

KIC 011558217

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})
011558217-01	OBS	8227.01	362.826183	152.701488	162.7	15.555	8.5	7.3	1.47	6740	1.99	3.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011558217-01	OBS	FP	0.22	1	0	0	0	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.

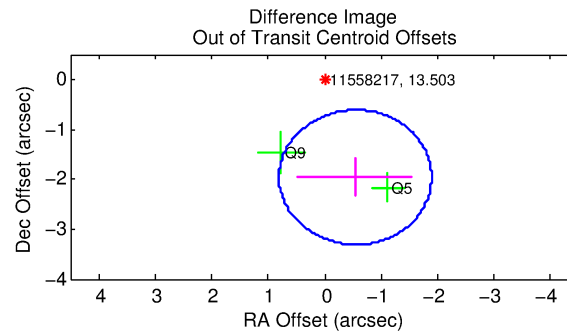
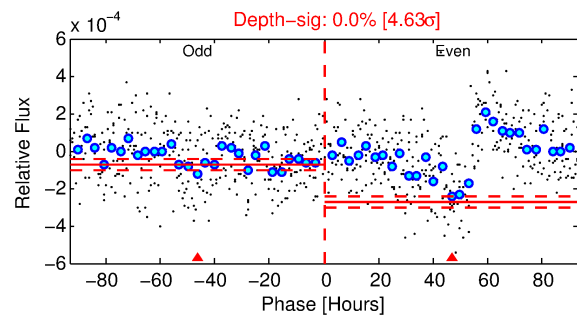
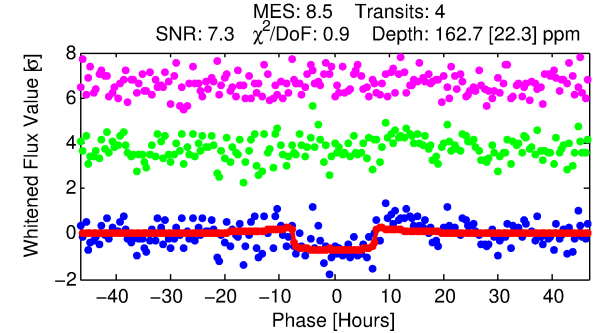
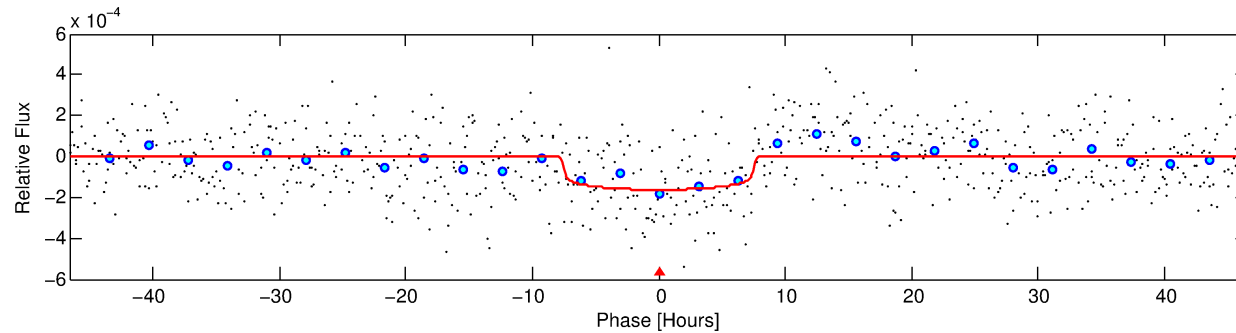
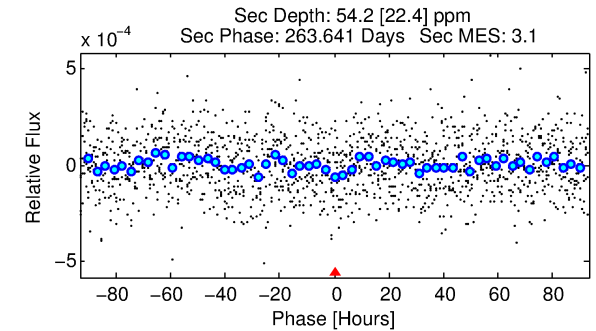
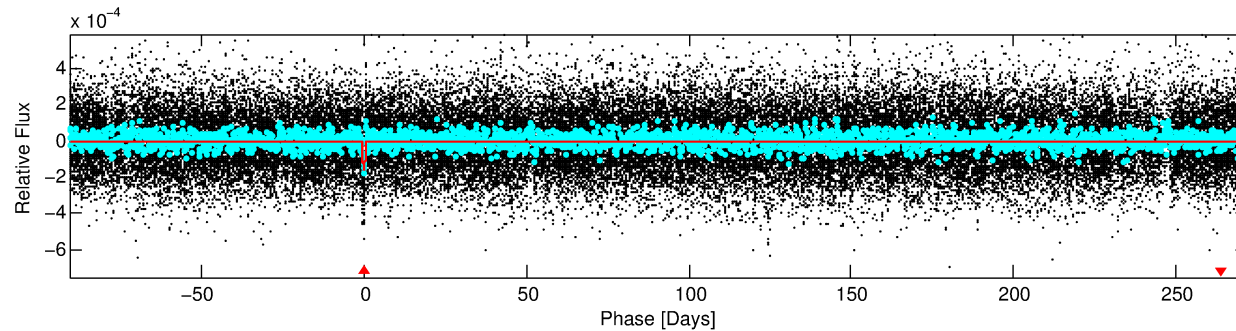
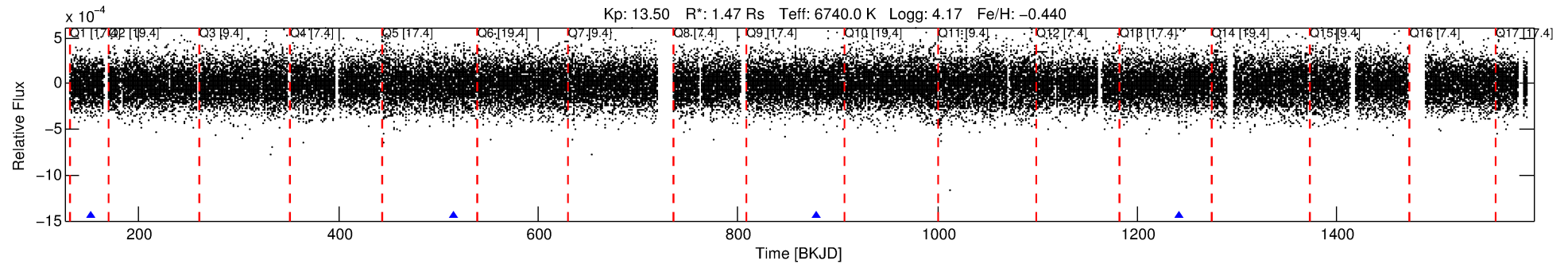
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011558217-01

No Significant Match Found

DV One-Page Summary

KIC: 11558217 Candidate: 1 of 1 Period: 362.826 d



DV Fit Results:

Period = 362.82618 [0.01090] d
Epoch = 152.7015 [0.0201] BKJD
Rp/R* = 0.0124 [0.0051]
a/R* = 135.91 [312.73]
b = 0.67 [1.93]
Seff = 3.67 [1.45]
Teq = 353 [35] K
Rp = 1.99 [1.00] Re
a = 1.0445 [0.2593] AU
Ag = 8180.57 [8108.18] [1.01σ]
Teffp = 5189 [1209] K [4.00σ]

