

KIC 008806985

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})
008806985-01	OBS	4588.01	7.537343	135.810996	42.6	4.003	9.1	10.1	1.44	6483	1.07	507.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008806985-01	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.

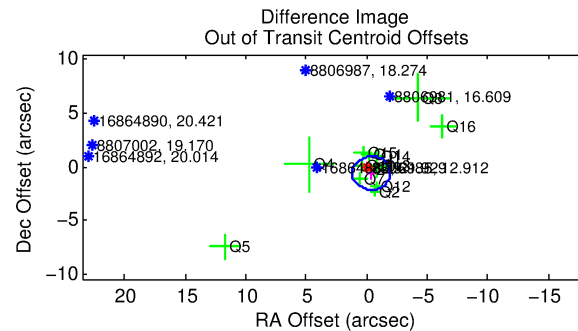
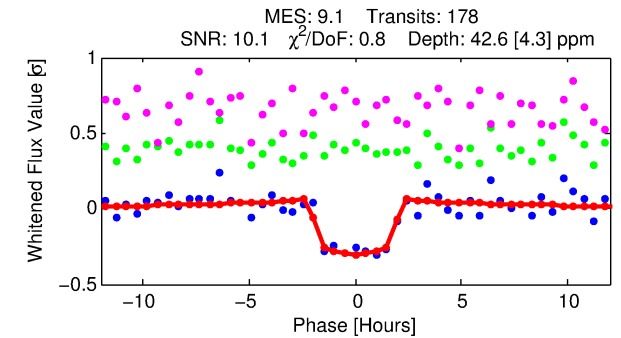
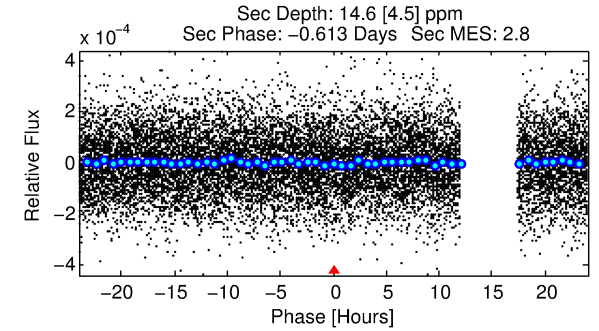
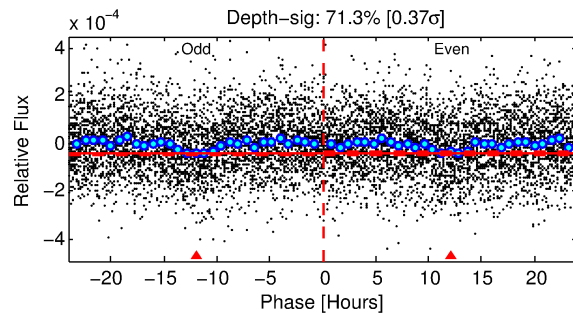
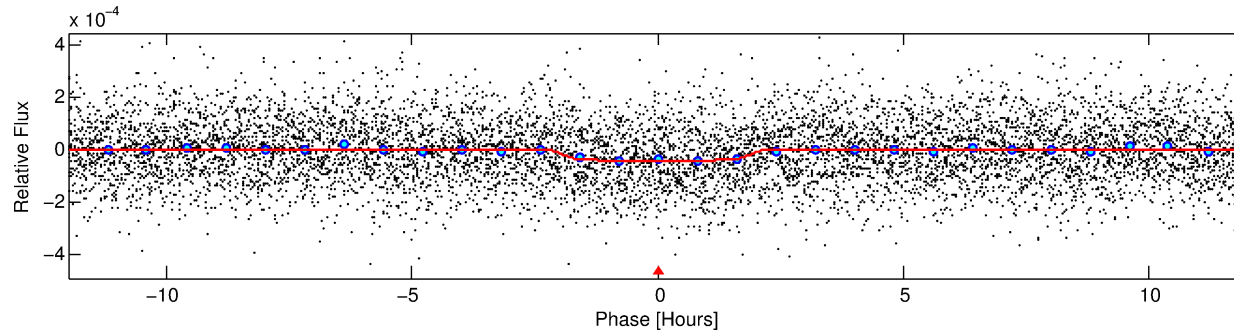
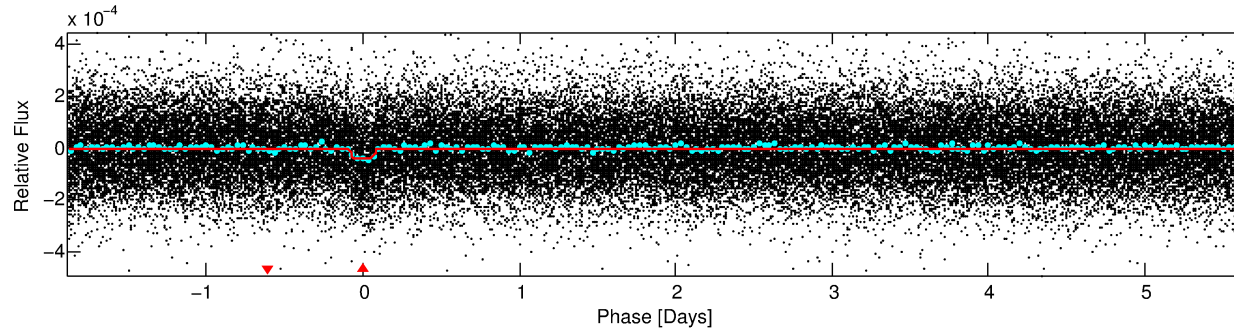
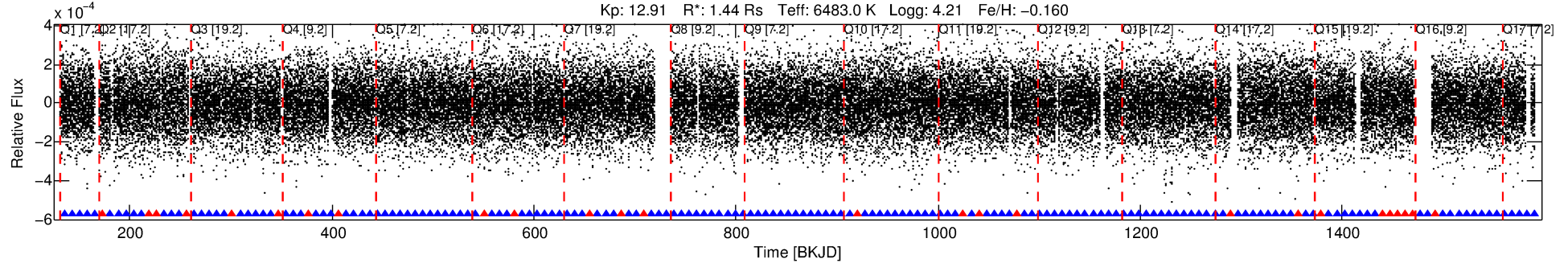
Ephemeris Match Information For 008806985-01

No Significant Match Found

DV One-Page Summary

KIC: 8806985 Candidate: 1 of 1 Period: 7.537 d
KOI: K04588.01 Corr: 0.985

Kp: 12.91 R*: 1.44 Rs Teff: 6483.0 K Logg: 4.21 Fe/H: -0.160



DV Fit Results:

Period = 7.53734 [0.00006] d
Epoch = 135.8110 [0.0063] BKJD
Rp/R* = 0.0068 [0.0029]
a/R* = 7.54 [17.74]
b = 0.86 [0.72]
Seff = 507.94 [186.17]
Teq = 1211 [111] K
Rp = 1.07 [0.55] Re
a = 0.0802 [0.0190] AU
Ag = 45.23 [43.58] [1.01σ]
Teffp = 4854 [1113] K [3.26σ]

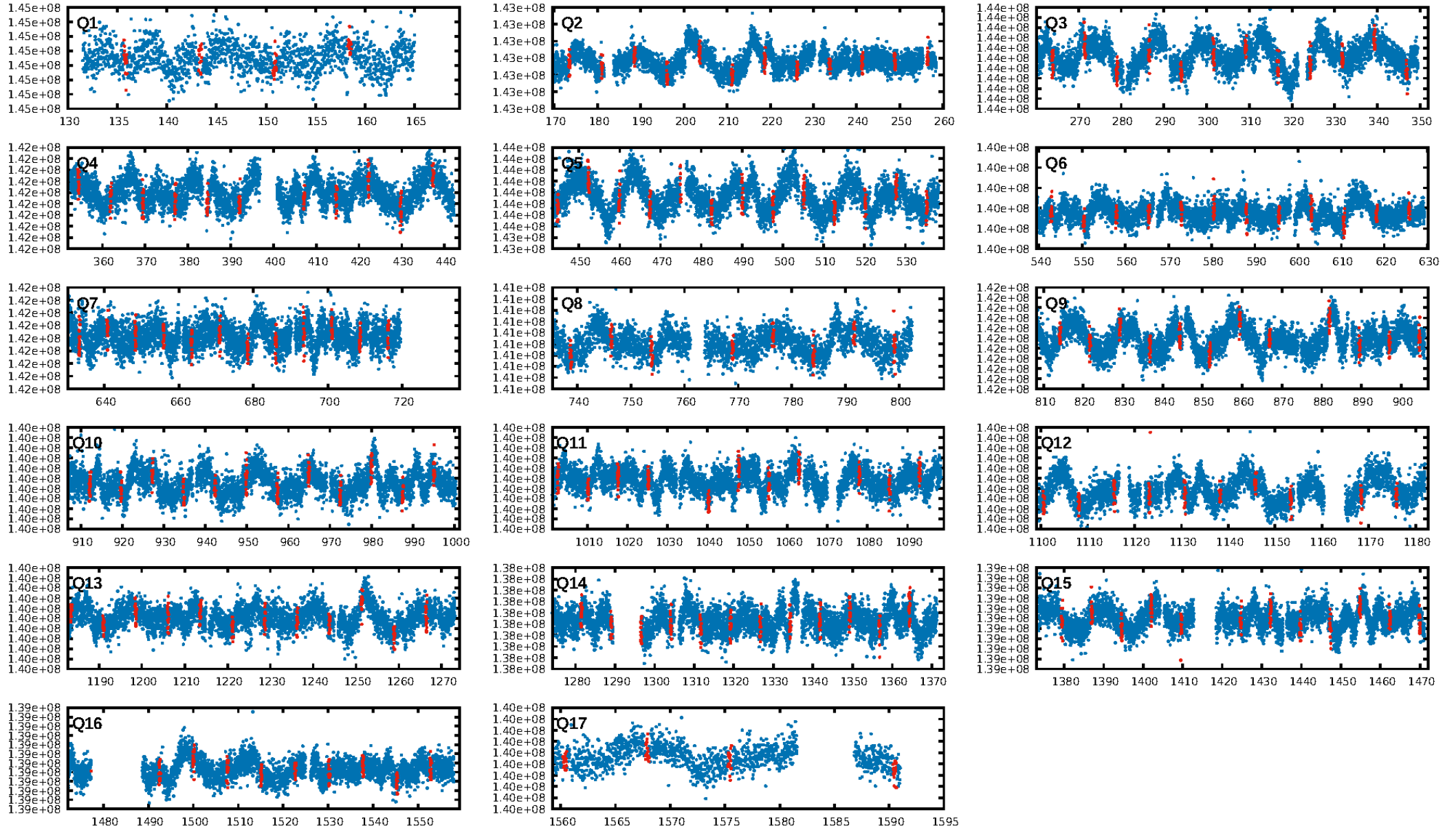
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.39e-19
RollingBand-fgt: 0.85 [144/170]
GhostDiagnostic-chr: -49.73
Centroid-sig: 37.9%
Centroid-so: 1.063 arcsec [0.99σ]
OotOffset-rm: 0.714 arcsec [1.38σ]
OotOffset-st: 3/4/3/3 [13]
KicOffset-rm: 0.602 arcsec [1.17σ]
KicOffset-st: 3/4/3/3 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 1.00 [17/17]

