

KIC 003734501

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})
003734501-01	OBS	8244.01	31.190886	142.503474	285.7	6.879	7.2	7.9	6.44	4785	13.07	387.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003734501-01	OBS	FP	0.26	1	0	0	0	MOD_NONUNIQ_ALT

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

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

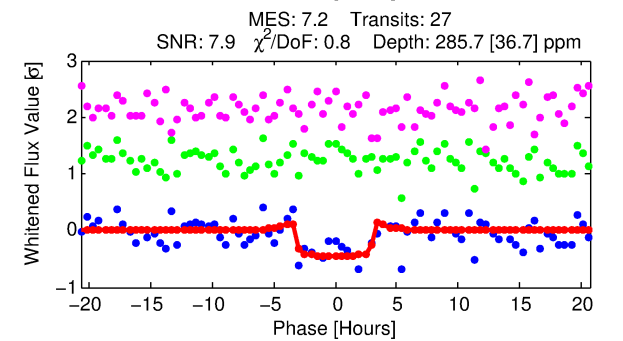
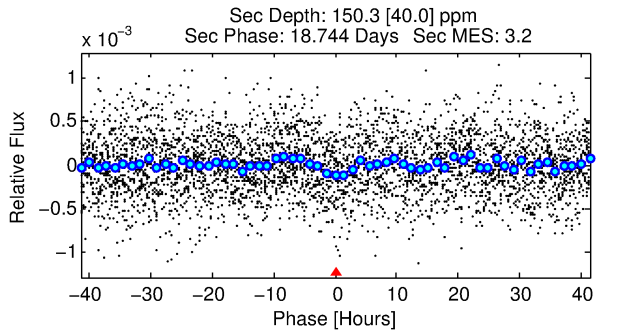
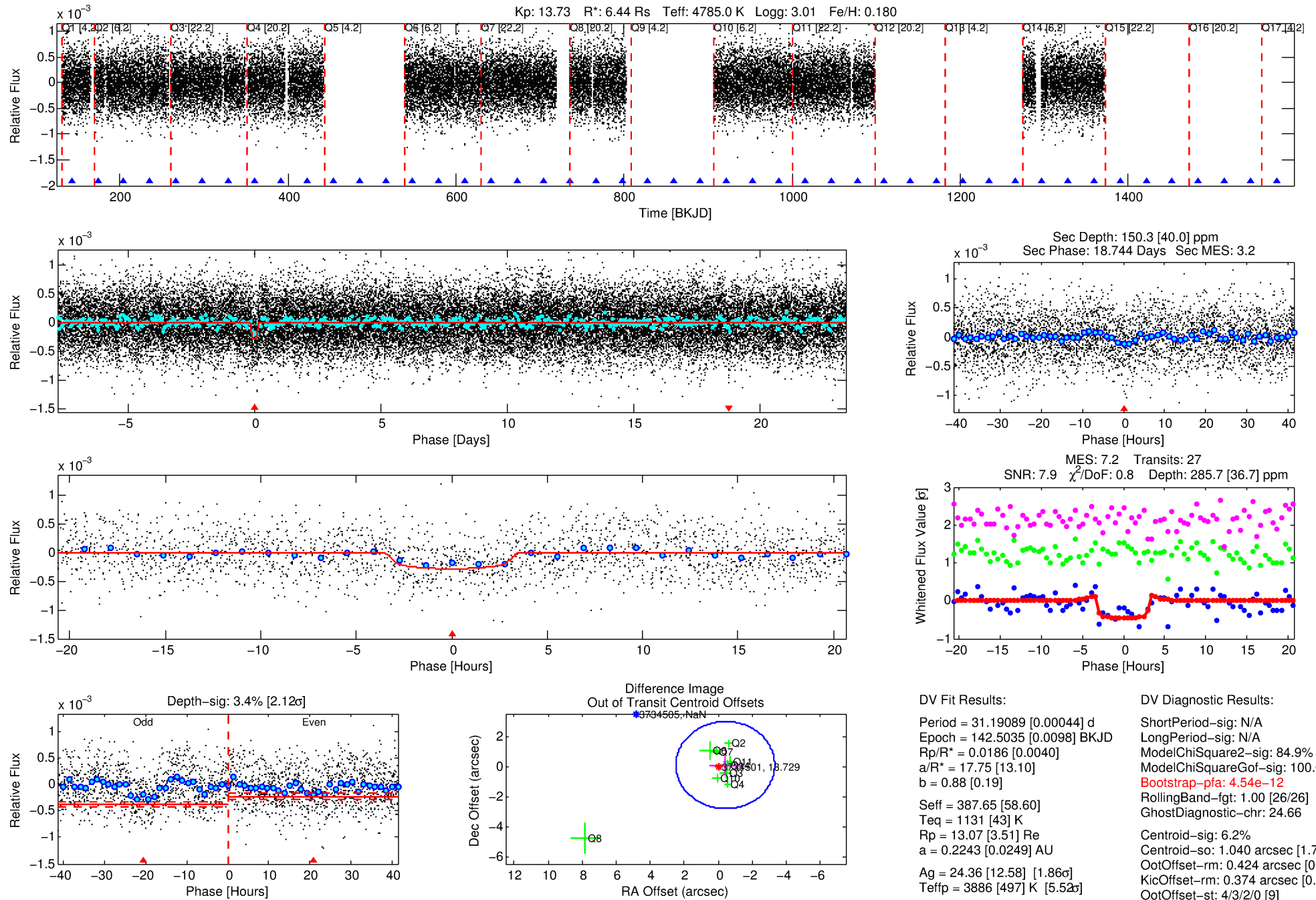
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003734501-01

No Significant Match Found

DV One-Page Summary

KIC: 3734501 Candidate: 1 of 1 Period: 31.191 d



DV Fit Results:

Period = 31.19089 [0.00044] d
 Epoch = 142.5035 [0.0098] BKJD
 Rp/R* = 0.0186 [0.0040]
 a/R* = 17.75 [13.10]
 b = 0.88 [0.19]
 Seff = 387.65 [58.60]
 Teq = 1131 [43] K
 Rp = 13.07 [3.51] Re
 a = 0.2243 [0.0249] AU
 Ag = 24.36 [12.58] [1.86 σ]
 Tefp = 3886 [497] K [5.52 σ]

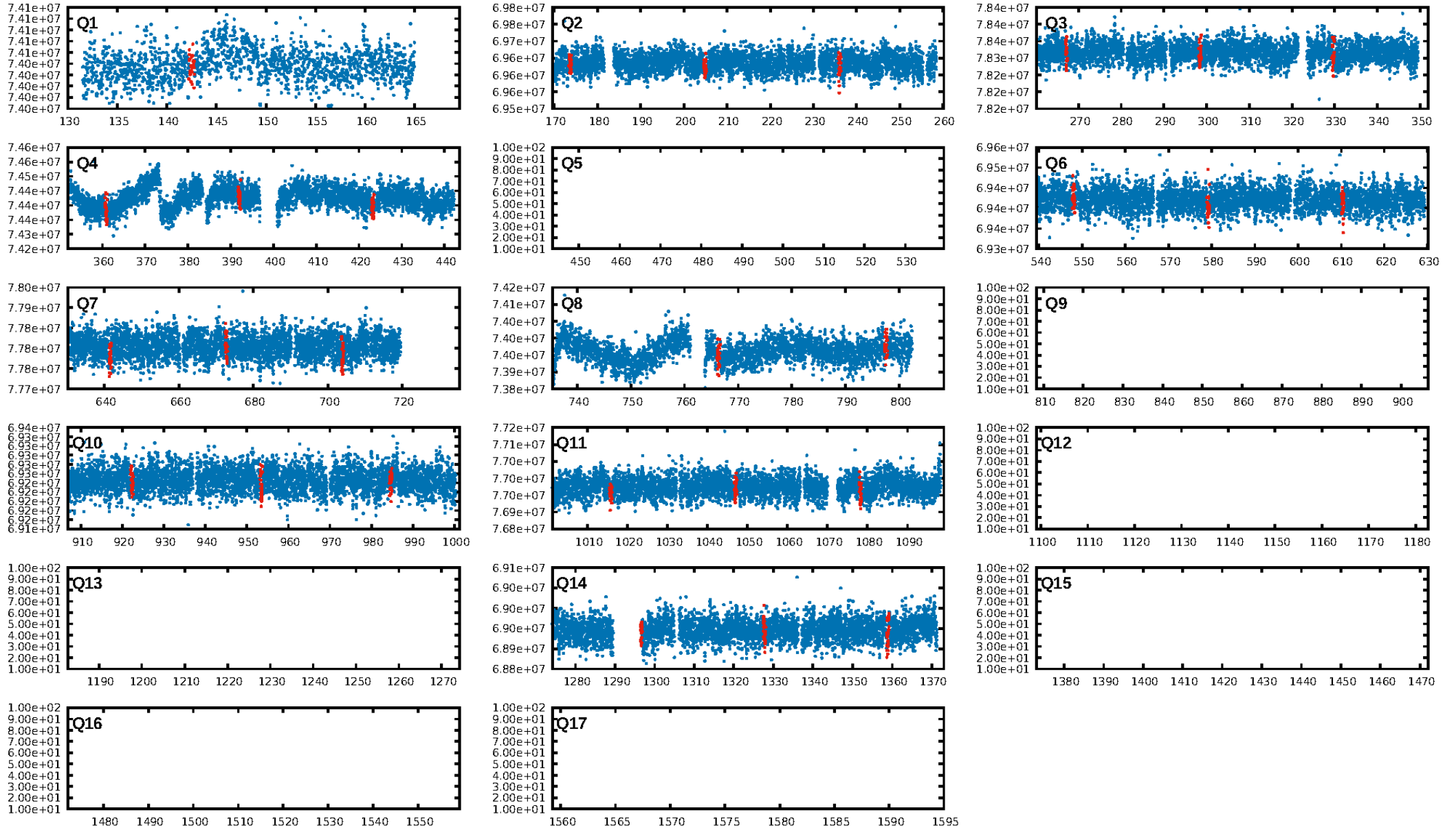
DV Diagnostic Results:

