

KIC 008885293

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})
008885293-01	OBS	No	374.585533	136.723030	776.5	21.520	7.6	7.8	0.70	5520	2.02	0.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008885293-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—EPHEM_MATCH

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.

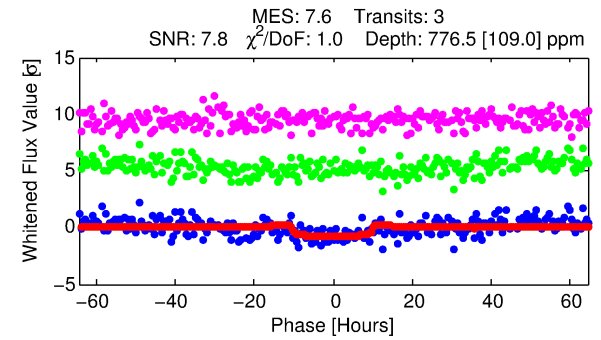
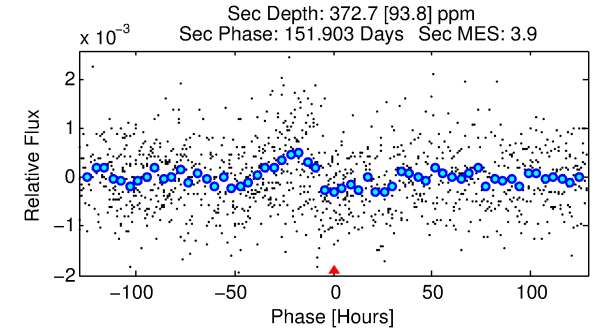
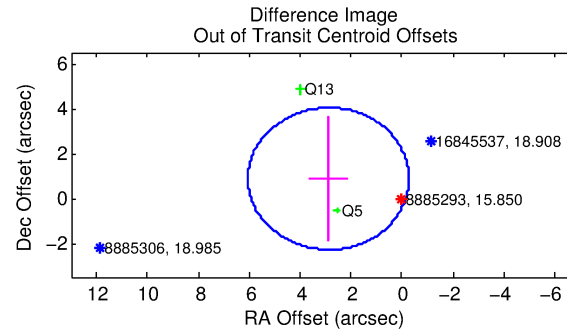
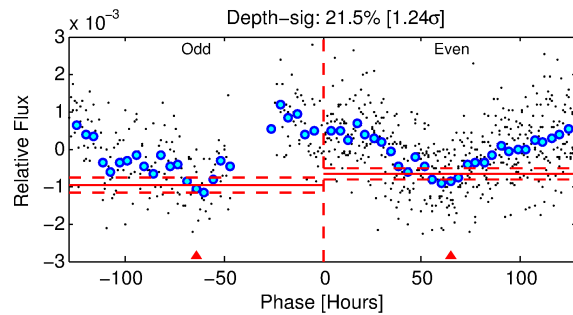
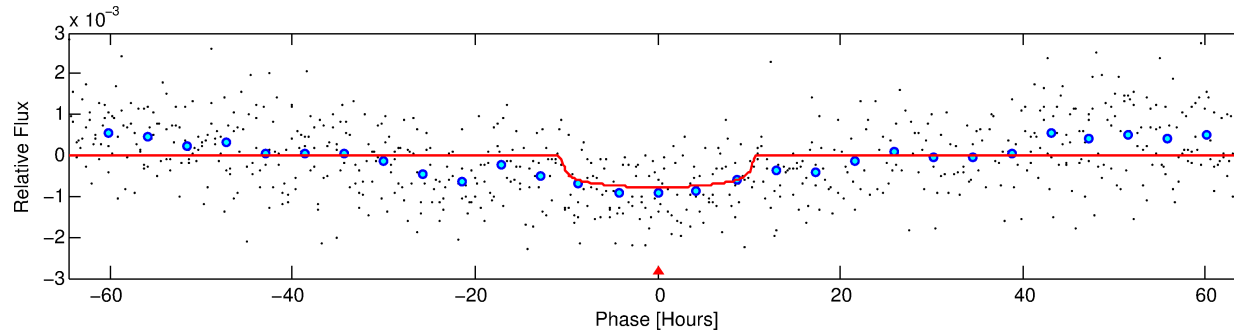
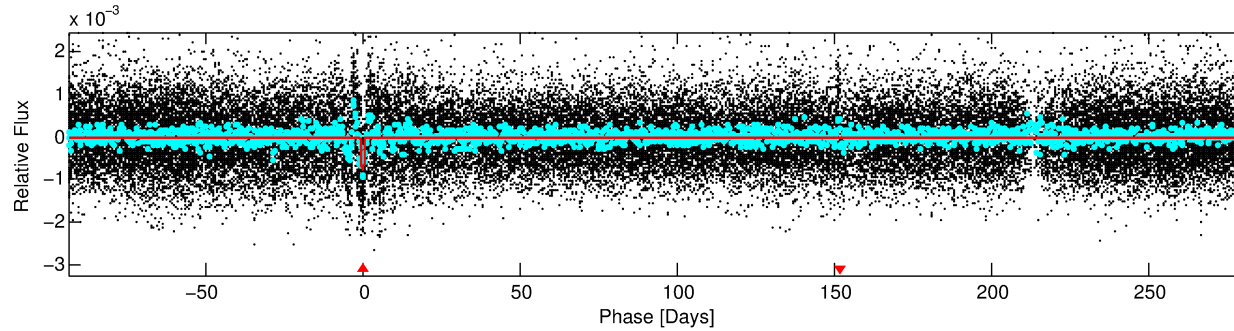
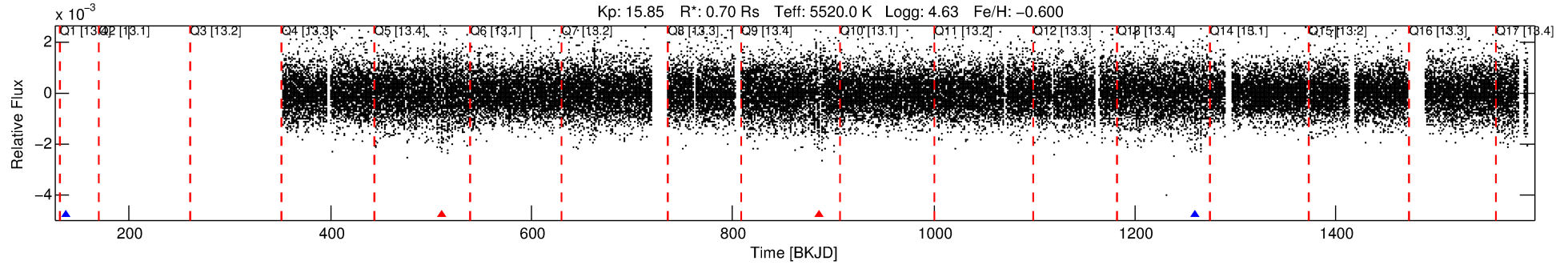
Ephemeris Match Information For 008885293-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist (\prime)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008885293-01	8885293	008752295-01	8752295	1:1	1052.3	-264	4	15.61	15.85	2.58	Col-Anomaly	1	0.96	2.01

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8885293 Candidate: 1 of 1 Period: 374.586 d



DV Fit Results:

Period = 374.58553 [0.02380] d
Epoch = 136.7230 [0.0513] BKJD
Rp/R* = 0.0264 [0.0102]
a/R* = 113.81 [193.42]
b = 0.57 [2.05]
Seff = 0.47 [0.12]
Teq = 211 [13] K
Rp = 2.02 [0.85] Re
a = 0.9323 [0.1318] AU
Ag = 43670.72 [36588.31] [1.19 σ]
Teff = 4720 [972] K [4.64 σ]

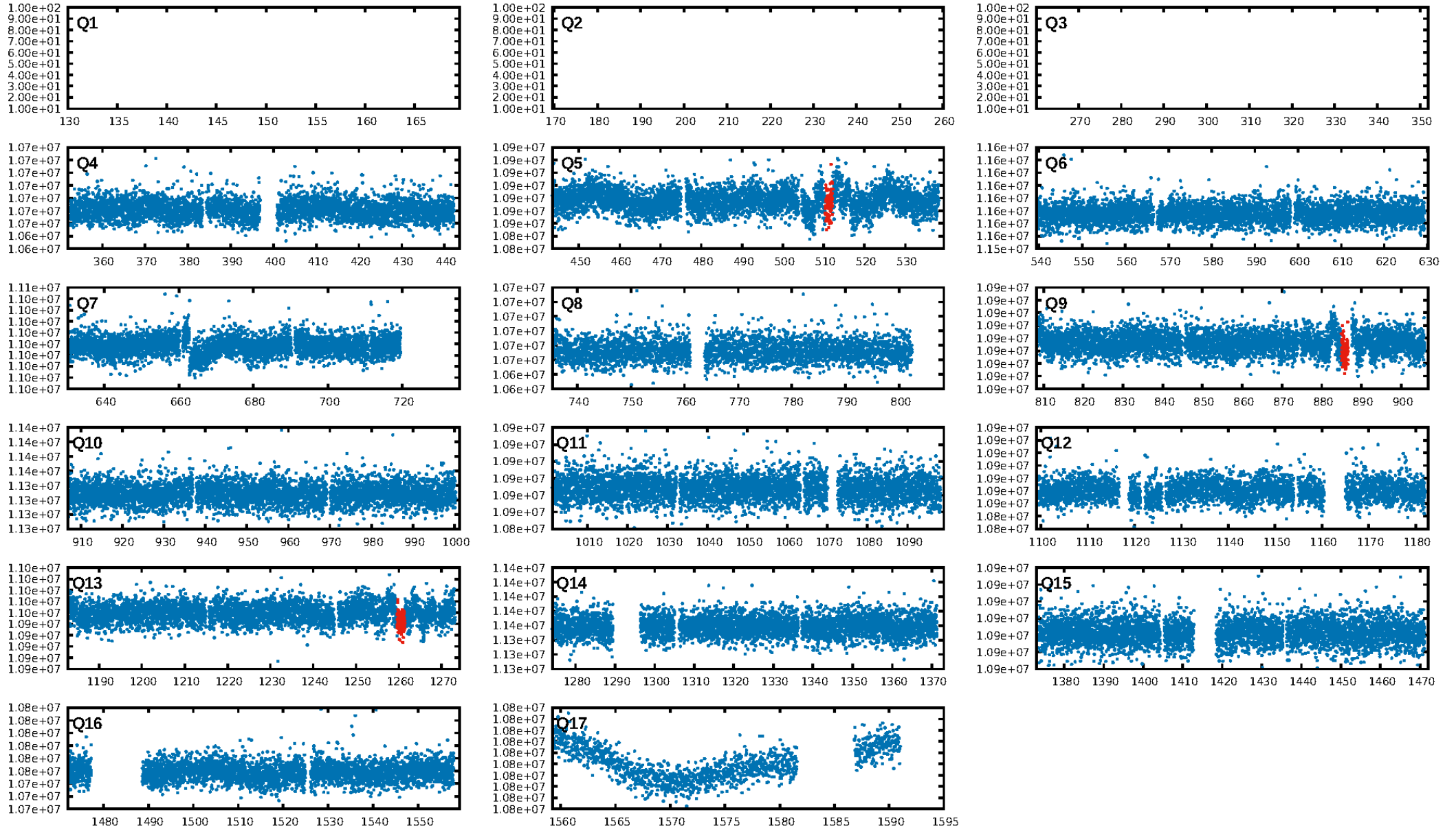
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 54.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.85e-12
RollingBand-fgt: 0.33 [1/3]
GhostDiagnostic-chr: 0.5282
Centroid-sig: 23.4%
Centroid-so: 2.349 arcsec [1.33 σ]
OotOffset-rm: 3.014 arcsec [2.86 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-rm: 3.019 arcsec [2.66 σ]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

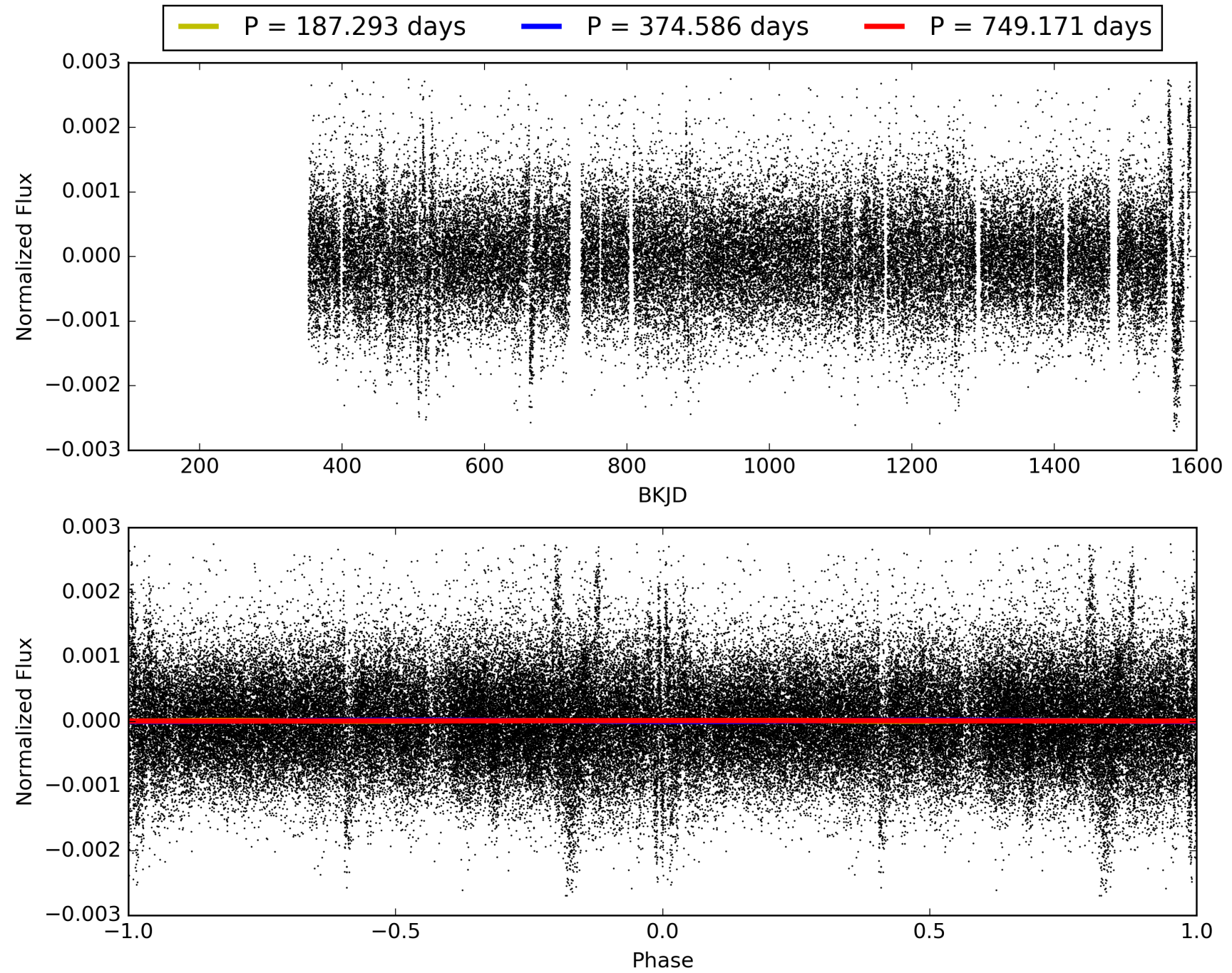
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:36:32 Z