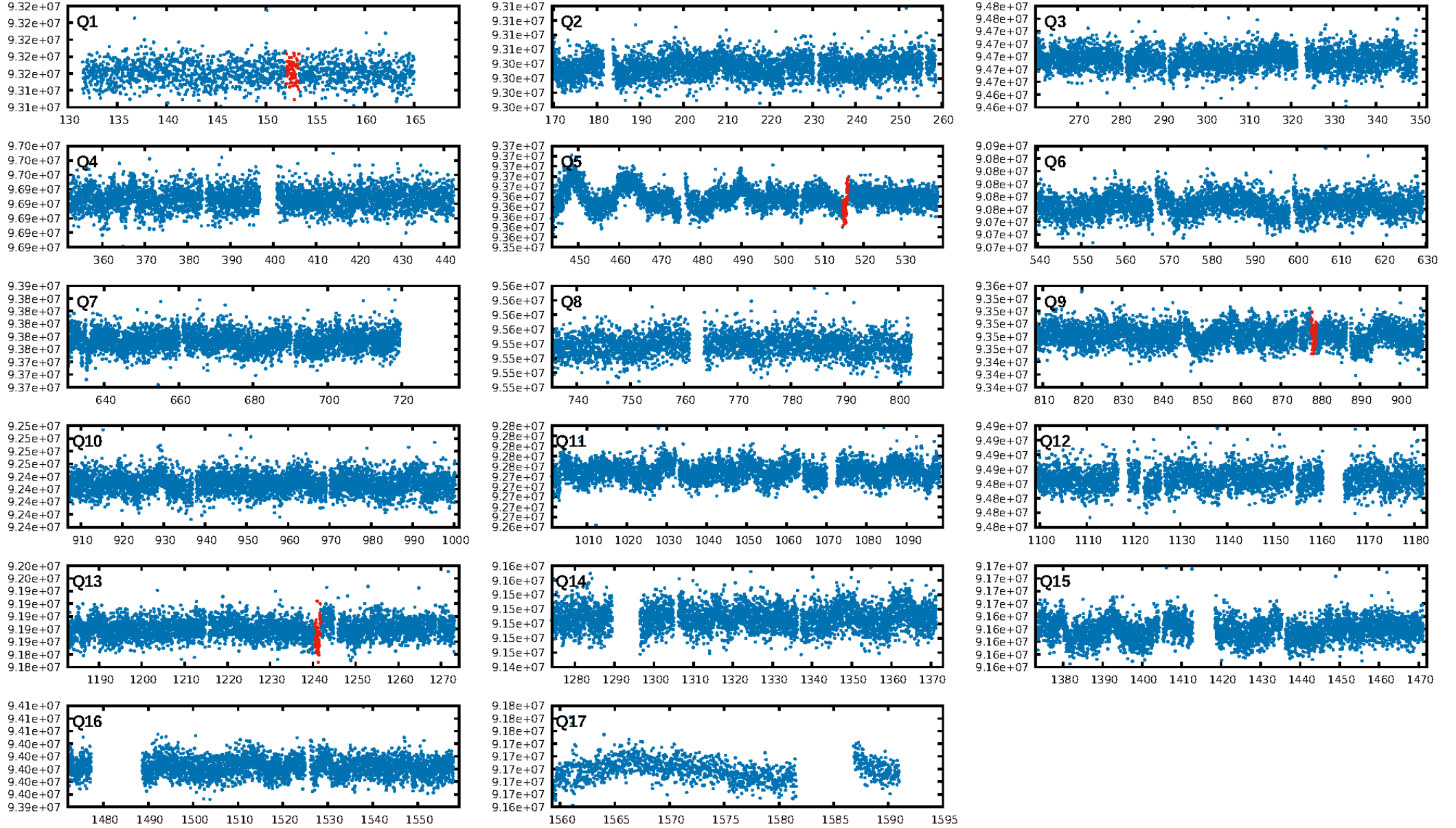
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 98.9%
Bootstrap-pfa: 5.66e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.403
Centroid-sig: 3.3%
Centroid-so: 1.843 arcsec [1.59σ]
OotOffset-rm: 2.036 arcsec [4.53σ]
KicOffset-rm: 2.061 arcsec [3.36σ]
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]

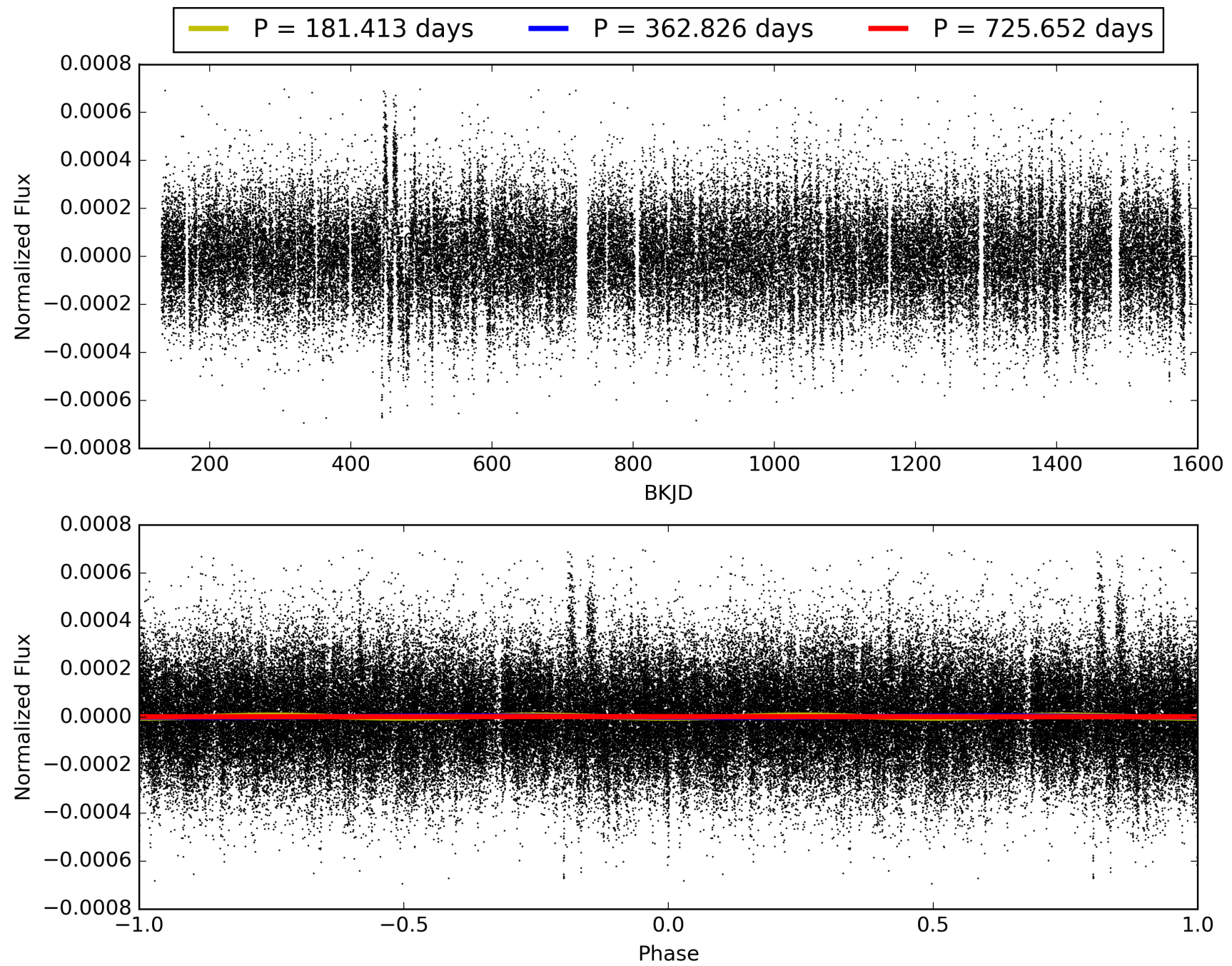
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:07:19 Z

