

KIC 009529294

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})
009529294-01	OBS	7184.01	5.033759	133.523956	93.9	1.566	7.4	8.5	1.28	5403	1.52	392.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009529294-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

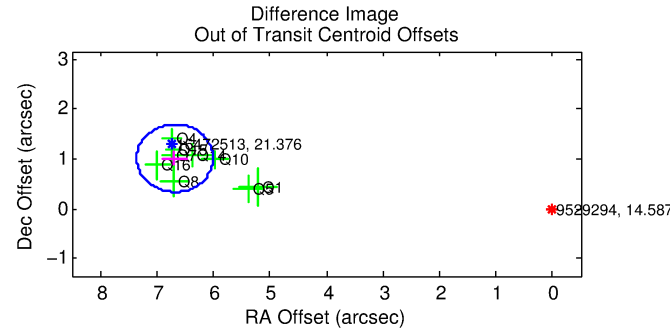
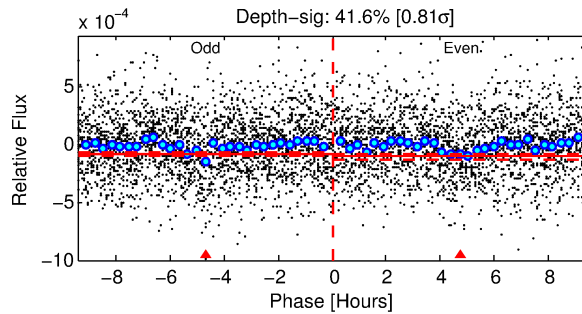
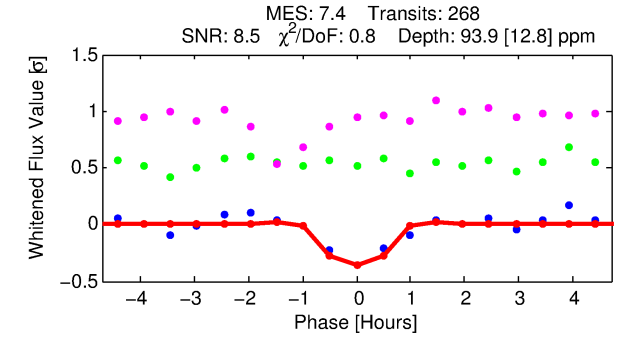
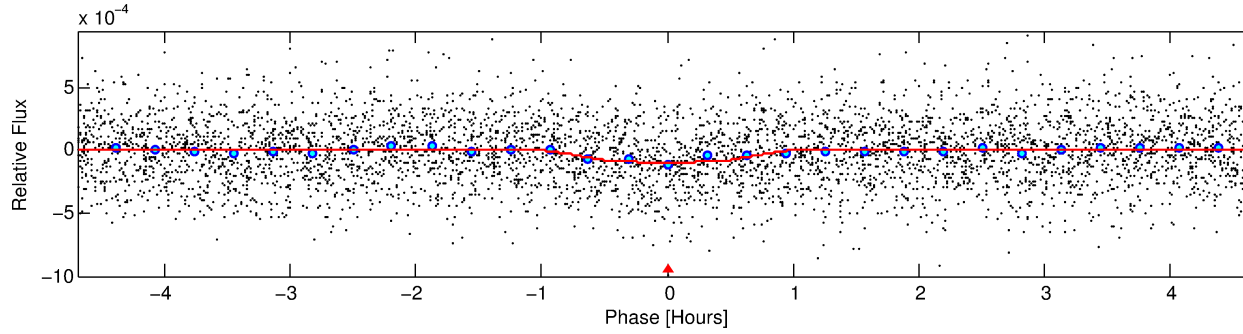
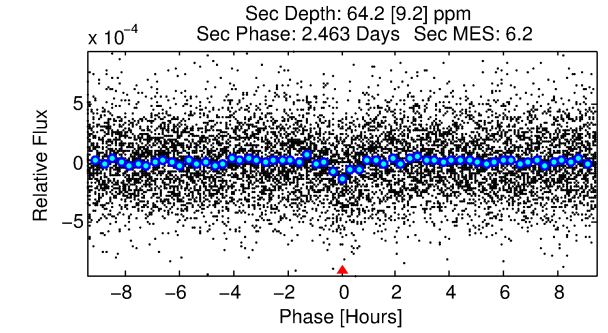
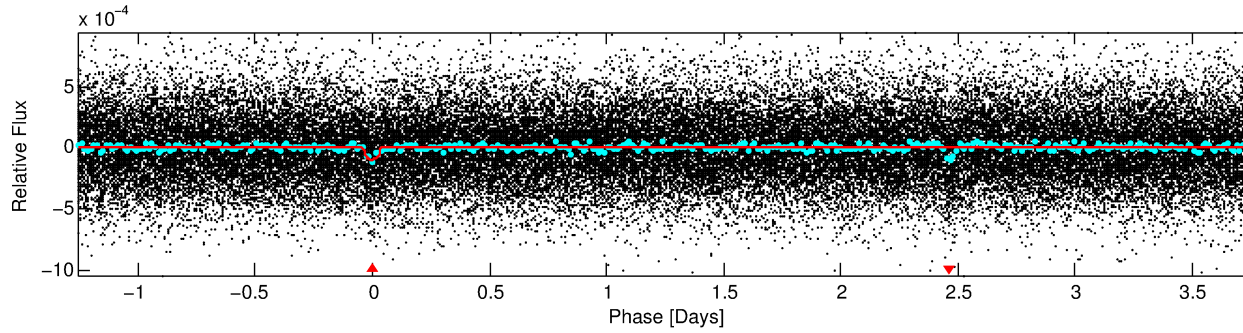
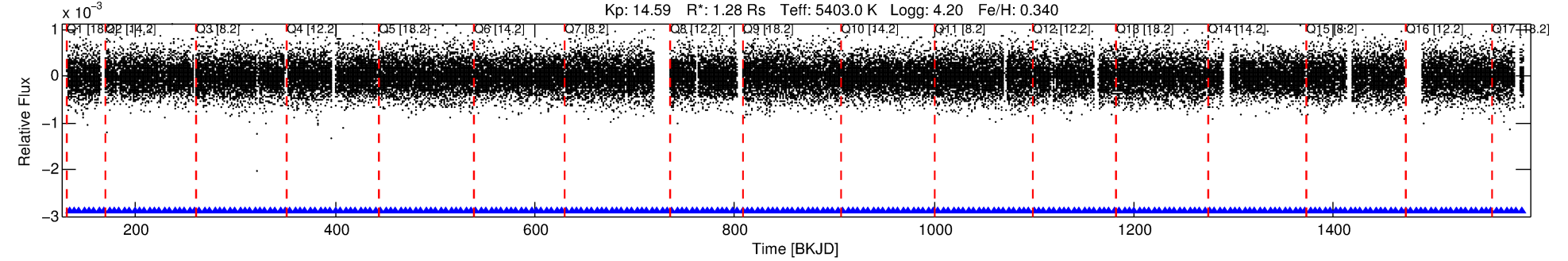
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009529294-01

No Significant Match Found

DV One-Page Summary

KIC: 9529294 Candidate: 1 of 1 Period: 5.034 d
KOI: K07184 Corr: No Ephemeris Match



DV Fit Results:

Period = 5.03376 [0.00003] d
Epoch = 133.5240 [0.0040] BKJD
Rp/R* = 0.0108 [0.0100]
a/R* = 11.00 [43.58]
b = 0.91 [0.80]
Seff = 392.60 [192.11]
Teff = 1135 [139] K
Rp = 1.52 [1.47] Re
a = 0.0566 [0.0164] AU
Ag = 49.09 [94.07] [0.51σ]
Teffp = 4645 [2161] K [1.62σ]

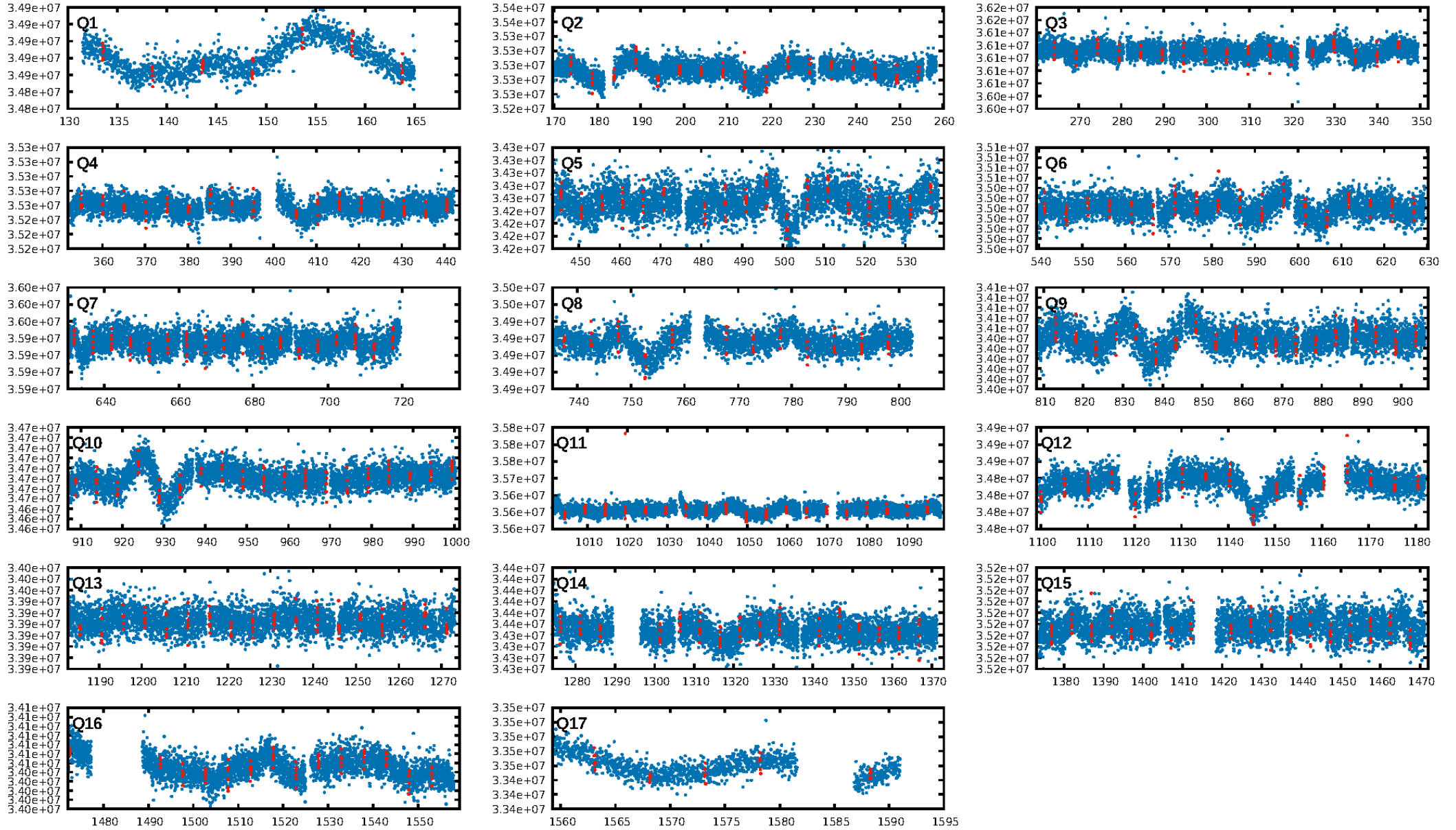
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.18e-14
RollingBand-fgt: 1.00 [256/256]
GhostDiagnostic-chr: -0.07667
Centroid-sig: 0.0%
Centroid-so: 21.030 arcsec [13.89σ]
OotOffset-rm: 6.756 arcsec [29.99σ]
KicOffset-rm: 6.534 arcsec [29.62σ]
OotOffset-st: 2/2/3/2 [9]
KicOffset-st: 2/2/3/2 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [17/17]

