

KIC 008345473

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})
008345473-01	OBS	7881.01	2.250537	133.605354	212.4	2.387	8.9	9.6	12.79	4507	17.86	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008345473-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

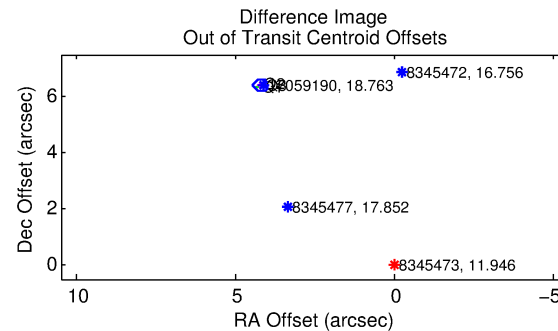
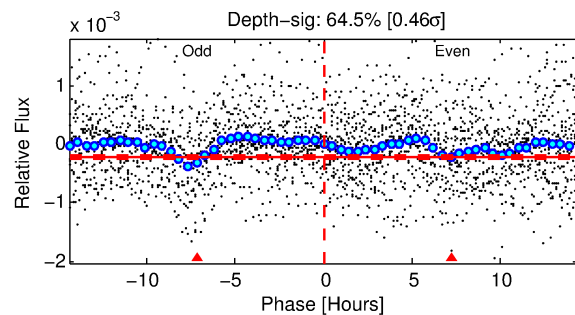
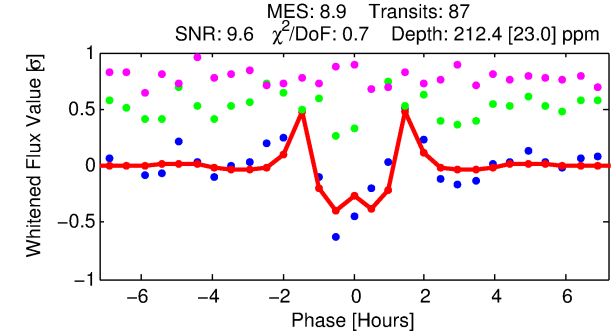
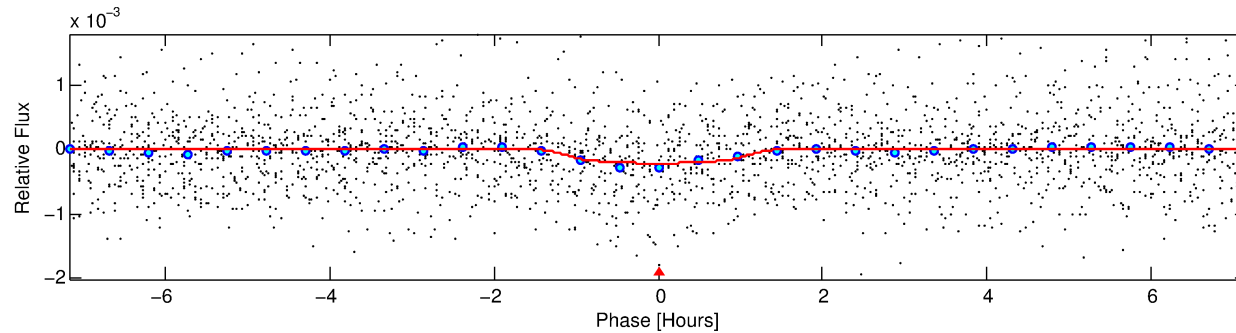
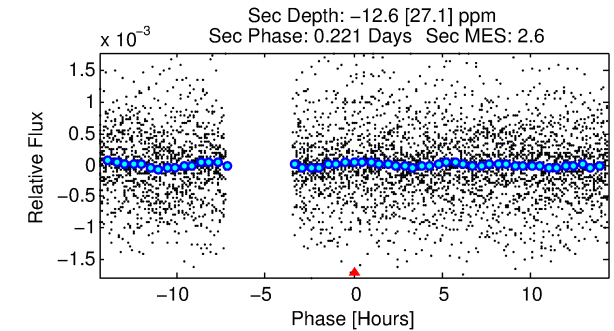
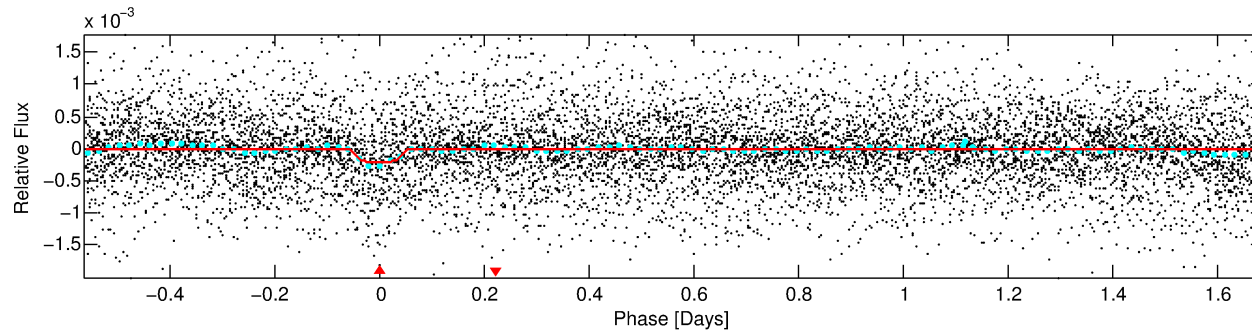
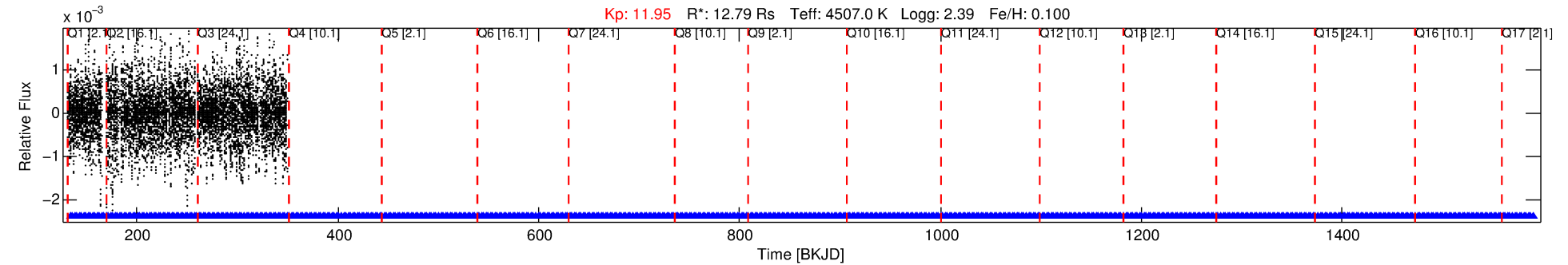
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008345473-01

