

KIC 004446044

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})
004446044-01	OBS	No	4.628148	135.547744	13.0	16.378	15.1	11.8	1.26	6876	0.48	945.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004446044-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL — LPP_DV — CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

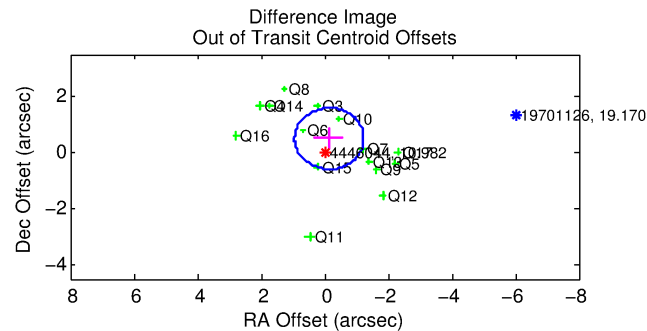
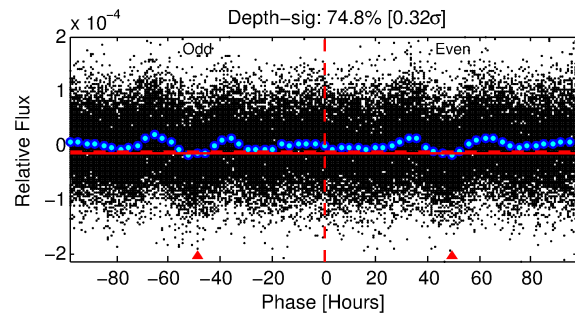
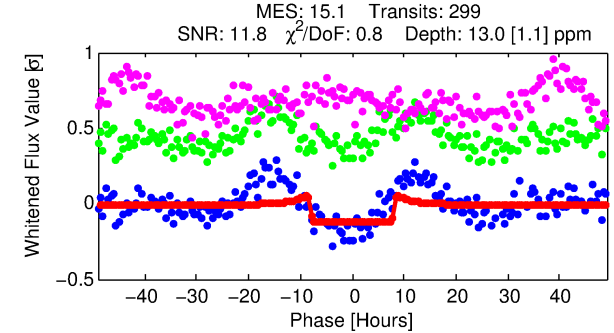
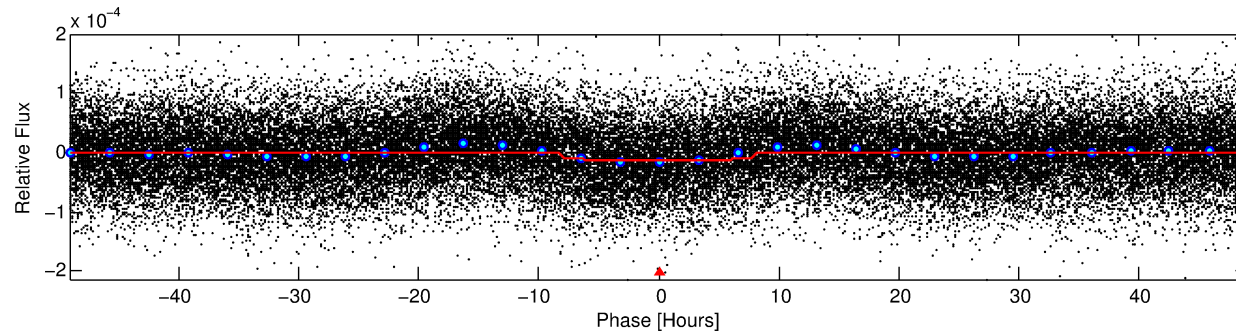
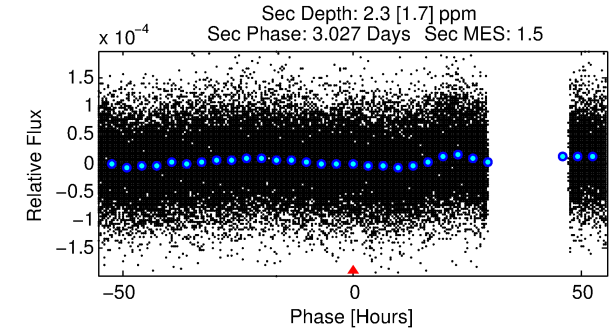
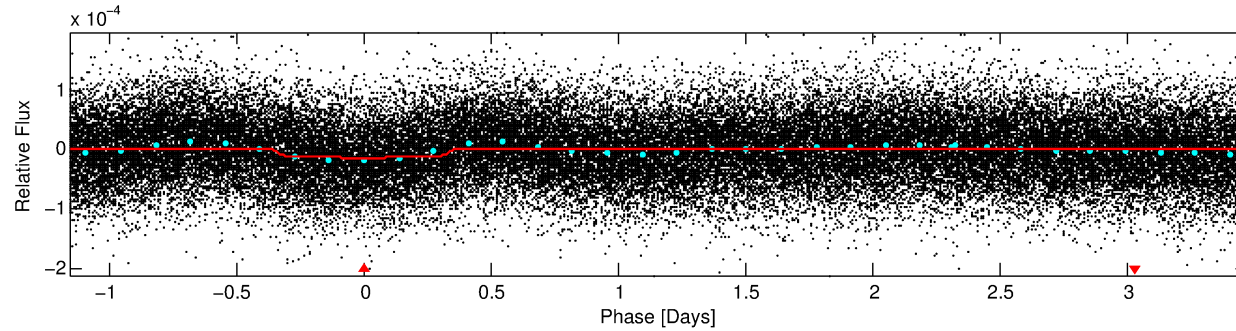
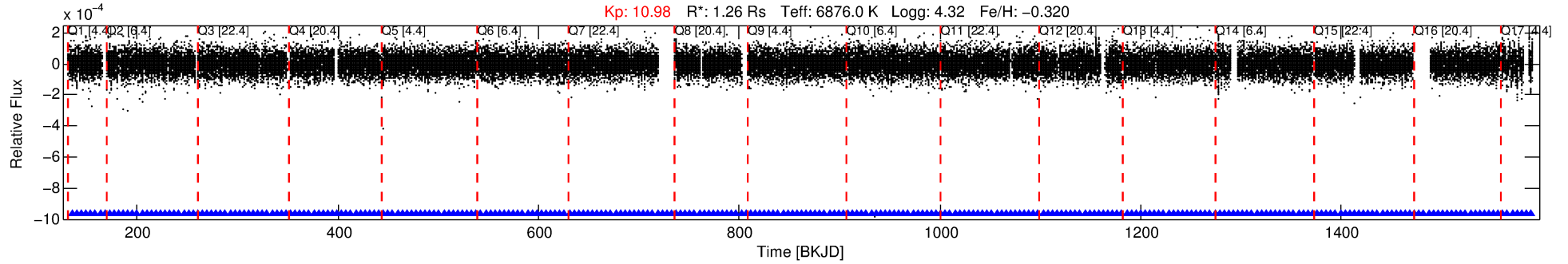
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004446044-01

No Significant Match Found

DV One-Page Summary

KIC: 4446044 Candidate: 1 of 1 Period: 4.628 d



DV Fit Results:

Period = 4.62815 [0.00005] d
Epoch = 135.5477 [0.0069] BKJD
Rp/R* = 0.0035 [0.0005]
a/R* = 1.91 [1.12]
b = 0.59 [0.89]
Seff = 945.21 [282.59]
Teq = 1414 [106] K
Rp = 0.48 [0.12] Re
a = 0.0582 [0.0106] AU
Ag = 18.36 [15.70] [1.11σ]
Teffp = 4525 [935] K [3.31σ]

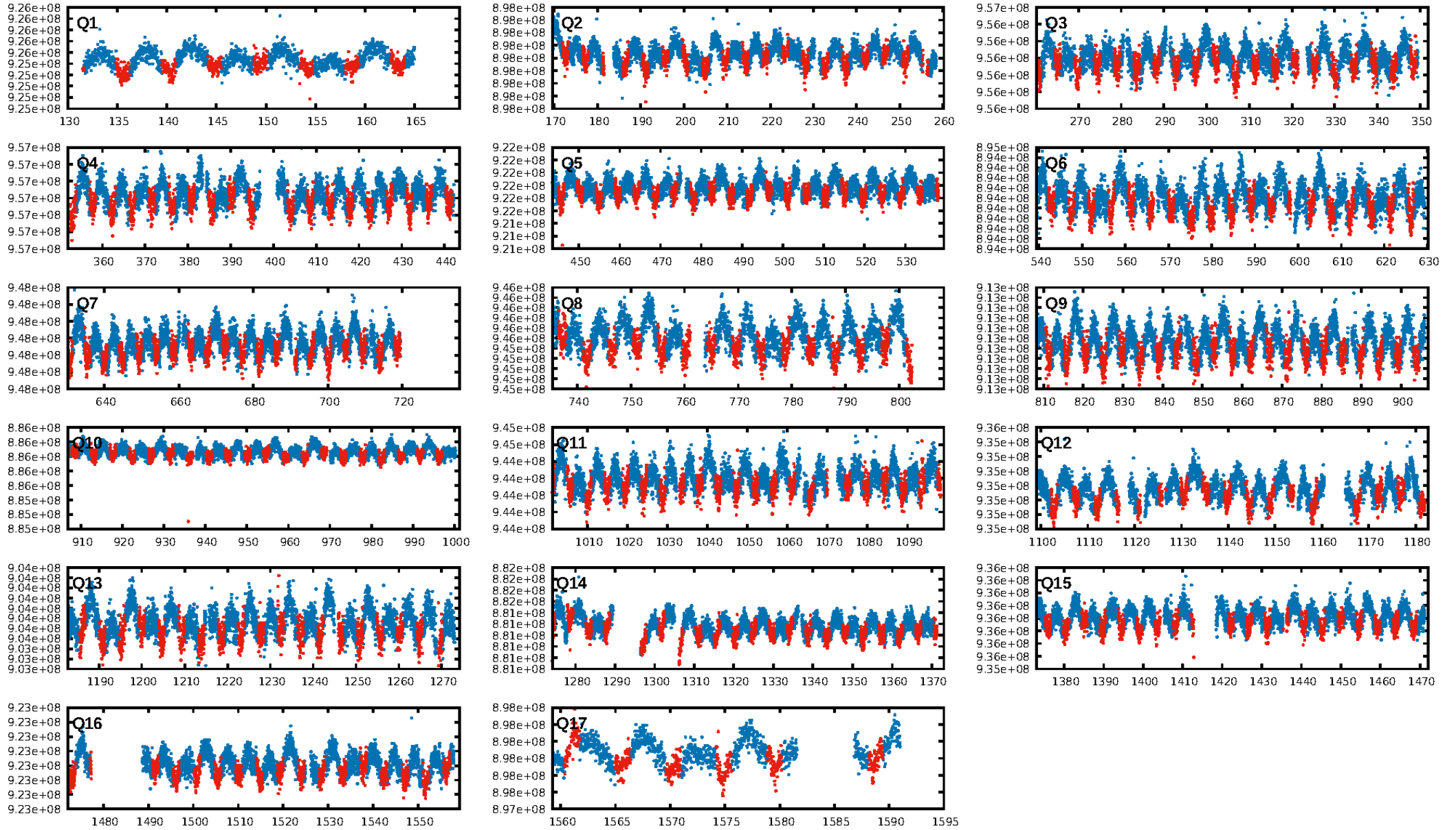
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.90e-39
RollingBand-fgt: 1.00 [286/286]
GhostDiagnostic-chr: 2.481
Centroid-sig: 3.5%
Centroid-so: 1.929 arcsec [1.49σ]
OotOffset-rm: 0.520 arcsec [1.43σ]
KicOffset-rm: 0.383 arcsec [0.83σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.60 [9/15]
DiffImageOverlap-fno: 1.00 [17/17]

