

KIC 009162741

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})
009162741-01	OBS	0703.01	1.368613	131.631361	118.9	1.651	25.2	41.5	1.58	6561	2.03	6122.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009162741-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_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 009162741-01

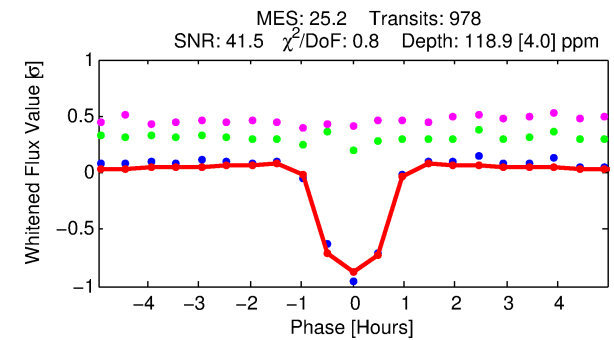
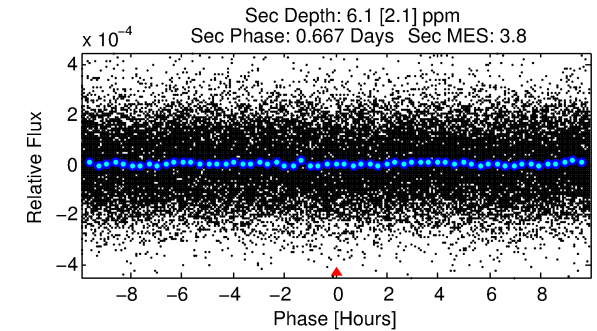
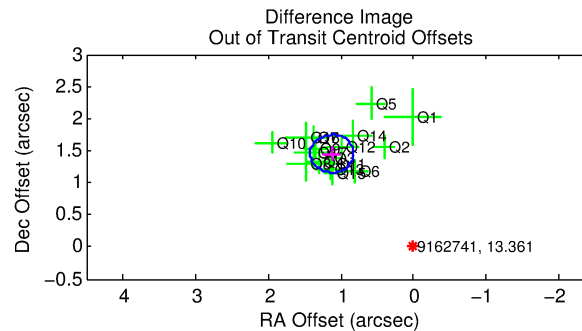
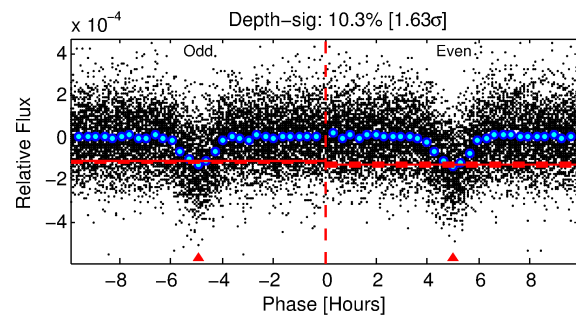
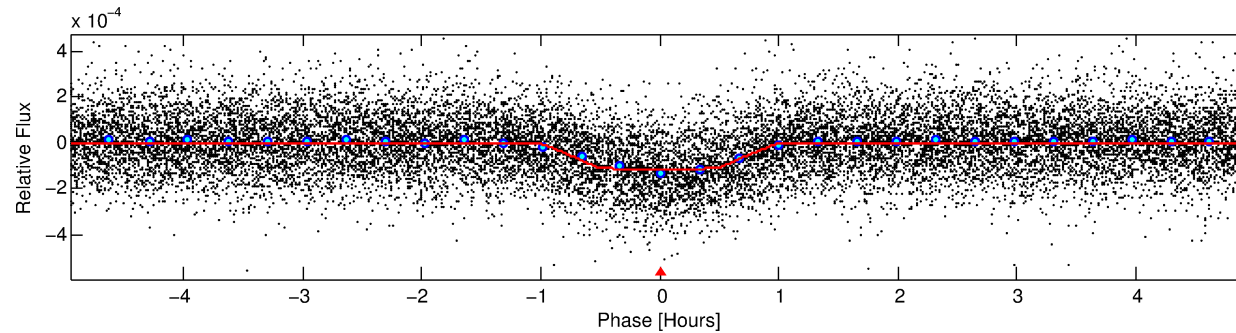
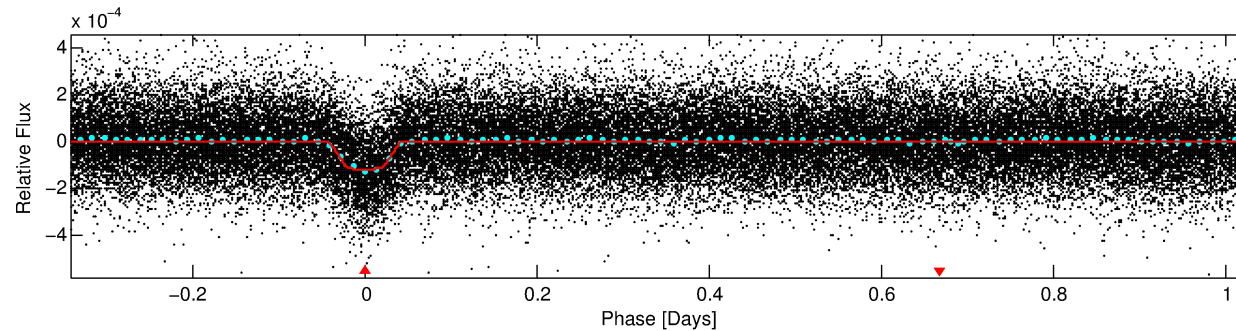
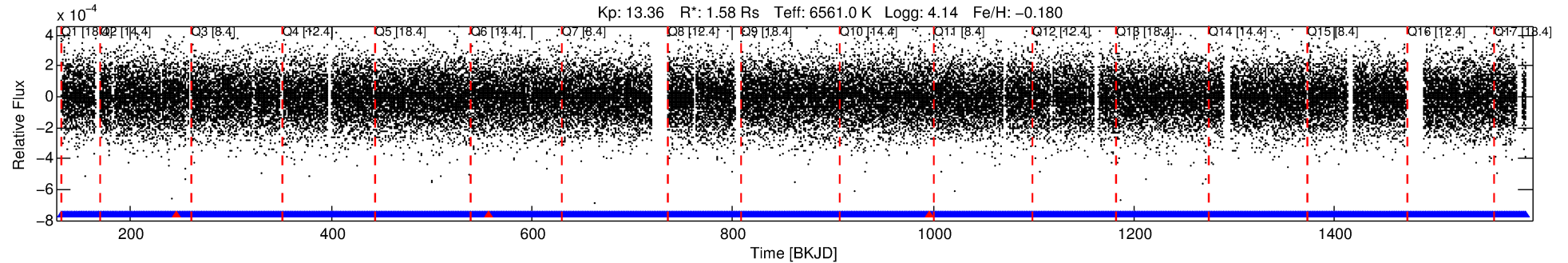
No Significant Match Found

DV One-Page Summary

KIC: 9162741 Candidate: 1 of 1 Period: 1.369 d

KOI: K00703.01 Corr: 0.982

Kp: 13.36 R*: 1.58 Rs Teff: 6561.0 K Logg: 4.14 Fe/H: -0.180



DV Fit Results:

Period = 1.36861 [0.00000] d
Epoch = 131.6314 [0.0006] BKJD
Rp/R* = 0.0117 [0.0017]
a/R* = 3.03 [2.30]
b = 0.90 [0.18]
Seff = 6122.15 [2474.79]
Teq = 2256 [228] K
Rp = 2.03 [0.69] Re
a = 0.0261 [0.0068] AU
Ag = 0.55 [0.33] [-1.36σ]
Teff = 3008 [357] K [1.78σ]

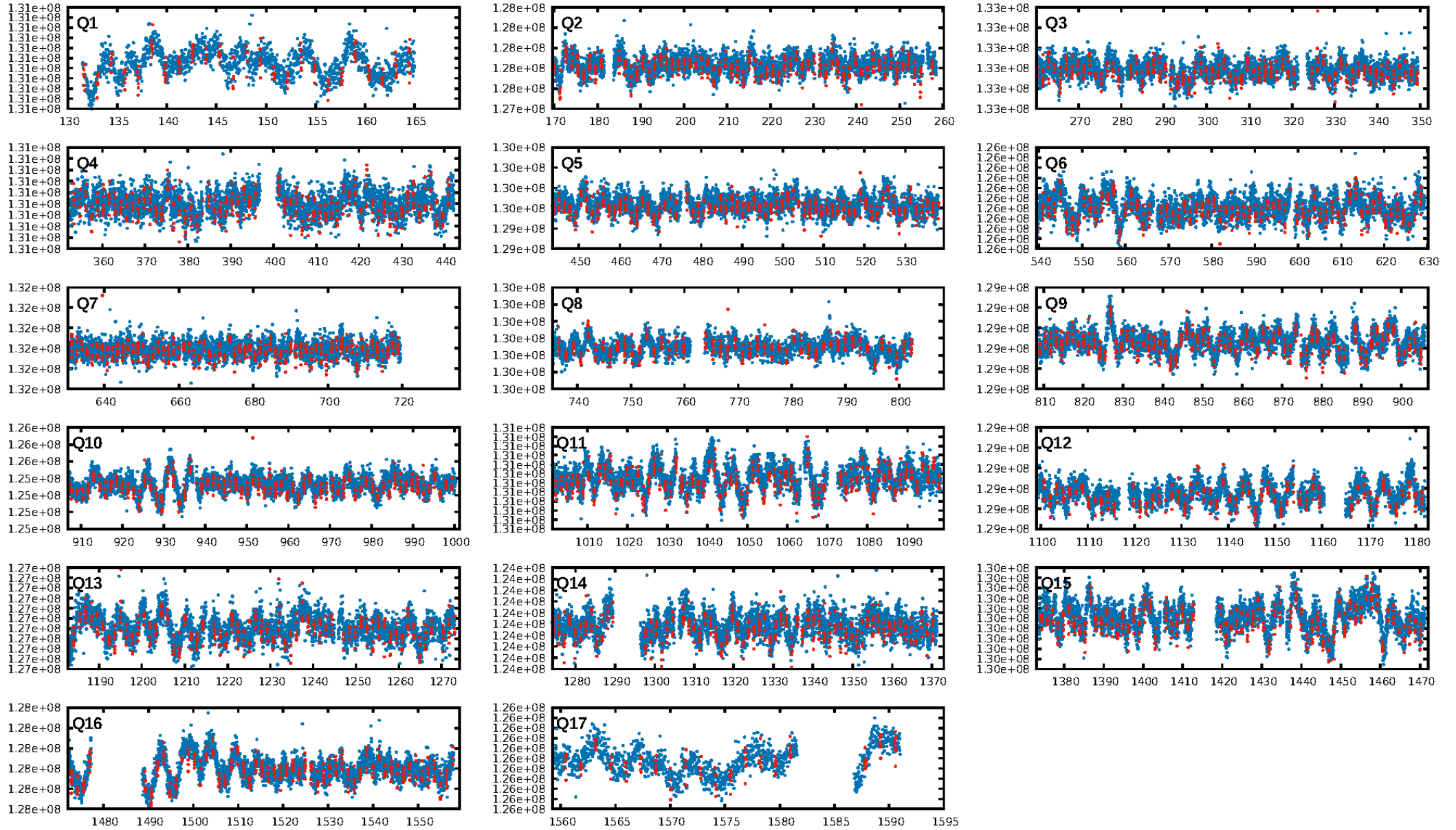
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.76e-133
RollingBand-fgt: 1.00 [931/934]
GhostDiagnostic-chr: 4.089
Centroid-sig: 0.0%
Centroid-so: 1.531 arcsec [6.00σ]
OotOffset-rm: 1.836 arcsec [18.68σ]
KicOffset-rm: 1.819 arcsec [18.49σ]
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]