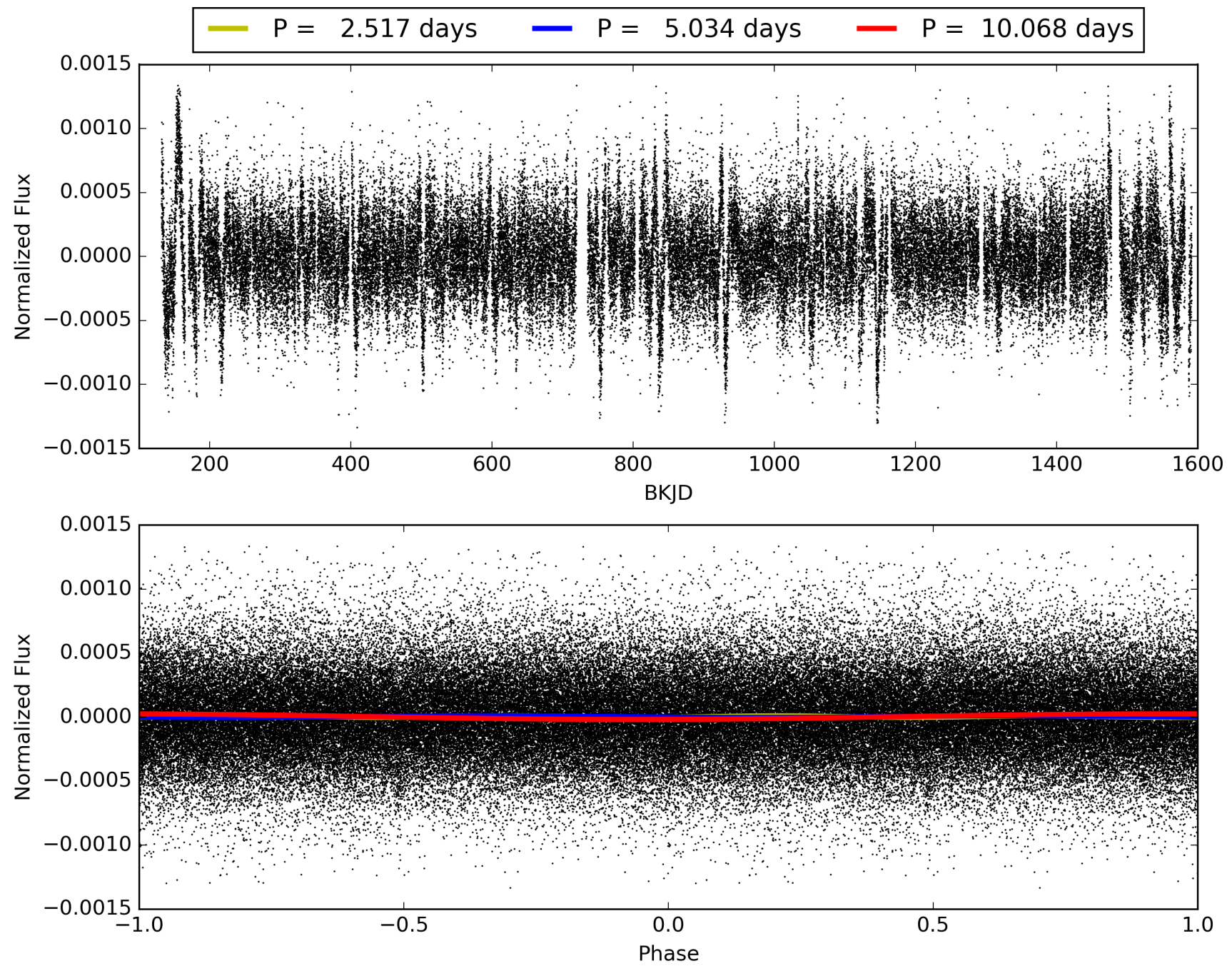
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:46:11 Z

