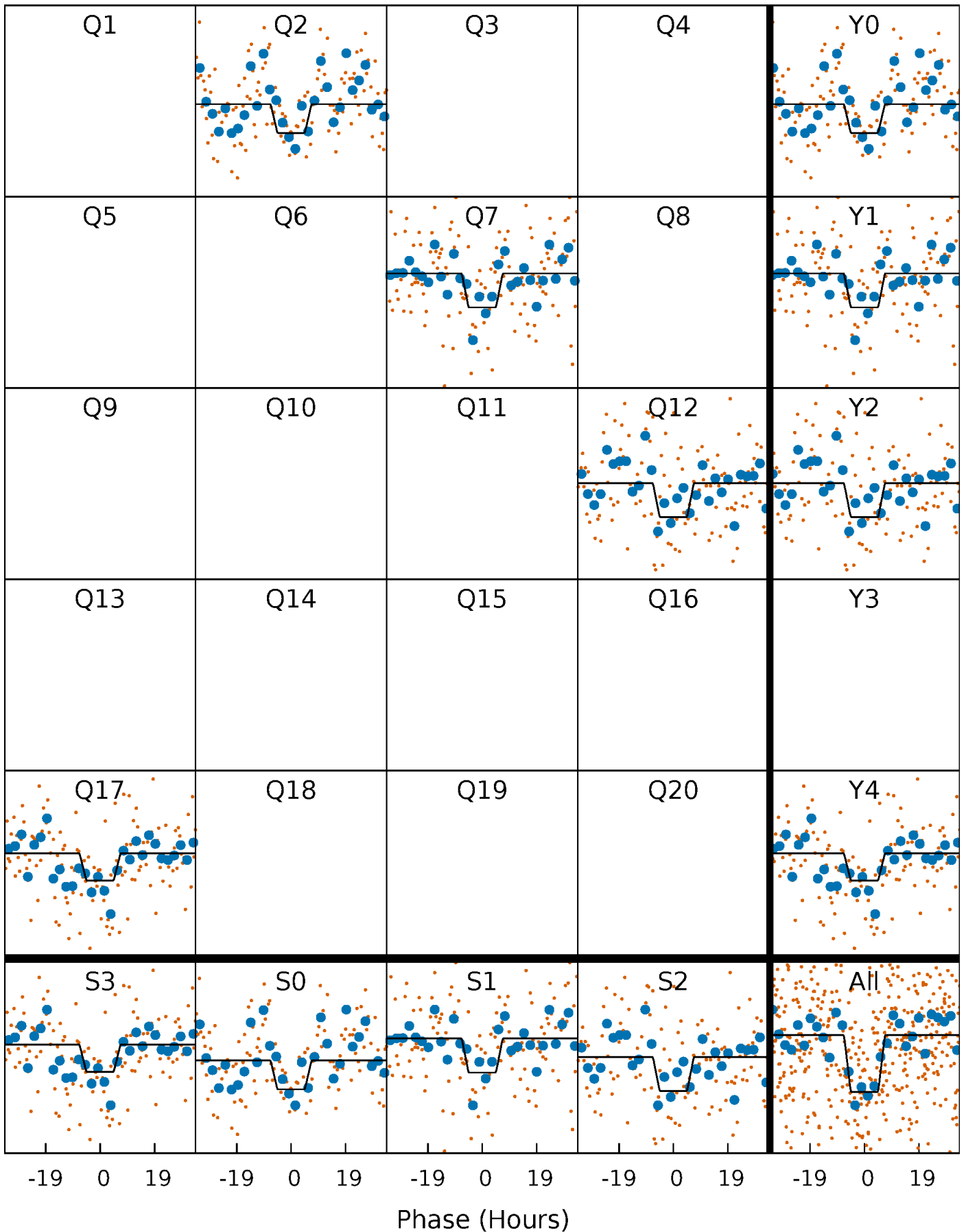
DV Quarter-Phased Transit Curves

TCE 010664639-01 P=468.432881 Days $T_0=171.150620$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

