

KIC 010589849

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})
010589849-01	OBS	No	6.955493	137.597169	6719.2	4.928	14.8	9.6	1.00	5780	8.21	196.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010589849-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—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.

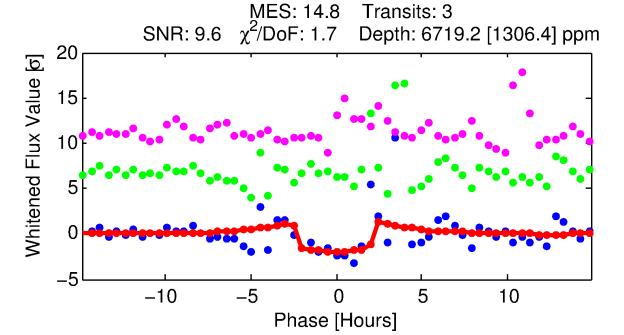
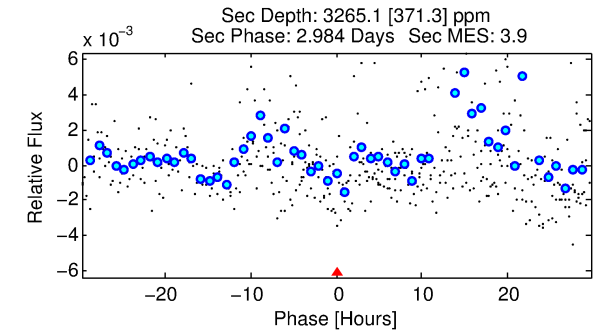
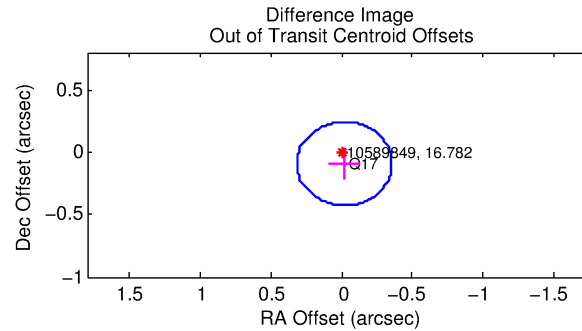
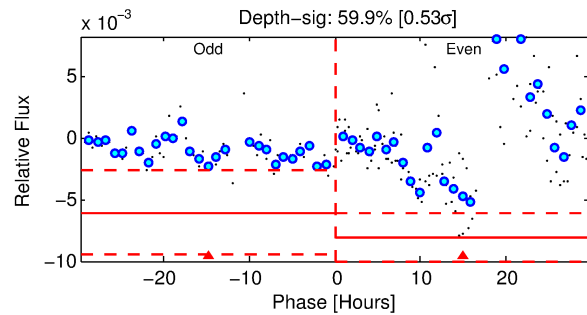
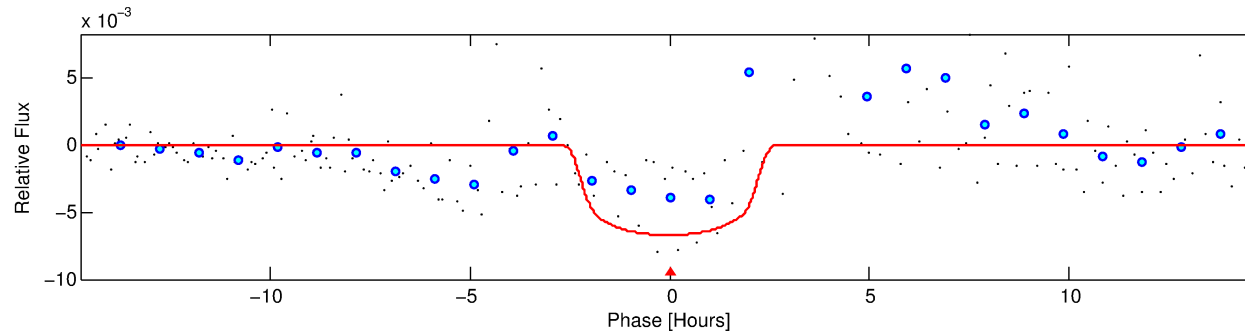
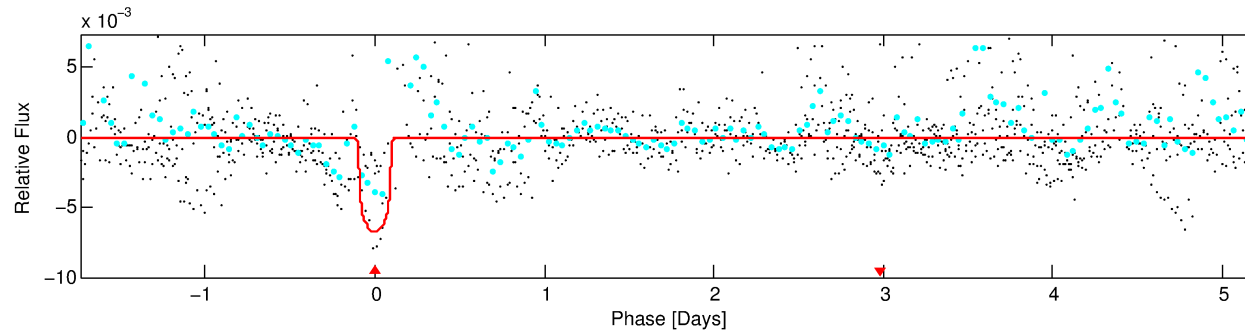
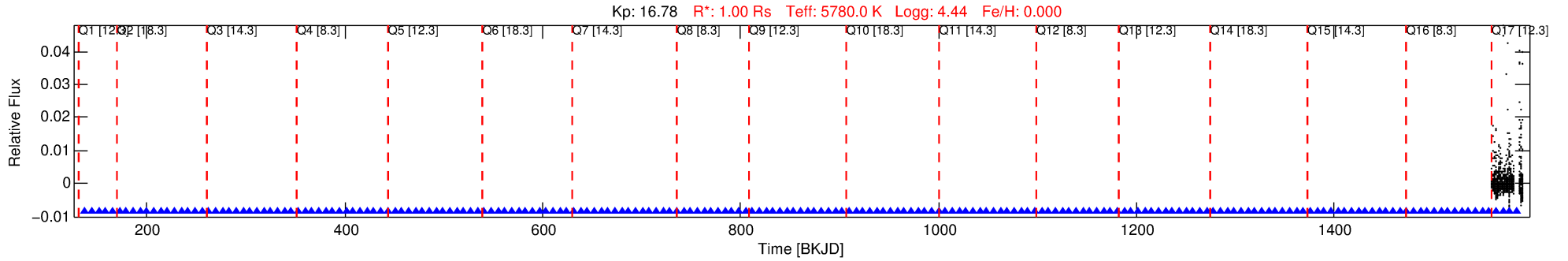
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010589849-01

