

KIC 008683144

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})
008683144-01	OBS	8162.01	267.972974	267.969816	382.8	11.789	9.0	8.6	0.90	6008	1.95	1.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008683144-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_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.

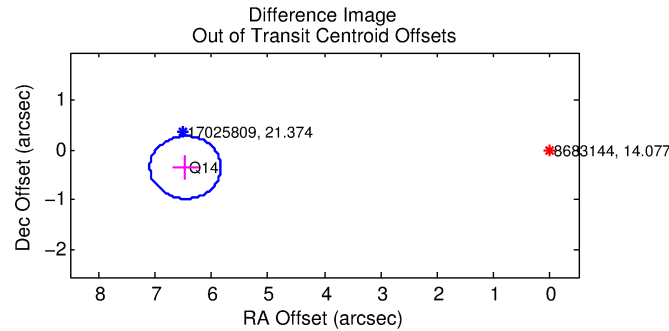
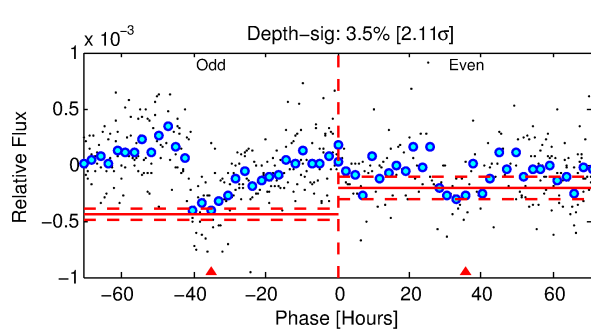
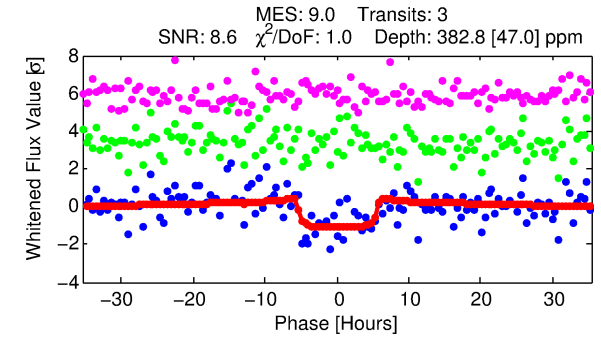
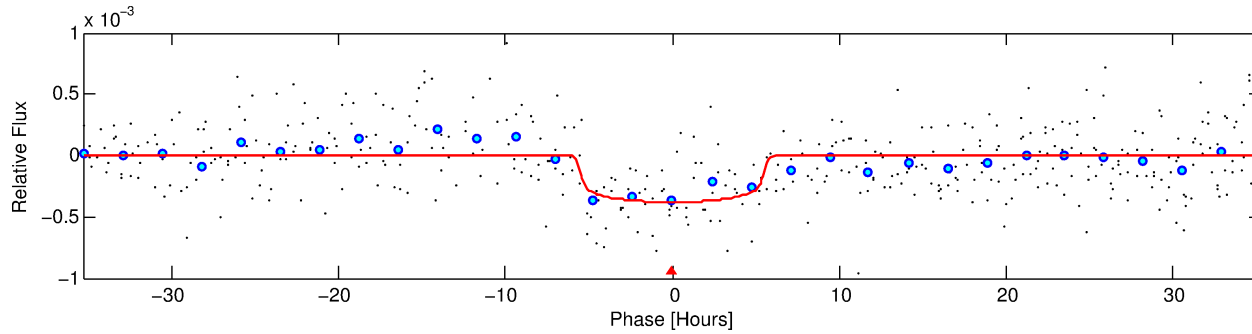
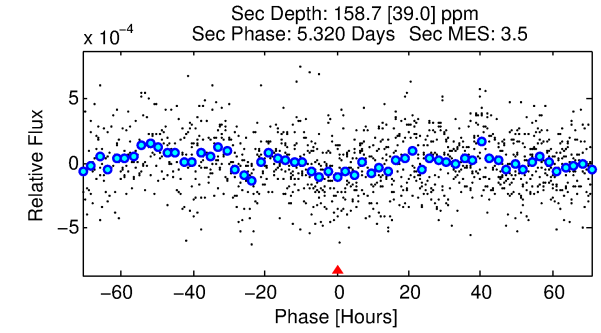
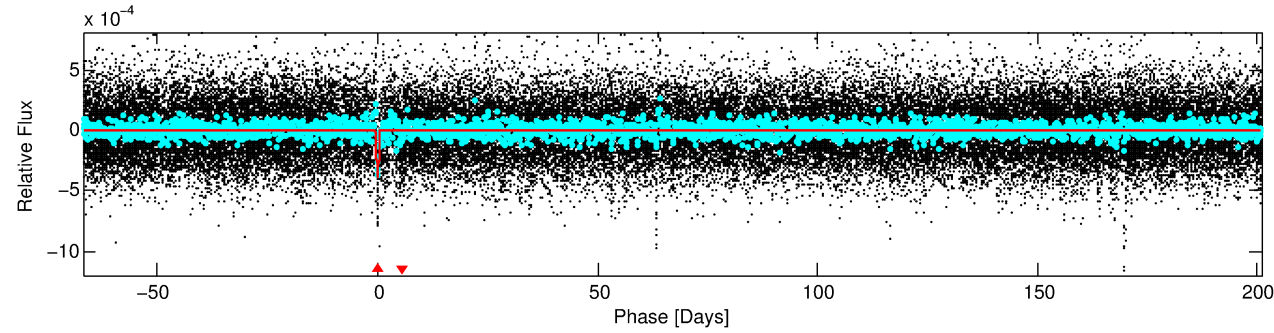
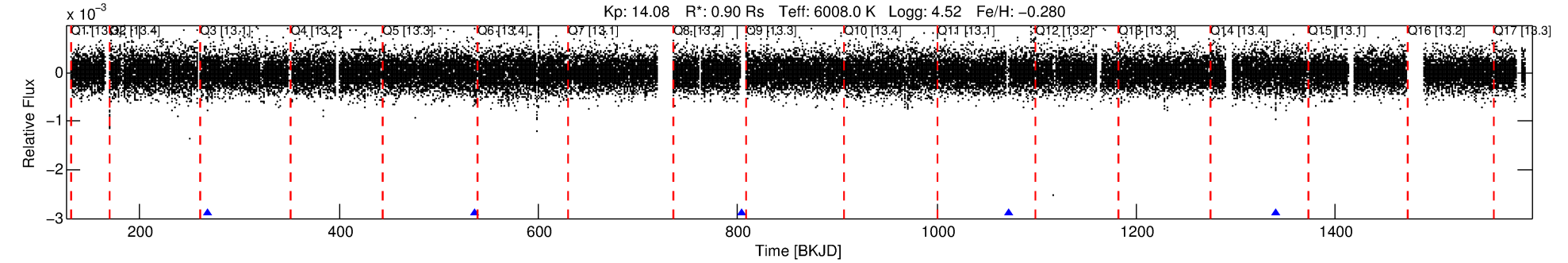
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008683144-01

No Significant Match Found

DV One-Page Summary

KIC: 8683144 Candidate: 1 of 1 Period: 267.973 d



DV Fit Results:

Period = 267.97297 [0.00538] d
Epoch = 267.9698 [0.0137] BKJD
Rp/R* = 0.0199 [0.0049]
a/R* = 107.93 [127.18]
b = 0.81 [0.51]
Seff = 1.45 [0.58]
Teff = 280 [28] K
Rp = 1.95 [0.77] Re
a = 0.8053 [0.2098] AU
Ag = 14897.28 [9968.77] [1.49σ]
Teffp = 4778 [674] K [6.67σ]