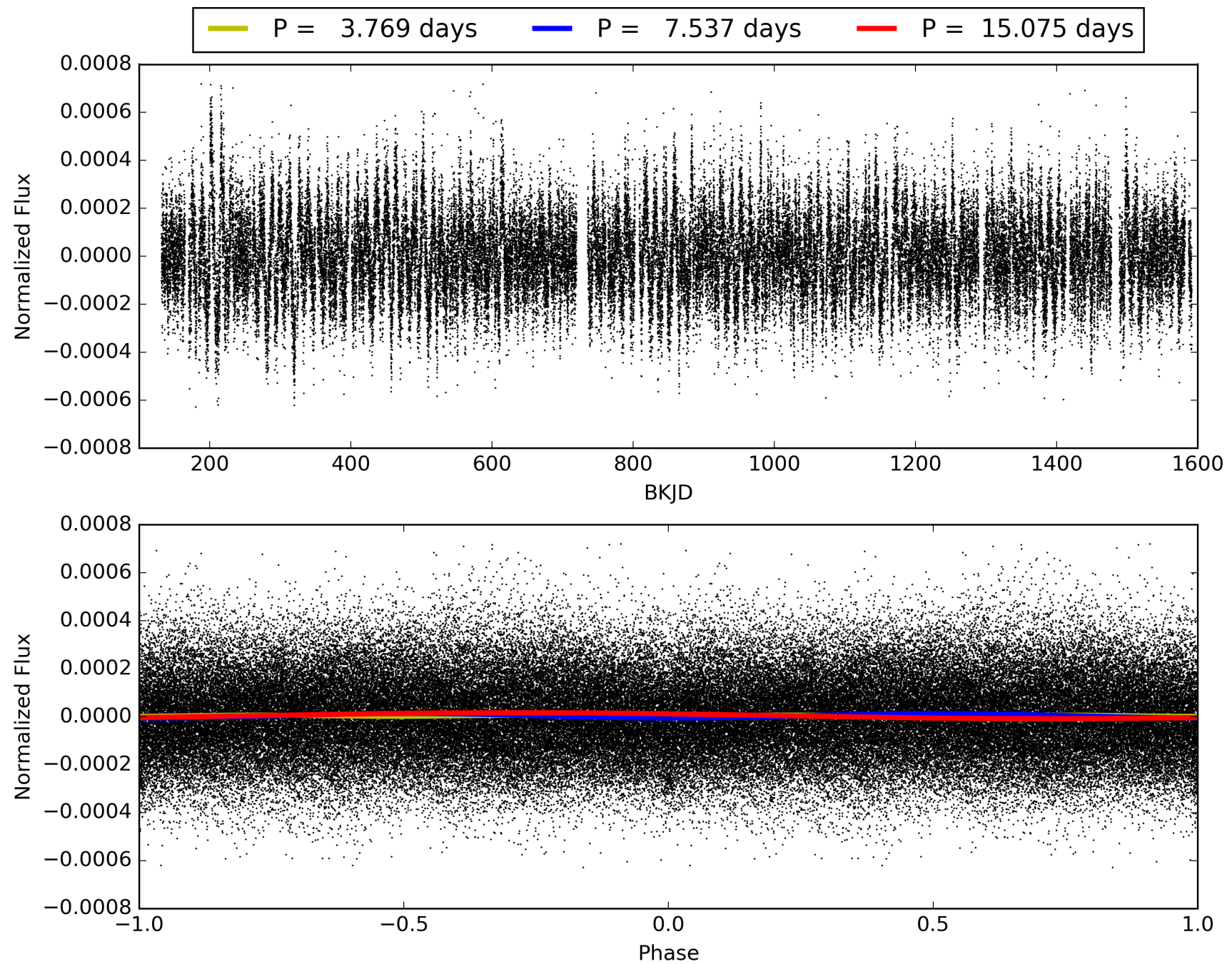
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:31:45 Z

