

KIC 006630943

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})
006630943-01	OBS	2738.01	0.690396	131.733421	92.4	1.789	24.3	22.4	0.79	5204	0.92	2126.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006630943-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—CENT_RESOLVED_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.

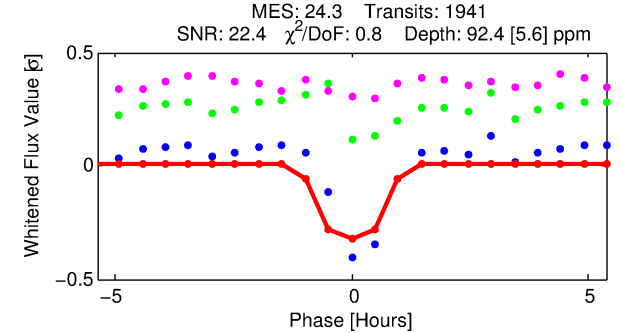
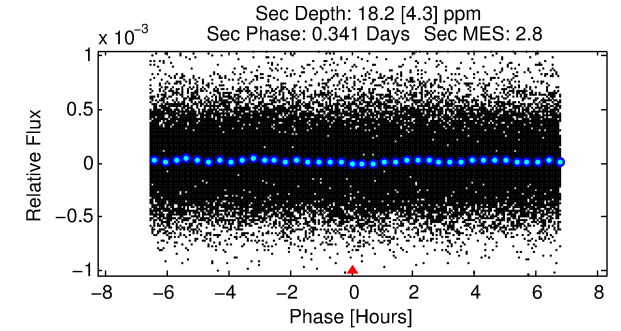
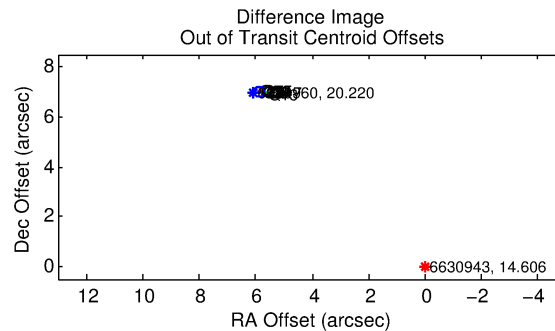
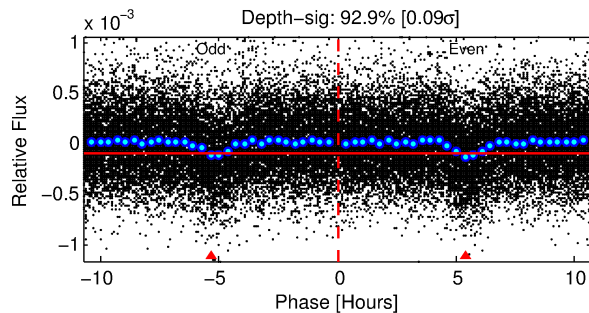
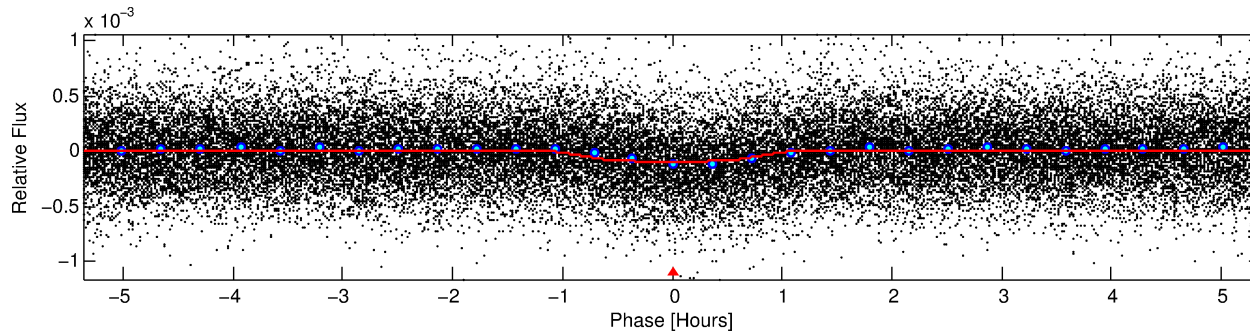
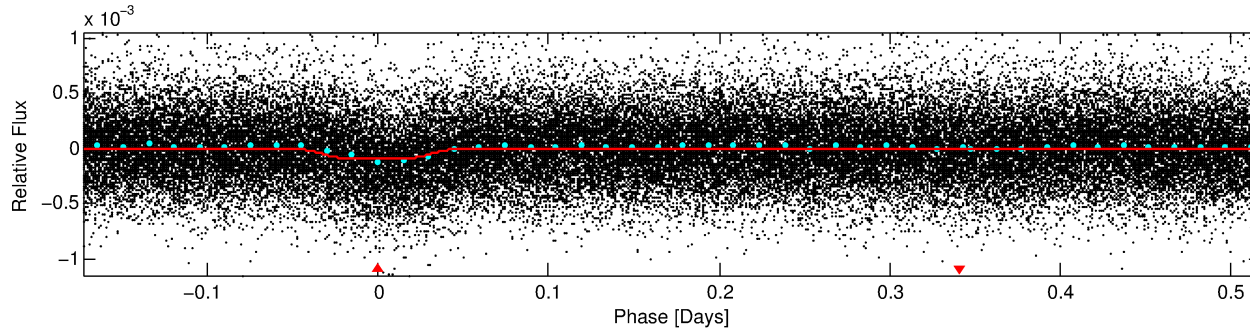
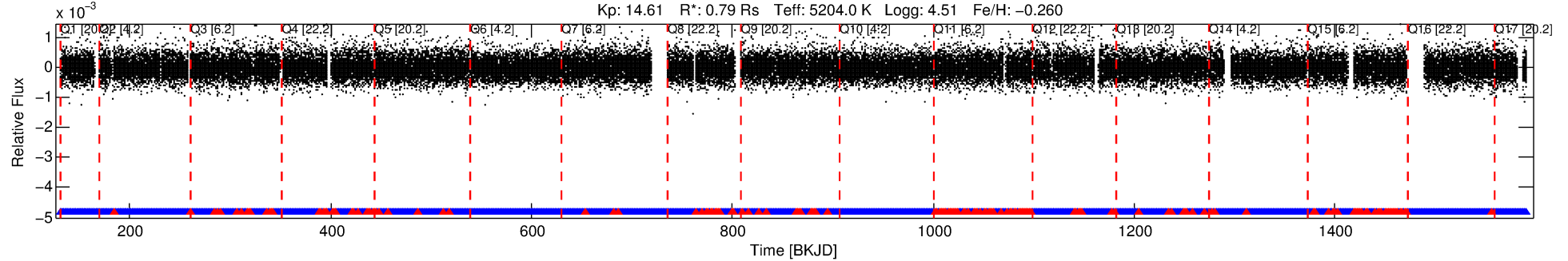
Ephemeris Match Information For 006630943-01

No Significant Match Found

DV One-Page Summary

KIC: 6630943 Candidate: 1 of 1 Period: 0.690 d
KOI: K02738.01 Corr: 0.895

Kp: 14.61 R*: 0.79 Rs Teff: 5204.0 K Logg: 4.51 Fe/H: -0.260



DV Fit Results:

Period = 0.69040 [0.00000] d
Epoch = 131.7334 [0.0012] BKJD
Rp/R* = 0.0107 [0.0044]
a/R* = 1.64 [1.84]
b = 0.90 [0.38]
Seff = 2126.80 [459.79]
Teq = 1732 [94] K
Rp = 0.92 [0.40] Re
a = 0.0138 [0.0015] AU
Ag = 2.28 [2.01] [0.64σ]
Teffp = 3289 [719] K [2.15σ]