ShortPeriod-sig: N/A
 LongPeriod-sig: N/A
 ModelChiSquare2-sig: 84.9%
 ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.54e-12
 RollingBand-fgt: 1.00 [26/26]
 GhostDiagnostic-chr: 24.66
 Centroid-sig: 6.2%
 Centroid-so: 1.040 arcsec [1.76 σ]
 OotOffset-rm: 0.424 arcsec [0.44 σ]
 KicOffset-rm: 0.374 arcsec [0.77 σ]
 OotOffset-st: 4/3/2/0 [9]
 KicOffset-st: 4/3/2/0 [9]
 DiffImageQuality-fgm: 0.89 [8/9]
 DiffImageOverlap-fno: 1.00 [10/10]

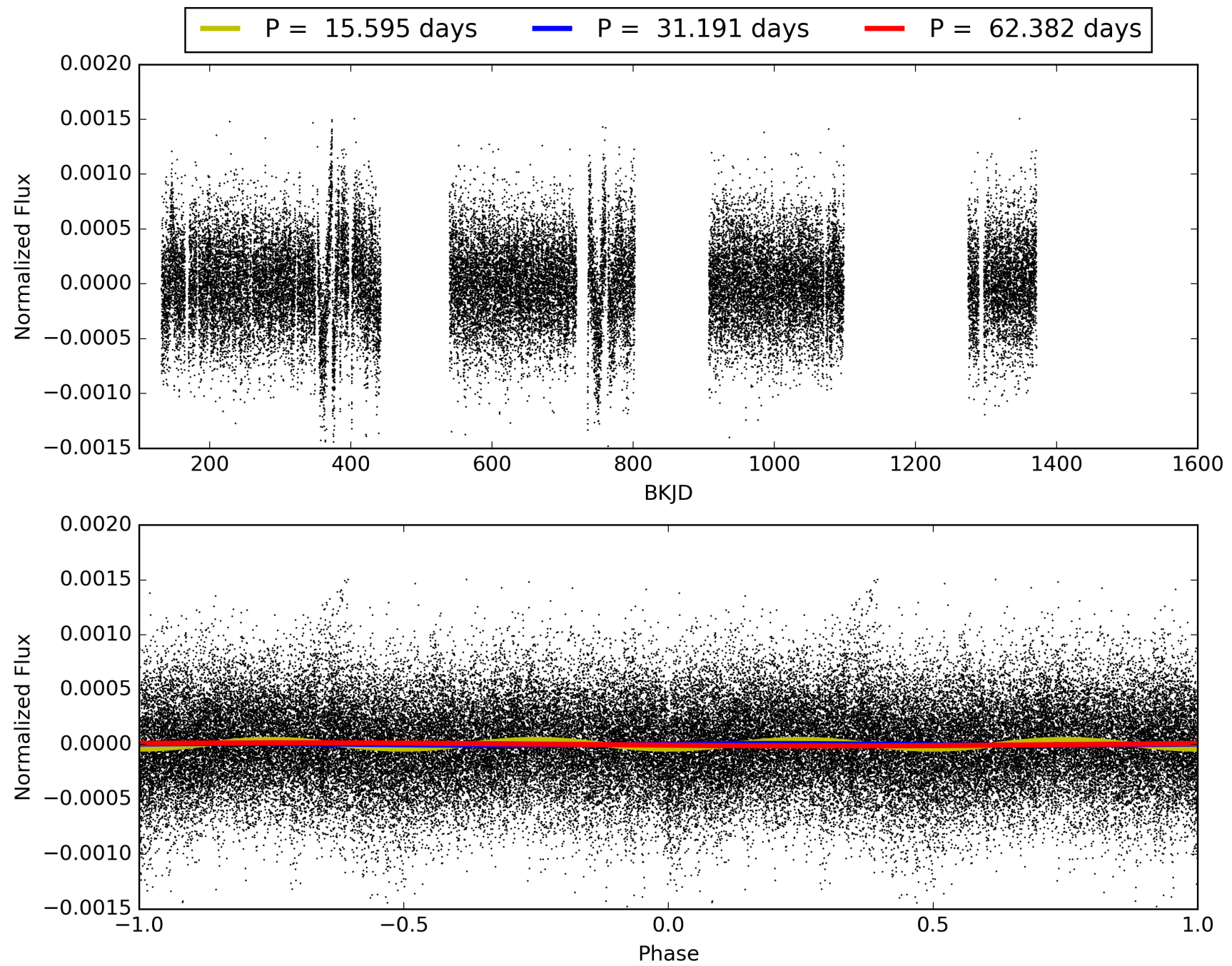
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:29:15 Z

