

KIC 006517097

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})
006517097-01	OBS	No	682.182954	198.656479	404.3	23.905	11.1	12.3	0.90	6038	2.07	0.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006517097-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—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.

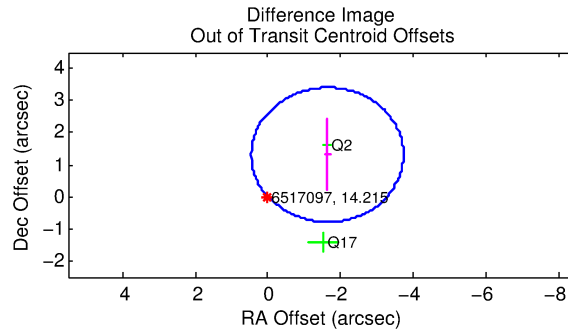
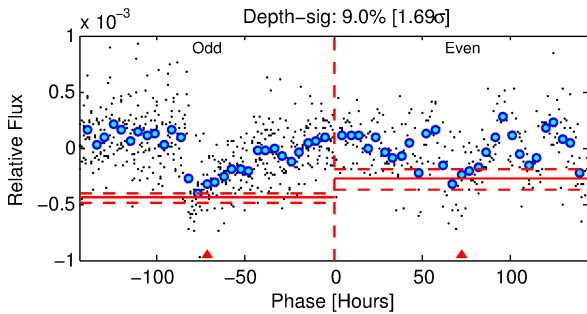
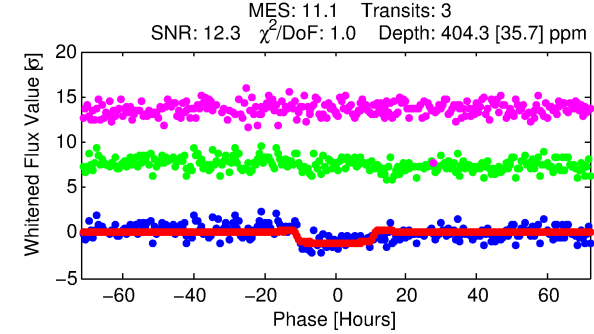
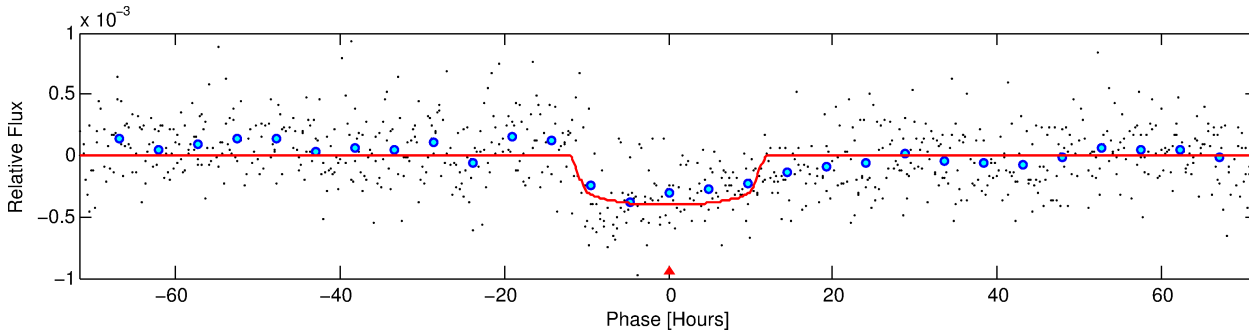
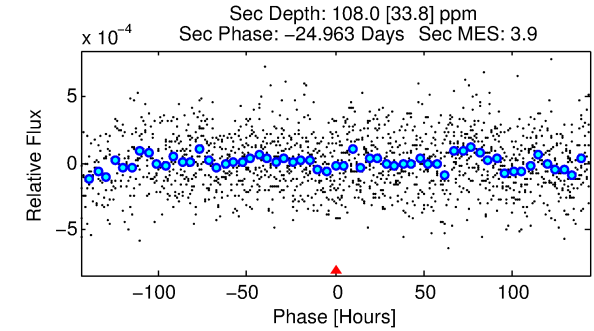
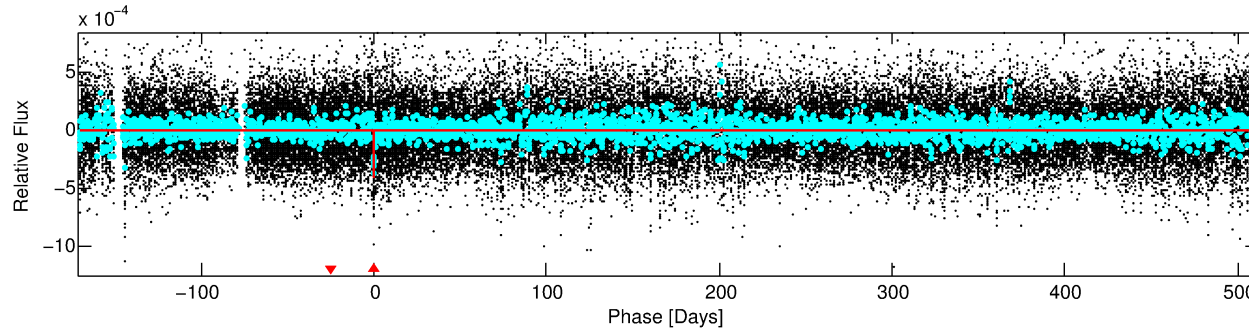
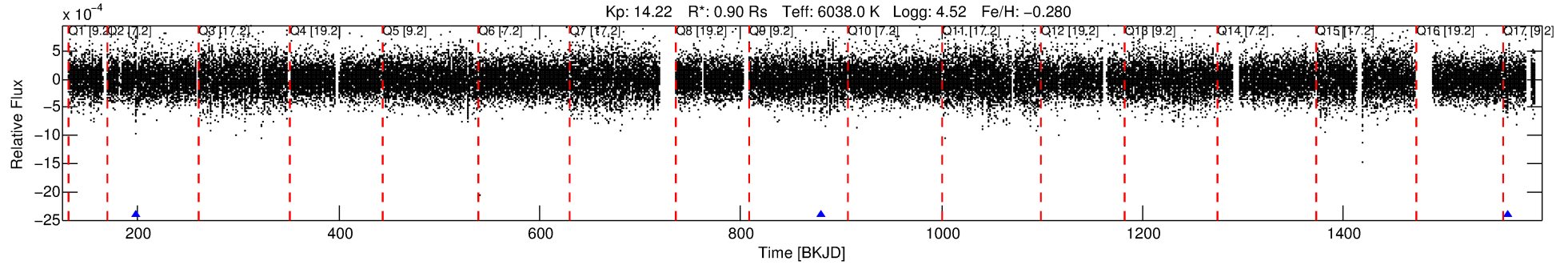
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006517097-01

No Significant Match Found

DV One-Page Summary

KIC: 6517097 Candidate: 1 of 1 Period: 682.183 d



DV Fit Results:

Period = 682.18295 [0.01642] d
Epoch = 198.6565 [0.0195] BKJD
Rp/R* = 0.0211 [0.0018]
a/R* = 118.12 [43.23]
b = 0.87 [0.11]
Seff = 0.42 [0.16]
Teq = 206 [20] K
Rp = 2.07 [0.63] Re
a = 1.5083 [0.3737] AU
Ag = 31598.60 [16109.69] [1.96 σ]
Teffp = 4237 [399] K [10.08 σ]