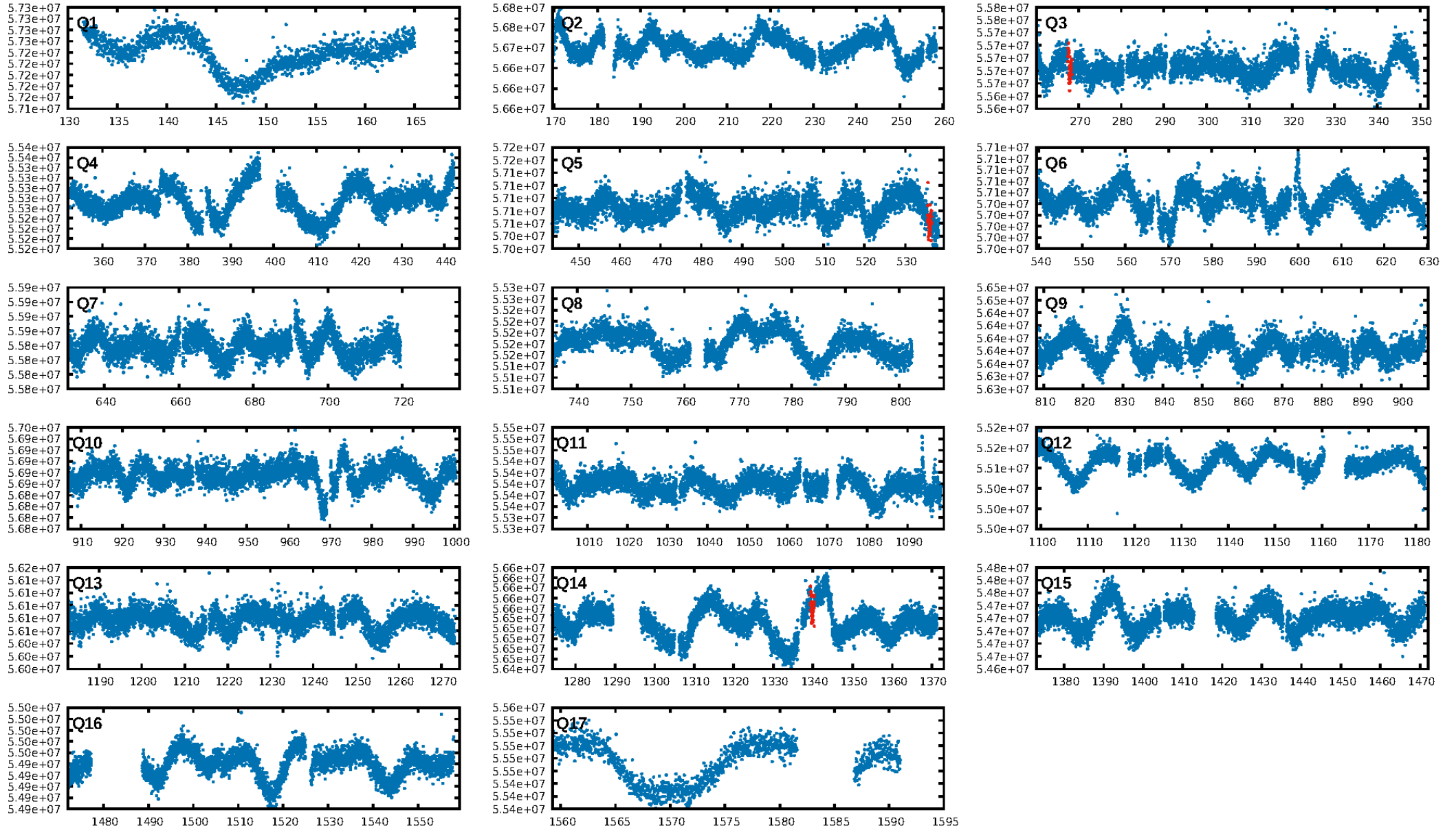
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 25.5%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 2.71e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.088
Centroid-sig: 3.5%
Centroid-so: 1.480 arcsec [1.16σ]
OotOffset-rm: 6.467 arcsec [30.95σ]
KicOffset-rm: 6.470 arcsec [30.97σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

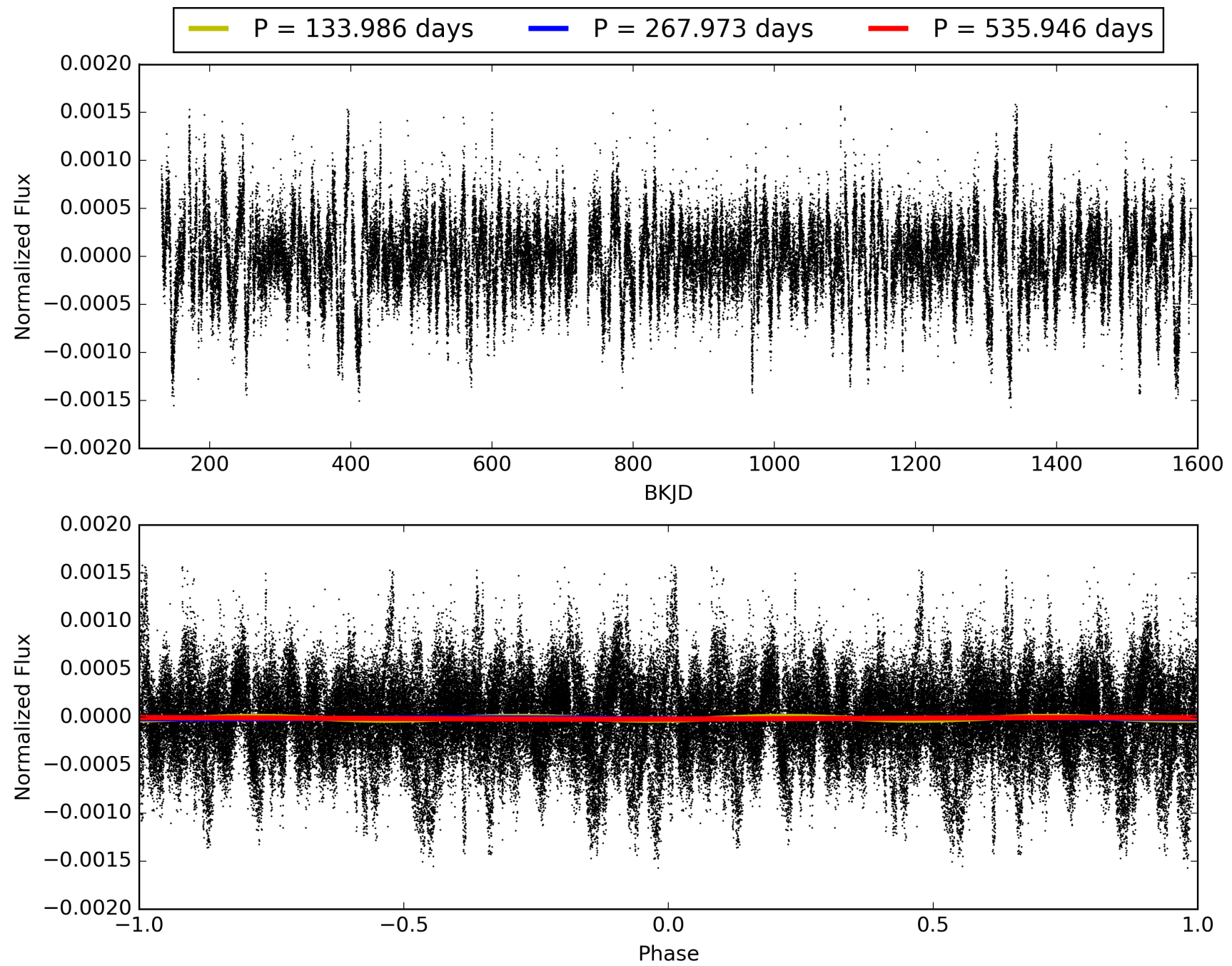
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:31:45 Z

