

KIC 007881567

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})
007881567-01	OBS	No	385.134052	466.399849	441.6	13.789	8.7	8.3	0.99	6217	2.31	1.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007881567-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_MEAS—HALO_GHOST

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

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

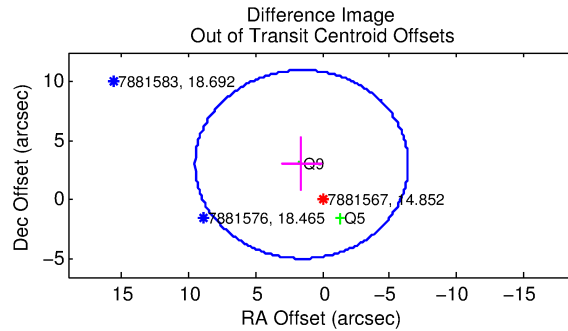
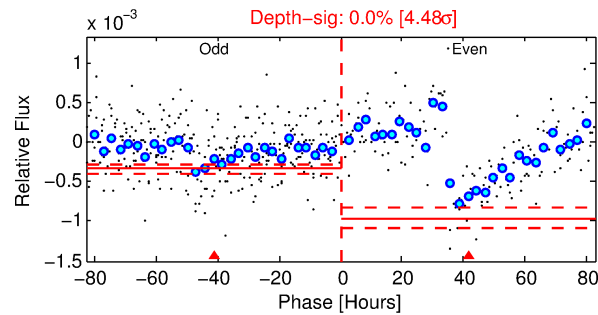
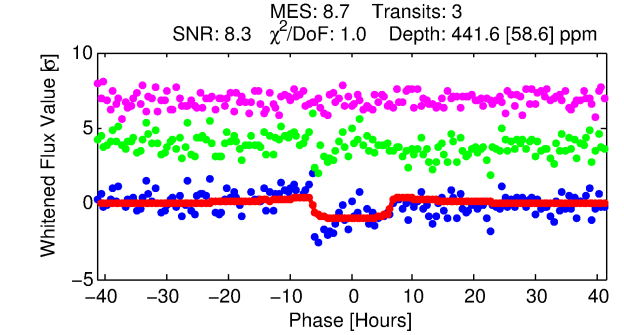
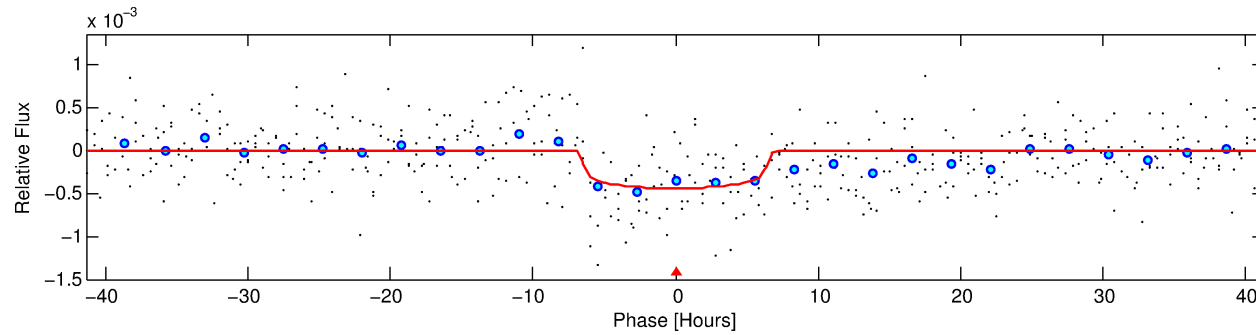
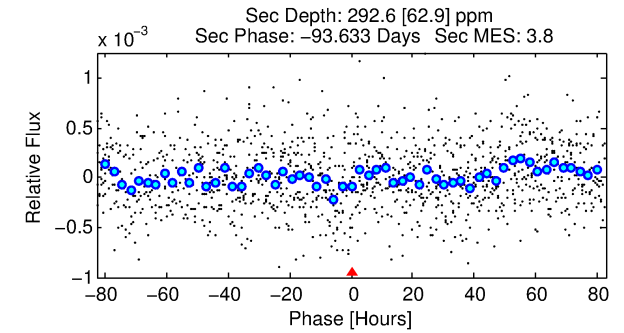
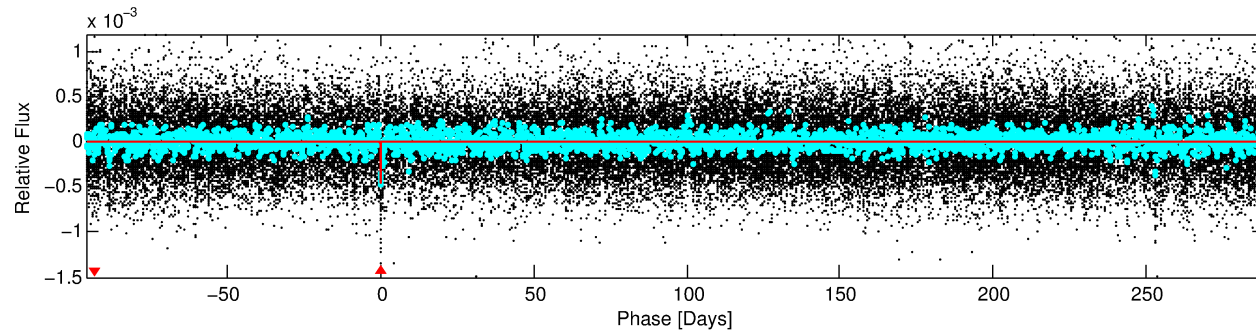
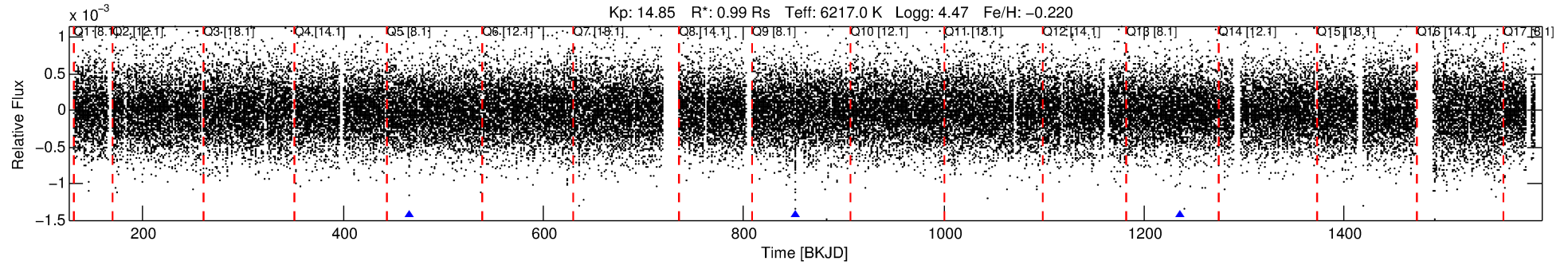
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007881567-01

No Significant Match Found

DV One-Page Summary

KIC: 7881567 Candidate: 1 of 1 Period: 385.134 d



DV Fit Results:

