

KIC 010214162

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})
010214162-01	OBS	1724.01	17.423906	148.827591	731.3	4.504	29.2	30.6	0.97	6018	3.03	64.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010214162-01	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 010214162-01

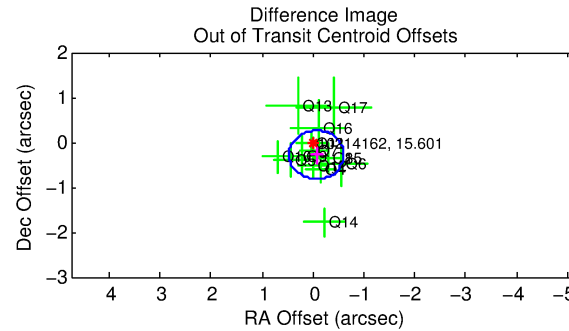
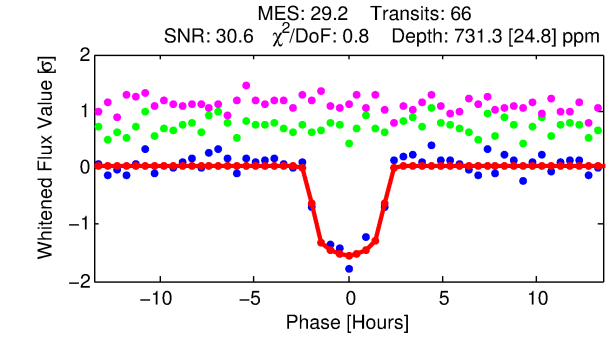
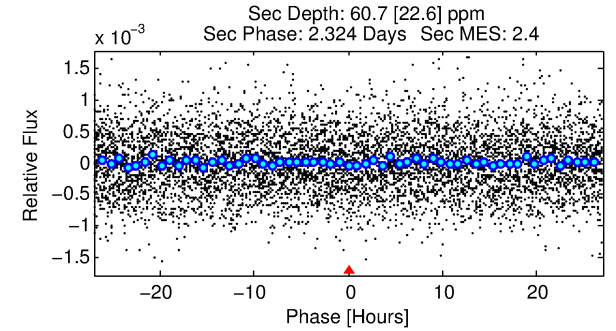
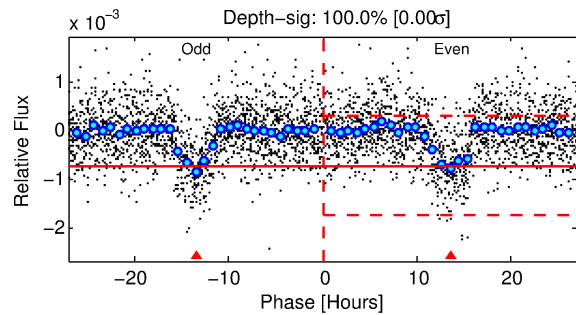
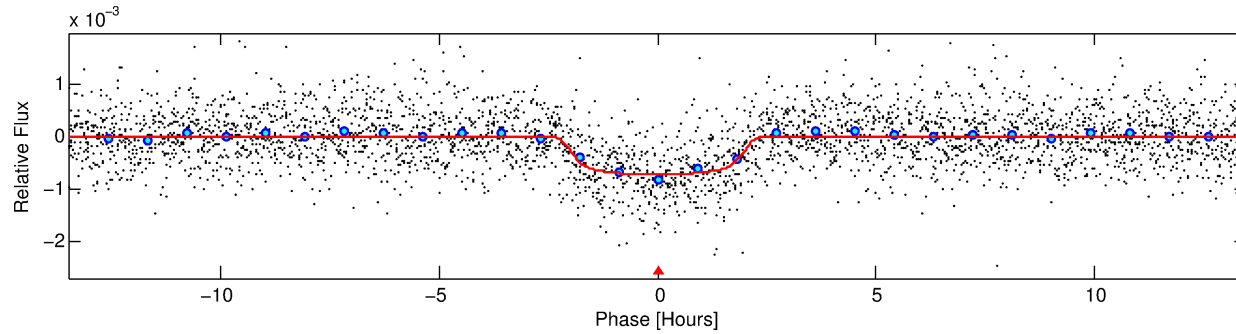
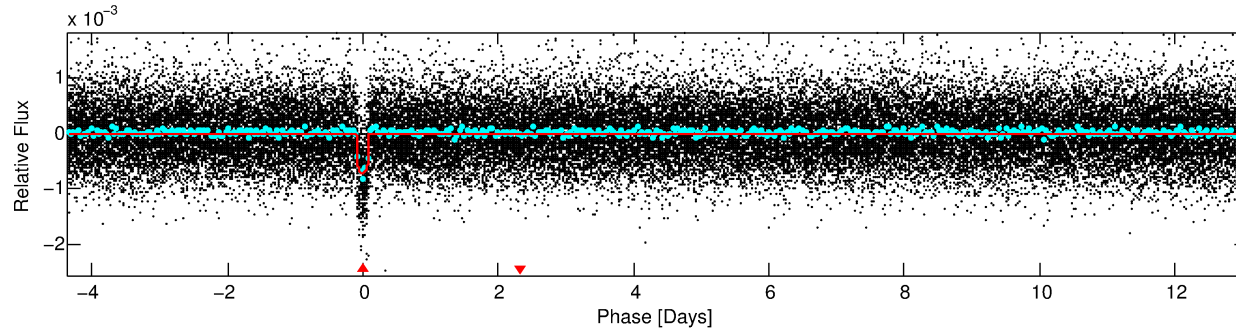
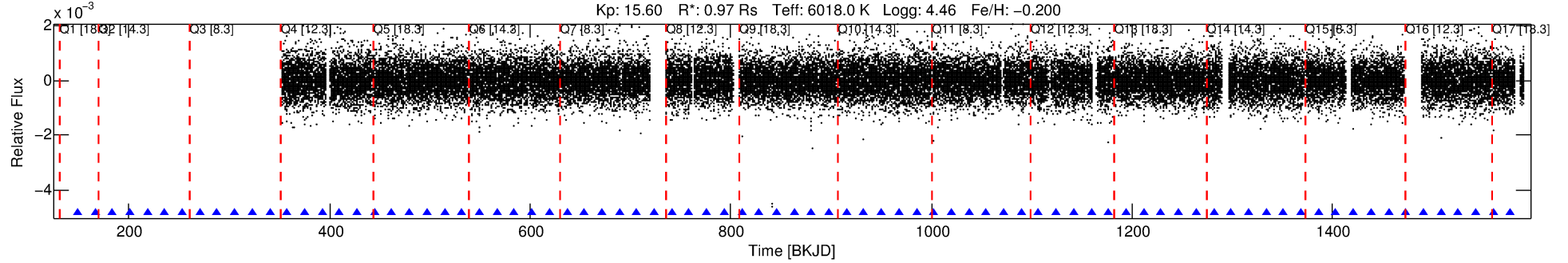
No Significant Match Found

DV One-Page Summary

KIC: 10214162 Candidate: 1 of 1 Period: 17.424 d

KOI: K01724.01 Corr: 0.962

Kp: 15.60 R*: 0.97 Rs Teff: 6018.0 K Logg: 4.46 Fe/H: -0.200



DV Fit Results:

Period = 17.42391 [0.00008] d
Epoch = 148.8276 [0.0041] BKJD
Rp/R* = 0.0286 [0.0022]
a/R* = 16.00 [5.80]
b = 0.88 [0.10]
Seff = 64.28 [26.64]
Teq = 722 [75] K
Rp = 3.03 [0.98] Re
a = 0.1310 [0.0347] AU
Ag = 62.56 [34.82] [1.77σ]
Teffp = 3139 [338] K [6.99σ]

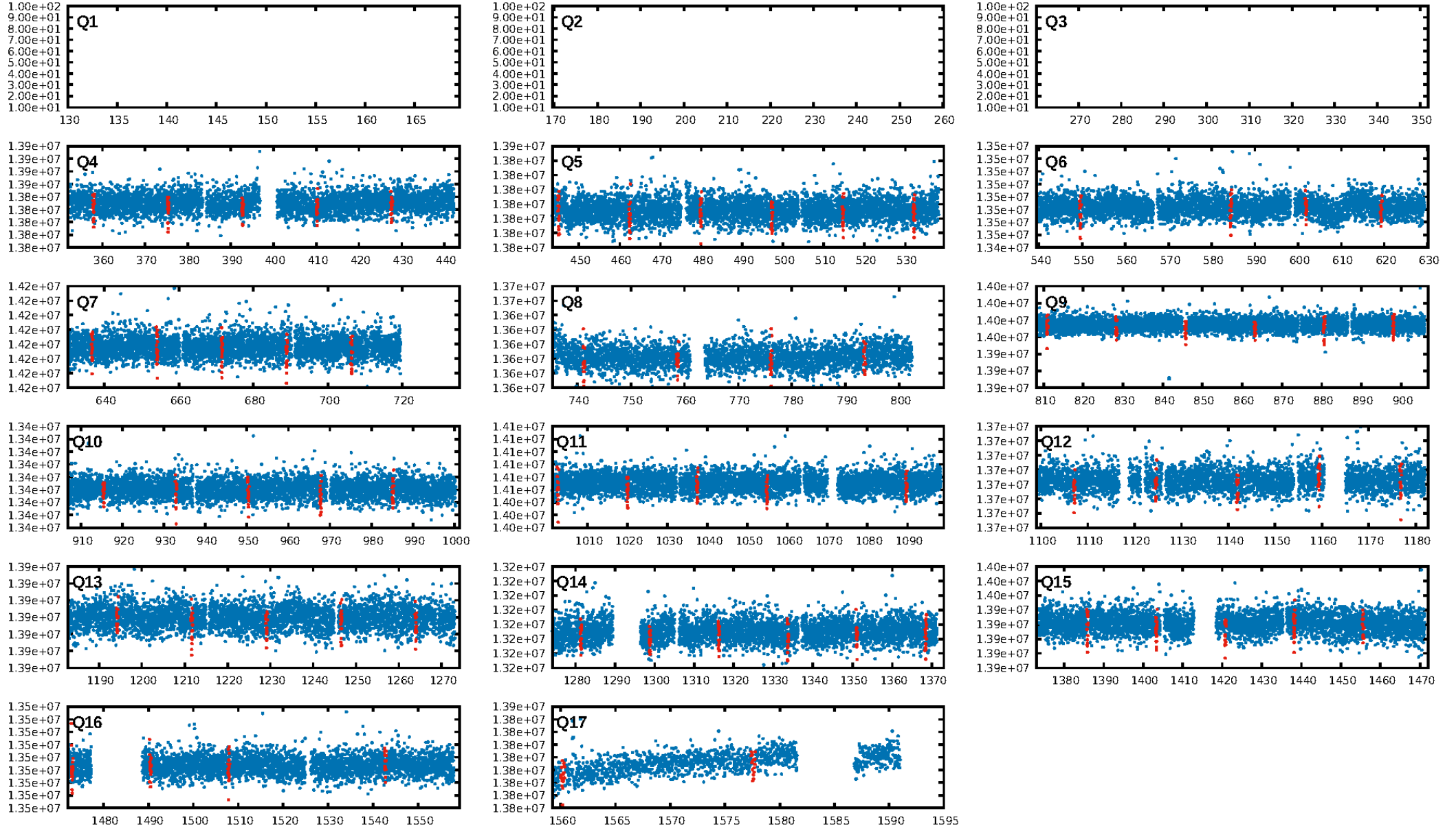
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.24e-182
RollingBand-fgt: 1.00 [64/64]
GhostDiagnostic-chr: 3.15
Centroid-sig: 4.7%
Centroid-so: 0.666 arcsec [1.52σ]
OotOffset-rm: 0.290 arcsec [1.61σ]
KicOffset-rm: 0.506 arcsec [3.03σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

