

KIC 009040849

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})
009040849-01	OBS	1392.01	4.118741	134.854034	2154.7	3.789	83.2	91.5	0.80	5944	4.20	307.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009040849-01	OBS	FP	0.09	0	0	1	0	CENT_RESOLVED_OFFSET

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.

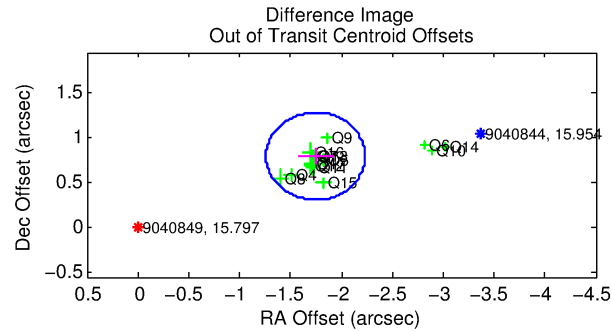
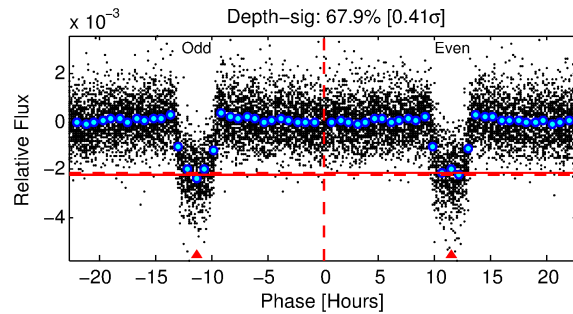
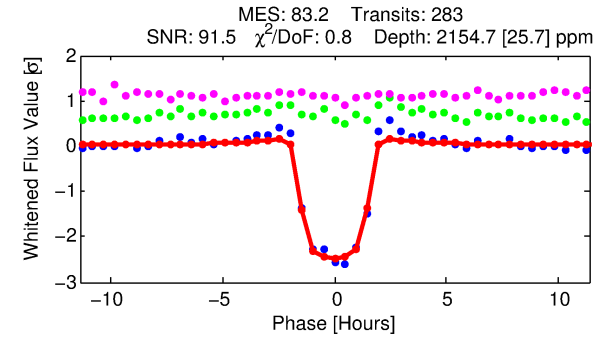
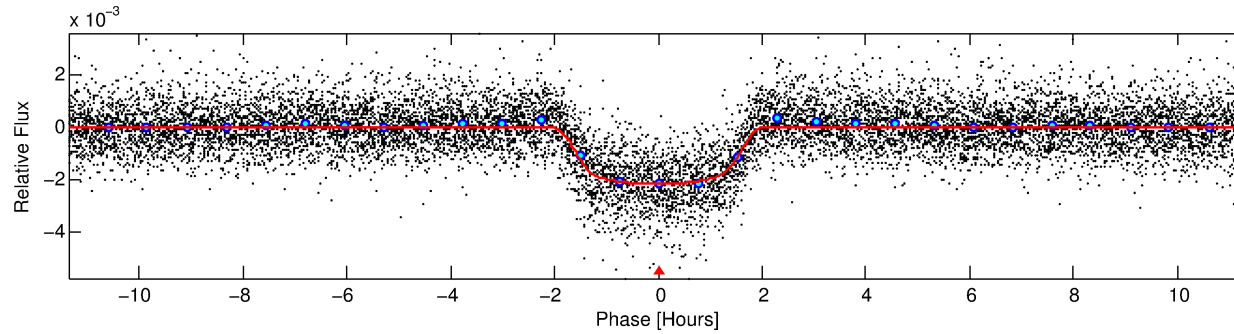
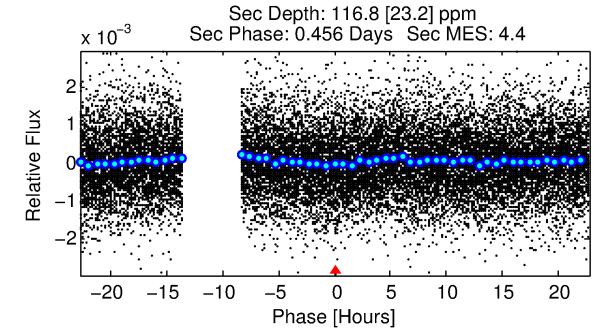
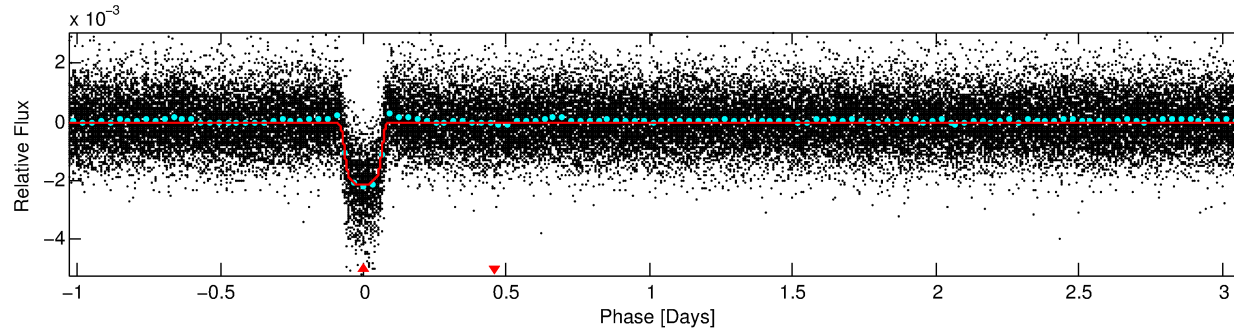
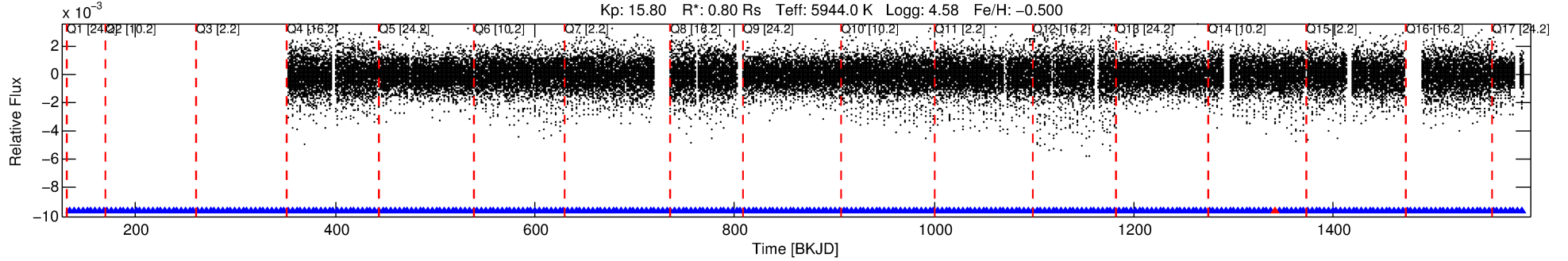
Ephemeris Match Information For 009040849-01

No Significant Match Found

DV One-Page Summary

KIC: 9040849 Candidate: 1 of 1 Period: 4.119 d
KOI: K01392.01 Corr: 0.982

Kp: 15.80 R*: 0.80 Rs Teff: 5944.0 K Logg: 4.58 Fe/H: -0.500



DV Fit Results:

Period = 4.11874 [0.00000] d
Epoch = 134.8540 [0.0007] BKJD
Rp/R* = 0.0480 [0.0009]
a/R* = 5.29 [0.47]
b = 0.84 [0.03]
Seff = 307.35 [107.23]
Teff = 1068 [93] K
Rp = 4.20 [1.08] Re
a = 0.0484 [0.0106] AU
Ag = 8.51 [3.22] [2.33σ]
Teffp = 2819 [173] K [8.90σ]

