

KIC 007659389

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})
007659389-01	OBS	2734.01	3.825911	132.199109	880.2	1.455	21.3	26.1	0.89	5223	2.80	241.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007659389-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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.

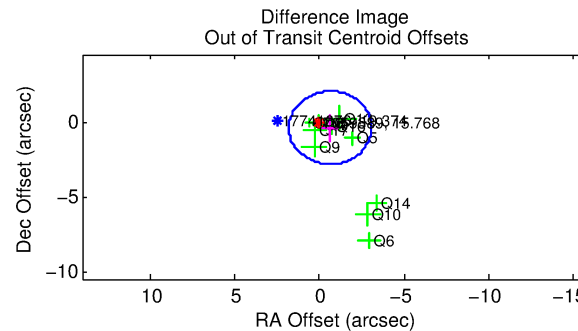
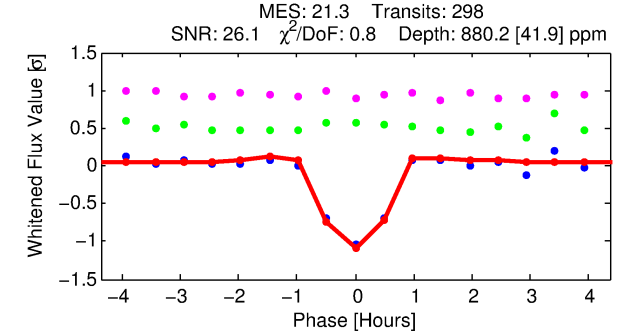
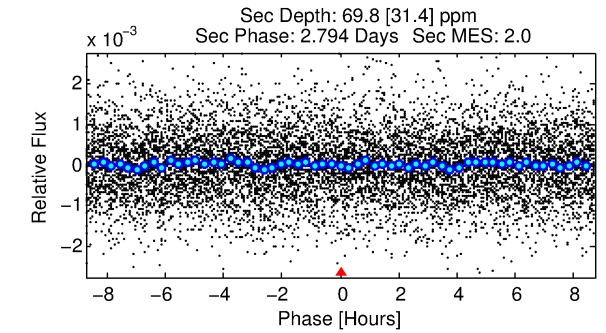
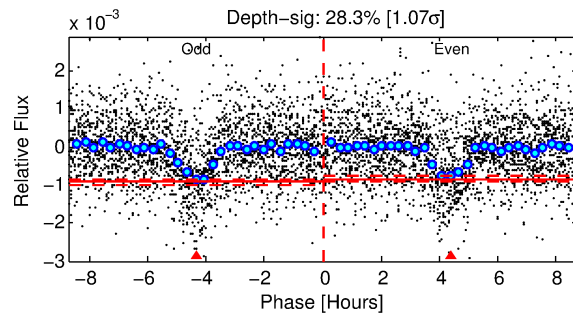
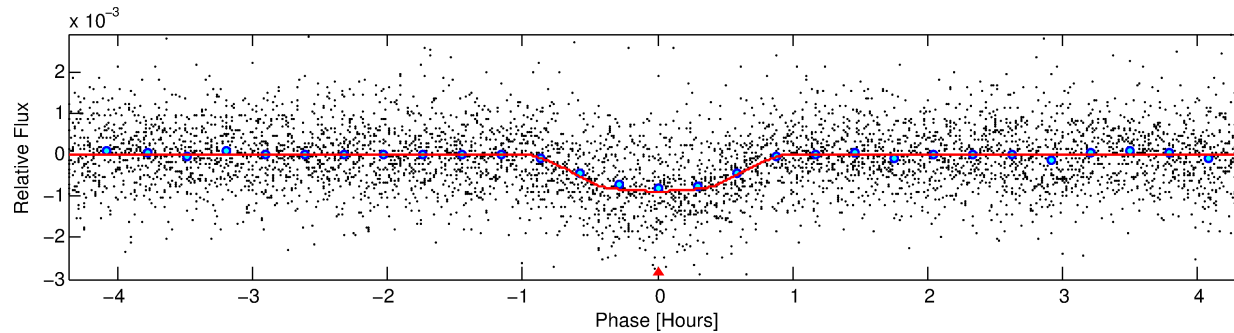
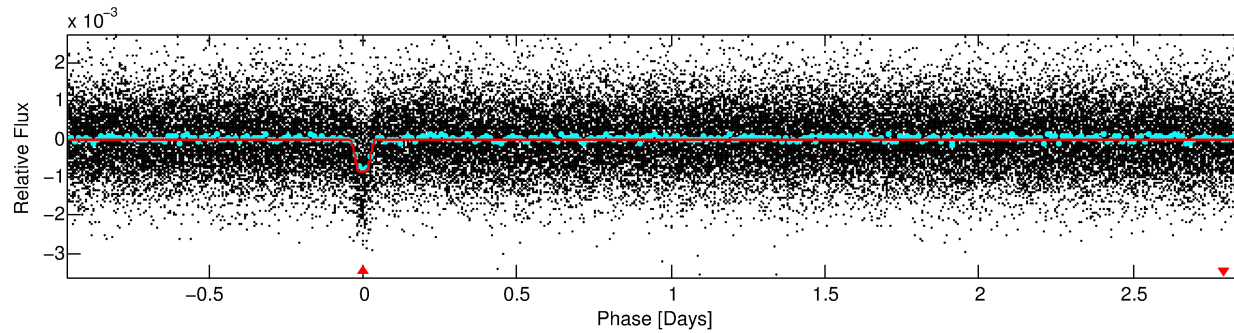
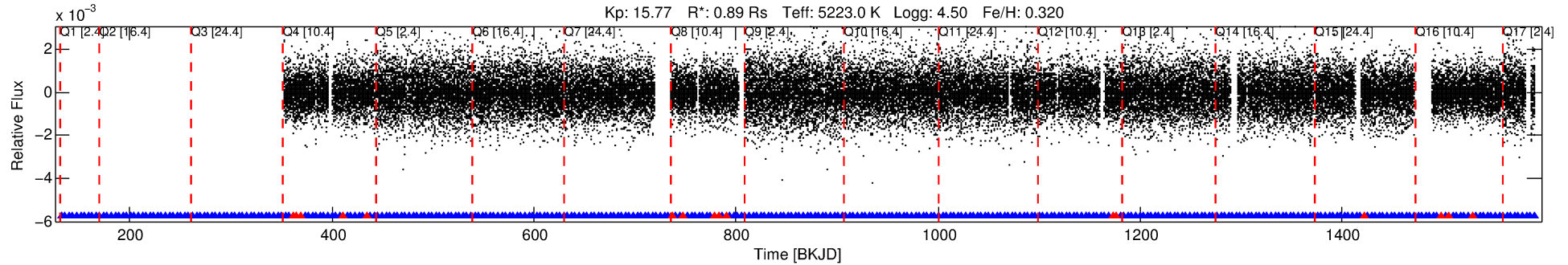
Ephemeris Match Information For 007659389-01

No Significant Match Found

DV One-Page Summary

KIC: 7659389 Candidate: 1 of 1 Period: 3.826 d
KOI: K02734.01 Corr: 0.987

Kp: 15.77 R*: 0.89 Rs Teff: 5223.0 K Logg: 4.50 Fe/H: 0.320



DV Fit Results:

Period = 3.82591 [0.00001] d
Epoch = 132.1991 [0.0011] BKJD
Rp/R* = 0.0290 [0.0211]
a/R* = 15.51 [39.48]
b = 0.68 [2.06]
Seff = 241.86 [61.26]
Teq = 1006 [64] K
Rp = 2.80 [2.09] Re
a = 0.0465 [0.0066] AU
Ag = 10.60 [16.29] [0.59σ]
Teffp = 2806 [1072] K [1.68σ]

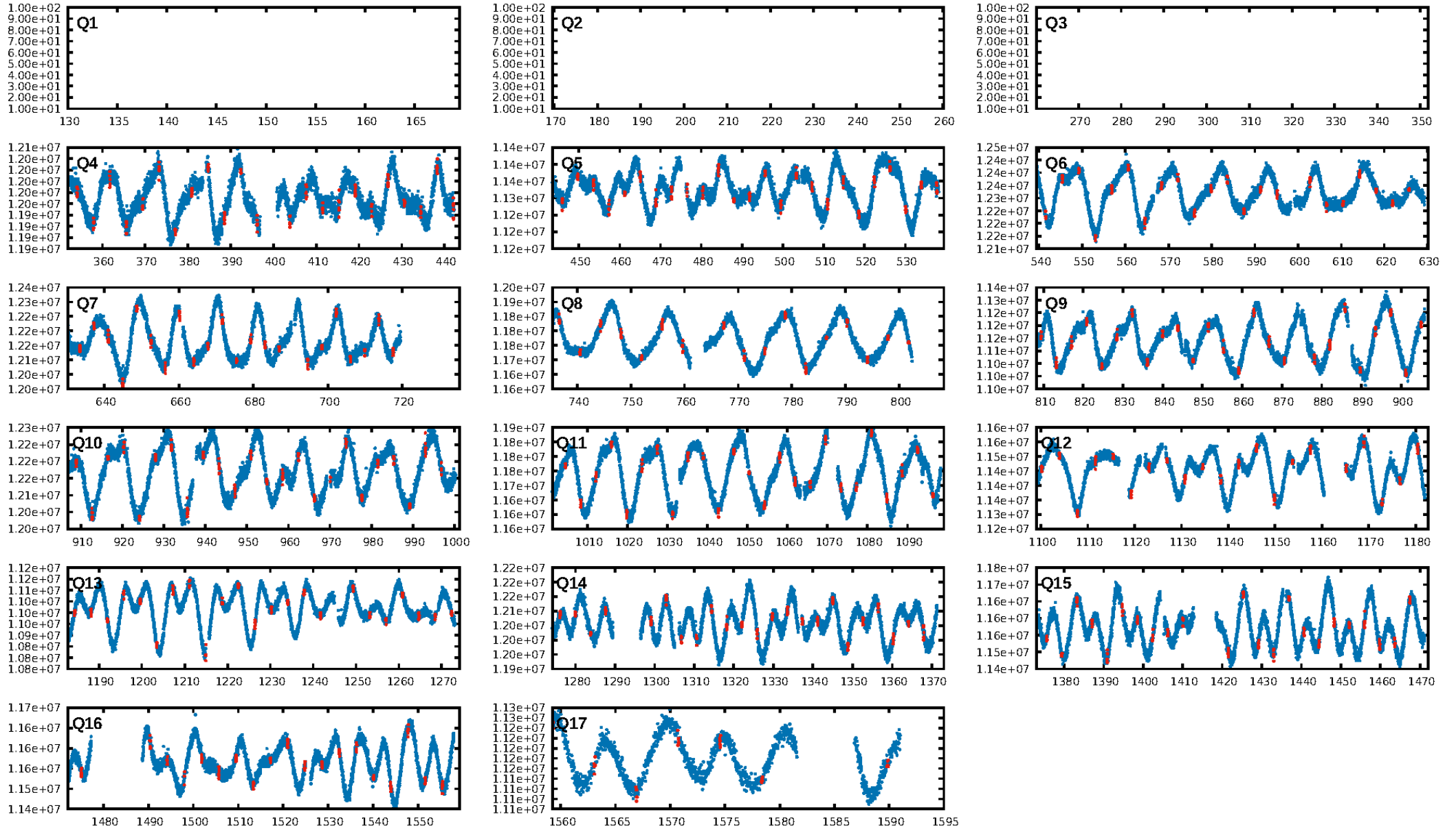
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.08e-95
RollingBand-fgt: 0.95 [275/291]
GhostDiagnostic-chr: 2.908
Centroid-sig: 2.3%
Centroid-so: 1.872 arcsec [5.09σ]
OotOffset-rm: 0.743 arcsec [0.91σ]
KicOffset-rm: 0.355 arcsec [1.63σ]
OotOffset-st: 3/0/4/4 [11]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [14/14]

