

KIC 008803757

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})
008803757-01	OBS	4904.01	3.594495	132.362685	84.6	2.648	8.5	9.5	1.05	5523	1.19	456.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008803757-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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.

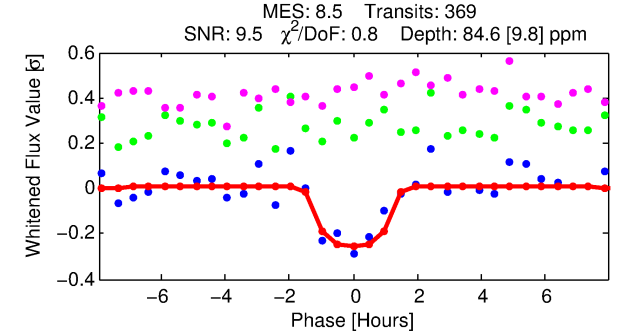
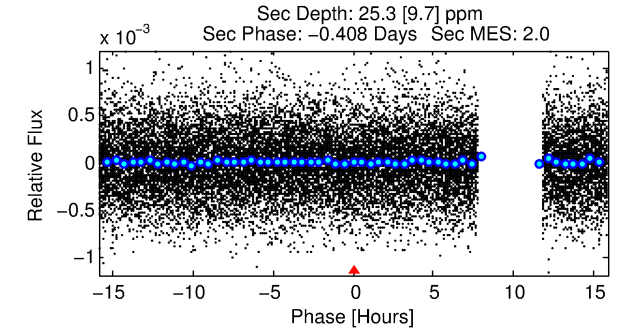
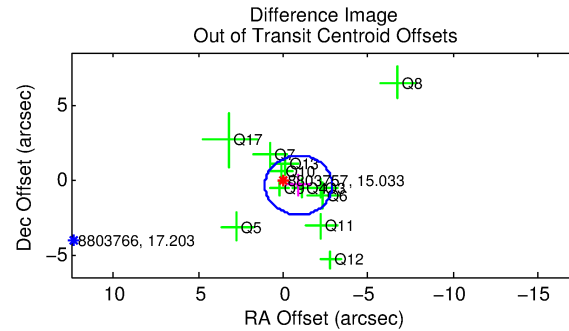
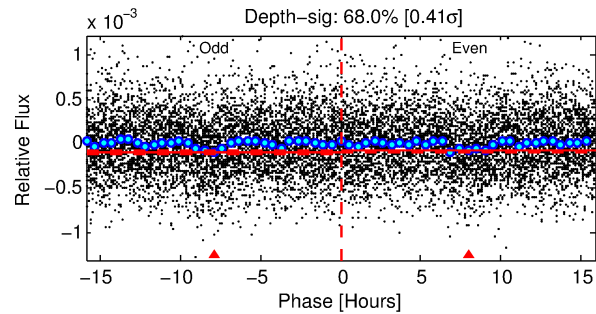
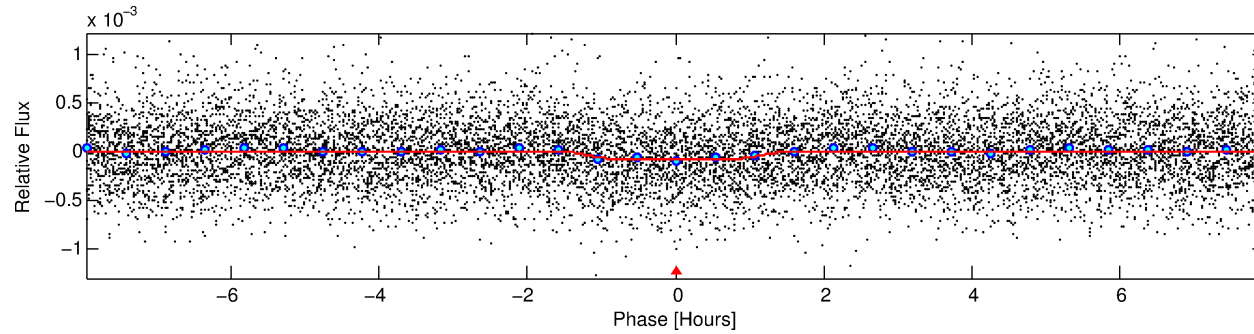
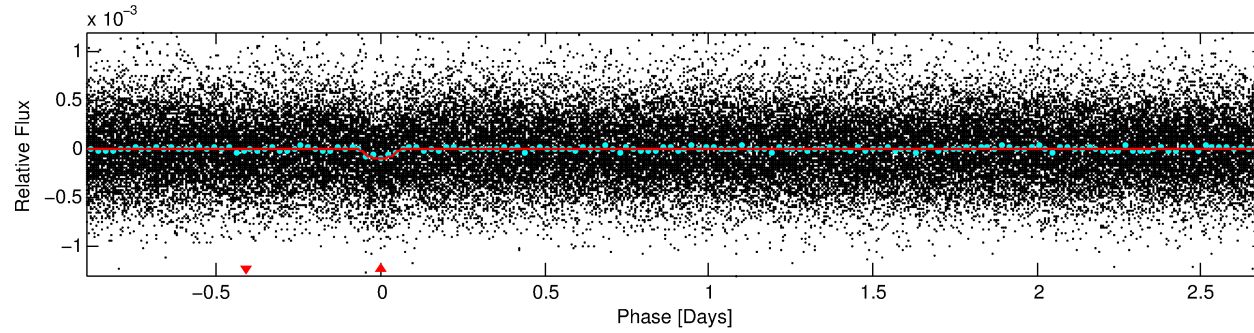
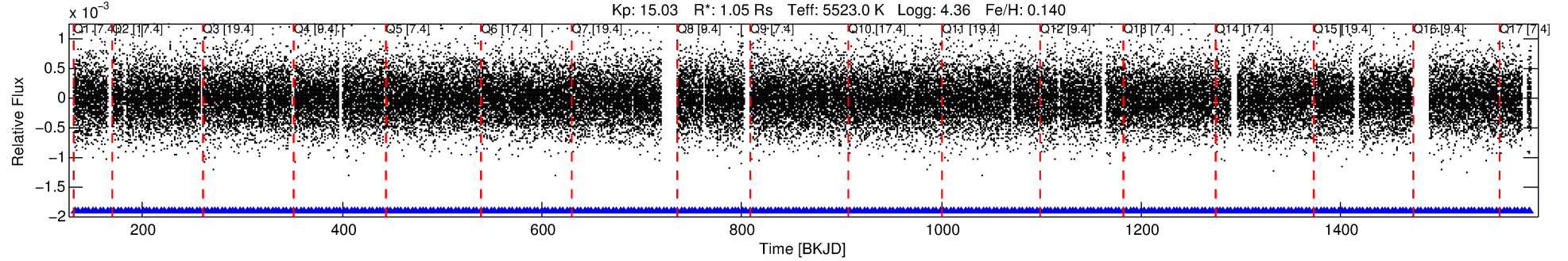
Ephemeris Match Information For 008803757-01

No Significant Match Found

DV One-Page Summary

KIC: 8803757 Candidate: 1 of 1 Period: 3.594 d

KOI: K04904.01 Corr: 0.969



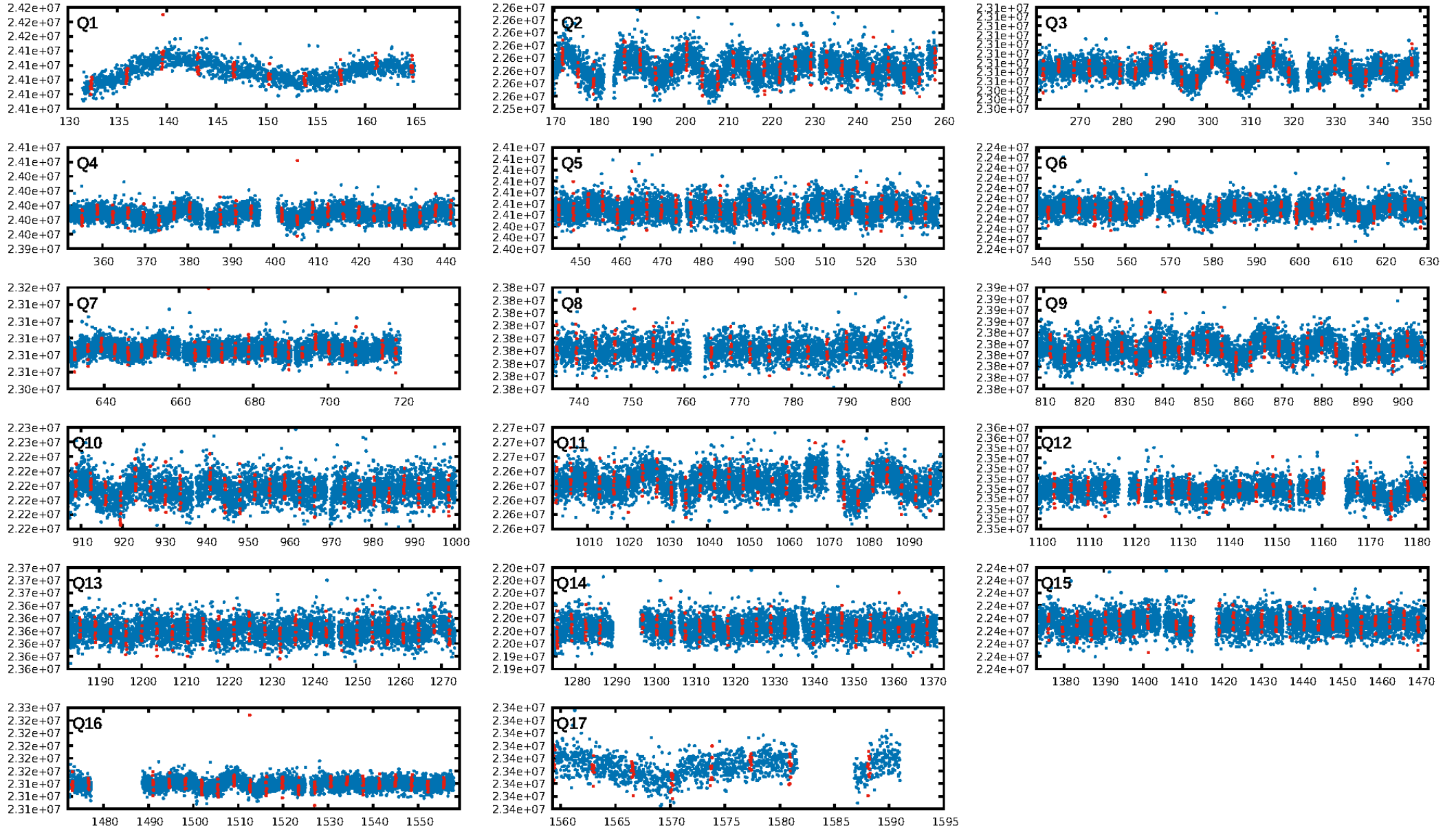
DV Fit Results:

