

KIC 007830385

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})
007830385-01	OBS	No	583.148605	389.636476	899.6	14.760	8.2	7.6	0.97	5722	2.97	0.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007830385-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

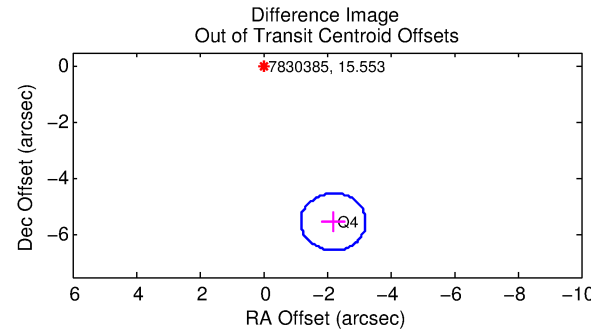
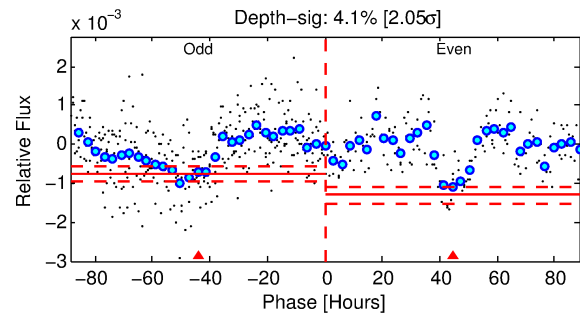
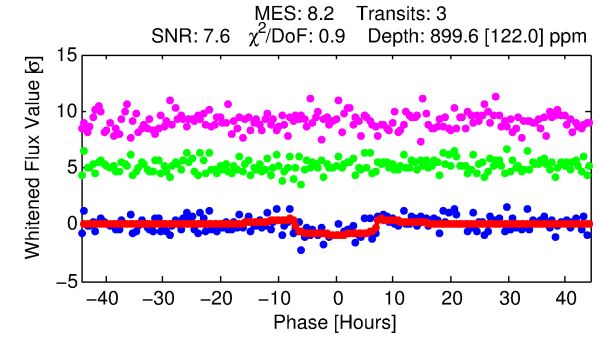
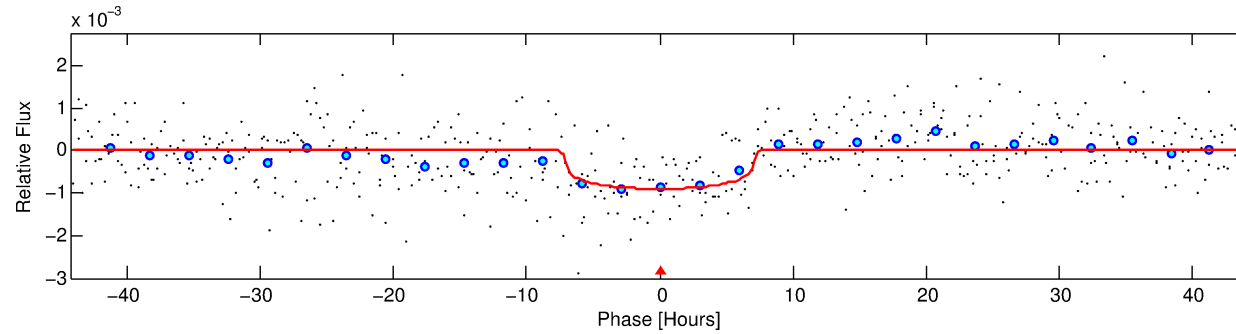
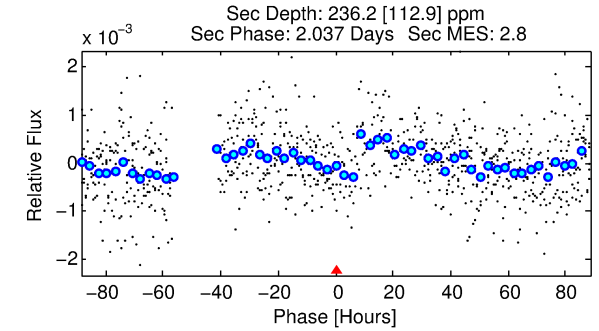
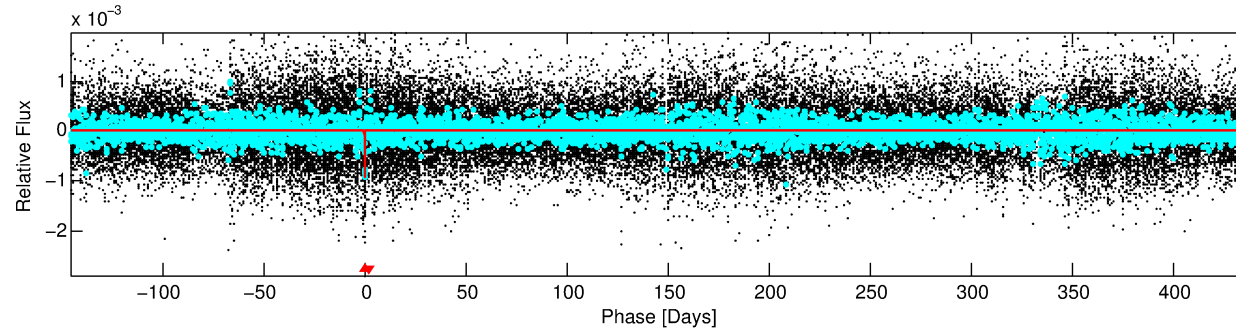
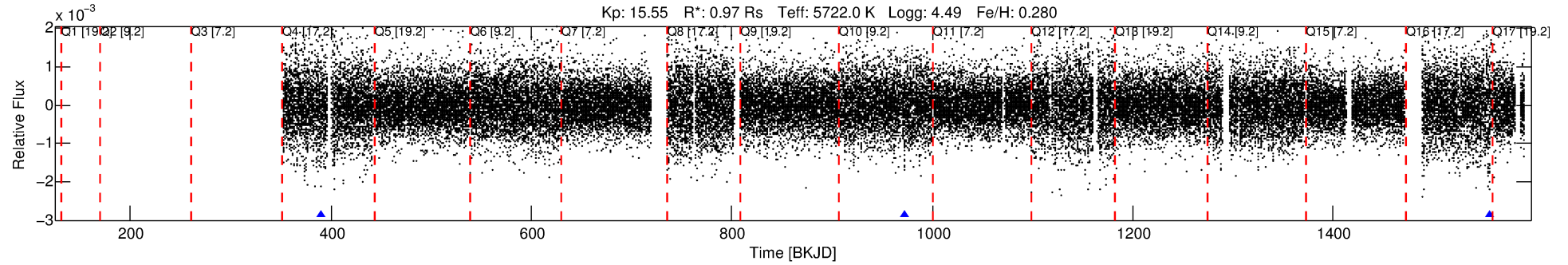
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007830385-01

No Significant Match Found

DV One-Page Summary

KIC: 7830385 Candidate: 1 of 1 Period: 583.149 d



DV Fit Results:

Period = 583.14860 [0.01383] d
Epoch = 389.6365 [0.0171] BKJD
Rp/R* = 0.0280 [0.0136]
a/R* = 271.26 [533.10]
b = 0.50 [2.98]
Seff = 0.47 [0.17]
Teq = 211 [20] K
Rp = 2.97 [1.65] Re
a = 1.3973 [0.3231] AU
Ag = 28734.36 [32744.78] [0.88σ]
Teff = 4240 [1161] K [3.47σ]

