

KIC 007210959

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})
007210959-01	OBS	No	0.534382	131.517390	12.4	4.393	7.9	7.5	1.15	6230	0.41	10021.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007210959-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

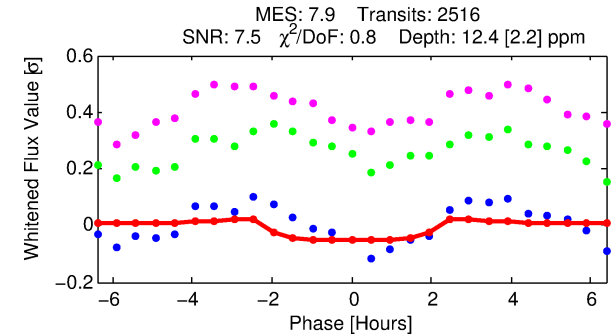
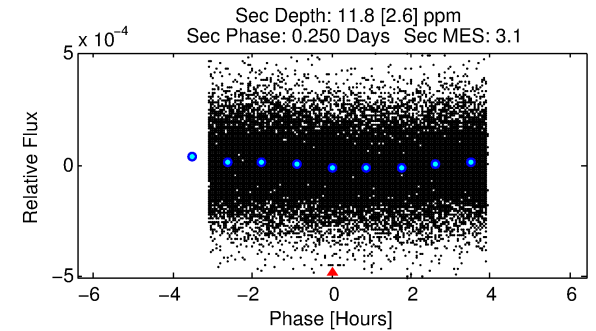
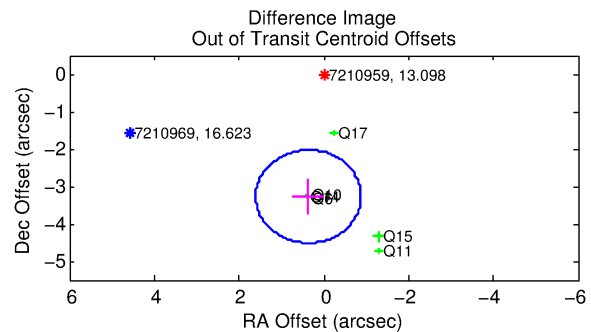
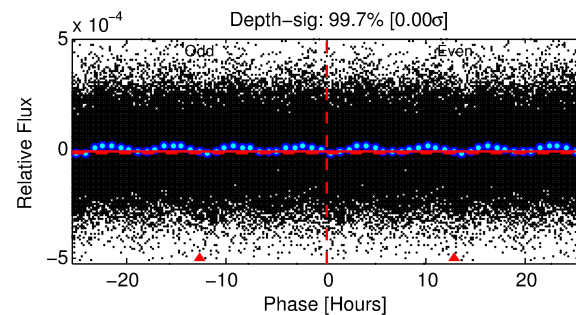
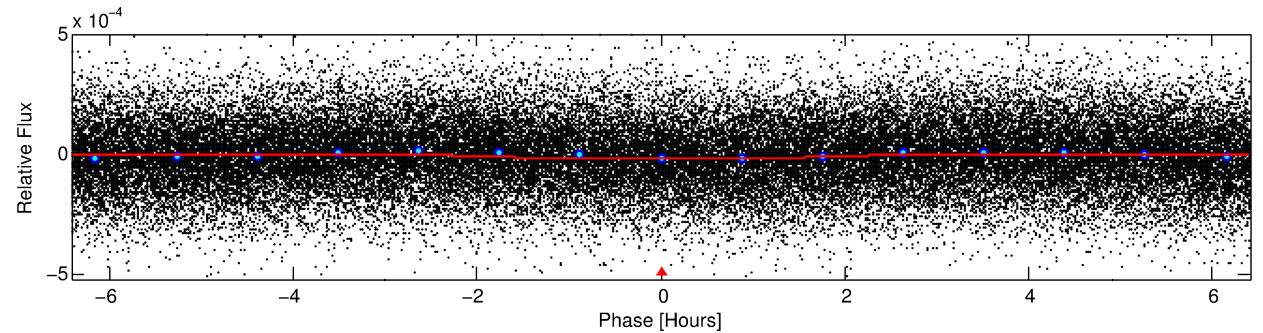
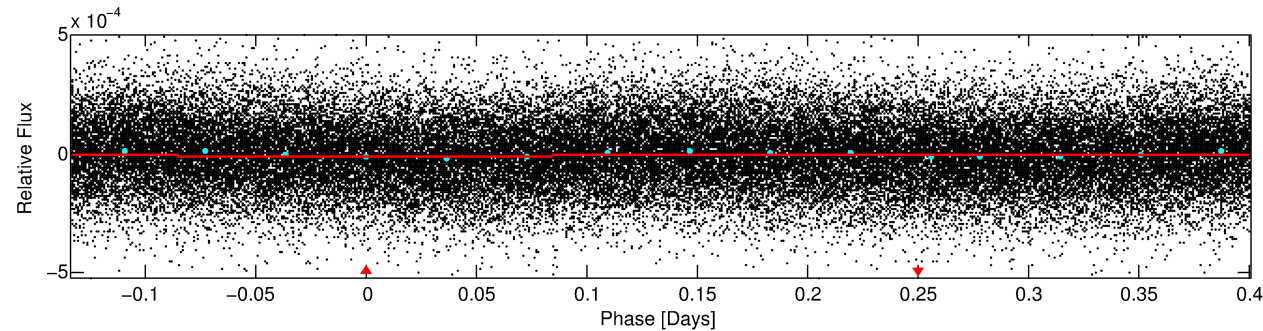
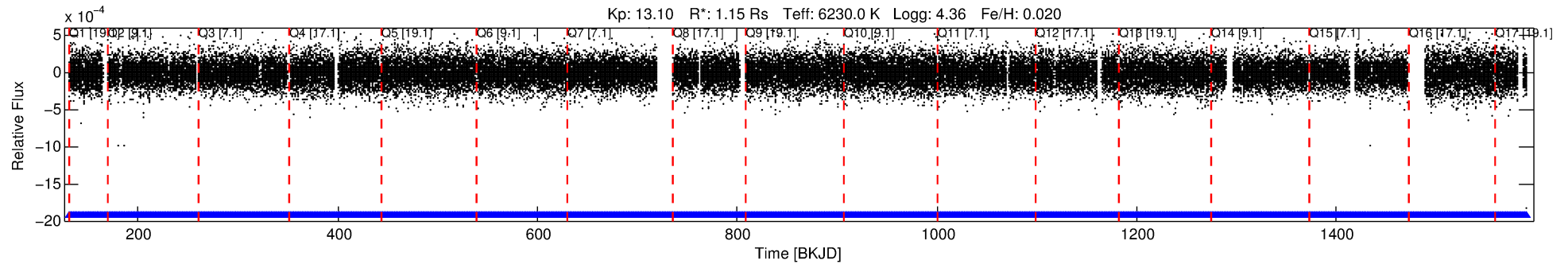
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007210959-01

No Significant Match Found

DV One-Page Summary

KIC: 7210959 Candidate: 1 of 1 Period: 0.534 d



DV Fit Results:

Period = 0.53438 [0.00001] d
Epoch = 131.5174 [0.0044] BKJD
Rp/R* = 0.0033 [0.0032]
a/R* = 1.12 [1.08]
b = 0.40 [10.20]
Seff = 10021.07 [4120.17]
Teq = 2551 [262] K
Rp = 0.41 [0.42] Re
a = 0.0133 [0.0037] AU
Ag = 6.80 [13.47] [0.43 σ]
Teffp = 6371 [3099] K [1.23 σ]

