

KIC 008739209

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})
008739209-01	OBS	7084.01	3.697196	131.818230	14.7	22.709	8.2	6.8	1.59	6313	0.61	1444.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008739209-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—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.

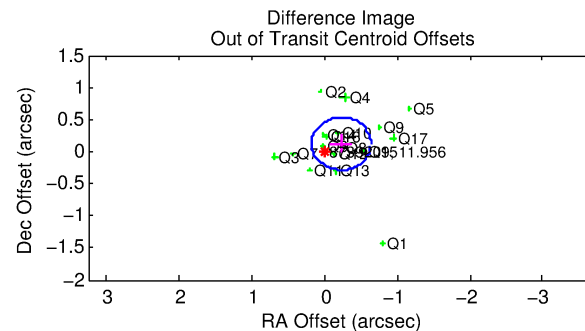
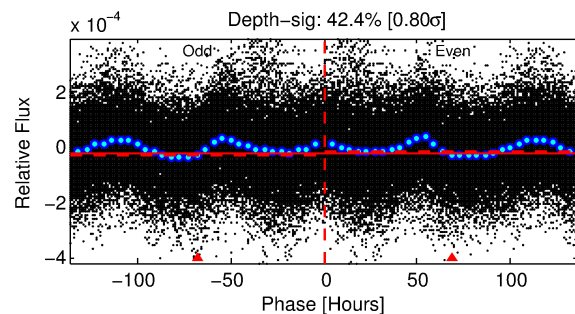
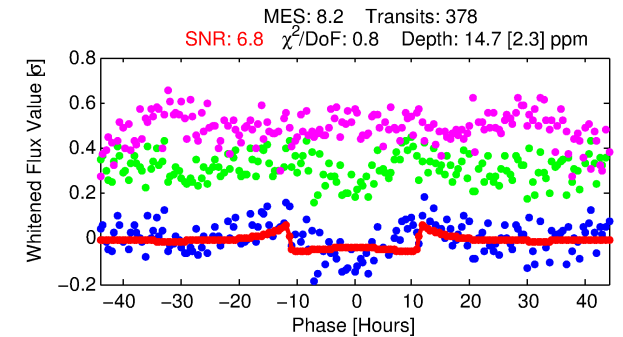
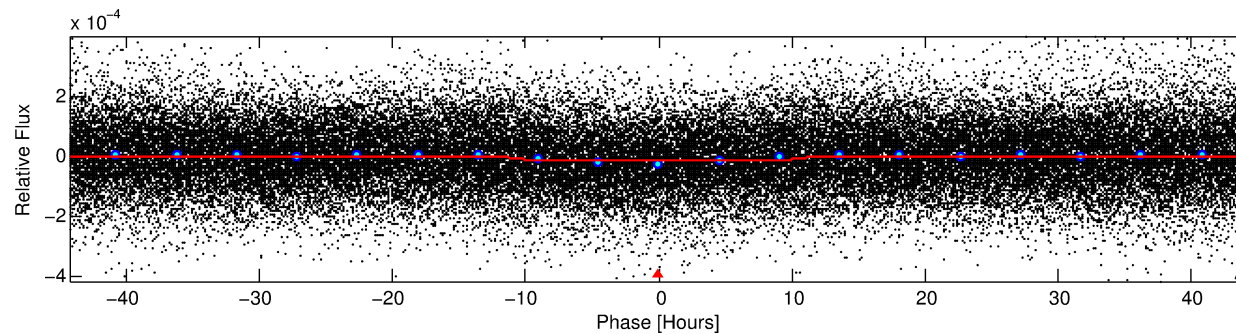
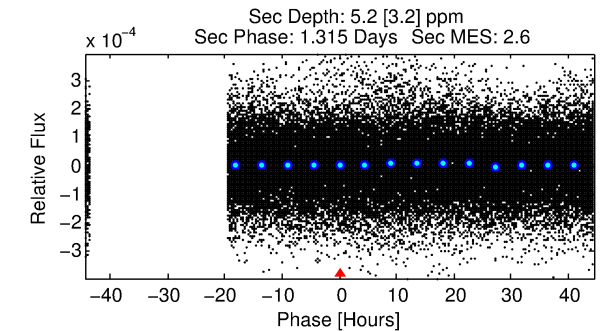
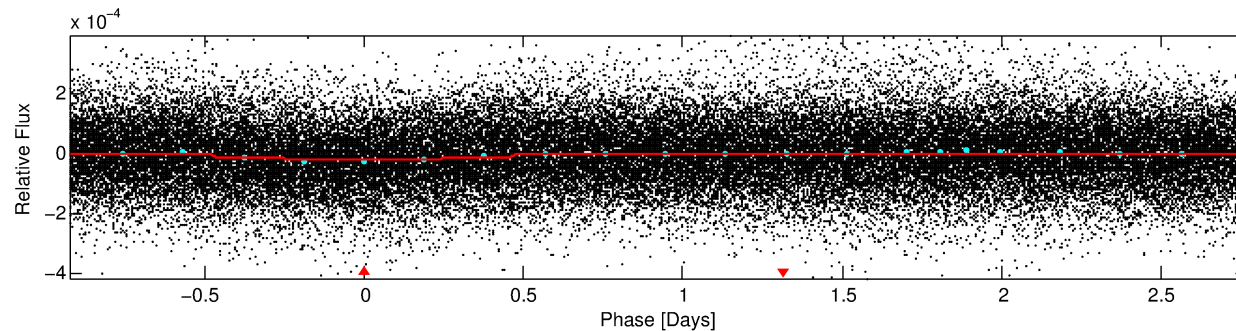
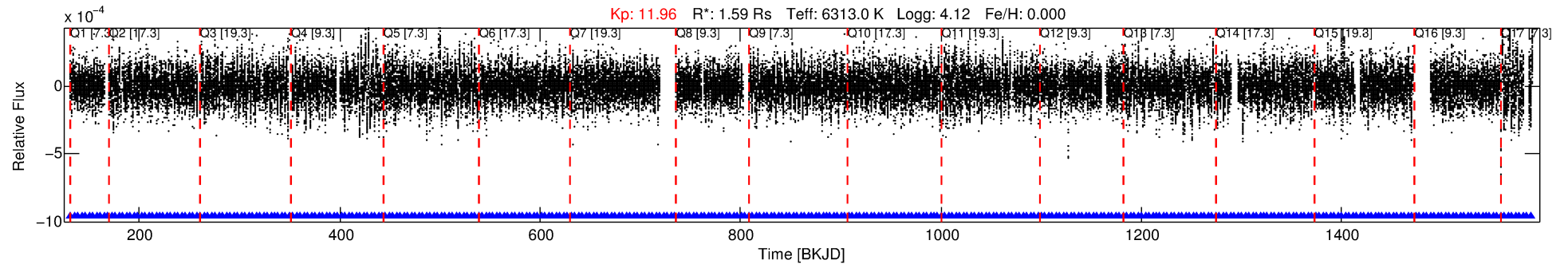
Ephemeris Match Information For 008739209-01

No Significant Match Found

DV One-Page Summary

KIC: 8739209 Candidate: 1 of 1 Period: 3.697 d

KOI: K07084 Corr: No Ephemeris Match



DV Fit Results:

Period = 3.69720 [0.00006] d
Epoch = 131.8182 [0.0096] BKJD
Rp/R* = 0.0035 [0.0026]
a/R* = 1.39 [2.61]
b = 0.08 [46.88]
Seff = 1444.33 [643.88]
Teq = 1572 [175] K
Rp = 0.61 [0.49] Re
a = 0.0500 [0.0135] AU
Ag = 19.23 [32.08] [0.57σ]
Teff = 5089 [2064] K [1.70σ]

