

KIC 003448130

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})
003448130-01	OBS	2043.01	78.546133	144.068419	645.5	8.909	23.5	26.5	1.40	5808	3.78	14.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003448130-01	OBS	PC	0.98	0	0	0	0	CENT_KIC_POS

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.

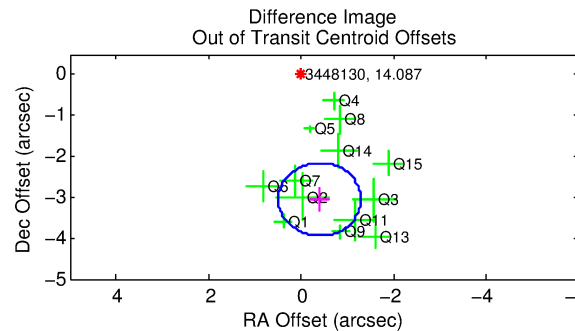
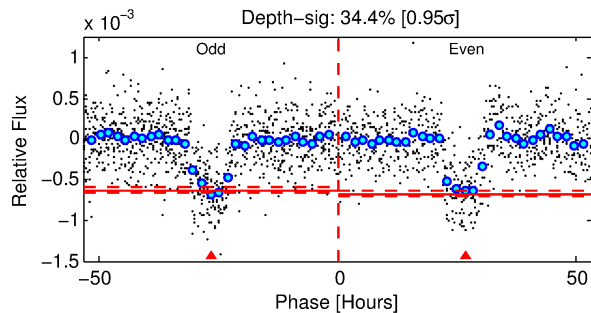
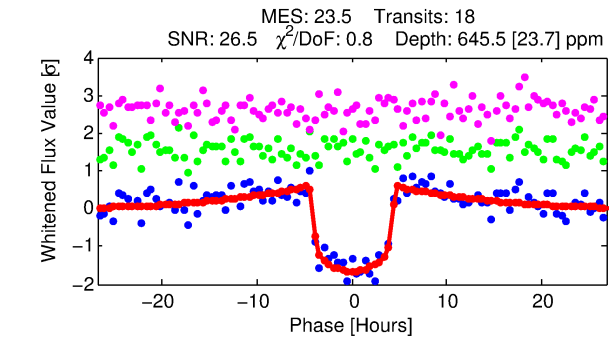
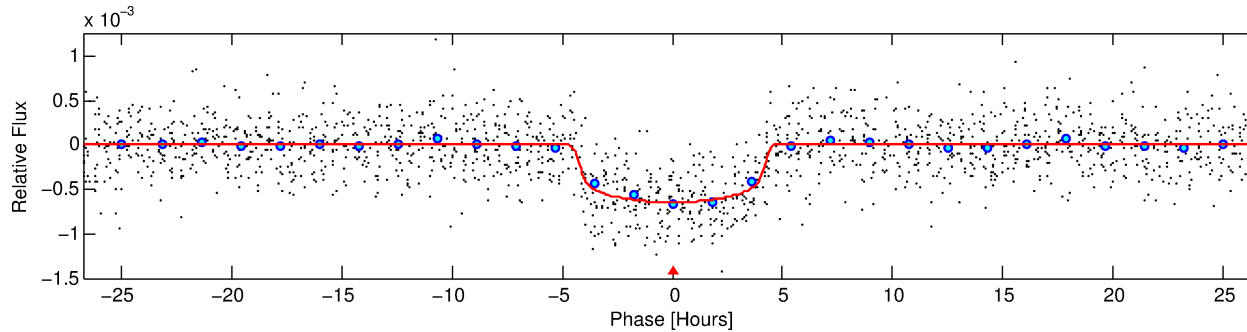
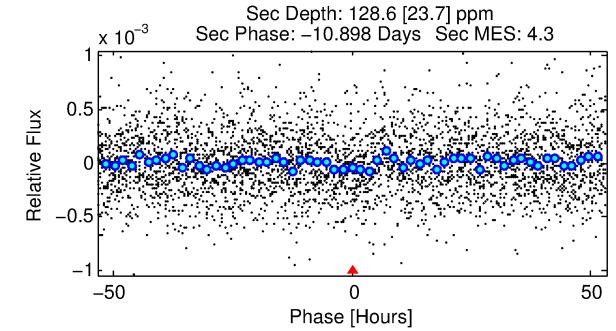
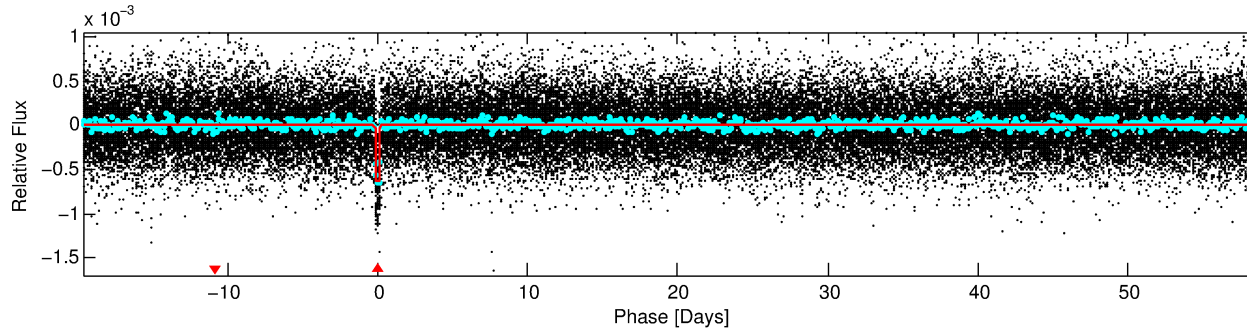
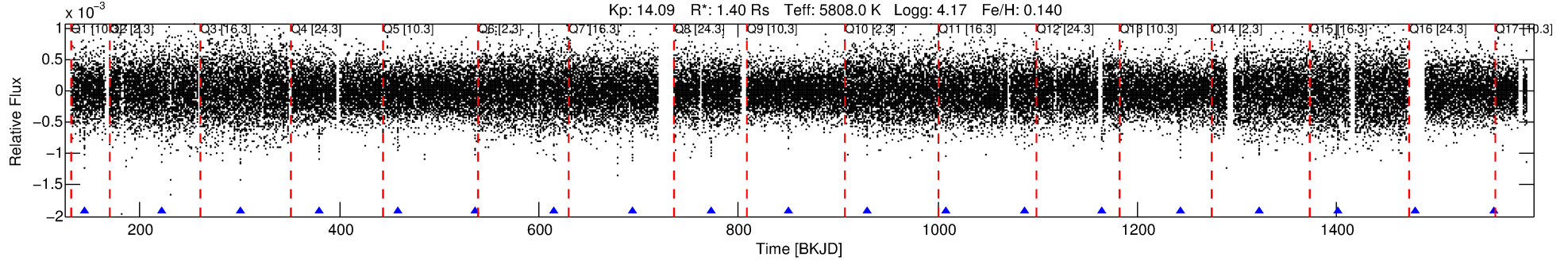
Ephemeris Match Information For 003448130-01

No Significant Match Found

DV One-Page Summary

KIC: 3448130 Candidate: 1 of 1 Period: 78.546 d
KOI: K02043.01 Corr: 0.987

Kp: 14.09 R*: 1.40 Rs Teff: 5808.0 K Logg: 4.17 Fe/H: 0.140



DV Fit Results:

Period = 78.54613 [0.00052] d
Epoch = 144.0684 [0.0047] BKJD
Rp/R* = 0.0248 [0.0040]
a/R* = 50.79 [35.03]
b = 0.69 [0.52]
Seff = 14.87 [4.19]
Teq = 501 [35] K
Rp = 3.78 [0.91] Re
a = 0.3658 [0.0635] AU
Ag = 662.17 [304.90] [2.17σ]
Teffp = 3927 [365] K [9.34σ]