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

TCE 008885293-01, PDC Light Curves

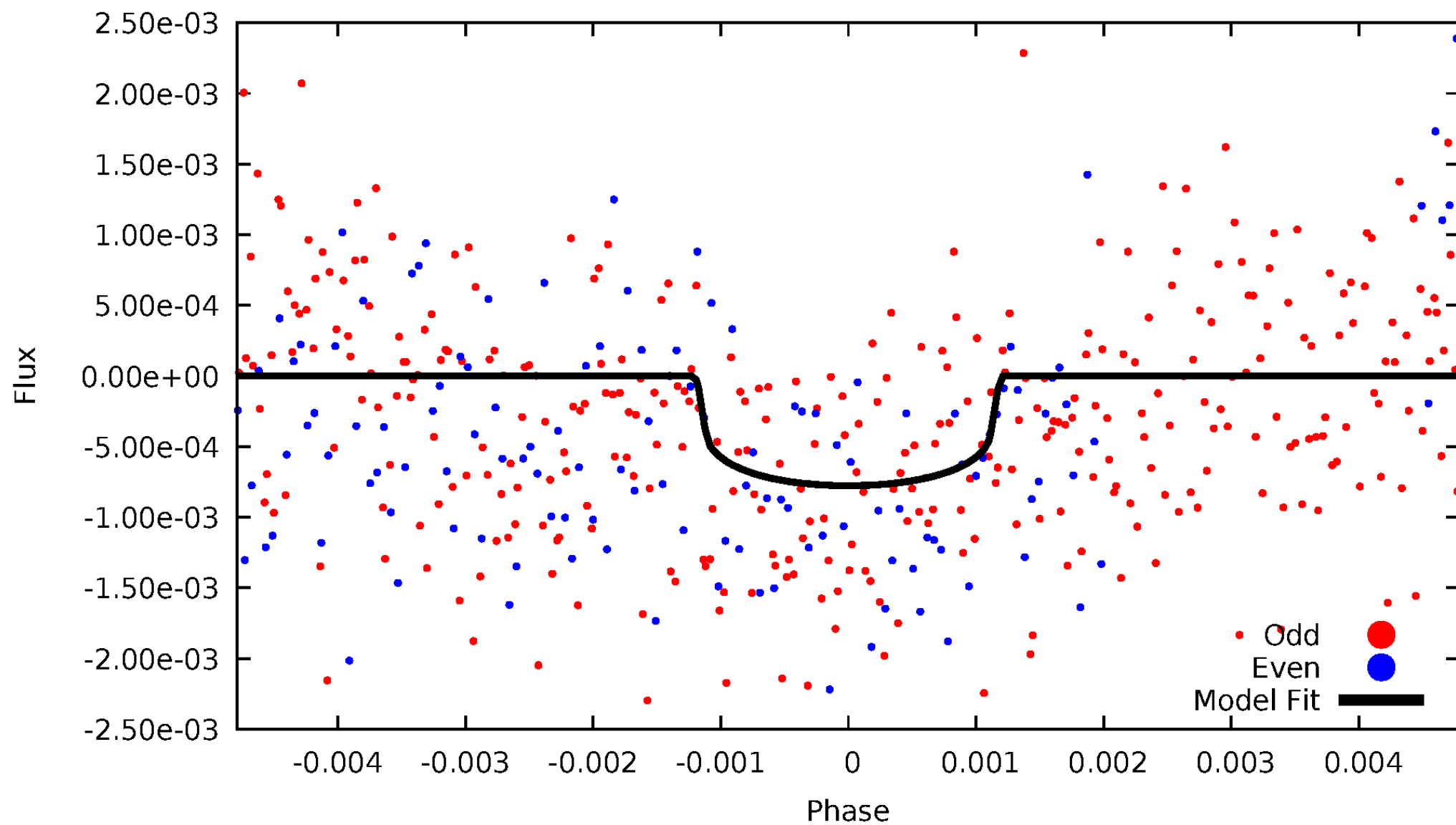


TCE 008885293-01



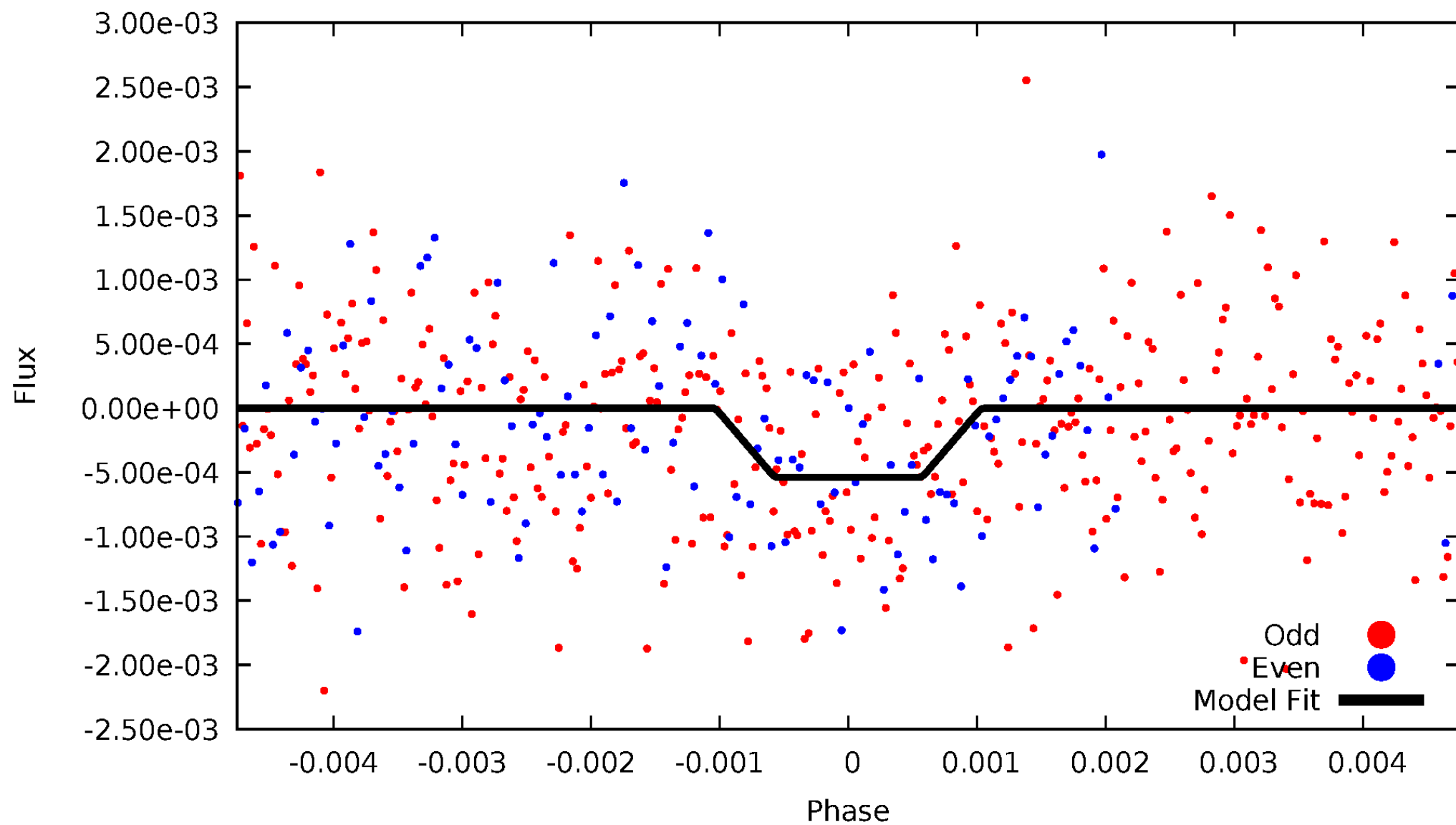
DV Odd/Even

TCE 008885293-01



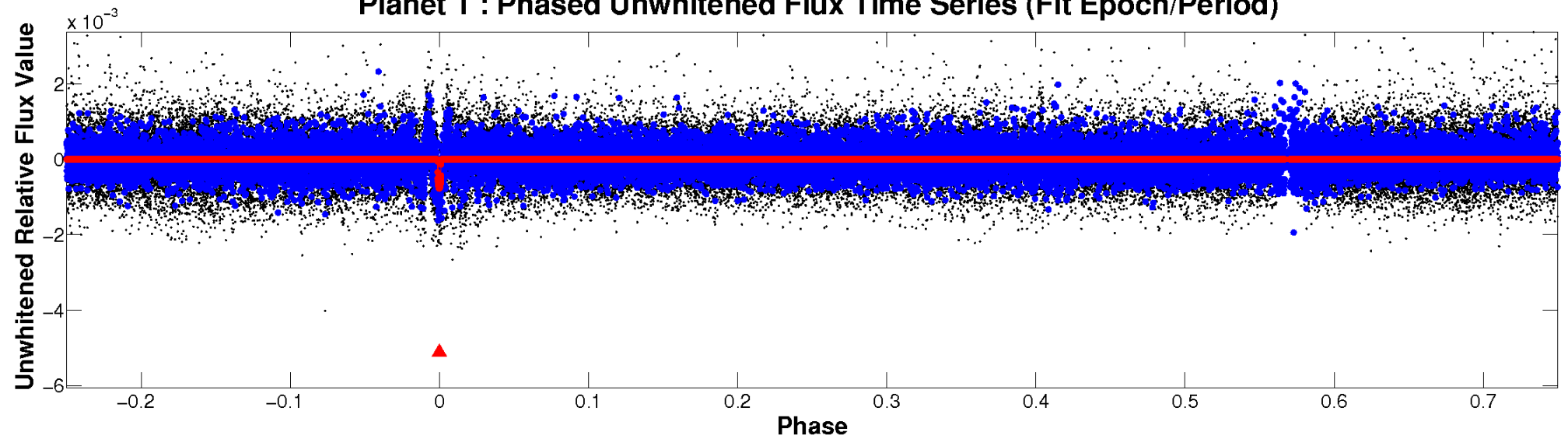
