

KIC 007909392

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})
007909392-01	OBS	No	0.851111	131.878200	17.9	3.968	8.9	9.0	2.87	8003	1.39	59499.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007909392-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

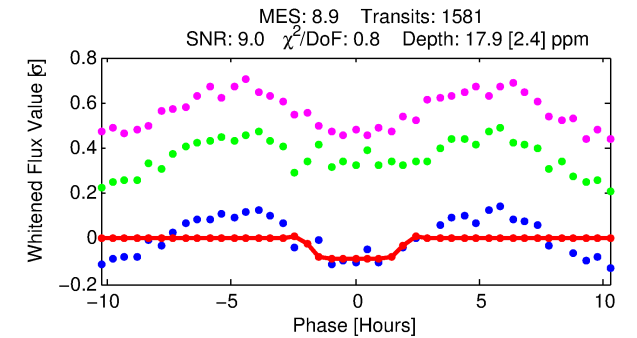
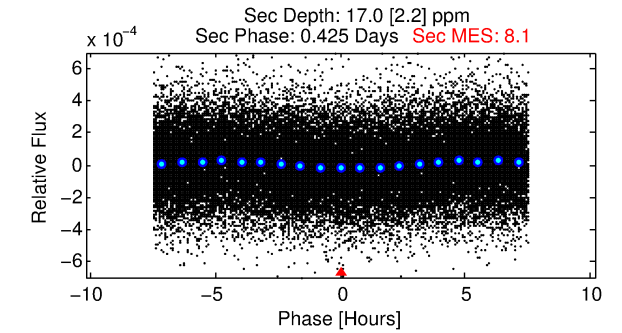
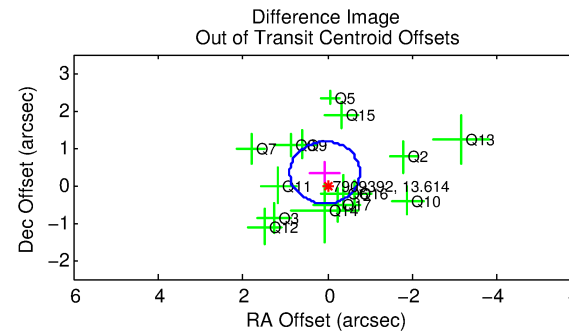
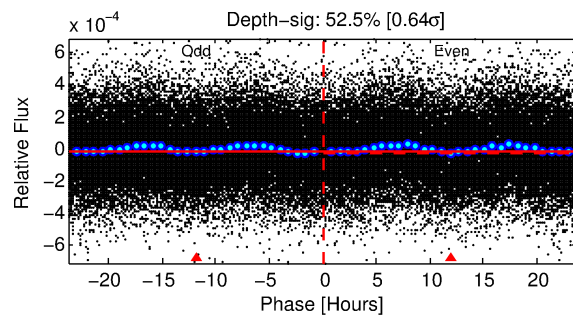
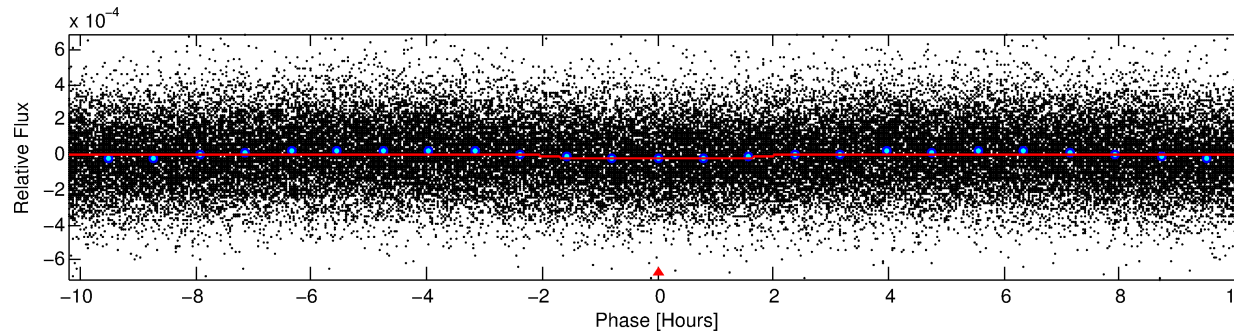
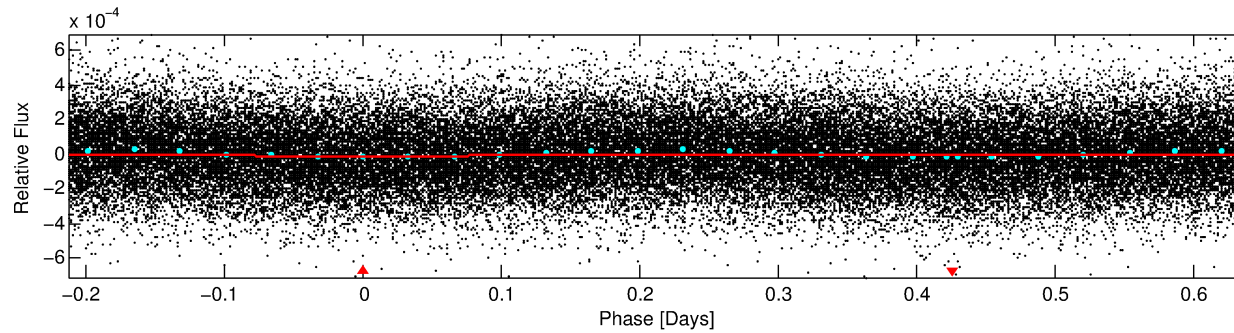
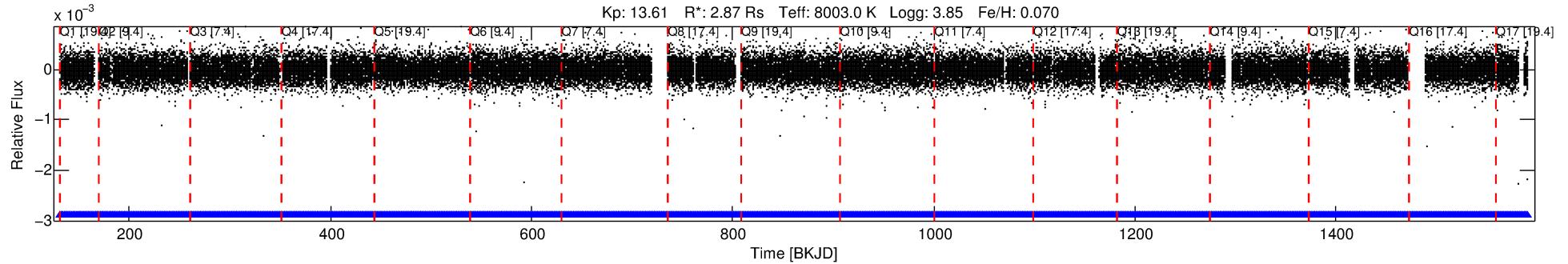
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007909392-01

No Significant Match Found

DV One-Page Summary

KIC: 7909392 Candidate: 1 of 1 Period: 0.851 d



DV Fit Results:

Period = 0.85111 [0.00001] d
Epoch = 131.8782 [0.0049] BKJD
Rp/R* = 0.0044 [0.0016]
a/R* = 1.23 [0.92]
b = 0.88 [0.60]
Seff = 59499.30 [34370.42]
Teq = 3982 [575] K
Rp = 1.39 [0.74] Re
a = 0.0226 [0.0080] AU
Ag = 2.46 [2.28] [0.64 σ]
Teffp = 7714 [1479] K [2.35 σ]

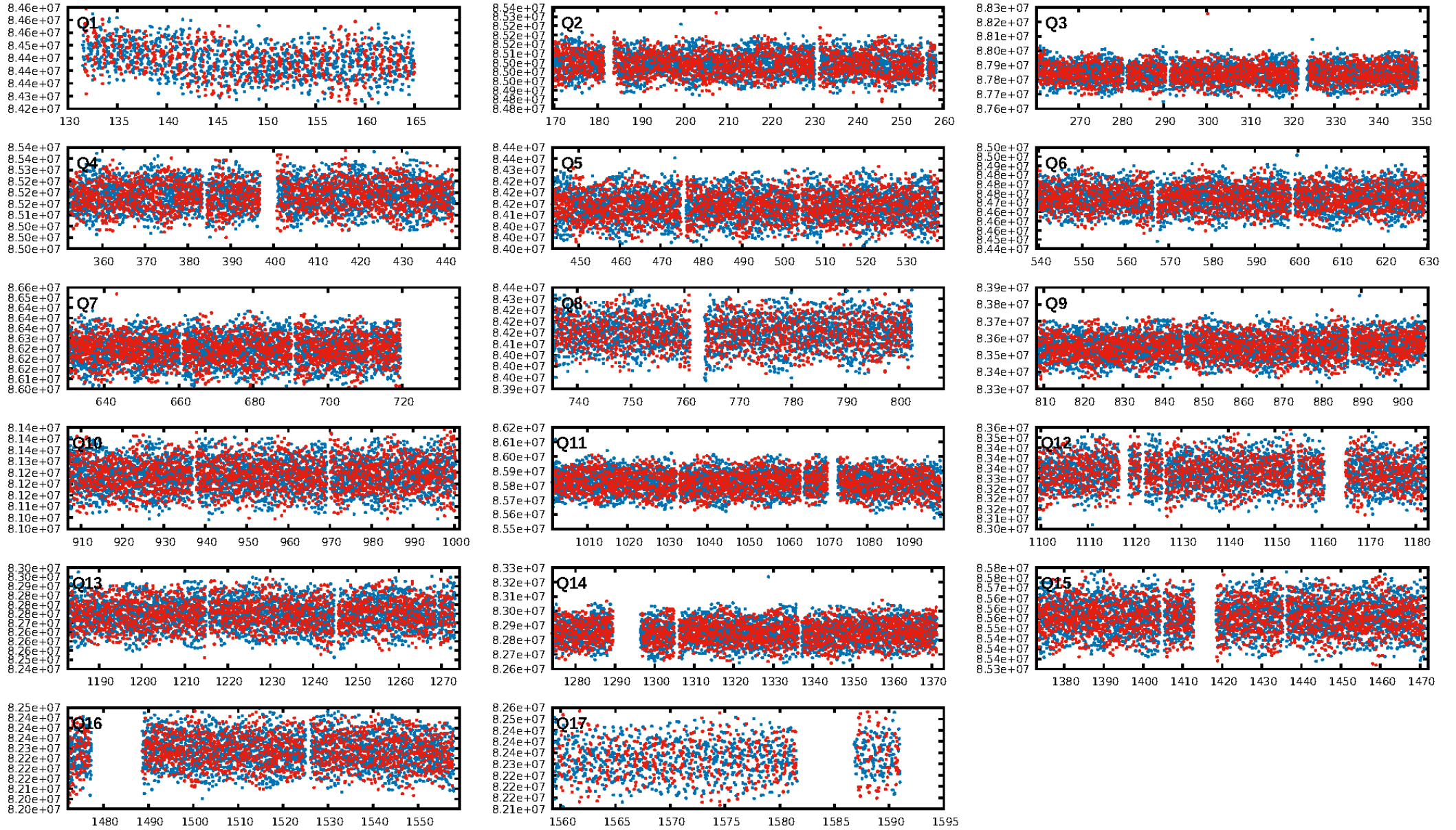
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.72e-13
RollingBand-fgt: 1.00 [1509/1509]
GhostDiagnostic-chr: 1.952
Centroid-sig: 30.9%
Centroid-so: 0.975 arcsec [0.88 σ]
OotOffset-rm: 0.346 arcsec [1.25 σ]
KicOffset-rm: 0.259 arcsec [0.94 σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 1.00 [17/17]

