

KIC 005024429

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})
005024429-01	OBS	7714.01	1.525874	132.715163	151.2	1.587	7.8	8.1	1.04	6184	1.61	1965.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005024429-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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.

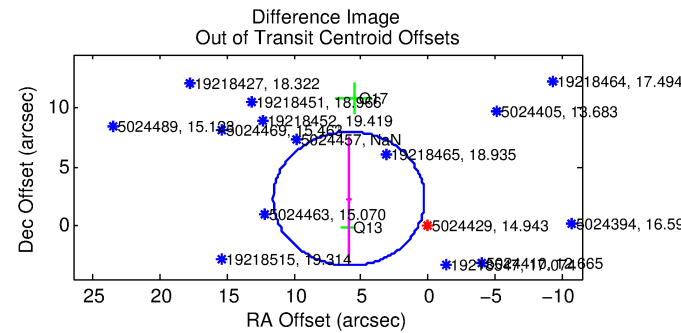
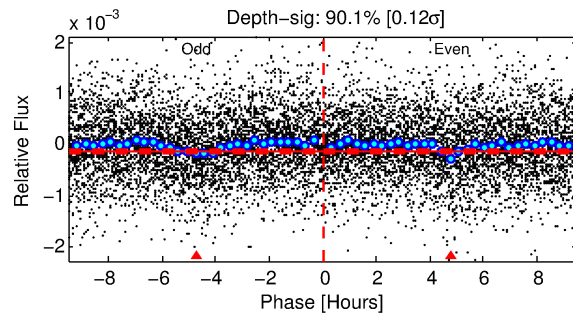
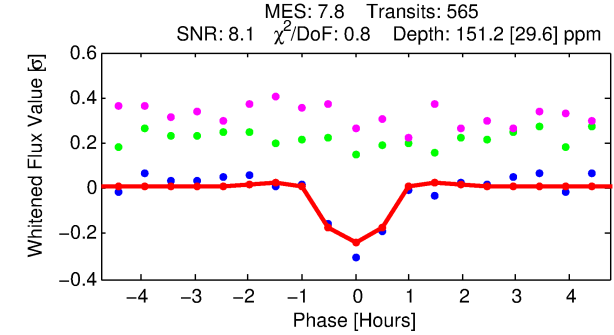
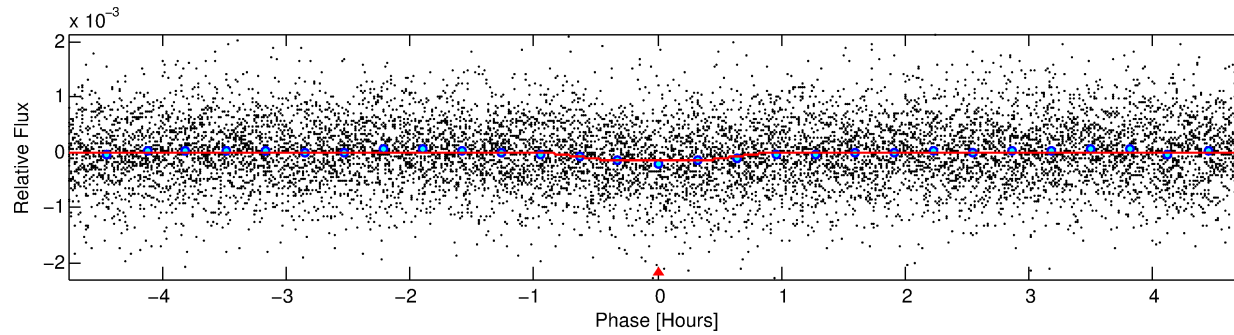
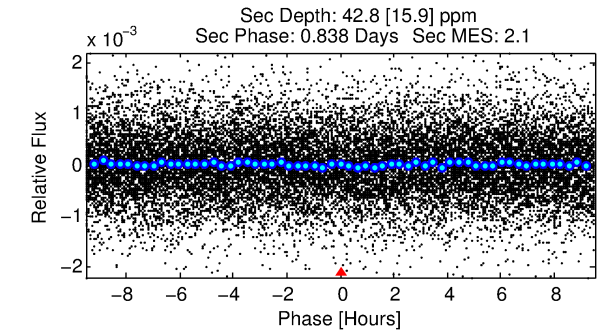
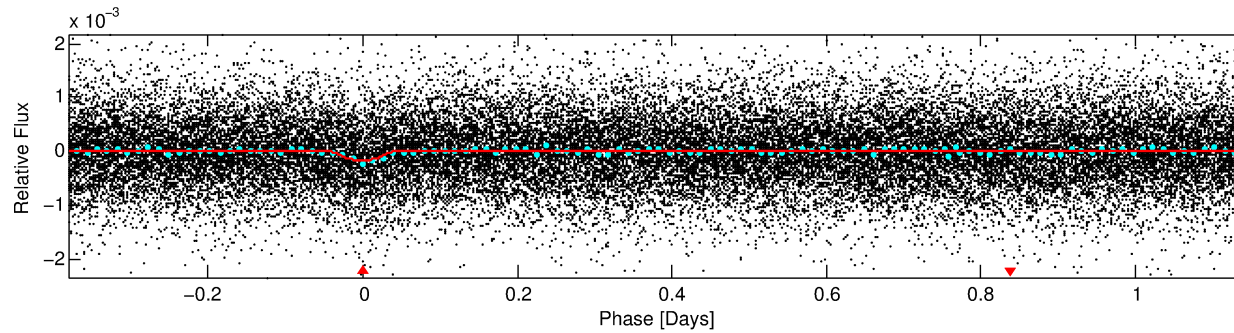
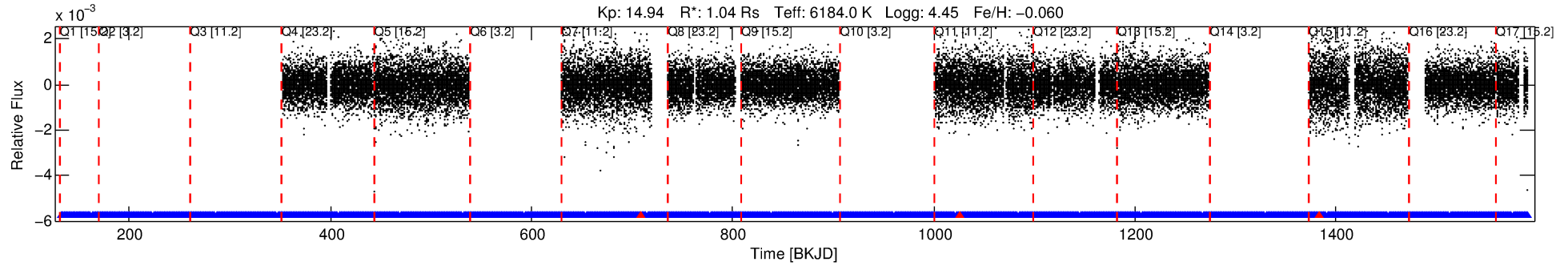
Ephemeris Match Information For 005024429-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
005024429-01	5024429	1544.01	5024450	1:1	14.8	-4	1	15.06	14.94	165.87	Direct-PRF	0	2.58	0.83

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 5024429 Candidate: 1 of 1 Period: 1.526 d



DV Fit Results:

Period = 1.52587 [0.00001] d
Epoch = 132.7152 [0.0027] BKJD
Rp/R* = 0.0142 [0.0057]
a/R* = 2.69 [4.89]
b = 0.95 [0.20]
Seff = 1965.22 [784.89]
Teq = 1698 [170] K
Rp = 1.61 [0.79] Re
a = 0.0268 [0.0066] AU
Ag = 6.51 [6.18] [0.89σ]
Teffp = 4192 [937] K [2.62σ]

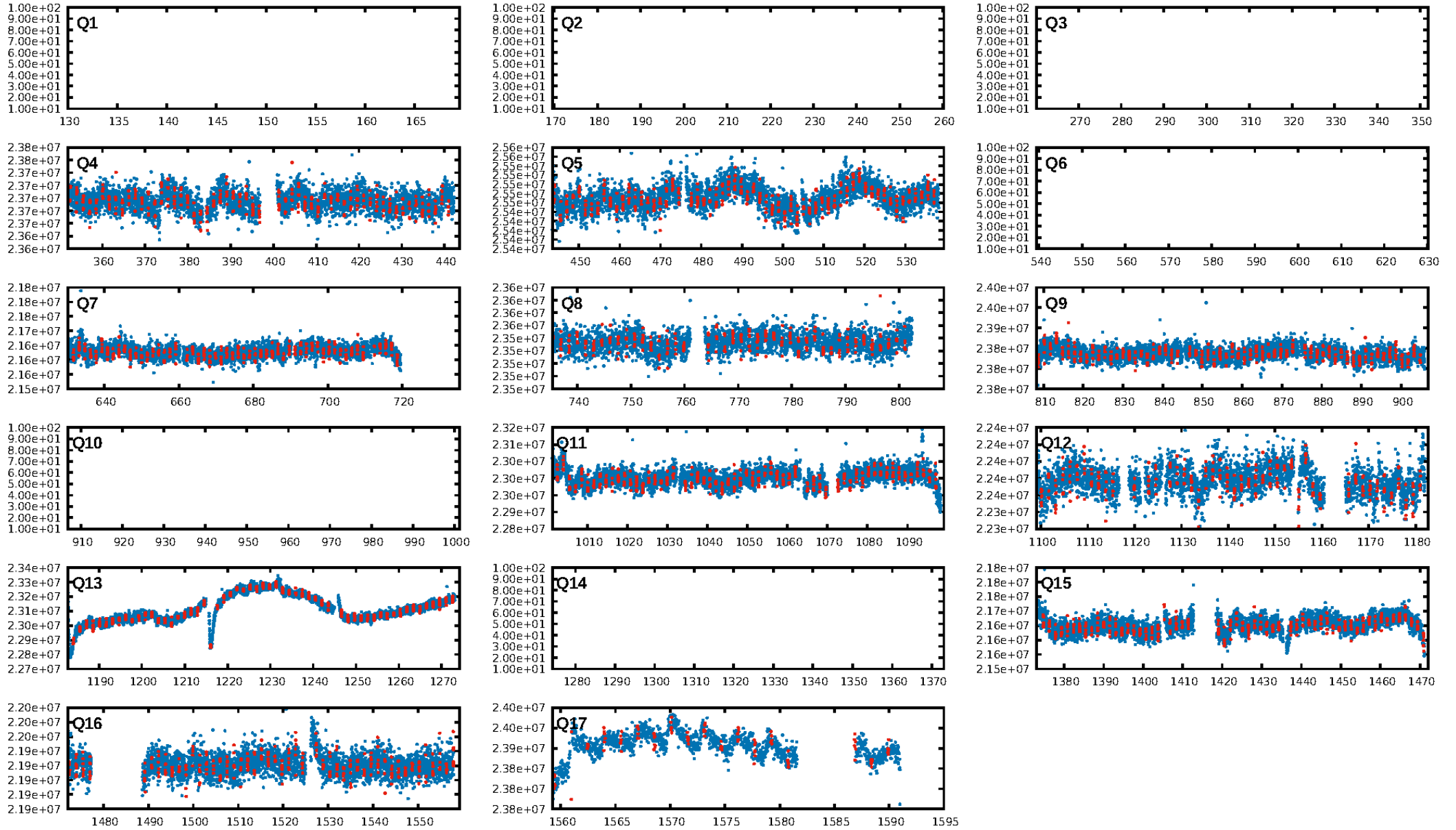
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.32e-15
RollingBand-fgt: 0.99 [544/547]
GhostDiagnostic-chr: -0.05487
Centroid-sig: 0.0%
Centroid-so: 3.511 arcsec [16.11σ]
OotOffset-rm: 6.326 arcsec [3.36σ]
KicOffset-rm: 3.050 arcsec [4.24σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [11/11]

