

KIC 009025739

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})
009025739-01	OBS	7125.01	7.918297	134.196247	98.3	3.527	7.7	8.5	1.02	5966	1.19	195.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009025739-01	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.

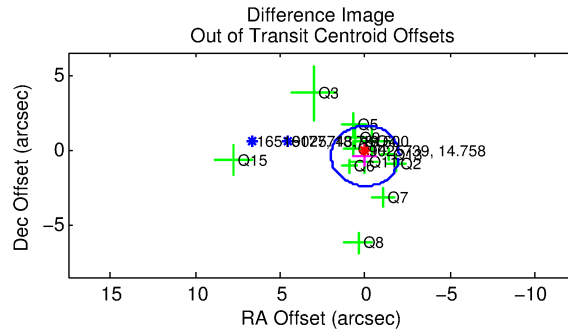
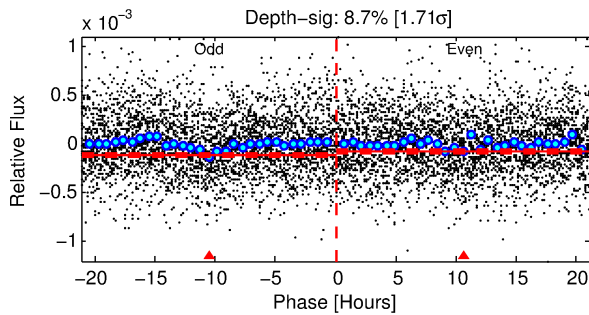
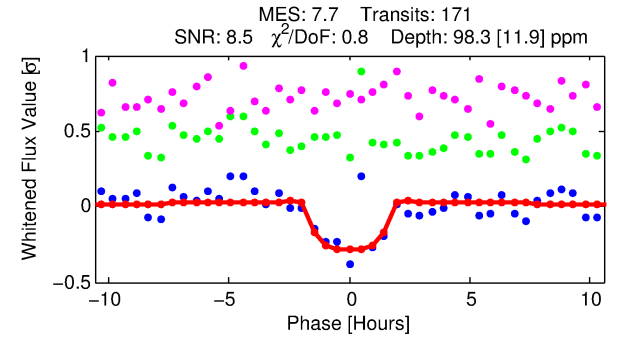
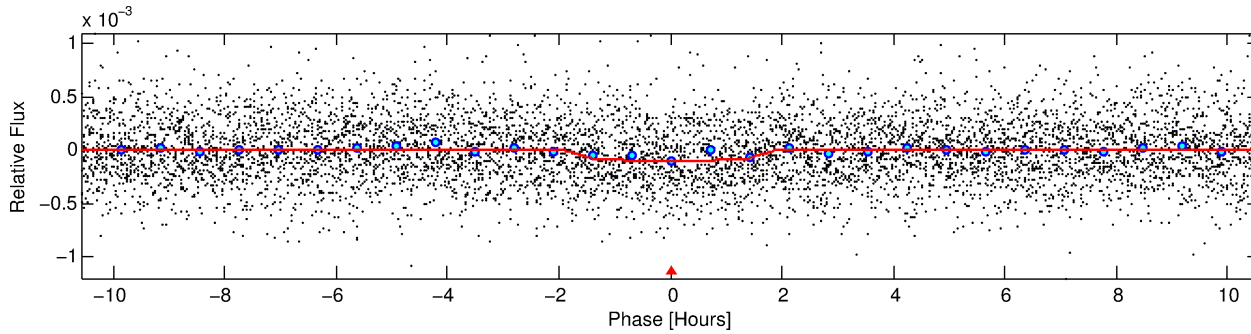
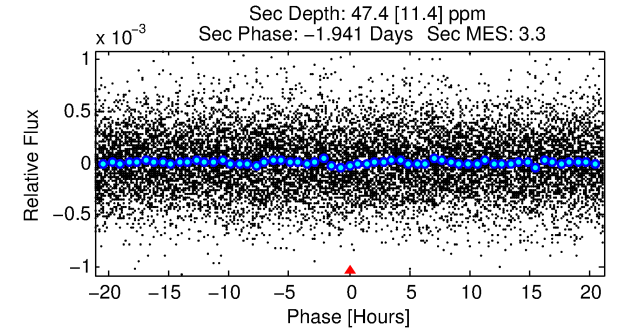
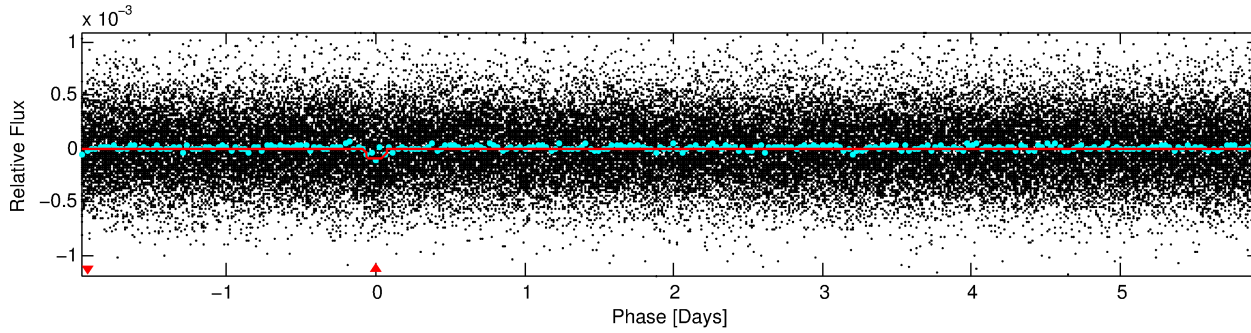
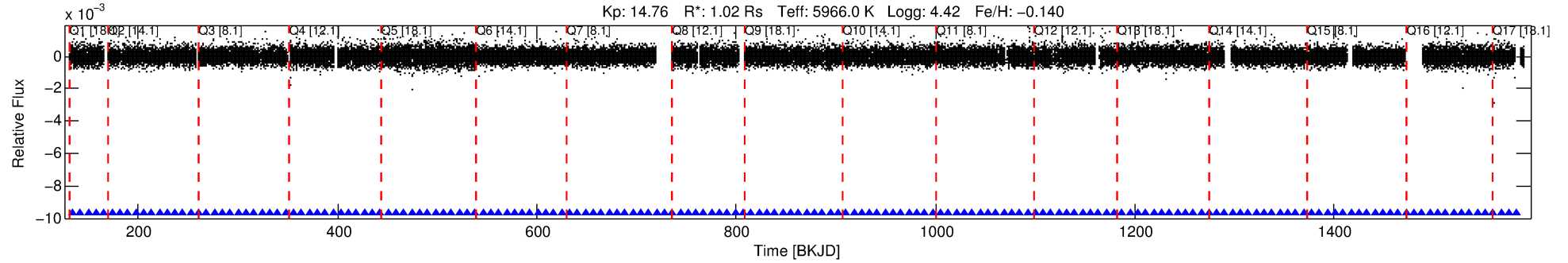
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009025739-01

No Significant Match Found

DV One-Page Summary

KIC: 9025739 Candidate: 1 of 1 Period: 7.918 d
KOI: K07125.01 Corr: 0.918



DV Fit Results:

Period = 7.91830 [0.00007] d
Epoch = 134.1962 [0.0071] BKJD
Rp/R* = 0.0107 [0.0064]
a/R* = 7.98 [24.06]
b = 0.90 [0.66]
Seff = 195.61 [77.37]
Teq = 954 [94] K
Rp = 1.19 [0.79] Re
a = 0.0774 [0.0194] AU
Ag = 110.60 [140.60] [0.78σ]
Teffp = 4781 [1464] K [2.61σ]

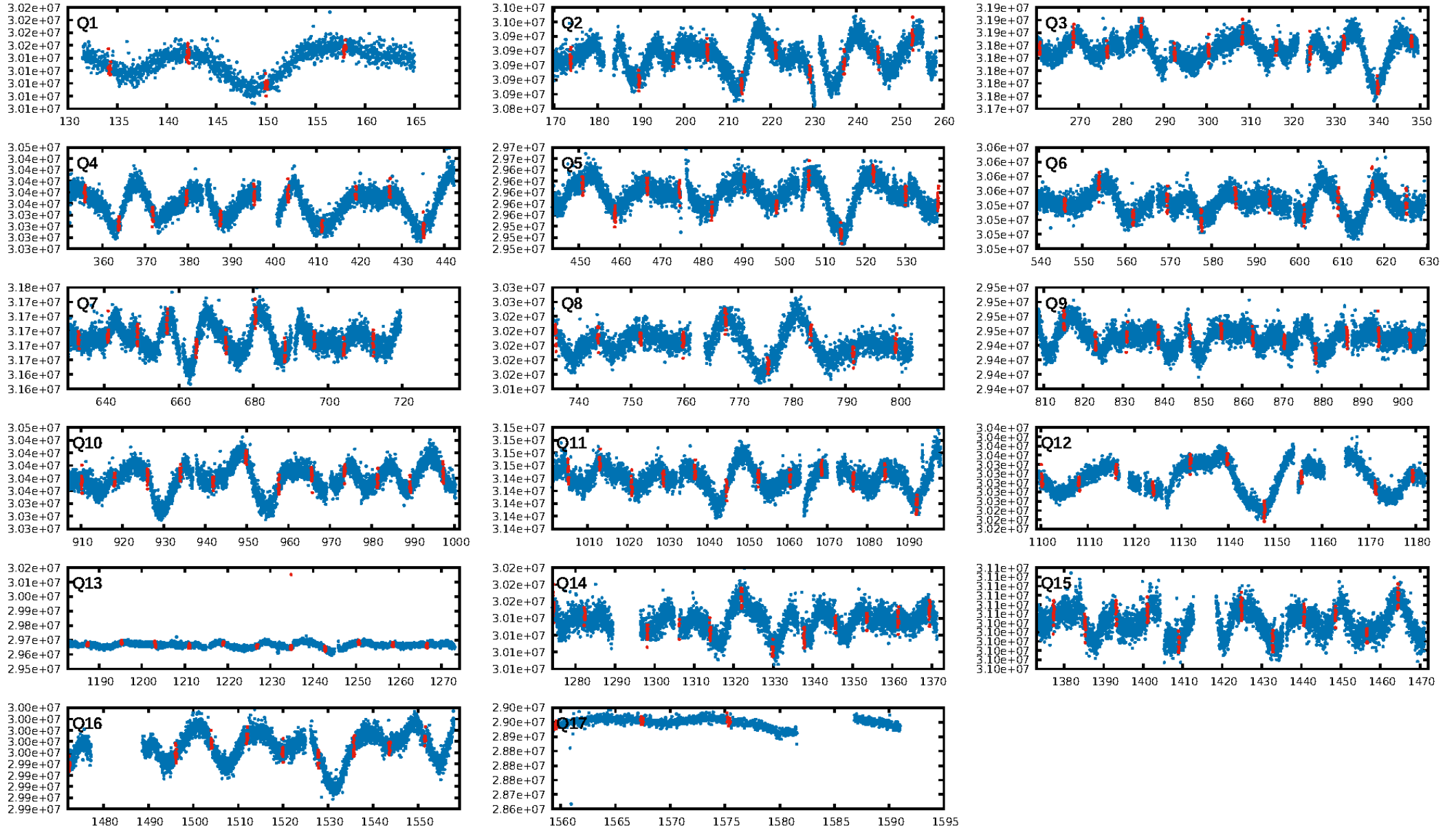
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.74e-14
RollingBand-fgt: 1.00 [164/164]
GhostDiagnostic-chr: 1.244
Centroid-sig: 26.8%
Centroid-so: 1.416 arcsec [1.20σ]
OotOffset-rm: 0.411 arcsec [0.61σ]
KicOffset-rm: 0.516 arcsec [0.67σ]
OotOffset-st: 3/4/2/3 [12]
KicOffset-st: 3/4/2/3 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 1.00 [17/17]