Period = 3.59449 [0.00003] d
Epoch = 132.3627 [0.0047] BKJD
Rp/R* = 0.0104 [0.0065]
a/R* = 4.29 [11.87]
b = 0.93 [0.46]
Seff = 456.14 [98.90]
Teff = 1178 [64] K
Rp = 1.19 [0.77] Re
a = 0.0447 [0.0060] AU
Ag = 19.57 [25.92] [0.72 σ]
Teffp = 3832 [1254] K [2.11 σ]

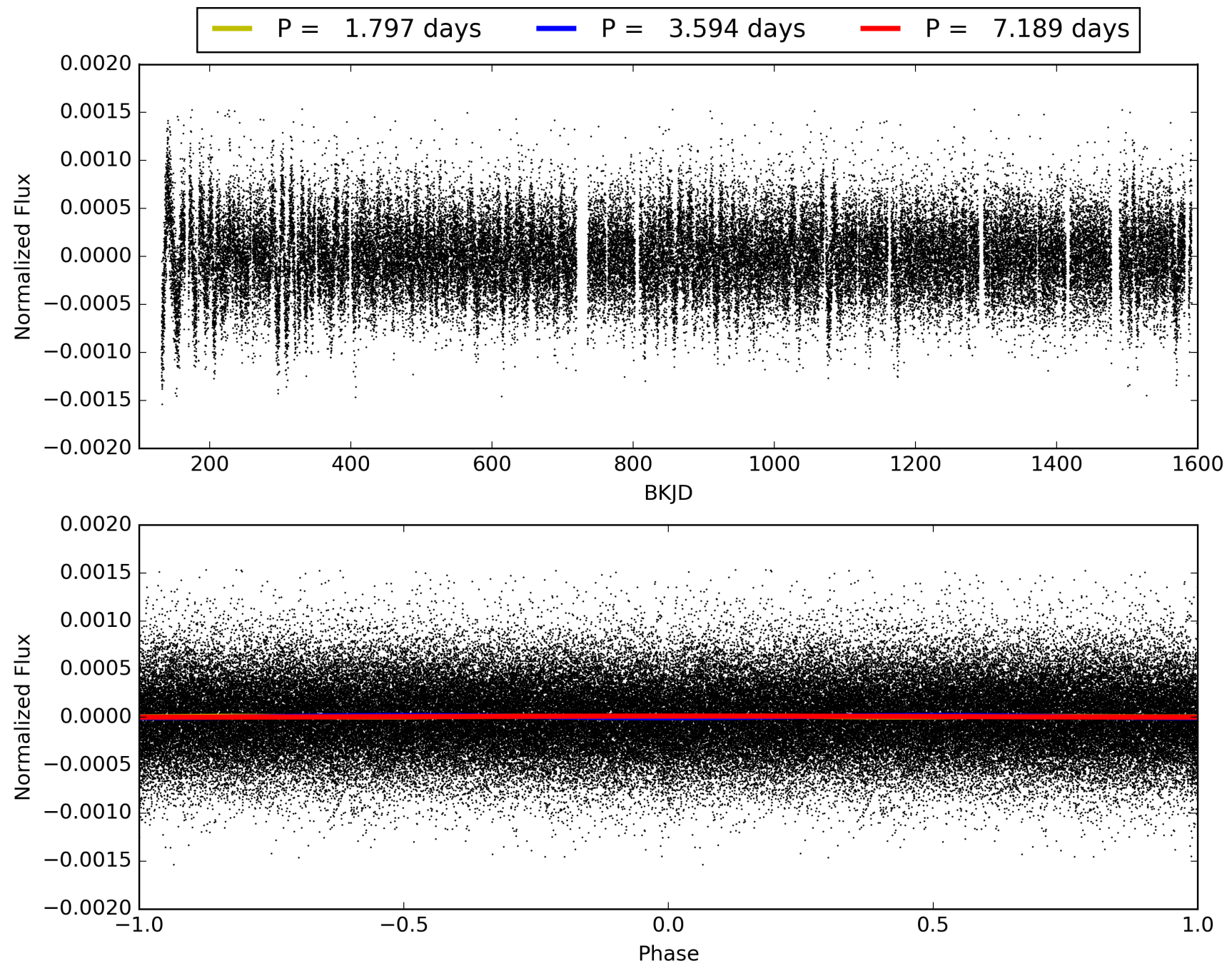
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.53e-17
RollingBand-fgt: 1.00 [351/351]
GhostDiagnostic-chr: 10.69
Centroid-sig: 0.5%
Centroid-so: 3.413 arcsec [2.35 σ]
OotOffset-rm: 0.982 arcsec [1.49 σ]
KicOffset-rm: 0.909 arcsec [1.33 σ]
OotOffset-st: 2/3/3/4 [12]
KicOffset-st: 2/3/3/4 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008803757-01, PDC Light Curves