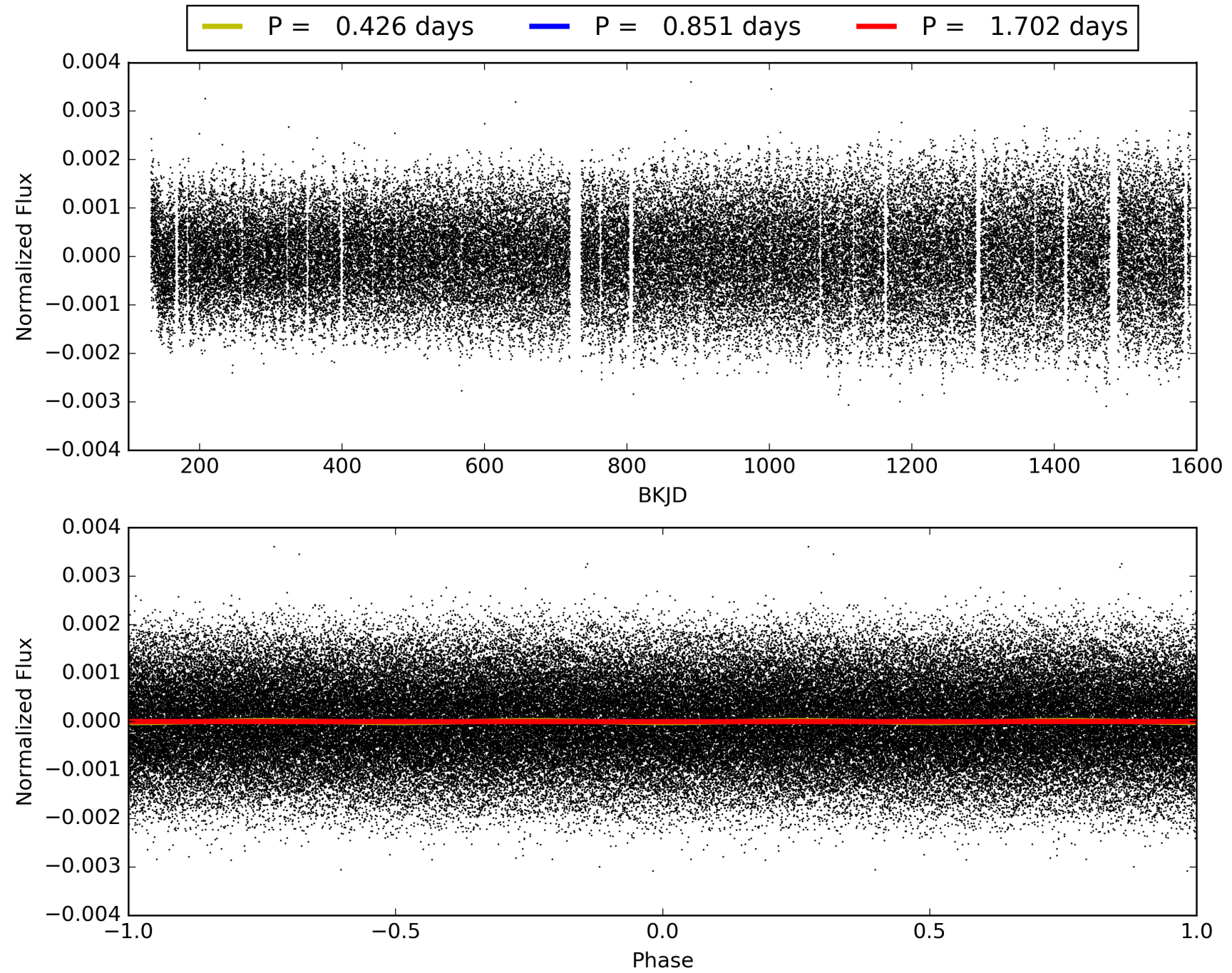
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:09:45 Z

