

KIC 010535708

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
010535708-01	OBS	5801.02	0.933729	131.530465	44.5	4.452	8.9	7.9	1.33	5534	1.06	4376.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010535708-01	OBS	FP	0.00	0	0	0	1	EPHEM_MATCH

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 010535708-01

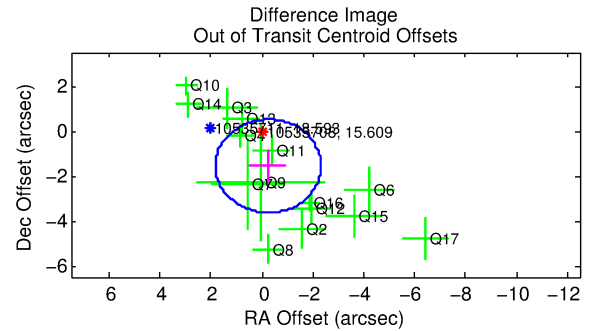
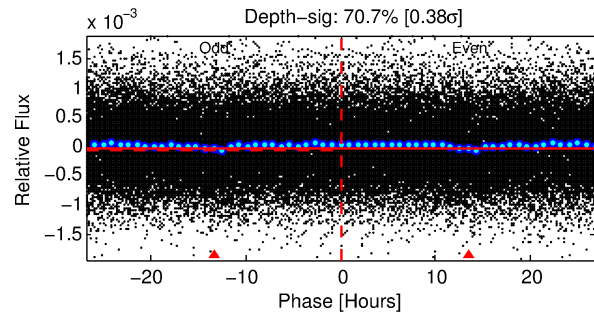
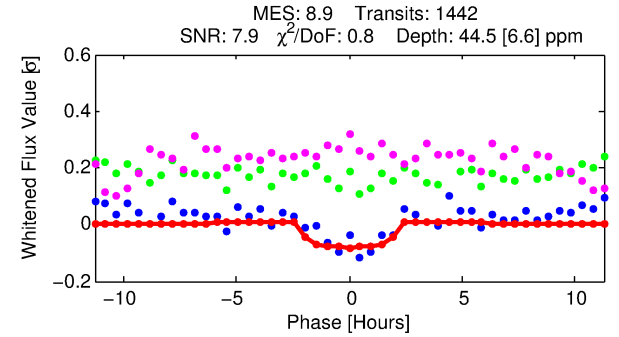
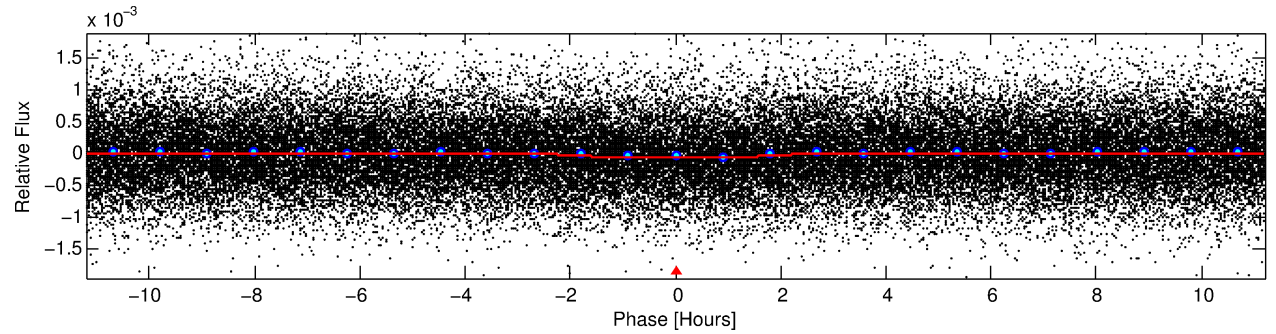
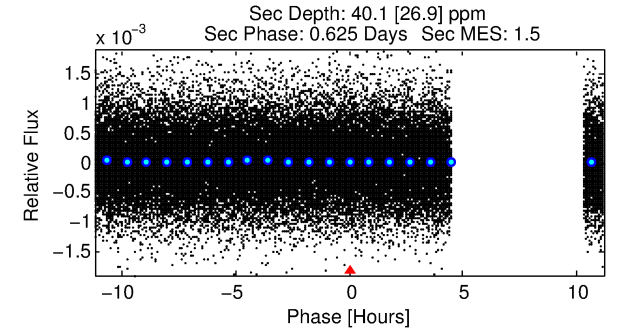
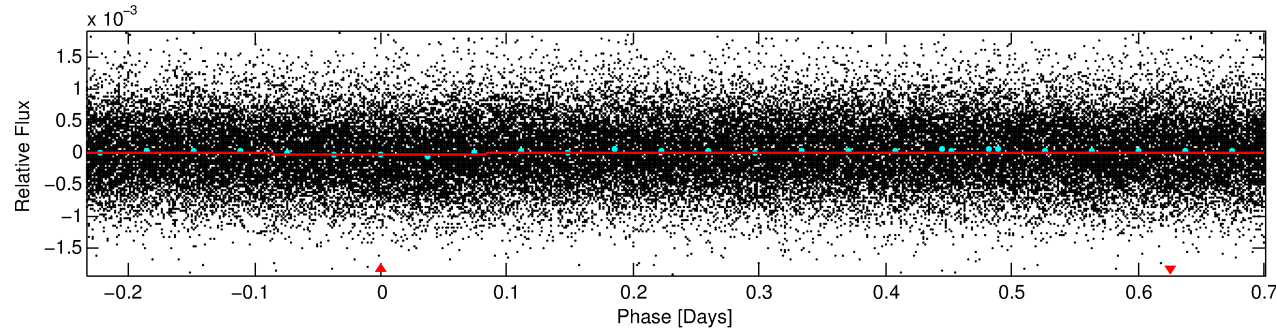
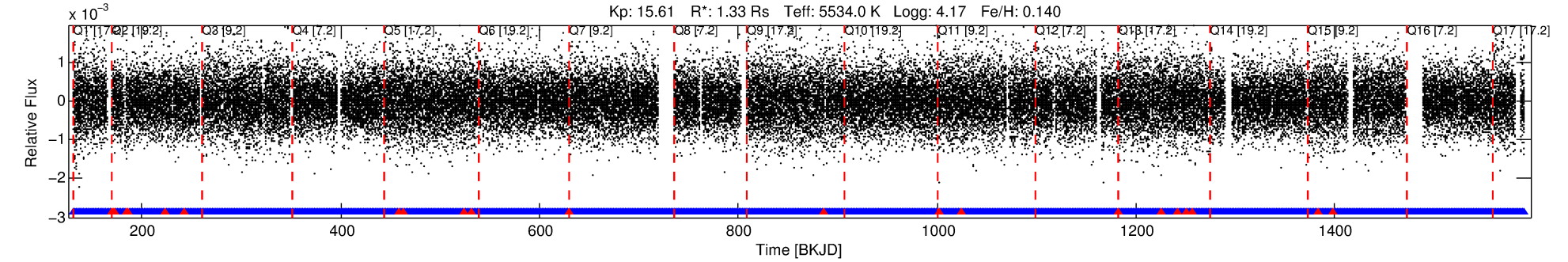
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
010535708-01	10535708	V2083-Cyg-pri	10342012	1:2	1927.9	417	-248	6.90	15.61	4507.30	Direct-PRF	0	3.57	0.99

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant σ_P < 5.0 and σ_T < 5.0. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 10535708 Candidate: 1 of 1 Period: 0.934 d

KOI: K05801.02 Corr: 0.939



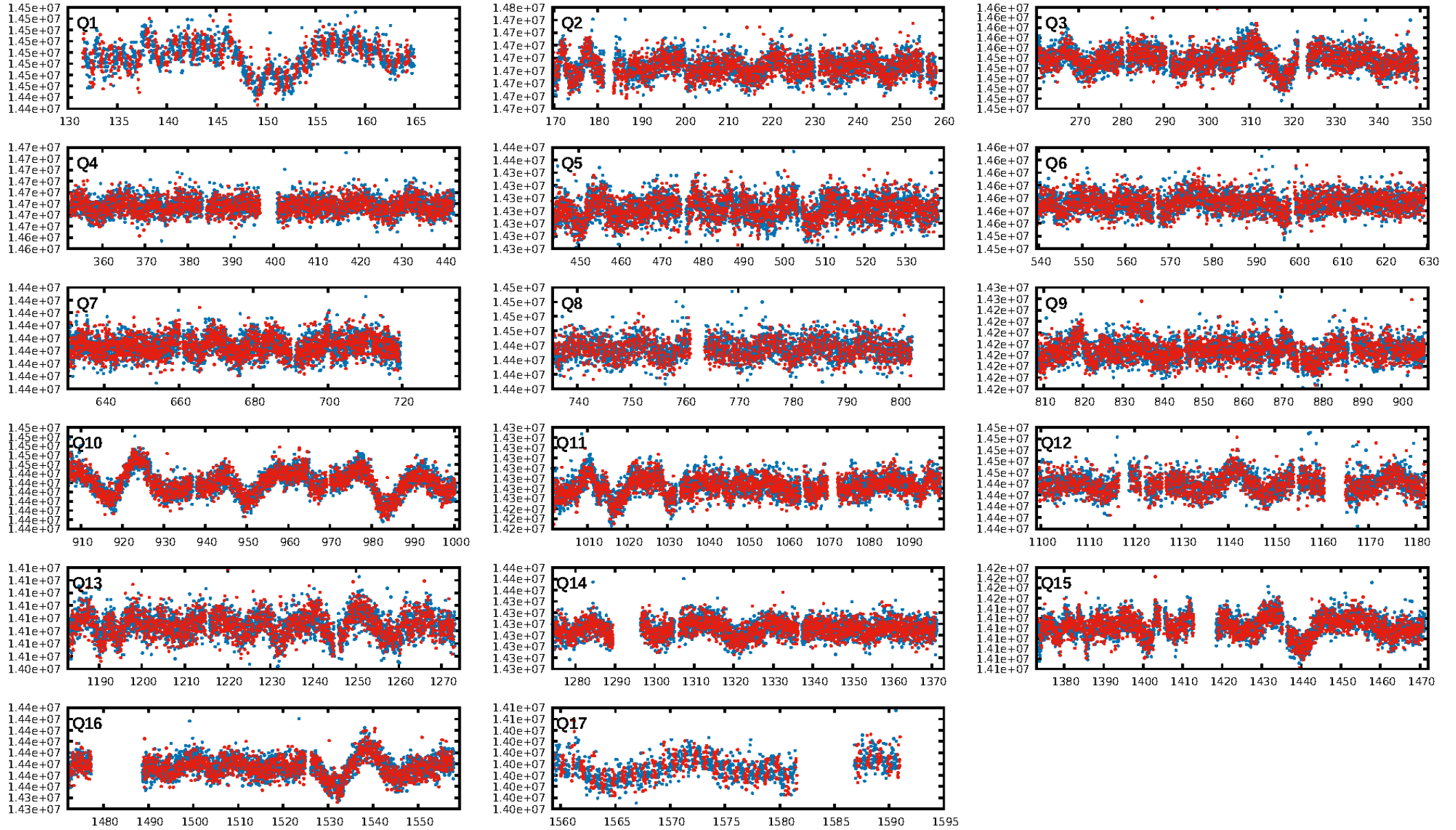
DV Fit Results:

Period = 0.93373 [0.00002] d
Epoch = 131.5305 [0.0063] BKJD
Rp/R* = 0.0073 [0.0061]
a/R* = 1.19 [1.30]
b = 0.90 [0.82]
Seff = 4376.42 [1511.81]
Teff = 2074 [179] K
Rp = 1.06 [0.91] Re
a = 0.0184 [0.0039] AU
Ag = 6.62 [12.07] [0.47σ]
Teffp = 5144 [2304] K [1.33σ]

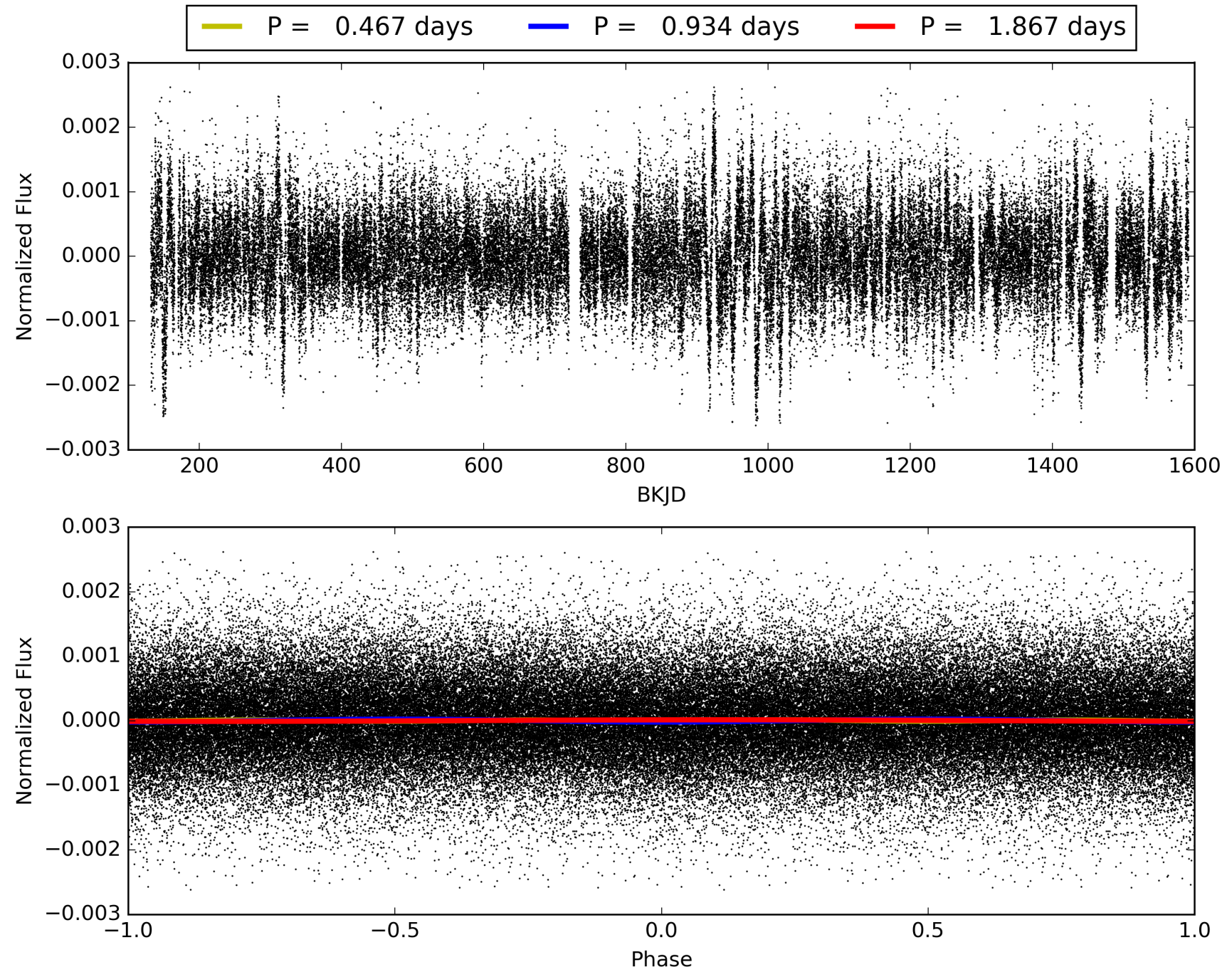
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.10e-15
RollingBand-fgt: 0.98 [1353/1376]
GhostDiagnostic-chr: 0.5628
Centroid-sig: 17.7%
Centroid-so: 3.227 arcsec [1.56σ]
OotOffset-rm: 1.583 arcsec [2.29σ]
KicOffset-rm: 1.503 arcsec [2.17σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.13 [2/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010535708-01, PDC Light Curves

