

KIC 005950611

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})
005950611-01	OBS	No	557.782914	268.001999	764.1	13.653	8.3	7.8	0.39	3631	1.35	0.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005950611-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—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.

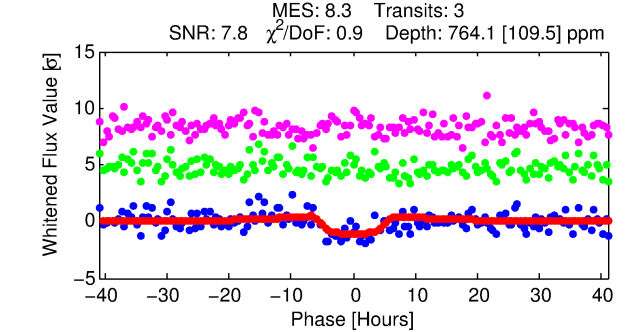
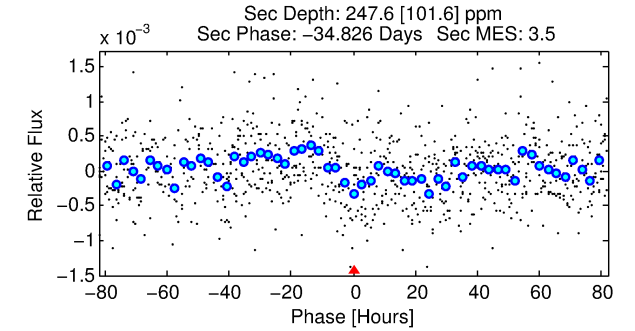
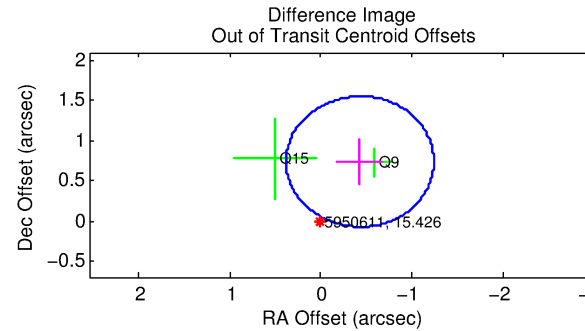
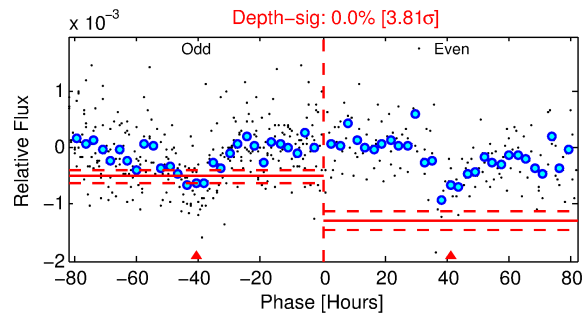
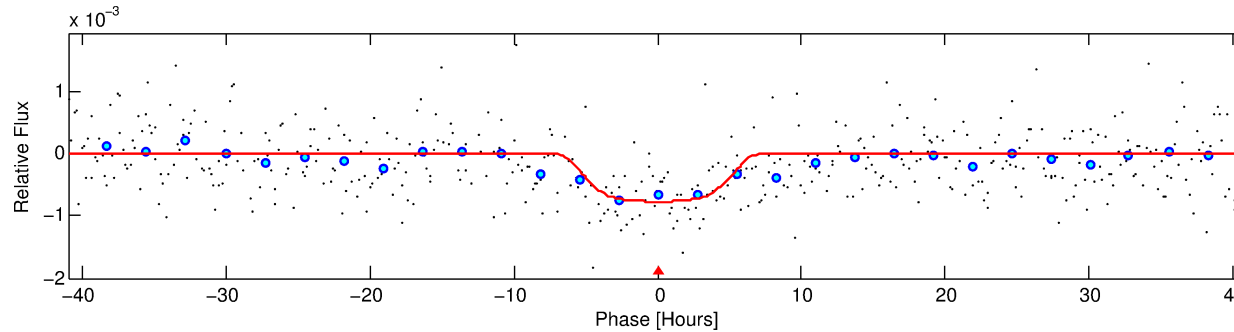
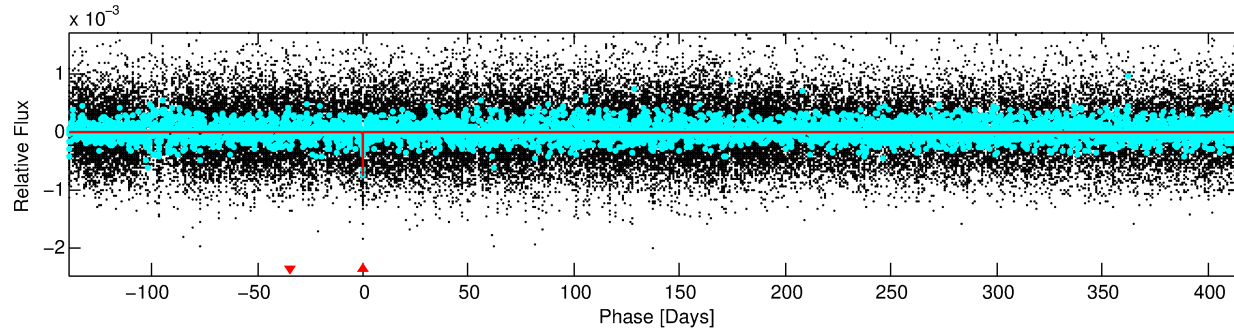
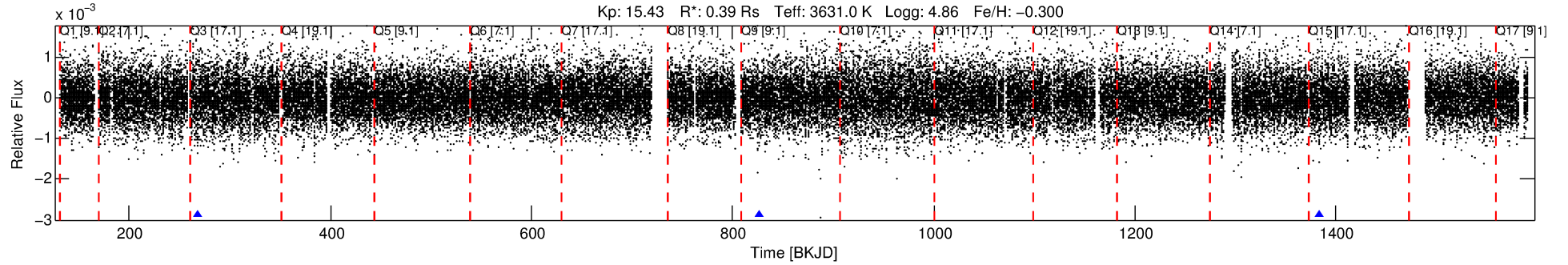
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005950611-01

No Significant Match Found

DV One-Page Summary

KIC: 5950611 Candidate: 1 of 1 Period: 557.783 d



DV Fit Results:

Period = 557.78291 [0.02028] d
Epoch = 268.0020 [0.0284] BKJD
Rp/R* = 0.0318 [0.0035]
a/R* = 128.12 [36.00]
b = 0.95 [0.03]
Seff = 0.02 [0.00]
Teq = 101 [3] K
Rp = 1.35 [0.19] Re
a = 0.9802 [0.0654] AU
Ag = 71727.46 [33832.59] [2.12 σ]
Teffp = 2553 [299] K [8.21 σ]