No Significant Match Found

DV One-Page Summary

KIC: 8345473 Candidate: 1 of 1 Period: 2.251 d



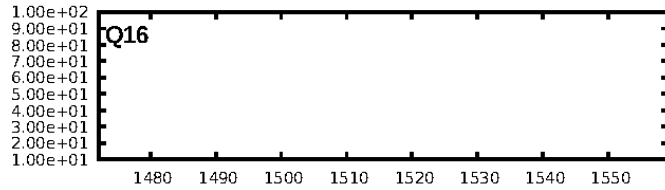
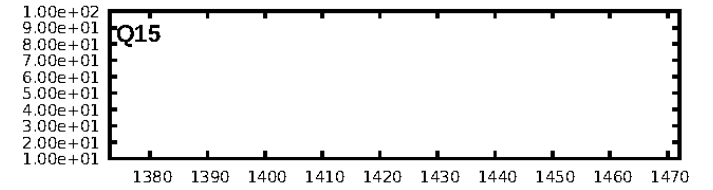
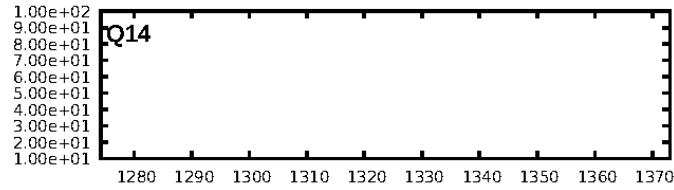
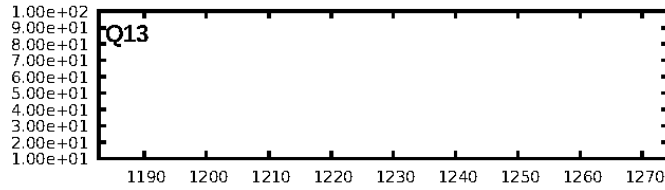
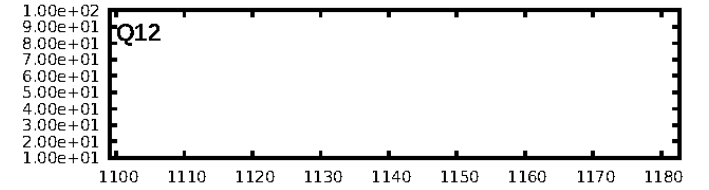
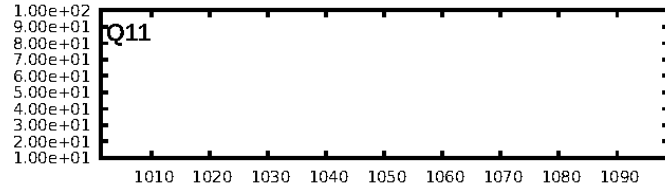
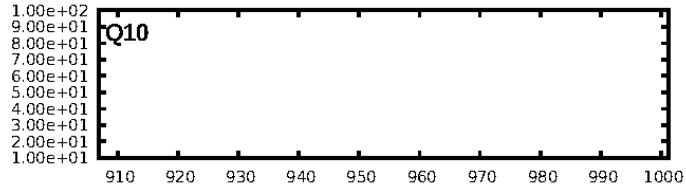
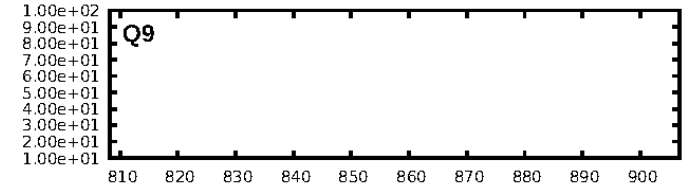
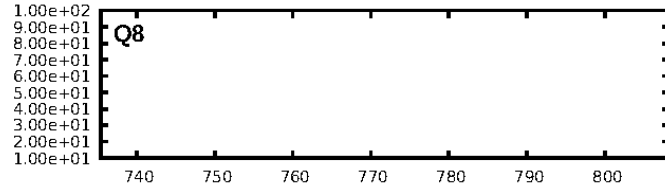
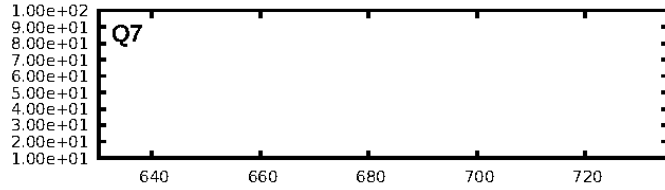
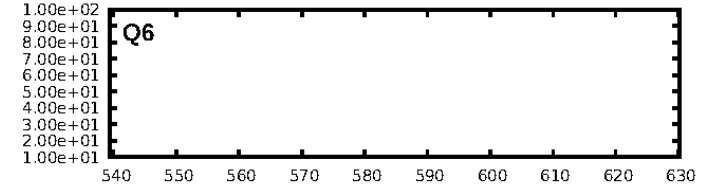
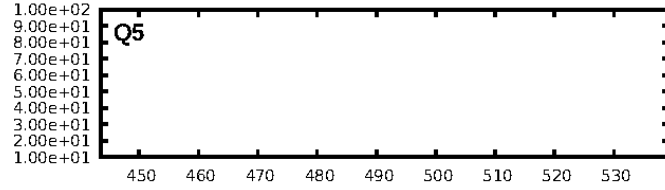
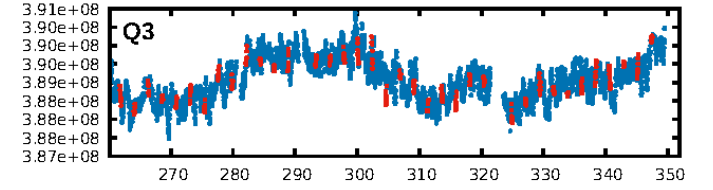
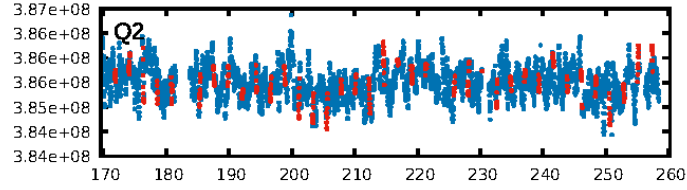
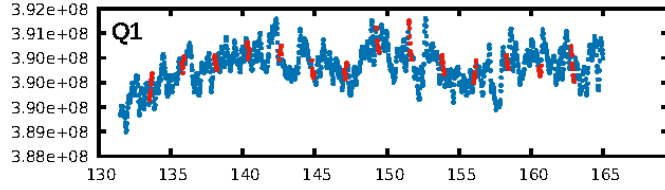
DV Fit Results:

Period = 2.25054 [0.00004] d
Epoch = 133.6054 [0.0022] BKJD
Rp/R* = 0.0128 [0.0061]
a/R* = 7.22 [9.88]
b = 0.17 [8.24]
Seff = N/A
Teq = N/A
Rp = 17.86 [8.95] Re
a = N/A
Ag = N/A
Teffp = N/A