Period = 385.13405 [0.01476] d
Epoch = 466.3998 [0.0191] BKJD
Rp/R* = 0.0214 [0.0045]
a/R* = 132.09 [134.65]
b = 0.81 [0.43]
Seff = 1.17 [0.50]
Teq = 265 [29] K
Rp = 2.31 [0.89] Re
a = 1.0558 [0.2912] AU
Ag = 33618.07 [20910.80] [1.61 σ]
Teffp = 5557 [683] K [7.74 σ]

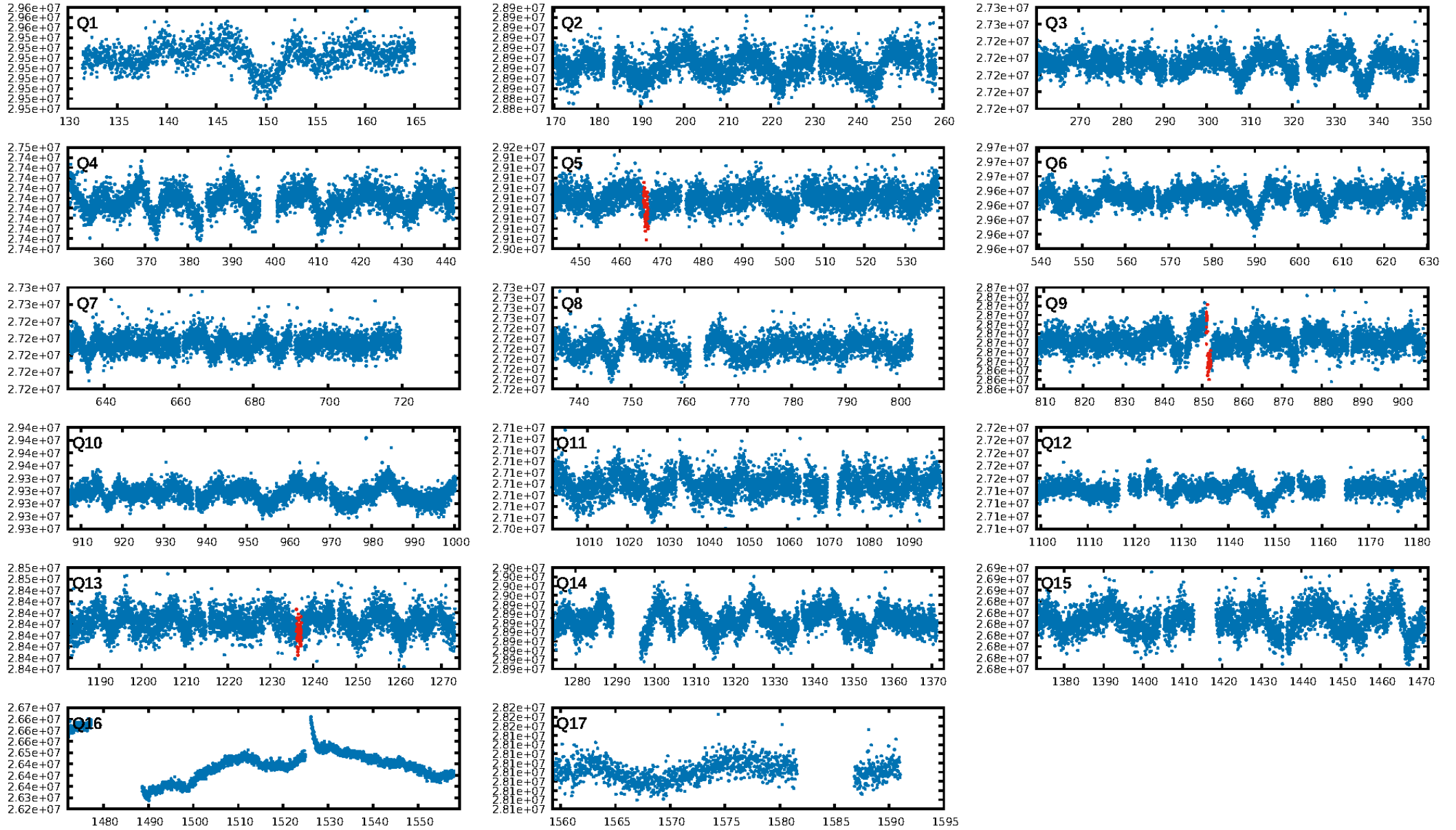
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 95.9%
Bootstrap-pfa: 2.22e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.1377
Centroid-sig: 15.3%
Centroid-so: 1.256 arcsec [1.06 σ]
OotOffset-rm: 3.396 arcsec [1.28 σ]
KicOffset-rm: 3.450 arcsec [2.49 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

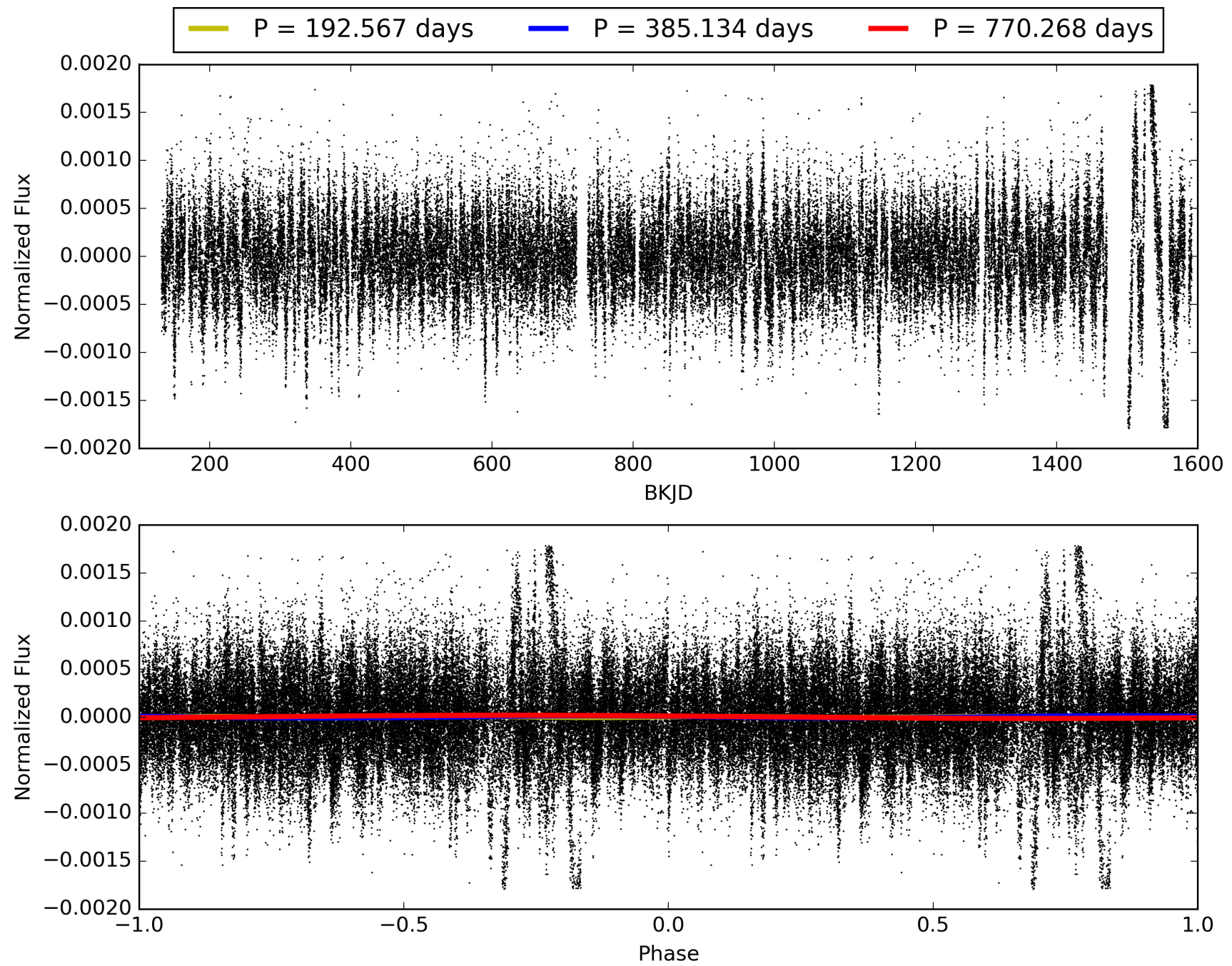
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:06:32 Z