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

TCE 008806985-01, PDC Light Curves

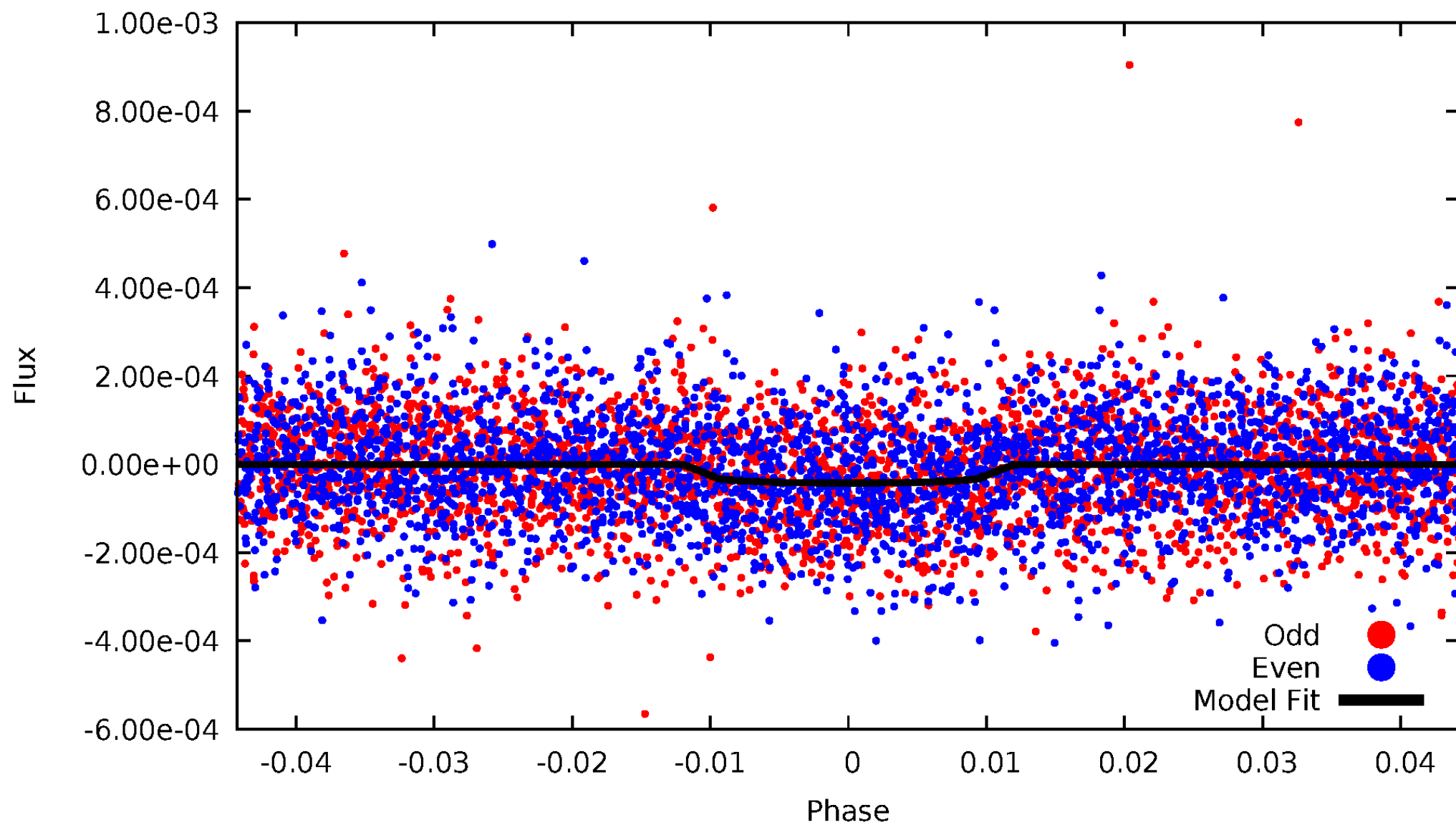


TCE 008806985-01



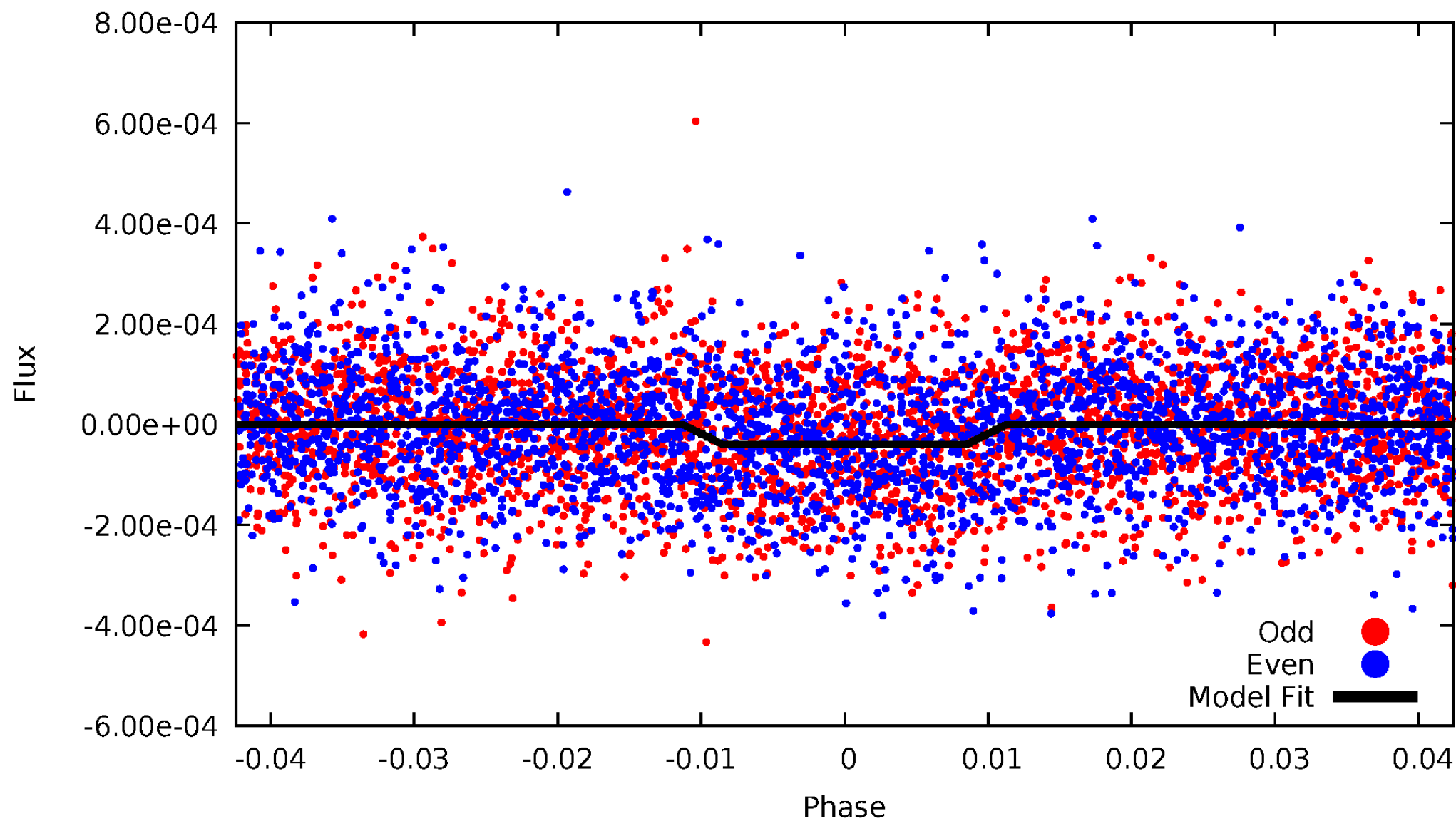
DV Odd/Even

TCE 008806985-01

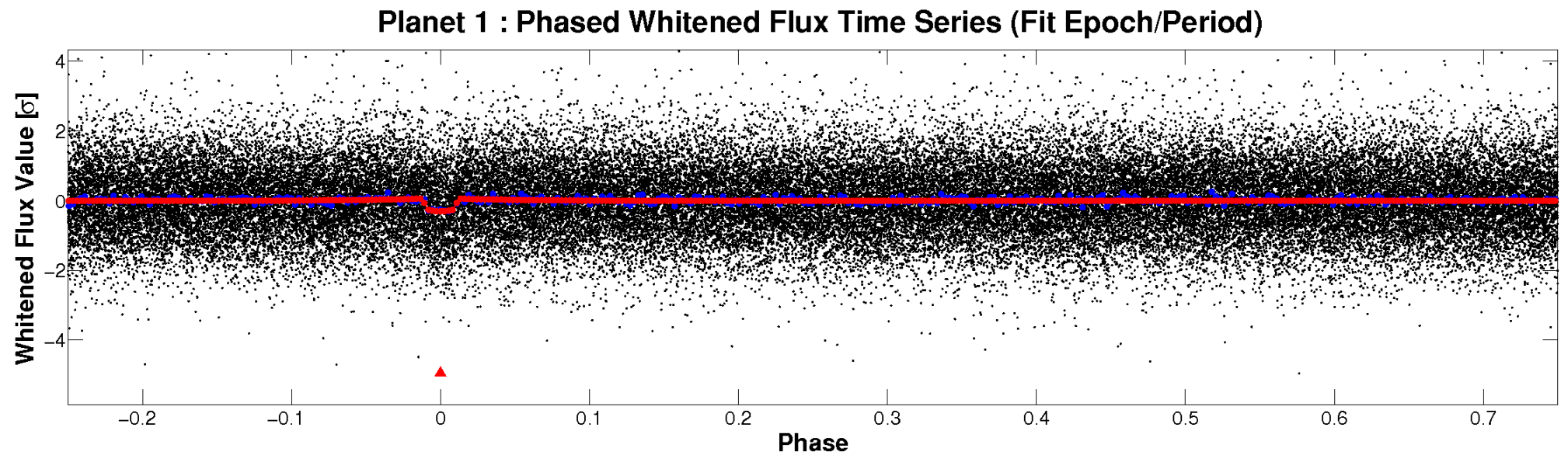
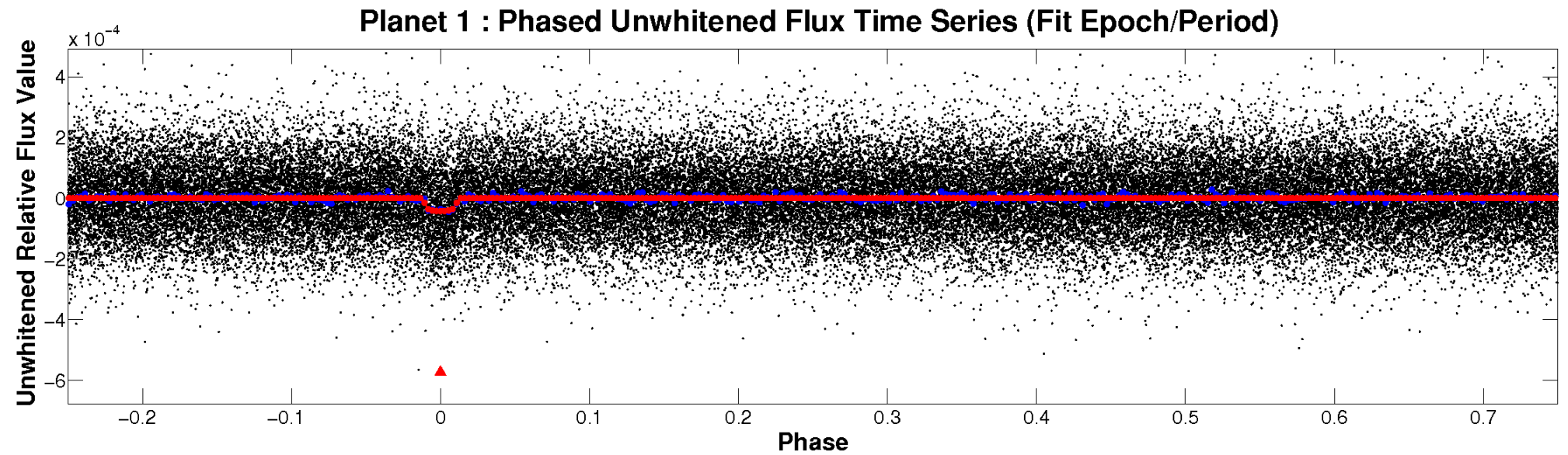


