

KIC 008802165

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})
008802165-01	OBS	0694.01	17.421147	131.983010	939.5	5.118	86.9	87.4	0.97	5679	3.29	49.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008802165-01	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.

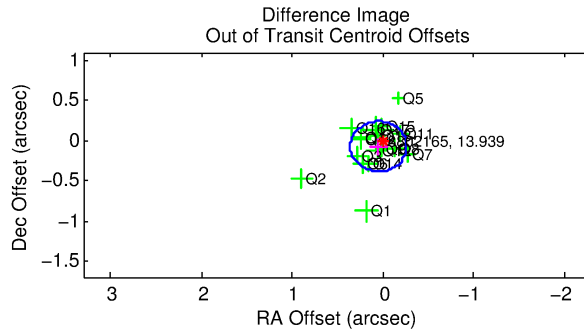
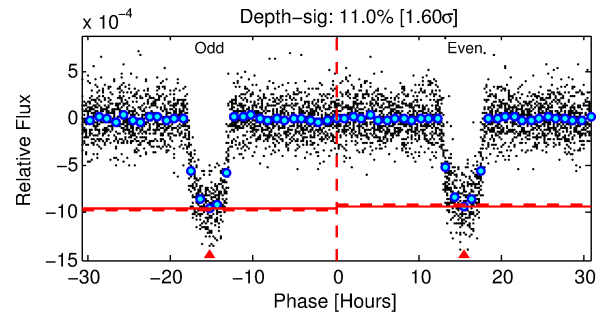
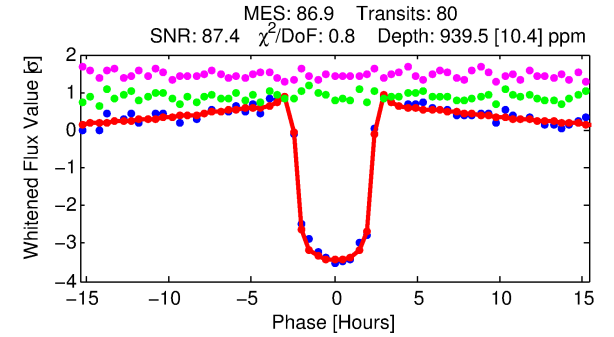
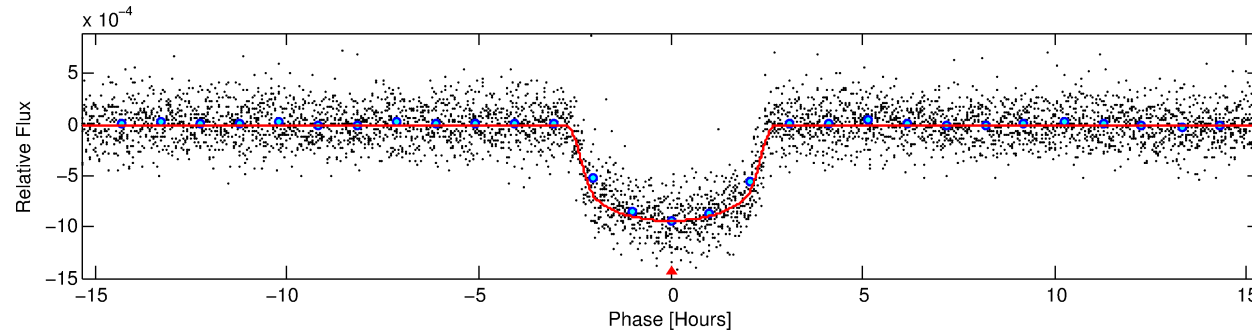
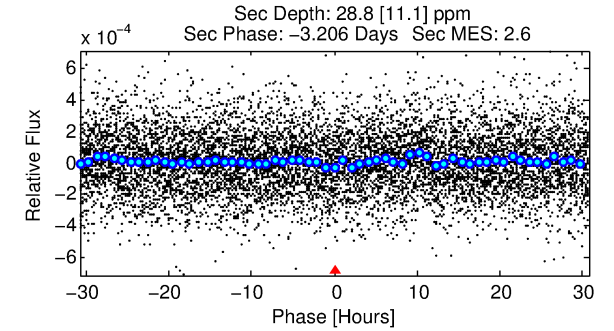
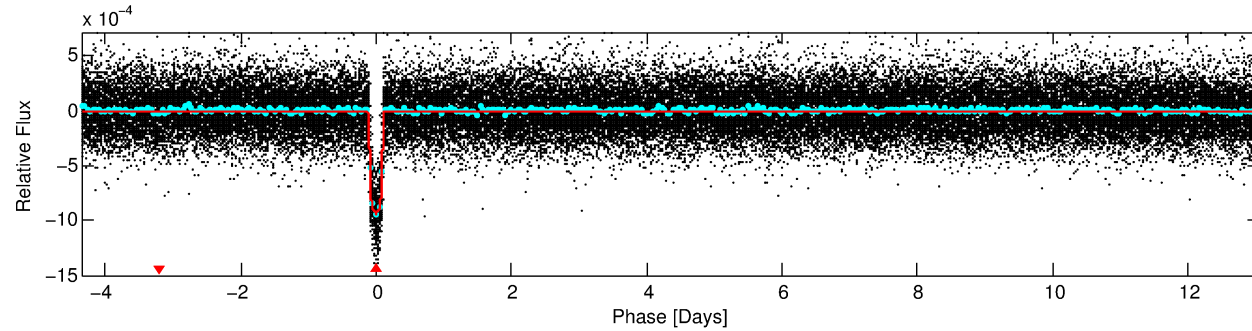
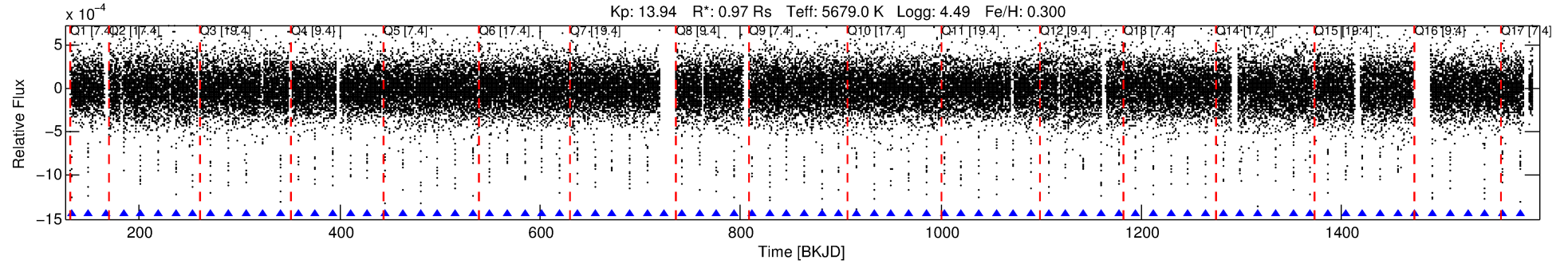
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008802165-01

No Significant Match Found

DV One-Page Summary

KIC: 8802165 Candidate: 1 of 1 Period: 17.421 d
KOI: K00694.01 Corr: 0.992



DV Fit Results:

Period = 17.42115 [0.00002] d
Epoch = 131.9830 [0.0010] BKJD
Rp/R* = 0.0310 [0.0012]
a/R* = 17.44 [2.79]
b = 0.78 [0.08]
Seff = 49.01 [11.68]
Teq = 675 [40] K
Rp = 3.29 [0.52] Re
a = 0.1340 [0.0190] AU
Ag = 26.30 [11.91] [2.12σ]
Teffp = 2362 [239] K [6.96σ]

