

KIC 005956458

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})
005956458-01	OBS	No	368.268379	149.680110	1234.7	13.087	7.4	7.9	0.82	5595	3.49	0.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005956458-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

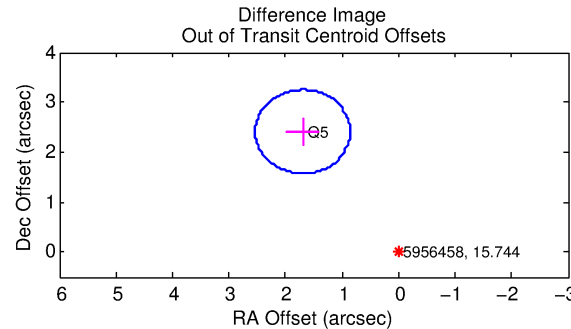
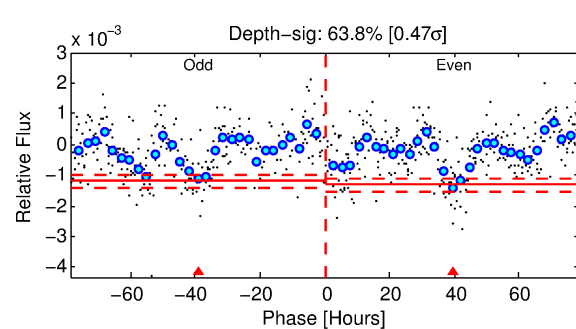
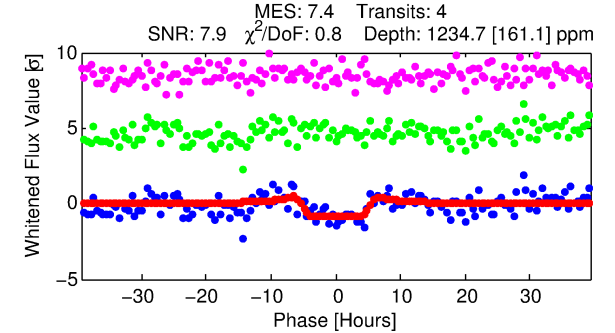
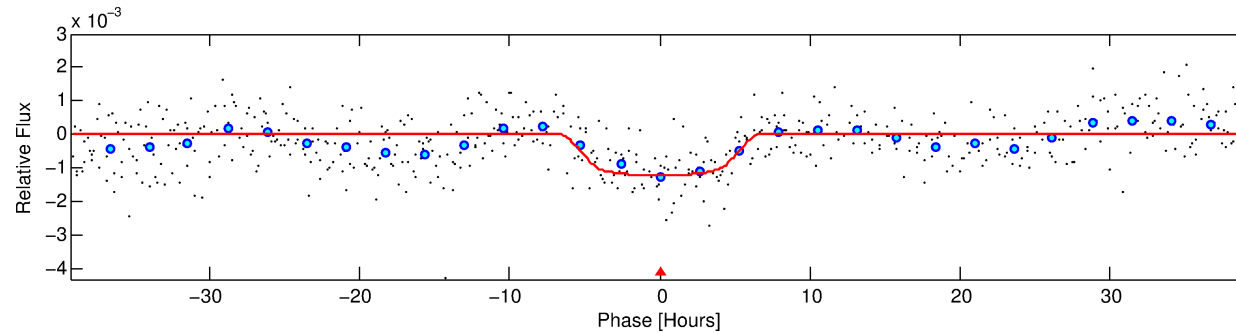
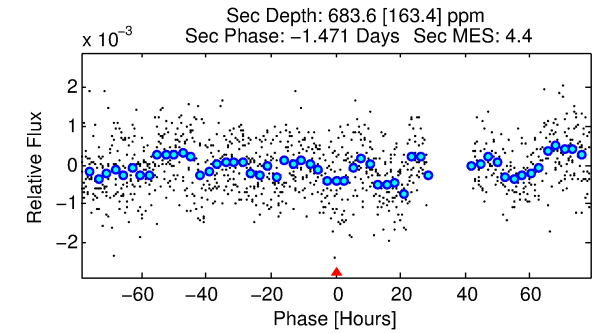
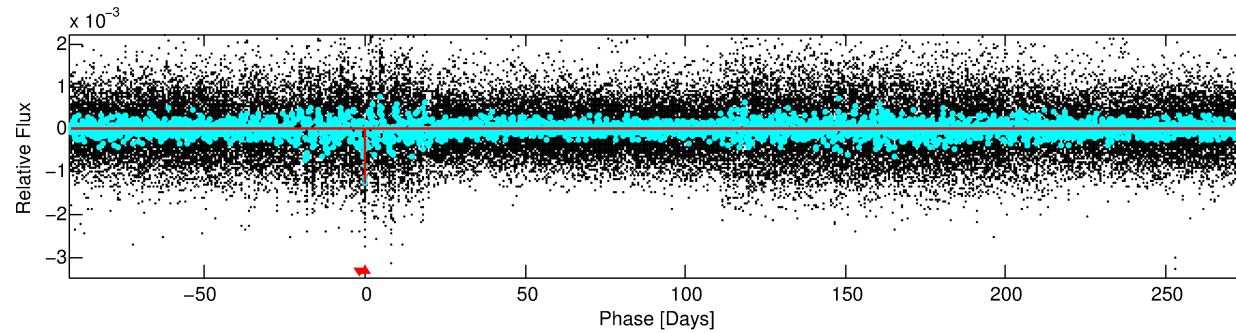
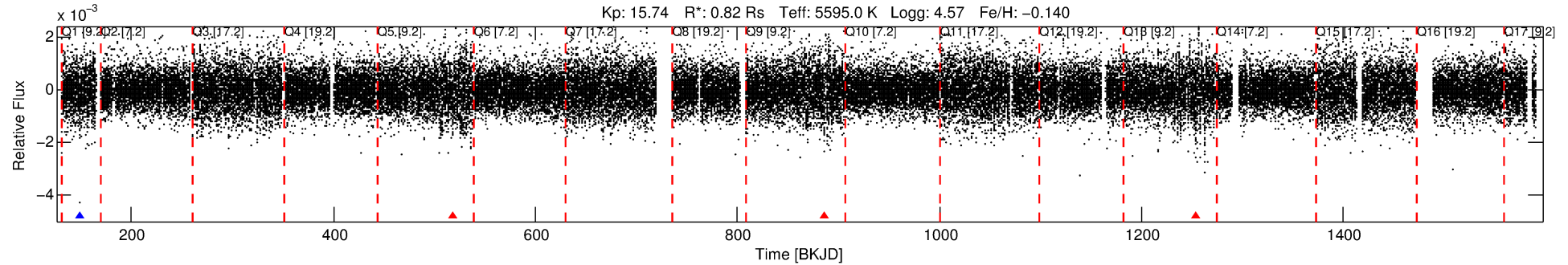
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005956458-01

No Significant Match Found

DV One-Page Summary

KIC: 5956458 Candidate: 1 of 1 Period: 368.268 d



DV Fit Results:

Period = 368.26838 [0.01015] d
Epoch = 149.6801 [0.0191] BKJD
Rp/R* = 0.0390 [0.0036]
a/R* = 106.49 [24.73]
b = 0.91 [0.04]
Seff = 0.62 [0.20]
Teq = 226 [18] K
Rp = 3.49 [0.89] Re
a = 0.9750 [0.1949] AU
Ag = 29333.96 [12294.09] [2.39σ]
Teff = 4580 [371] K [11.72σ]

