

KIC 005171598

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})
005171598-01	OBS	No	359.884187	374.073704	425.4	27.858	9.4	10.7	0.75	5437	1.74	0.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005171598-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

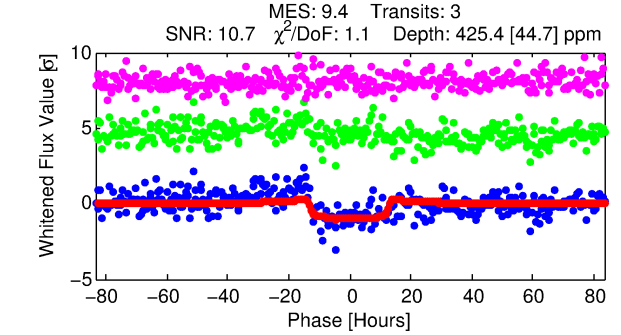
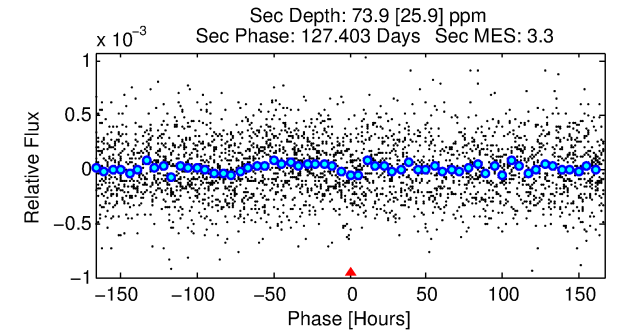
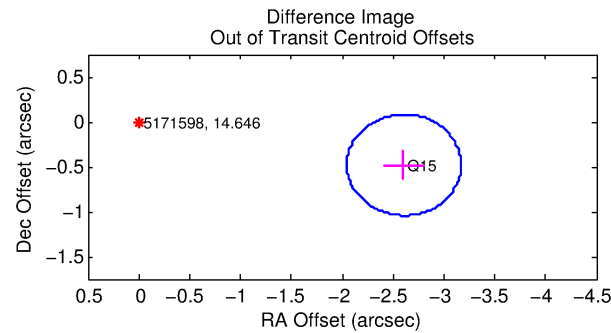
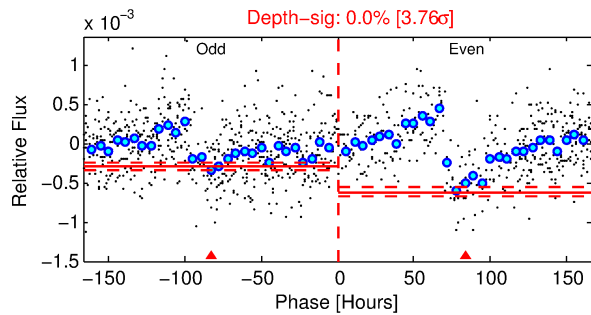
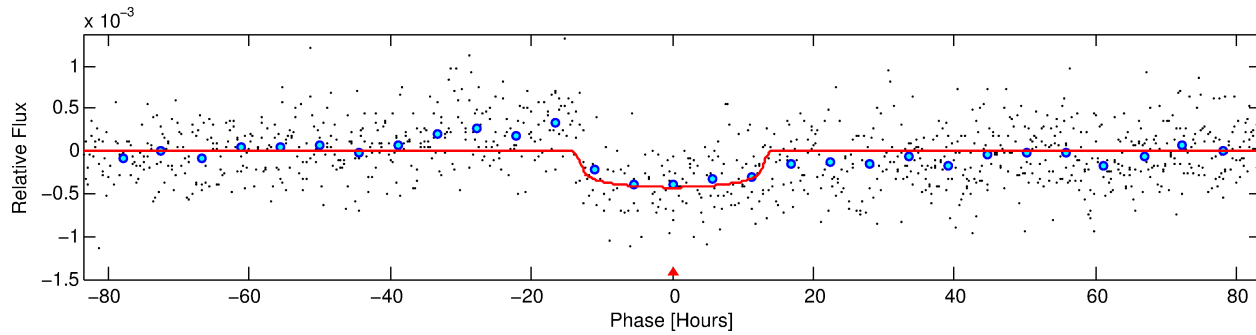
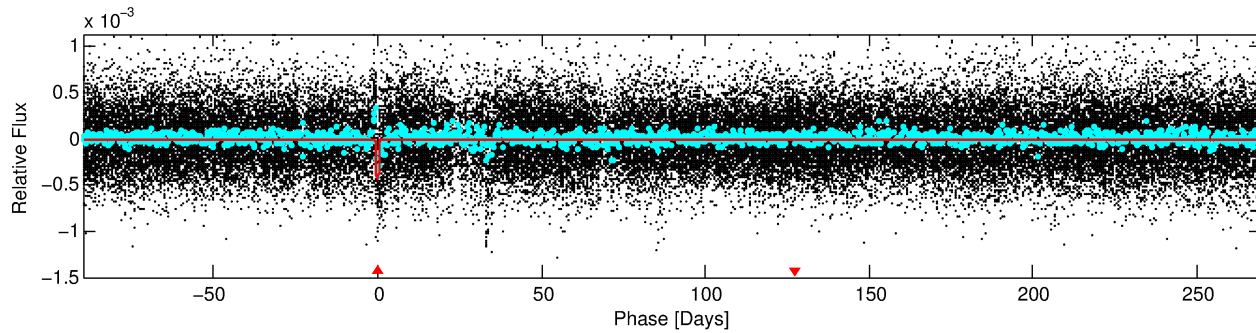
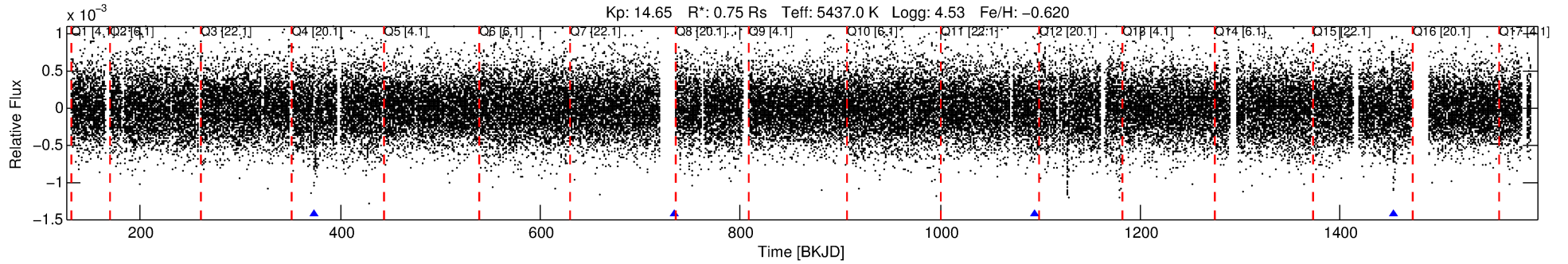
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005171598-01

