

KIC 008700895

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})
008700895-01	OBS	4523.01	5.682471	131.677972	75.9	3.805	8.3	8.7	1.16	5753	1.19	334.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008700895-01	OBS	PC	0.88	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.

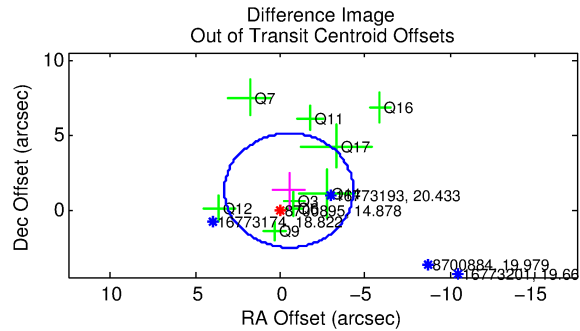
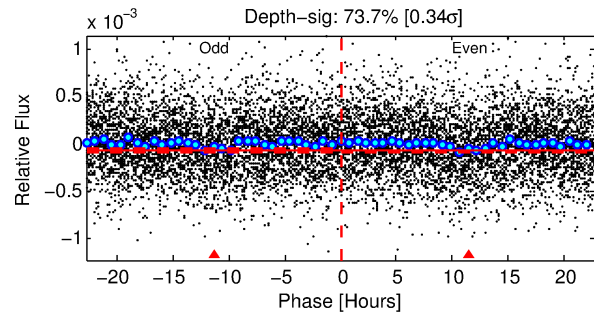
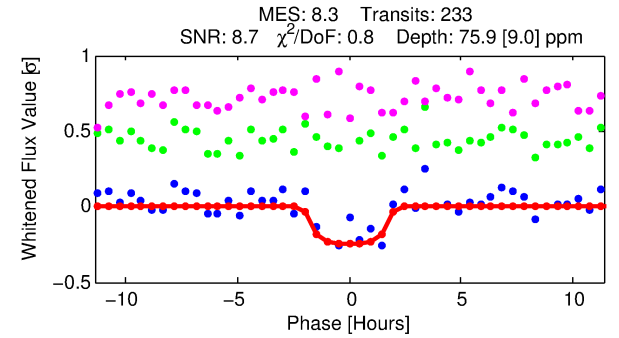
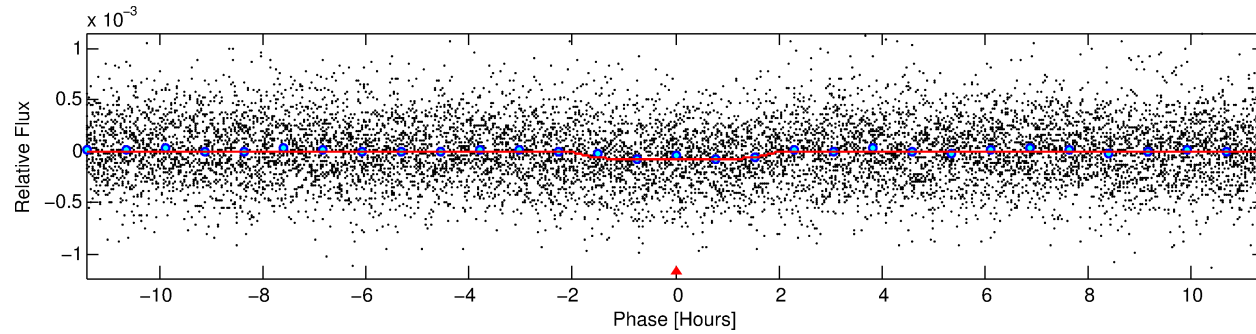
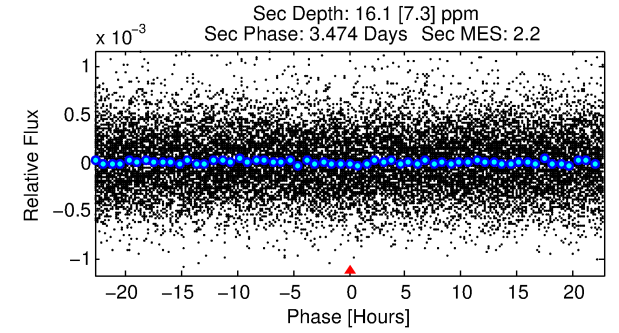
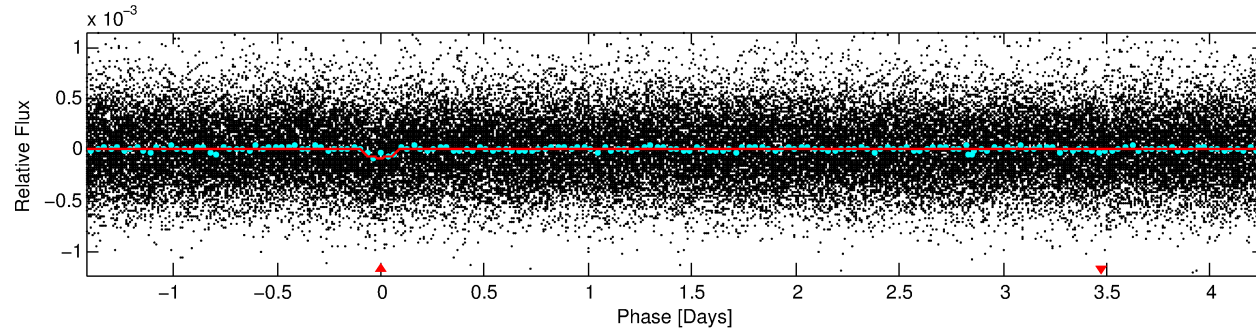
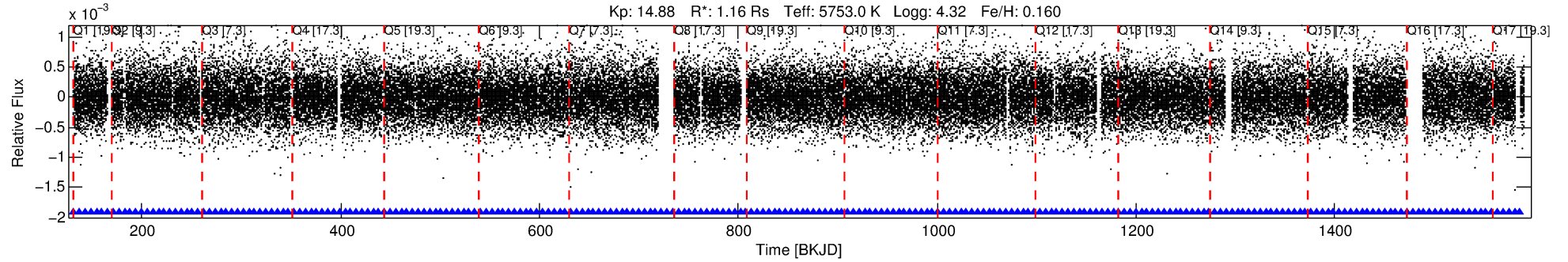
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008700895-01

