

KIC 006859546

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})
006859546-01	OBS	6777.01	13.444971	137.248074	246.4	2.080	8.4	9.8	0.76	5003	1.45	31.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006859546-01	OBS	PC	0.72	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.

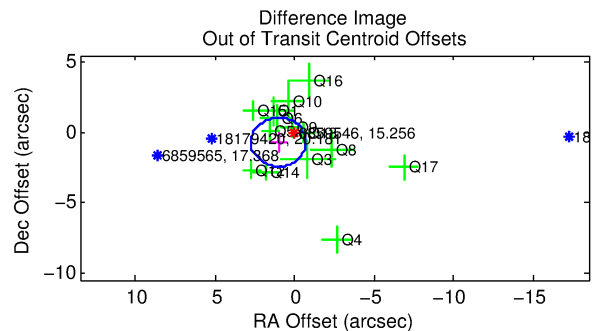
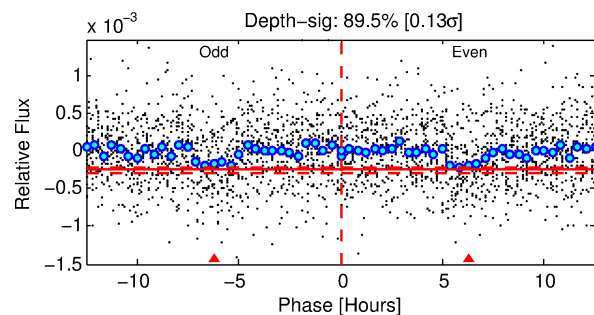
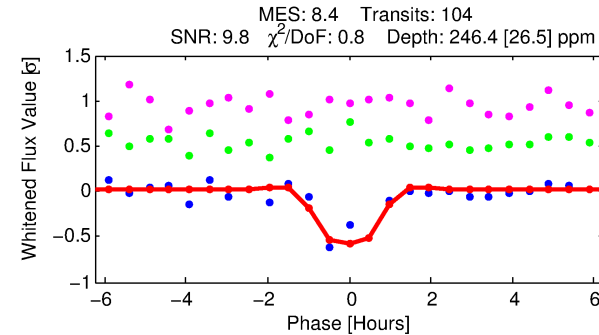
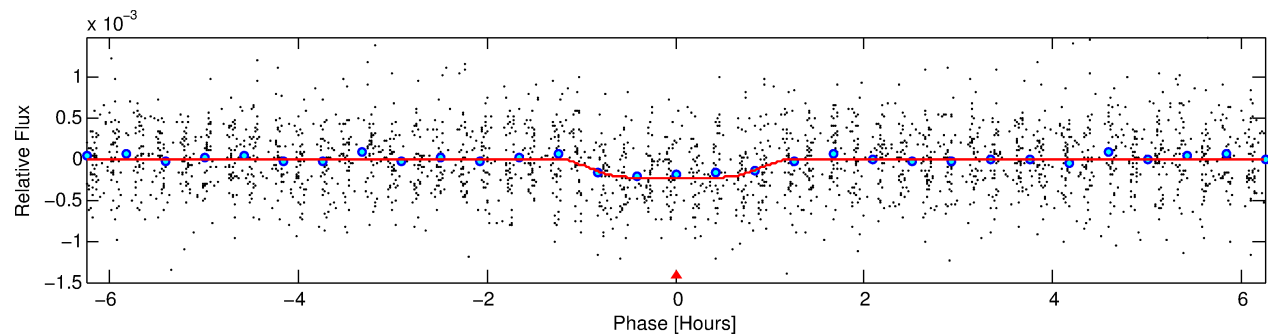
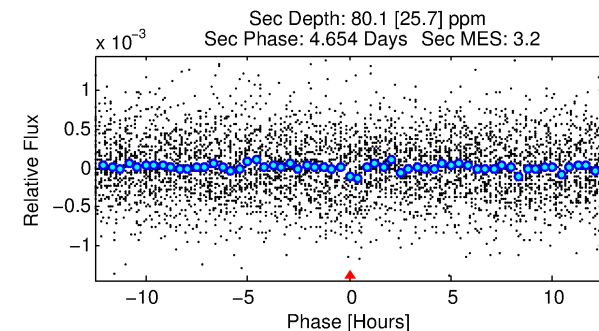
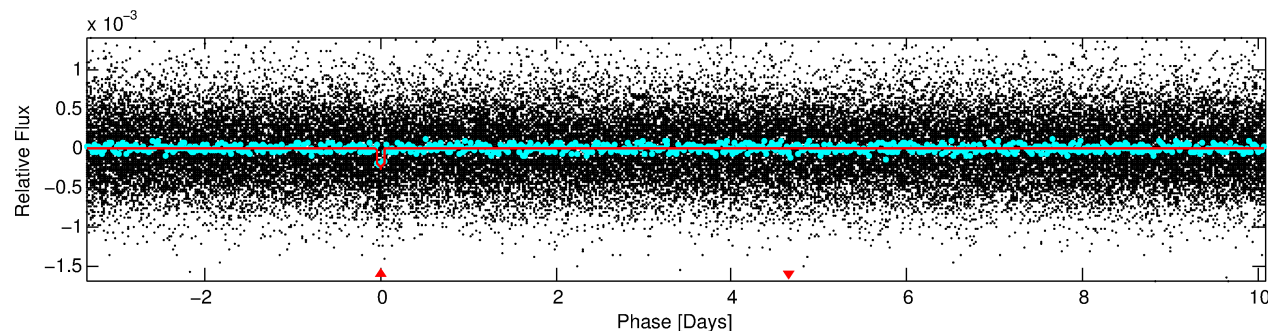
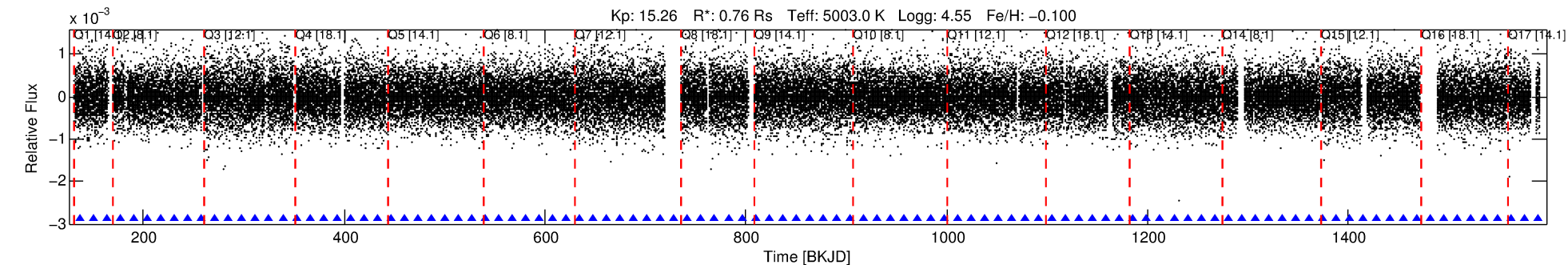
Ephemeris Match Information For 006859546-01

No Significant Match Found

DV One-Page Summary

KIC: 6859546 Candidate: 1 of 1 Period: 13.445 d

KOI: K06777.01 Corr: 0.978



DV Fit Results:

Period = 13.44497 [0.00009] d
Epoch = 137.2481 [0.0053] BKJD
Rp/R* = 0.0175 [0.0136]
b = 0.90 [0.69]
Seff = 31.96 [5.28]
Teq = 606 [25] K
Rp = 1.45 [1.14] Re
a = 0.1006 [0.0079] AU
Ag = 213.09 [339.93] [0.62σ]
Teffp = 3581 [1429] K [2.08σ]

