

KIC 008312852

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})
008312852-01	OBS	1143.01	7.440422	134.763884	533.3	3.150	31.0	32.1	0.88	5815	2.71	144.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008312852-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET—HALO_GHOST

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.

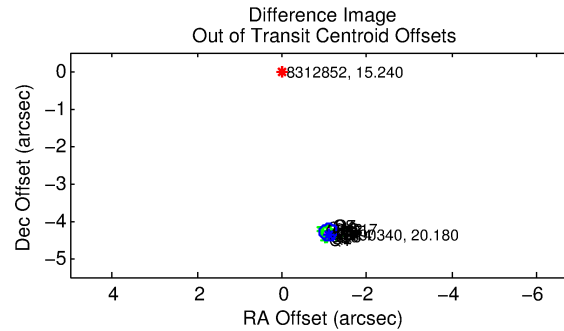
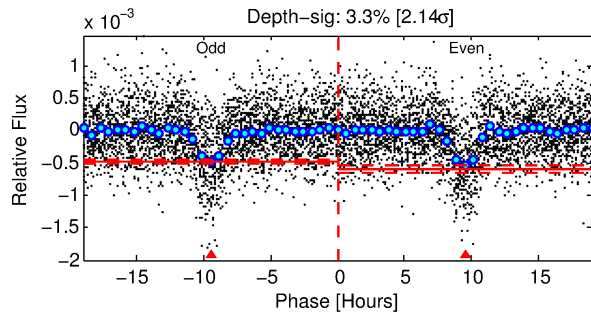
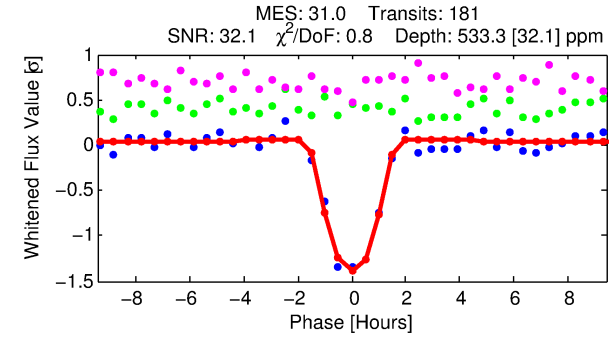
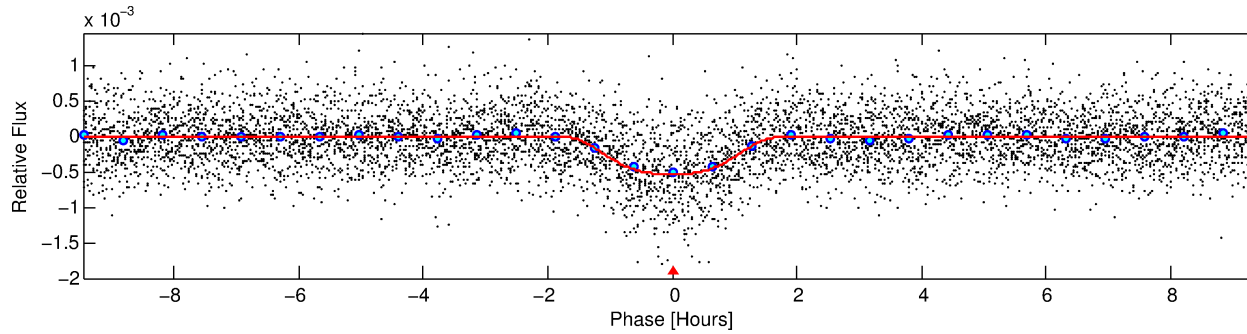
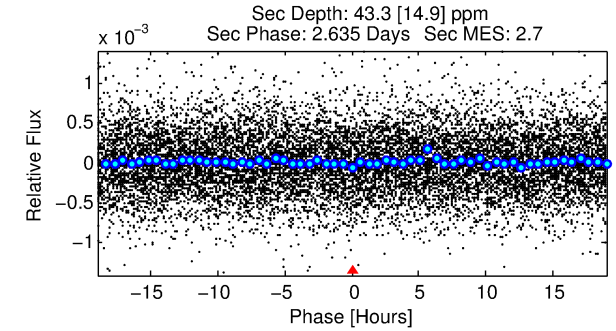
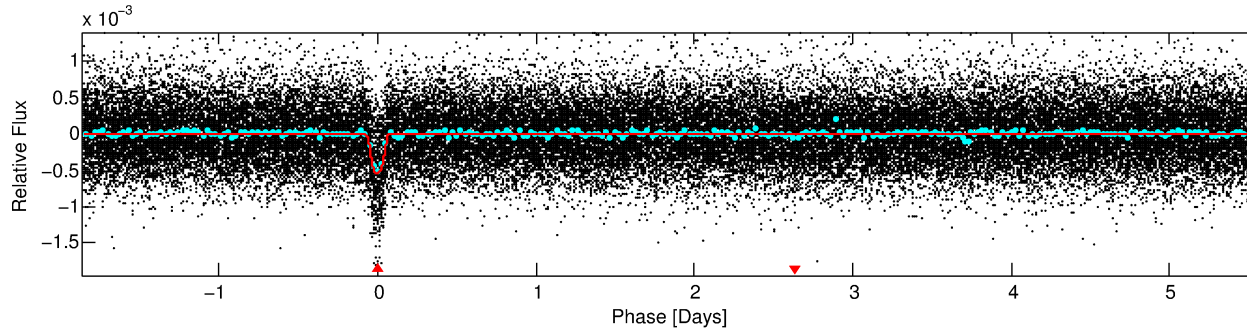
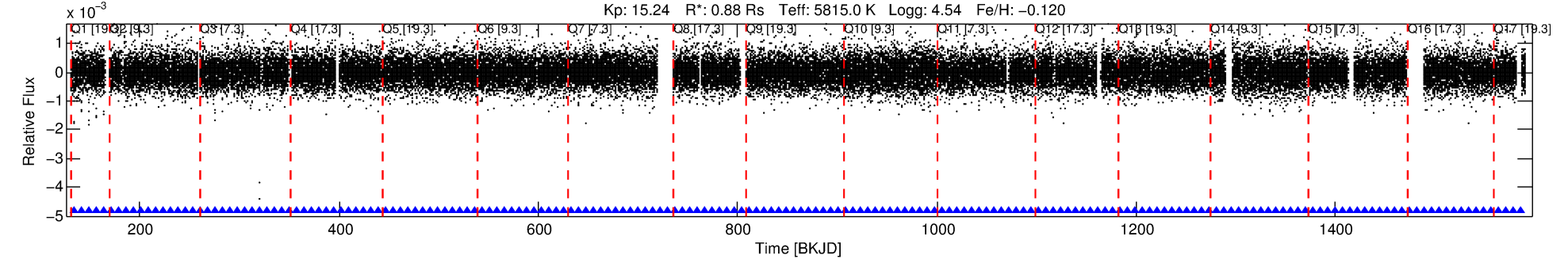
Ephemeris Match Information For 008312852-01

No Significant Match Found

DV One-Page Summary

KIC: 8312852 Candidate: 1 of 1 Period: 7.440 d
KOI: K01143.01 Corr: 0.992

Kp: 15.24 R*: 0.88 Rs Teff: 5815.0 K Logg: 4.54 Fe/H: -0.120



DV Fit Results:

Period = 7.44042 [0.00002] d
Epoch = 134.7639 [0.0022] BKJD
Rp/R* = 0.0283 [0.0014]
a/R* = 6.20 [0.48]
b = 0.97 [0.01]
Seff = 144.20 [53.95]
Teq = 884 [83] K
Rp = 2.71 [0.77] Re
a = 0.0739 [0.0177] AU
Ag = 17.77 [8.94] [1.88σ]
Teffp = 2805 [264] K [6.93σ]

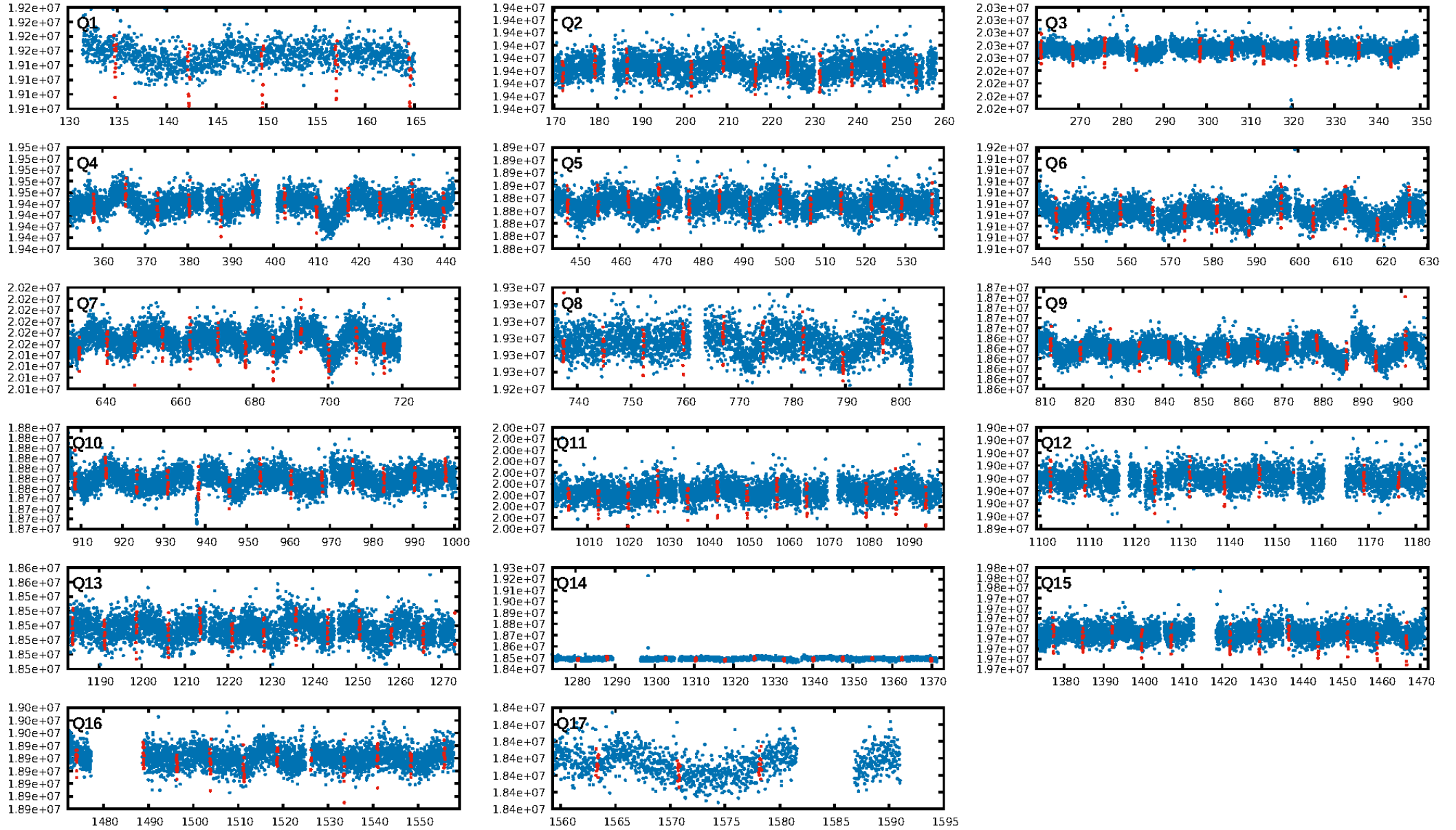
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.03e-201
RollingBand-fgt: 1.00 [173/173]
GhostDiagnostic-chr: -4.781e-05
Centroid-sig: 0.0%
Centroid-so: 10.759 arcsec [33.11σ]
OotOffset-rm: 4.447 arcsec [60.45σ]
KicOffset-rm: 4.530 arcsec [63.91σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

