

KIC 010844890

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})
010844890-01	OBS	1946.01	8.294849	133.500892	554.1	2.623	35.3	39.1	0.94	5773	2.63	139.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010844890-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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

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

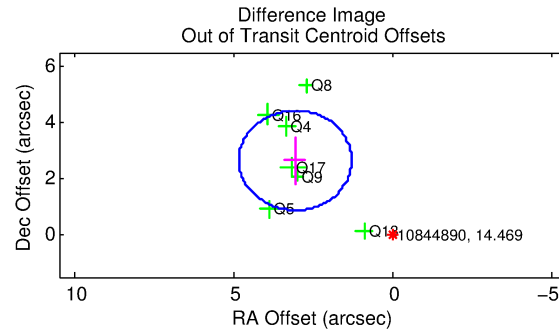
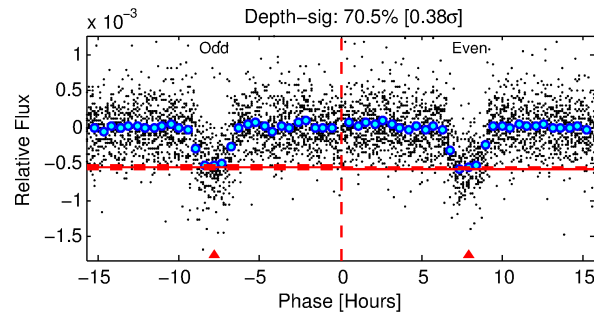
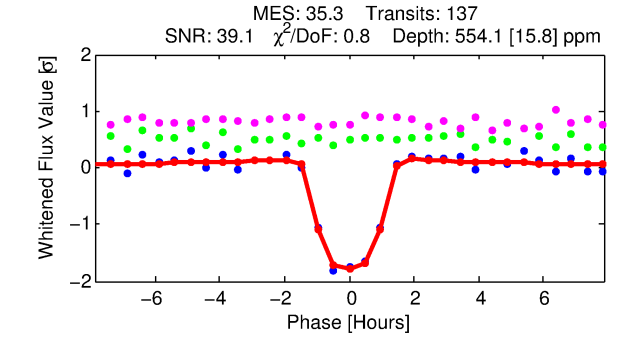
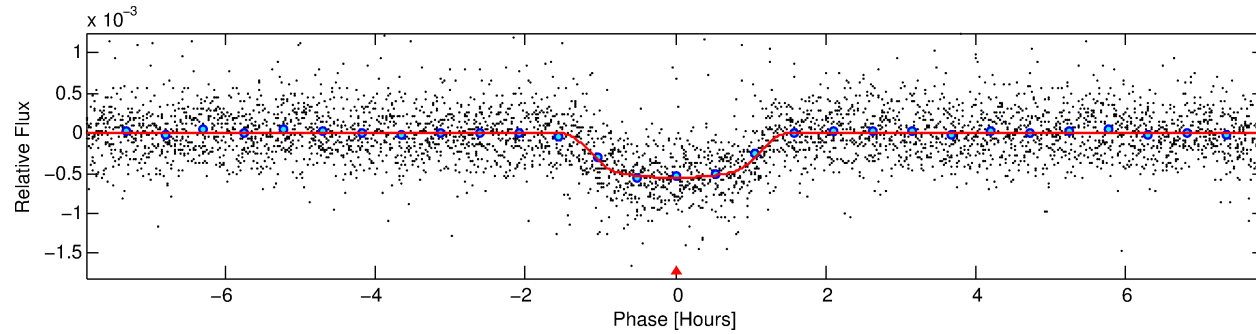
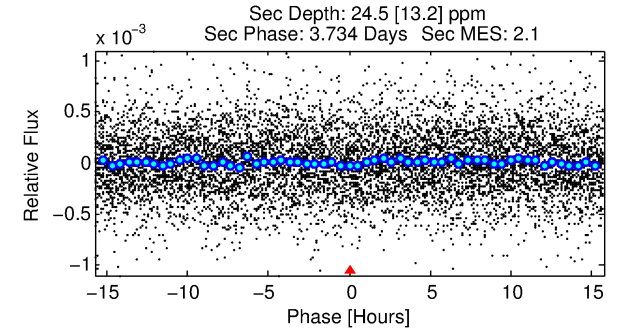
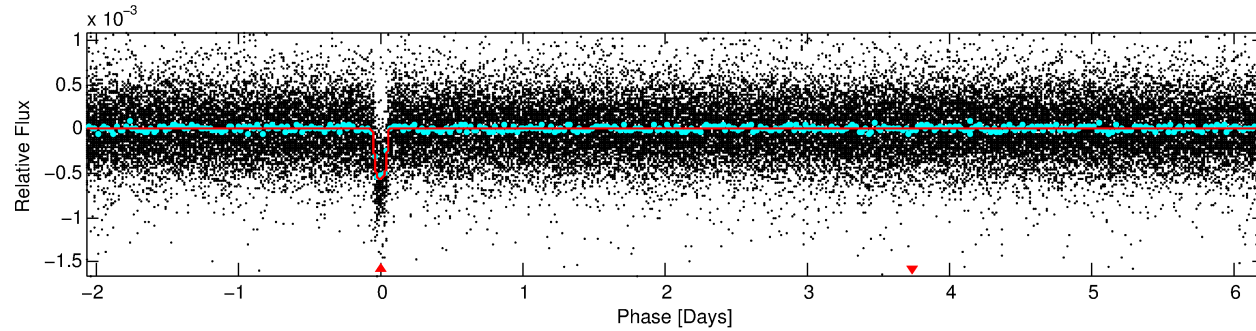
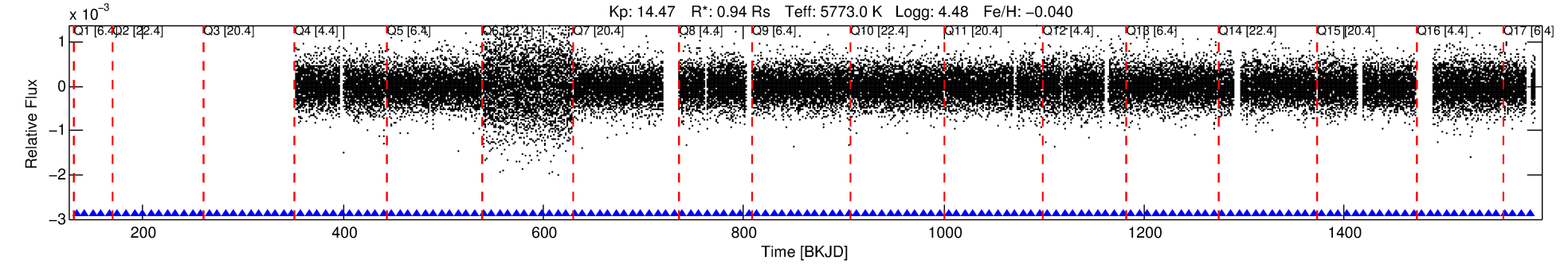
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010844890-01

No Significant Match Found

DV One-Page Summary

KIC: 10844890 Candidate: 1 of 1 Period: 8.295 d
KOI: K01946.01 Corr: 0.987



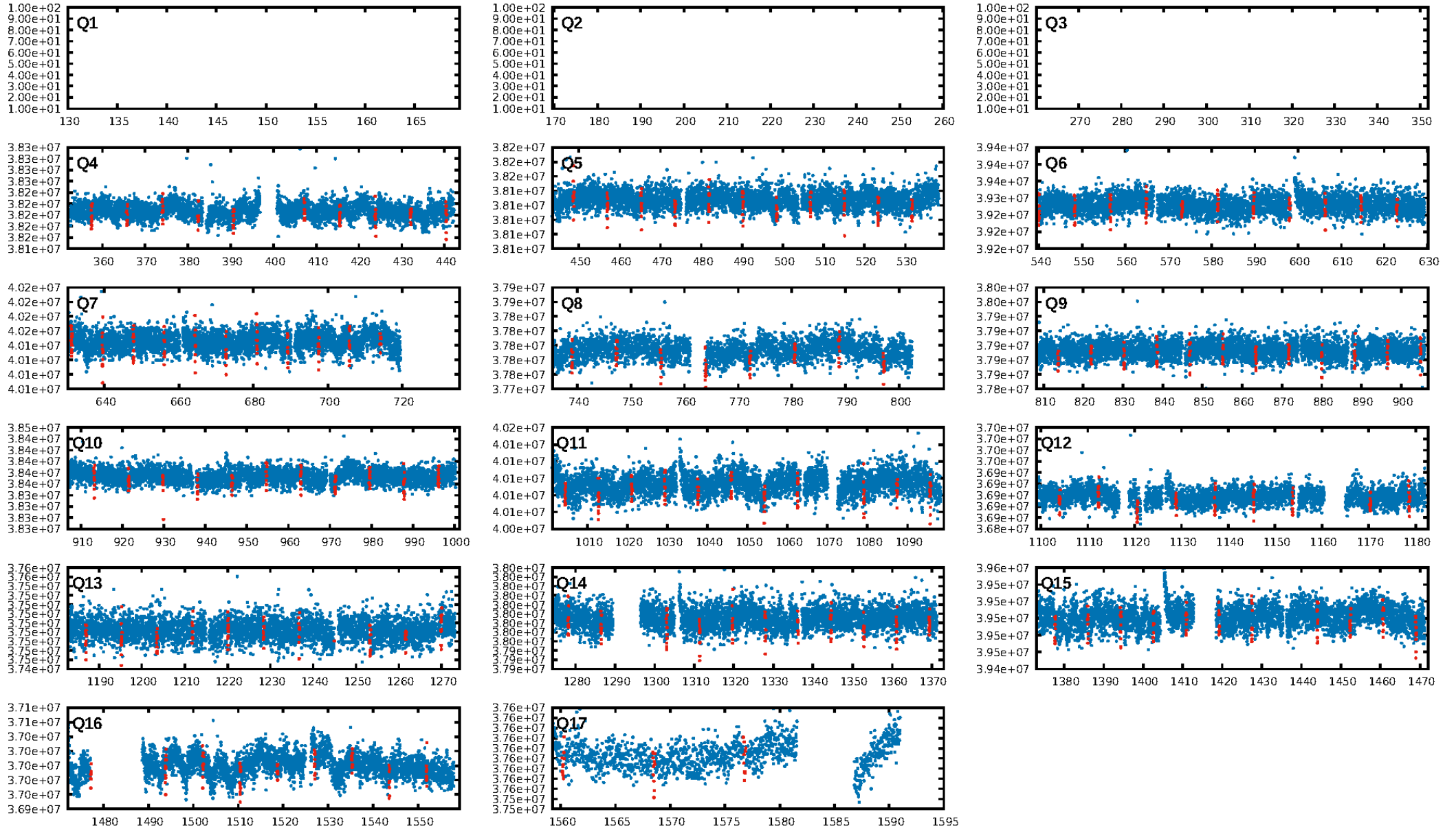
DV Fit Results:

