

KIC 006551110

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})
006551110-01	OBS	No	0.964603	131.850413	62.9	9.965	11.7	16.4	0.94	6191	1.01	3377.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006551110-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—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.

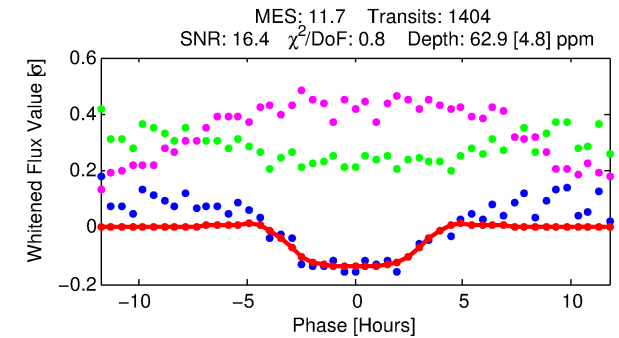
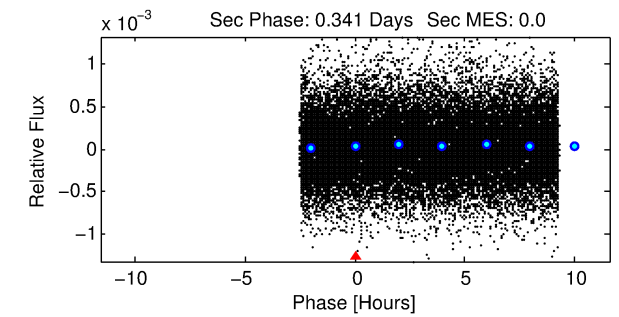
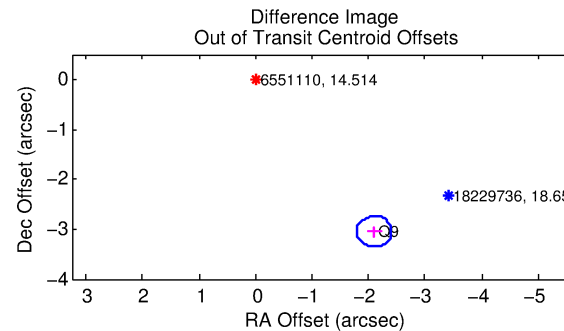
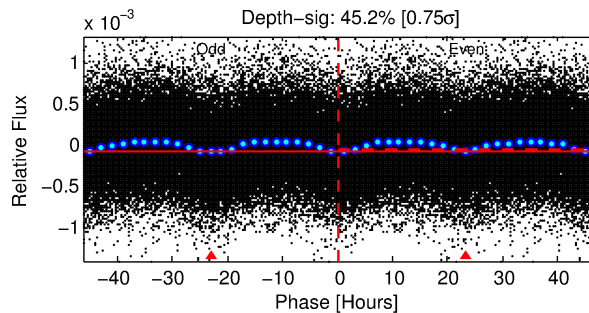
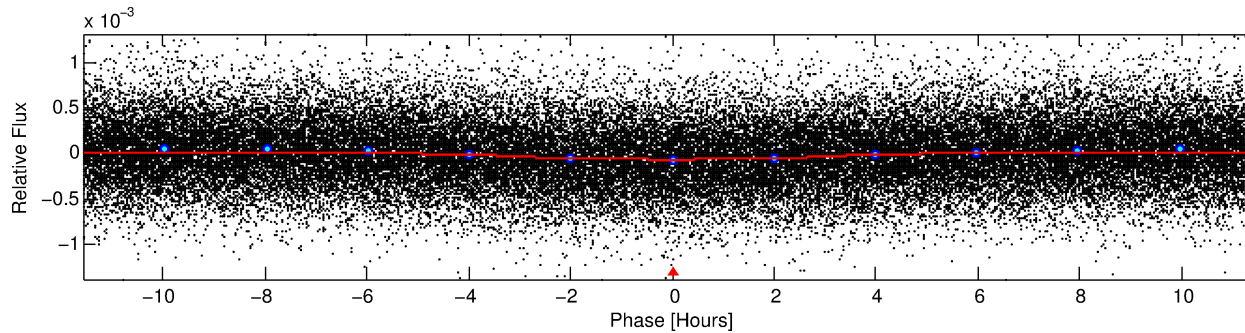
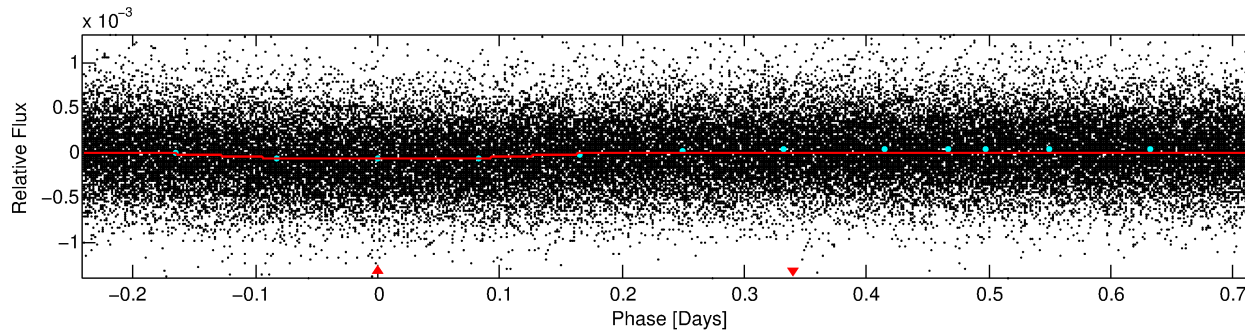
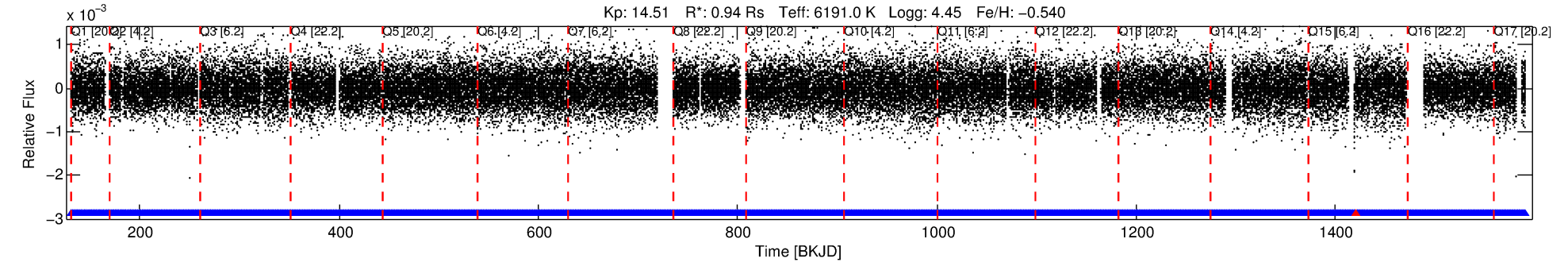
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006551110-01

No Significant Match Found

DV One-Page Summary

KIC: 6551110 Candidate: 1 of 1 Period: 0.965 d



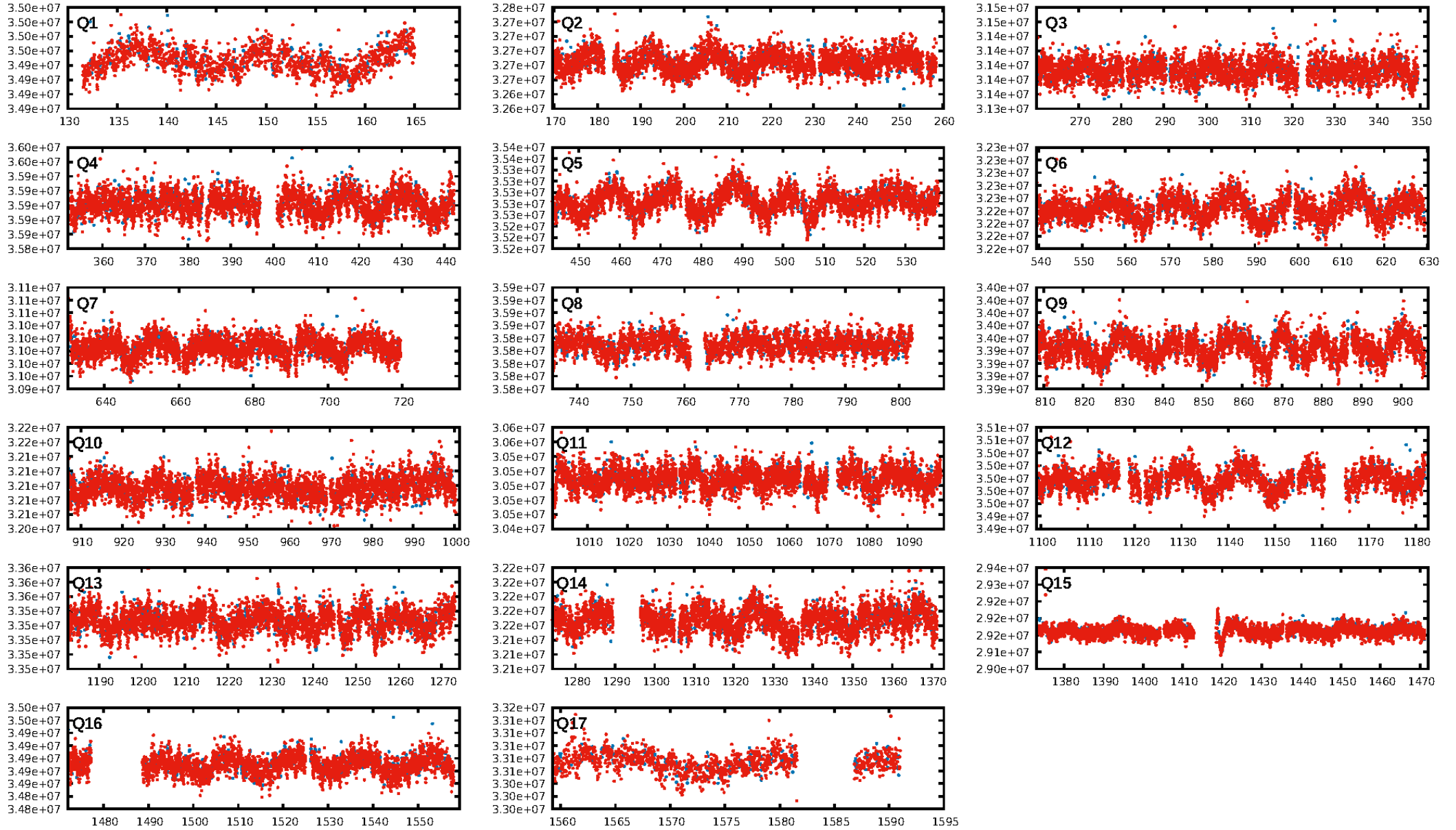
DV Fit Results:

Period = 0.96460 [0.00001] d
Epoch = 131.8504 [0.0083] BKJD
Rp/R* = 0.0098 [0.0005]
a/R* = 1.01 [0.00]
b = 0.98 [0.00]
Seff = 3377.01 [1254.22]
Teq = 1944 [180] K
Rp = 1.01 [0.29] Re
a = 0.0186 [0.0044] AU
Ag = N/A
Teffp = N/A

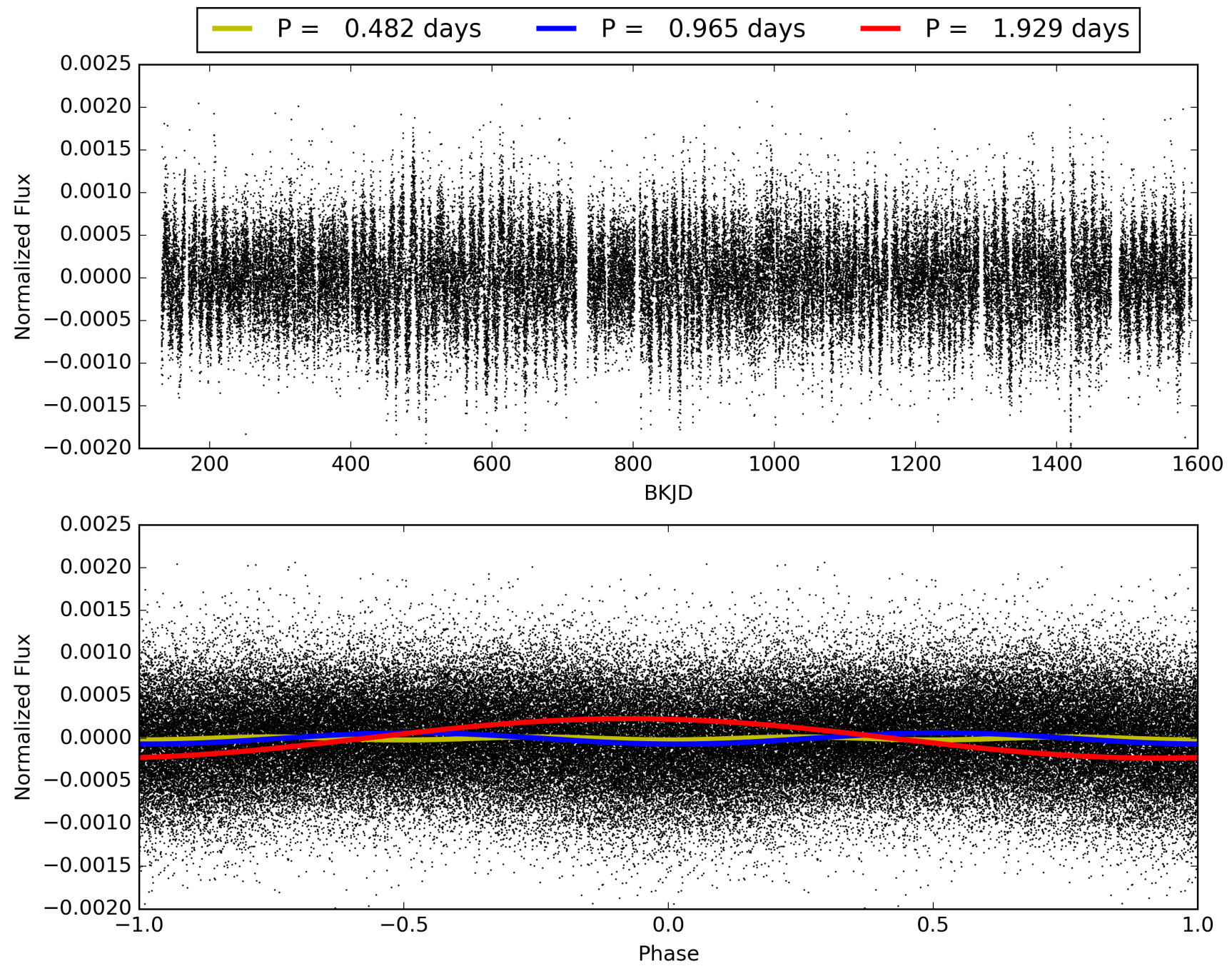
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1340/1341]
GhostDiagnostic-chr: 1.513
Centroid-sig: 0.0%
Centroid-so: 0.606 arcsec [1.23 σ]
OotOffset-rm: 3.701 arcsec [36.23 σ]
KicOffset-rm: 4.121 arcsec [40.53 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006551110-01, PDC Light Curves