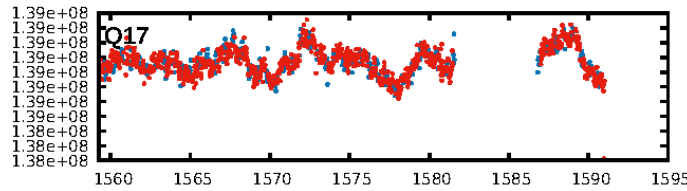
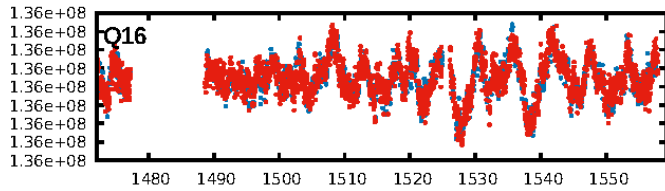
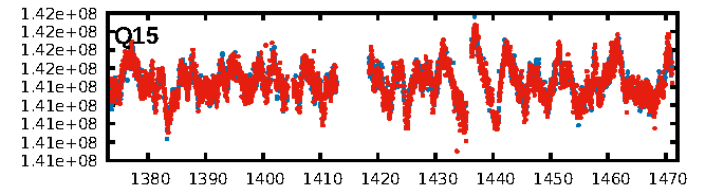
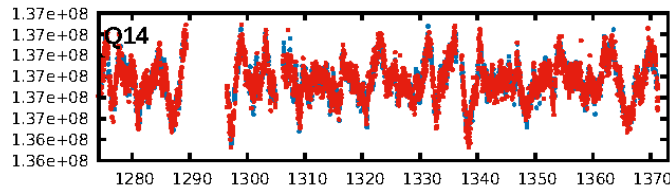
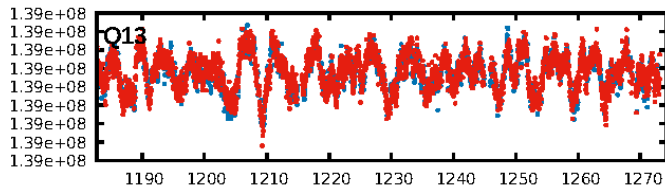
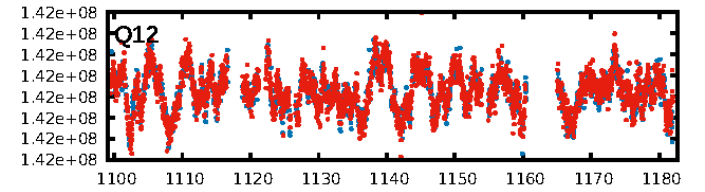
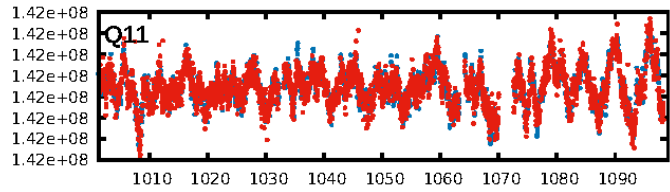
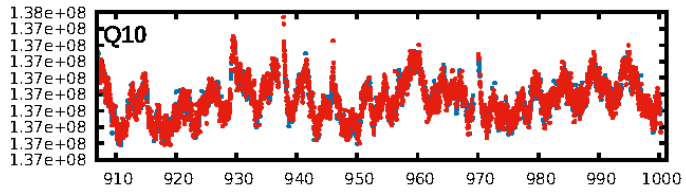
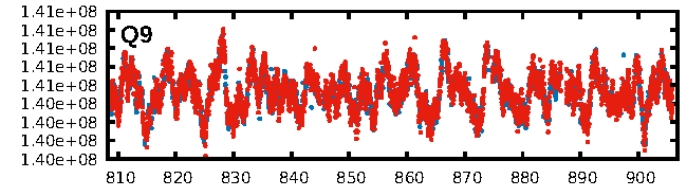
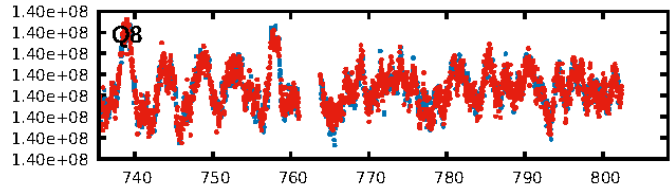
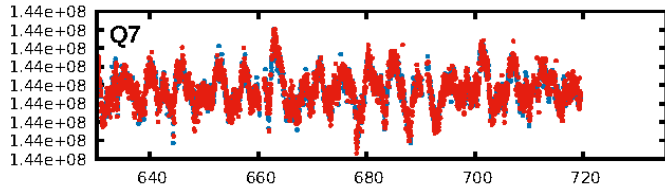
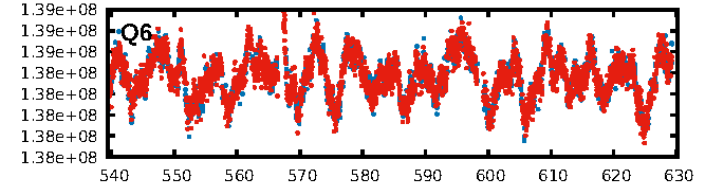
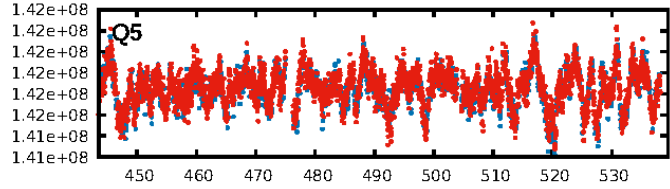
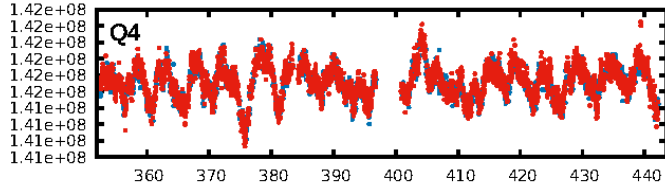
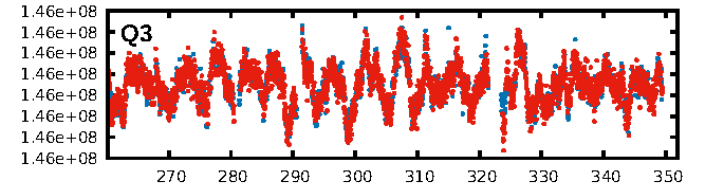
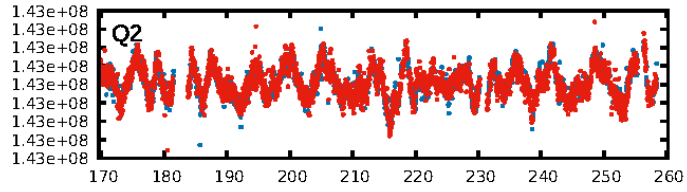
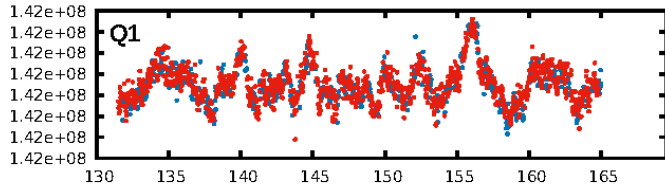
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2403/2403]
GhostDiagnostic-chr: -2.008
Centroid-sig: 76.9%
Centroid-so: 2.721 arcsec [1.67 σ]
OotOffset-rm: 3.292 arcsec [7.95 σ]
KicOffset-rm: 6.987 arcsec [22.07 σ]
OotOffset-st: 3/2/0/1 [6]
KicOffset-st: 3/2/0/1 [6]
DiffImageQuality-fgm: 0.50 [3/6]
DiffImageOverlap-fno: 1.00 [17/17]

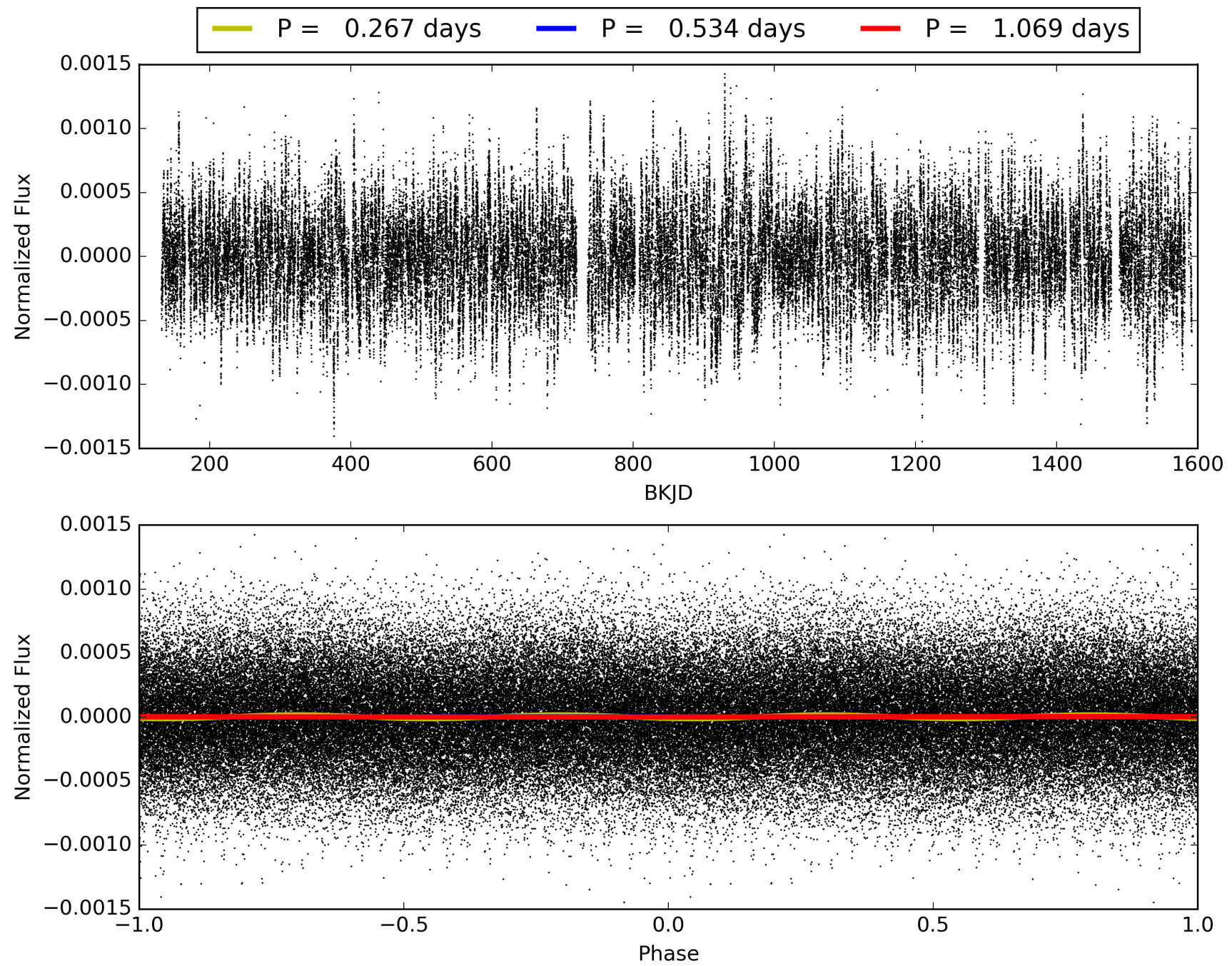
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:02:27 Z

