

KIC 002710623

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})
002710623-01	OBS	4532.01	1.020883	131.663445	32.2	2.741	8.4	9.3	1.11	5750	0.73	3105.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002710623-01	OBS	FP	0.00	0	0	1	0	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.

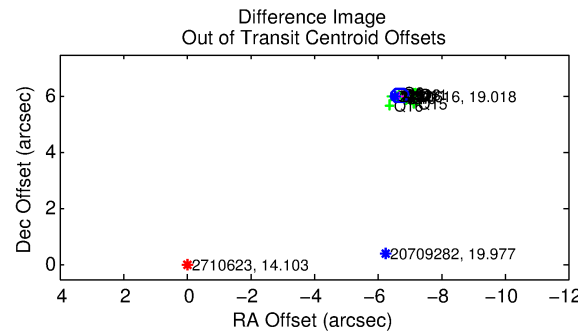
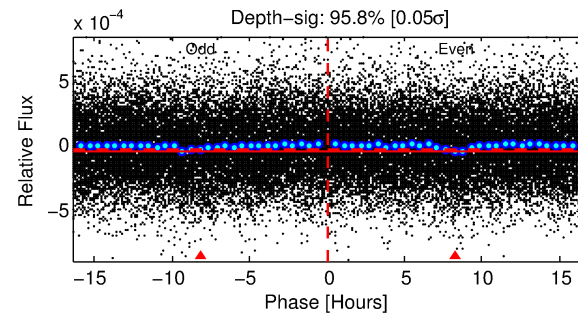
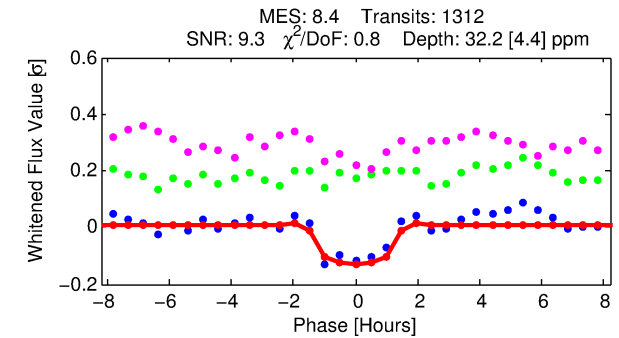
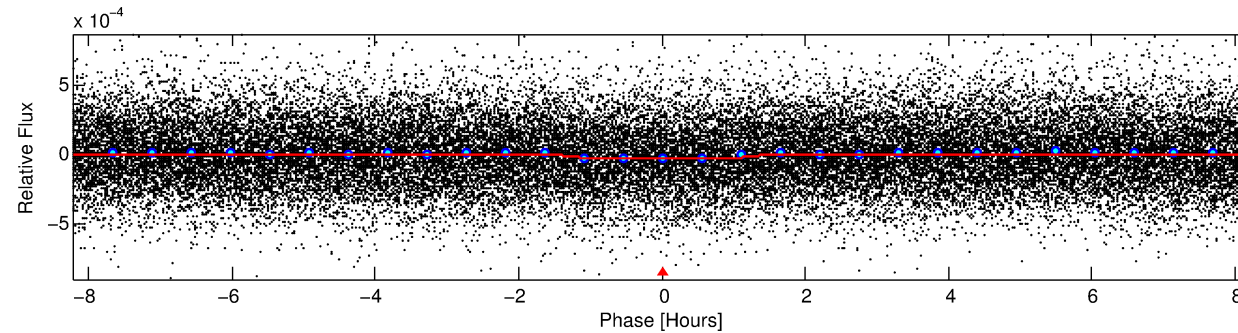
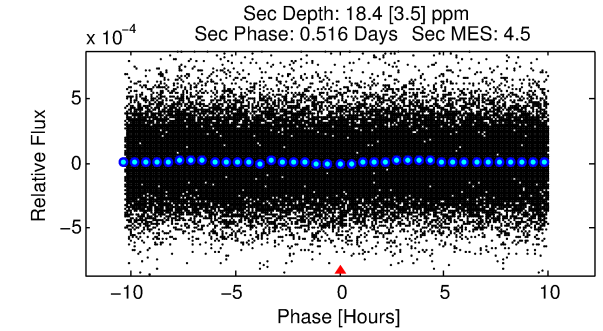
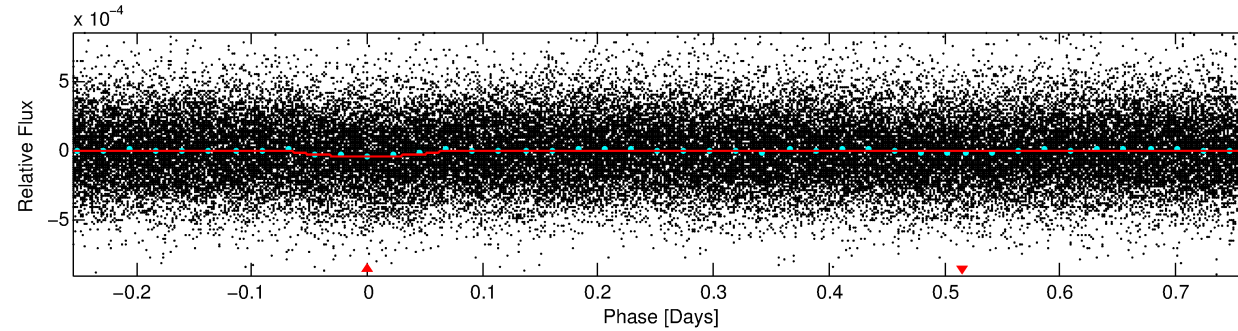
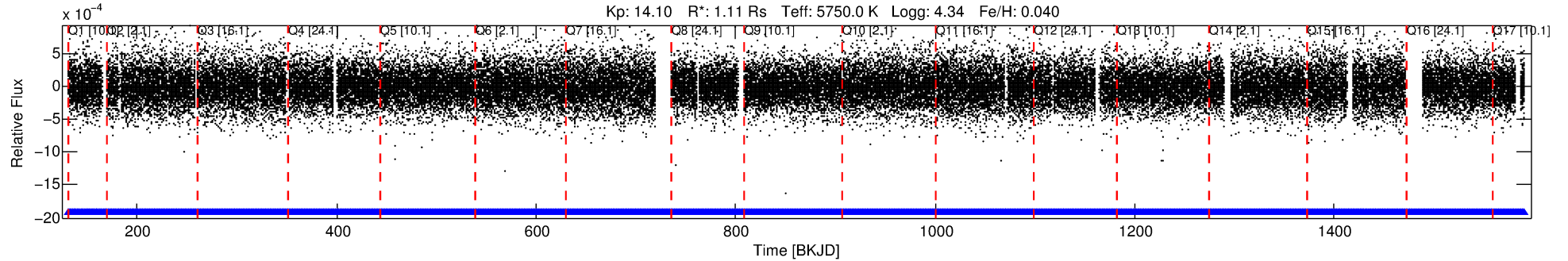
Ephemeris Match Information For 002710623-01

No Significant Match Found

DV One-Page Summary

KIC: 2710623 Candidate: 1 of 1 Period: 1.021 d
KOI: K04532.01 Corr: 0.947

Kp: 14.10 R*: 1.11 Rs Teff: 5750.0 K Logg: 4.34 Fe/H: 0.040



DV Fit Results:

Period = 1.02088 [0.00001] d
Epoch = 131.6634 [0.0036] BKJD
Rp/R* = 0.0061 [0.0032]
a/R* = 1.66 [2.64]
b = 0.88 [0.64]
Seff = 3105.28 [1096.77]
Teq = 1903 [168] K
Rp = 0.73 [0.44] Re
a = 0.0196 [0.0046] AU
Ag = 7.23 [8.13] [0.77σ]
Teffp = 4826 [1302] K [2.23σ]