Period = 8.29485 [0.00002] d
Epoch = 133.5009 [0.0018] BKJD
Rp/R* = 0.0256 [0.0025]
a/R* = 11.99 [5.32]
b = 0.90 [0.10]
Seff = 139.49 [54.58]
Teq = 876 [86] K
Rp = 2.63 [0.79] Re
a = 0.0793 [0.0195] AU
Ag = 12.28 [8.33] [1.35σ]
Teffp = 2536 [375] K [4.32σ]

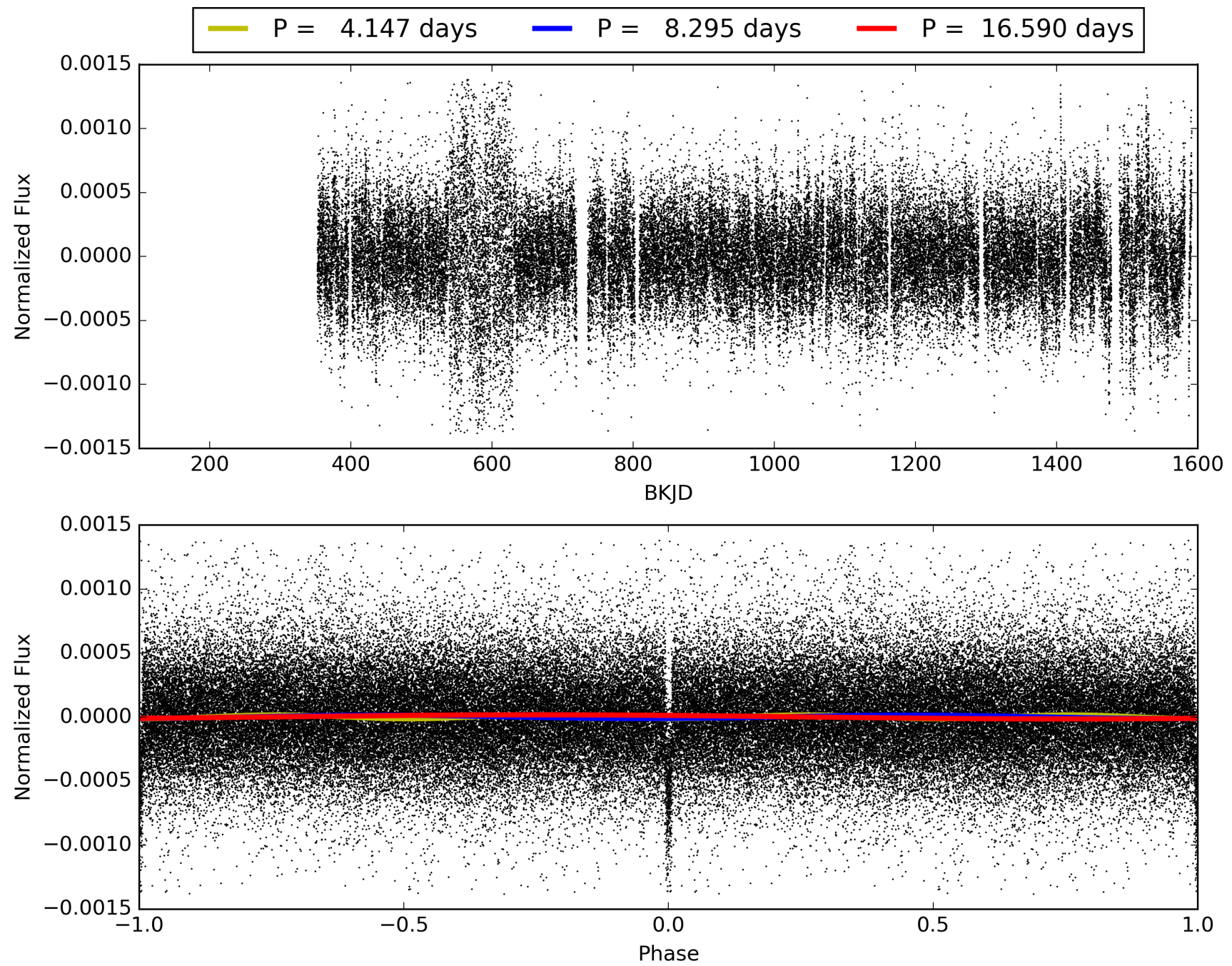
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.34e-260
RollingBand-fgt: 1.00 [134/134]
GhostDiagnostic-chr: 4.22
Centroid-sig: 0.0%
Centroid-so: 2.211 arcsec [13.95σ]
OOTOffset-rm: 4.059 arcsec [6.86σ]
KicOffset-rm: 0.334 arcsec [1.42σ]
OOTOffset-st: 0/0/3/4 [7]
KicOffset-st: 2/3/3/4 [12]
DiffImageQuality-fgm: 0.92 [11/12]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010844890-01, PDC Light Curves