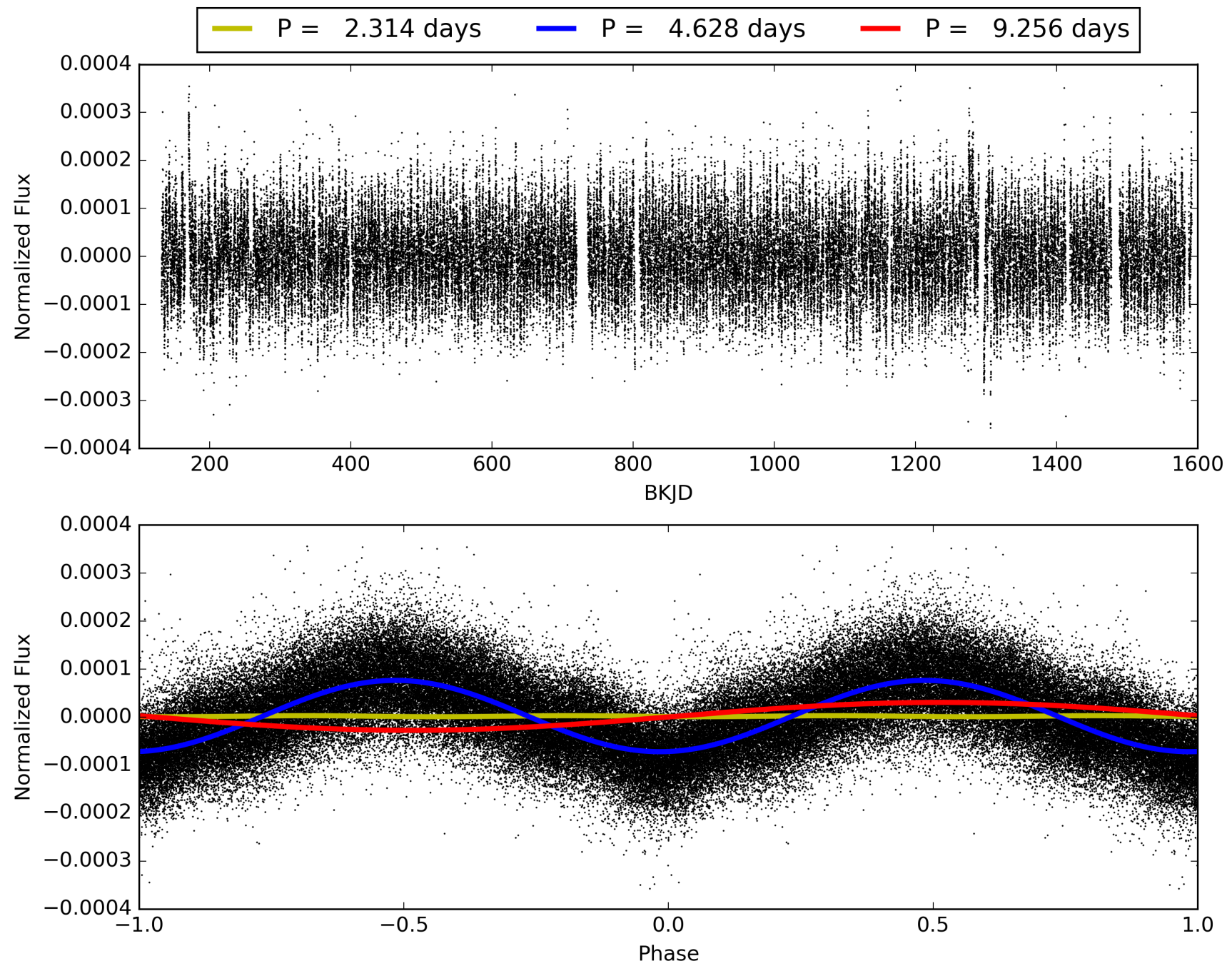
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:25:59 Z