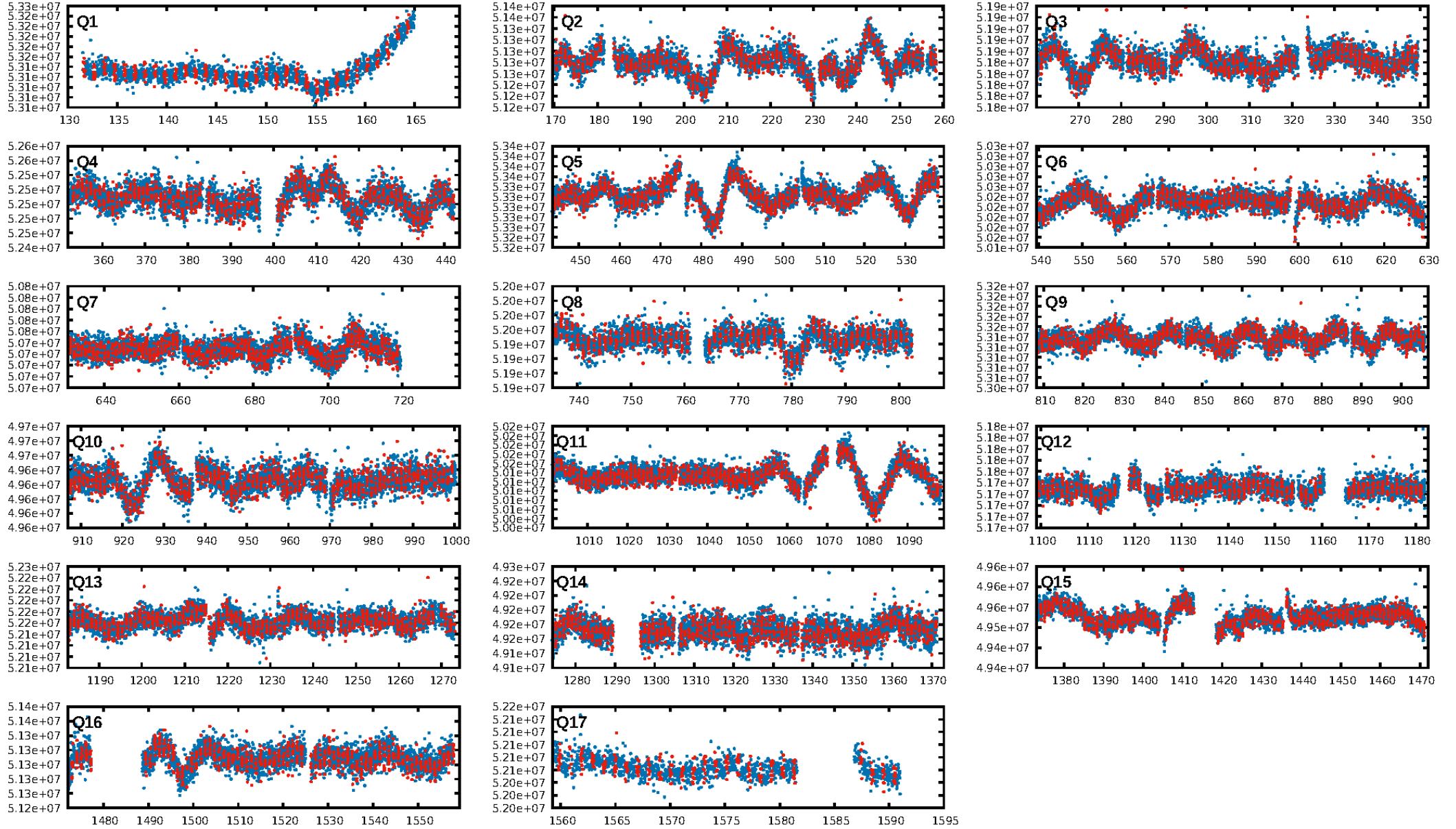
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 5.71e-17
RollingBand-fgt: 1.00 [1253/1253]
GhostDiagnostic-chr: -0.3495
Centroid-sig: 0.0%
Centroid-so: 17.003 arcsec [11.91σ]
OotOffset-rm: 9.005 arcsec [101.98σ]
KicOffset-rm: 9.028 arcsec [105.28σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 1.00 [15/15]
DiffImageOverlap-fno: 1.00 [17/17]

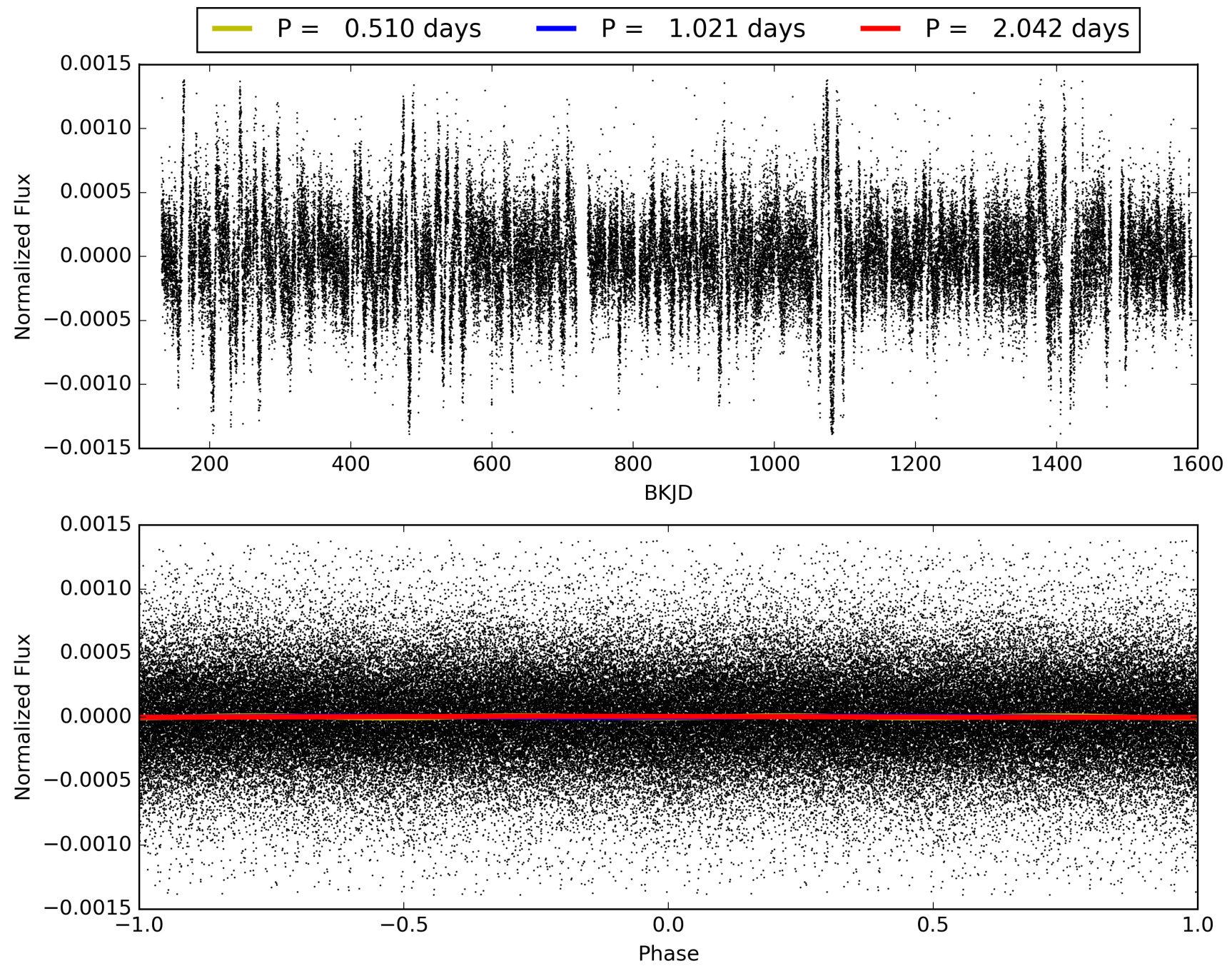
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:31:44 Z

