

KIC 003433613

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})
003433613-01	OBS	No	202.593687	324.180017	343.8	18.773	9.1	11.6	2.79	5735	5.27	12.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003433613-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

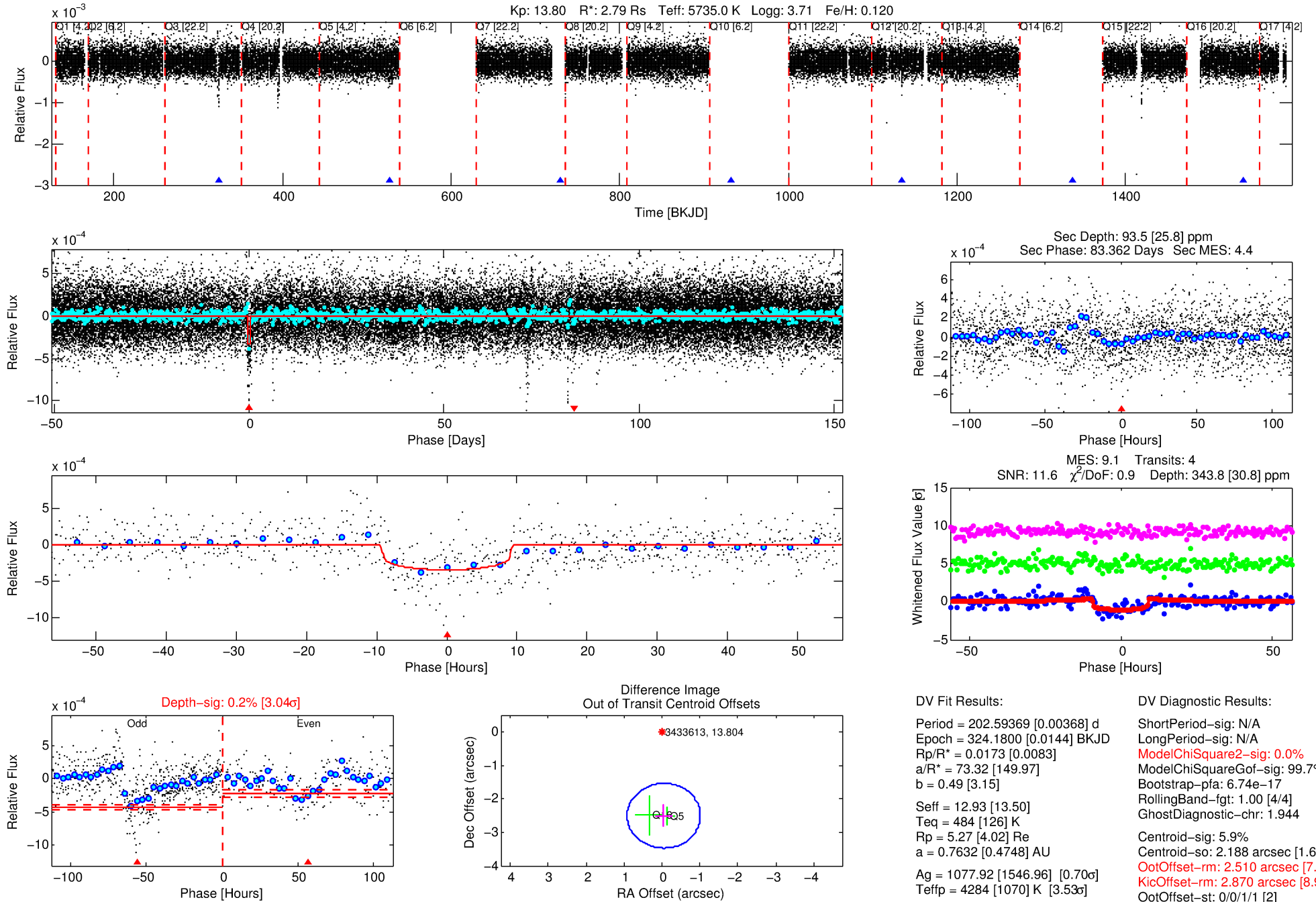
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003433613-01

No Significant Match Found

DV One-Page Summary

KIC: 3433613 Candidate: 1 of 1 Period: 202.594 d



DV Fit Results:

Period = 202.59369 [0.00368] d
Epoch = 324.1800 [0.0144] BKJD
Rp/R* = 0.0173 [0.0083]
a/R* = 73.32 [149.97]
b = 0.49 [3.15]
Seff = 12.93 [13.50]
Teq = 484 [126] K
Rp = 5.27 [4.02] Re
a = 0.7632 [0.4748] AU
Ag = 1077.92 [1546.96] [0.70σ]
Teffp = 4284 [1070] K [3.53σ]

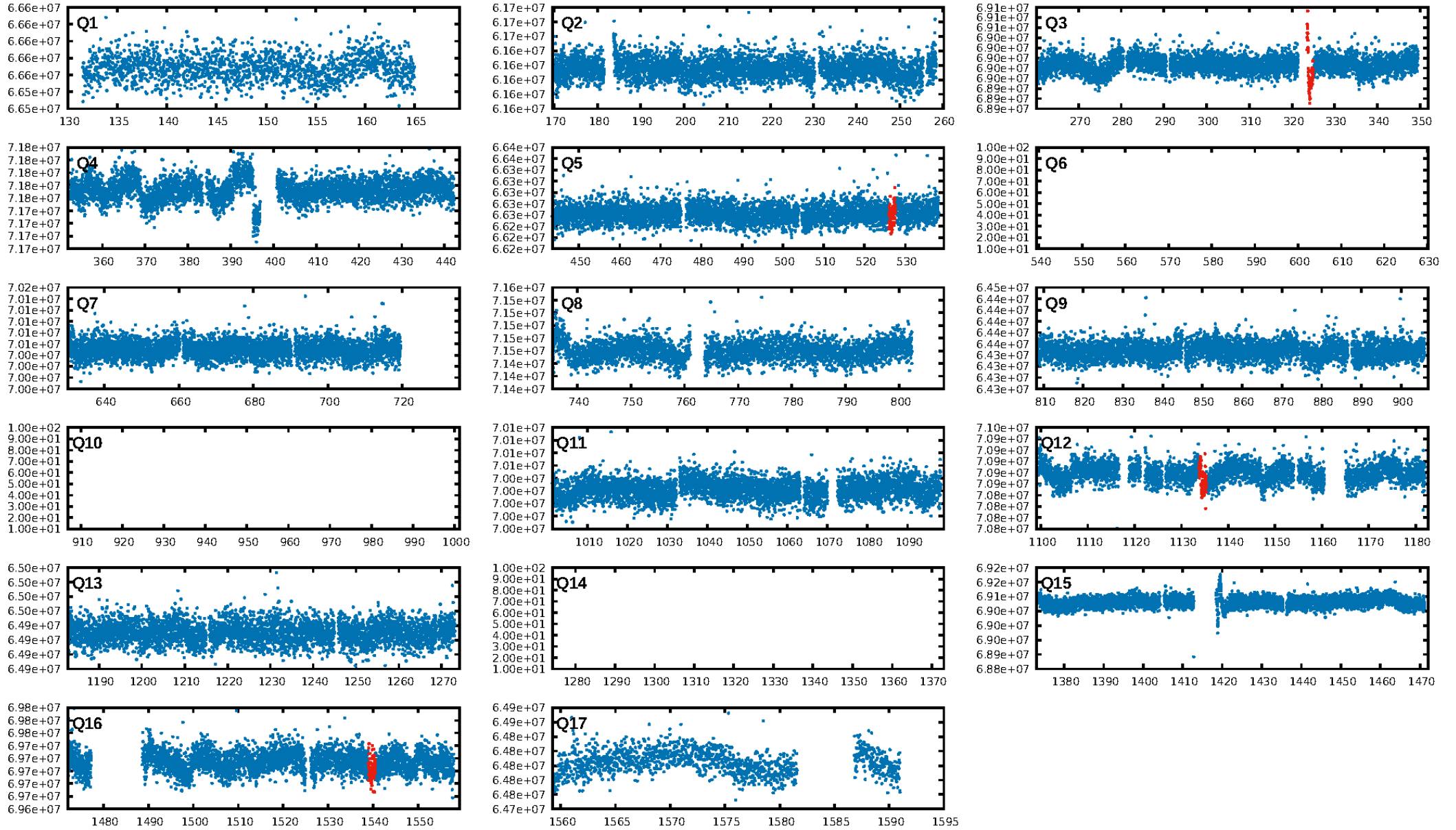
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 6.74e-17
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.944
Centroid-sig: 5.9%
Centroid-so: 2.188 arcsec [1.62σ]
OotOffset-rm: 2.510 arcsec [7.79σ]
KicOffset-rm: 2.870 arcsec [8.93σ]
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]