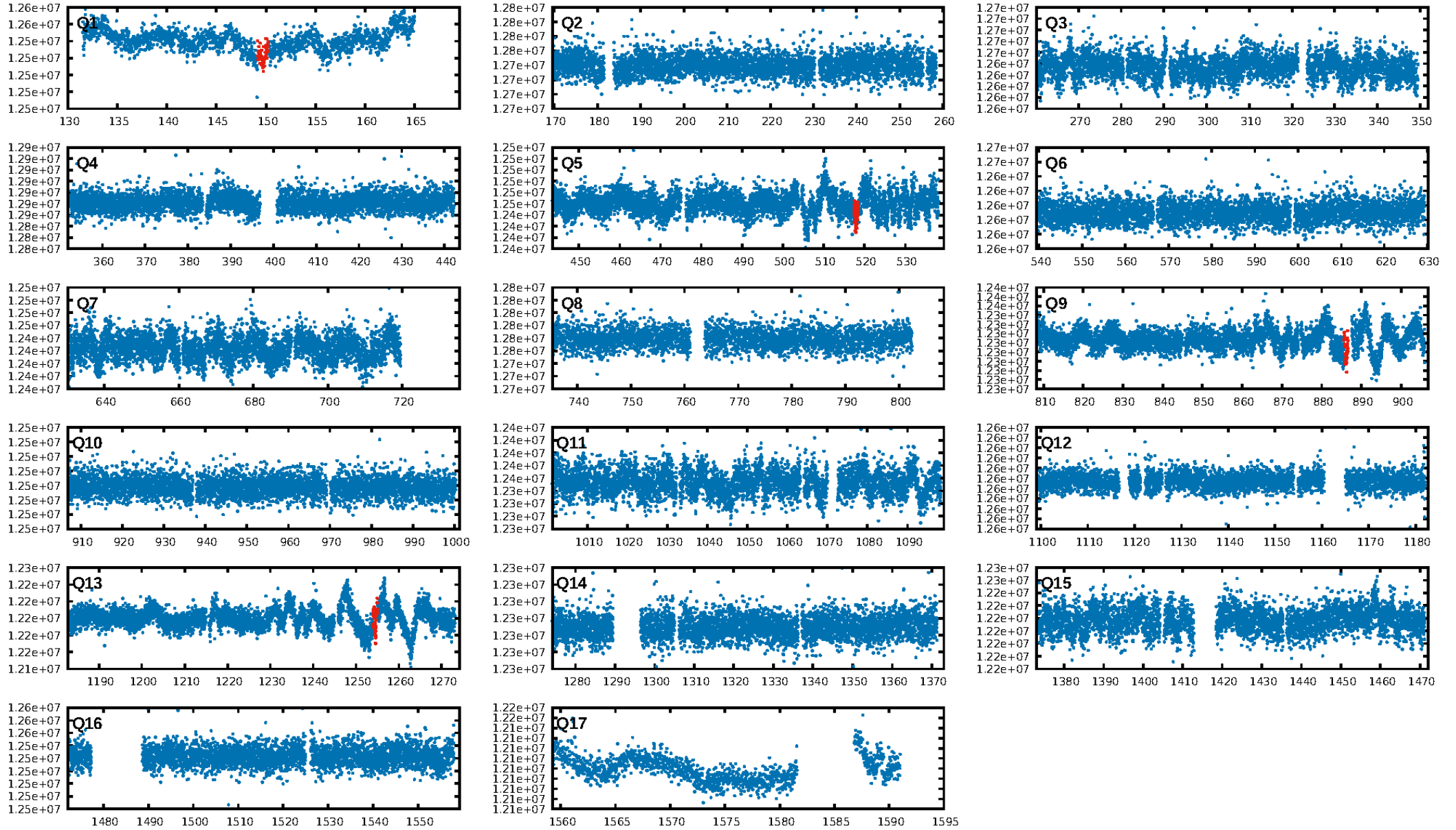
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 80.3%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 1.14e-09
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: 10.85
Centroid-sig: 31.7%
Centroid-so: 2.357 arcsec [0.97σ]
OotOffset-rm: 2.949 arcsec [10.54σ]
KicOffset-rm: 2.970 arcsec [10.63σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

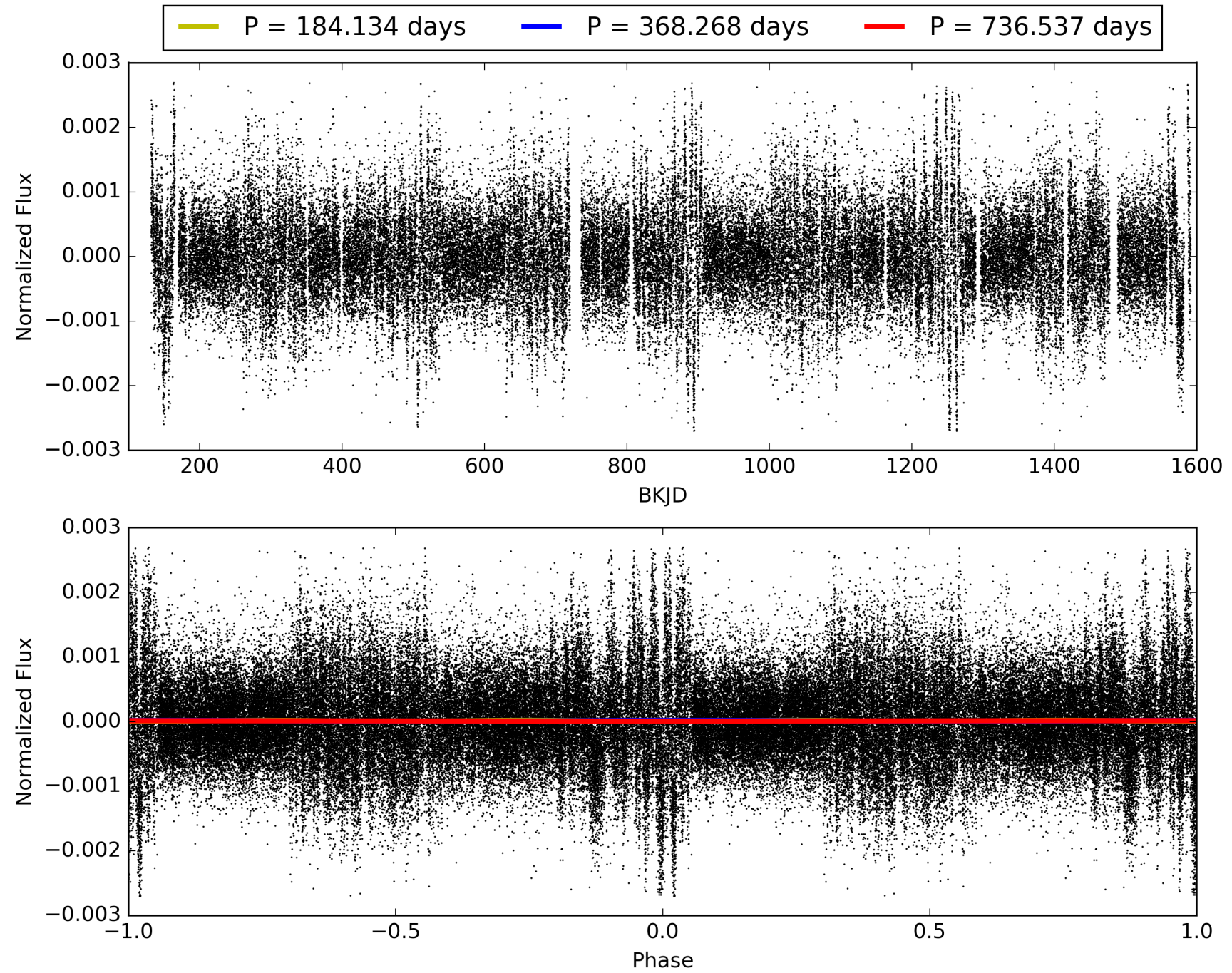
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:38:32 Z