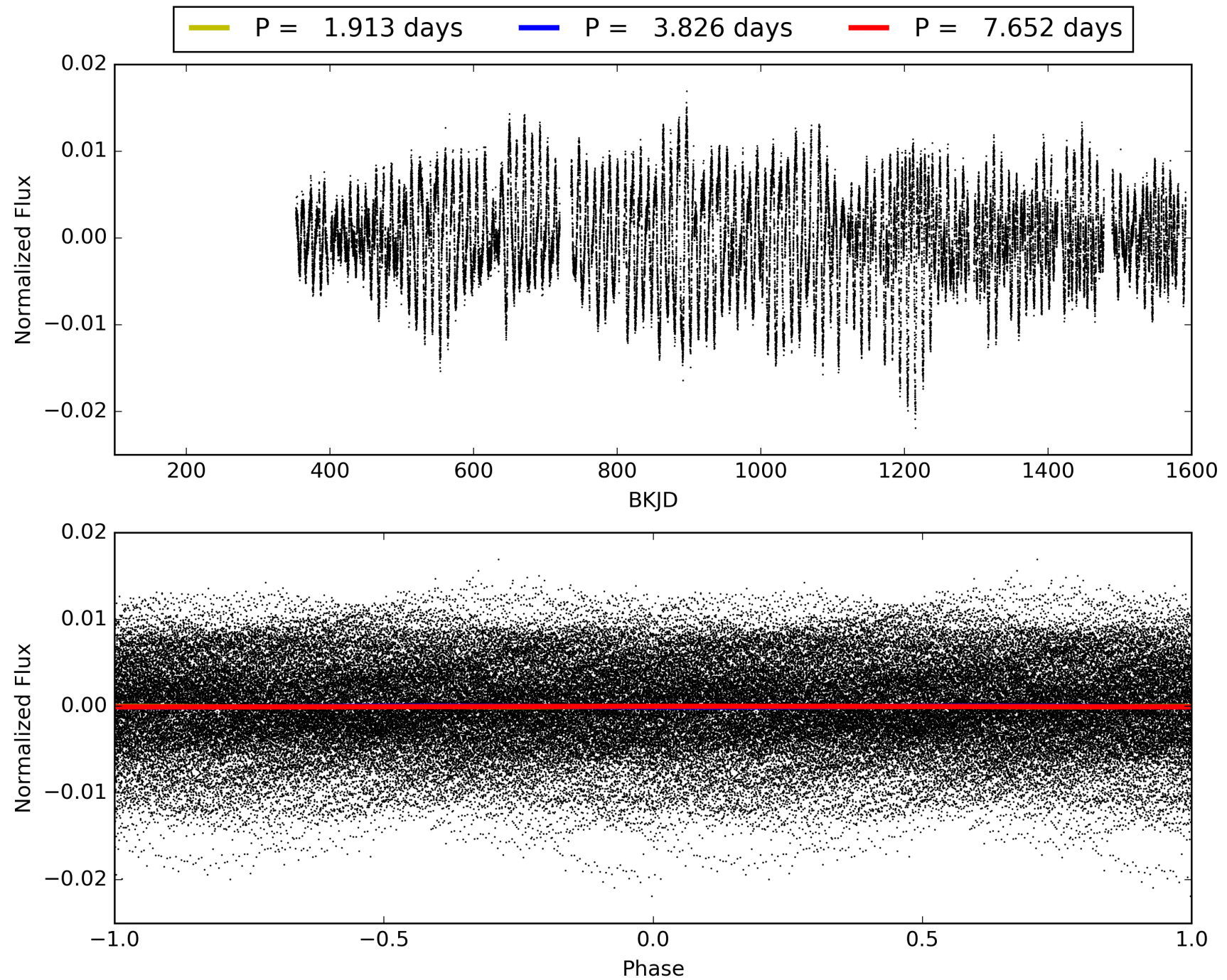
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:11:39 Z