No Significant Match Found

DV One-Page Summary

KIC: 5171598 Candidate: 1 of 1 Period: 359.884 d



DV Fit Results:

Period = 359.88419 [0.01511] d
Epoch = 374.0737 [0.0322] BKJD
Rp/R* = 0.0211 [0.0032]
a/R* = 60.61 [37.62]
b = 0.82 [0.26]
Seff = 0.58 [0.13]
Teq = 222 [12] K
Rp = 1.74 [0.36] Re
a = 0.8791 [0.1077] AU
Ag = 10389.89 [5151.04] [2.02σ]
Teffp = 3467 [416] K [7.79σ]

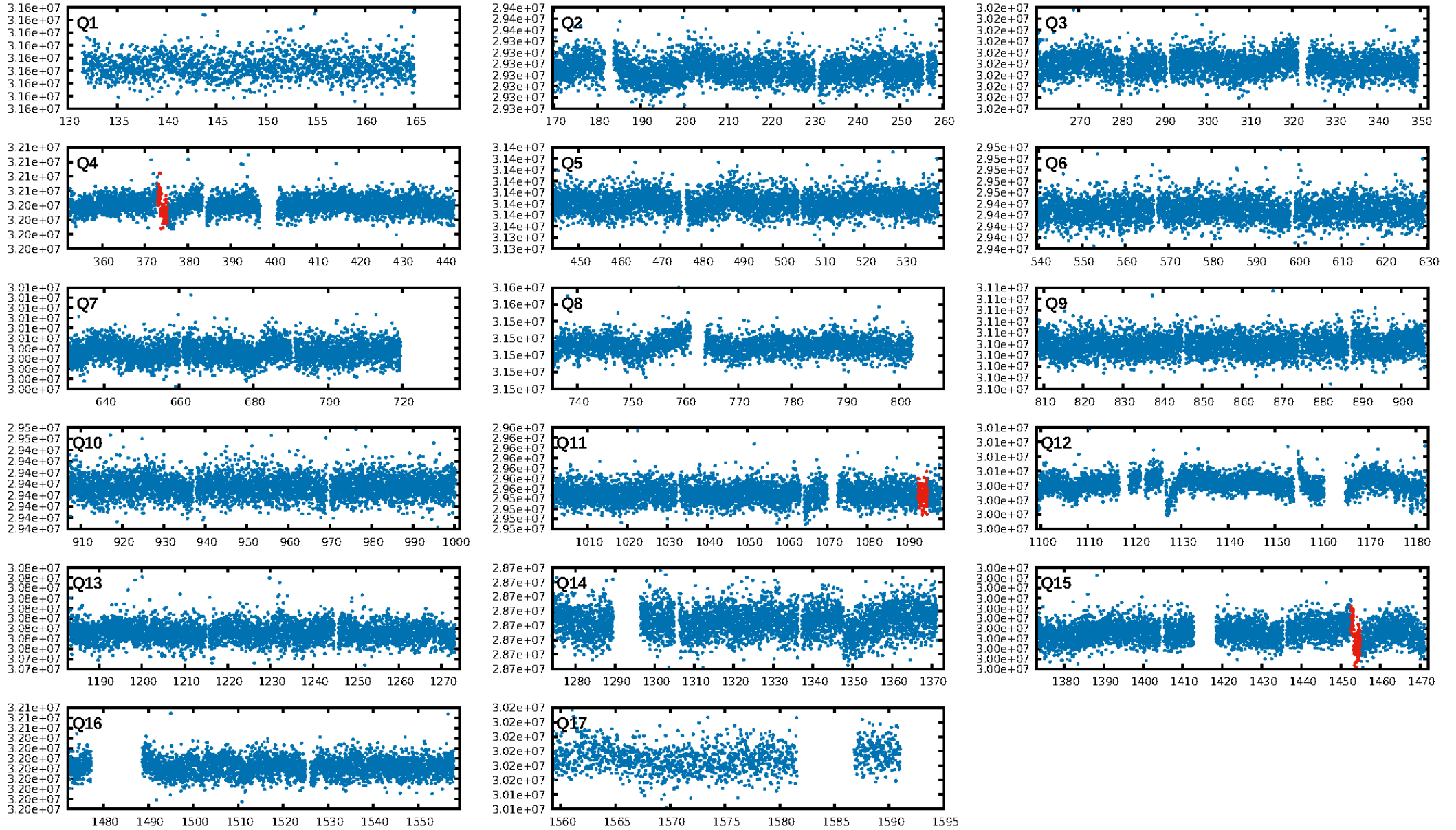
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.18e-20
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 4.373
Centroid-sig: 67.4%
Centroid-so: 0.559 arcsec [0.56σ]
OotOffset-rm: 2.650 arcsec [14.15σ]
KicOffset-rm: 3.188 arcsec [17.18σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