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

TCE 005956458-01, PDC Light Curves

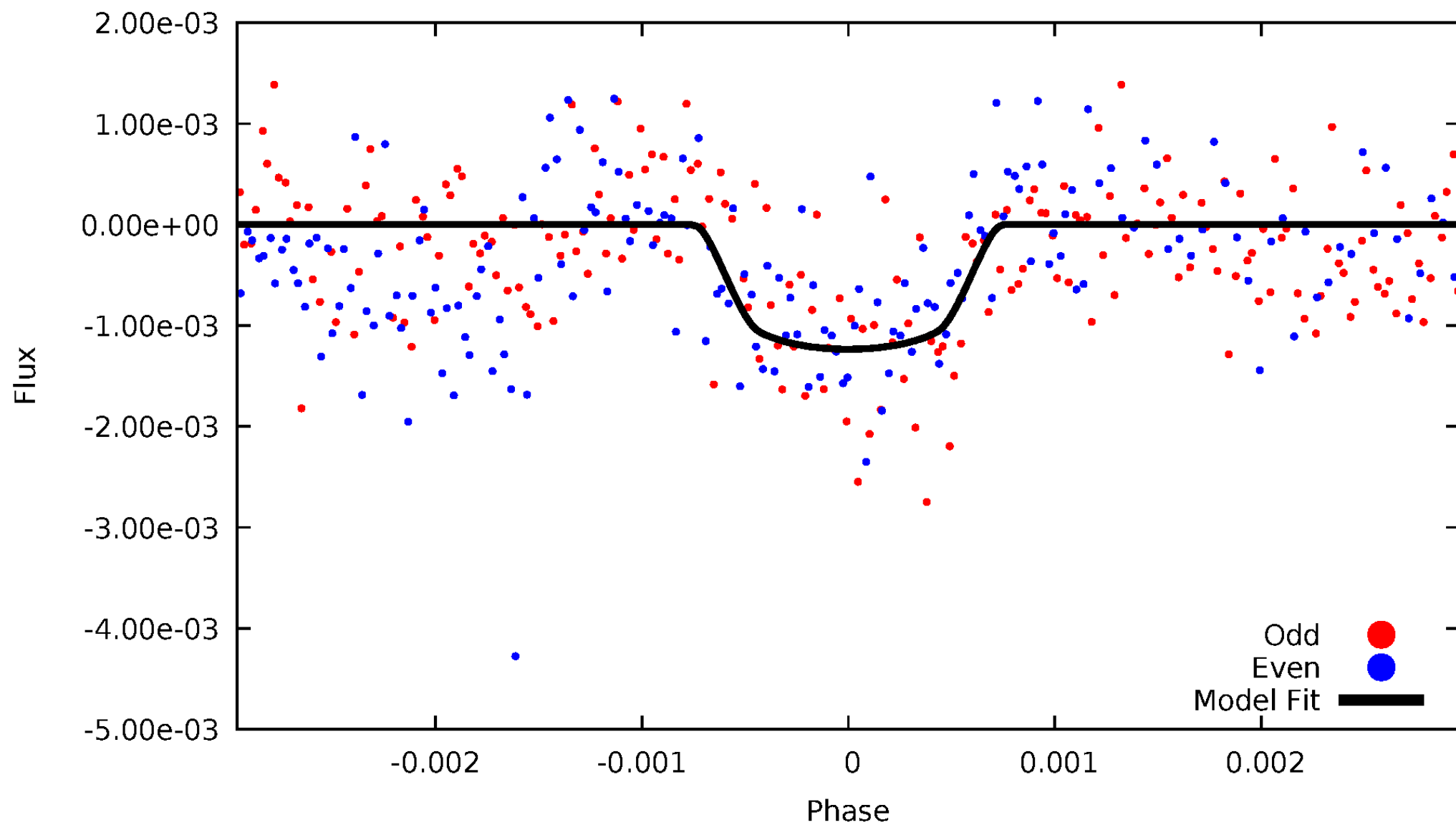


TCE 005956458-01



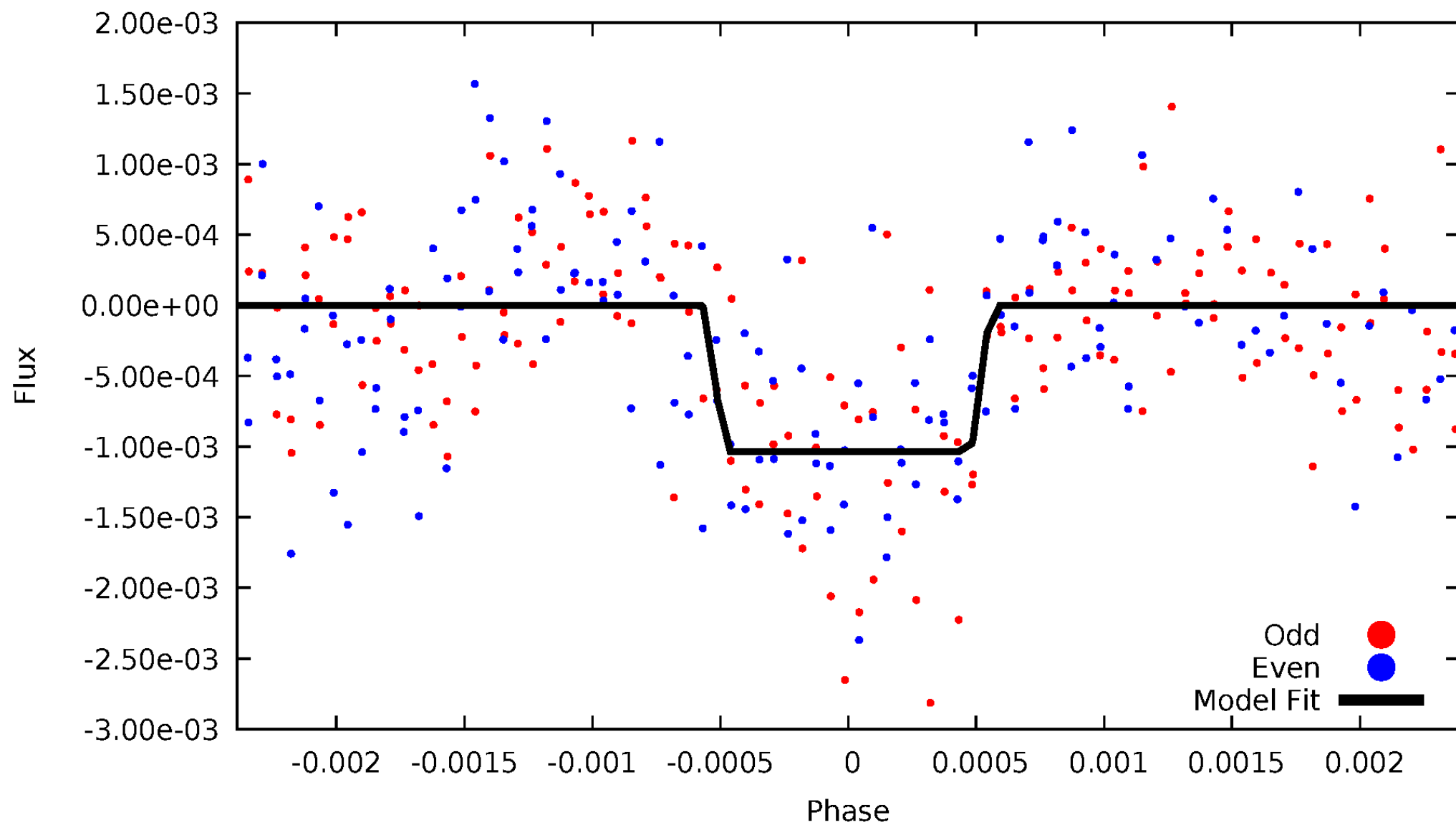
DV Odd/Even

TCE 005956458-01



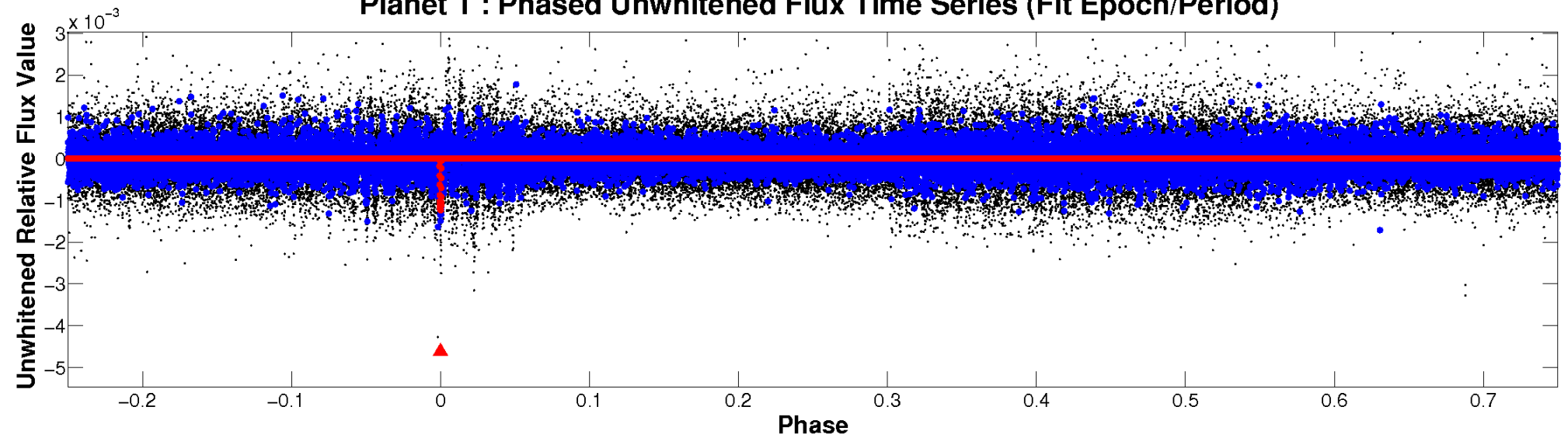
ALT Odd/Even

