

KIC 005014903

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})
005014903-01	OBS	2966.01	7.727655	136.198967	406.0	2.284	12.8	13.7	0.94	5765	2.30	154.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005014903-01	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 005014903-01

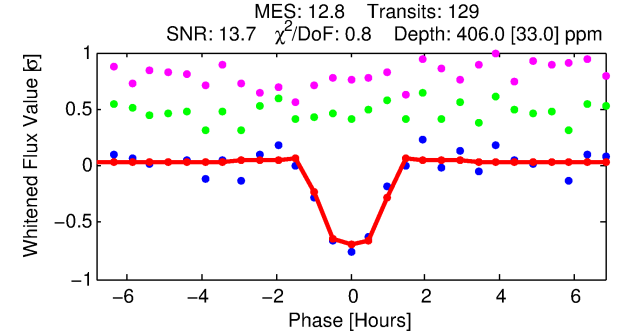
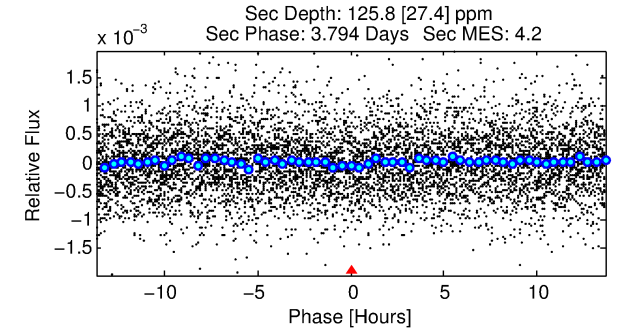
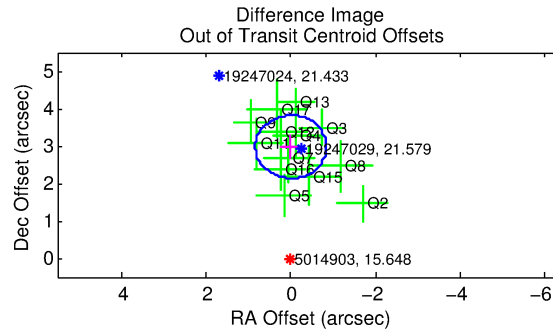
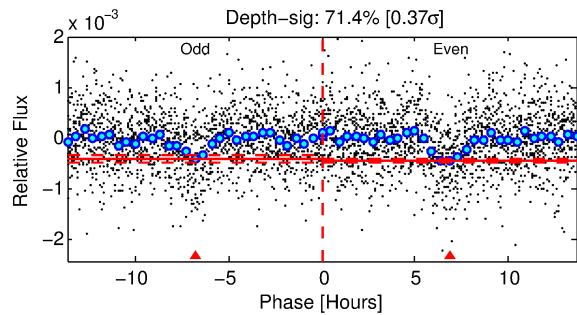
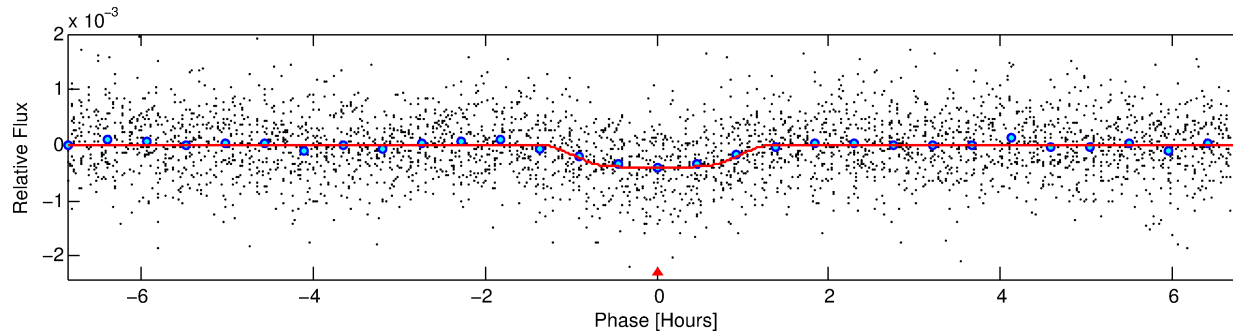
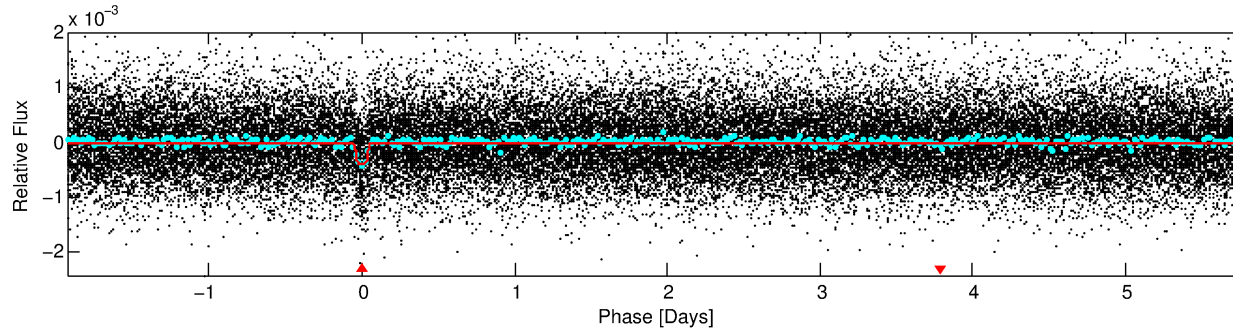
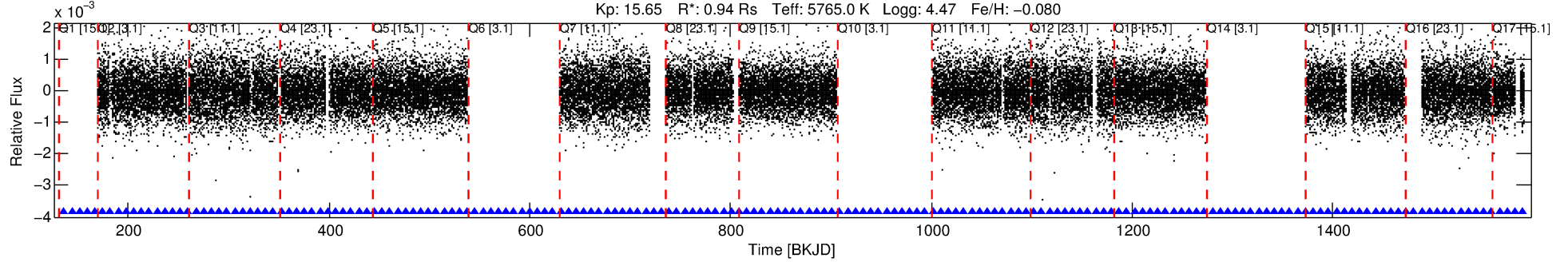
No Significant Match Found

DV One-Page Summary

KIC: 5014903 Candidate: 1 of 1 Period: 7.728 d

KOI: K02966.01 Corr: 0.949

Kp: 15.65 R*: 0.94 Rs Teff: 5765.0 K Logg: 4.47 Fe/H: -0.080



DV Fit Results:

Period = 7.72766 [0.00003] d
Epoch = 136.1990 [0.0034] BKJD
Rp/R* = 0.0224 [0.0053]
a/R* = 11.58 [12.67]
b = 0.92 [0.19]
Seff = 154.92 [57.48]
Teq = 900 [83] K
Rp = 2.30 [0.85] Re
a = 0.0751 [0.0180] AU
Ag = 73.70 [45.98] [1.58σ]
Teff = 4075 [545] K [5.76σ]

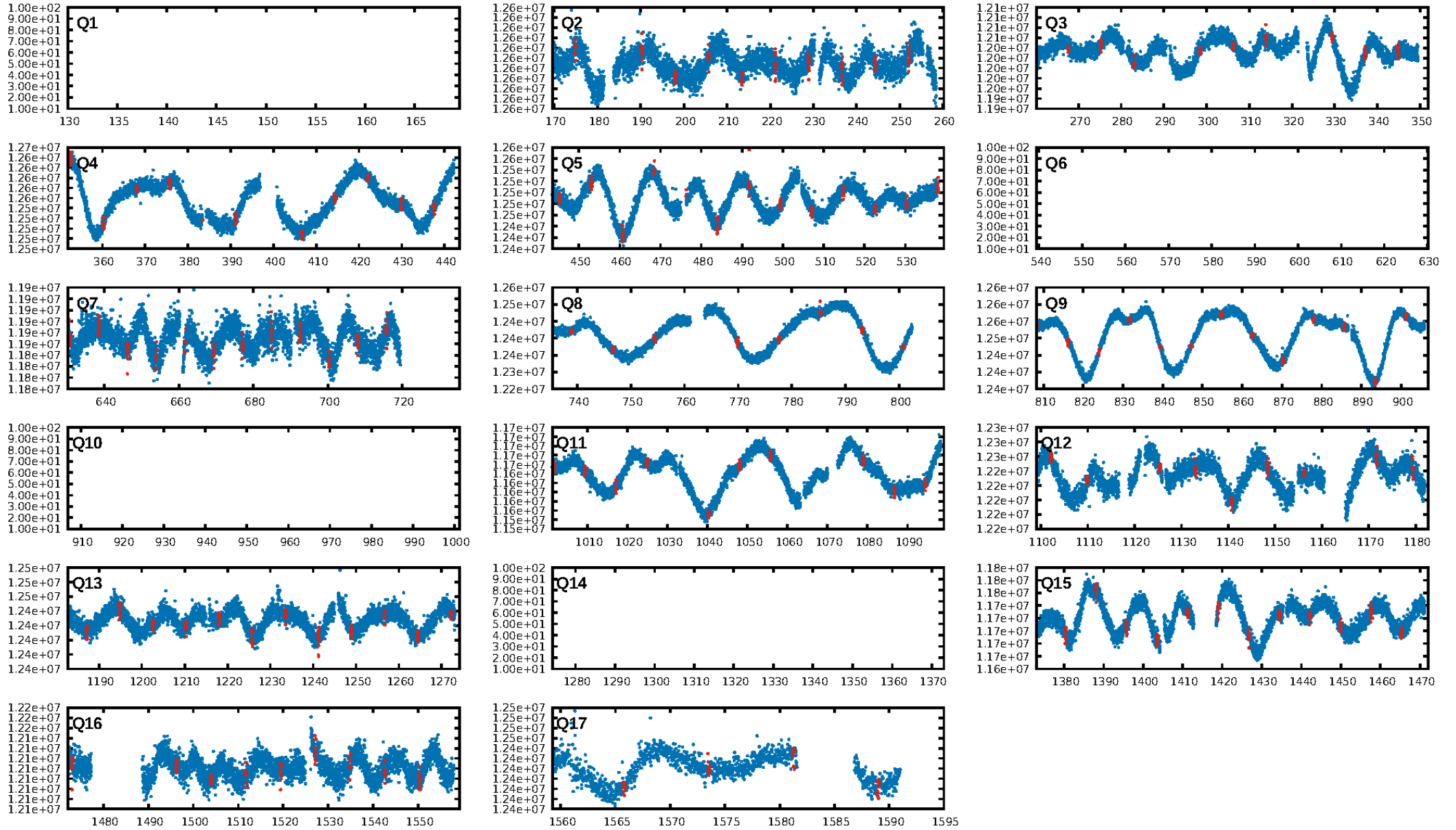
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 1.63e-35
RollingBand-fgt: 1.00 [125/125]
GhostDiagnostic-chr: 0.4057
Centroid-sig: 0.0%
Centroid-so: 2.756 arcsec [3.02σ]
OotOffset-rm: 2.976 arcsec [10.63σ]
KicOffset-rm: 2.644 arcsec [8.50σ]
OotOffset-st: 1/4/4/4 [13]
KicOffset-st: 1/4/4/4 [13]
DiffImageQuality-fgm: 0.92 [12/13]
DiffImageOverlap-fno: 1.00 [13/13]