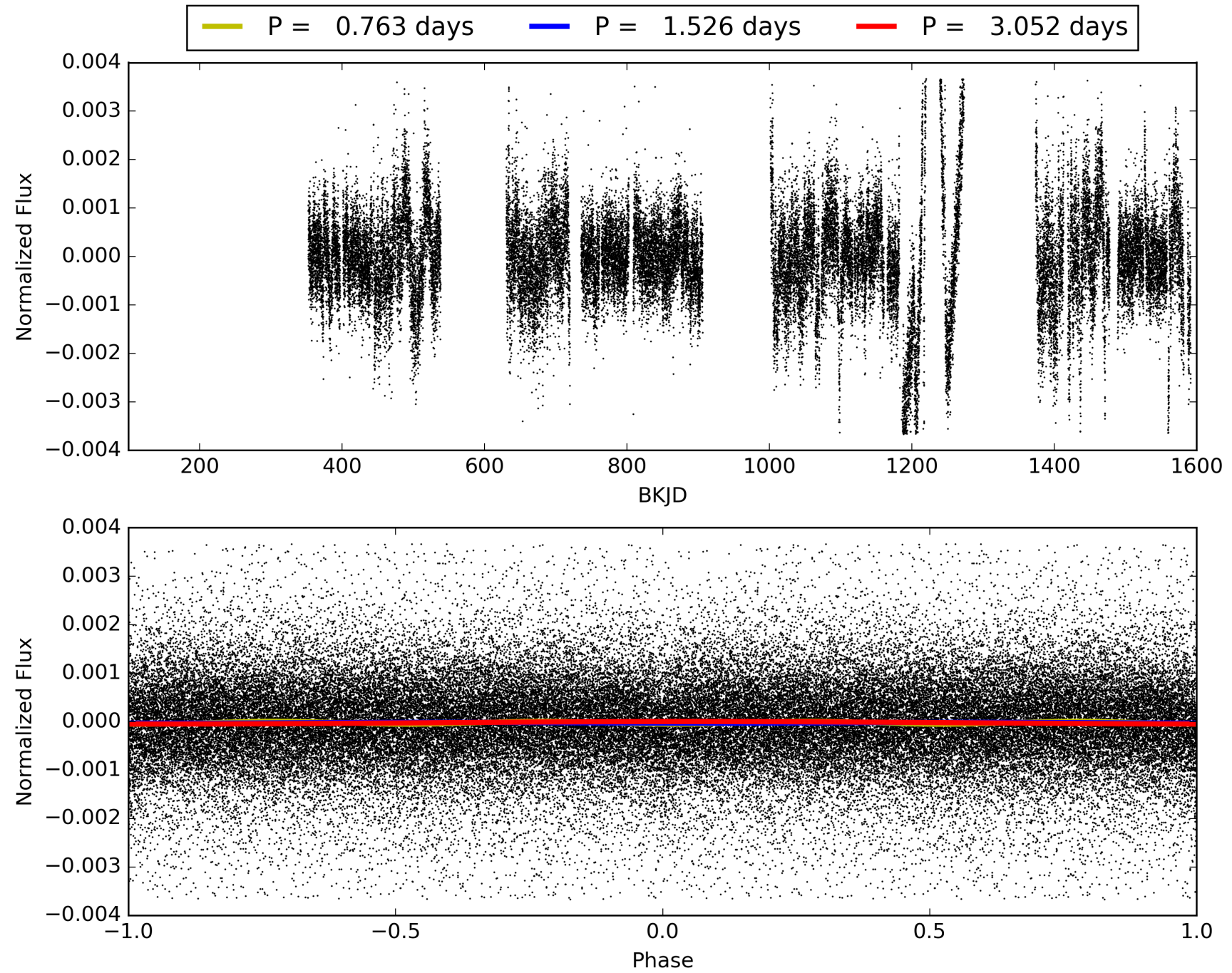
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:53:43 Z