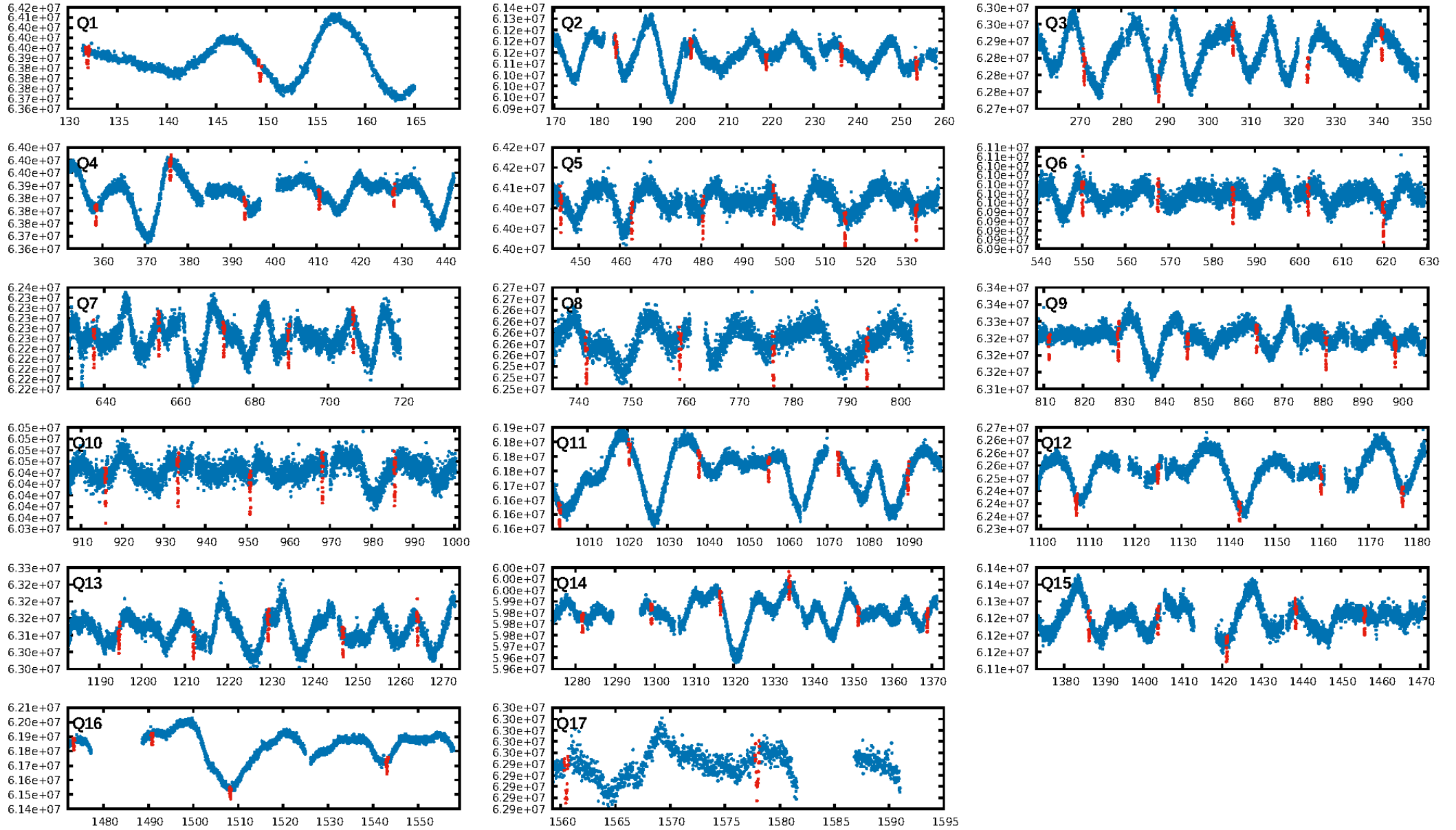
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 95.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [76/76]
GhostDiagnostic-chr: 4.402
Centroid-sig: 15.7%
Centroid-so: 0.208 arcsec [2.19σ]
OotOffset-rm: 0.089 arcsec [0.86σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.065 arcsec [0.64σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

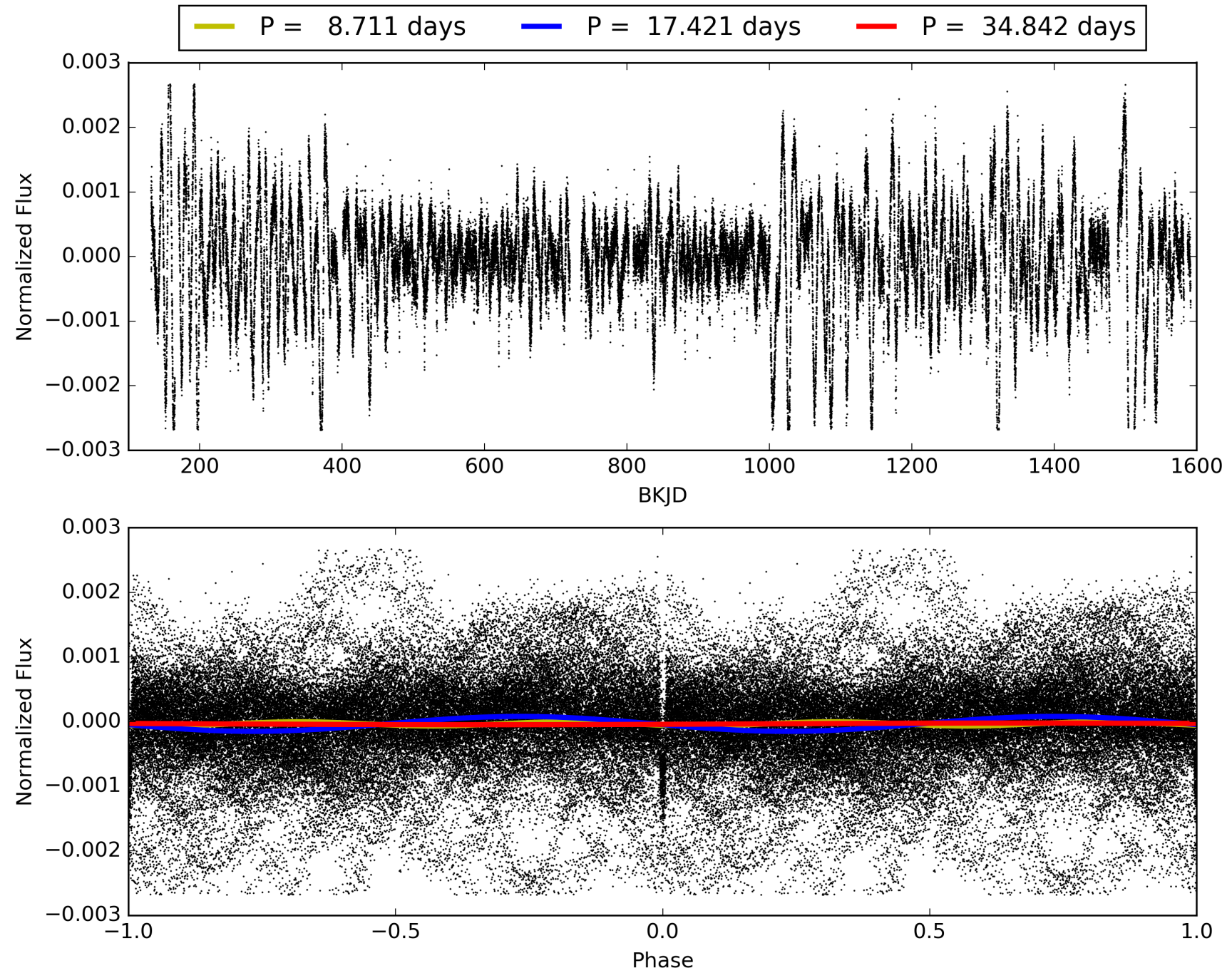
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:10:40 Z