TCE 005956458-01

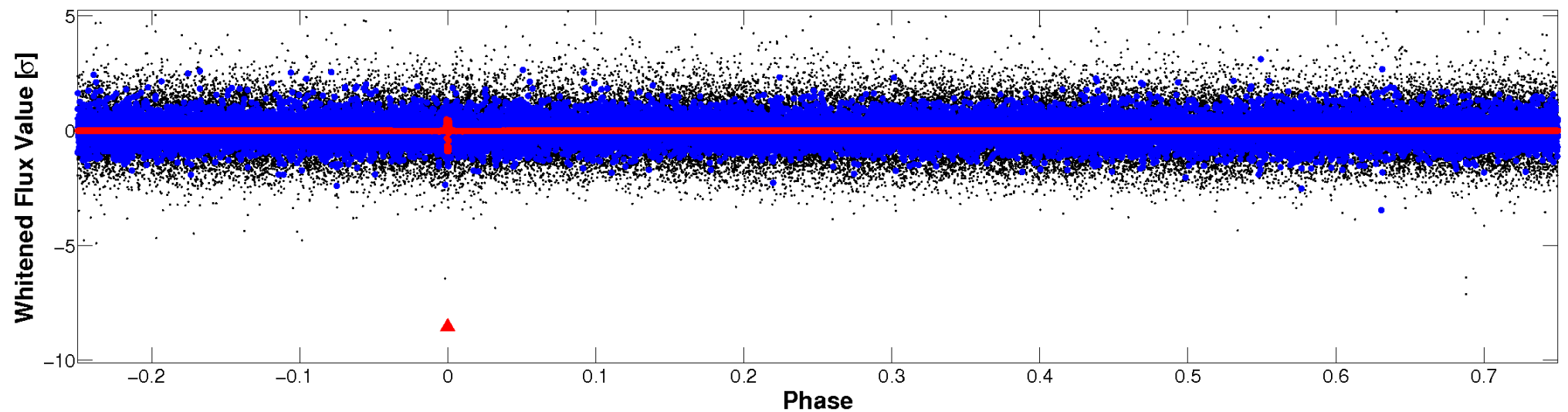


Non-Whitened Vs. Whitened Light Curve

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

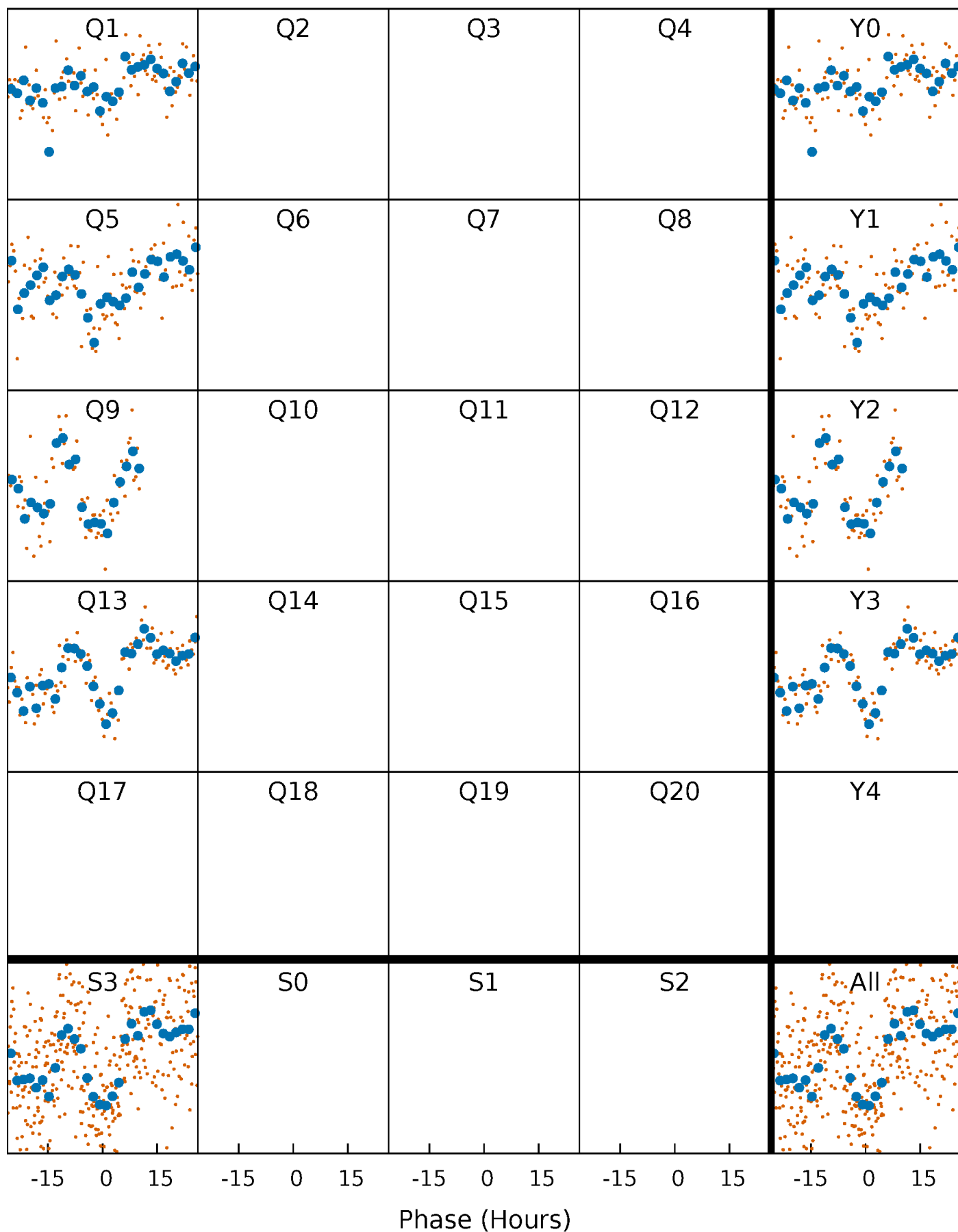


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



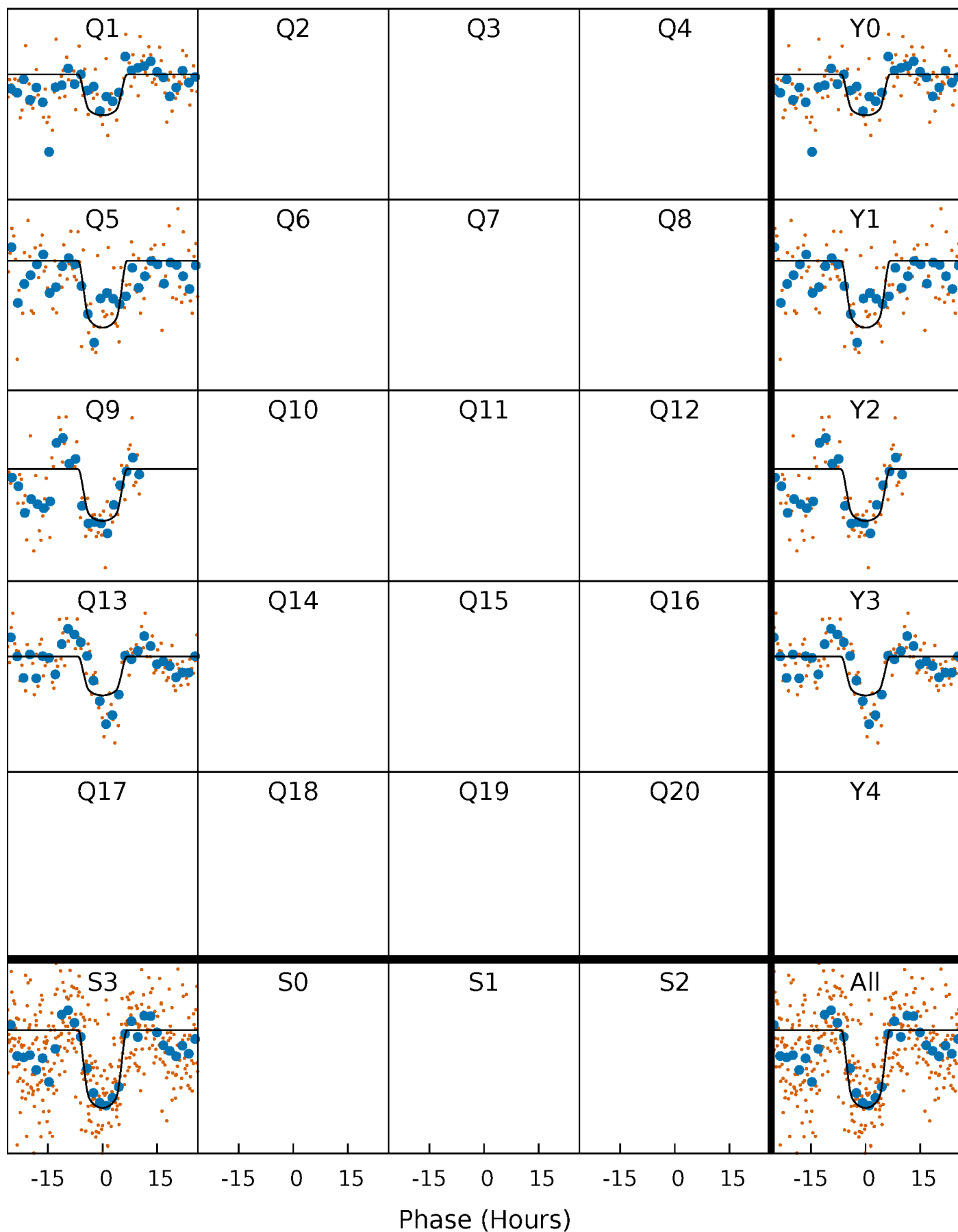
