

KIC 007743830

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})
007743830-01	OBS	No	0.562216	131.956245	12.4	2.196	10.1	1.5	0.51	3787	0.18	412.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007743830-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

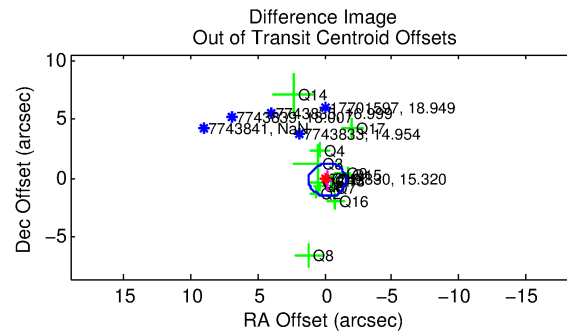
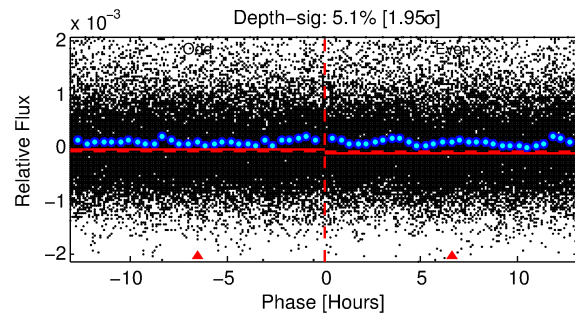
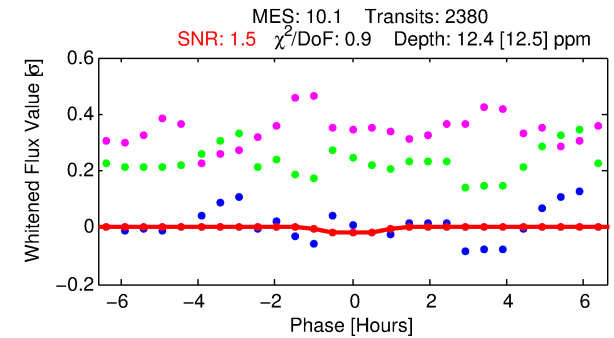
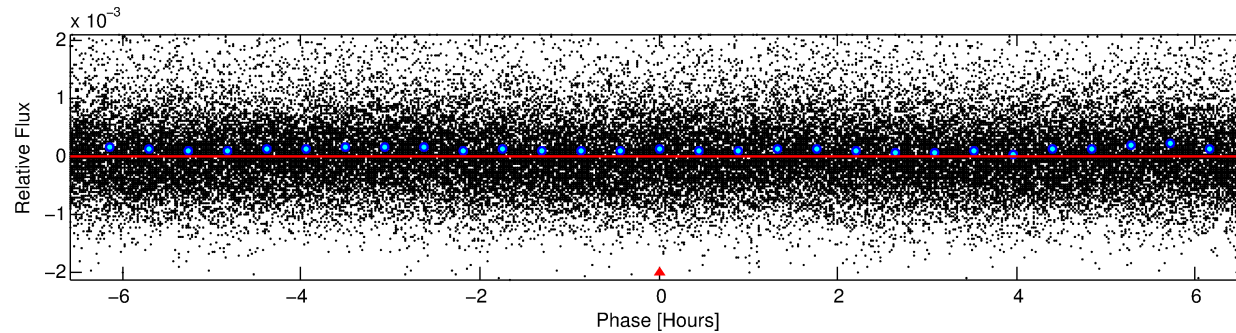
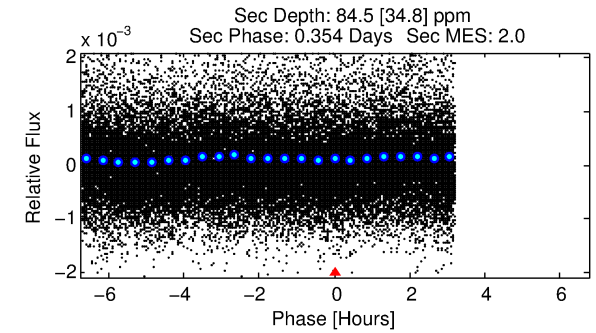
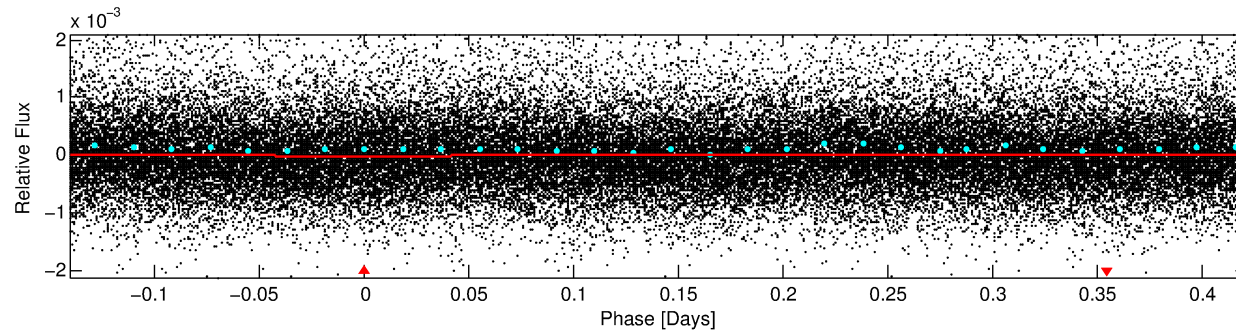
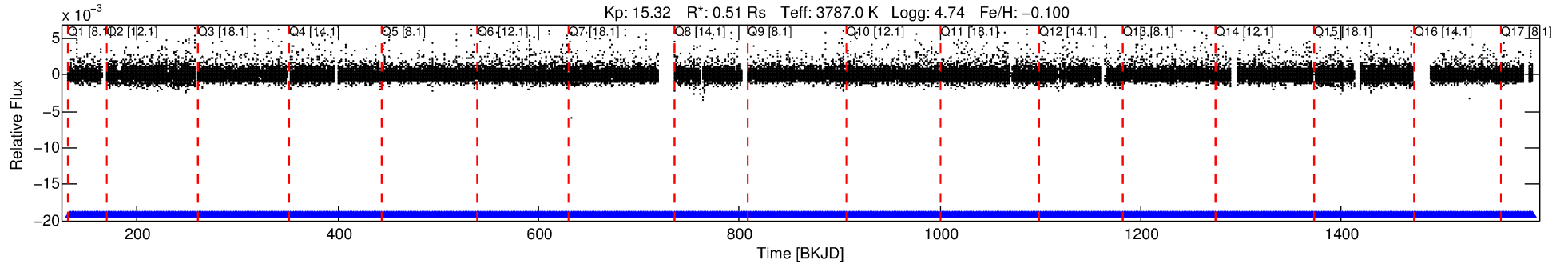
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007743830-01

No Significant Match Found

DV One-Page Summary

KIC: 7743830 Candidate: 1 of 1 Period: 0.562 d



DV Fit Results:

Period = 0.56222 [0.00007] d
Epoch = 131.9562 [0.0165] BKJD
Rp/R* = 0.0032 [0.0345]
a/R* = 2.05 [75.04]
b = 0.01 [4235.87]
Seff = 412.16 [44.22]
Teq = 1149 [31] K
Rp = 0.18 [1.90] Re
a = 0.0107 [0.0006] AU
Ag = 170.48 [3673.63] [0.05σ]
Teffp = 6419 [34580] K [0.15σ]

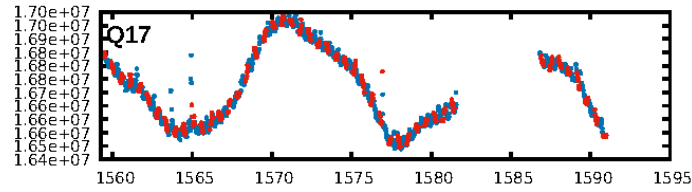
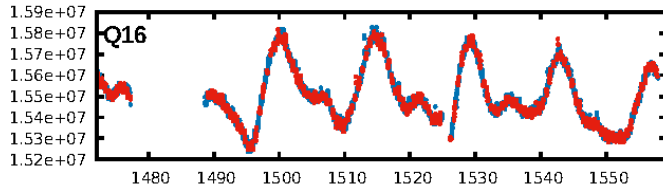
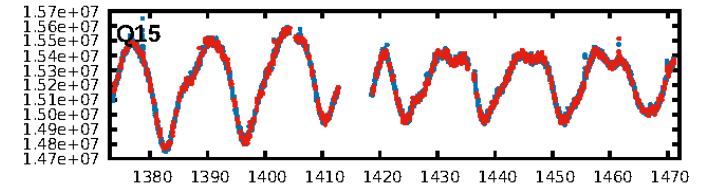
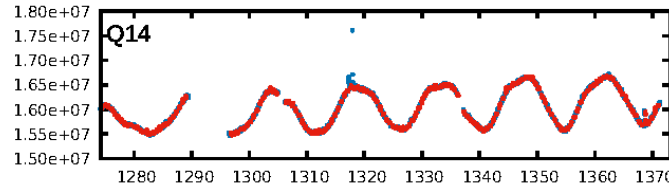
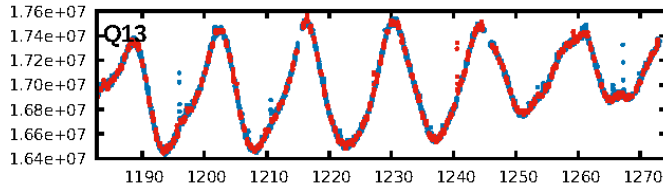
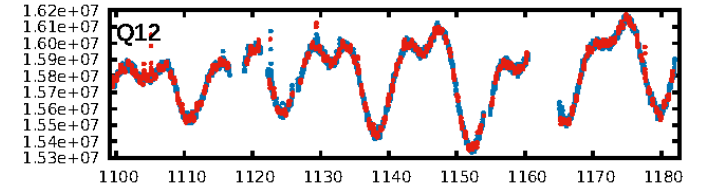
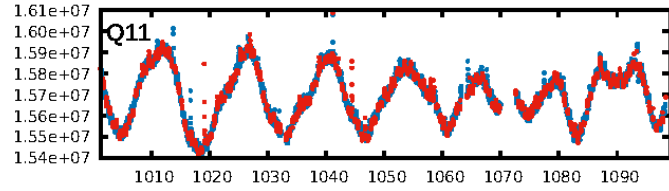
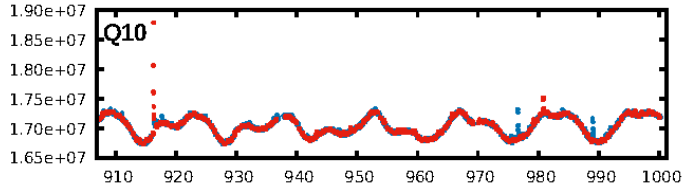
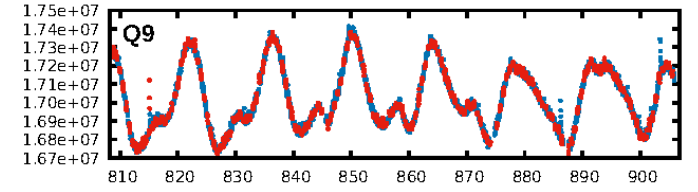
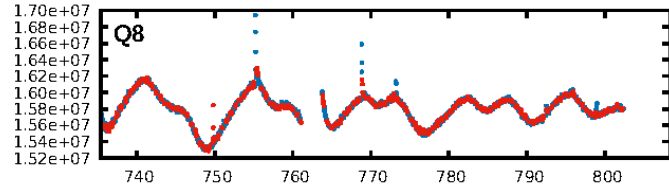
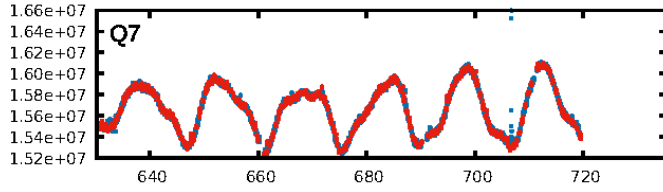
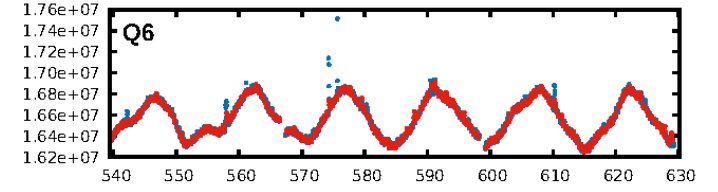
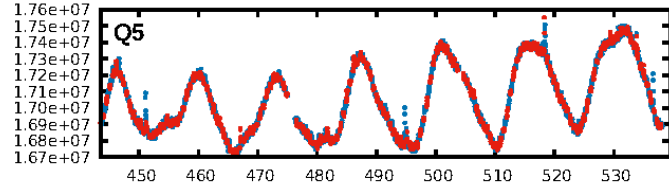
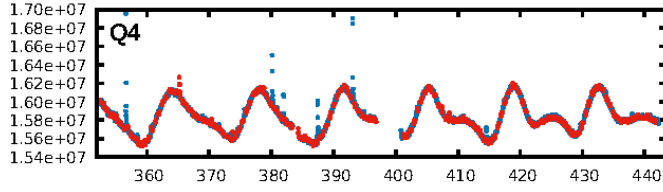
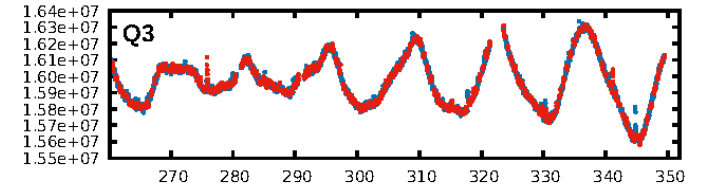
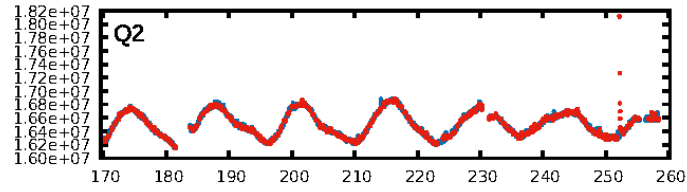
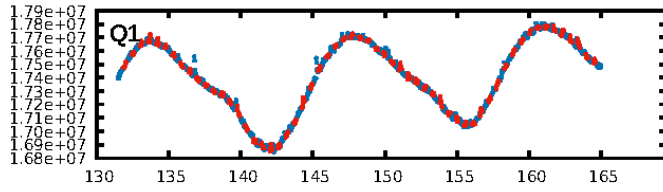
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.52e-21
RollingBand-fgt: 1.00 [2273/2273]
GhostDiagnostic-chr: -0.151
Centroid-sig: 26.2%
Centroid-so: 5.533 arcsec [0.93σ]
OotOffset-rm: 0.242 arcsec [0.52σ]
KicOffset-rm: 0.158 arcsec [0.21σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 1.00 [17/17]

