

KIC 008009350

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})
008009350-01	OBS	1569.01	13.752097	143.030796	1189.2	3.044	31.2	35.1	0.70	4802	2.89	22.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008009350-01	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 008009350-01

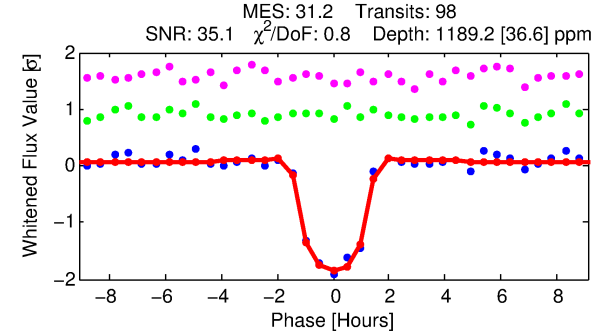
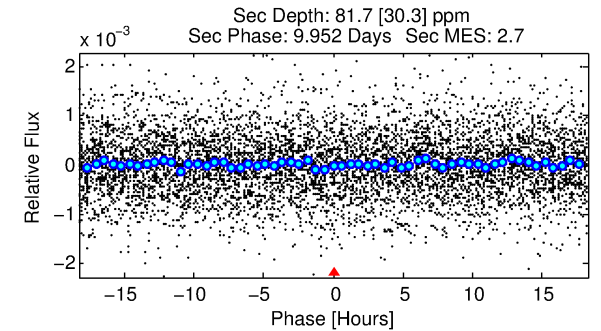
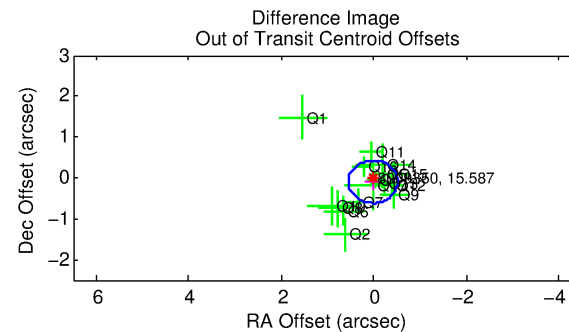
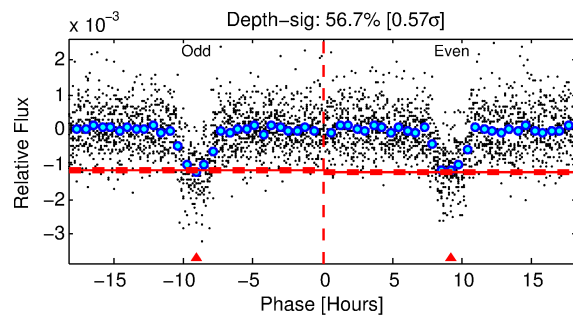
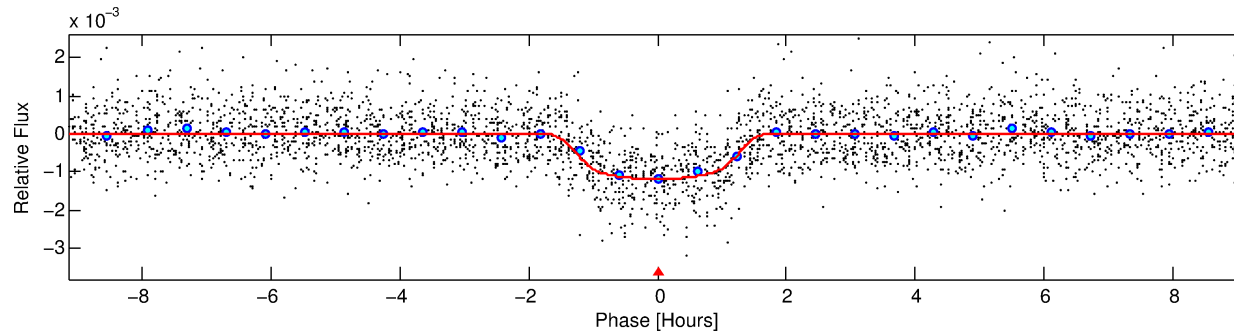
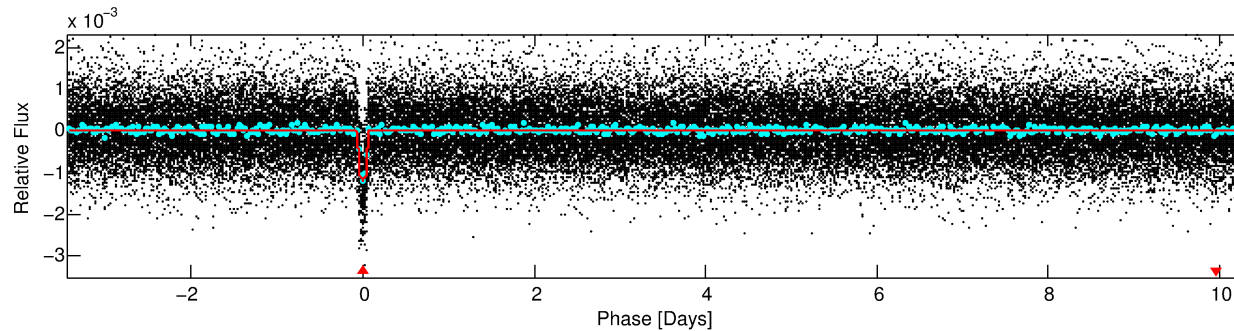
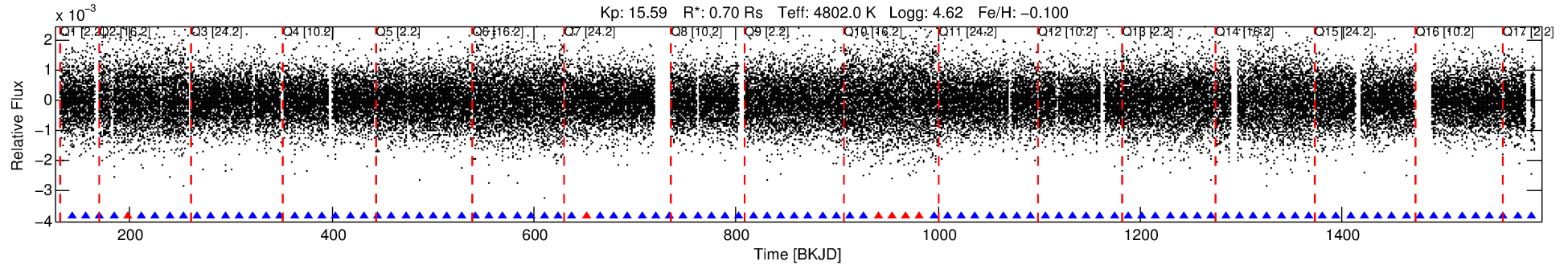
No Significant Match Found

DV One-Page Summary

KIC: 8009350 Candidate: 1 of 1 Period: 13.752 d

KOI: K01569.01 Corr: 0.942

Kp: 15.59 R*: 0.70 Rs Teff: 4802.0 K Logg: 4.62 Fe/H: -0.100



DV Fit Results:

Period = 13.75210 [0.00003] d
Epoch = 143.0308 [0.0020] BKJD
Rp/R* = 0.0379 [0.0034]
a/R* = 19.05 [5.85]
b = 0.88 [0.08]
Seff = 22.62 [3.51]
Teq = 556 [22] K
Rp = 2.89 [0.38] Re
a = 0.1015 [0.0076] AU
Ag = 55.43 [23.51] [2.31σ]
Teffp = 2346 [252] K [7.08σ]

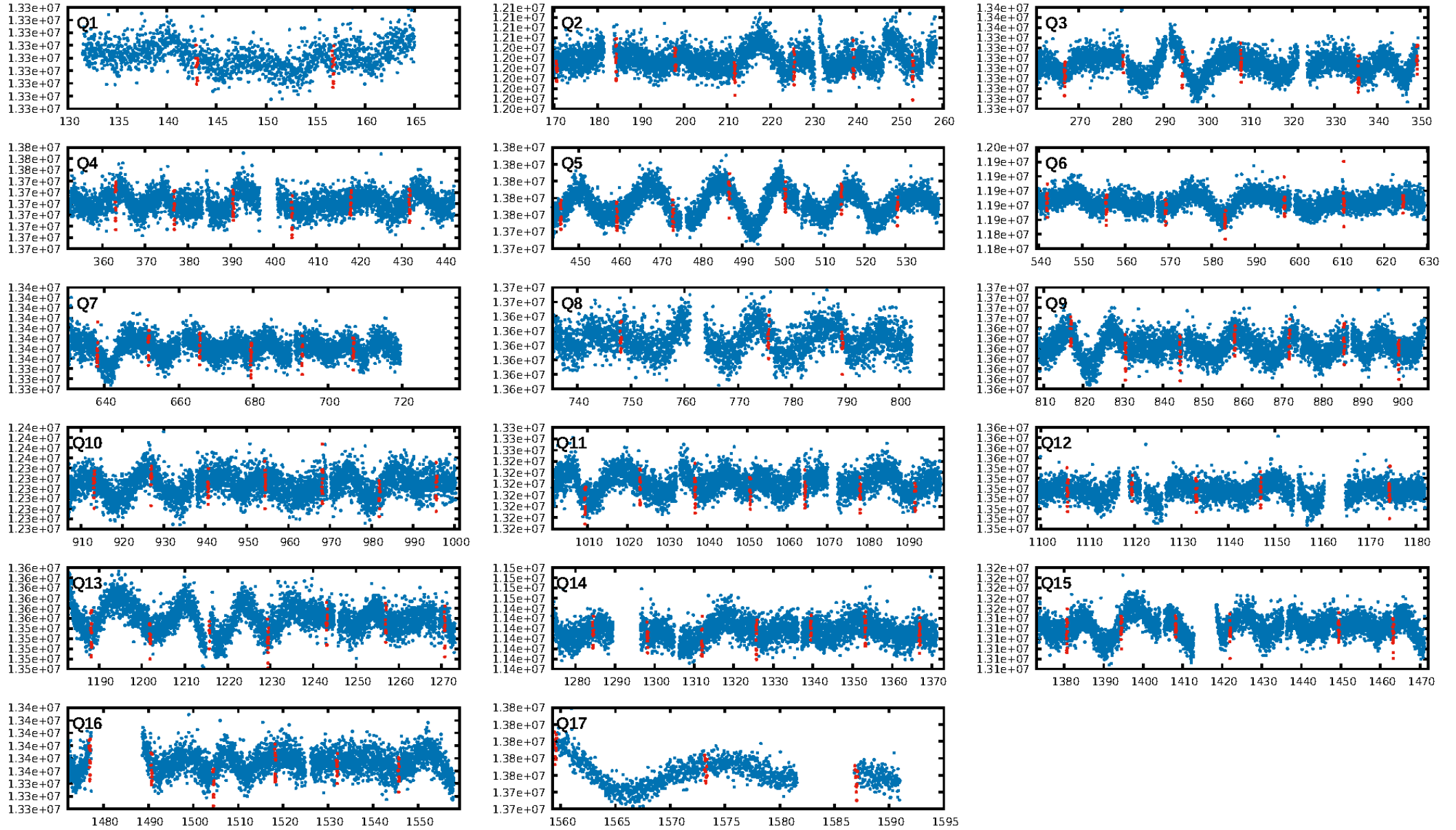
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.57e-212
RollingBand-fgt: 0.94 [87/93]
GhostDiagnostic-chr: 2.638
Centroid-sig: 79.9%
Centroid-so: 0.399 arcsec [0.98σ]
OotOffset-rm: 0.099 arcsec [0.56σ]
KicOffset-rm: 0.395 arcsec [2.34σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

