

KIC 007584650

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})
007584650-01	OBS	2631.01	44.997581	160.228503	158.9	9.318	16.0	17.2	0.98	5871	1.45	15.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007584650-01	OBS	PC	0.91	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.

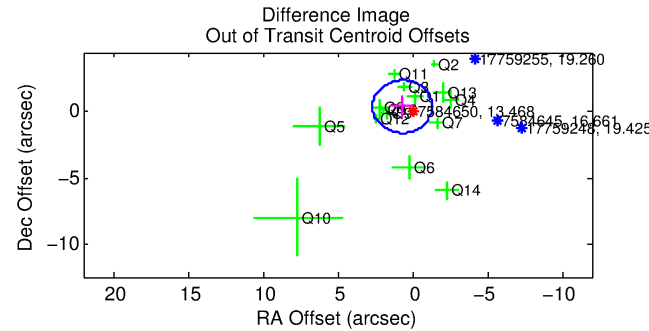
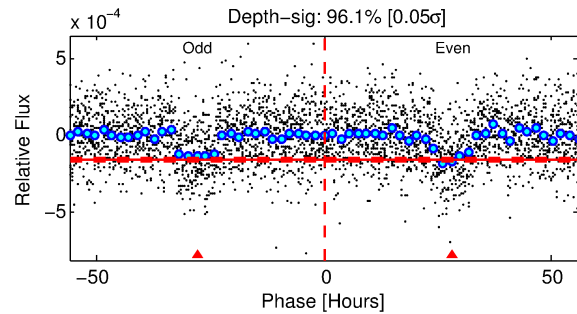
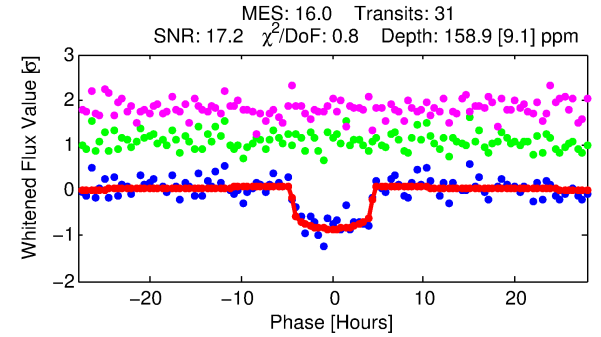
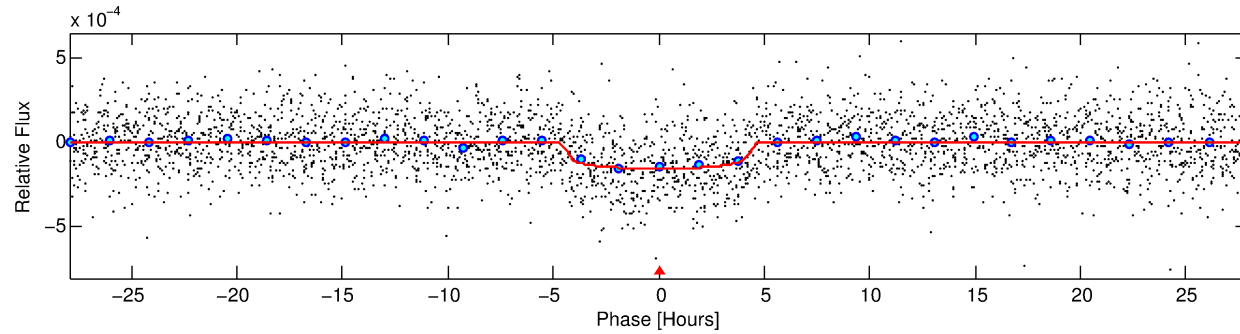
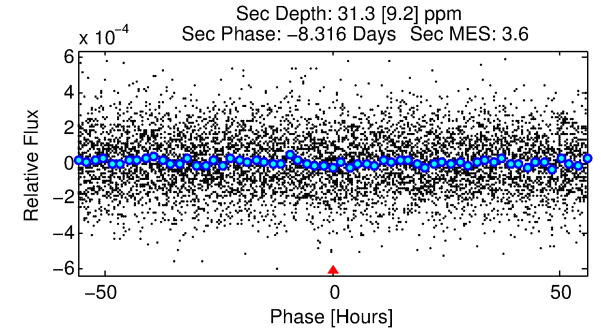
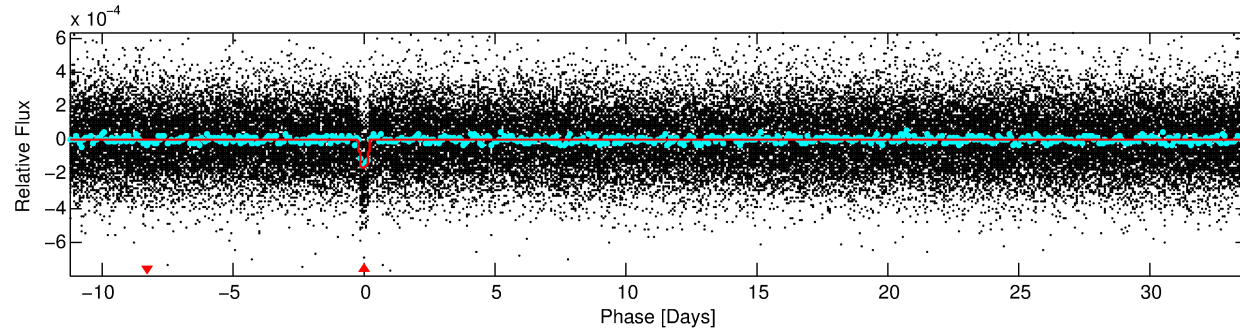
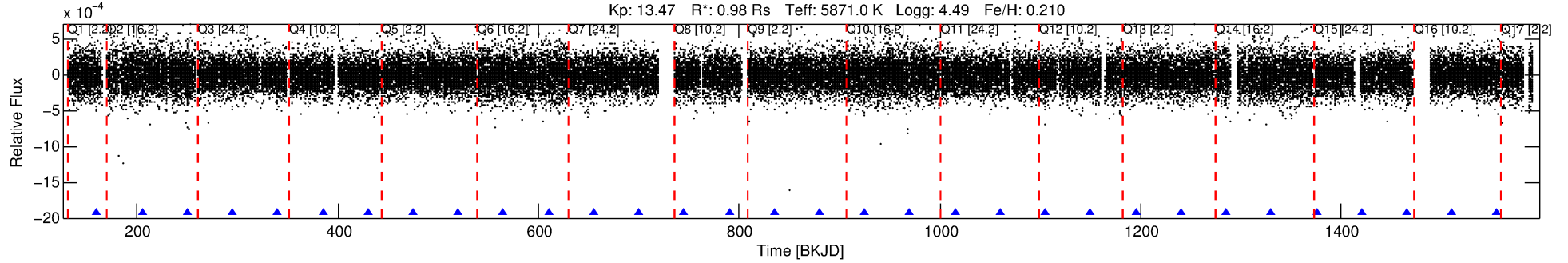
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007584650-01

No Significant Match Found

DV One-Page Summary

KIC: 7584650 Candidate: 1 of 1 Period: 44.998 d
KOI: K02631.01 Corr: 0.989



DV Fit Results:

Period = 44.99758 [0.00049] d
Epoch = 160.2285 [0.0090] BKJD
Rp/R* = 0.0135 [0.0017]
a/R* = 18.31 [10.60]
b = 0.88 [0.14]
Seff = 15.77 [3.21]
Teff = 508 [26] K
Rp = 1.45 [0.28] Re
a = 0.2554 [0.0328] AU
Ag = 533.58 [231.60] [2.30σ]
Teffp = 3776 [371] K [8.80σ]

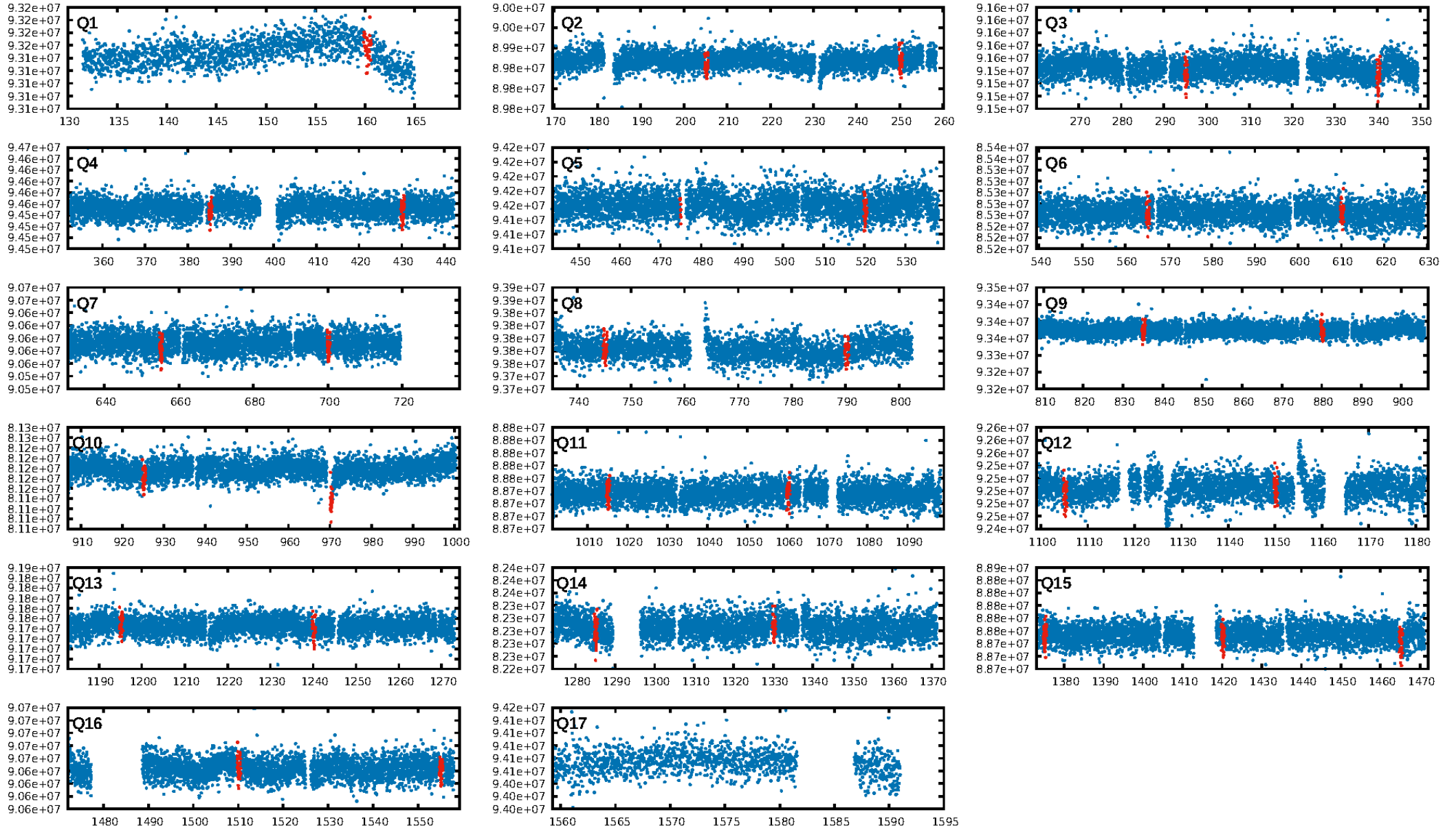
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 44.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.03e-53
RollingBand-fgt: 1.00 [30/30]
GhostDiagnostic-chr: 41.96
Centroid-sig: 60.7%
Centroid-so: 0.534 arcsec [0.73σ]
OotOffset-rm: 0.793 arcsec [1.19σ]
KicOffset-rm: 0.984 arcsec [1.72σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 0.67 [10/15]
DiffImageOverlap-fno: 1.00 [16/16]

