

KIC 004575944

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})
004575944-01	OBS	No	511.959516	174.079313	1318.4	8.161	9.0	7.9	0.76	5676	2.90	0.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004575944-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—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.

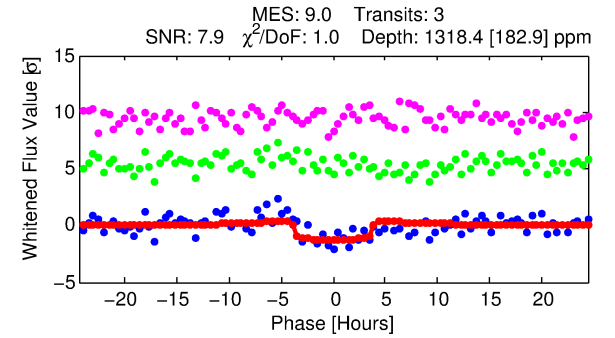
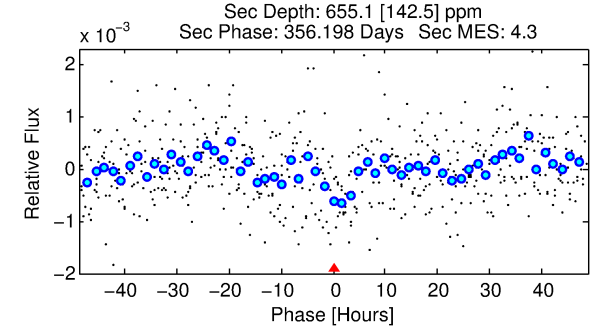
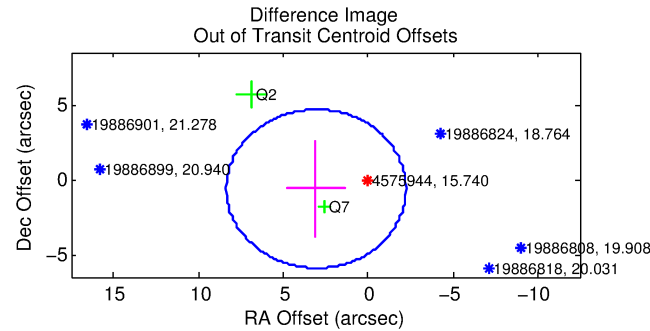
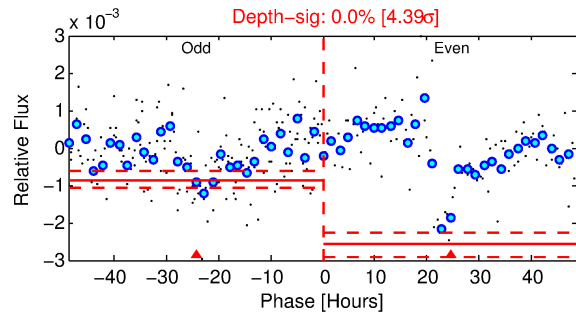
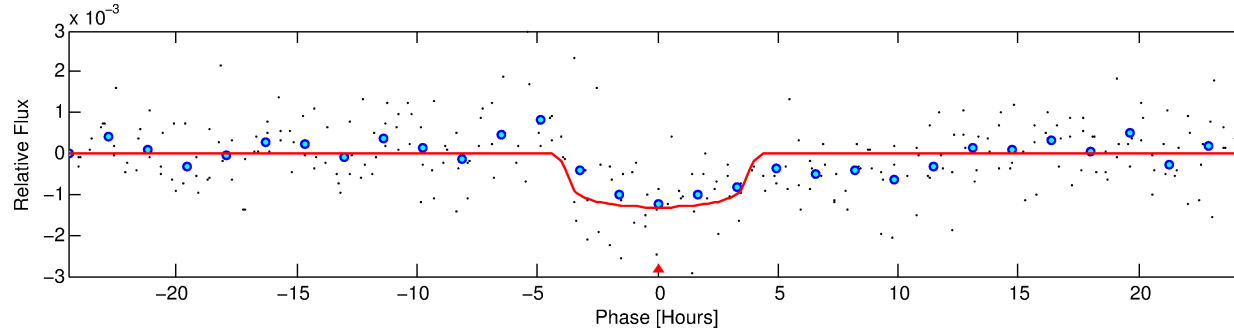
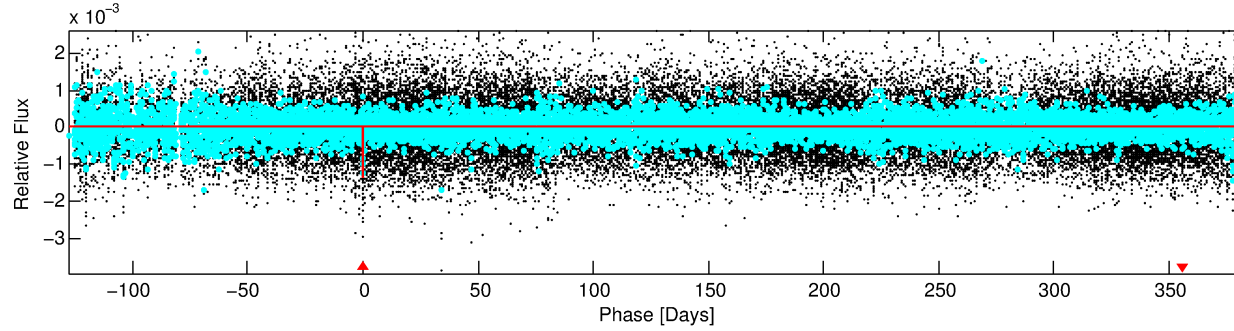
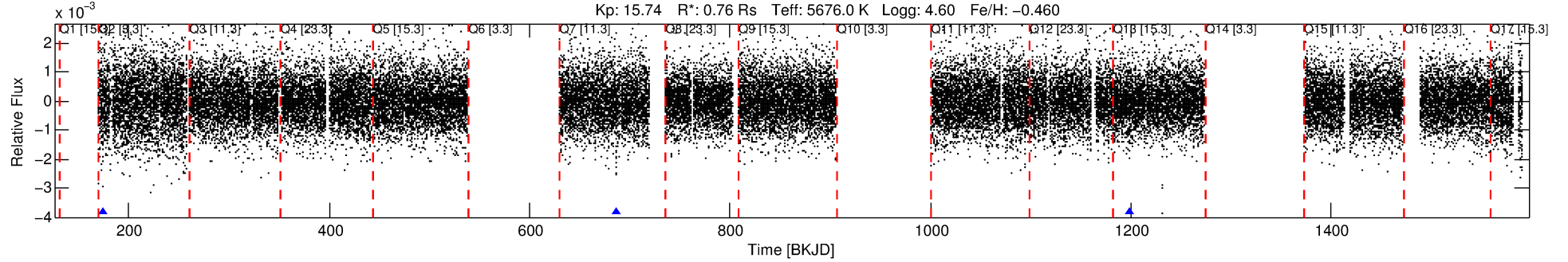
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004575944-01

No Significant Match Found

DV One-Page Summary

KIC: 4575944 Candidate: 1 of 1 Period: 511.960 d



DV Fit Results:

Period = 511.95952 [0.01046] d
Epoch = 174.0793 [0.0137] BKJD
Rp/R* = 0.0351 [0.0213]
a/R* = 385.85 [1040.20]
b = 0.65 [2.44]
Seff = 0.39 [0.12]
Teq = 201 [15] K
Rp = 2.90 [1.88] Re
a = 1.1786 [0.2233] AU
Ag = 59356.40 [75203.56] [0.79 σ]
Teff = 4849 [1506] K [3.09 σ]