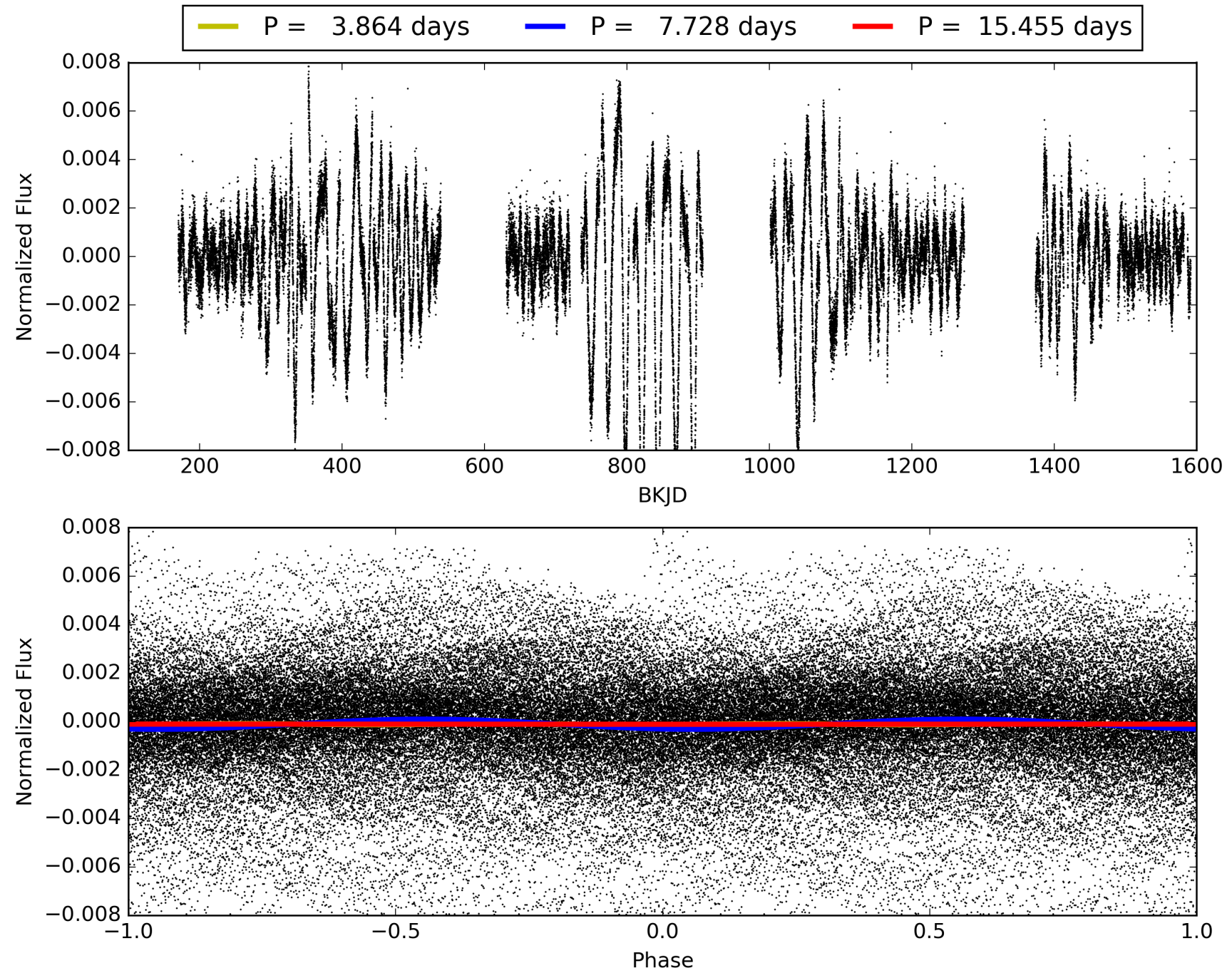
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:21:42 Z