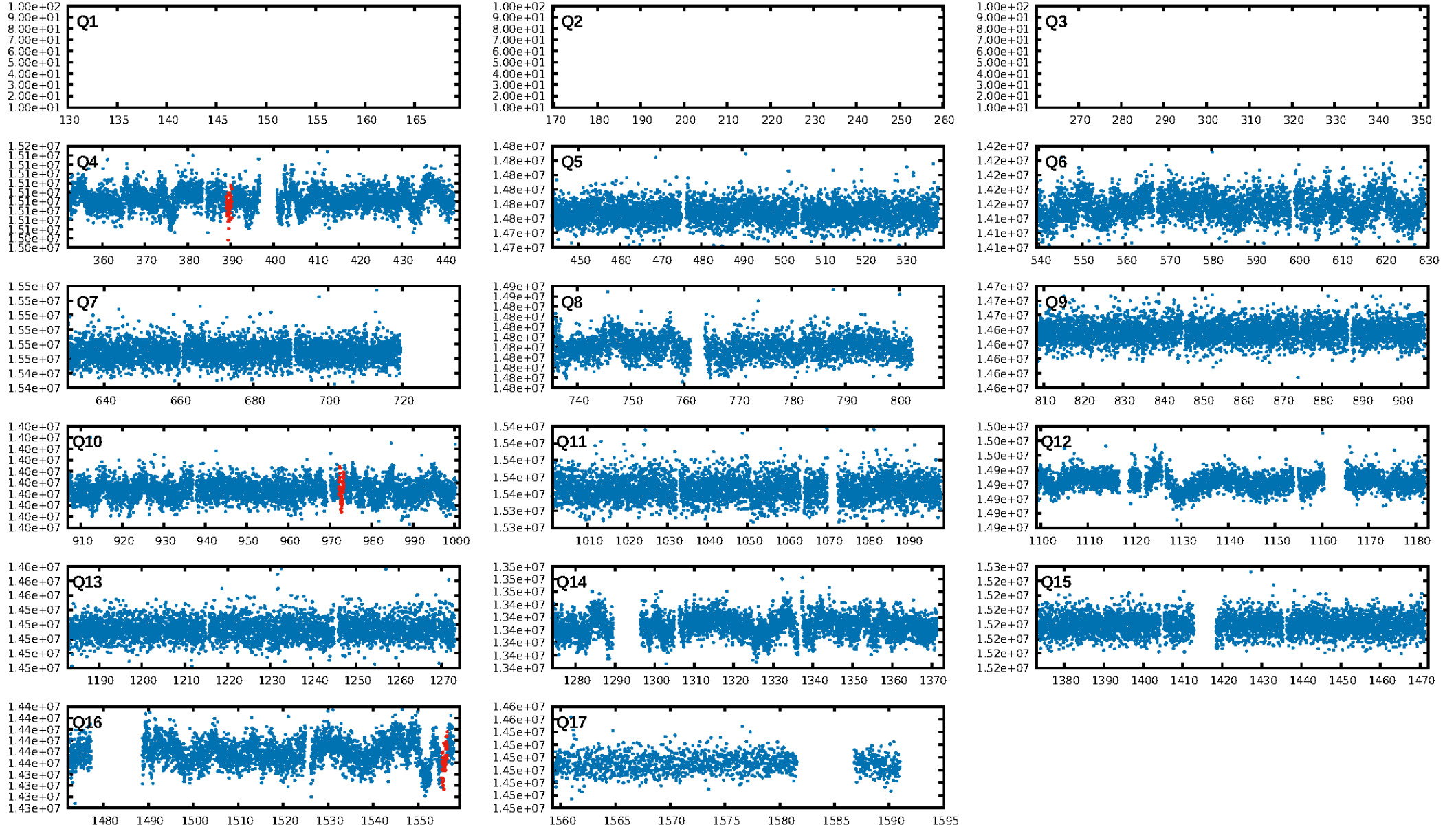
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 28.6%
ModelChiSquareGoF-sig: 99.9%
Bootstrap-pfa: 5.33e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.847
Centroid-sig: 26.7%
Centroid-so: 3.020 arcsec [1.67σ]
OotOffset-rm: 5.962 arcsec [17.55σ]
KicOffset-rm: 5.859 arcsec [17.27σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

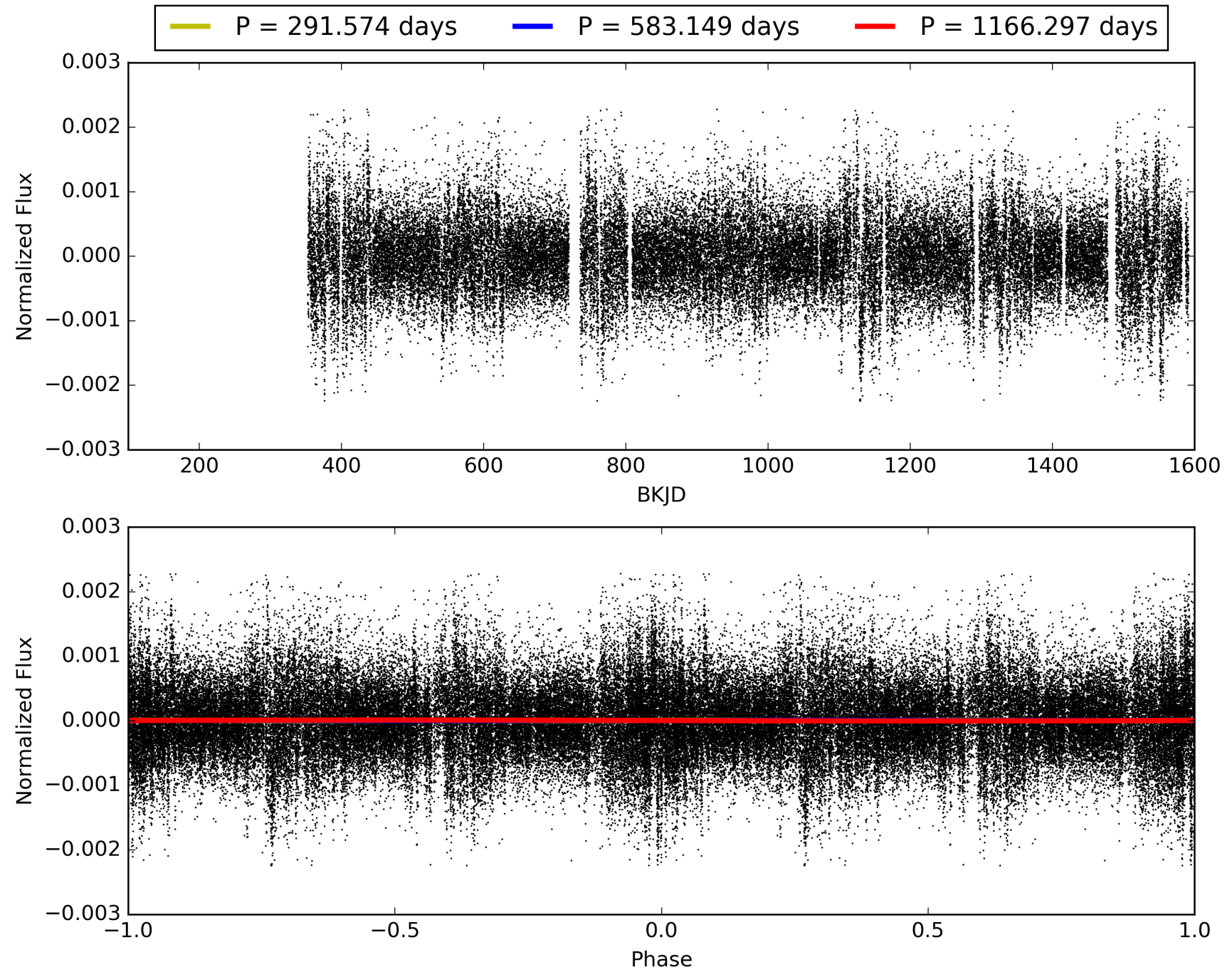
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:15:52 Z