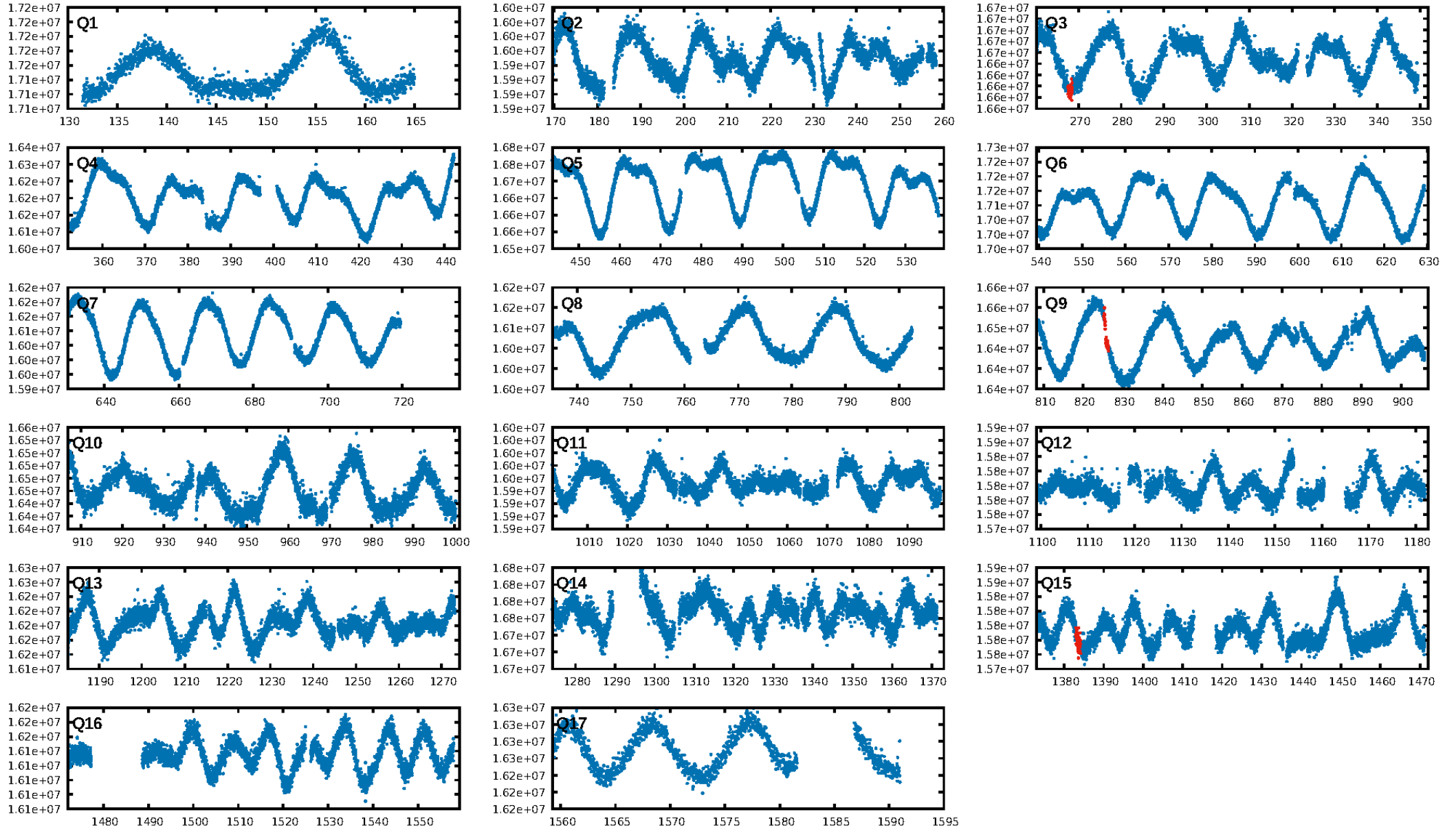
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 7.11e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.334
Centroid-sig: 3.1%
Centroid-so: 1.668 arcsec [1.27 σ]
OotOffset-rm: 0.854 arcsec [3.15 σ]
KicOffset-rm: 0.734 arcsec [2.77 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

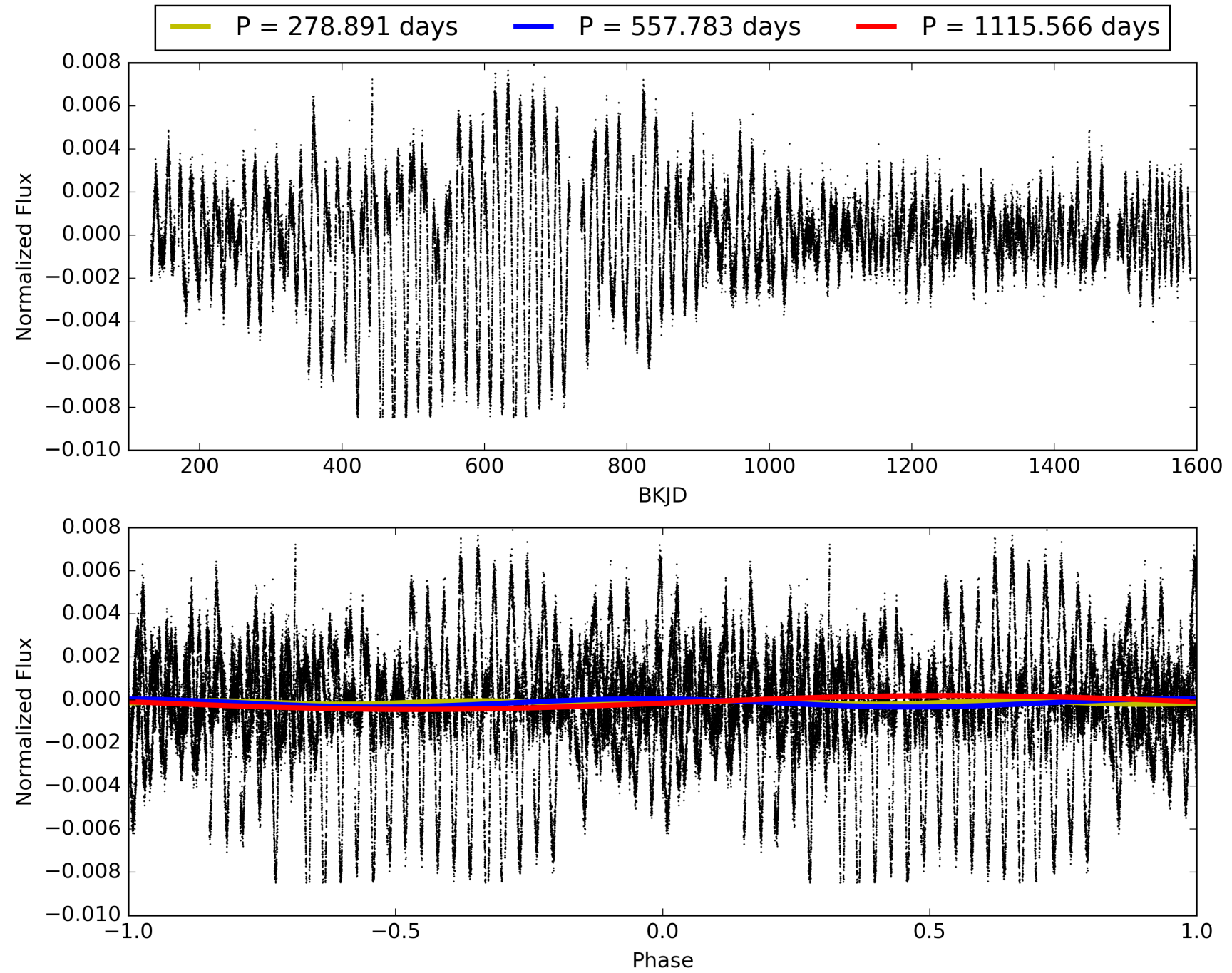
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:40:14 Z

