

KIC 005004705

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})
005004705-01	OBS	No	1.800674	132.121531	25.8	5.595	8.5	7.4	2.48	6840	1.56	10430.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005004705-01	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.

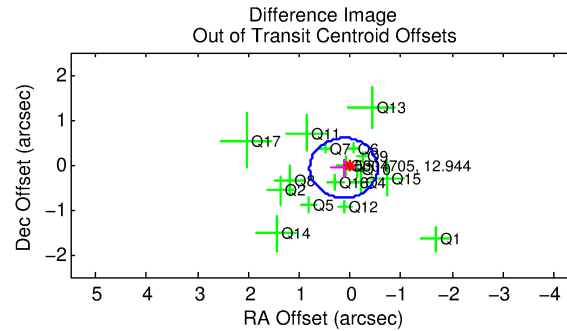
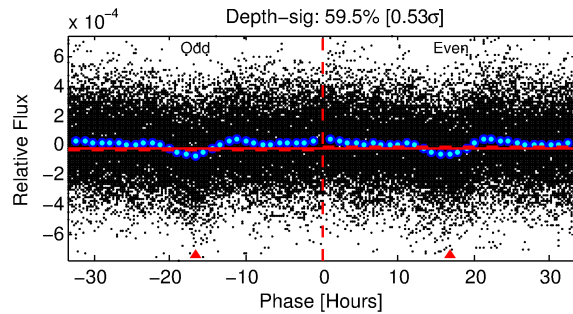
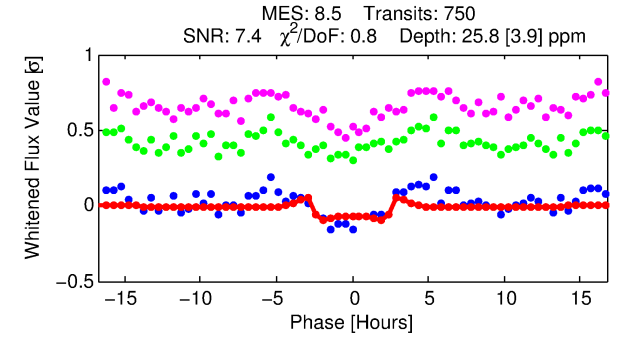
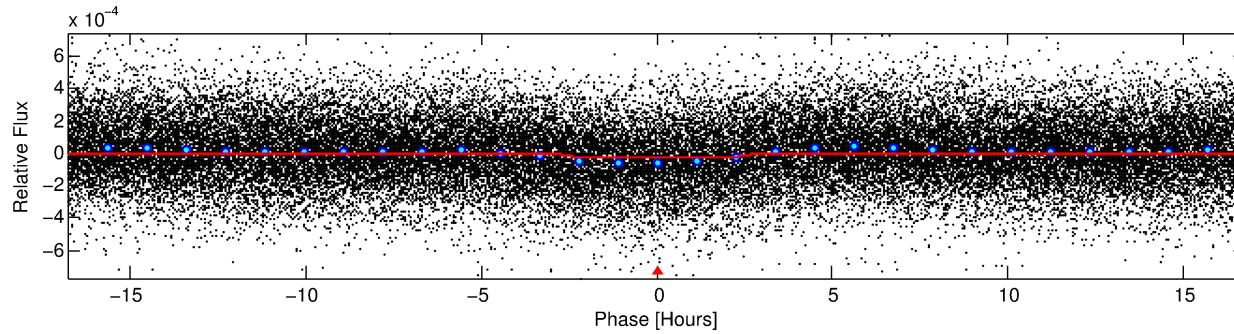
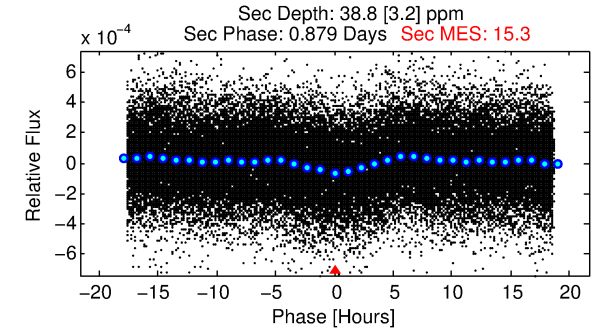
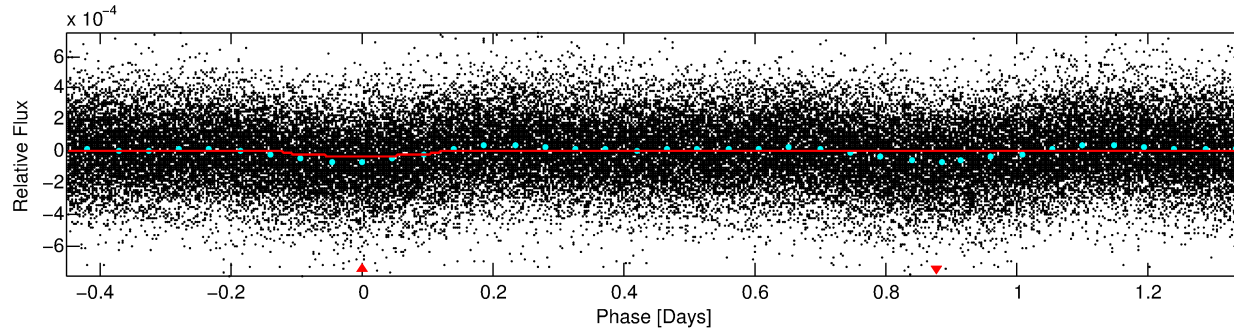
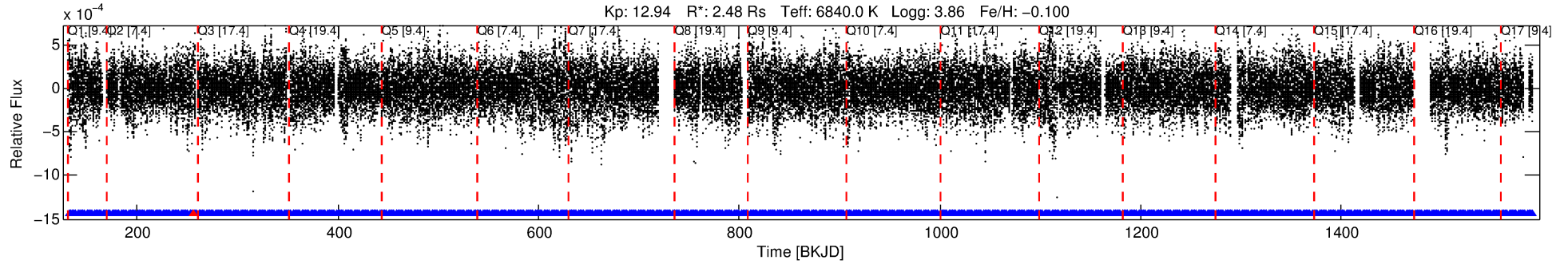
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005004705-01

No Significant Match Found

DV One-Page Summary

KIC: 5004705 Candidate: 1 of 1 Period: 1.801 d



DV Fit Results:

Period = 1.80067 [0.00002] d
Epoch = 132.1215 [0.0037] BKJD
Rp/R* = 0.0058 [0.0008]
a/R* = 1.25 [0.33]
b = 0.95 [0.07]
Seff = 10430.13 [4817.26]
Teq = 2577 [298] K
Rp = 1.56 [0.57] Re
a = 0.0340 [0.0099] AU
Ag = 10.17 [5.43] [1.69σ]
Teffp = 7115 [597] K [6.80σ]

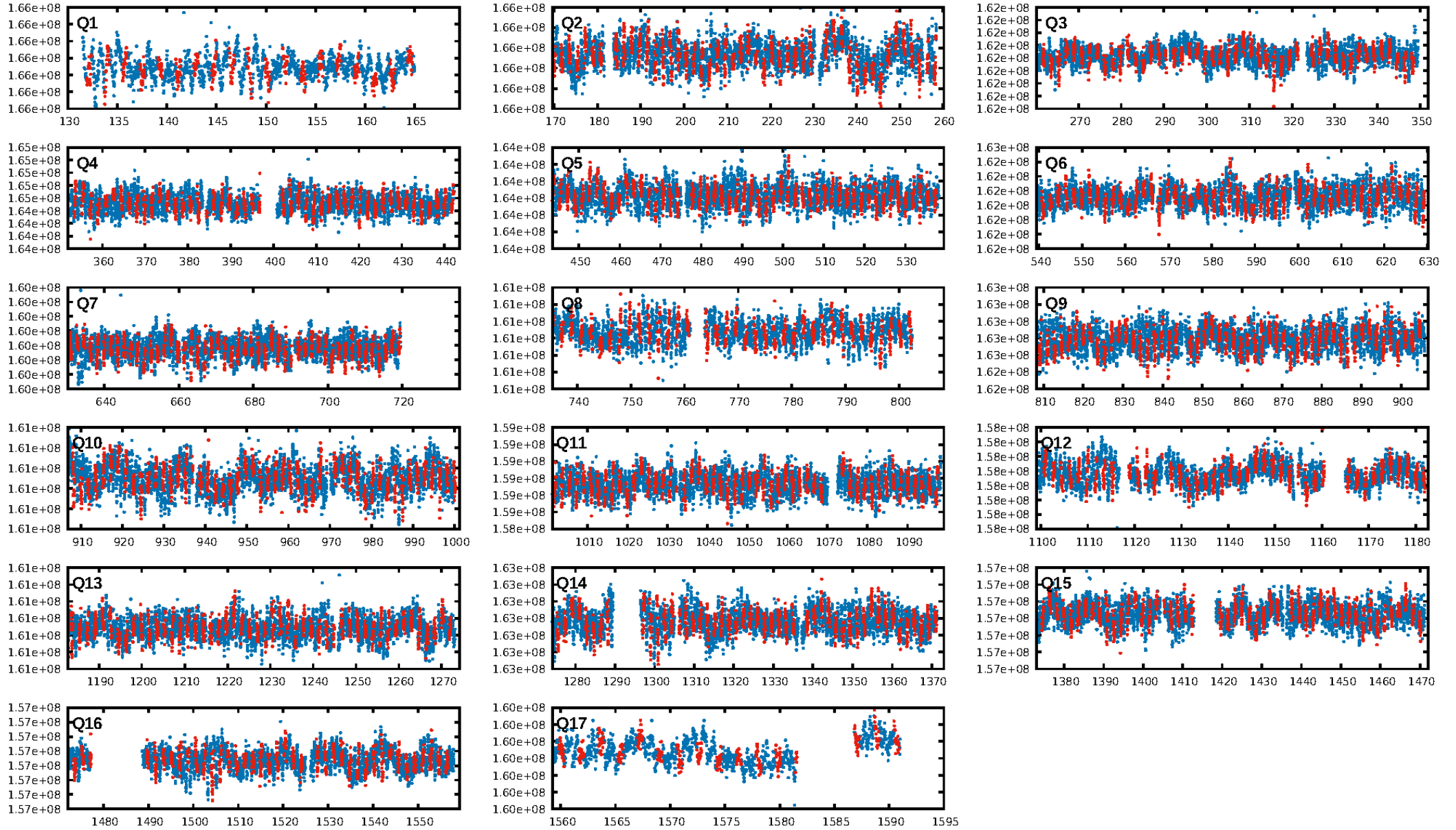
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.06e-12
RollingBand-fgt: 1.00 [714/715]
GhostDiagnostic-chr: 2.086
Centroid-sig: 0.0%
Centroid-so: 1.471 arcsec [2.59σ]
OotOffset-rm: 0.149 arcsec [0.67σ]
KicOffset-rm: 0.238 arcsec [1.05σ]
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]