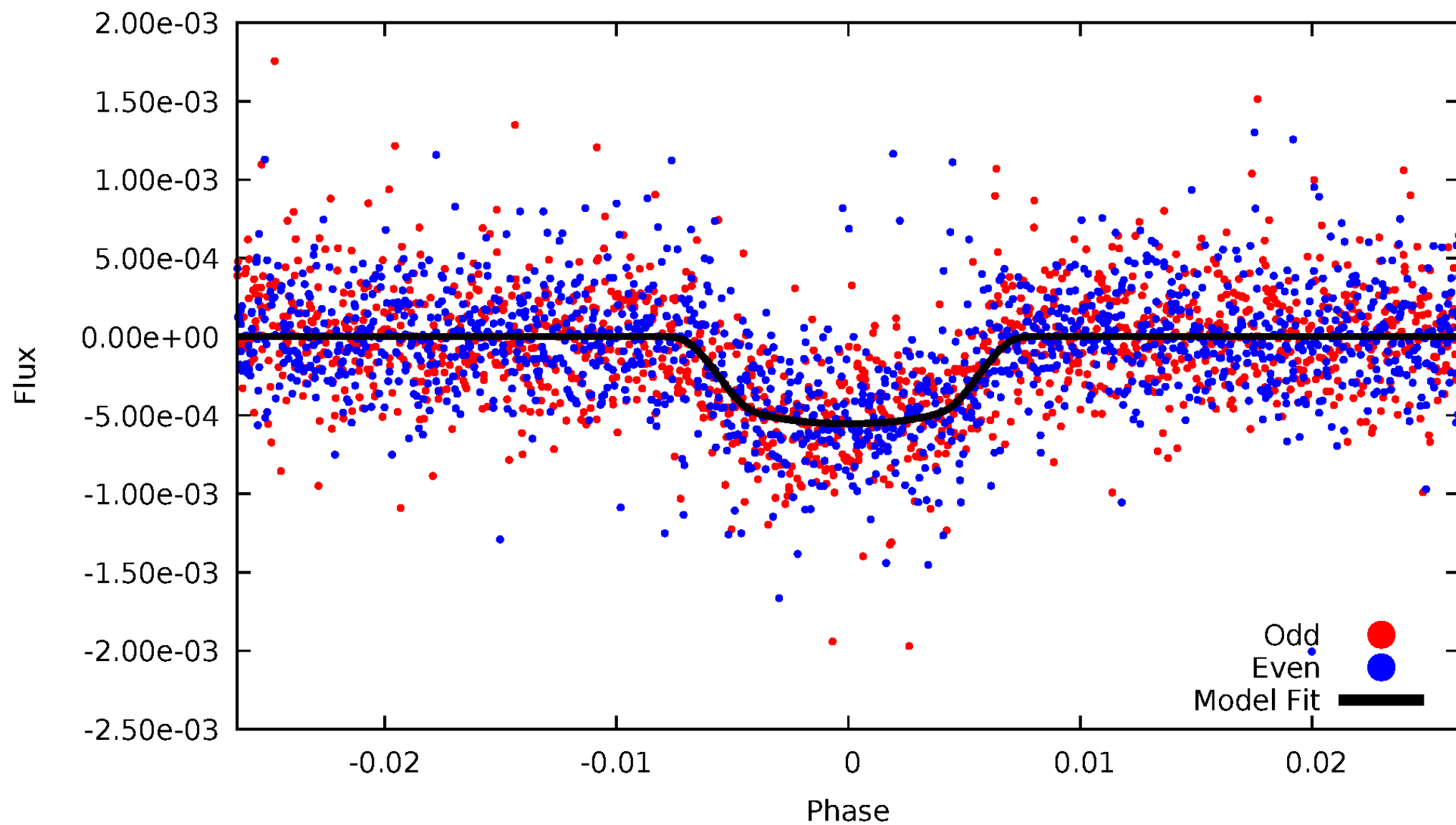


TCE 010844890-01



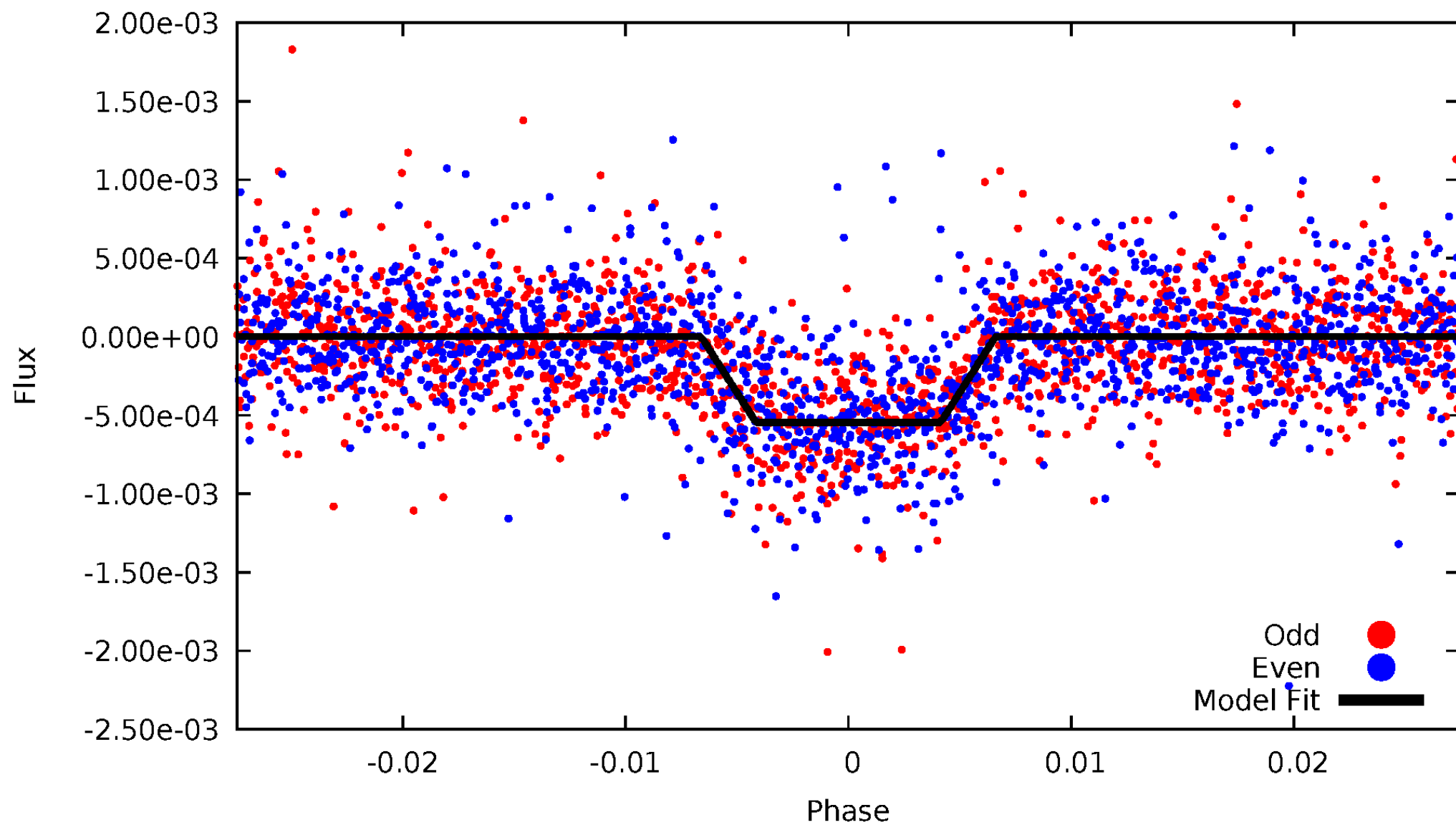
DV Odd/Even

TCE 010844890-01



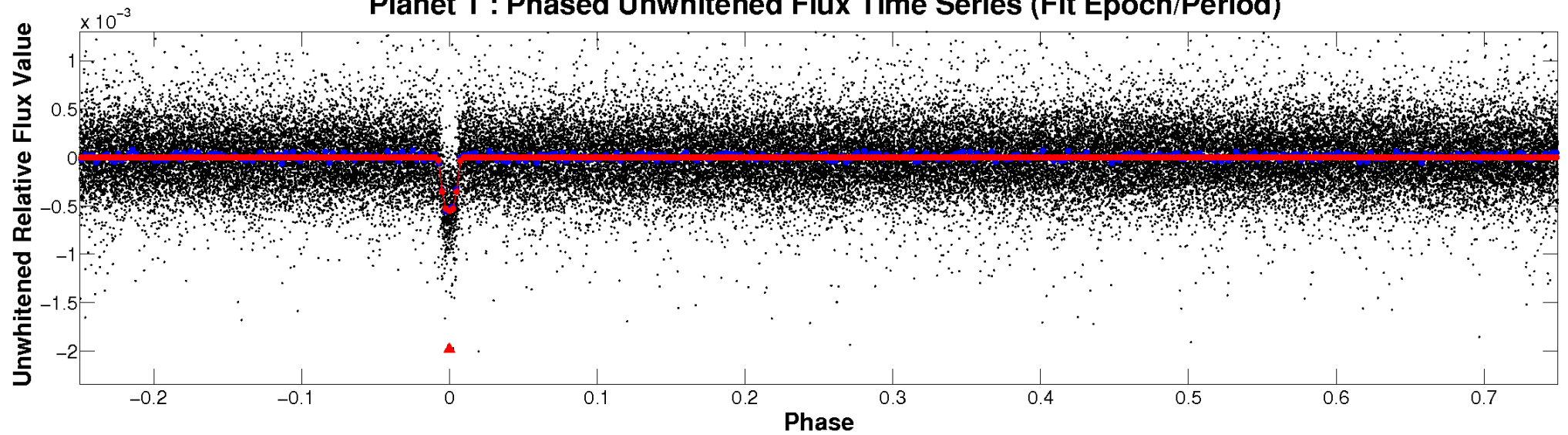
ALT Odd/Even

TCE 010844890-01

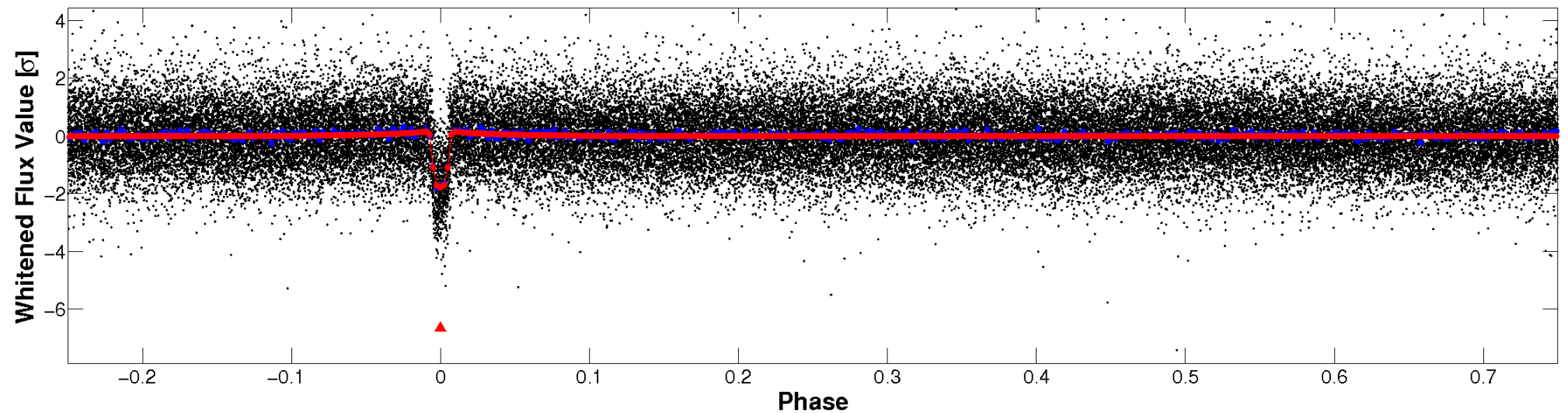


Non-Whitened Vs. Whitened Light Curve

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

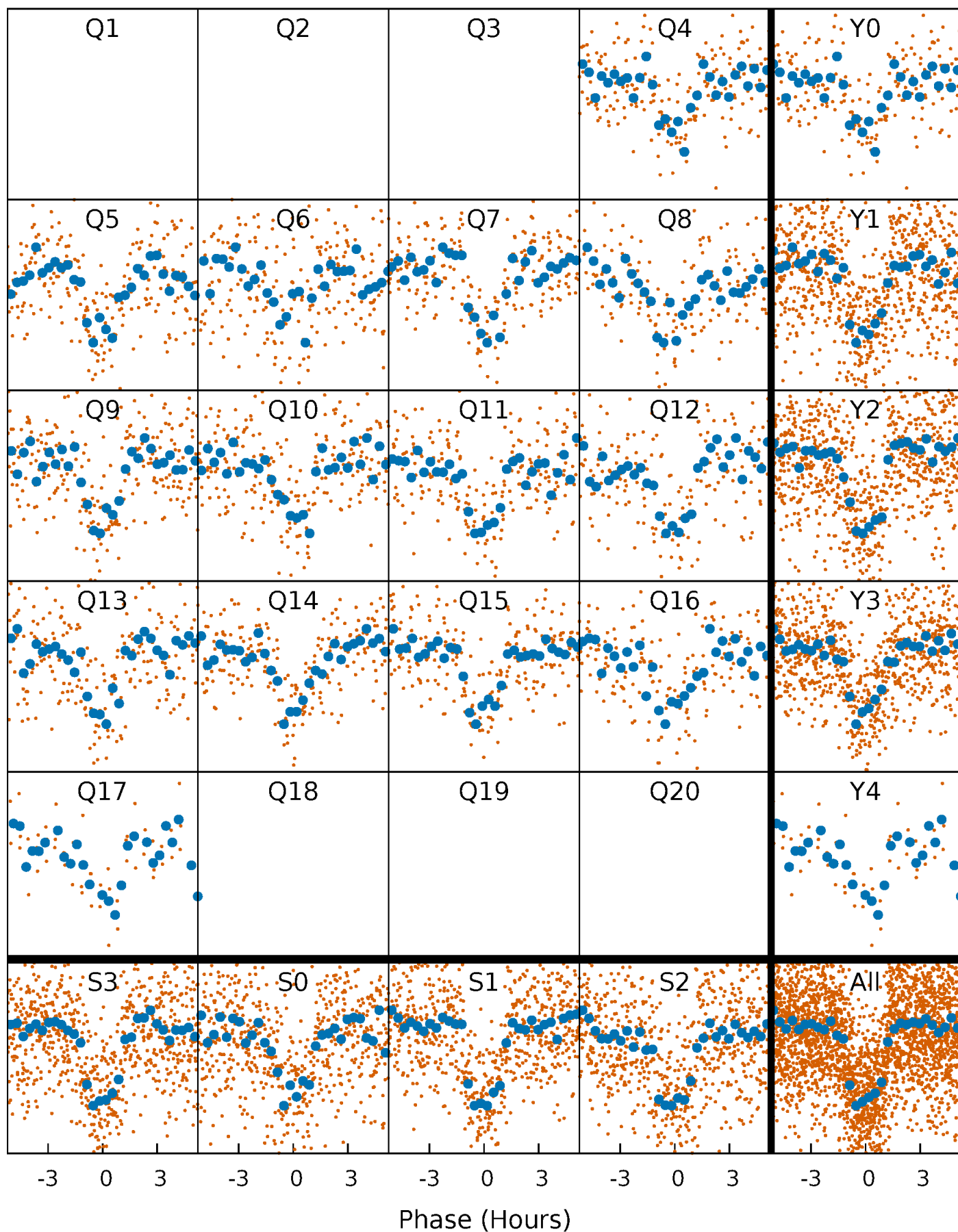


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