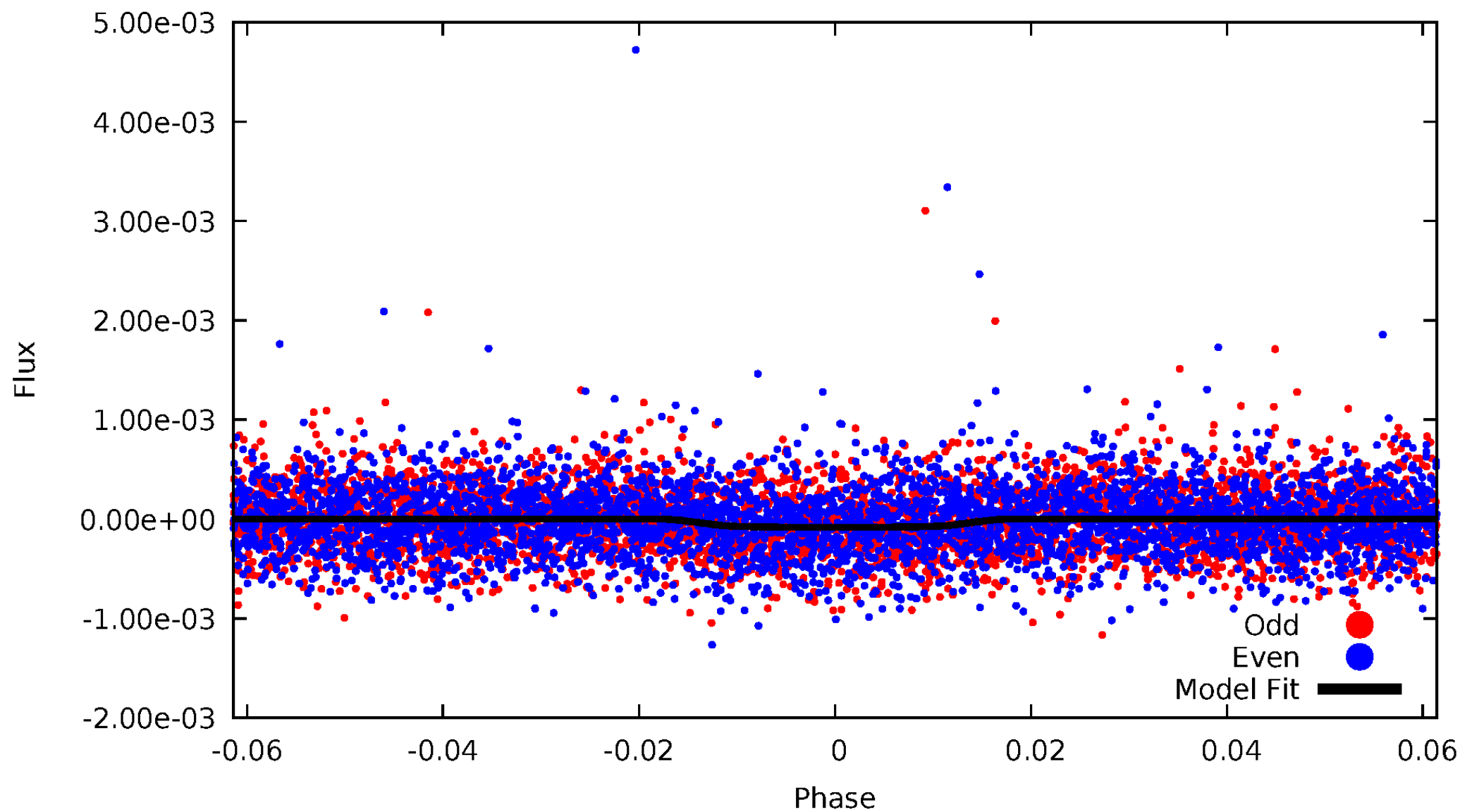


TCE 008803757-01



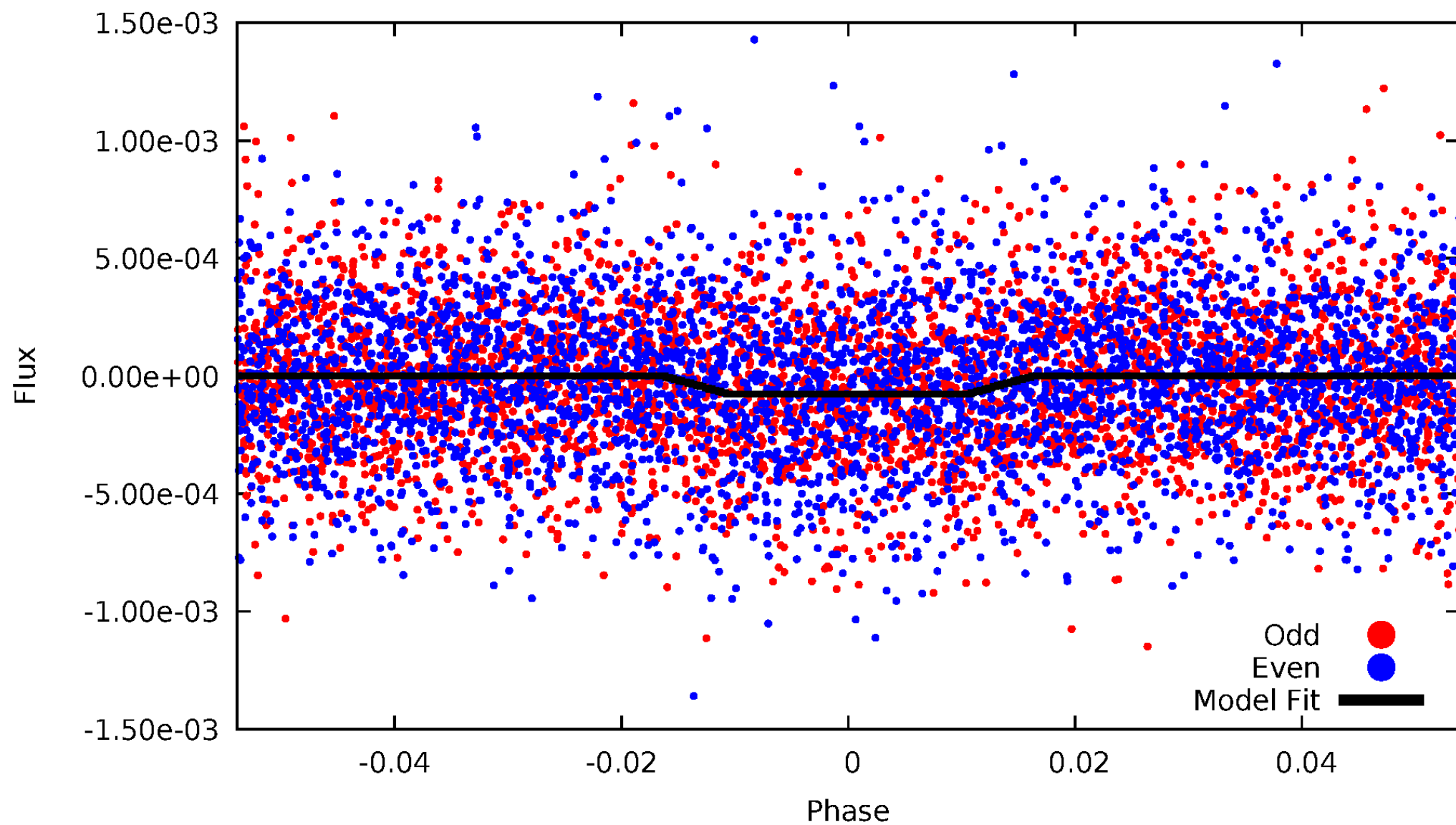
DV Odd/Even

TCE 008803757-01



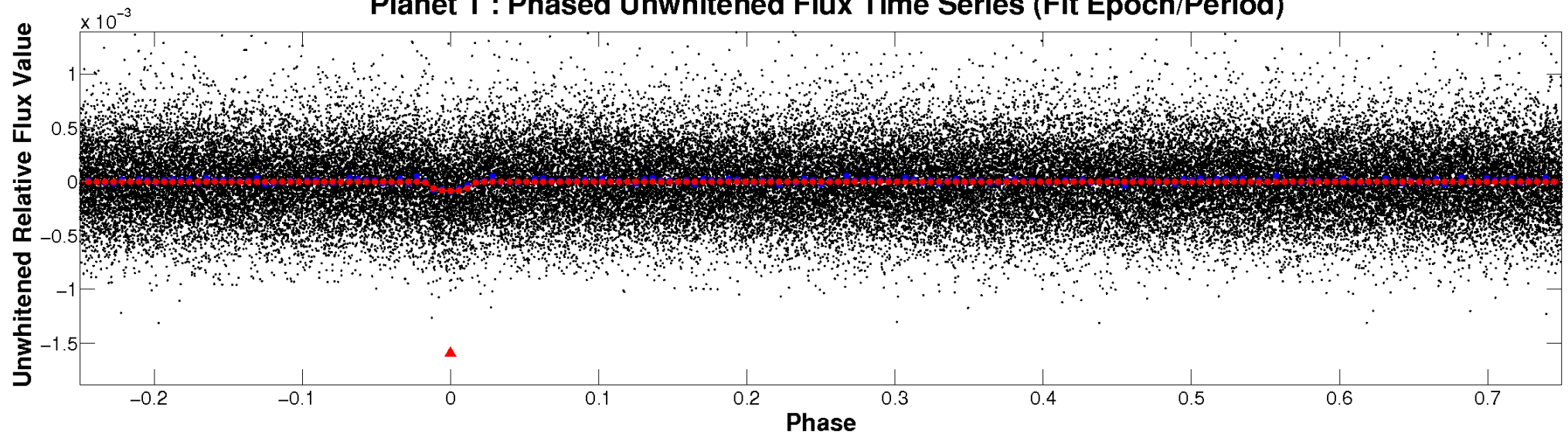
ALT Odd/Even

TCE 008803757-01

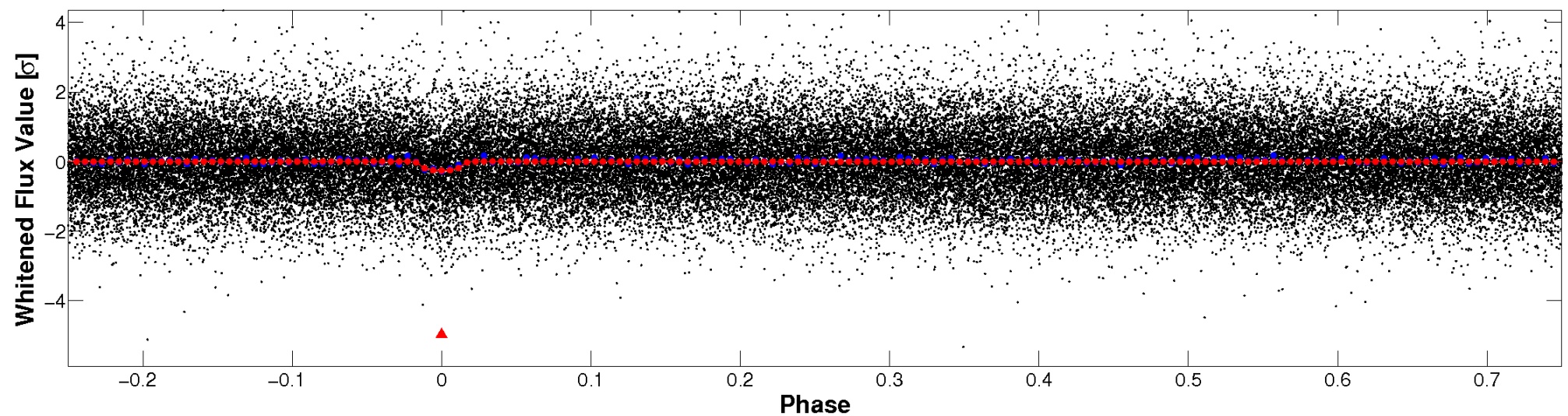


Non-Whitened Vs. Whitened Light Curve

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

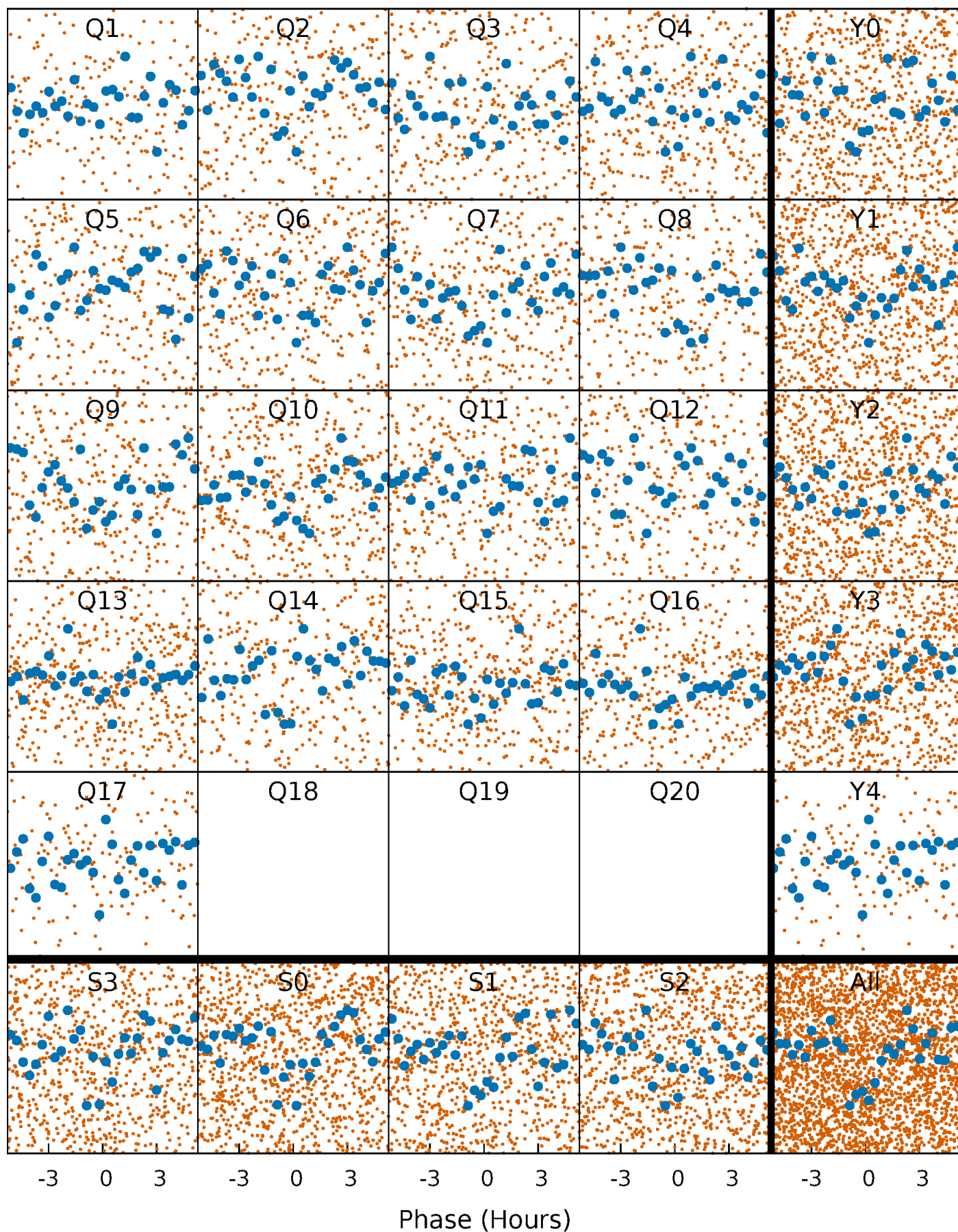


