

KIC 008039892

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})
008039892-01	OBS	0903.01	5.007318	133.375210	6916.0	4.300	435.9	446.1	0.83	5865	7.09	234.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008039892-01	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.

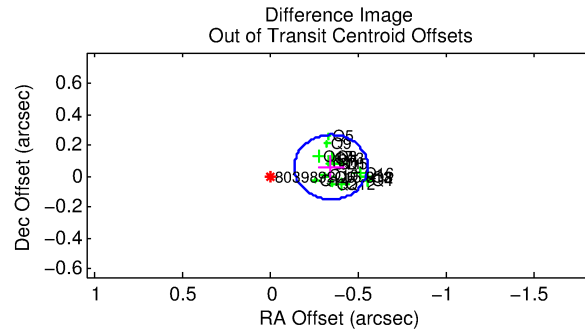
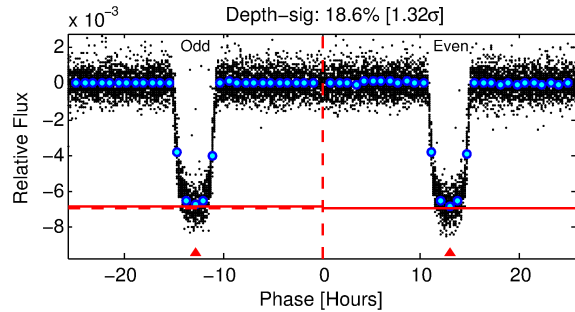
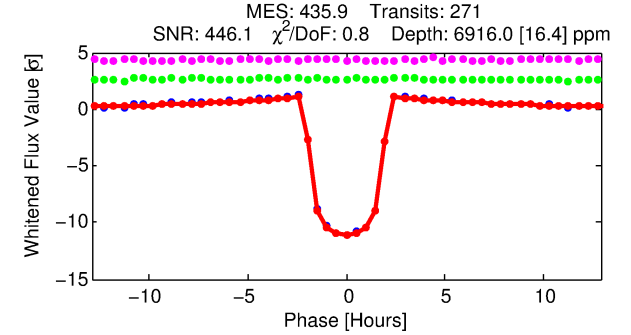
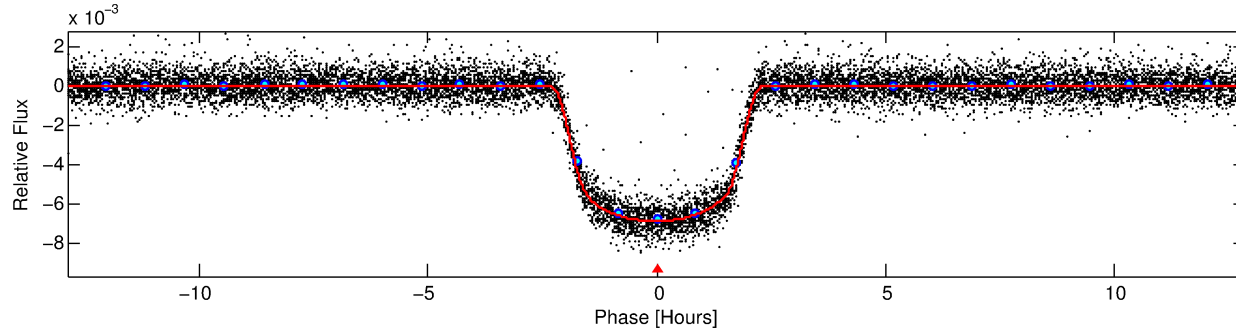
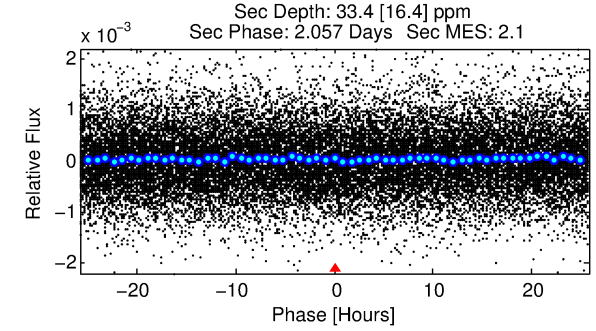
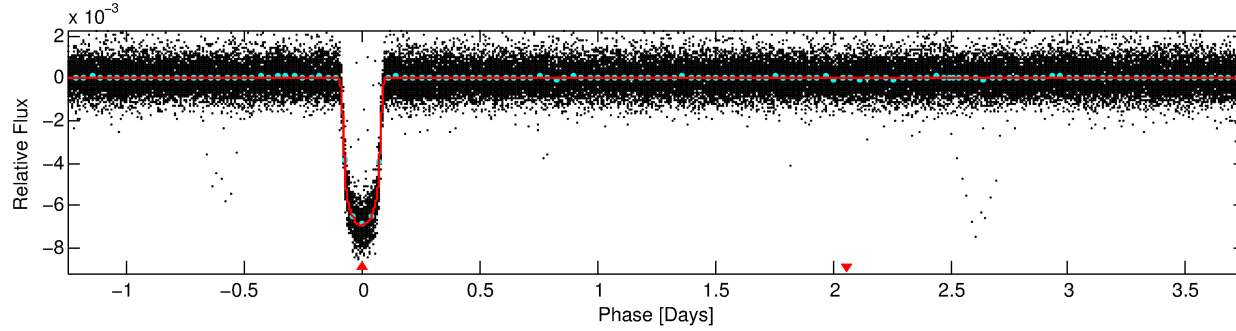
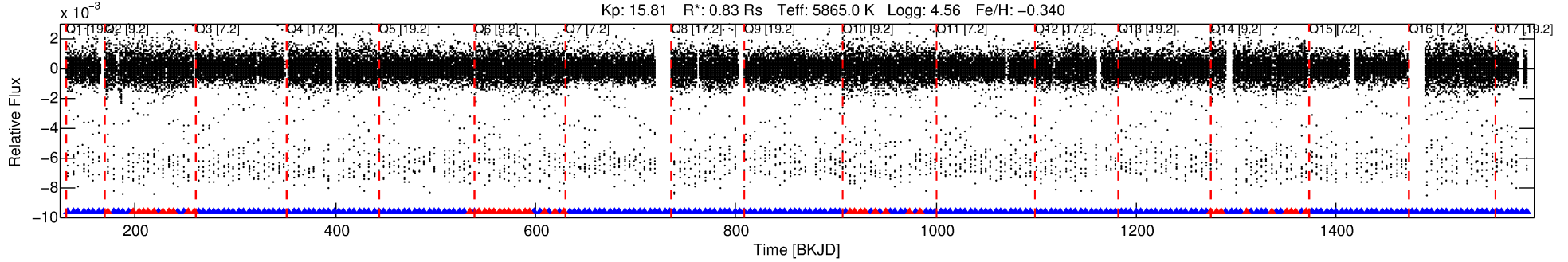
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008039892-01

No Significant Match Found

DV One-Page Summary

KIC: 8039892 Candidate: 1 of 1 Period: 5.007 d
KOI: K00903.01 Corr: 0.991



DV Fit Results:

Period = 5.00732 [0.00000] d
Epoch = 133.3752 [0.0002] BKJD
Rp/R* = 0.0785 [0.0006]
a/R* = 8.42 [0.28]
b = 0.52 [0.05]
Seff = 234.87 [78.40]
Teff = 998 [83] K
Rp = 7.09 [1.78] Re
a = 0.0556 [0.0118] AU
Ag = 1.13 [0.65] [0.20 σ]
Teffp = 1590 [202] K [2.71 σ]

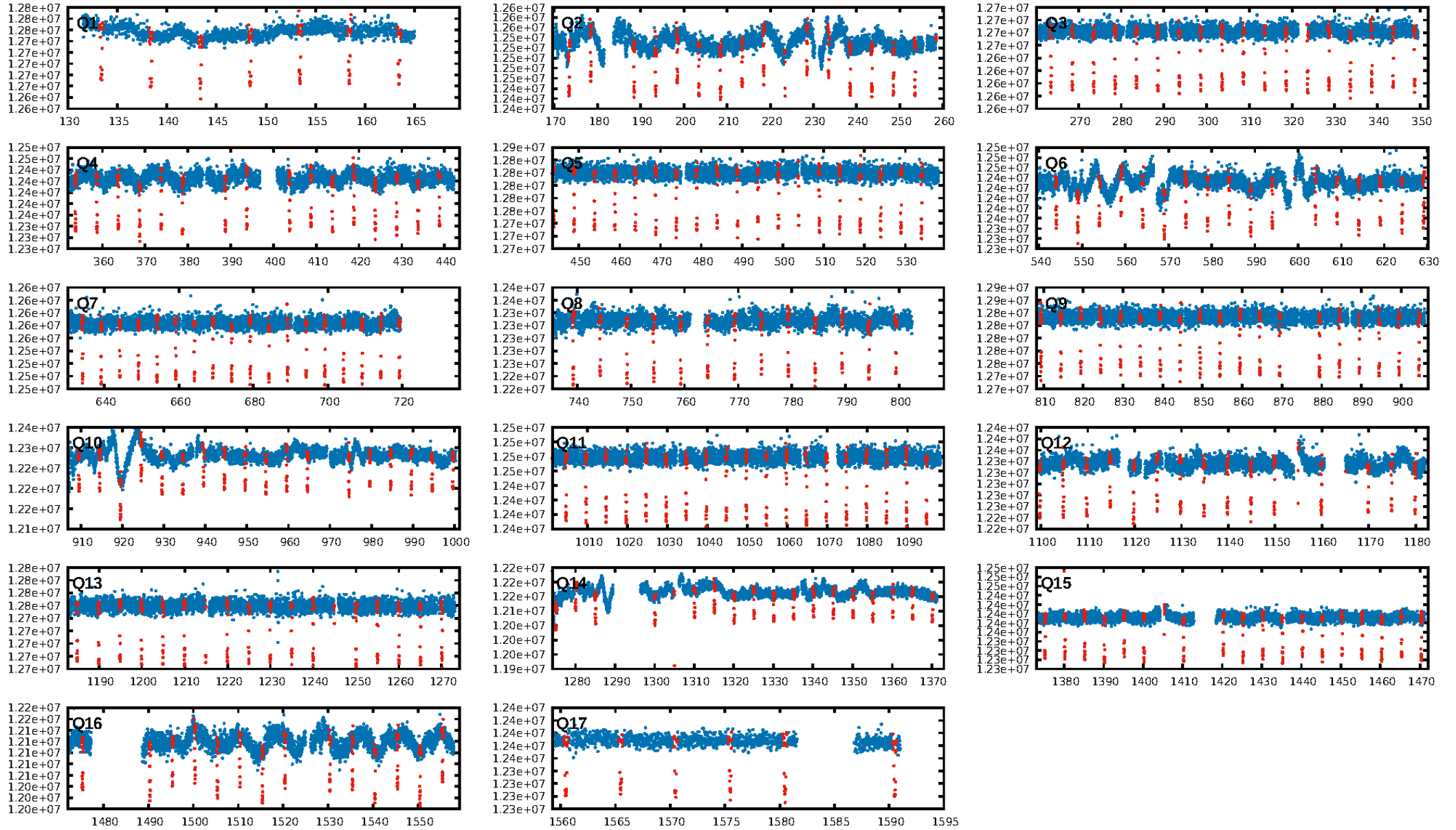
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.83 [215/258]
GhostDiagnostic-chr: 9.127
Centroid-sig: 0.0%
Centroid-so: 0.023 arcsec [0.49 σ]
OotOffset-rm: 0.349 arcsec [5.01 σ]
KicOffset-rm: 0.144 arcsec [2.10 σ]
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]