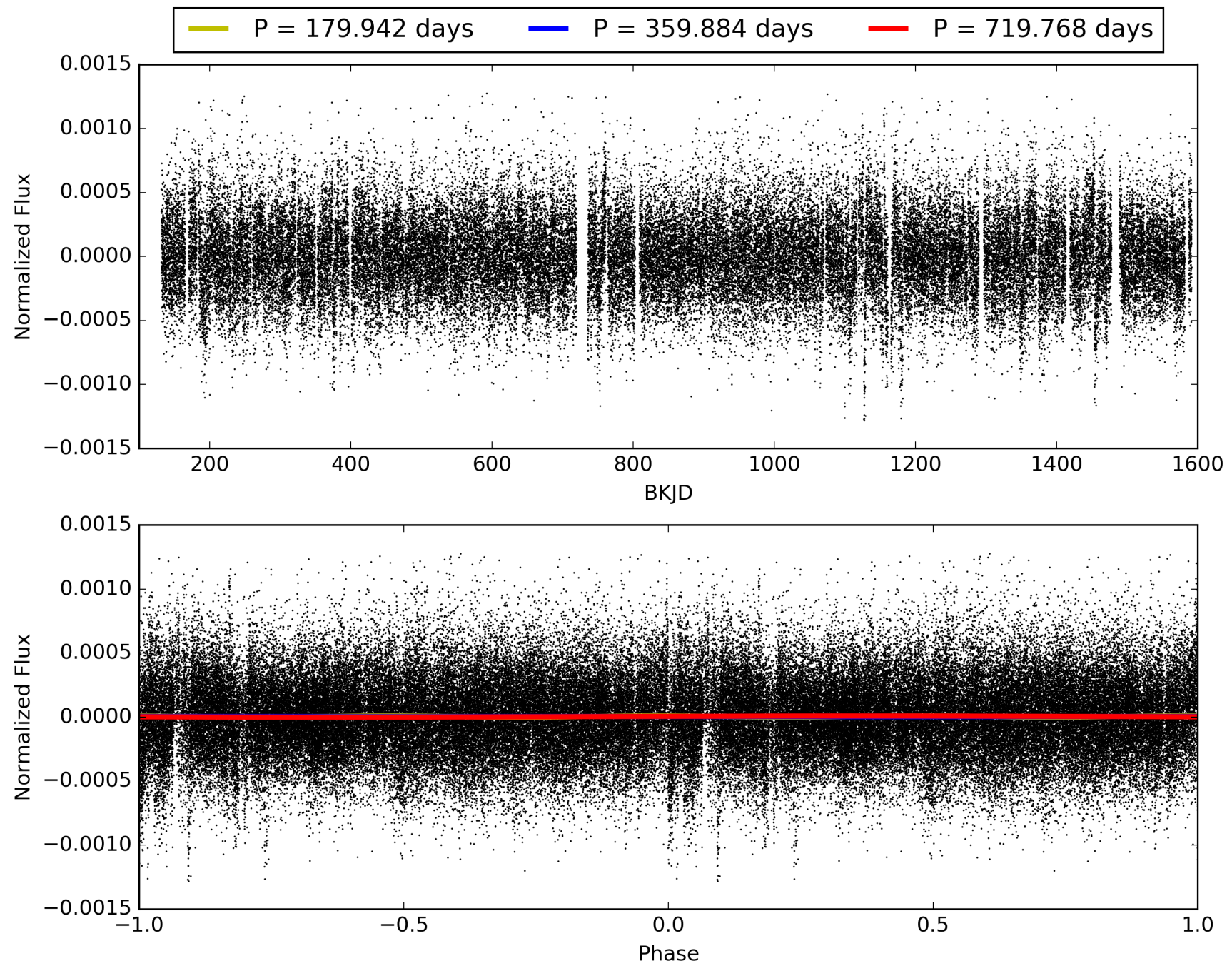
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:54:34 Z