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

TCE 005024429-01, PDC Light Curves

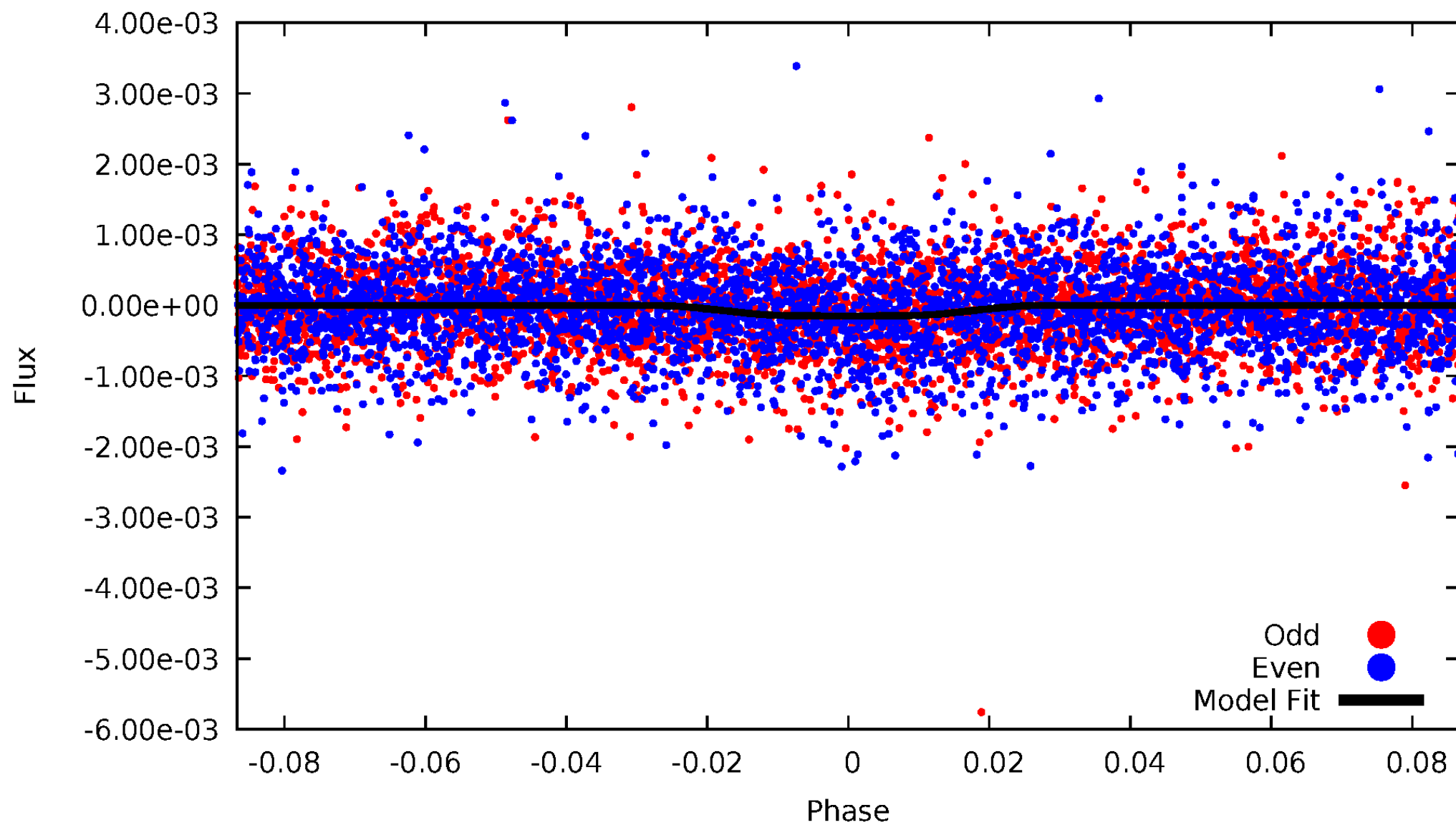


TCE 005024429-01



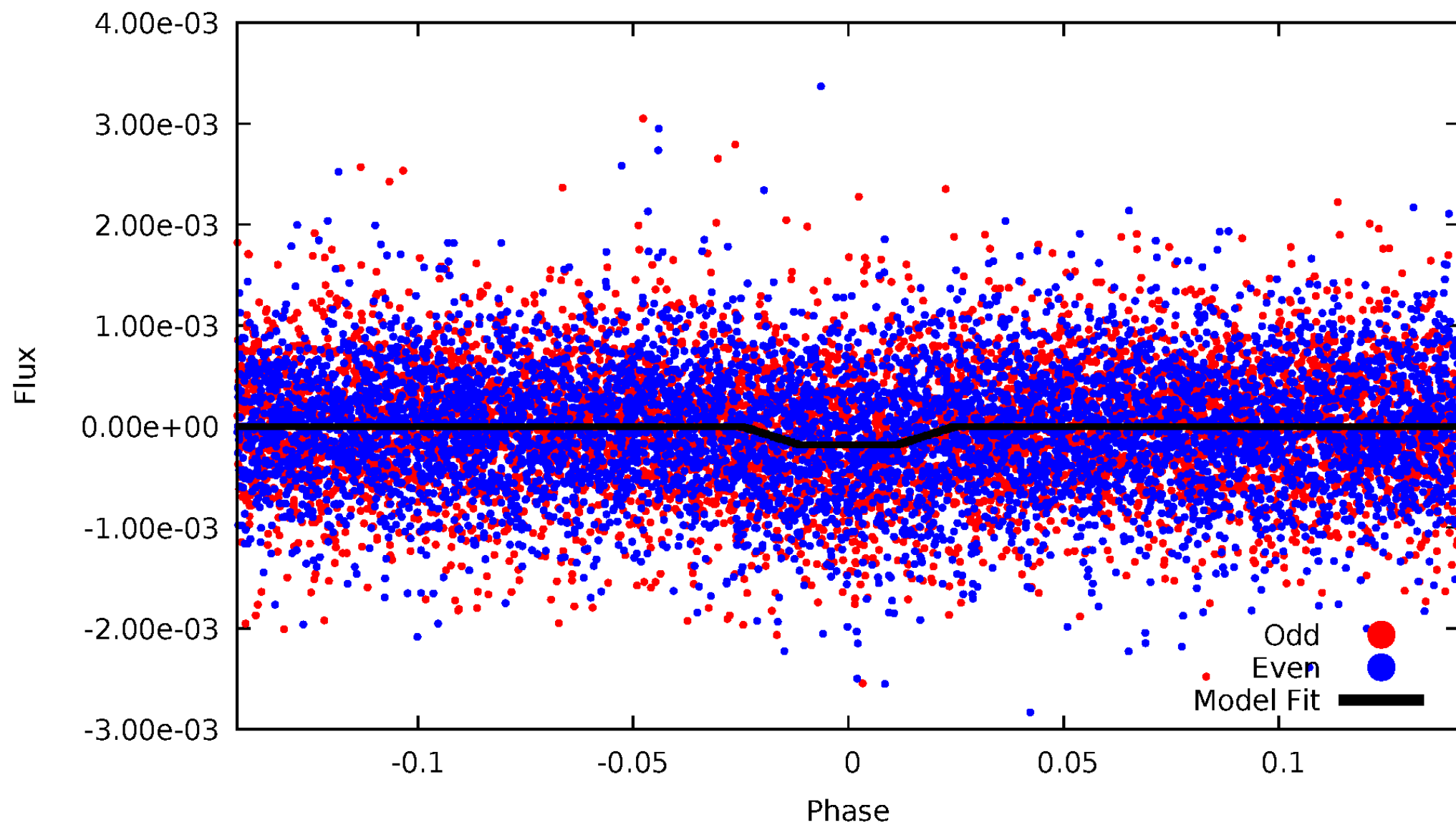
DV Odd/Even

TCE 005024429-01

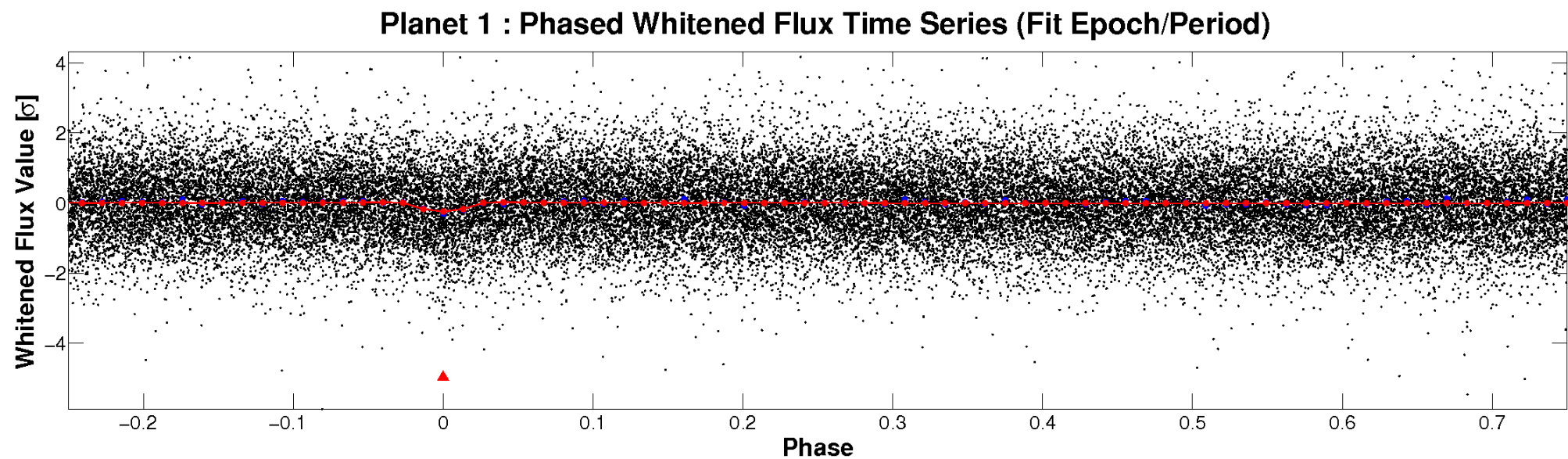
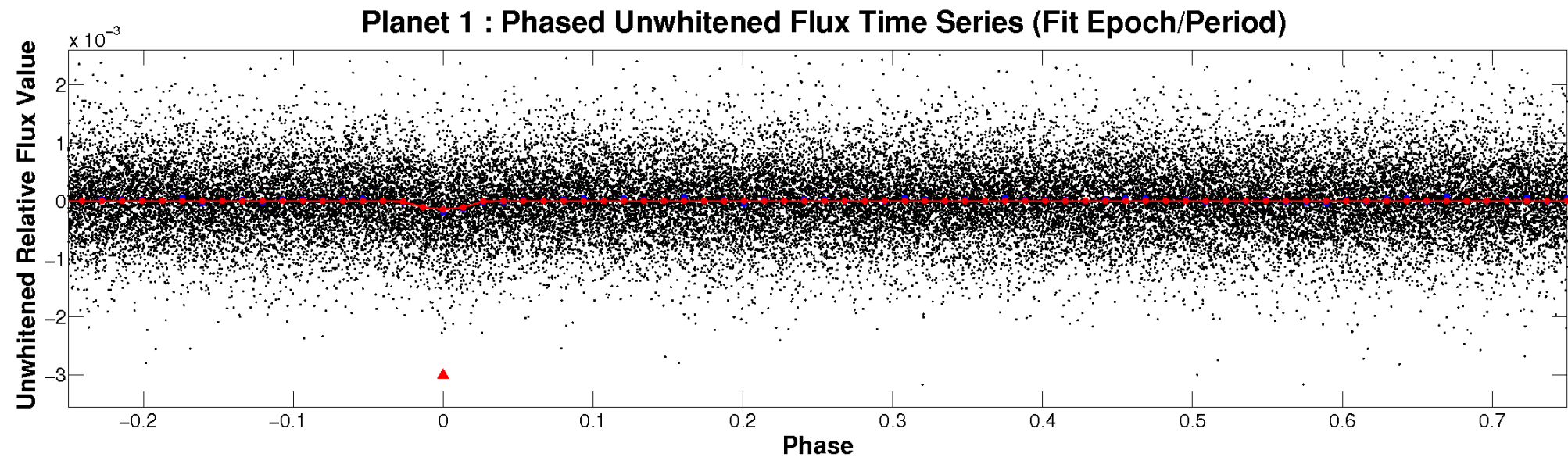