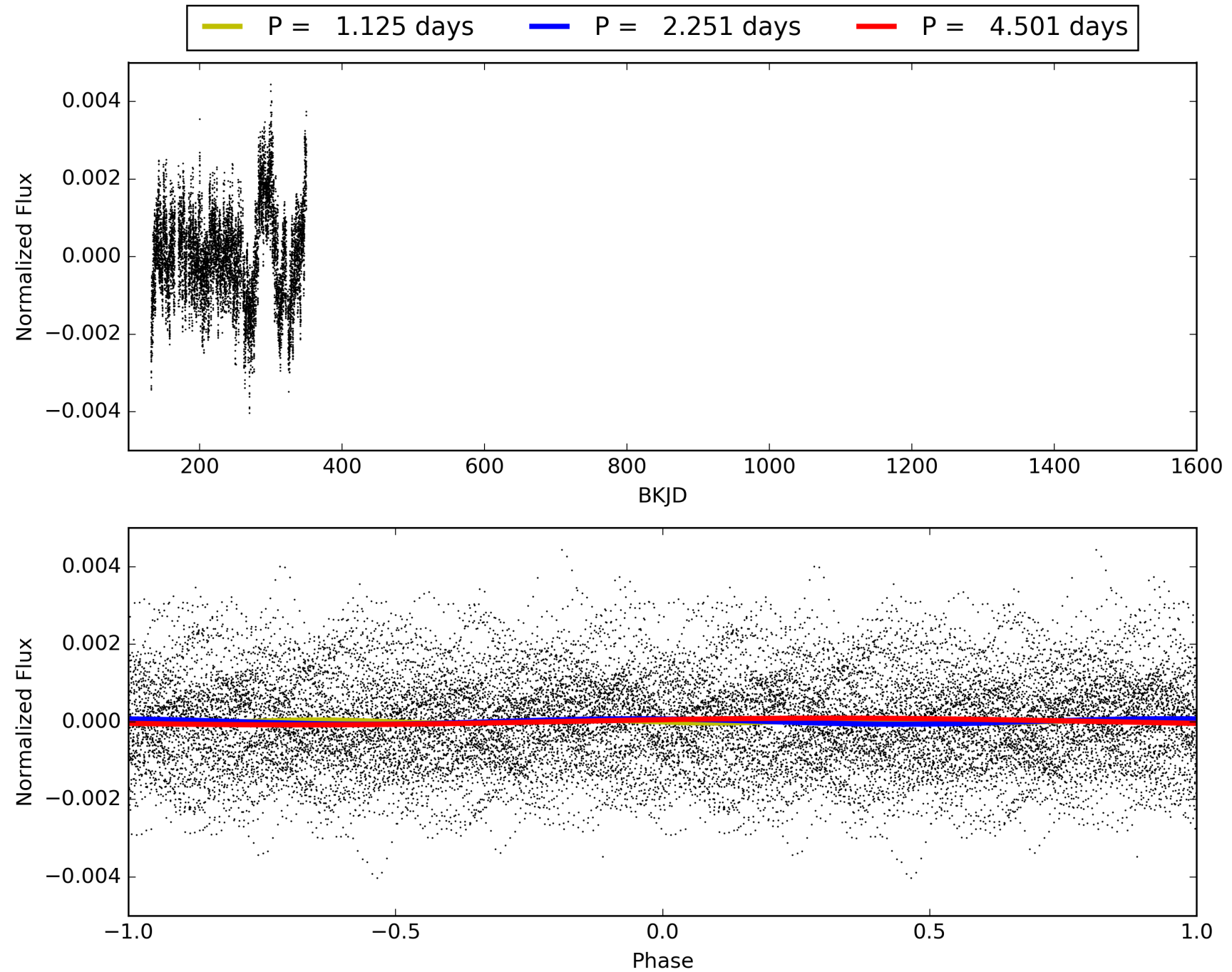
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.73e-18
RollingBand-fgt: 1.00 [73/73]
GhostDiagnostic-chr: 0.03712
Centroid-sig: 0.0%
Centroid-so: 22.715 arcsec [70.51σ]
OotOffset-rm: 7.661 arcsec [103.80σ]
KicOffset-rm: 7.697 arcsec [70.29σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 008345473-01, PDC Light Curves