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

TCE 005950611-01, PDC Light Curves

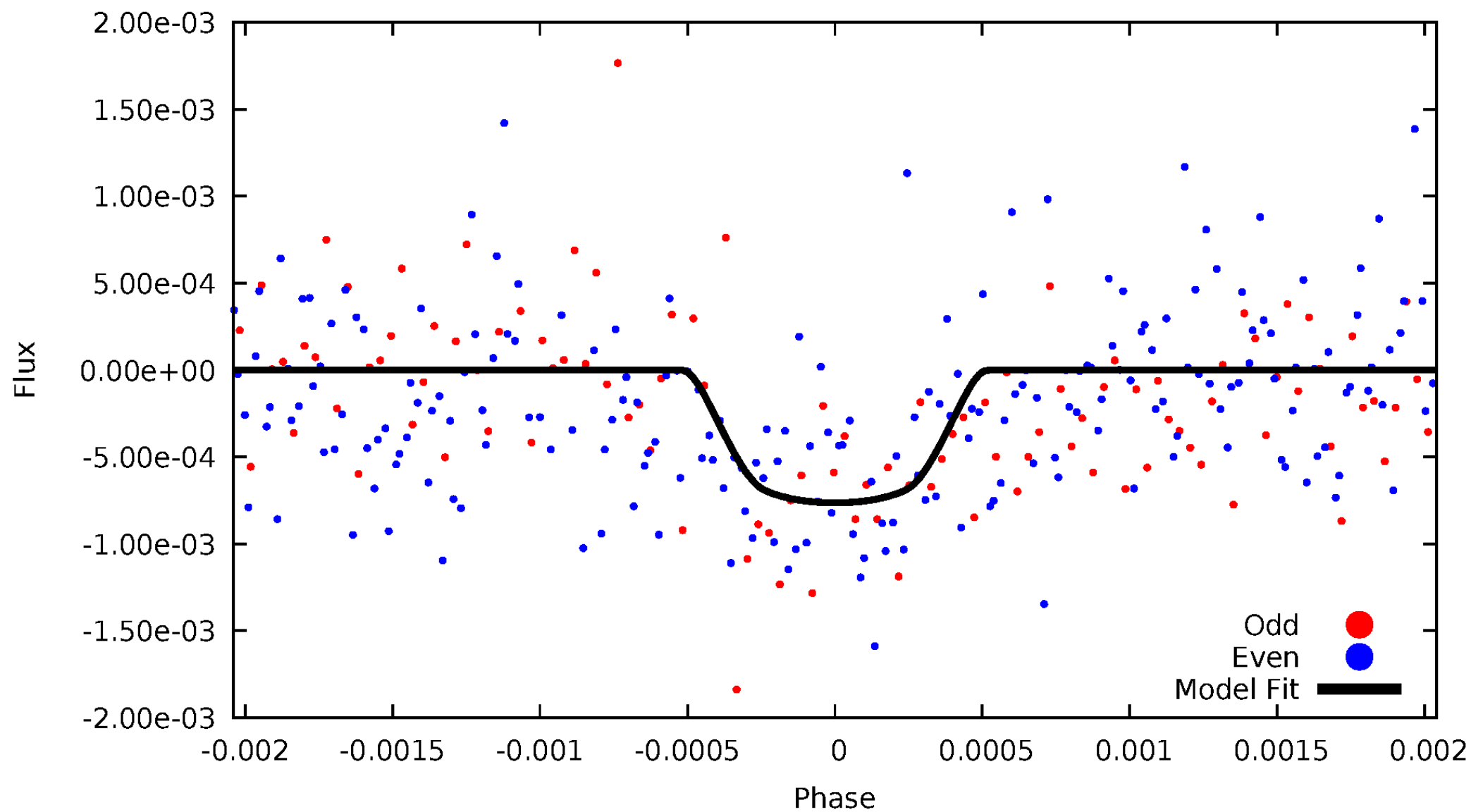


TCE 005950611-01