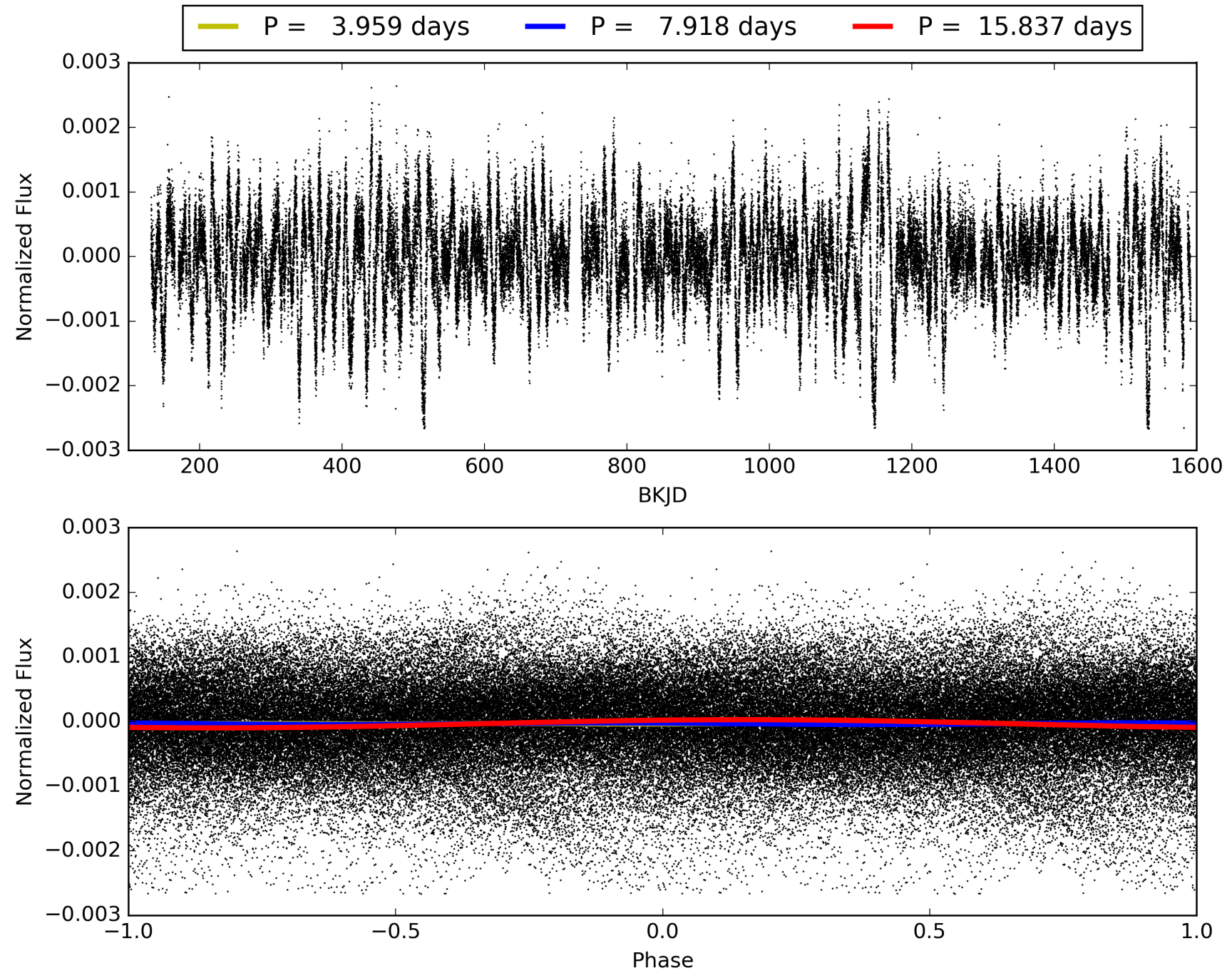
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:42:02 Z