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

TCE 004446044-01, PDC Light Curves

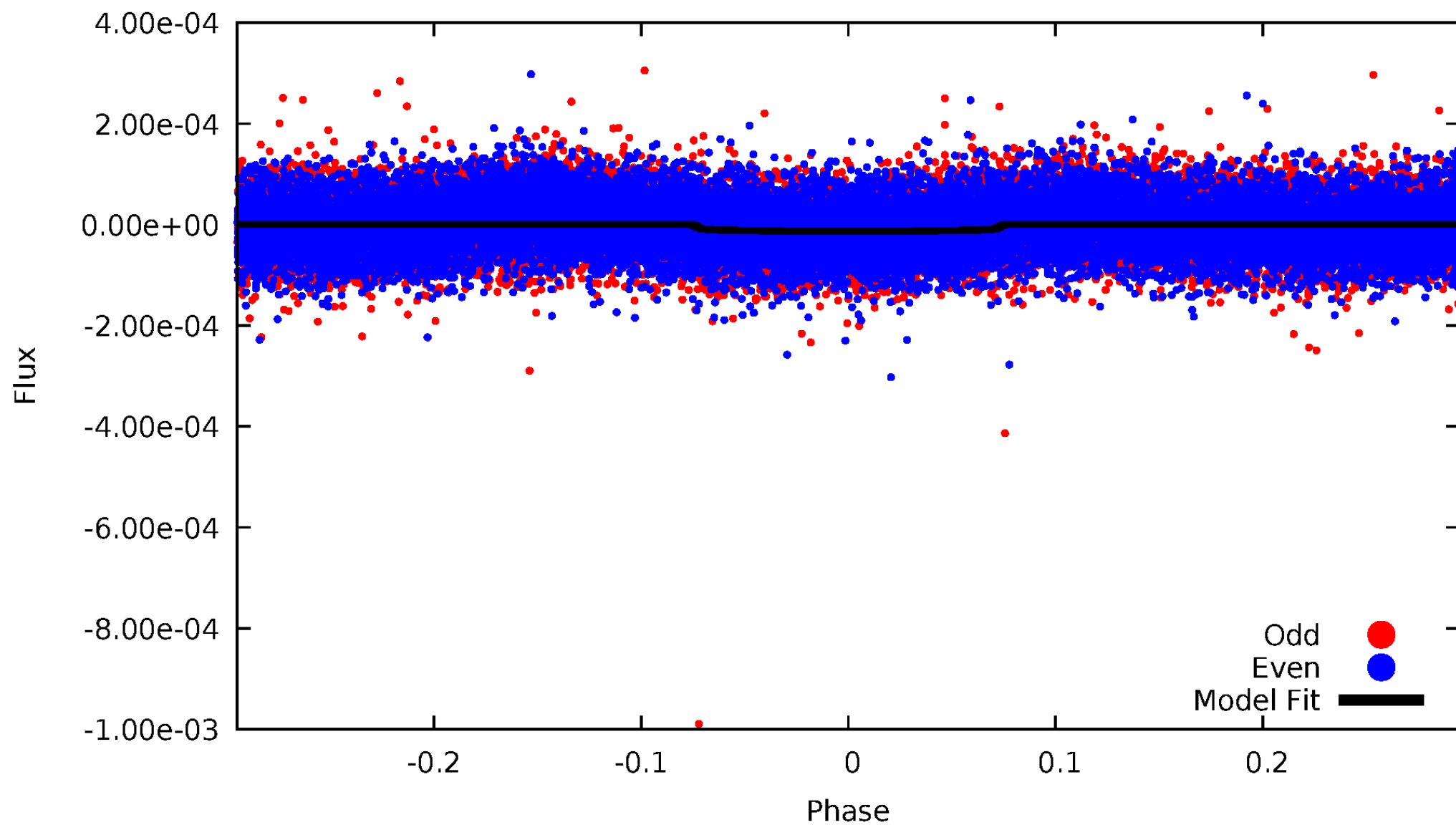


TCE 004446044-01



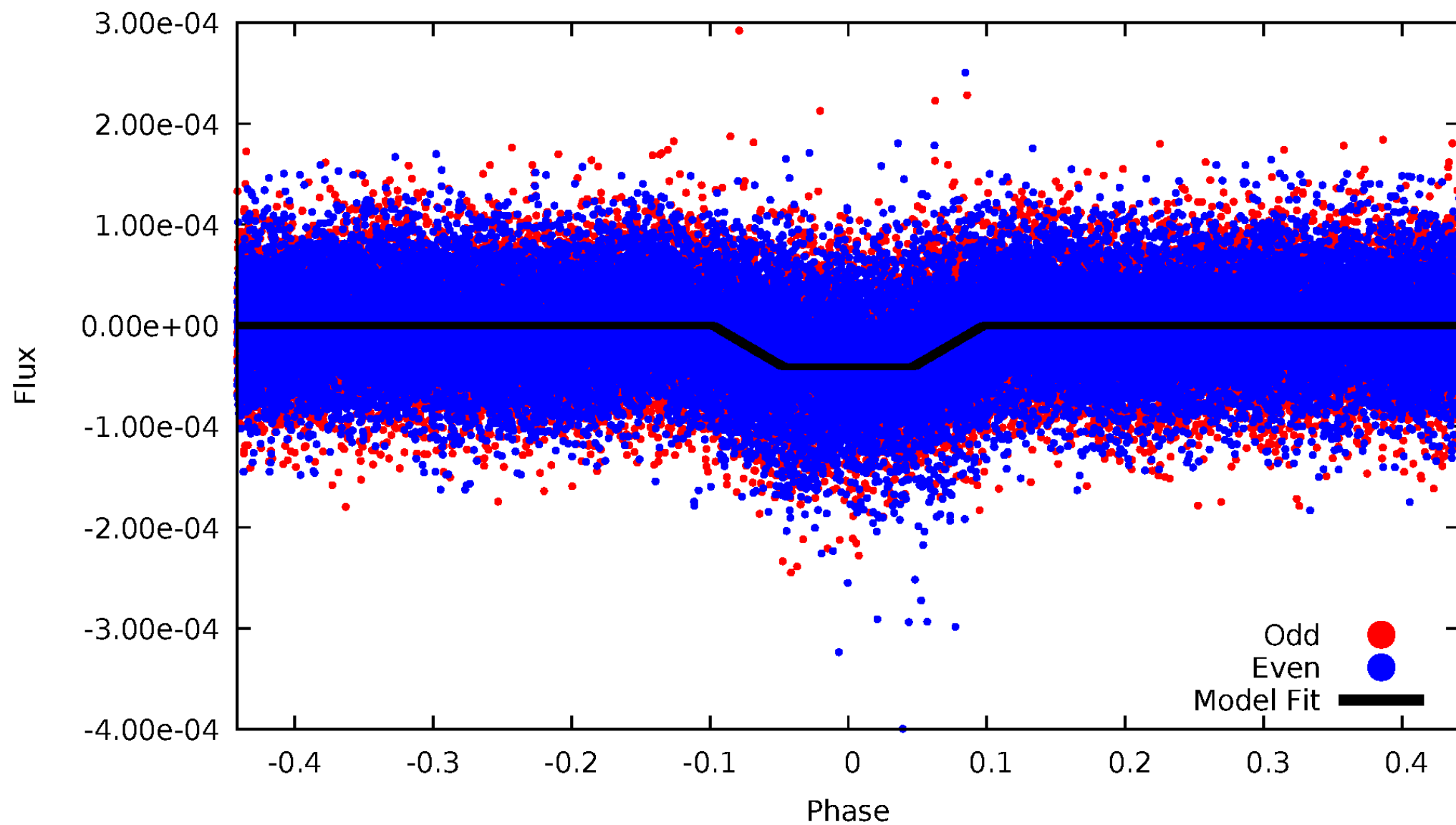
DV Odd/Even

TCE 004446044-01

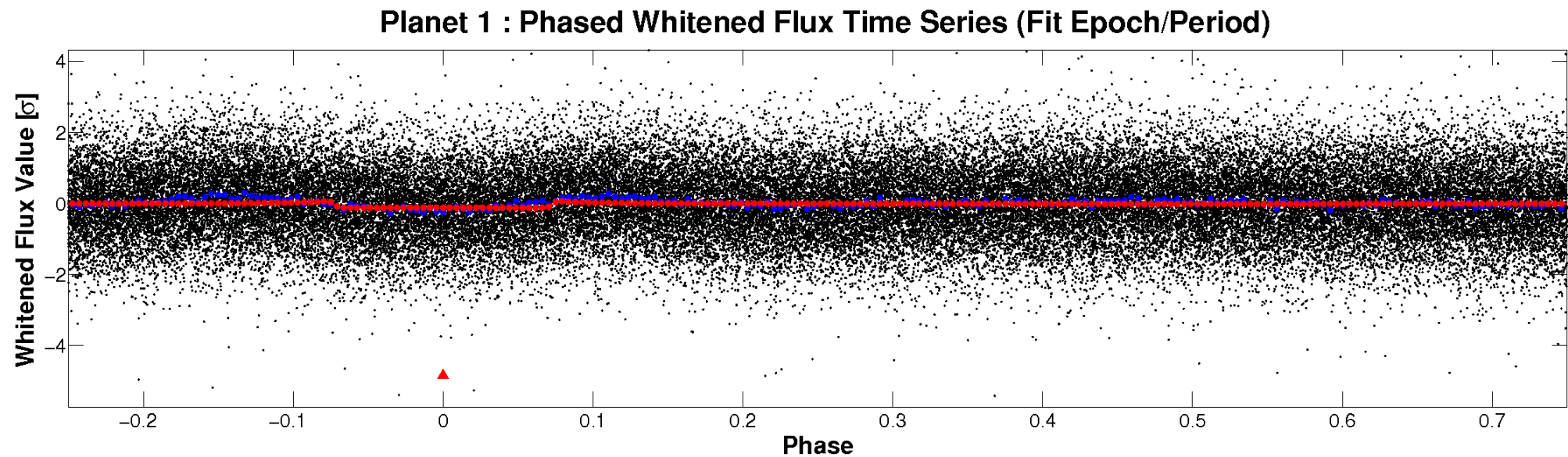
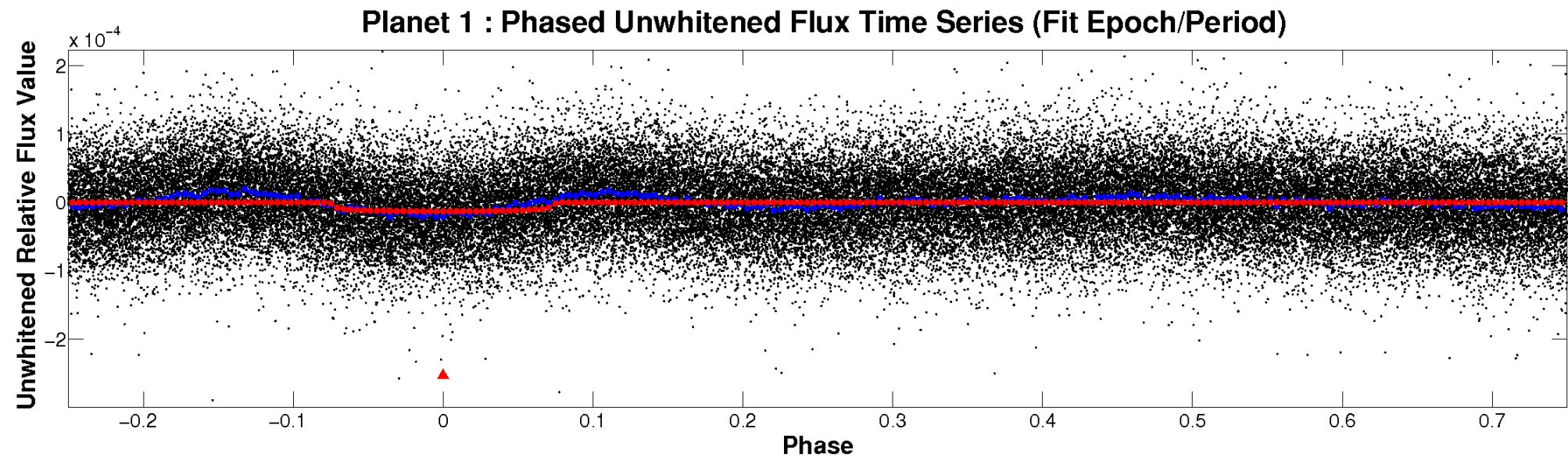


ALT Odd/Even

TCE 004446044-01

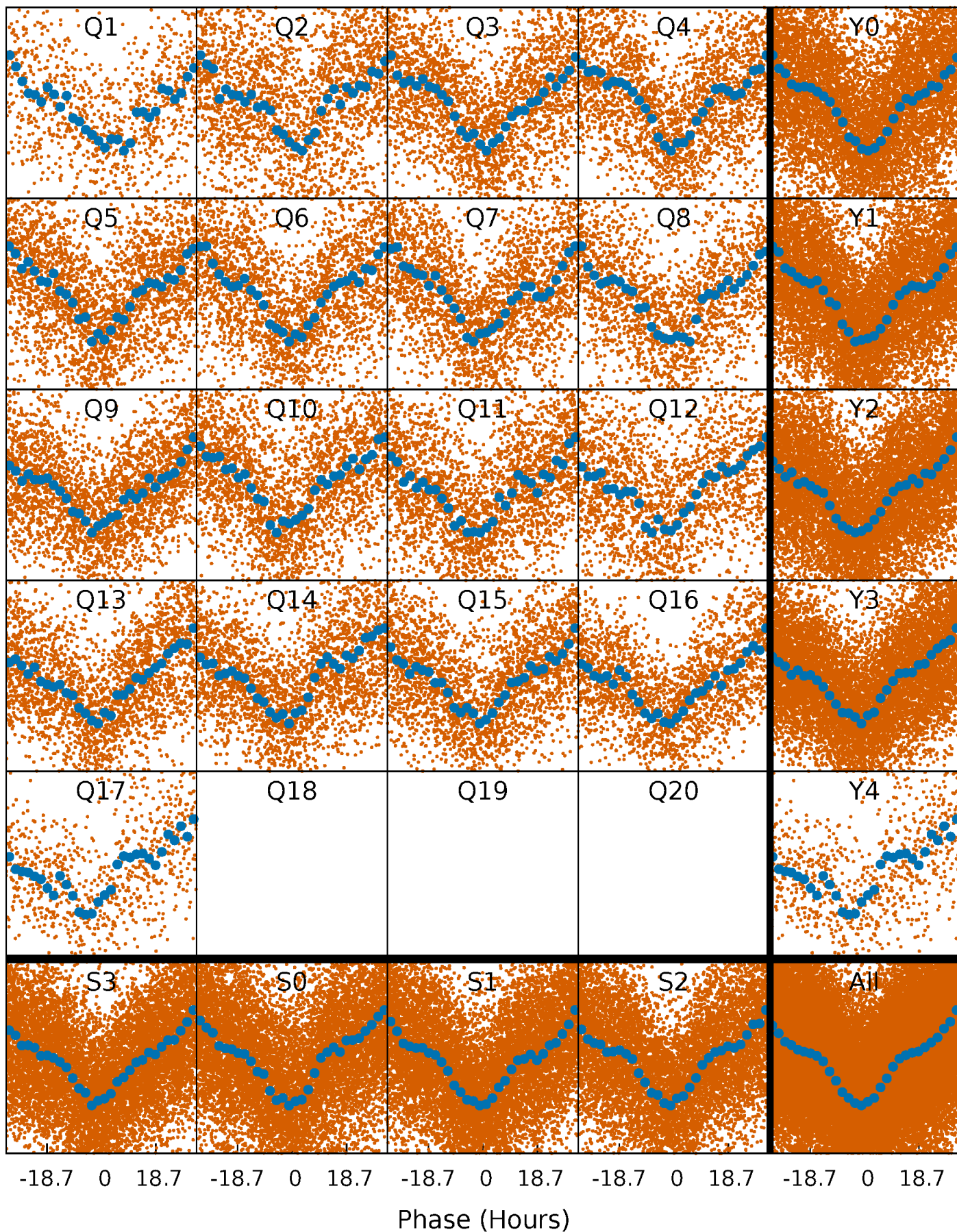


Non-Whitened Vs. Whitened Light Curve



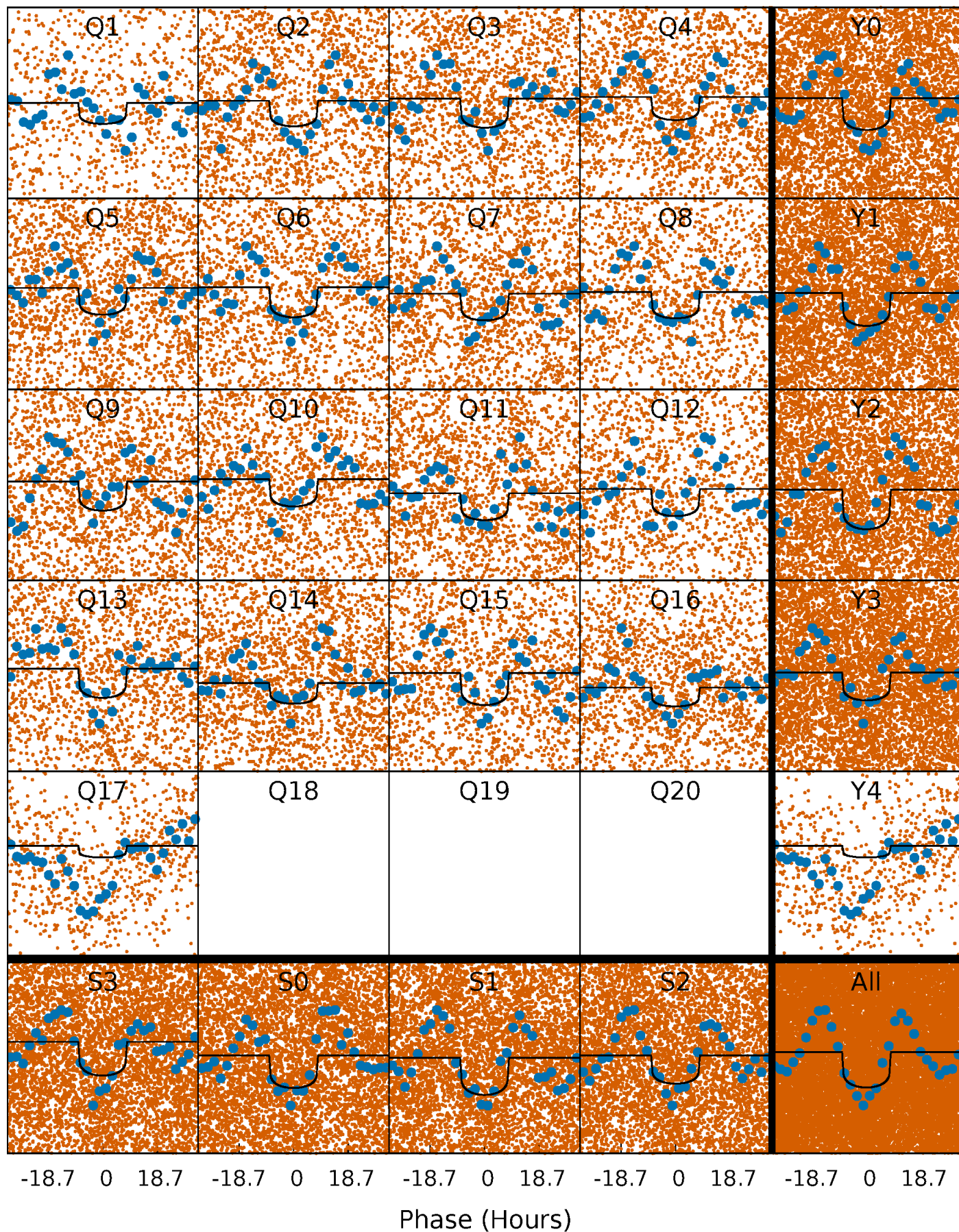
PDC Quarter-Phased Transit Curves

TCE 004446044-01 P= 4.628148 Days $T_0=135.547743$ (BKJD)