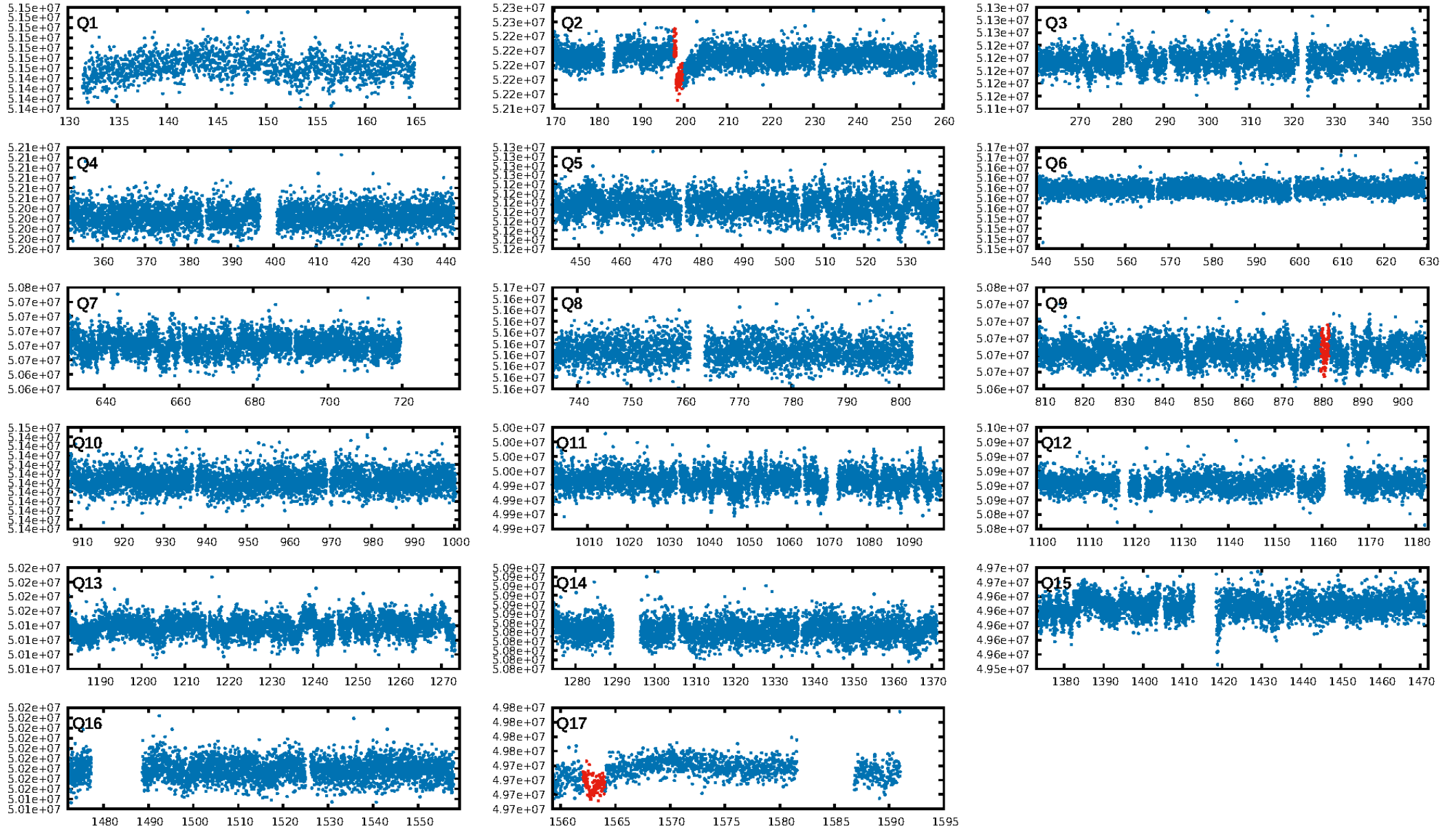
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.93e-14
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.436
Centroid-sig: 9.3%
Centroid-so: 1.034 arcsec [1.16 σ]
OotOffset-rm: 2.091 arcsec [3.00 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 2.059 arcsec [3.42 σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

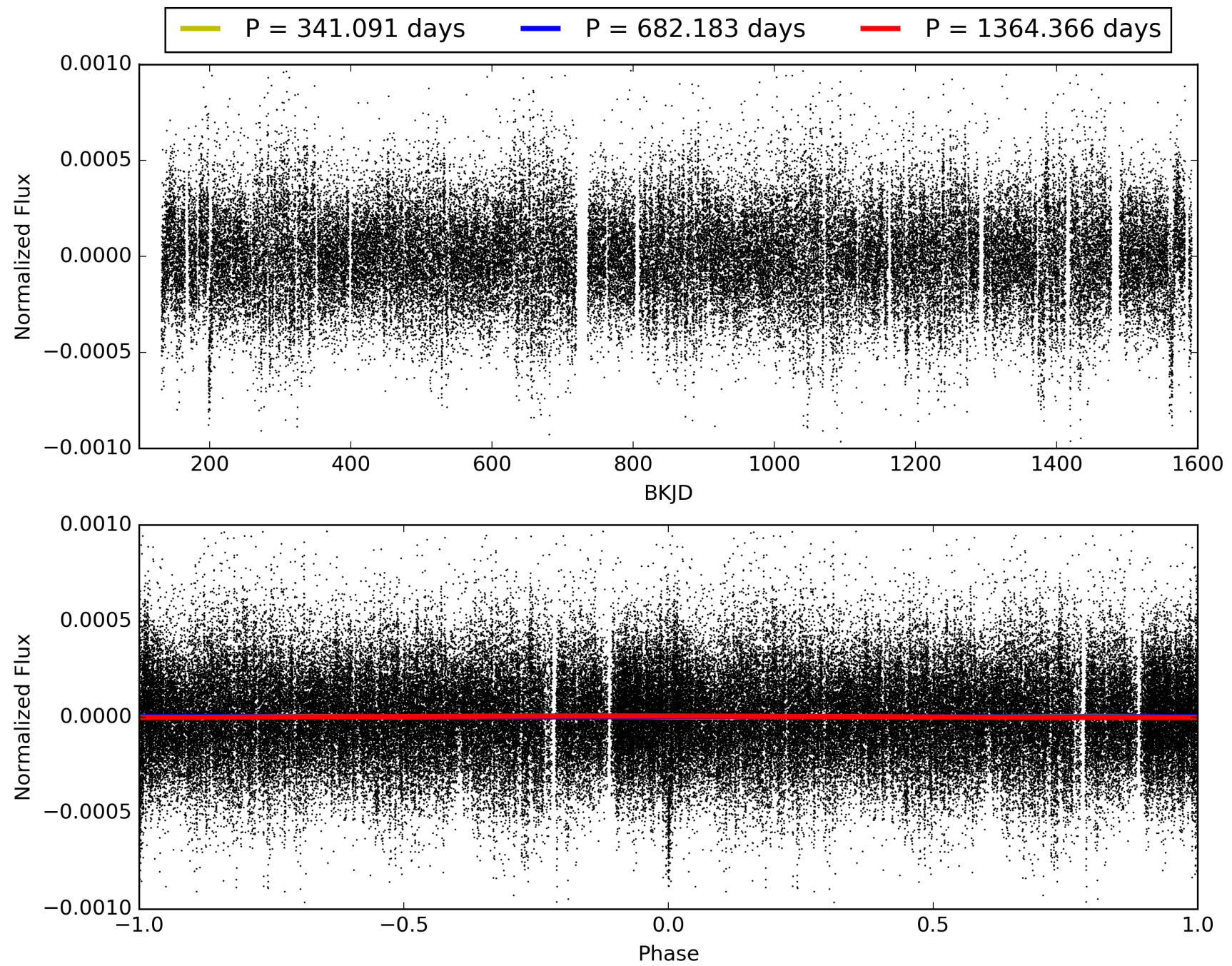
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:58:41 Z