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

TCE 007659389-01, PDC Light Curves

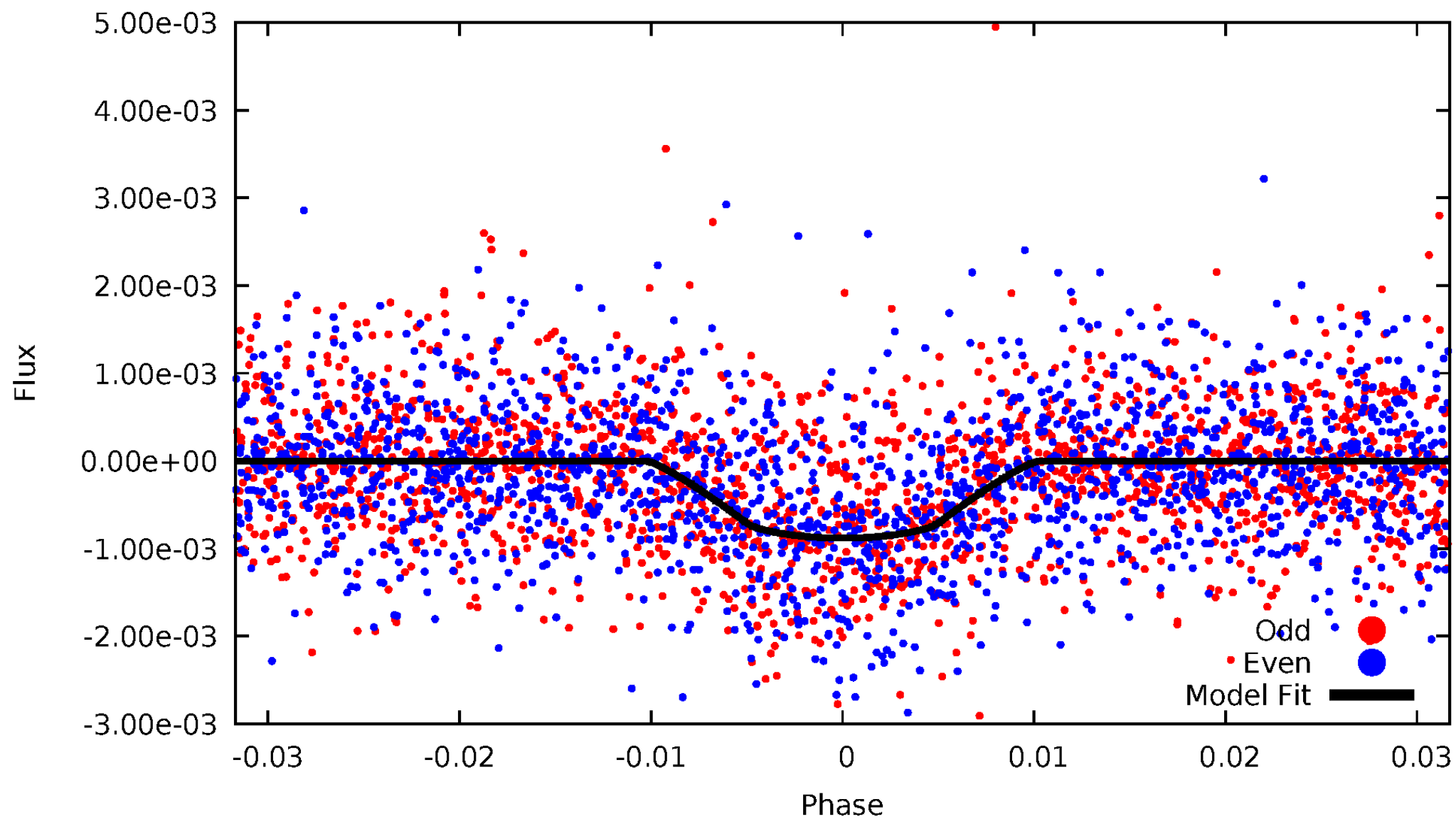


TCE 007659389-01



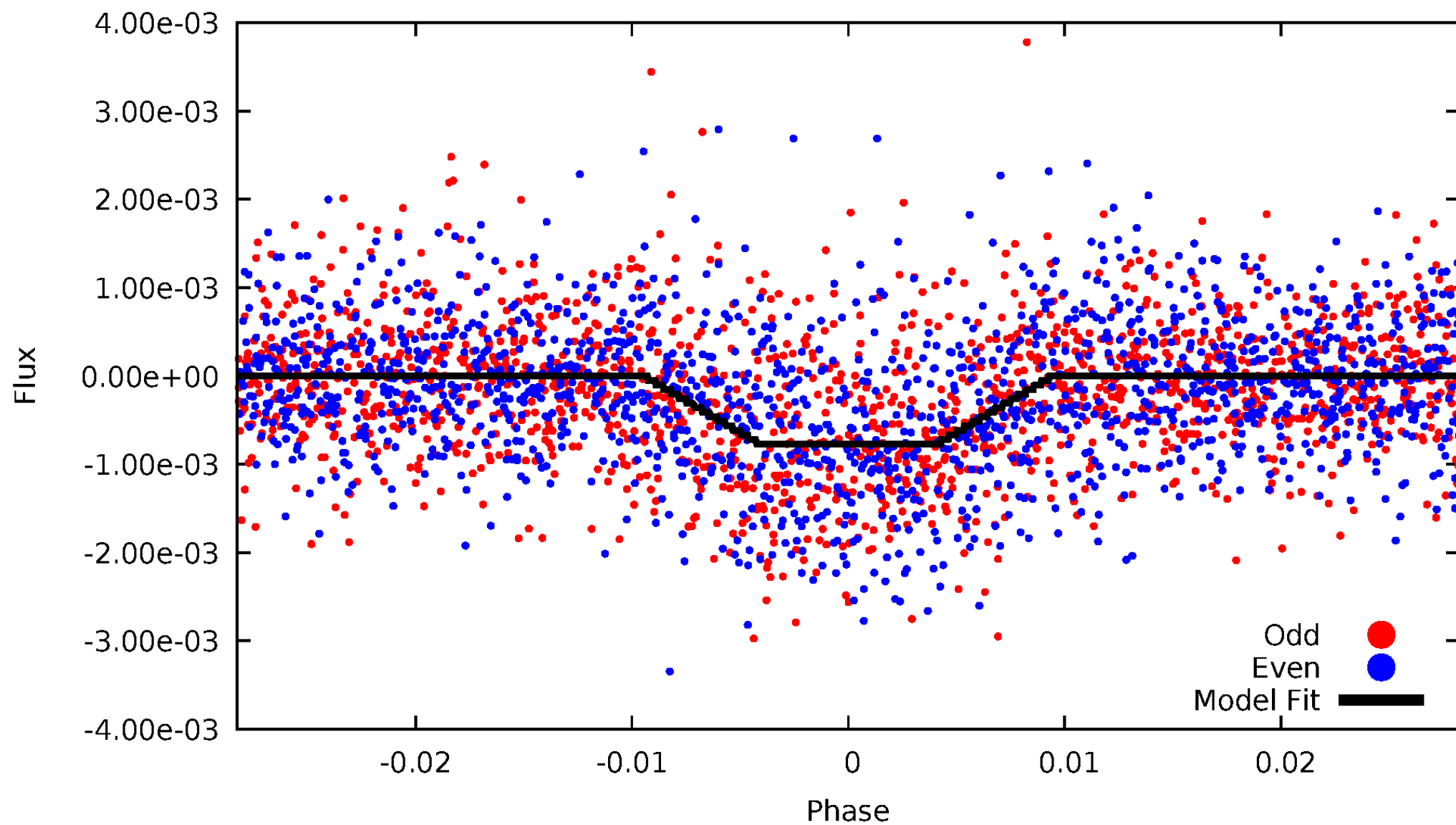
DV Odd/Even

TCE 007659389-01



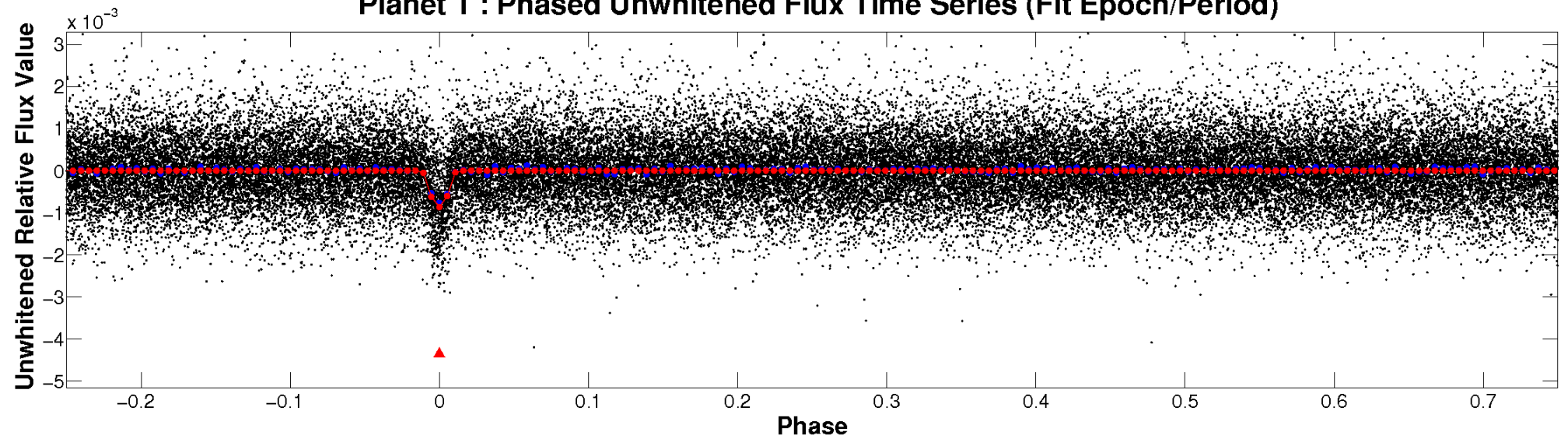
ALT Odd/Even

TCE 007659389-01

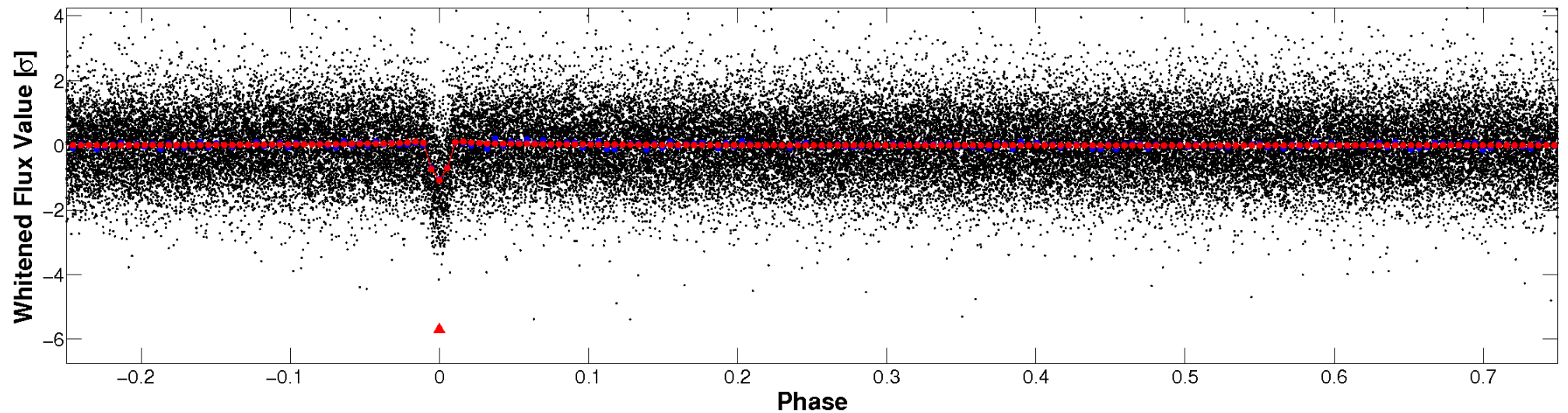


Non-Whitened Vs. Whitened Light Curve

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

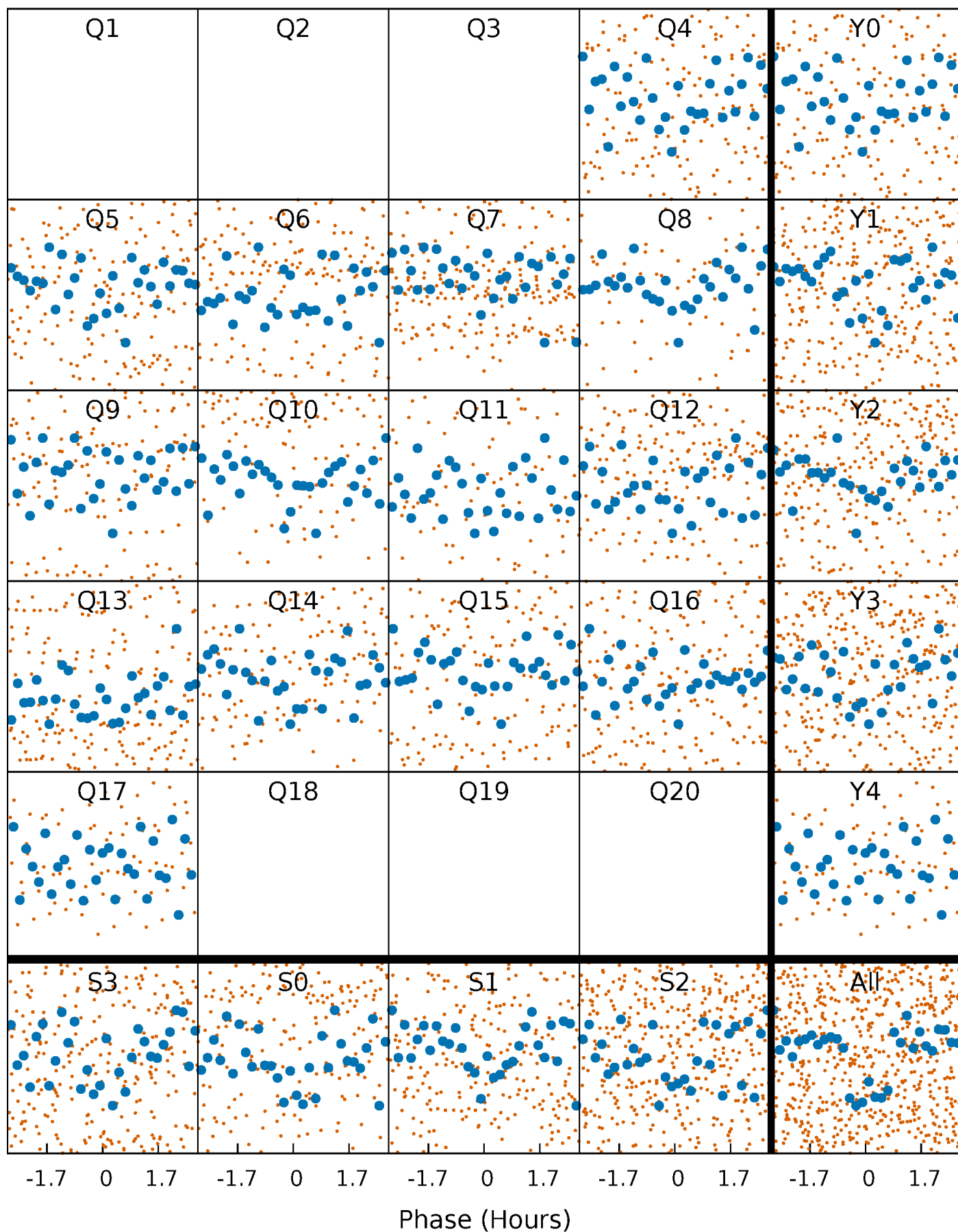