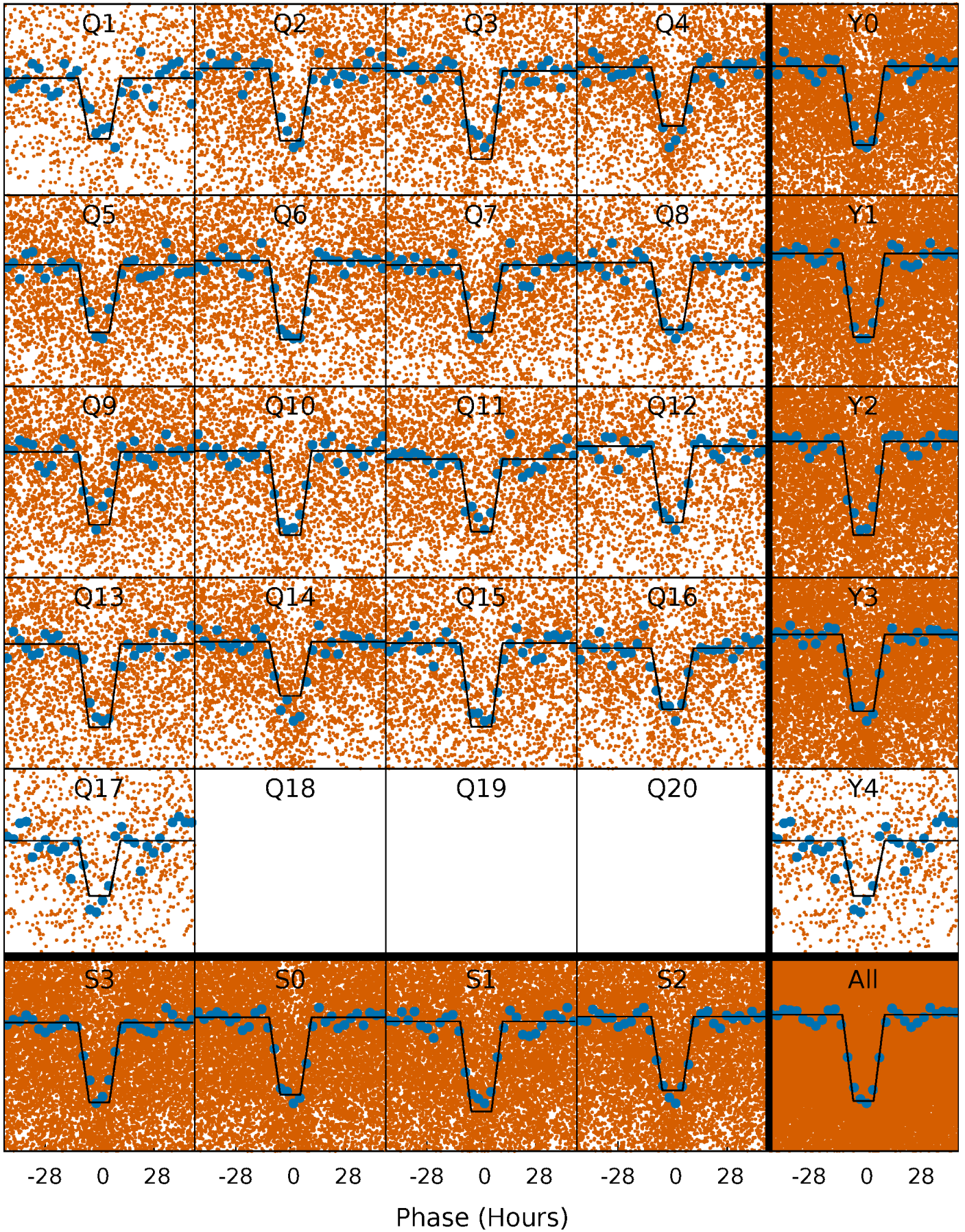
DV Quarter-Phased Transit Curves

TCE 004446044-01 P= 4.628148 Days $T_0=135.547743$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

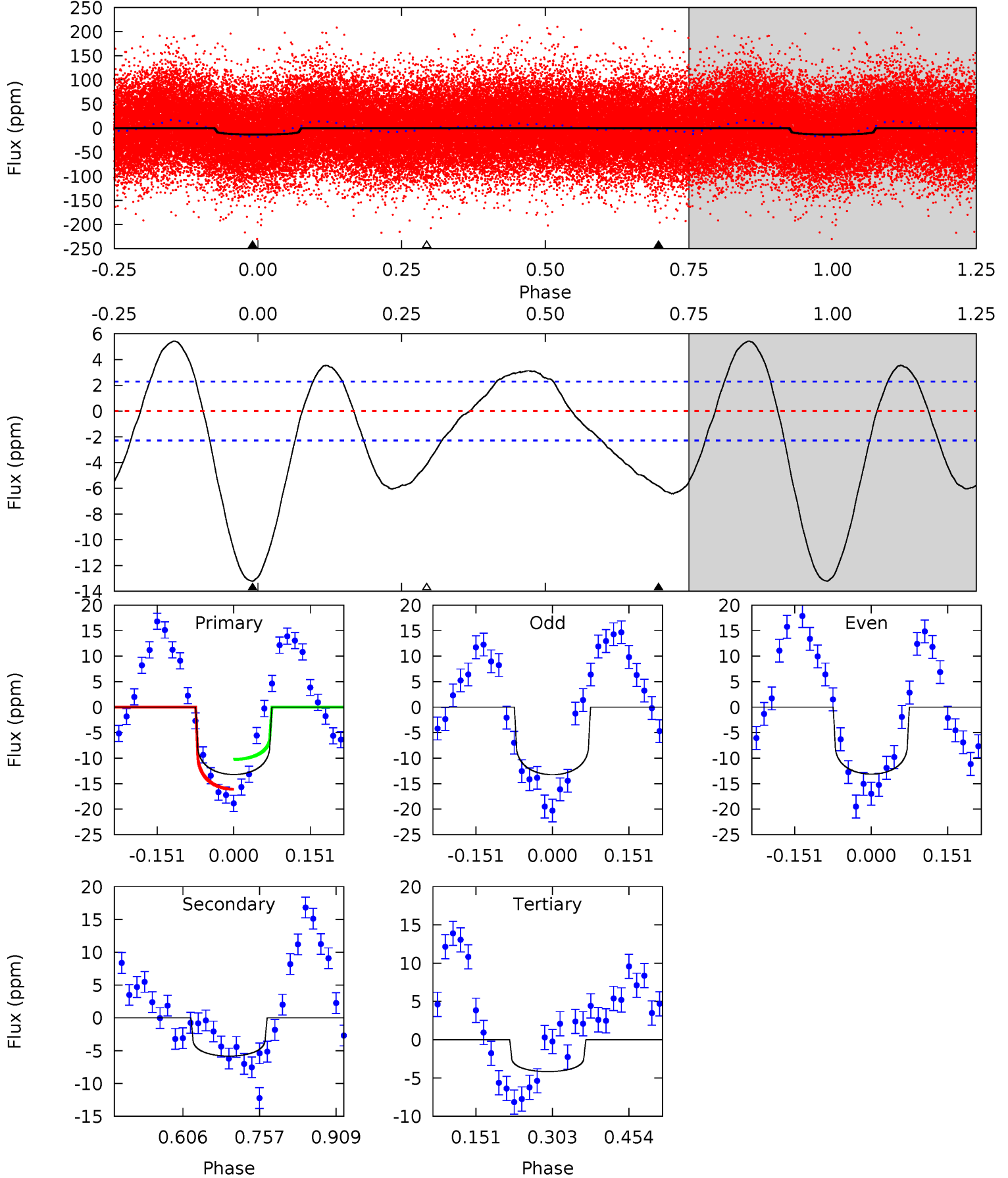
TCE 004446044-01 P= 4.627755 Days $T_0=135.550904$ (BKJD)



DV Model-Shift Uniqueness Test

004446044-01, P = 4.628148 Days, E = 130.919595 Days

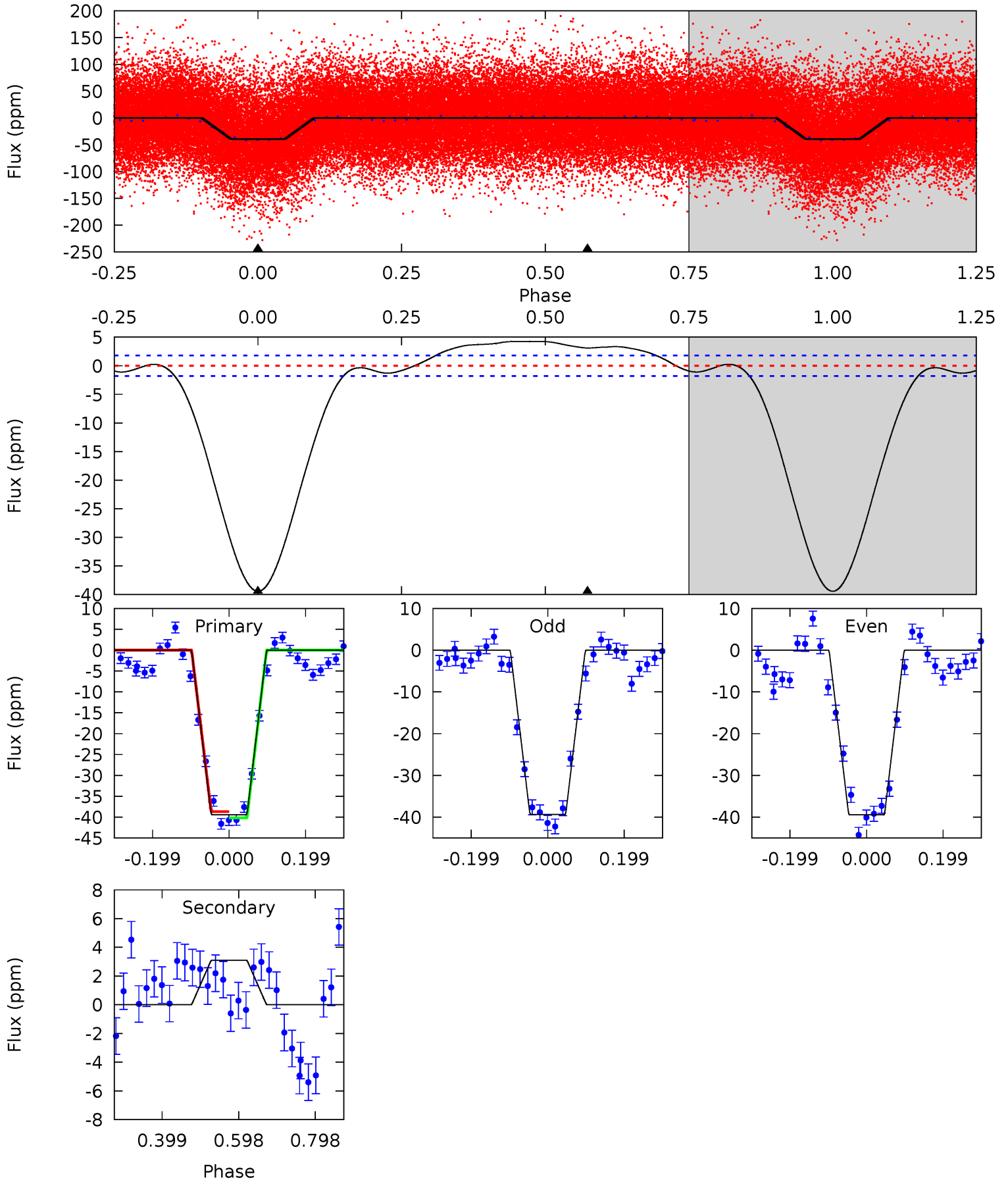
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.9	11.4	8.15	0	4.48	1.43	6.22	17.7	25.9	3.26	11.4	0.11	1.04	0.29	5.74