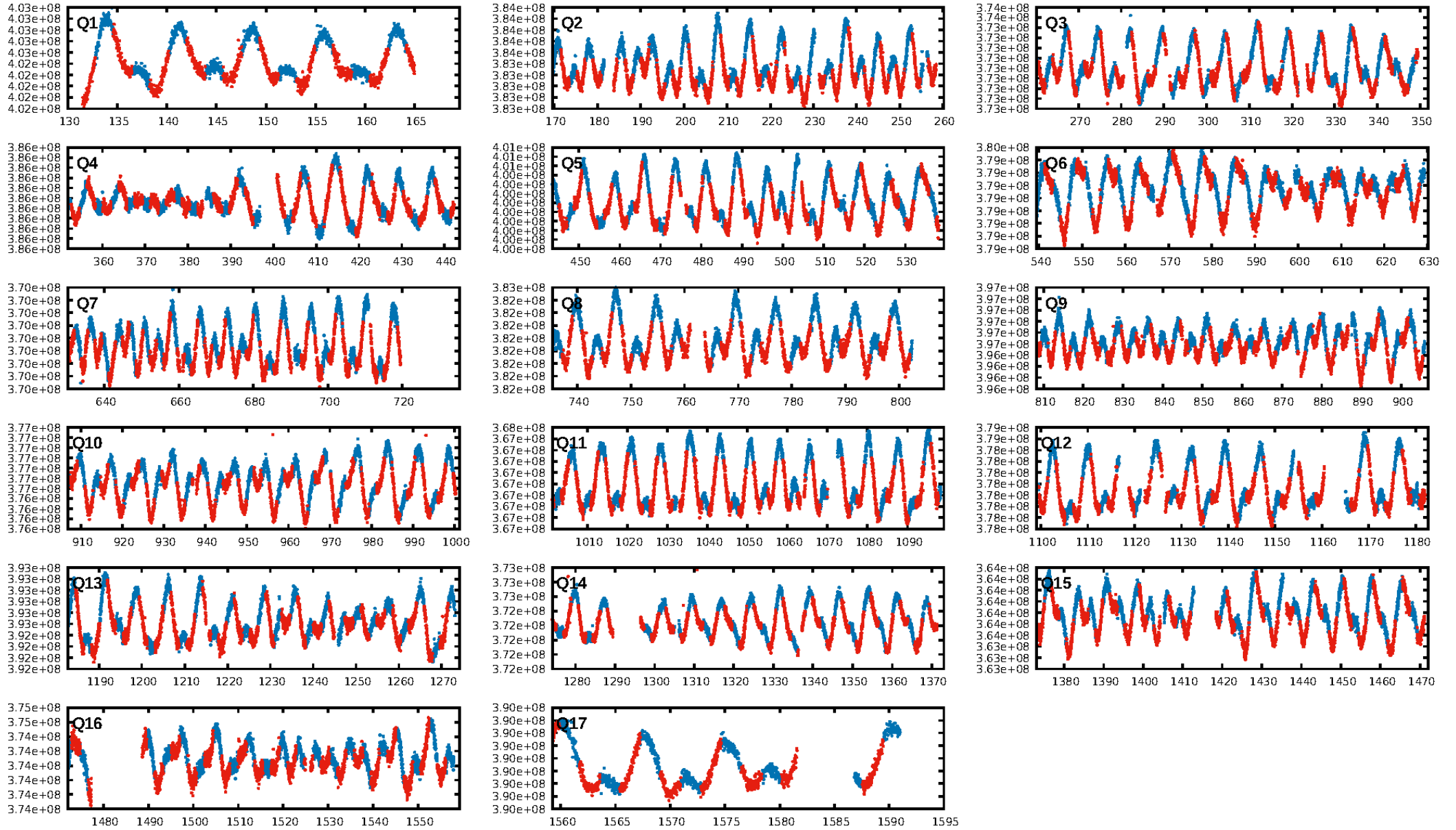
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.66e-19
RollingBand-fgt: 1.00 [360/360]
GhostDiagnostic-chr: 0.6985
Centroid-sig: 3.8%
Centroid-so: 0.721 arcsec [1.17σ]
OotOffset-rm: 0.260 arcsec [1.90σ]
KicOffset-rm: 0.329 arcsec [2.50σ]
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]

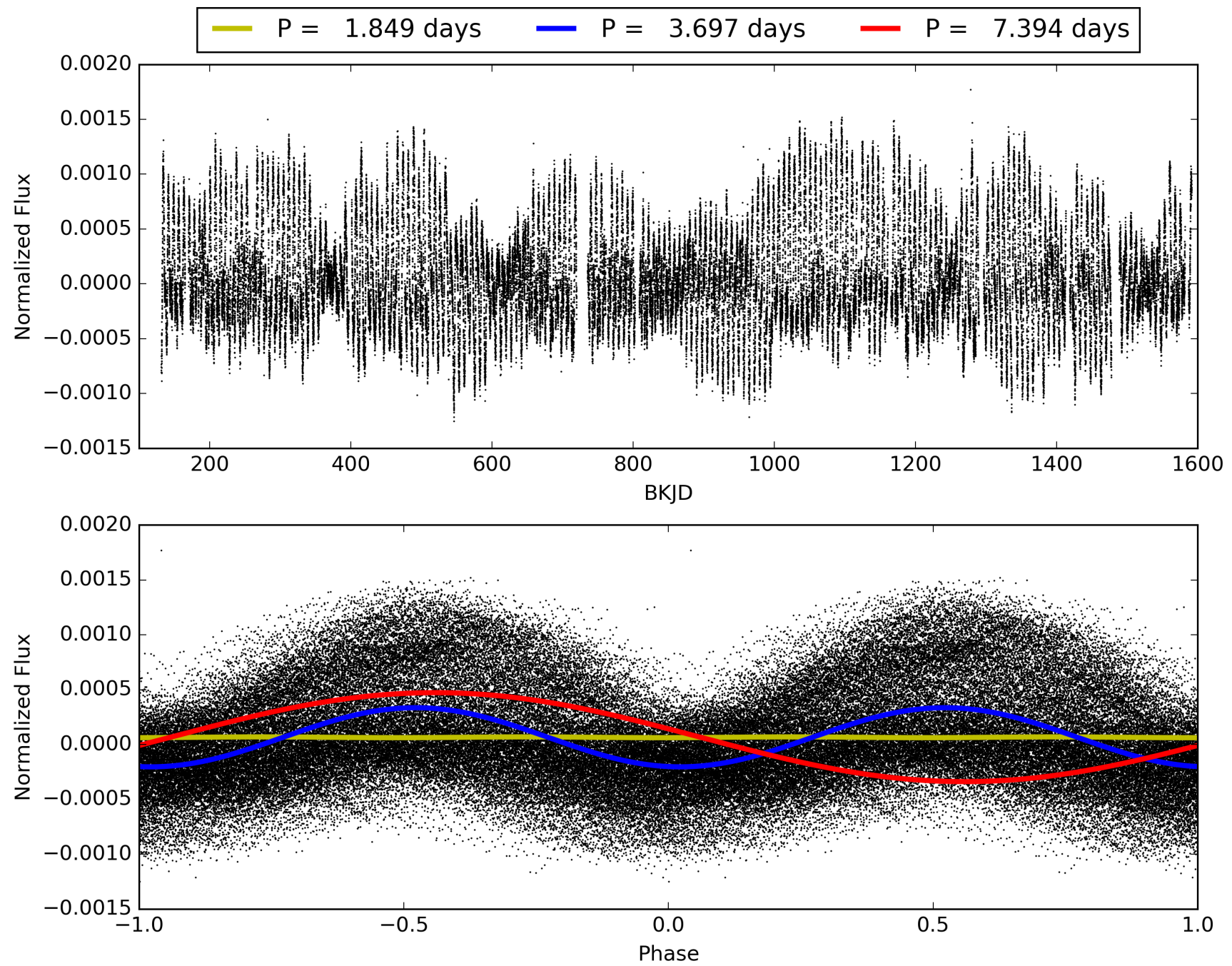
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:40:25 Z