PDC Quarter-Phased Transit Curves

TCE 005956458-01 P=368.268378 Days $T_0=149.680110$ (BKJD)



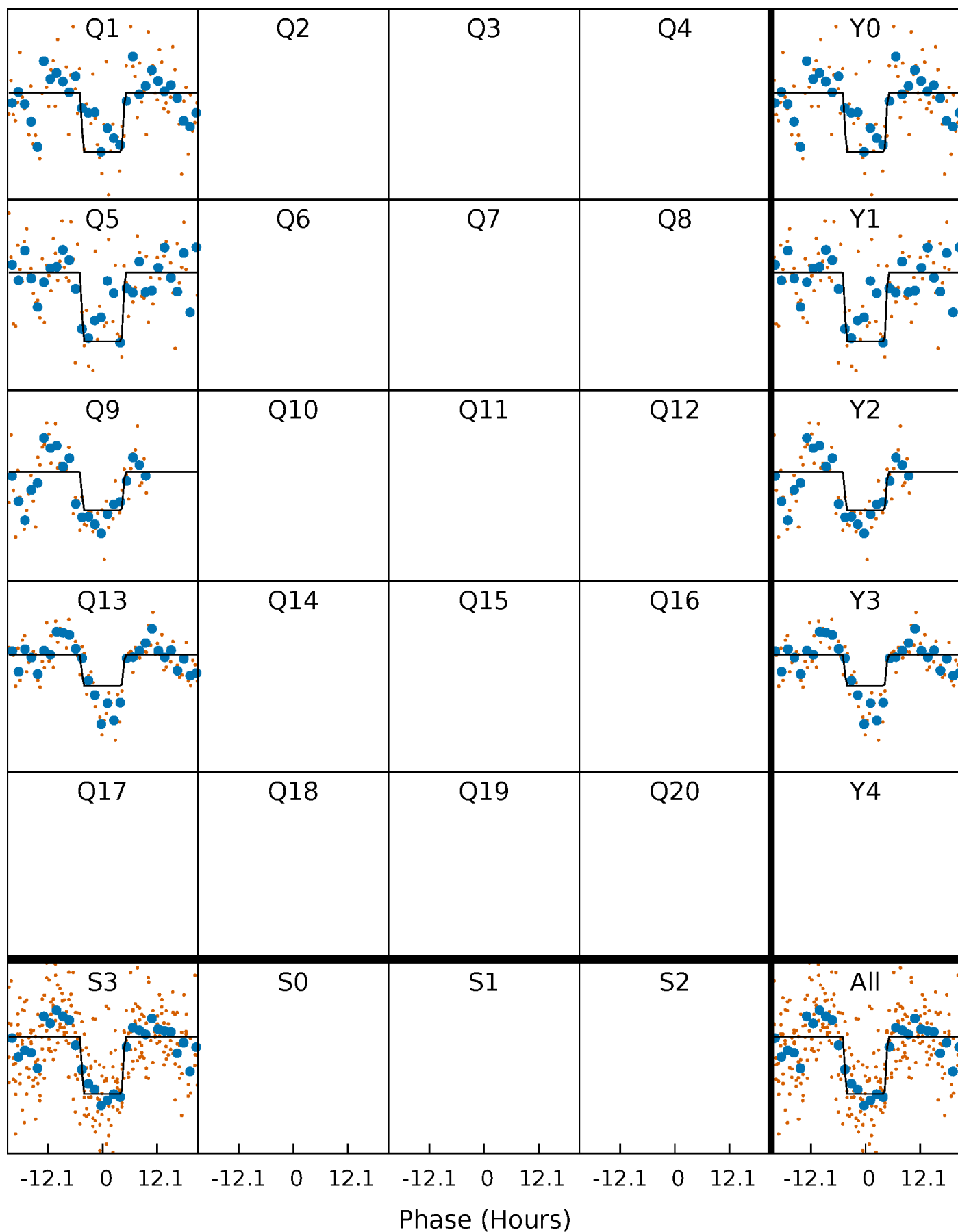
DV Quarter-Phased Transit Curves

TCE 005956458-01 $P=368.268378$ Days $T_0=149.680110$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

