

KIC 011133306

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})
011133306-01	OBS	0276.01	41.745969	168.653309	427.3	4.844	92.4	91.8	1.17	5978	2.77	27.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011133306-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

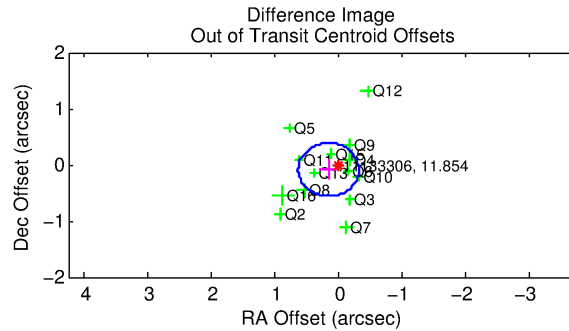
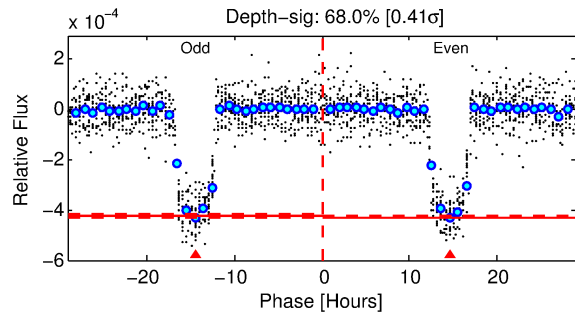
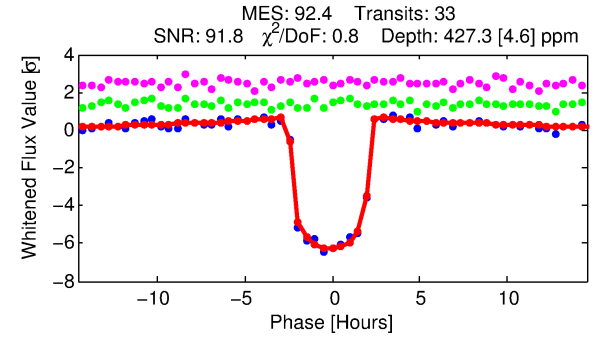
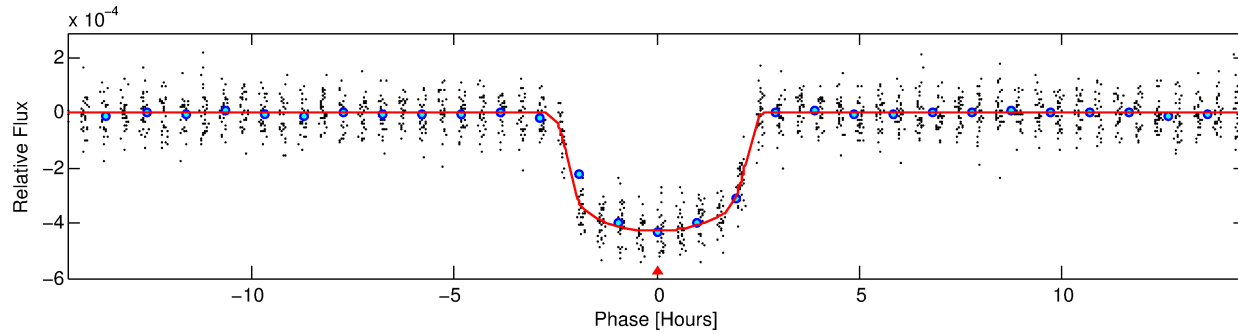
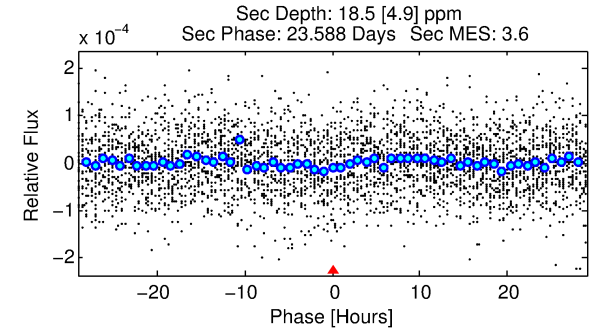
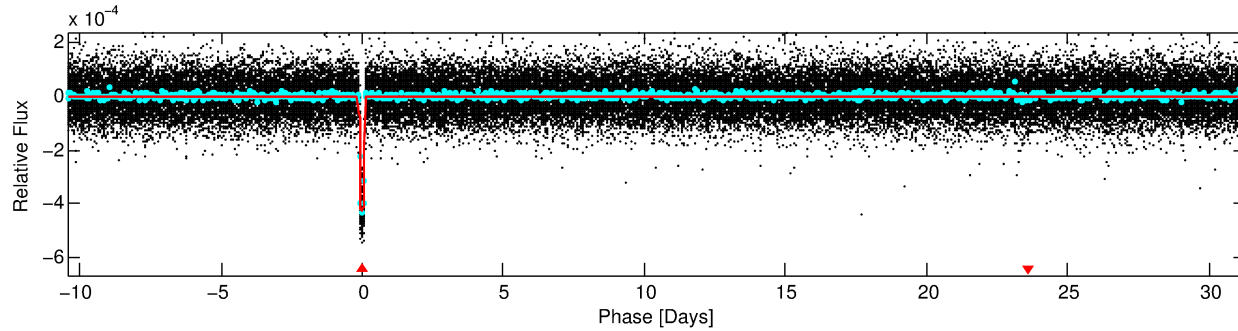
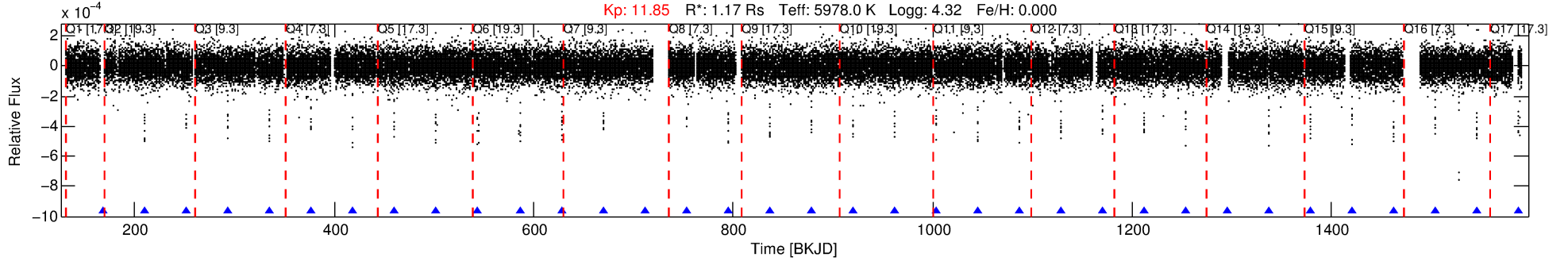
Ephemeris Match Information For 011133306-01

No Significant Match Found

DV One-Page Summary

KIC: 11133306 Candidate: 1 of 1 Period: 41.746 d

KOI: K00276.01 Corr: 0.975



DV Fit Results:

Period = 41.74597 [0.00006] d
Epoch = 168.6533 [0.0011] BKJD
 $R_p/R^* = 0.0217$ [0.0007]
 $a/R^* = 36.37$ [5.82]
 $b = 0.86$ [0.05]
 $S_{\text{eff}} = 27.63$ [2.17]
 $T_{\text{eq}} = 585$ [11] K
 $R_p = 2.77$ [0.17] R_e
 $a = 0.2383$ [0.0098] AU
 $A_g = 75.25$ [20.99] [3.54σ]
 $T_{\text{eff}} = 2662$ [185] K [11.20σ]