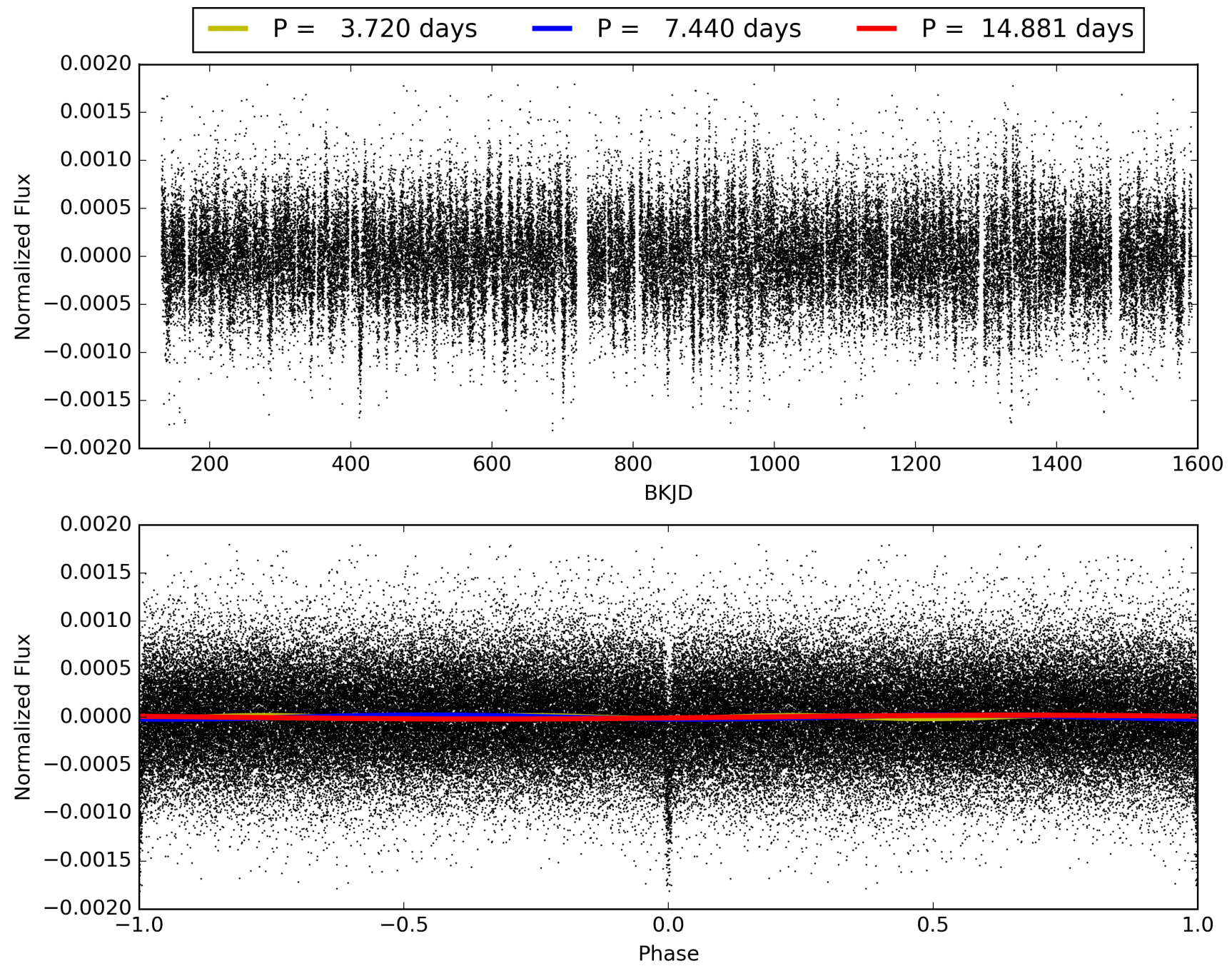
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:24:49 Z