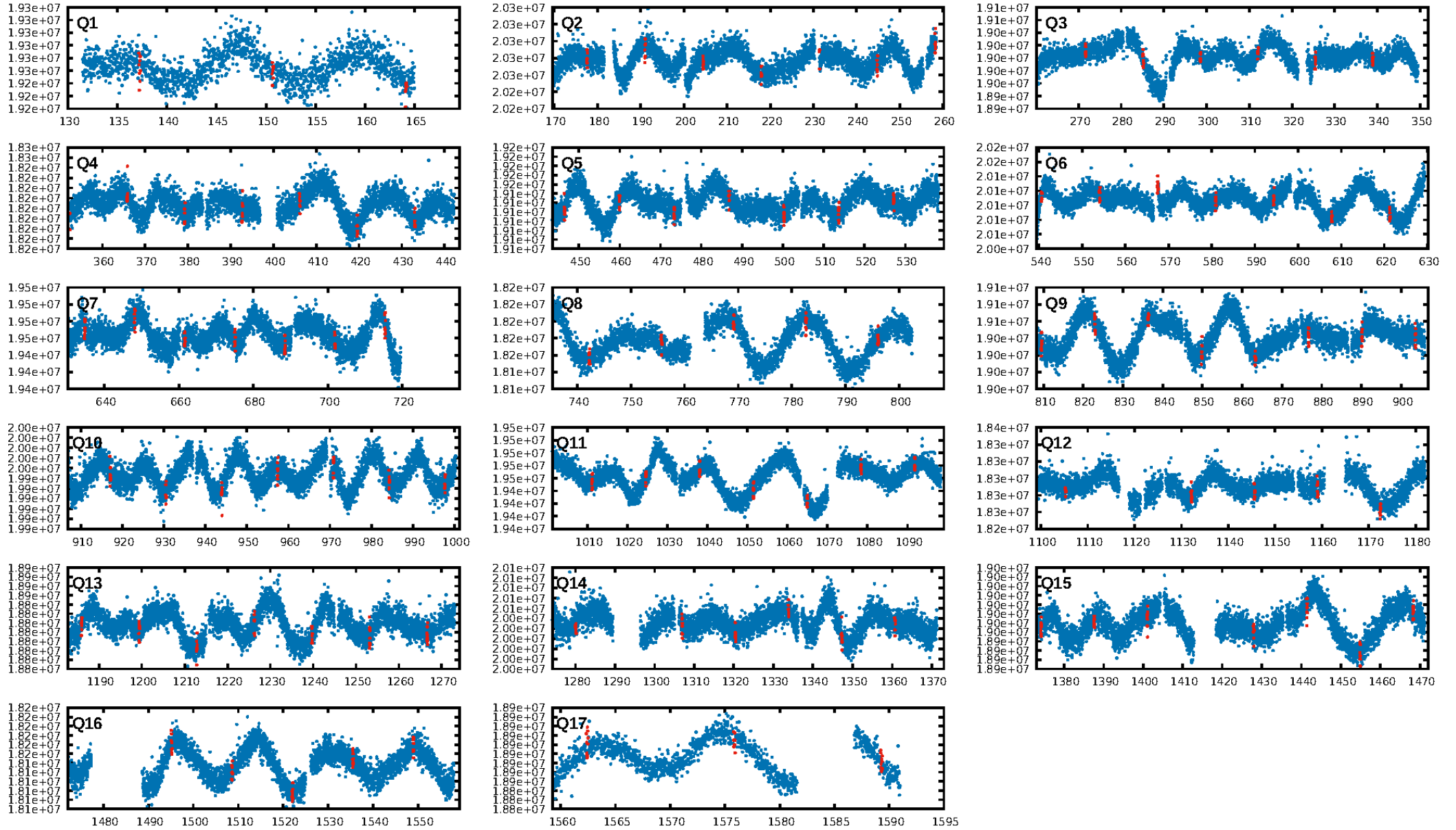
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.72e-17
RollingBand-fgt: 1.00 [98/98]
GhostDiagnostic-chr: 3.006
Centroid-sig: 8.5%
Centroid-so: 1.848 arcsec [1.50σ]
OotOffset-rm: 1.230 arcsec [2.13σ]
KicOffset-rm: 1.090 arcsec [1.88σ]
OotOffset-st: 3/2/4/5 [14]
KicOffset-st: 3/2/4/5 [14]
DiffImageQuality-fgm: 0.36 [5/14]
DiffImageOverlap-fno: 1.00 [17/17]

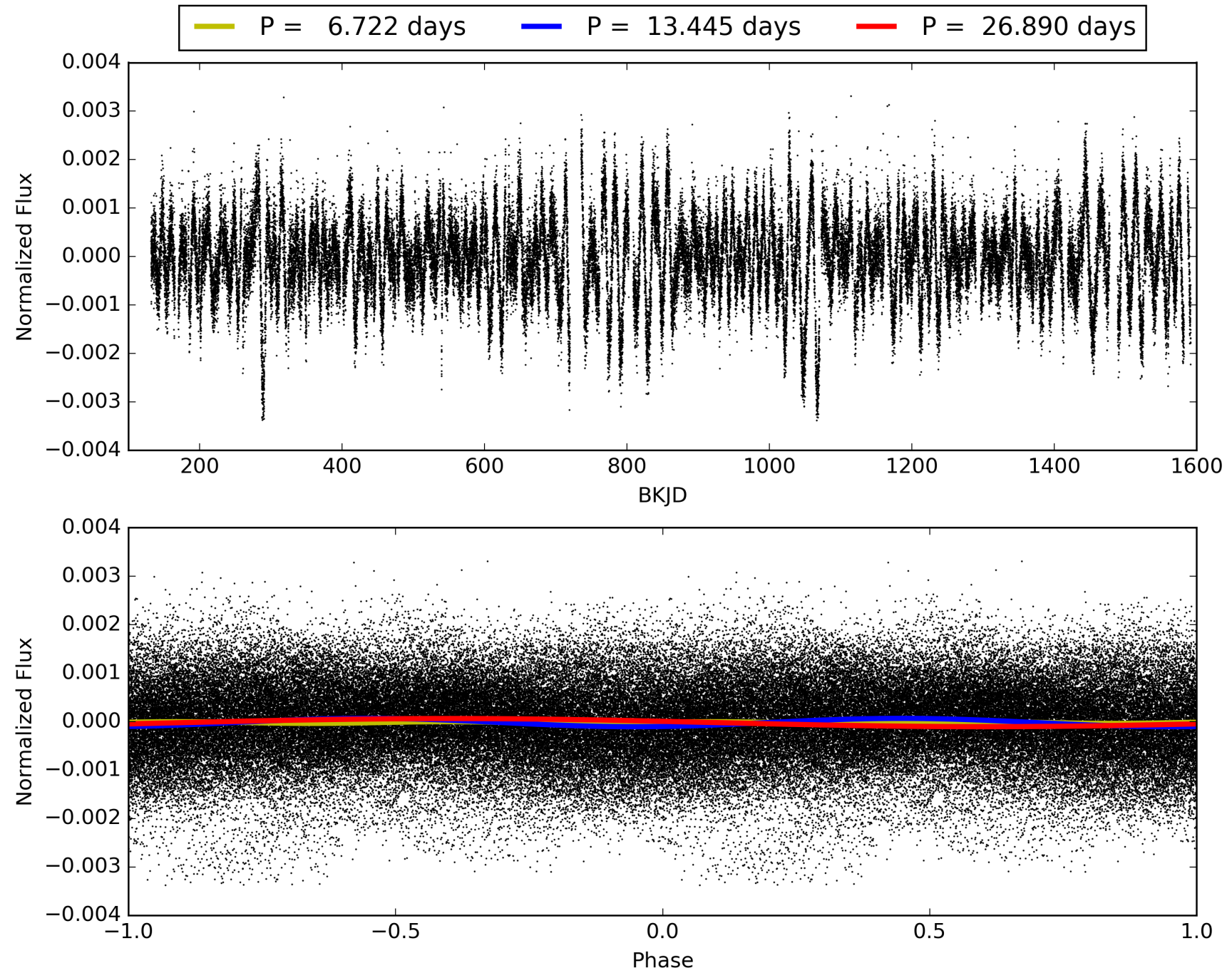
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:04:52 Z