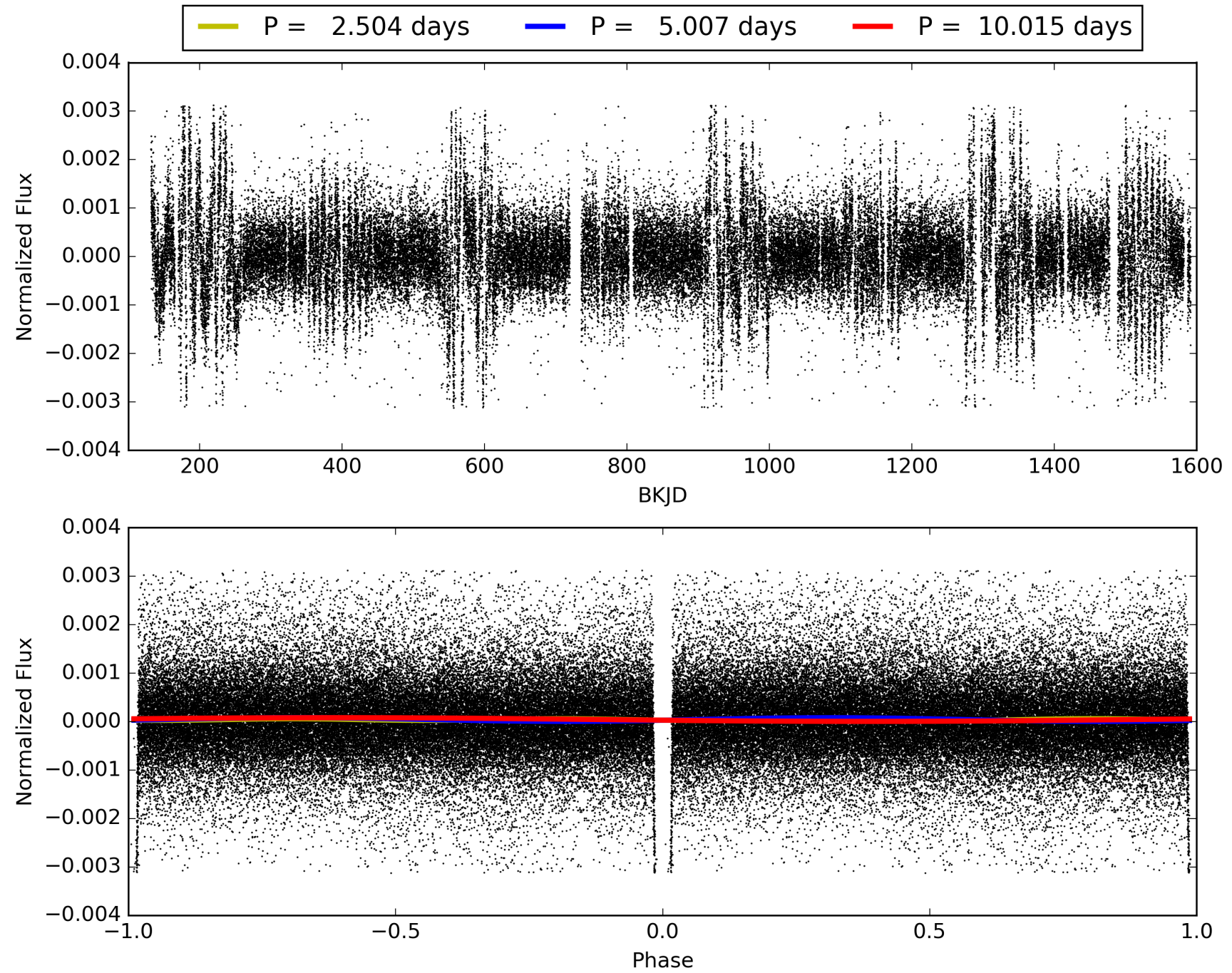
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:59:02 Z