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

TCE 007830385-01, PDC Light Curves

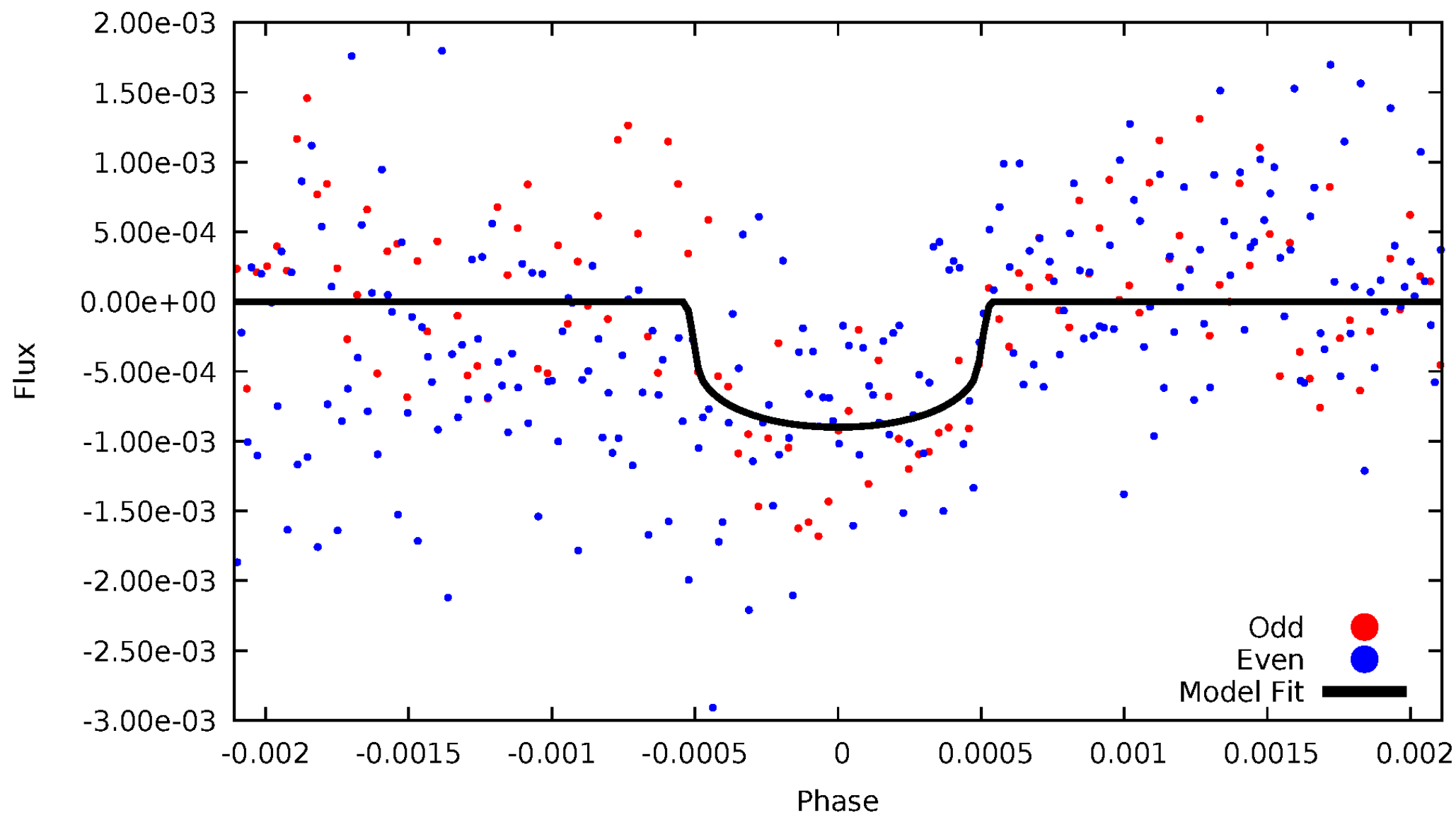


TCE 007830385-01



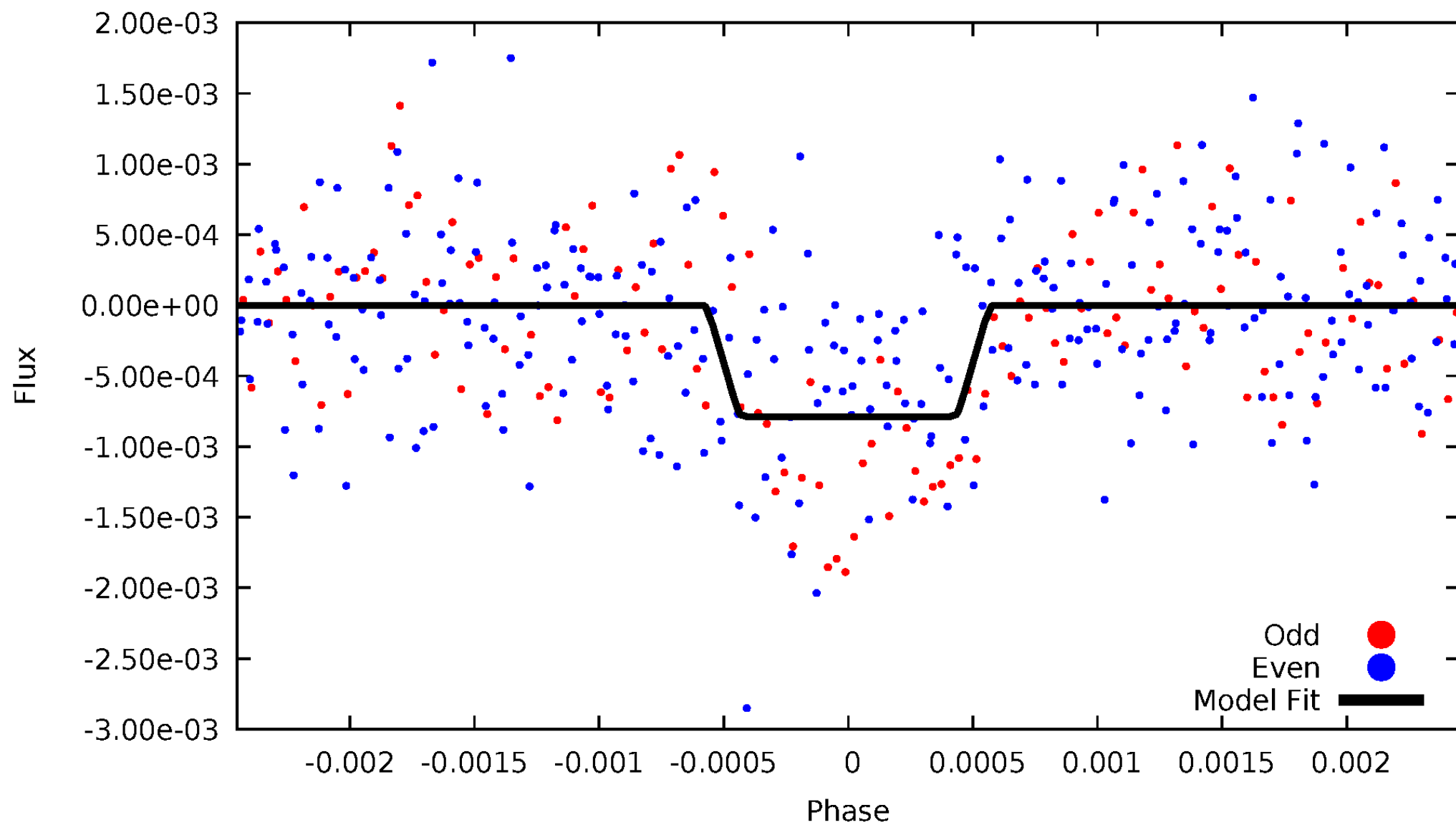
DV Odd/Even

TCE 007830385-01



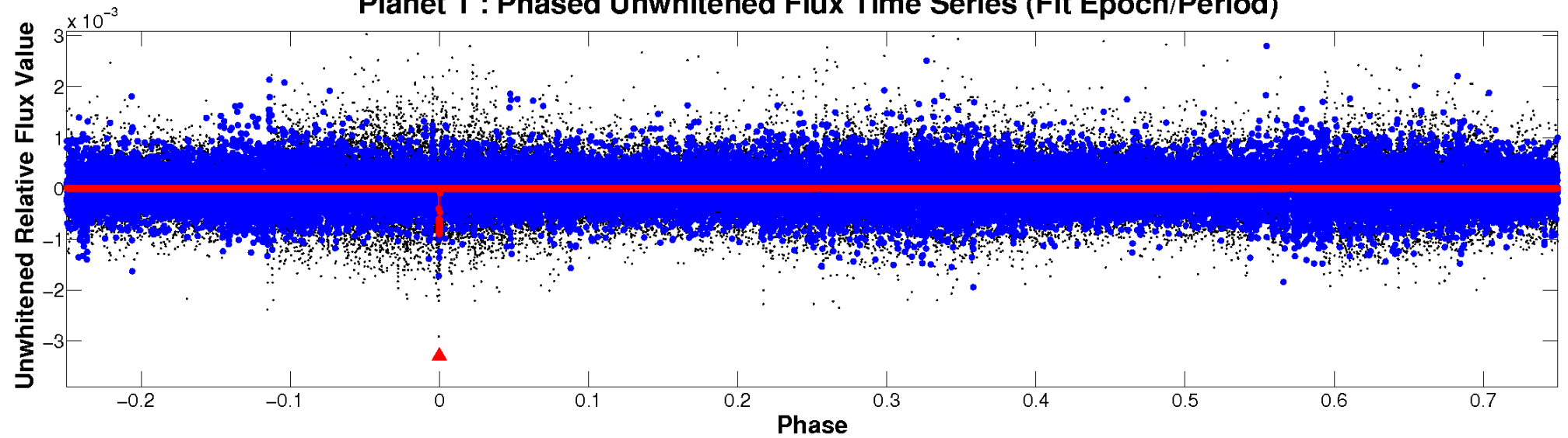
ALT Odd/Even

TCE 007830385-01