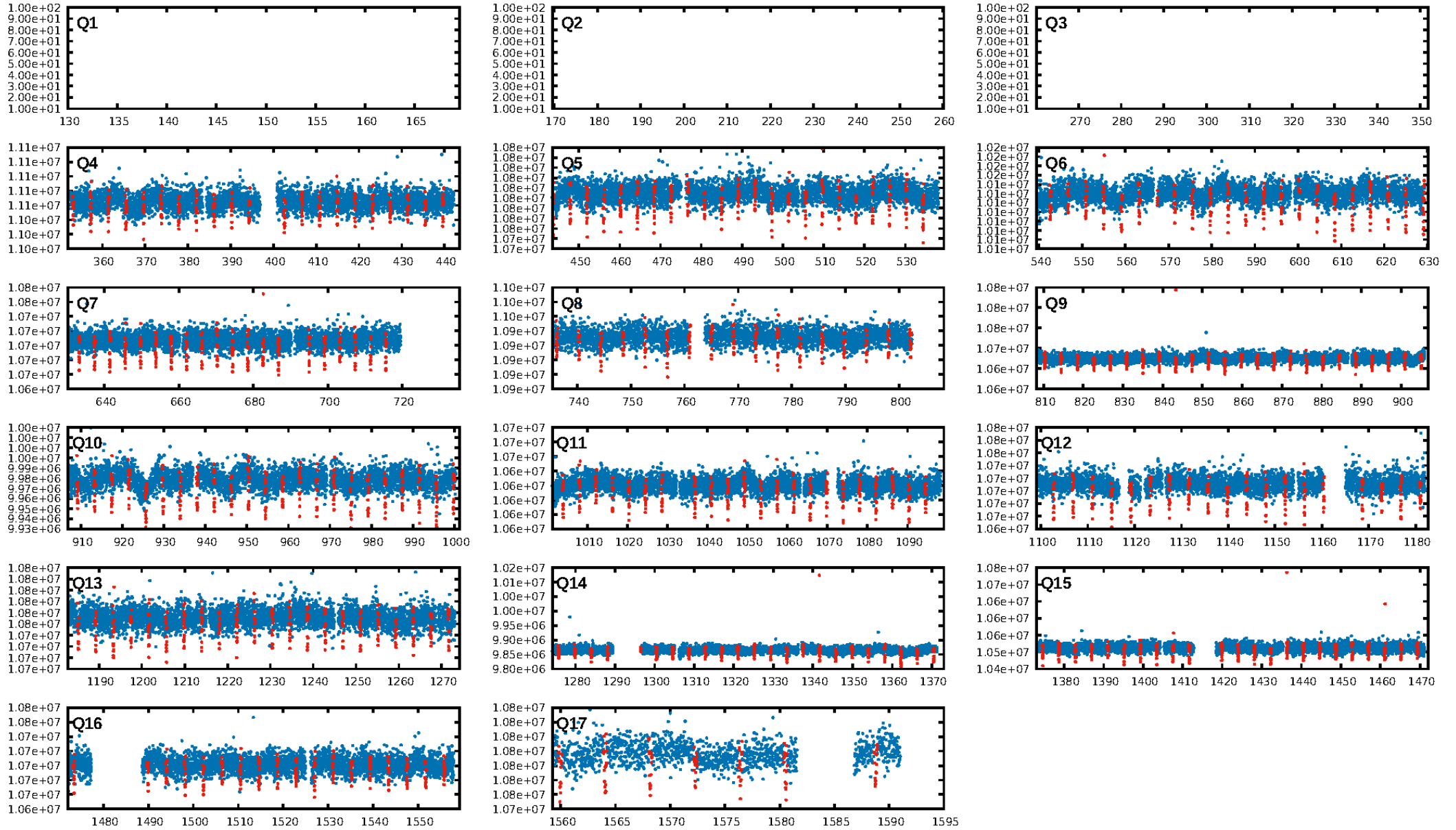
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [275/276]
GhostDiagnostic-chr: 0.8409
Centroid-sig: 0.0%
Centroid-so: 3.713 arcsec [45.03σ]
OotOffset-rm: 1.918 arcsec [11.82σ]
KicOffset-rm: 3.716 arcsec [42.01σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

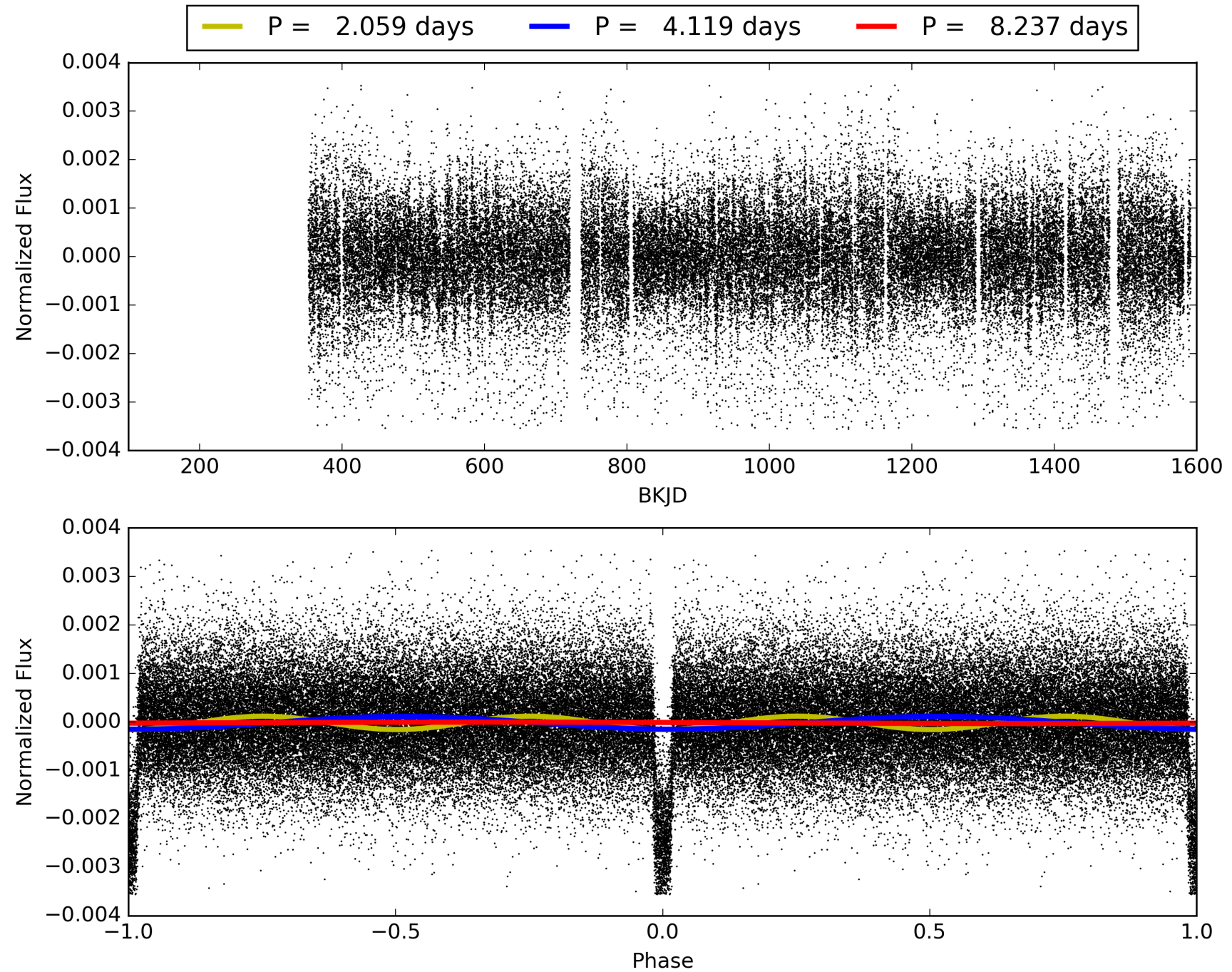
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:13:43 Z