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

TCE 007210959-01, PDC Light Curves

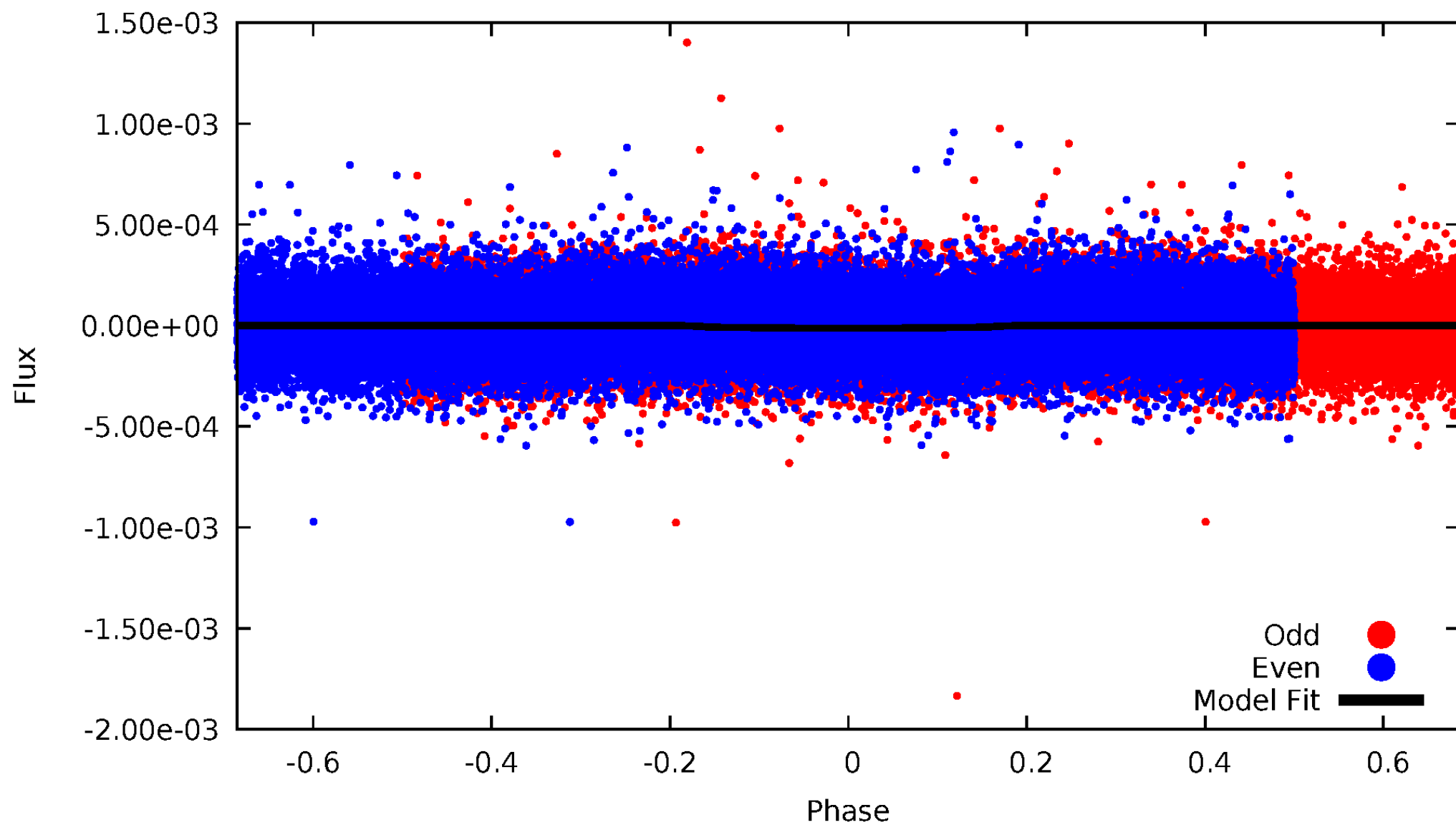


TCE 007210959-01



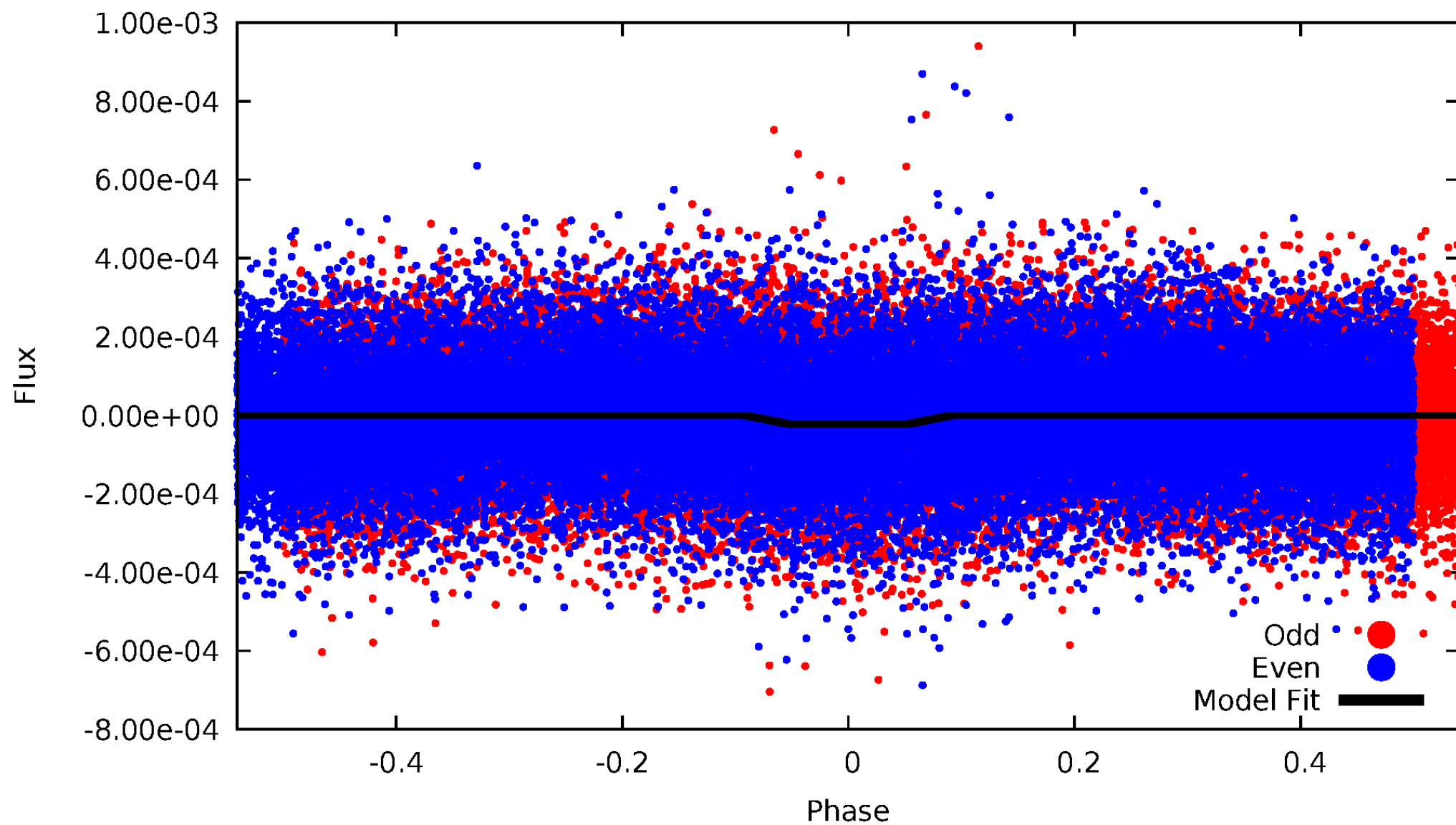
DV Odd/Even

TCE 007210959-01



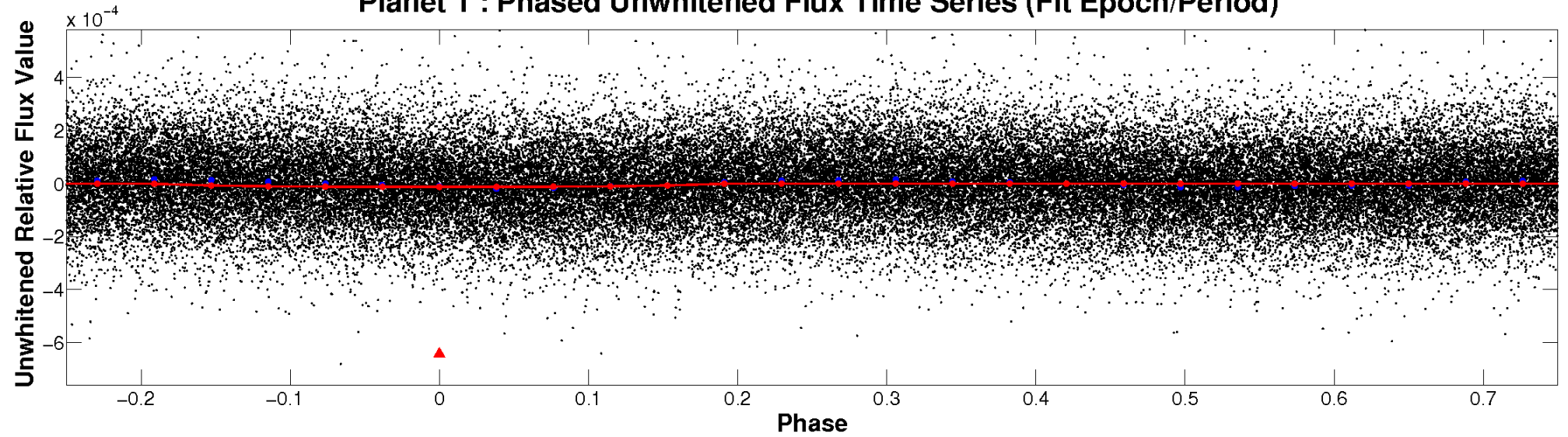
ALT Odd/Even

TCE 007210959-01

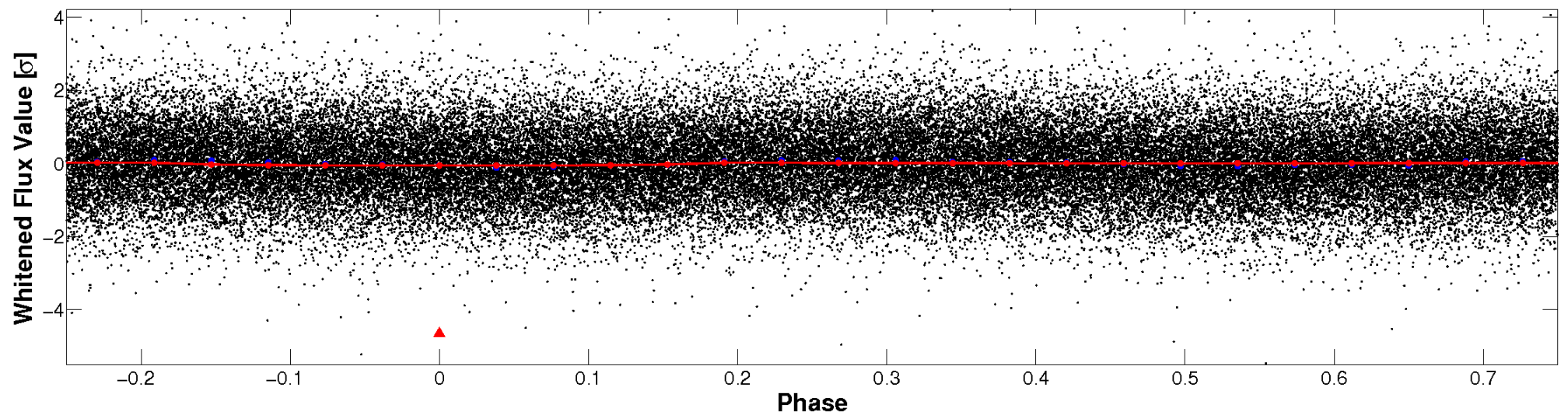


Non-Whitened Vs. Whitened Light Curve

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

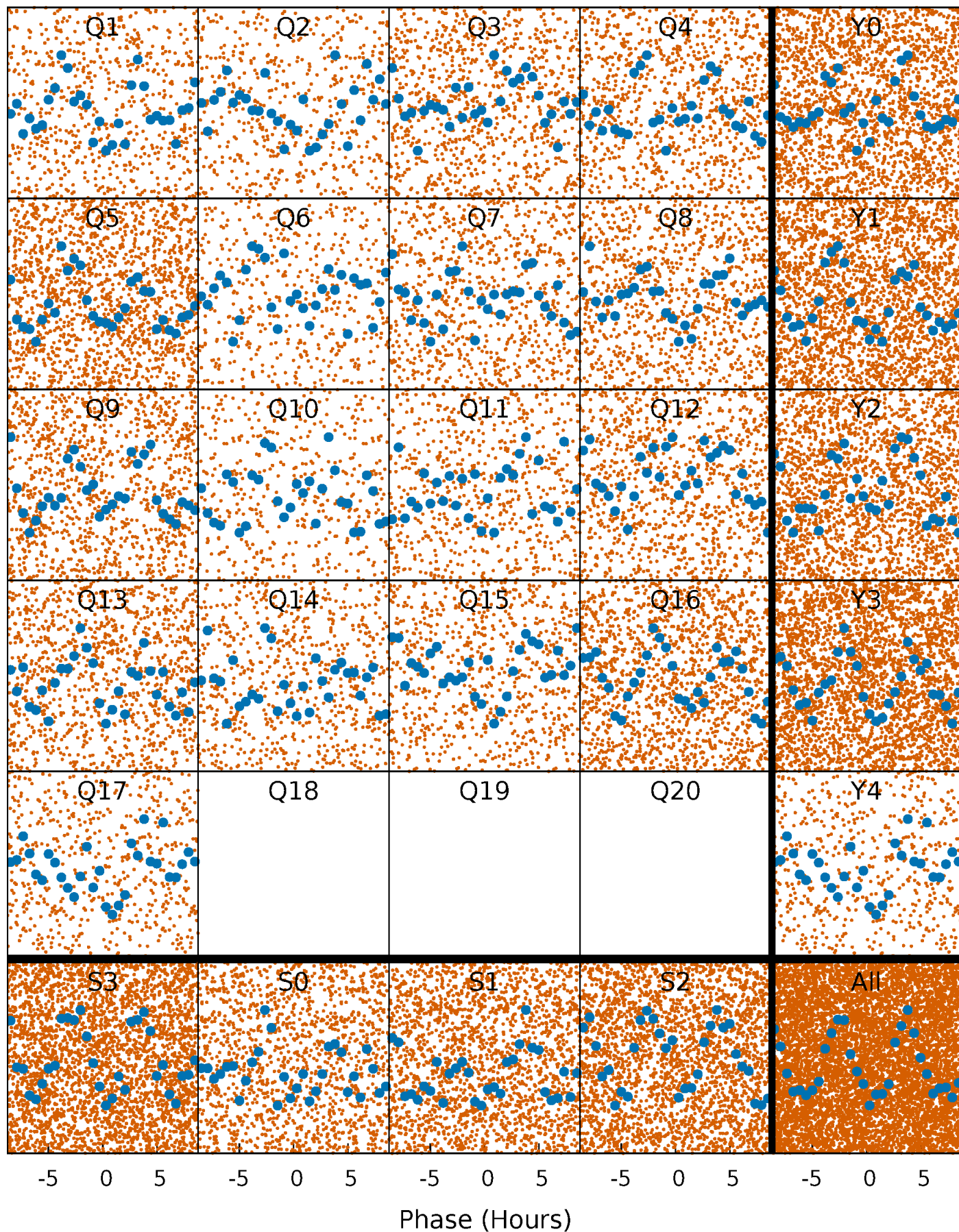