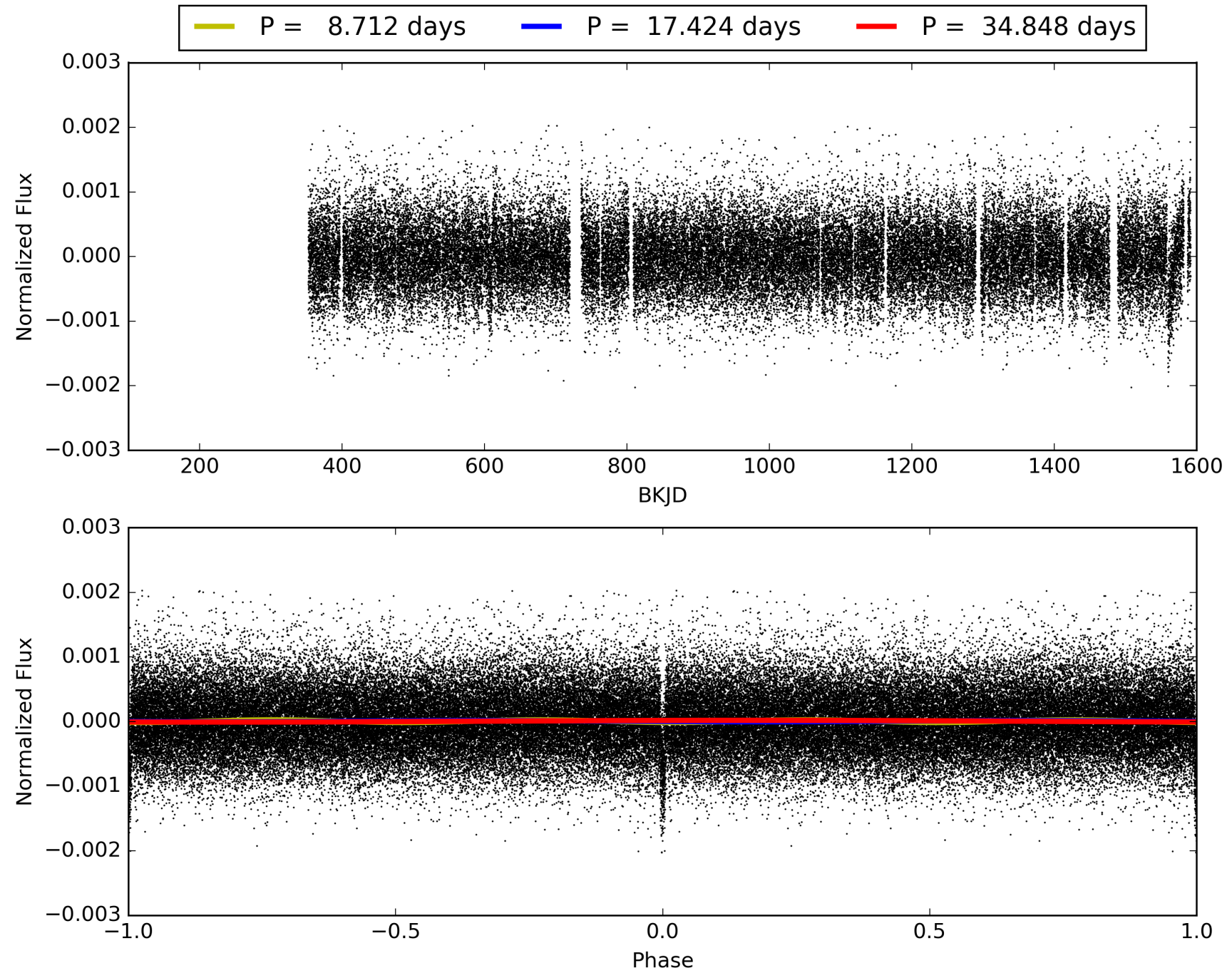
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:37:17 Z