ALT Odd/Even

TCE 008885293-01

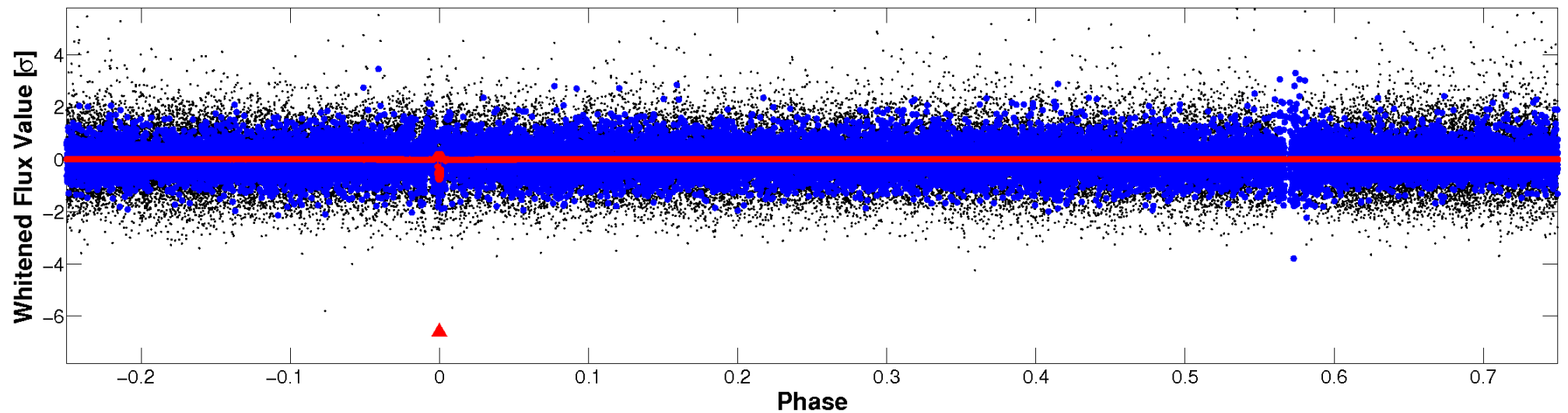


Non-Whitened Vs. Whitened Light Curve

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



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



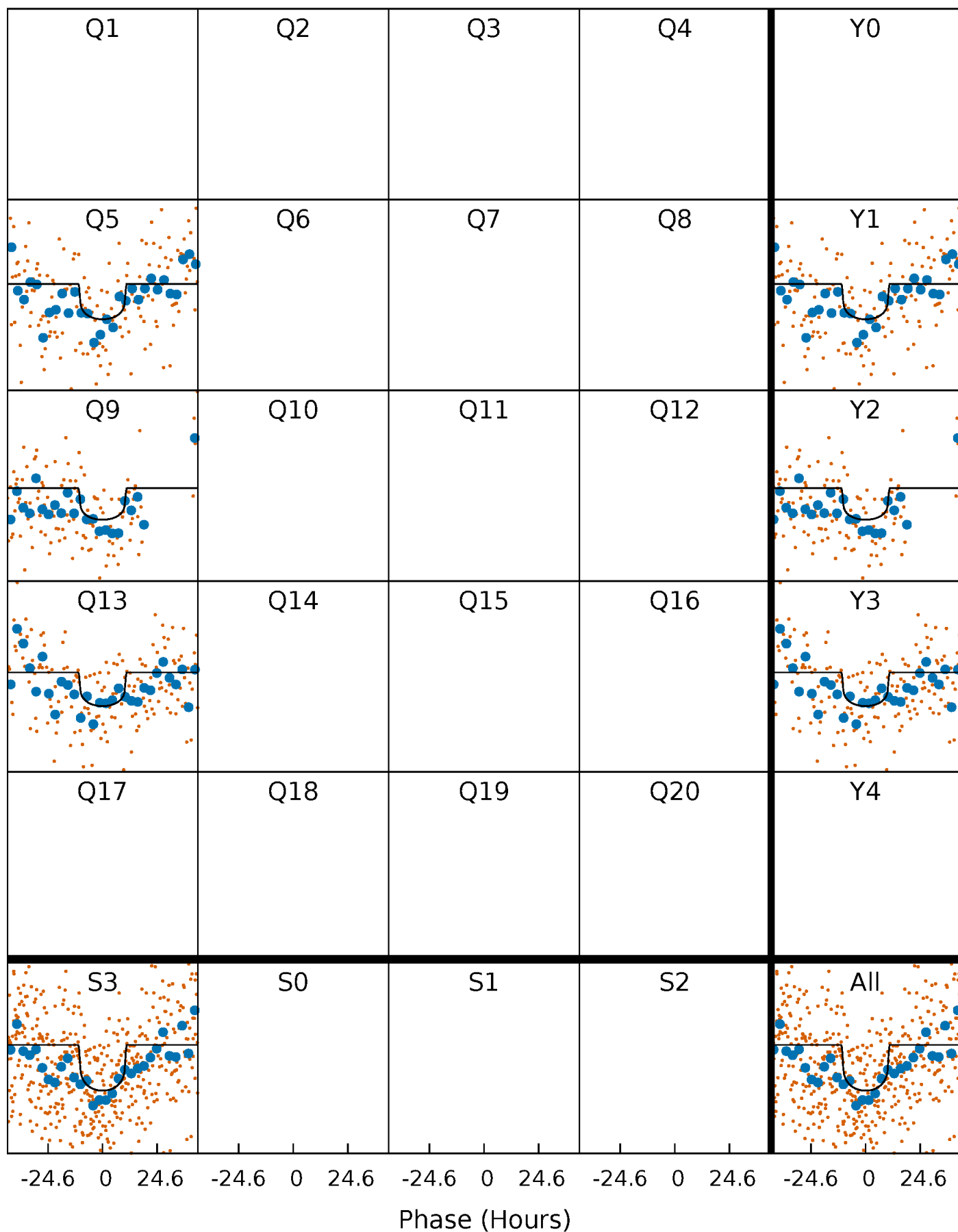