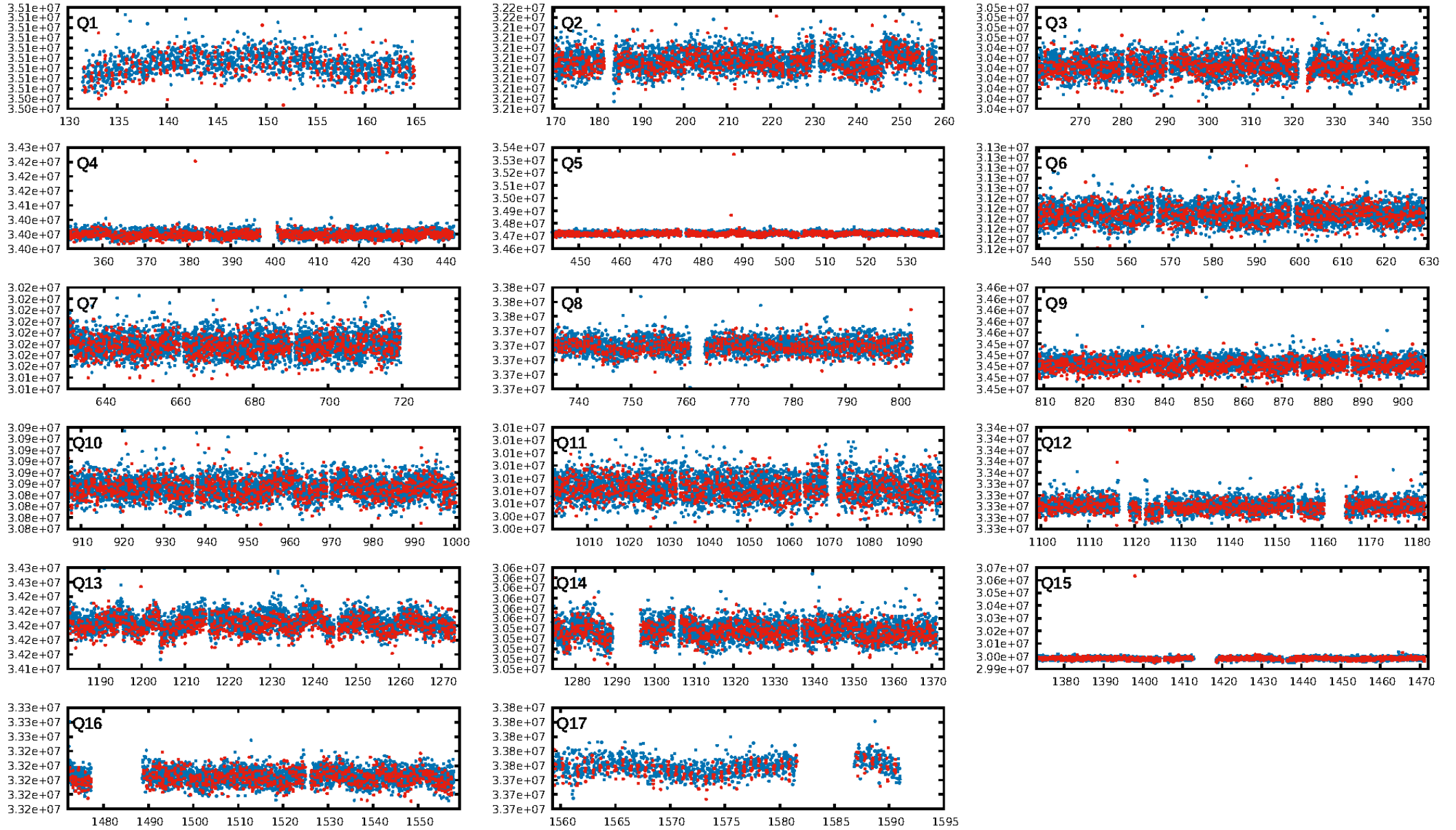
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.23e-120
RollingBand-fgt: 0.90 [1666/1853]
GhostDiagnostic-chr: -0.4819
Centroid-sig: 0.0%
Centroid-so: 62.194 arcsec [77.28σ]
OotOffset-rm: 9.142 arcsec [128.11σ]
KicOffset-rm: 9.208 arcsec [129.12σ]
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]

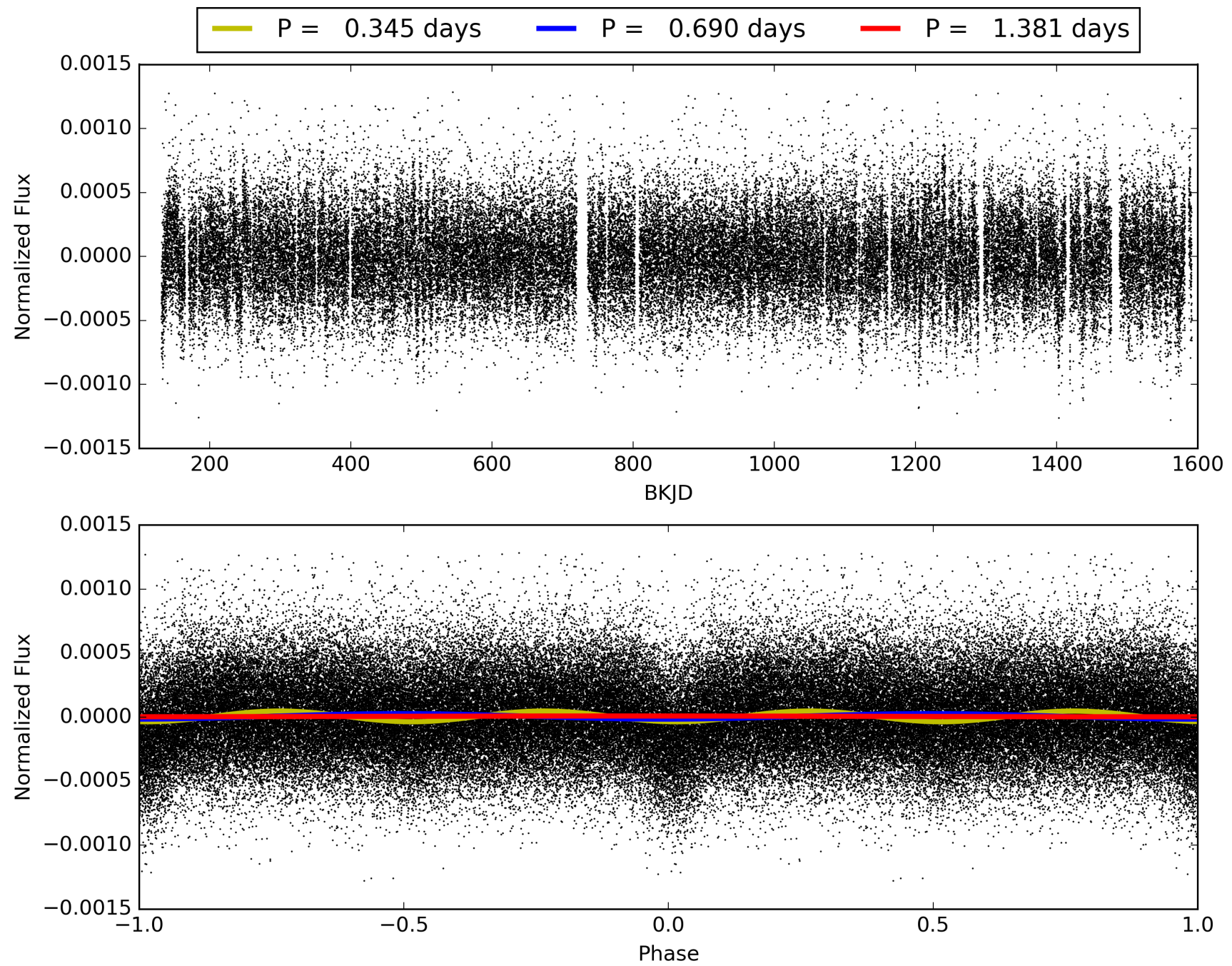
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:56:44 Z