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

TCE 010214162-01, PDC Light Curves

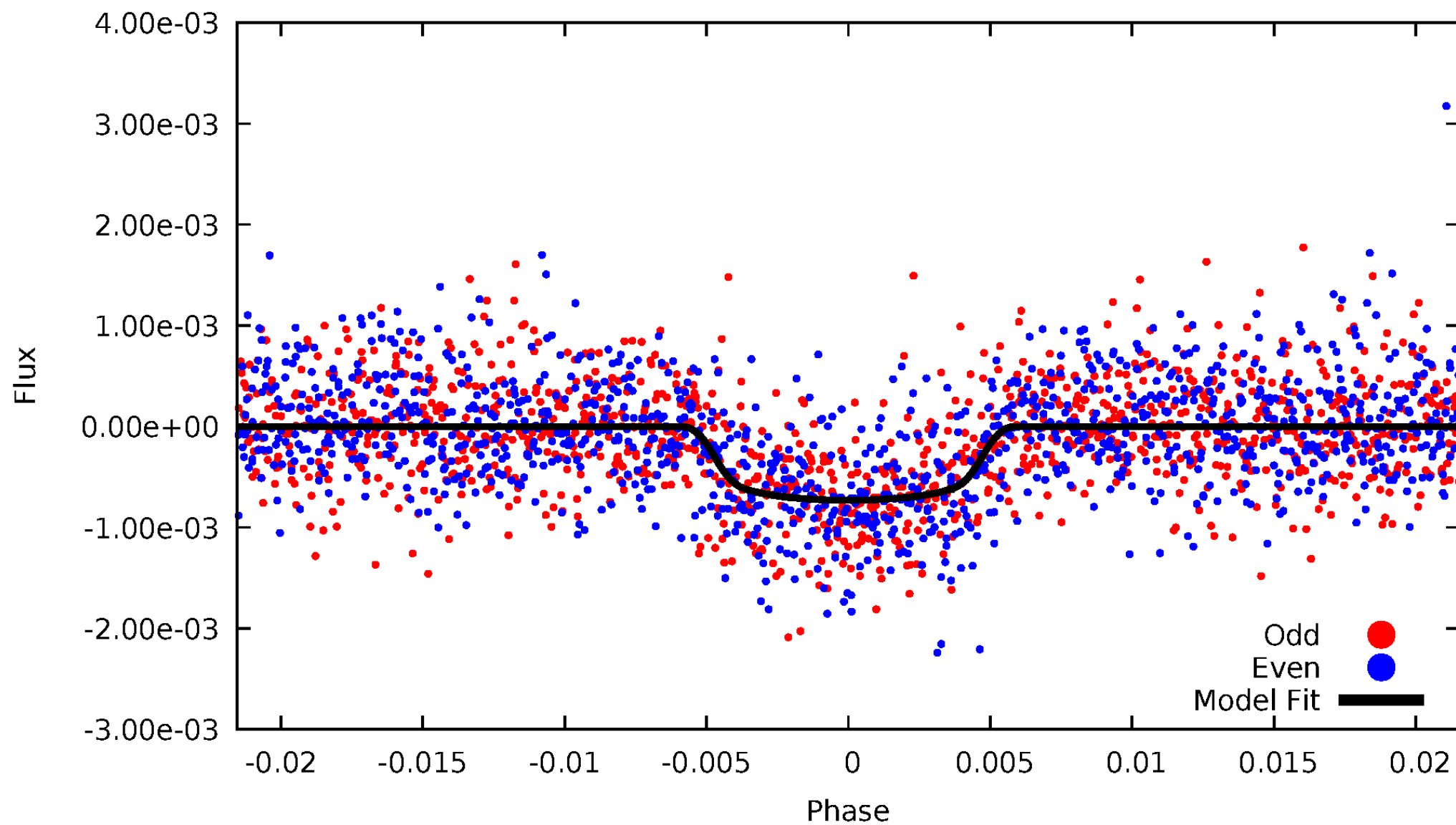


TCE 010214162-01



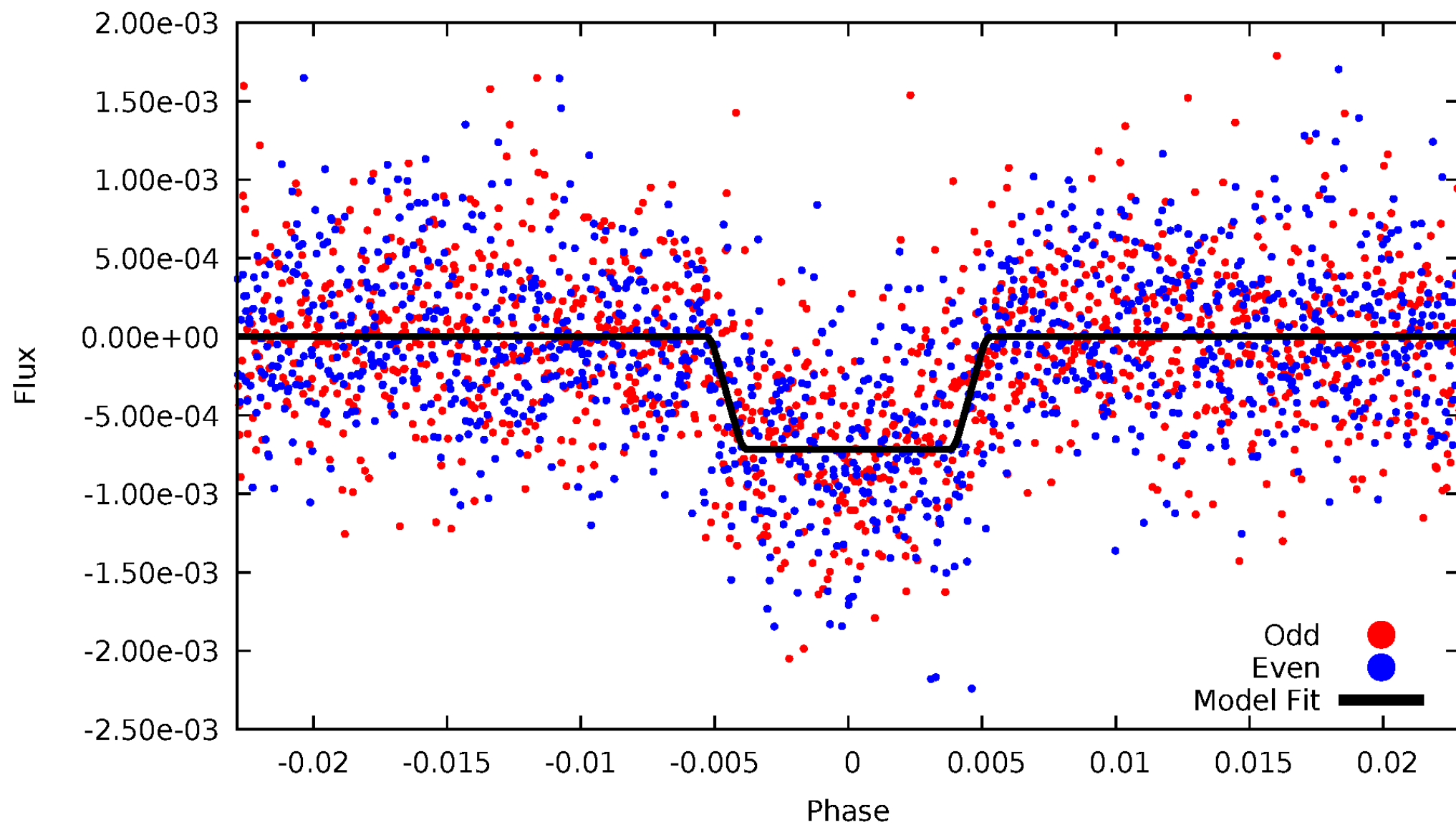
DV Odd/Even

TCE 010214162-01



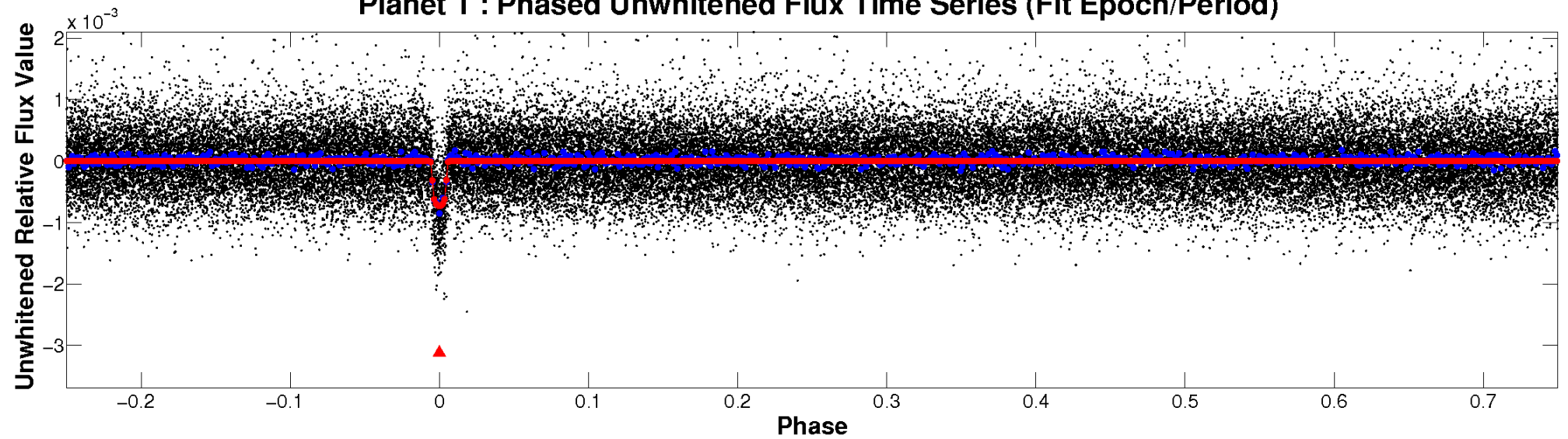
ALT Odd/Even

TCE 010214162-01

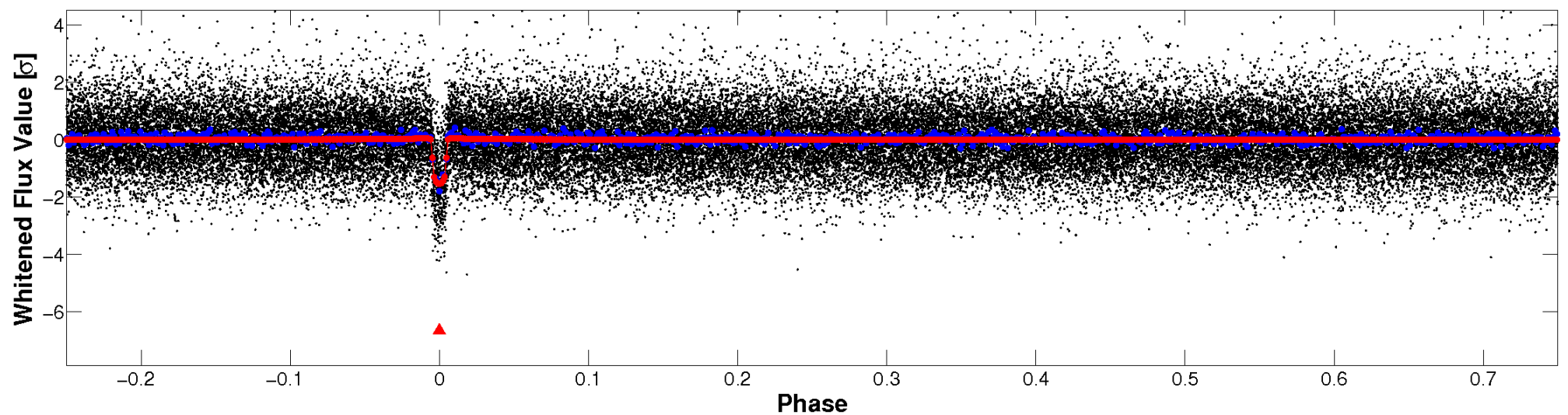


Non-Whitened Vs. Whitened Light Curve

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

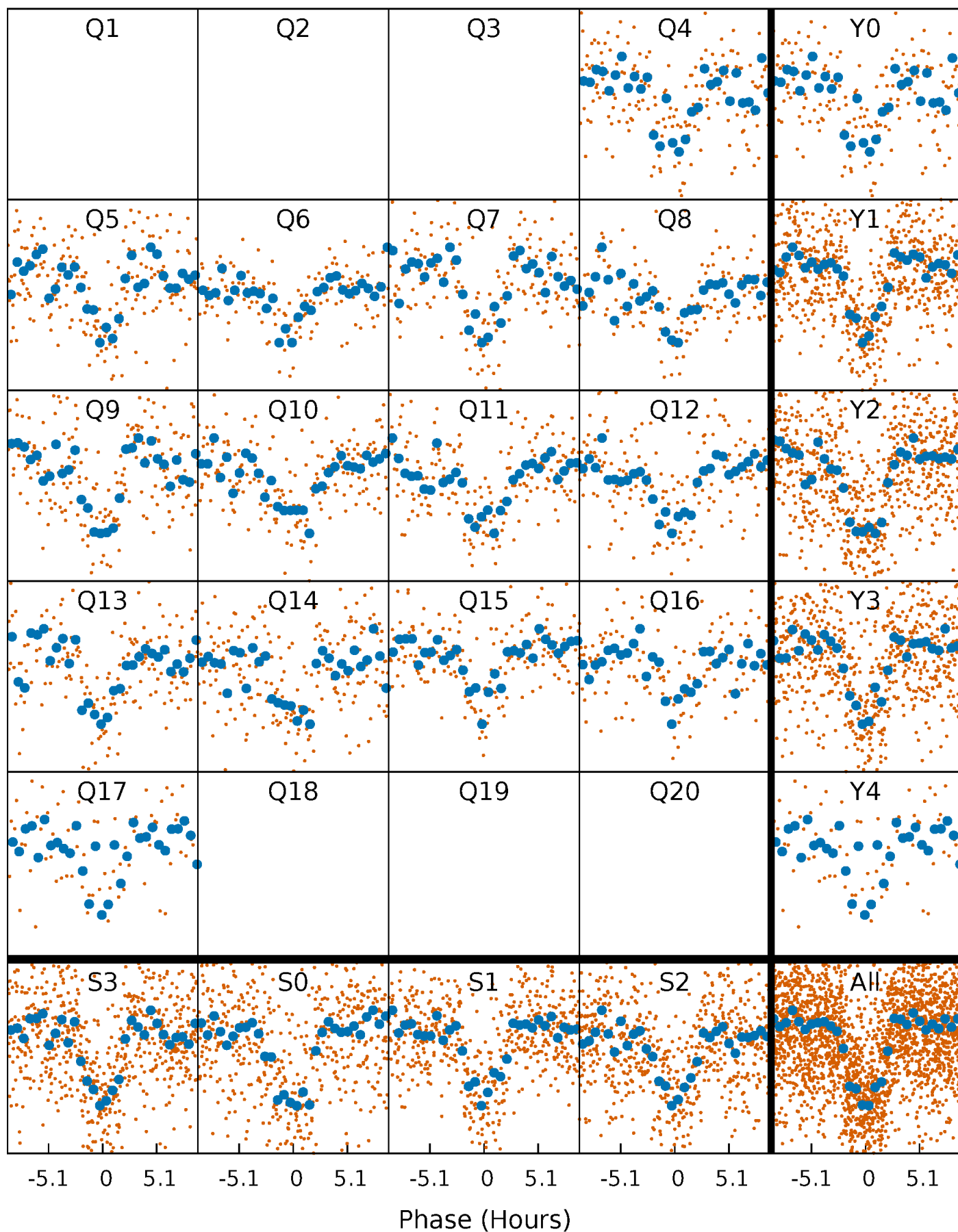