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

TCE 008802165-01, PDC Light Curves

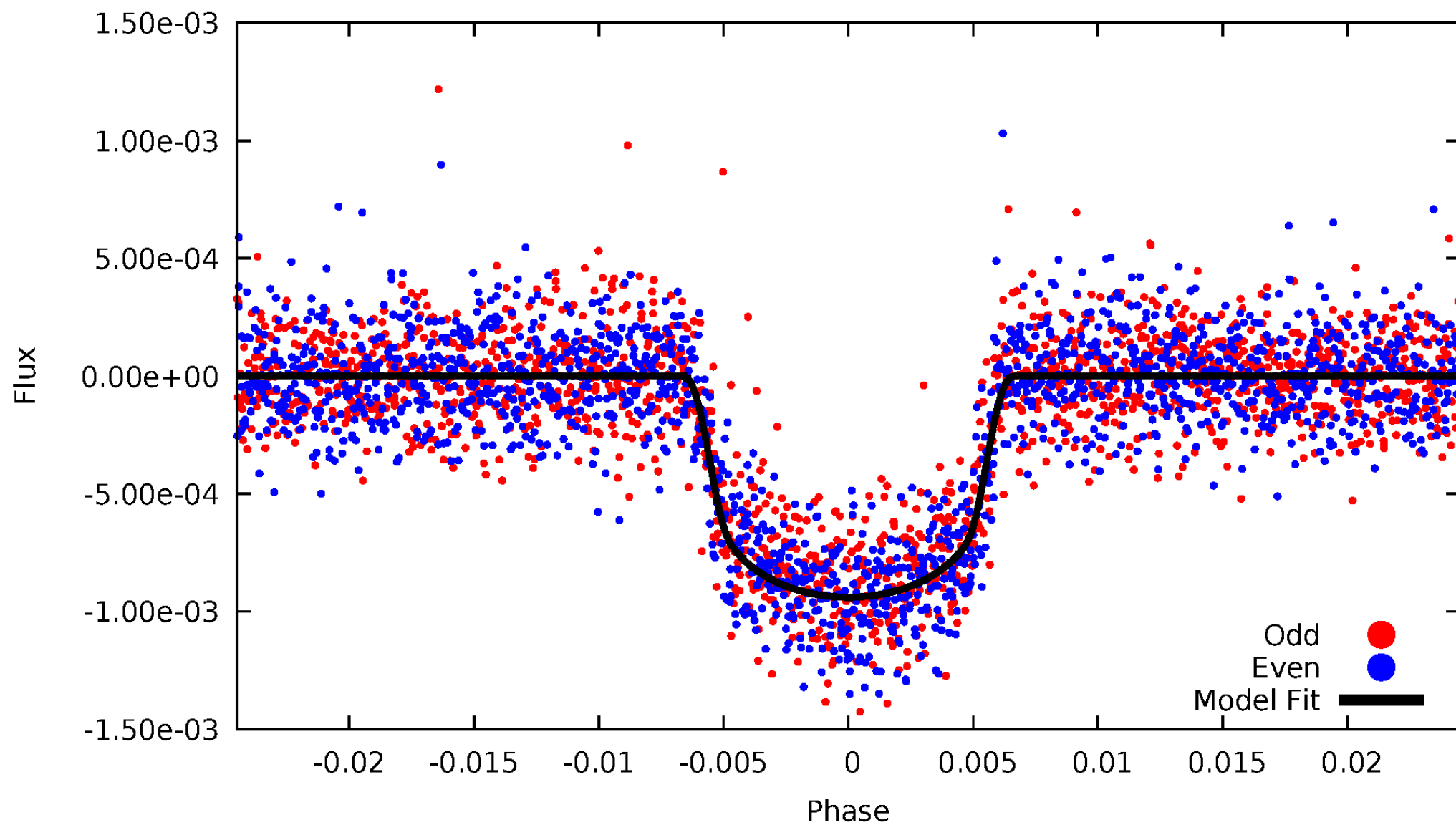


TCE 008802165-01



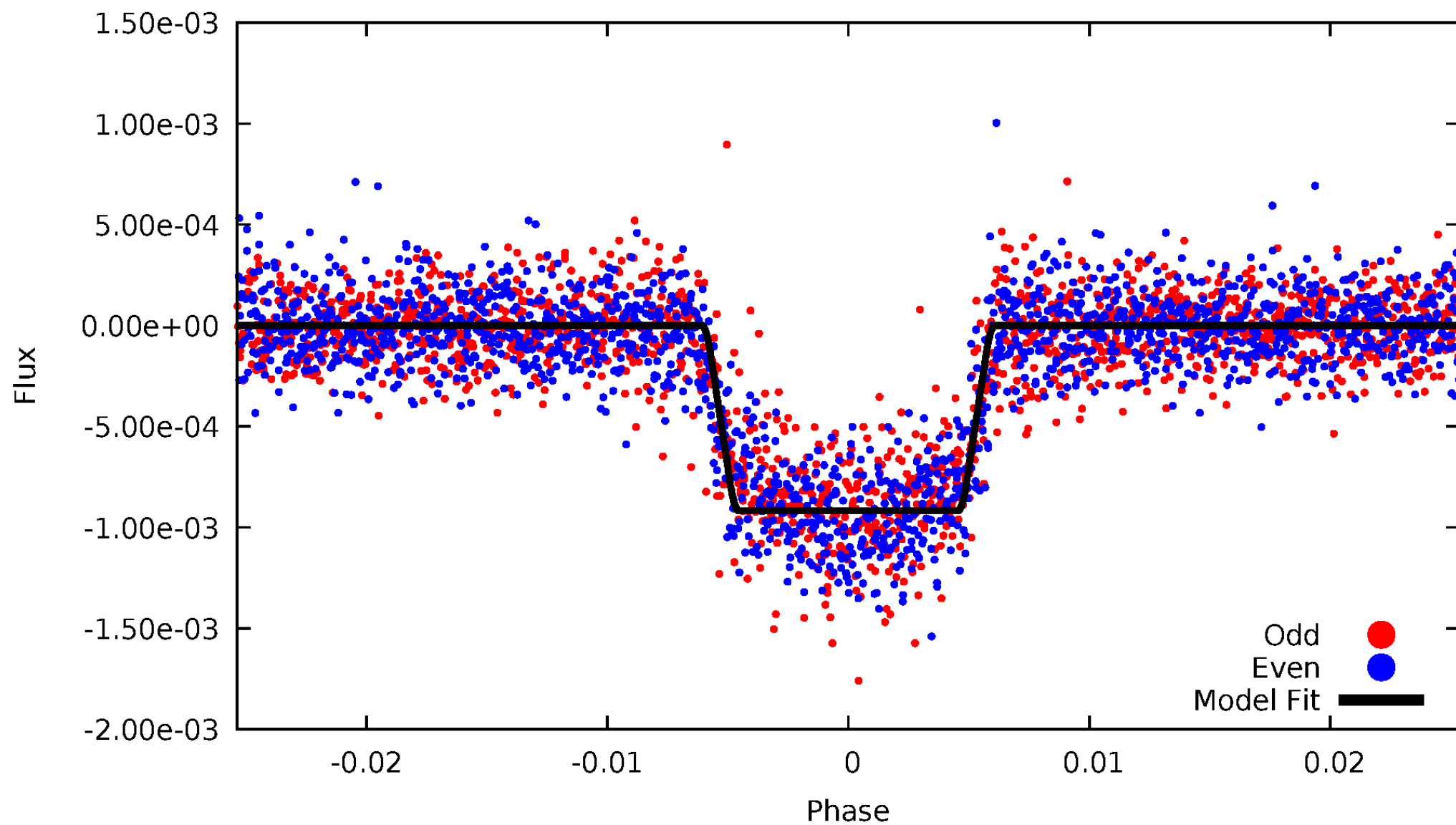
DV Odd/Even

TCE 008802165-01

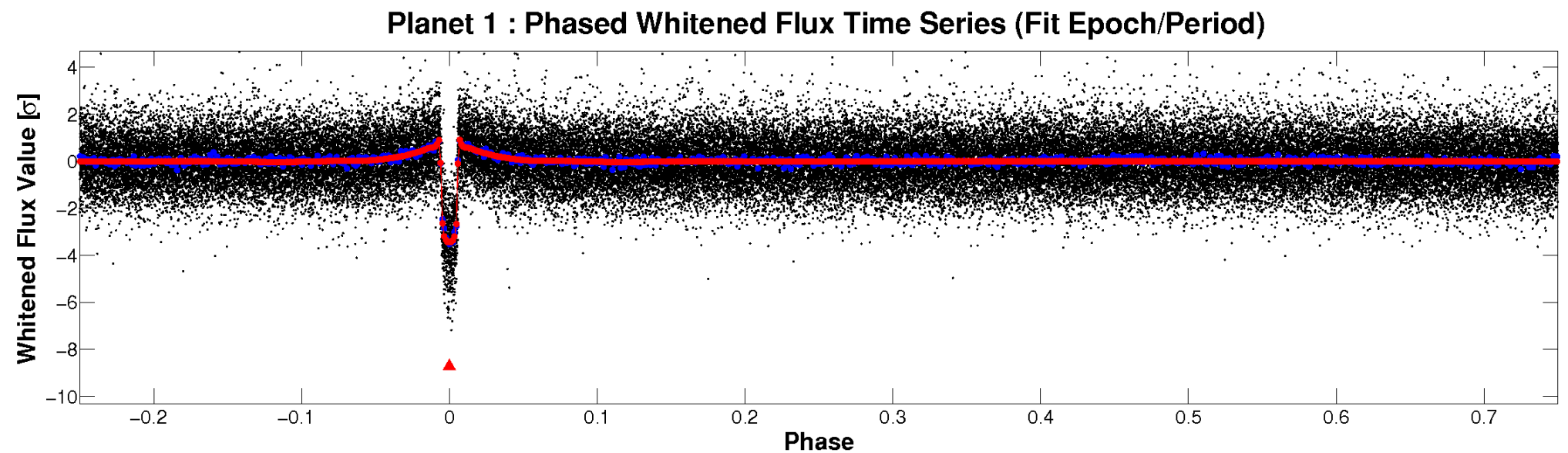
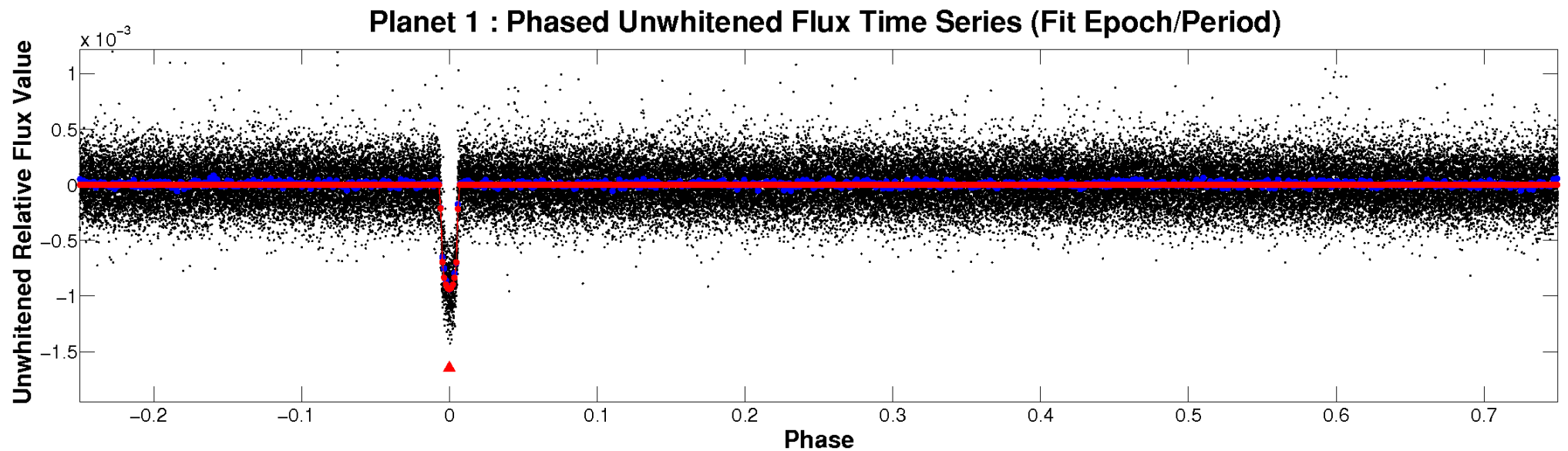