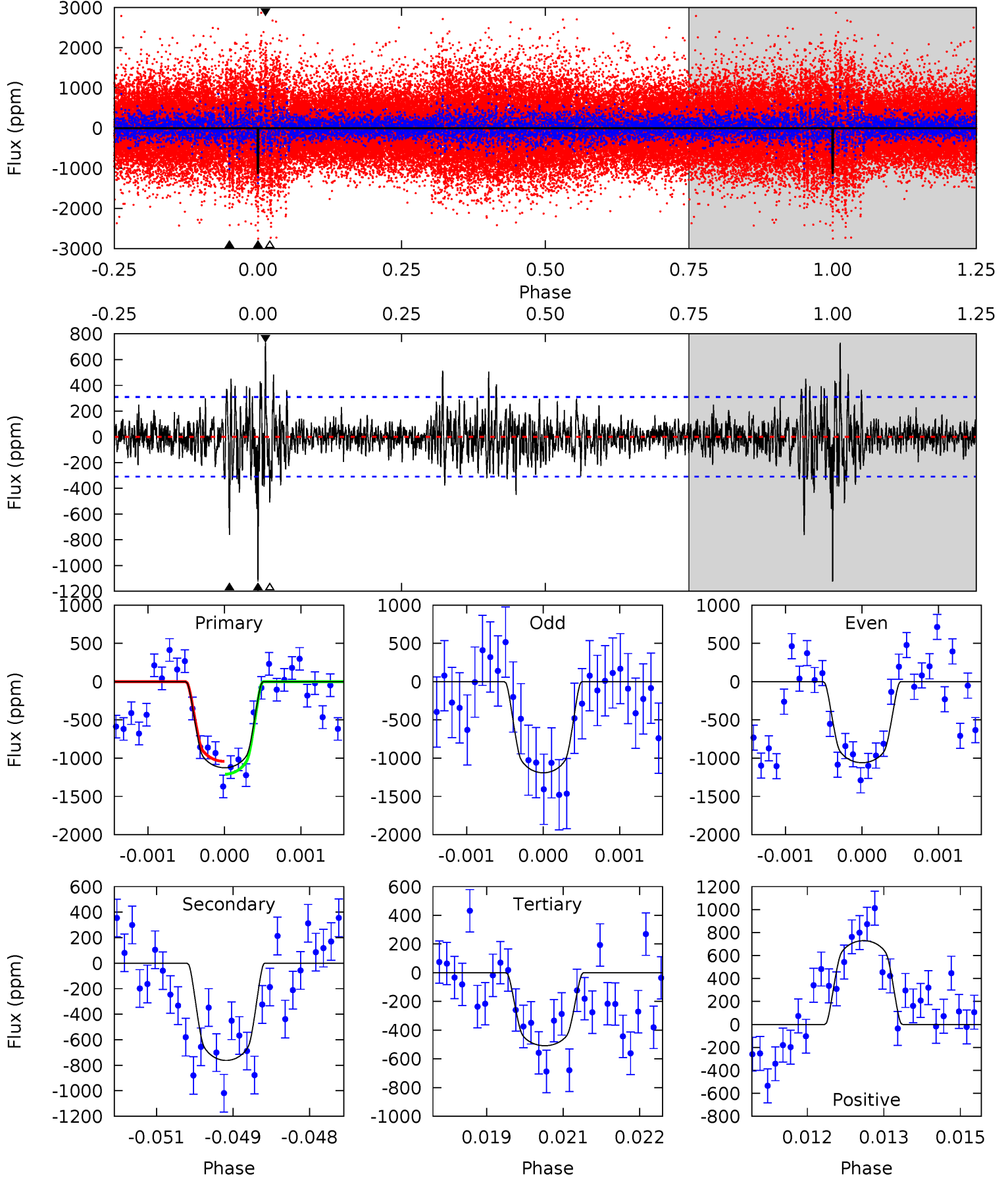
TCE 005956458-01 P=368.274052 Days $T_0=149.685008$ (BKJD)



DV Model-Shift Uniqueness Test

005956458-01, P = 368.268378 Days, E = 149.680110 Days

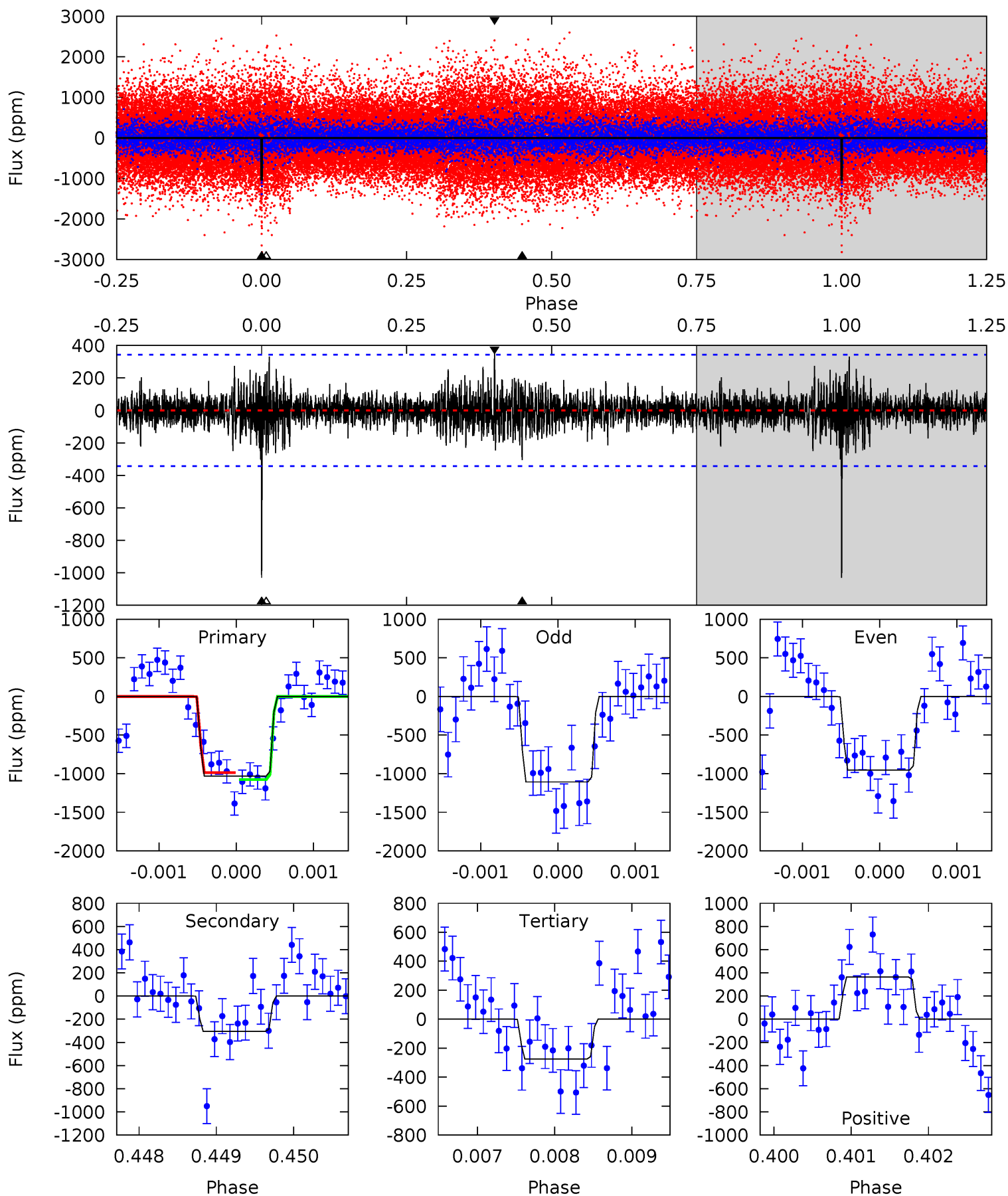
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	13.3	8.84	12.7	5.38	3.18	2.05	10.7	6.88	4.41	0.57	1.15	0.99	0.39	1.46