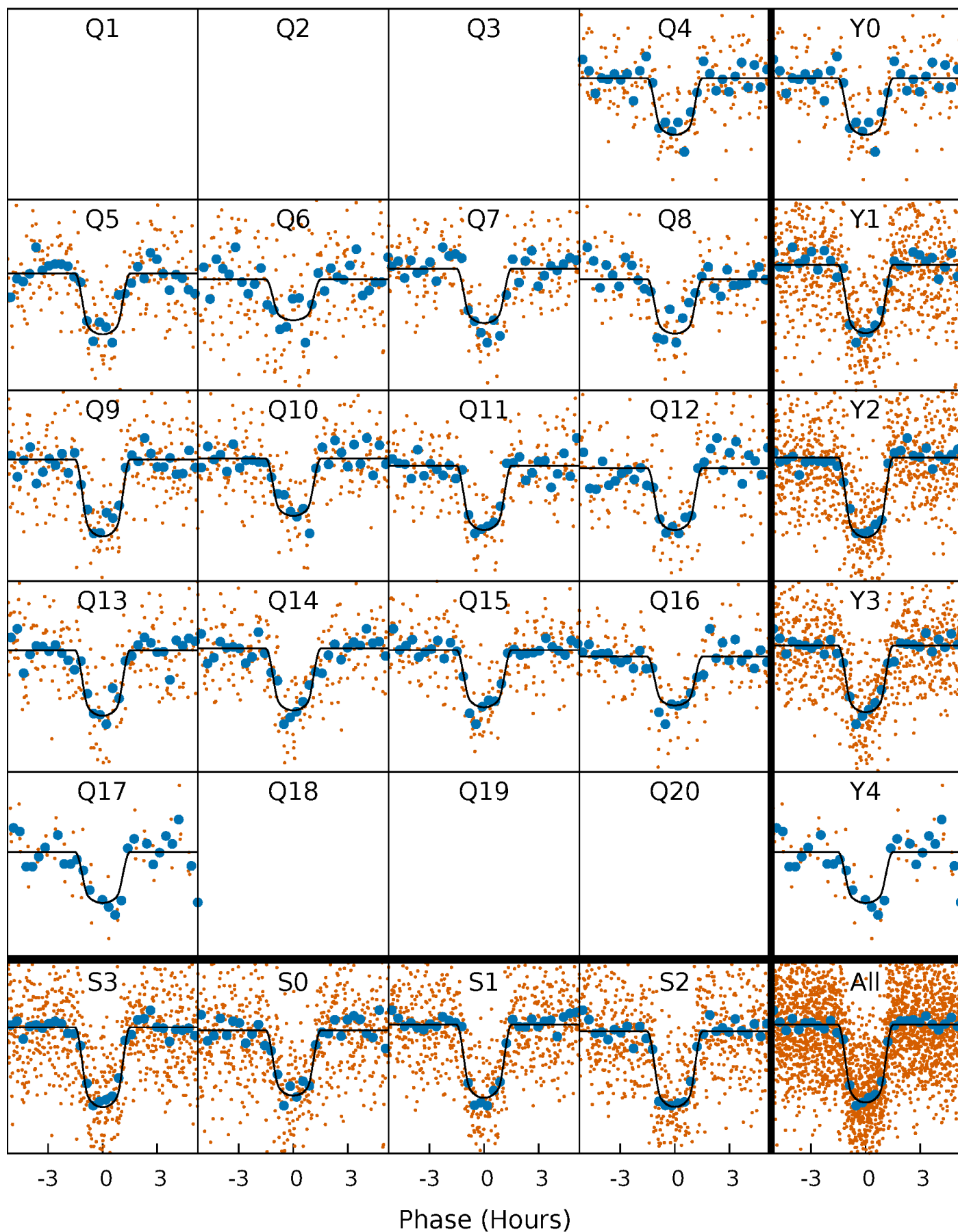
PDC Quarter-Phased Transit Curves

TCE 010844890-01 P= 8.294849 Days $T_0=133.500892$ (BKJD)



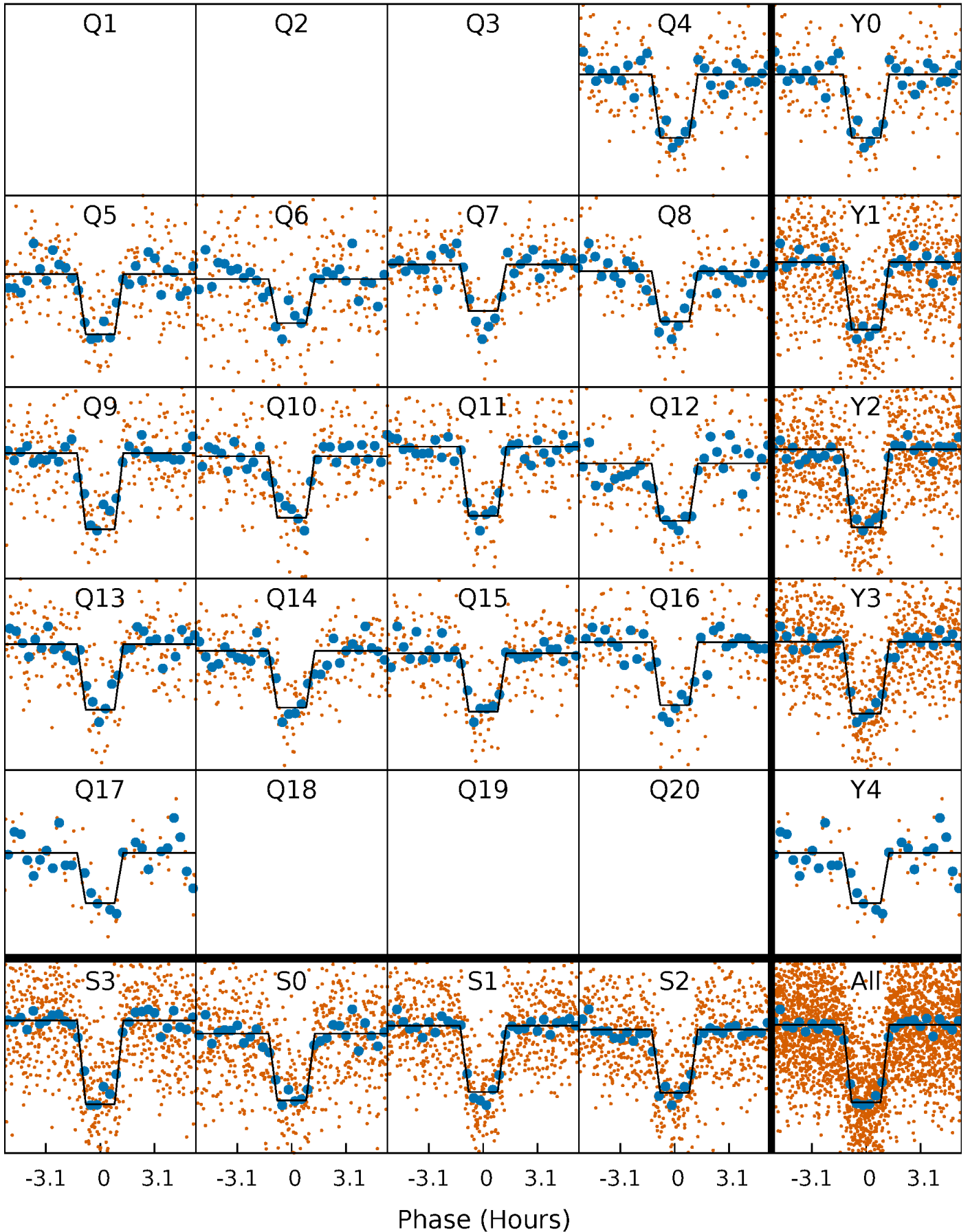
DV Quarter-Phased Transit Curves

TCE 010844890-01 P= 8.294849 Days $T_0=133.500892$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

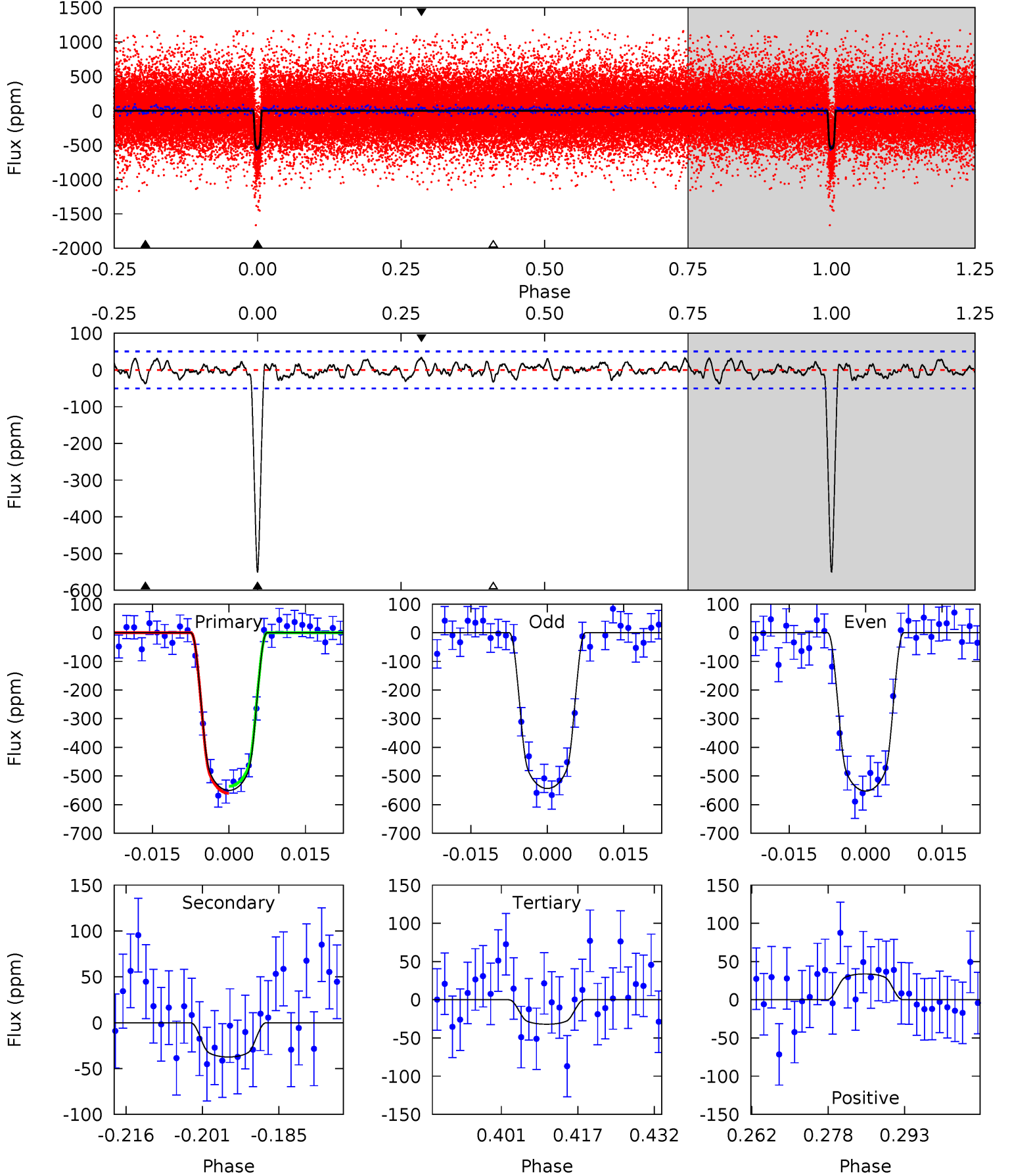
TCE 010844890-01 $P = 8.294797$ Days $T_0 = 133.505637$ (BKJD)