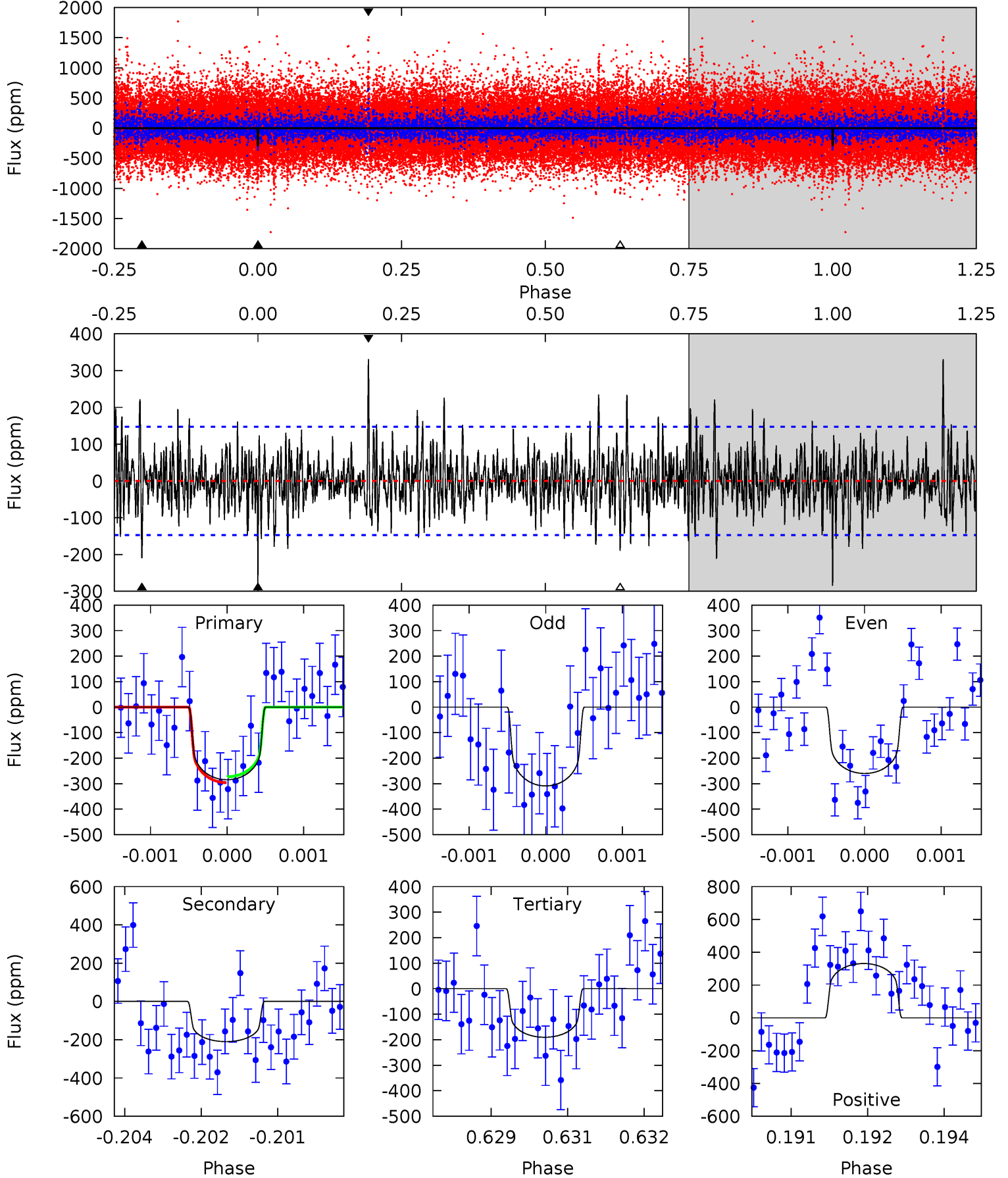
TCE 010664639-01 P=468.432552 Days $T_0=171.137668$ (BKJD)