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

TCE 009040849-01, PDC Light Curves

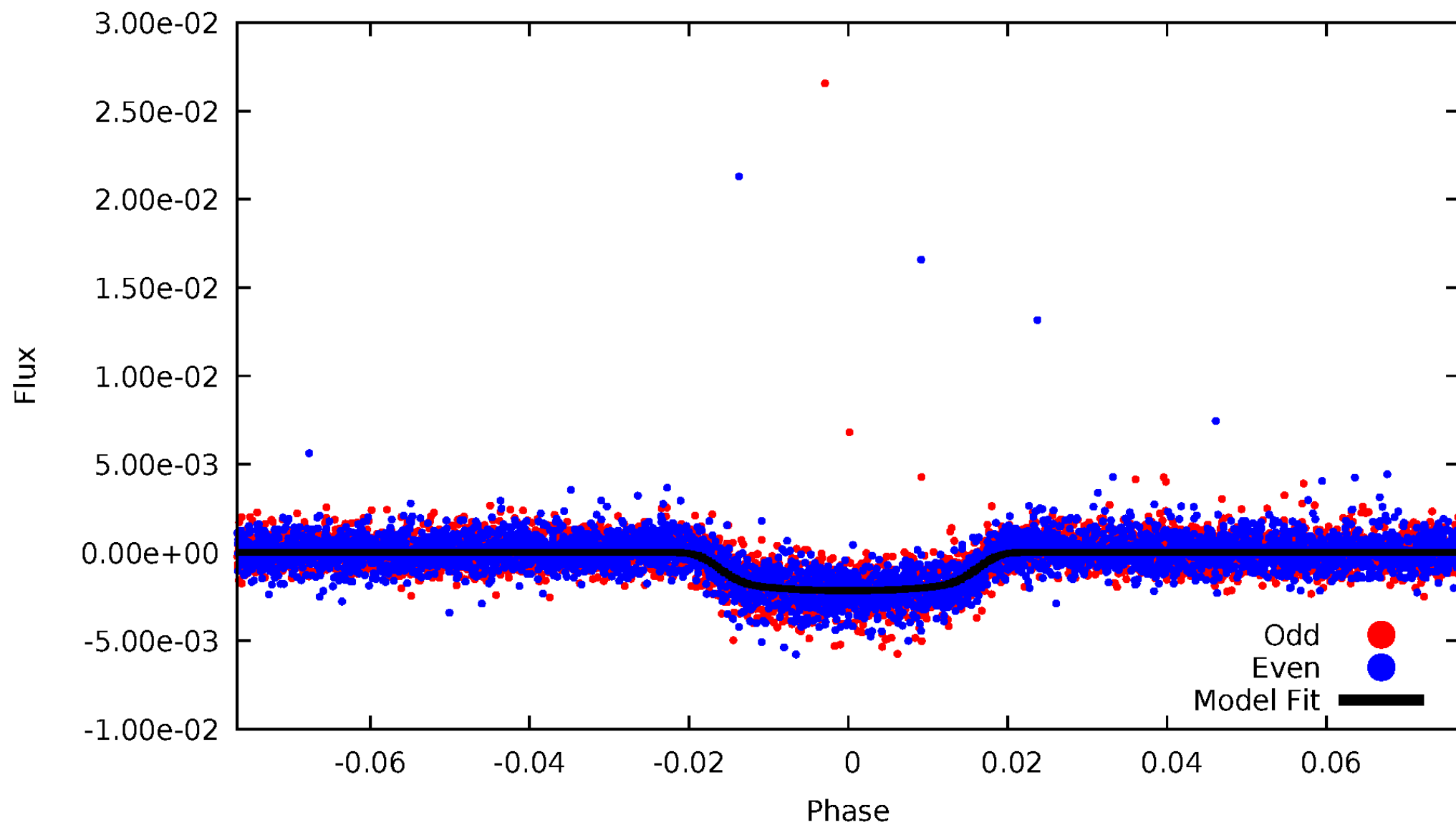


TCE 009040849-01



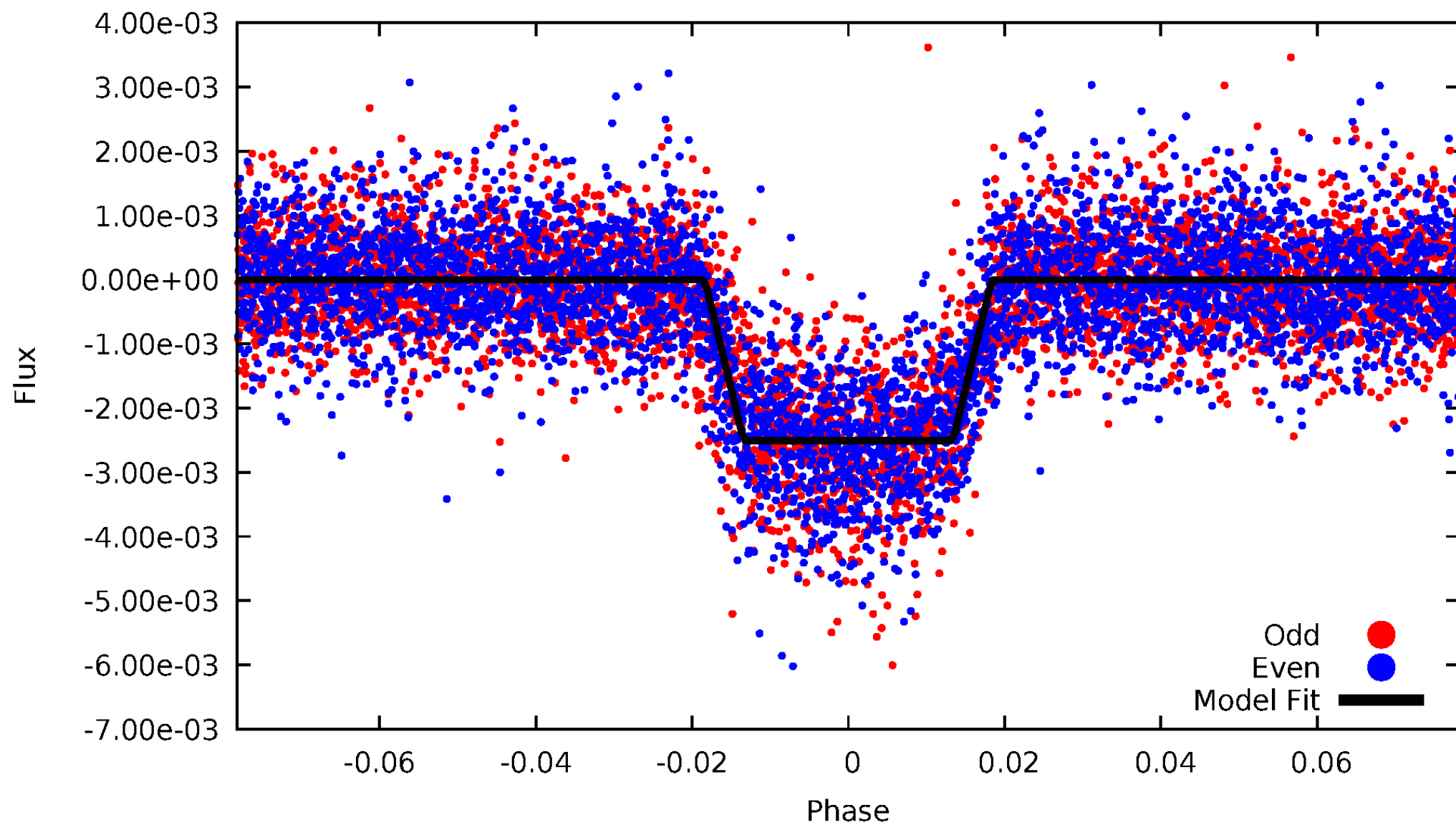
DV Odd/Even

TCE 009040849-01



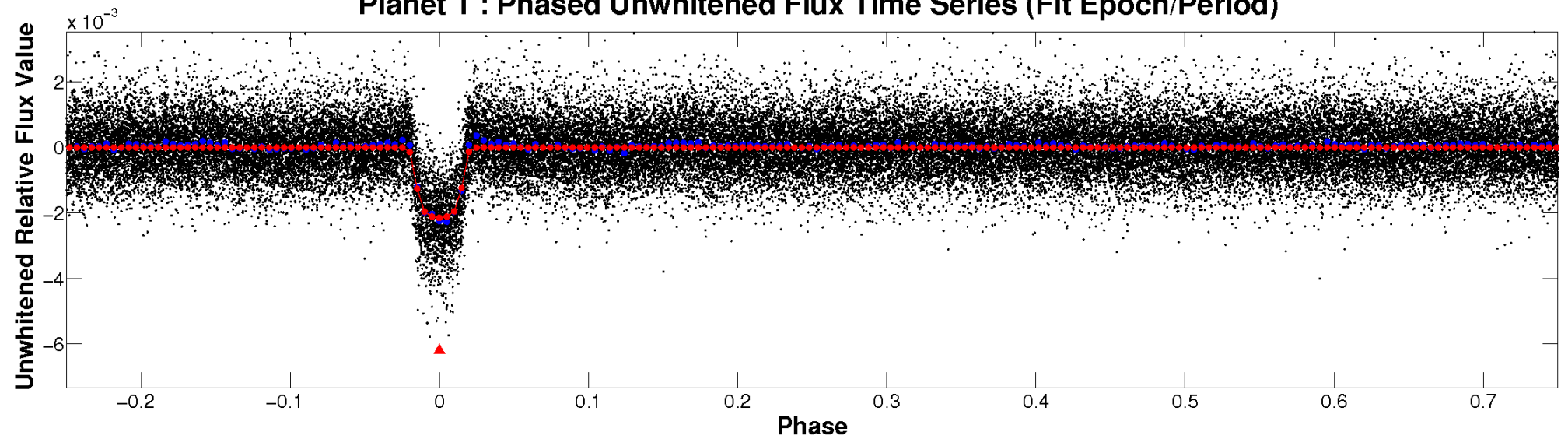
ALT Odd/Even

TCE 009040849-01

