

KIC 008144096

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})
008144096-01	OBS	No	32.725124	160.490515	79.0	44.874	8.2	14.3	3.12	6628	2.92	310.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008144096-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

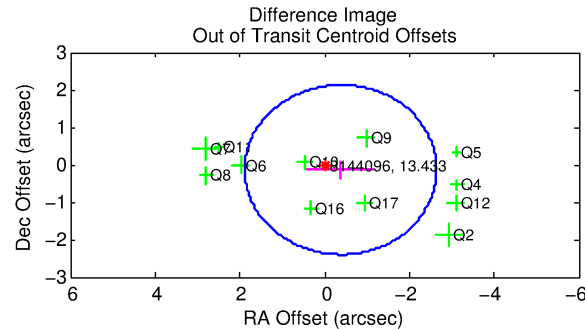
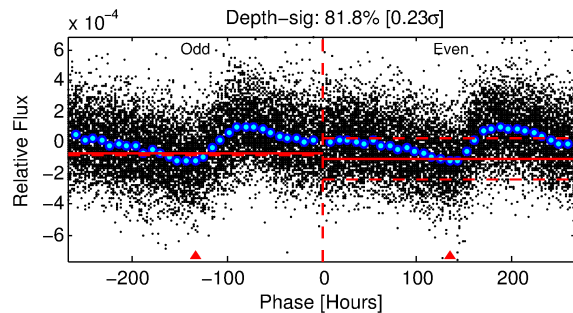
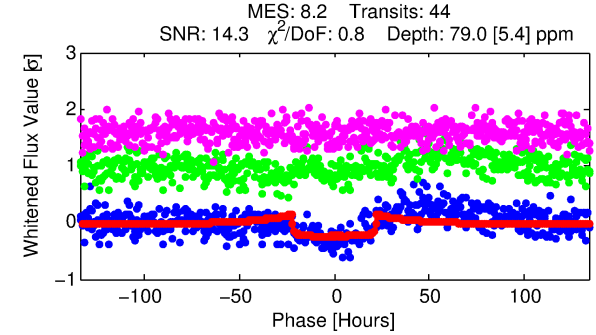
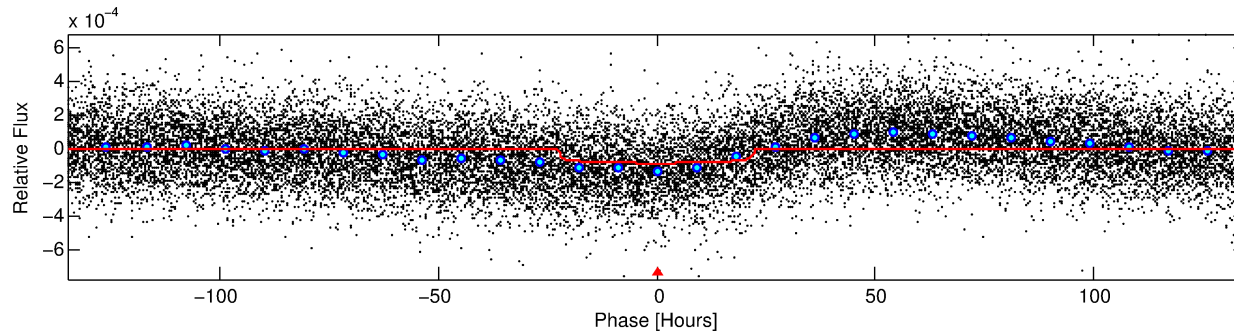
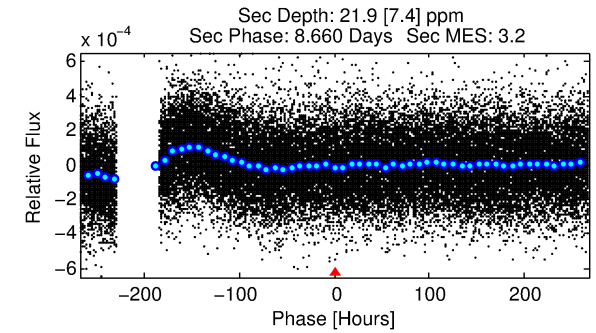
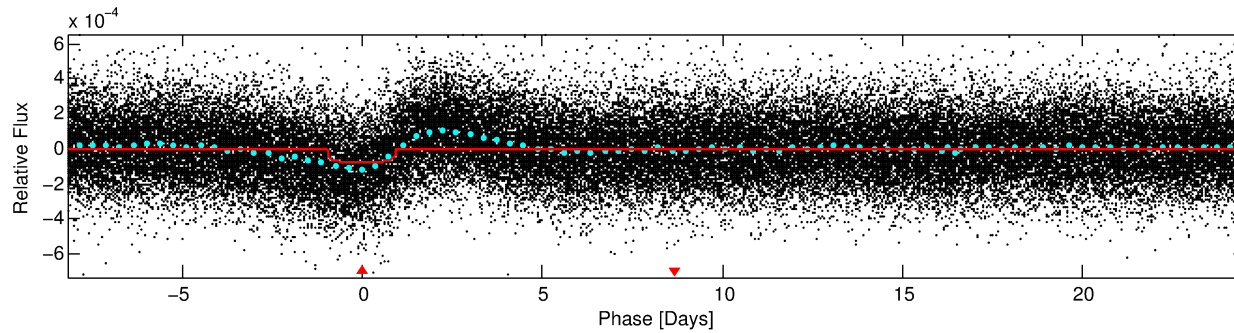
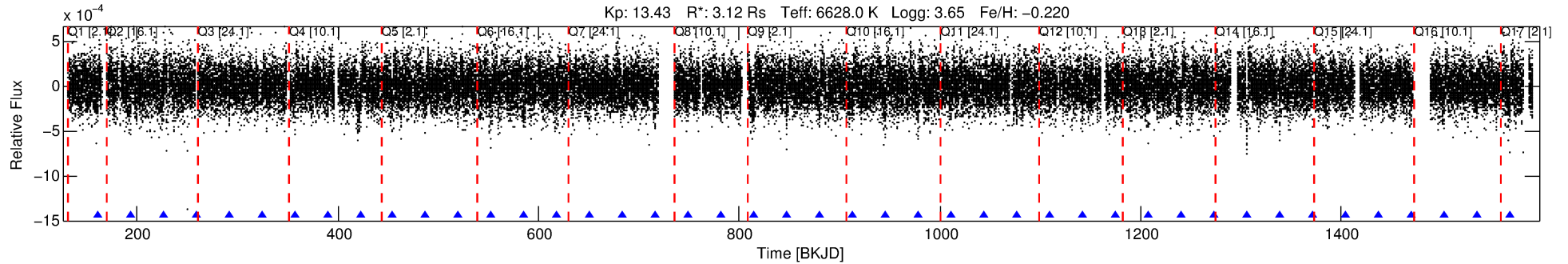
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008144096-01

No Significant Match Found

DV One-Page Summary

KIC: 8144096 Candidate: 1 of 1 Period: 32.725 d



DV Fit Results:

Period = 32.72512 [0.00081] d
Epoch = 160.4905 [0.0200] BKJD
Rp/R* = 0.0086 [0.0008]
a/R* = 4.54 [2.09]
b = 0.61 [0.50]
Seff = 310.26 [172.47]
Teq = 1070 [149] K
Rp = 2.92 [1.15] Re
a = 0.2332 [0.0817] AU
Ag = 76.99 [51.25] [1.48σ]
Teffp = 4901 [494] K [7.42σ]

