

KIC 003356884

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})
003356884-01	OBS	No	499.630660	178.200126	282.9	14.779	7.8	7.8	1.14	6241	2.08	1.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003356884-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

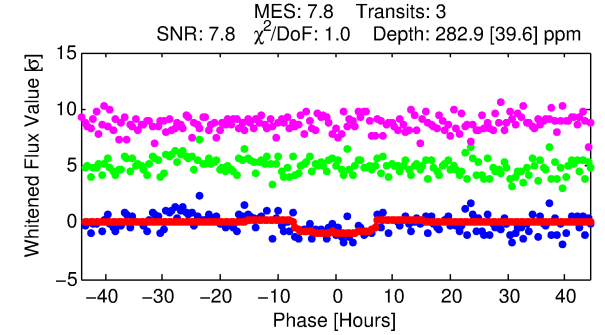
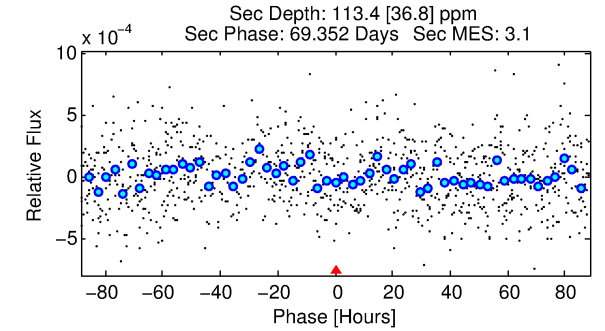
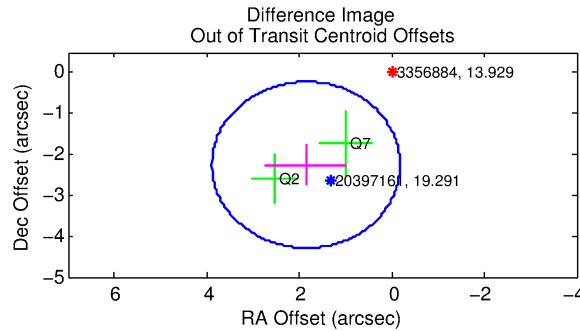
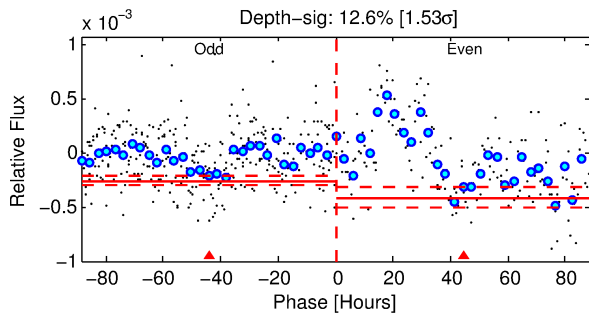
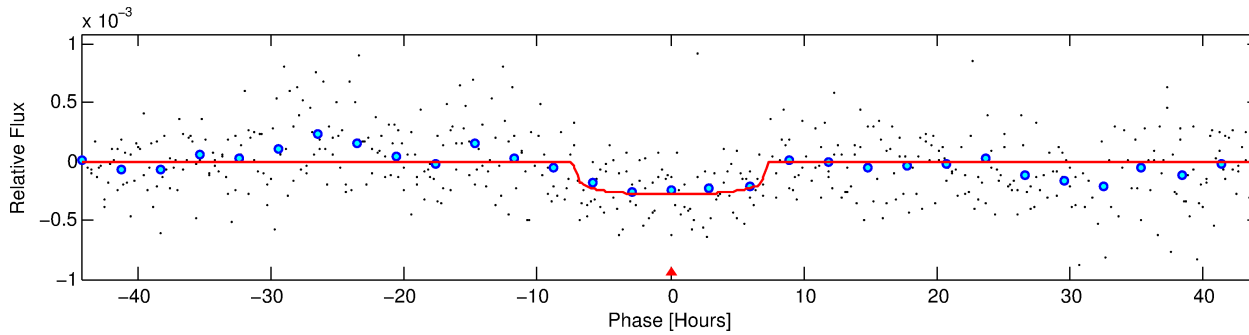
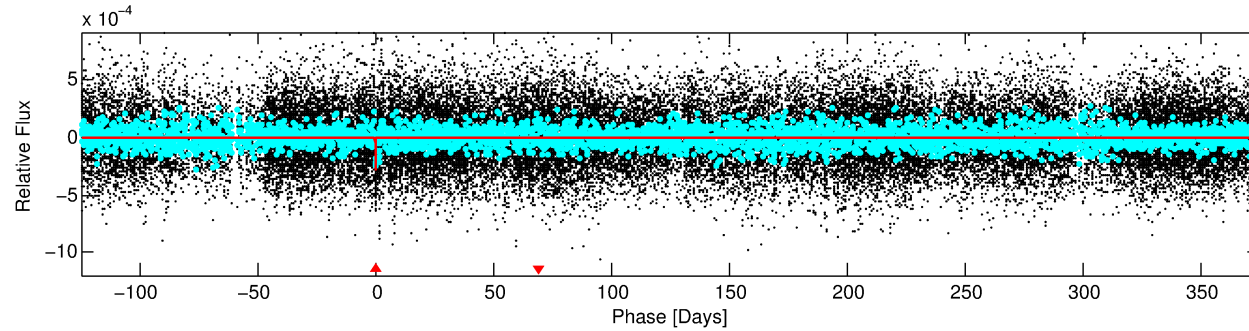
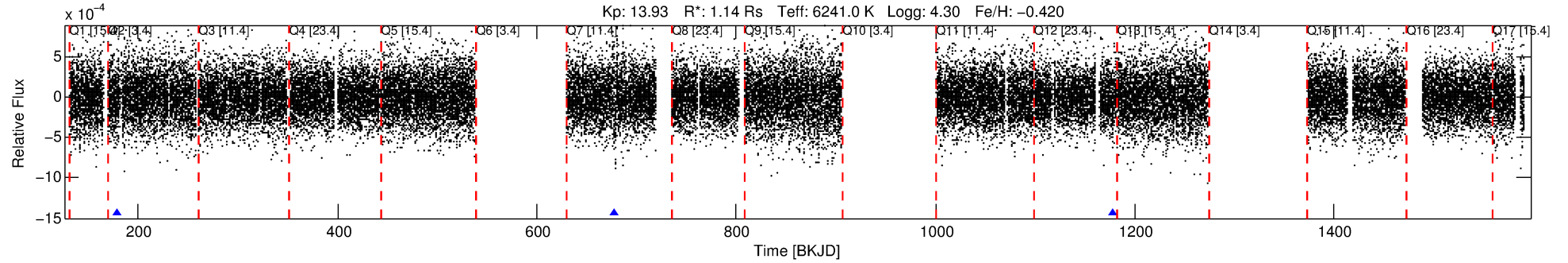
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003356884-01