No Significant Match Found

DV One-Page Summary

KIC: 8700895 Candidate: 1 of 1 Period: 5.682 d
KOI: K04523.01 Corr: 0.915



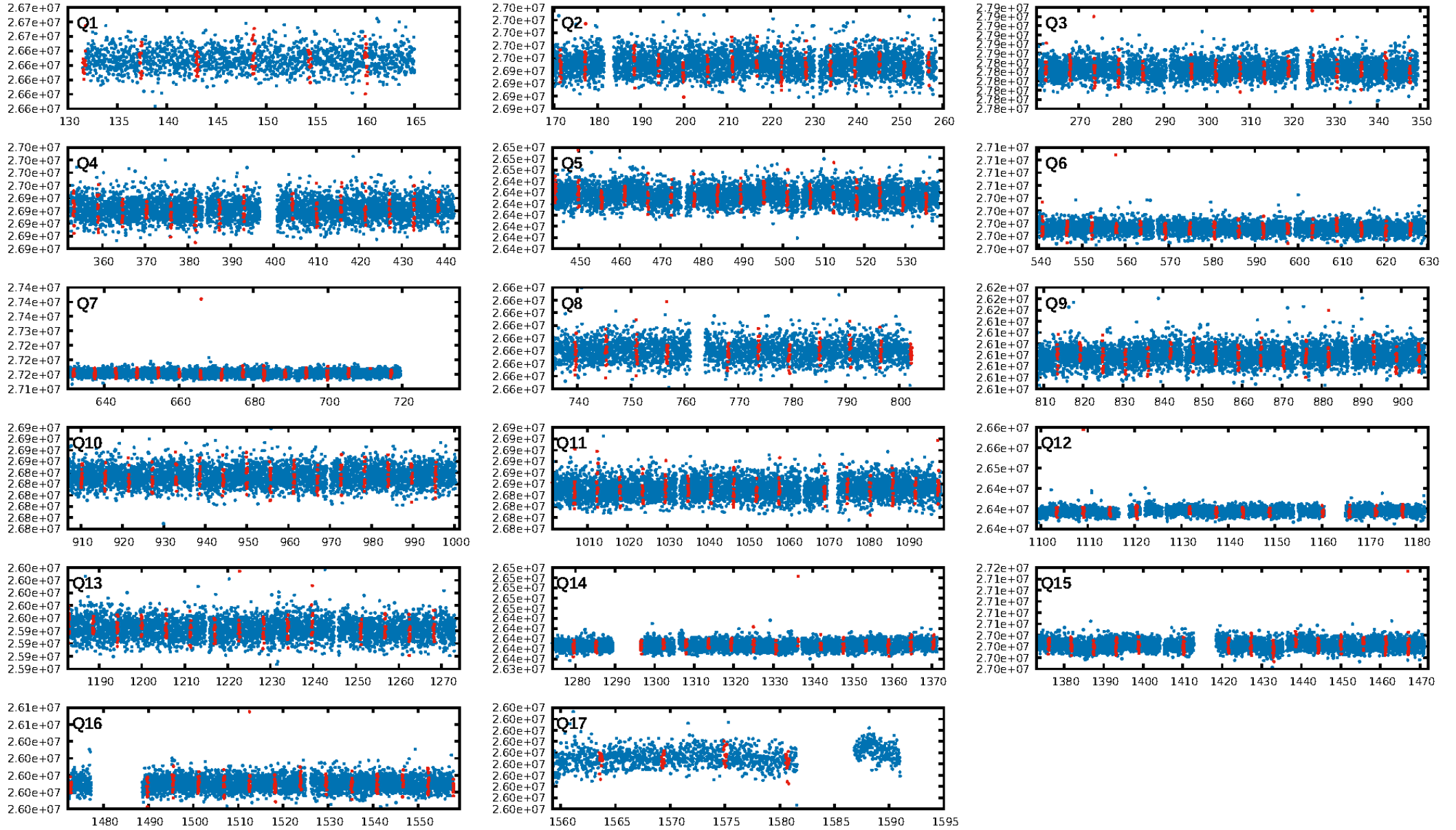
DV Fit Results:

Period = 5.68247 [0.00006] d
Epoch = 131.6780 [0.0078] BKJD
Rp/R* = 0.0095 [0.0066]
a/R* = 5.43 [17.31]
b = 0.89 [0.76]
Seff = 334.18 [71.65]
Teff = 1090 [58] K
Rp = 1.19 [0.86] Re
a = 0.0627 [0.0088] AU
Ag = 24.36 [36.21] [0.64σ]
Teffp = 3745 [1379] K [1.92σ]

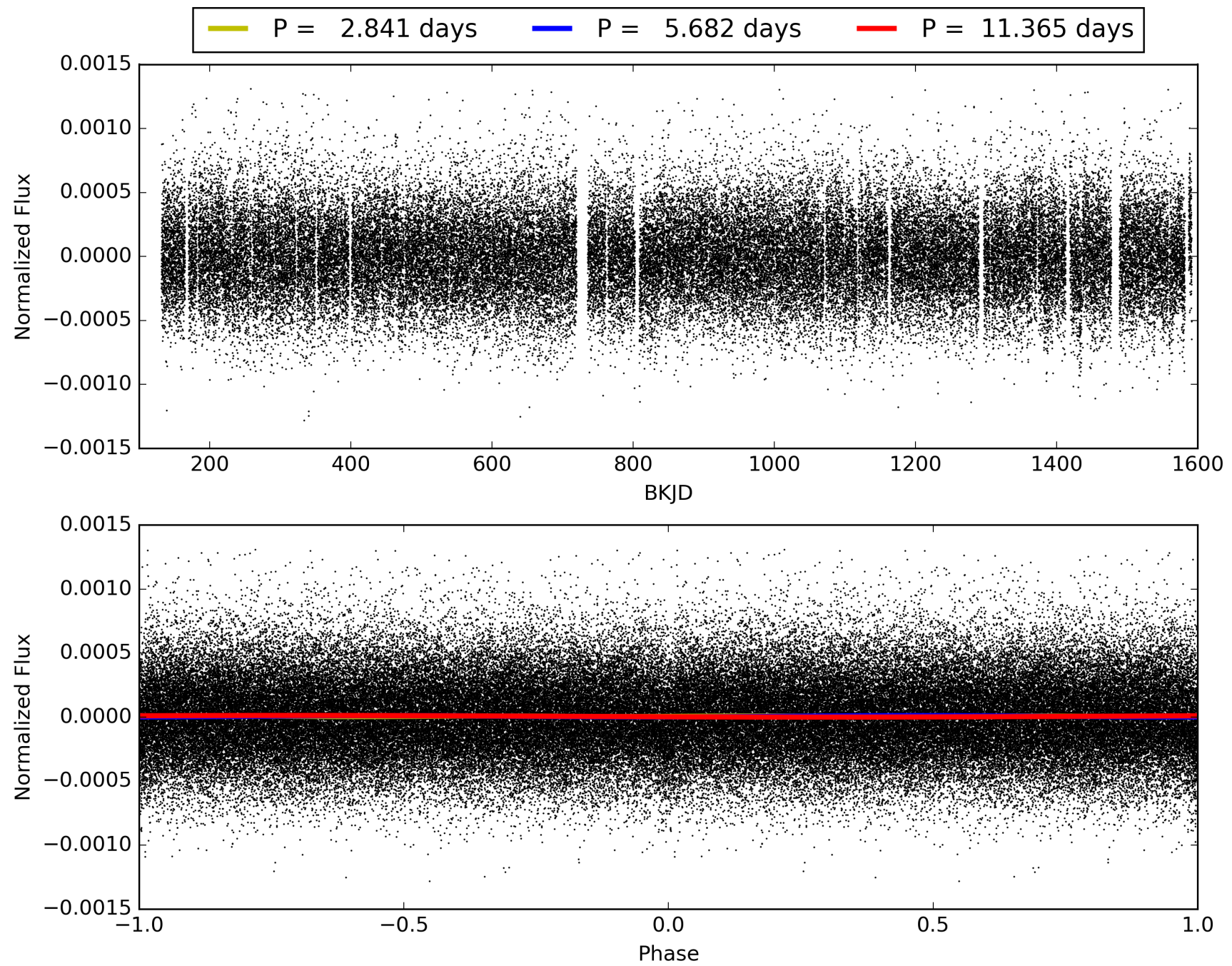
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.21e-16
RollingBand-fgt: 1.00 [223/223]
GhostDiagnostic-chr: 48.62
Centroid-sig: 53.7%
Centroid-so: 1.048 arcsec [0.70σ]
OotOffset-rm: 1.379 arcsec [1.09σ]
OotOffset-st: 2/3/2/2 [9]
KicOffset-rm: 1.386 arcsec [1.20σ]
KicOffset-st: 2/3/2/2 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008700895-01, PDC Light Curves