ALT Odd/Even

TCE 008806985-01

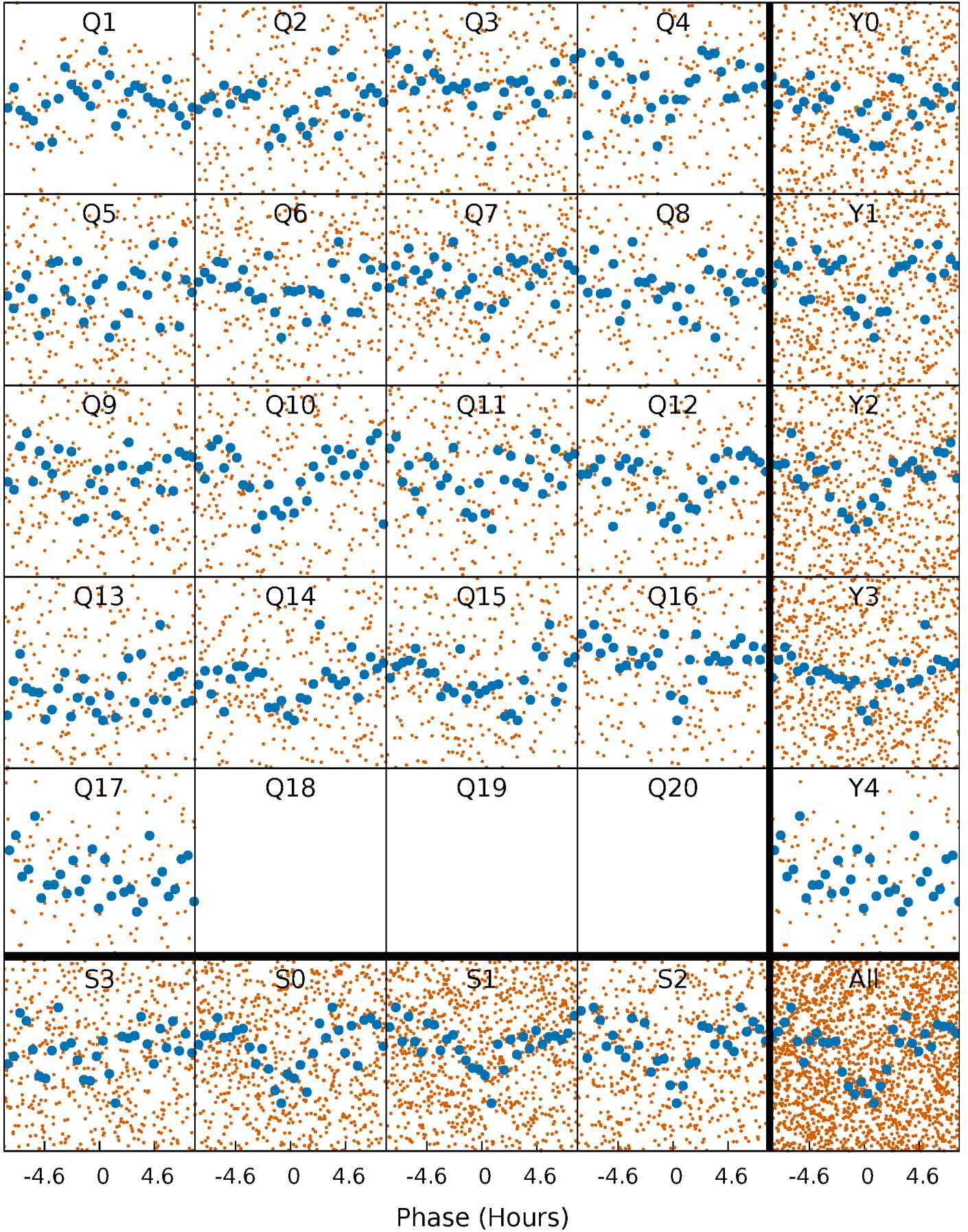


Non-Whitened Vs. Whitened Light Curve



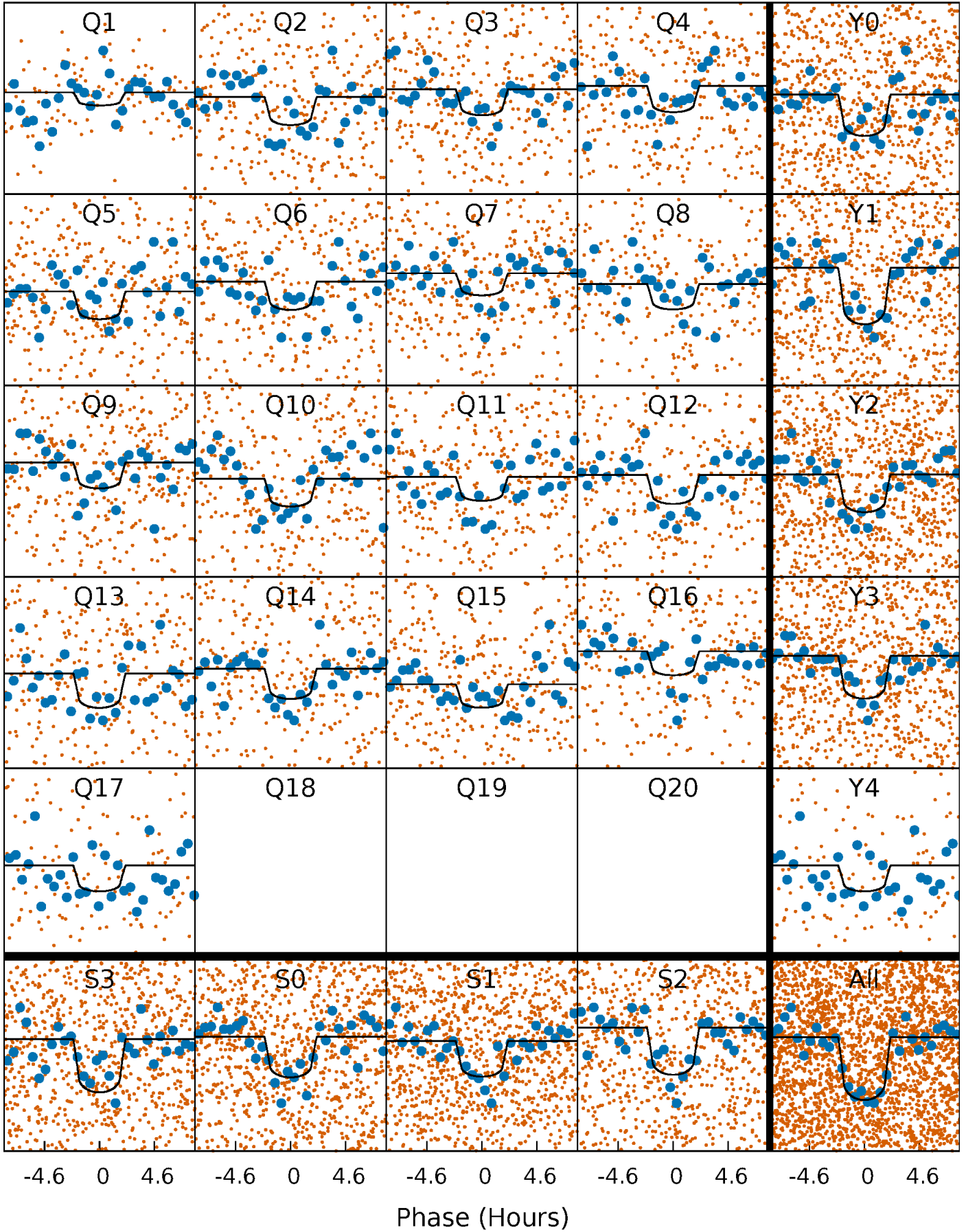
PDC Quarter-Phased Transit Curves

TCE 008806985-01 P= 7.537343 Days $T_0=135.810996$ (BKJD)



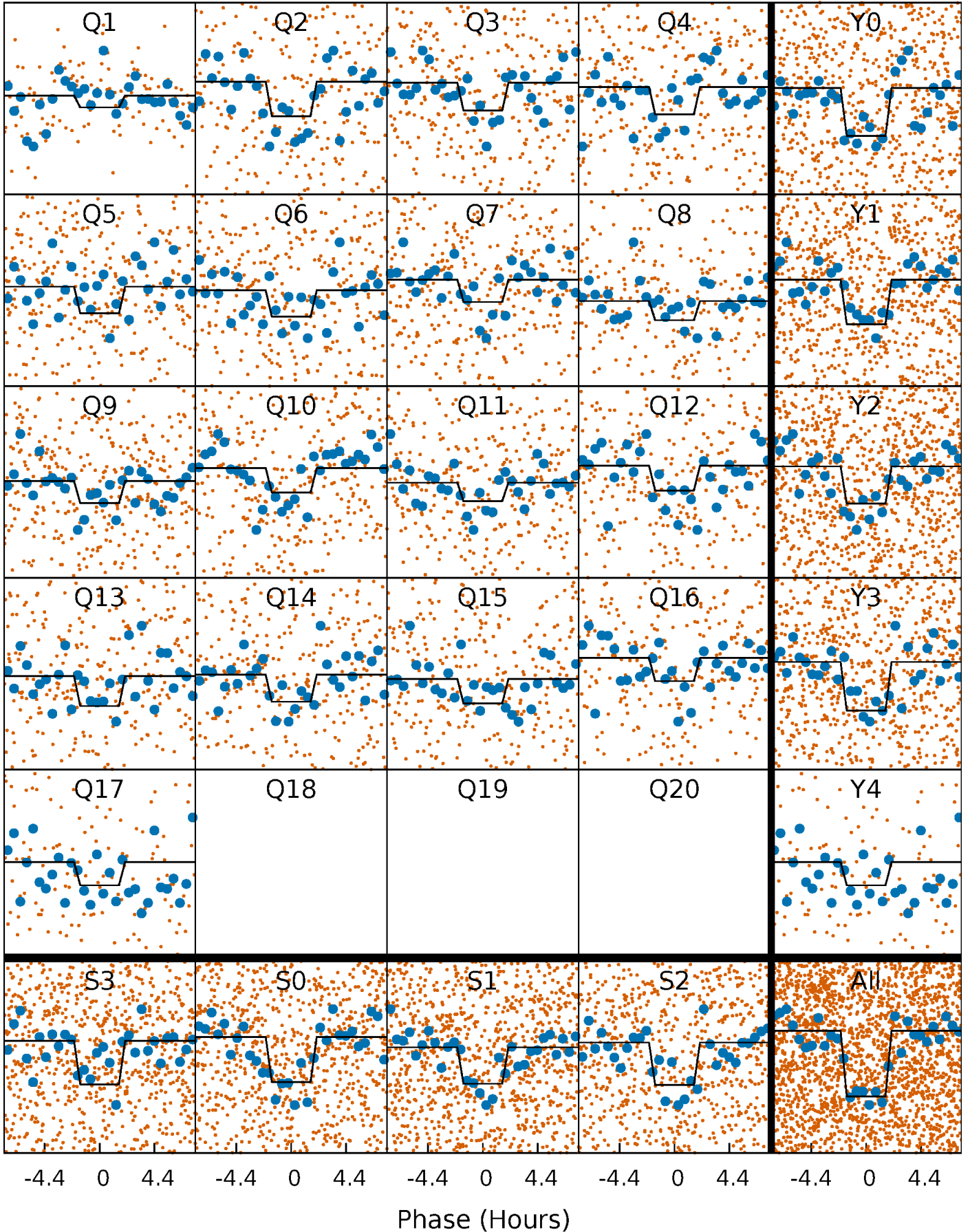
DV Quarter-Phased Transit Curves

TCE 008806985-01 P= 7.537343 Days $T_0=135.810996$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