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

TCE 009529294-01, PDC Light Curves

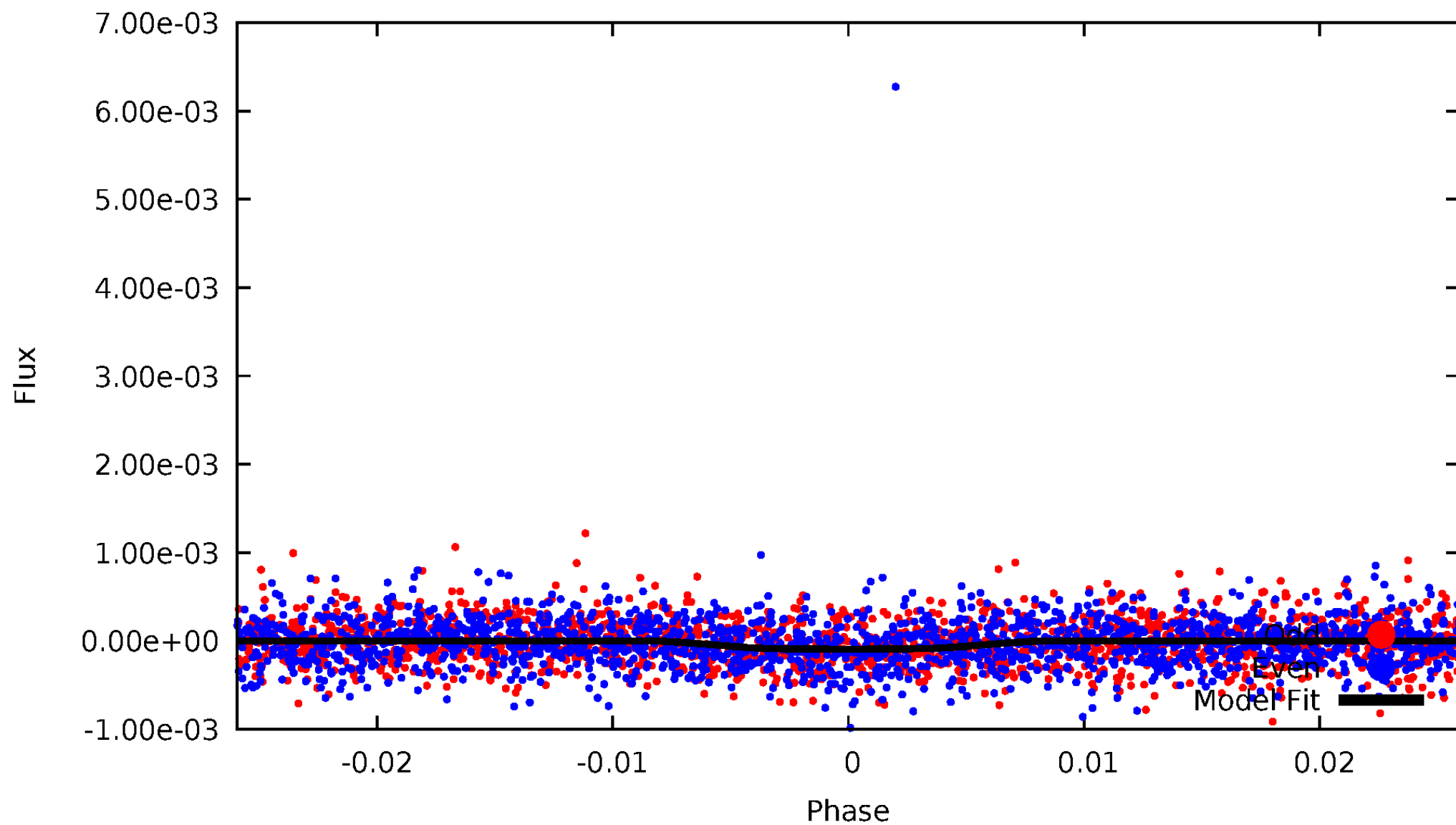


TCE 009529294-01



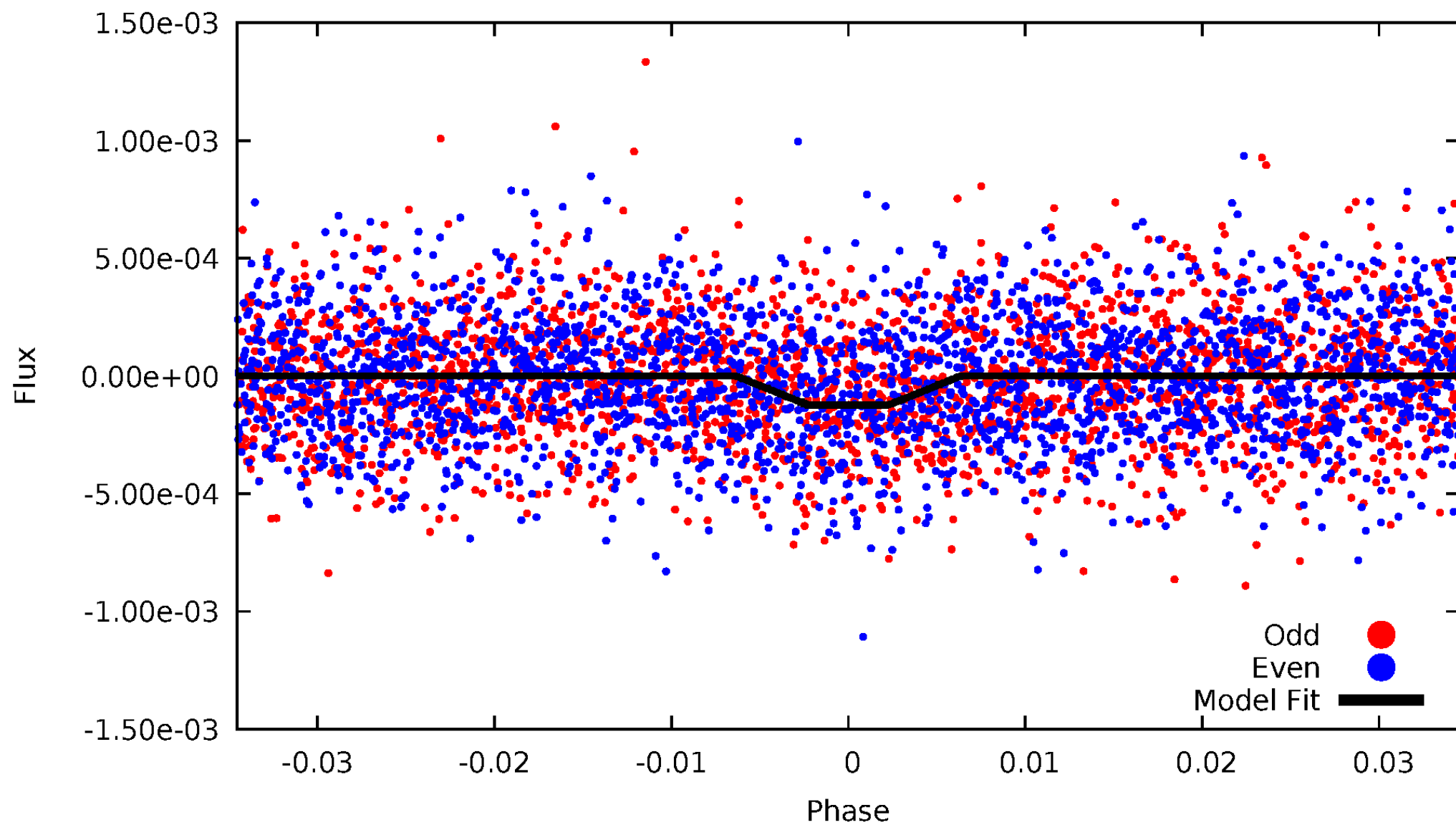
DV Odd/Even

TCE 009529294-01

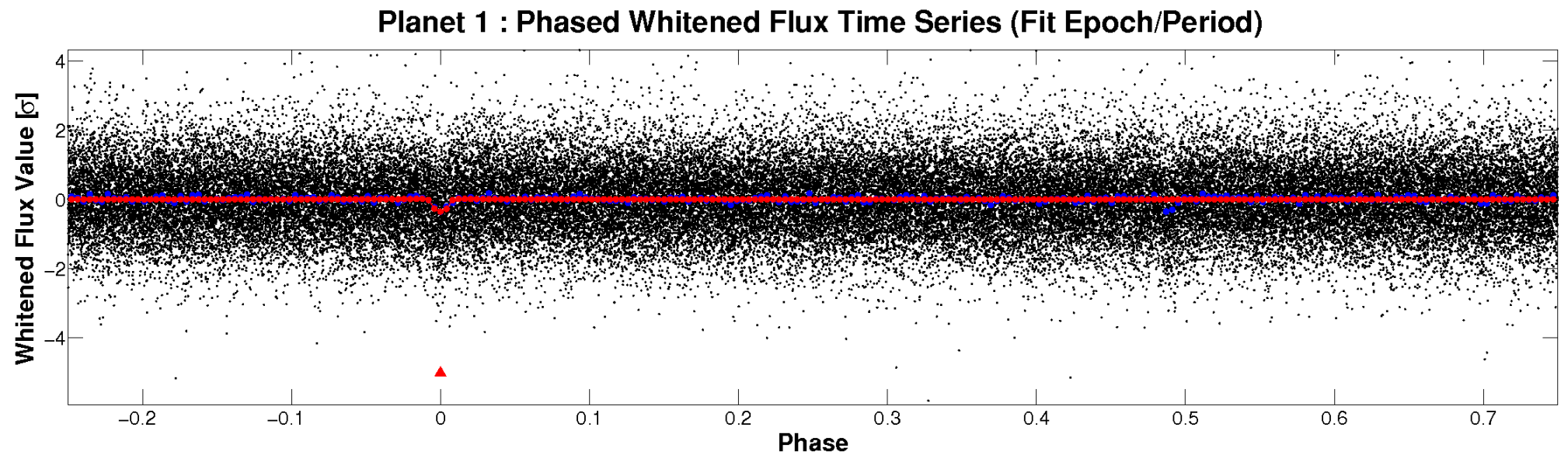
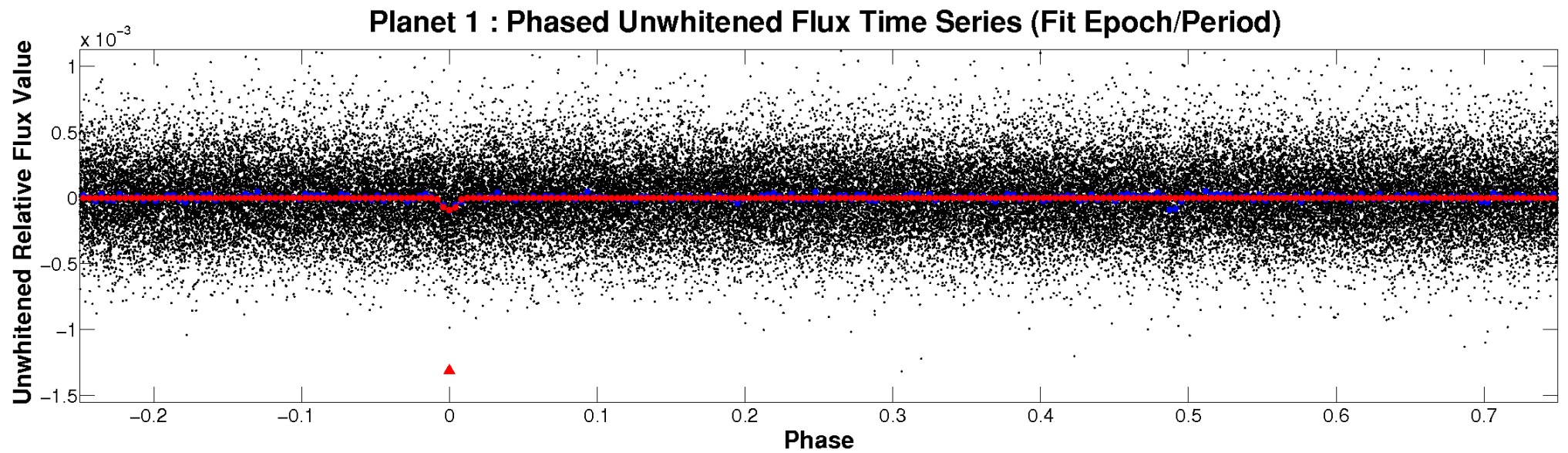