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

TCE 009025739-01, PDC Light Curves

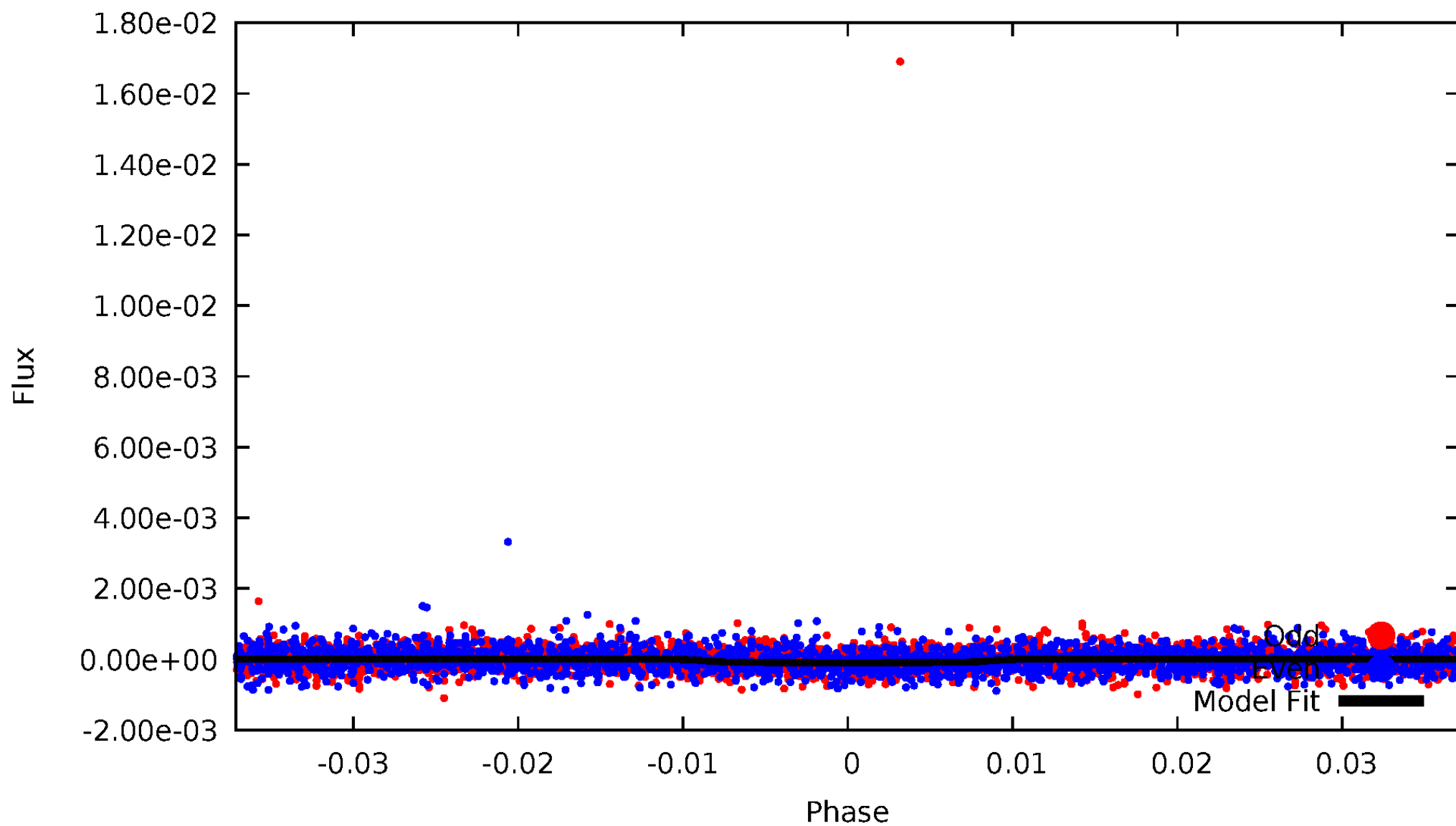


TCE 009025739-01



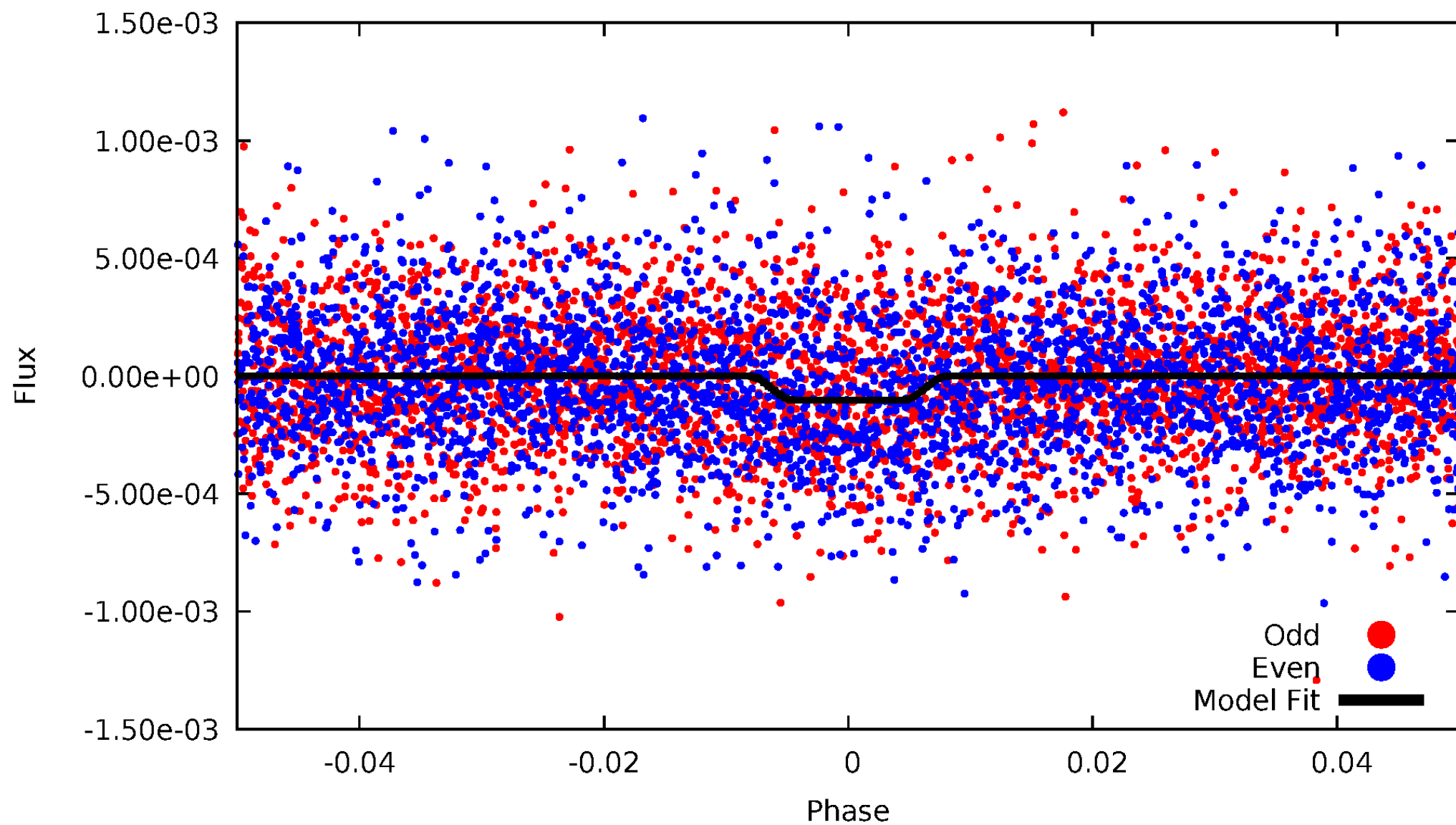
DV Odd/Even

TCE 009025739-01

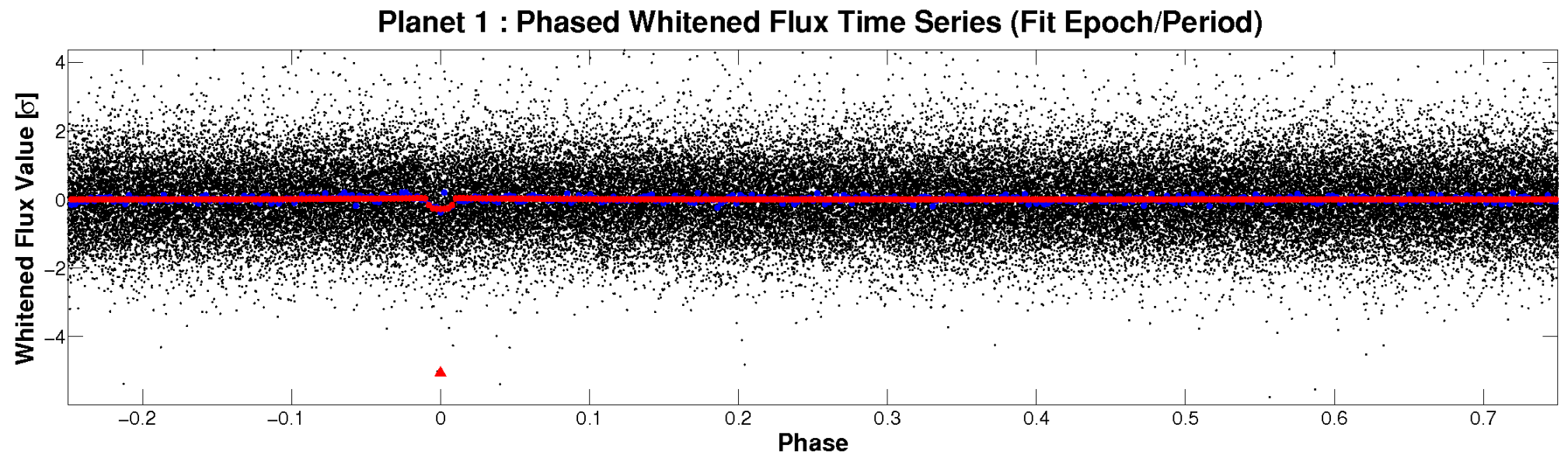
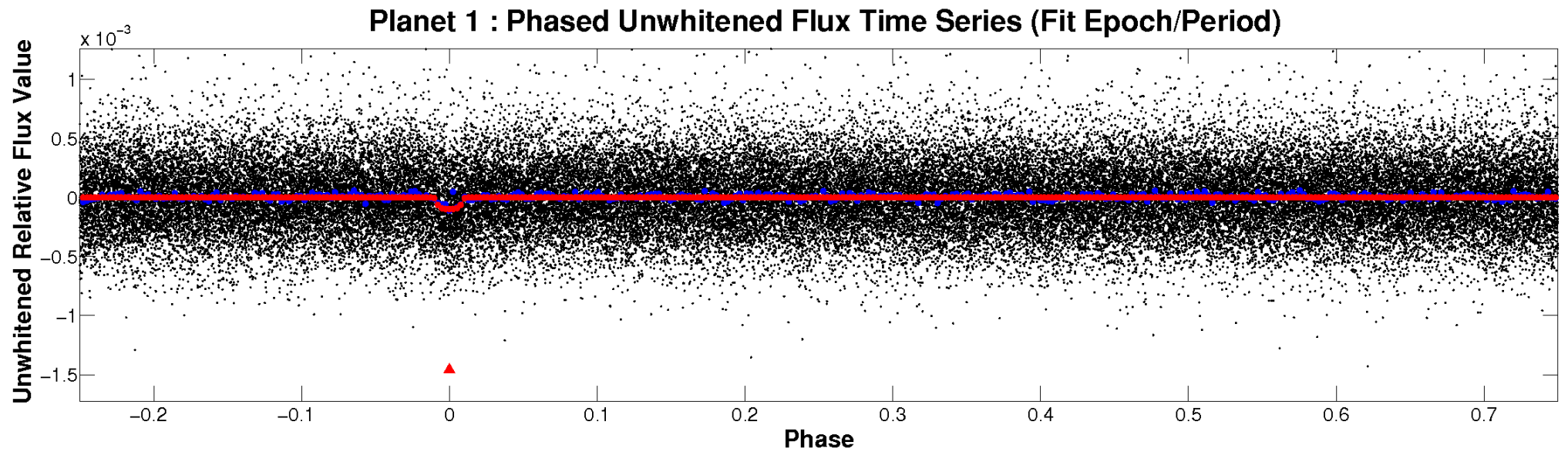