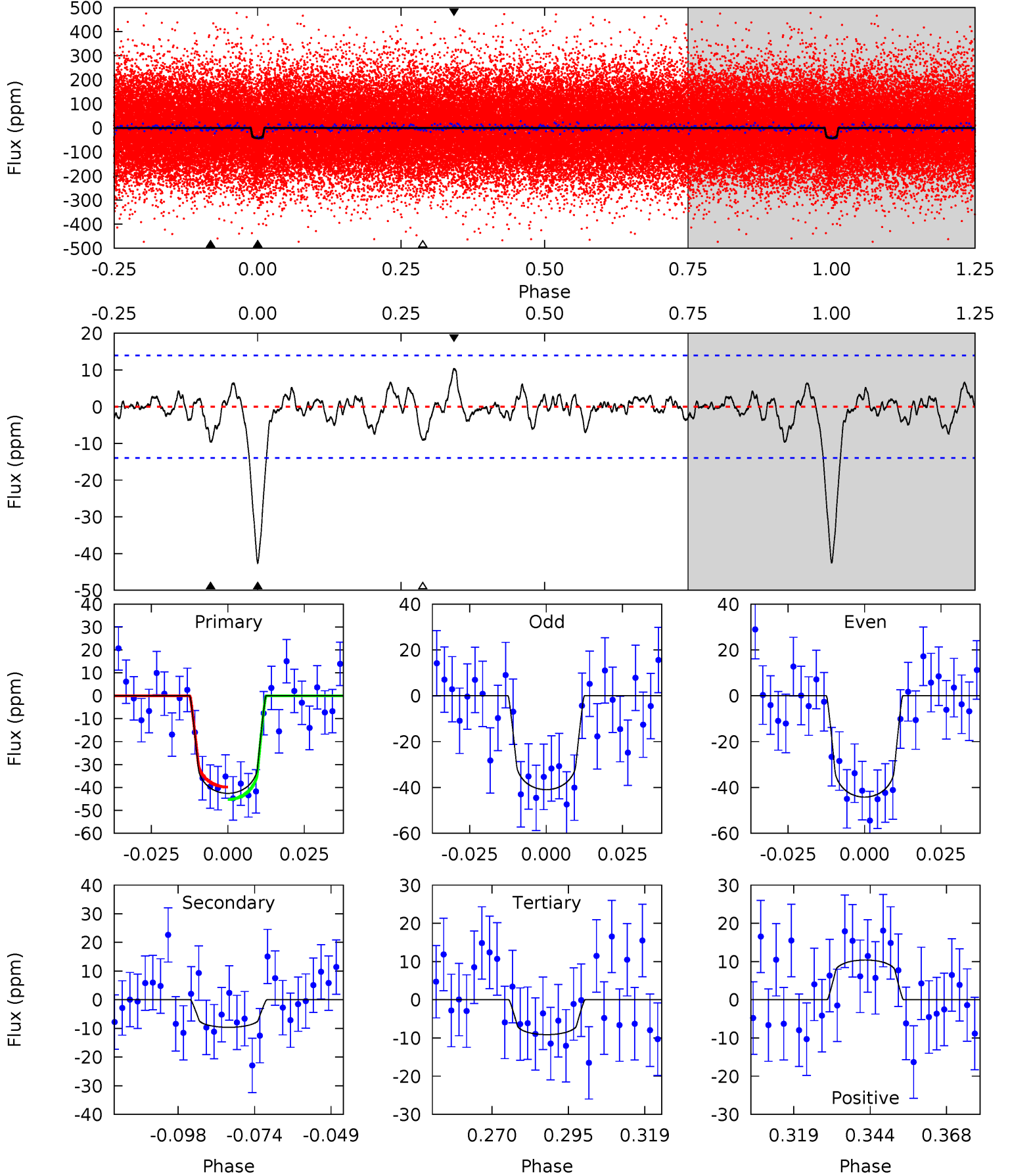
TCE 008806985-01 P= 7.537256 Days $T_0=135.820214$ (BKJD)



DV Model-Shift Uniqueness Test

008806985-01, P = 7.537343 Days, E = 128.273653 Days

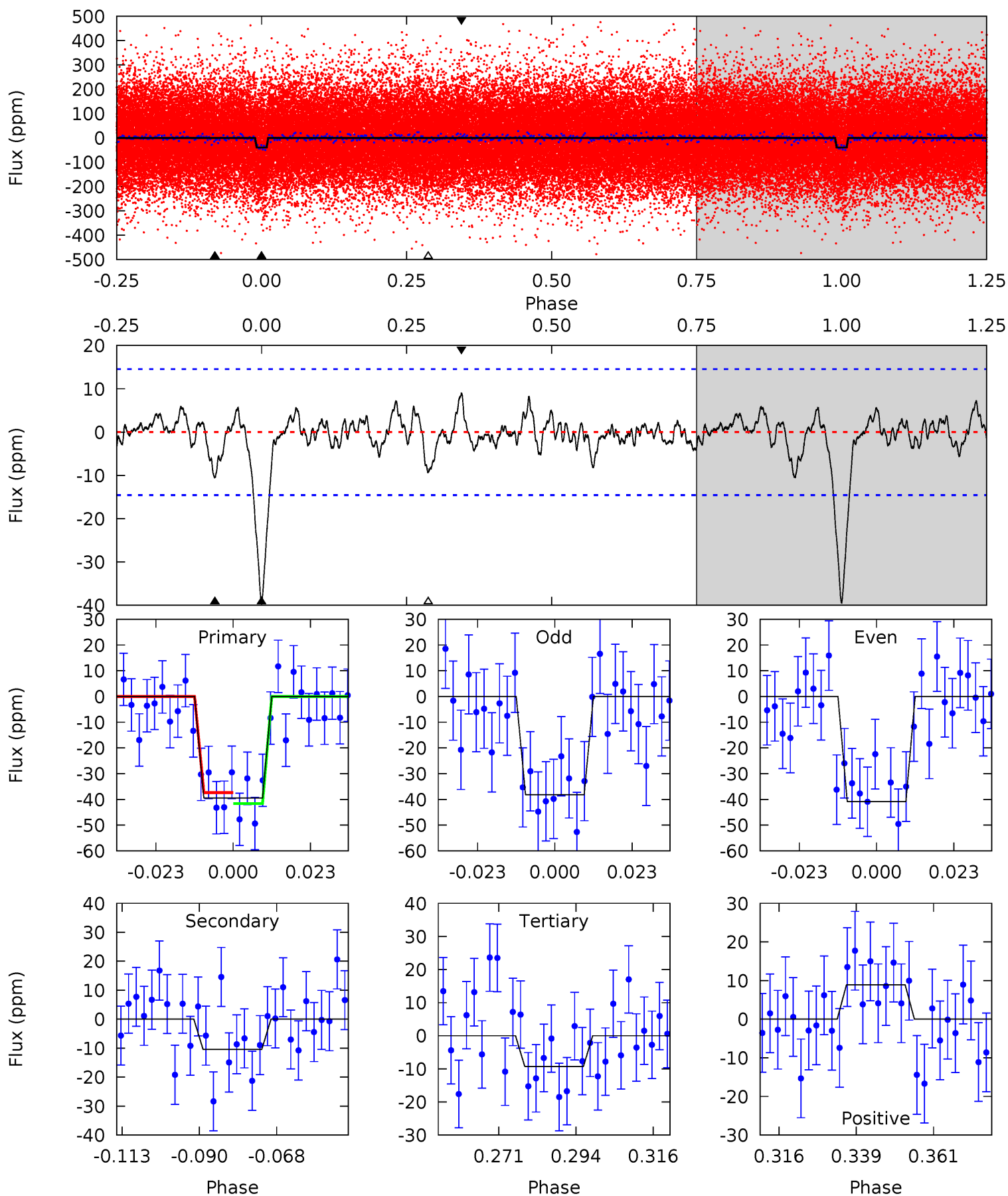
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	3.34	3.17	3.61	4.85	2.25	0.99	11.6	11.2	0.17	-0.28	0.57	1.10	0.20	0.94



Alt Model-Shift Uniqueness Test

008806985-01, P = 7.537256 Days, E = 128.282958 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	3.50	3.11	2.99	4.87	2.28	0.94	10.1	10.2	0.39	0.52	0.44	1.07	0.18	0.72



Stellar Parameters For KIC 008806985

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6483^{+181}_{-250}	$4.206^{+0.175}_{-0.175}$	$-0.160^{+0.250}_{-0.300}$	$1.436^{+0.422}_{-0.346}$	$1.212^{+0.188}_{-0.188}$	$0.576^{+0.549}_{-0.285}$
	+3%/-4%	+4%/-4%	+156%/-188%	+29%/-24%	+16%/-16%	+95%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 008806985-01 / KOI 4588.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 3	$1.10^{+0.48}_{-0.50}$	1688^{+129}_{-115}	4479^{+1451}_{-620}	28^{+70}_{-16}
Alt.	-10 ± 3	$0.99^{+0.52}_{-0.44}$	1684^{+134}_{-120}	4709^{+1426}_{-669}	37^{+82}_{-22}

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

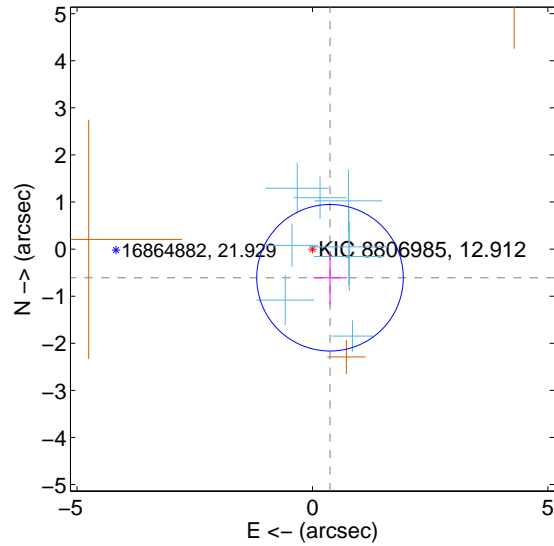
Supplemental centroid analysis for 008806985-01. Kepler magnitude: 12.91. Transit SNR 10.10

There are 8 quarters with good PRF difference image offsets

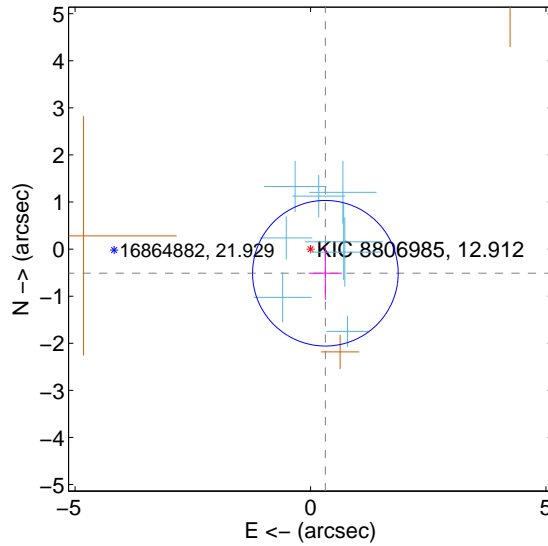
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.714 ± 0.519	1.38	-0.373 ± 0.360	-0.609 ± 0.567
PRF-fit source offset from KIC position	0.602 ± 0.515	1.17	-0.315 ± 0.354	-0.513 ± 0.565
photometric centroid source offset	1.06 ± 1.07	0.99	0.65 ± 0.95	0.84 ± 1.14