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

TCE 008039892-01, PDC Light Curves

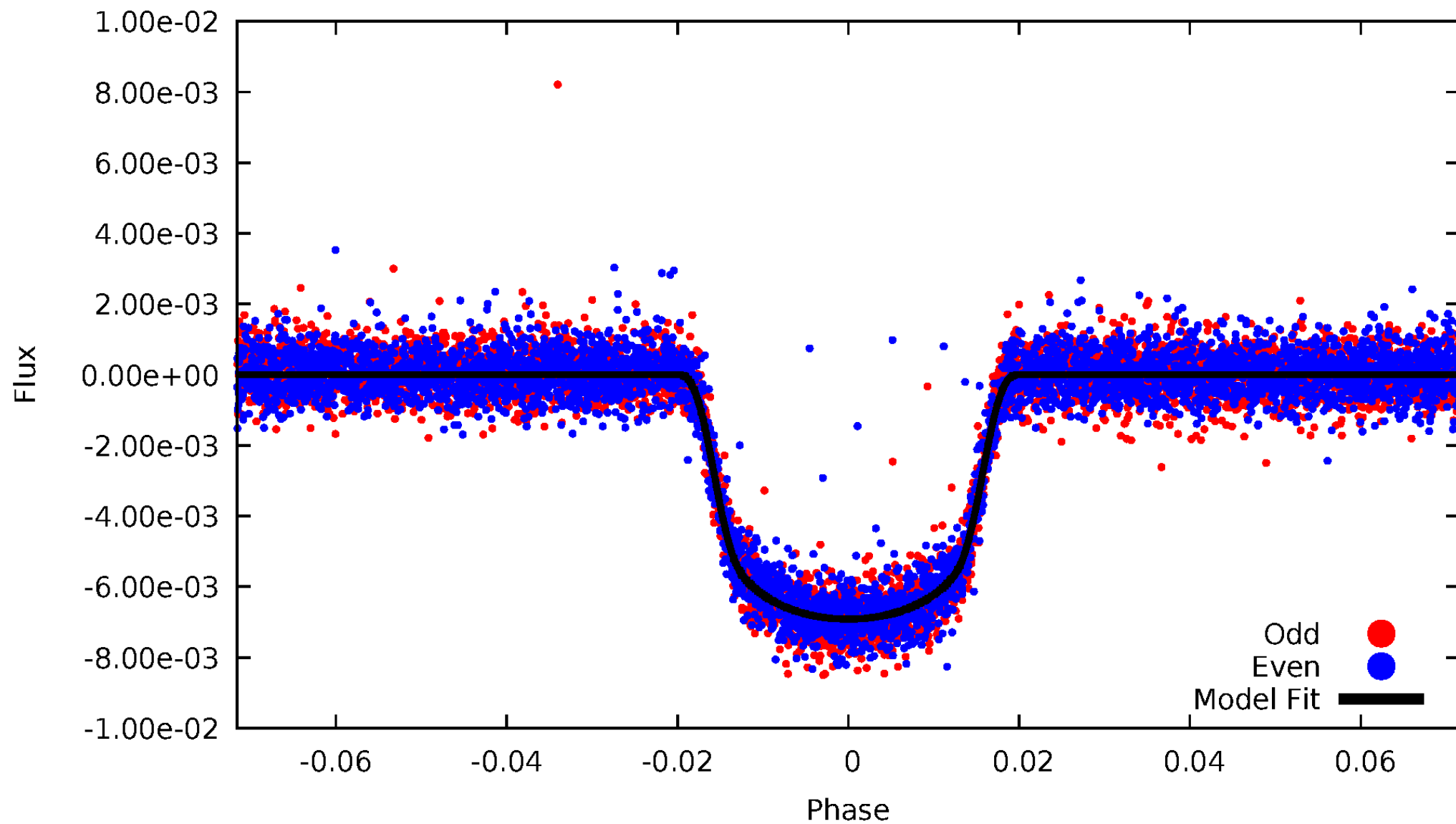


TCE 008039892-01



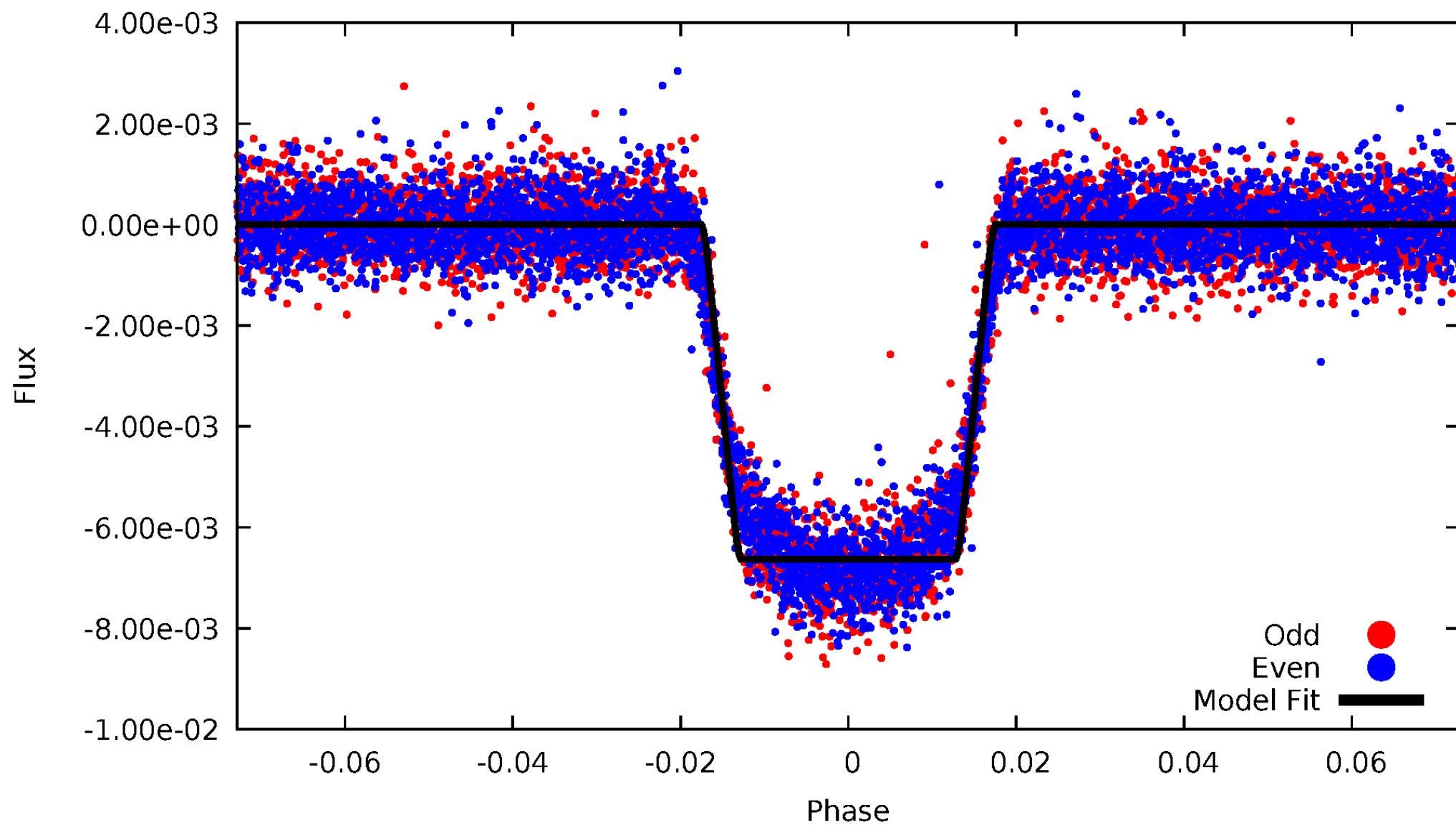
DV Odd/Even

TCE 008039892-01



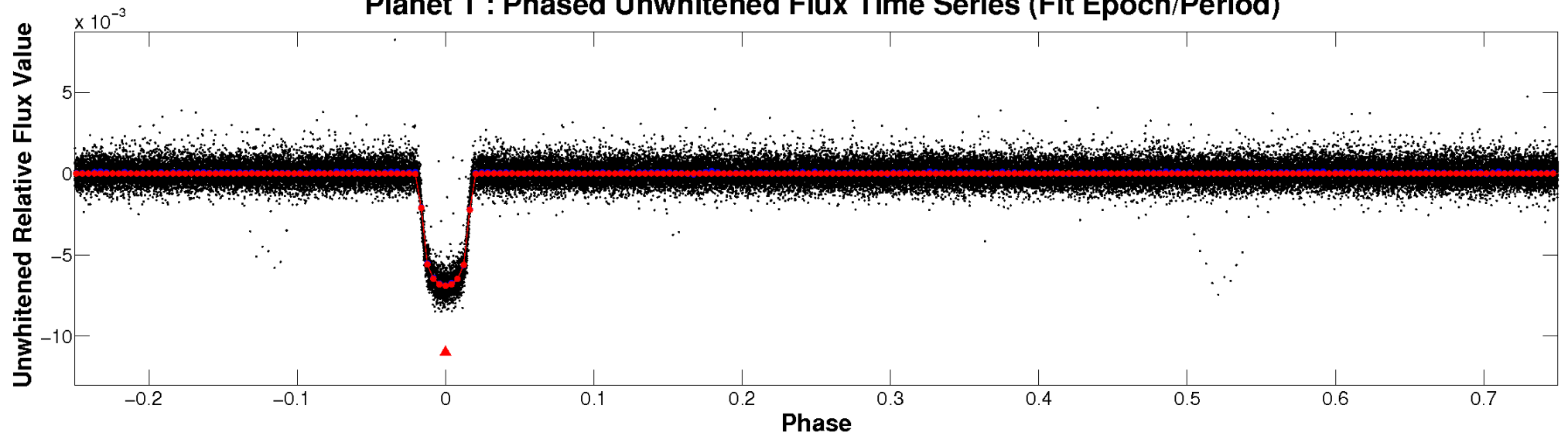
ALT Odd/Even

TCE 008039892-01

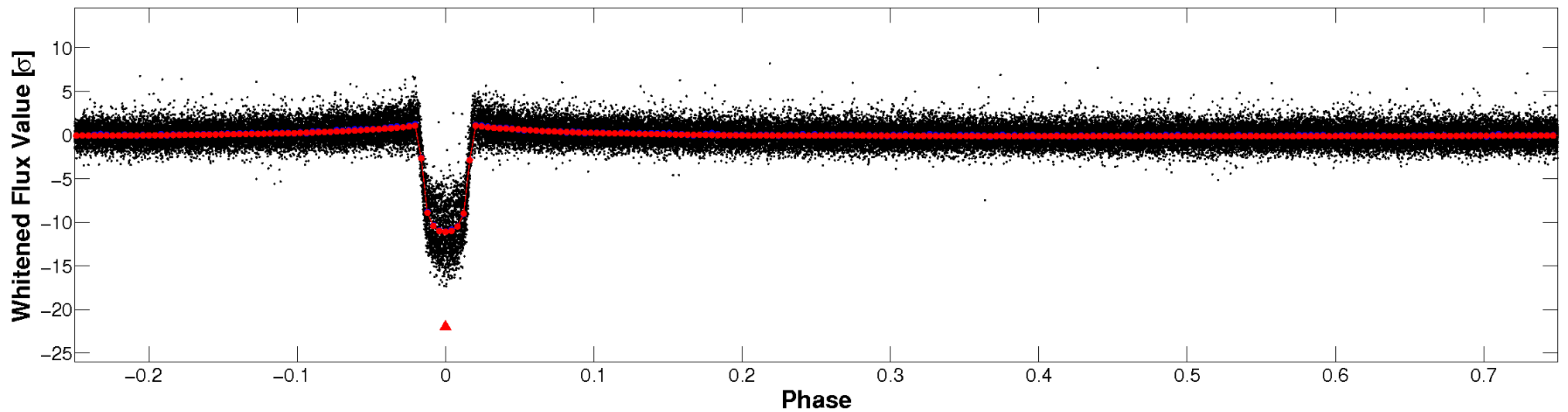


Non-Whitened Vs. Whitened Light Curve

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

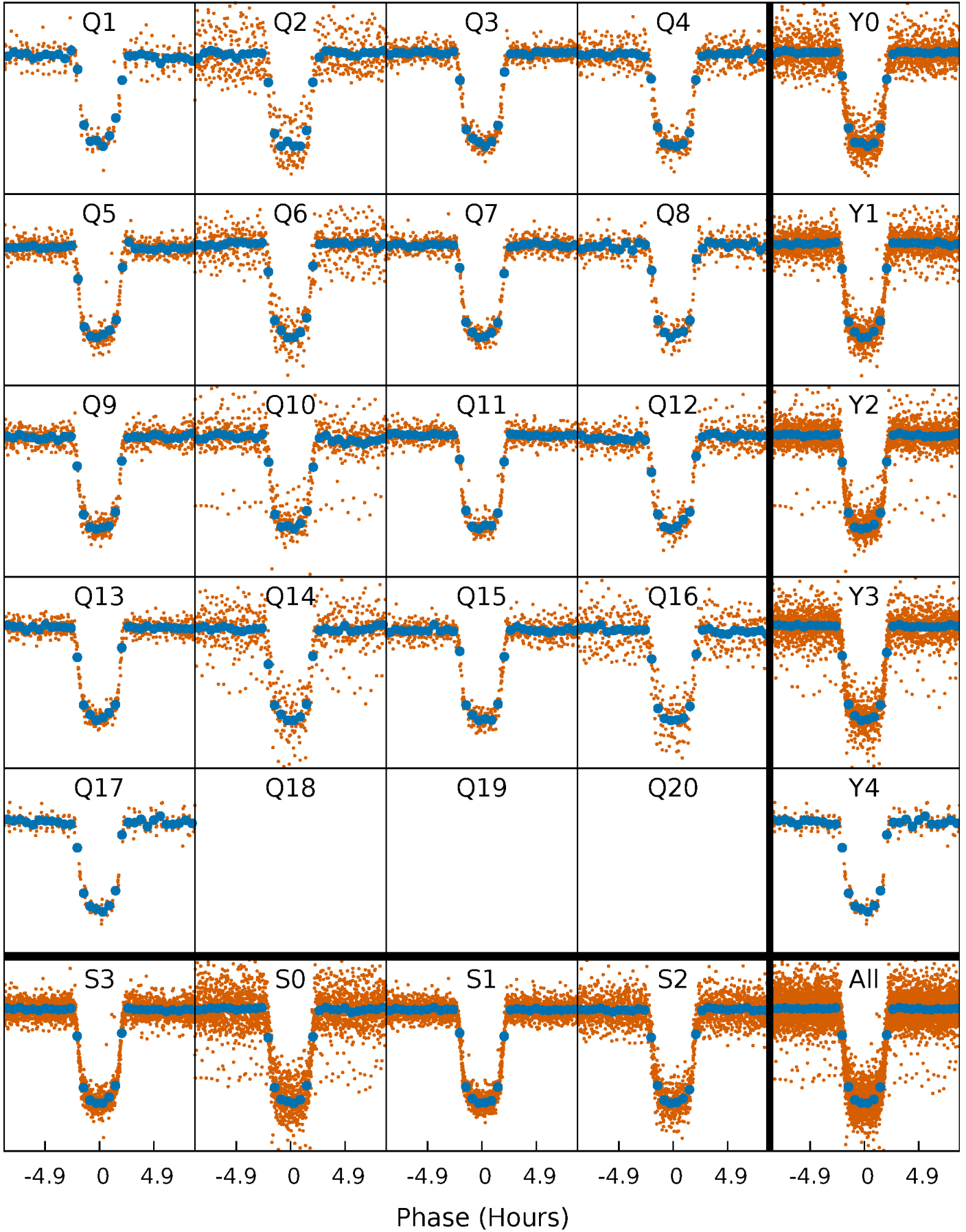