ALT Odd/Even

TCE 009025739-01

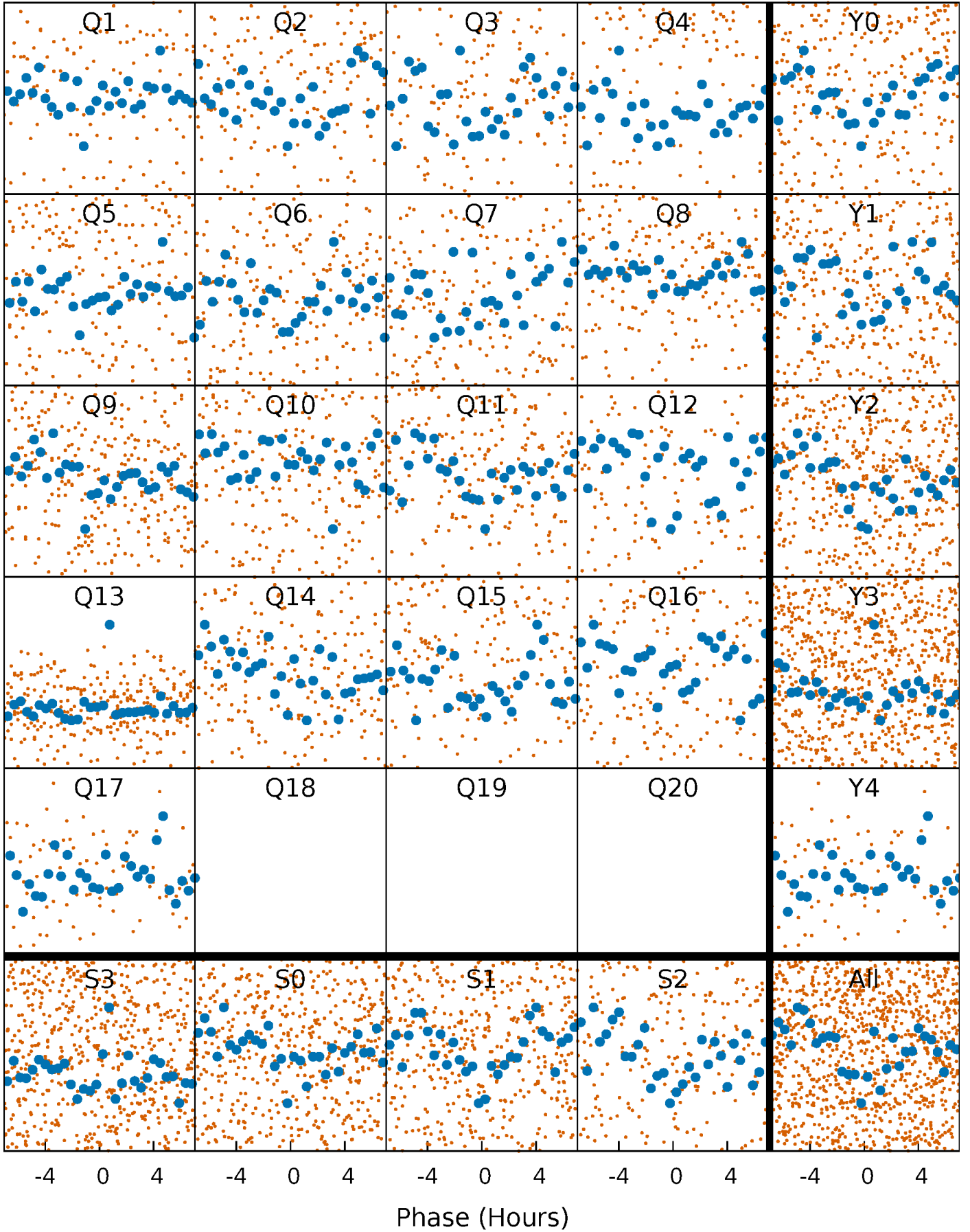


Non-Whitened Vs. Whitened Light Curve



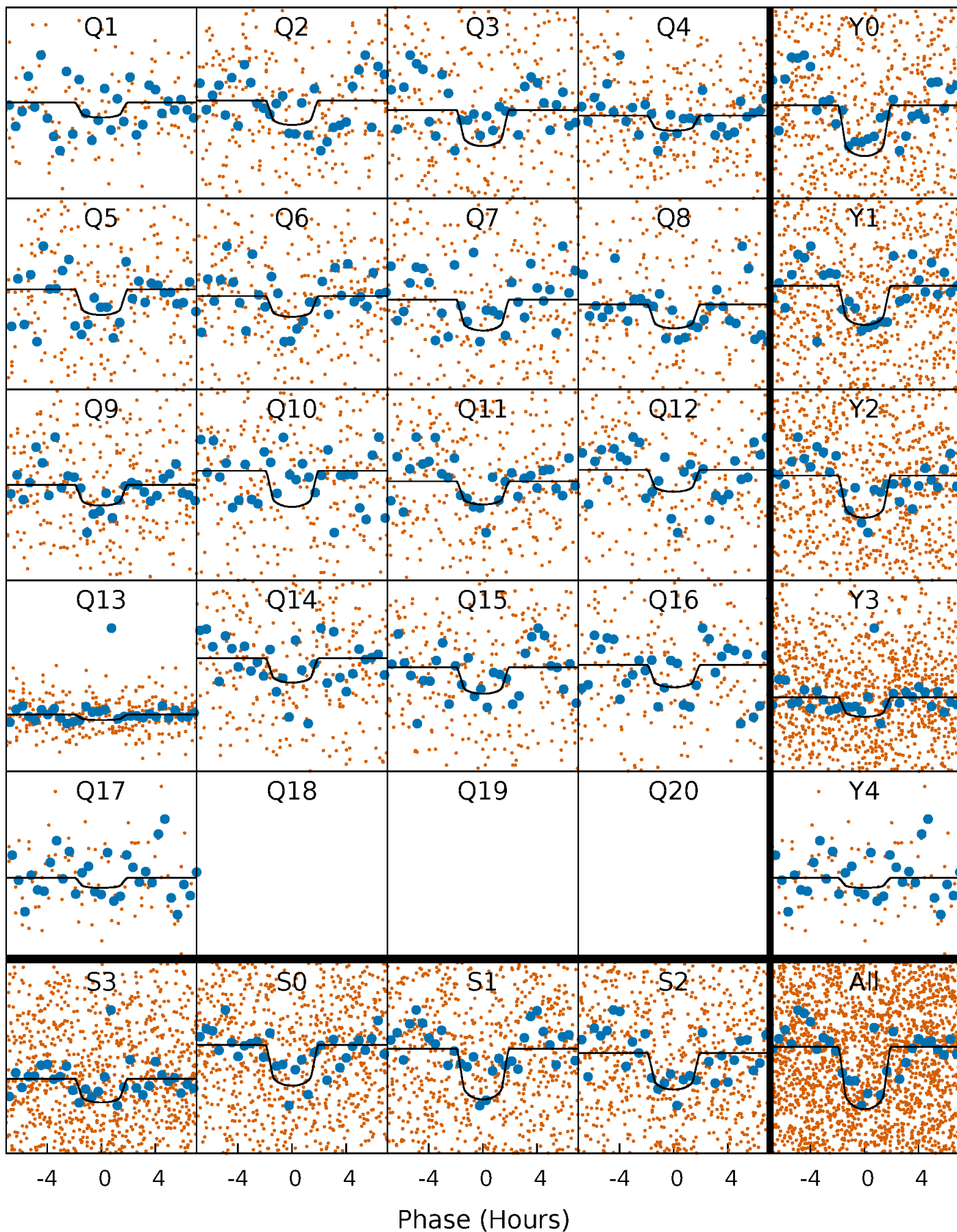
PDC Quarter-Phased Transit Curves

TCE 009025739-01 P= 7.918297 Days $T_0=134.196247$ (BKJD)



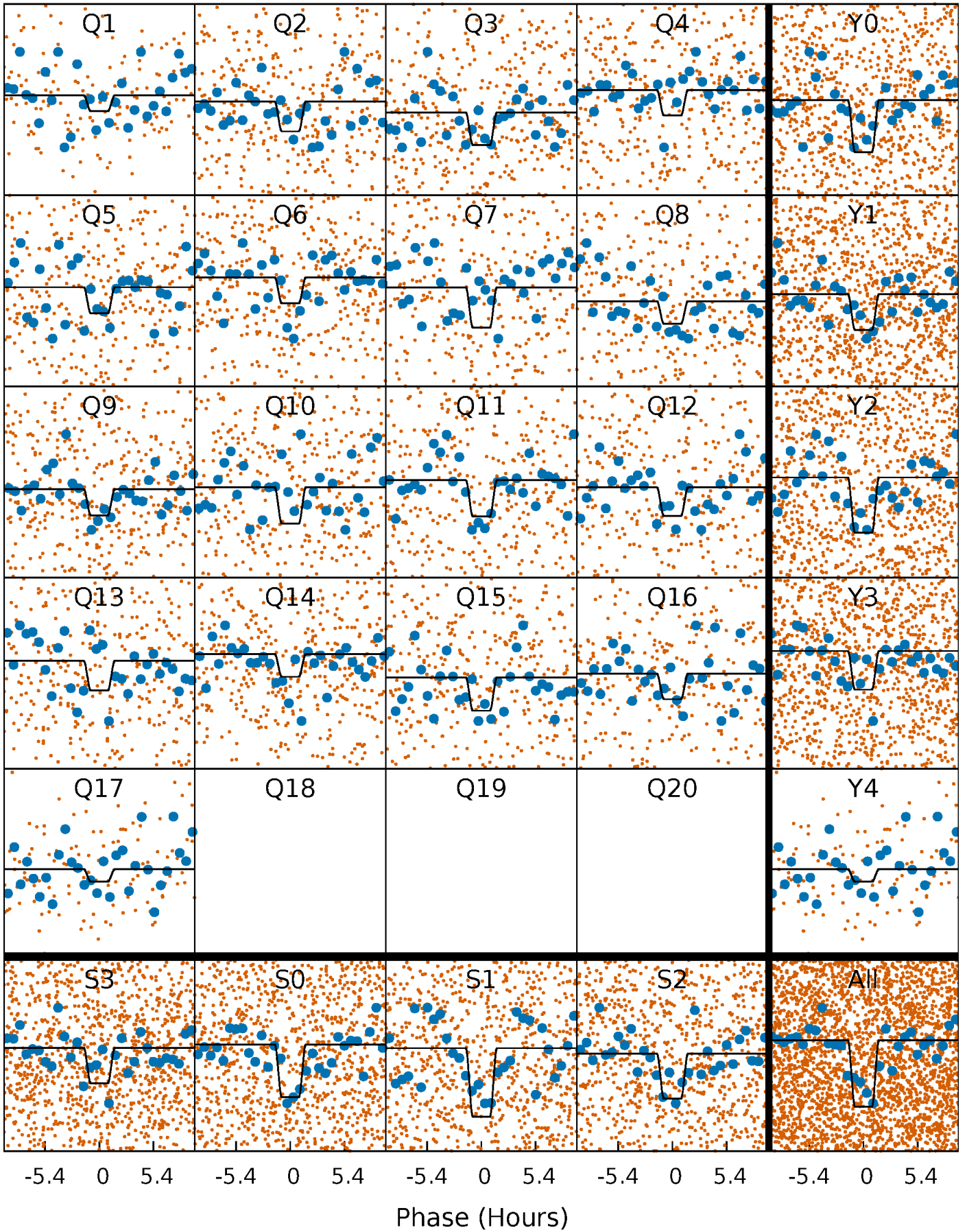
DV Quarter-Phased Transit Curves

TCE 009025739-01 P= 7.918297 Days $T_0=134.196247$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

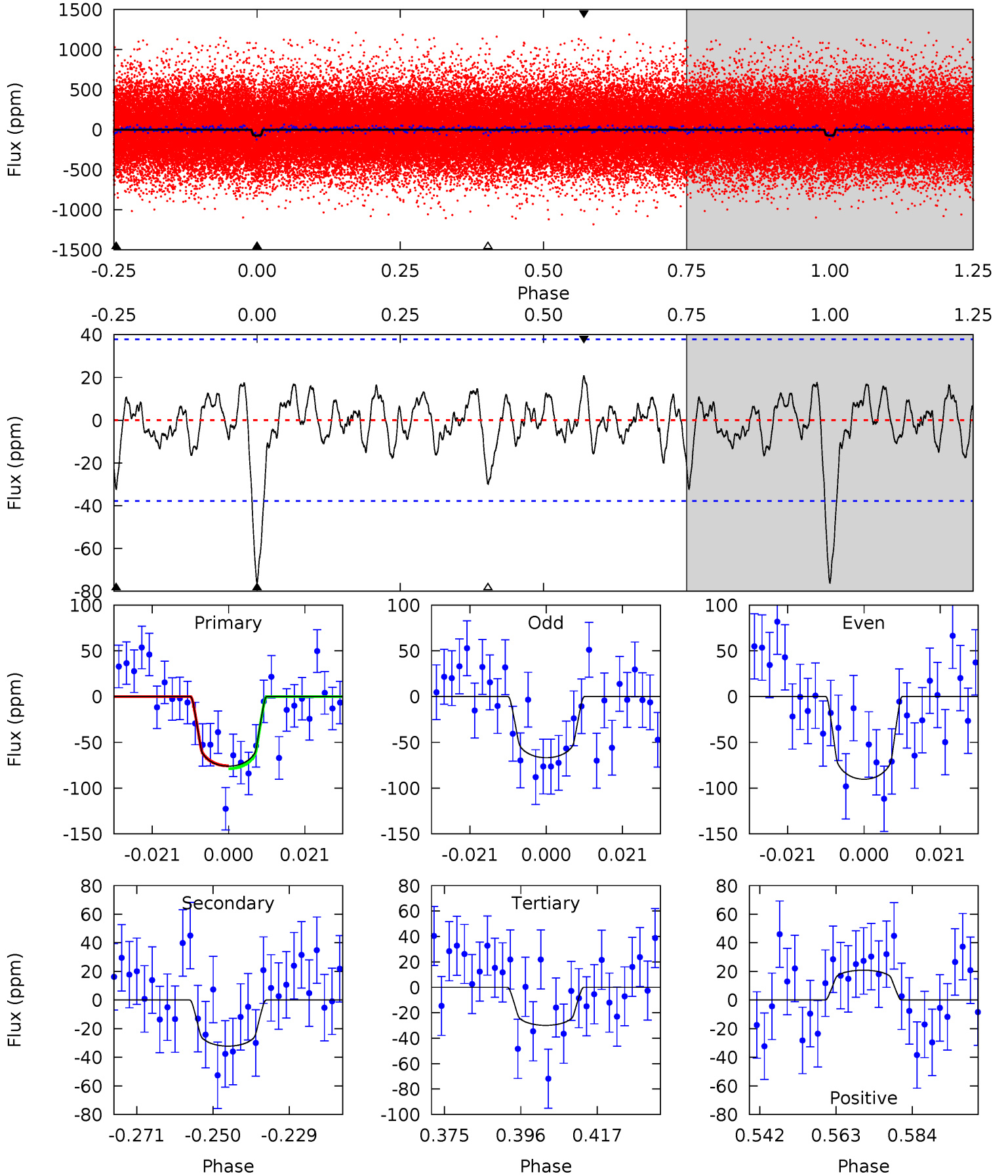
TCE 009025739-01 P= 7.918385 Days $T_0=134.185627$ (BKJD)