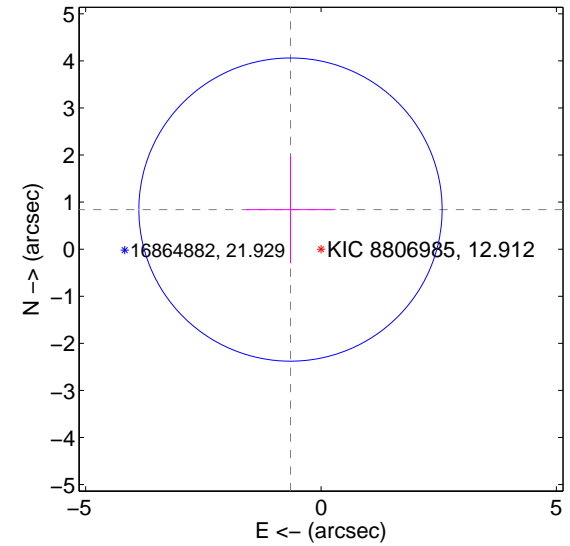
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

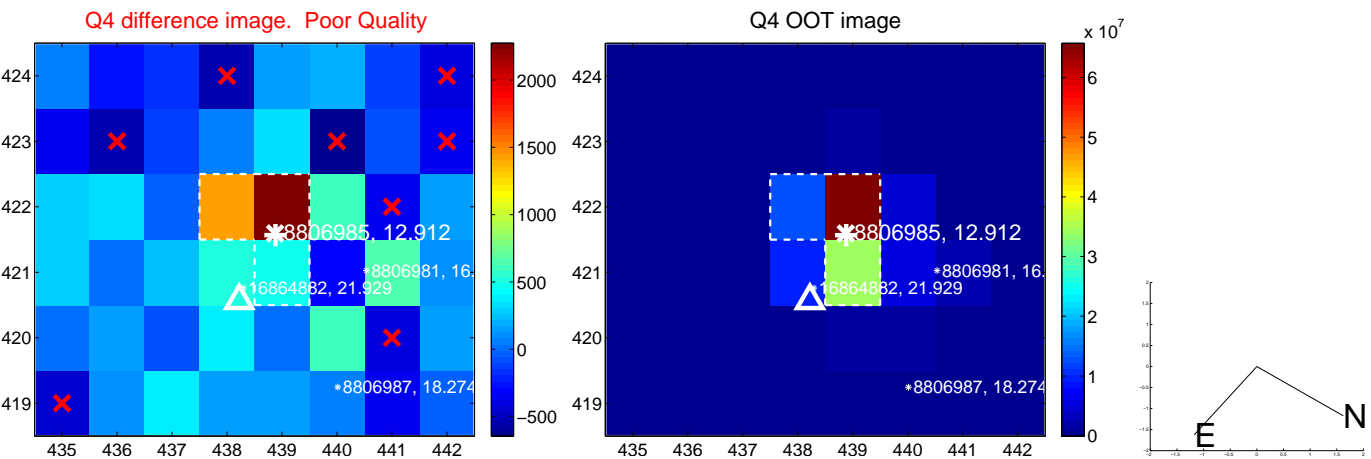
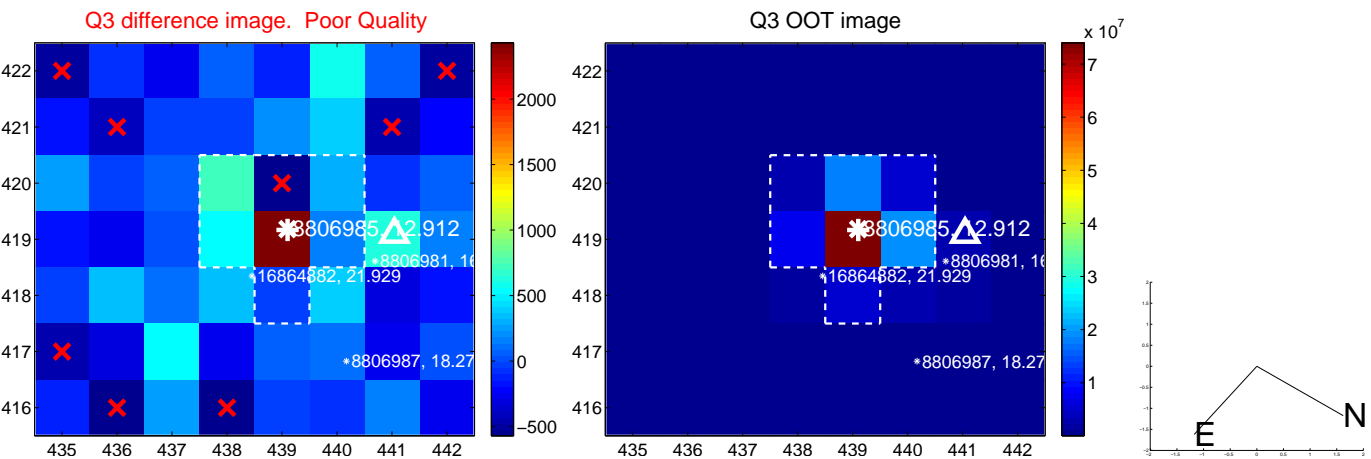
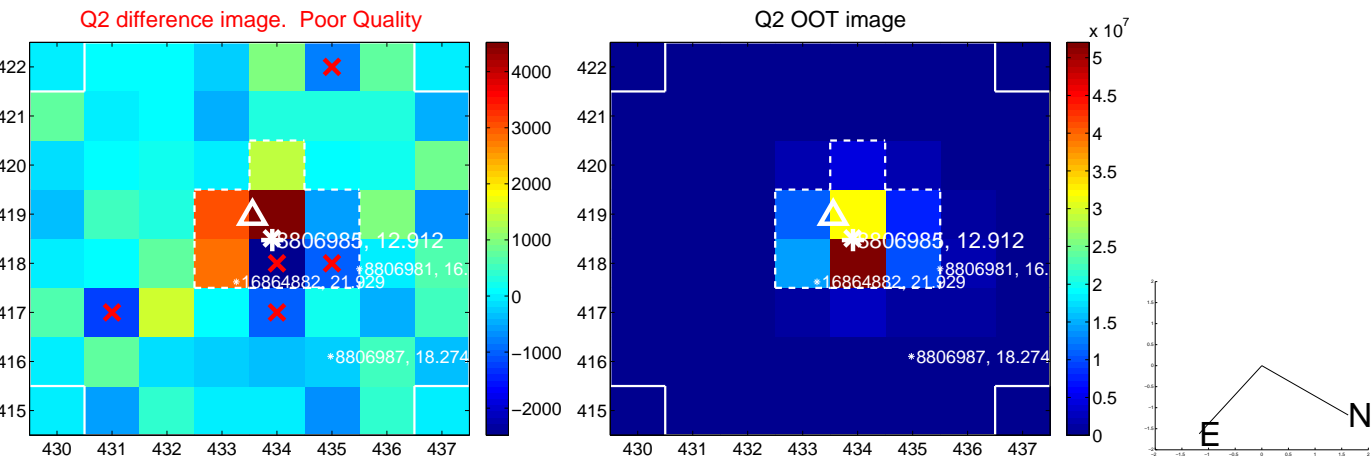
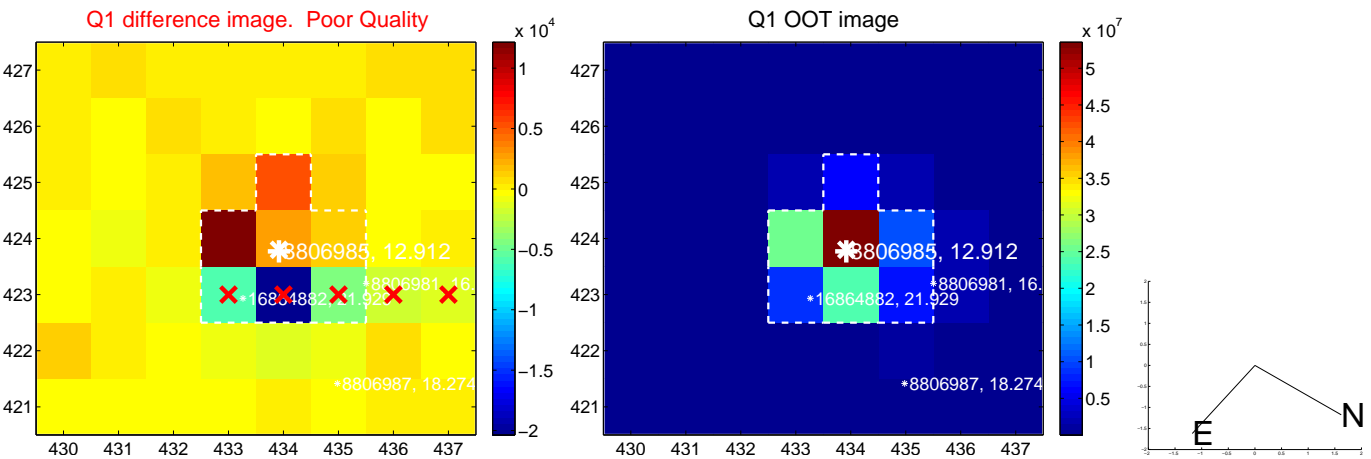