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



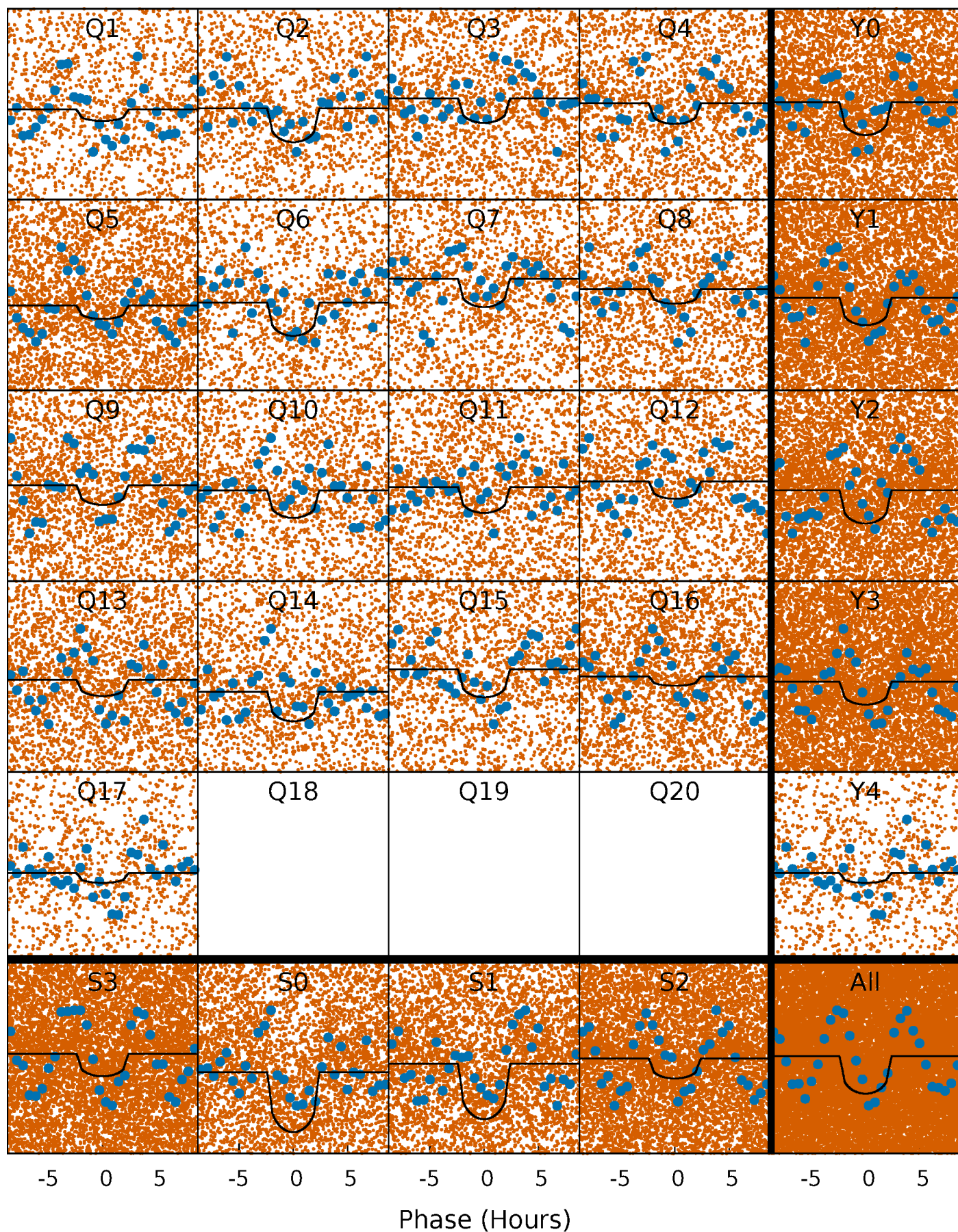
PDC Quarter-Phased Transit Curves

TCE 007210959-01 P= 0.534382 Days $T_0=131.517390$ (BKJD)



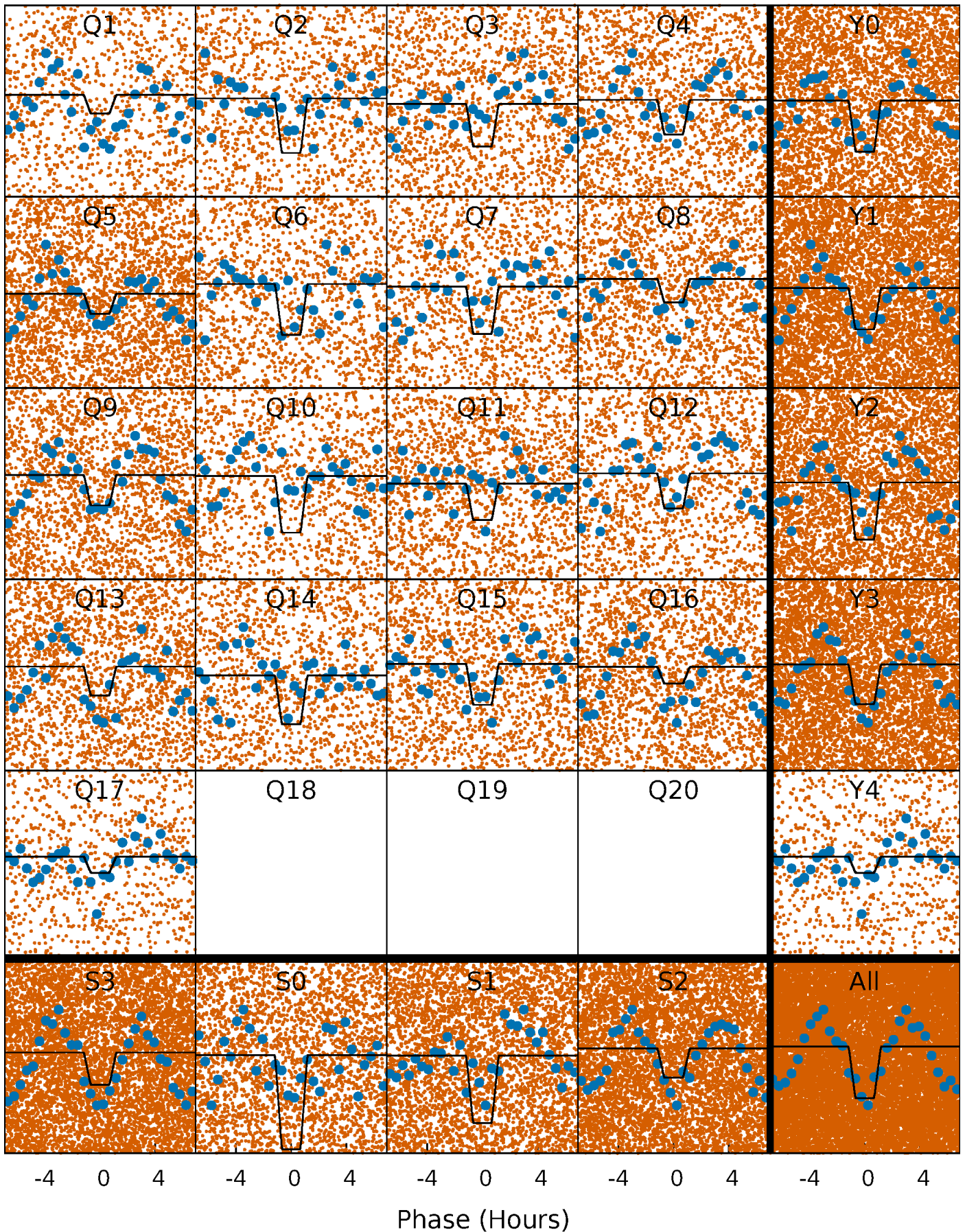
DV Quarter-Phased Transit Curves

TCE 007210959-01 P= 0.534382 Days $T_0=131.517390$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

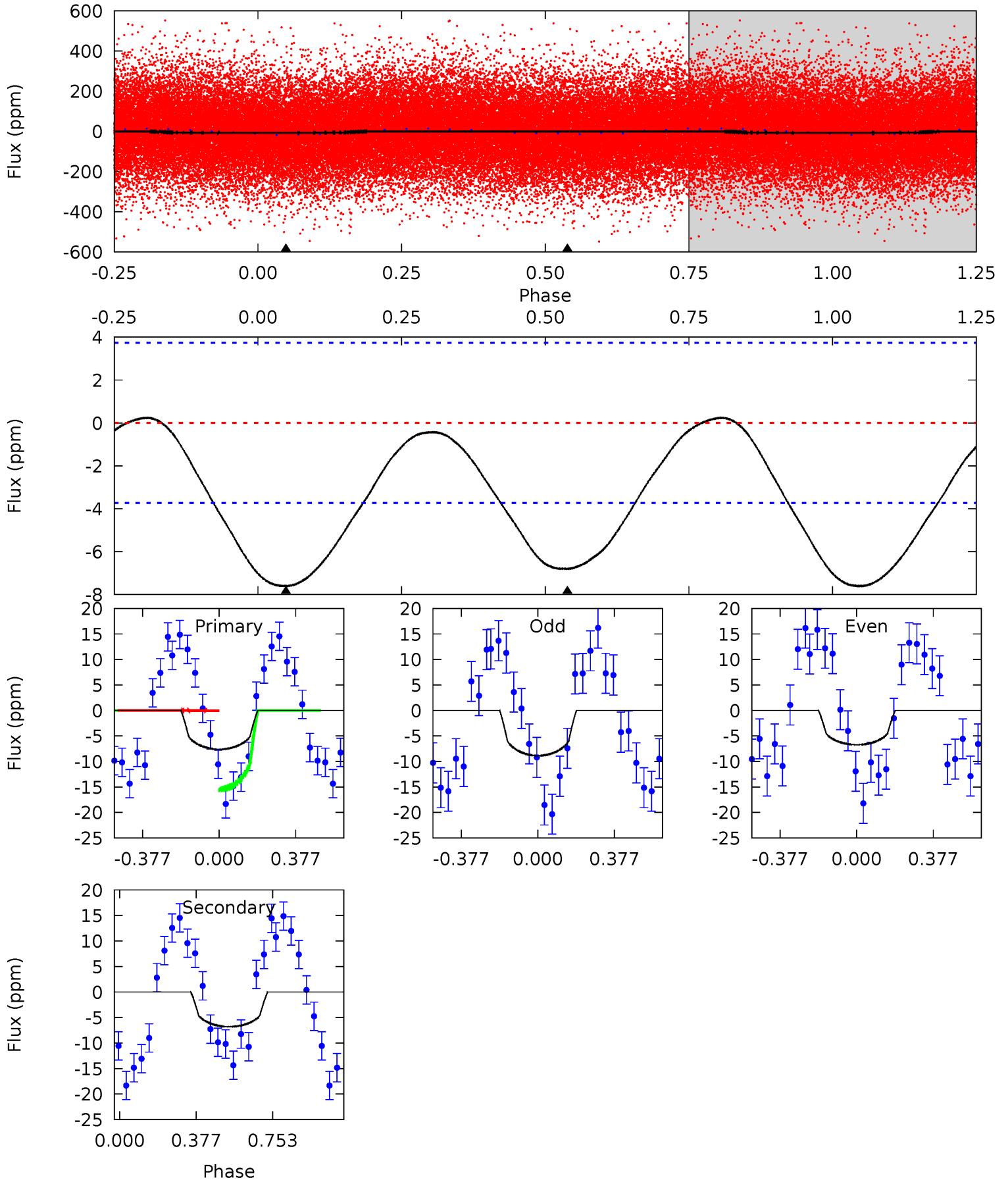
TCE 007210959-01 P= 0.534398 Days $T_0=131.518862$ (BKJD)