DV Model-Shift Uniqueness Test

009025739-01, P = 7.918297 Days, E = 126.277950 Days

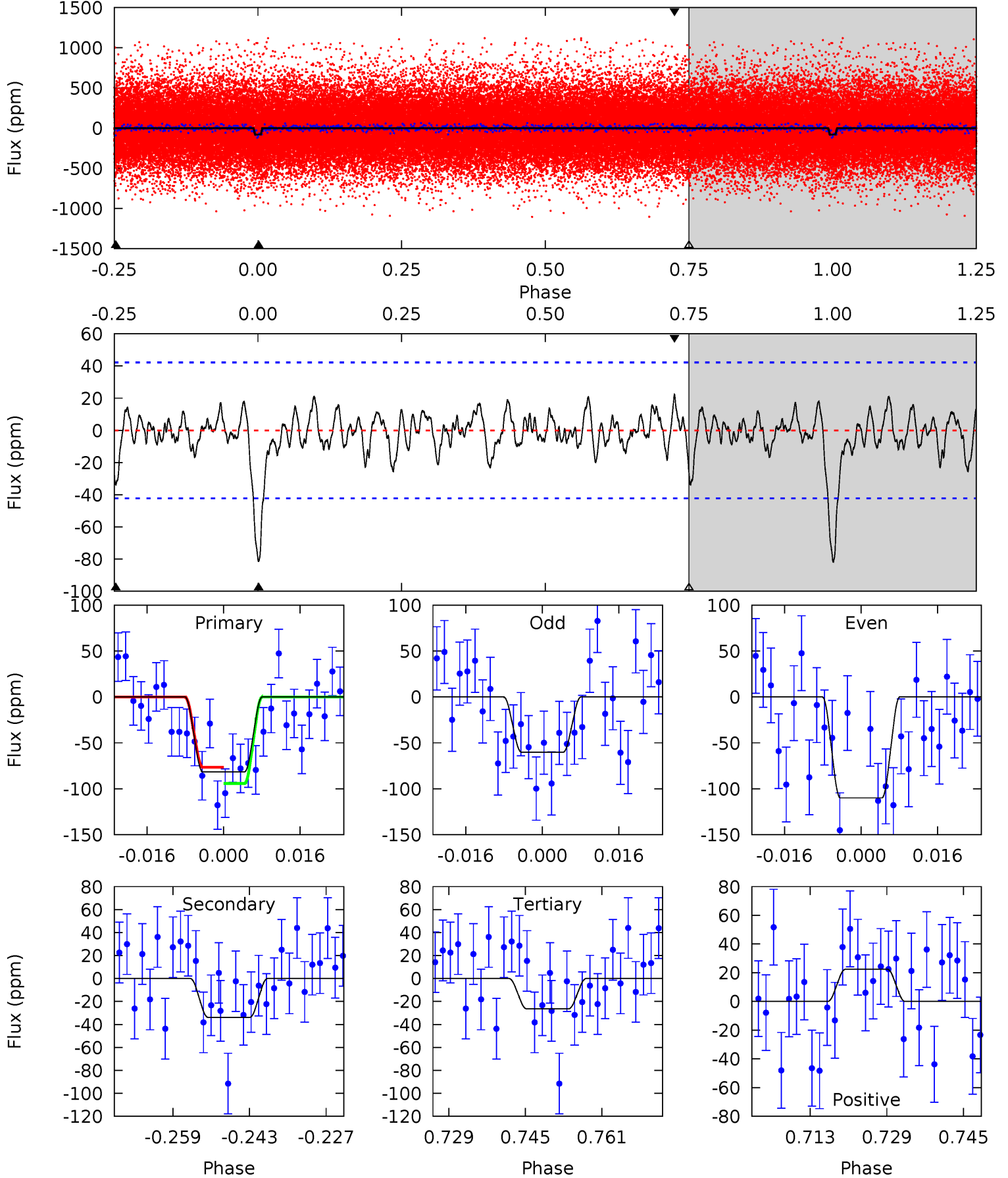
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.83	4.16	3.87	2.70	4.88	2.31	1.12	5.96	7.13	0.30	1.47	1.52	0.66	0.22	0.20



Alt Model-Shift Uniqueness Test

009025739-01, P = 7.918385 Days, E = 126.267242 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.54	3.95	3.10	2.63	4.93	2.40	1.03	6.44	6.91	0.85	1.32	2.91	0.91	0.22	1.03



Stellar Parameters For KIC 009025739

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5966^{+179}_{-214}	$4.418^{+0.087}_{-0.203}$	$-0.140^{+0.300}_{-0.300}$	$1.016^{+0.300}_{-0.129}$	$0.985^{+0.132}_{-0.119}$	$1.325^{+0.521}_{-0.686}$
	+3%/-4%	+2%/-5%	+214%/-214%	+30%/-13%	+13%/-12%	+39%/-52%
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 009025739-01 / KOI 7125.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-32 ± 8	$1.31^{+0.80}_{-0.65}$	1348^{+106}_{-72}	4369^{+1462}_{-653}	59^{+177}_{-37}
Alt.	-34 ± 9	$1.19^{+0.76}_{-0.65}$	1346^{+104}_{-71}	4572^{+2008}_{-781}	71^{+291}_{-43}

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

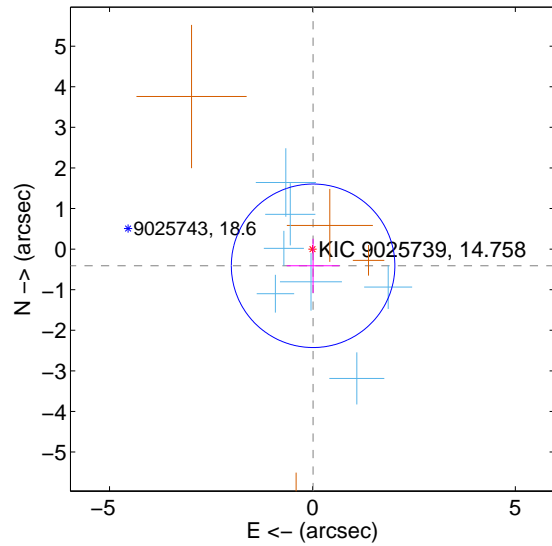
Supplemental centroid analysis for 009025739-01. Kepler magnitude: 14.76. Transit SNR 8.47

There are 7 quarters with good PRF difference image offsets

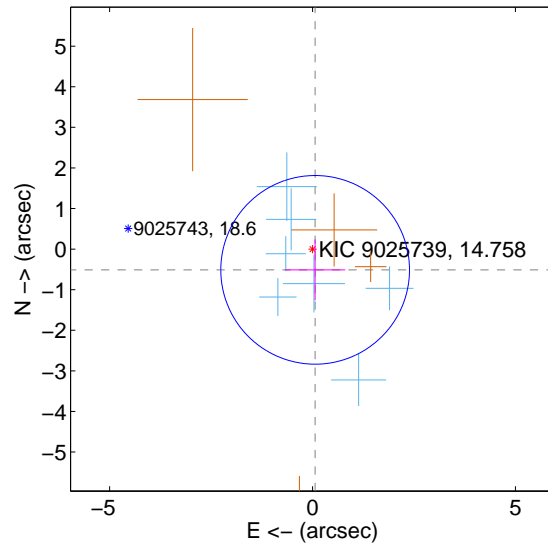
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.411 ± 0.671	0.61	-0.016 ± 0.649	-0.411 ± 0.667
PRF-fit source offset from KIC position	0.516 ± 0.775	0.67	-0.065 ± 0.742	-0.511 ± 0.750
photometric centroid source offset	1.42 ± 1.18	1.20	1.42 ± 1.18	0.02 ± 1.41

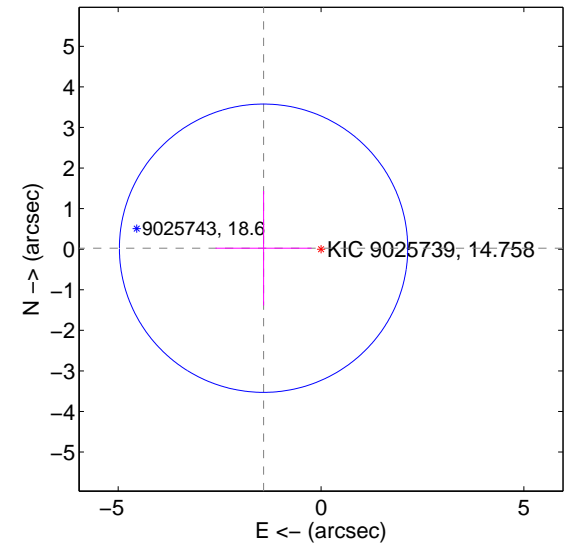
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