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

TCE 006630943-01, PDC Light Curves

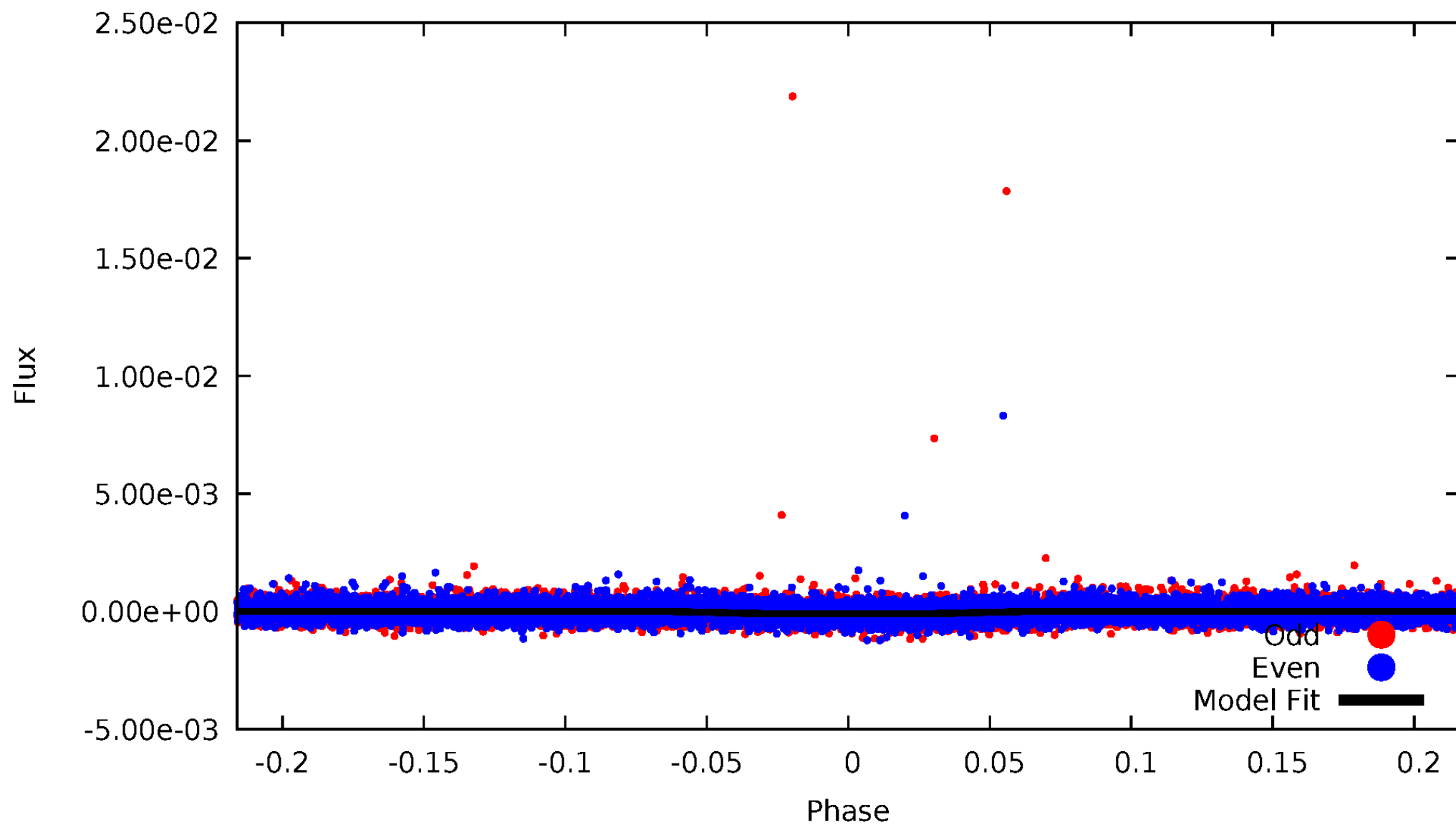


TCE 006630943-01



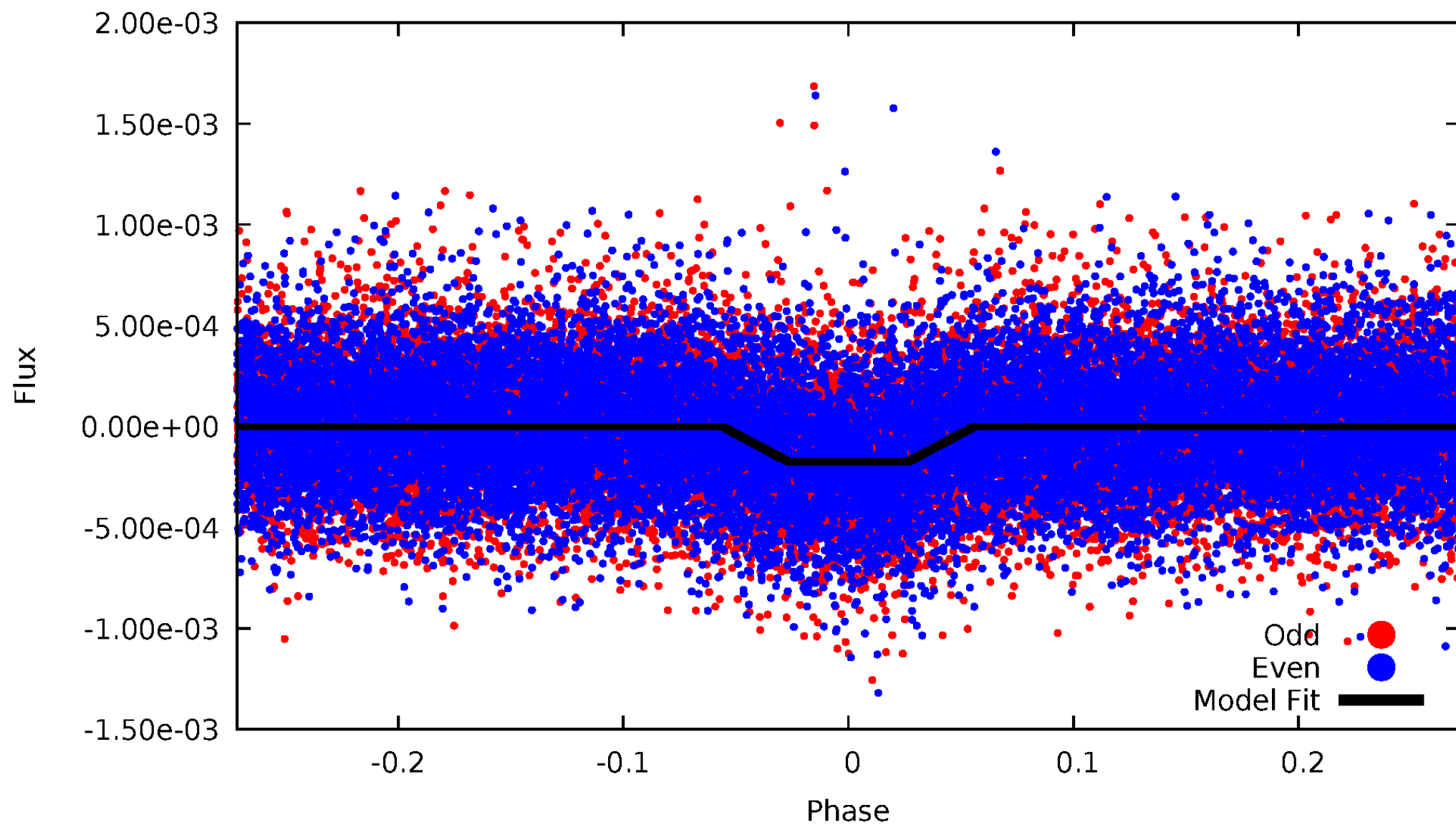
DV Odd/Even

TCE 006630943-01



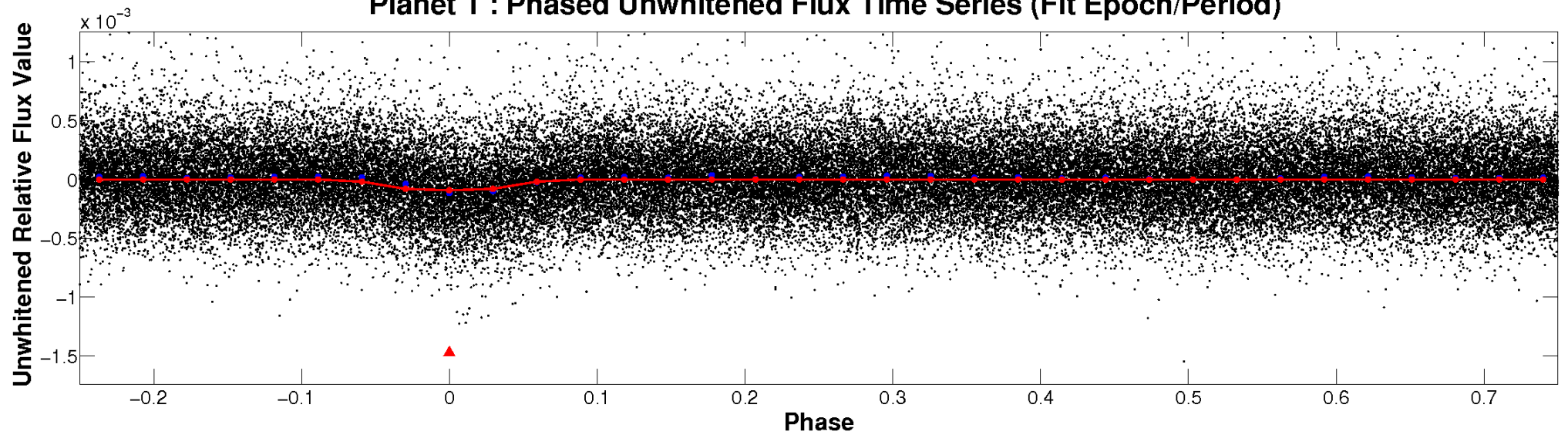
ALT Odd/Even

TCE 006630943-01

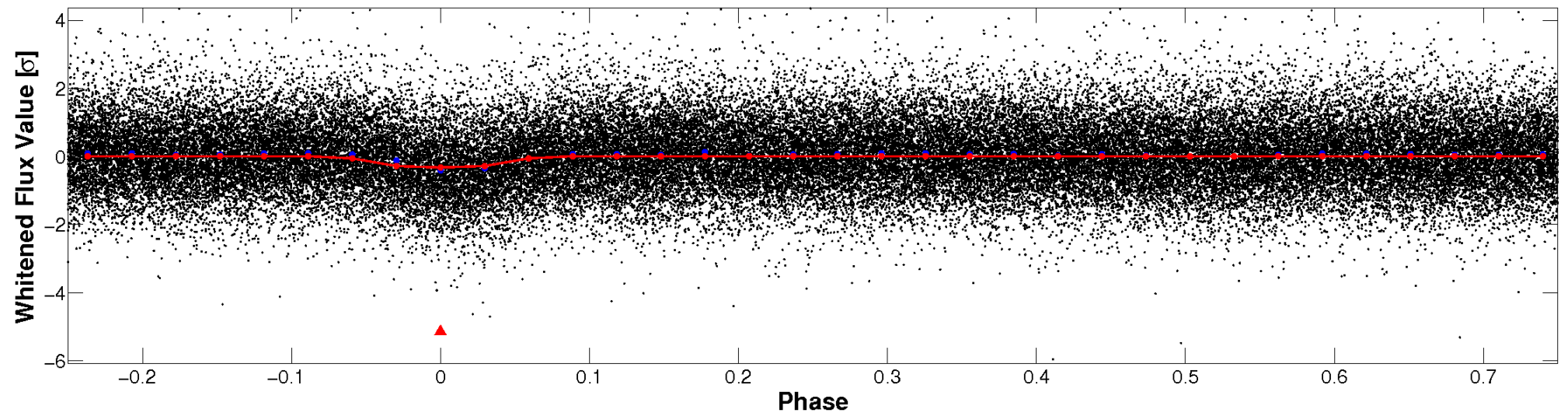