No Significant Match Found

DV One-Page Summary

KIC: 3356884 Candidate: 1 of 1 Period: 499.631 d



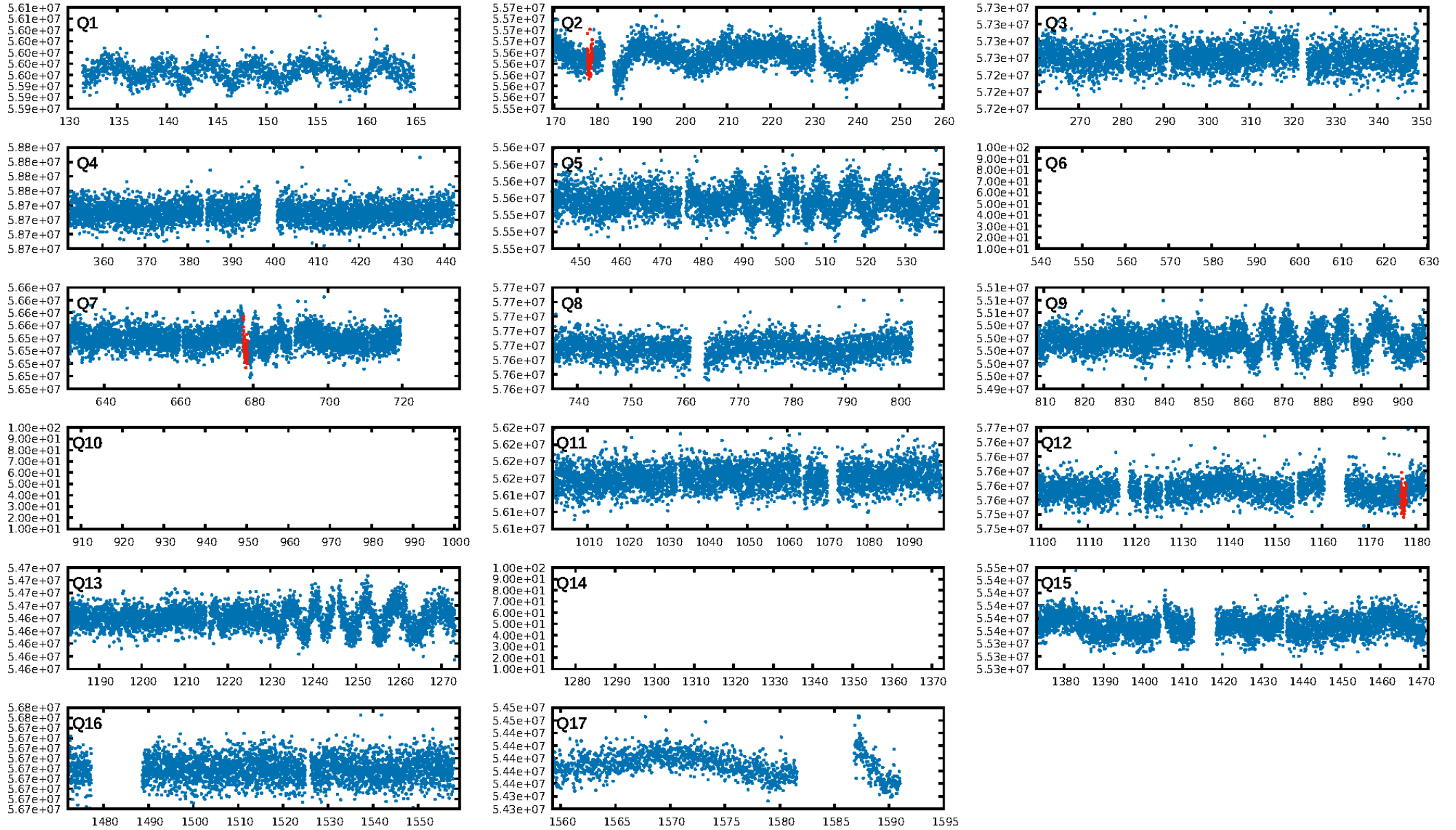
DV Fit Results:

Period = 499.63066 [0.01749] d
Epoch = 178.2001 [0.0253] BKJD
Rp/R* = 0.0167 [0.0055]
a/R* = 177.90 [305.80]
b = 0.75 [1.01]
Seff = 1.20 [0.44]
Teff = 267 [25] K
Rp = 2.08 [0.90] Re
a = 1.2145 [0.2893] AU
Ag = 21285.93 [17248.50] [1.23 σ]
Teffp = 4982 [928] K [5.08 σ]

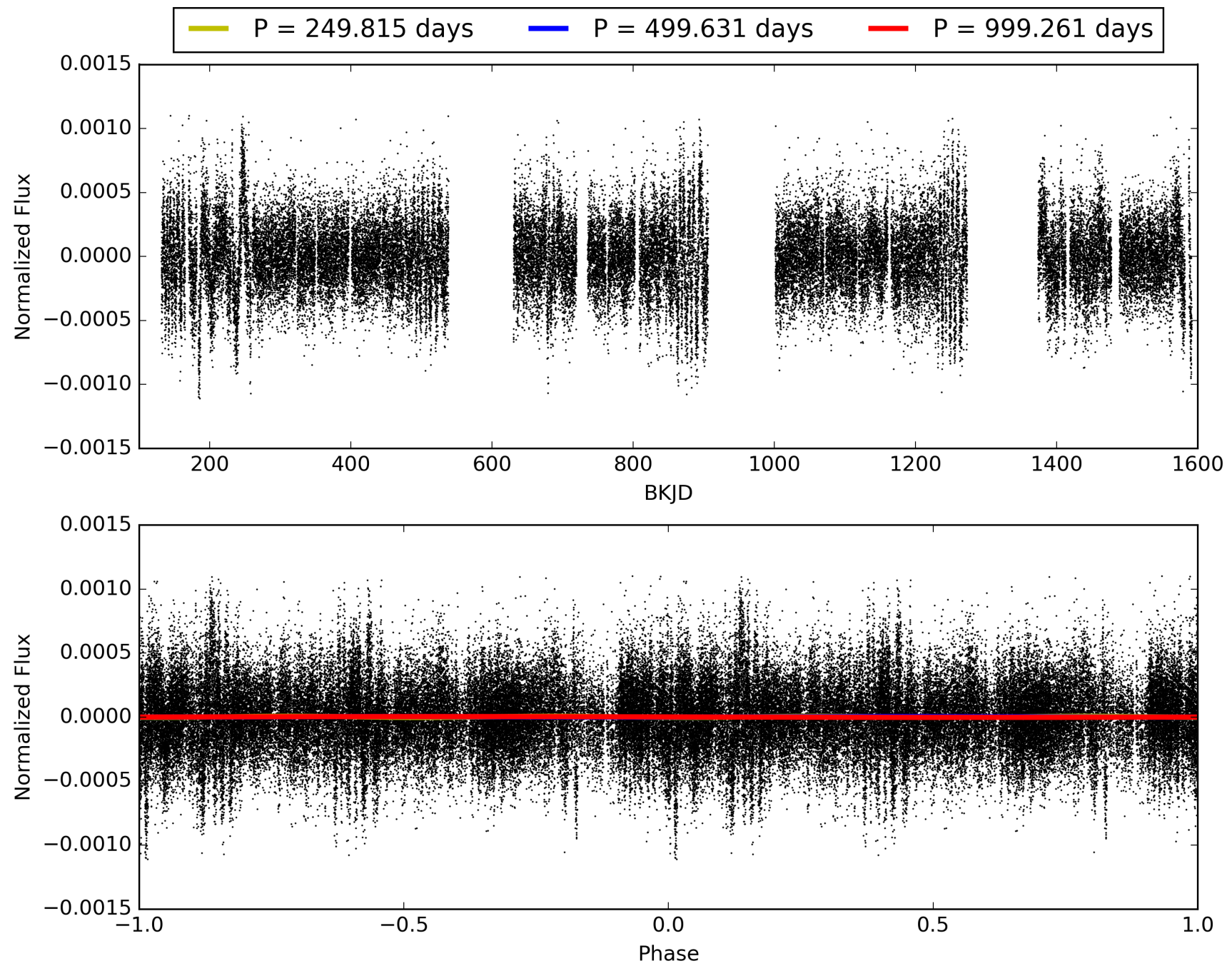
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 25.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.34e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 16.85
Centroid-sig: 48.6%
Centroid-so: 1.188 arcsec [0.72 σ]
OotOffset-rm: 2.921 arcsec [4.31 σ]
KicOffset-rm: 2.889 arcsec [4.14 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 003356884-01, PDC Light Curves