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

TCE 006859546-01, PDC Light Curves

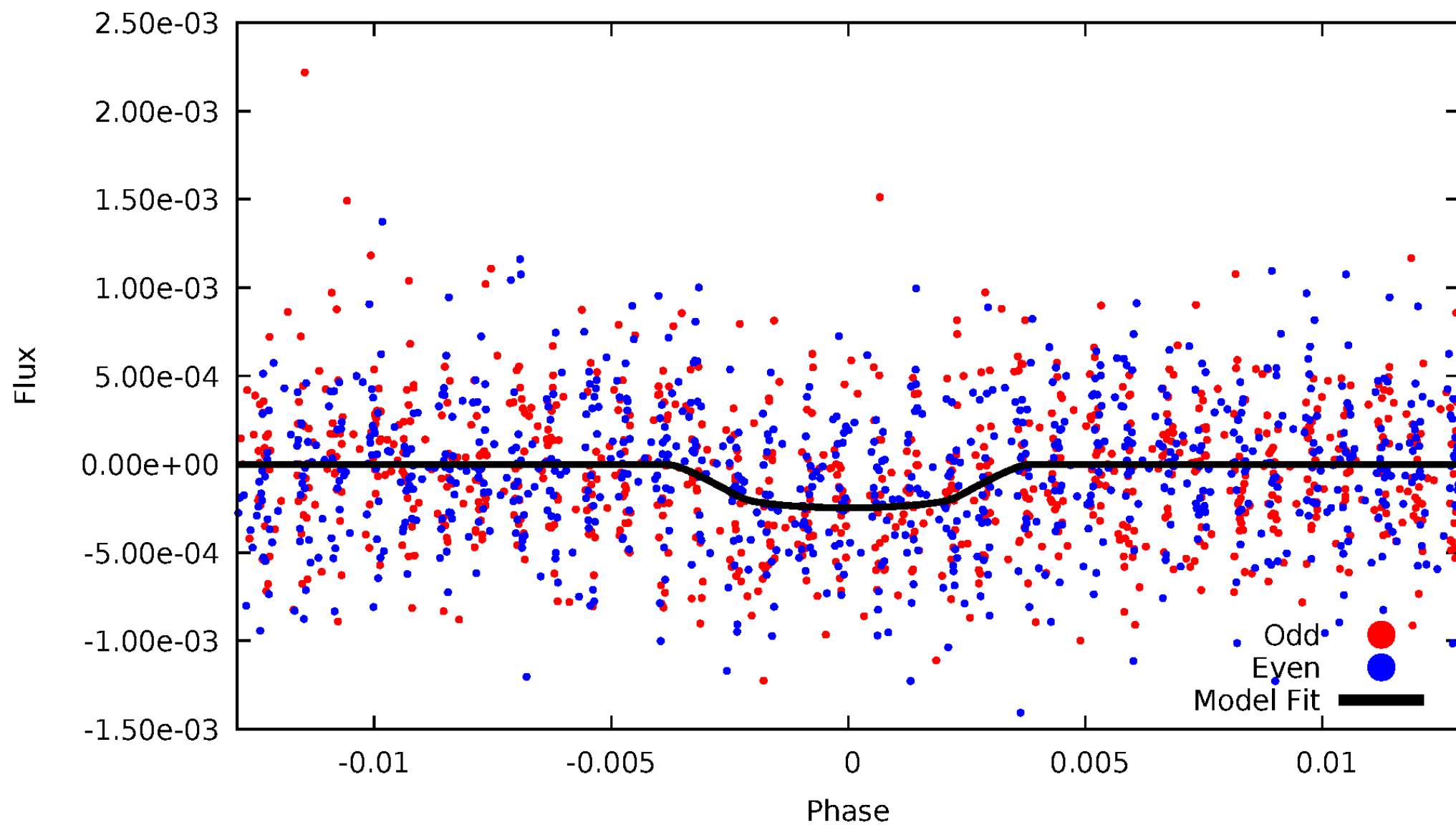


TCE 006859546-01



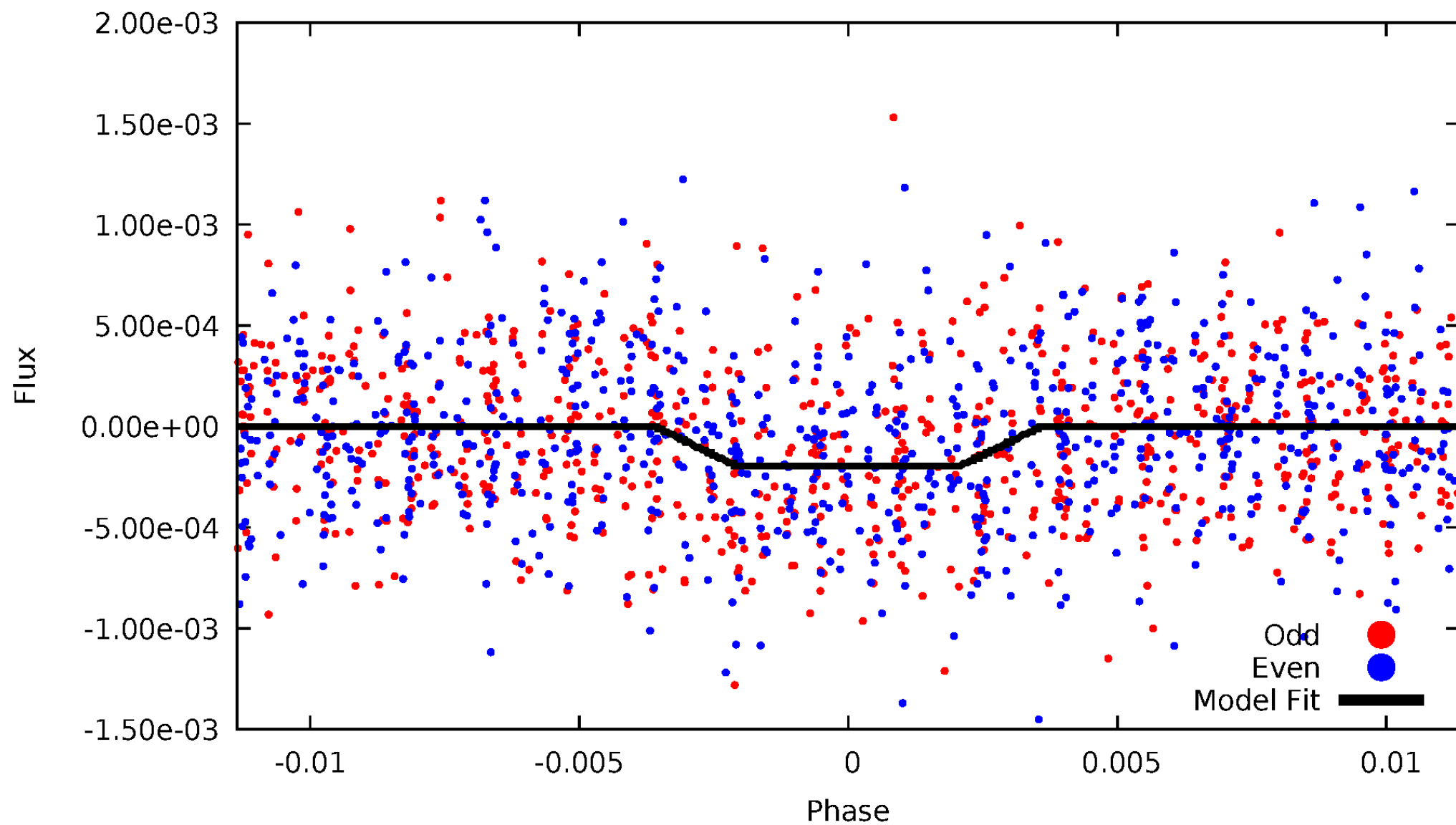
DV Odd/Even

TCE 006859546-01

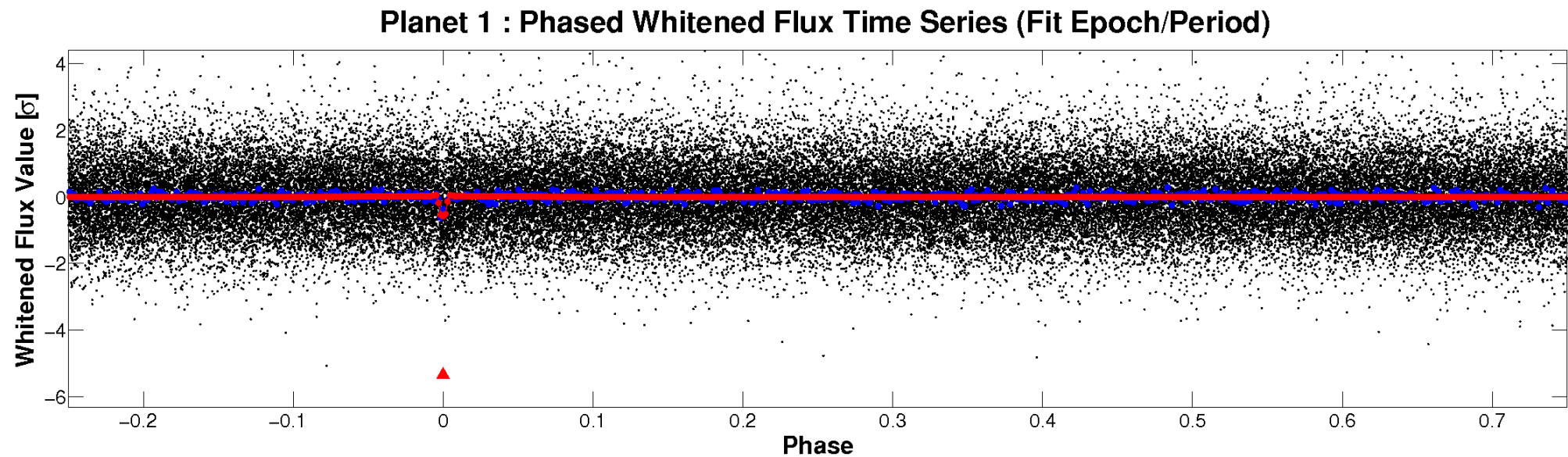
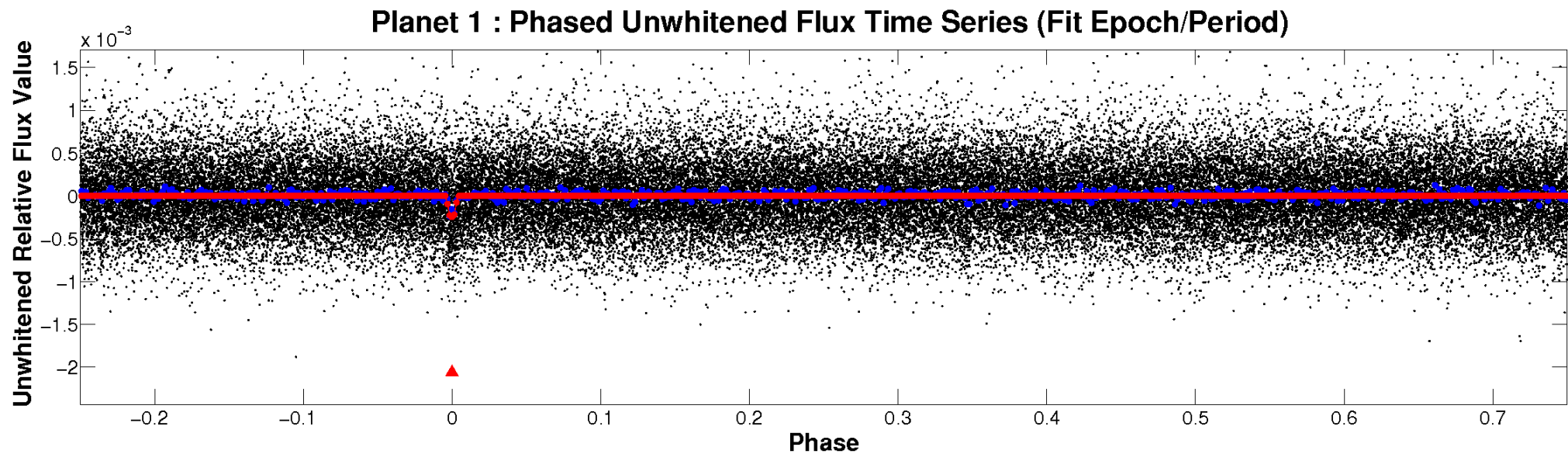