ALT Odd/Even

TCE 008802165-01

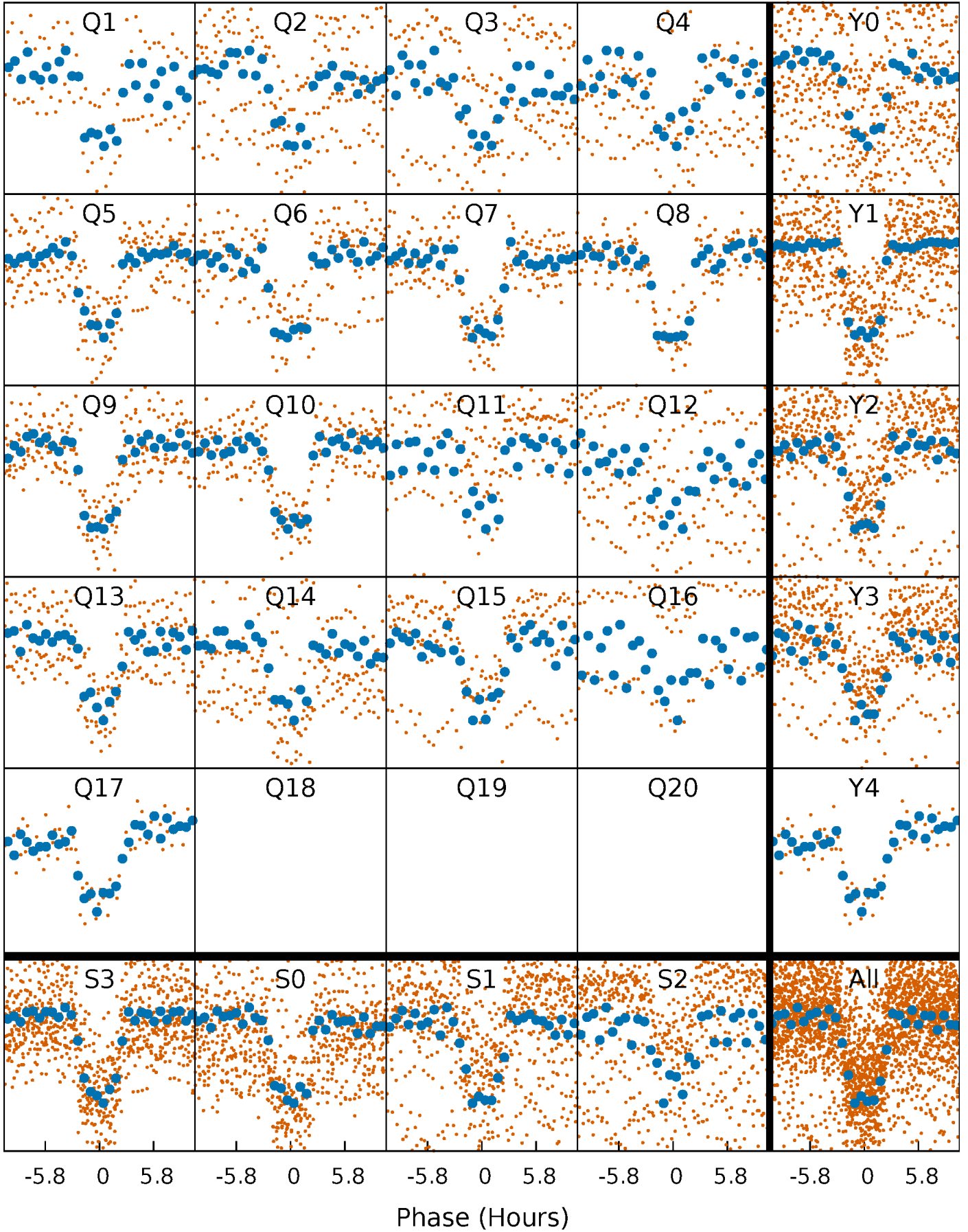


Non-Whitened Vs. Whitened Light Curve



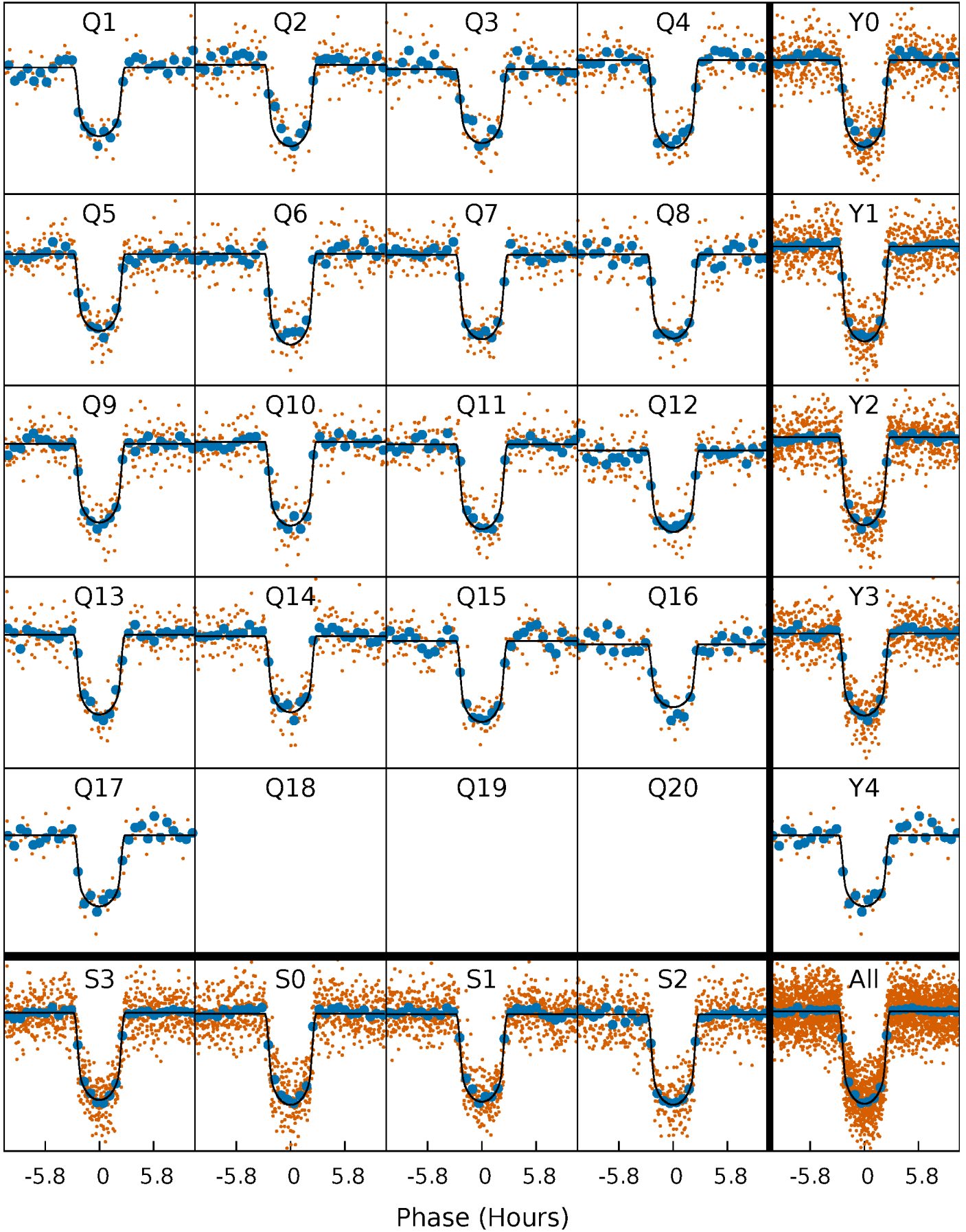
PDC Quarter-Phased Transit Curves

TCE 008802165-01 P= 17.421147 Days $T_0=131.983010$ (BKJD)