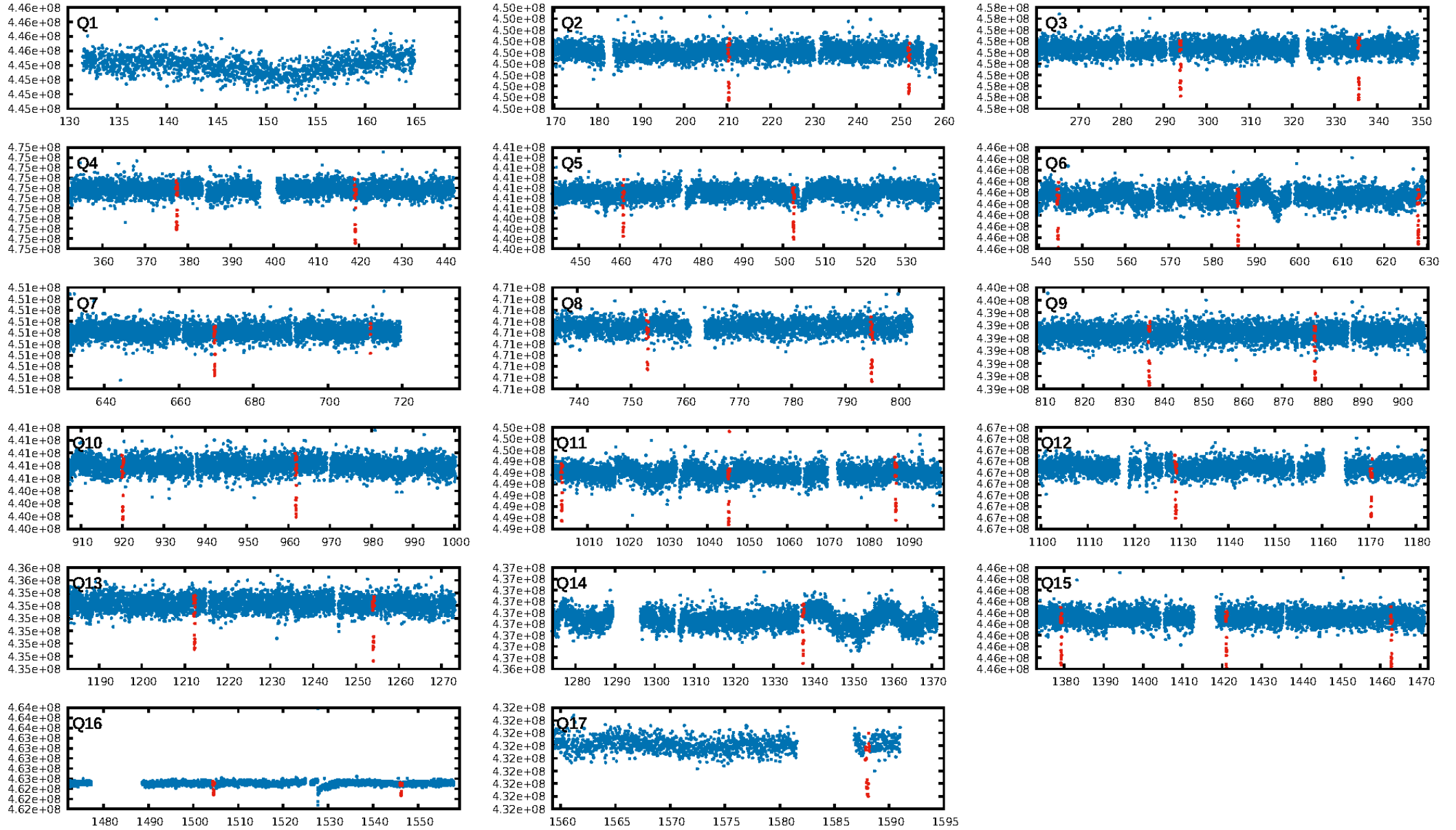
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 94.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [32/32]
GhostDiagnostic-chr: 13.06
Centroid-sig: 0.0%
Centroid-so: 0.363 arcsec [2.31σ]
OotOffset-rm: 0.183 arcsec [1.16σ]
KicOffset-rm: 0.130 arcsec [0.73σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

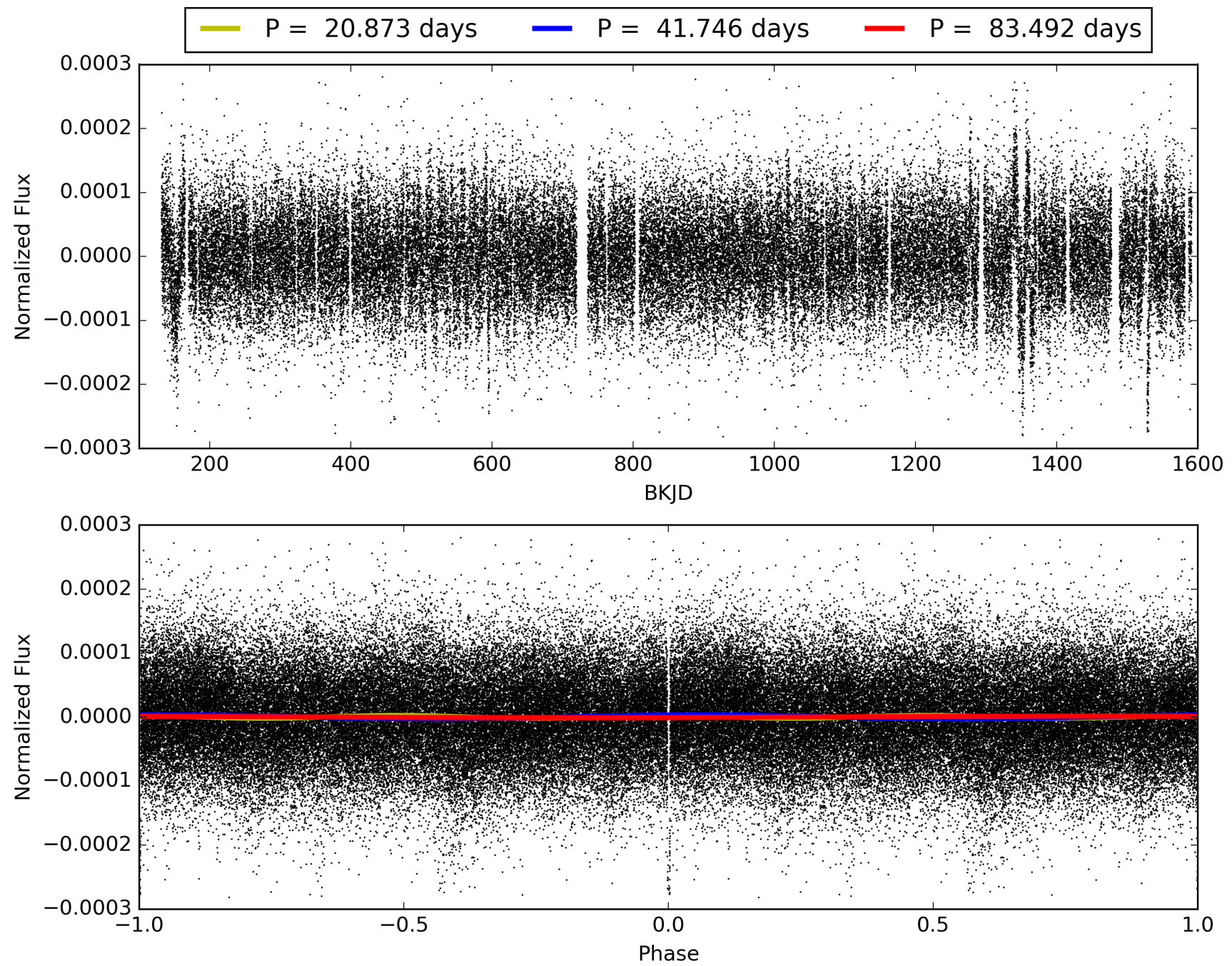
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:18:53 Z