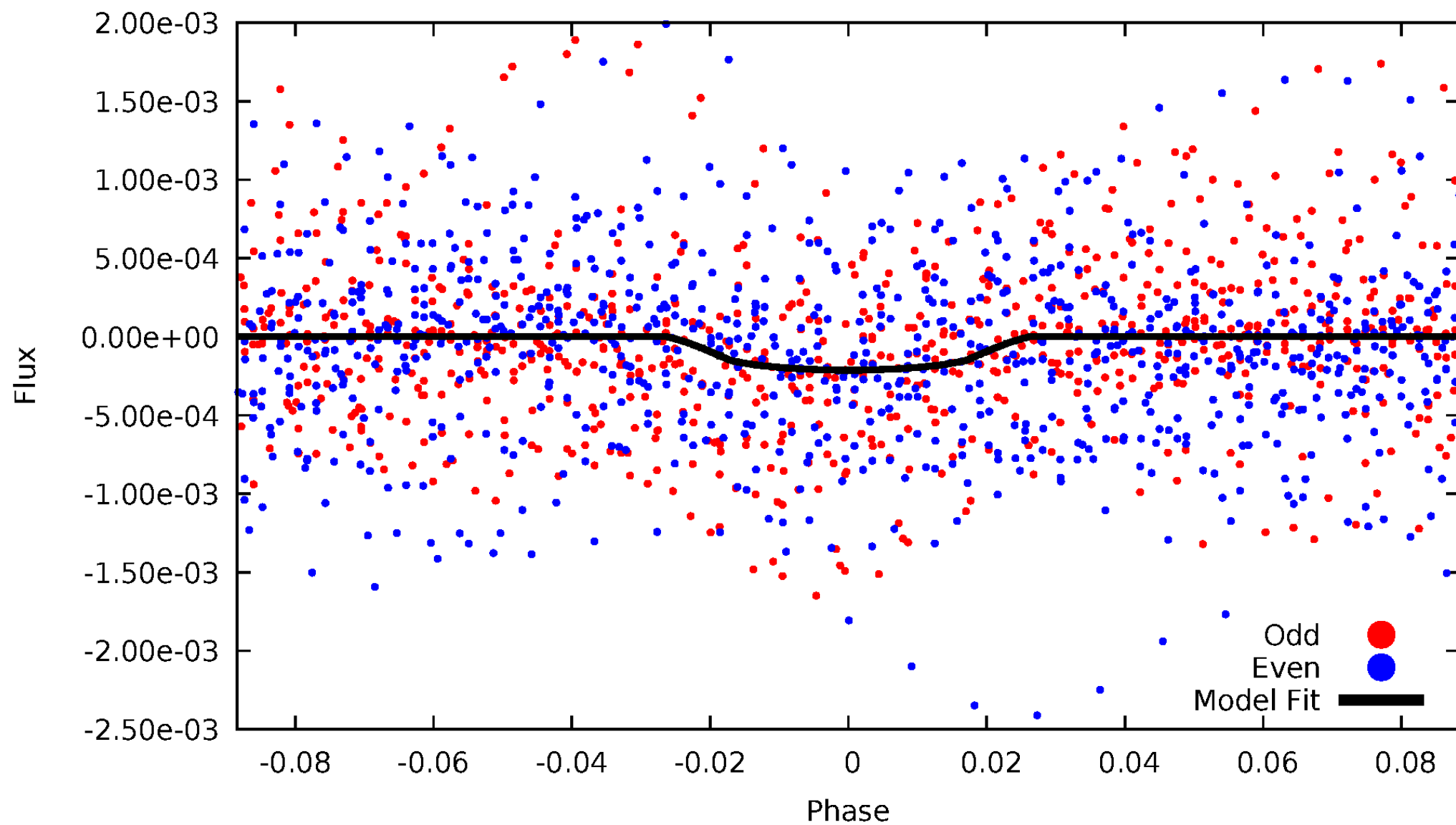


TCE 008345473-01



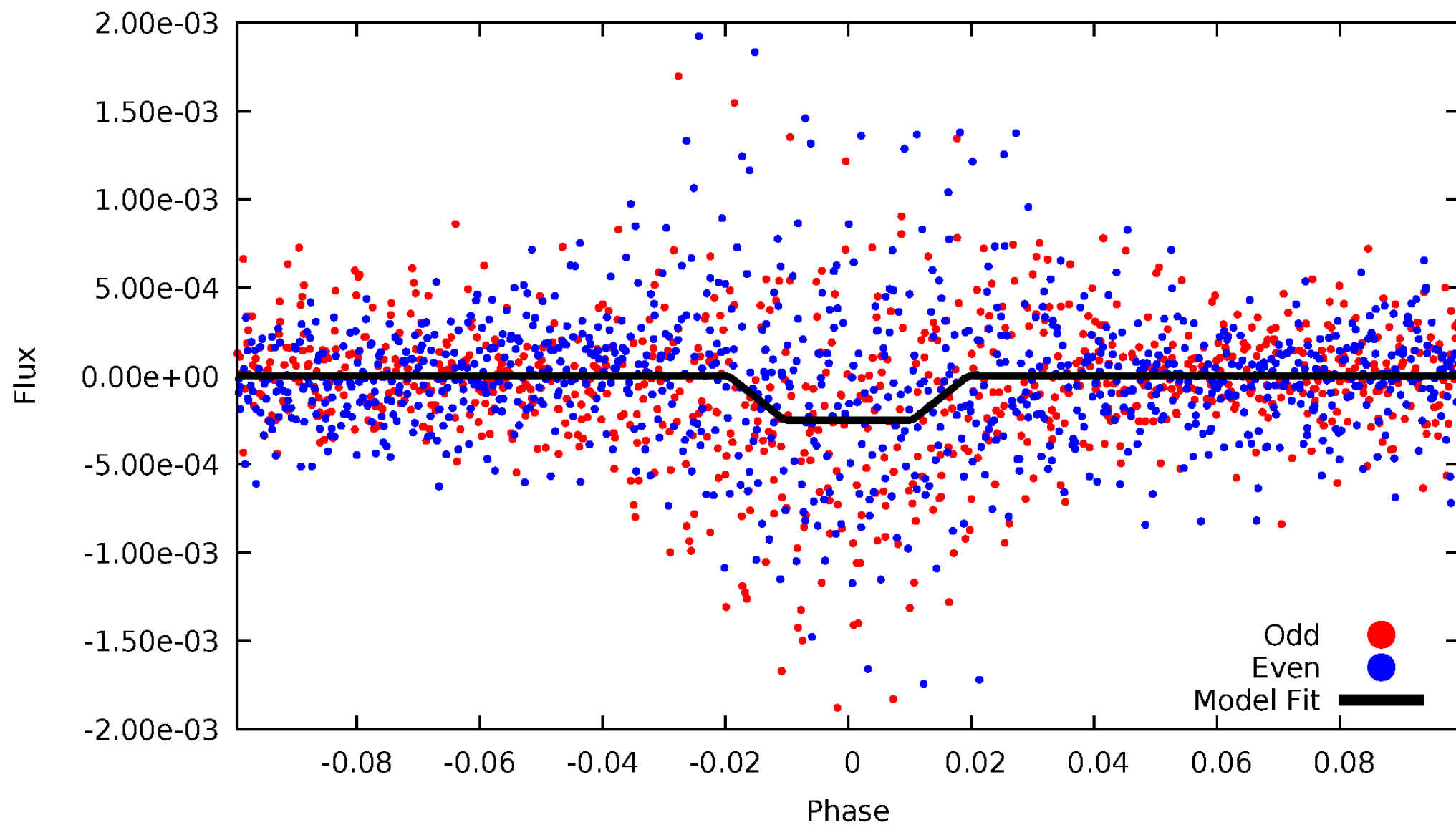
DV Odd/Even

TCE 008345473-01

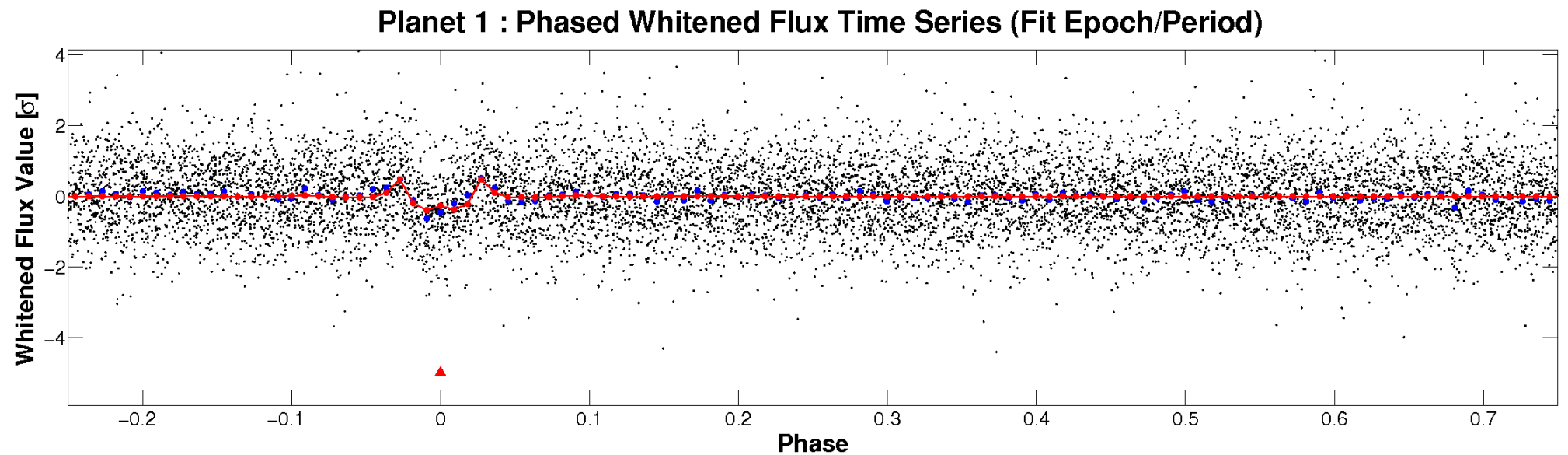
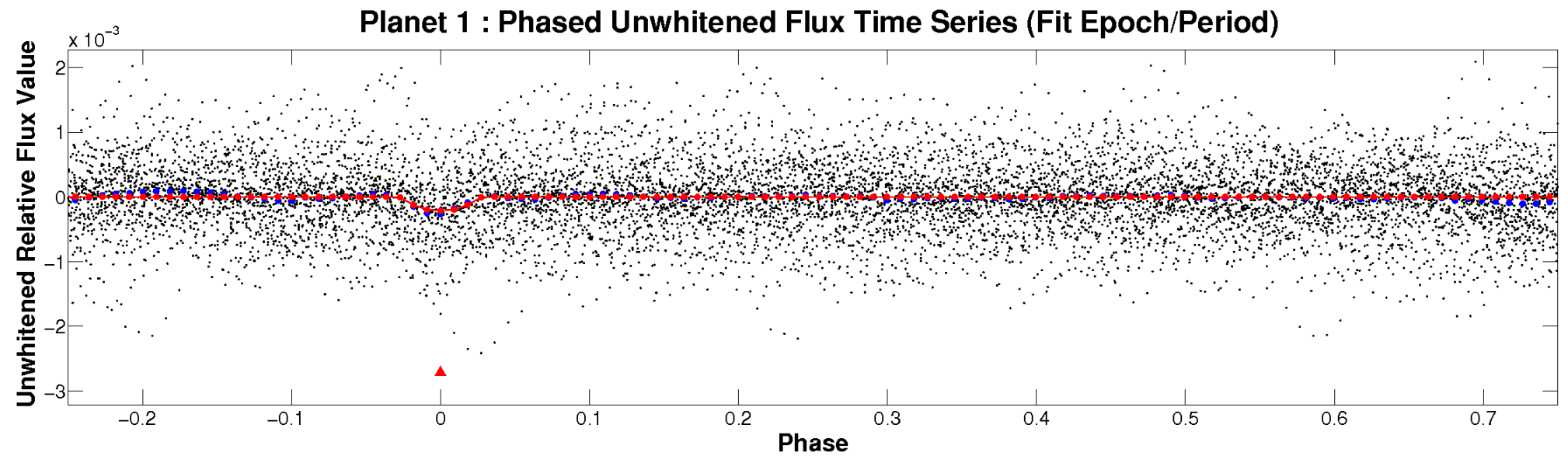