ALT Odd/Even

TCE 005024429-01

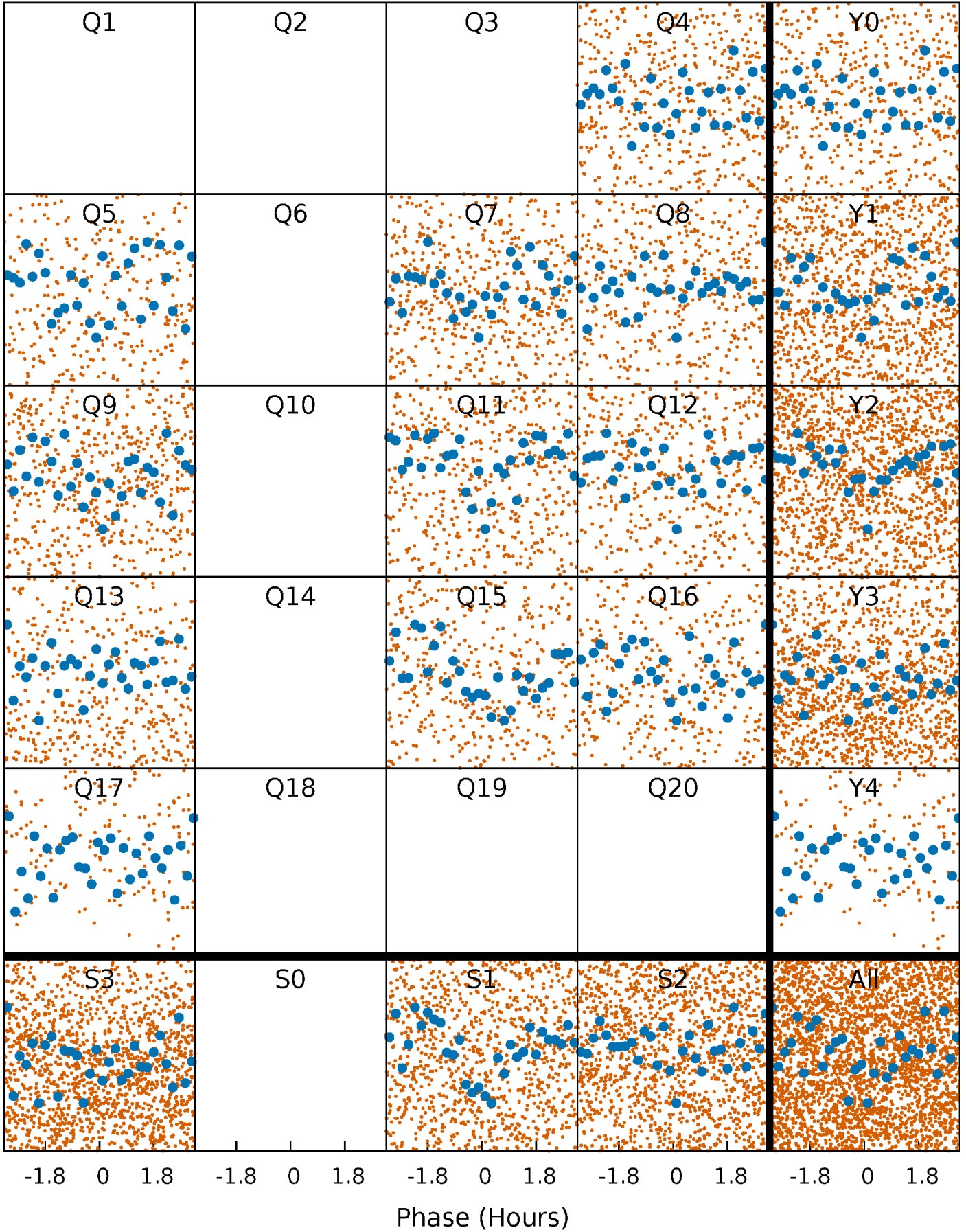


Non-Whitened Vs. Whitened Light Curve



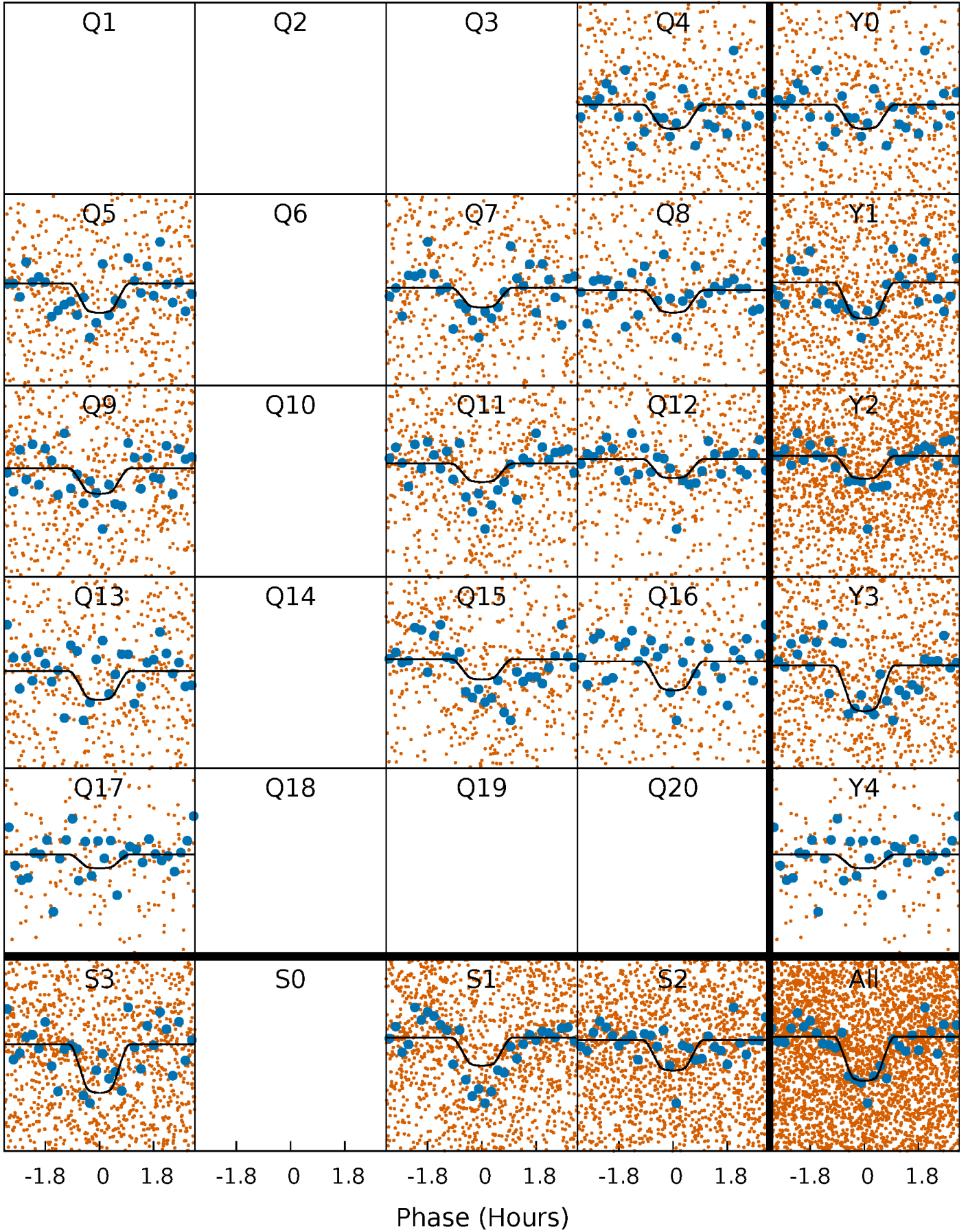
PDC Quarter-Phased Transit Curves

TCE 005024429-01 P= 1.525874 Days $T_0=132.715163$ (BKJD)



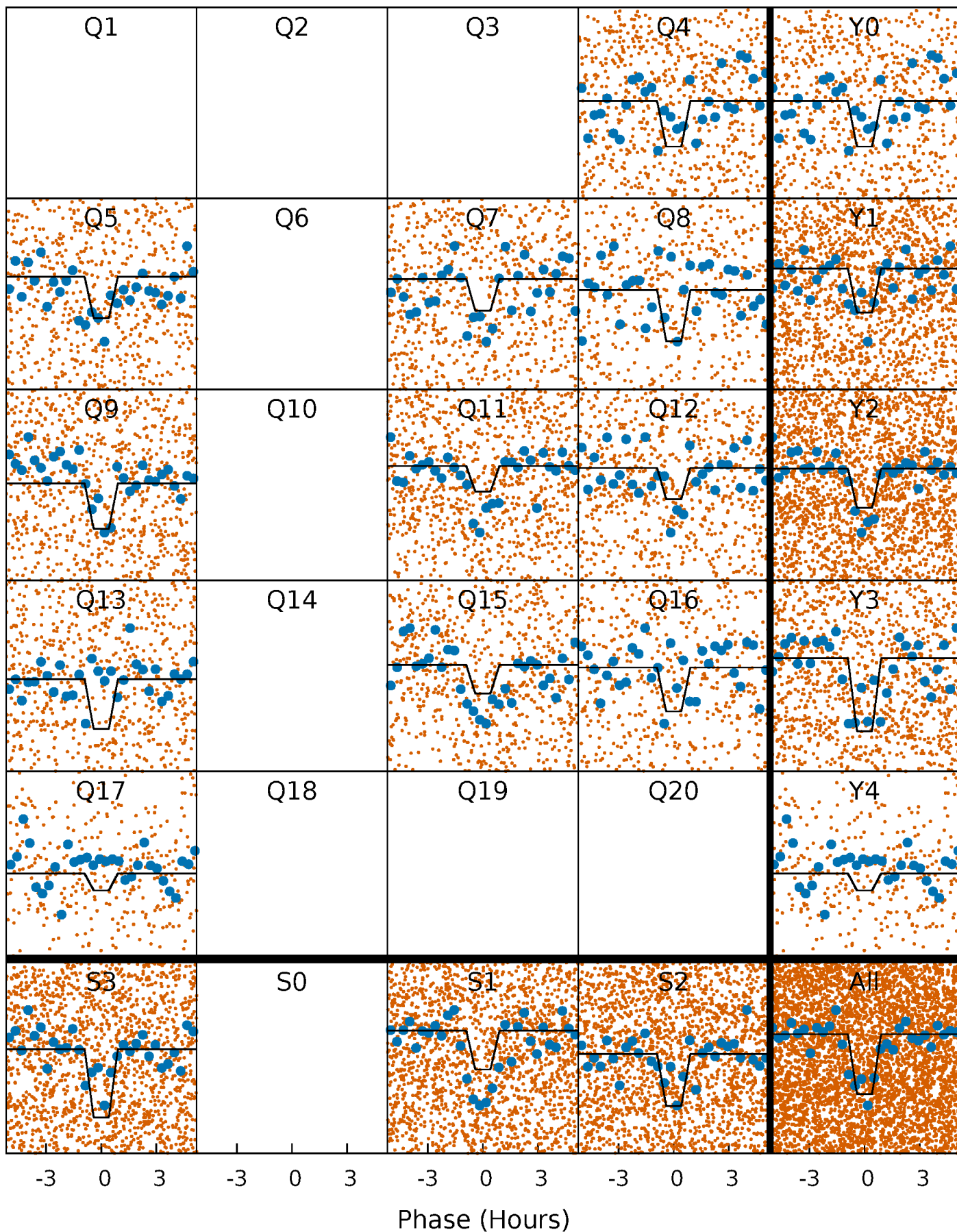
DV Quarter-Phased Transit Curves

TCE 005024429-01 P= 1.525874 Days $T_0=132.715163$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