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

TCE 005171598-01, PDC Light Curves

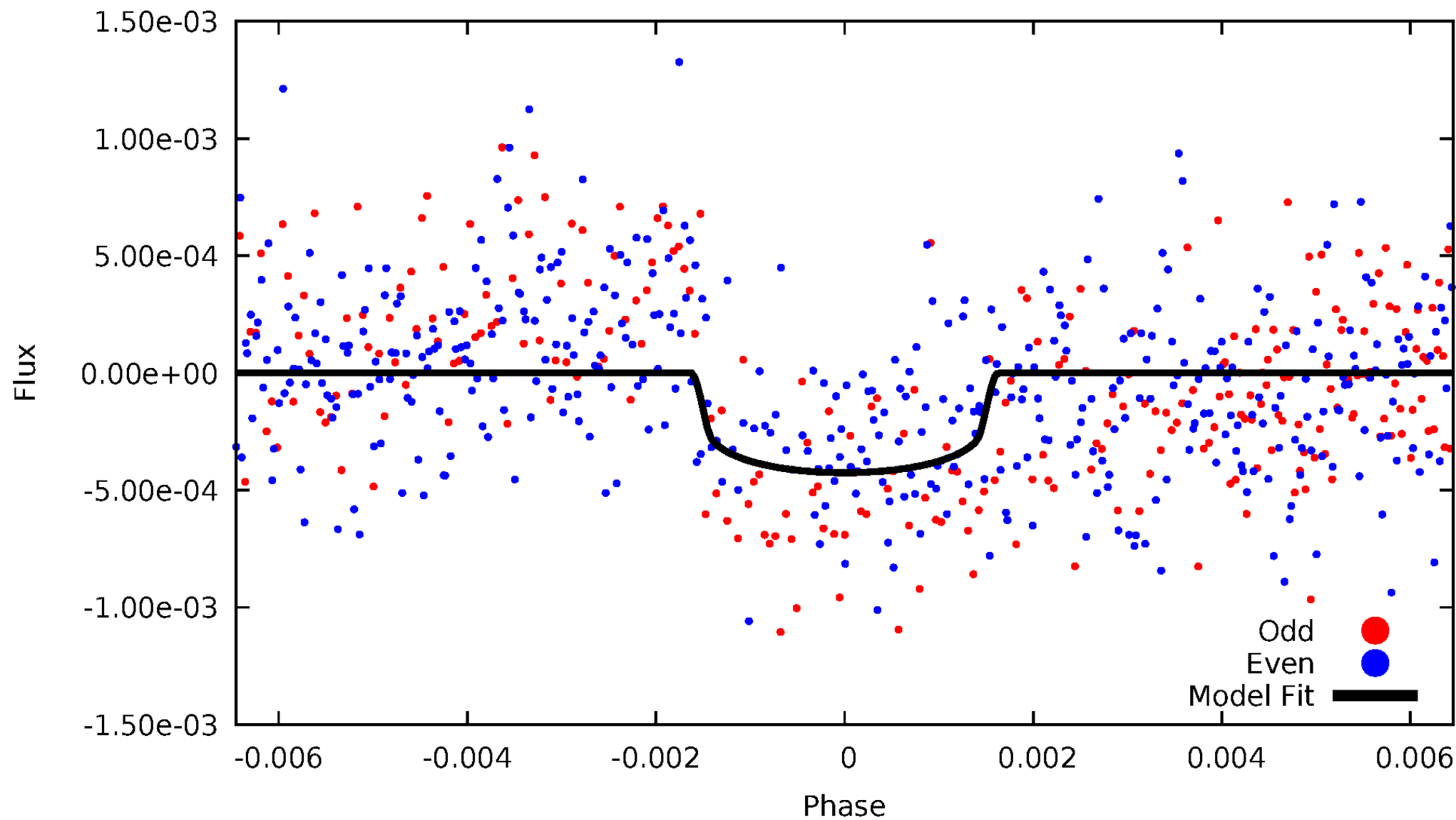


TCE 005171598-01



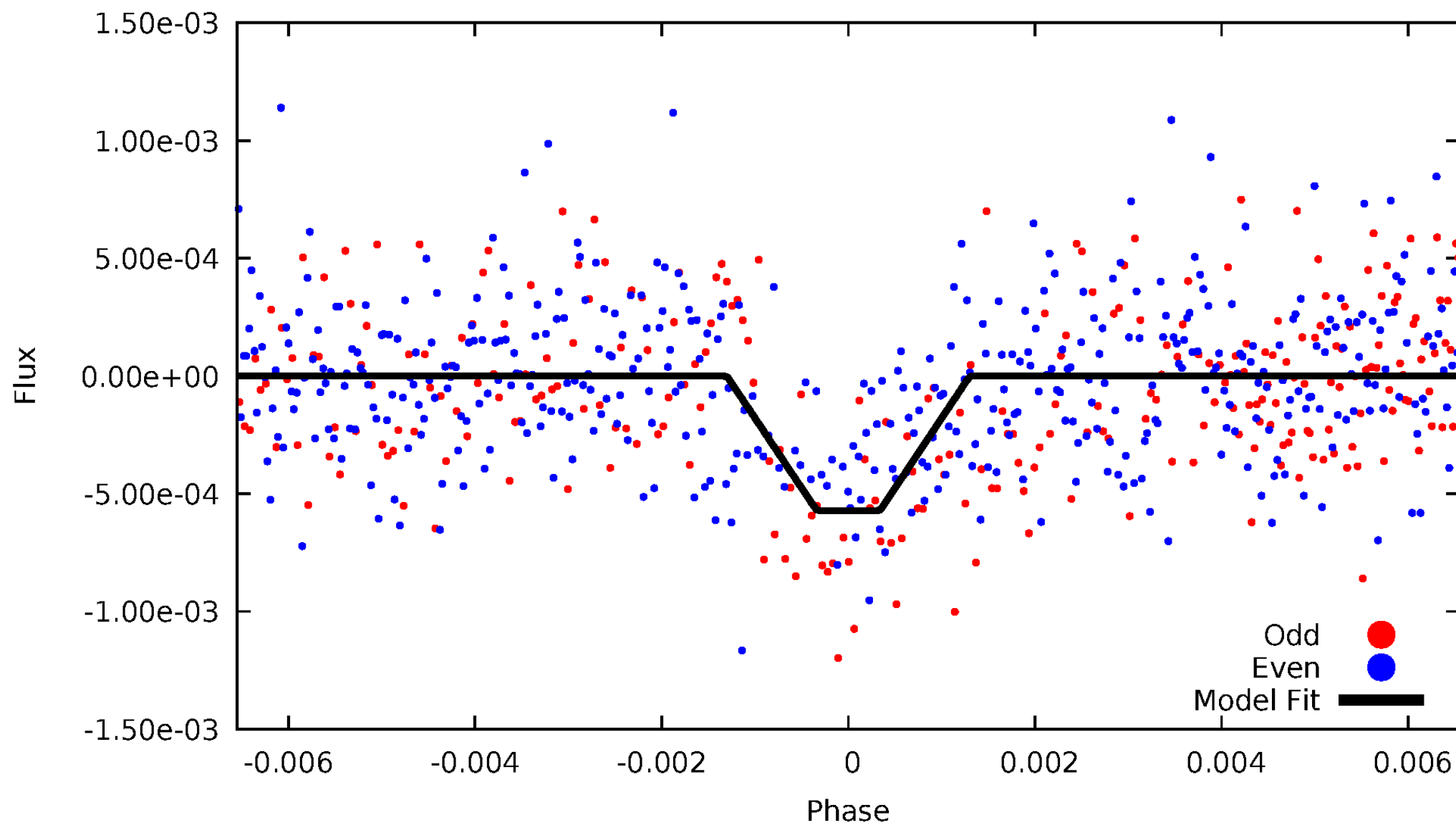
DV Odd/Even

TCE 005171598-01



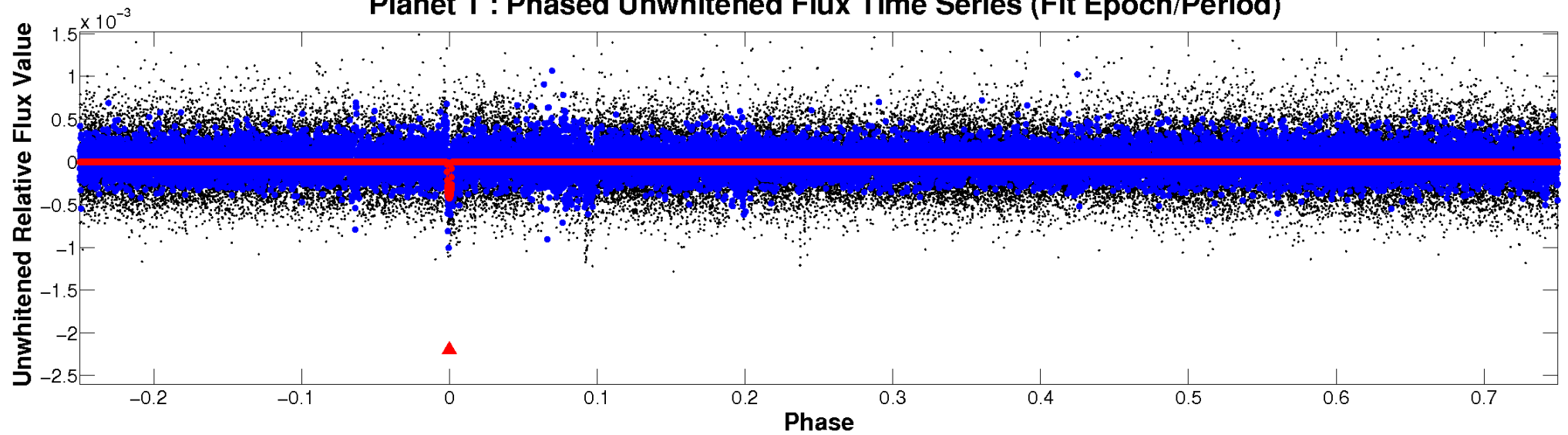
ALT Odd/Even

TCE 005171598-01

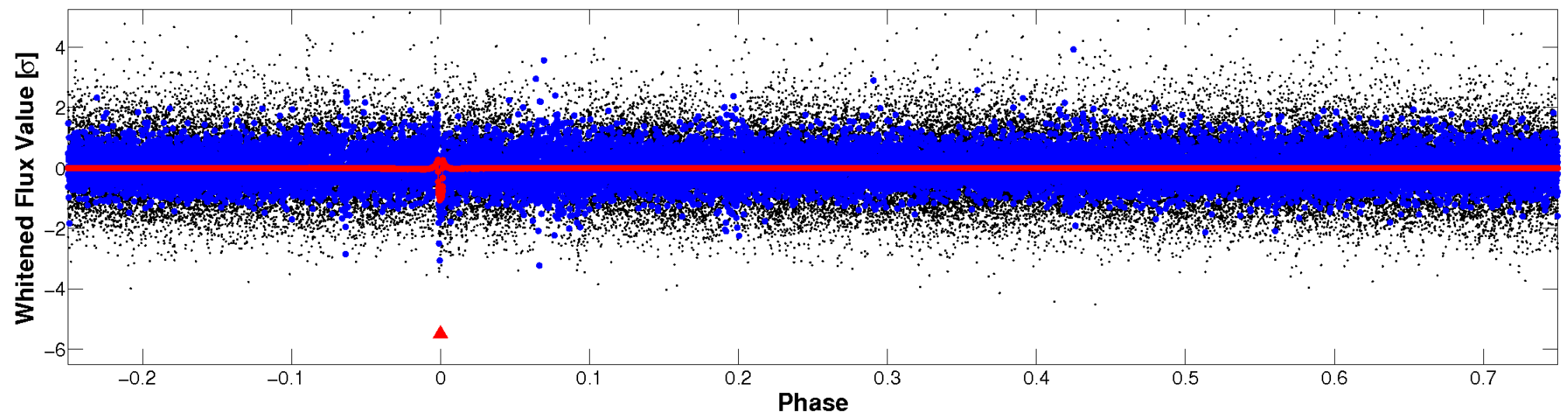


Non-Whitened Vs. Whitened Light Curve

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 005171598-01 P=359.884187 Days $T_0=374.073704$ (BKJD)