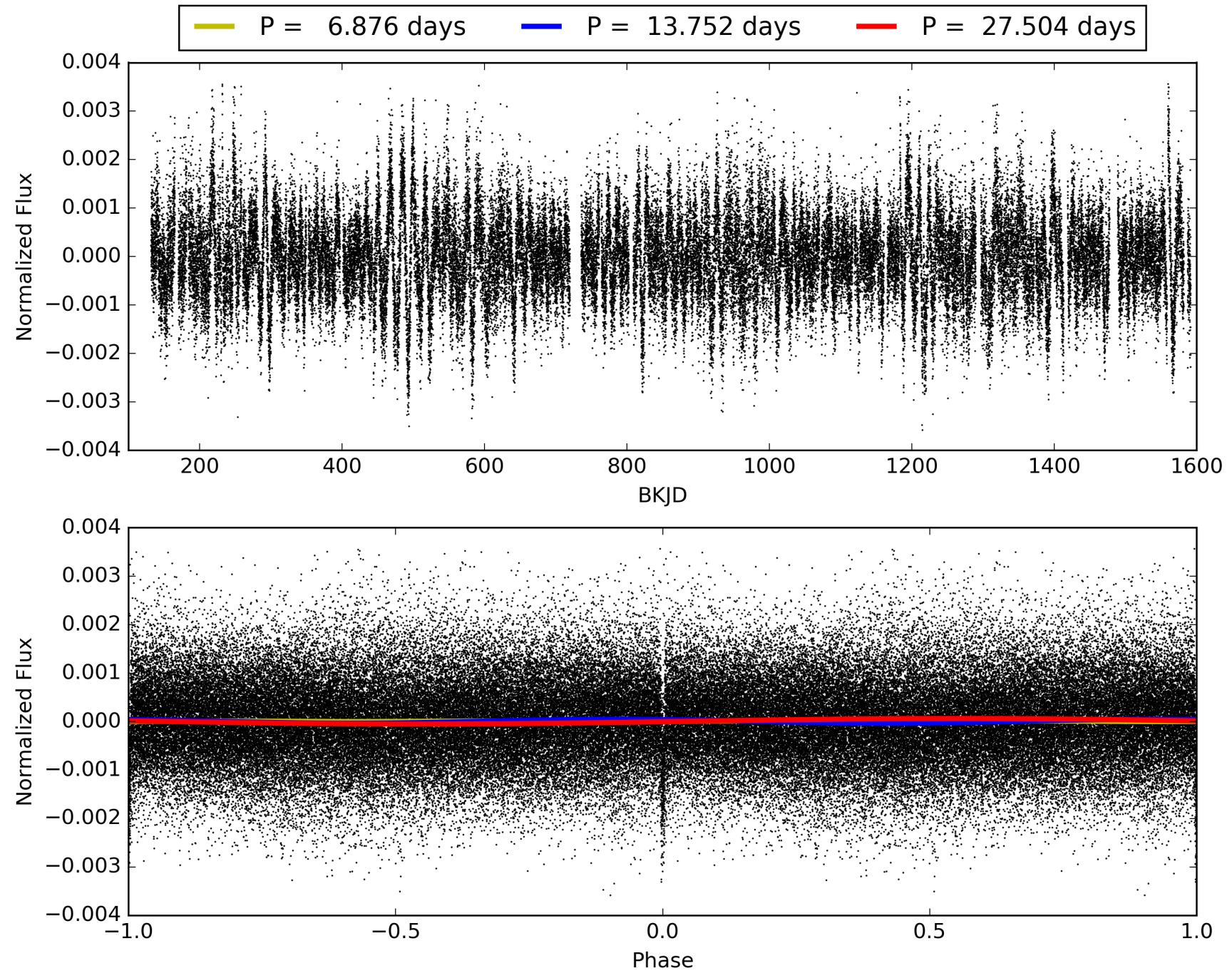
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:14:57 Z