ALT Odd/Even

TCE 009529294-01

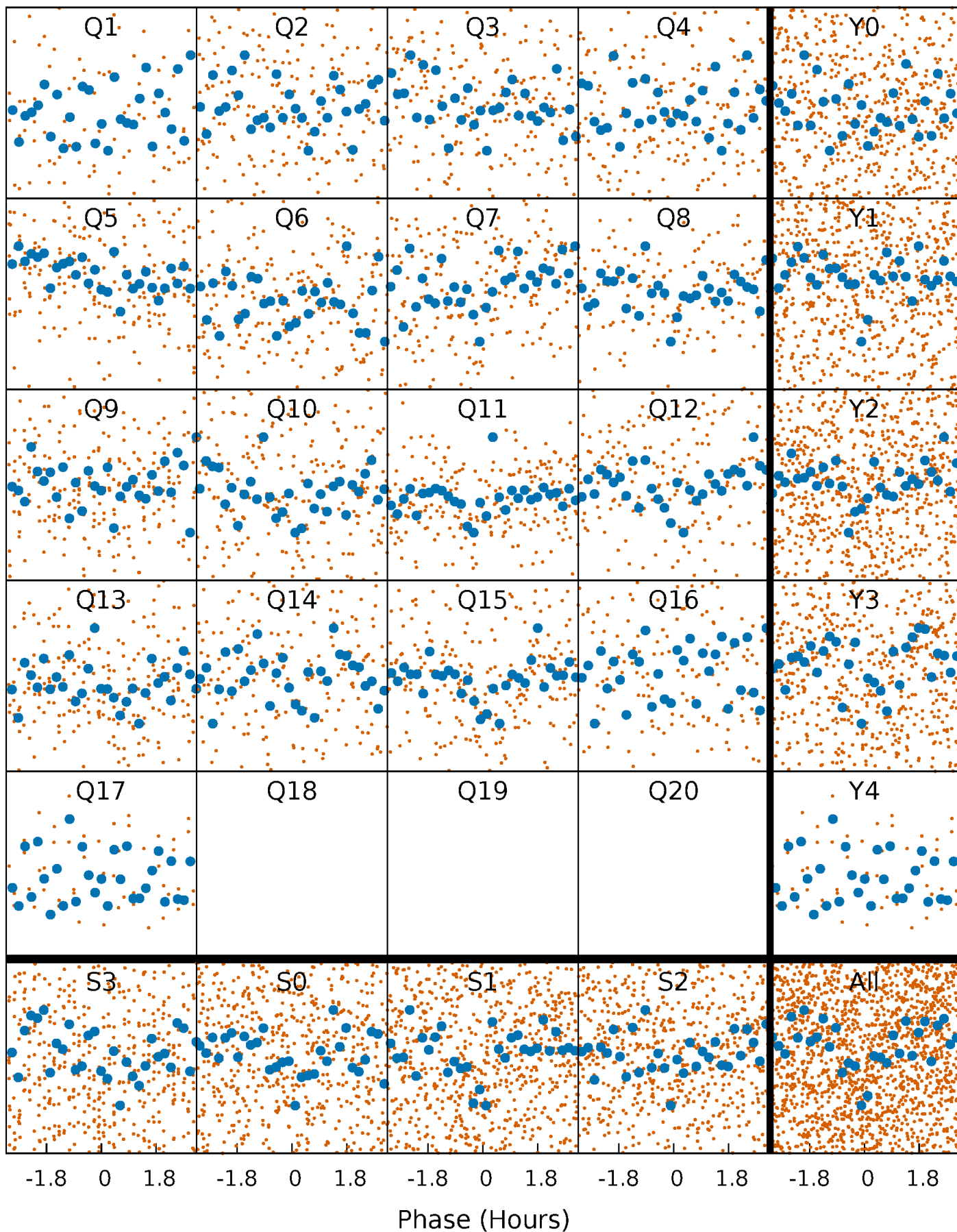


Non-Whitened Vs. Whitened Light Curve



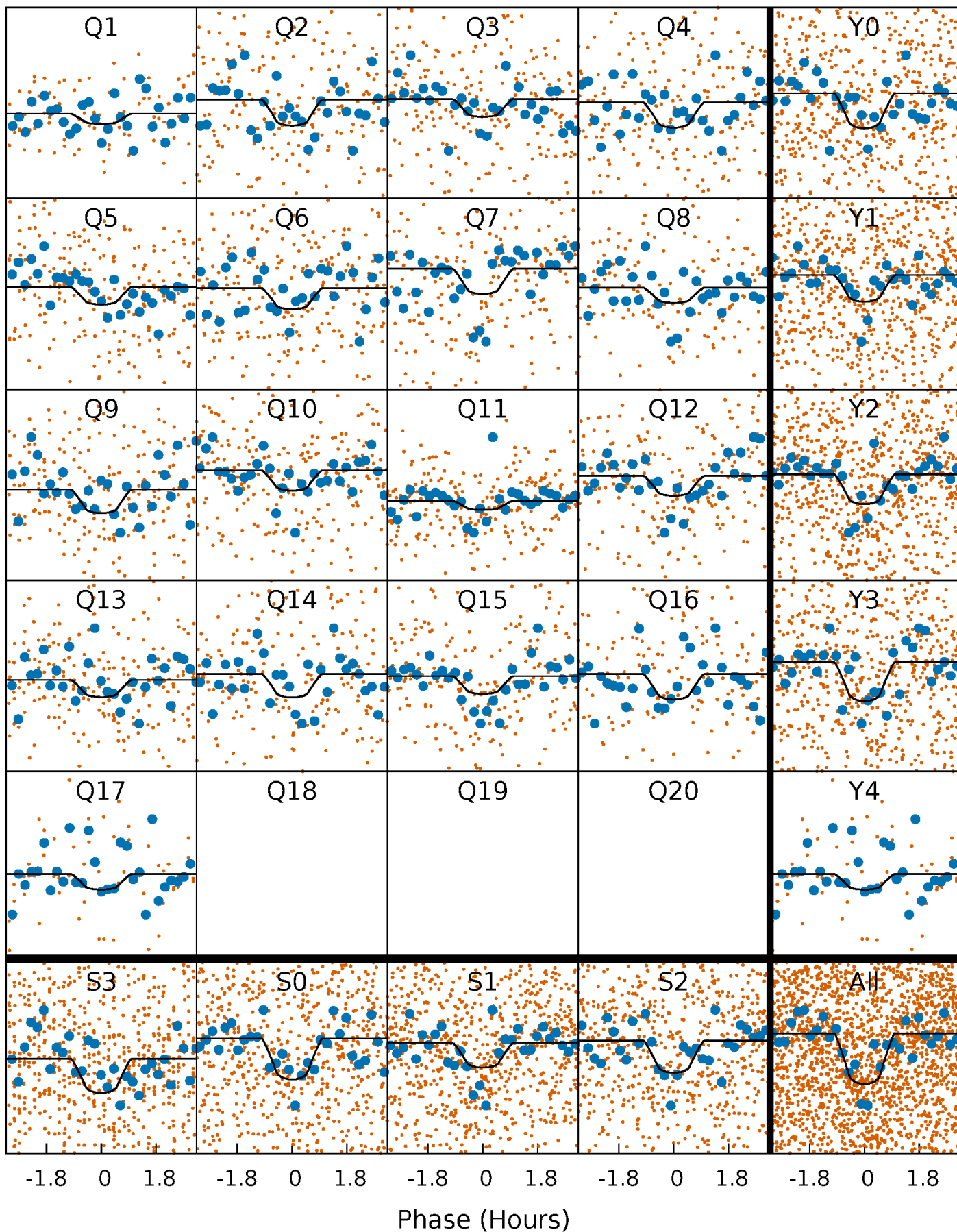
PDC Quarter-Phased Transit Curves

TCE 009529294-01 P= 5.033759 Days $T_0=133.523955$ (BKJD)



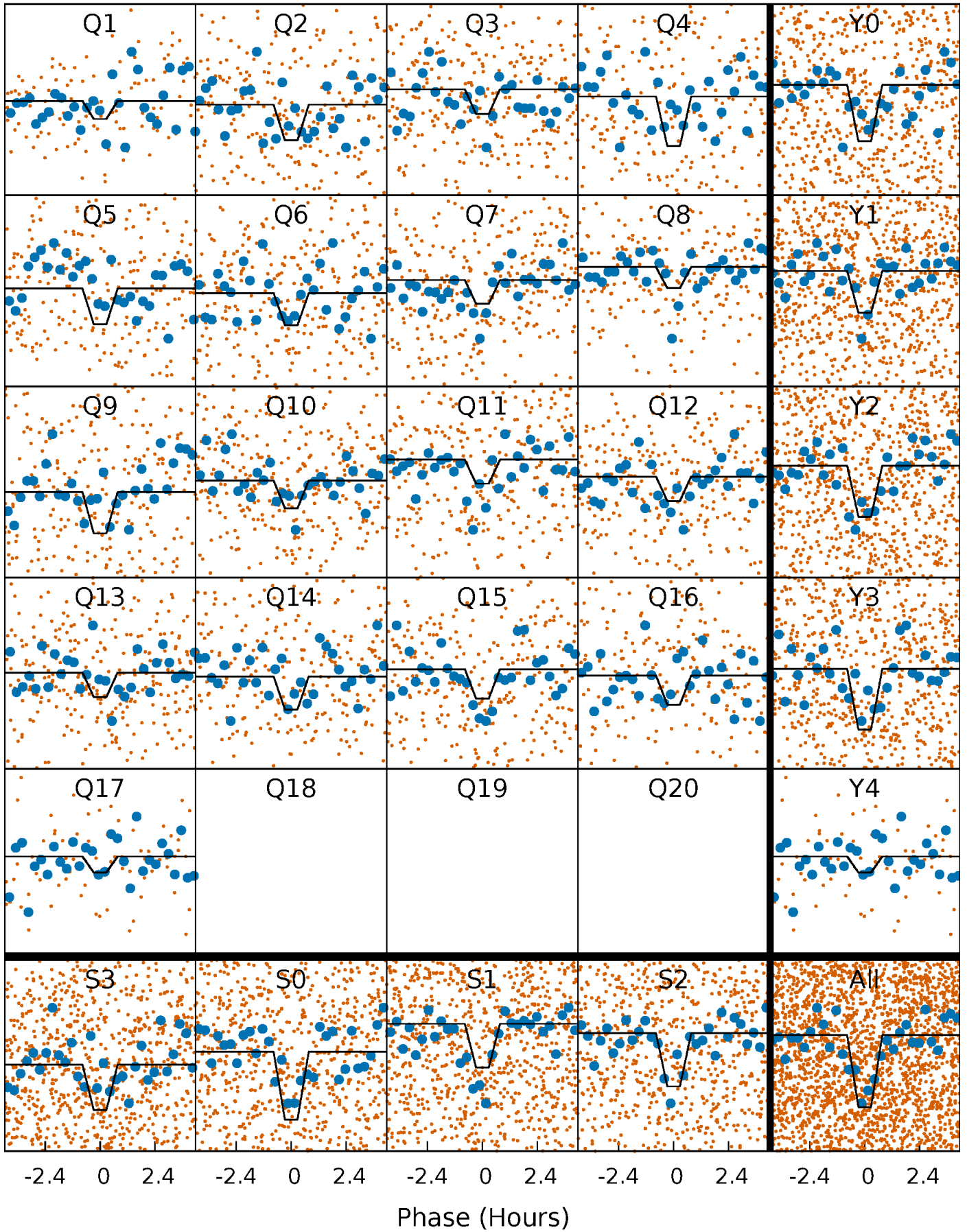
DV Quarter-Phased Transit Curves

TCE 009529294-01 P= 5.033759 Days $T_0=133.523955$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

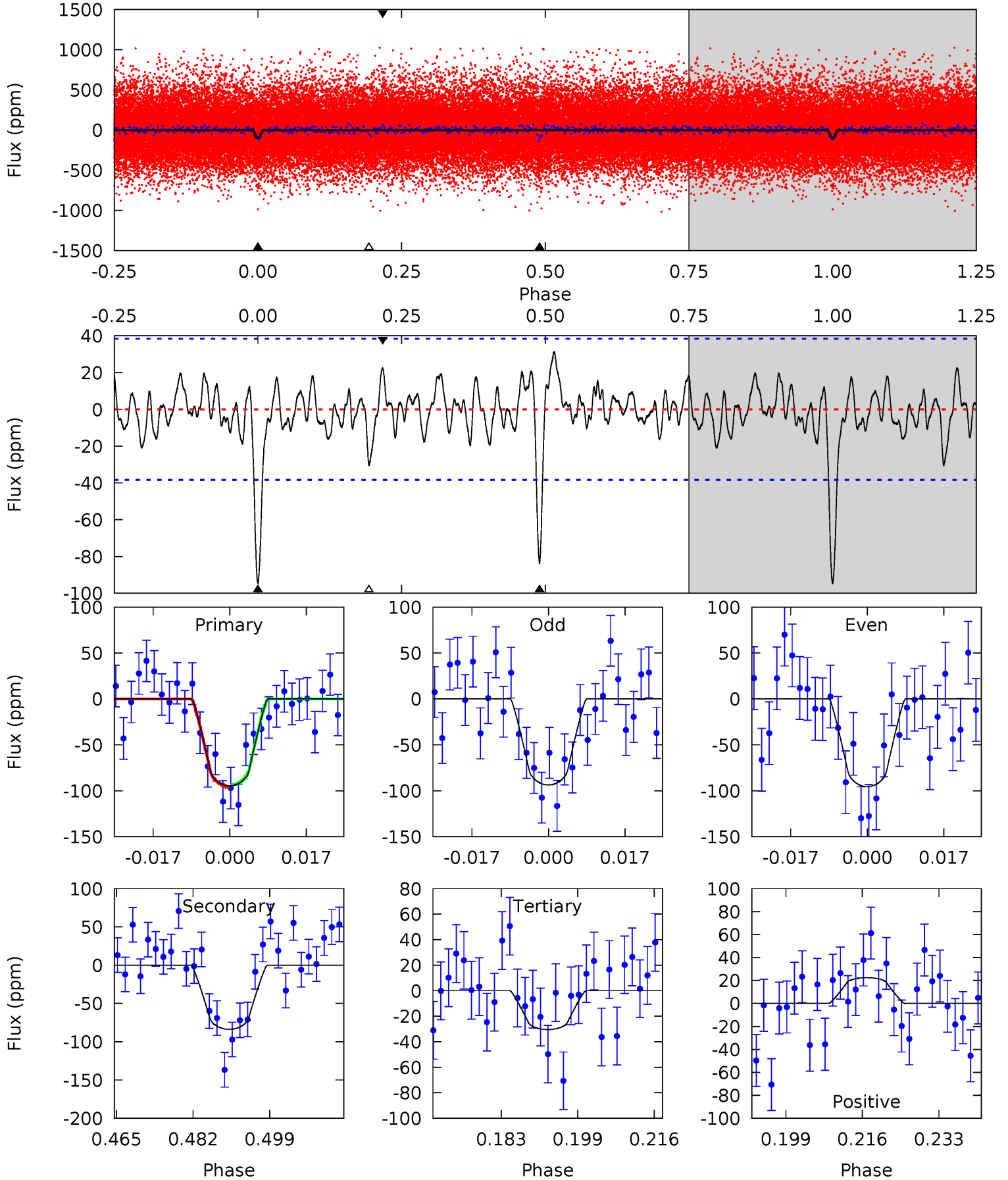
TCE 009529294-01 P= 5.033790 Days $T_0=133.519082$ (BKJD)



