

KIC 009157719

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})
009157719-01	OBS	No	141.839868	150.011279	647.9	2.623	11.1	6.4	5.62	4759	15.45	55.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009157719-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV

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

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

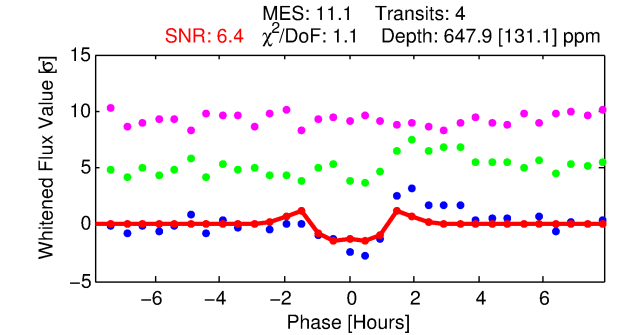
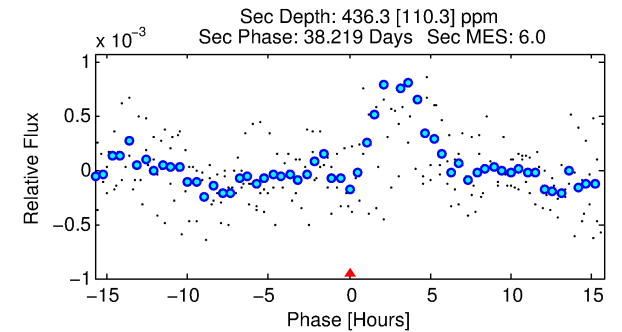
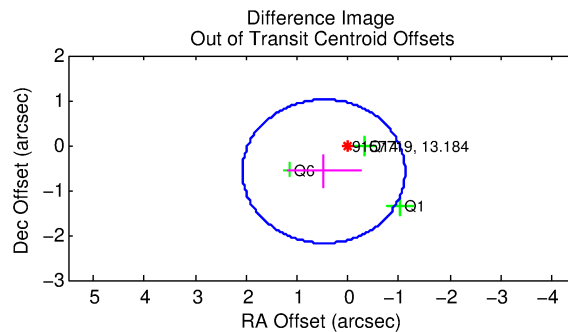
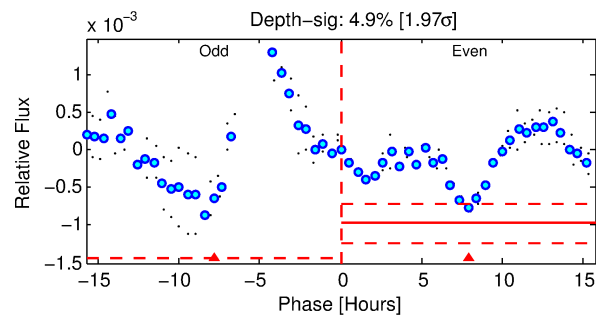
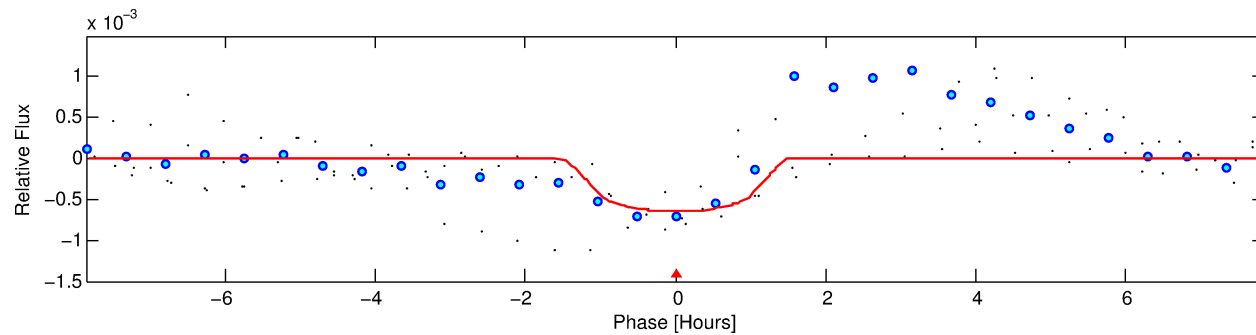
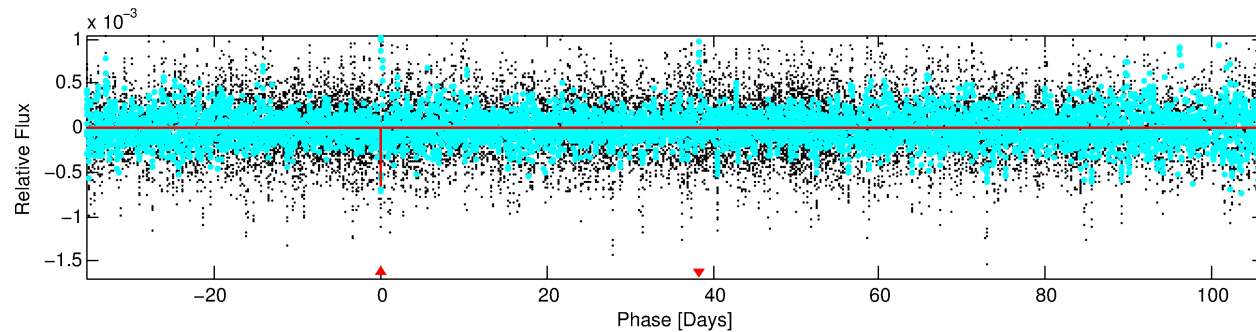
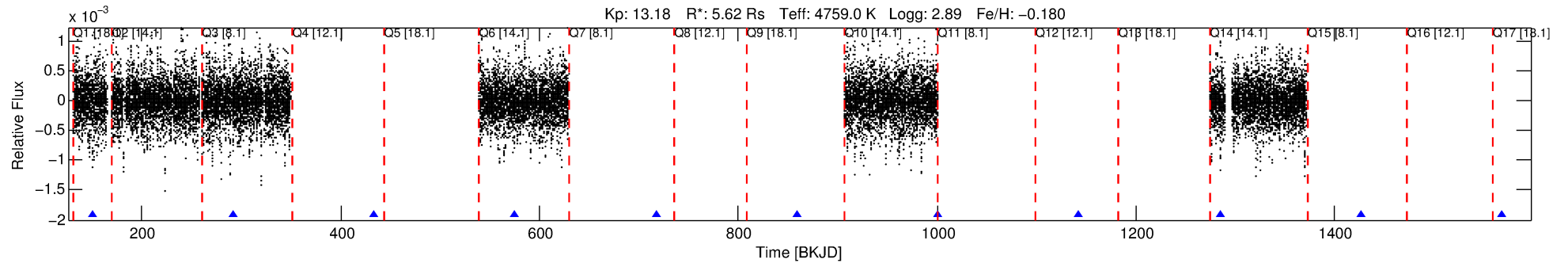
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009157719-01

No Significant Match Found

DV One-Page Summary

KIC: 9157719 Candidate: 1 of 1 Period: 141.840 d



DV Fit Results:

Period = 141.83987 [0.00115] d
Epoch = 150.0113 [0.0047] BKJD
Rp/R* = 0.0252 [0.0320]
a/R* = 298.19 [1288.08]
b = 0.73 [2.88]
Seff = 55.06 [43.42]
Teq = 695 [137] K
Rp = 15.45 [22.15] Re
a = 0.5131 [0.2805] AU
Ag = 264.68 [706.63] [0.37 σ]
Teffp = 4332 [2768] K [1.31 σ]