offset from photometric centroids

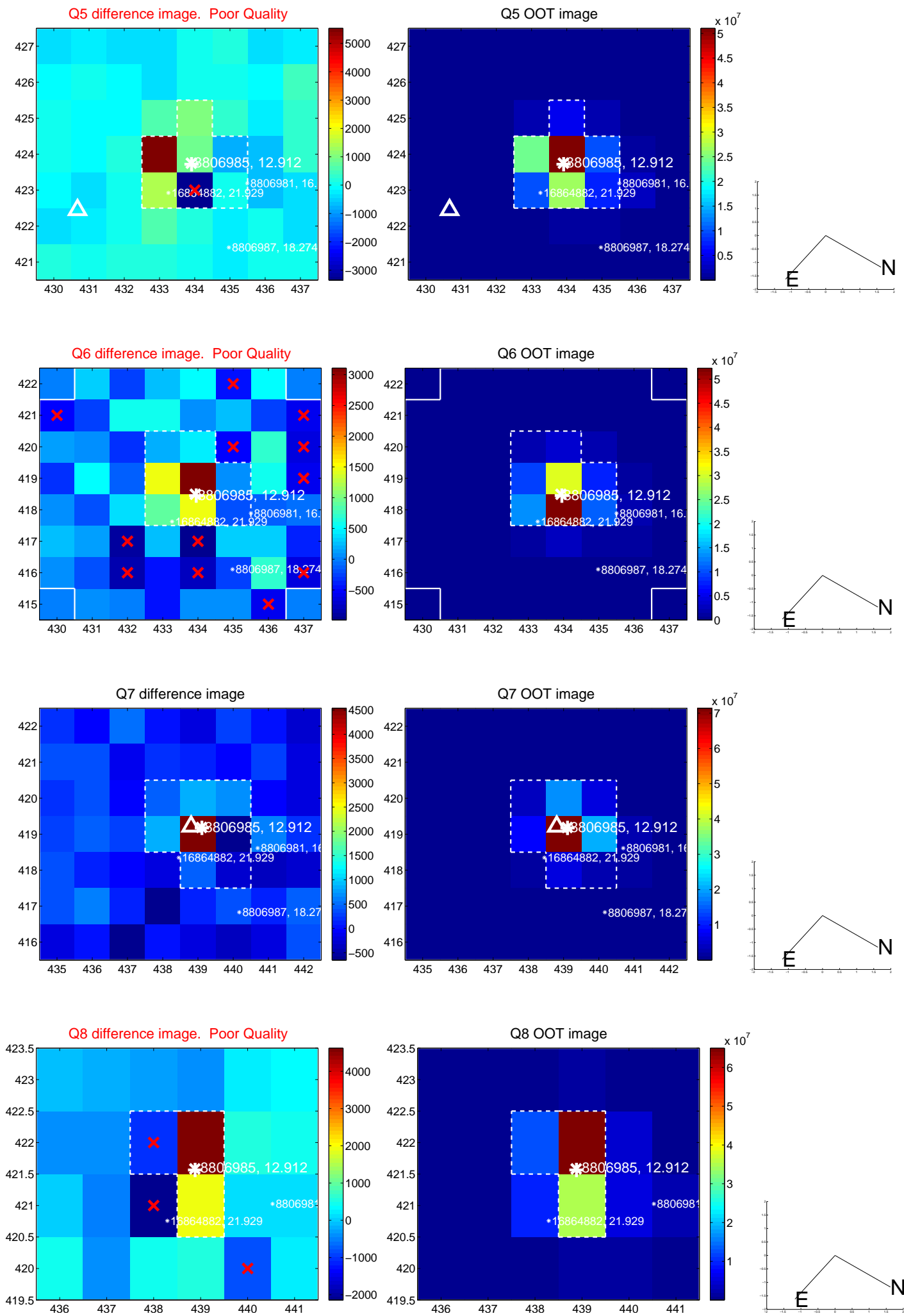


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

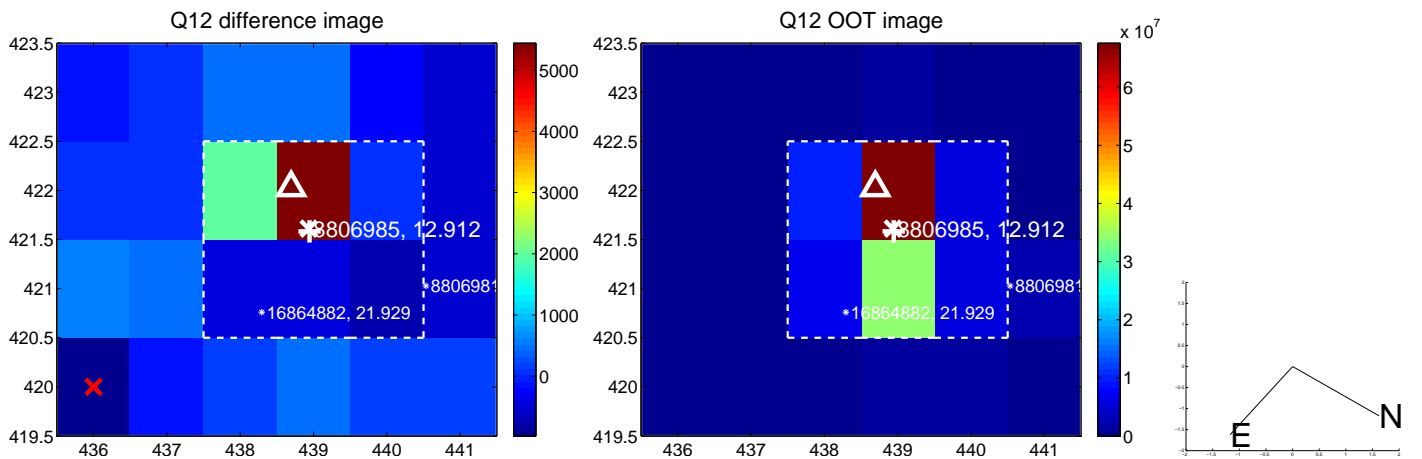
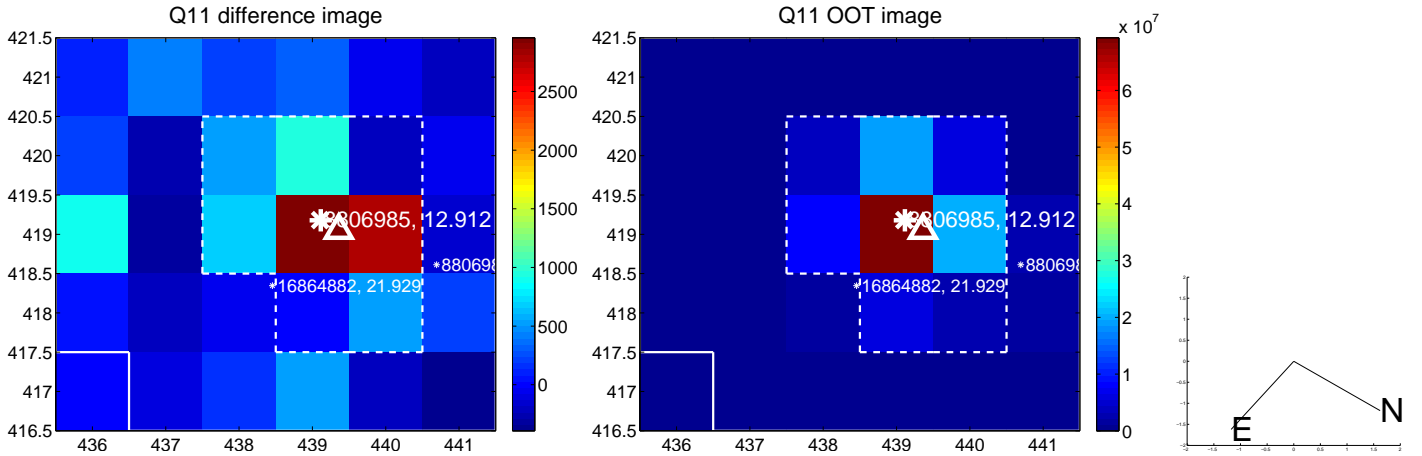
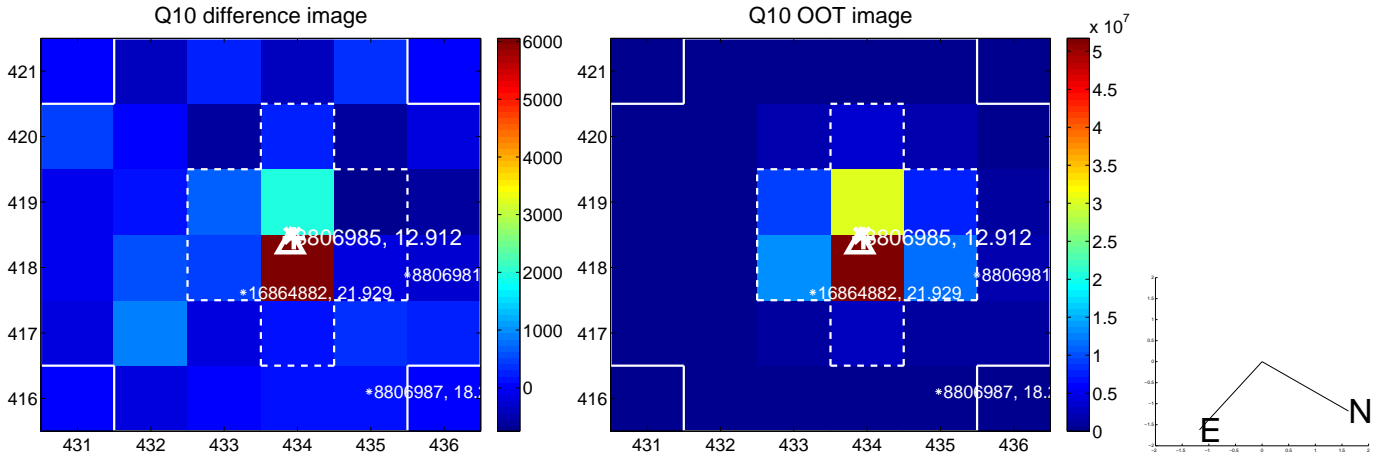
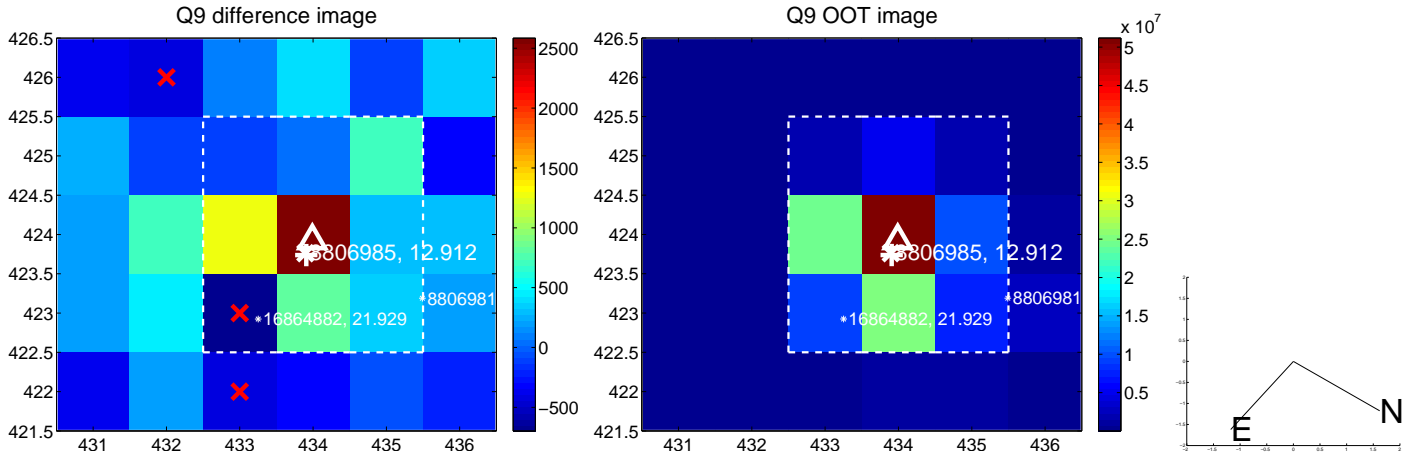
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