PDC Quarter-Phased Transit Curves

TCE 008885293-01 P=374.585532 Days $T_0=136.723029$ (BKJD)



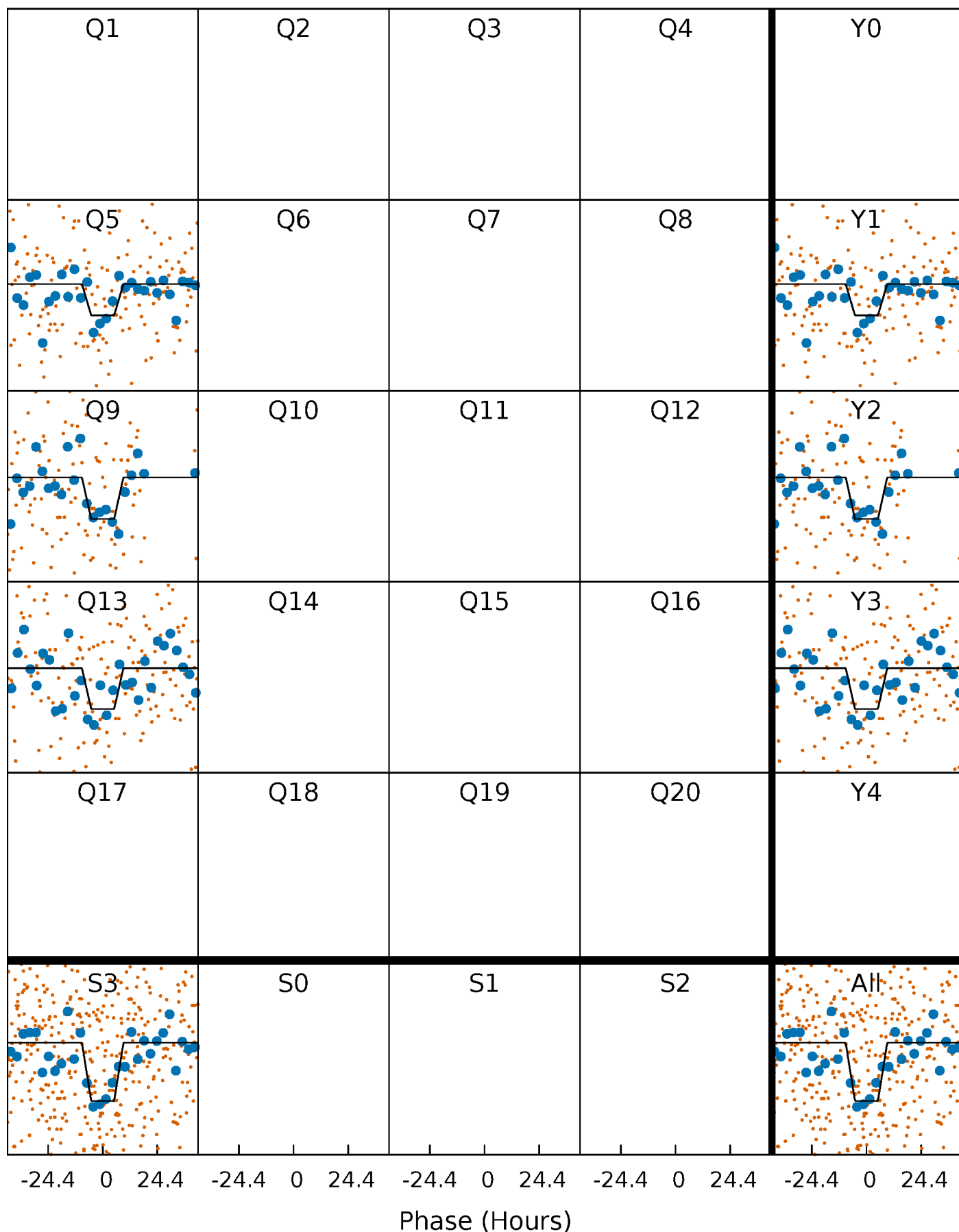
DV Quarter-Phased Transit Curves

TCE 008885293-01 P=374.585532 Days $T_0=136.723029$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