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



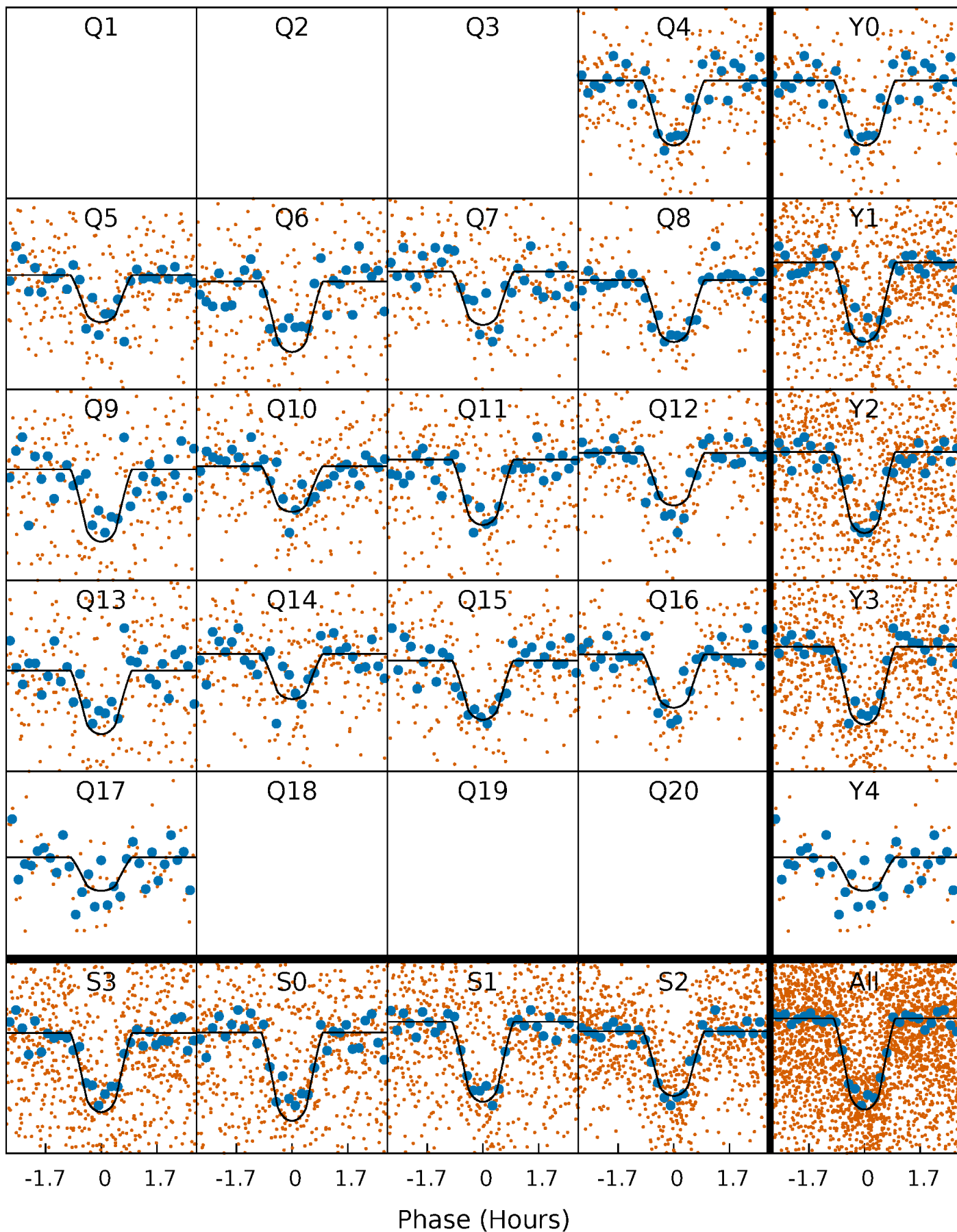
PDC Quarter-Phased Transit Curves

TCE 007659389-01 P= 3.825911 Days $T_0=132.199109$ (BKJD)



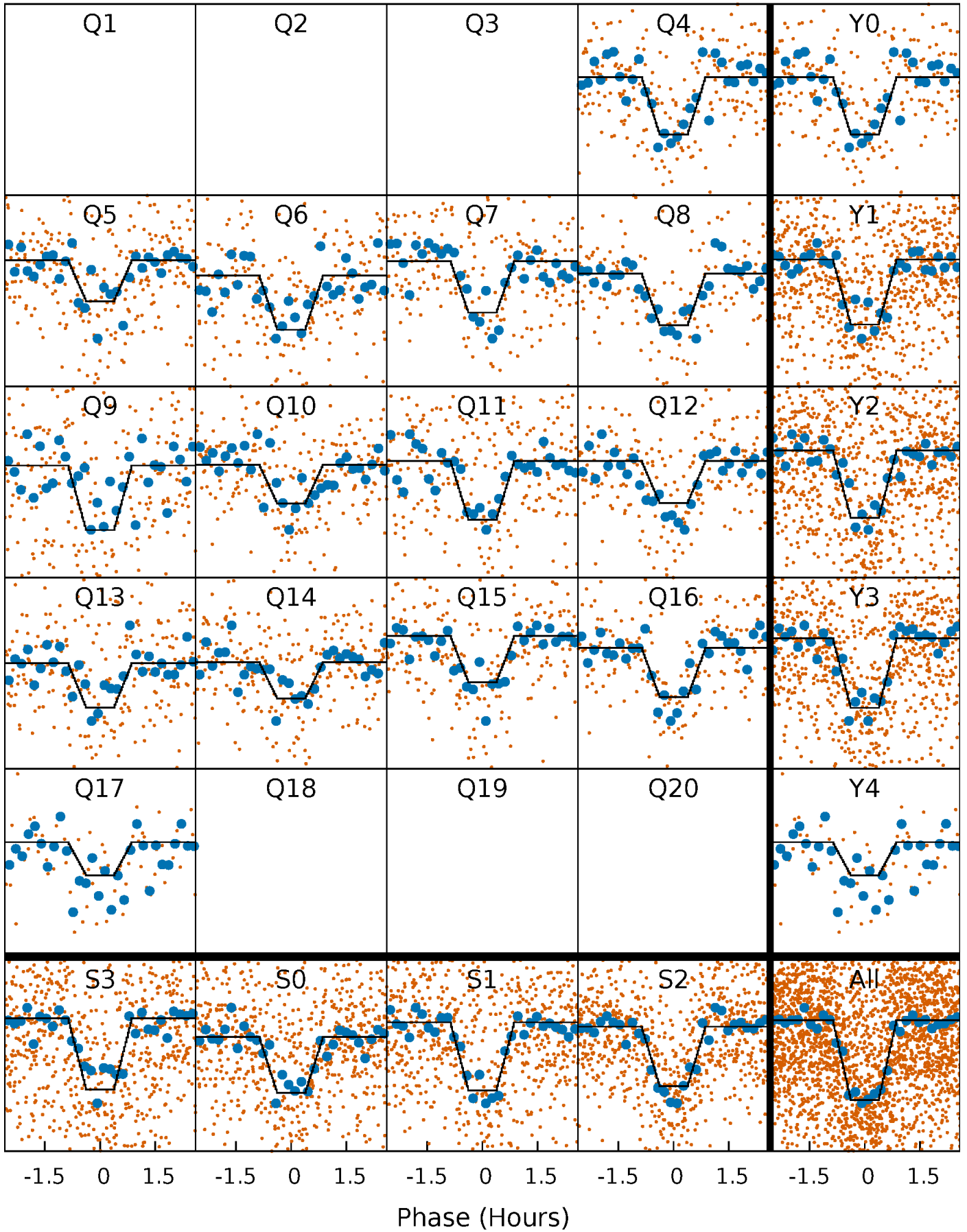
DV Quarter-Phased Transit Curves

TCE 007659389-01 P= 3.825911 Days $T_0=132.199109$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

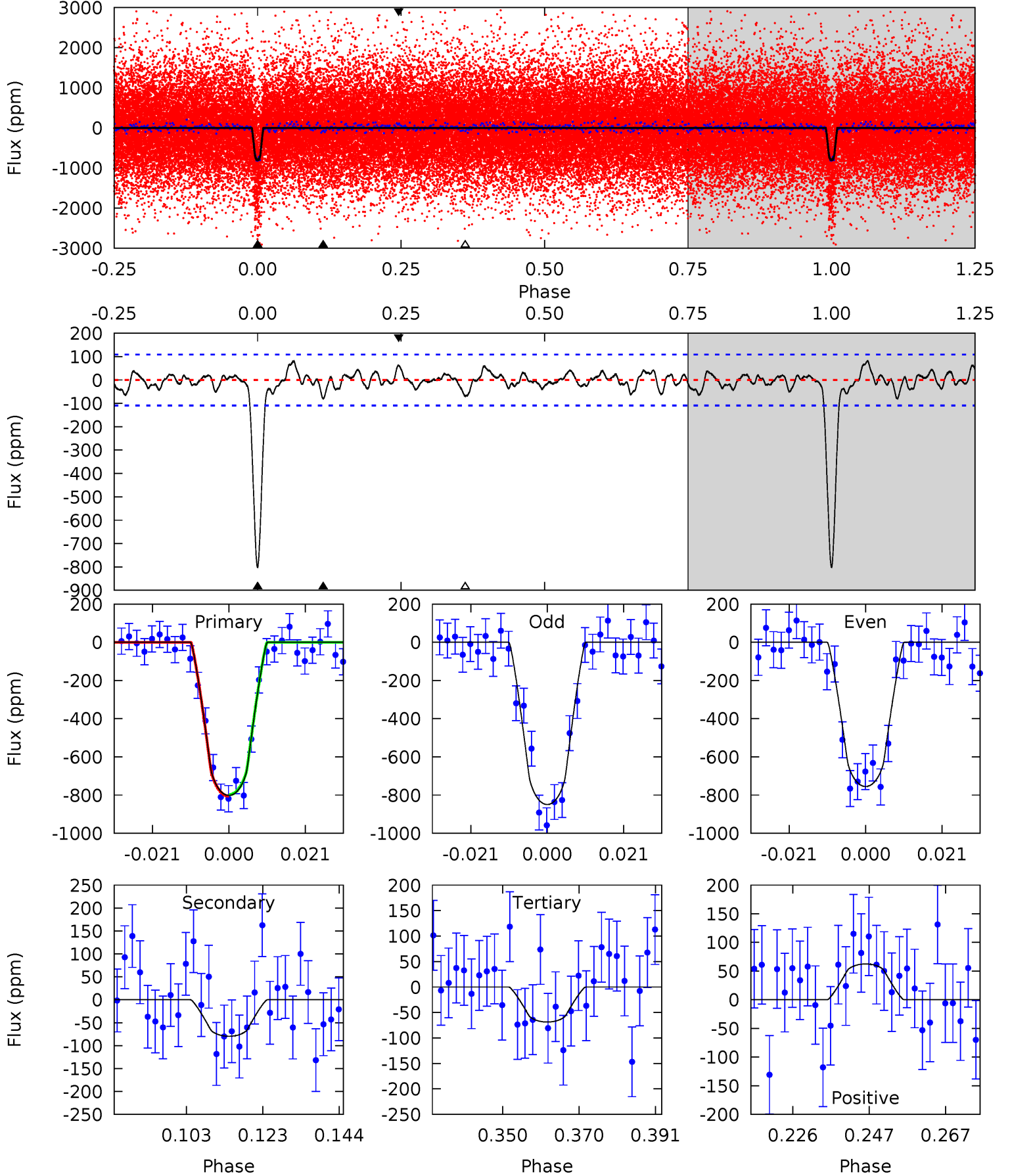
TCE 007659389-01 P= 3.825901 Days $T_0=132.200839$ (BKJD)