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

TCE 008312852-01, PDC Light Curves

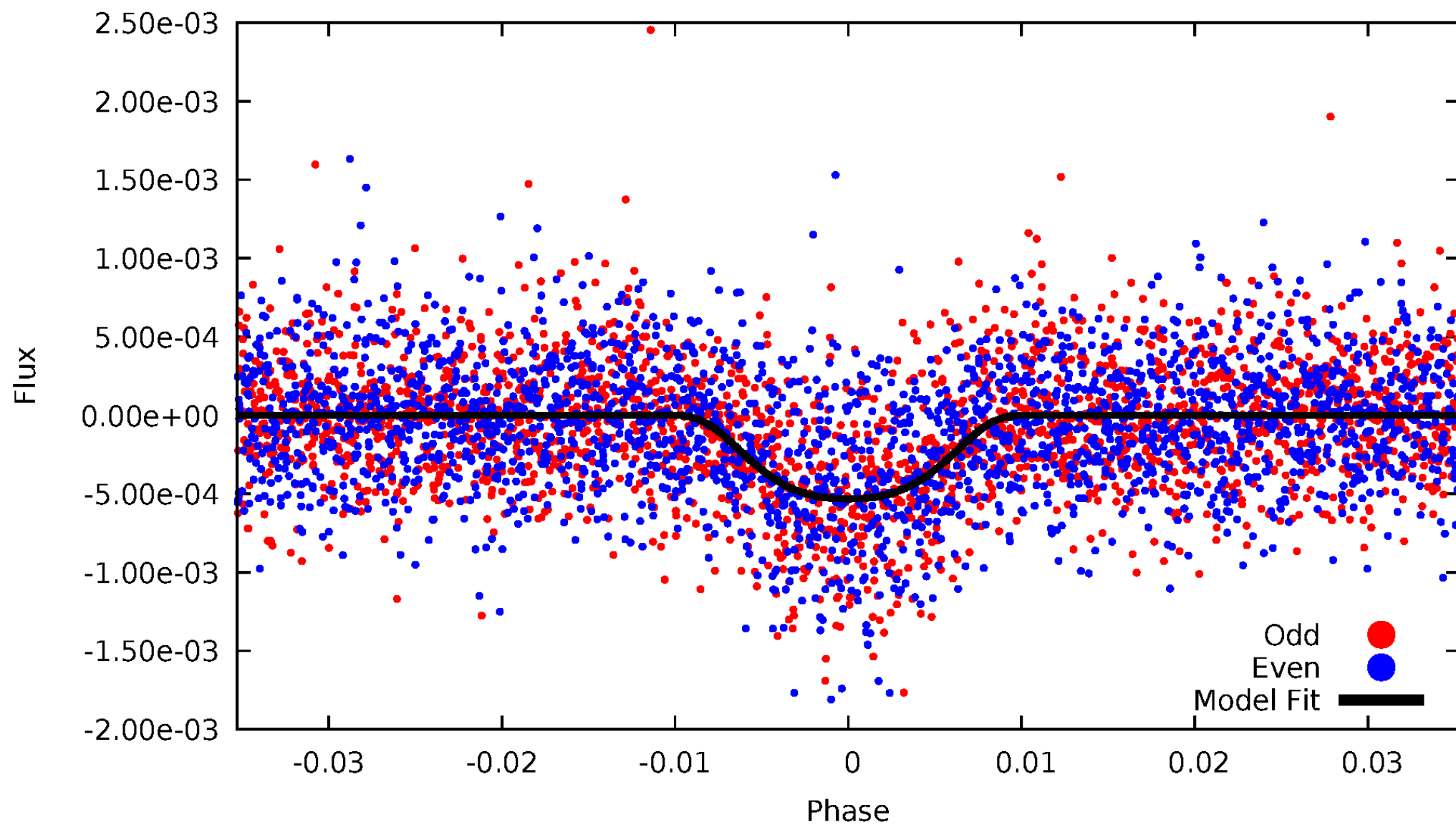


TCE 008312852-01



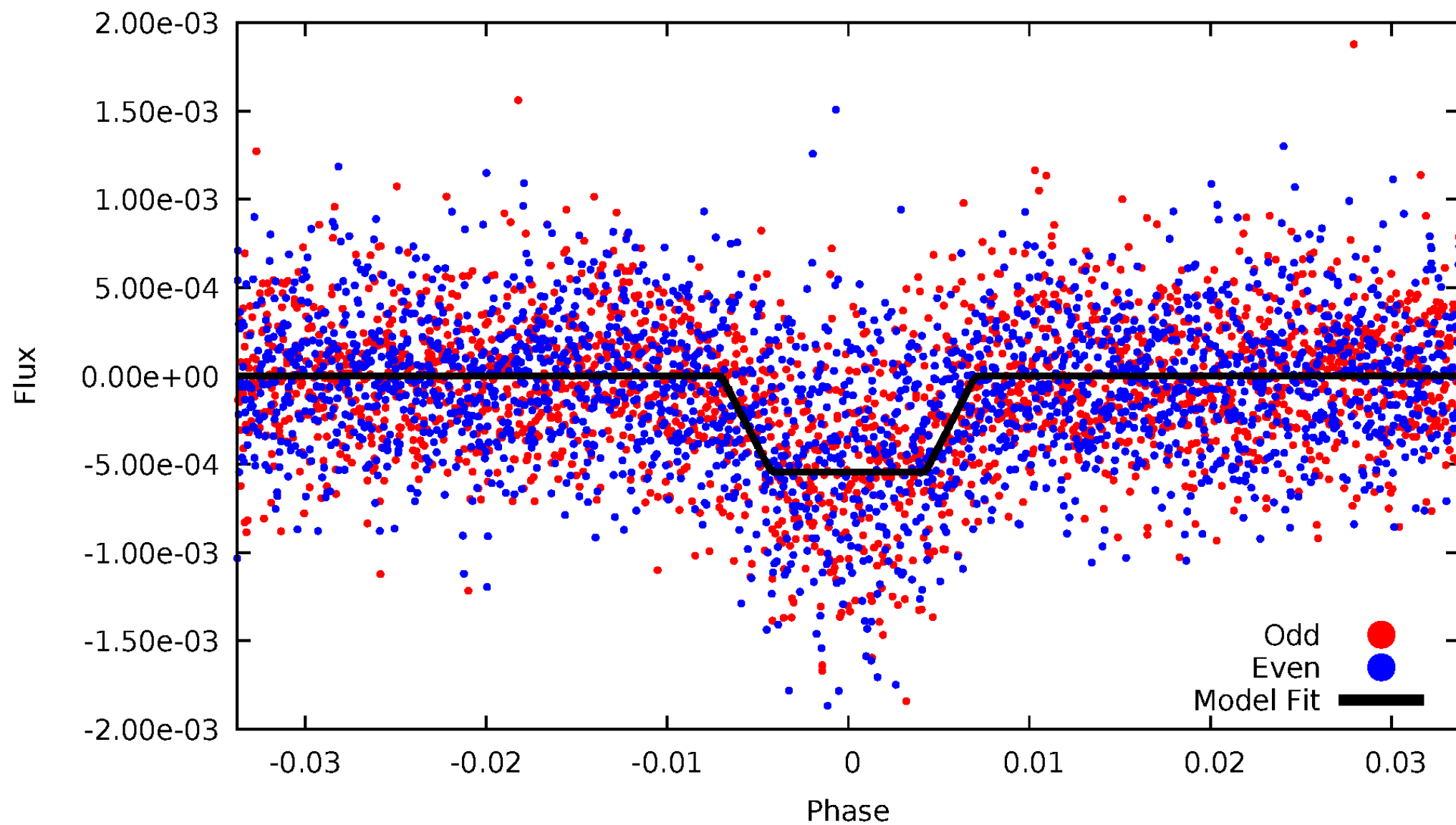
DV Odd/Even

TCE 008312852-01



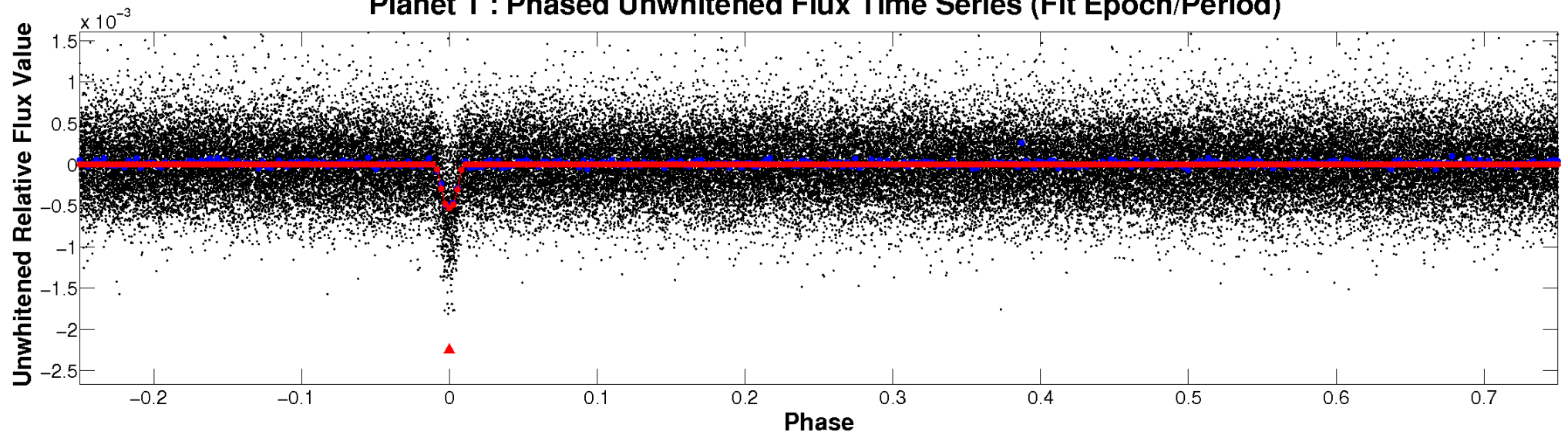
ALT Odd/Even

TCE 008312852-01

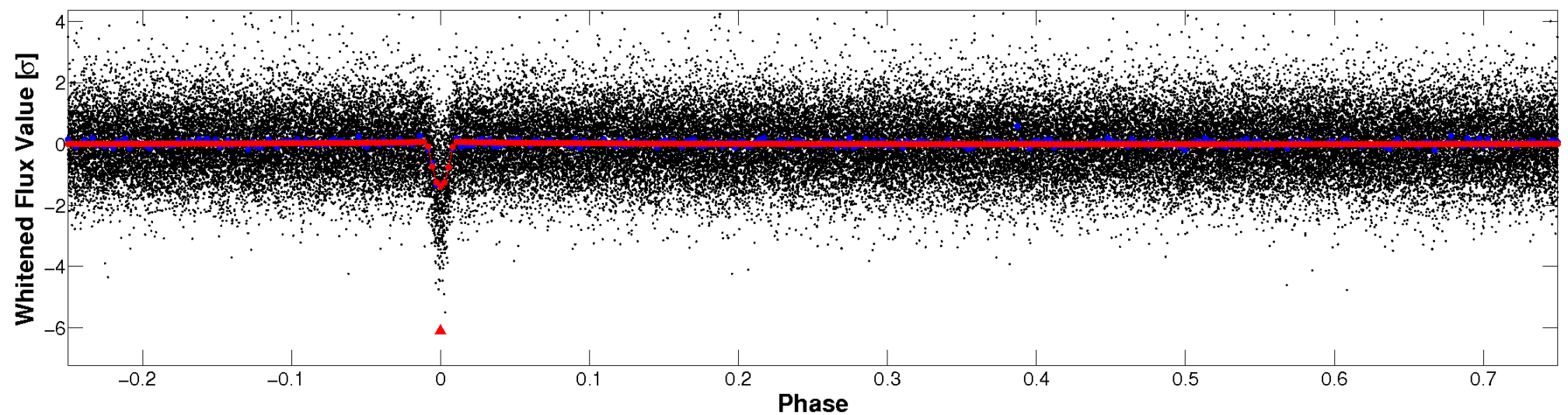


Non-Whitened Vs. Whitened Light Curve

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