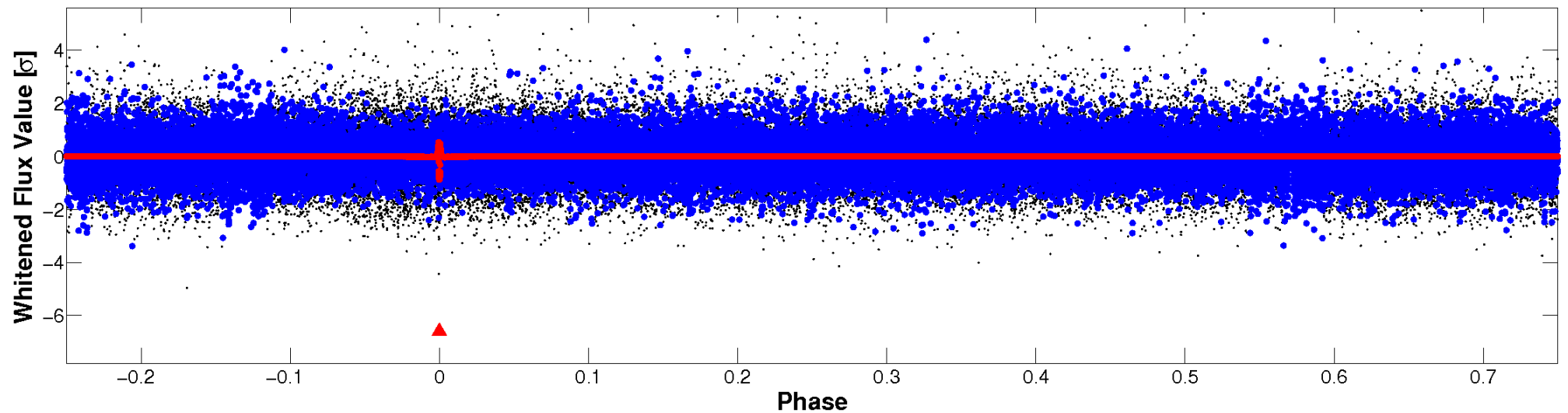


Non-Whitened Vs. Whitened Light Curve

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



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



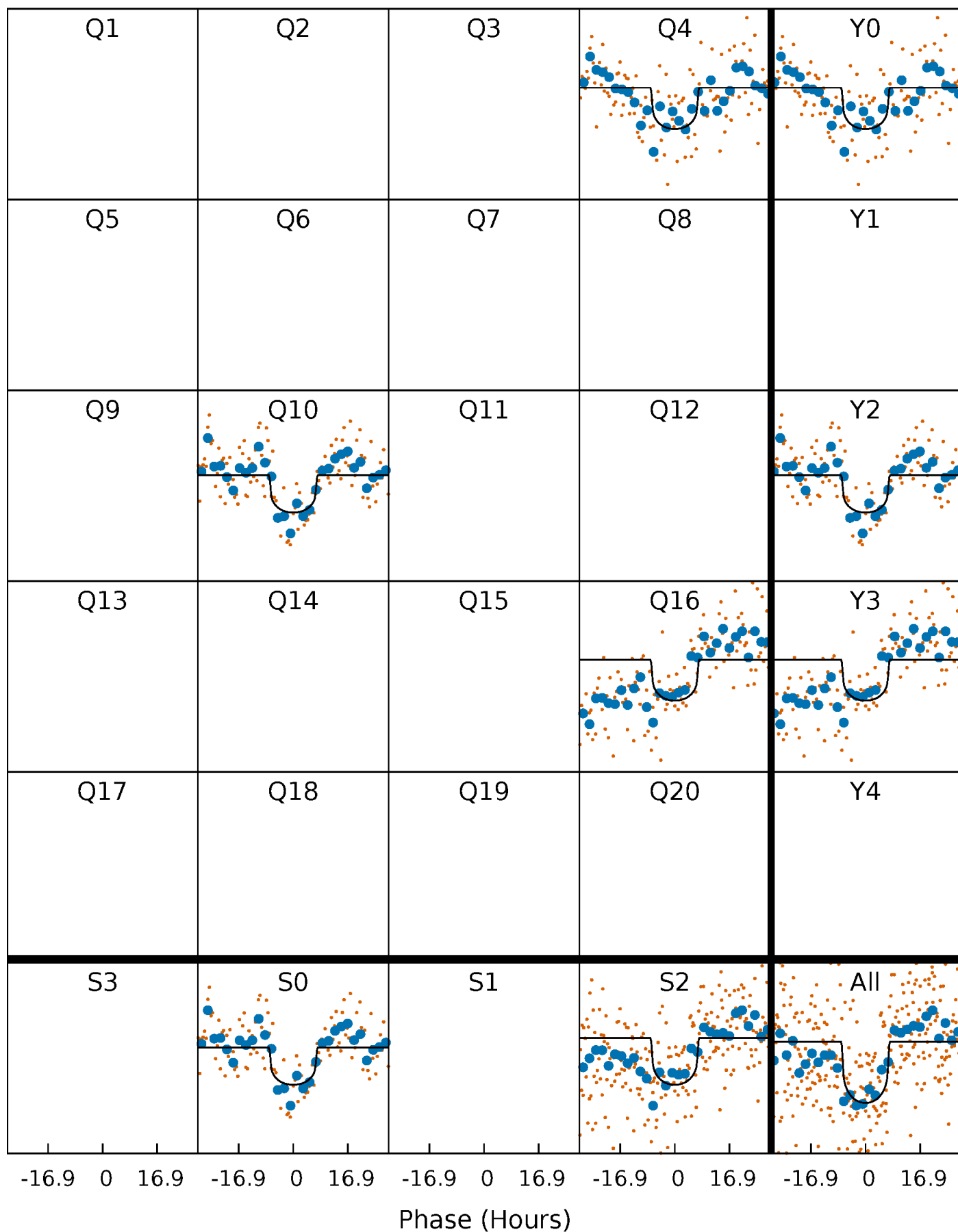
PDC Quarter-Phased Transit Curves

TCE 007830385-01 P=583.148605 Days $T_0=389.636476$ (BKJD)