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

TCE 011558217-01, PDC Light Curves

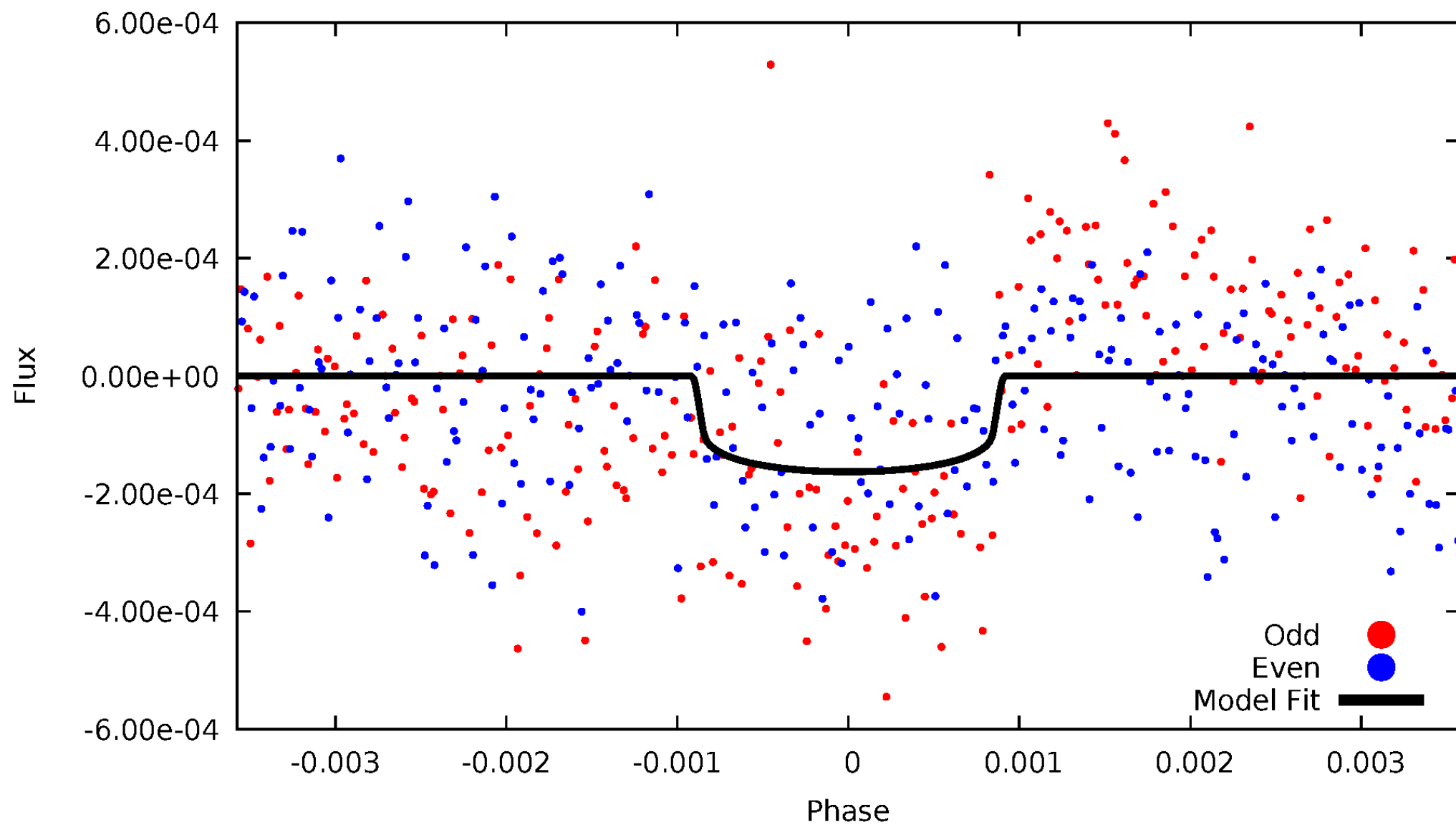


TCE 011558217-01