Alt Model-Shift Uniqueness Test

005956458-01, P = 368.274052 Days, E = 149.685008 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	4.83	4.36	5.76	5.43	3.26	1.11	12.0	10.5	0.47	-0.93	1.22	1.08	0.26	0.70



Stellar Parameters For KIC 005956458

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5595^{+169}_{-169}	$4.570^{+0.040}_{-0.160}$	$-0.140^{+0.300}_{-0.300}$	$0.820^{+0.194}_{-0.065}$	$0.917^{+0.083}_{-0.104}$	$2.341^{+0.384}_{-1.016}$
	+3%/-3%	+1%/-4%	+214%/-214%	+24%/-8%	+9%/-11%	+16%/-43%
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 005956458-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-762 ± 58	$3.62^{+0.53}_{-0.44}$	322^{+19}_{-14}	4810^{+251}_{-231}	29976^{+8829}_{-7005}
Alt.	-305 ± 63	$2.96^{+0.44}_{-0.37}$	322^{+18}_{-14}	4327^{+292}_{-269}	17163^{+7597}_{-4887}

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 $A_{\text{obs}} \gg 1.0$

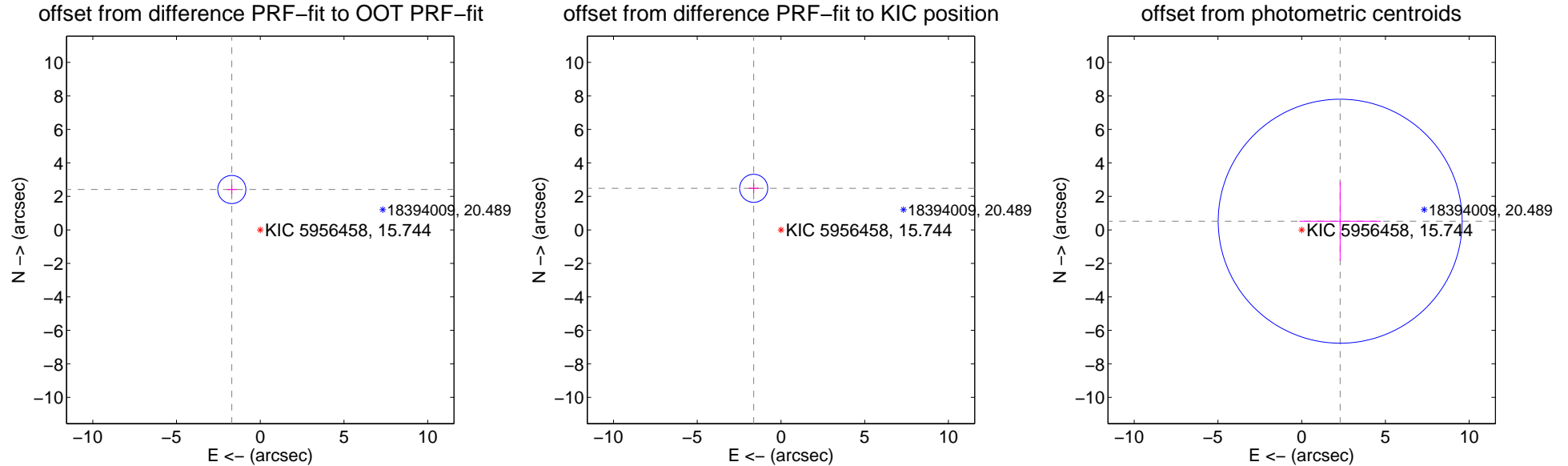
DV Centroid Data

Supplemental centroid analysis for 005956458-01. Kepler magnitude: 15.74. Transit SNR 7.86

There are 0 quarters with good PRF difference image offsets

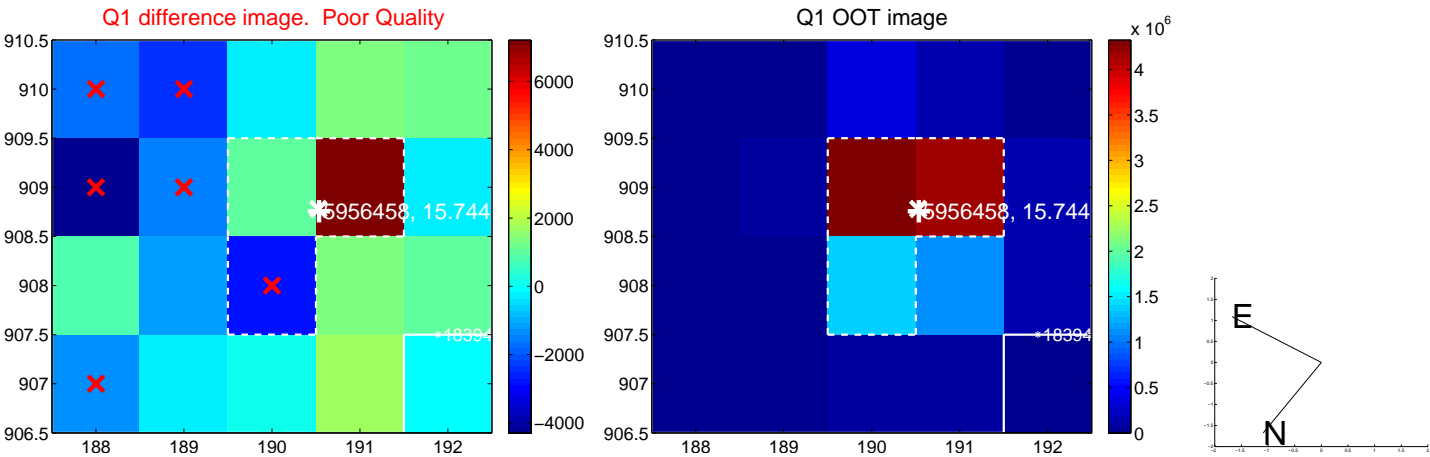
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.949 ± 0.280	10.54	1.698 ± 0.290	2.411 ± 0.275
PRF-fit source offset from KIC position	2.970 ± 0.279	10.63	1.630 ± 0.290	2.483 ± 0.275
photometric centroid source offset	2.36 ± 2.43	0.97	-2.30 ± 2.43	0.52 ± 2.35