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

TCE 006517097-01, PDC Light Curves

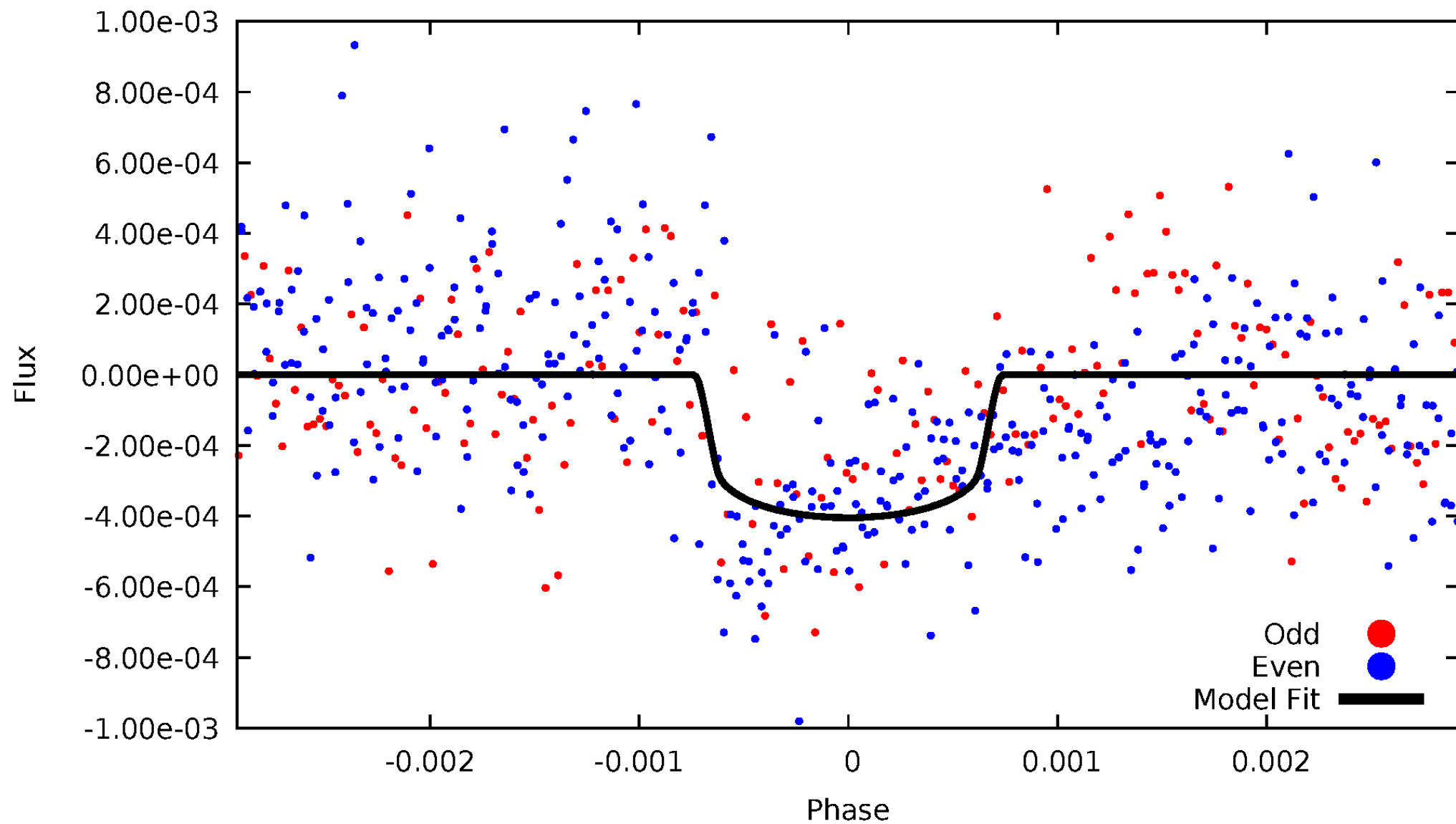


TCE 006517097-01



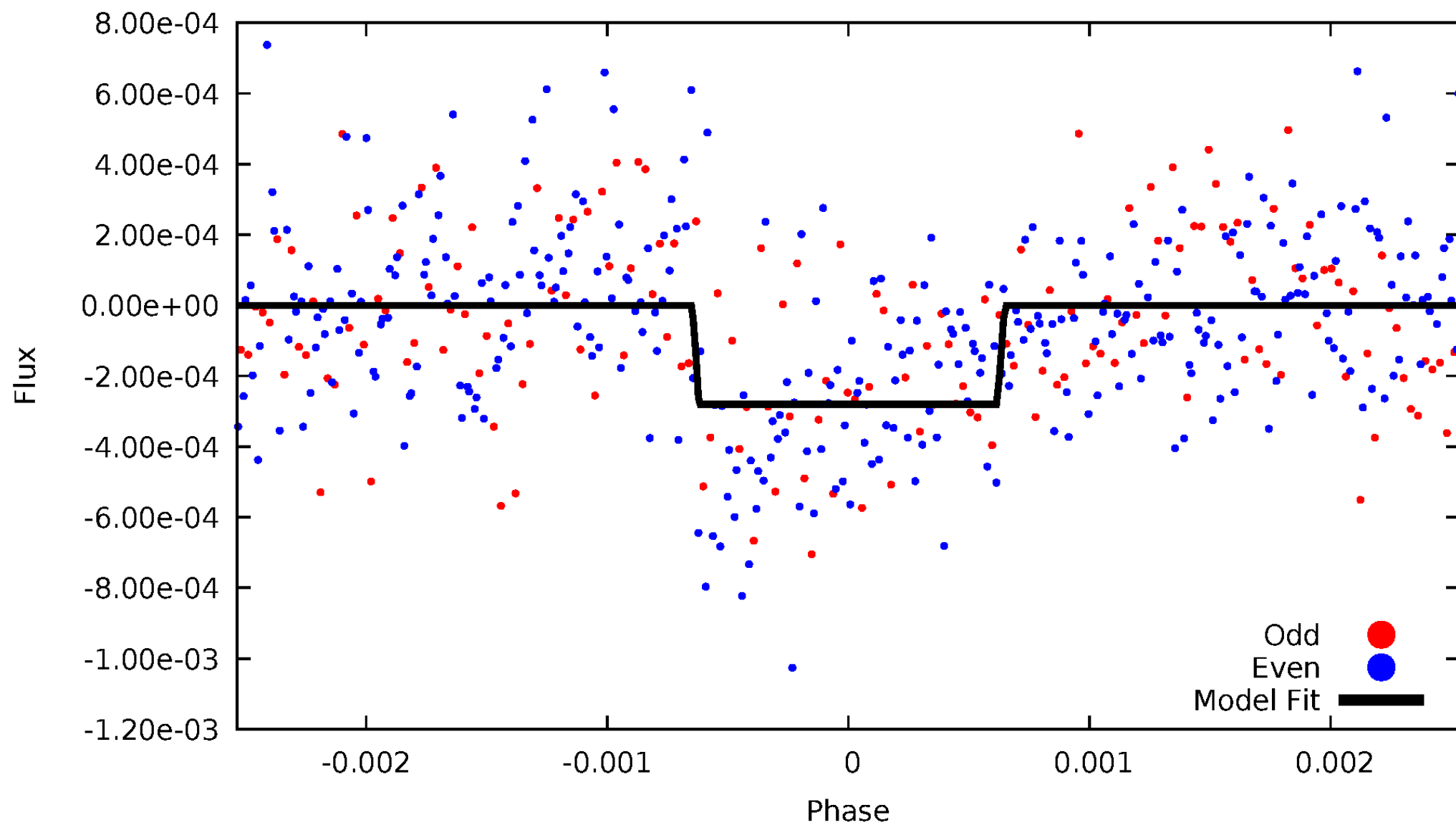
DV Odd/Even

TCE 006517097-01



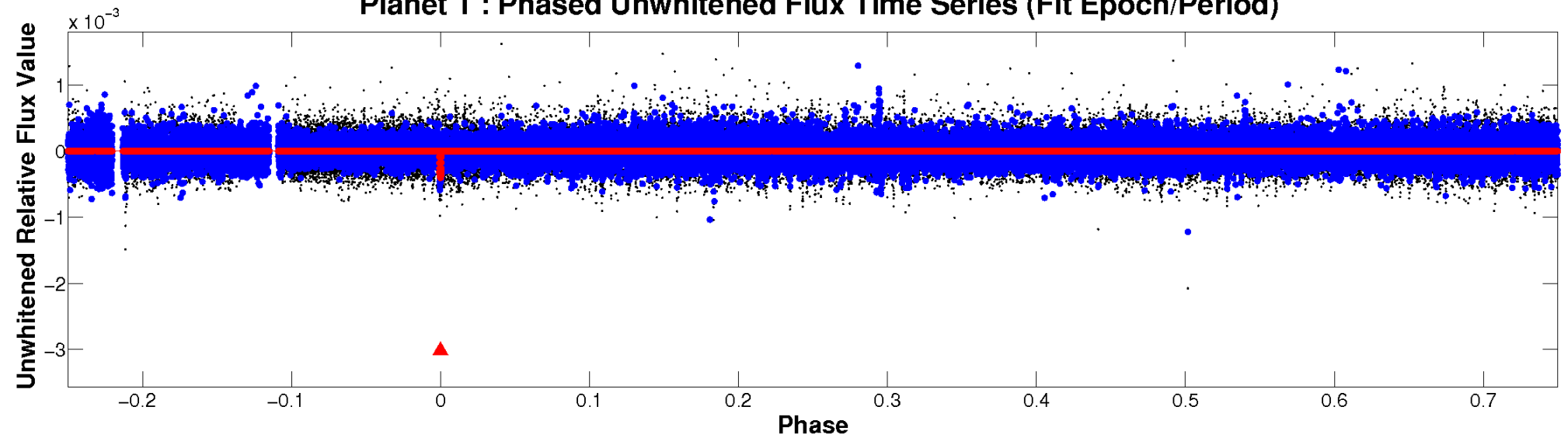
ALT Odd/Even

TCE 006517097-01