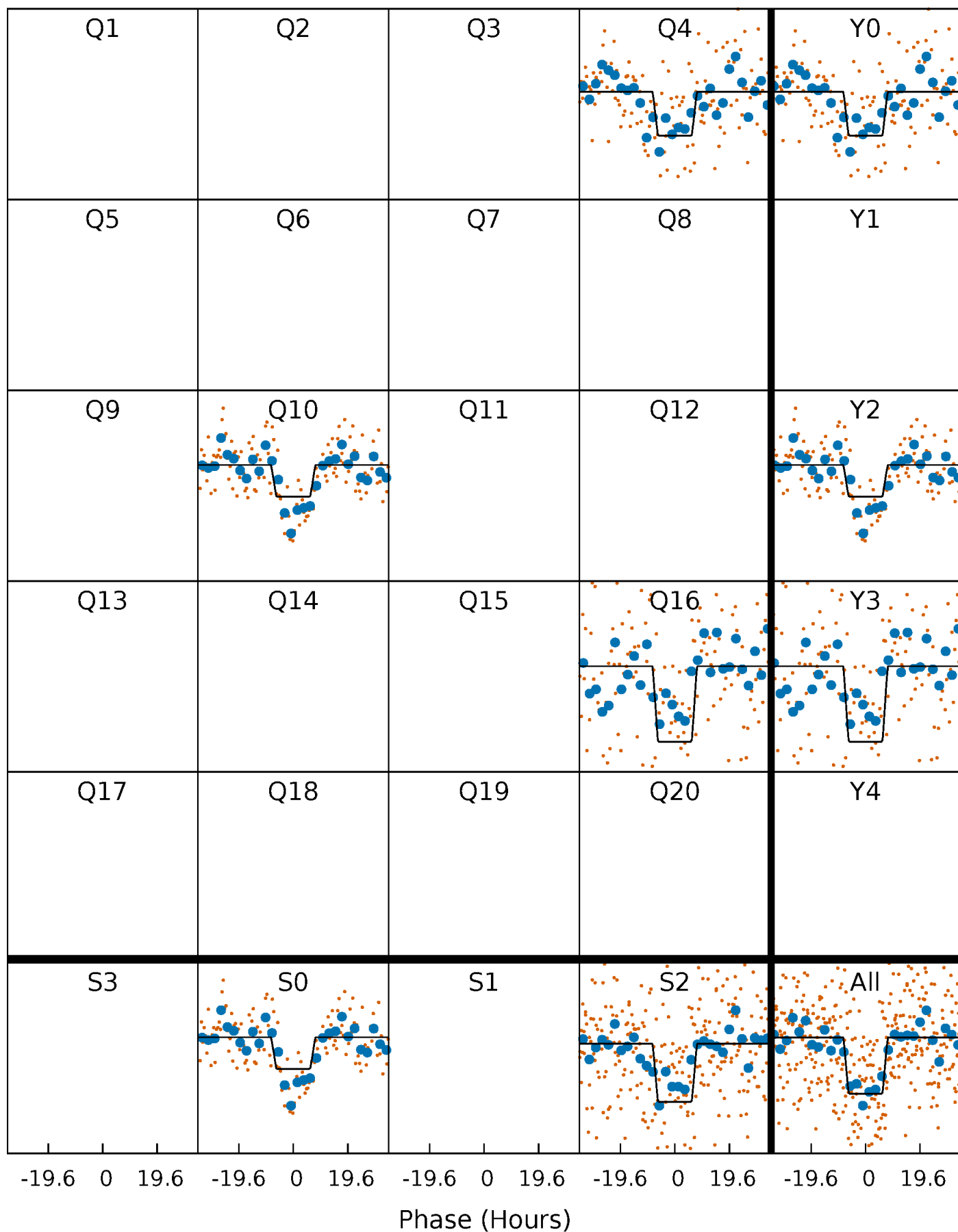
DV Quarter-Phased Transit Curves

TCE 007830385-01 $P=583.148605$ Days $T_0=389.636476$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

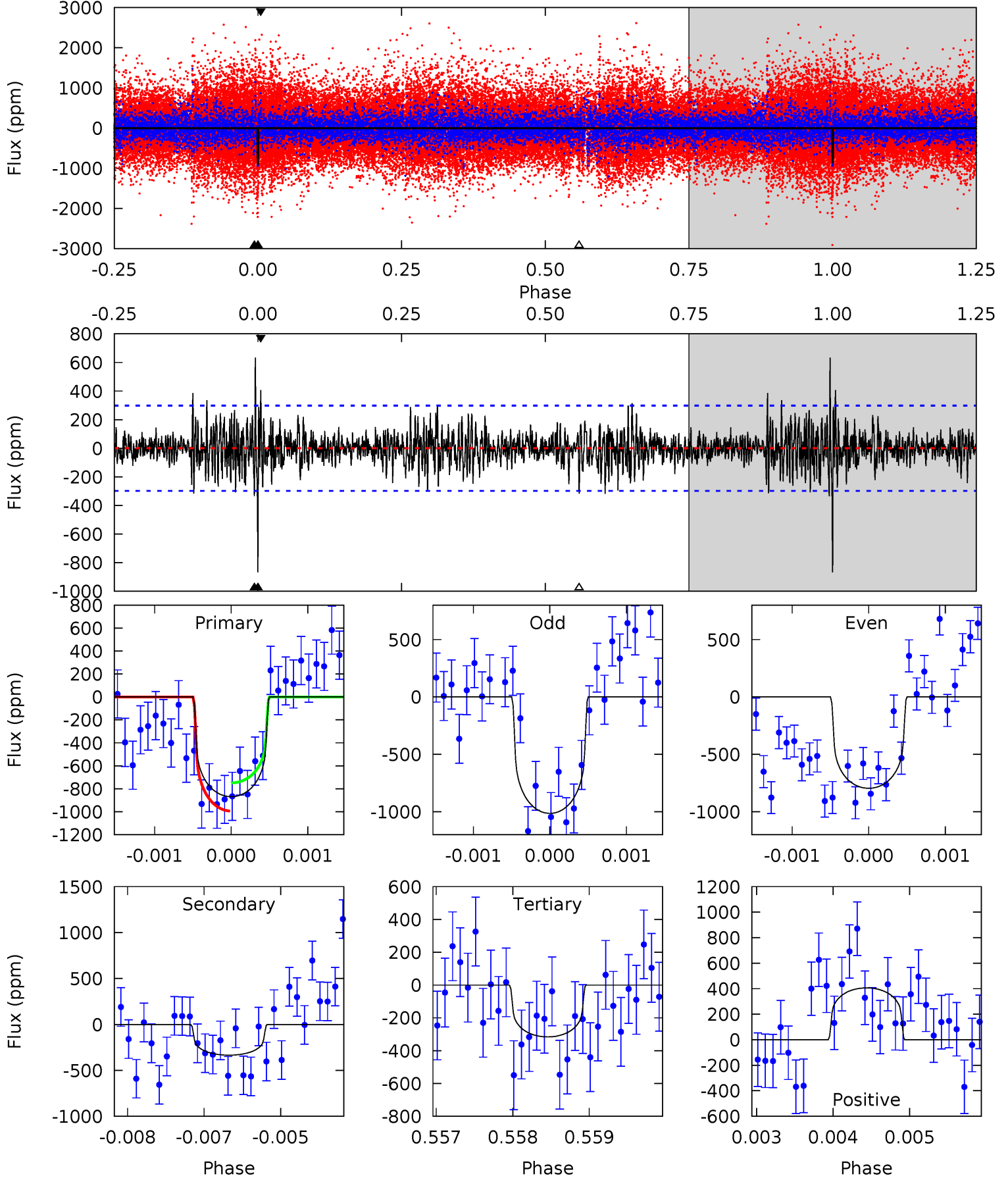
TCE 007830385-01 P=583.132935 Days $T_0=389.619061$ (BKJD)