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

TCE 002710623-01, PDC Light Curves

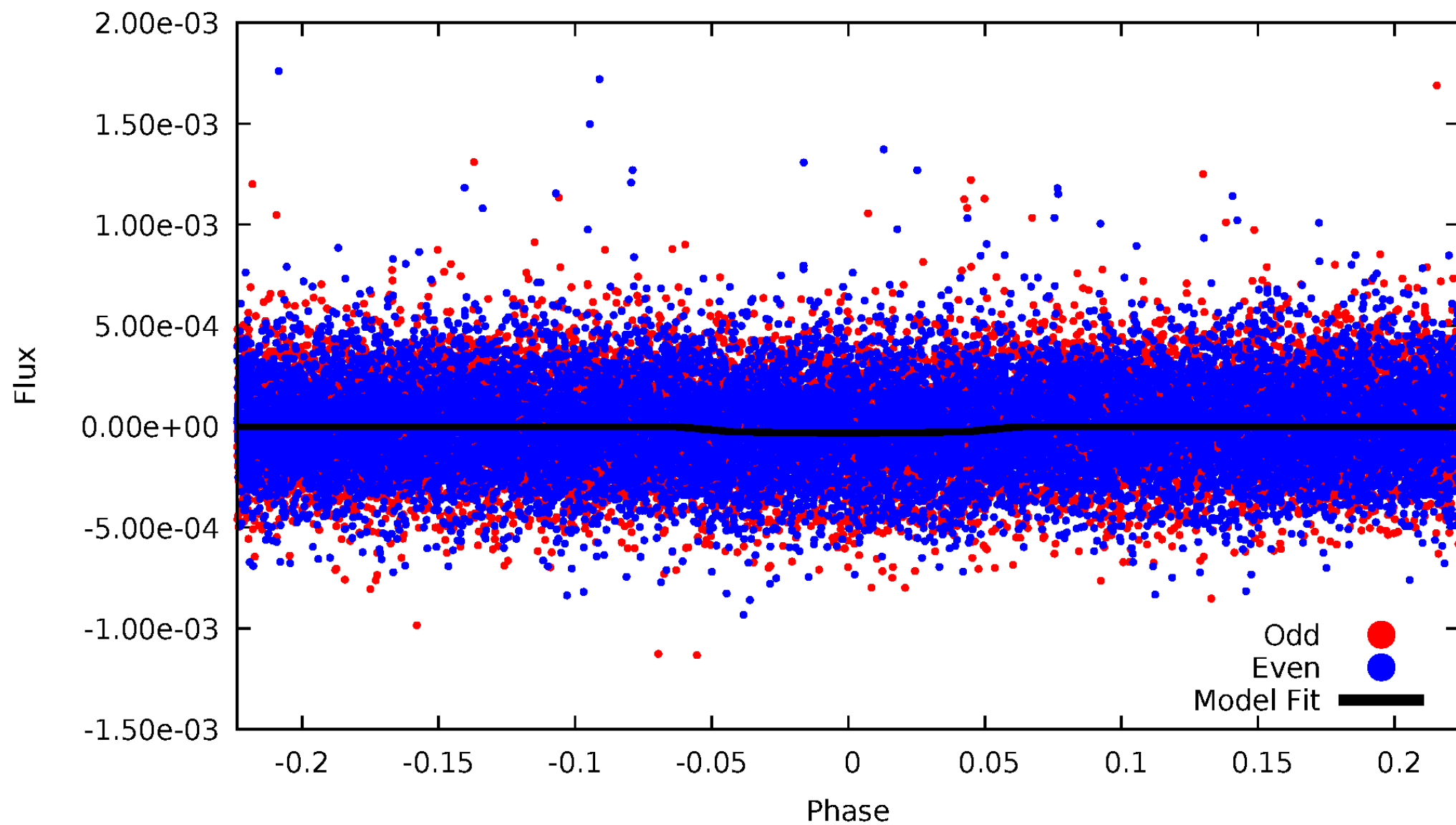


TCE 002710623-01



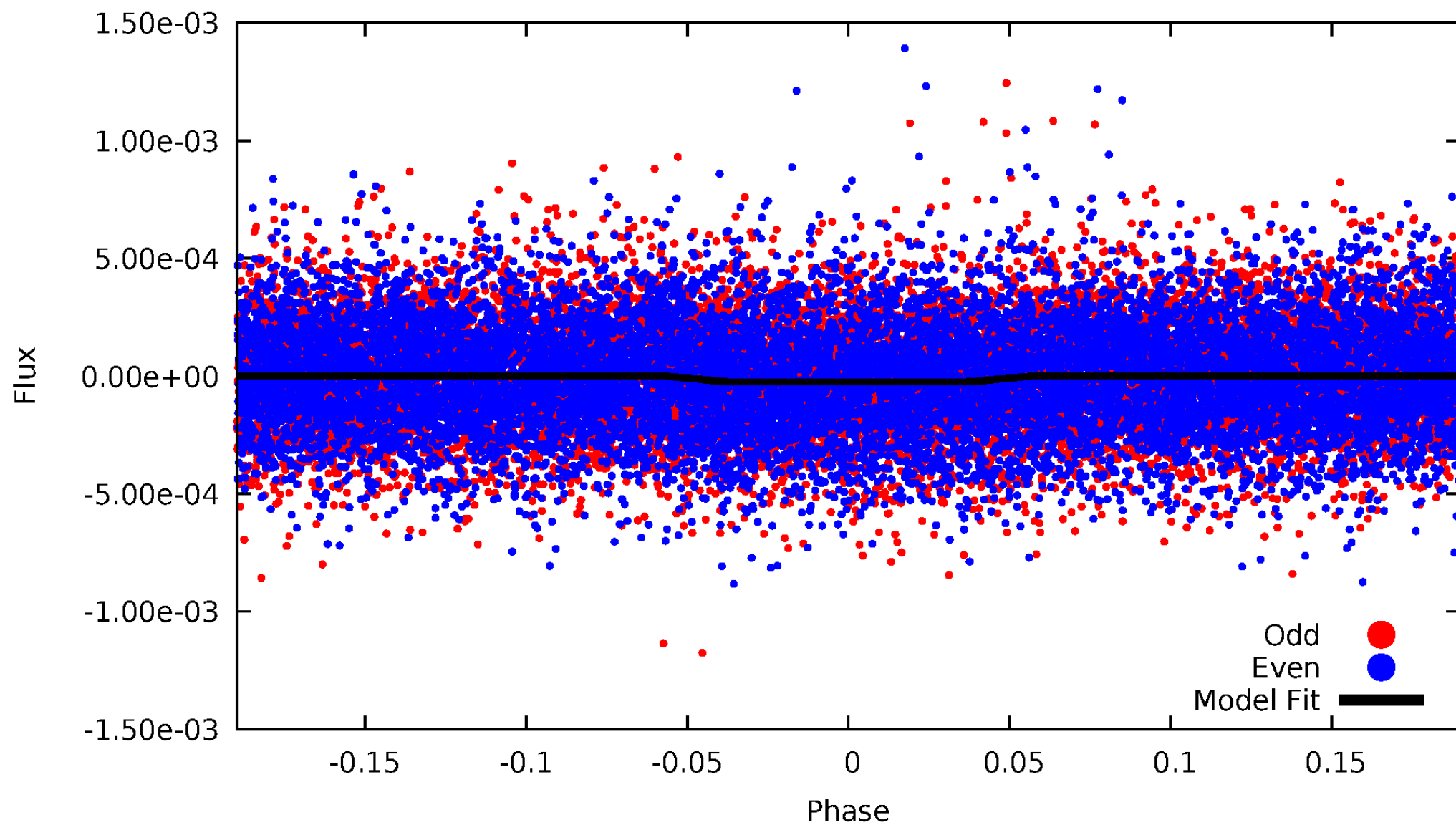
DV Odd/Even

TCE 002710623-01

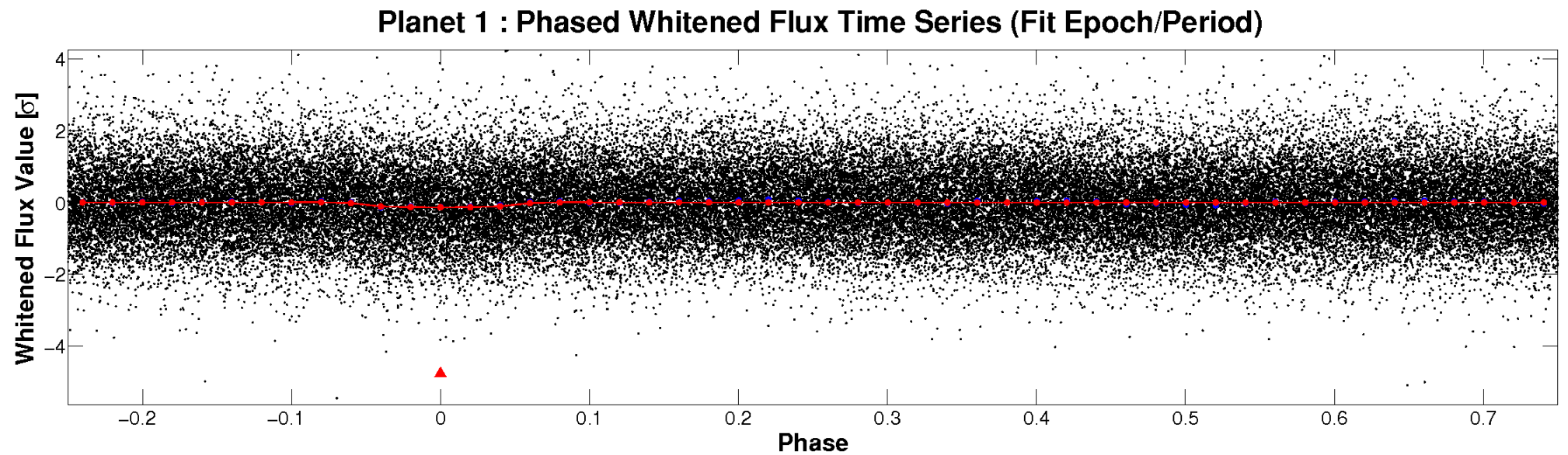
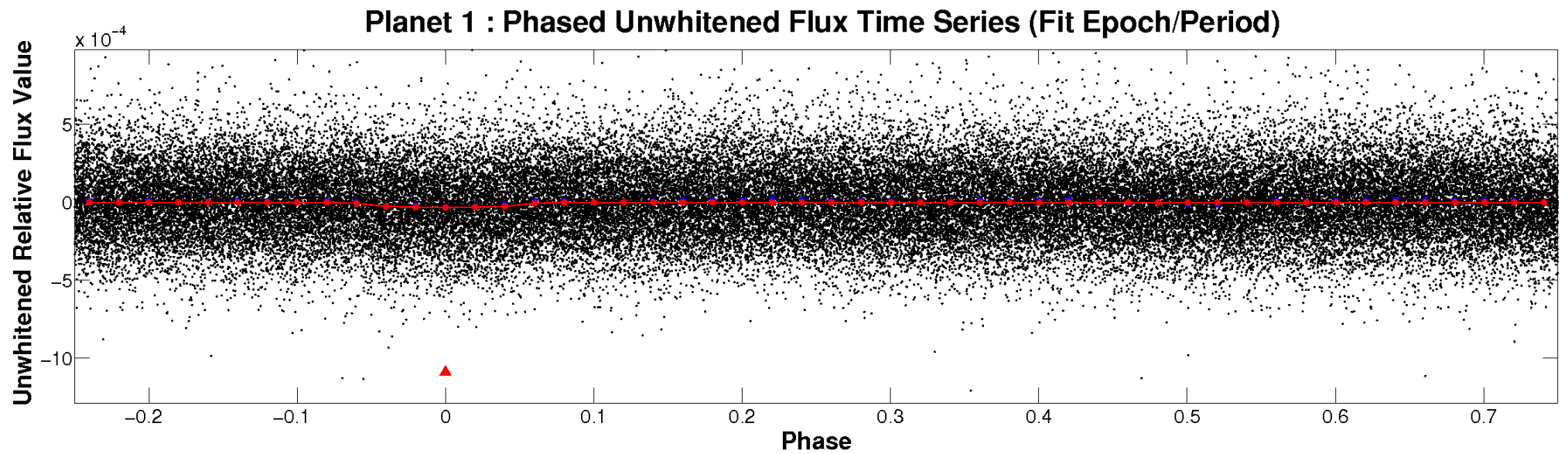