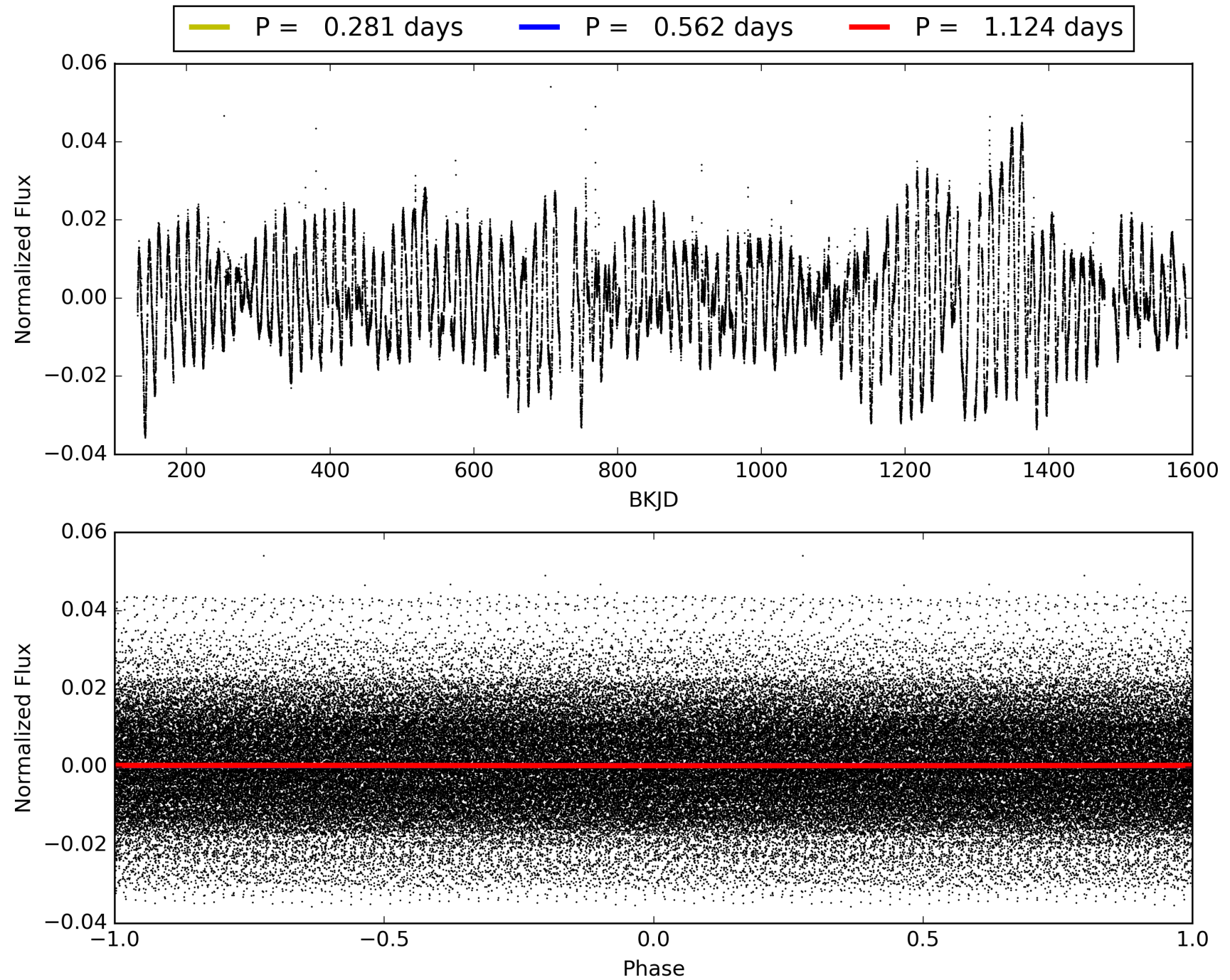
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:31:11 Z