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

TCE 007909392-01, PDC Light Curves

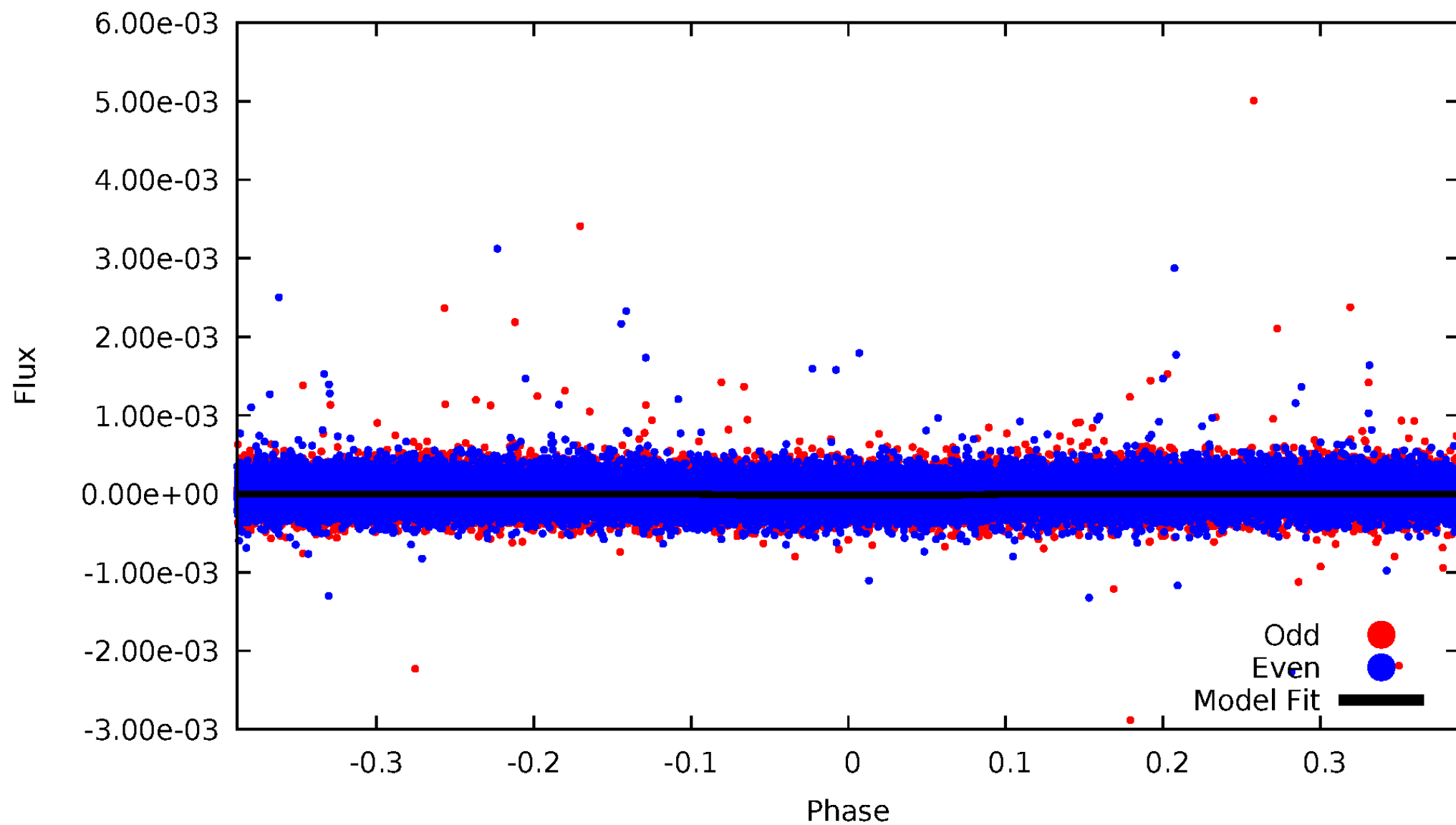


TCE 007909392-01



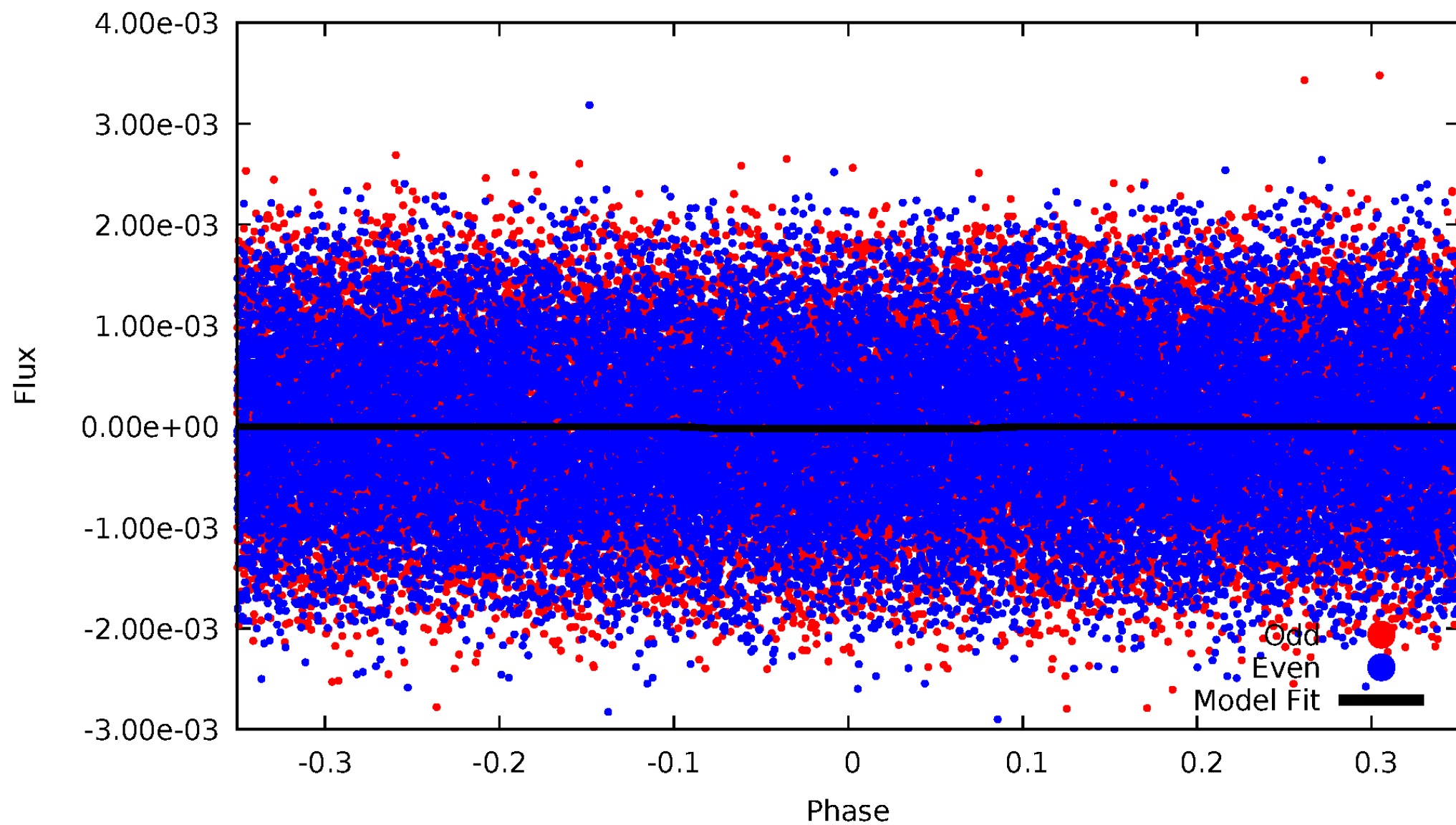
DV Odd/Even

TCE 007909392-01



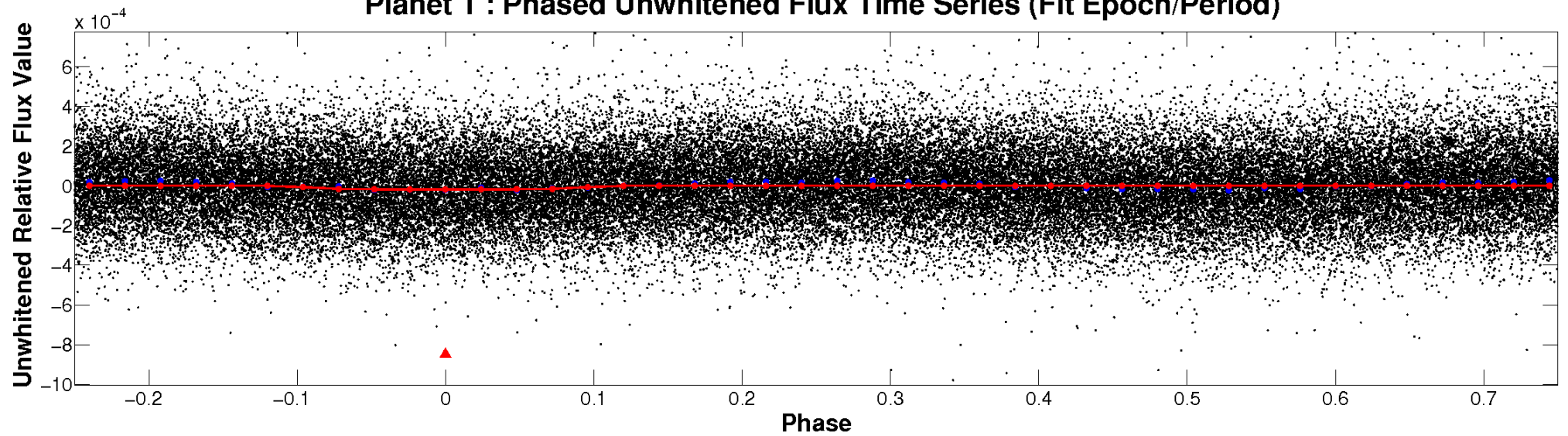
ALT Odd/Even

TCE 007909392-01

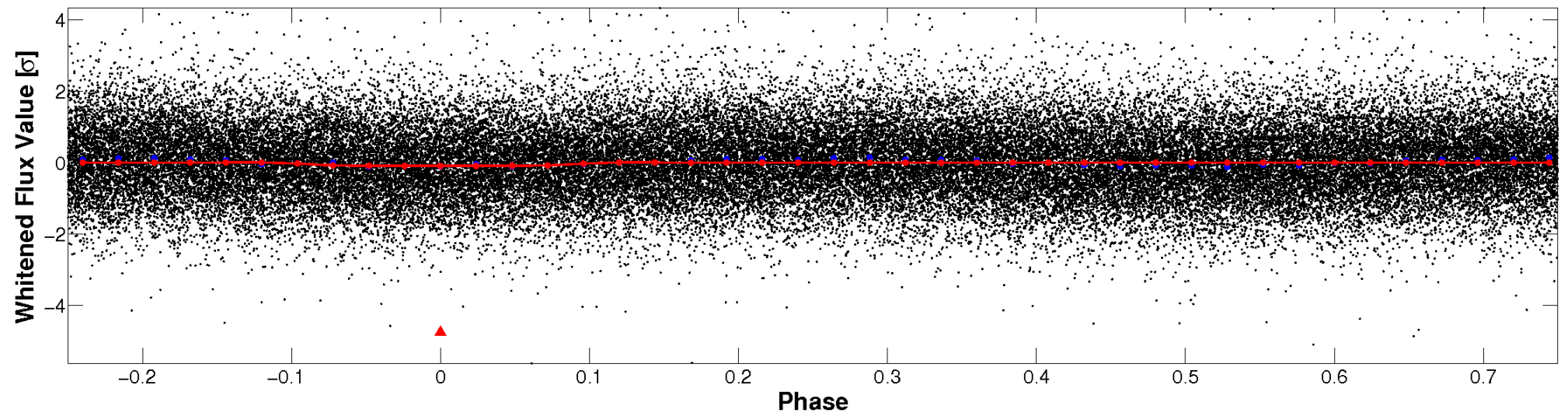


Non-Whitened Vs. Whitened Light Curve

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

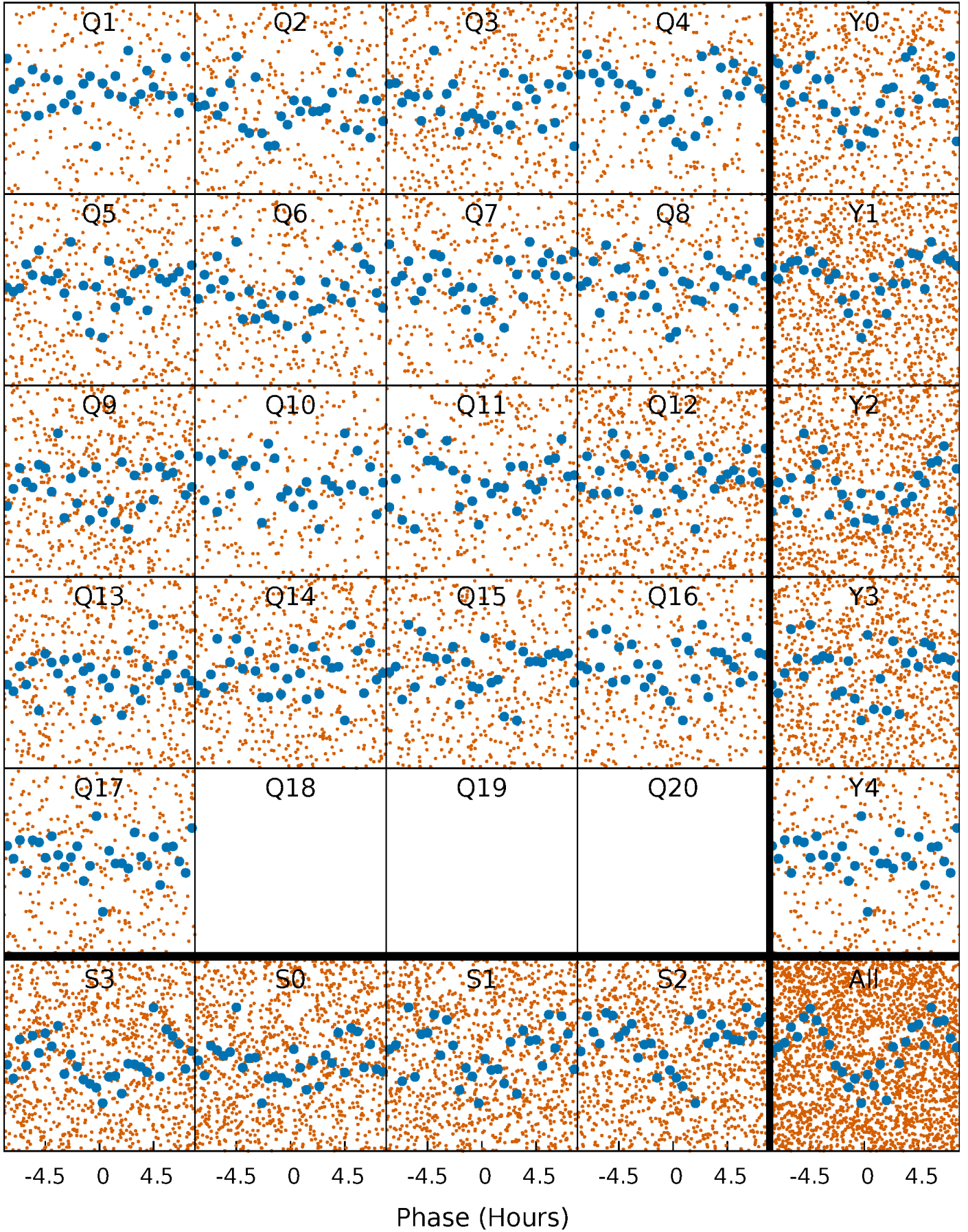