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

TCE 007881567-01, PDC Light Curves

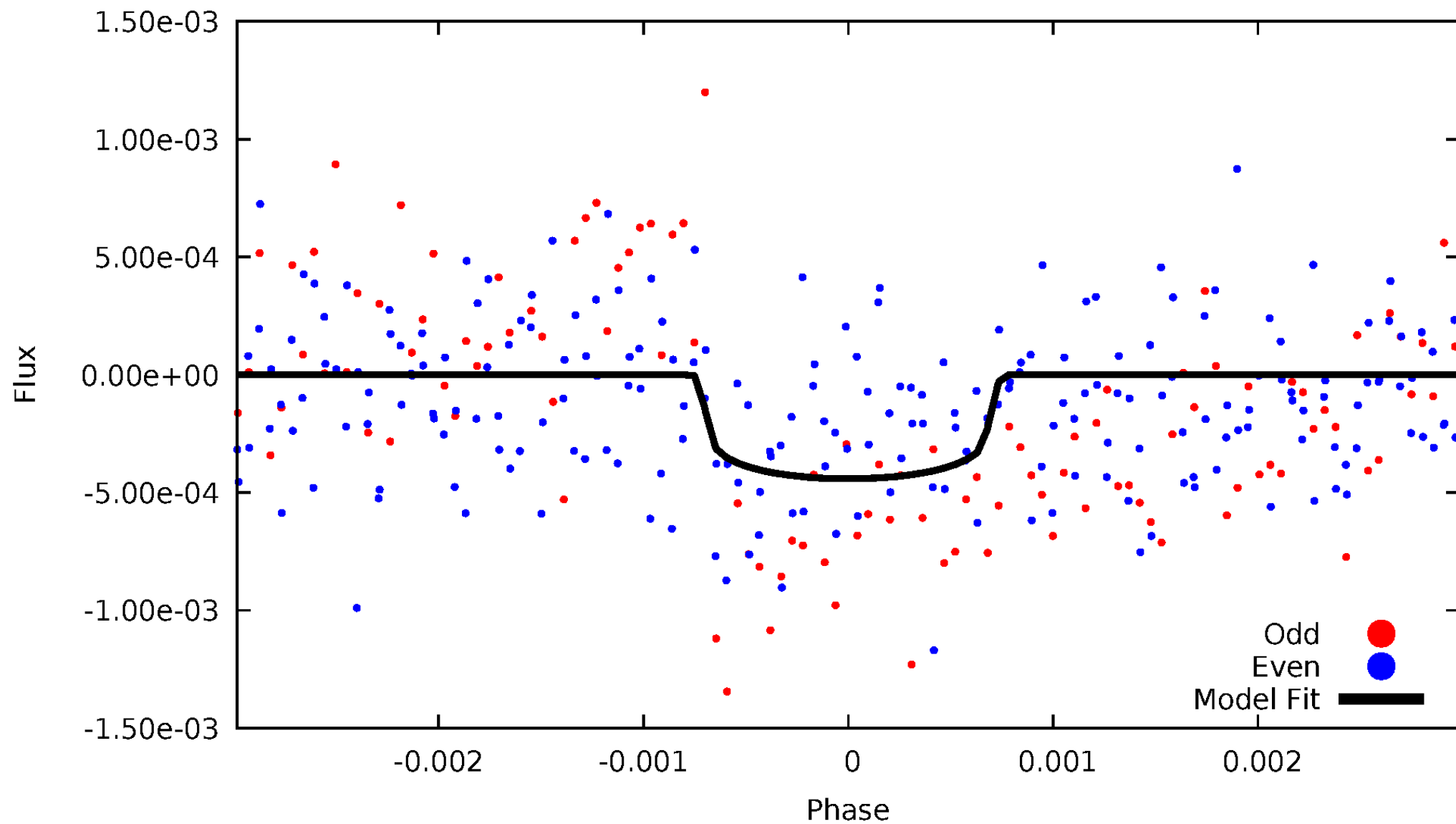


TCE 007881567-01



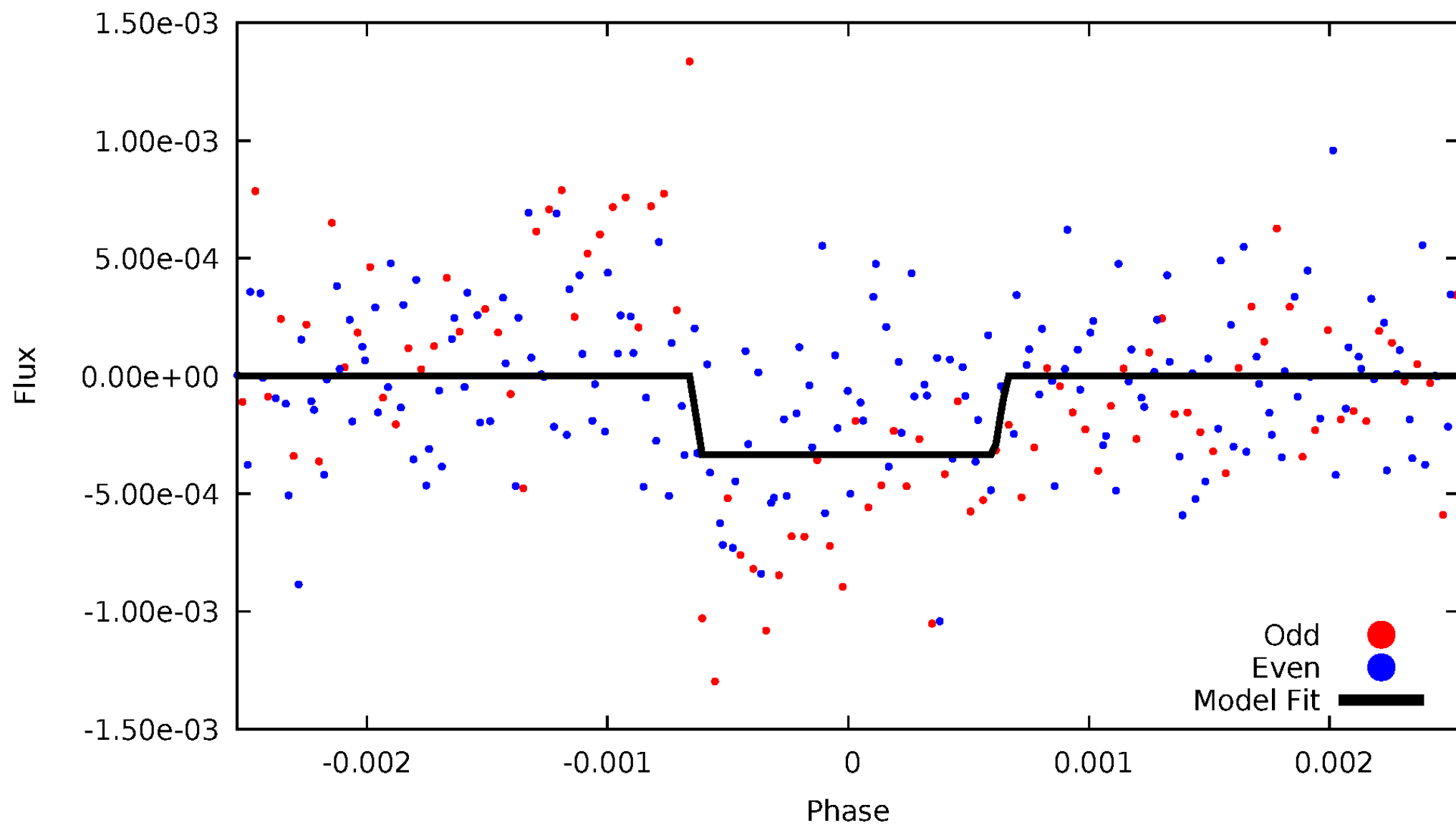
DV Odd/Even

TCE 007881567-01



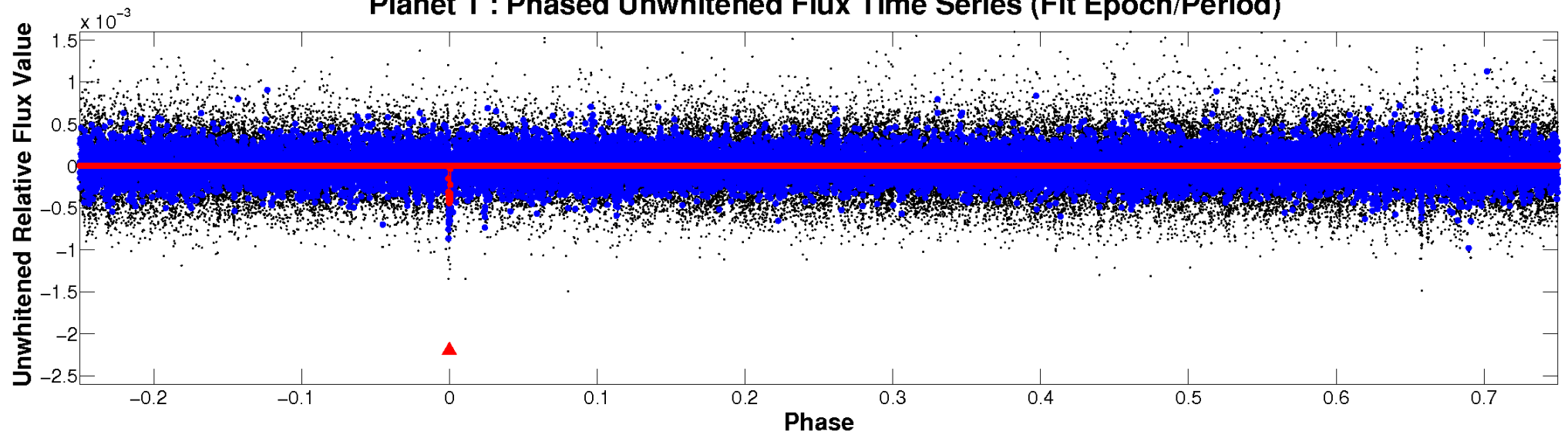