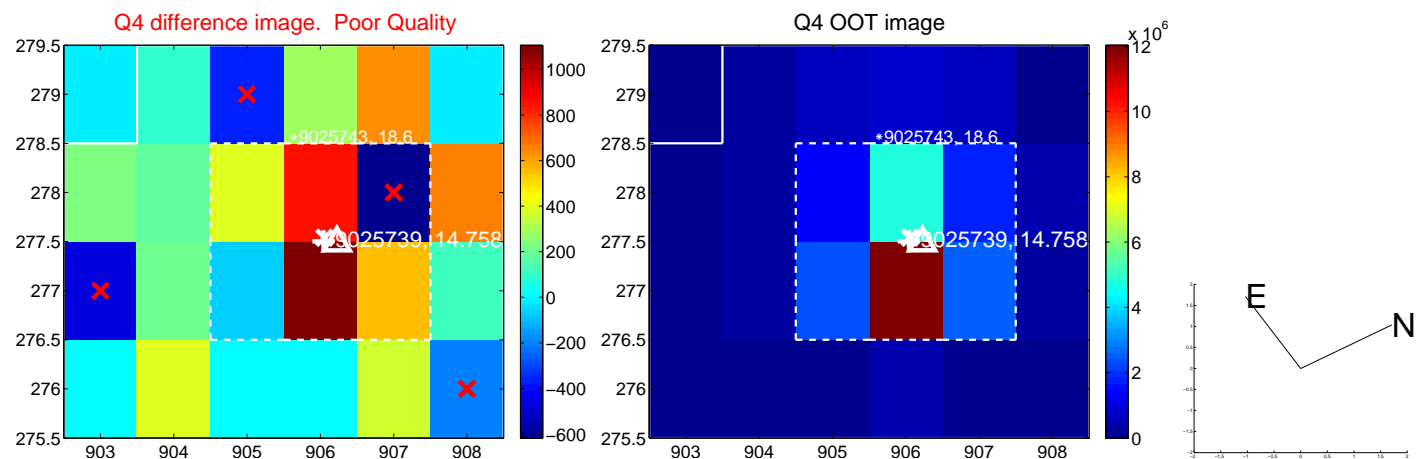
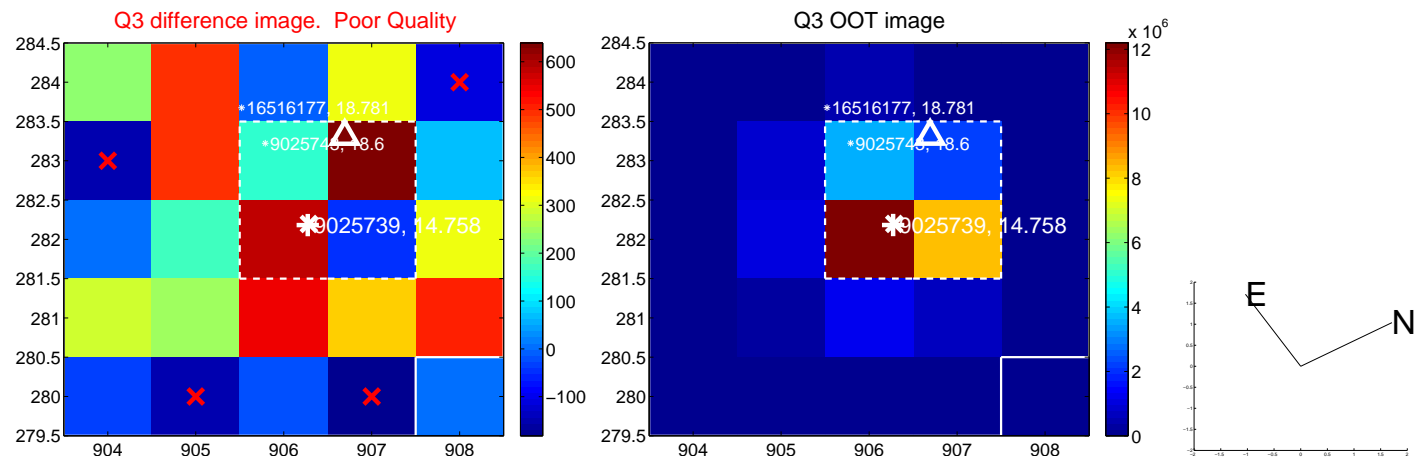
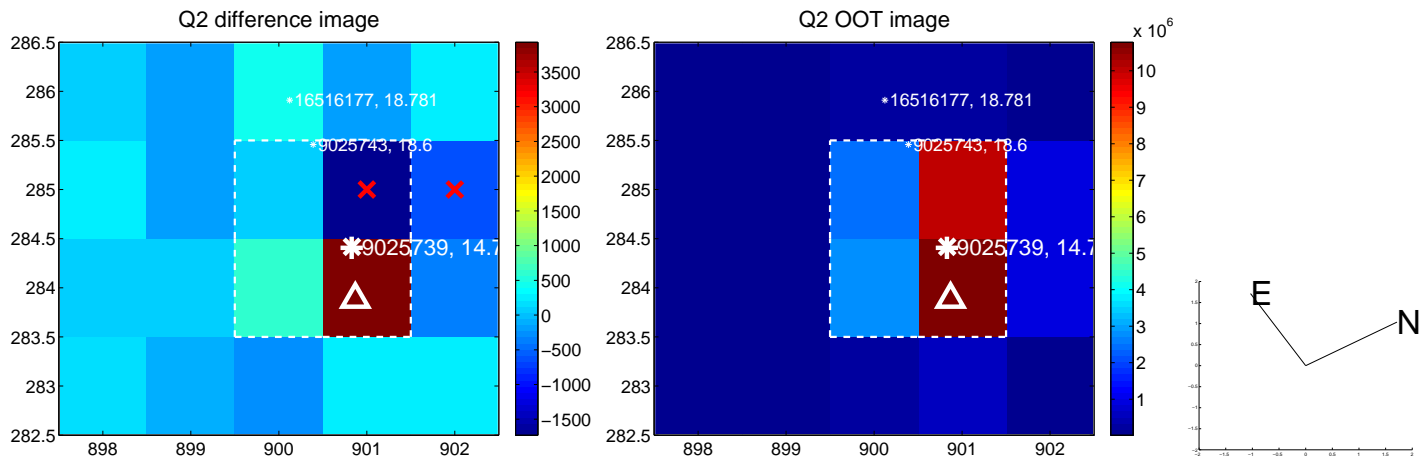
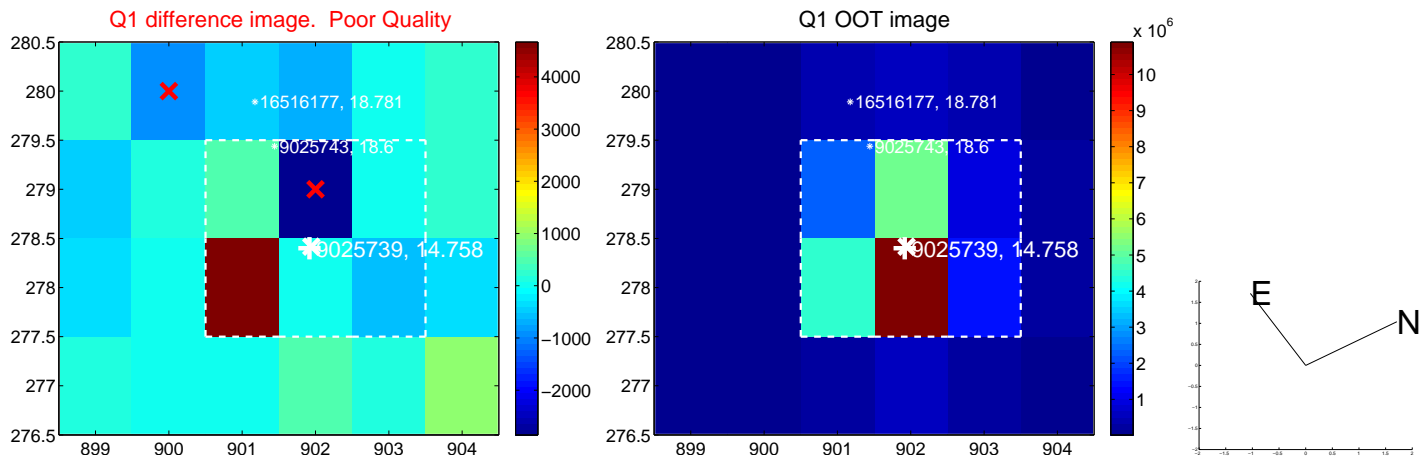