DV Model-Shift Uniqueness Test

009529294-01, P = 5.033759 Days, E = 128.490196 Days

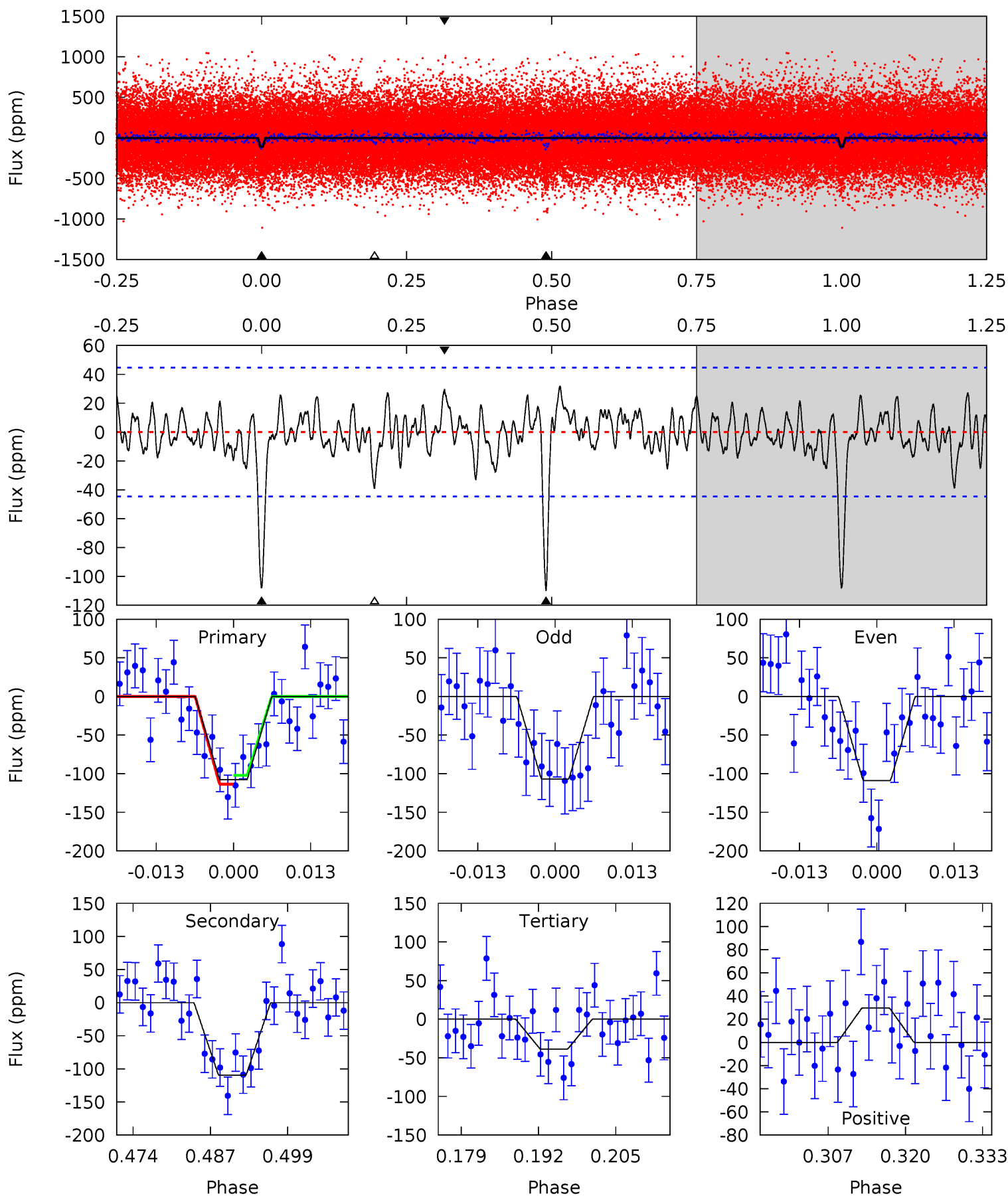
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	10.8	3.91	2.89	4.93	2.39	1.23	8.22	9.24	6.85	7.87	0.11	0.90	0.25	0.11



Alt Model-Shift Uniqueness Test

009529294-01, P = 5.033790 Days, E = 128.485292 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	12.2	4.32	3.31	4.98	2.49	1.30	7.71	8.72	7.92	8.92	0.11	0.96	0.22	0.65



Stellar Parameters For KIC 009529294

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5403^{+164}_{-147}	$4.201^{+0.282}_{-0.188}$	$0.340^{+0.100}_{-0.250}$	$1.284^{+0.372}_{-0.372}$	$0.955^{+0.079}_{-0.079}$	$0.636^{+1.071}_{-0.301}$
	+3%/-3%	+7%/-4%	+29%/-74%	+29%/-29%	+8%/-8%	+168%/-47%
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 009529294-01 / KOI 7184.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-84 ± 8	$1.68^{+1.34}_{-1.12}$	1576^{+129}_{-127}	4754^{+3207}_{-926}	52^{+391}_{-36}
Alt.	-110 ± 9	$1.67^{+1.49}_{-1.02}$	1582^{+122}_{-125}	5075^{+3170}_{-1038}	71^{+380}_{-52}

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 $A_{obs} \gg 1.0$

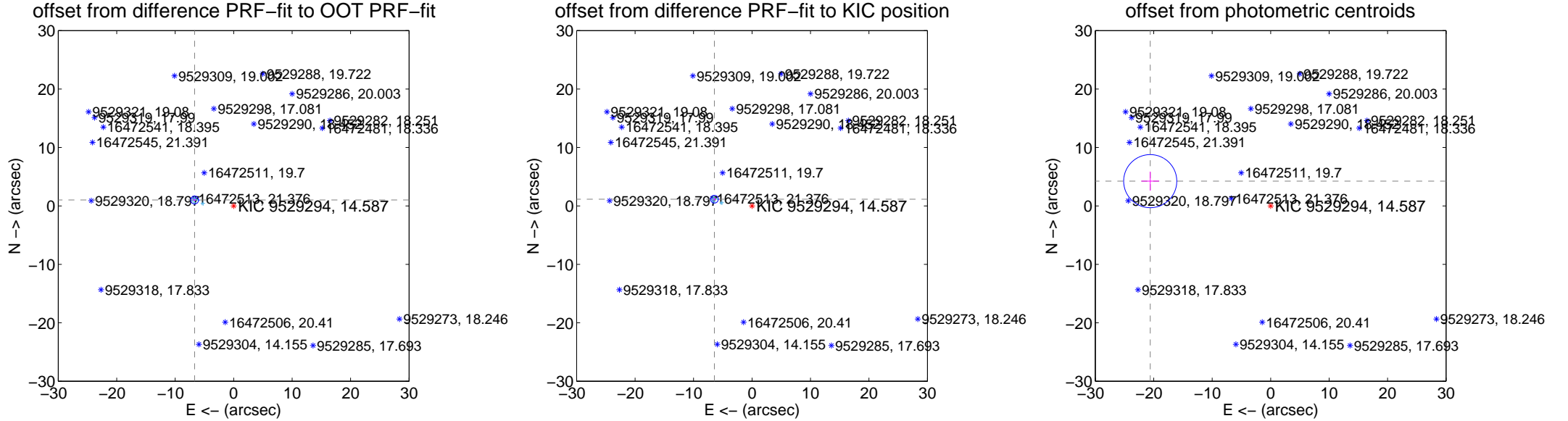
DV Centroid Data

Supplemental centroid analysis for 009529294-01. Kepler magnitude: 14.59. Transit SNR 8.53