Alt Model-Shift Uniqueness Test

004446044-01, P = 4.627755 Days, E = 130.923149 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
97.1	-7.64	0	0	4.42	1.28	4.27	97.1	97.1	-7.64	-7.64	0.11	1.04	0.10	1.81



Stellar Parameters For KIC 004446044

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6876^{+163}_{-245}	$4.323^{+0.077}_{-0.143}$	$-0.320^{+0.250}_{-0.350}$	$1.264^{+0.274}_{-0.160}$	$1.234^{+0.148}_{-0.165}$	$0.861^{+0.287}_{-0.355}$
	+2%/-4%	+2%/-3%	+78%/-109%	+22%/-13%	+12%/-13%	+33%/-41%
Source	PHO1	FLK73	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 004446044-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-6 ± 1	$0.49^{+0.09}_{-0.07}$	1996^{+107}_{-106}	5683^{+474}_{-402}	45^{+18}_{-12}
Alt.	3 ± 0	$0.90^{+0.13}_{-0.10}$	1995^{+115}_{-97}	-3945^{+145}_{-160}	$-6.983^{+1.798}_{-1.958}$

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

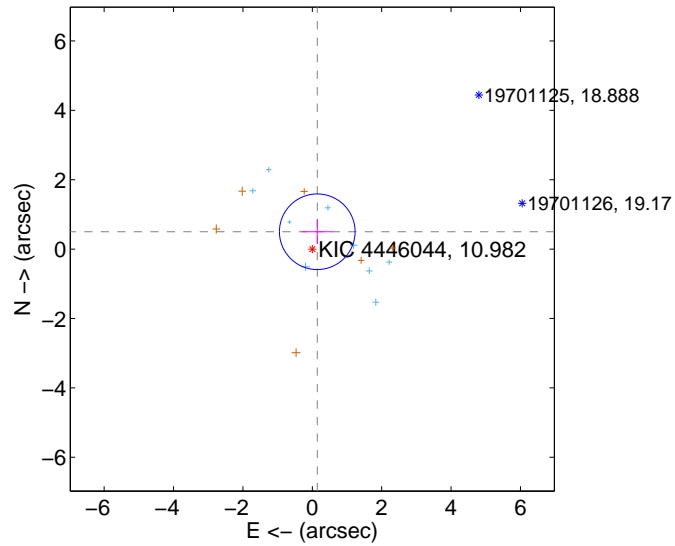
Supplemental centroid analysis for 004446044-01. **Kepler magnitude: 10.98.** Transit SNR 11.84

There are 9 quarters with good PRF difference image offsets

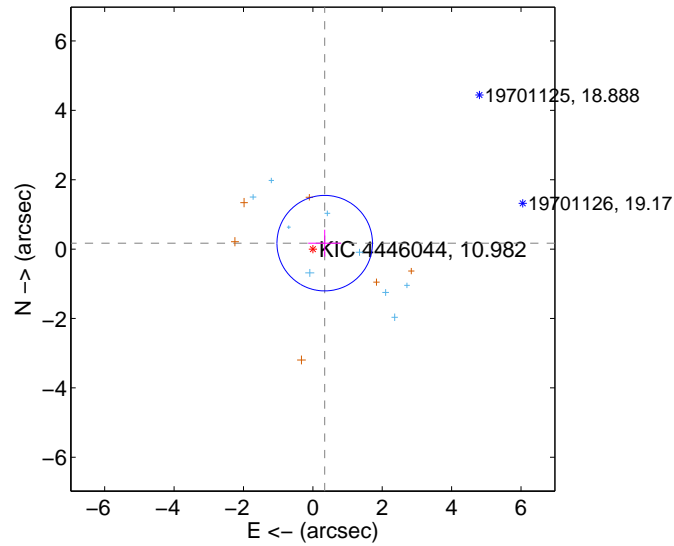
The direct PRF centroid is offset from the target star catalog position by about 0.84 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.520 ± 0.363	1.43	-0.143 ± 0.439	0.500 ± 0.356
PRF-fit source offset from KIC position	0.383 ± 0.459	0.83	-0.342 ± 0.475	0.171 ± 0.388
photometric centroid source offset	1.93 ± 1.29	1.49	1.02 ± 1.33	-1.64 ± 1.28

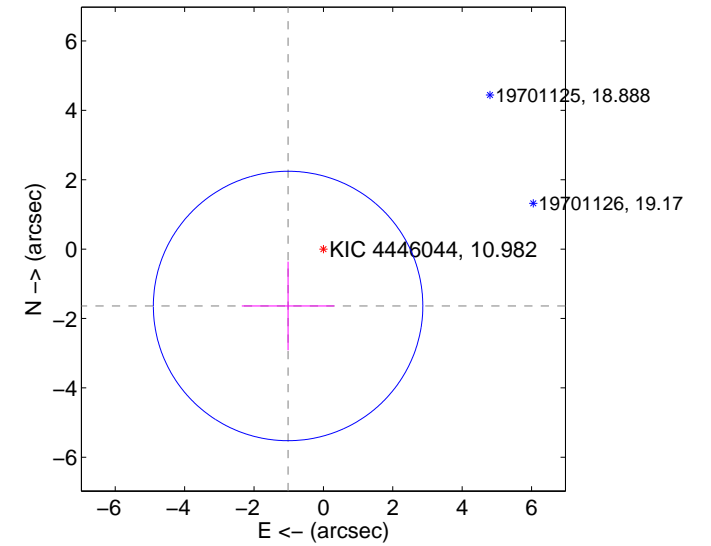
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

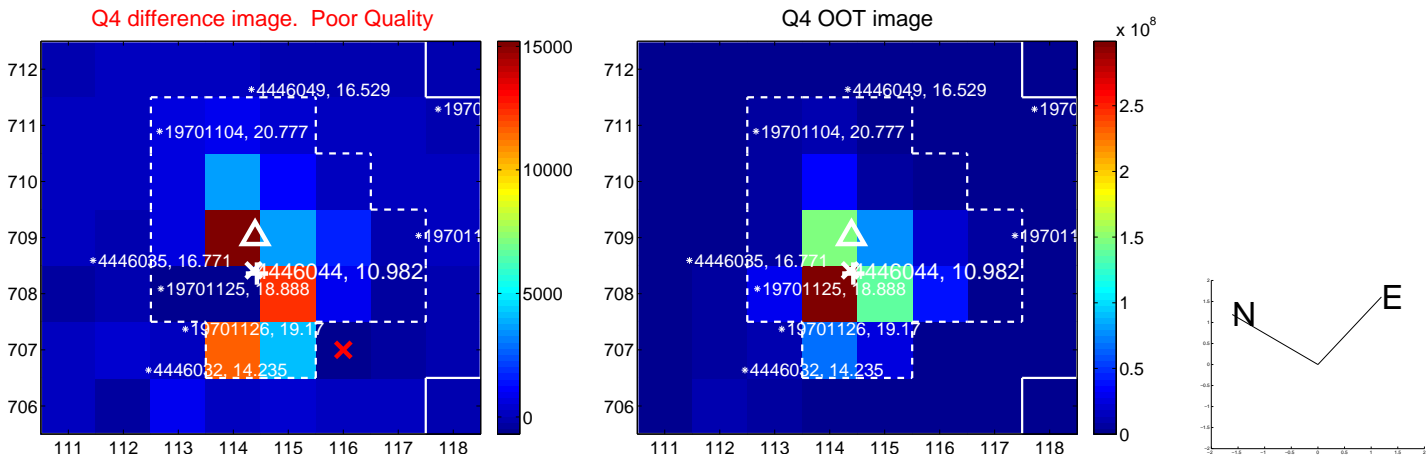
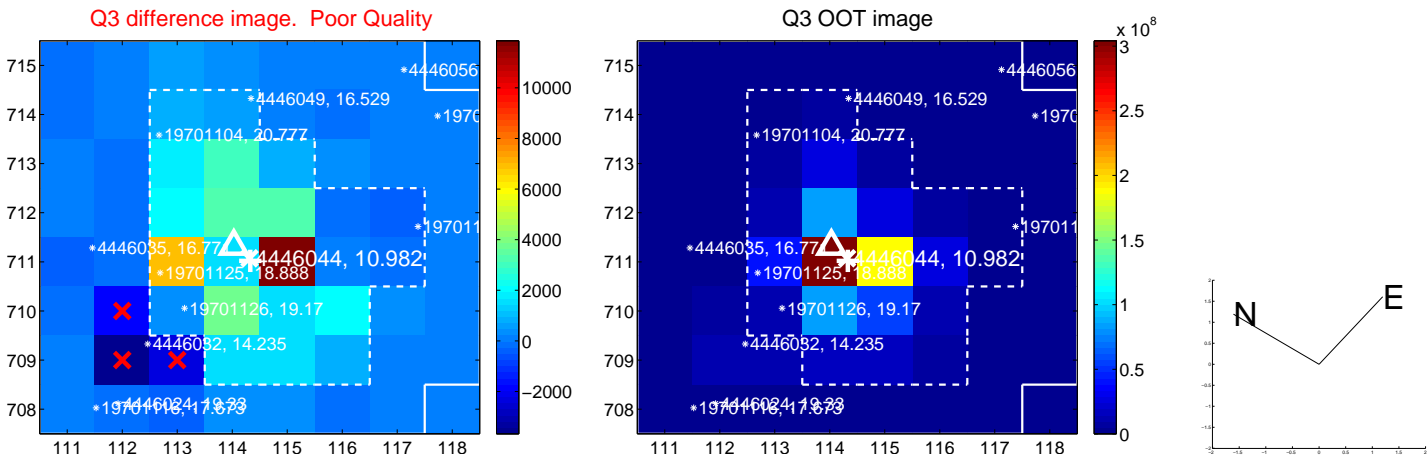
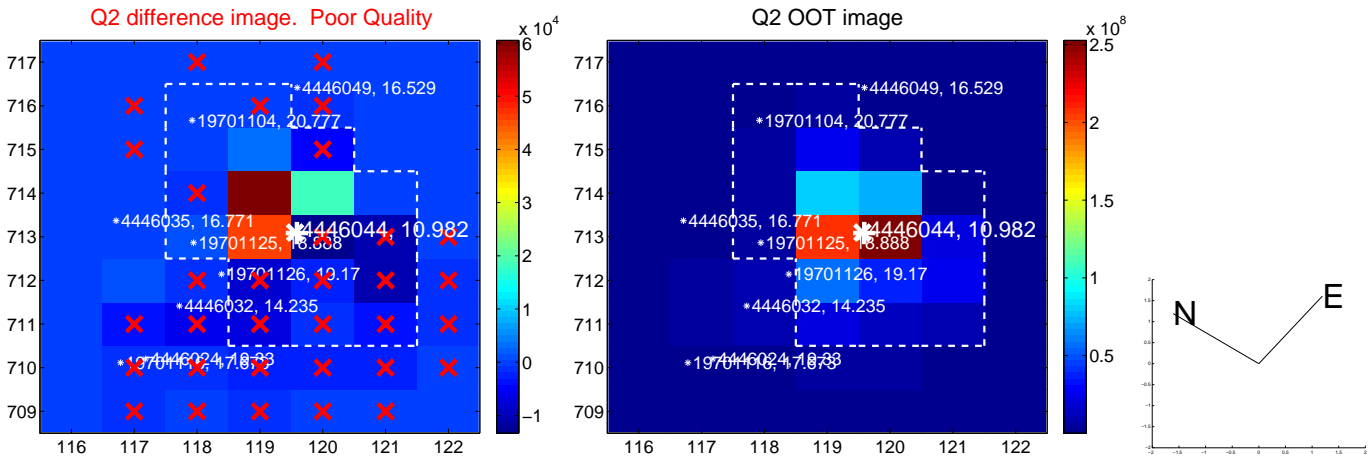
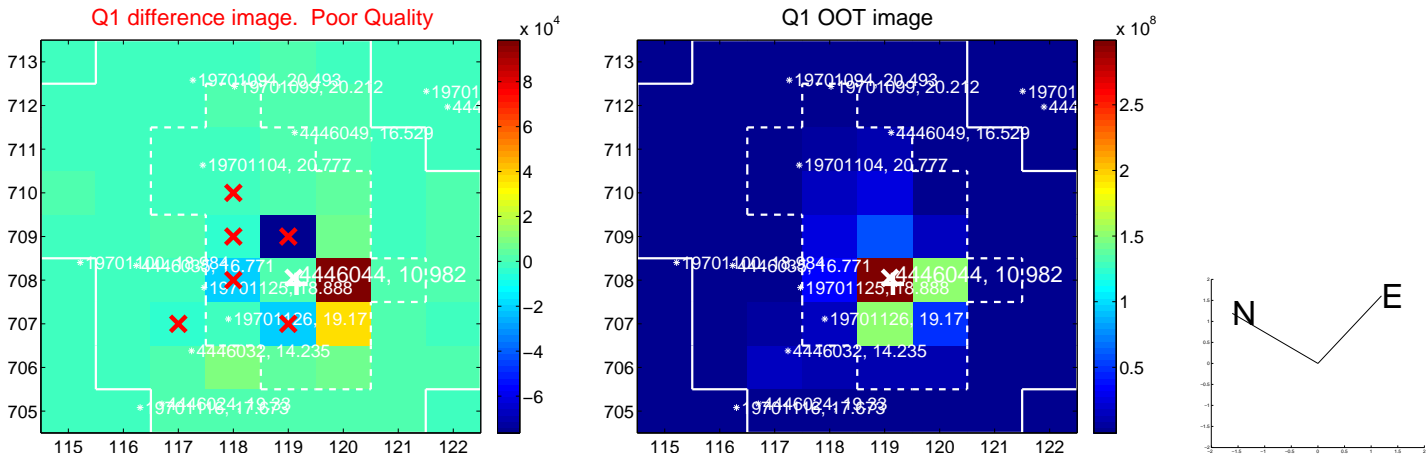