DV Model-Shift Uniqueness Test

007210959-01, P = 0.534382 Days, E = 130.983008 Days

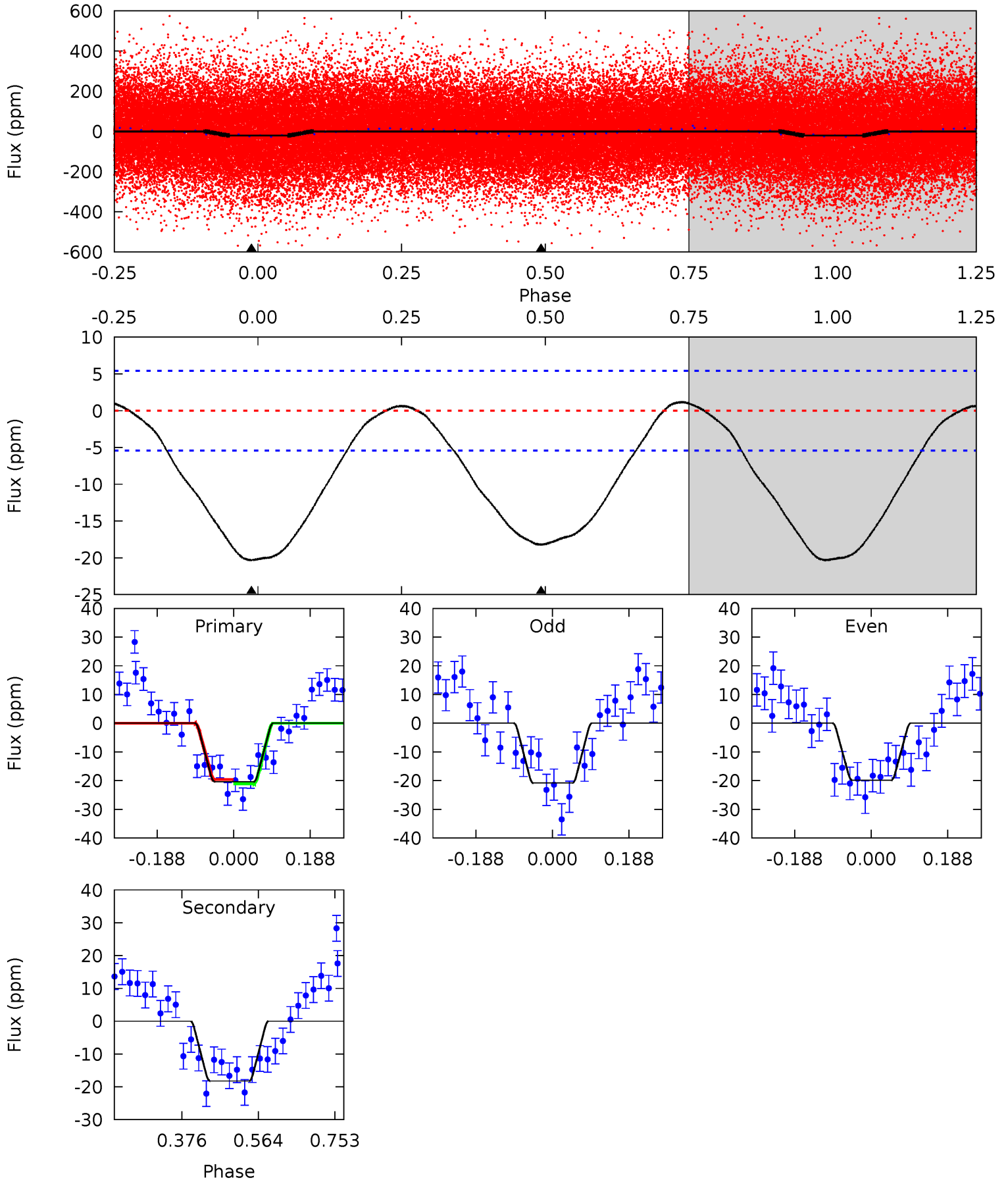
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.72	7.80	0	0	4.28	0.88	0.35	8.72	8.72	7.80	7.80	1.24	1.23	0.03	8.87



Alt Model-Shift Uniqueness Test

007210959-01, P = 0.534398 Days, E = 130.984464 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	14.9	0	0	4.43	1.32	0.79	16.6	16.6	14.9	14.9	0.40	1.12	0.05	0.61



Stellar Parameters For KIC 007210959

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6230^{+149}_{-204}	$4.360^{+0.087}_{-0.203}$	$0.020^{+0.250}_{-0.300}$	$1.145^{+0.402}_{-0.161}$	$1.090^{+0.189}_{-0.126}$	$1.022^{+0.406}_{-0.556}$
	+2%/-3%	+2%/-5%	+1250%/-1500%	+35%/-14%	+17%/-12%	+40%/-54%
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 007210959-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-7 ± 1	$0.50^{+0.37}_{-0.31}$	3602^{+299}_{-195}	4986^{+3495}_{-1124}	$2.582^{+15.068}_{-1.709}$
Alt.	-18 ± 1	$0.62^{+0.42}_{-0.34}$	3610^{+279}_{-200}	5744^{+3623}_{-1256}	$4.514^{+18.585}_{-2.921}$

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

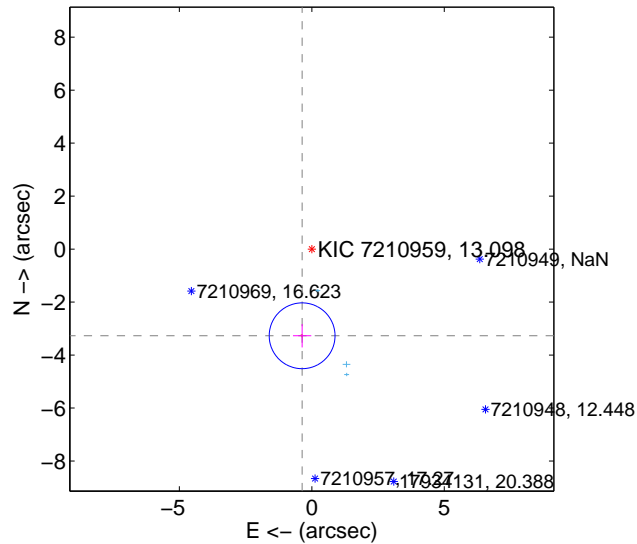
Supplemental centroid analysis for 007210959-01. Kepler magnitude: 13.10. Transit SNR 7.47

There are 3 quarters with good PRF difference image offsets

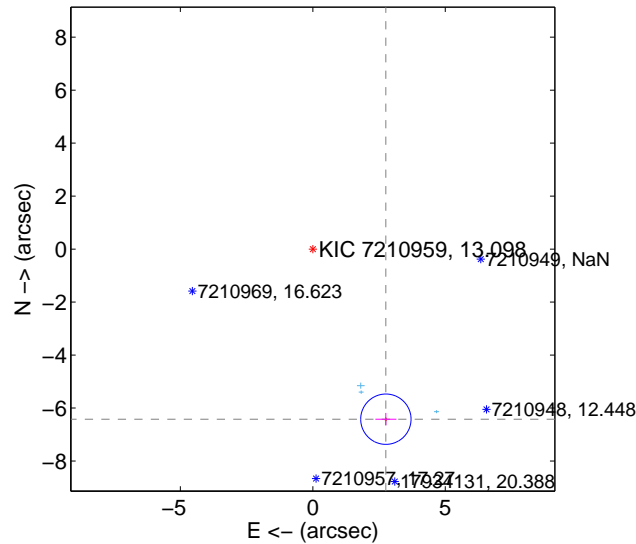
The OOT PRF centroid is offset from the target star catalog position by about 6.37 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.292 ± 0.414	7.95	0.366 ± 0.345	-3.272 ± 0.441
PRF-fit source offset from KIC position	6.987 ± 0.317	22.07	-2.758 ± 0.394	-6.420 ± 0.236
photometric centroid source offset	2.72 ± 1.63	1.67	-2.13 ± 1.43	-1.69 ± 1.90

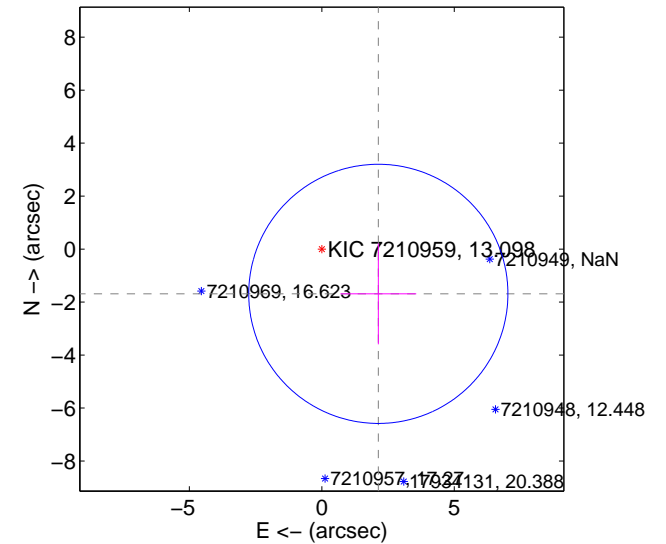
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