There are 9 quarters with good PRF difference image offsets

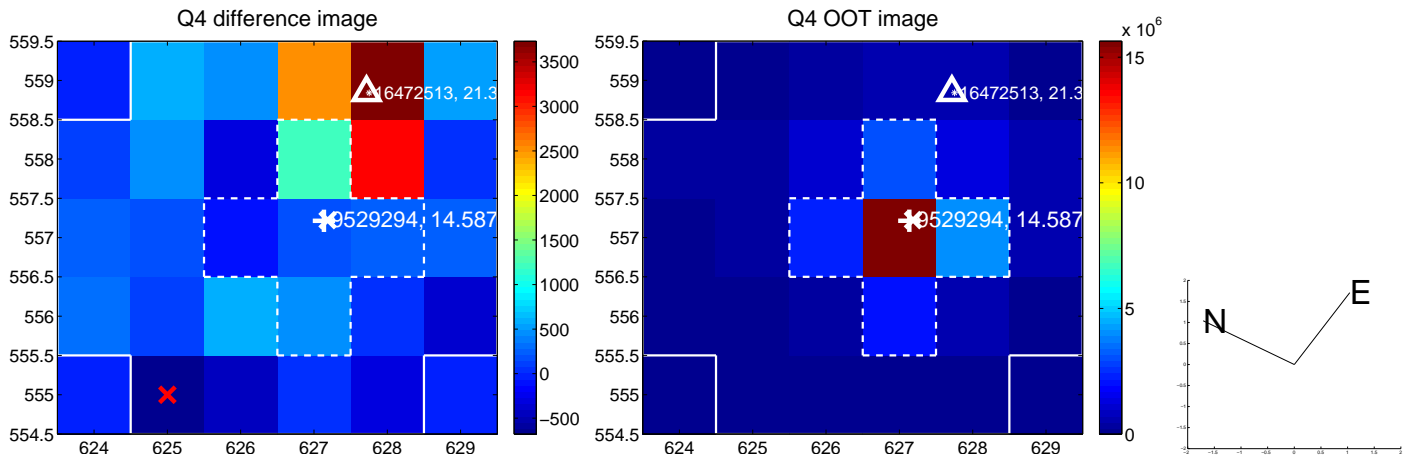
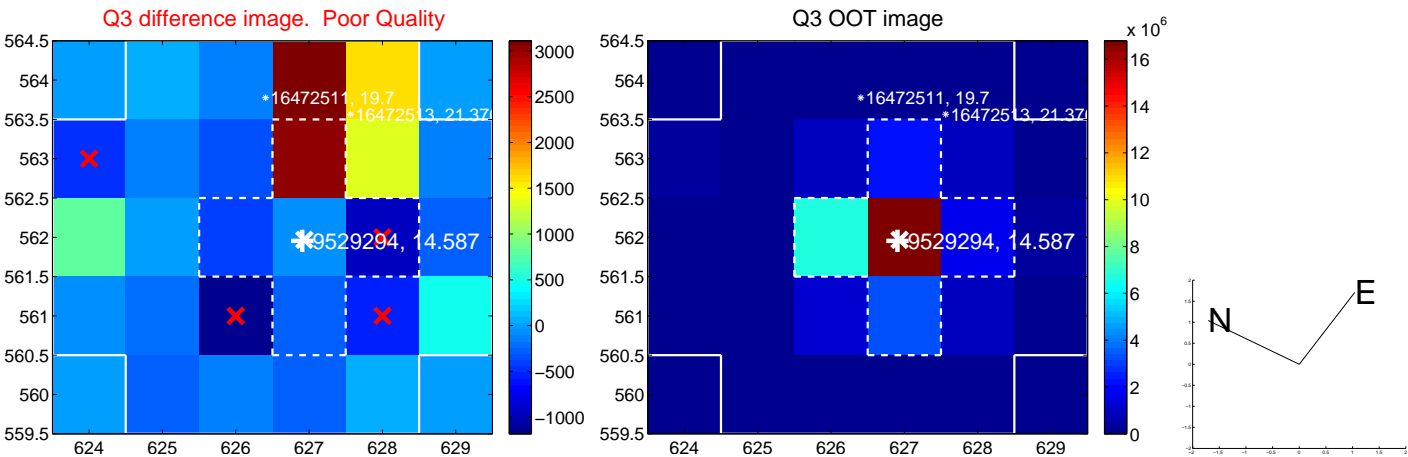
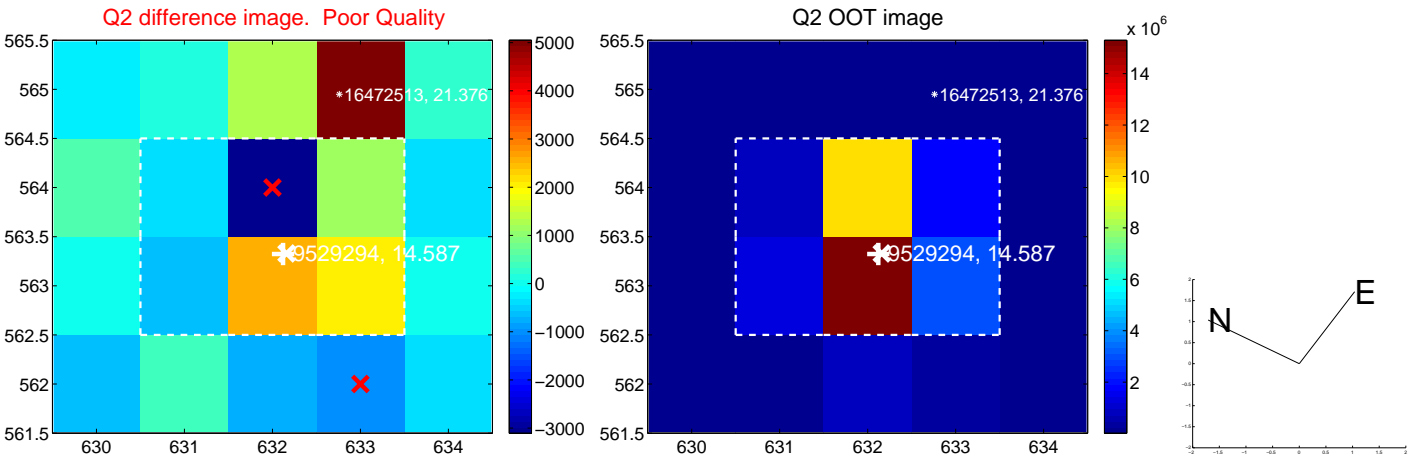
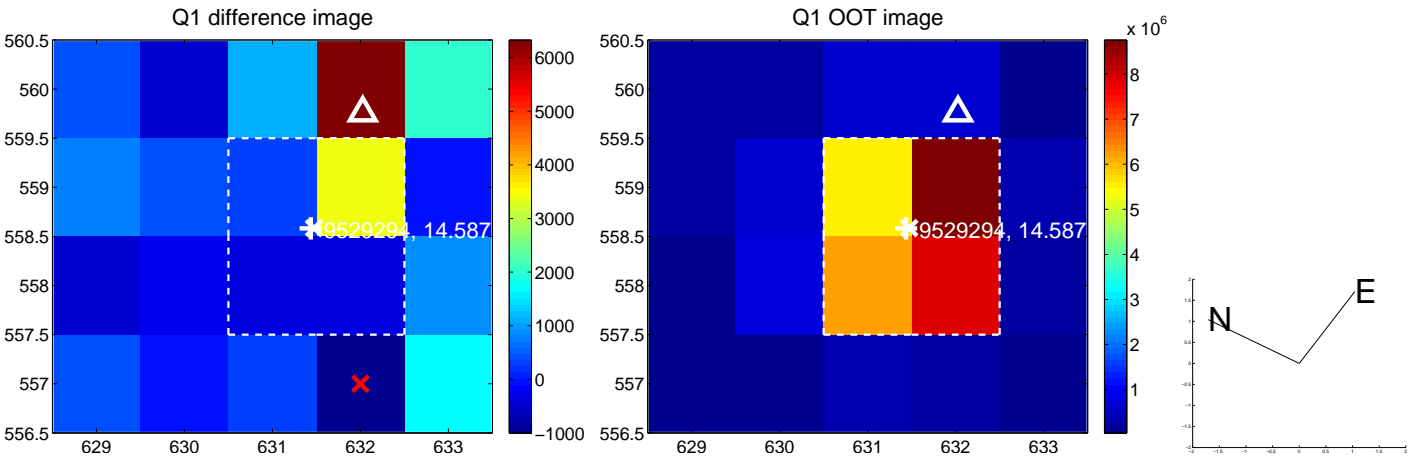
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.756 \pm 0.225	29.99	6.681 \pm 0.218	1.008 \pm 0.124
PRF-fit source offset from KIC position	6.534 \pm 0.221	29.62	6.433 \pm 0.209	1.146 \pm 0.135
photometric centroid source offset	21.03 \pm 1.51	13.89	20.60 \pm 1.51	4.24 \pm 1.63