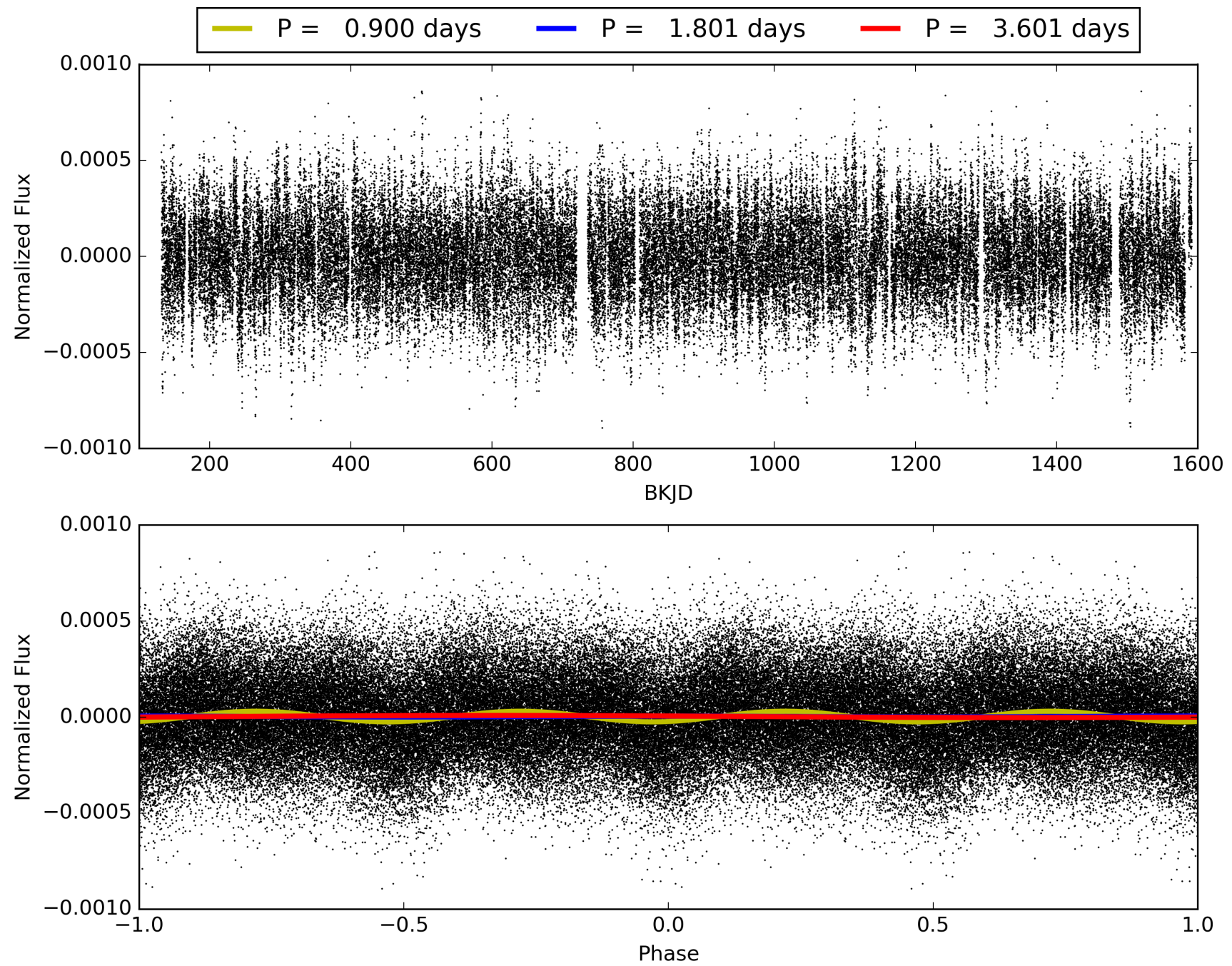
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:03:43 Z