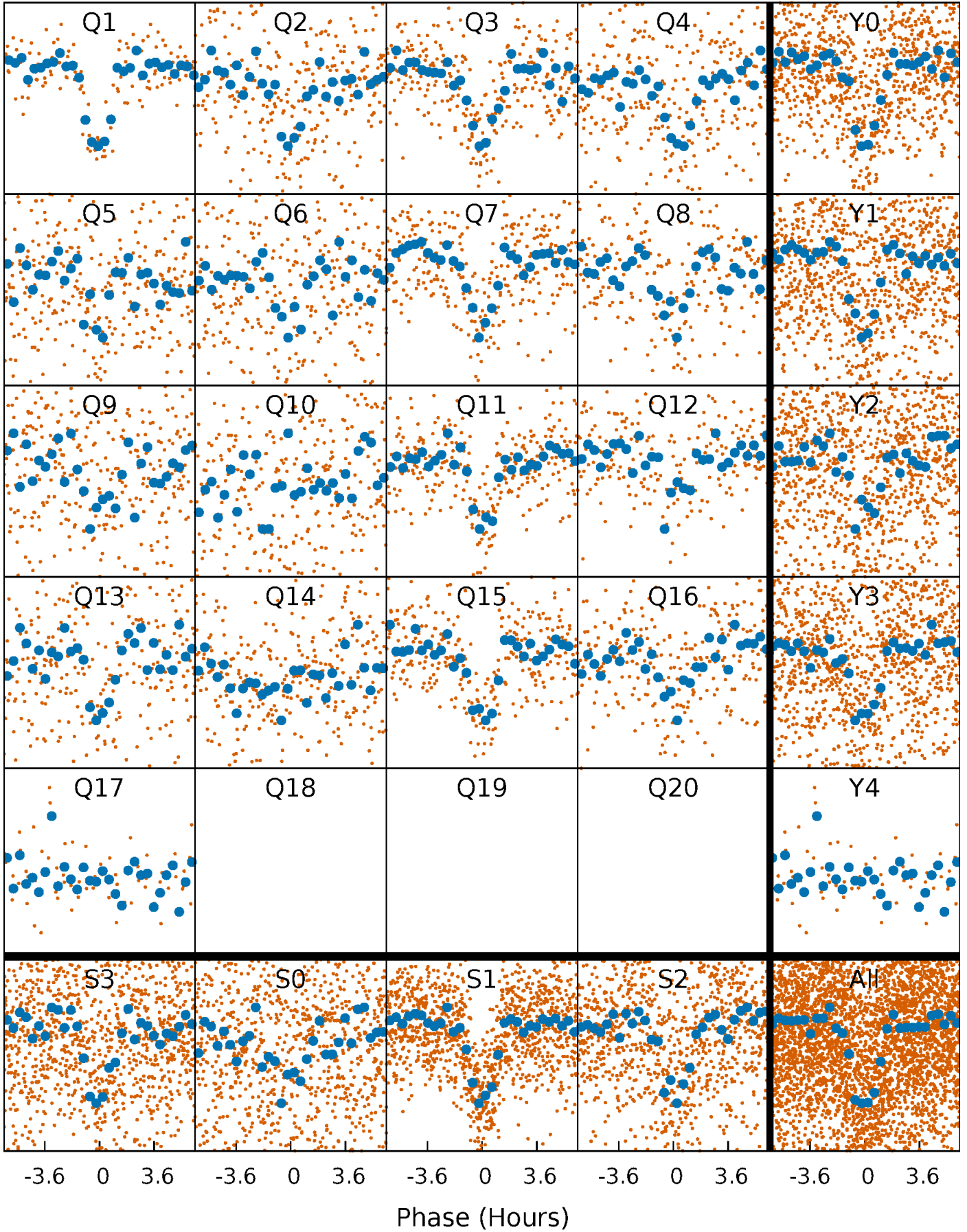


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



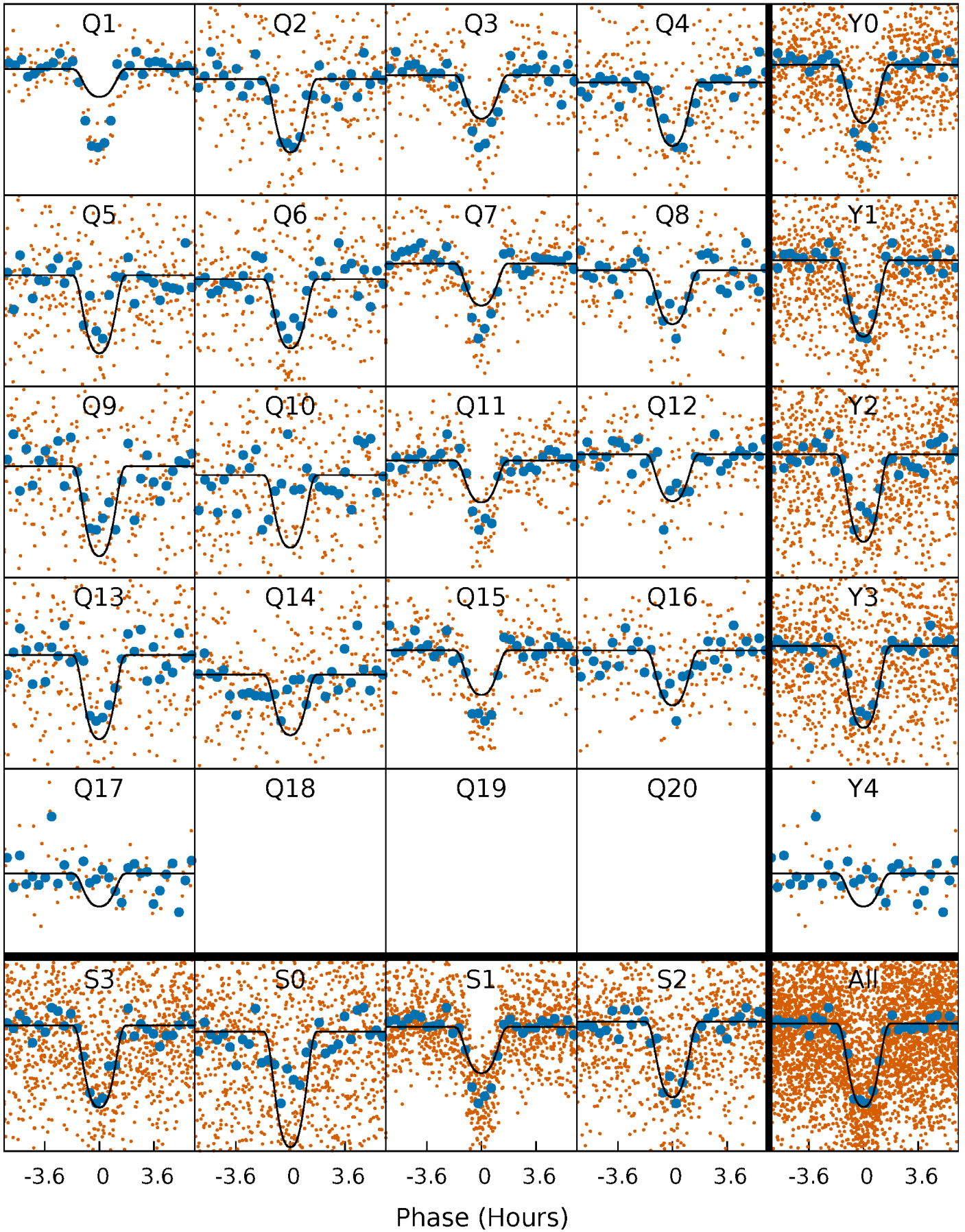
PDC Quarter-Phased Transit Curves

TCE 008312852-01 P= 7.440422 Days $T_0=134.763884$ (BKJD)



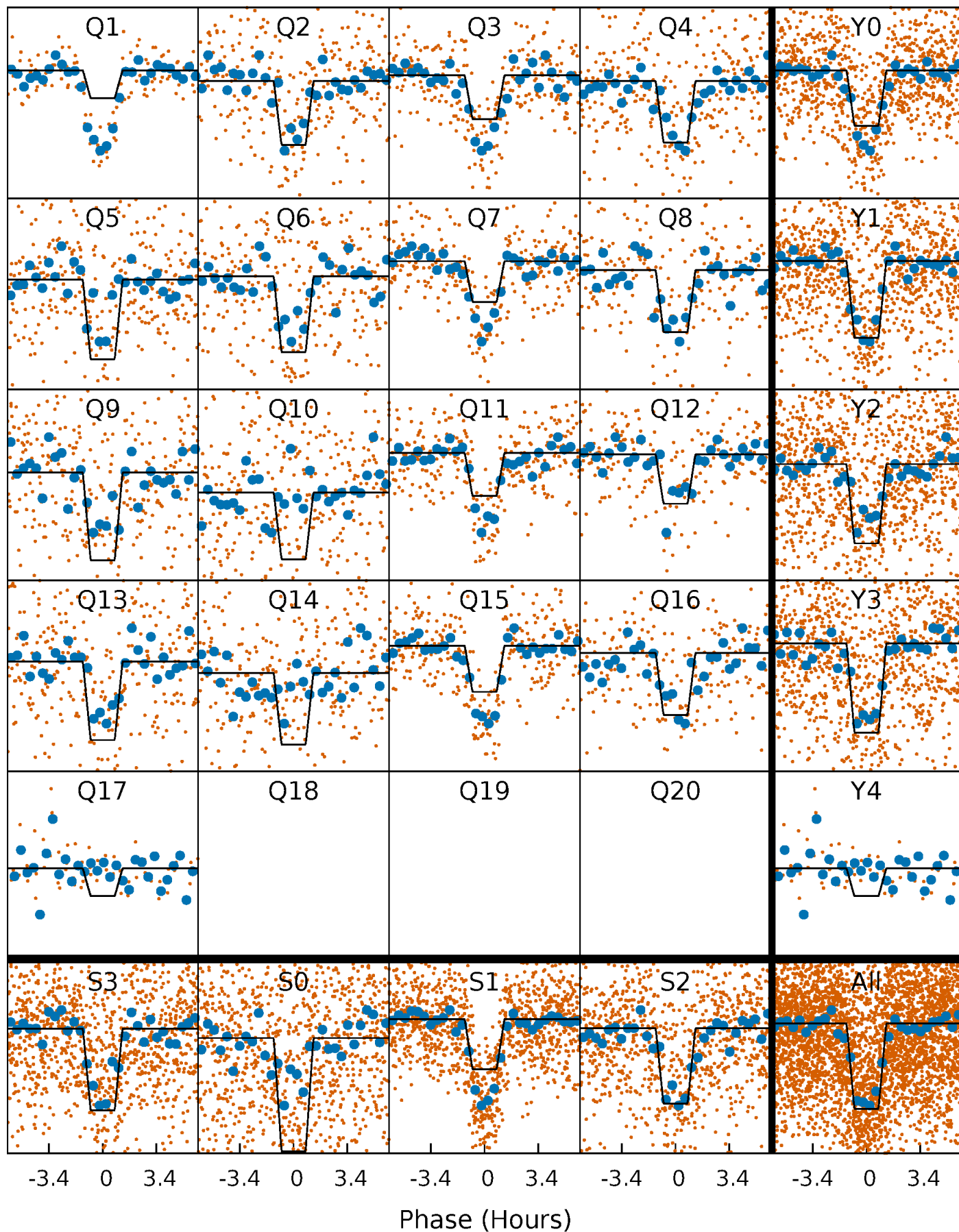
DV Quarter-Phased Transit Curves

TCE 008312852-01 P= 7.440422 Days $T_0=134.763884$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