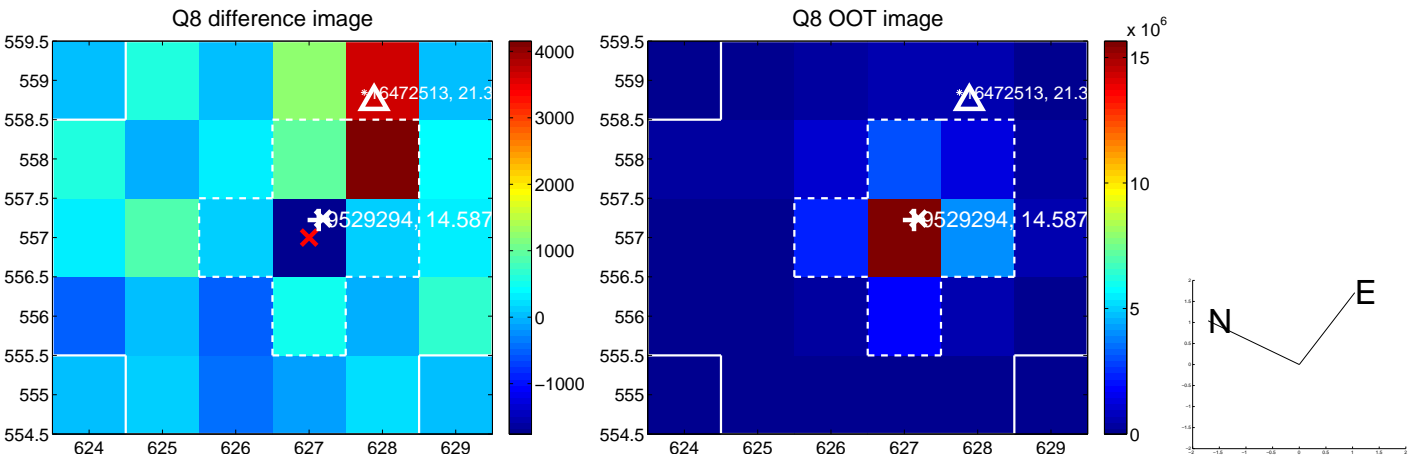
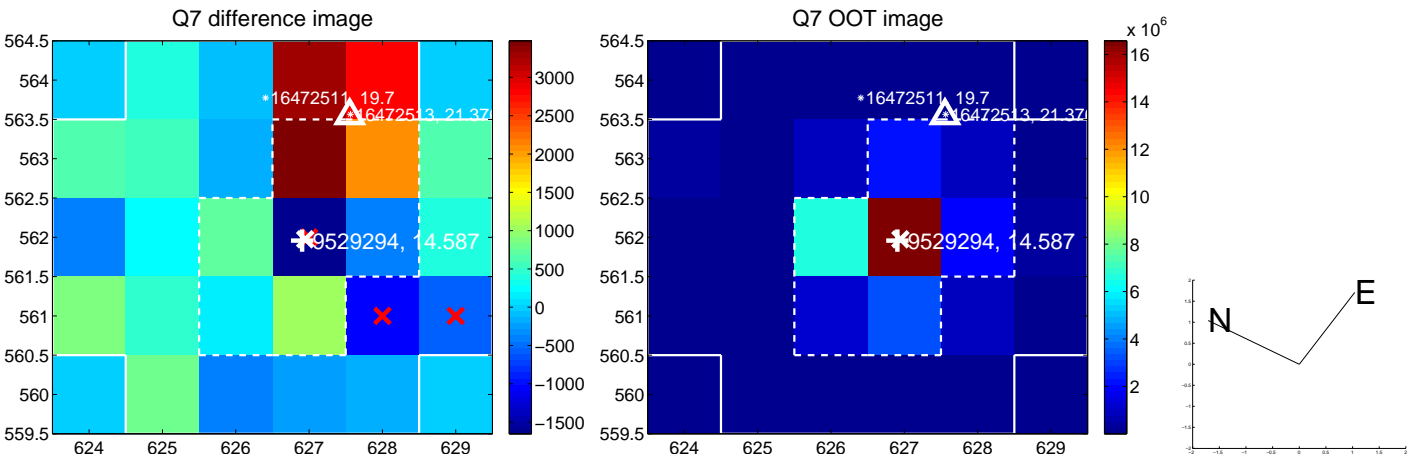
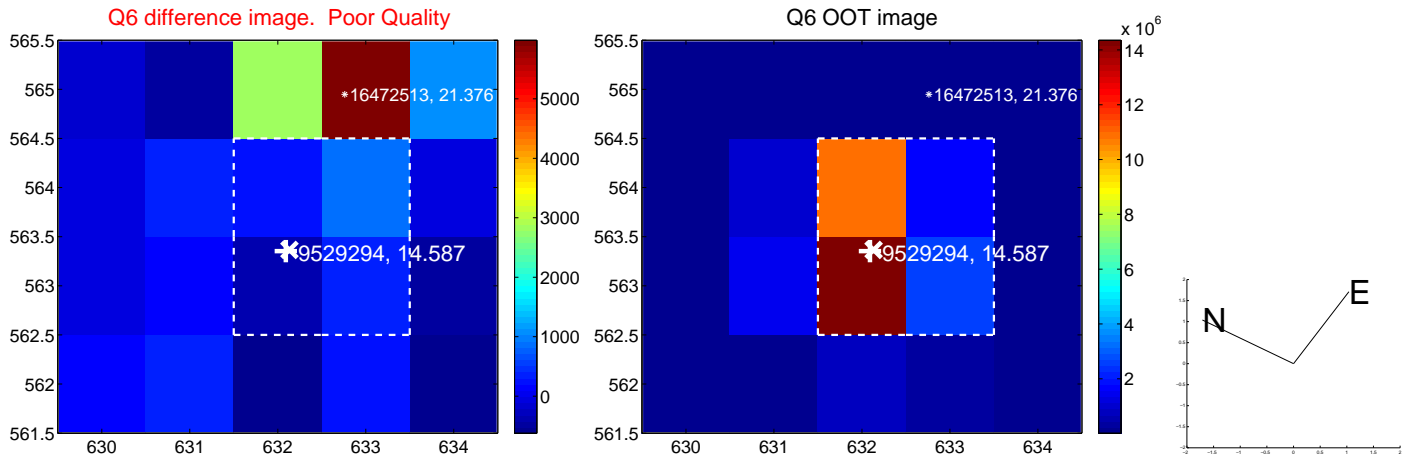
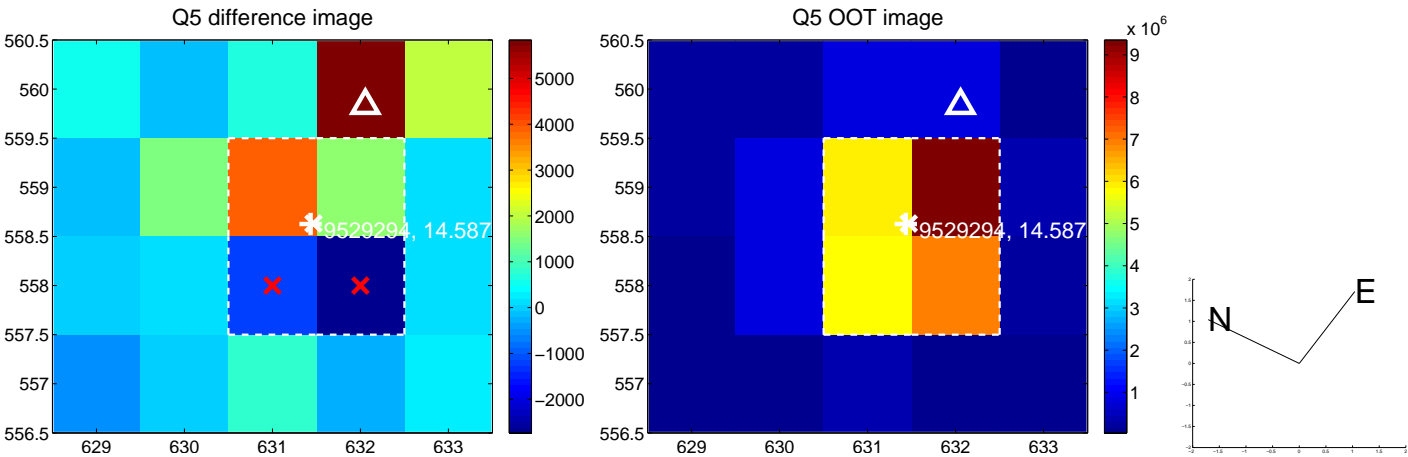


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

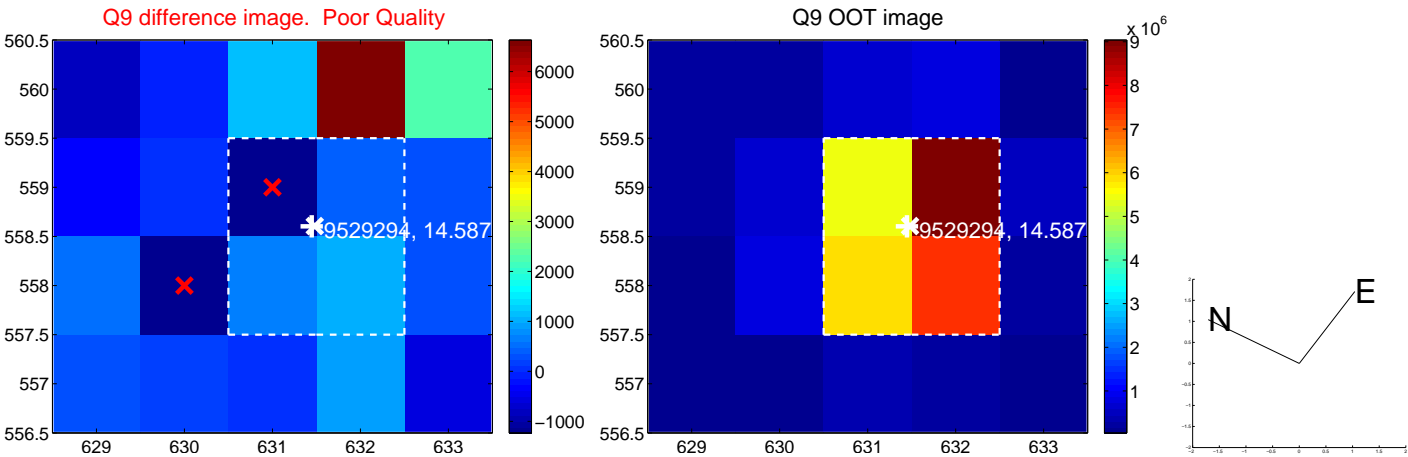
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