ALT Odd/Even

TCE 006859546-01

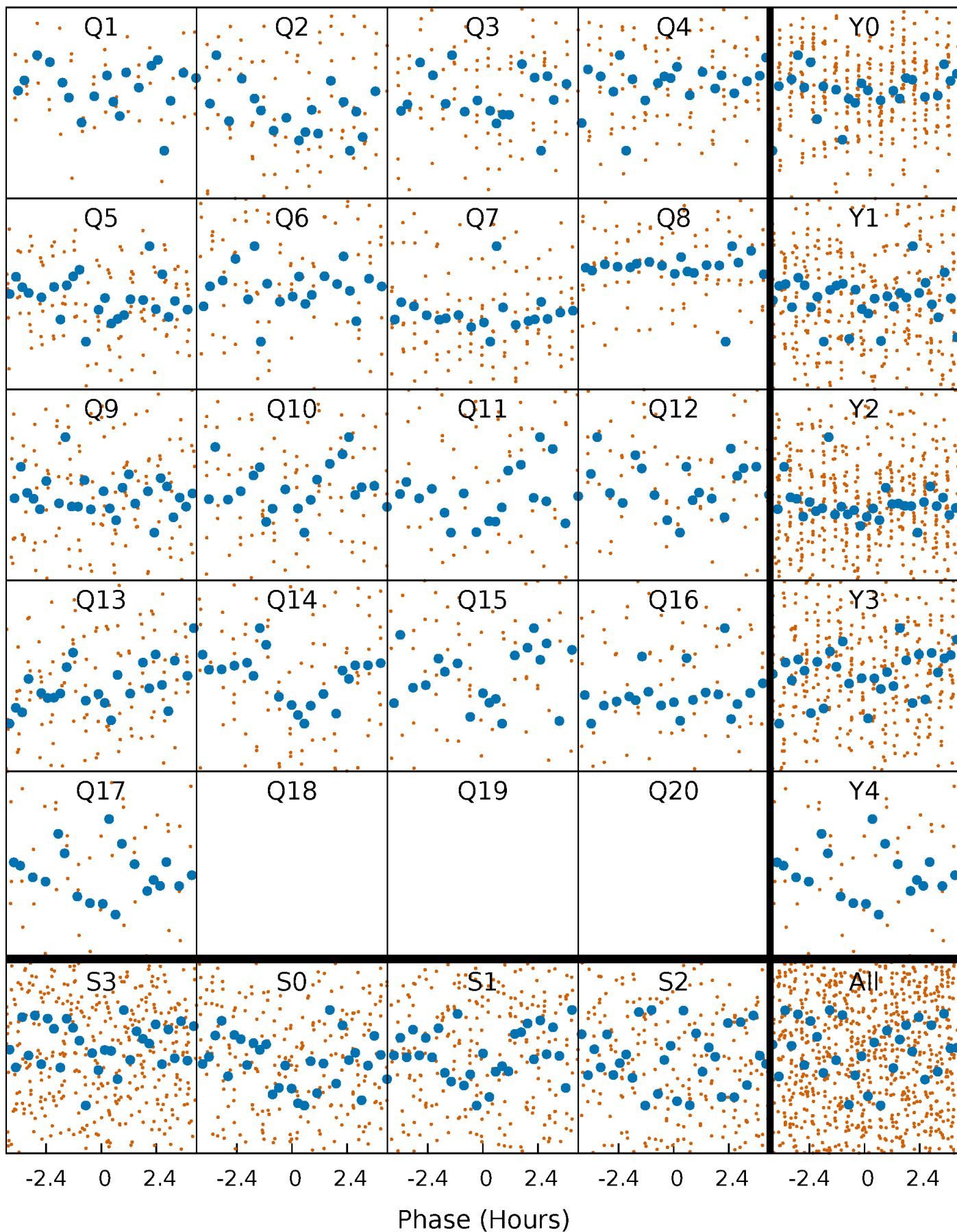


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 006859546-01 P= 13.444971 Days $T_0=137.248074$ (BKJD)



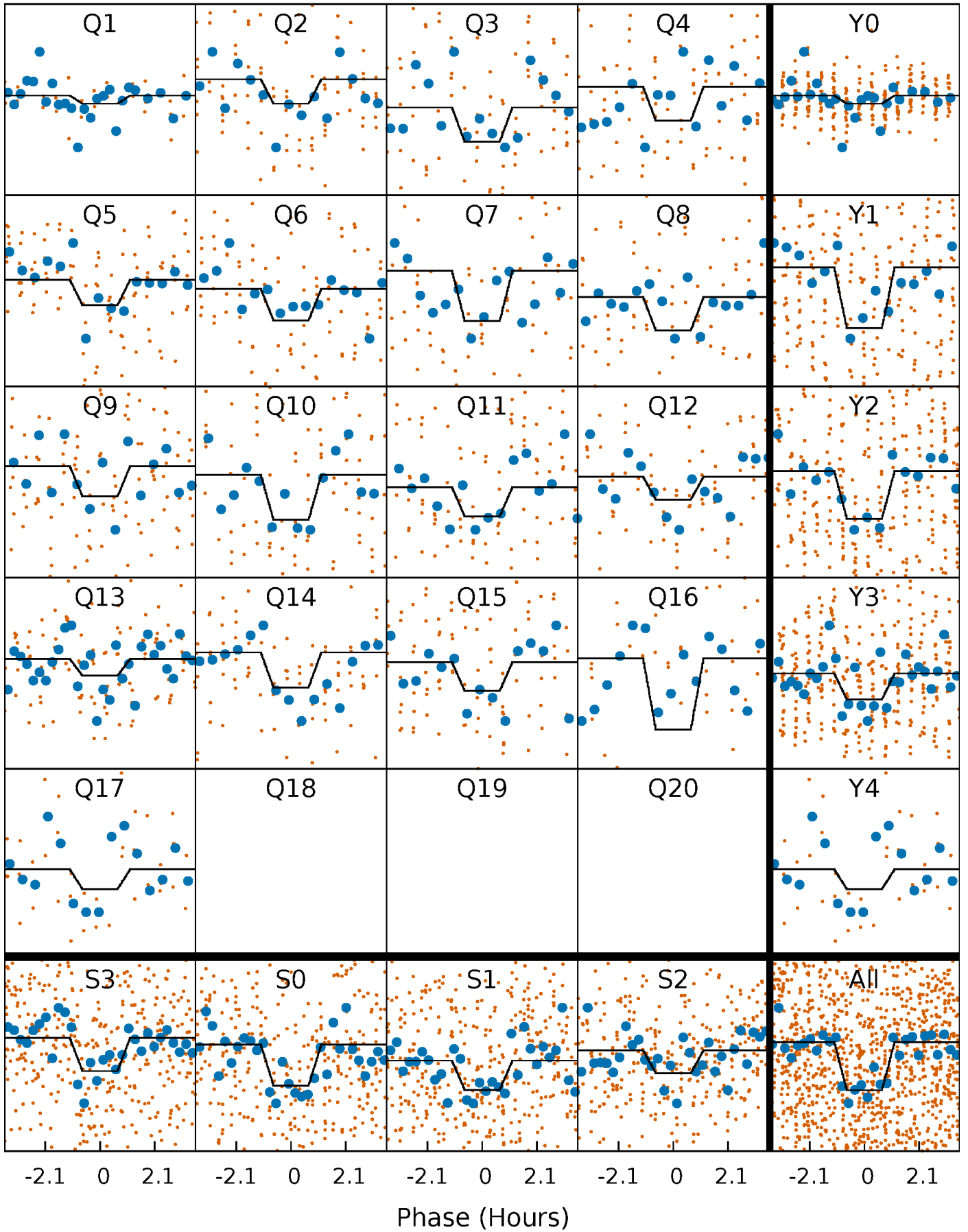
DV Quarter-Phased Transit Curves

TCE 006859546-01 P= 13.444971 Days $T_0=137.248074$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