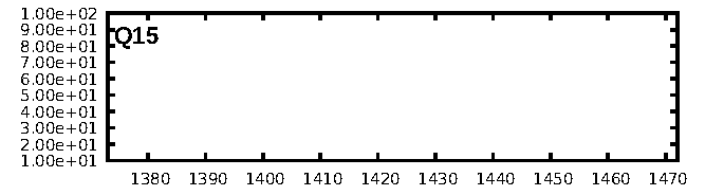
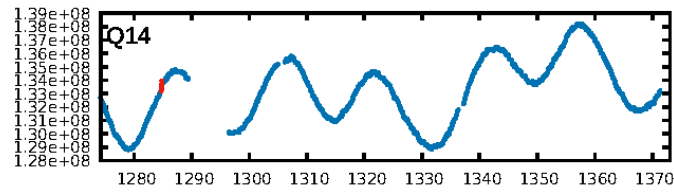
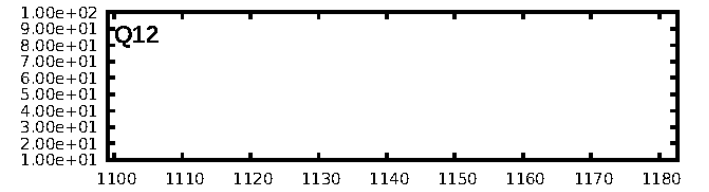
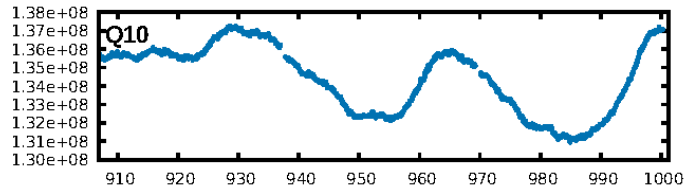
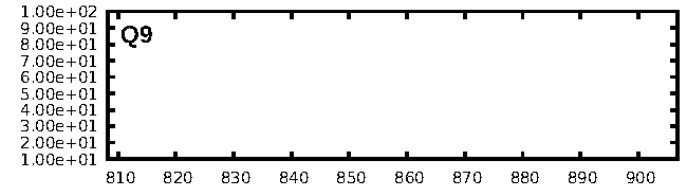
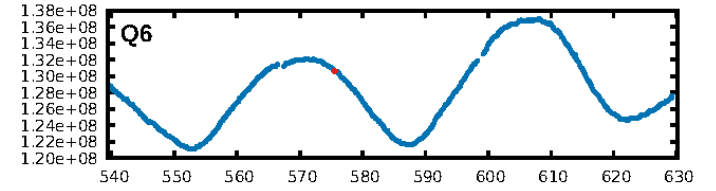
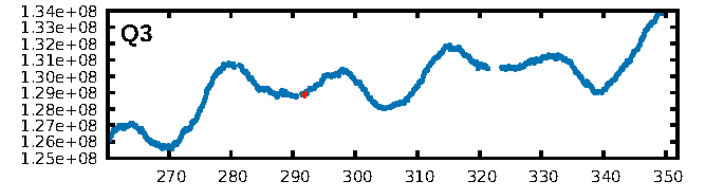
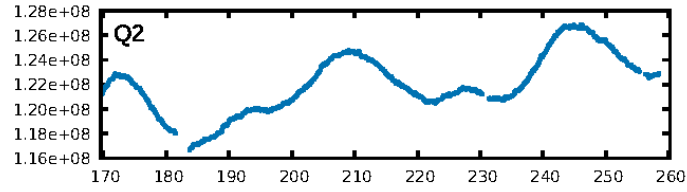
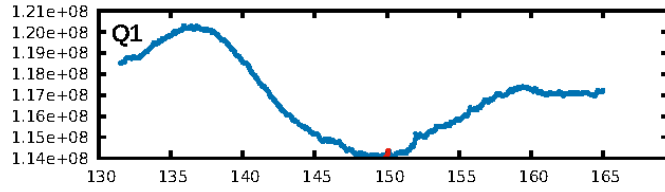
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 34.9%
ModelChiSquareGof-sig: 99.0%
Bootstrap-pfa: 1.37e-18
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.437
Centroid-sig: 22.5%
Centroid-so: 0.469 arcsec [0.79 σ]
OotOffset-rm: 0.751 arcsec [1.41 σ]
KicOffset-rm: 0.906 arcsec [1.56 σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

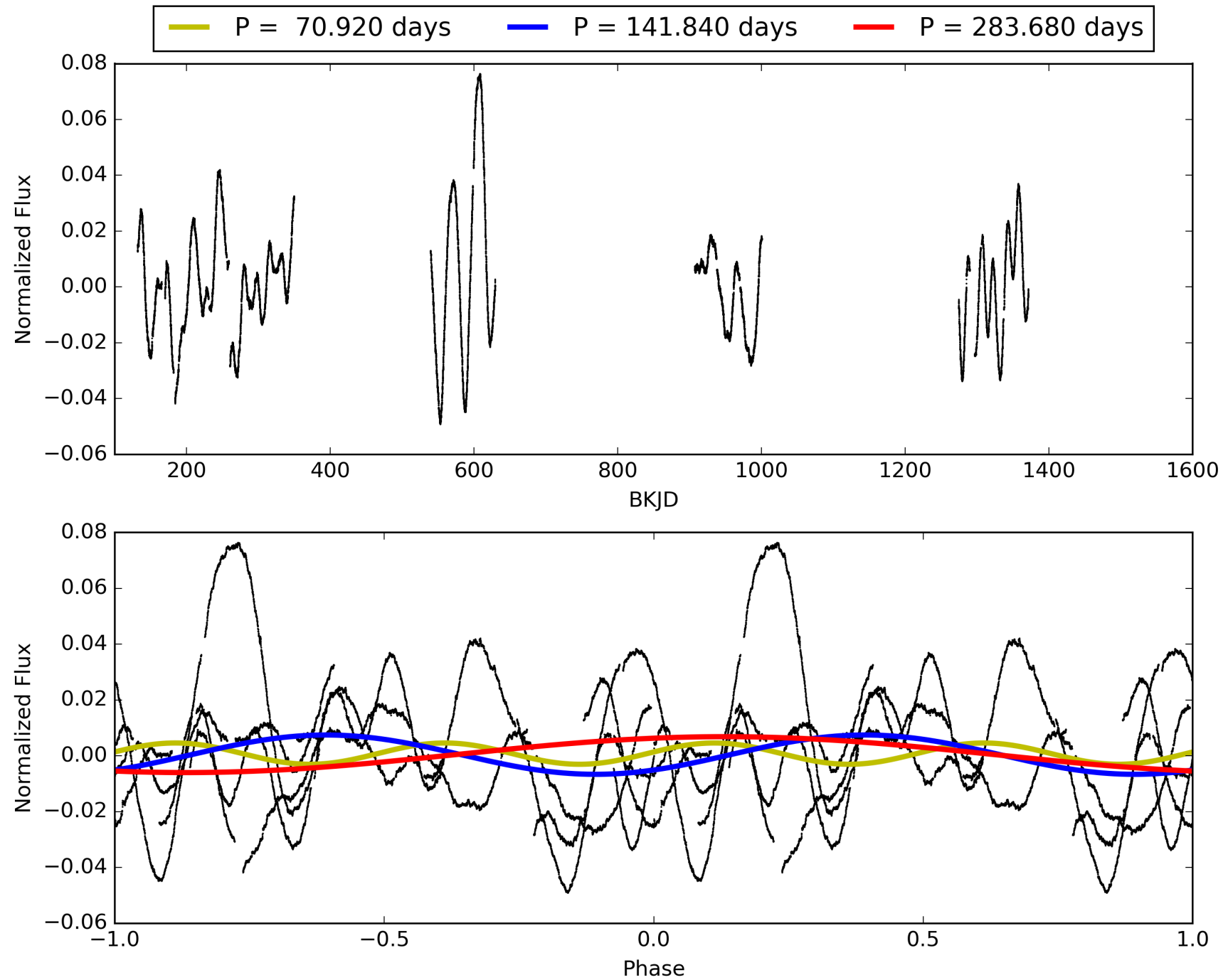
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:29:25 Z