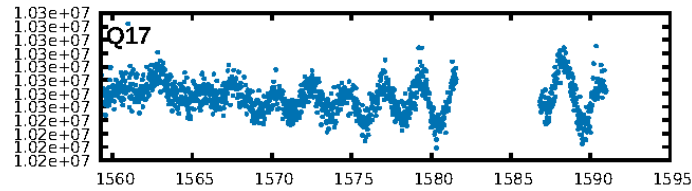
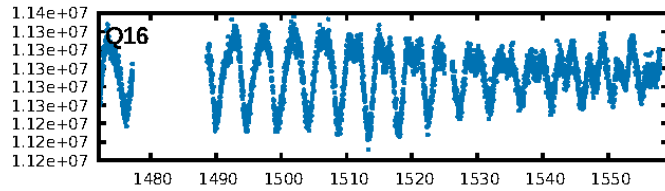
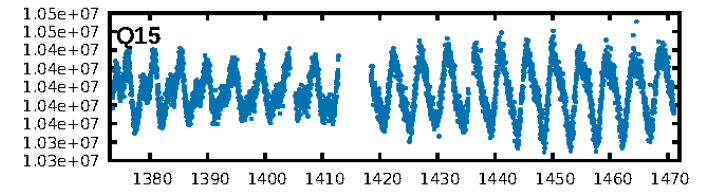
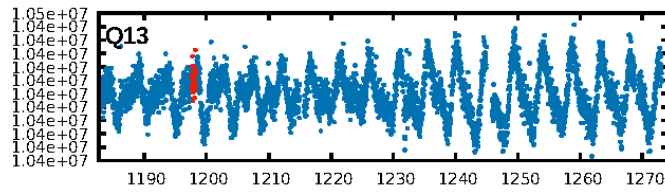
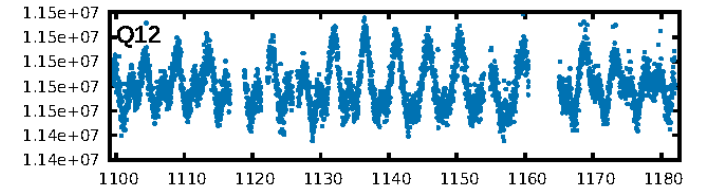
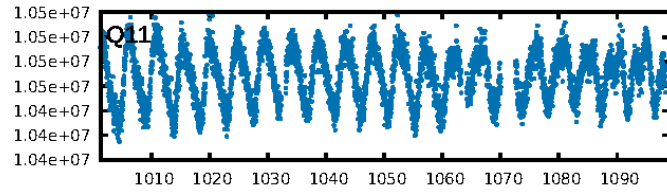
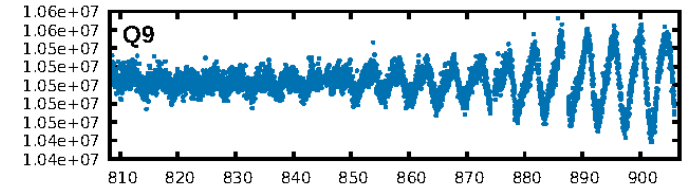
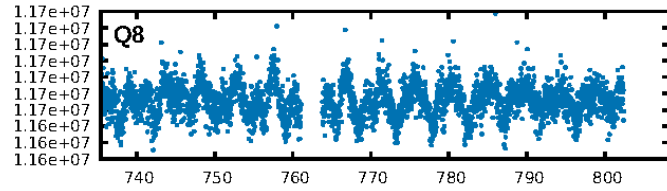
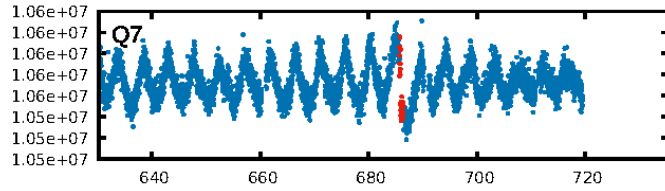
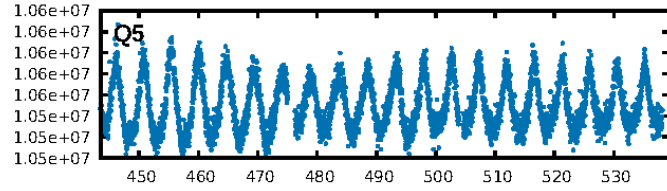
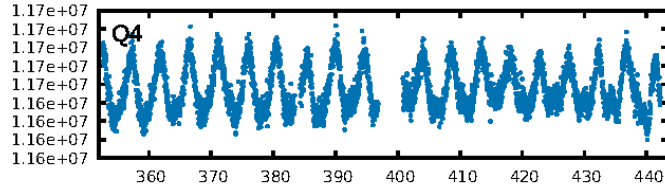
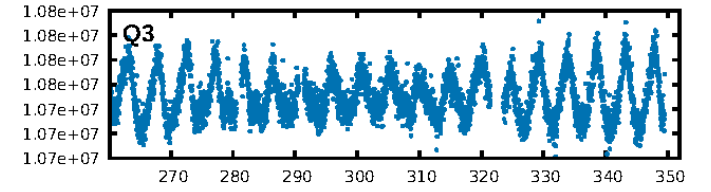
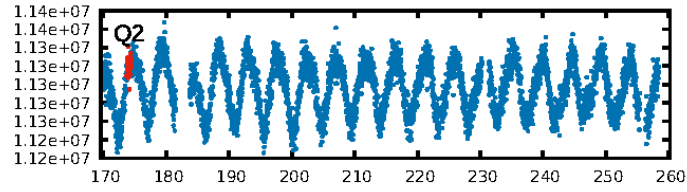
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 93.9%
Bootstrap-pfa: 2.92e-18
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.426
Centroid-sig: 5.4%
Centroid-so: 2.486 arcsec [1.72 σ]
OotOffset-rm: 3.113 arcsec [1.76 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-rm: 3.114 arcsec [1.78 σ]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

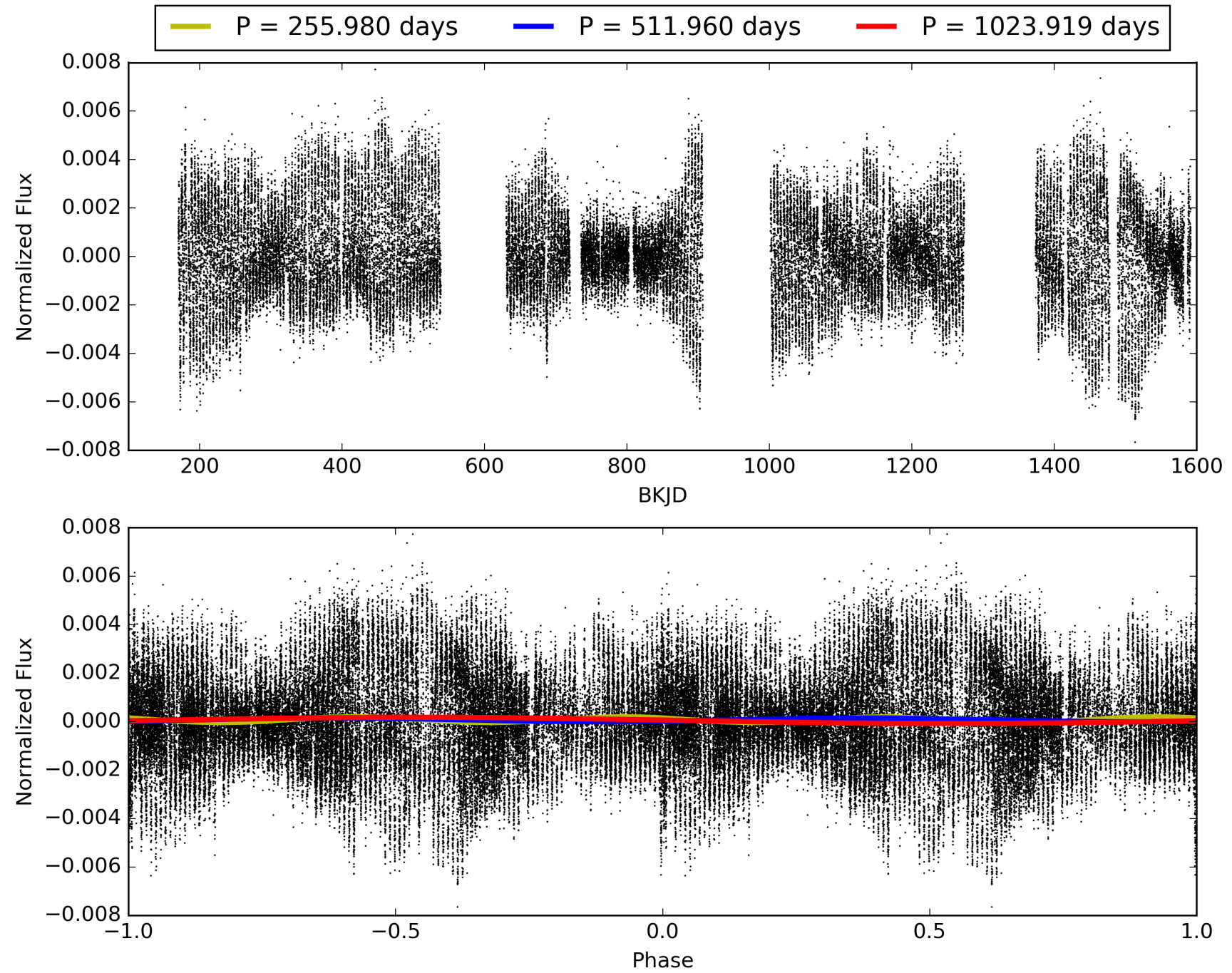
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:40:15 Z

