

KIC 005037710

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})
005037710-01	OBS	No	0.734621	131.687323	14.9	2.225	7.5	2.1	1.98	7794	0.89	34638.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005037710-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

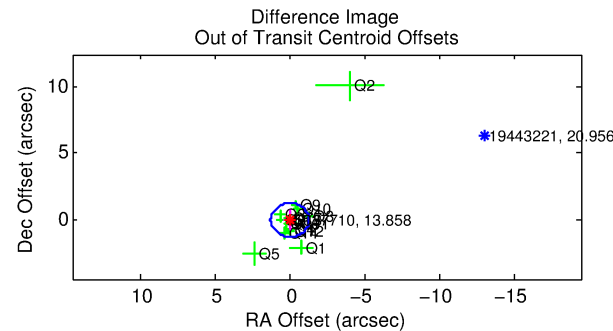
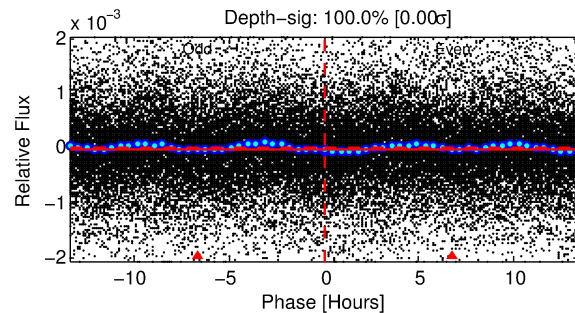
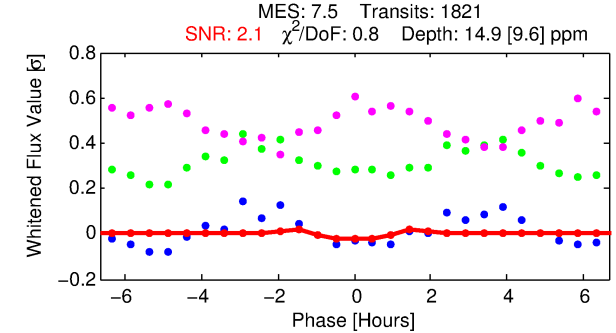
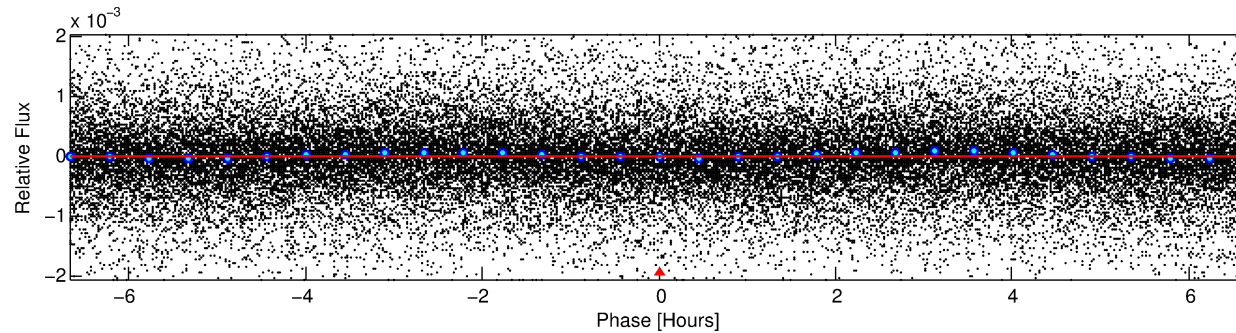
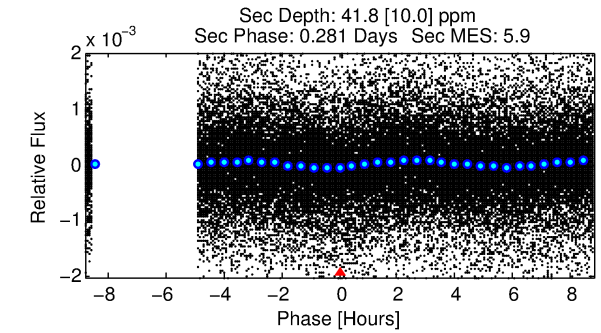
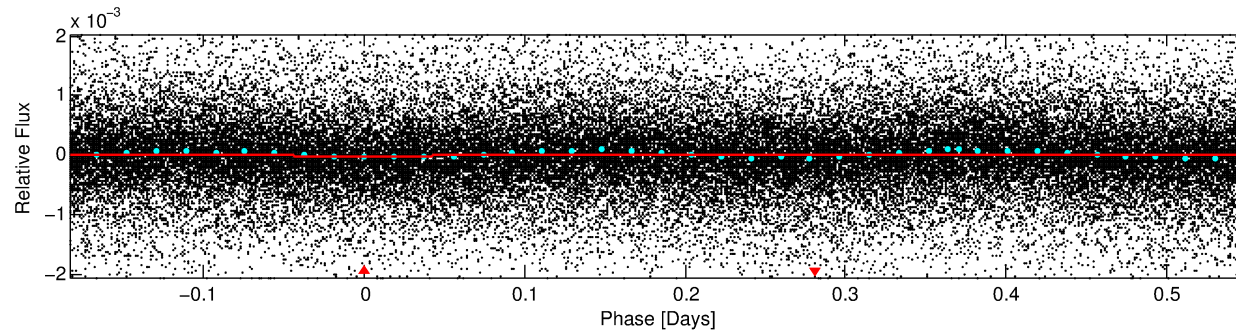
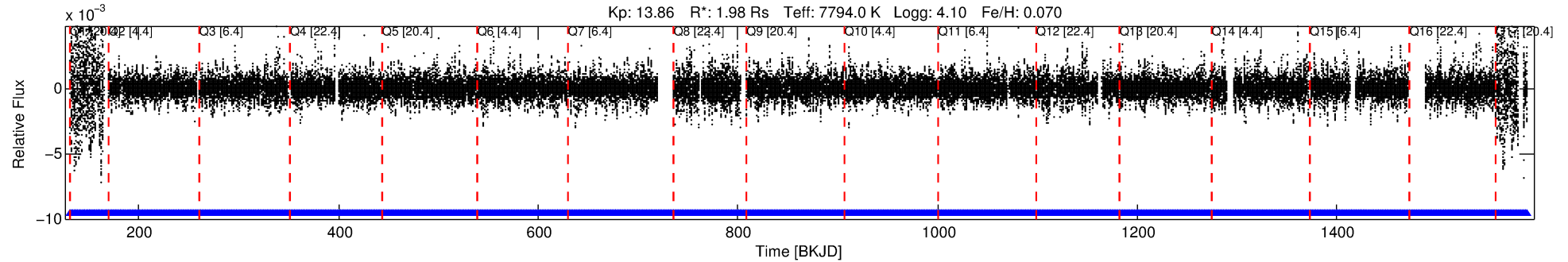
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005037710-01

No Significant Match Found

DV One-Page Summary

KIC: 5037710 Candidate: 1 of 1 Period: 0.735 d



DV Fit Results:

Period = 0.73462 [0.00005] d
Epoch = 131.6873 [0.0069] BKJD
Rp/R* = 0.0041 [0.0027]
a/R* = 1.46 [2.96]
b = 0.90 [0.81]
Seff = 34638.78 [12123.97]
Teq = 3479 [304] K
Rp = 0.88 [0.63] Re
a = 0.0193 [0.0041] AU
Ag = 10.93 [15.00] [0.66σ]
Teffp = 9780 [3302] K [1.90σ]

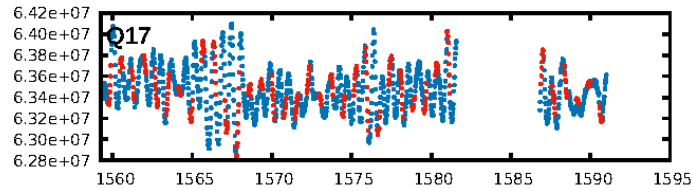
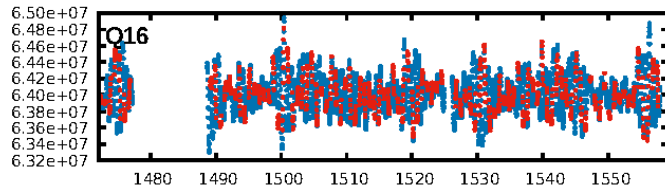
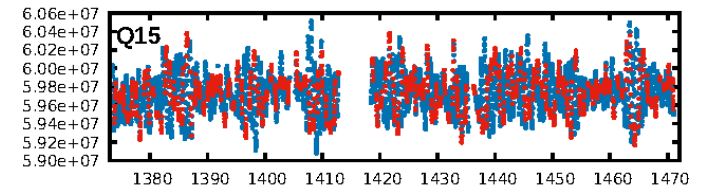
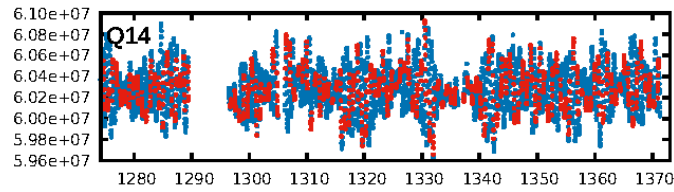
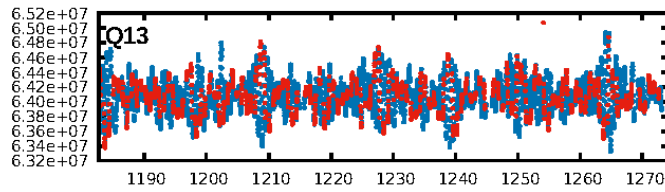
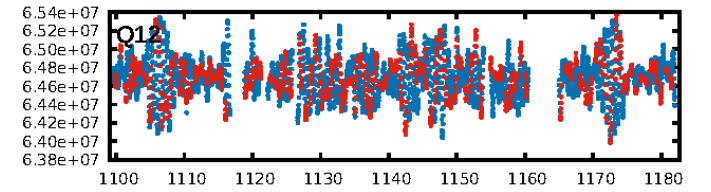
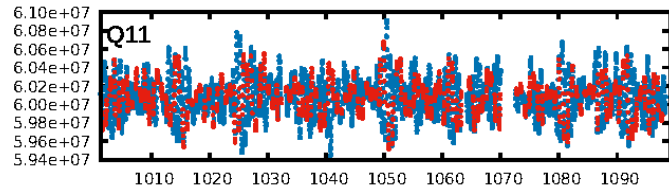
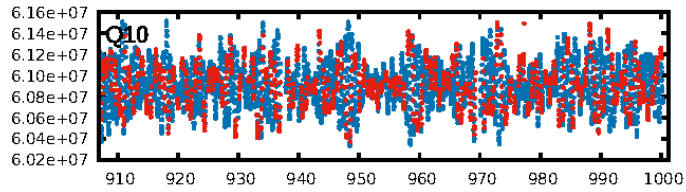
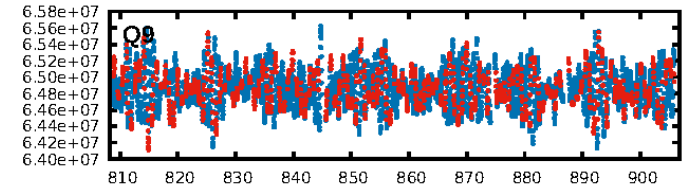
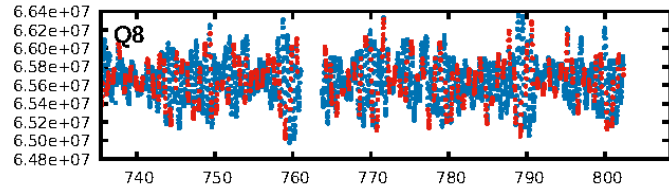
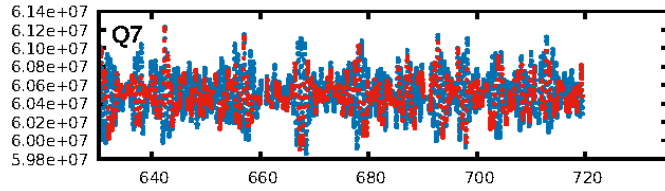
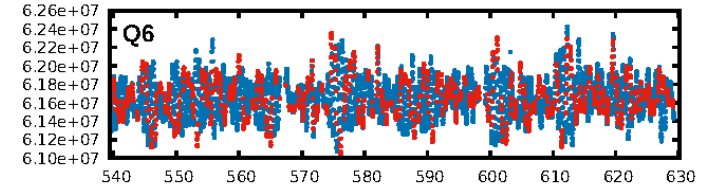
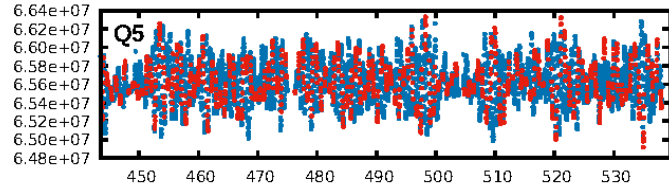
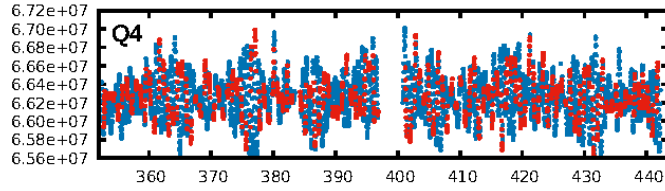
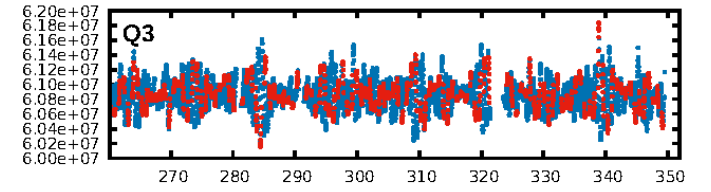
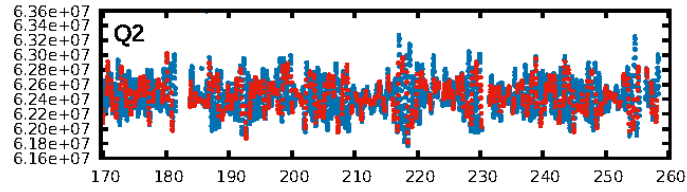
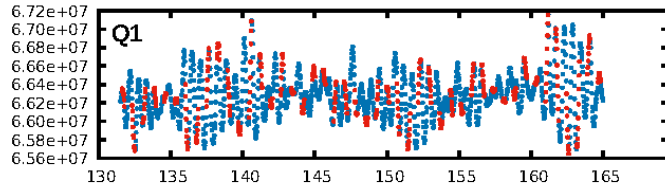
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.94e-12
RollingBand-fgt: 1.00 [1739/1739]
GhostDiagnostic-chr: 0.4917
Centroid-sig: 18.3%
Centroid-so: 2.808 arcsec [1.10σ]
OotOffset-rm: 0.046 arcsec [0.11σ]
KicOffset-rm: 0.066 arcsec [0.33σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 1.00 [17/17]