ALT Odd/Even

TCE 002710623-01

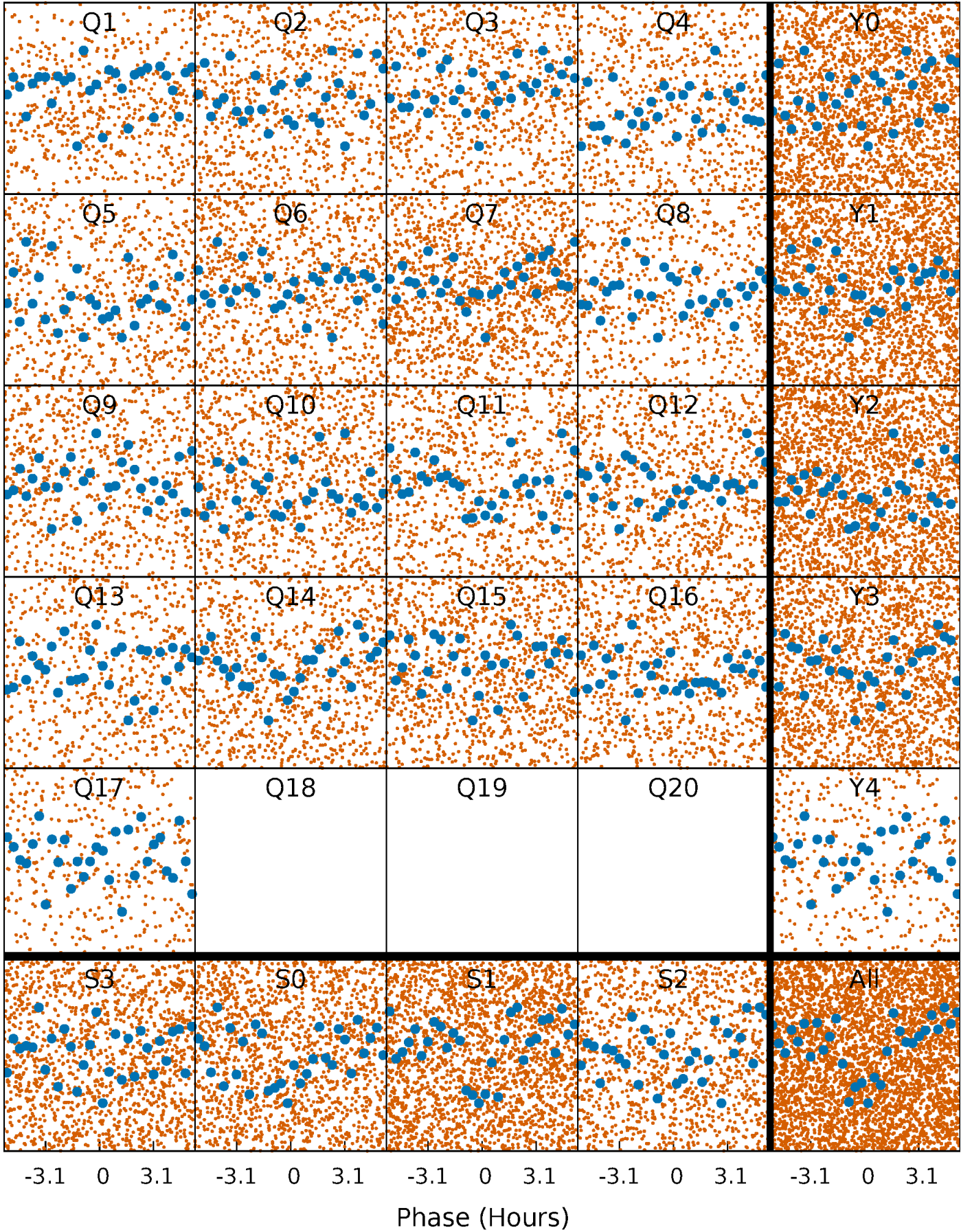


Non-Whitened Vs. Whitened Light Curve



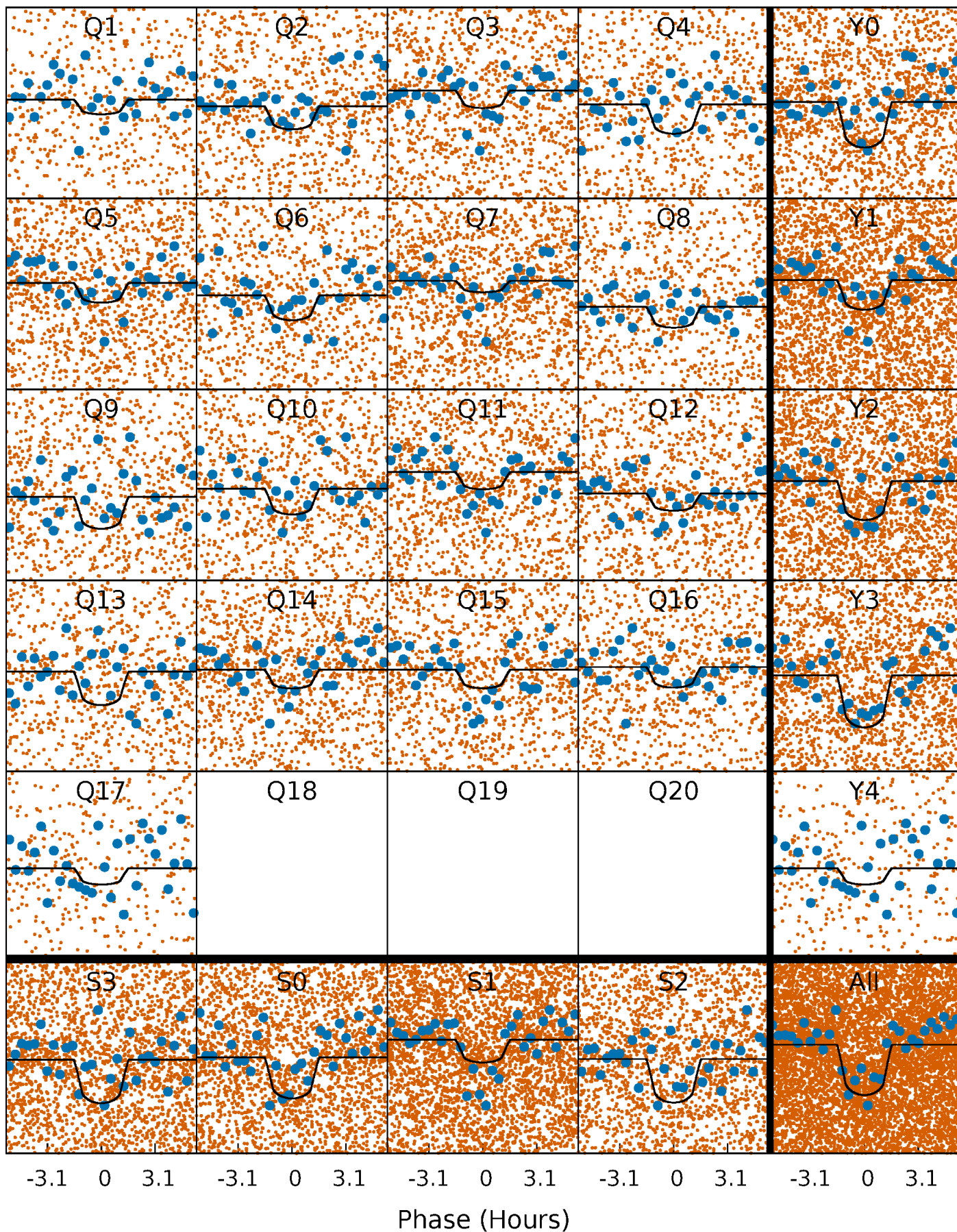
PDC Quarter-Phased Transit Curves

TCE 002710623-01 P= 1.020883 Days $T_0=131.663445$ (BKJD)