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

TCE 008009350-01, PDC Light Curves

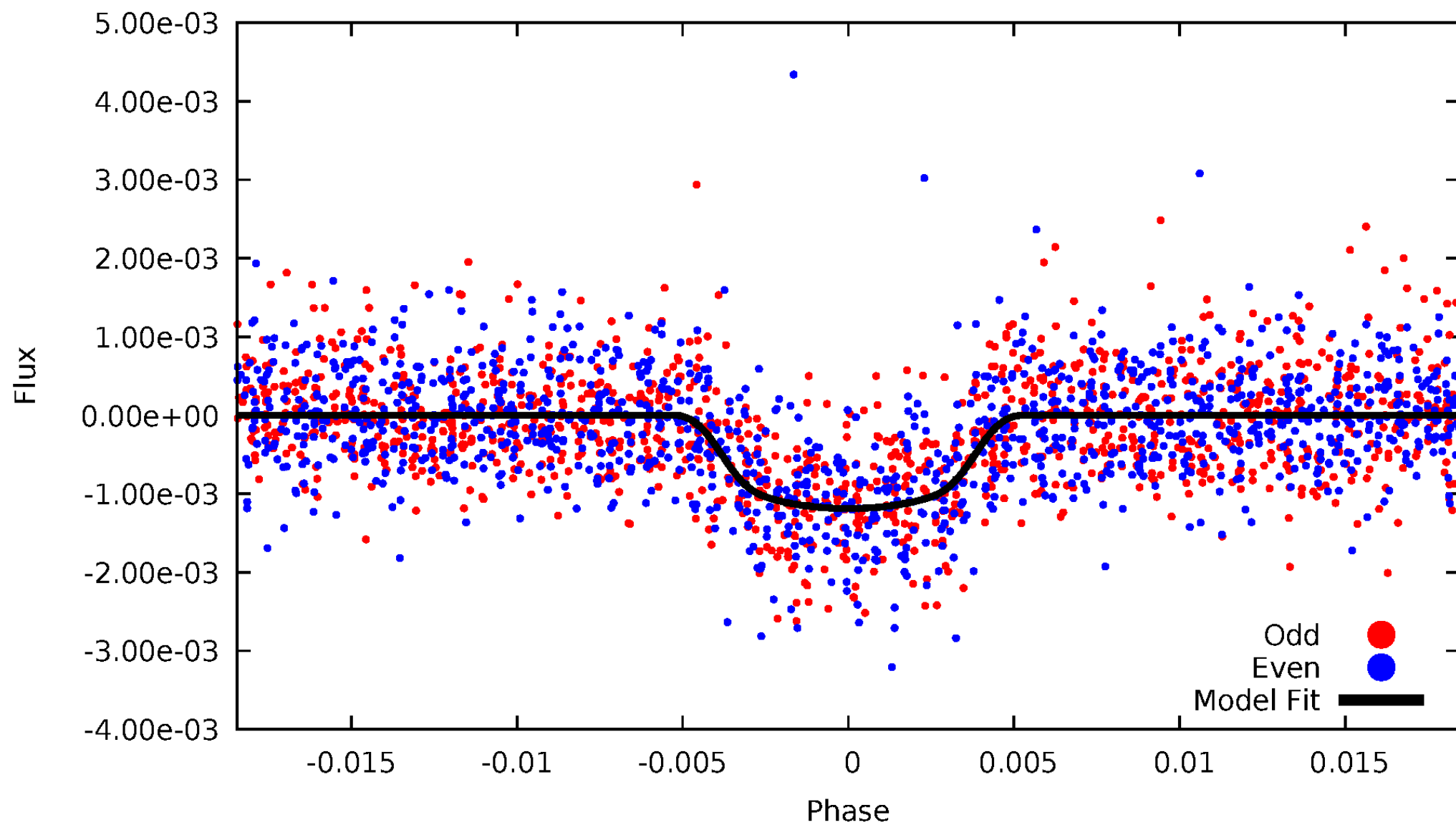


TCE 008009350-01



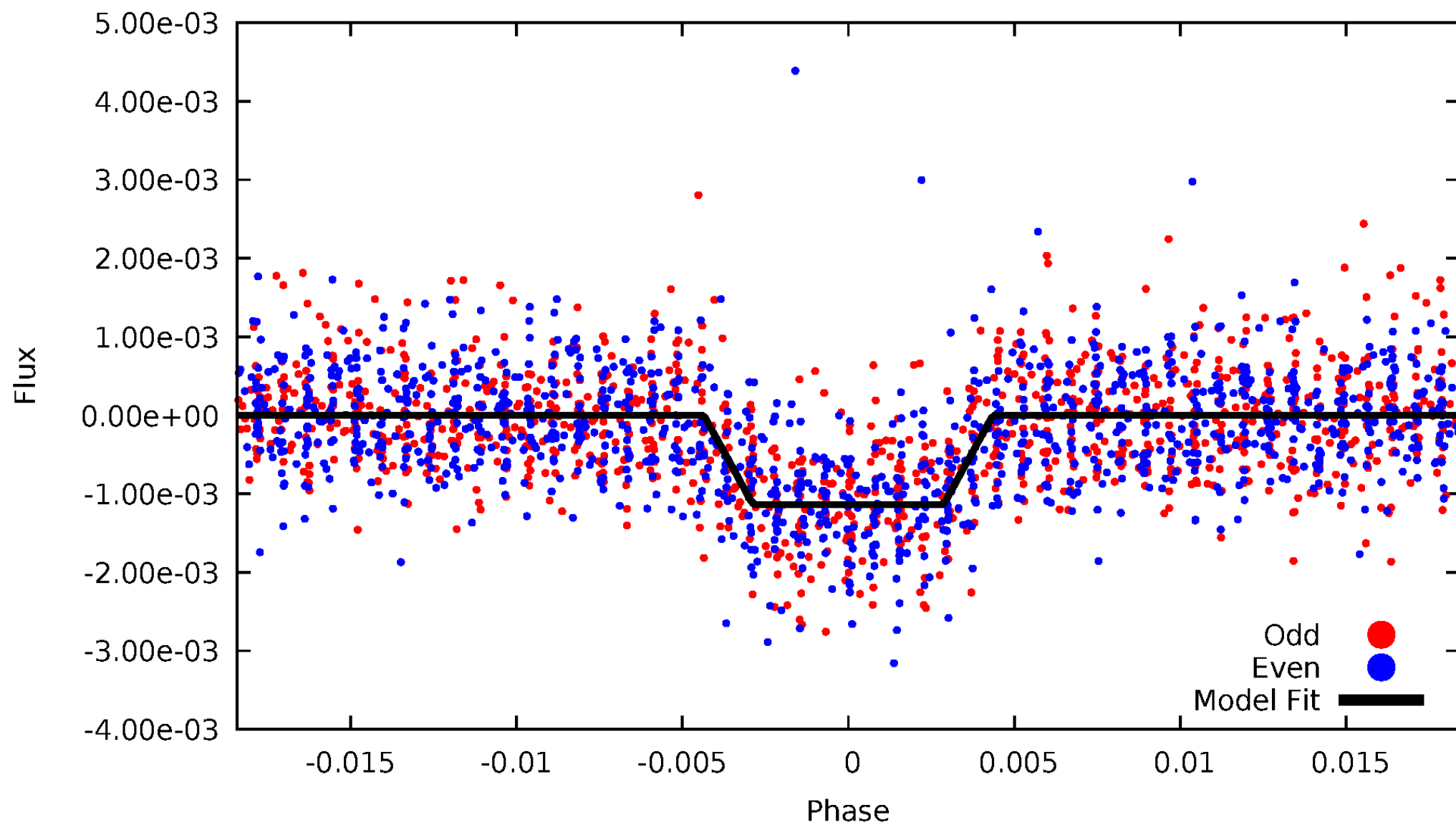
DV Odd/Even

TCE 008009350-01

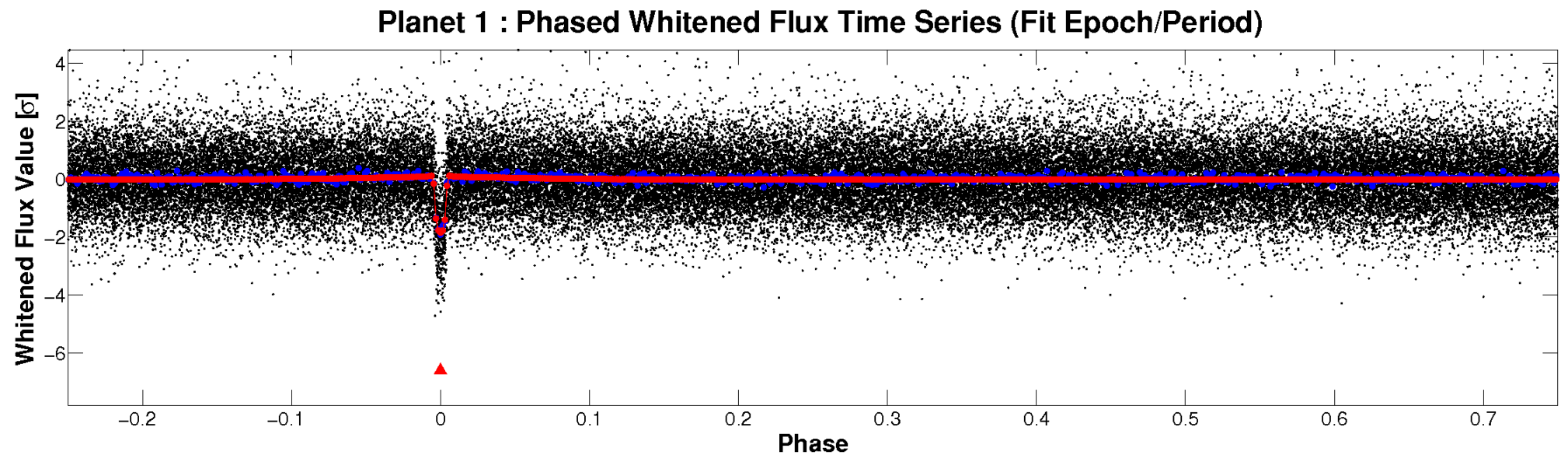
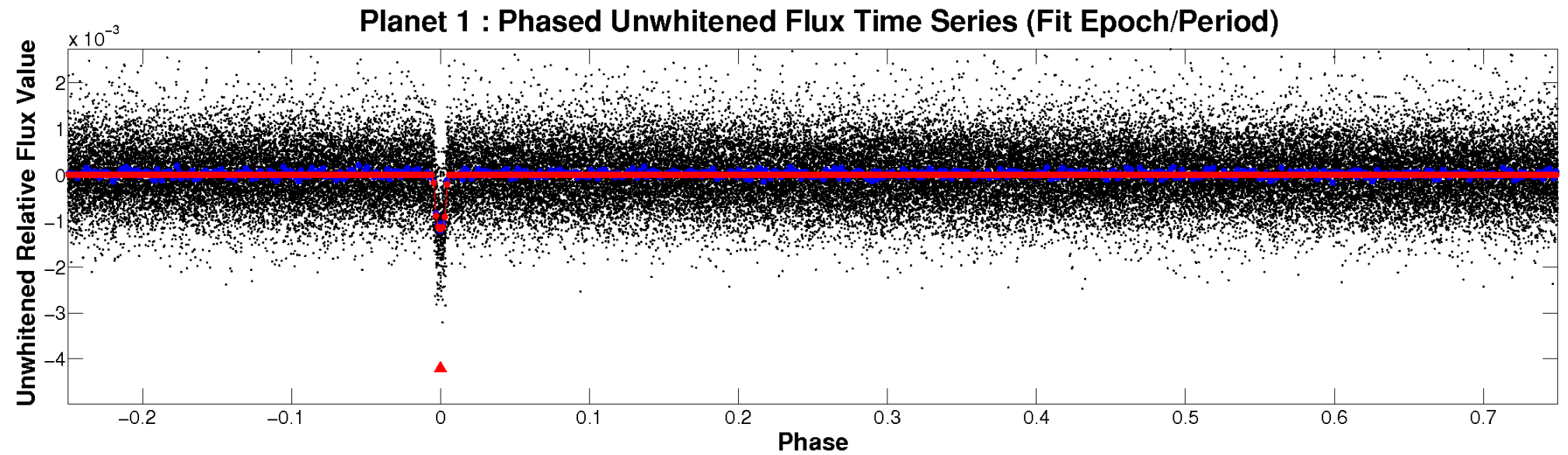


ALT Odd/Even

TCE 008009350-01

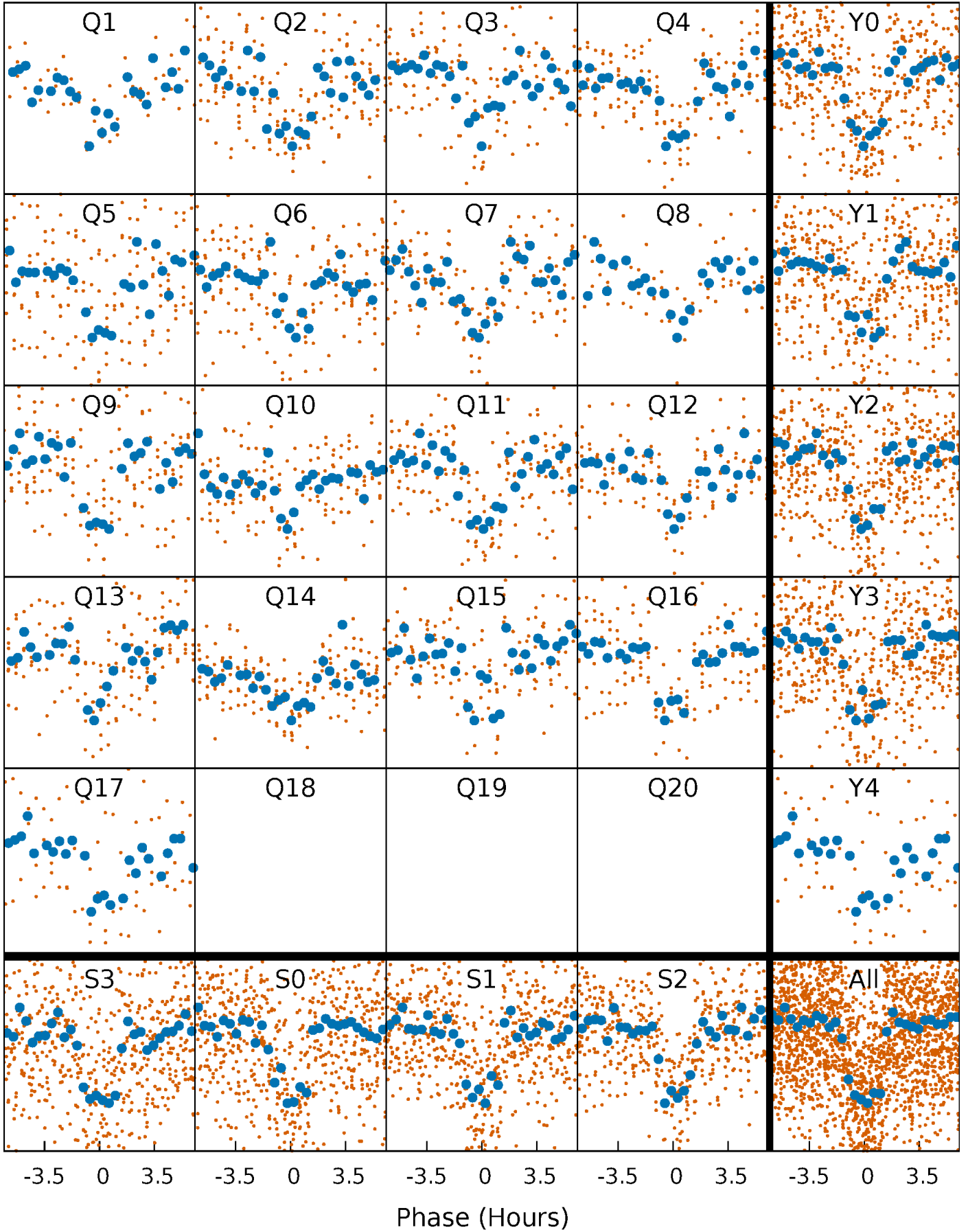


Non-Whitened Vs. Whitened Light Curve



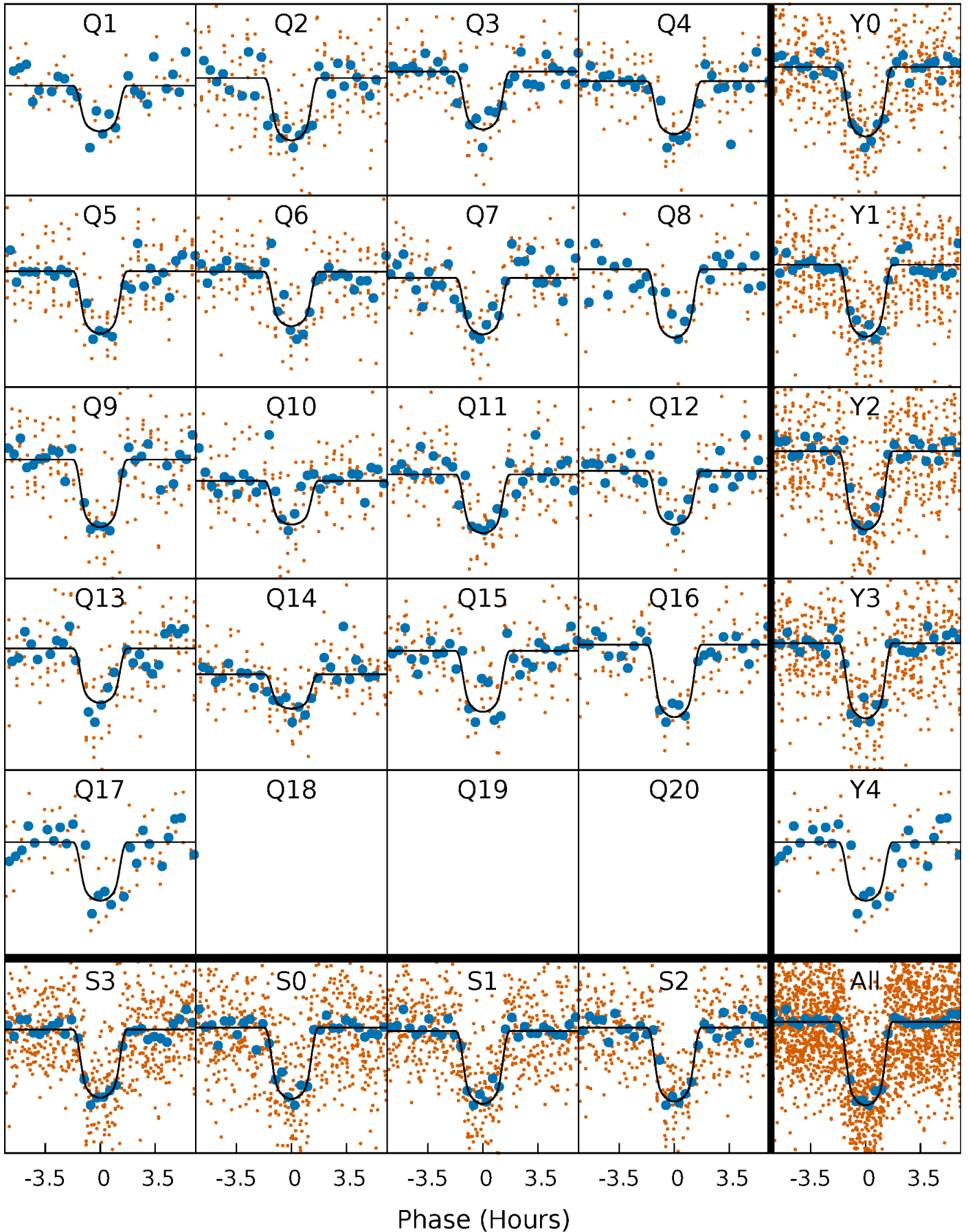
PDC Quarter-Phased Transit Curves

TCE 008009350-01 P= 13.752097 Days $T_0=143.030796$ (BKJD)