ALT Odd/Even

TCE 007881567-01

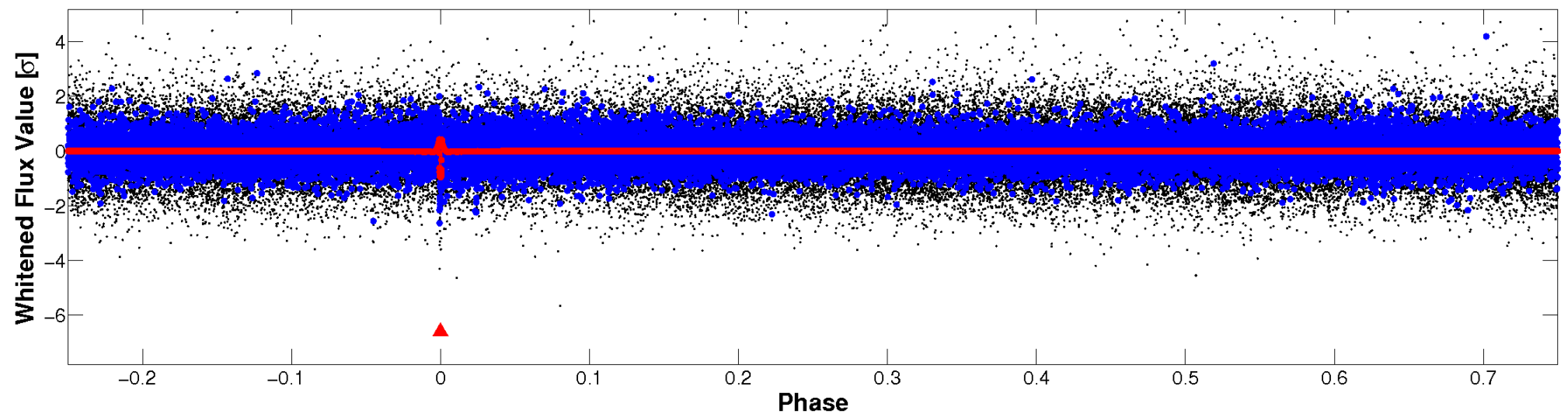


Non-Whitened Vs. Whitened Light Curve

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

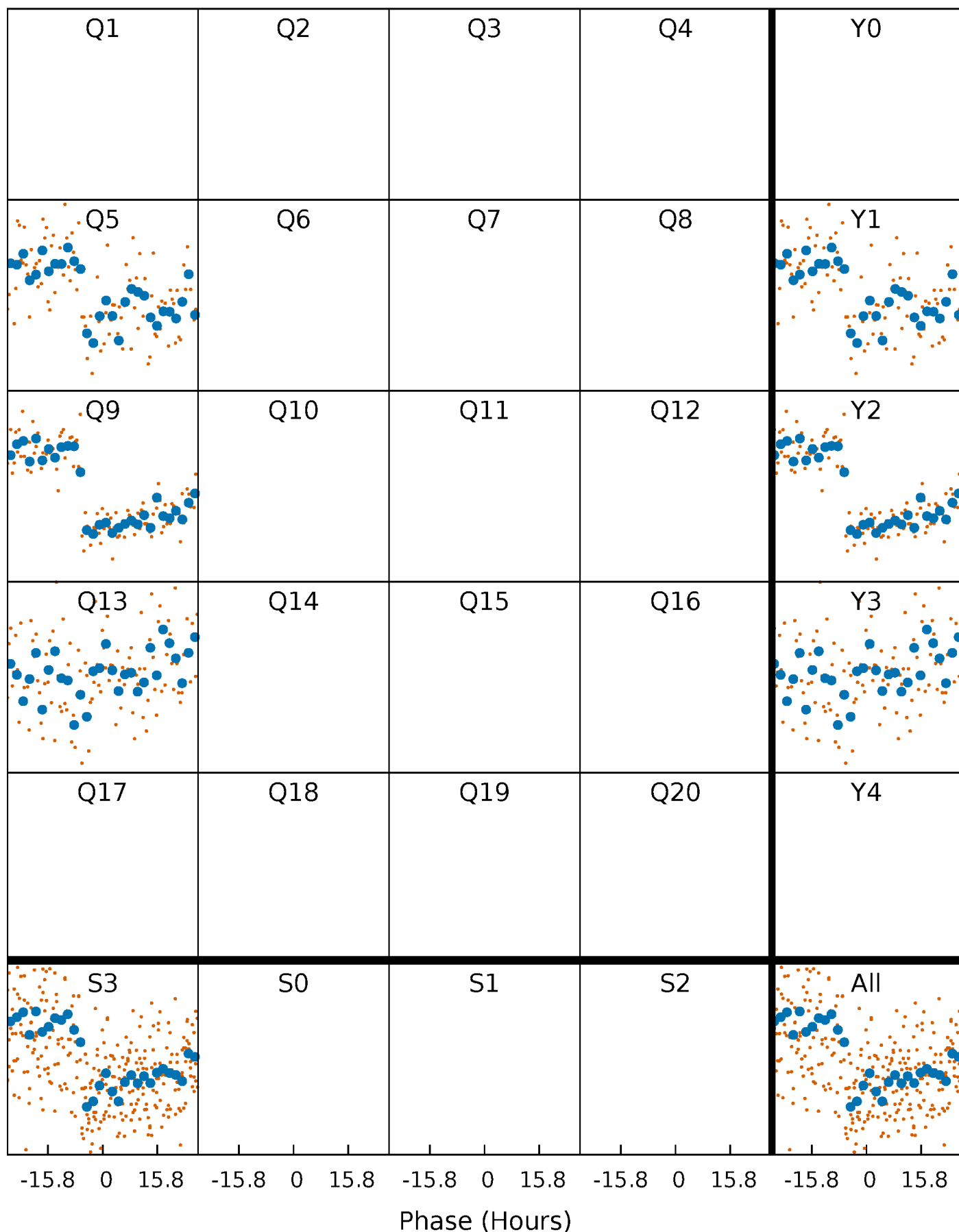