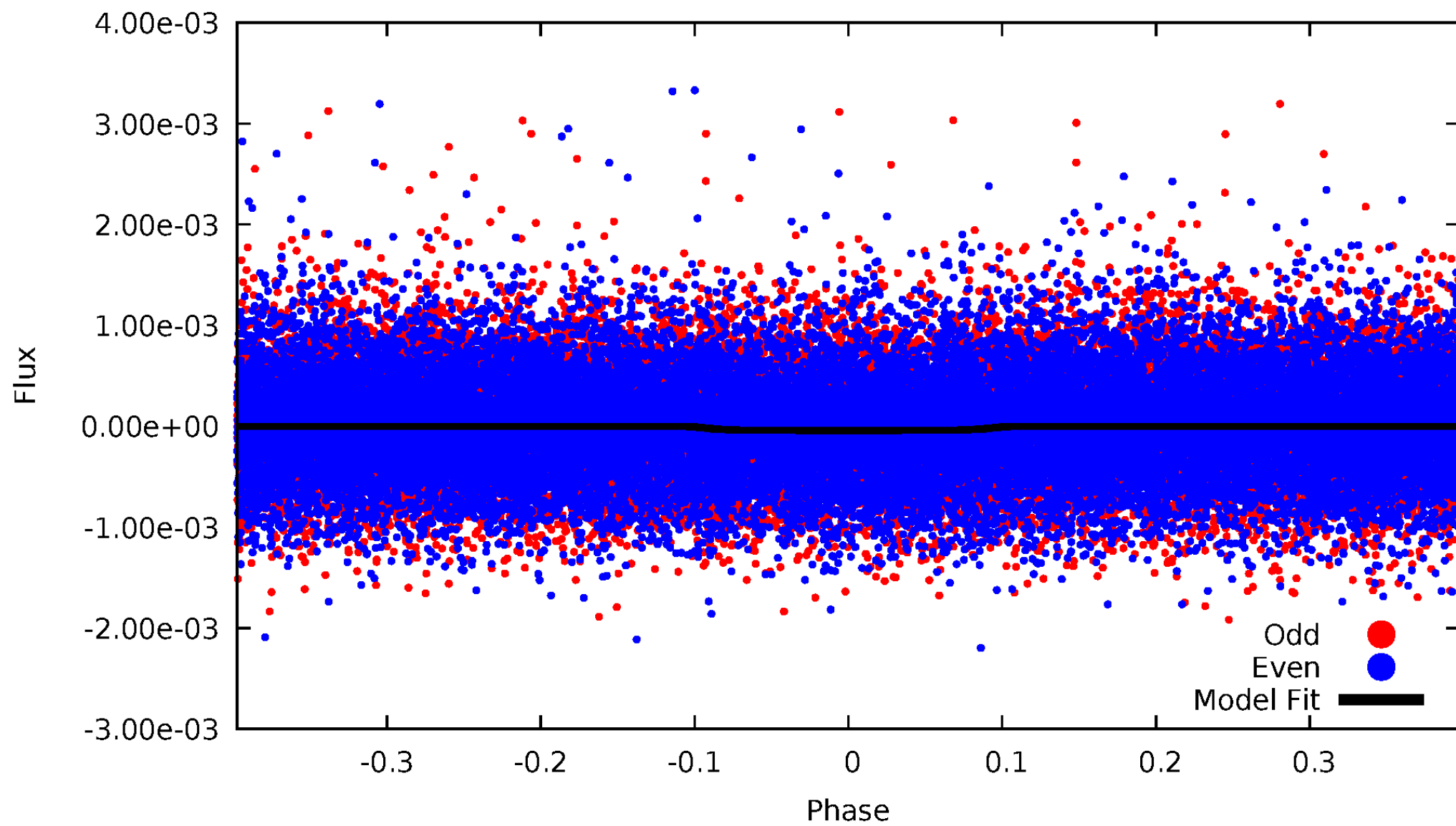


TCE 010535708-01



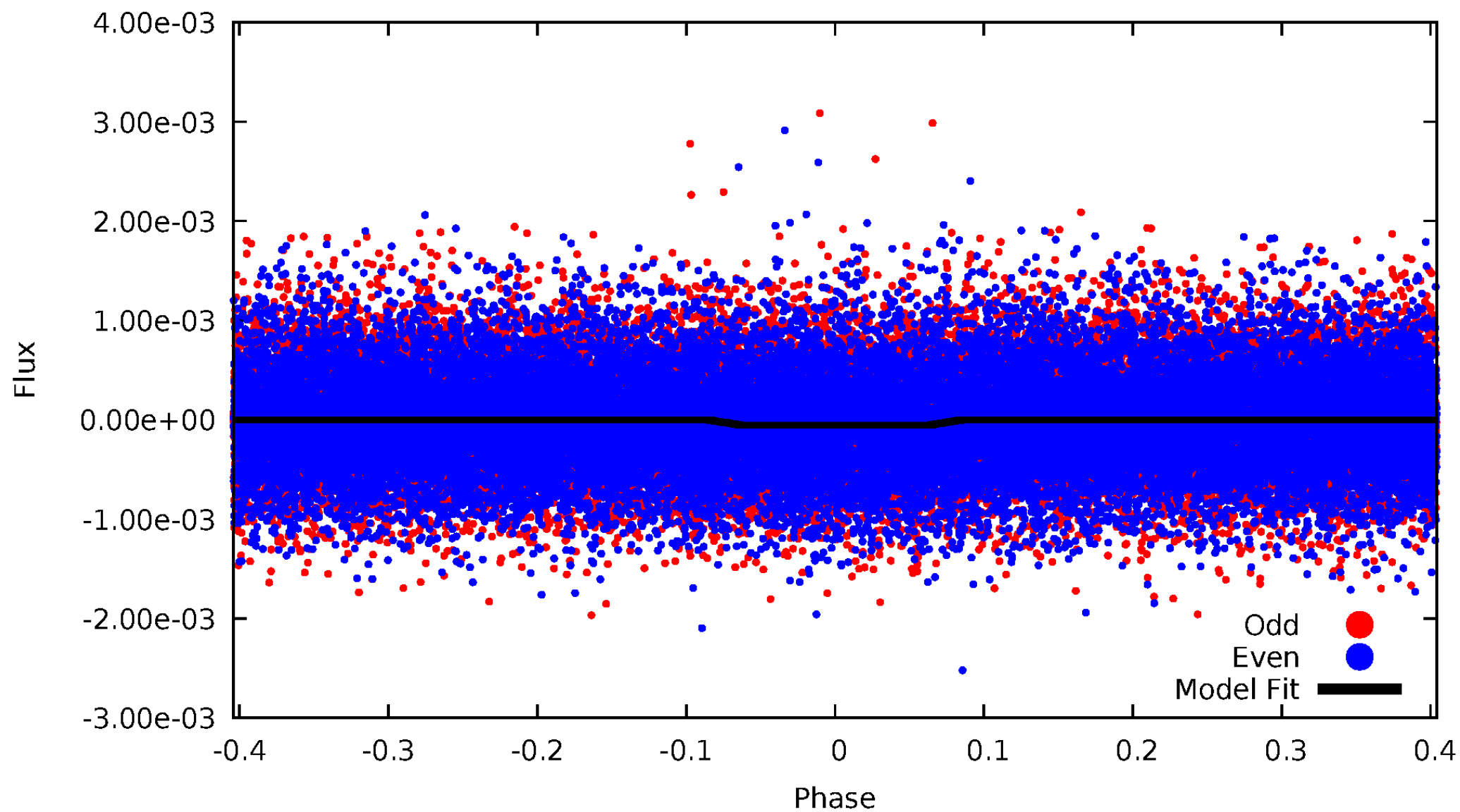
DV Odd/Even

TCE 010535708-01



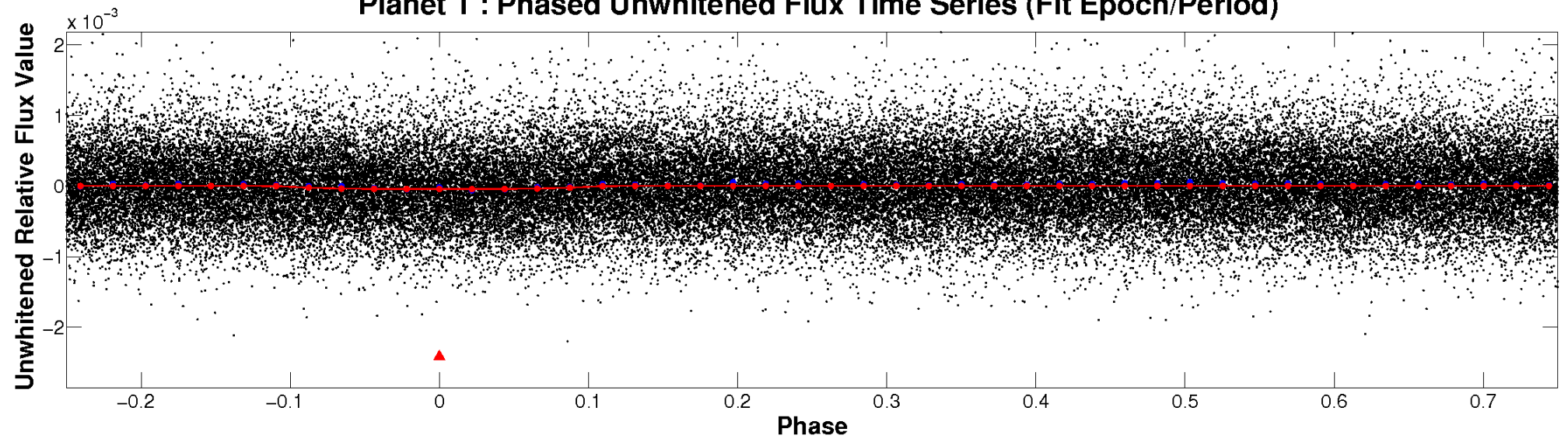
ALT Odd/Even

TCE 010535708-01

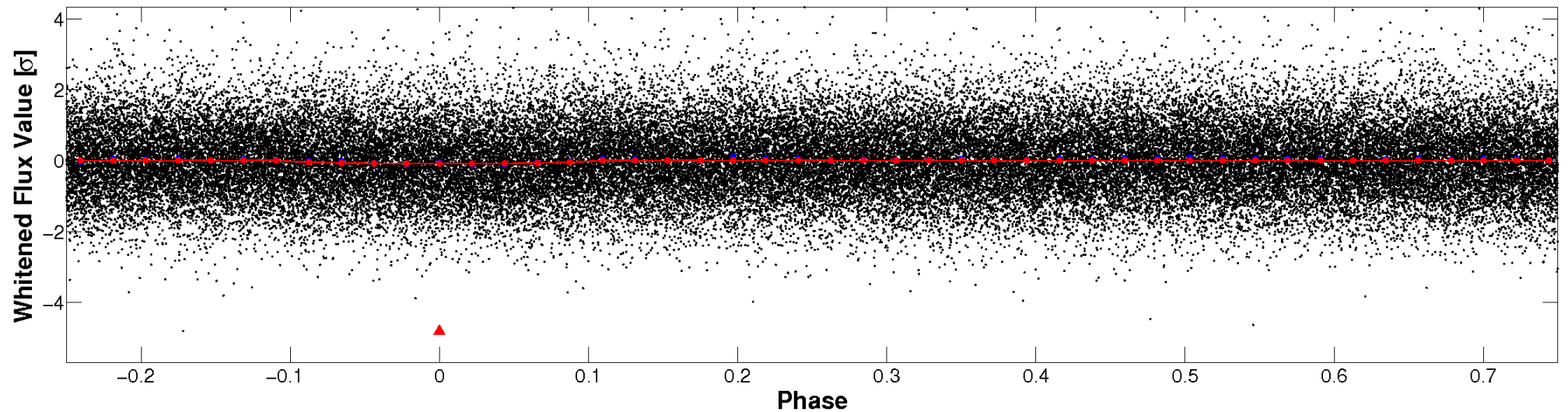


Non-Whitened Vs. Whitened Light Curve

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

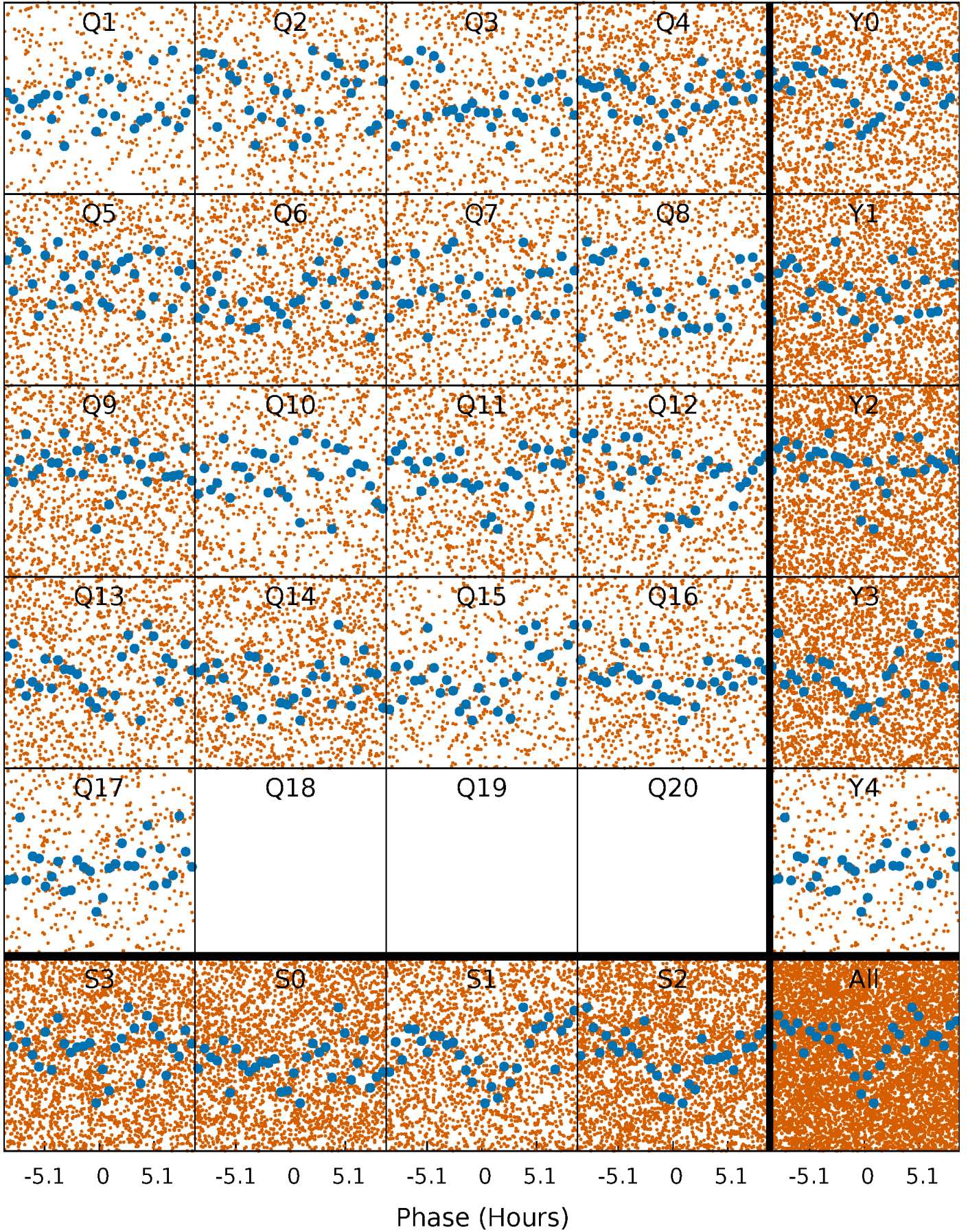


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



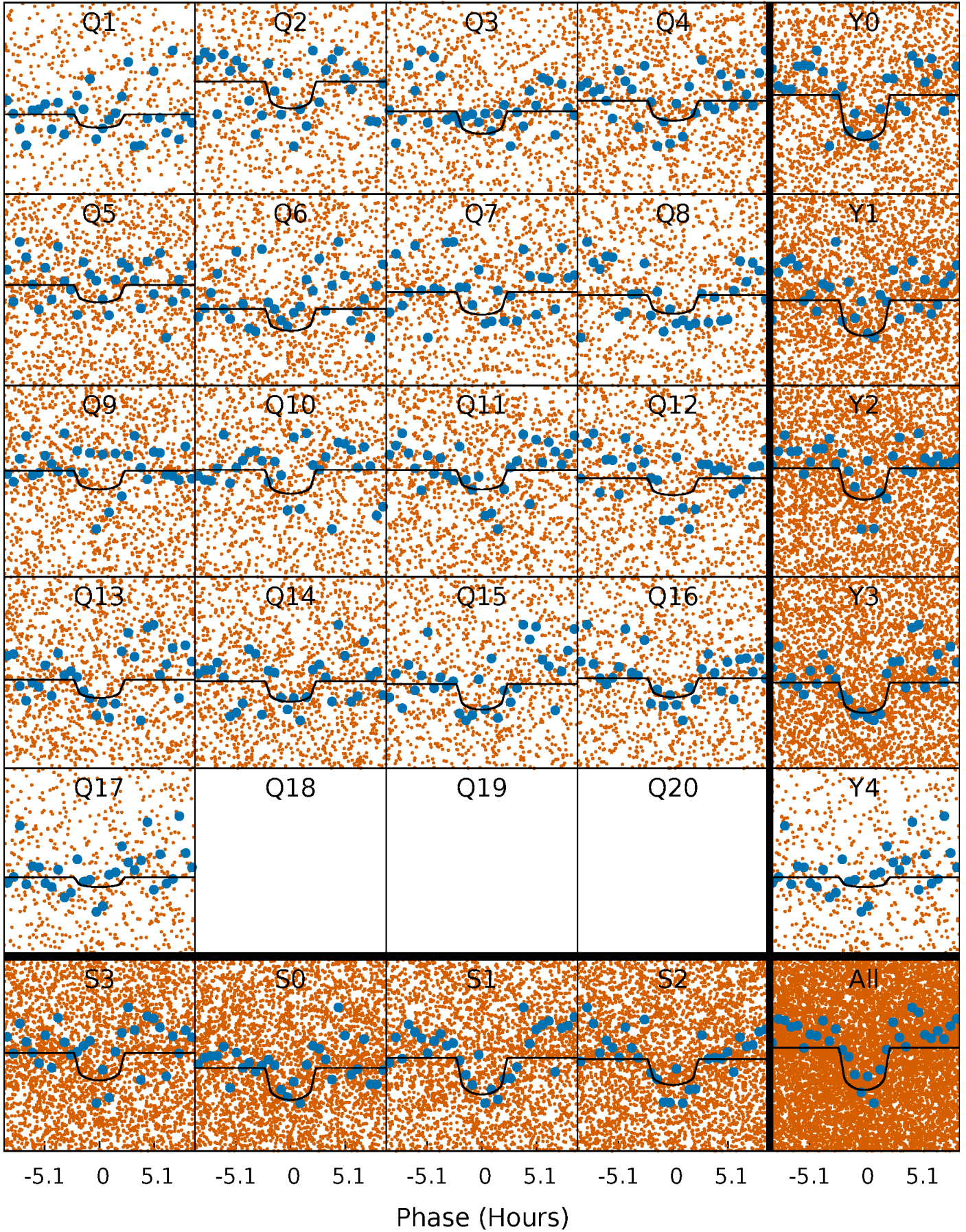
PDC Quarter-Phased Transit Curves

TCE 010535708-01 P= 0.933729 Days $T_0=131.530465$ (BKJD)



