

KIC 004741484

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})
004741484-01	OBS	No	414.782856	372.901372	173.6	11.098	9.4	7.8	1.43	5735	2.14	1.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004741484-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_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.

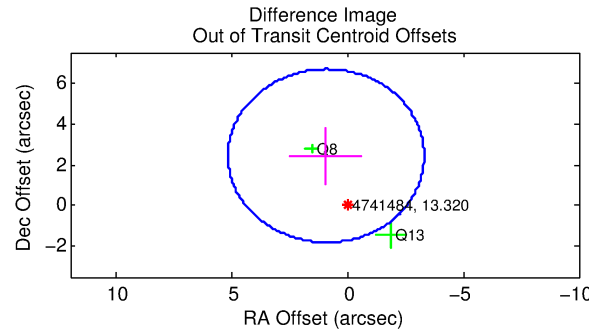
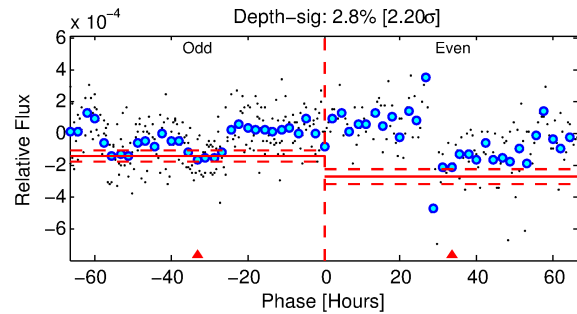
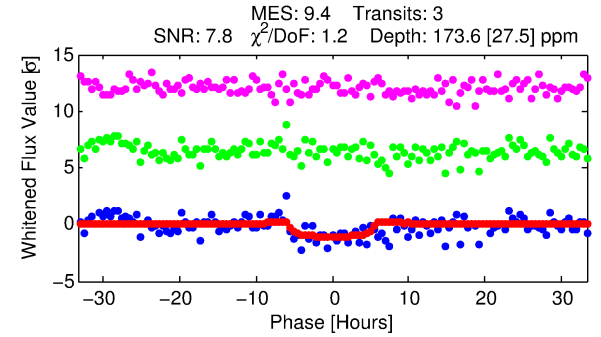
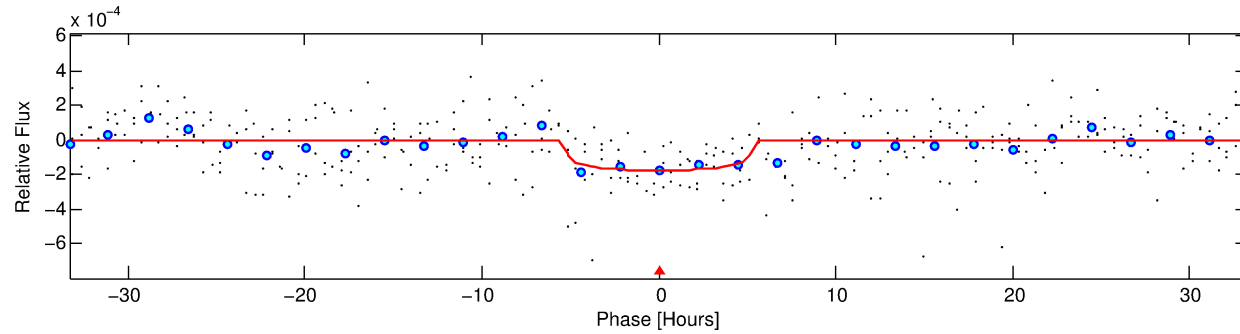
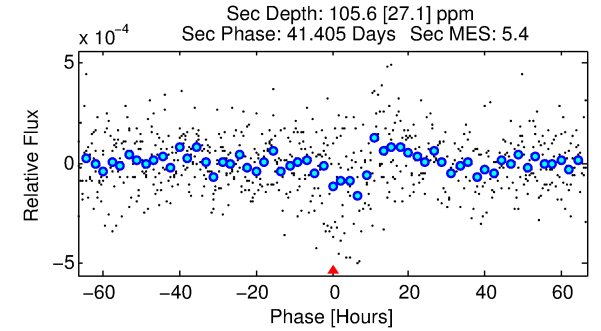
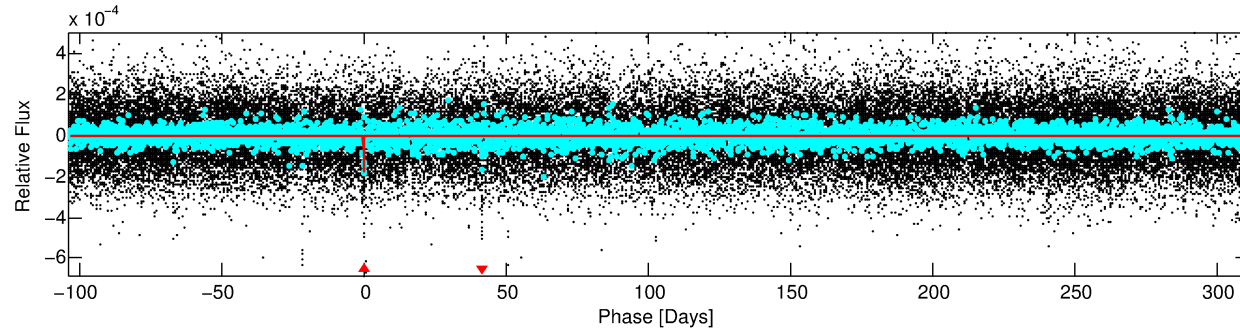
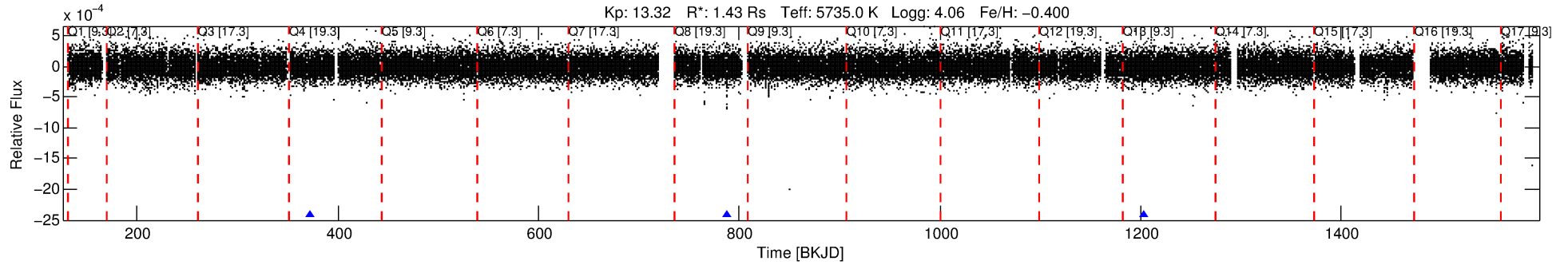
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004741484-01