DV Model-Shift Uniqueness Test

010664639-01, P = 468.432881 Days, E = 171.150620 Days

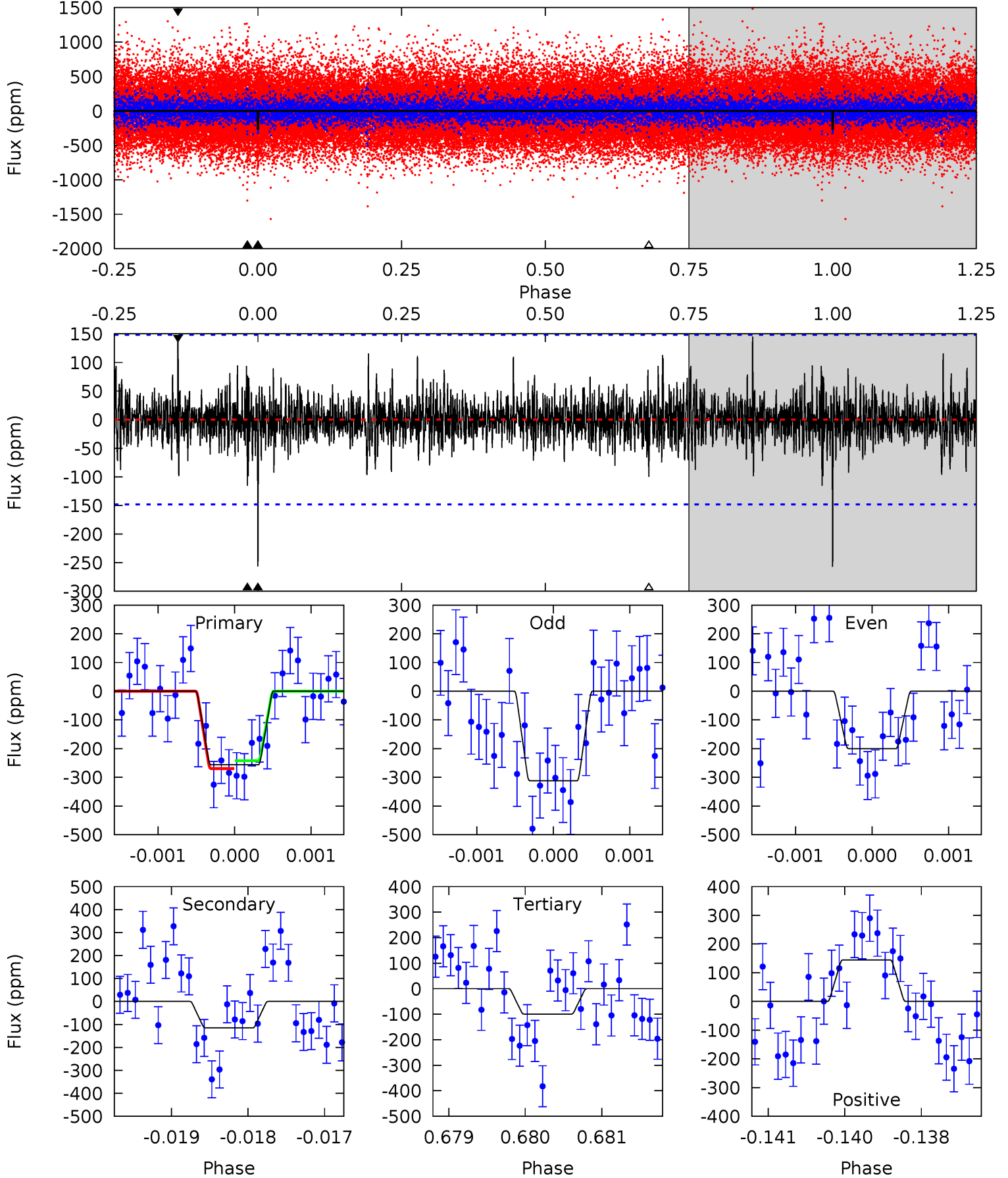
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	7.67	6.95	12.1	5.38	3.18	2.18	3.44	-1.71	0.72	-4.43	0.89	1.09	0.54	0.42



Alt Model-Shift Uniqueness Test

010664639-01, P = 468.432552 Days, E = 171.137668 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.35	4.20	3.63	5.28	5.41	3.22	1.06	5.71	4.06	0.57	-1.08	2.04	1.11	0.36	0.50



Stellar Parameters For KIC 010664639

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5550^{+166}_{-166}	$4.382^{+0.153}_{-0.187}$	$-0.100^{+0.300}_{-0.250}$	$0.984^{+0.283}_{-0.174}$	$0.851^{+0.120}_{-0.074}$	$1.259^{+0.929}_{-0.621}$
	+3%/-3%	+3%/-4%	+300%/-250%	+29%/-18%	+14%/-9%	+74%/-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 010664639-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-210 ± 27	$1.91^{+0.55}_{-0.57}$	321^{+24}_{-19}	5082^{+792}_{-509}	39620^{+40184}_{-16763}
Alt.	-115 ± 27	$1.82^{+0.57}_{-0.56}$	322^{+25}_{-20}	4614^{+790}_{-508}	24401^{+28106}_{-11497}