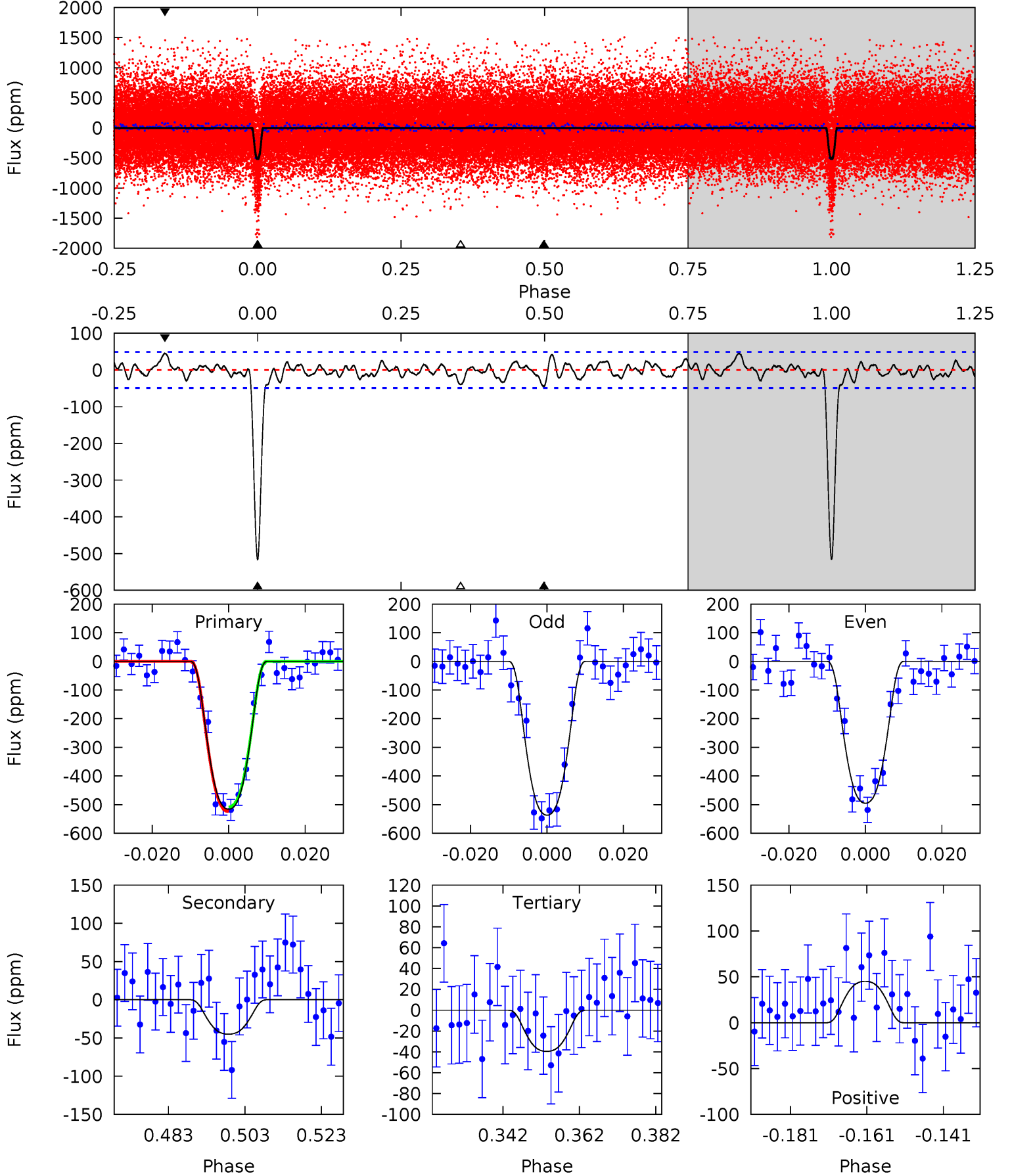
TCE 008312852-01 P= 7.440407 Days $T_0=134.764969$ (BKJD)



DV Model-Shift Uniqueness Test

008312852-01, P = 7.440422 Days, E = 127.323462 Days

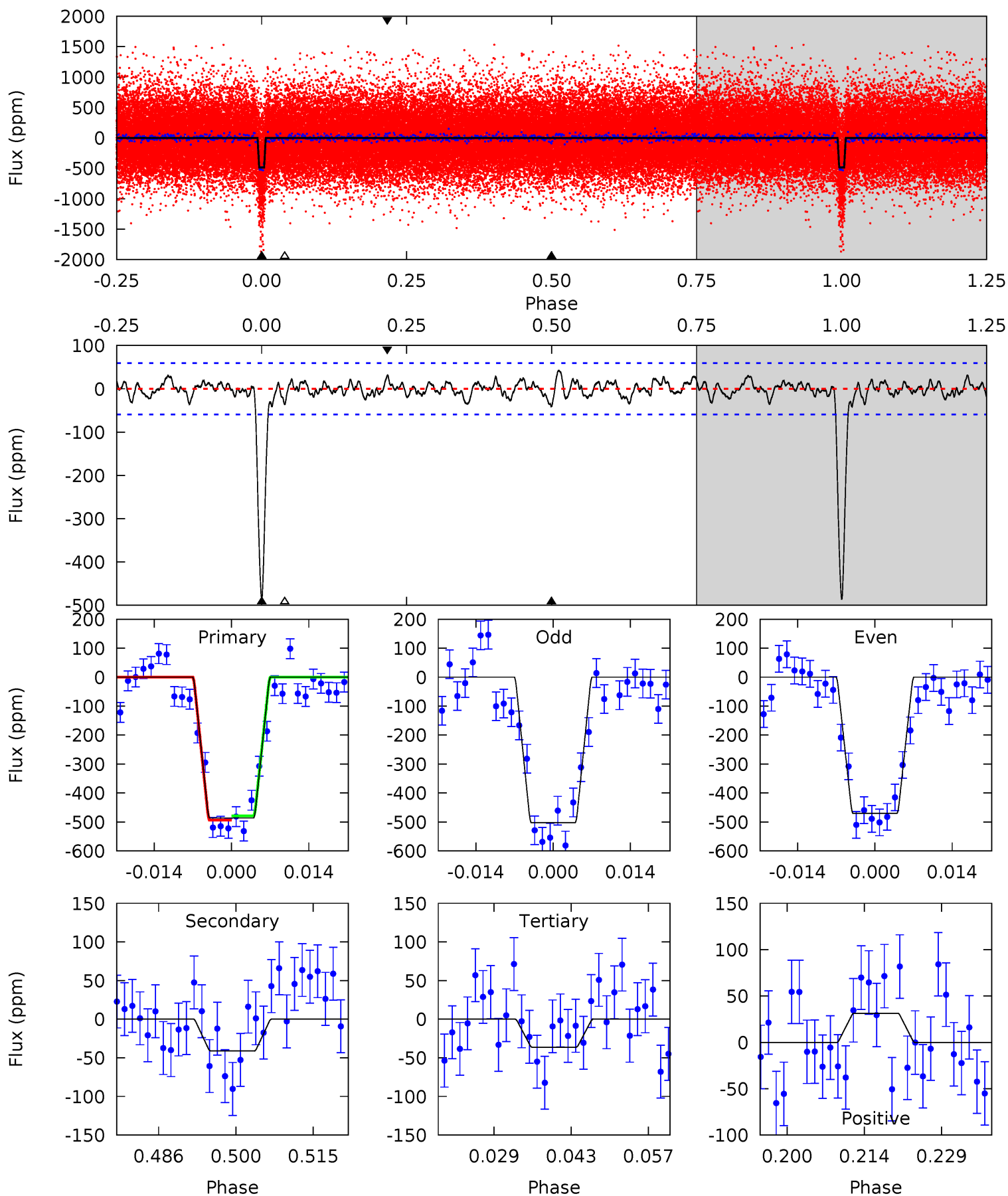
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.1	4.46	3.92	4.47	4.89	2.32	1.43	47.2	46.7	0.55	-0.00	2.06	1.02	0.08	0.76



Alt Model-Shift Uniqueness Test

008312852-01, P = 7.440407 Days, E = 127.324562 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.7	3.43	3.04	2.62	4.96	2.45	1.15	37.6	38.0	0.39	0.81	1.34	1.07	0.08	0.60



Stellar Parameters For KIC 008312852

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5815^{+157}_{-175}	$4.540^{+0.046}_{-0.196}$	$-0.120^{+0.300}_{-0.300}$	$0.877^{+0.246}_{-0.082}$	$0.973^{+0.104}_{-0.116}$	$2.032^{+0.385}_{-0.968}$
	+3%/-3%	+1%/-4%	+250%/-250%	+28%/-9%	+11%/-12%	+19%/-48%
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 008312852-01 / KOI 1143.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-45 ± 10	$2.80^{+0.41}_{-0.25}$	1265^{+79}_{-61}	3354^{+125}_{-147}	16^{+6}_{-5}
Alt.	-41 ± 12	$2.33^{+0.35}_{-0.24}$	1264^{+90}_{-58}	3496^{+207}_{-207}	21^{+9}_{-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 $A_{\text{obs}} \gg 1.0$

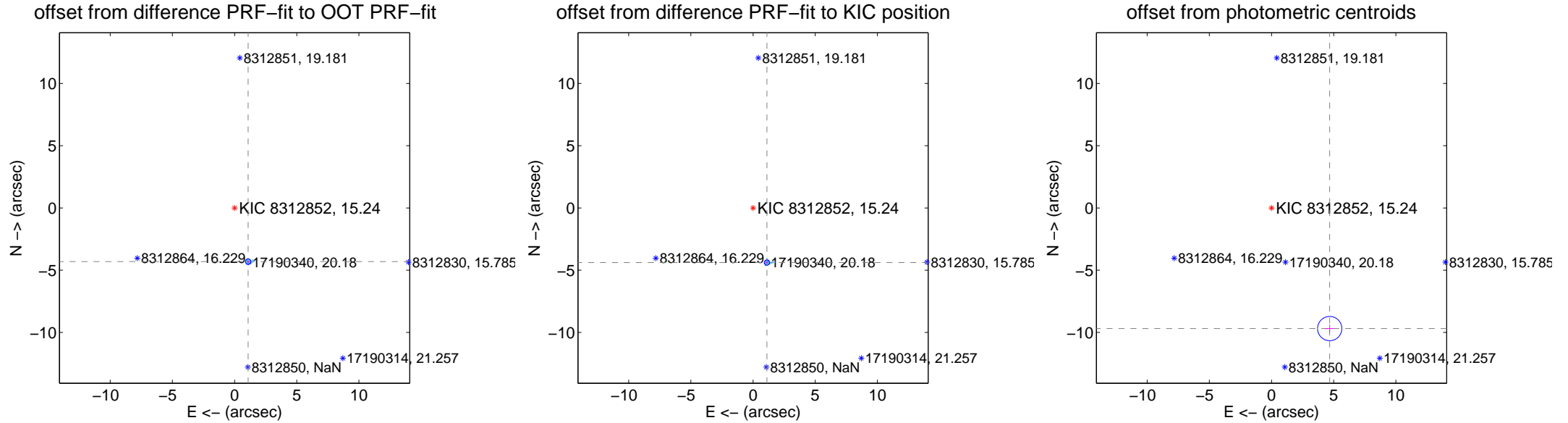
DV Centroid Data

Supplemental centroid analysis for 008312852-01. Kepler magnitude: 15.24. Transit SNR 32.07