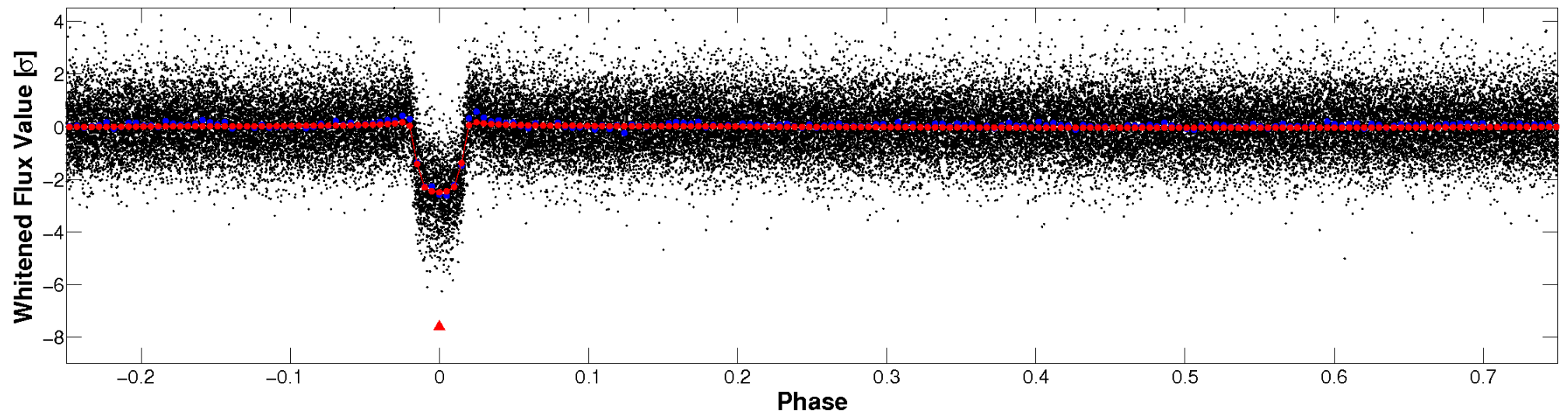


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

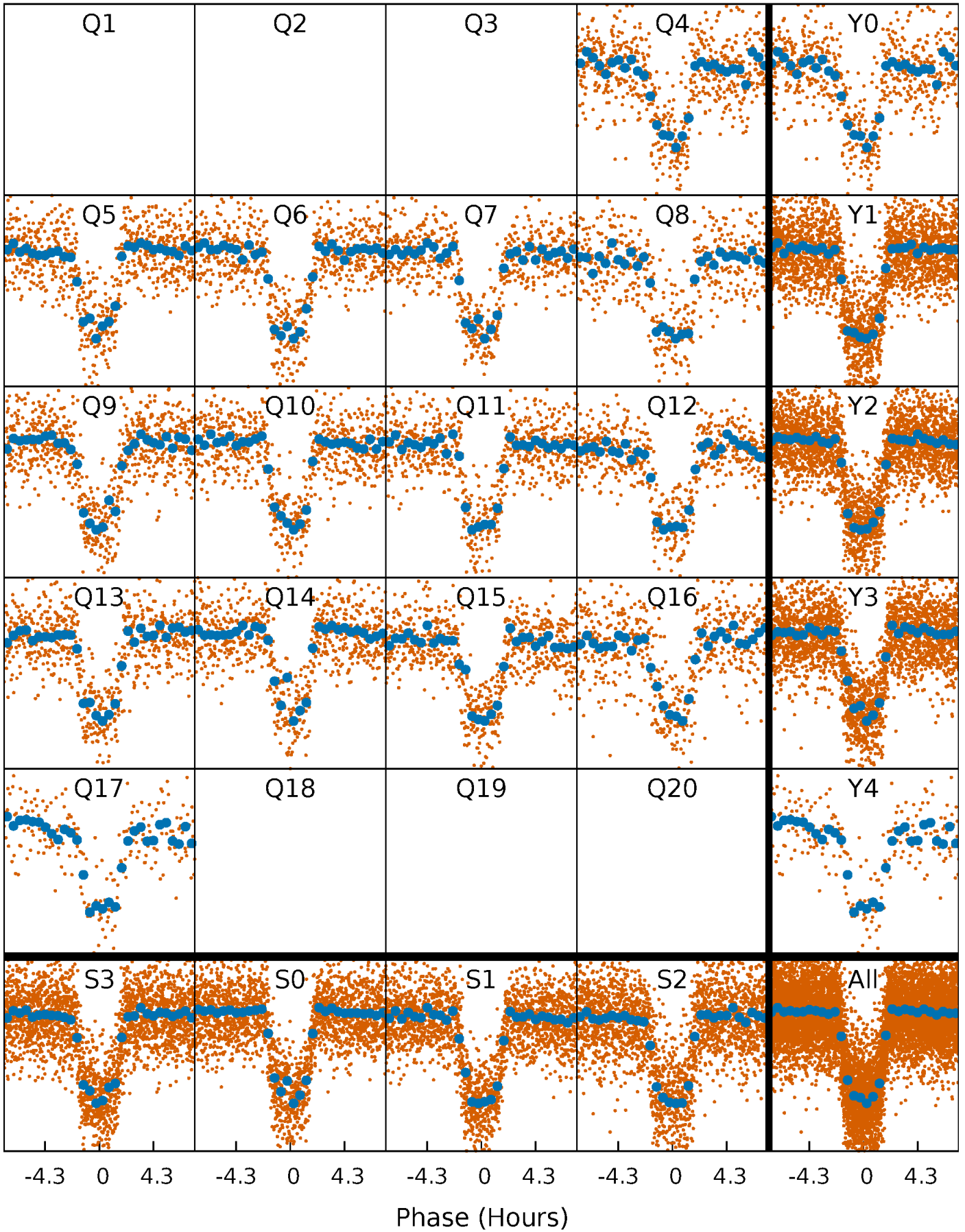


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



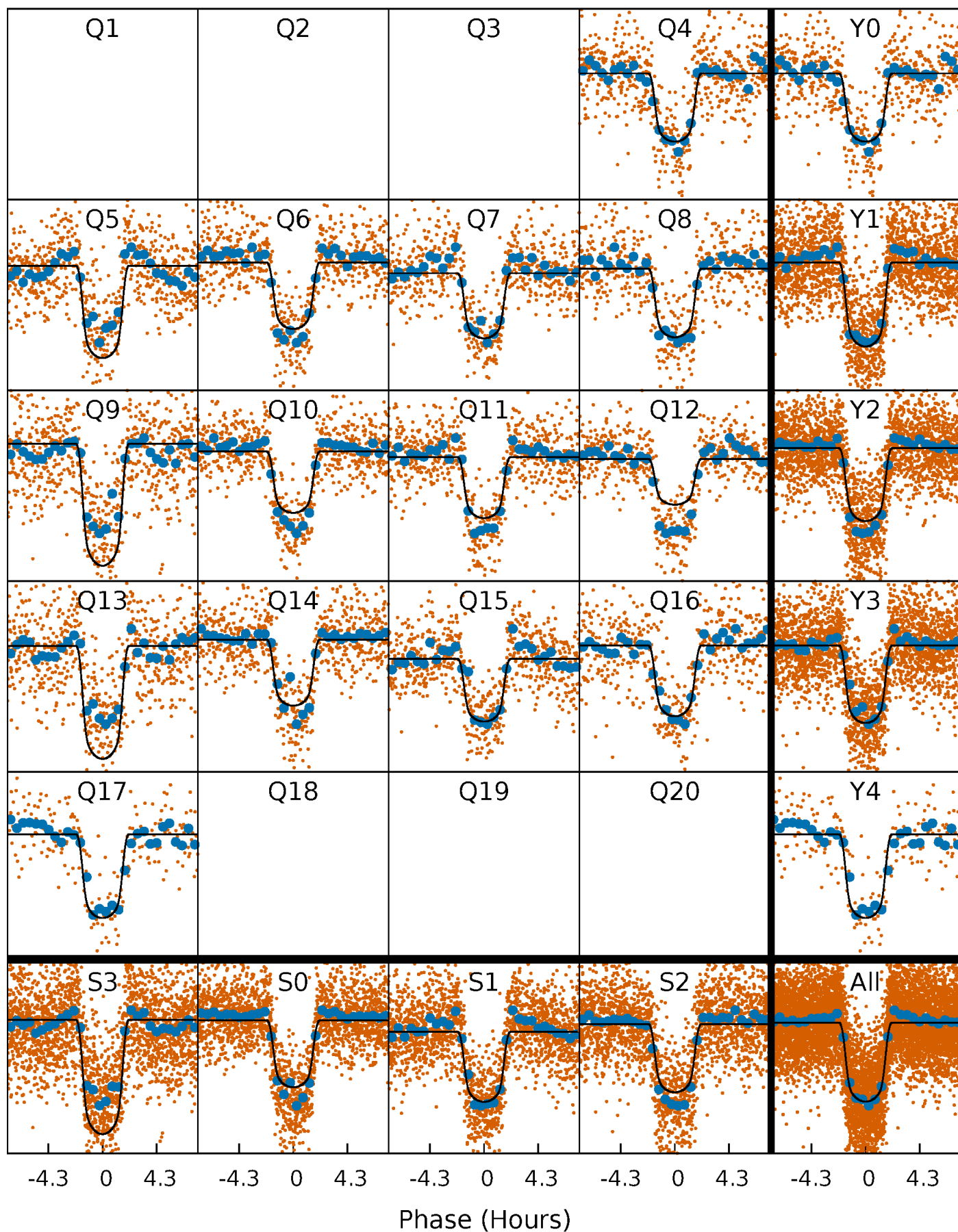
PDC Quarter-Phased Transit Curves

TCE 009040849-01 P= 4.118741 Days $T_0=134.854034$ (BKJD)