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

TCE 005004705-01, PDC Light Curves

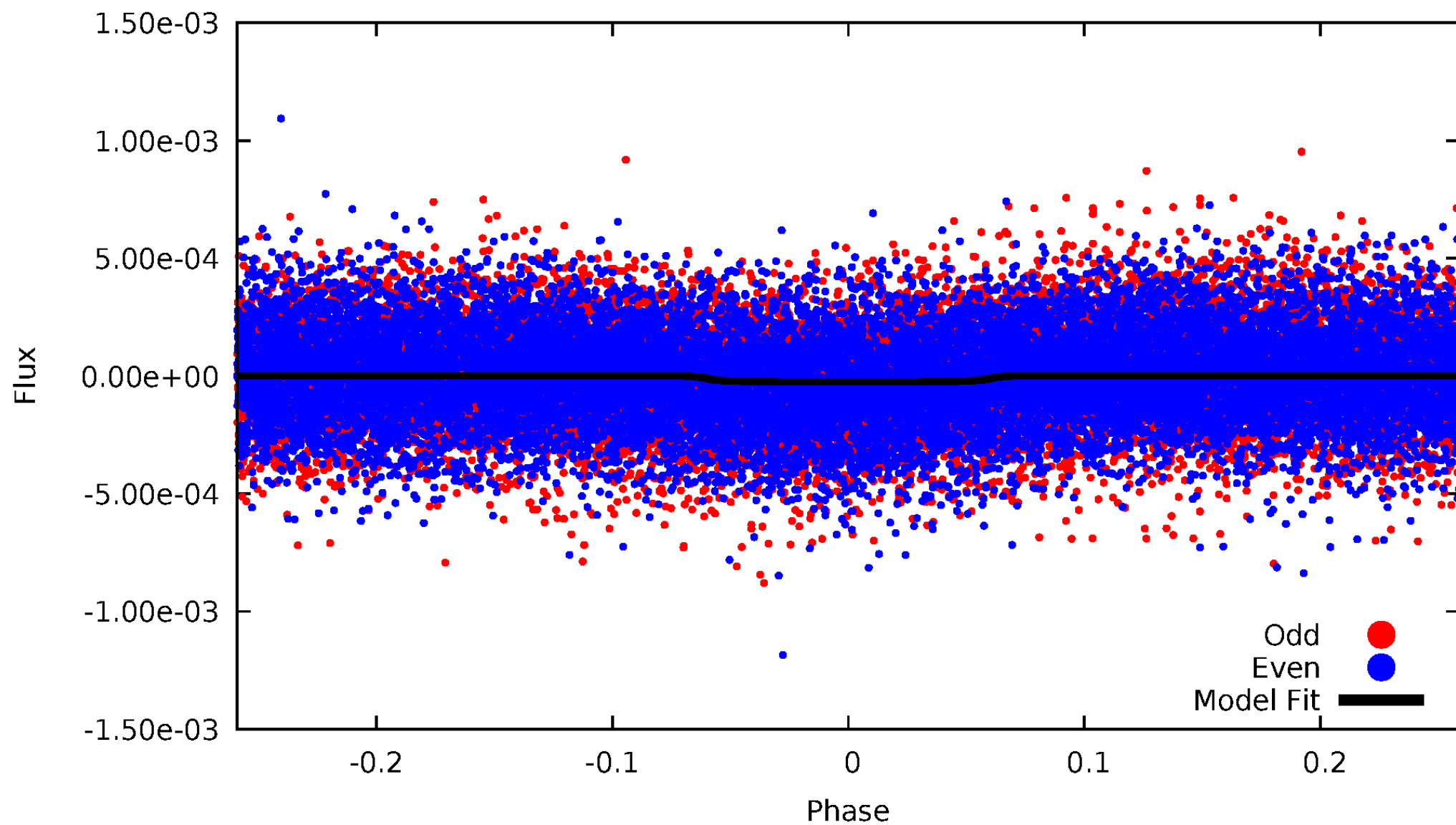


TCE 005004705-01



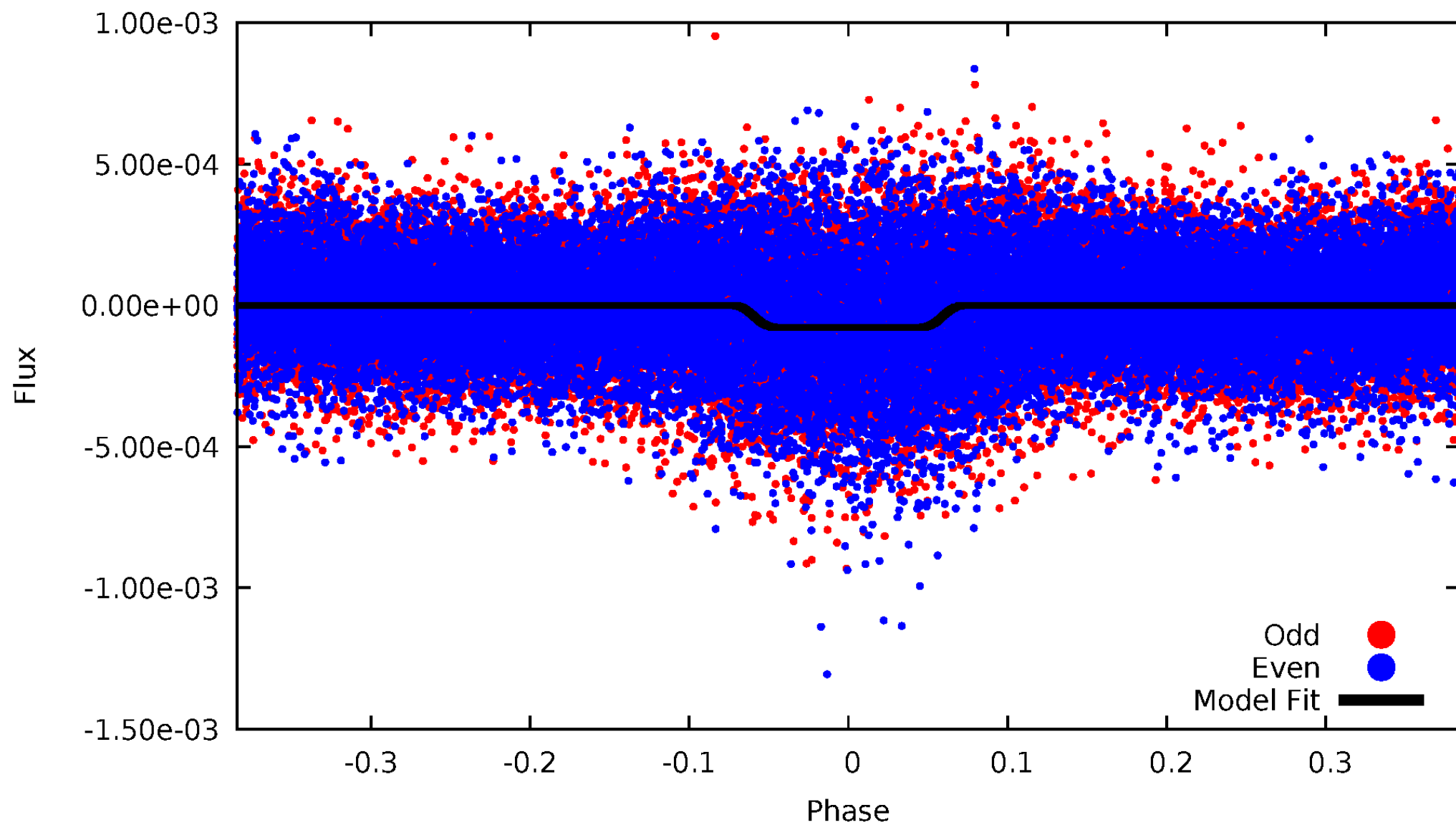
DV Odd/Even

TCE 005004705-01

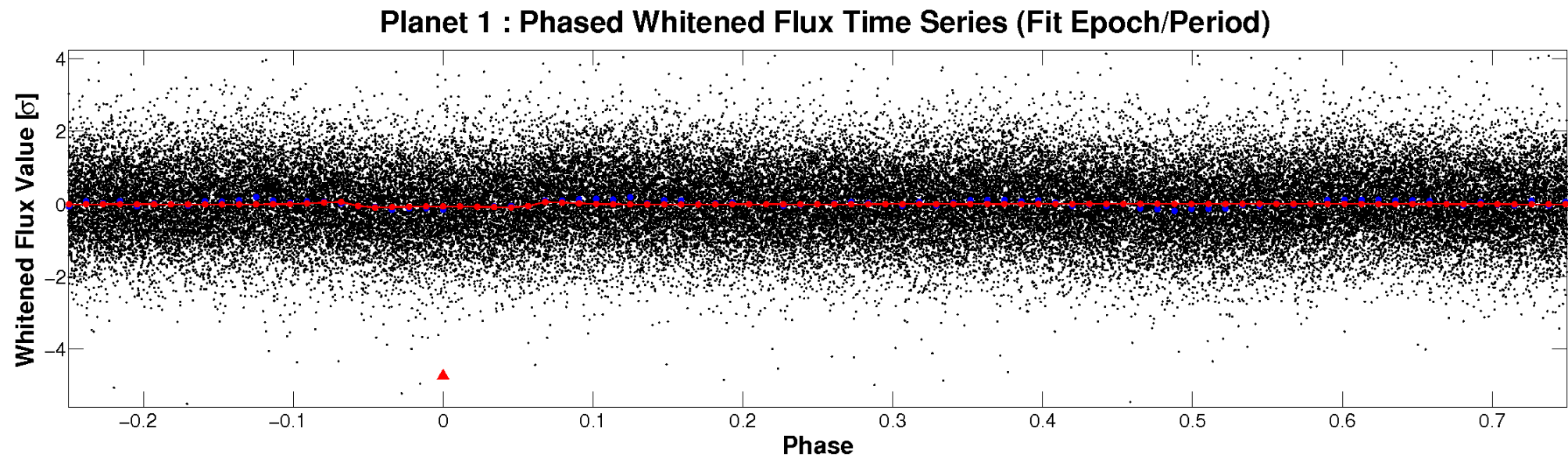
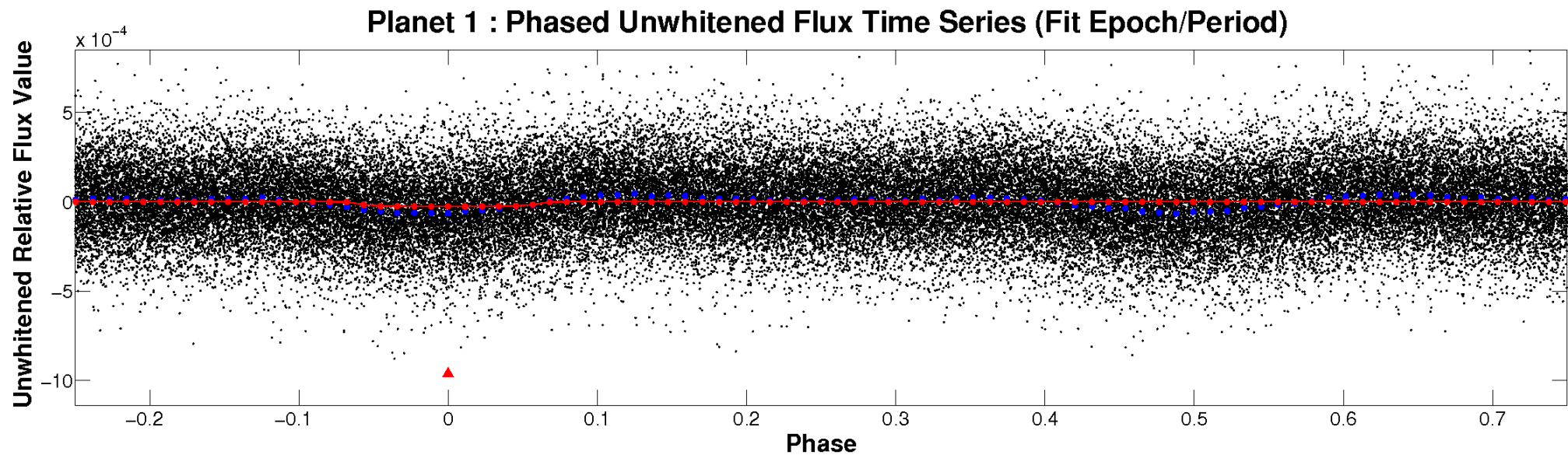