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 007881567-01 $P=385.134052$ Days $T_0=466.399849$ (BKJD)



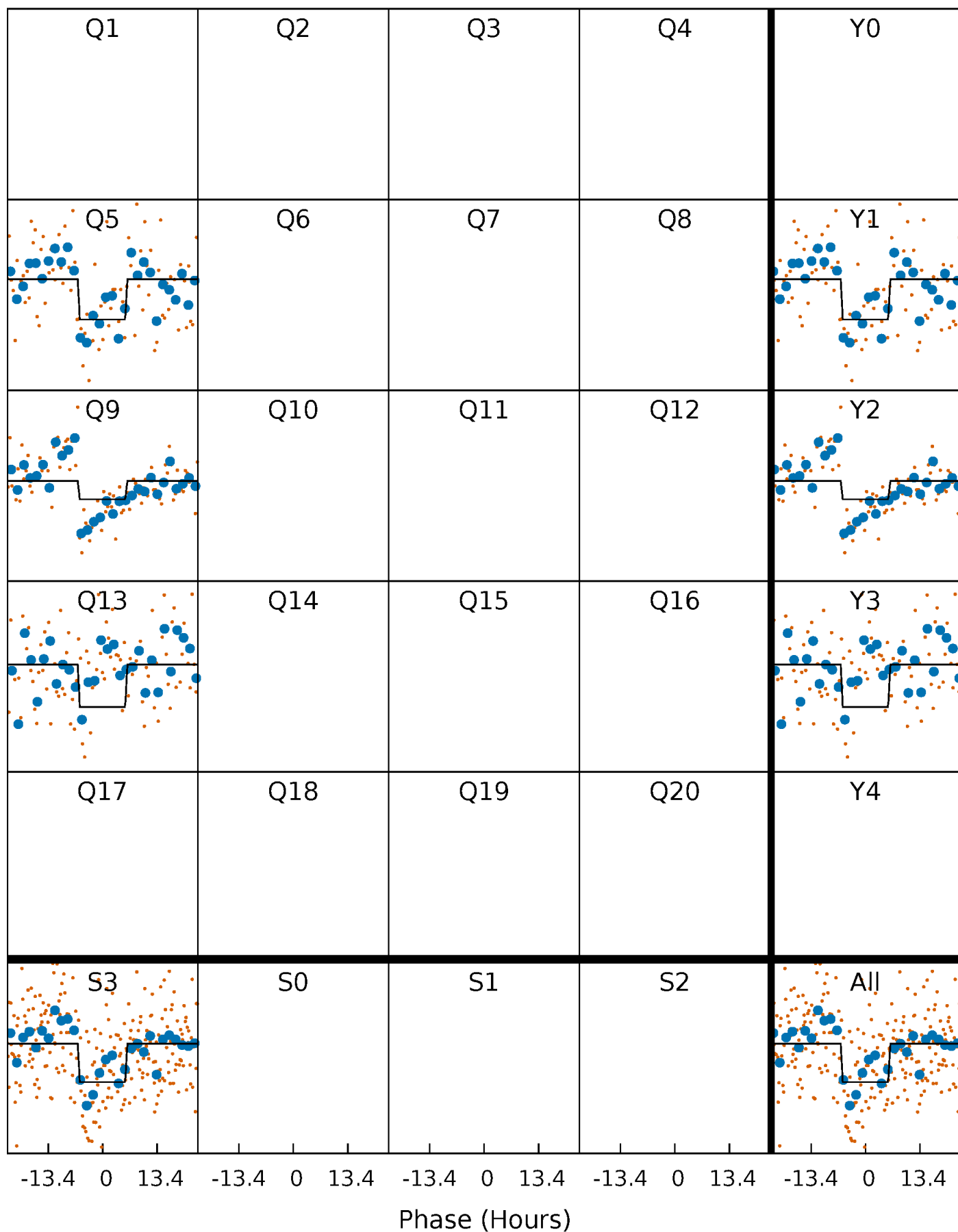
DV Quarter-Phased Transit Curves

TCE 007881567-01 $P=385.134052$ Days $T_0=466.399849$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