Non-Whitened Vs. Whitened Light Curve

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

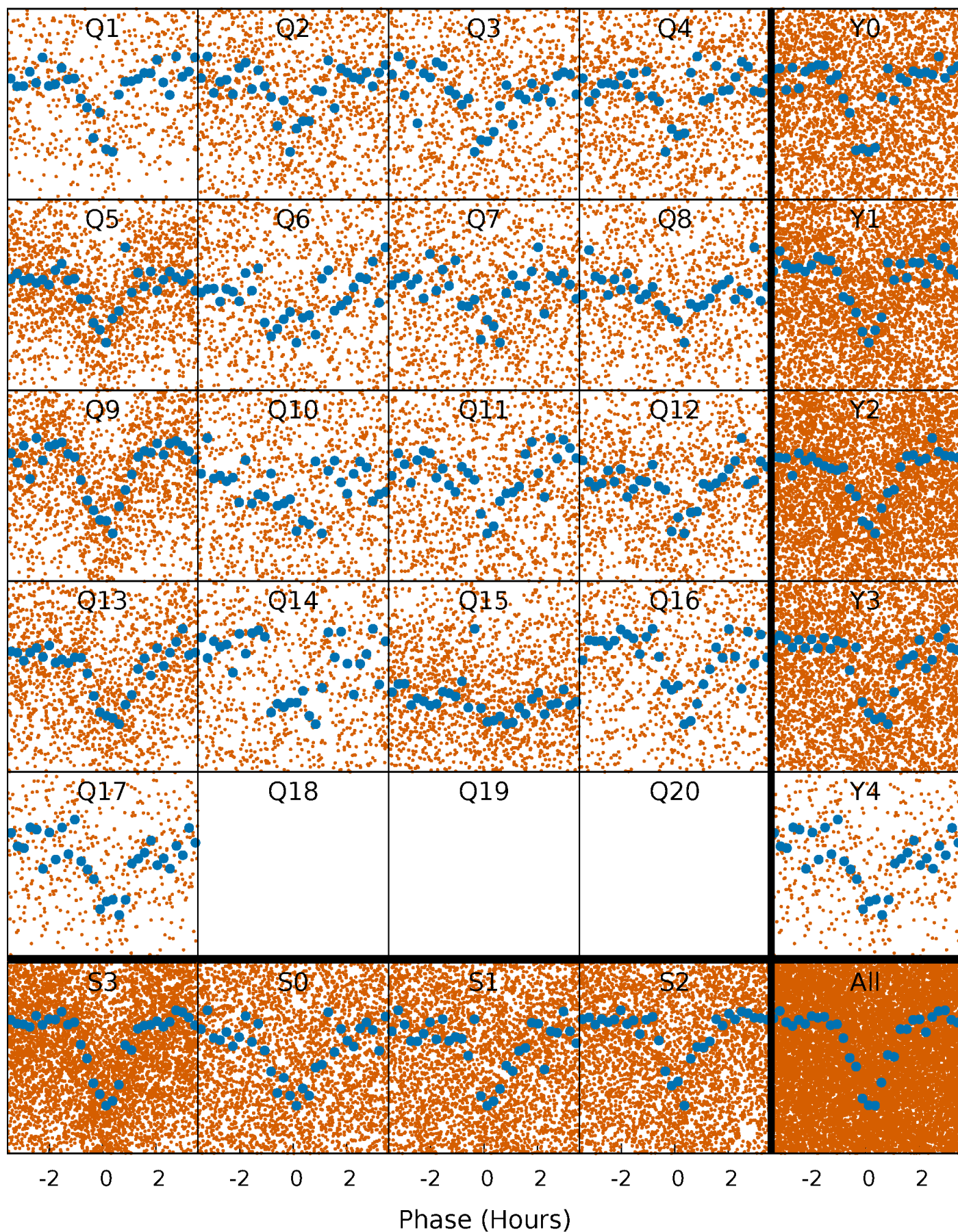


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



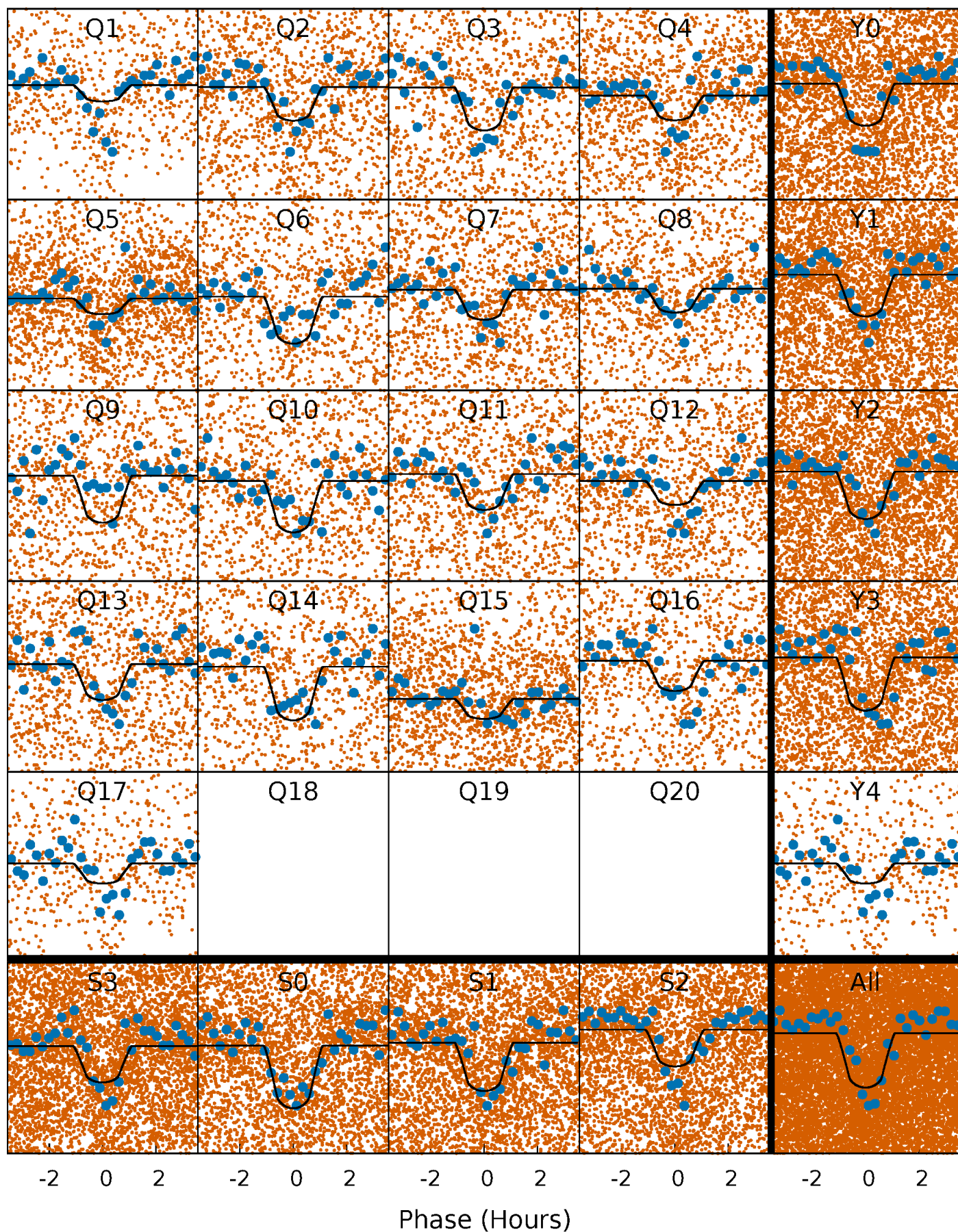
PDC Quarter-Phased Transit Curves

TCE 006630943-01 P= 0.690396 Days $T_0=131.733421$ (BKJD)