DV Model-Shift Uniqueness Test

007659389-01, P = 3.825911 Days, E = 132.199109 Days

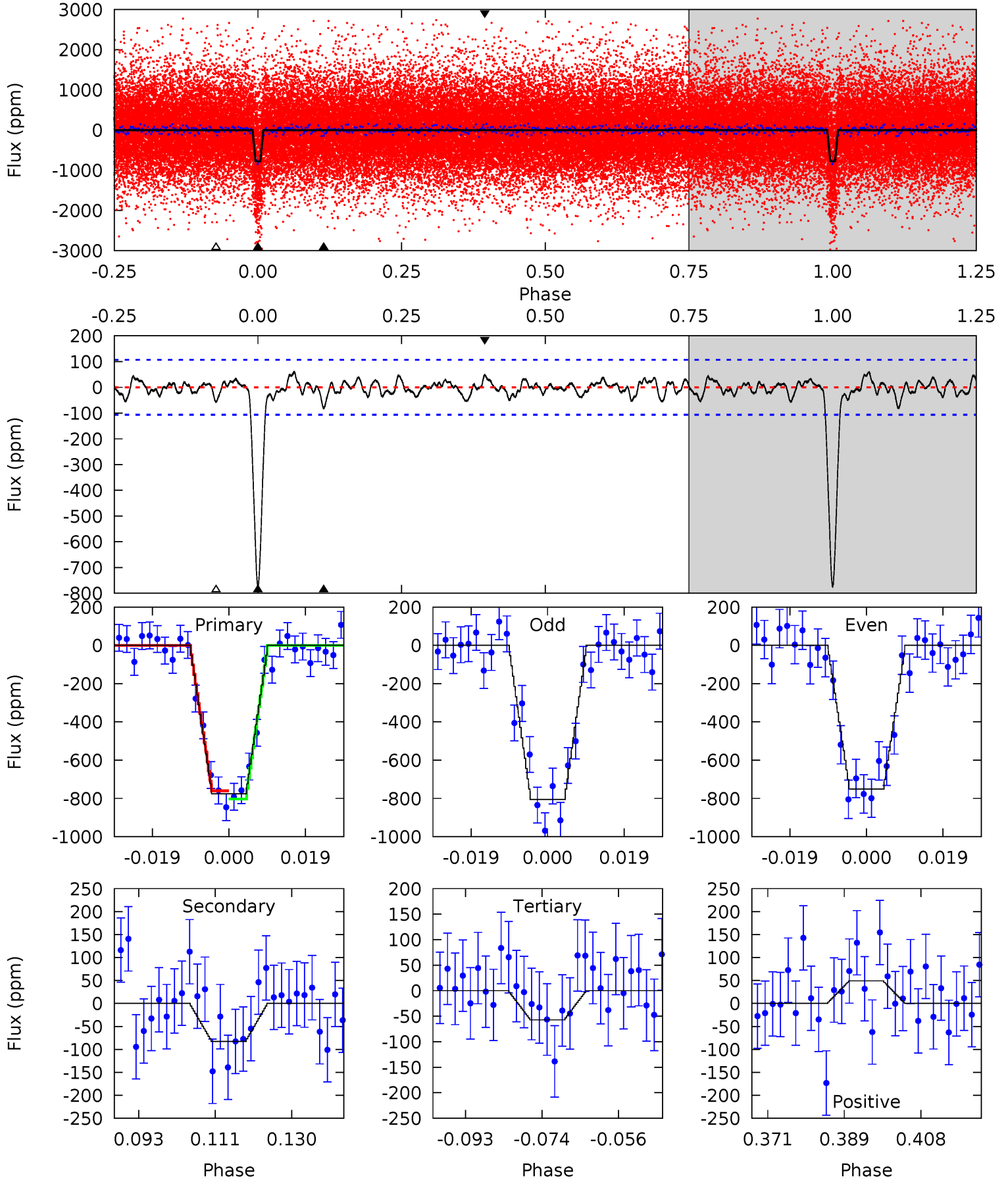
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.9	3.57	3.08	2.80	4.89	2.32	1.19	32.9	33.1	0.49	0.77	2.12	1.06	0.09	0.16



Alt Model-Shift Uniqueness Test

007659389-01, P = 3.825901 Days, E = 132.200839 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.7	3.80	2.62	2.26	4.91	2.35	1.03	33.1	33.4	1.17	1.54	1.25	1.03	0.07	0.97



Stellar Parameters For KIC 007659389

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5223^{+183}_{-183}	$4.505^{+0.054}_{-0.117}$	$0.320^{+0.100}_{-0.300}$	$0.885^{+0.147}_{-0.079}$	$0.913^{+0.061}_{-0.081}$	$1.858^{+0.469}_{-0.634}$
	+4%/-4%	+1%/-3%	+31%/-94%	+17%/-9%	+7%/-9%	+25%/-34%
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 007659389-01 / KOI 2734.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-80 ± 22	$3.09^{+1.92}_{-1.77}$	1420^{+73}_{-62}	3273^{+1122}_{-463}	$9.626^{+43.239}_{-6.075}$
Alt.	-83 ± 22	$2.87^{+2.00}_{-1.66}$	1425^{+68}_{-62}	3380^{+1114}_{-545}	12^{+49}_{-8}

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

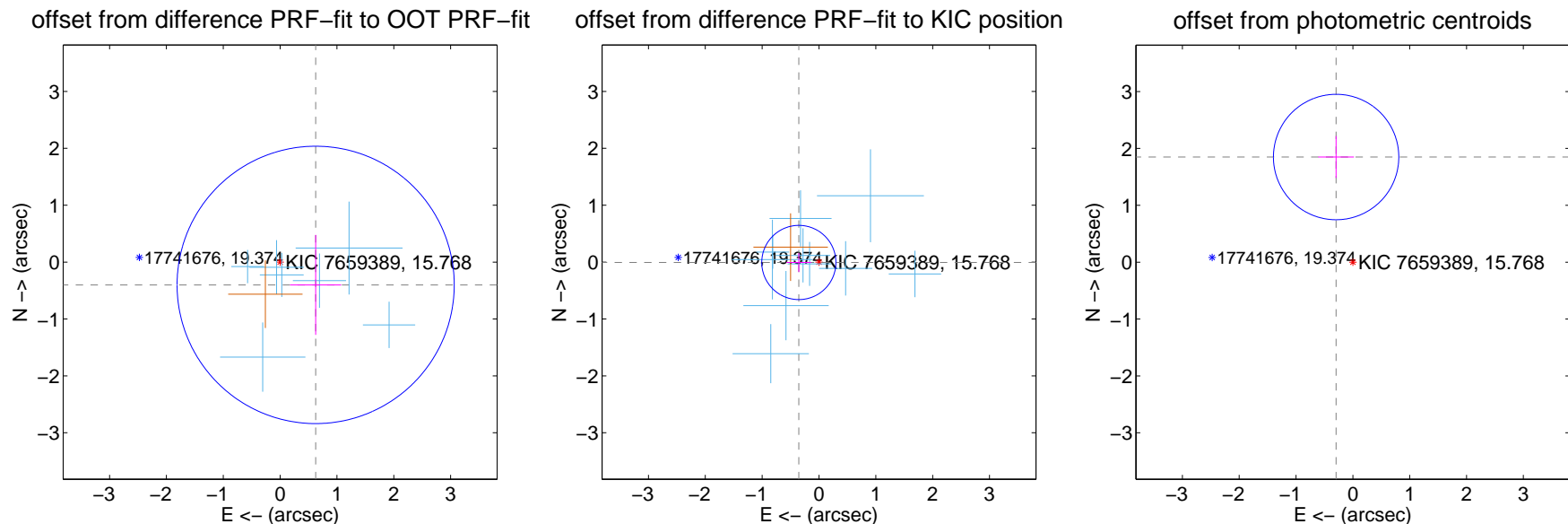
DV Centroid Data

Supplemental centroid analysis for 007659389-01. Kepler magnitude: 15.77. Transit SNR 26.10

There are 13 quarters with good PRF difference image offsets

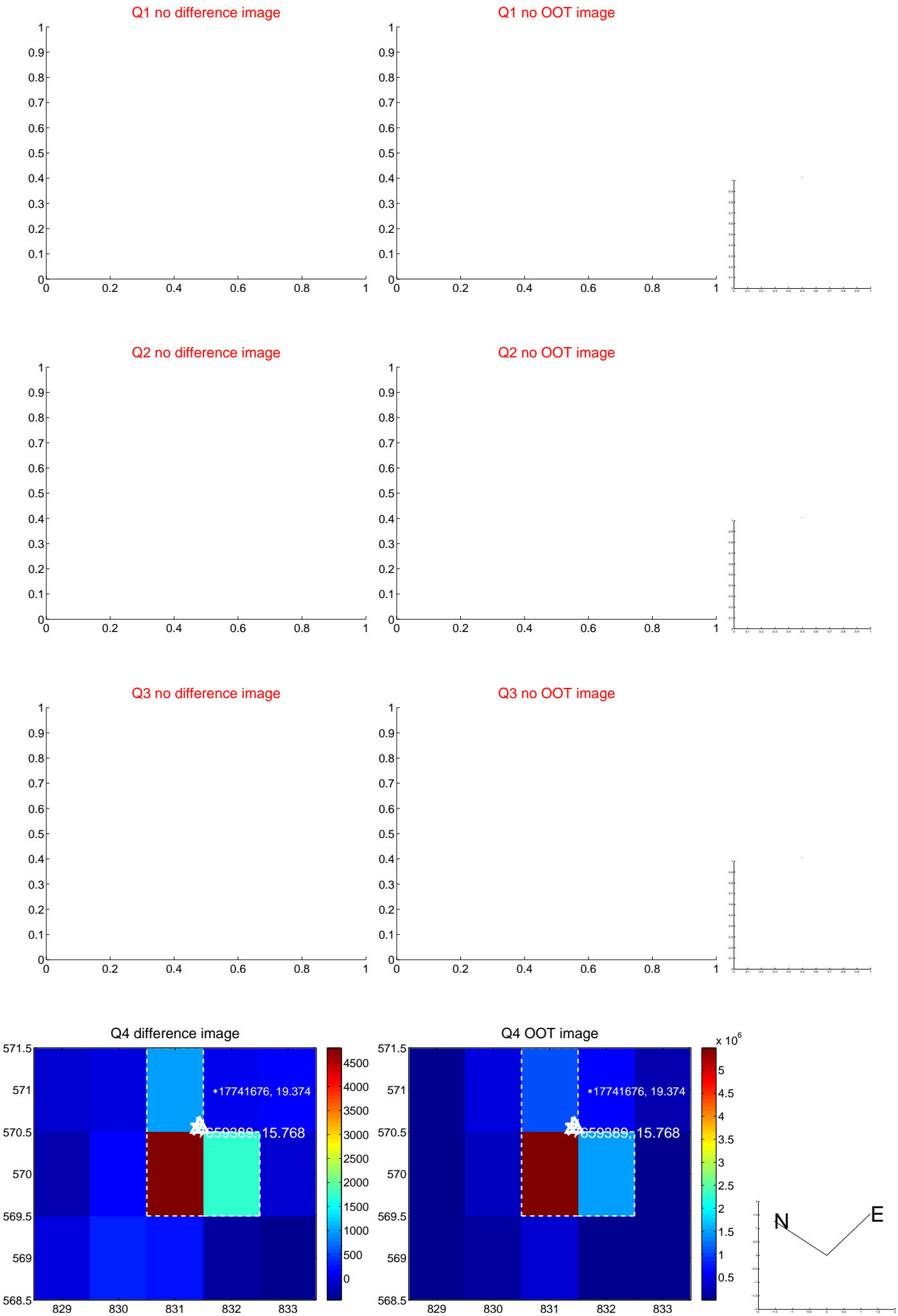
The direct PRF centroid is offset from the target star catalog position by about 0.86 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.743 ± 0.813	0.91	-0.625 ± 0.449	-0.401 ± 0.879
PRF-fit source offset from KIC position	0.355 ± 0.217	1.63	0.355 ± 0.216	-0.007 ± 0.167
photometric centroid source offset	1.87 ± 0.37	5.09	0.29 ± 0.31	1.85 ± 0.37