DV Model-Shift Uniqueness Test

007830385-01, P = 583.148605 Days, E = 389.636476 Days

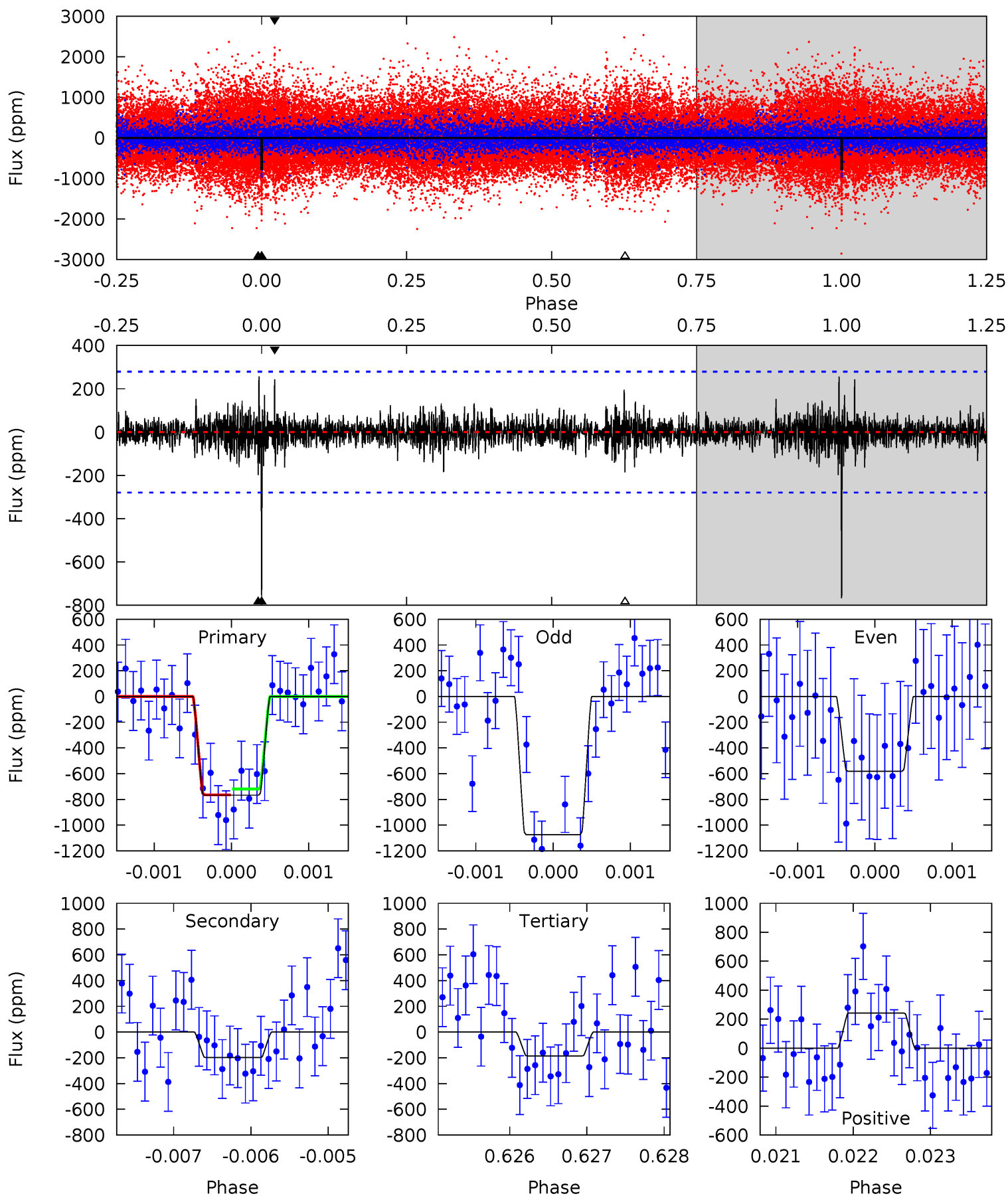
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	6.10	5.76	7.41	5.44	3.27	1.72	10.1	8.43	0.34	-1.31	1.89	1.03	0.42	2.23



Alt Model-Shift Uniqueness Test

007830385-01, P = 583.132935 Days, E = 389.619061 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	3.85	3.62	4.72	5.42	3.25	0.85	11.3	10.2	0.24	-0.86	4.55	1.05	0.25	0.43



Stellar Parameters For KIC 007830385

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5722^{+160}_{-200}	$4.491^{+0.048}_{-0.192}$	$0.280^{+0.150}_{-0.300}$	$0.973^{+0.260}_{-0.093}$	$1.070^{+0.097}_{-0.134}$	$1.634^{+0.327}_{-0.852}$
	+3%/-3%	+1%/-4%	+54%/-107%	+27%/-10%	+9%/-13%	+20%/-52%
Source	KIC0	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 007830385-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-335 ± 55	$3.05^{+1.69}_{-1.39}$	300^{+20}_{-14}	4733^{+1469}_{-690}	37622^{+90348}_{-21987}
Alt.	-198 ± 51	$3.16^{+1.53}_{-1.53}$	300^{+19}_{-16}	4254^{+1229}_{-596}	21184^{+56142}_{-12354}