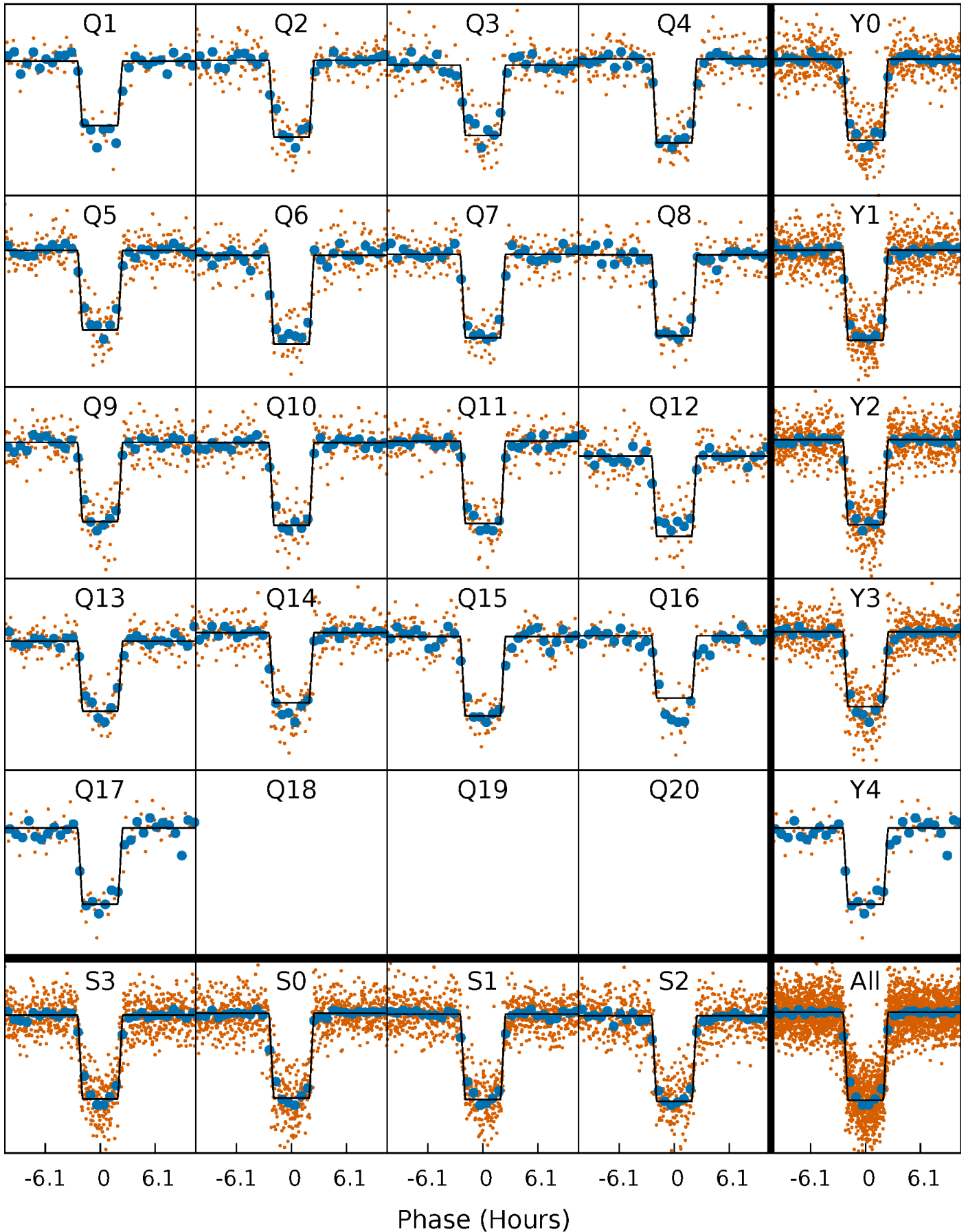
DV Quarter-Phased Transit Curves

TCE 008802165-01 P= 17.421147 Days $T_0=131.983010$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

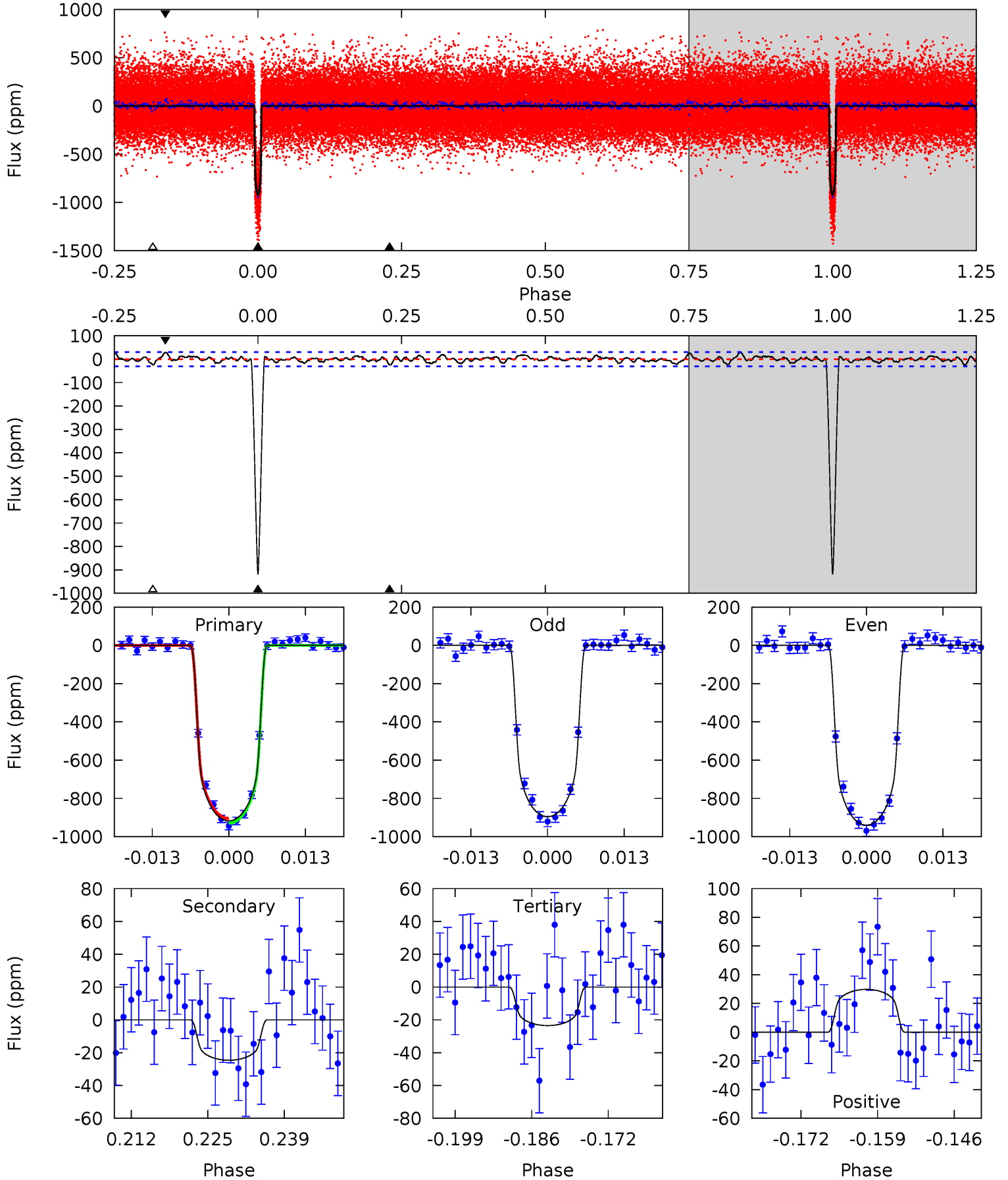
TCE 008802165-01 P= 17.421145 Days $T_0=131.983820$ (BKJD)



DV Model-Shift Uniqueness Test

008802165-01, $P = 17.421147$ Days, $E = 114.561863$ Days

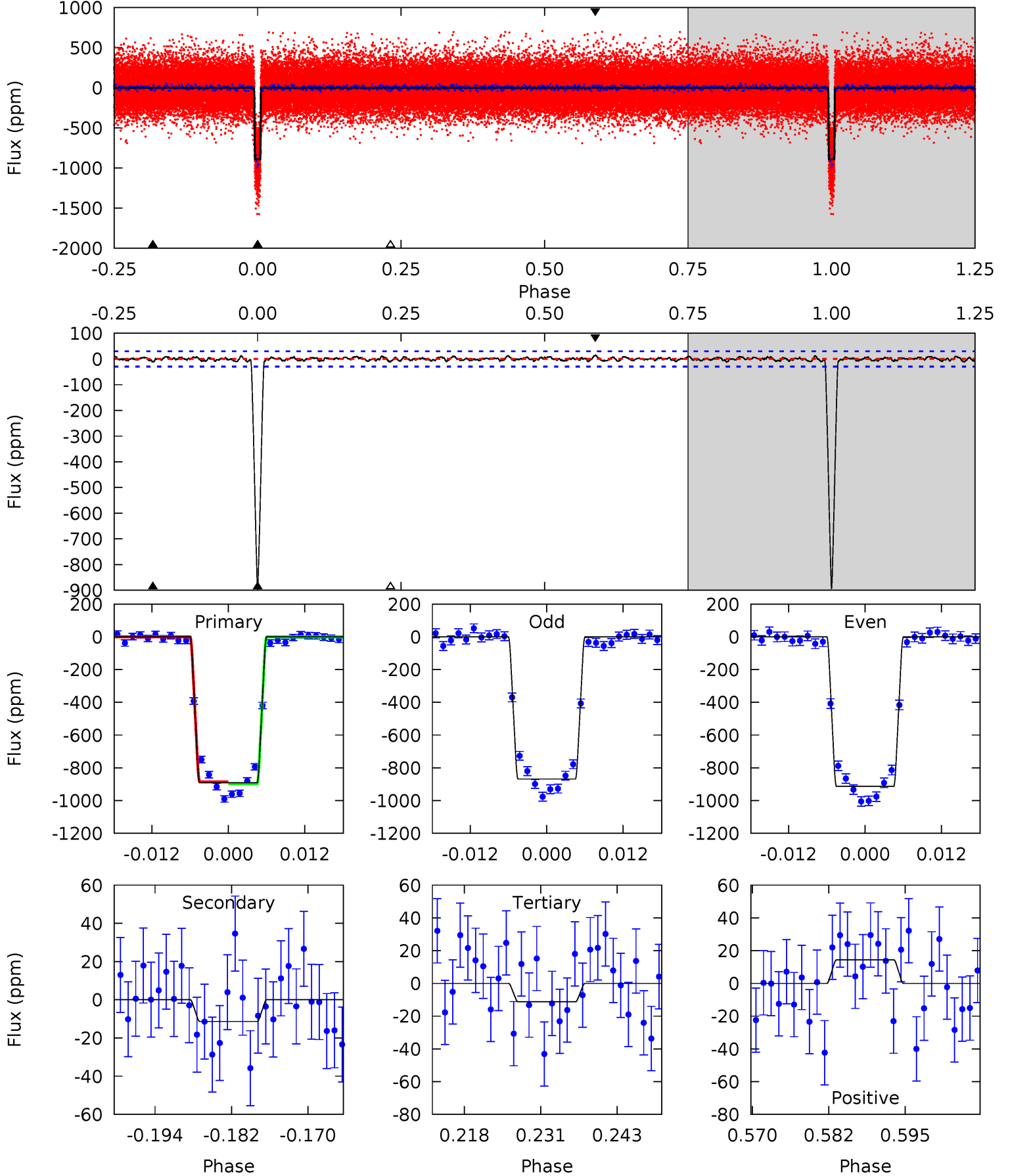
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
148.3	3.98	3.80	4.82	4.97	2.48	1.43	144.5	143.5	0.18	-0.84	3.57	1.00	0.03	1.97