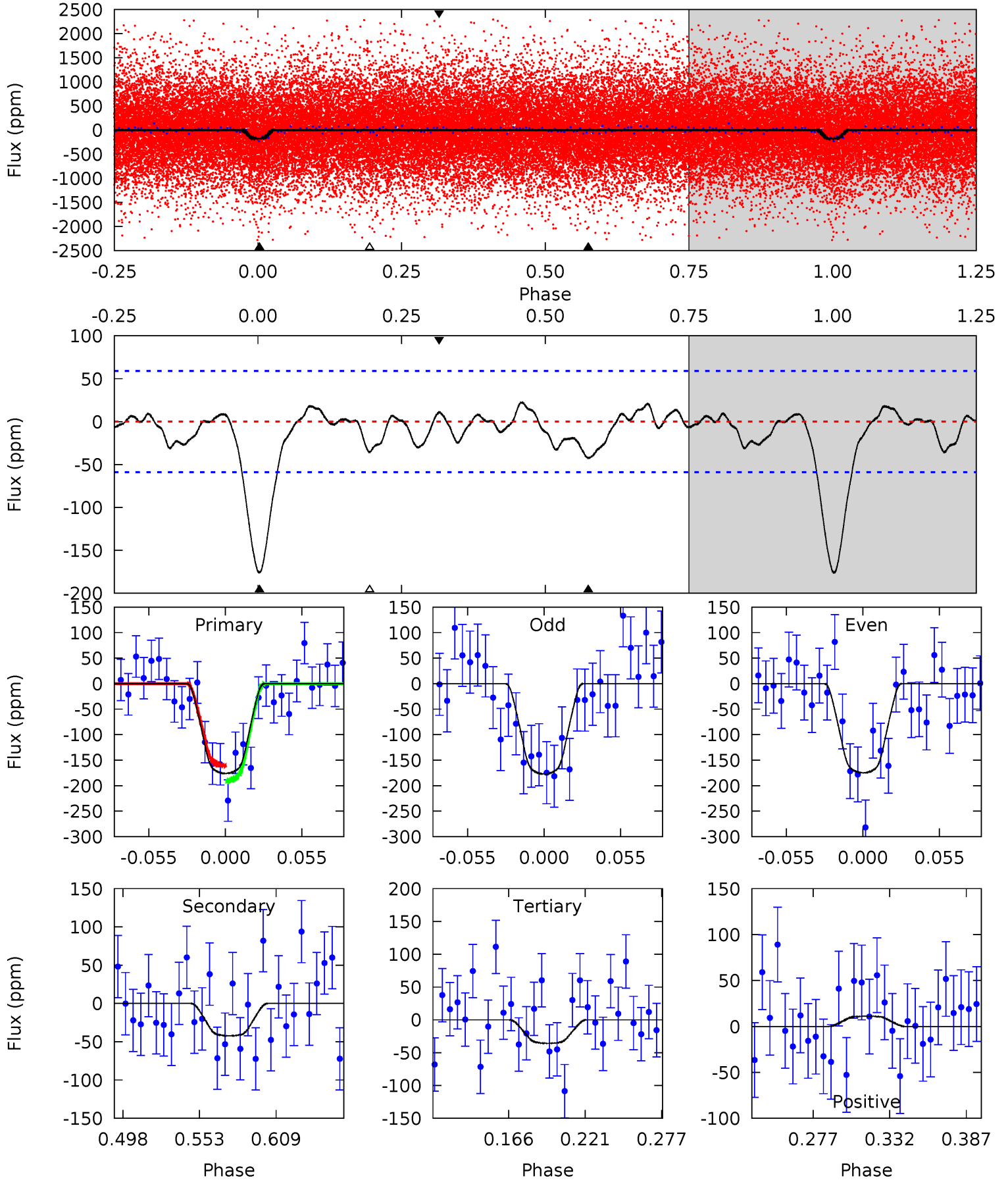
TCE 005024429-01 P= 1.525935 Days $T_0=132.687384$ (BKJD)



DV Model-Shift Uniqueness Test

005024429-01, P = 1.525874 Days, E = 132.715163 Days

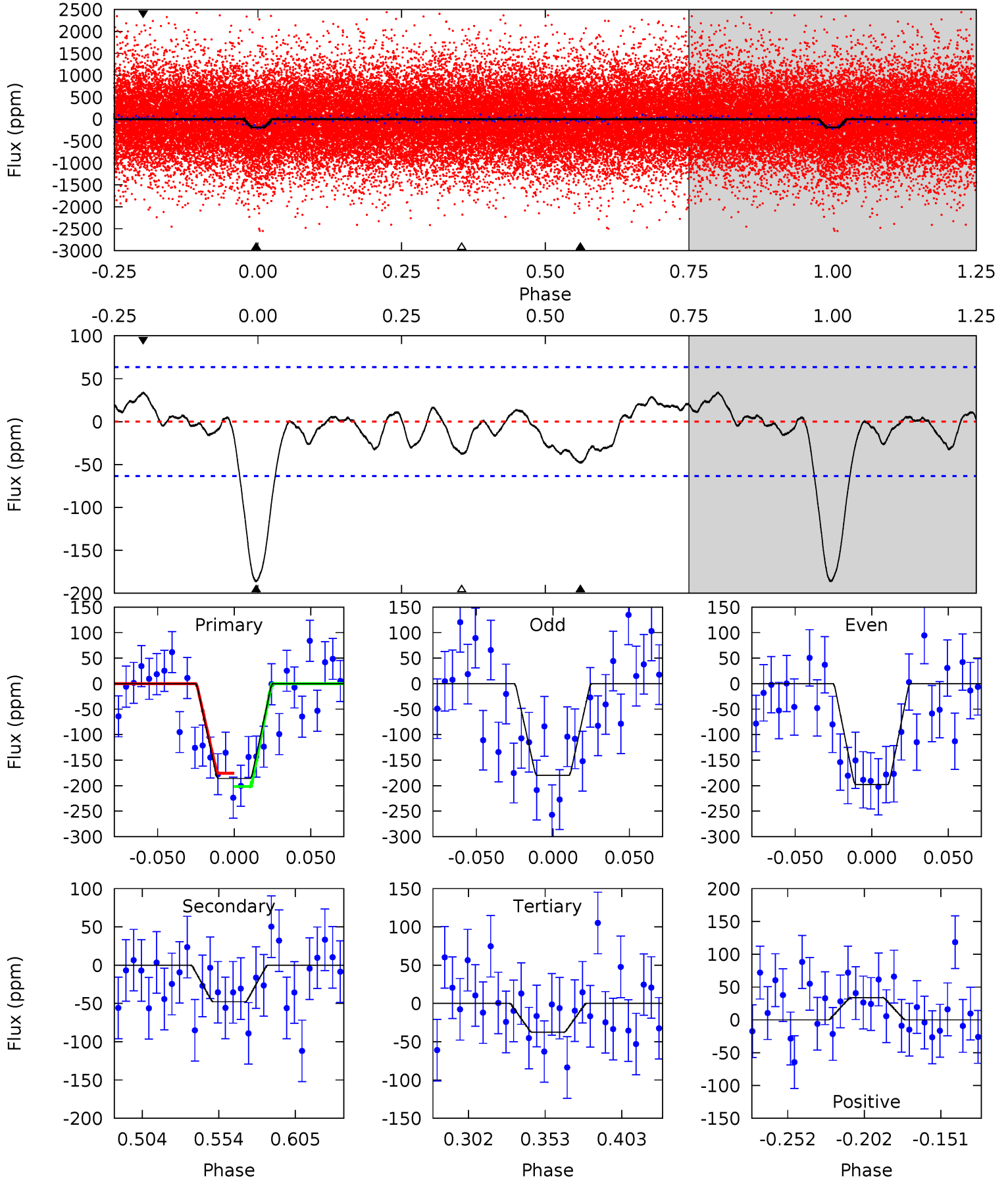
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	3.37	2.85	0.89	4.69	1.92	1.06	11.1	13.1	0.52	2.48	0.09	1.14	0.11	1.18



Alt Model-Shift Uniqueness Test

005024429-01, P = 1.525935 Days, E = 132.687384 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	3.54	2.77	2.50	4.71	1.96	1.20	11.0	11.3	0.76	1.04	0.67	1.07	0.15	0.96



Stellar Parameters For KIC 005024429

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6184^{+193}_{-257}	$4.448^{+0.062}_{-0.200}$	$-0.060^{+0.250}_{-0.350}$	$1.038^{+0.302}_{-0.130}$	$1.100^{+0.151}_{-0.151}$	$1.387^{+0.383}_{-0.722}$
	+3%/-4%	+1%/-4%	+417%/-583%	+29%/-13%	+14%/-14%	+28%/-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 005024429-01 / KOI 7714.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-42 ± 13	$1.64^{+0.76}_{-0.64}$	2419^{+172}_{-129}	4352^{+1144}_{-576}	$5.938^{+11.154}_{-3.219}$
Alt.	-48 ± 13	$1.63^{+0.71}_{-0.63}$	2415^{+180}_{-130}	4466^{+1118}_{-608}	$6.597^{+11.662}_{-3.545}$

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

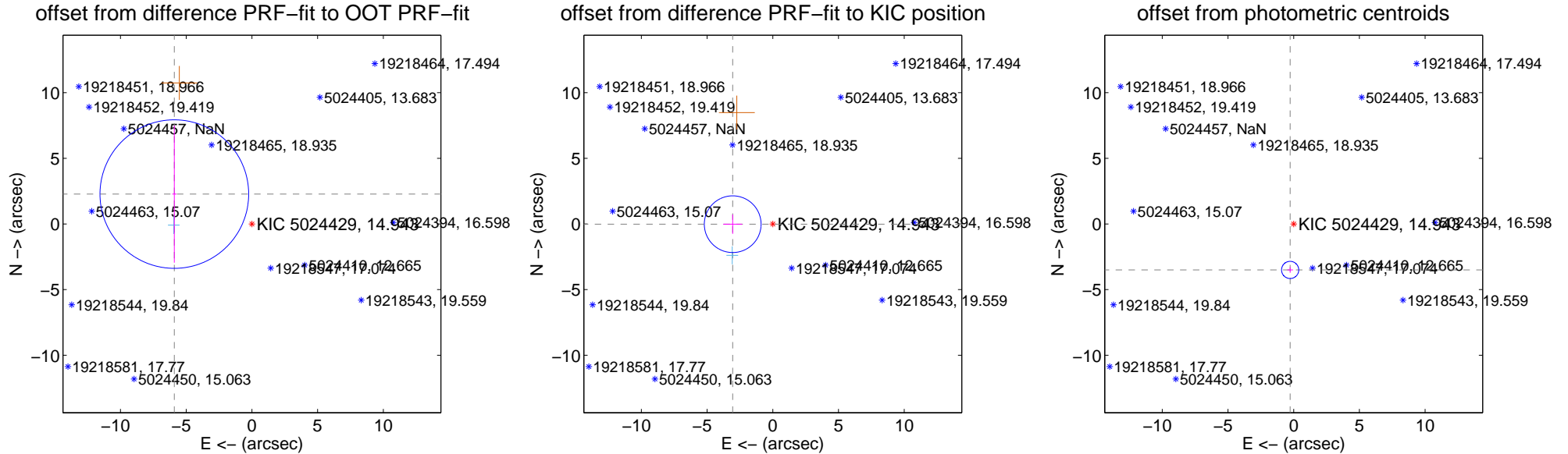
DV Centroid Data

Supplemental centroid analysis for 005024429-01. Kepler magnitude: 14.94. Transit SNR 8.10