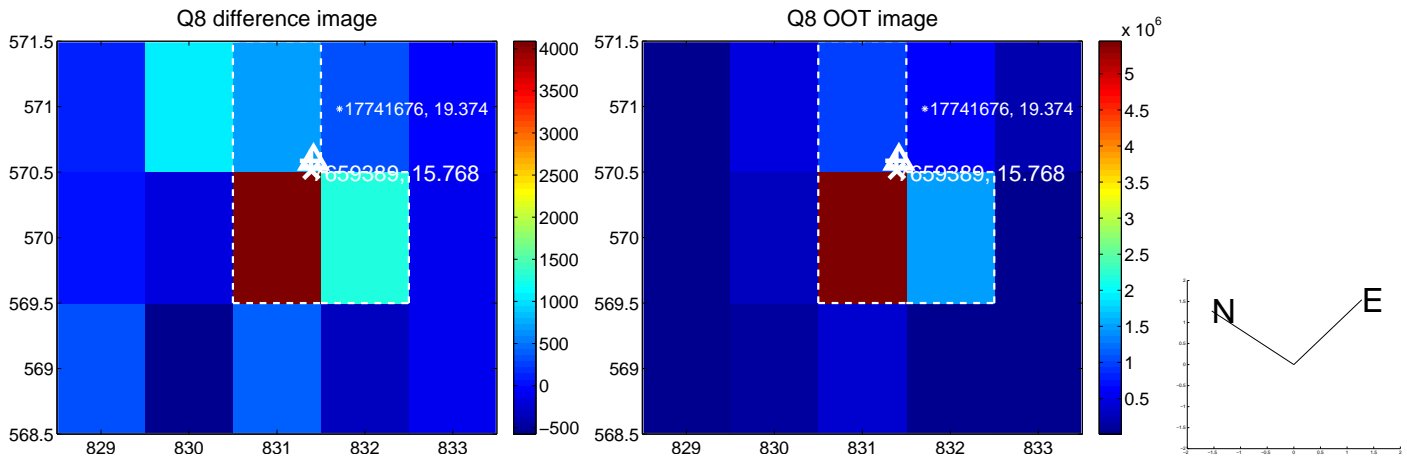
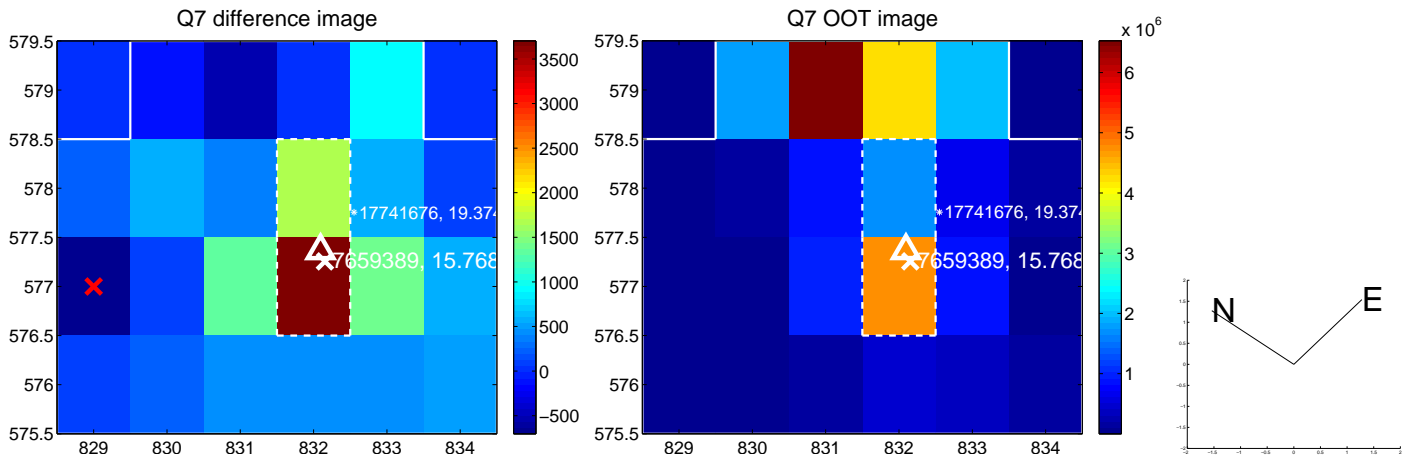
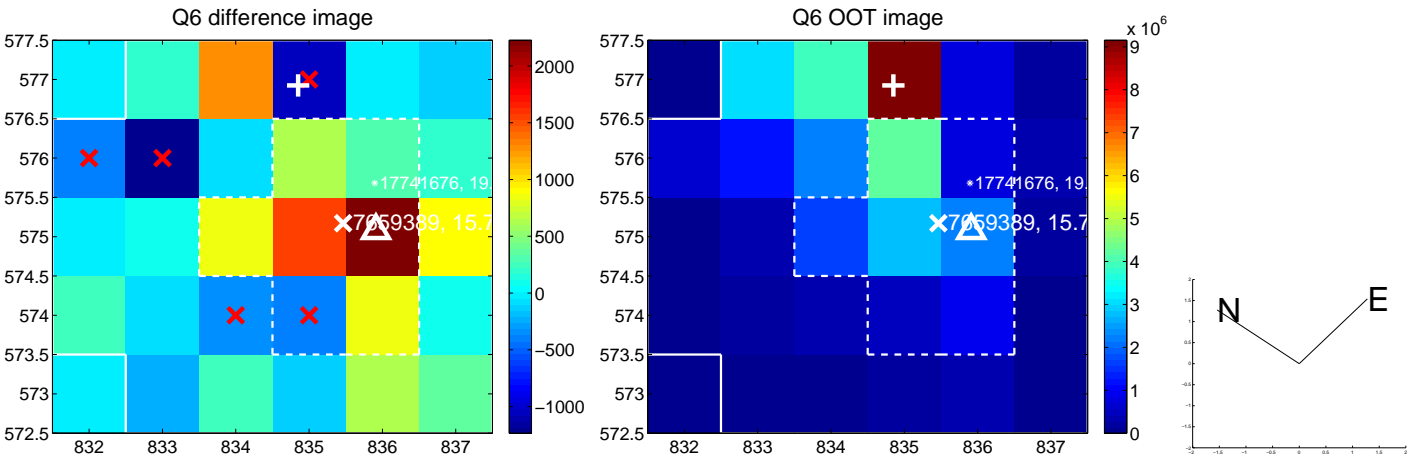
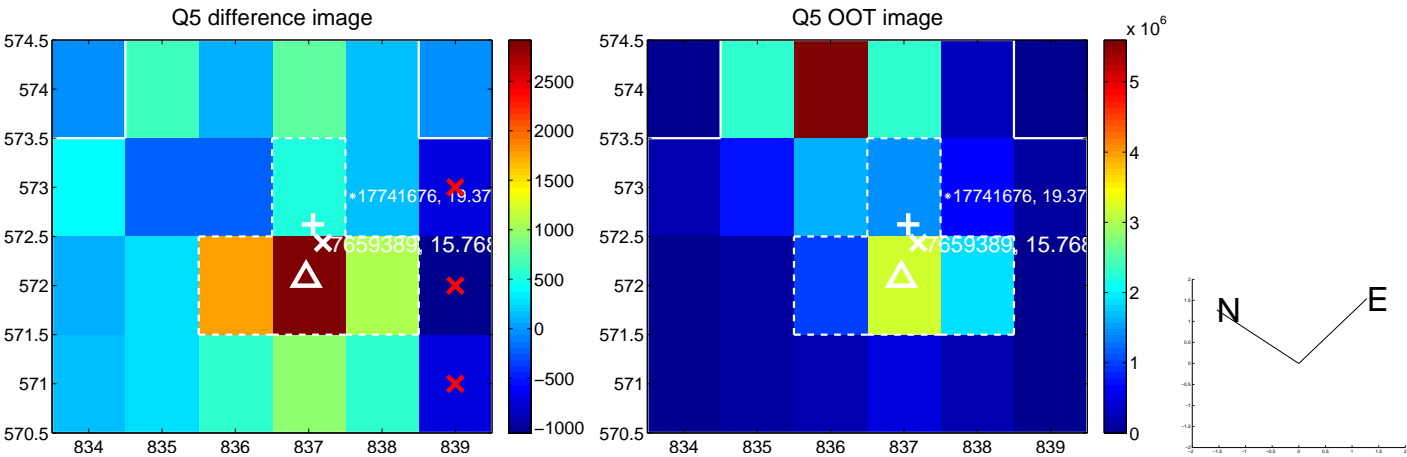