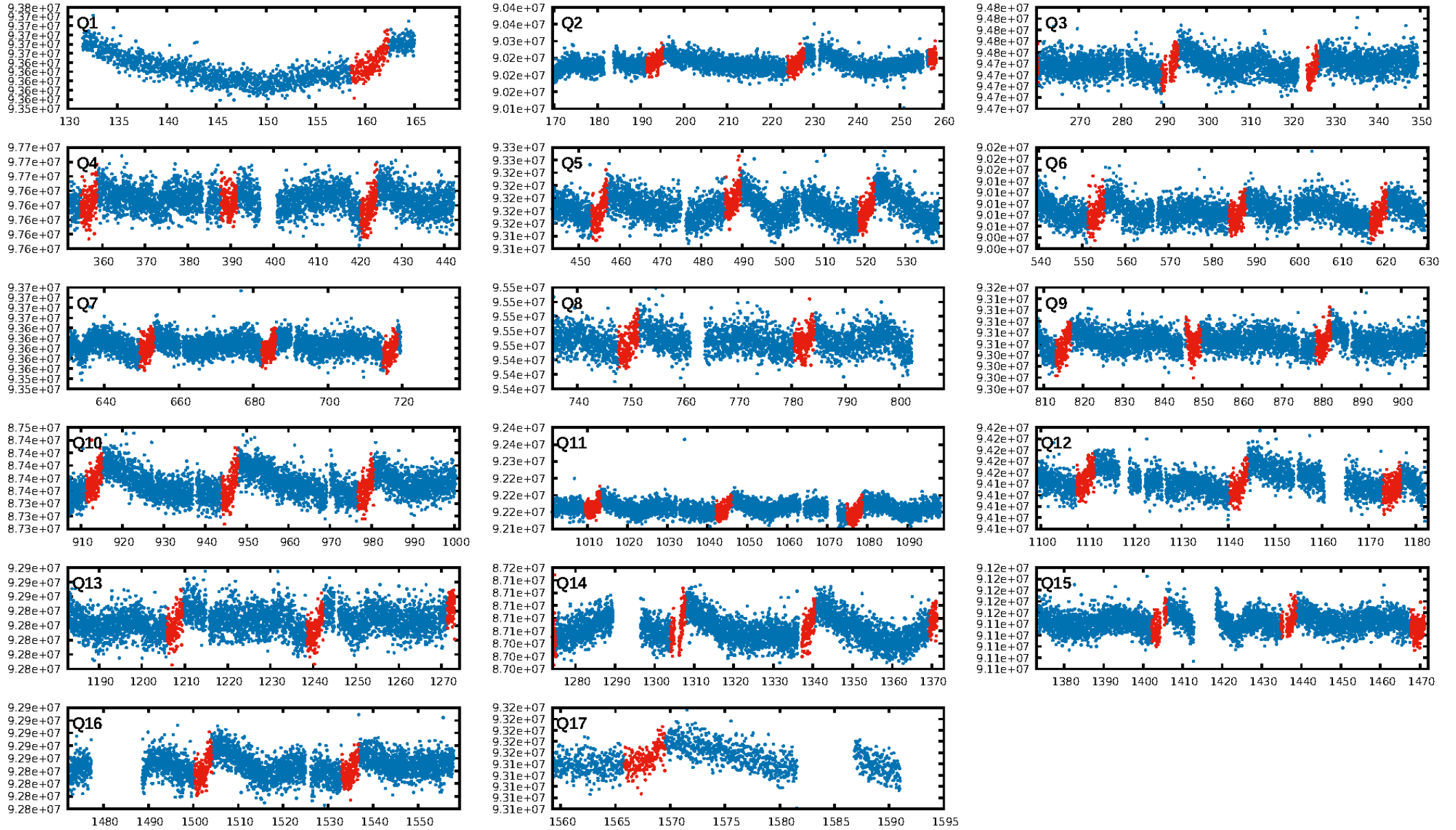
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 88.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.65e-16
RollingBand-fgt: 1.00 [42/42]
GhostDiagnostic-chr: 0.51
Centroid-sig: 0.4%
Centroid-so: 1.411 arcsec [2.01σ]
OotOffset-rm: 0.402 arcsec [0.53σ]
KicOffset-rm: 0.315 arcsec [0.42σ]
OotOffset-st: 3/2/4/3 [12]
KicOffset-st: 3/2/4/3 [12]
DiffImageQuality-fgm: 0.92 [11/12]
DiffImageOverlap-fno: 1.00 [13/13]

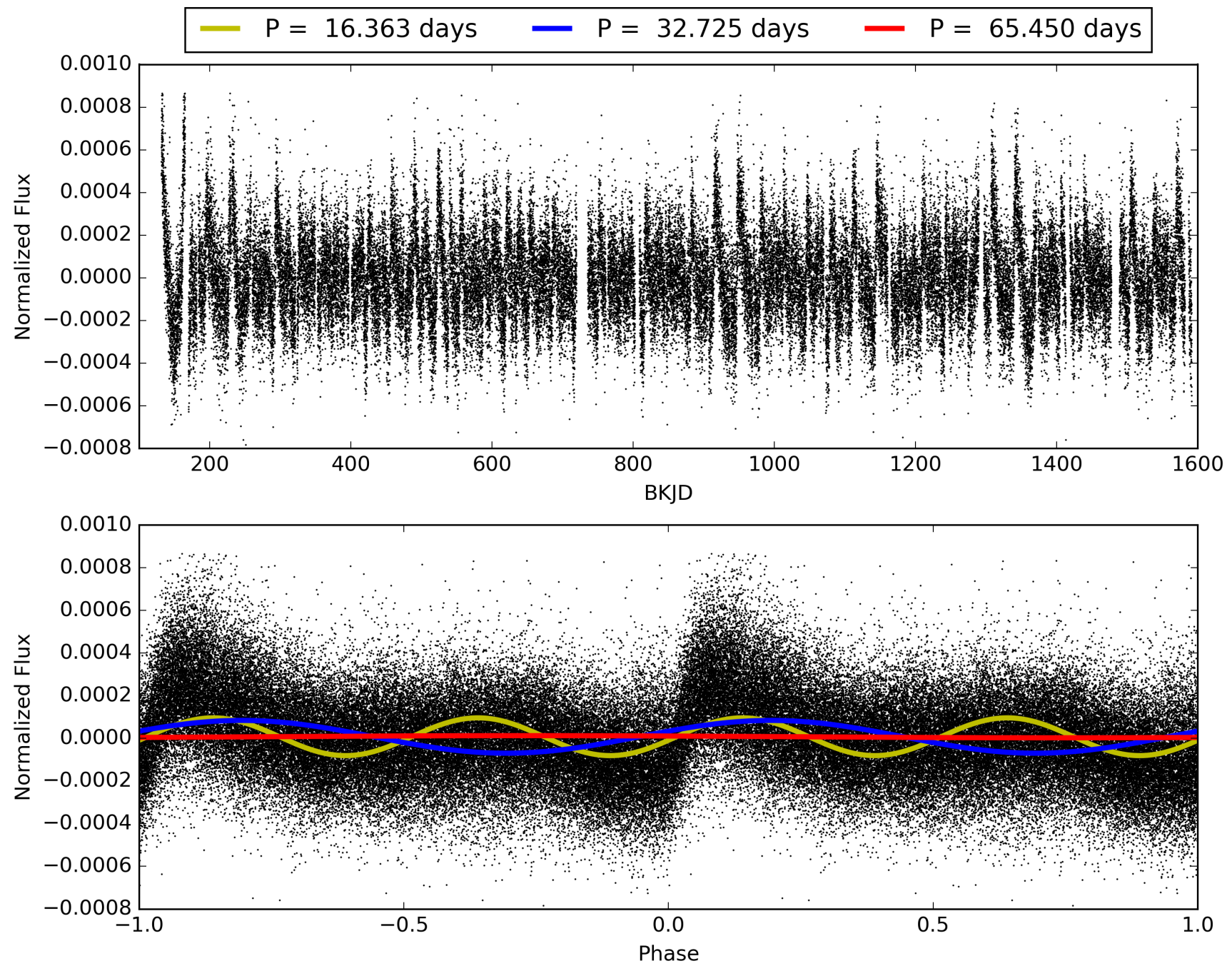
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:16:02 Z