ALT Odd/Even

TCE 005004705-01

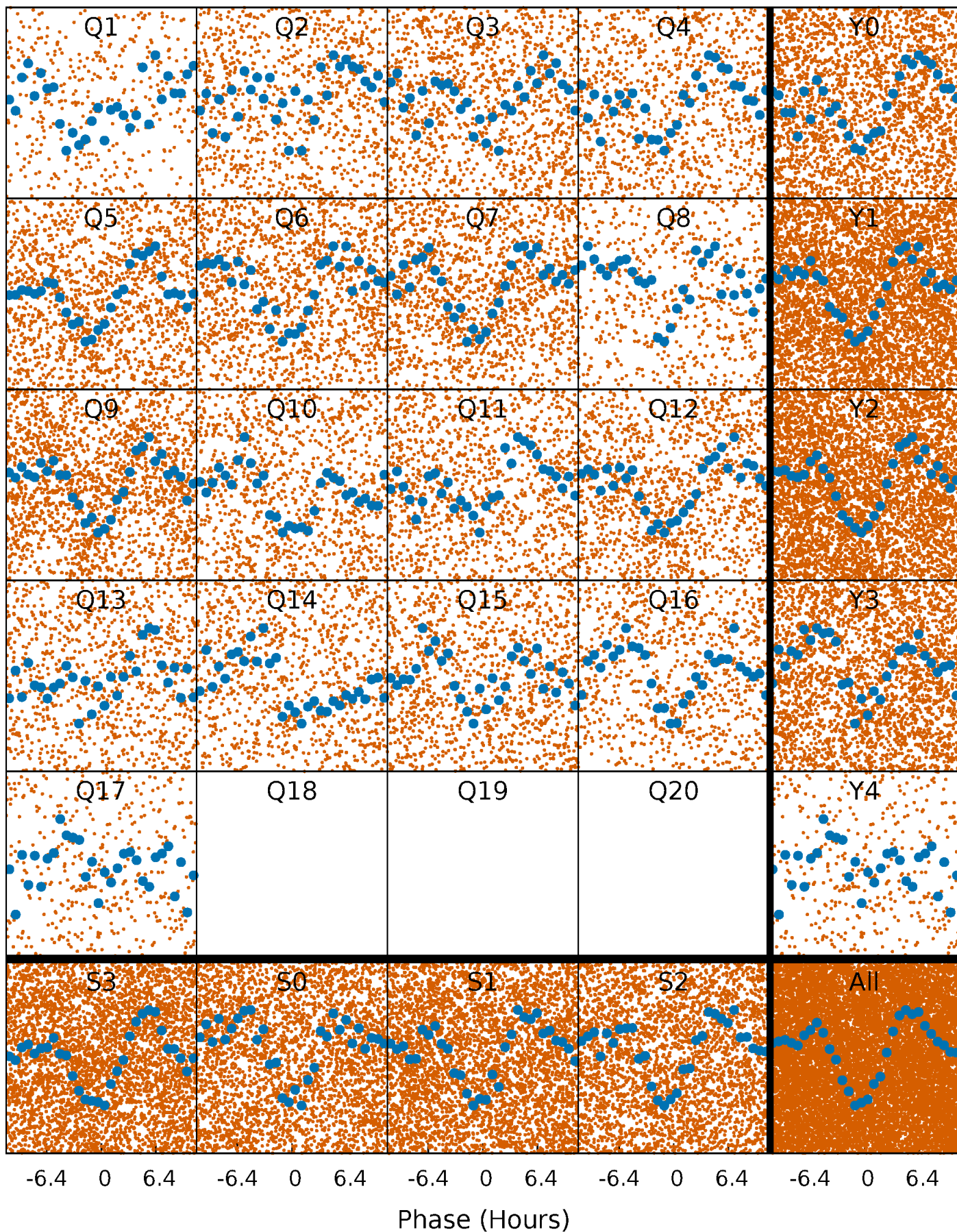


Non-Whitened Vs. Whitened Light Curve



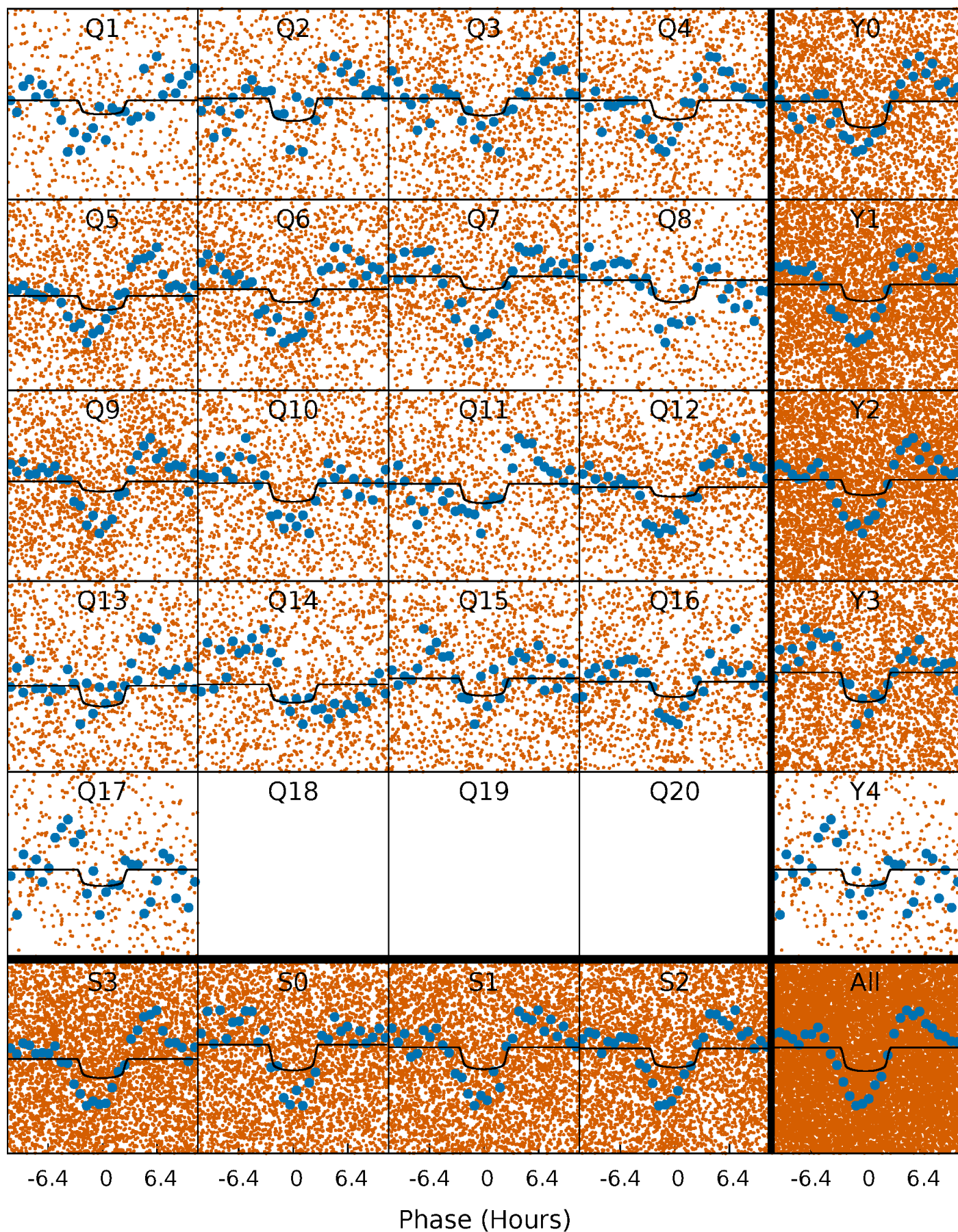
PDC Quarter-Phased Transit Curves

TCE 005004705-01 P= 1.800674 Days $T_0=132.121531$ (BKJD)



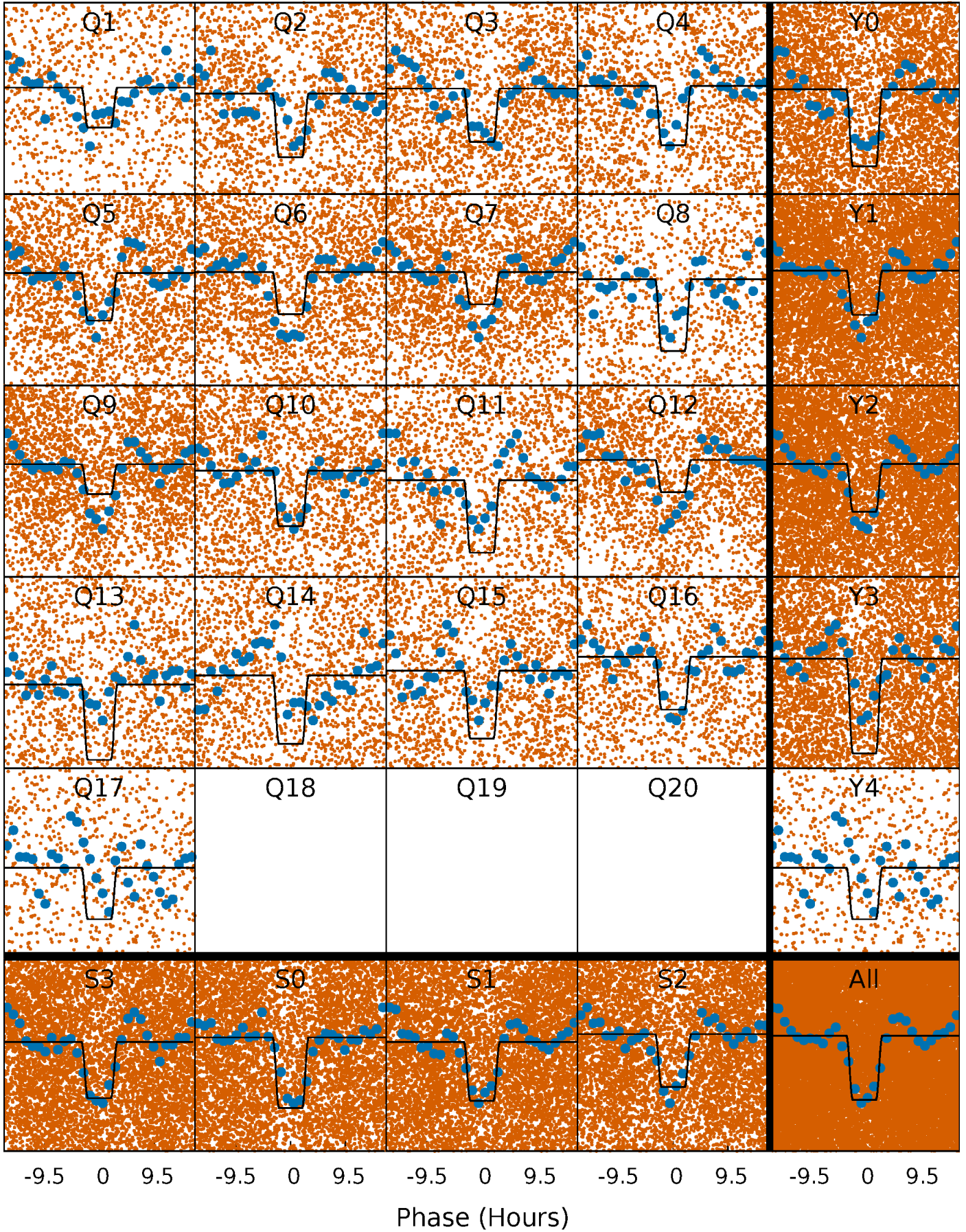
DV Quarter-Phased Transit Curves

TCE 005004705-01 P= 1.800674 Days $T_0=132.121531$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