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



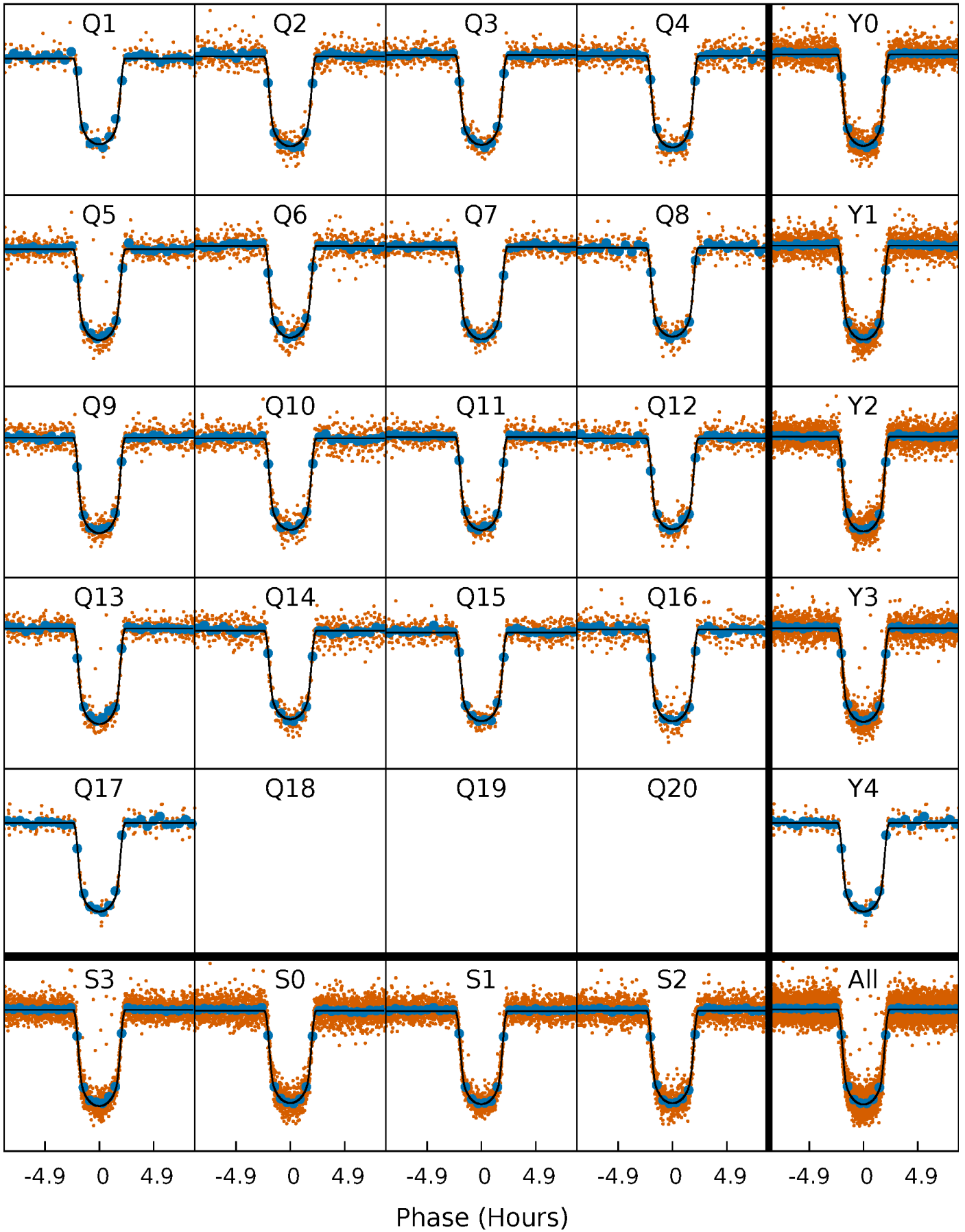
PDC Quarter-Phased Transit Curves

TCE 008039892-01 P= 5.007318 Days $T_0=133.375211$ (BKJD)



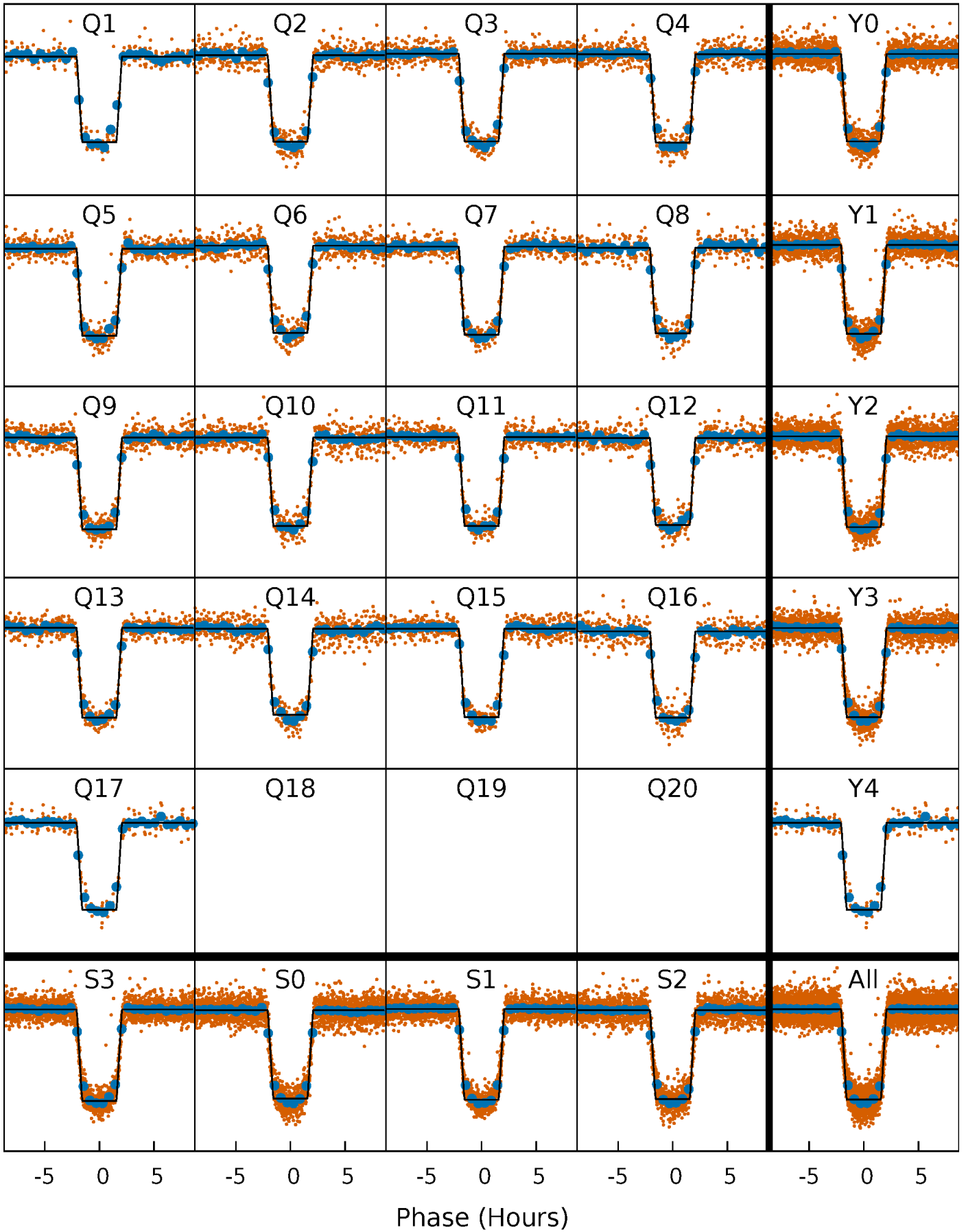
DV Quarter-Phased Transit Curves

TCE 008039892-01 P= 5.007318 Days $T_0=133.375211$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

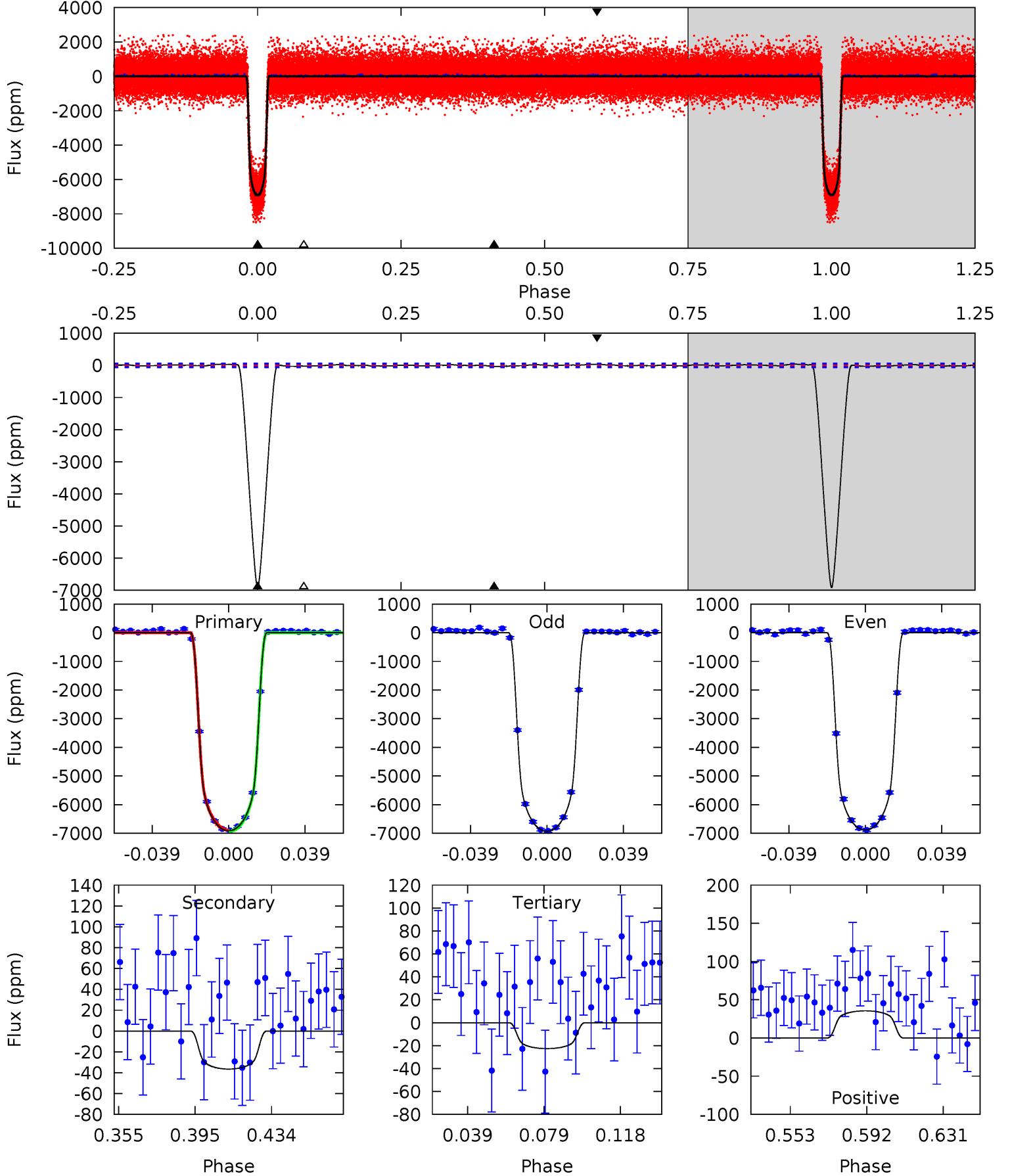
TCE 008039892-01 P= 5.007306 Days $T_0=133.376908$ (BKJD)