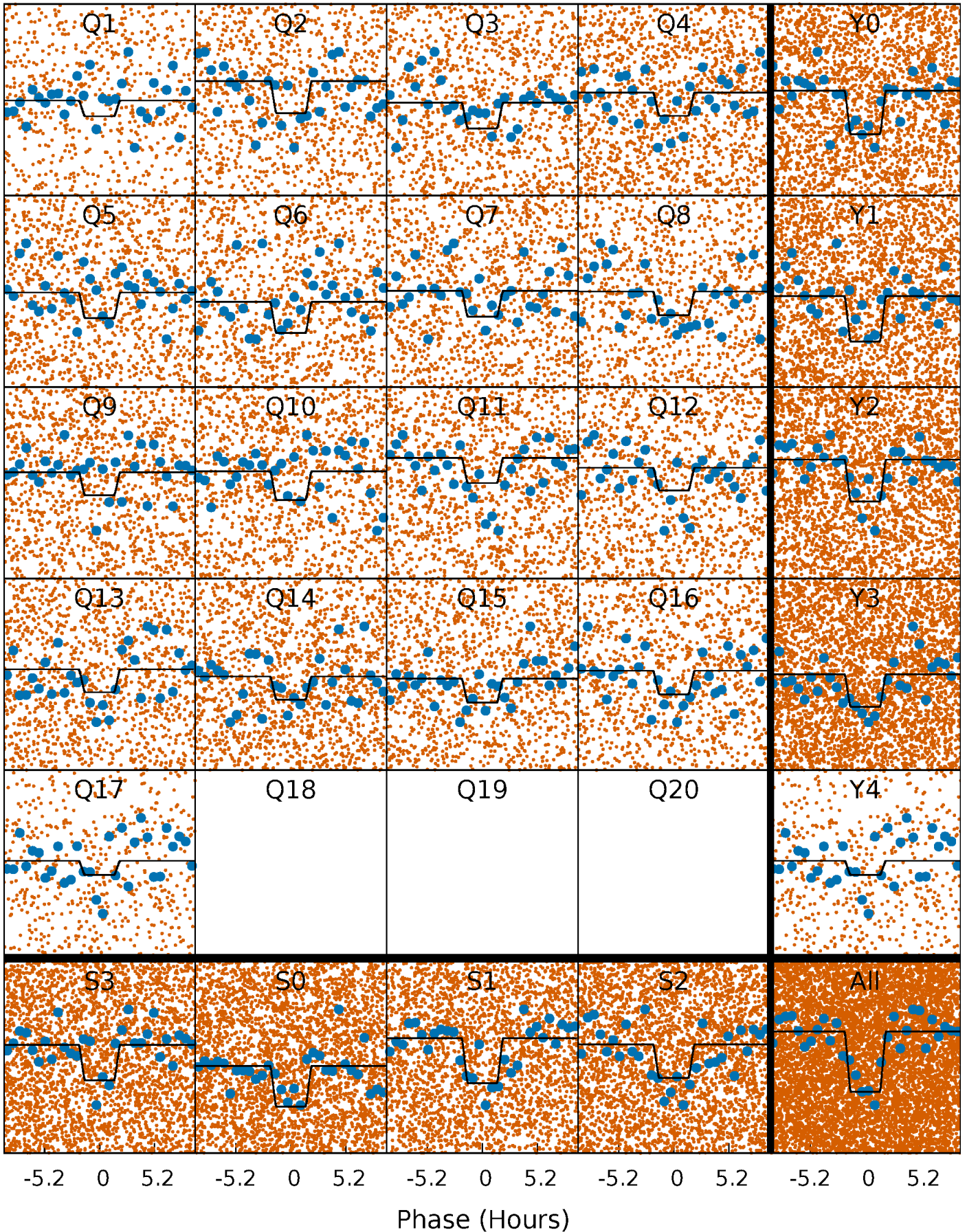
DV Quarter-Phased Transit Curves

TCE 010535708-01 P= 0.933729 Days $T_0=131.530465$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

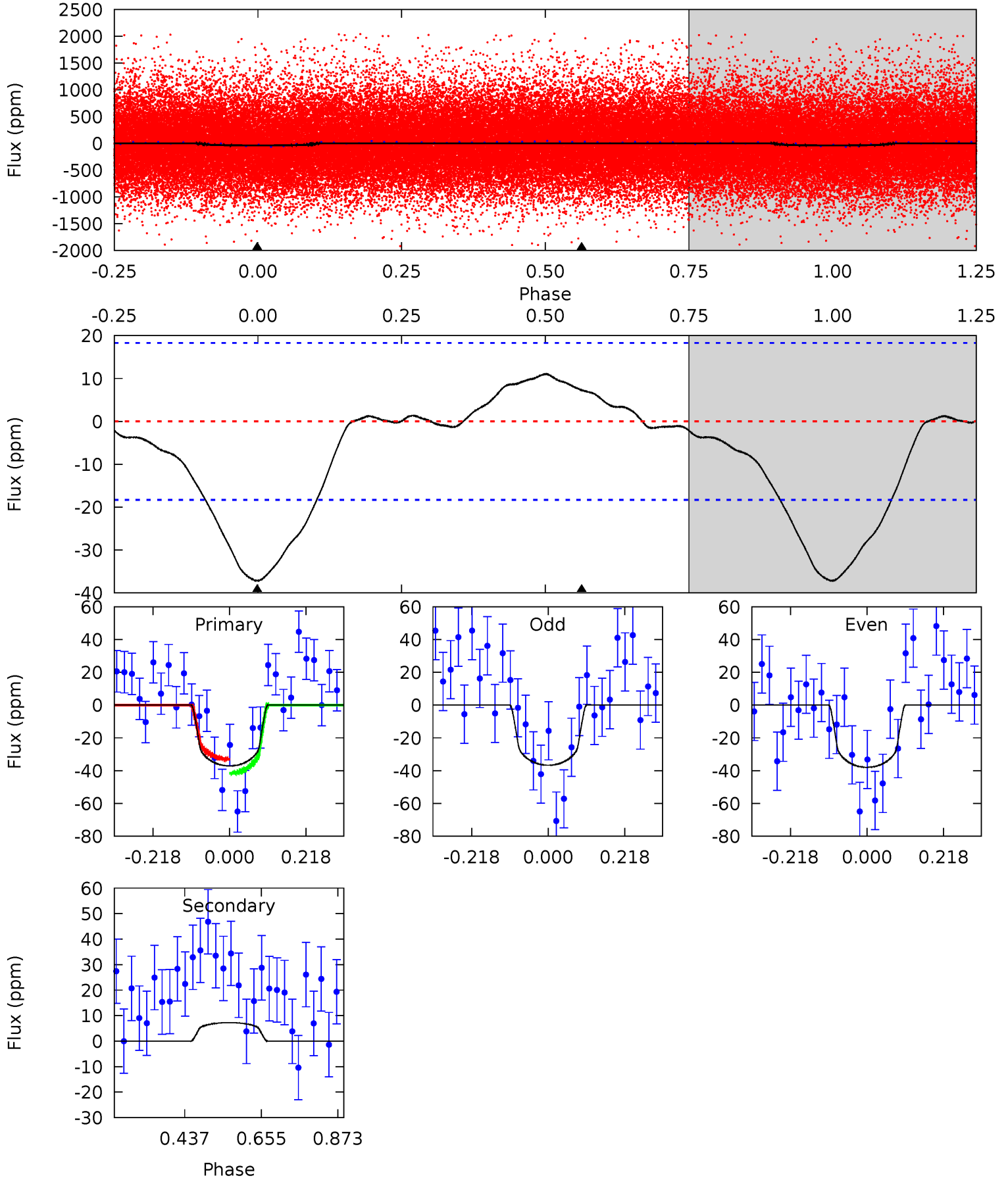
TCE 010535708-01 P= 0.933732 Days $T_0=131.530876$ (BKJD)



DV Model-Shift Uniqueness Test

010535708-01, P = 0.933729 Days, E = 130.596736 Days

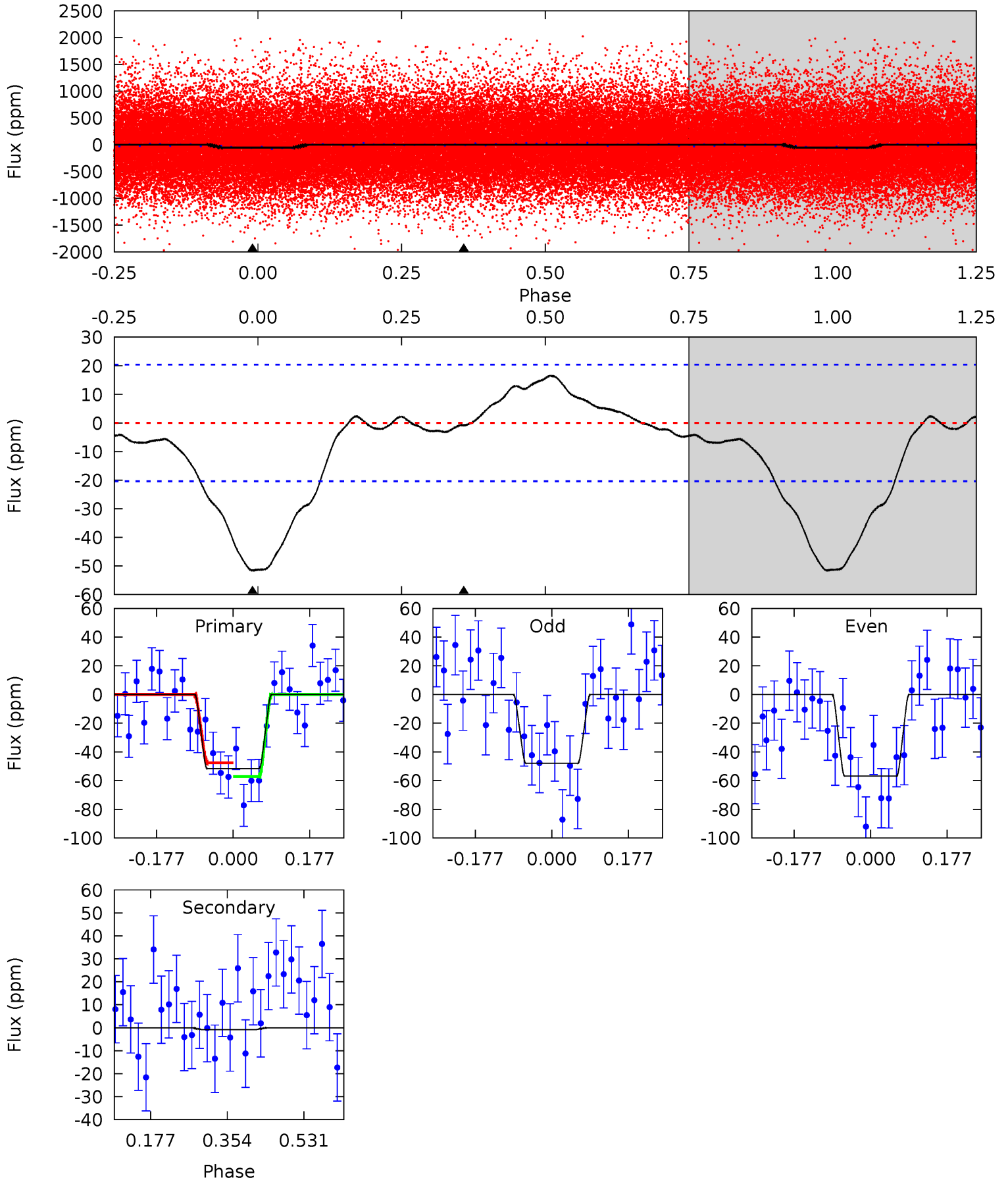
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.92	-1.75	0	0	4.40	1.23	0.19	8.92	8.92	-1.75	-1.75	0.15	1.00	0.23	1.05