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

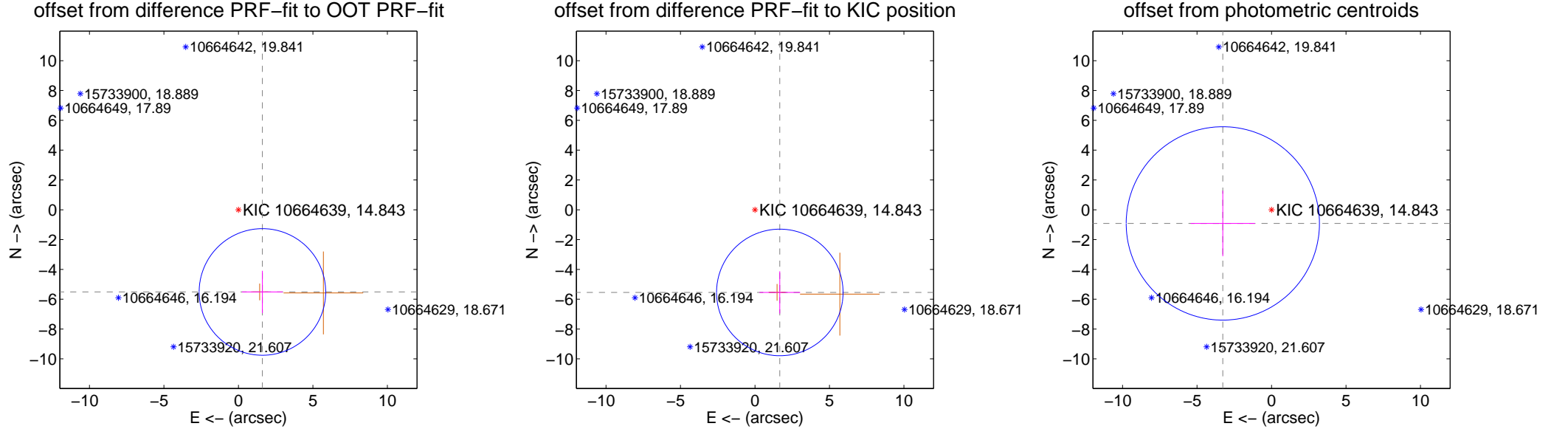
DV Centroid Data

Supplemental centroid analysis for 010664639-01. Kepler magnitude: 14.84. Transit SNR 6.20