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



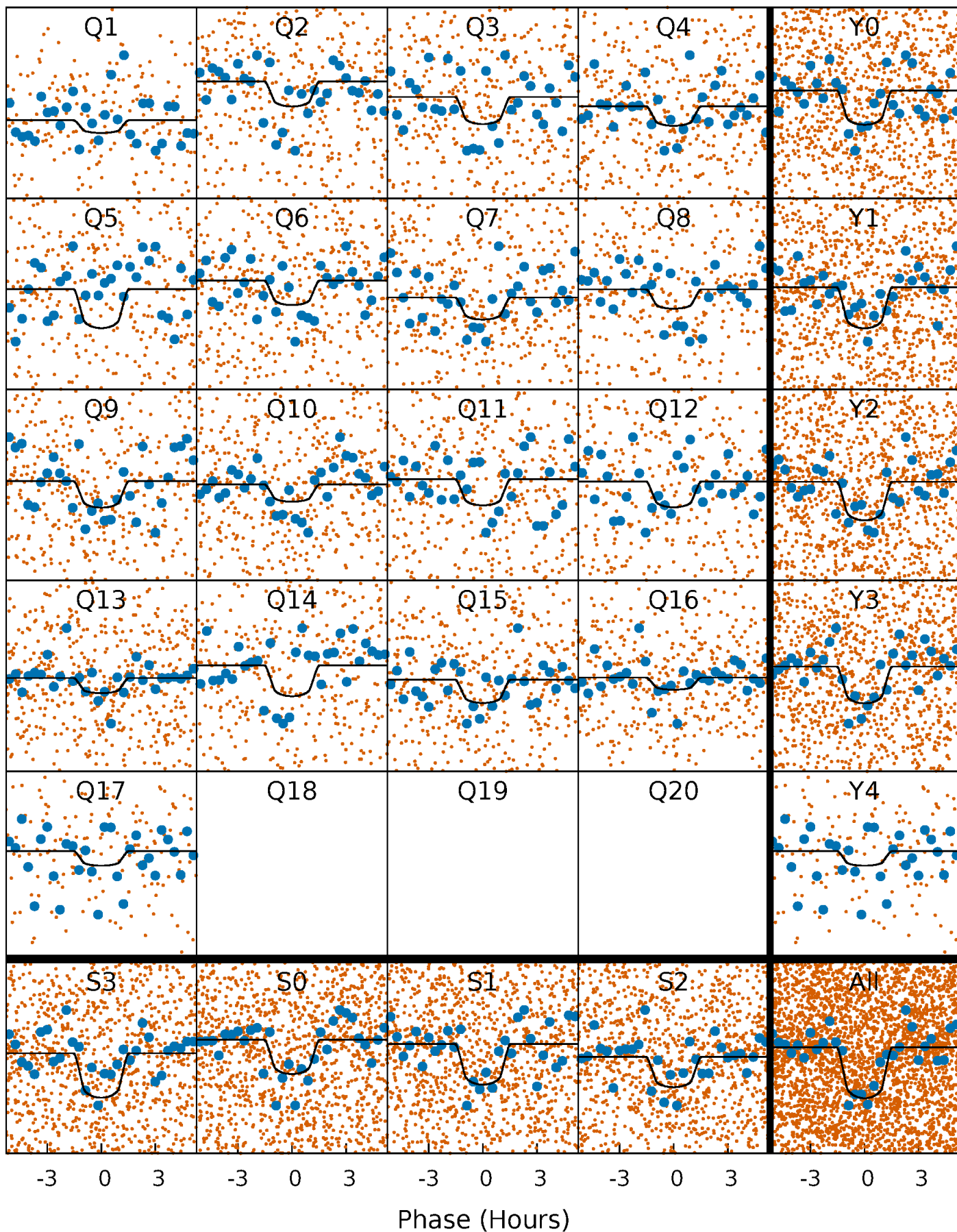
PDC Quarter-Phased Transit Curves

TCE 008803757-01 P= 3.594495 Days $T_0=132.362685$ (BKJD)



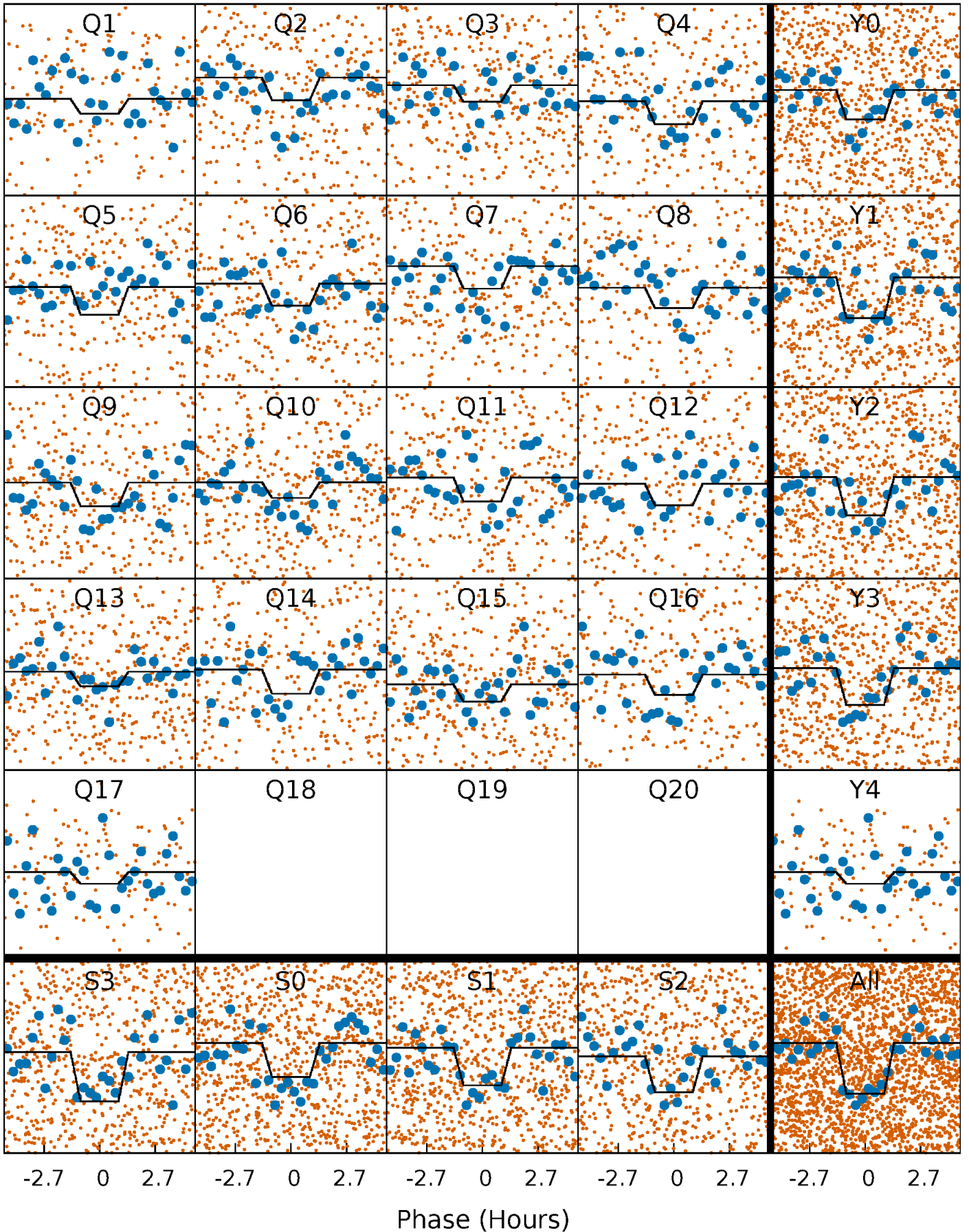
DV Quarter-Phased Transit Curves

TCE 008803757-01 P= 3.594495 Days $T_0=132.362685$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