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

TCE 008739209-01, PDC Light Curves

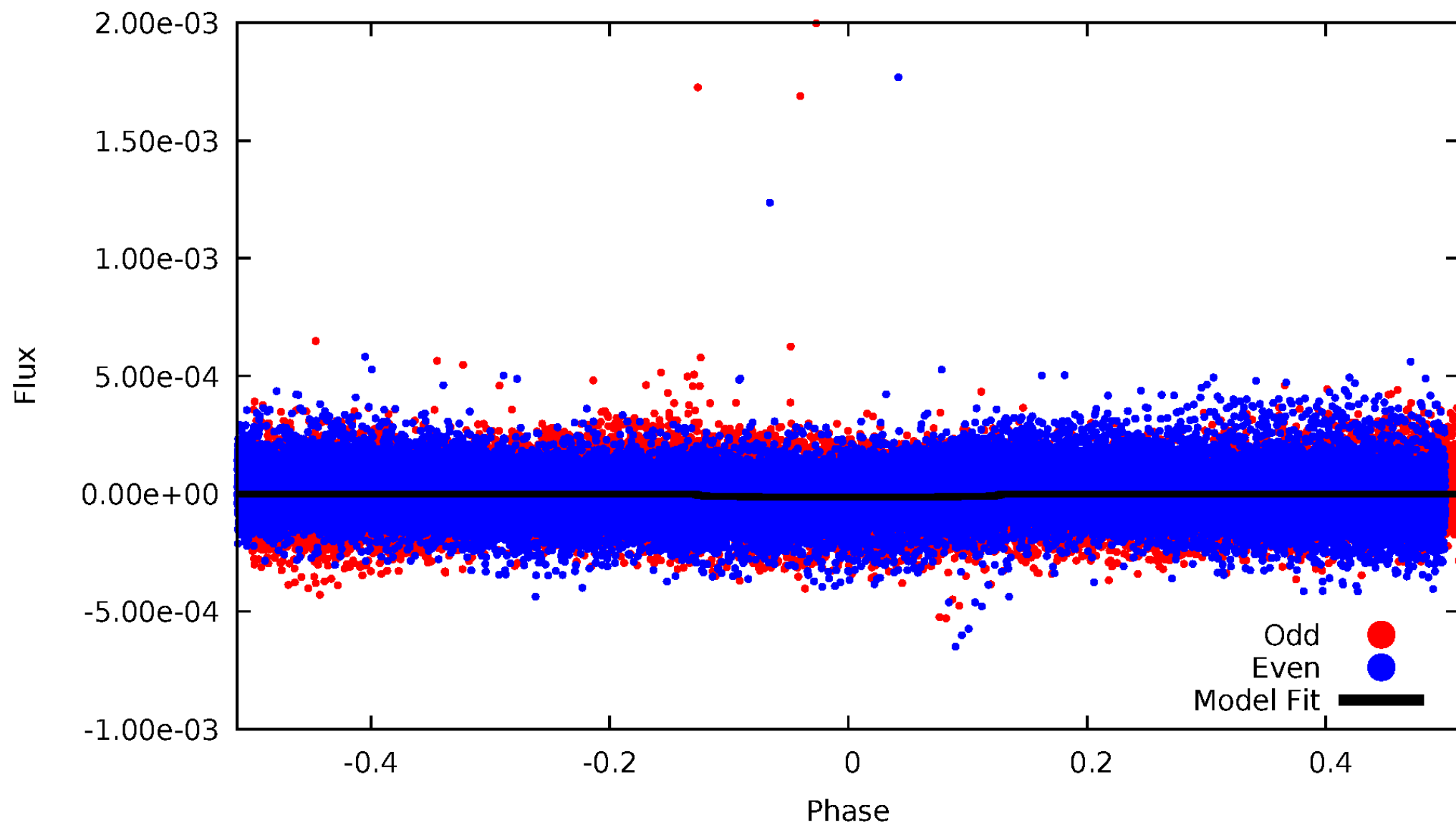


TCE 008739209-01



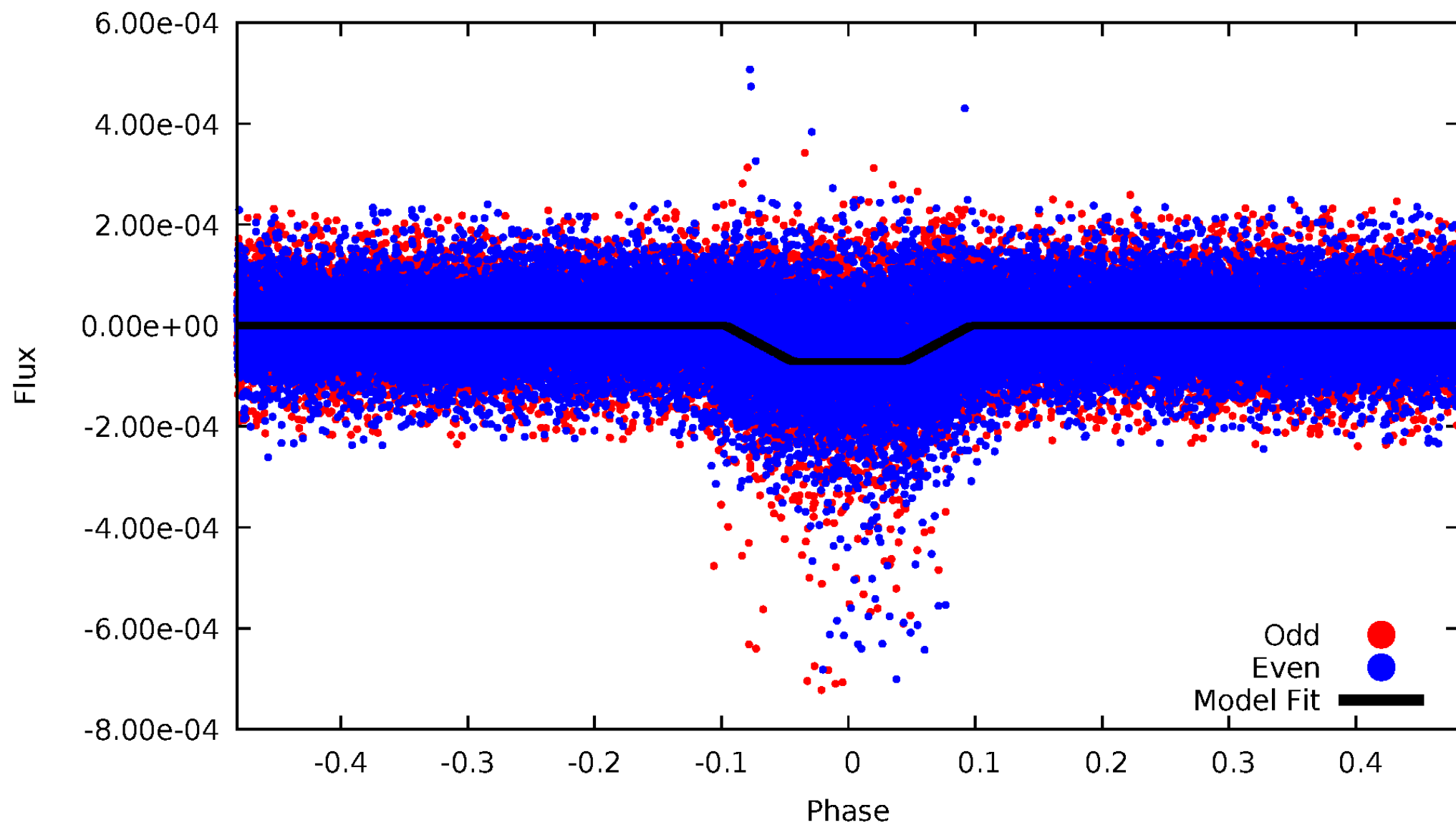
DV Odd/Even

TCE 008739209-01



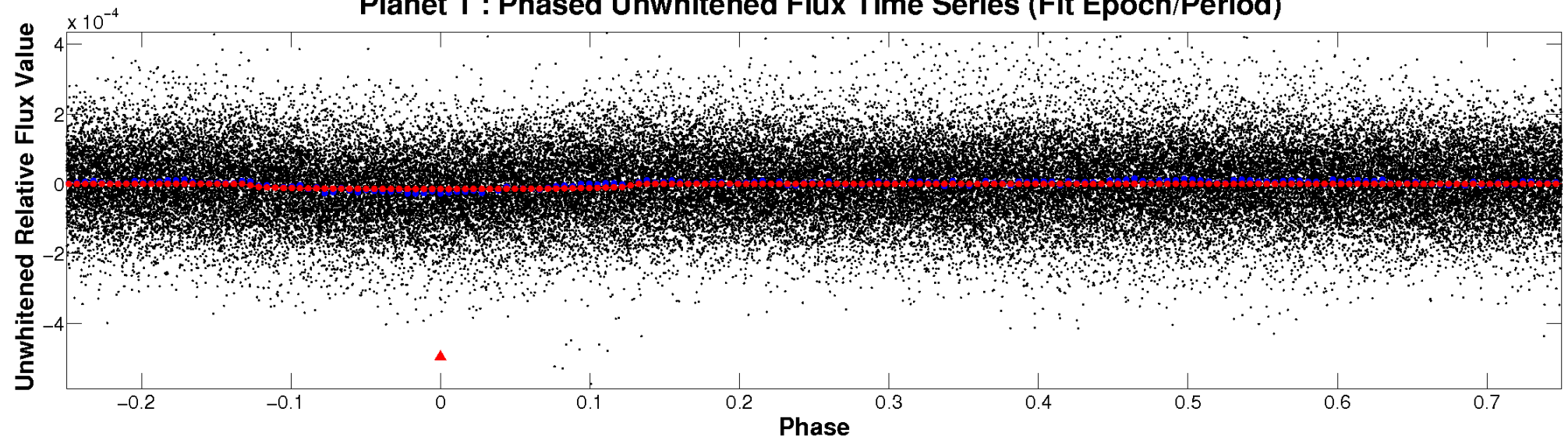
ALT Odd/Even

TCE 008739209-01

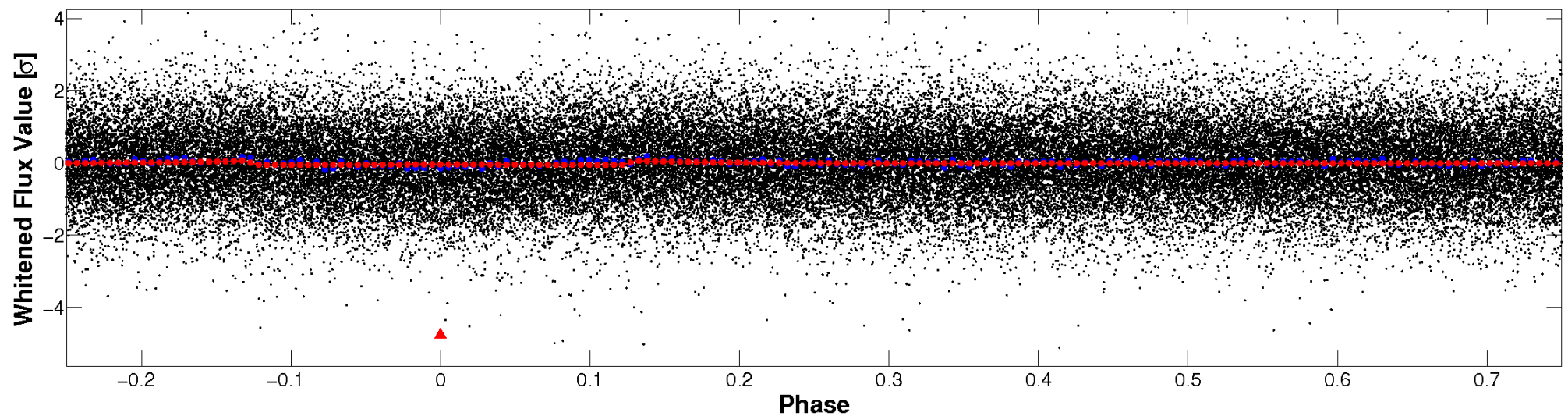