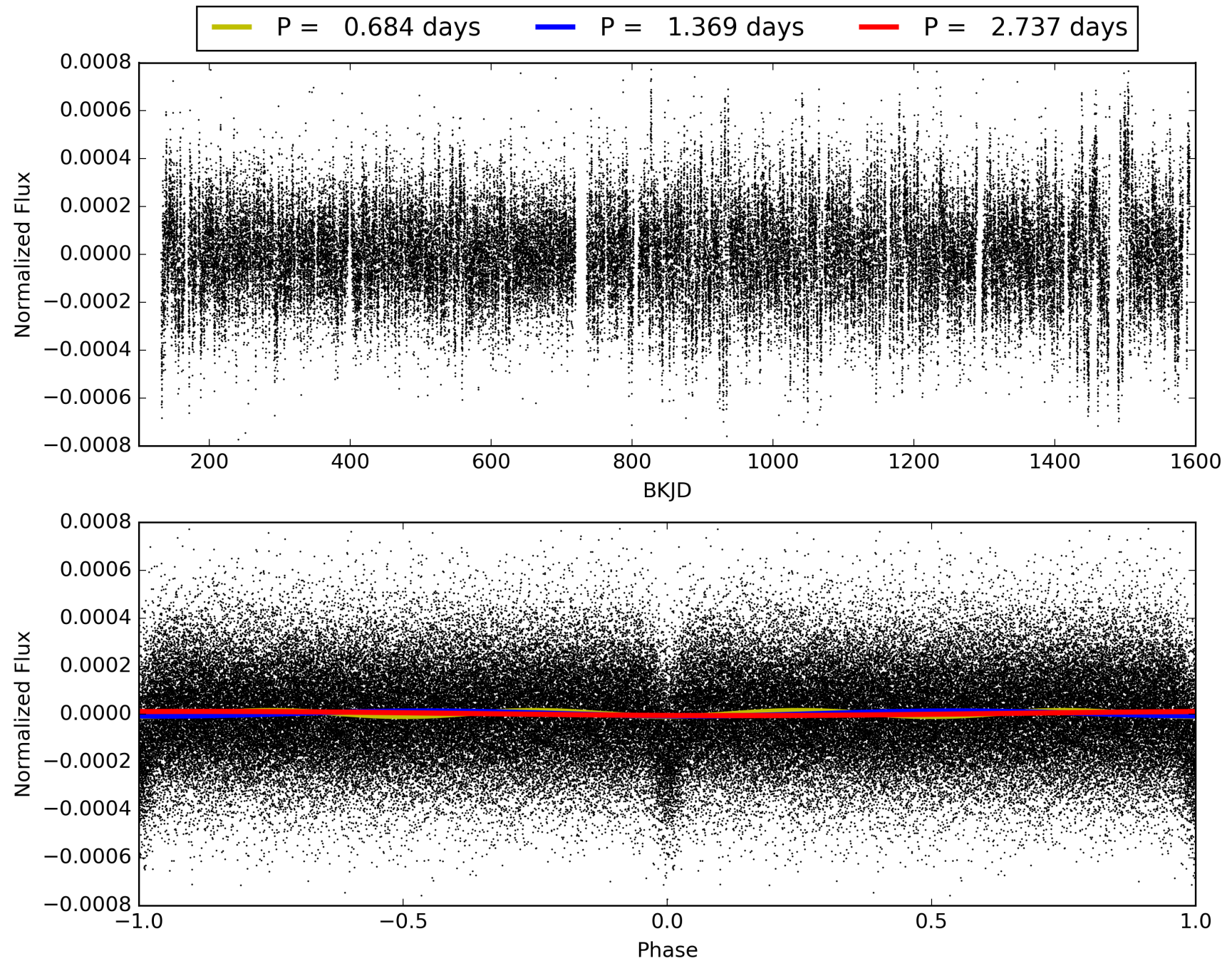
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:11:50 Z