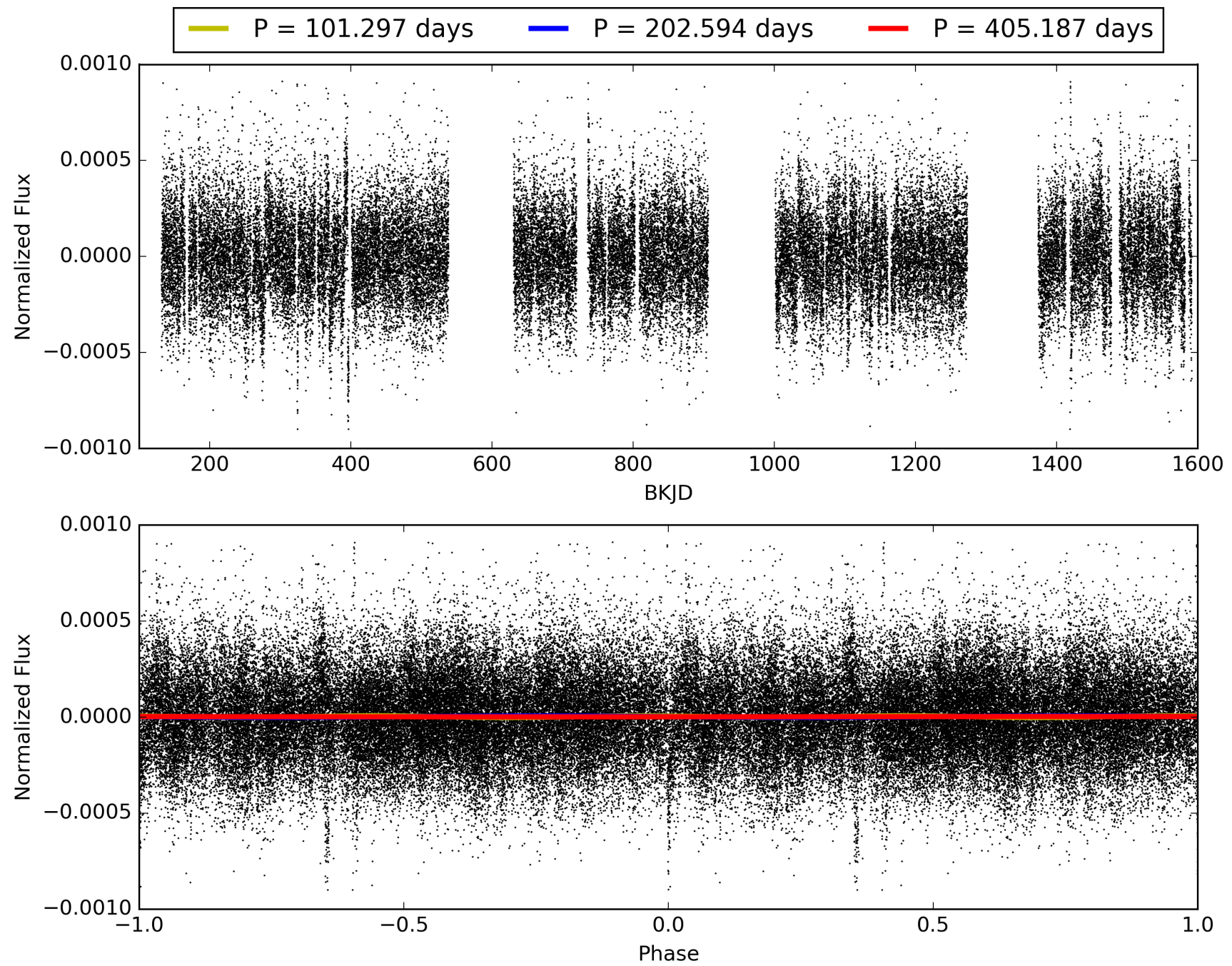
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:30:29 Z