Alt Model-Shift Uniqueness Test

008802165-01, P = 17.421145 Days, E = 114.562675 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
149.9	1.91	1.89	2.41	4.99	2.51	0.80	148.0	147.5	0.02	-0.50	3.71	1.00	0.02	1.04



Stellar Parameters For KIC 008802165

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5679^{+103}_{-125}	$4.487^{+0.024}_{-0.128}$	$0.300^{+0.150}_{-0.150}$	$0.972^{+0.149}_{-0.047}$	$1.058^{+0.046}_{-0.073}$	$1.622^{+0.183}_{-0.567}$
	+2%/-2%	+1%/-3%	+50%/-50%	+15%/-5%	+4%/-7%	+11%/-35%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 008802165-01 / KOI 0694.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-25 ± 6	$3.36^{+0.29}_{-0.22}$	954^{+37}_{-27}	2948^{+106}_{-130}	21^{+6}_{-6}
Alt.	-11 ± 6	$3.27^{+0.33}_{-0.21}$	956^{+41}_{-28}	2670^{+166}_{-290}	10^{+6}_{-6}

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 $A_{obs} \gg 1.0$

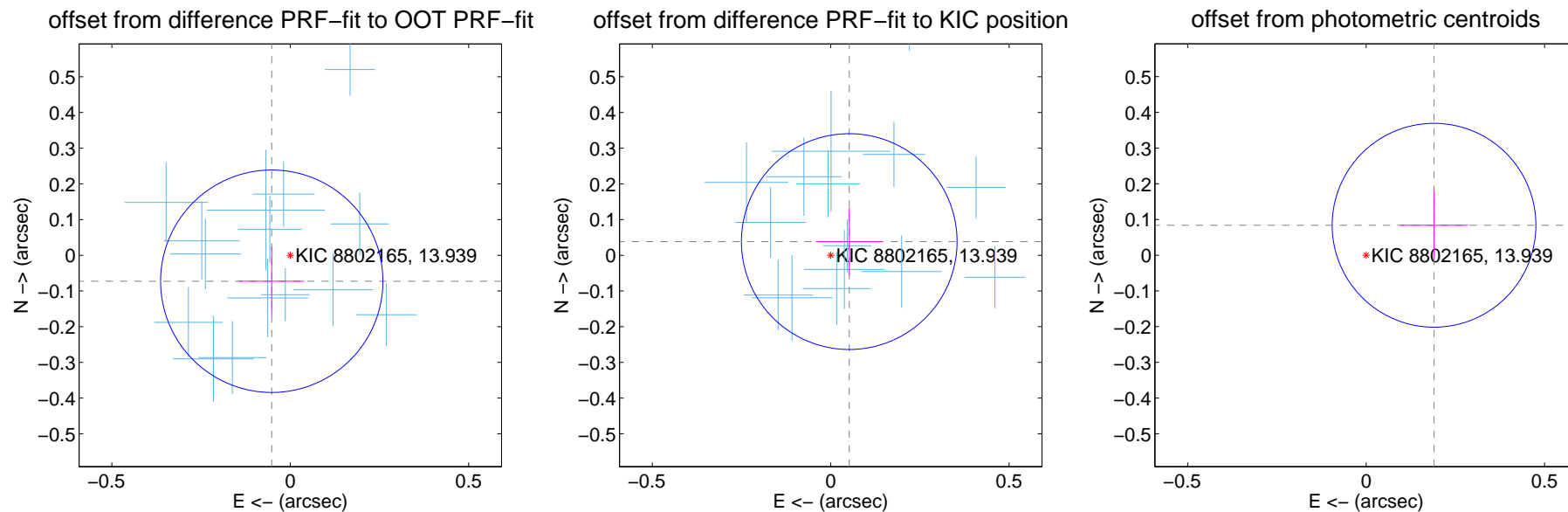
DV Centroid Data

Supplemental centroid analysis for 008802165-01. Kepler magnitude: 13.94. Transit SNR 87.37

There are 17 quarters with good PRF difference image offsets

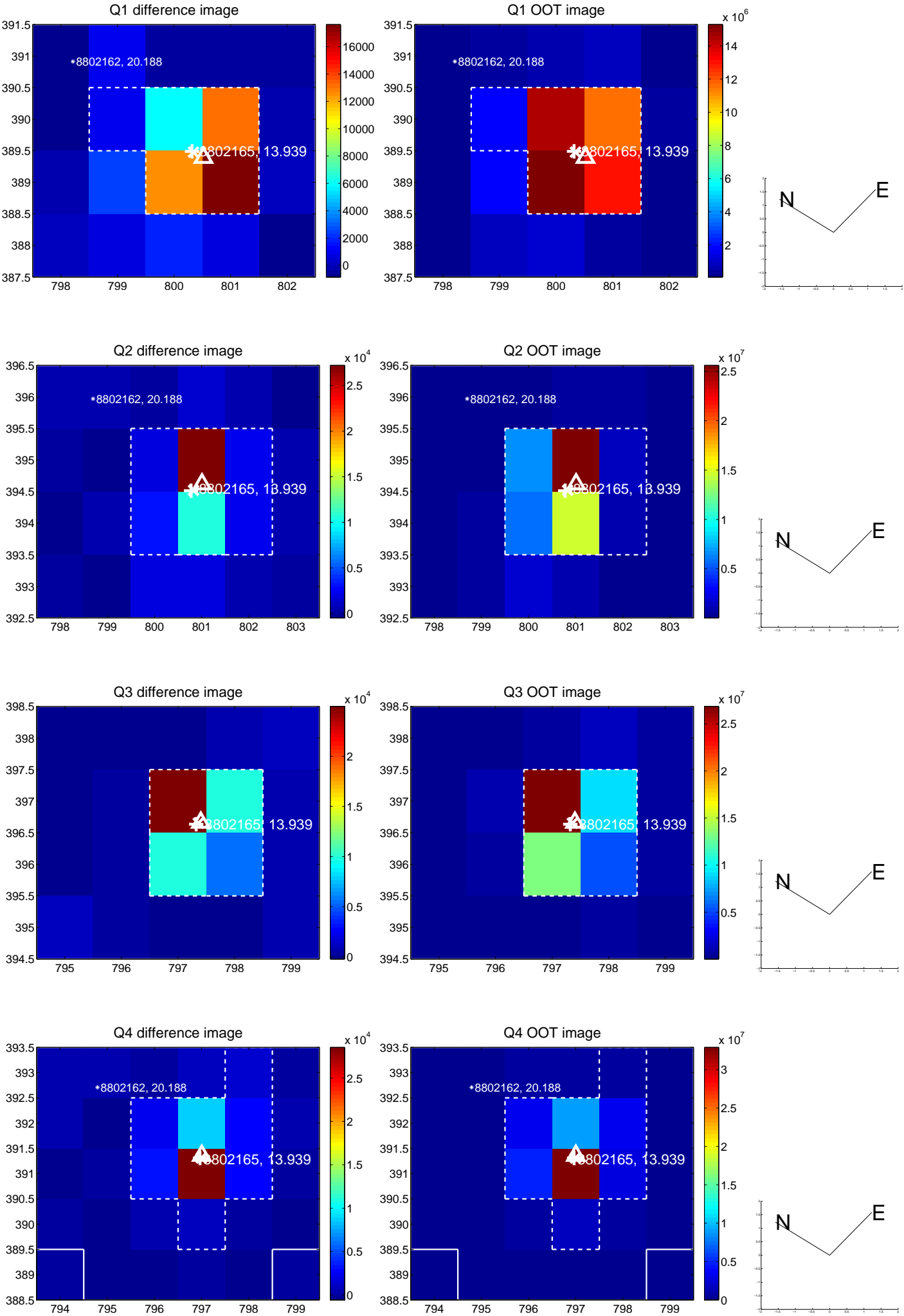
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.089 ± 0.104	0.86	0.052 ± 0.091	-0.073 ± 0.096
PRF-fit source offset from KIC position	0.065 ± 0.101	0.64	-0.052 ± 0.093	0.038 ± 0.095
photometric centroid source offset	0.21 ± 0.10	2.19	-0.19 ± 0.10	0.08 ± 0.09