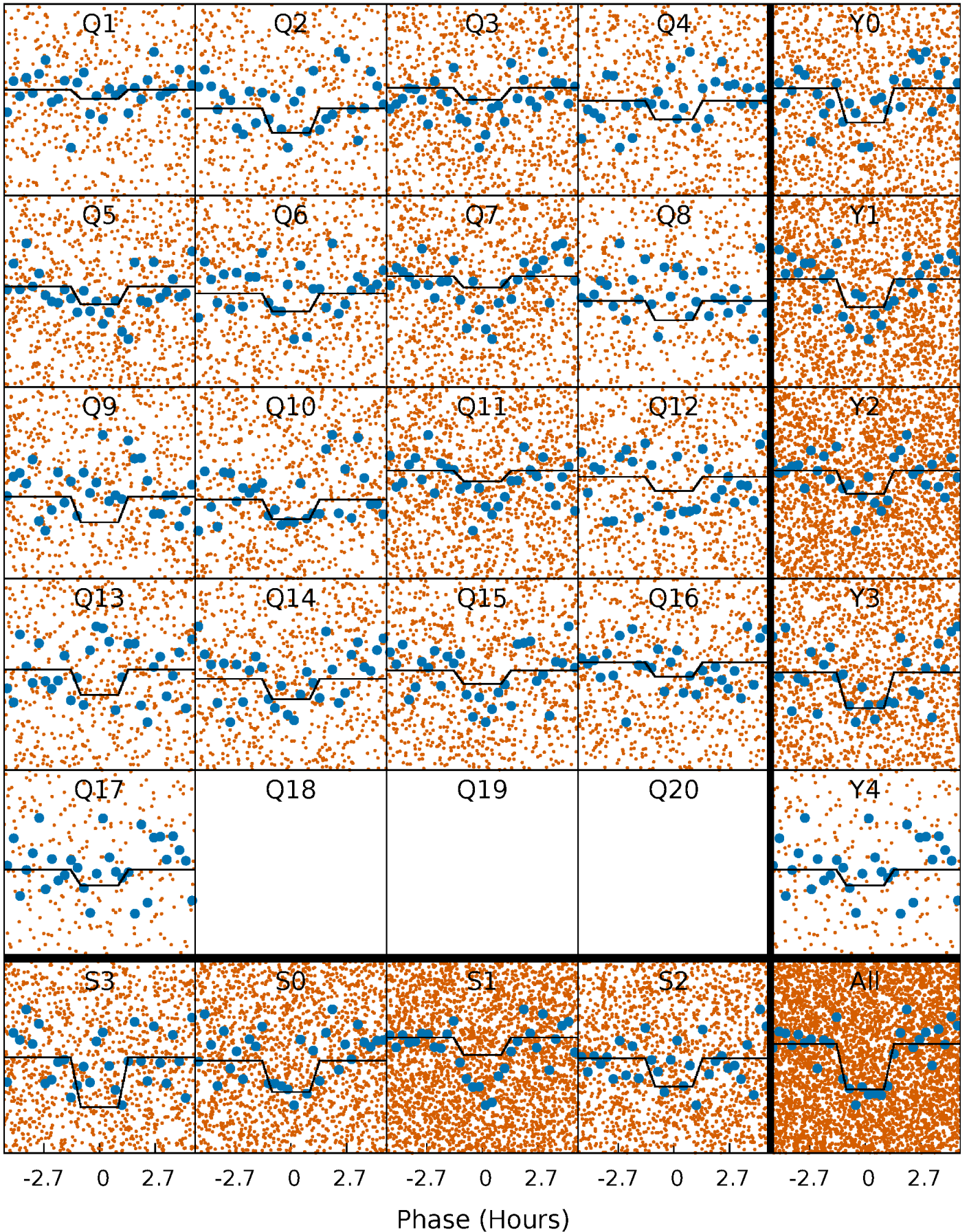
DV Quarter-Phased Transit Curves

TCE 002710623-01 P= 1.020883 Days $T_0=131.663445$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

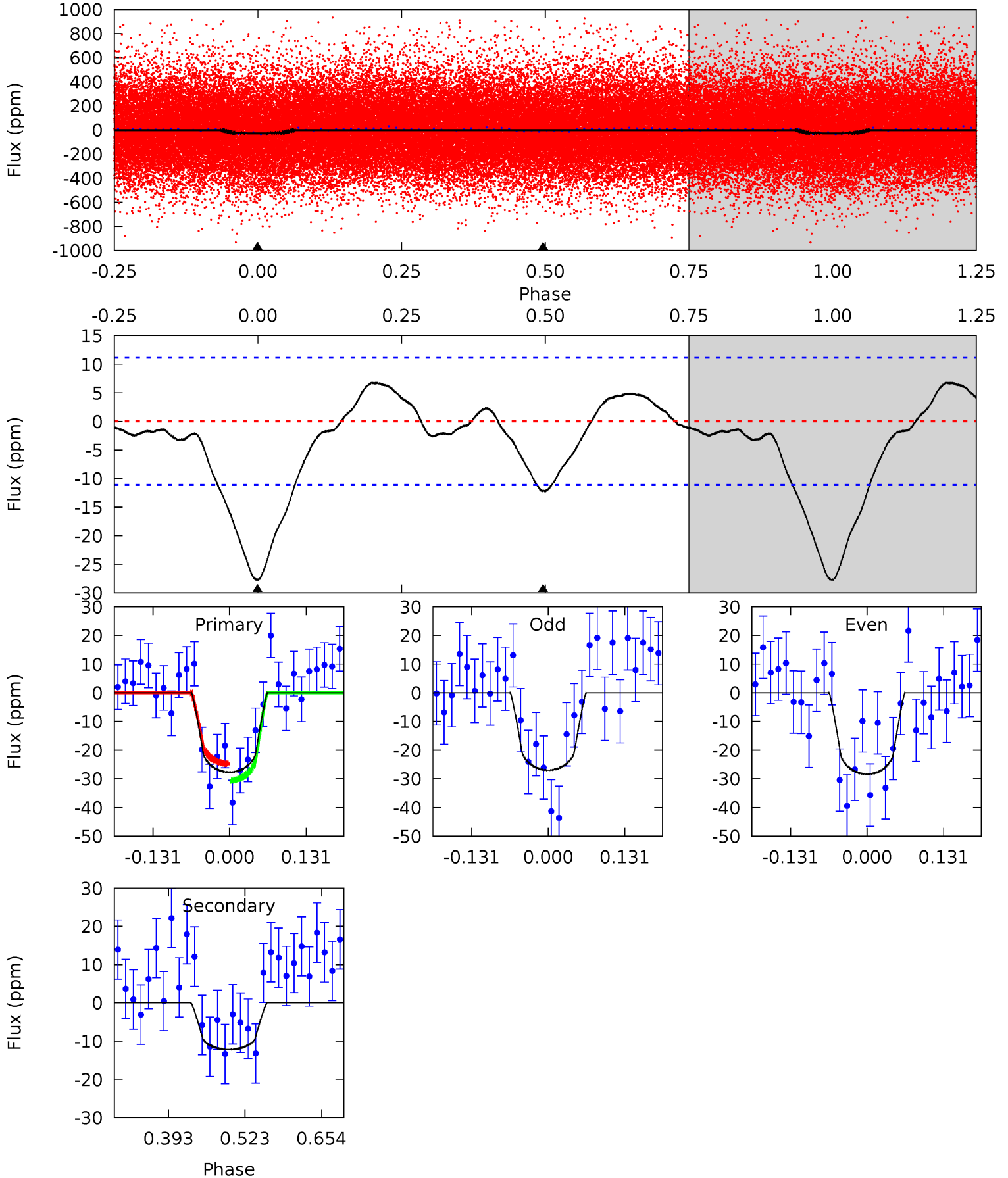
TCE 002710623-01 P= 1.020870 Days $T_0=131.665074$ (BKJD)



DV Model-Shift Uniqueness Test

002710623-01, P = 1.020883 Days, E = 130.642562 Days

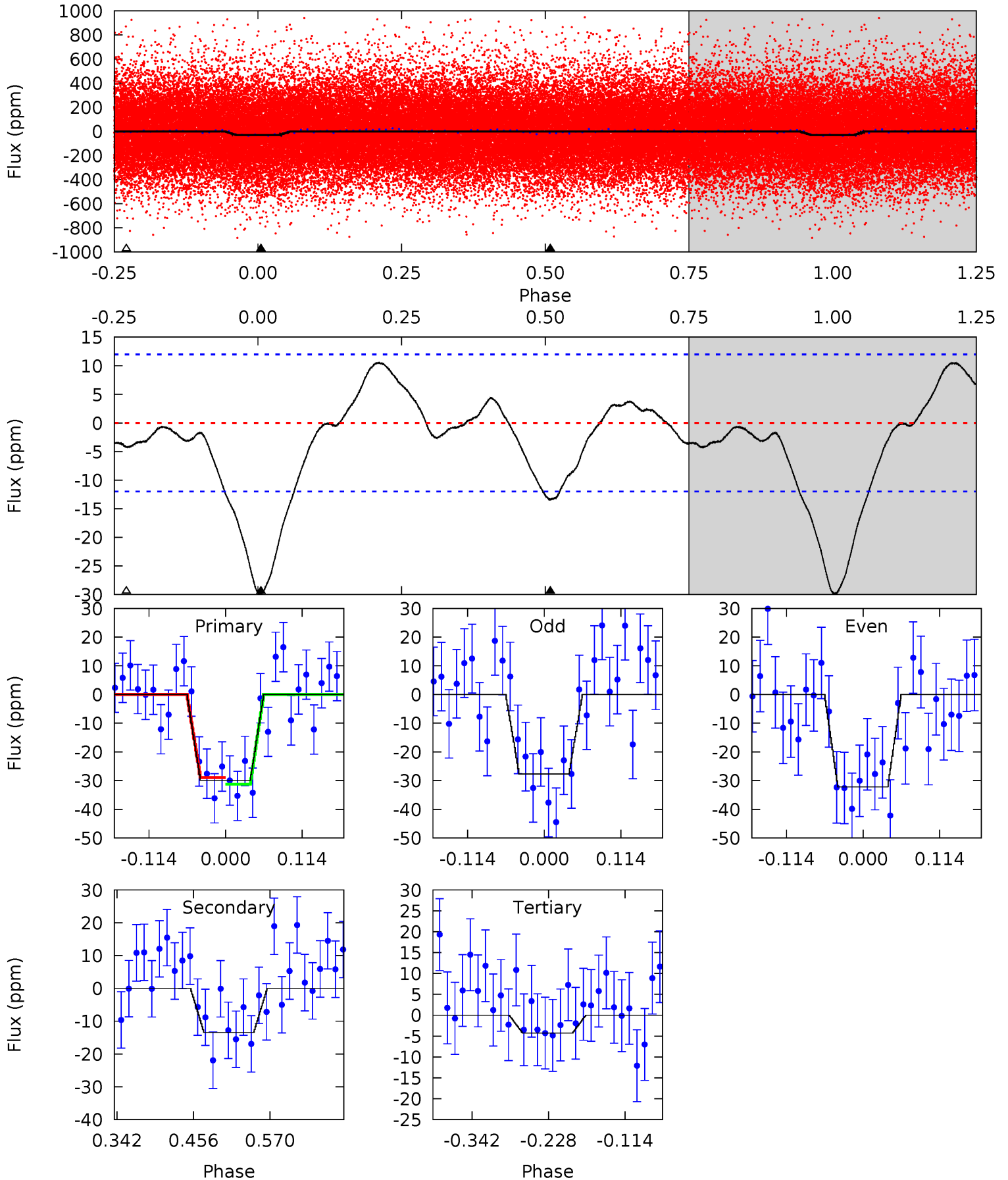
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	4.95	0	0	4.51	1.51	1.27	11.2	11.2	4.95	4.95	0.28	1.06	0.20	1.18