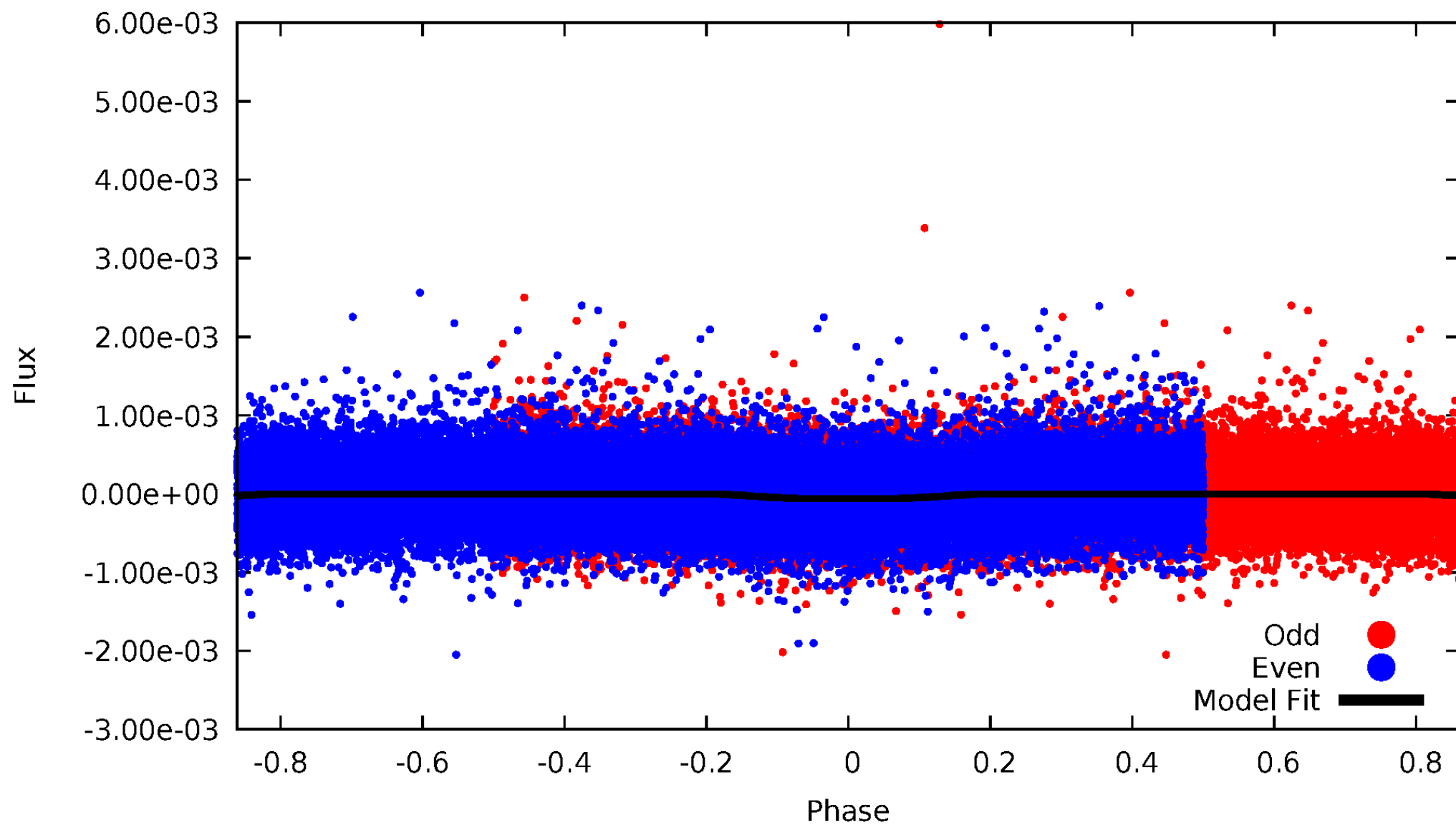


TCE 006551110-01



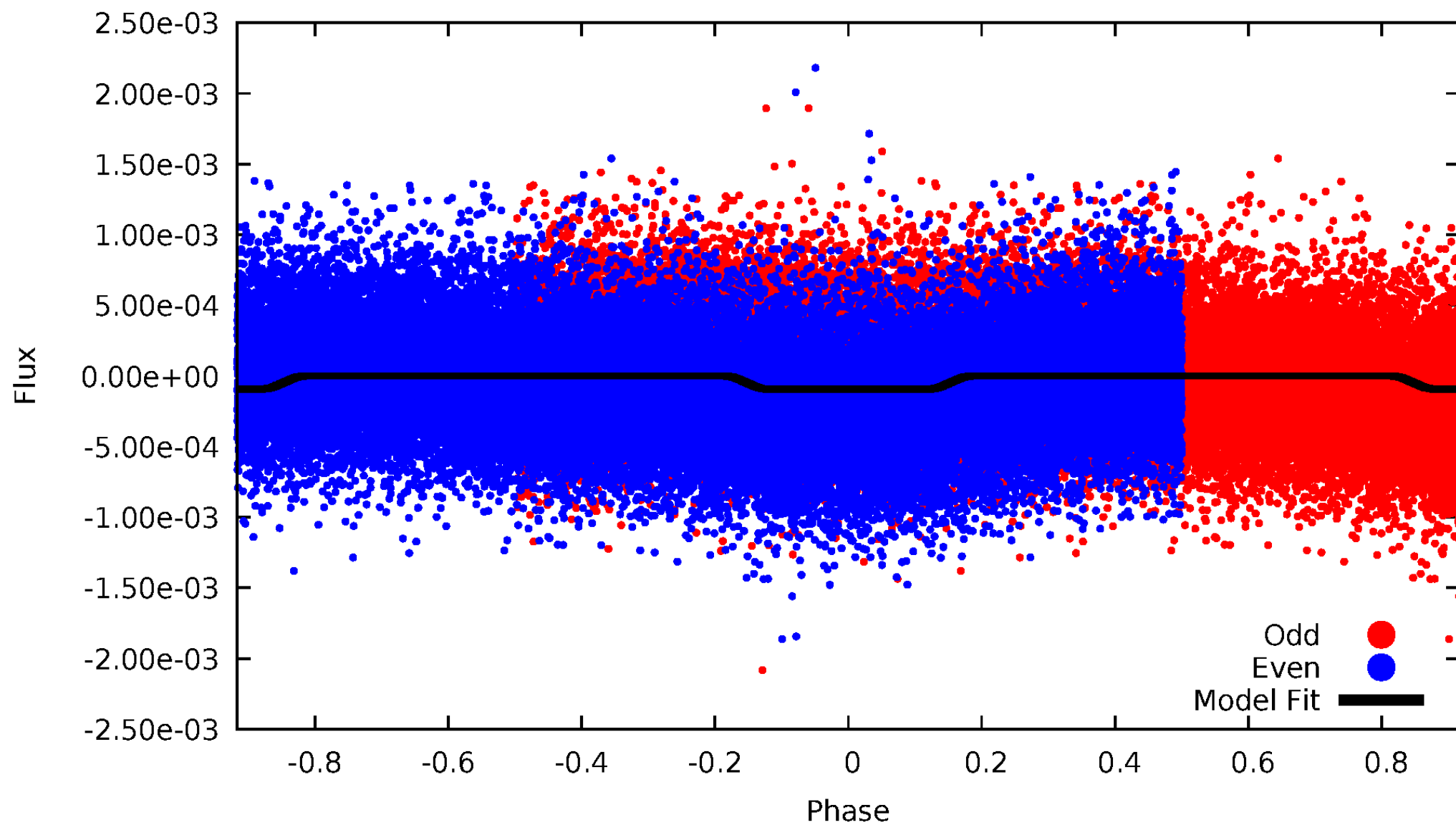
DV Odd/Even

TCE 006551110-01

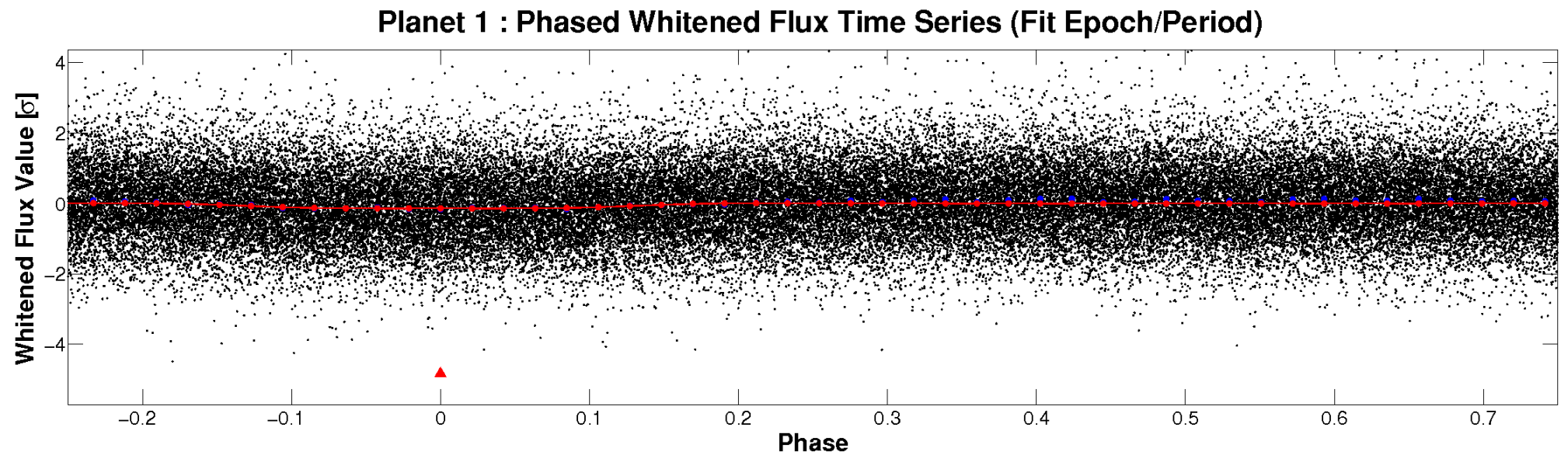
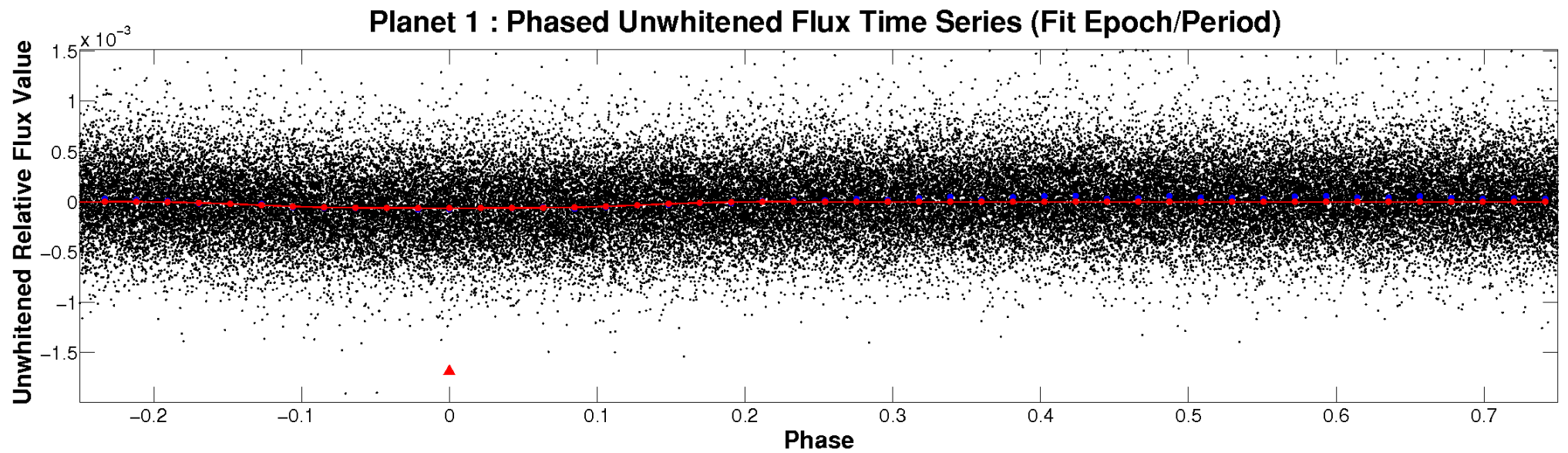