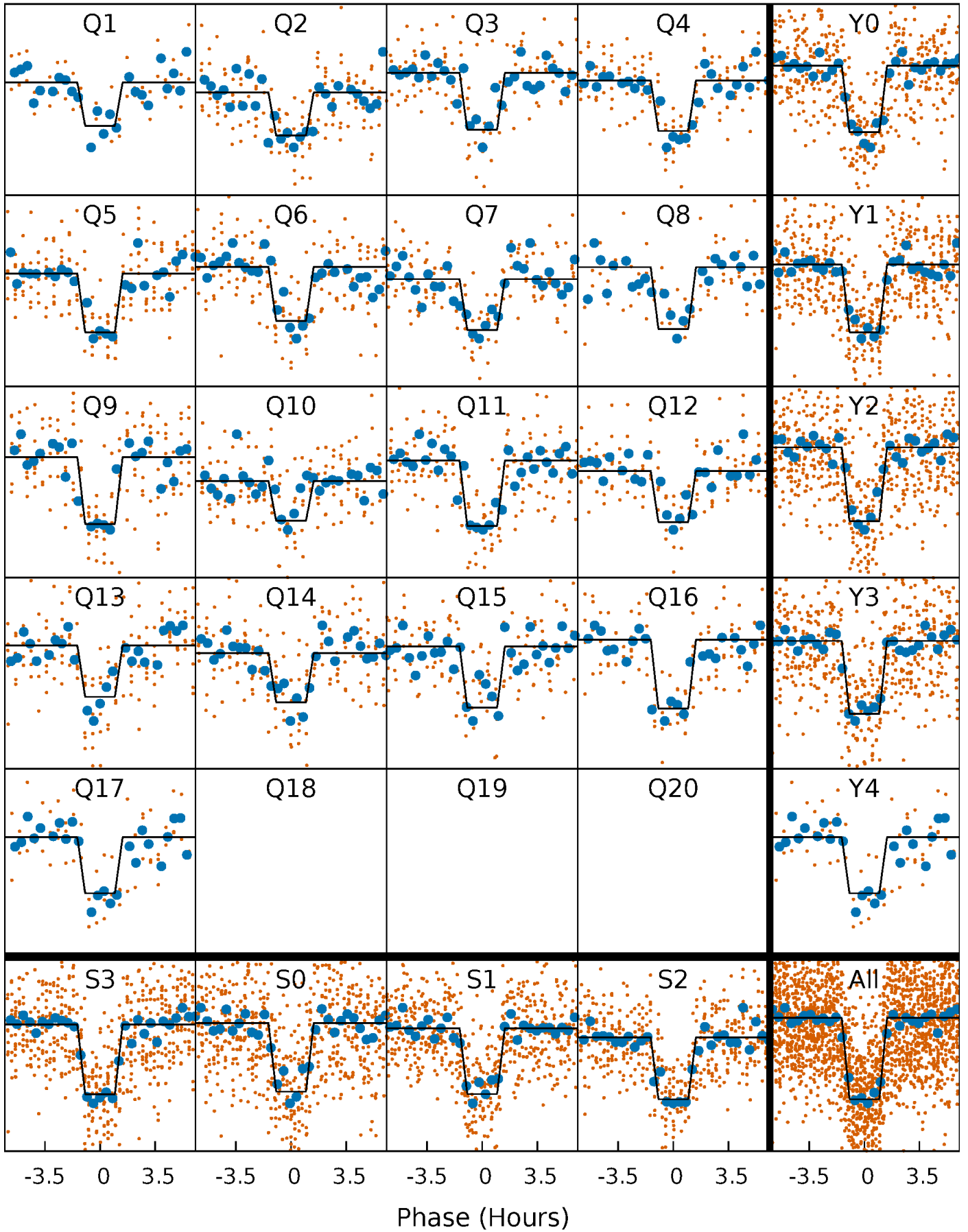
DV Quarter-Phased Transit Curves

TCE 008009350-01 P= 13.752097 Days $T_0=143.030796$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

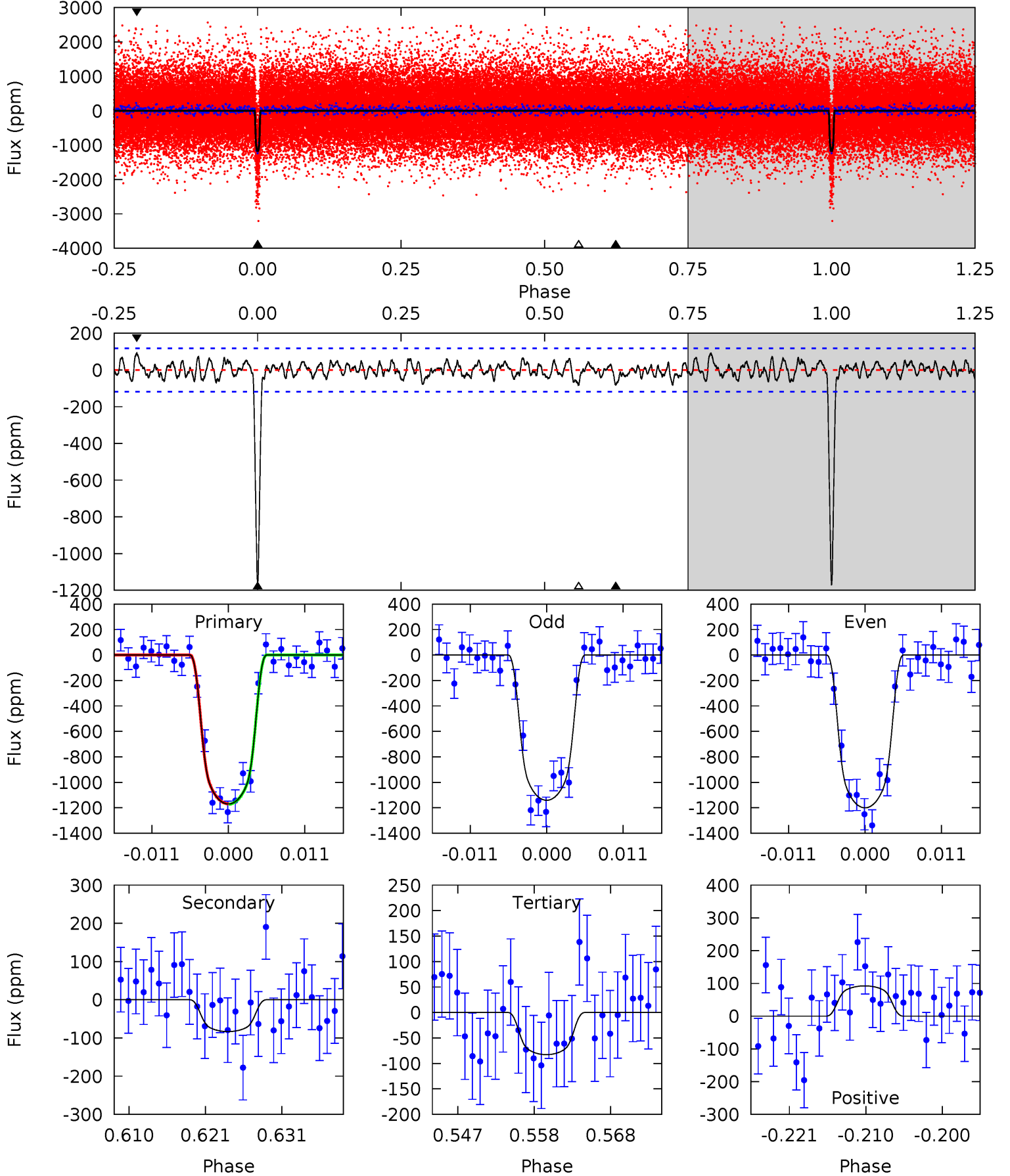
TCE 008009350-01 P= 13.752173 Days $T_0=143.027472$ (BKJD)



DV Model-Shift Uniqueness Test

008009350-01, $P = 13.752097$ Days, $E = 129.278699$ Days

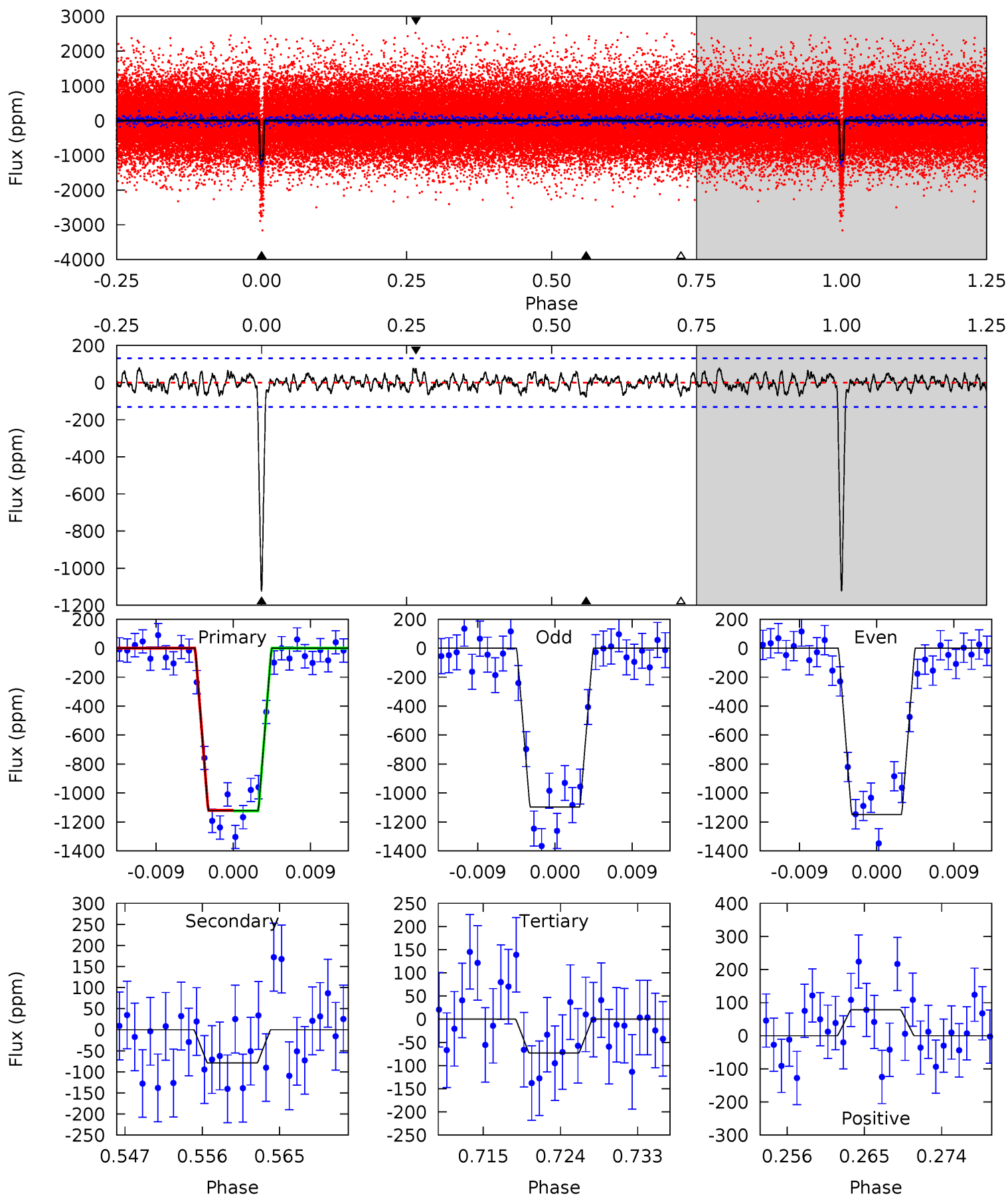
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.6	3.53	3.51	3.91	5.02	2.56	1.32	46.1	45.7	0.02	-0.38	1.26	1.00	0.07	0.07