Alt Model-Shift Uniqueness Test

002710623-01, P = 1.020870 Days, E = 130.644204 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	5.09	1.62	0	4.54	1.58	1.50	9.71	11.3	3.47	5.09	0.86	1.04	0.26	0.44



Stellar Parameters For KIC 002710623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5750^{+156}_{-156}	$4.337^{+0.149}_{-0.182}$	$0.040^{+0.250}_{-0.300}$	$1.106^{+0.310}_{-0.207}$	$0.968^{+0.125}_{-0.102}$	$1.008^{+0.738}_{-0.499}$
	+3%/-3%	+3%/-4%	+625%/-750%	+28%/-19%	+13%/-11%	+73%/-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 002710623-01 / KOI 4532.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-12 ± 2	$0.78^{+0.42}_{-0.37}$	2661^{+205}_{-157}	4356^{+1464}_{-687}	$4.135^{+10.568}_{-2.451}$
Alt.	-13 ± 3	$0.65^{+0.41}_{-0.34}$	2667^{+205}_{-157}	4863^{+1946}_{-908}	$6.822^{+22.155}_{-4.327}$

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

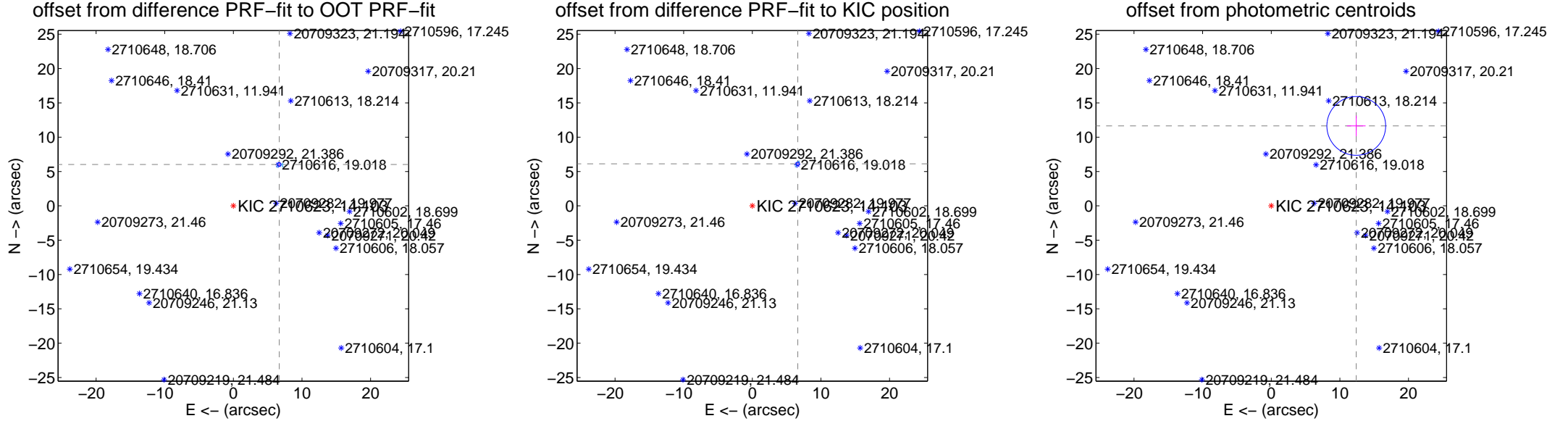
DV Centroid Data

Supplemental centroid analysis for 002710623-01. Kepler magnitude: 14.10. Transit SNR 9.27

There are 15 quarters with good PRF difference image offsets

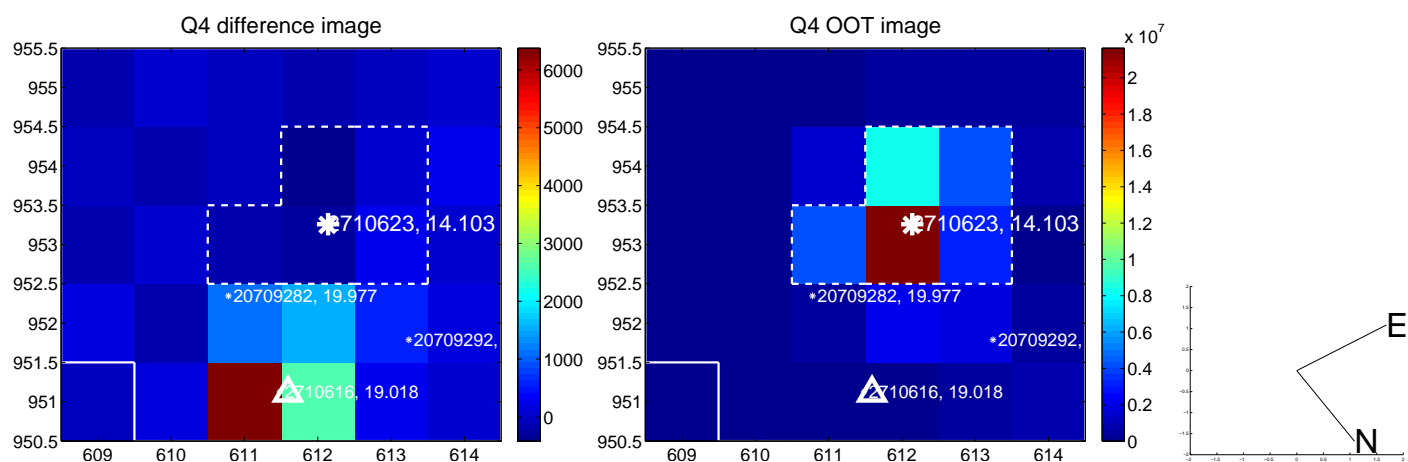
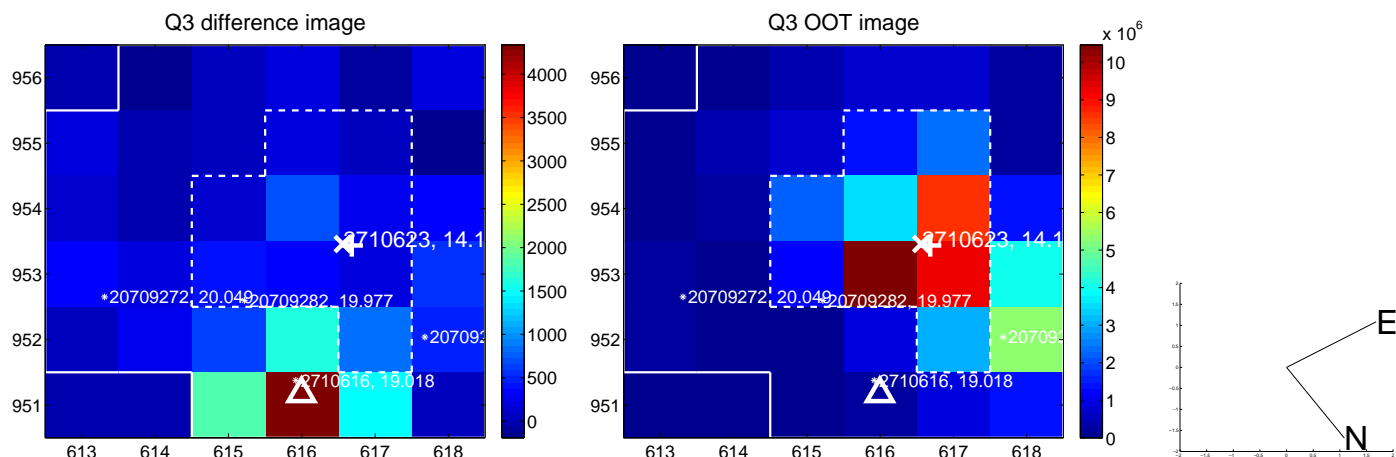
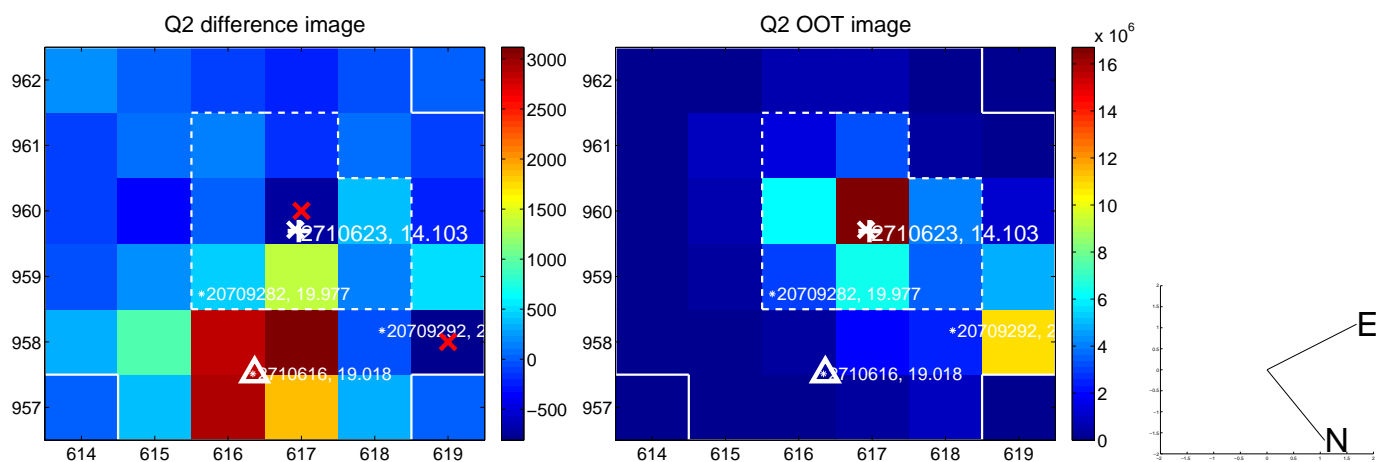
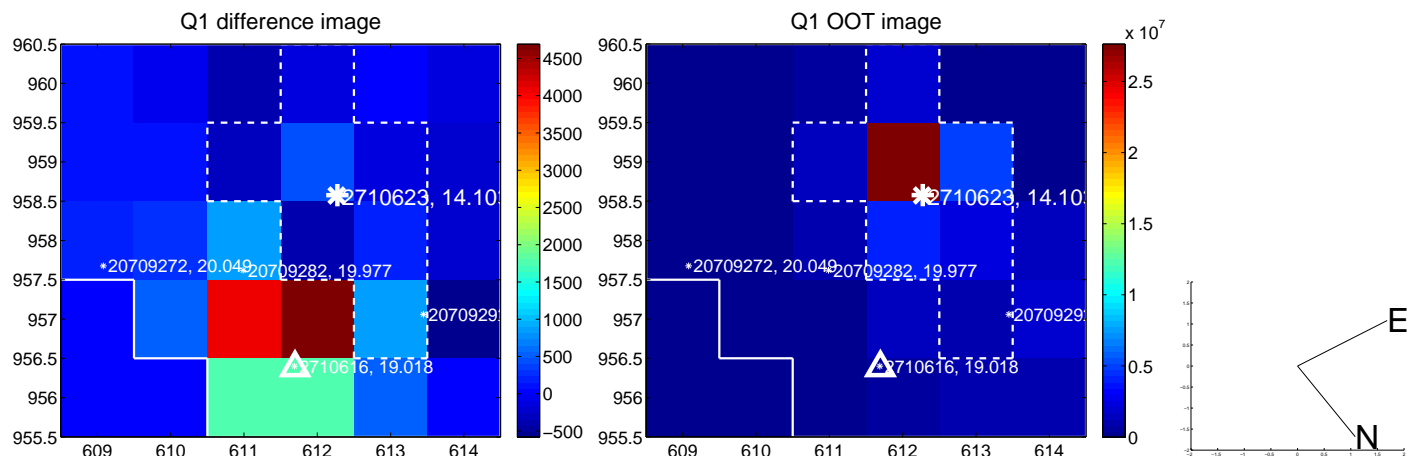
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.005 ± 0.088	101.98	-6.687 ± 0.097	6.032 ± 0.073
PRF-fit source offset from KIC position	9.028 ± 0.086	105.28	-6.634 ± 0.076	6.123 ± 0.082
photometric centroid source offset	17.00 ± 1.43	11.91	-12.39 ± 1.36	11.64 ± 1.50