ALT Odd/Even

TCE 008345473-01

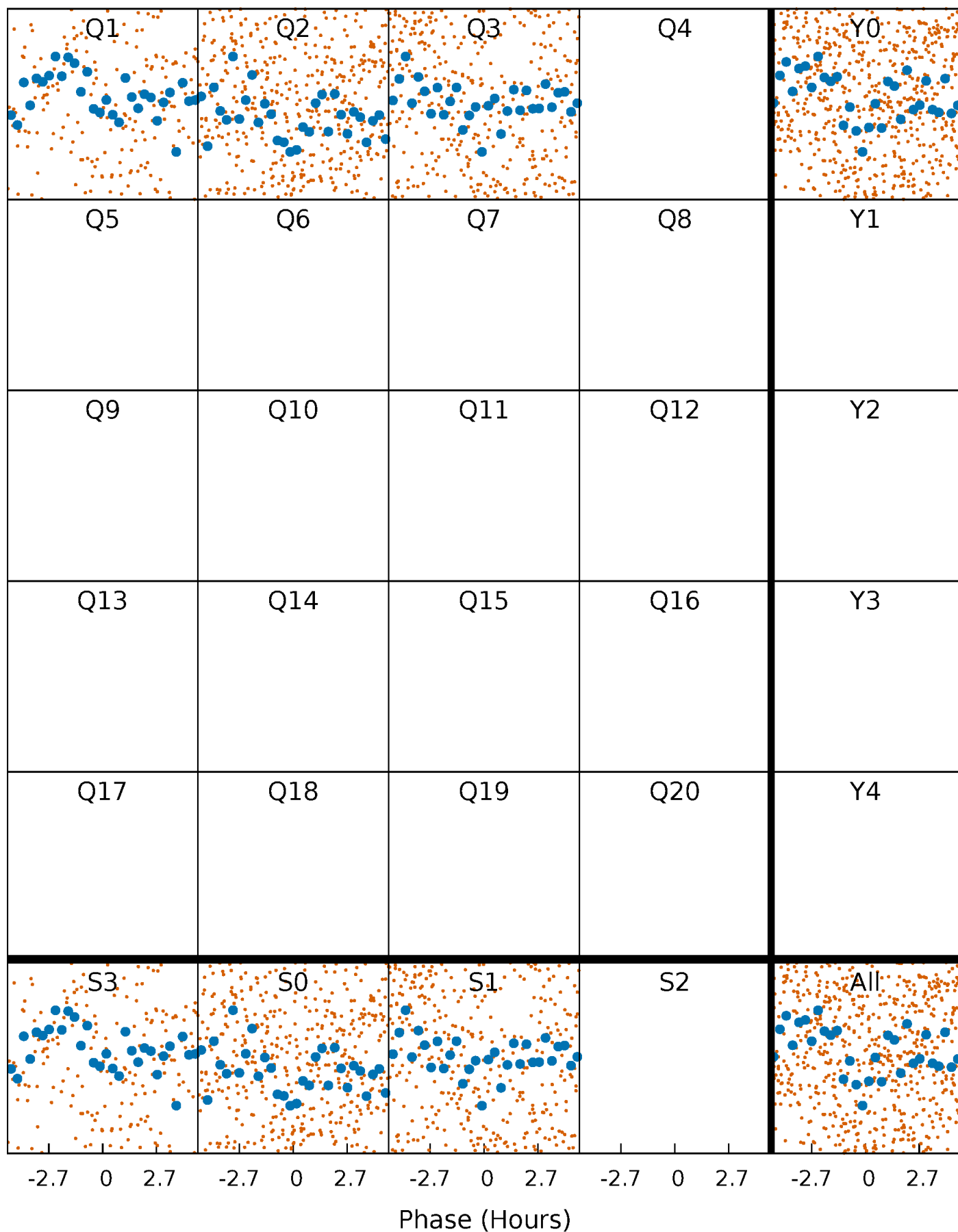


Non-Whitened Vs. Whitened Light Curve



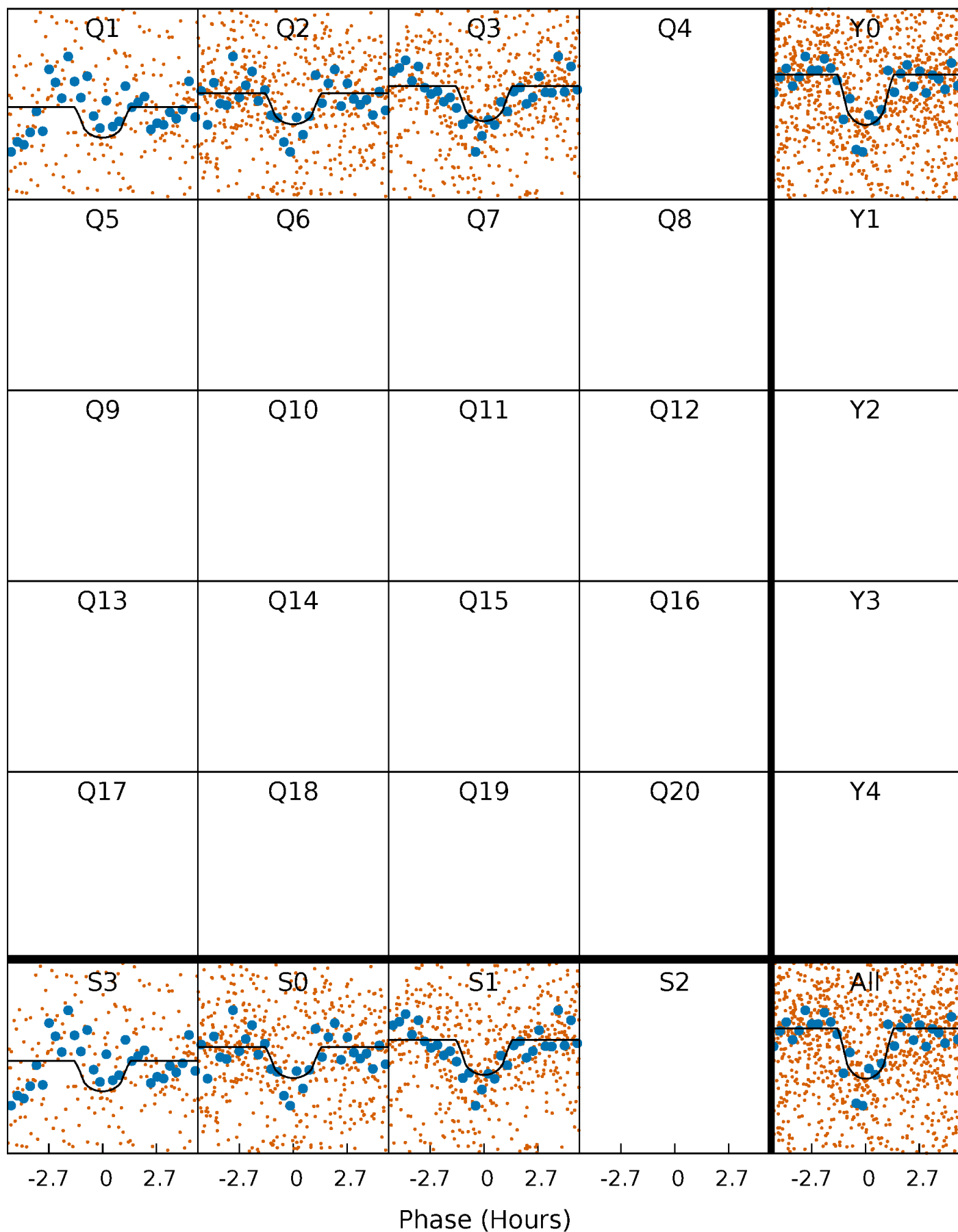
PDC Quarter-Phased Transit Curves

TCE 008345473-01 P= 2.250537 Days $T_0=133.605354$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008345473-01 P= 2.250537 Days $T_0=133.605354$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