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

TCE 009157719-01, PDC Light Curves

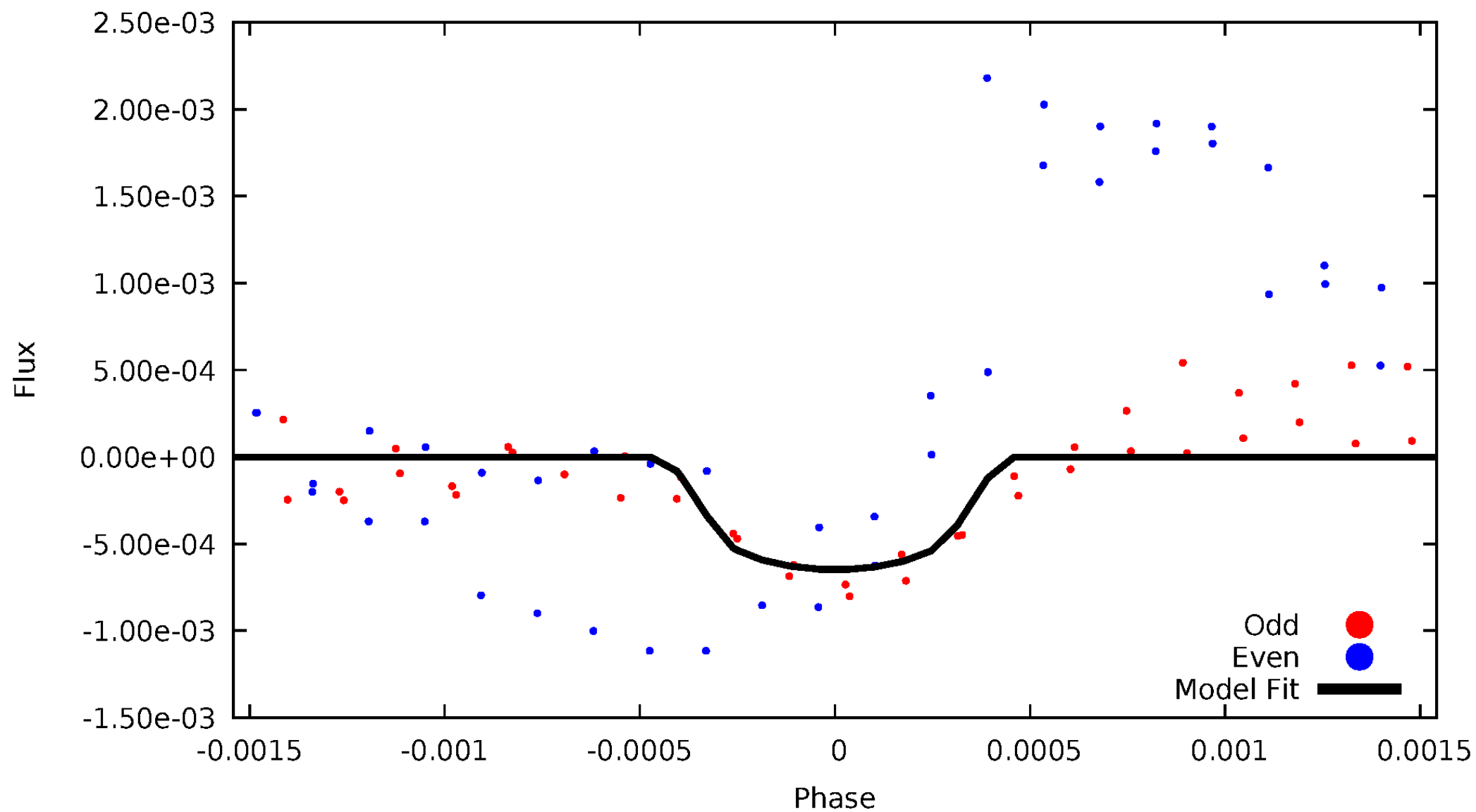


TCE 009157719-01



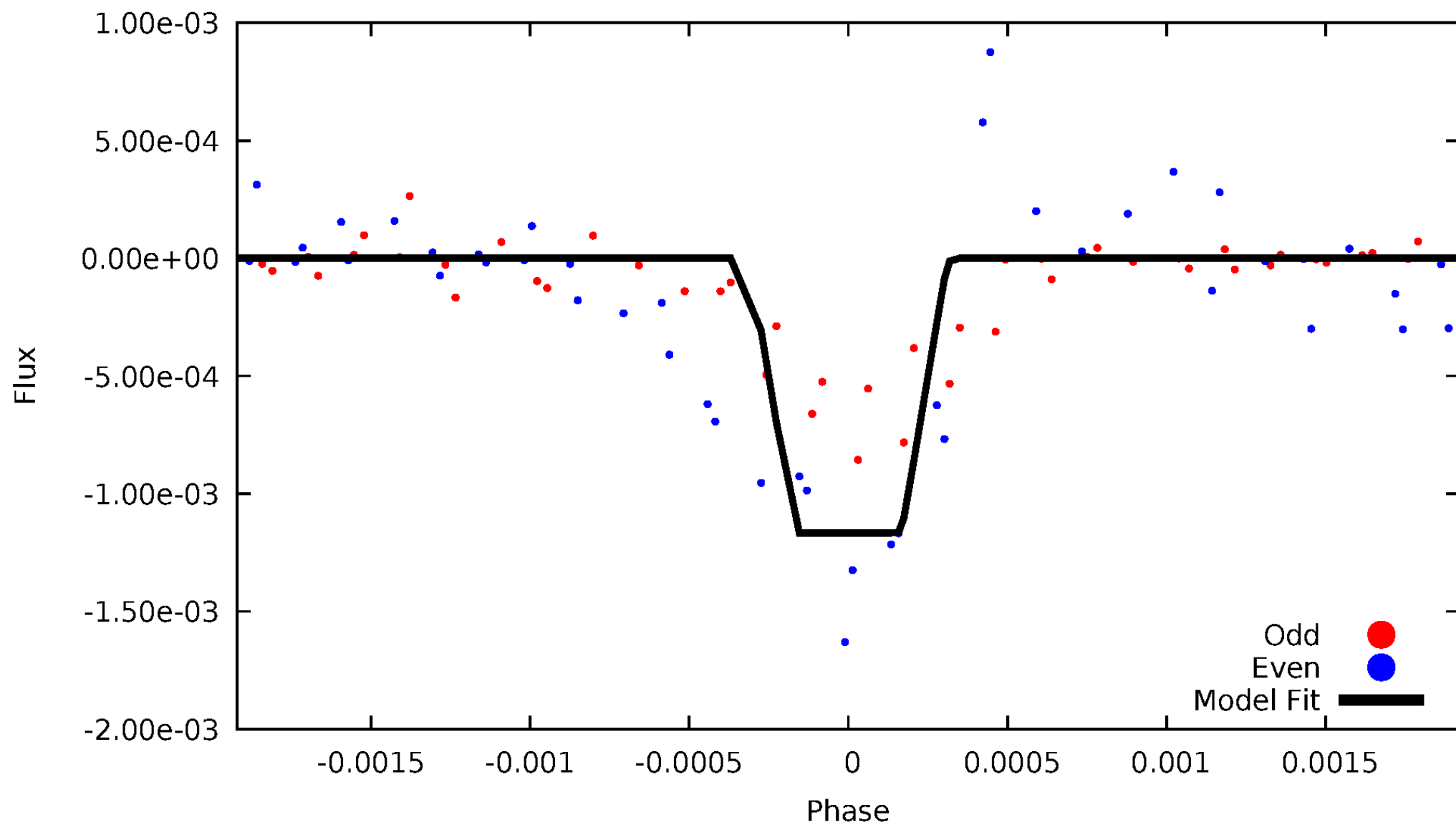
DV Odd/Even

TCE 009157719-01



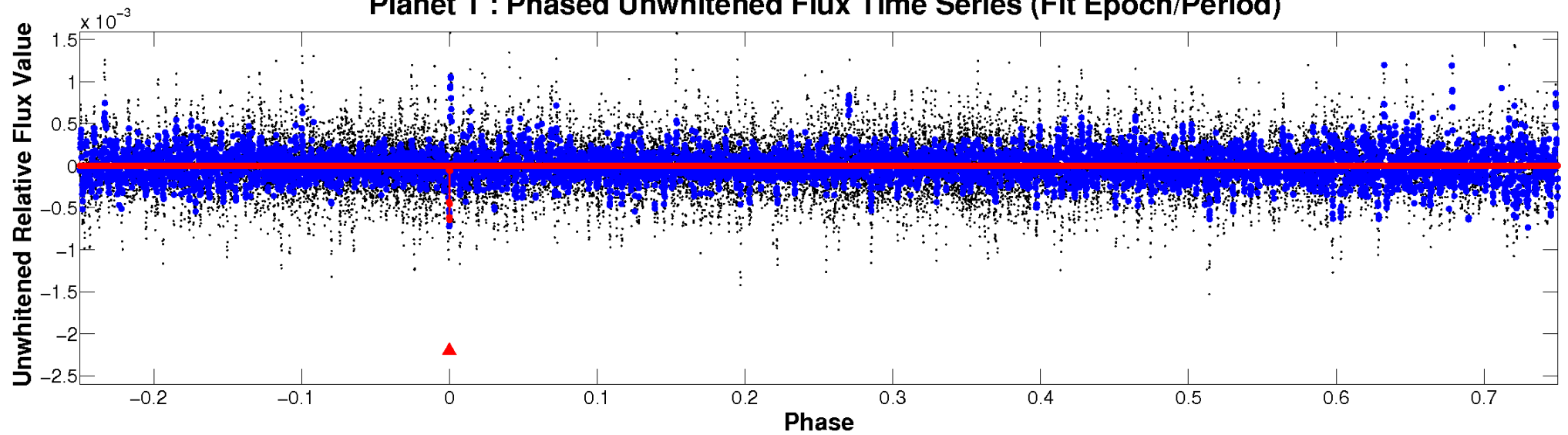
ALT Odd/Even