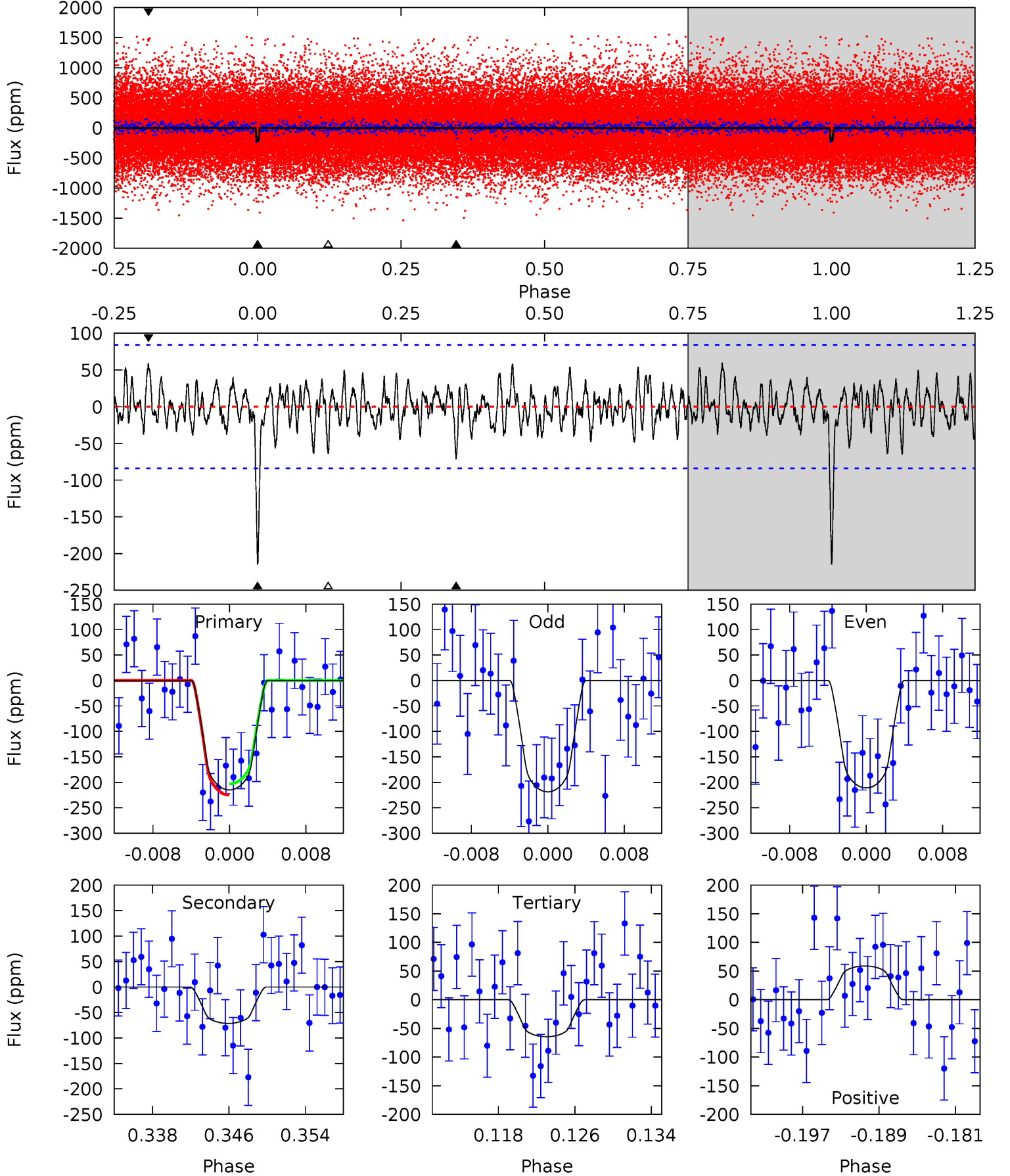
TCE 006859546-01 P= 13.445055 Days $T_0=137.244299$ (BKJD)



DV Model-Shift Uniqueness Test

006859546-01, P = 13.444971 Days, E = 123.803103 Days

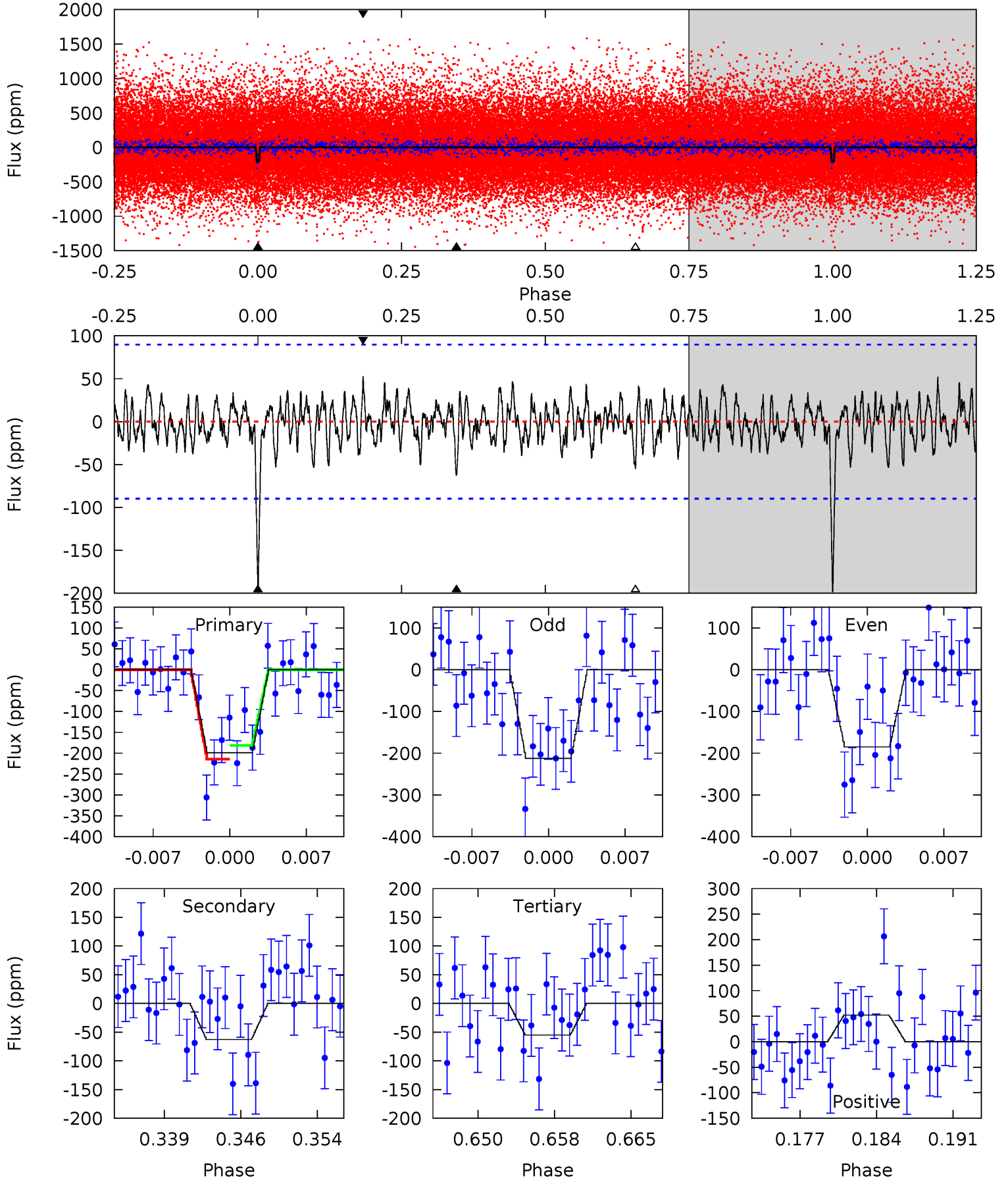
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	4.31	3.89	3.56	5.07	2.66	1.27	9.07	9.41	0.42	0.75	0.23	0.92	0.22	0.68



Alt Model-Shift Uniqueness Test

006859546-01, $P = 13.445055$ Days, $E = 123.799244$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	3.56	3.12	2.96	5.09	2.69	1.07	8.15	8.32	0.44	0.60	0.78	0.88	0.21	0.94



Stellar Parameters For KIC 006859546

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5003^{+151}_{-151}	$4.553^{+0.061}_{-0.050}$	$-0.100^{+0.300}_{-0.300}$	$0.759^{+0.072}_{-0.072}$	$0.750^{+0.085}_{-0.057}$	$2.421^{+0.623}_{-0.414}$
	+3%/-3%	+1%/-1%	+300%/-300%	+9%/-9%	+11%/-8%	+26%/-17%
Source	PHO1	KIC0	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 006859546-01 / KOI 6777.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-71 ± 17	$1.57^{+1.05}_{-0.90}$	847^{+29}_{-32}	3709^{+1402}_{-598}	159^{+723}_{-105}
Alt.	-63 ± 18	$1.38^{+1.03}_{-0.88}$	844^{+33}_{-31}	3744^{+1784}_{-620}	180^{+1099}_{-122}