No Significant Match Found

DV One-Page Summary

KIC: 10589849 Candidate: 1 of 1 Period: 6.955 d



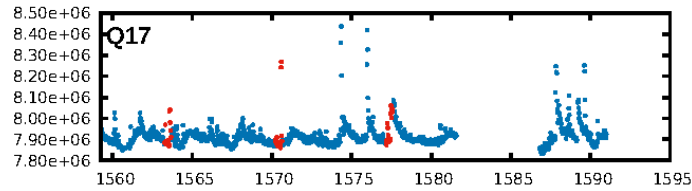
DV Fit Results:

Period = 6.95549 [0.00006] d
Epoch = 137.5972 [0.0100] BKJD
Rp/R* = 0.0752 [0.0373]
a/R* = 11.11 [23.38]
b = 0.31 [6.14]
Seff = 196.56 [0.00]
Teq = 955 [0] K
Rp = 8.21 [4.07] Re
a = 0.0713 [0.0000] AU
Ag = 135.69 [135.63] [0.99σ]
Teffp = 5038 [1259] K [3.24σ]

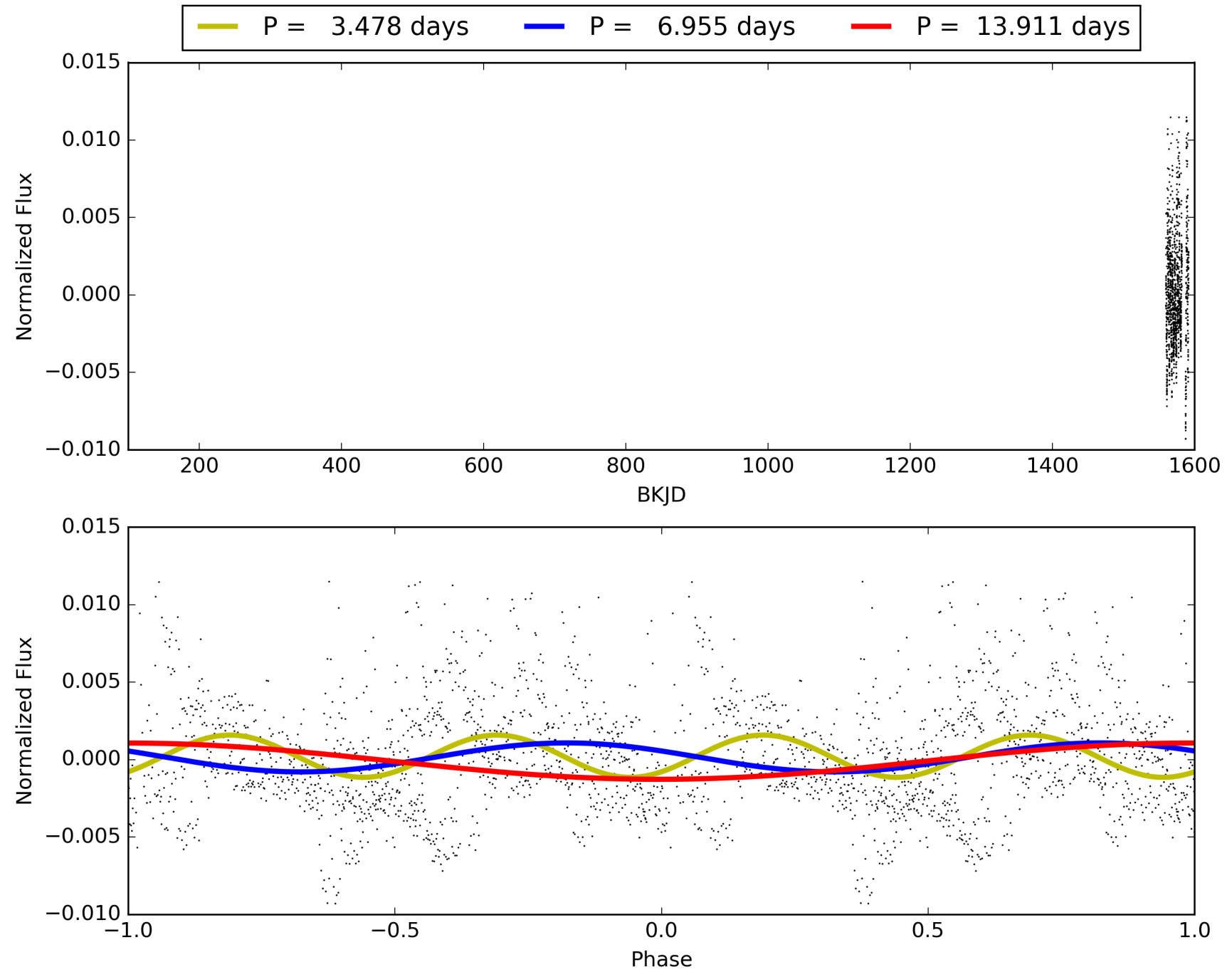
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.1%
ModelChiSquareGof-sig: 70.6%
Bootstrap-pfa: 3.23e-17
RollingBand-fgt: N/A
GhostDiagnostic-chr: 1.923
Centroid-sig: 15.8%
Centroid-so: 0.739 arcsec [1.59σ]
OotOffset-rm: 0.095 arcsec [0.84σ]
KicOffset-rm: 0.289 arcsec [2.72σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