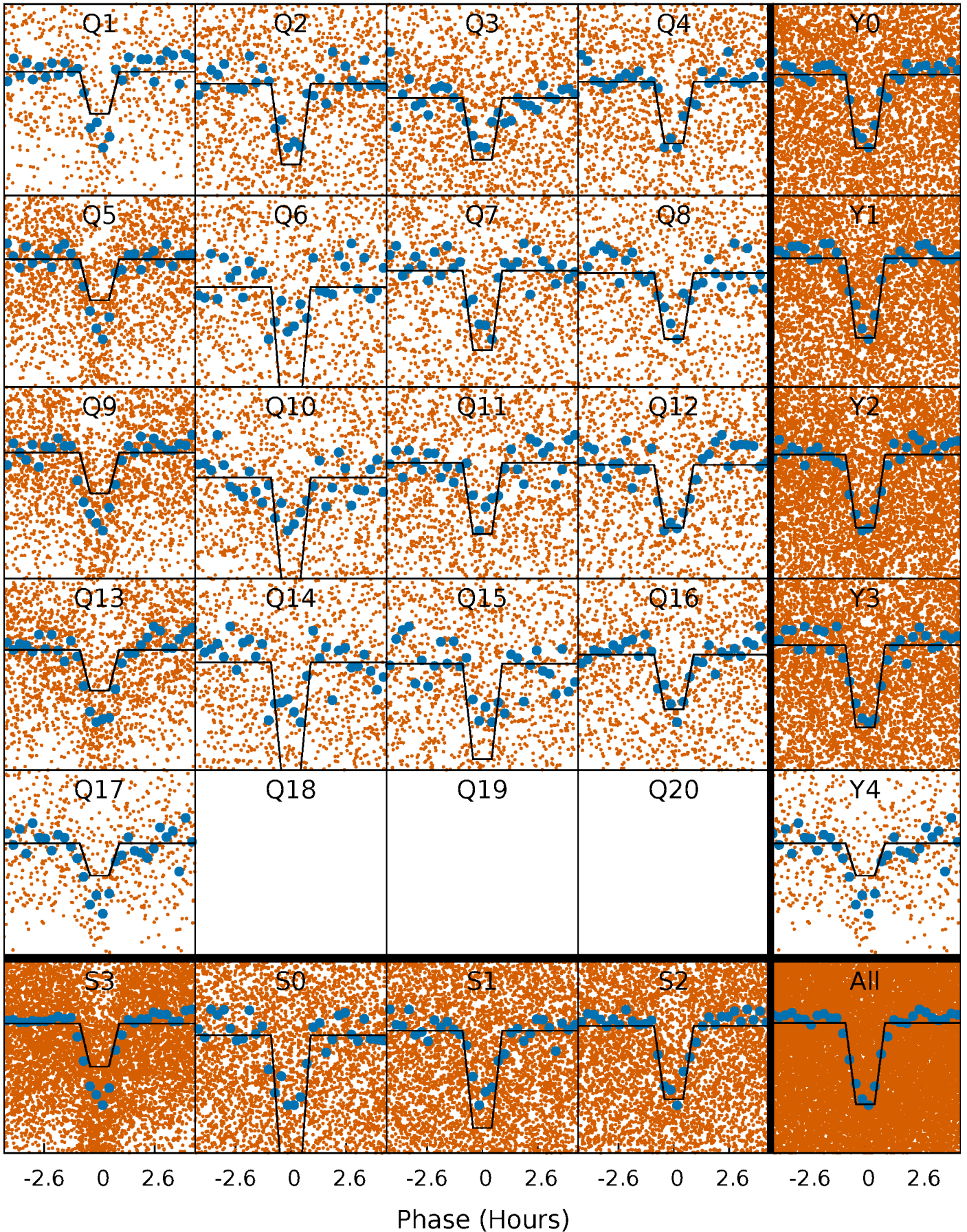
DV Quarter-Phased Transit Curves

TCE 006630943-01 P= 0.690396 Days $T_0=131.733421$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

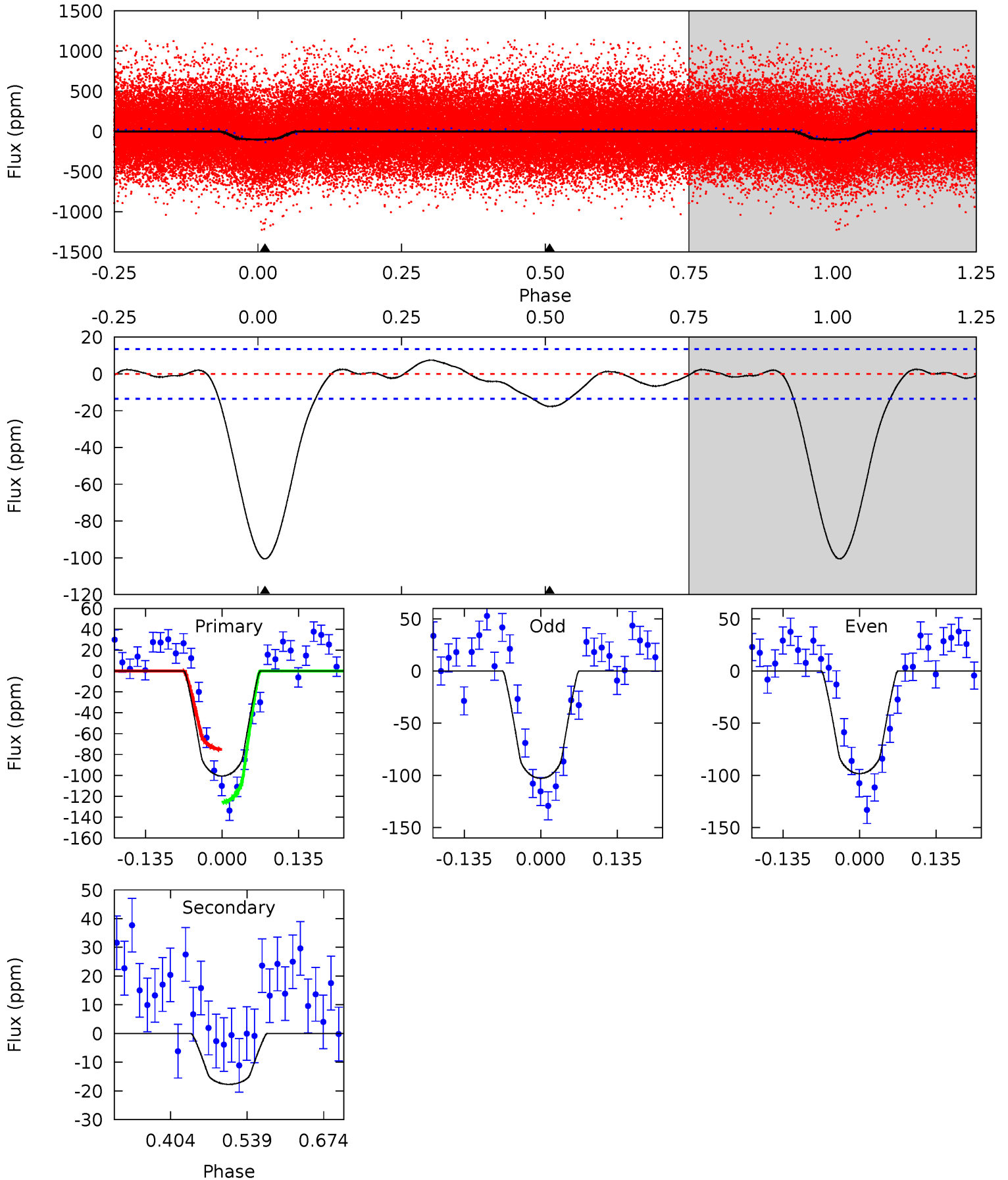
TCE 006630943-01 P= 0.690405 Days $T_0=131.731603$ (BKJD)



DV Model-Shift Uniqueness Test

006630943-01, P = 0.690396 Days, E = 131.043025 Days

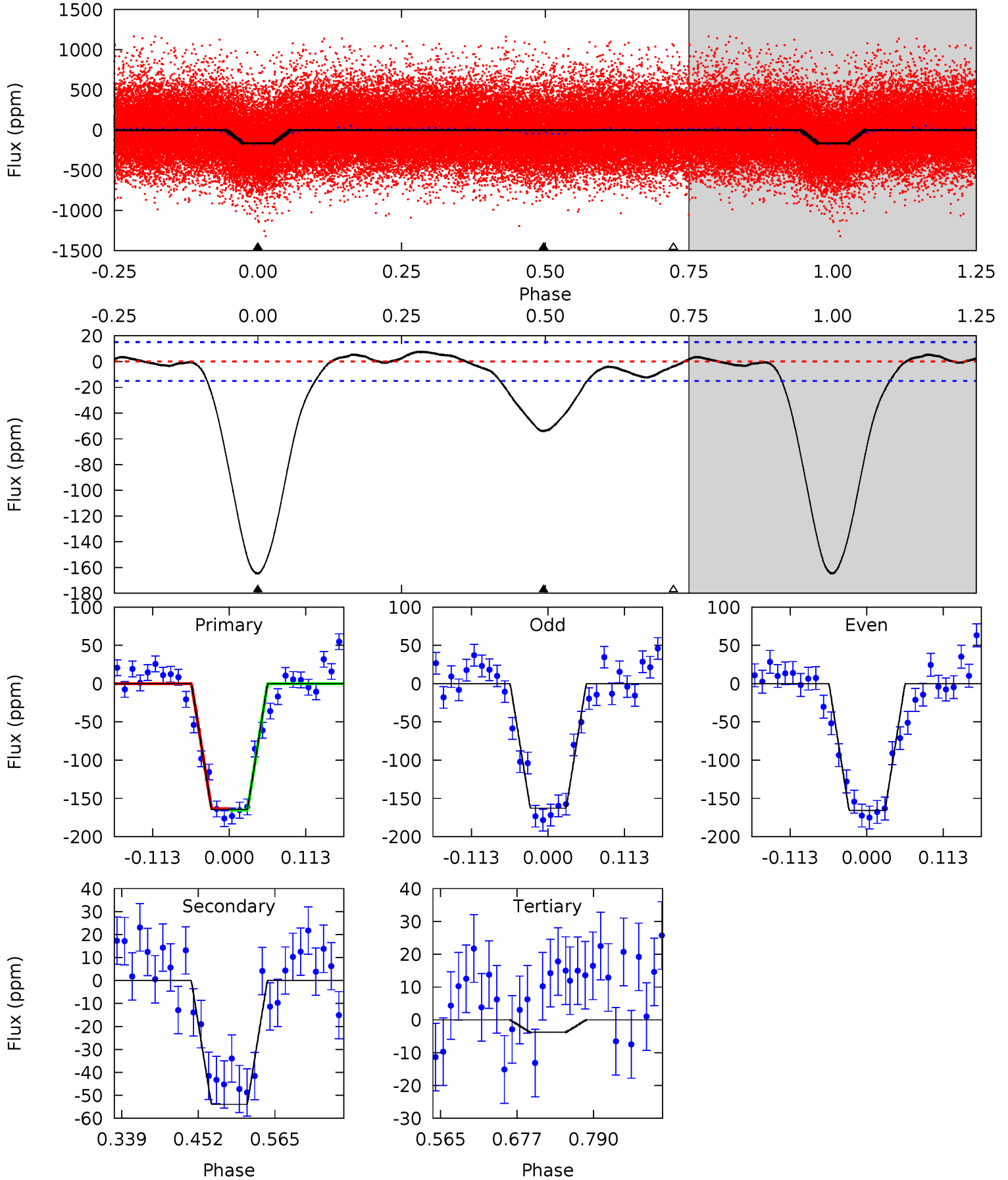
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.4	5.89	0	0	4.50	1.50	1.17	33.4	33.4	5.89	5.89	0.76	0.89	0.07	8.43