Non-Whitened Vs. Whitened Light Curve

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

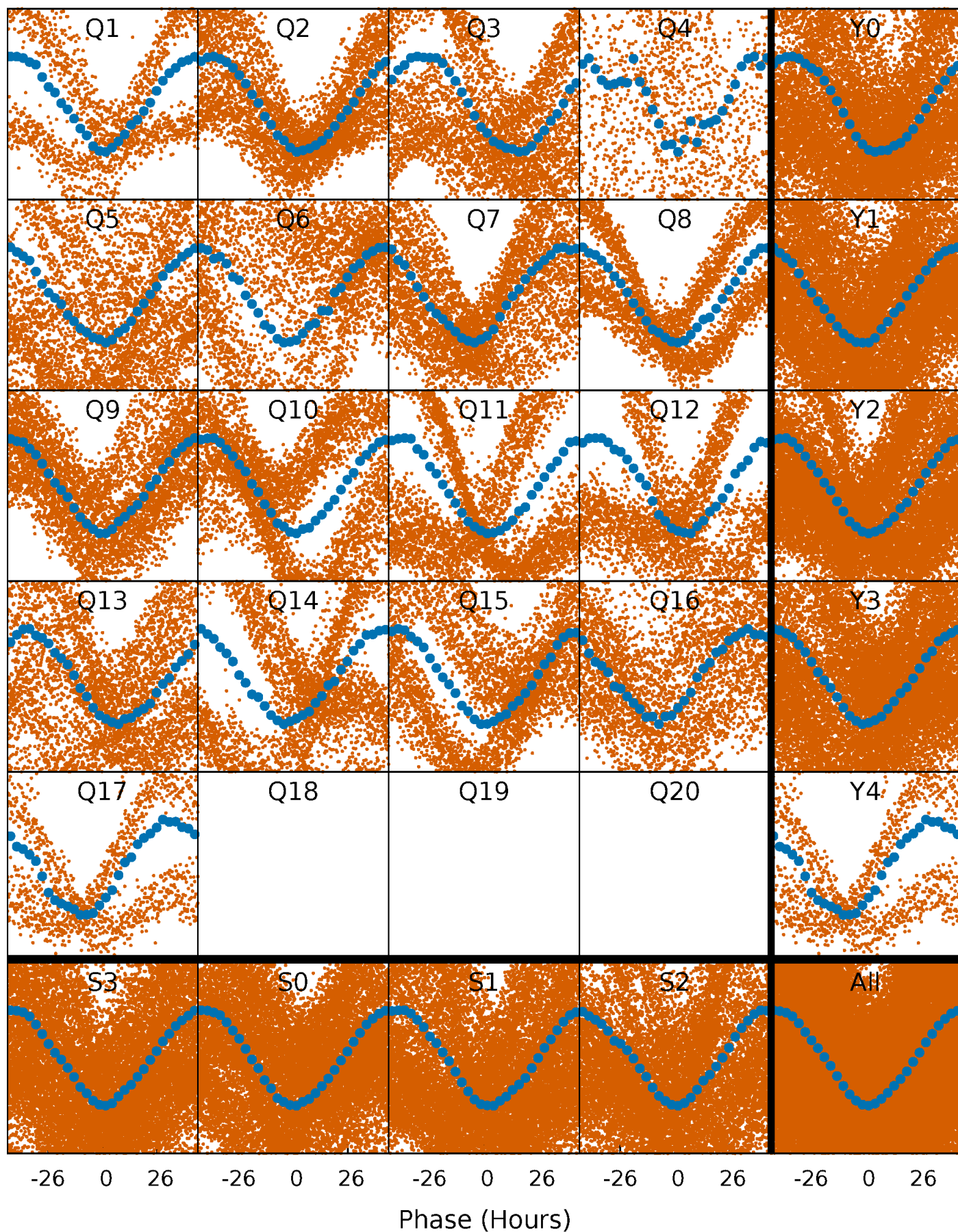


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



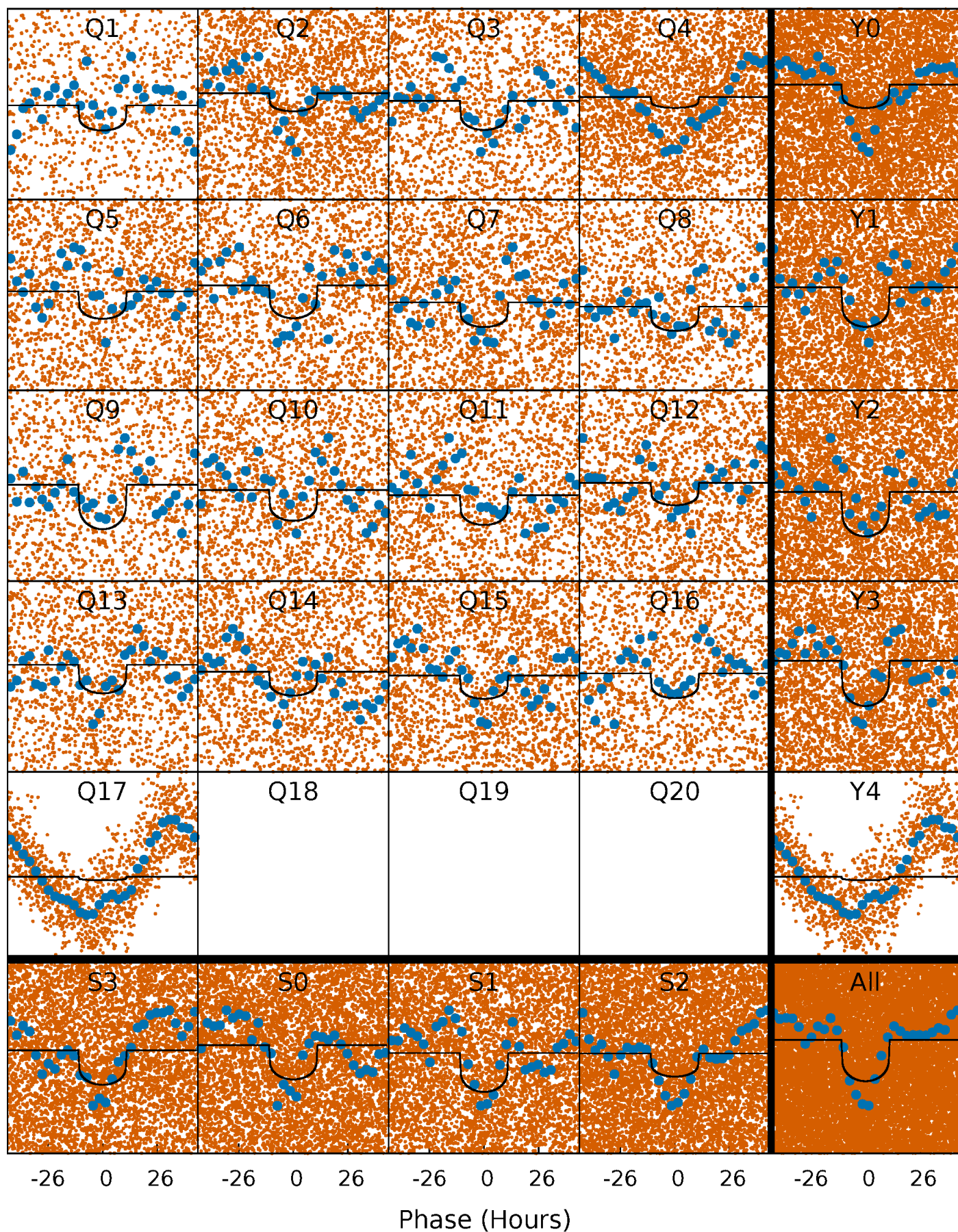
PDC Quarter-Phased Transit Curves

TCE 008739209-01 P= 3.697196 Days $T_0=131.818230$ (BKJD)