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

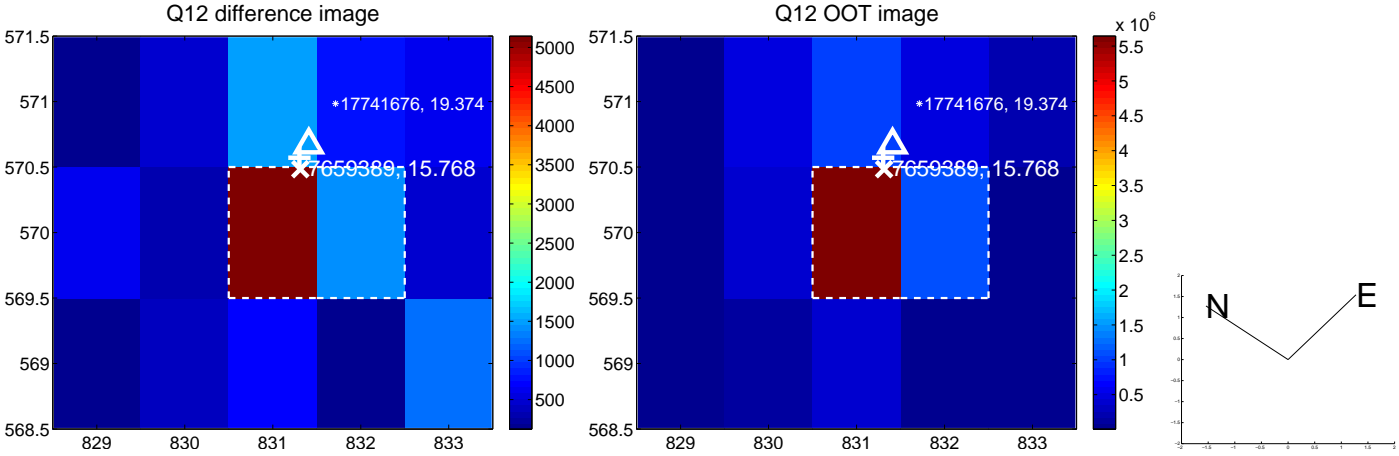
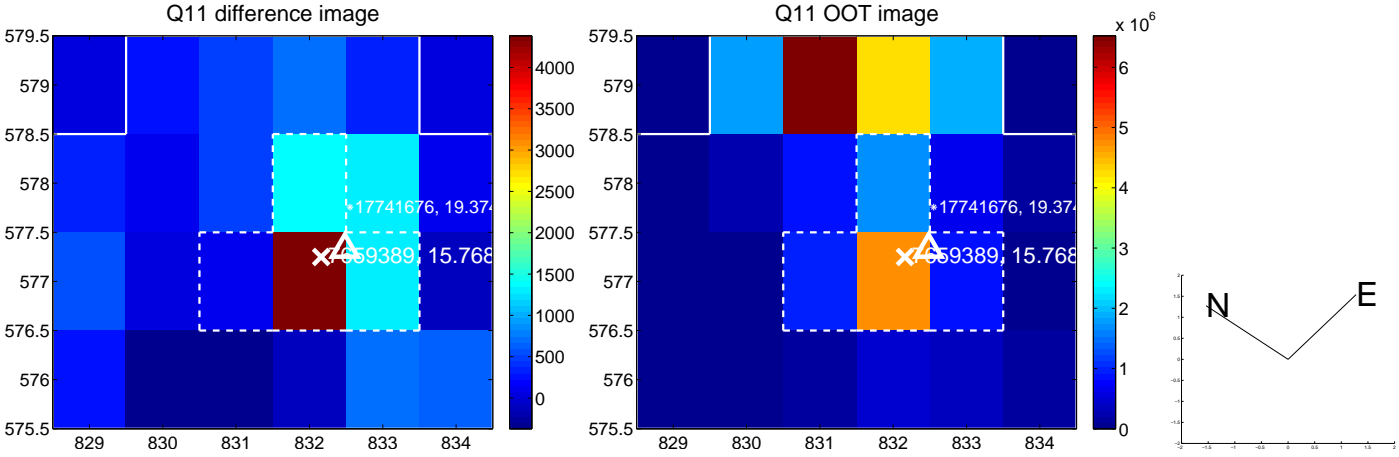
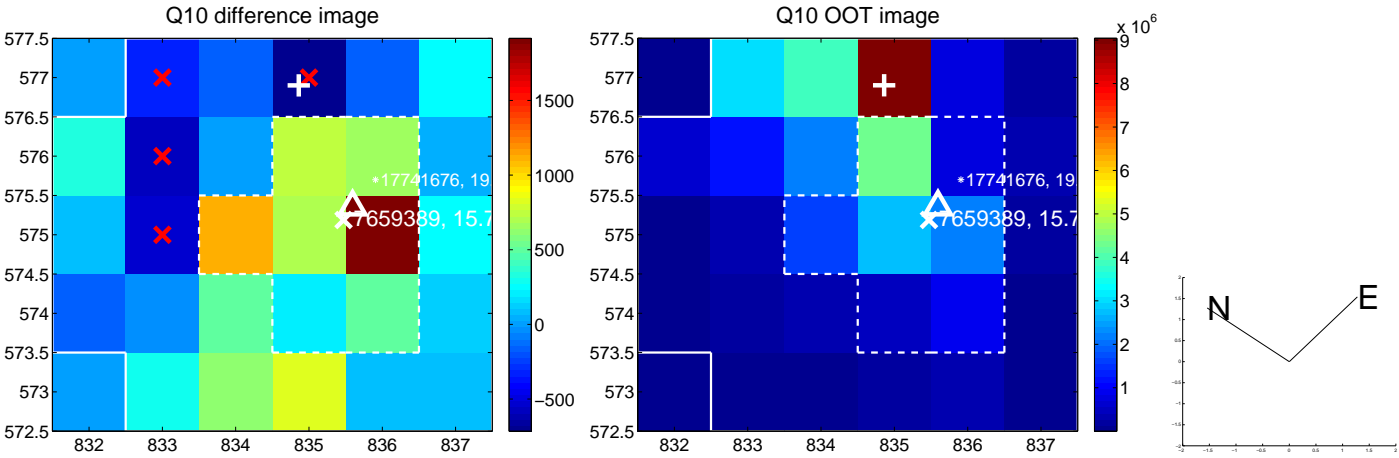
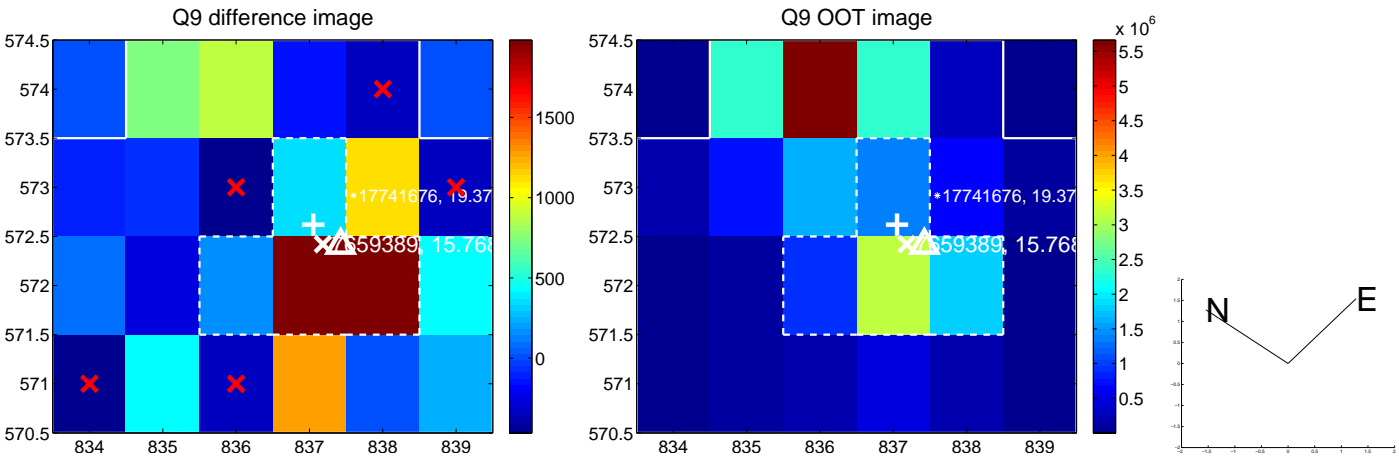
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