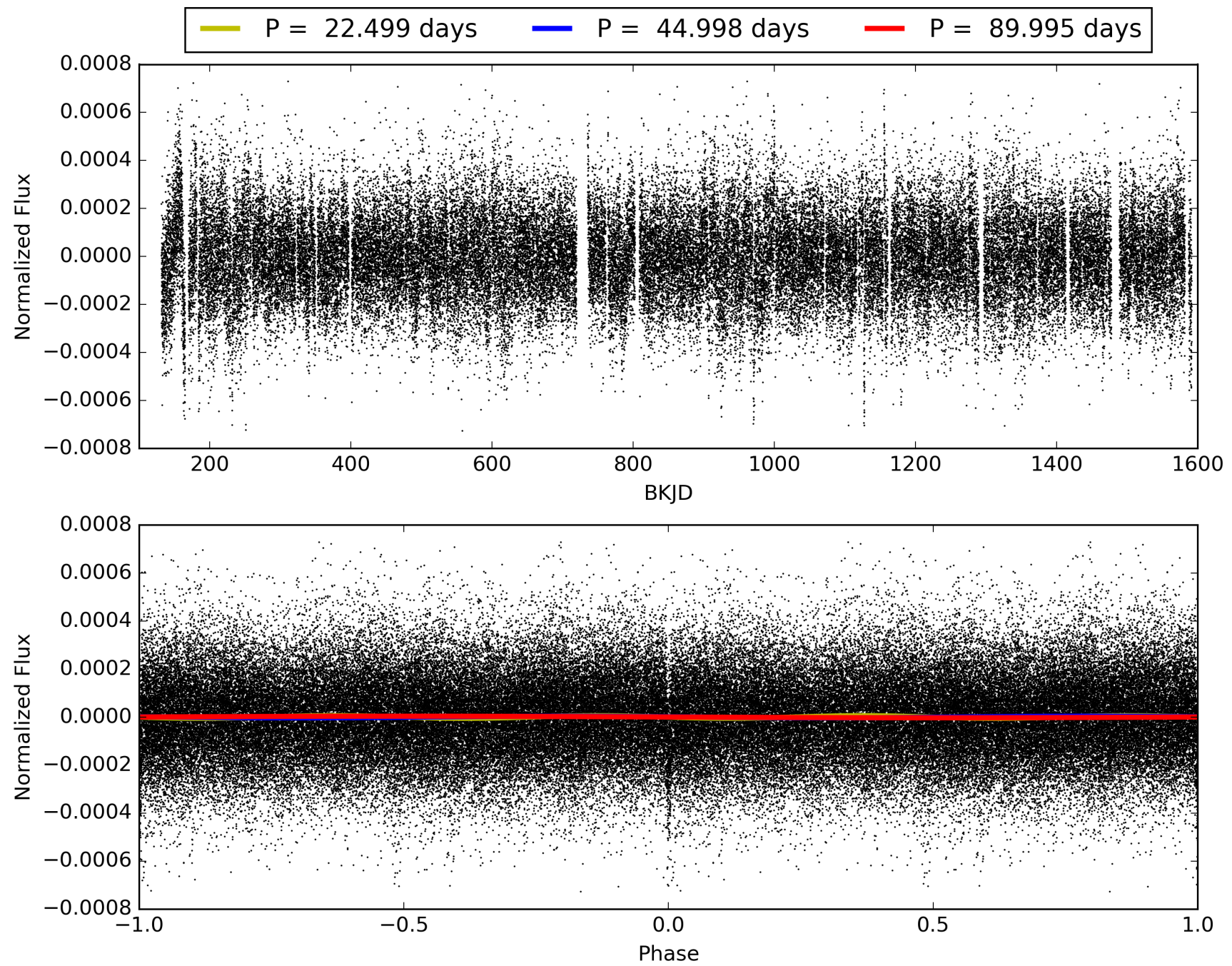
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:10:03 Z