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

TCE 011133306-01, PDC Light Curves

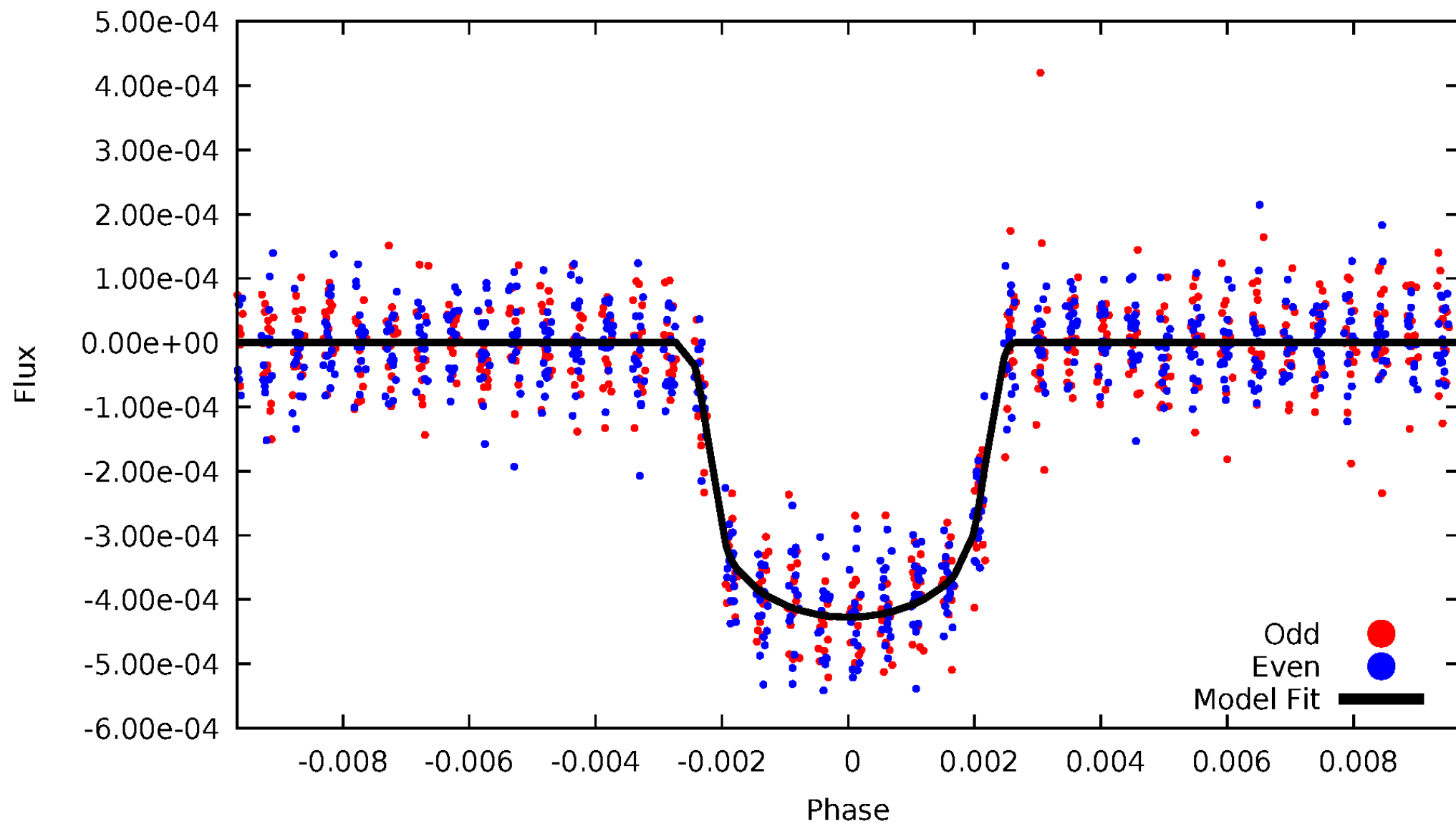


TCE 011133306-01



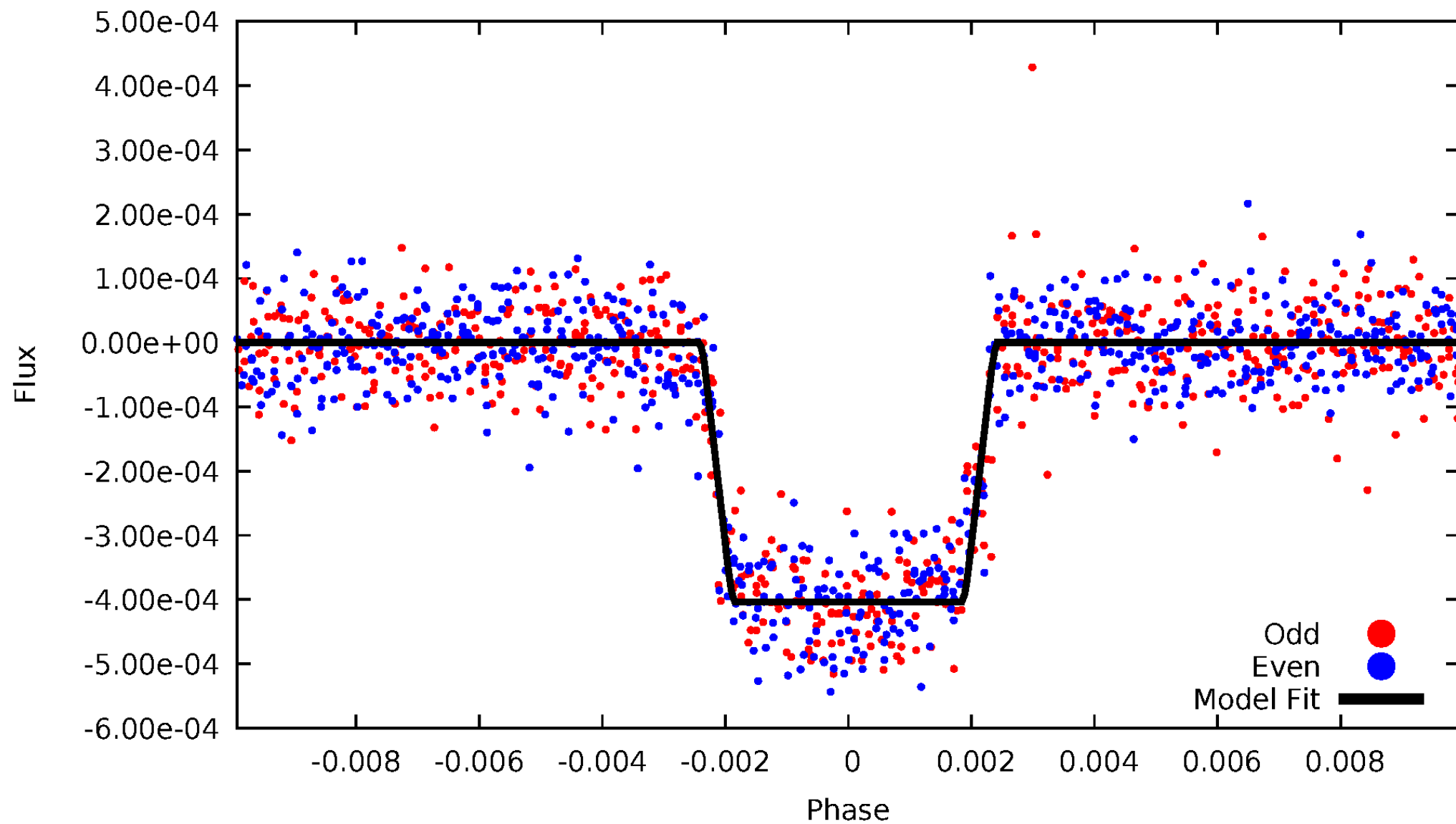
DV Odd/Even

TCE 011133306-01



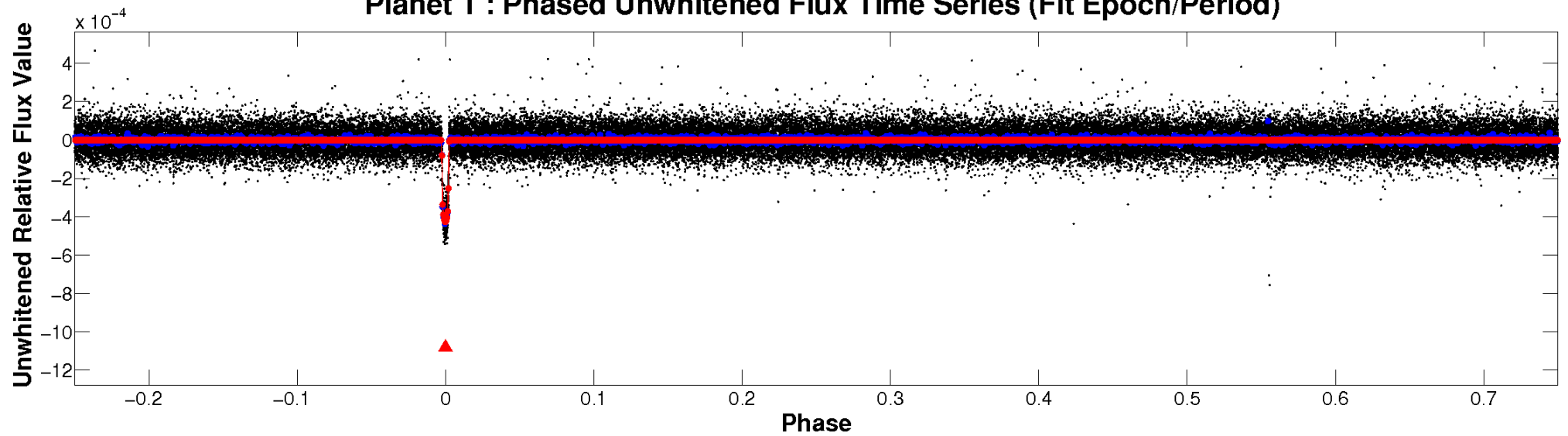
ALT Odd/Even

TCE 011133306-01

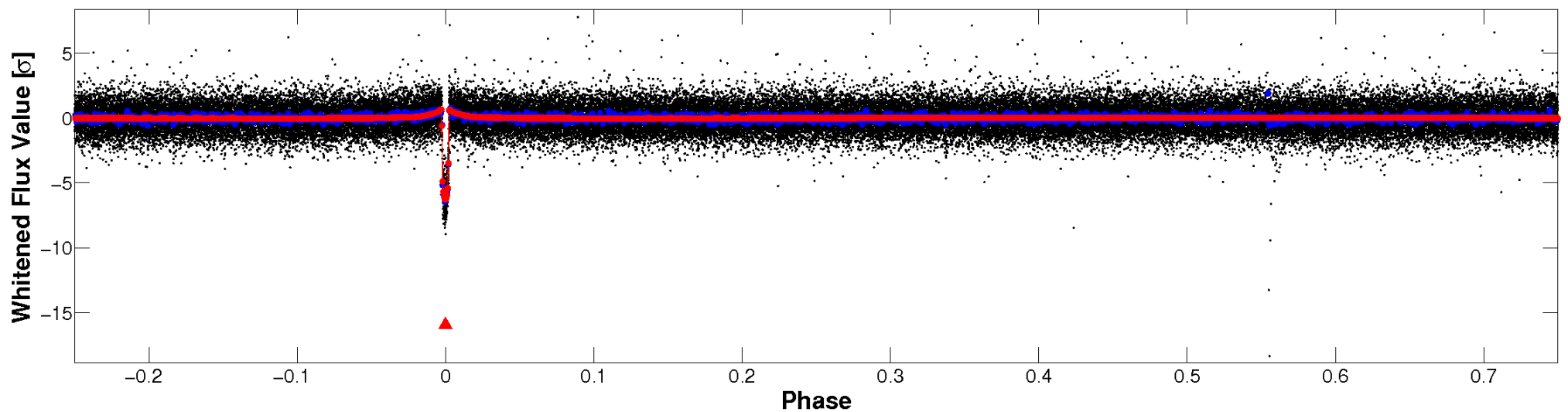