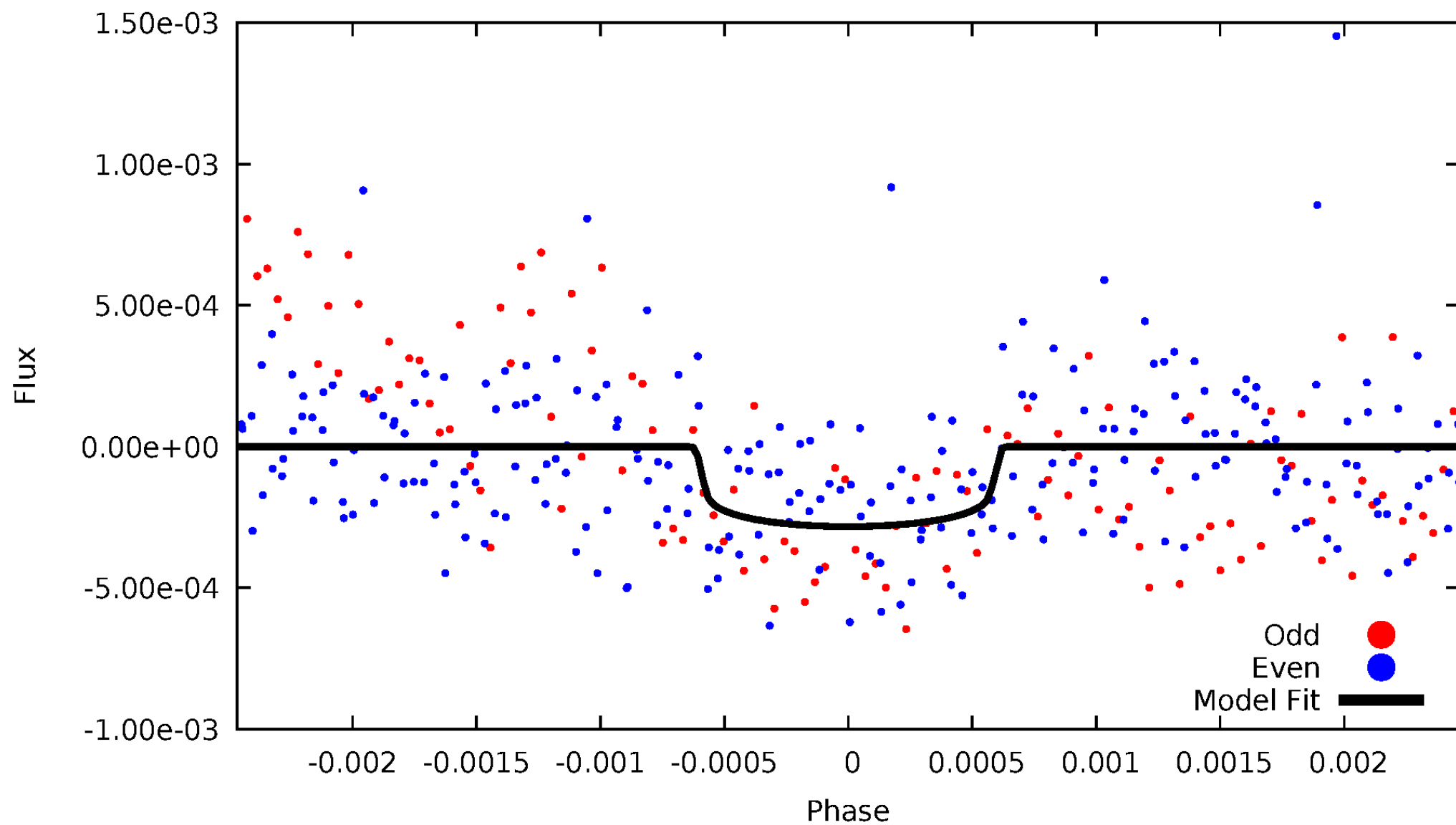


TCE 003356884-01



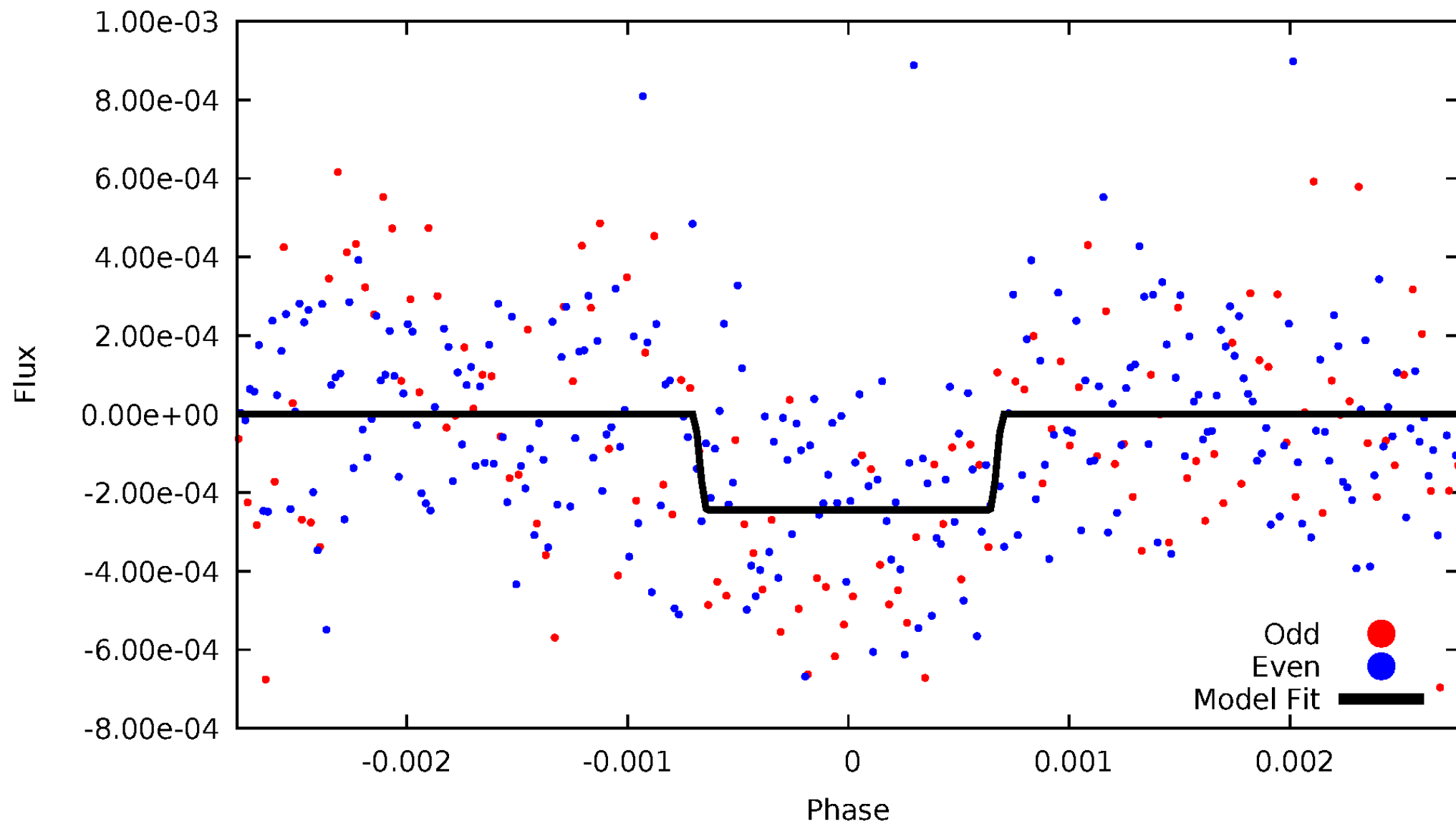
DV Odd/Even

TCE 003356884-01



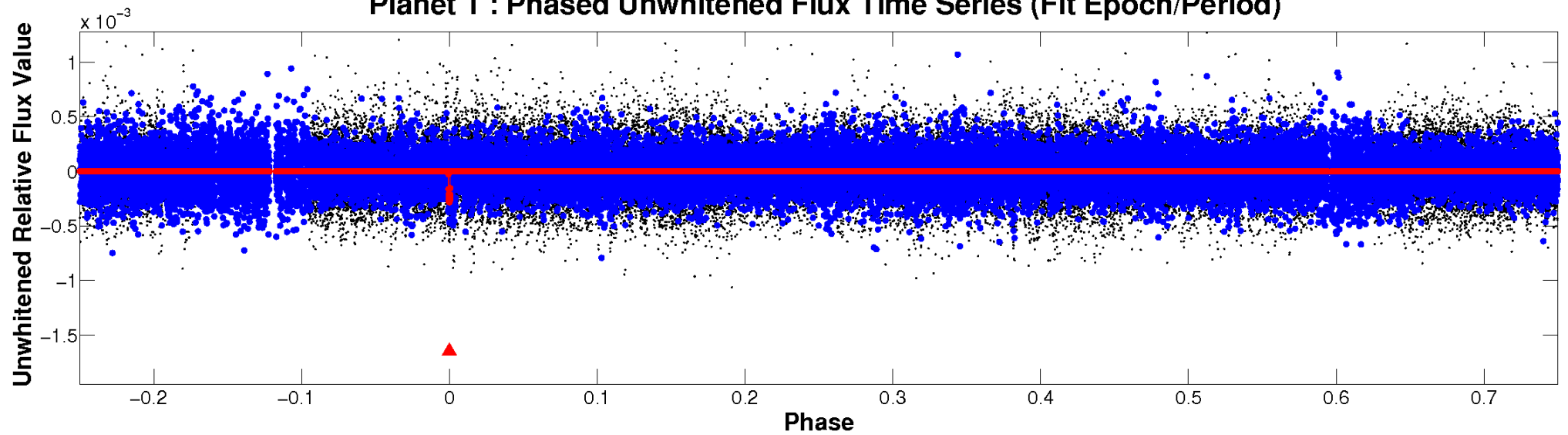
ALT Odd/Even

TCE 003356884-01

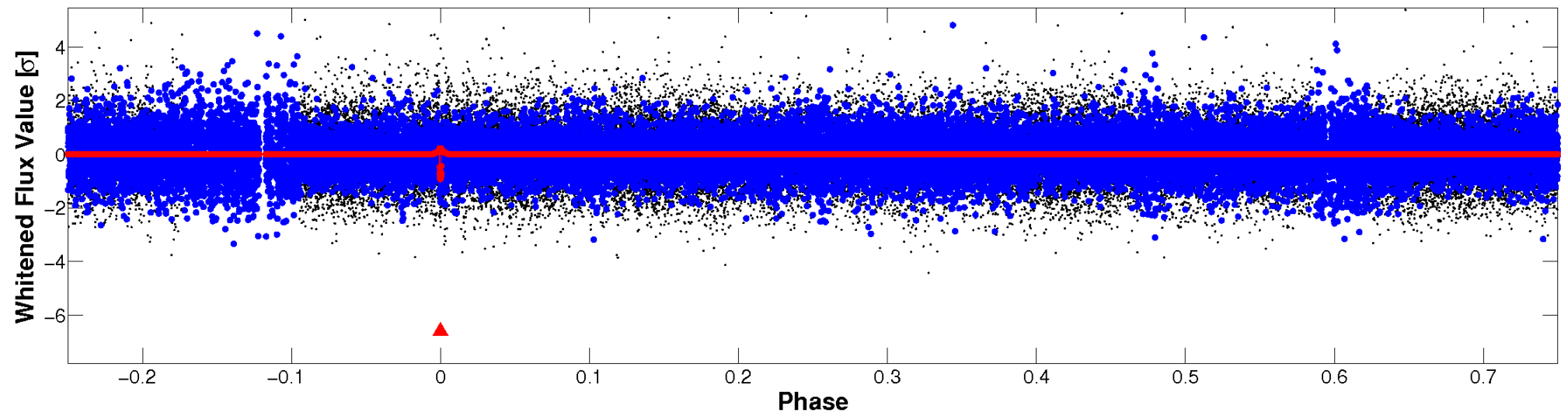