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

TCE 007584650-01, PDC Light Curves

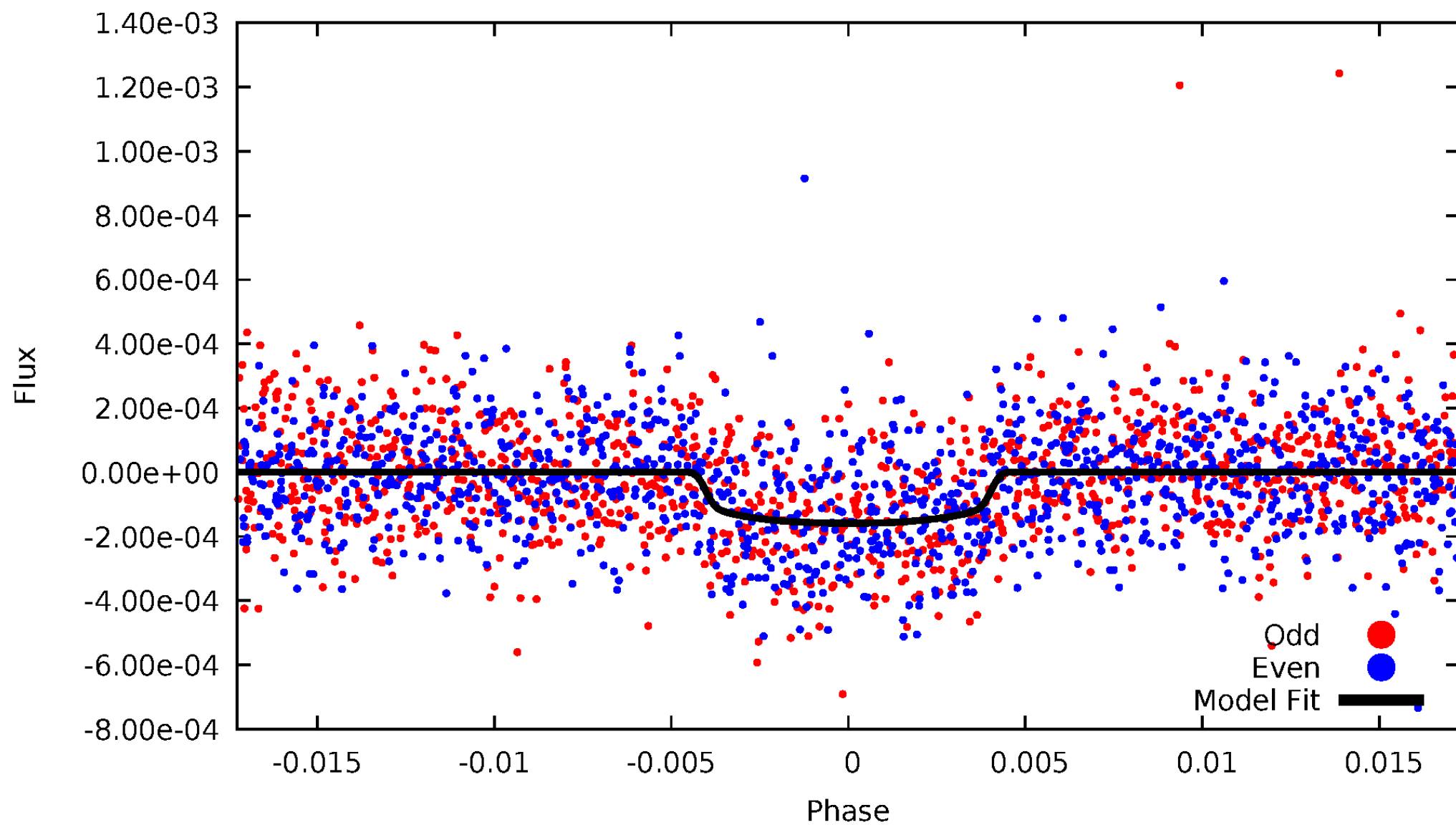


TCE 007584650-01



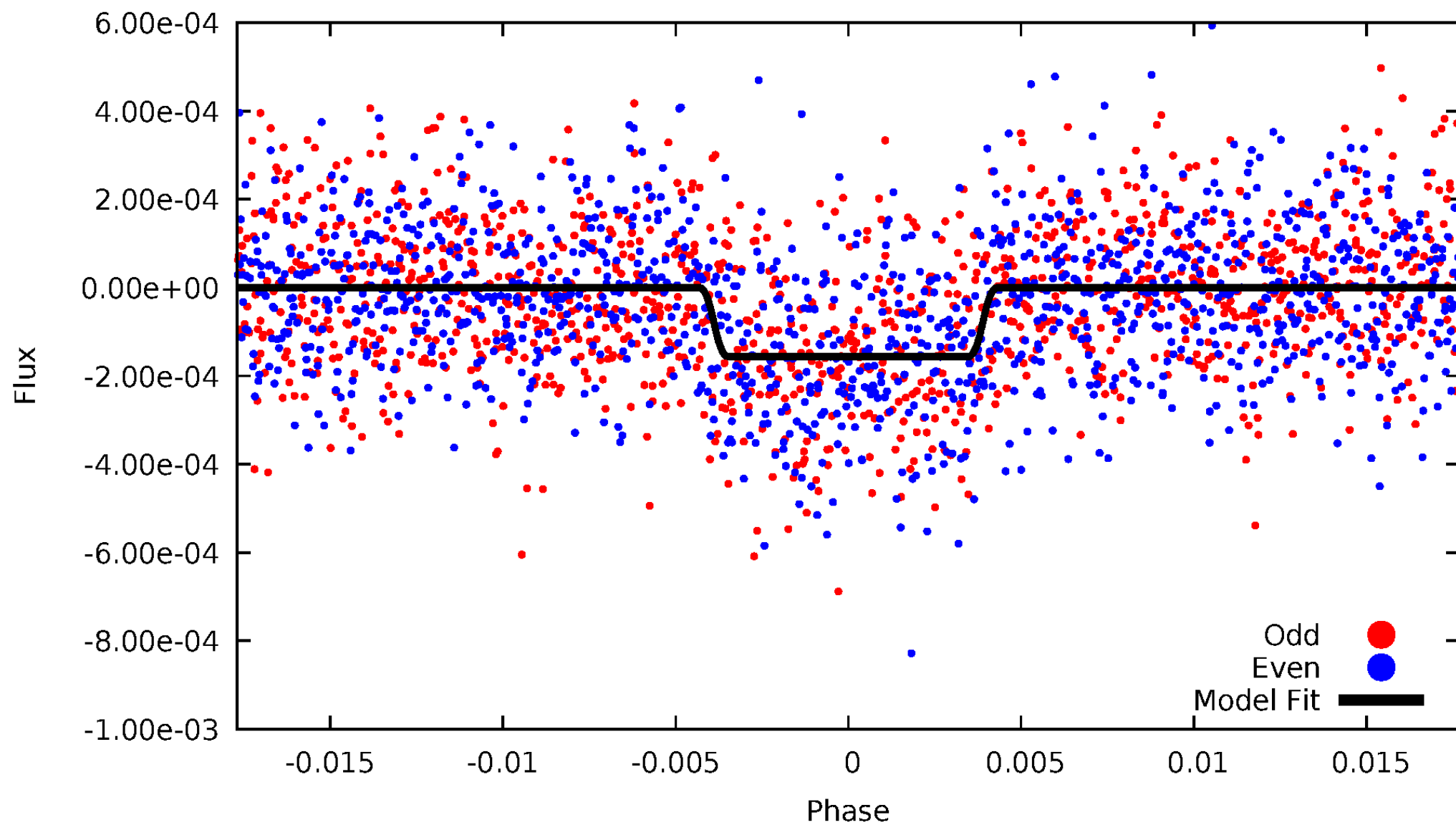
DV Odd/Even

TCE 007584650-01



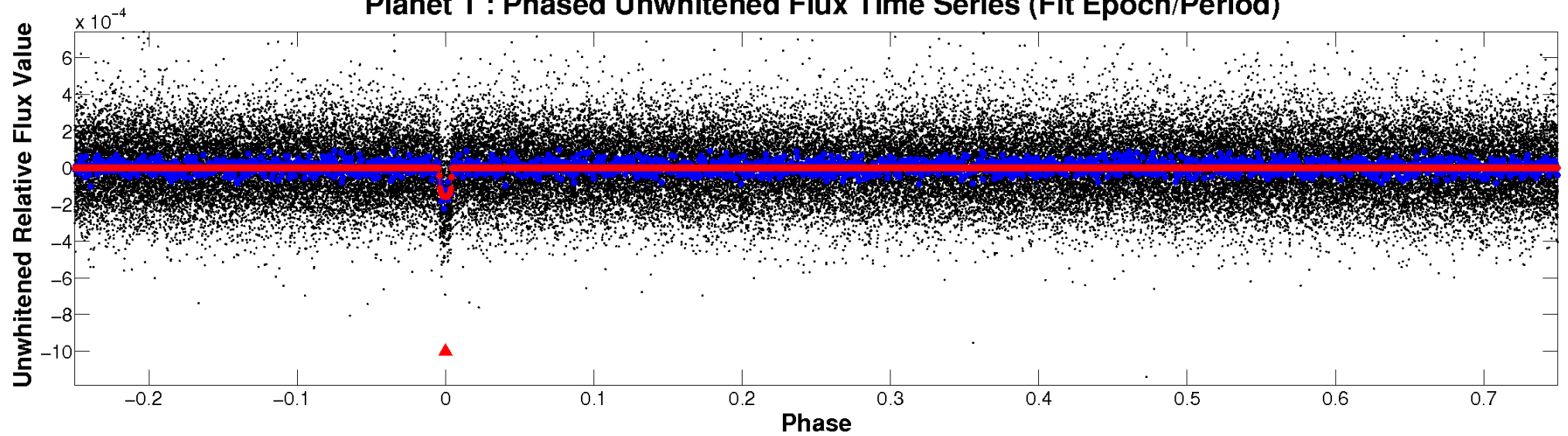
ALT Odd/Even

TCE 007584650-01

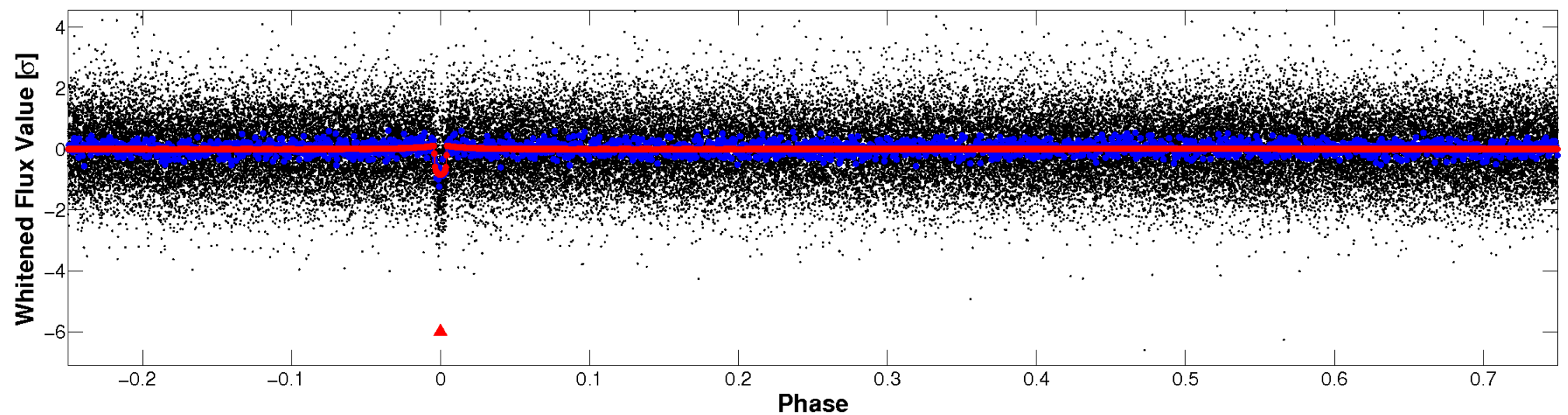


Non-Whitened Vs. Whitened Light Curve

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

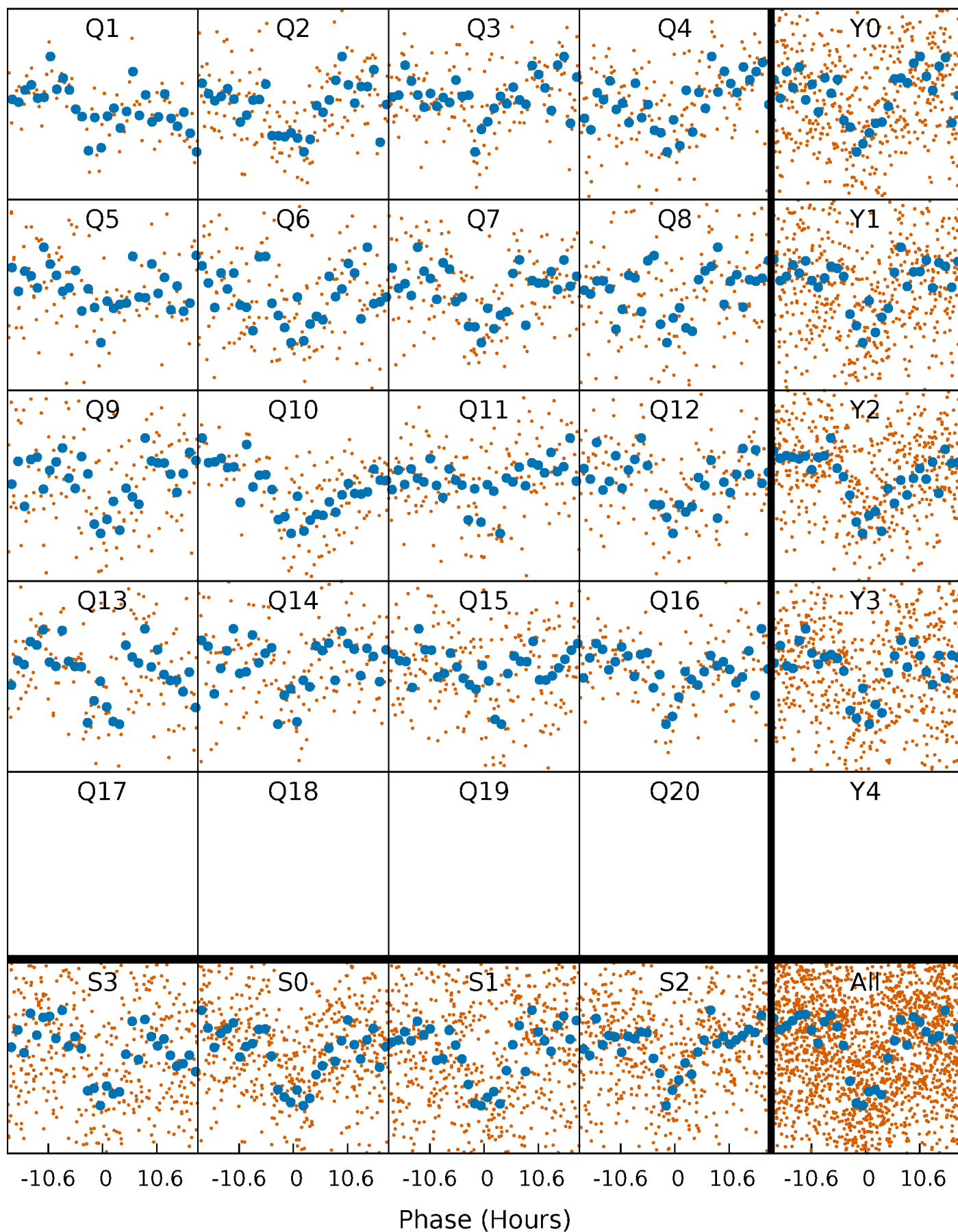