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

TCE 003433613-01, PDC Light Curves

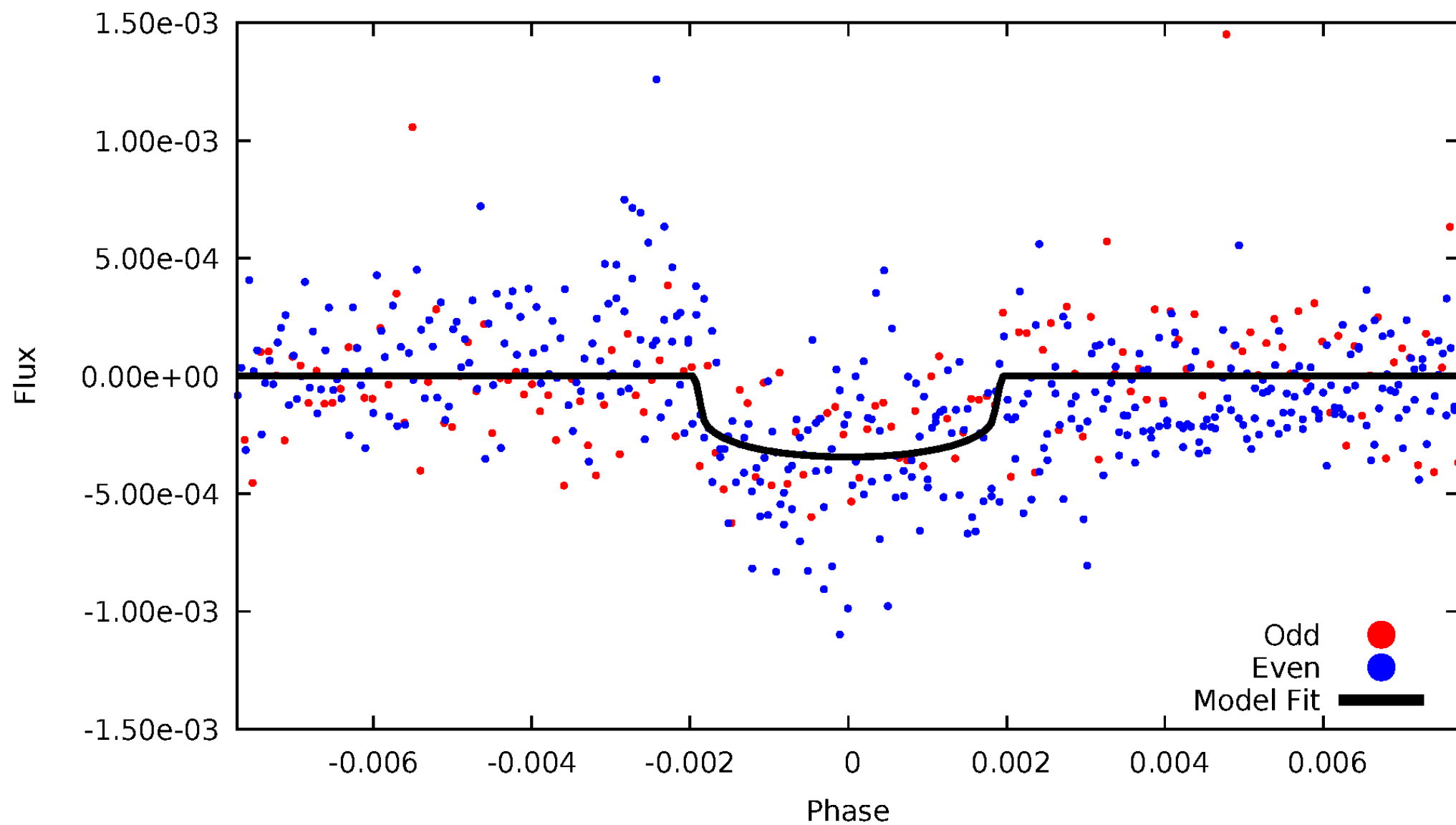


TCE 003433613-01



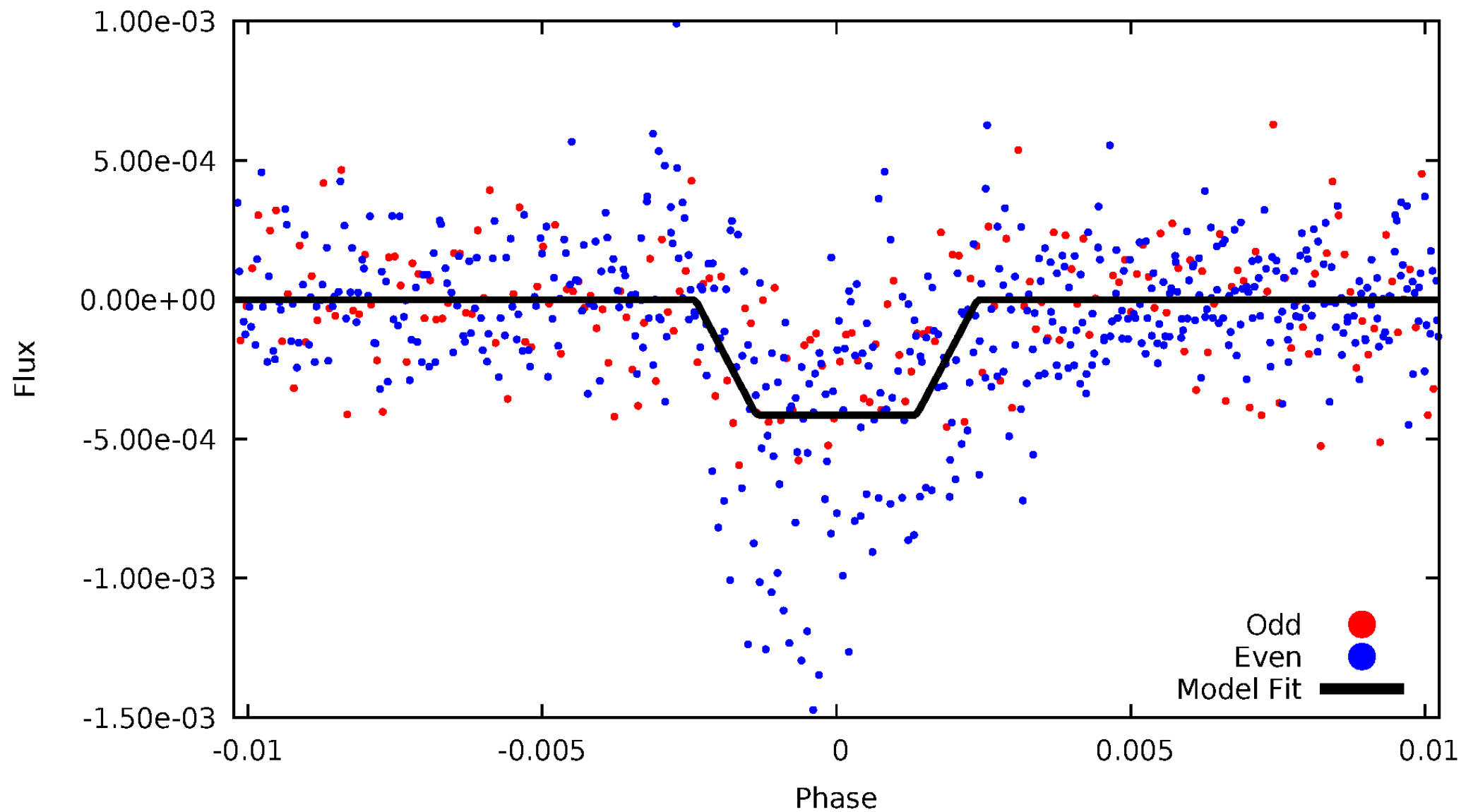
DV Odd/Even

TCE 003433613-01



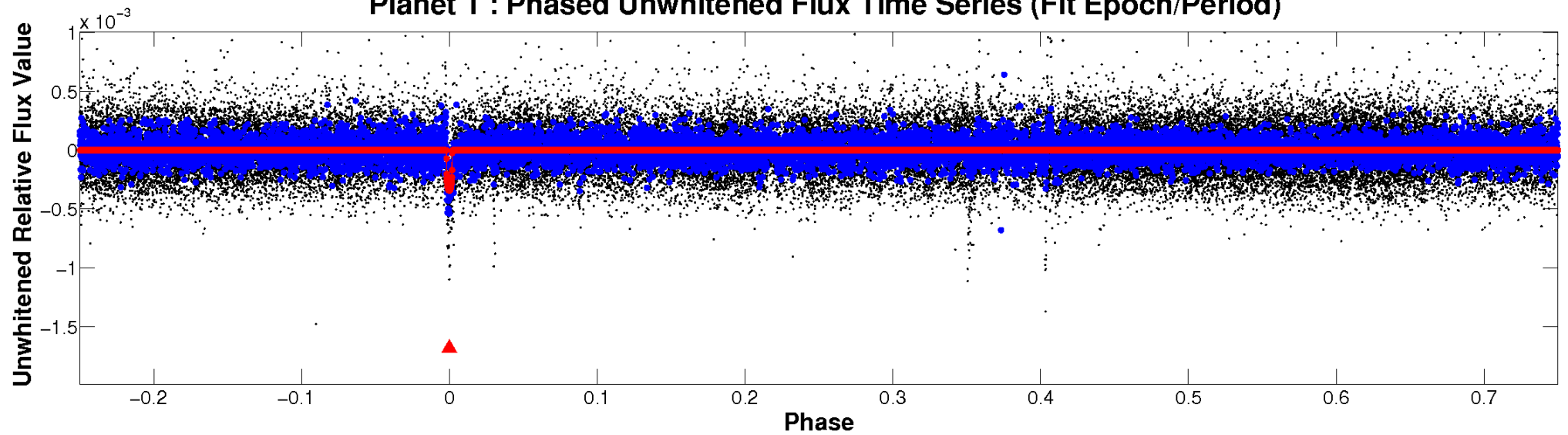