Non-Whitened Vs. Whitened Light Curve

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

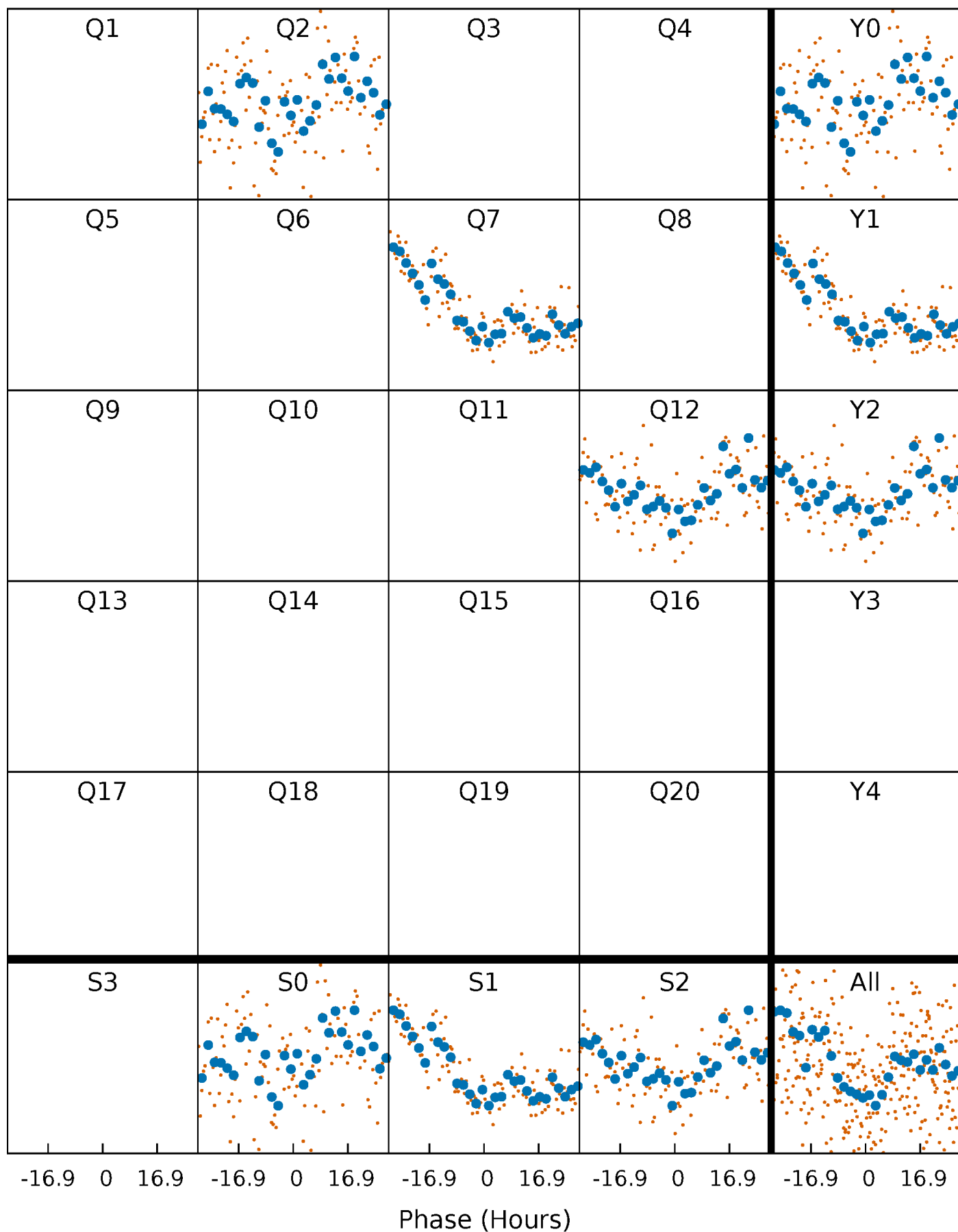


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



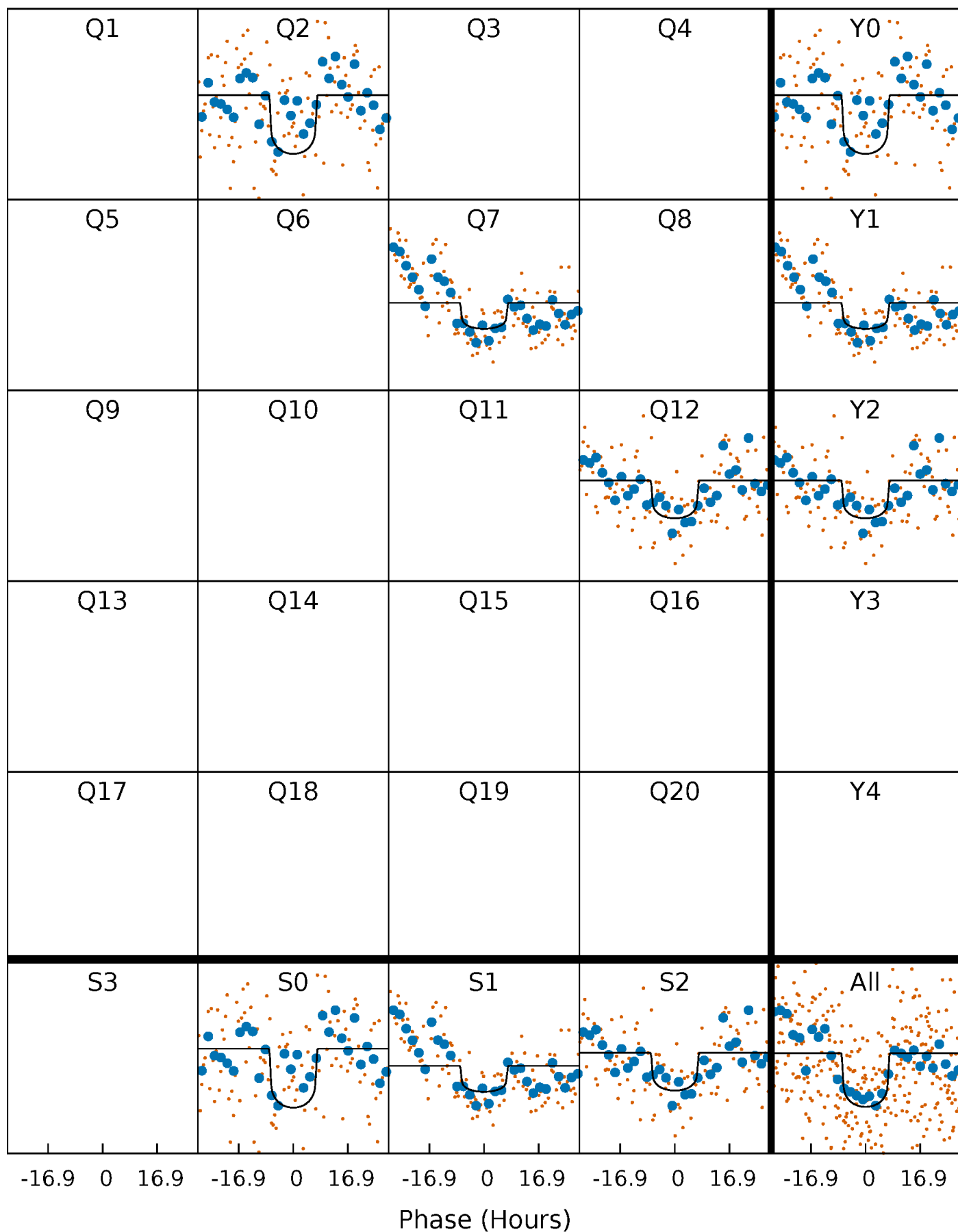
PDC Quarter-Phased Transit Curves

TCE 003356884-01 P=499.630660 Days $T_0=178.200126$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 003356884-01 P=499.630660 Days $T_0=178.200126$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