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



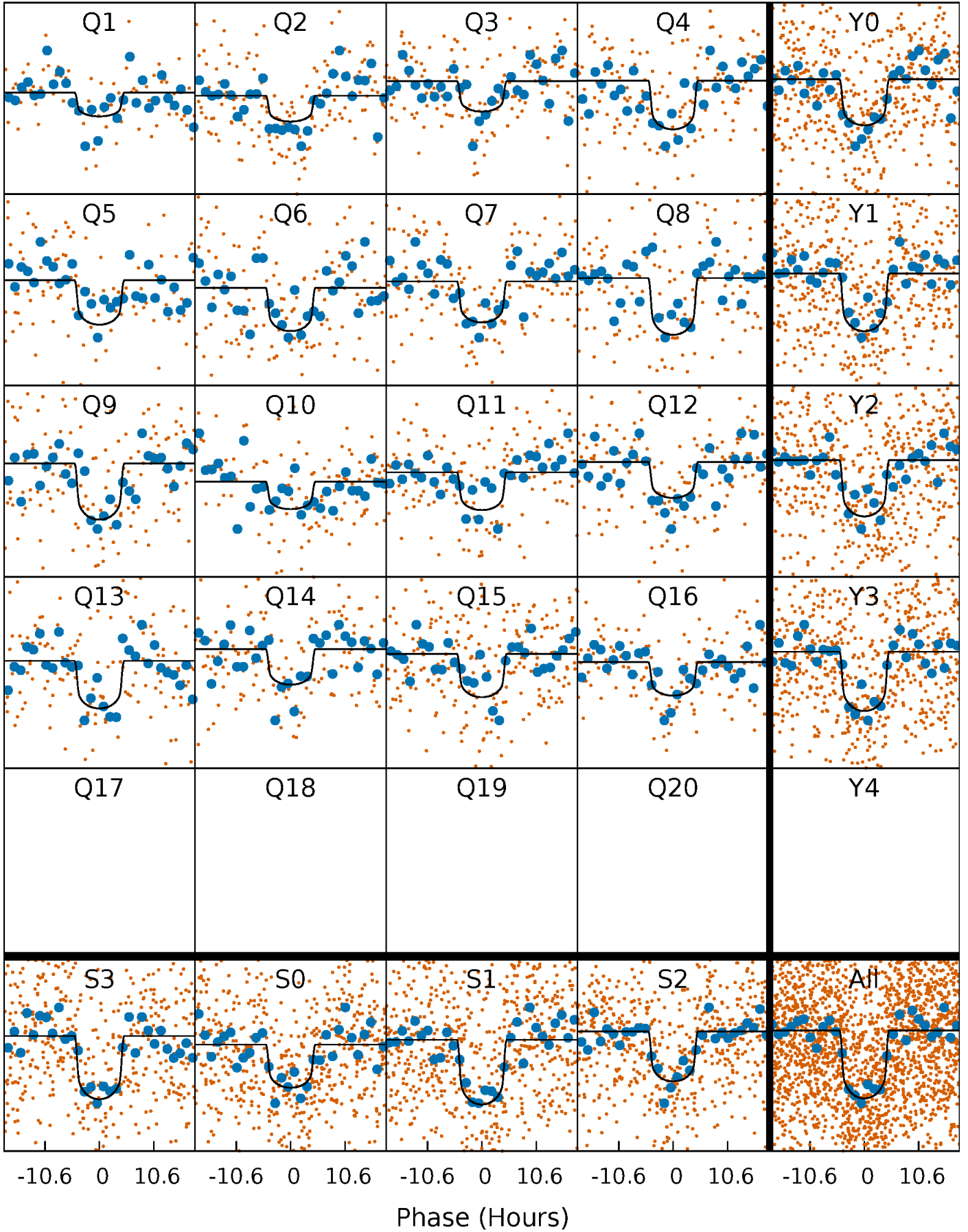
PDC Quarter-Phased Transit Curves

TCE 007584650-01 P= 44.997581 Days $T_0=160.228503$ (BKJD)



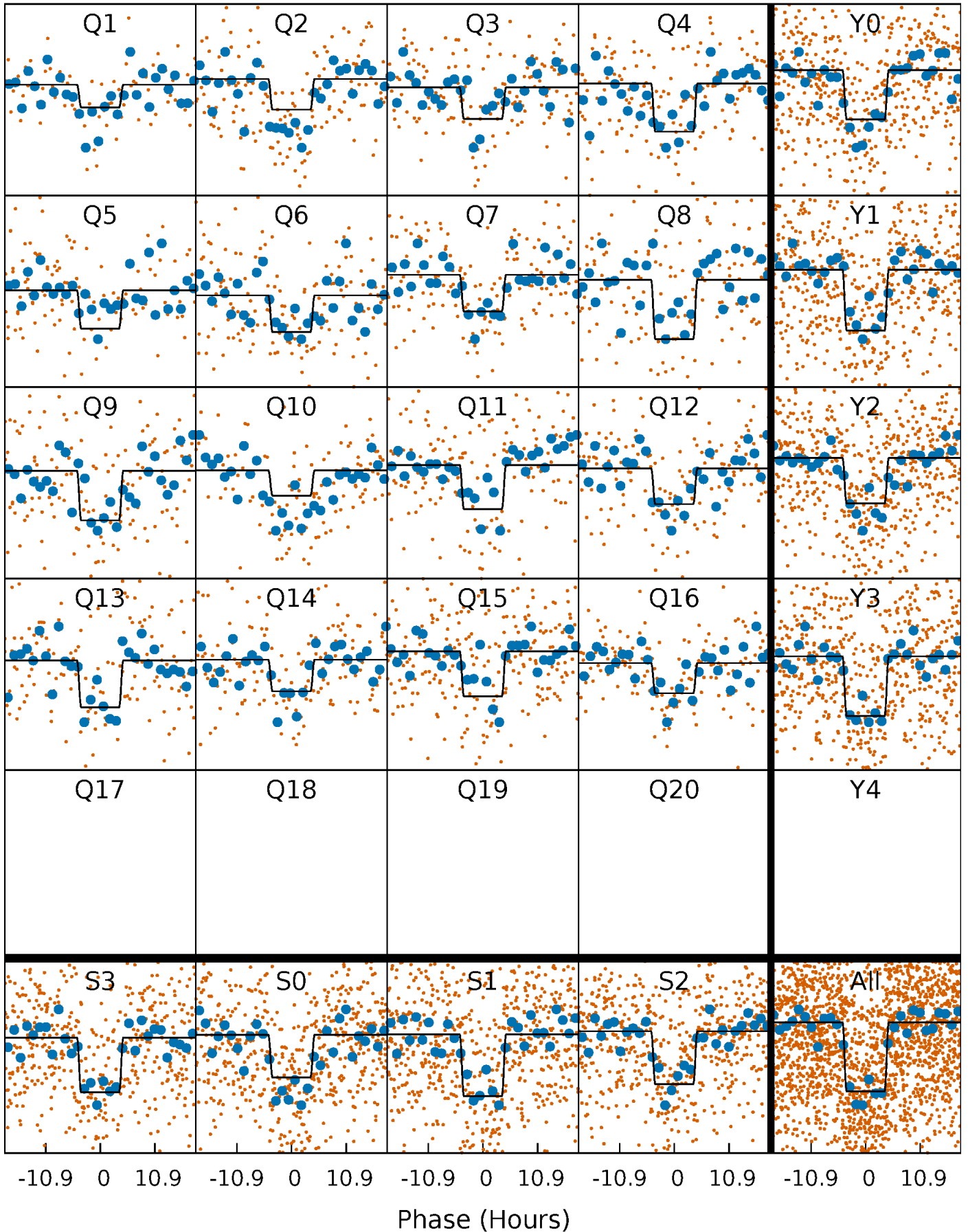
DV Quarter-Phased Transit Curves

TCE 007584650-01 P= 44.997581 Days $T_0=160.228503$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

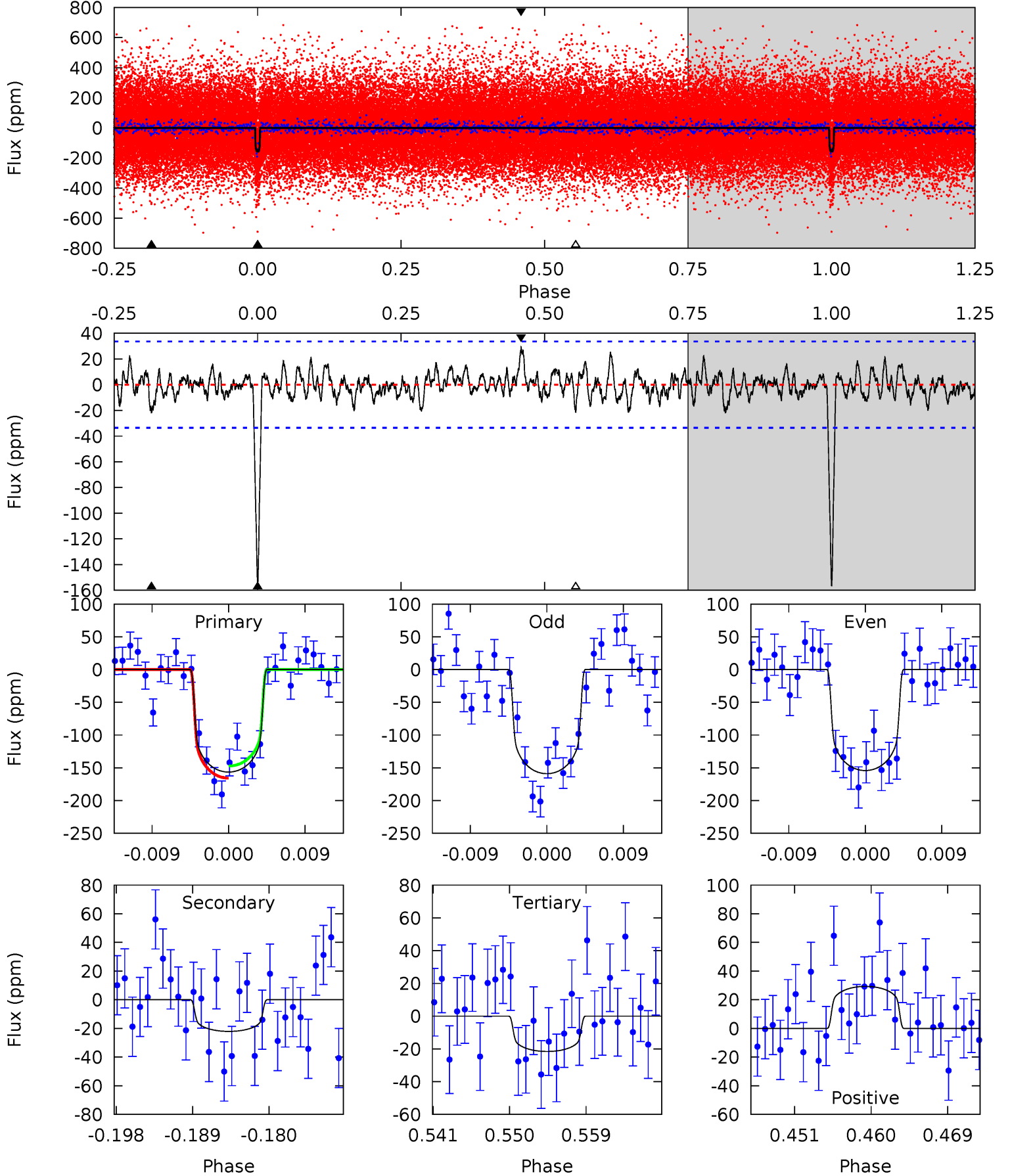
TCE 007584650-01 $P = 44.997772$ Days $T_0 = 160.230243$ (BKJD)