Alt Model-Shift Uniqueness Test

008009350-01, P = 13.752173 Days, E = 129.275299 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.2	3.04	2.81	3.02	5.05	2.62	1.12	40.4	40.2	0.24	0.03	0.98	1.00	0.07	0.08



Stellar Parameters For KIC 008009350

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4802^{+129}_{-144}	$4.616^{+0.032}_{-0.048}$	$-0.100^{+0.300}_{-0.300}$	$0.699^{+0.068}_{-0.051}$	$0.738^{+0.066}_{-0.066}$	$3.039^{+0.546}_{-0.556}$
	+3%/-3%	+1%/-1%	+300%/-300%	+10%/-7%	+9%/-9%	+18%/-18%
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 008009350-01 / KOI 1569.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-83 ± 24	$2.87^{+0.31}_{-0.28}$	778^{+28}_{-26}	2972^{+149}_{-145}	56^{+22}_{-17}
Alt.	-79 ± 26	$2.60^{+0.28}_{-0.29}$	778^{+27}_{-26}	3042^{+163}_{-174}	66^{+27}_{-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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

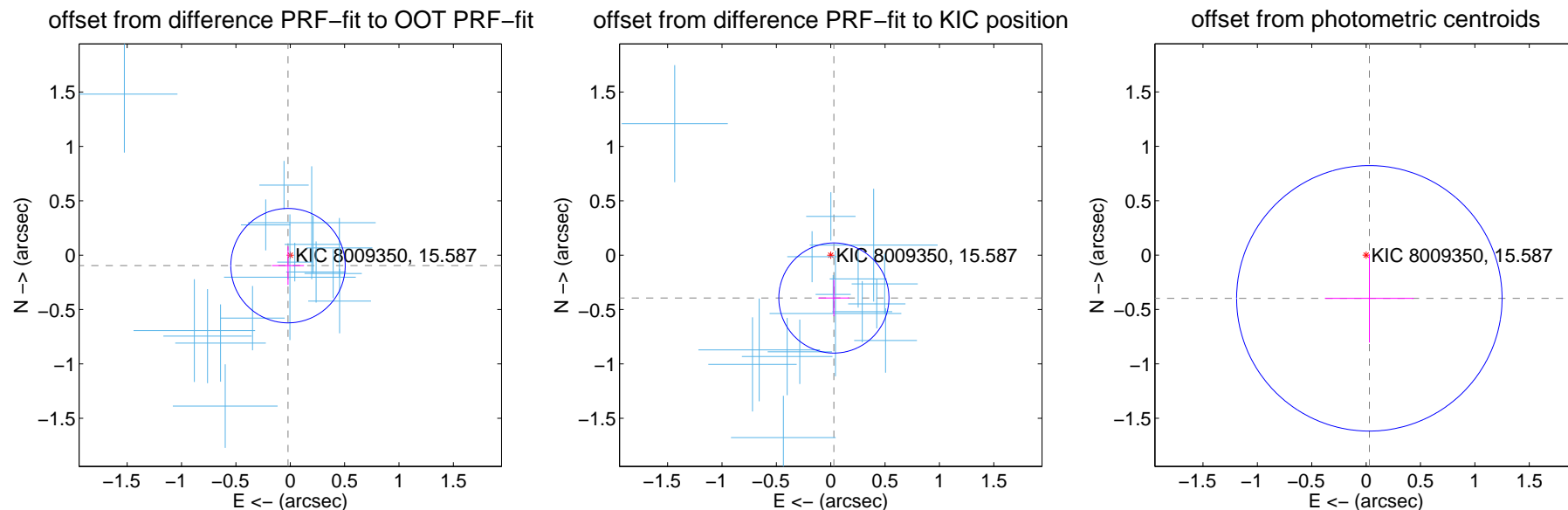
DV Centroid Data

Supplemental centroid analysis for 008009350-01. Kepler magnitude: 15.59. Transit SNR 35.14

There are 16 quarters with good PRF difference image offsets

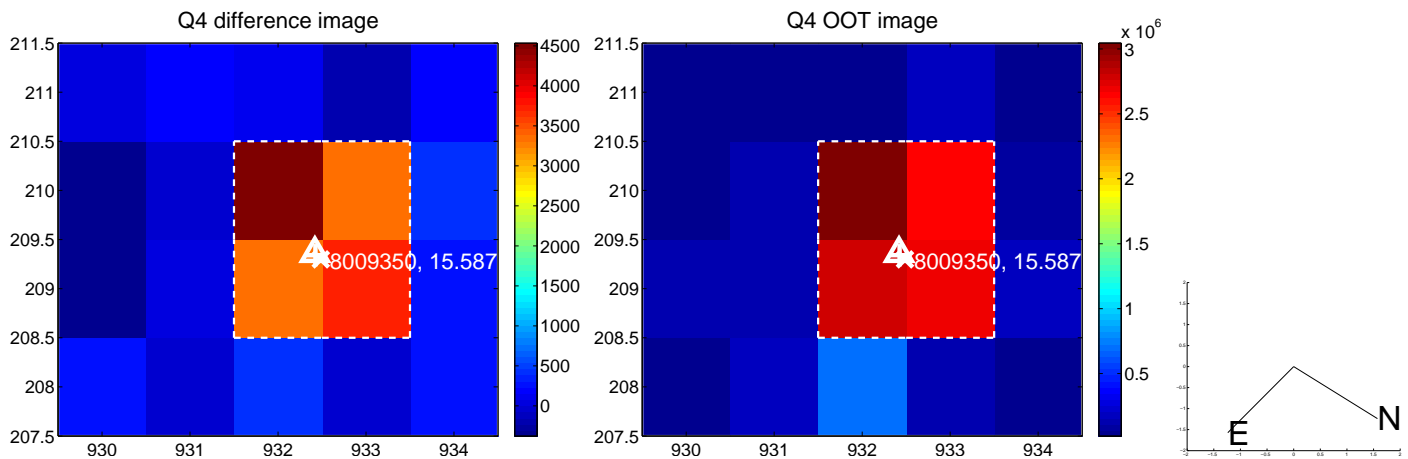
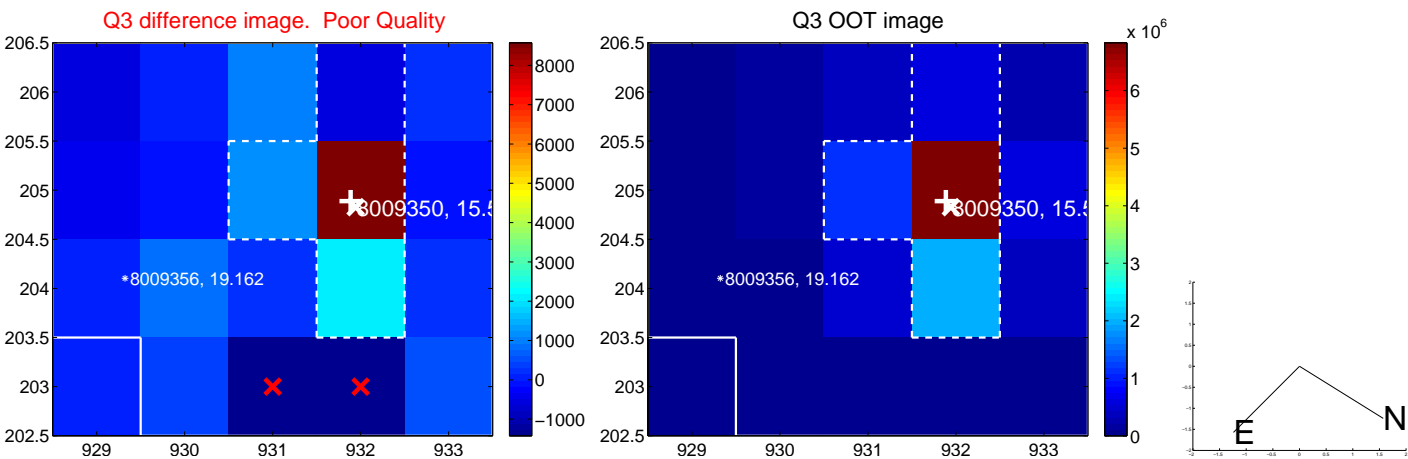
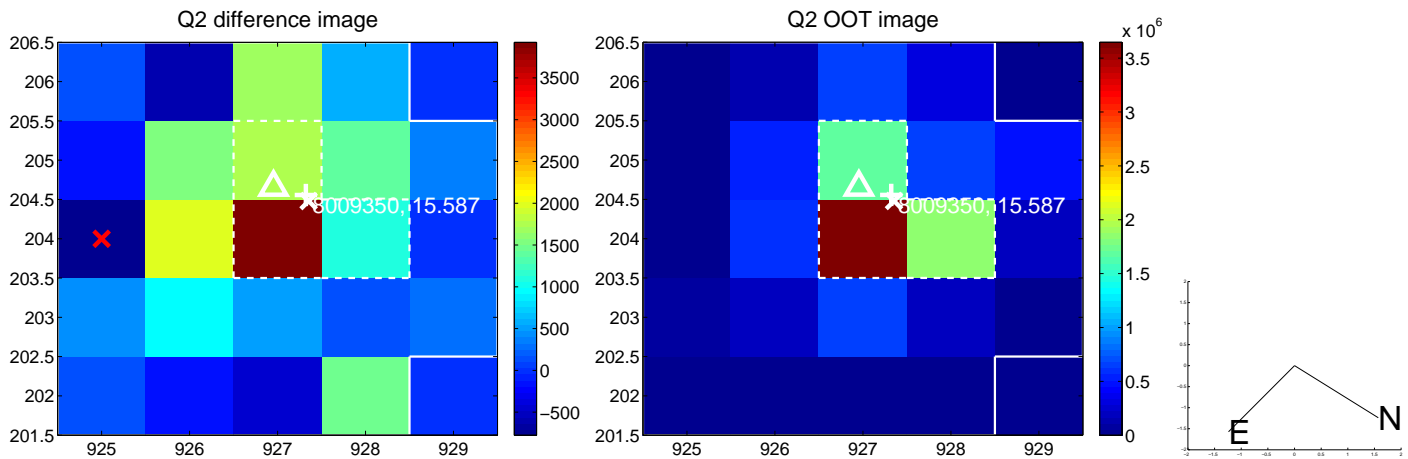
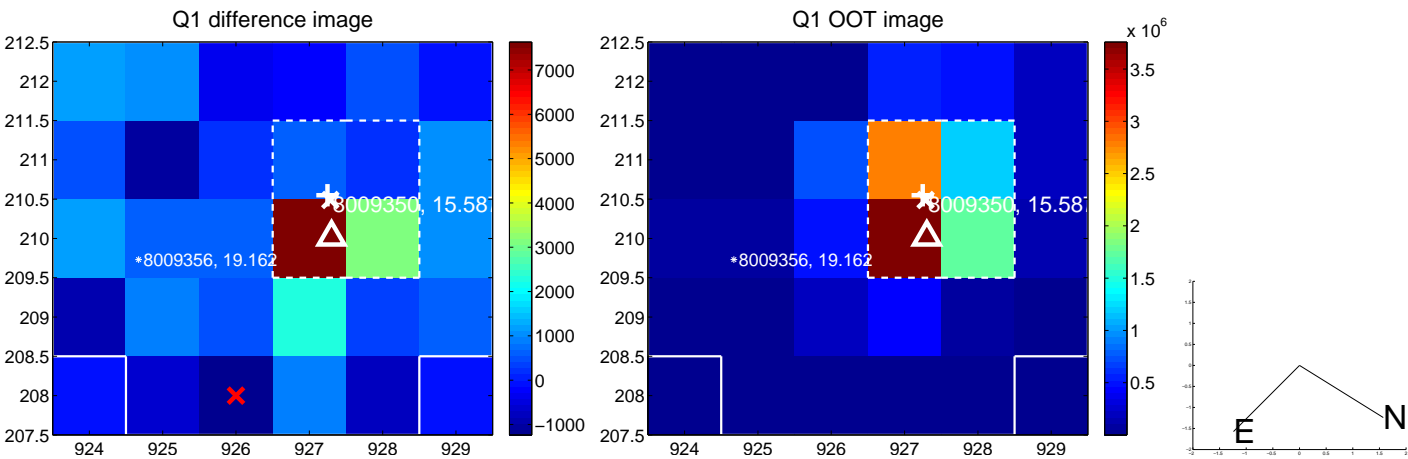
The direct PRF centroid is offset from the target star catalog position by about 0.34 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.099 ± 0.175	0.56	0.021 ± 0.147	-0.097 ± 0.177
PRF-fit source offset from KIC position	0.395 ± 0.169	2.34	-0.029 ± 0.142	-0.394 ± 0.167
photometric centroid source offset	0.40 ± 0.41	0.98	-0.03 ± 0.41	-0.40 ± 0.41