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

TCE 003734501-01, PDC Light Curves

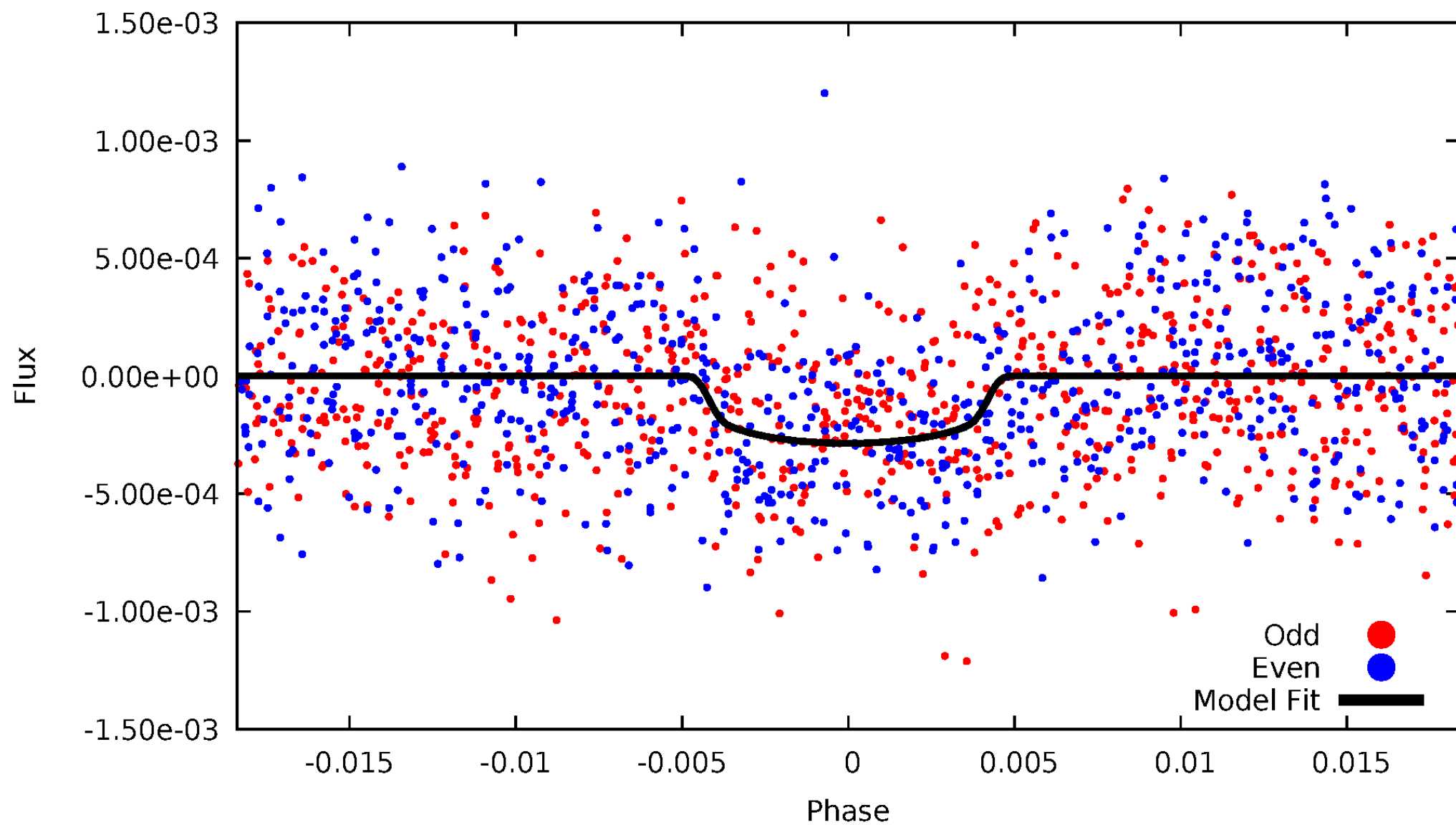


TCE 003734501-01



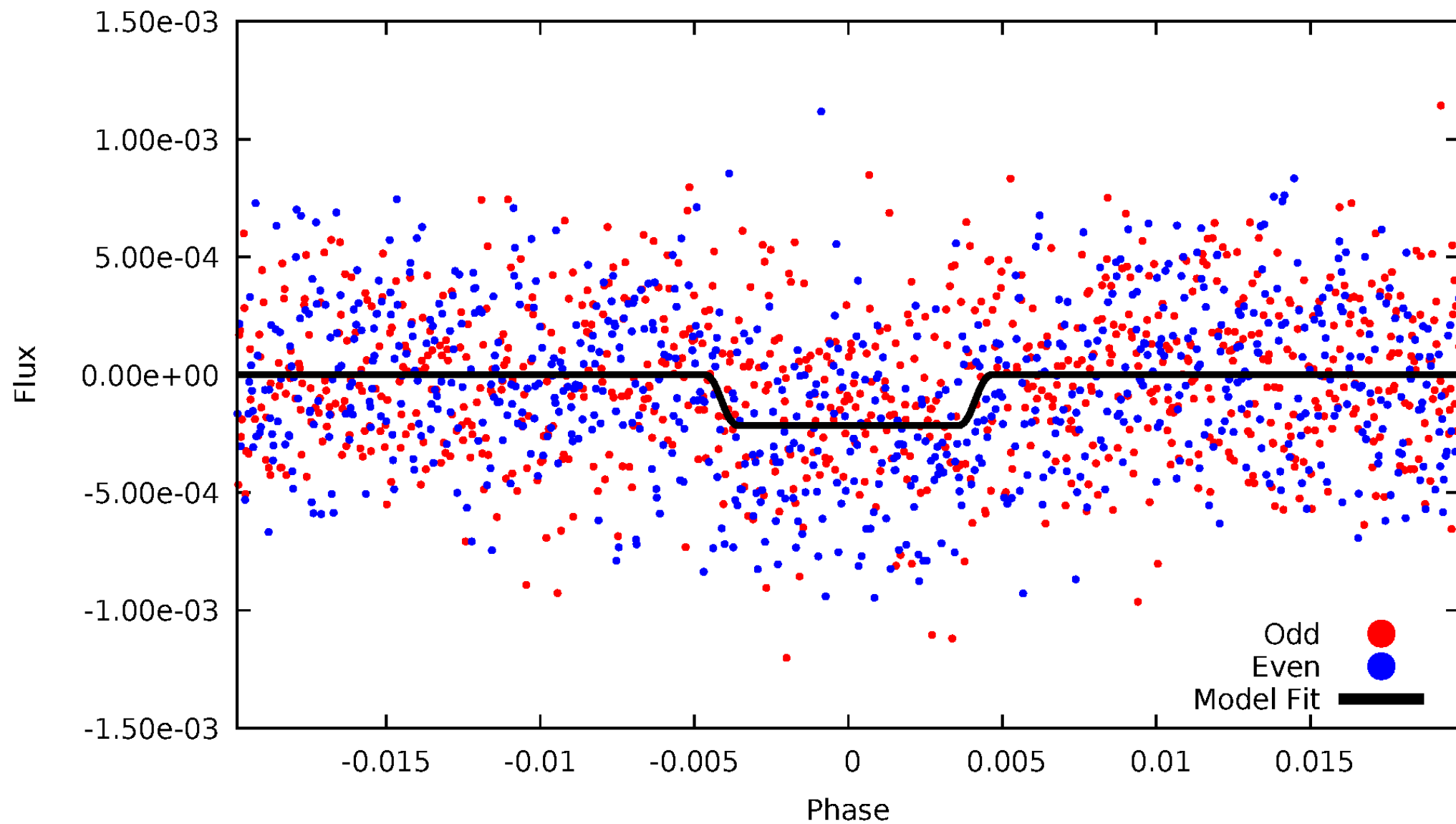
DV Odd/Even

TCE 003734501-01

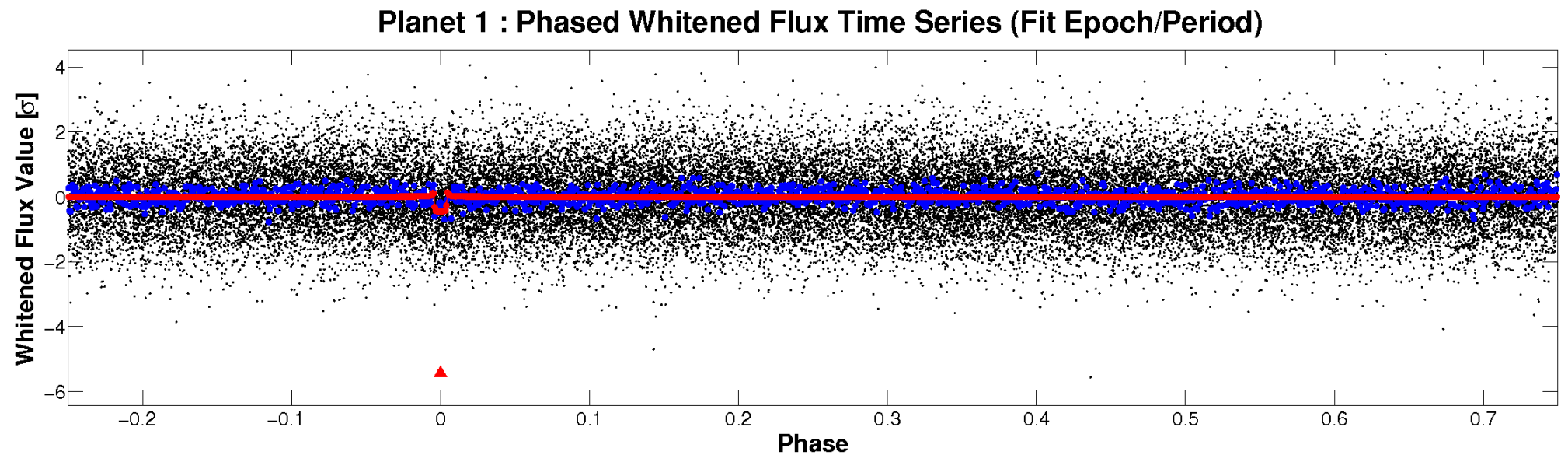
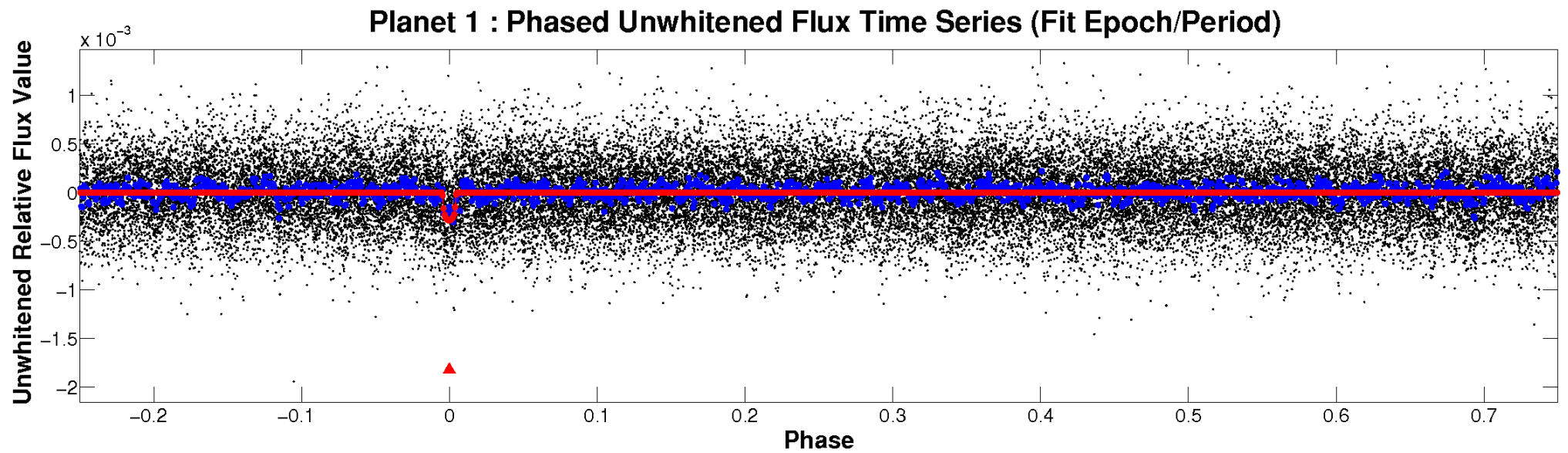