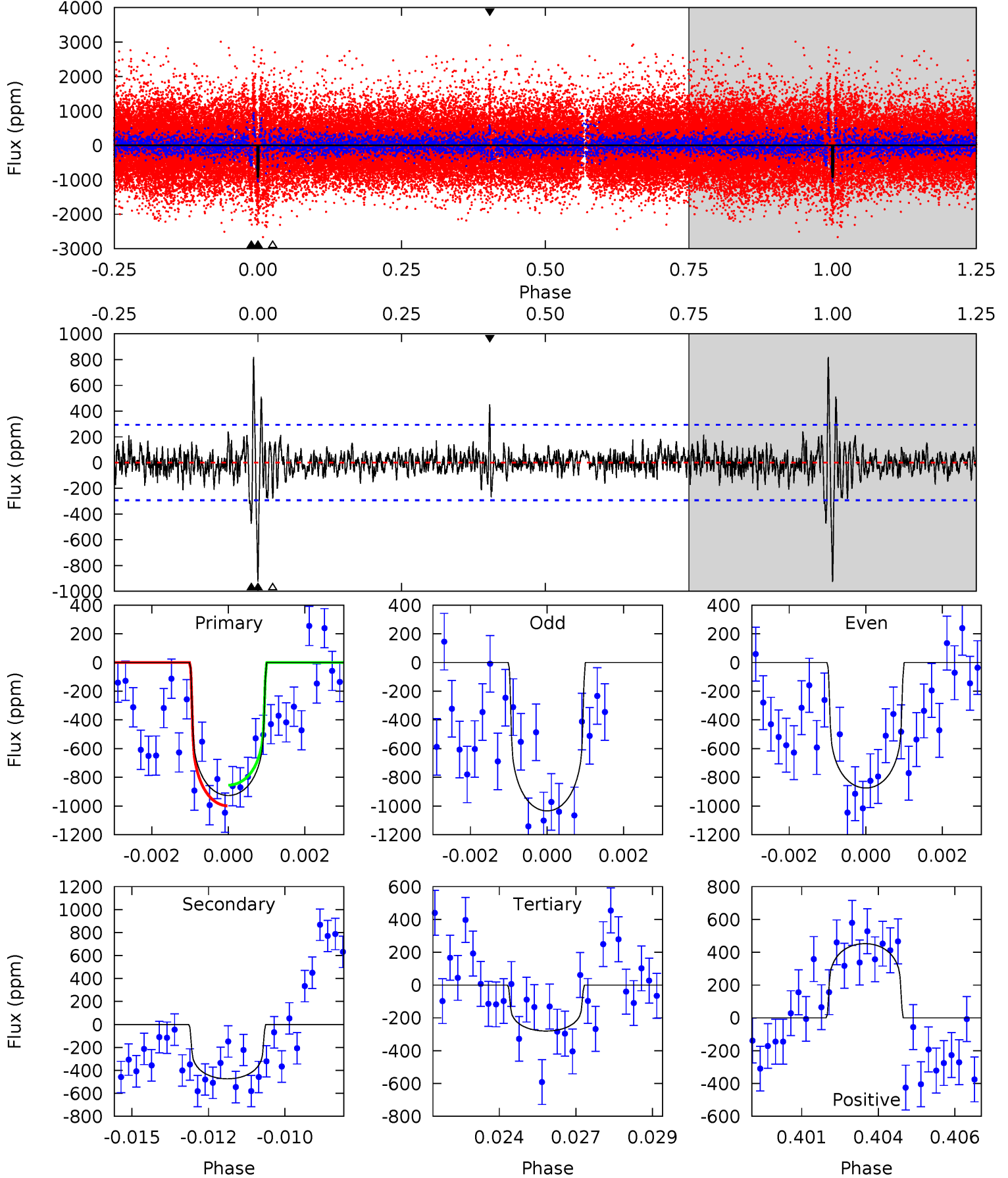
TCE 008885293-01 P=374.553966 Days $T_0=136.750866$ (BKJD)



DV Model-Shift Uniqueness Test

008885293-01, P = 374.585532 Days, E = 136.723029 Days

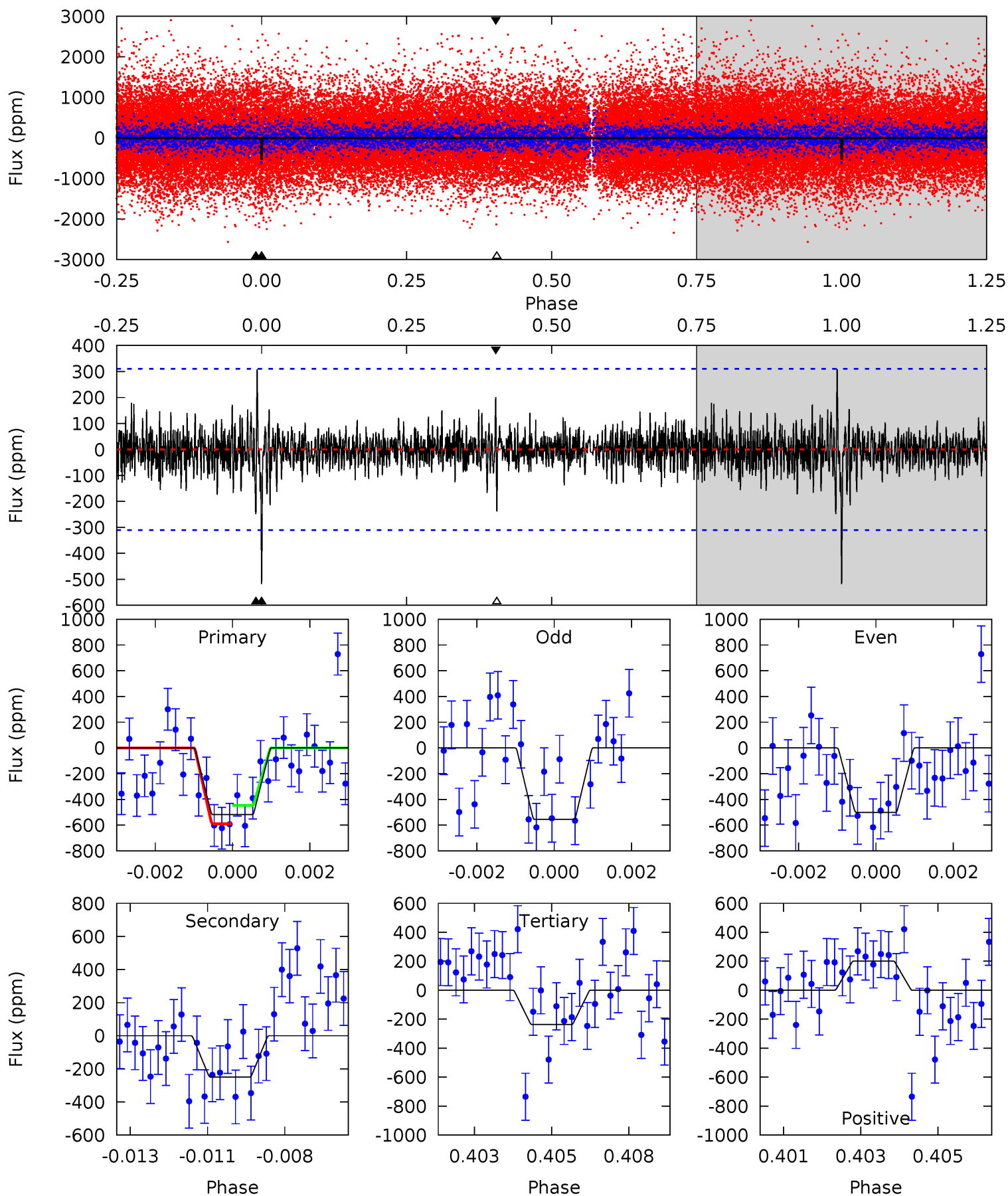
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	8.53	5.05	8.15	5.29	3.03	1.51	11.7	8.55	3.48	0.38	1.36	1.01	0.47	1.31



Alt Model-Shift Uniqueness Test

008885293-01, P = 374.553966 Days, E = 136.750866 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.87	4.27	4.06	3.44	5.32	3.07	0.90	4.81	5.44	0.20	0.83	0.43	1.00	0.37	1.23