Non-Whitened Vs. Whitened Light Curve

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

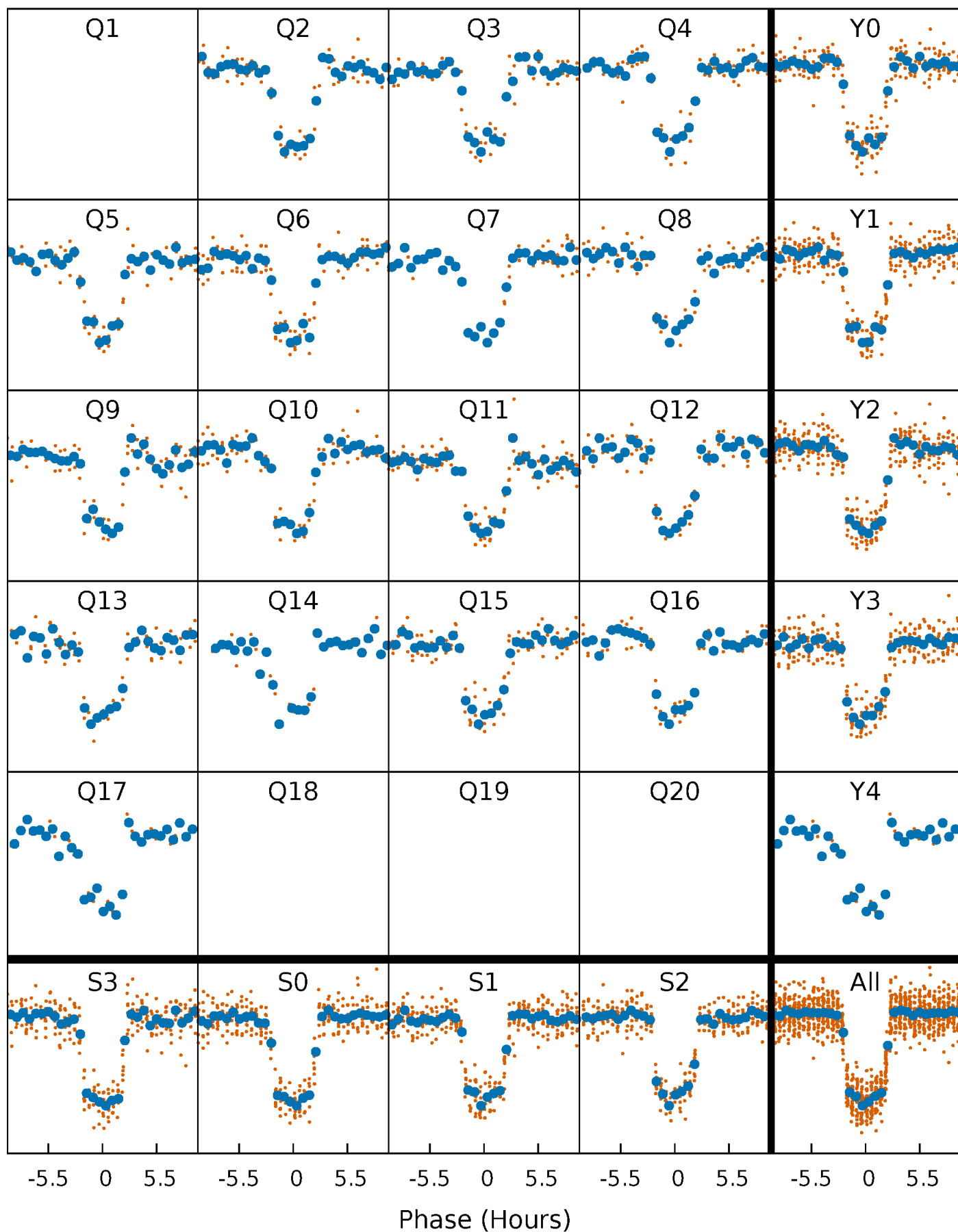


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



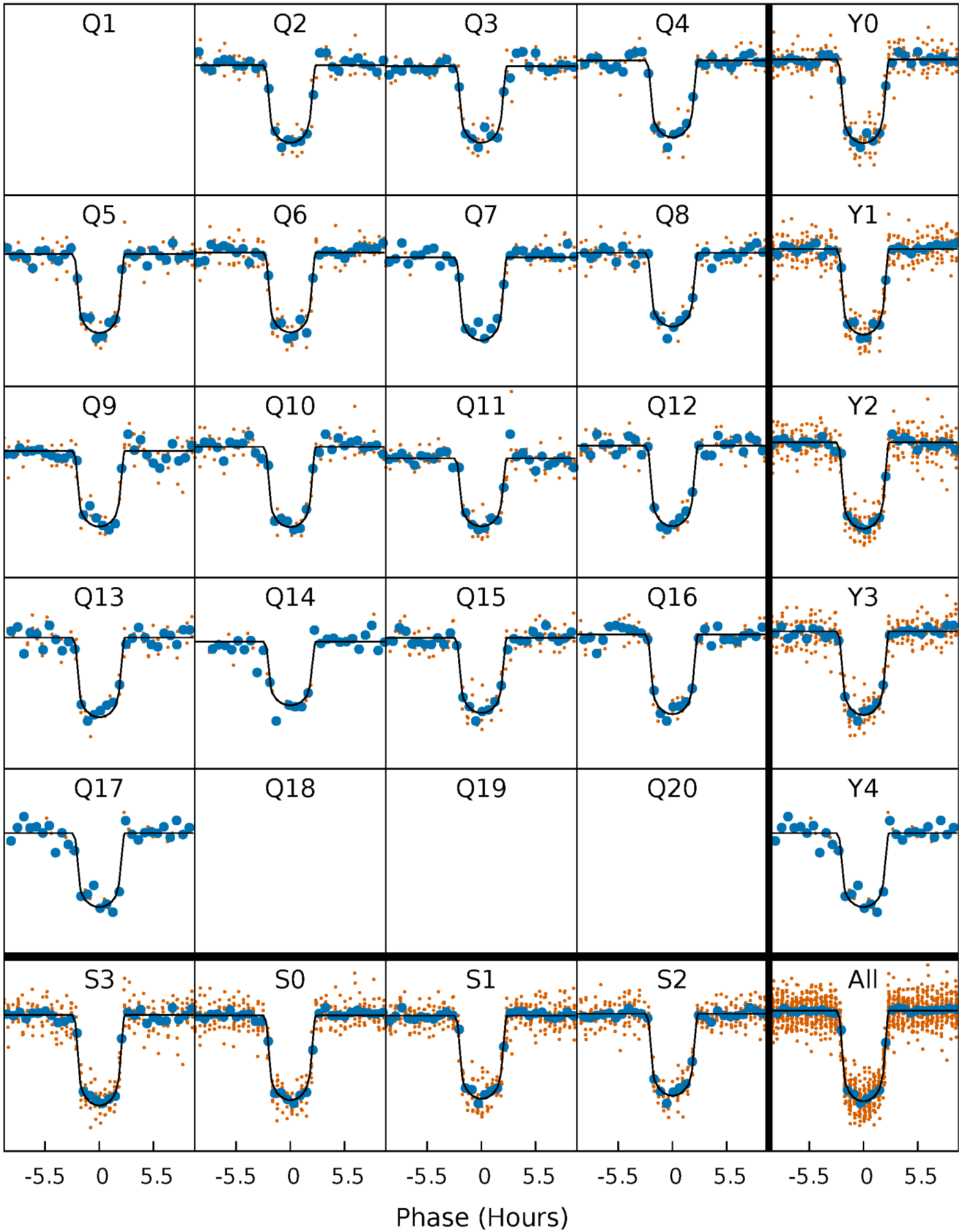
PDC Quarter-Phased Transit Curves

TCE 011133306-01 P= 41.745969 Days $T_0=168.653309$ (BKJD)