ALT Odd/Even

TCE 003734501-01

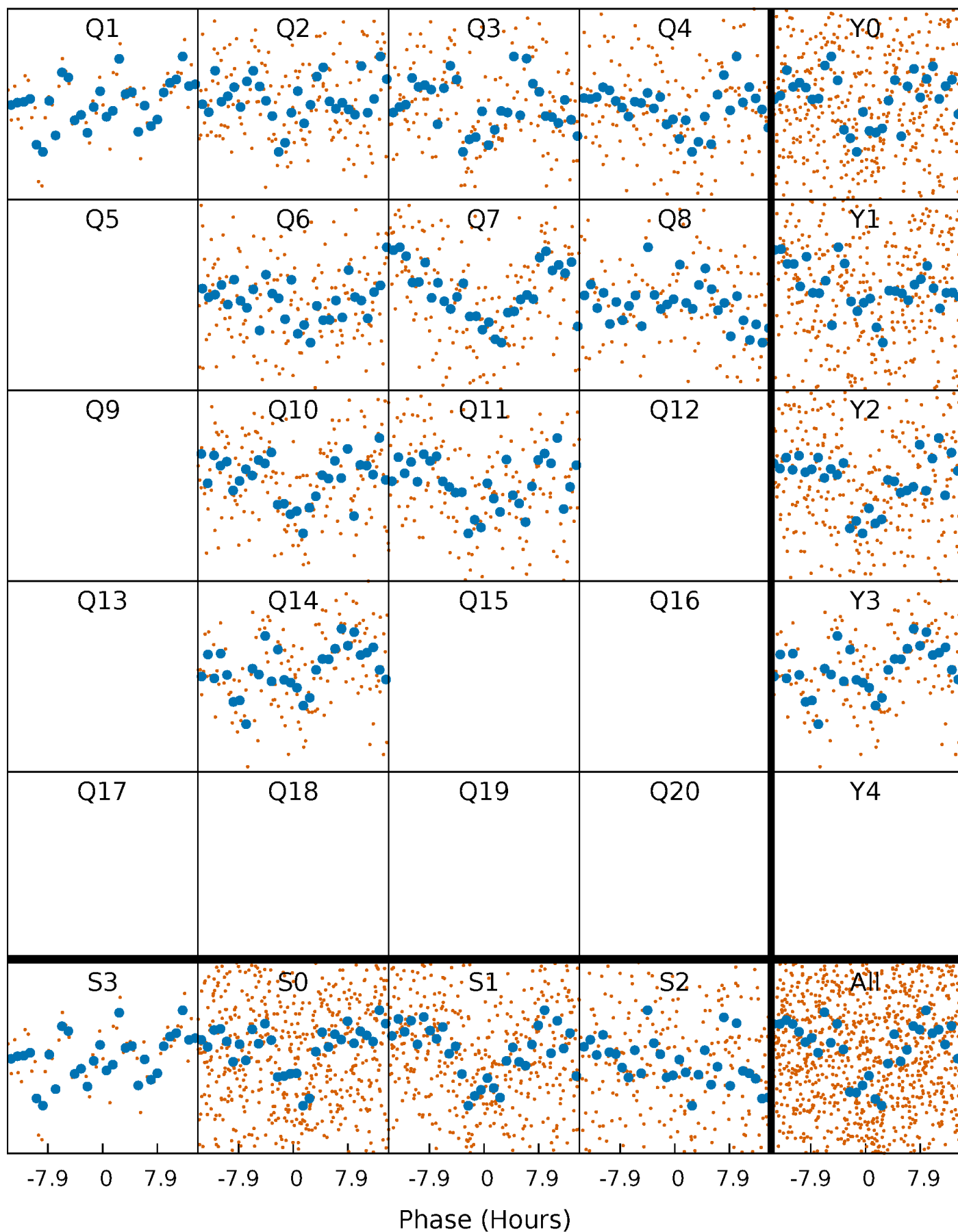


Non-Whitened Vs. Whitened Light Curve



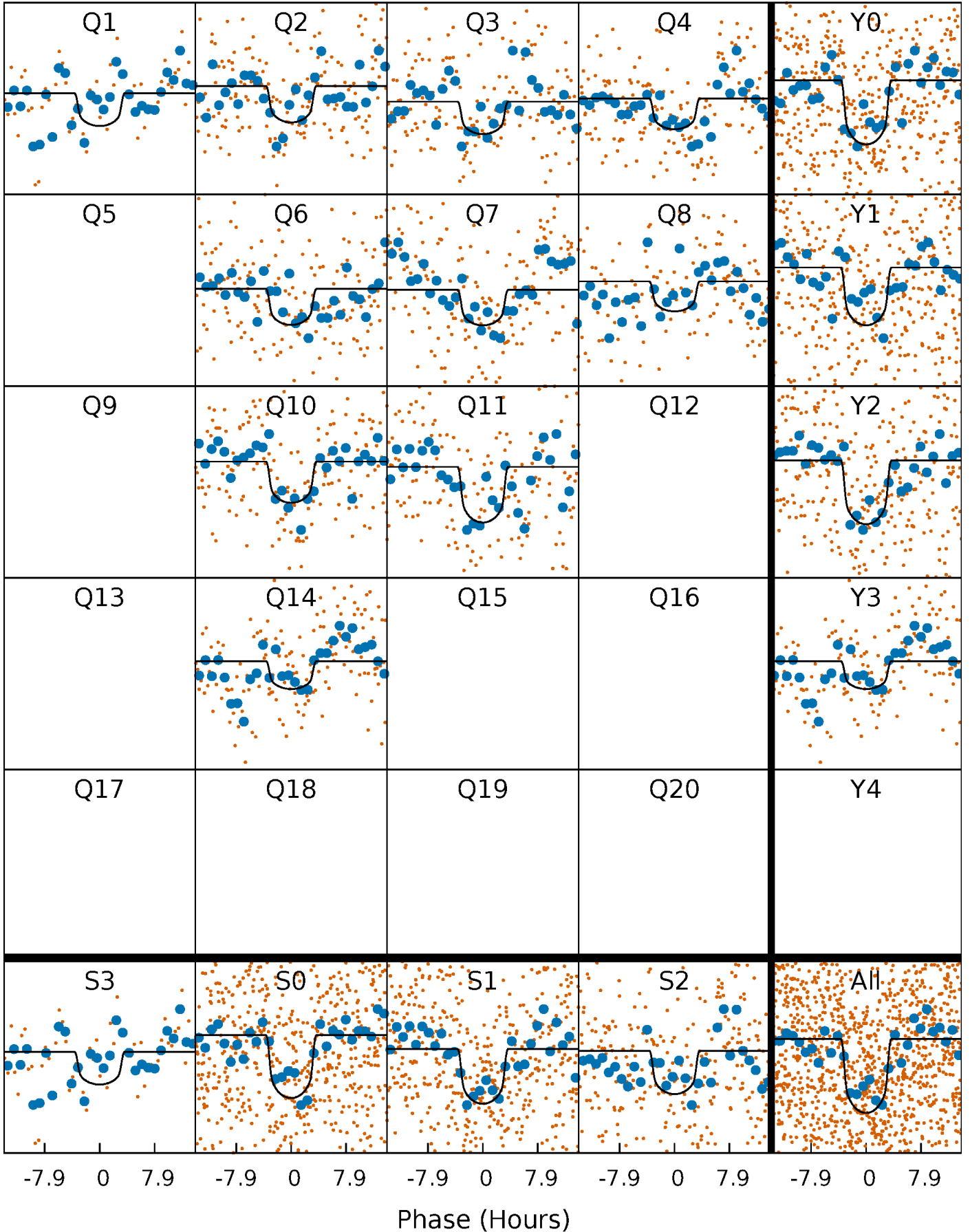
PDC Quarter-Phased Transit Curves

TCE 003734501-01 P= 31.190886 Days $T_0=142.503474$ (BKJD)