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



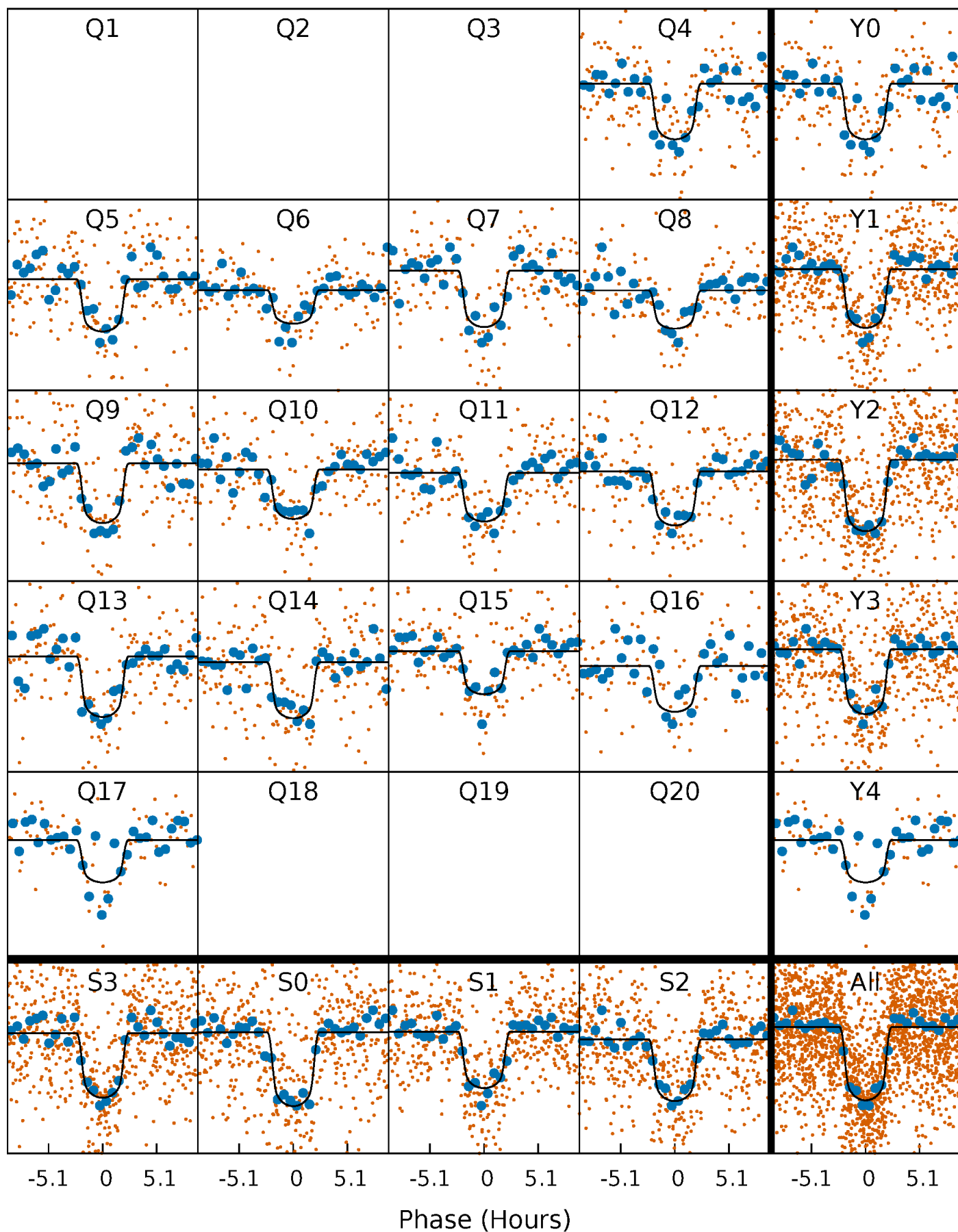
PDC Quarter-Phased Transit Curves

TCE 010214162-01 P= 17.423906 Days $T_0=148.827591$ (BKJD)



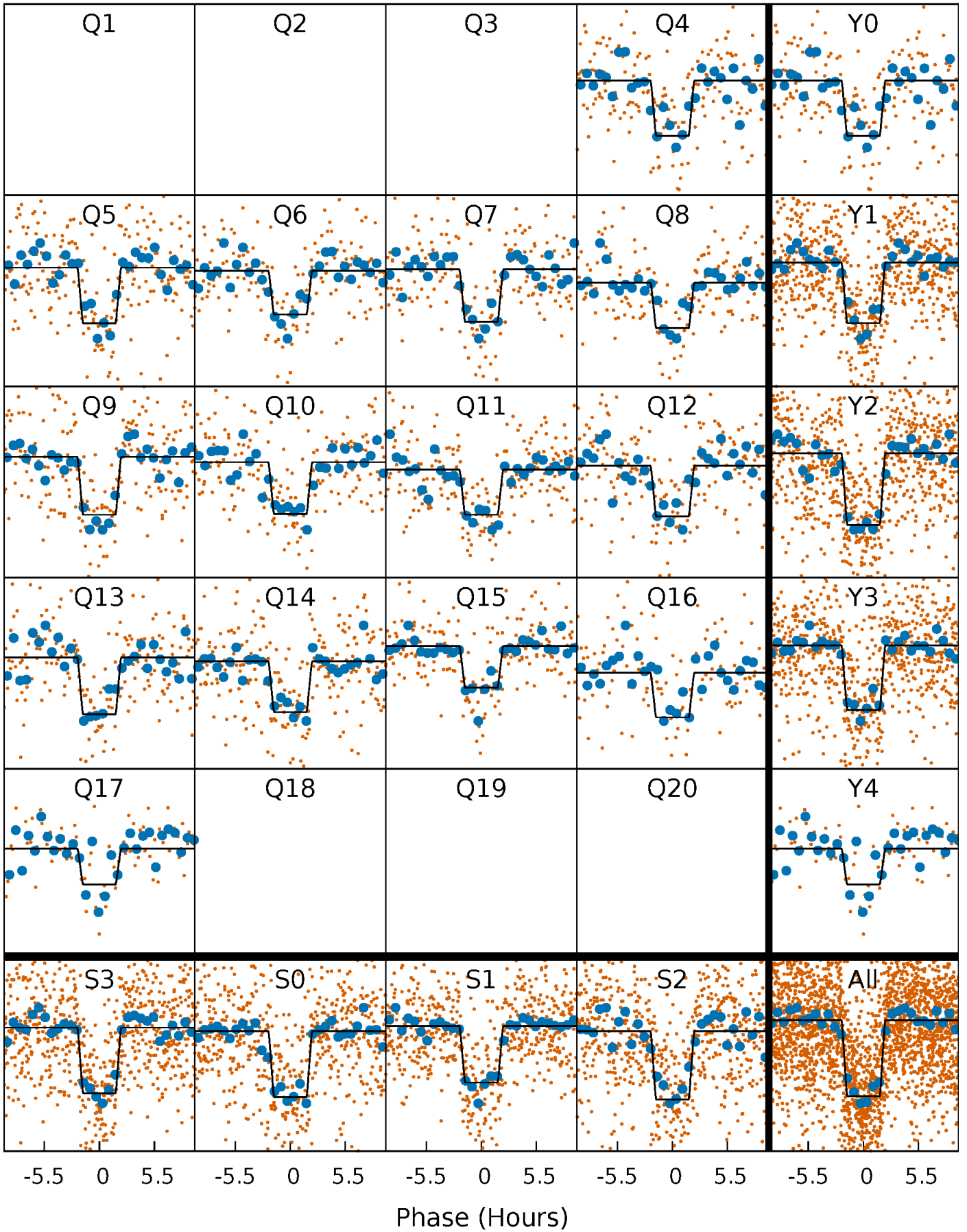
DV Quarter-Phased Transit Curves

TCE 010214162-01 P= 17.423906 Days $T_0=148.827591$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

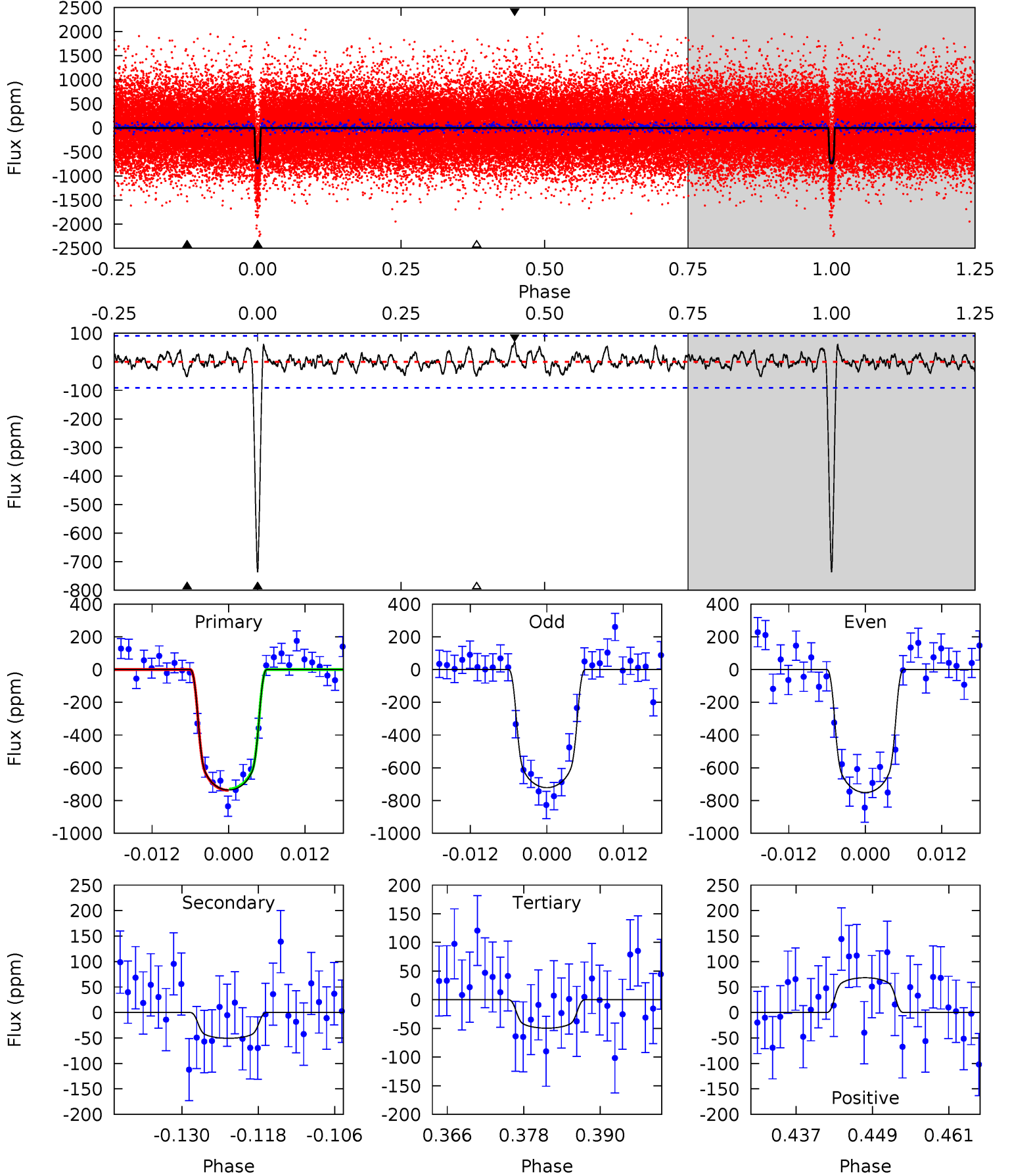
TCE 010214162-01 P= 17.423955 Days $T_0=148.825417$ (BKJD)