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

TCE 008683144-01, PDC Light Curves

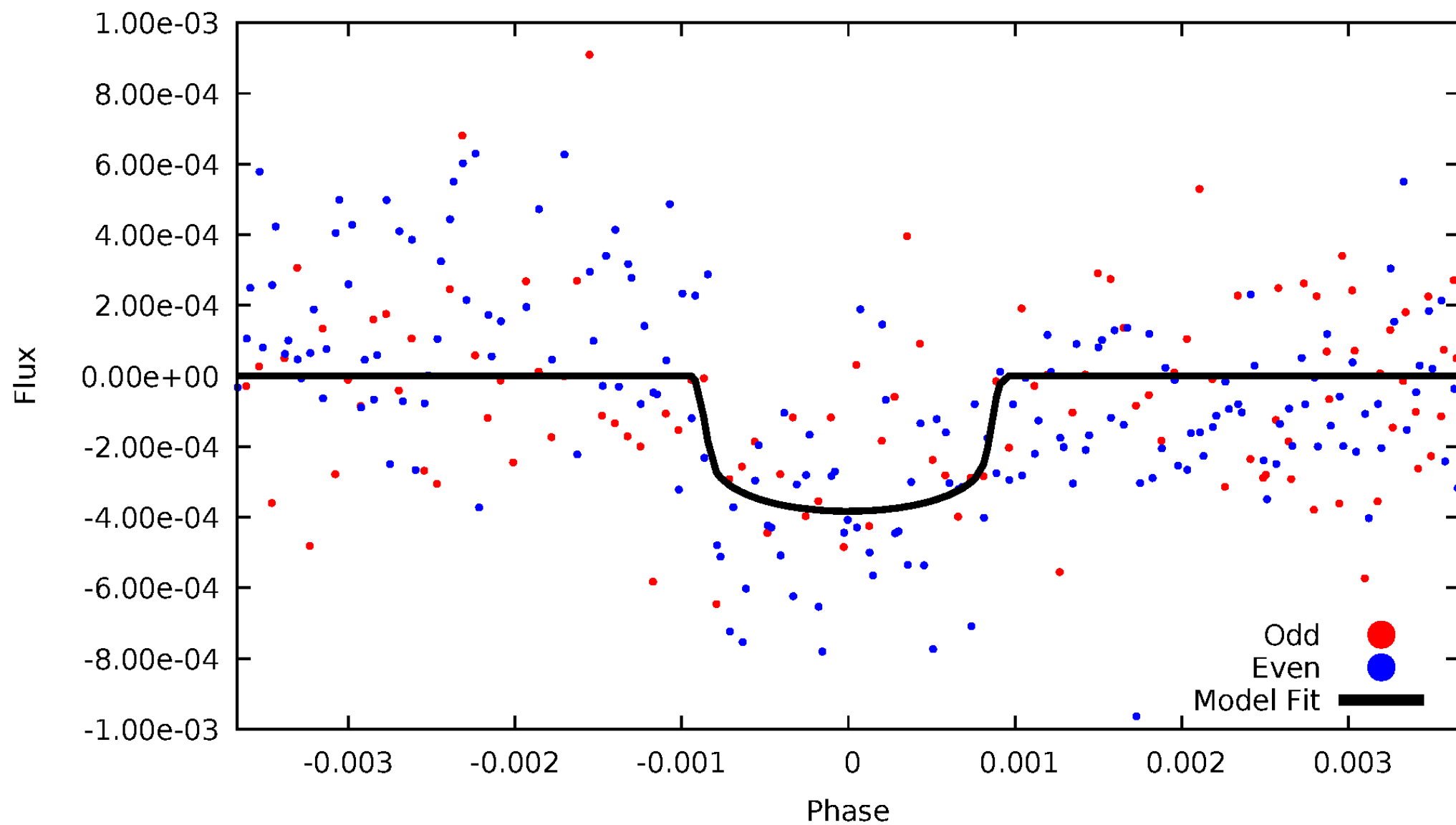


TCE 008683144-01



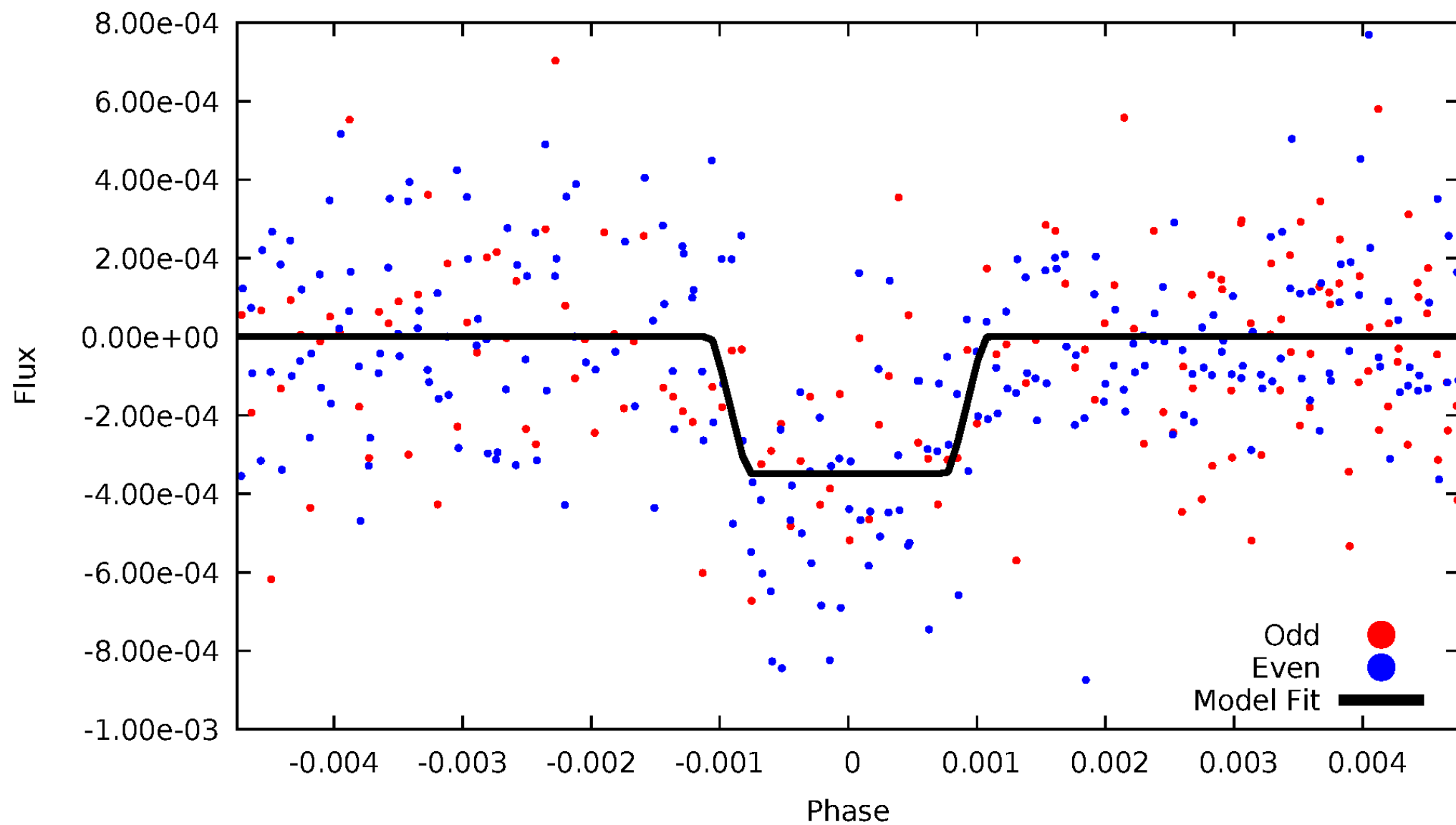
DV Odd/Even

TCE 008683144-01



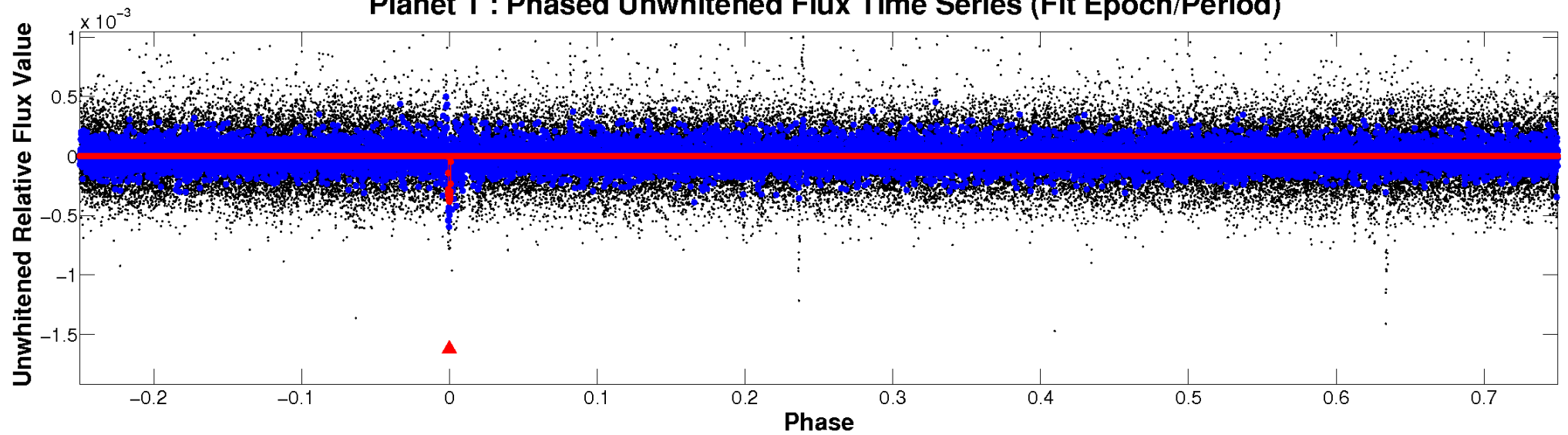
ALT Odd/Even

TCE 008683144-01