TCE 010589849-01, PDC Light Curves

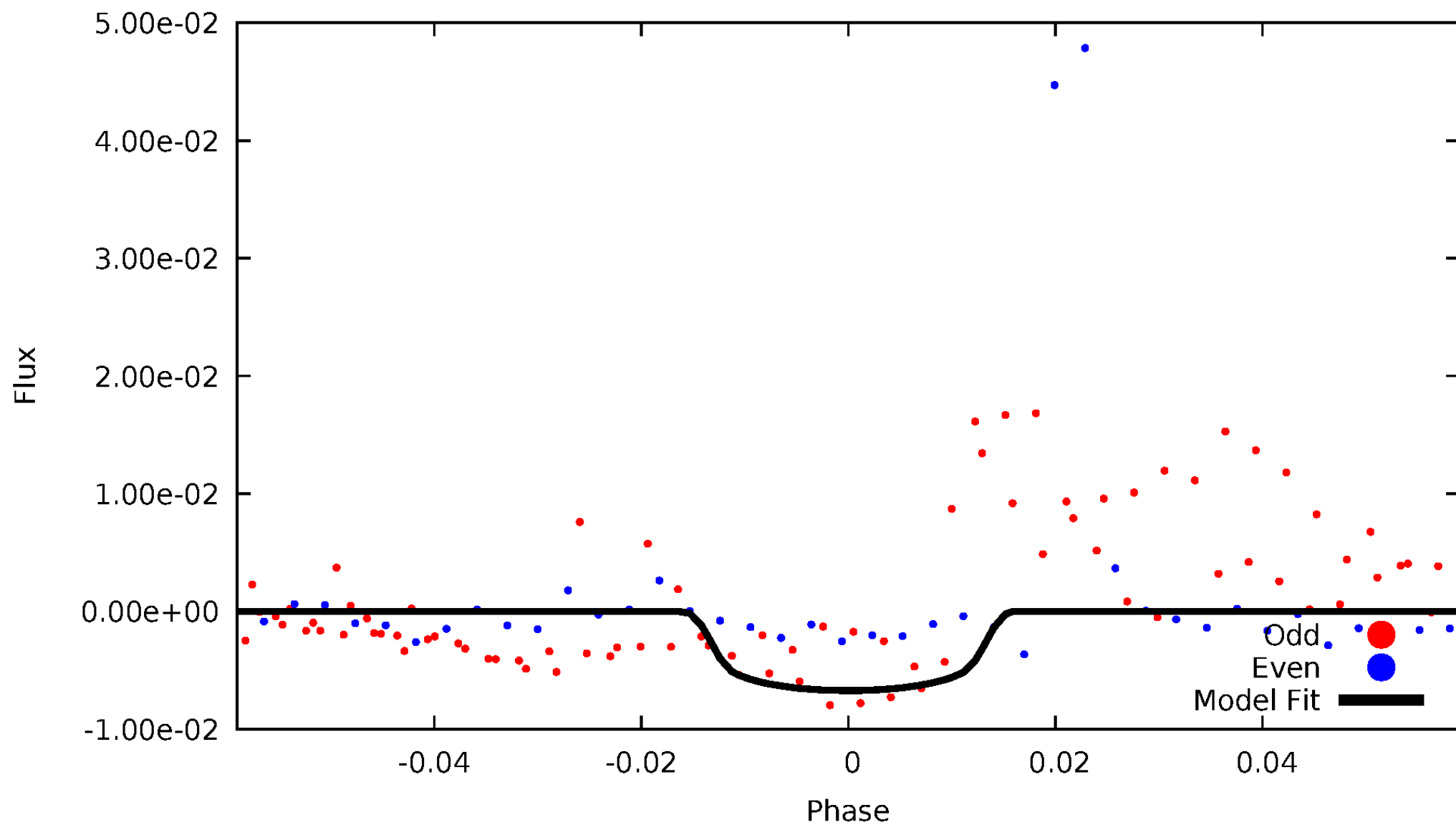


TCE 010589849-01



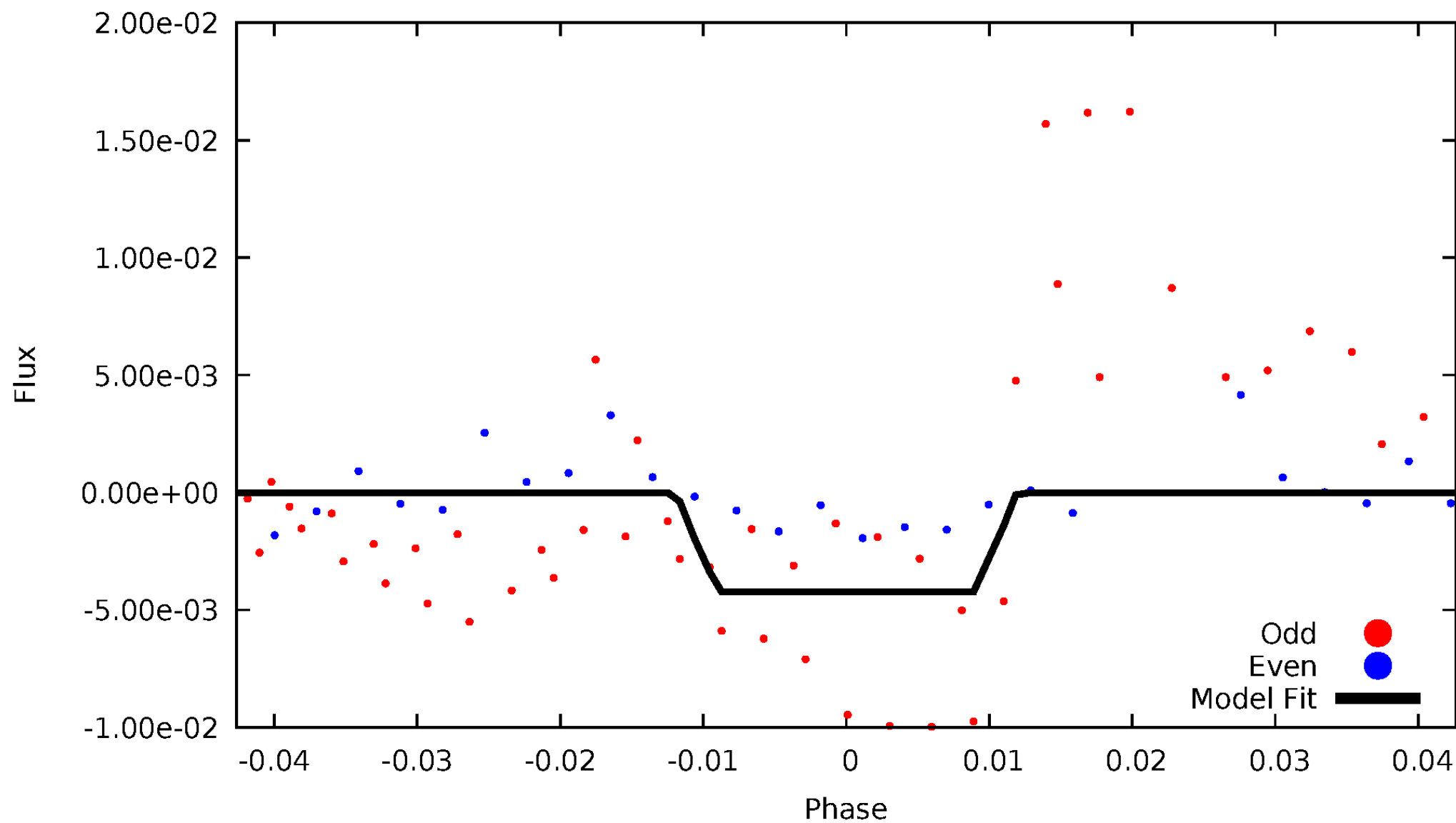
DV Odd/Even

TCE 010589849-01



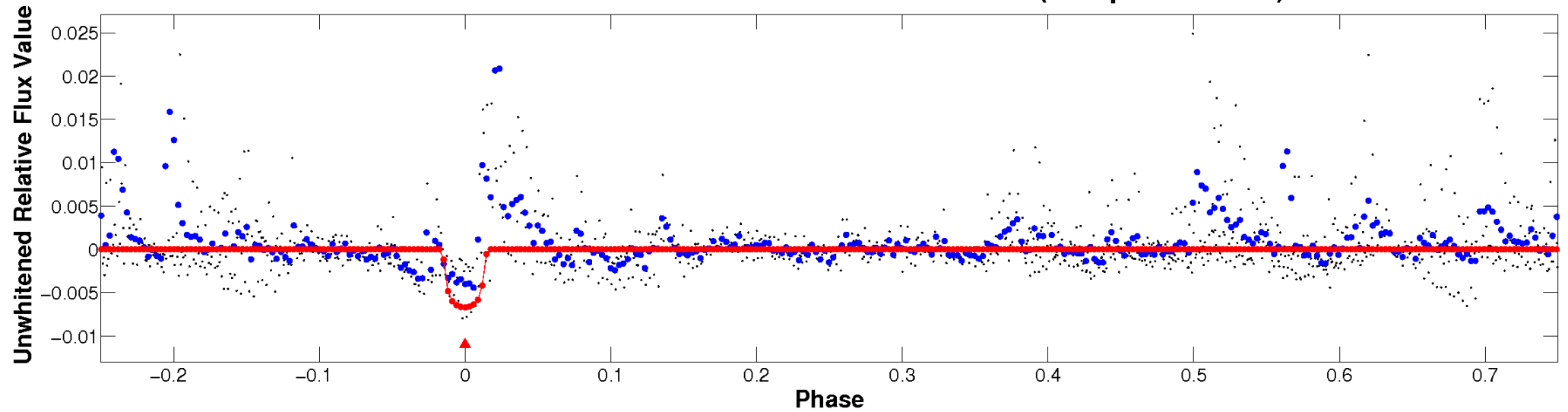