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

TCE 008144096-01, PDC Light Curves

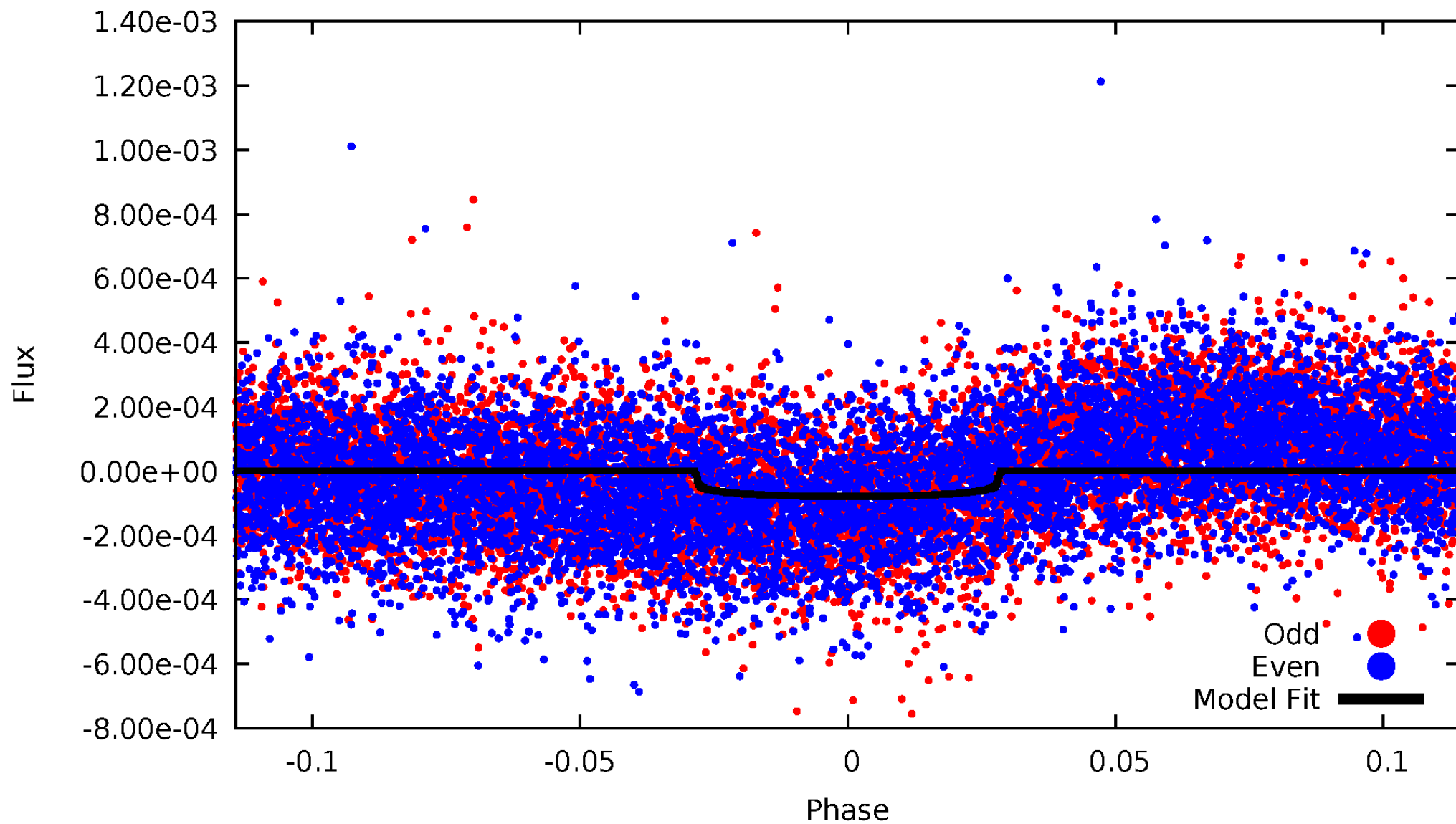


TCE 008144096-01



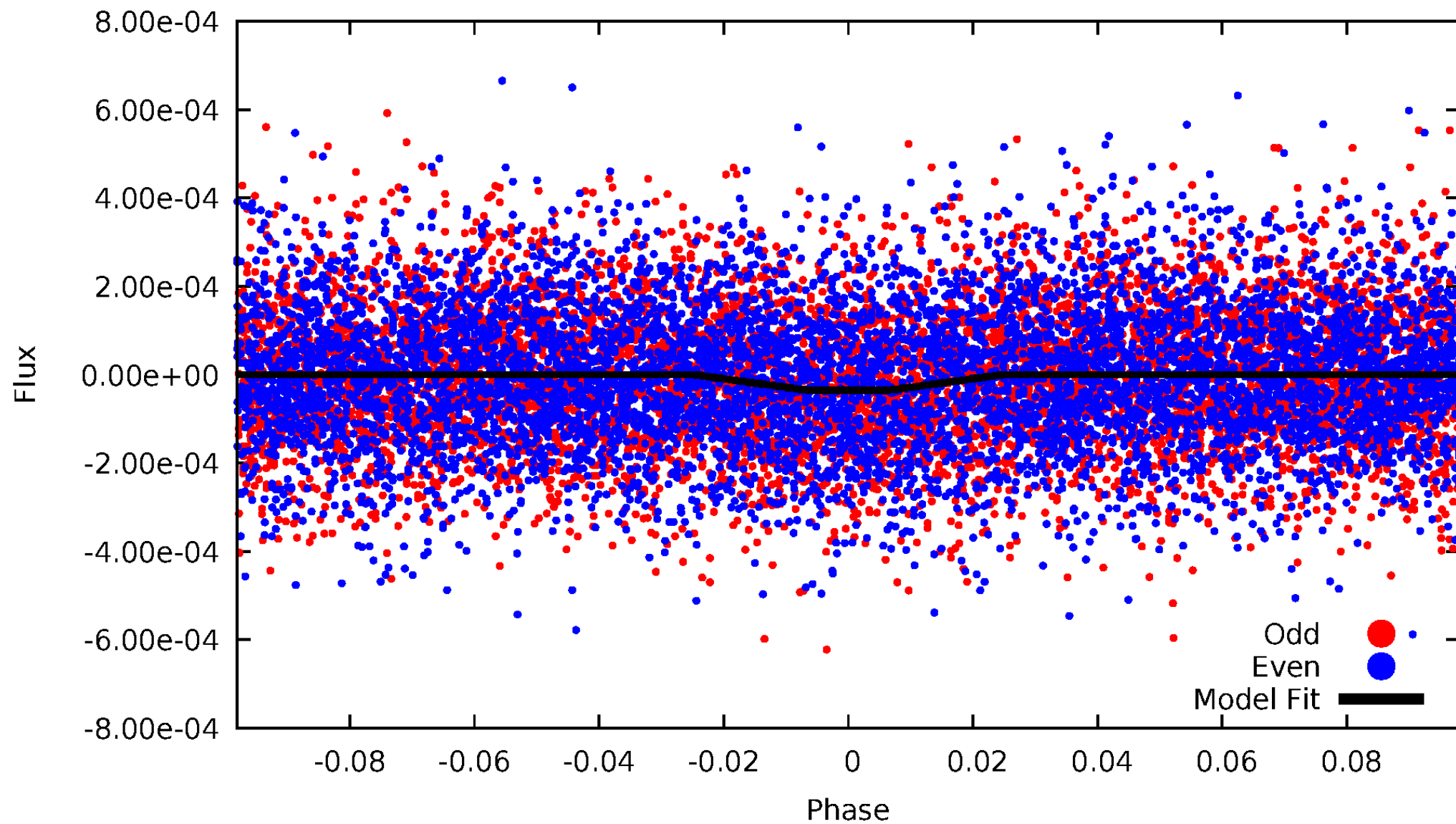
DV Odd/Even

TCE 008144096-01

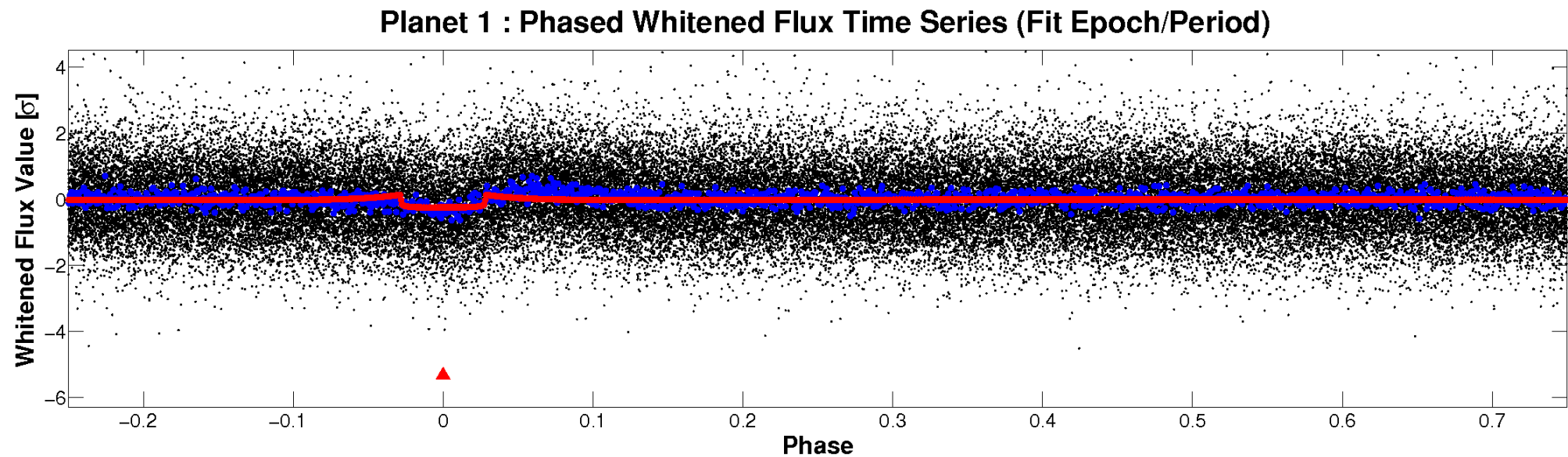
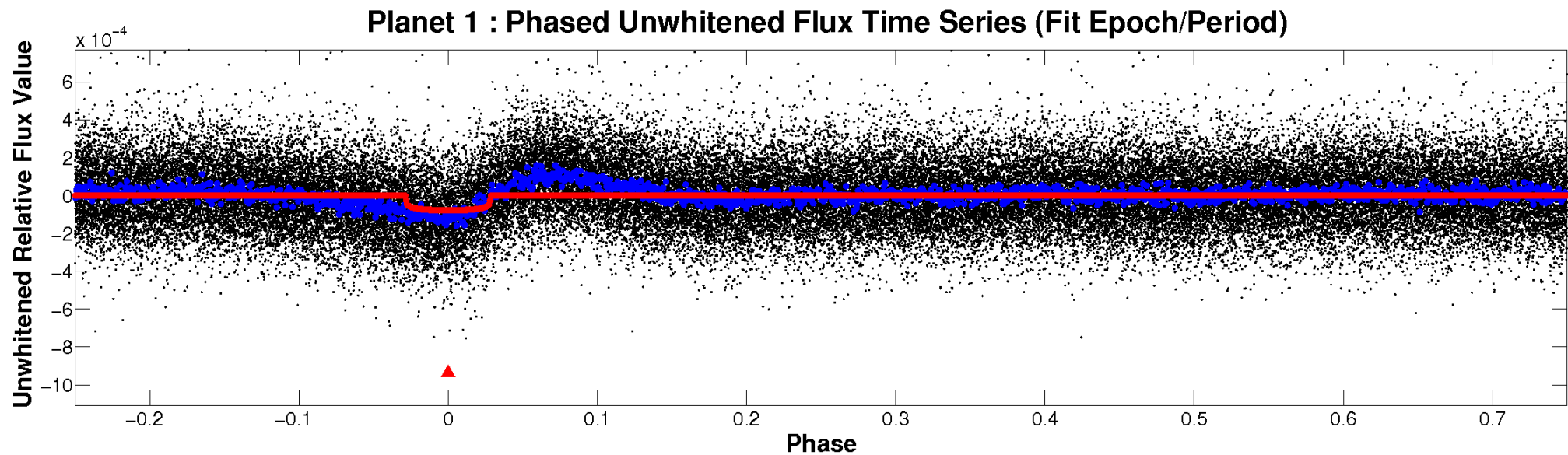