There are 17 quarters with good PRF difference image offsets

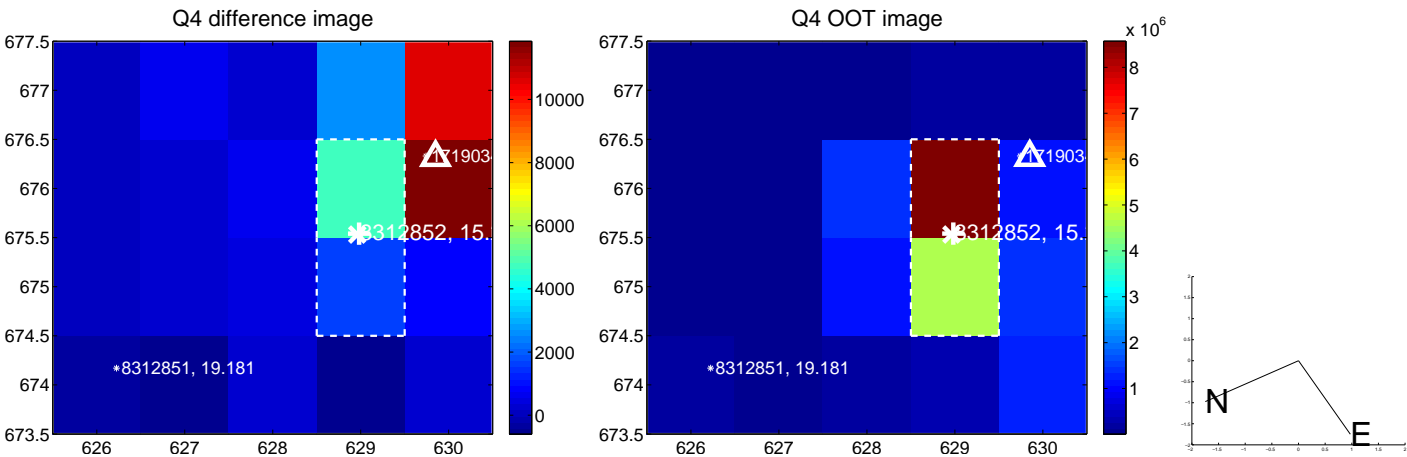
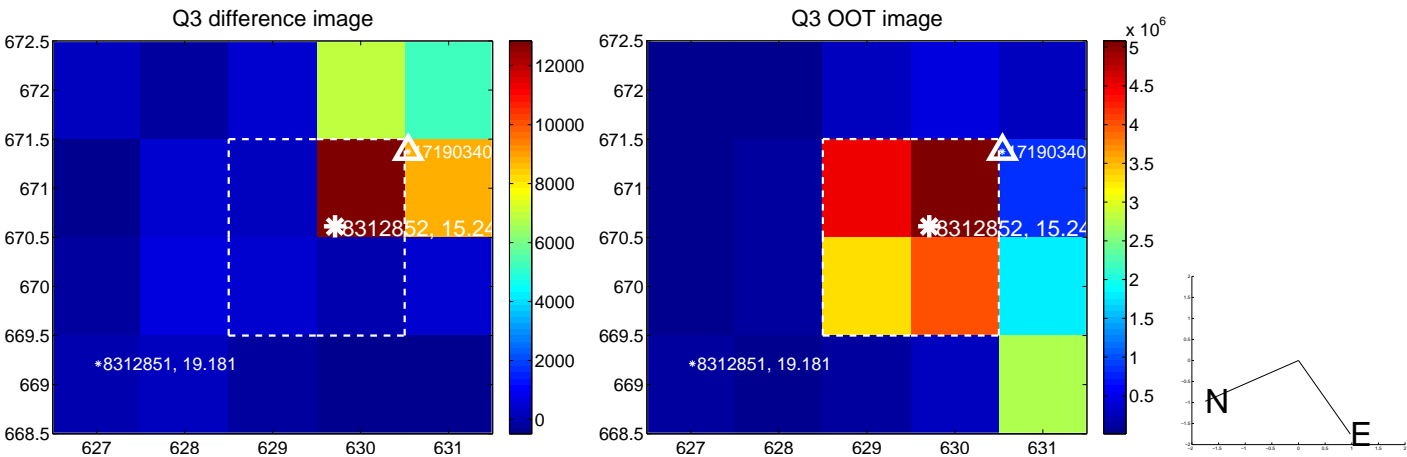
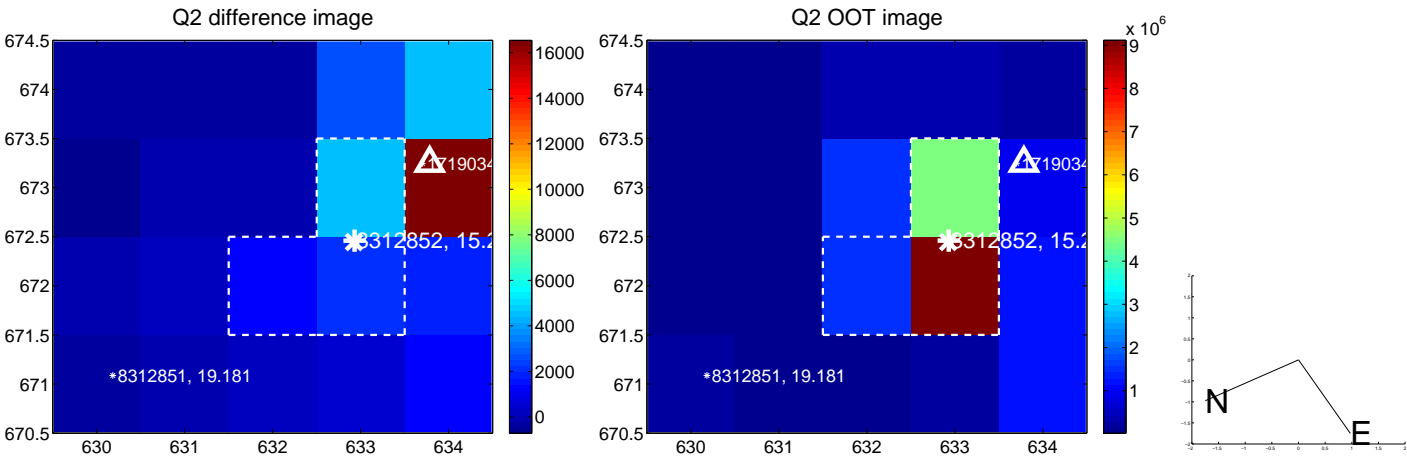
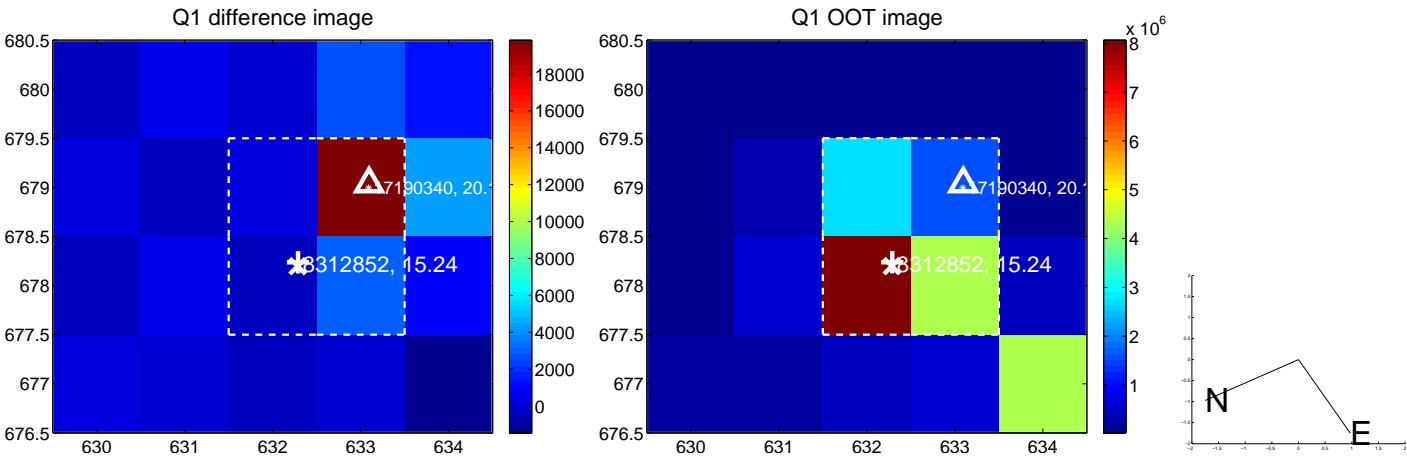
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.447 ± 0.074	60.45	-1.091 ± 0.072	-4.311 ± 0.074
PRF-fit source offset from KIC position	4.530 ± 0.071	63.91	-1.115 ± 0.078	-4.390 ± 0.071
photometric centroid source offset	10.76 ± 0.32	33.11	-4.68 ± 0.35	-9.69 ± 0.32