Stellar Parameters For KIC 008885293

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5520^{+191}_{-191}	$4.633^{+0.035}_{-0.112}$	$-0.600^{+0.300}_{-0.300}$	$0.701^{+0.118}_{-0.055}$	$0.779^{+0.074}_{-0.081}$	$3.188^{+0.469}_{-1.074}$
	+3%/-3%	+1%/-2%	+50%/-50%	+17%/-8%	+9%/-10%	+15%/-34%
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 008885293-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-474 ± 55	$2.07^{+0.78}_{-0.77}$	299^{+15}_{-13}	5077^{+1230}_{-648}	52803^{+76961}_{-25907}
Alt.	-249 ± 58	$1.89^{+0.80}_{-0.77}$	298^{+15}_{-13}	4566^{+1234}_{-595}	32667^{+61825}_{-17553}

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

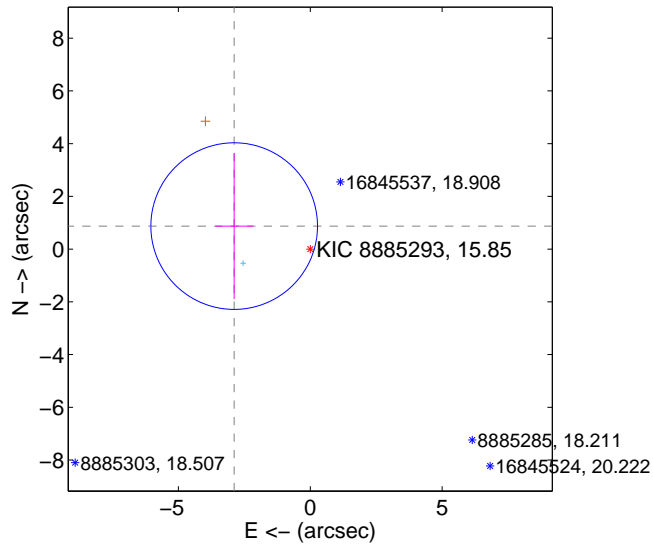
Supplemental centroid analysis for 008885293-01. Kepler magnitude: 15.85. Transit SNR 7.79

There are 1 quarters with good PRF difference image offsets

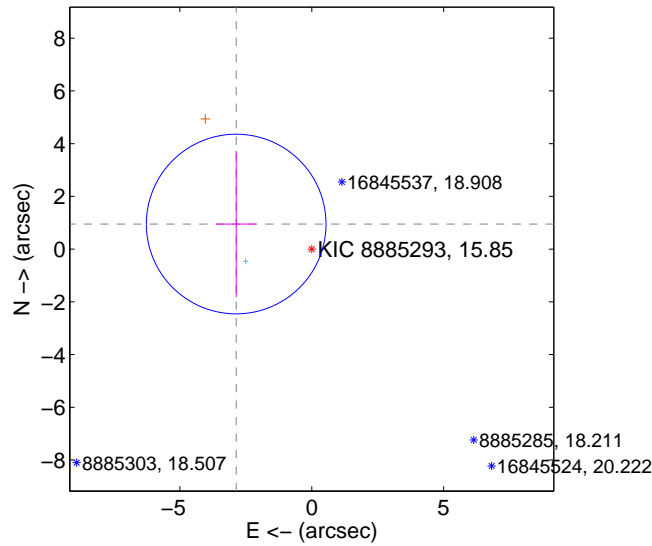
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.014 ± 1.053	2.86	2.885 ± 0.715	0.872 ± 2.766
PRF-fit source offset from KIC position	3.019 ± 1.135	2.66	2.866 ± 0.765	0.951 ± 2.774
photometric centroid source offset	2.35 ± 1.77	1.33	-1.65 ± 1.54	1.68 ± 1.96

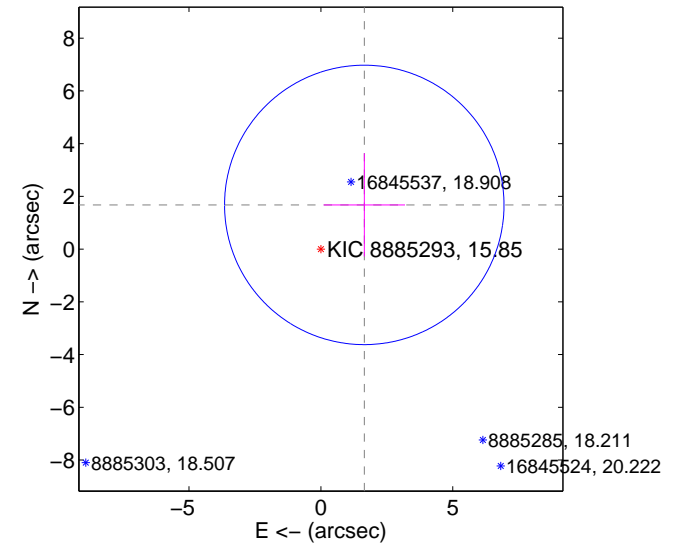
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