ALT Odd/Even

TCE 008144096-01

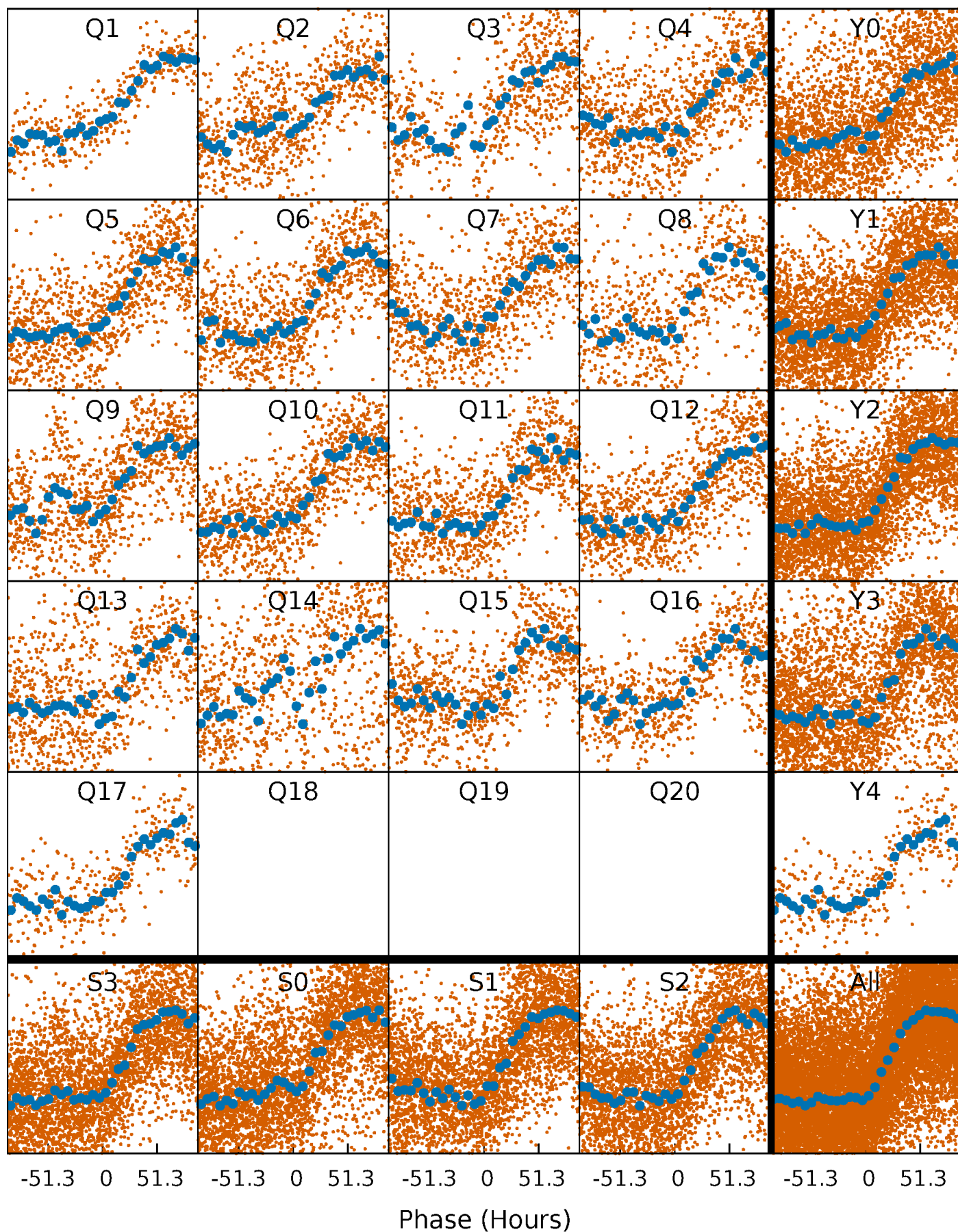


Non-Whitened Vs. Whitened Light Curve



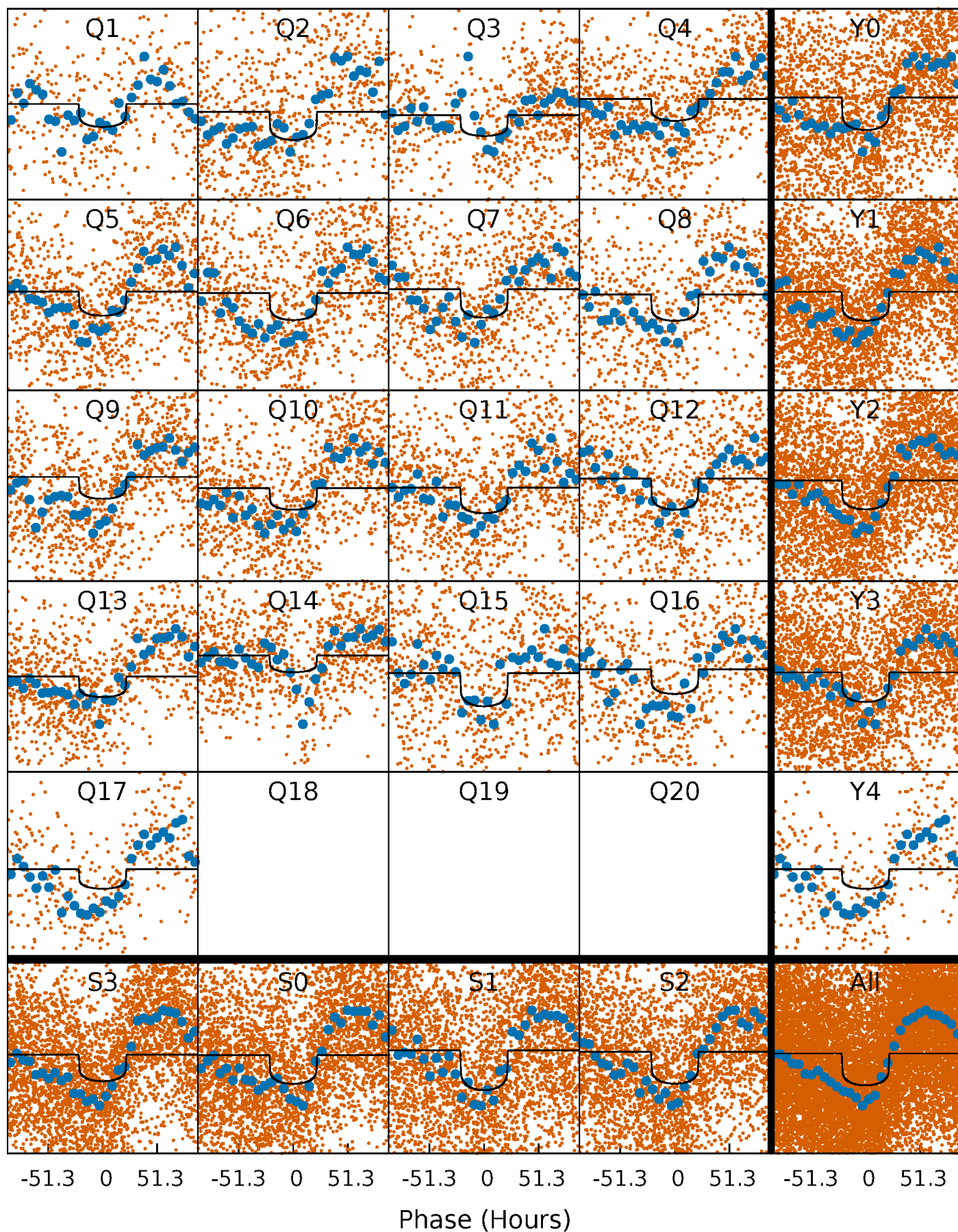
PDC Quarter-Phased Transit Curves

TCE 008144096-01 P= 32.725124 Days $T_0=160.490515$ (BKJD)