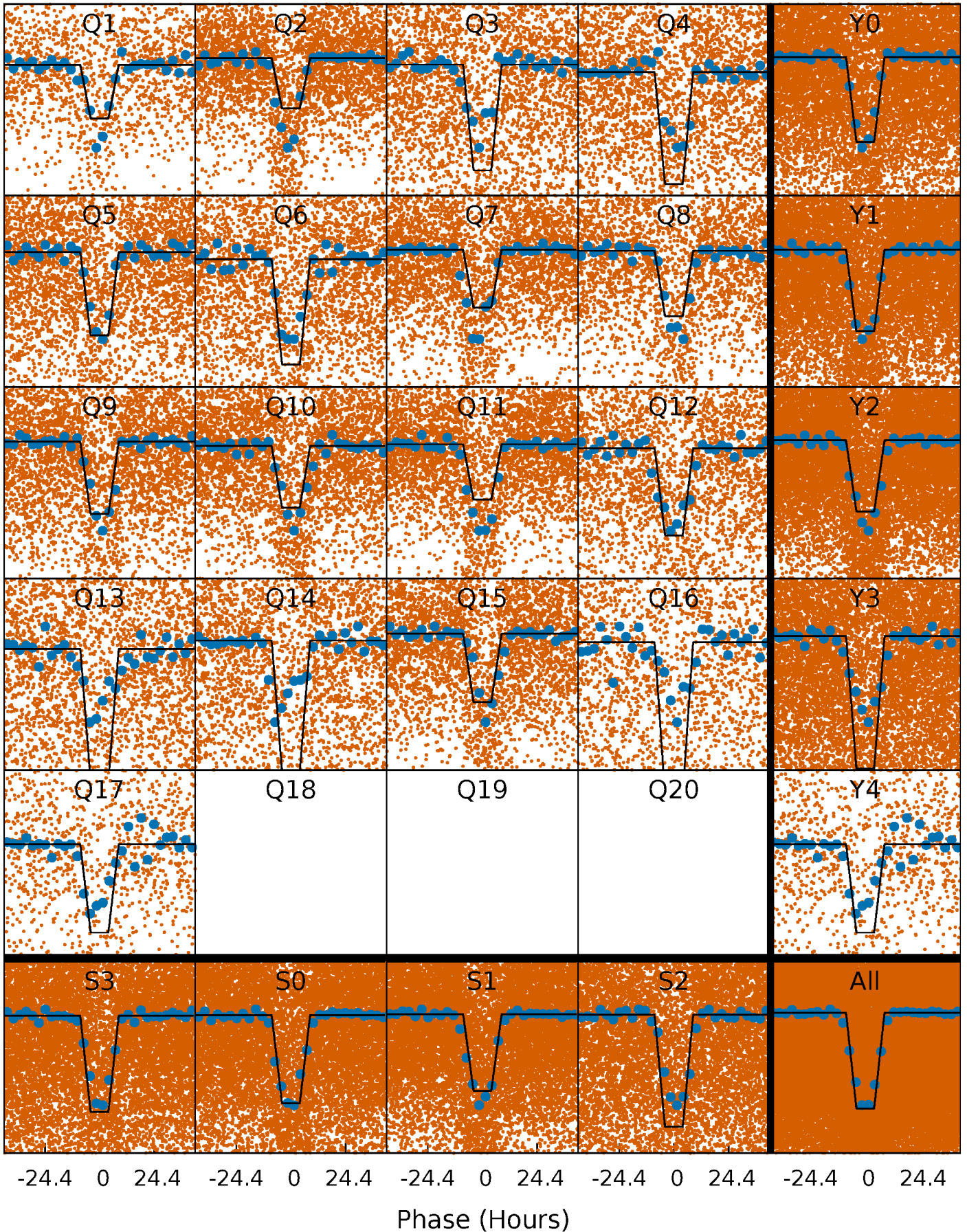
DV Quarter-Phased Transit Curves

TCE 008739209-01 P= 3.697196 Days $T_0=131.818230$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

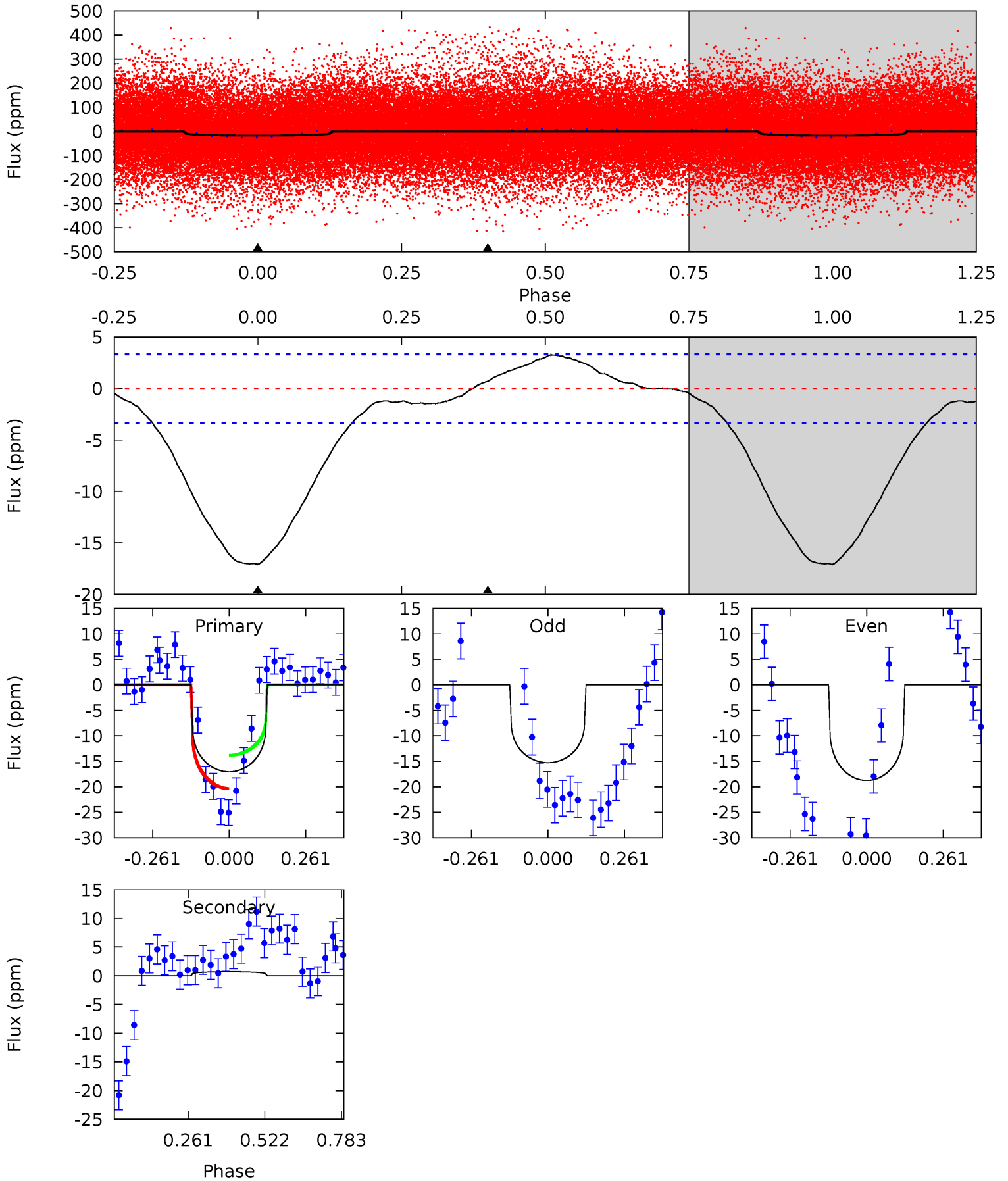
TCE 008739209-01 P= 3.697174 Days $T_0=131.770587$ (BKJD)