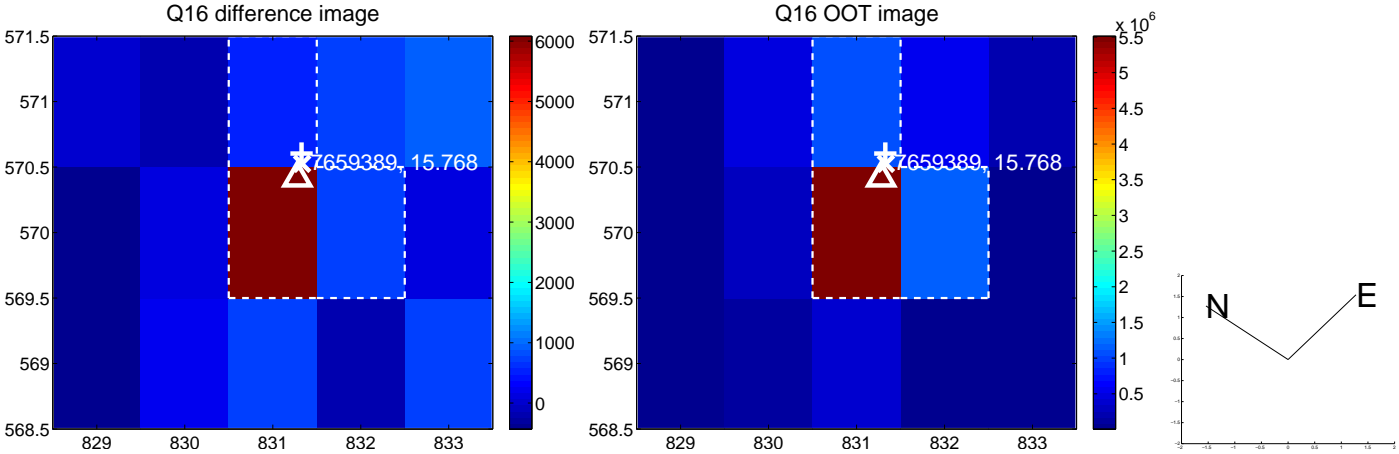
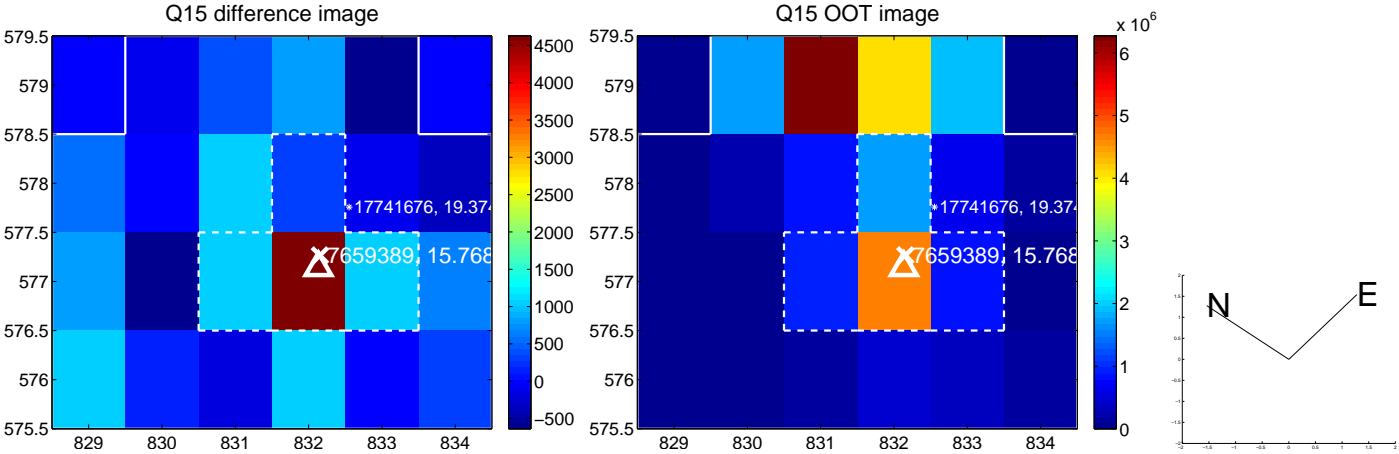
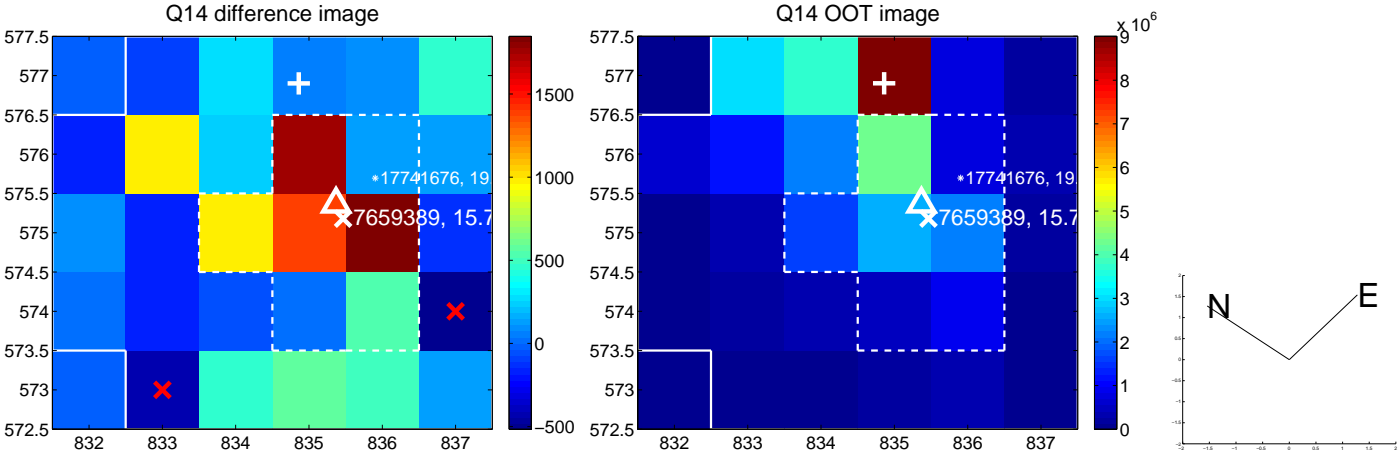
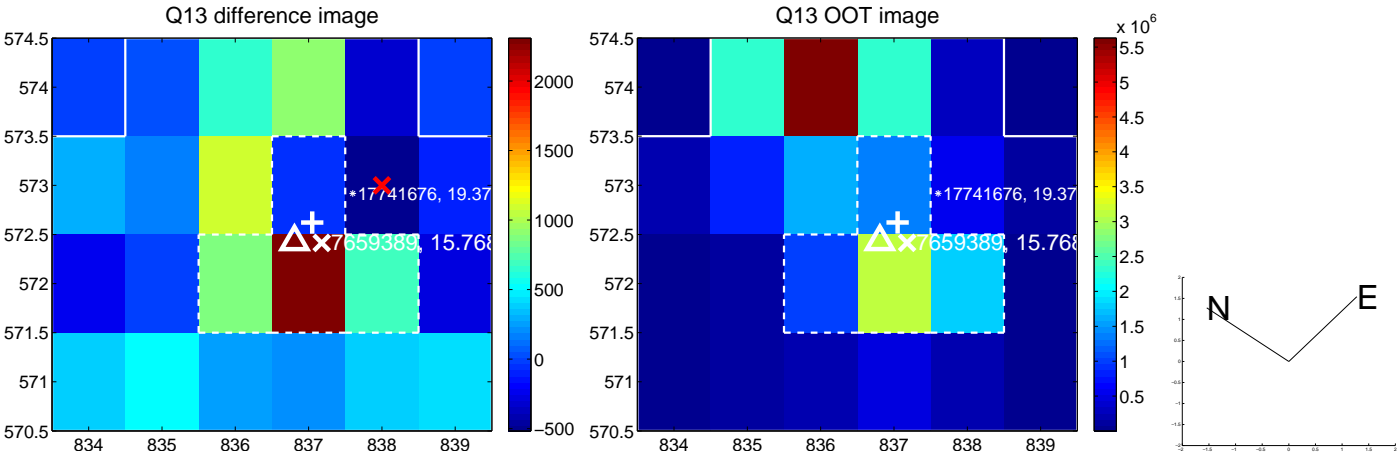
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



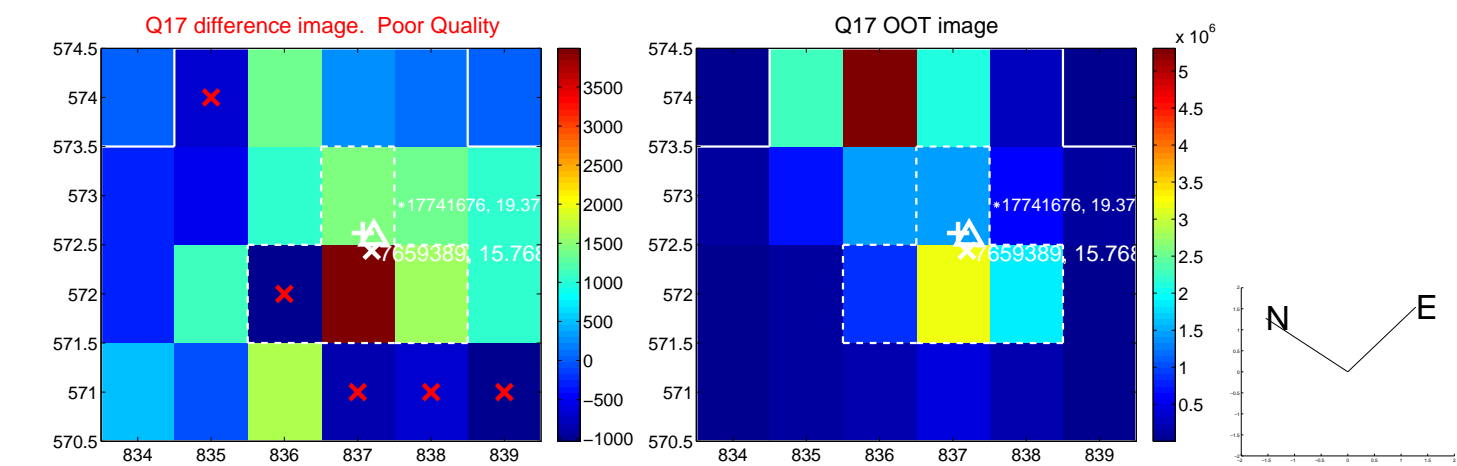
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



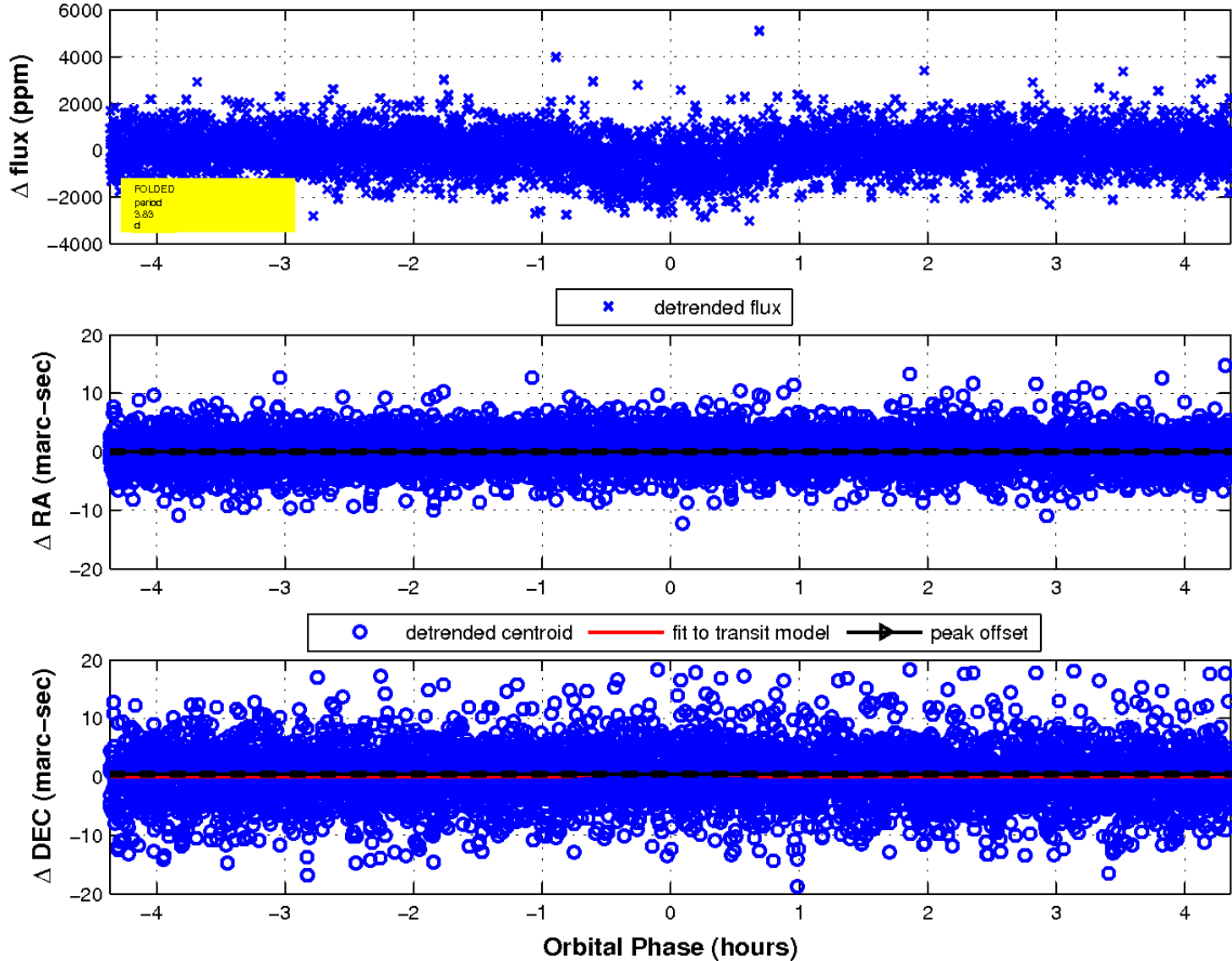
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