No Significant Match Found

DV One-Page Summary

KIC: 4741484 Candidate: 1 of 1 Period: 414.783 d



DV Fit Results:

Period = 414.78286 [0.01593] d
Epoch = 372.9014 [0.0205] BKJD
Rp/R* = 0.0138 [0.0056]
a/R* = 157.02 [317.50]
b = 0.85 [0.65]
Seff = 1.85 [1.37]
Teq = 297 [55] K
Rp = 2.14 [1.27] Re
a = 1.0345 [0.4567] AU
Ag = 13537.01 [15288.08] [0.89σ]
Teffp = 4957 [1074] K [4.33σ]

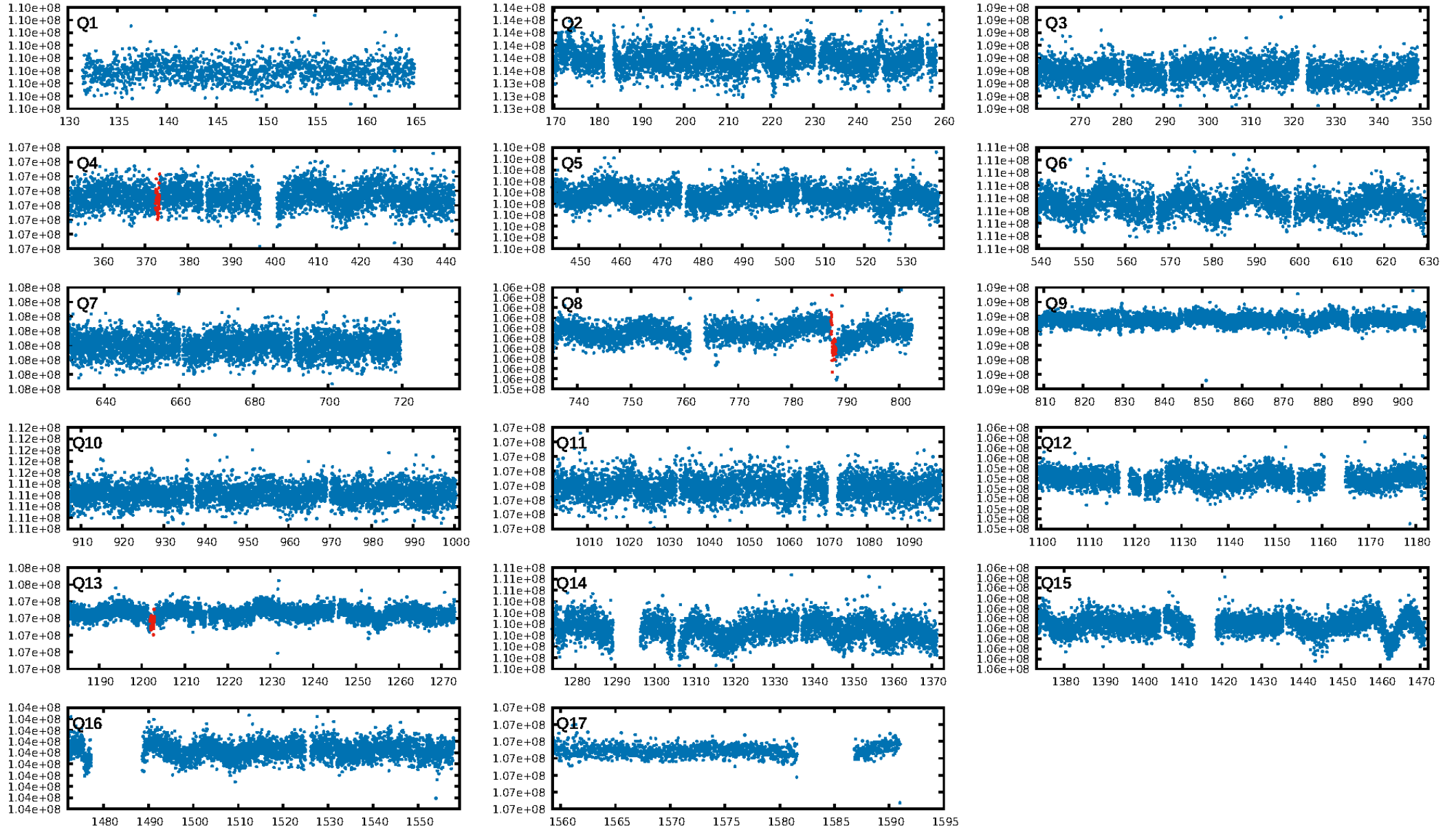
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.4%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.01e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.168
Centroid-sig: 0.1%
Centroid-so: 3.423 arcsec [2.07σ]
OotOffset-rm: 2.606 arcsec [1.84σ]
KicOffset-rm: 2.623 arcsec [1.83σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