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



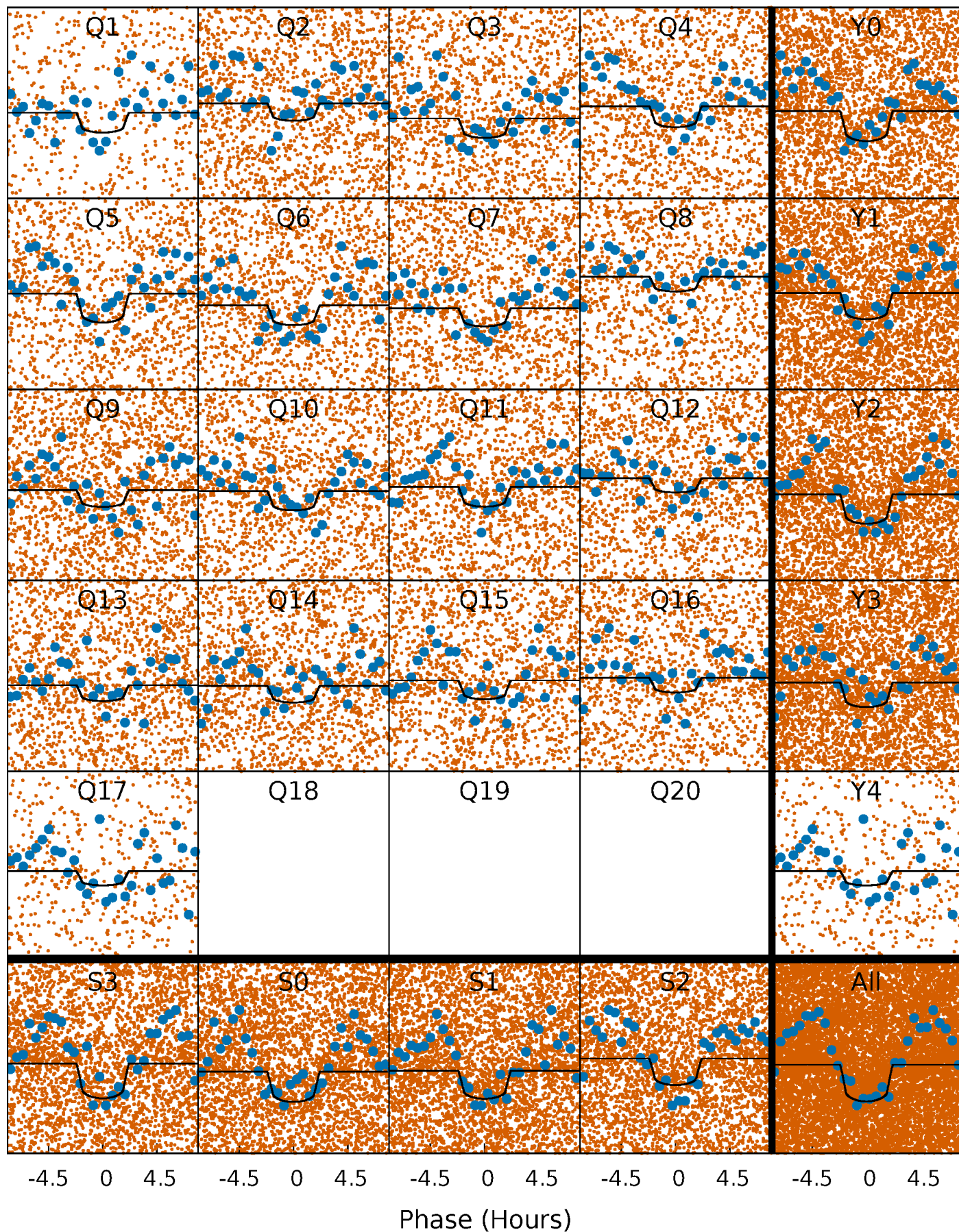
PDC Quarter-Phased Transit Curves

TCE 007909392-01 P= 0.851111 Days $T_0=131.878200$ (BKJD)



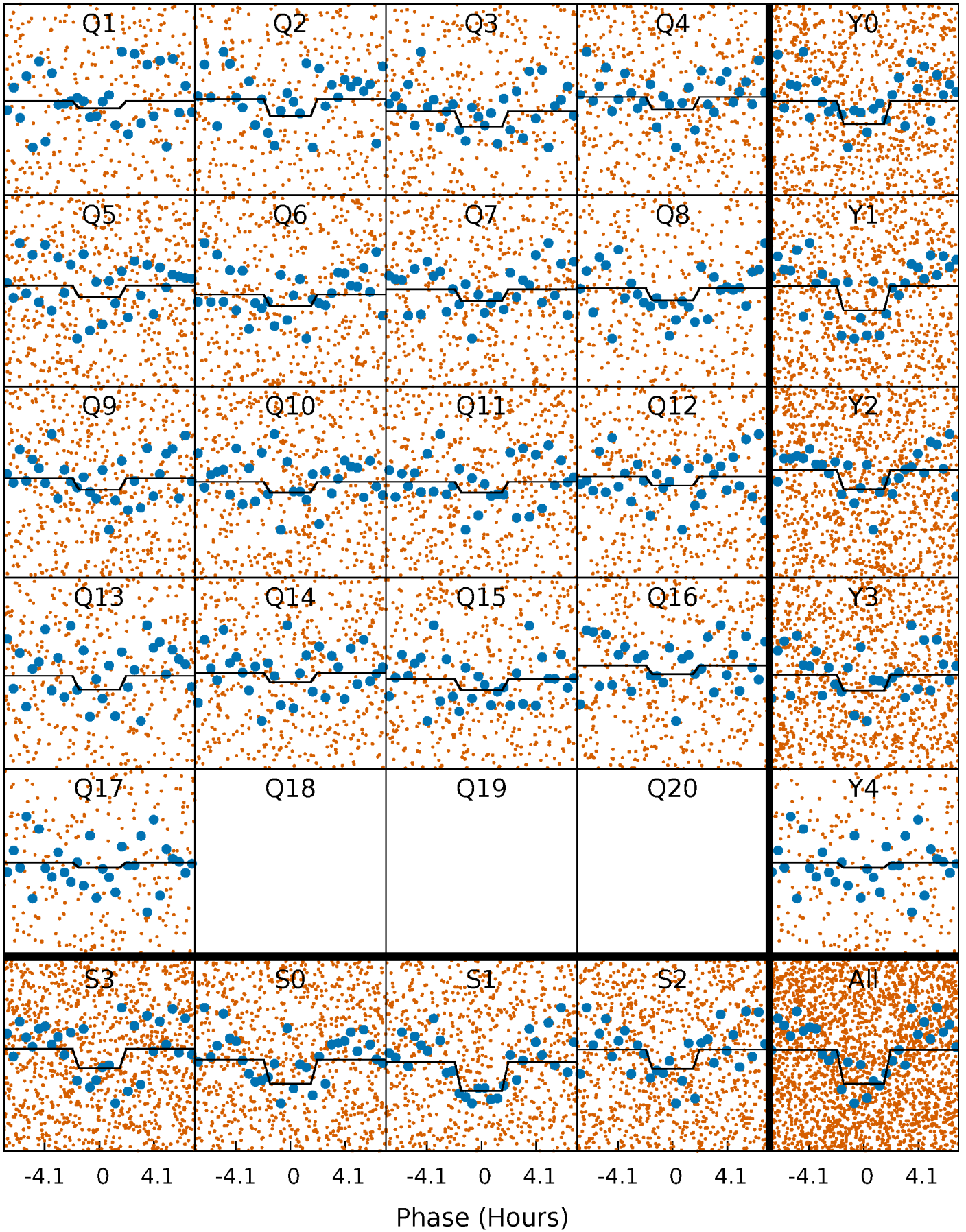
DV Quarter-Phased Transit Curves

TCE 007909392-01 P= 0.851111 Days $T_0=131.878200$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

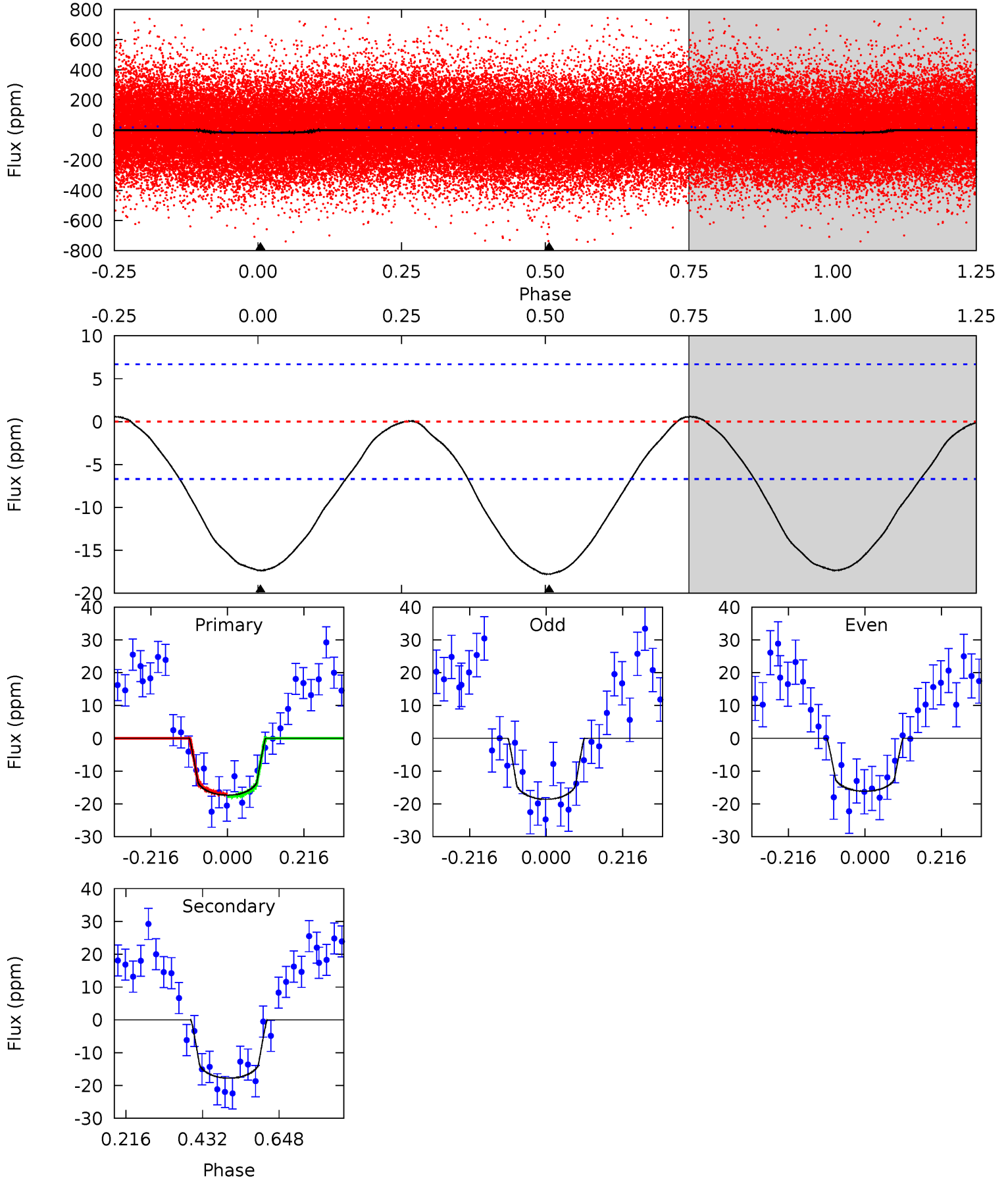
TCE 007909392-01 P= 0.851132 Days $T_0=131.869029$ (BKJD)