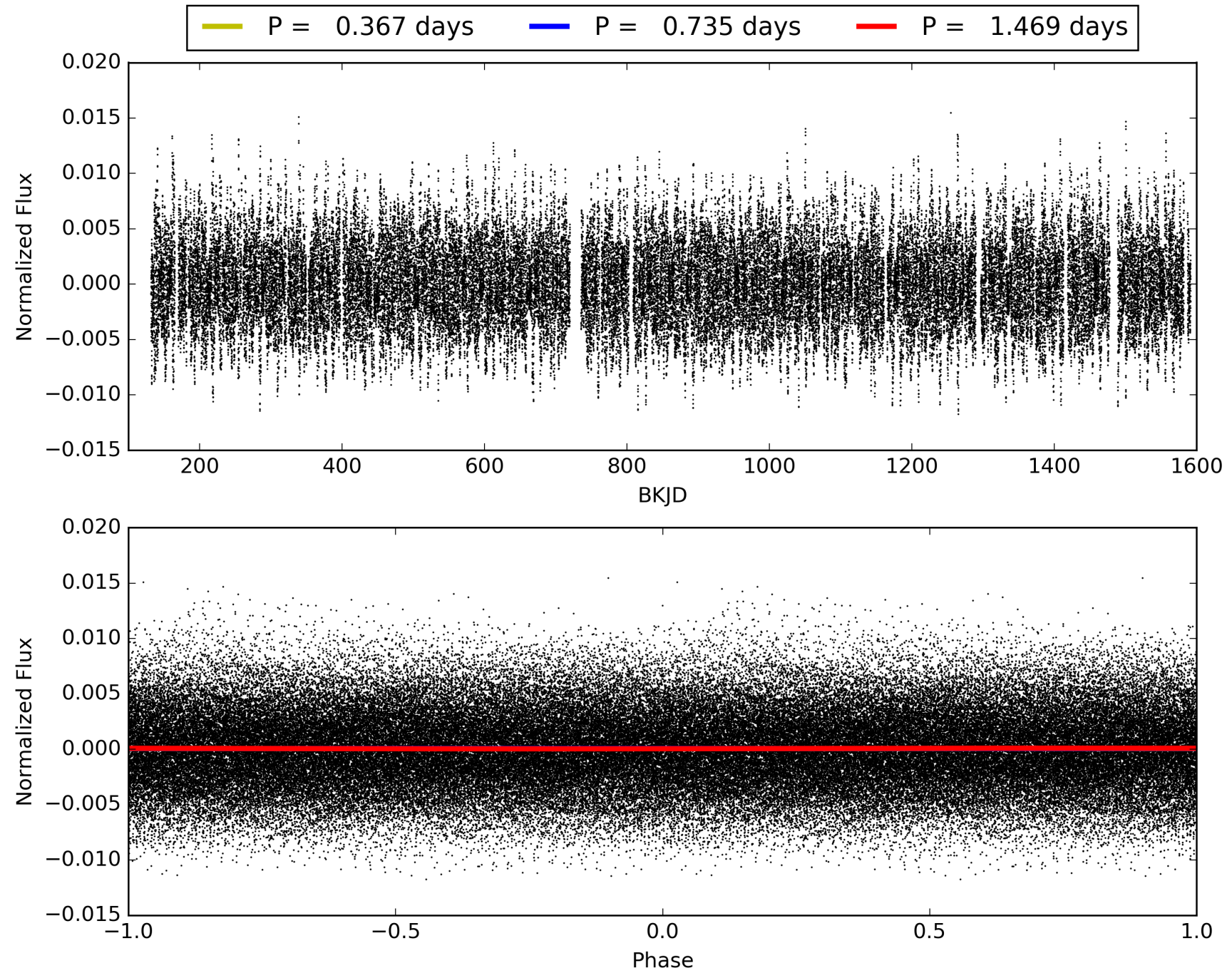
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:46:35 Z