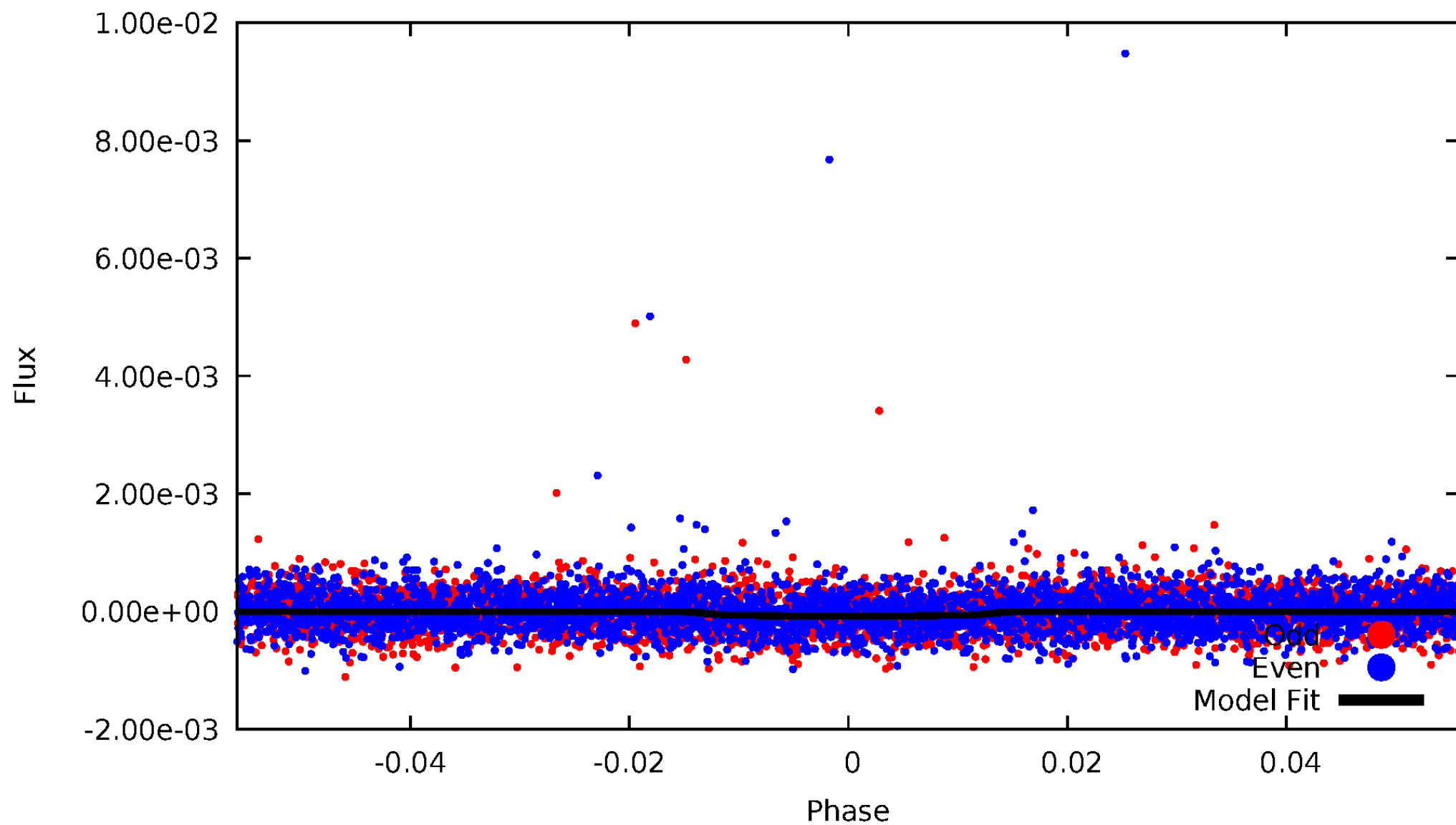


TCE 008700895-01



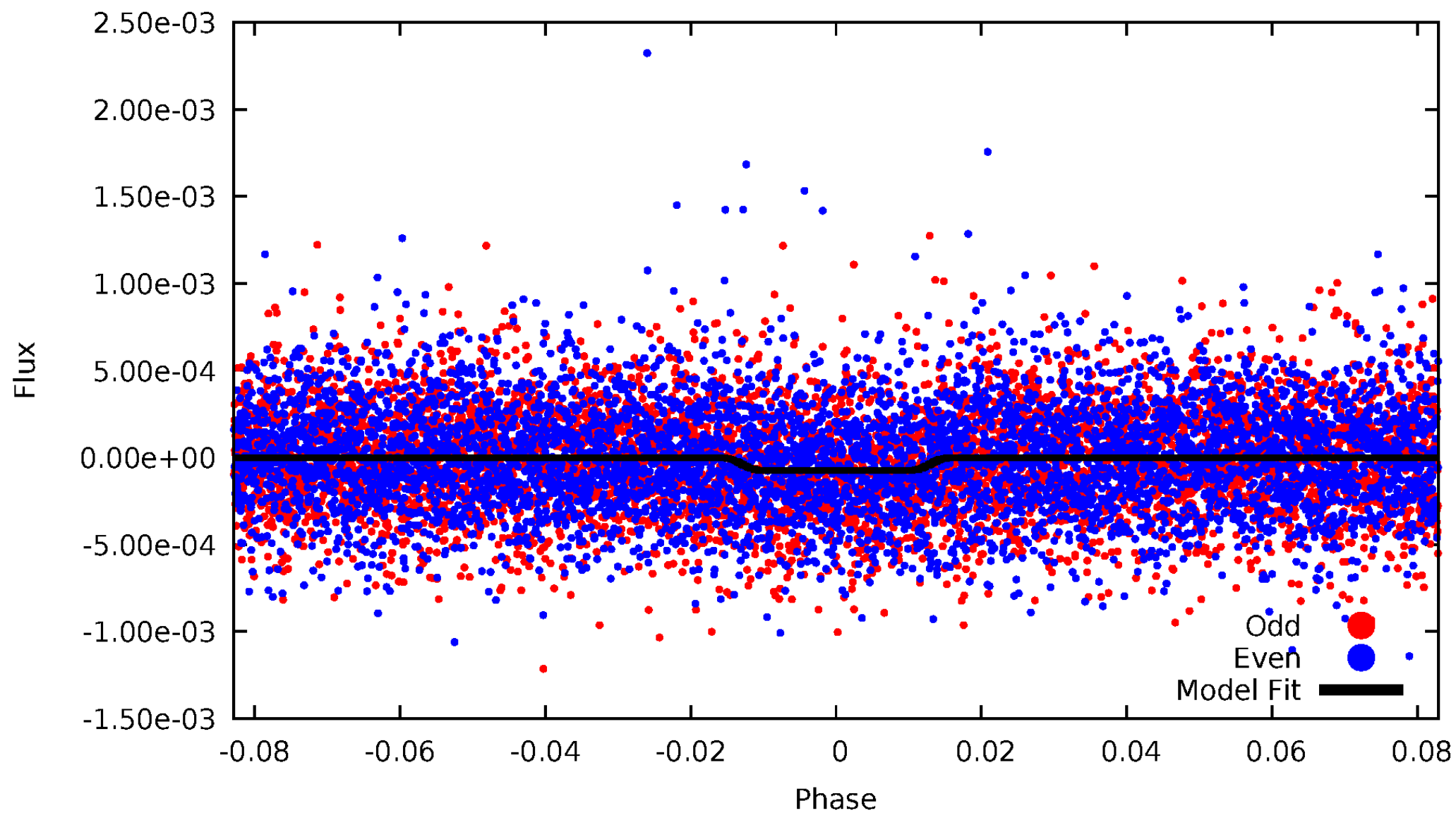