ALT Odd/Even

TCE 003433613-01

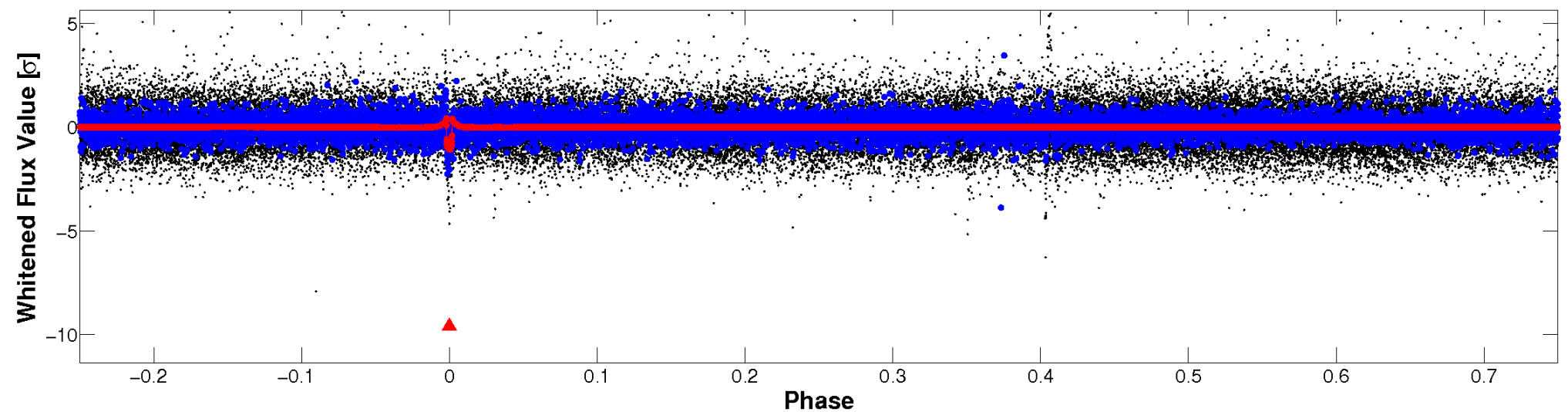


Non-Whitened Vs. Whitened Light Curve

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



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



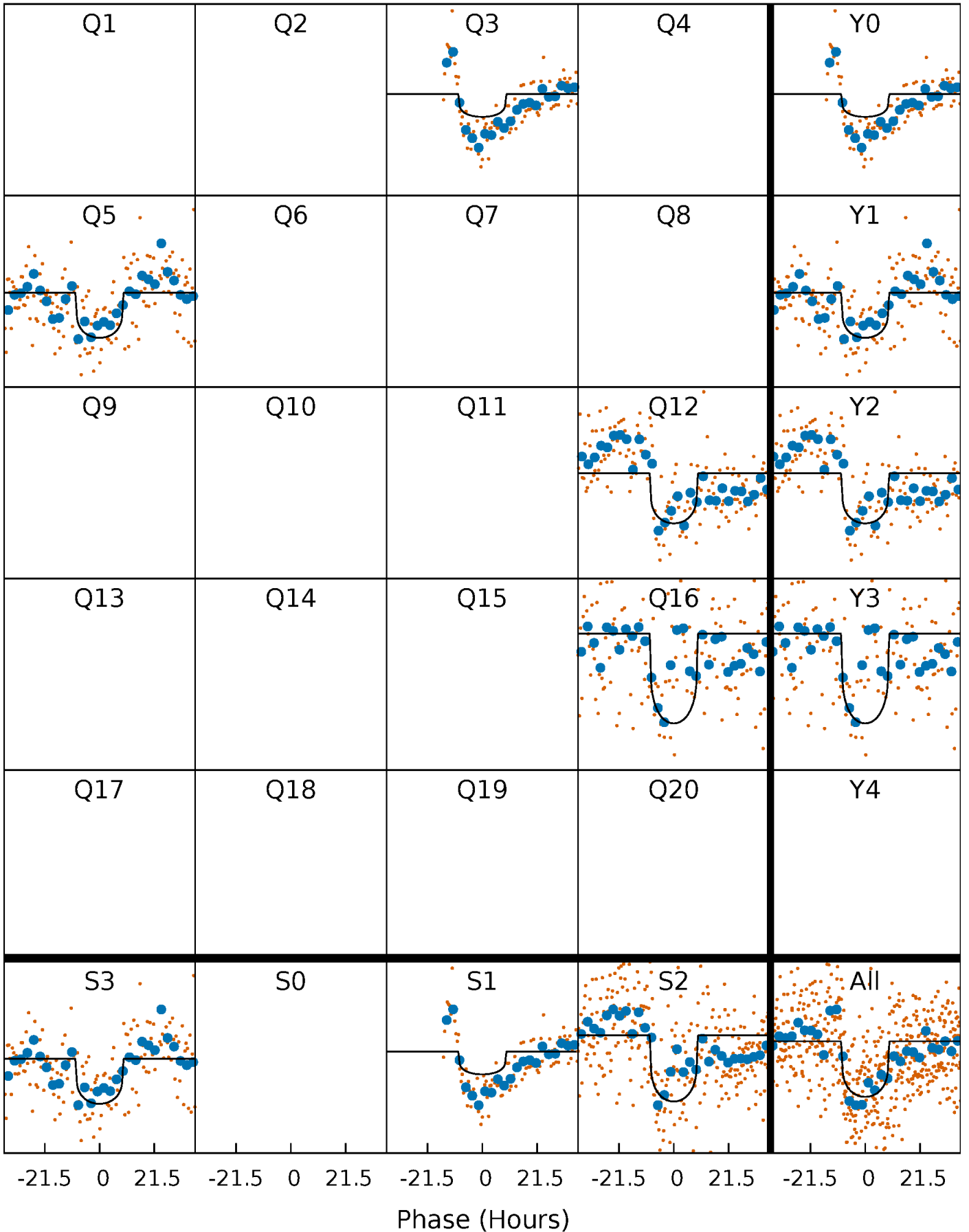