Alt Model-Shift Uniqueness Test

010535708-01, P = 0.933732 Days, E = 130.597144 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	0.18	0	0	4.44	1.35	1.15	11.3	11.3	0.18	0.18	0.97	0.87	0.24	1.05



Stellar Parameters For KIC 010535708

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5534^{+83}_{-71}	$4.170^{+0.201}_{-0.108}$	$0.140^{+0.150}_{-0.100}$	$1.326^{+0.207}_{-0.285}$	$0.948^{+0.072}_{-0.044}$	$0.572^{+0.608}_{-0.185}$
	+1%/-1%	+5%/-3%	+107%/-71%	+16%/-21%	+8%/-5%	+106%/-32%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 010535708-01 / KOI 5801.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	7 ± 4	$1.12^{+0.84}_{-0.69}$	2890^{+137}_{-183}	-3722^{+442}_{-1452}	$-0.970^{+0.749}_{-5.738}$
Alt.	-1 ± 5	$1.16^{+0.85}_{-0.70}$	2895^{+128}_{-174}	-2899^{+6563}_{-632}	$0.071^{+1.242}_{-0.646}$

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 $A_{obs} \gg 1.0$

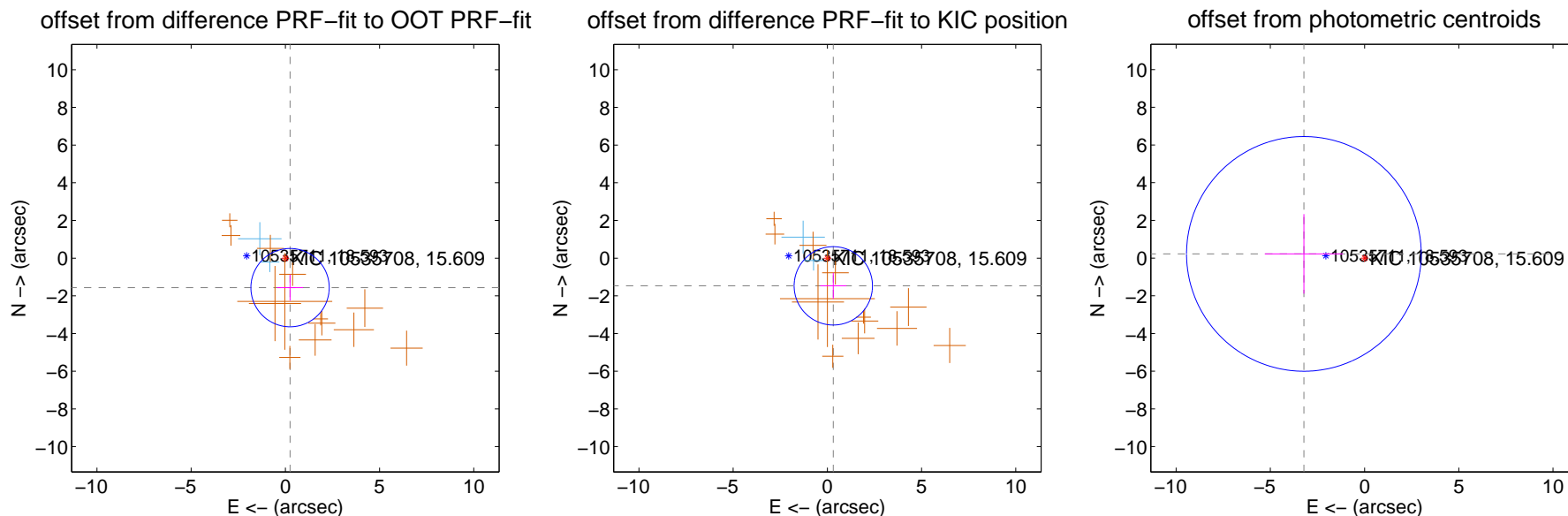
DV Centroid Data

Supplemental centroid analysis for 010535708-01. Kepler magnitude: 15.61. Transit SNR 7.90

There are 2 quarters with good PRF difference image offsets

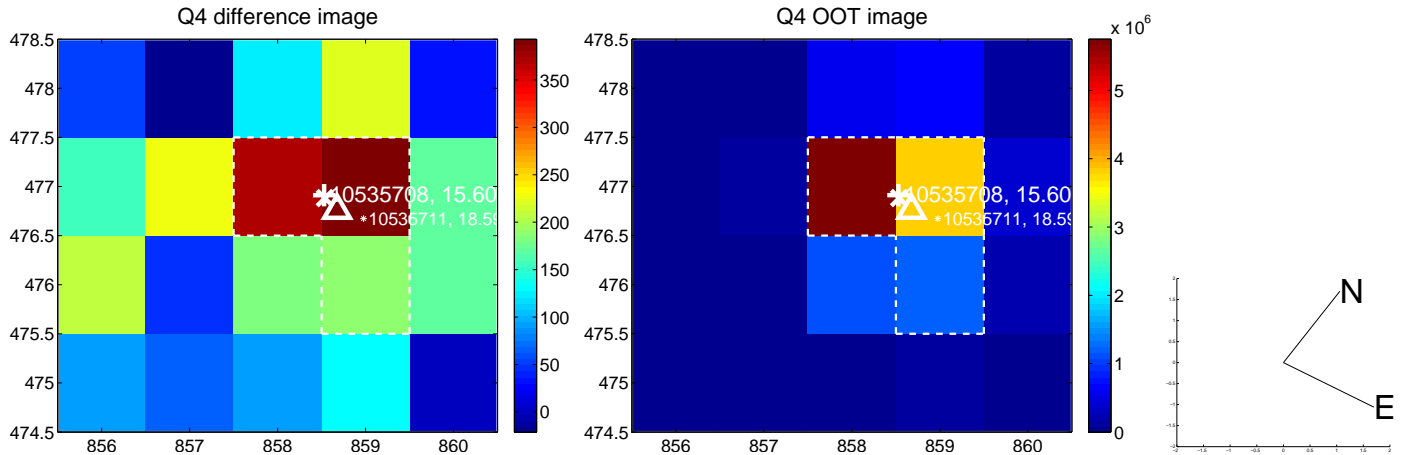
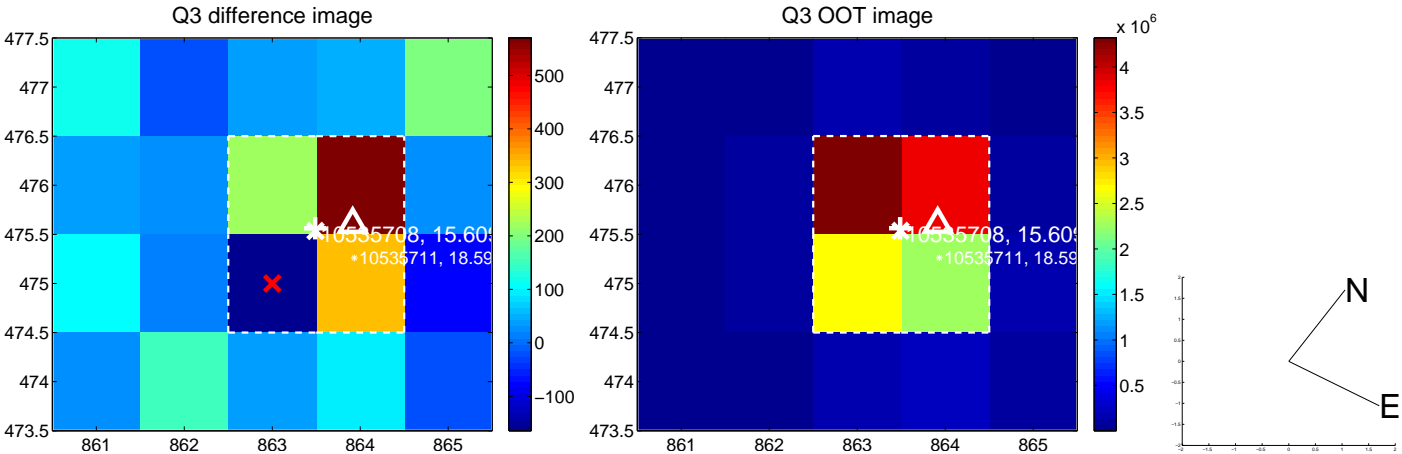
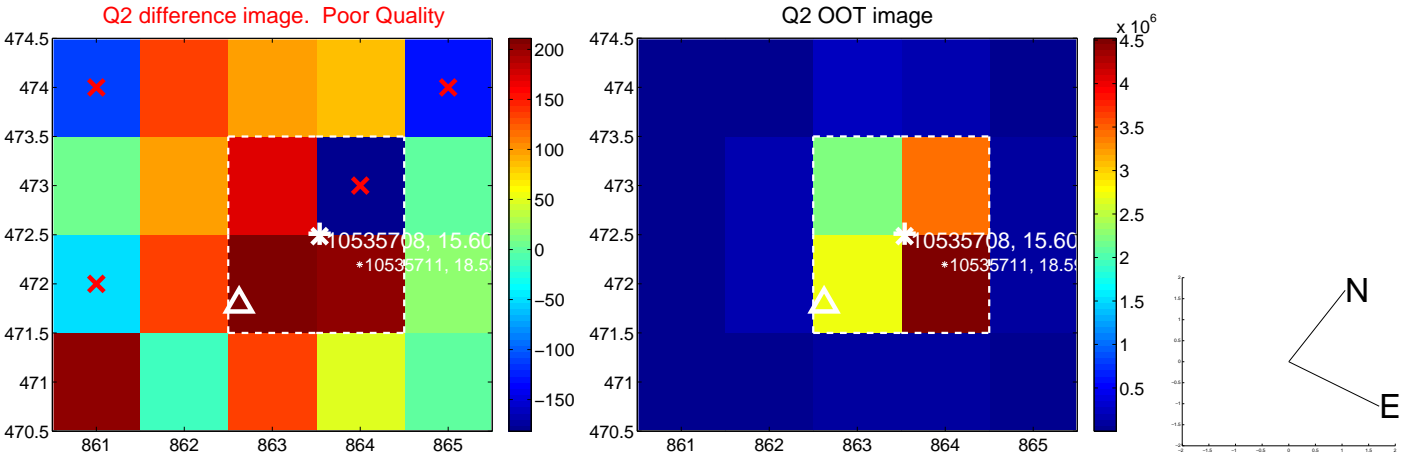
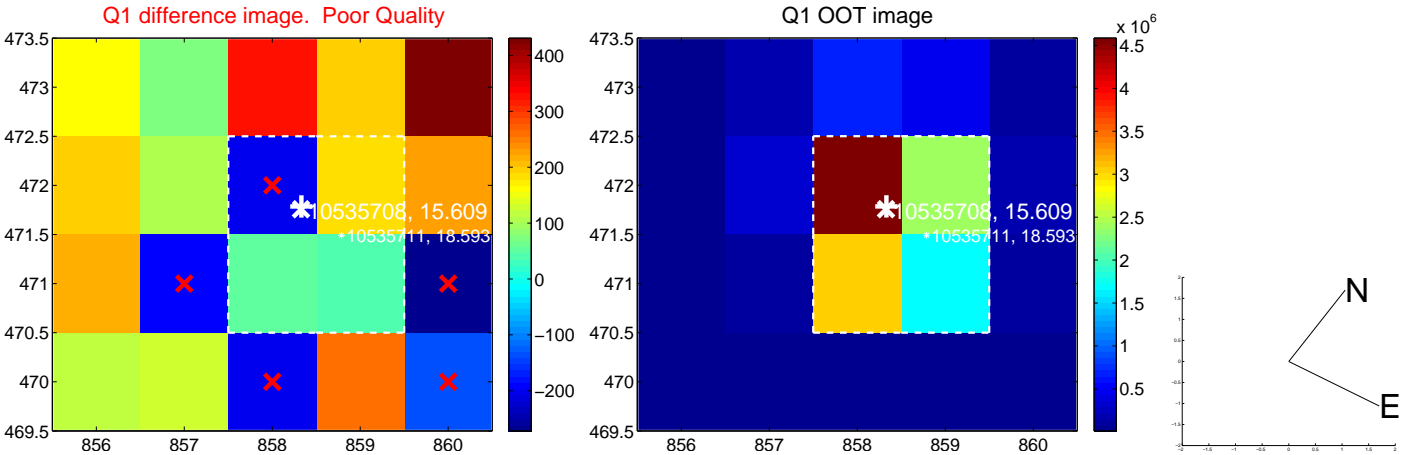
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.583 ± 0.693	2.29	-0.249 ± 0.694	-1.564 ± 0.693
PRF-fit source offset from KIC position	1.503 ± 0.693	2.17	-0.315 ± 0.691	-1.470 ± 0.693
photometric centroid source offset	3.23 ± 2.07	1.56	3.22 ± 2.07	0.22 ± 2.11