offset from photometric centroids

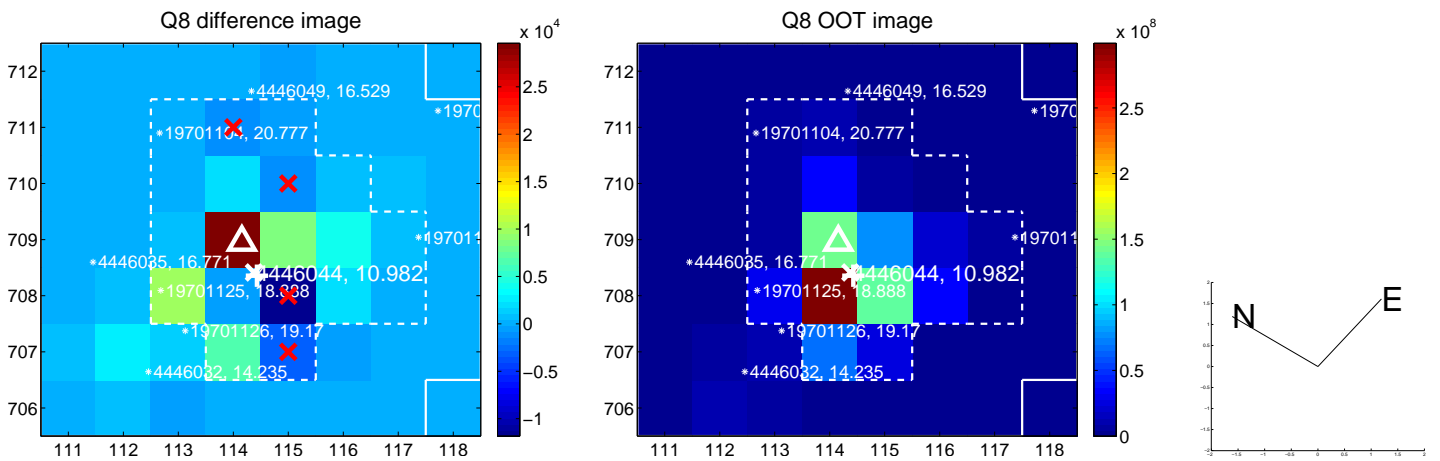
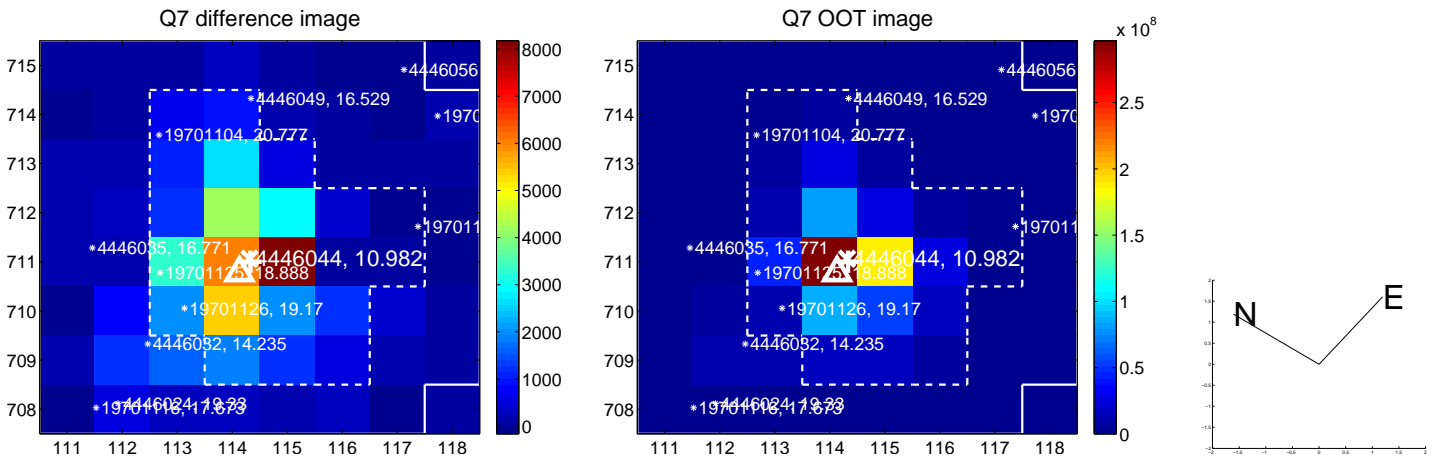
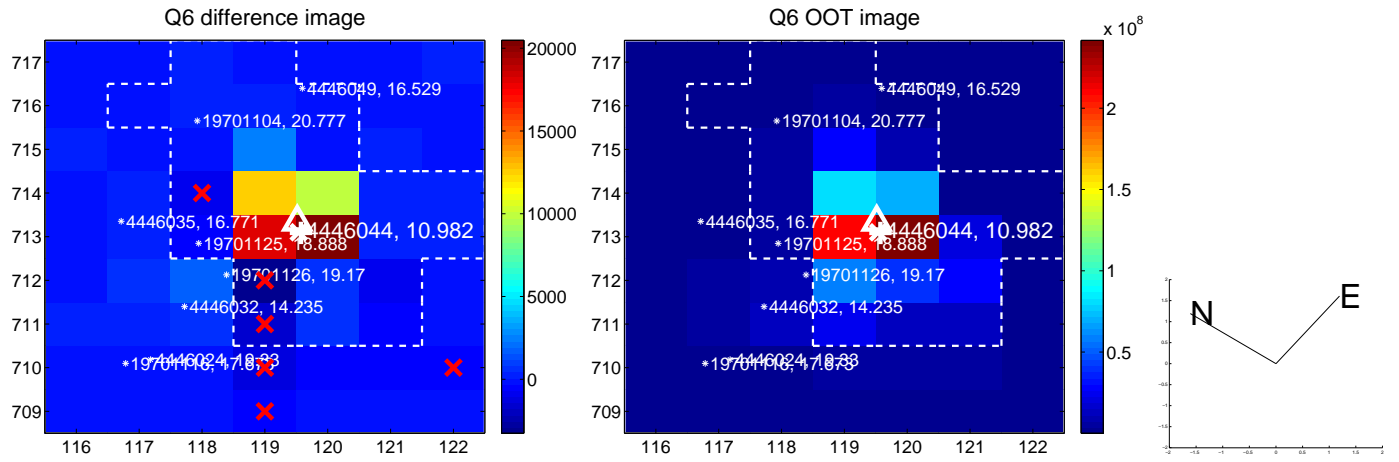
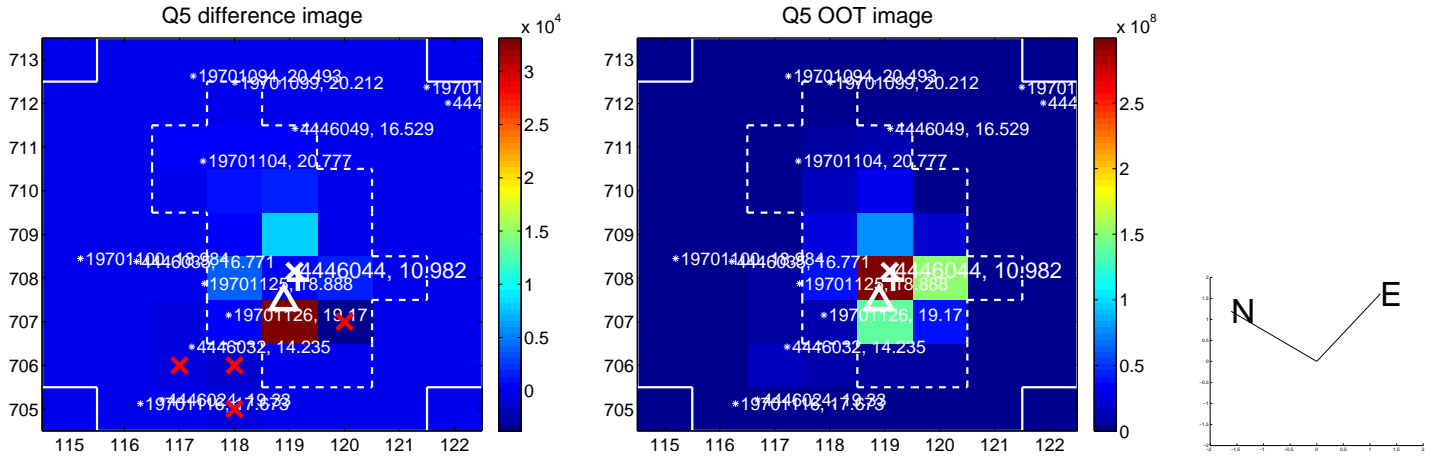