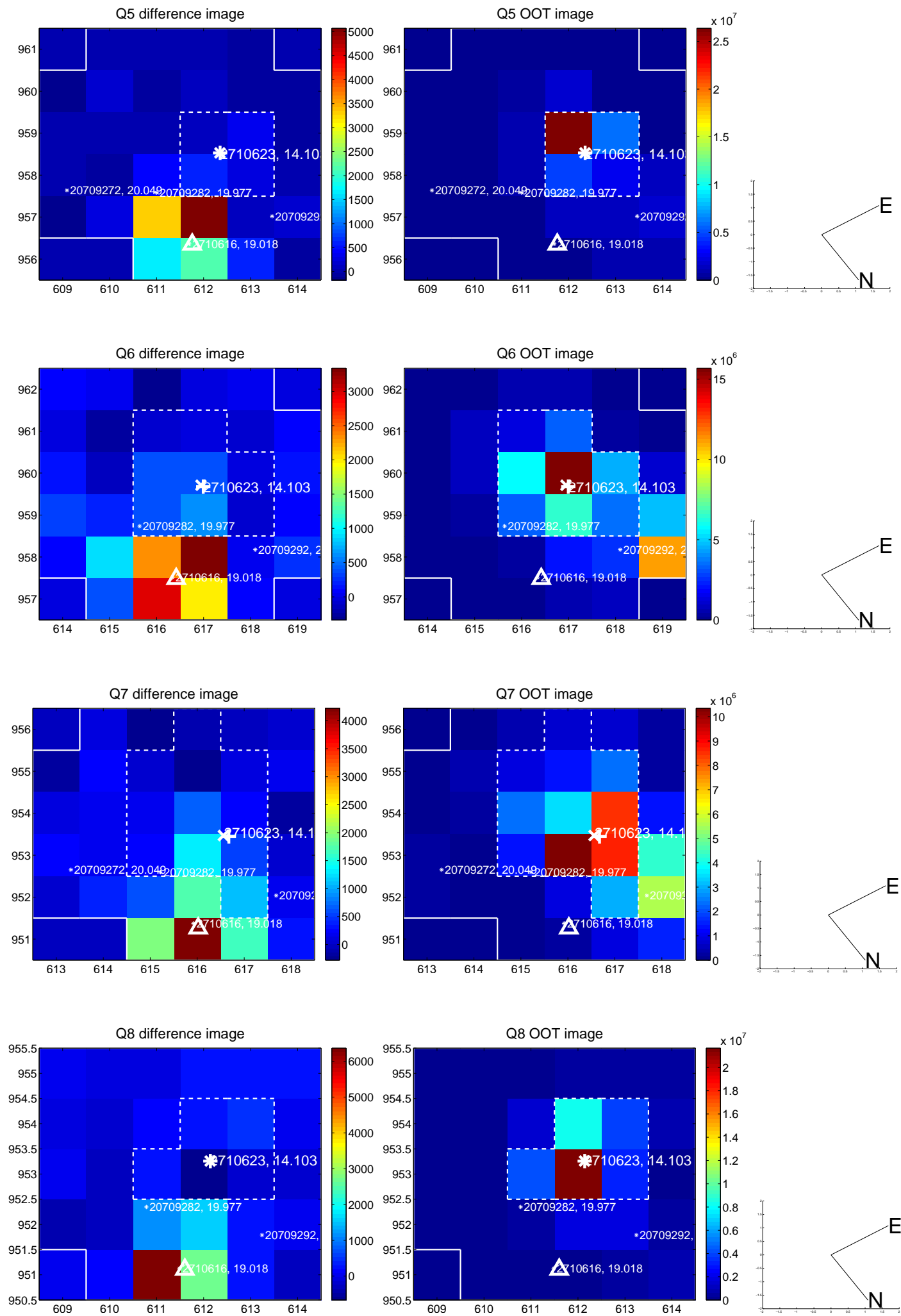


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

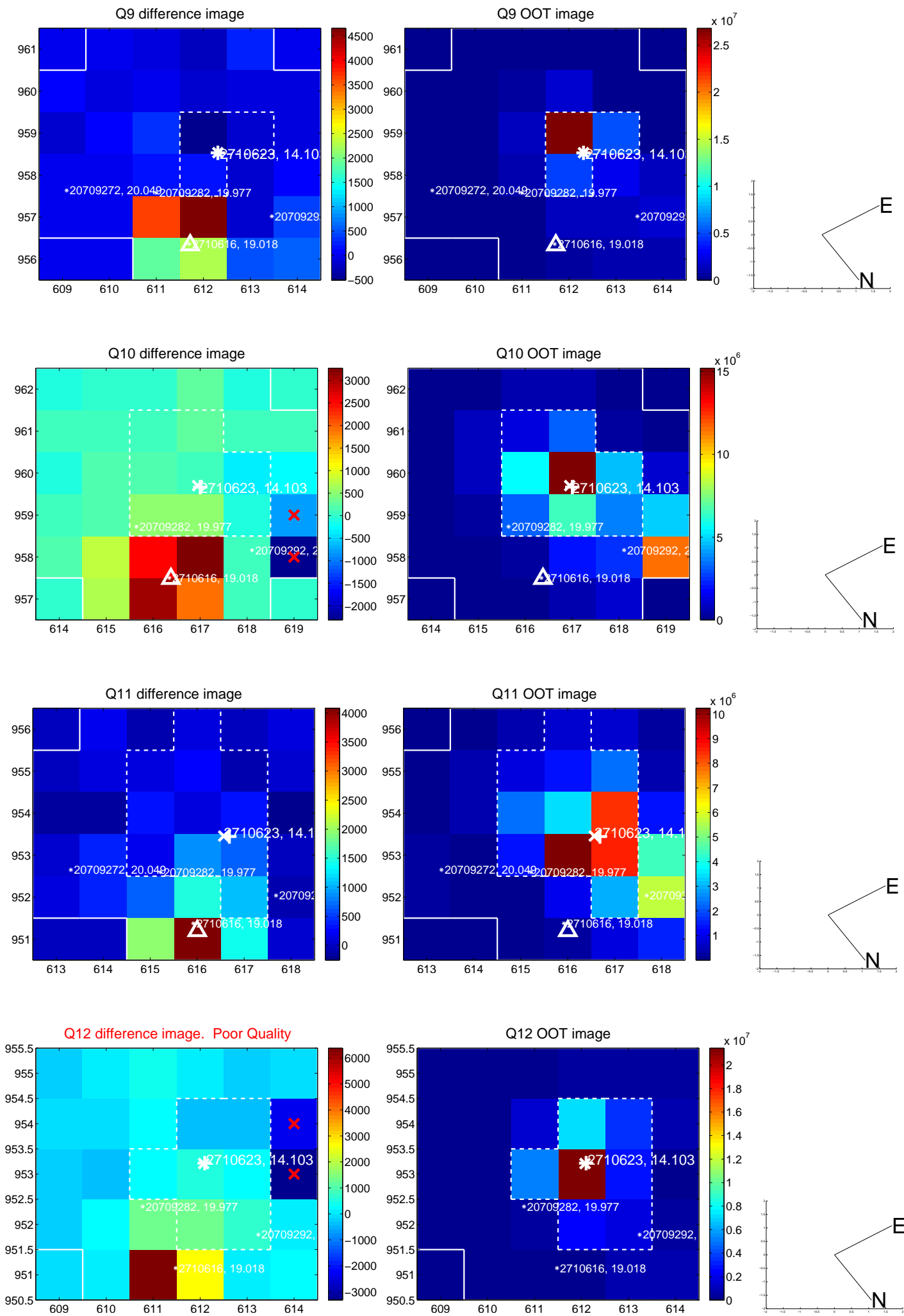
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