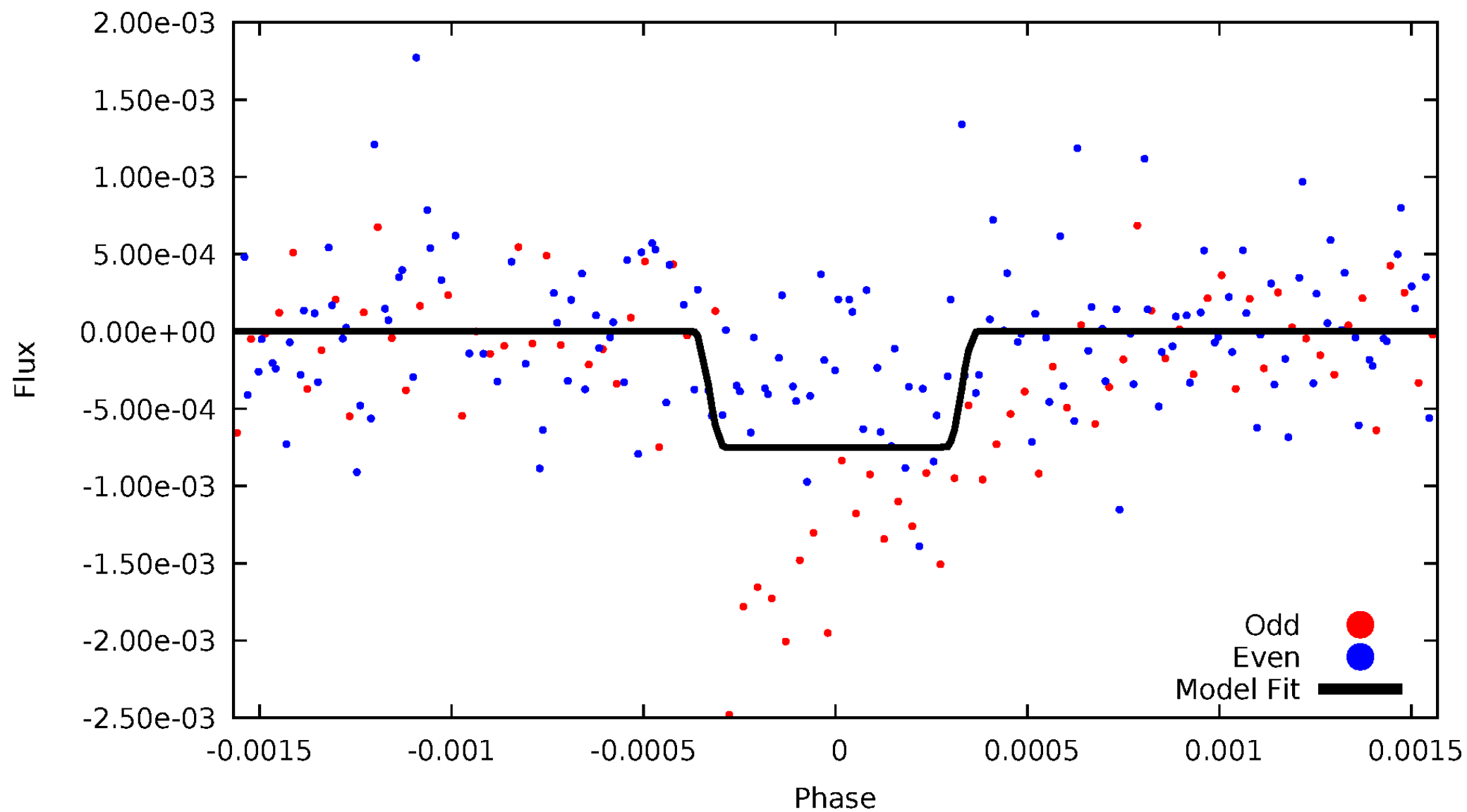
DV Odd/Even

TCE 005950611-01

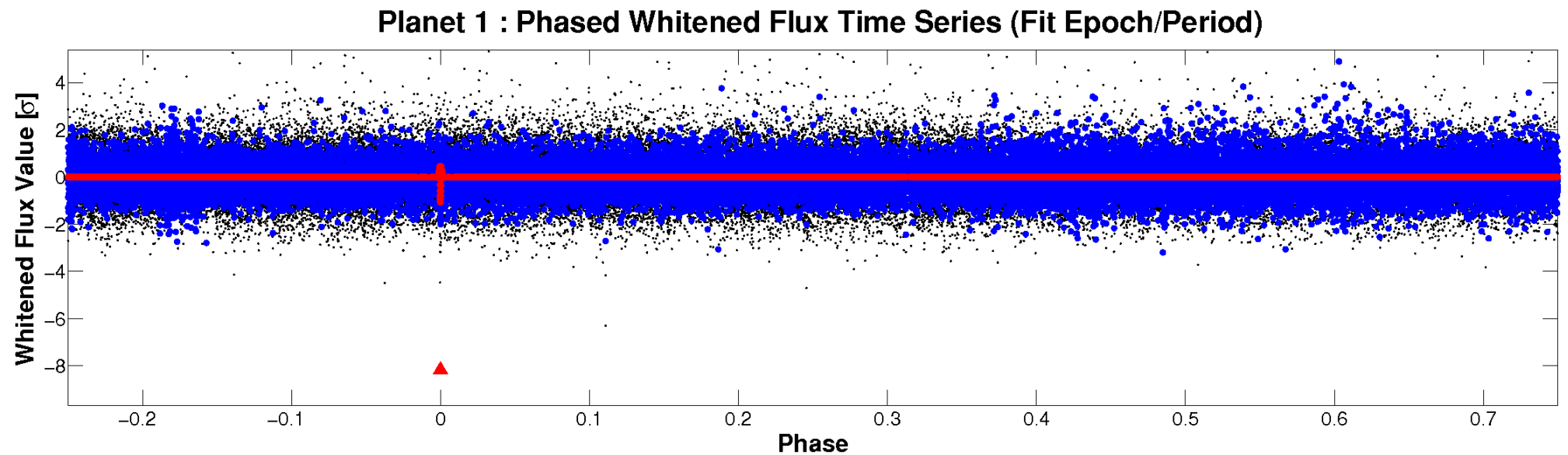
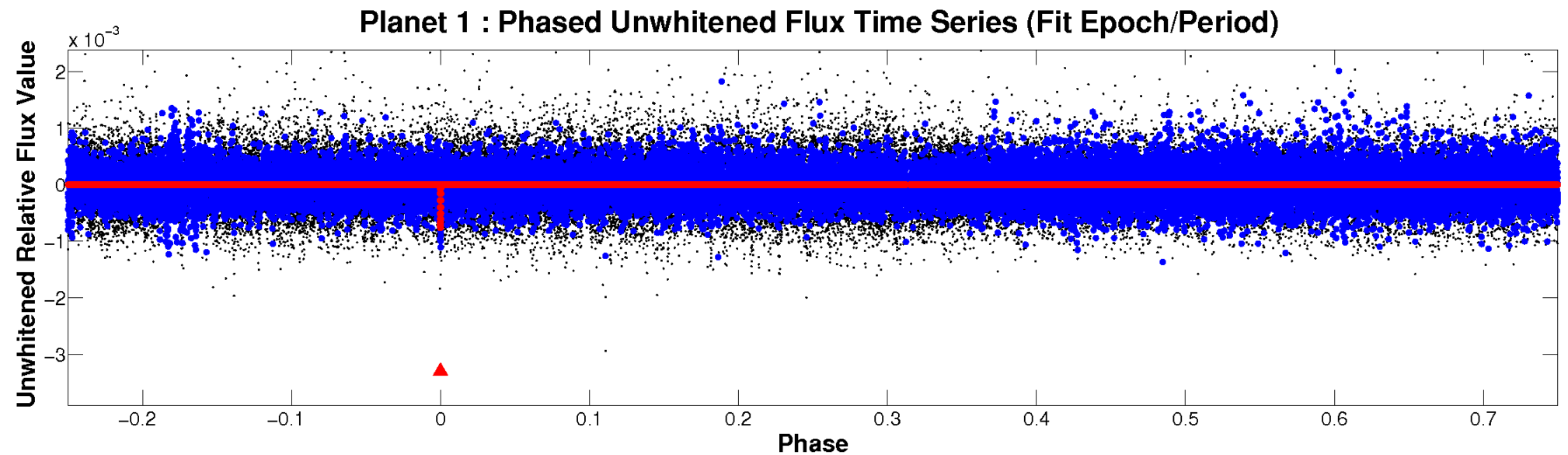