PDC Quarter-Phased Transit Curves

TCE 003433613-01 P=202.593687 Days $T_0=324.180017$ (BKJD)



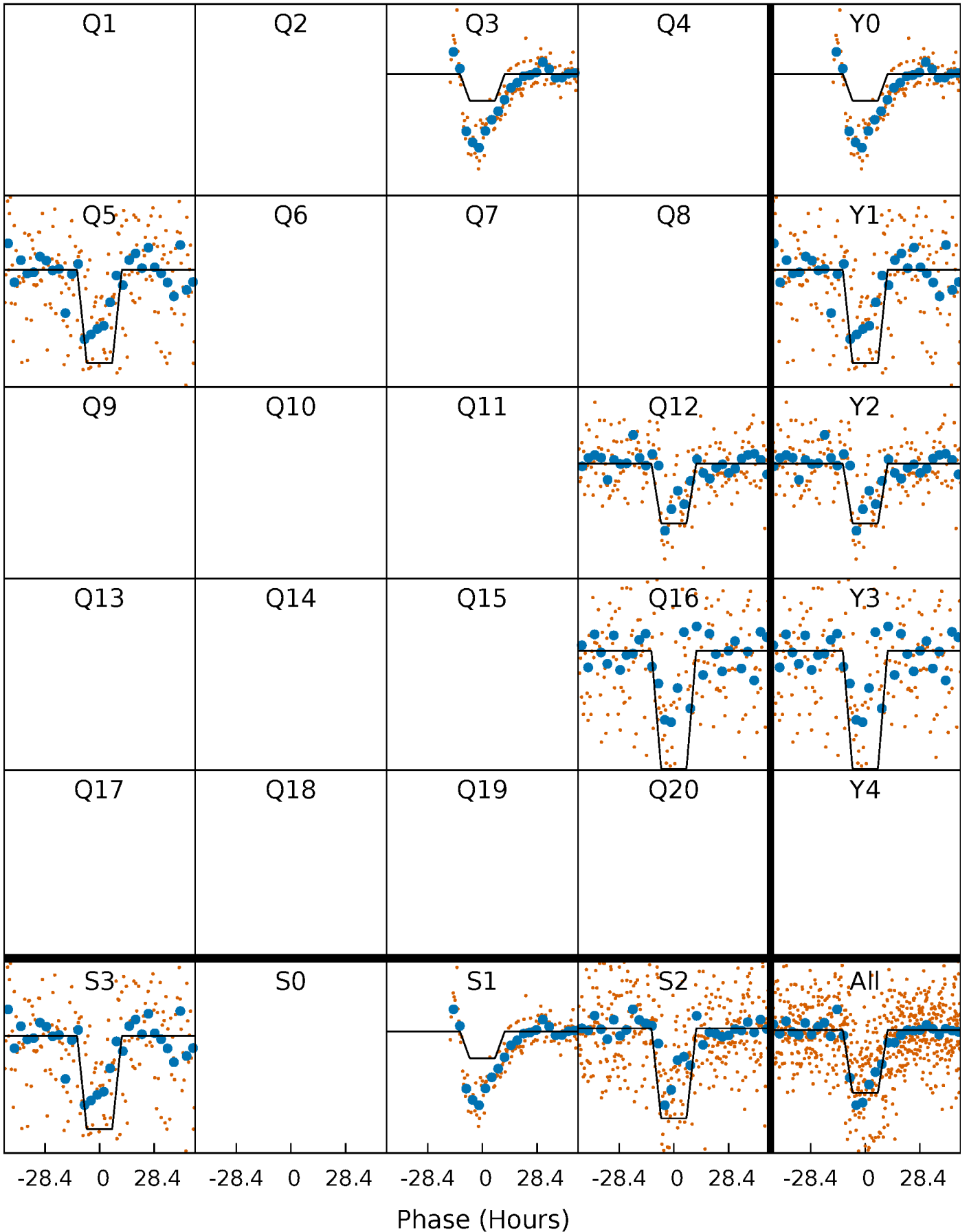
DV Quarter-Phased Transit Curves

TCE 003433613-01 P=202.593687 Days $T_0=324.180017$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