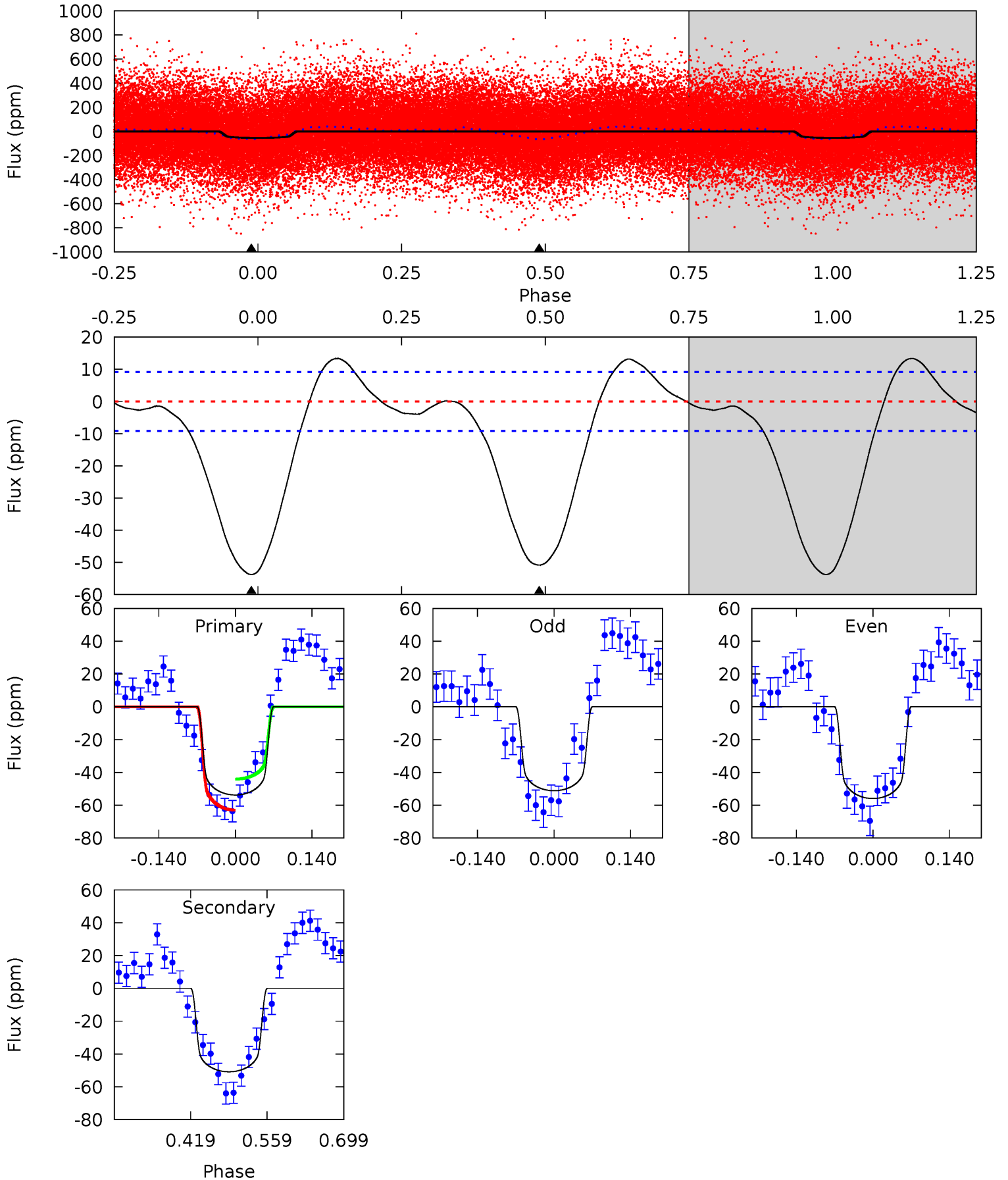
TCE 005004705-01 P= 1.800688 Days $T_0=132.094308$ (BKJD)



DV Model-Shift Uniqueness Test

005004705-01, P = 1.800674 Days, E = 130.320857 Days

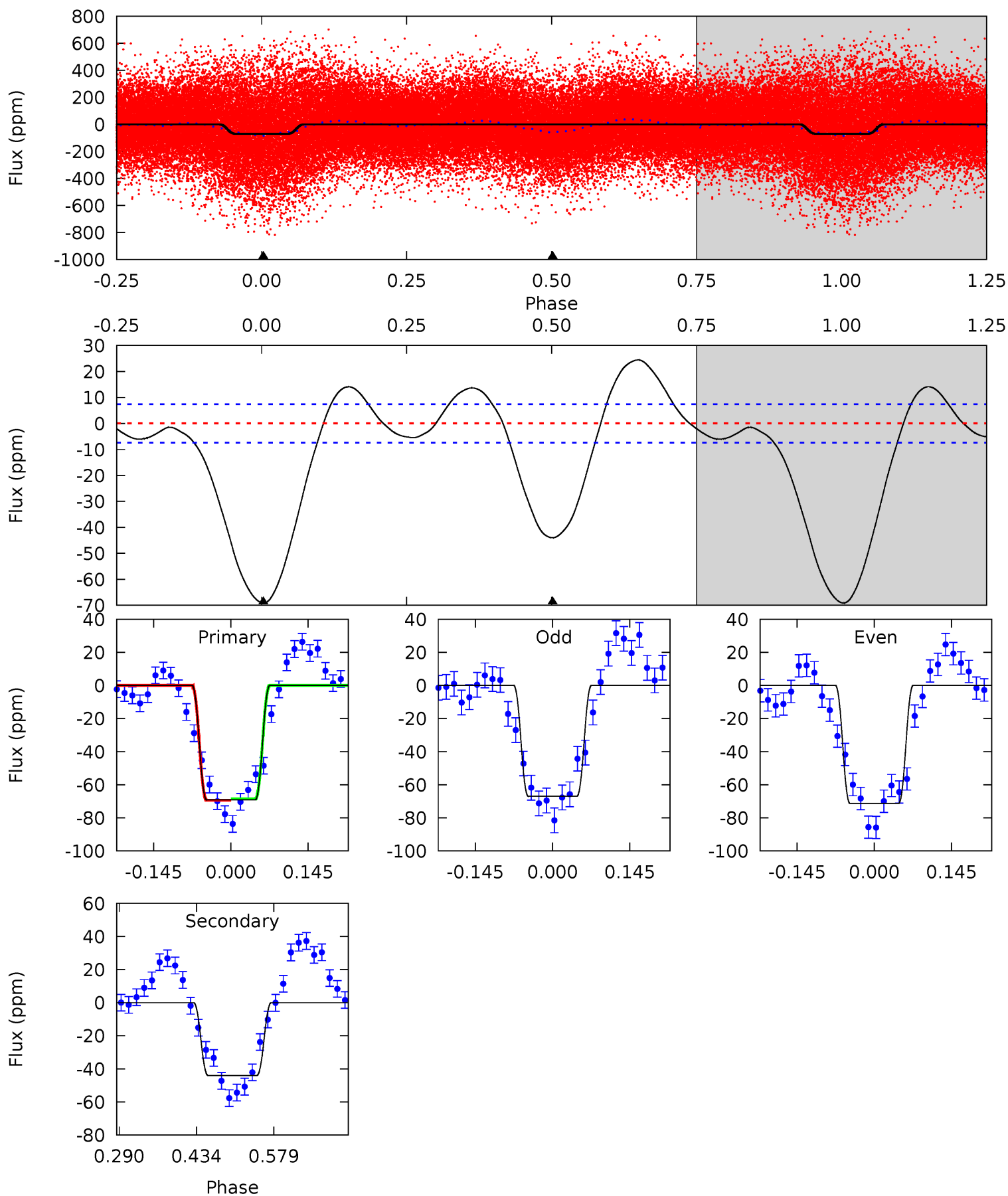
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.4	25.0	0	0	4.49	1.48	2.81	26.4	26.4	25.0	25.0	1.17	1.06	0.20	4.65



Alt Model-Shift Uniqueness Test

005004705-01, P = 1.800688 Days, E = 130.293620 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.9	26.7	0	0	4.49	1.46	5.24	41.9	41.9	26.7	26.7	1.32	1.17	0.26	0.22



Stellar Parameters For KIC 005004705

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6840^{+184}_{-245}	$3.858^{+0.247}_{-0.114}$	$-0.100^{+0.300}_{-0.300}$	$2.481^{+0.507}_{-0.824}$	$1.618^{+0.206}_{-0.309}$	$0.149^{+0.259}_{-0.053}$
	+3%/-4%	+6%/-3%	+300%/-300%	+20%/-33%	+13%/-19%	+174%/-35%
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 005004705-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-51 ± 2	$1.50^{+0.34}_{-0.32}$	3562^{+224}_{-298}	7680^{+859}_{-684}	14^{+8}_{-5}
Alt.	-44 ± 2	$2.32^{+0.37}_{-0.41}$	3545^{+227}_{-273}	5812^{+357}_{-306}	$5.206^{+2.369}_{-1.294}$