ALT Odd/Even

TCE 005950611-01



Non-Whitened Vs. Whitened Light Curve



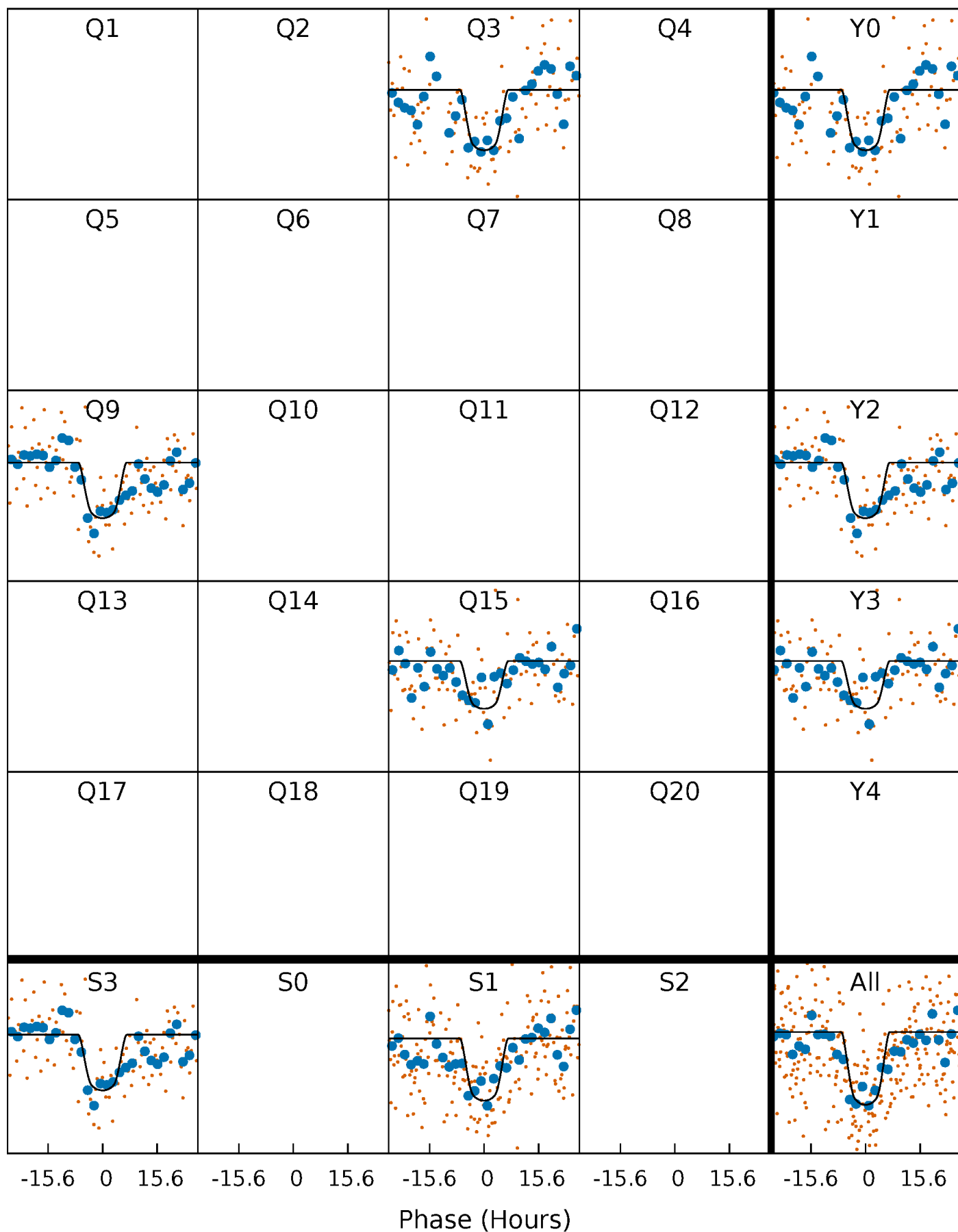
PDC Quarter-Phased Transit Curves

TCE 005950611-01 P=557.782914 Days $T_0=268.001999$ (BKJD)



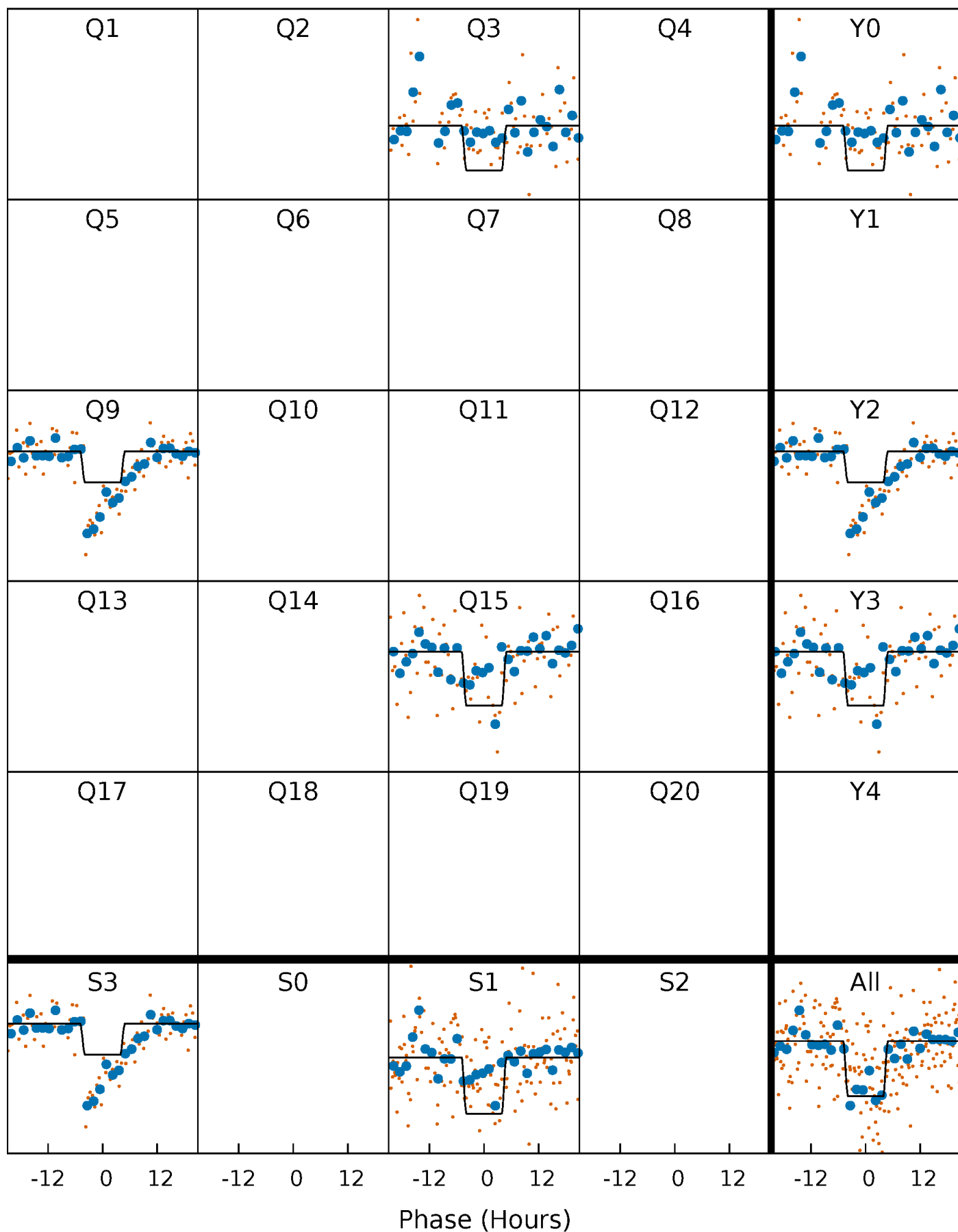
DV Quarter-Phased Transit Curves

TCE 005950611-01 P=557.782914 Days $T_0=268.001999$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