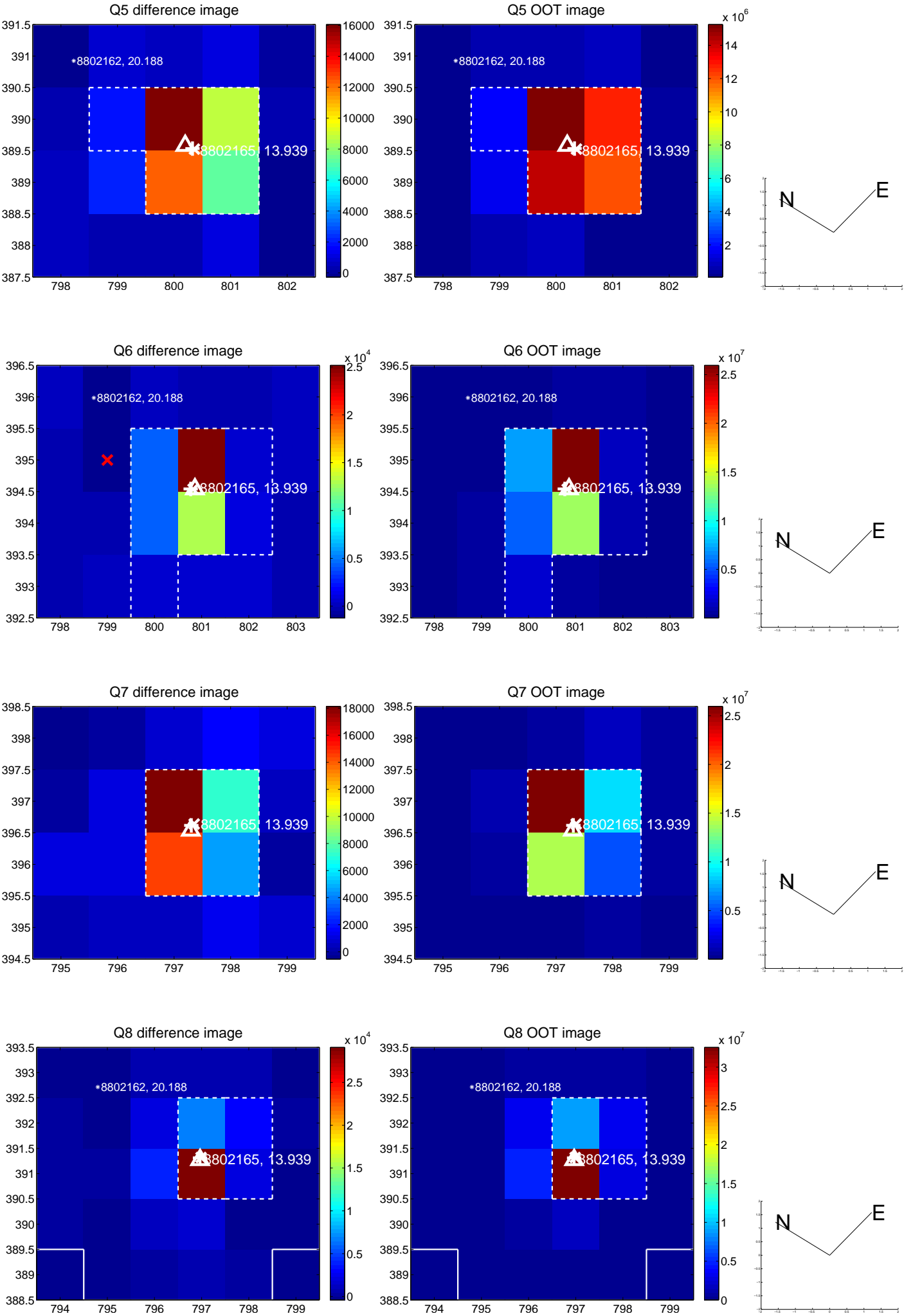


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

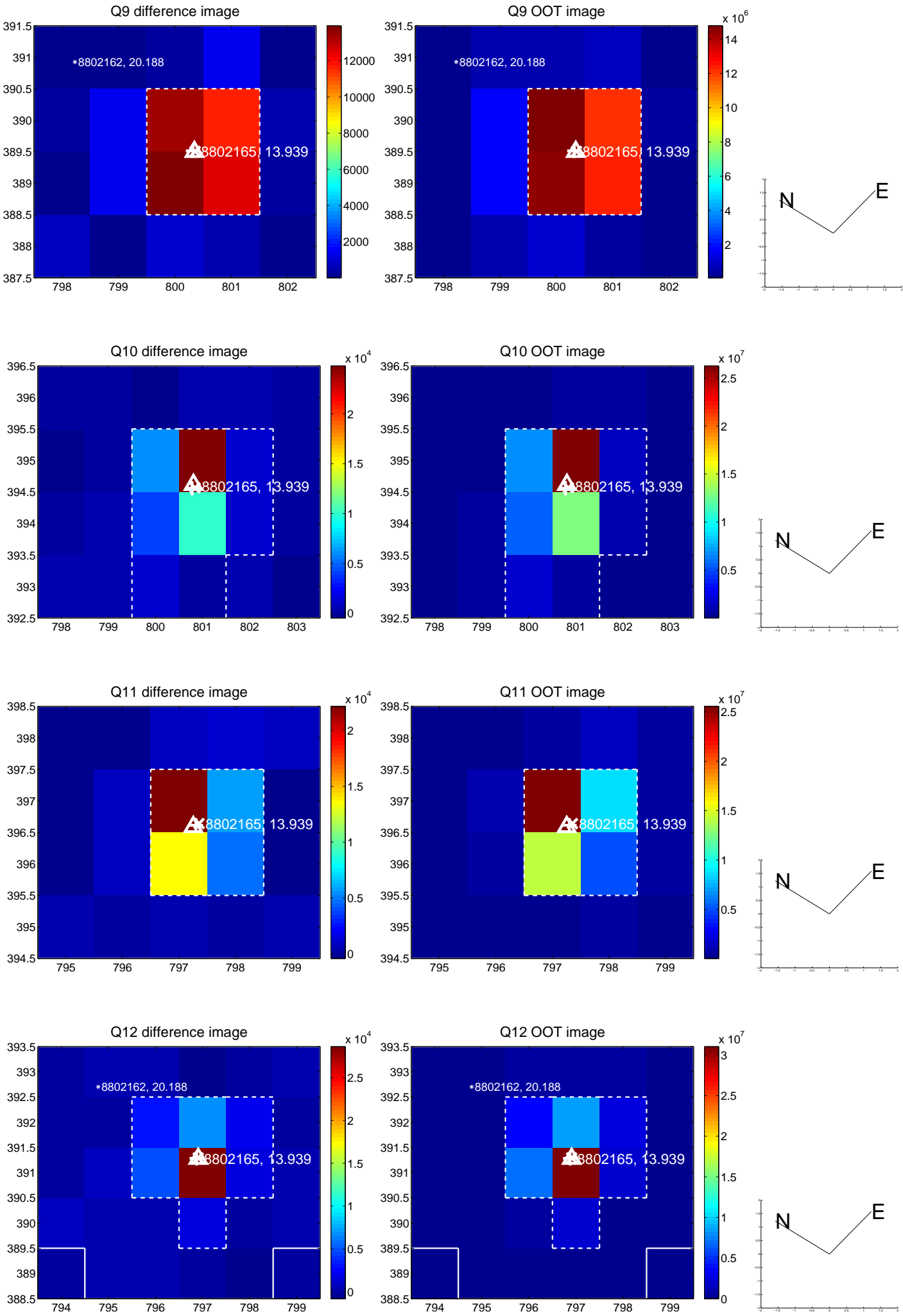
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