TCE 009157719-01

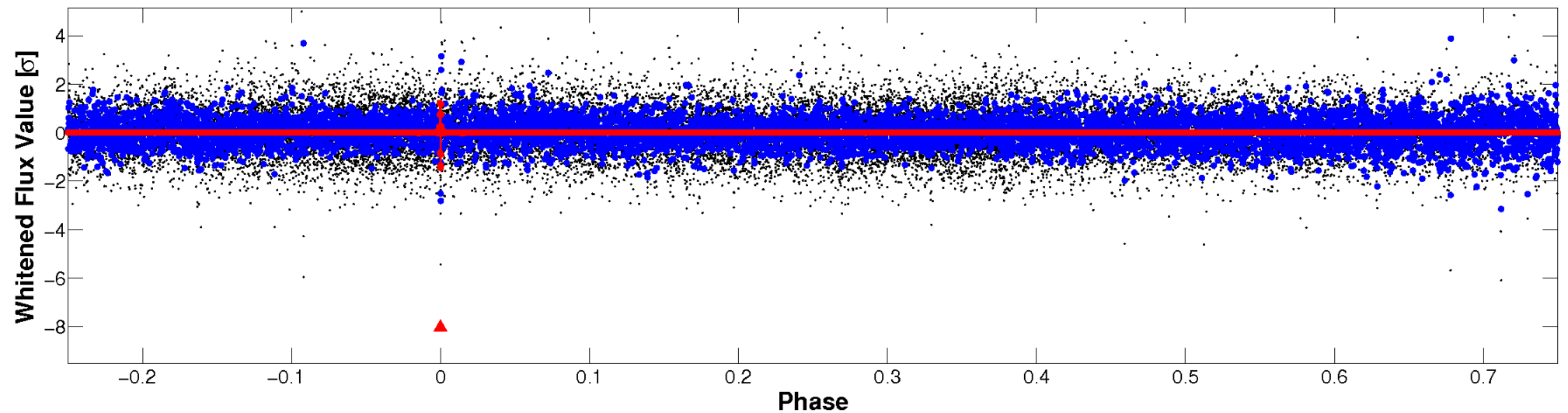


Non-Whitened Vs. Whitened Light Curve

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

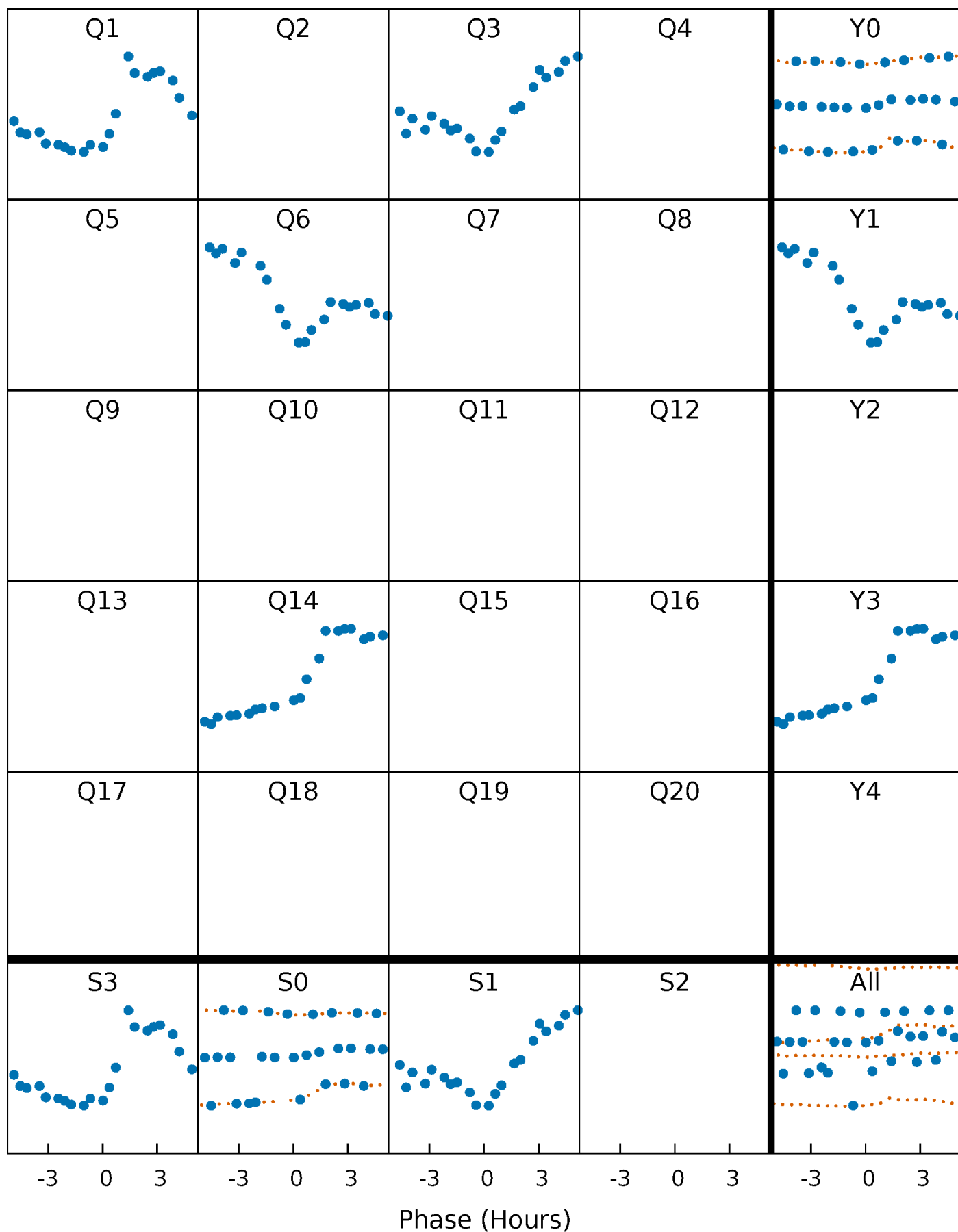


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



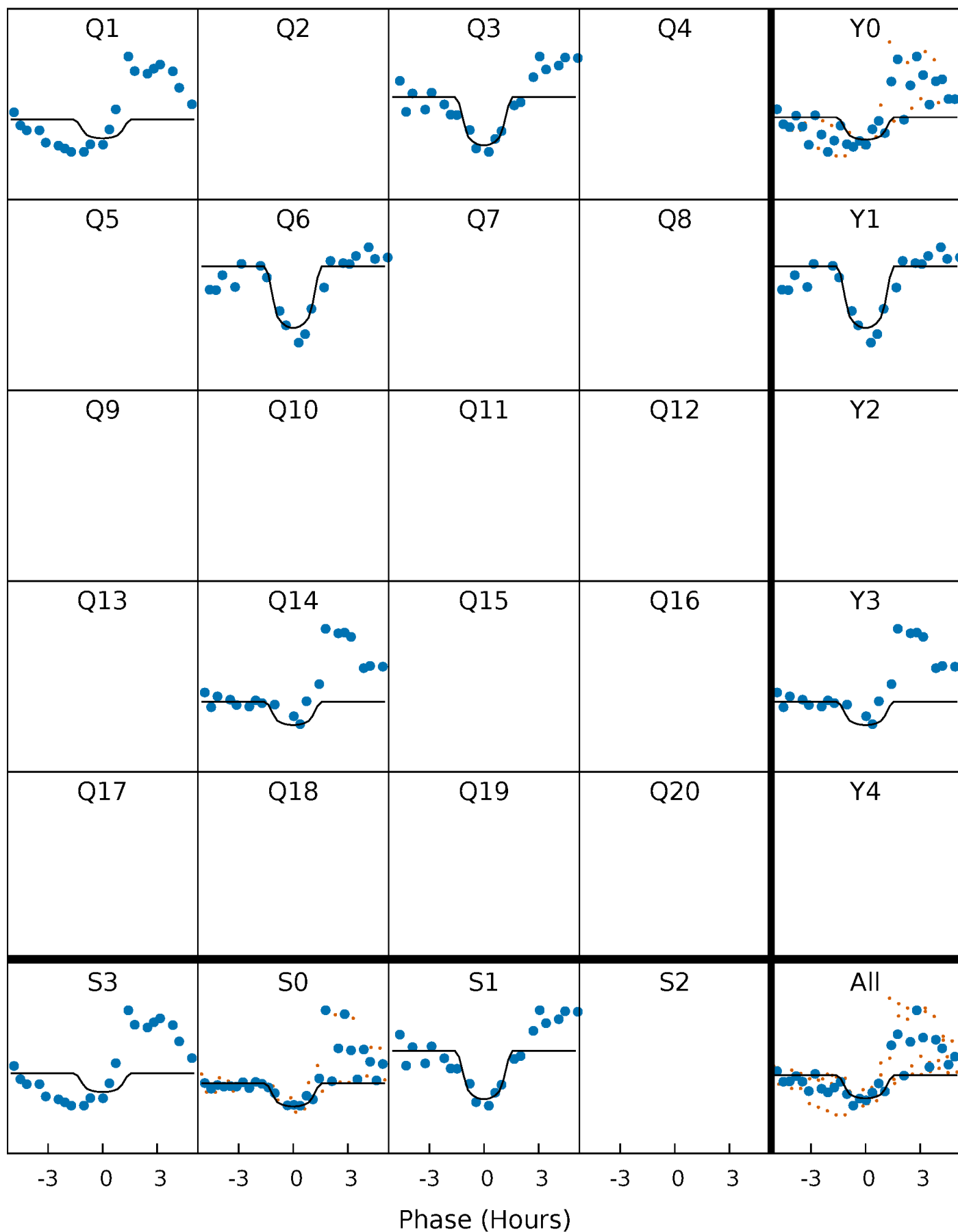