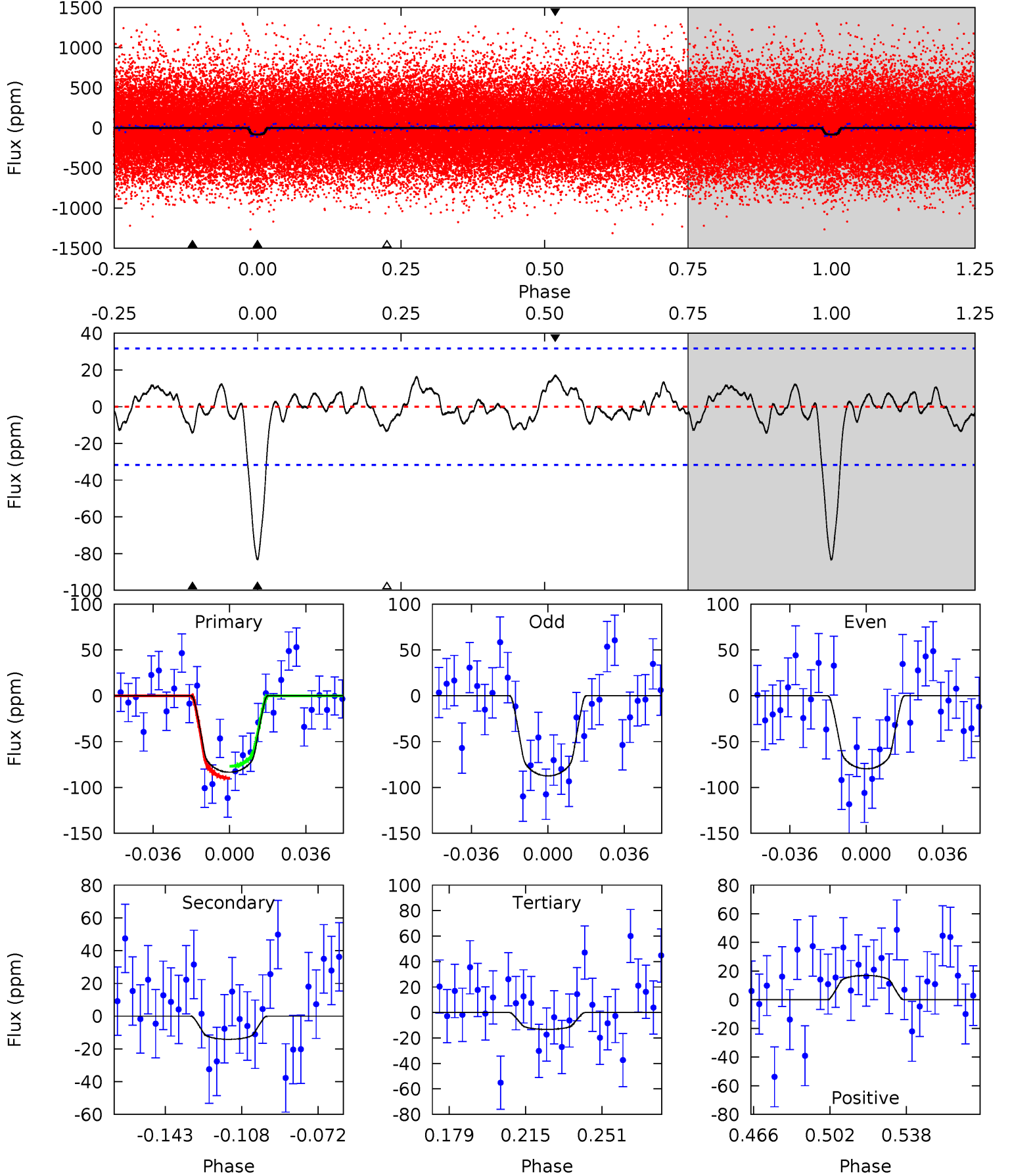
TCE 008803757-01 P= 3.594513 Days $T_0=132.359269$ (BKJD)



DV Model-Shift Uniqueness Test

008803757-01, P = 3.594495 Days, E = 128.768190 Days

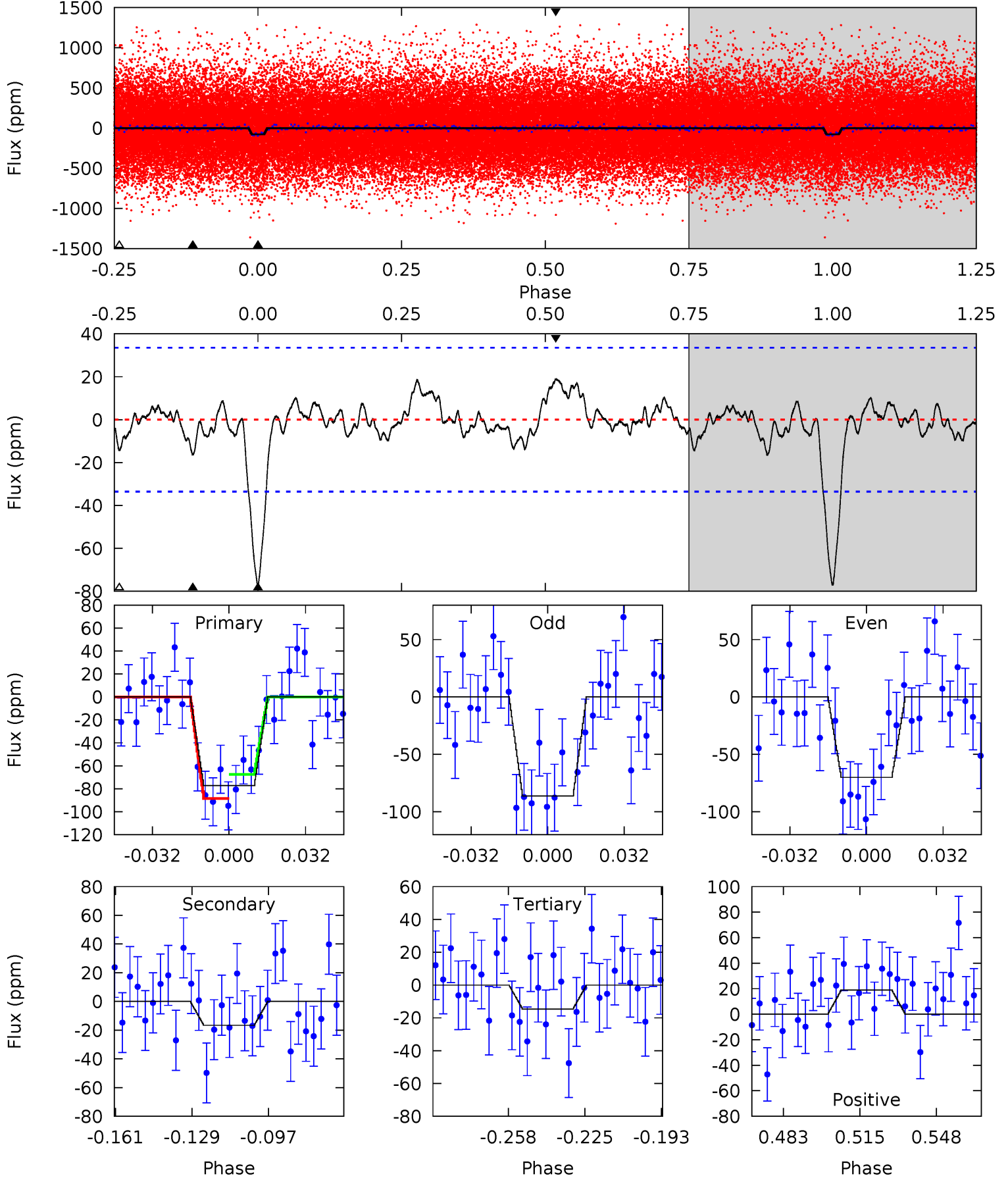
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	2.13	2.00	2.55	4.78	2.10	1.02	10.5	9.99	0.14	-0.42	0.59	0.94	0.17	0.99



Alt Model-Shift Uniqueness Test

008803757-01, P = 3.594513 Days, E = 128.764756 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	2.37	2.09	2.72	4.80	2.14	0.98	8.98	8.35	0.29	-0.34	1.16	0.97	0.20	1.50



Stellar Parameters For KIC 008803757

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5523^{+74}_{-74}	$4.364^{+0.121}_{-0.099}$	$0.140^{+0.150}_{-0.150}$	$1.046^{+0.154}_{-0.126}$	$0.922^{+0.062}_{-0.043}$	$1.136^{+0.547}_{-0.370}$
	+1%/-1%	+3%/-2%	+107%/-107%	+15%/-12%	+7%/-5%	+48%/-33%
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 008803757-01 / KOI 4904.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-14 ± 7	$1.24^{+0.73}_{-0.63}$	1642^{+67}_{-58}	3580^{+1102}_{-576}	$9.163^{+29.459}_{-5.983}$
Alt.	-17 ± 7	$1.05^{+0.74}_{-0.58}$	1641^{+63}_{-62}	3932^{+1497}_{-725}	15^{+62}_{-11}