DV Model-Shift Uniqueness Test

008739209-01, P = 3.697196 Days, E = 128.121034 Days

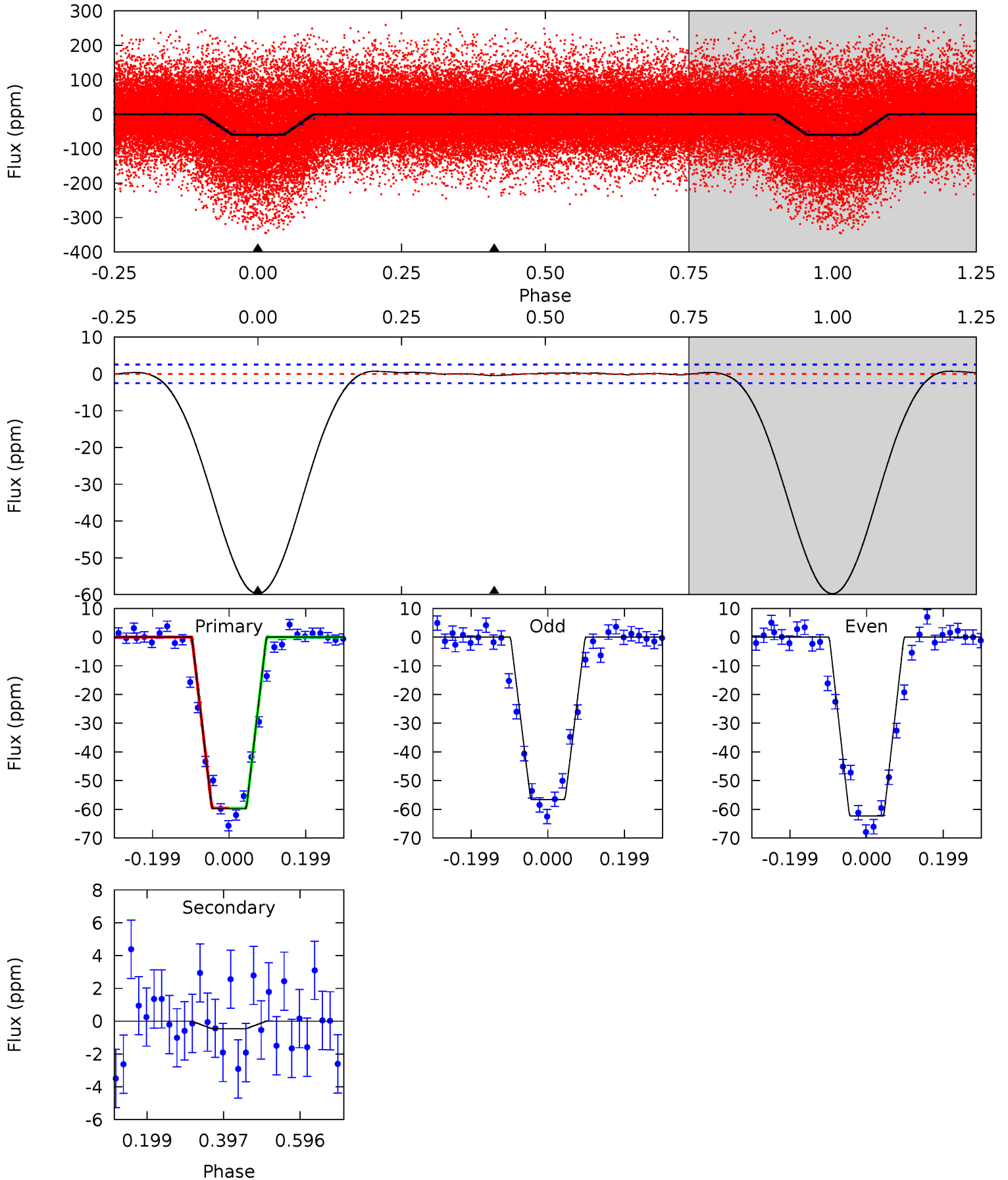
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.4	-0.93	0	0	4.36	1.12	0.29	22.4	22.4	-0.93	-0.93	2.13	1.18	0.16	4.24



Alt Model-Shift Uniqueness Test

008739209-01, P = 3.697174 Days, E = 128.073413 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
104.3	0.80	0	0	4.42	1.29	0.44	104.3	104.3	0.80	0.80	5.03	1.24	0.01	0.04



Stellar Parameters For KIC 008739209

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6313^{+177}_{-243}	$4.120^{+0.240}_{-0.180}$	$0.000^{+0.250}_{-0.300}$	$1.594^{+0.474}_{-0.474}$	$1.220^{+0.189}_{-0.189}$	$0.424^{+0.627}_{-0.208}$
	+3%/-4%	+6%/-4%	+inf%/-inf%	+30%/-30%	+15%/-15%	+148%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008739209-01 / KOI 7084.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	1 ± 1	$0.64^{+0.48}_{-0.36}$	2192^{+177}_{-199}	-3419^{+775}_{-1265}	$-1.768^{+1.746}_{-10.789}$
Alt.	-0 ± 1	$1.47^{+0.55}_{-0.49}$	2177^{+181}_{-171}	-2072^{+4882}_{-635}	$0.258^{+0.634}_{-0.336}$

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

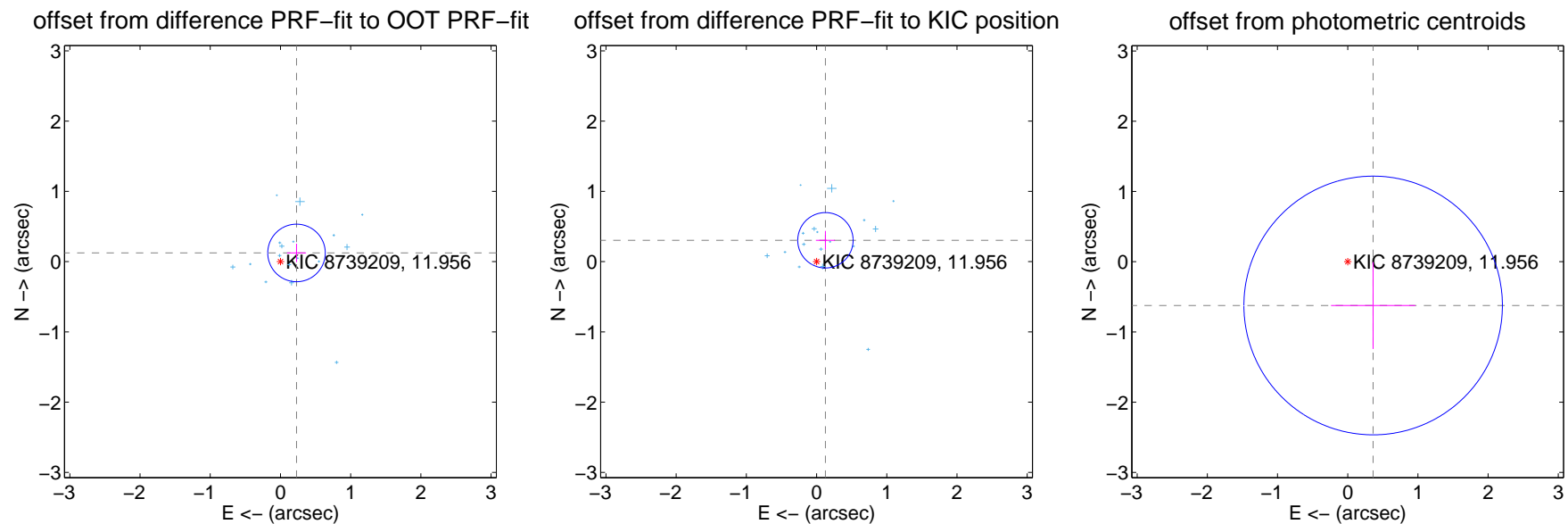
DV Centroid Data

Supplemental centroid analysis for 008739209-01. **Kepler magnitude: 11.96.** Transit SNR 6.82