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

TCE 007743830-01, PDC Light Curves

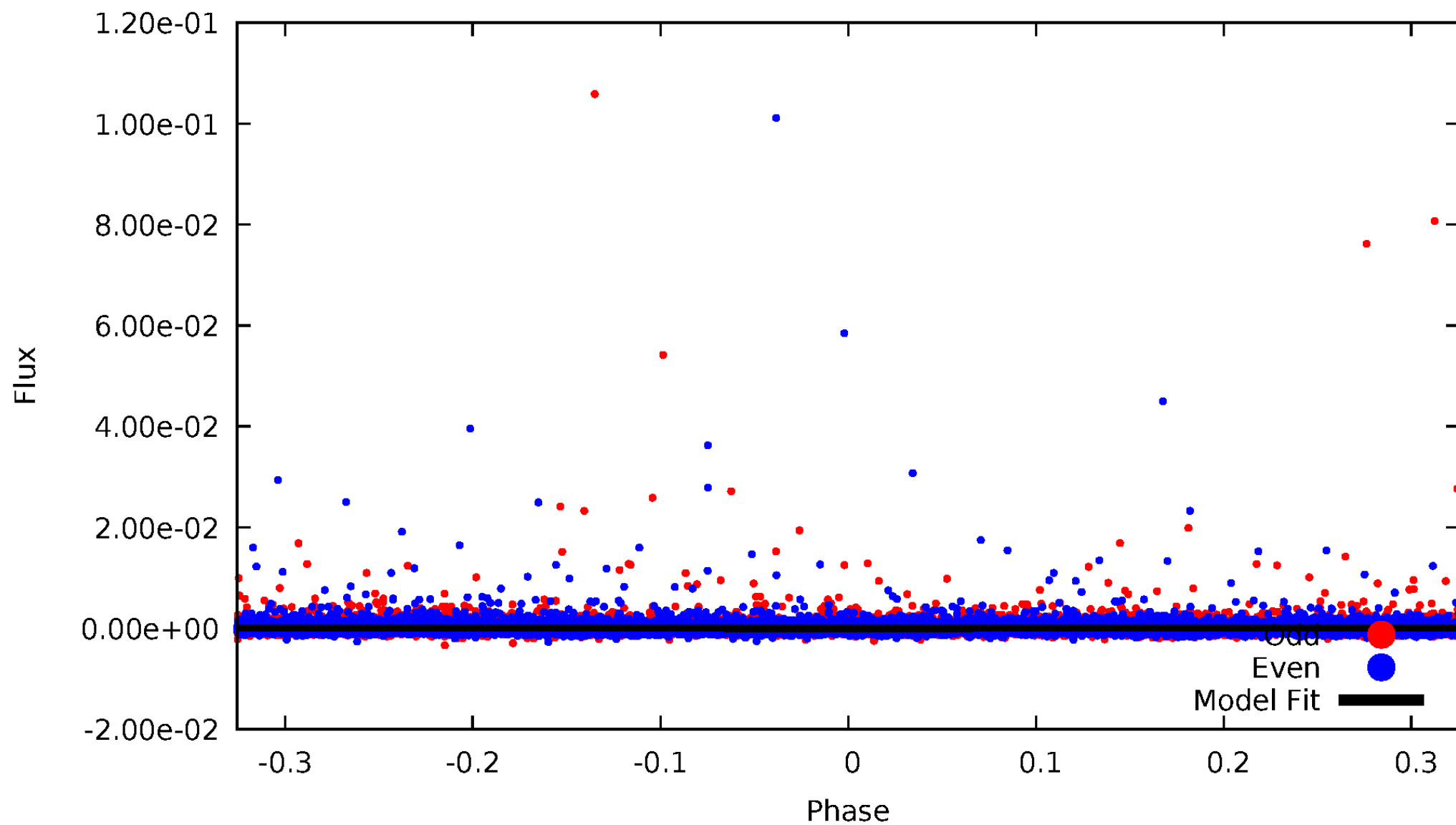


TCE 007743830-01



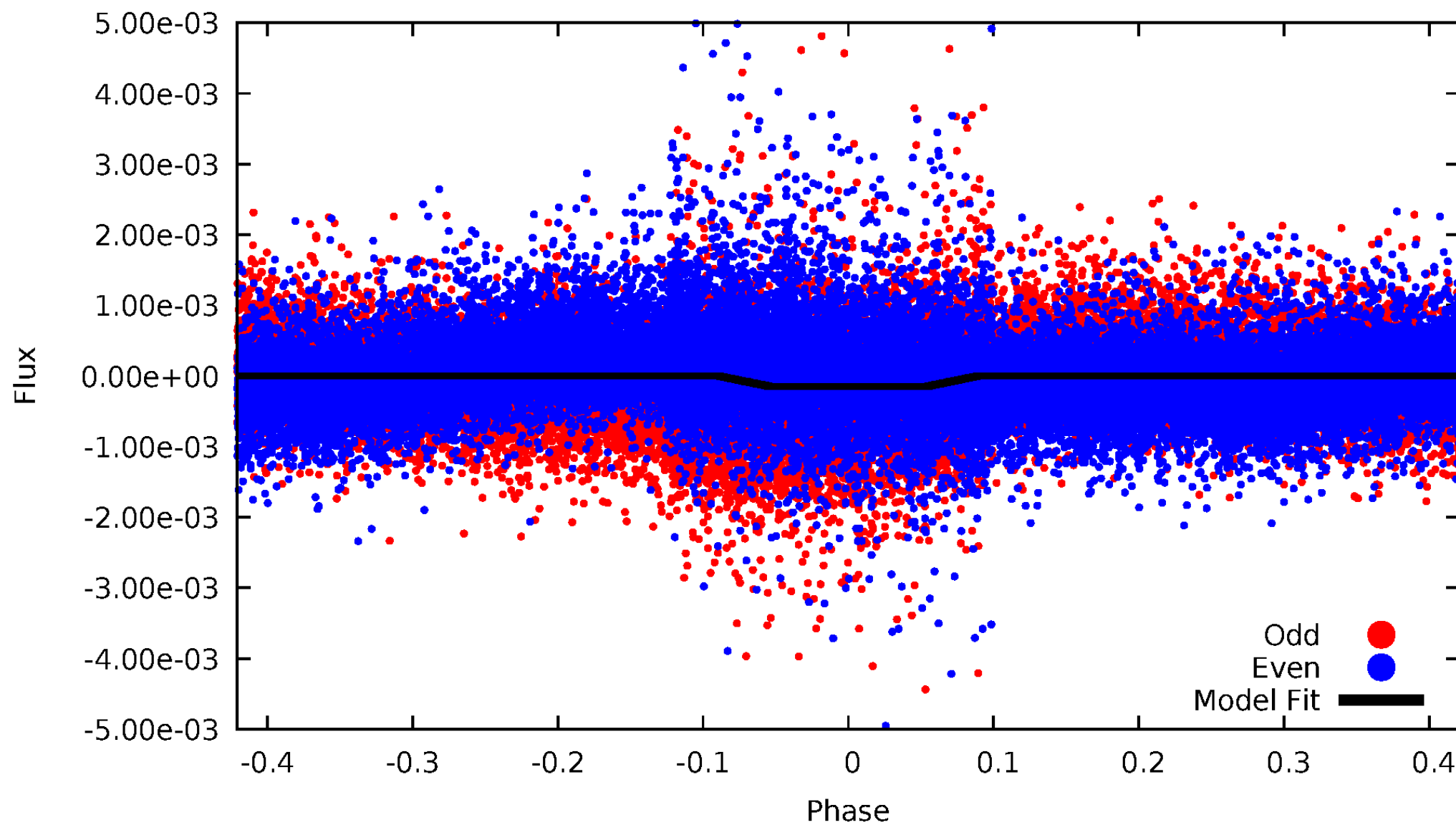
DV Odd/Even

TCE 007743830-01



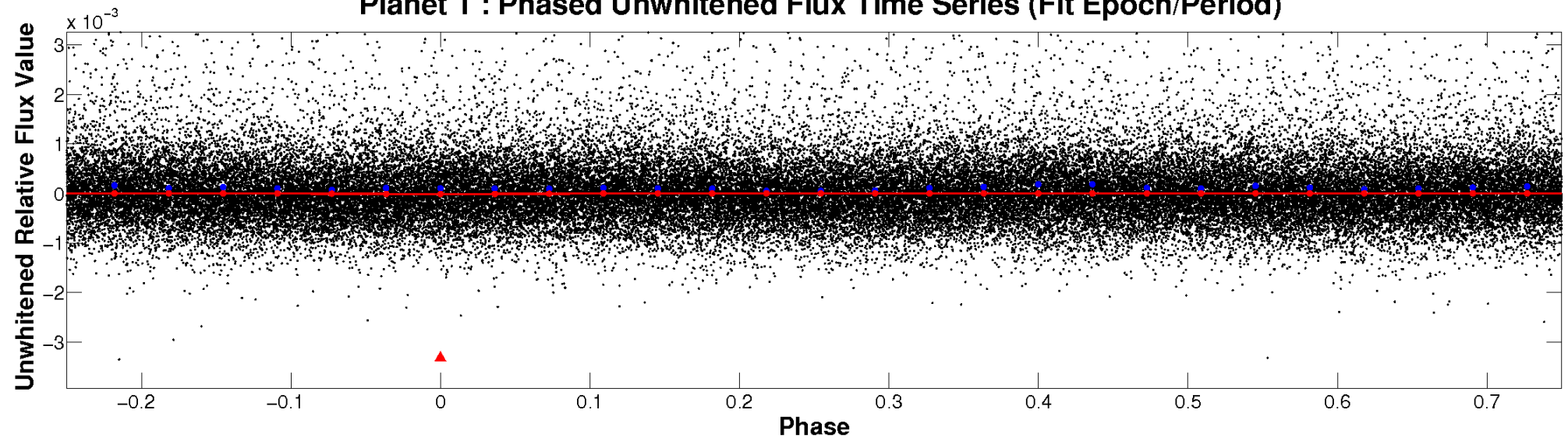
ALT Odd/Even

TCE 007743830-01

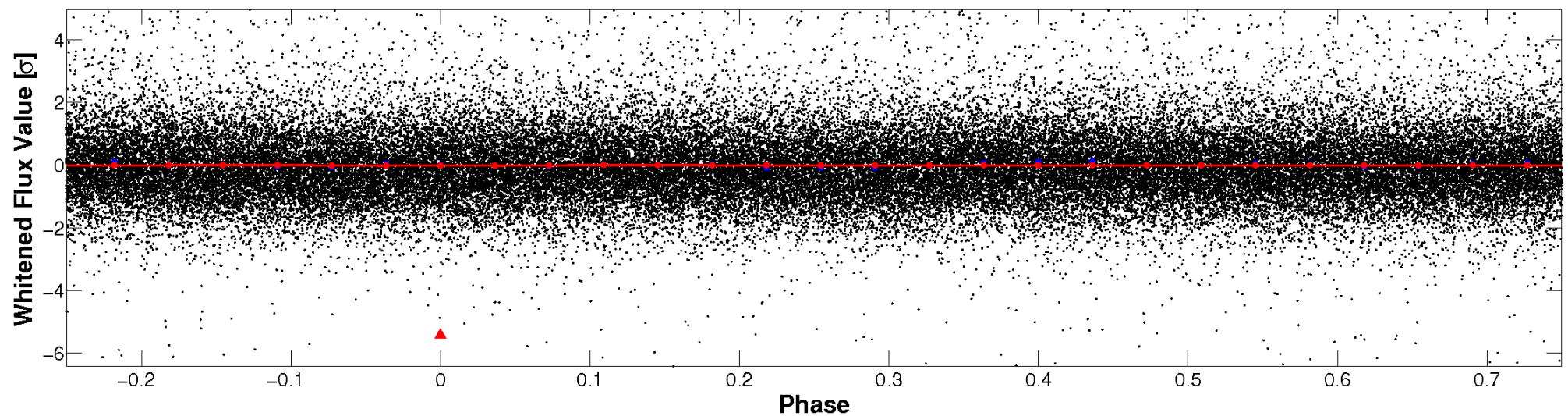


Non-Whitened Vs. Whitened Light Curve

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

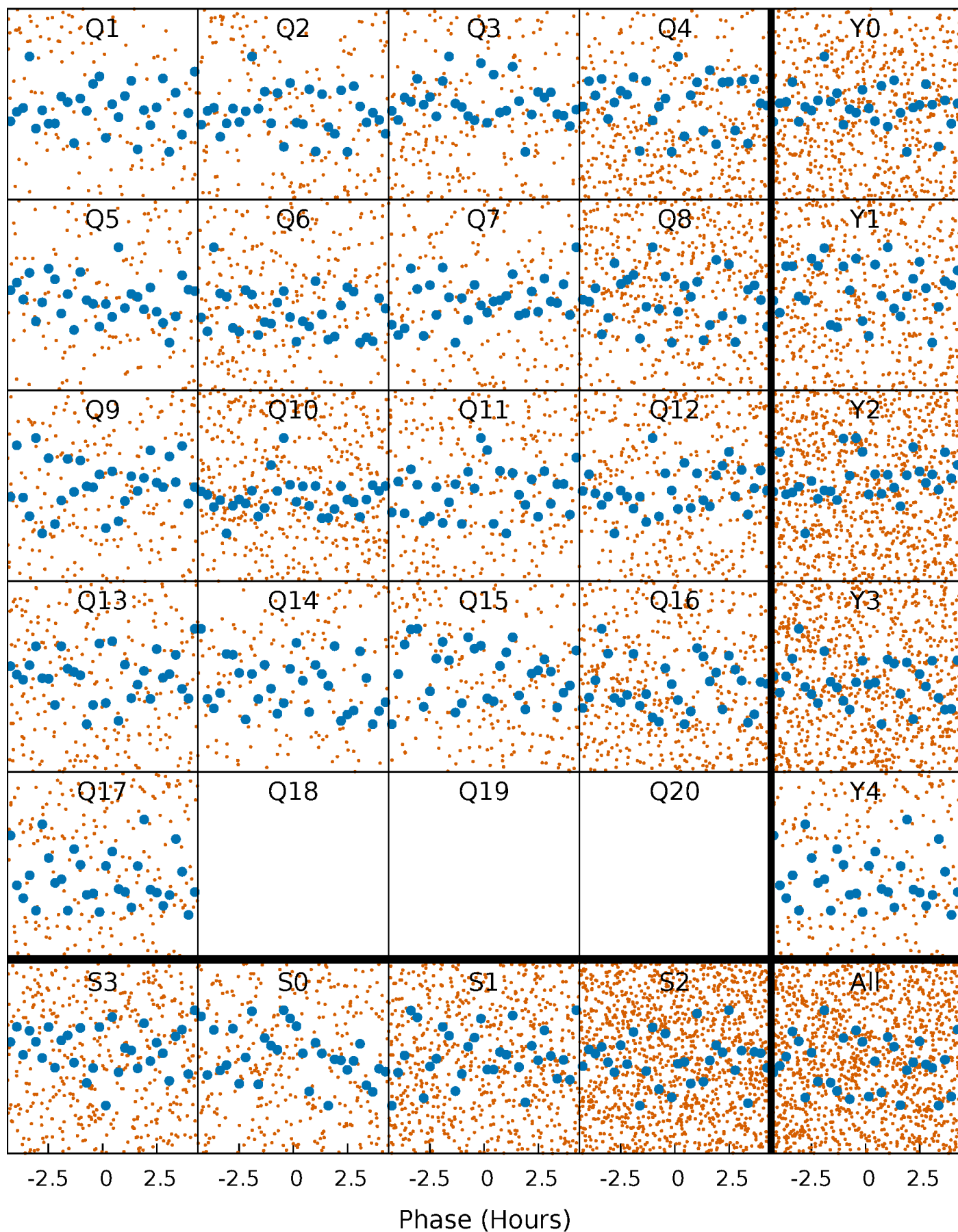