ALT Odd/Even

TCE 010589849-01

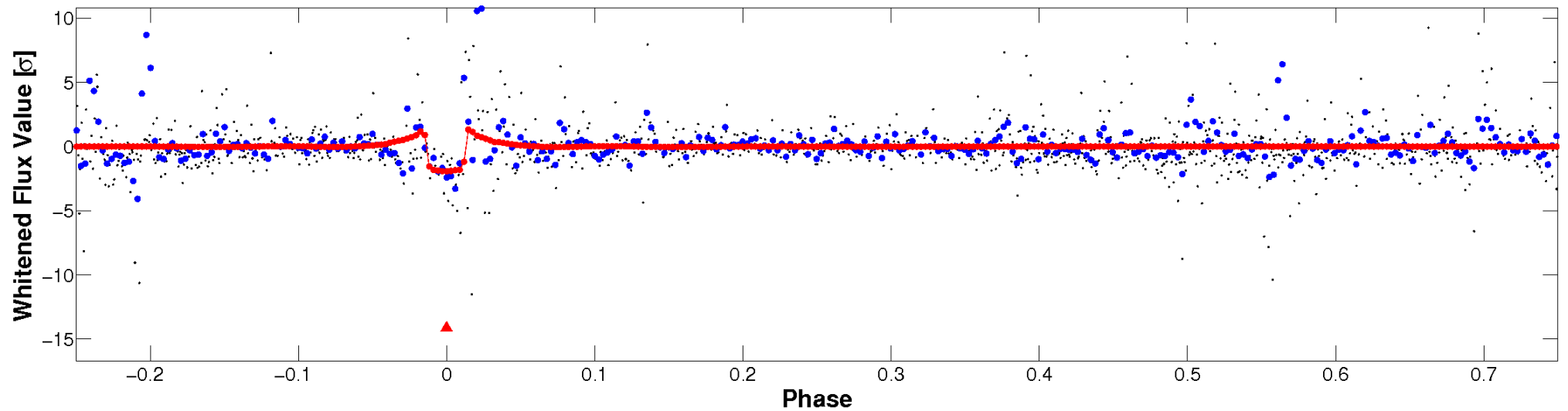


Non-Whitened Vs. Whitened Light Curve

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

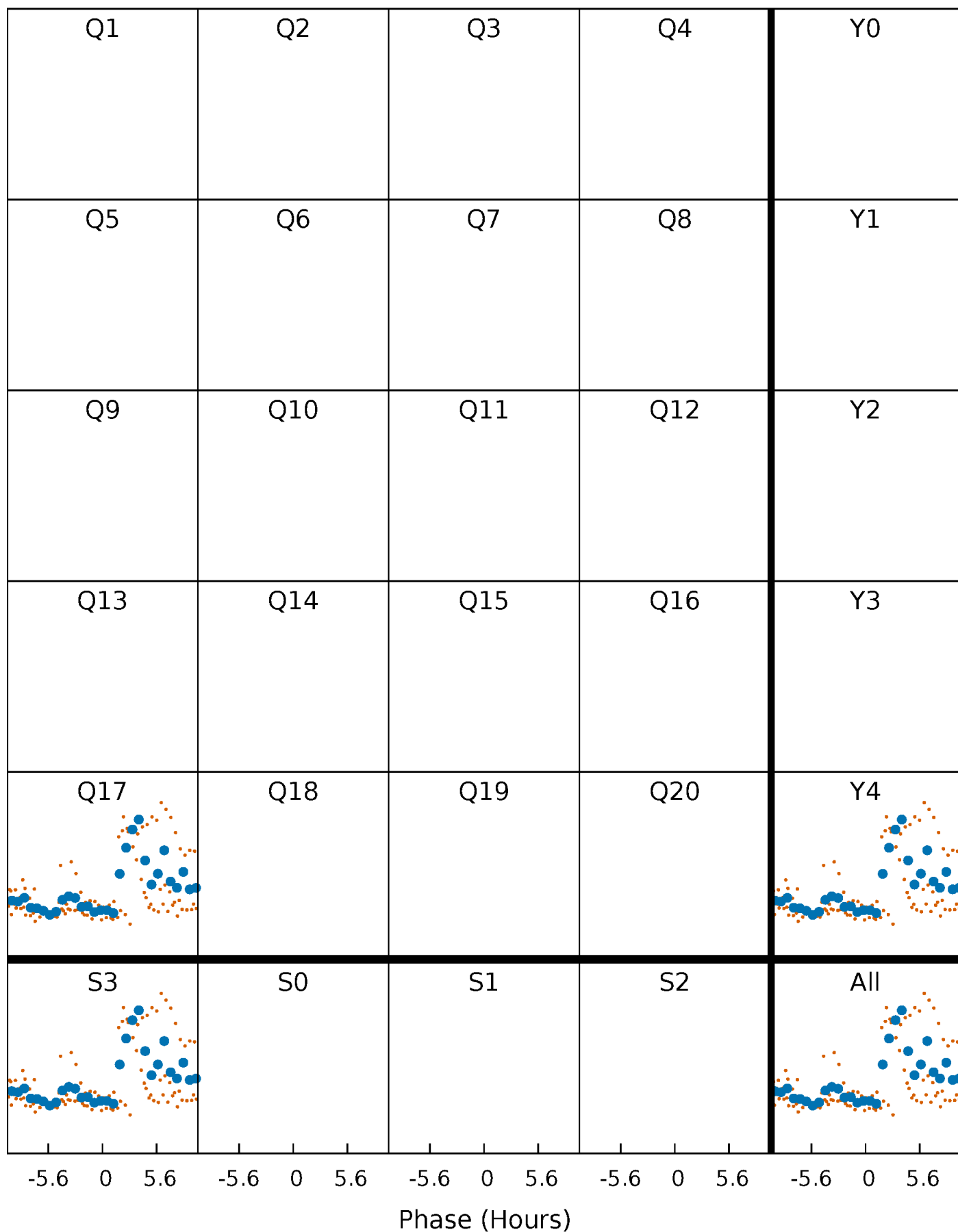