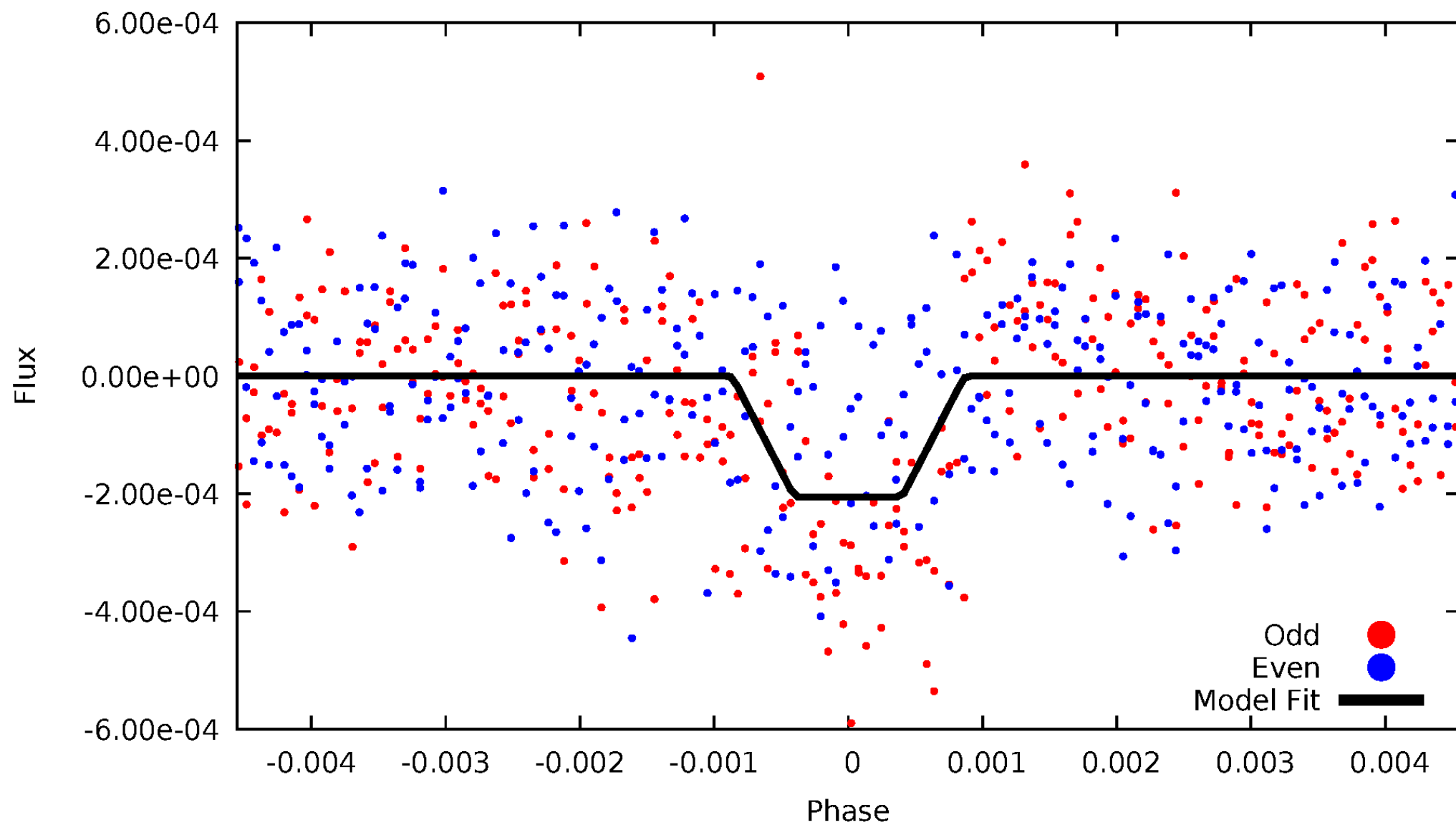
DV Odd/Even

TCE 011558217-01

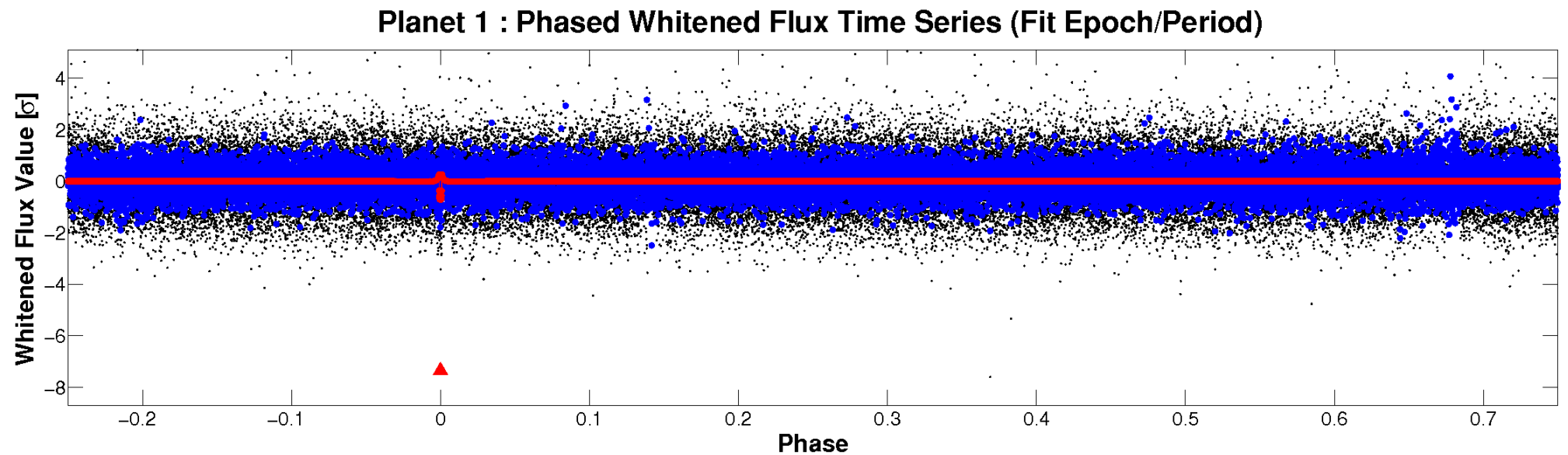
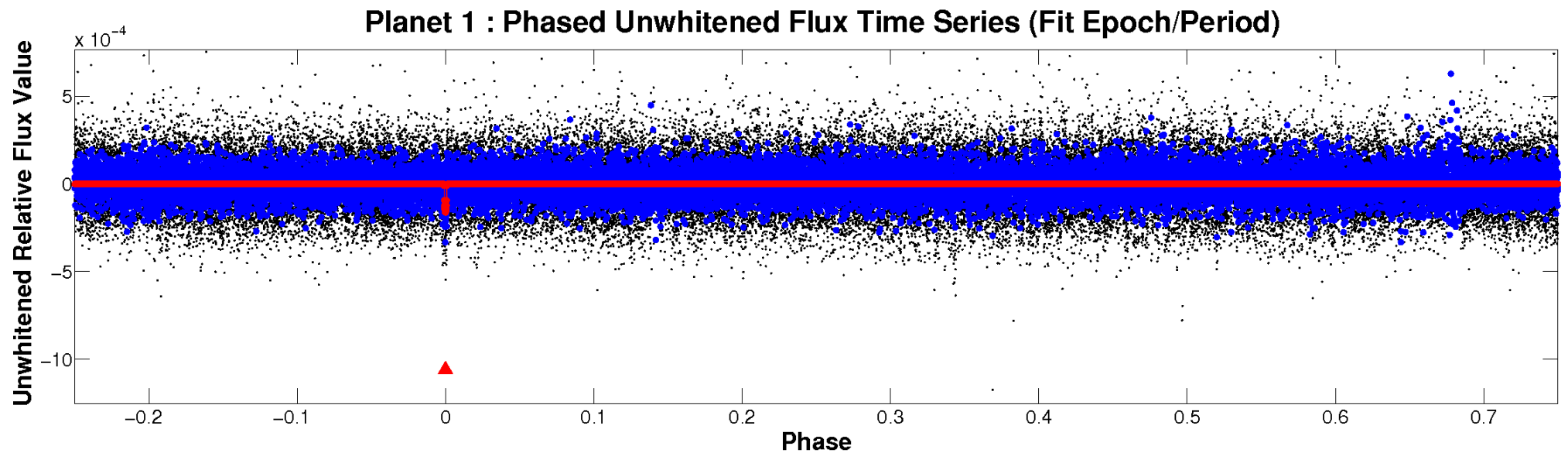