DV Model-Shift Uniqueness Test

007584650-01, $P = 44.997581$ Days, $E = 115.230922$ Days

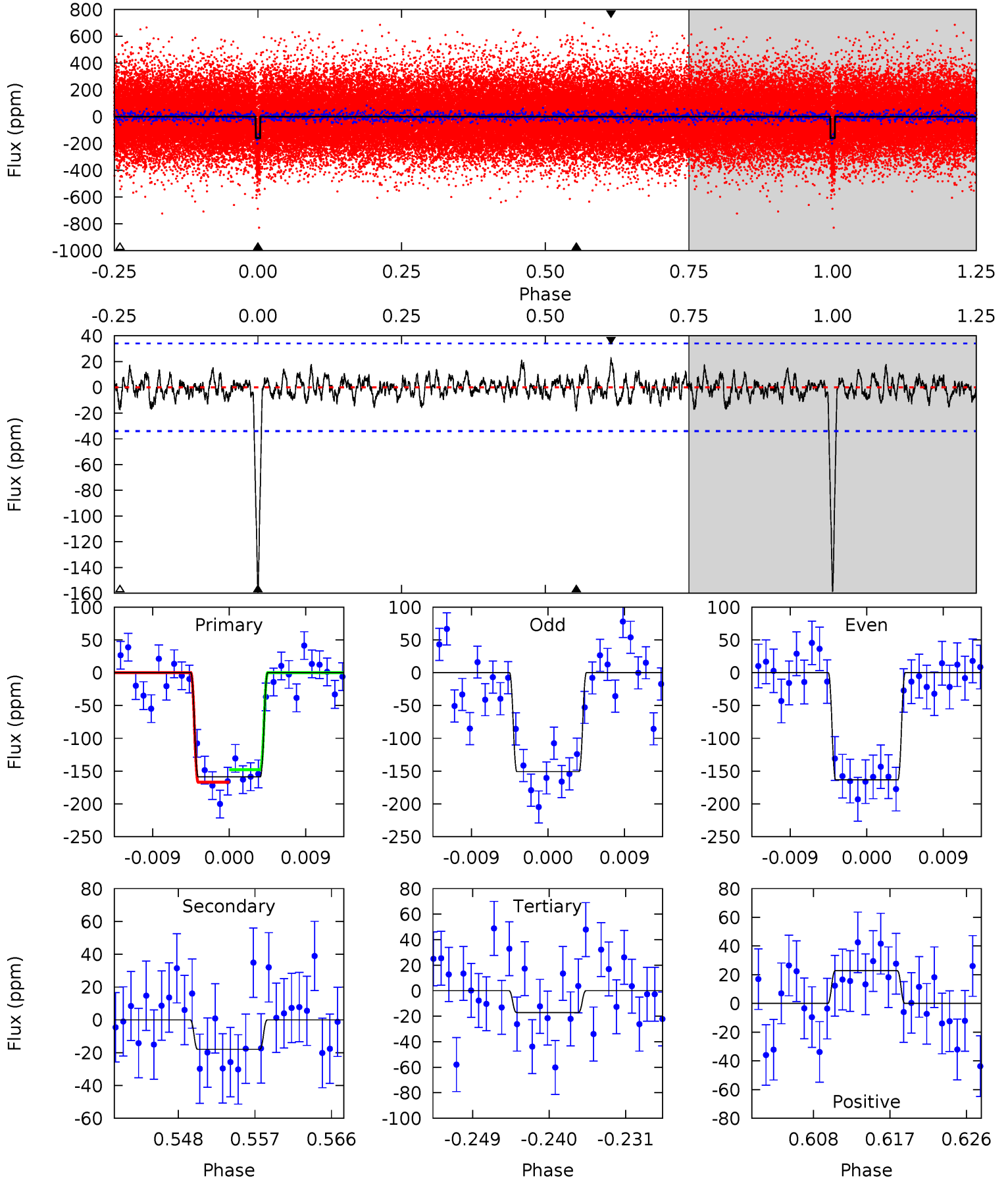
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.5	3.32	3.25	4.41	5.05	2.61	1.19	20.3	19.1	0.07	-1.09	0.36	1.01	0.16	1.39



Alt Model-Shift Uniqueness Test

007584650-01, P = 44.997772 Days, E = 115.232471 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.6	2.67	2.53	3.39	5.06	2.63	0.94	21.0	20.2	0.14	-0.71	0.93	1.13	0.13	1.41



Stellar Parameters For KIC 007584650

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5871^{+70}_{-88}	$4.493^{+0.019}_{-0.110}$	$0.210^{+0.150}_{-0.150}$	$0.983^{+0.143}_{-0.045}$	$1.097^{+0.045}_{-0.076}$	$1.624^{+0.165}_{-0.522}$
	+1%/-1%	+0%/-2%	+71%/-71%	+15%/-5%	+4%/-7%	+10%/-32%
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 007584650-01 / KOI 2631.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-22 ± 7	$1.49^{+0.21}_{-0.20}$	717^{+24}_{-14}	3814^{+262}_{-242}	344^{+174}_{-118}
Alt.	-18 ± 7	$1.37^{+0.22}_{-0.20}$	717^{+24}_{-16}	3777^{+320}_{-303}	329^{+196}_{-138}

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 $A_{obs} \gg 1.0$

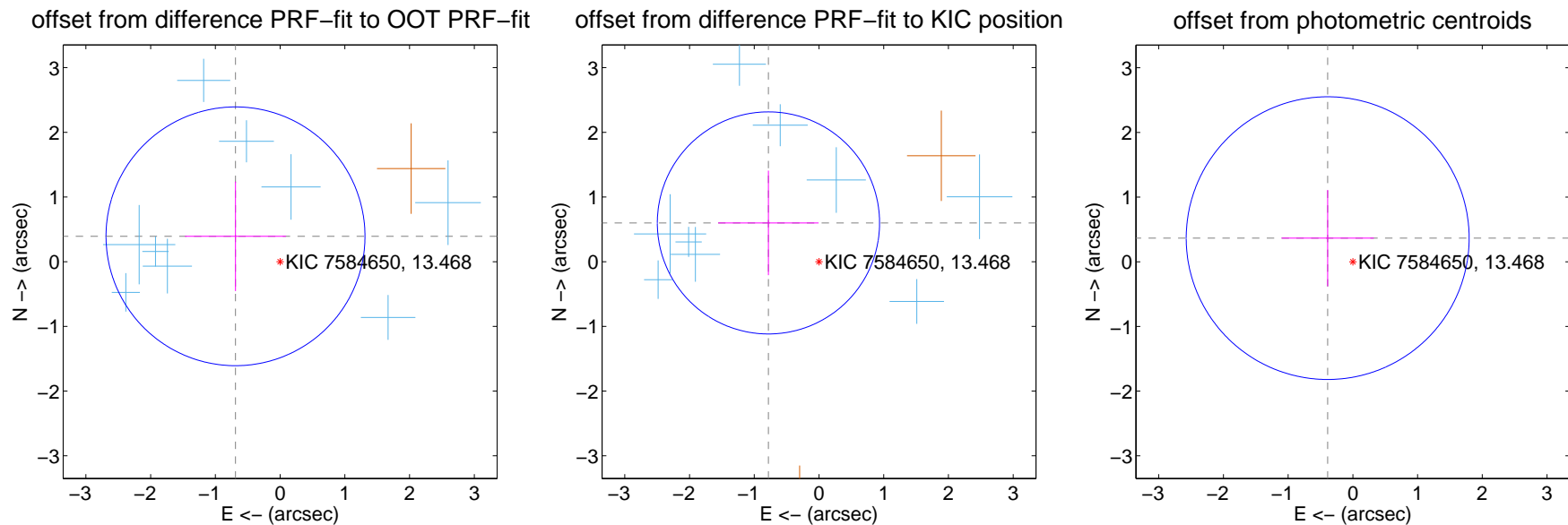
DV Centroid Data

Supplemental centroid analysis for 007584650-01. Kepler magnitude: 13.47. Transit SNR 17.21