offset from photometric centroids

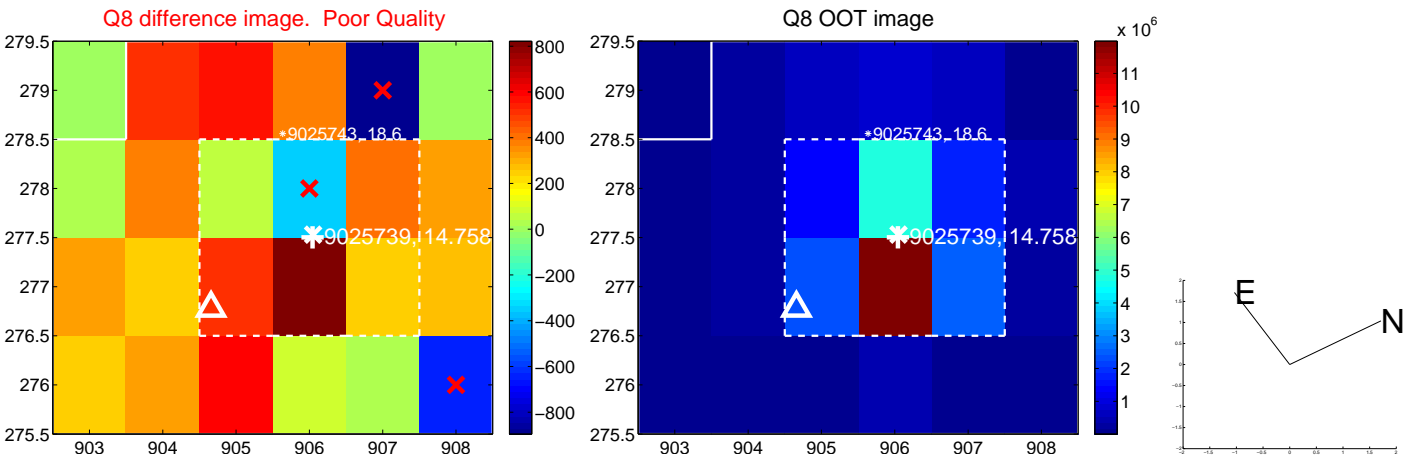
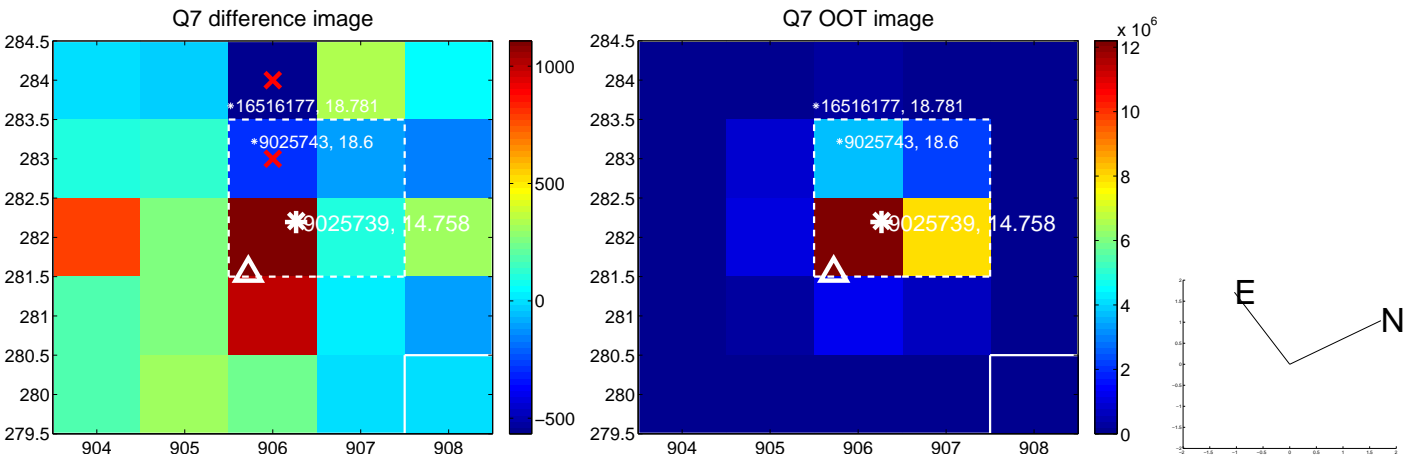
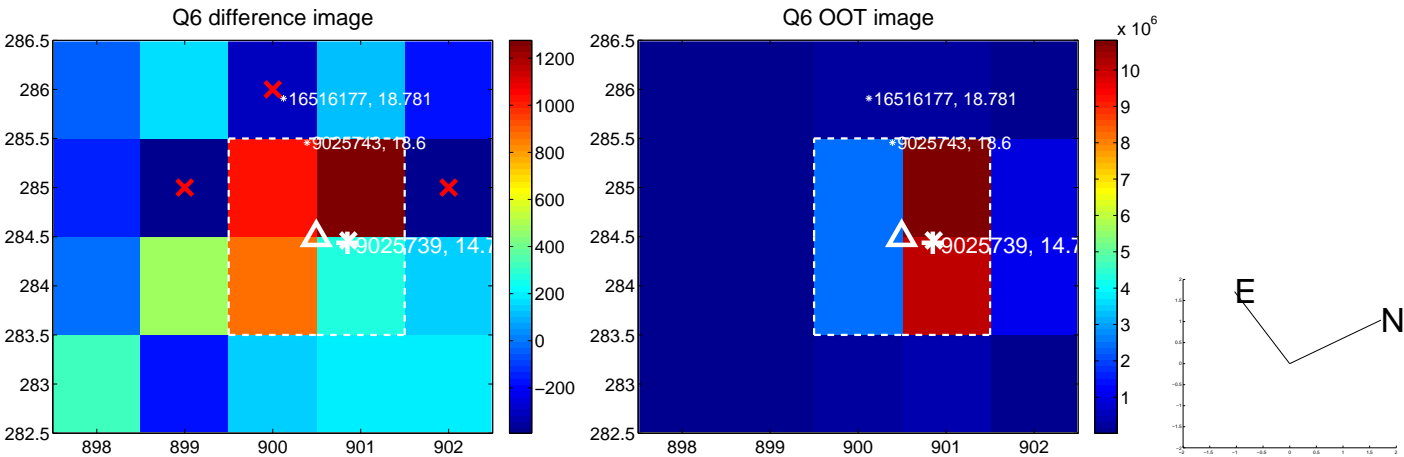
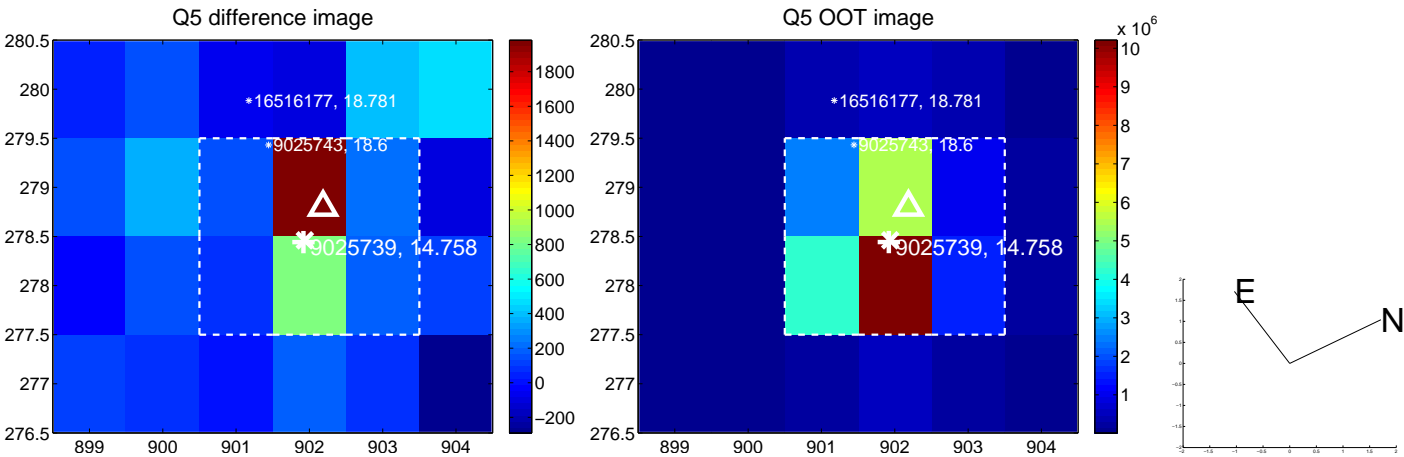


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

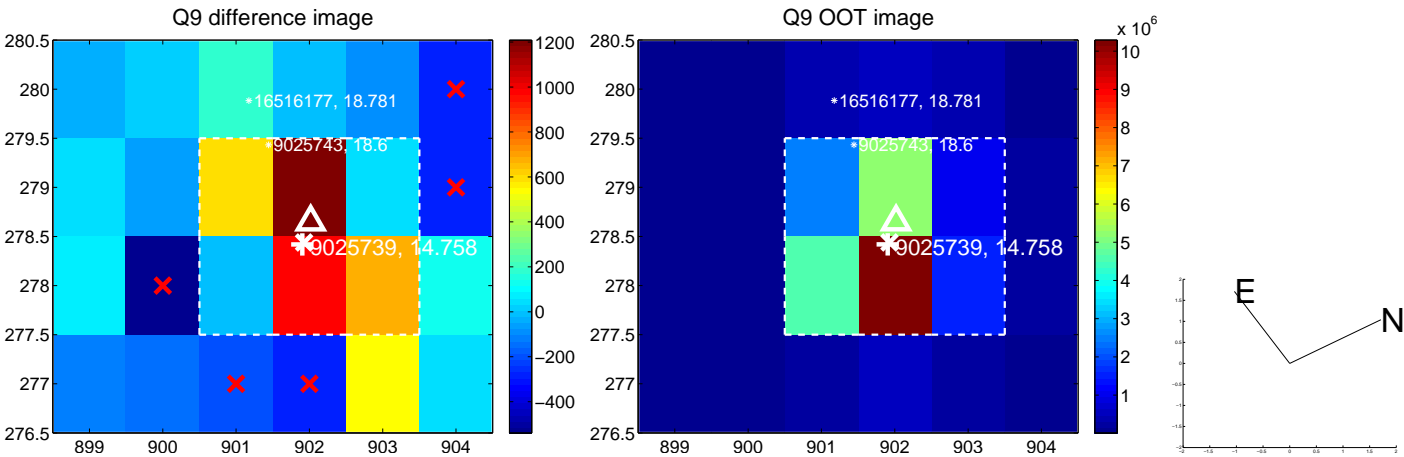
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