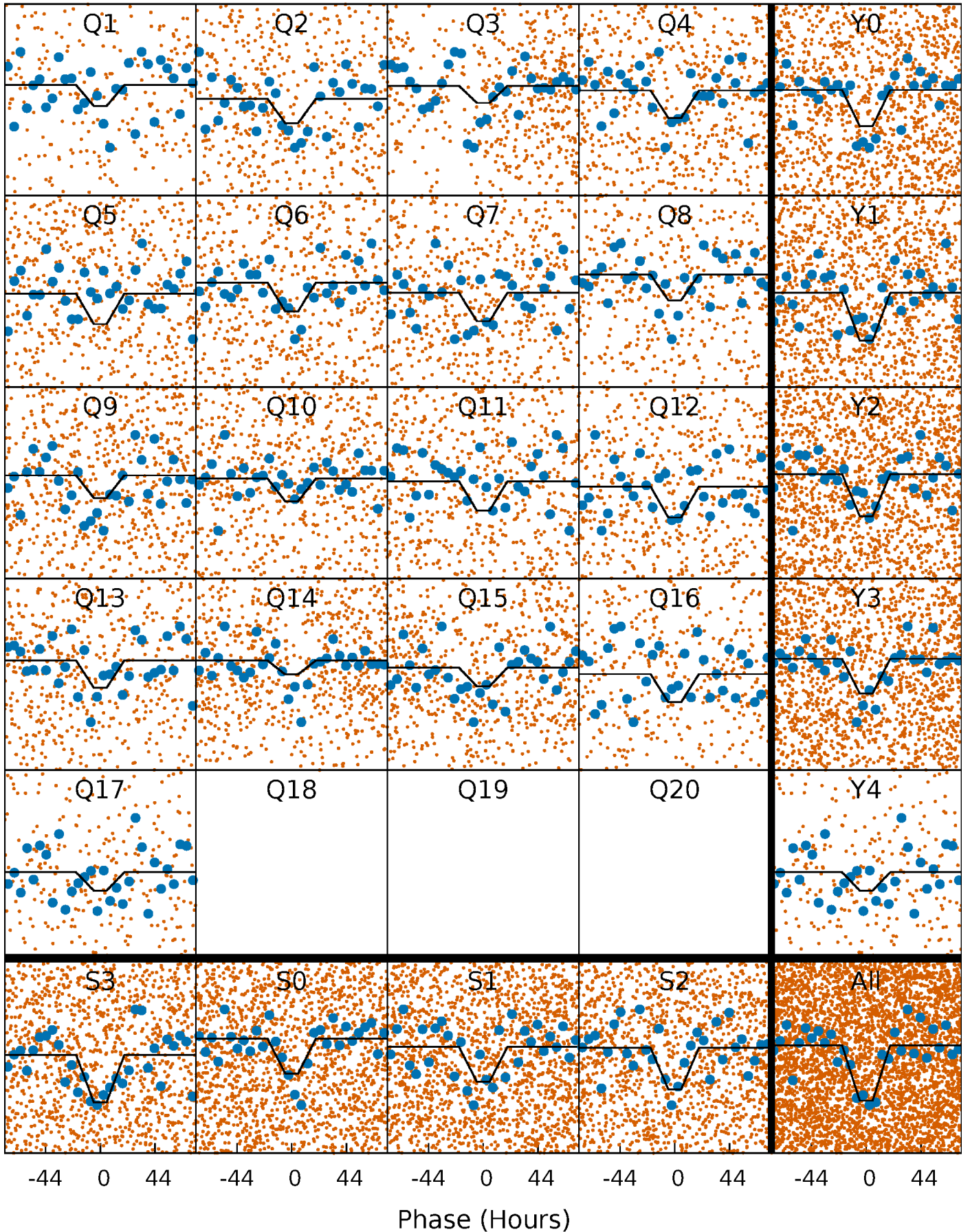
DV Quarter-Phased Transit Curves

TCE 008144096-01 P= 32.725124 Days $T_0=160.490515$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

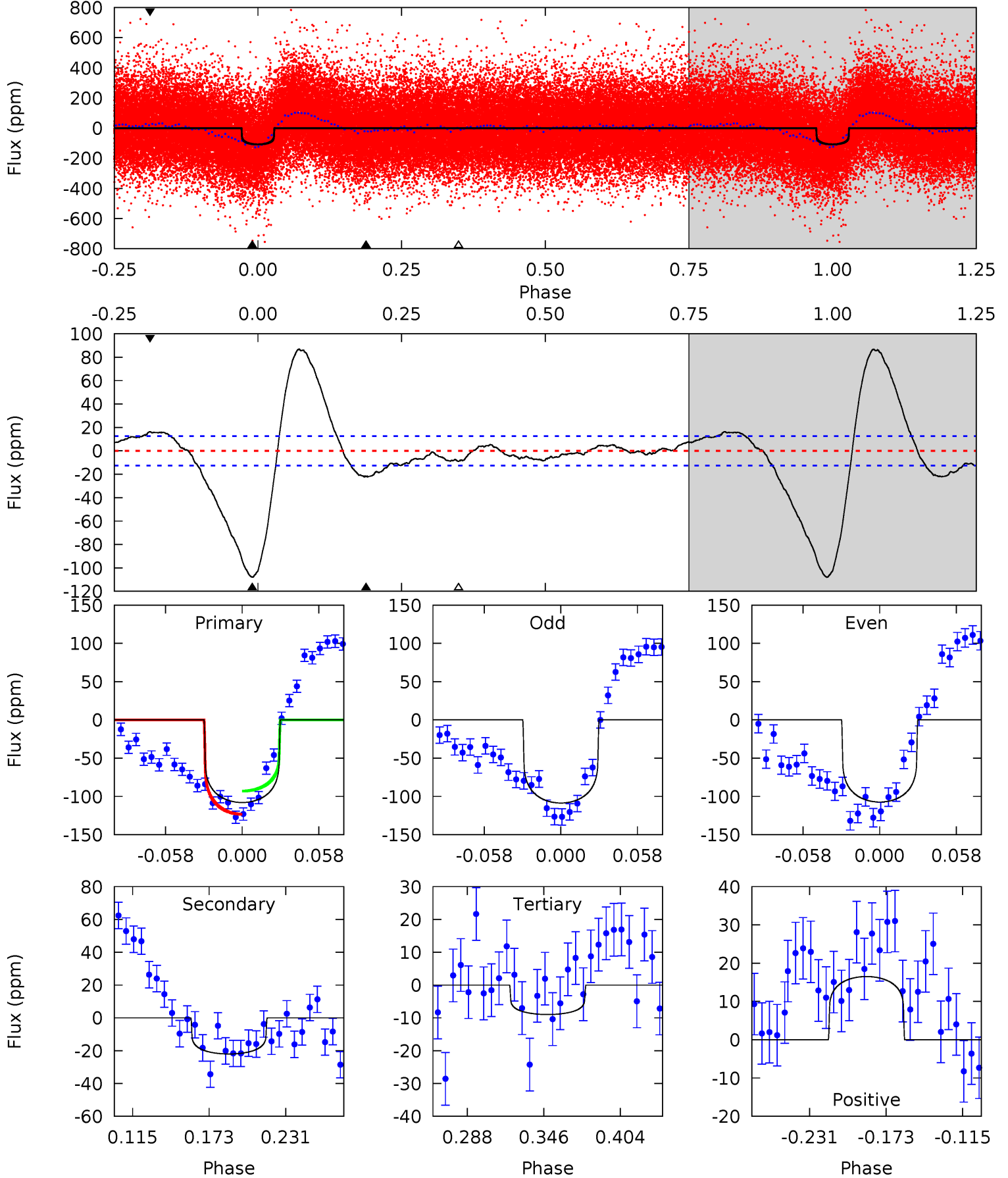
TCE 008144096-01 P= 32.724371 Days $T_0=160.651965$ (BKJD)



DV Model-Shift Uniqueness Test

008144096-01, P = 32.725124 Days, E = 127.765391 Days

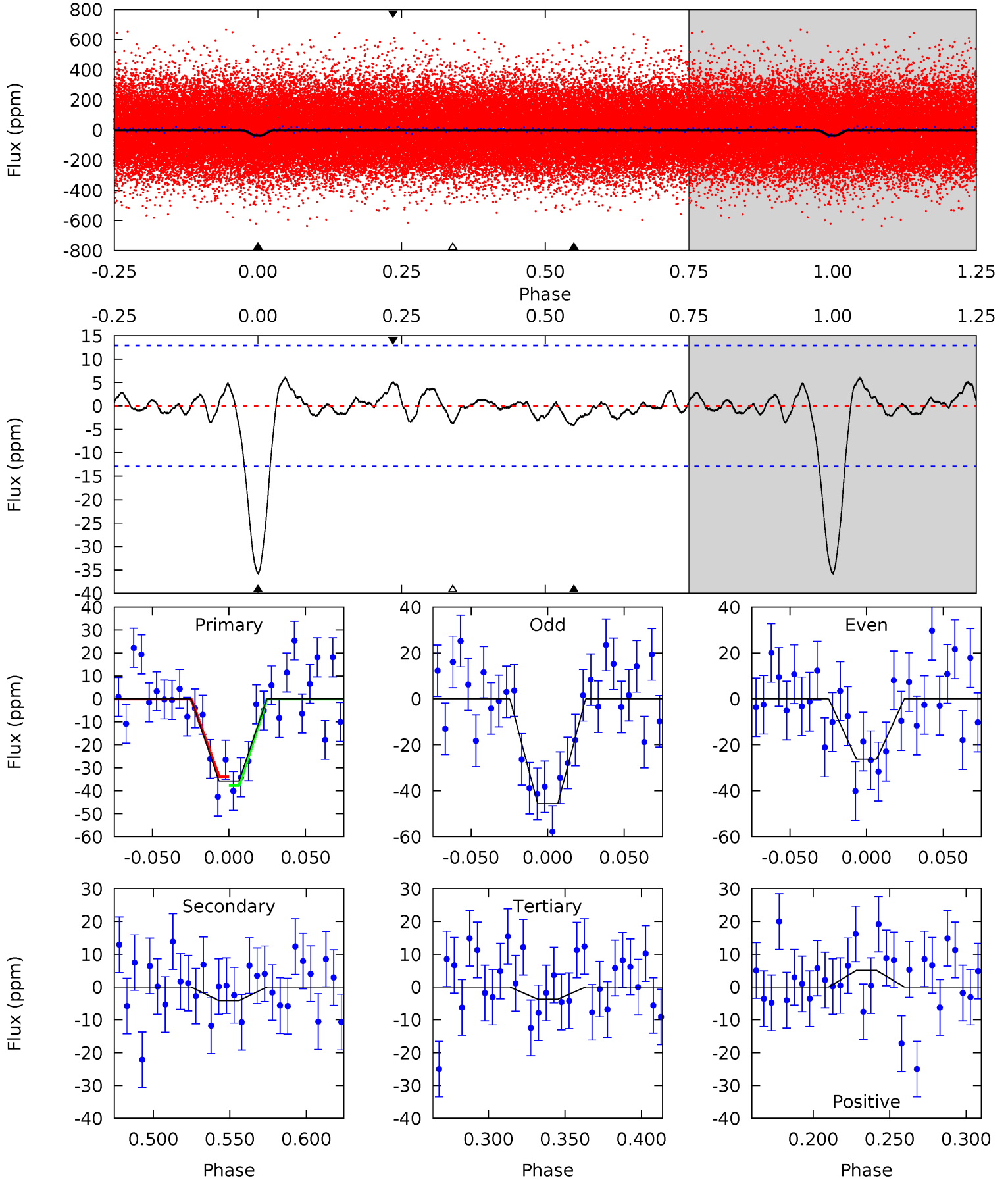
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.1	8.18	3.33	6.13	4.68	1.90	8.83	36.7	33.9	4.84	2.05	0.24	1.08	0.45	5.61