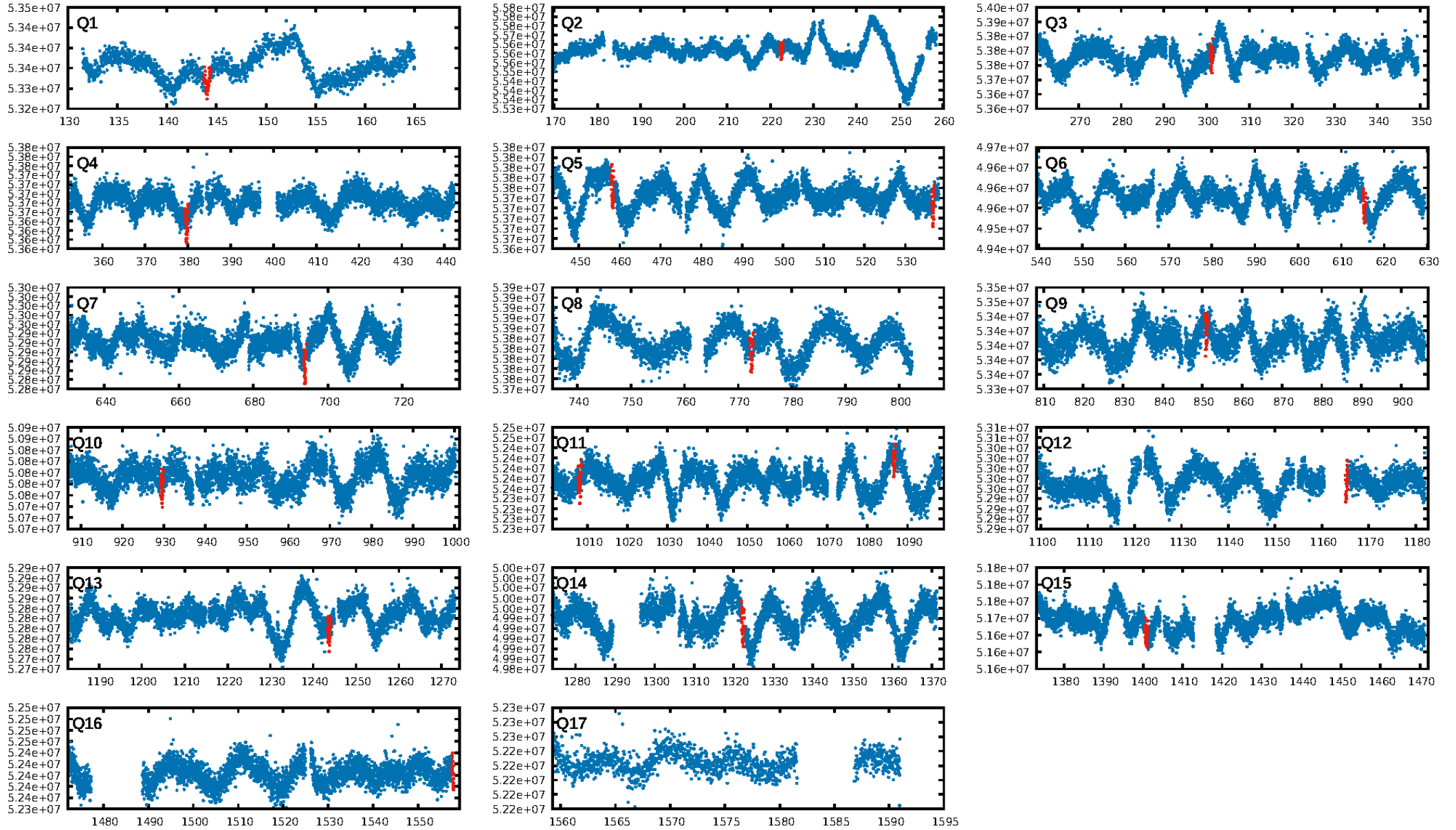
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 10.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.64e-113
RollingBand-fgt: 1.00 [17/17]
GhostDiagnostic-chr: 4.073
Centroid-sig: 0.0%
Centroid-so: 0.431 arcsec [1.17σ]
OotOffset-rm: 3.078 arcsec [10.34σ]
KicOffset-rm: 0.287 arcsec [1.36σ]
OotOffset-st: 3/4/2/4 [13]
KicOffset-st: 3/4/2/4 [13]
DiffImageQuality-fgm: 0.92 [12/13]
DiffImageOverlap-fno: 1.00 [13/13]

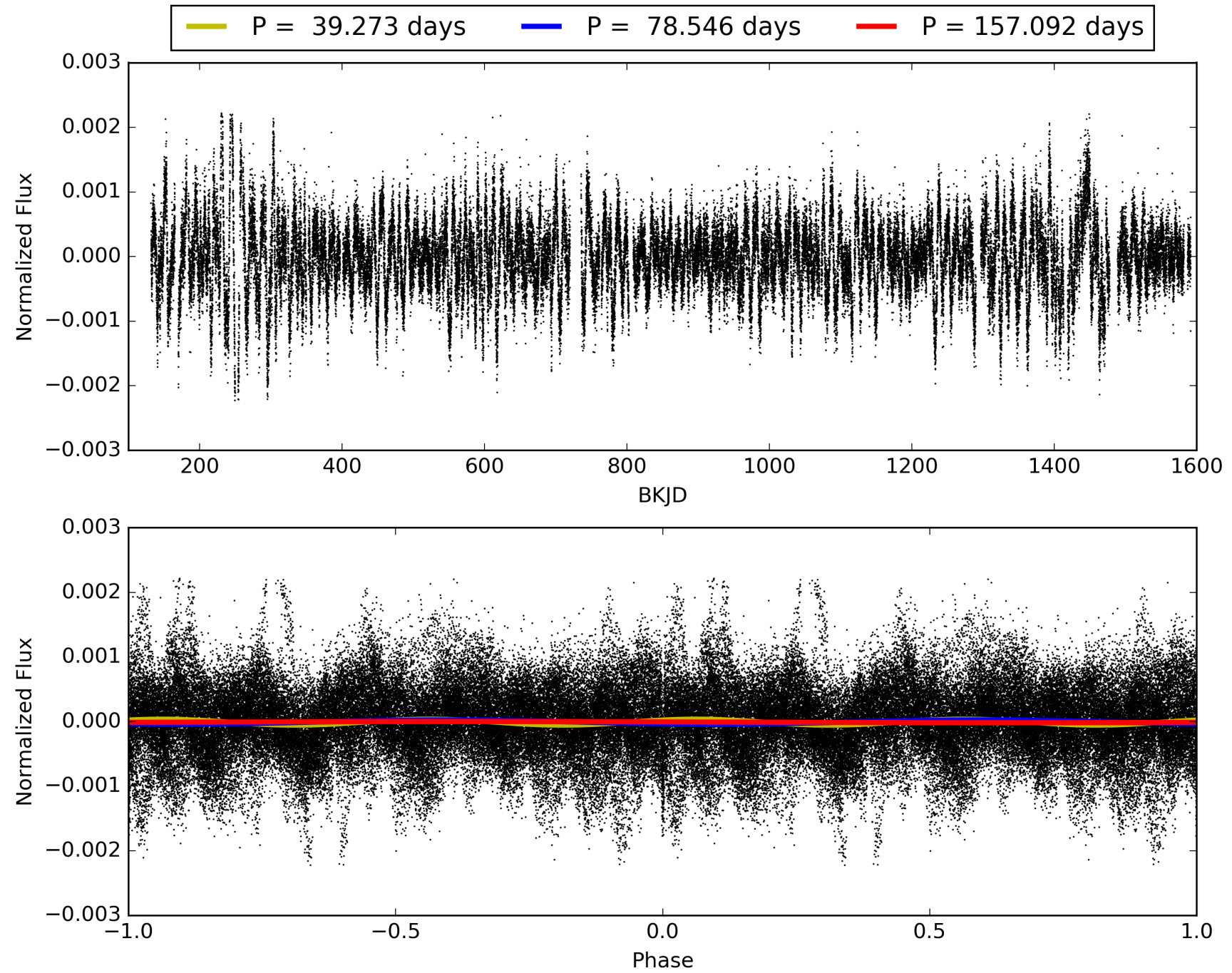
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:20:59 Z