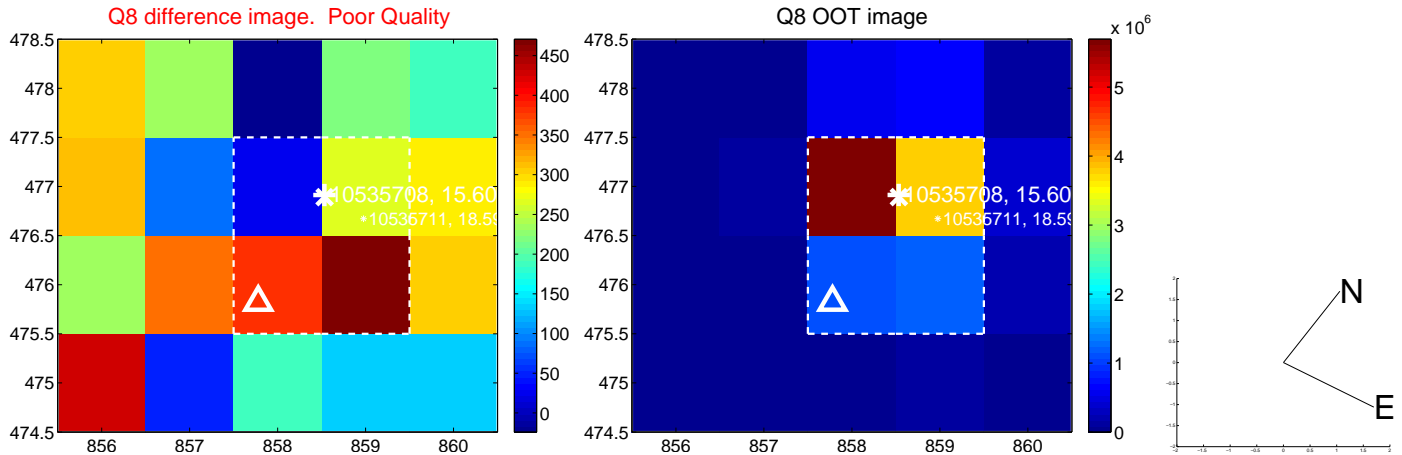
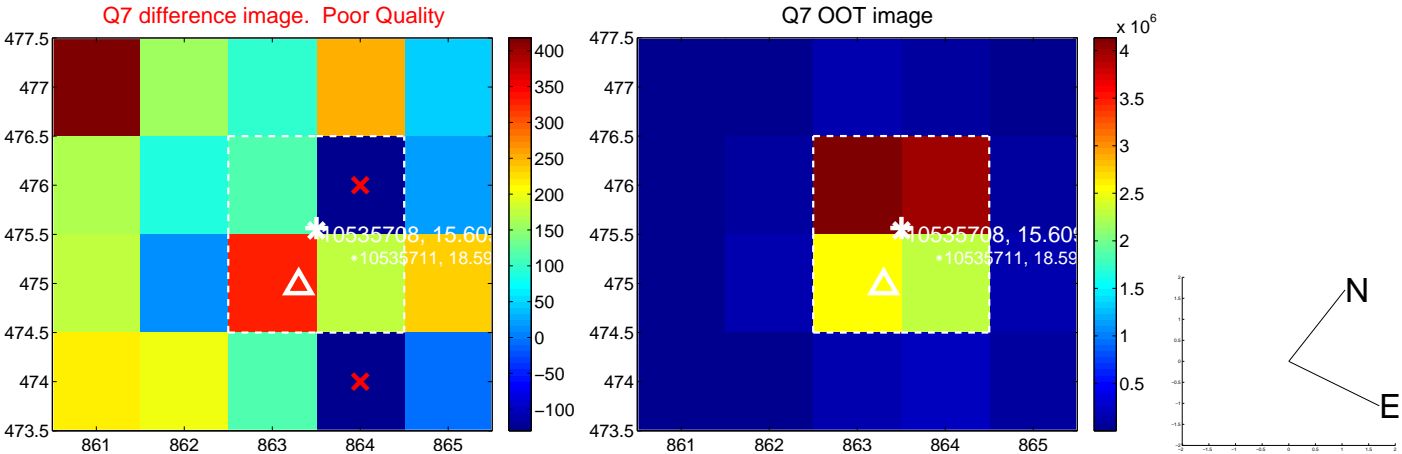
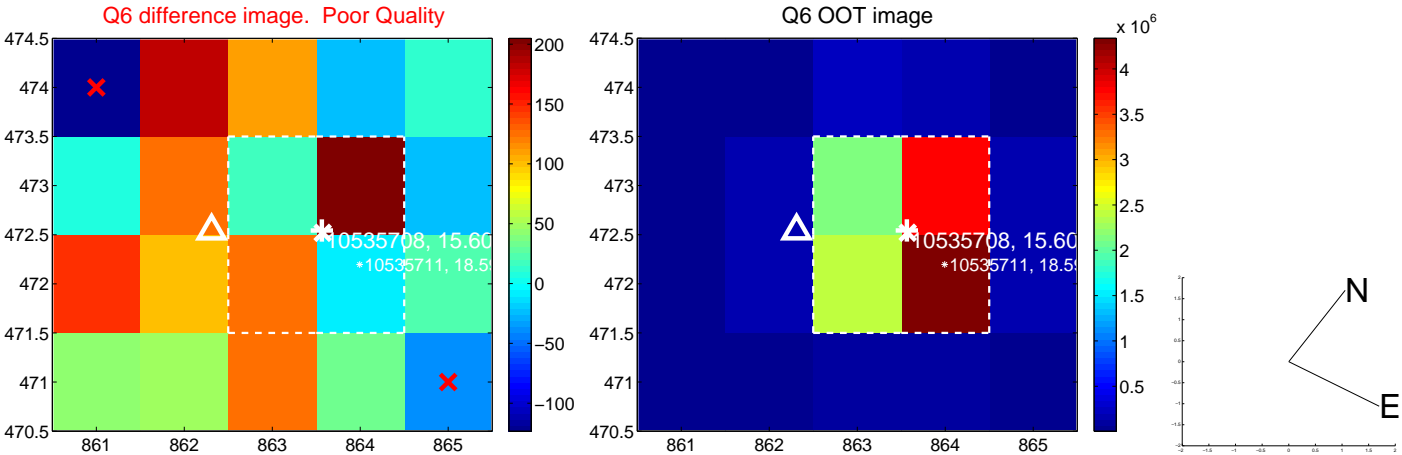
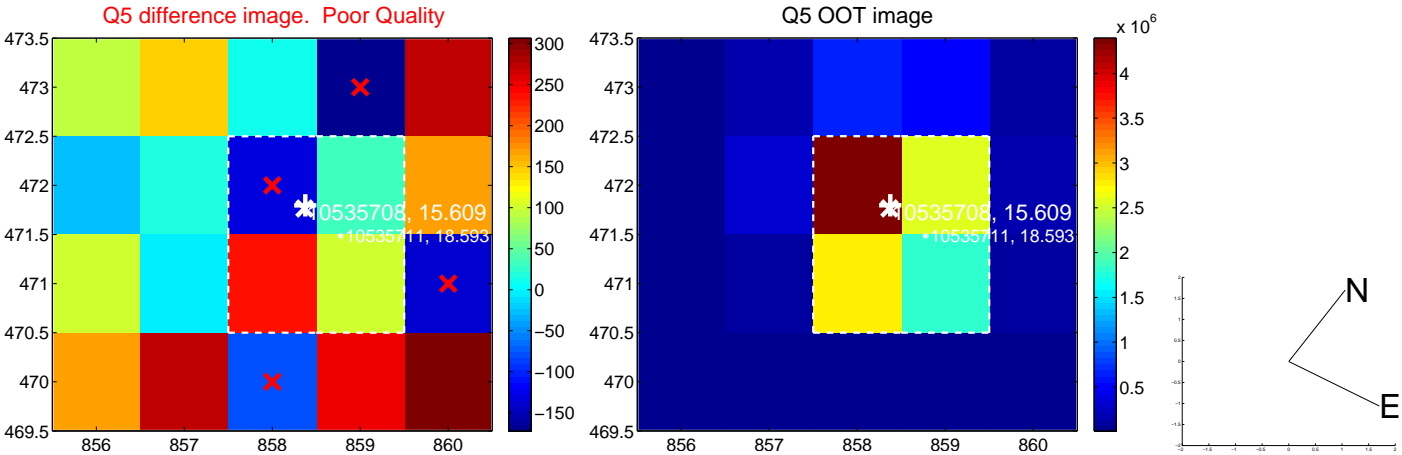