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

TCE 004575944-01, PDC Light Curves

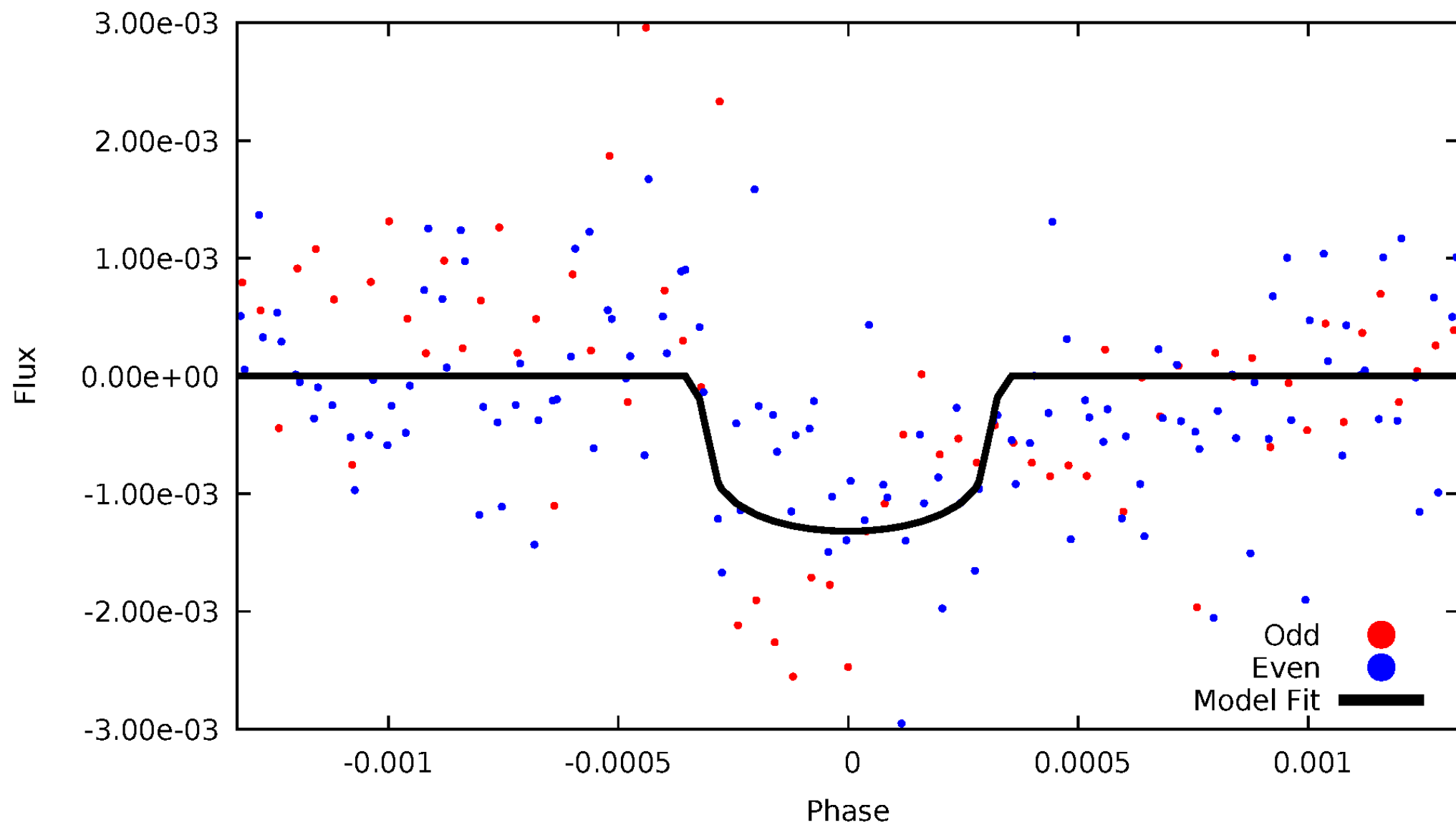


TCE 004575944-01



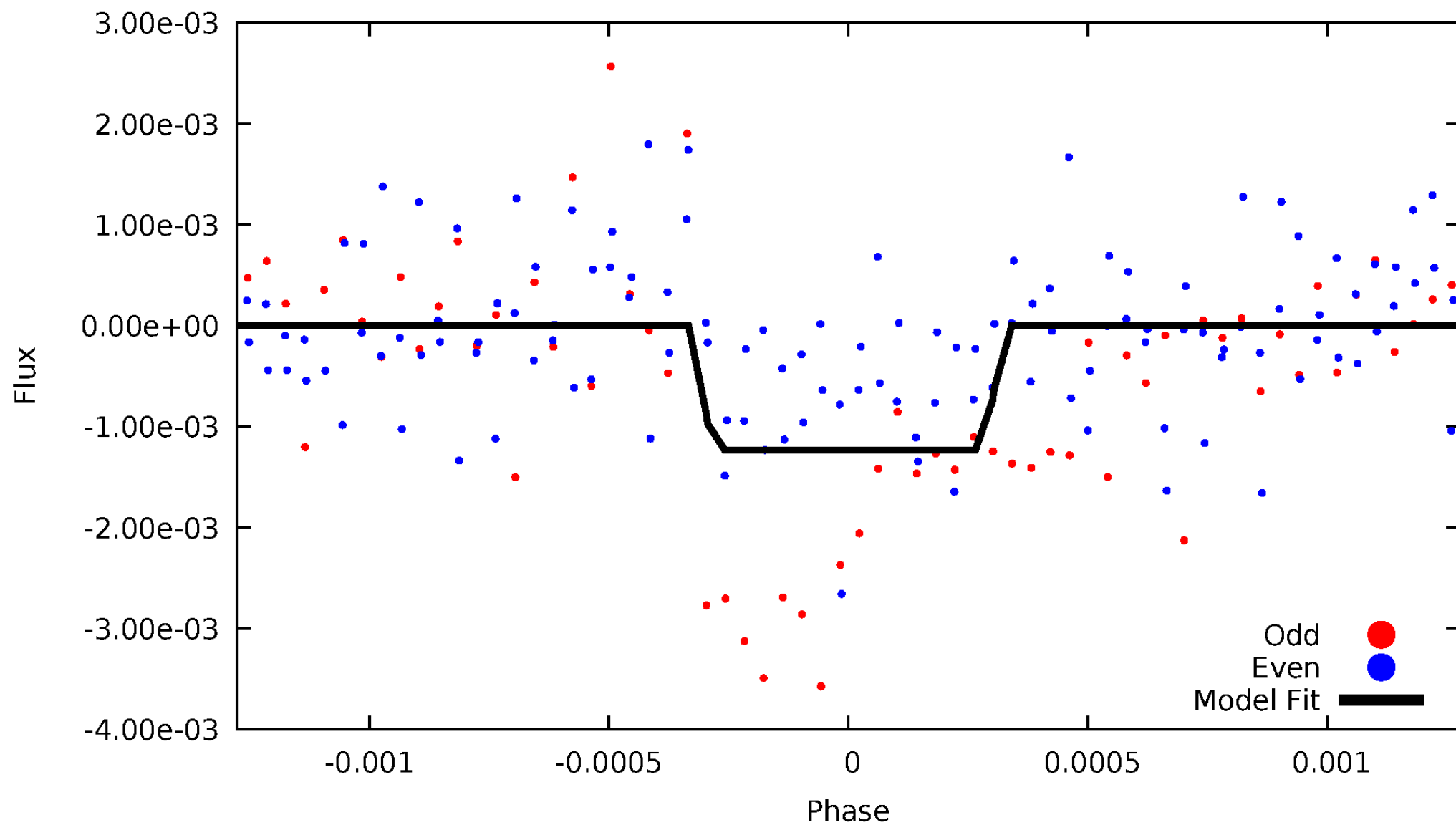
DV Odd/Even

TCE 004575944-01



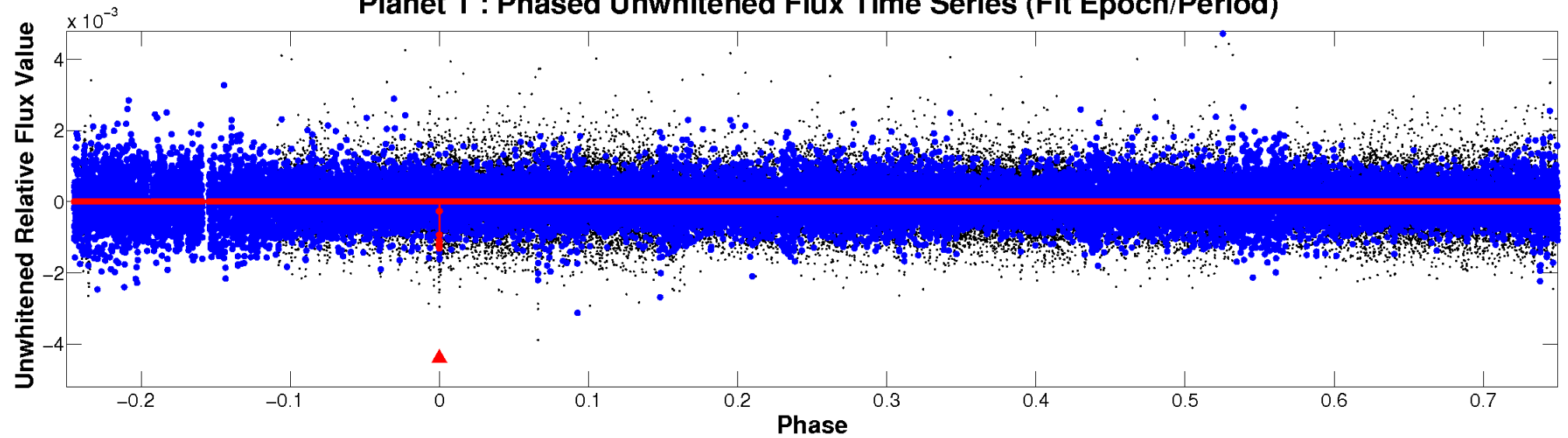
ALT Odd/Even