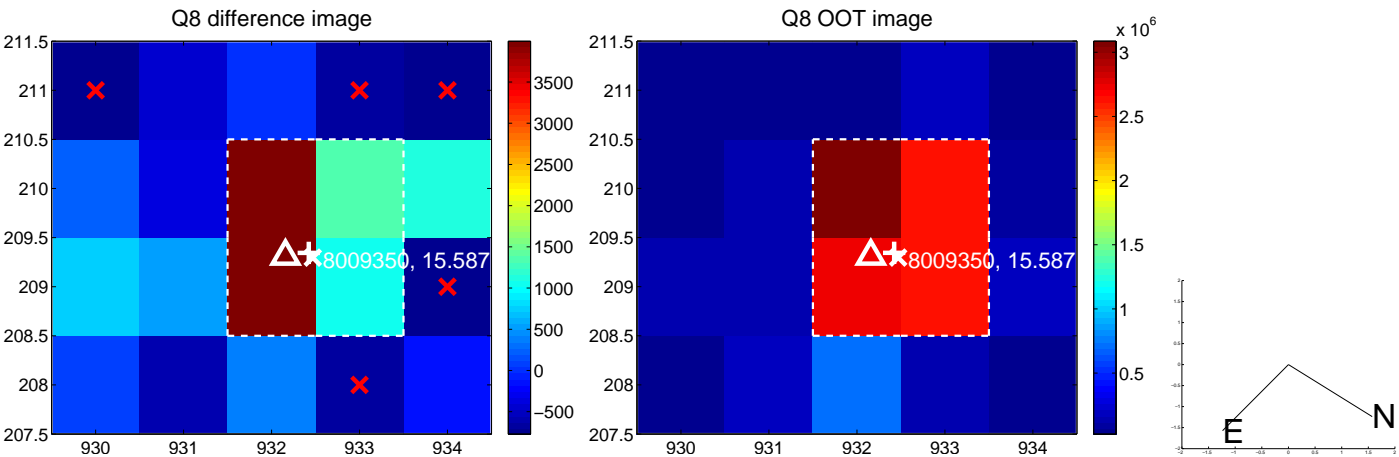
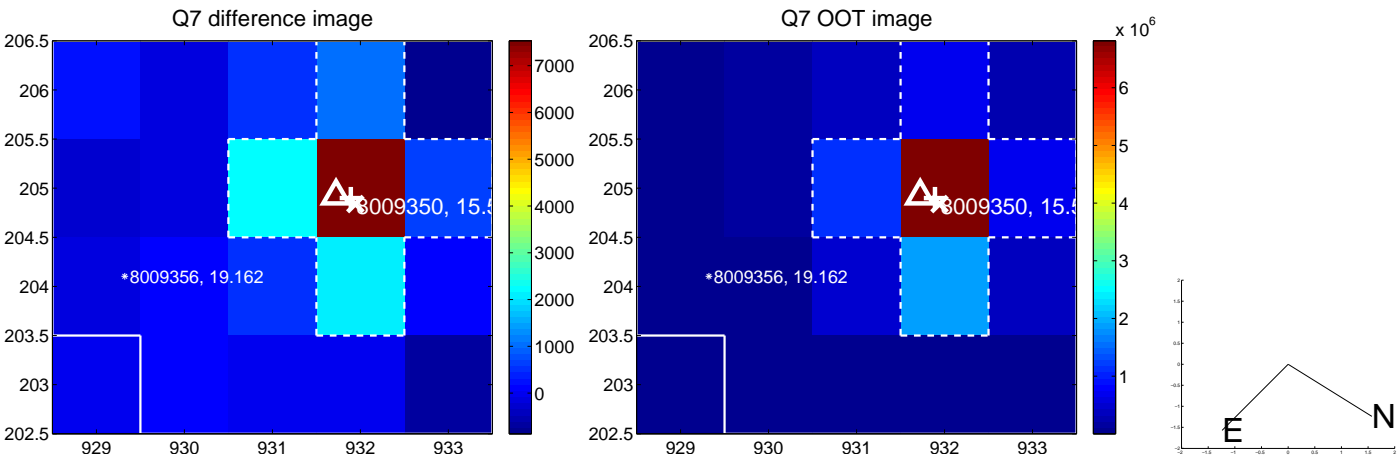
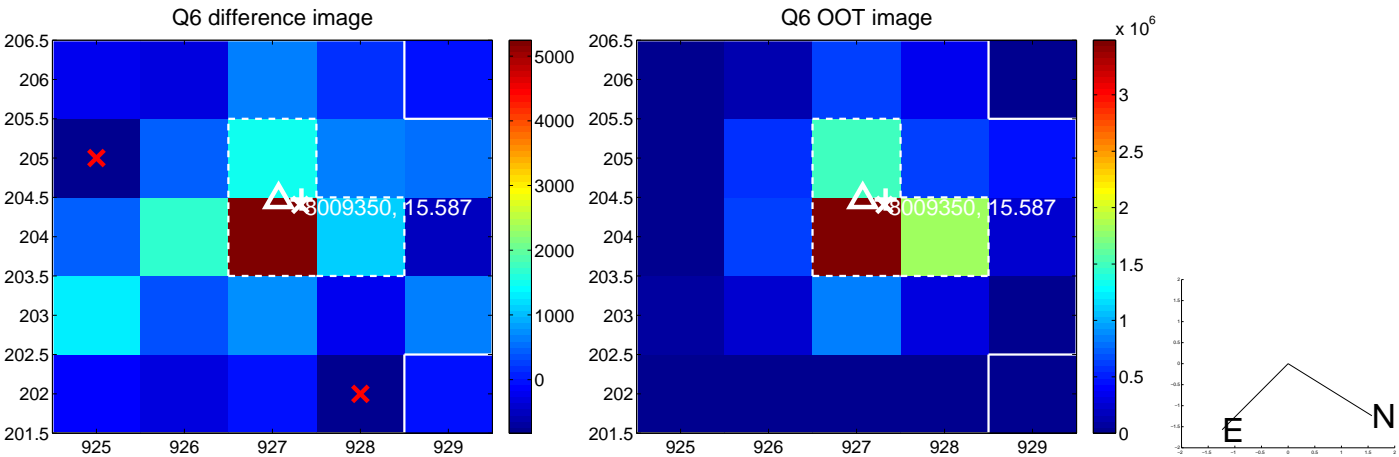
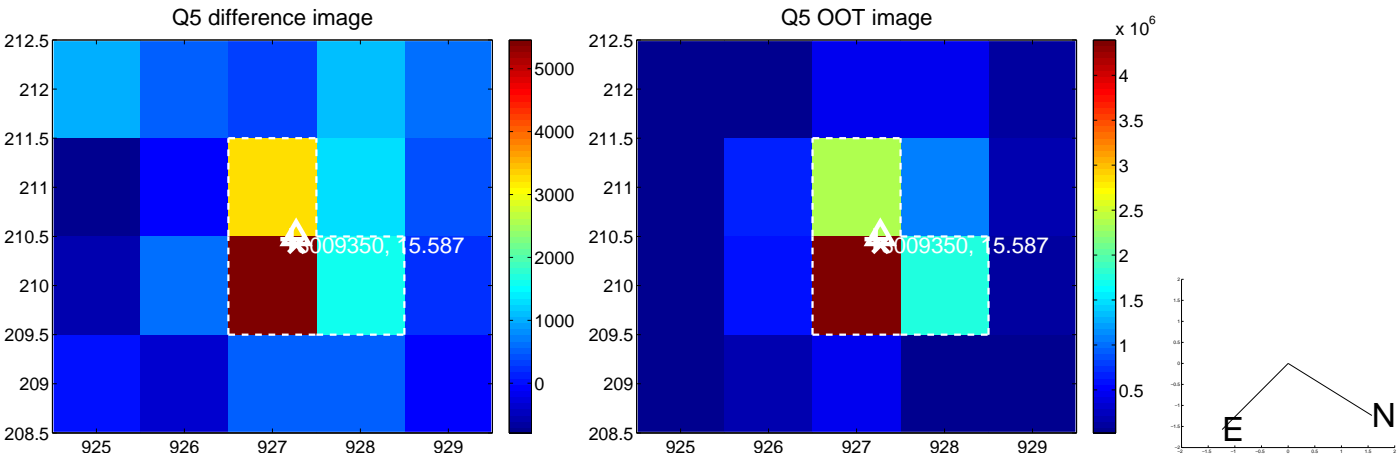