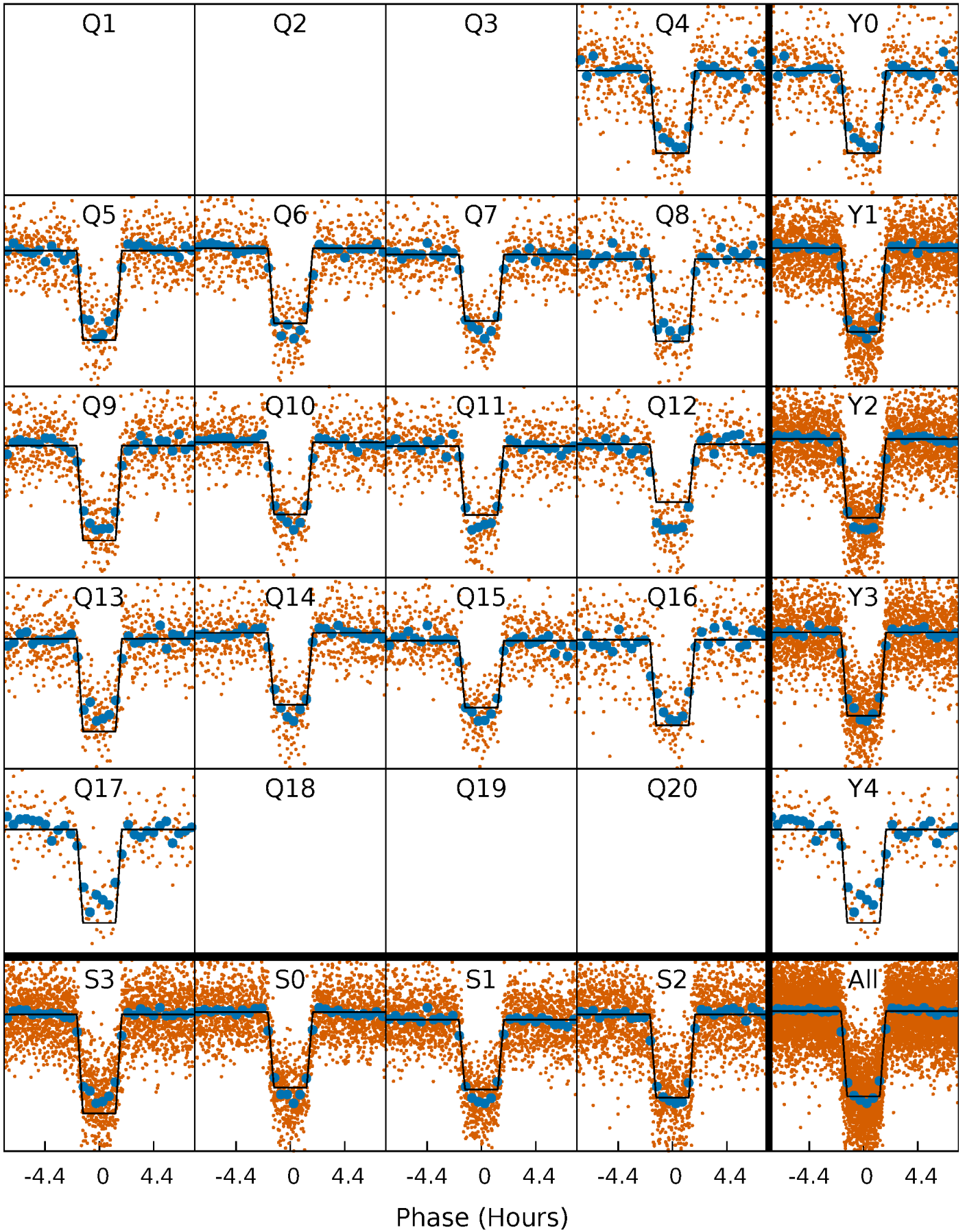
DV Quarter-Phased Transit Curves

TCE 009040849-01 P= 4.118741 Days $T_0=134.854034$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

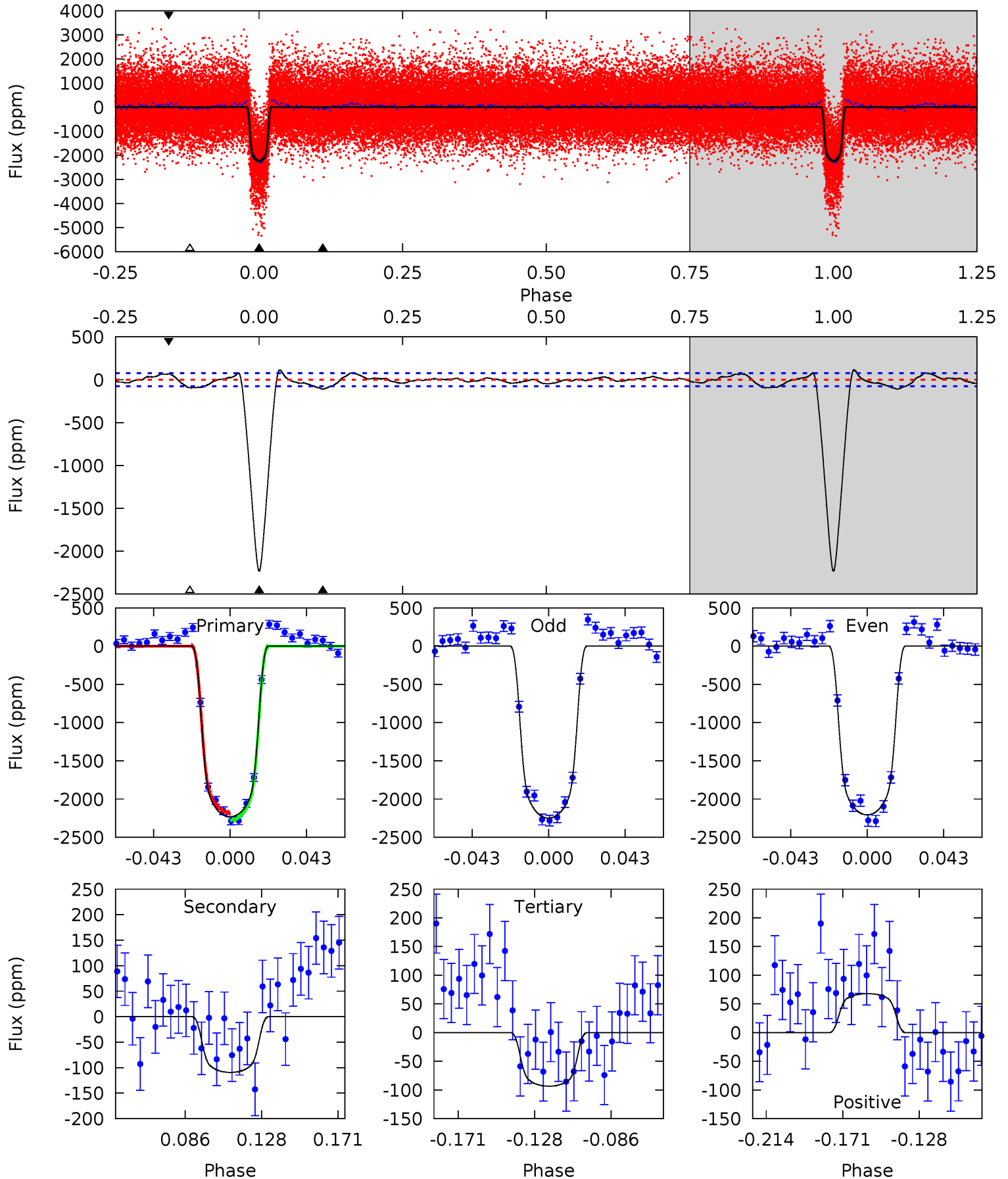
TCE 009040849-01 P= 4.118781 Days $T_0=134.846079$ (BKJD)



DV Model-Shift Uniqueness Test

009040849-01, P = 4.118741 Days, E = 134.854034 Days

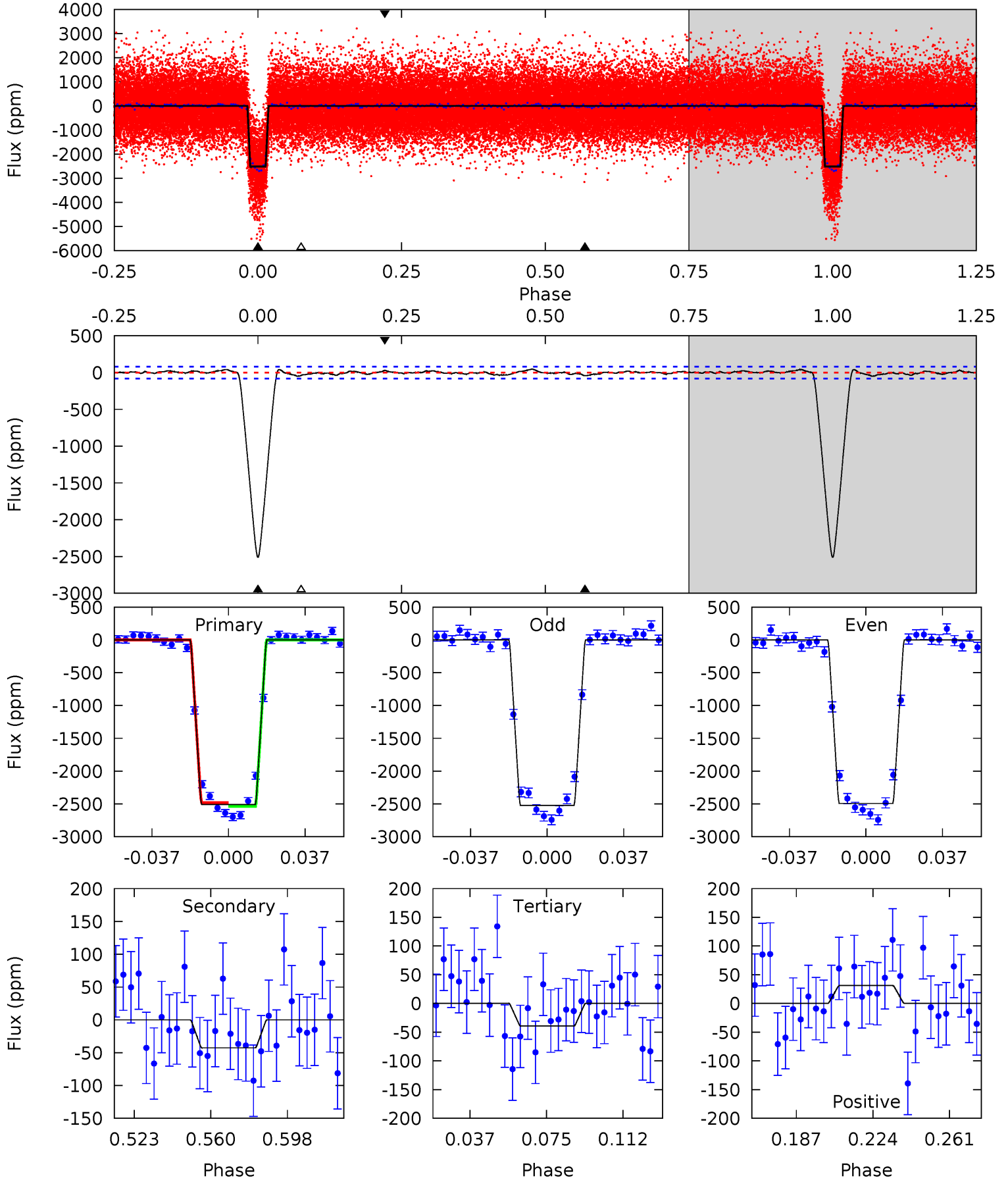
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
139.4	6.83	5.83	4.24	4.74	2.03	2.00	133.5	135.1	0.99	2.59	1.34	1.00	0.05	3.08