There are 0 quarters with good PRF difference image offsets

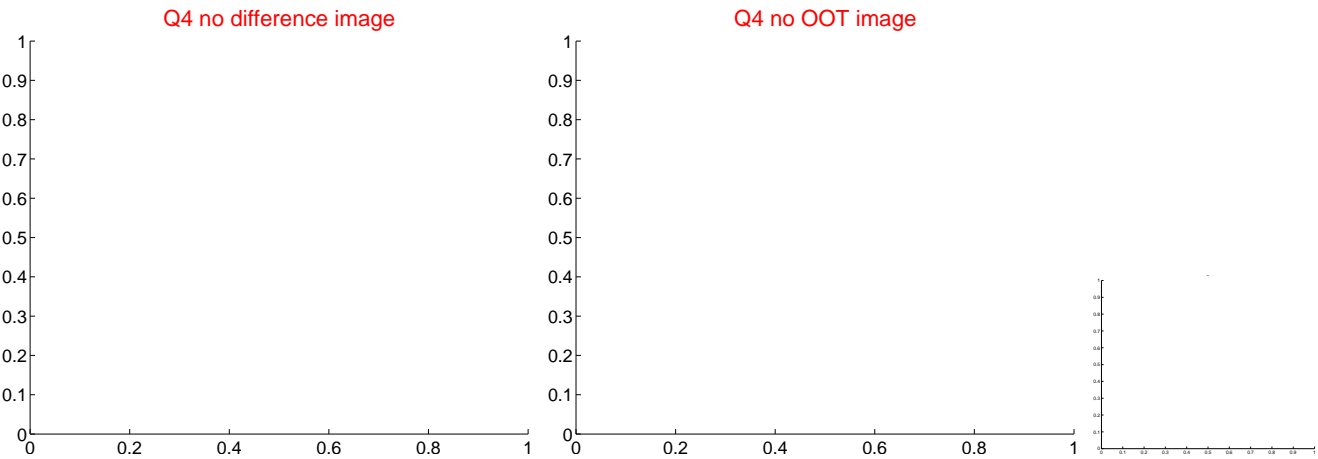
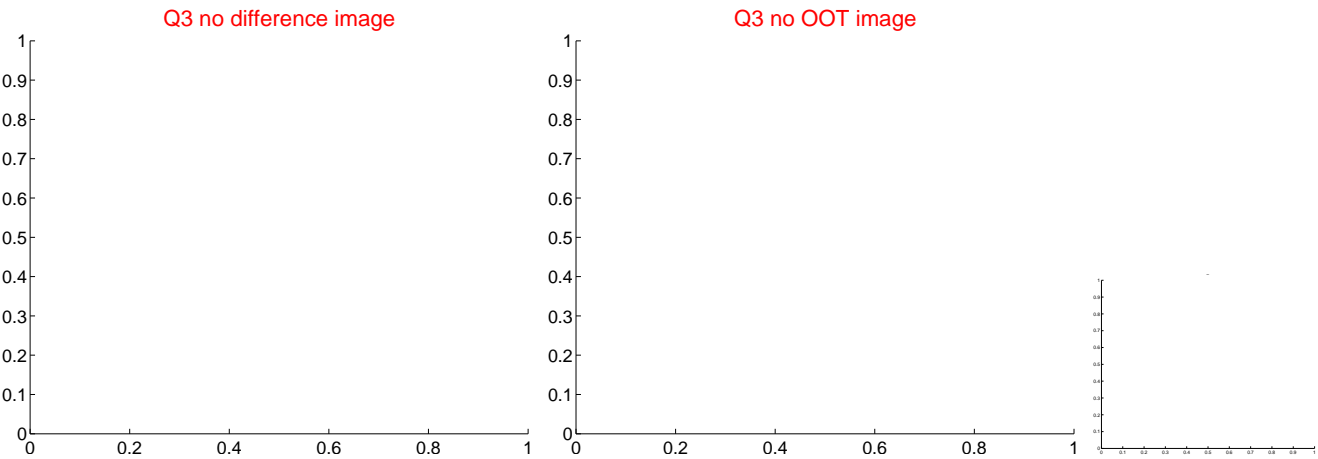
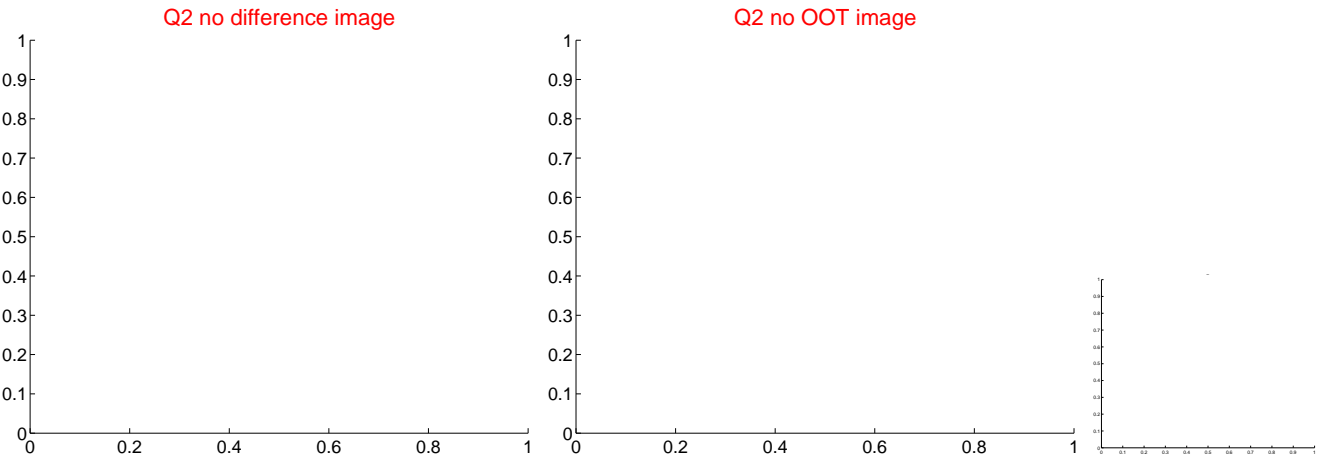
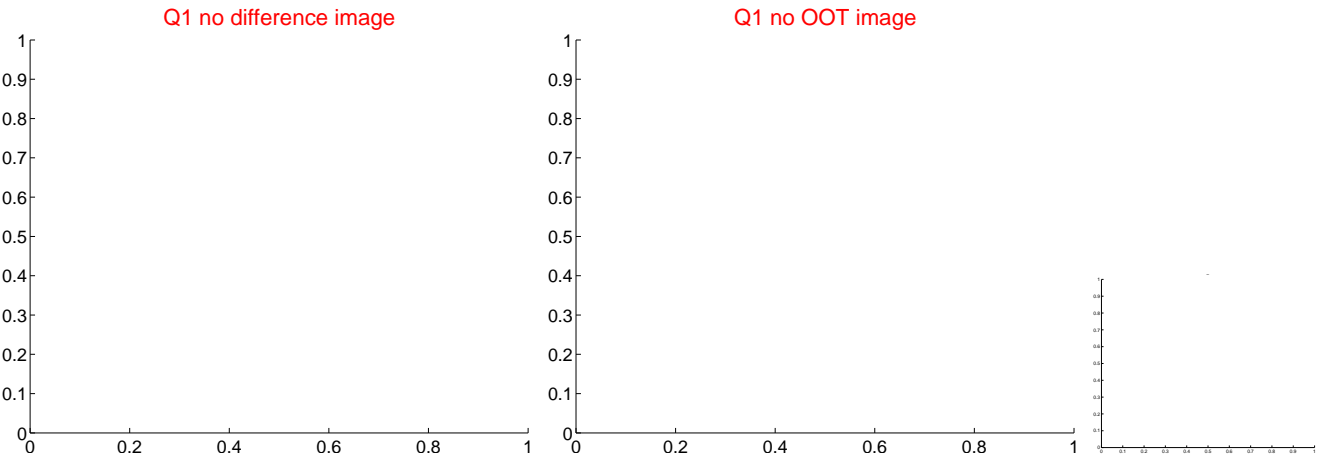
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.742 ± 1.415	4.06	-1.611 ± 1.367	-5.512 ± 1.419
PRF-fit source offset from KIC position	5.790 ± 1.415	4.09	-1.667 ± 1.367	-5.545 ± 1.419
photometric centroid source offset	3.39 ± 2.16	1.57	3.27 ± 2.16	-0.92 ± 2.20