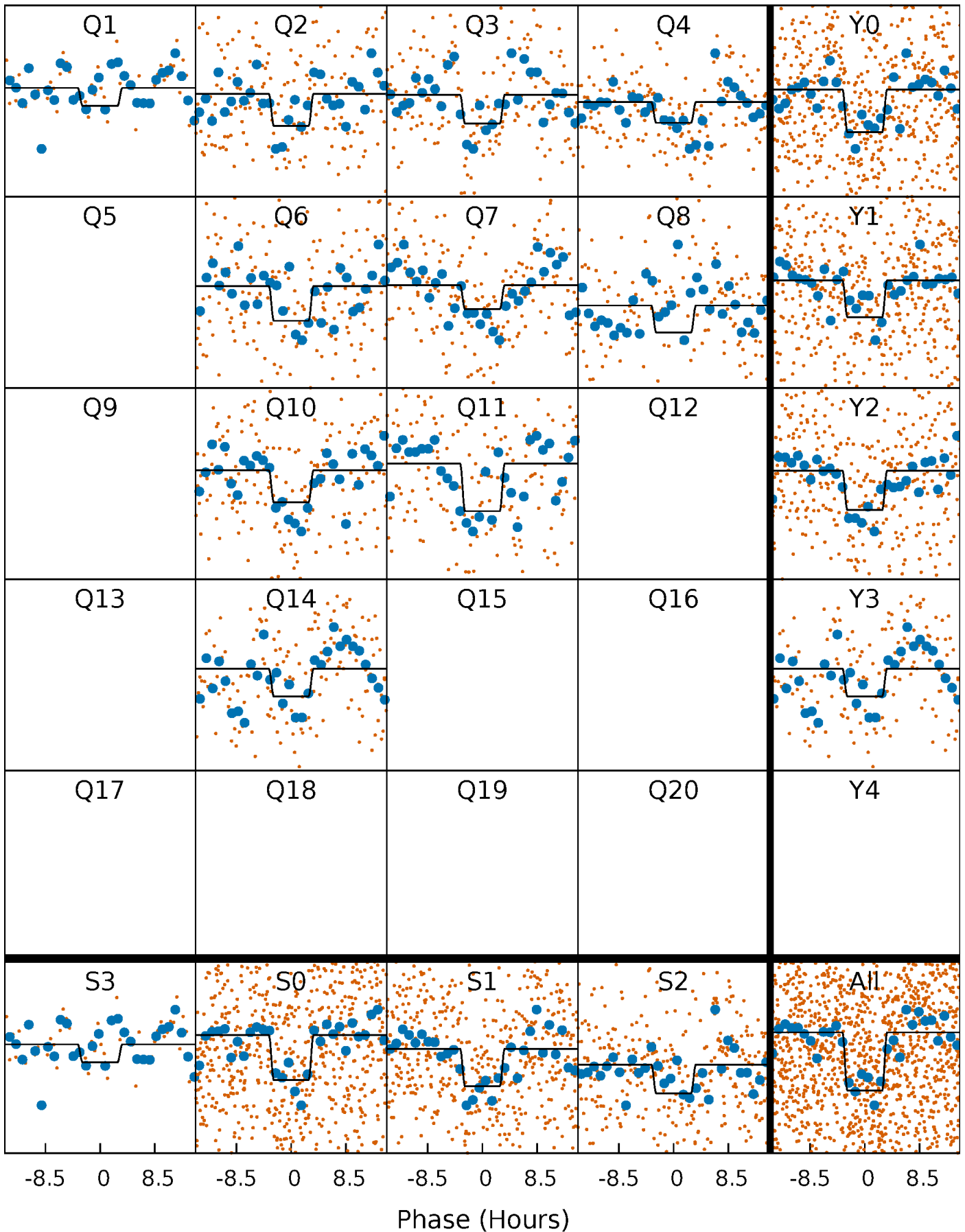
DV Quarter-Phased Transit Curves

TCE 003734501-01 P= 31.190886 Days $T_0=142.503474$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

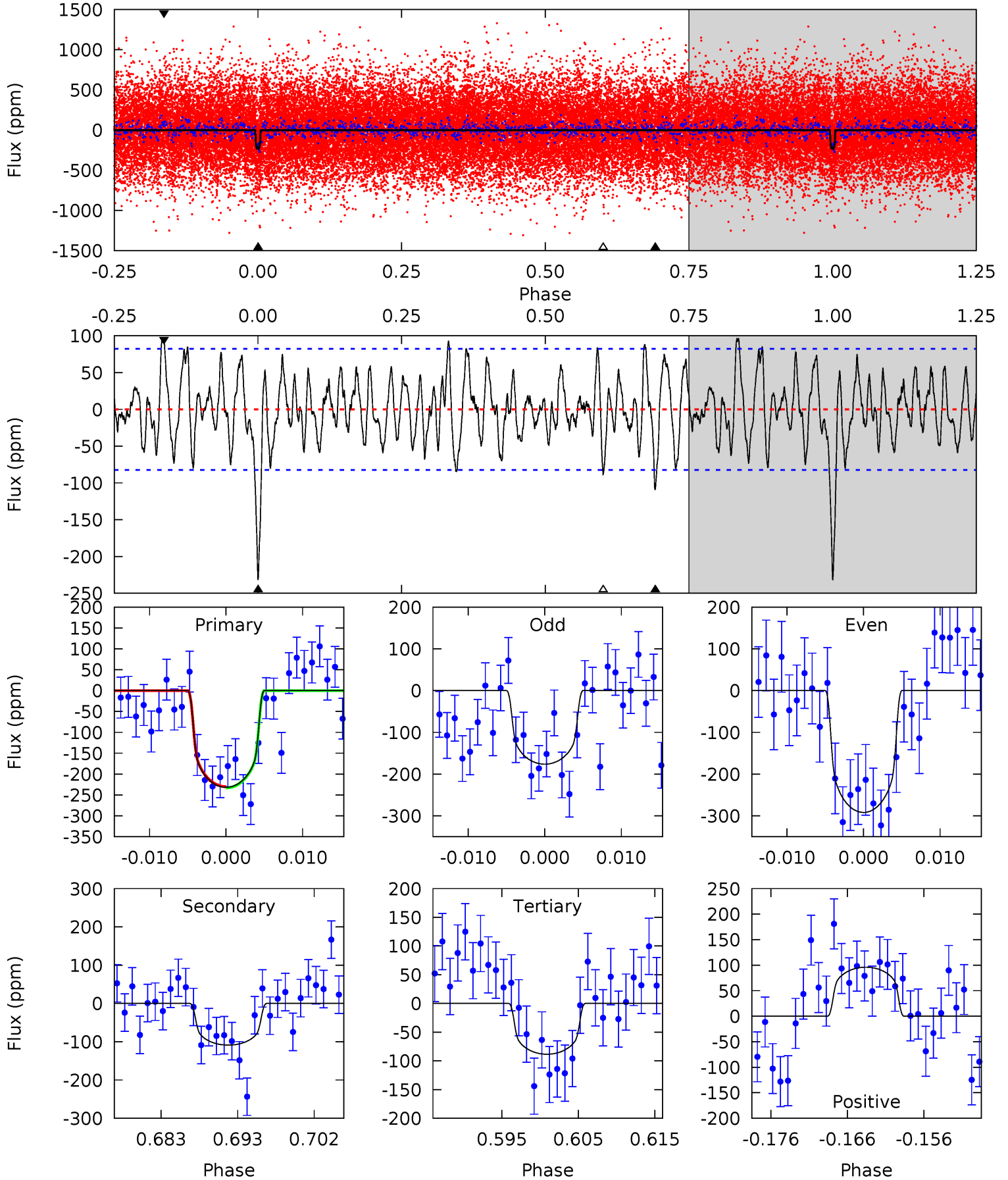
TCE 003734501-01 P= 31.191517 Days $T_0=142.499744$ (BKJD)