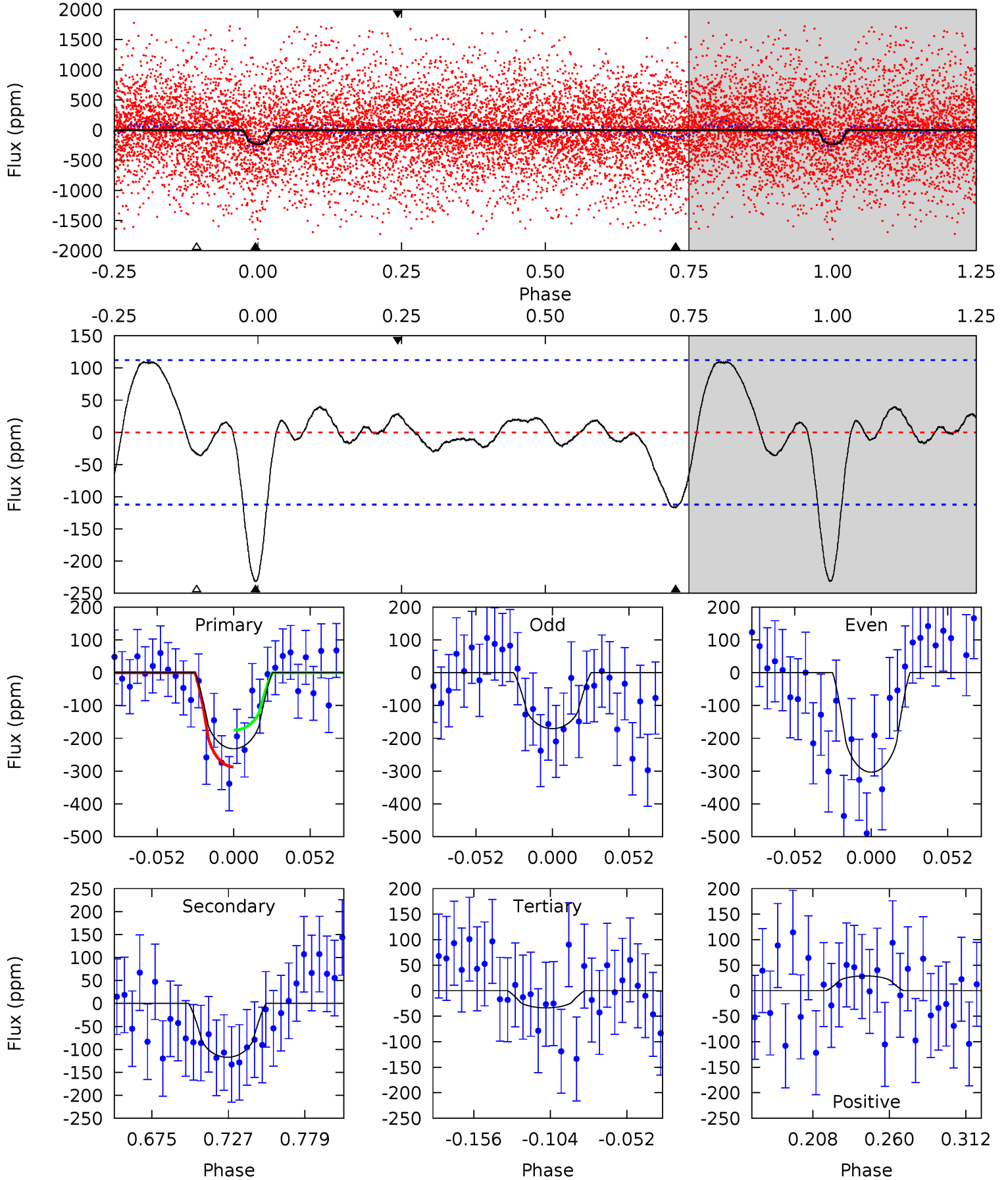
TCE 008345473-01 P= 2.250577 Days $T_0=133.597624$ (BKJD)



DV Model-Shift Uniqueness Test

008345473-01, P = 2.250537 Days, E = 131.354817 Days

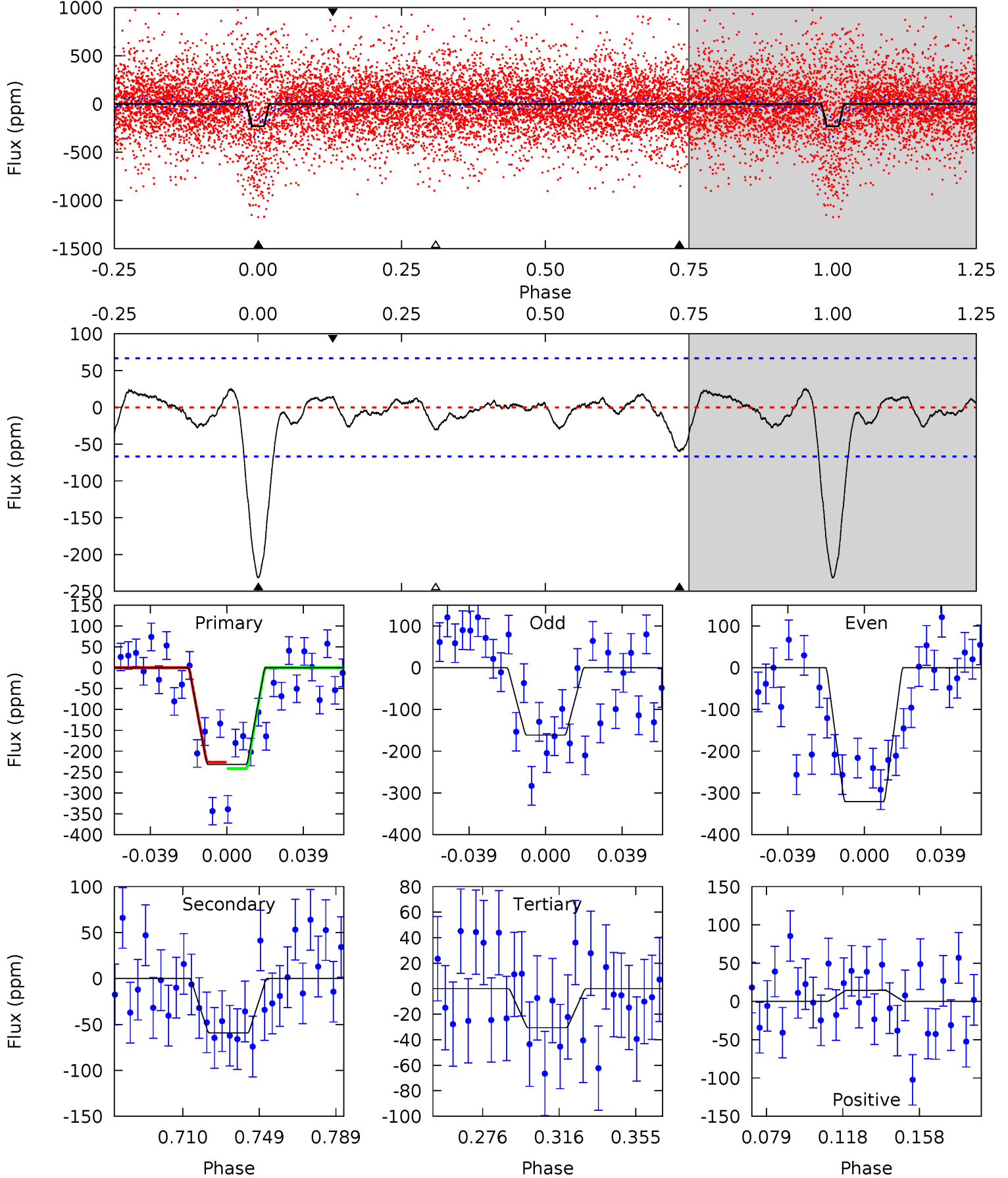
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.72	4.91	1.41	1.21	4.70	1.94	1.37	8.31	8.50	3.50	3.69	2.79	1.04	0.32	2.37



Alt Model-Shift Uniqueness Test

008345473-01, P = 2.250577 Days, E = 131.347047 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	4.22	2.17	1.03	4.76	2.06	0.88	14.3	15.4	2.05	3.19	5.63	1.06	0.10	0.55



Stellar Parameters For KIC 008345473

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4507^{+90}_{-81}	$2.391^{+0.027}_{-0.033}$	$0.100^{+0.200}_{-0.200}$	$12.787^{+1.327}_{-1.990}$	$1.467^{+0.324}_{-0.431}$	$0.001^{+0.000}_{-0.000}$
	+2%/-2%	+1%/-1%	+200%/-200%	+10%/-16%	+22%/-29%	+21%/-14%
Source	PHO56	AST56	PHO56	DSEP		