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

TCE 005014903-01, PDC Light Curves

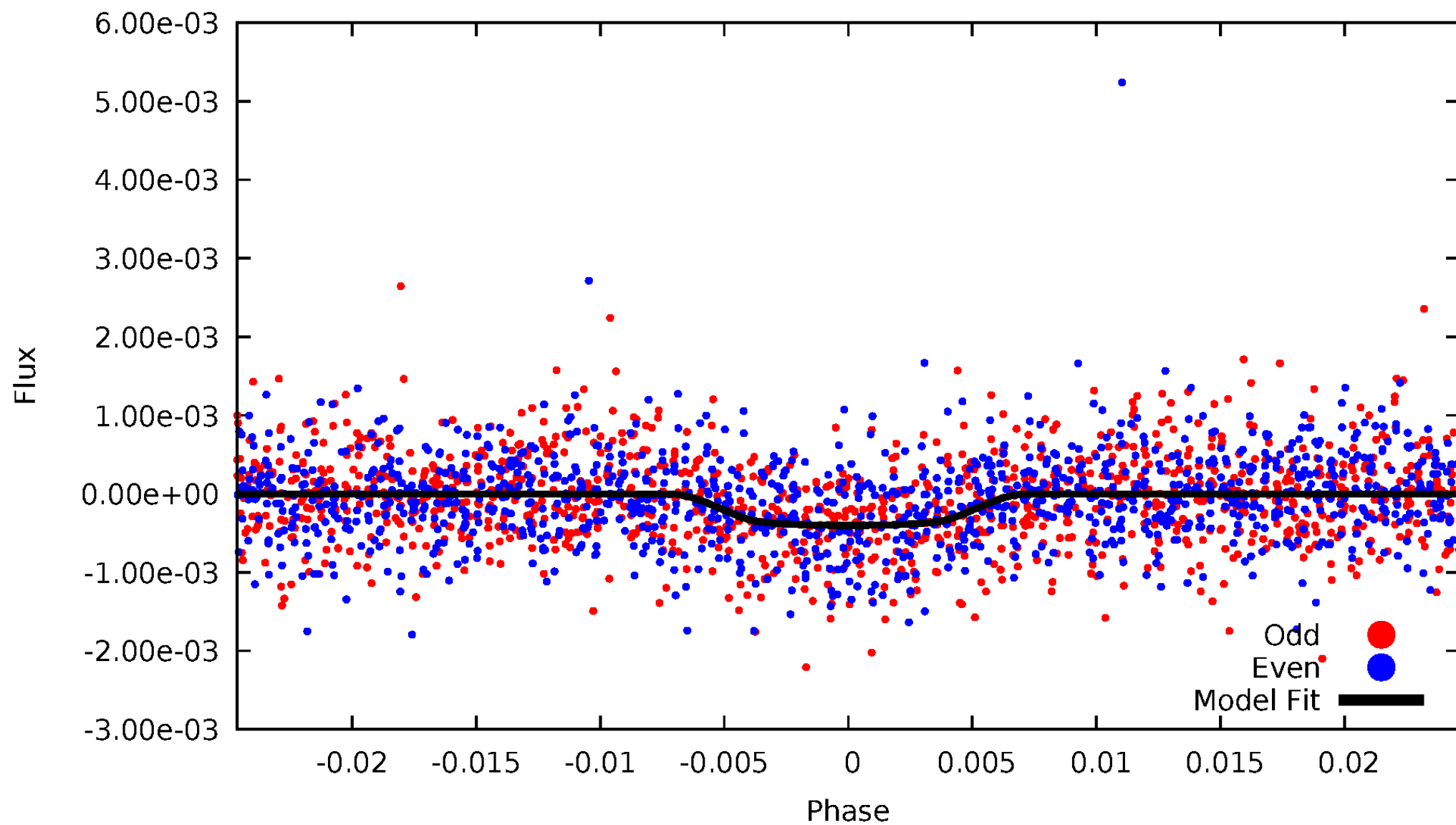


TCE 005014903-01



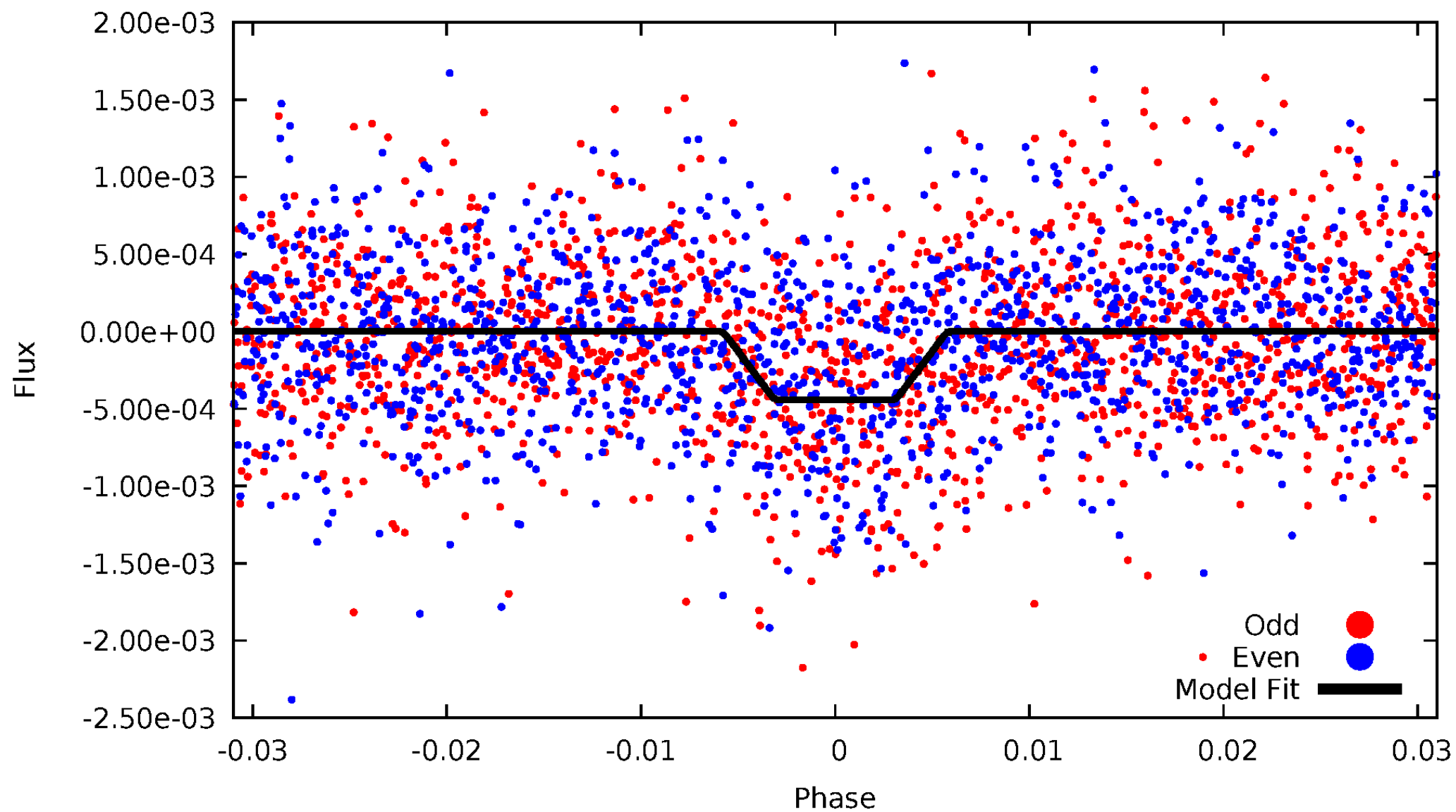
DV Odd/Even

TCE 005014903-01

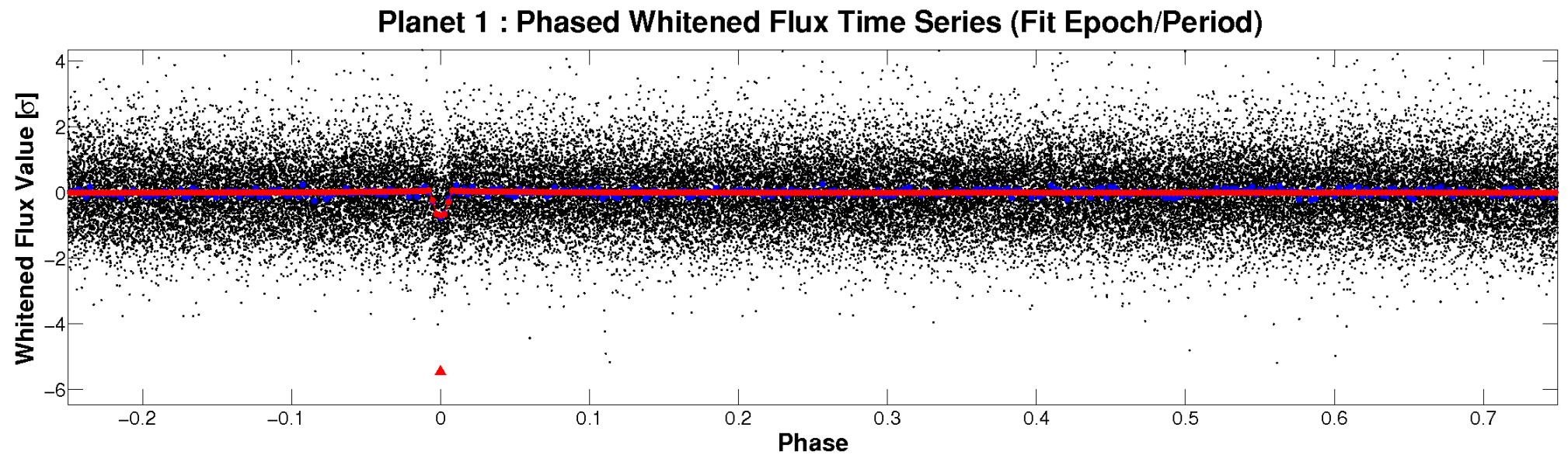
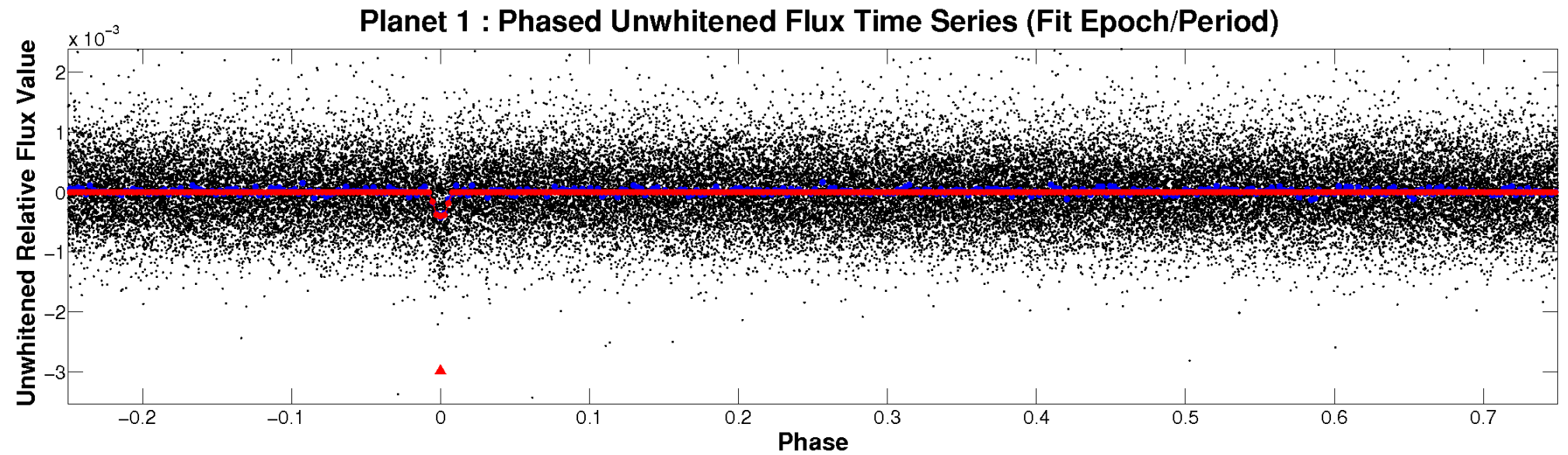