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

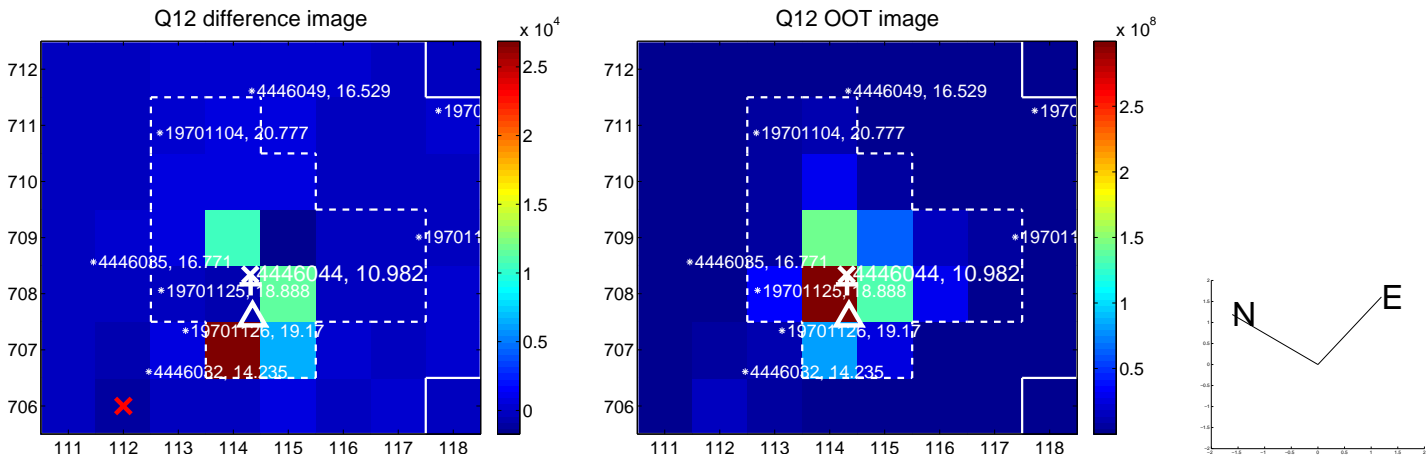
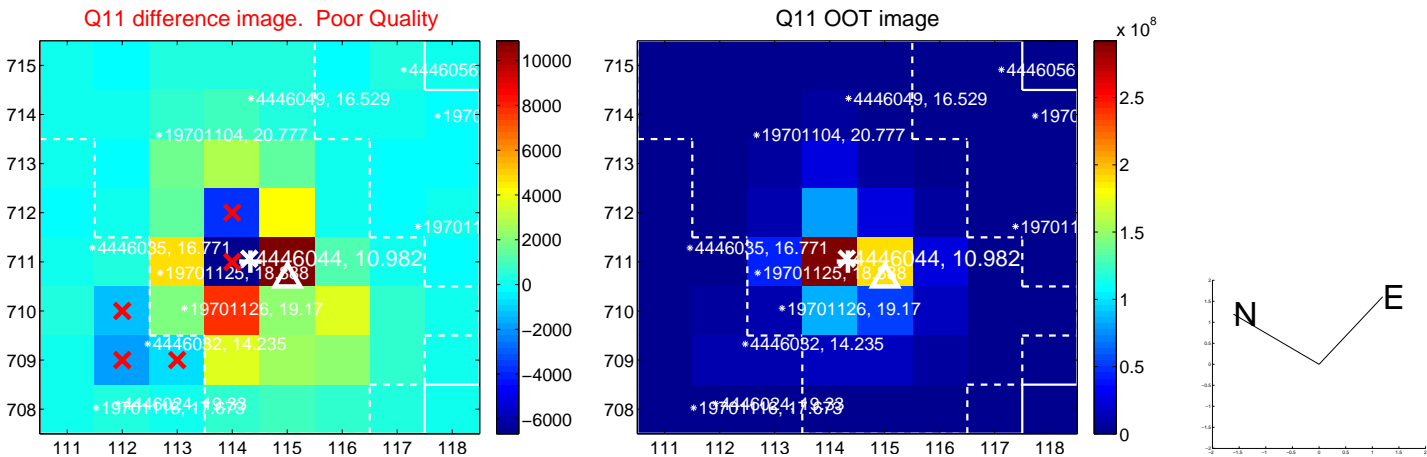
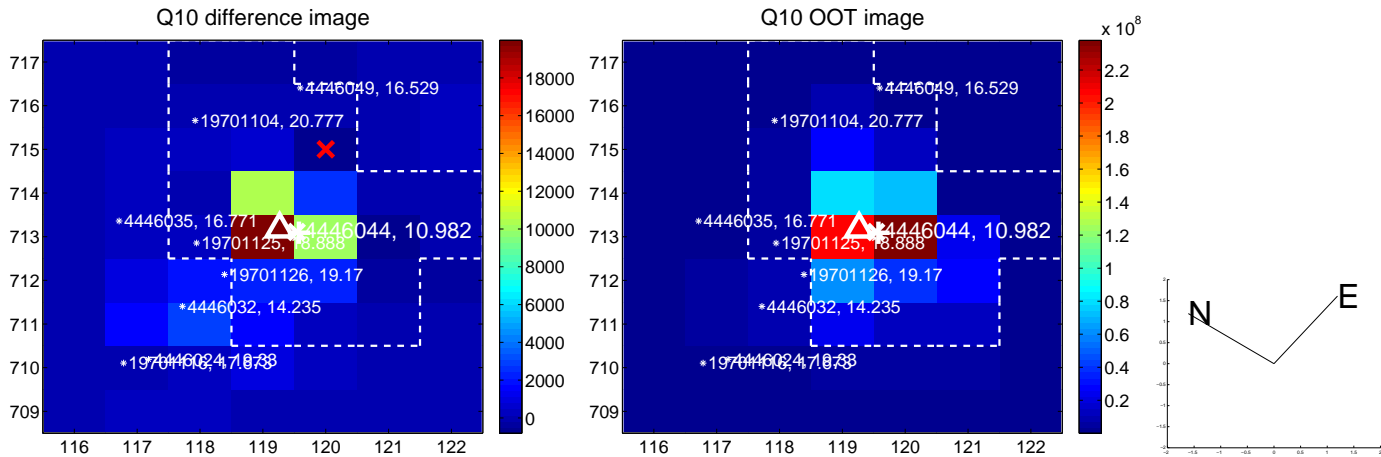
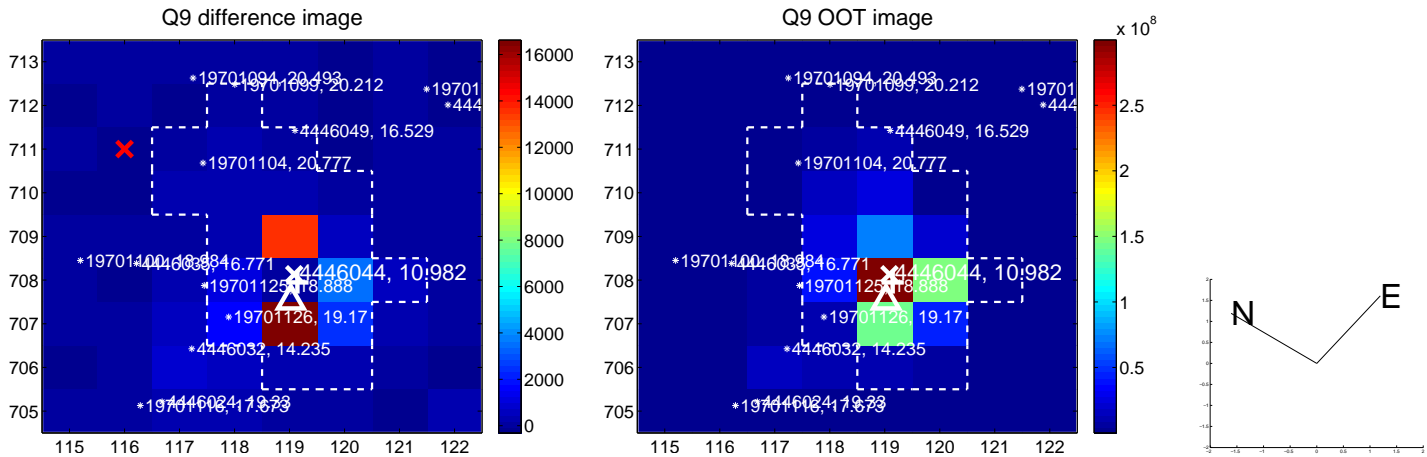
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