DV Model-Shift Uniqueness Test

003734501-01, P = 31.190886 Days, E = 111.312588 Days

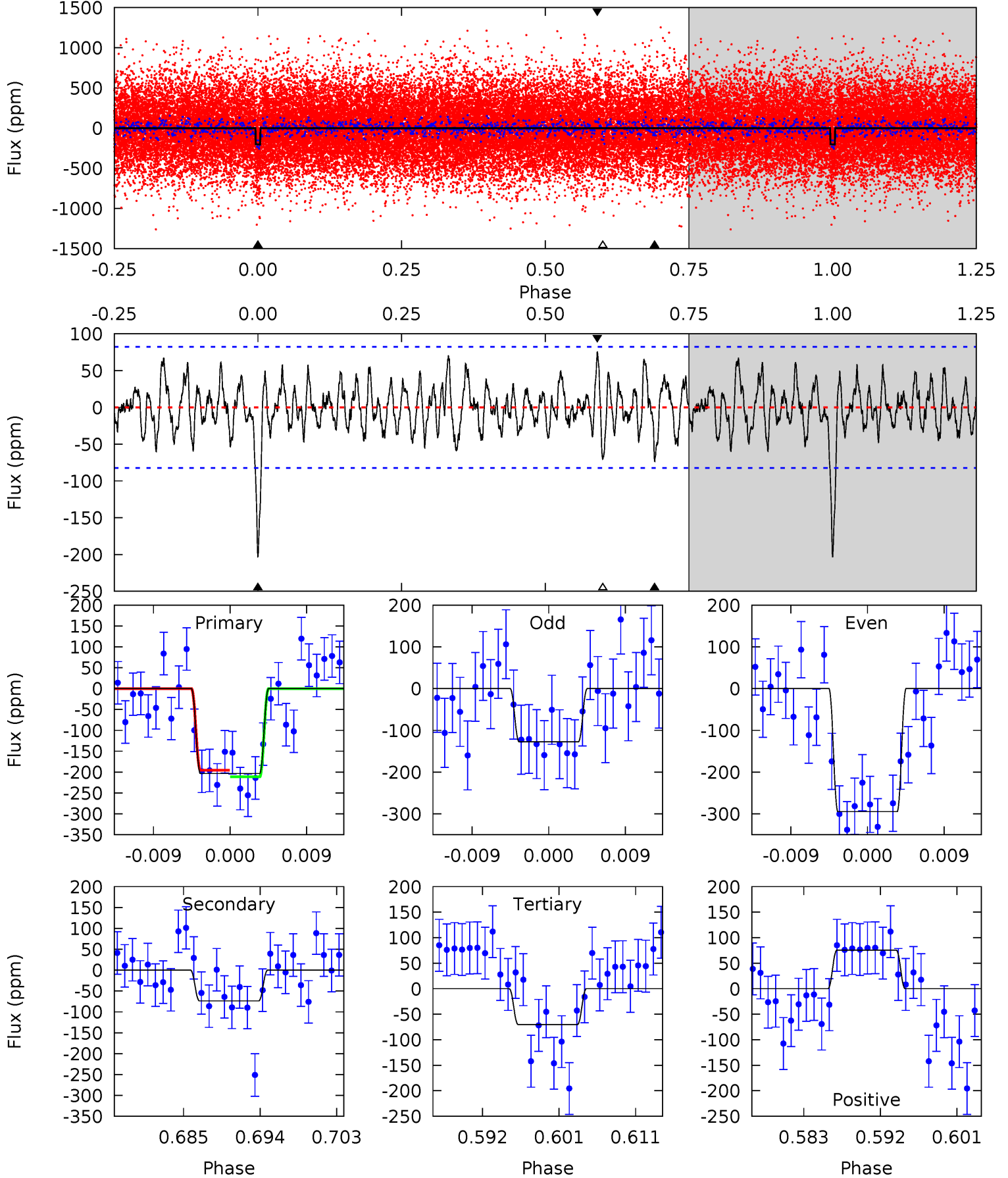
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	6.65	5.40	5.87	5.03	2.58	2.27	8.75	8.28	1.25	0.78	3.54	1.19	0.29	0.09



Alt Model-Shift Uniqueness Test

003734501-01, P = 31.191517 Days, E = 111.308227 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	4.50	4.30	4.63	5.04	2.60	1.60	8.16	7.83	0.20	-0.13	5.12	1.10	0.27	0.48



Stellar Parameters For KIC 003734501

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4785^{+94}_{-113}	$3.009^{+0.030}_{-0.030}$	$0.180^{+0.150}_{-0.250}$	$6.443^{+0.450}_{-1.050}$	$1.546^{+0.244}_{-0.453}$	$0.008^{+0.002}_{-0.001}$
	+2%/-2%	+1%/-1%	+83%/-139%	+7%/-16%	+16%/-29%	+23%/-11%
Source	PHO1	AST9	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 003734501-01 / KOI 8244.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-109±16	$13.25^{+2.76}_{-2.96}$	1582^{+42}_{-44}	3838^{+390}_{-287}	17^{+12}_{-6}
Alt.	-74±16	$10.23^{+2.76}_{-2.74}$	1585^{+38}_{-46}	3912^{+458}_{-361}	19^{+16}_{-8}

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

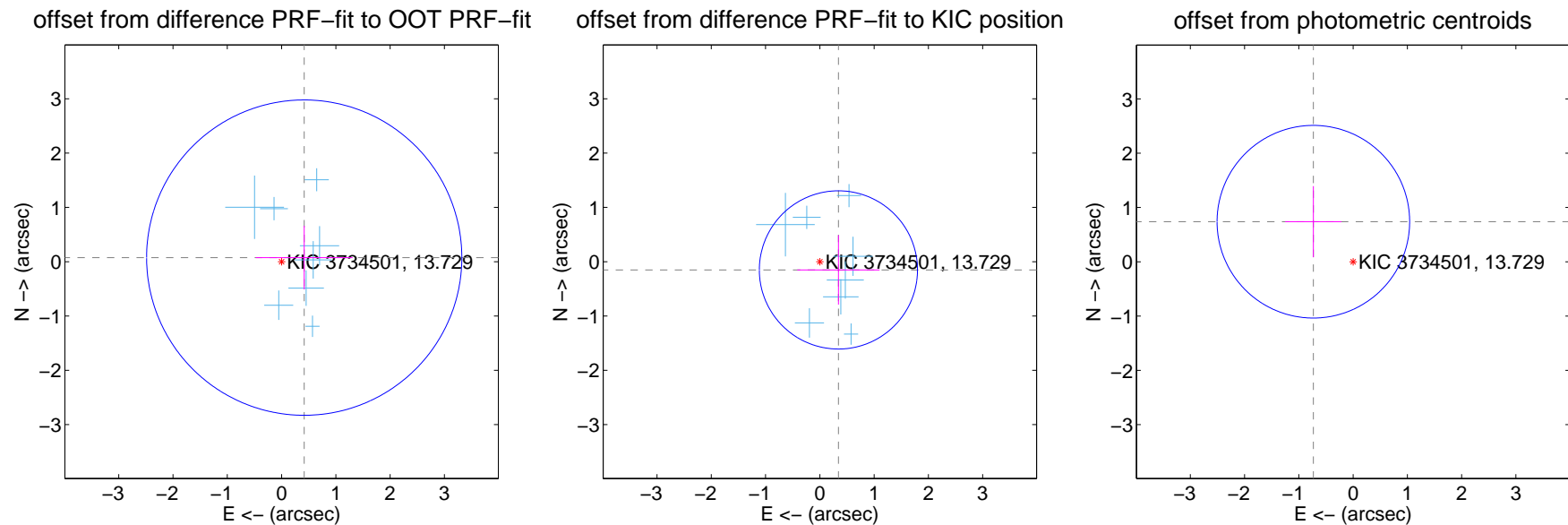
DV Centroid Data

Supplemental centroid analysis for 003734501-01. Kepler magnitude: 13.73. Transit SNR 7.86

There are 8 quarters with good PRF difference image offsets

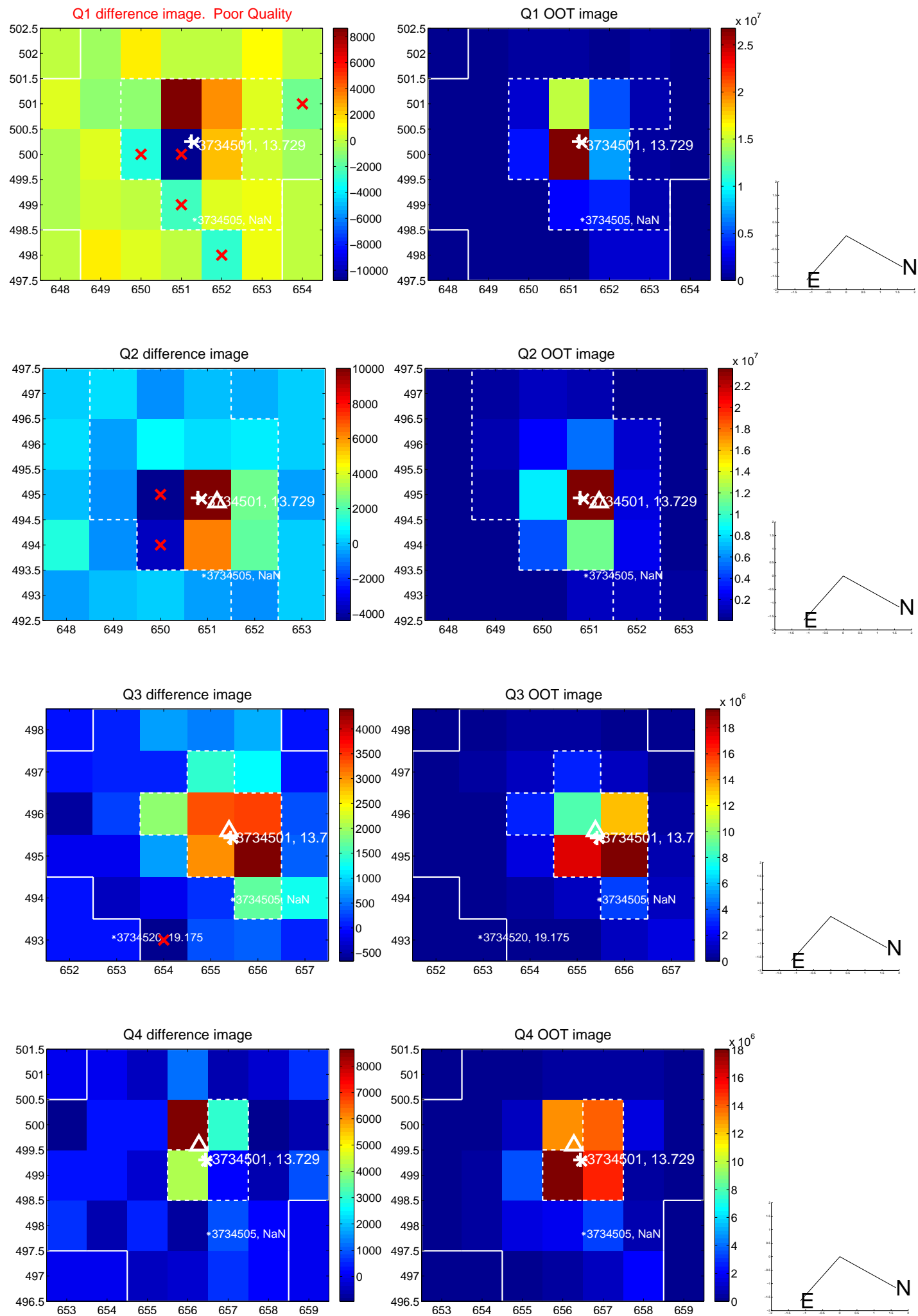
The direct PRF centroid is offset from the target star catalog position by about 0.39 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.424 ± 0.968	0.44	-0.417 ± 0.892	0.075 ± 0.586
PRF-fit source offset from KIC position	0.374 ± 0.486	0.77	-0.342 ± 0.759	-0.151 ± 0.639
photometric centroid source offset	1.04 ± 0.59	1.76	0.73 ± 0.52	0.74 ± 0.66