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

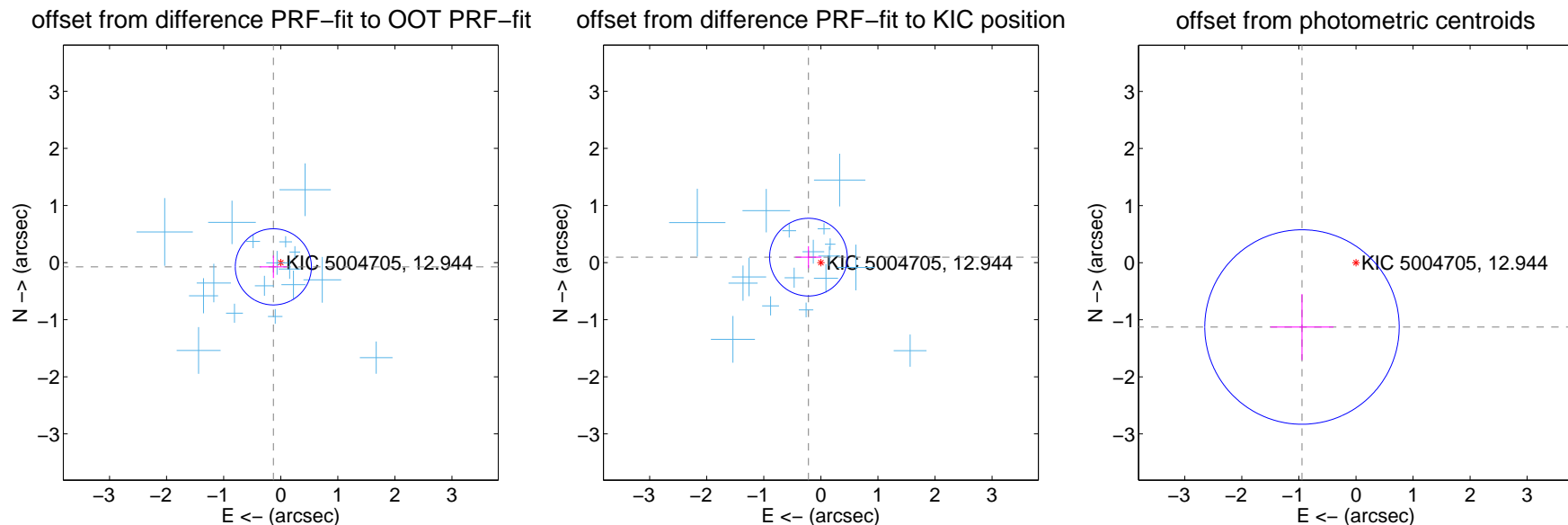
DV Centroid Data

Supplemental centroid analysis for 005004705-01. Kepler magnitude: 12.94. Transit SNR 7.44

There are 17 quarters with good PRF difference image offsets

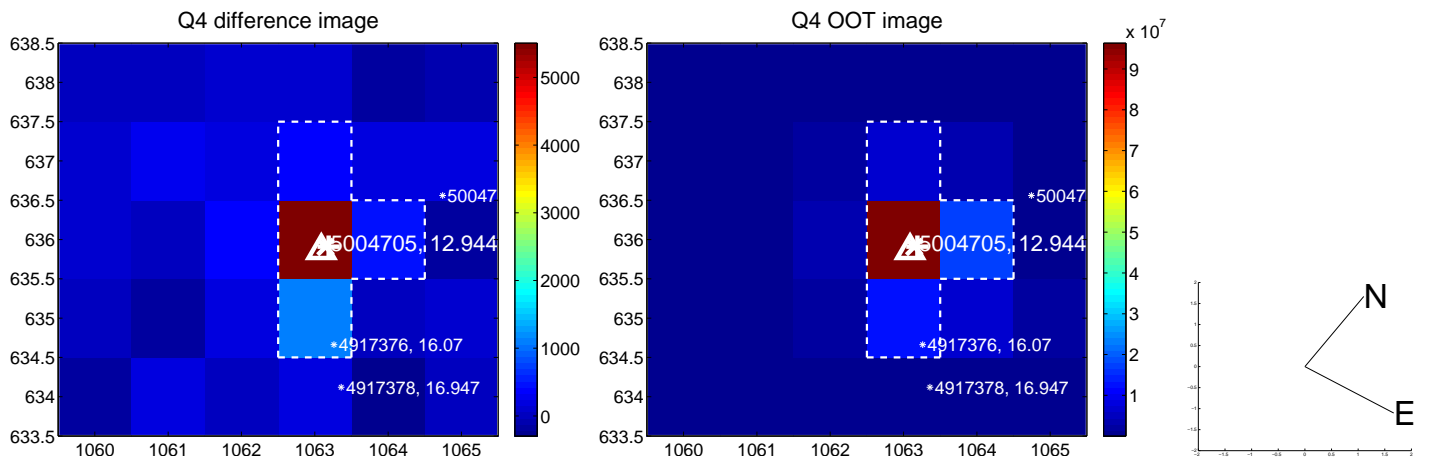
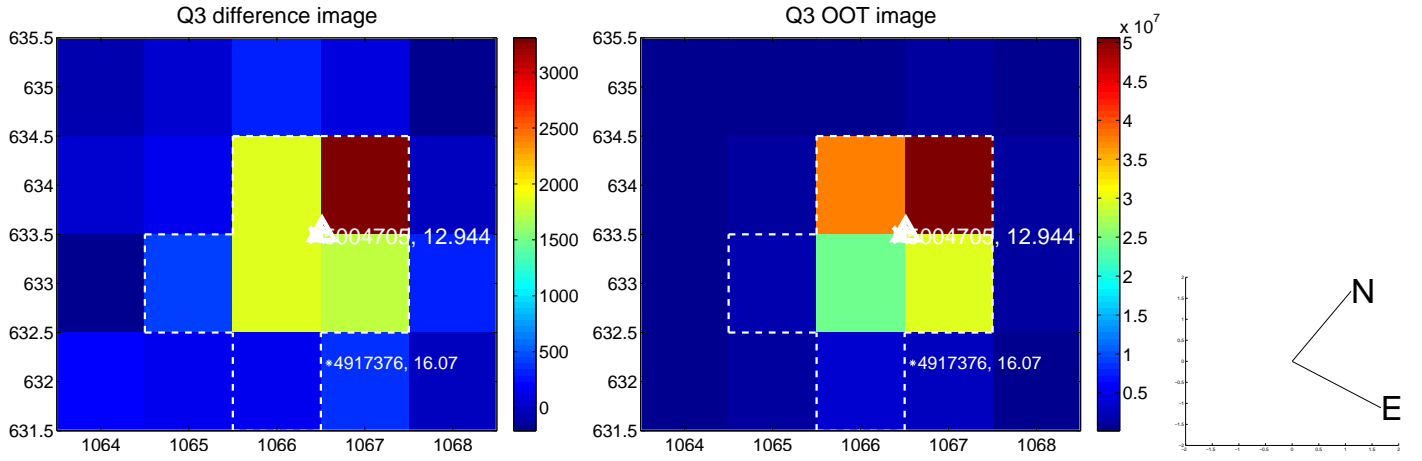
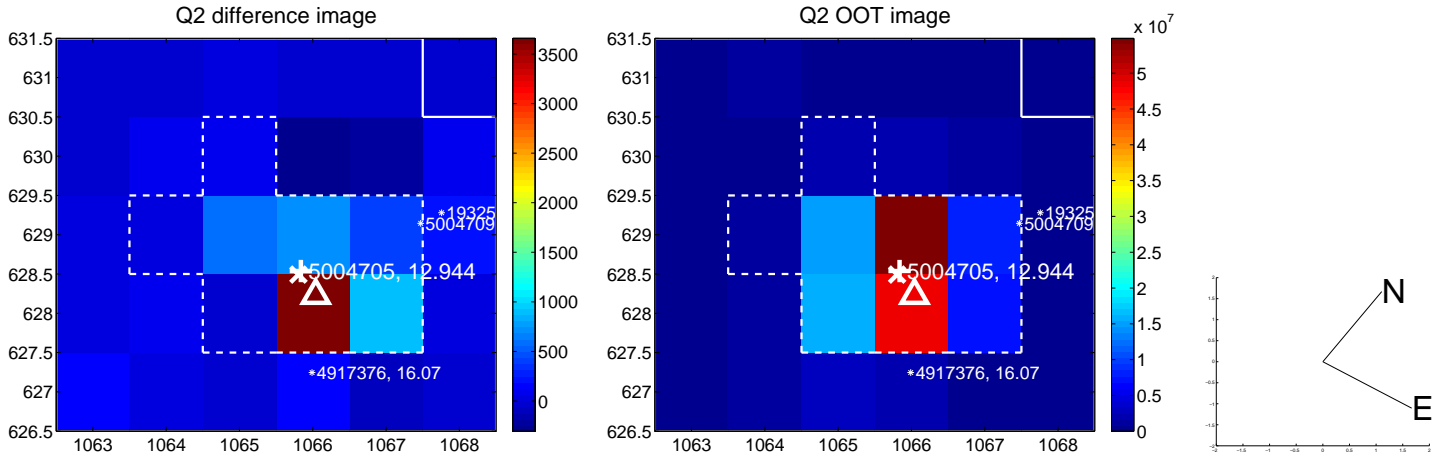
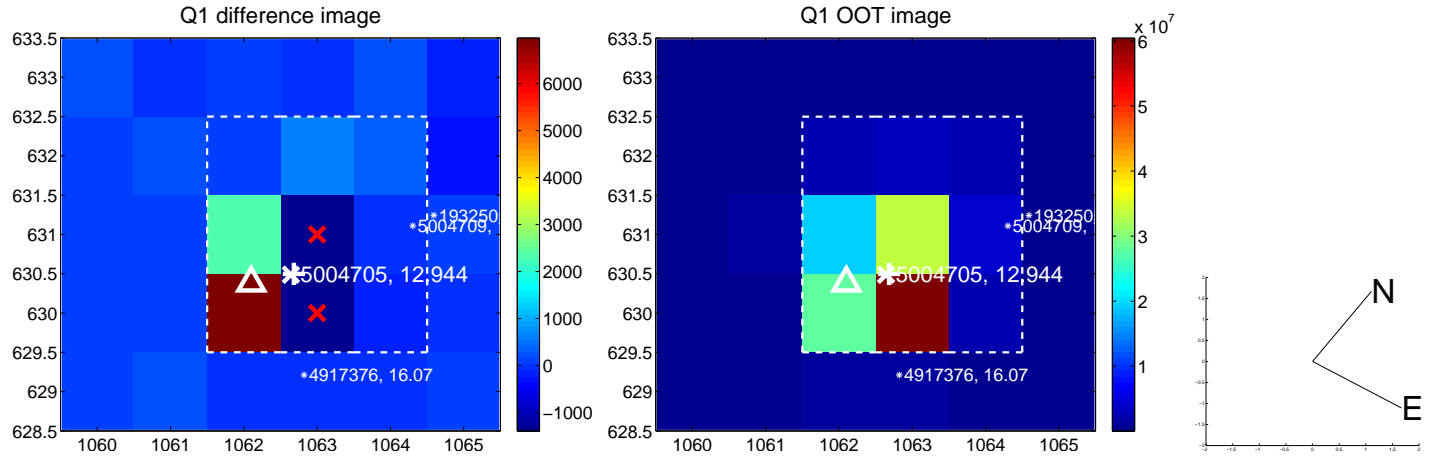
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.149 ± 0.222	0.67	0.130 ± 0.237	-0.074 ± 0.198
PRF-fit source offset from KIC position	0.238 ± 0.227	1.05	0.218 ± 0.227	0.095 ± 0.192
photometric centroid source offset	1.47 ± 0.57	2.59	0.95 ± 0.55	-1.13 ± 0.58