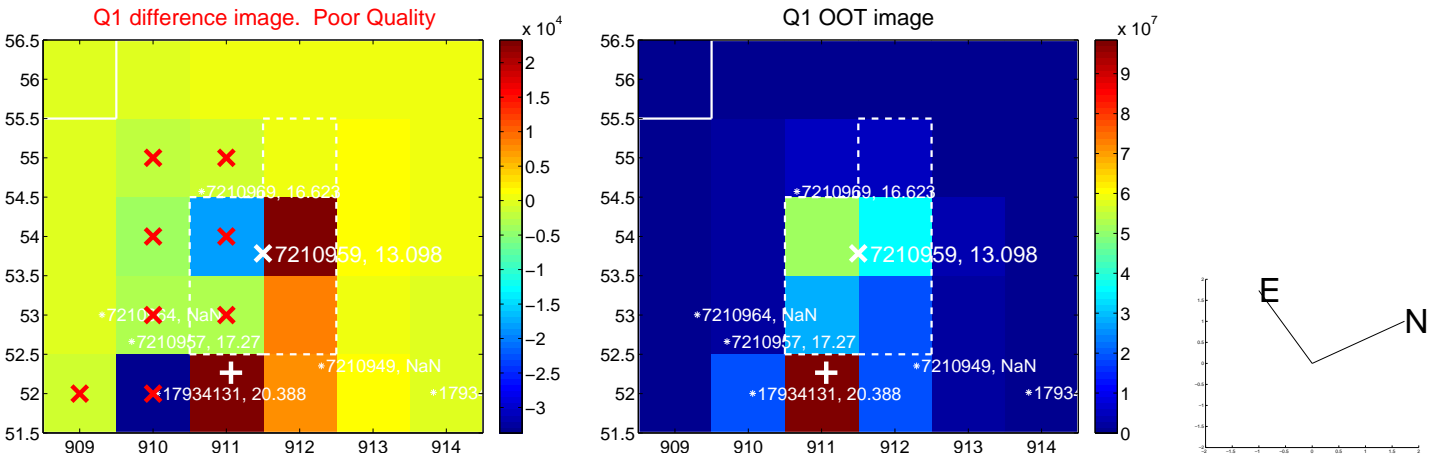


offset from photometric centroids

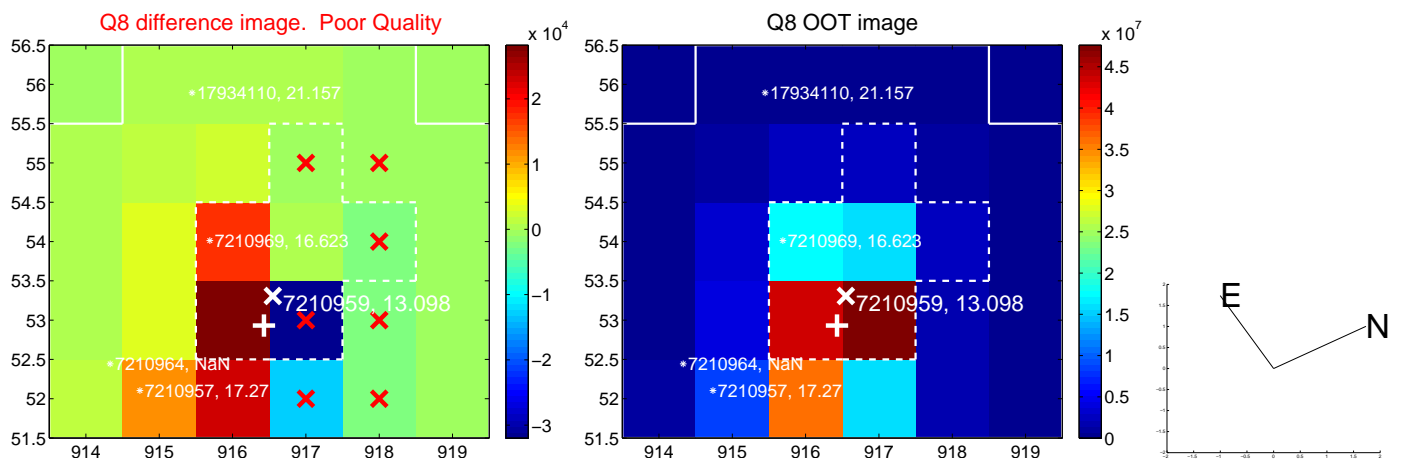
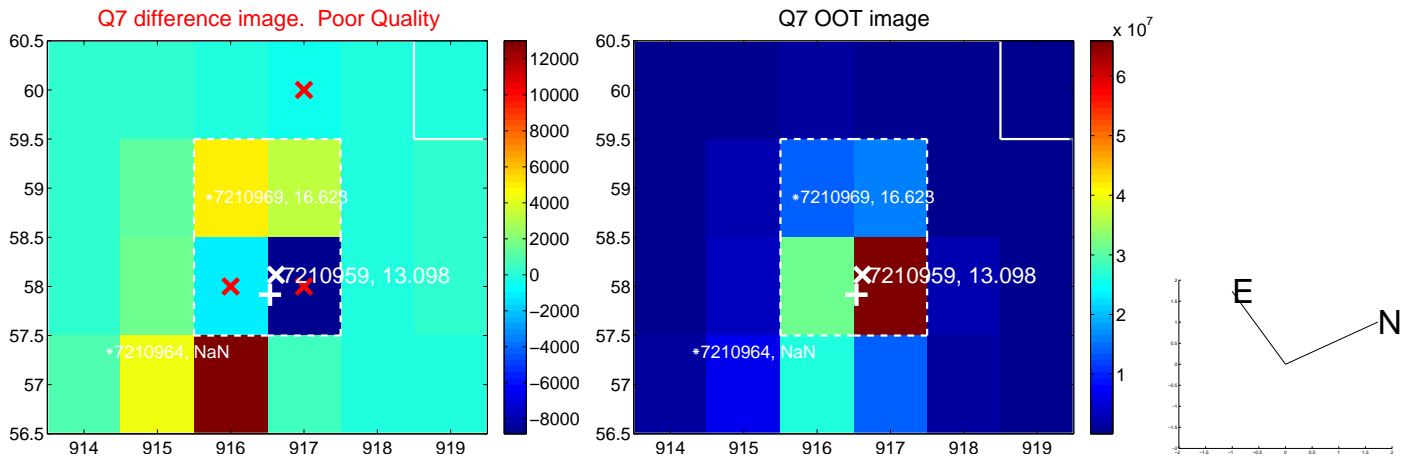
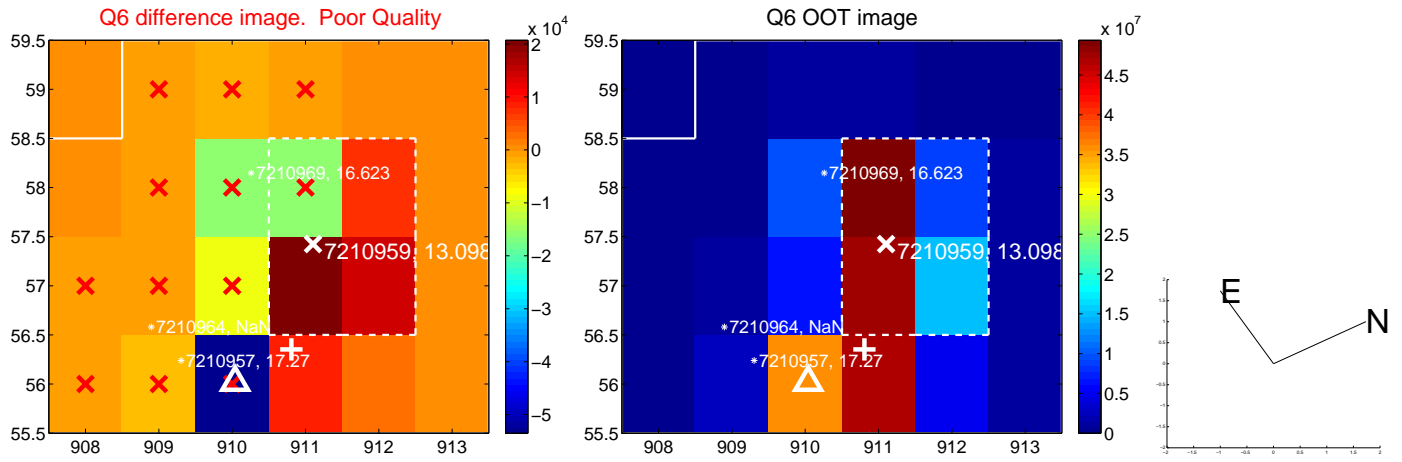
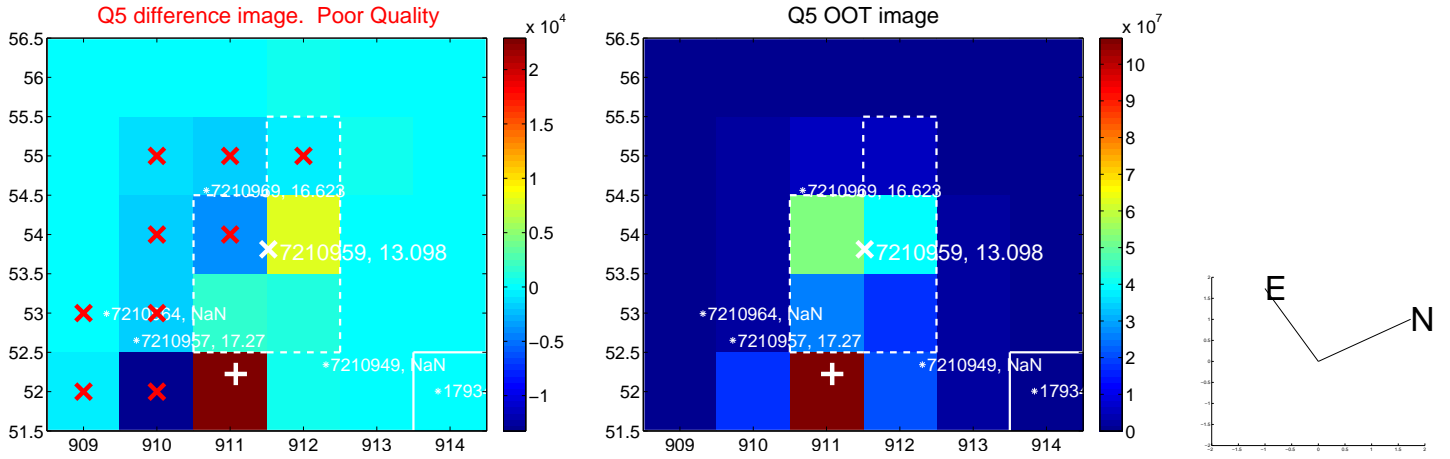