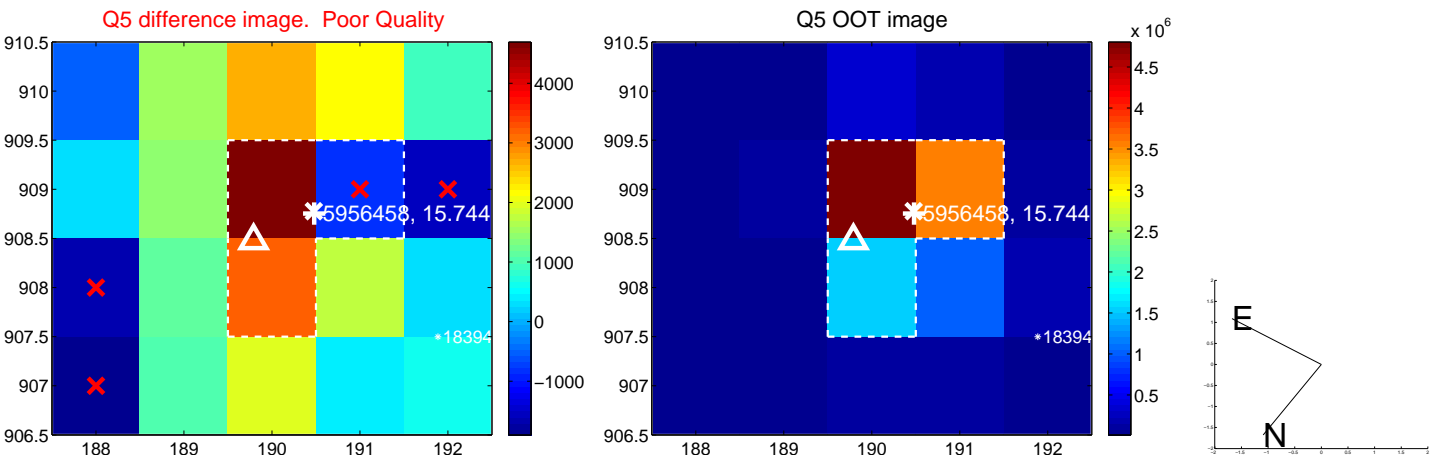


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



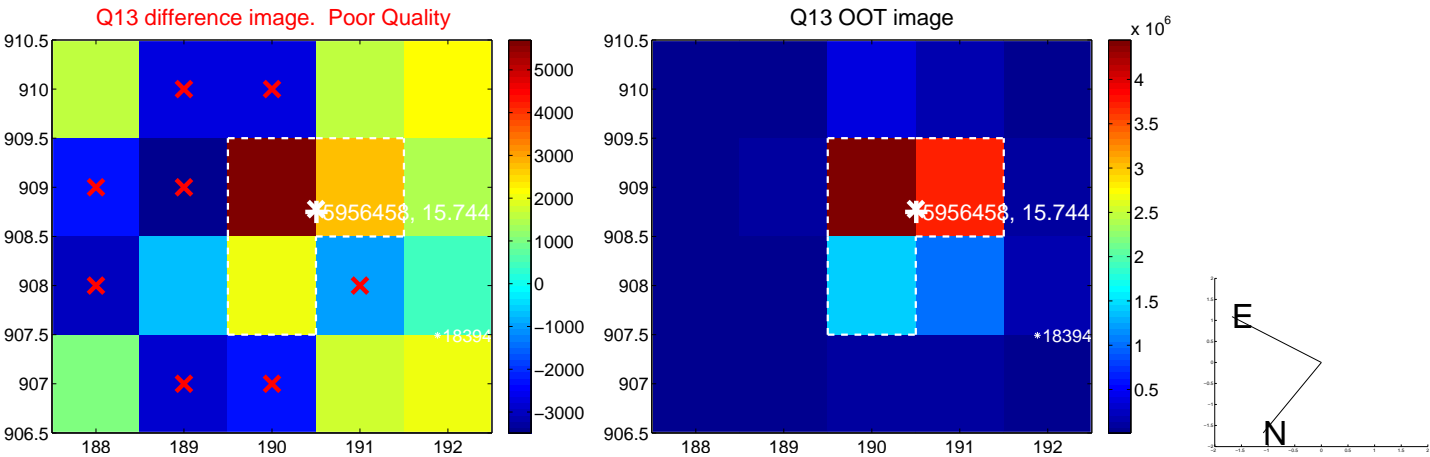
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



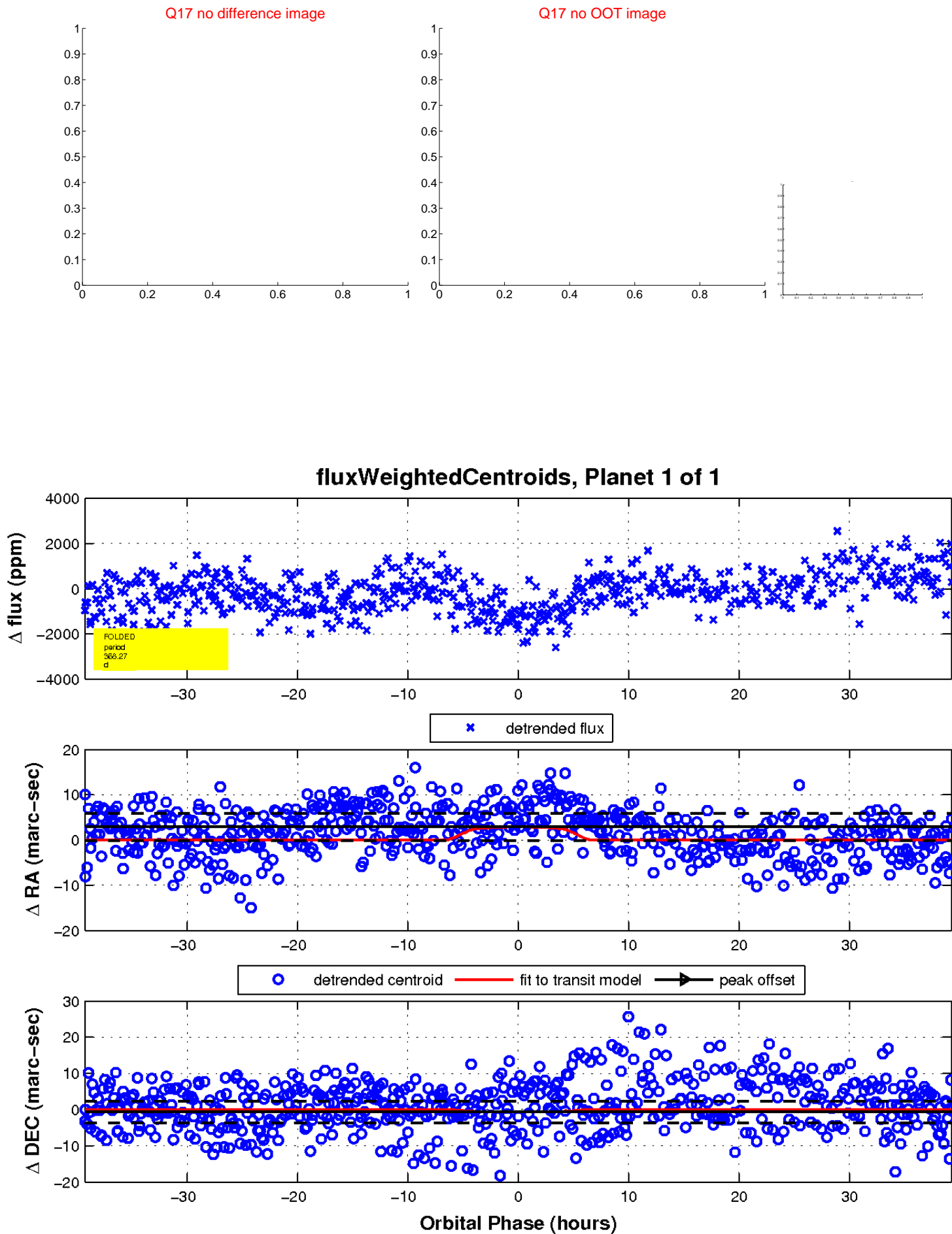
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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