PDC Quarter-Phased Transit Curves

TCE 009157719-01 P=141.839868 Days $T_0=150.011279$ (BKJD)



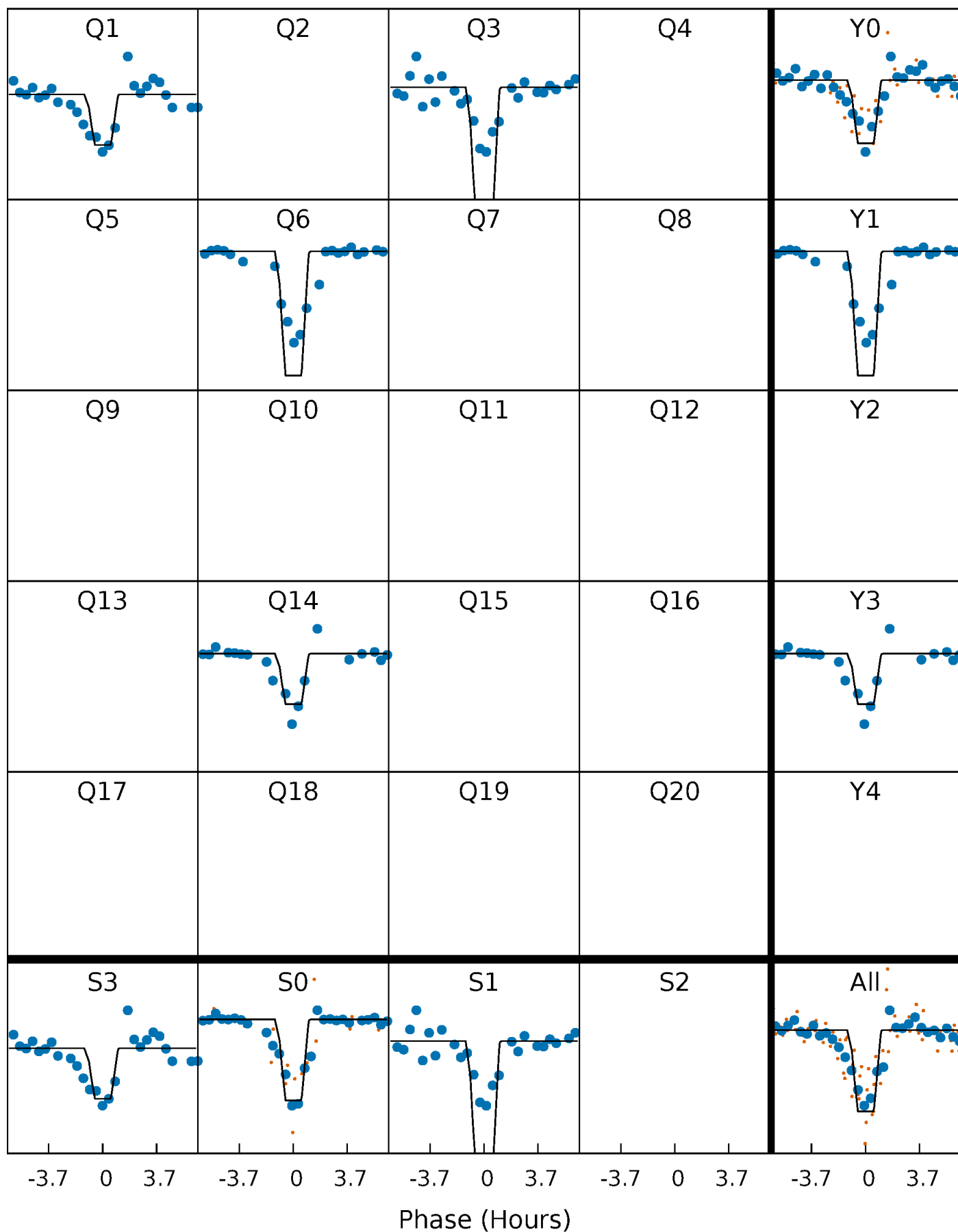
DV Quarter-Phased Transit Curves

TCE 009157719-01 P=141.839868 Days $T_0=150.011279$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