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



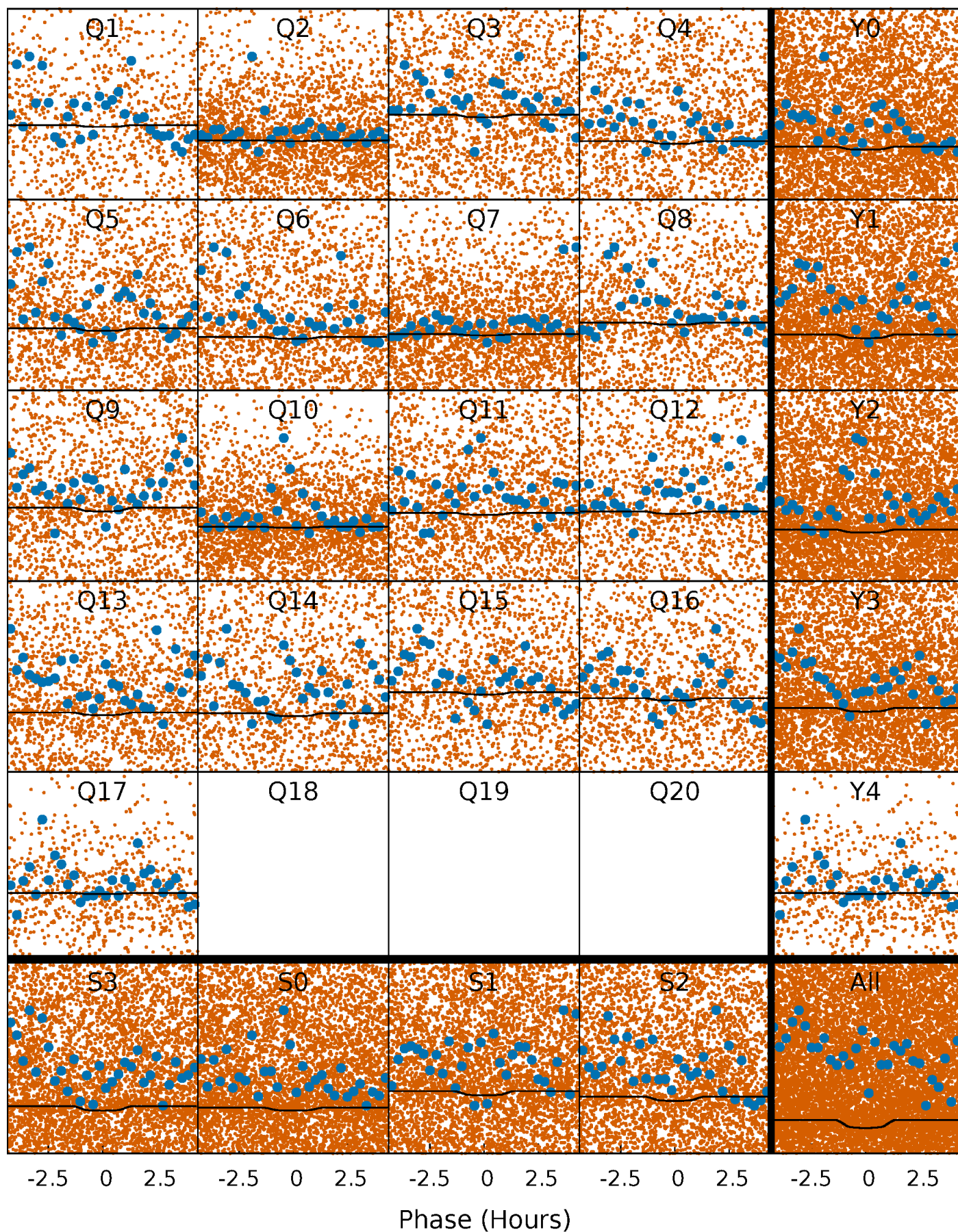
PDC Quarter-Phased Transit Curves

TCE 007743830-01 P= 0.562216 Days $T_0=131.956245$ (BKJD)



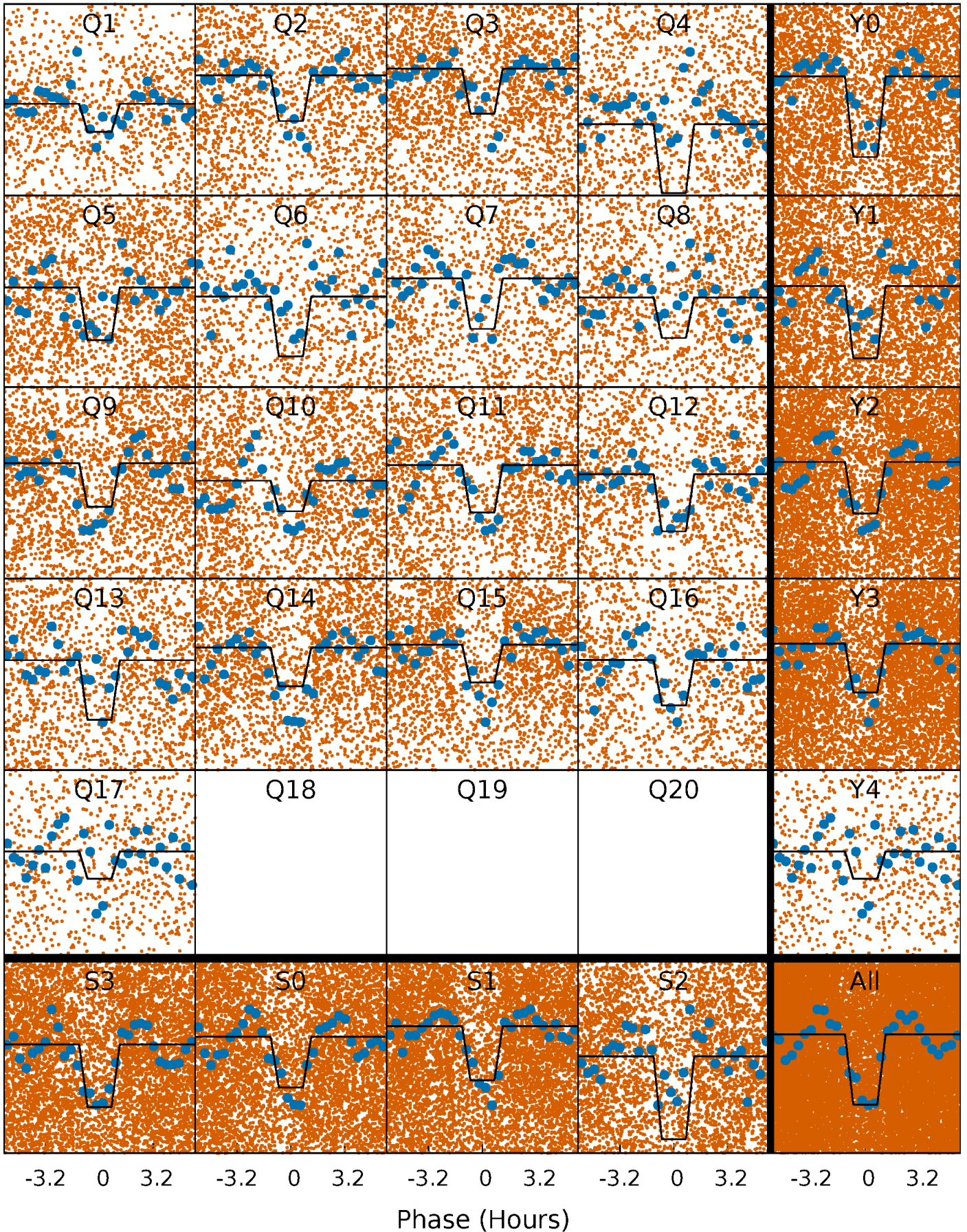
DV Quarter-Phased Transit Curves

TCE 007743830-01 P= 0.562216 Days $T_0=131.956245$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

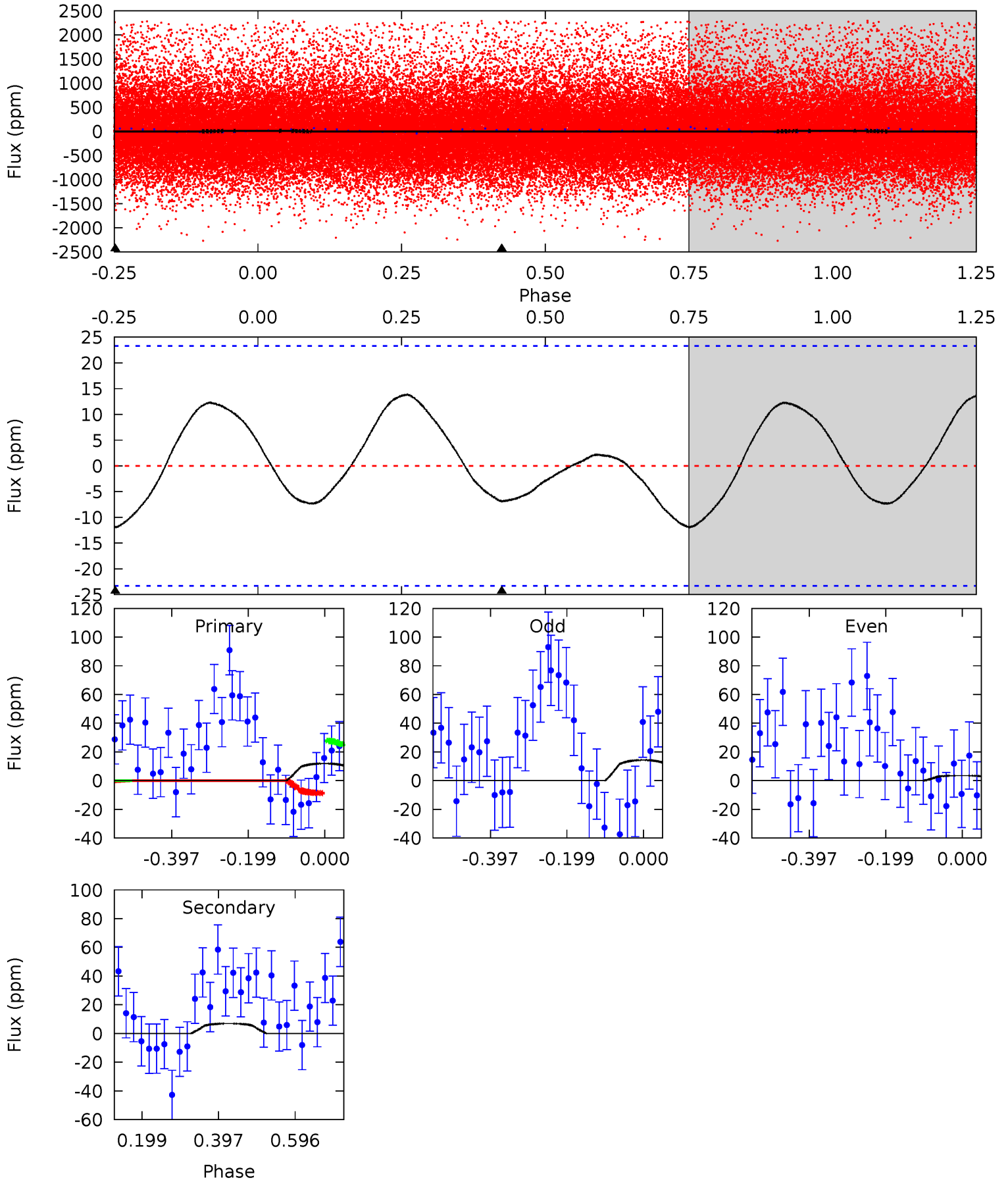
TCE 007743830-01 P= 0.562309 Days $T_0=131.887170$ (BKJD)