TCE 004575944-01

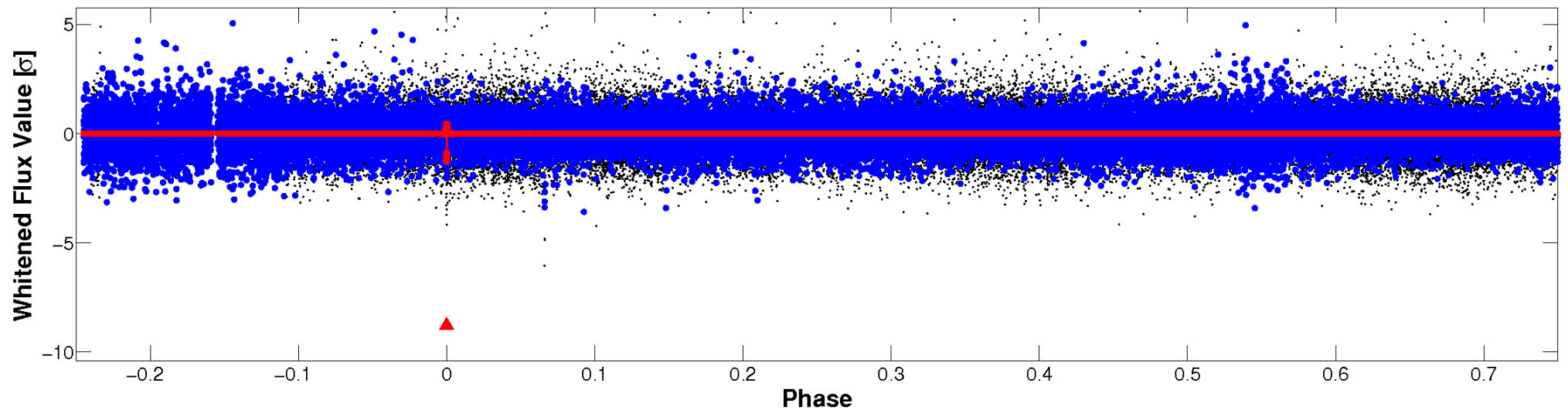


Non-Whitened Vs. Whitened Light Curve

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

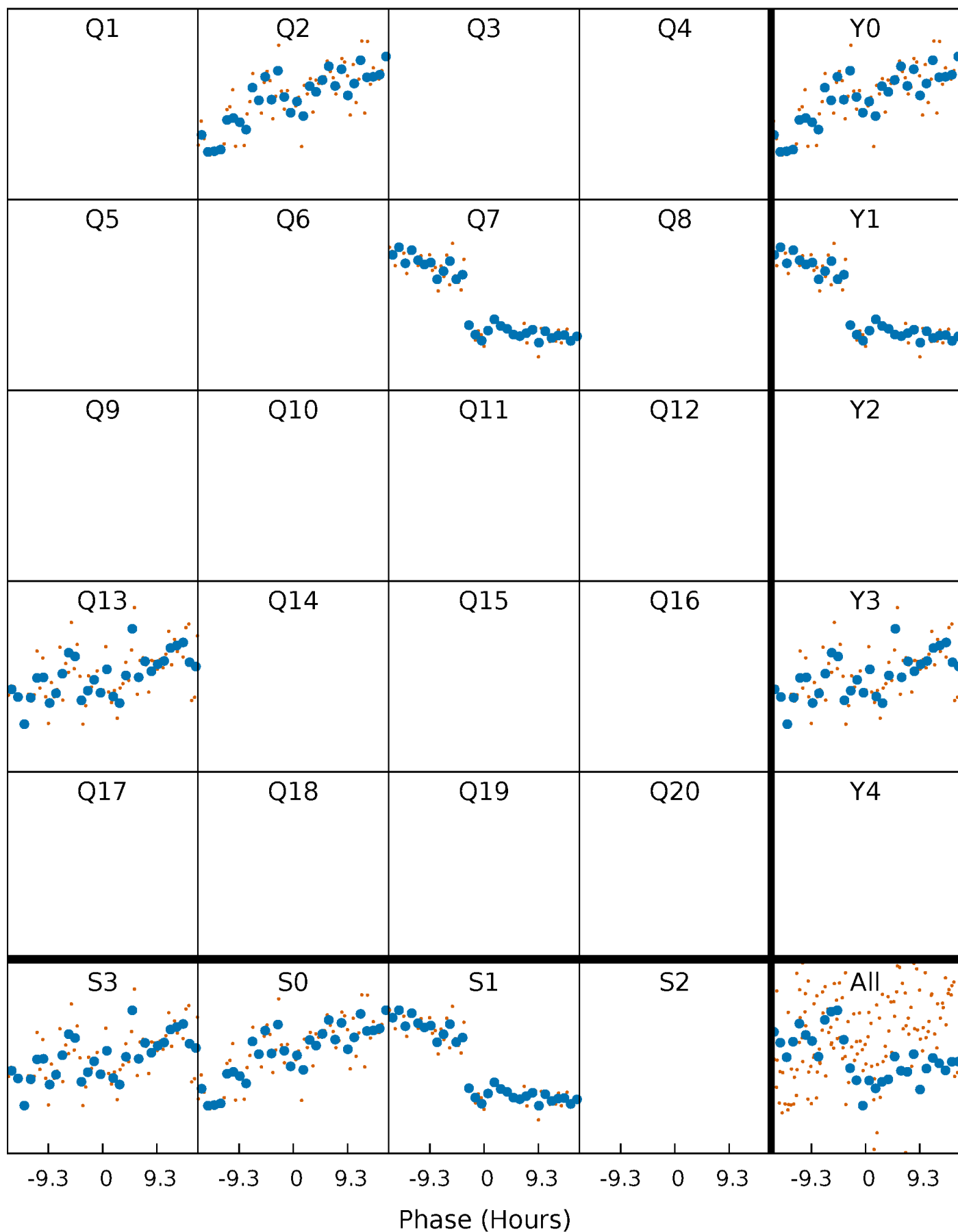


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



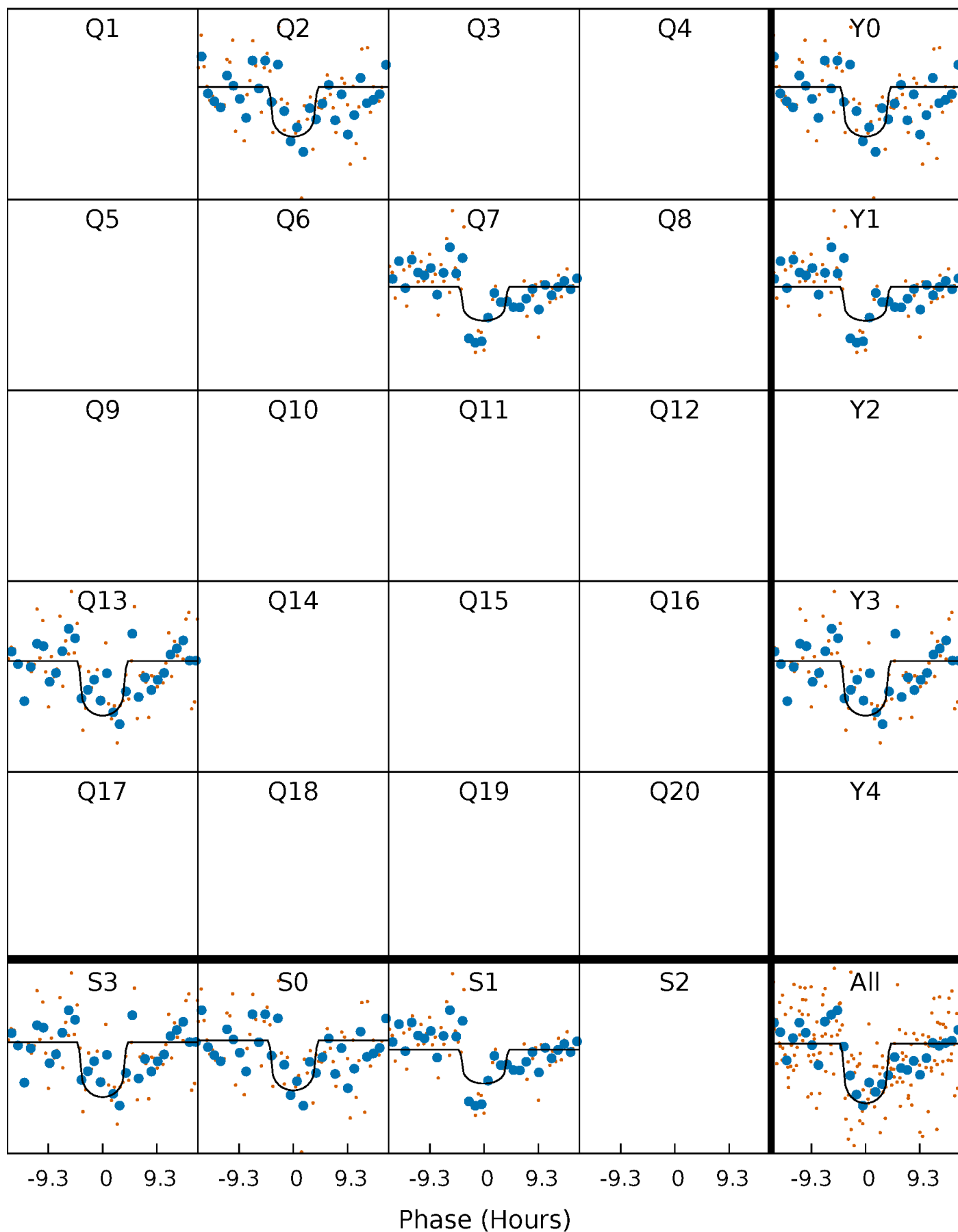