DV Model-Shift Uniqueness Test

010844890-01, P = 8.294849 Days, E = 133.500892 Days

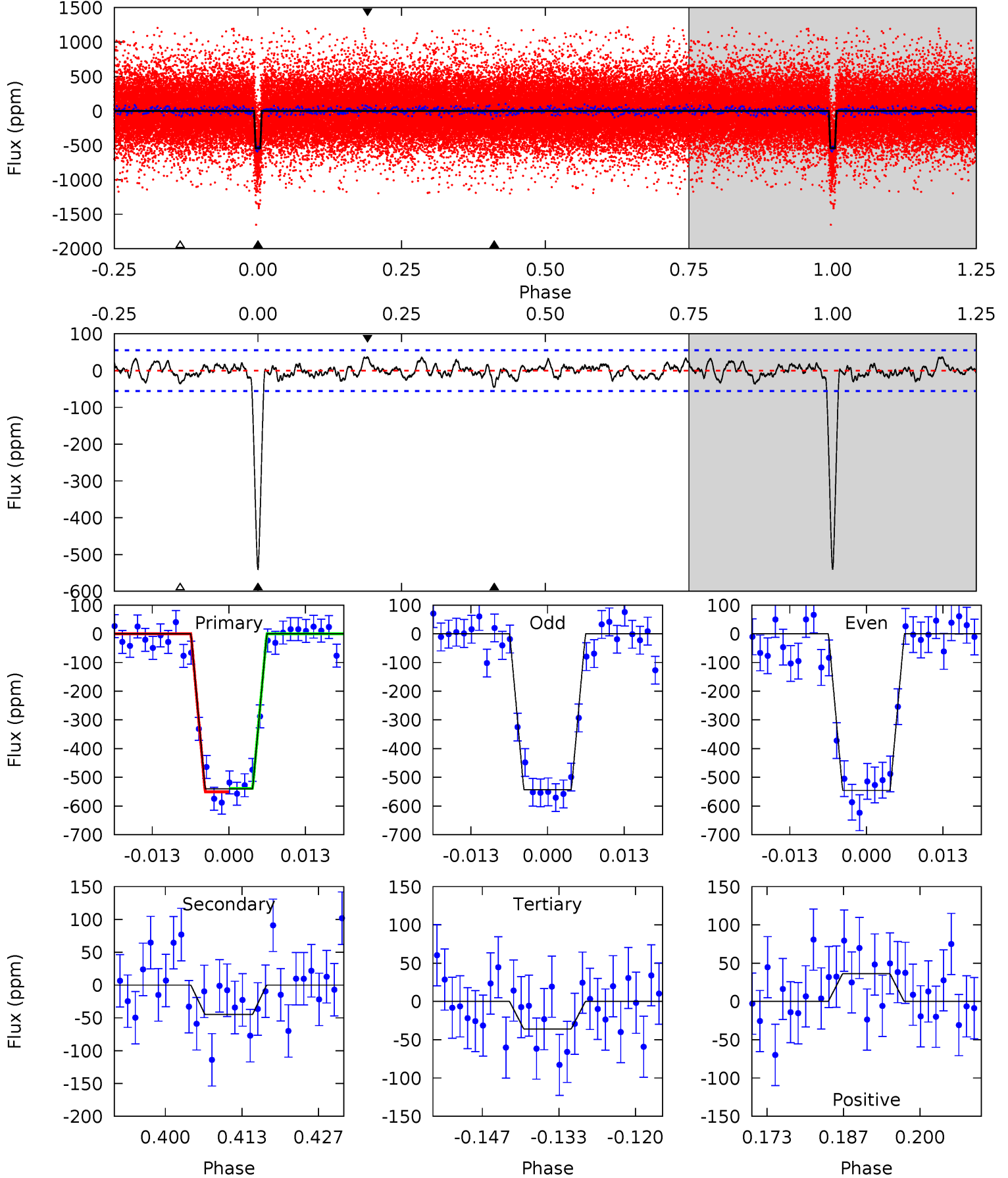
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.0	3.67	3.14	3.32	4.94	2.42	1.30	50.8	50.6	0.52	0.35	0.44	0.98	0.06	1.19



Alt Model-Shift Uniqueness Test

010844890-01, P = 8.294797 Days, E = 133.505637 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.6	4.04	3.22	3.25	4.97	2.47	1.25	45.3	45.3	0.82	0.79	0.12	1.00	0.06	0.52



Stellar Parameters For KIC 010844890

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5773^{+173}_{-208}	$4.478^{+0.067}_{-0.202}$	$-0.040^{+0.250}_{-0.300}$	$0.939^{+0.268}_{-0.115}$	$0.967^{+0.125}_{-0.102}$	$1.644^{+0.469}_{-0.835}$
	+3%/-4%	+1%/-5%	+625%/-750%	+29%/-12%	+13%/-11%	+29%/-51%
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 010844890-01 / KOI 1946.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-37 ± 10	$2.73^{+0.42}_{-0.35}$	1246^{+82}_{-65}	3335^{+188}_{-184}	17^{+7}_{-6}
Alt.	-45 ± 11	$2.49^{+0.47}_{-0.34}$	1250^{+91}_{-66}	3539^{+203}_{-203}	24^{+11}_{-8}

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 $A_{obs} \gg 1.0$

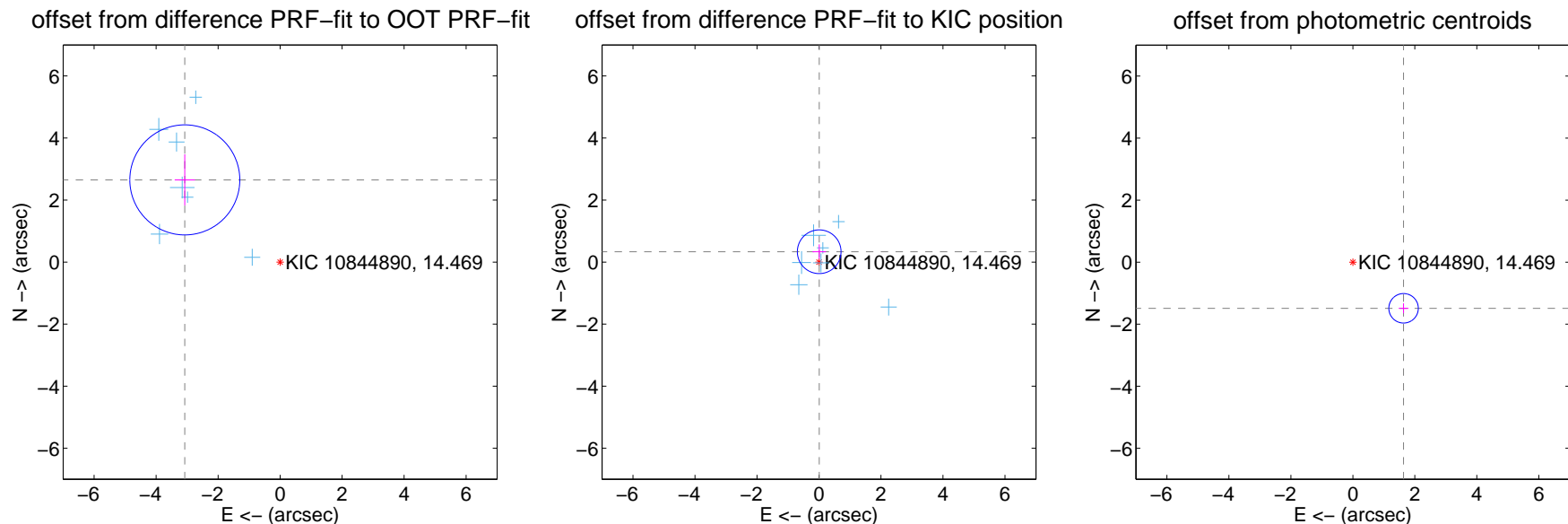
DV Centroid Data

Supplemental centroid analysis for 010844890-01. Kepler magnitude: 14.47. Transit SNR 39.08

There are 11 quarters with good PRF difference image offsets

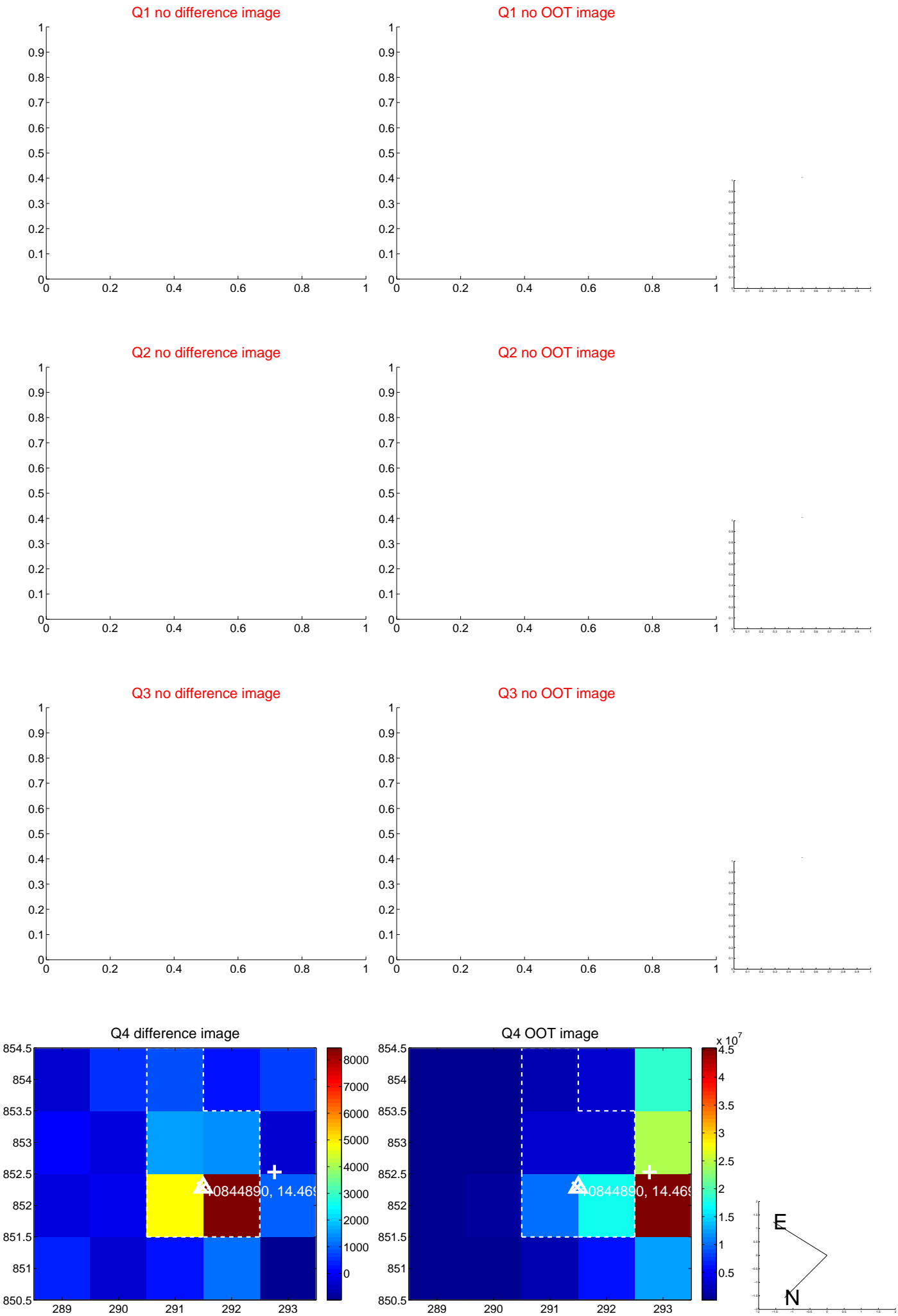
The OOT PRF centroid is offset from the target star catalog position by about 3.36 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.059 ± 0.591	6.86	3.074 ± 0.326	2.650 ± 0.823
PRF-fit source offset from KIC position	0.334 ± 0.235	1.42	-0.007 ± 0.216	0.334 ± 0.237
photometric centroid source offset	2.21 ± 0.16	13.95	-1.64 ± 0.16	-1.49 ± 0.16