DV Model-Shift Uniqueness Test

007743830-01, P = 0.562216 Days, E = 131.394029 Days

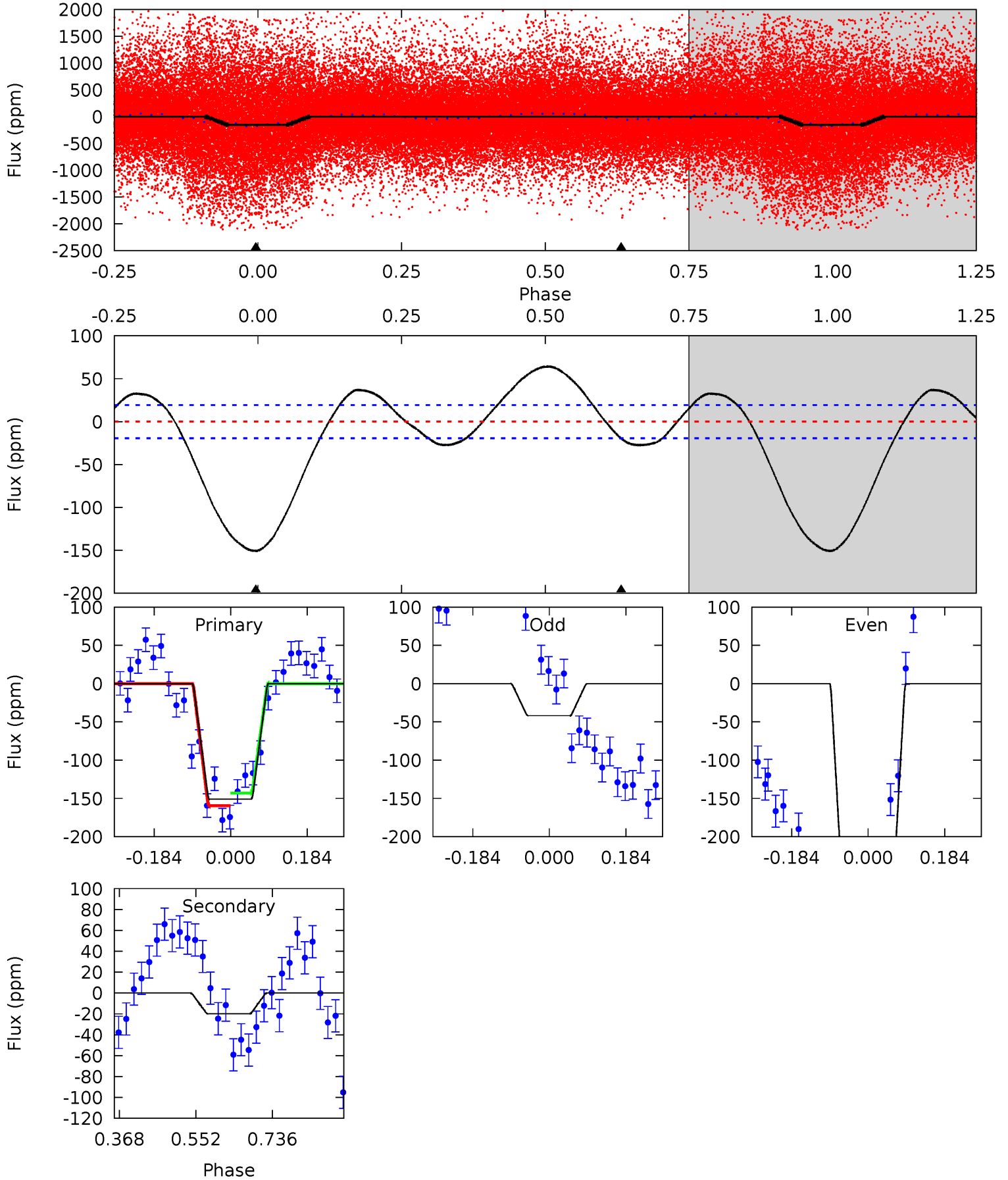
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.27	1.32	0	0	4.42	1.29	1.16	2.27	2.27	1.32	1.32	1.03	-43.3	0.54	1.85



Alt Model-Shift Uniqueness Test

007743830-01, P = 0.562309 Days, E = 131.324861 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.5	4.52	0	0	4.44	1.33	5.05	34.5	34.5	4.52	4.52	33.5	1.11	0.30	1.85



Stellar Parameters For KIC 007743830

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3787^{+76}_{-76}	$4.742^{+0.036}_{-0.024}$	$-0.100^{+0.100}_{-0.100}$	$0.505^{+0.028}_{-0.034}$	$0.514^{+0.029}_{-0.029}$	$5.610^{+0.919}_{-0.586}$
	+2%/-2%	+1%/-1%	+100%/-100%	+6%/-7%	+6%/-6%	+16%/-10%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007743830-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7 ± 5	$1.34^{+1.39}_{-0.93}$	1604^{+38}_{-38}	-1936^{+4603}_{-198}	$0.187^{+1.941}_{-0.167}$
Alt.	-20 ± 4	$1.54^{+1.59}_{-1.08}$	1602^{+39}_{-41}	2069^{+970}_{-4086}	$0.511^{+4.955}_{-0.387}$

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

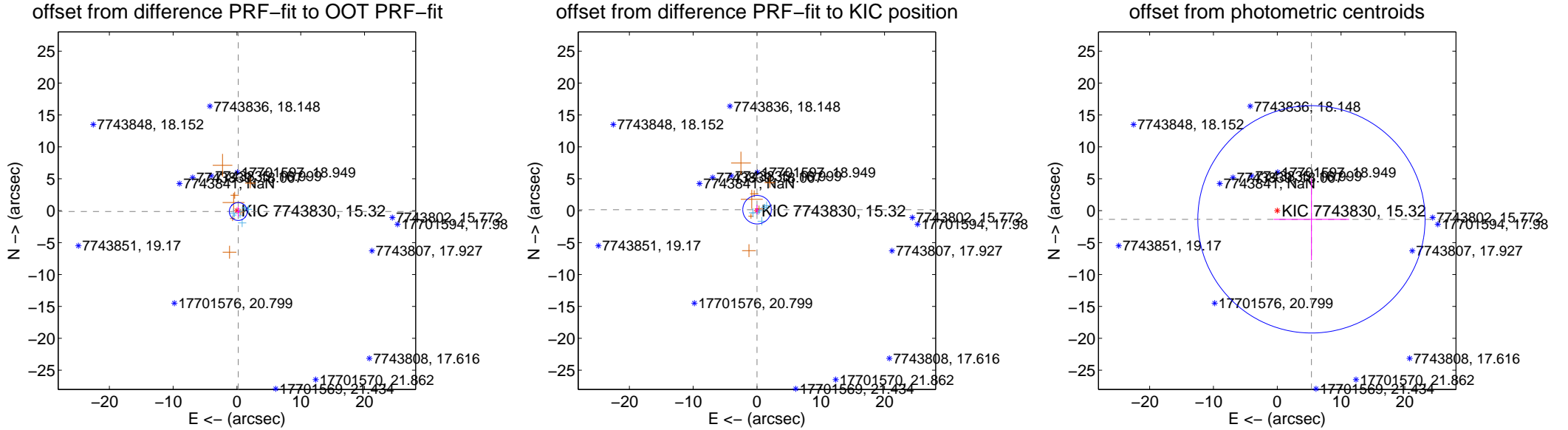
DV Centroid Data

Supplemental centroid analysis for 007743830-01. Kepler magnitude: 15.32. Transit SNR 1.46

There are 7 quarters with good PRF difference image offsets

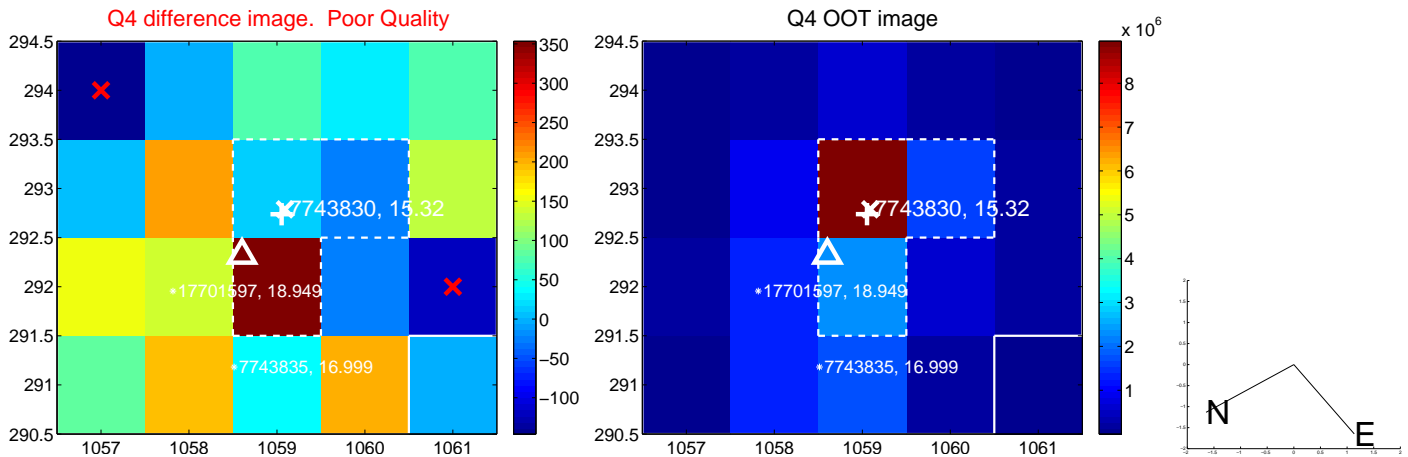
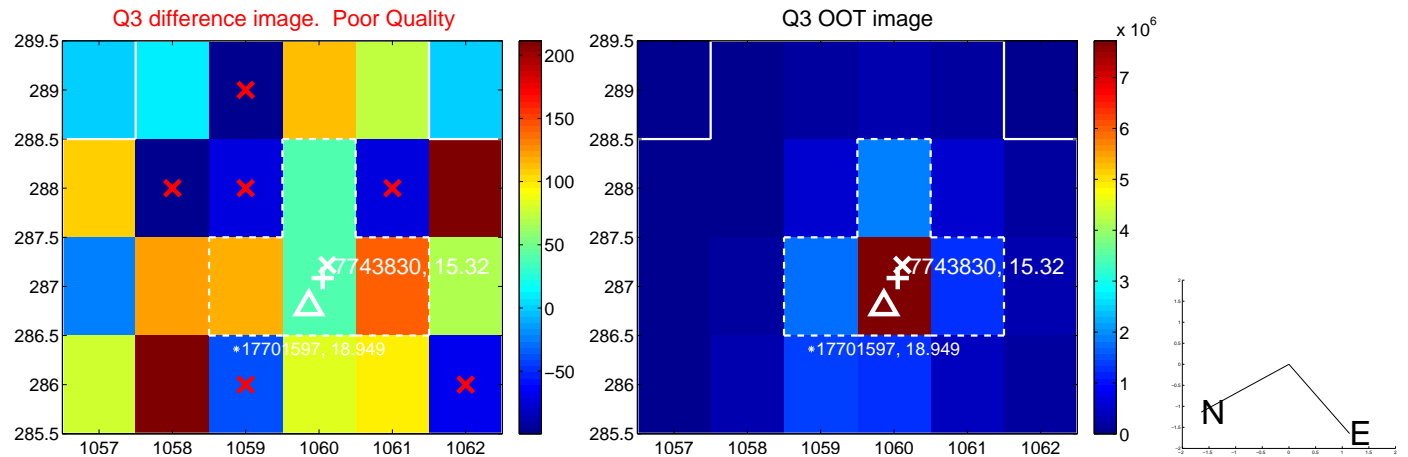
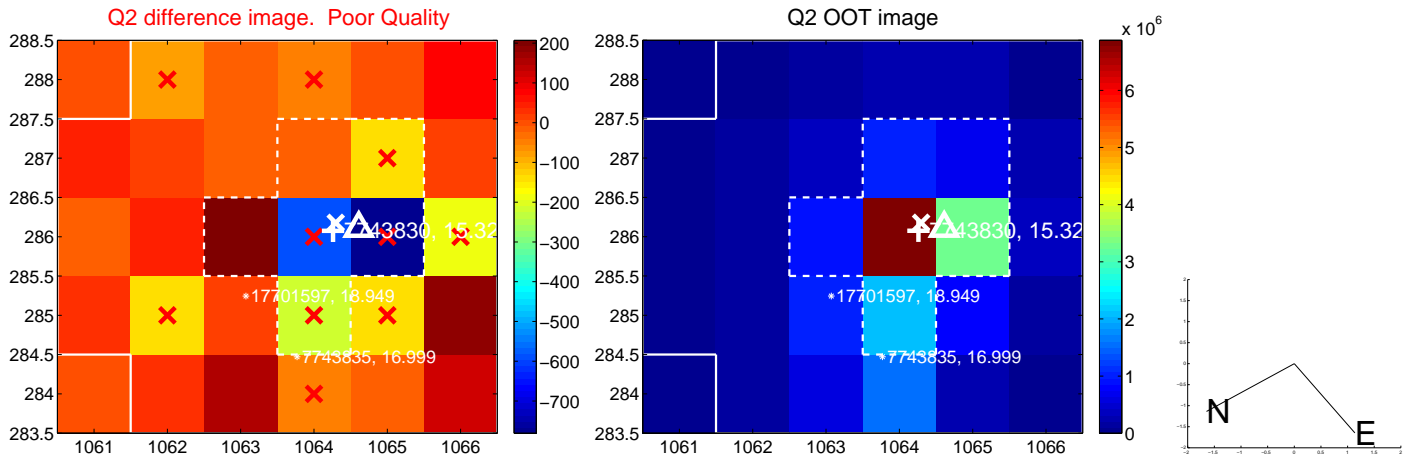
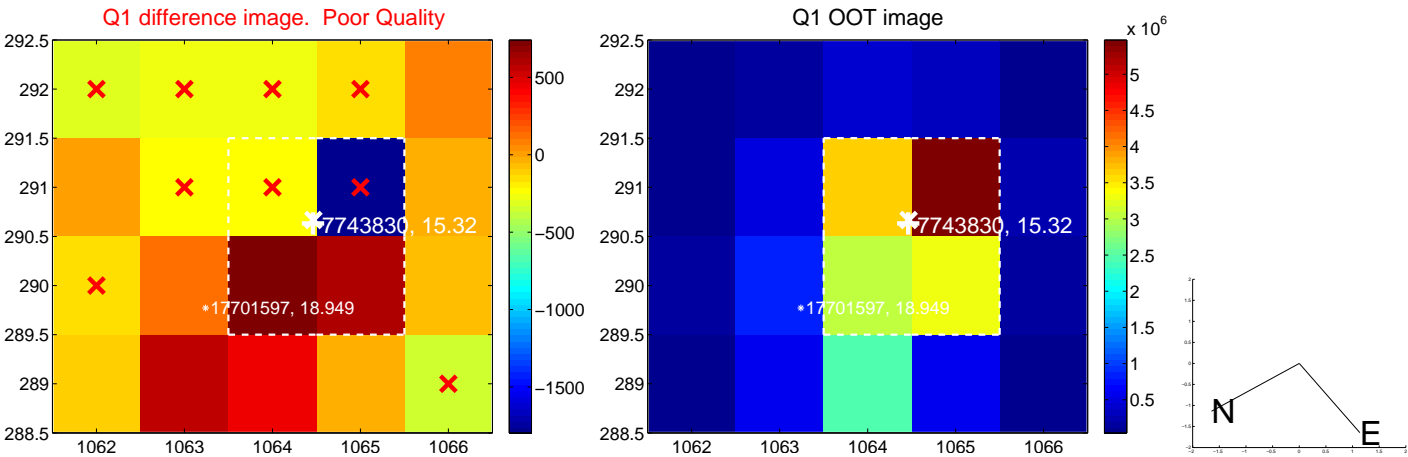
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.242 ± 0.467	0.52	-0.205 ± 0.287	-0.127 ± 0.777
PRF-fit source offset from KIC position	0.158 ± 0.745	0.21	-0.012 ± 0.276	0.157 ± 0.746
photometric centroid source offset	5.53 ± 5.94	0.93	-5.36 ± 5.91	-1.36 ± 6.41