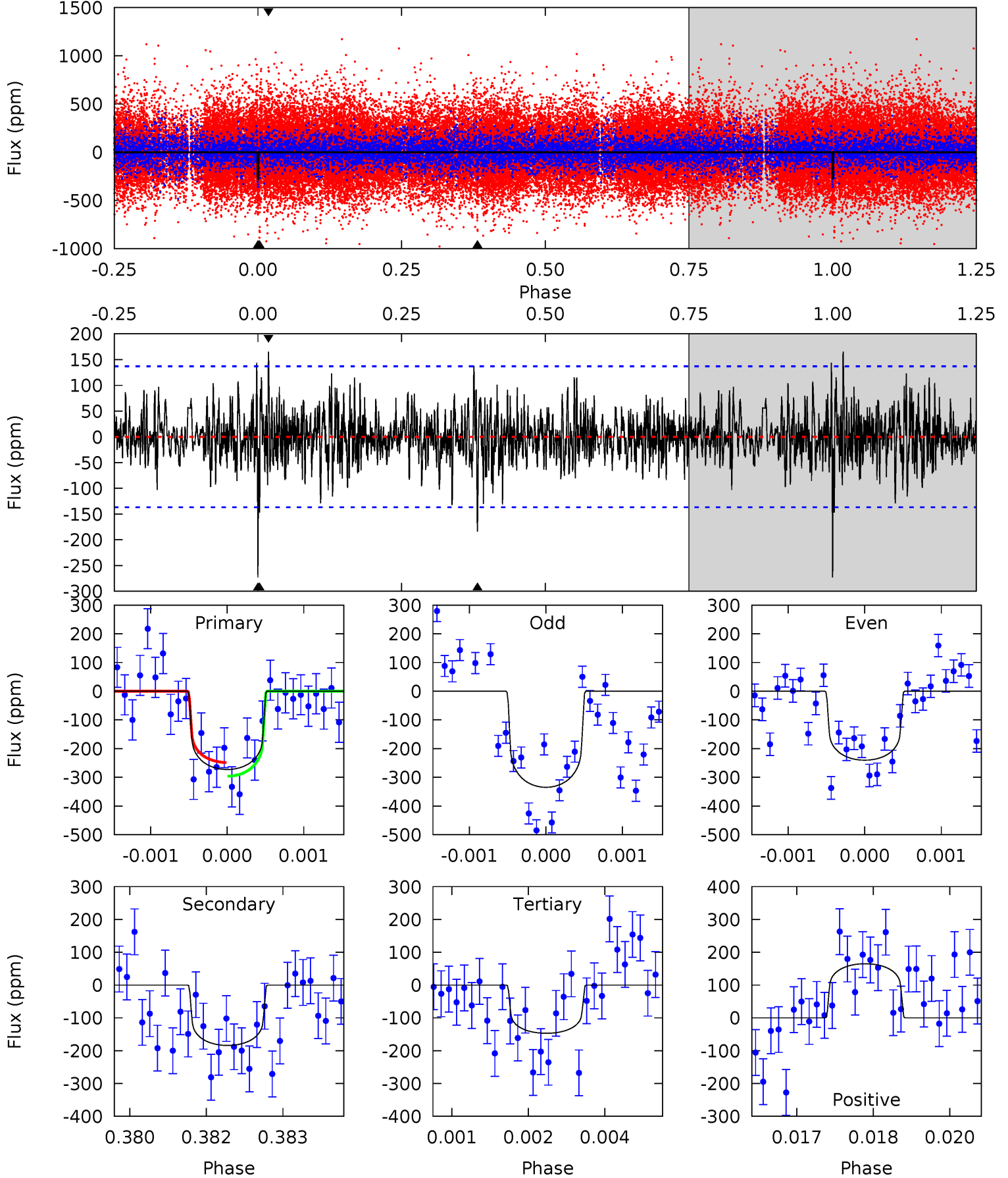
TCE 003356884-01 P=499.634598 Days $T_0=178.138832$ (BKJD)



DV Model-Shift Uniqueness Test

003356884-01, P = 499.630660 Days, E = 178.200126 Days

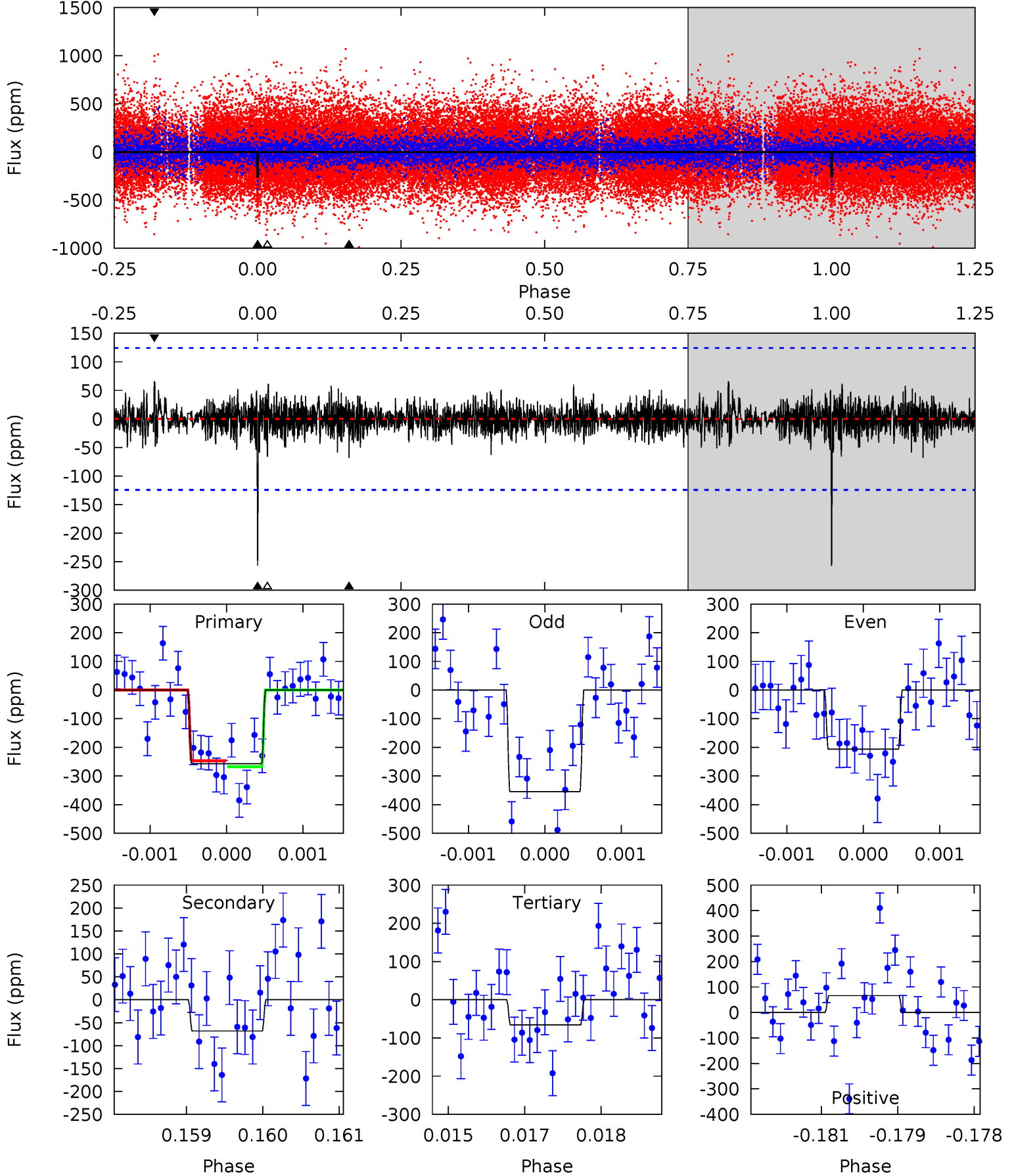
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	7.28	5.81	6.53	5.41	3.23	1.52	4.97	4.26	1.46	0.75	1.76	0.92	0.38	0.95