ALT Odd/Even

TCE 006551110-01

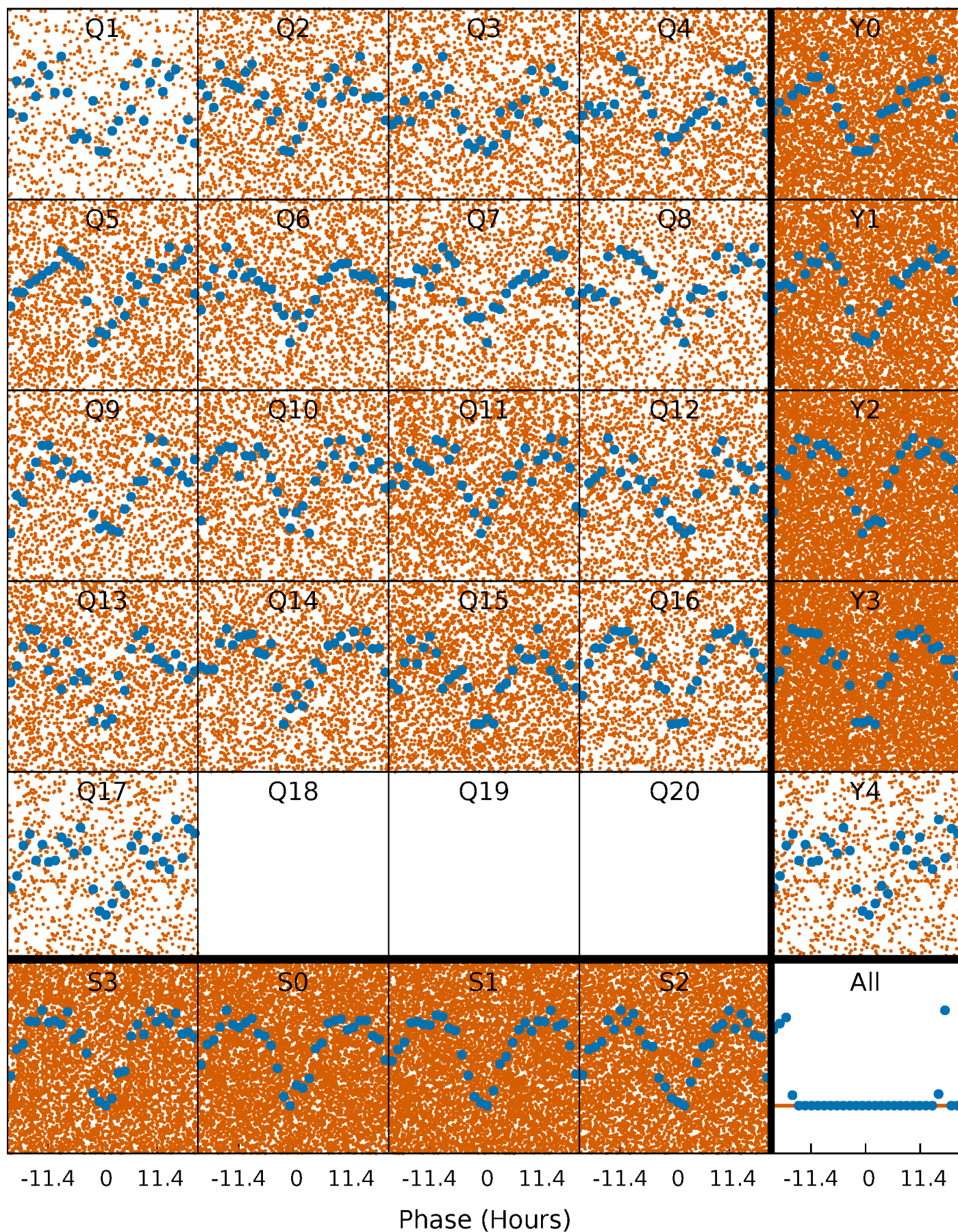


Non-Whitened Vs. Whitened Light Curve



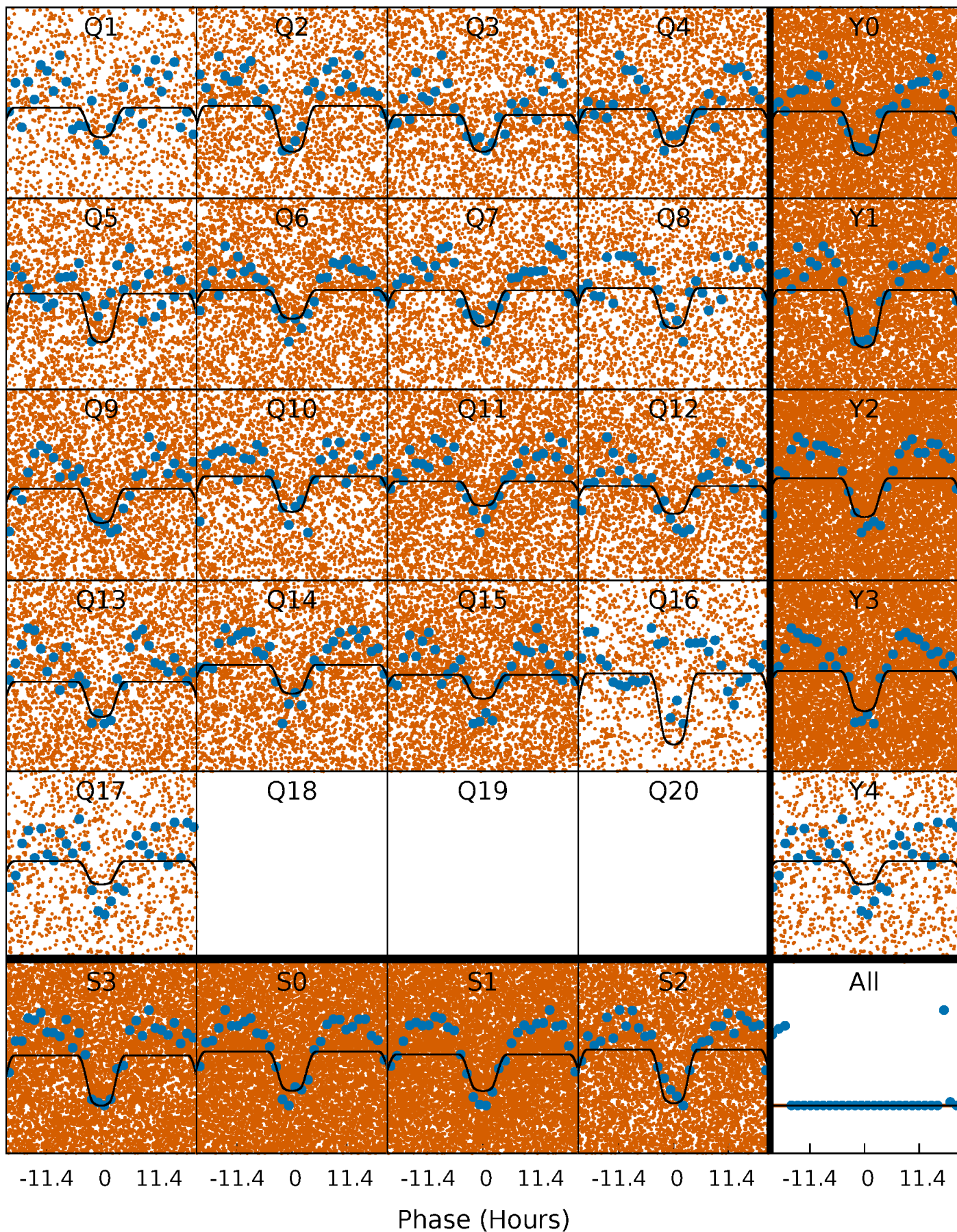
PDC Quarter-Phased Transit Curves

TCE 006551110-01 P= 0.964603 Days $T_0=131.850413$ (BKJD)



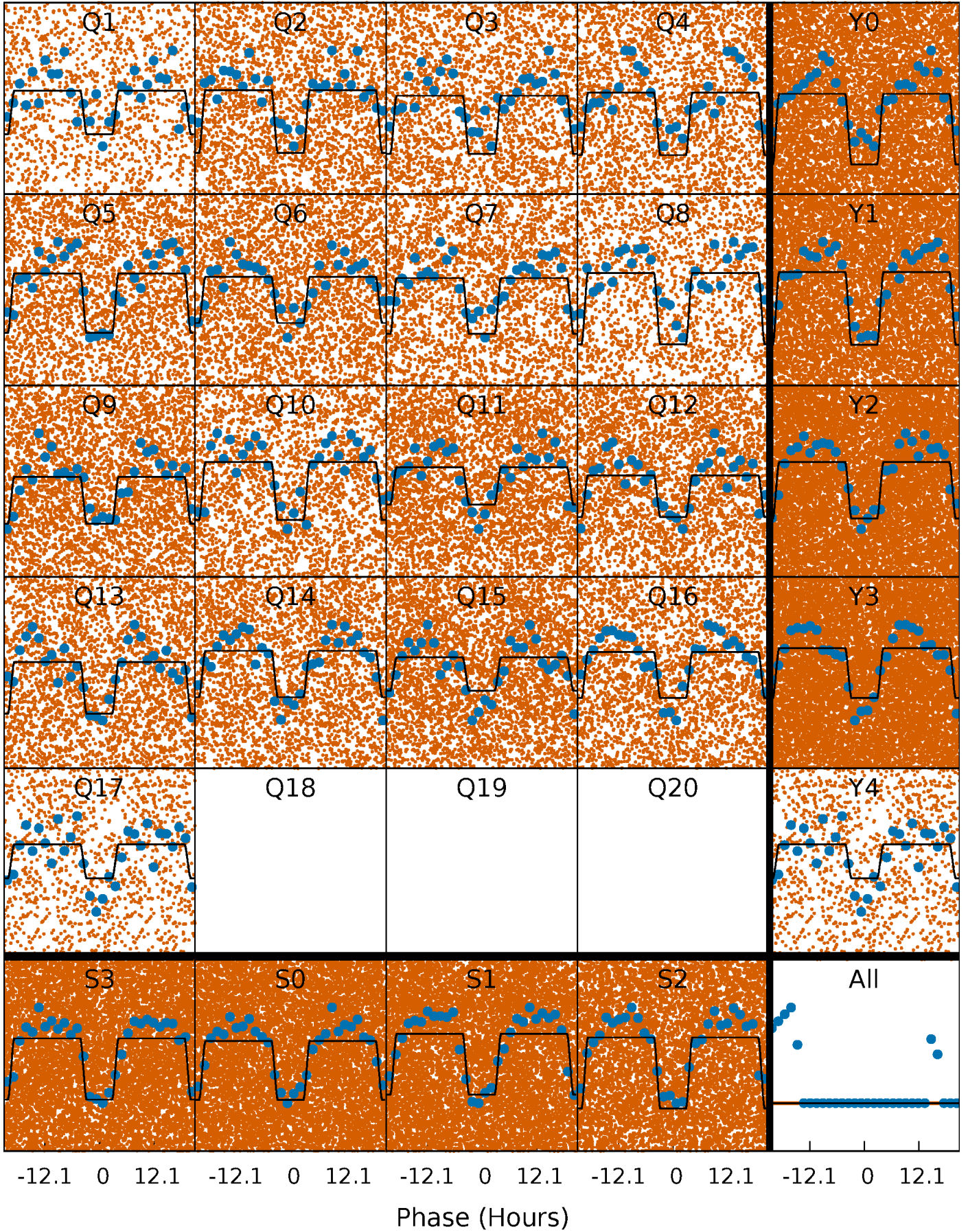
DV Quarter-Phased Transit Curves

TCE 006551110-01 P= 0.964603 Days $T_0=131.850413$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