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

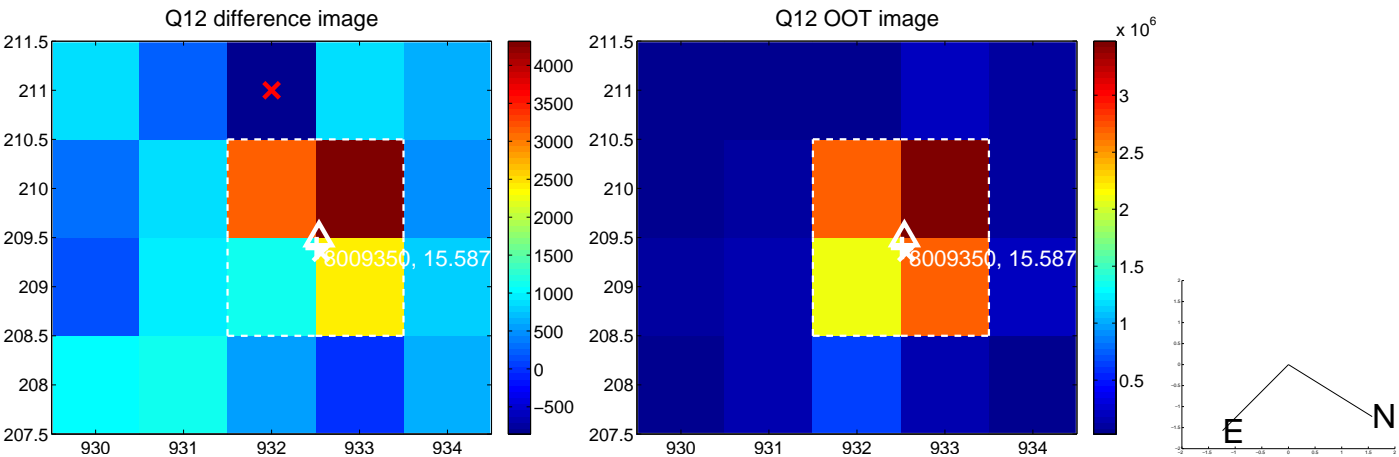
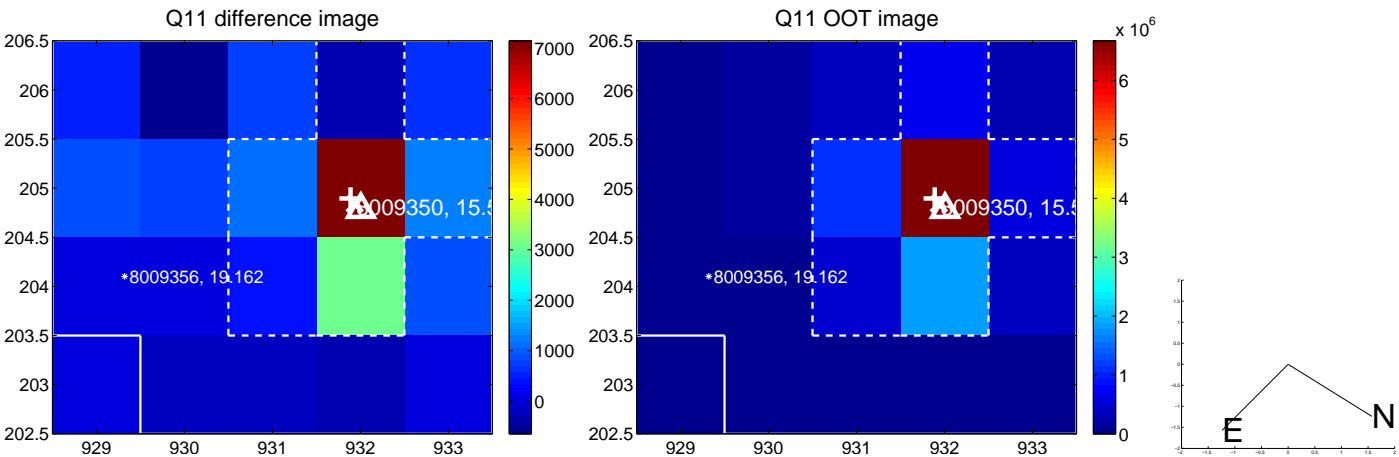
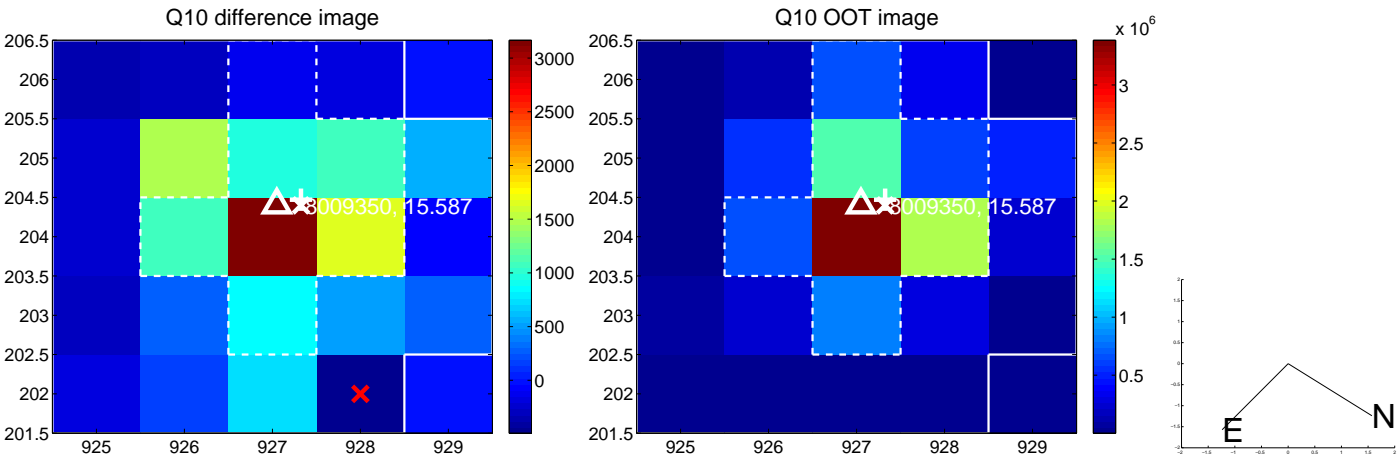
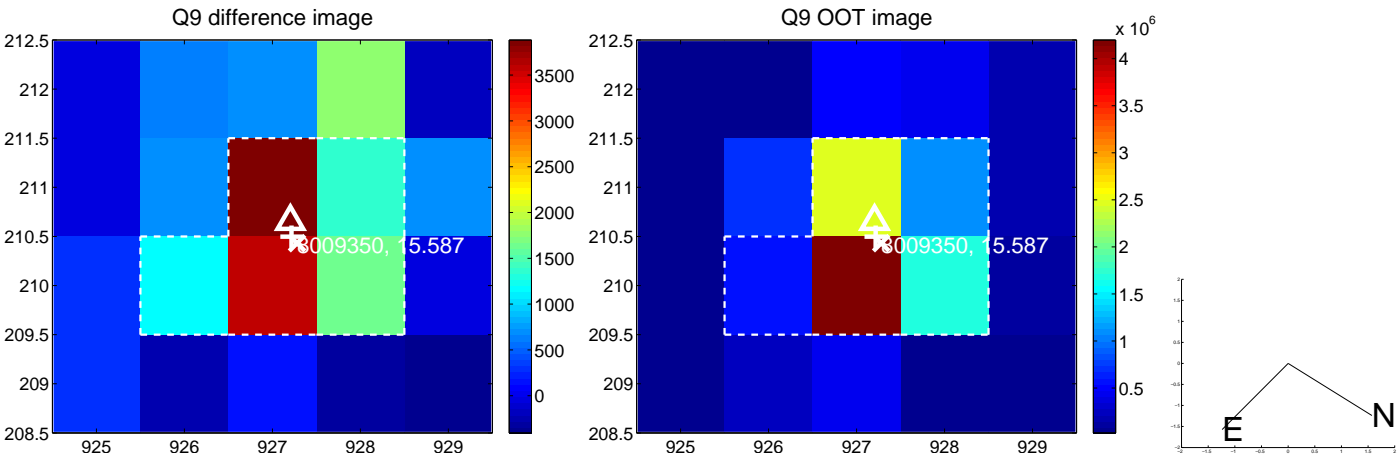
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