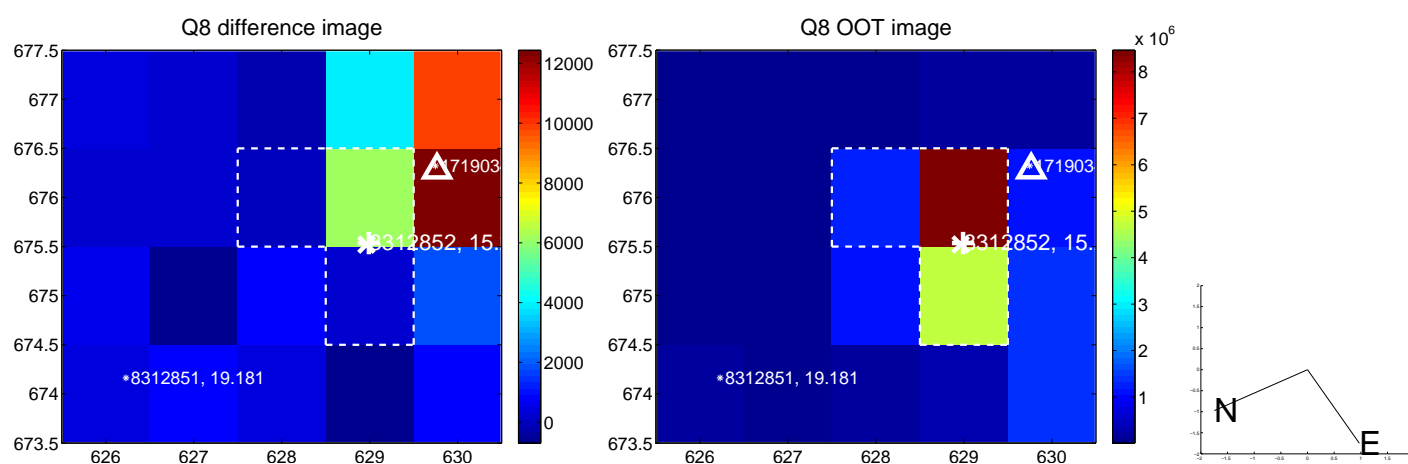
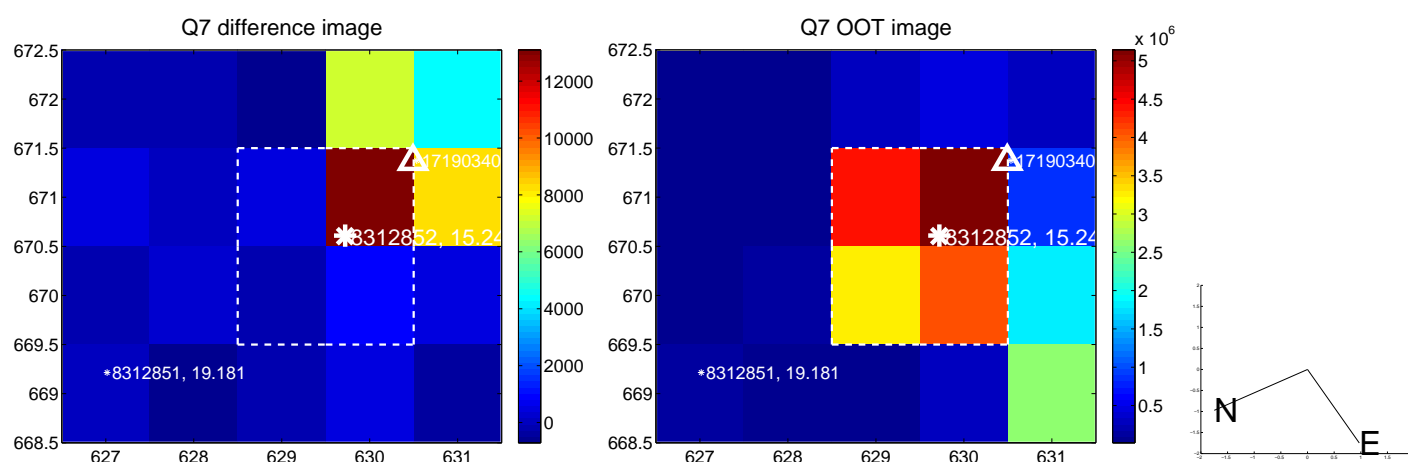
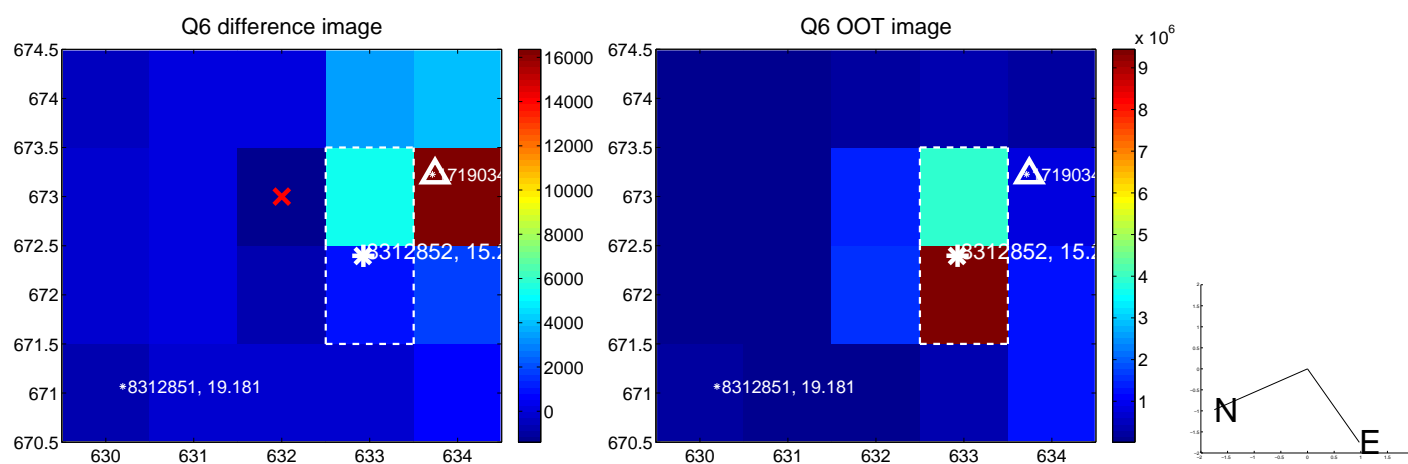
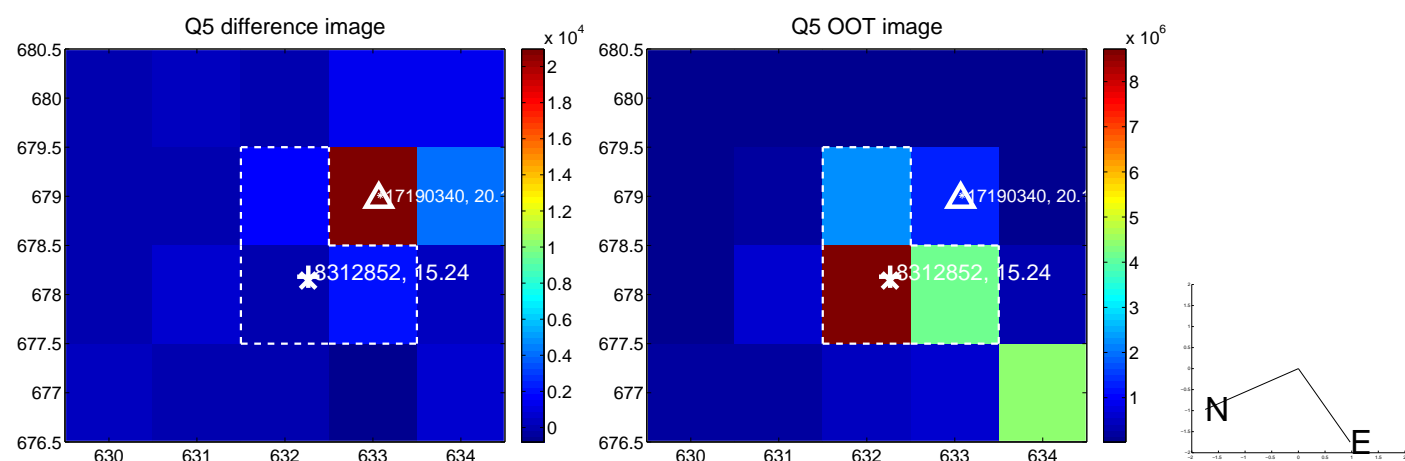