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

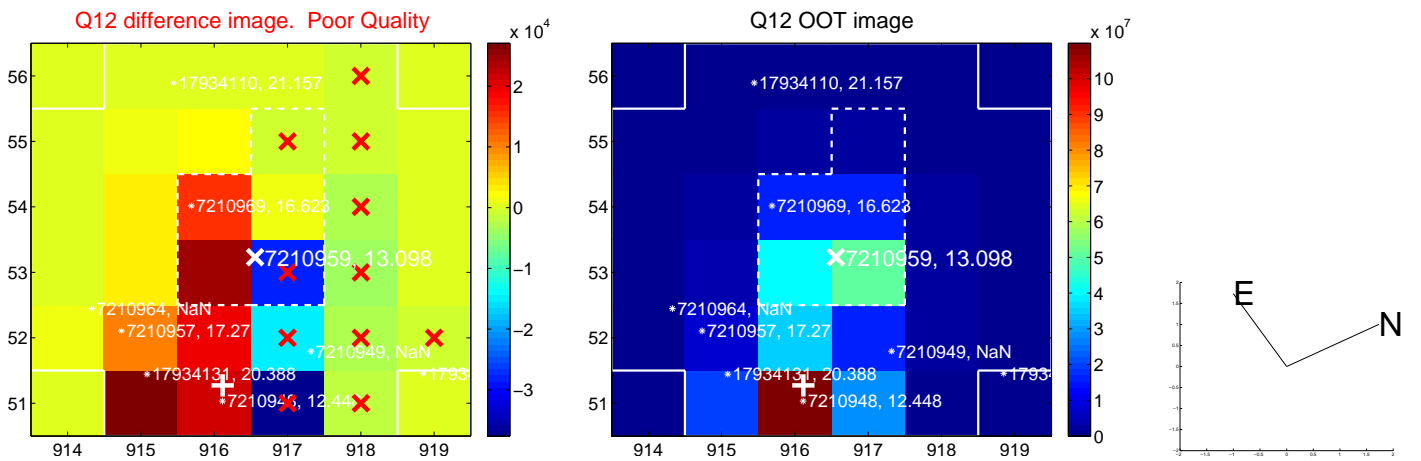
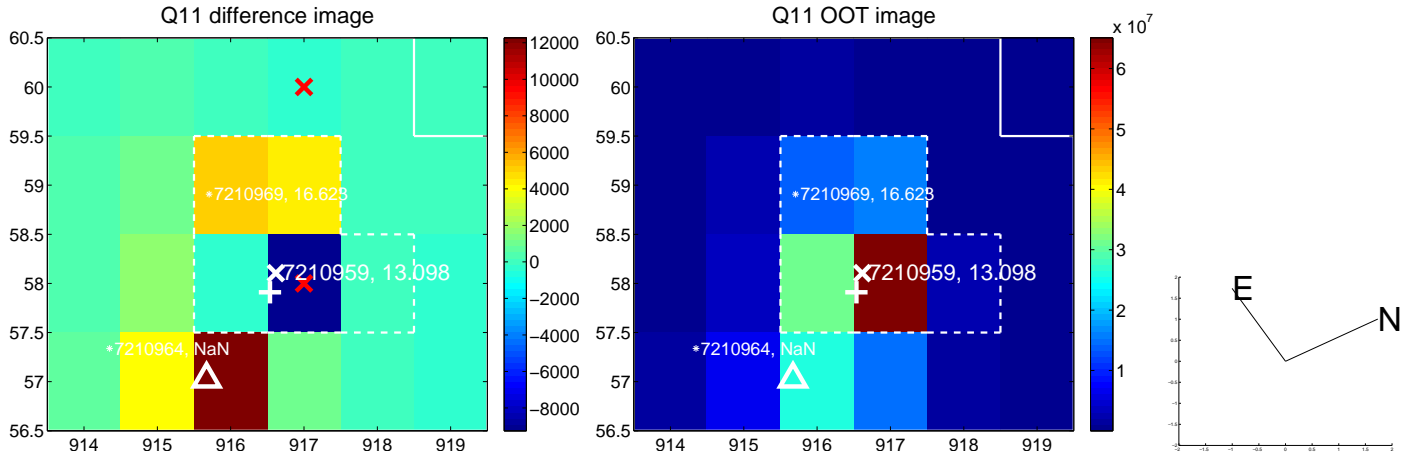
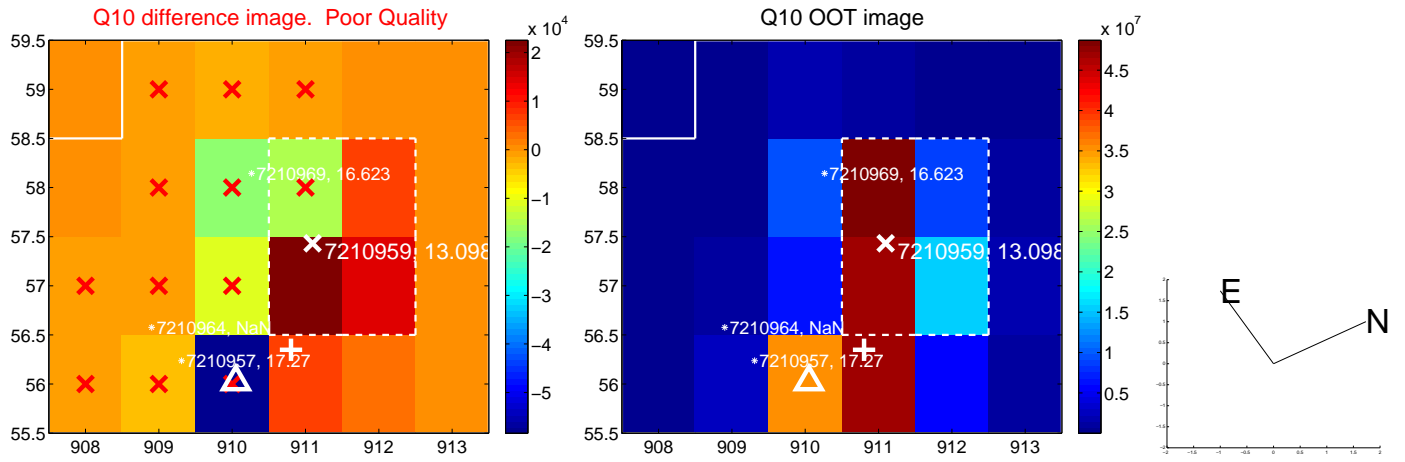
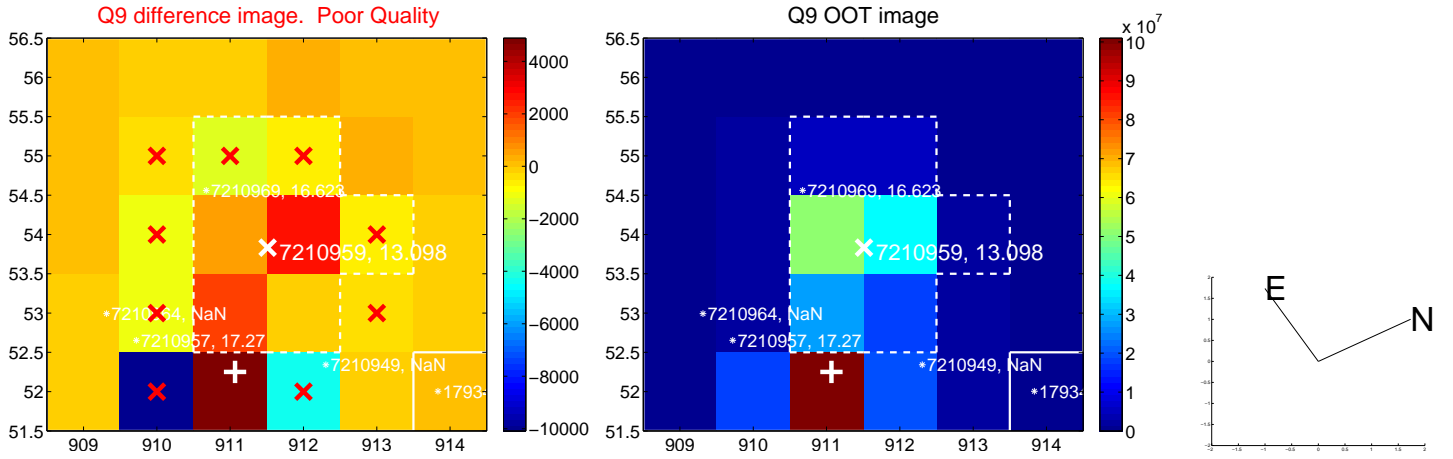
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