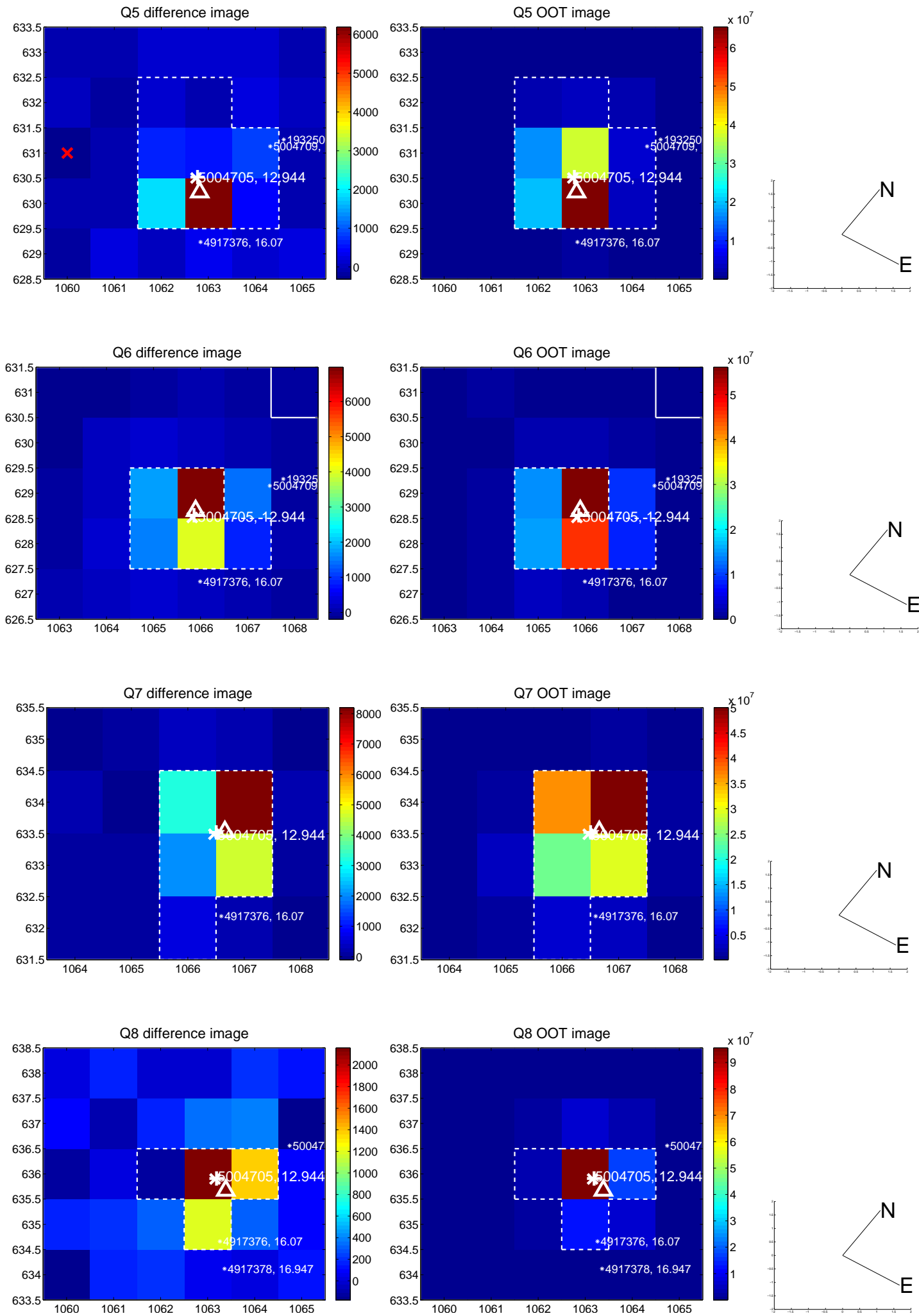


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

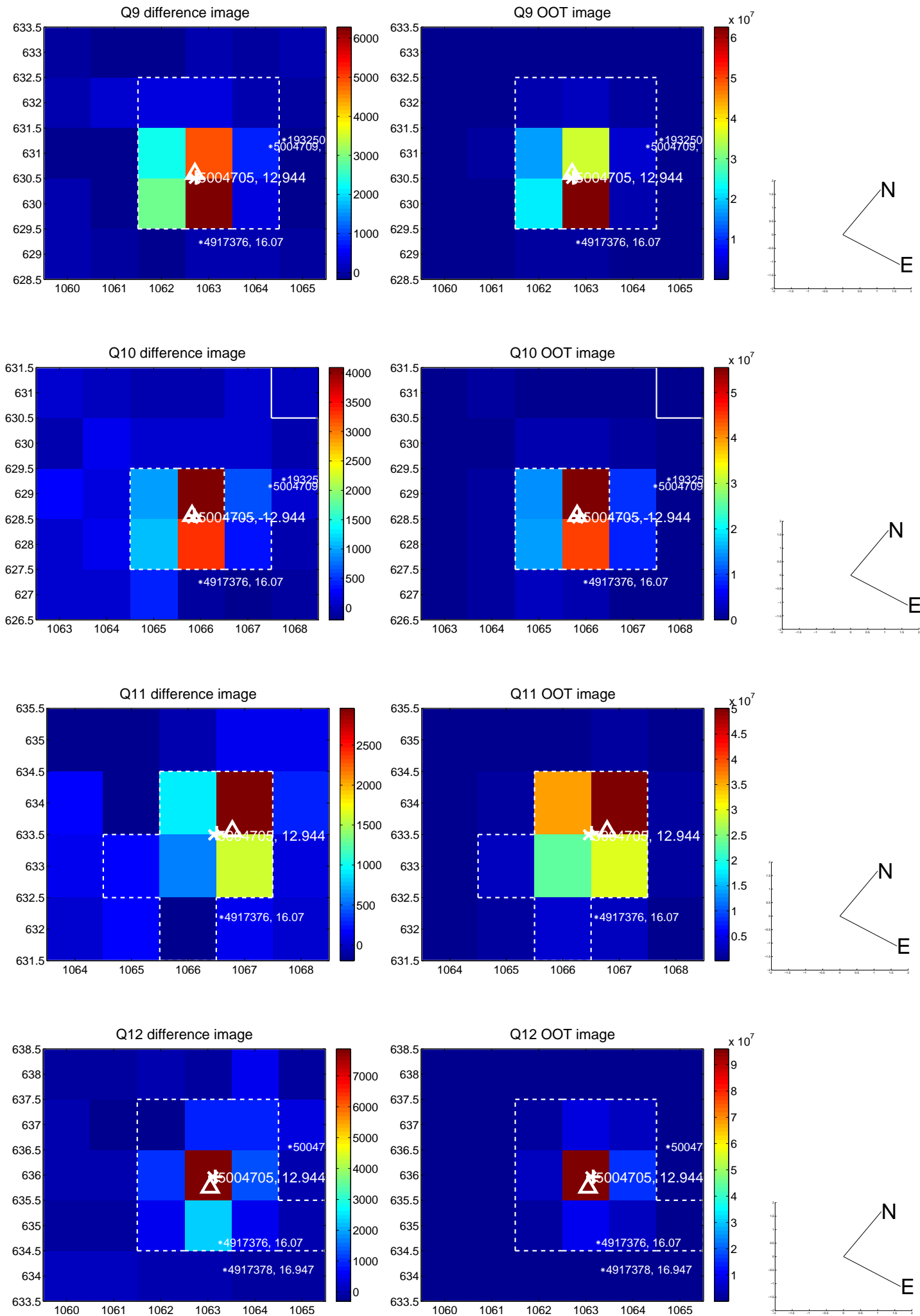
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