DV Model-Shift Uniqueness Test

010214162-01, $P = 17.423906$ Days, $E = 148.827591$ Days

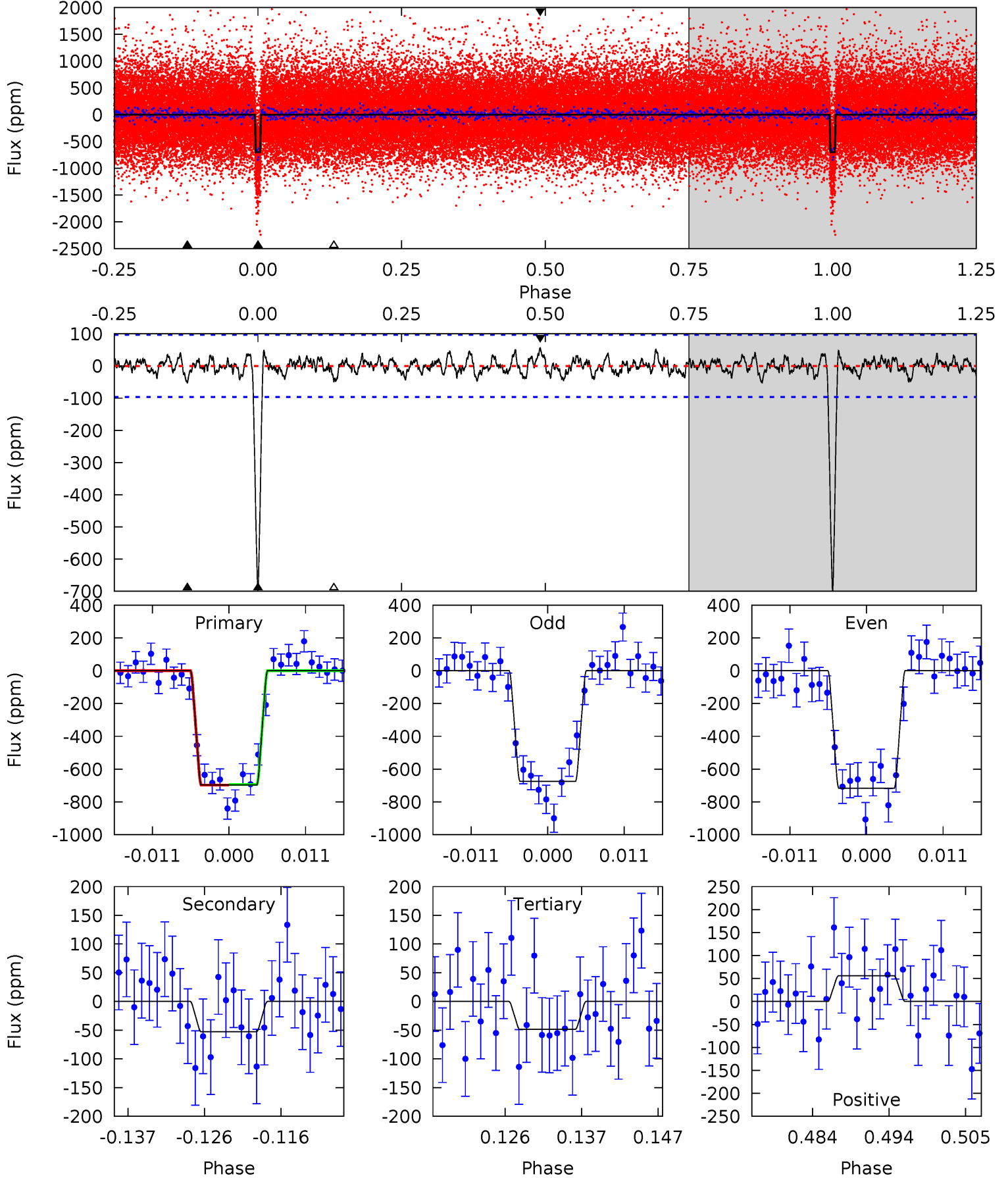
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.3	2.78	2.72	3.74	4.99	2.52	1.12	37.6	36.6	0.06	-0.96	0.82	1.04	0.08	0.21



Alt Model-Shift Uniqueness Test

010214162-01, P = 17.423955 Days, E = 148.825417 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.3	2.75	2.53	2.92	5.02	2.56	0.98	33.8	33.4	0.22	-0.17	1.10	1.00	0.07	0.08



Stellar Parameters For KIC 010214162

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6018^{+189}_{-231}	$4.460^{+0.070}_{-0.210}$	$-0.200^{+0.250}_{-0.300}$	$0.969^{+0.306}_{-0.122}$	$0.986^{+0.144}_{-0.118}$	$1.529^{+0.559}_{-0.791}$
	+3%/-4%	+2%/-5%	+125%/-150%	+32%/-13%	+15%/-12%	+37%/-52%
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 010214162-01 / KOI 1724.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-51 ± 18	$3.15^{+0.54}_{-0.42}$	1027^{+76}_{-55}	3490^{+204}_{-267}	48^{+23}_{-20}
Alt.	-53 ± 19	$2.94^{+0.55}_{-0.36}$	1024^{+81}_{-54}	3575^{+233}_{-264}	56^{+31}_{-25}

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

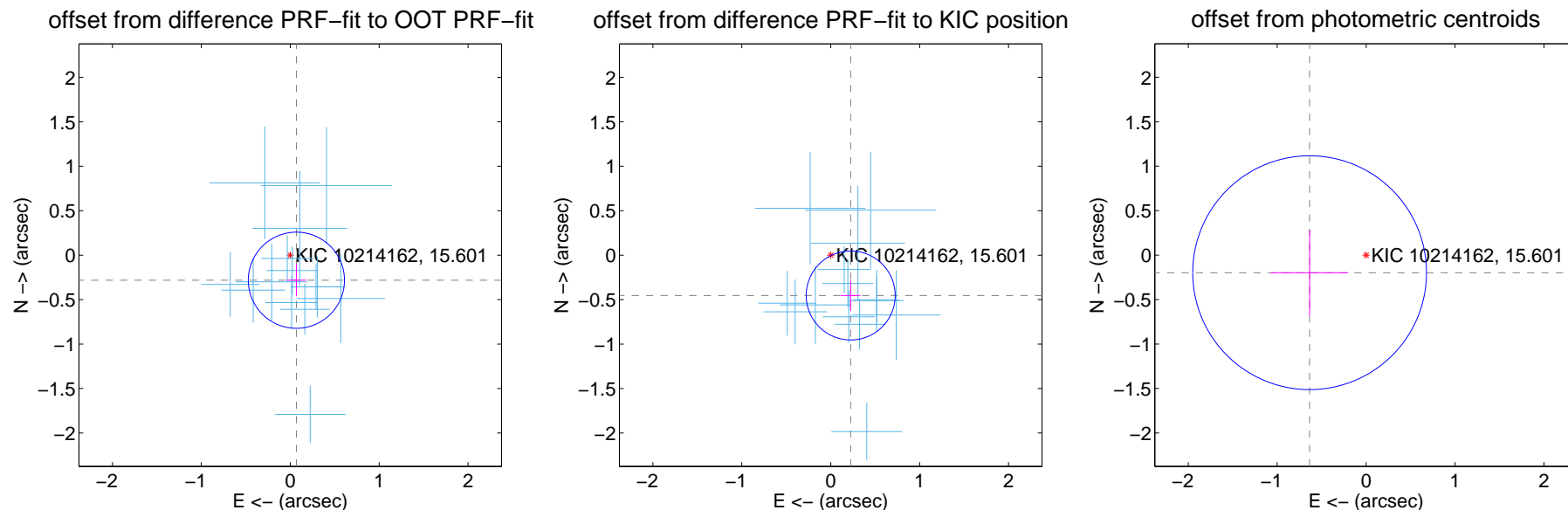
DV Centroid Data

Supplemental centroid analysis for 010214162-01. Kepler magnitude: 15.60. Transit SNR 30.62

There are 14 quarters with good PRF difference image offsets

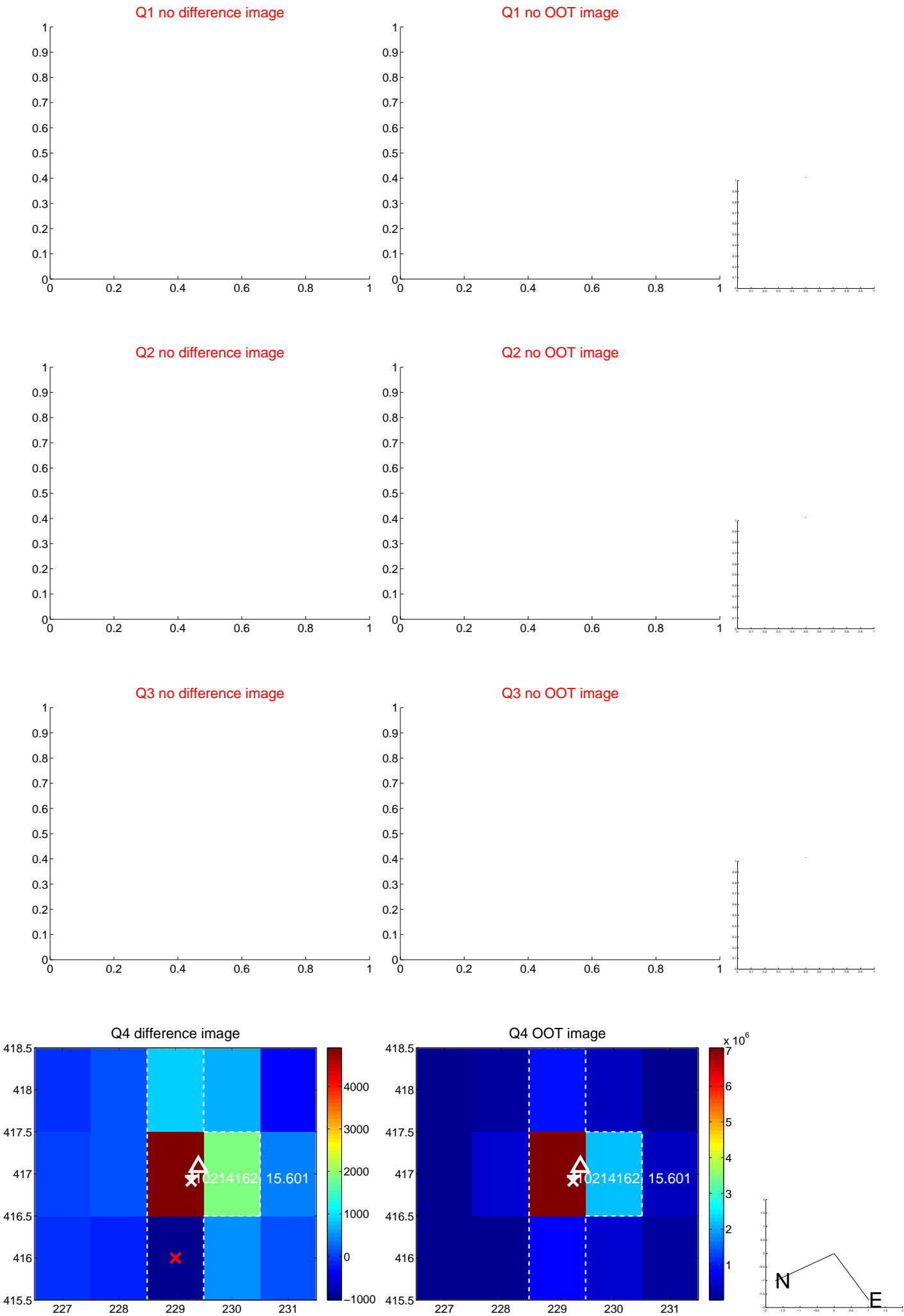
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.290 ± 0.180	1.61	-0.069 ± 0.108	-0.282 ± 0.180
PRF-fit source offset from KIC position	0.506 ± 0.167	3.03	-0.225 ± 0.110	-0.453 ± 0.174
photometric centroid source offset	0.67 ± 0.44	1.52	0.64 ± 0.43	-0.20 ± 0.48