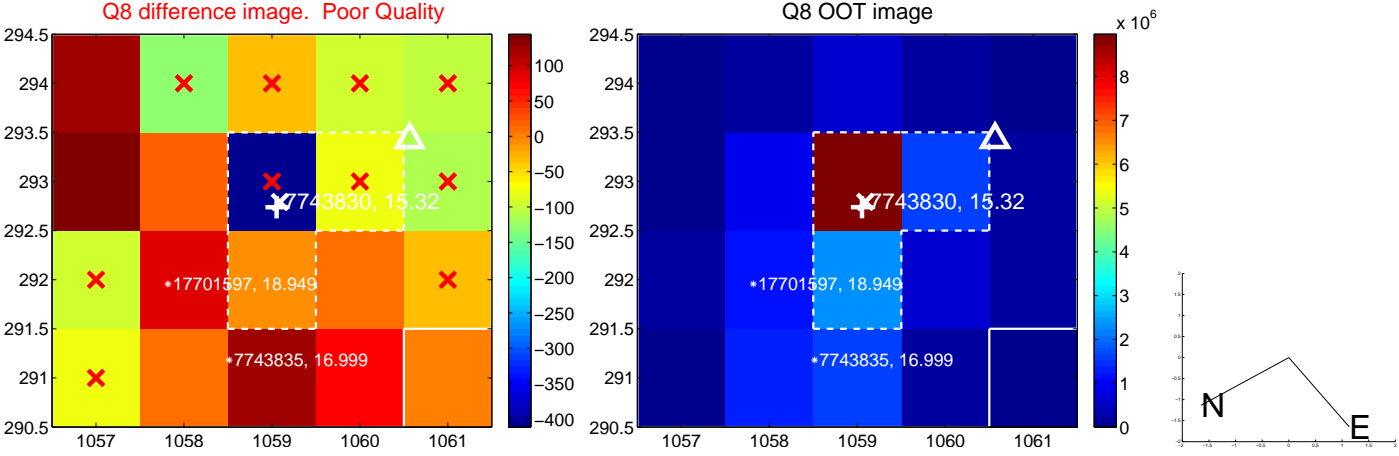
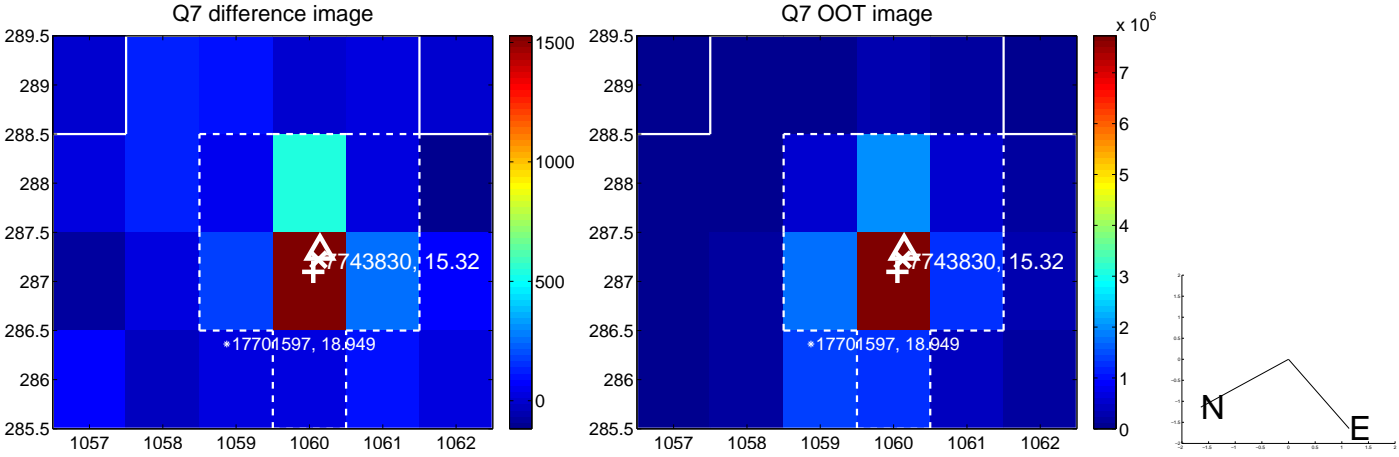
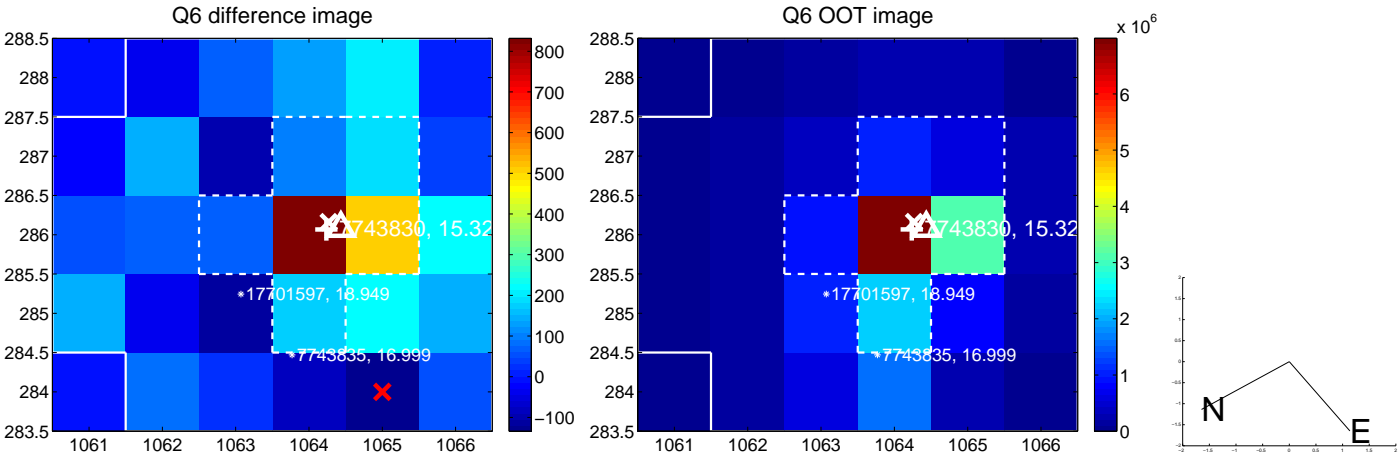
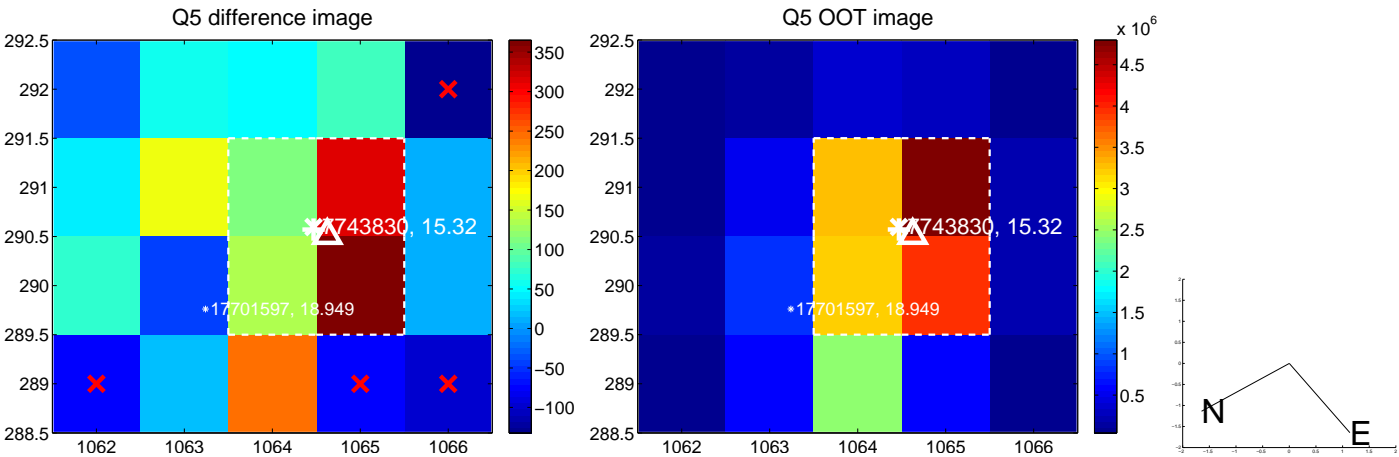