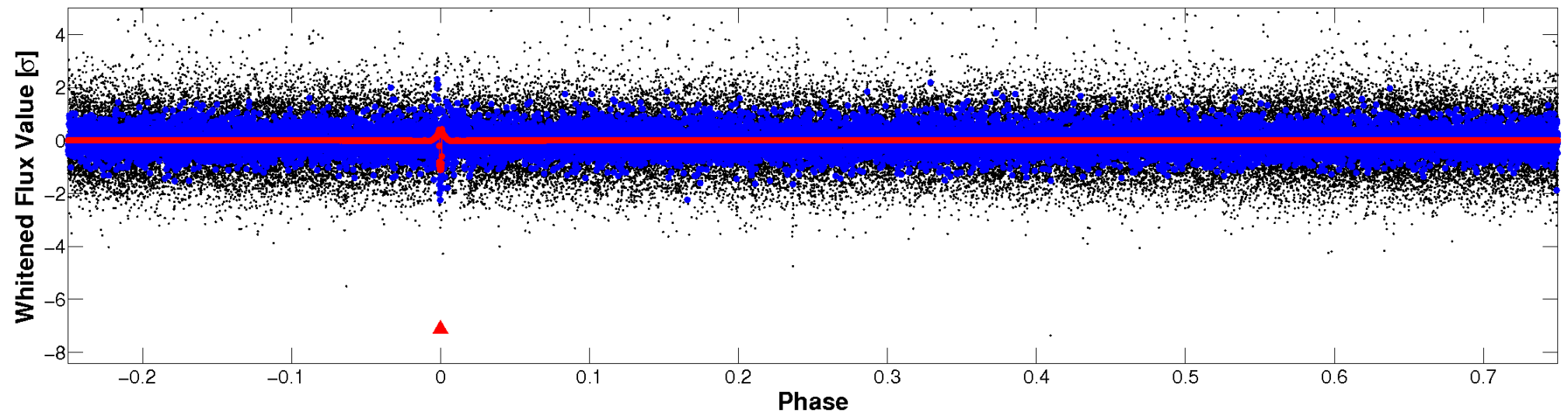


Non-Whitened Vs. Whitened Light Curve

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



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



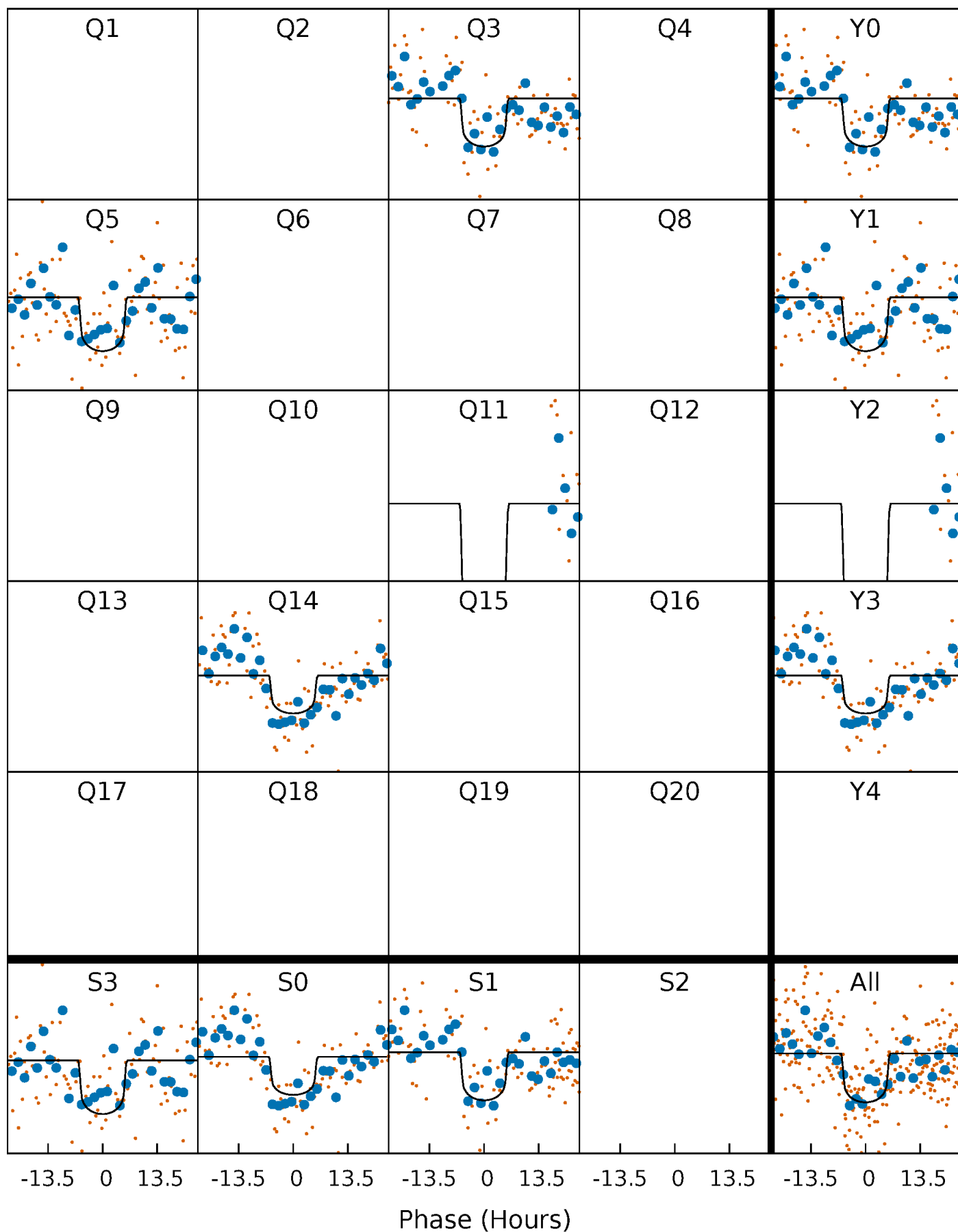
PDC Quarter-Phased Transit Curves

TCE 008683144-01 P=267.972974 Days $T_0=267.969816$ (BKJD)