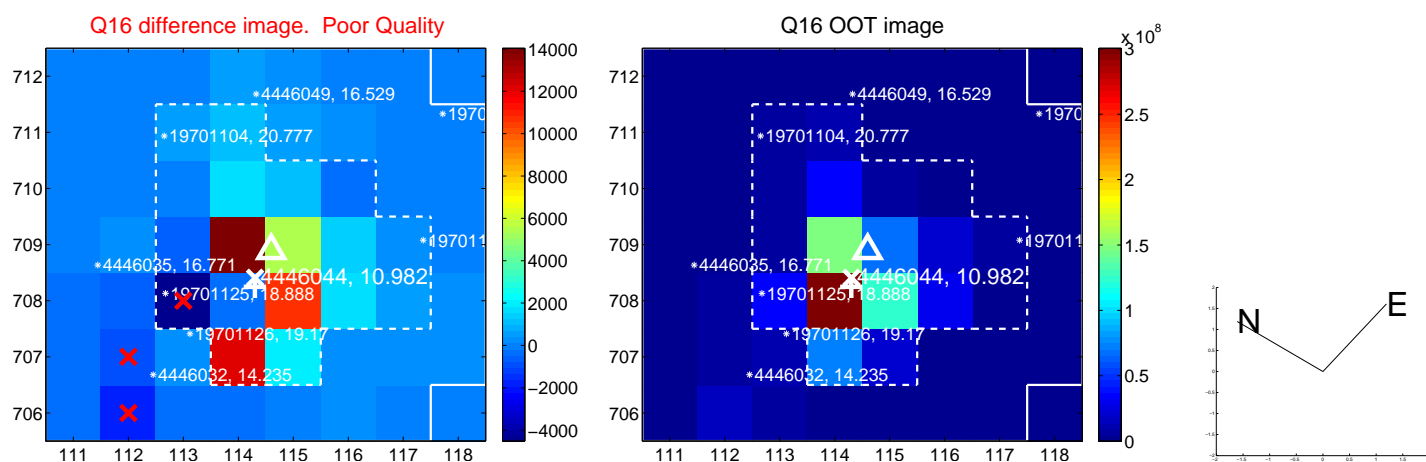
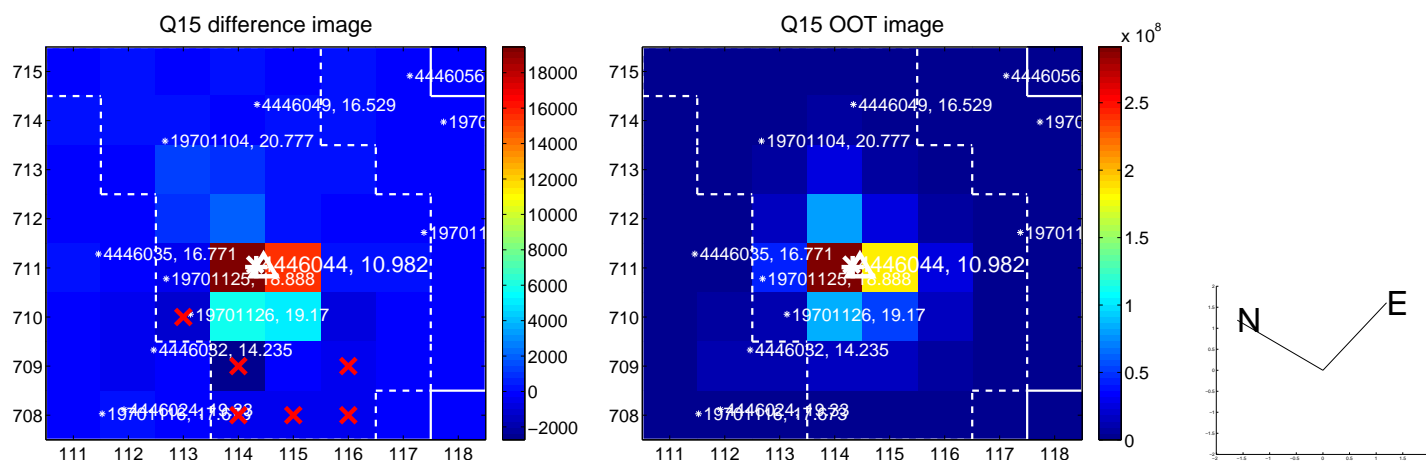
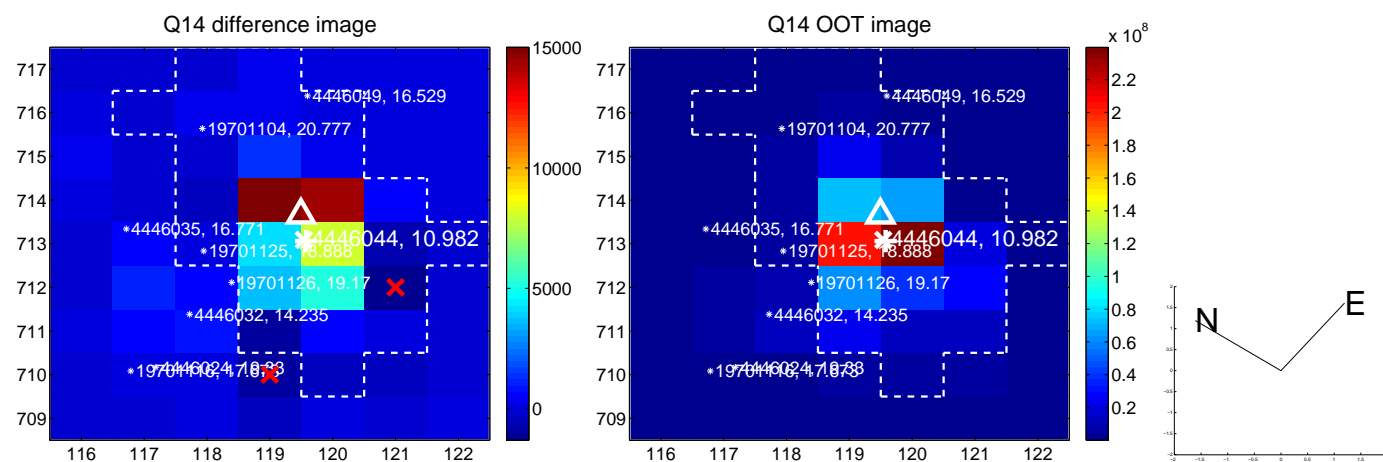
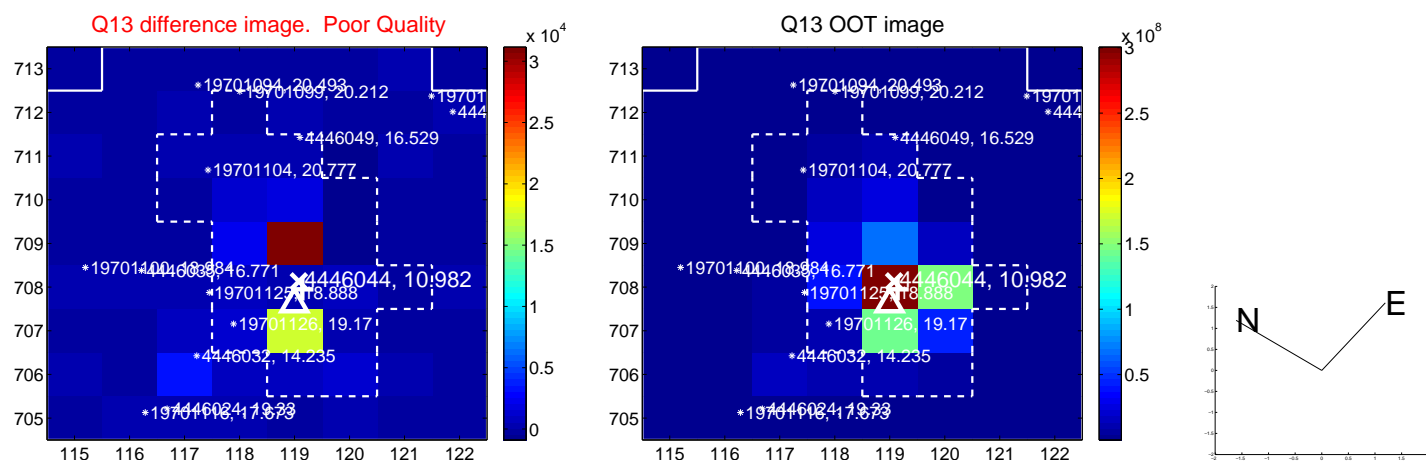
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



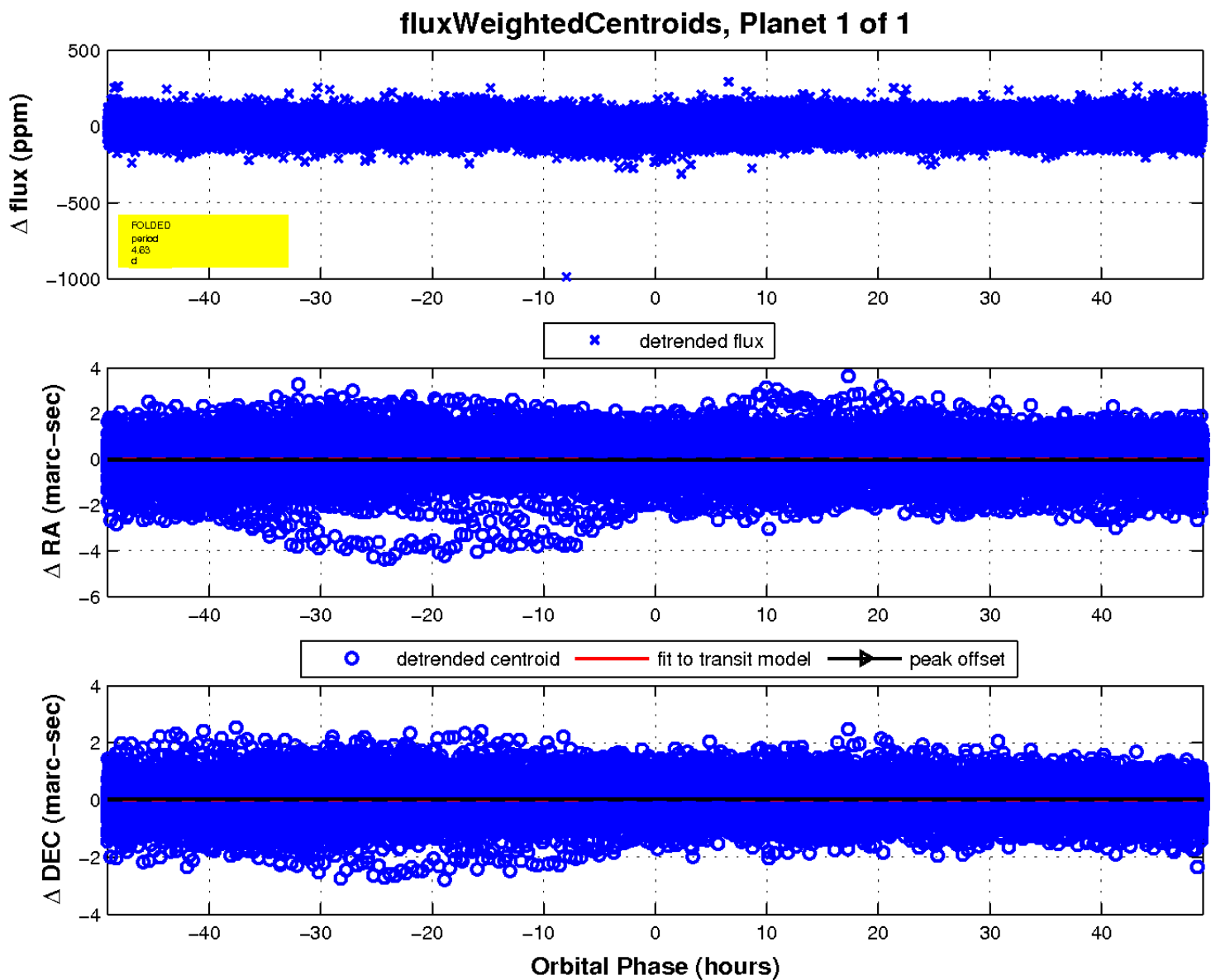
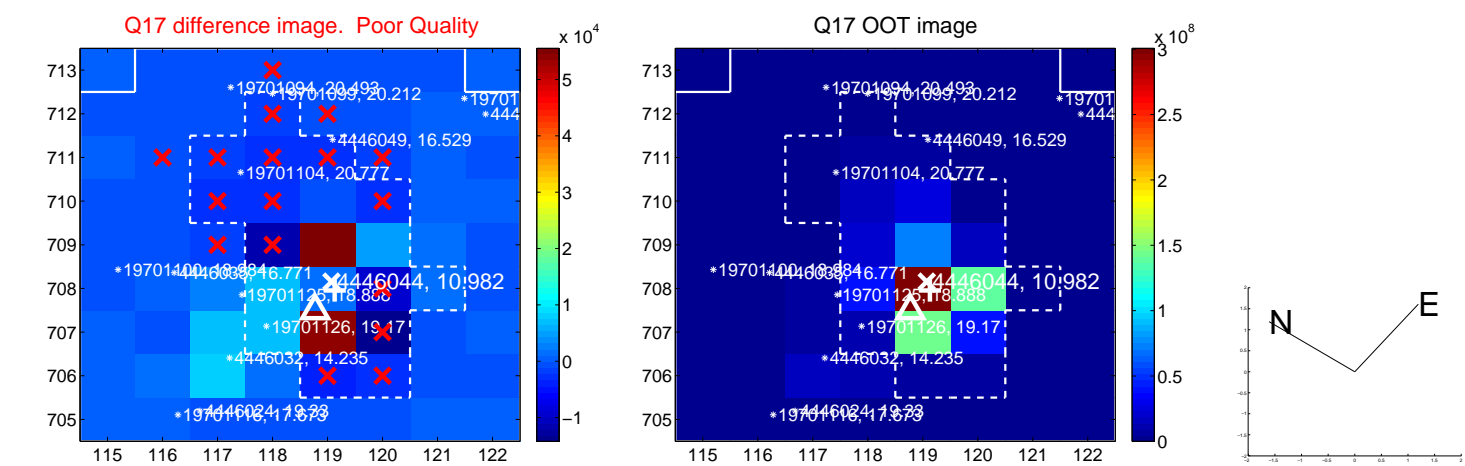
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