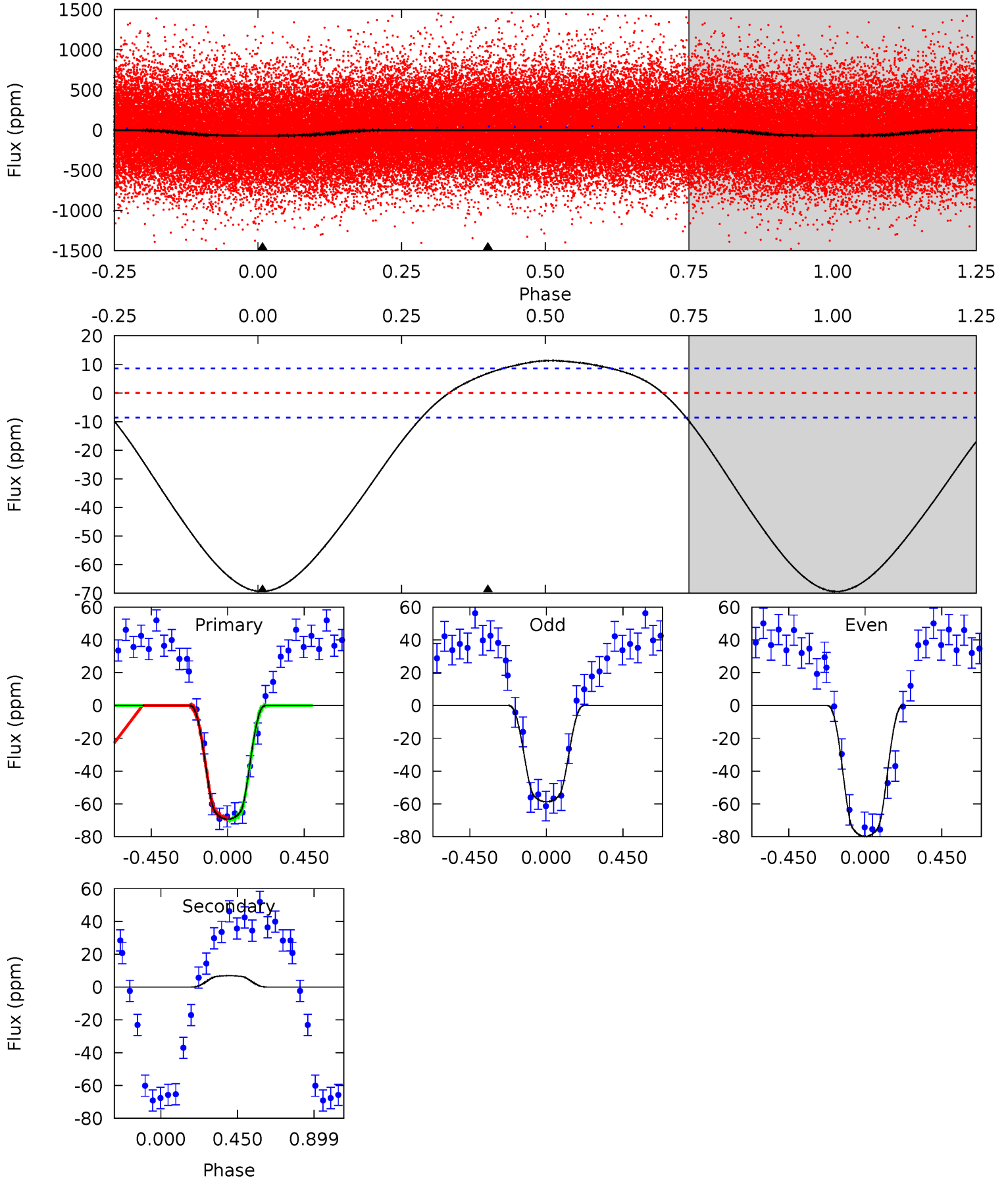
TCE 006551110-01 P= 0.964646 Days $T_0=131.821248$ (BKJD)



DV Model-Shift Uniqueness Test

006551110-01, P = 0.964603 Days, E = 130.885810 Days

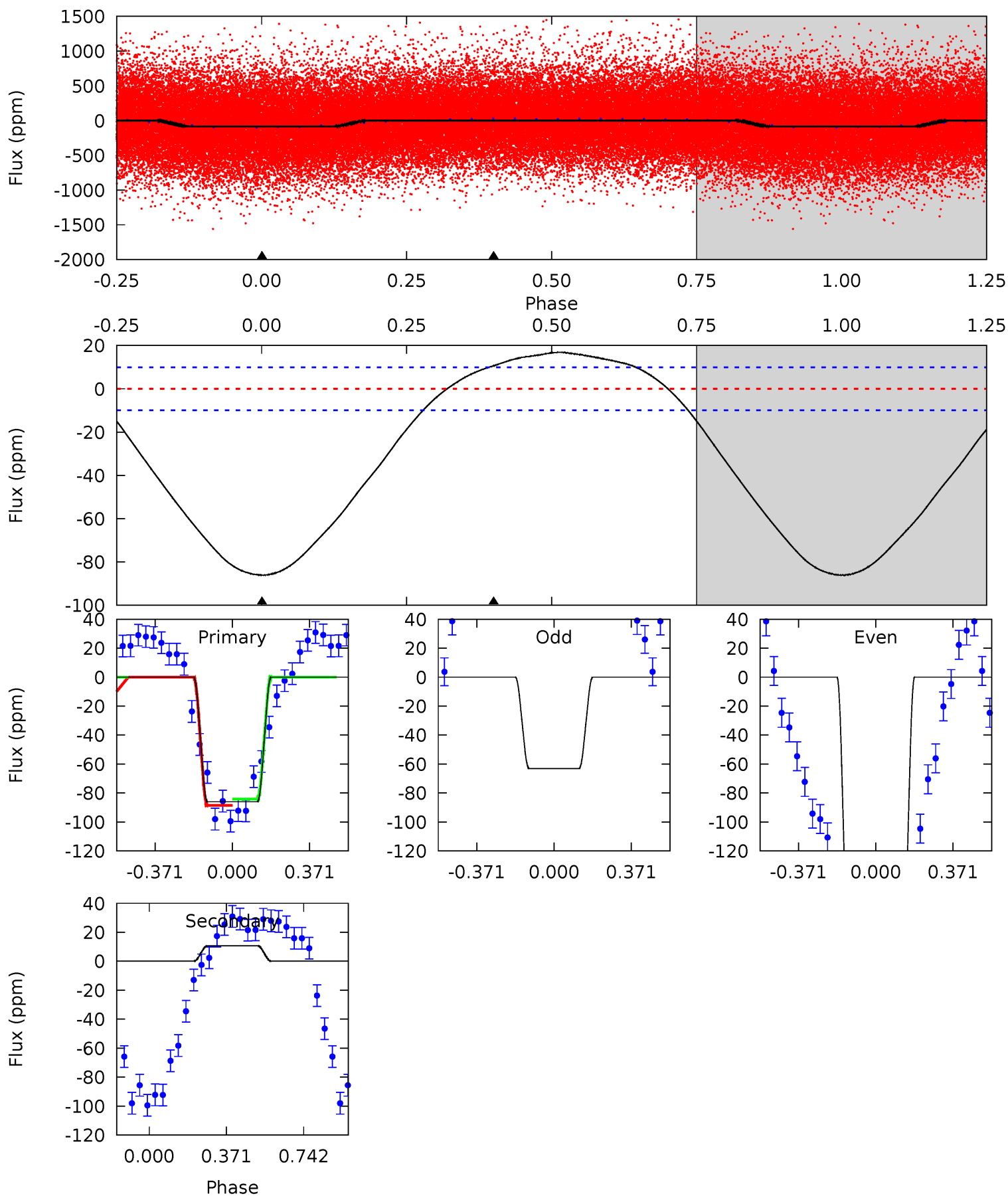
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.2	-3.39	0	0	4.24	0.76	2.45	34.2	34.2	-3.39	-3.39	5.22	0.58	0.14	0.34



Alt Model-Shift Uniqueness Test

006551110-01, P = 0.964646 Days, E = 130.856602 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.0	-4.57	0	0	4.28	0.89	3.05	37.0	37.0	-4.57	-4.57	38.2	1.06	0.16	0.93



Stellar Parameters For KIC 006551110

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6191^{+187}_{-206}	$4.454^{+0.081}_{-0.189}$	$-0.540^{+0.300}_{-0.300}$	$0.941^{+0.268}_{-0.115}$	$0.920^{+0.118}_{-0.096}$	$1.554^{+0.565}_{-0.807}$
	+3%/-3%	+2%/-4%	+56%/-56%	+28%/-12%	+13%/-10%	+36%/-52%
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 006551110-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	7 ± 2	$1.04^{+0.16}_{-0.10}$	2751^{+184}_{-143}	-3776^{+201}_{-158}	$-1.145^{+0.387}_{-0.517}$
Alt.	11 ± 2	$1.01^{+0.14}_{-0.10}$	2754^{+186}_{-150}	-4044^{+178}_{-170}	$-1.920^{+0.537}_{-0.644}$