PDC Quarter-Phased Transit Curves

TCE 004575944-01 P=511.959516 Days $T_0=174.079313$ (BKJD)



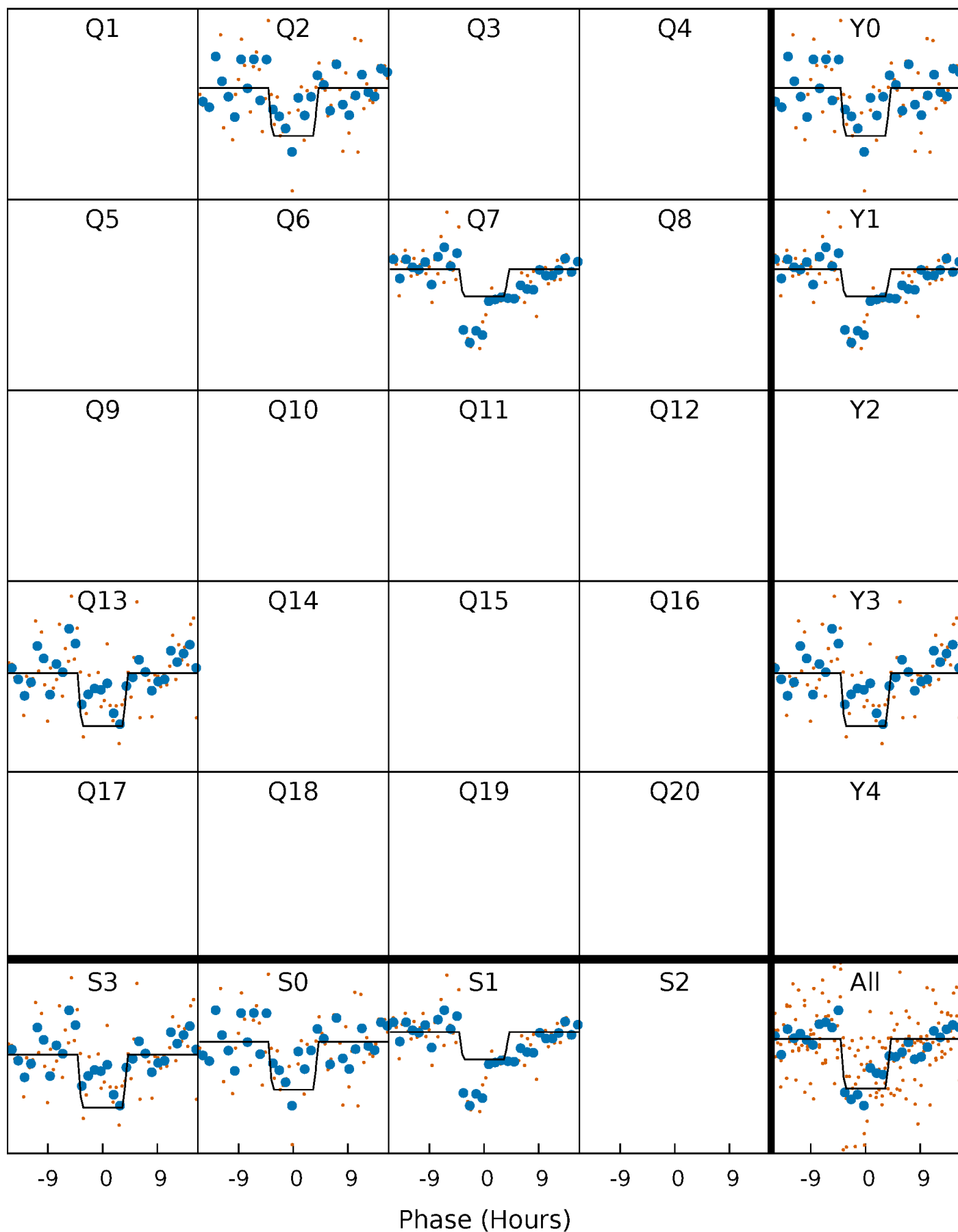
DV Quarter-Phased Transit Curves

TCE 004575944-01 P=511.959516 Days $T_0=174.079313$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