There are 1 quarters with good PRF difference image offsets

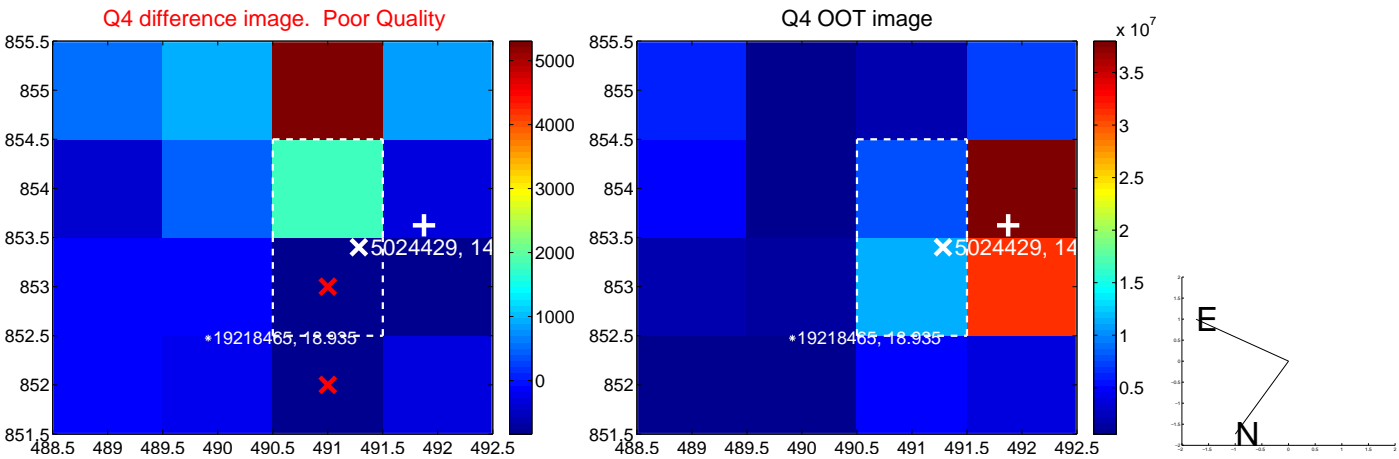
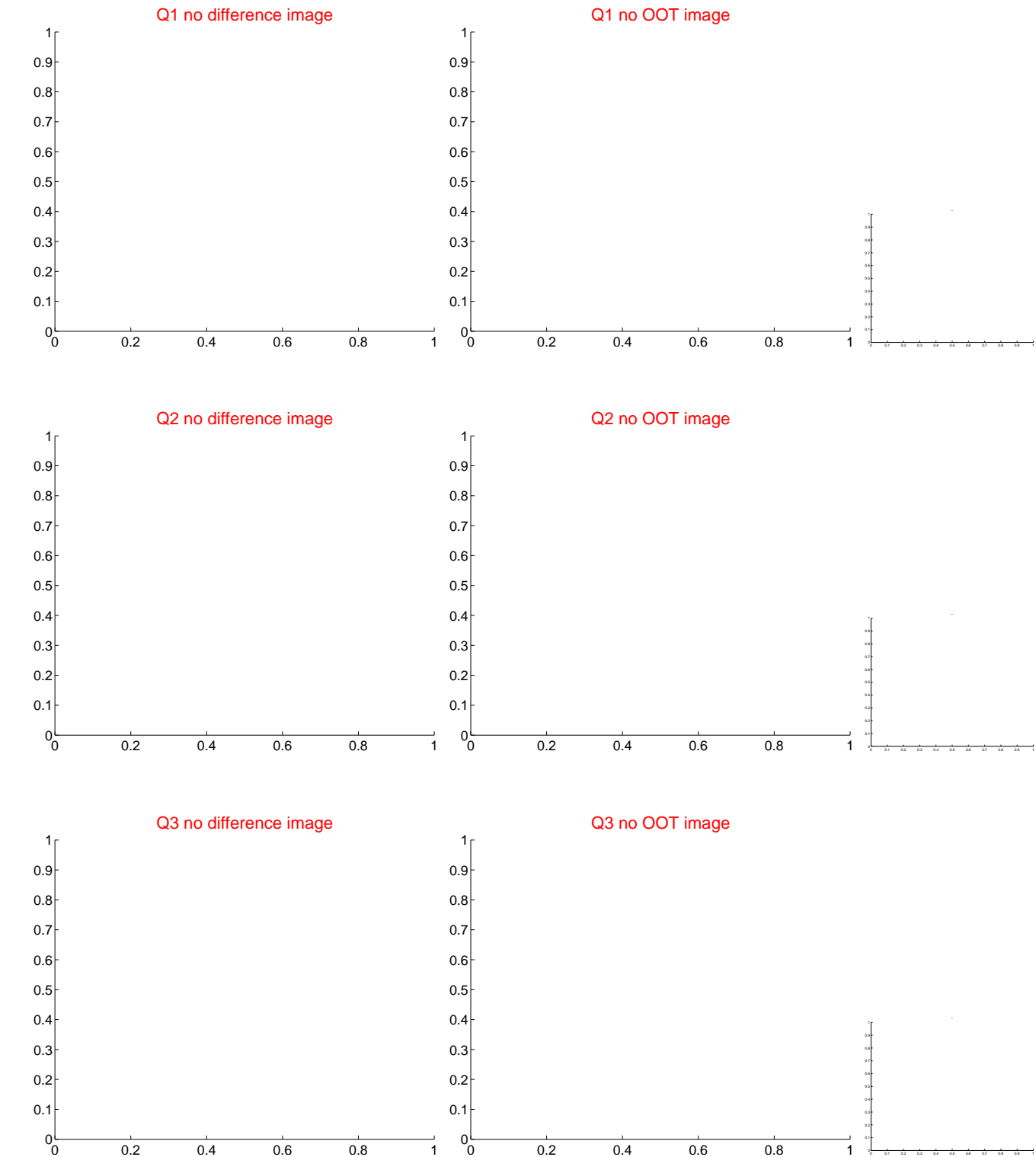
The OOT PRF centroid is offset from the target star catalog position by about 3.58 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.326 ± 1.885	3.36	5.902 ± 0.160	2.275 ± 5.224
PRF-fit source offset from KIC position	3.050 ± 0.720	4.24	3.050 ± 0.720	-0.017 ± 0.733
photometric centroid source offset	3.51 ± 0.22	16.11	0.27 ± 0.21	-3.50 ± 0.22