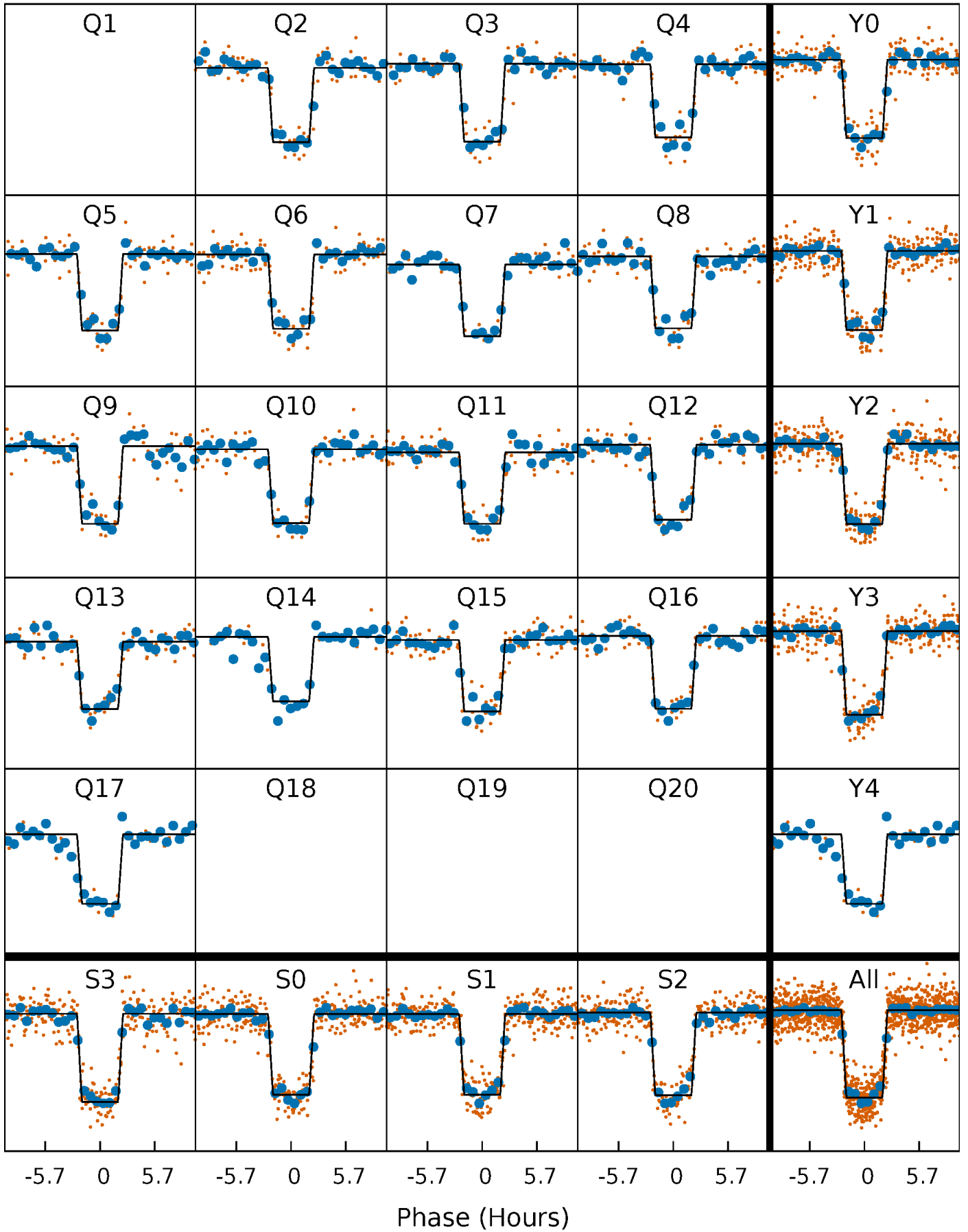
DV Quarter-Phased Transit Curves

TCE 011133306-01 P= 41.745969 Days $T_0=168.653309$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

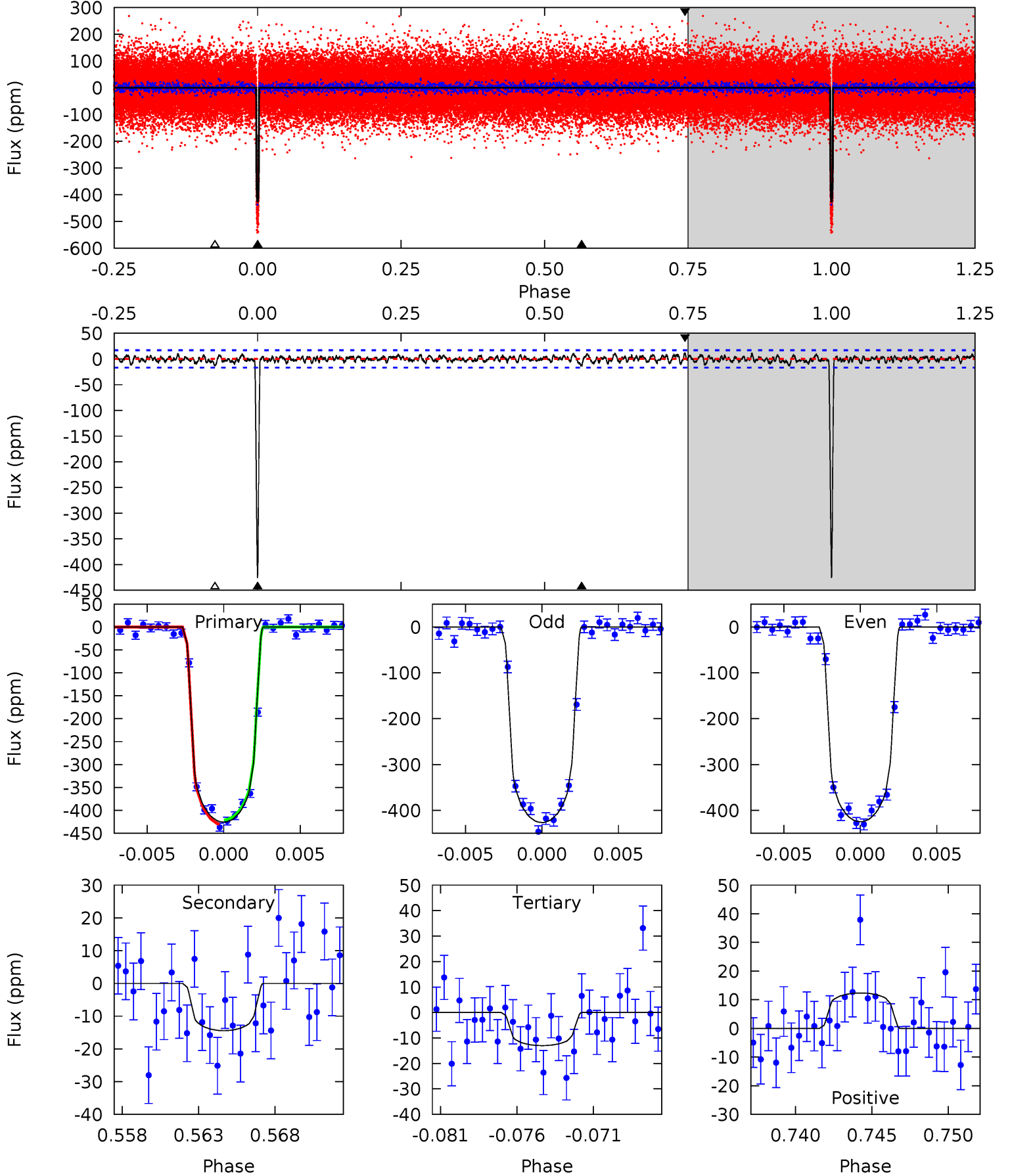
TCE 011133306-01 P= 41.746400 Days $T_0=168.646315$ (BKJD)