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

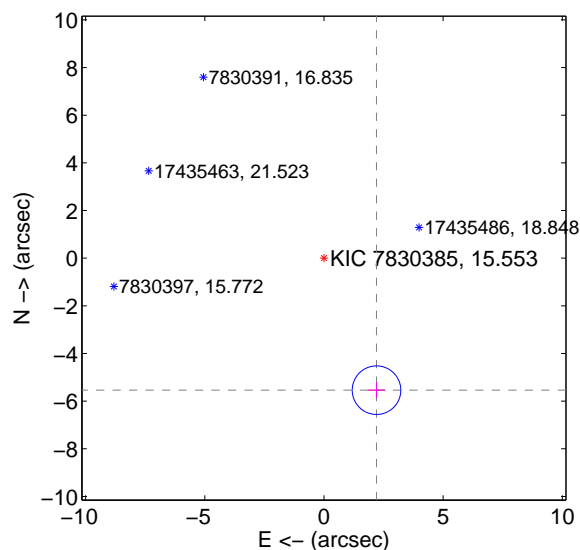
Supplemental centroid analysis for 007830385-01. Kepler magnitude: 15.55. Transit SNR 7.56

There are 0 quarters with good PRF difference image offsets

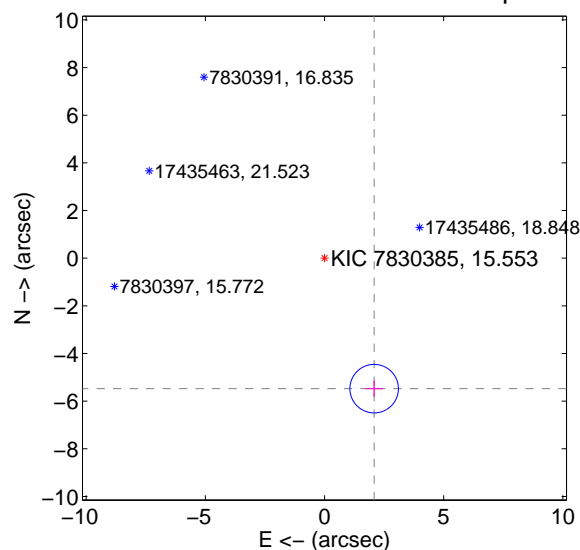
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.962 ± 0.340	17.55	-2.205 ± 0.368	-5.540 ± 0.335
PRF-fit source offset from KIC position	5.859 ± 0.339	17.27	-2.083 ± 0.368	-5.476 ± 0.335
photometric centroid source offset	3.02 ± 1.81	1.67	2.51 ± 1.82	1.67 ± 1.81

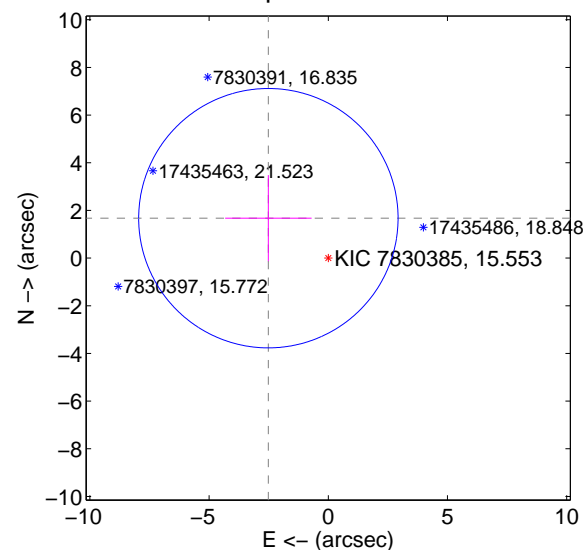
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

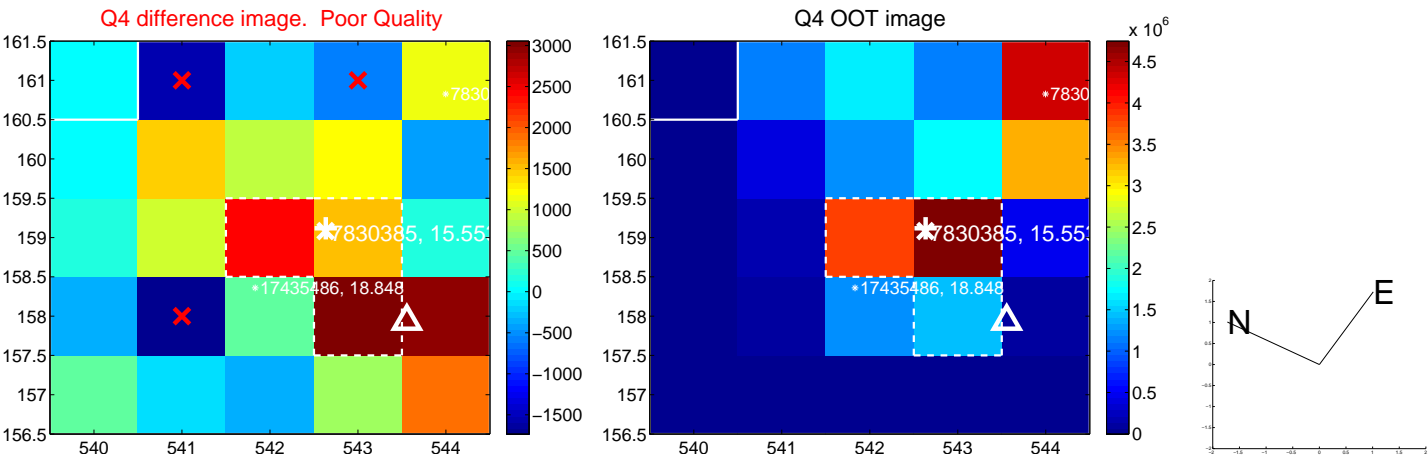


offset from photometric centroids



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.

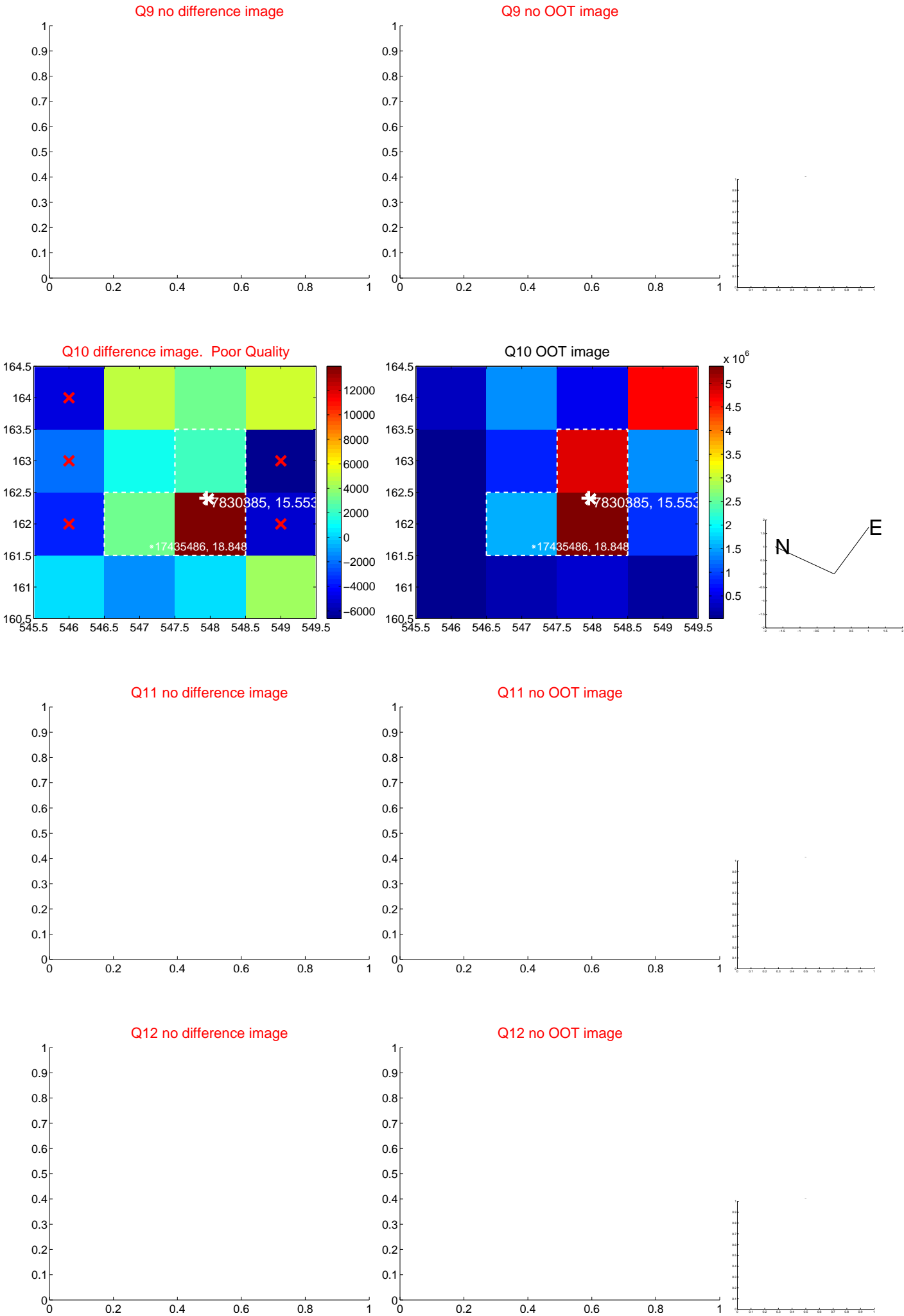
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