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

TCE 003448130-01, PDC Light Curves

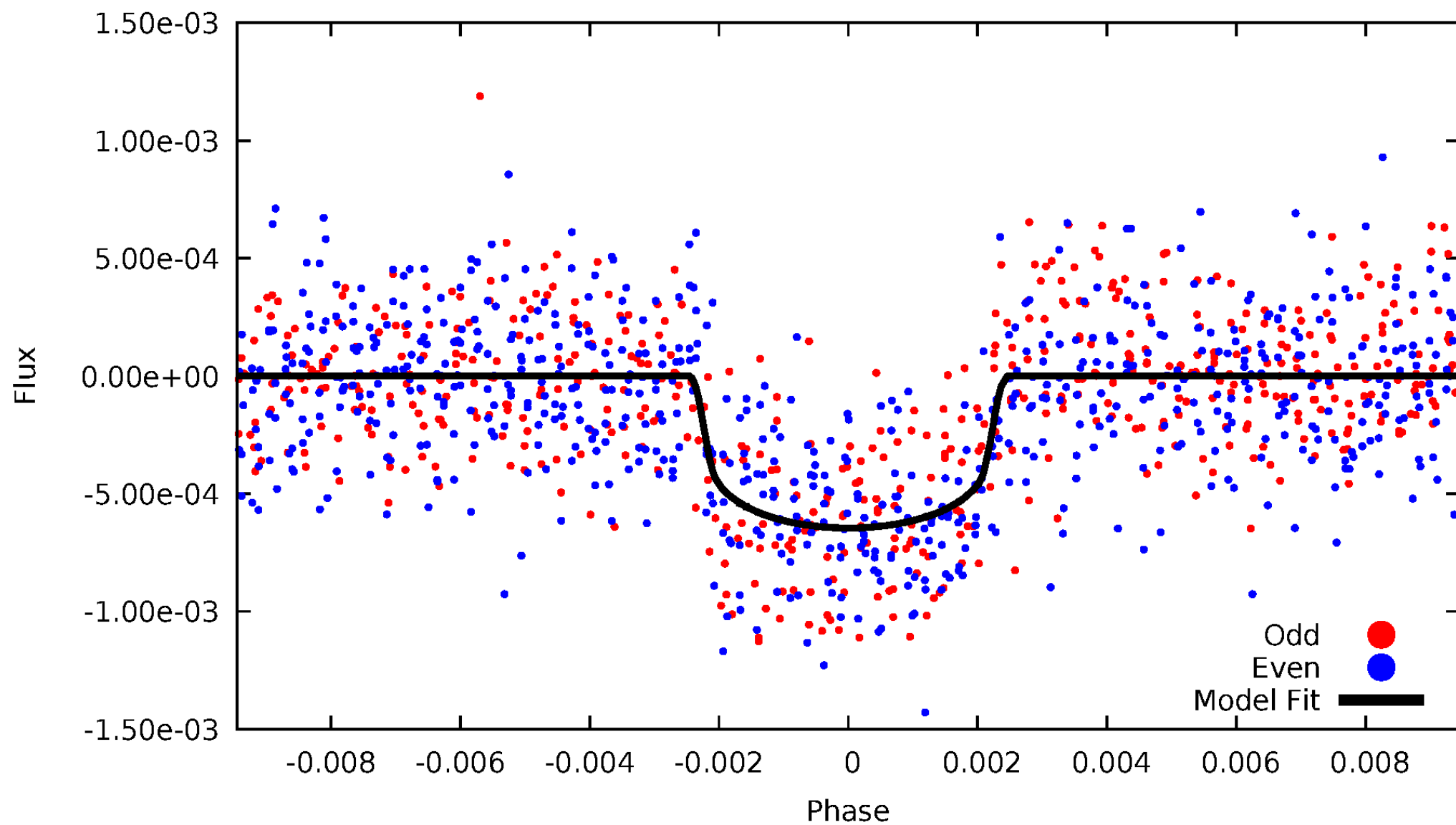


TCE 003448130-01



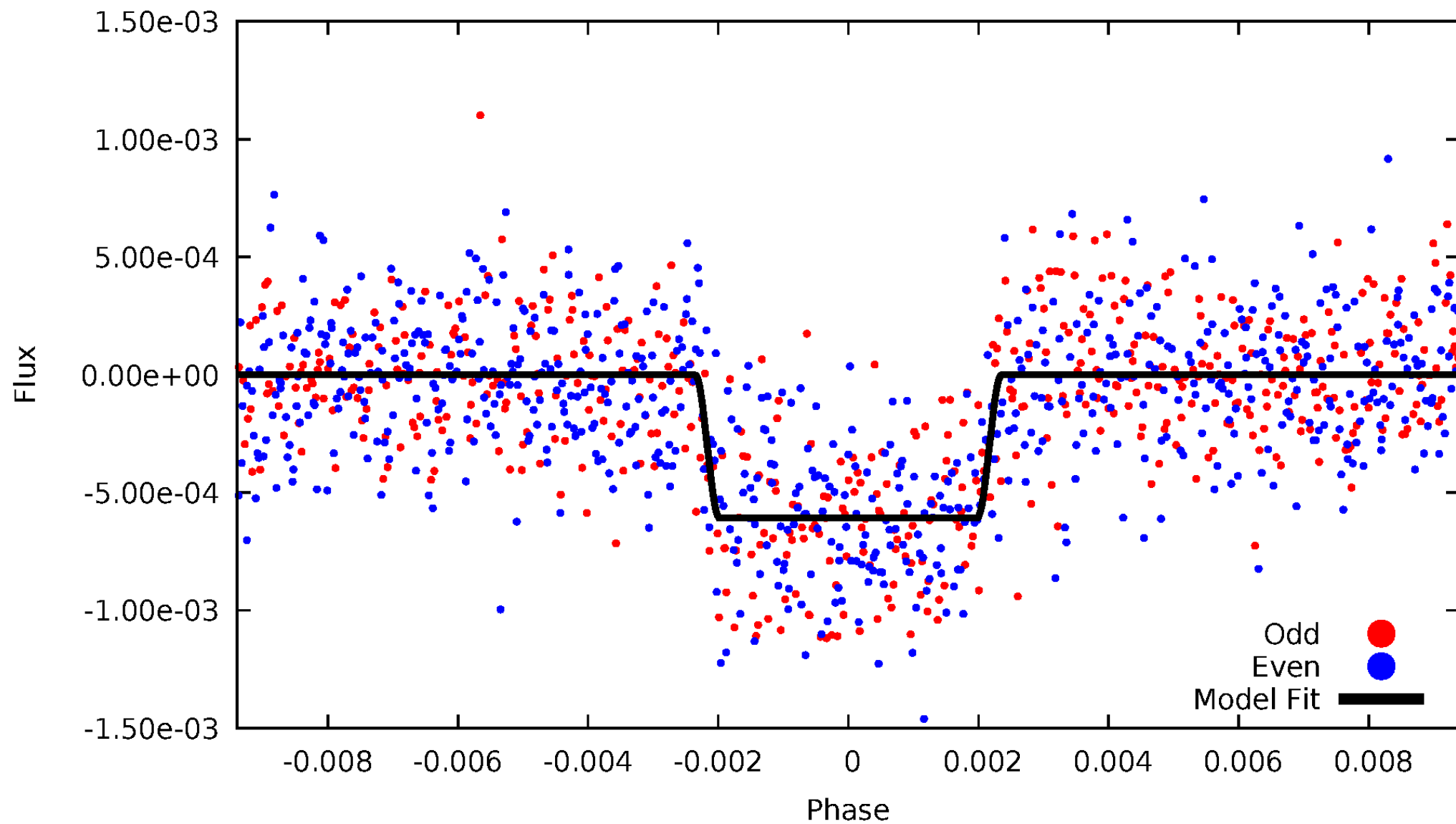
DV Odd/Even

TCE 003448130-01



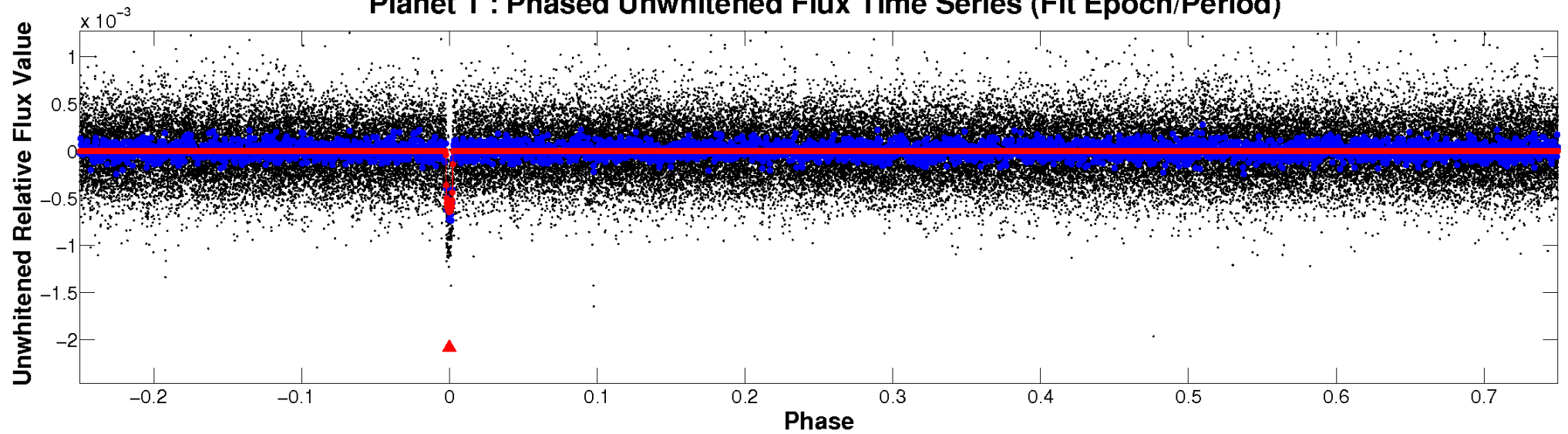
ALT Odd/Even

TCE 003448130-01

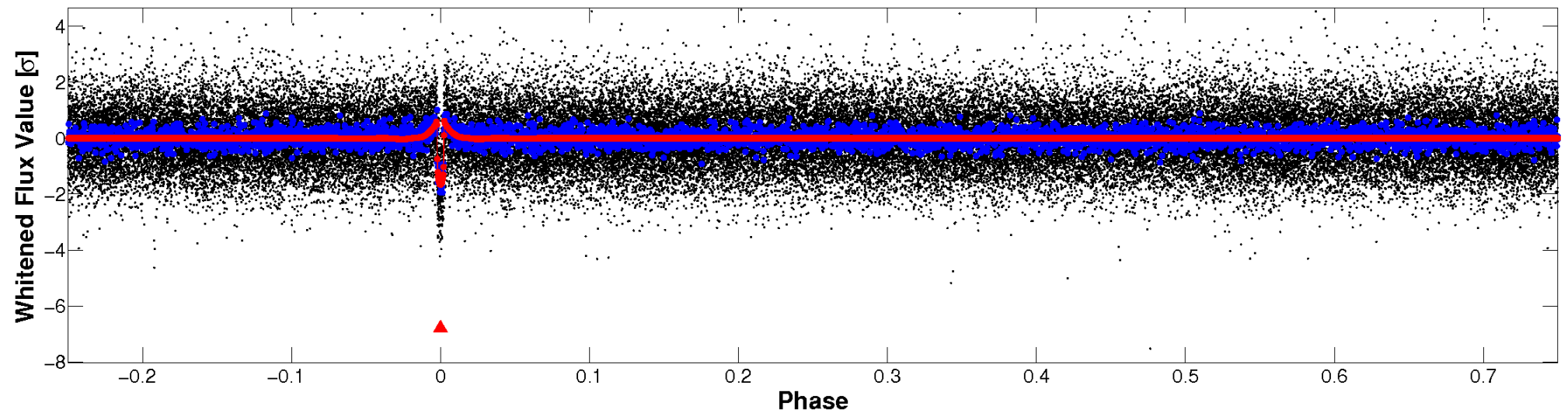


Non-Whitened Vs. Whitened Light Curve

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