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

TCE 005037710-01, PDC Light Curves

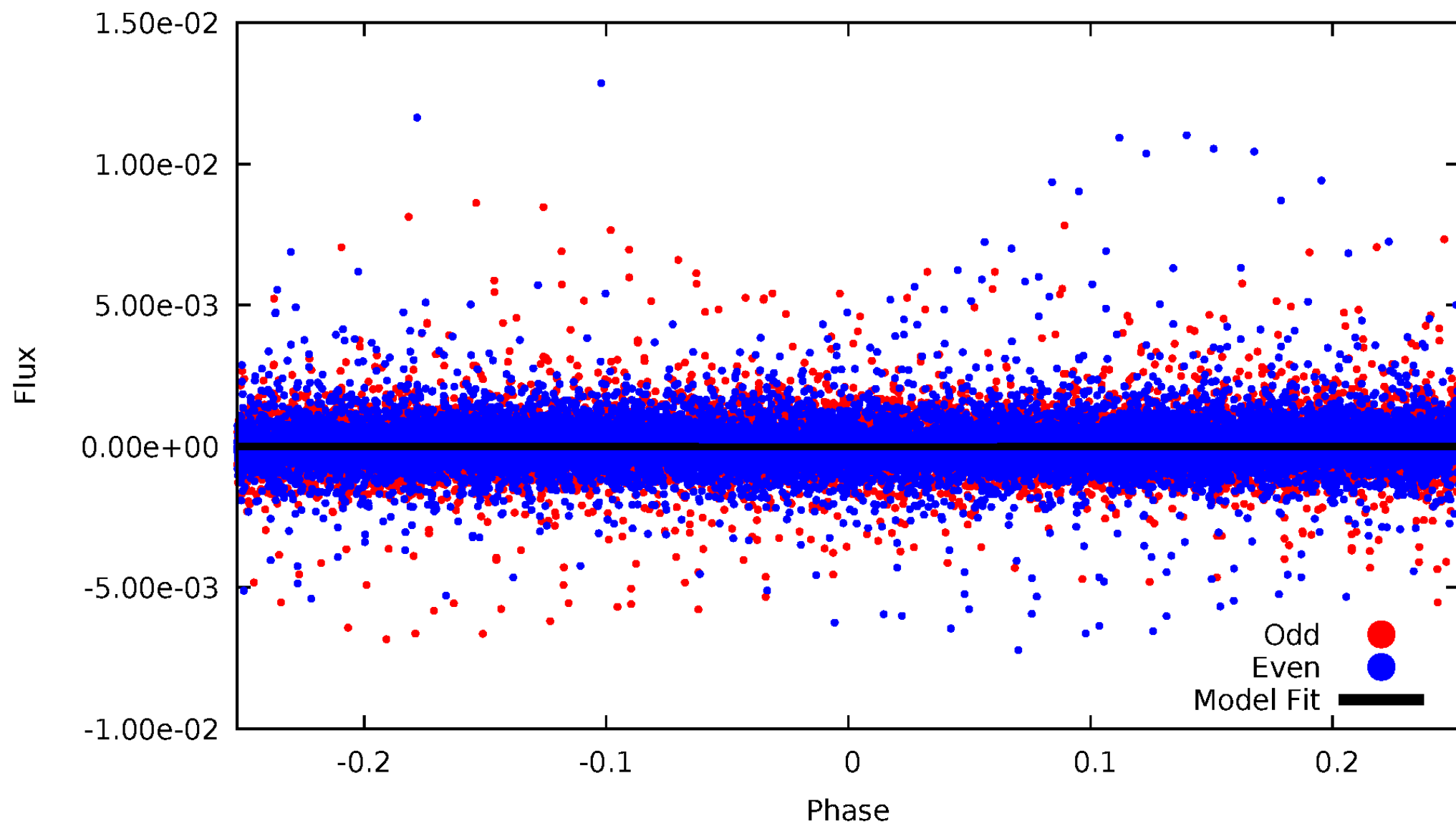


TCE 005037710-01



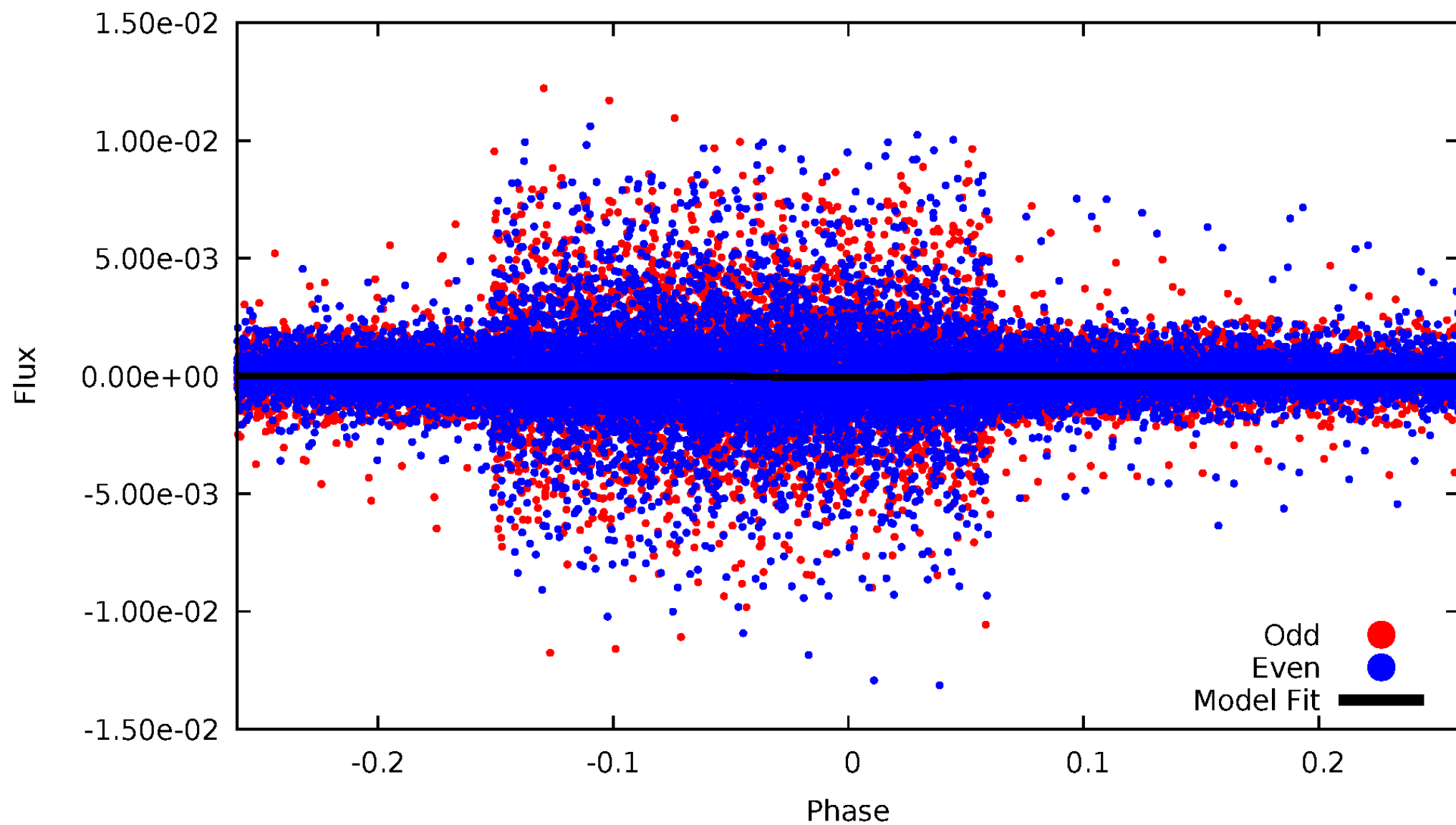
DV Odd/Even

TCE 005037710-01



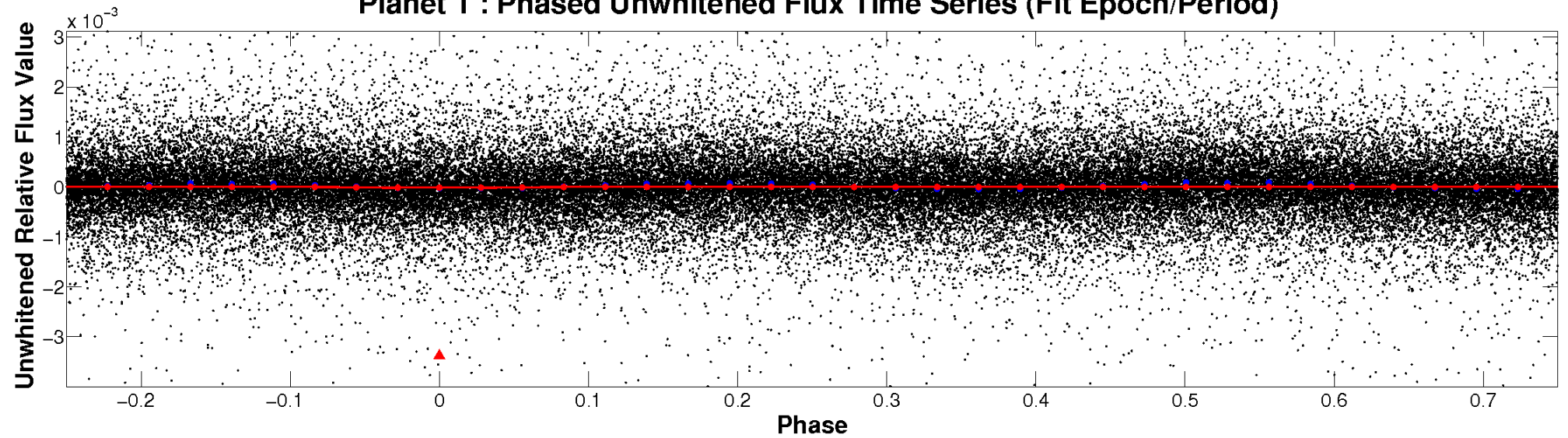
ALT Odd/Even

TCE 005037710-01

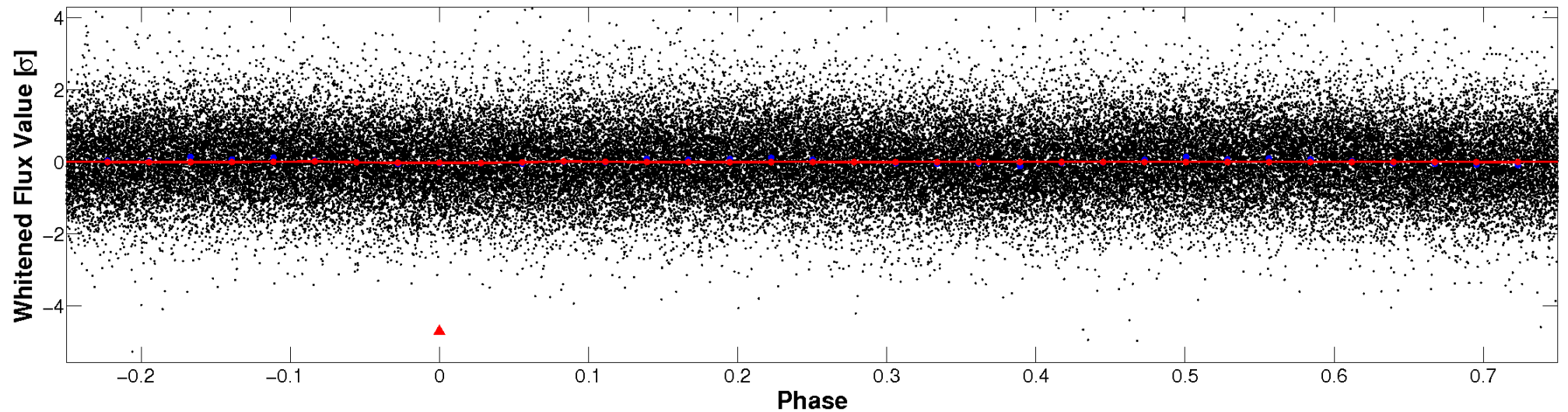


Non-Whitened Vs. Whitened Light Curve

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

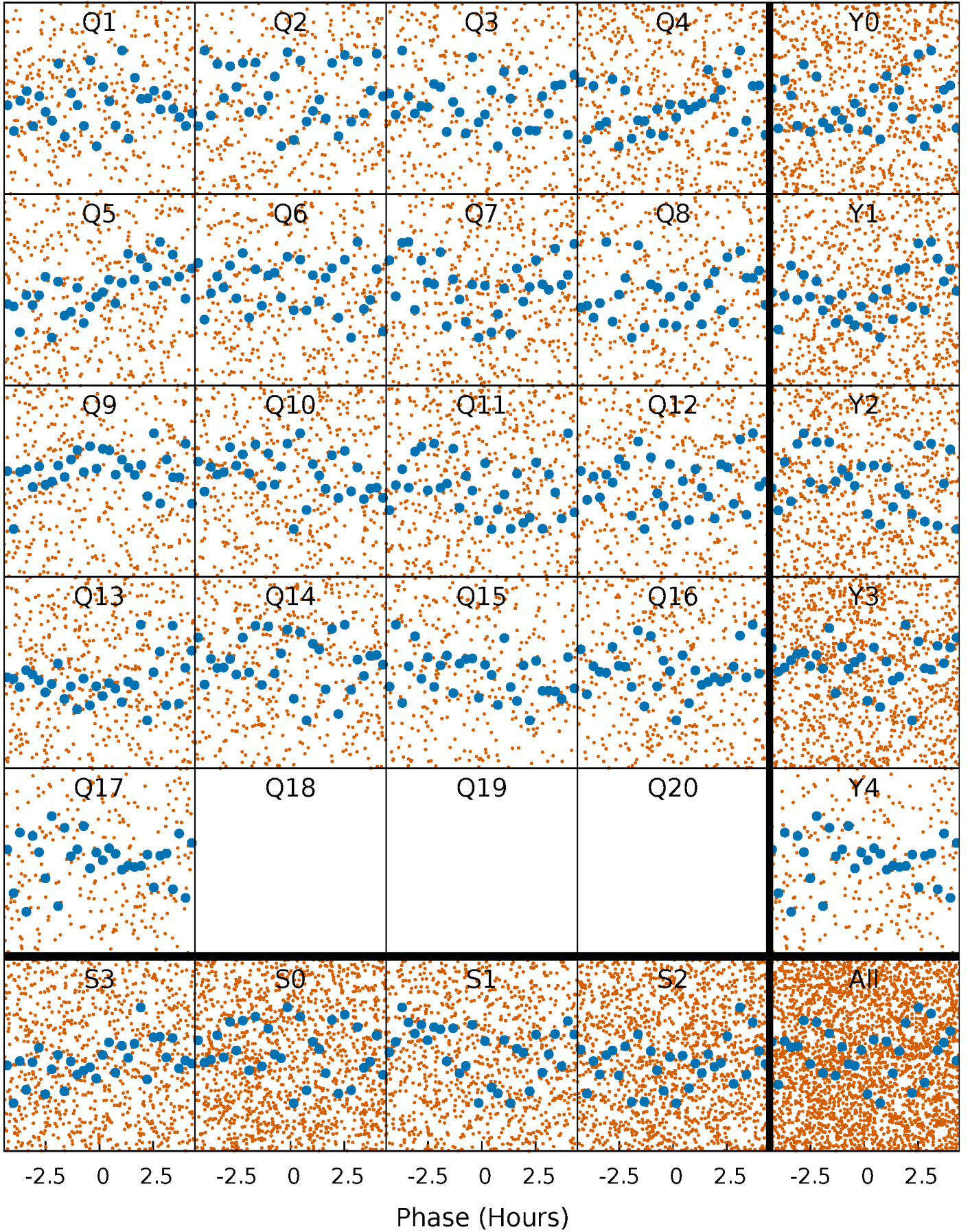