Alt Model-Shift Uniqueness Test

006630943-01, P = 0.690405 Days, E = 131.041198 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.7	16.3	1.14	0	4.54	1.59	1.51	48.6	49.7	15.1	16.3	0.46	0.98	0.04	0.30



Stellar Parameters For KIC 006630943

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5204^{+169}_{-138}	$4.515^{+0.099}_{-0.090}$	$-0.260^{+0.300}_{-0.300}$	$0.786^{+0.097}_{-0.097}$	$0.736^{+0.116}_{-0.050}$	$2.139^{+0.791}_{-0.580}$
	+3%/-3%	+2%/-2%	+115%/-115%	+12%/-12%	+16%/-7%	+37%/-27%
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 006630943-01 / KOI 2738.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 3	$0.93^{+0.40}_{-0.38}$	2422^{+110}_{-104}	3557^{+786}_{-458}	$2.171^{+3.855}_{-1.140}$
Alt.	-54 ± 3	$1.12^{+0.39}_{-0.39}$	2415^{+119}_{-105}	4111^{+750}_{-453}	$4.573^{+6.149}_{-2.033}$

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 $A_{obs} \gg 1.0$

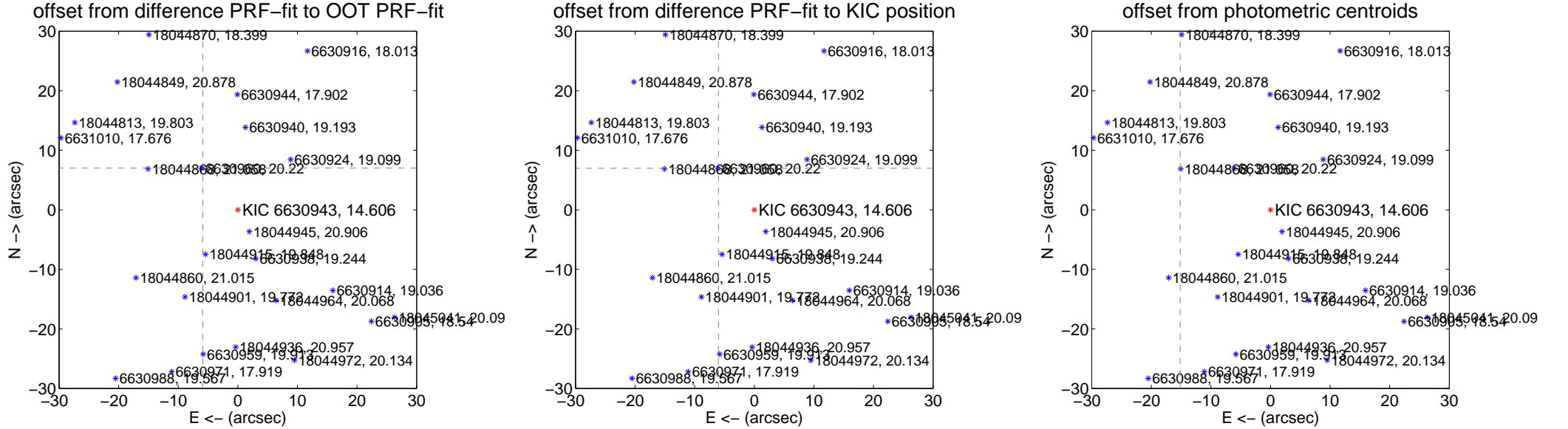
DV Centroid Data

Supplemental centroid analysis for 006630943-01. Kepler magnitude: 14.61. Transit SNR 22.44

There are 17 quarters with good PRF difference image offsets

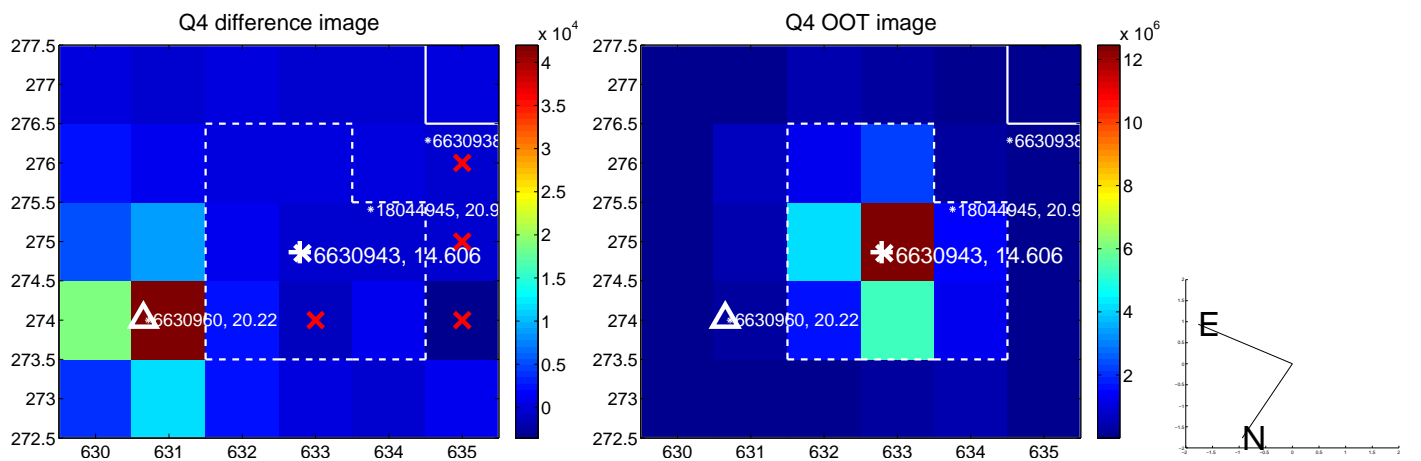
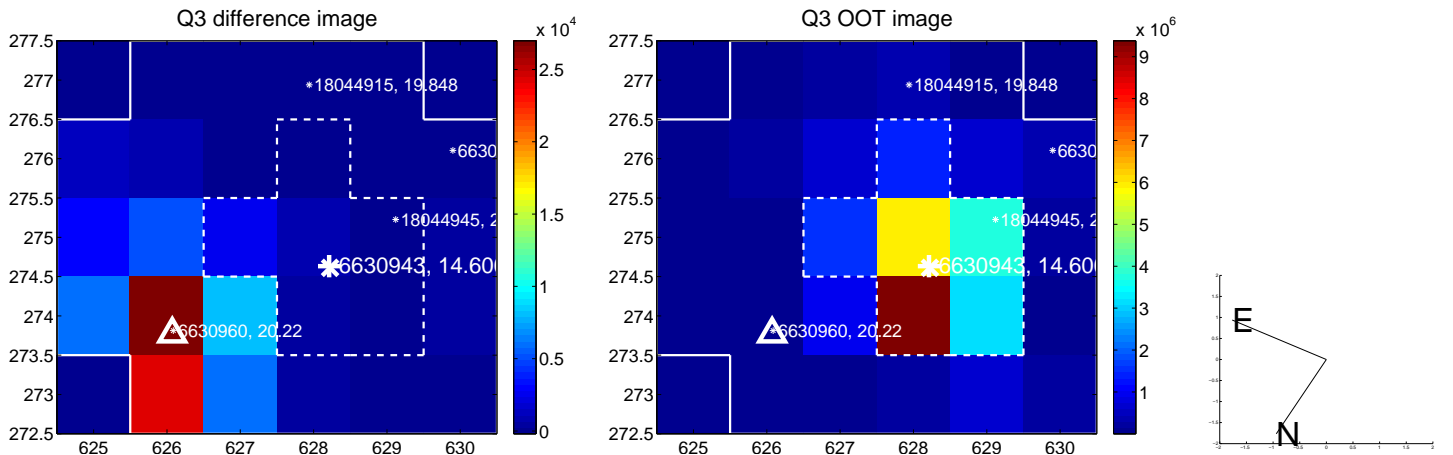
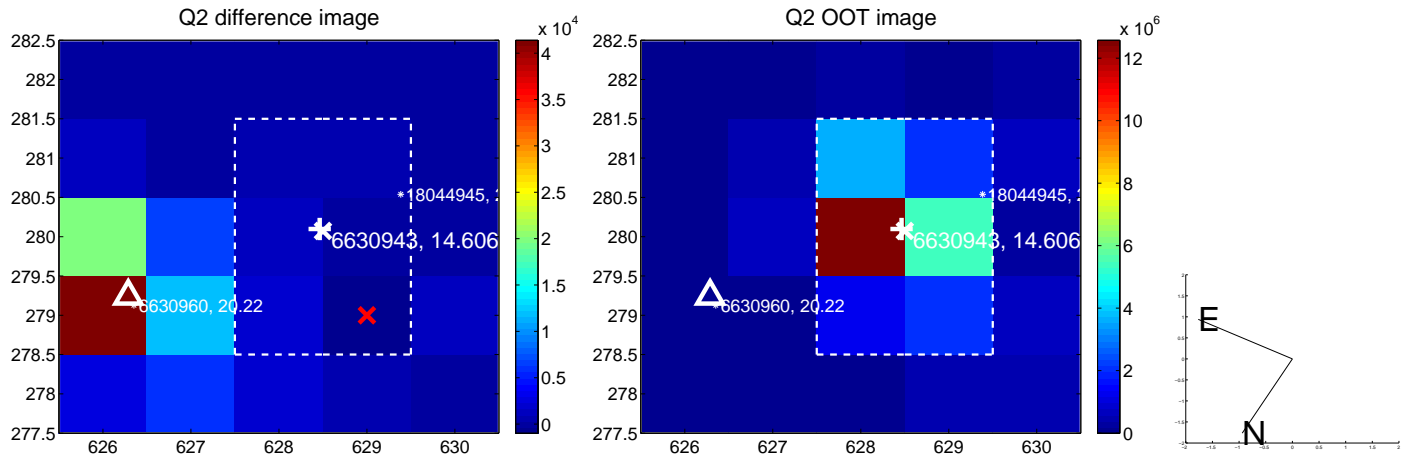
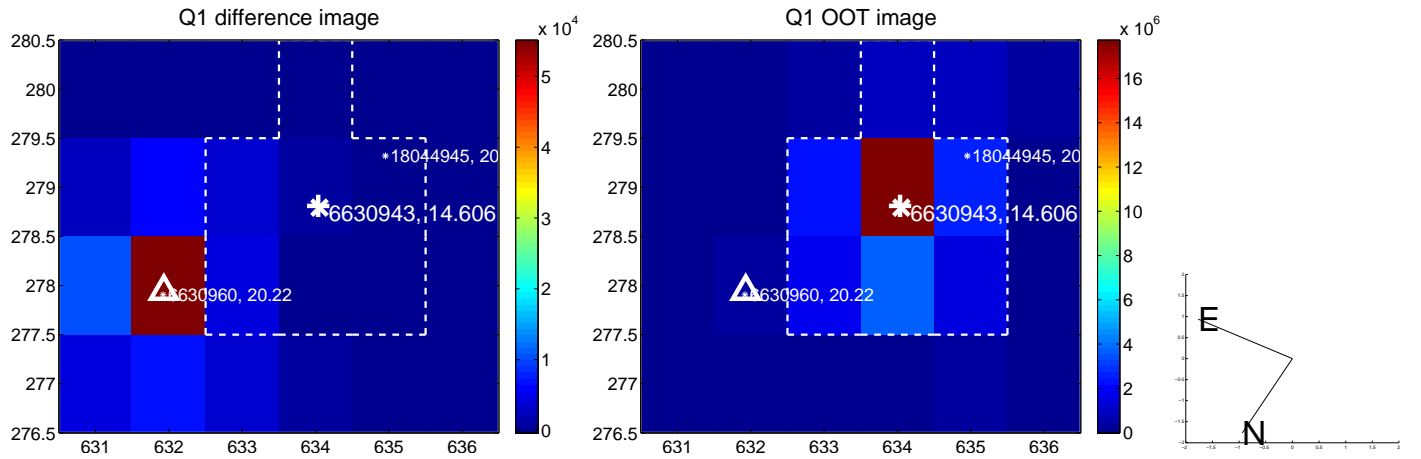
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.142 \pm 0.071	128.11	5.881 \pm 0.073	7.000 \pm 0.067
PRF-fit source offset from KIC position	9.208 \pm 0.071	129.12	6.013 \pm 0.075	6.973 \pm 0.067
photometric centroid source offset	62.19 \pm 0.80	77.28	15.16 \pm 0.85	60.32 \pm 0.80