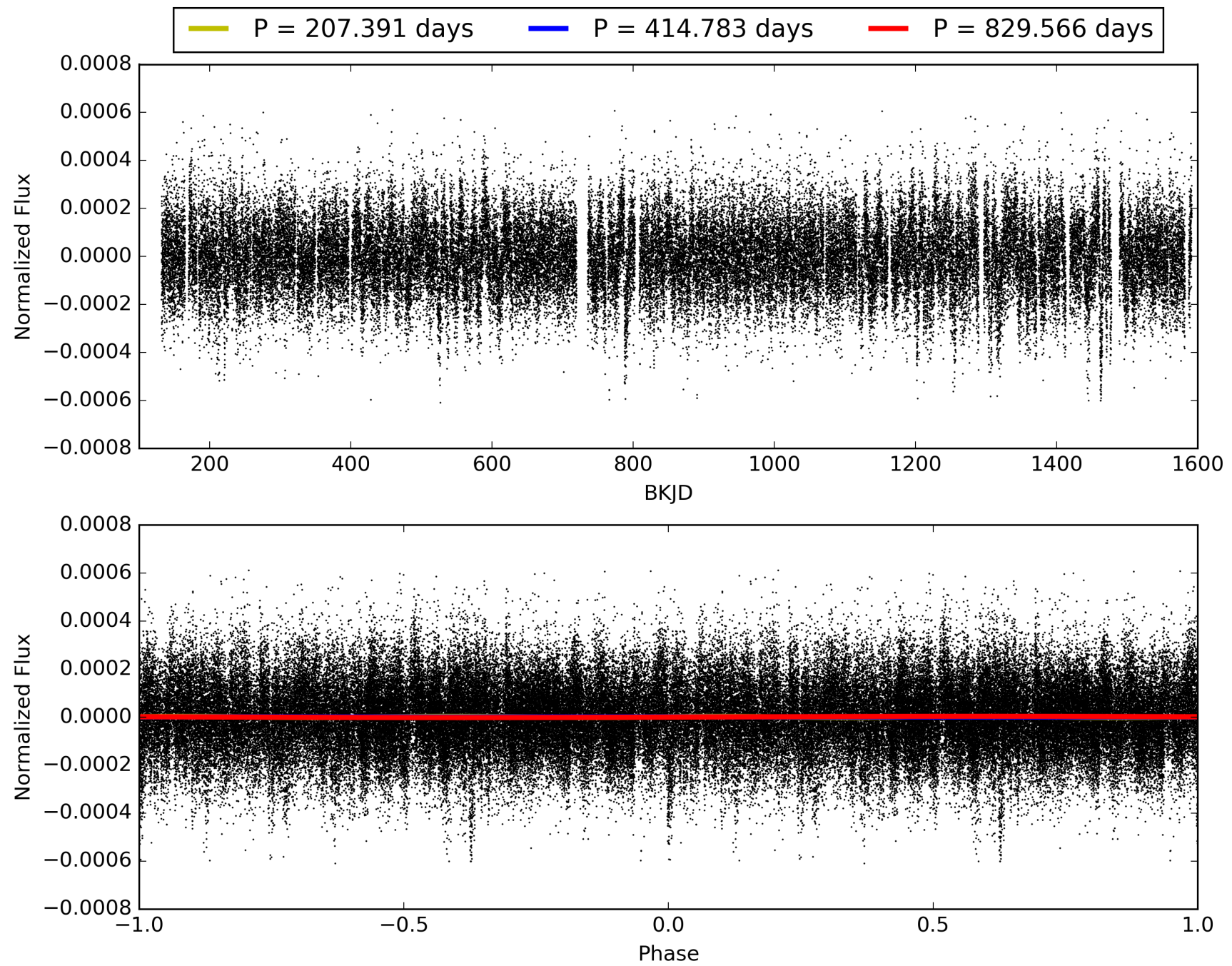
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:02:44 Z