Alt Model-Shift Uniqueness Test

003356884-01, $P = 499.634598$ Days, $E = 178.138832$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	2.96	2.87	2.88	5.39	3.20	0.73	8.30	8.29	0.09	0.08	3.05	1.09	0.20	0.46



Stellar Parameters For KIC 003356884

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6241^{+188}_{-207}	$4.305^{+0.153}_{-0.187}$	$-0.420^{+0.300}_{-0.300}$	$1.140^{+0.325}_{-0.217}$	$0.956^{+0.148}_{-0.098}$	$0.910^{+0.770}_{-0.443}$
	+3%/-3%	+4%/-4%	+71%/-71%	+29%/-19%	+15%/-10%	+85%/-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 003356884-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-184 ± 25	$2.07^{+0.79}_{-0.67}$	376^{+28}_{-23}	5650^{+1396}_{-693}	34052^{+46962}_{-16528}
Alt.	-68 ± 23	$1.99^{+0.78}_{-0.77}$	376^{+27}_{-26}	4671^{+1118}_{-583}	14142^{+25736}_{-7833}

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

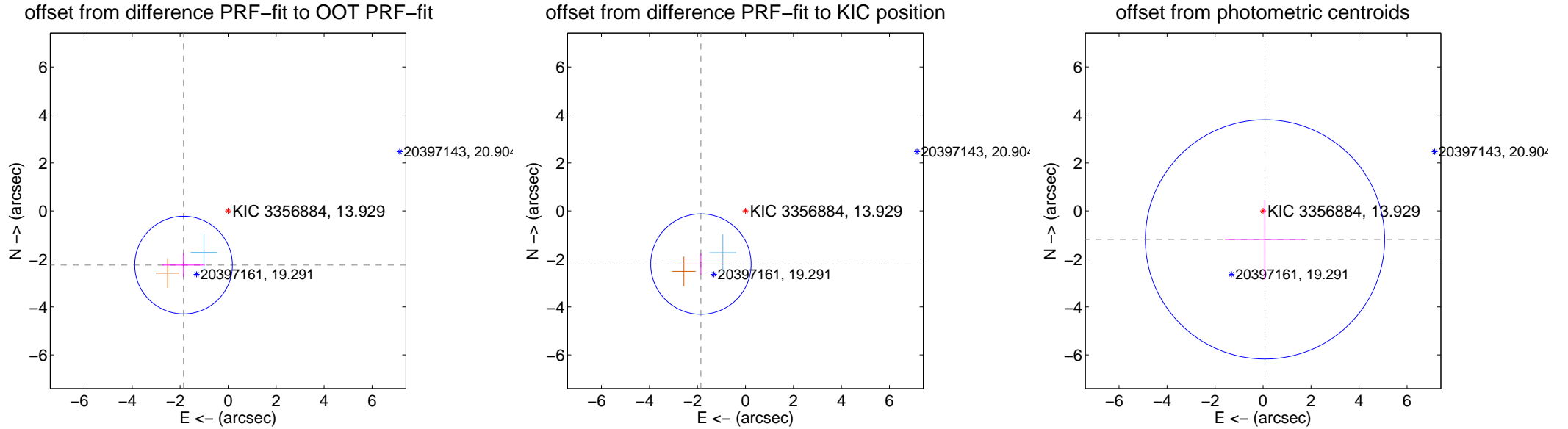
DV Centroid Data

Supplemental centroid analysis for 003356884-01. Kepler magnitude: 13.93. Transit SNR 7.83

There are 1 quarters with good PRF difference image offsets

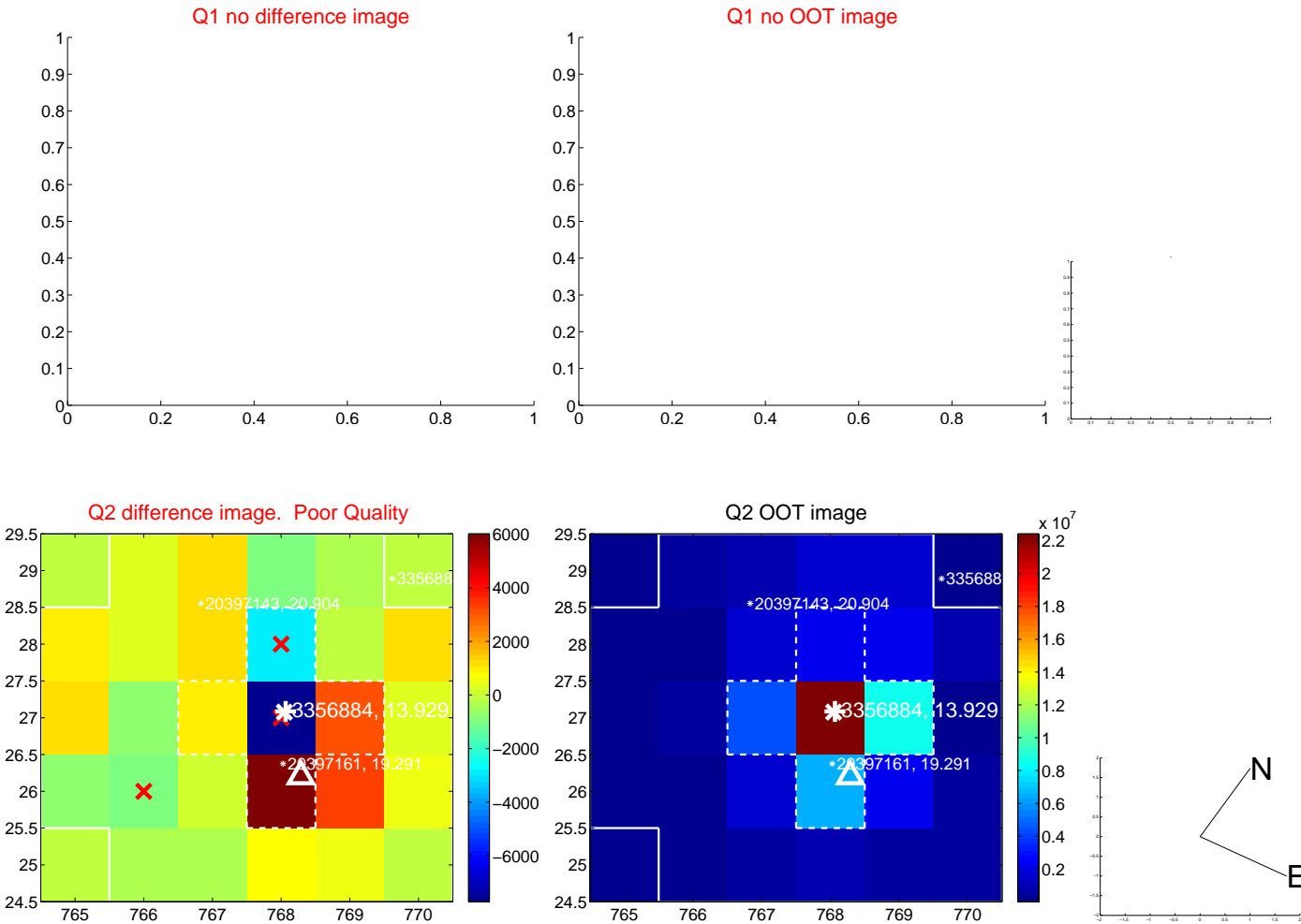
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.921 ± 0.678	4.31	1.856 ± 0.882	-2.256 ± 0.495
PRF-fit source offset from KIC position	2.889 ± 0.698	4.14	1.855 ± 0.945	-2.215 ± 0.450
photometric centroid source offset	1.19 ± 1.66	0.72	-0.08 ± 1.67	-1.19 ± 1.66