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



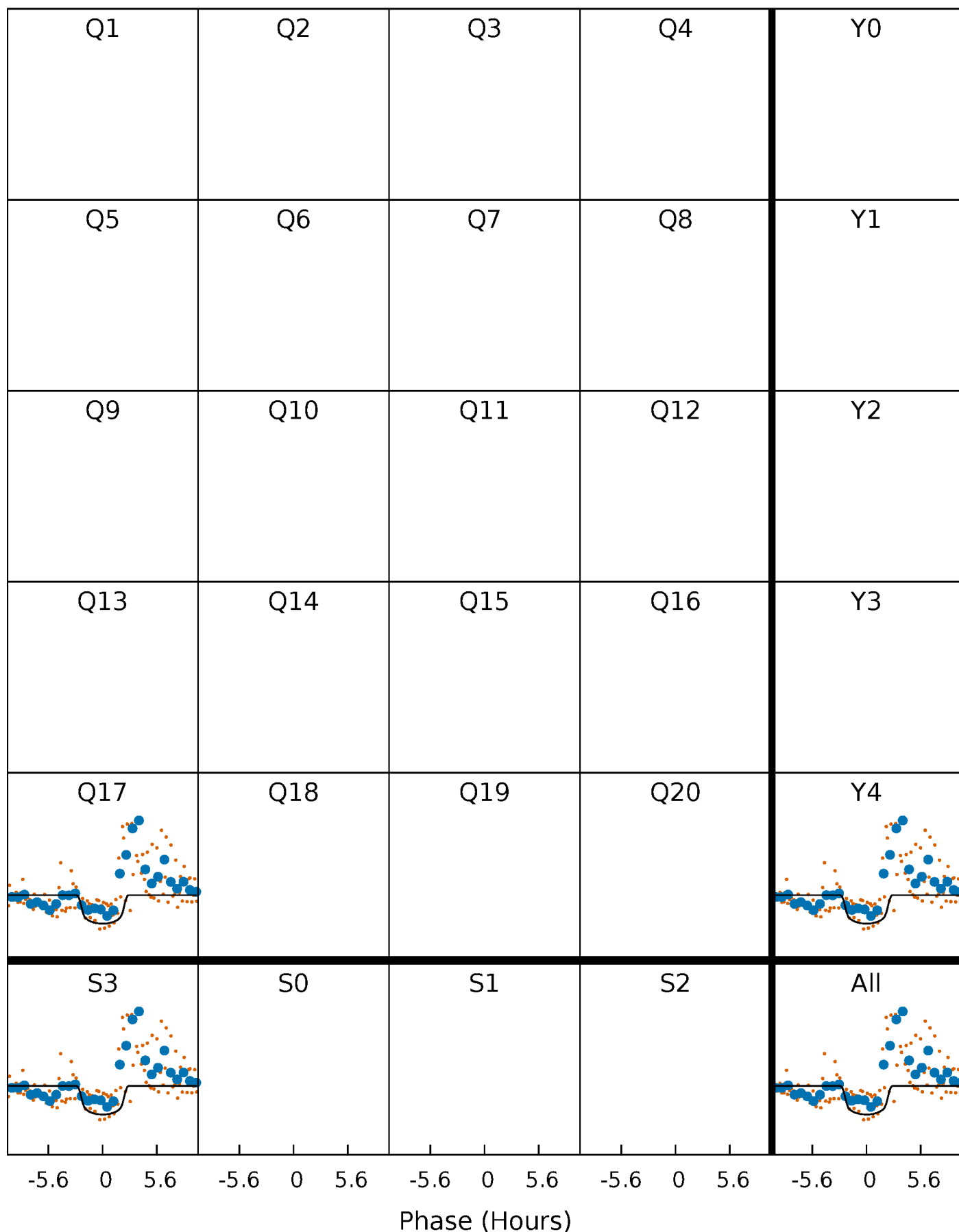
PDC Quarter-Phased Transit Curves

TCE 010589849-01 P= 6.955493 Days $T_0=137.597169$ (BKJD)