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

TCE 004741484-01, PDC Light Curves

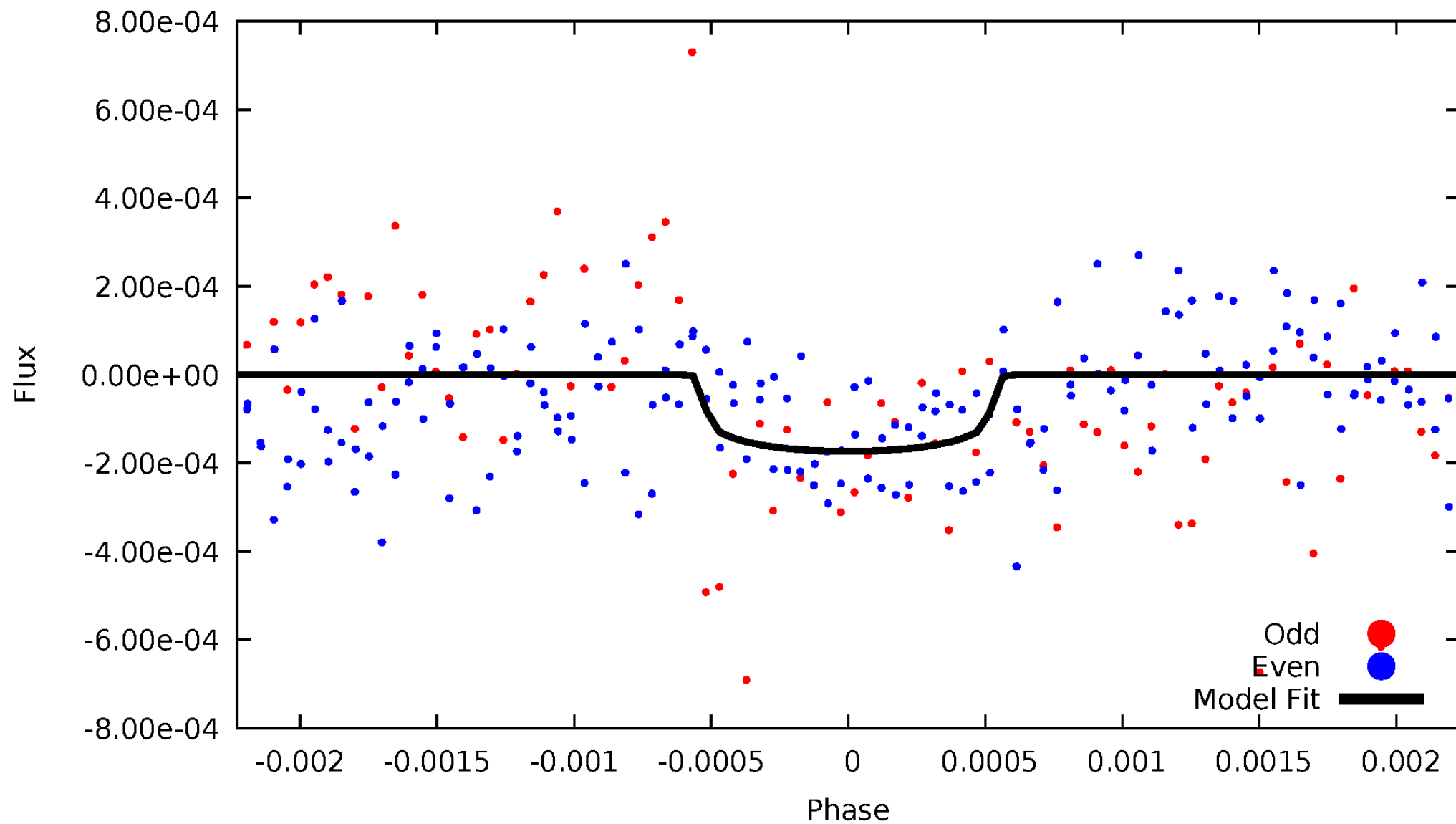


TCE 004741484-01



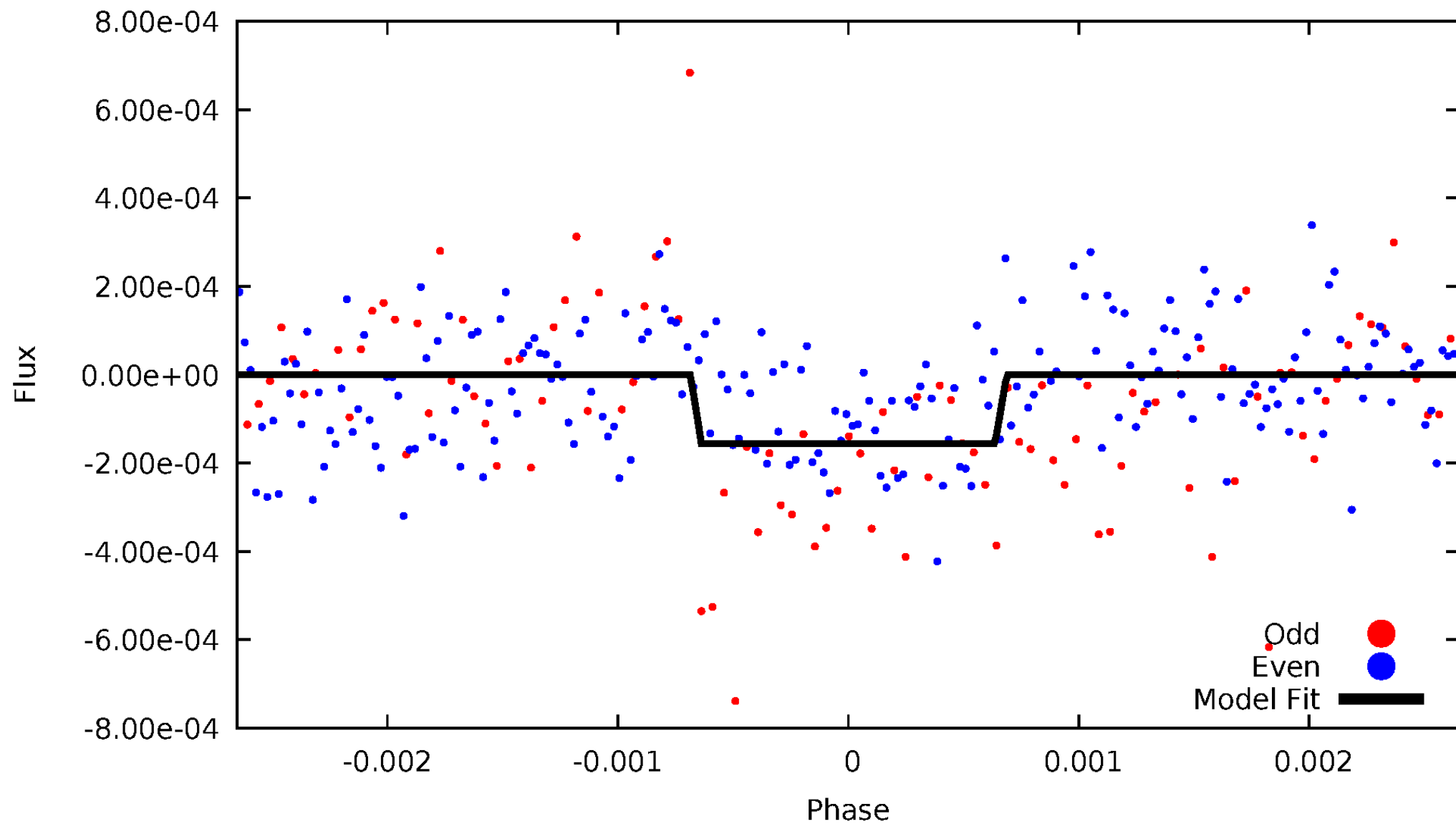
DV Odd/Even

TCE 004741484-01



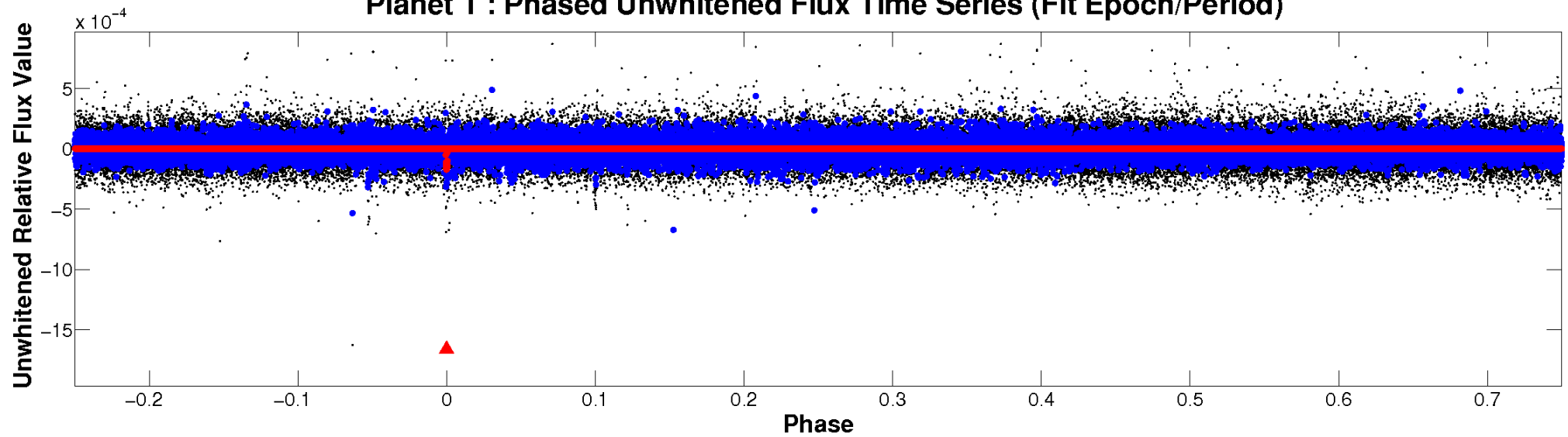
ALT Odd/Even

TCE 004741484-01

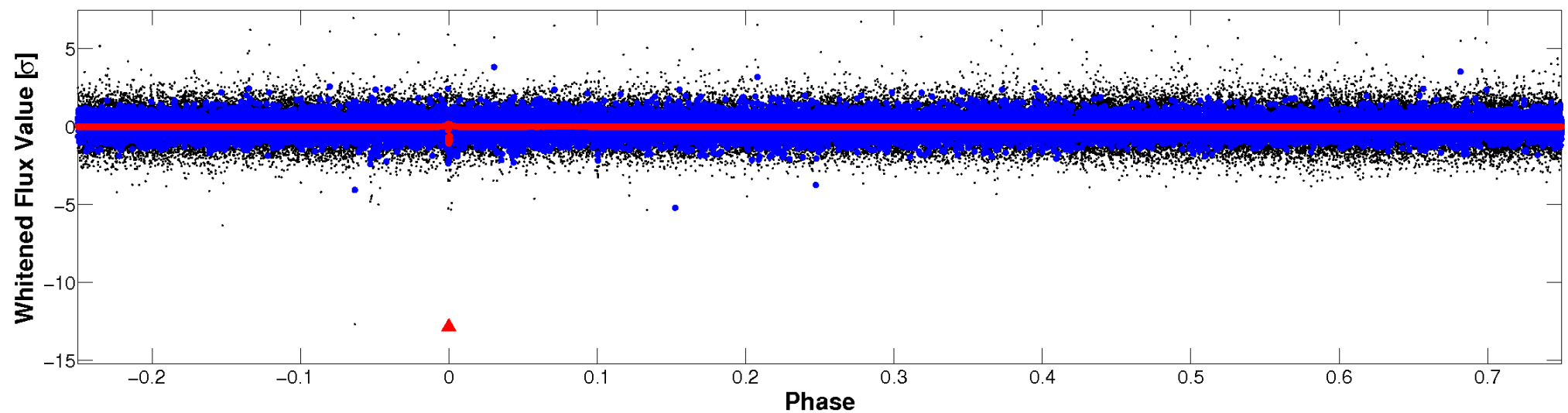


Non-Whitened Vs. Whitened Light Curve