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



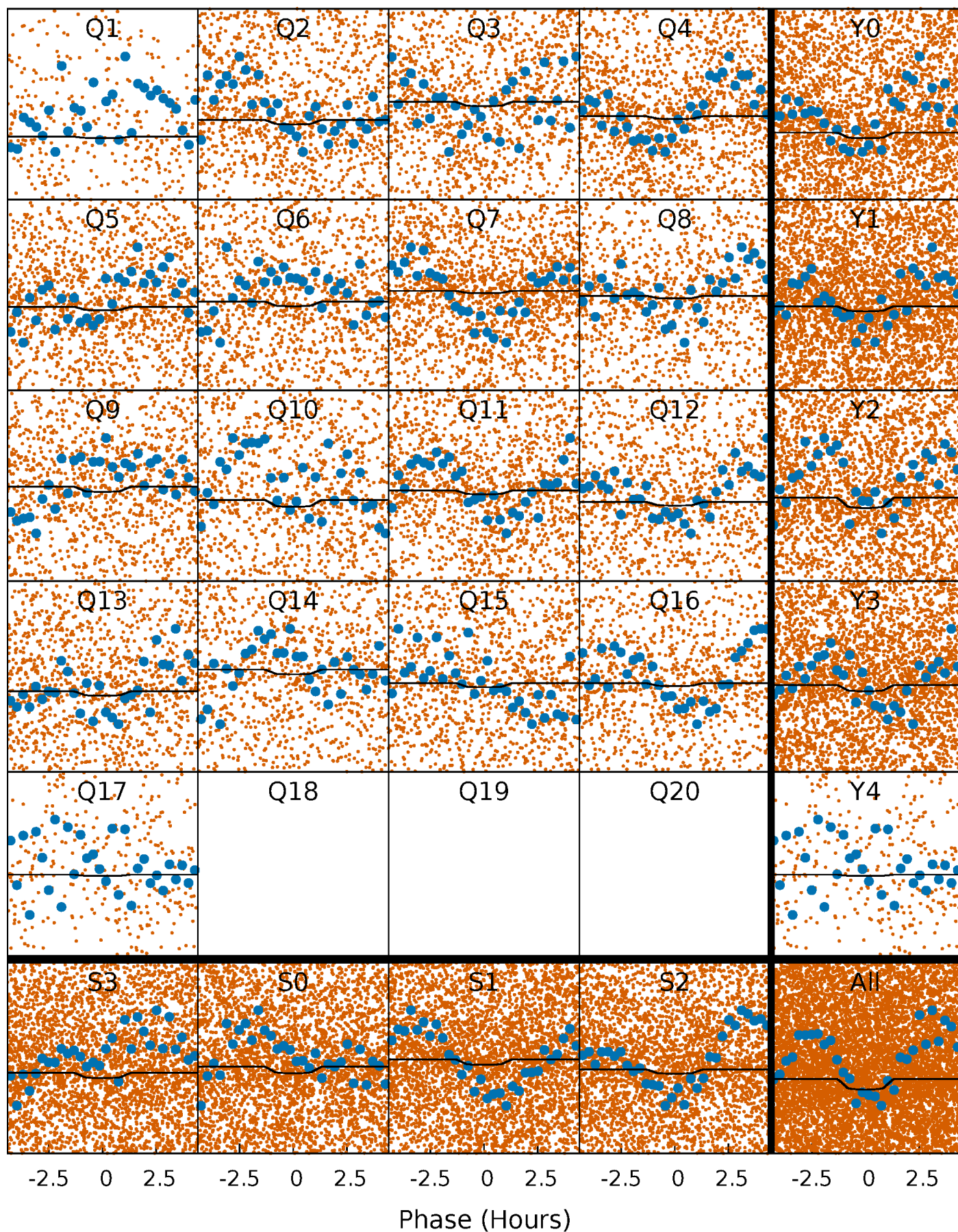
PDC Quarter-Phased Transit Curves

TCE 005037710-01 P= 0.734621 Days $T_0=131.687323$ (BKJD)



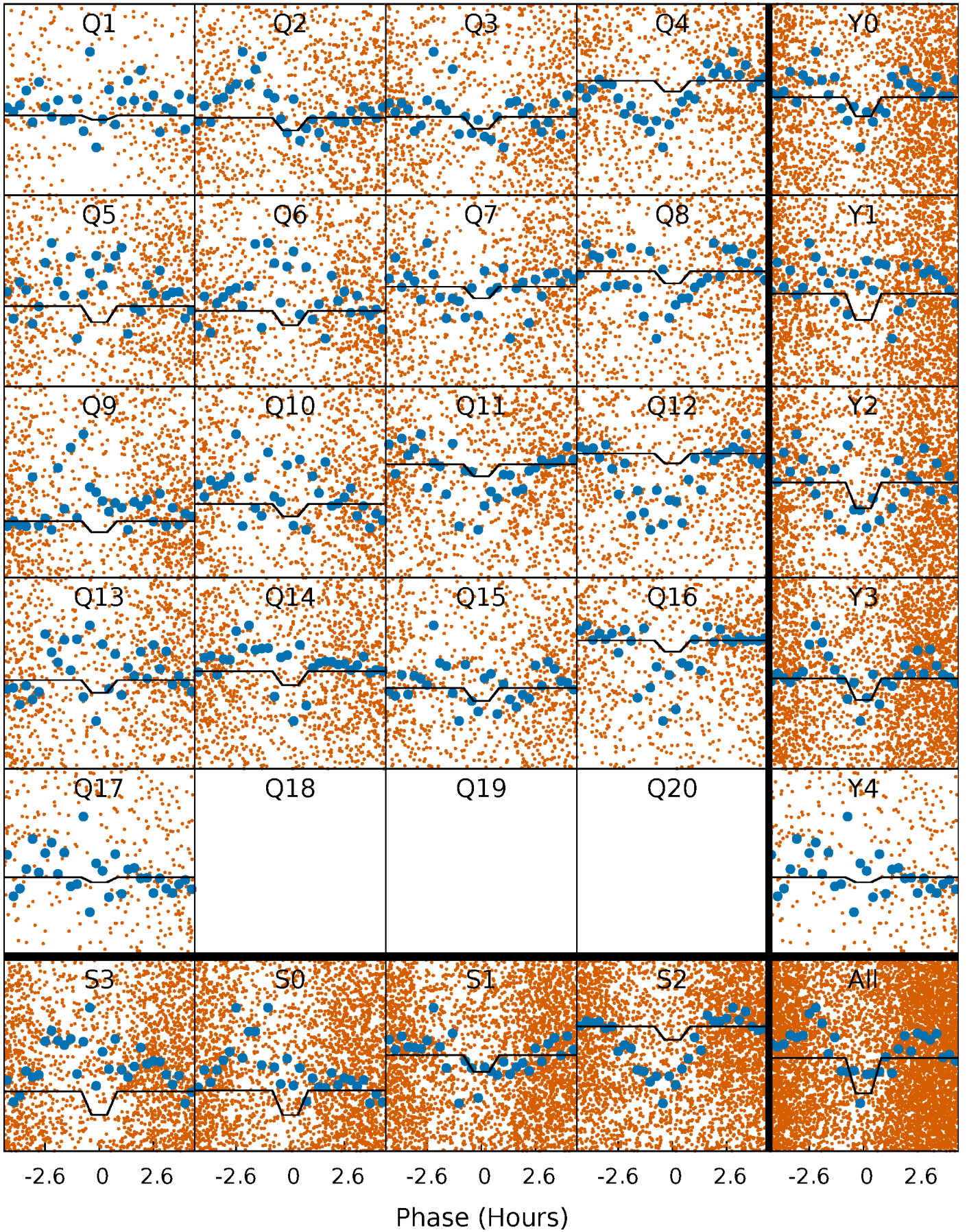
DV Quarter-Phased Transit Curves

TCE 005037710-01 P= 0.734621 Days $T_0=131.687323$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

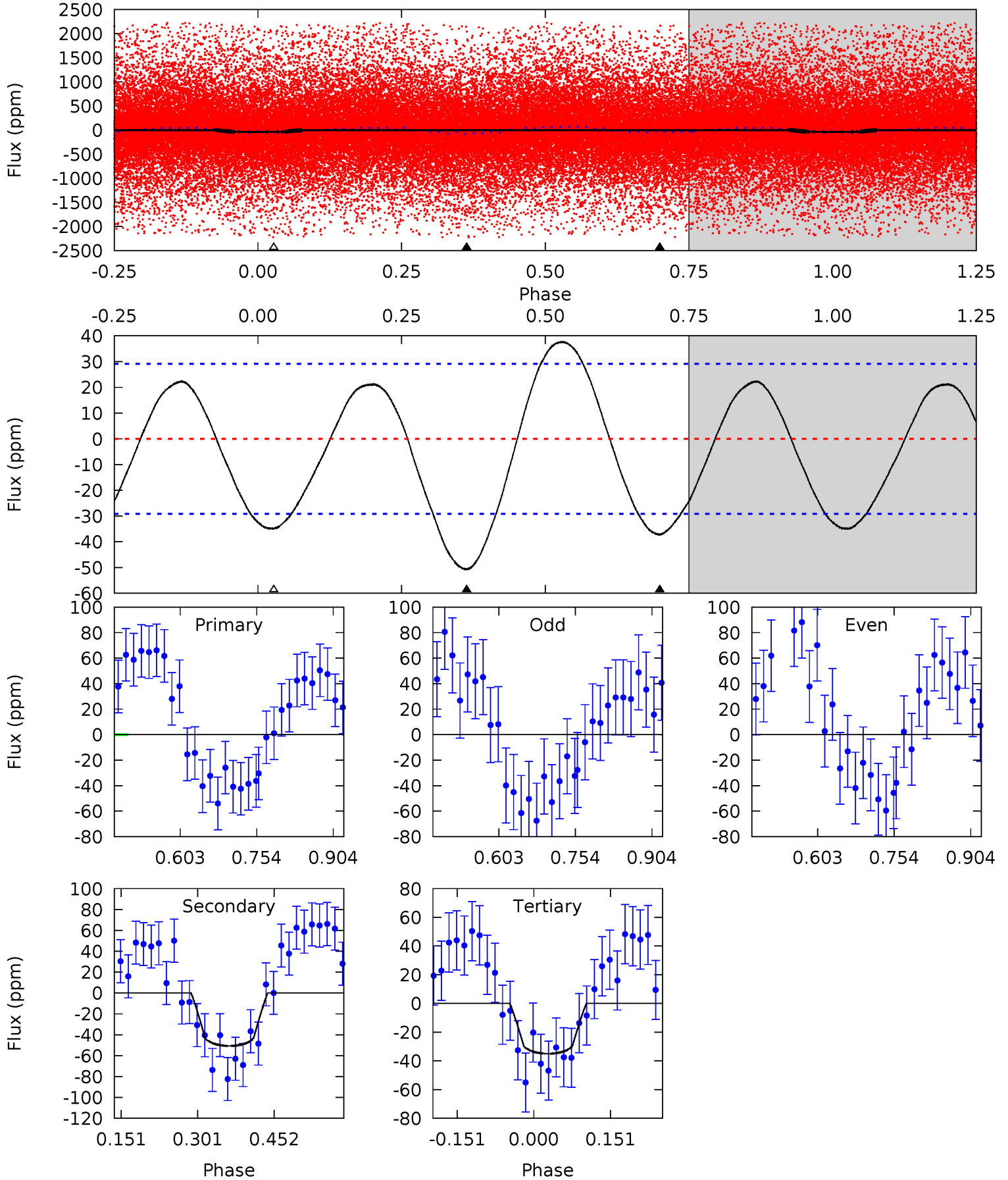
TCE 005037710-01 P= 0.734657 Days $T_0=131.688464$ (BKJD)