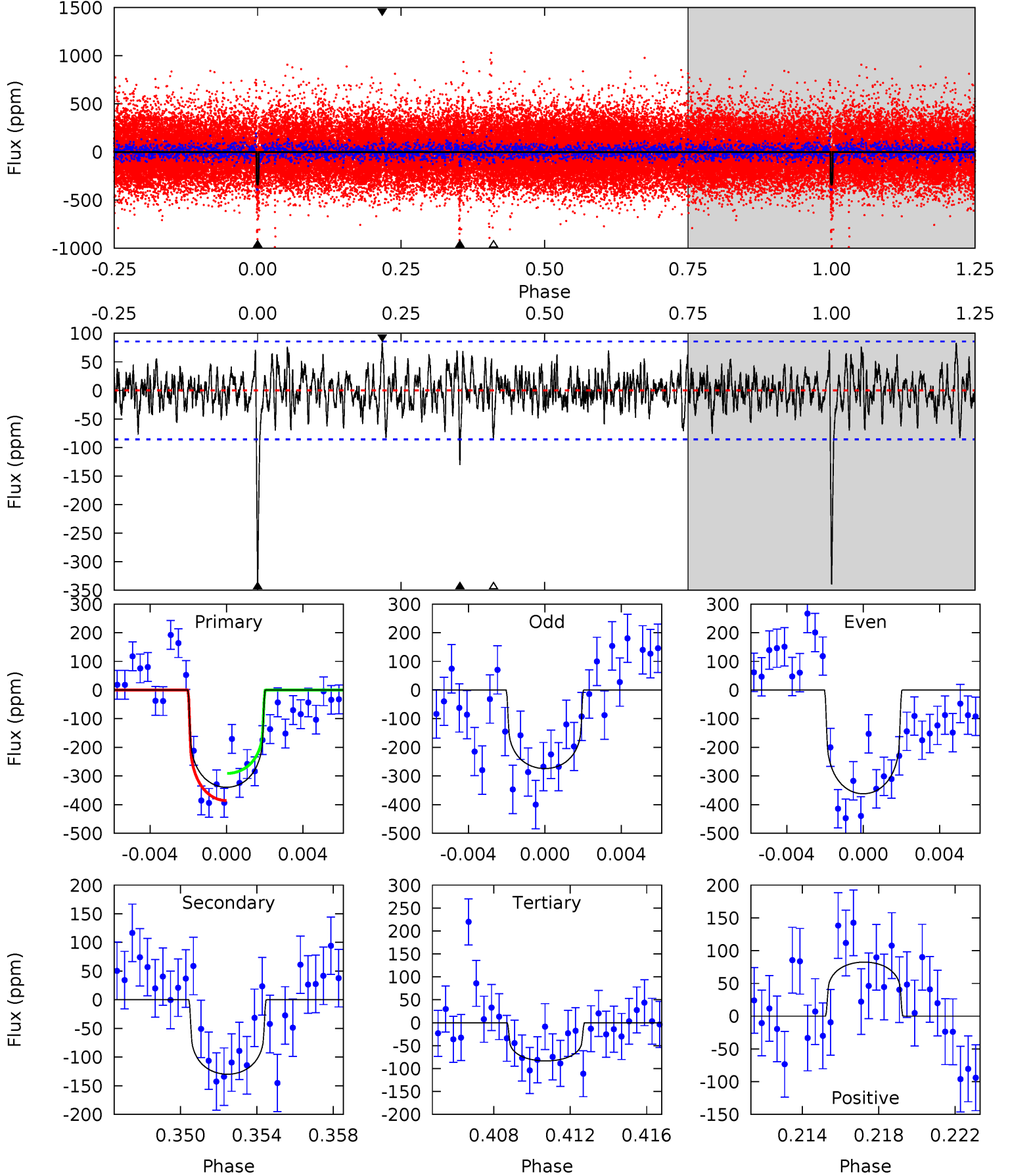
TCE 003433613-01 P=202.571503 Days $T_0=324.238606$ (BKJD)



DV Model-Shift Uniqueness Test

003433613-01, P = 202.593687 Days, E = 121.586330 Days

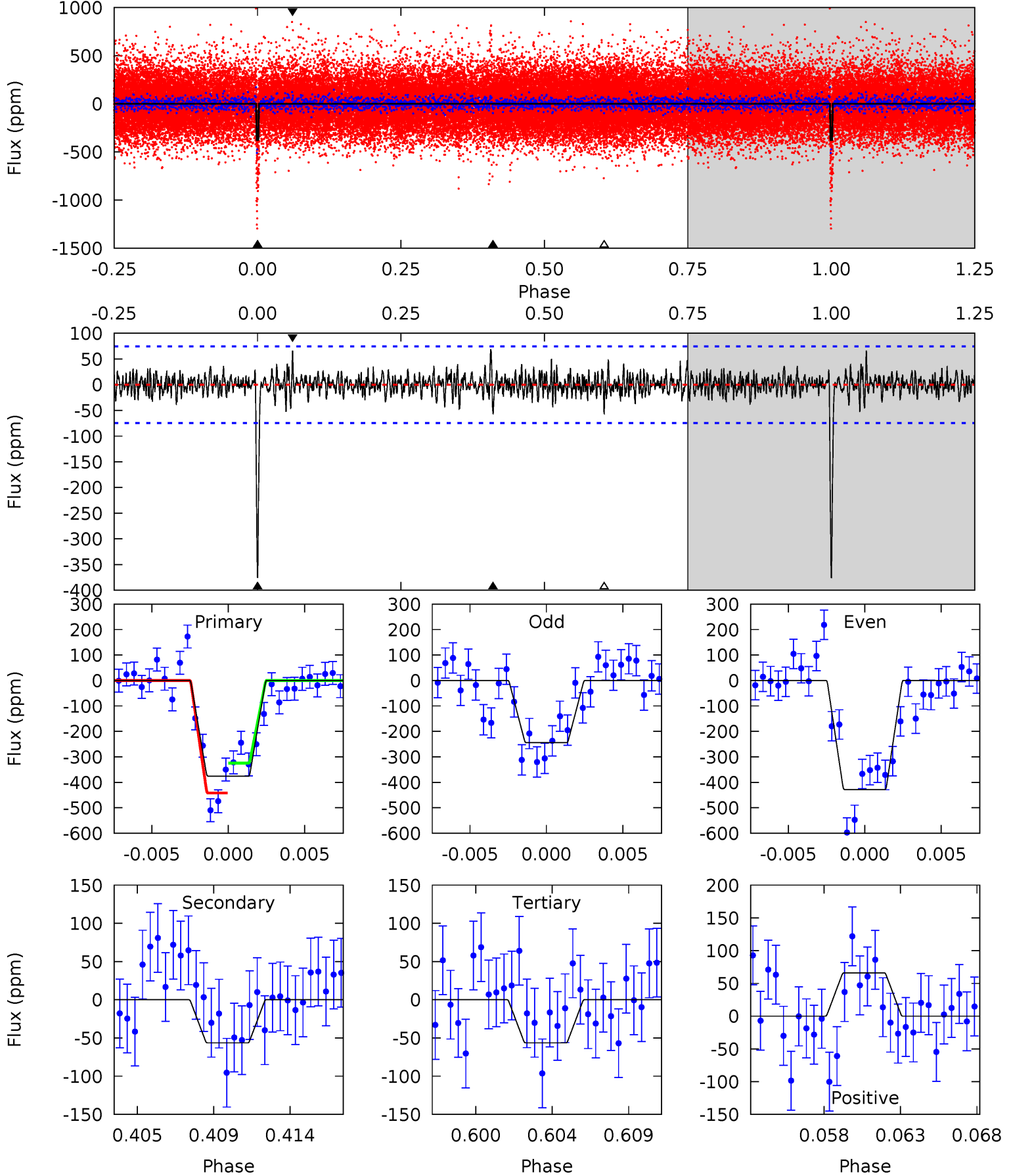
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	7.89	5.06	5.01	5.20	2.89	1.52	15.6	15.6	2.83	2.88	2.32	1.26	0.20	2.88



Alt Model-Shift Uniqueness Test

003433613-01, P = 202.571503 Days, E = 121.667103 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.0	3.90	3.90	4.56	5.16	2.82	1.05	22.1	21.4	0.00	-0.66	5.50	1.58	0.15	4.04