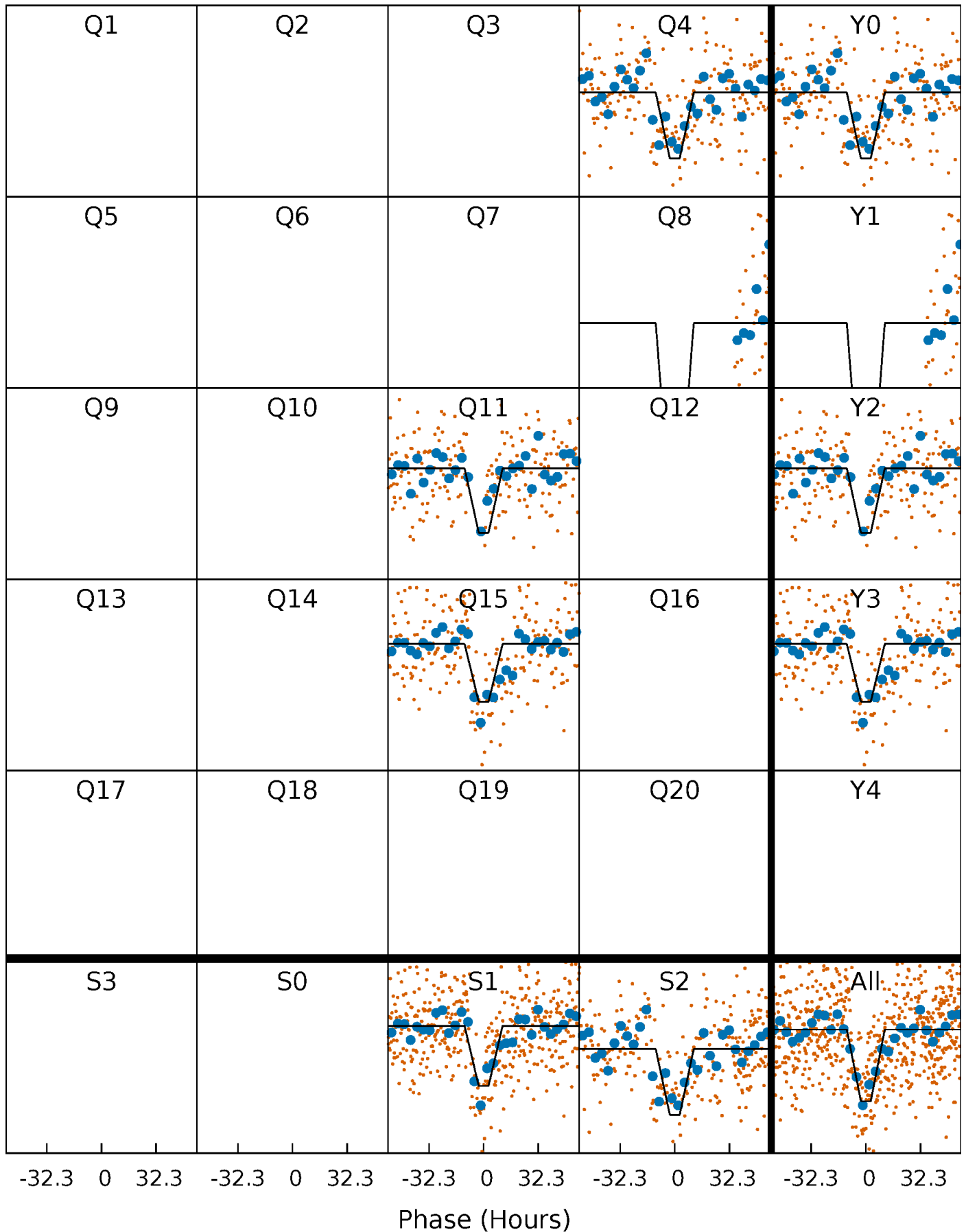
DV Quarter-Phased Transit Curves

TCE 005171598-01 P=359.884187 Days $T_0=374.073704$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