DV Model-Shift Uniqueness Test

005037710-01, P = 0.734621 Days, E = 130.952702 Days

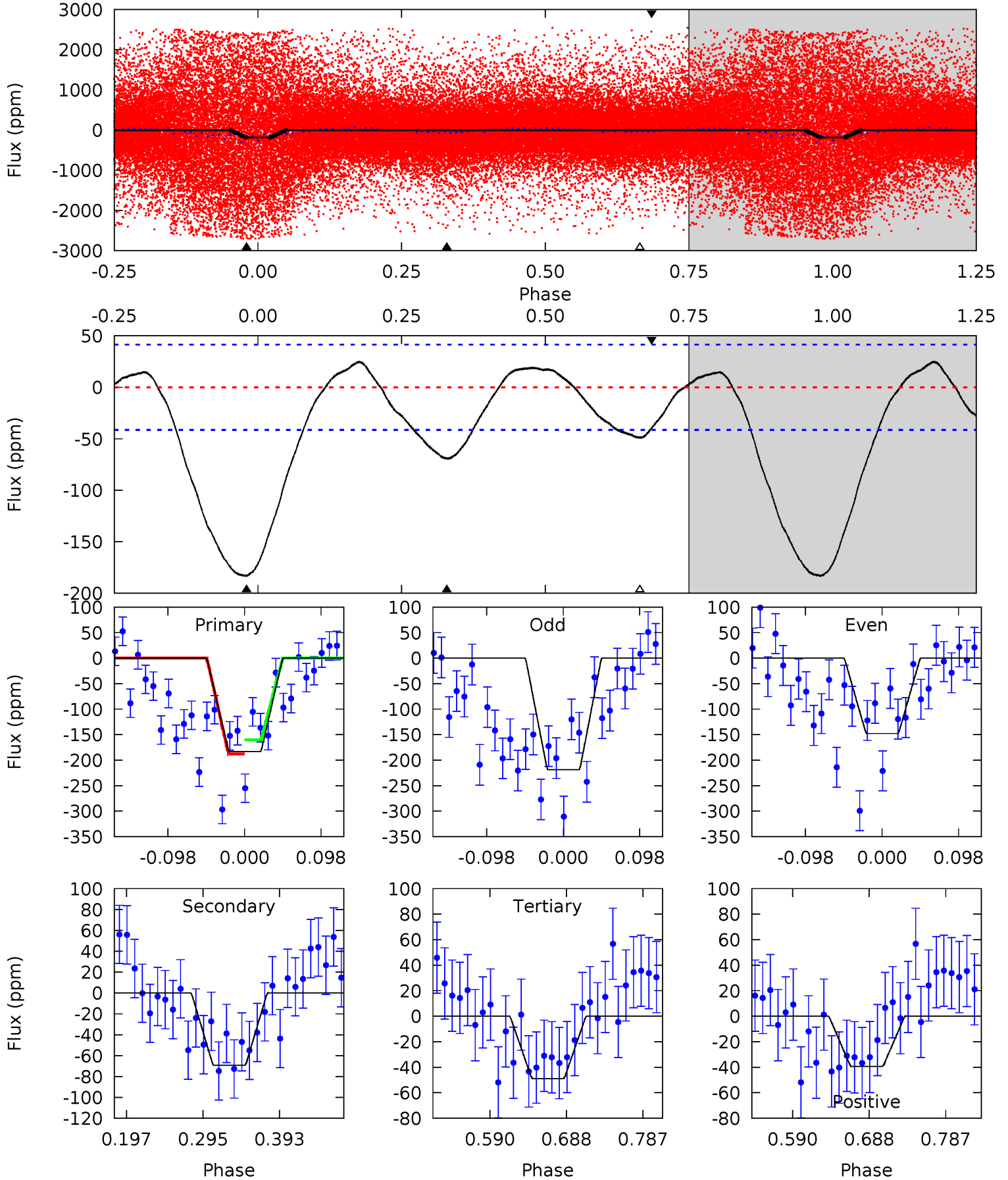
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.73	7.79	5.38	0	4.48	1.44	3.53	0.35	5.73	2.42	7.79	2.87	0.54	0.43	0.75



Alt Model-Shift Uniqueness Test

005037710-01, P = 0.734657 Days, E = 130.953807 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.2	7.64	5.39	-4.34	4.57	1.65	2.69	14.8	24.5	2.25	12.0	3.92	0.30	0.12	1.53



Stellar Parameters For KIC 005037710

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7794^{+214}_{-349}	$4.096^{+0.131}_{-0.160}$	$0.070^{+0.200}_{-0.400}$	$1.975^{+0.514}_{-0.420}$	$1.774^{+0.170}_{-0.291}$	$0.324^{+0.220}_{-0.154}$
	+3%/-4%	+3%/-4%	+286%/-571%	+26%/-21%	+10%/-16%	+68%/-47%
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 005037710-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-51 ± 7	$0.95^{+0.56}_{-0.54}$	4874^{+340}_{-316}	10656^{+14532}_{-2894}	11^{+51}_{-7}
Alt.	-69 ± 9	$1.76^{+0.61}_{-0.65}$	4866^{+350}_{-316}	7716^{+2819}_{-1274}	$4.516^{+6.327}_{-2.002}$

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 $A_{obs} \gg 1.0$

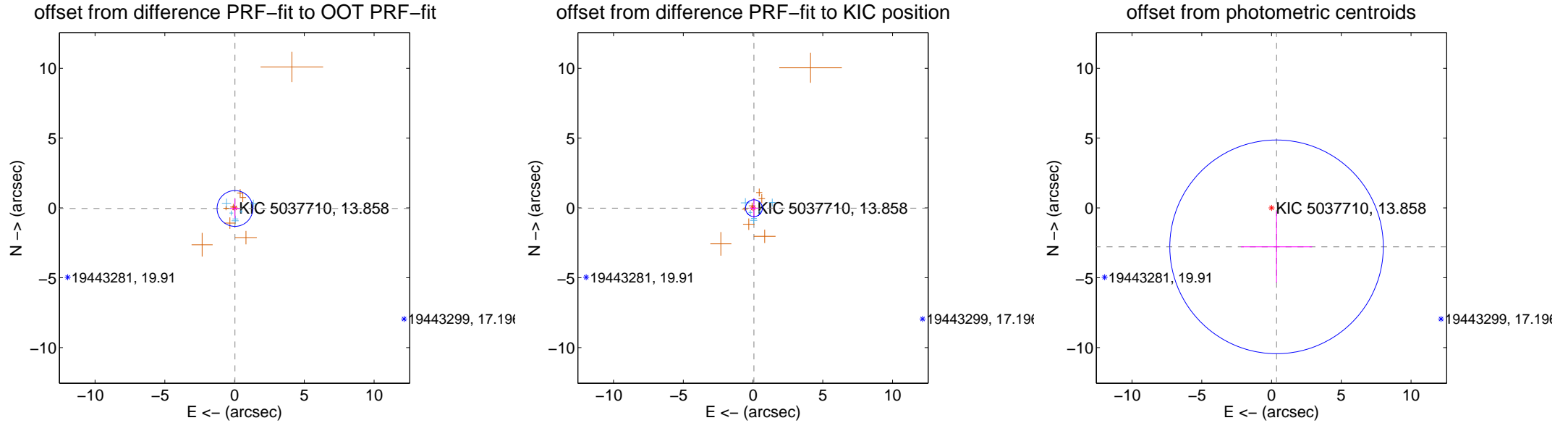
DV Centroid Data

Supplemental centroid analysis for 005037710-01. Kepler magnitude: 13.86. Transit SNR 2.10

There are 8 quarters with good PRF difference image offsets

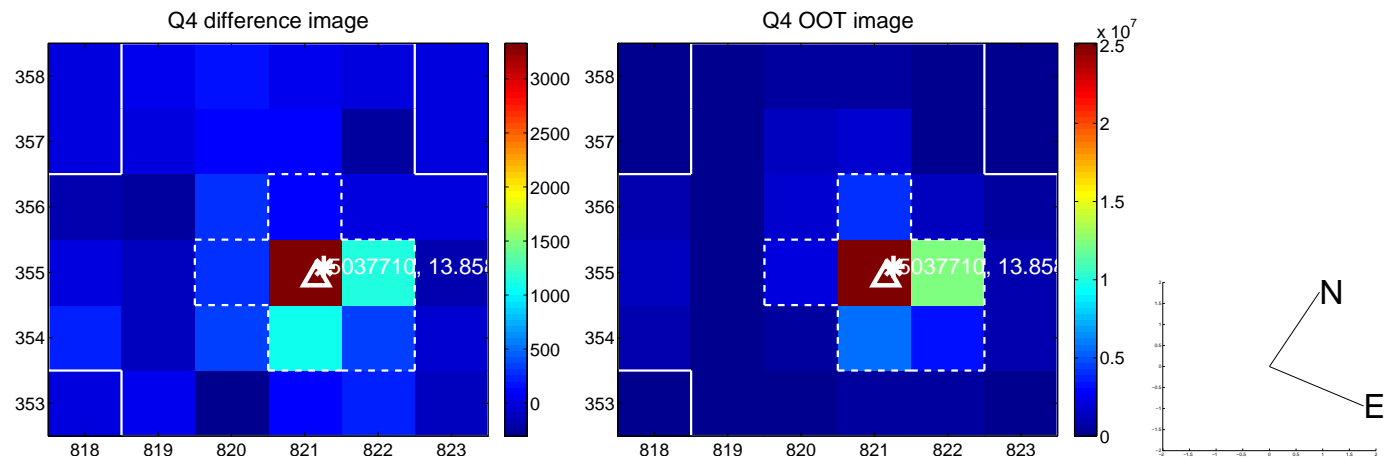
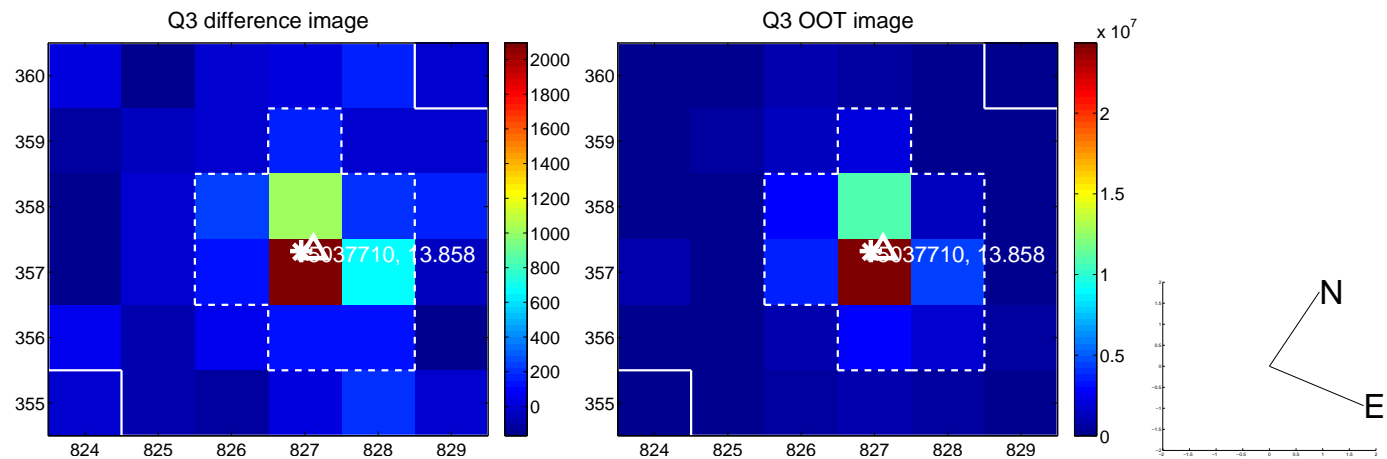
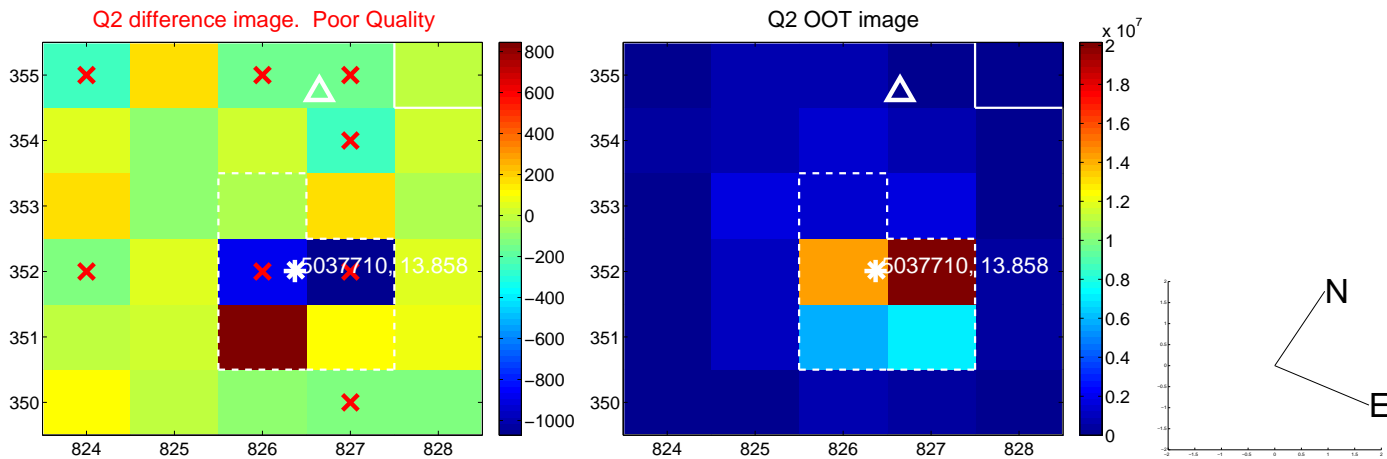
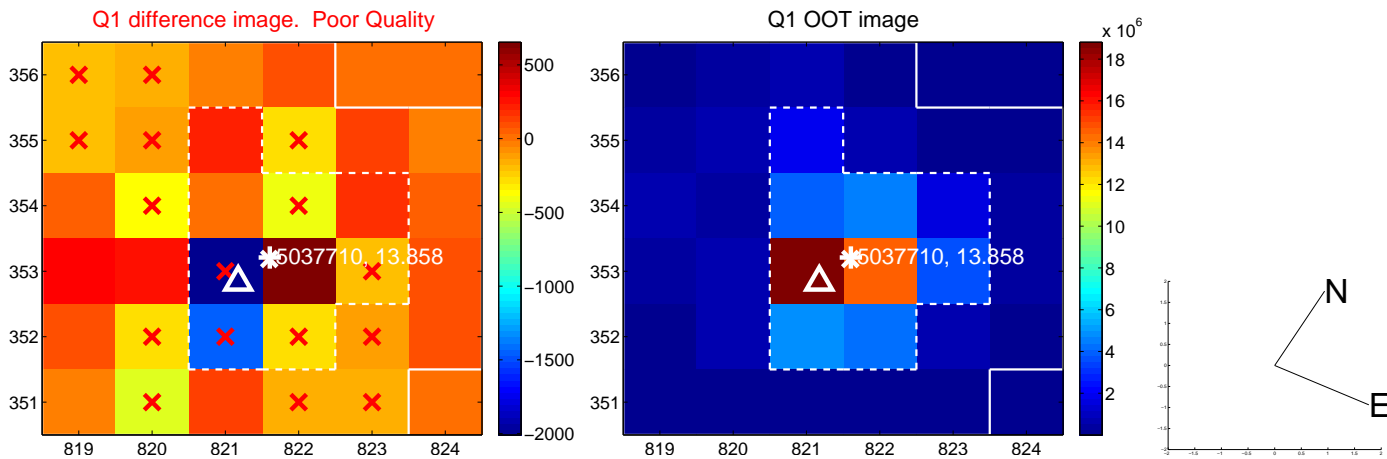
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.046 ± 0.427	0.11	-0.027 ± 0.340	-0.038 ± 0.707
PRF-fit source offset from KIC position	0.066 ± 0.200	0.33	-0.064 ± 0.328	-0.016 ± 0.706
photometric centroid source offset	2.81 ± 2.55	1.10	-0.36 ± 2.55	-2.78 ± 2.55