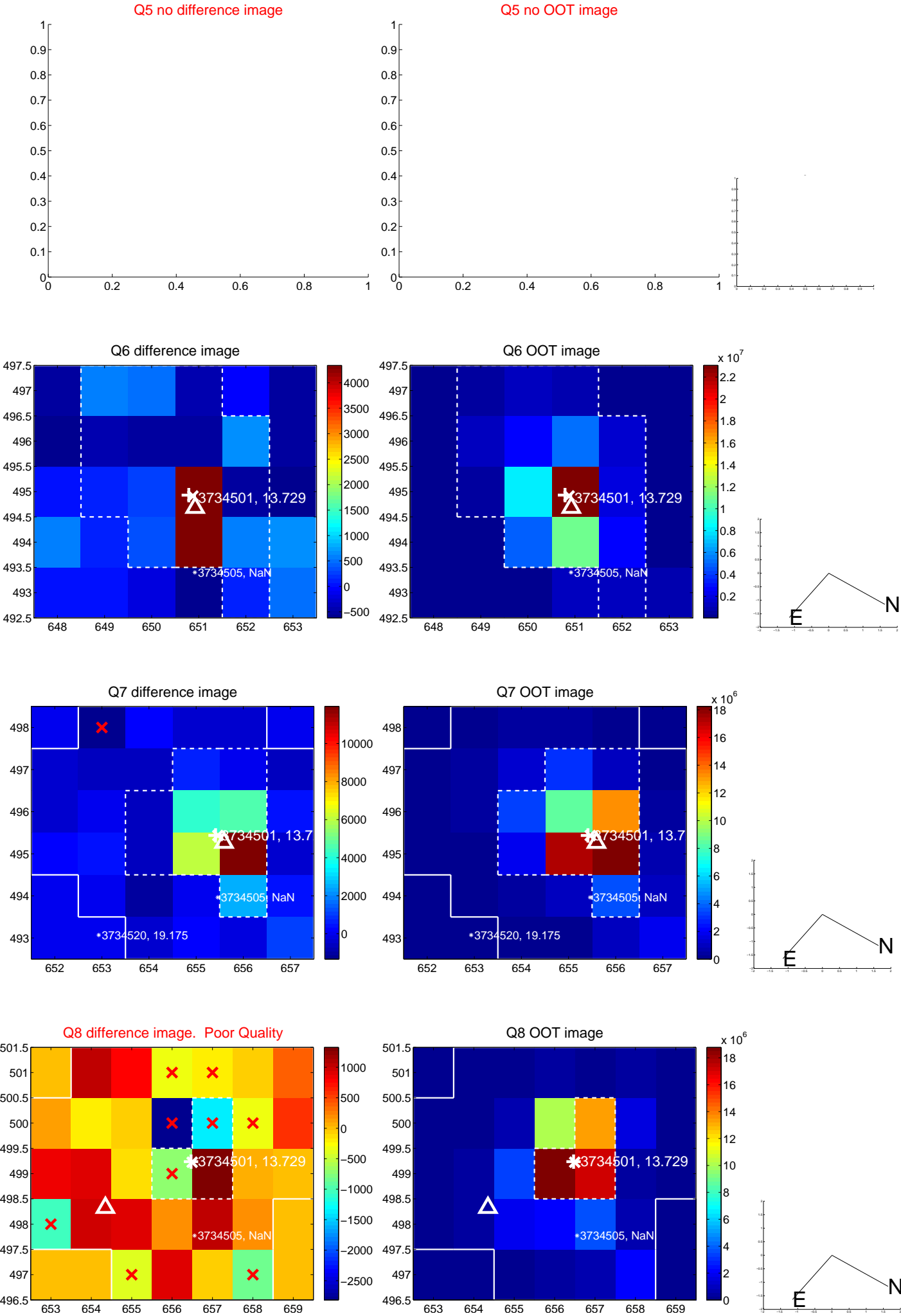


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



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

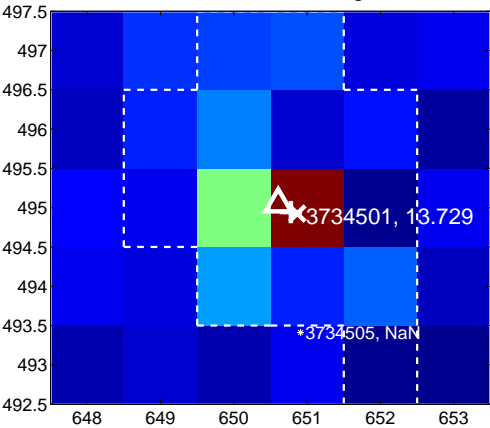
Q9 no difference image



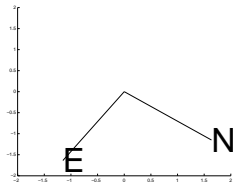
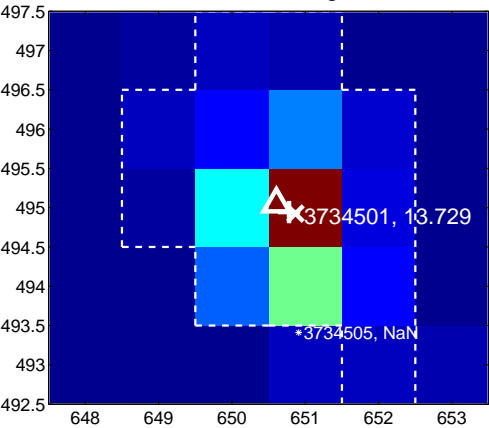
Q9 no OOT image



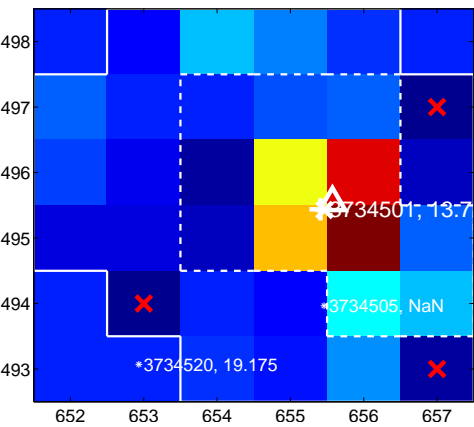
Q10 difference image



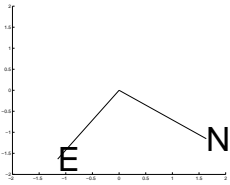
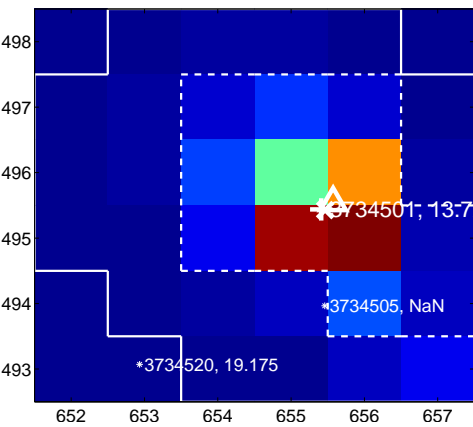
Q10 OOT image