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

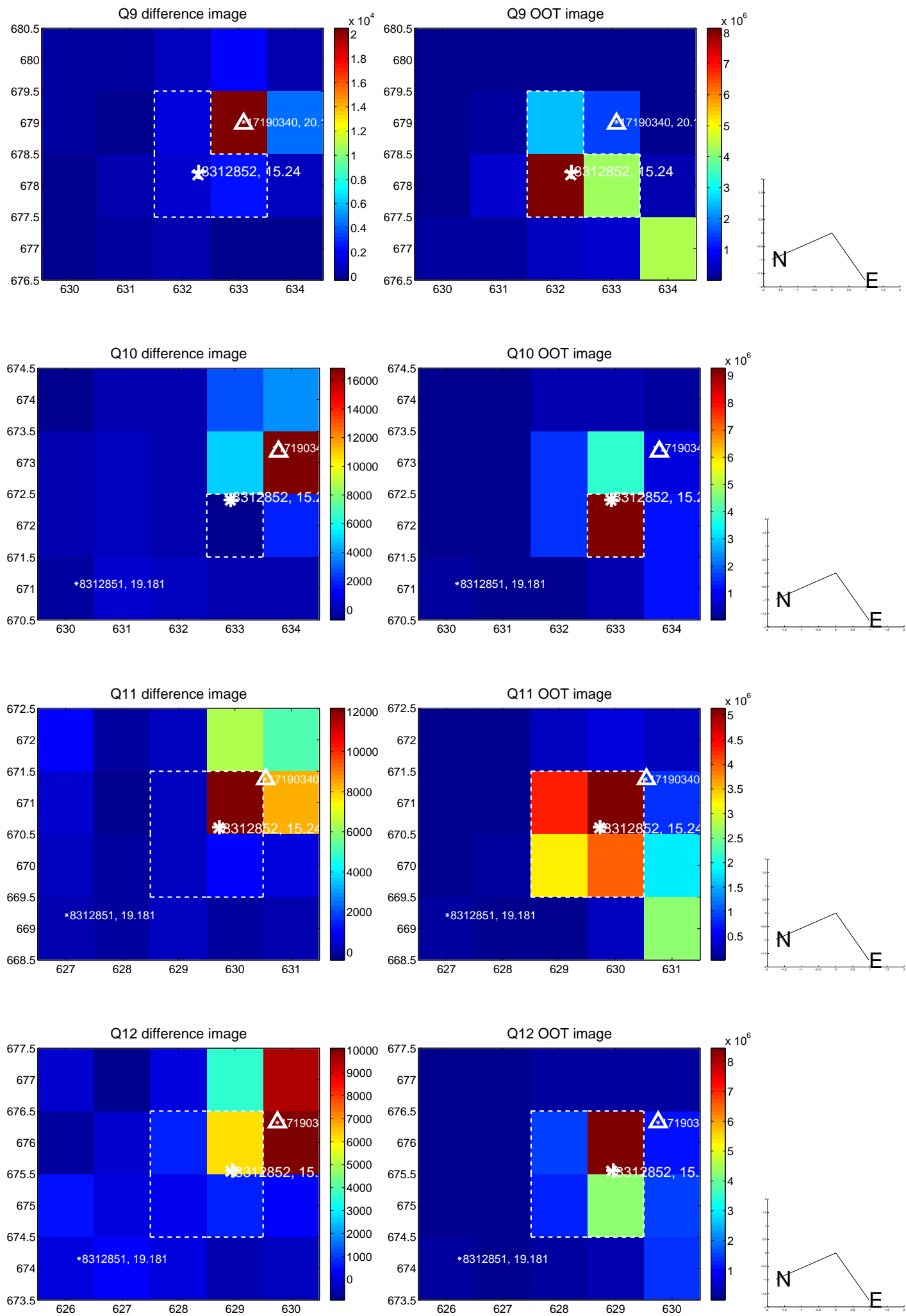
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



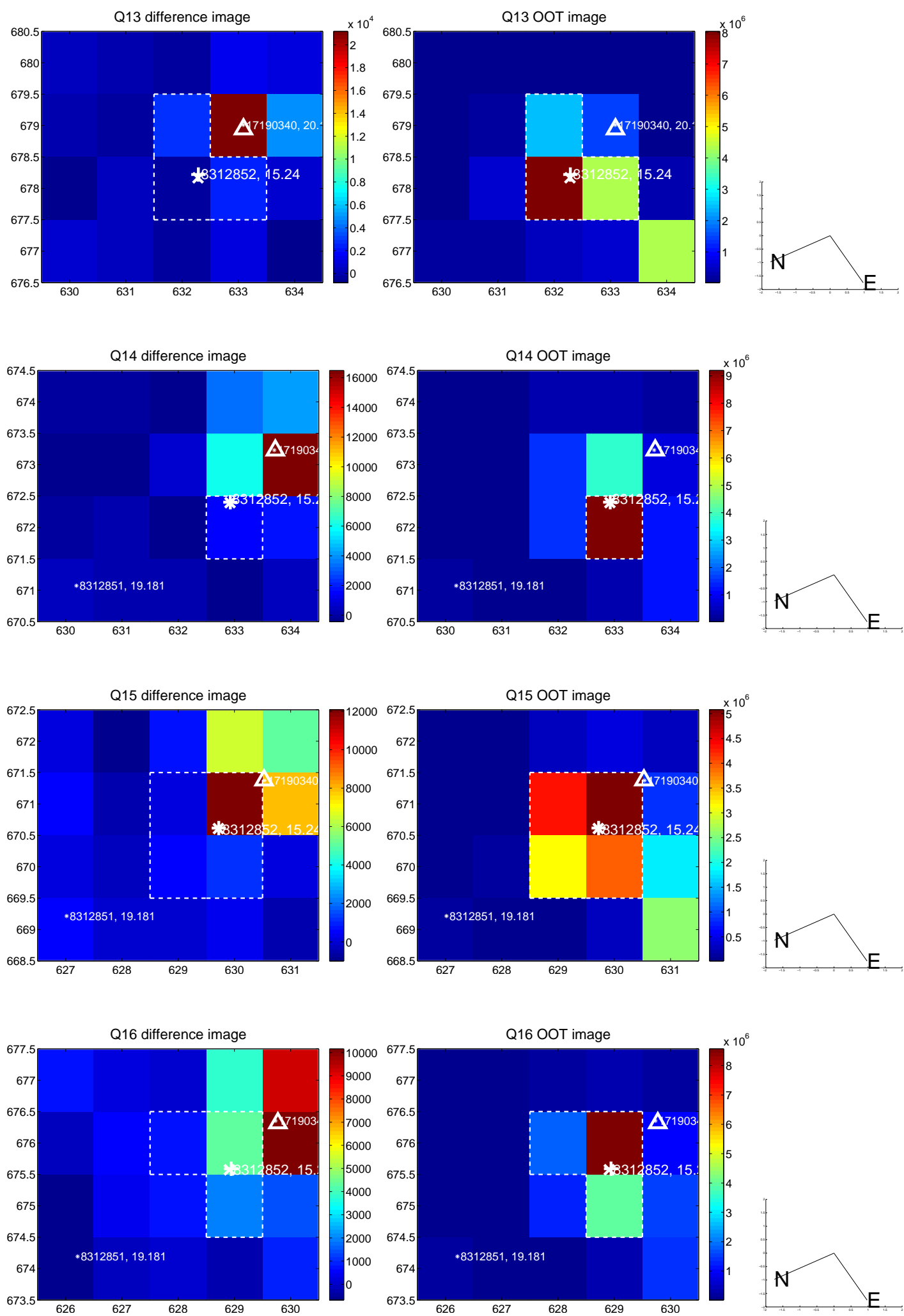
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



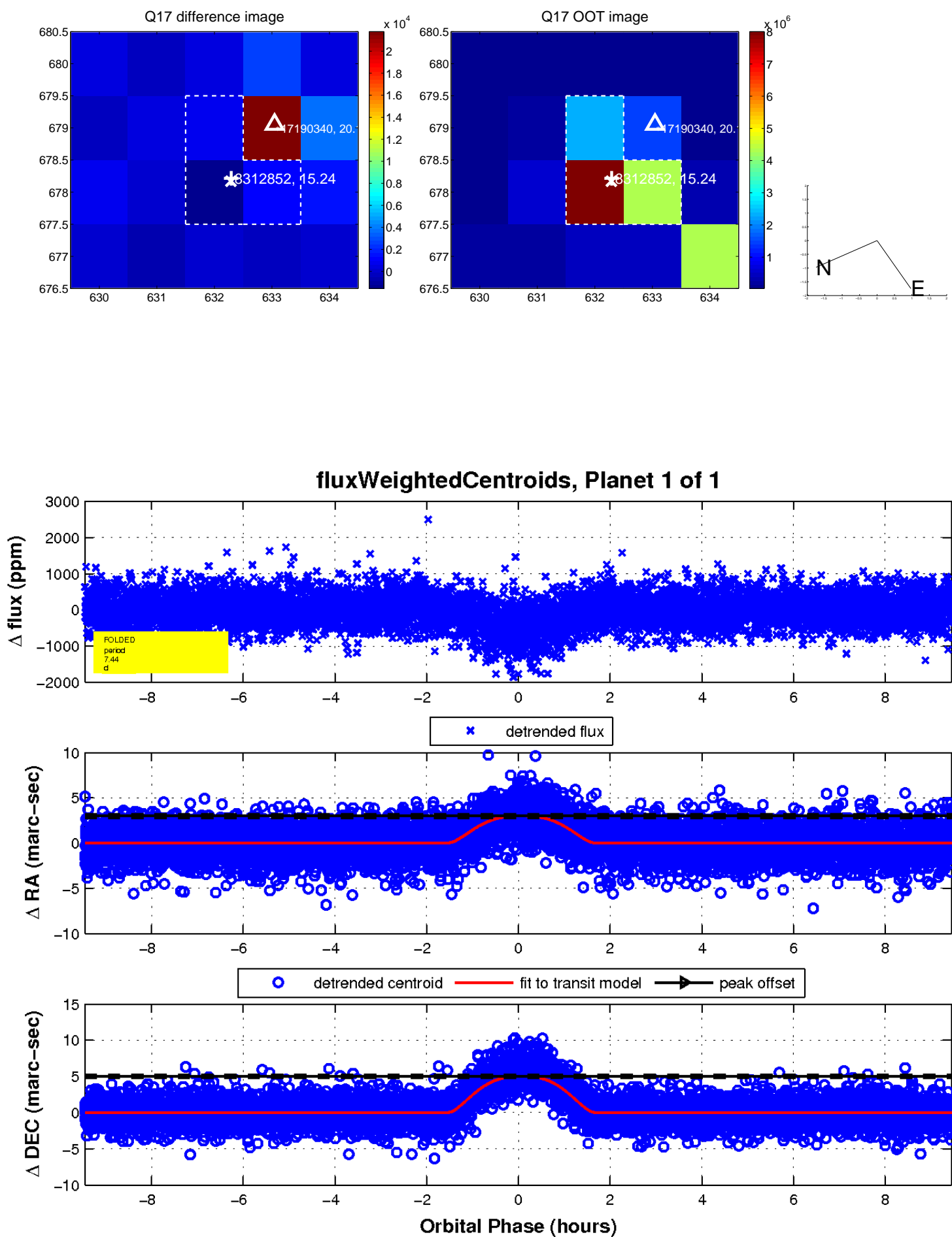
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