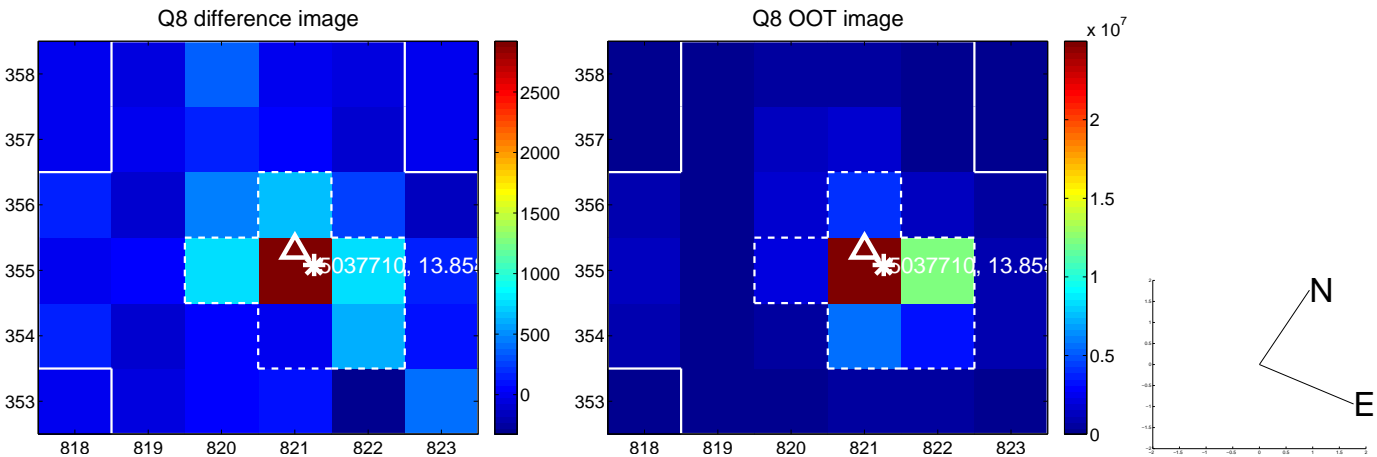
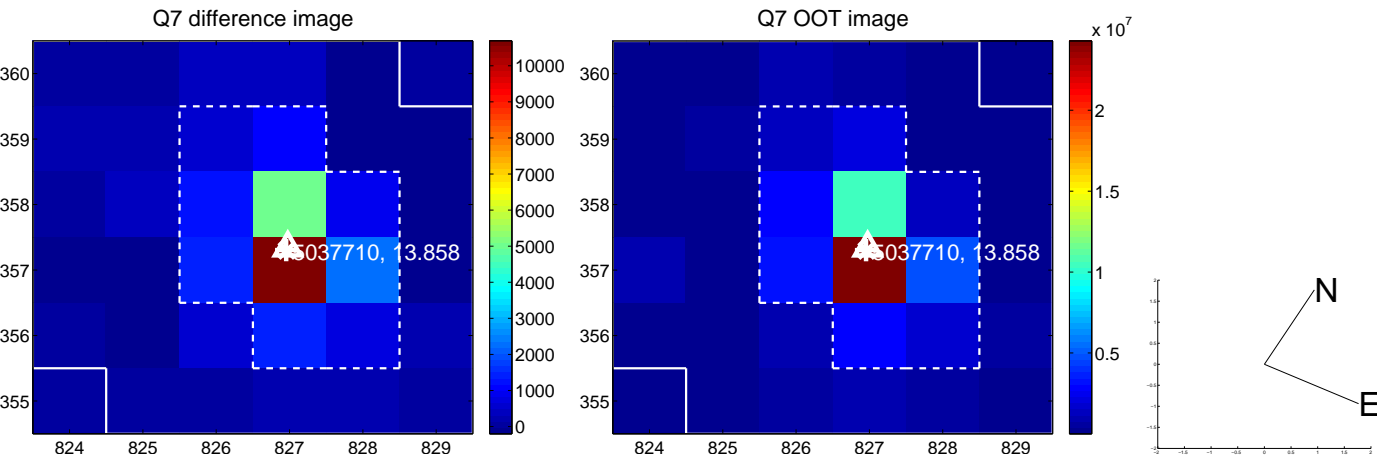
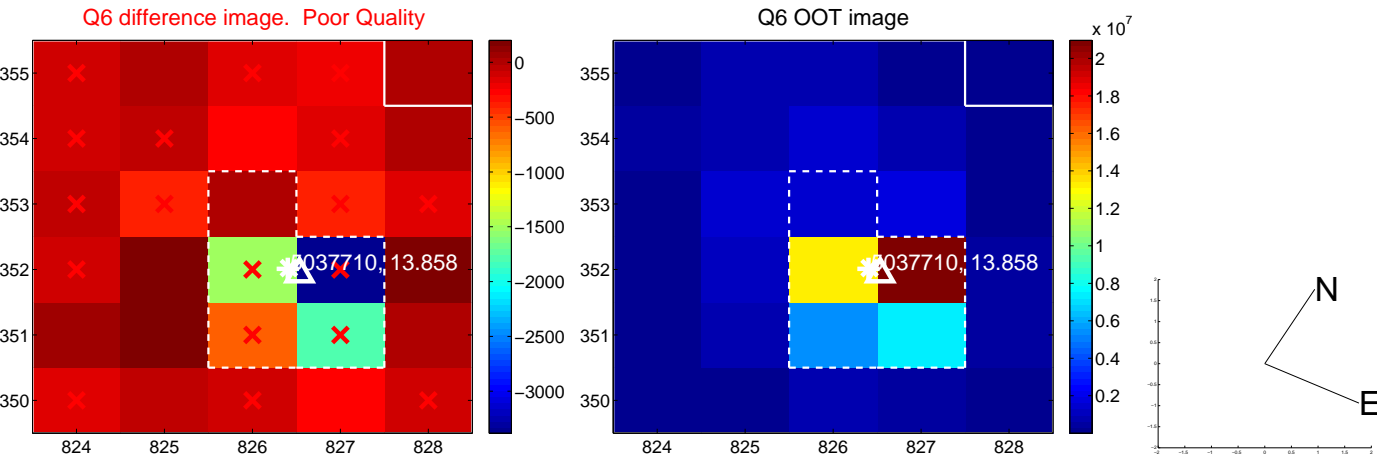
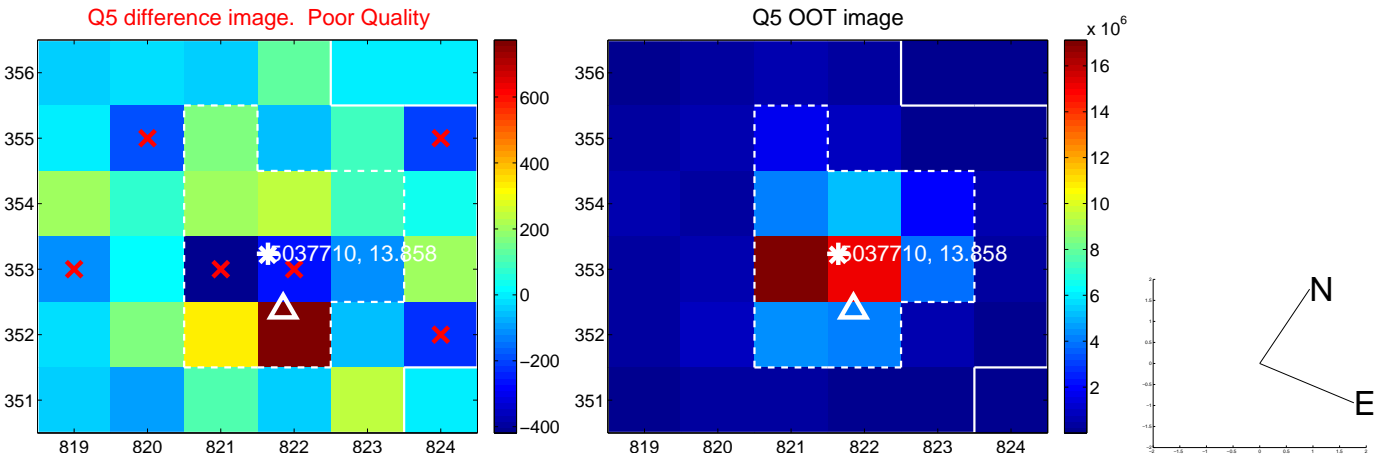