ALT Odd/Even

TCE 011558217-01



Non-Whitened Vs. Whitened Light Curve



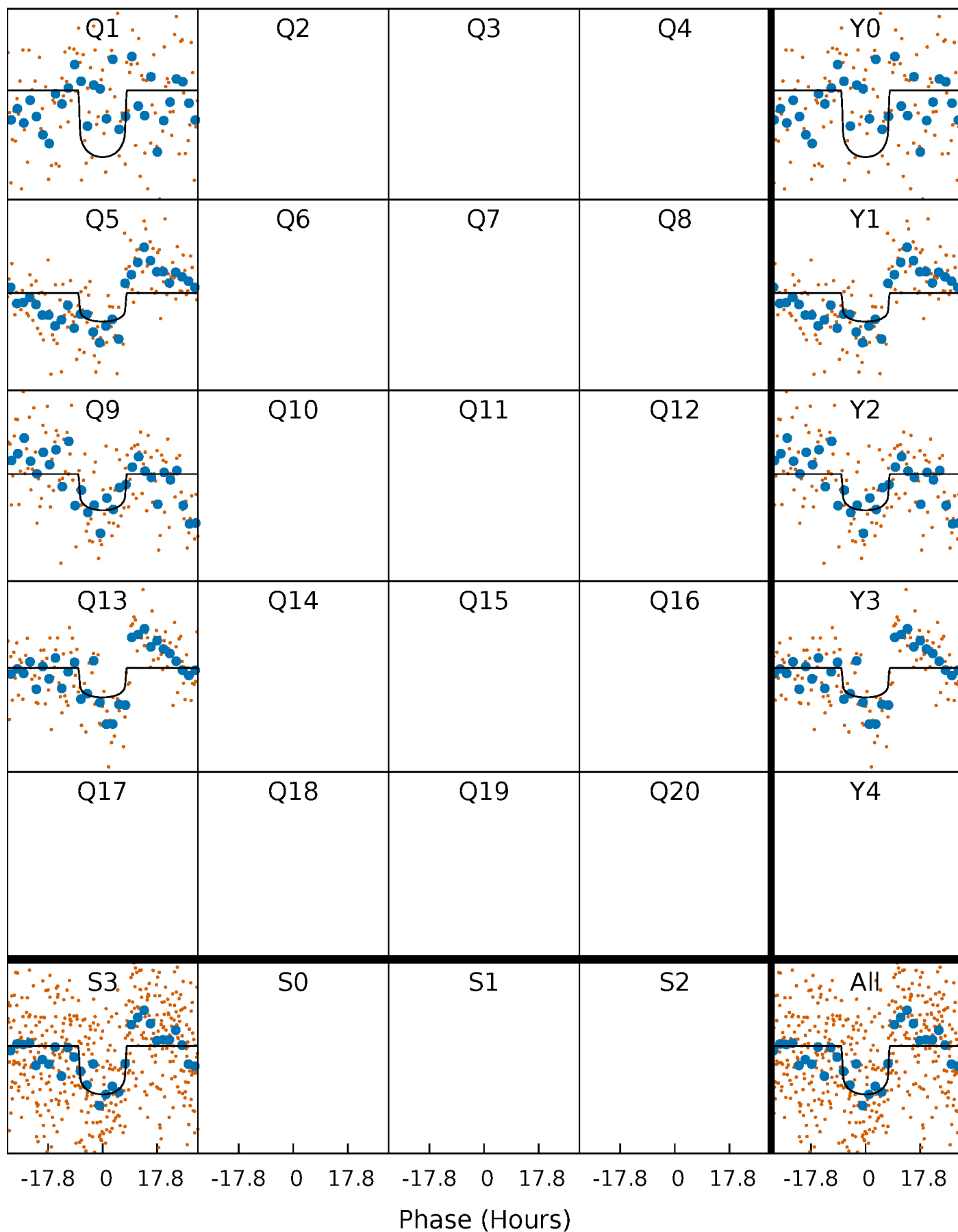
PDC Quarter-Phased Transit Curves

TCE 011558217-01 P=362.826183 Days $T_0=152.701488$ (BKJD)



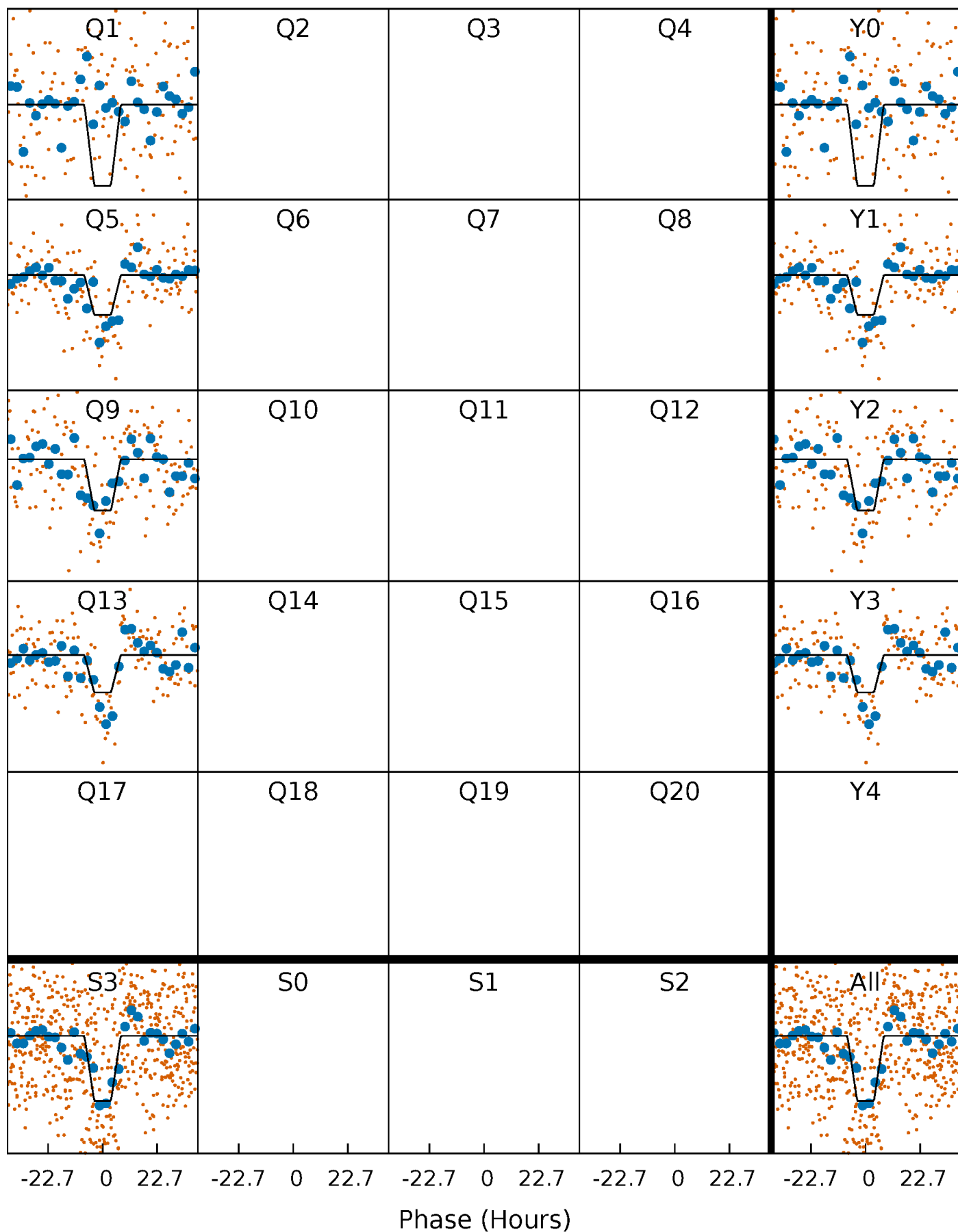
DV Quarter-Phased Transit Curves

TCE 011558217-01 P=362.826183 Days $T_0=152.701488$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

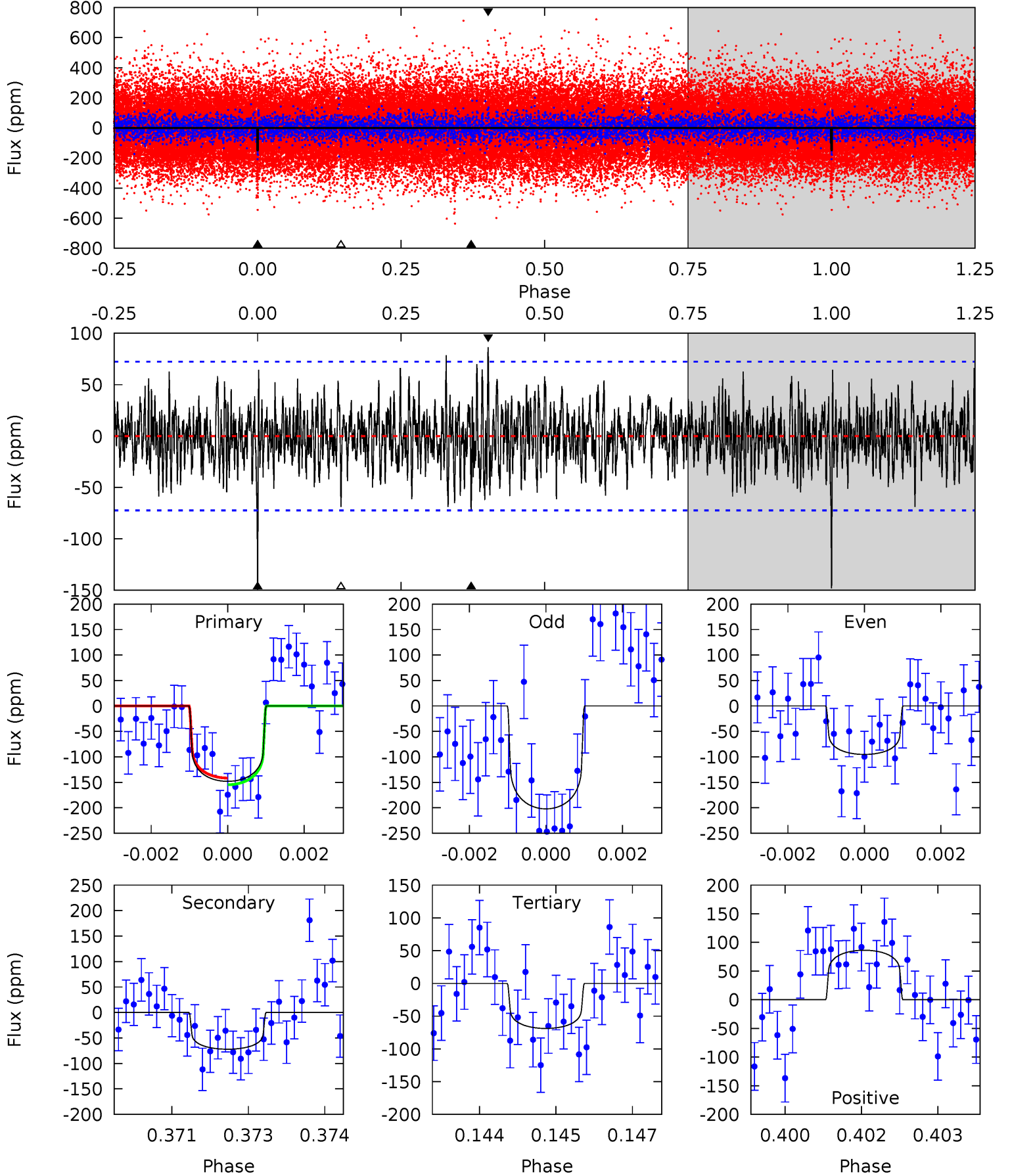
TCE 011558217-01 P=362.879592 Days $T_0=152.614099$ (BKJD)