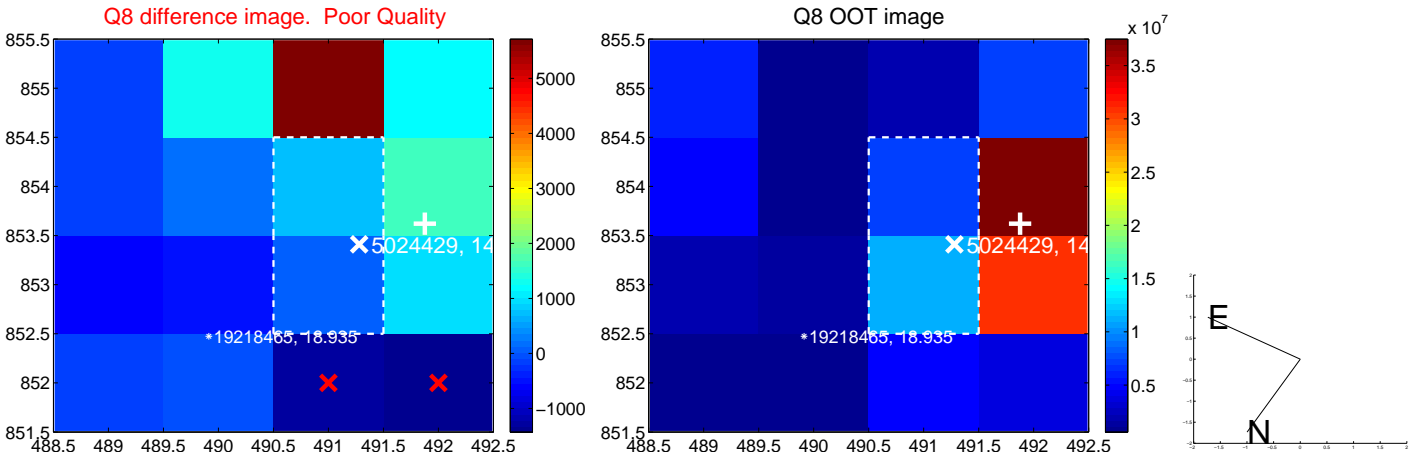
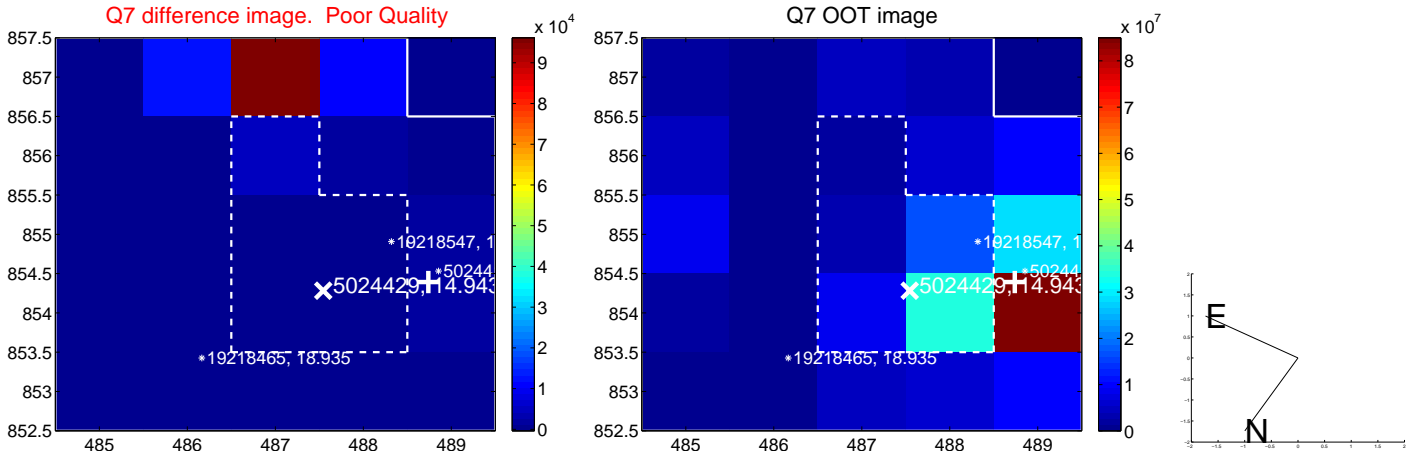
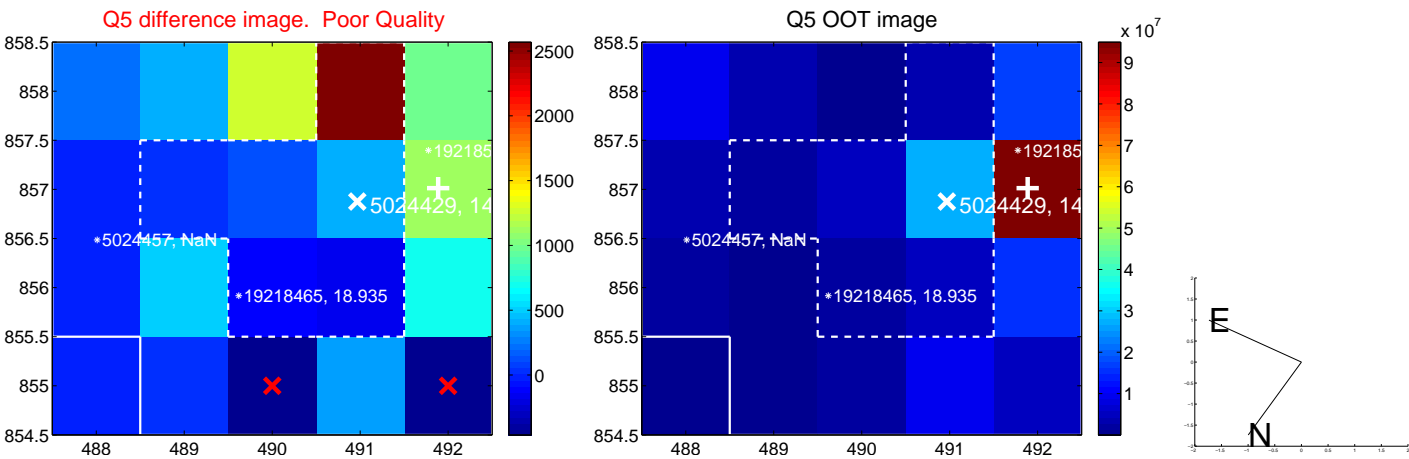


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

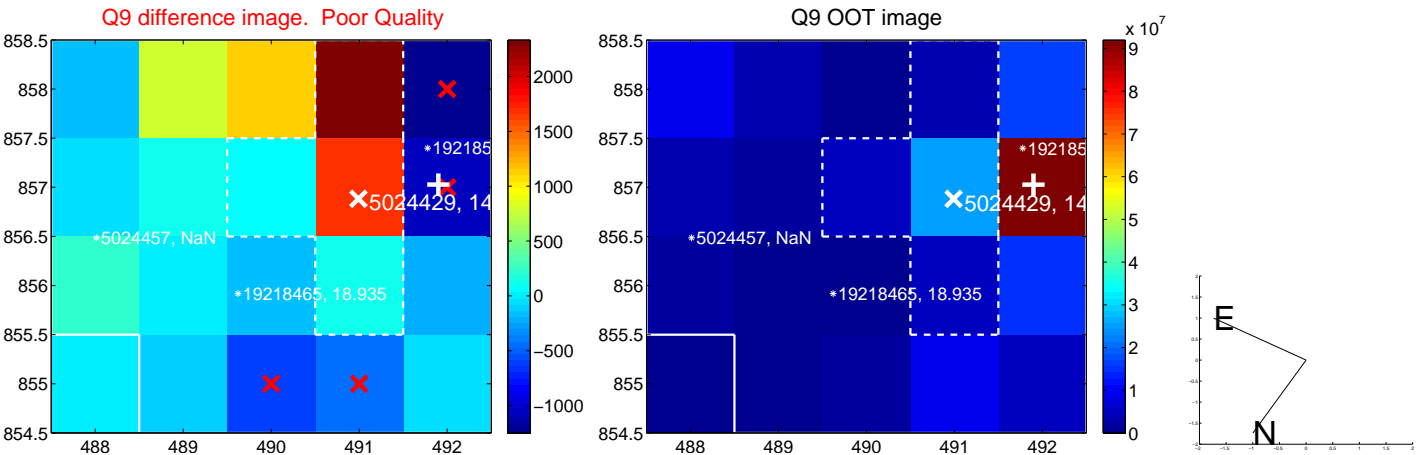
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



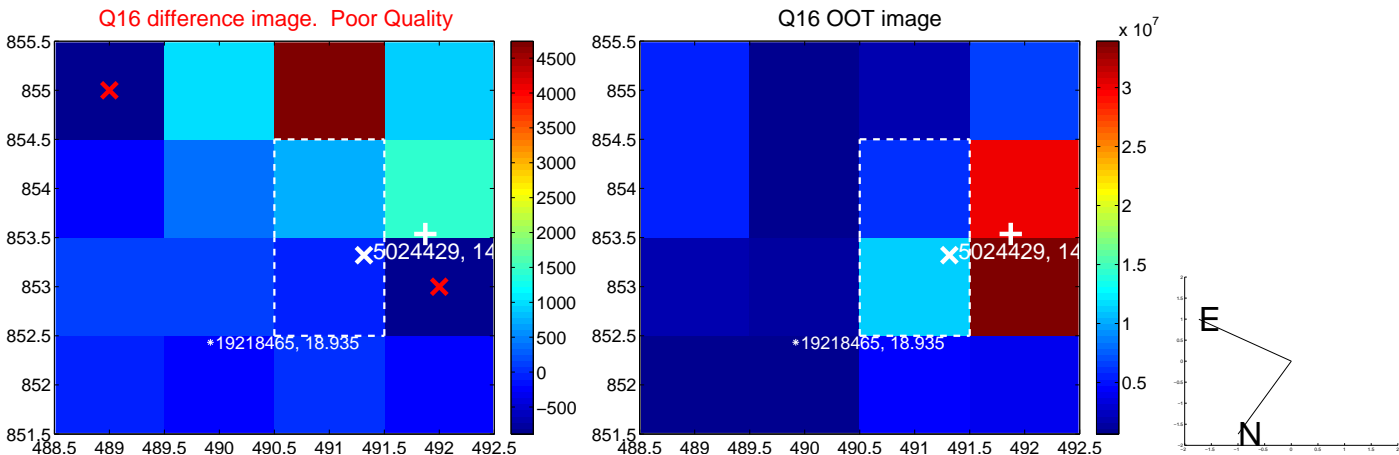
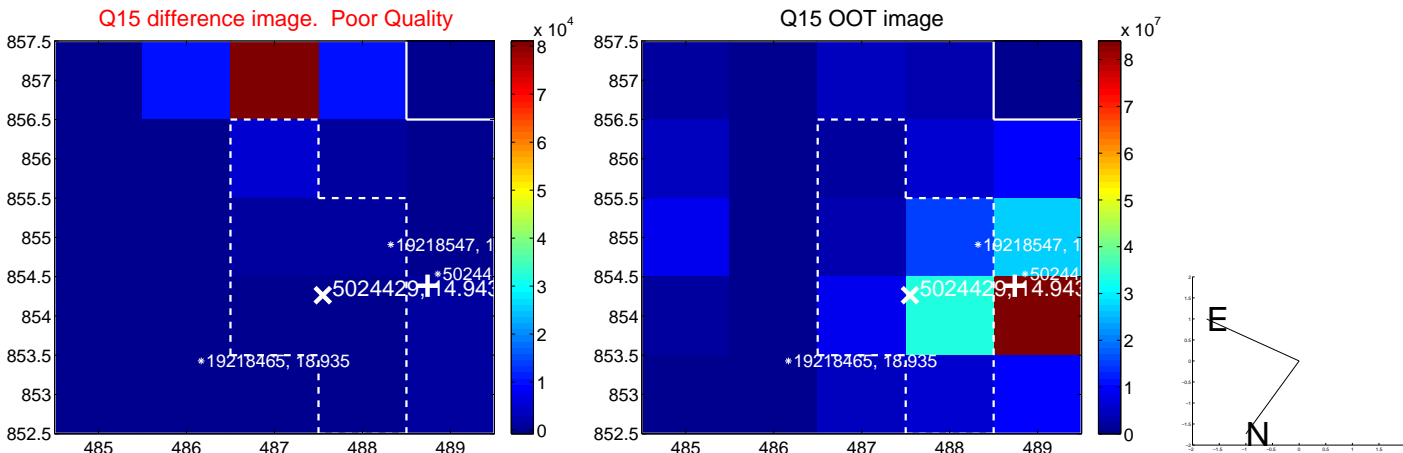
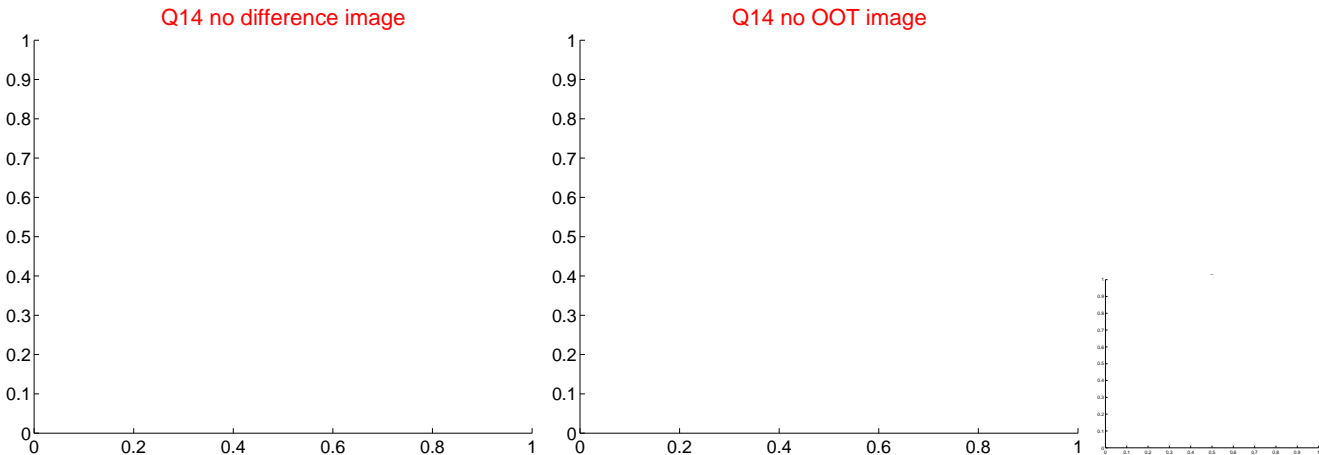
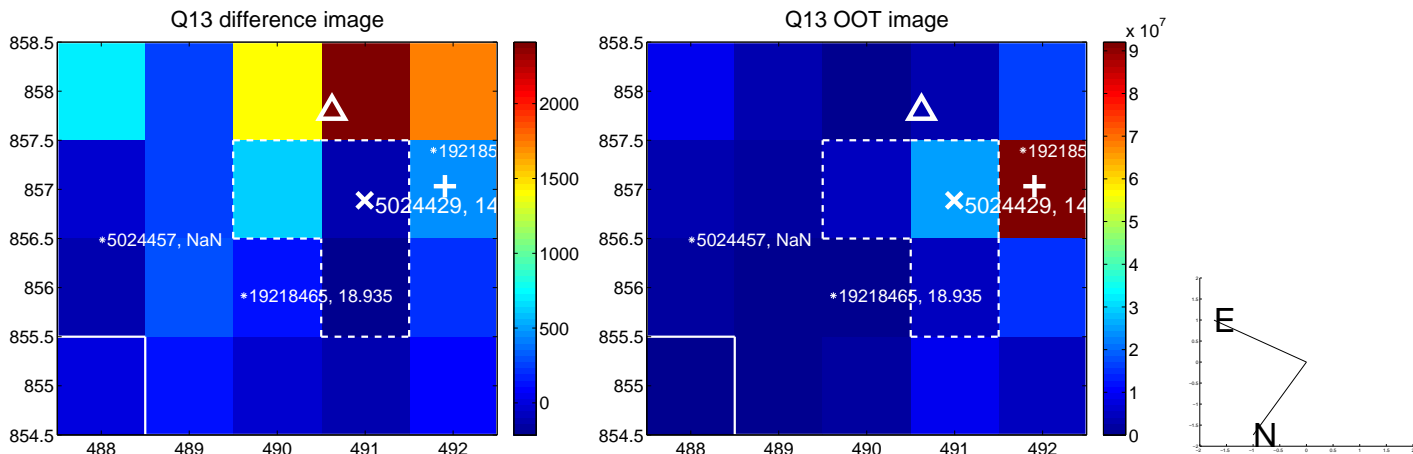
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