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

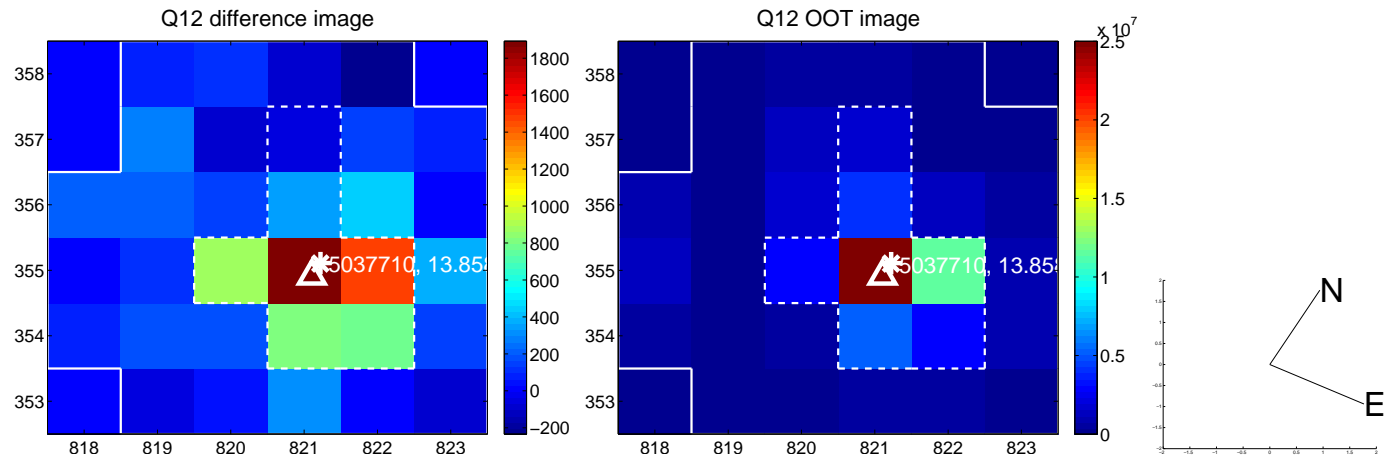
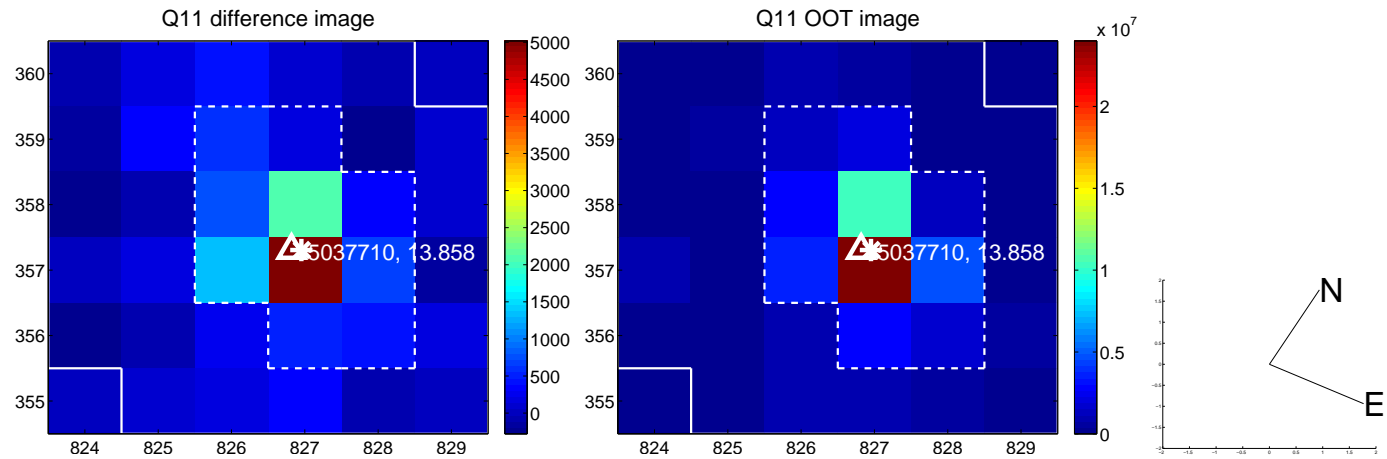
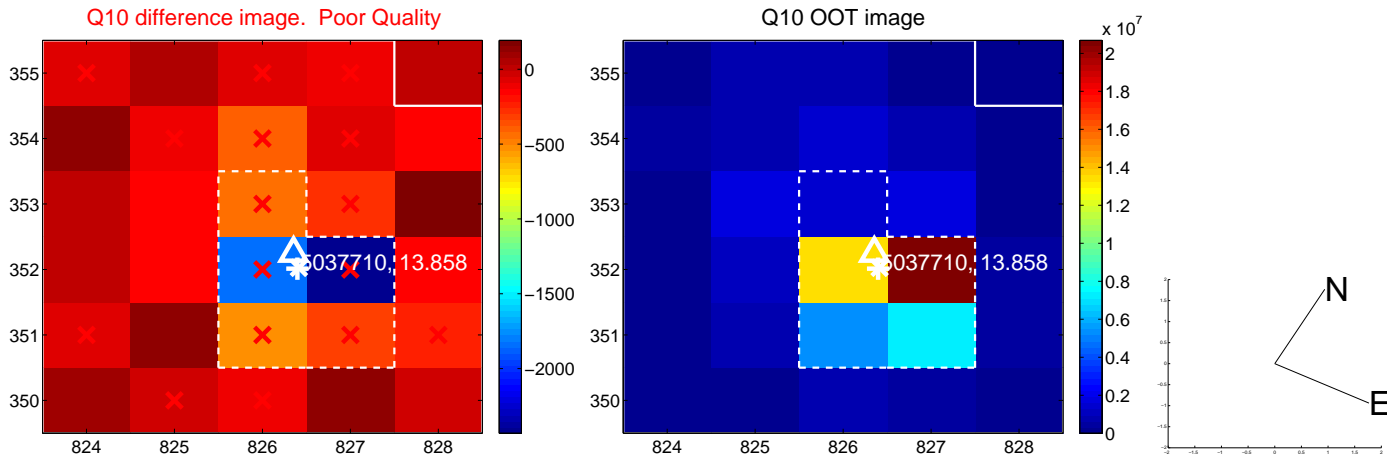
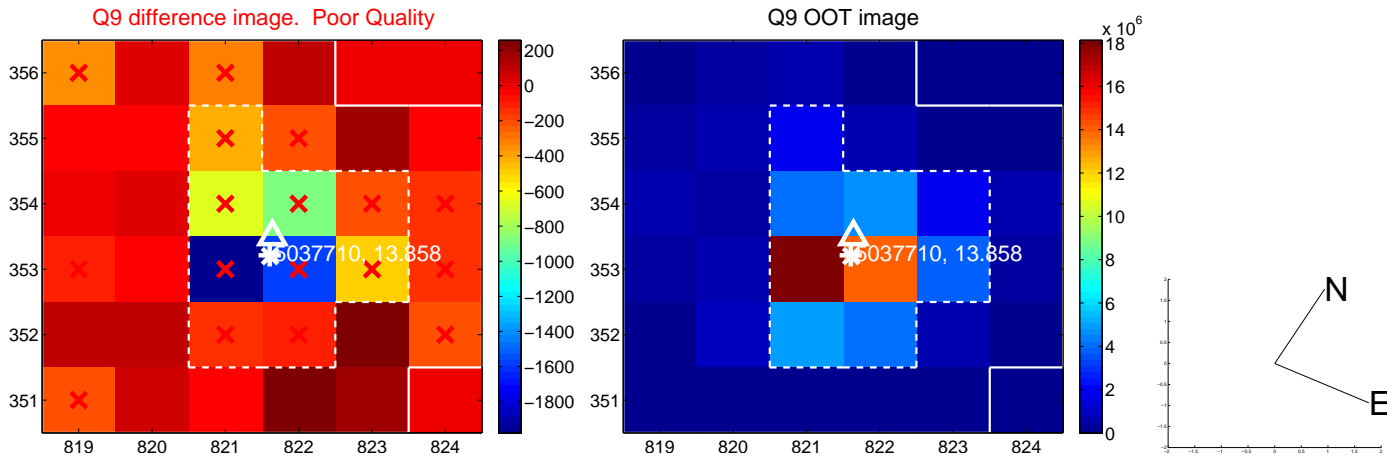
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