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

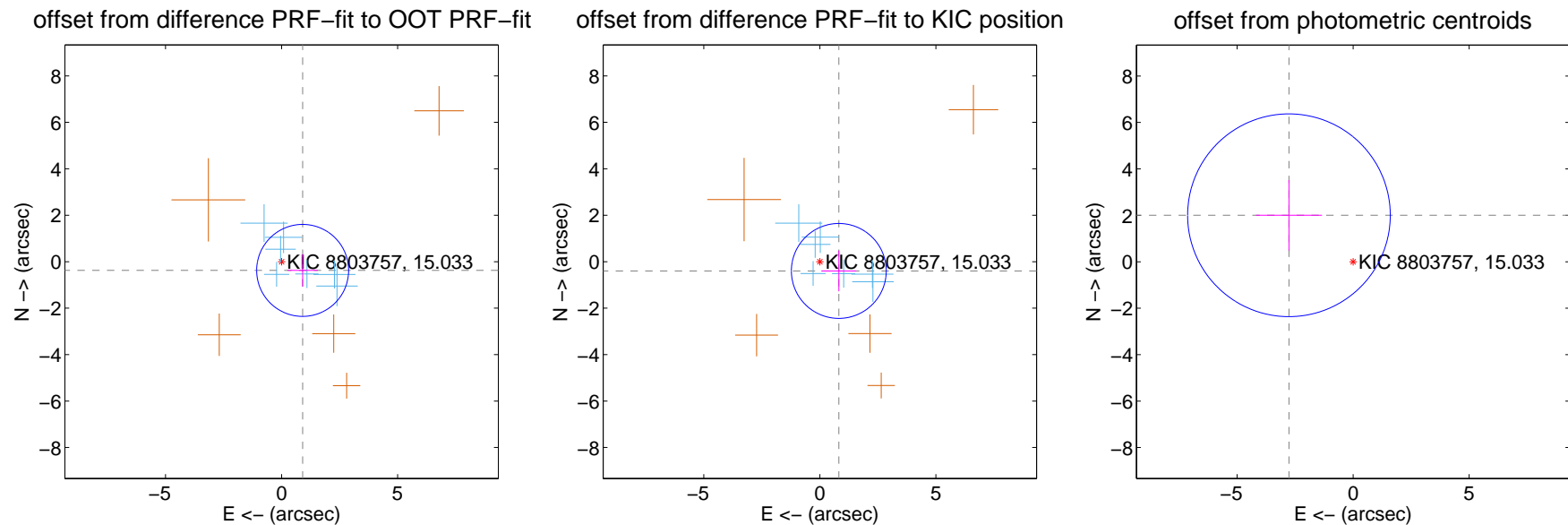
DV Centroid Data

Supplemental centroid analysis for 008803757-01. Kepler magnitude: 15.03. Transit SNR 9.51

There are 7 quarters with good PRF difference image offsets

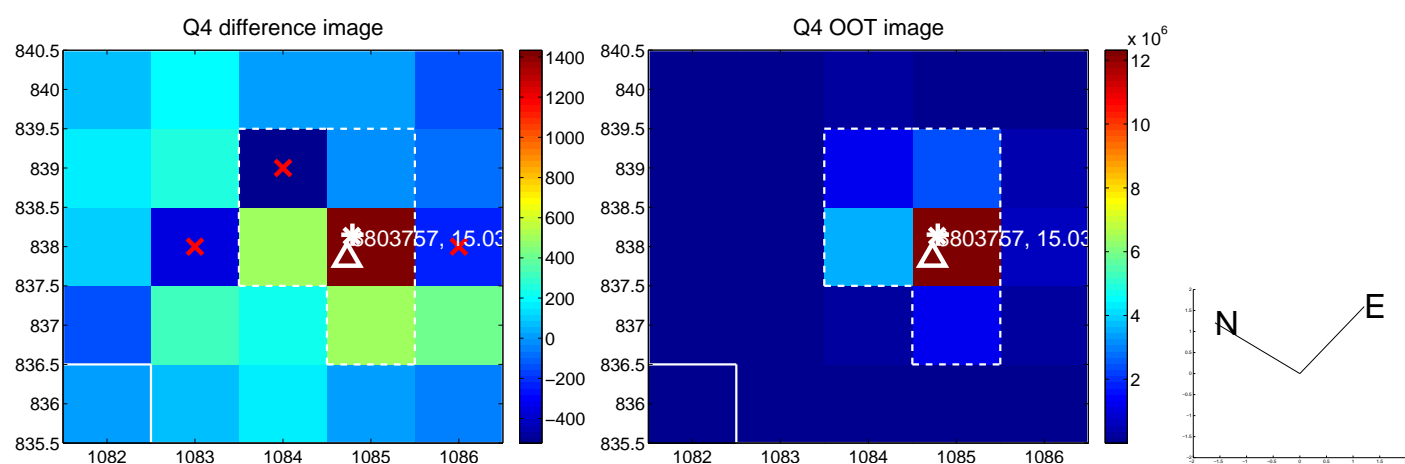
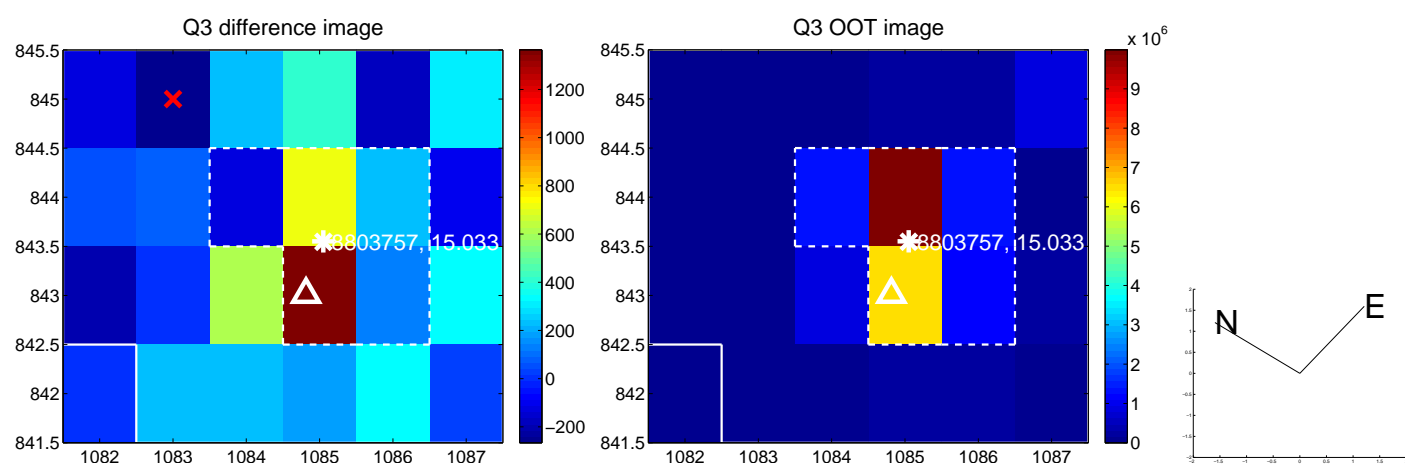
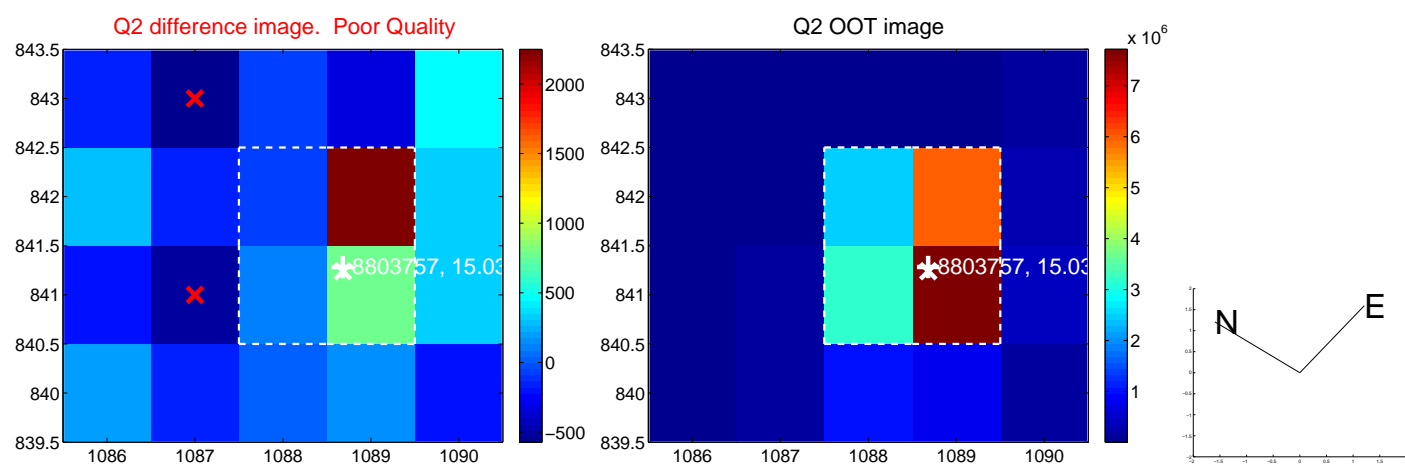
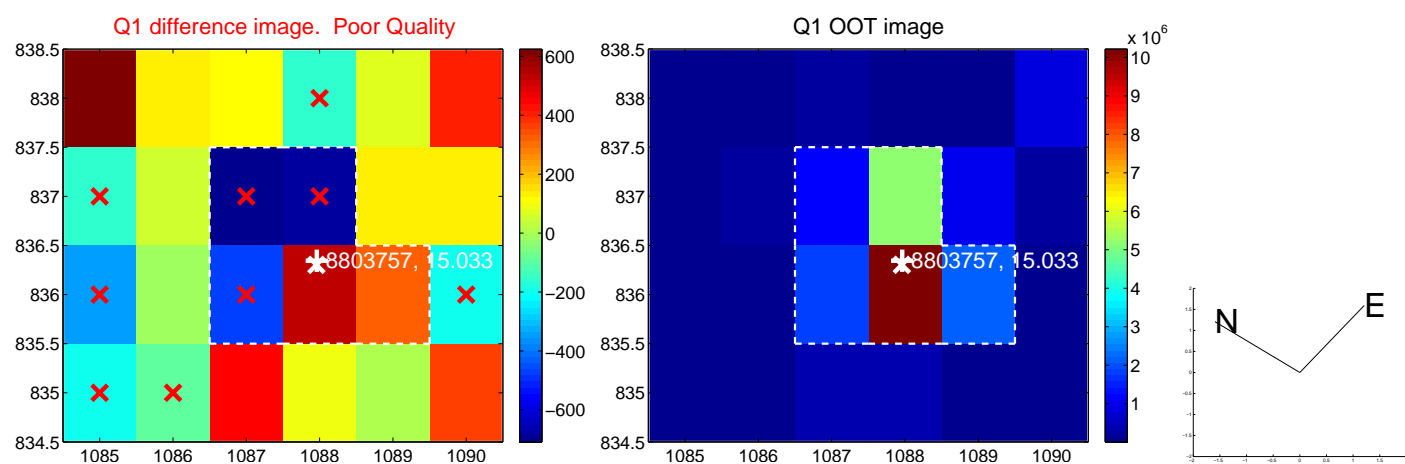
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.982 ± 0.660	1.49	-0.907 ± 0.653	-0.375 ± 0.701
PRF-fit source offset from KIC position	0.909 ± 0.681	1.33	-0.817 ± 0.754	-0.398 ± 0.875
photometric centroid source offset	3.41 ± 1.46	2.35	2.76 ± 1.42	2.00 ± 1.52