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

TCE 009162741-01, PDC Light Curves

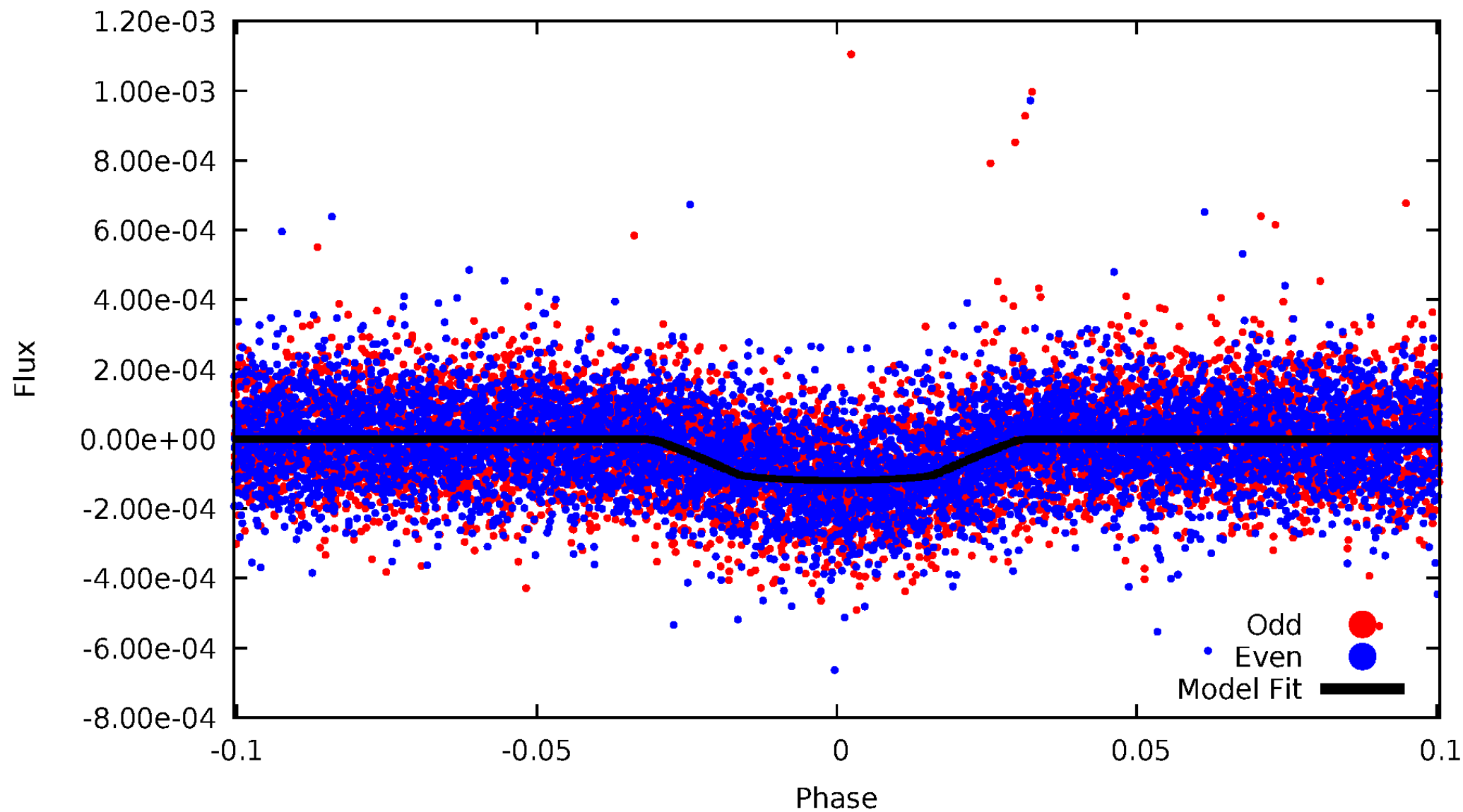


TCE 009162741-01



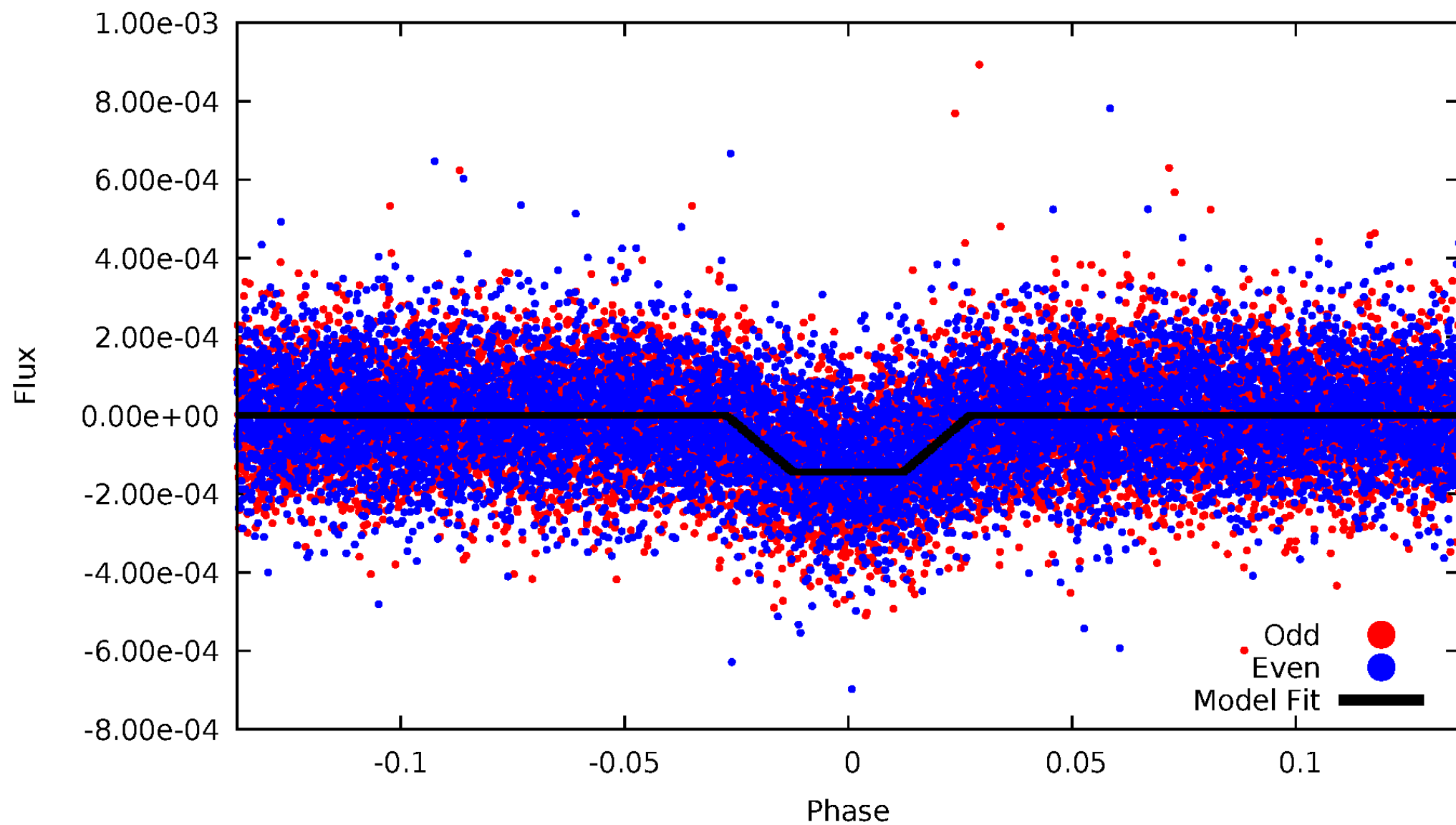
DV Odd/Even

TCE 009162741-01



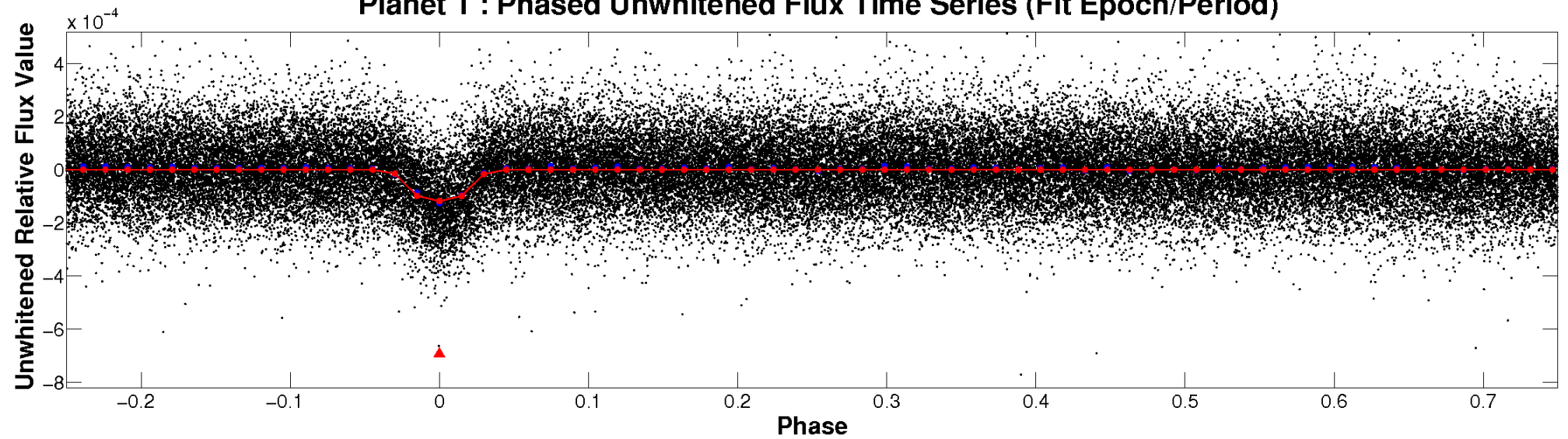
ALT Odd/Even

TCE 009162741-01

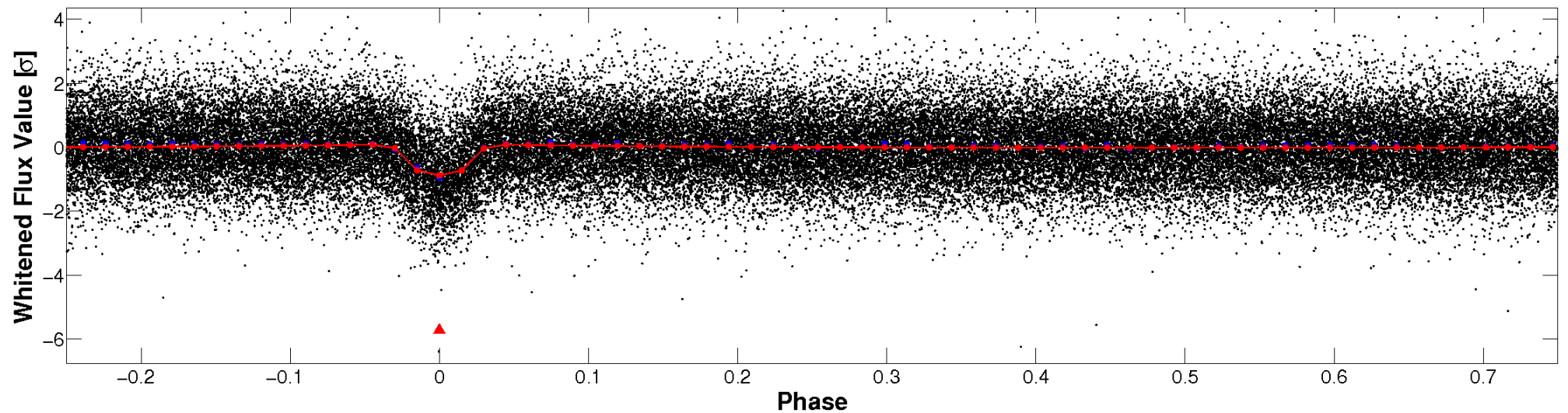


Non-Whitened Vs. Whitened Light Curve

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

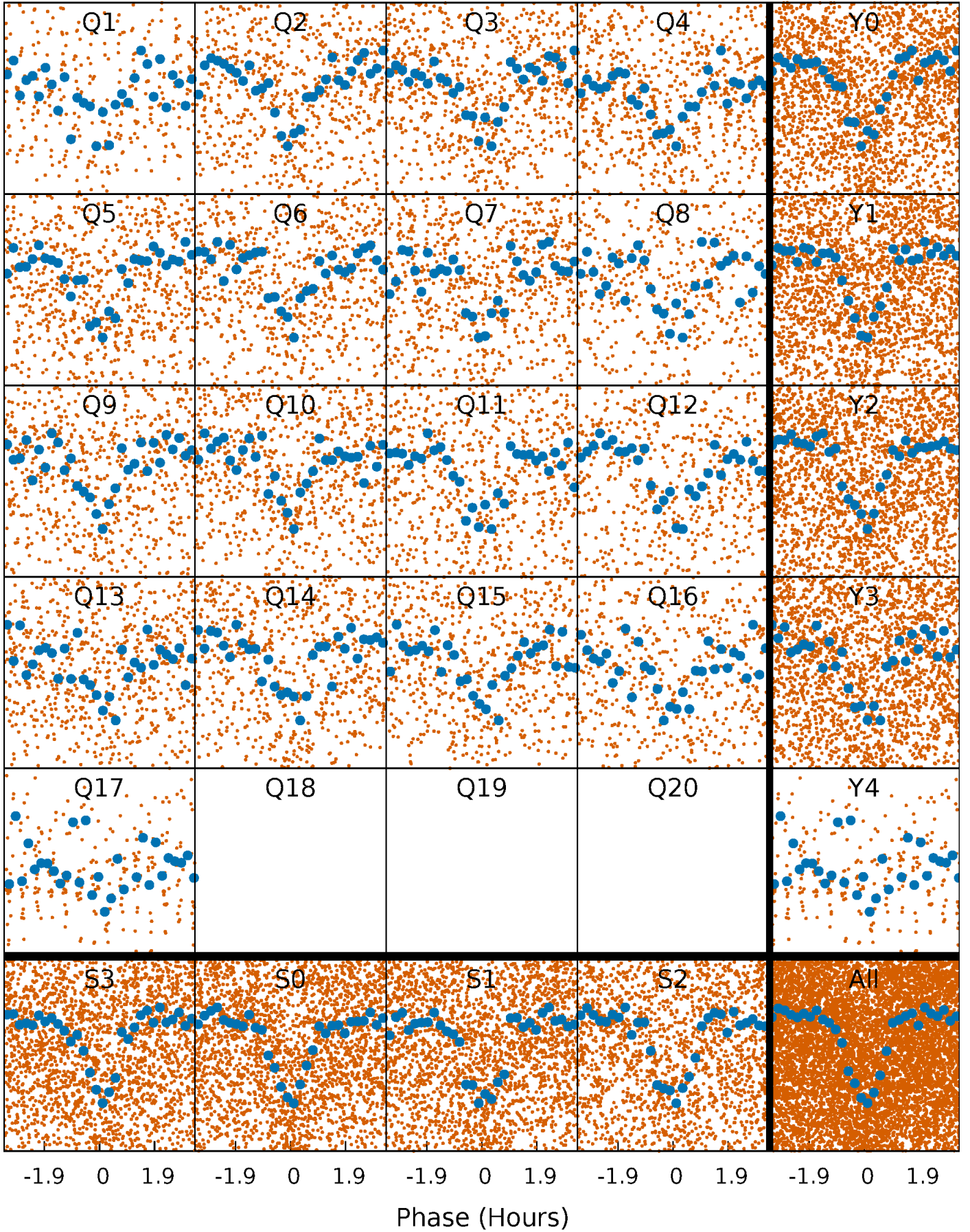