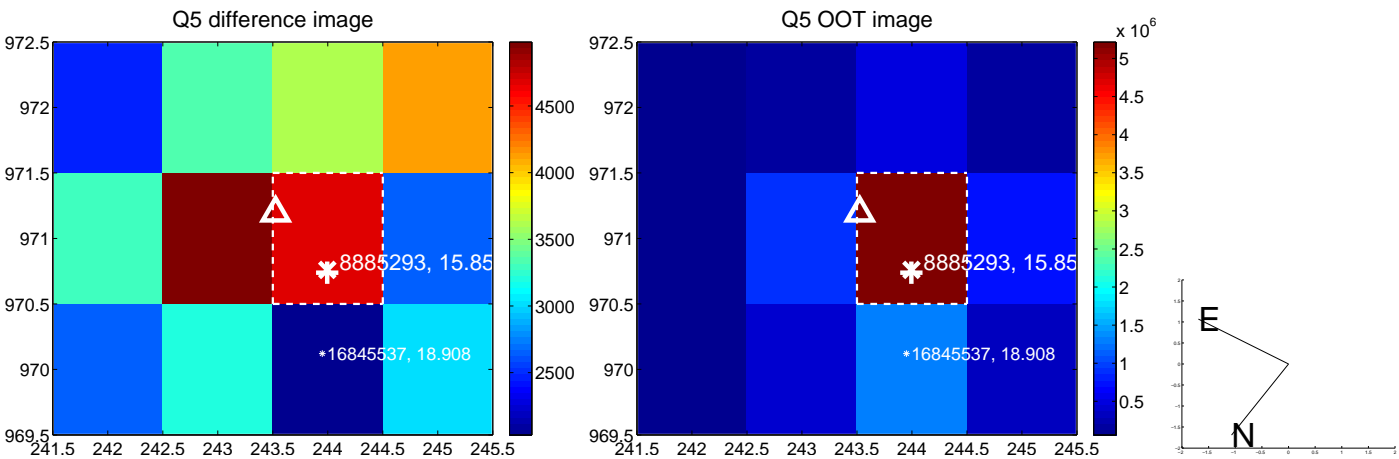


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



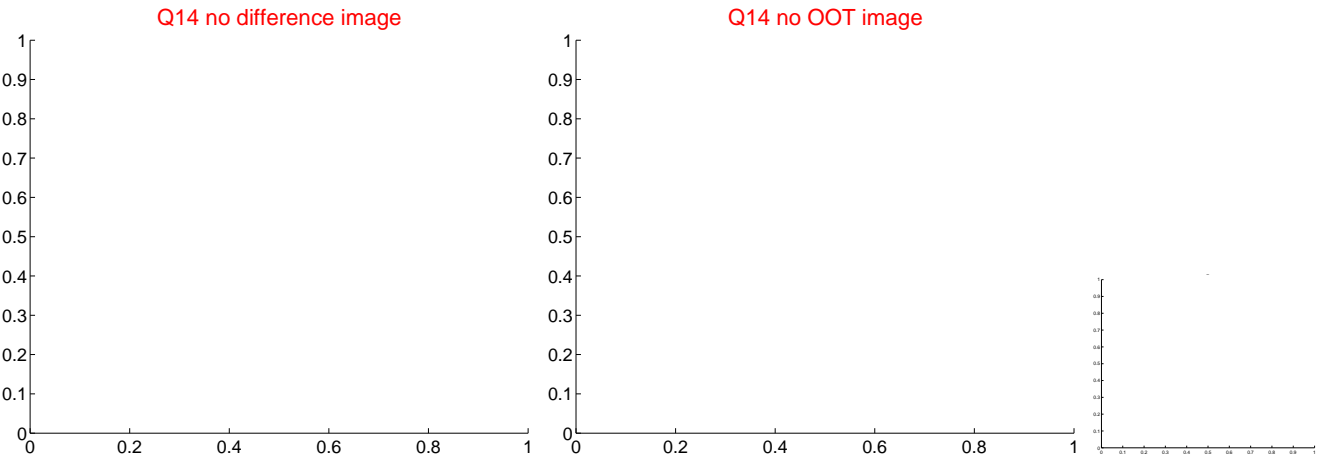
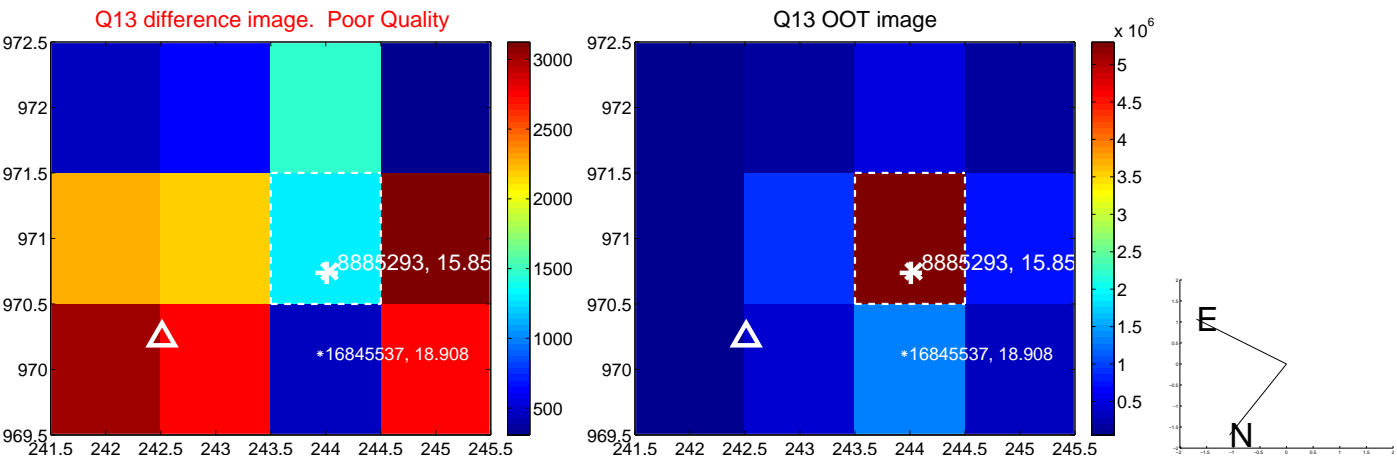
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



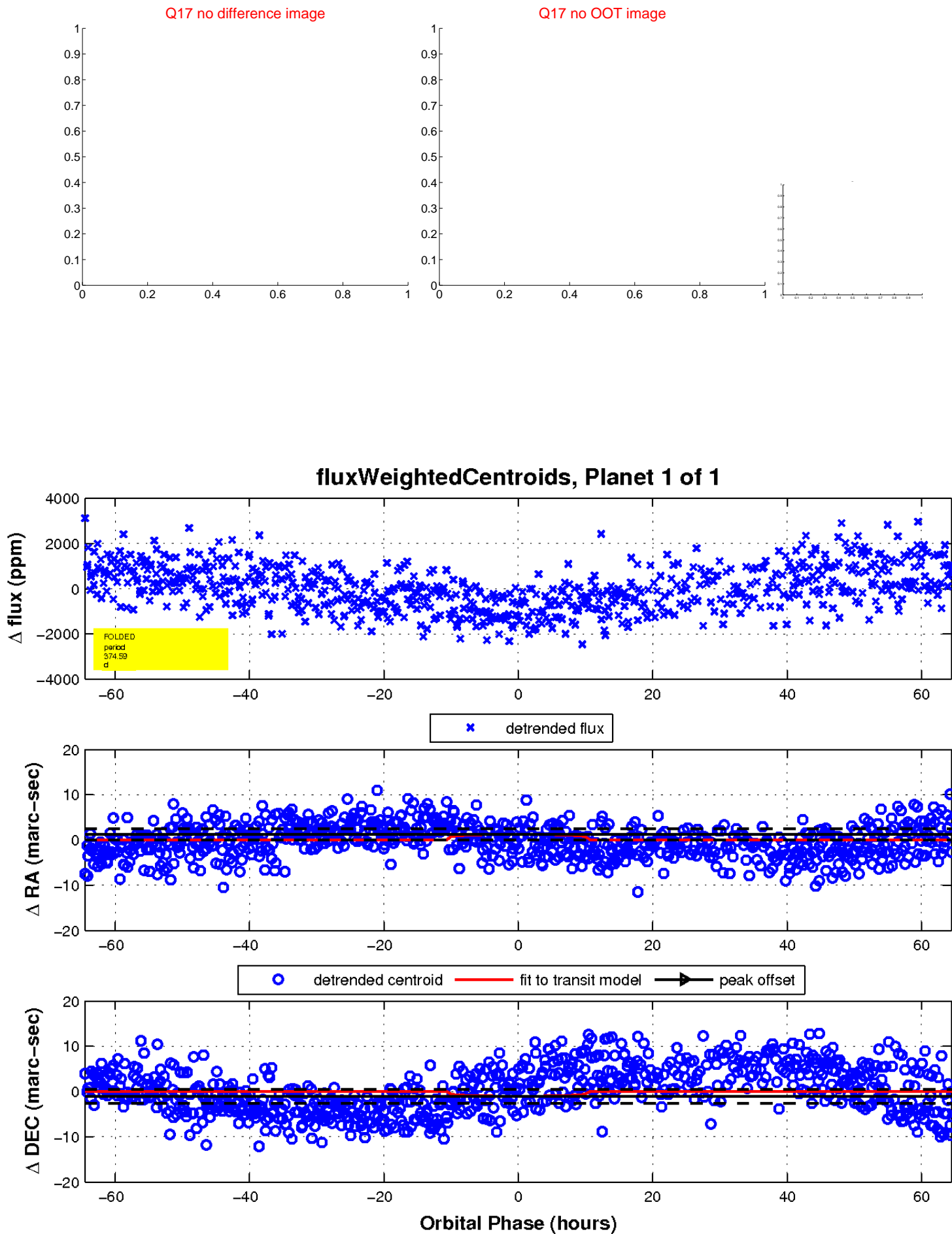
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