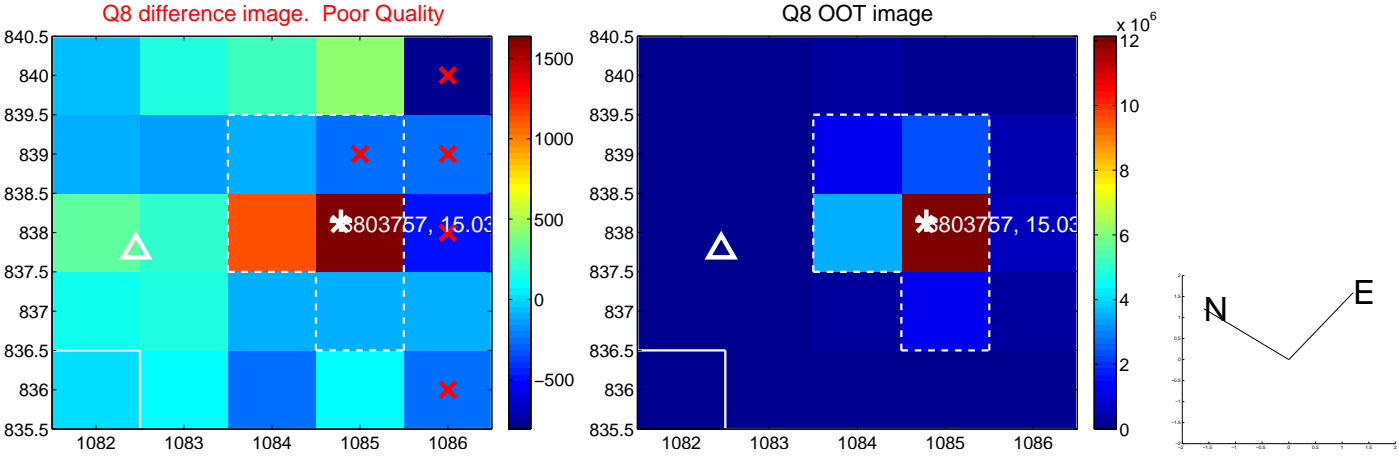
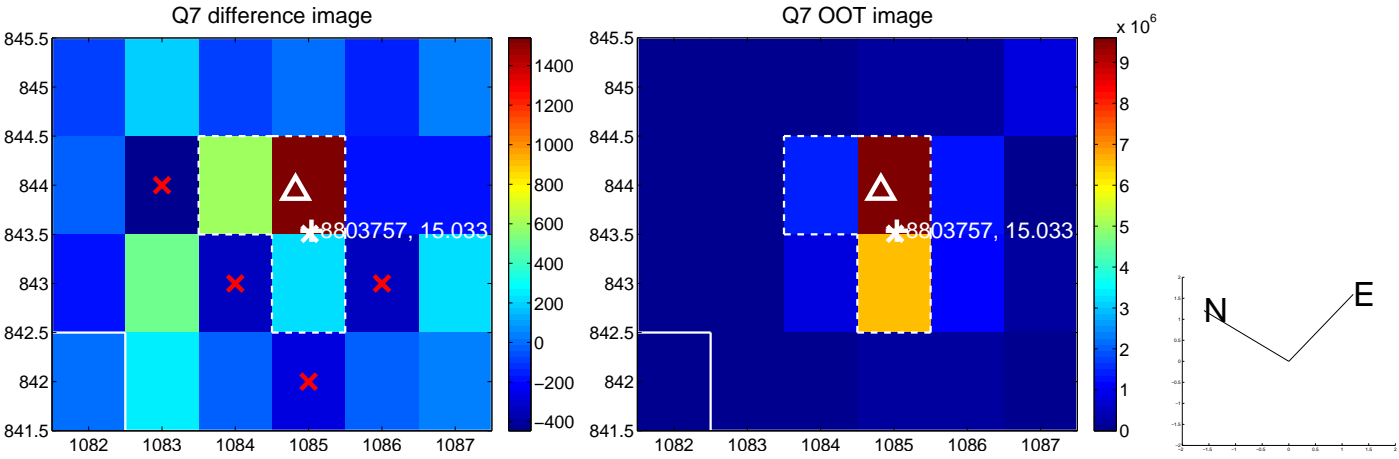
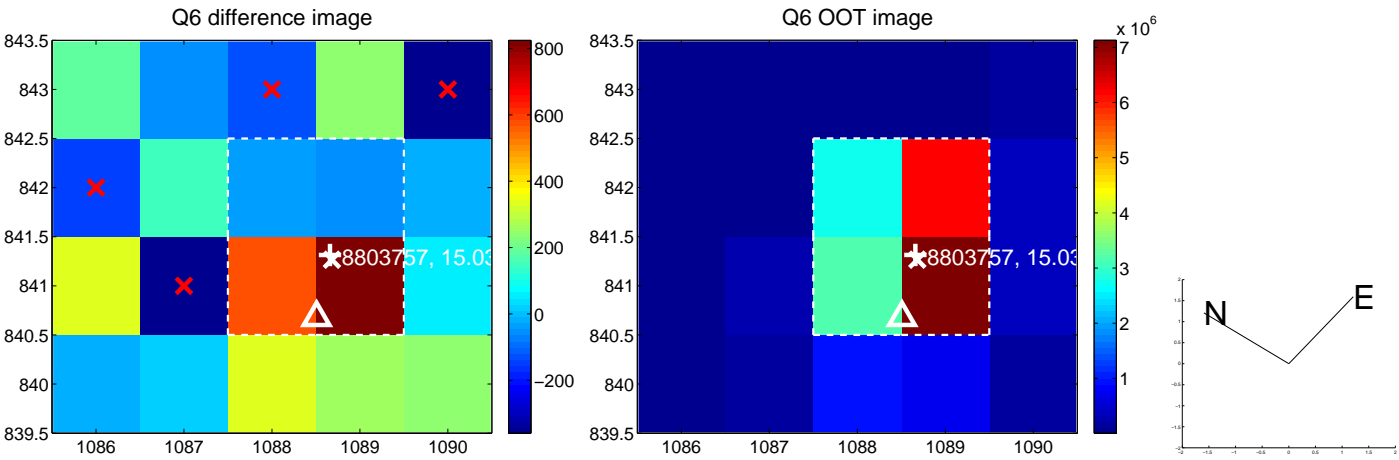
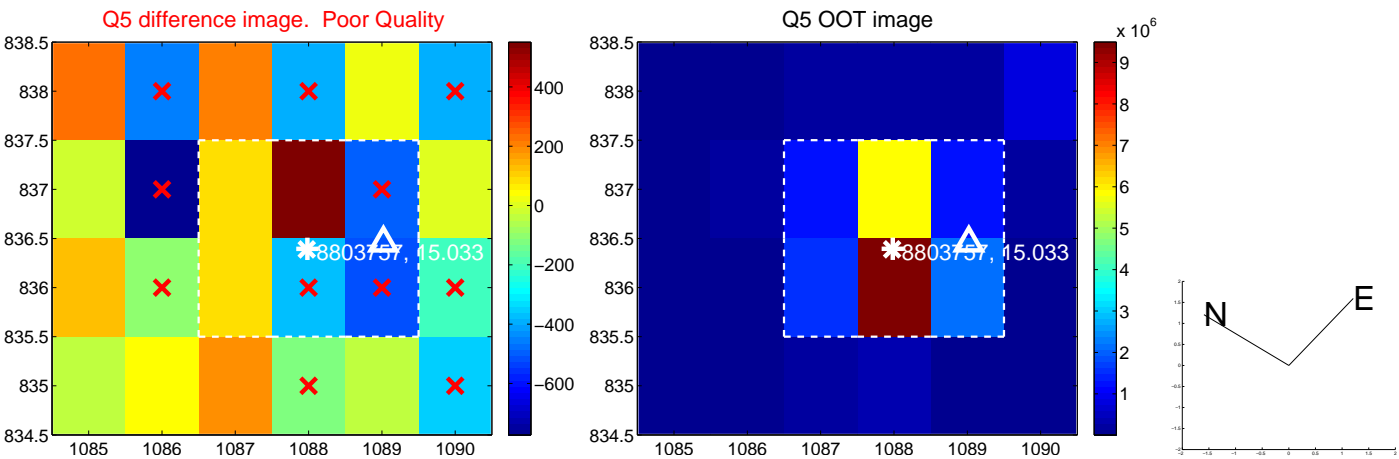