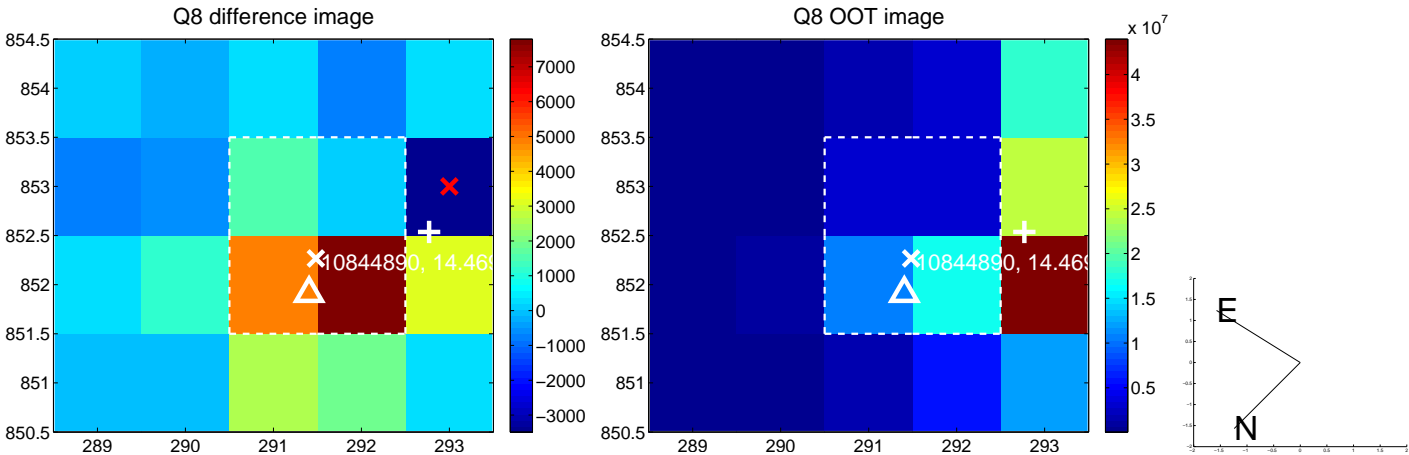
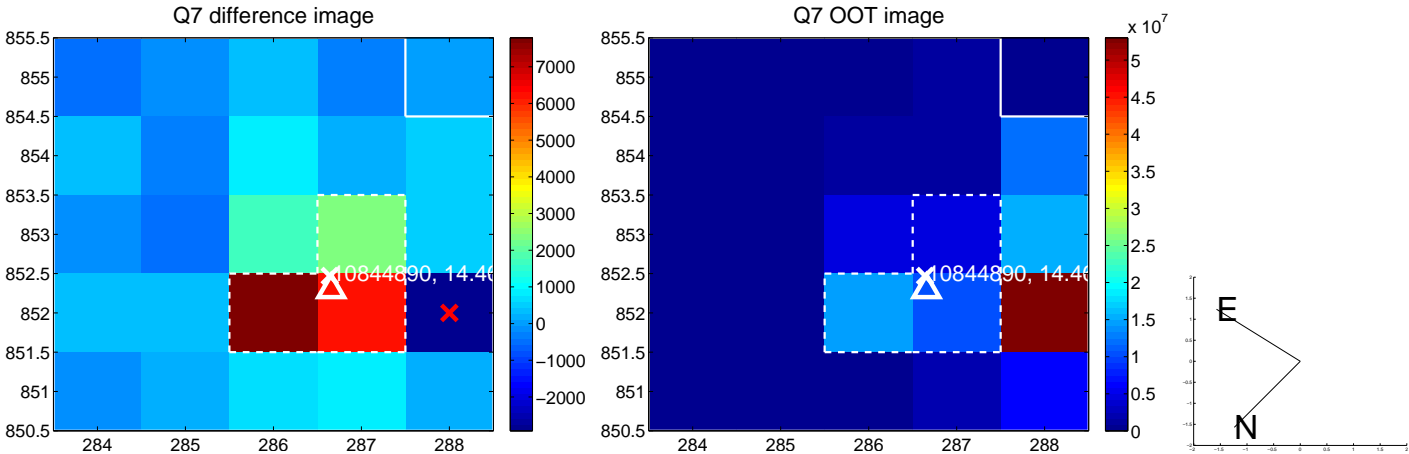
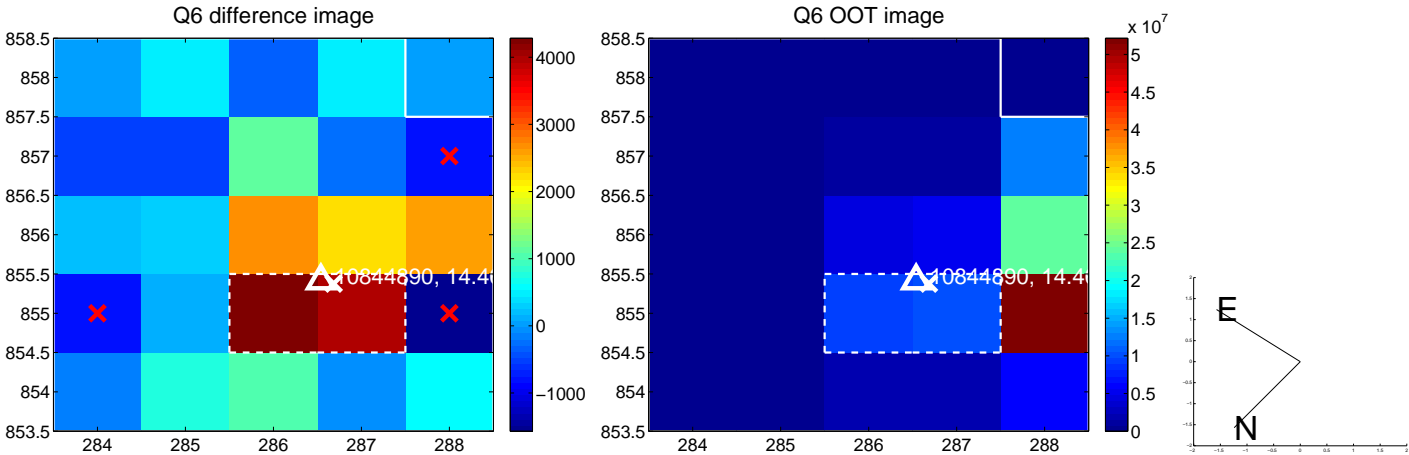
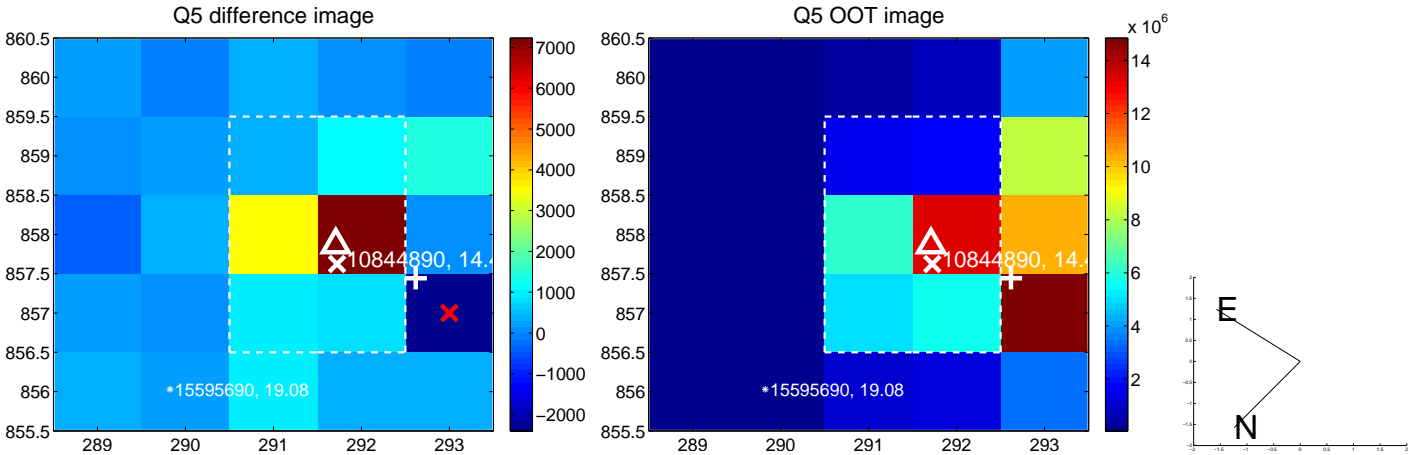