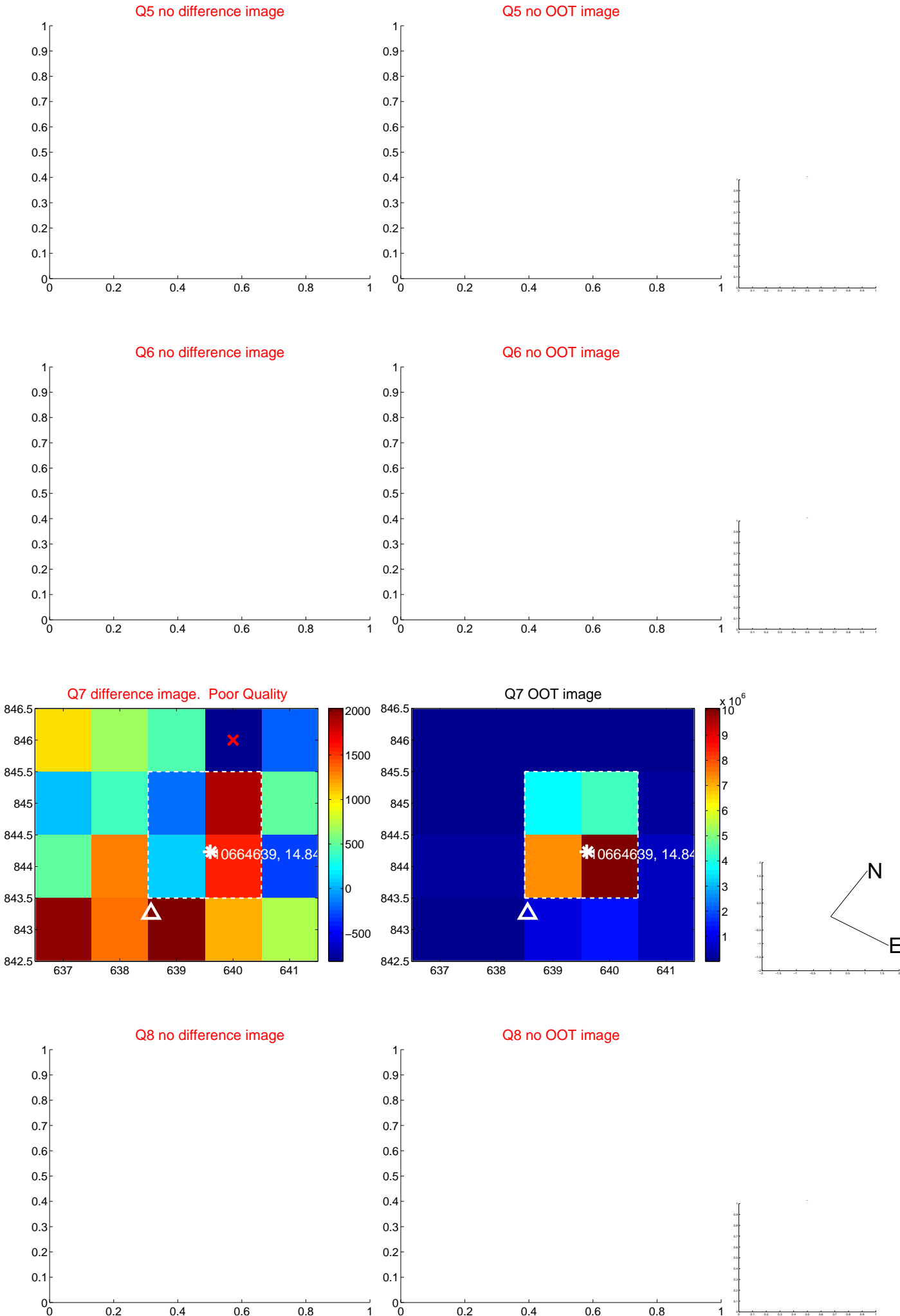


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

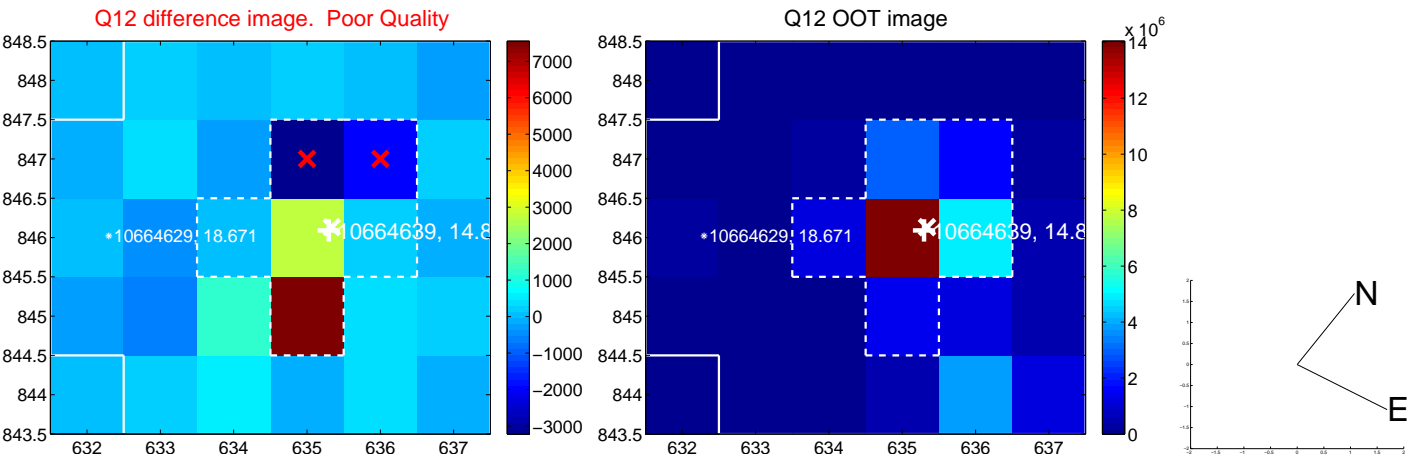
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



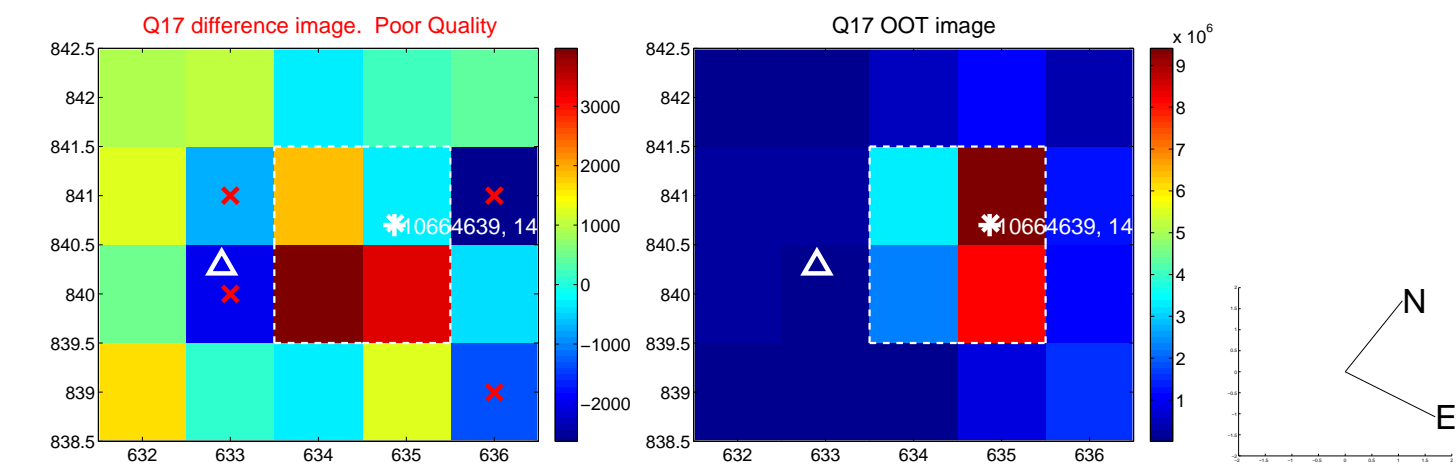
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