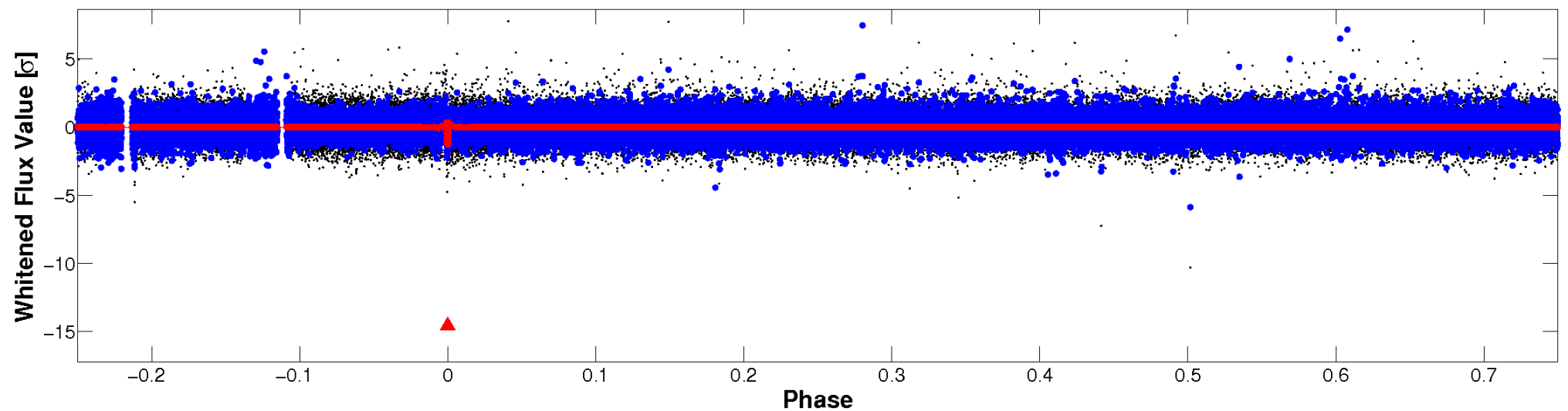


Non-Whitened Vs. Whitened Light Curve

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



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



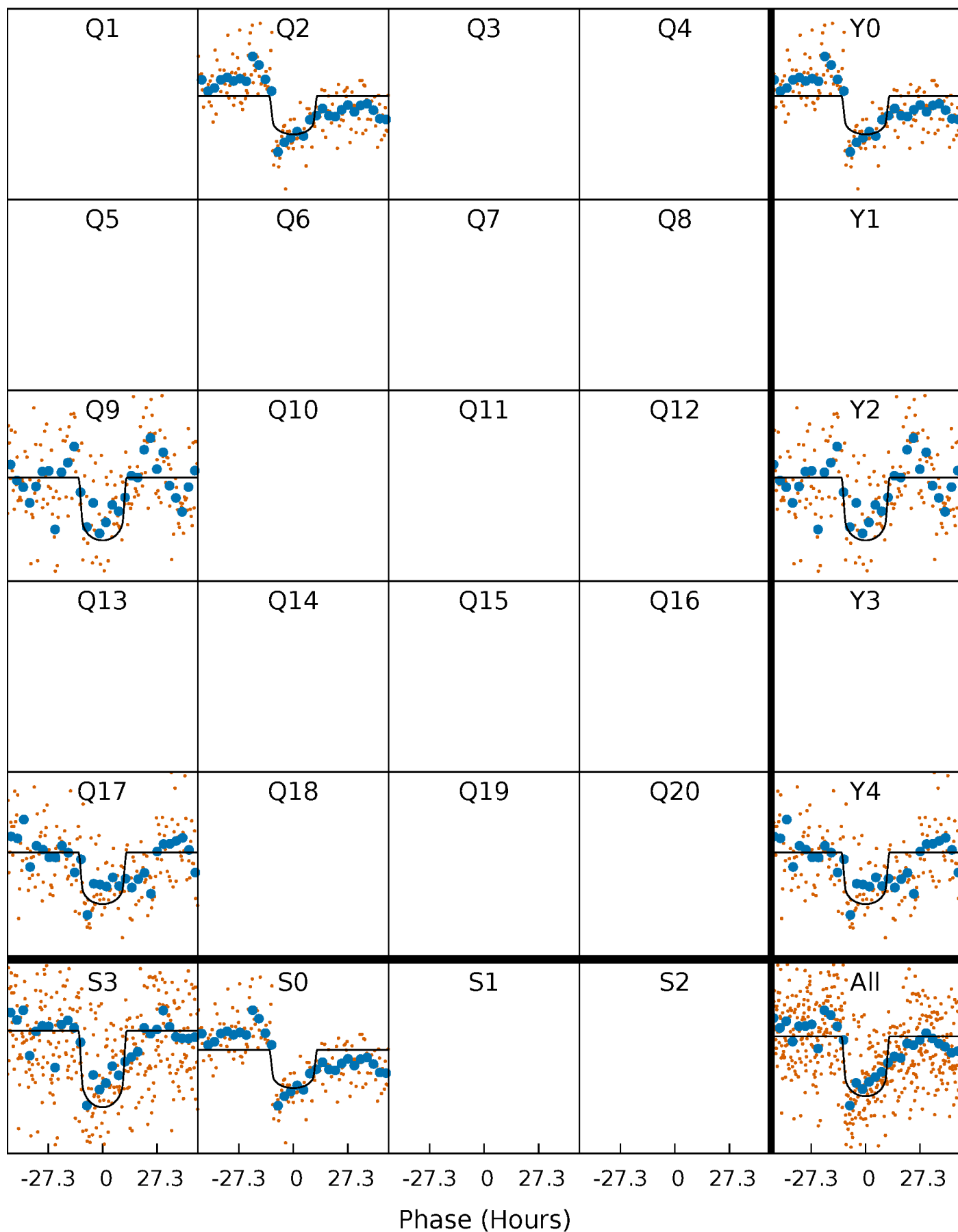
PDC Quarter-Phased Transit Curves

TCE 006517097-01 $P=682.182954$ Days $T_0=198.656479$ (BKJD)