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

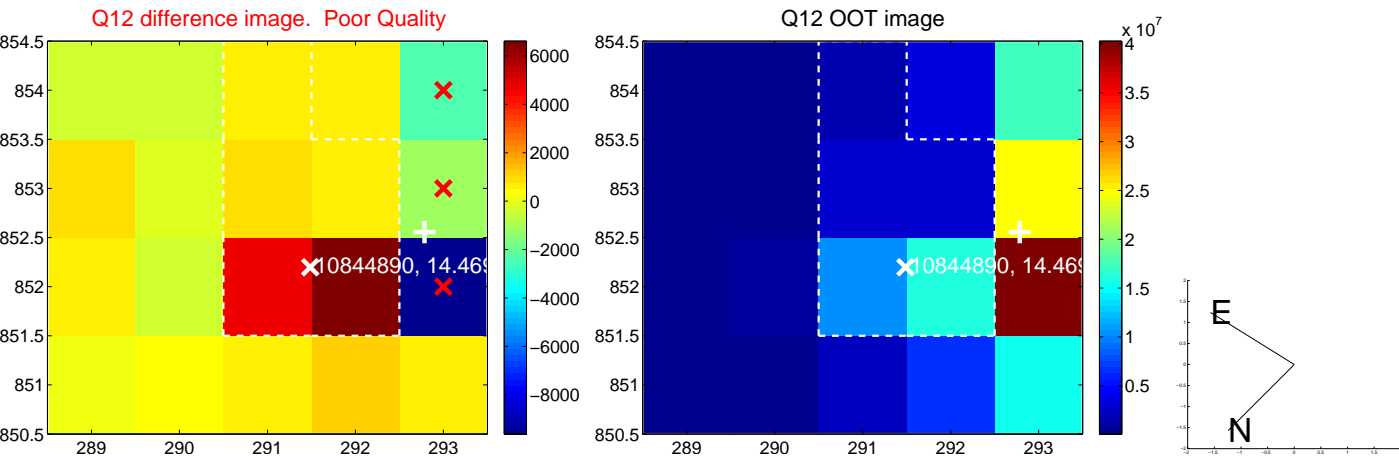
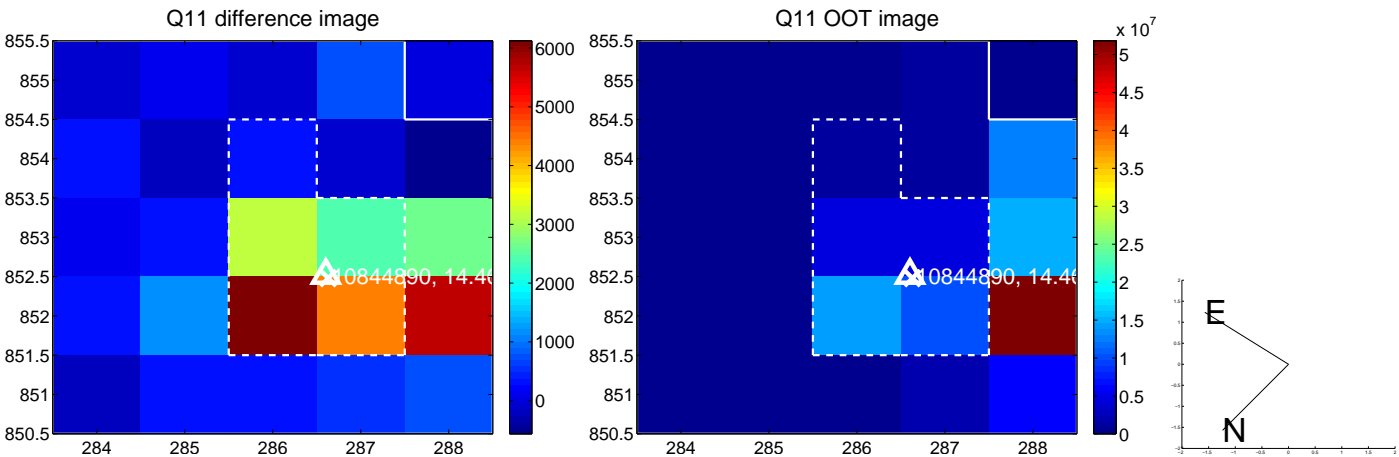
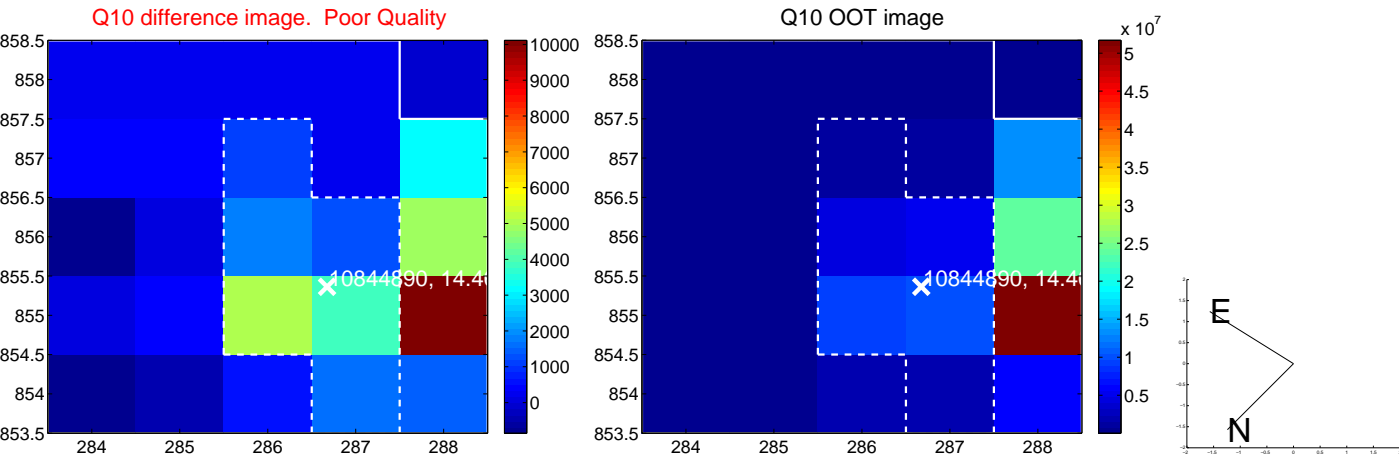
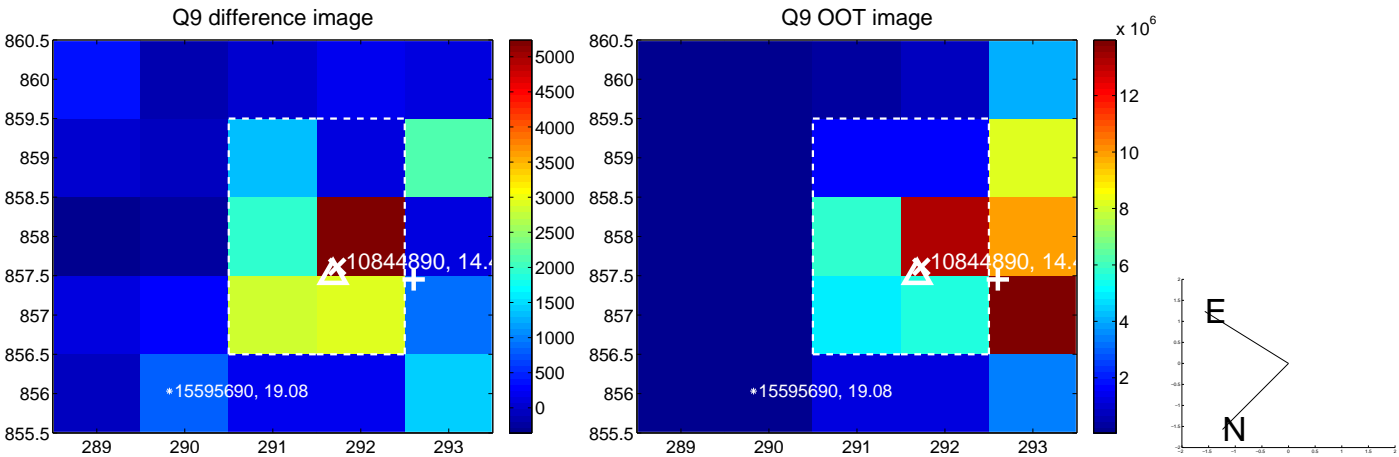
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