ALT Odd/Even

TCE 005014903-01

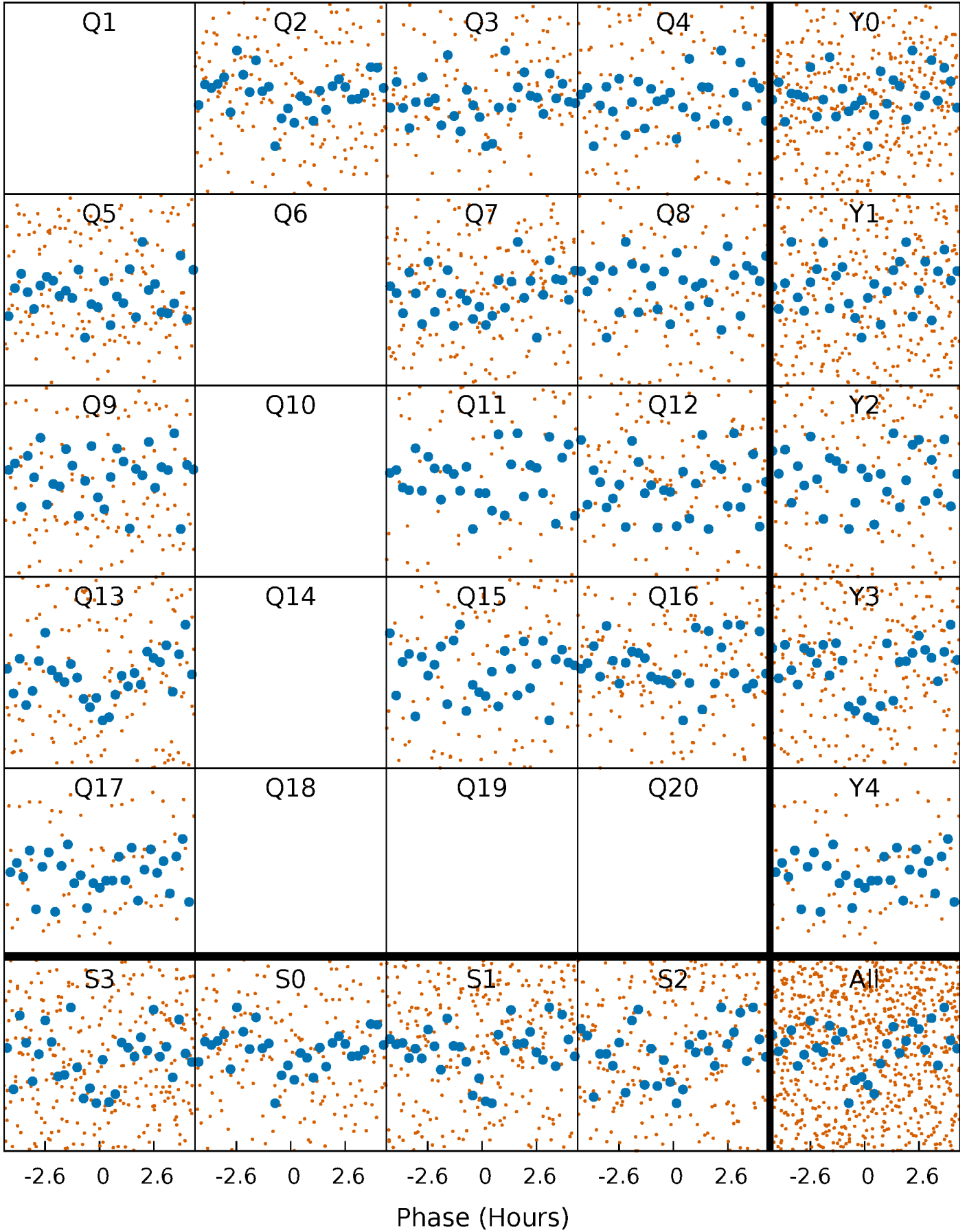


Non-Whitened Vs. Whitened Light Curve



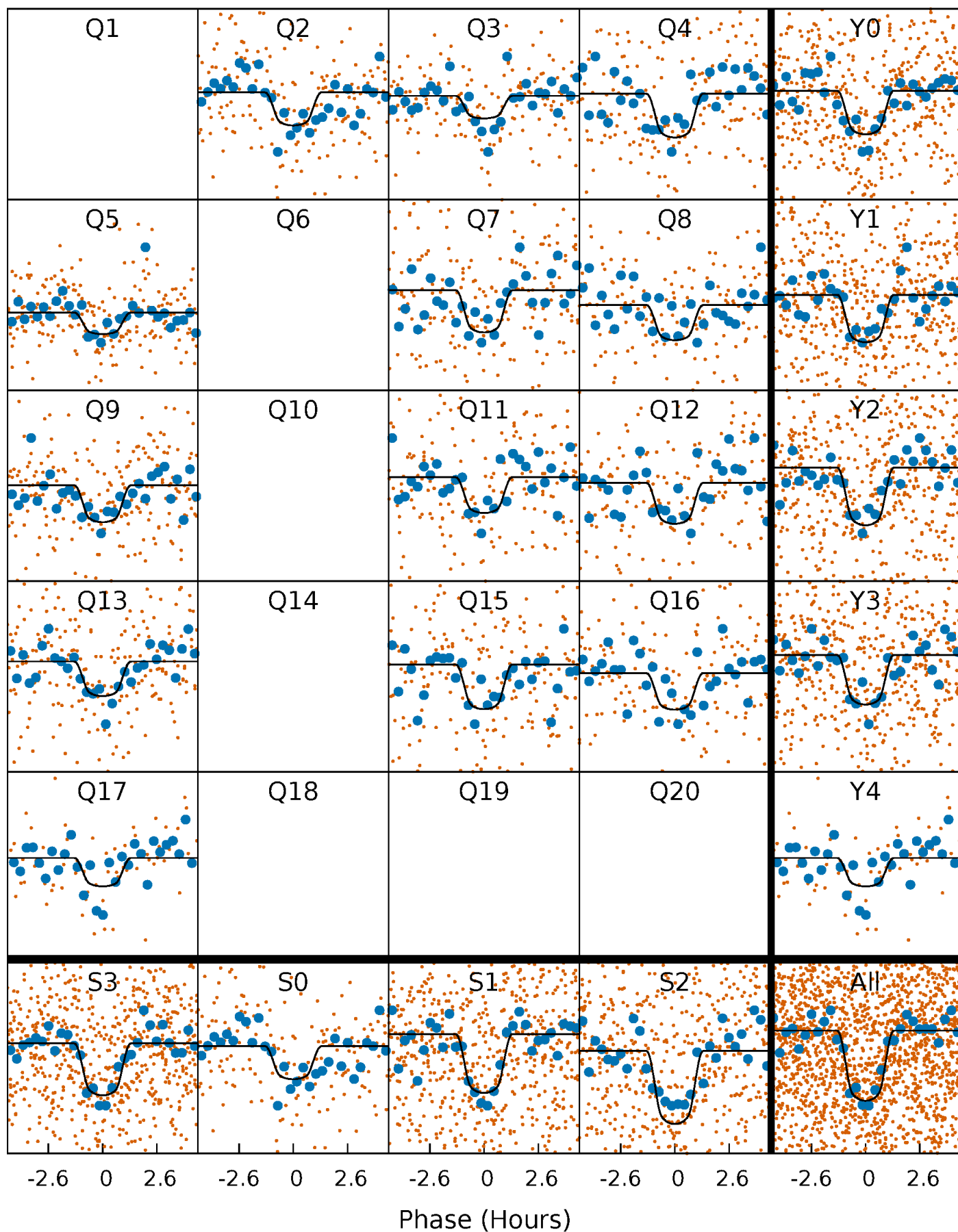
PDC Quarter-Phased Transit Curves

TCE 005014903-01 P= 7.727655 Days $T_0=136.198967$ (BKJD)



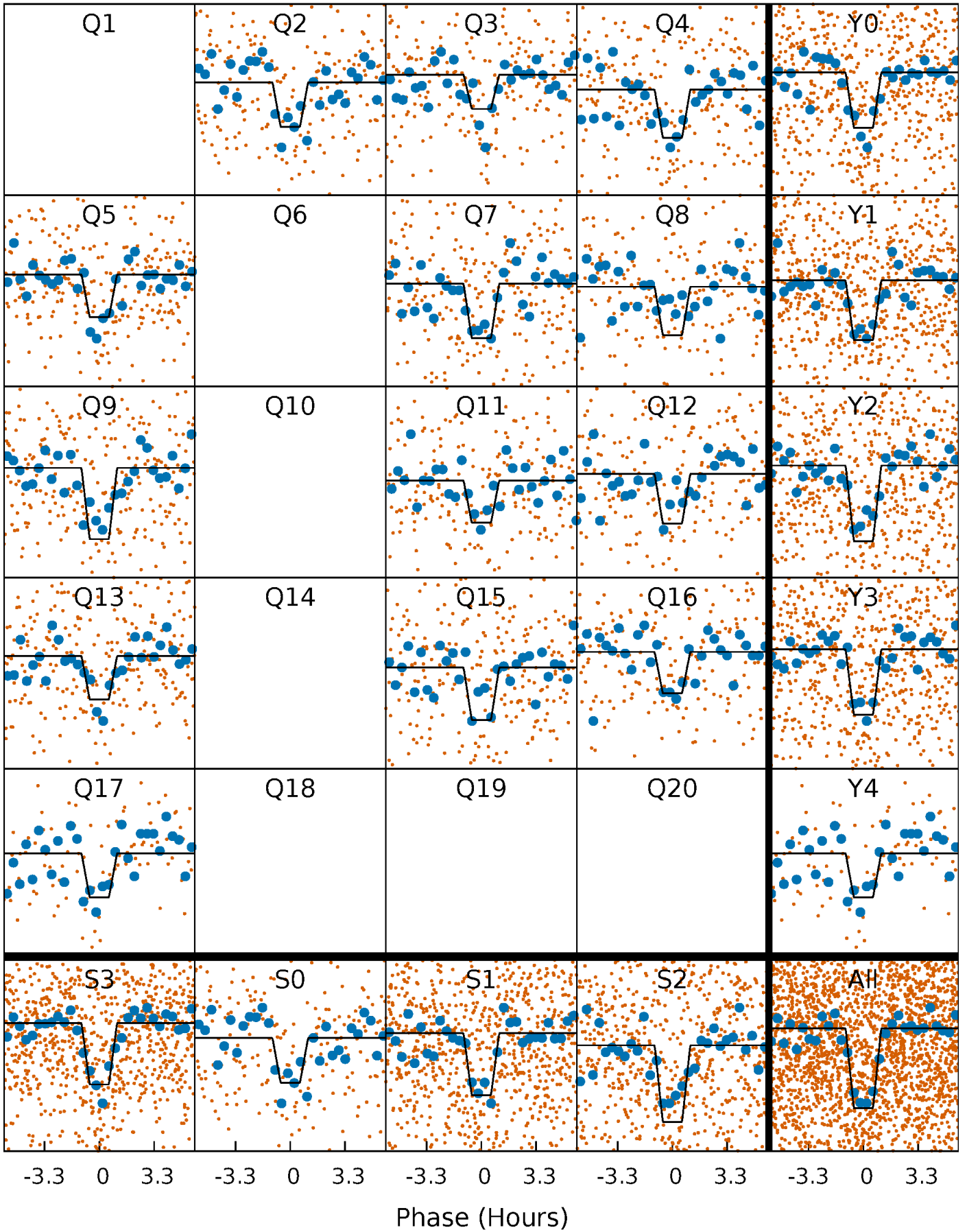
DV Quarter-Phased Transit Curves

TCE 005014903-01 P= 7.727655 Days $T_0=136.198967$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

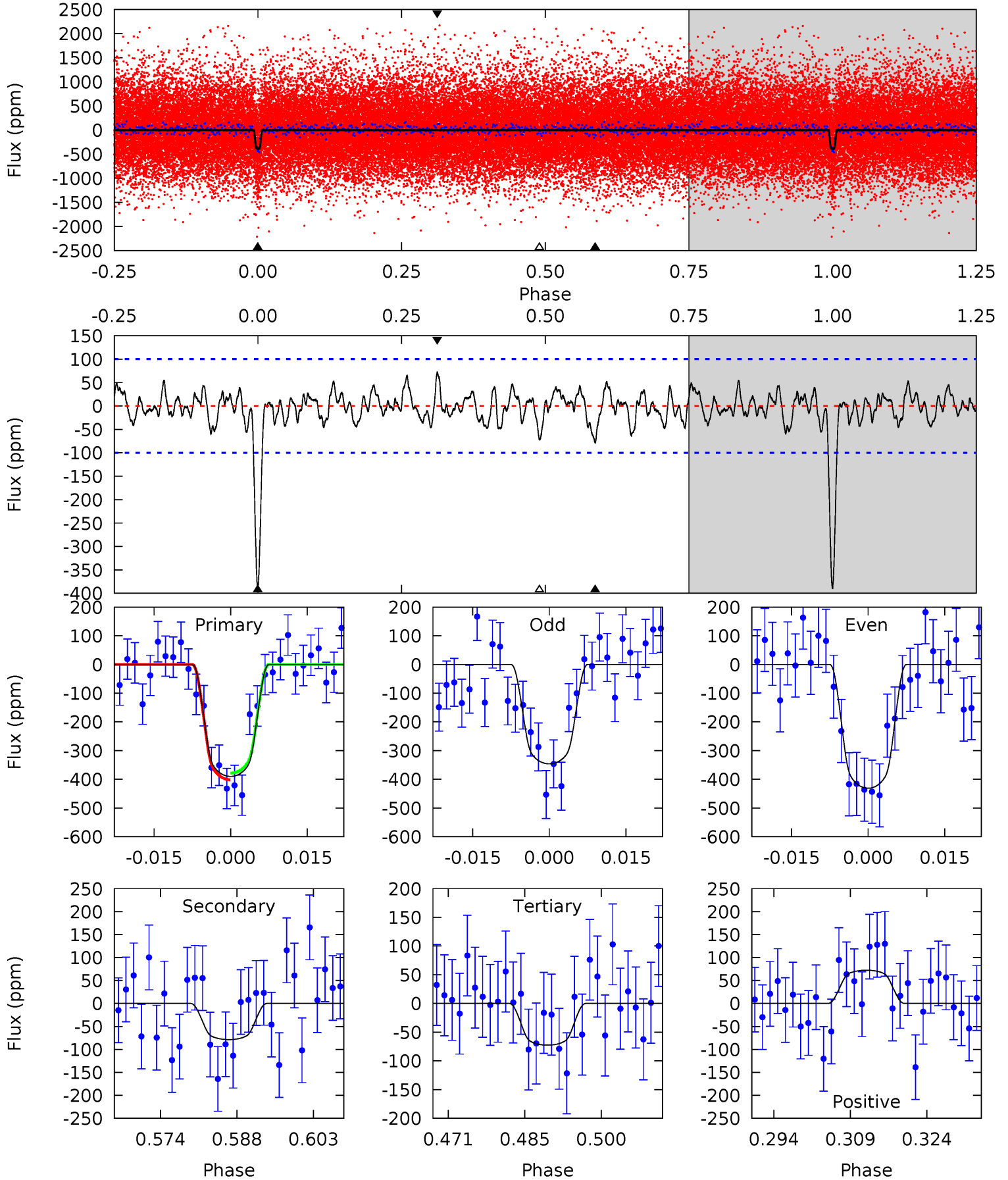
TCE 005014903-01 P= 7.727696 Days $T_0=136.192971$ (BKJD)