DV Model-Shift Uniqueness Test

011558217-01, P = 362.826183 Days, E = 152.701488 Days

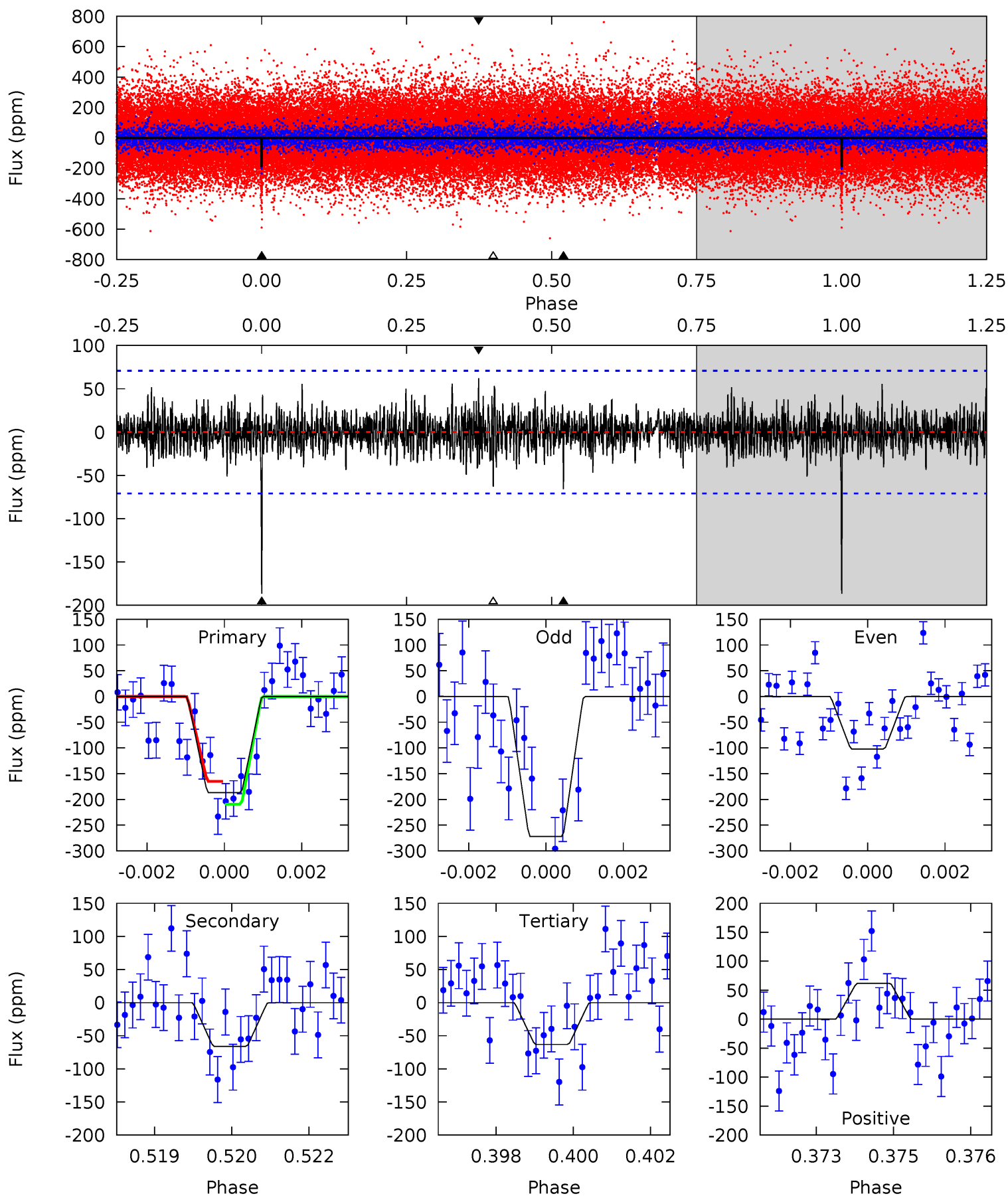
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	5.32	5.08	6.38	5.34	3.12	1.64	5.85	4.55	0.24	-1.06	3.97	0.83	0.37	0.48



Alt Model-Shift Uniqueness Test

011558217-01, P = 362.879592 Days, E = 152.614099 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	4.98	4.77	4.68	5.35	3.12	1.17	9.32	9.40	0.21	0.30	6.42	0.79	0.25	1.68



Stellar Parameters For KIC 011558217

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6740^{+163}_{-245}	$4.165^{+0.204}_{-0.167}$	$-0.440^{+0.250}_{-0.300}$	$1.471^{+0.425}_{-0.348}$	$1.155^{+0.176}_{-0.158}$	$0.511^{+0.521}_{-0.242}$
	+2%/-4%	+5%/-4%	+57%/-68%	+29%/-24%	+15%/-14%	+102%/-47%
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 011558217-01 / KOI 8227.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-72 ± 14	$1.94^{+0.92}_{-0.77}$	489^{+35}_{-36}	5532^{+1591}_{-773}	11203^{+20785}_{-5988}
Alt.	-66 ± 13	$2.28^{+0.89}_{-0.88}$	486^{+39}_{-36}	5059^{+1134}_{-633}	7471^{+12350}_{-3771}