DV Odd/Even

TCE 008700895-01

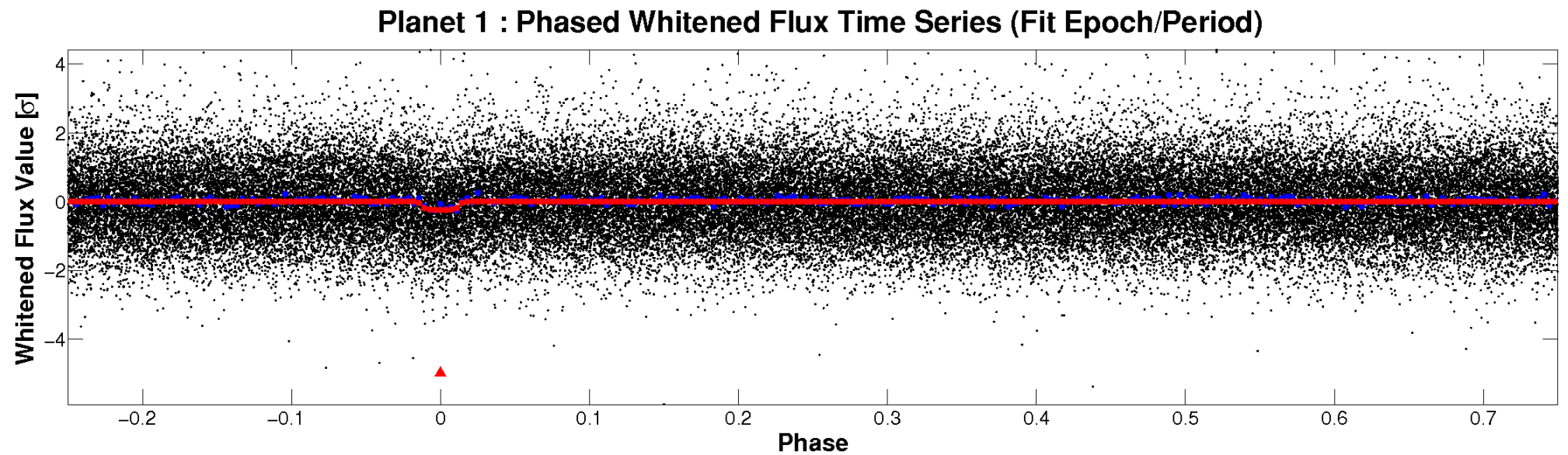
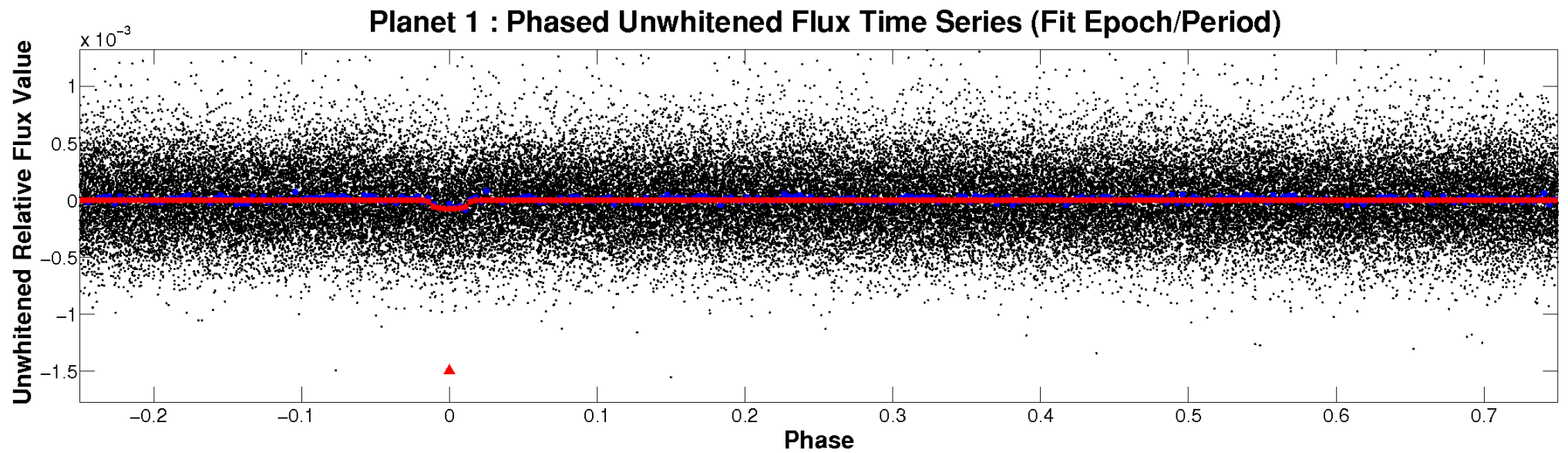