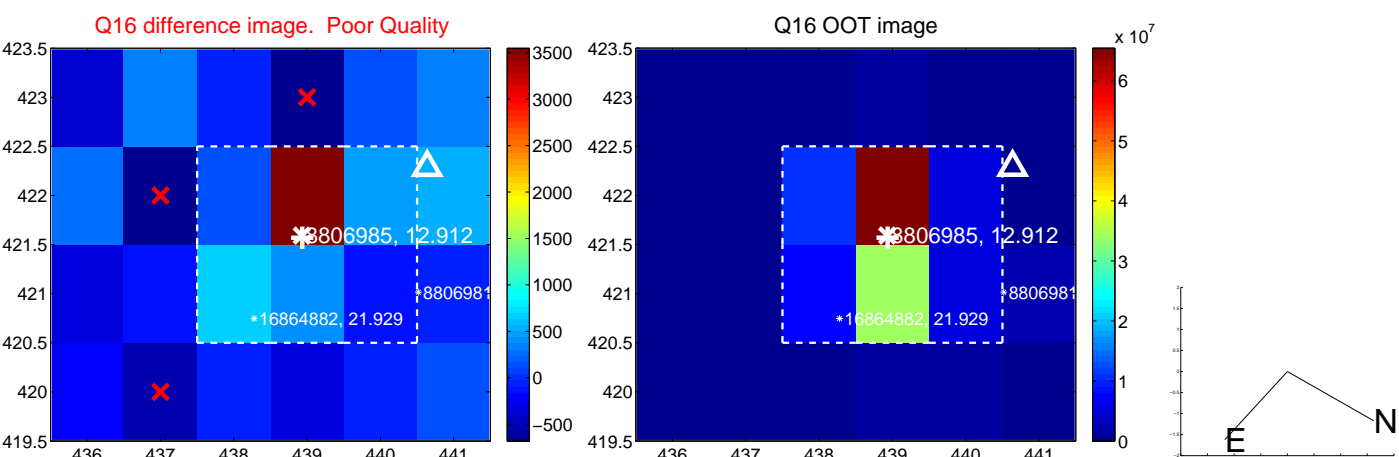
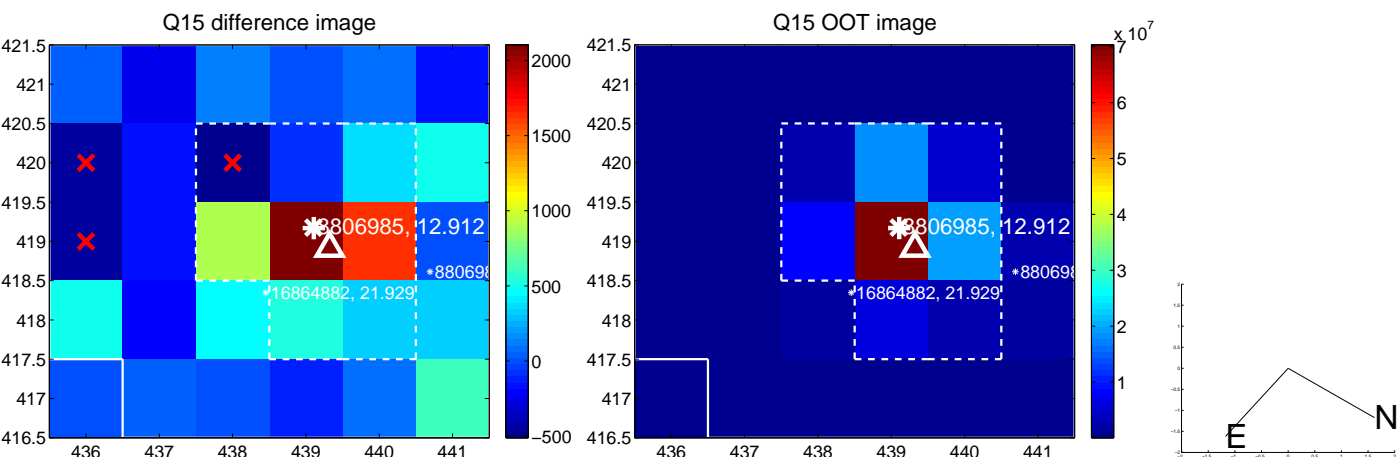
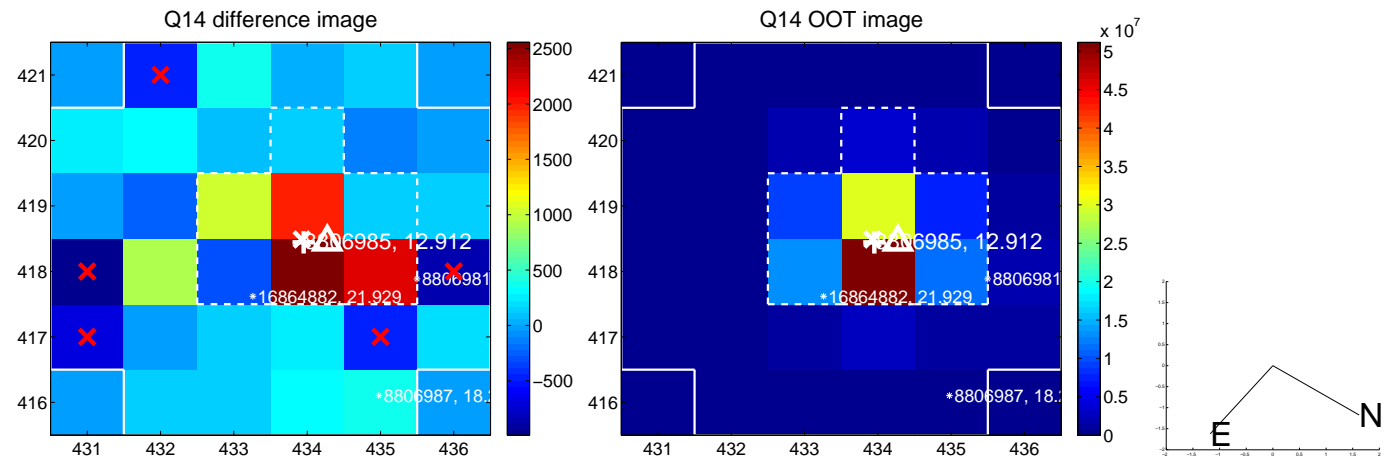
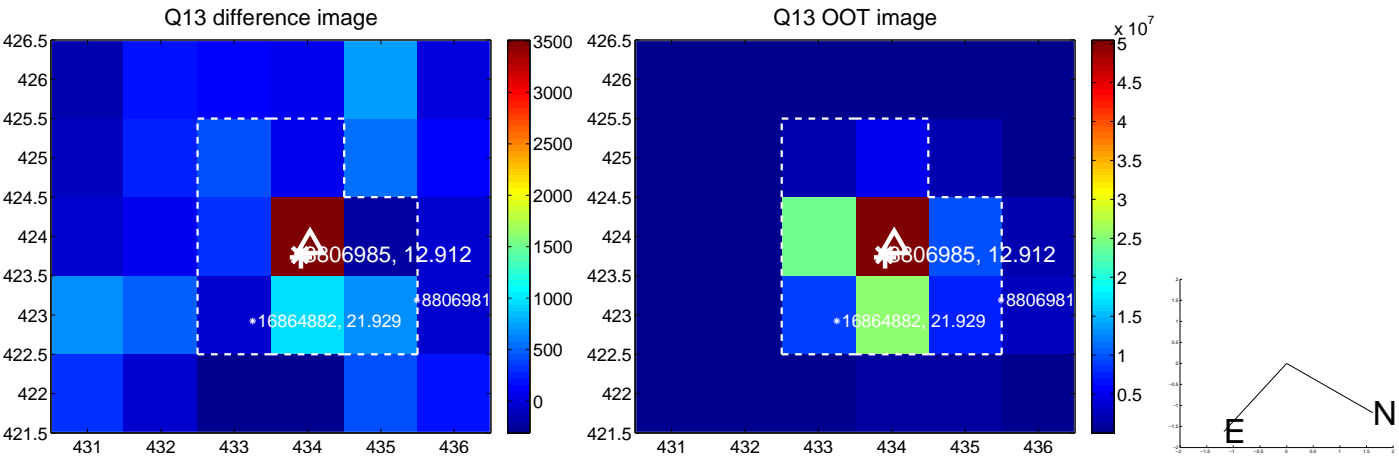
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