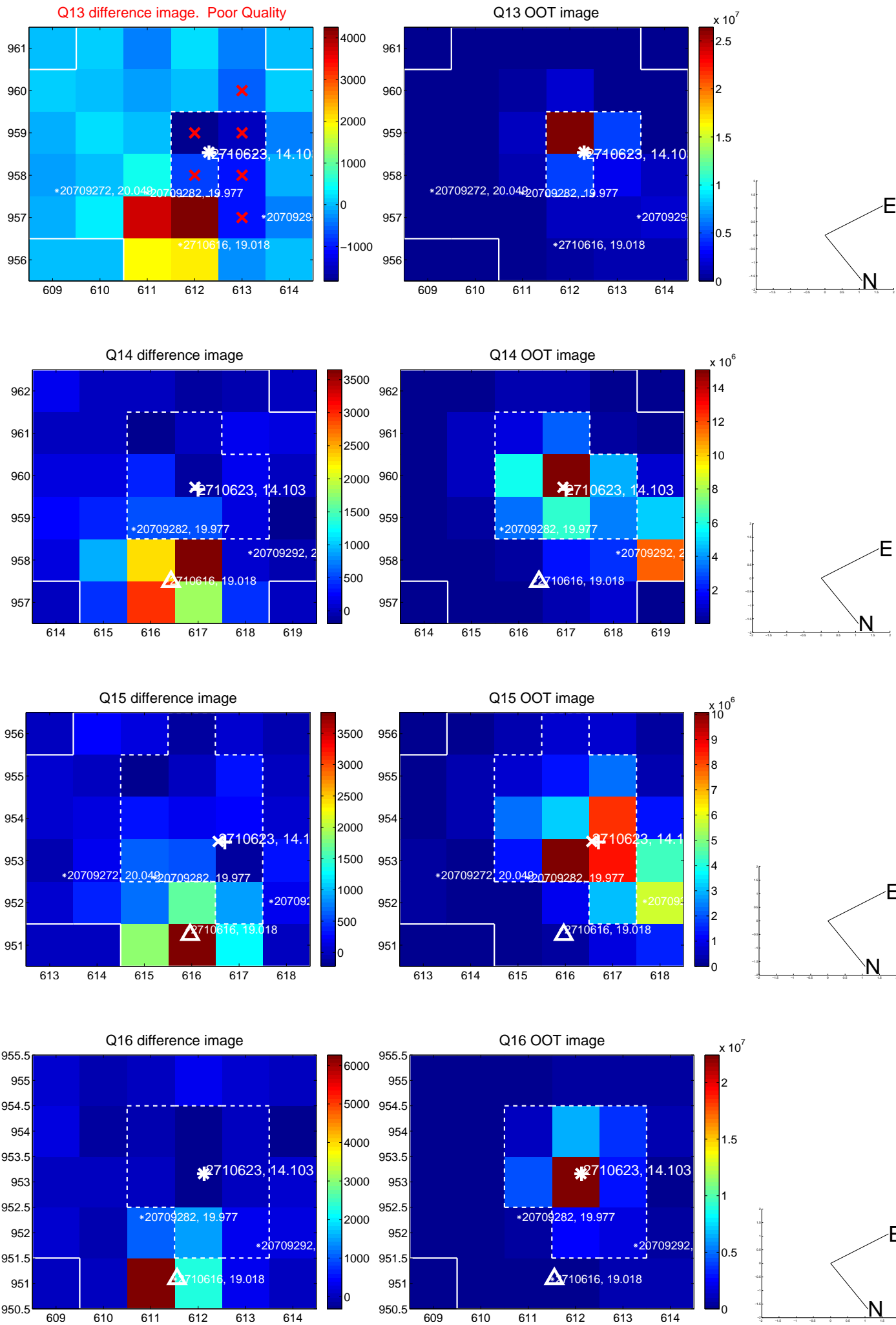
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



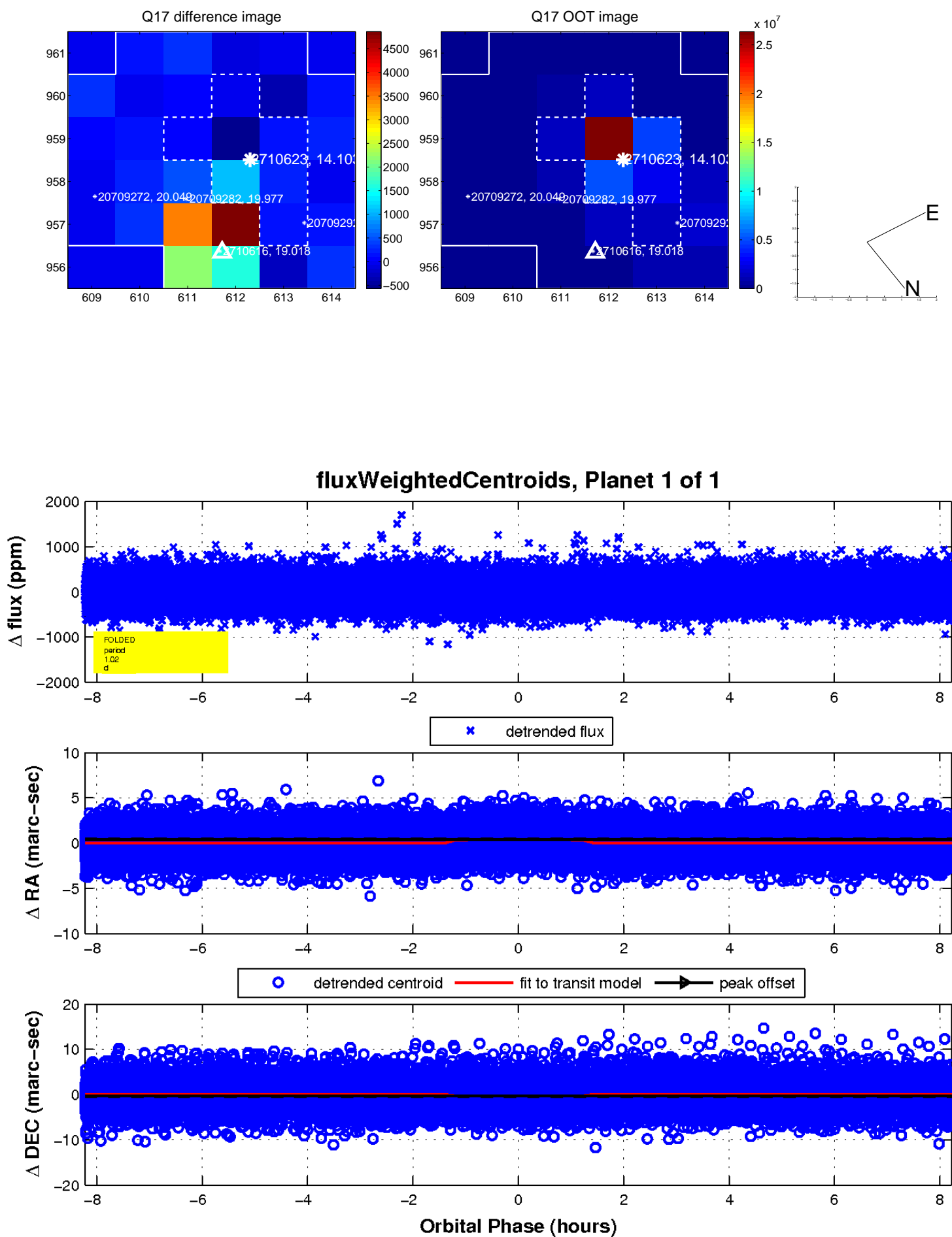
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