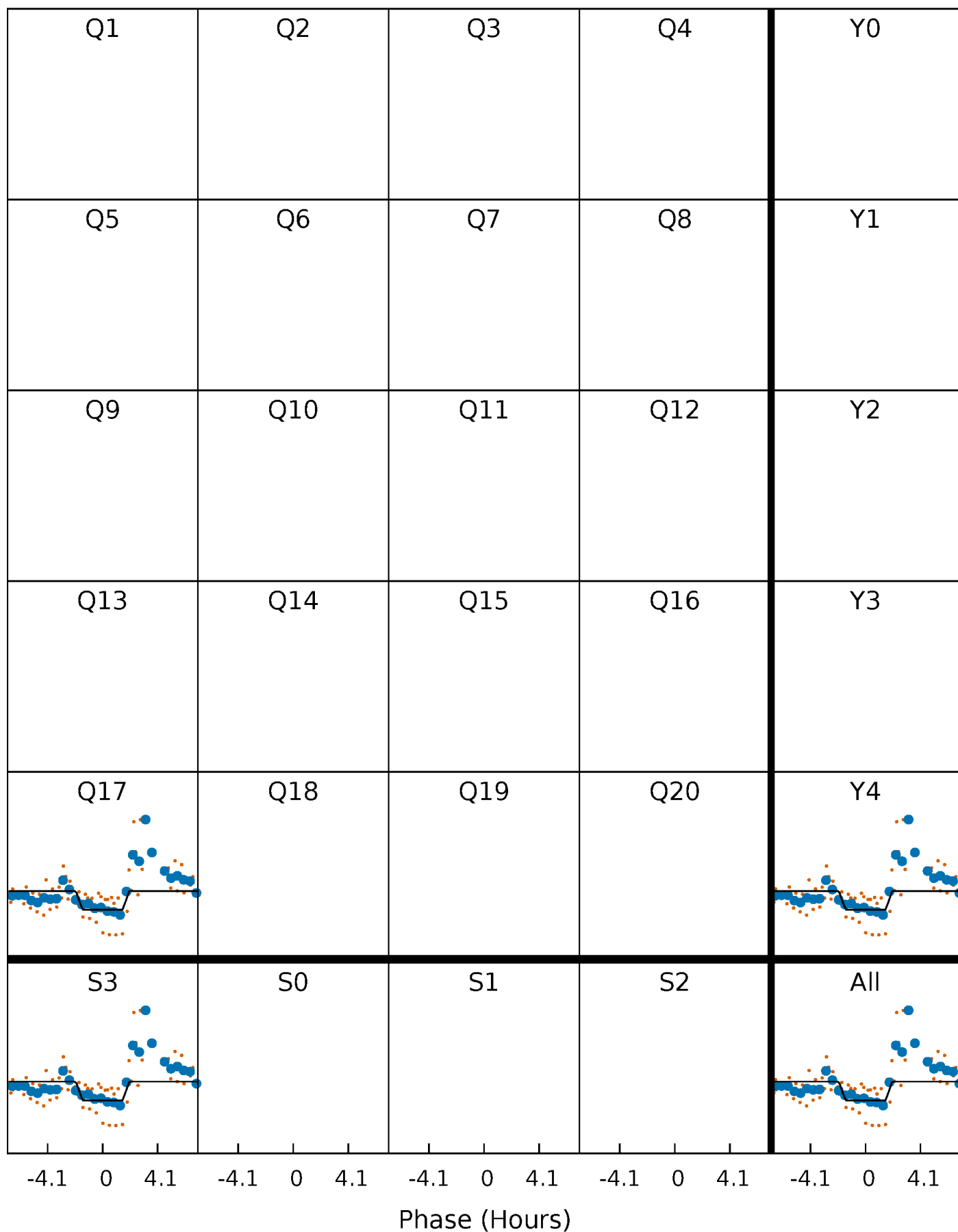
DV Quarter-Phased Transit Curves

TCE 010589849-01 P= 6.955493 Days $T_0=137.597169$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

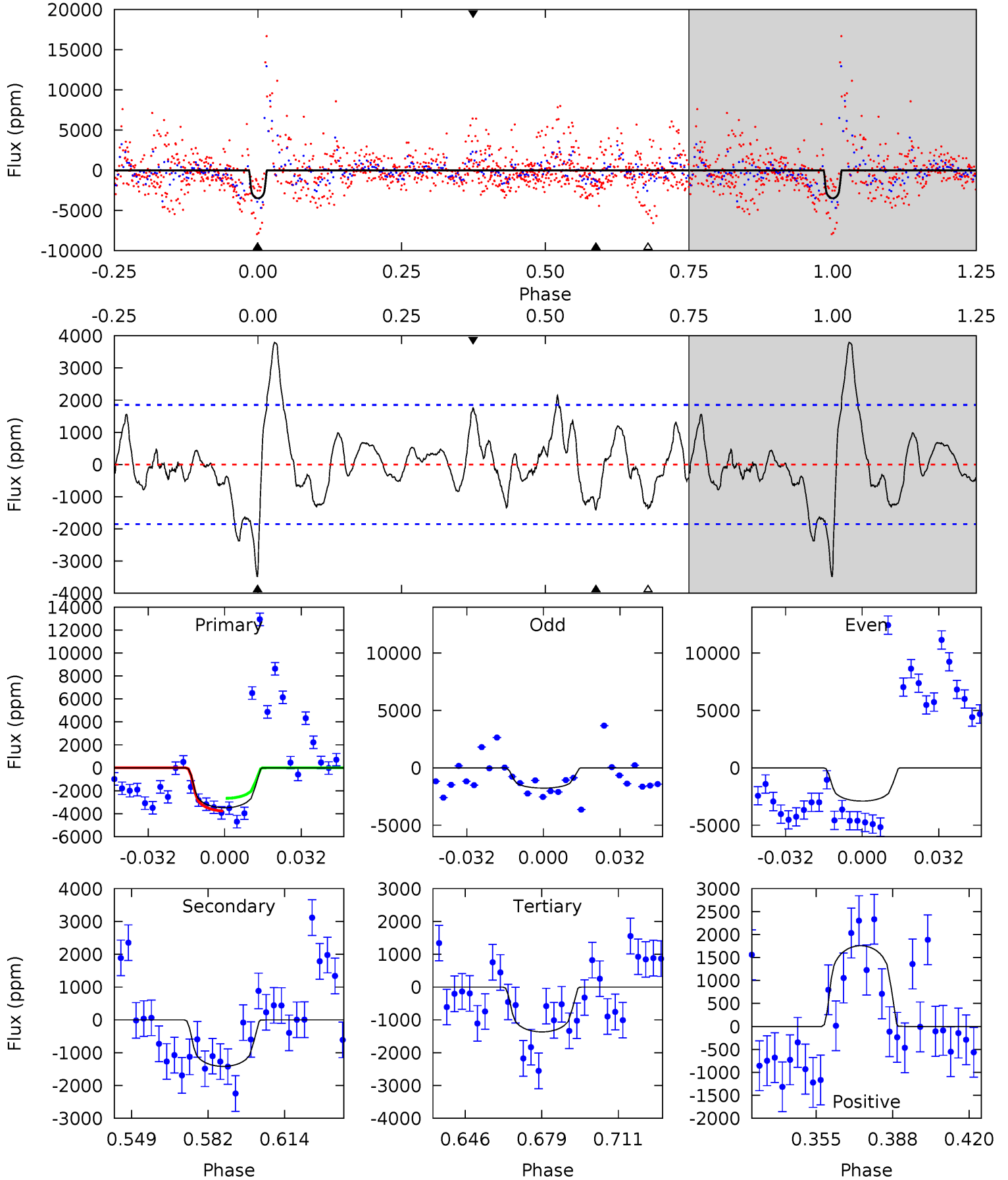
TCE 010589849-01 P= 6.954951 Days $T_0=137.696328$ (BKJD)