DV Model-Shift Uniqueness Test

005014903-01, P = 7.727655 Days, E = 136.198967 Days

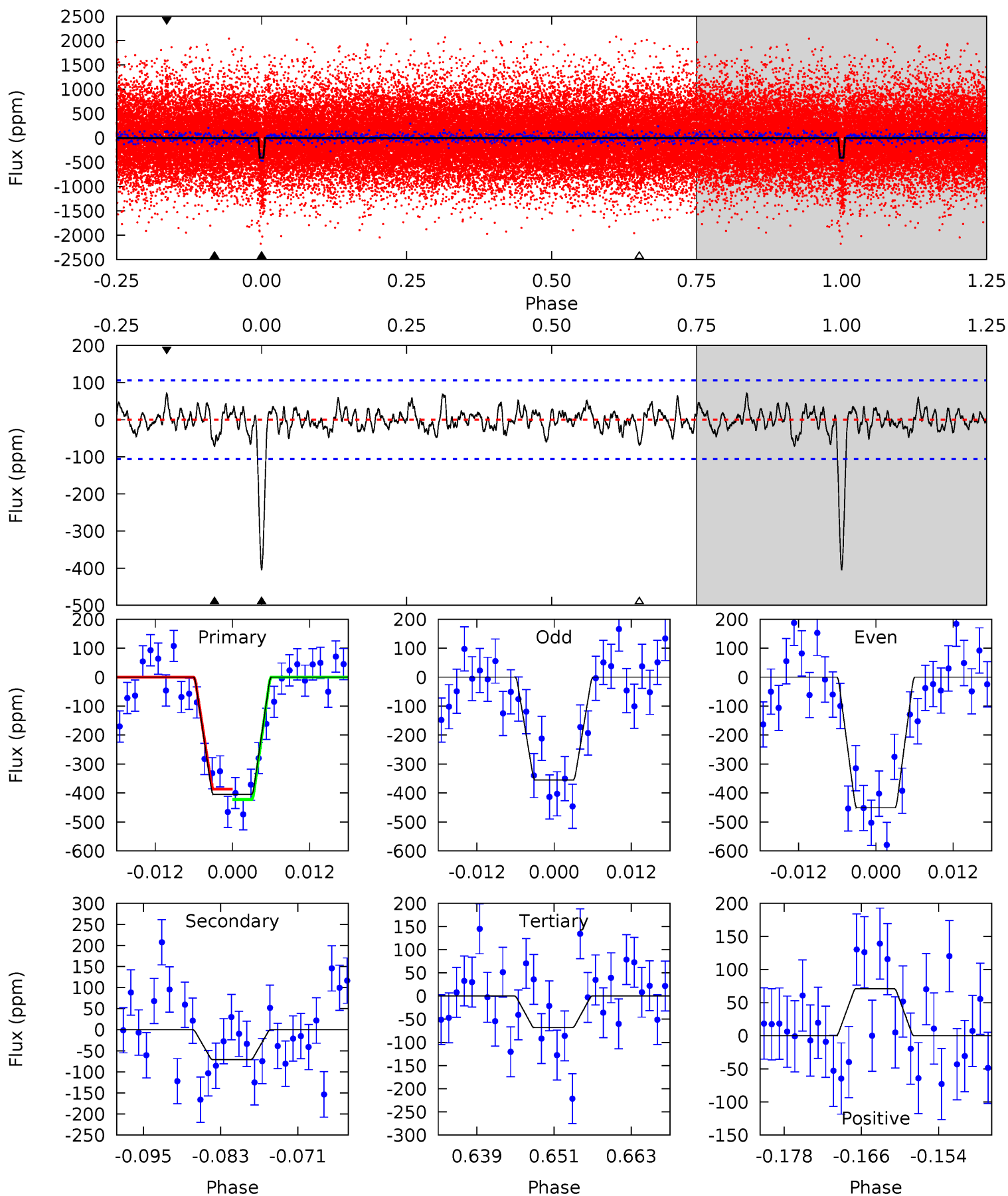
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.3	3.89	3.59	3.58	4.95	2.44	1.25	15.7	15.7	0.30	0.31	2.11	0.94	0.16	0.58



Alt Model-Shift Uniqueness Test

005014903-01, P = 7.727696 Days, E = 136.192971 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	3.34	3.21	3.35	4.99	2.52	1.10	15.9	15.7	0.13	-0.01	2.26	0.89	0.15	0.84



Stellar Parameters For KIC 005014903

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5765^{+173}_{-190}	$4.468^{+0.067}_{-0.189}$	$-0.080^{+0.300}_{-0.300}$	$0.940^{+0.268}_{-0.115}$	$0.946^{+0.114}_{-0.102}$	$1.607^{+0.545}_{-0.787}$
	+3%/-3%	+1%/-4%	+375%/-375%	+29%/-12%	+12%/-11%	+34%/-49%
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 005014903-01 / KOI 2966.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-79 ± 20	$2.40^{+0.65}_{-0.57}$	1279^{+89}_{-64}	3930^{+455}_{-341}	41^{+33}_{-18}
Alt.	-71 ± 21	$2.27^{+0.63}_{-0.60}$	1284^{+91}_{-73}	3943^{+500}_{-375}	41^{+39}_{-20}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

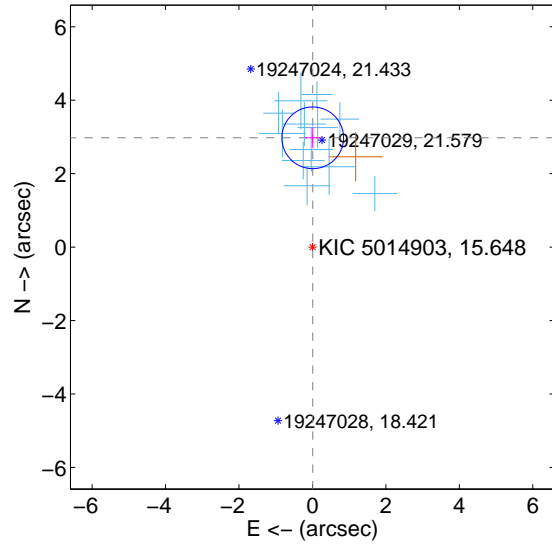
Supplemental centroid analysis for 005014903-01. Kepler magnitude: 15.65. Transit SNR 13.68

There are 12 quarters with good PRF difference image offsets

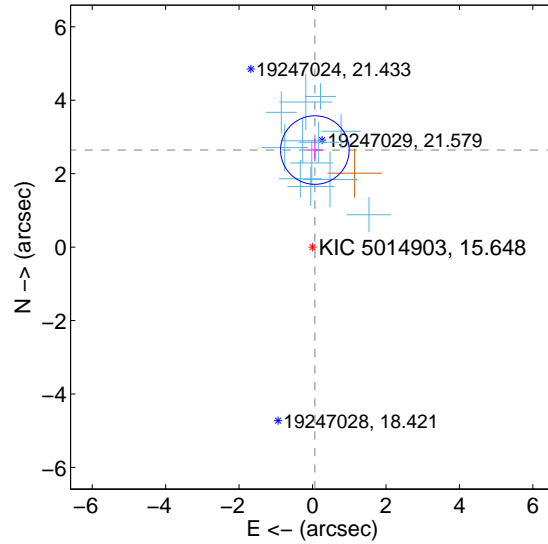
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.976 ± 0.280	10.63	-0.008 ± 0.219	2.976 ± 0.280
PRF-fit source offset from KIC position	2.644 ± 0.311	8.50	-0.064 ± 0.223	2.643 ± 0.311
photometric centroid source offset	2.76 ± 0.91	3.02	-1.48 ± 0.92	2.32 ± 0.91

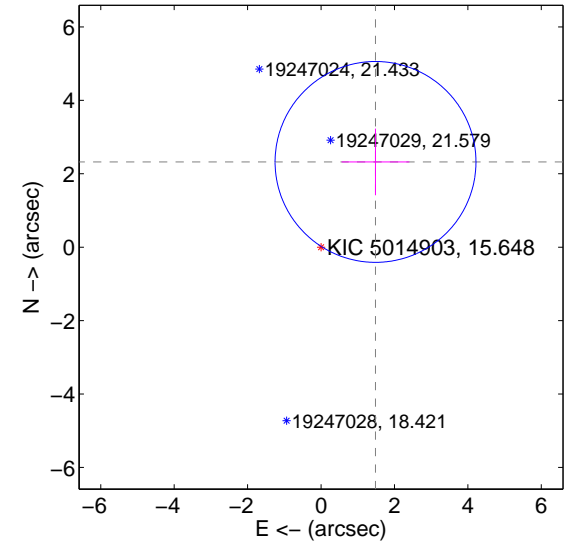
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