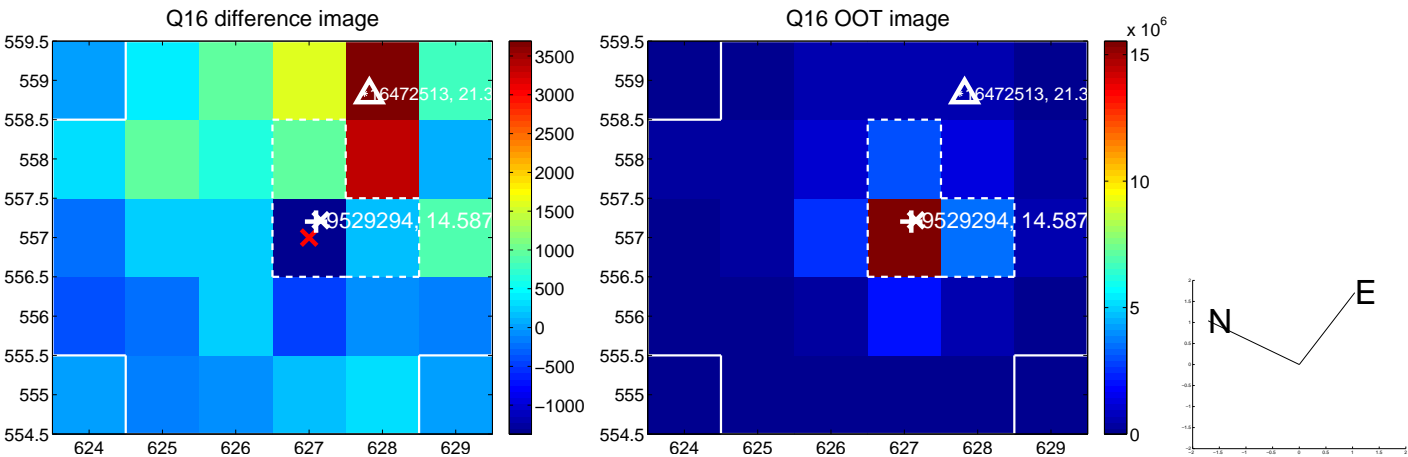
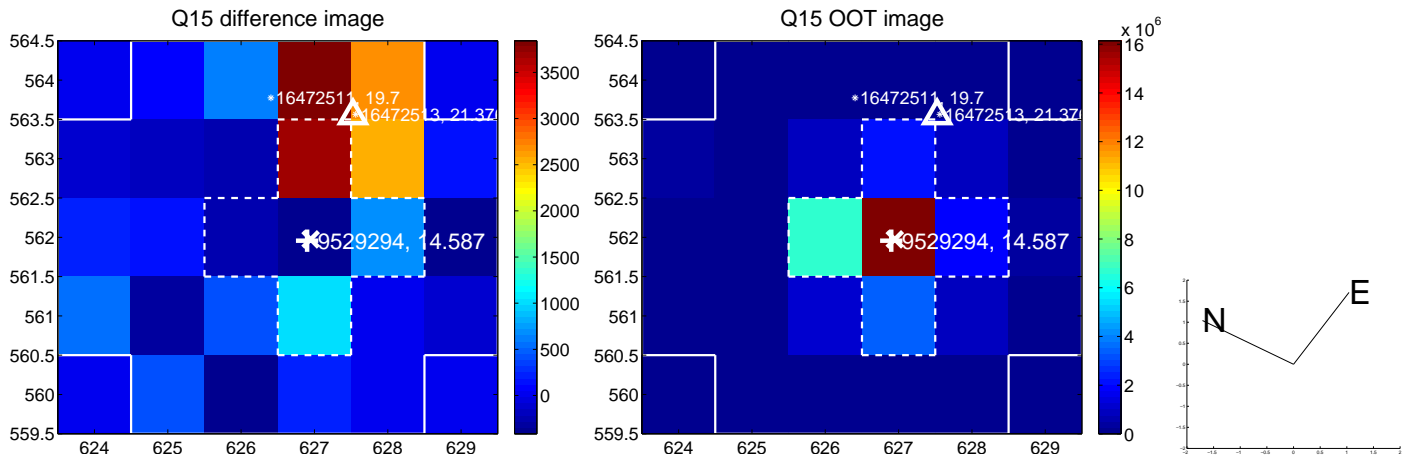
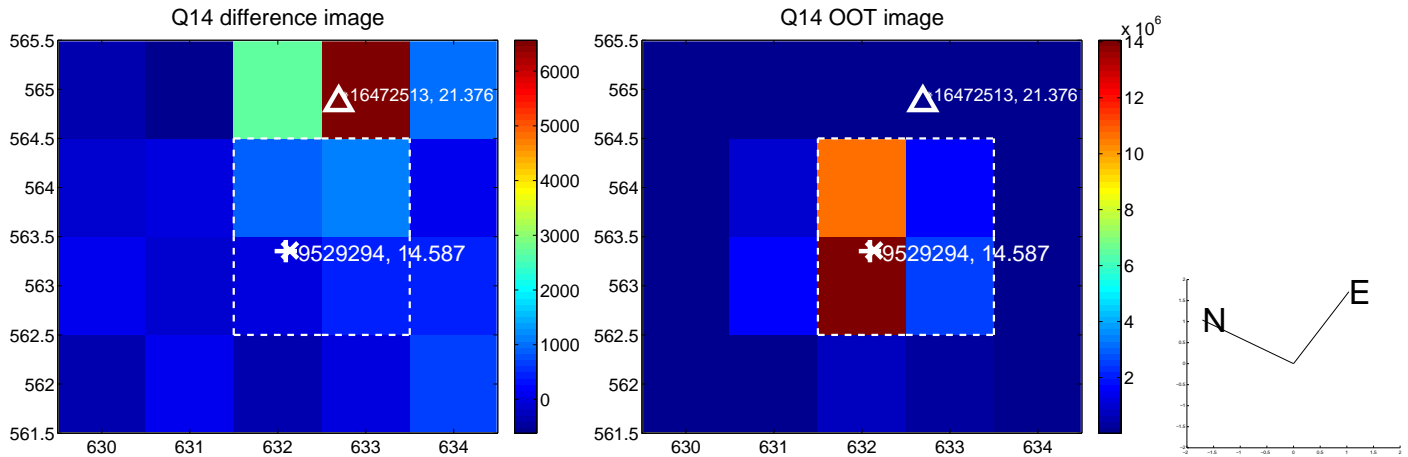
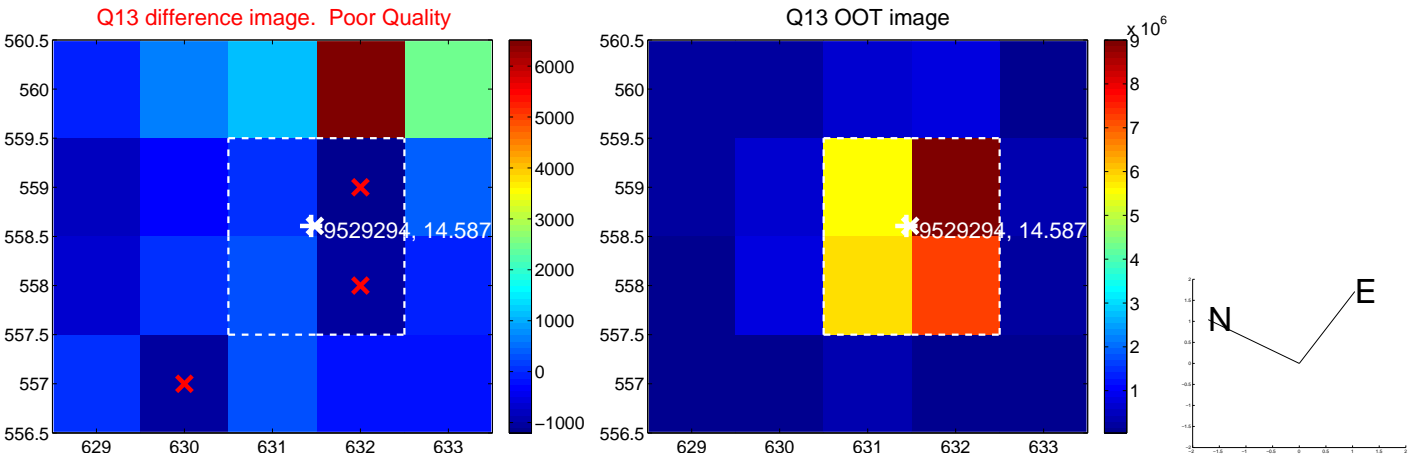
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



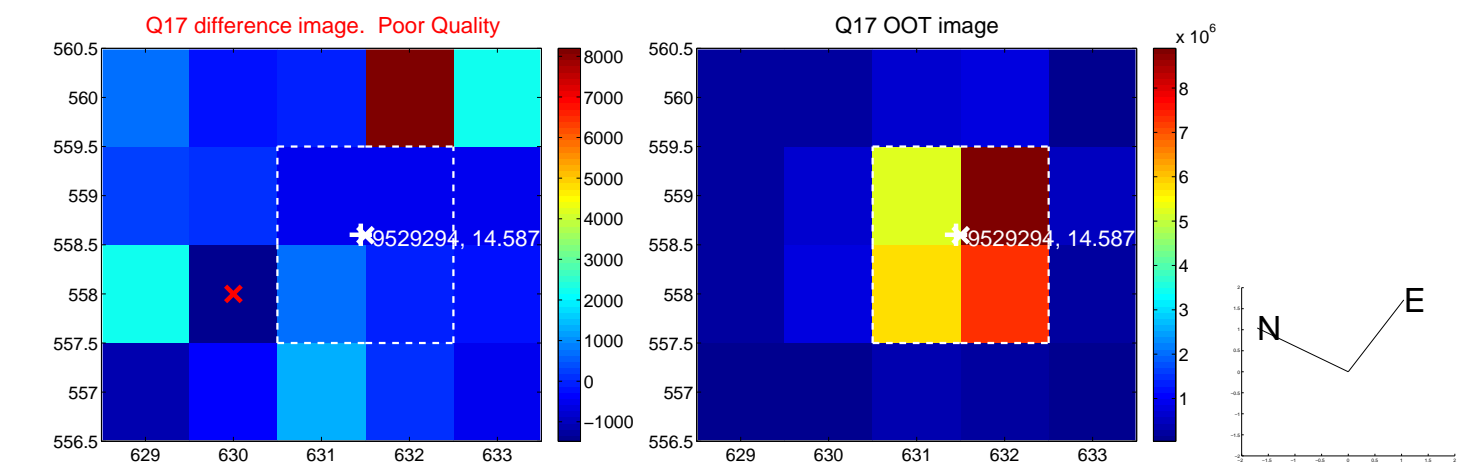
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



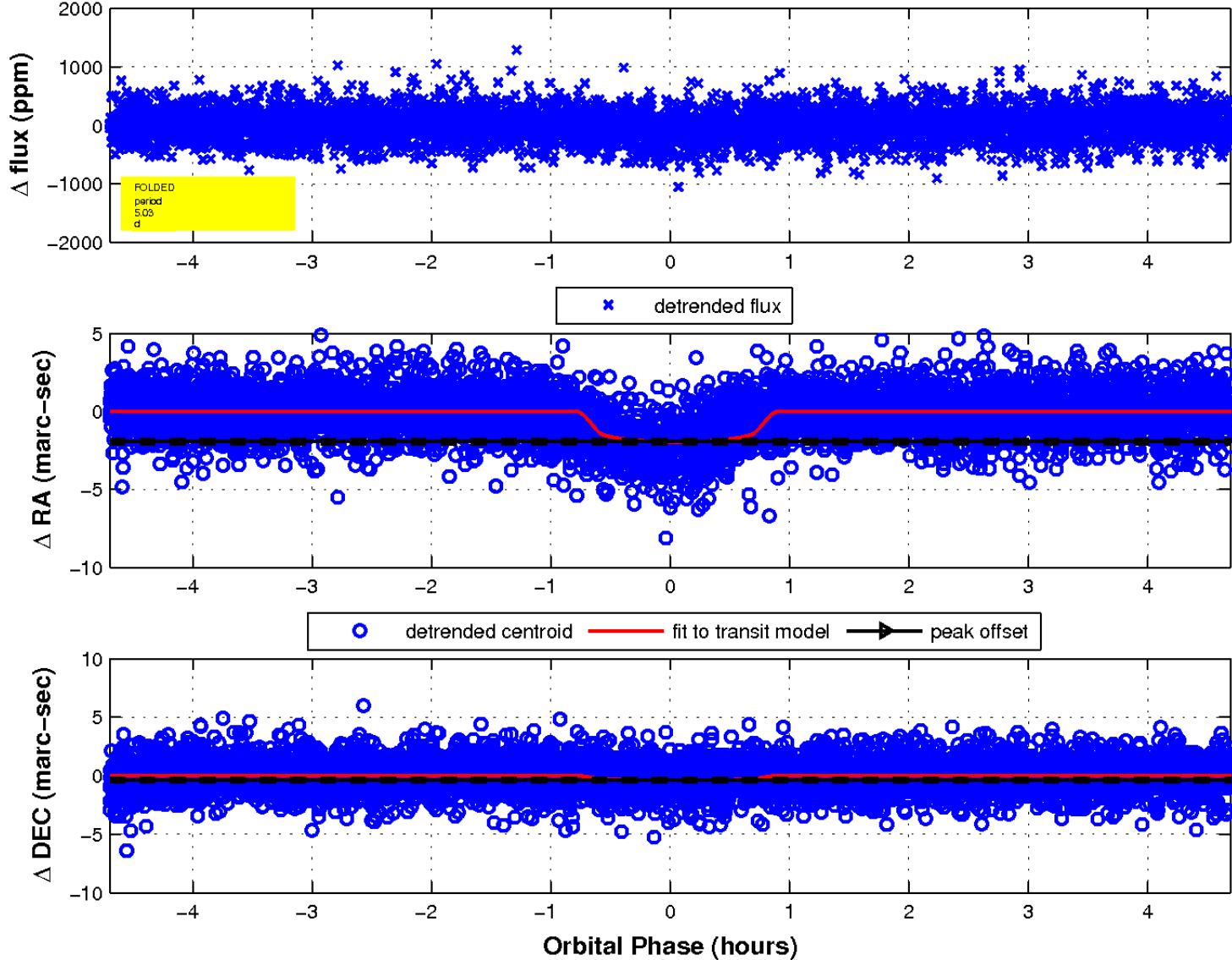
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