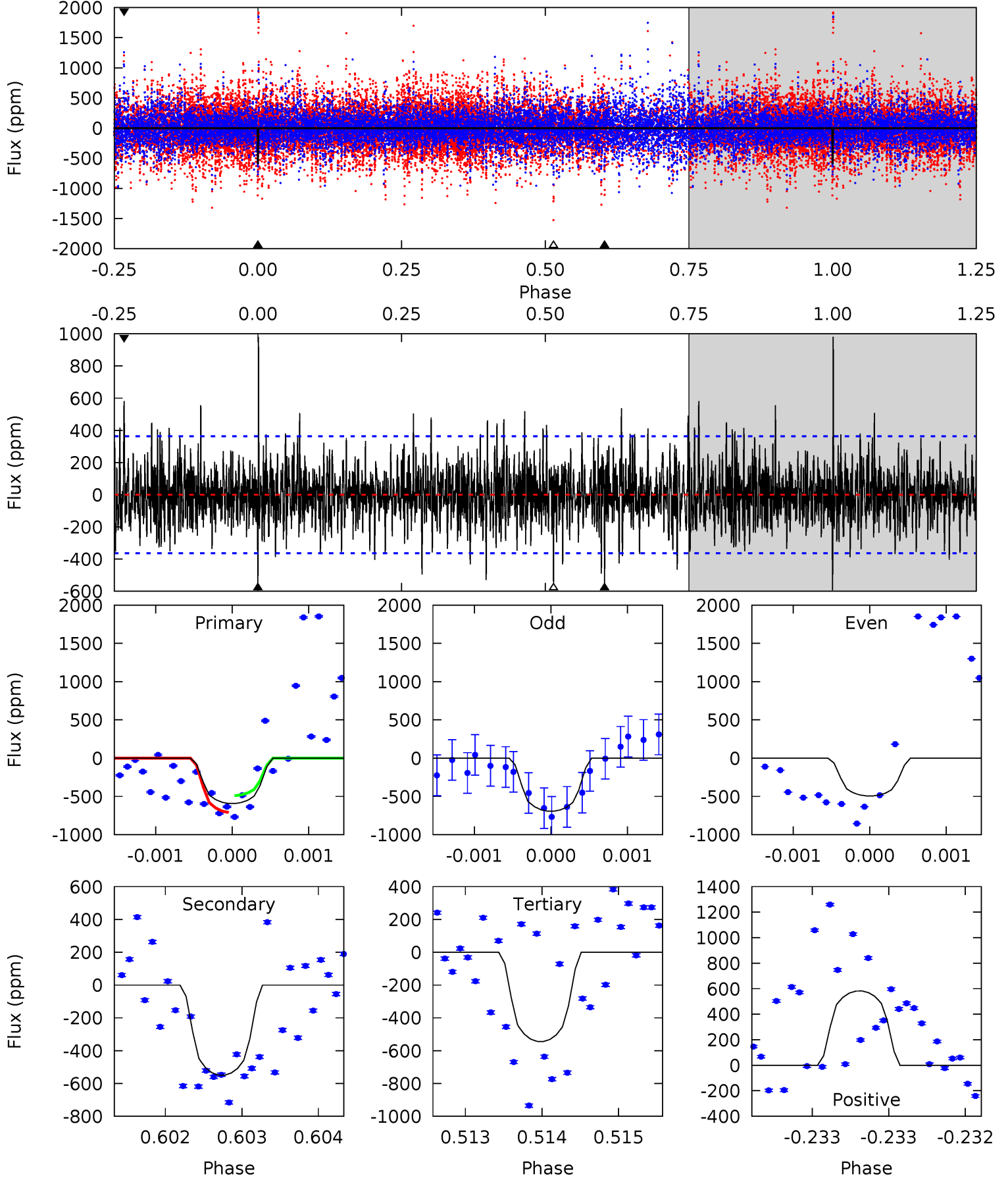
TCE 009157719-01 P=141.842877 Days $T_0=150.003281$ (BKJD)



DV Model-Shift Uniqueness Test

009157719-01, P = 141.839868 Days, E = 8.171411 Days

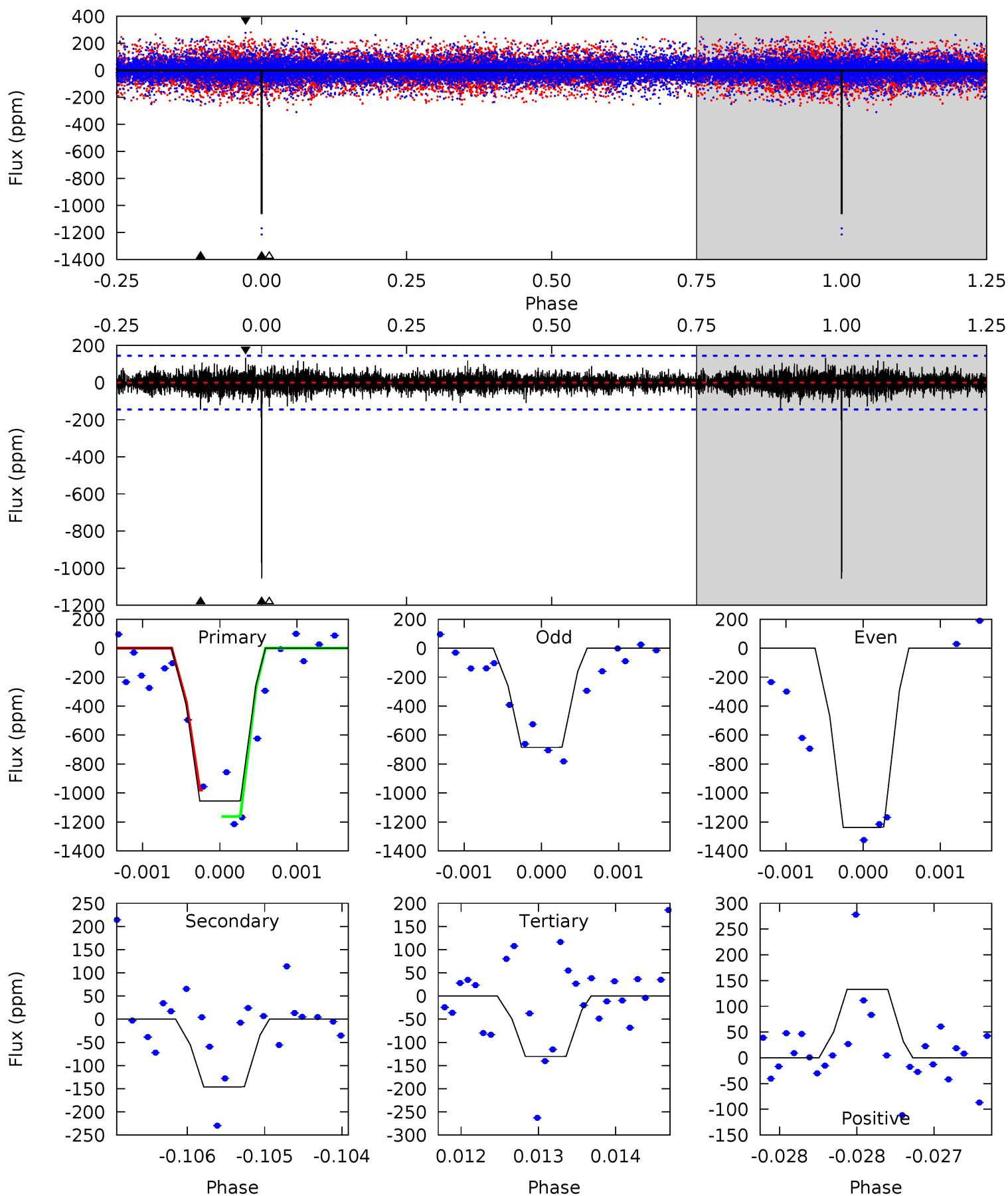
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.93	8.27	8.20	8.76	5.48	3.33	2.18	0.73	0.16	0.07	-0.49	1.43	0.95	0.62	1.66



Alt Model-Shift Uniqueness Test

009157719-01, P = 141.842877 Days, E = 8.160404 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.3	5.57	4.98	5.07	5.54	3.43	1.05	35.3	35.2	0.59	0.49	11.0	0.94	0.11	0



Stellar Parameters For KIC 009157719

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4759^{+142}_{-107}	$2.891^{+0.418}_{-0.342}$	$-0.180^{+0.300}_{-0.200}$	$5.616^{+3.729}_{-2.008}$	$0.897^{+0.407}_{-0.021}$	$0.007^{+0.020}_{-0.005}$
	+3%/-2%	+14%/-12%	+167%/-111%	+66%/-36%	+45%/-2%	+284%/-73%
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 009157719-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-549 ± 66	$20.92^{+19.66}_{-14.31}$	959^{+154}_{-112}	4160^{+2526}_{-777}	196^{+1621}_{-143}
Alt.	-146 ± 26	$24.96^{+20.53}_{-15.23}$	961^{+146}_{-113}	3156^{+1115}_{-446}	36^{+188}_{-25}