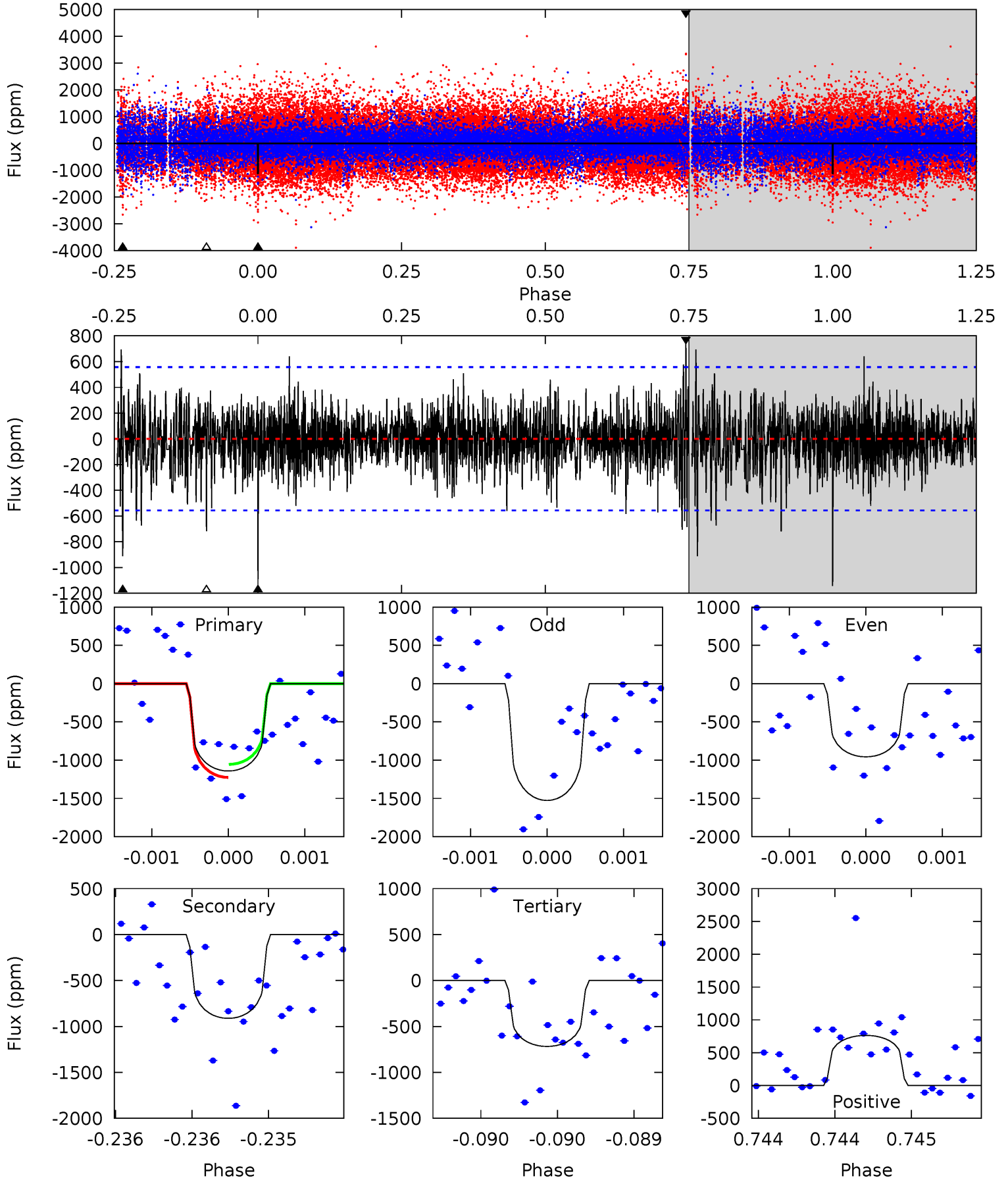
TCE 004575944-01 P=511.921979 Days $T_0=174.145786$ (BKJD)



DV Model-Shift Uniqueness Test

004575944-01, P = 511.959516 Days, E = 174.079313 Days

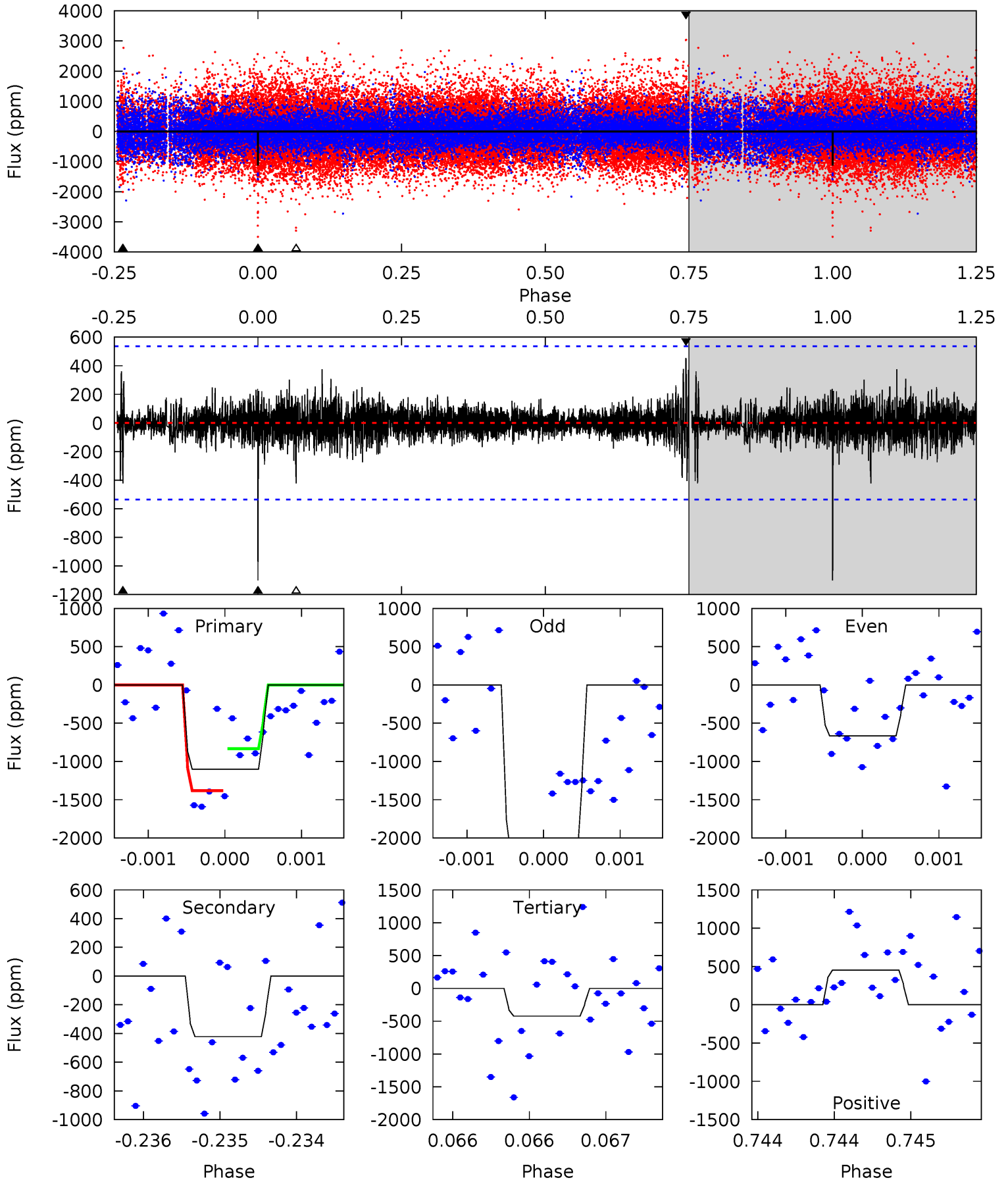
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	9.06	7.13	7.58	5.53	3.41	1.65	4.21	3.76	1.93	1.48	2.67	1.12	0.40	0.84