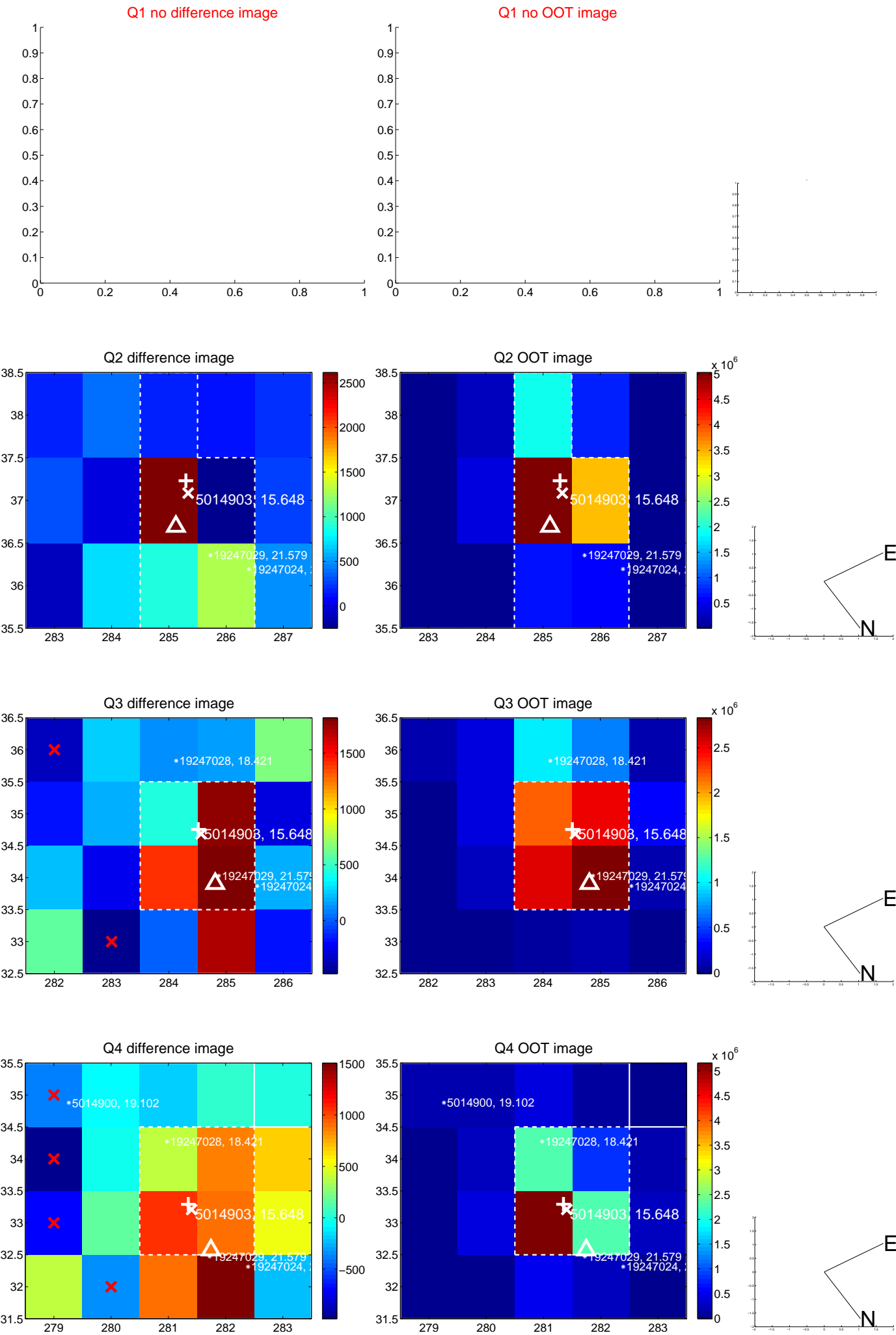


offset from photometric centroids

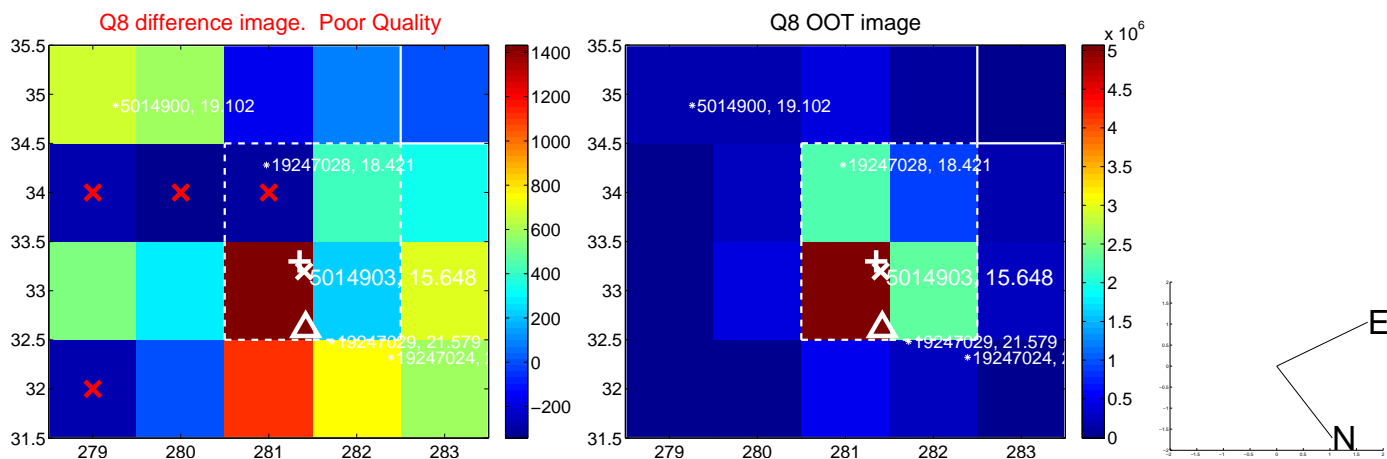
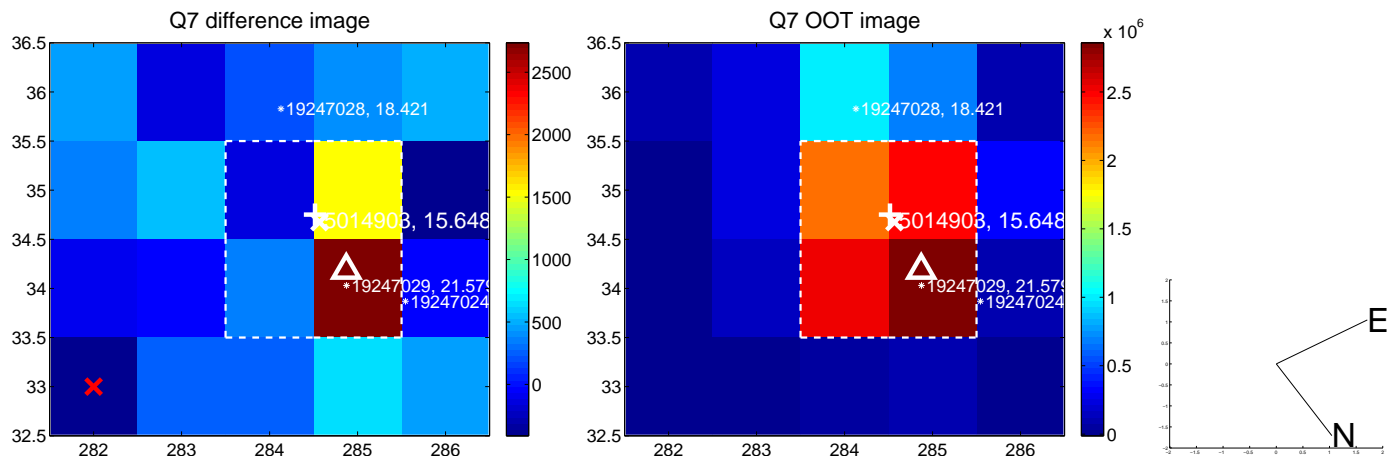
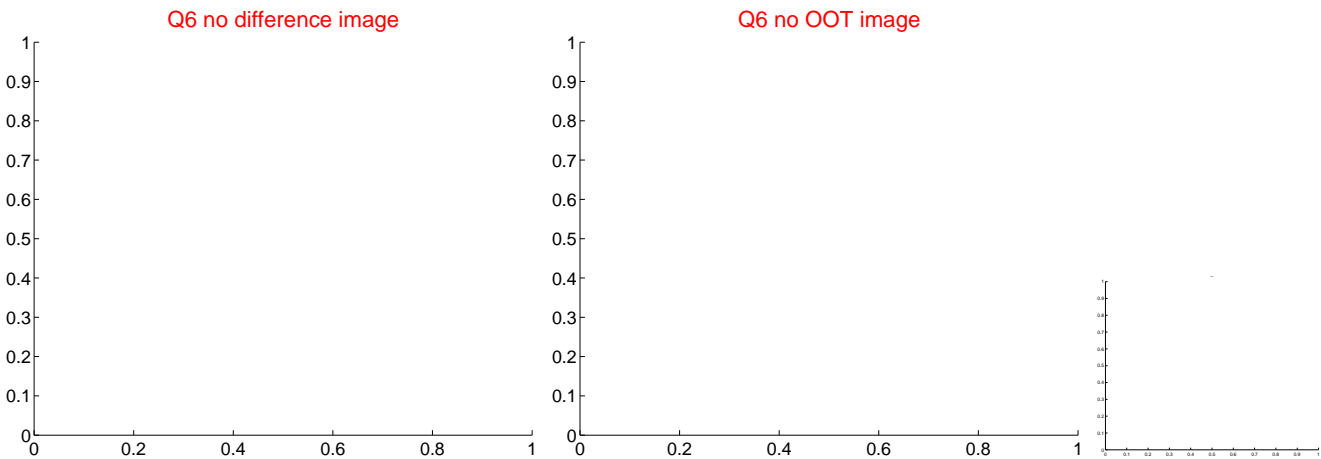
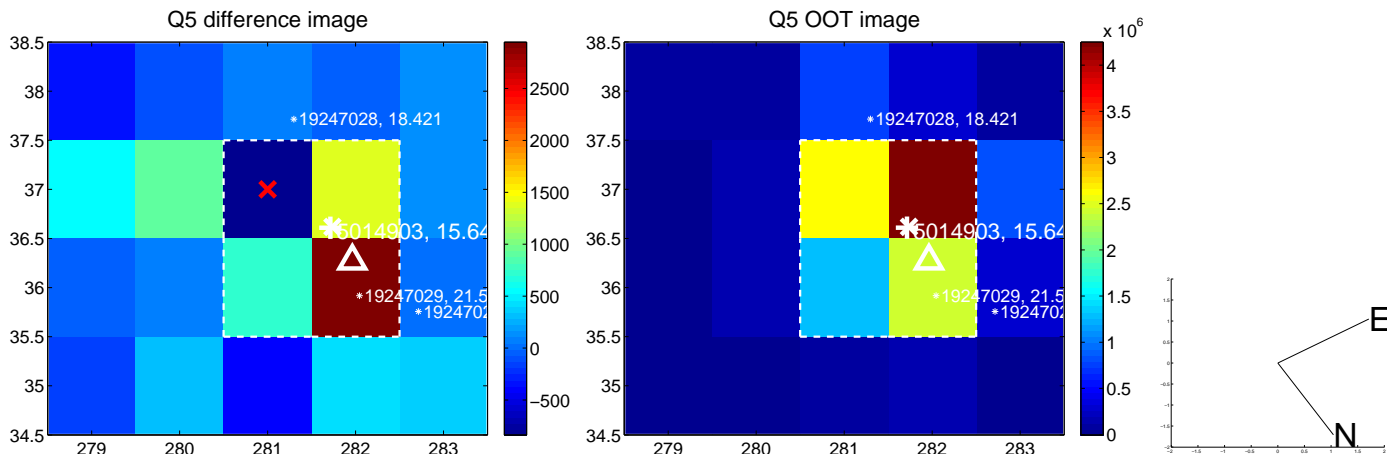