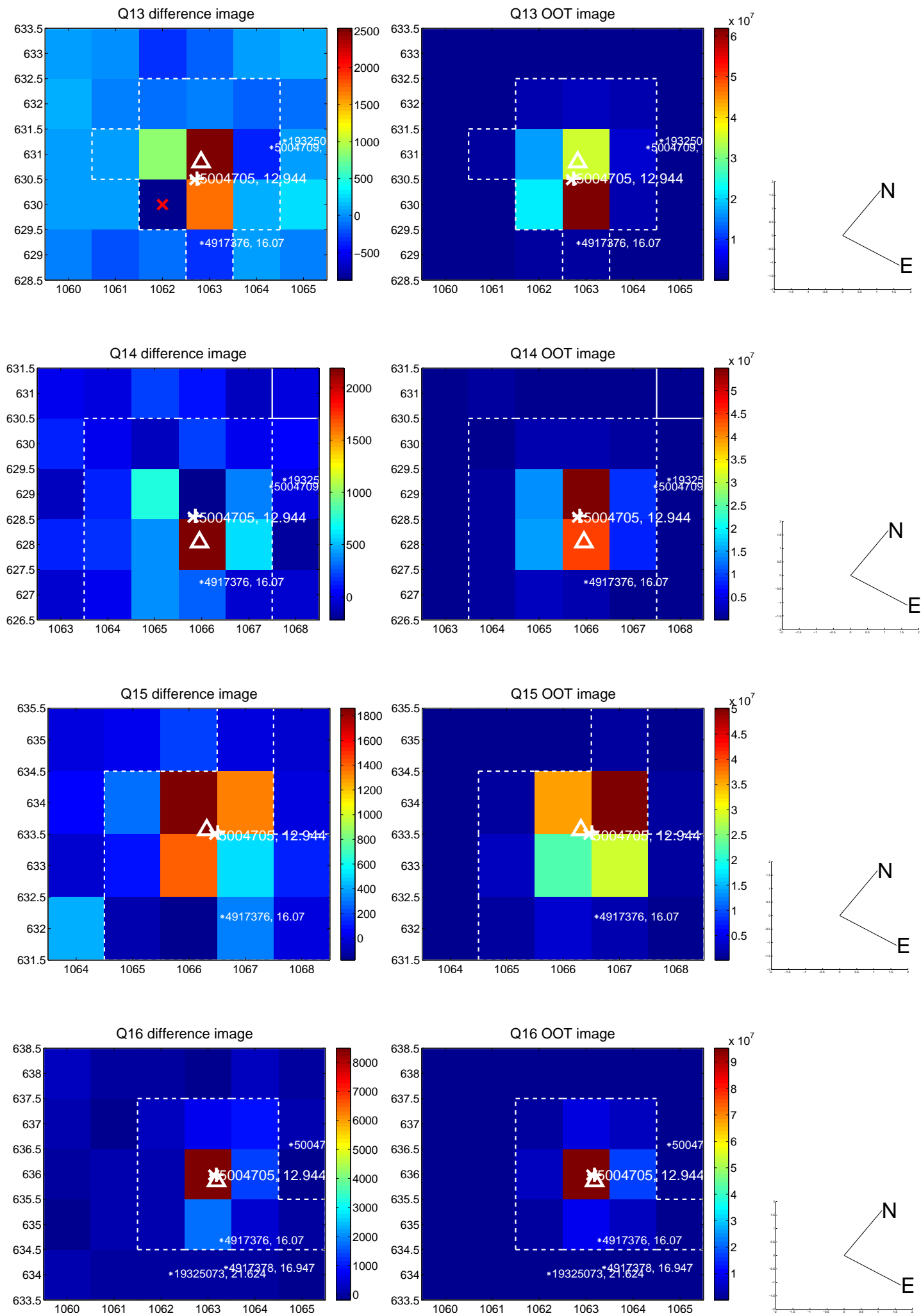
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



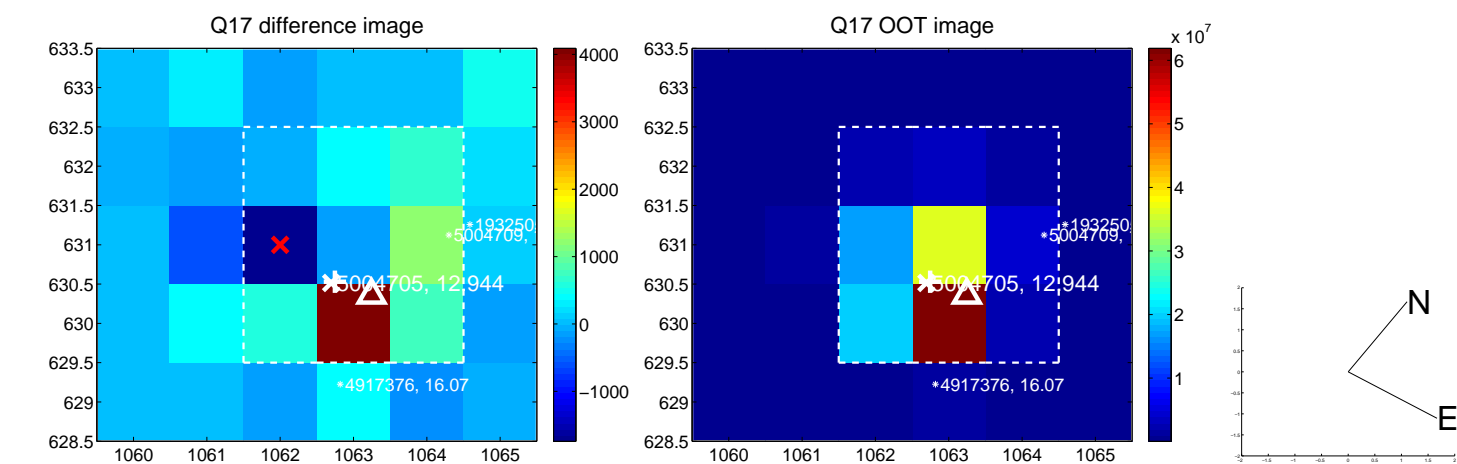
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



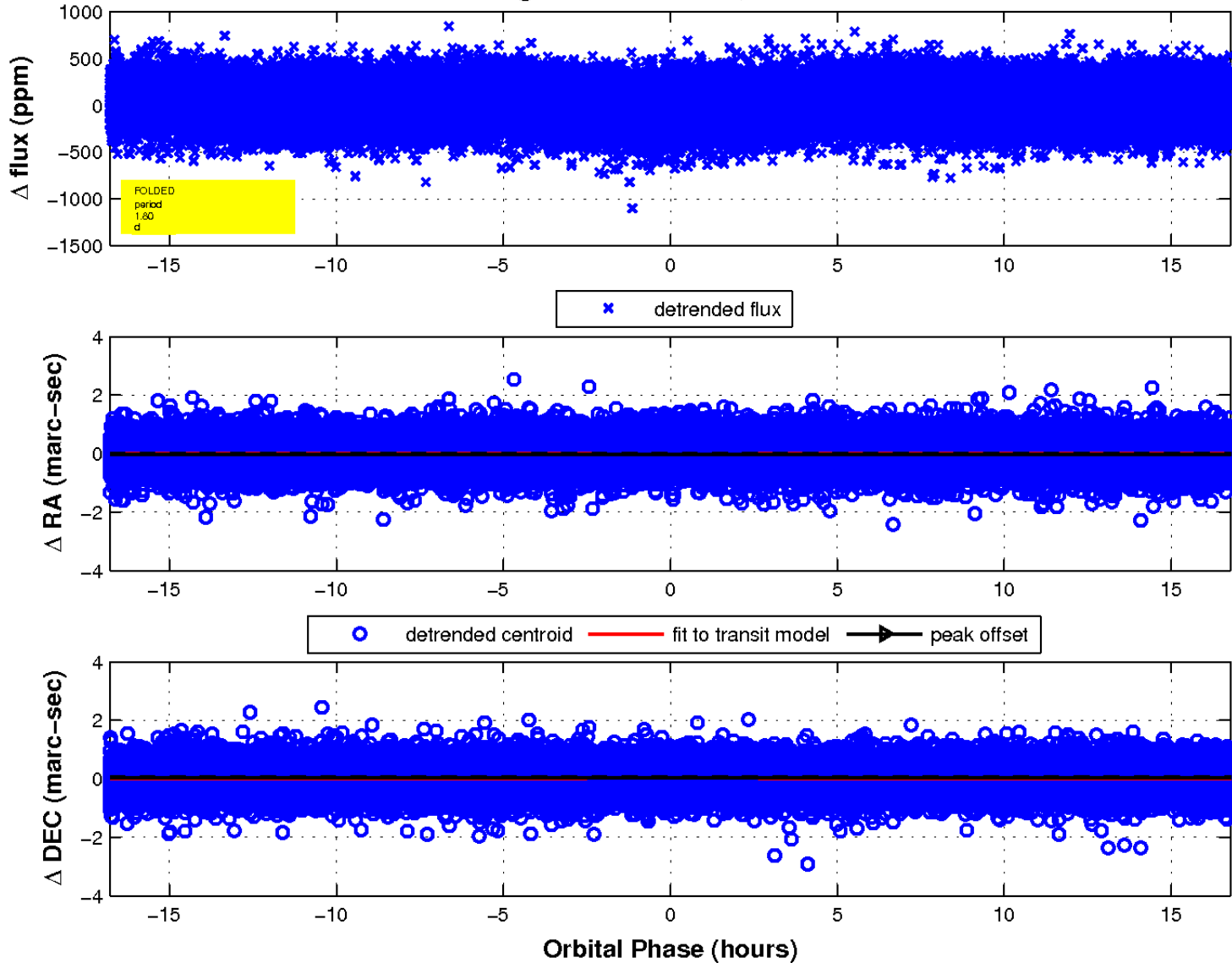
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