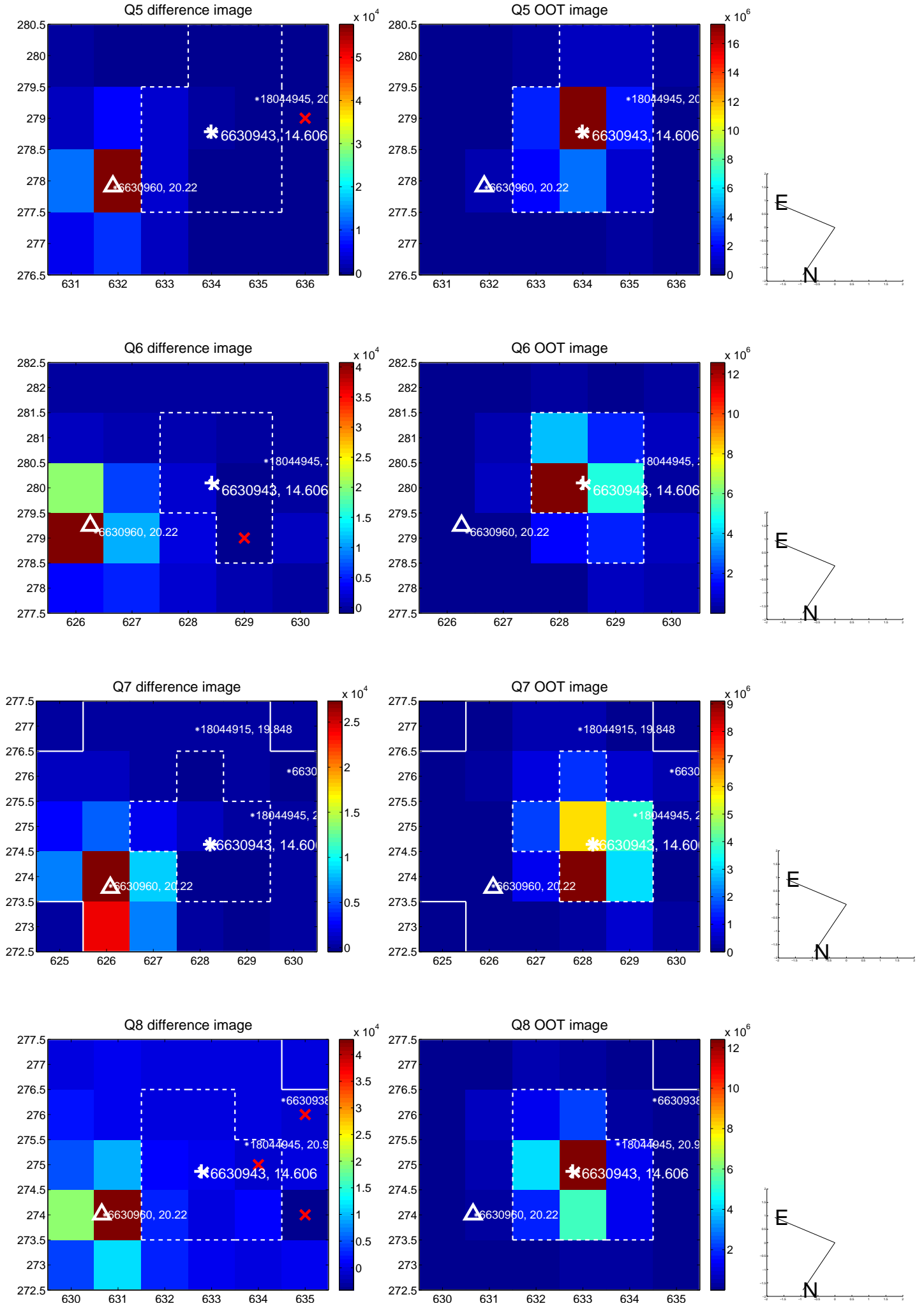


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

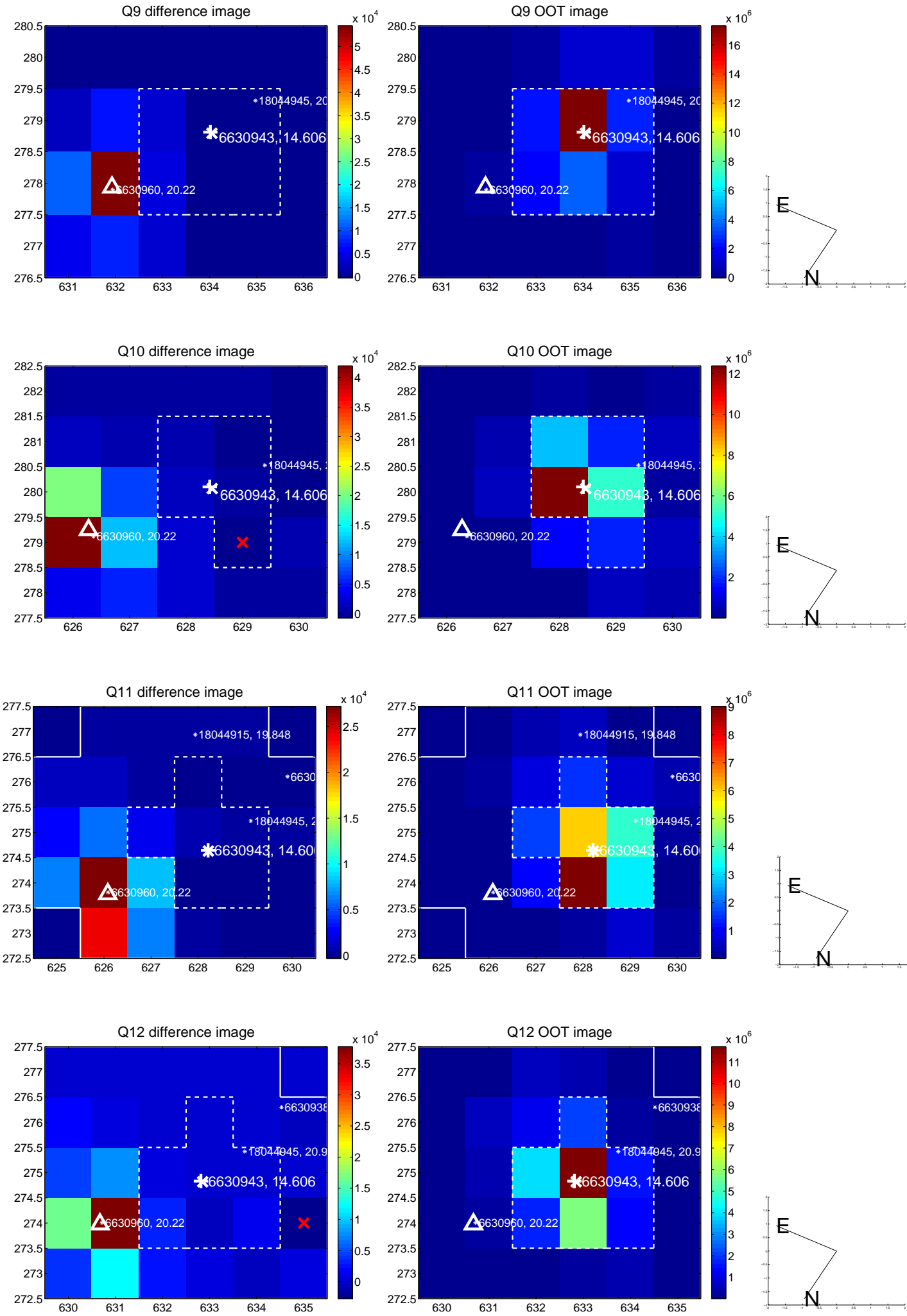
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