DV Model-Shift Uniqueness Test

007909392-01, P = 0.851111 Days, E = 131.027089 Days

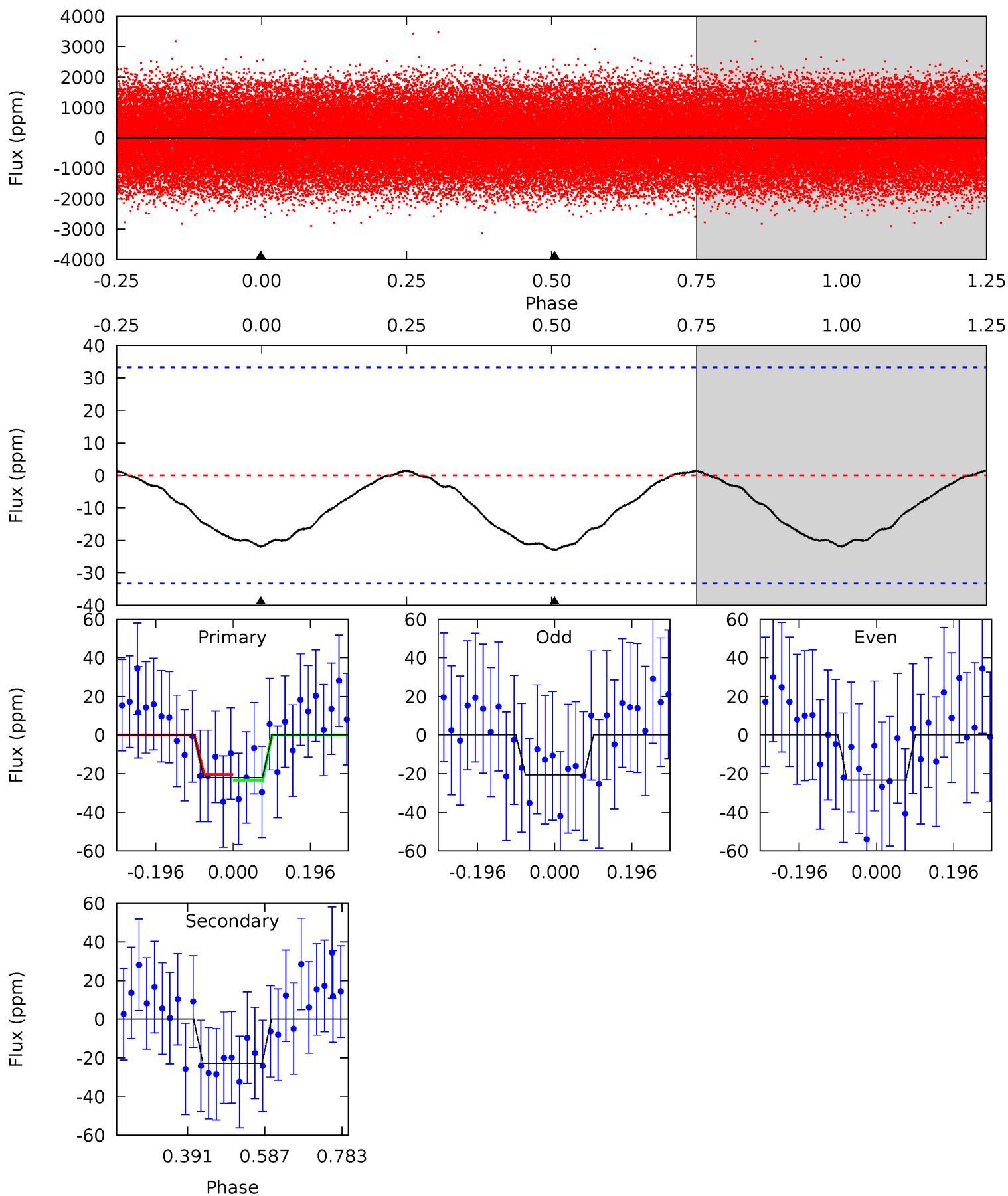
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	11.7	0	0	4.40	1.24	0.27	11.4	11.4	11.7	11.7	0.81	0.94	0.03	0.24



Alt Model-Shift Uniqueness Test

007909392-01, P = 0.851132 Days, E = 131.017897 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.91	3.04	0	0	4.42	1.29	0.15	2.91	2.91	3.04	3.04	0.18	1.18	0.06	0.20



Stellar Parameters For KIC 007909392

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8003^{+222}_{-361}	$3.847^{+0.315}_{-0.126}$	$0.070^{+0.250}_{-0.400}$	$2.870^{+0.602}_{-1.117}$	$2.111^{+0.321}_{-0.521}$	$0.126^{+0.280}_{-0.051}$
	+3%/-5%	+8%/-3%	+357%/-571%	+21%/-39%	+15%/-25%	+222%/-40%
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 007909392-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-18 ± 2	$1.31^{+0.57}_{-0.51}$	5458^{+378}_{-555}	7483^{+2688}_{-1436}	$2.917^{+4.411}_{-1.506}$
Alt.	-23 ± 8	$1.35^{+0.57}_{-0.59}$	5428^{+417}_{-521}	7861^{+3716}_{-1647}	$3.409^{+7.606}_{-1.834}$

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

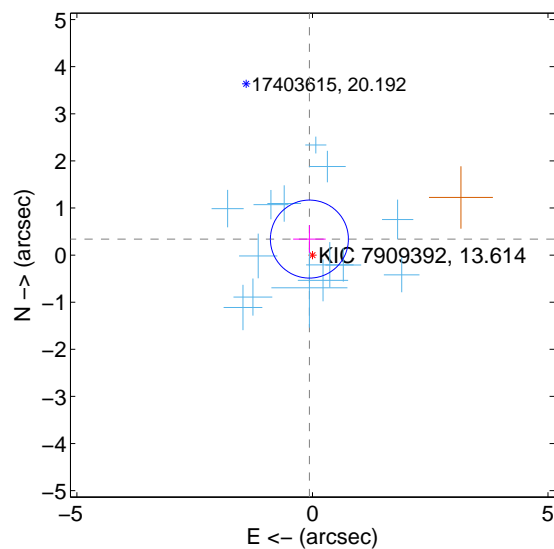
Supplemental centroid analysis for 007909392-01. Kepler magnitude: 13.61. Transit SNR 8.99

There are 14 quarters with good PRF difference image offsets

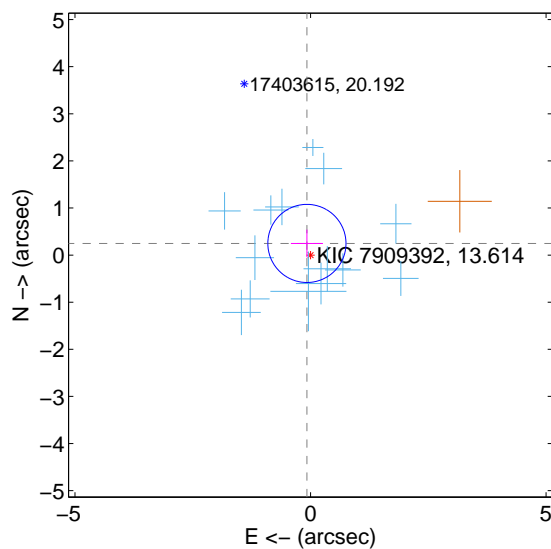
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.346 ± 0.276	1.25	0.065 ± 0.344	0.340 ± 0.290
PRF-fit source offset from KIC position	0.259 ± 0.276	0.94	0.077 ± 0.339	0.248 ± 0.294
photometric centroid source offset	0.97 ± 1.10	0.88	-0.32 ± 1.08	-0.92 ± 1.10

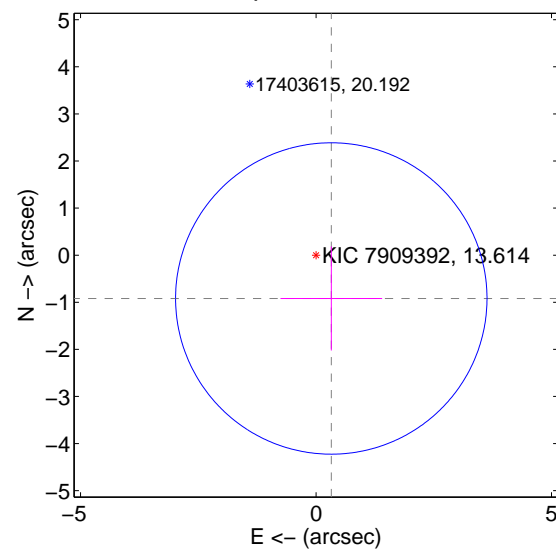
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