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



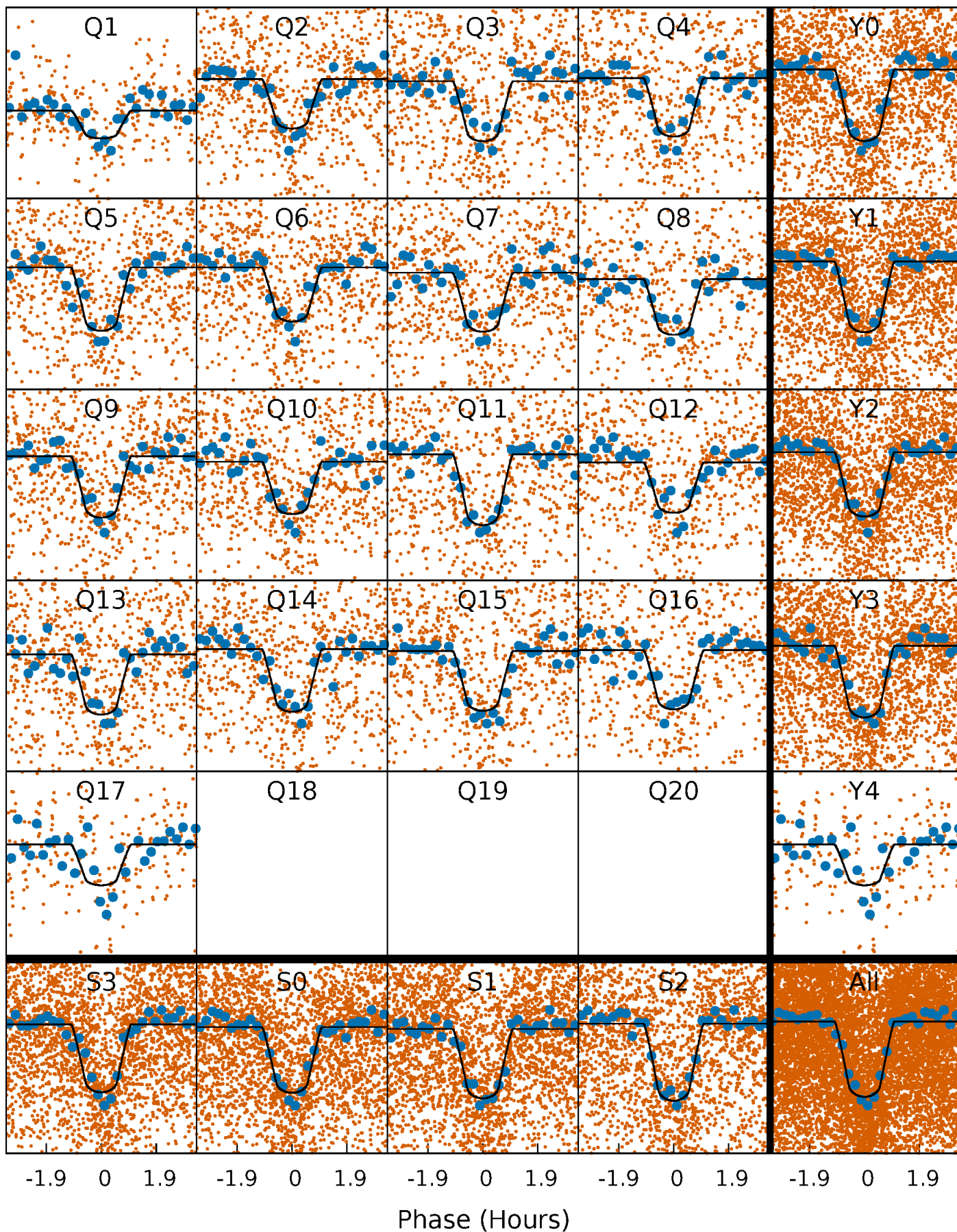
PDC Quarter-Phased Transit Curves

TCE 009162741-01 P= 1.368613 Days $T_0=131.631361$ (BKJD)



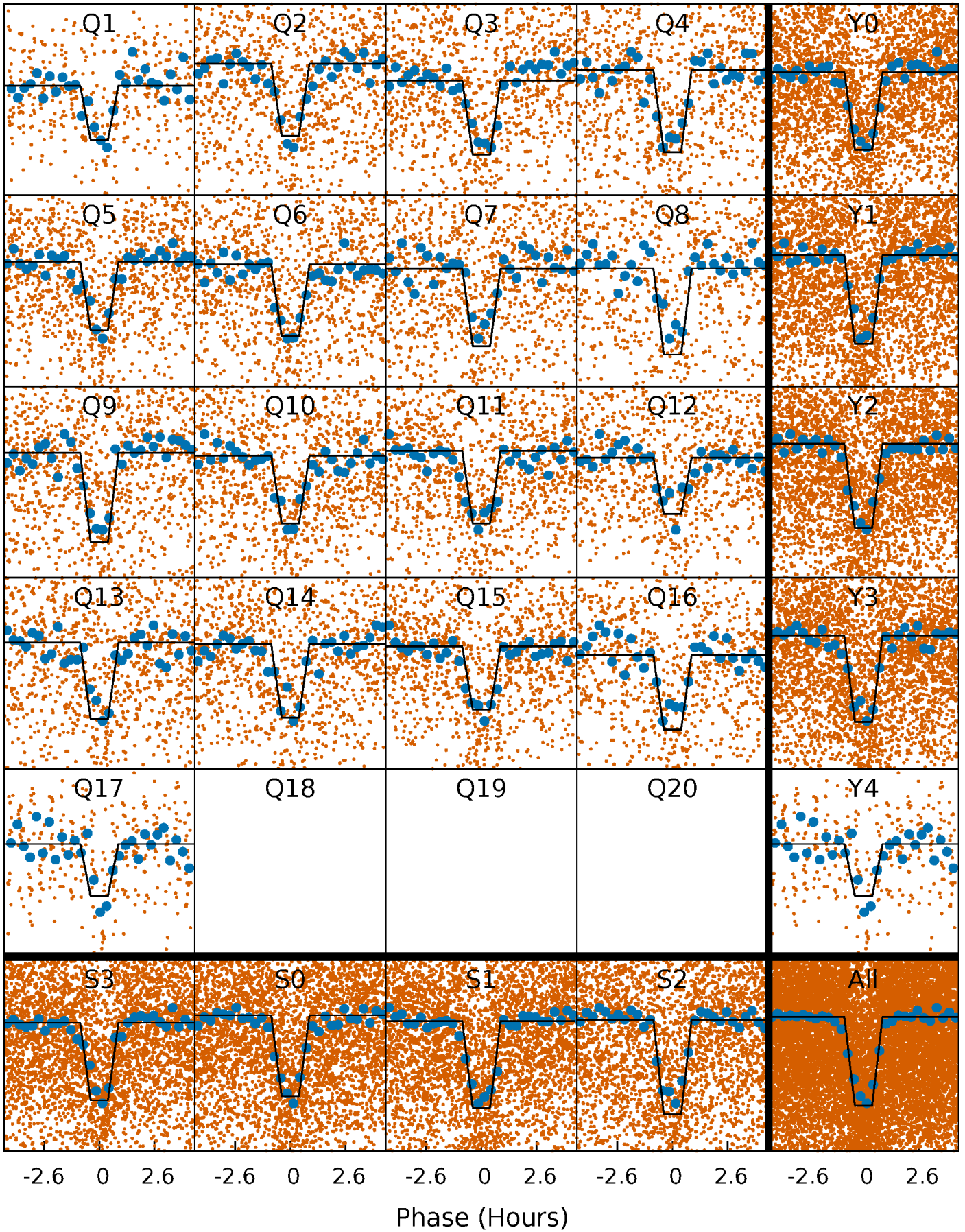
DV Quarter-Phased Transit Curves

TCE 009162741-01 P= 1.368613 Days $T_0=131.631361$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

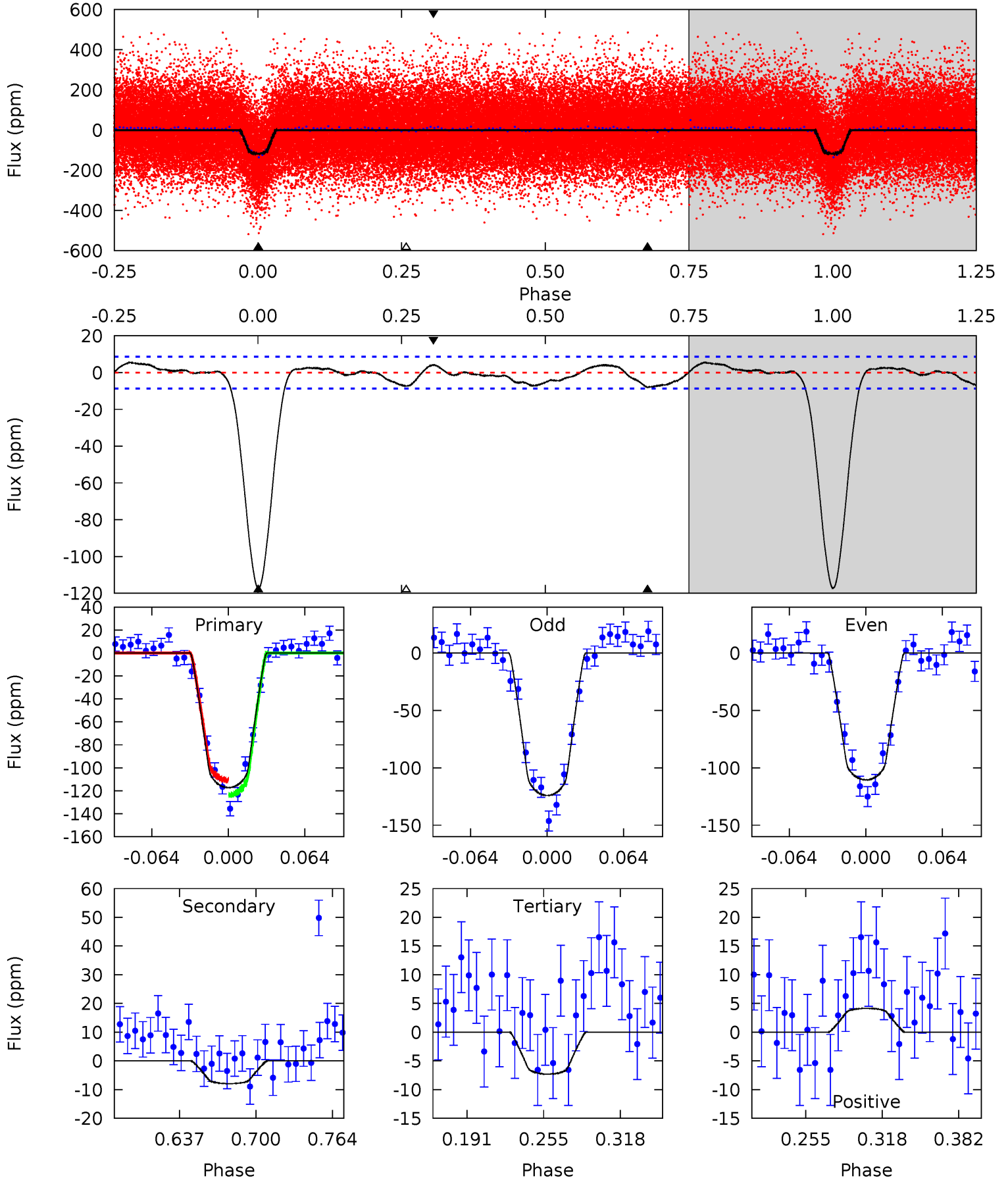
TCE 009162741-01 P= 1.368619 Days $T_0=131.629295$ (BKJD)