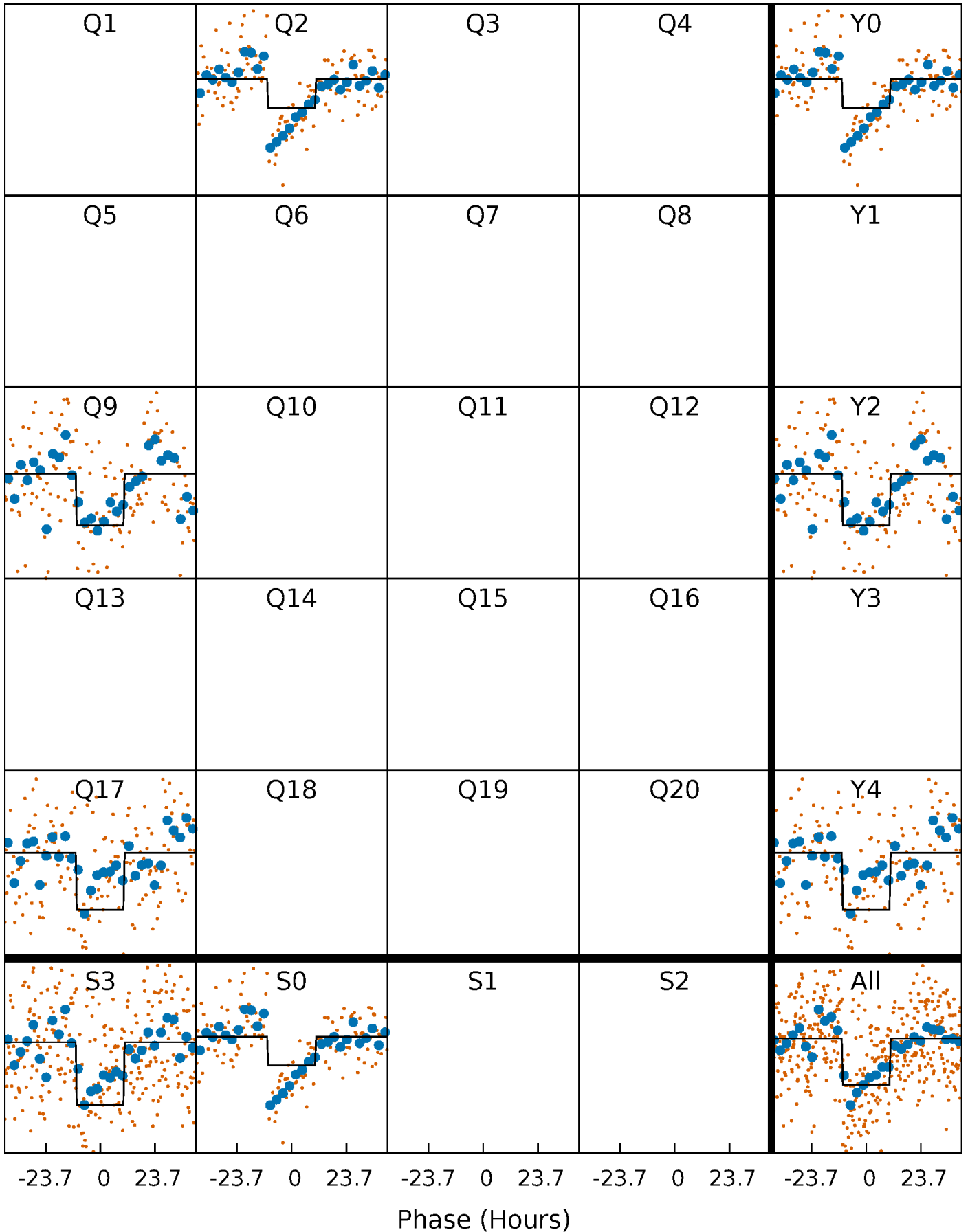
DV Quarter-Phased Transit Curves

TCE 006517097-01 P=682.182954 Days $T_0=198.656479$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

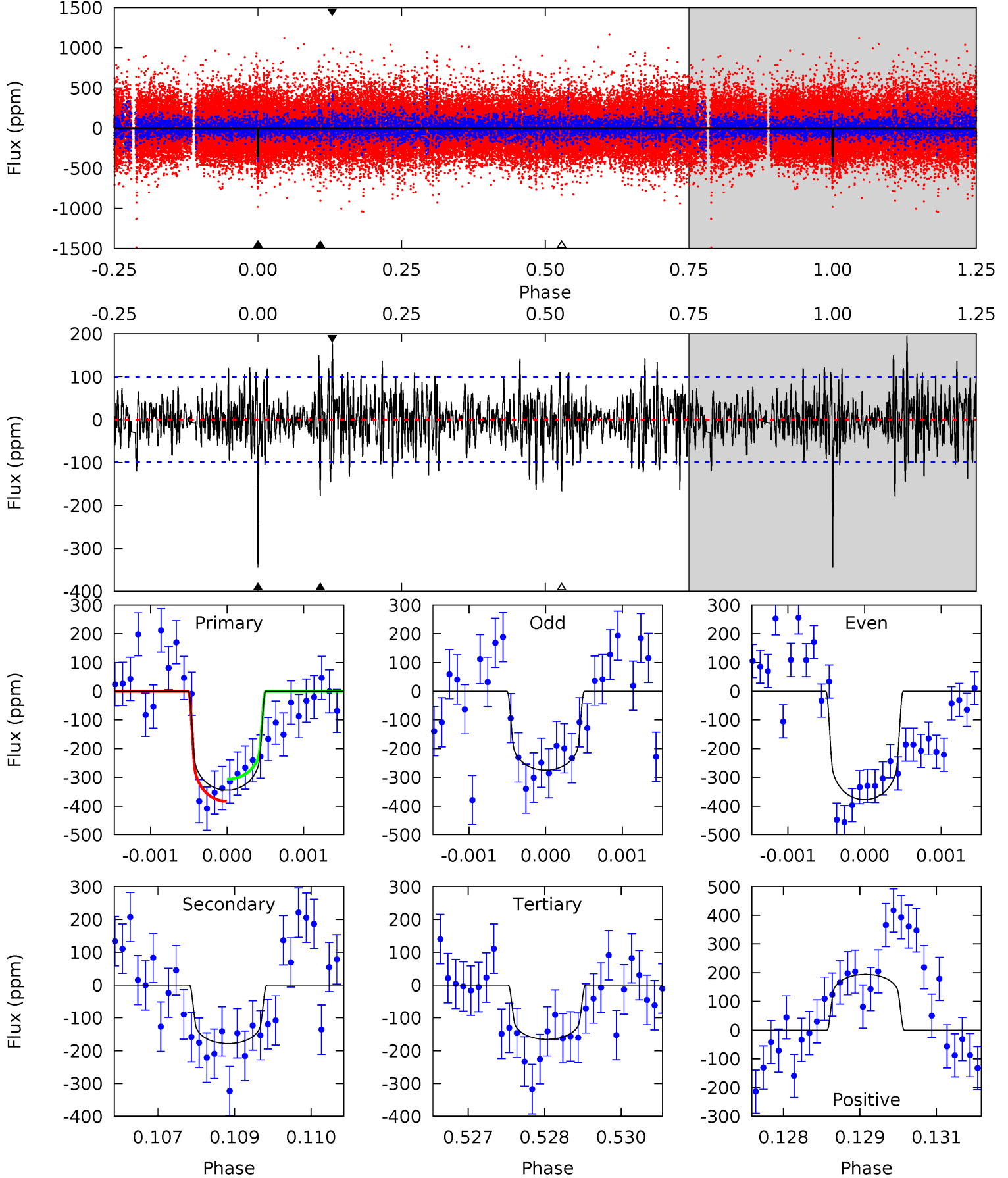
TCE 006517097-01 P=682.181212 Days $T_0=198.654083$ (BKJD)