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

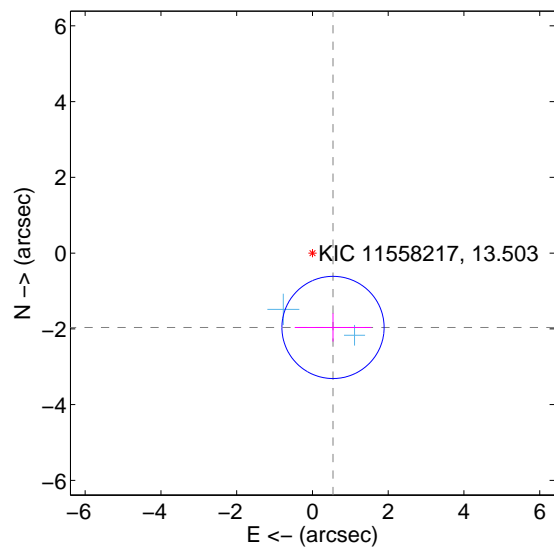
Supplemental centroid analysis for 011558217-01. Kepler magnitude: 13.50. Transit SNR 7.33

There are 2 quarters with good PRF difference image offsets

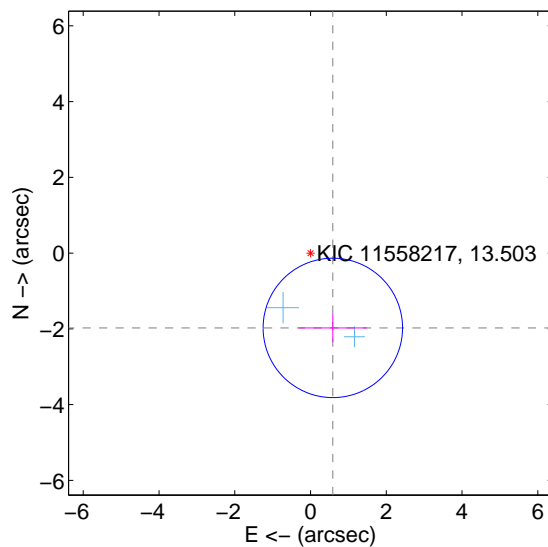
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.036 ± 0.450	4.53	-0.543 ± 1.012	-1.963 ± 0.373
PRF-fit source offset from KIC position	2.061 ± 0.613	3.36	-0.589 ± 0.904	-1.975 ± 0.374
photometric centroid source offset	1.84 ± 1.16	1.59	1.19 ± 1.06	-1.41 ± 1.23

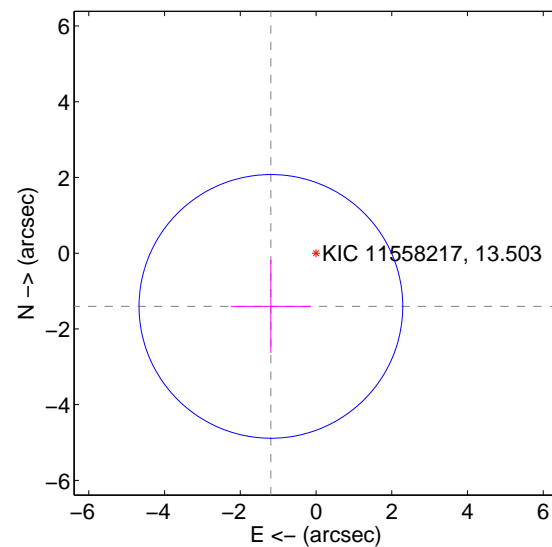
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

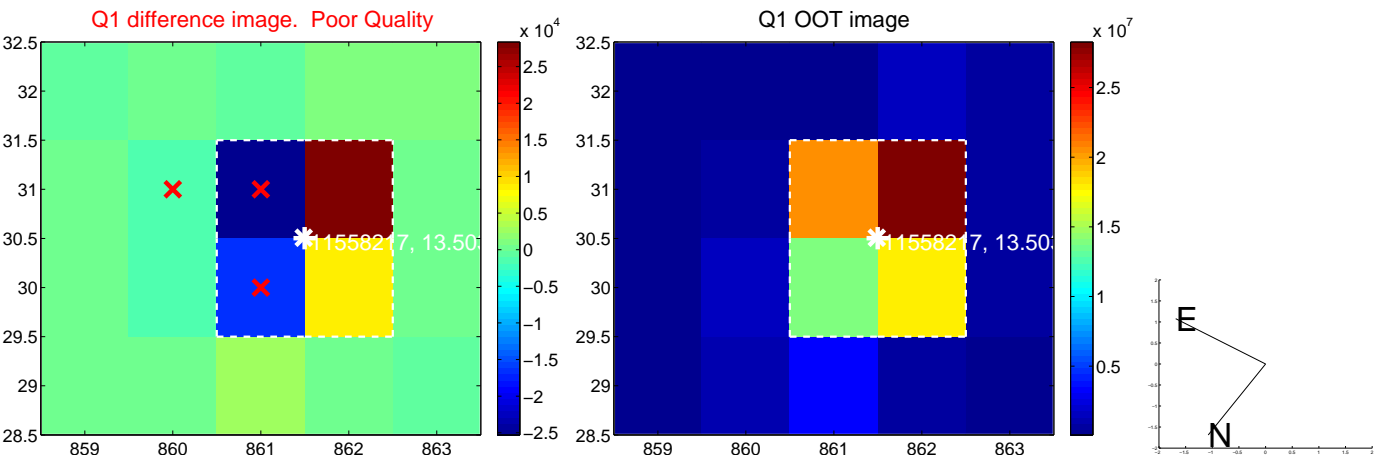


offset from photometric centroids

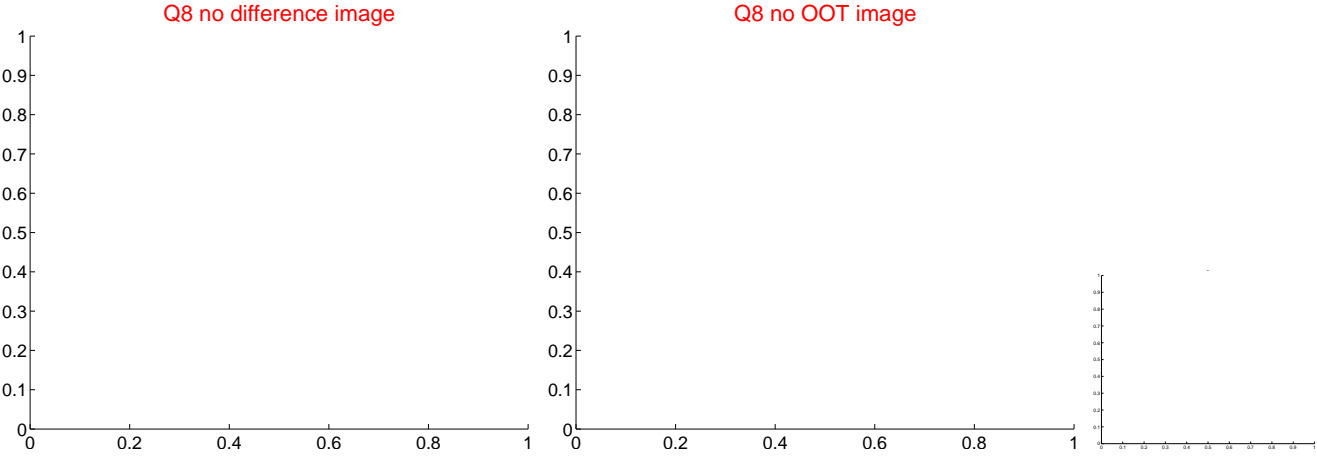
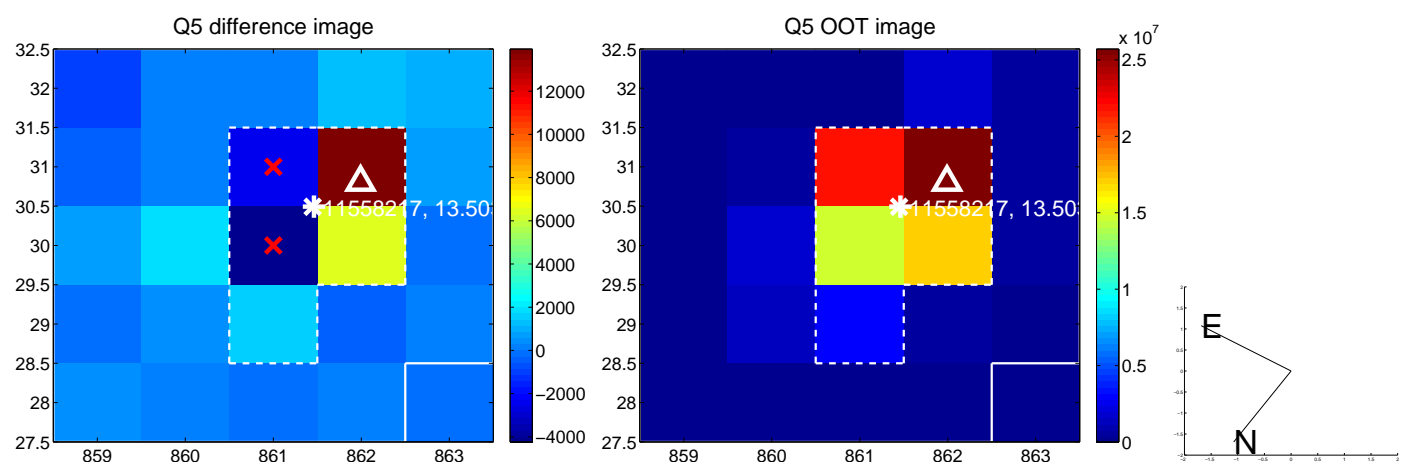