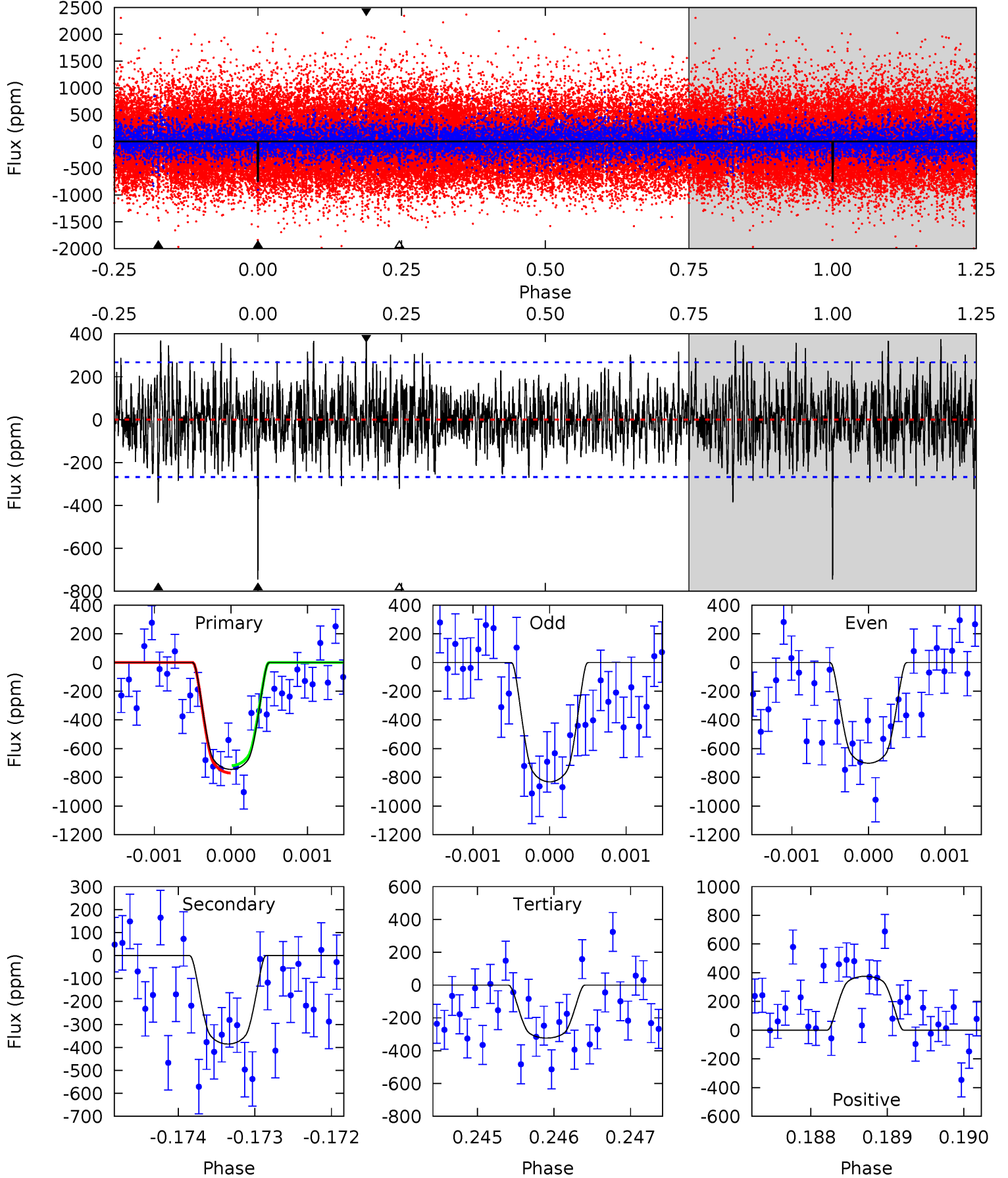
TCE 005950611-01 P=557.768076 Days $T_0=267.985012$ (BKJD)



DV Model-Shift Uniqueness Test

005950611-01, P = 557.782914 Days, E = 268.001999 Days

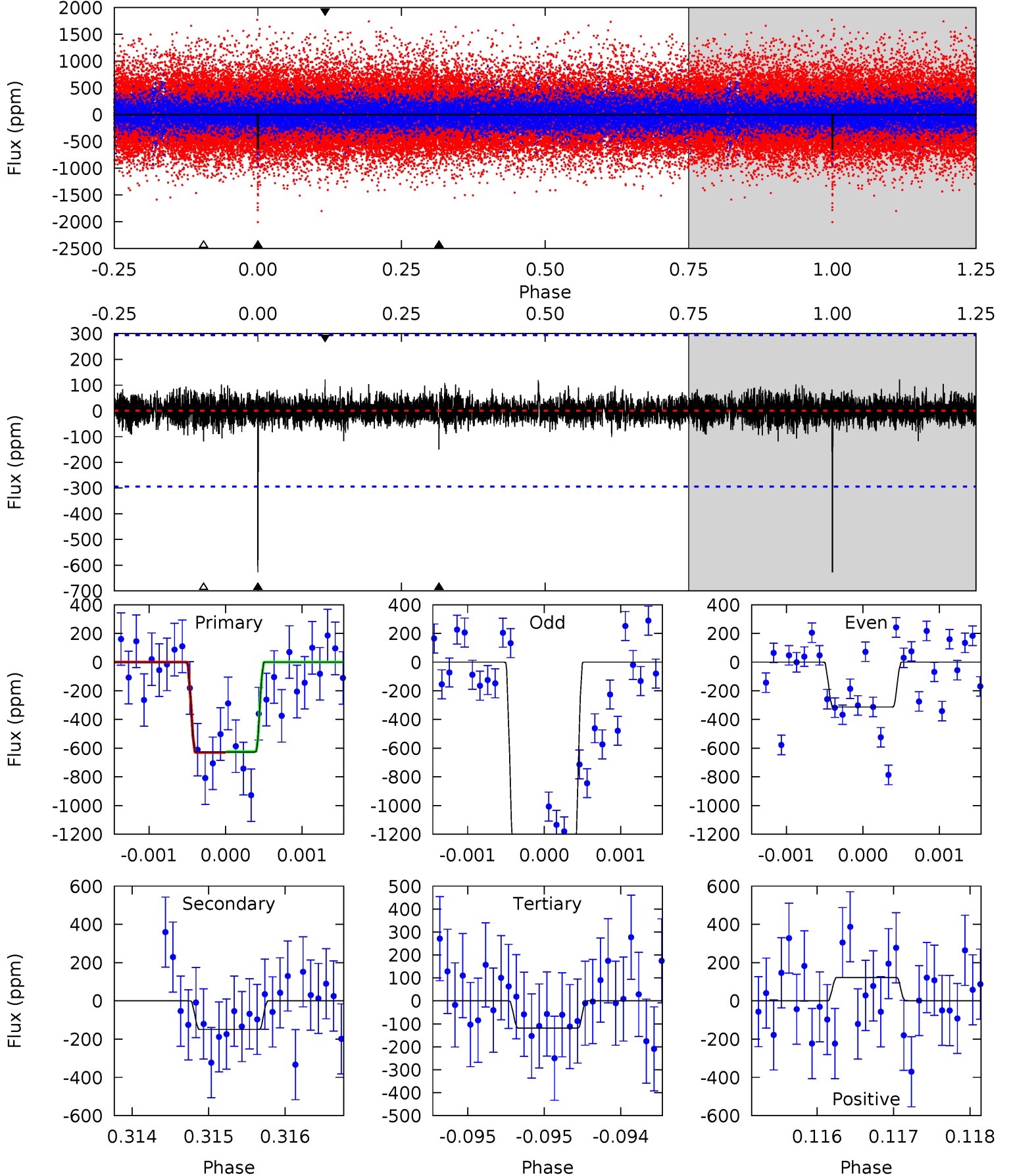
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	7.84	6.58	7.64	5.44	3.28	2.09	8.59	7.52	1.26	0.20	1.23	0.94	0.34	0.52