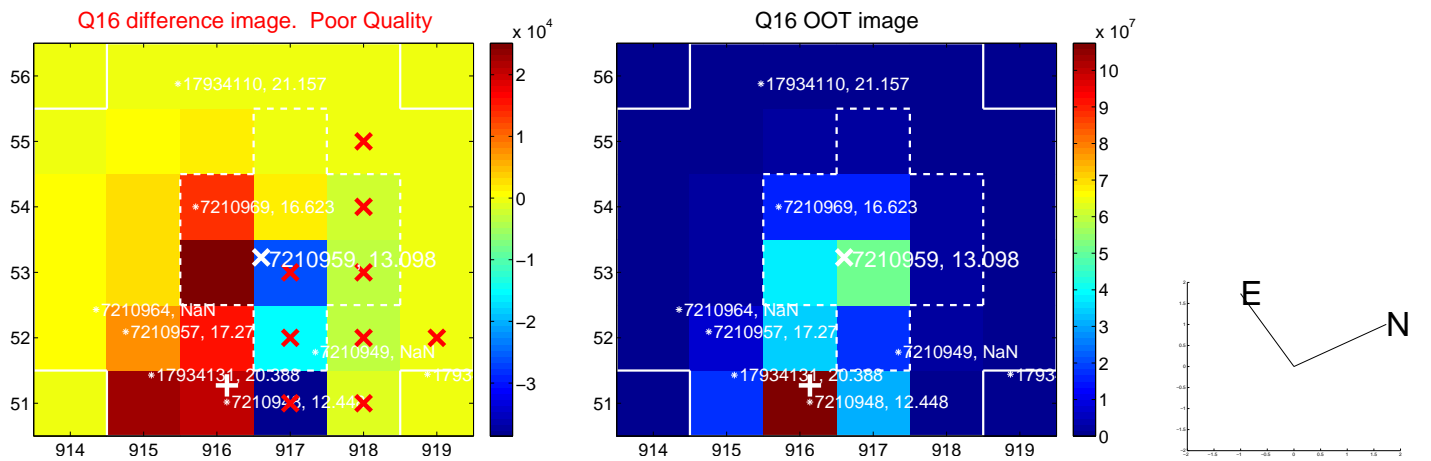
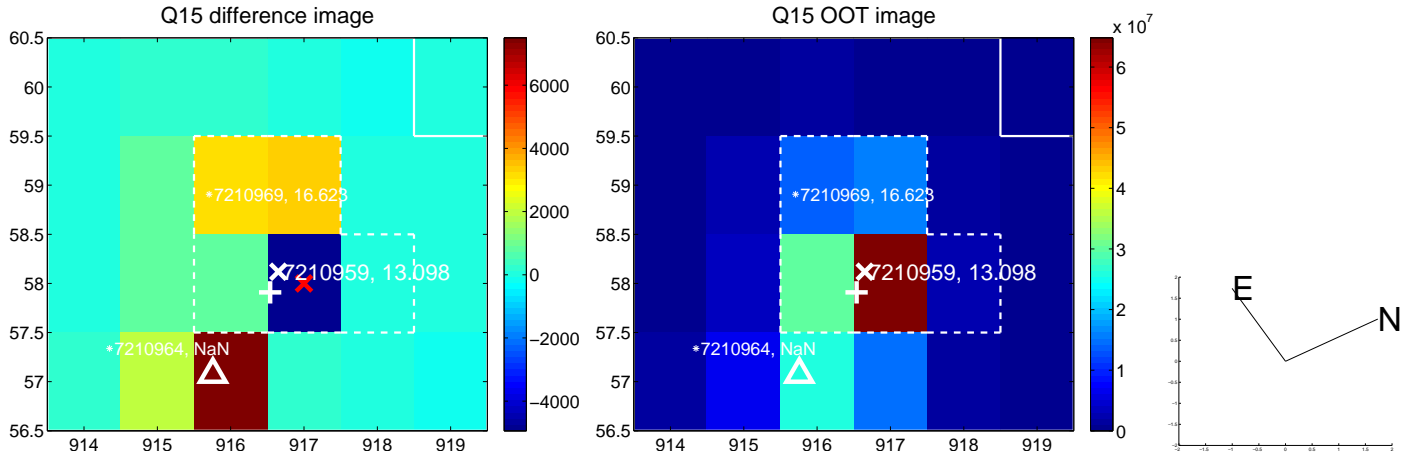
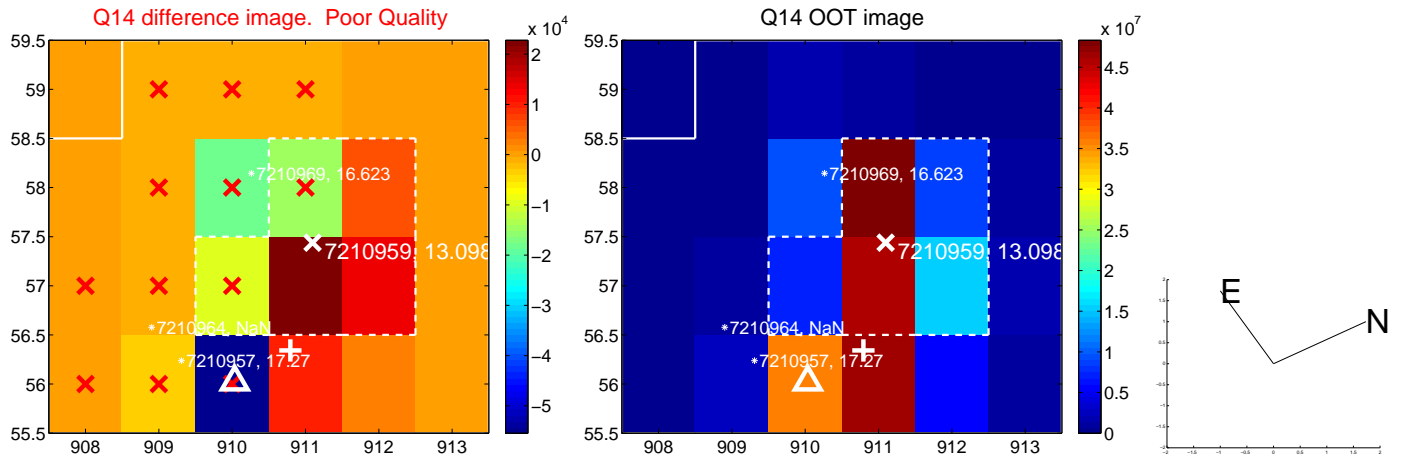
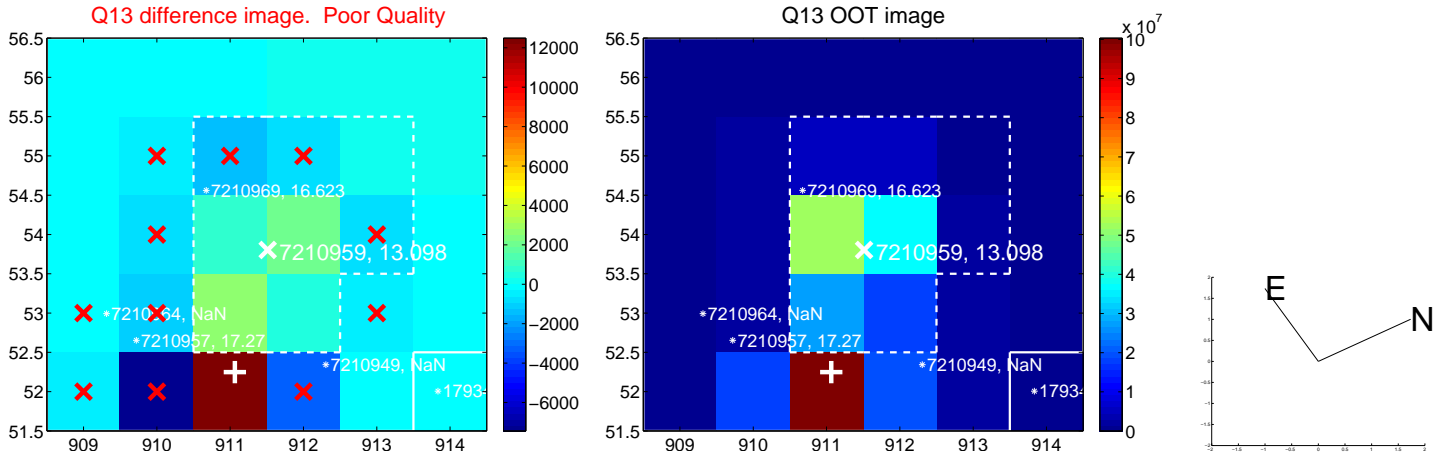
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



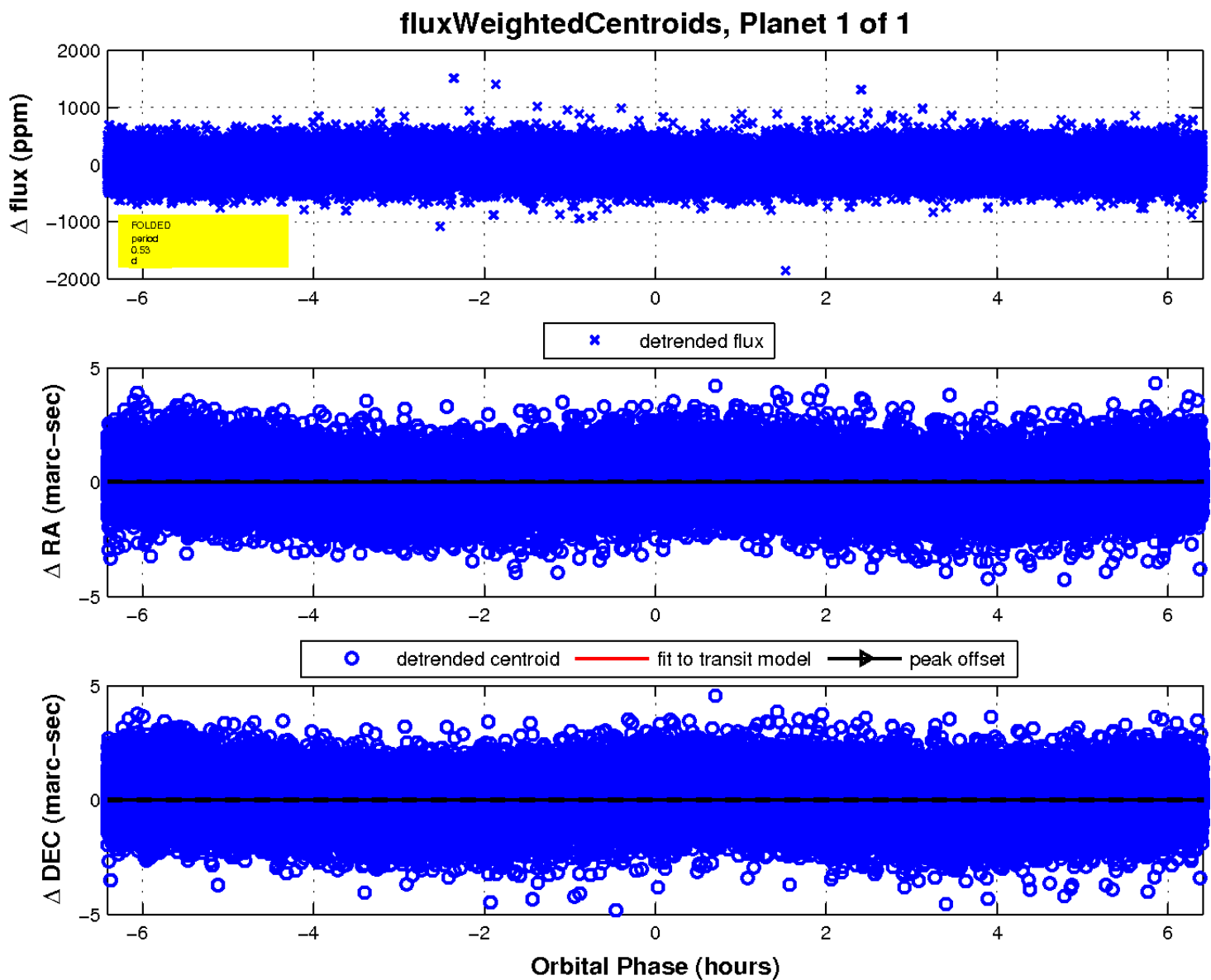
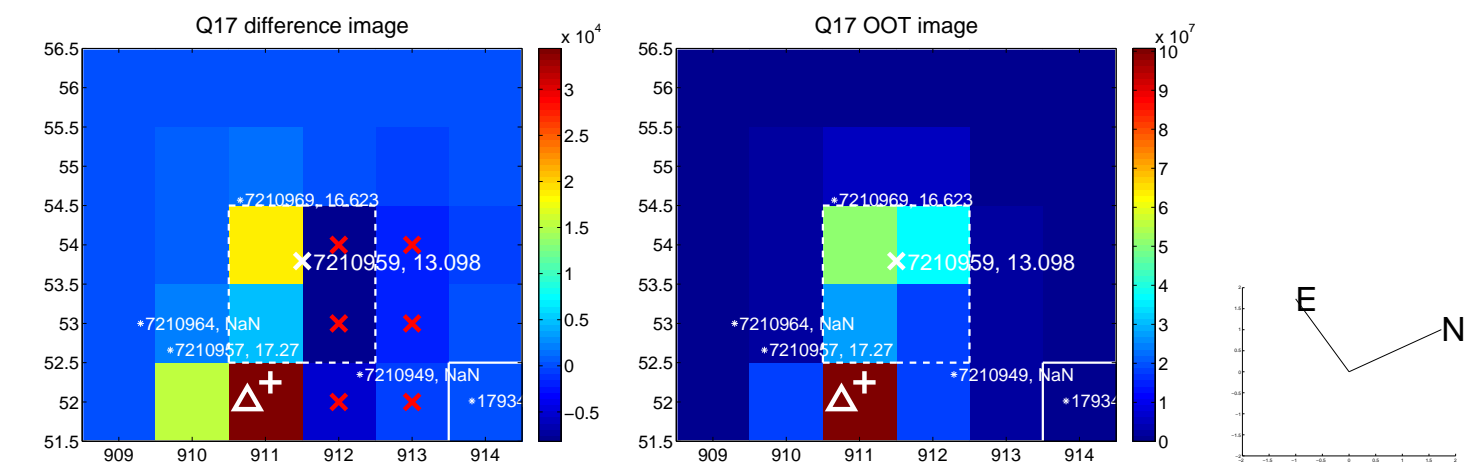
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