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 $A_{obs} \gg 1.0$

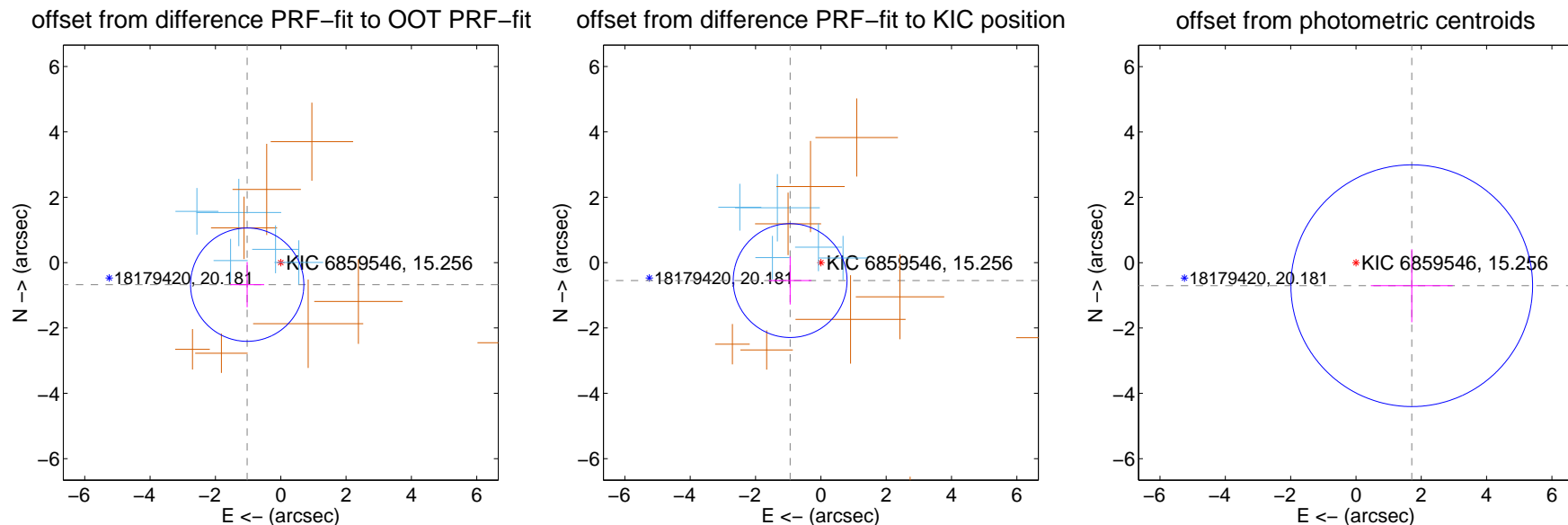
DV Centroid Data

Supplemental centroid analysis for 006859546-01. Kepler magnitude: 15.26. Transit SNR 9.82

There are 5 quarters with good PRF difference image offsets

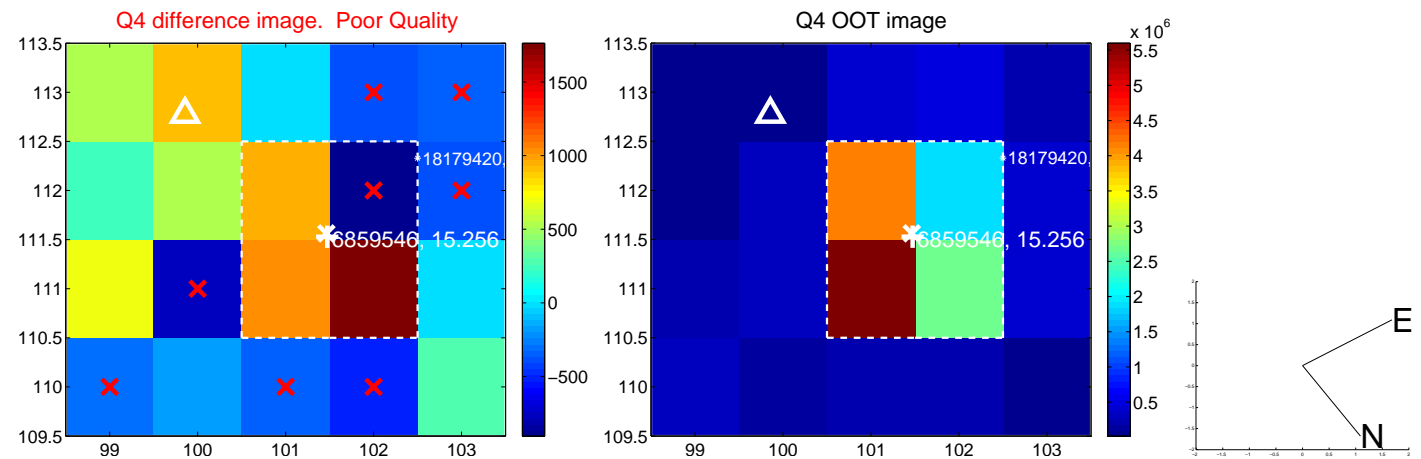
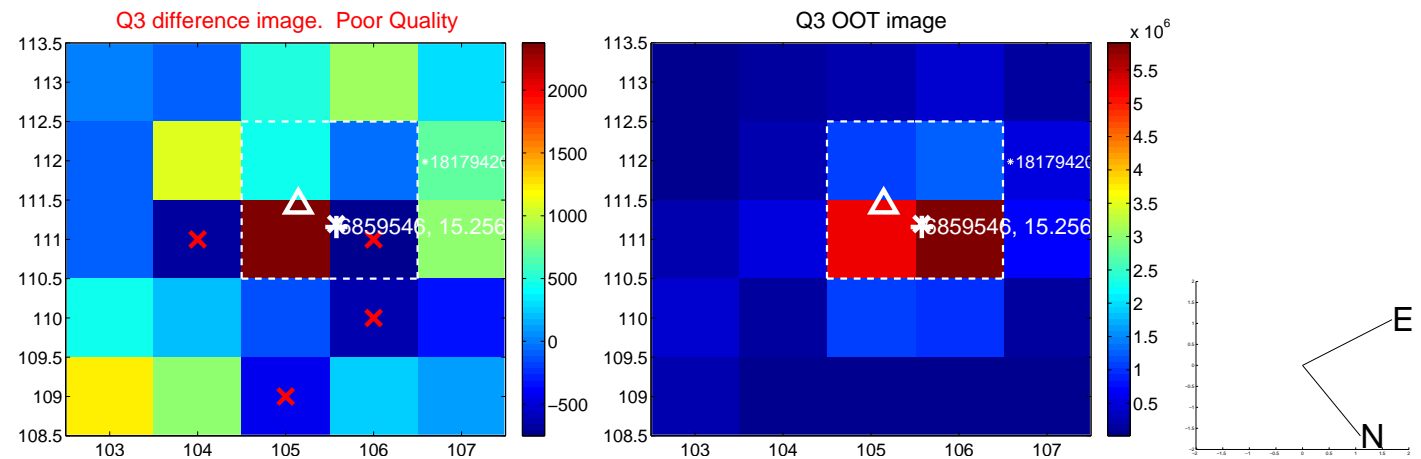
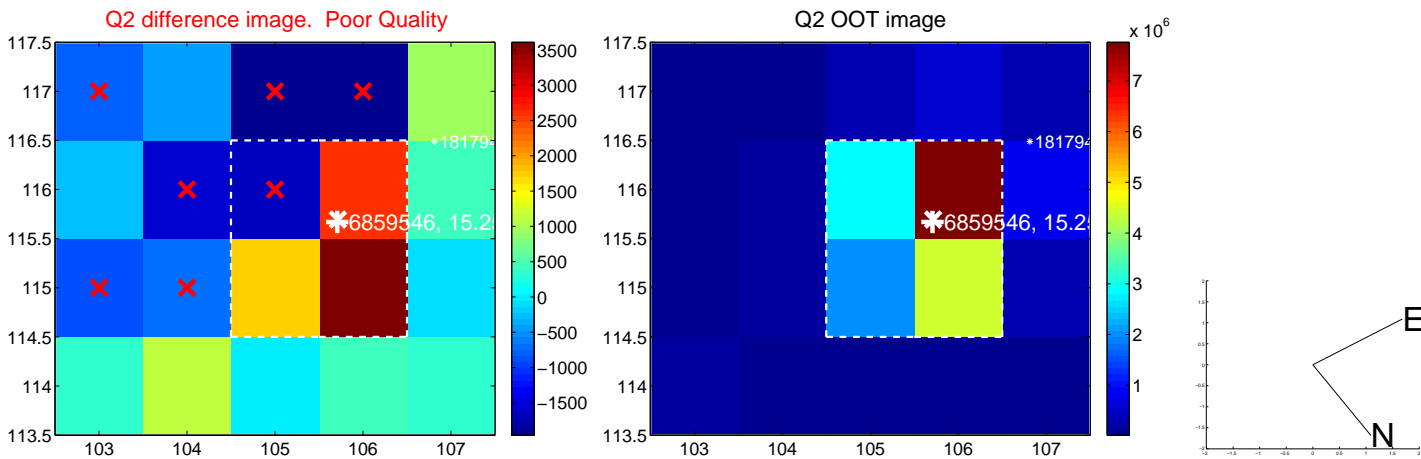
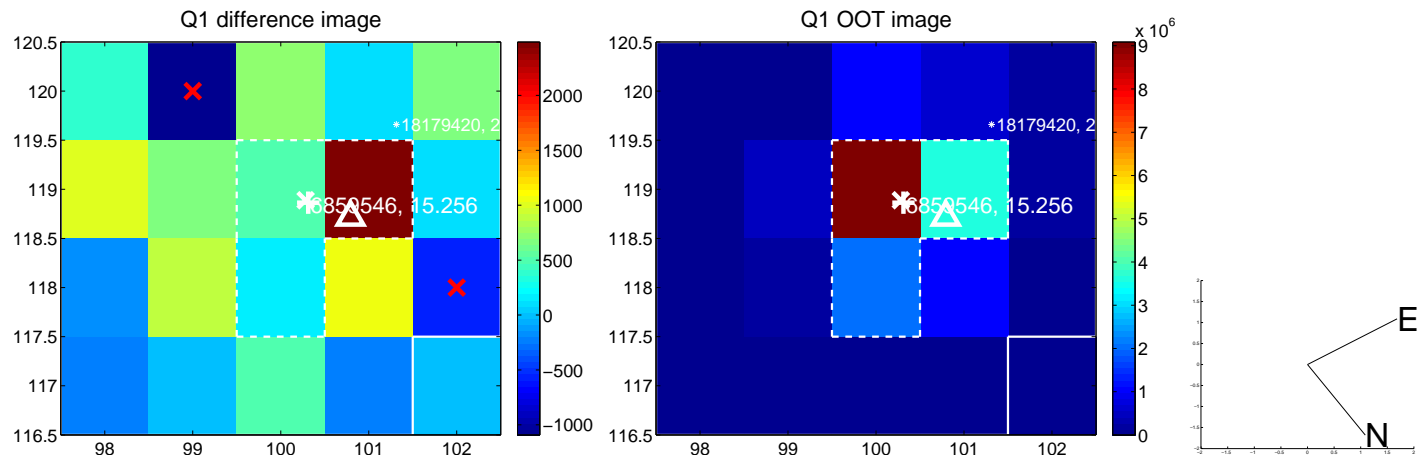
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.230 ± 0.578	2.13	1.027 ± 0.521	-0.675 ± 0.692
PRF-fit source offset from KIC position	1.090 ± 0.581	1.88	0.941 ± 0.652	-0.550 ± 0.735
photometric centroid source offset	1.85 ± 1.23	1.50	-1.71 ± 1.25	-0.71 ± 1.12