Alt Model-Shift Uniqueness Test

009040849-01, P = 4.118781 Days, E = 134.846079 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
148.1	2.52	2.32	1.84	4.77	2.08	0.97	145.8	146.3	0.20	0.68	0.89	1.03	0.02	1.72



Stellar Parameters For KIC 009040849

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5944^{+186}_{-207}	$4.579^{+0.033}_{-0.176}$	$-0.500^{+0.300}_{-0.300}$	$0.802^{+0.206}_{-0.069}$	$0.905^{+0.087}_{-0.116}$	$2.476^{+0.440}_{-1.197}$
	+3%/-3%	+1%/-4%	+60%/-60%	+26%/-9%	+10%/-13%	+18%/-48%
Source	KIC0	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 009040849-01 / KOI 1392.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-109 ± 16	$4.41^{+0.59}_{-0.37}$	1534^{+94}_{-74}	3292^{+103}_{-100}	$7.045^{+1.595}_{-1.747}$
Alt.	-43 ± 17	$4.53^{+0.58}_{-0.35}$	1526^{+94}_{-67}	2807^{+159}_{-205}	$2.480^{+1.216}_{-0.976}$

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 $A_{obs} \gg 1.0$

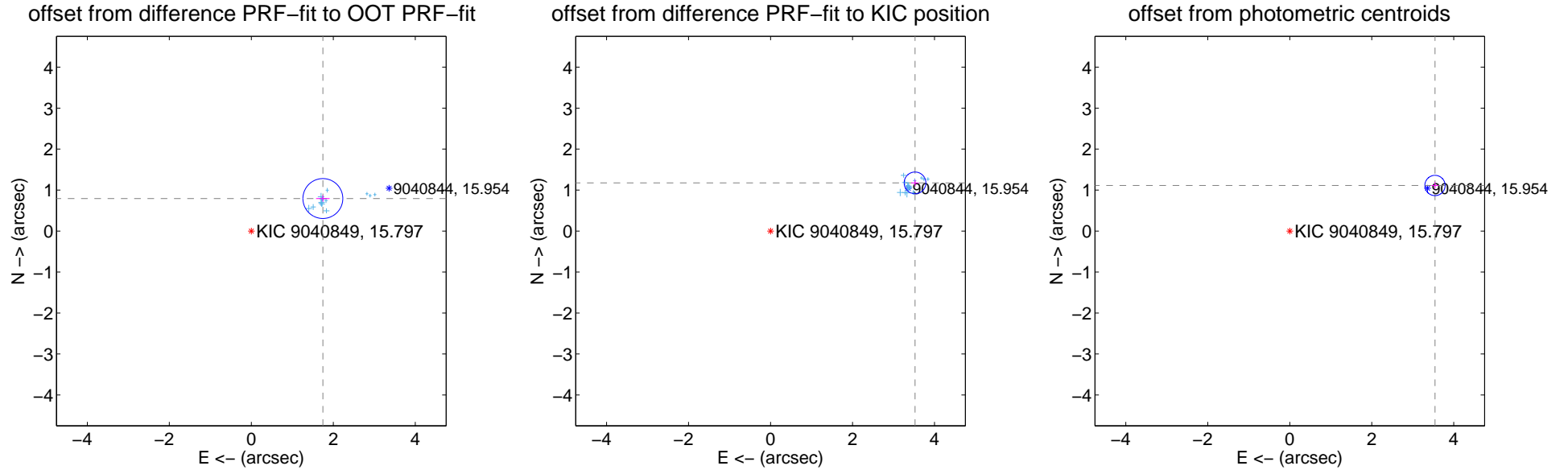
DV Centroid Data

Supplemental centroid analysis for 009040849-01. Kepler magnitude: 15.80. Transit SNR 91.50

There are 14 quarters with good PRF difference image offsets

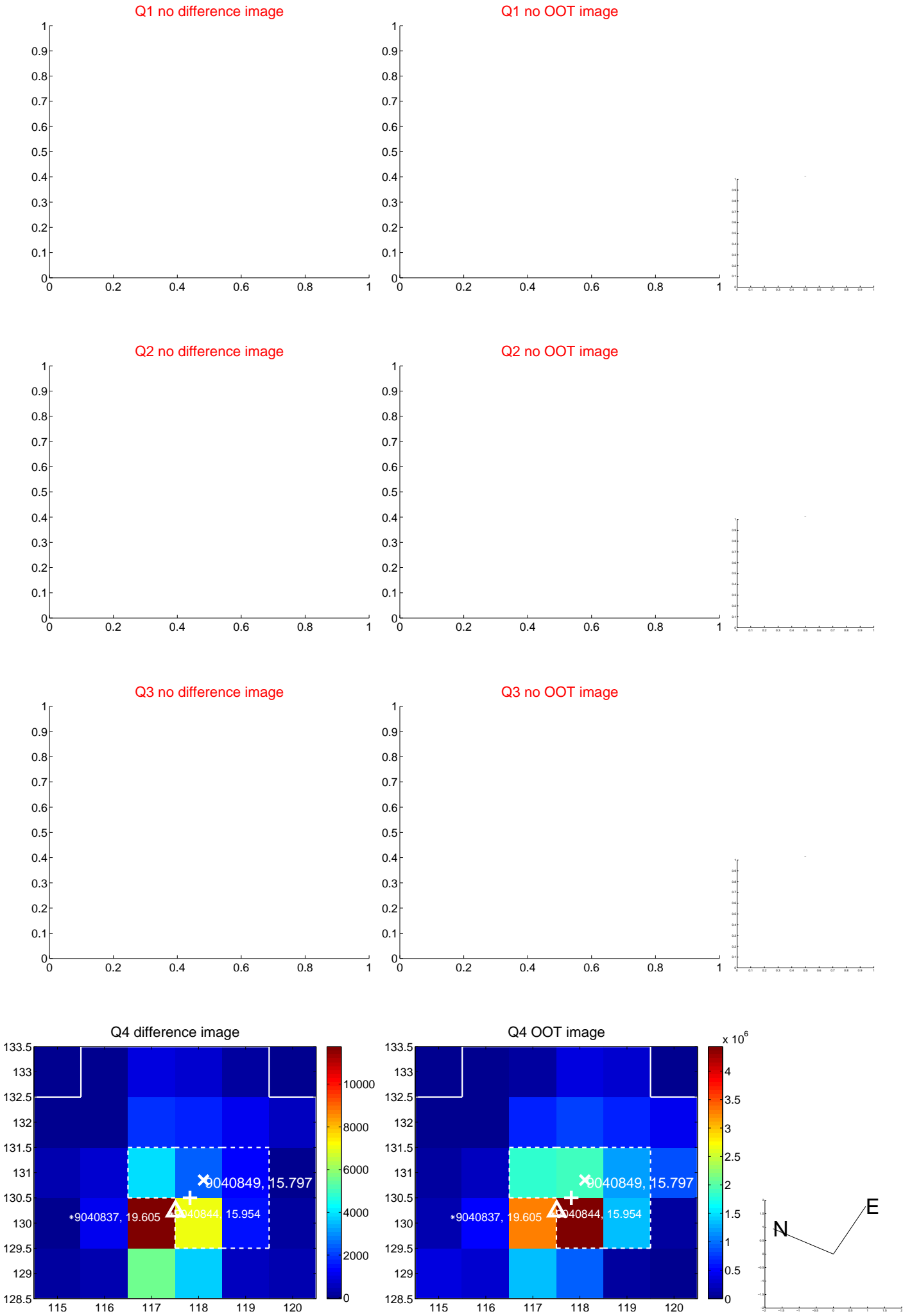
The direct PRF centroid is offset from the target star catalog position by about 1.62 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.918 ± 0.162	11.82	-1.746 ± 0.165	0.794 ± 0.077
PRF-fit source offset from KIC position	3.716 ± 0.088	42.01	-3.525 ± 0.090	1.175 ± 0.078
photometric centroid source offset	3.71 ± 0.08	45.03	-3.54 ± 0.08	1.11 ± 0.08