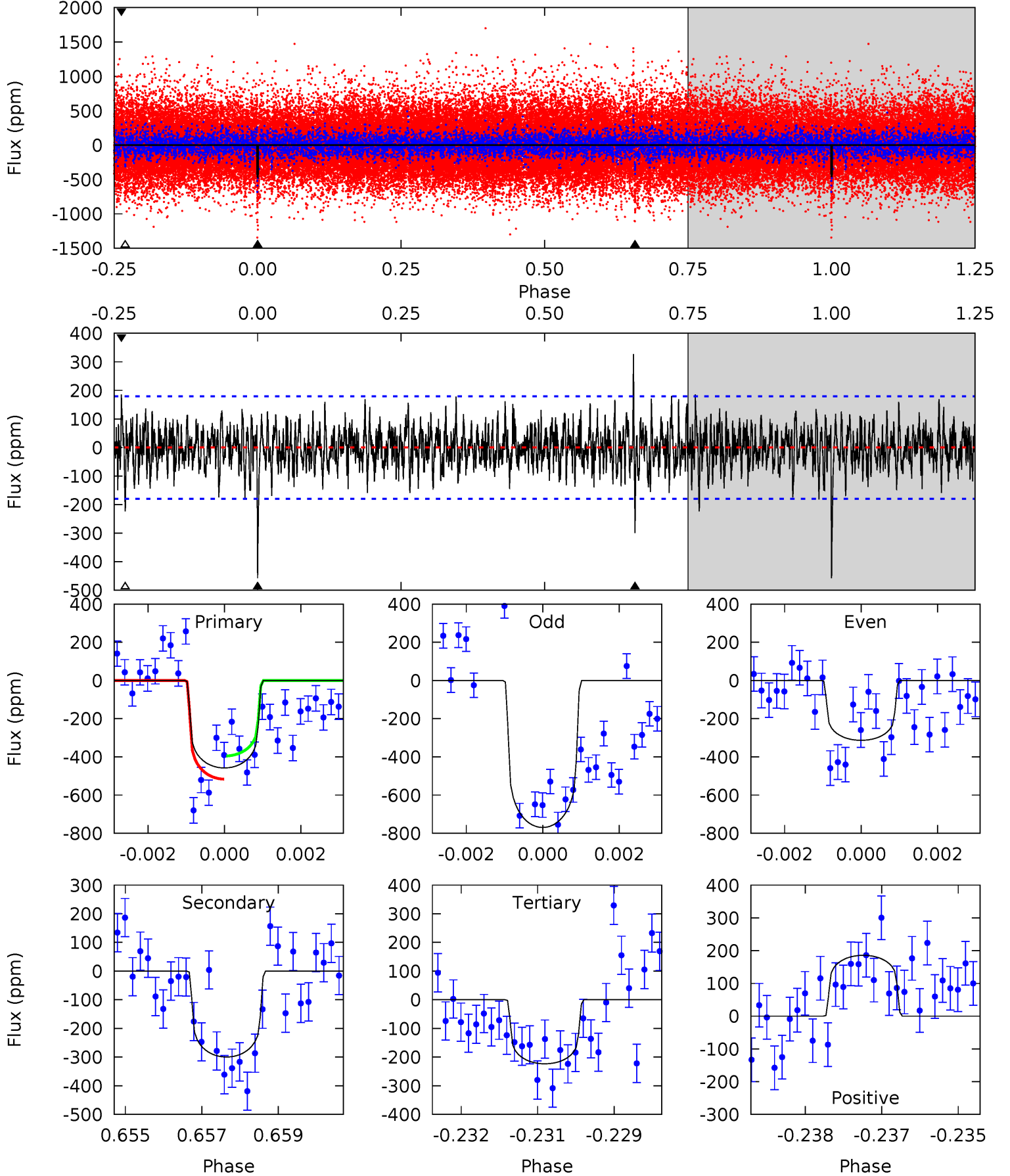
TCE 007881567-01 $P=385.104494$ Days $T_0=466.414392$ (BKJD)



DV Model-Shift Uniqueness Test

007881567-01, $P = 385.134052$ Days, $E = 81.265797$ Days

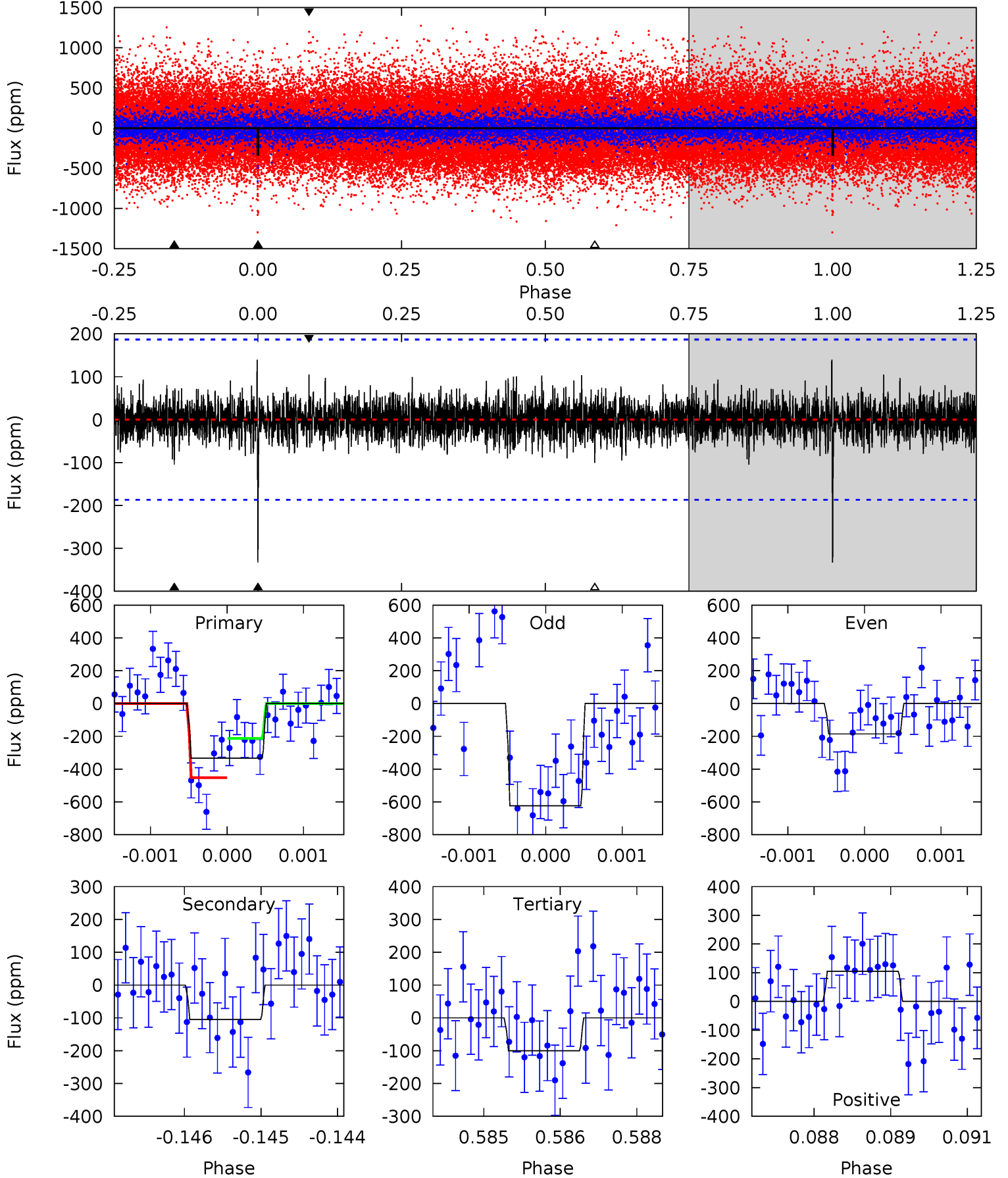
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	8.98	6.69	5.56	5.37	3.17	1.74	7.02	8.15	2.29	3.42	6.35	1.00	0.42	1.81



Alt Model-Shift Uniqueness Test

007881567-01, P = 385.104494 Days, E = 81.309898 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.64	3.03	2.91	3.04	5.41	3.22	0.81	6.73	6.61	0.12	-0.00	5.99	0.96	0.30	3.47