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

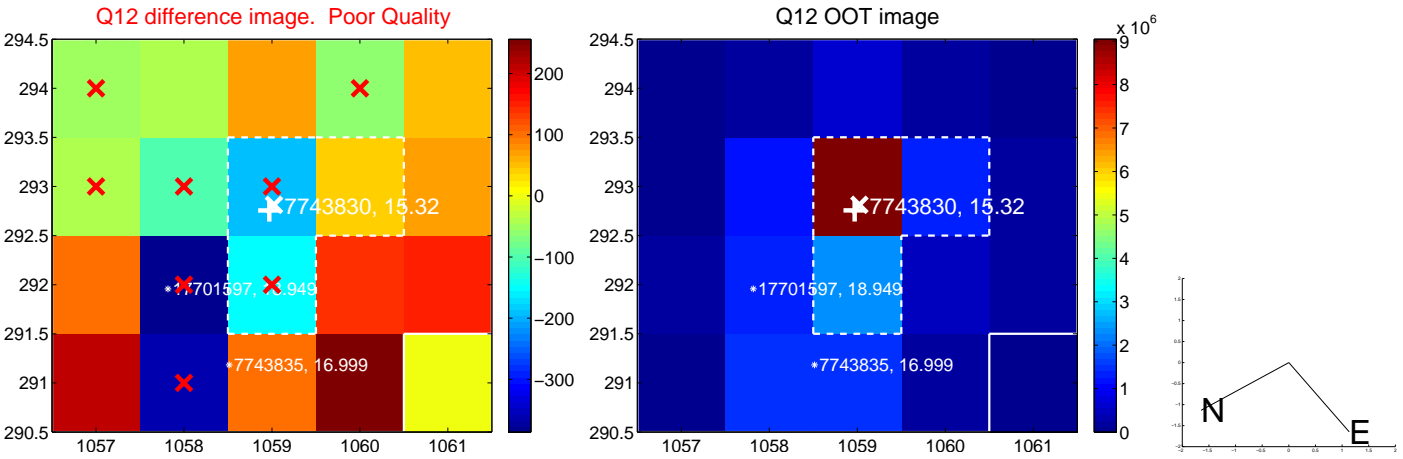
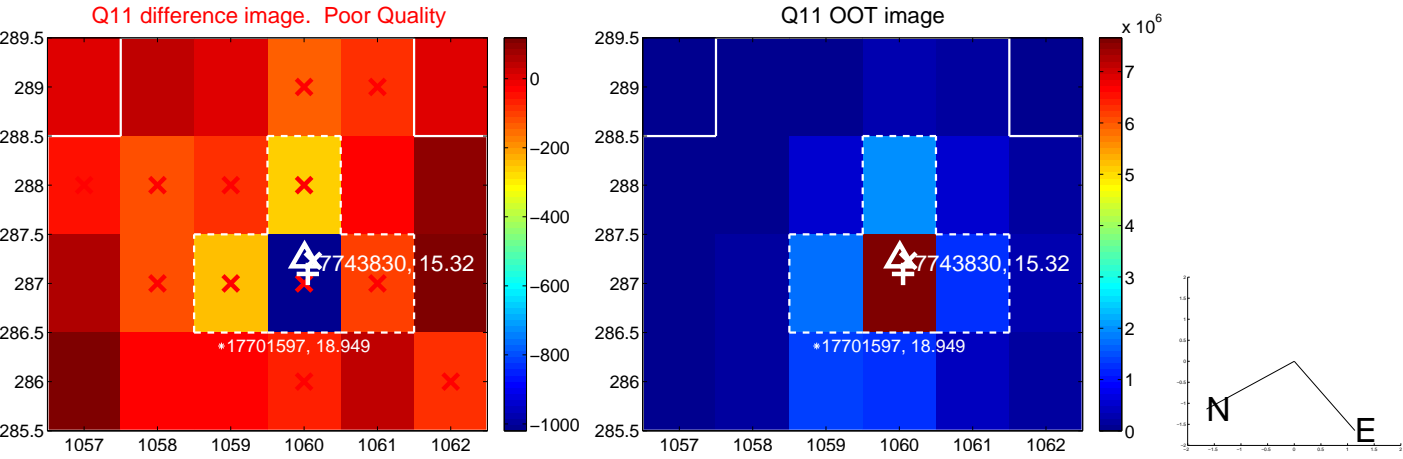
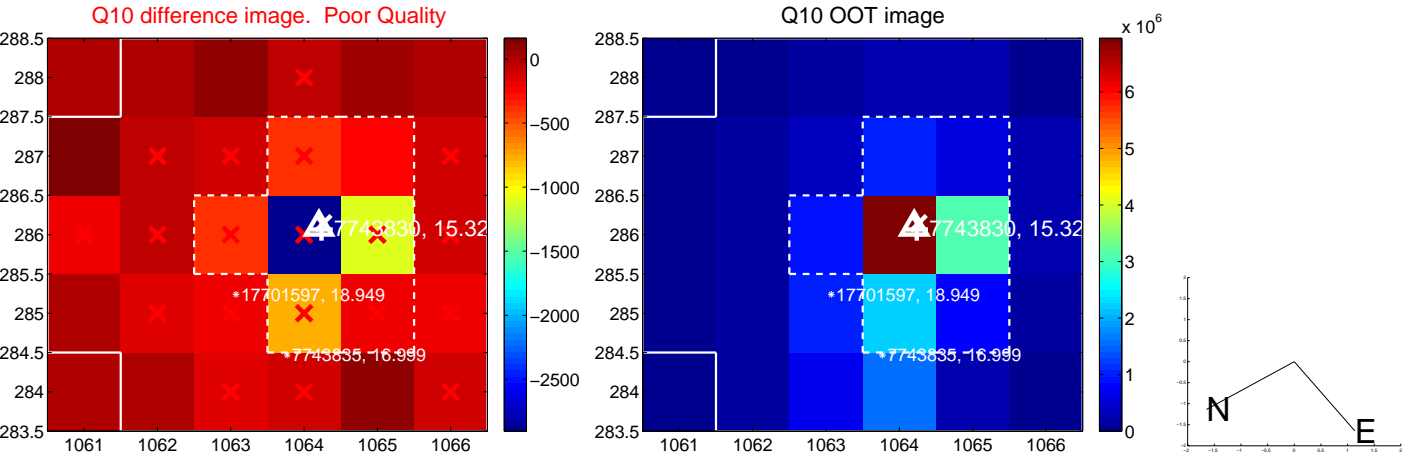
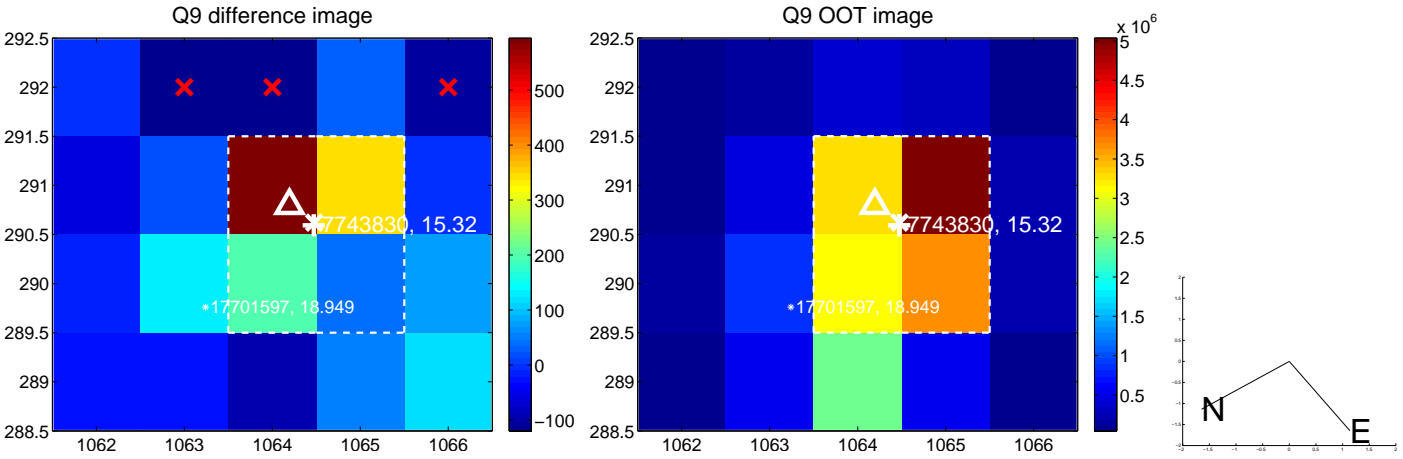
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