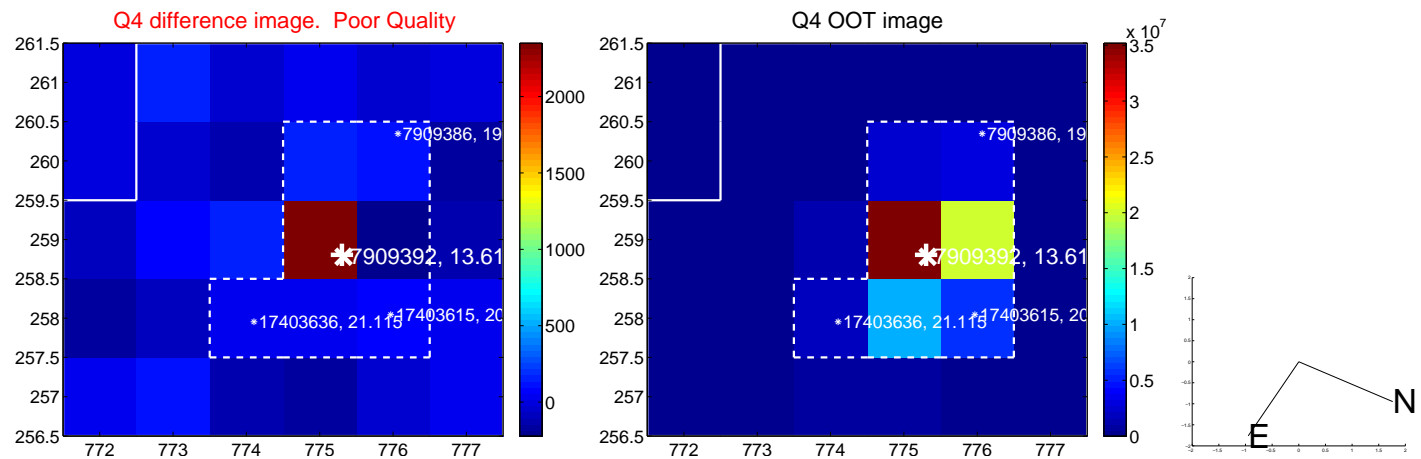
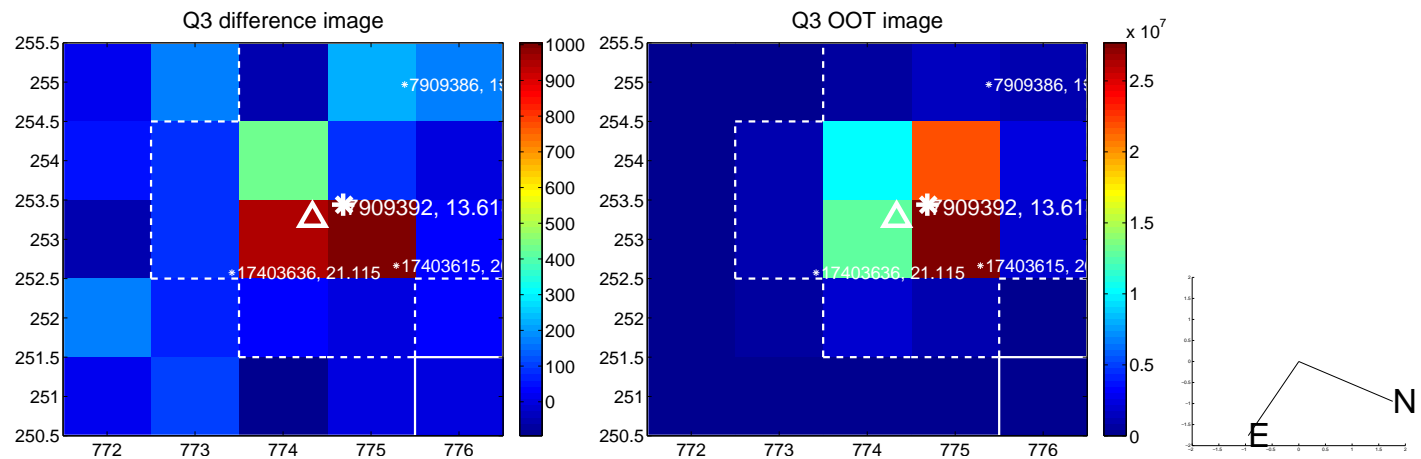
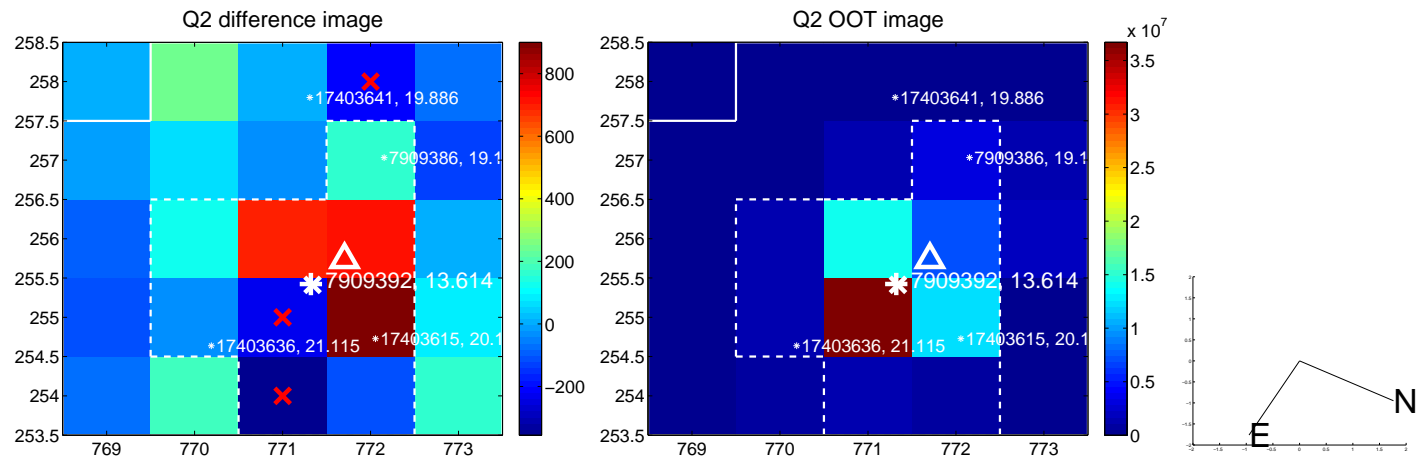
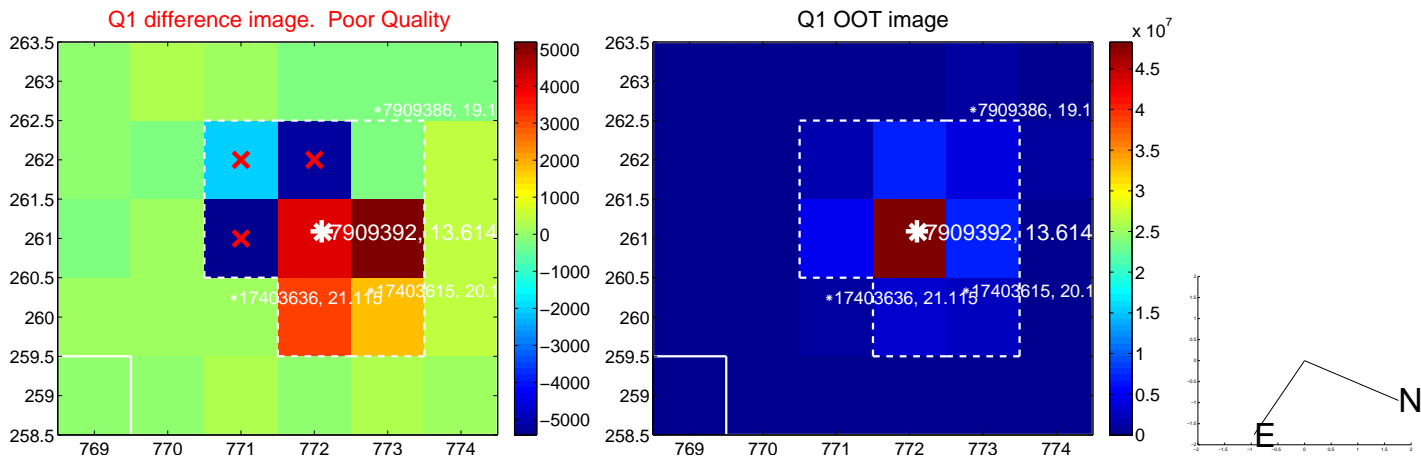


offset from photometric centroids

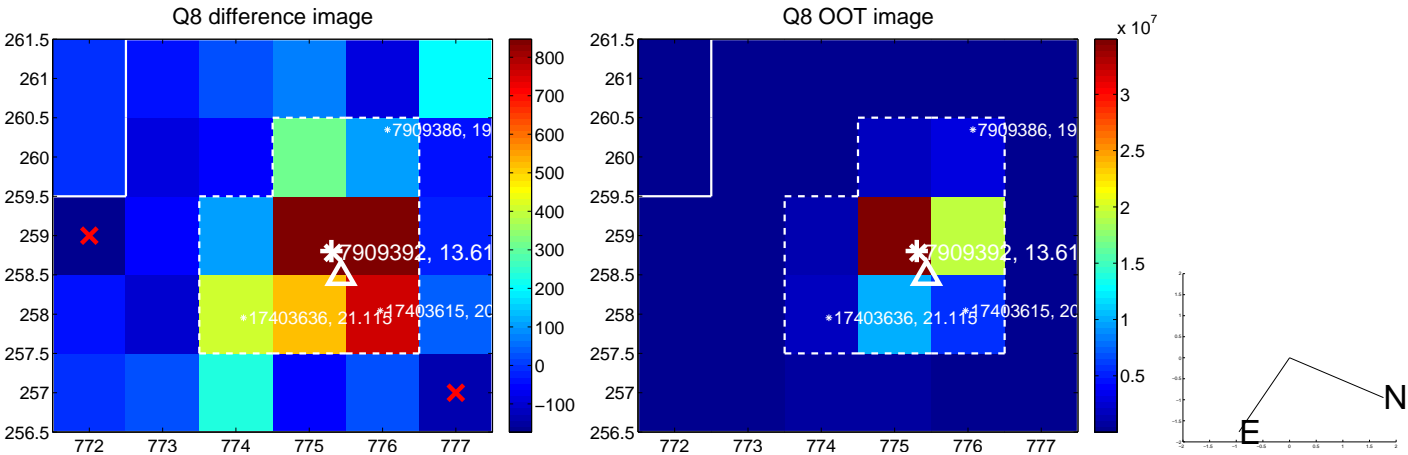
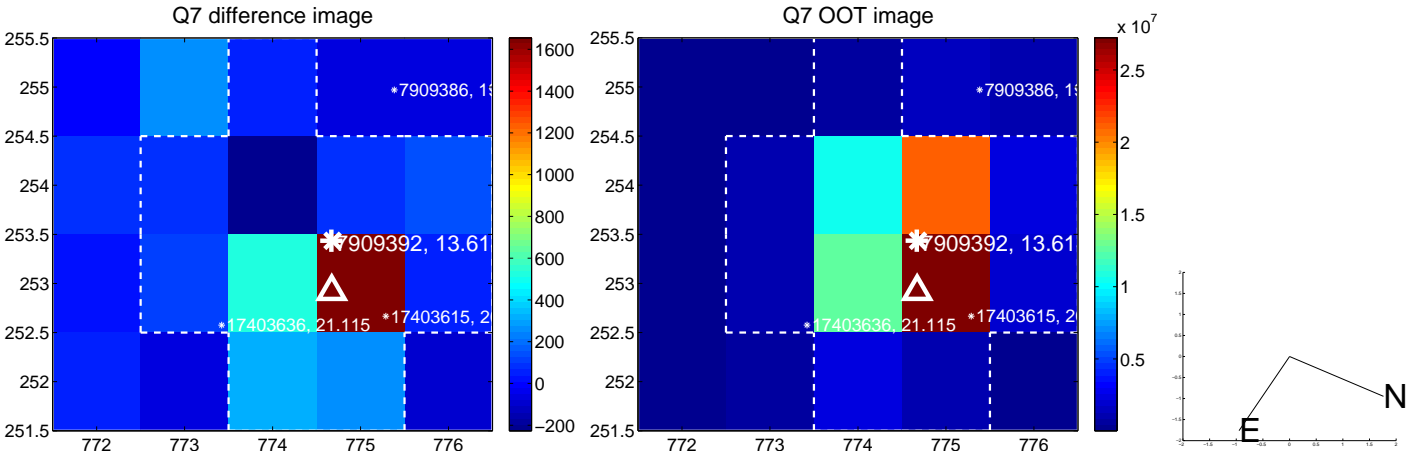
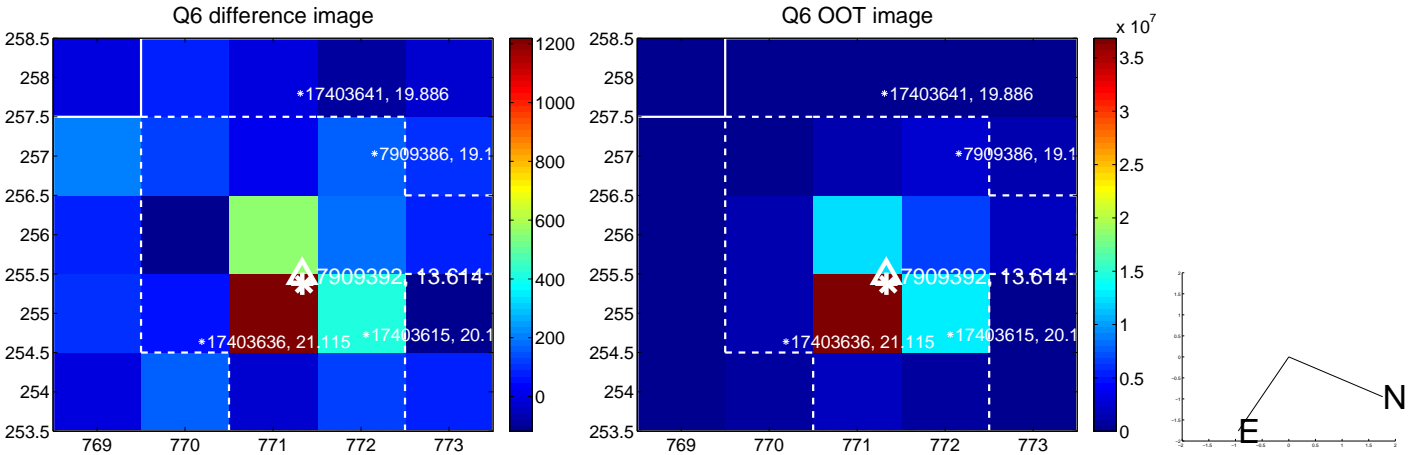
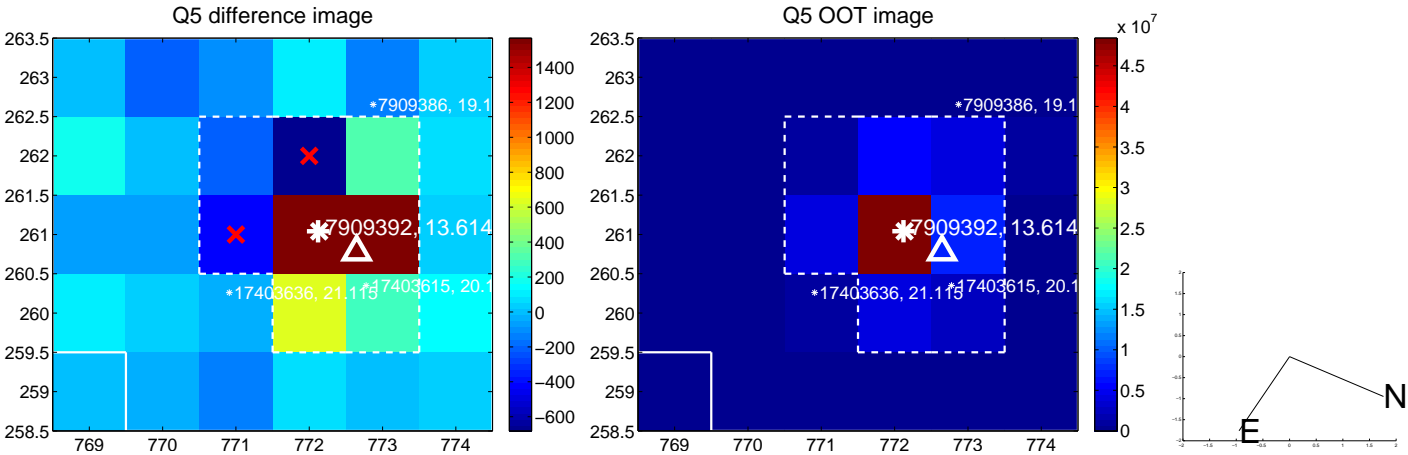