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

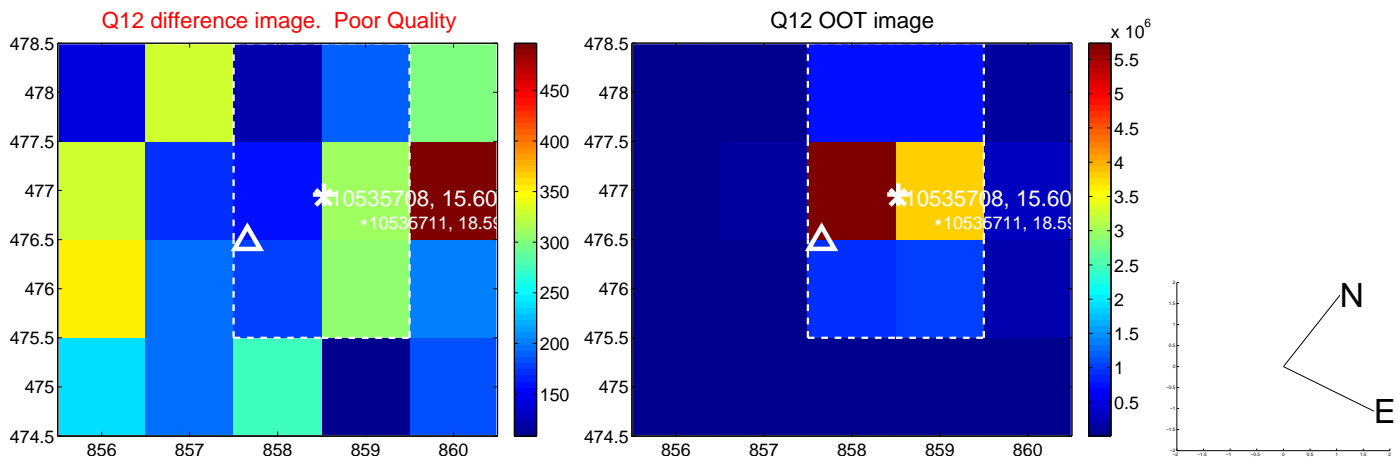
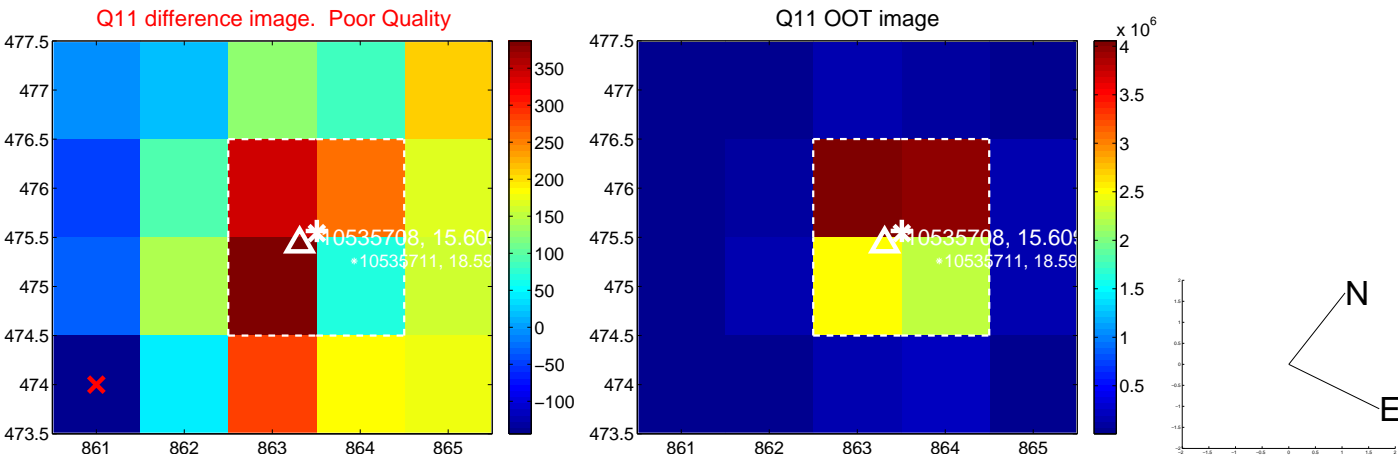
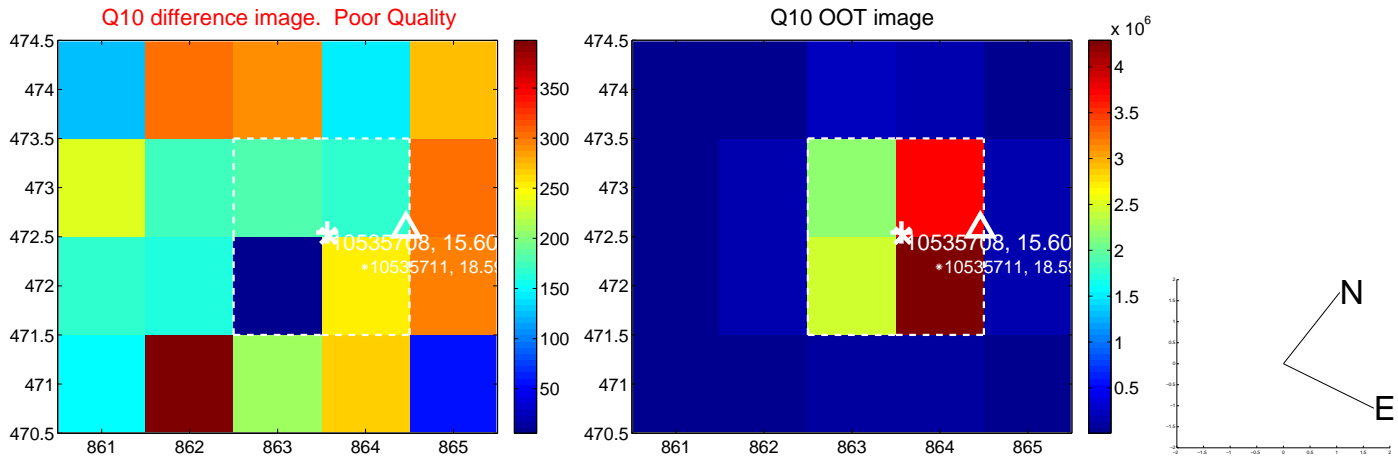
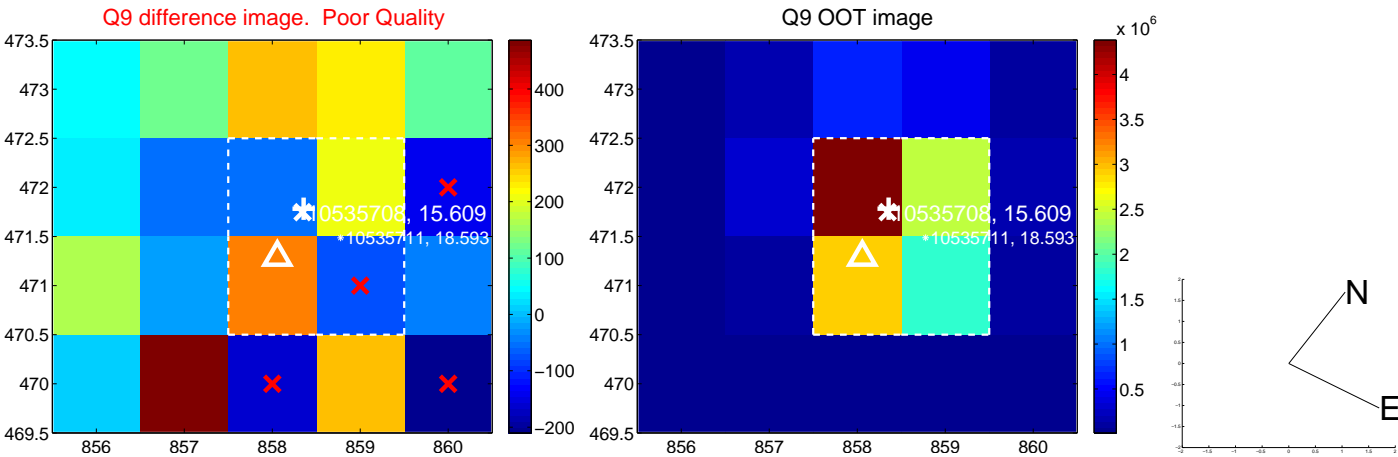
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