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 004741484-01 P=414.782856 Days $T_0=372.901372$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004741484-01 $P=414.782856$ Days $T_0=372.901372$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

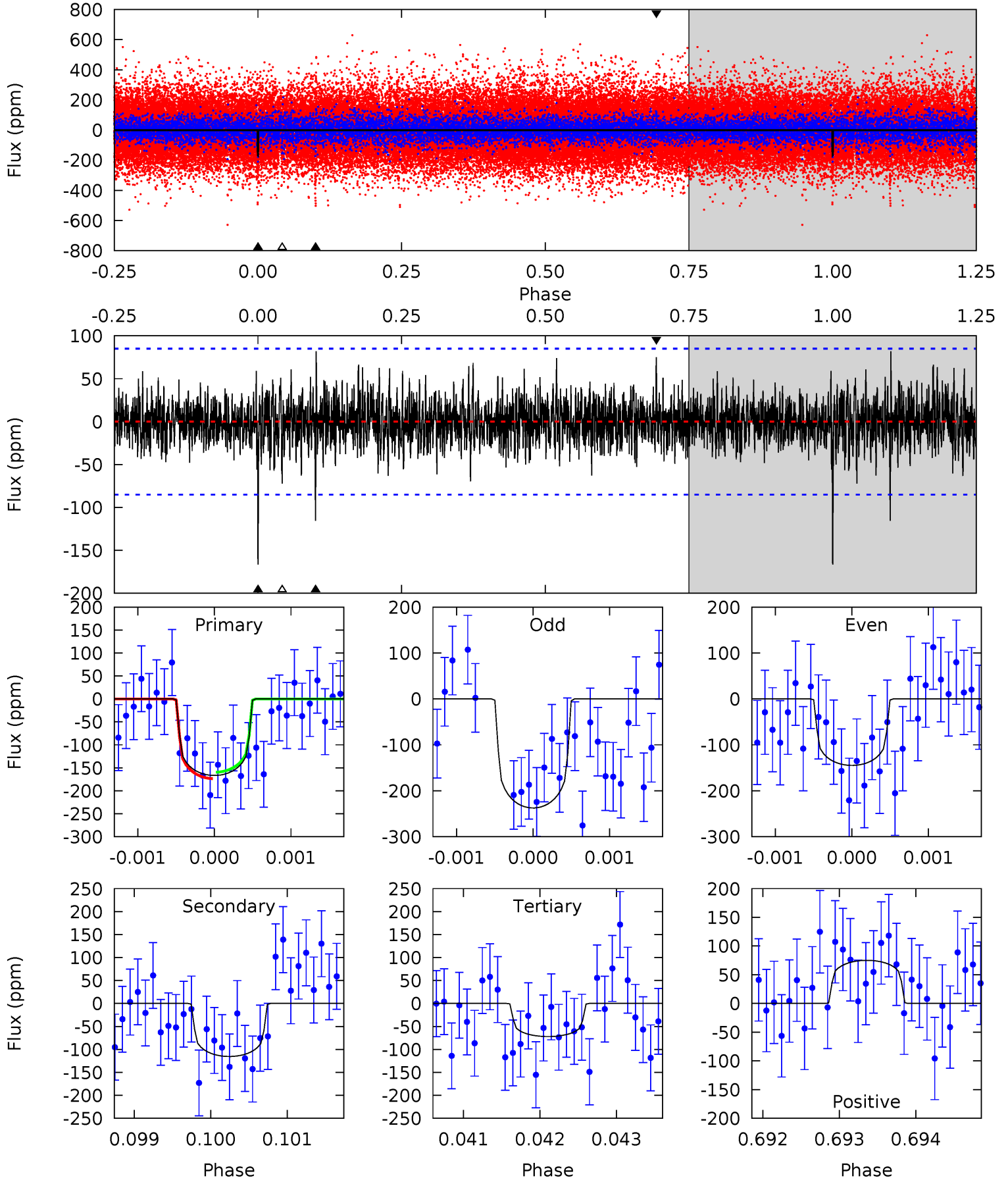
TCE 004741484-01 P=414.828513 Days $T_0=372.904581$ (BKJD)