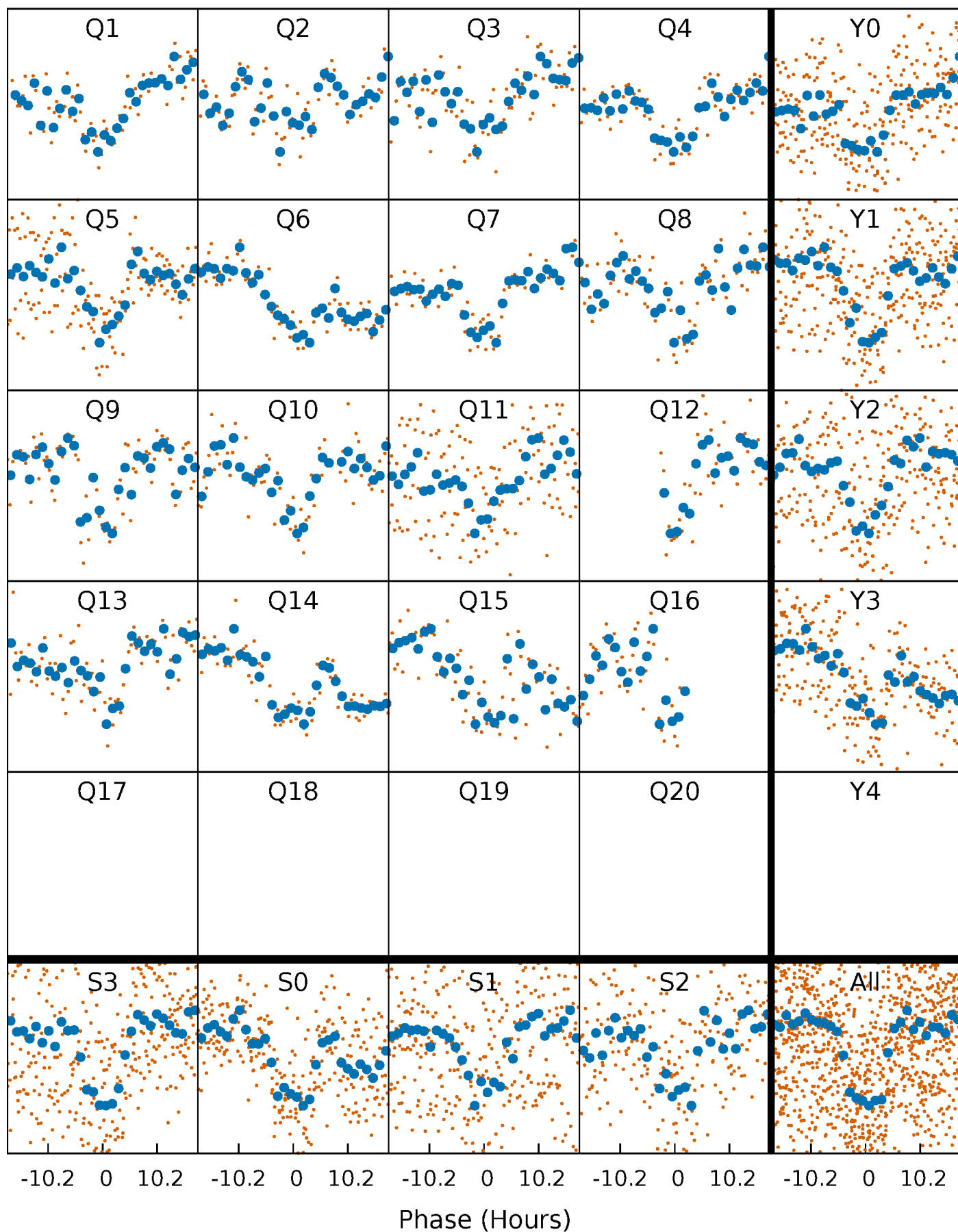


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



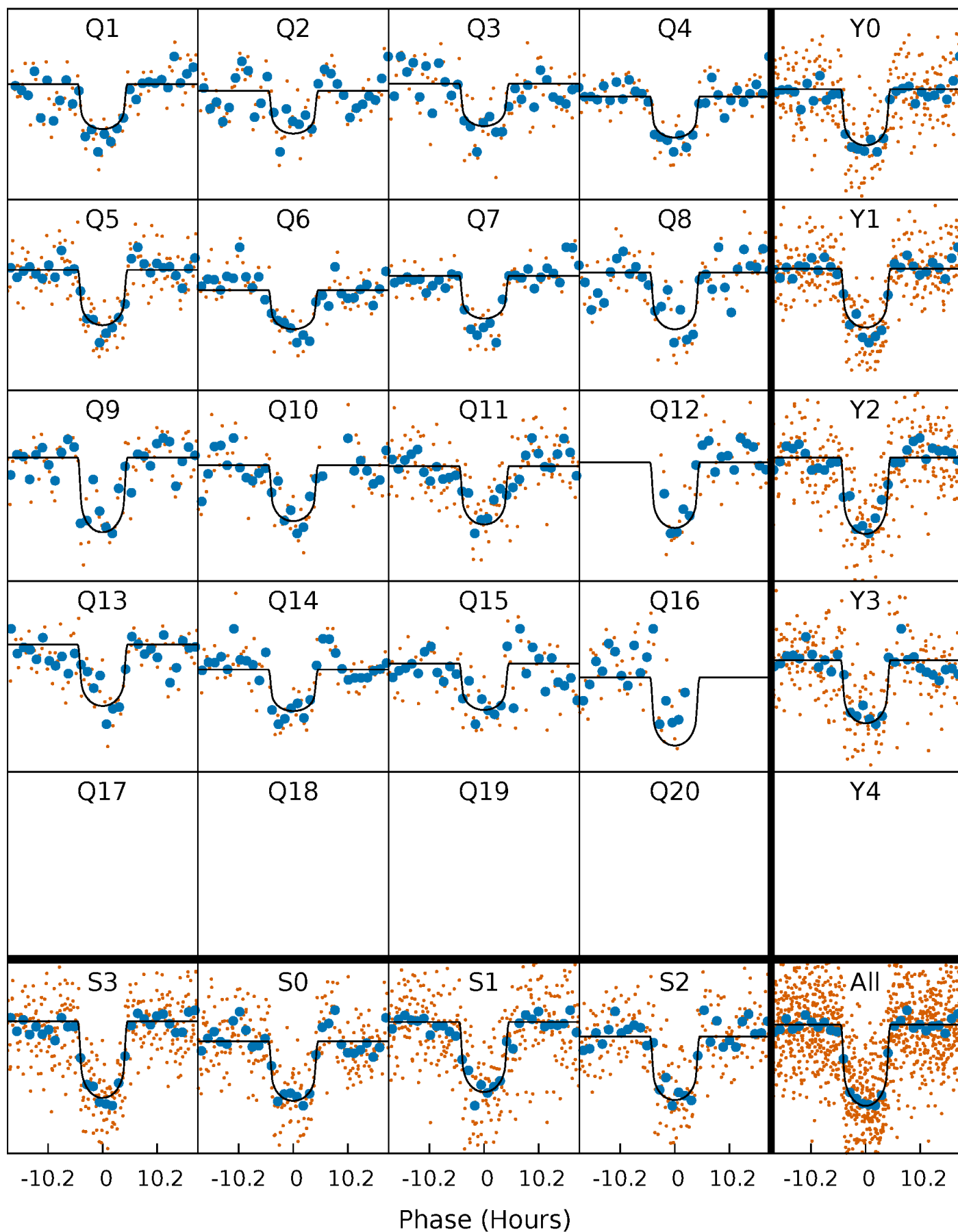
PDC Quarter-Phased Transit Curves

TCE 003448130-01 P= 78.546133 Days $T_0=144.068419$ (BKJD)



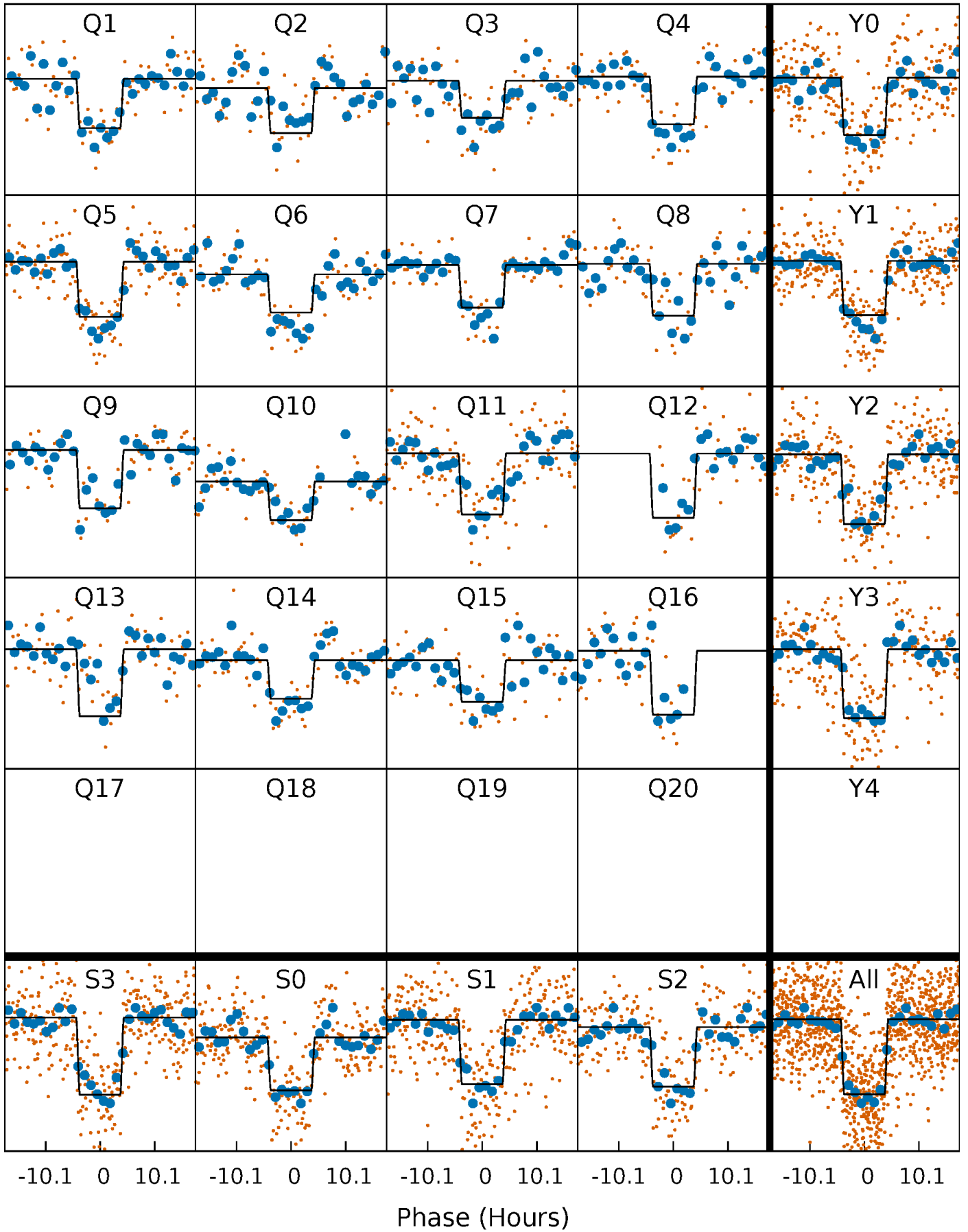
DV Quarter-Phased Transit Curves

TCE 003448130-01 P= 78.546133 Days $T_0=144.068419$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