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

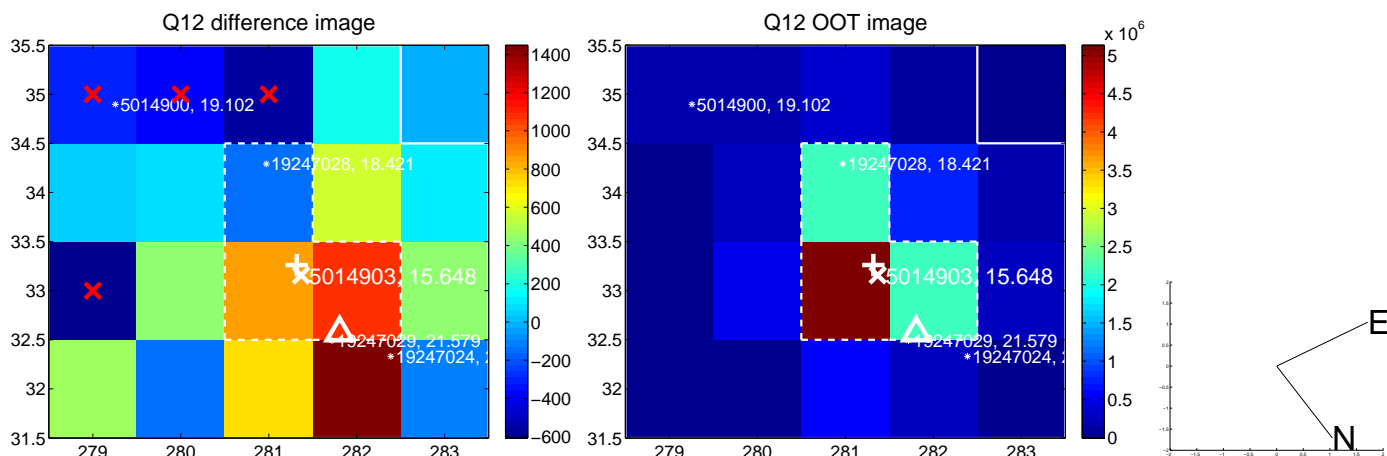
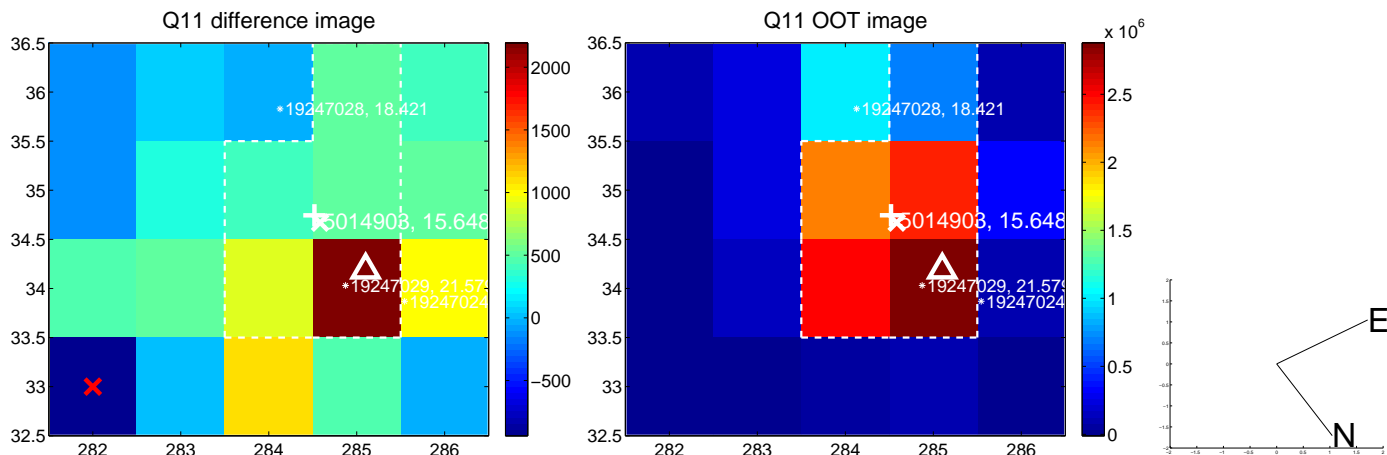
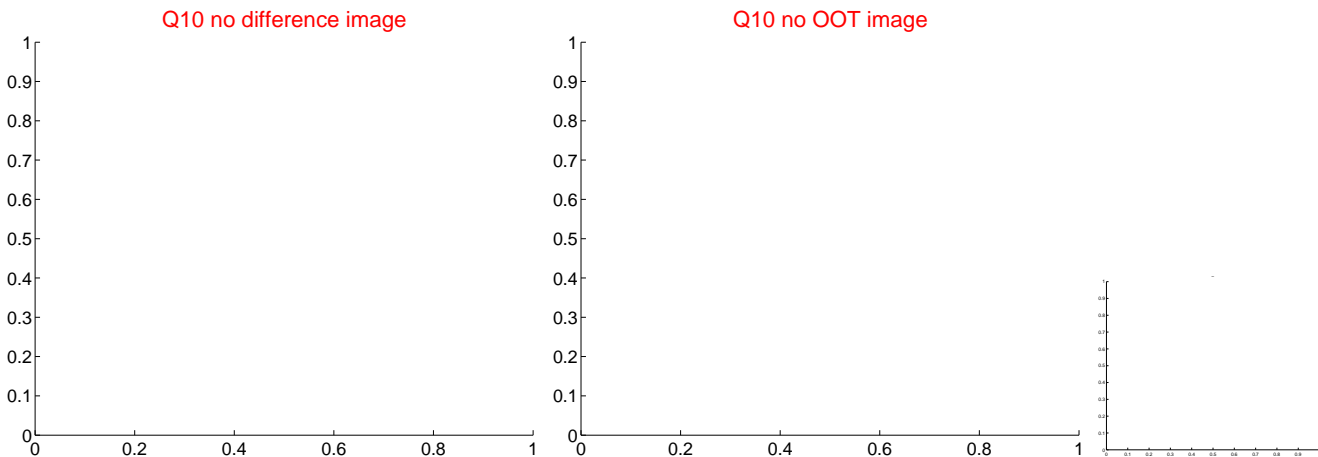
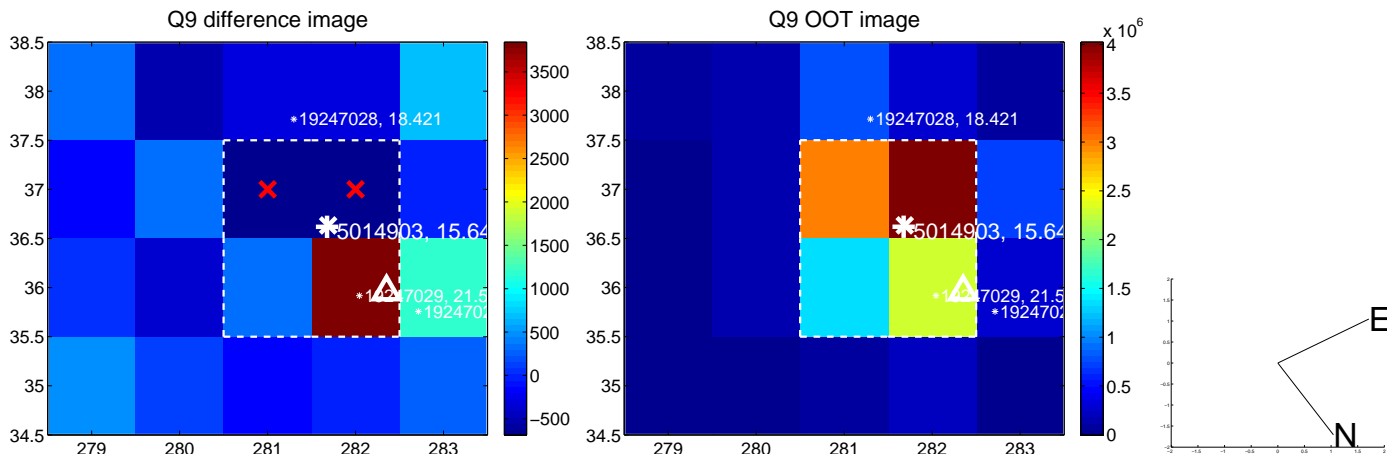
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