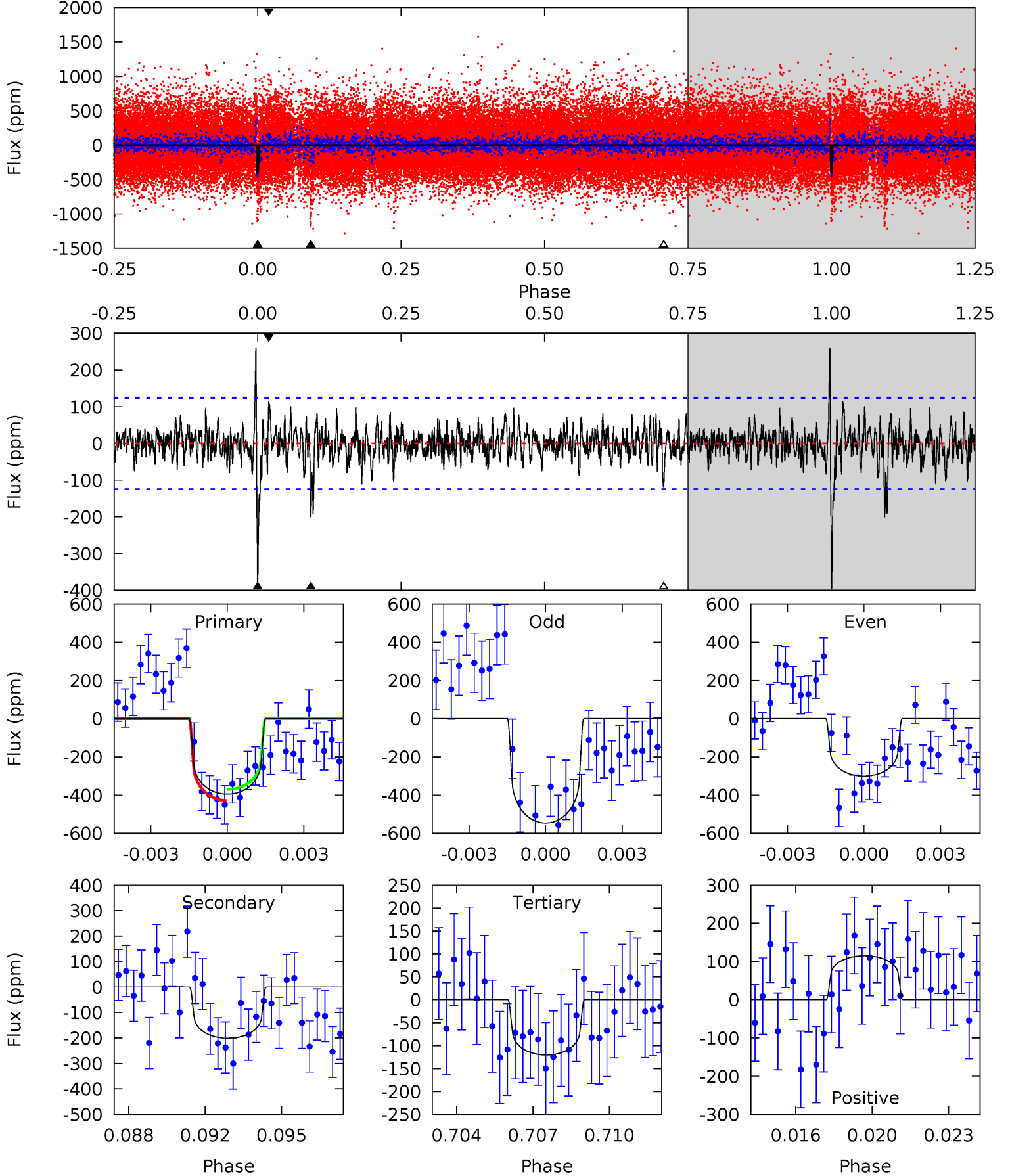
TCE 005171598-01 P=359.800936 Days $T_0=374.118203$ (BKJD)



DV Model-Shift Uniqueness Test

005171598-01, $P = 359.884187$ Days, $E = 14.189517$ Days

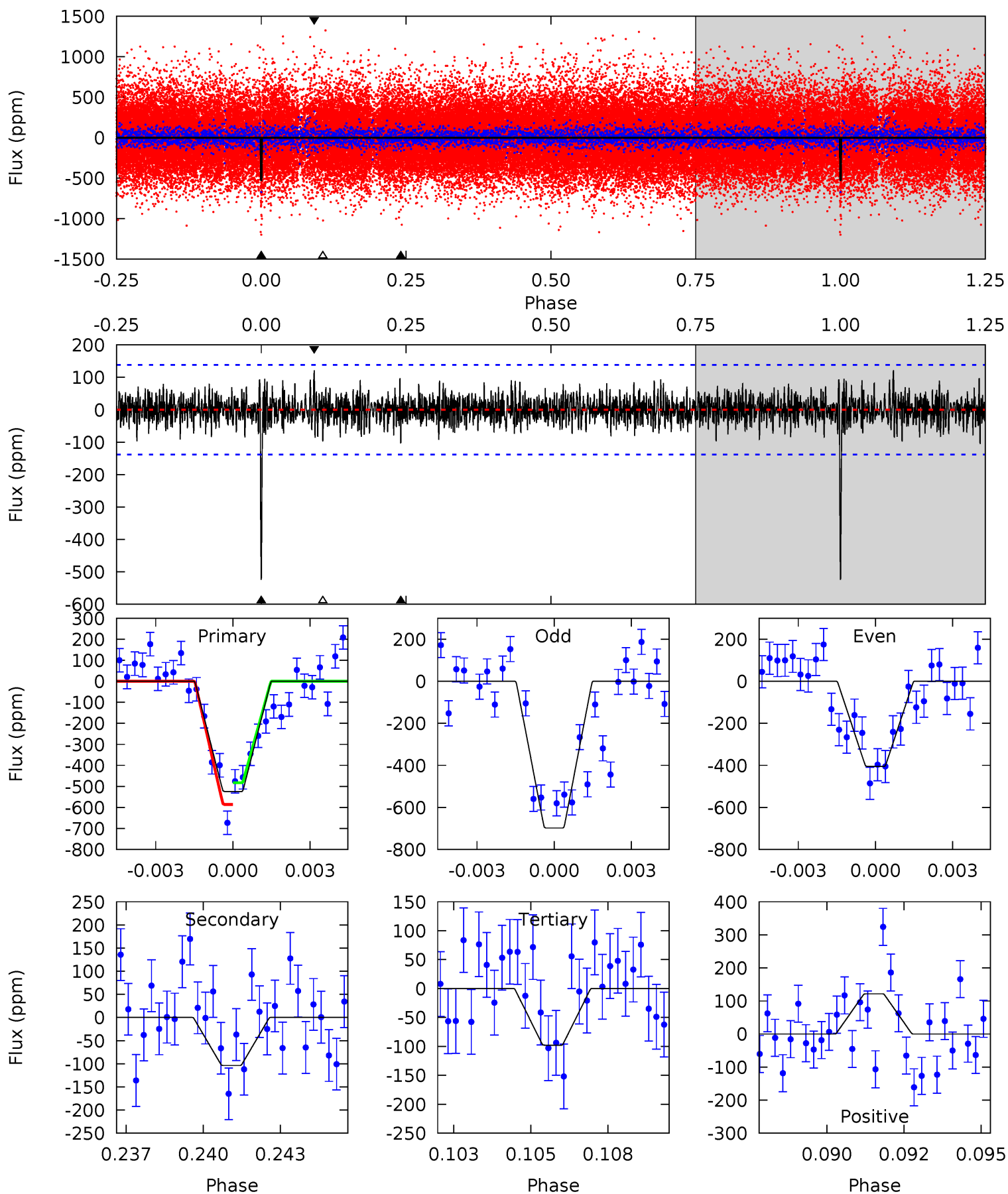
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	8.47	5.08	4.85	5.24	2.94	1.44	11.6	11.8	3.40	3.63	5.04	0.97	0.40	1.21



Alt Model-Shift Uniqueness Test

005171598-01, P = 359.800936 Days, E = 14.317267 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.0	3.96	3.74	4.64	5.28	3.01	1.19	16.3	15.4	0.21	-0.68	5.49	1.08	0.19	1.94