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

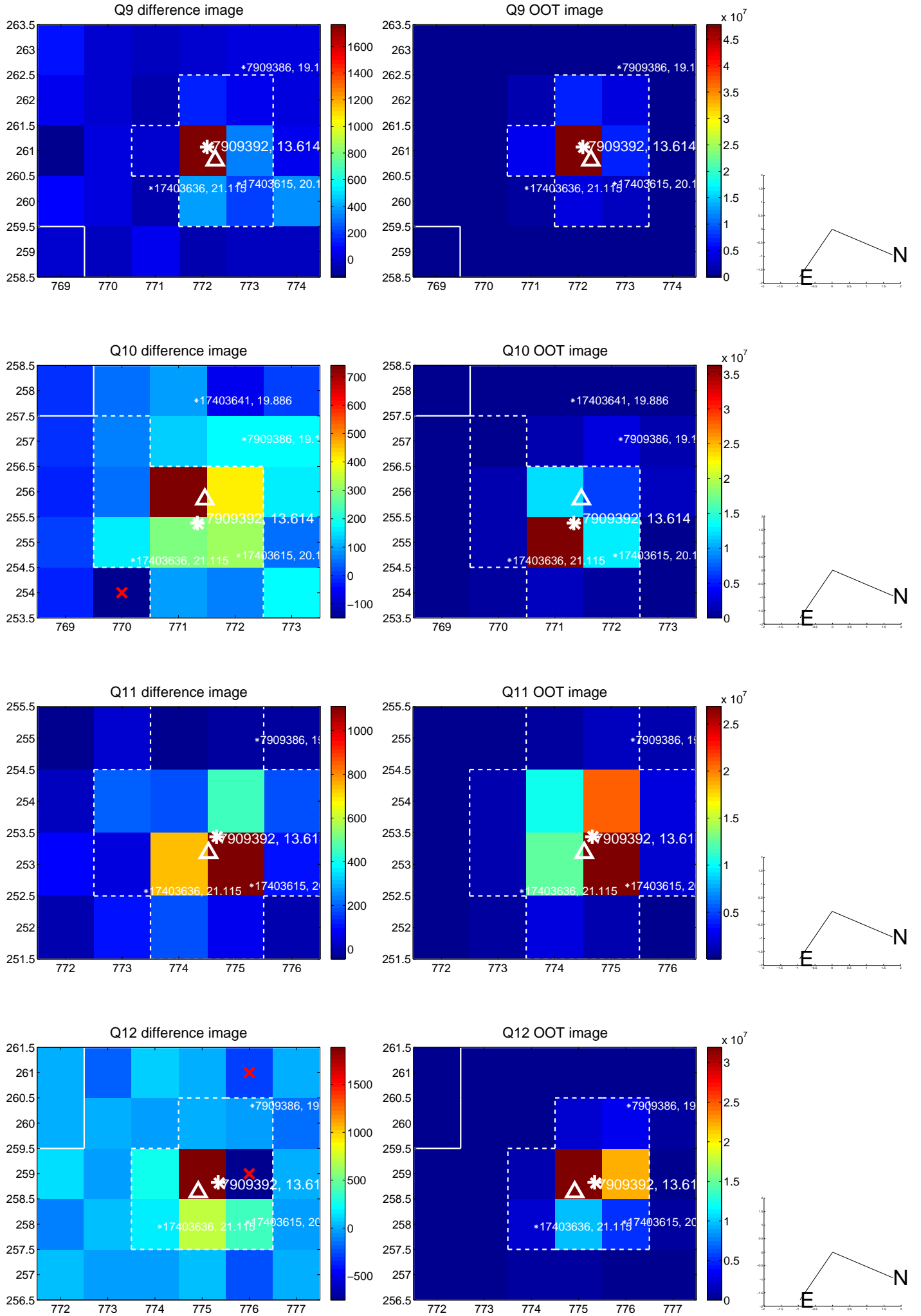
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