DV Model-Shift Uniqueness Test

004741484-01, P = 414.782856 Days, E = 372.901372 Days

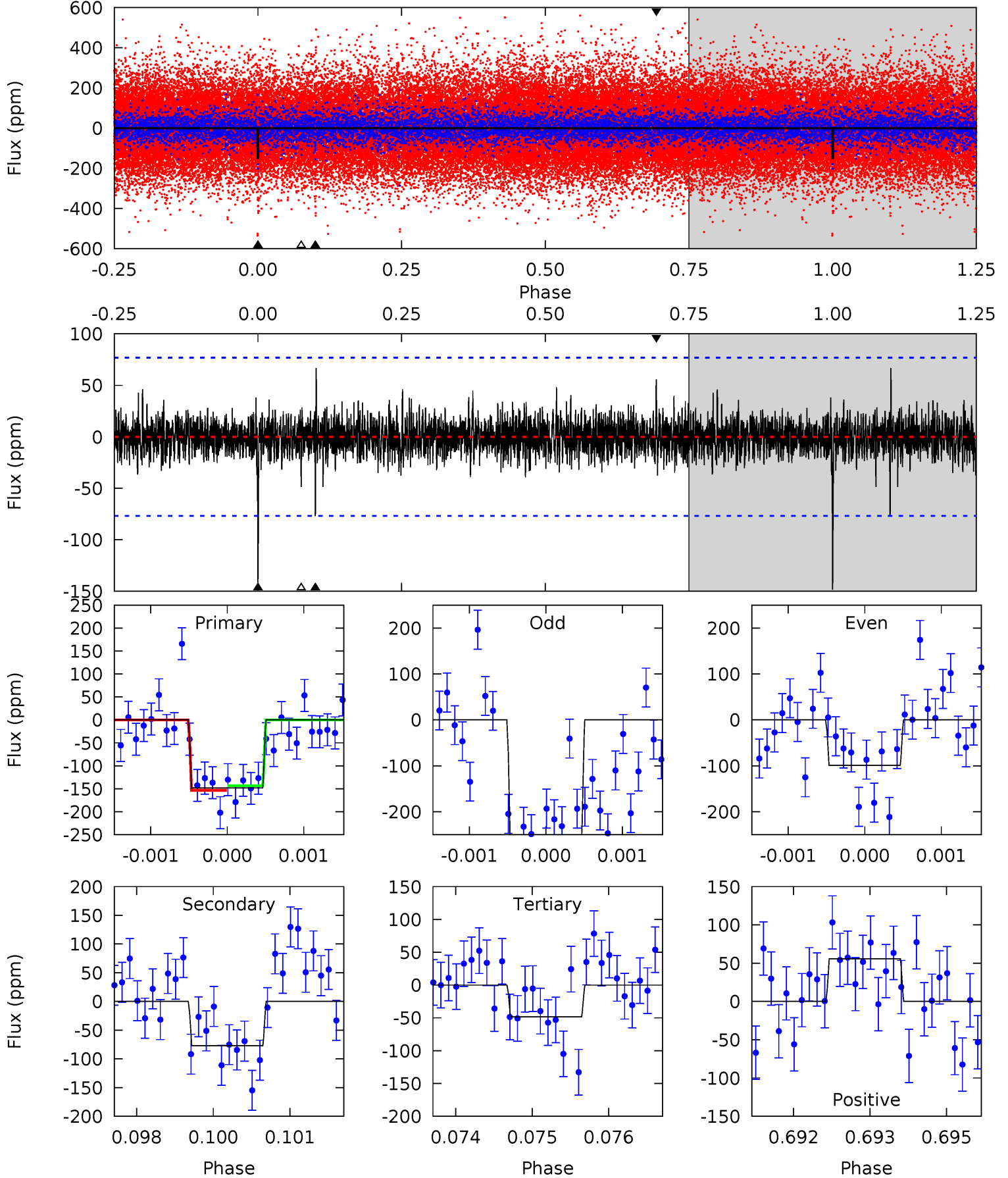
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	7.36	4.59	4.79	5.43	3.25	1.25	6.04	5.84	2.77	2.58	2.82	1.10	0.33	0.44



Alt Model-Shift Uniqueness Test

004741484-01, P = 414.828513 Days, E = 372.904581 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	5.41	3.42	3.91	5.40	3.20	0.86	7.01	6.52	1.99	1.50	5.64	1.27	0.31	0.35



Stellar Parameters For KIC 004741484

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5735^{+172}_{-155}	$4.062^{+0.441}_{-0.189}$	$-0.400^{+0.350}_{-0.250}$	$1.428^{+0.455}_{-0.607}$	$0.859^{+0.118}_{-0.082}$	$0.415^{+1.483}_{-0.192}$
	+3%/-3%	+11%/-5%	+87%/-62%	+32%/-43%	+14%/-10%	+357%/-46%
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 004741484-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-115 ± 16	$2.03^{+1.00}_{-0.95}$	410^{+38}_{-46}	5145^{+1680}_{-688}	17444^{+43322}_{-10130}
Alt.	-77 ± 14	$1.88^{+1.06}_{-0.86}$	411^{+36}_{-51}	4808^{+1532}_{-630}	12796^{+30800}_{-7593}