Alt Model-Shift Uniqueness Test

008144096-01, P = 32.724371 Days, E = 127.927594 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	1.51	1.35	1.86	4.71	1.96	0.66	11.7	11.2	0.16	-0.35	3.53	1.10	0.14	0.70



Stellar Parameters For KIC 008144096

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6628^{+165}_{-198}	$3.647^{+0.312}_{-0.078}$	$-0.220^{+0.300}_{-0.250}$	$3.124^{+0.399}_{-1.198}$	$1.578^{+0.241}_{-0.321}$	$0.073^{+0.163}_{-0.019}$
	+2%/-3%	+9%/-2%	+136%/-114%	+13%/-38%	+15%/-20%	+224%/-26%
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 008144096-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-22 ± 3	$2.79^{+0.47}_{-0.49}$	1468^{+74}_{-122}	4989^{+272}_{-252}	87^{+40}_{-23}
Alt.	-4 ± 3	$1.92^{+0.36}_{-0.44}$	1463^{+85}_{-122}	4132^{+487}_{-696}	34^{+31}_{-23}

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 $A_{\text{obs}} \gg 1.0$

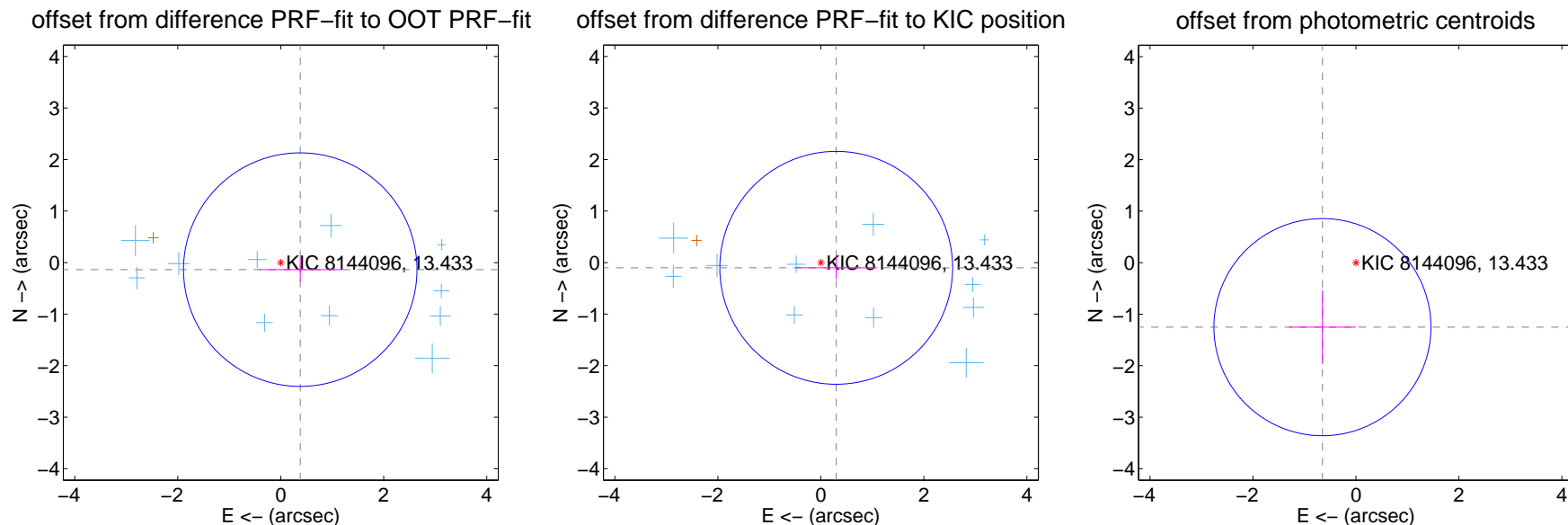
DV Centroid Data

Supplemental centroid analysis for 008144096-01. Kepler magnitude: 13.43. Transit SNR 14.25

There are 11 quarters with good PRF difference image offsets

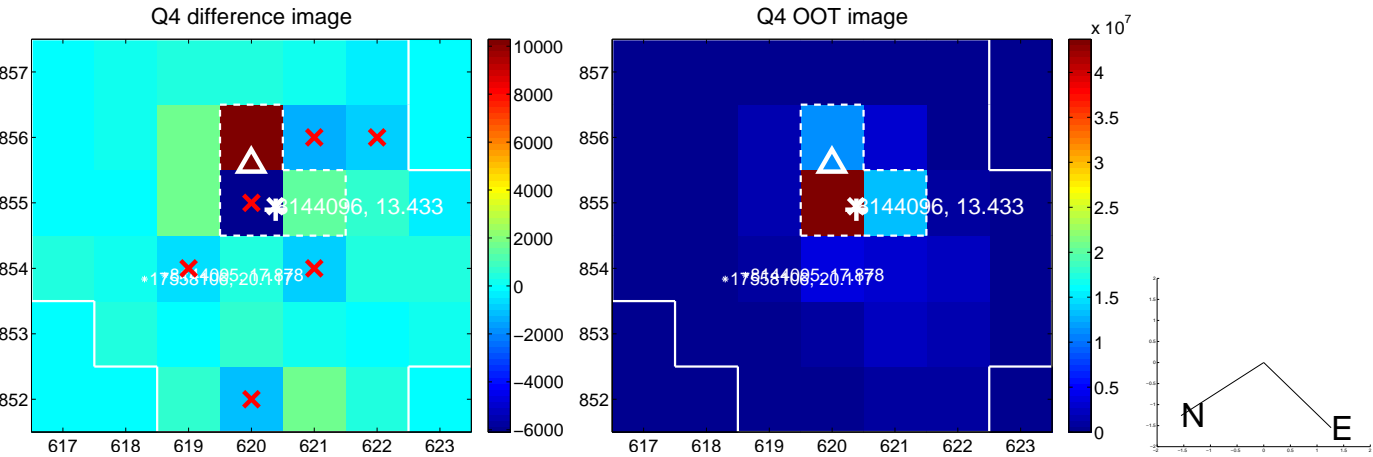
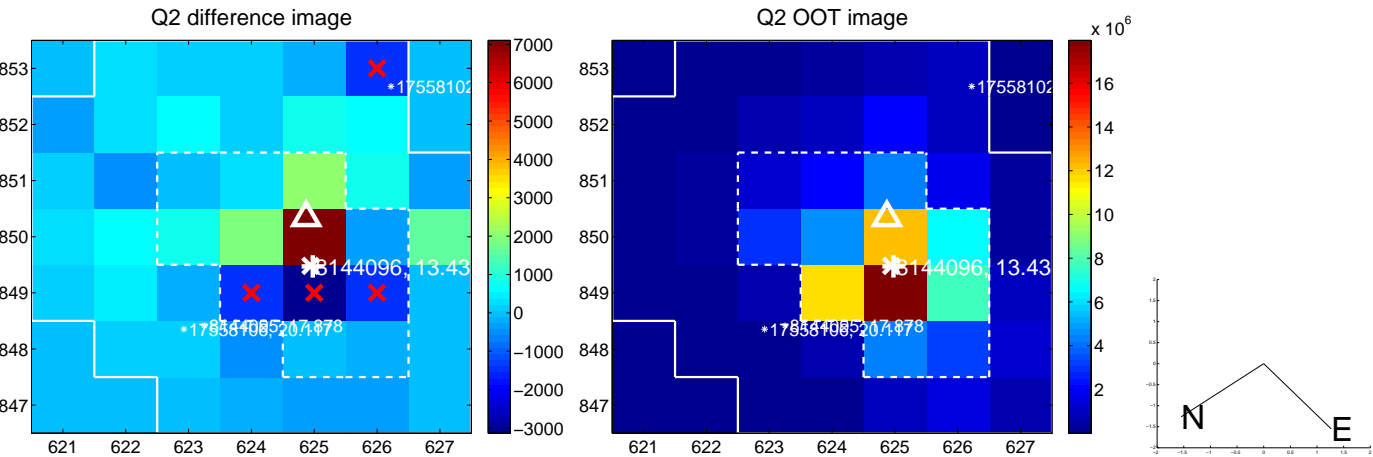
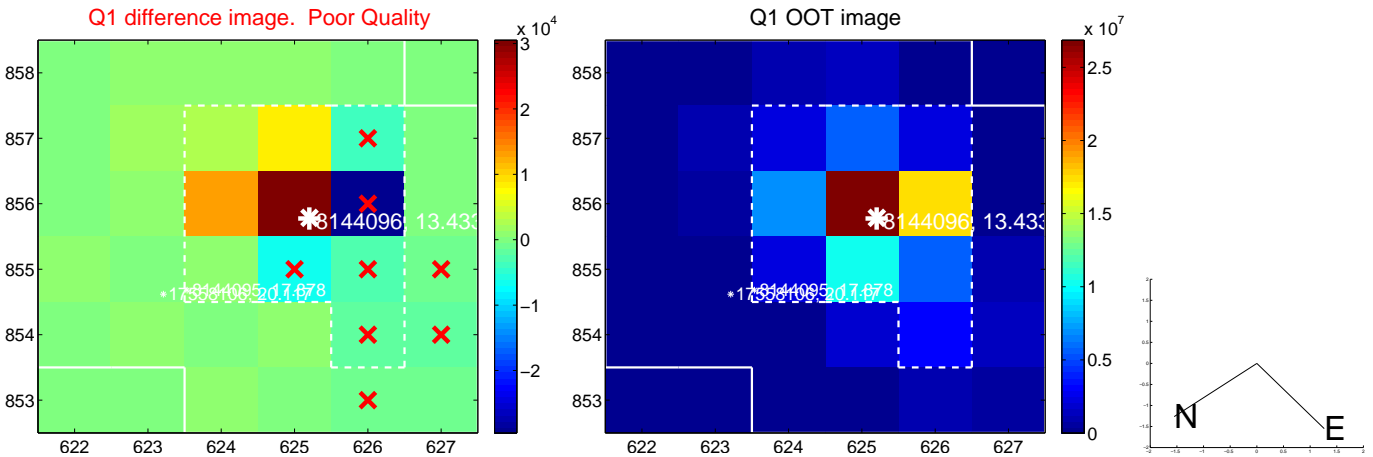
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.402 ± 0.755	0.53	-0.378 ± 0.799	-0.137 ± 0.228
PRF-fit source offset from KIC position	0.315 ± 0.753	0.42	-0.298 ± 0.792	-0.102 ± 0.221
photometric centroid source offset	1.41 ± 0.70	2.01	0.65 ± 0.65	-1.25 ± 0.72