DV Model-Shift Uniqueness Test

011133306-01, P = 41.745969 Days, E = 126.907340 Days

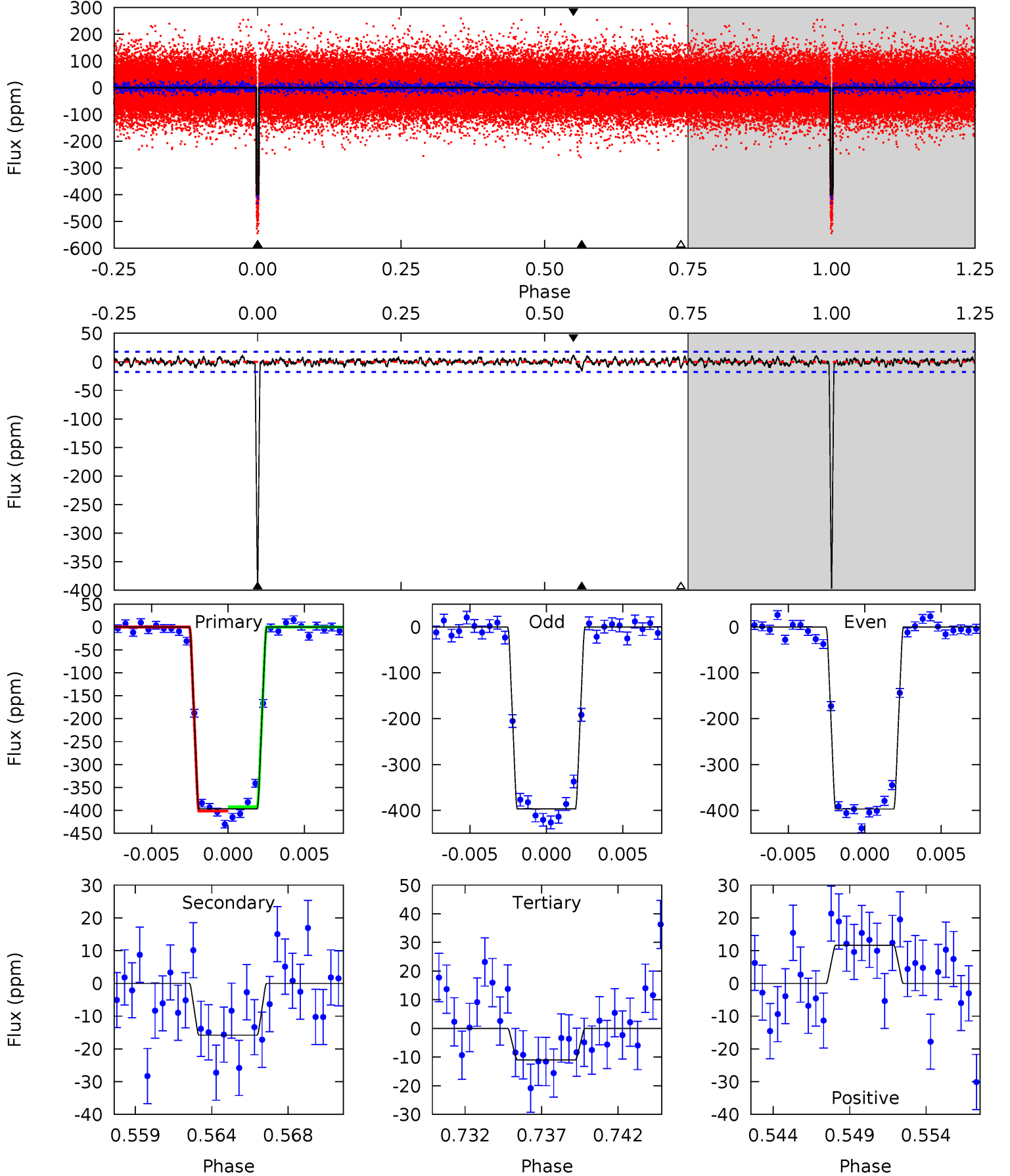
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
130.1	4.41	3.97	3.78	5.16	2.80	1.24	126.1	126.3	0.44	0.63	0.26	1.00	0.03	1.48



Alt Model-Shift Uniqueness Test

011133306-01, $P = 41.746400$ Days, $E = 126.899915$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
115.3	4.59	3.18	3.38	5.16	2.82	1.06	112.1	111.9	1.41	1.21	0.05	1.00	0.03	1.37



Stellar Parameters For KIC 011133306

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5978^{+71}_{-80}	$4.316^{+0.030}_{-0.030}$	$0.000^{+0.150}_{-0.150}$	$1.171^{+0.060}_{-0.060}$	$1.034^{+0.083}_{-0.068}$	$0.908^{+0.111}_{-0.099}$
	+1%/-1%	+1%/-1%	+inf%/-inf%	+5%/-5%	+8%/-7%	+12%/-11%
Source	SPE72	AST69	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011133306-01 / KOI 0276.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 3	$2.77^{+0.14}_{-0.13}$	815^{+15}_{-14}	3121^{+114}_{-113}	59^{+16}_{-13}
Alt.	-16 ± 3	$2.57^{+0.13}_{-0.12}$	817^{+14}_{-15}	3238^{+107}_{-126}	75^{+17}_{-18}

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

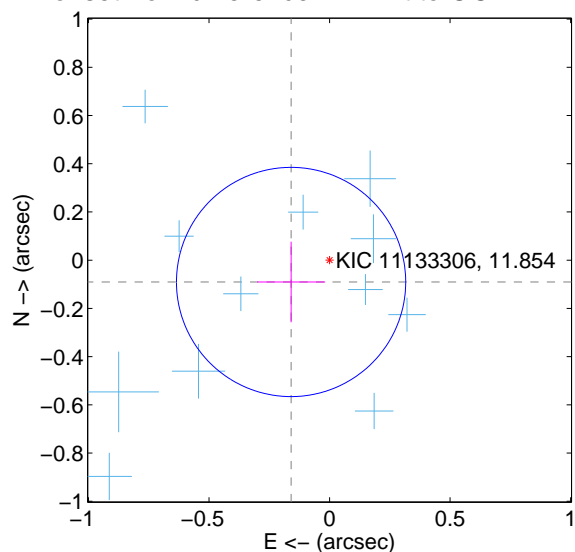
Supplemental centroid analysis for 011133306-01. **Kepler magnitude: 11.85.** Transit SNR 91.76

There are 14 quarters with good PRF difference image offsets

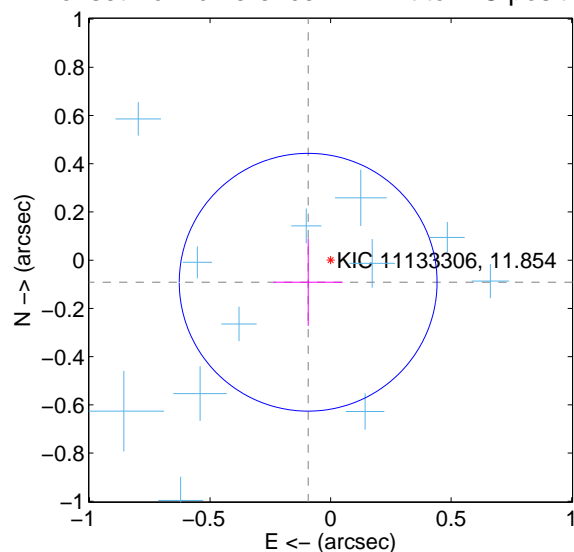
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.183 ± 0.158	1.16	0.159 ± 0.141	-0.090 ± 0.167
PRF-fit source offset from KIC position	0.130 ± 0.178	0.73	0.093 ± 0.143	-0.092 ± 0.181
photometric centroid source offset	0.36 ± 0.16	2.31	-0.33 ± 0.16	-0.15 ± 0.13

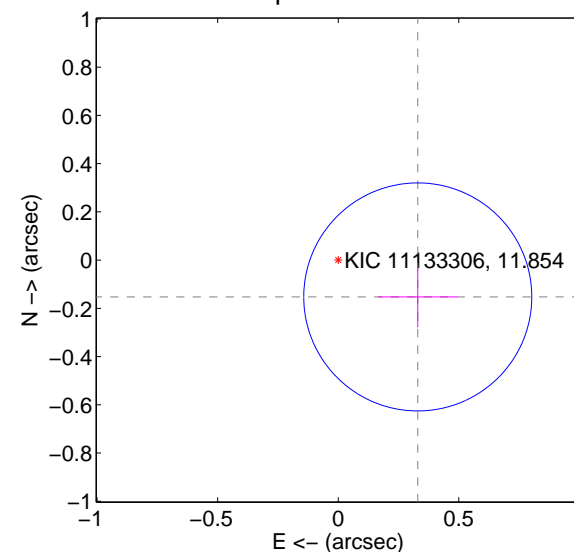
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