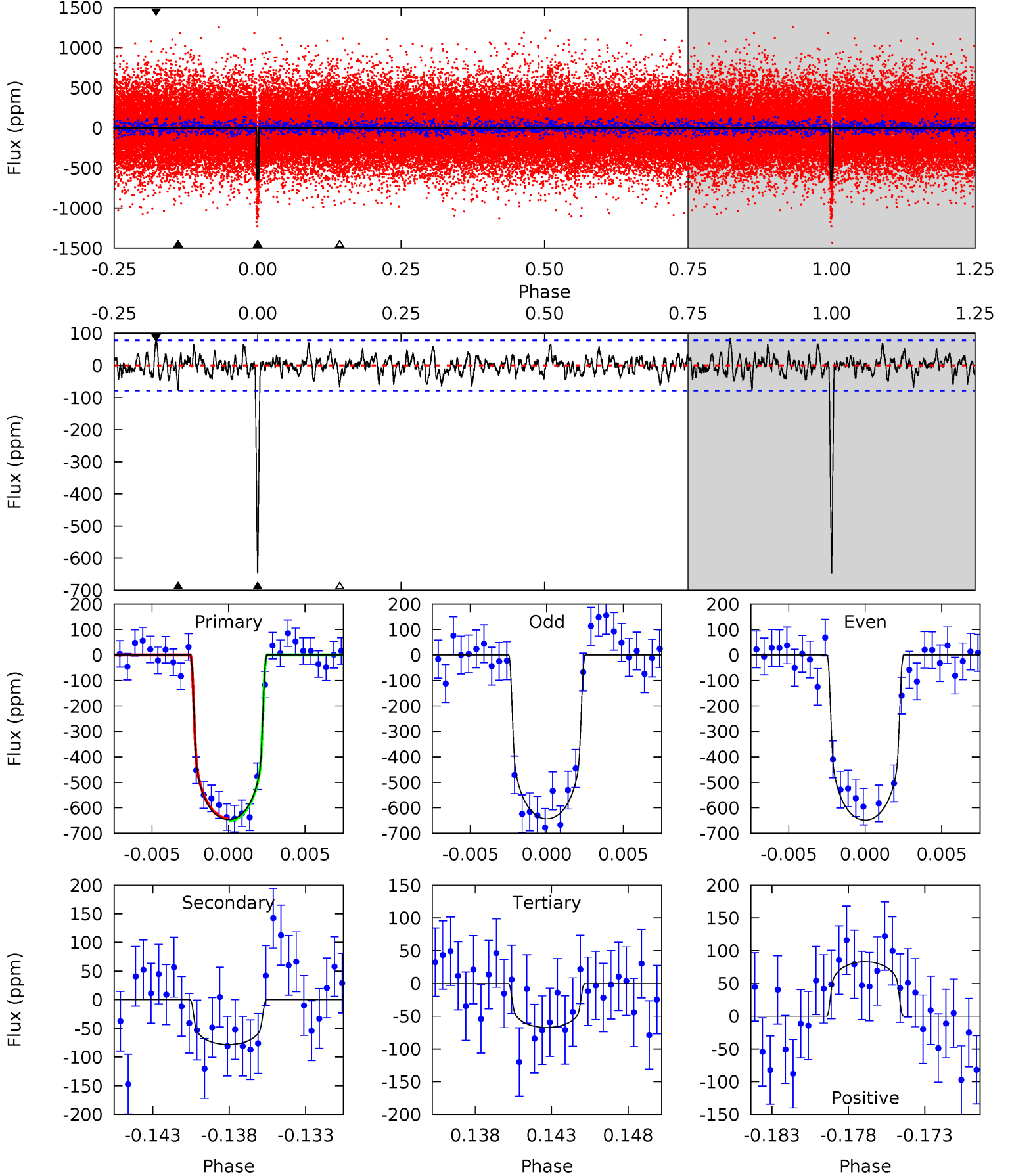
TCE 003448130-01 P= 78.545699 Days $T_0=144.071260$ (BKJD)



DV Model-Shift Uniqueness Test

003448130-01, P = 78.546133 Days, E = 65.522286 Days

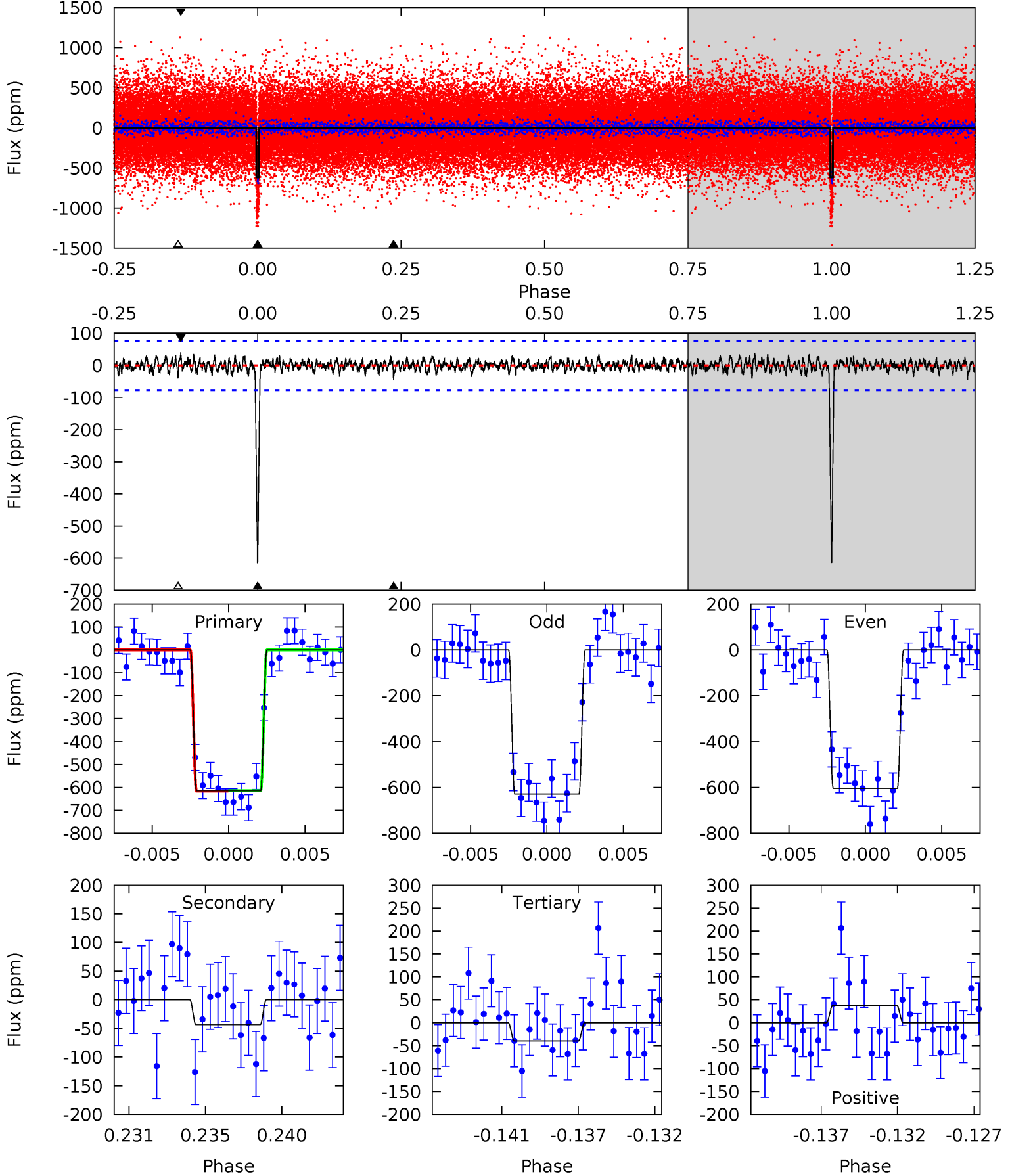
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.6	5.15	4.44	5.47	5.16	2.81	1.47	38.1	37.1	0.71	-0.32	0.18	1.01	0.11	0.29



Alt Model-Shift Uniqueness Test

003448130-01, P = 78.545699 Days, E = 65.525561 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.5	2.94	2.69	2.52	5.17	2.83	0.81	38.8	38.9	0.26	0.43	0.84	0.99	0.06	0.09



Stellar Parameters For KIC 003448130

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5808^{+78}_{-78}	$4.172^{+0.162}_{-0.108}$	$0.140^{+0.150}_{-0.150}$	$1.397^{+0.228}_{-0.254}$	$1.058^{+0.105}_{-0.073}$	$0.546^{+0.446}_{-0.180}$
	+1%/-1%	+4%/-3%	+107%/-107%	+16%/-18%	+10%/-7%	+82%/-33%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 003448130-01 / KOI 2043.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-78 ± 15	$3.74^{+0.75}_{-0.69}$	697^{+31}_{-38}	3823^{+280}_{-231}	410^{+222}_{-145}
Alt.	-44 ± 15	$3.71^{+0.75}_{-0.76}$	696^{+32}_{-37}	3482^{+312}_{-245}	233^{+182}_{-98}

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

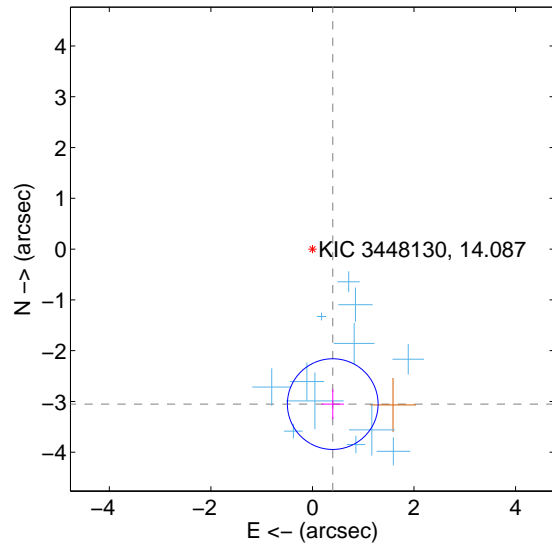
Supplemental centroid analysis for 003448130-01. Kepler magnitude: 14.09. Transit SNR 26.52