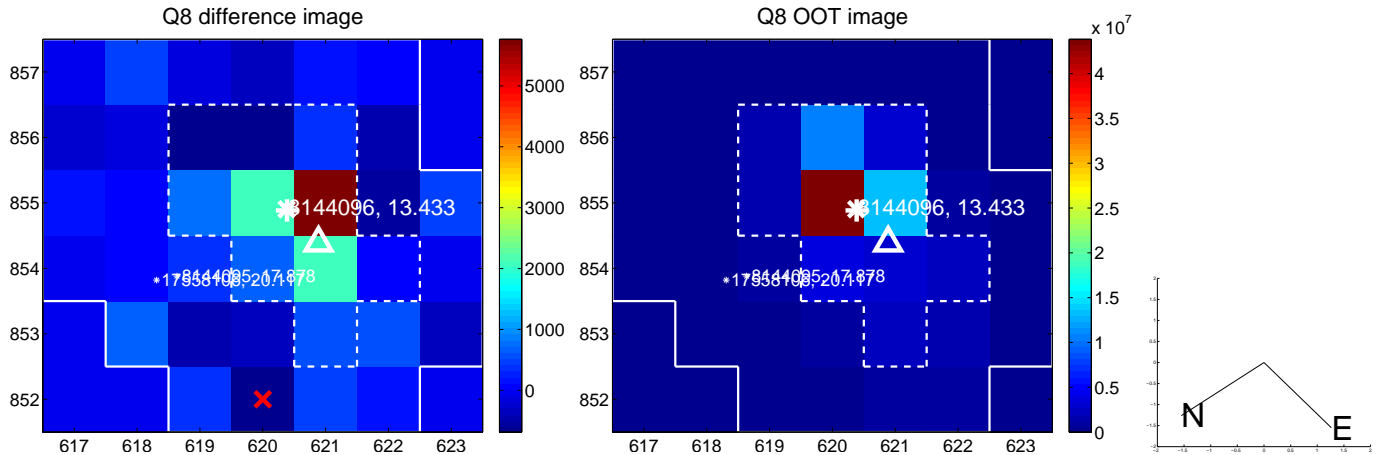
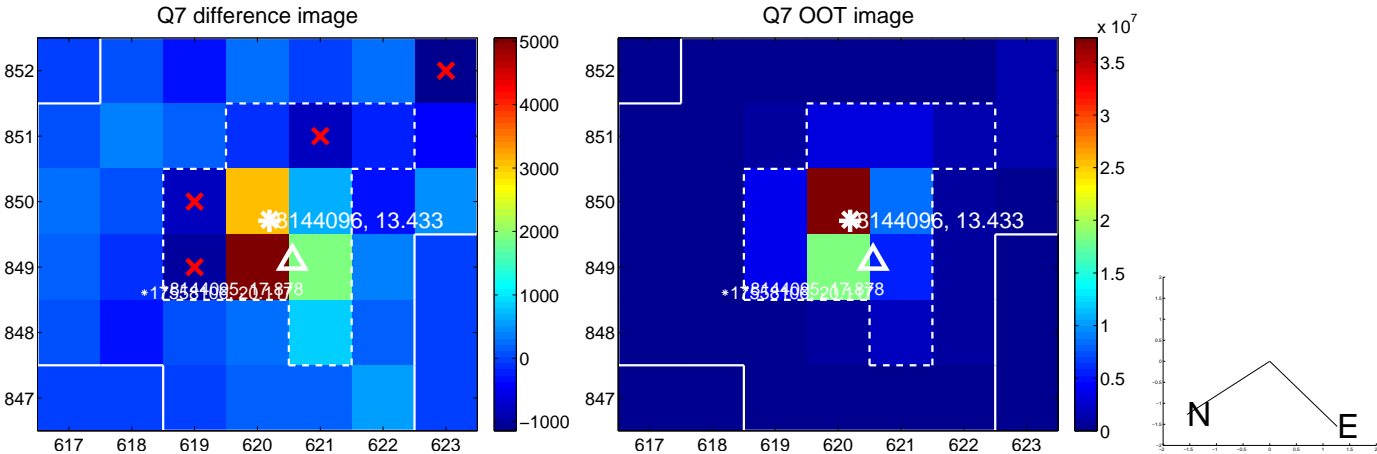
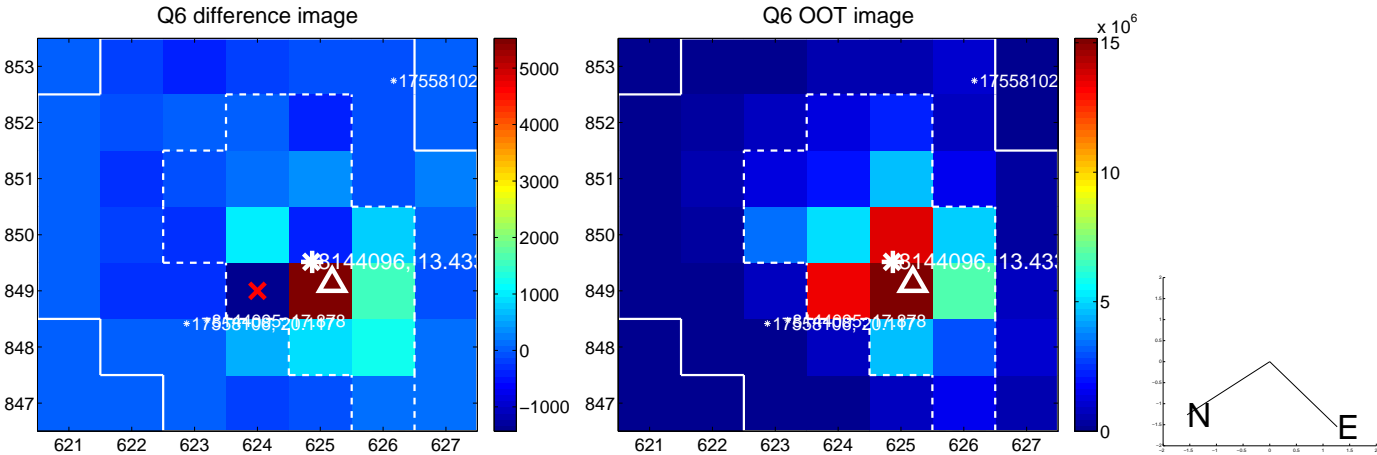
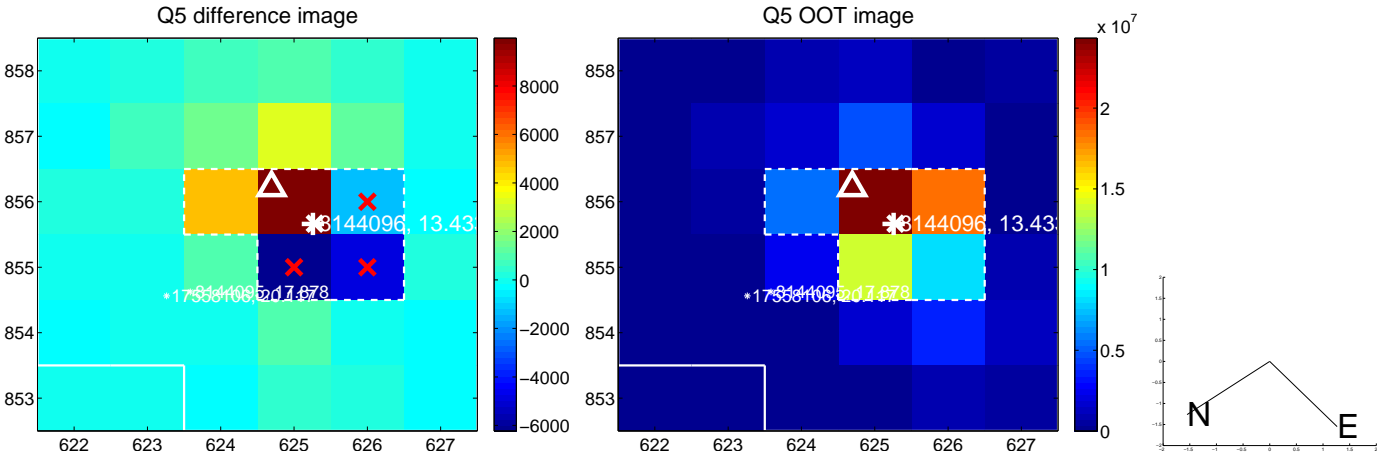