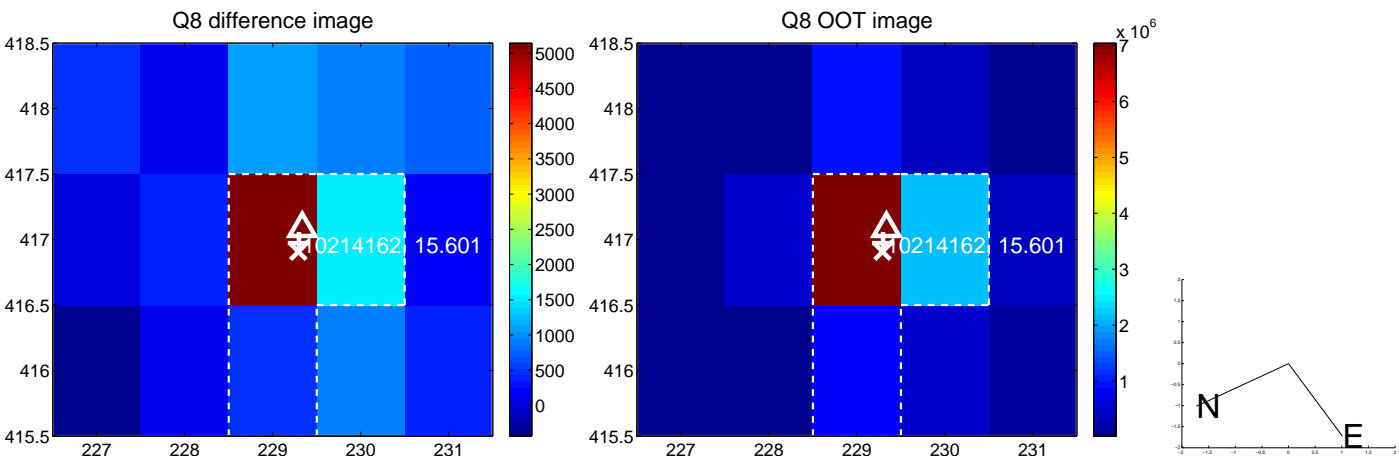
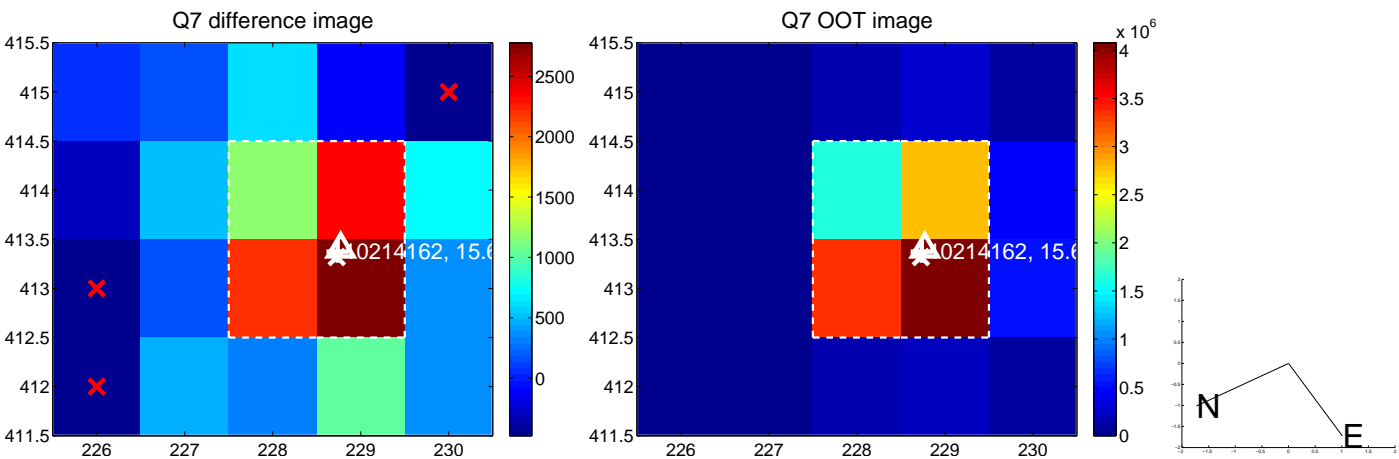
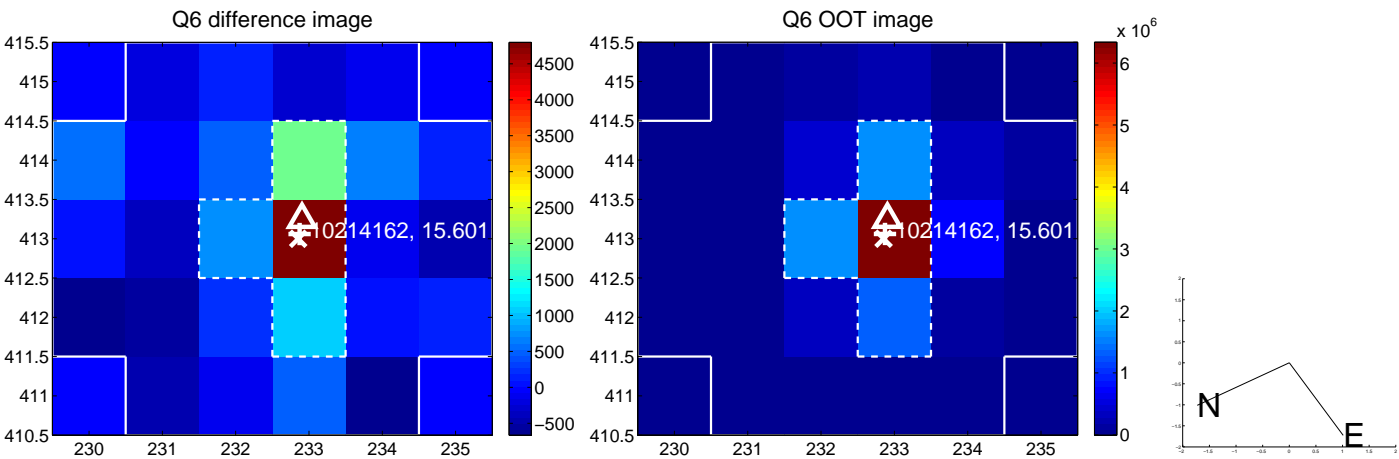
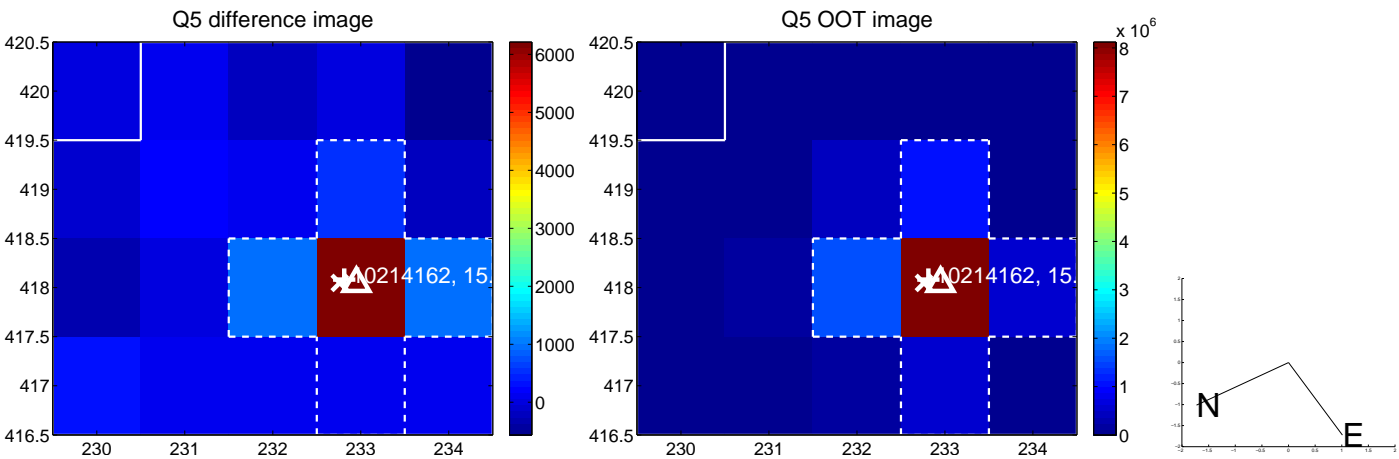