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

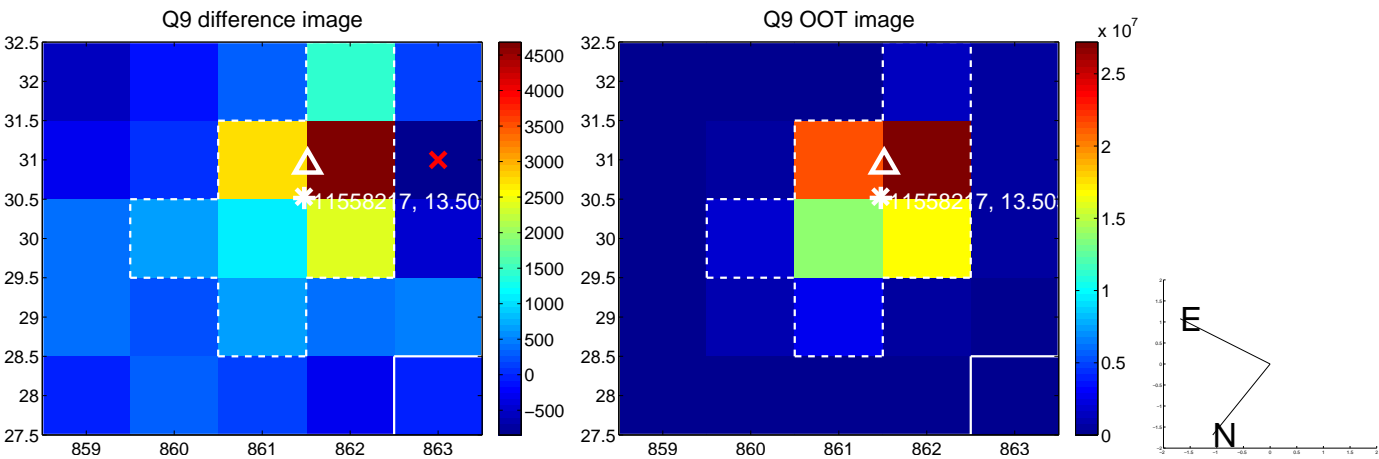
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



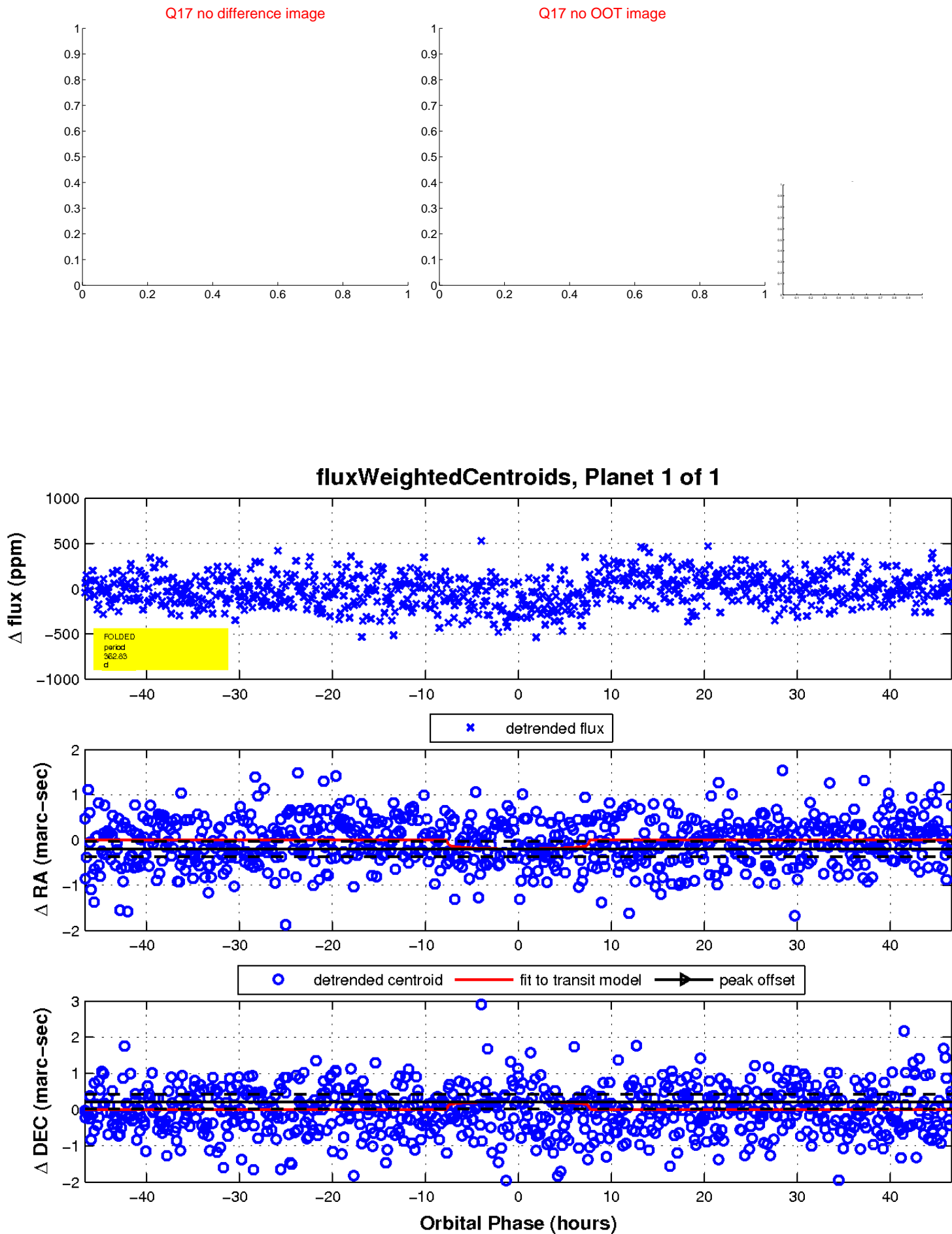
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