There are 12 quarters with good PRF difference image offsets

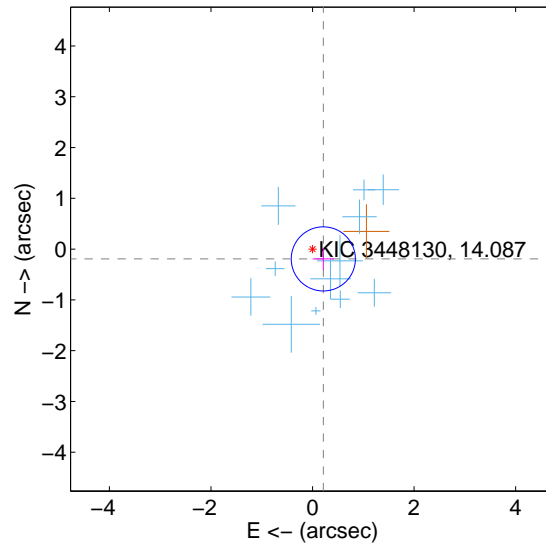
The OOT PRF centroid is offset from the target star catalog position by about 3.38 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.078 ± 0.298	10.34	-0.400 ± 0.221	-3.052 ± 0.295
PRF-fit source offset from KIC position	0.287 ± 0.210	1.36	-0.212 ± 0.210	-0.193 ± 0.211
photometric centroid source offset	0.43 ± 0.37	1.17	-0.14 ± 0.24	0.41 ± 0.38

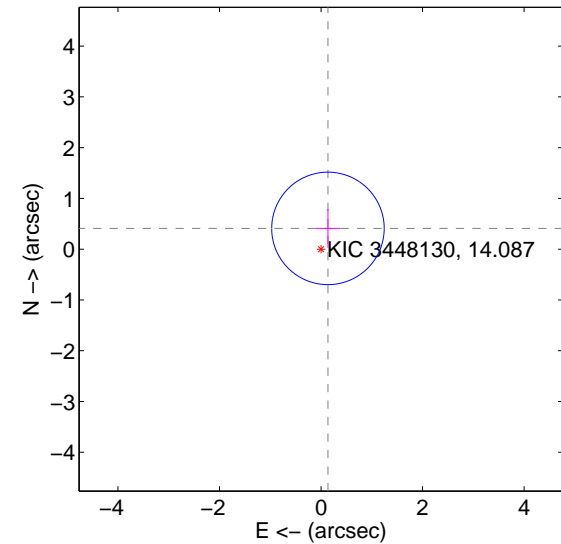
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

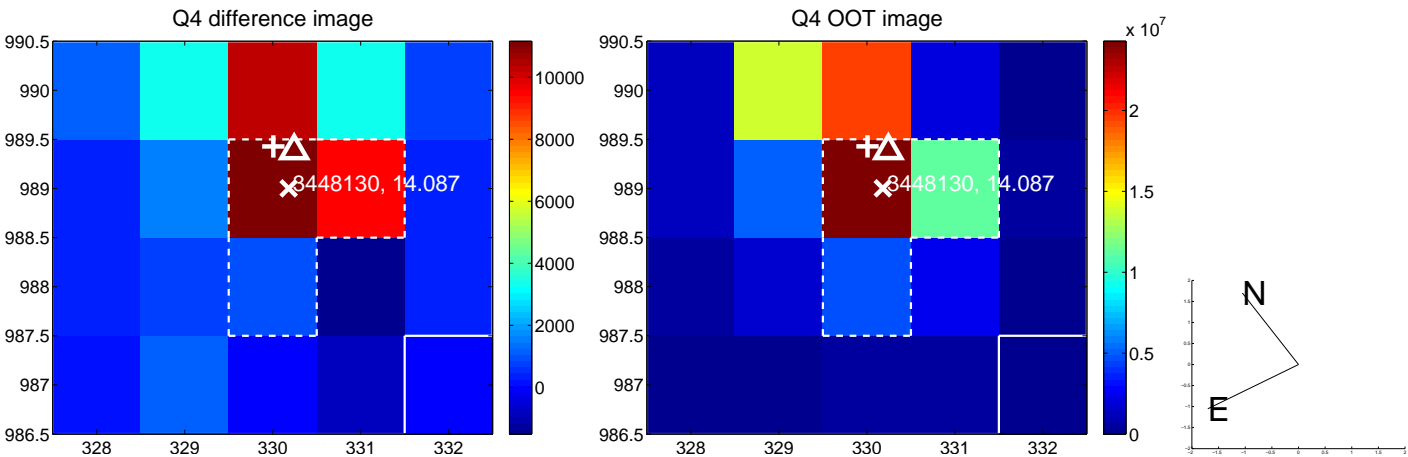
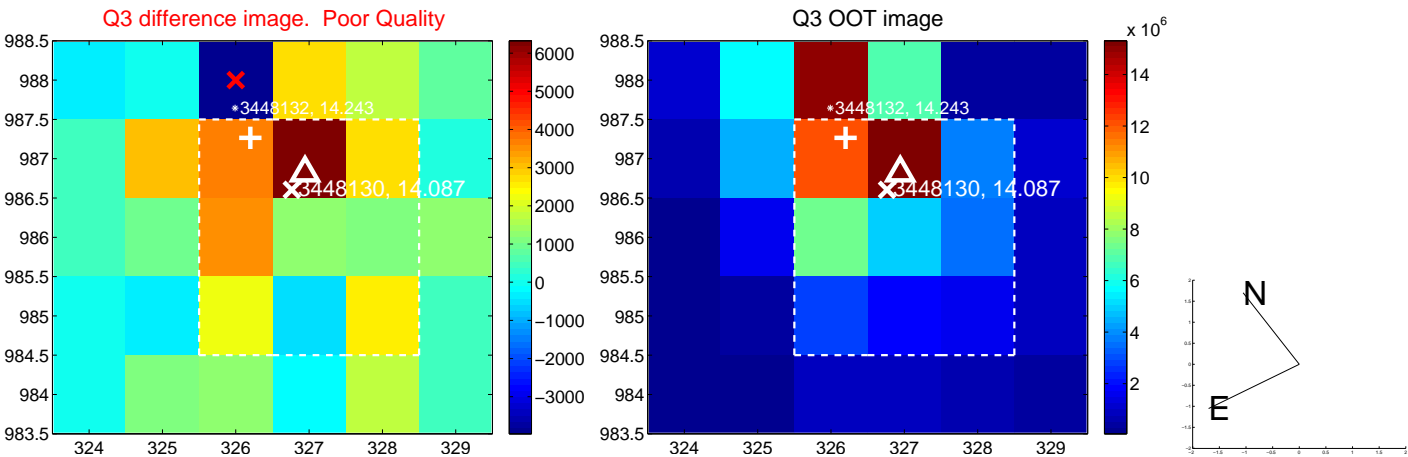
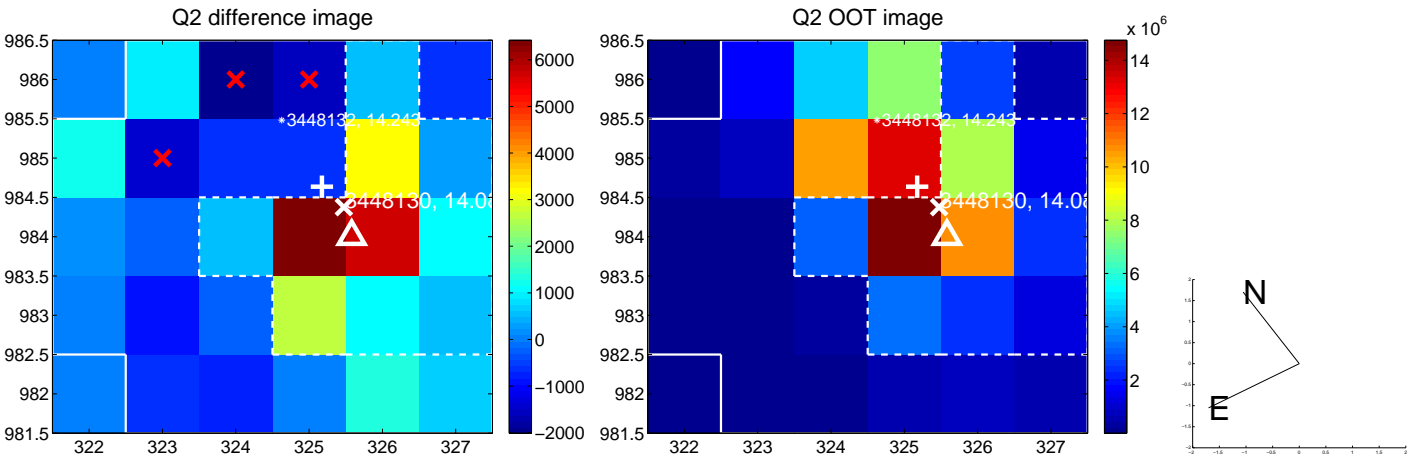
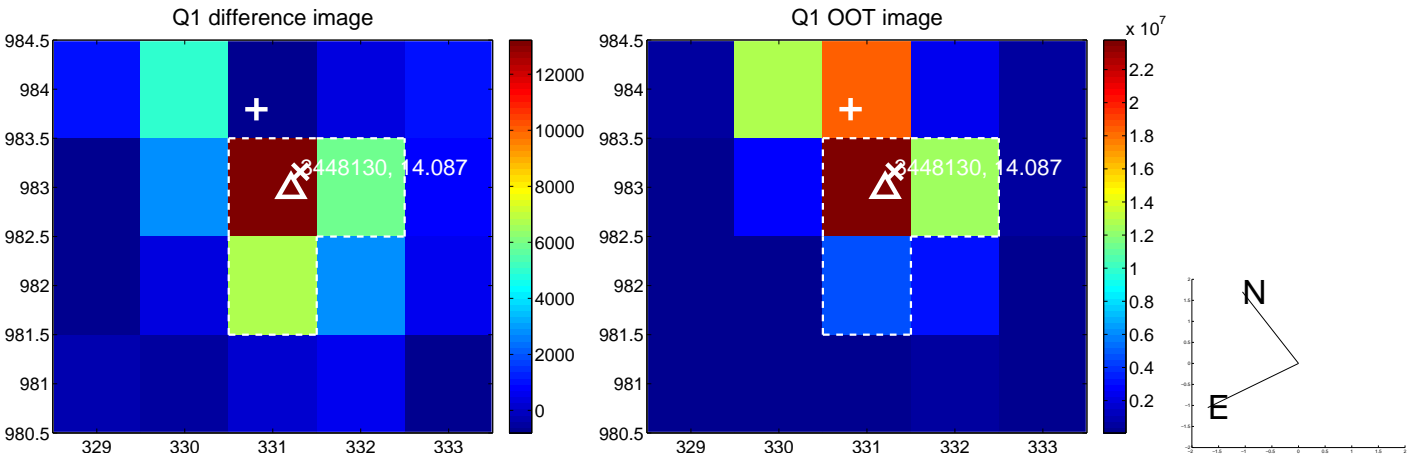