Alt Model-Shift Uniqueness Test

004575944-01, P = 511.921979 Days, E = 174.145786 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	4.37	4.37	4.69	5.54	3.43	0.76	7.02	6.69	0.00	-0.33	8.00	1.68	0.29	2.85



Stellar Parameters For KIC 004575944

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5676^{+172}_{-172}	$4.598^{+0.038}_{-0.152}$	$-0.460^{+0.300}_{-0.300}$	$0.759^{+0.170}_{-0.061}$	$0.848^{+0.080}_{-0.098}$	$2.729^{+0.509}_{-1.147}$
	+3%/-3%	+1%/-3%	+65%/-65%	+22%/-8%	+9%/-12%	+19%/-42%
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 004575944-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-912±101	$3.17^{+1.89}_{-1.71}$	285^{+18}_{-11}	5178^{+2609}_{-883}	$68097^{+258504}_{-41438}$
Alt.	-422±97	$3.13^{+1.79}_{-1.58}$	286^{+16}_{-12}	4419^{+1556}_{-678}	32049^{+98961}_{-19296}

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 $A_{obs} \gg 1.0$

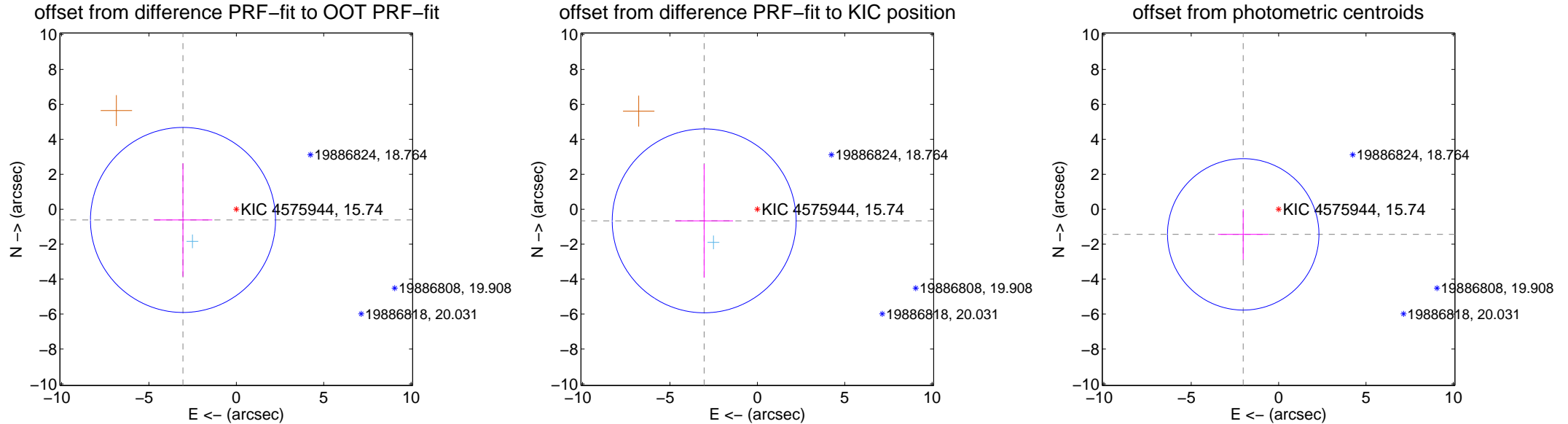
DV Centroid Data

Supplemental centroid analysis for 004575944-01. Kepler magnitude: 15.74. Transit SNR 7.87

There are 1 quarters with good PRF difference image offsets

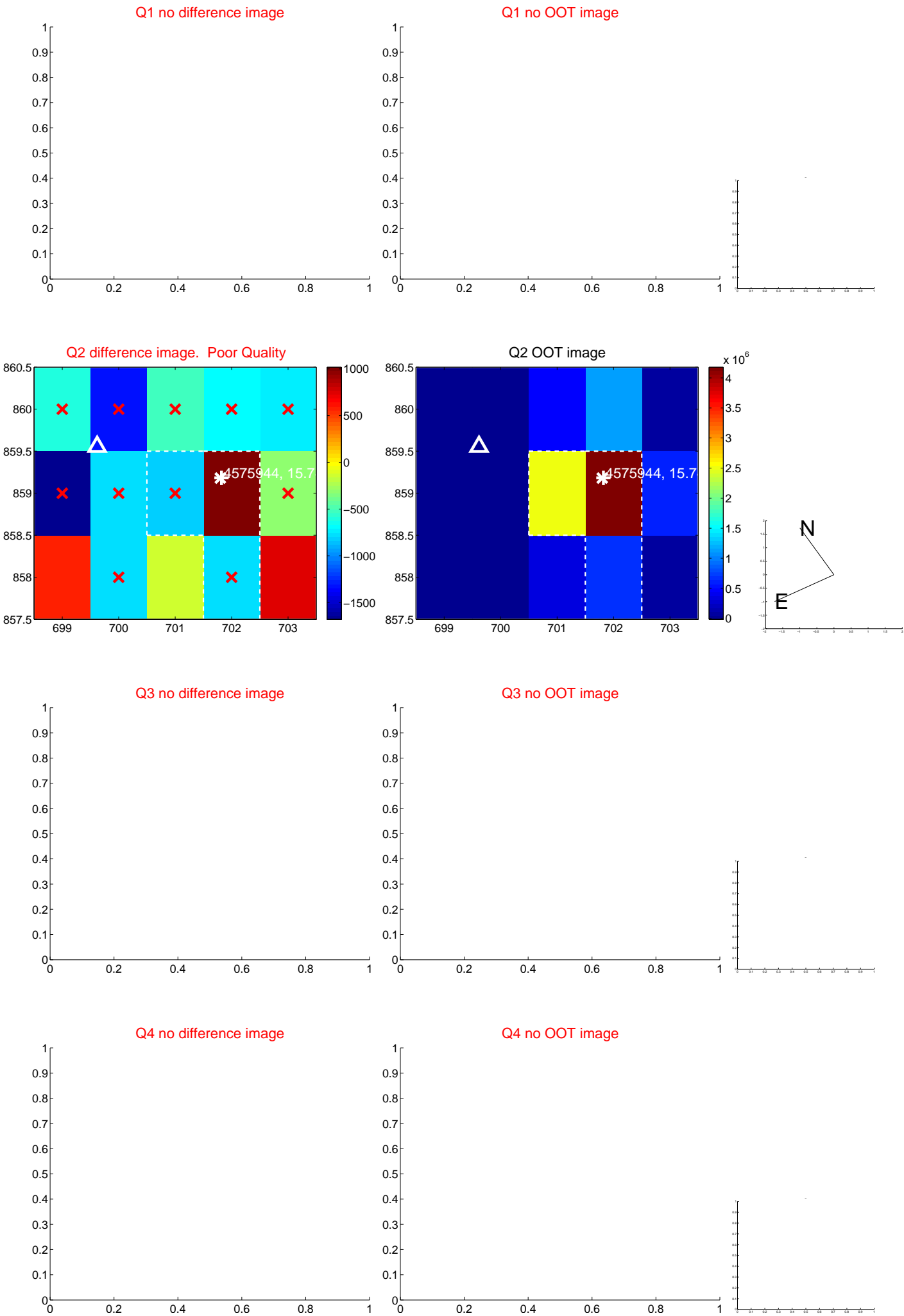
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.113 ± 1.765	1.76	3.052 ± 1.678	-0.615 ± 3.239
PRF-fit source offset from KIC position	3.114 ± 1.754	1.78	3.042 ± 1.649	-0.666 ± 3.250
photometric centroid source offset	2.49 ± 1.44	1.72	2.03 ± 1.44	-1.44 ± 1.44