ALT Odd/Even

TCE 008700895-01

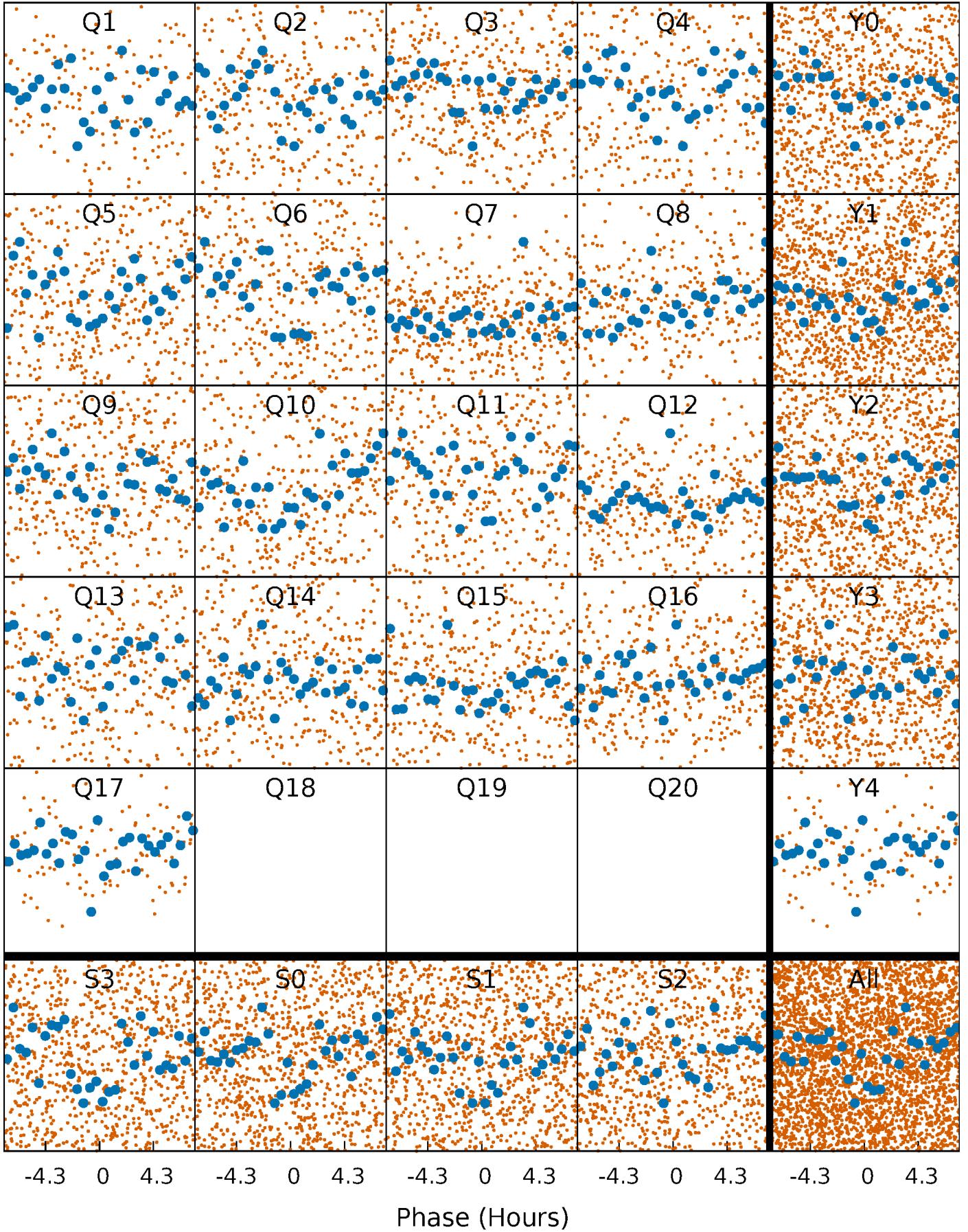


Non-Whitened Vs. Whitened Light Curve



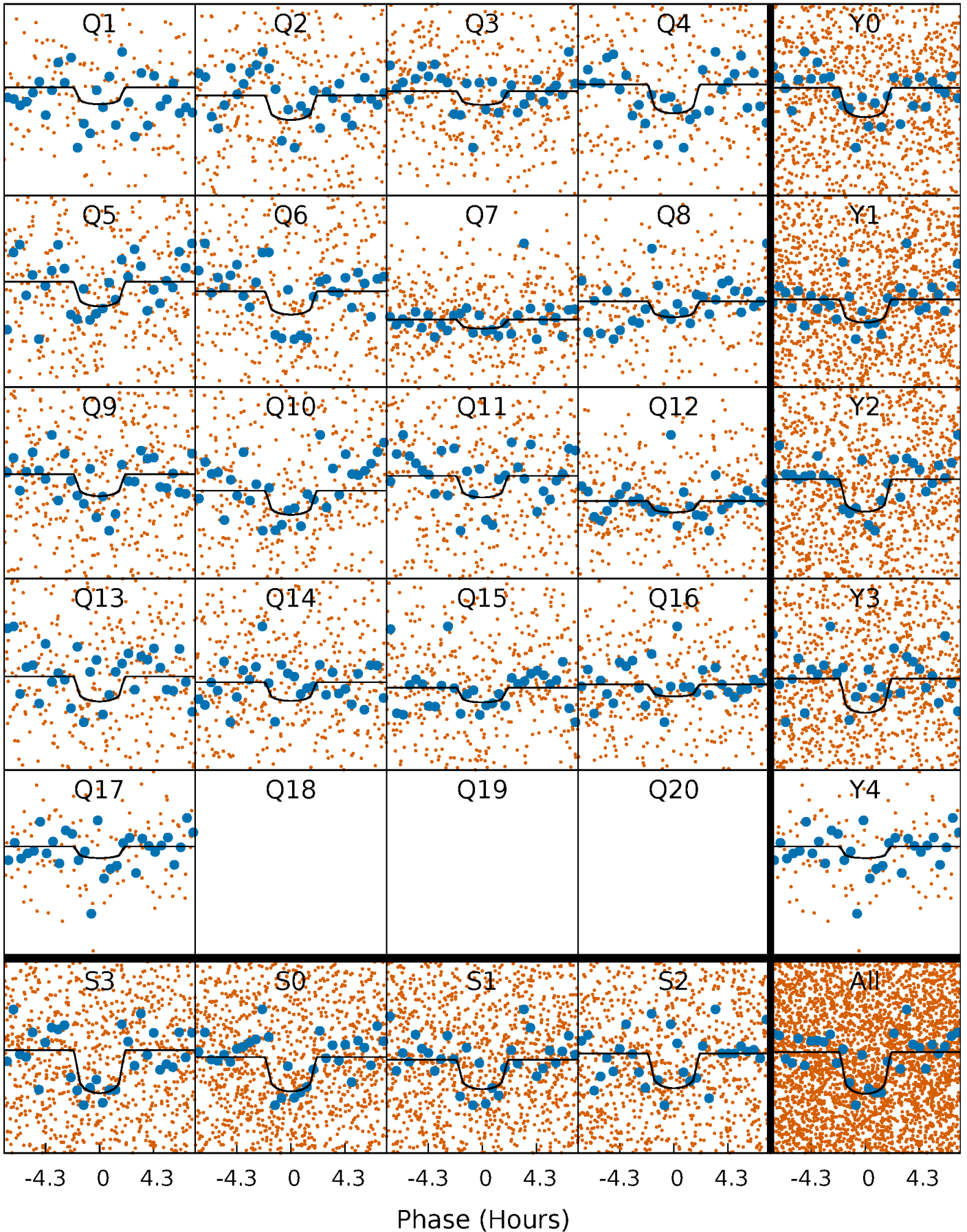
PDC Quarter-Phased Transit Curves

TCE 008700895-01 P= 5.682471 Days $T_0=131.677972$ (BKJD)