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 $A_{obs} \gg 1.0$

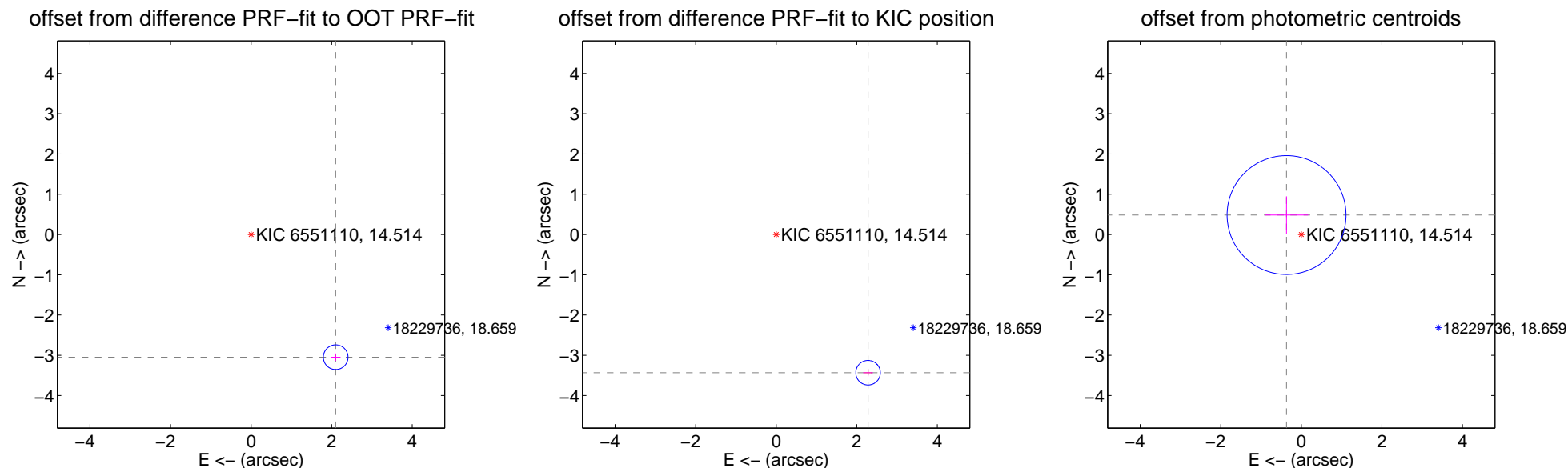
DV Centroid Data

Supplemental centroid analysis for 006551110-01. Kepler magnitude: 14.51. Transit SNR 16.36

There are 0 quarters with good PRF difference image offsets

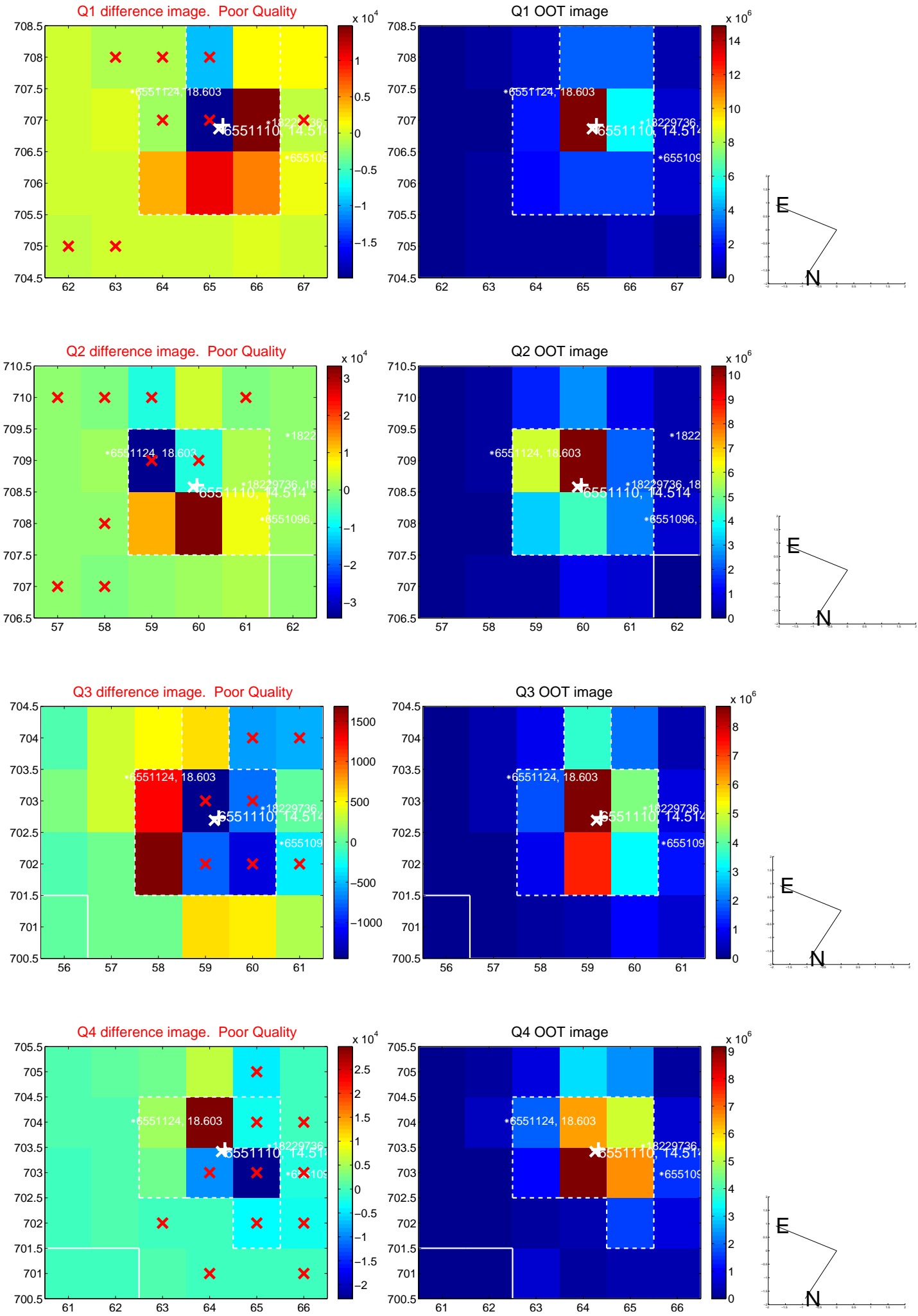
The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.701 ± 0.102	36.23	-2.099 ± 0.121	-3.047 ± 0.092
PRF-fit source offset from KIC position	4.121 ± 0.102	40.53	-2.280 ± 0.121	-3.433 ± 0.092
photometric centroid source offset	0.61 ± 0.49	1.23	0.37 ± 0.54	0.48 ± 0.46