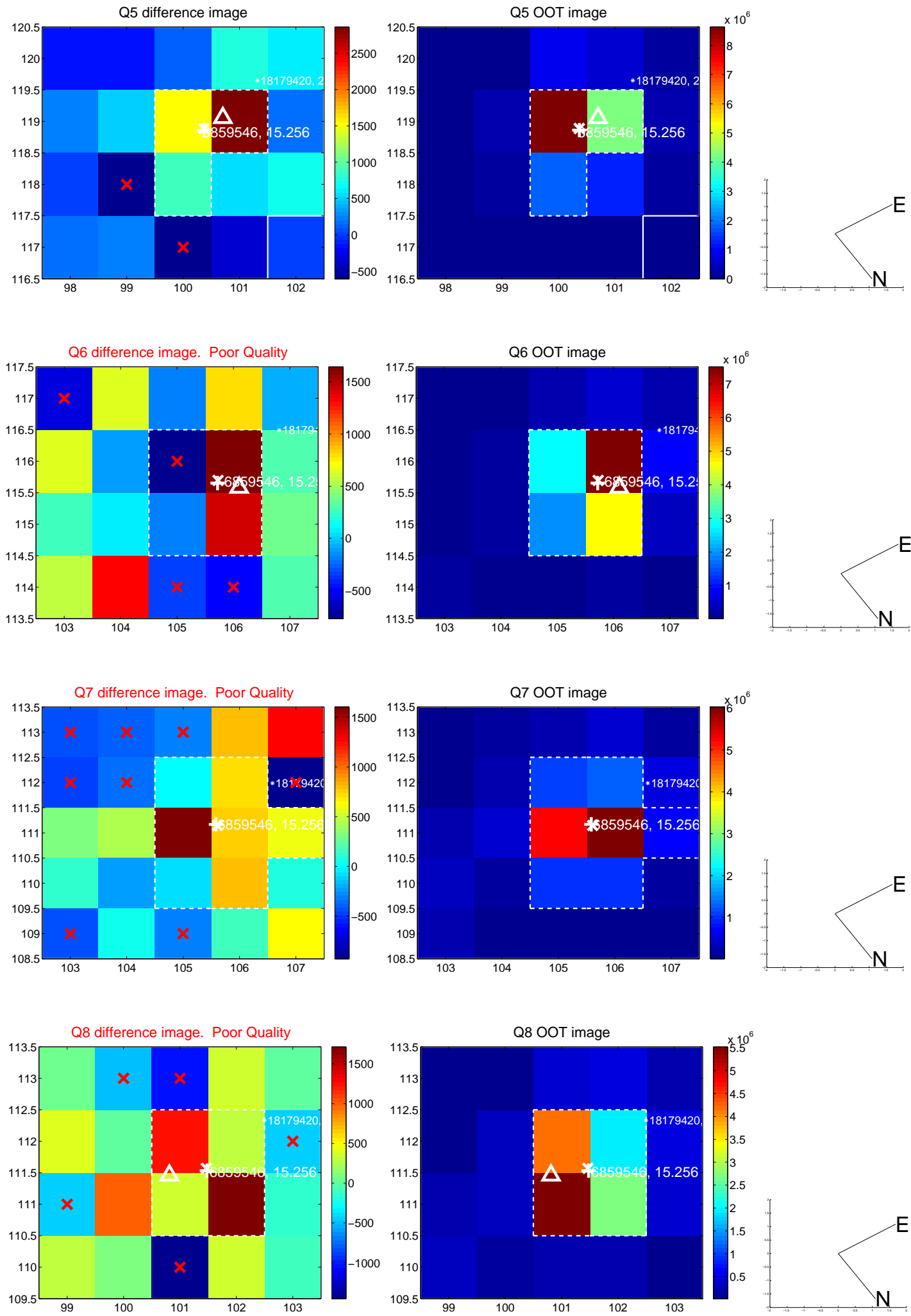


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

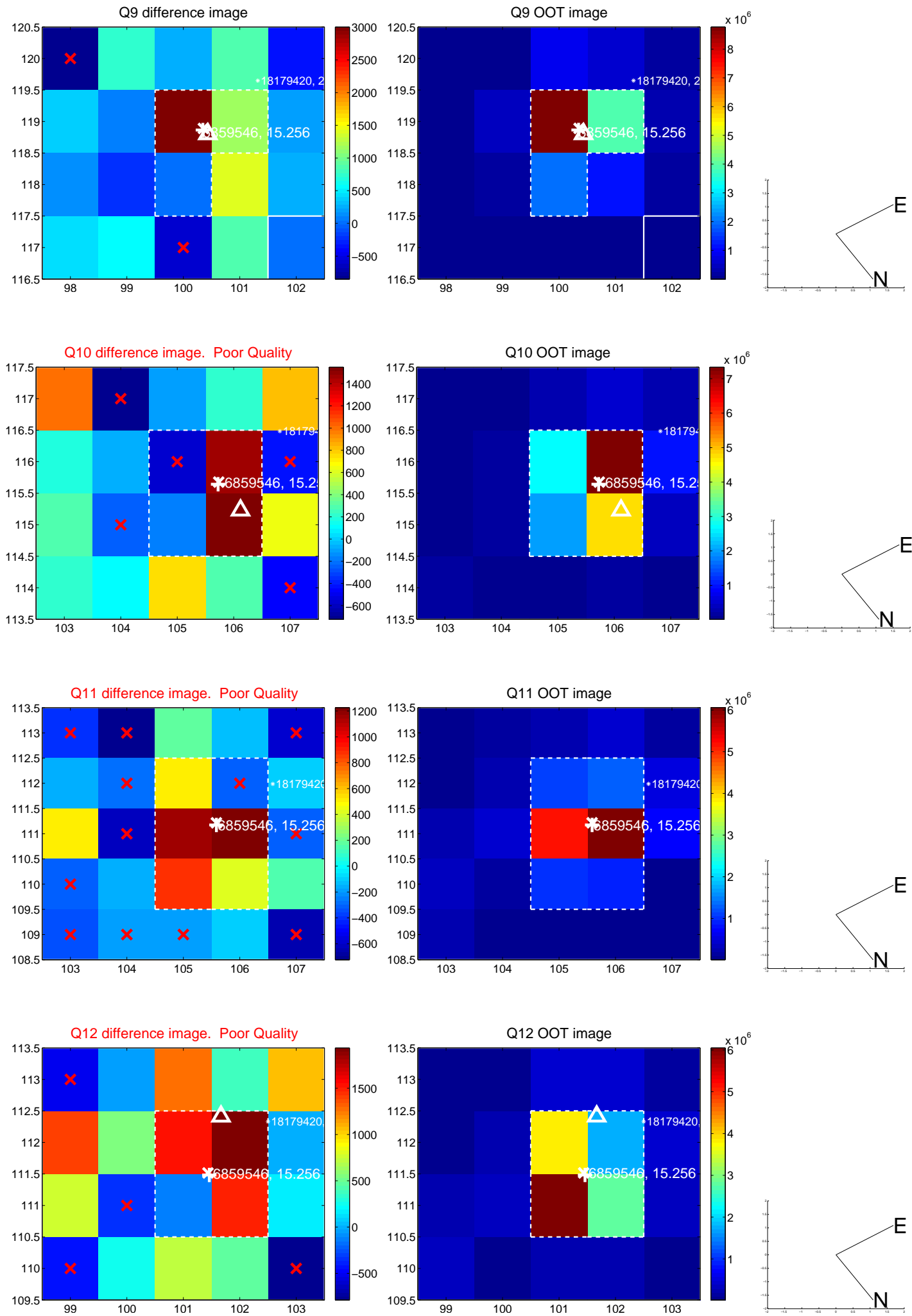
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