Stellar Parameters For KIC 007881567

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6217^{+175}_{-219}	$4.472^{+0.056}_{-0.224}$	$-0.220^{+0.250}_{-0.300}$	$0.989^{+0.320}_{-0.107}$	$1.056^{+0.144}_{-0.144}$	$1.540^{+0.442}_{-0.817}$
	+3%/-4%	+1%/-5%	+114%/-136%	+32%/-11%	+14%/-14%	+29%/-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 007881567-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-300 ± 33	$2.40^{+0.64}_{-0.47}$	379^{+28}_{-18}	5612^{+617}_{-511}	31418^{+17170}_{-12114}
Alt.	-105 ± 35	$2.09^{+0.59}_{-0.54}$	378^{+29}_{-19}	4748^{+678}_{-548}	14205^{+13308}_{-6908}

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

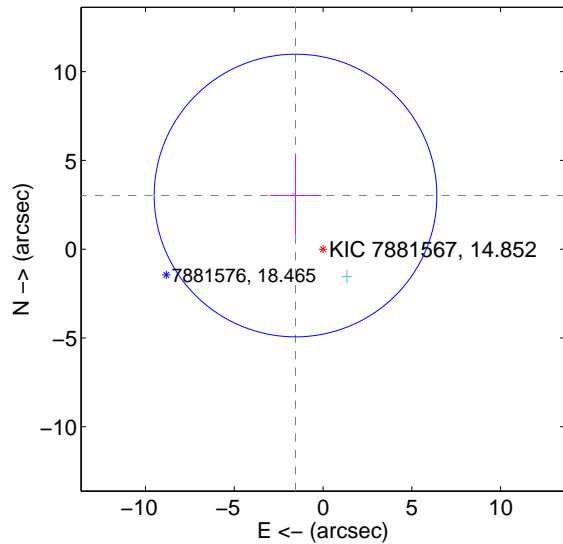
Supplemental centroid analysis for 007881567-01. Kepler magnitude: 14.85. Transit SNR 8.26

There are 2 quarters with good PRF difference image offsets

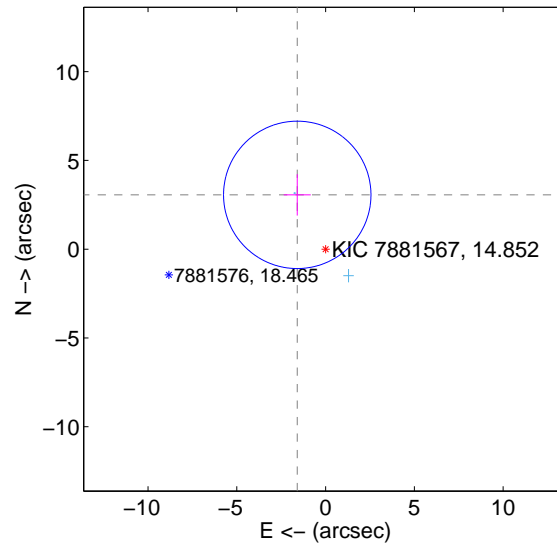
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.396 ± 2.654	1.28	1.550 ± 1.456	3.022 ± 2.236
PRF-fit source offset from KIC position	3.450 ± 1.384	2.49	1.596 ± 0.761	3.059 ± 1.165
photometric centroid source offset	1.26 ± 1.18	1.06	-1.00 ± 1.19	-0.76 ± 1.16

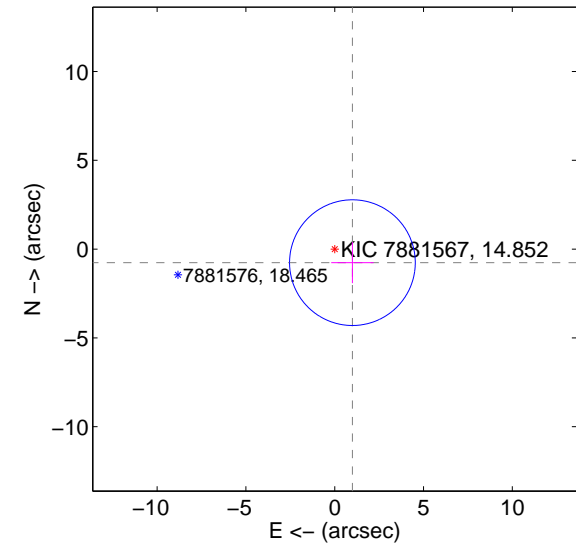
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