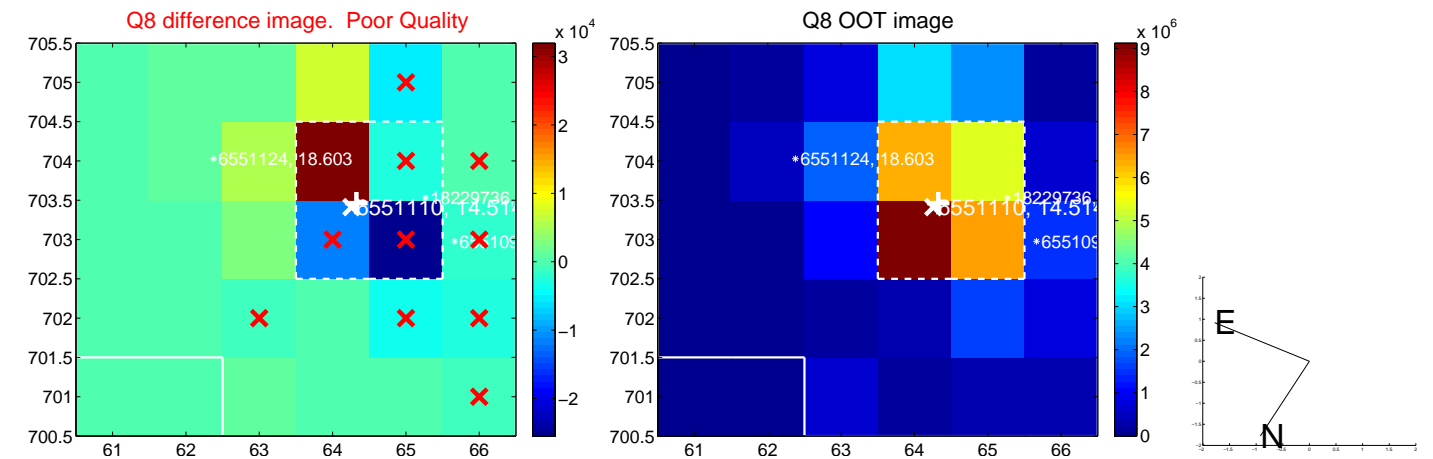
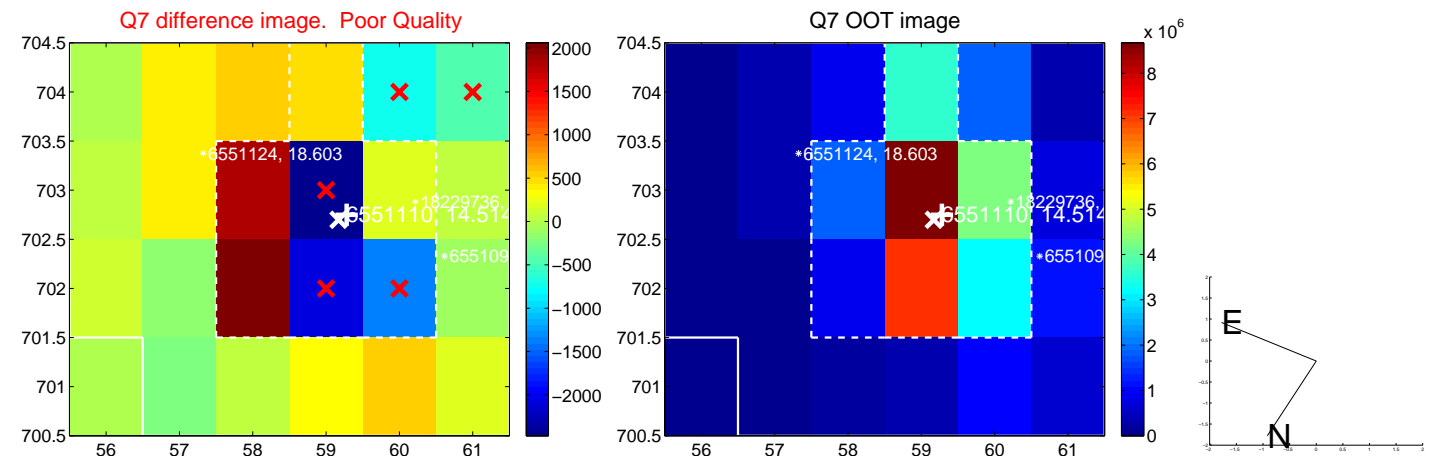
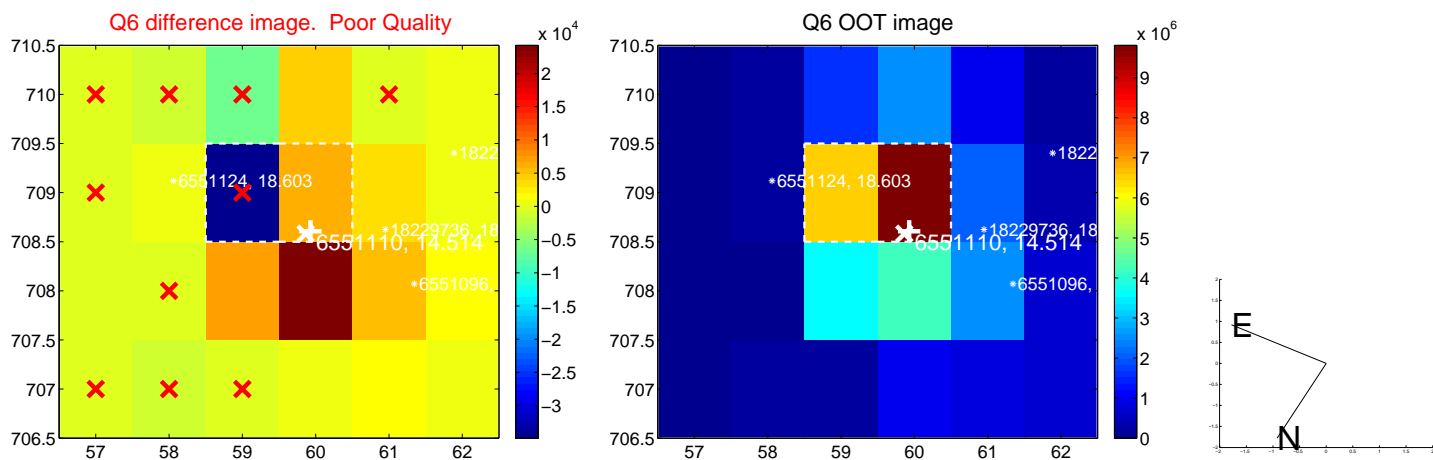
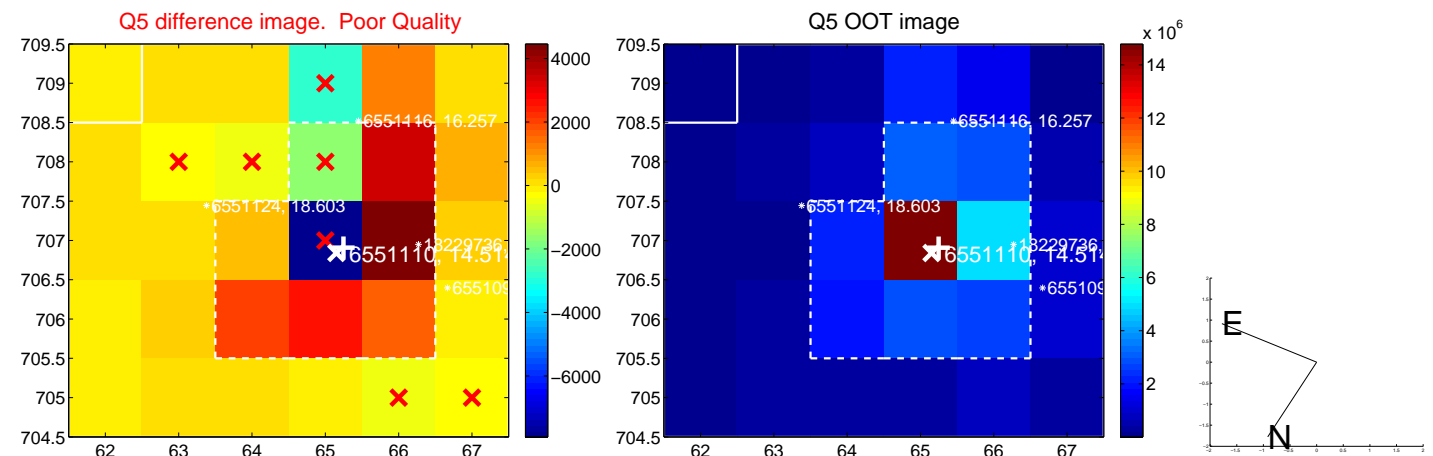


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

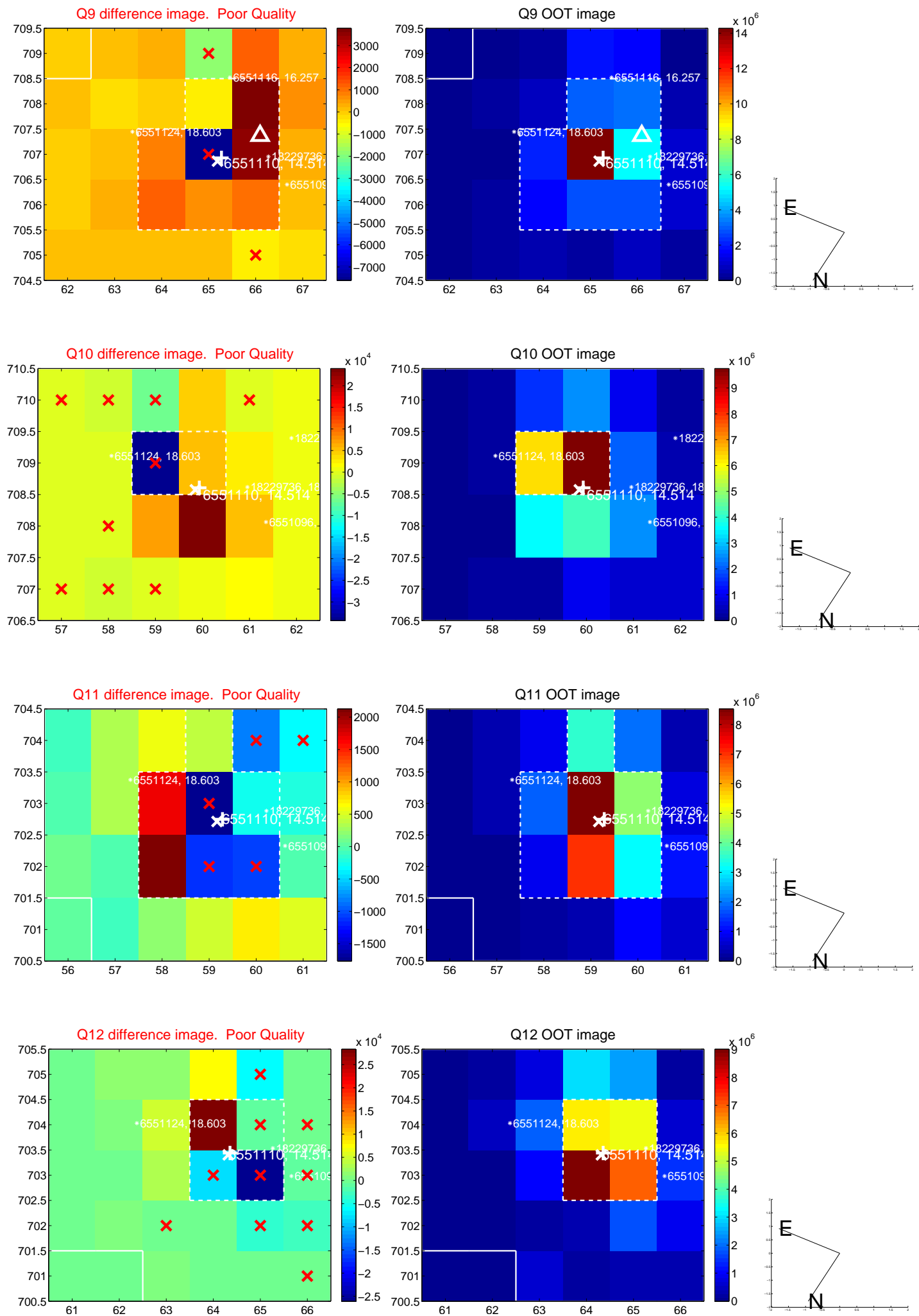
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