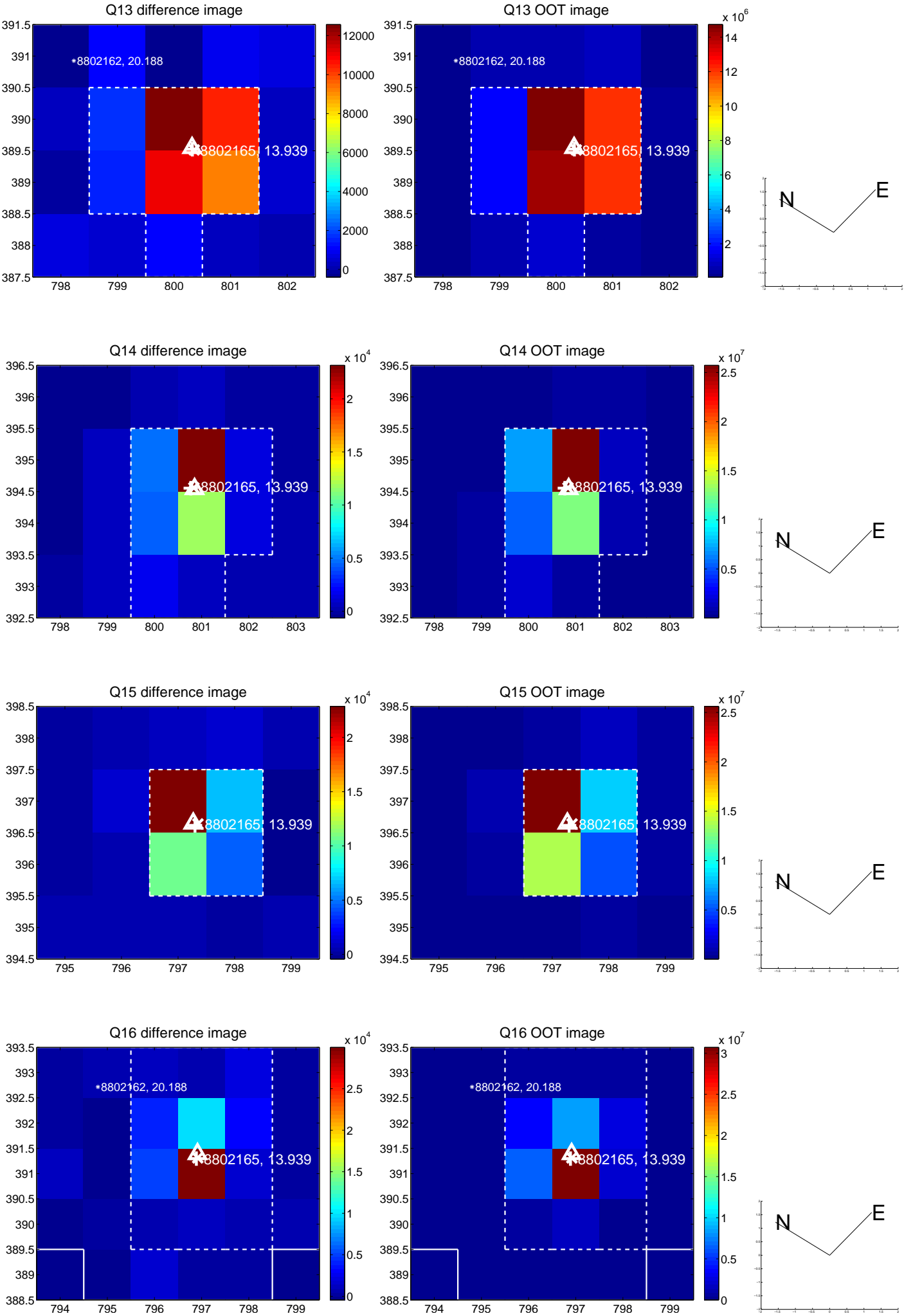
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



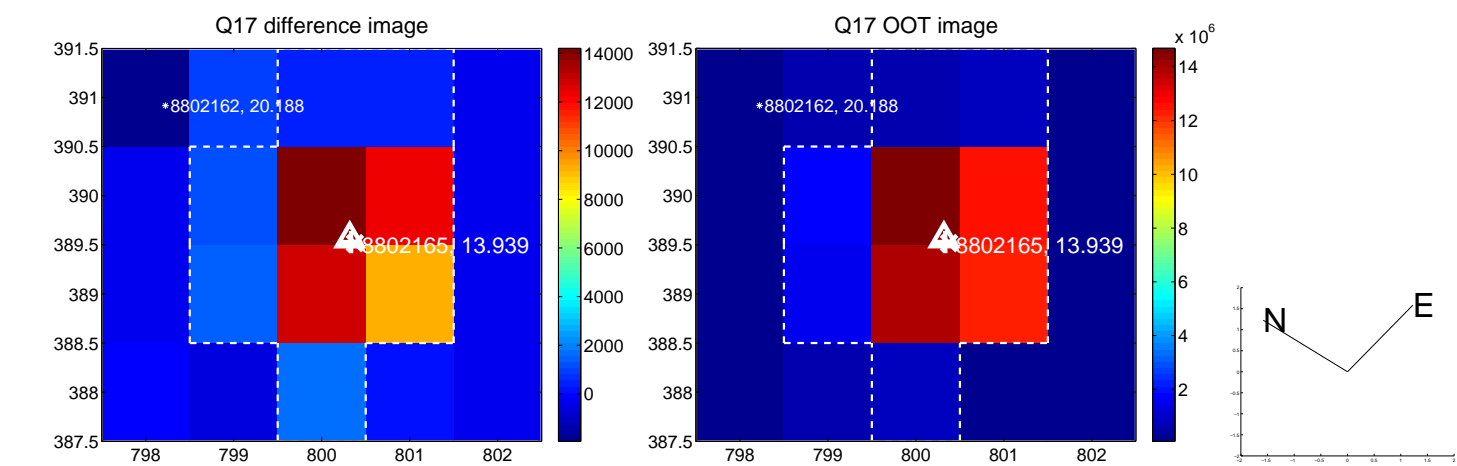
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



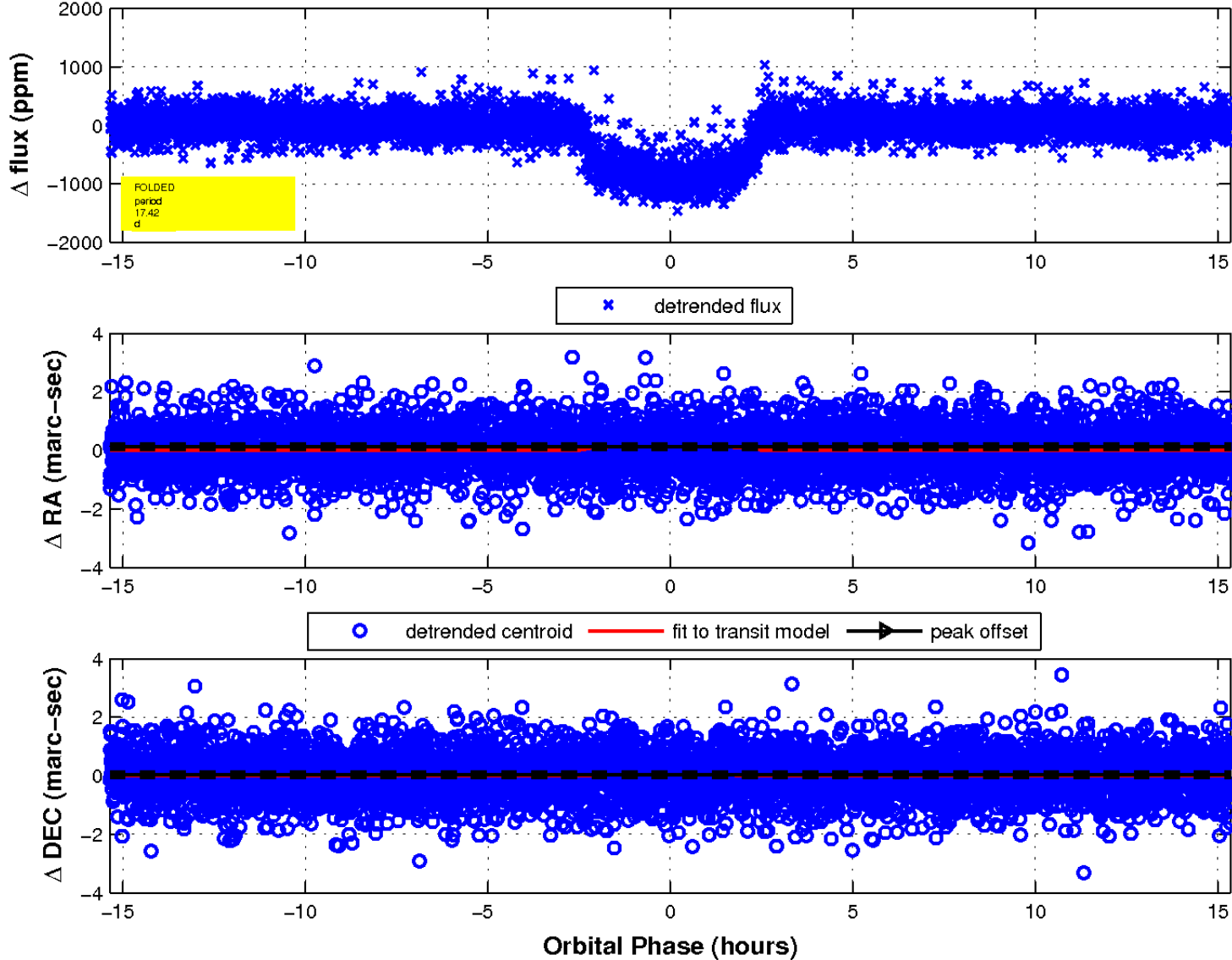
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