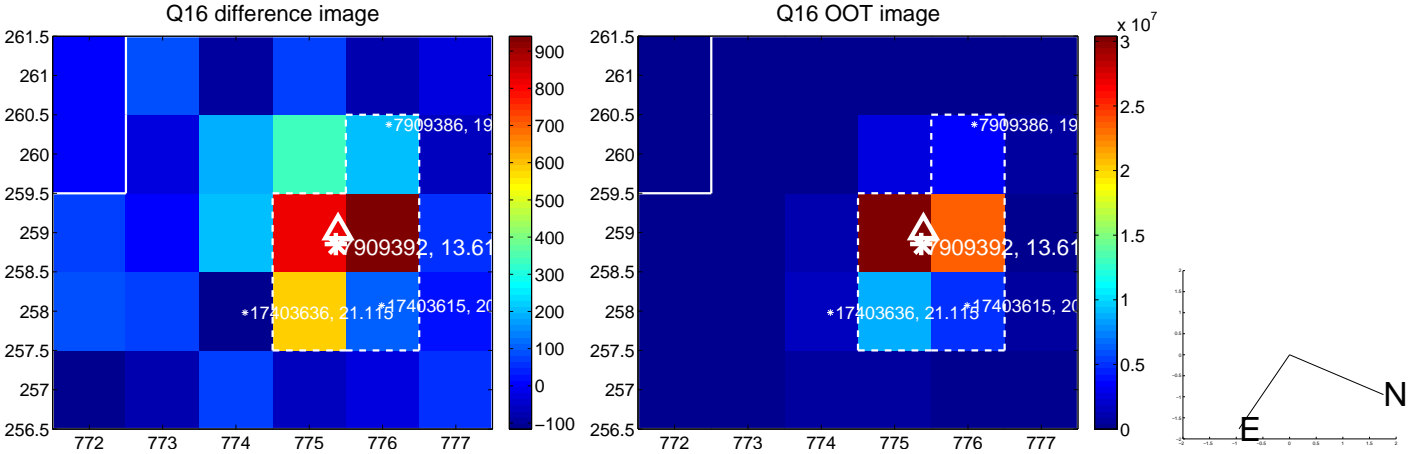
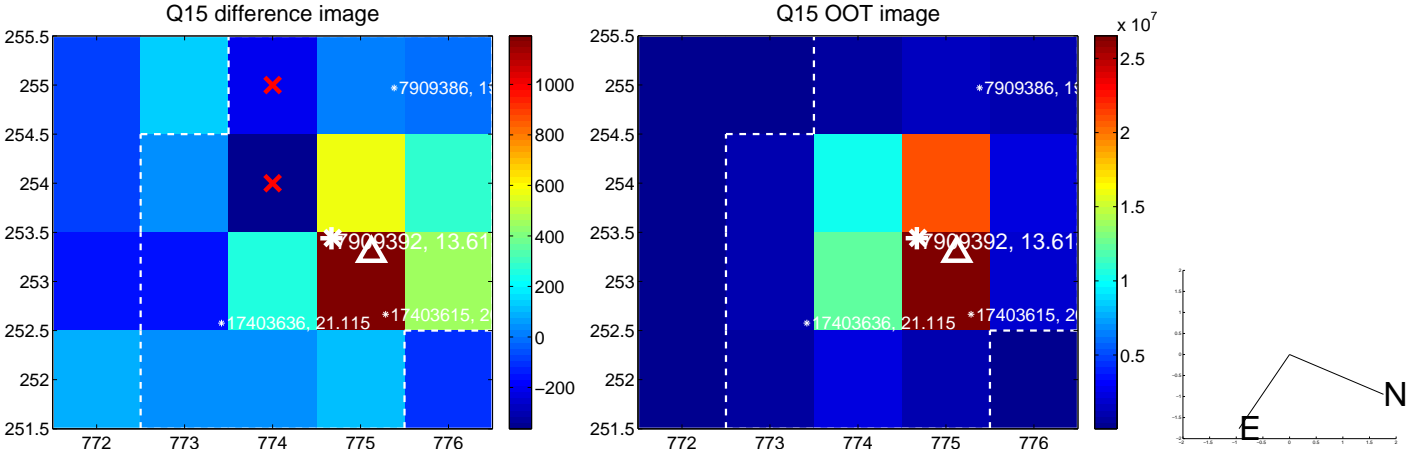
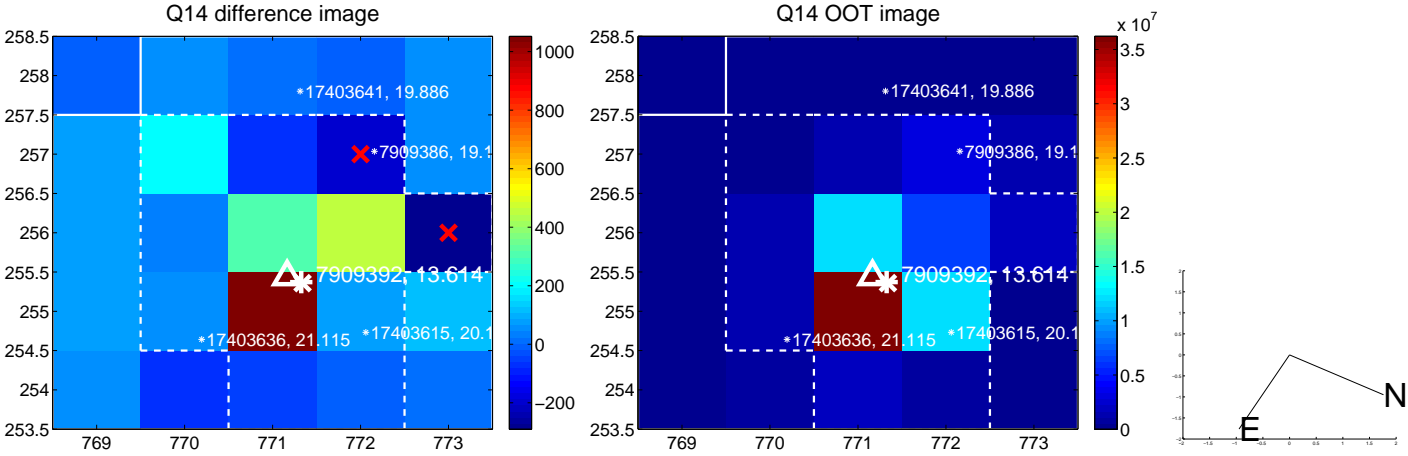
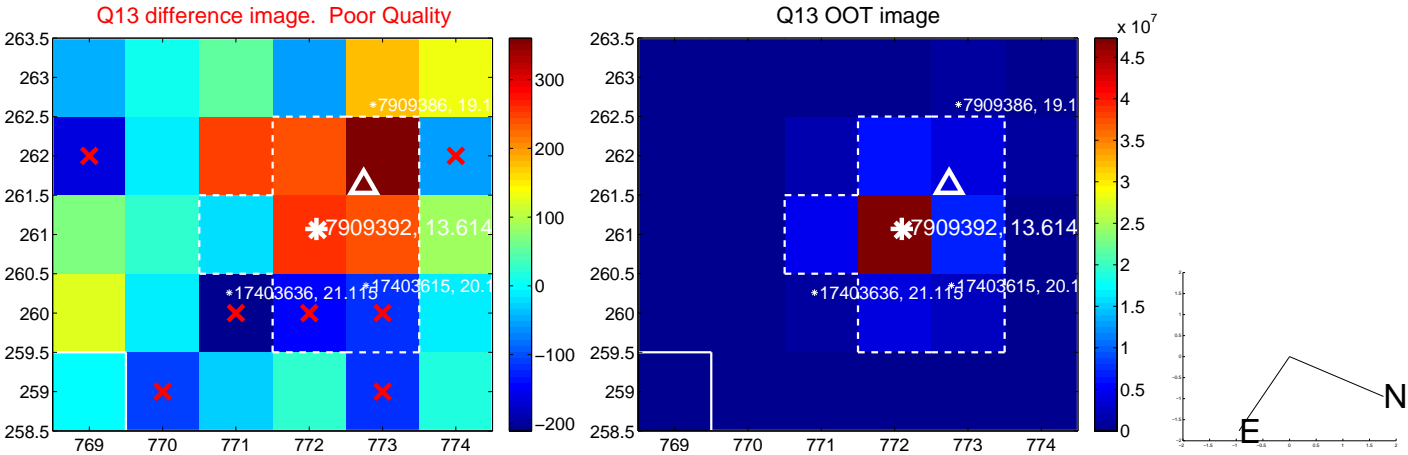
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



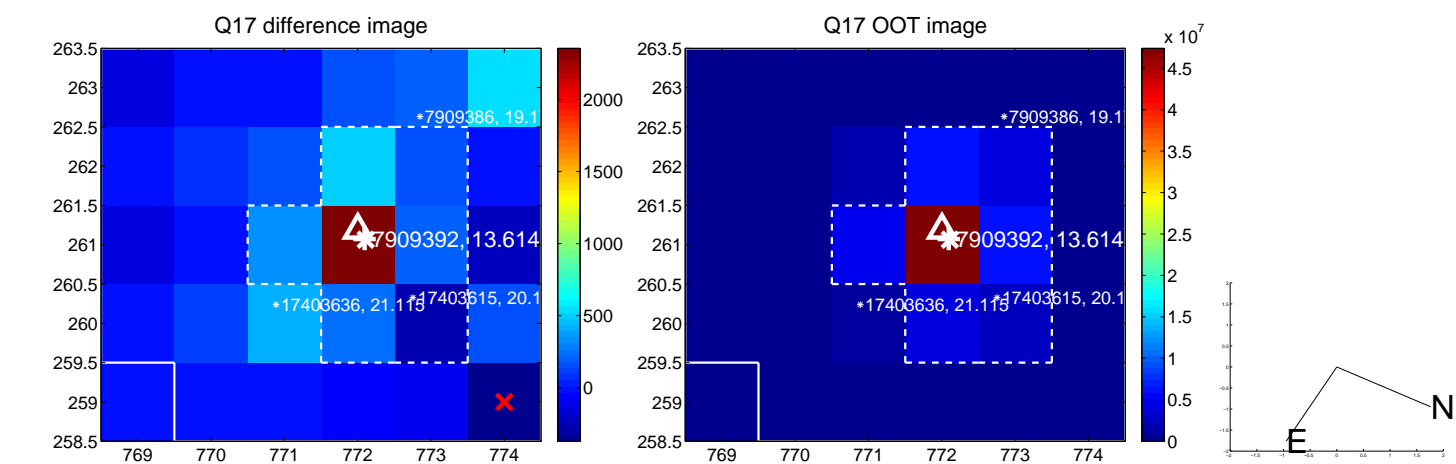
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



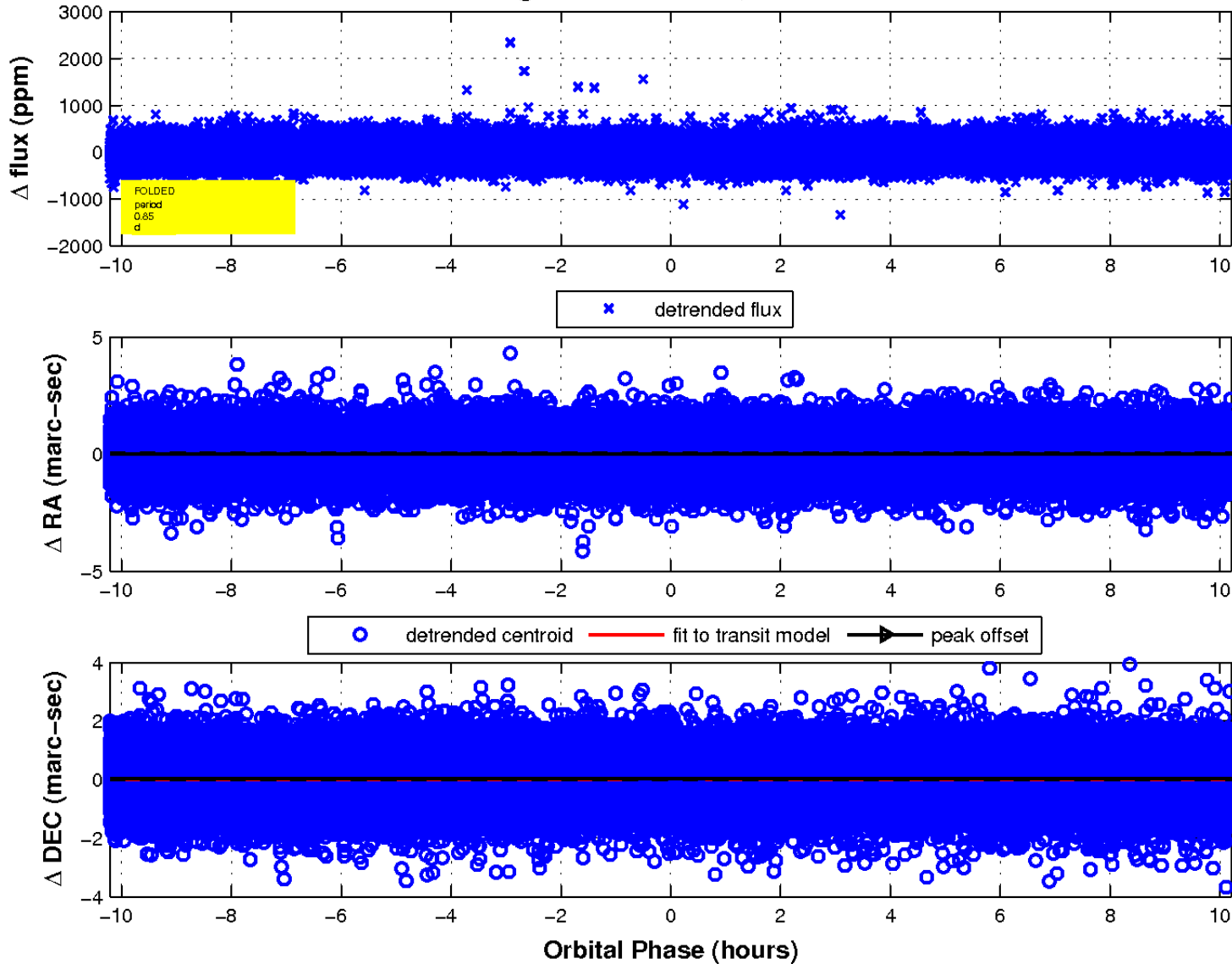
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