DV Model-Shift Uniqueness Test

008039892-01, P = 5.007318 Days, E = 128.367893 Days

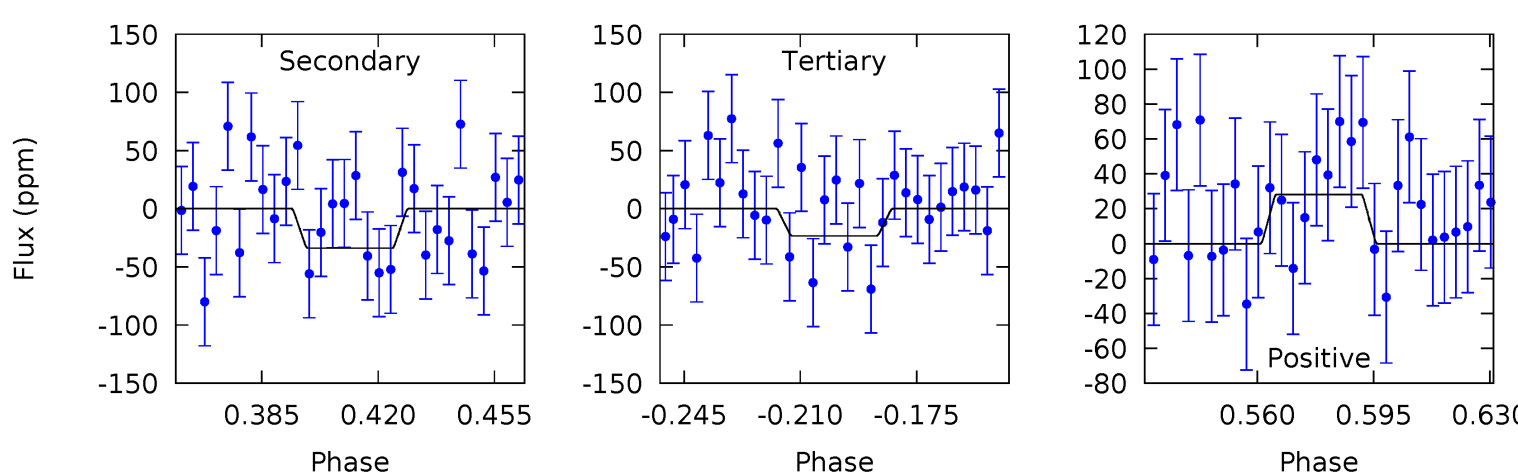
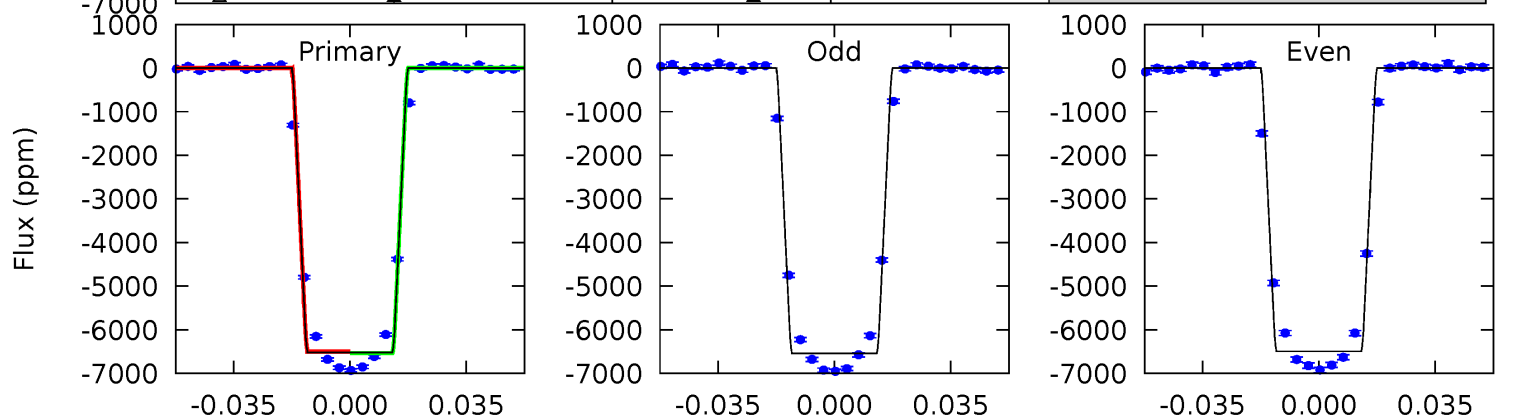
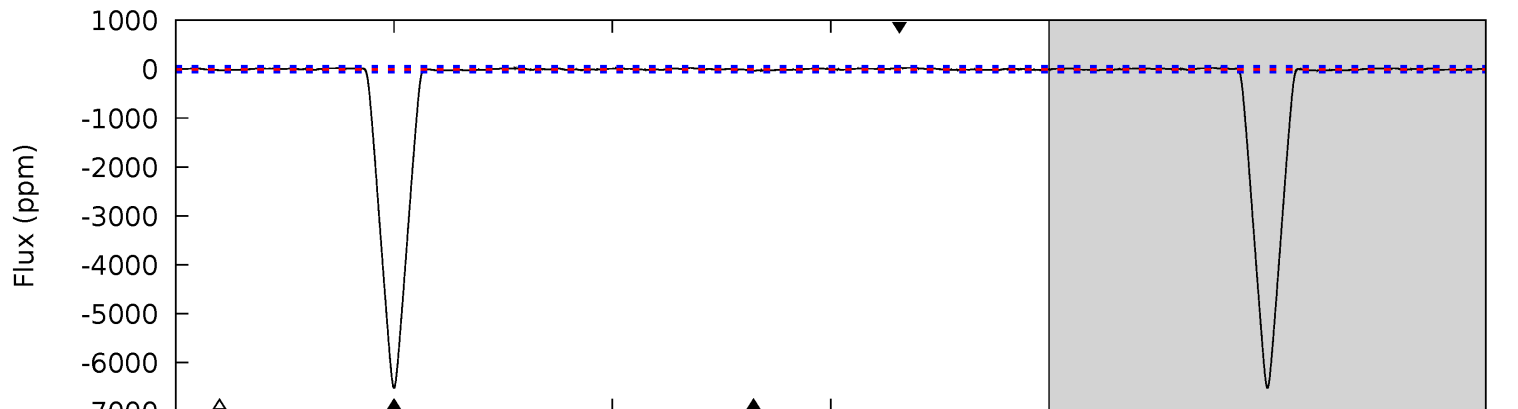
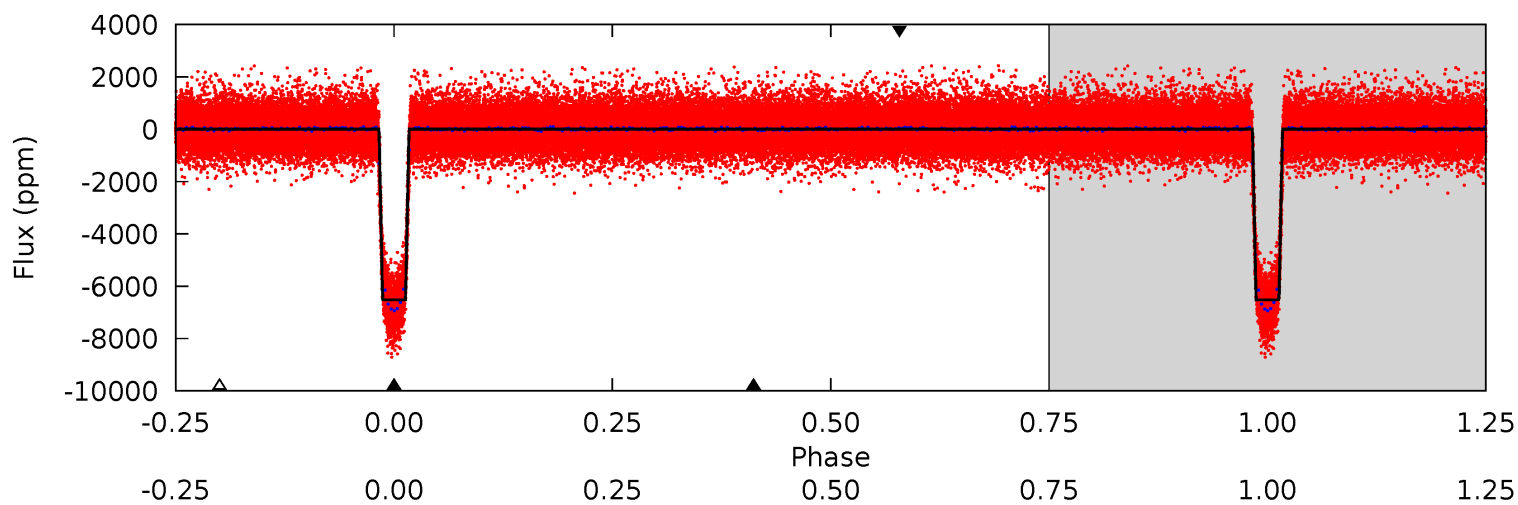
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
597.1	3.15	1.95	3.07	4.76	2.06	1.24	595.2	594.1	1.20	0.09	1.99	0.99	0.01	1.63



Alt Model-Shift Uniqueness Test

008039892-01, P = 5.007306 Days, E = 128.369602 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
533.7	2.78	1.91	2.31	4.78	2.11	1.02	531.8	531.4	0.86	0.46	1.84	1.00	0.00	1.47