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

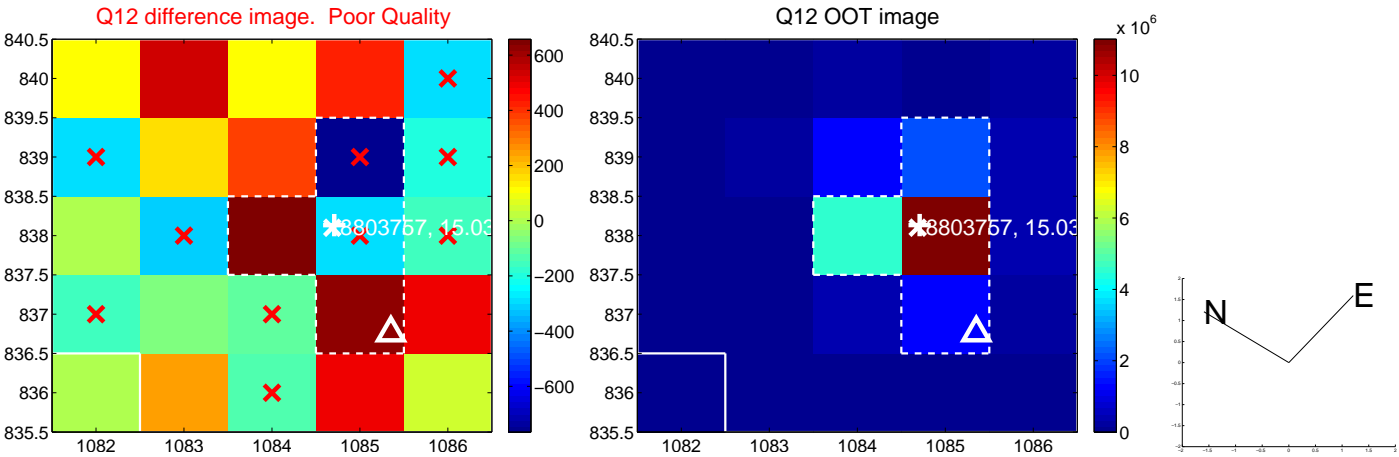
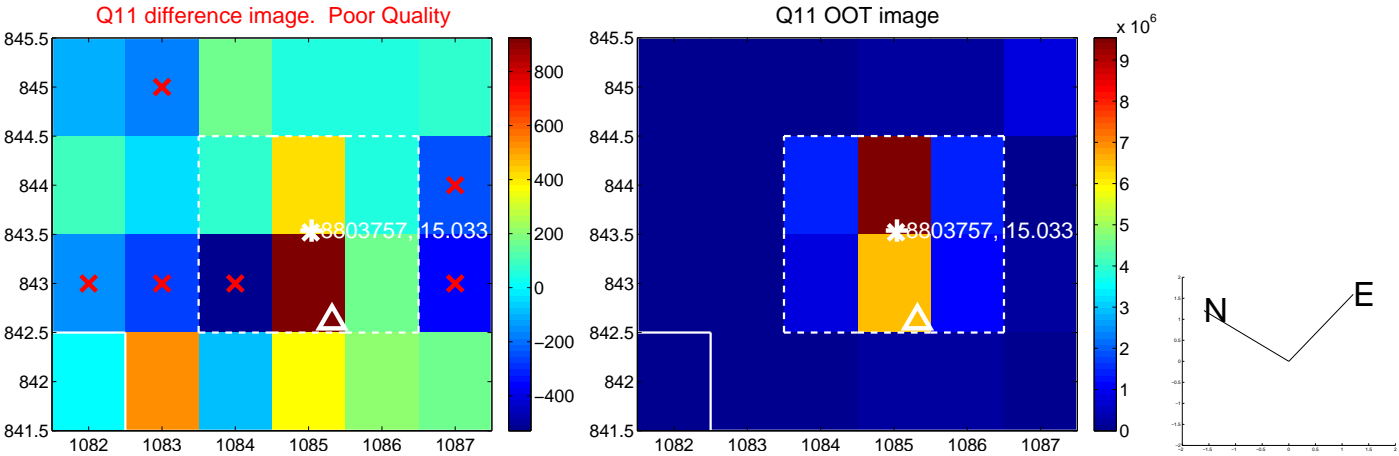
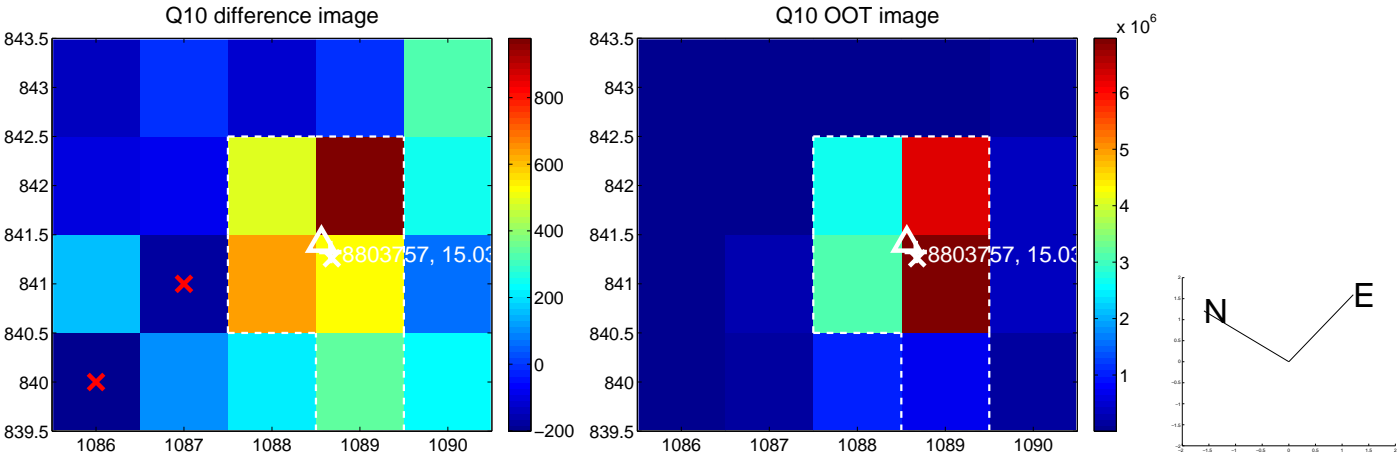
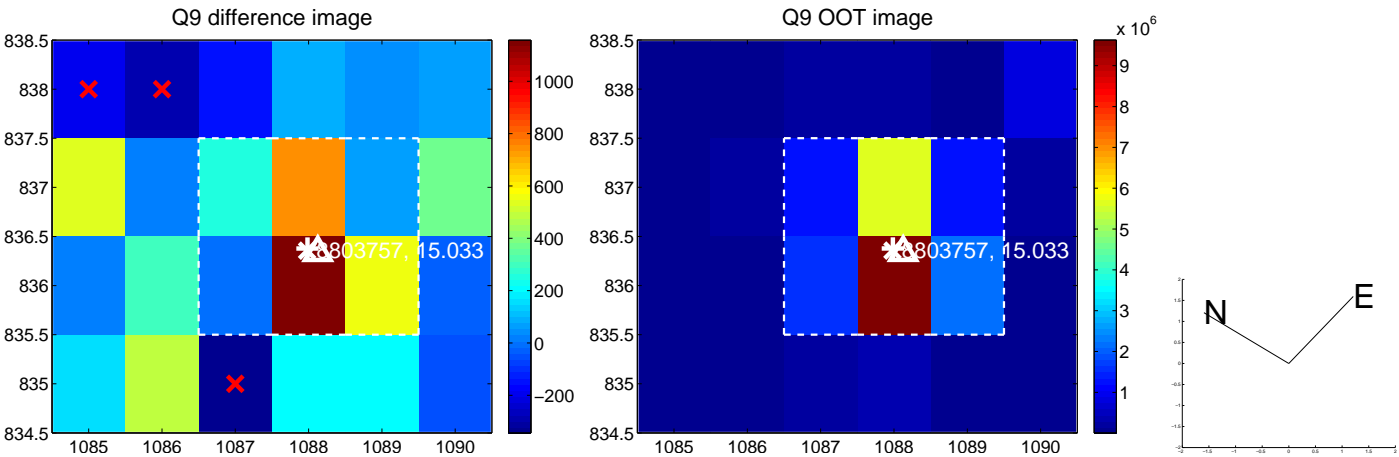
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