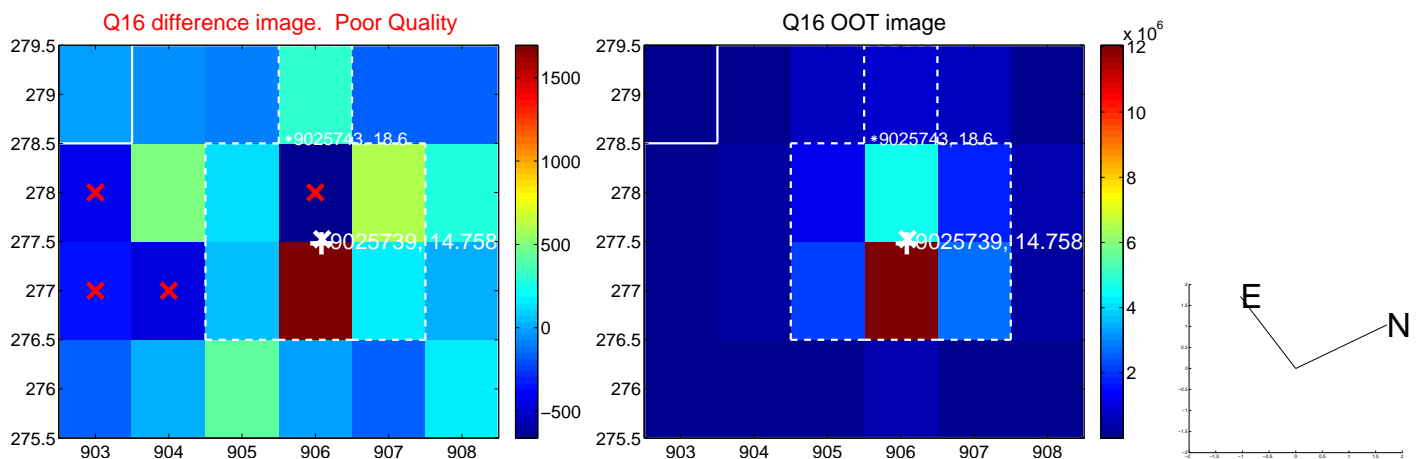
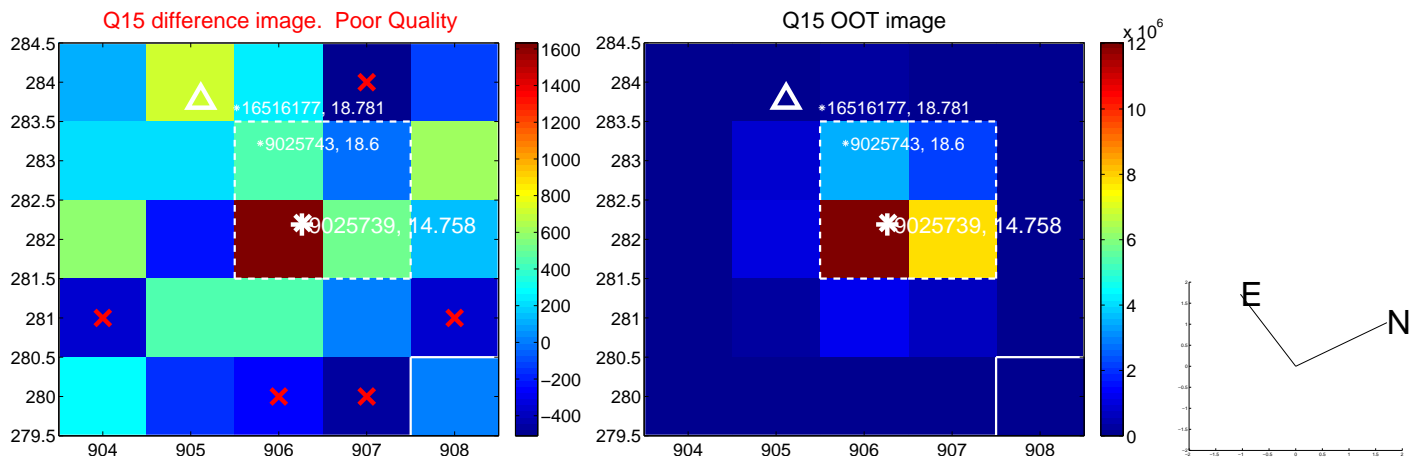
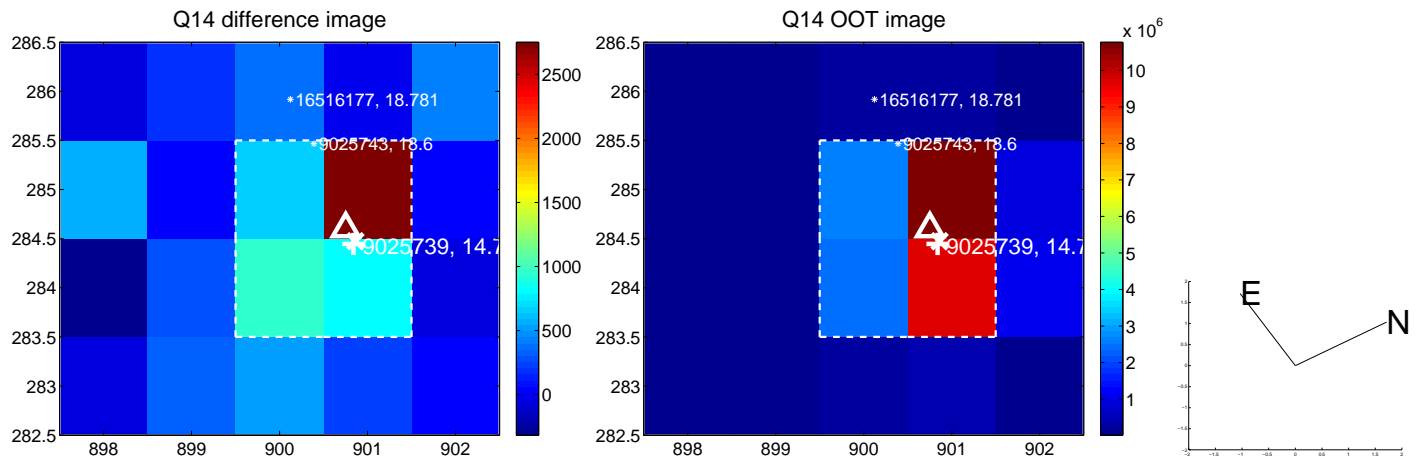
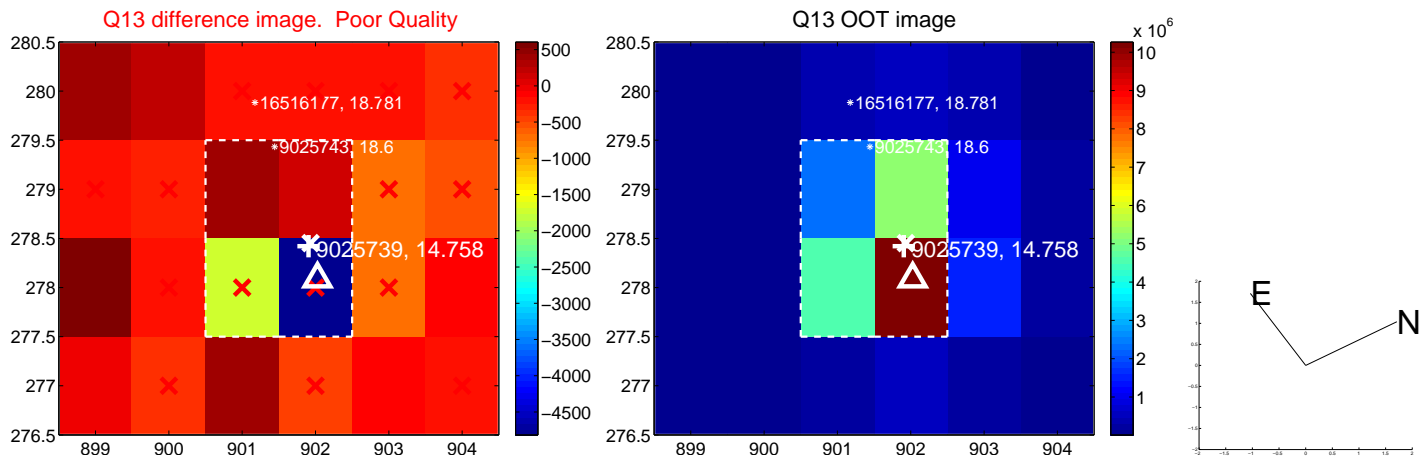
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



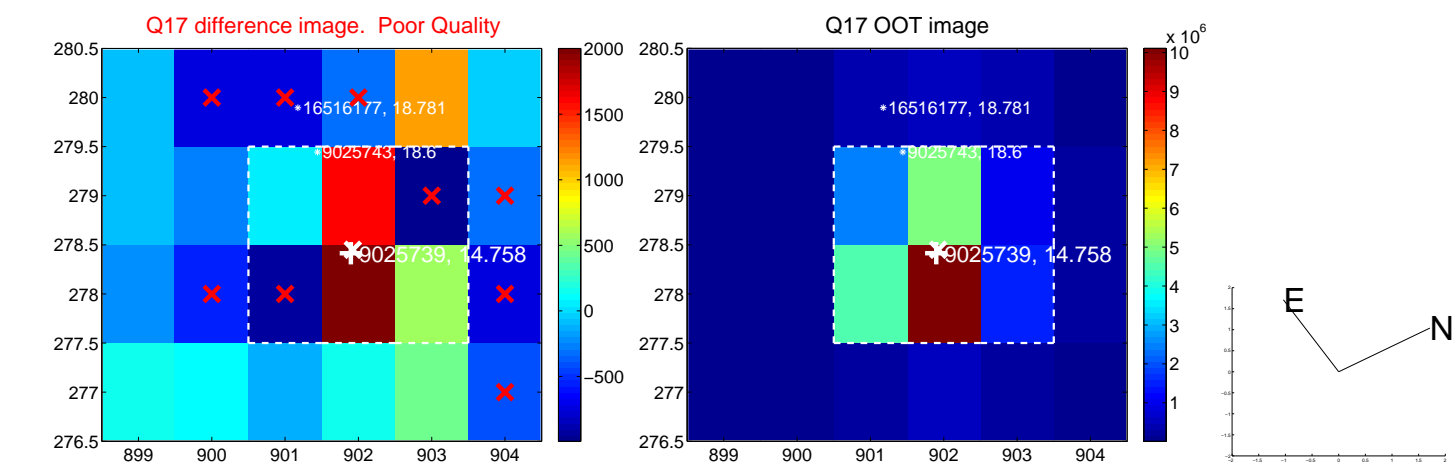
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



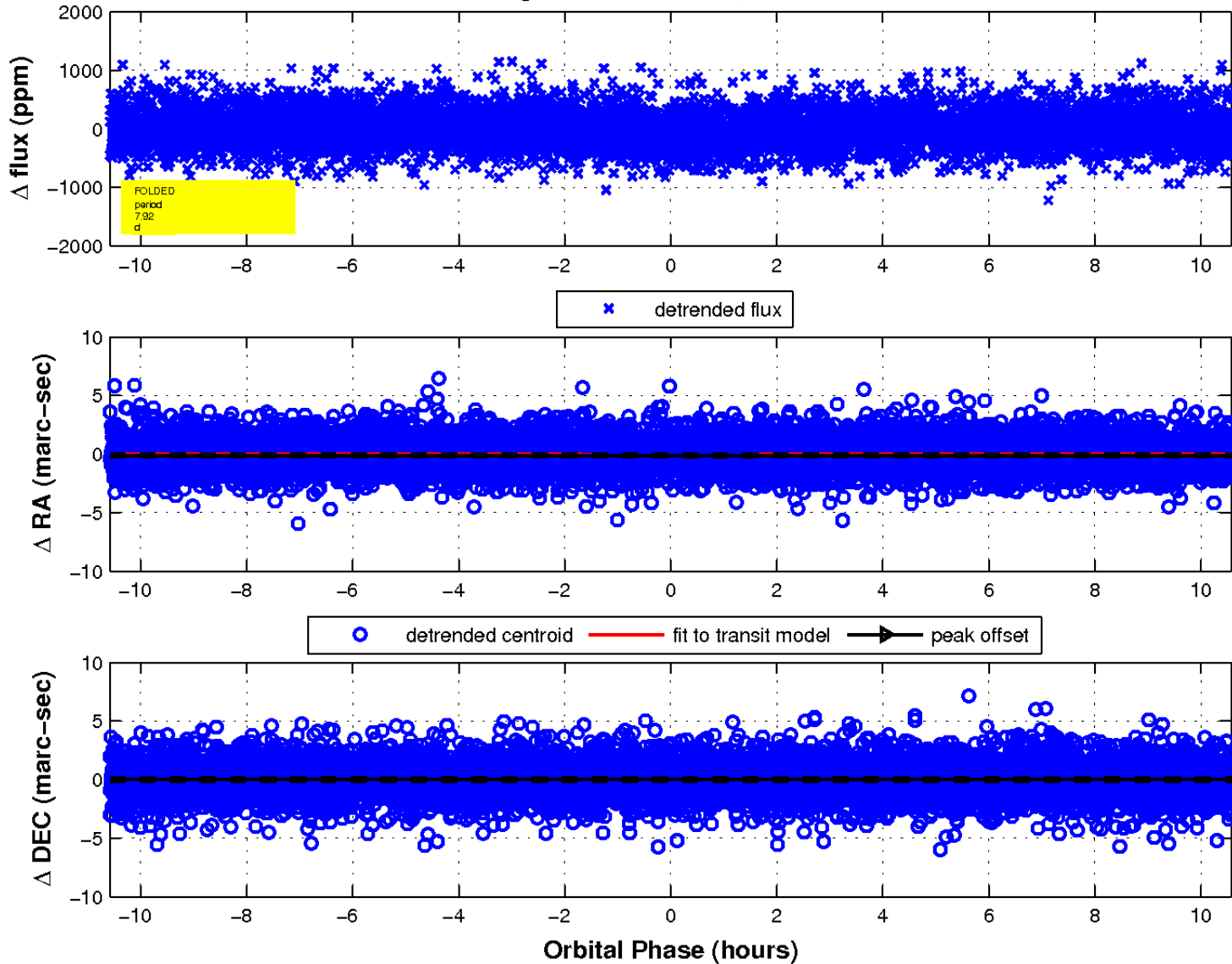
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