There are 17 quarters with good PRF difference image offsets

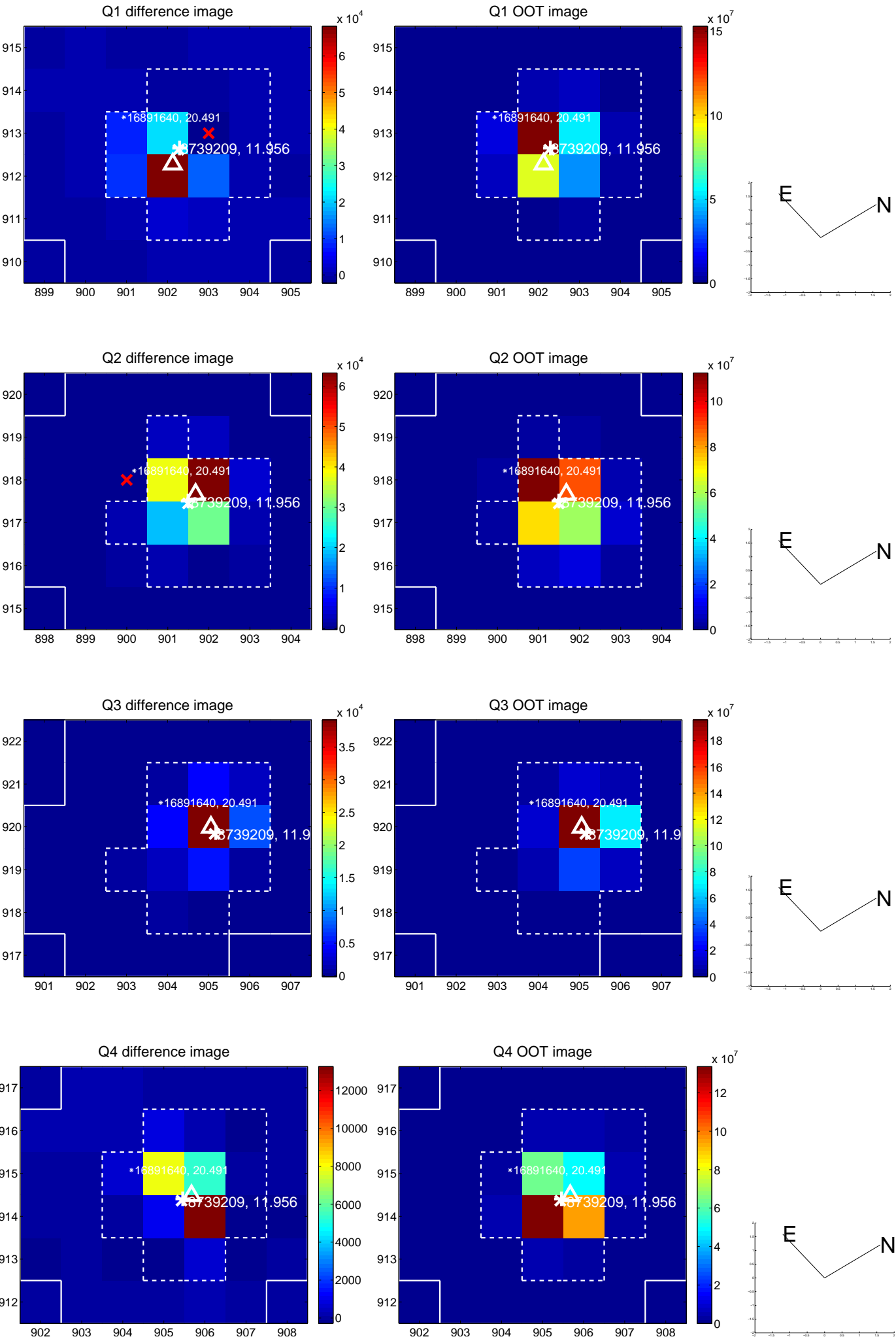
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.260 ± 0.137	1.90	-0.229 ± 0.135	0.124 ± 0.131
PRF-fit source offset from KIC position	0.329 ± 0.131	2.50	-0.126 ± 0.136	0.304 ± 0.133
photometric centroid source offset	0.72 ± 0.61	1.17	-0.36 ± 0.60	-0.62 ± 0.62

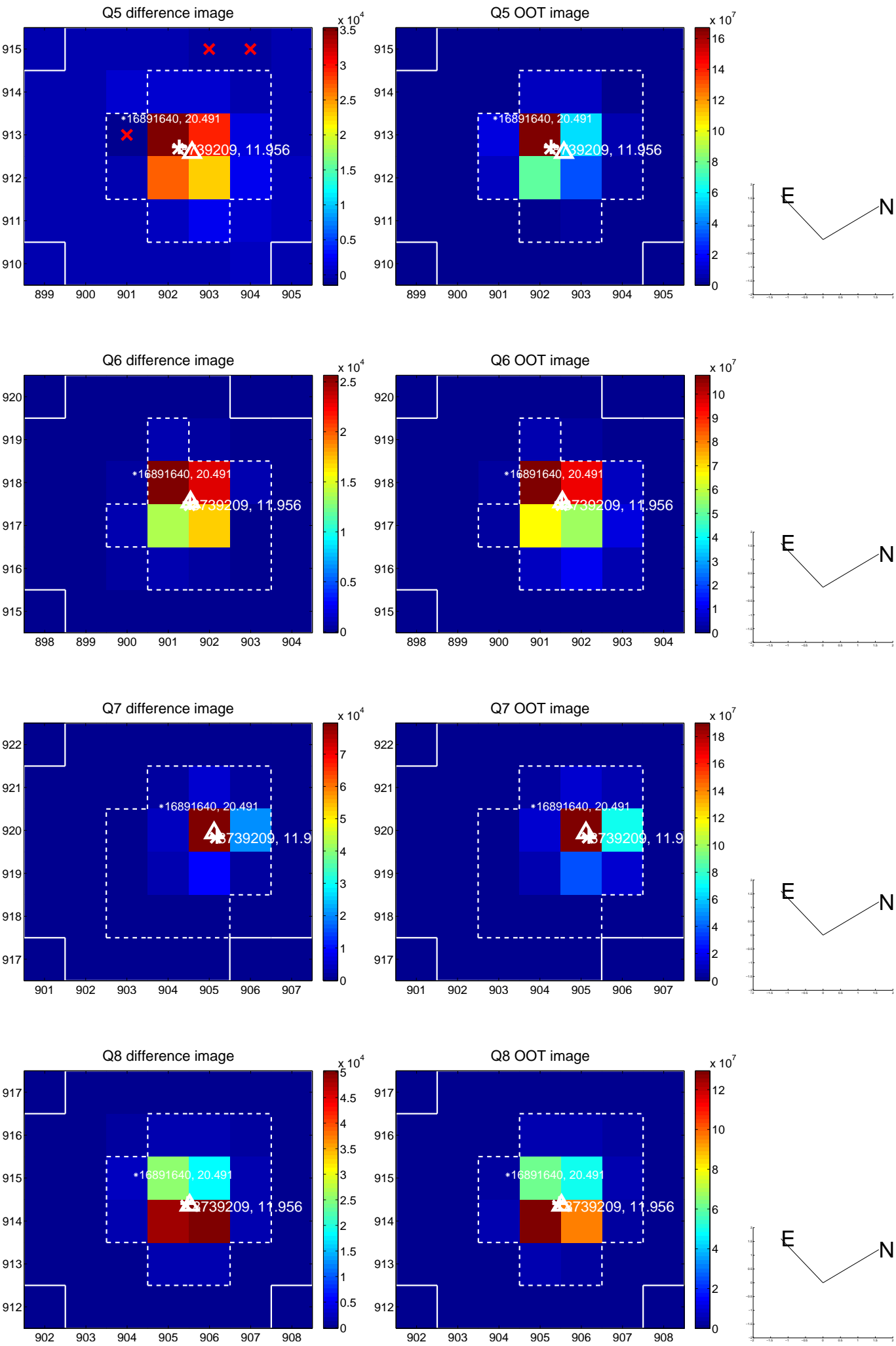


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

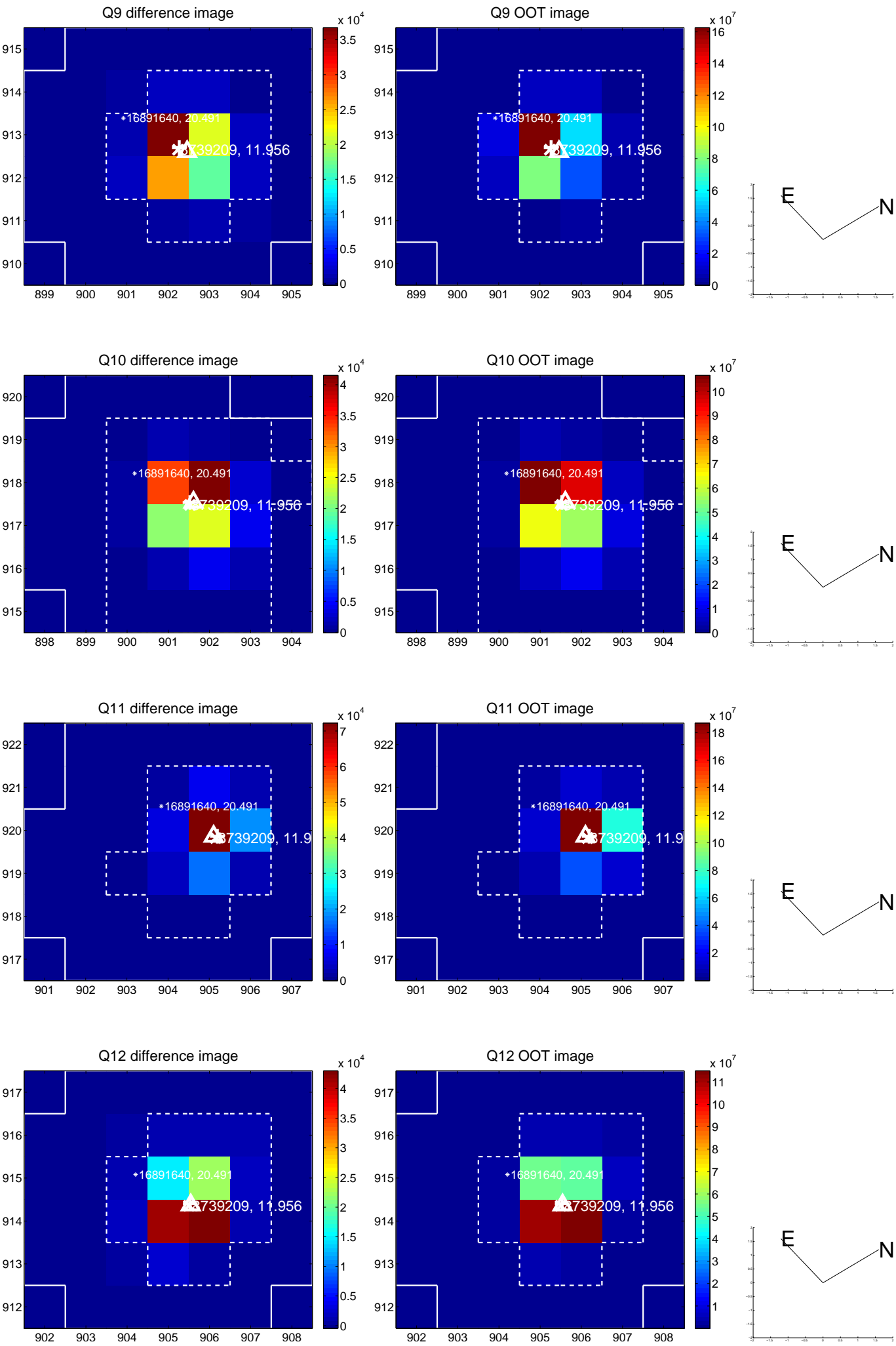
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