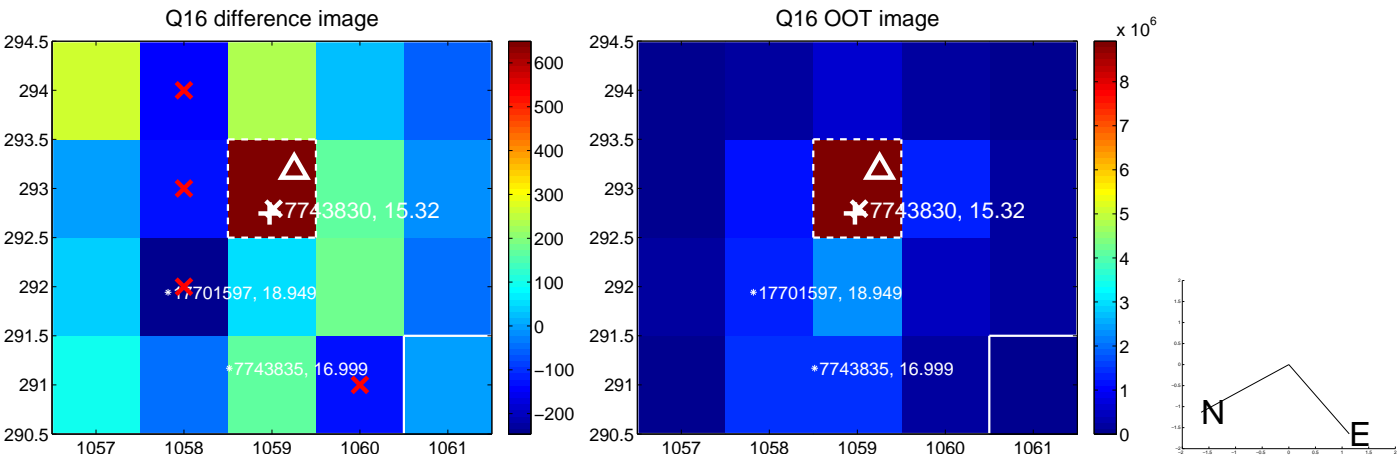
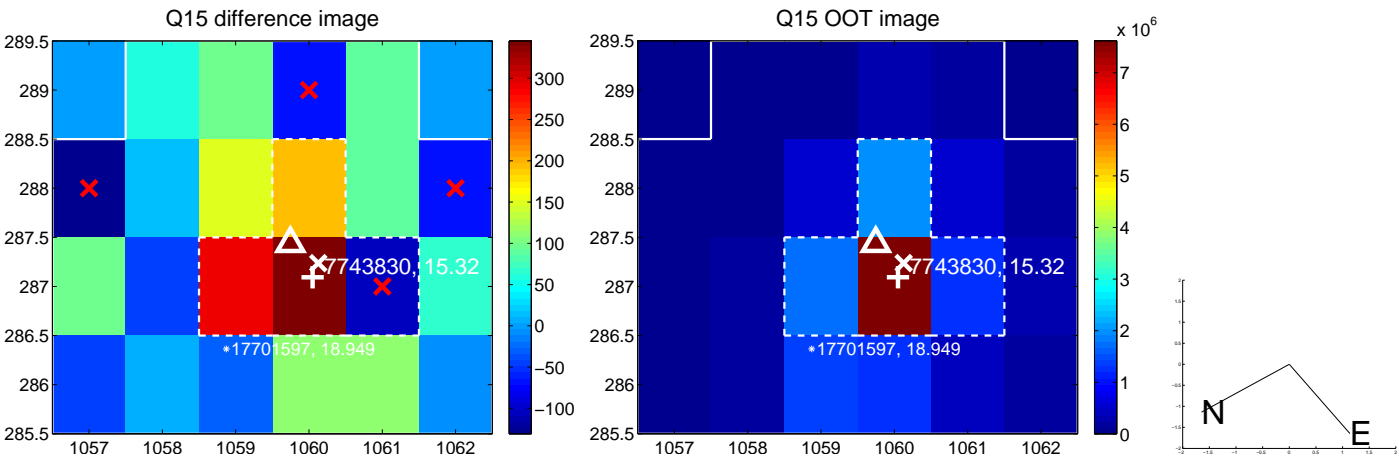
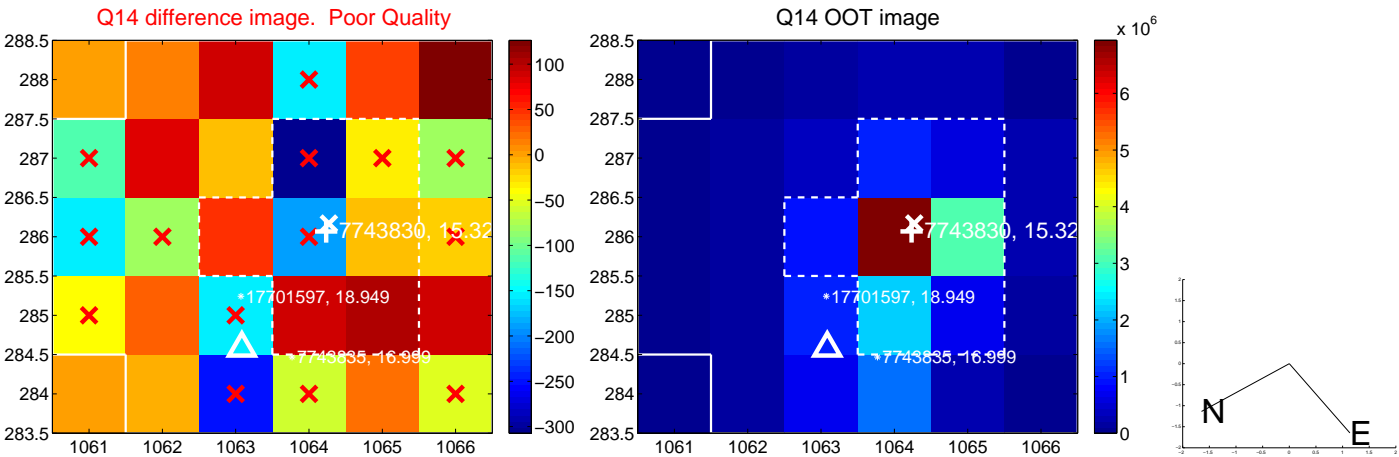
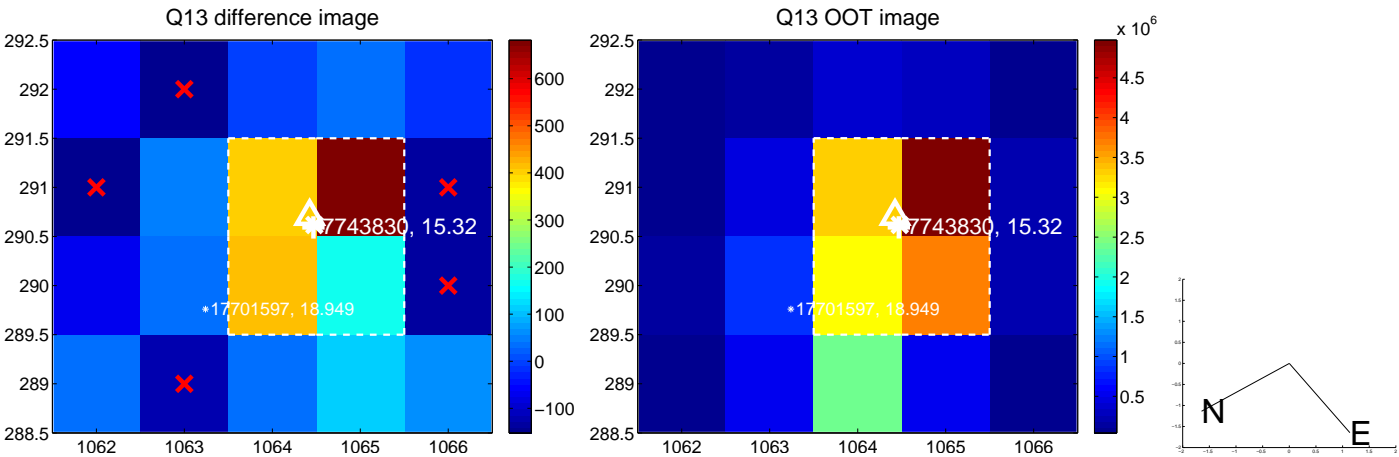
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



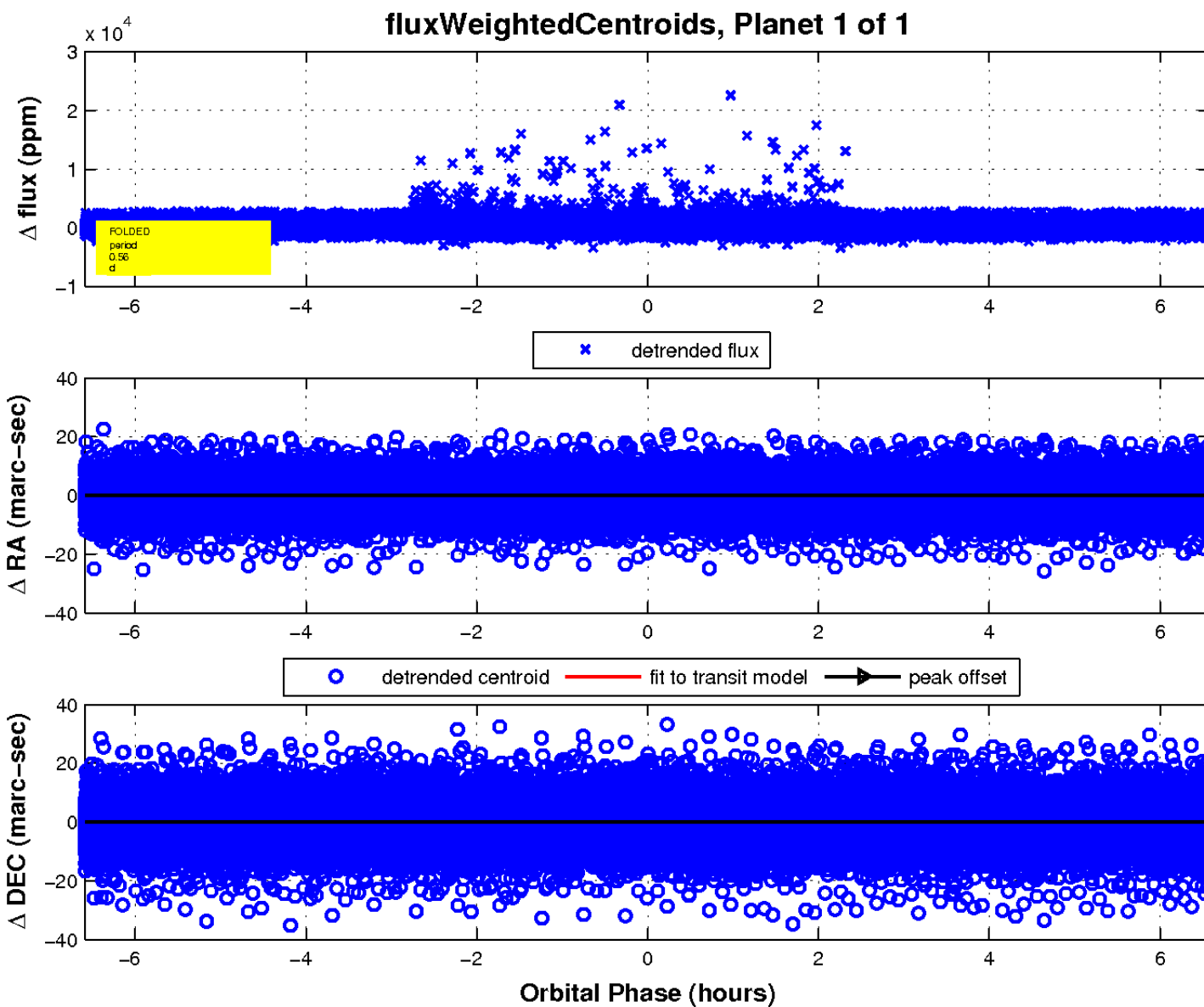
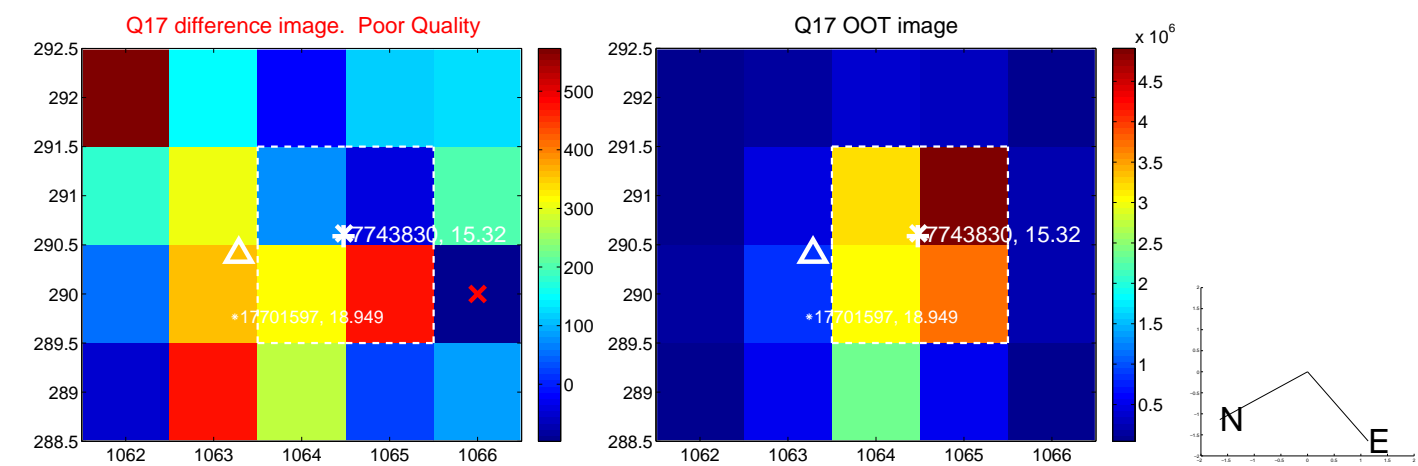
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