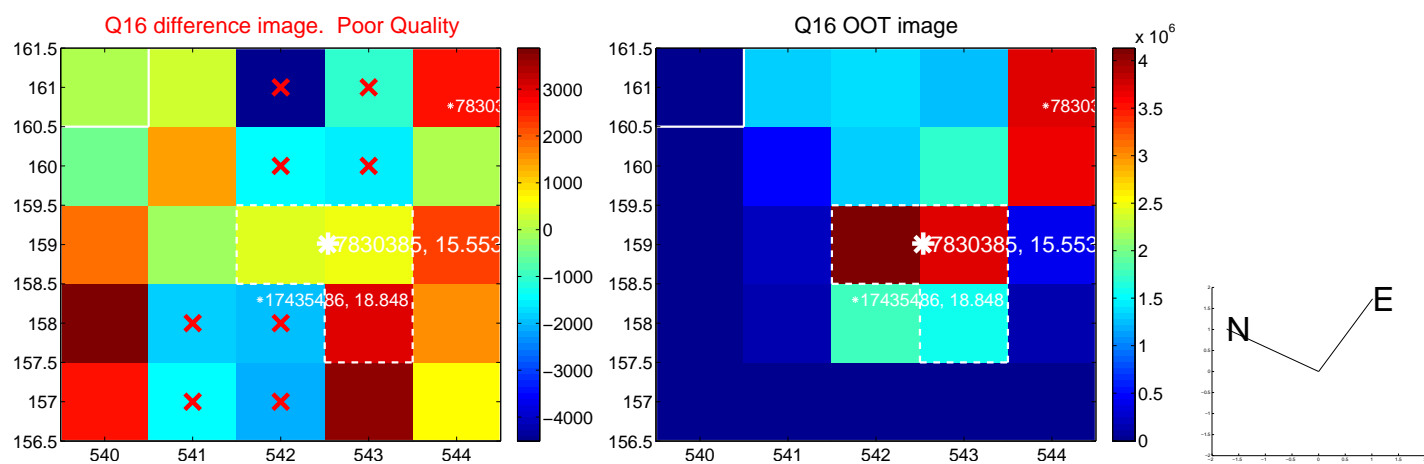
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



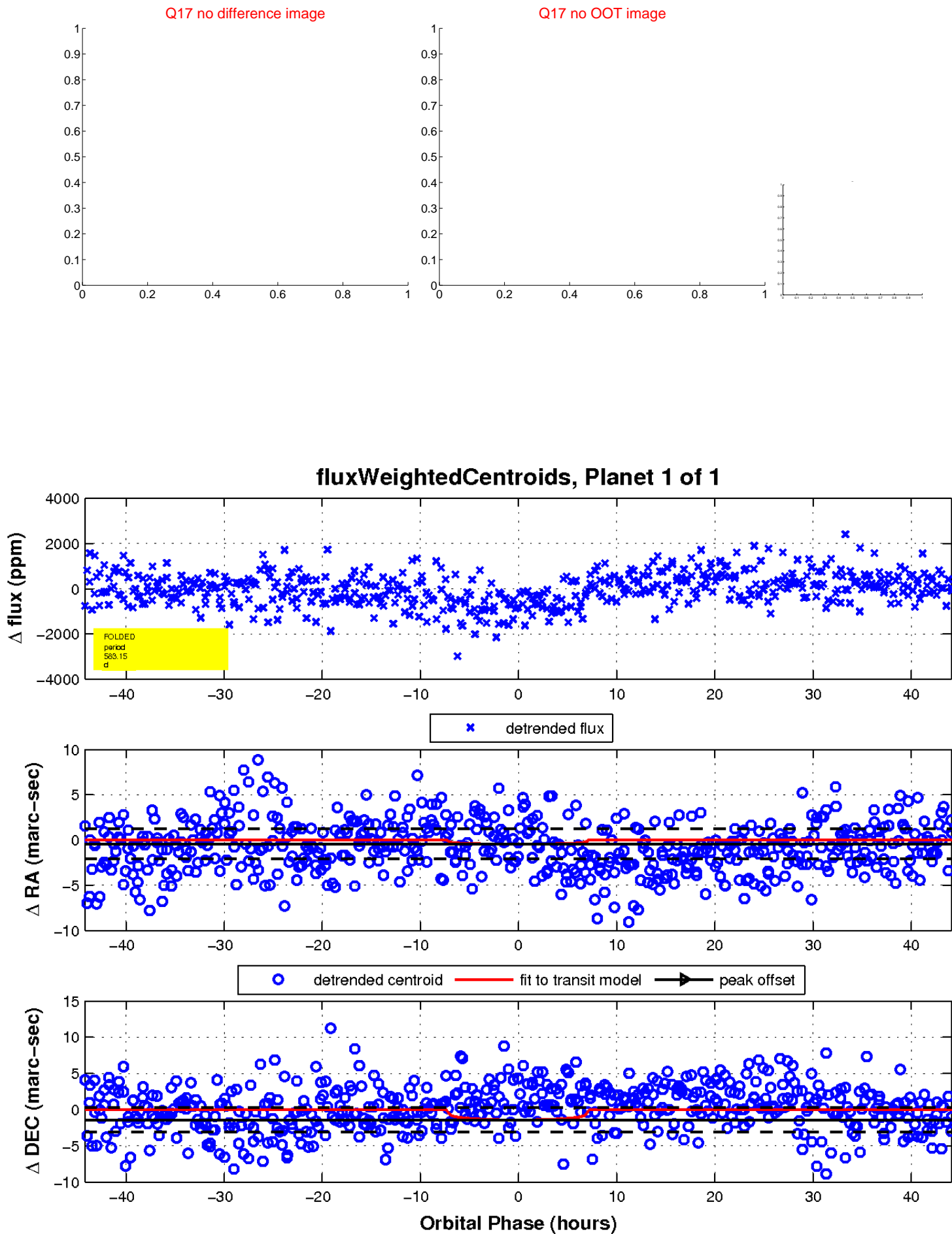
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