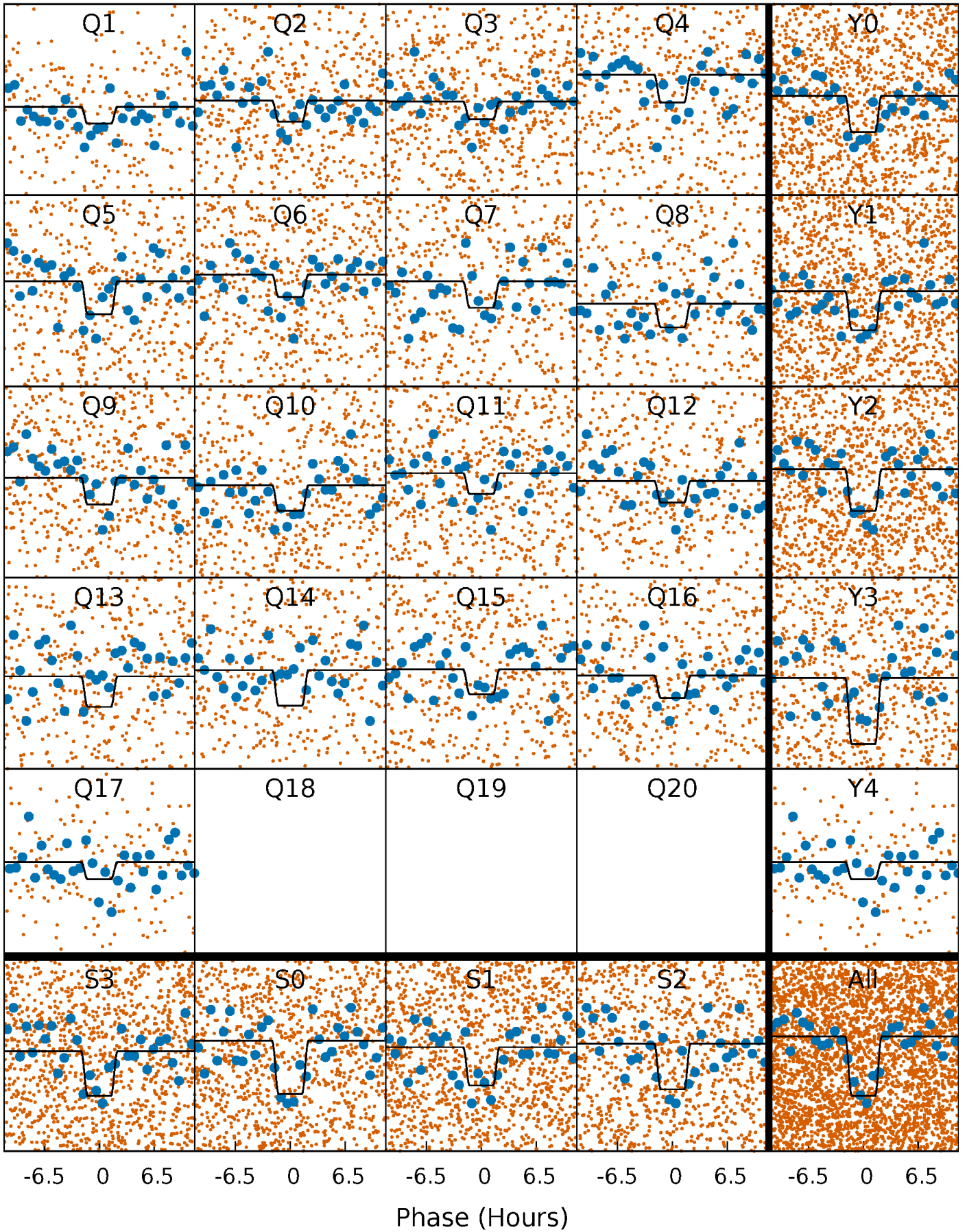
DV Quarter-Phased Transit Curves

TCE 008700895-01 P= 5.682471 Days $T_0=131.677972$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