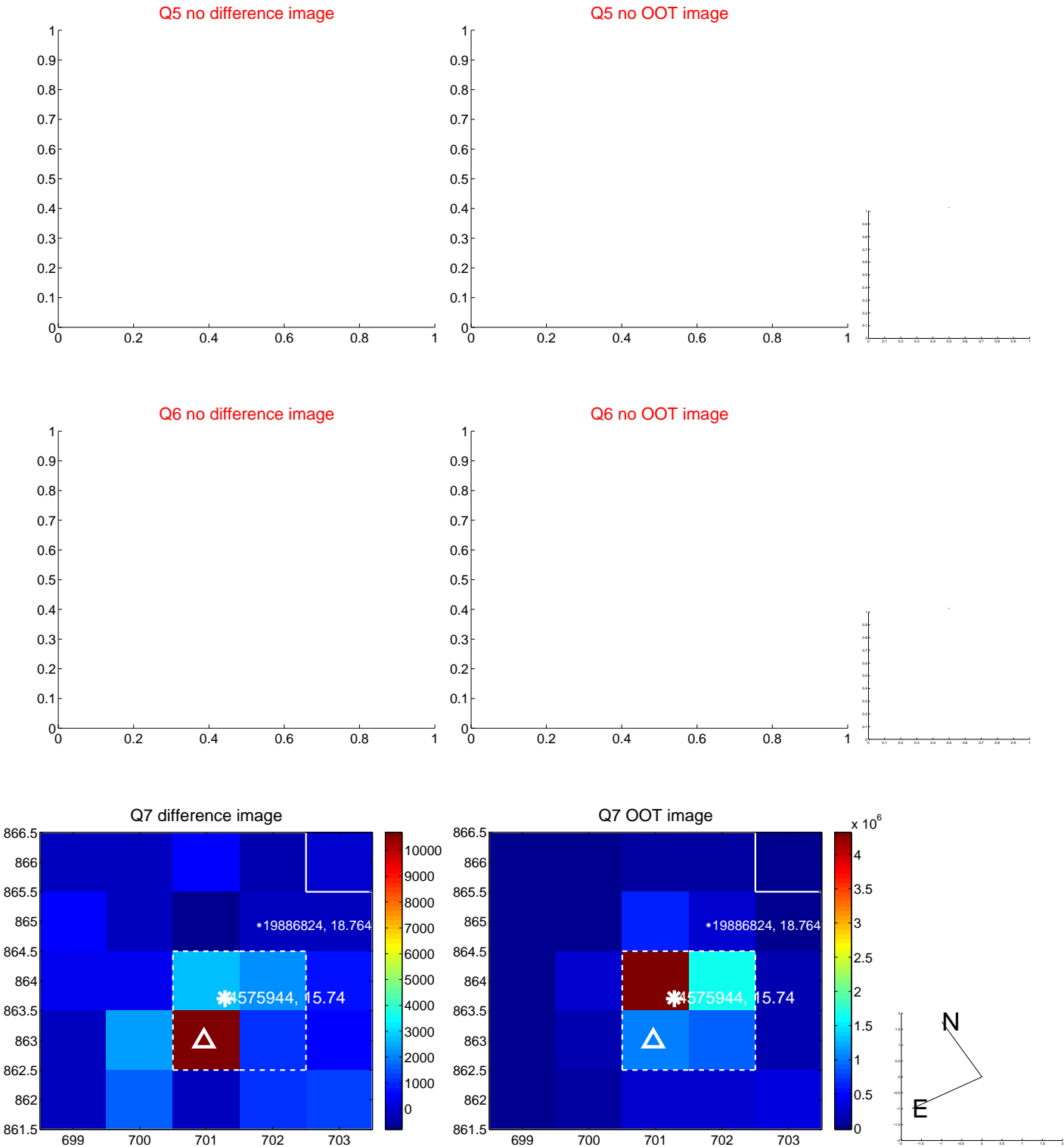


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



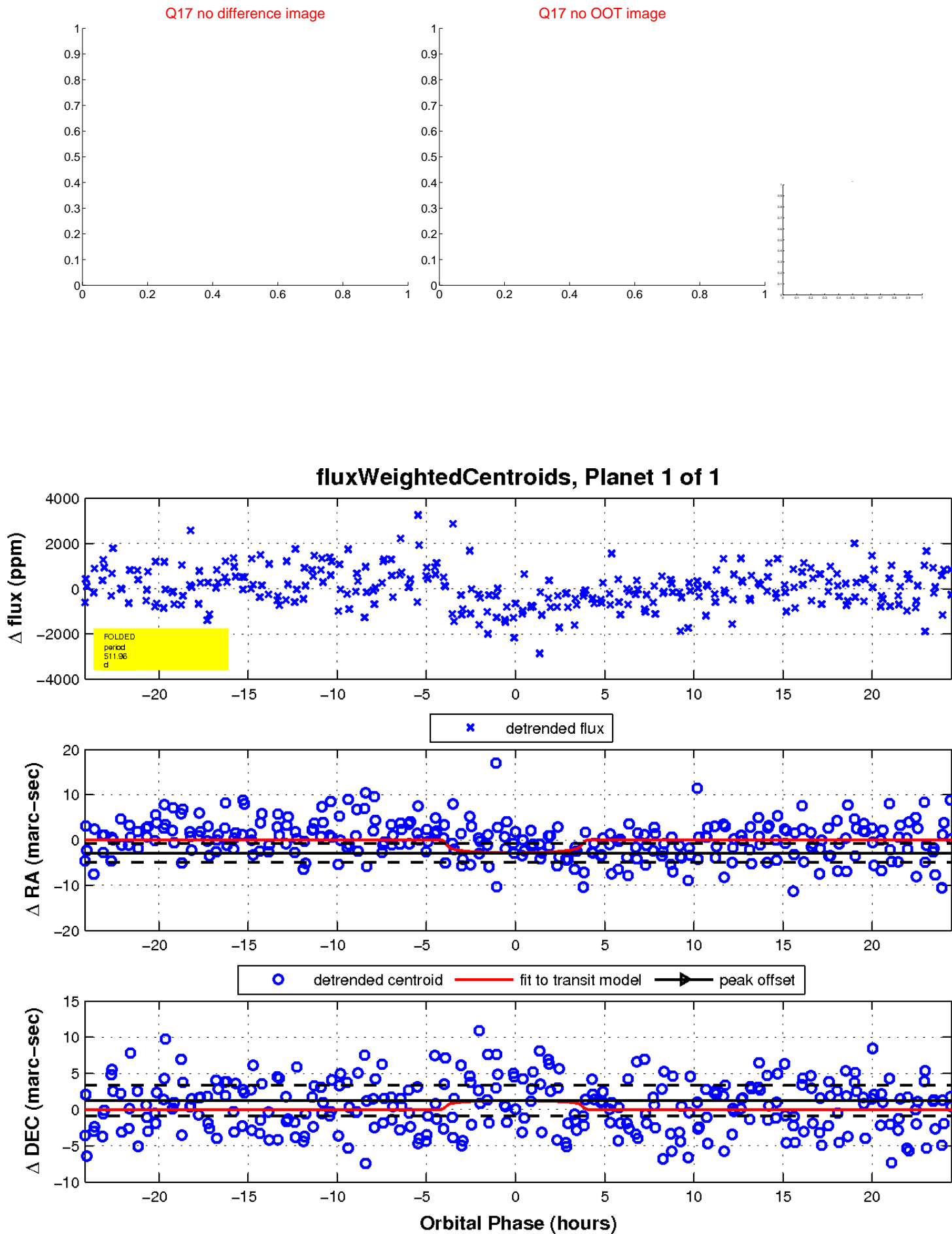
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