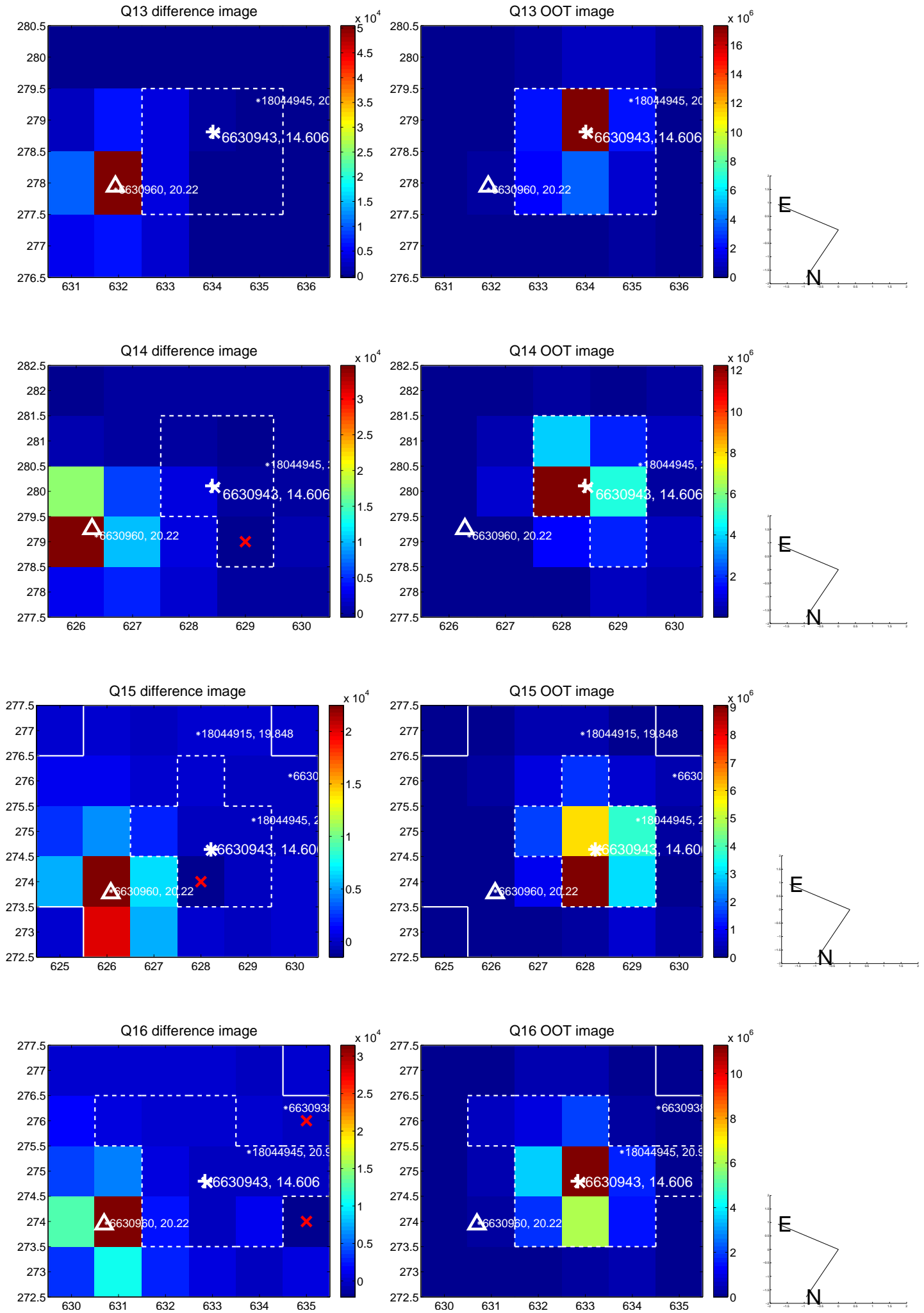
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



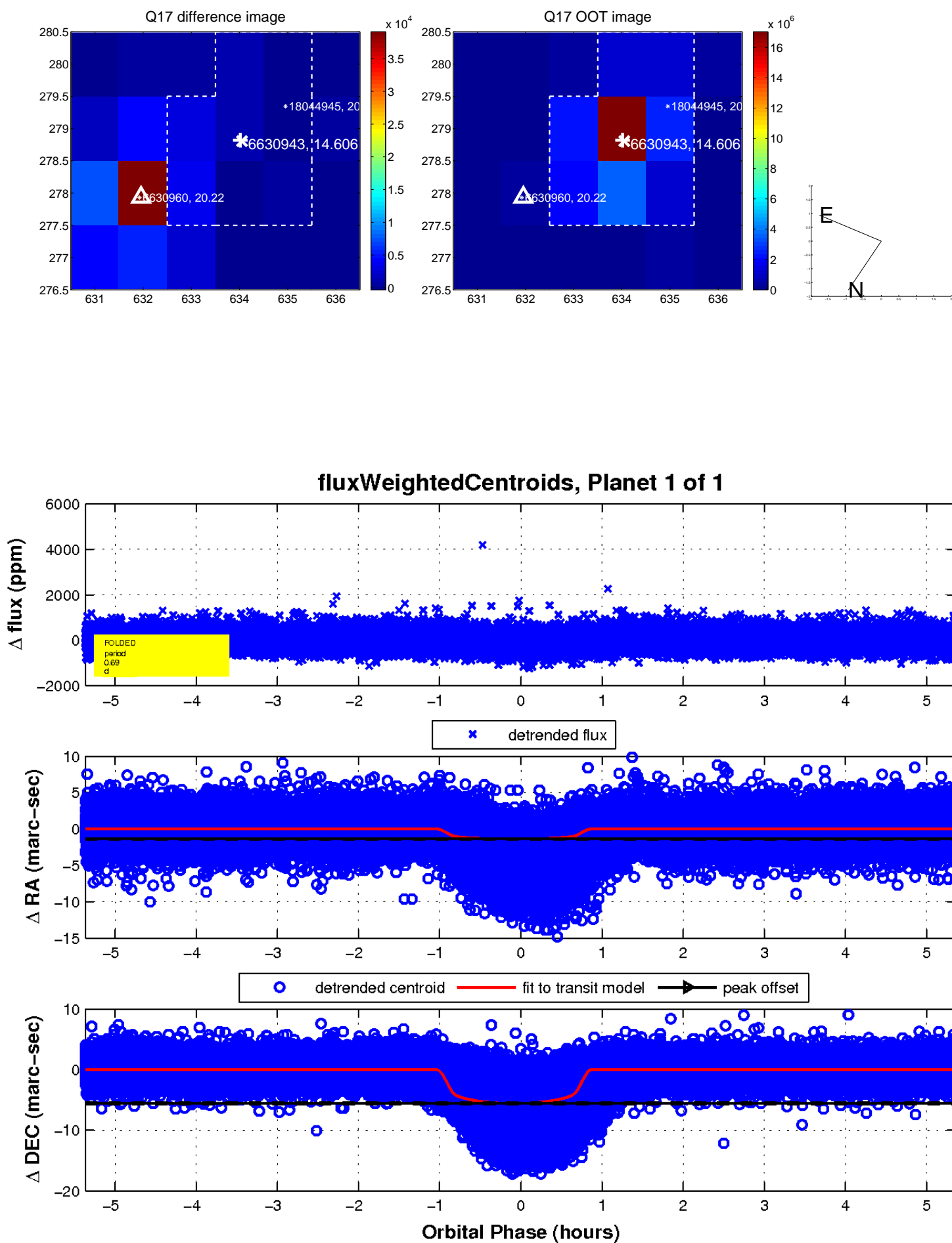
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