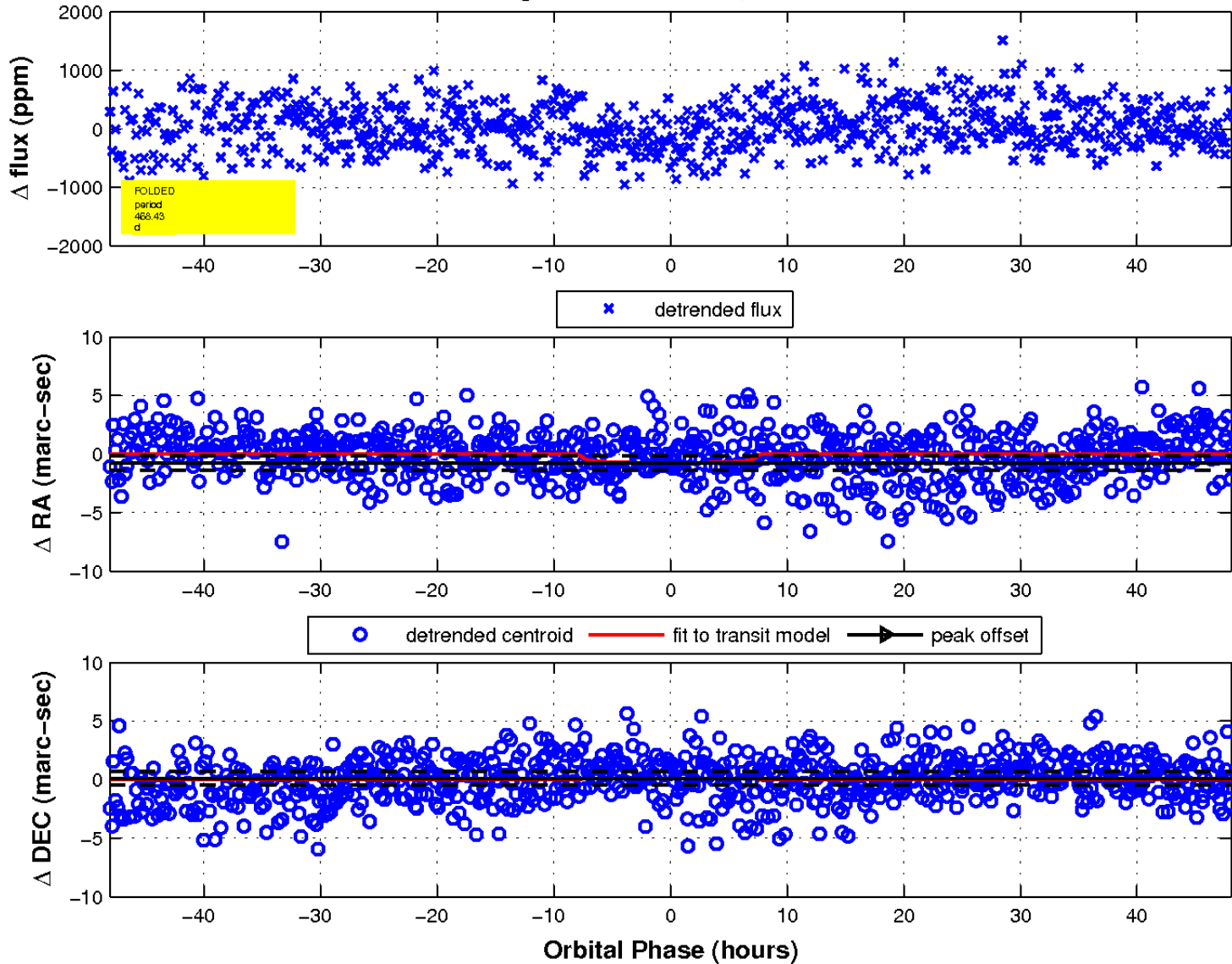
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