DV Model-Shift Uniqueness Test

006517097-01, P = 682.182954 Days, E = 198.656479 Days

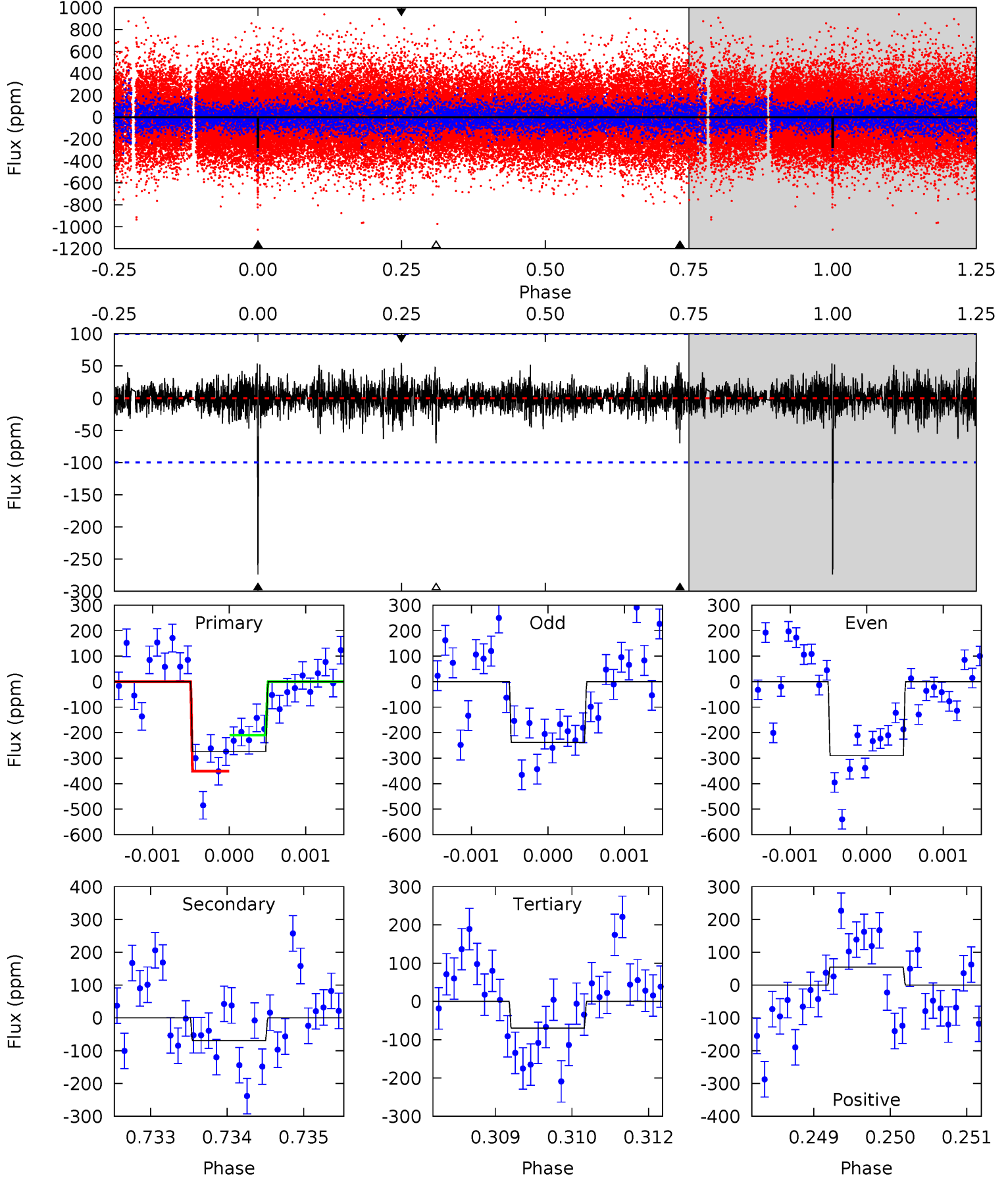
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.8	9.70	9.00	10.6	5.38	3.18	2.41	9.76	8.18	0.70	-0.88	2.60	1.14	0.36	2.10



Alt Model-Shift Uniqueness Test

006517097-01, P = 682.181212 Days, E = 198.654083 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	3.78	3.77	2.96	5.41	3.22	0.78	11.0	11.9	0.01	0.82	1.32	1.14	0.17	3.82



Stellar Parameters For KIC 006517097

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6038^{+163}_{-181}	$4.524^{+0.050}_{-0.200}$	$-0.280^{+0.300}_{-0.300}$	$0.898^{+0.262}_{-0.087}$	$0.982^{+0.117}_{-0.130}$	$1.912^{+0.399}_{-0.975}$
	+3%/-3%	+1%/-4%	+107%/-107%	+29%/-10%	+12%/-13%	+21%/-51%
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 006517097-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-178 ± 18	$2.13^{+0.33}_{-0.24}$	293^{+19}_{-14}	4902^{+264}_{-229}	47577^{+13896}_{-12452}
Alt.	-70 ± 18	$1.70^{+0.32}_{-0.22}$	293^{+22}_{-13}	4442^{+336}_{-313}	28201^{+14711}_{-9229}