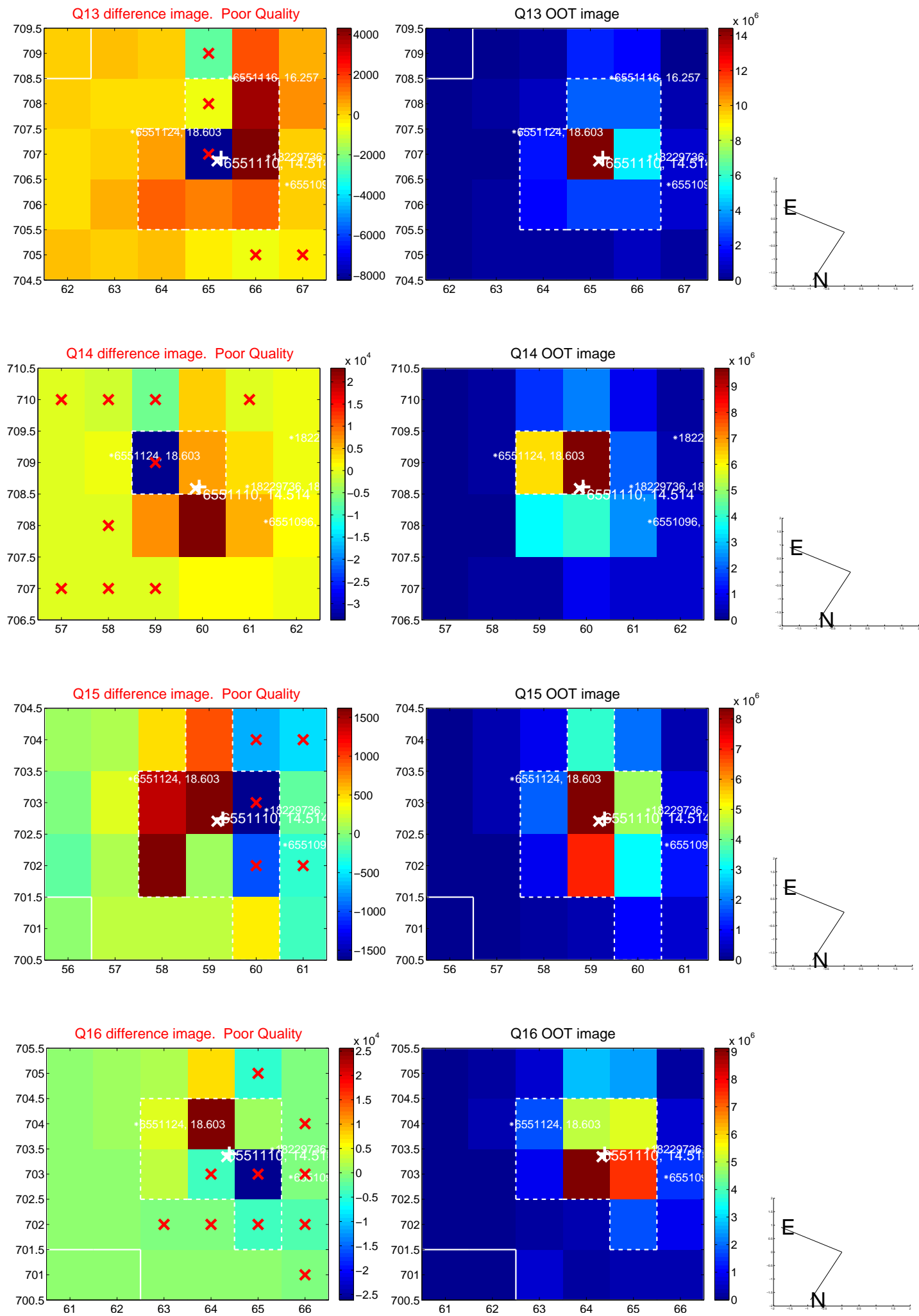
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



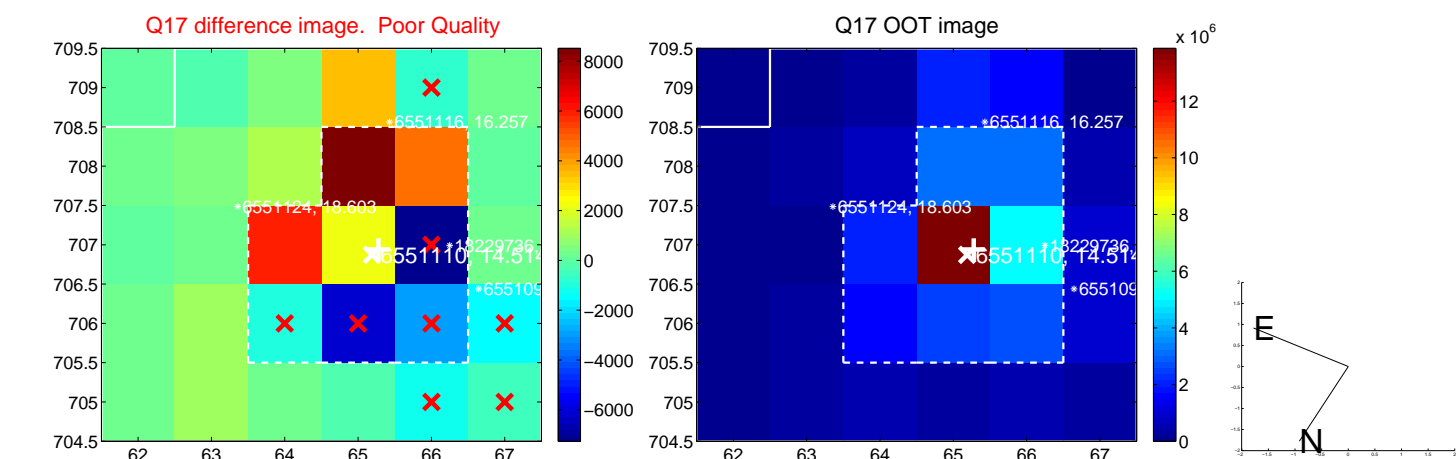
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



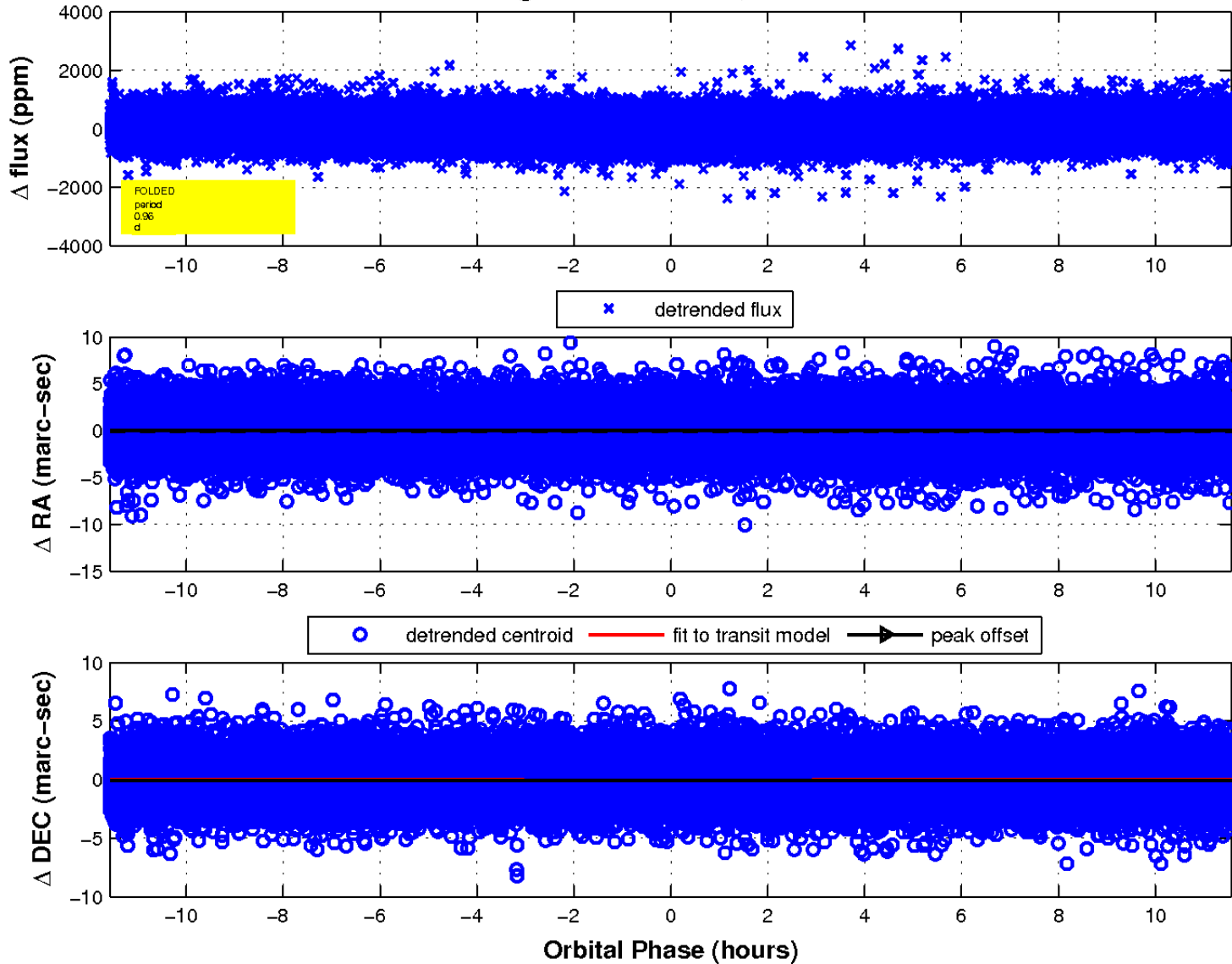
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