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 $A_{obs} \gg 1.0$

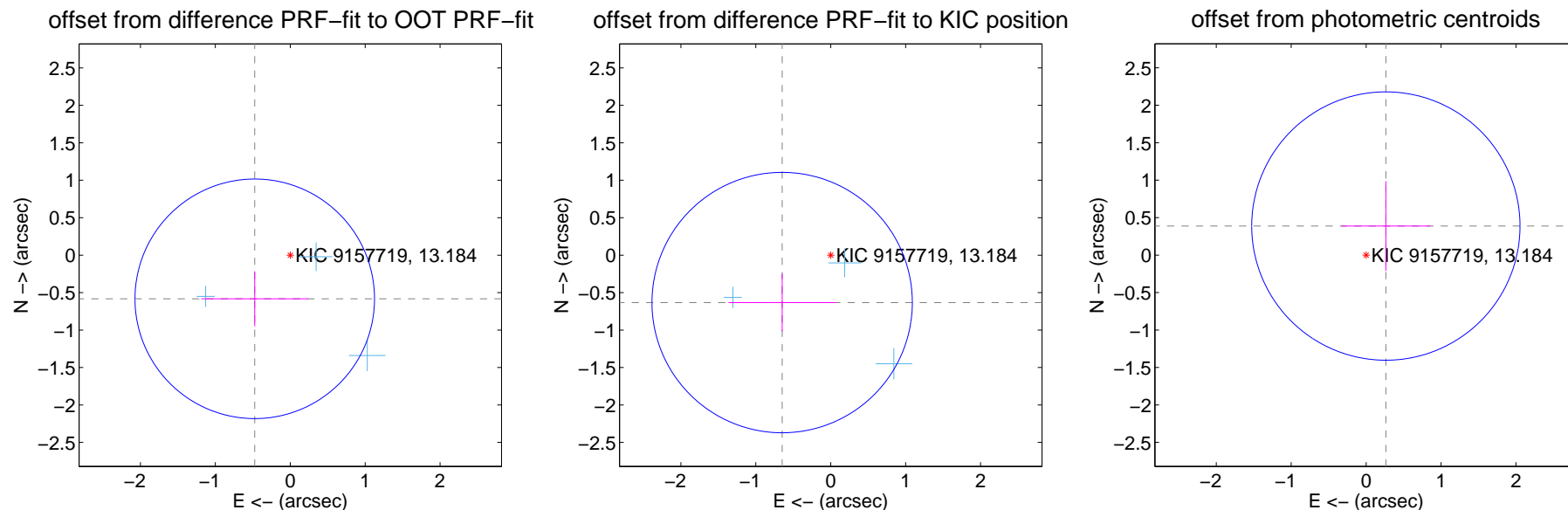
DV Centroid Data

Supplemental centroid analysis for 009157719-01. Kepler magnitude: 13.18. Transit SNR 6.38

There are 3 quarters with good PRF difference image offsets

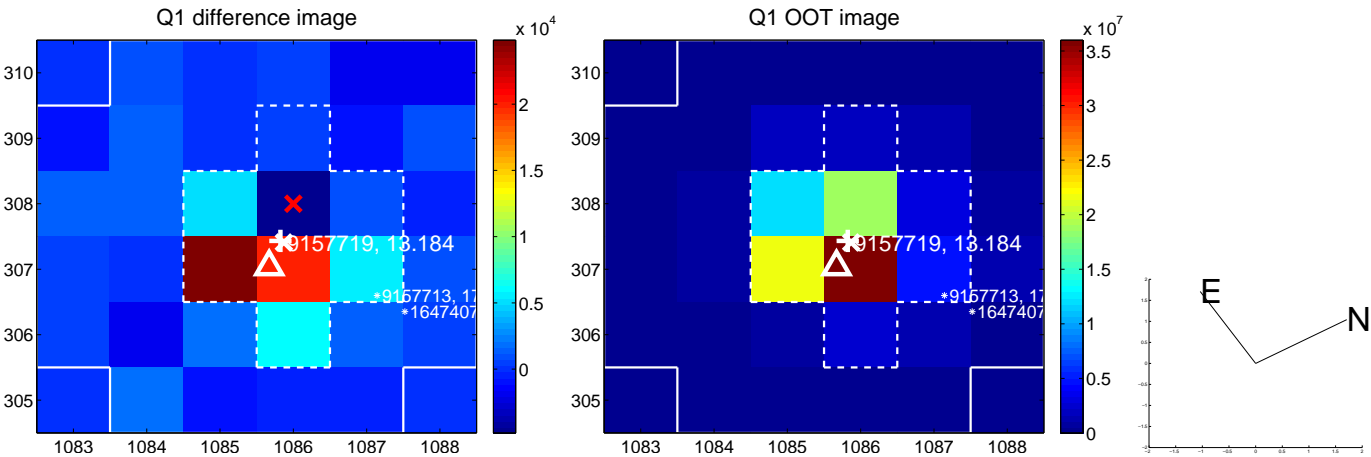
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.751 ± 0.533	1.41	0.474 ± 0.714	-0.583 ± 0.367
PRF-fit source offset from KIC position	0.906 ± 0.579	1.56	0.648 ± 0.718	-0.633 ± 0.384
photometric centroid source offset	0.47 ± 0.60	0.79	-0.26 ± 0.59	0.39 ± 0.60