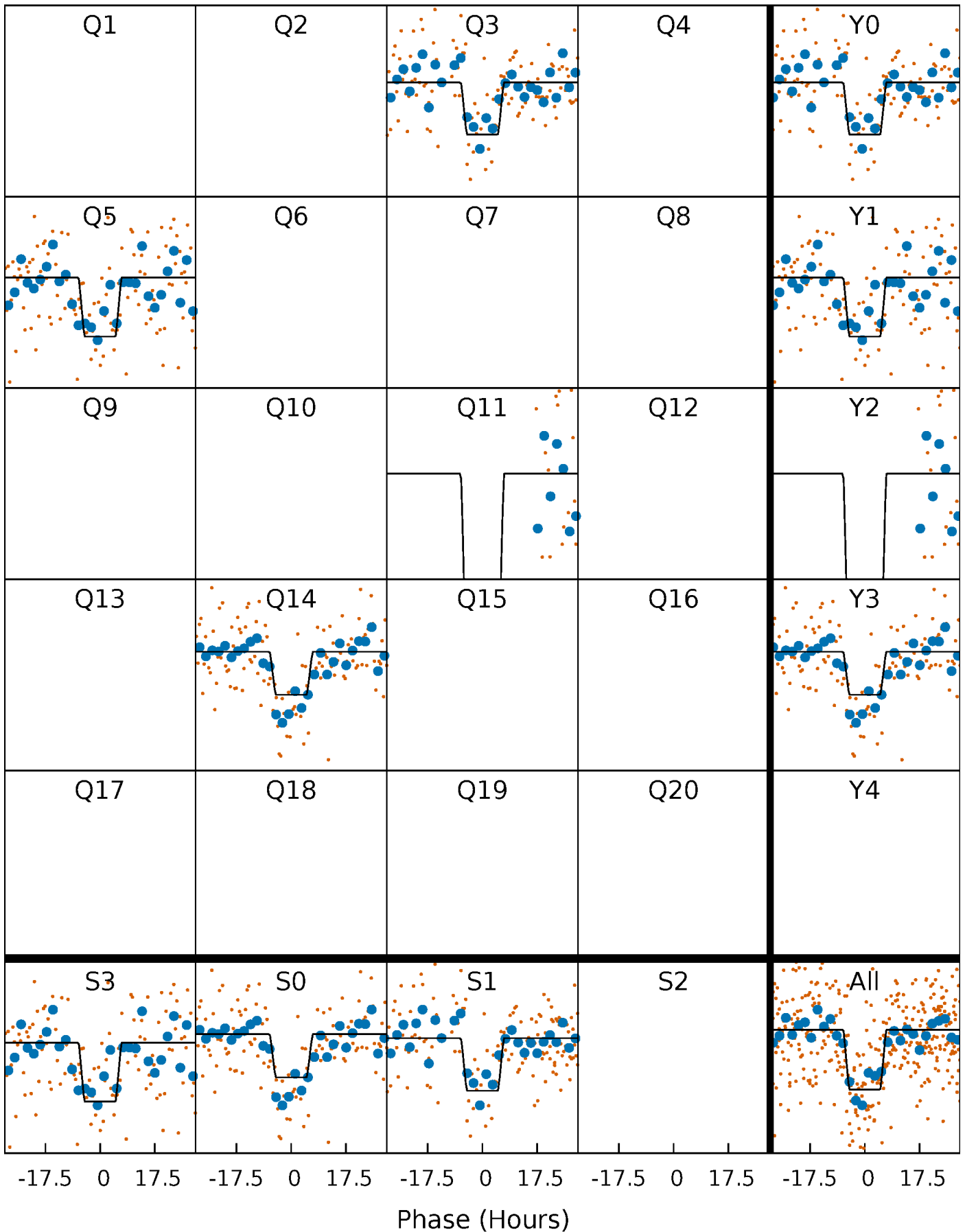
DV Quarter-Phased Transit Curves

TCE 008683144-01 P=267.972974 Days $T_0=267.969816$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

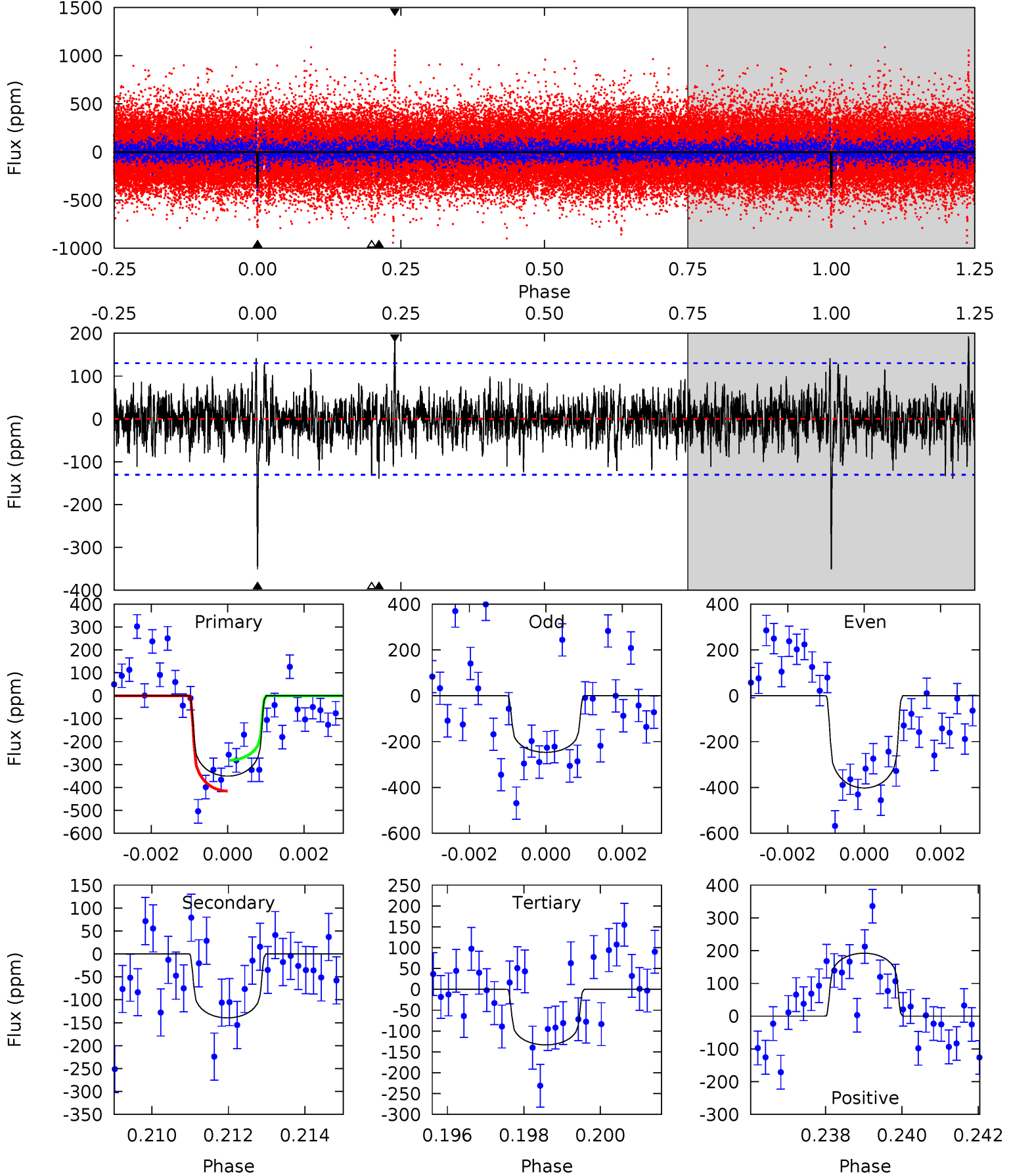
TCE 008683144-01 P=267.965706 Days $T_0=267.966975$ (BKJD)