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

Secondary Eclipse Parameters for KIC 008345473-01 / KOI 7881.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-117 ± 24	$18.37^{+8.65}_{-8.51}$	5099^{+127}_{-147}	-2590^{+7542}_{-1247}	$0.290^{+0.689}_{-0.160}$
Alt.	-59 ± 14	$22.26^{+9.30}_{-8.04}$	5106^{+143}_{-139}	-3954^{+732}_{-203}	$0.096^{+0.146}_{-0.050}$

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 $A_{obs} \gg 1.0$

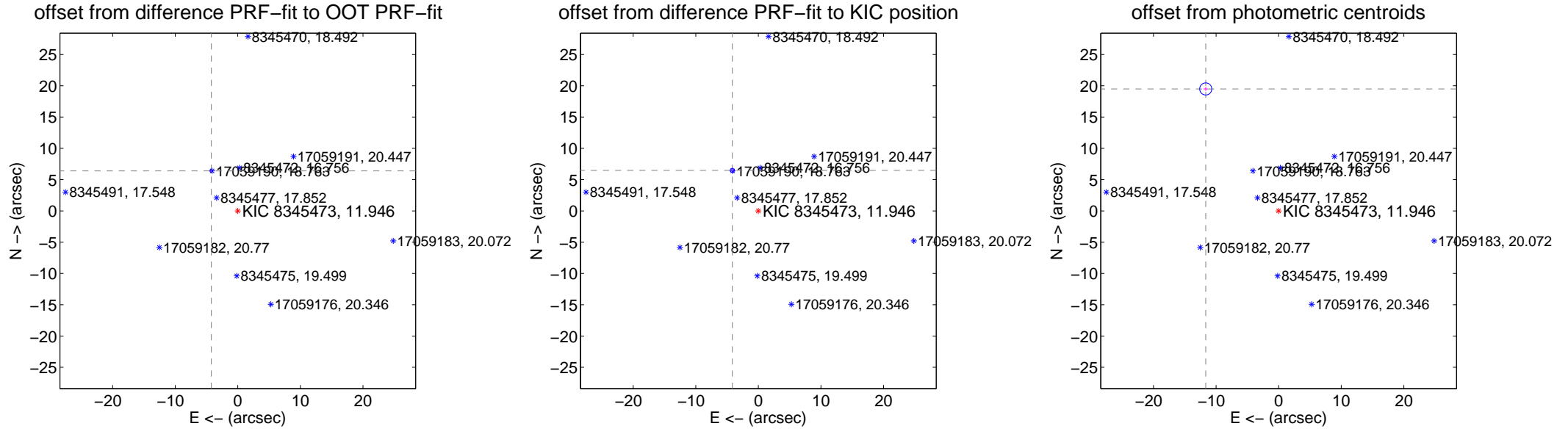
DV Centroid Data

Supplemental centroid analysis for 008345473-01. **Kepler magnitude: 11.95.** Transit SNR 9.63

There are 3 quarters with good PRF difference image offsets

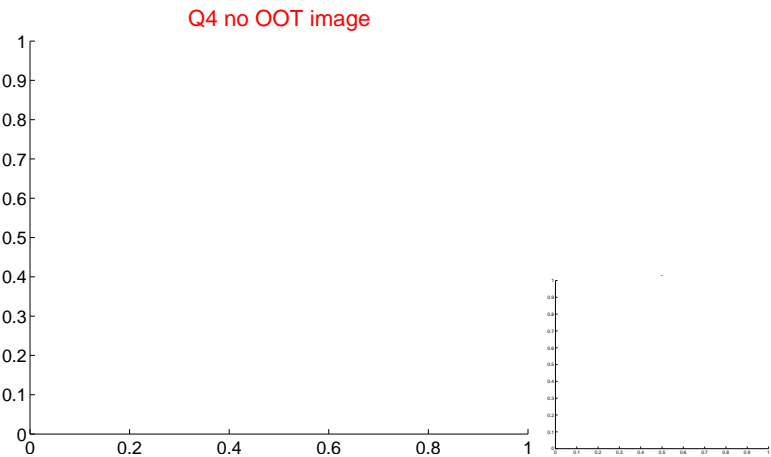
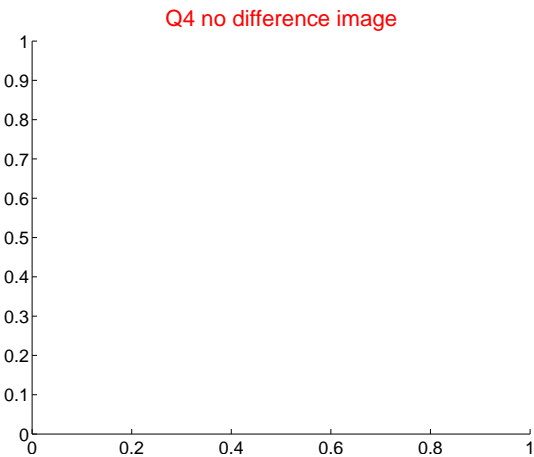
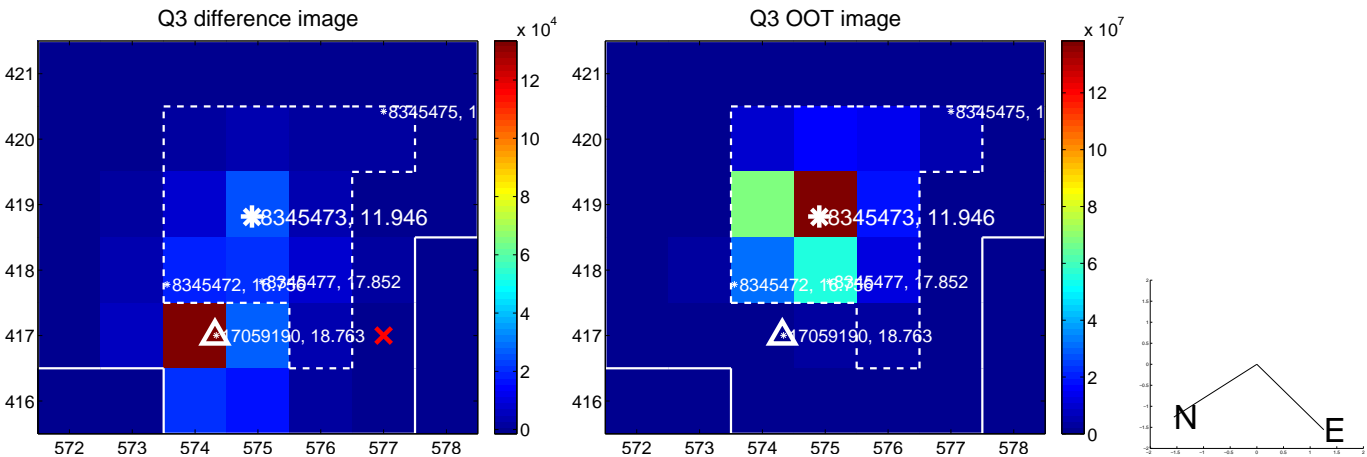
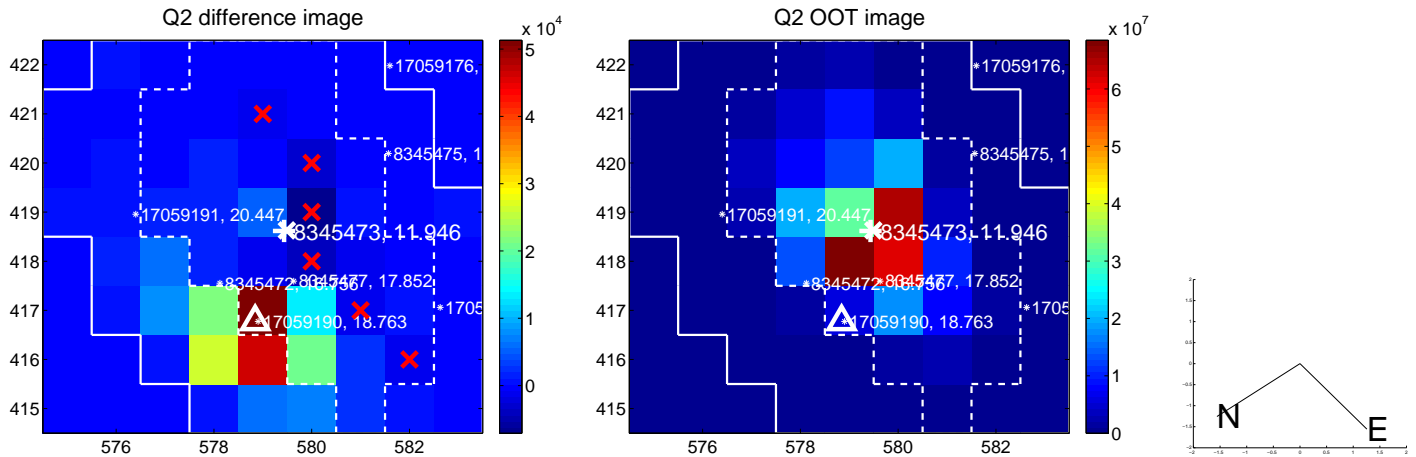
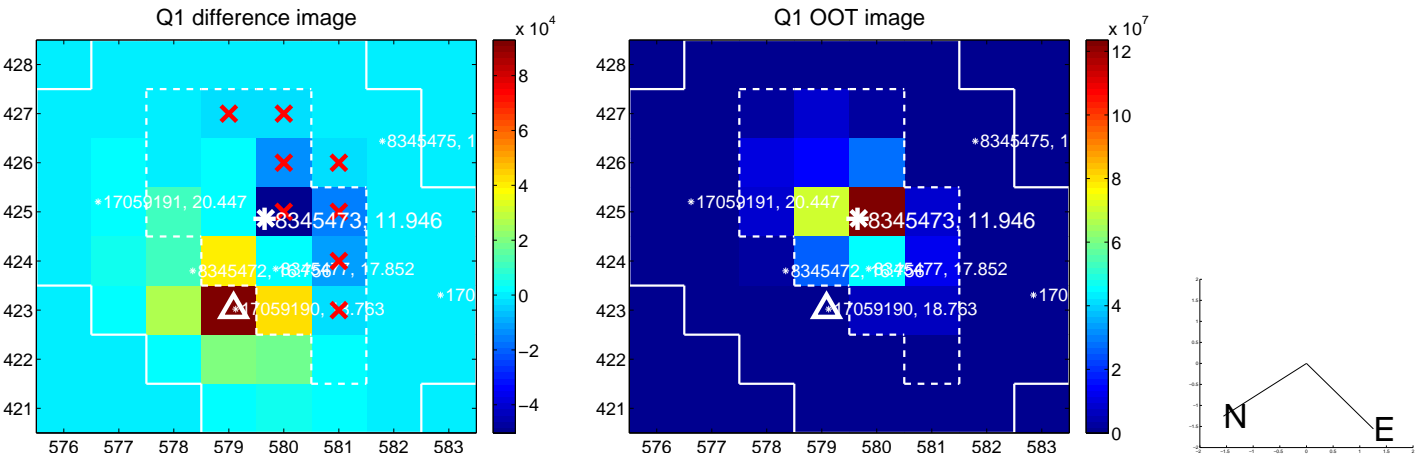
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.661 \pm 0.074	103.80	4.224 \pm 0.077	6.392 \pm 0.072
PRF-fit source offset from KIC position	7.697 \pm 0.110	70.29	4.164 \pm 0.084	6.473 \pm 0.118
photometric centroid source offset	22.71 \pm 0.32	70.51	11.66 \pm 0.36	19.49 \pm 0.31