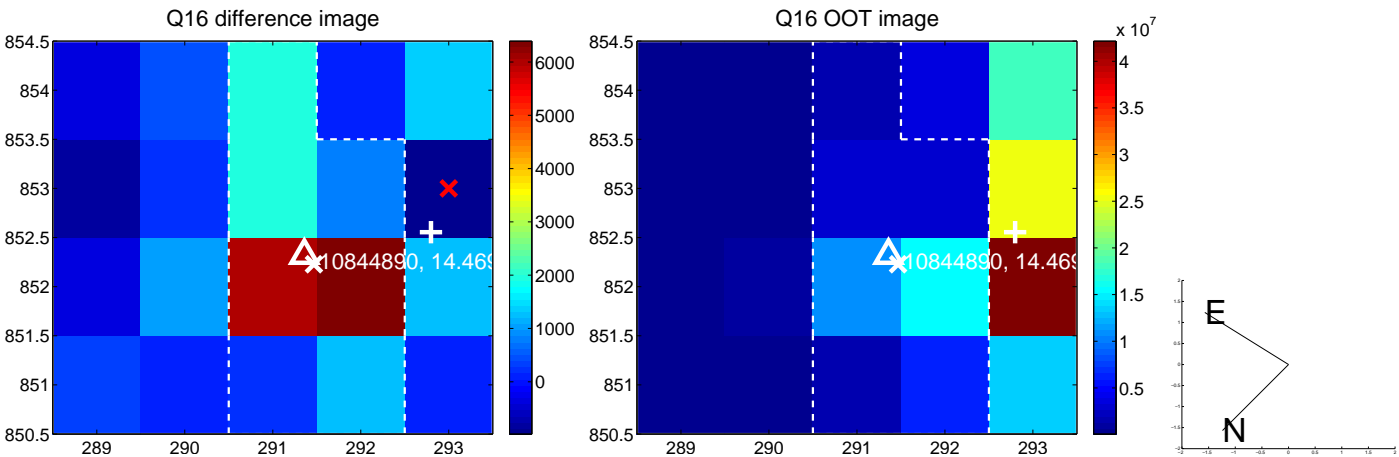
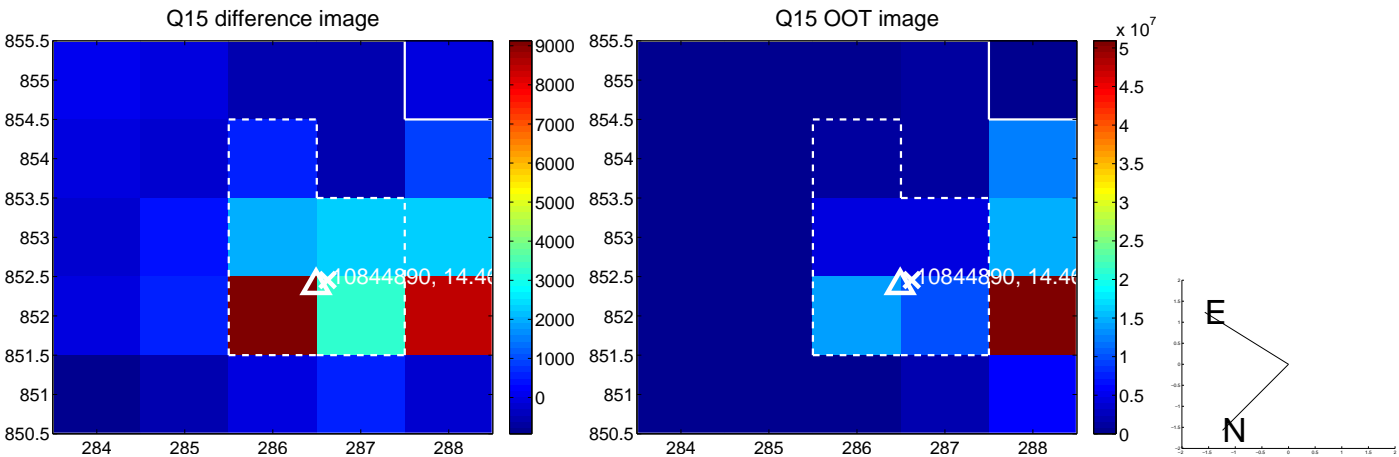
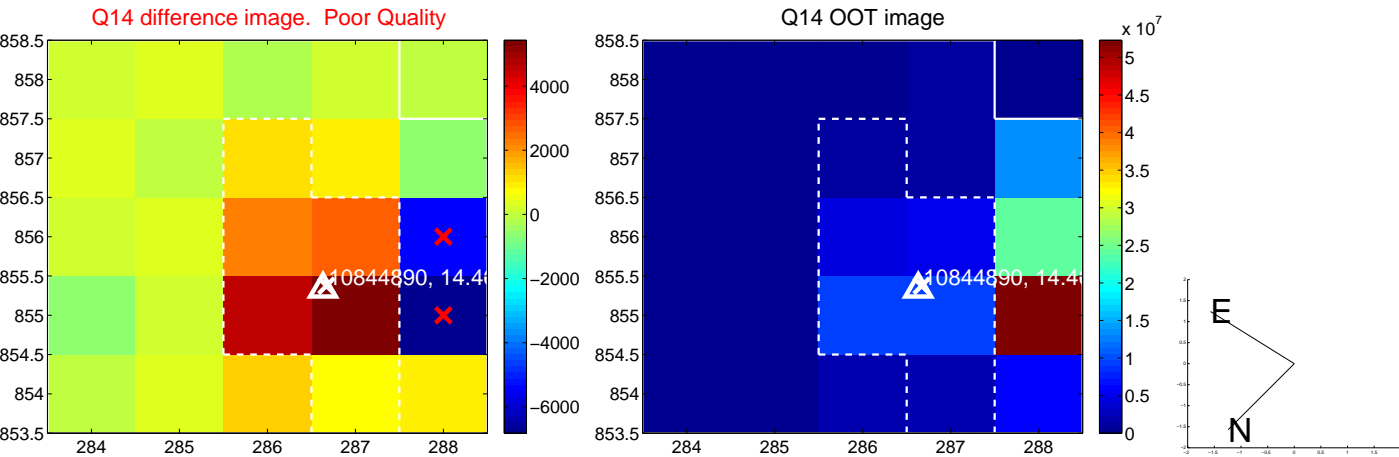
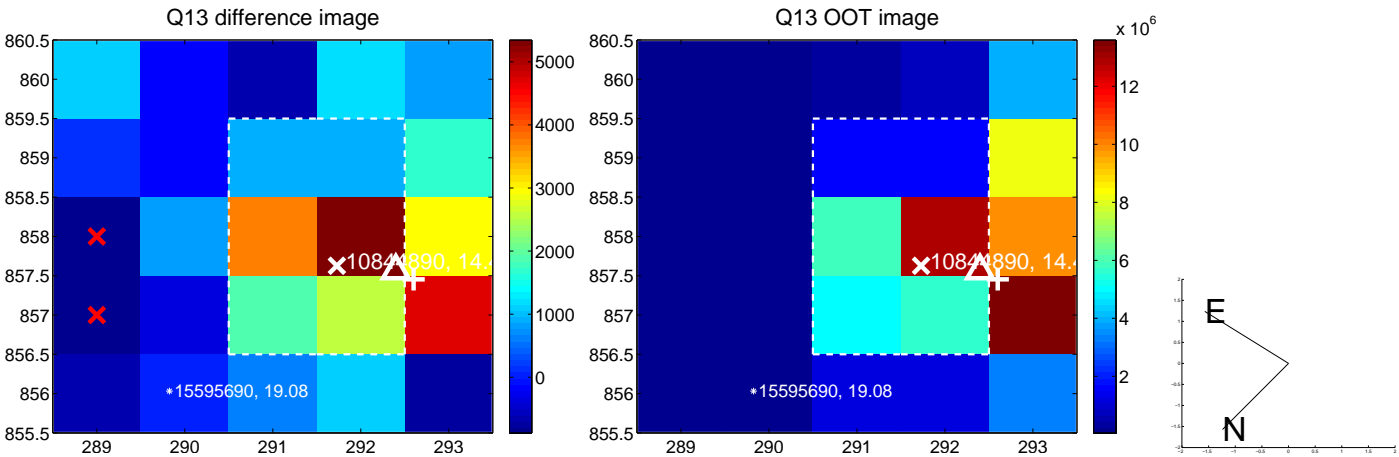
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



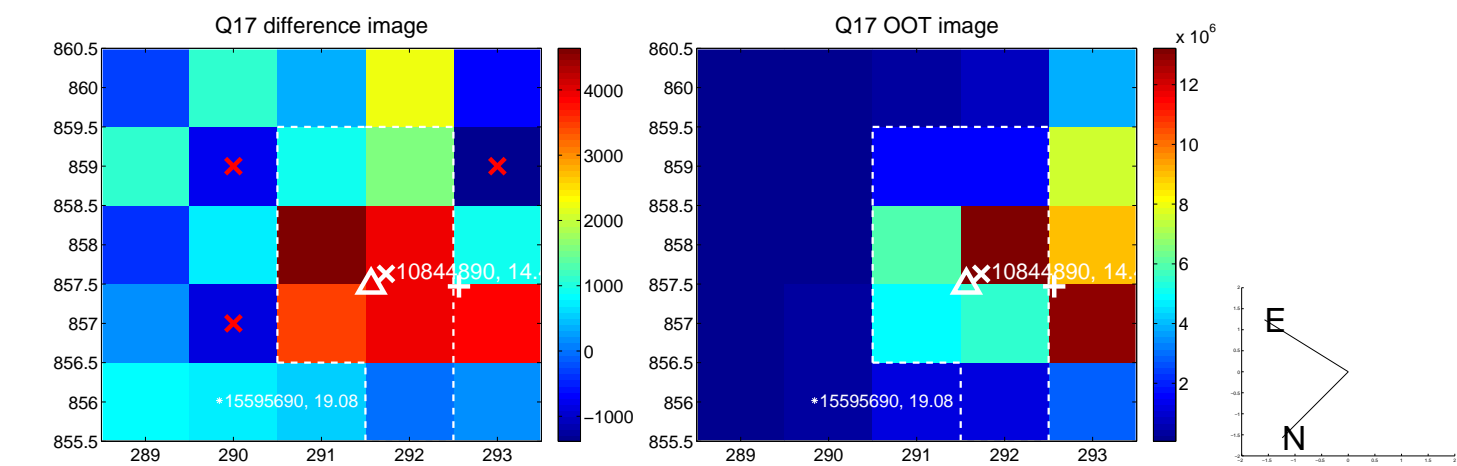
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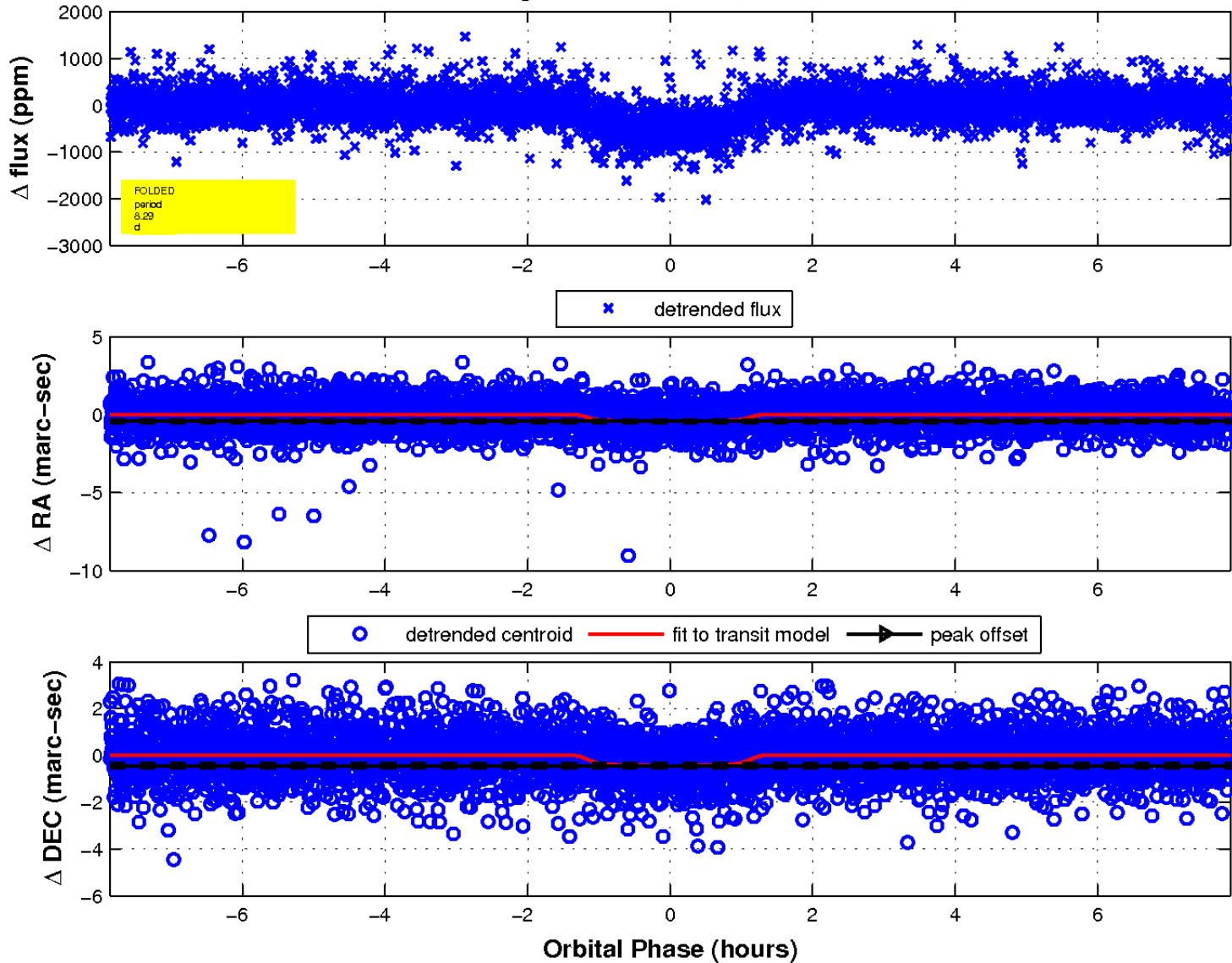
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