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.

Q5 no difference image



Q5 no OOT image



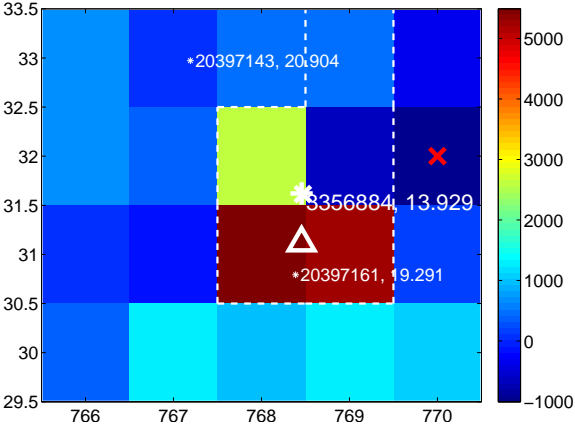
Q6 no difference image



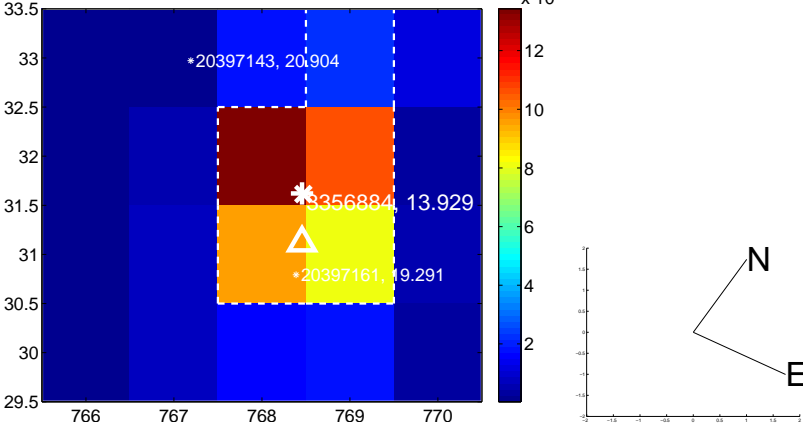
Q6 no OOT image



Q7 difference image



Q7 OOT image



Q8 no difference image



Q8 no OOT image



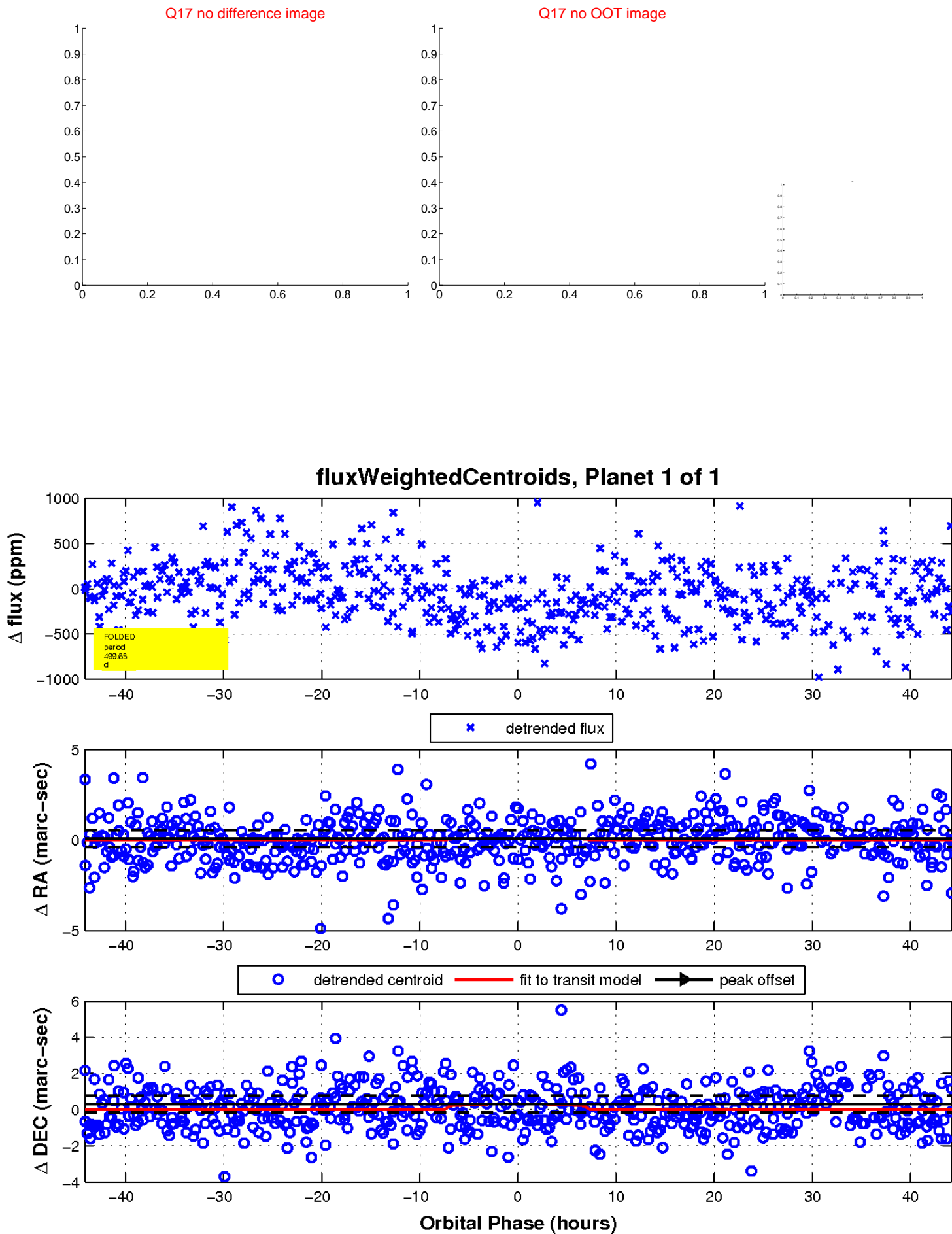
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