DV Model-Shift Uniqueness Test

008683144-01, P = 267.972974 Days, E = 267.969816 Days

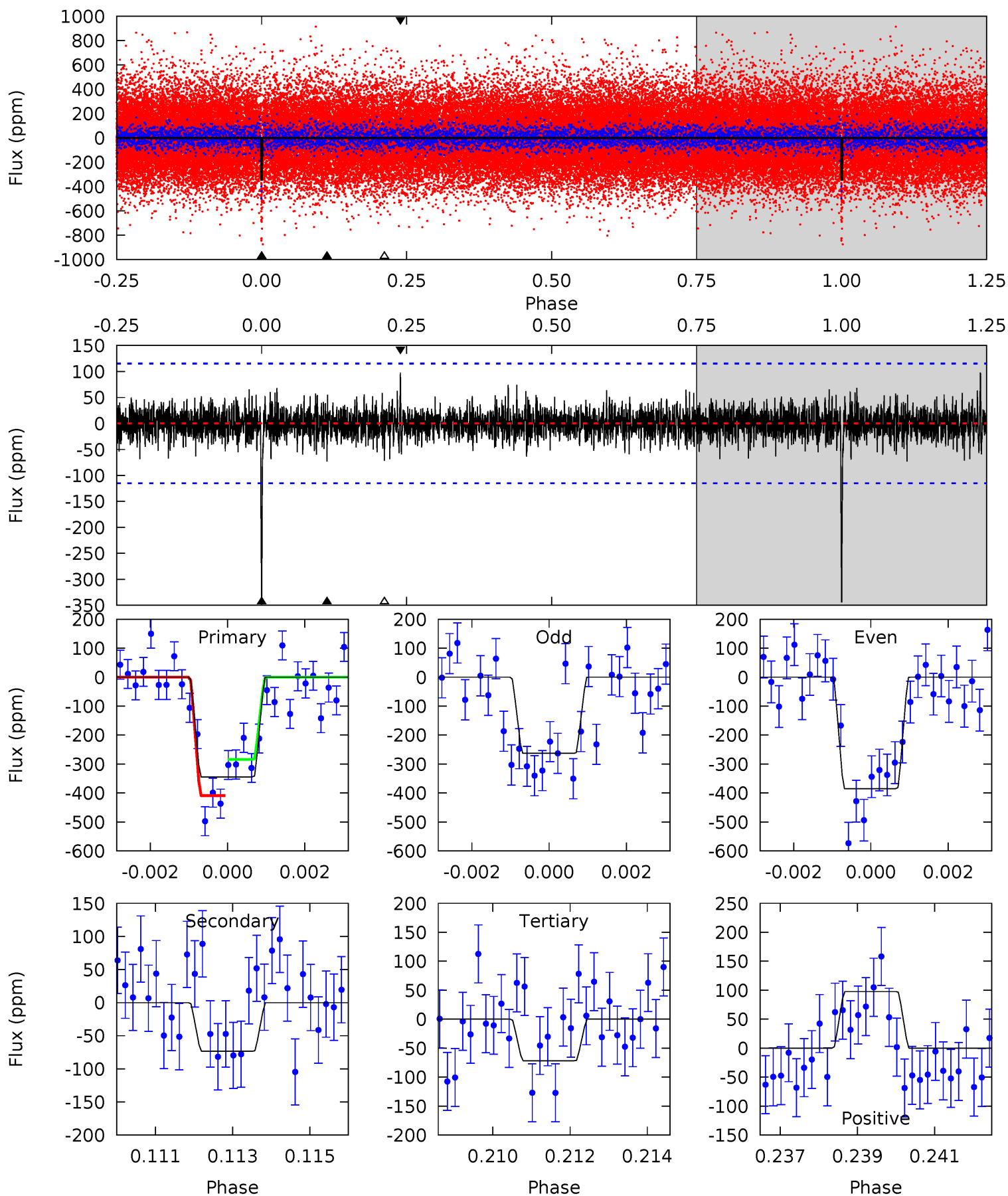
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	5.71	5.46	7.87	5.34	3.10	1.43	8.90	6.49	0.26	-2.15	2.97	1.07	0.35	2.75



Alt Model-Shift Uniqueness Test

008683144-01, $P = 267.965706$ Days, $E = 0.001269$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	3.38	3.30	4.50	5.31	3.06	0.93	12.6	11.4	0.08	-1.12	2.65	1.16	0.22	2.88



Stellar Parameters For KIC 008683144

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6008^{+163}_{-181}	$4.519^{+0.052}_{-0.208}$	$-0.280^{+0.300}_{-0.300}$	$0.897^{+0.277}_{-0.092}$	$0.970^{+0.120}_{-0.132}$	$1.892^{+0.396}_{-1.009}$
	+3%/-3%	+1%/-5%	+107%/-107%	+31%/-10%	+12%/-14%	+21%/-53%
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 008683144-01 / KOI 8162.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-140 ± 24	$2.04^{+0.62}_{-0.56}$	399^{+29}_{-19}	4733^{+683}_{-417}	11393^{+10716}_{-4706}
Alt.	-73 ± 22	$1.93^{+0.57}_{-0.50}$	399^{+29}_{-19}	4268^{+611}_{-449}	6597^{+6888}_{-3030}

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

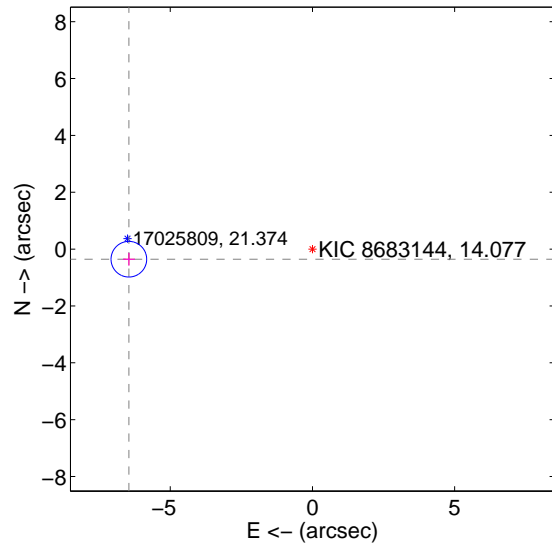
Supplemental centroid analysis for 008683144-01. Kepler magnitude: 14.08. Transit SNR 8.59

There are 0 quarters with good PRF difference image offsets

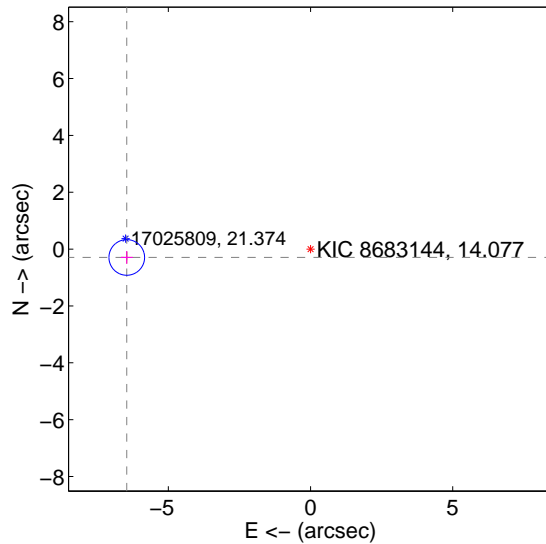
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.467 ± 0.209	30.95	6.457 ± 0.209	-0.355 ± 0.225
PRF-fit source offset from KIC position	6.470 ± 0.209	30.97	6.463 ± 0.209	-0.293 ± 0.225
photometric centroid source offset	1.48 ± 1.27	1.16	-0.01 ± 1.27	-1.48 ± 1.27