DV Model-Shift Uniqueness Test

009162741-01, P = 1.368613 Days, E = 130.262748 Days

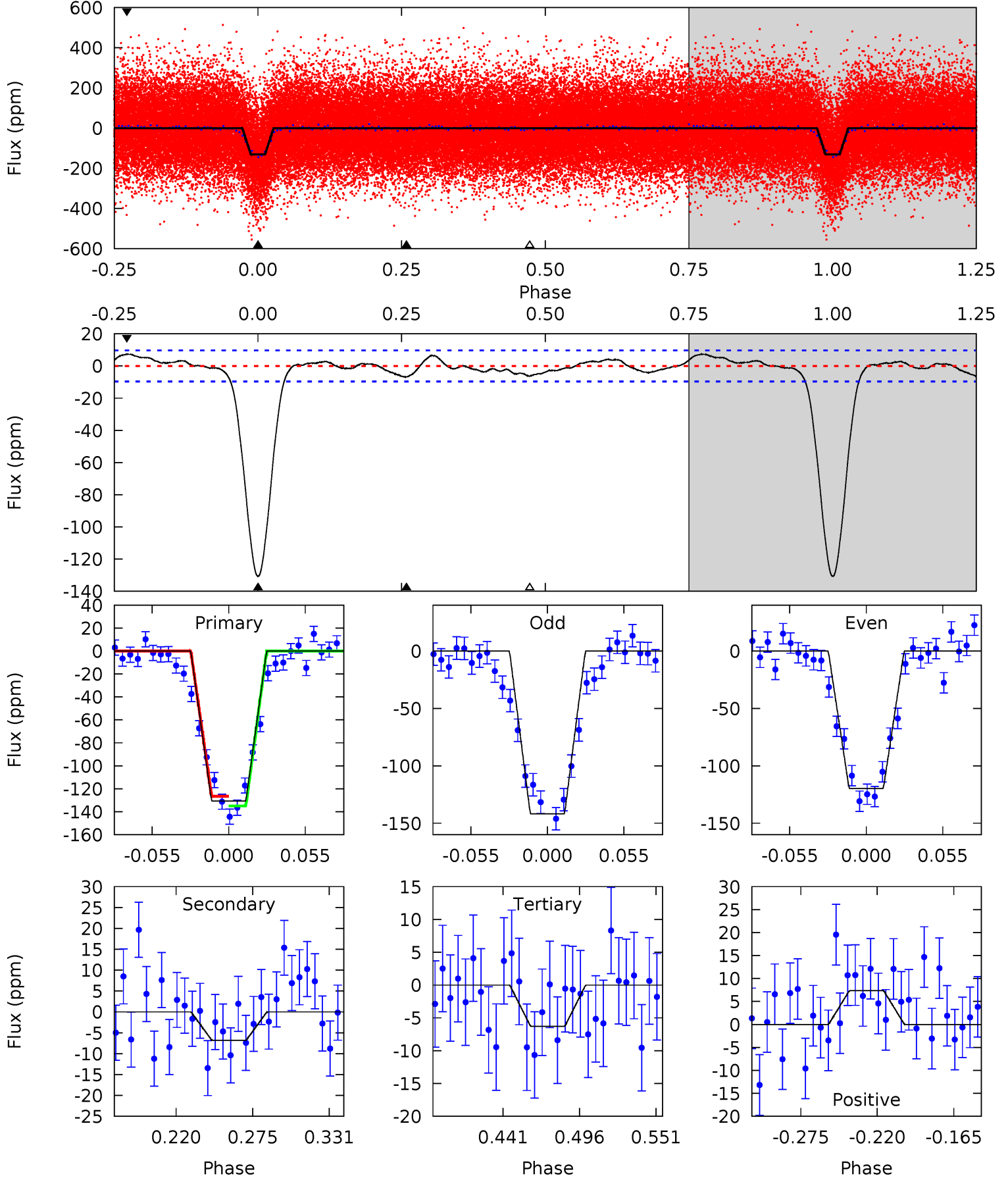
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.1	4.27	3.94	2.23	4.66	1.85	1.72	59.2	60.9	0.34	2.05	3.65	0.98	0.05	3.44



Alt Model-Shift Uniqueness Test

009162741-01, P = 1.368619 Days, E = 130.260676 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.4	3.30	3.05	3.56	4.69	1.92	1.46	60.3	59.8	0.25	-0.26	5.36	1.01	0.05	2.04



Stellar Parameters For KIC 009162741

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6561^{+181}_{-227}	$4.140^{+0.209}_{-0.171}$	$-0.180^{+0.250}_{-0.300}$	$1.584^{+0.483}_{-0.439}$	$1.272^{+0.181}_{-0.221}$	$0.451^{+0.496}_{-0.223}$
	+3%/-3%	+5%/-4%	+139%/-167%	+30%/-28%	+14%/-17%	+110%/-50%
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 009162741-01 / KOI 0703.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-8 ± 2	$2.01^{+0.48}_{-0.40}$	3143^{+259}_{-248}	3321^{+334}_{-445}	$0.721^{+0.444}_{-0.291}$
Alt.	-7 ± 2	$2.06^{+0.48}_{-0.39}$	3142^{+244}_{-236}	3136^{+356}_{-685}	$0.579^{+0.356}_{-0.238}$

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

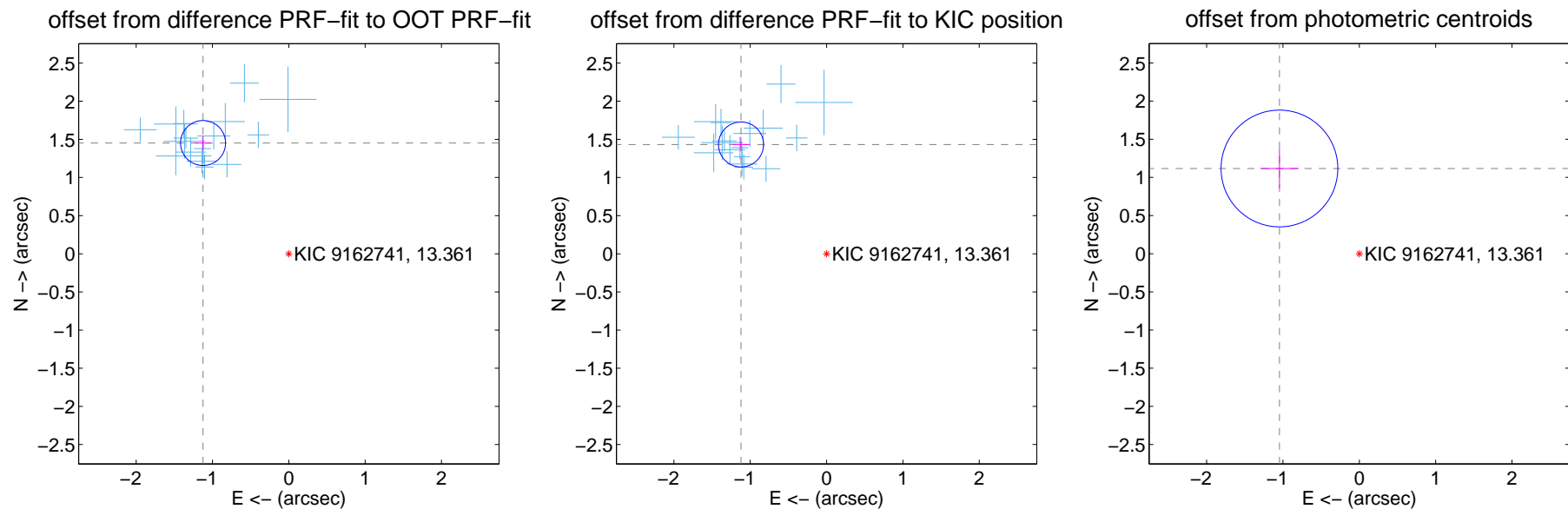
DV Centroid Data

Supplemental centroid analysis for 009162741-01. Kepler magnitude: 13.36. Transit SNR 41.49

There are 17 quarters with good PRF difference image offsets

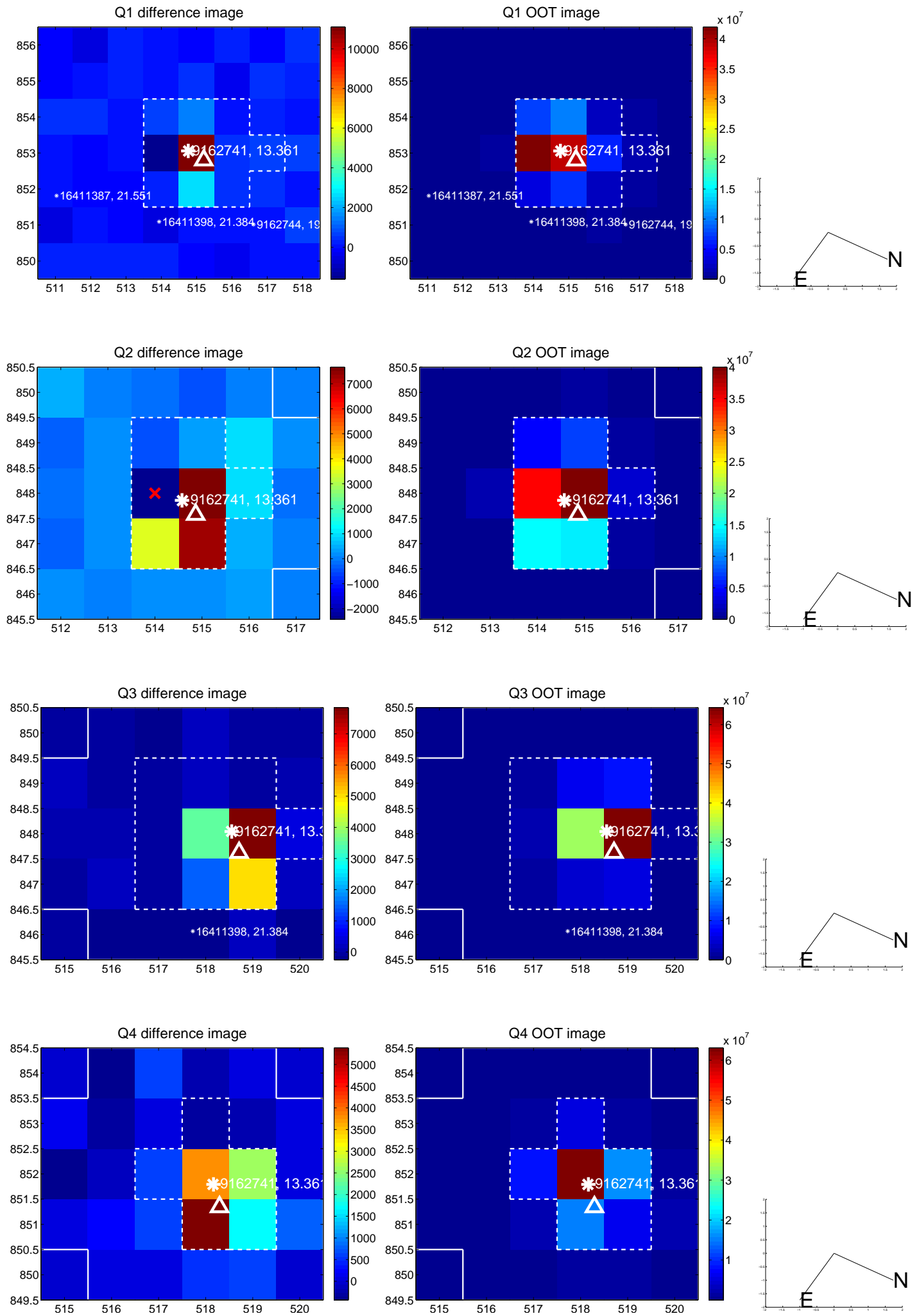
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.836 ± 0.098	18.68	1.124 ± 0.109	1.452 ± 0.091
PRF-fit source offset from KIC position	1.819 ± 0.098	18.49	1.121 ± 0.109	1.433 ± 0.092
photometric centroid source offset	1.53 ± 0.25	6.00	1.05 ± 0.25	1.12 ± 0.26