Stellar Parameters For KIC 003433613

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5735^{+170}_{-170}	$3.707^{+0.624}_{-0.156}$	$0.120^{+0.250}_{-0.250}$	$2.788^{+0.712}_{-1.660}$	$1.442^{+0.152}_{-0.457}$	$0.094^{+0.937}_{-0.044}$
	+3%/-3%	+17%/-4%	+208%/-208%	+26%/-60%	+11%/-32%	+1000%/-47%
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 003433613-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-130 ± 16	$4.59^{+2.89}_{-2.30}$	665^{+57}_{-107}	4733^{+1621}_{-638}	1877^{+5812}_{-1153}
Alt.	-56 ± 14	$5.35^{+3.12}_{-2.37}$	662^{+58}_{-107}	3843^{+805}_{-474}	575^{+1385}_{-337}

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

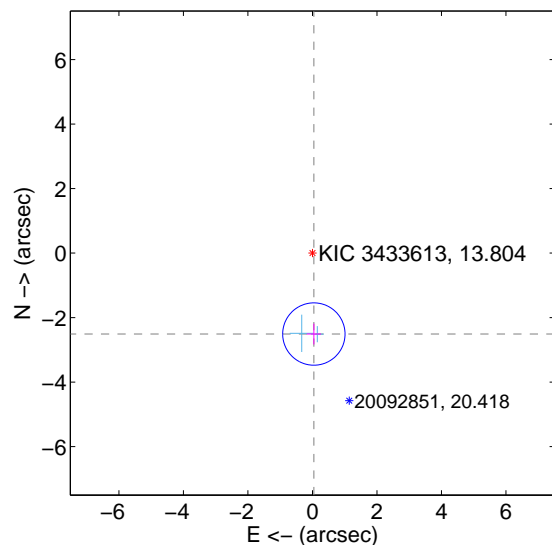
Supplemental centroid analysis for 003433613-01. Kepler magnitude: 13.80. Transit SNR 11.56

There are 2 quarters with good PRF difference image offsets

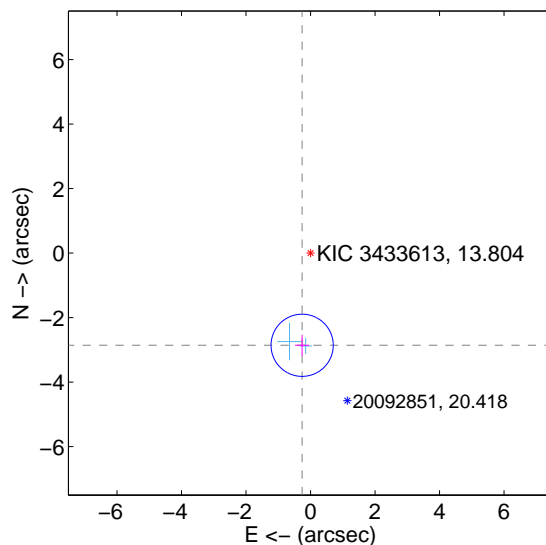
The direct PRF centroid is offset from the target star catalog position by about 0.41 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.510 ± 0.322	7.79	-0.044 ± 0.220	-2.509 ± 0.322
PRF-fit source offset from KIC position	2.870 ± 0.321	8.93	0.260 ± 0.220	-2.858 ± 0.322
photometric centroid source offset	2.19 ± 1.35	1.62	0.84 ± 1.26	-2.02 ± 1.37

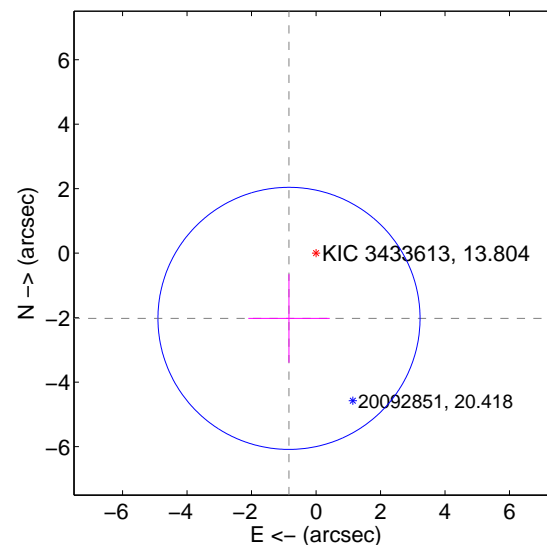
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