offset from photometric centroids

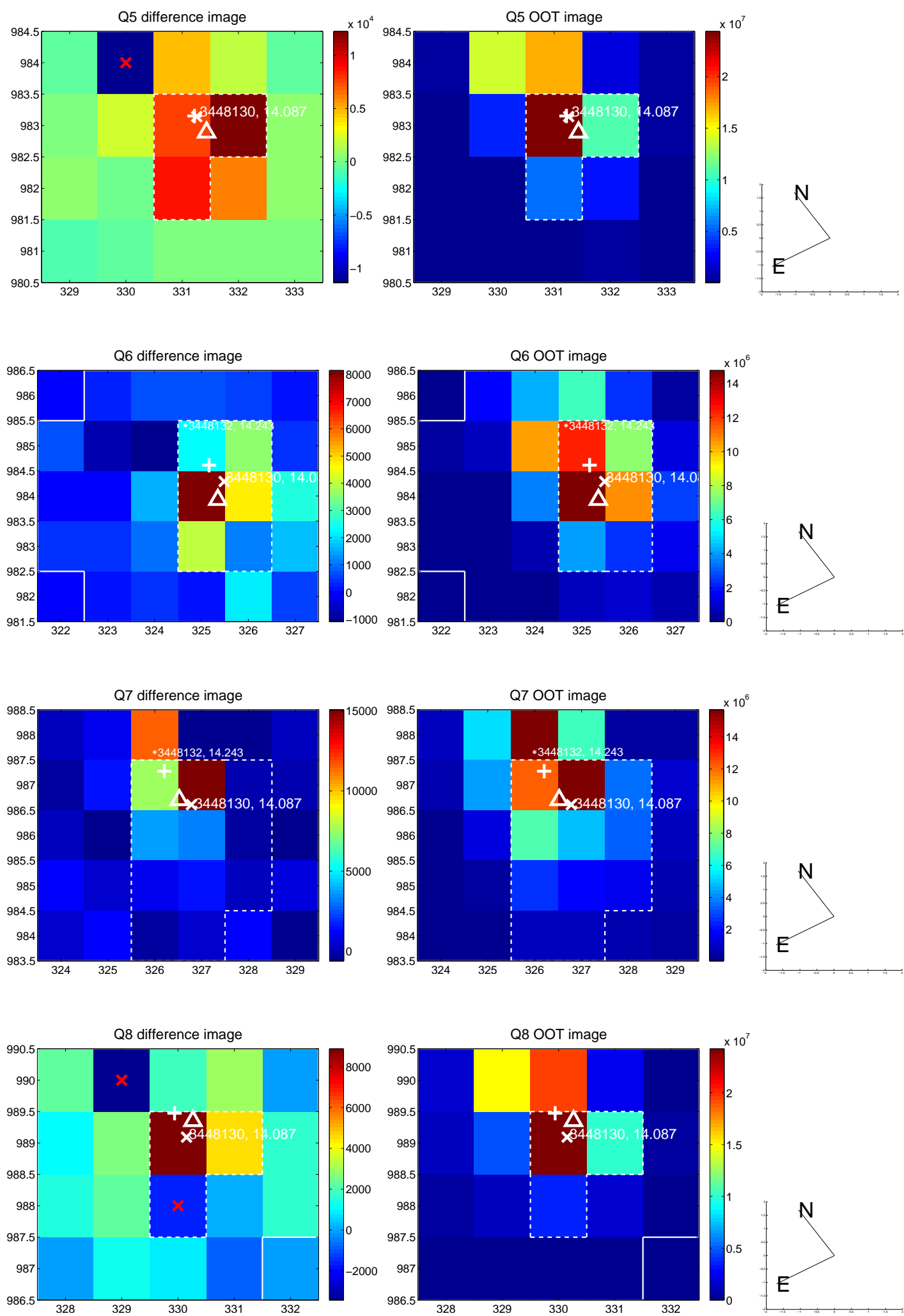


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

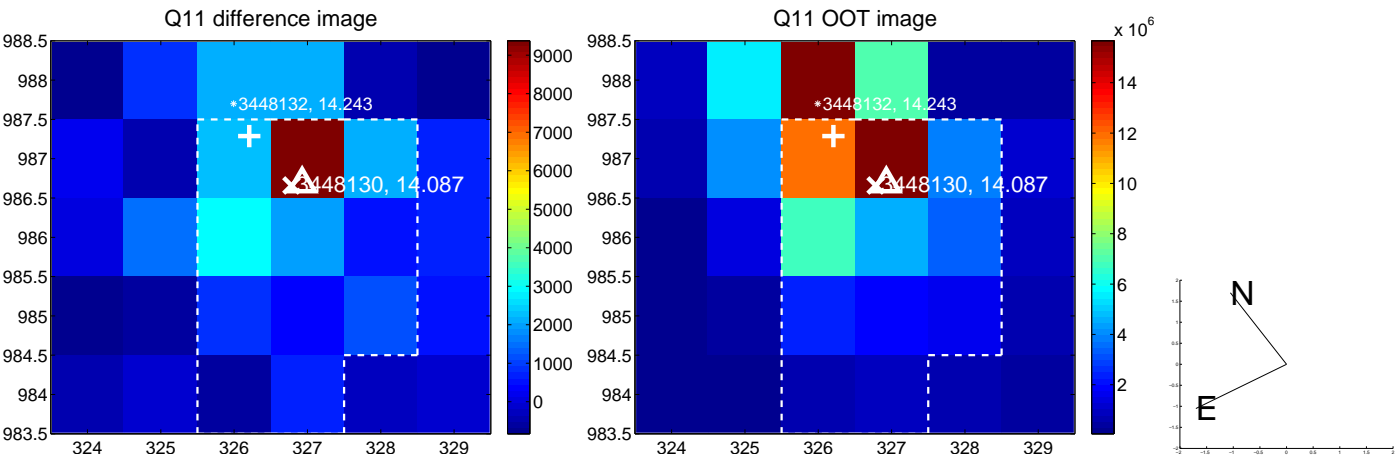
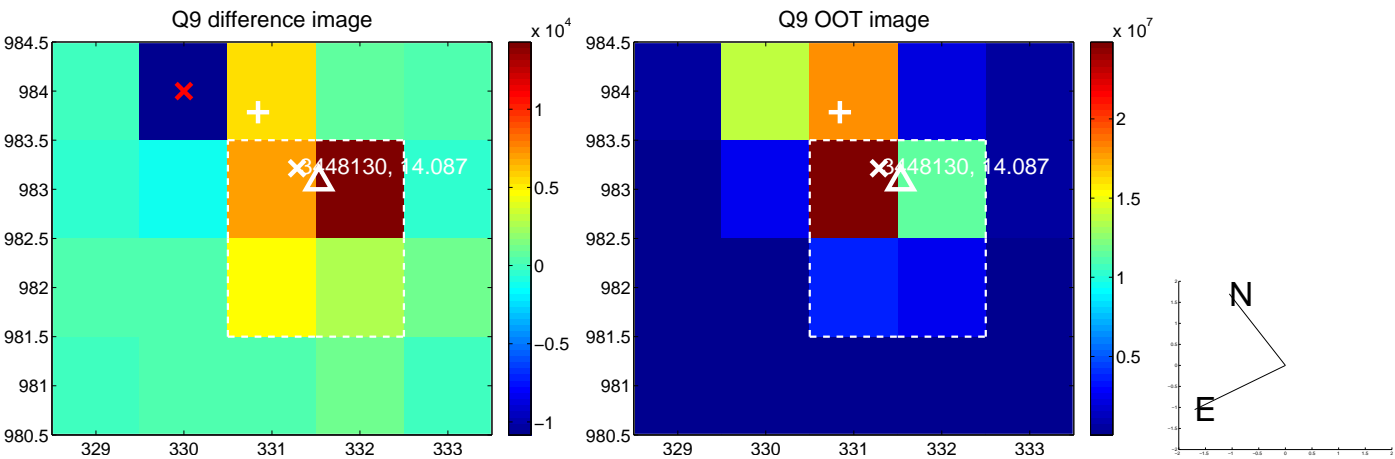
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