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

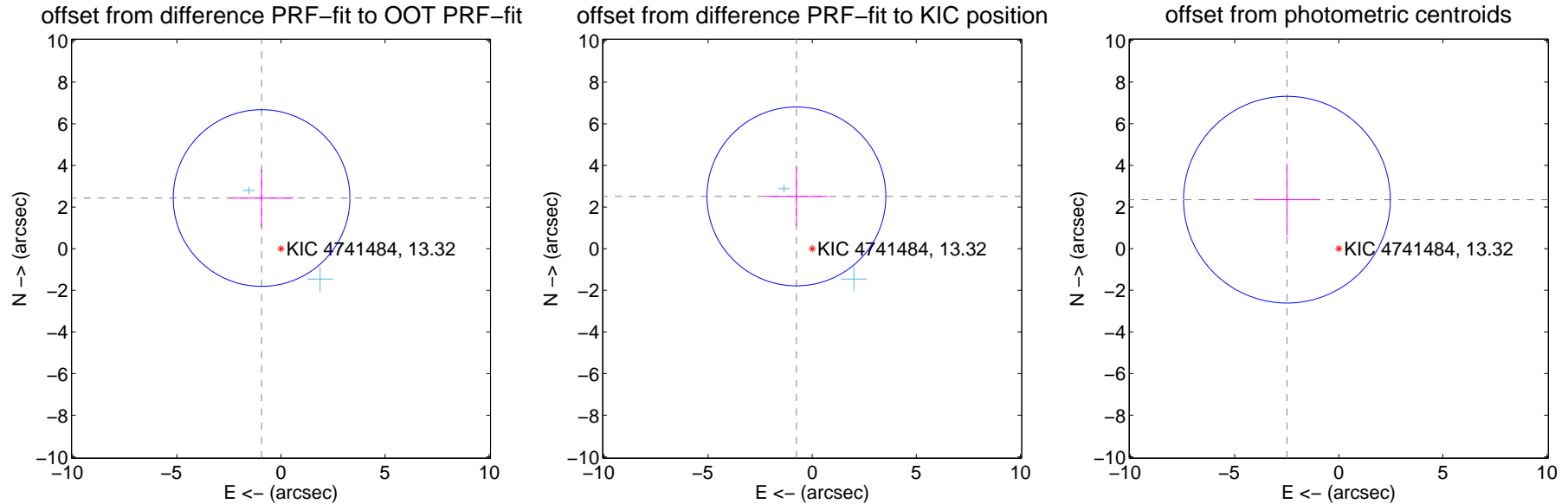
DV Centroid Data

Supplemental centroid analysis for 004741484-01. Kepler magnitude: 13.32. Transit SNR 7.77

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.606 ± 1.414	1.84	0.934 ± 1.532	2.433 ± 1.396
PRF-fit source offset from KIC position	2.623 ± 1.432	1.83	0.759 ± 1.505	2.511 ± 1.425
photometric centroid source offset	3.42 ± 1.65	2.07	2.49 ± 1.58	2.35 ± 1.73