Stellar Parameters For KIC 005171598

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5437^{+180}_{-147}	$4.528^{+0.100}_{-0.100}$	$-0.620^{+0.350}_{-0.300}$	$0.754^{+0.108}_{-0.088}$	$0.699^{+0.096}_{-0.037}$	$2.295^{+1.045}_{-0.660}$
	+3%/-3%	+2%/-2%	+56%/-48%	+14%/-12%	+14%/-5%	+46%/-29%
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 005171598-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-201 ± 24	$1.74^{+0.33}_{-0.28}$	311^{+14}_{-13}	4604^{+372}_{-282}	28513^{+12219}_{-8467}
Alt.	-104 ± 26	$1.98^{+0.33}_{-0.28}$	311^{+15}_{-15}	3896^{+268}_{-267}	11451^{+5049}_{-3814}

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

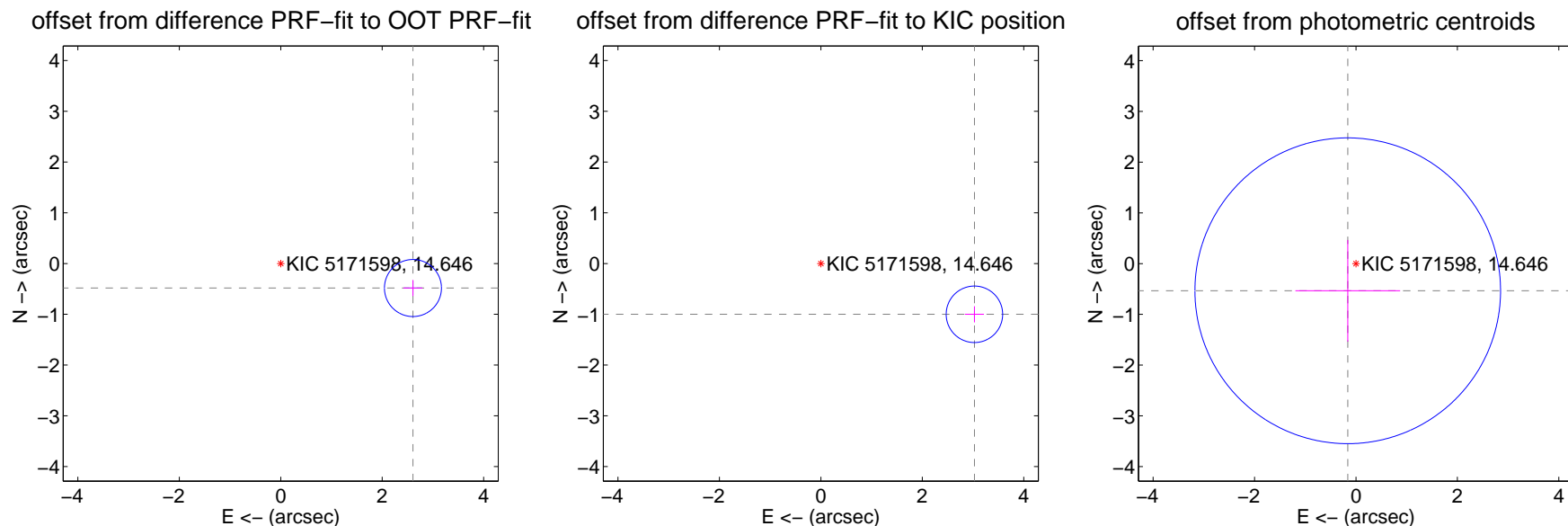
DV Centroid Data

Supplemental centroid analysis for 005171598-01. Kepler magnitude: 14.65. Transit SNR 10.71

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.67 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.650 ± 0.187	14.15	-2.606 ± 0.188	-0.482 ± 0.159
PRF-fit source offset from KIC position	3.188 ± 0.186	17.18	-3.027 ± 0.188	-1.000 ± 0.159
photometric centroid source offset	0.56 ± 1.00	0.56	0.16 ± 1.03	-0.54 ± 1.00



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.

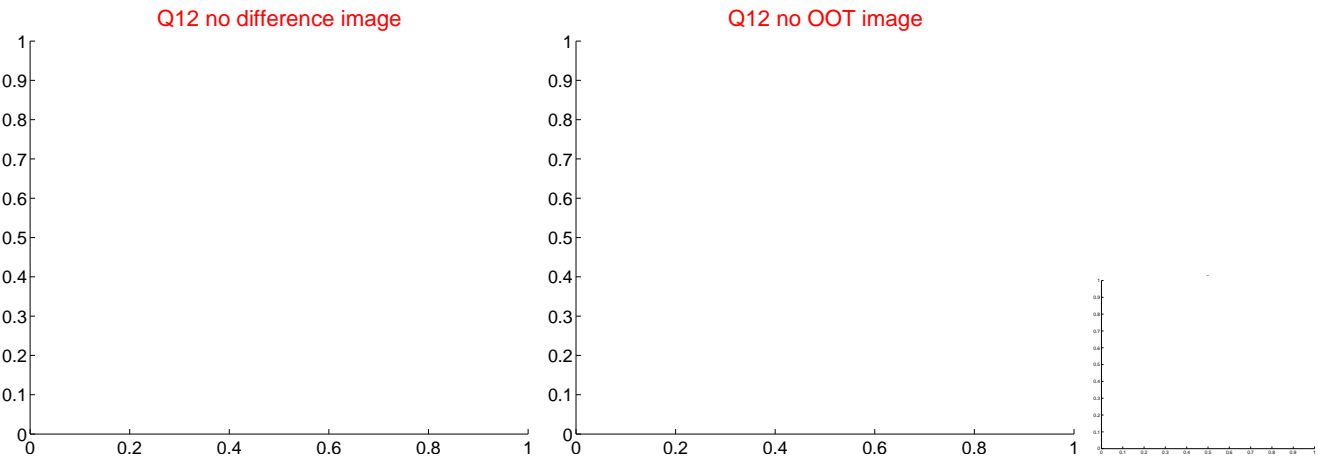
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