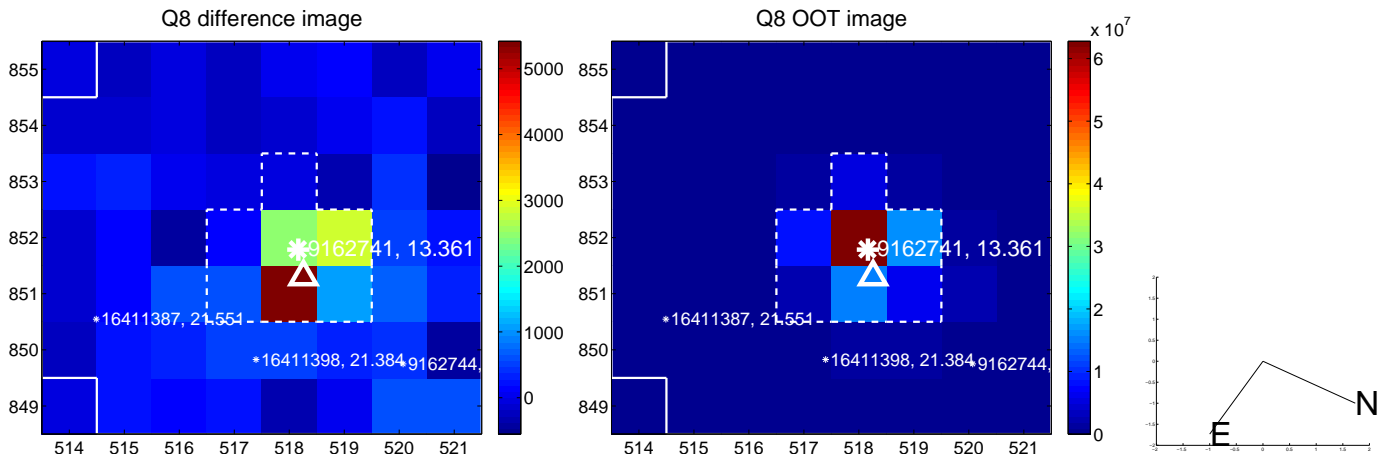
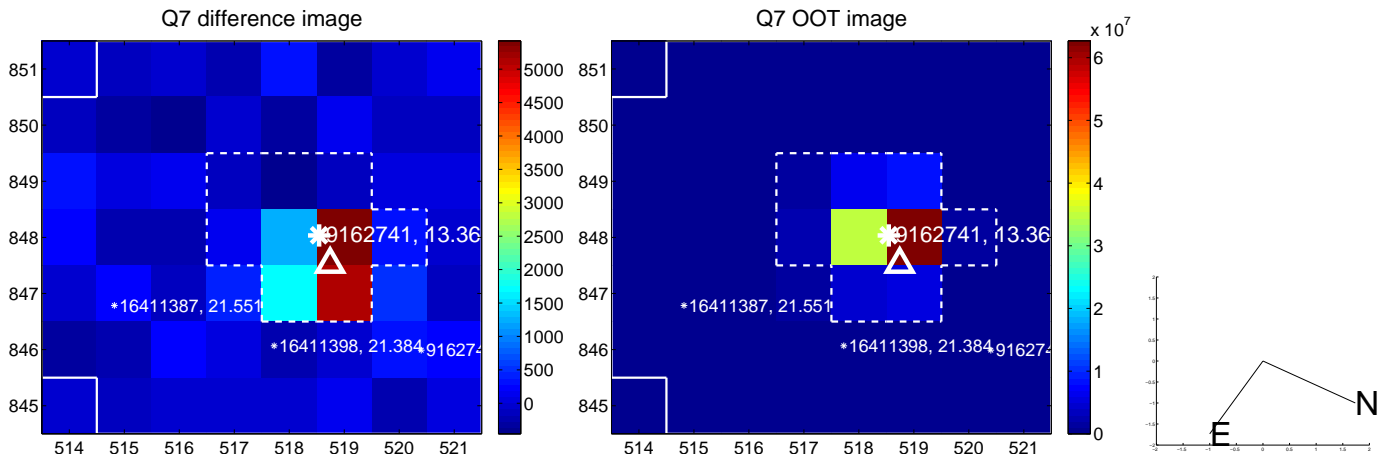
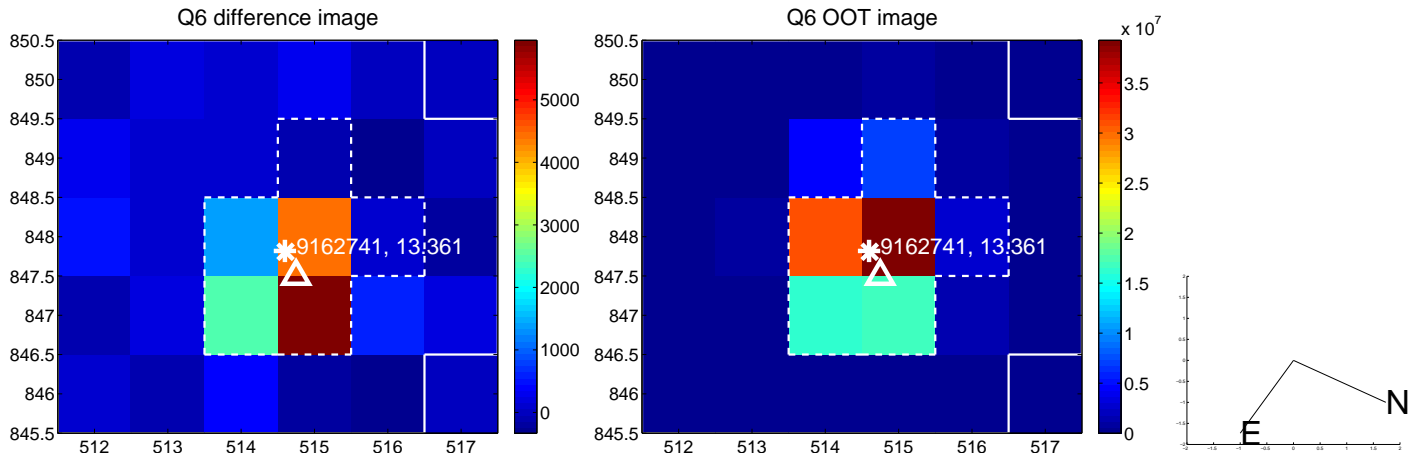
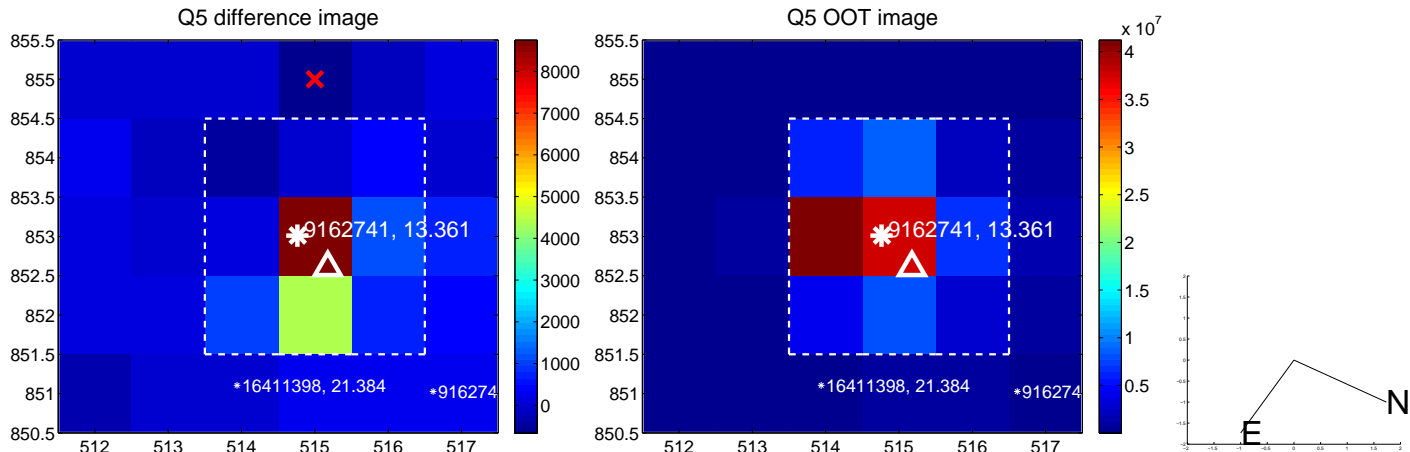