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

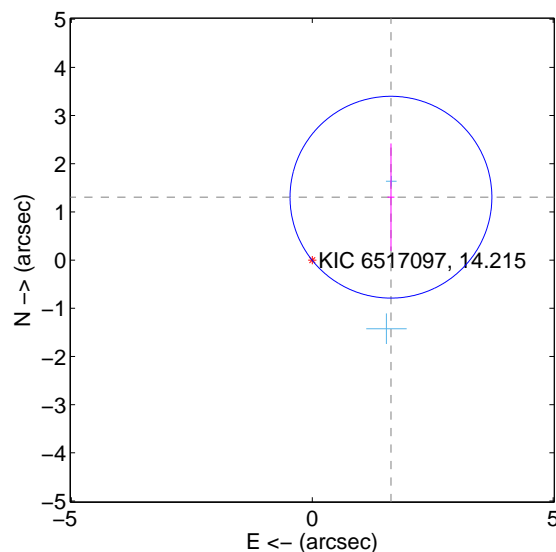
Supplemental centroid analysis for 006517097-01. Kepler magnitude: 14.21. Transit SNR 12.34

There are 2 quarters with good PRF difference image offsets

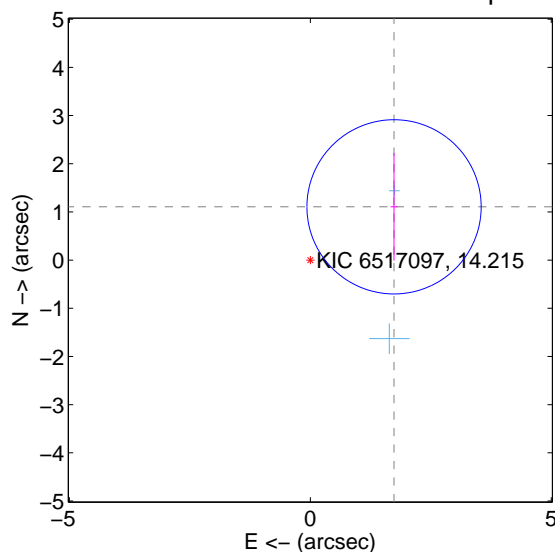
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.091 ± 0.698	3.00	-1.634 ± 0.073	1.306 ± 1.114
PRF-fit source offset from KIC position	2.059 ± 0.603	3.42	-1.738 ± 0.073	1.105 ± 1.117
photometric centroid source offset	1.03 ± 0.90	1.16	0.88 ± 0.93	0.55 ± 0.81

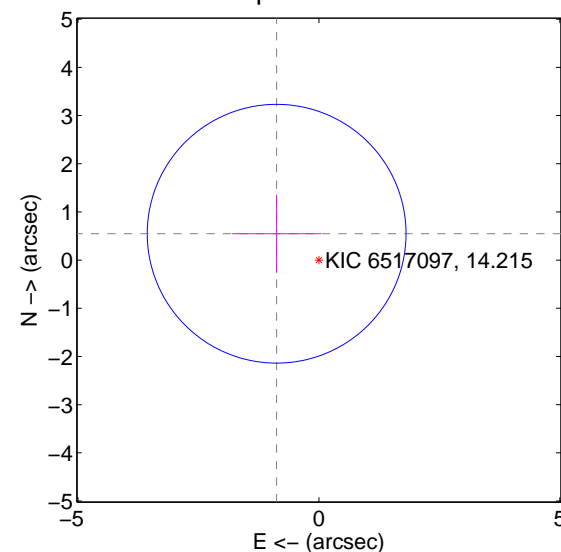
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

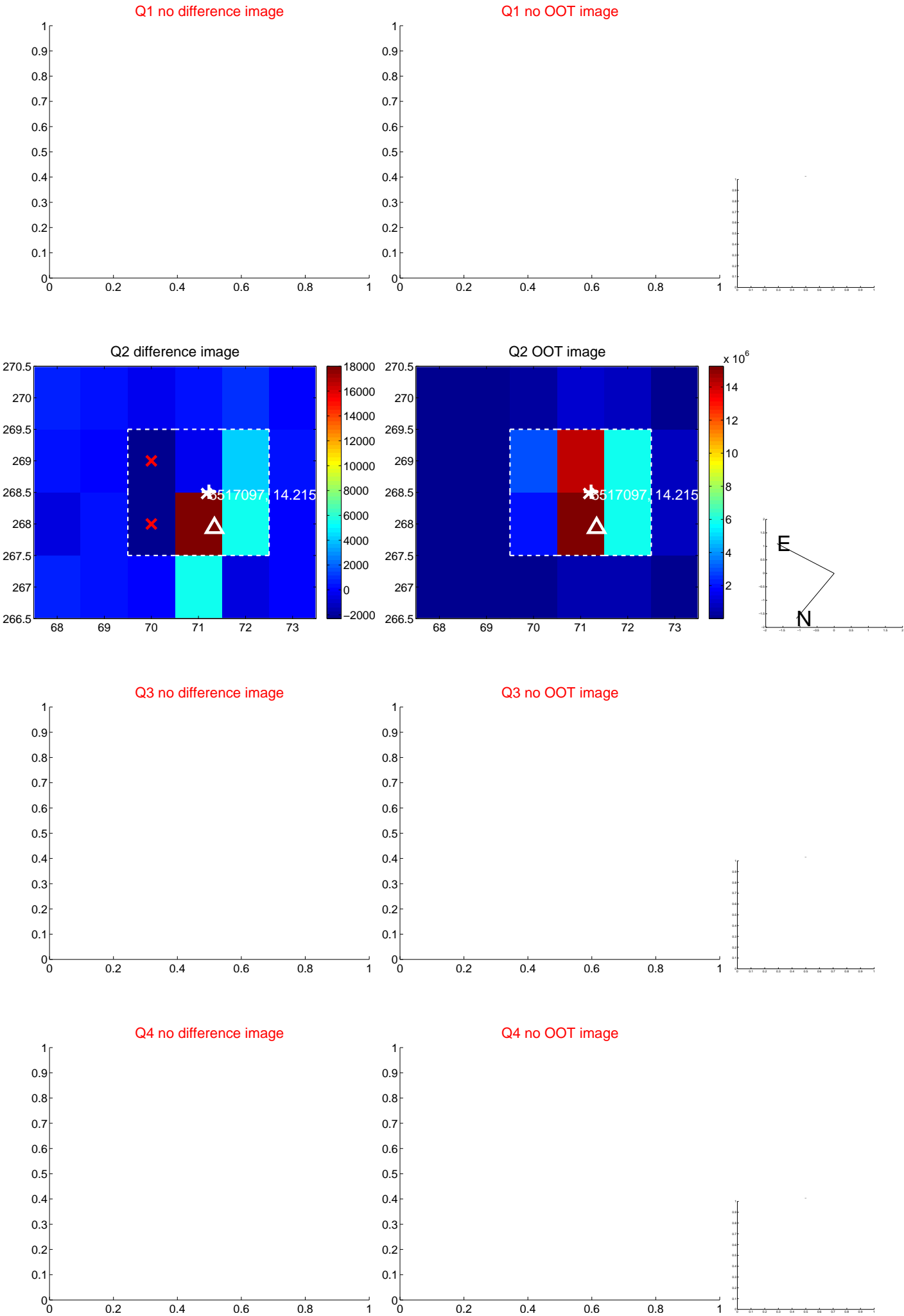


offset from photometric centroids



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.