There are 10 quarters with good PRF difference image offsets

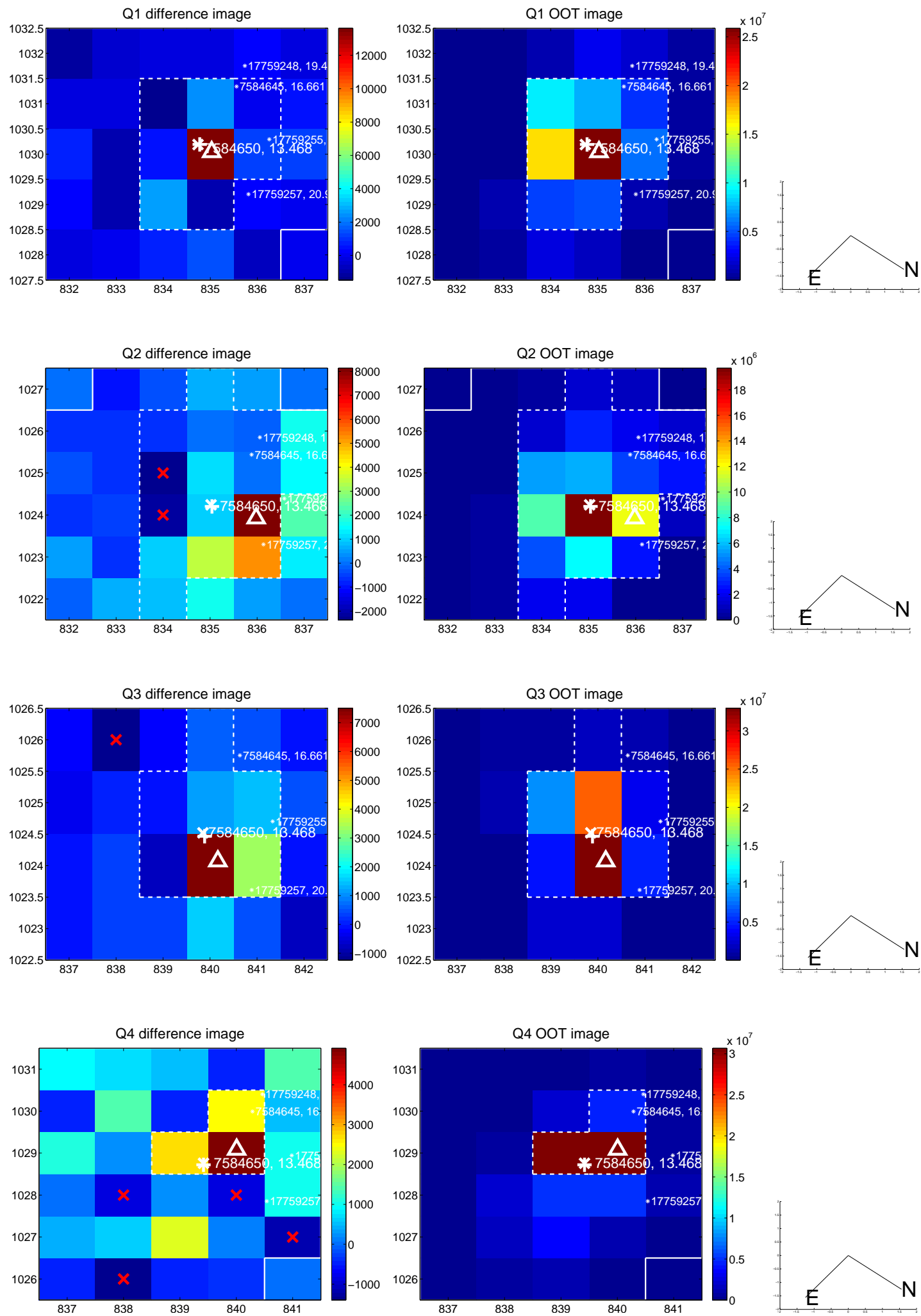
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.793 ± 0.667	1.19	0.689 ± 0.780	0.392 ± 0.846
PRF-fit source offset from KIC position	0.984 ± 0.572	1.72	0.781 ± 0.776	0.599 ± 0.809
photometric centroid source offset	0.53 ± 0.73	0.73	0.39 ± 0.71	0.37 ± 0.75

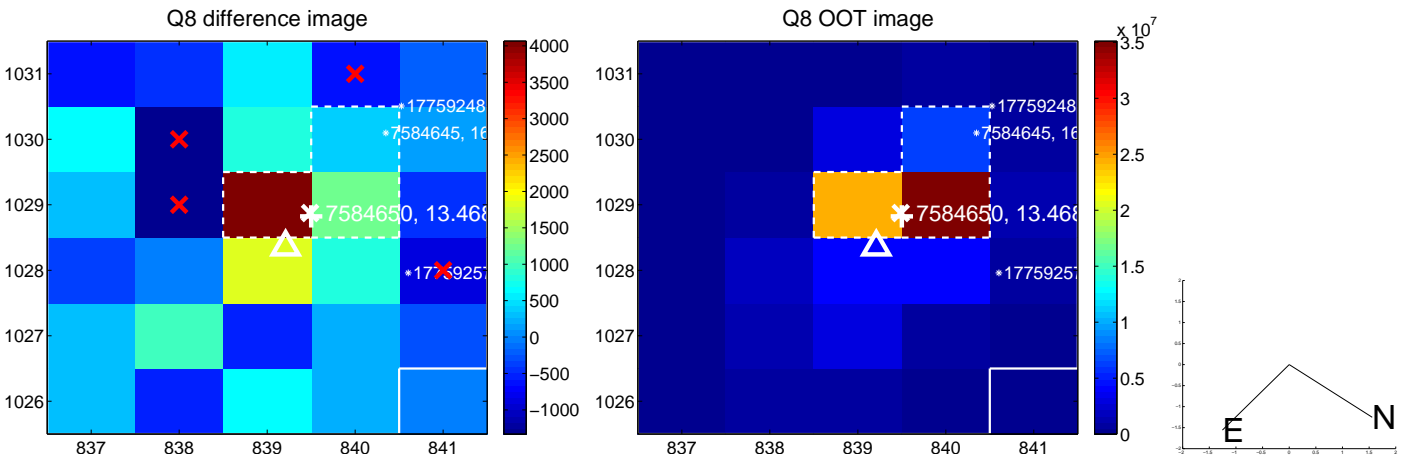
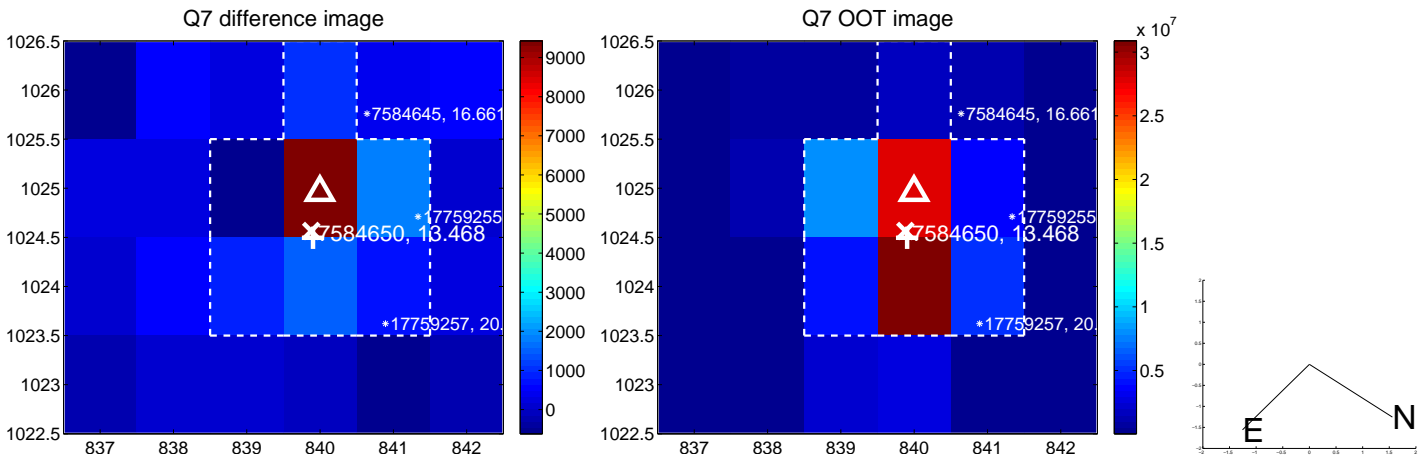
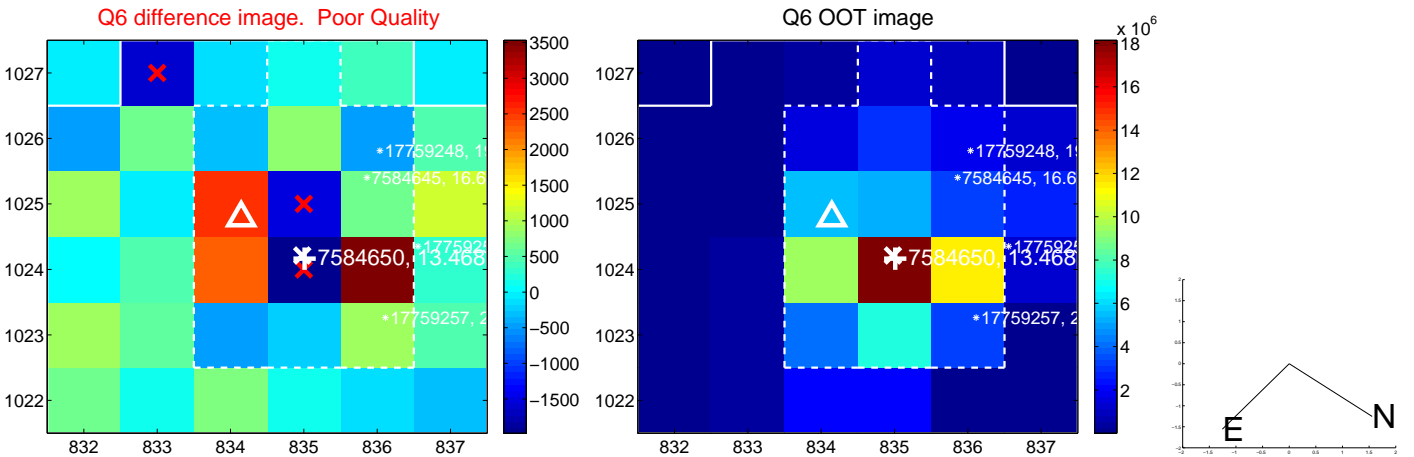
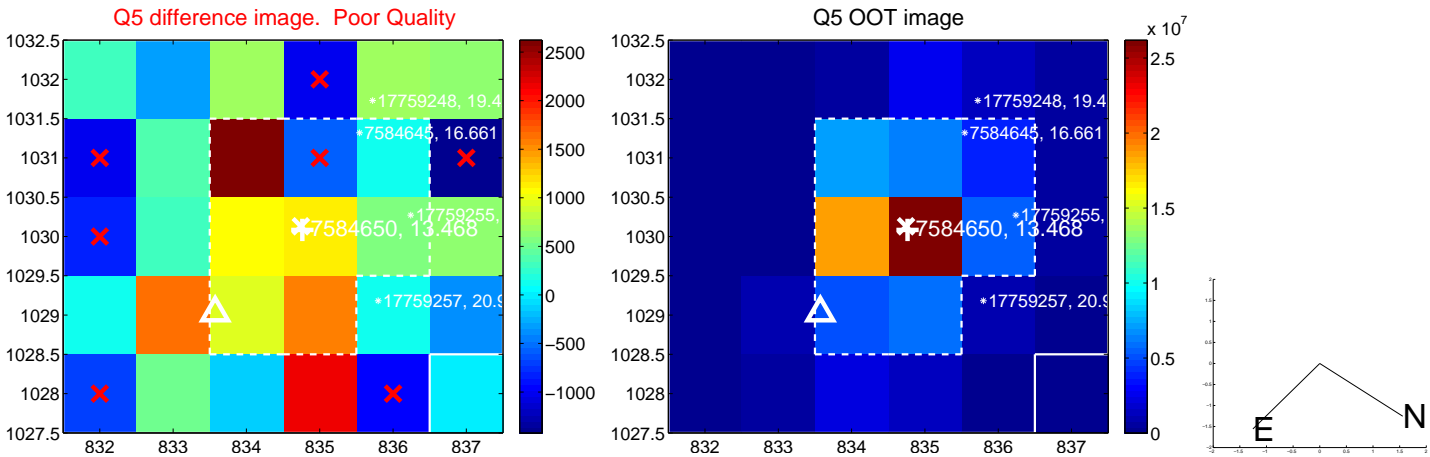