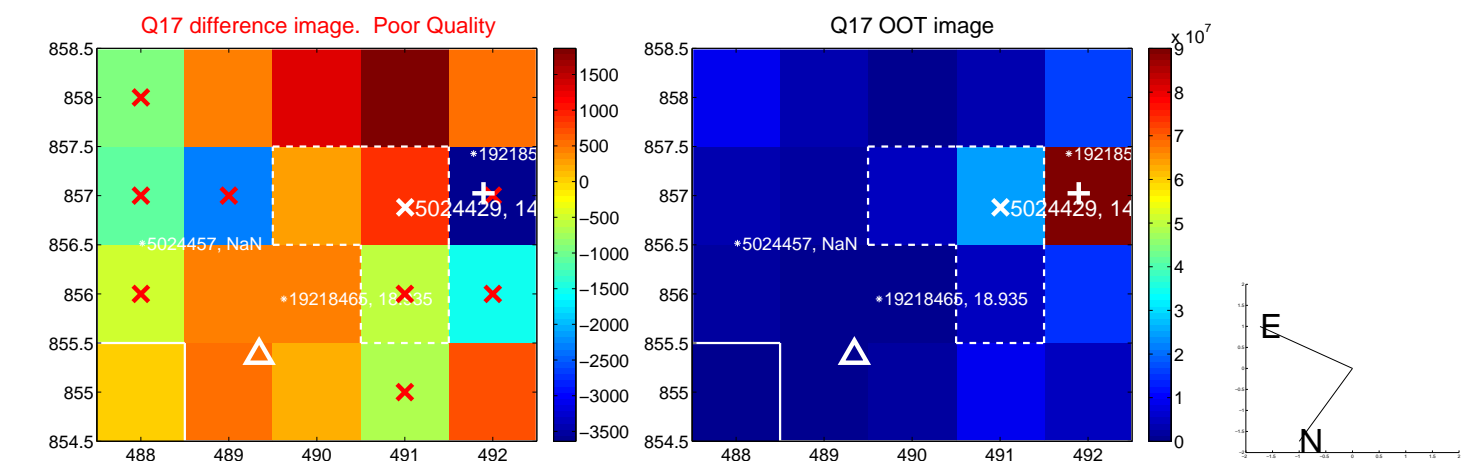
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



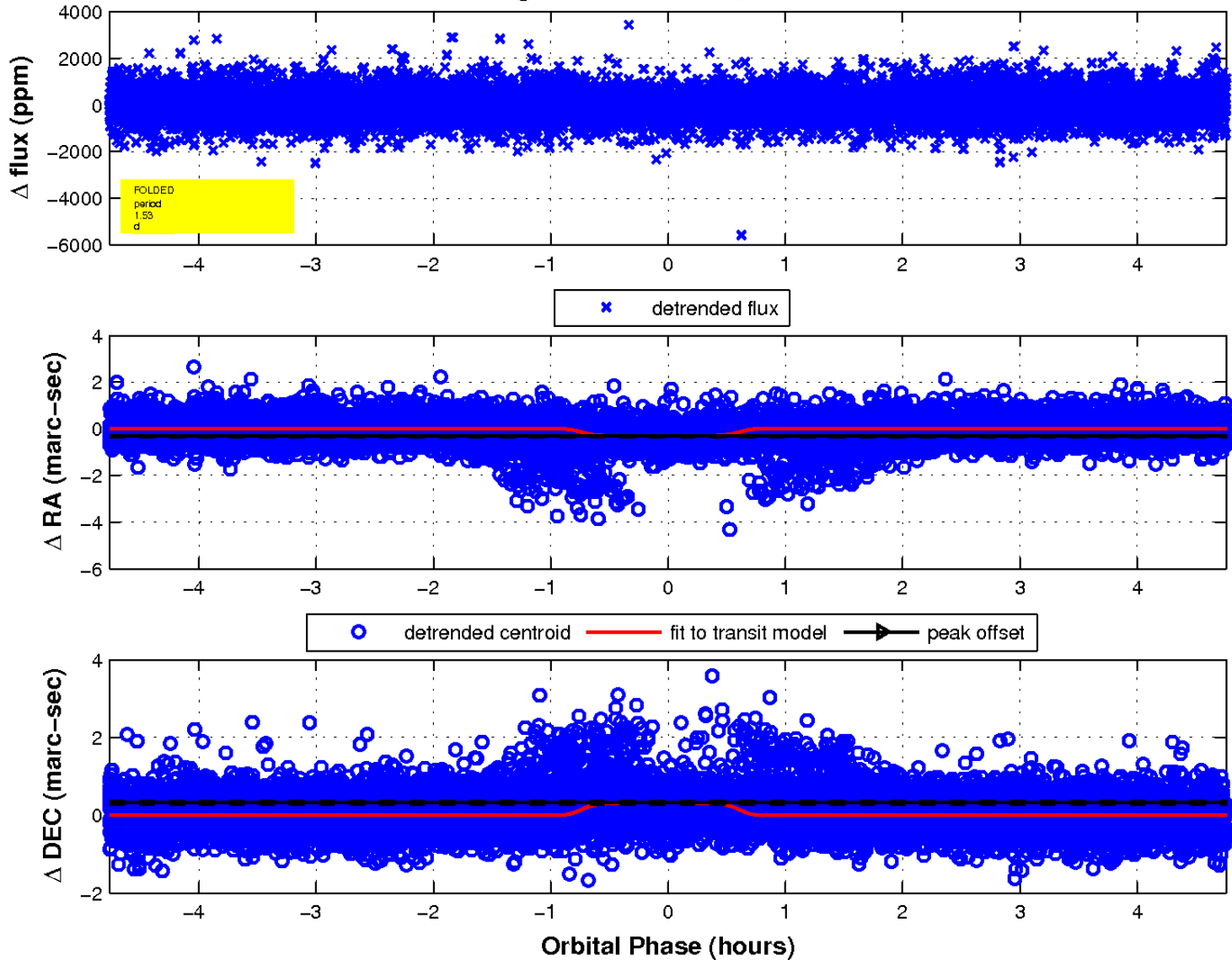
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