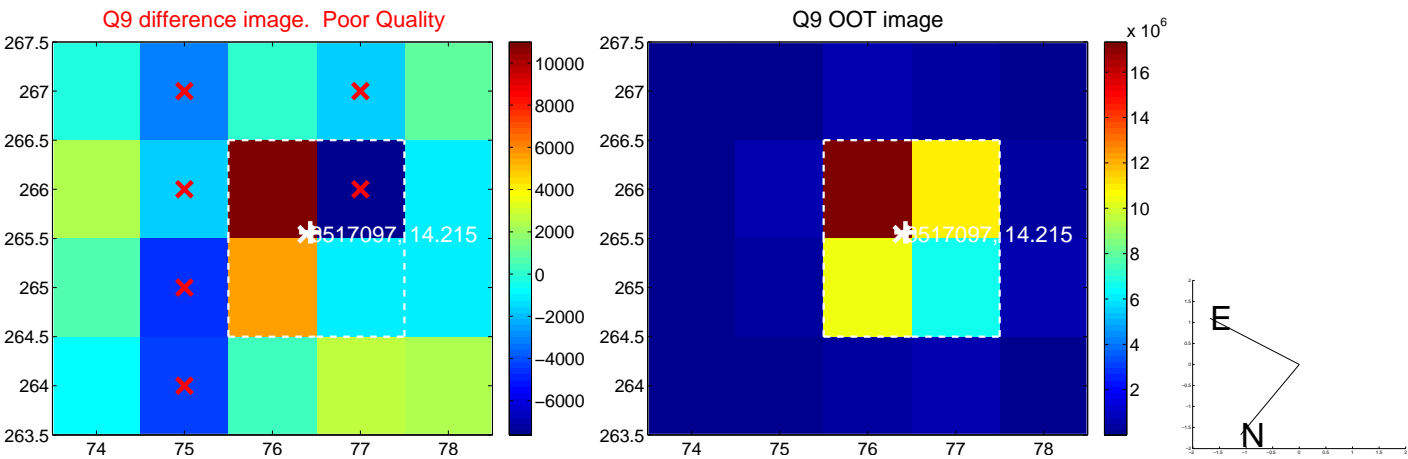
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



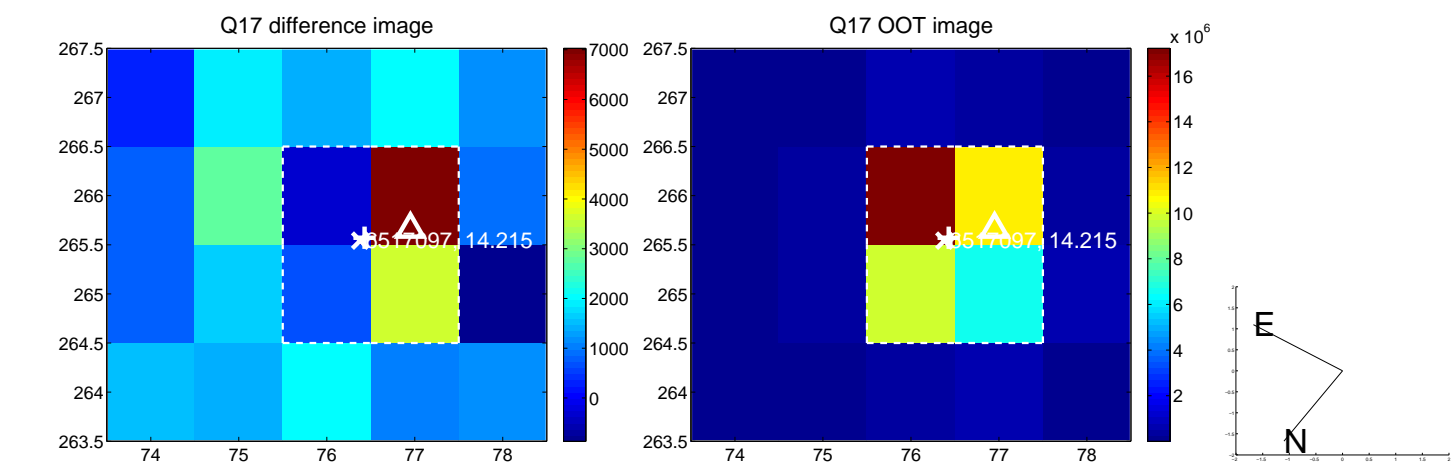
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



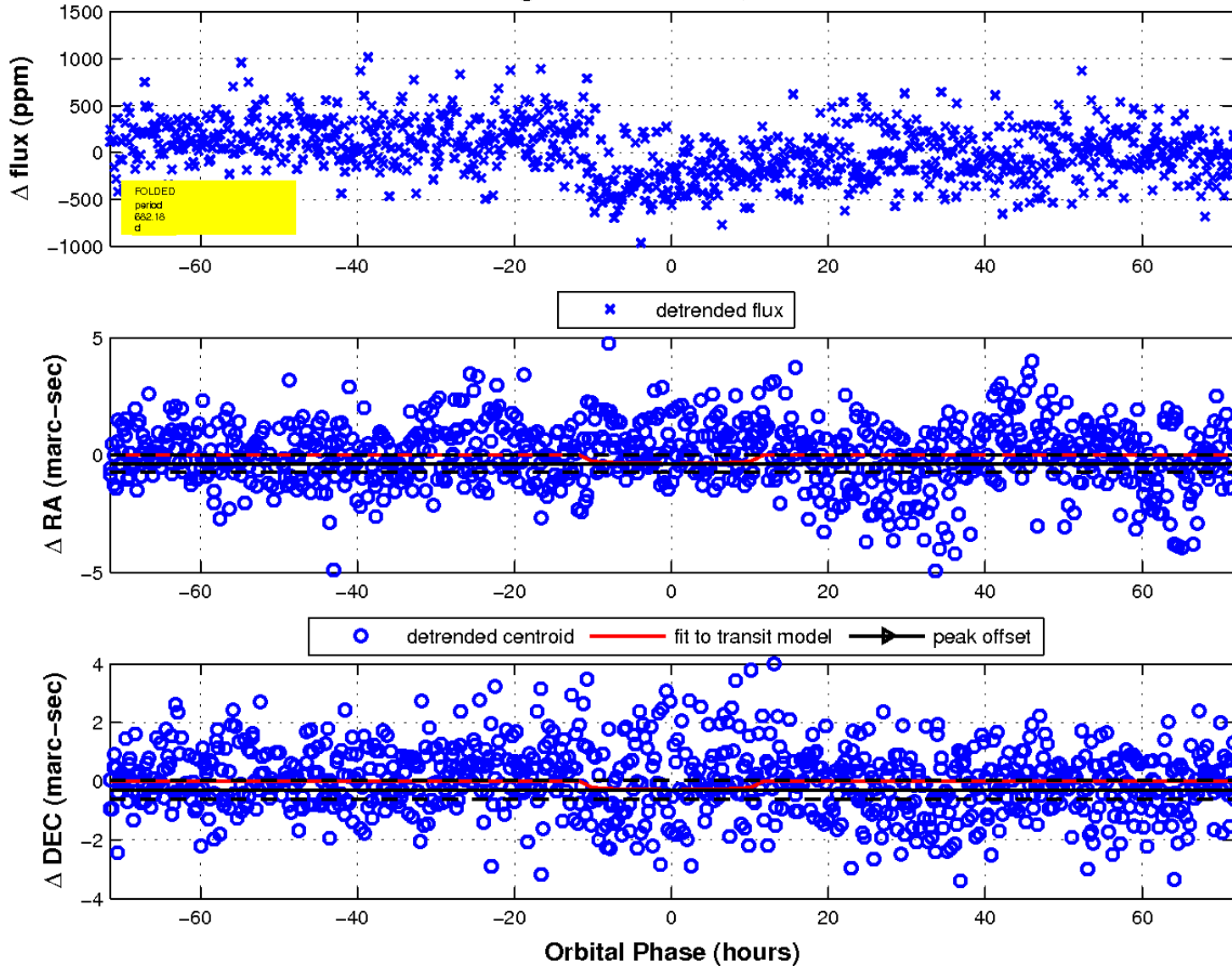
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