Alt Model-Shift Uniqueness Test

005950611-01, P = 557.768076 Days, E = 267.985012 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	2.80	2.22	2.29	5.51	3.38	0.51	9.53	9.46	0.58	0.51	9.75	1.54	0.16	0.05



Stellar Parameters For KIC 005950611

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3631^{+54}_{-54}	$4.864^{+0.038}_{-0.031}$	$-0.300^{+0.100}_{-0.100}$	$0.389^{+0.032}_{-0.035}$	$0.405^{+0.034}_{-0.041}$	$9.667^{+2.061}_{-1.304}$
	+1%/-1%	+1%/-1%	+33%/-33%	+8%/-9%	+8%/-10%	+21%/-13%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005950611-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-385 ± 49	$1.35^{+0.16}_{-0.17}$	141^{+3}_{-3}	3133^{+138}_{-115}	113957^{+37236}_{-27422}
Alt.	-150 ± 53	$1.16^{+0.16}_{-0.16}$	141^{+3}_{-3}	2850^{+181}_{-176}	57874^{+30213}_{-22673}

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

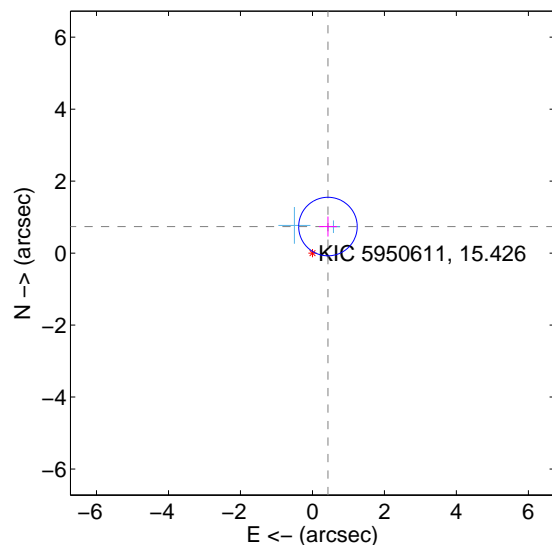
Supplemental centroid analysis for 005950611-01. Kepler magnitude: 15.43. Transit SNR 7.83

There are 2 quarters with good PRF difference image offsets

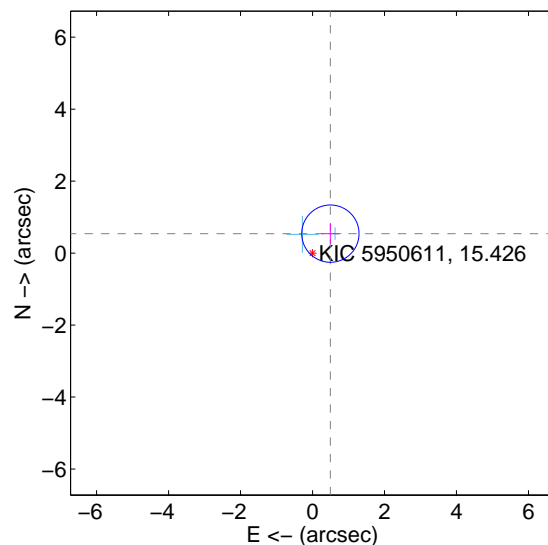
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.854 ± 0.271	3.15	-0.431 ± 0.249	0.738 ± 0.278
PRF-fit source offset from KIC position	0.734 ± 0.265	2.77	-0.496 ± 0.249	0.541 ± 0.278
photometric centroid source offset	1.67 ± 1.31	1.27	-0.54 ± 1.34	1.58 ± 1.31

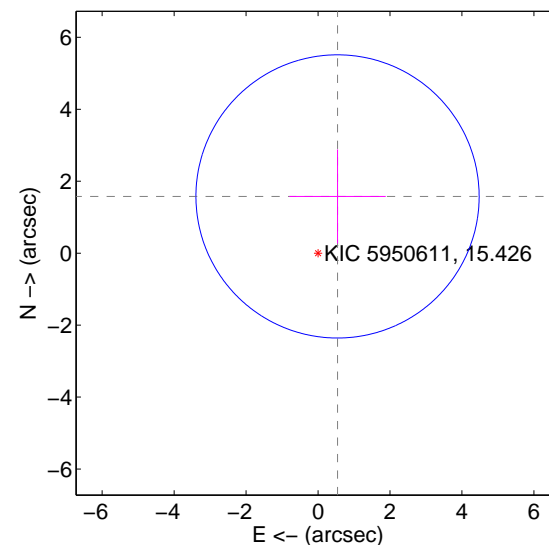
offset from difference PRF-fit to OOT PRF-fit



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.

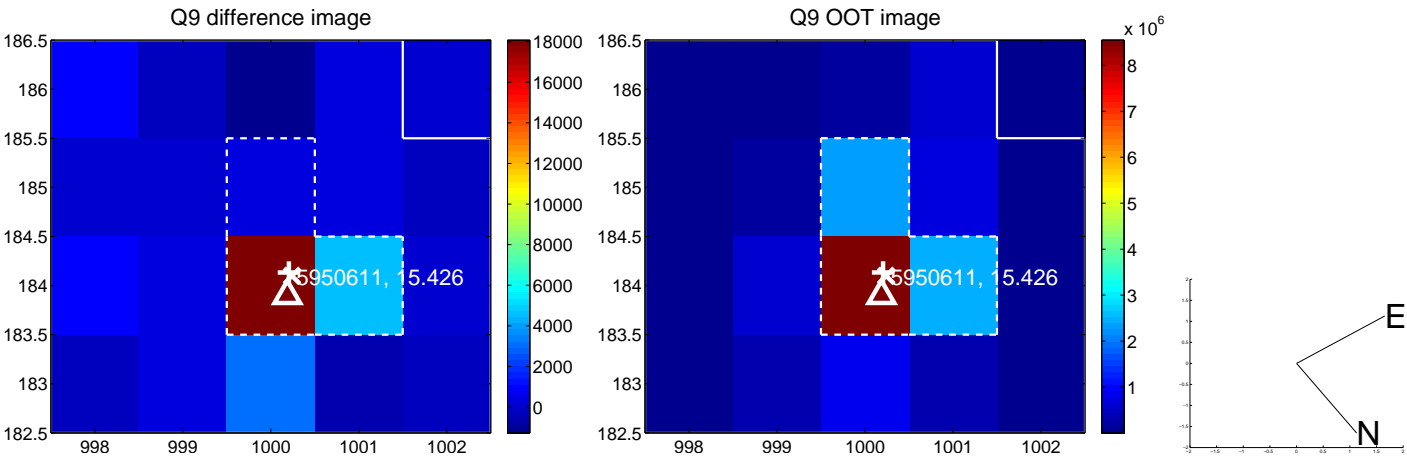
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