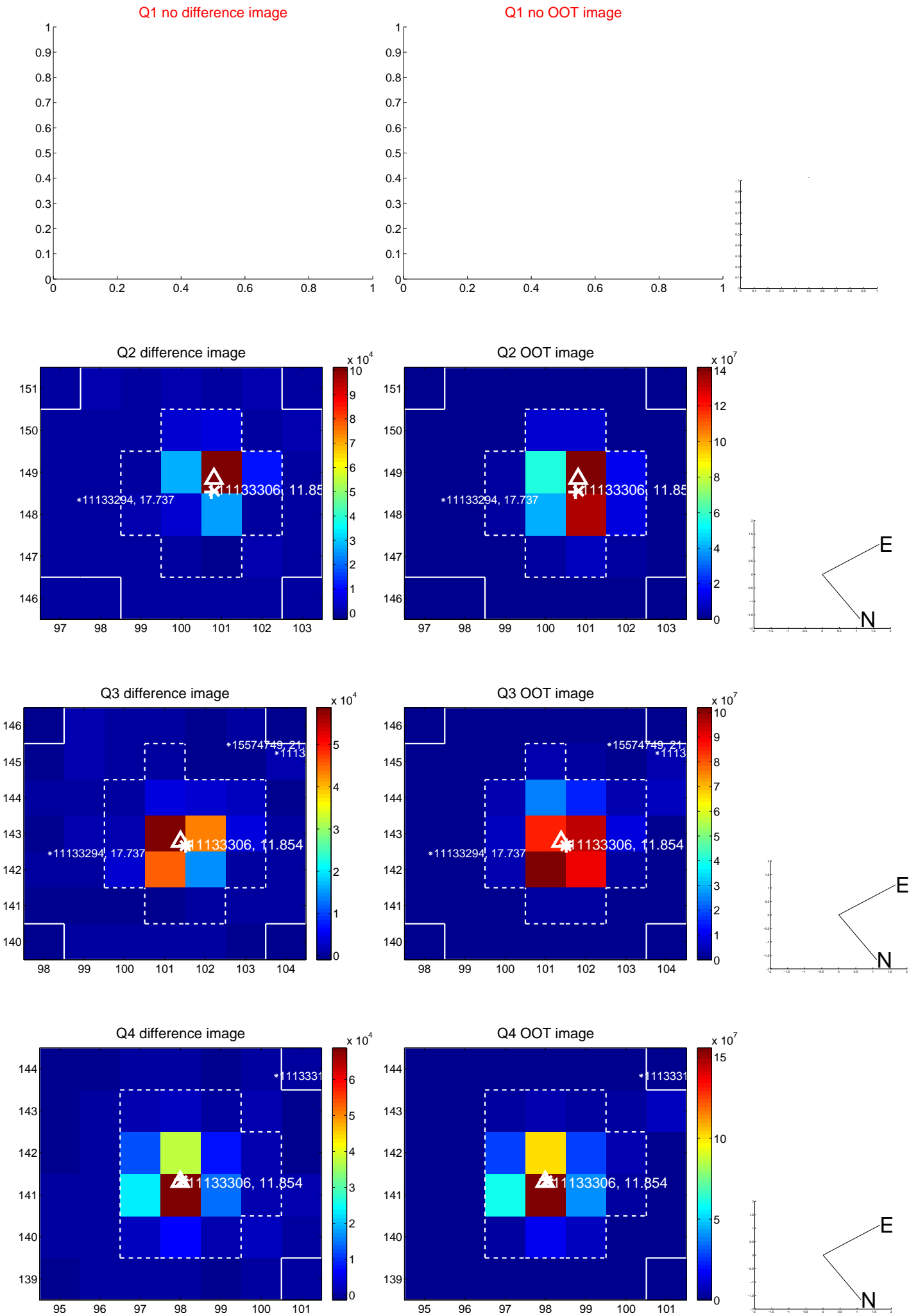


offset from photometric centroids

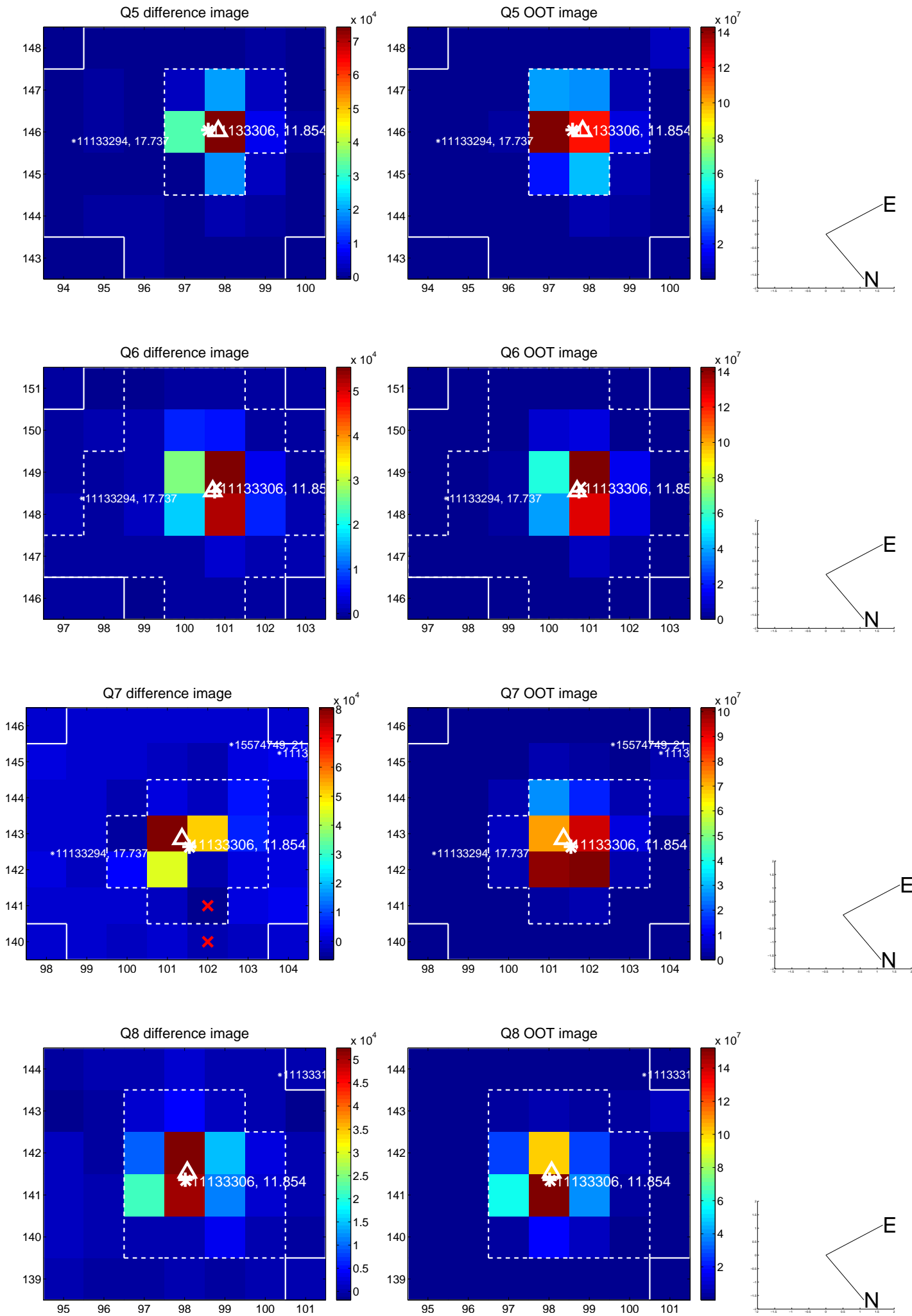


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

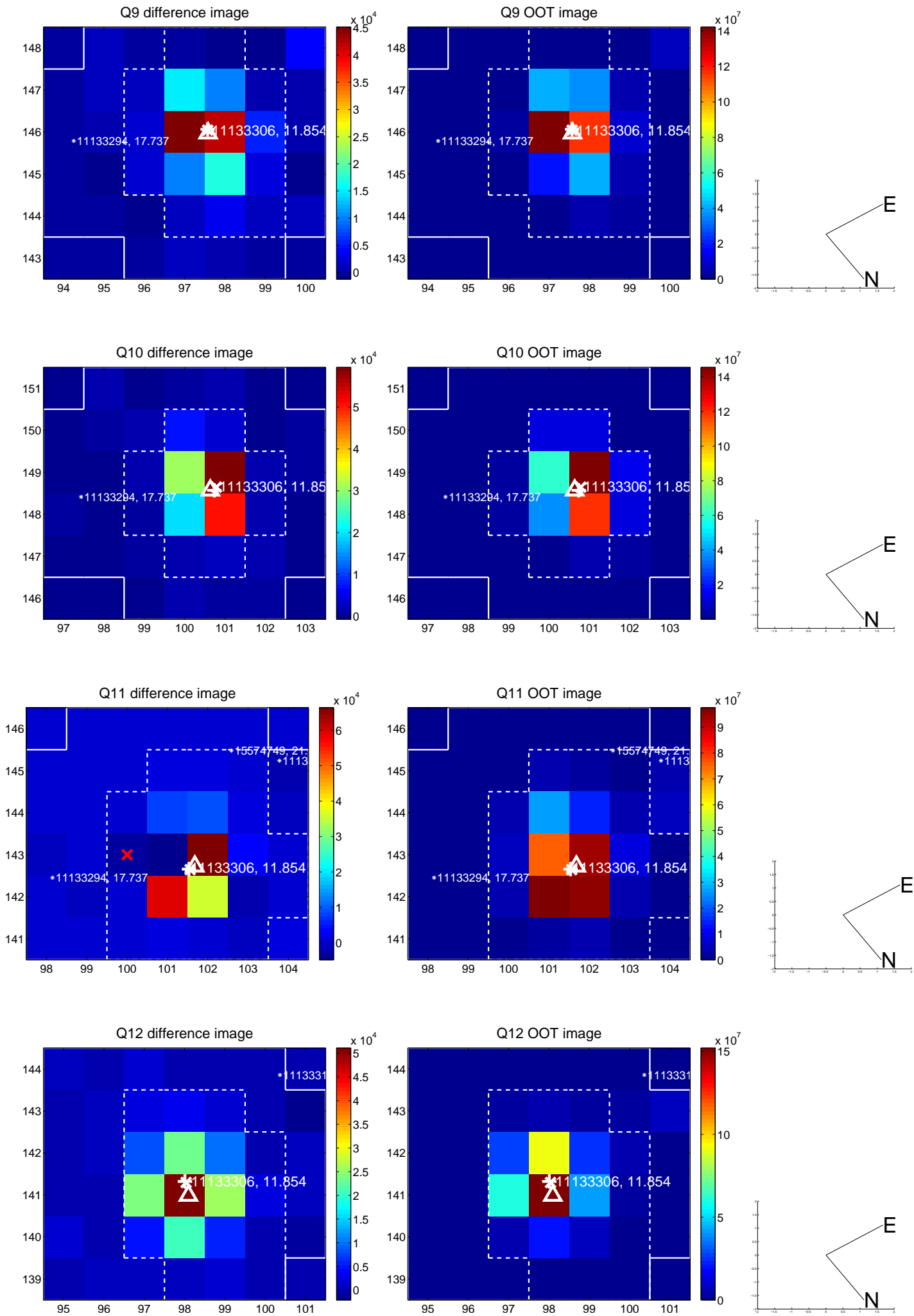
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