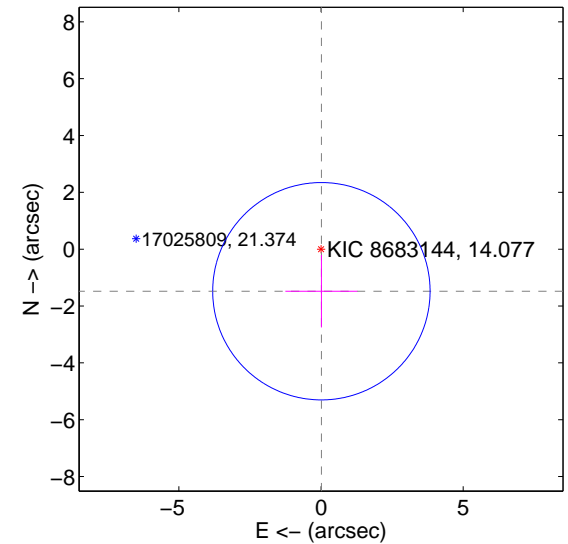
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

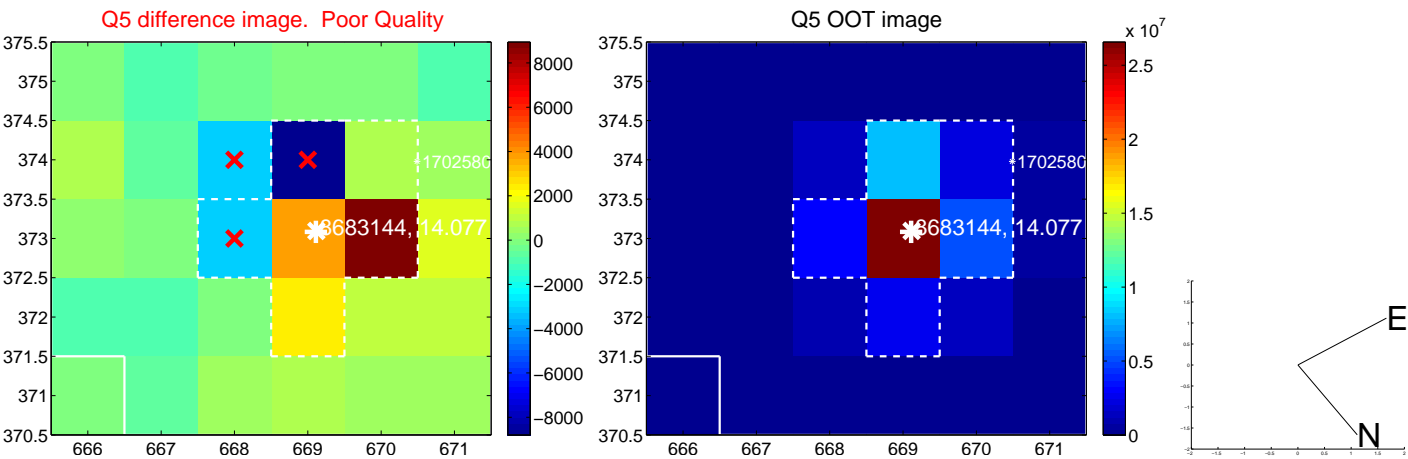


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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.



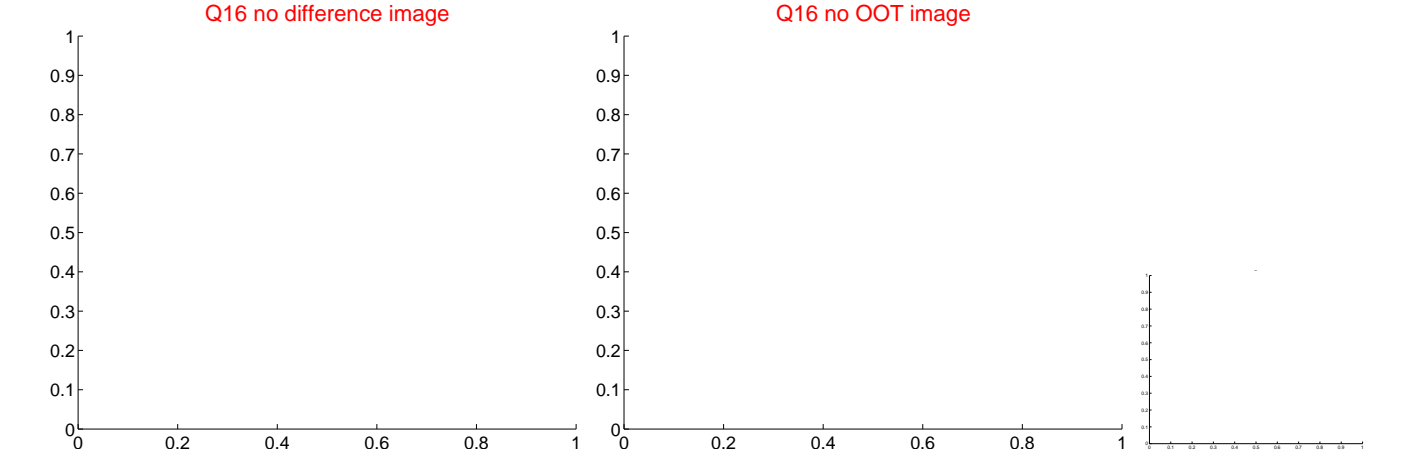
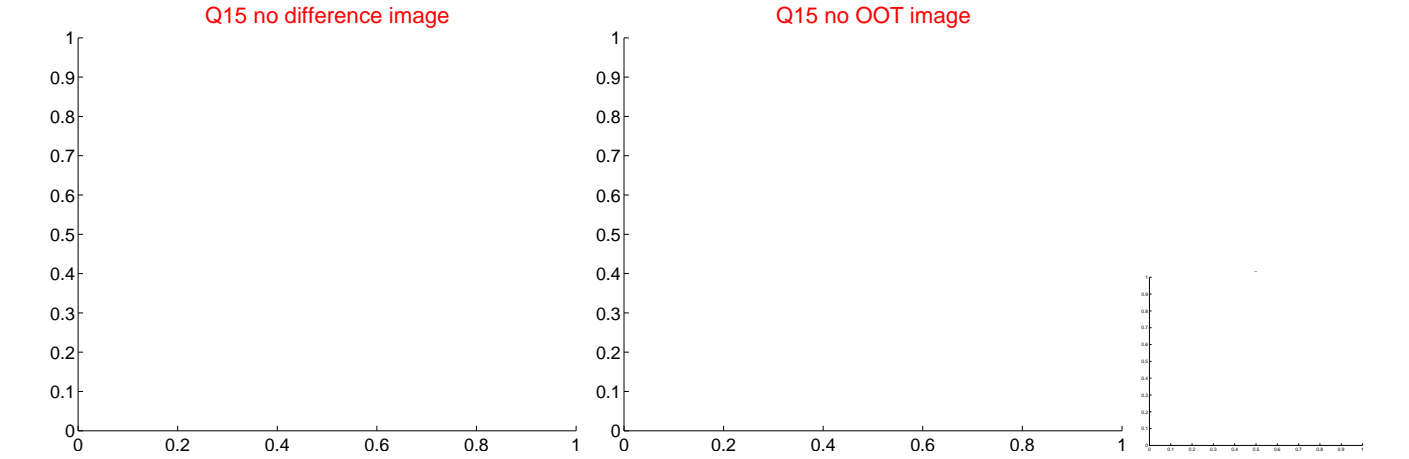
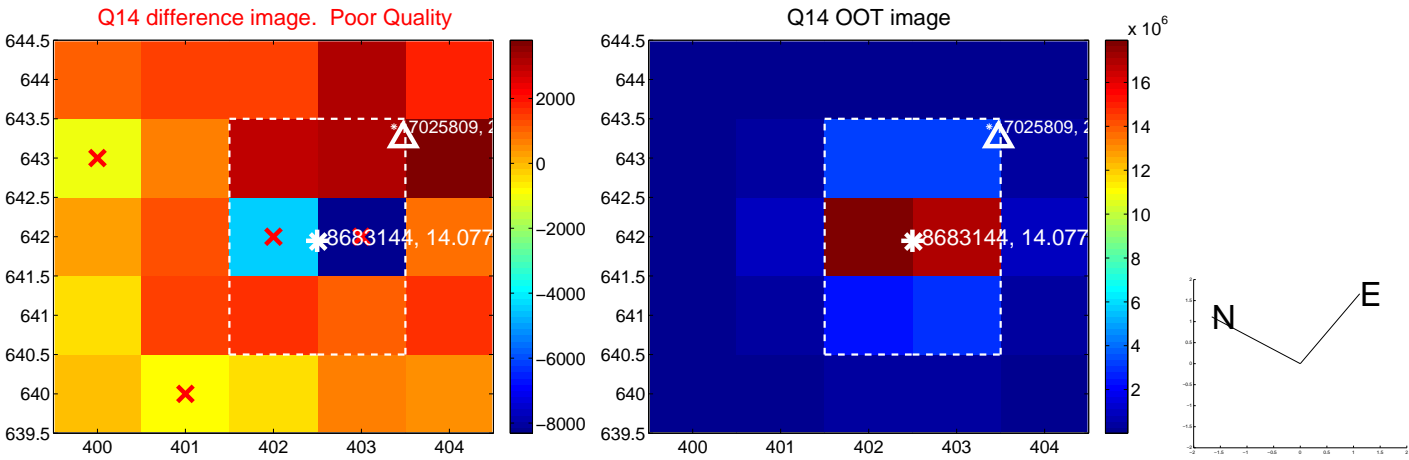
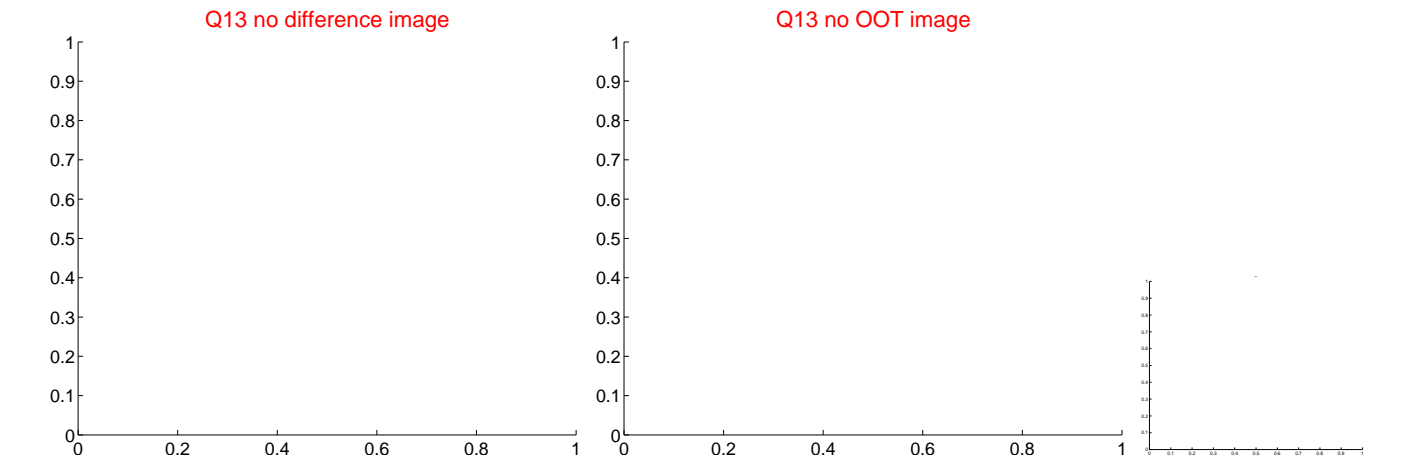
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