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

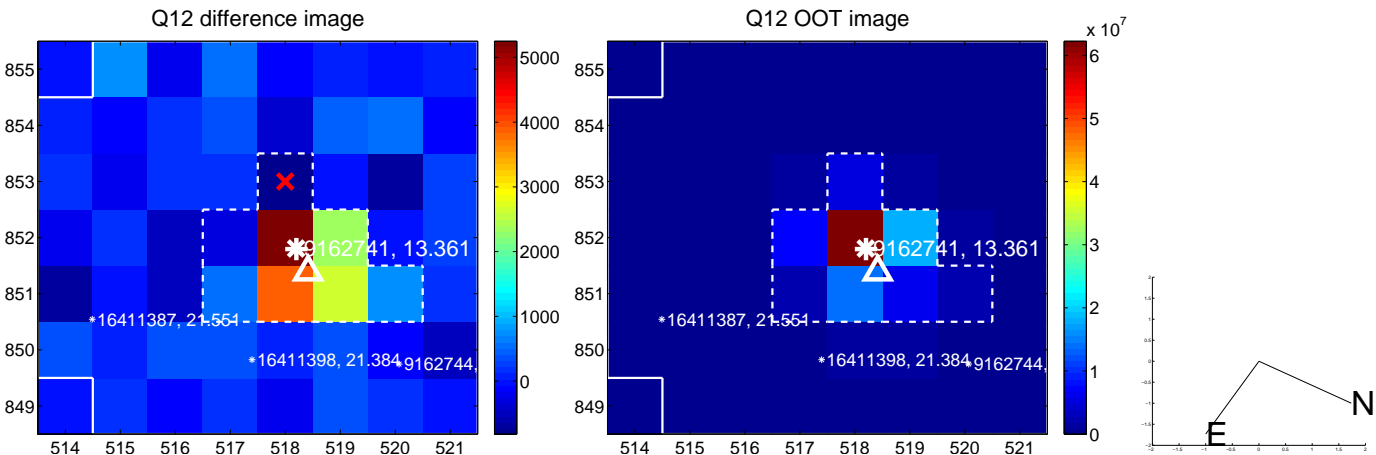
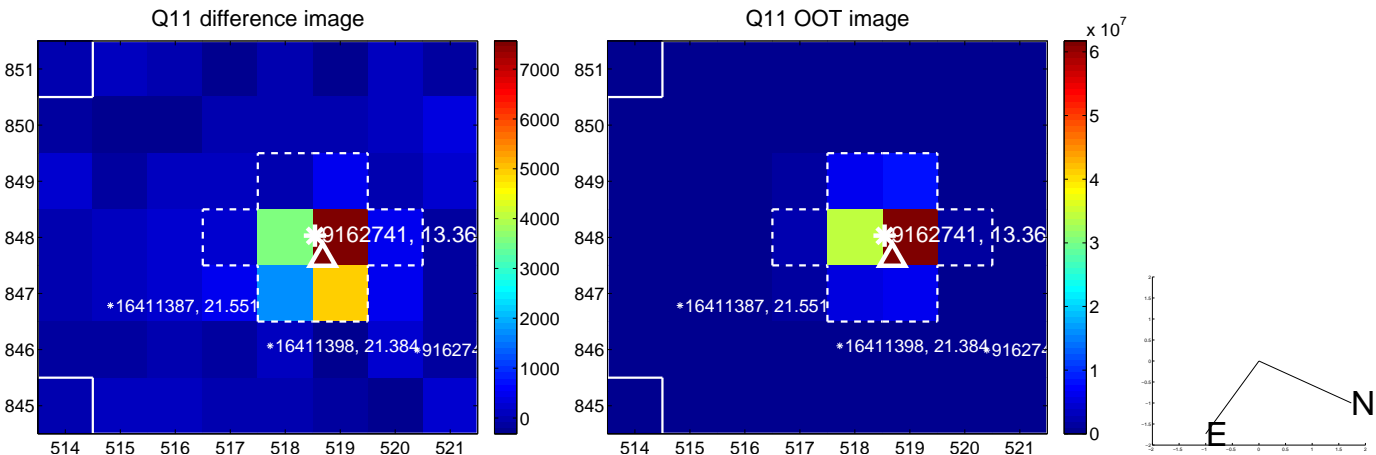
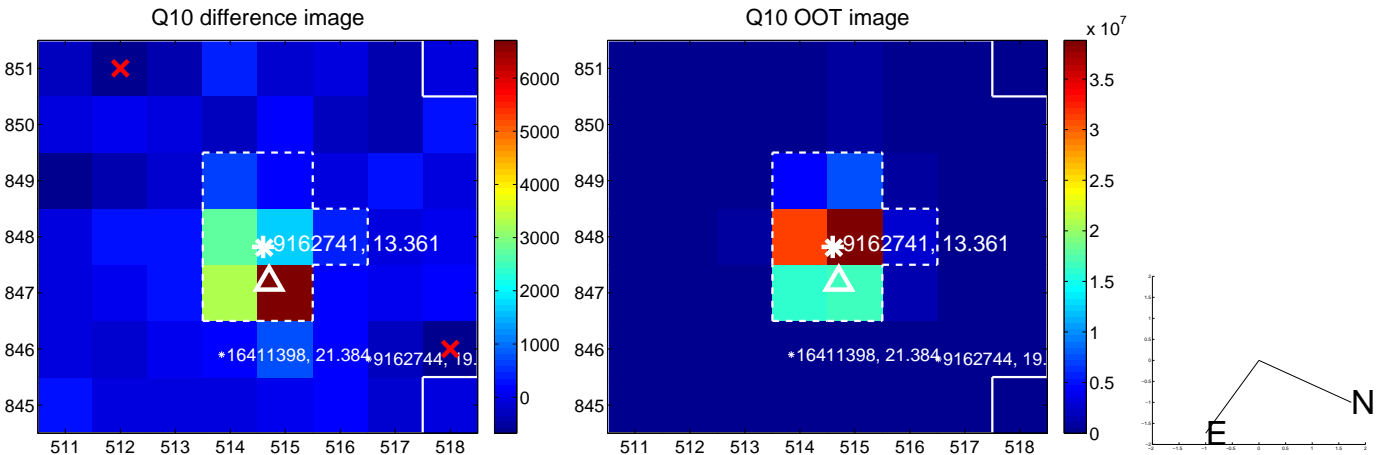
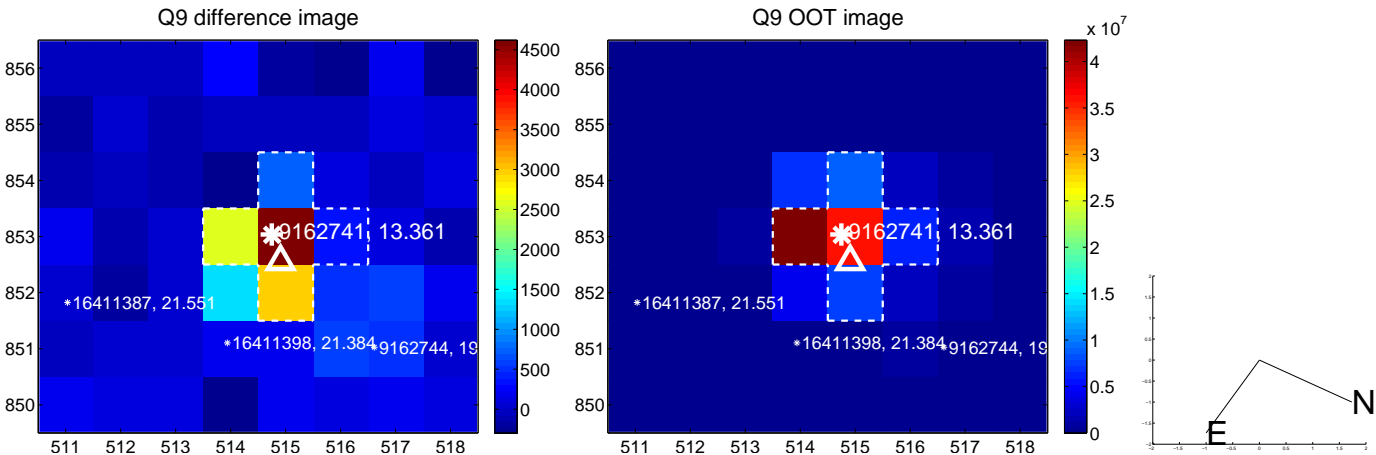
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