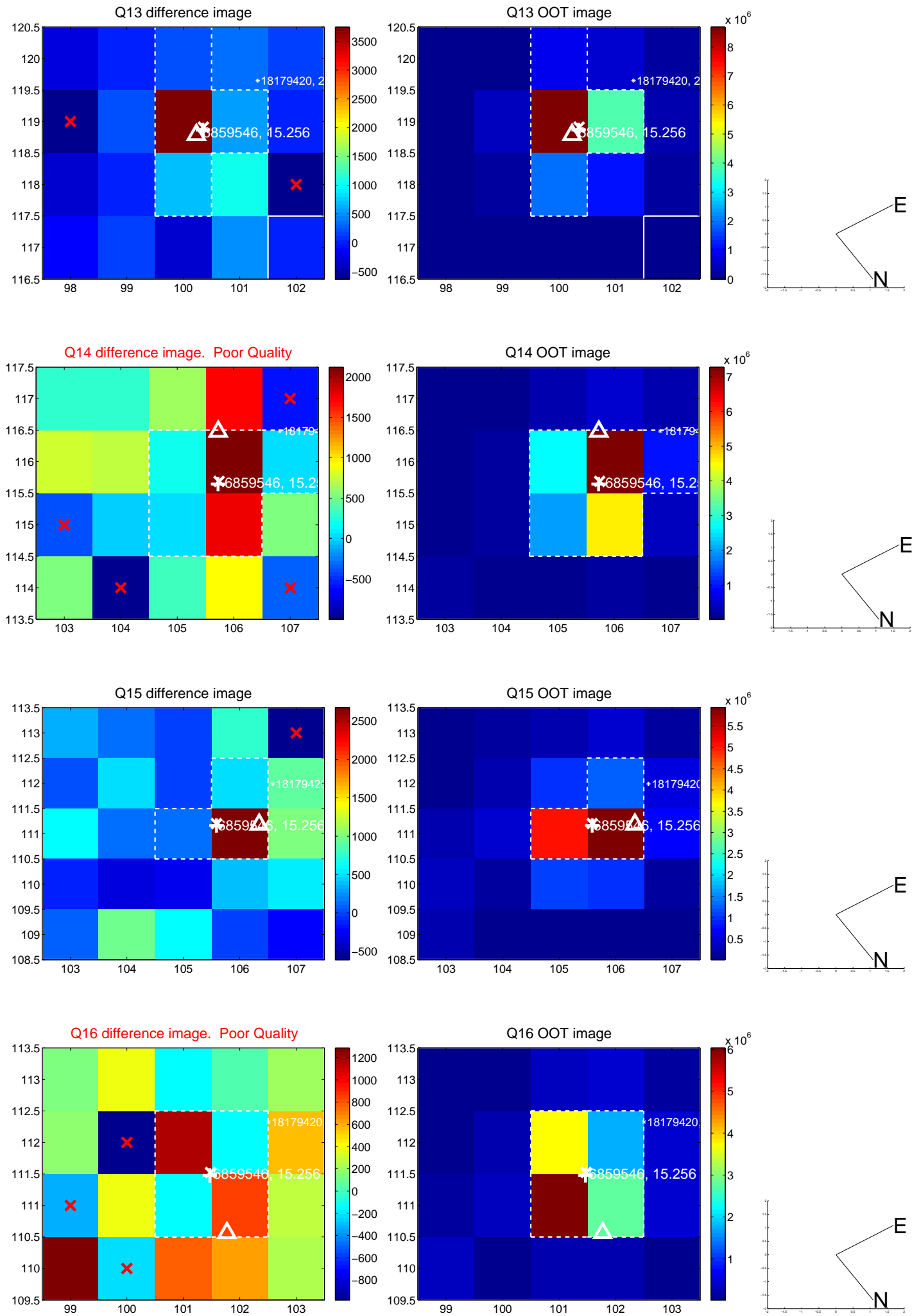
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



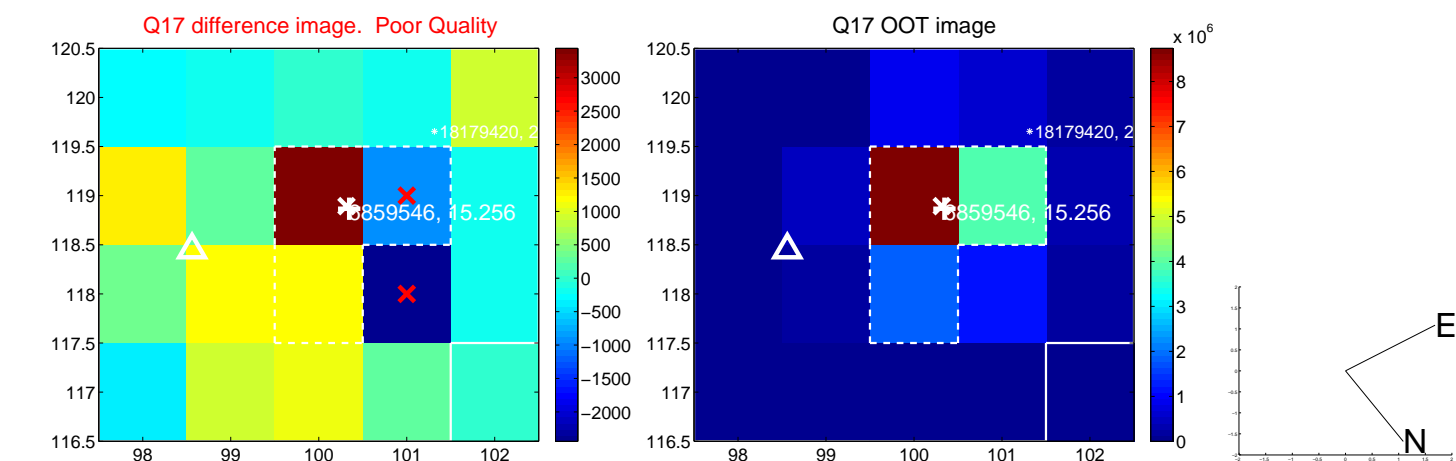
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



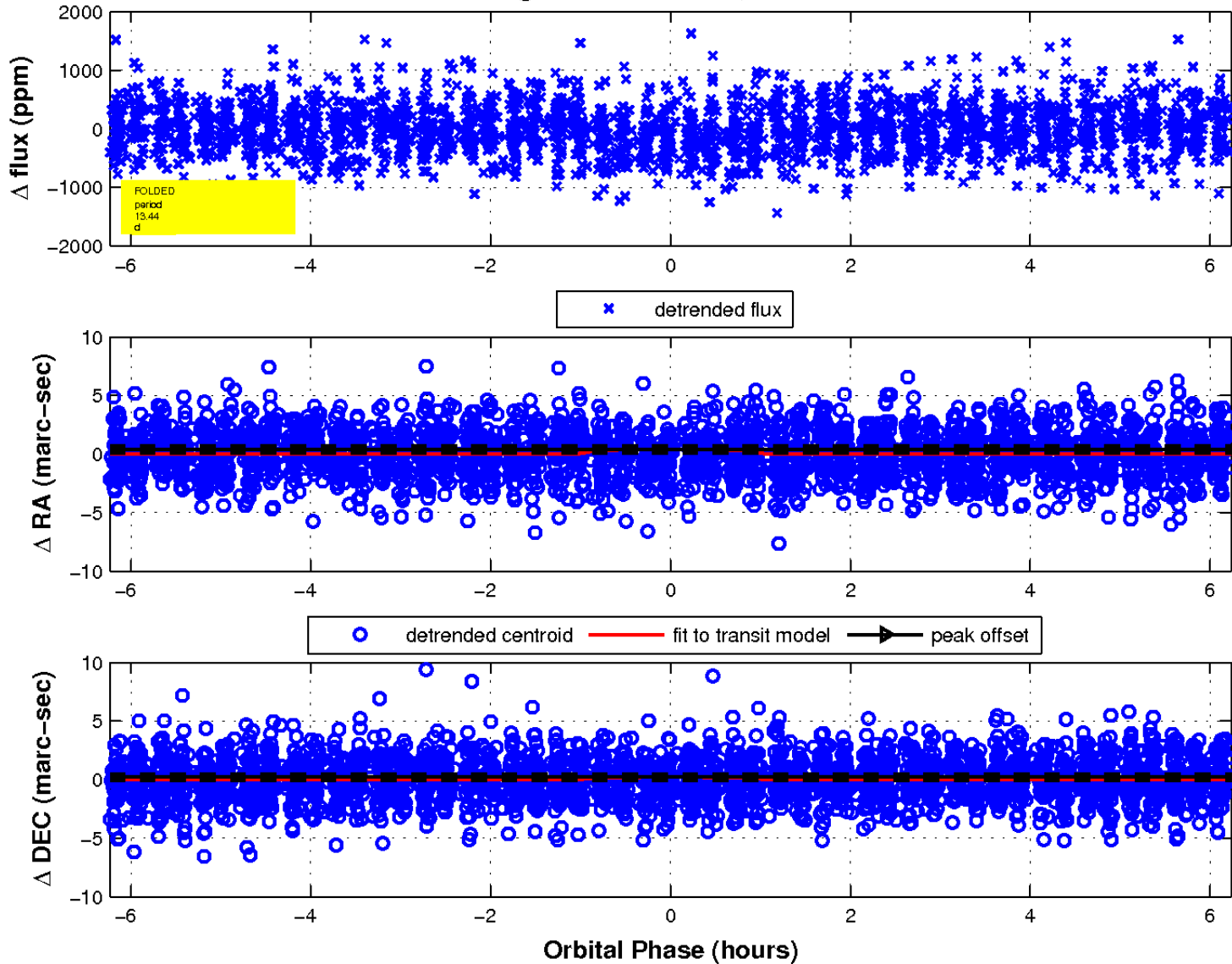
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