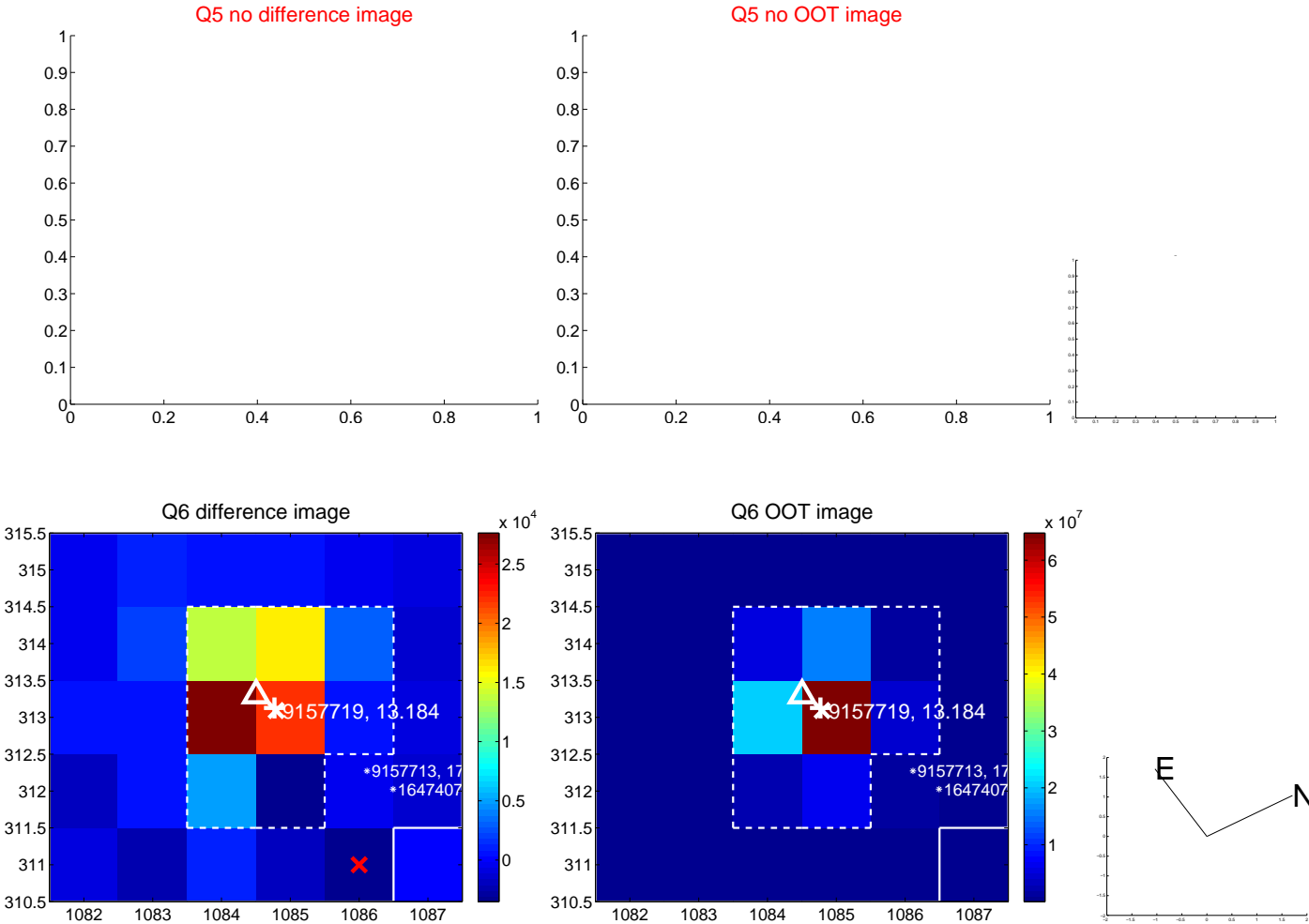


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



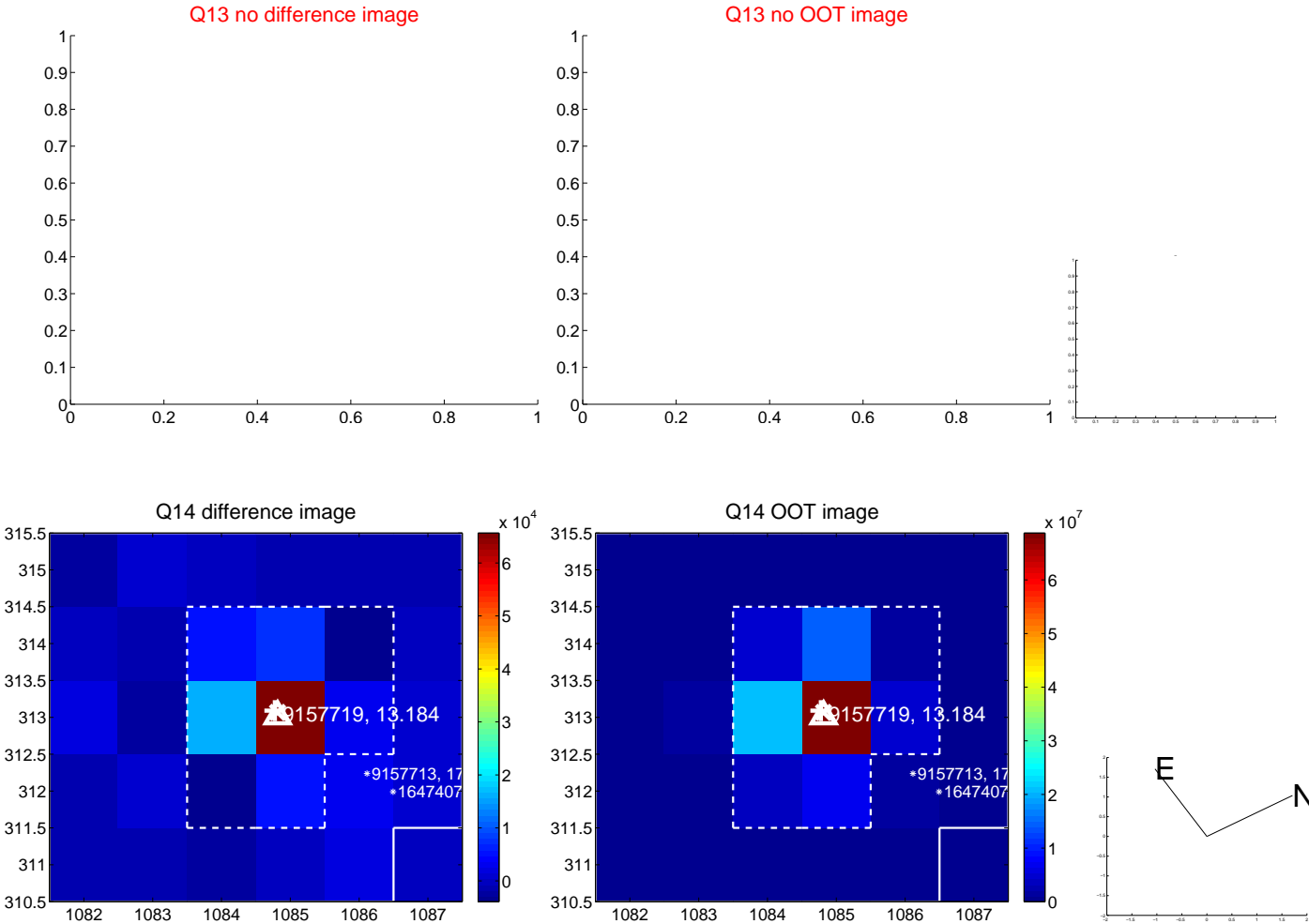
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



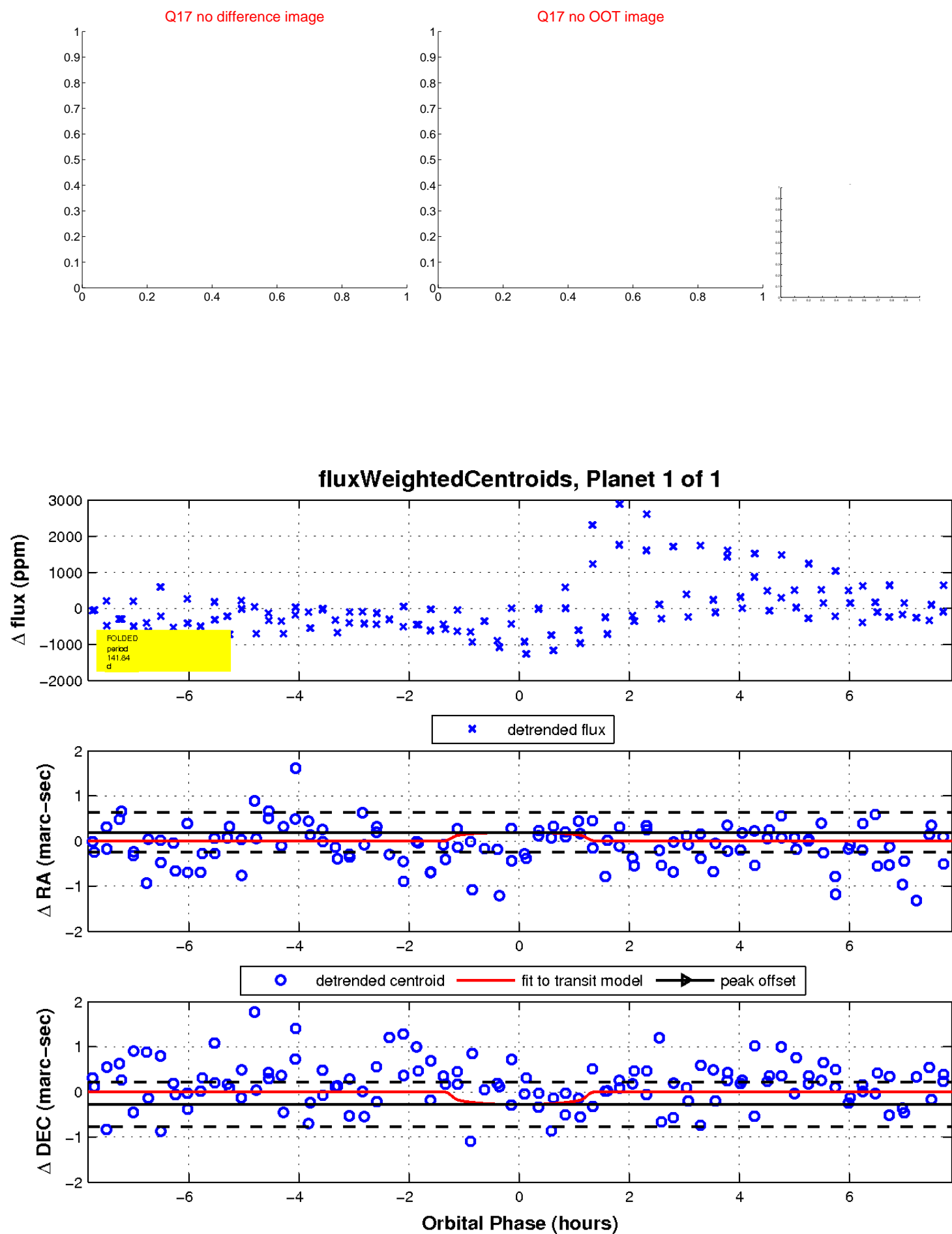
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