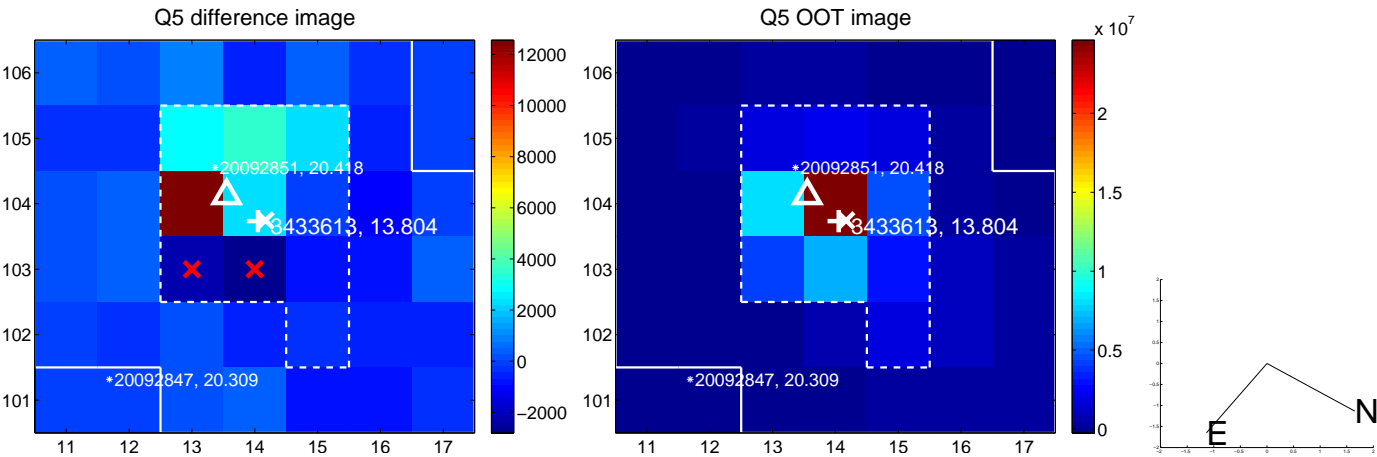


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



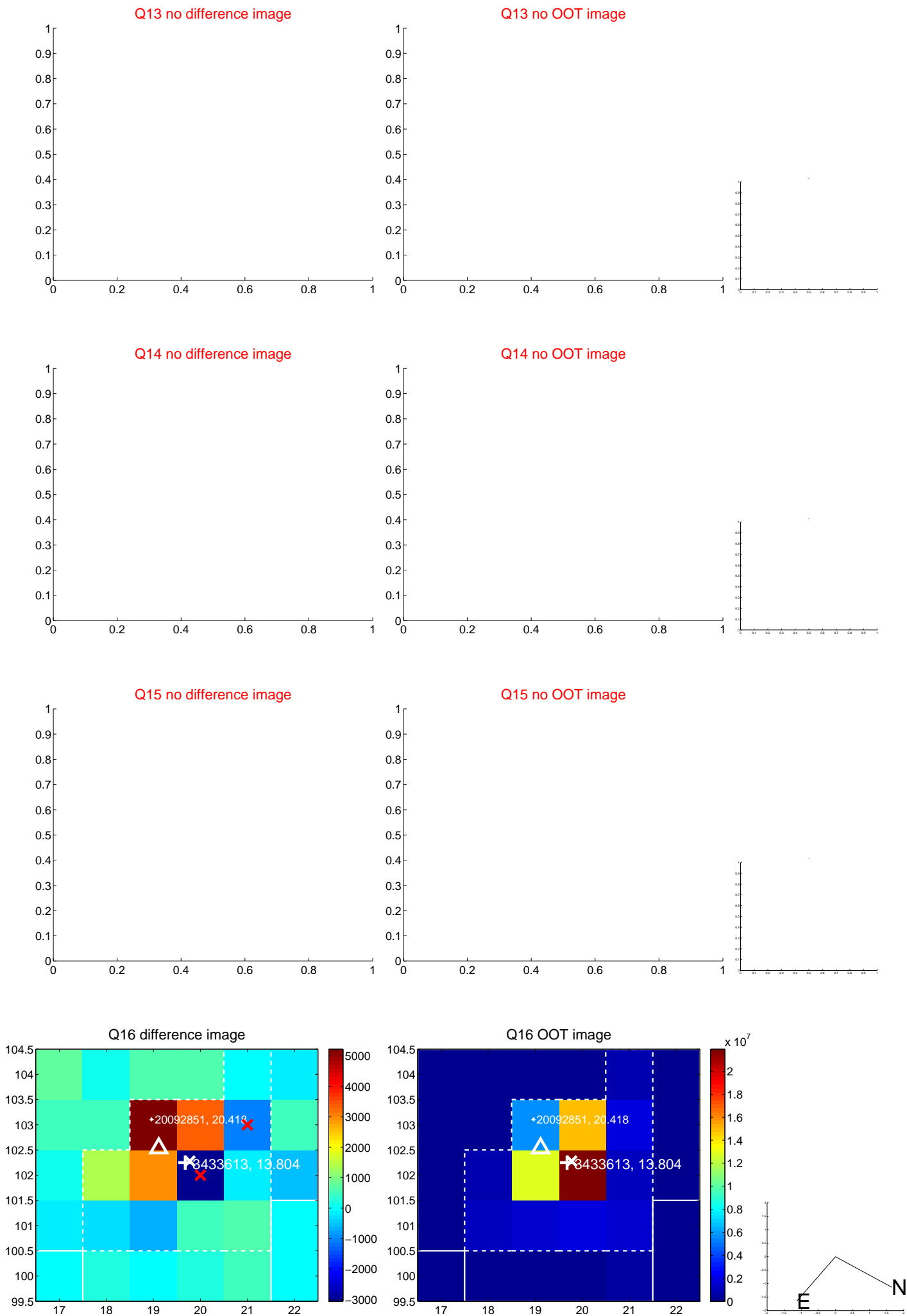
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



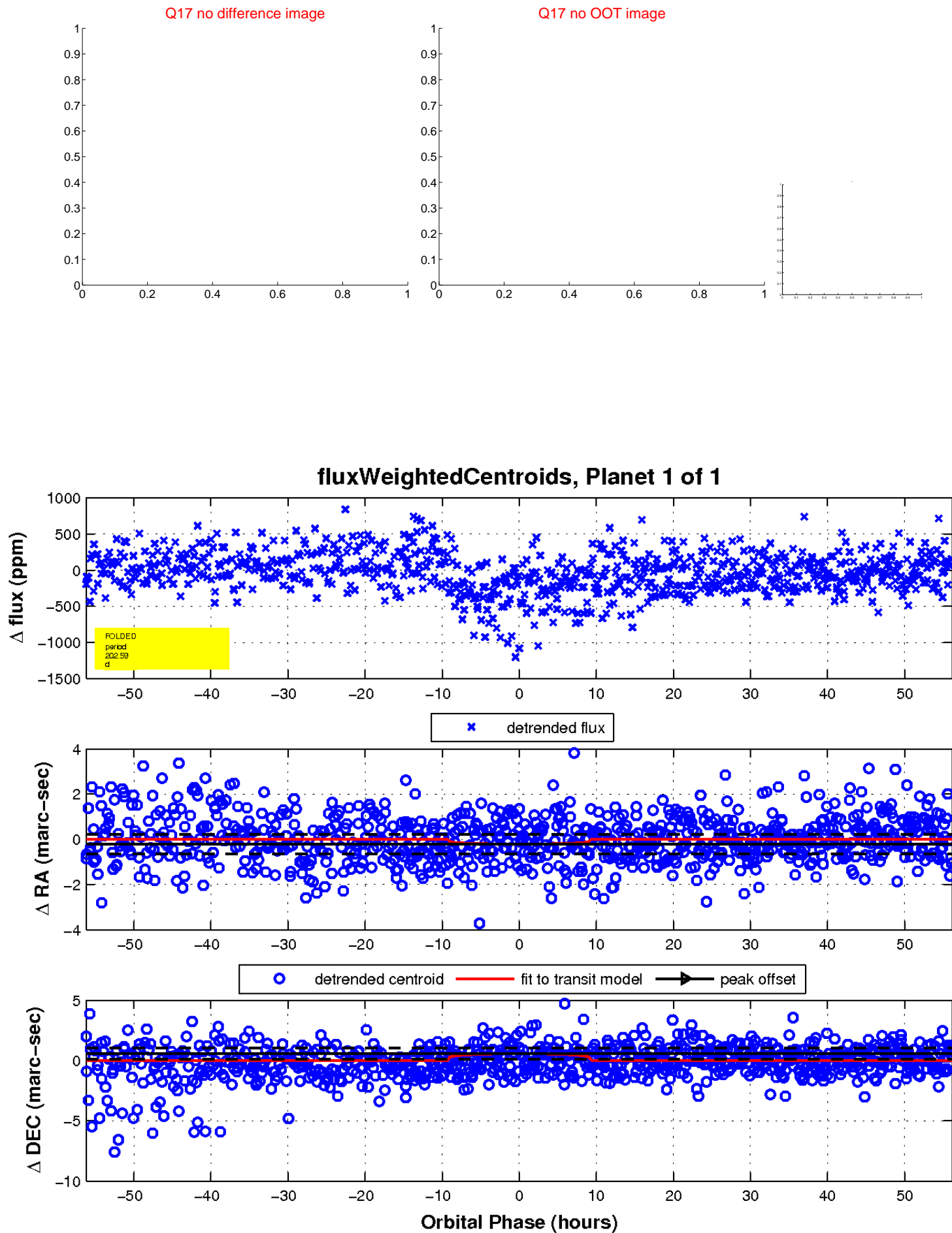
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