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

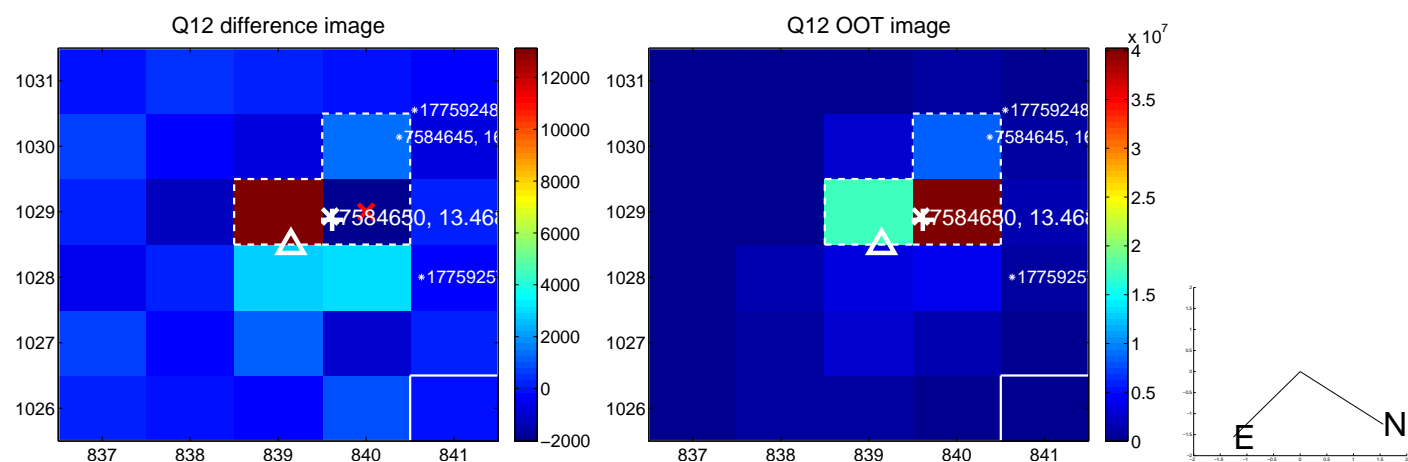
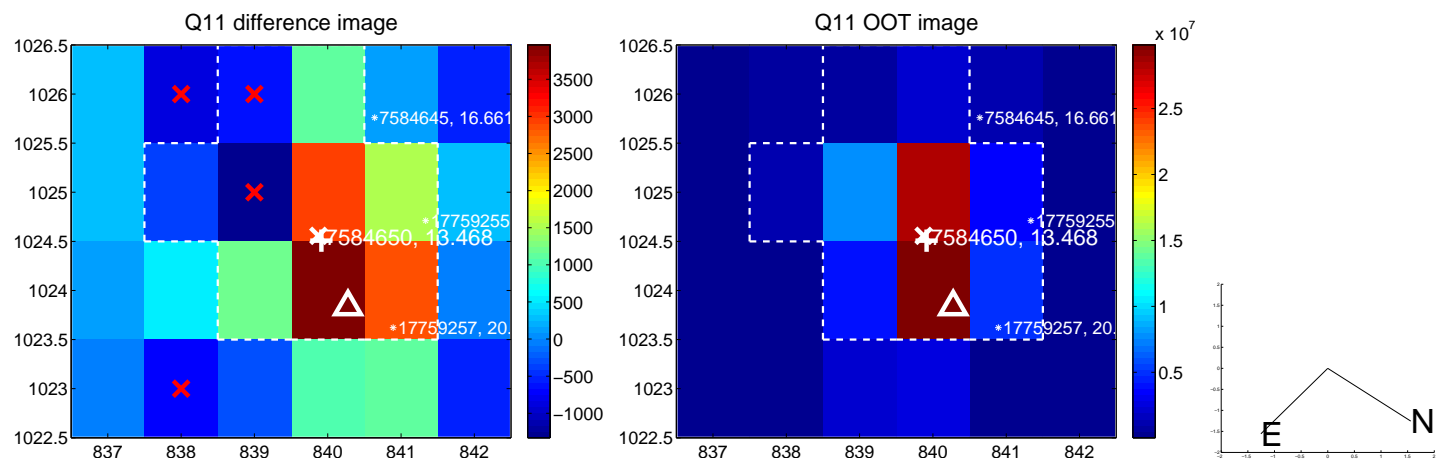
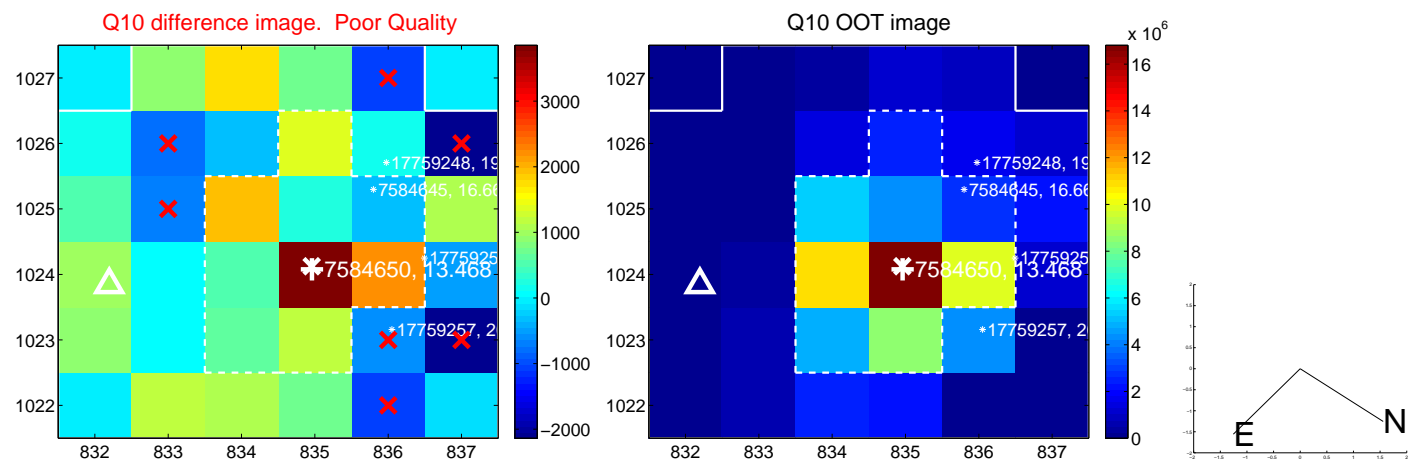
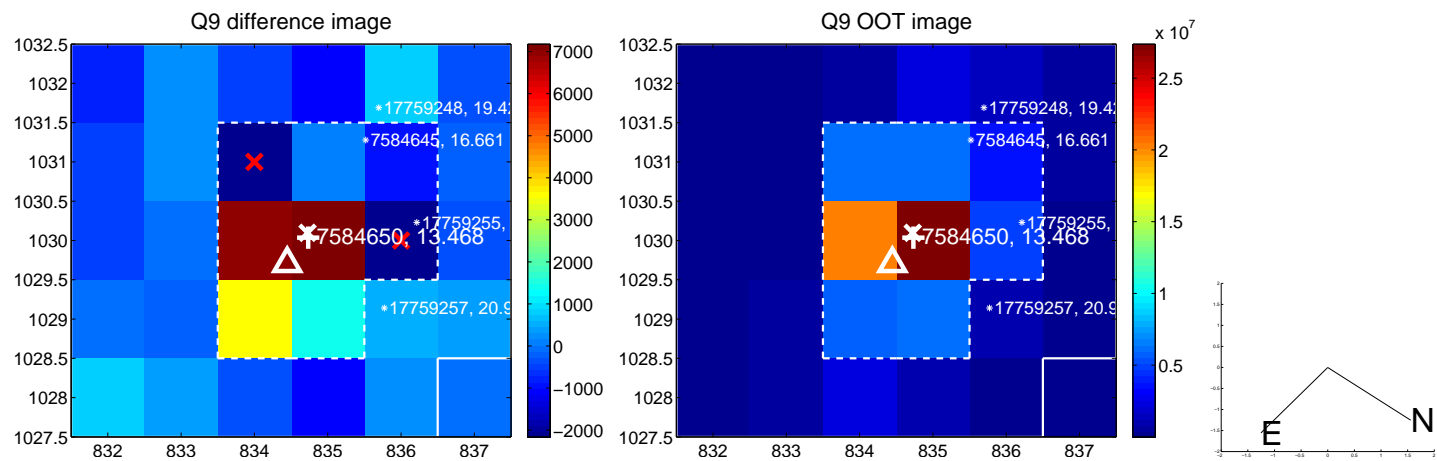
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