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

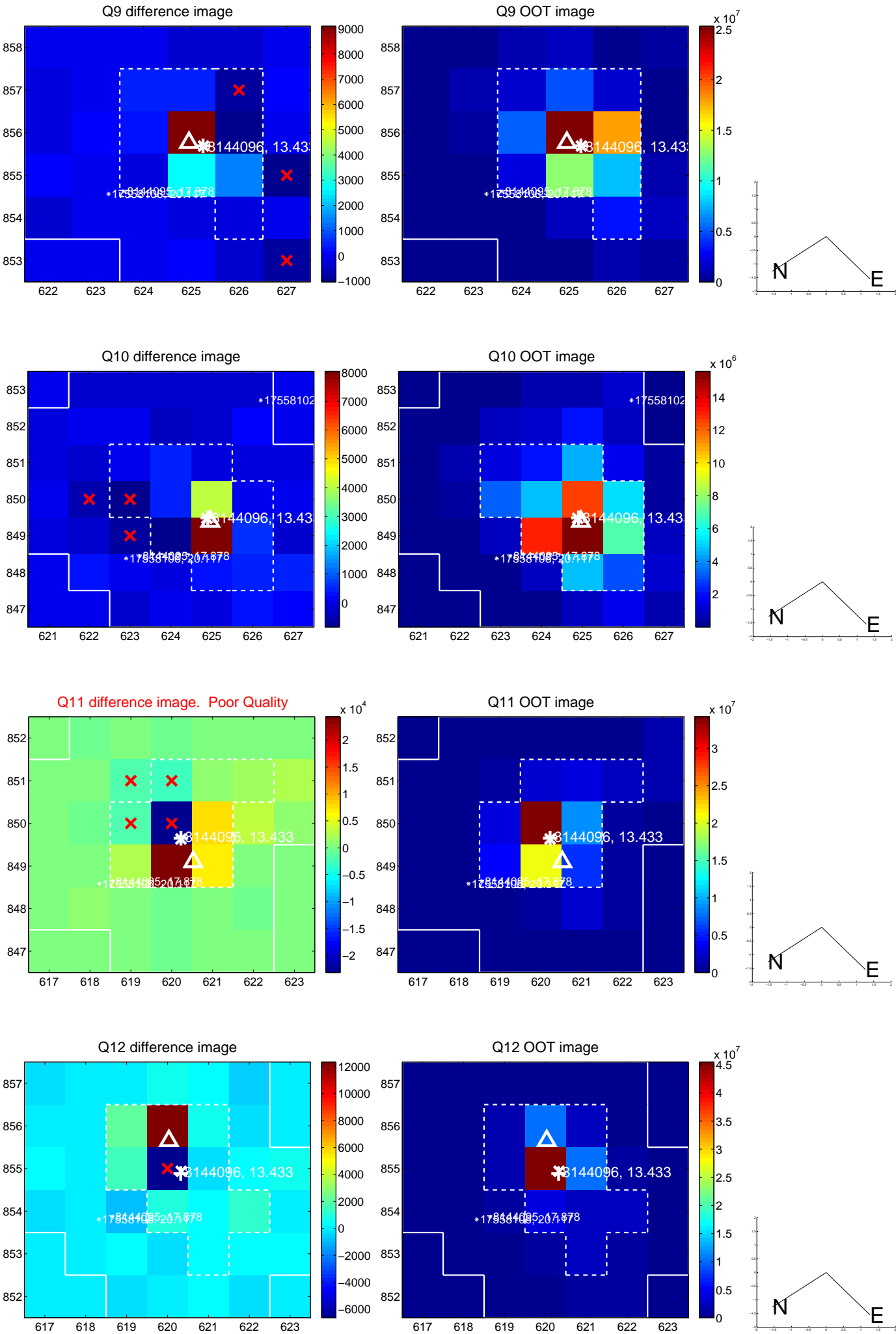
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



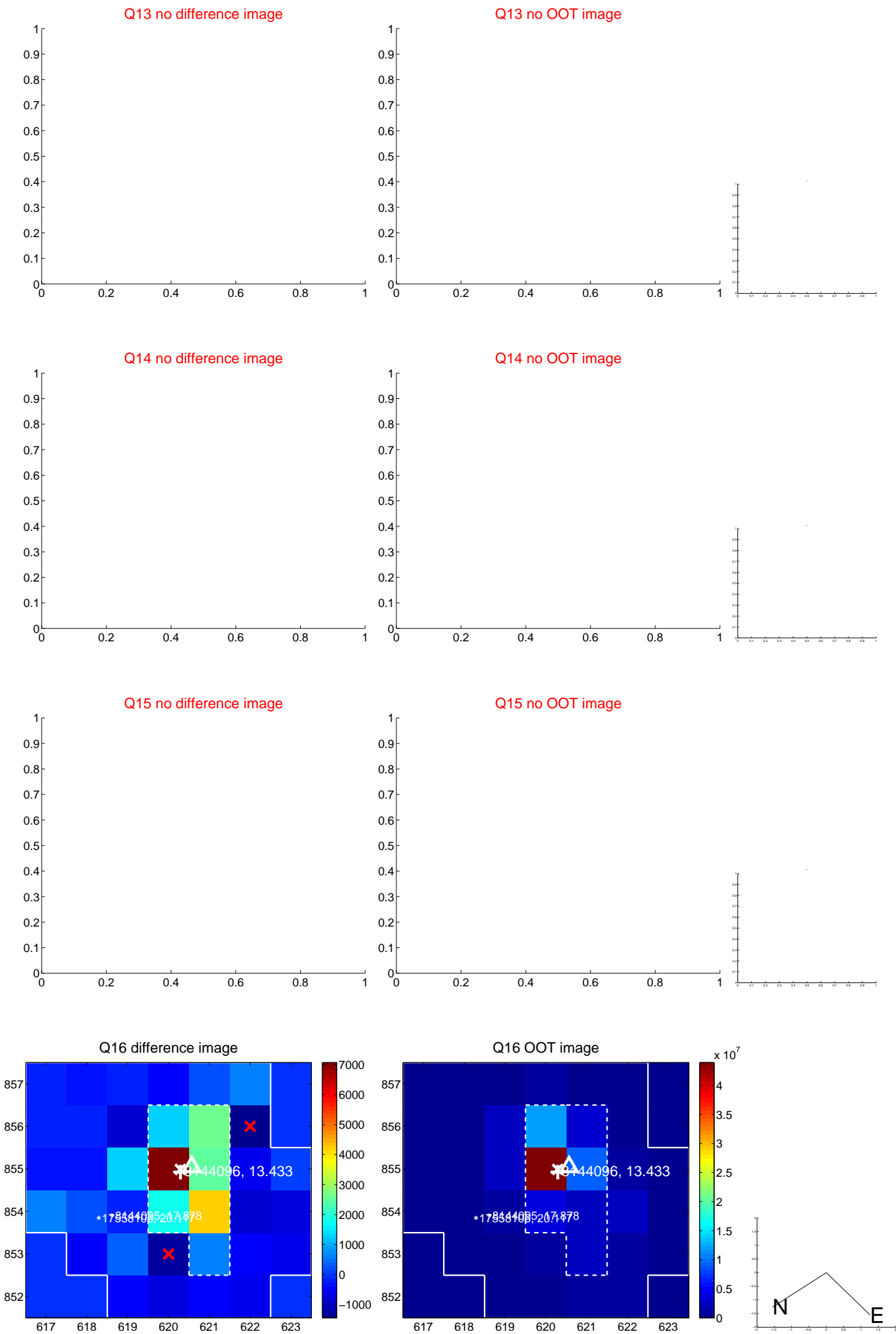
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