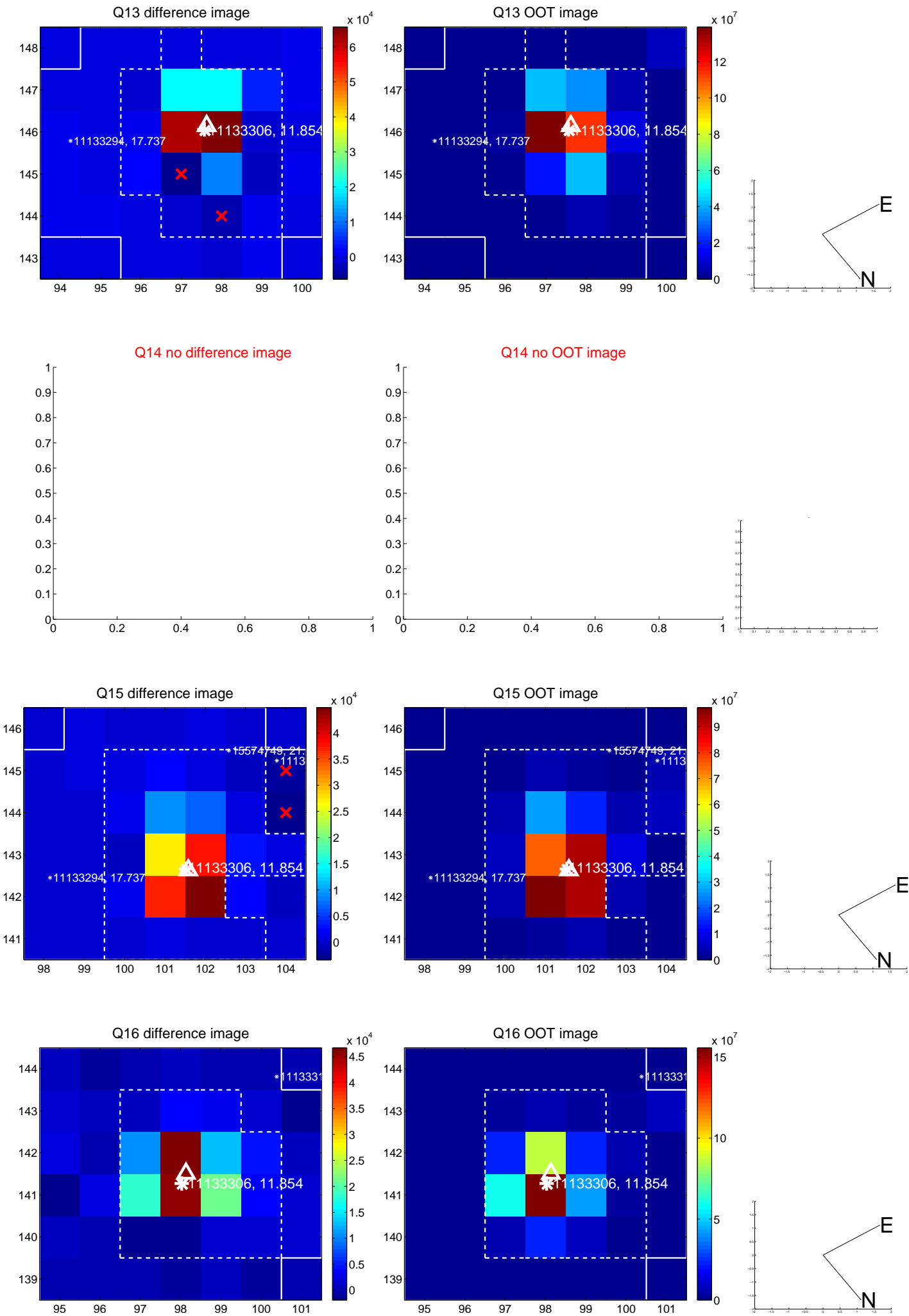
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



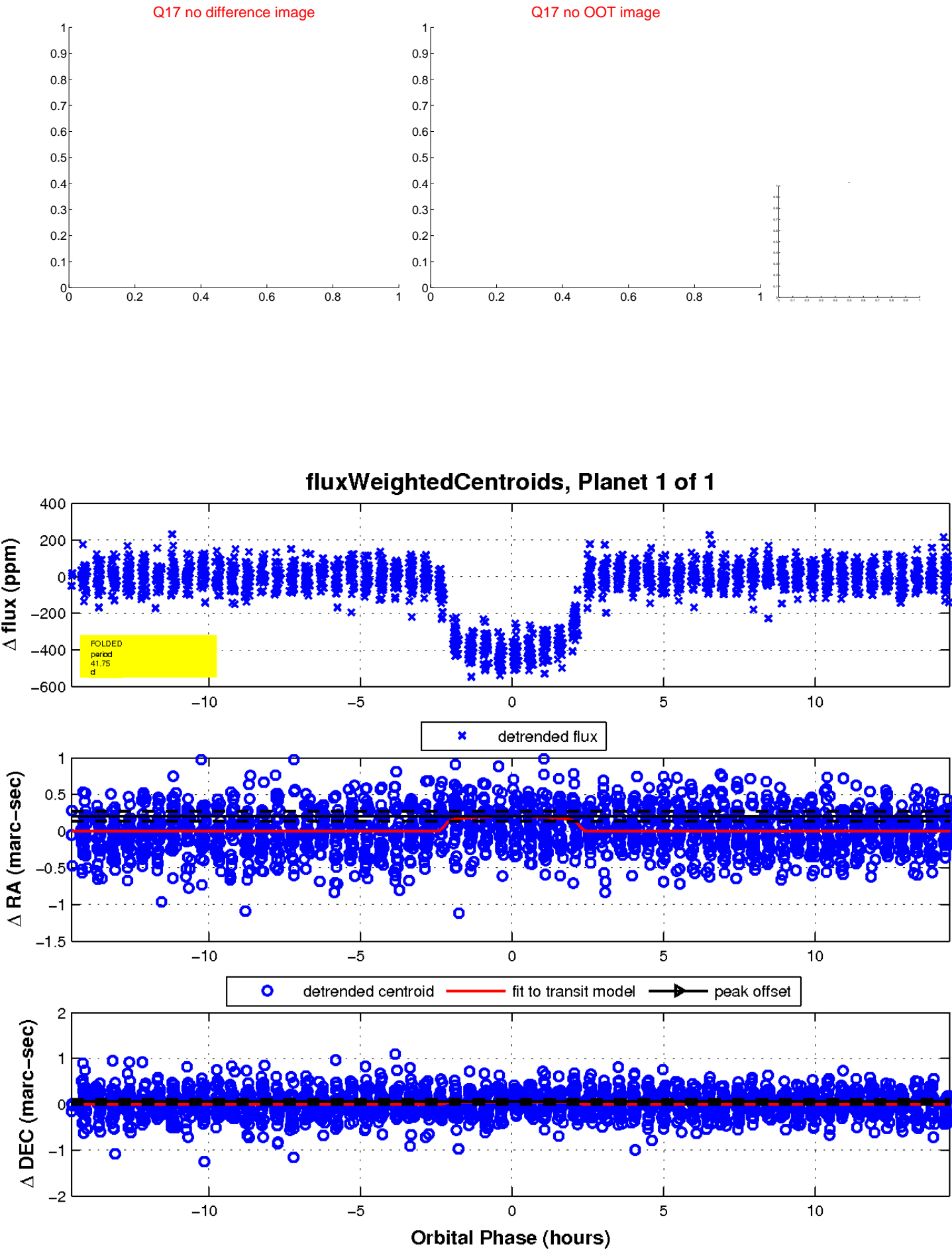
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