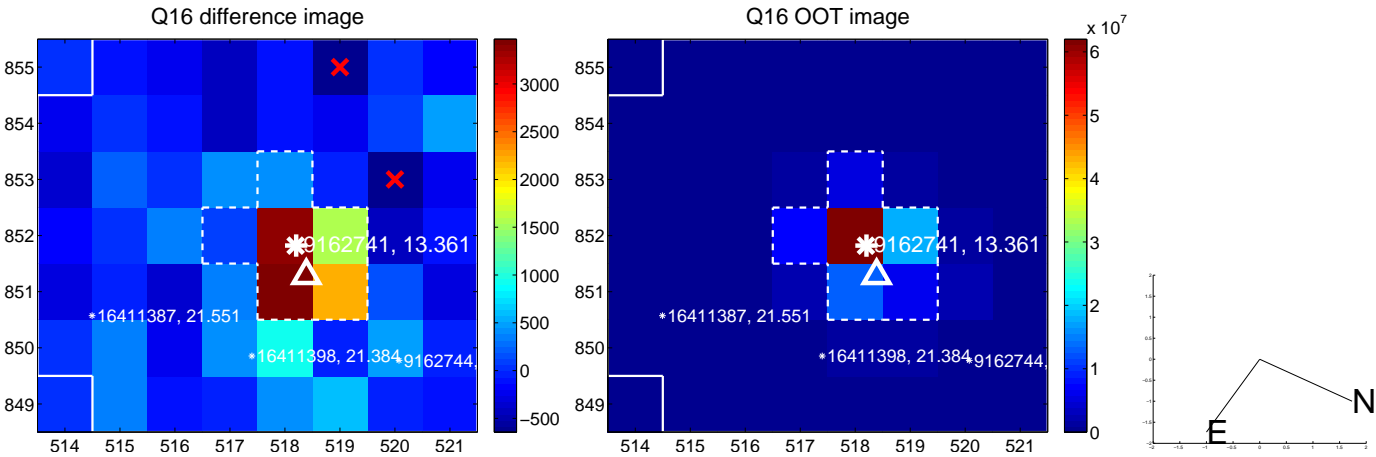
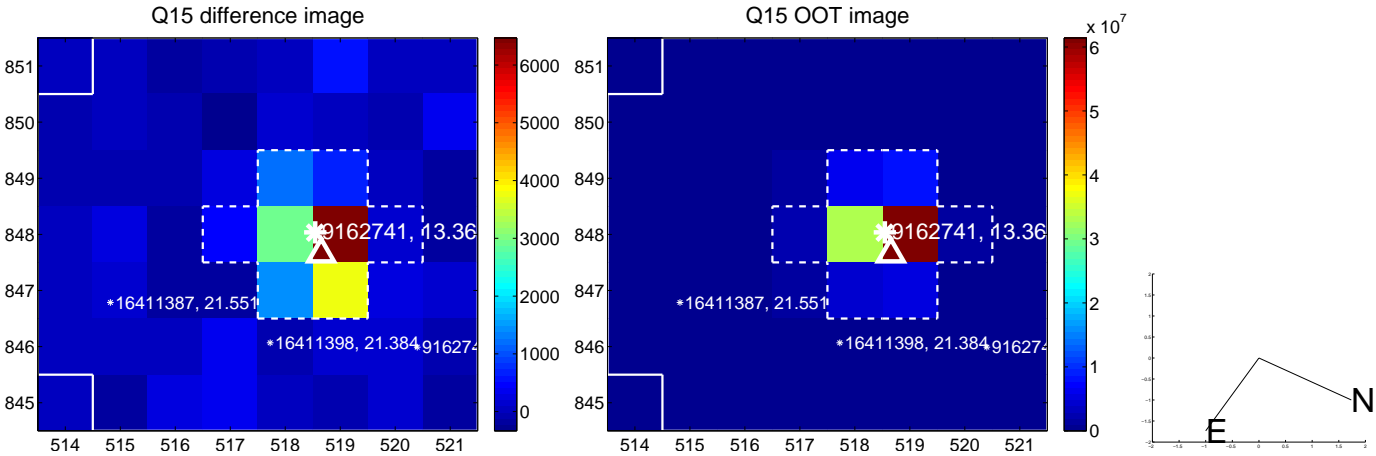
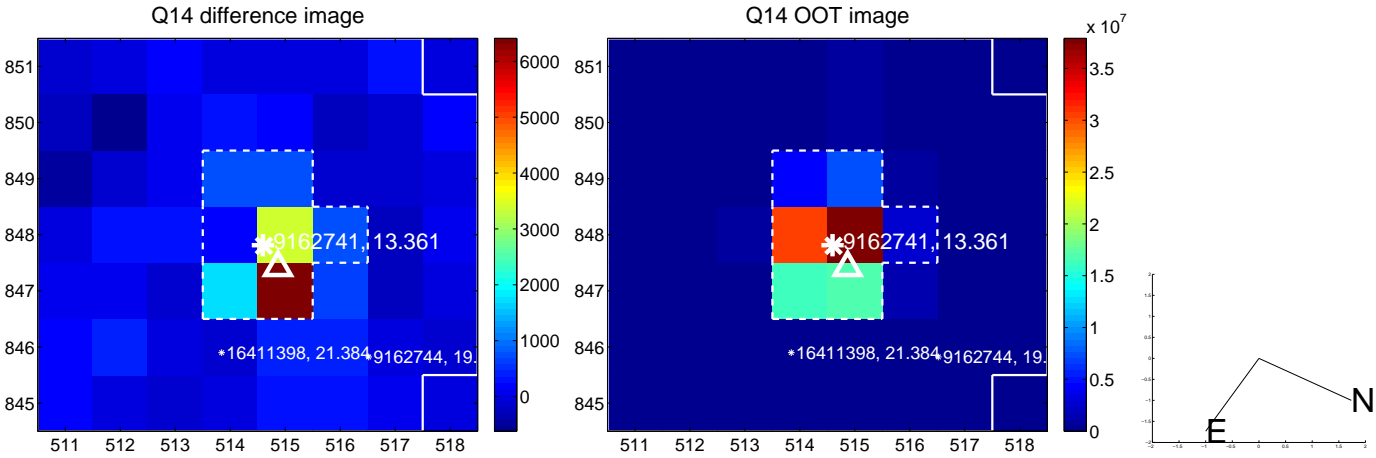
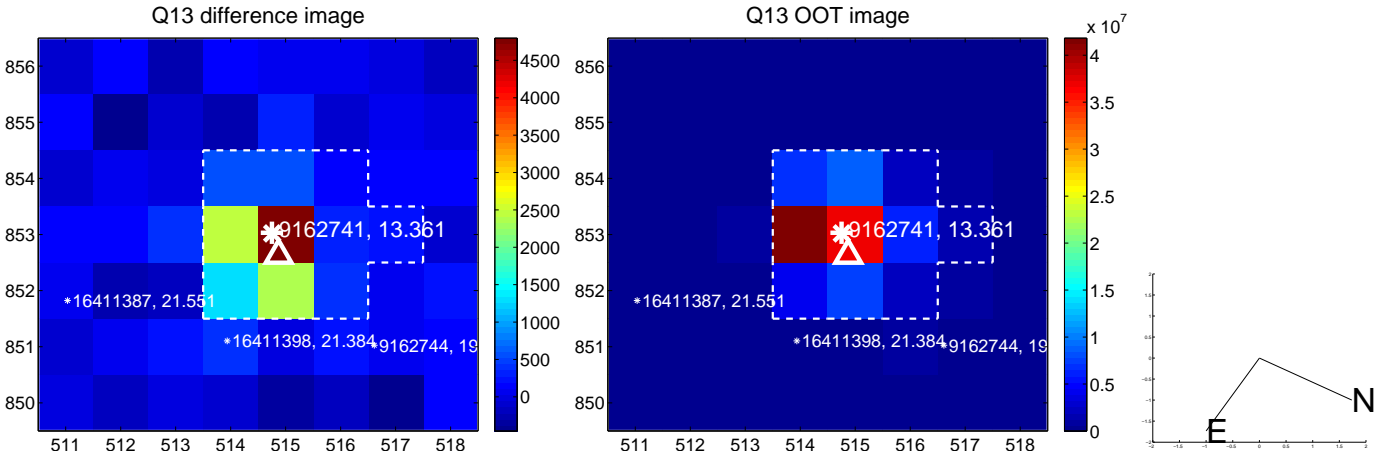
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



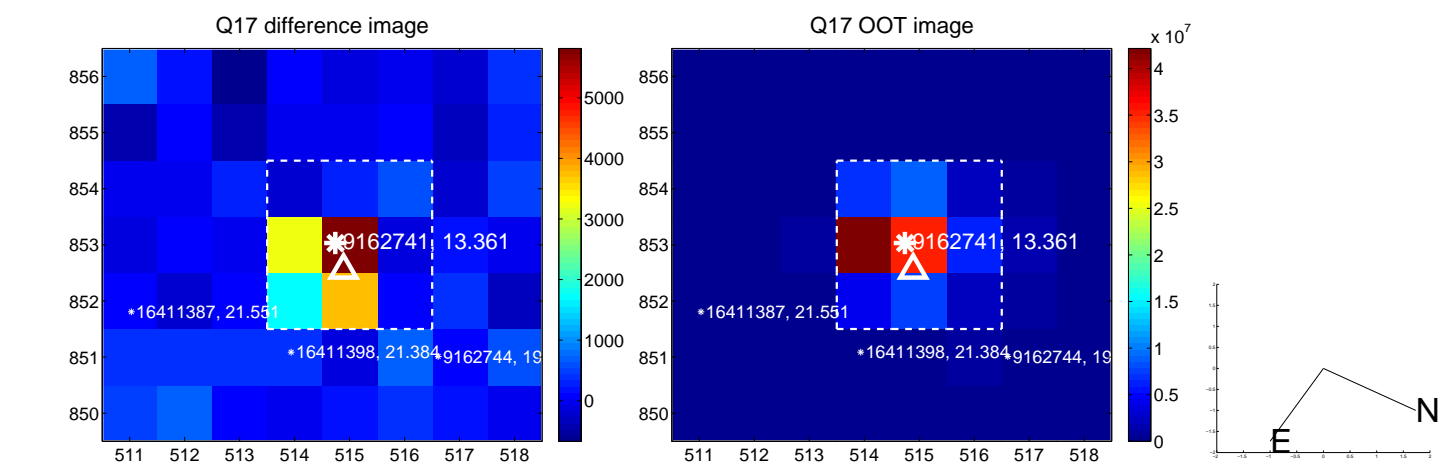
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



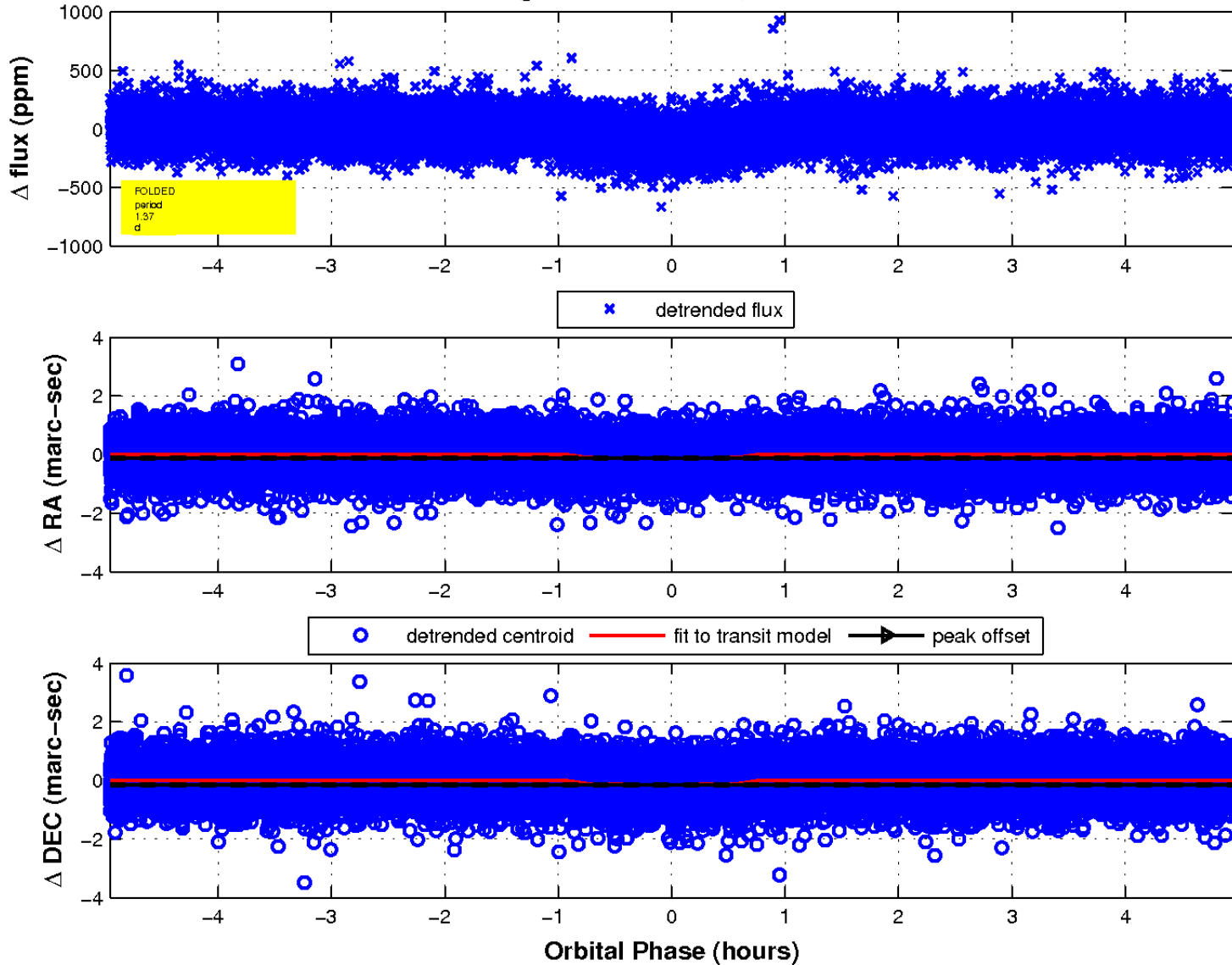
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