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.



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



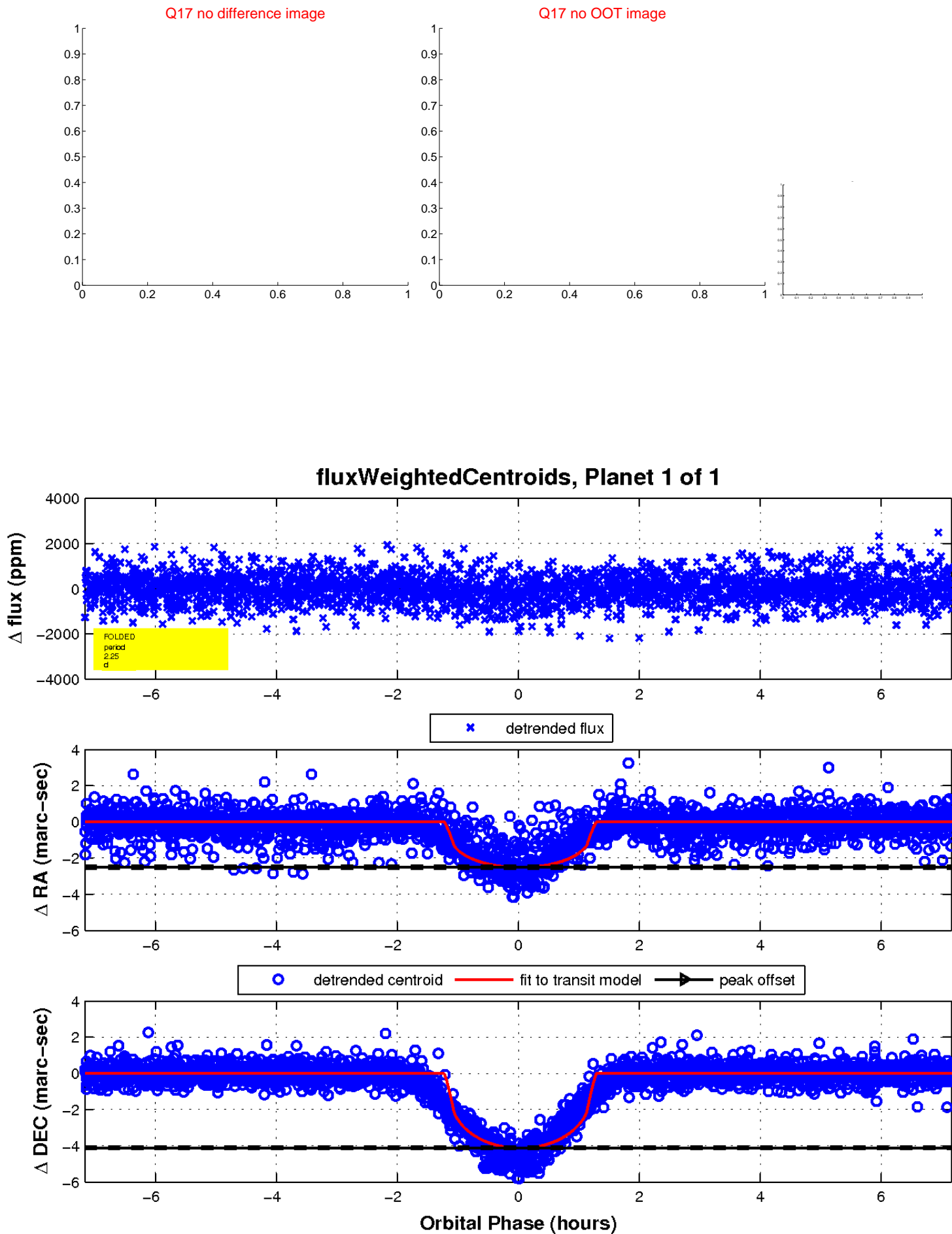
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