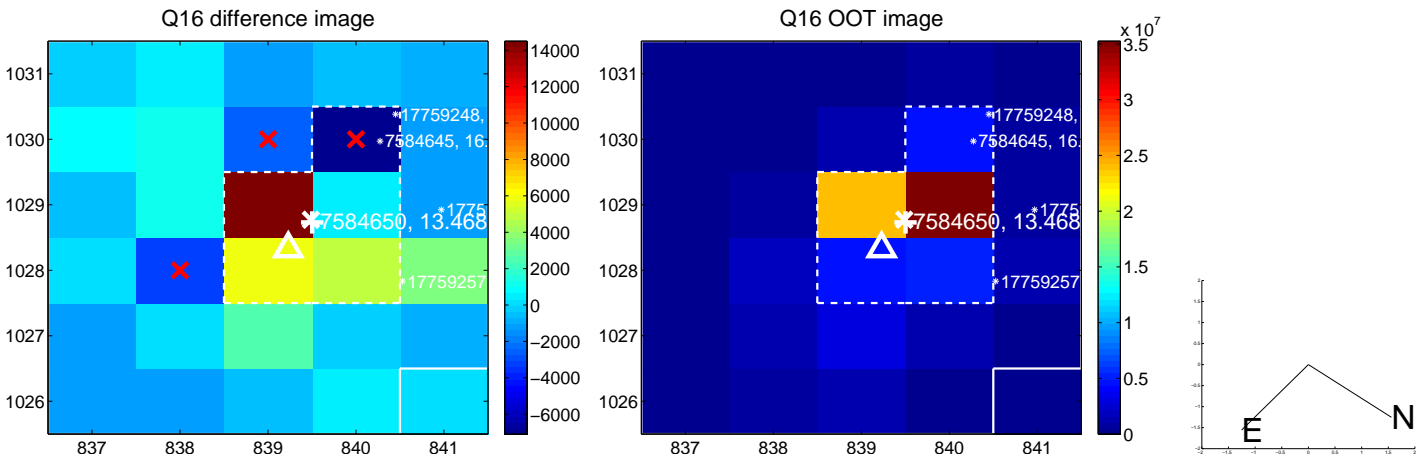
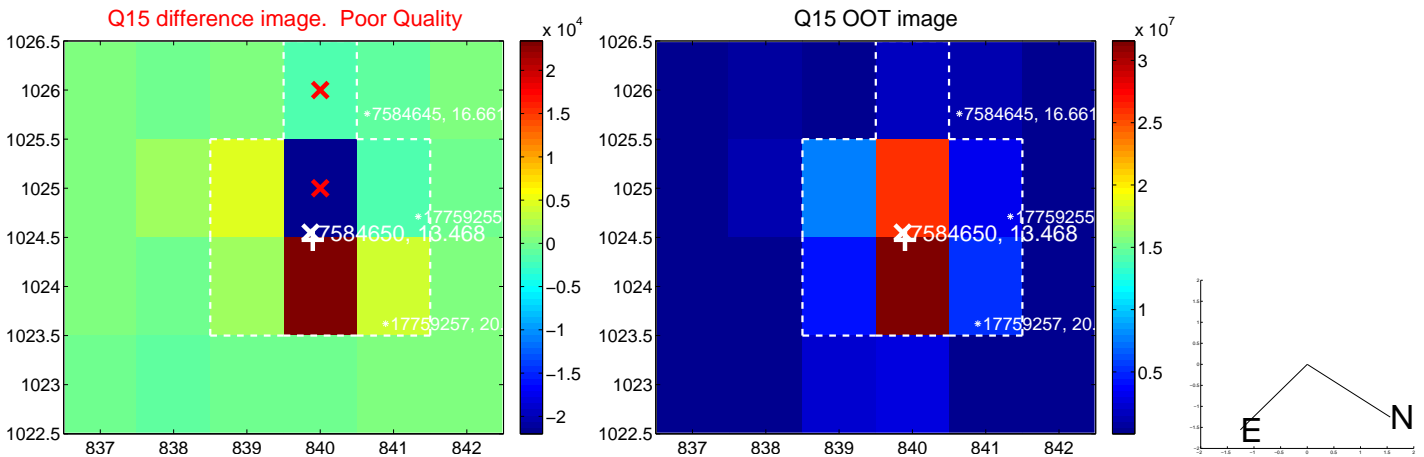
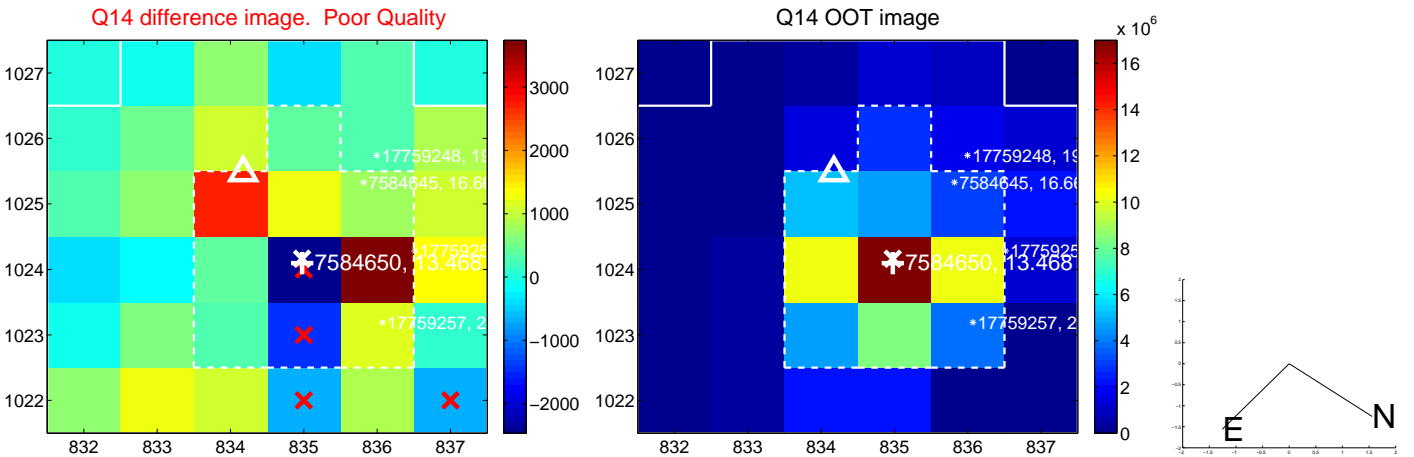
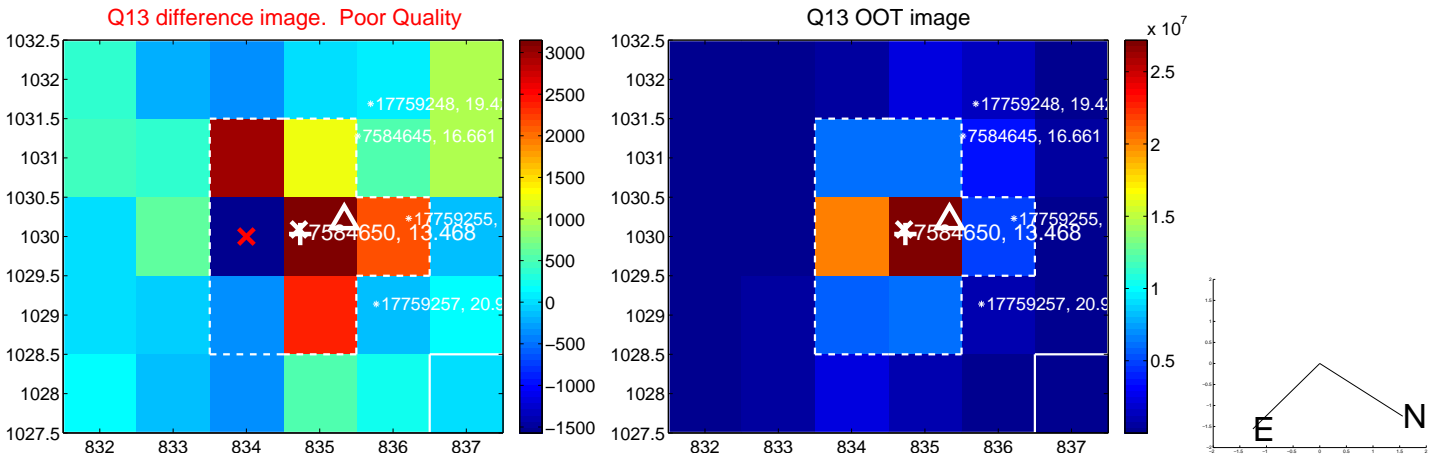
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



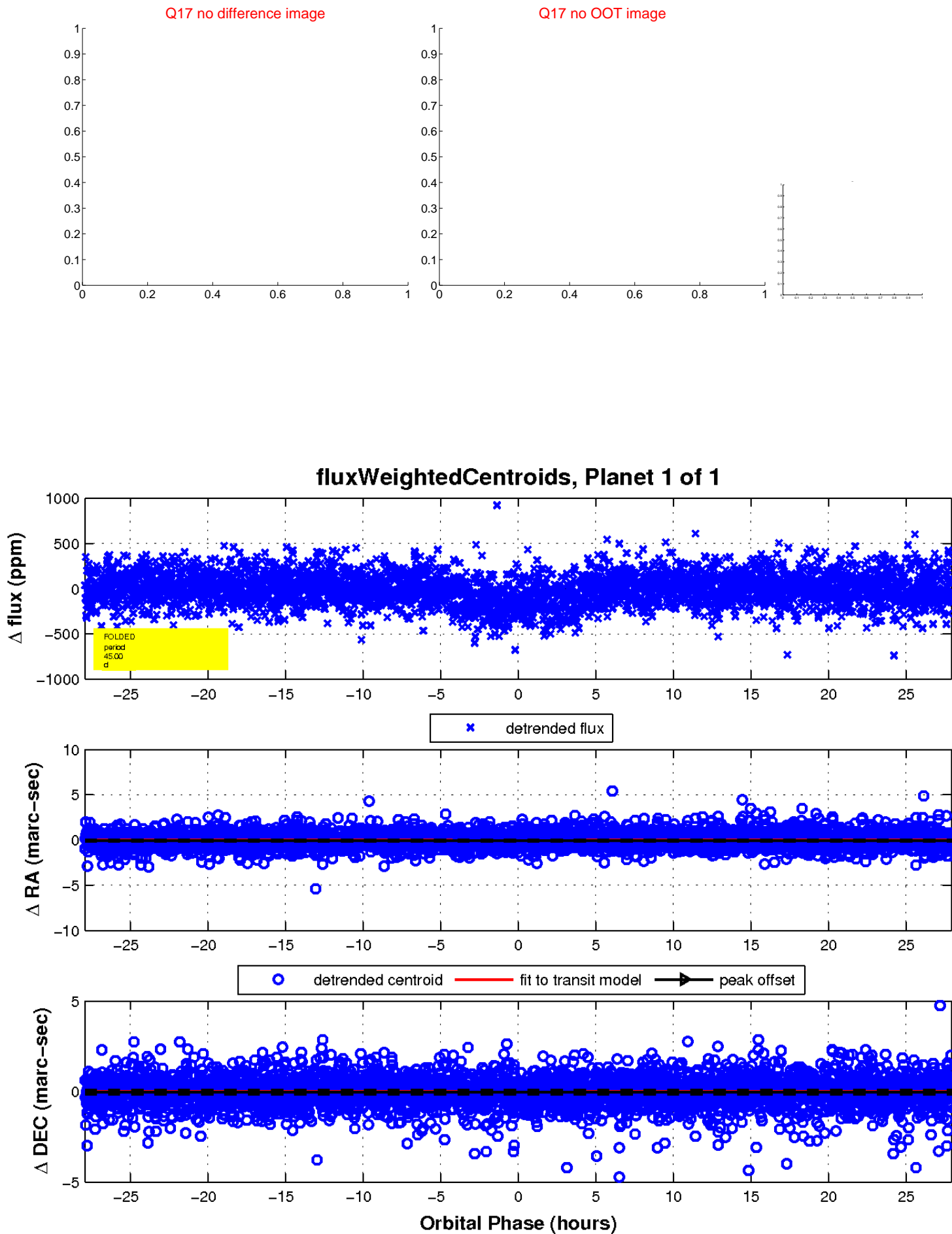
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