DV Model-Shift Uniqueness Test

010589849-01, P = 6.955493 Days, E = 137.597169 Days

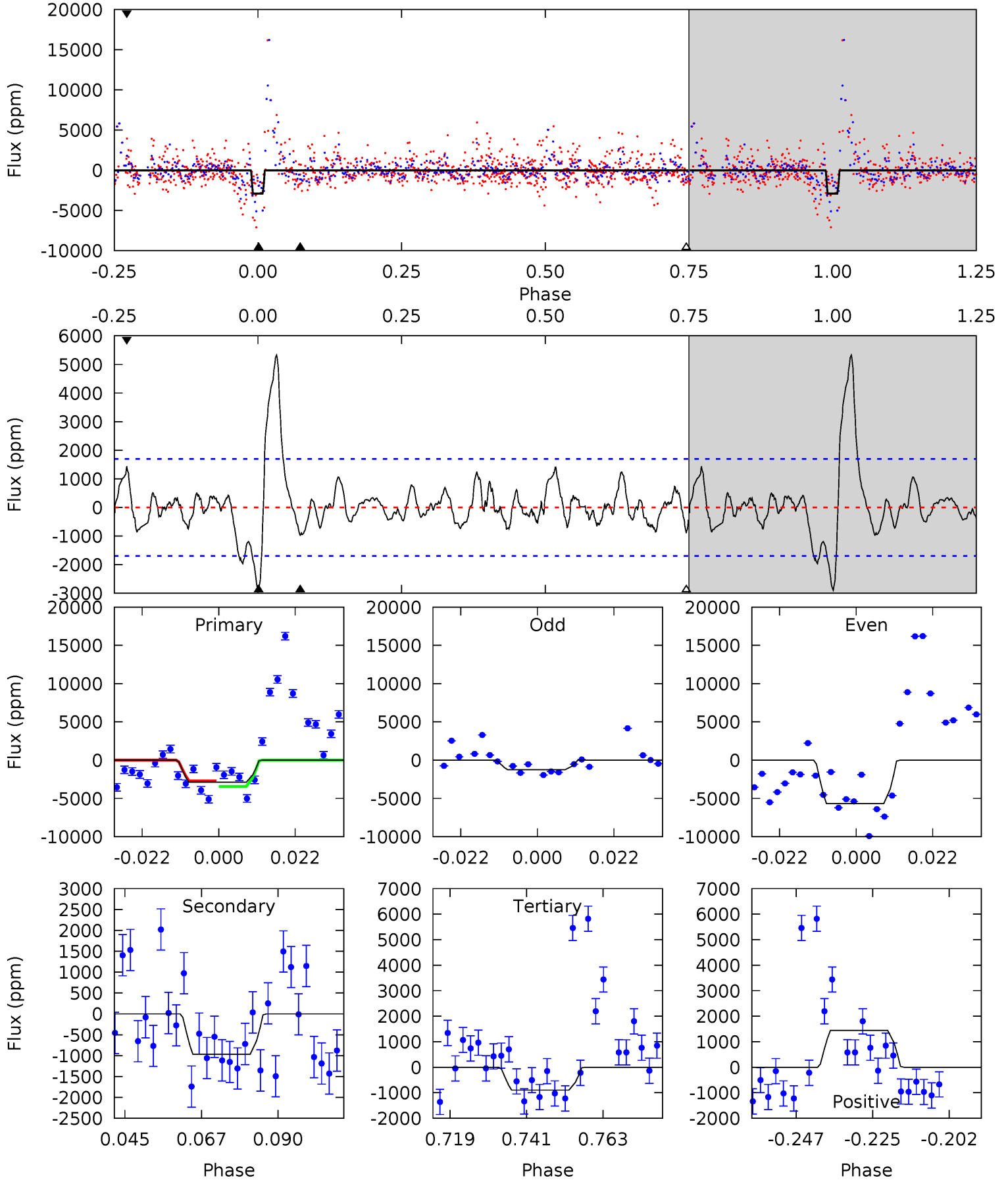
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.01	3.67	3.54	4.55	4.80	2.14	1.95	5.47	4.46	0.13	-0.88	1.32	1.43	0.52	1.48



Alt Model-Shift Uniqueness Test

010589849-01, P = 6.954951 Days, E = 137.696328 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.33	2.78	2.57	4.14	4.87	2.28	1.98	5.76	4.19	0.21	-1.36	6.52	1.42	0.65	1.12



Stellar Parameters For KIC 010589849

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 010589849-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1418 ± 386	$8.51^{+3.95}_{-4.30}$	1334^{+61}_{-60}	4252^{+1446}_{-597}	55^{+166}_{-31}
Alt.	-968 ± 348	$7.41^{+4.05}_{-3.54}$	1334^{+65}_{-64}	4131^{+1282}_{-627}	47^{+123}_{-29}

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

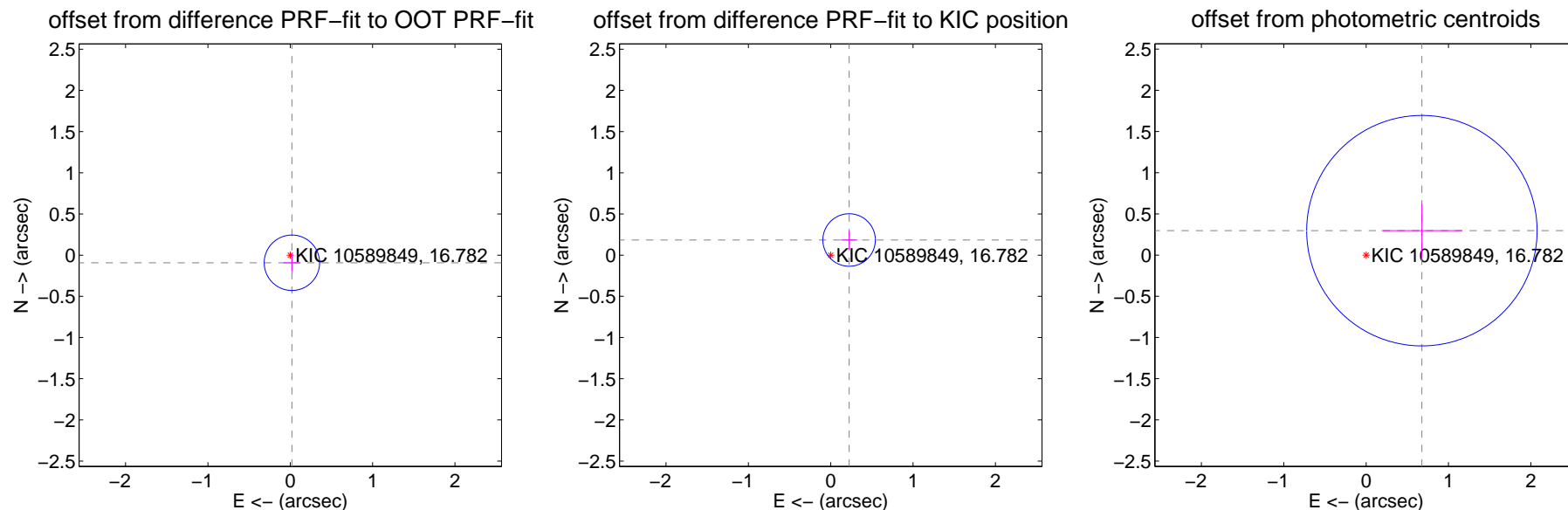
DV Centroid Data

Supplemental centroid analysis for 010589849-01. Kepler magnitude: 16.78. Transit SNR 9.58

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.34 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.095 ± 0.112	0.84	-0.020 ± 0.102	-0.092 ± 0.113
PRF-fit source offset from KIC position	0.289 ± 0.106	2.72	-0.223 ± 0.102	0.184 ± 0.113
photometric centroid source offset	0.74 ± 0.47	1.59	-0.68 ± 0.49	0.30 ± 0.33



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.