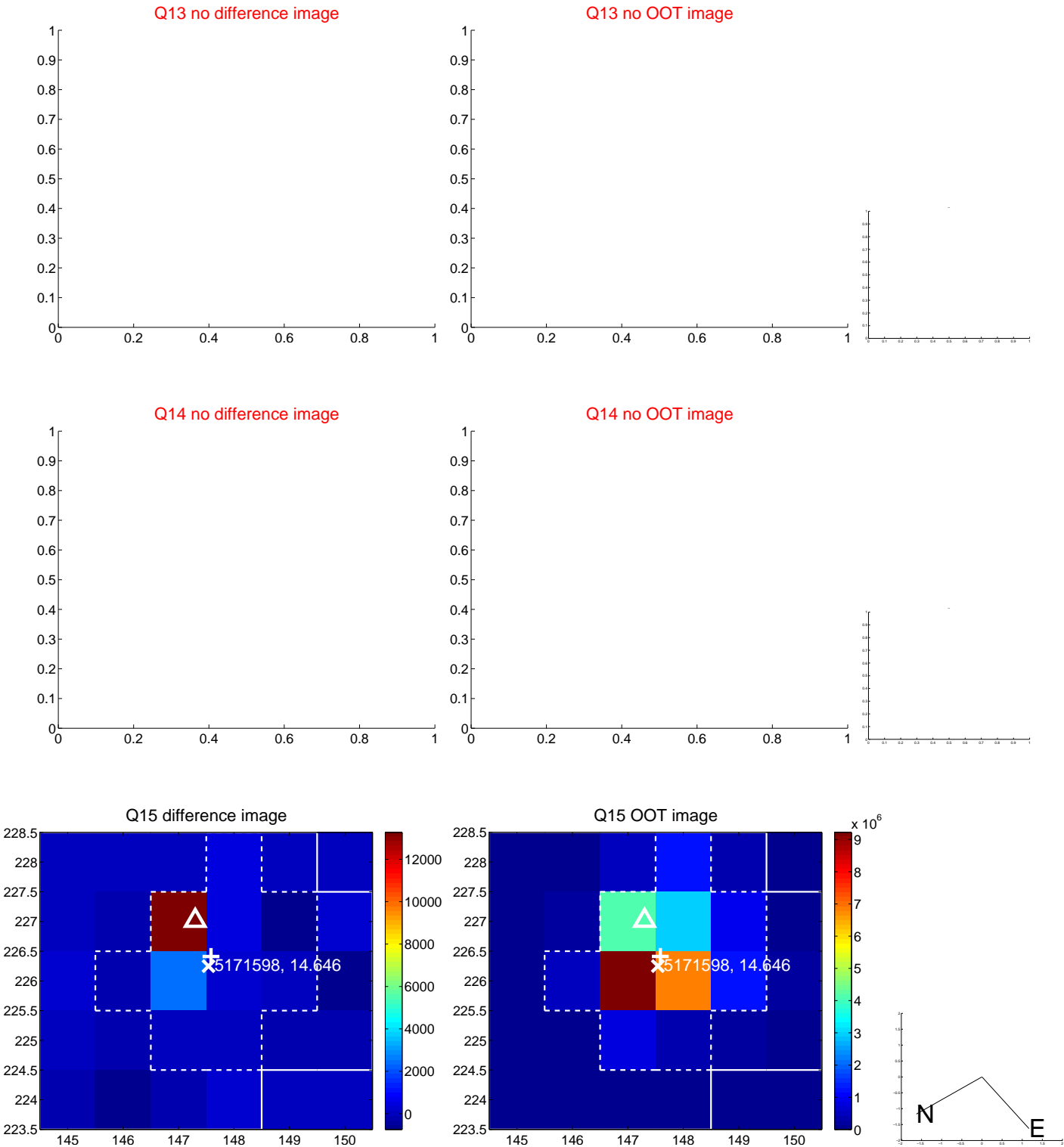
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



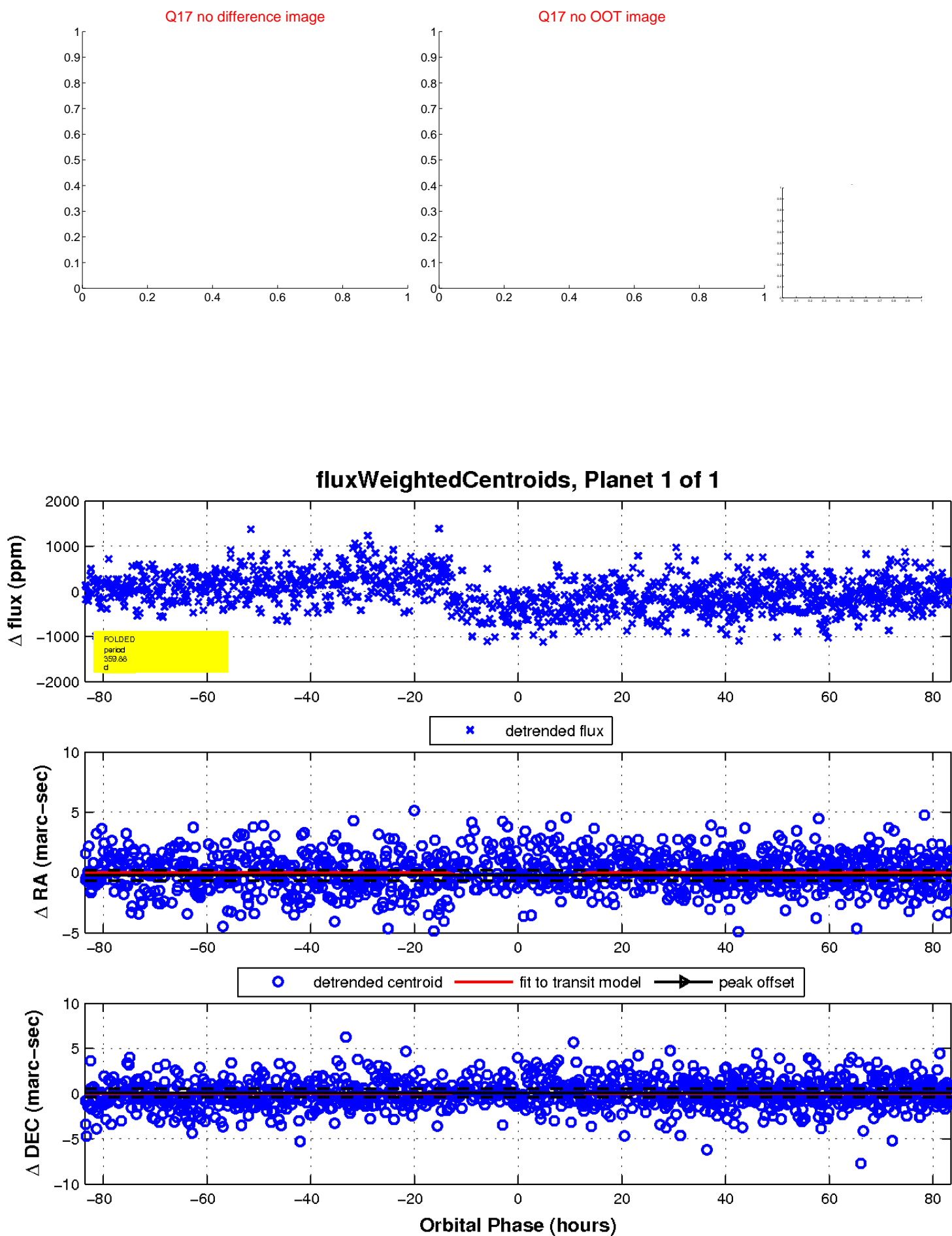
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