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

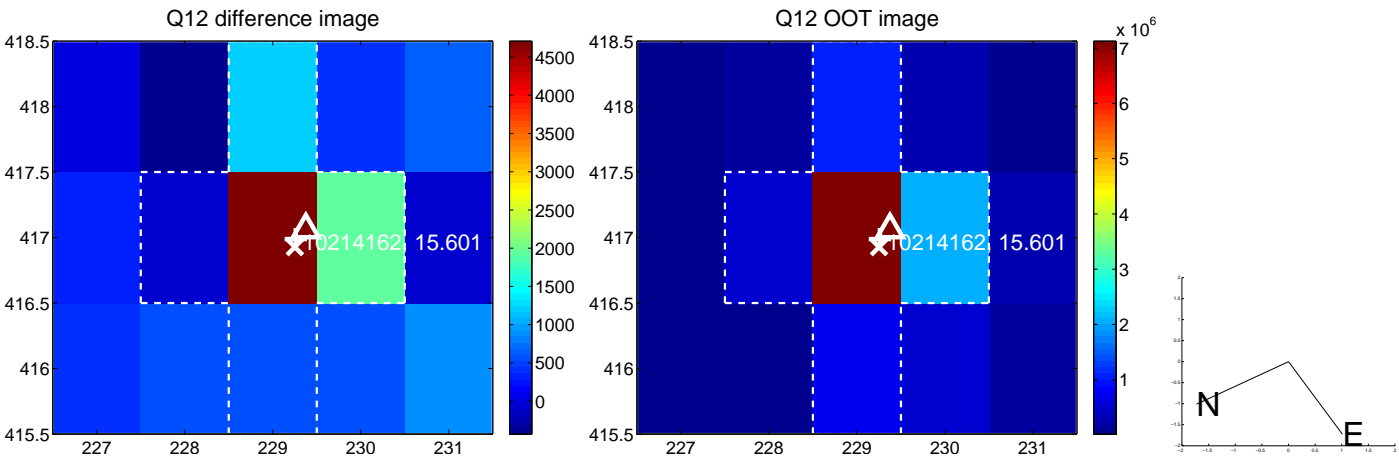
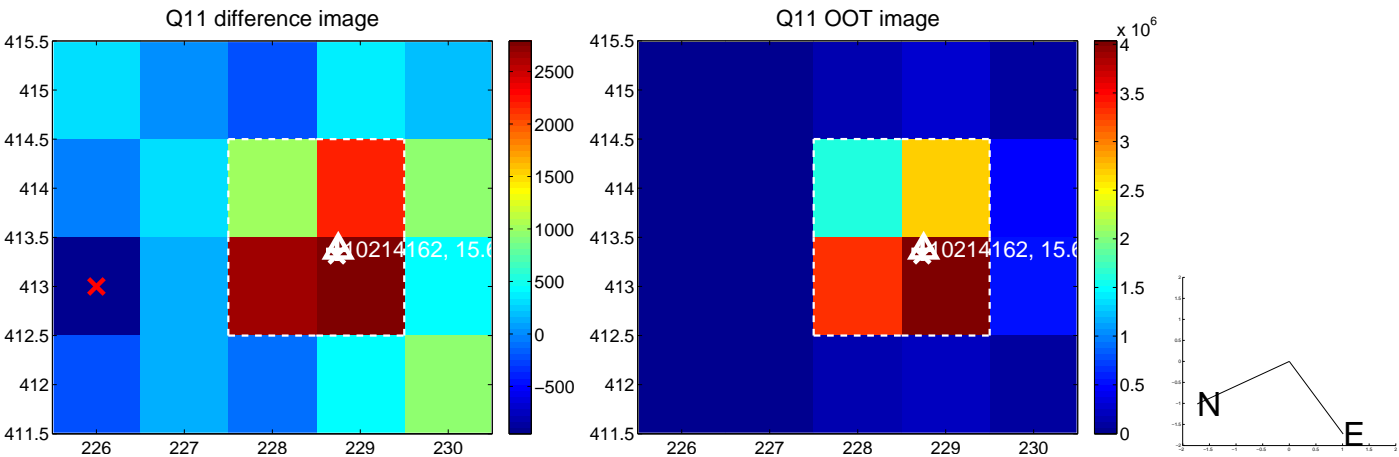
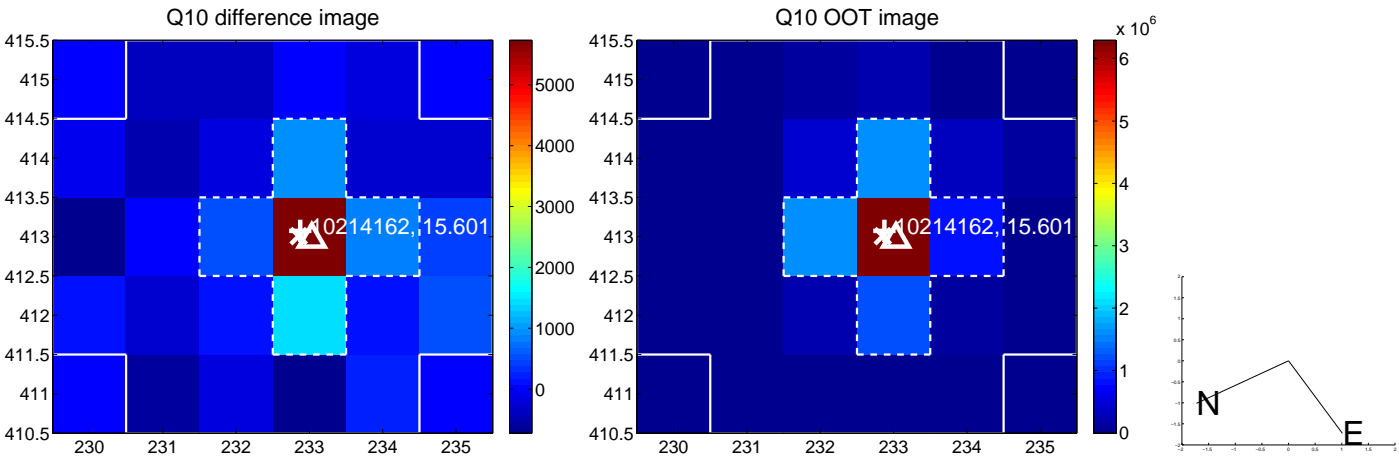
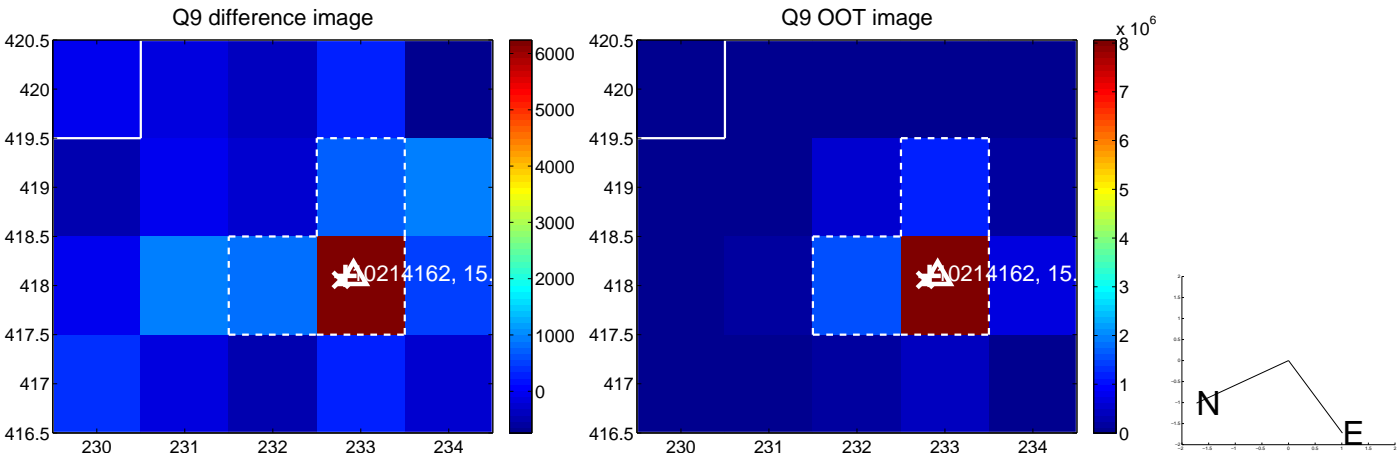
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