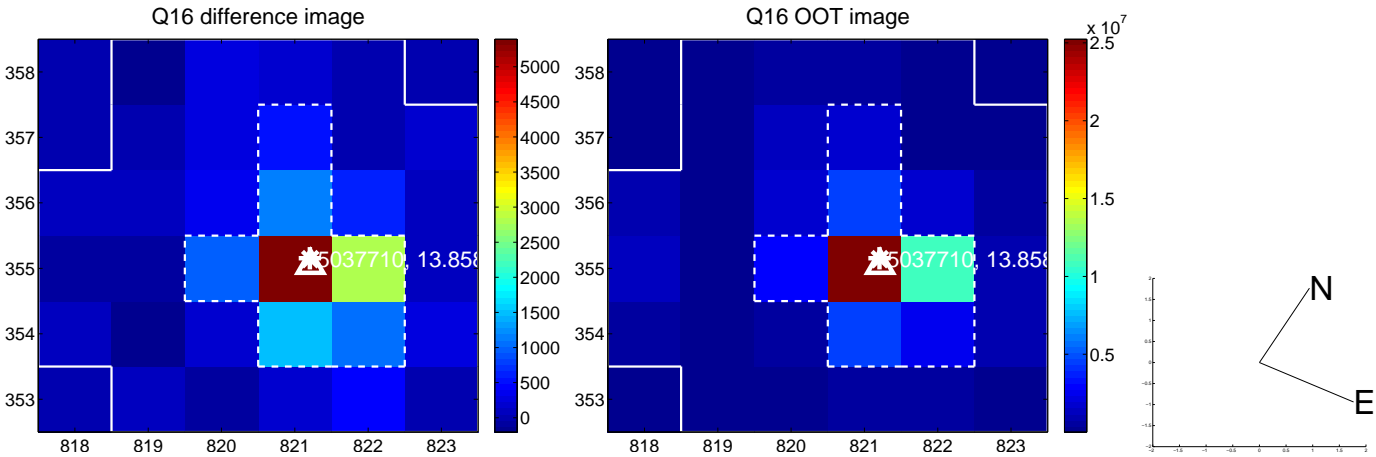
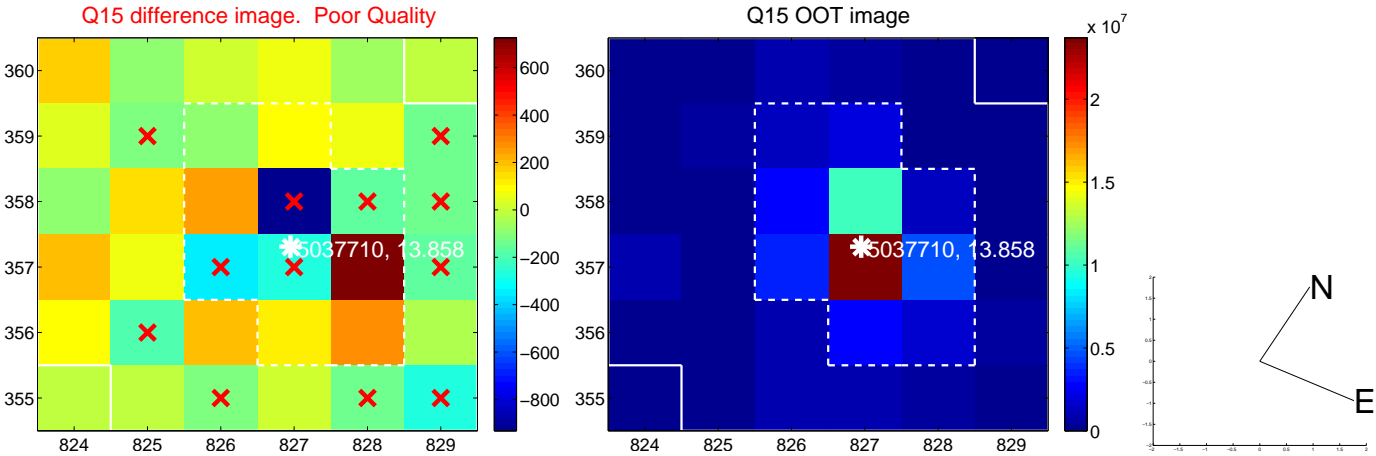
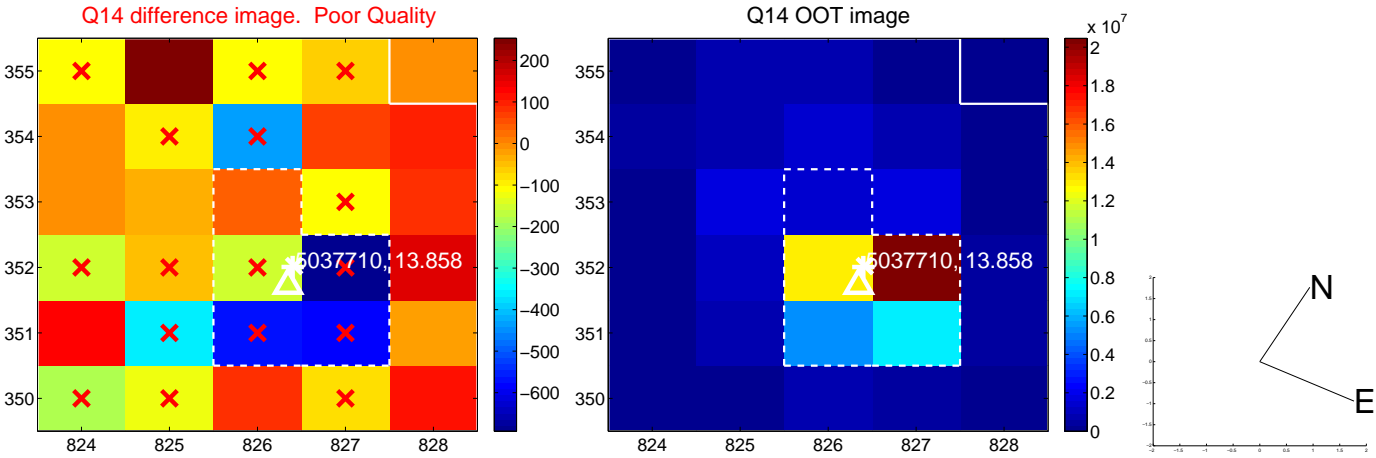
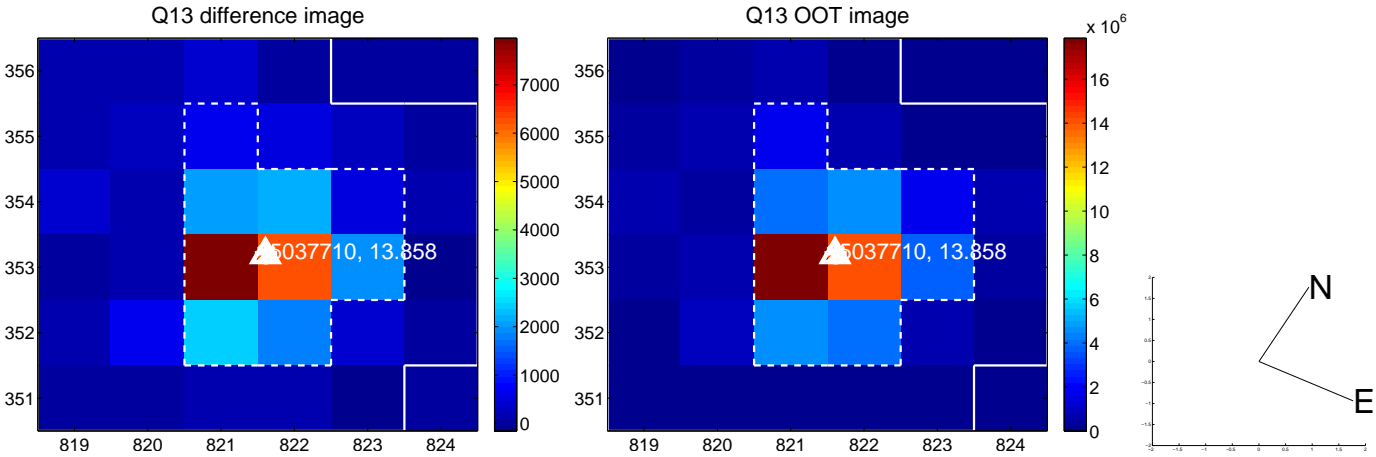
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



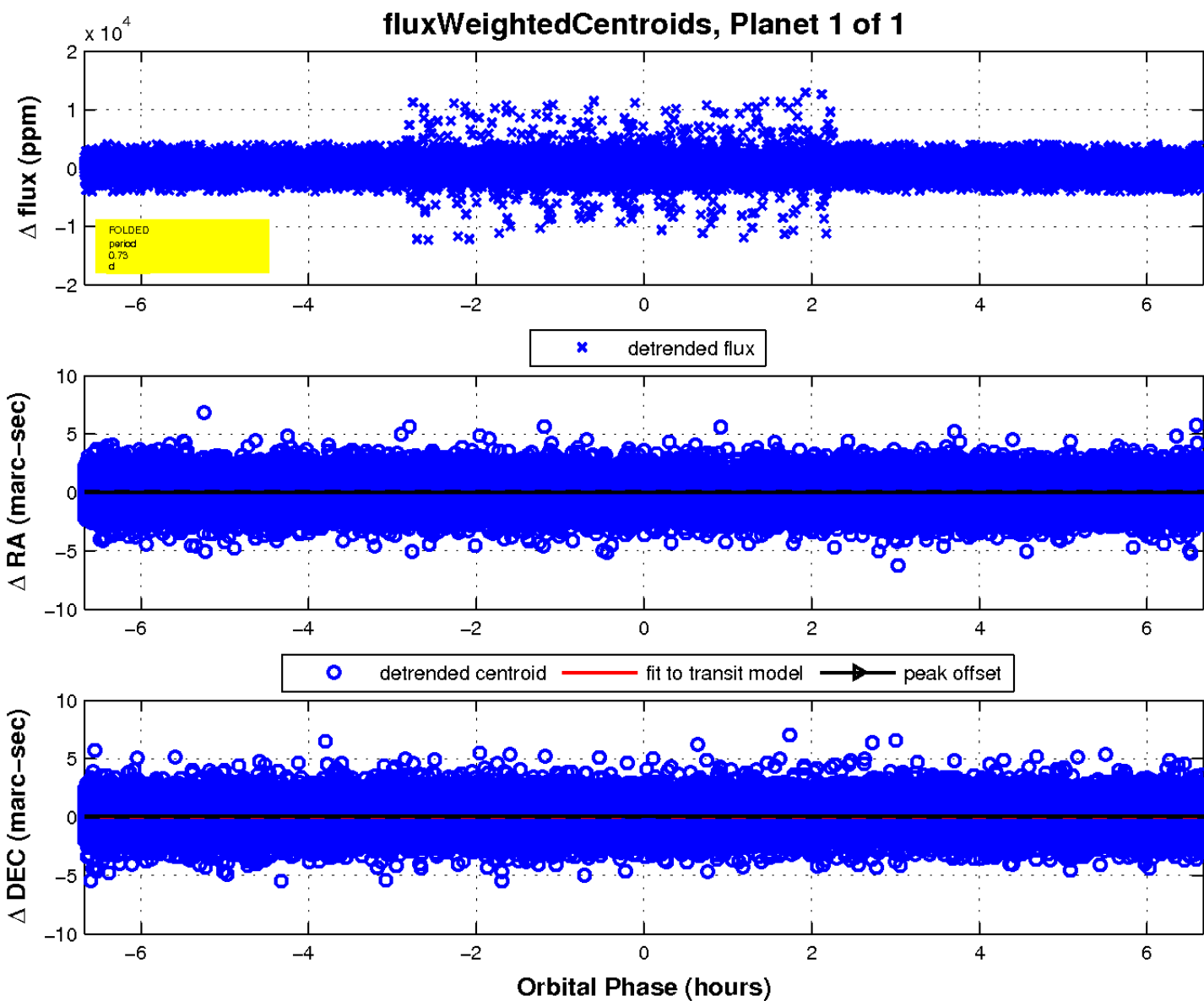
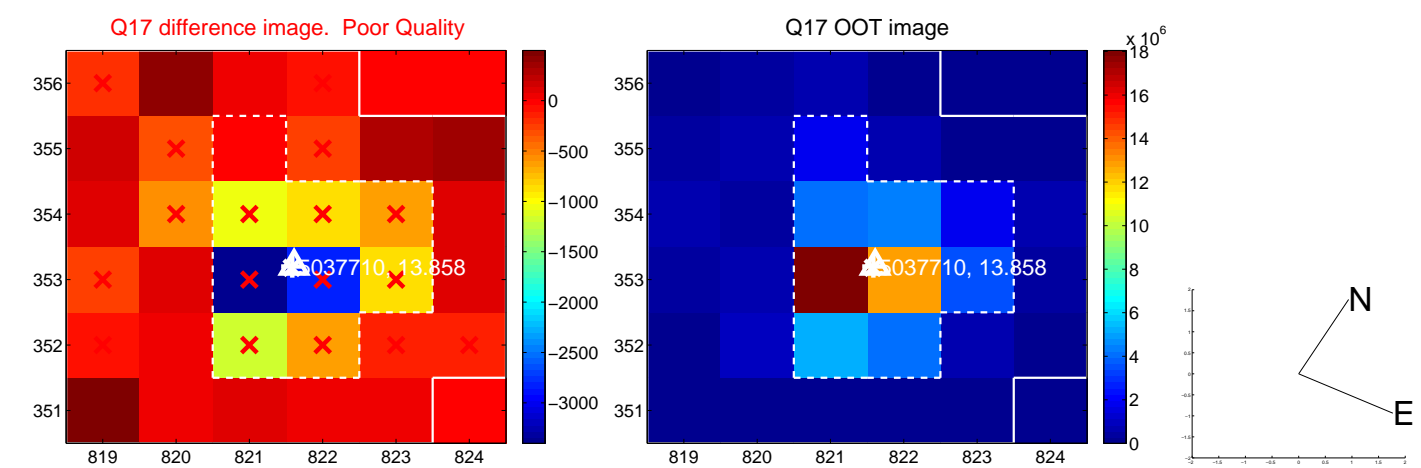
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