Stellar Parameters For KIC 008039892

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5865^{+146}_{-190}	$4.563^{+0.042}_{-0.168}$	$-0.340^{+0.300}_{-0.300}$	$0.827^{+0.208}_{-0.074}$	$0.914^{+0.099}_{-0.109}$	$2.274^{+0.399}_{-1.035}$
	+2%/-3%	+1%/-4%	+88%/-88%	+25%/-9%	+11%/-12%	+18%/-46%
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 008039892-01 / KOI 0903.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-37 ± 12	$7.26^{+0.99}_{-0.50}$	1420^{+90}_{-62}	2384^{+115}_{-166}	$1.090^{+0.419}_{-0.388}$
Alt.	-34 ± 12	$7.46^{+1.03}_{-0.45}$	1415^{+86}_{-61}	2334^{+123}_{-181}	$0.960^{+0.421}_{-0.357}$

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 $A_{obs} \gg 1.0$

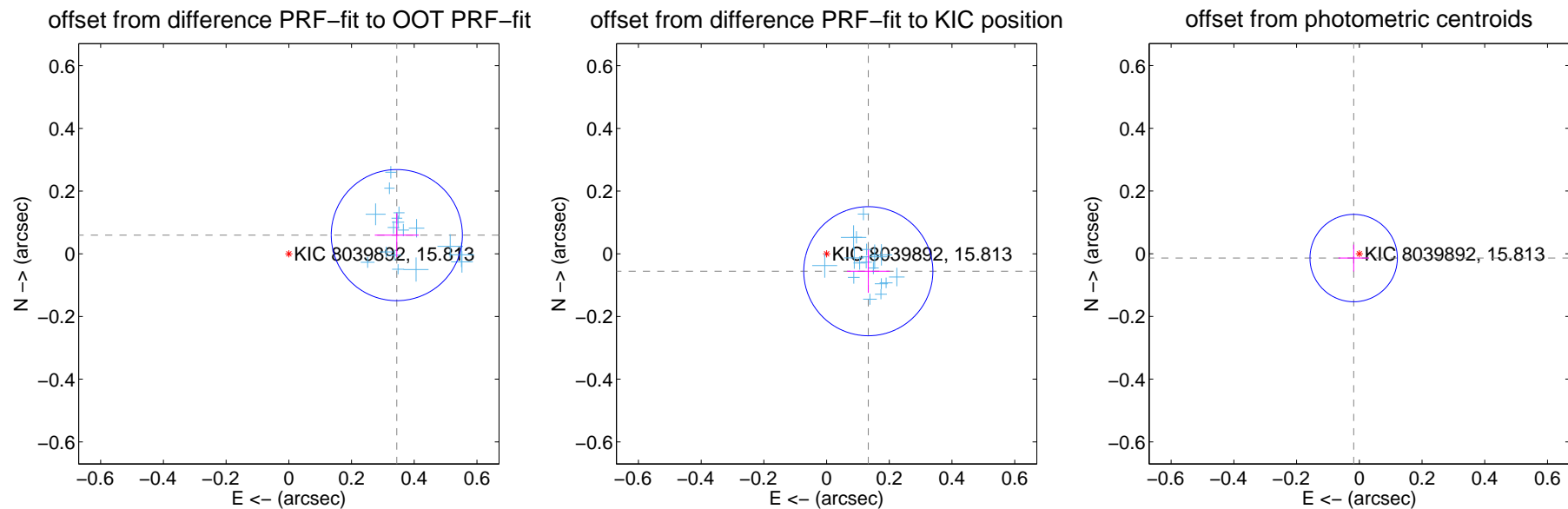
DV Centroid Data

Supplemental centroid analysis for 008039892-01. Kepler magnitude: 15.81. Transit SNR 446.14

There are 17 quarters with good PRF difference image offsets

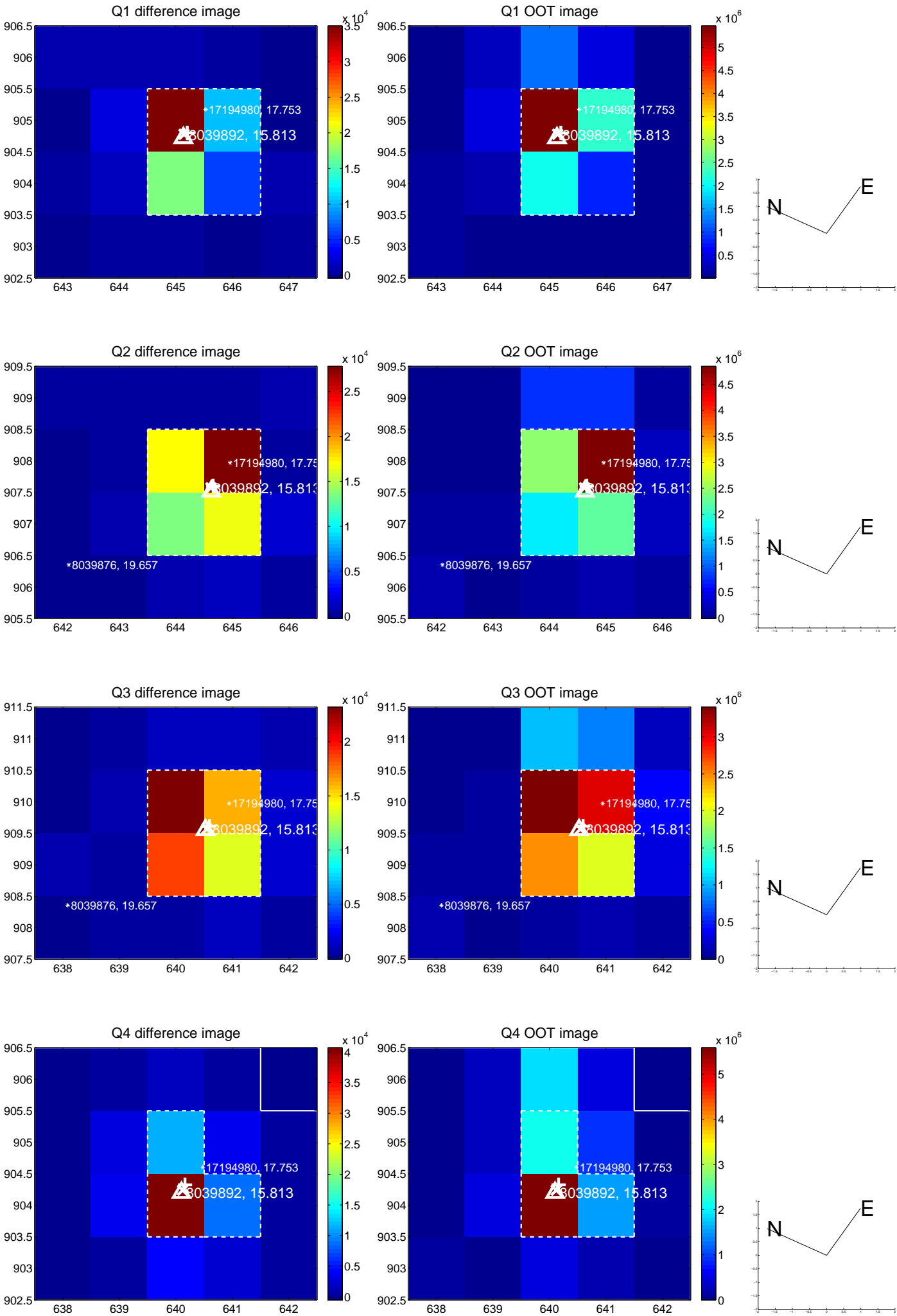
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.349 ± 0.070	5.01	-0.344 ± 0.070	0.060 ± 0.071
PRF-fit source offset from KIC position	0.144 ± 0.069	2.10	-0.133 ± 0.068	-0.056 ± 0.069
photometric centroid source offset	0.02 ± 0.05	0.49	0.02 ± 0.05	-0.01 ± 0.04