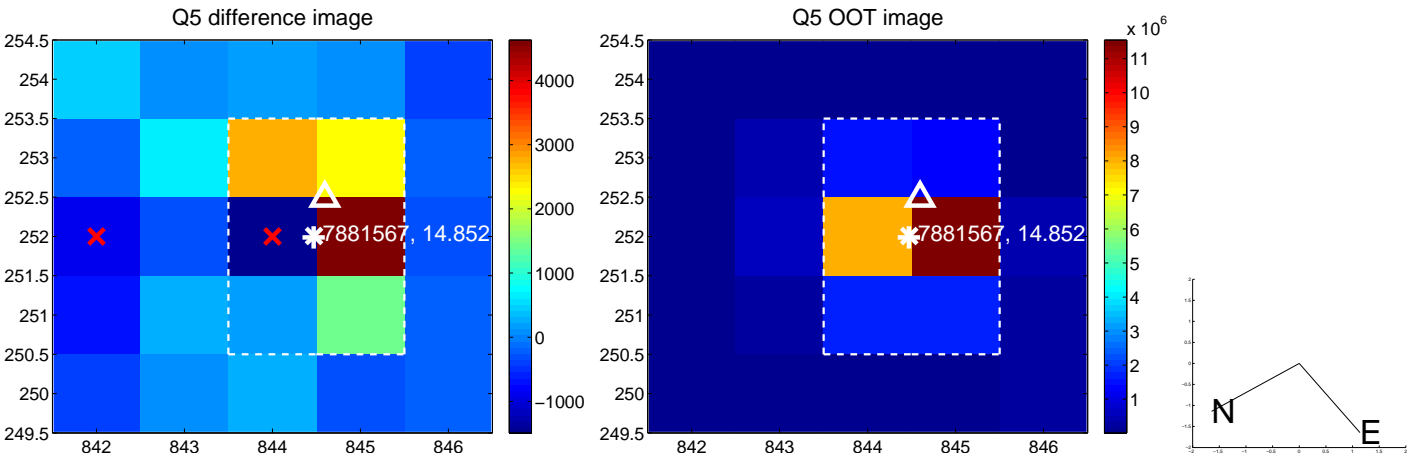


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

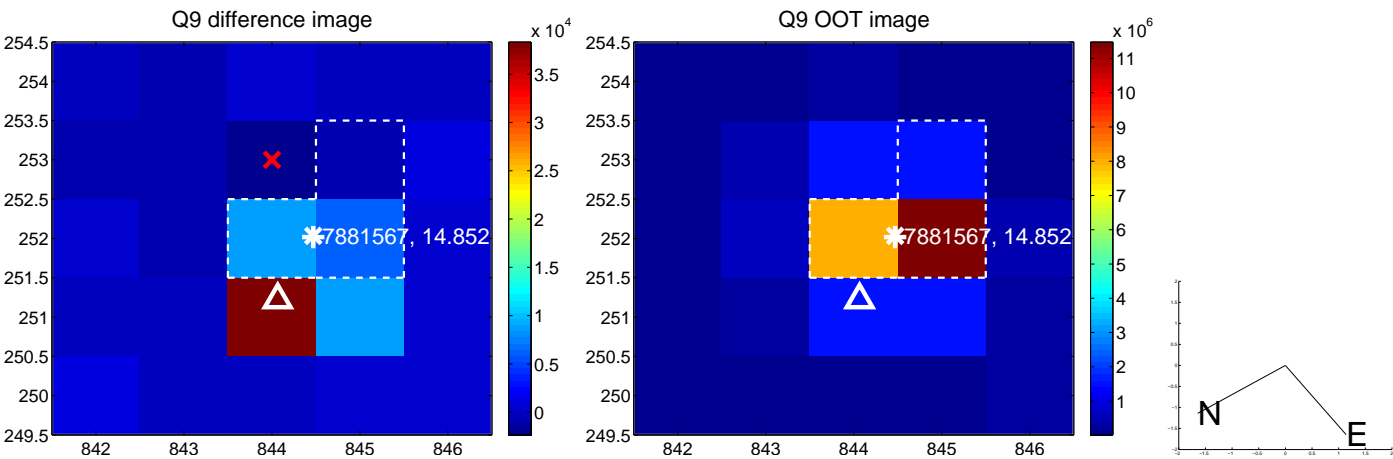
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



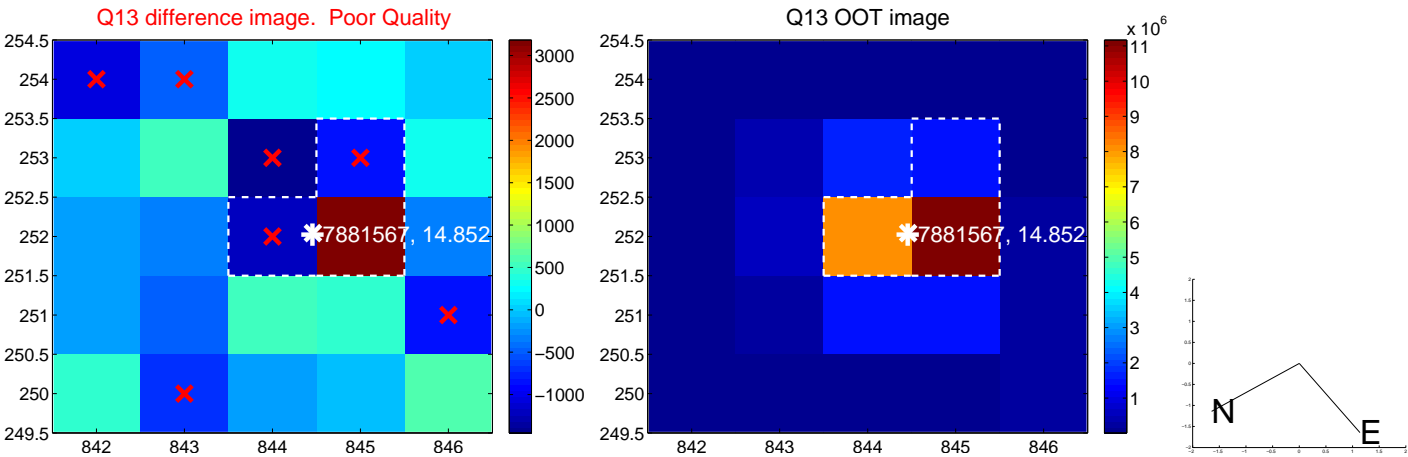
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



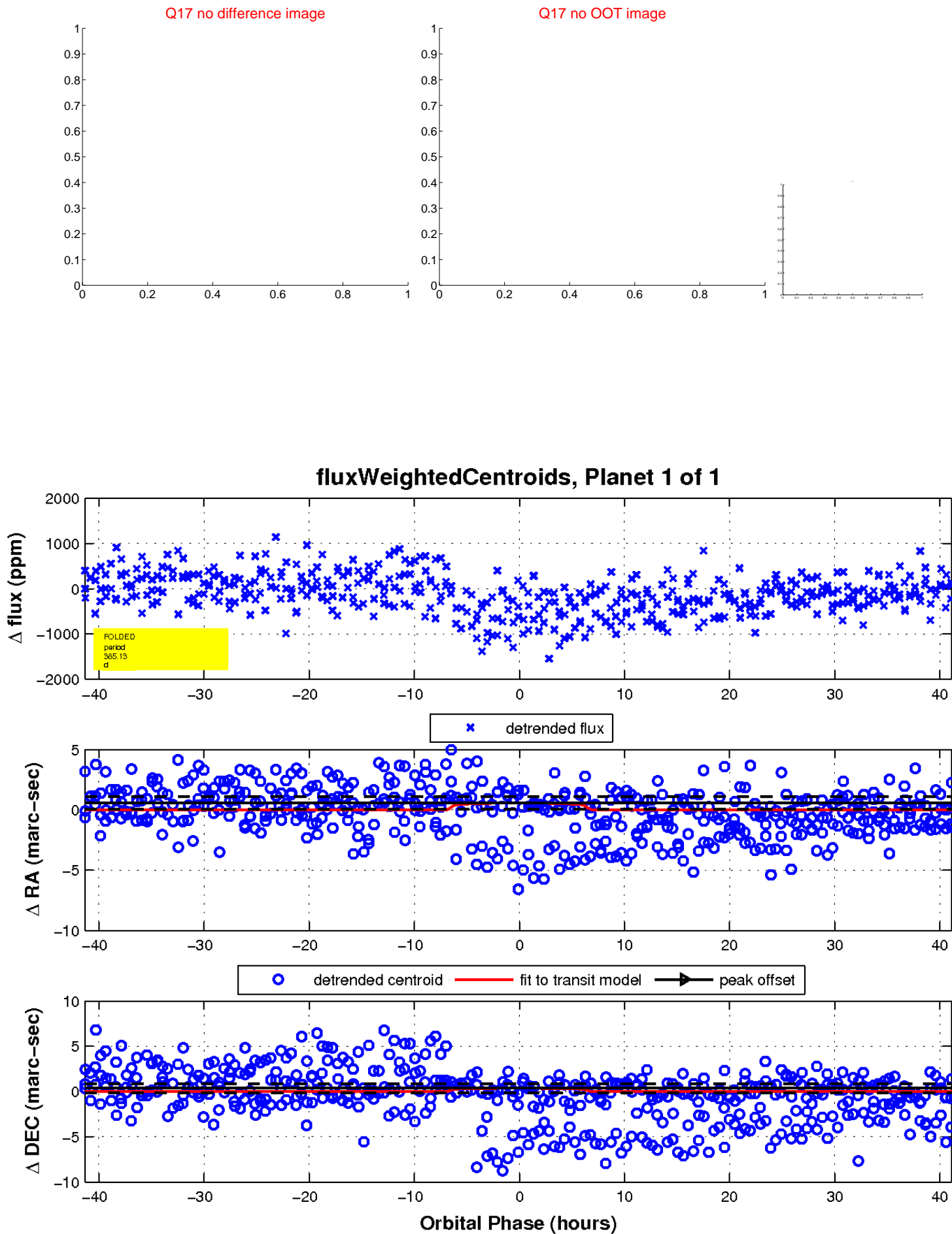
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