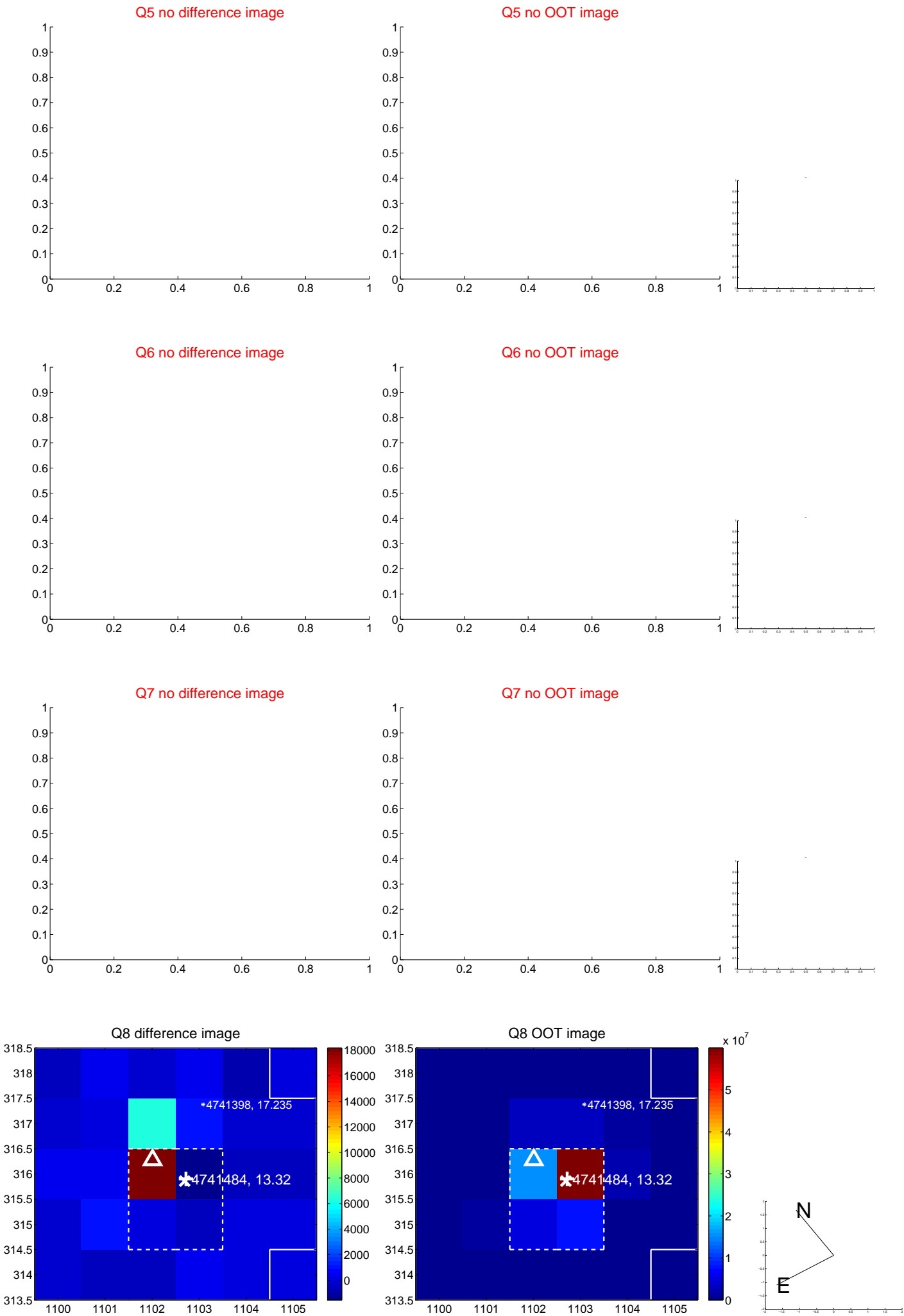


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



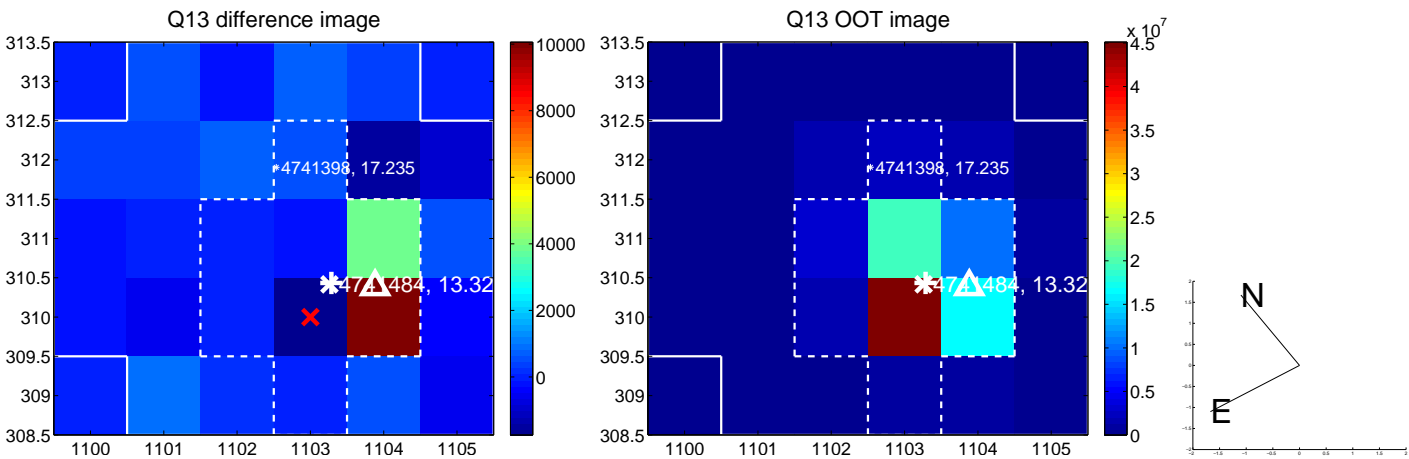
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



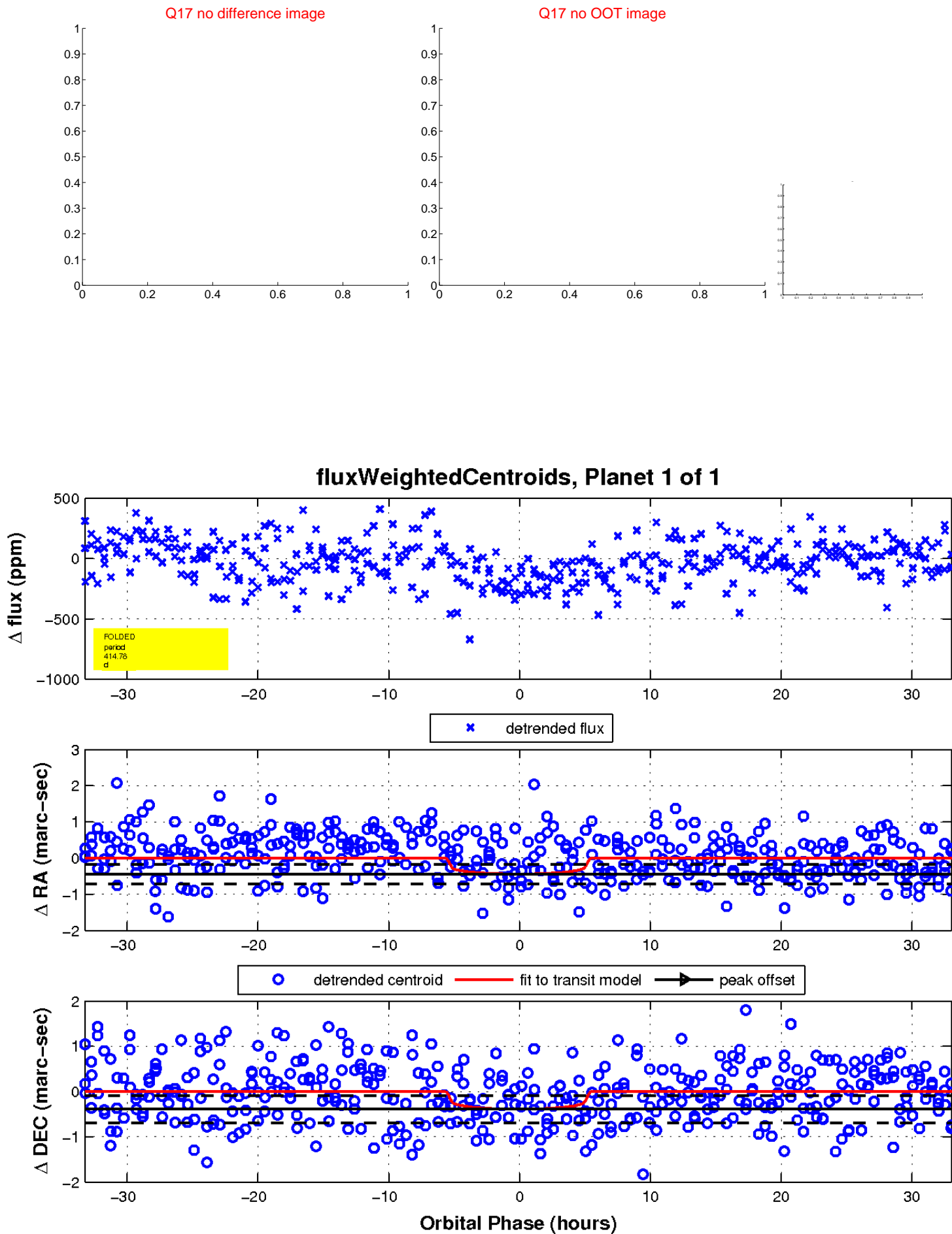
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