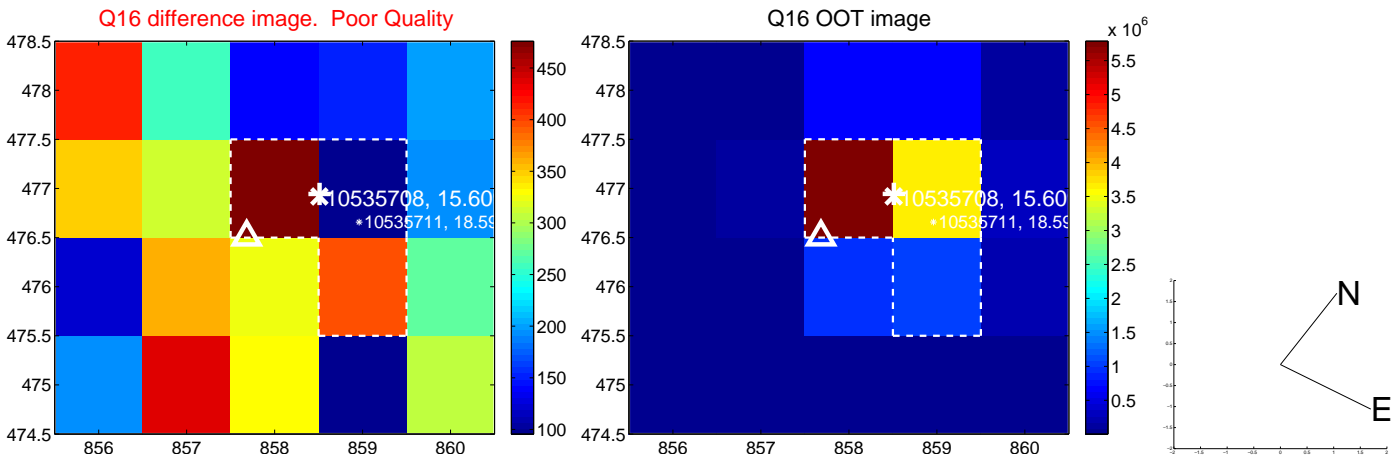
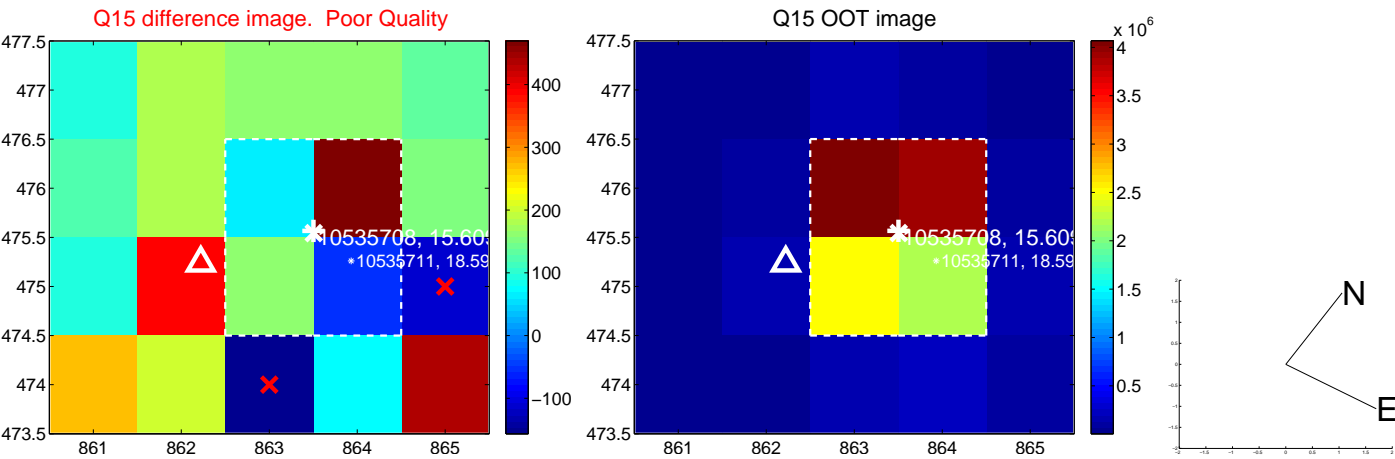
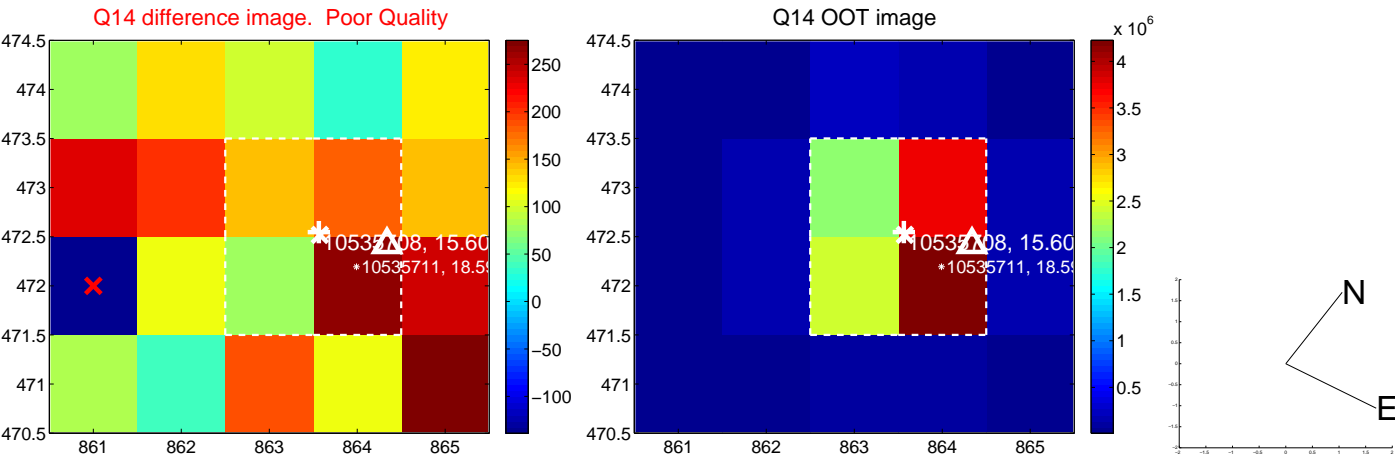
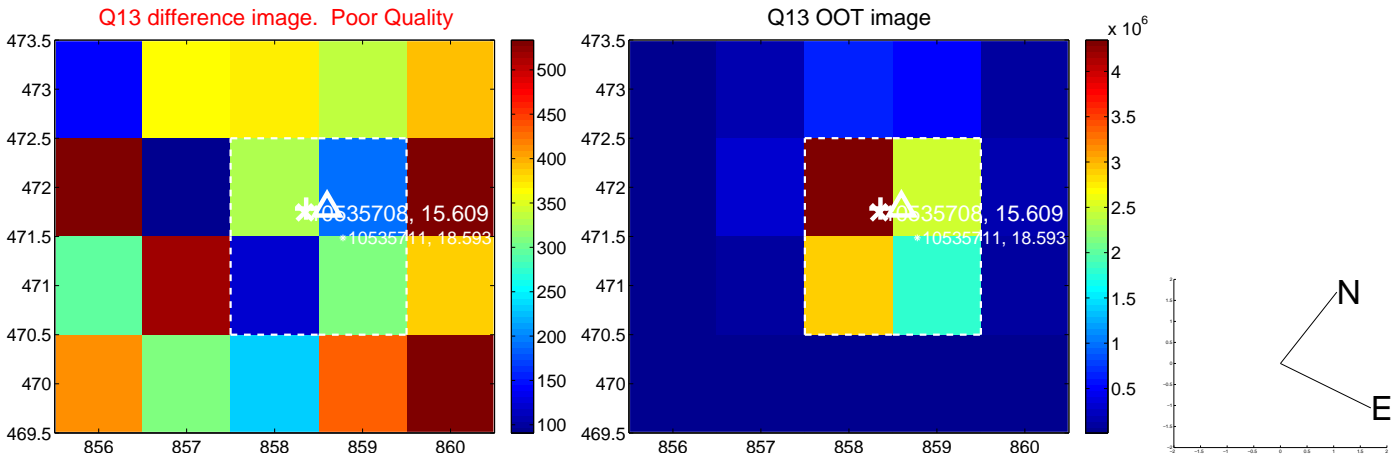
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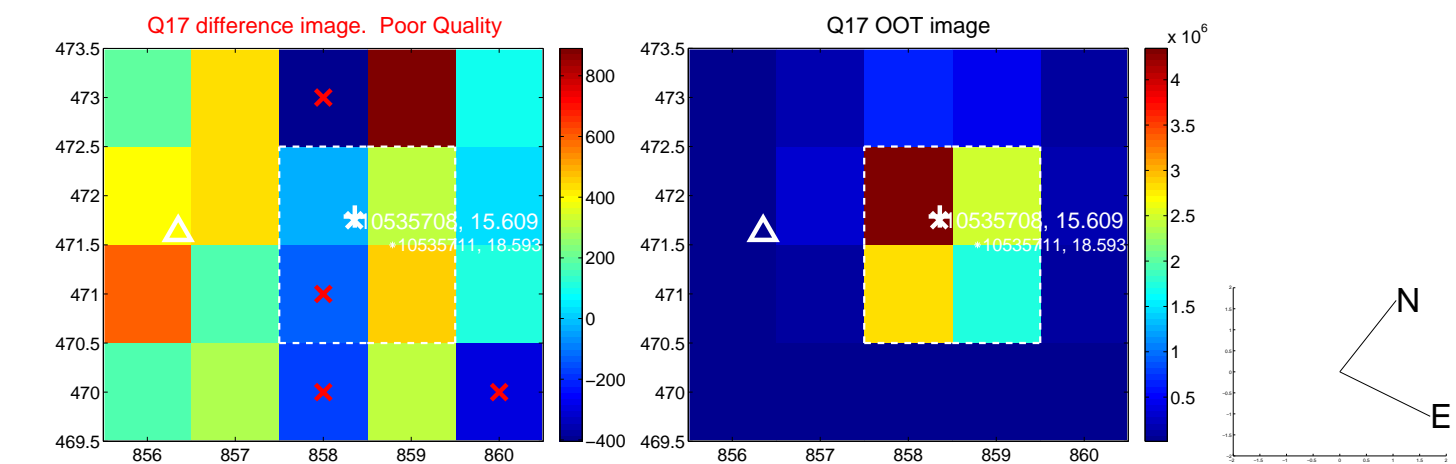
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



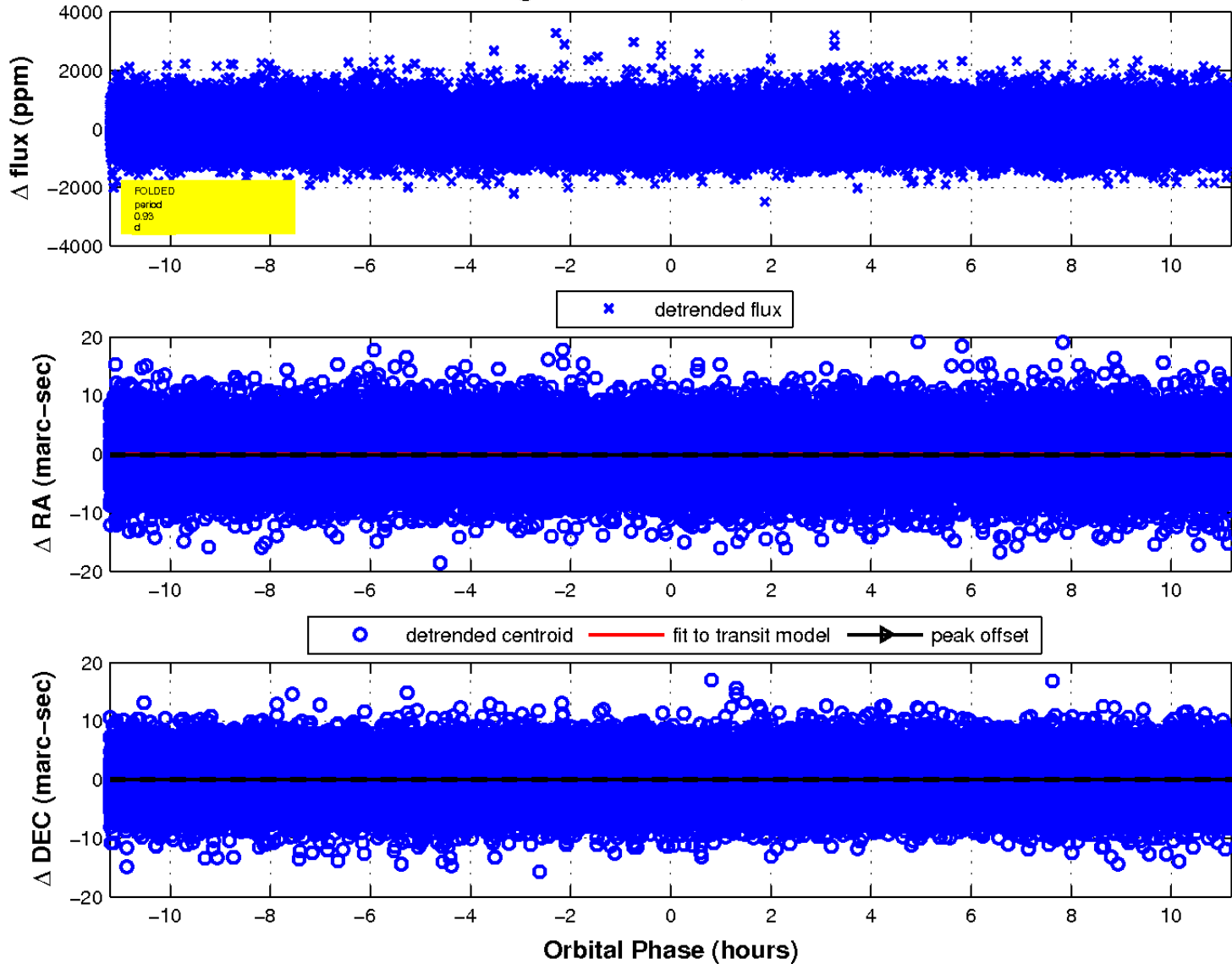
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