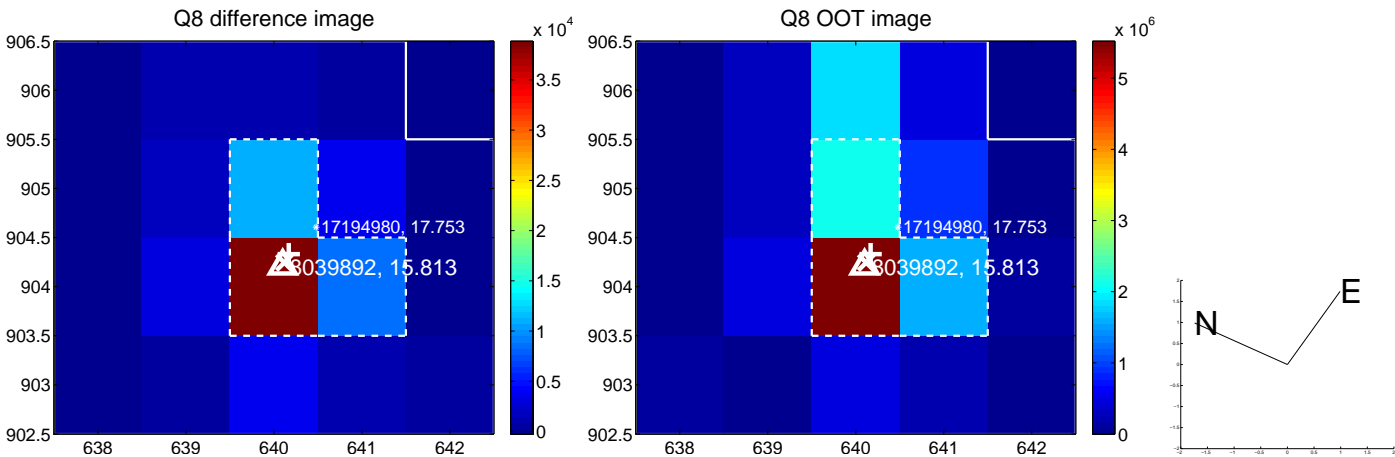
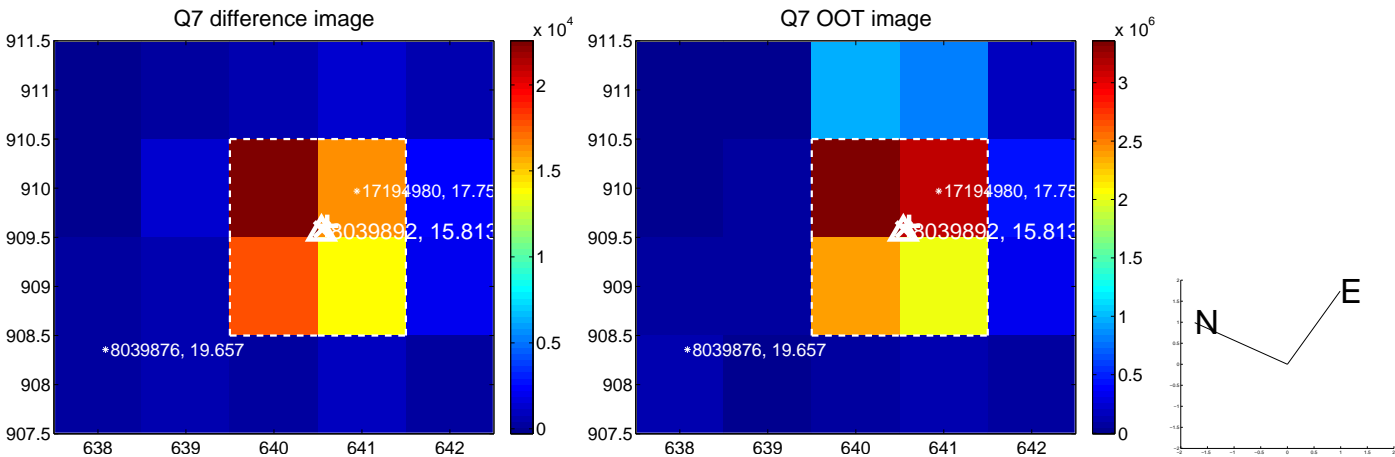
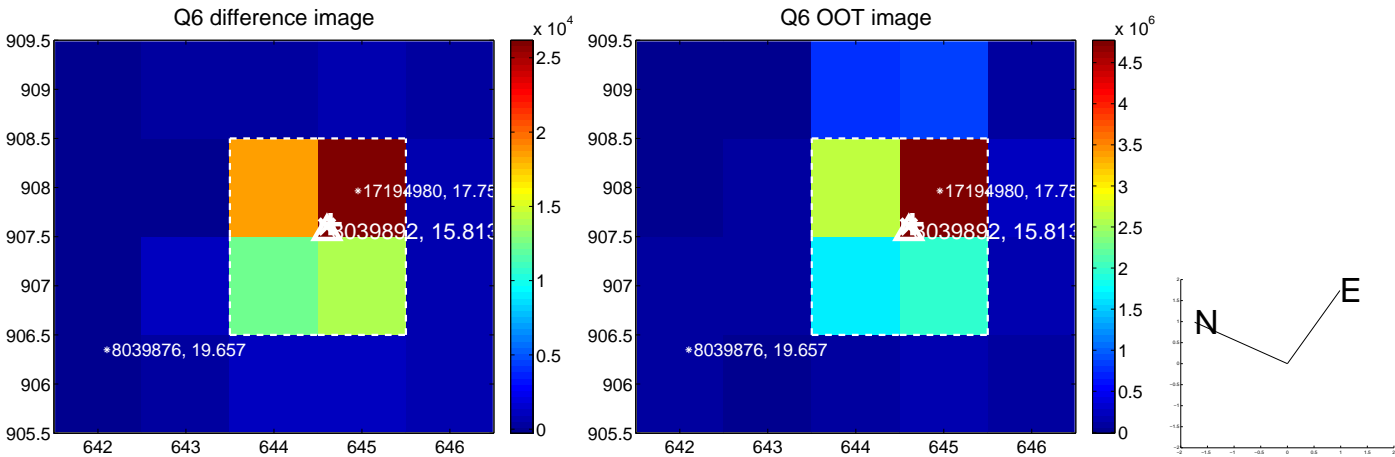
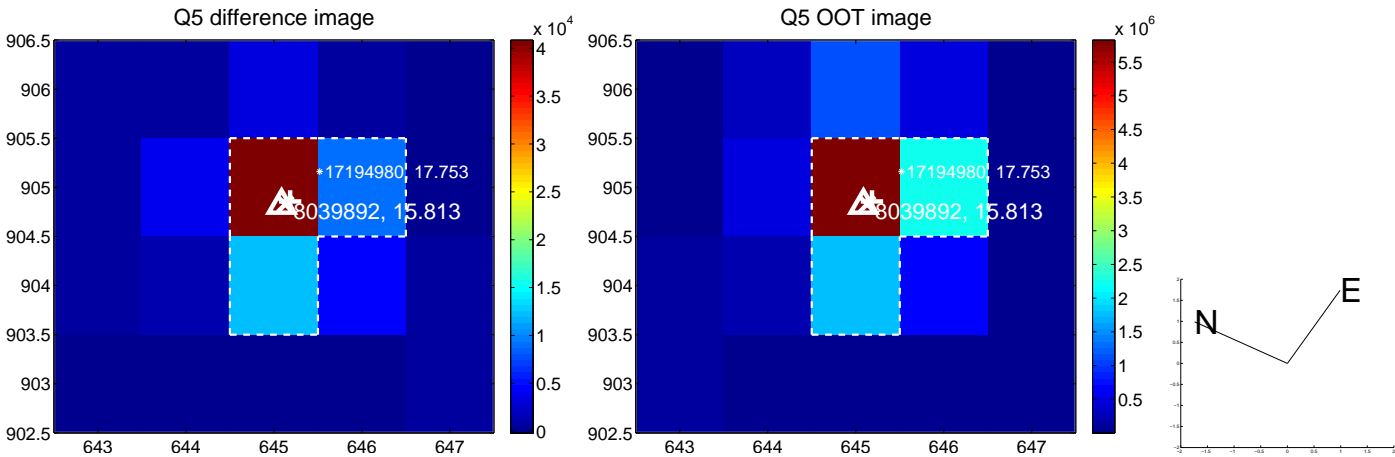


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

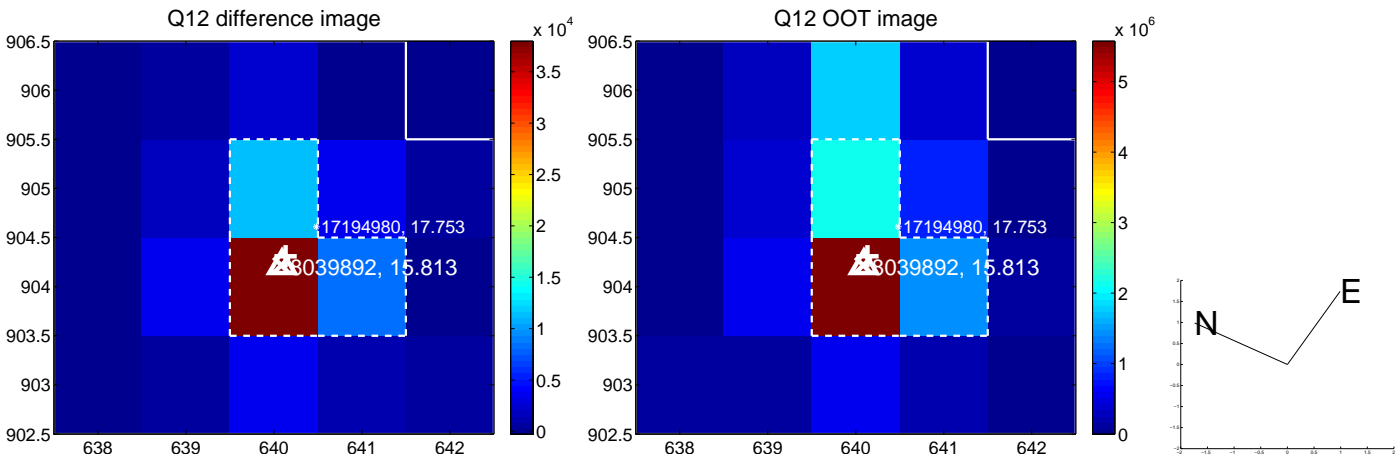
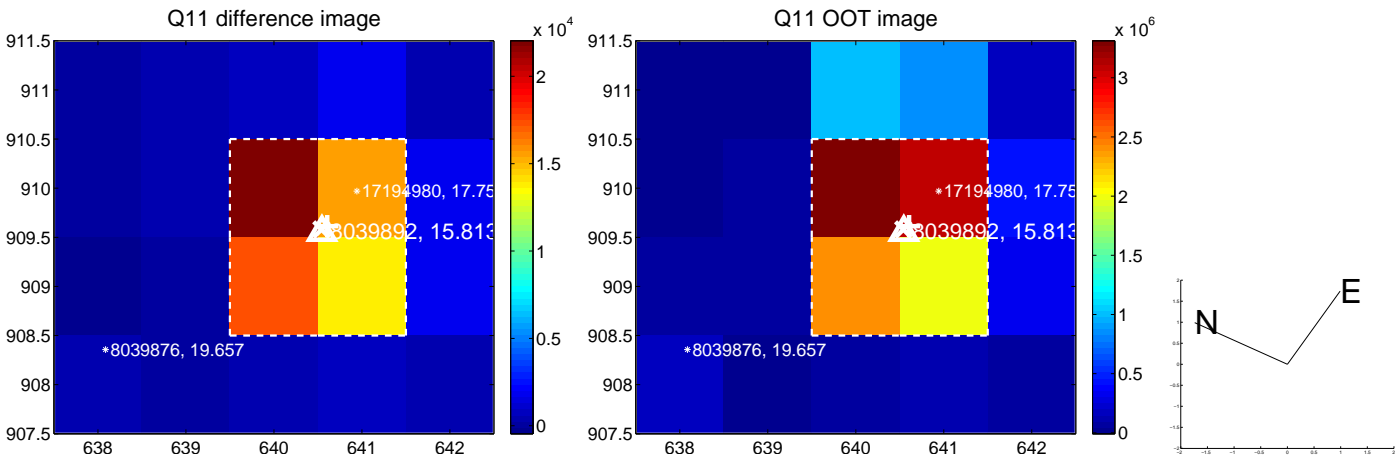
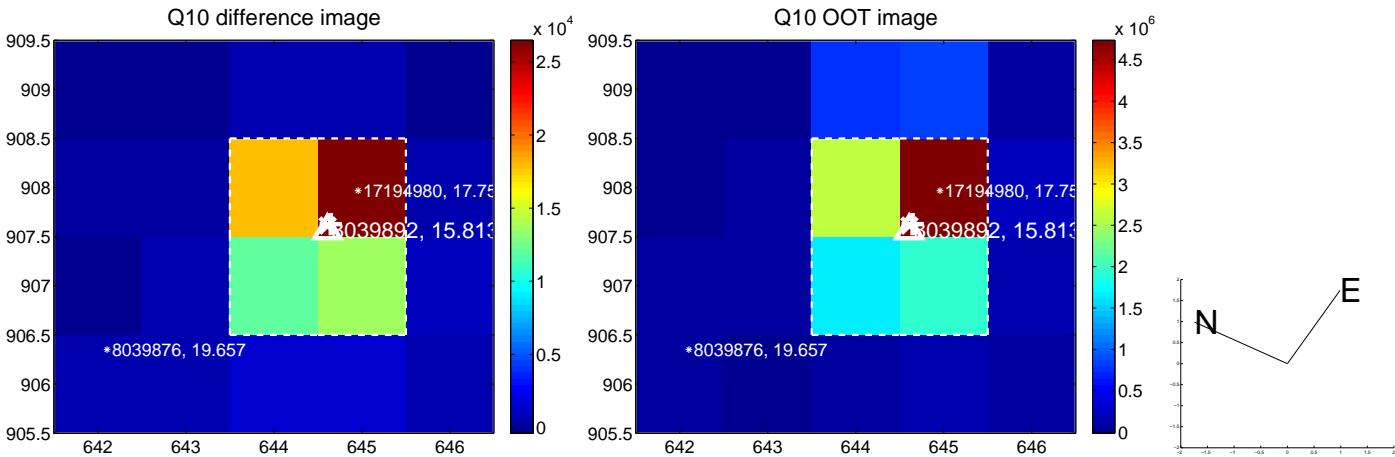
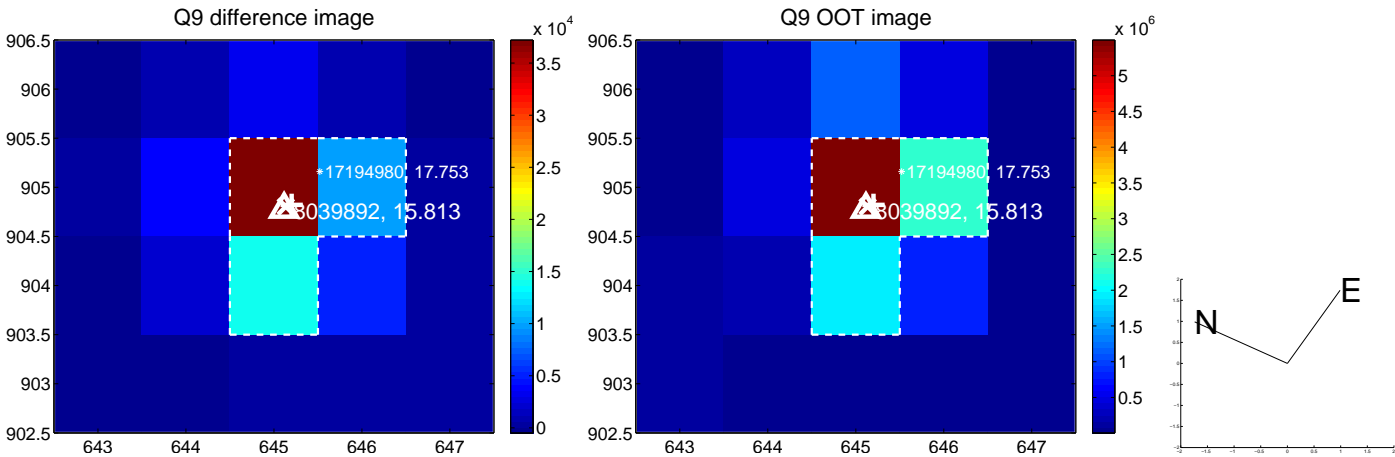
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