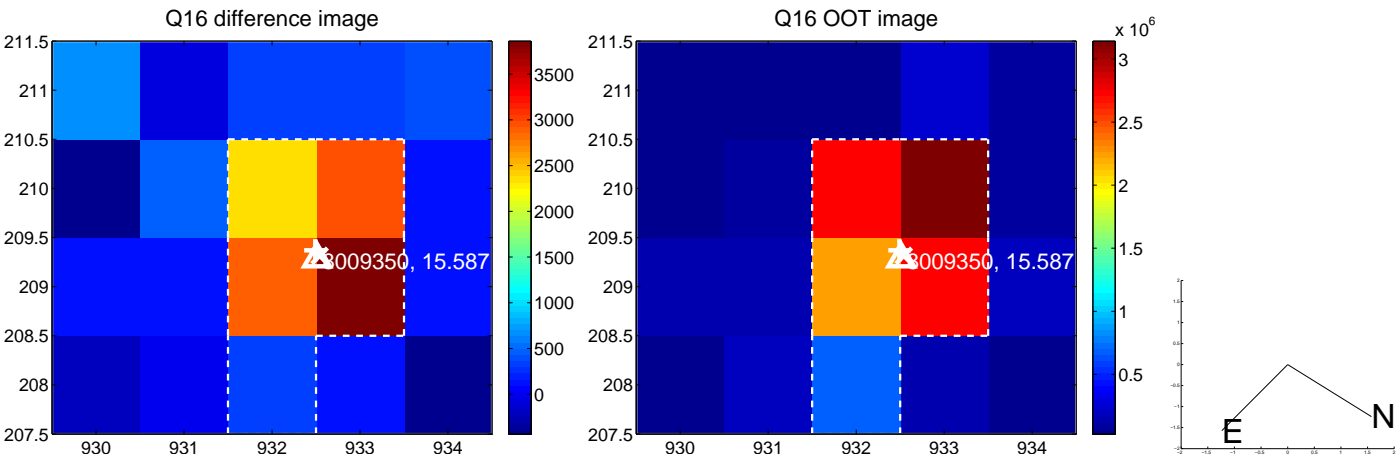
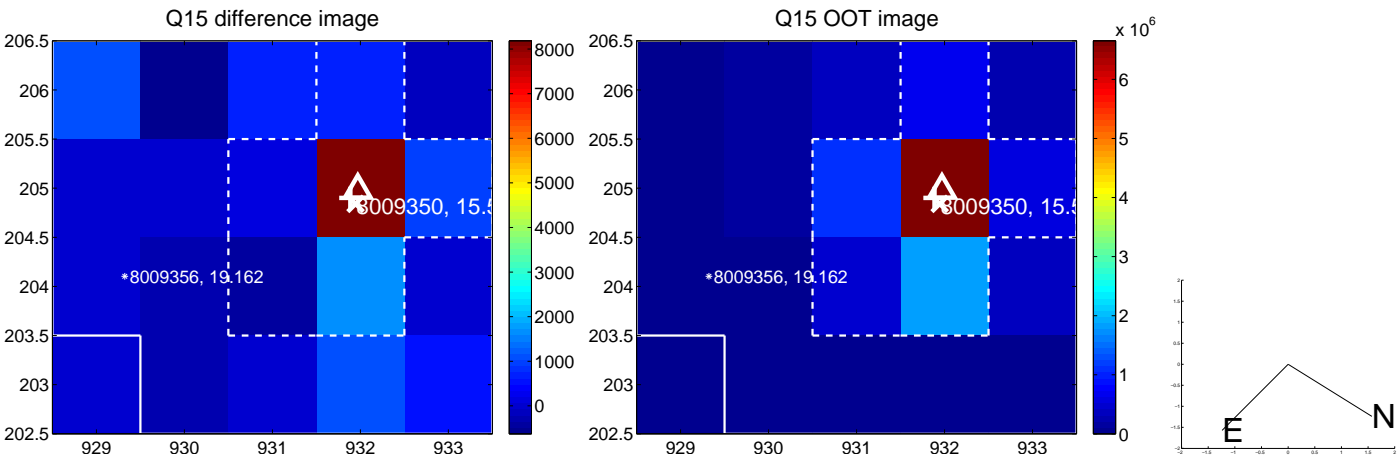
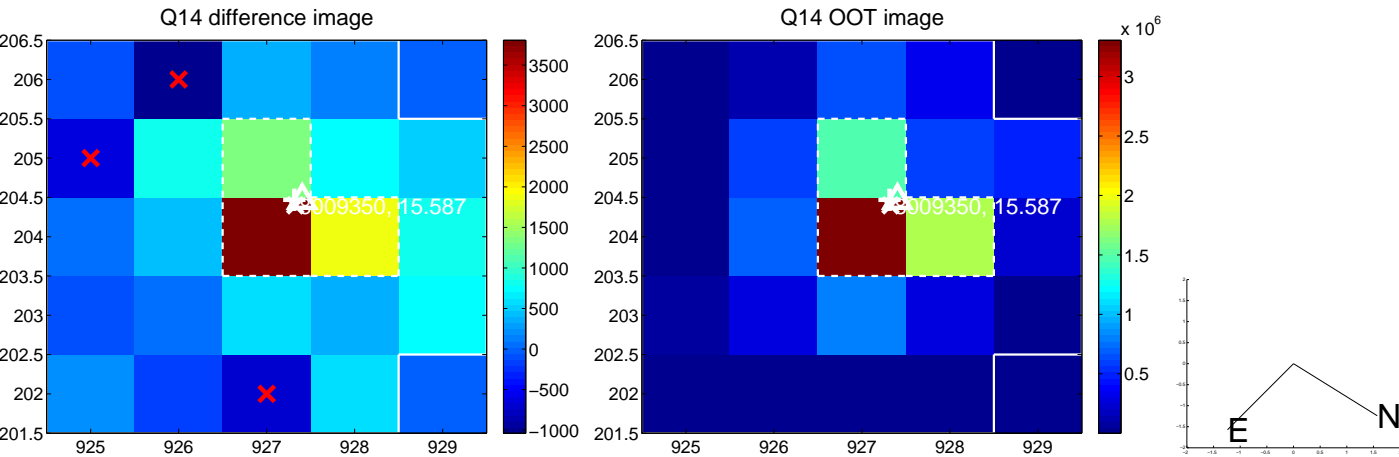
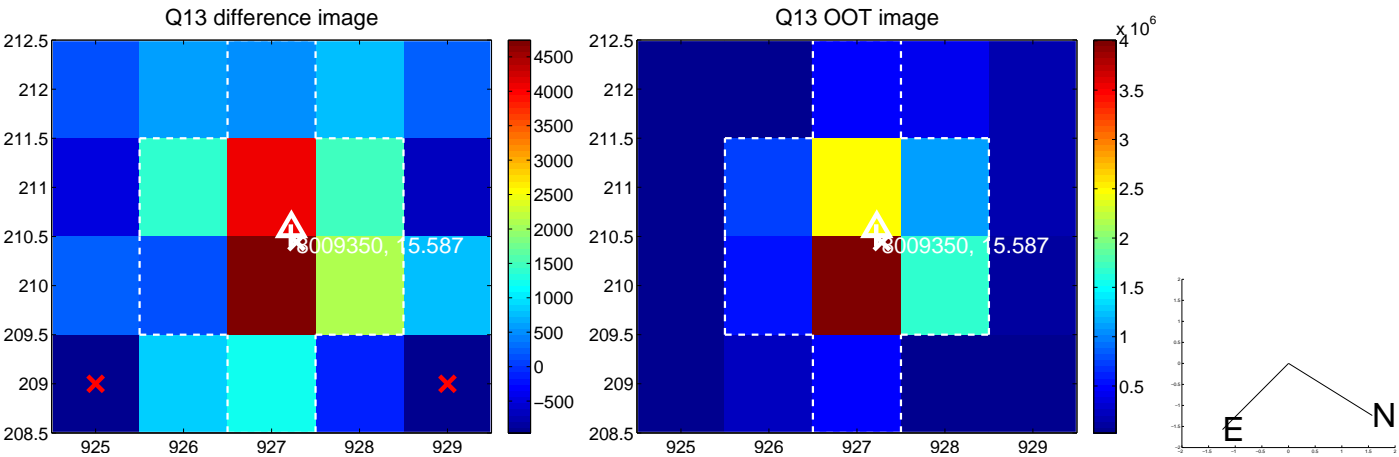
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



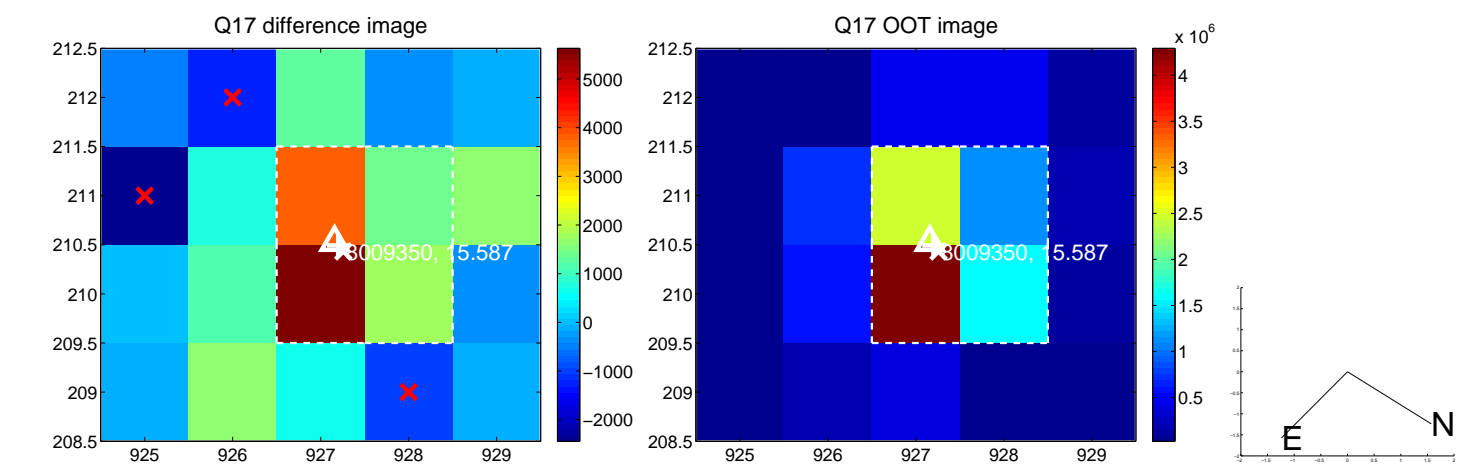
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



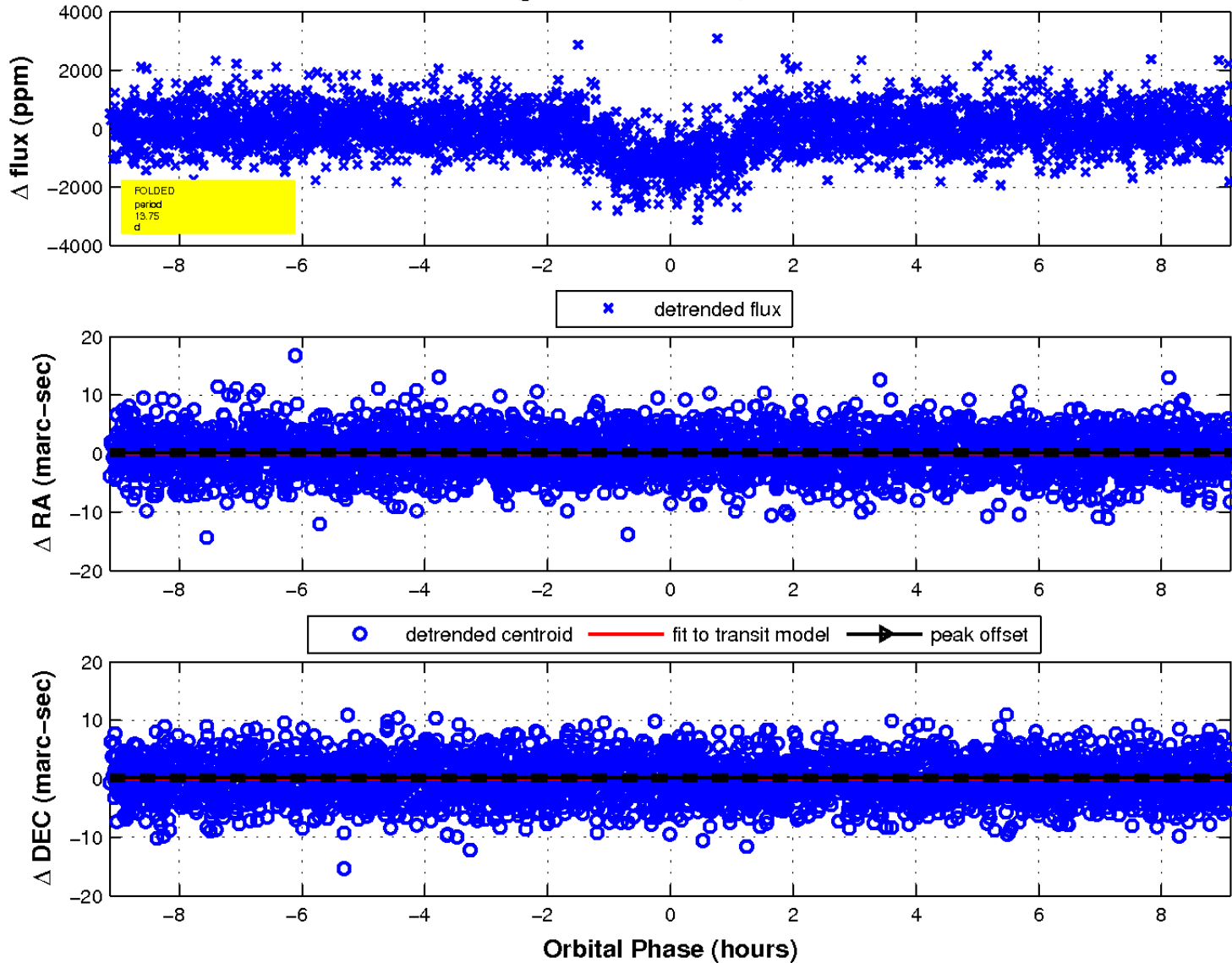
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