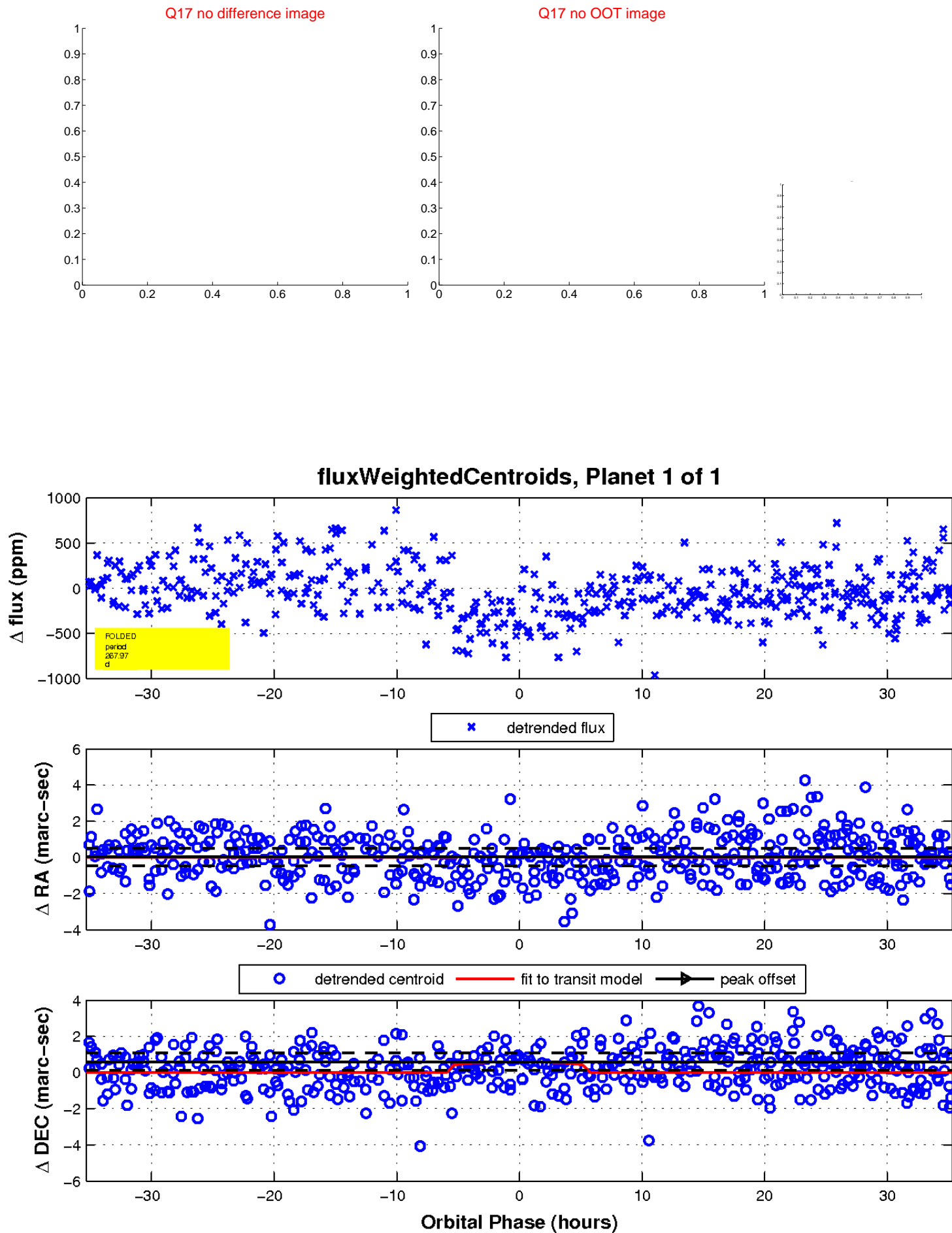
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white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