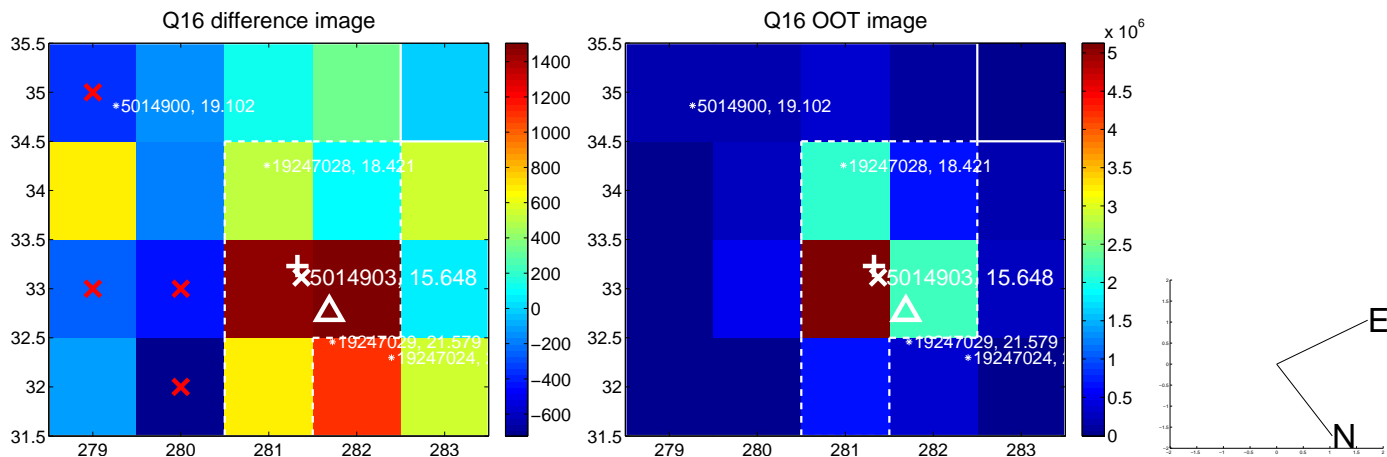
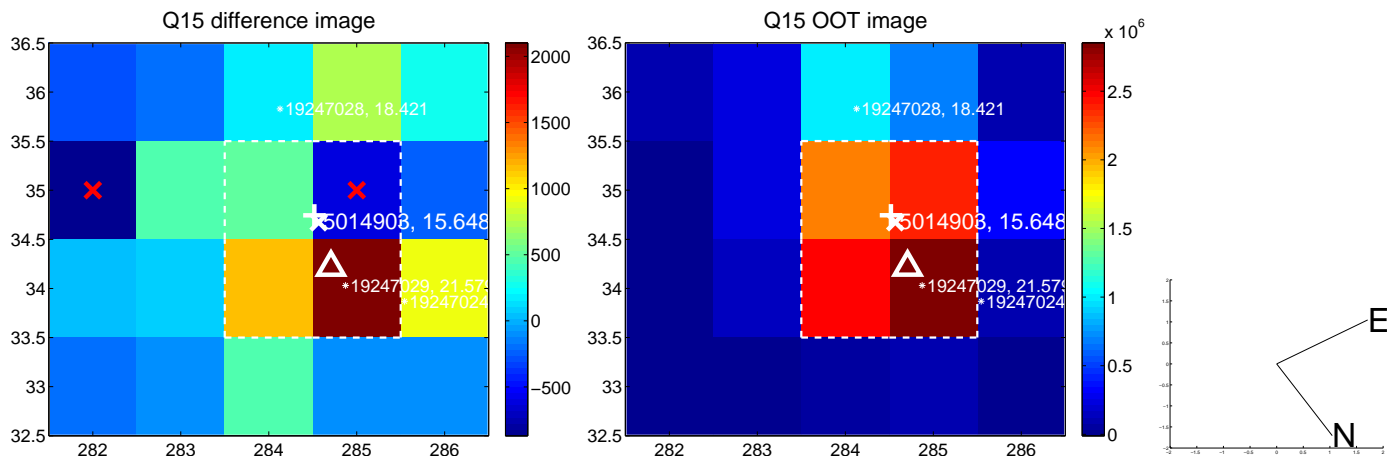
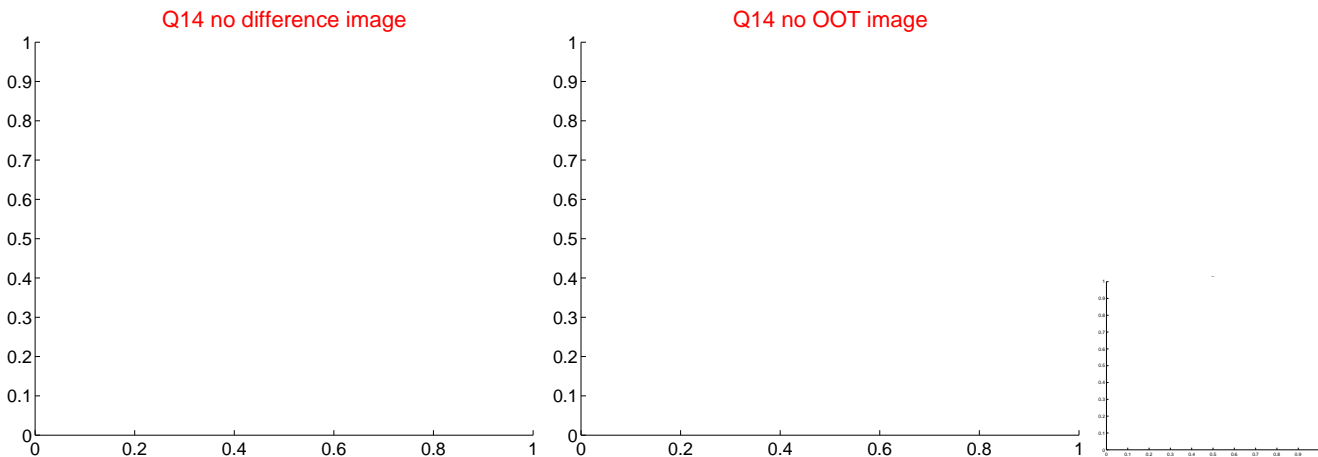
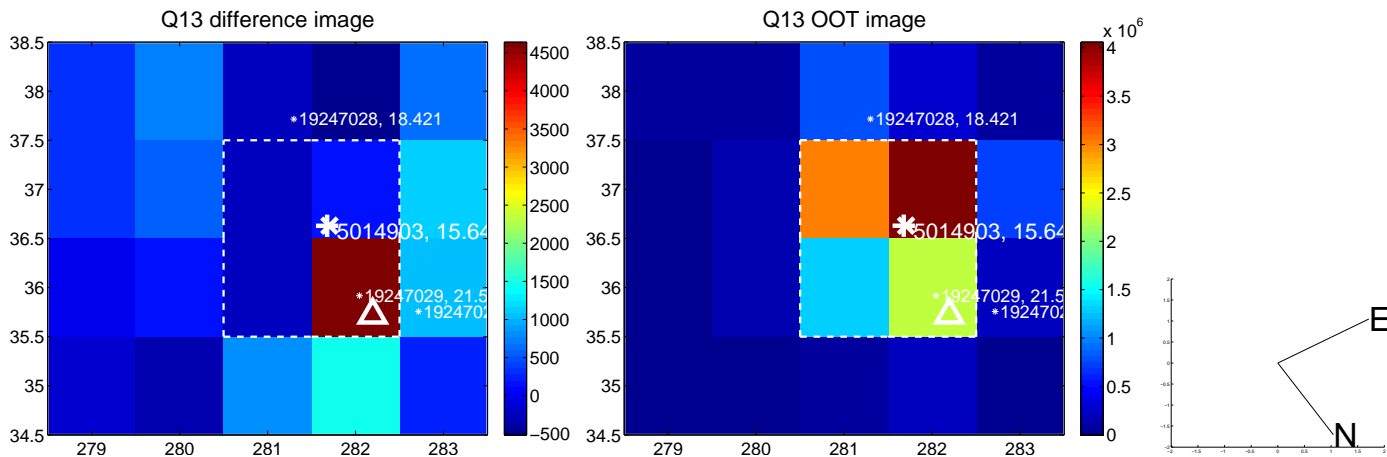
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



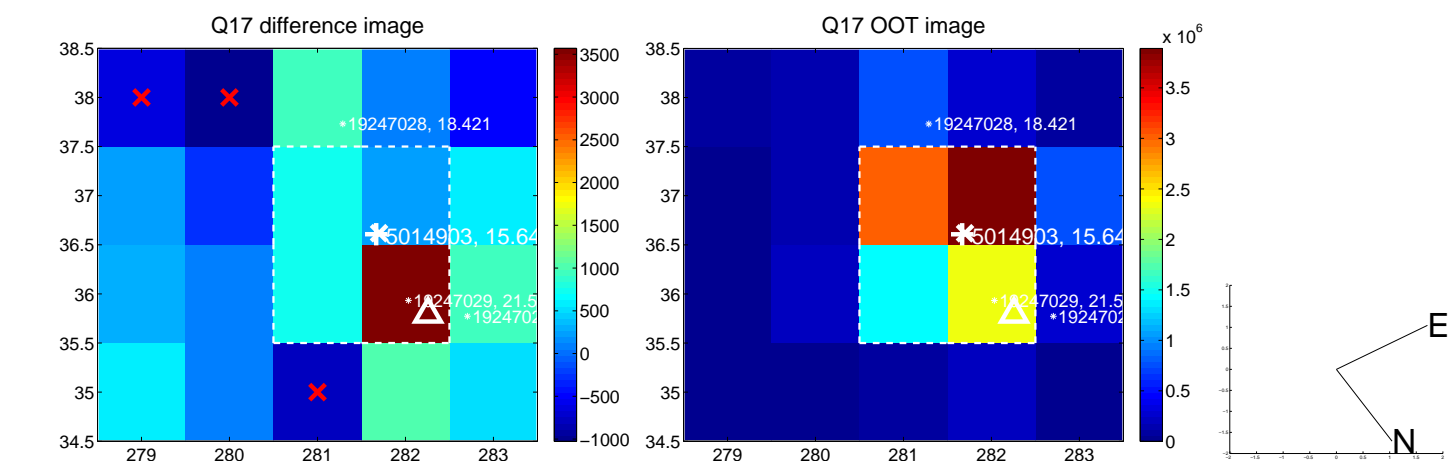
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



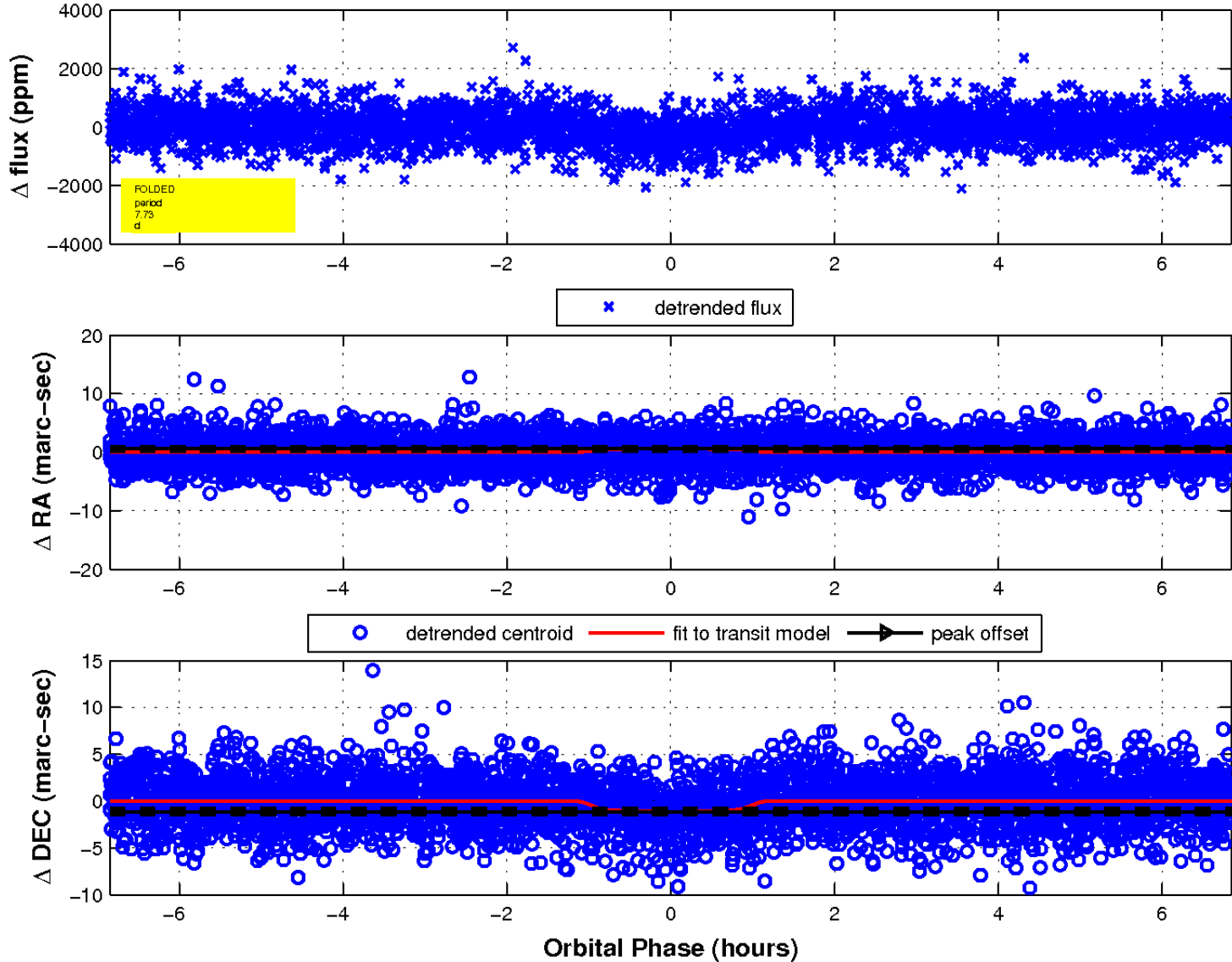
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