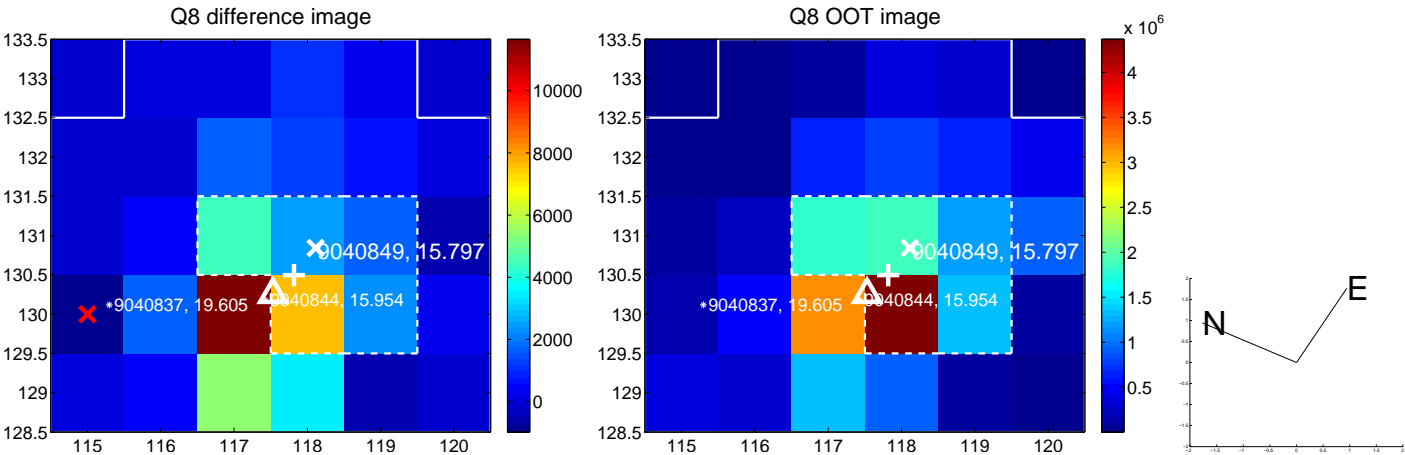
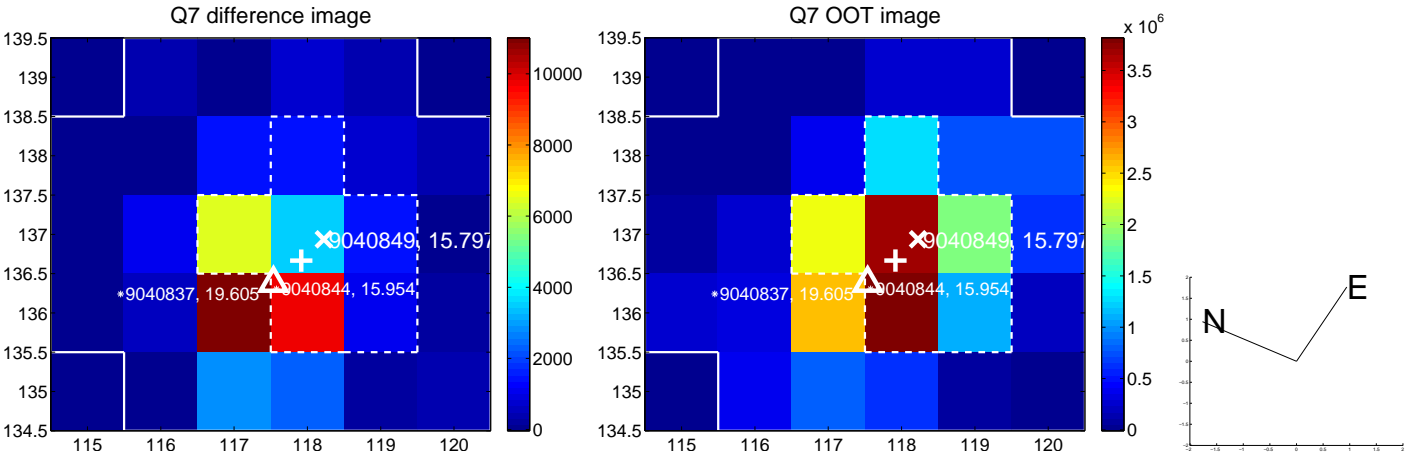
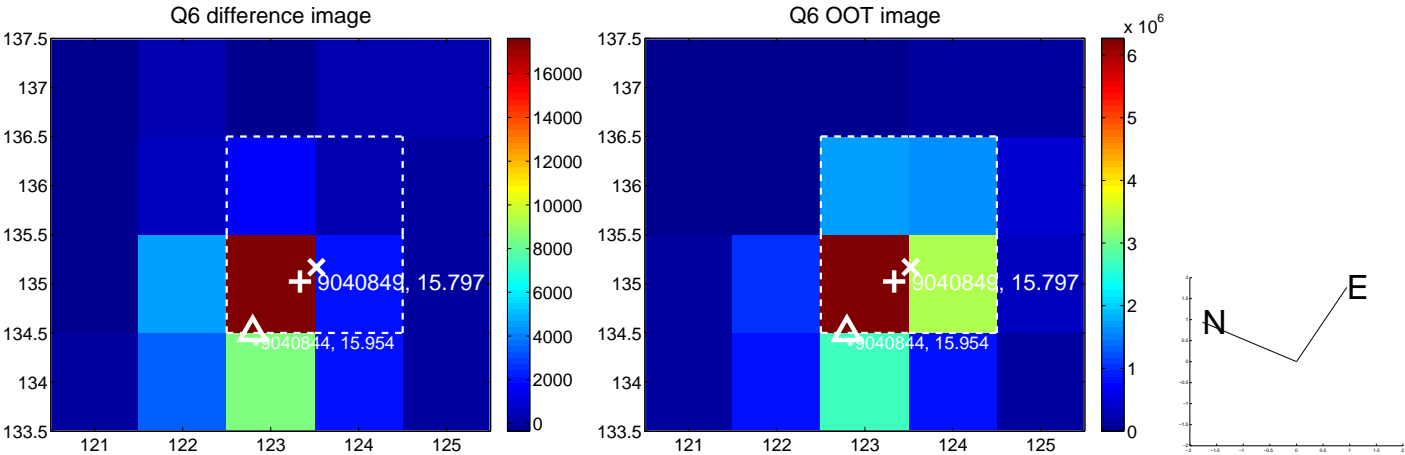
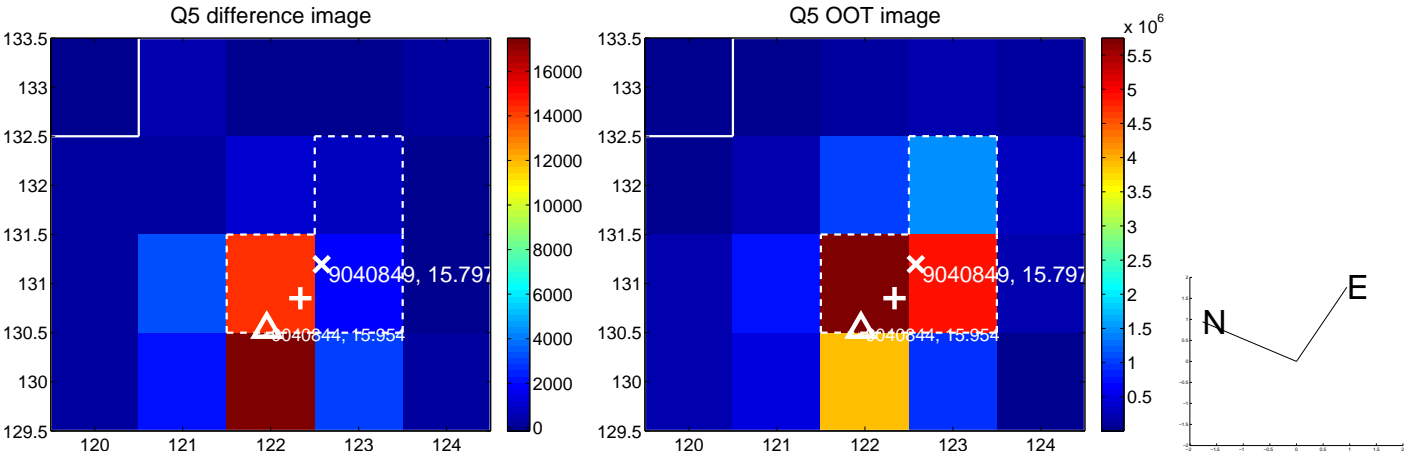