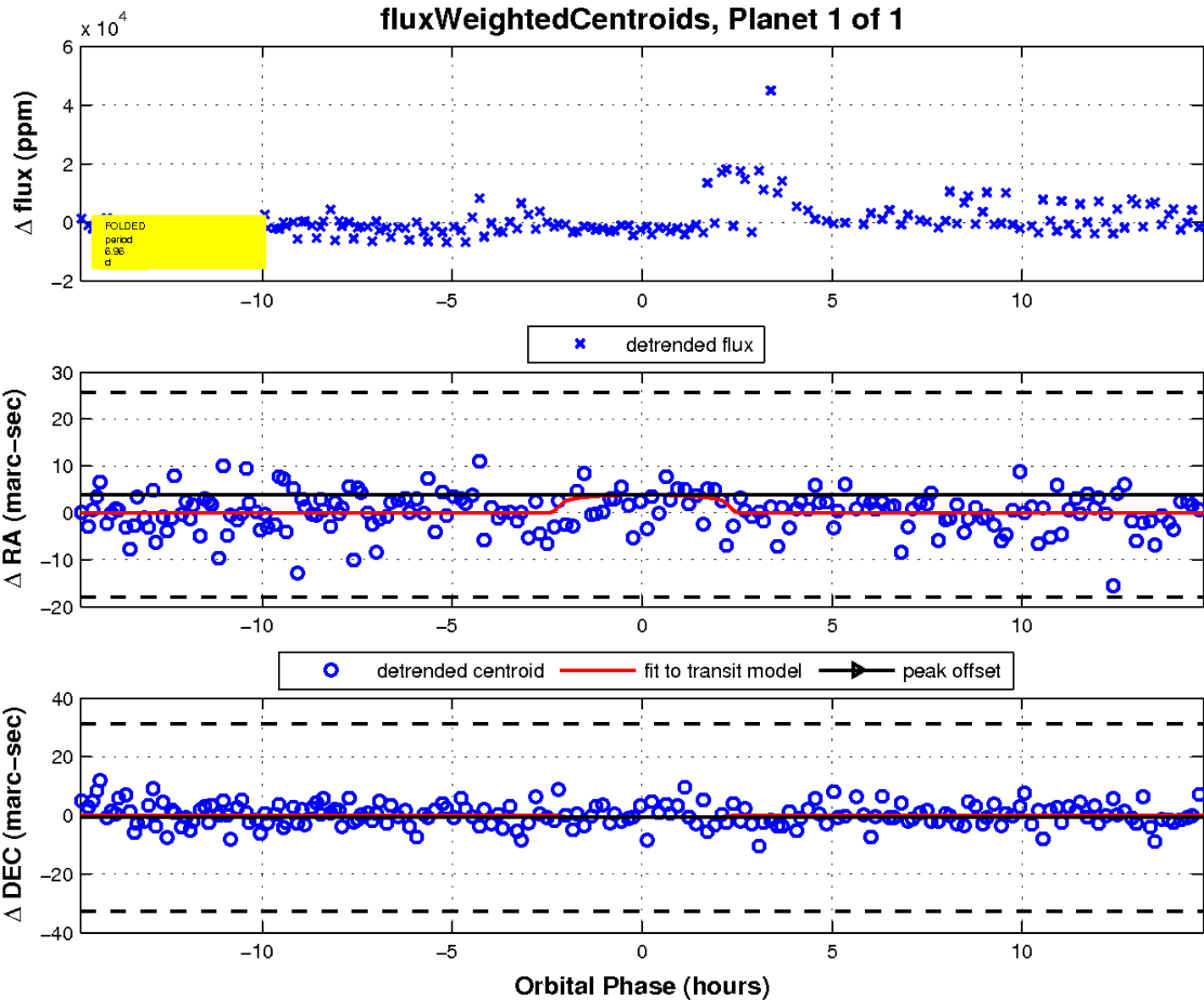
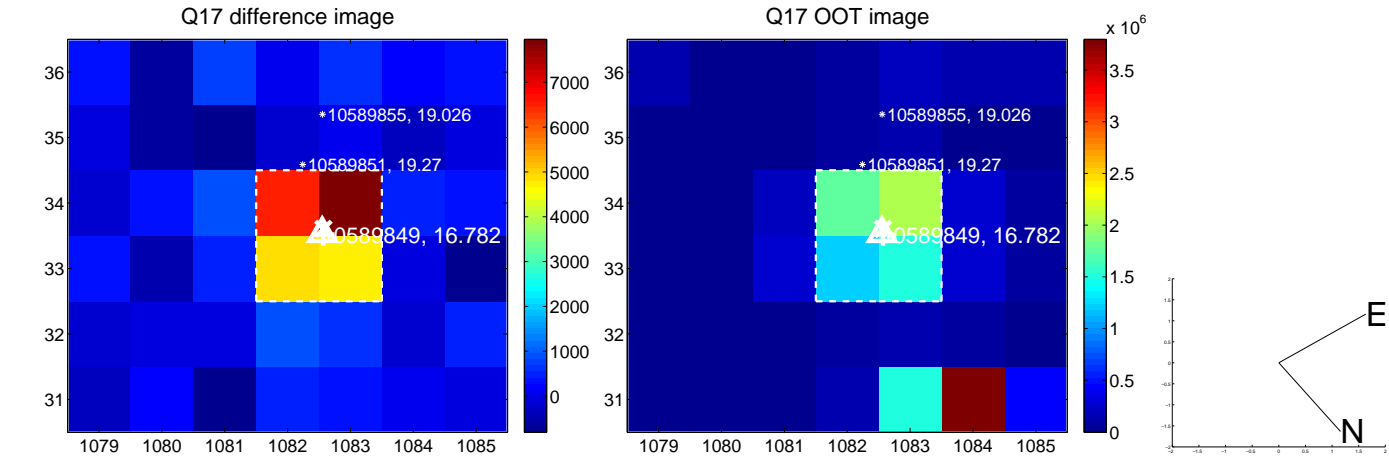
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