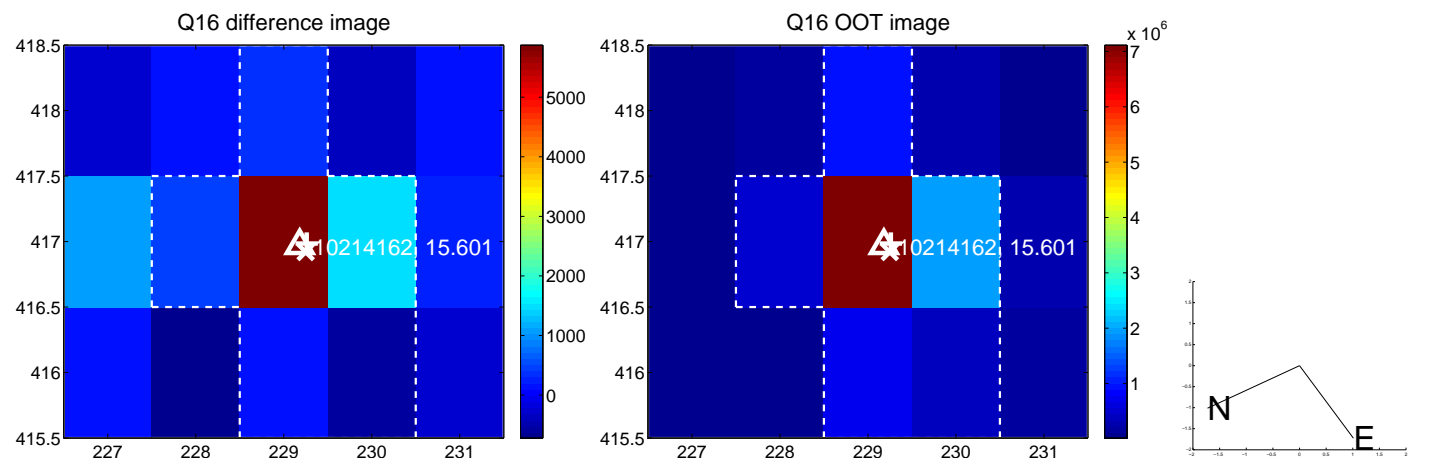
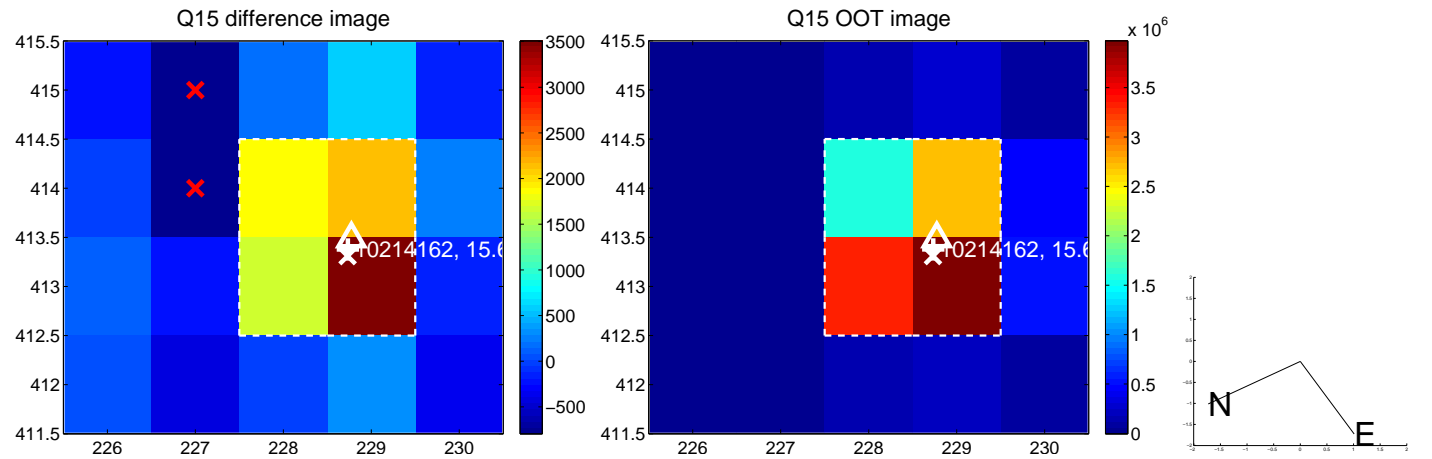
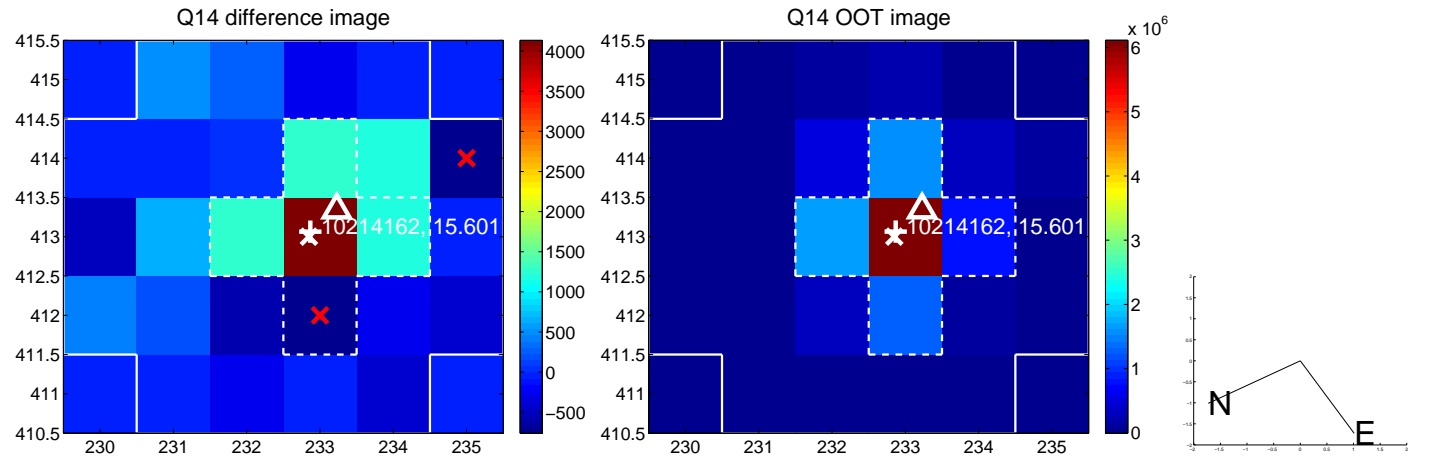
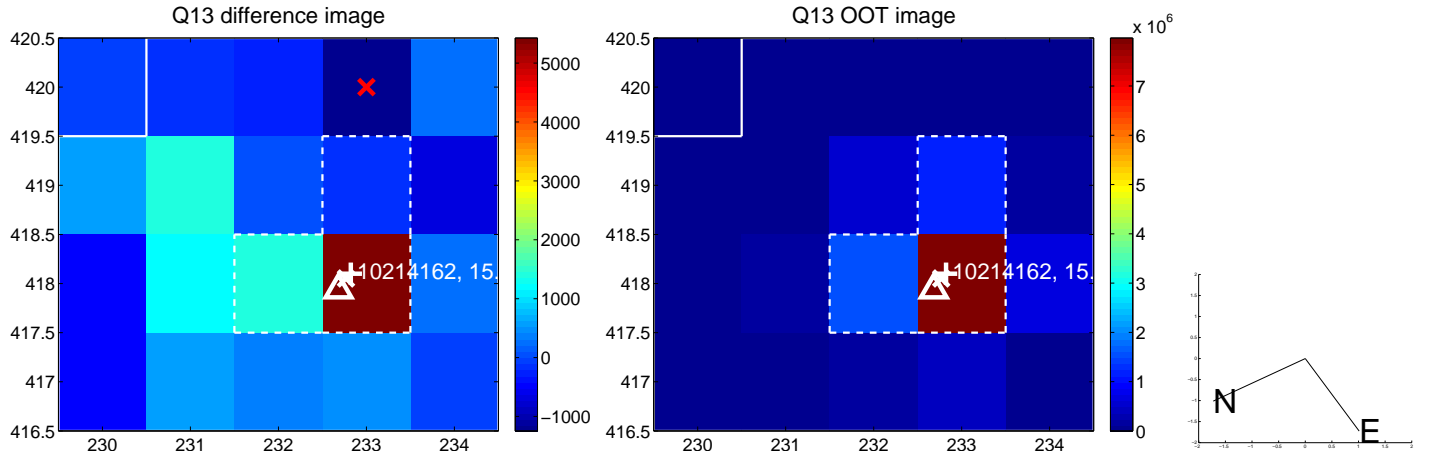
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



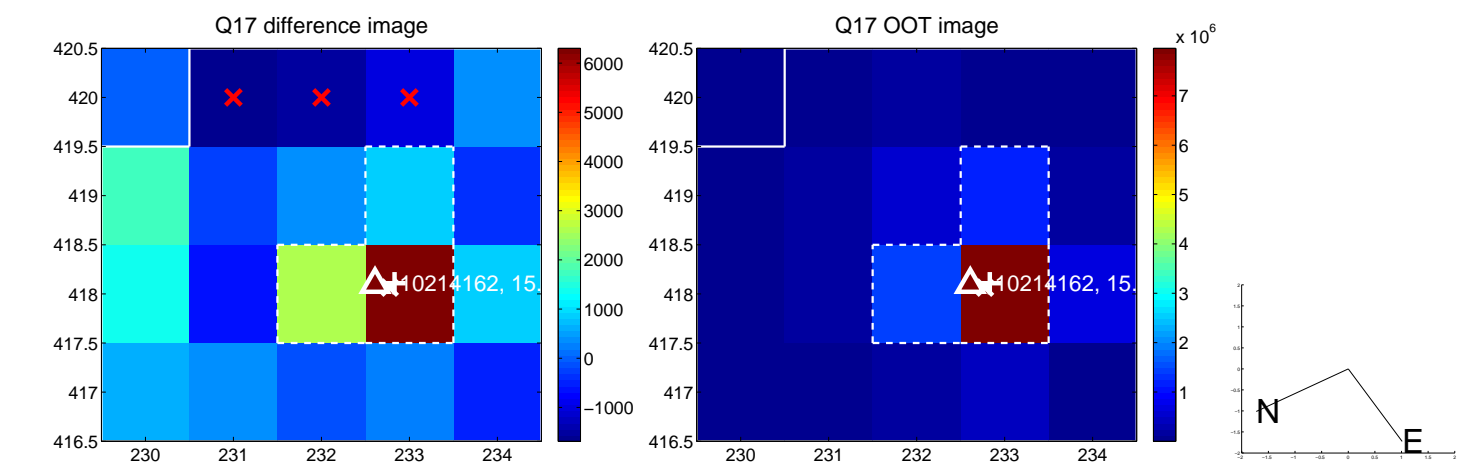
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



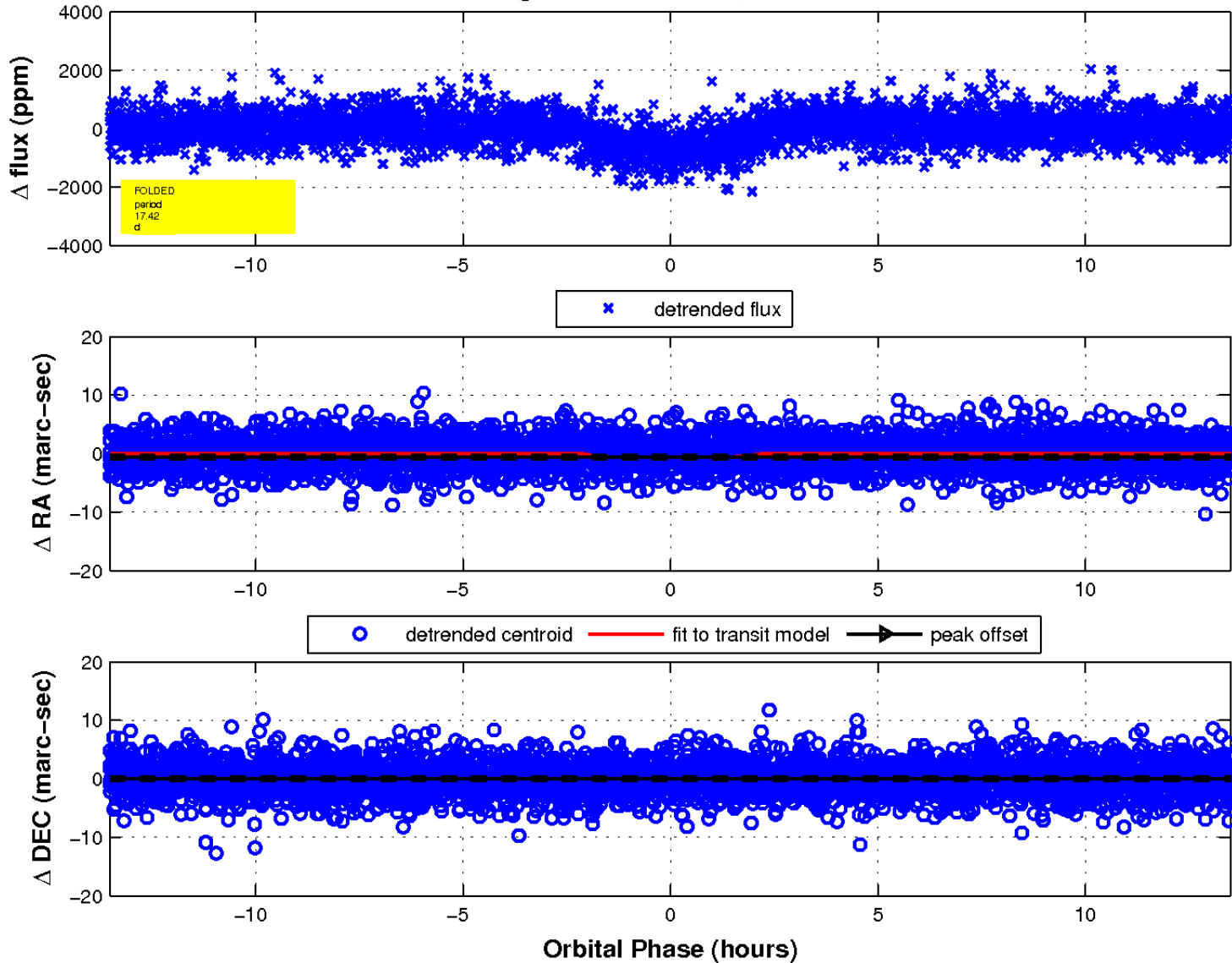
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