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

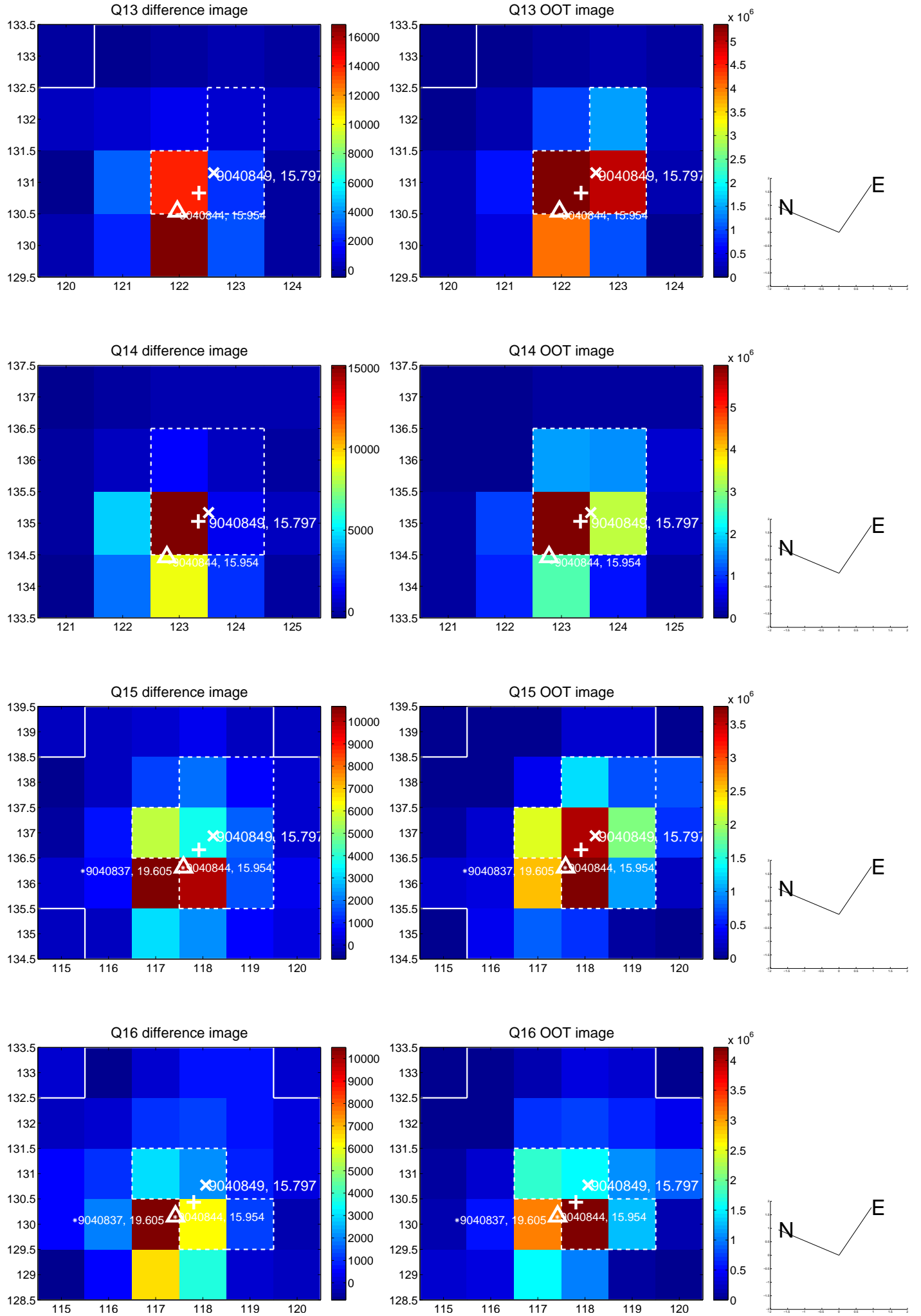
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



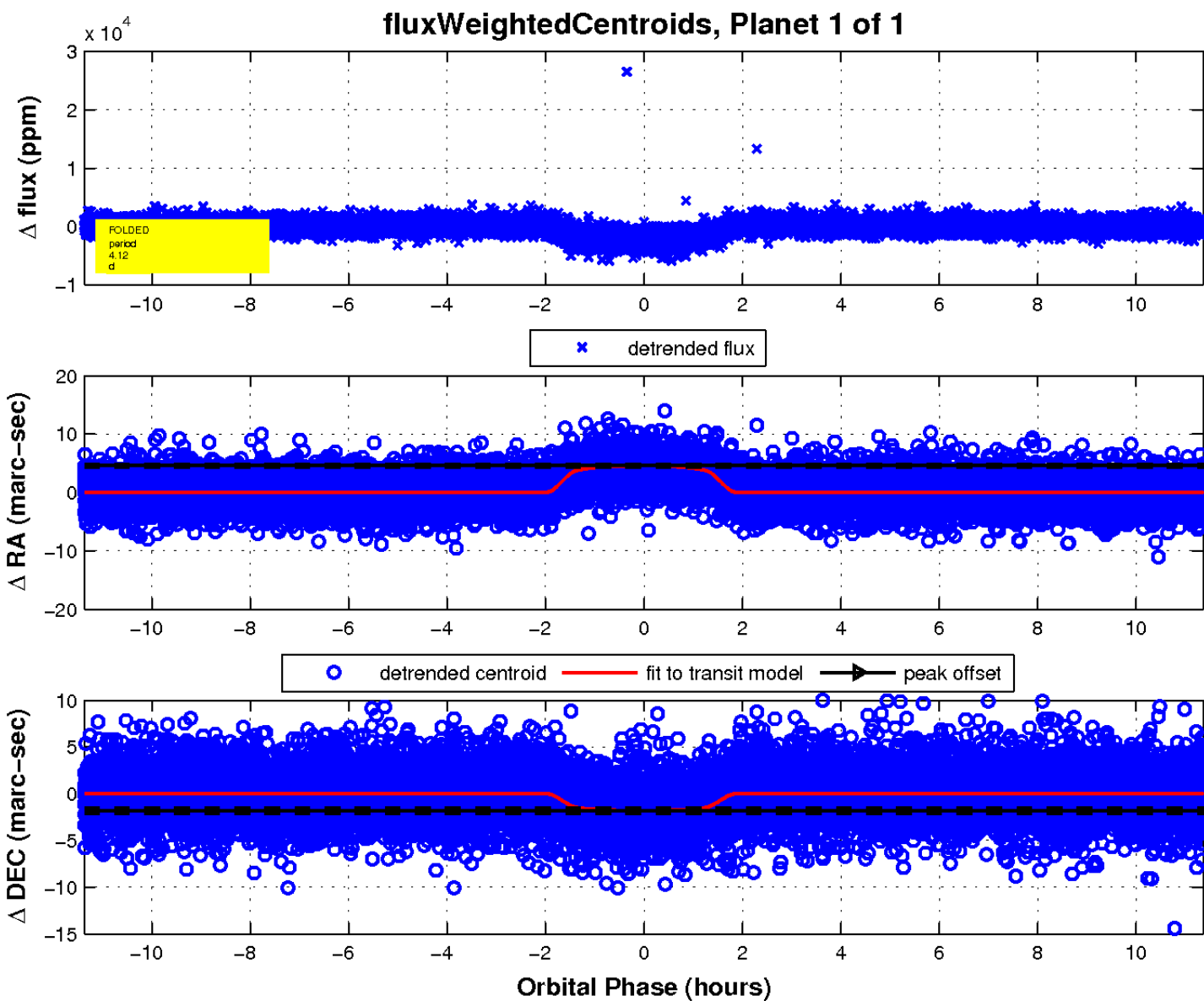
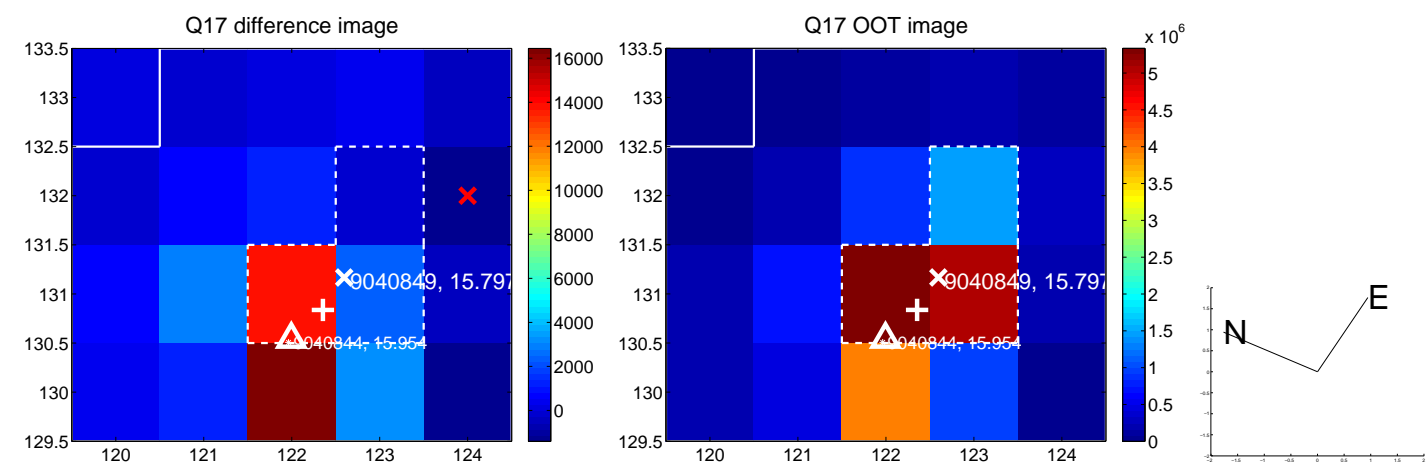
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