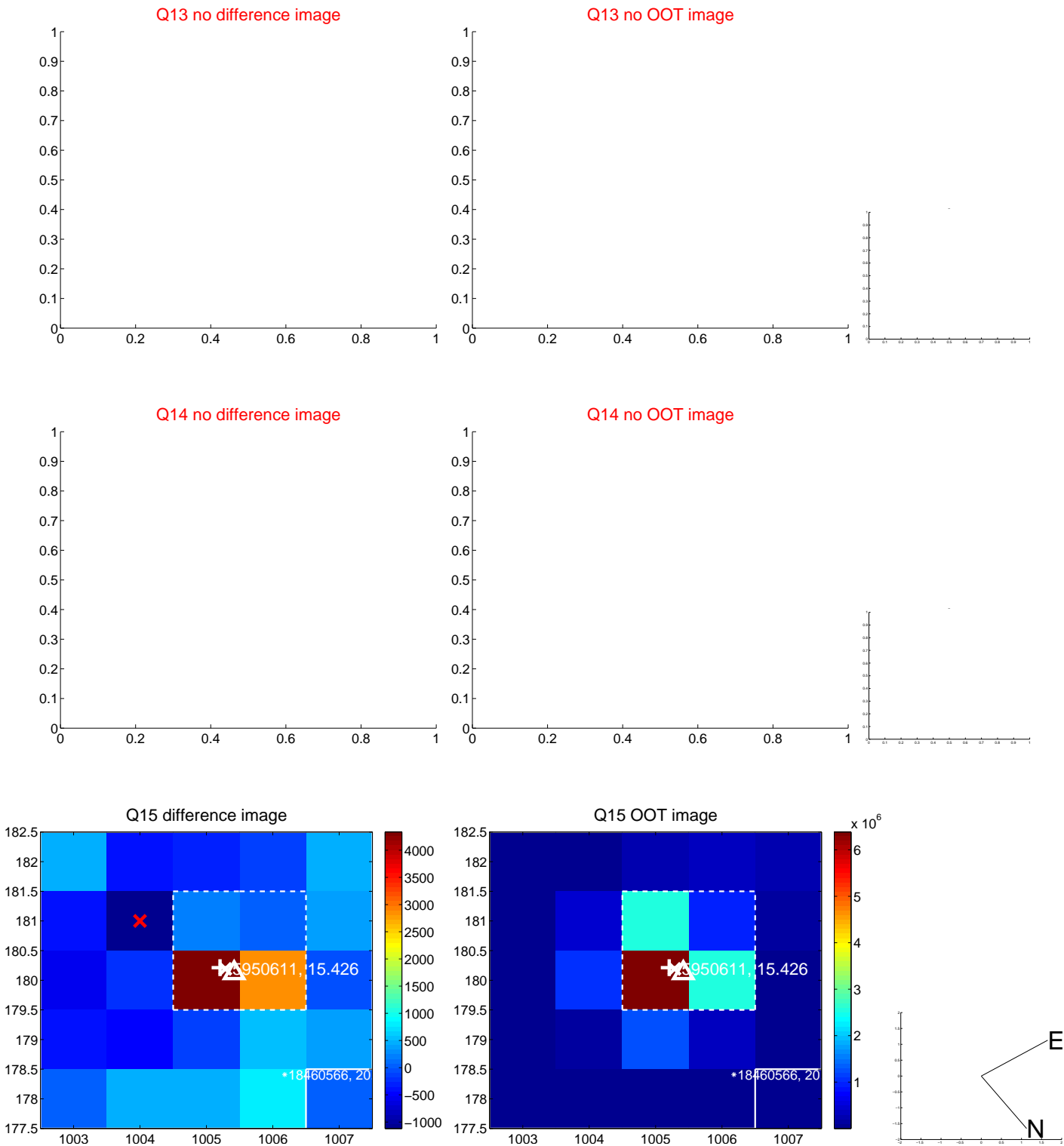
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



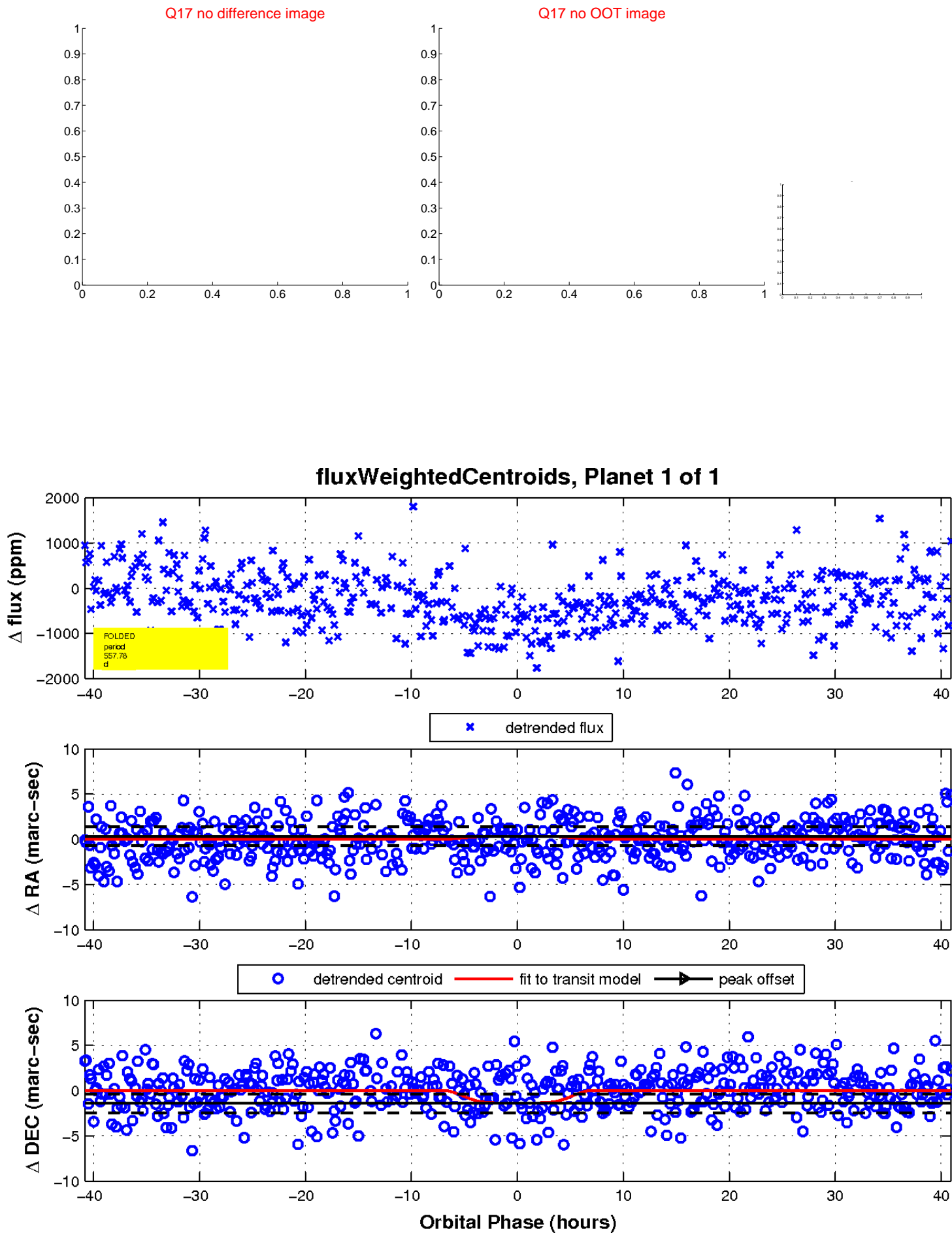
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