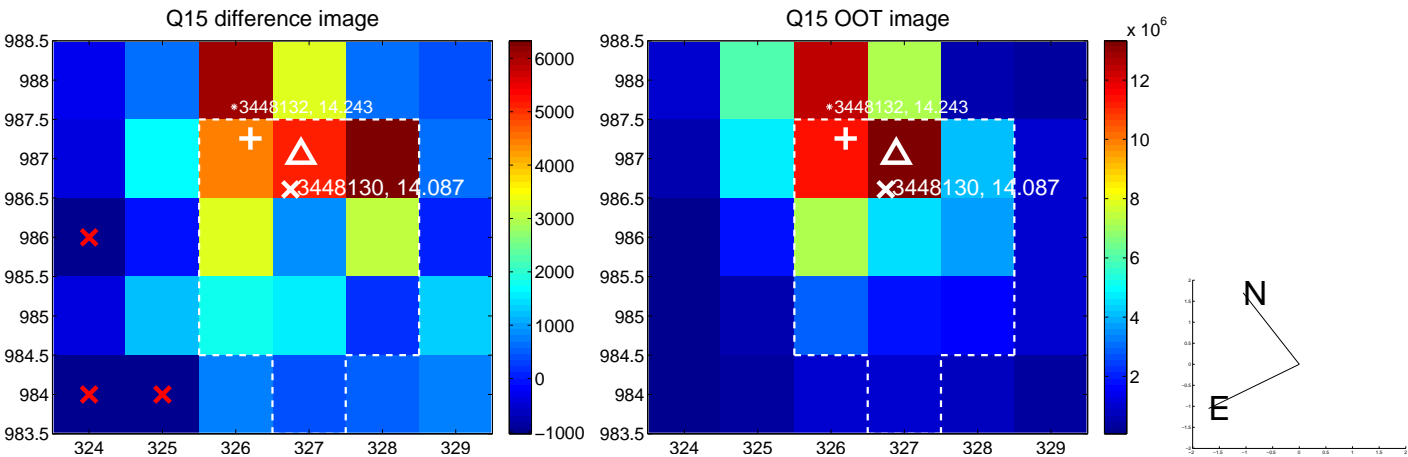
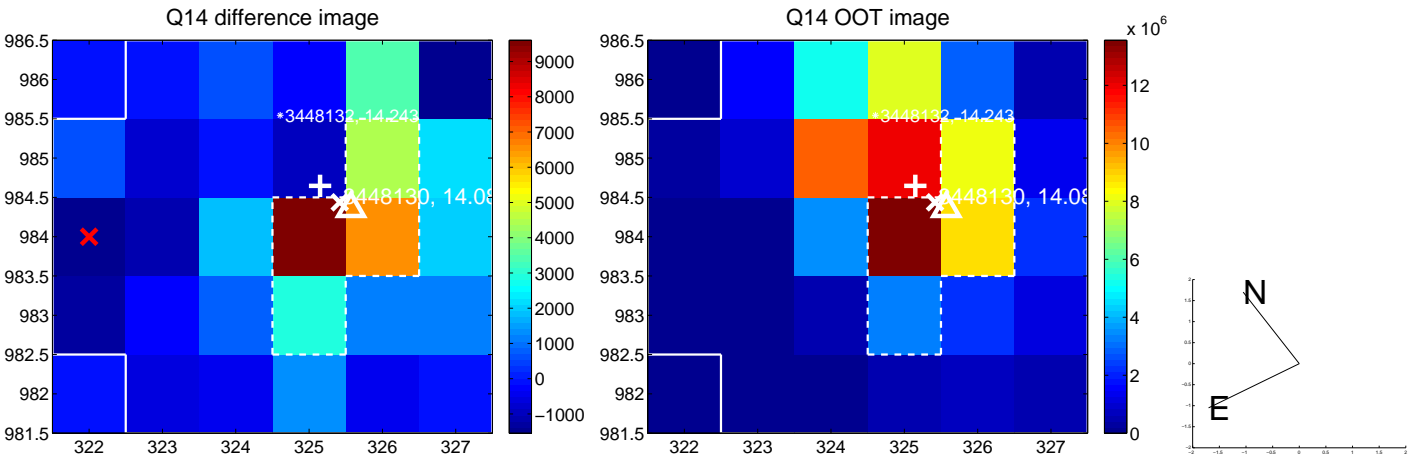
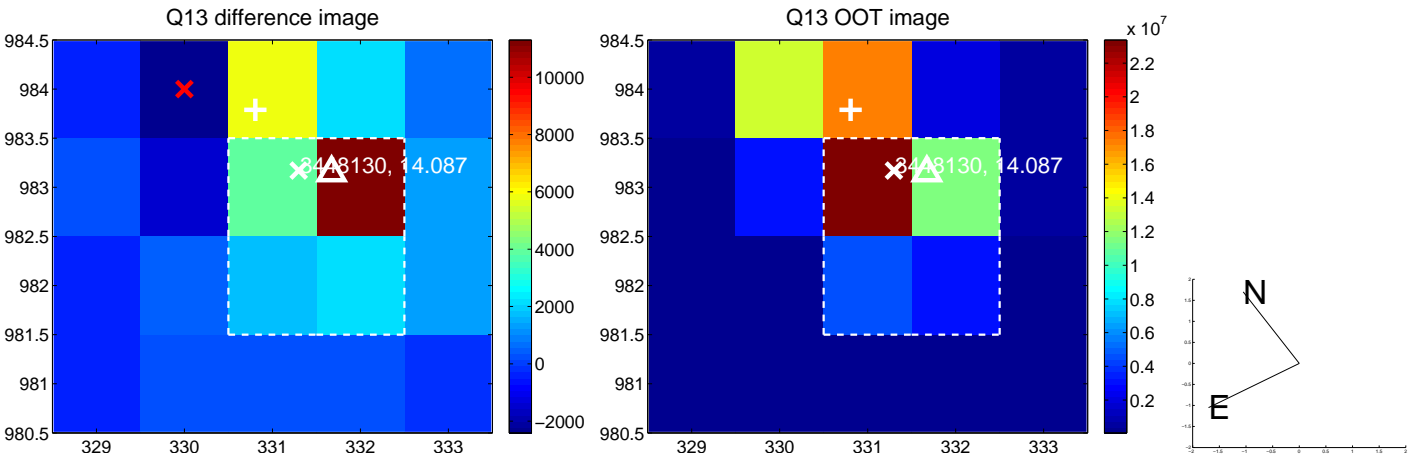
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



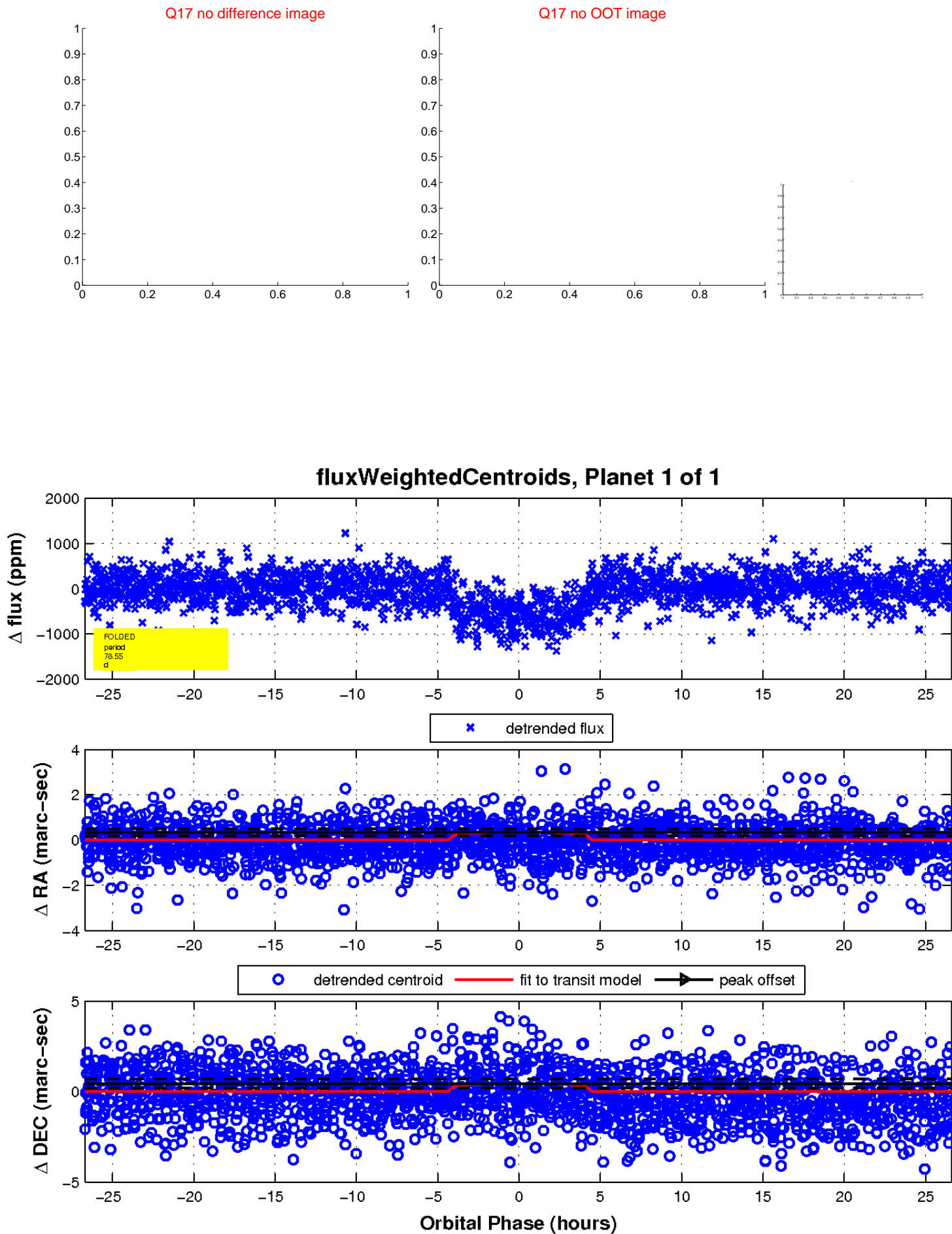
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