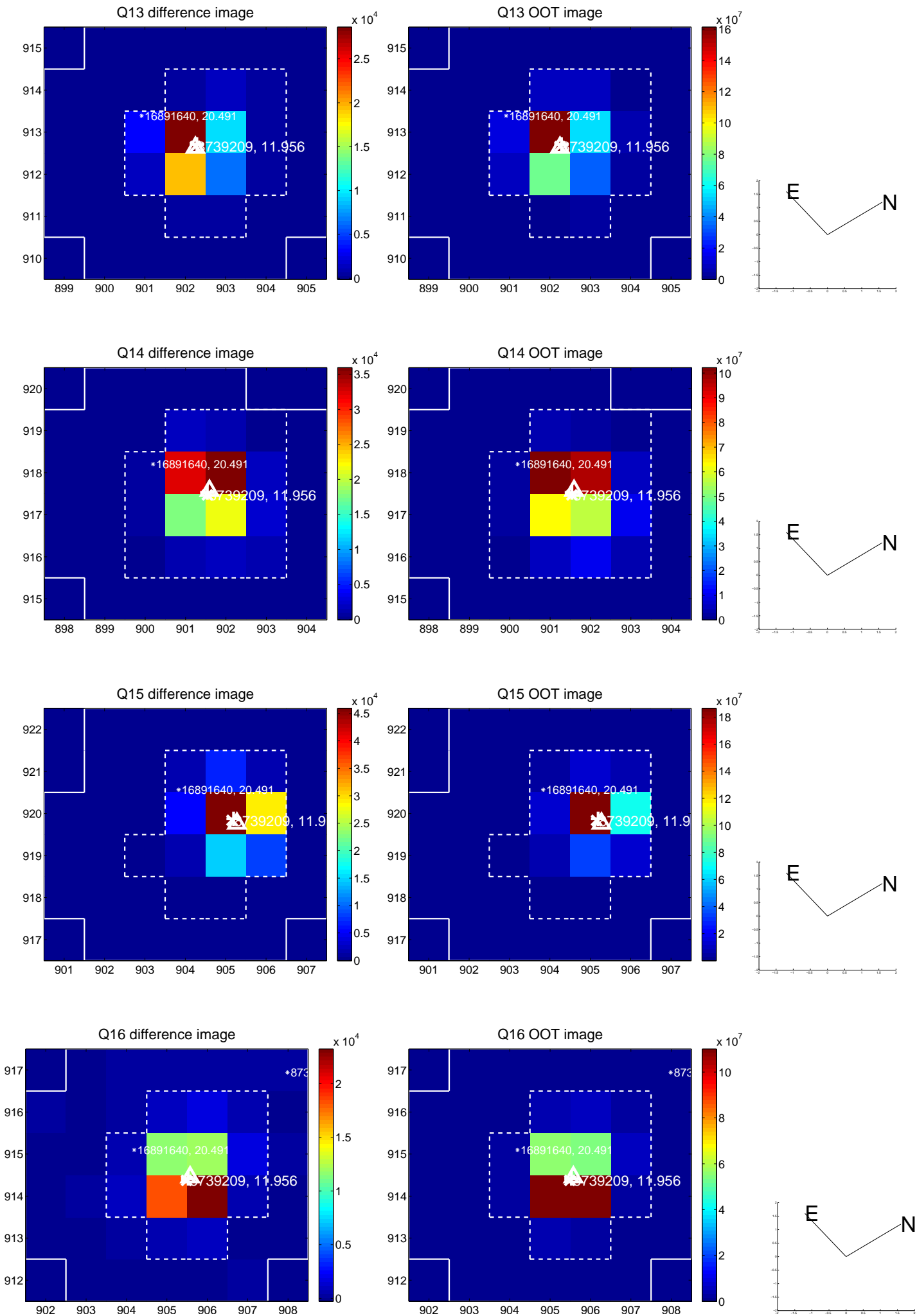
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



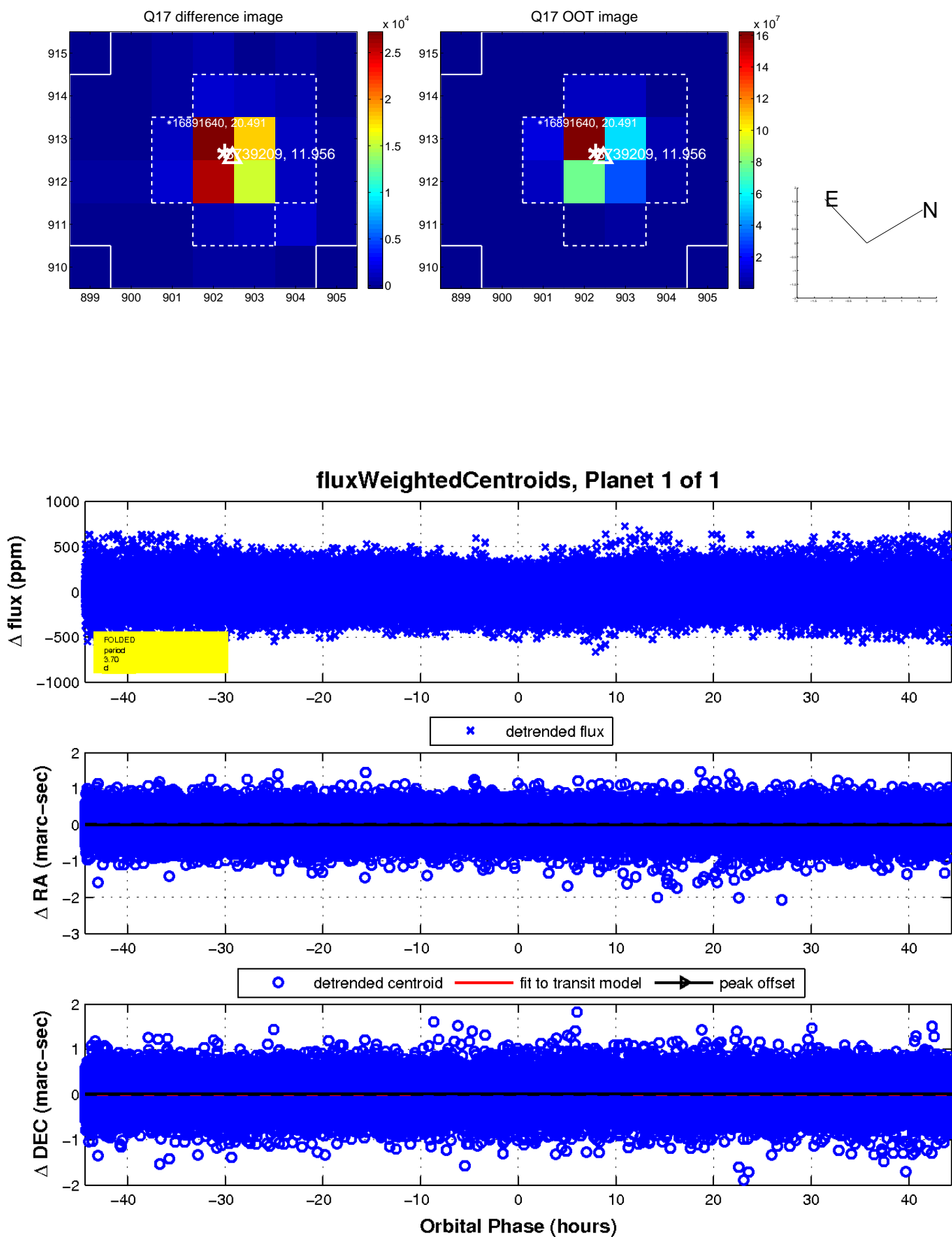
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