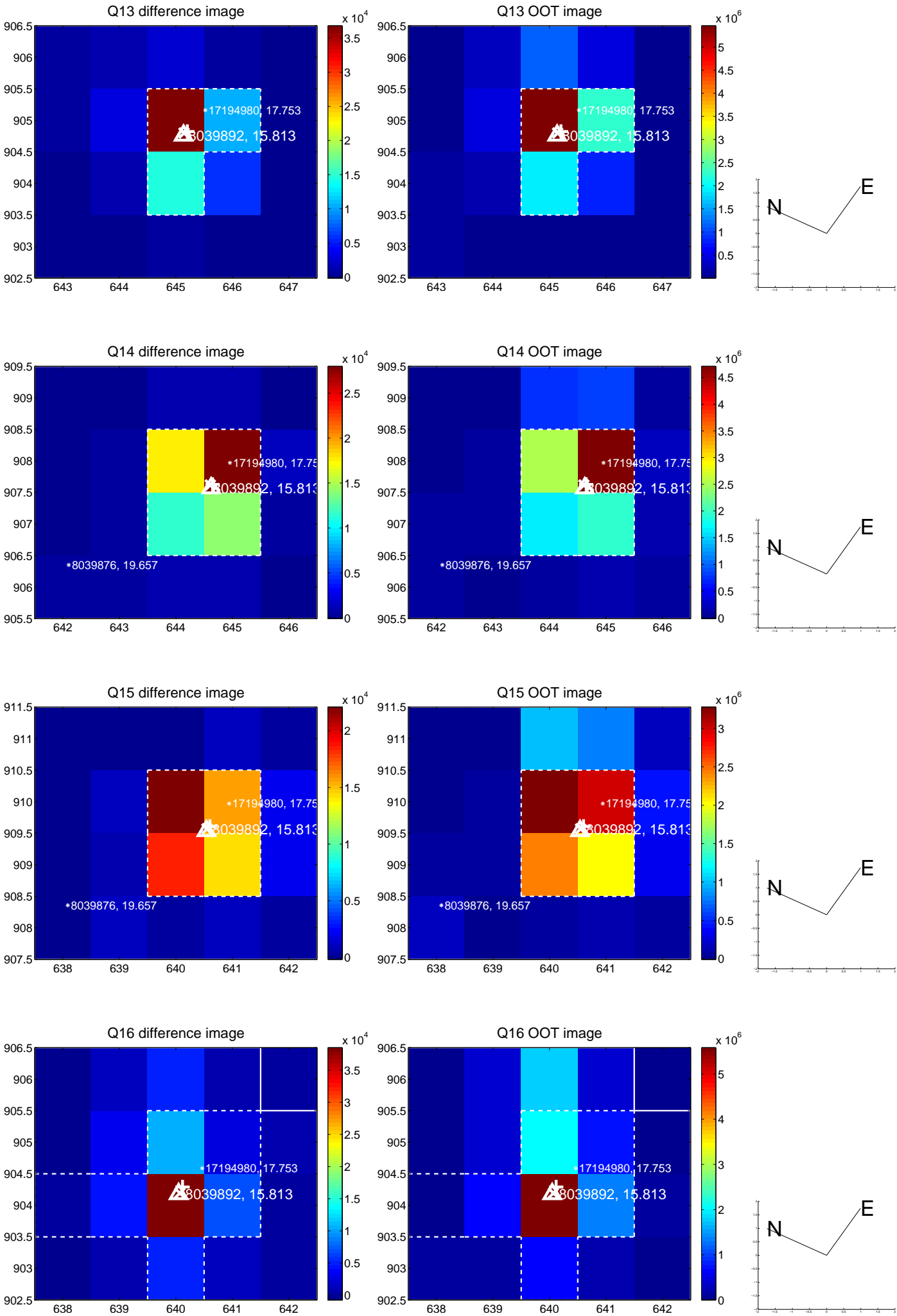
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



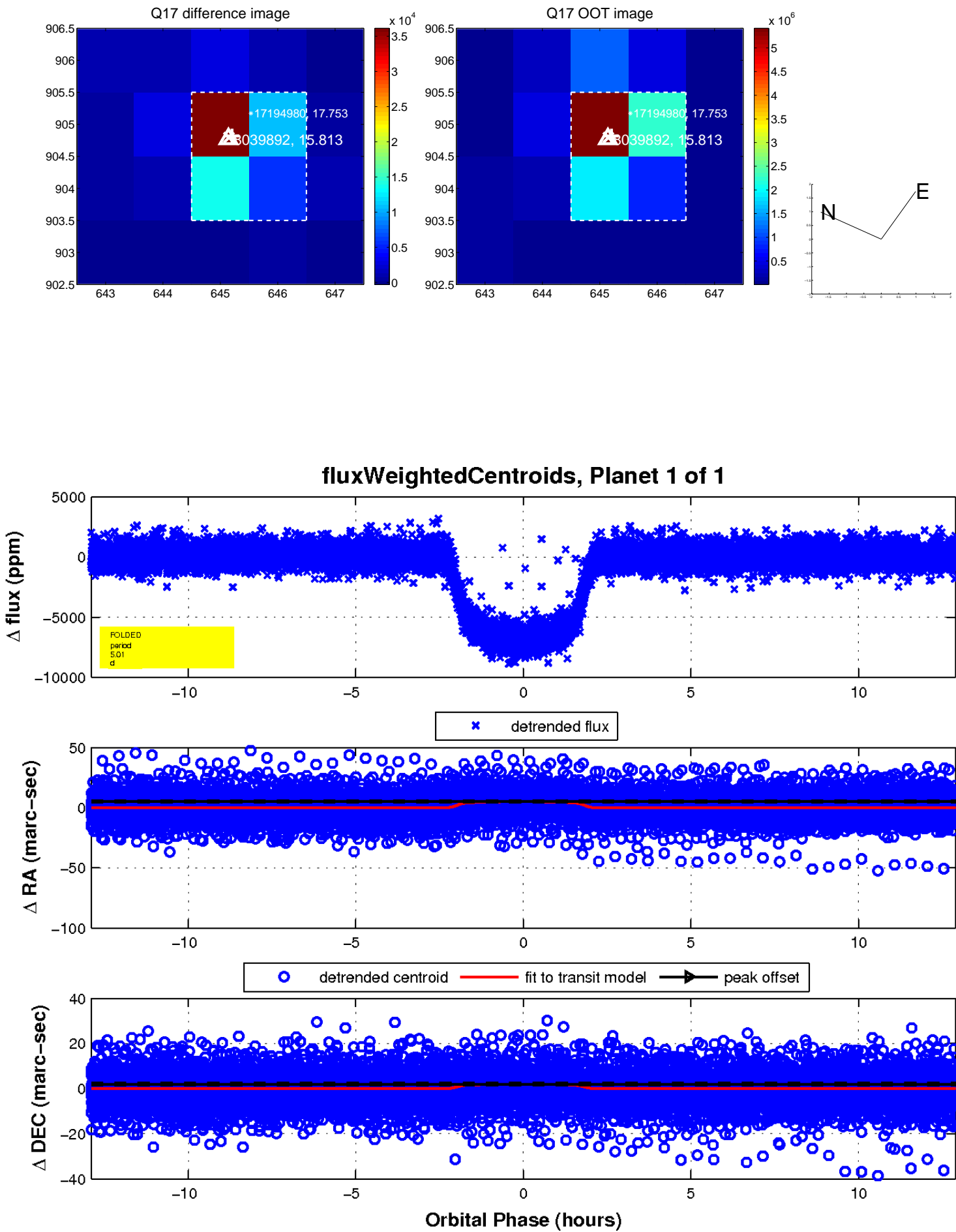
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