Q11 difference image



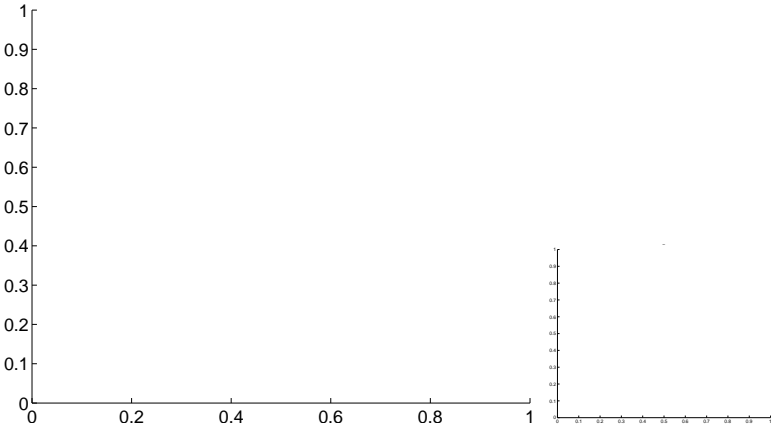
Q11 OOT image



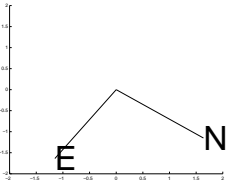
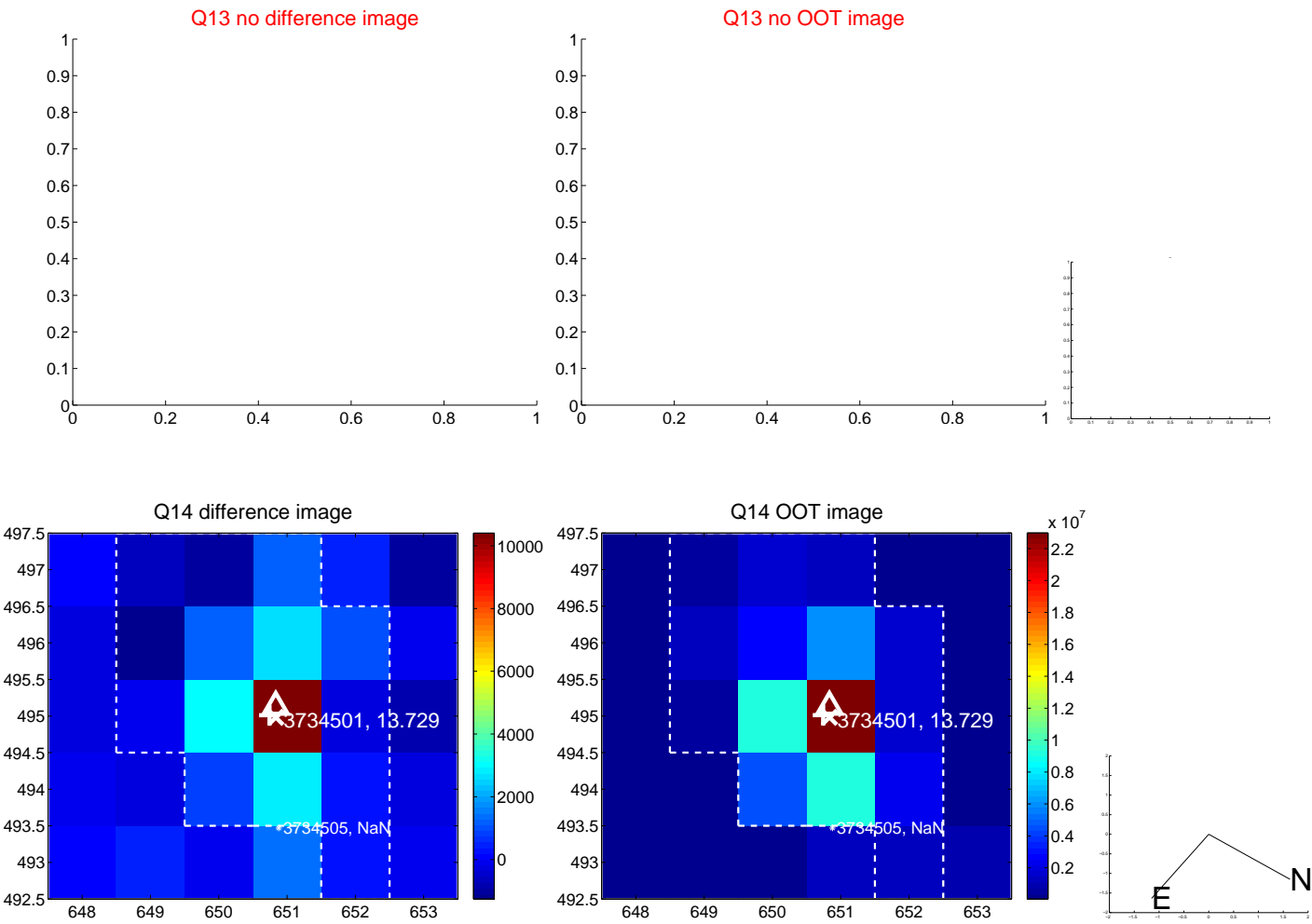
Q12 no difference image



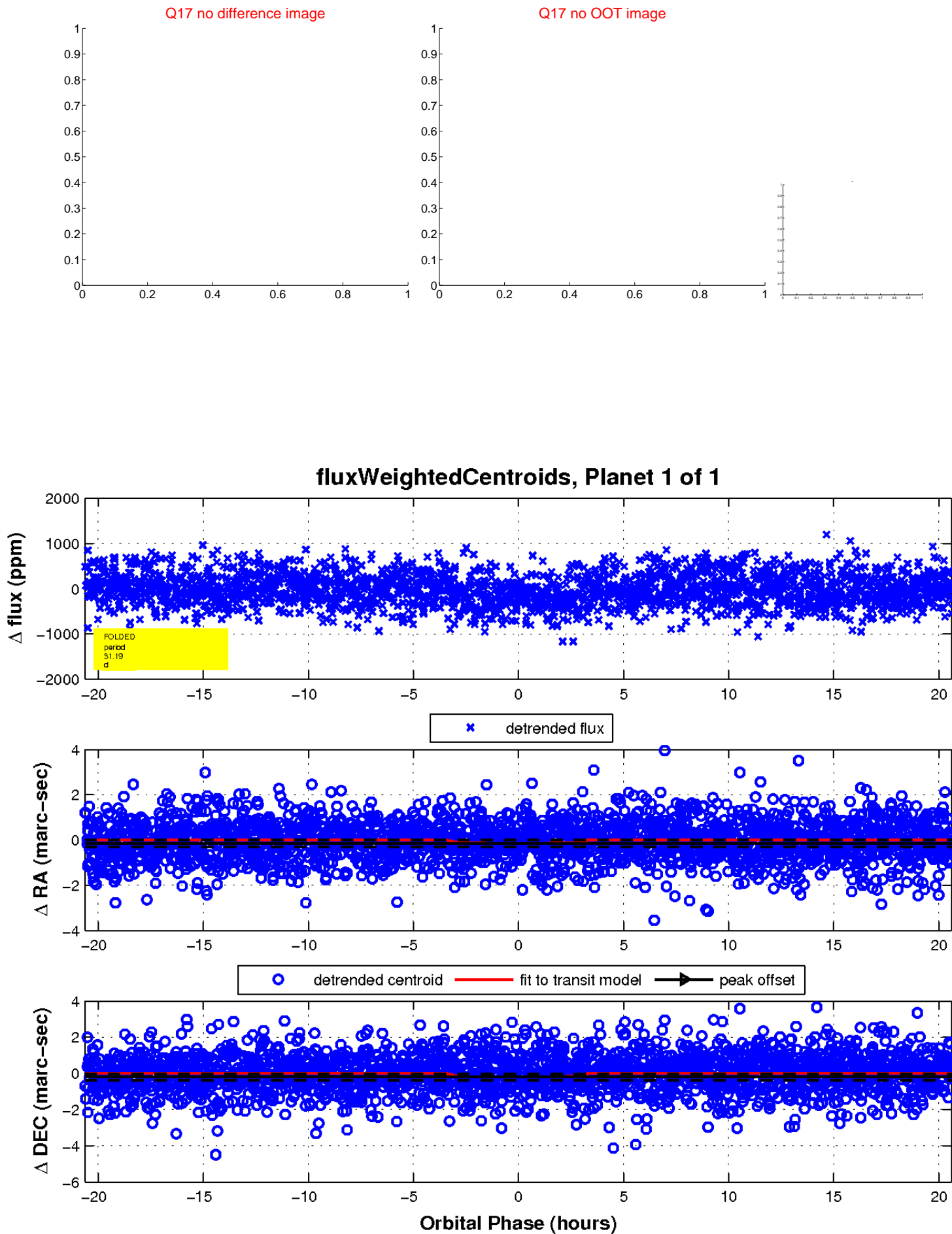
Q12 no OOT image



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