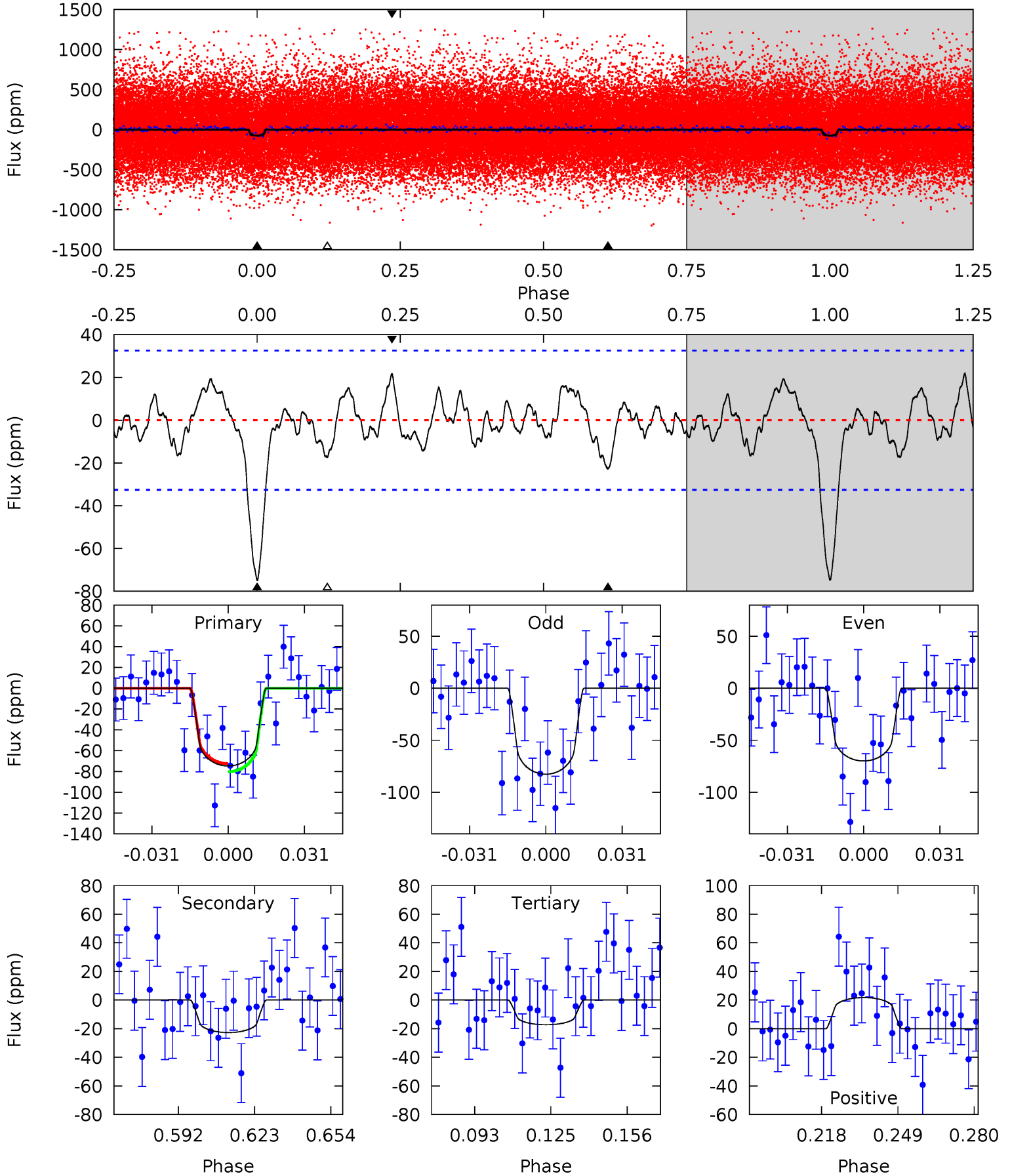
TCE 008700895-01 P= 5.682216 Days $T_0=131.704065$ (BKJD)



DV Model-Shift Uniqueness Test

008700895-01, P = 5.682471 Days, E = 125.995501 Days

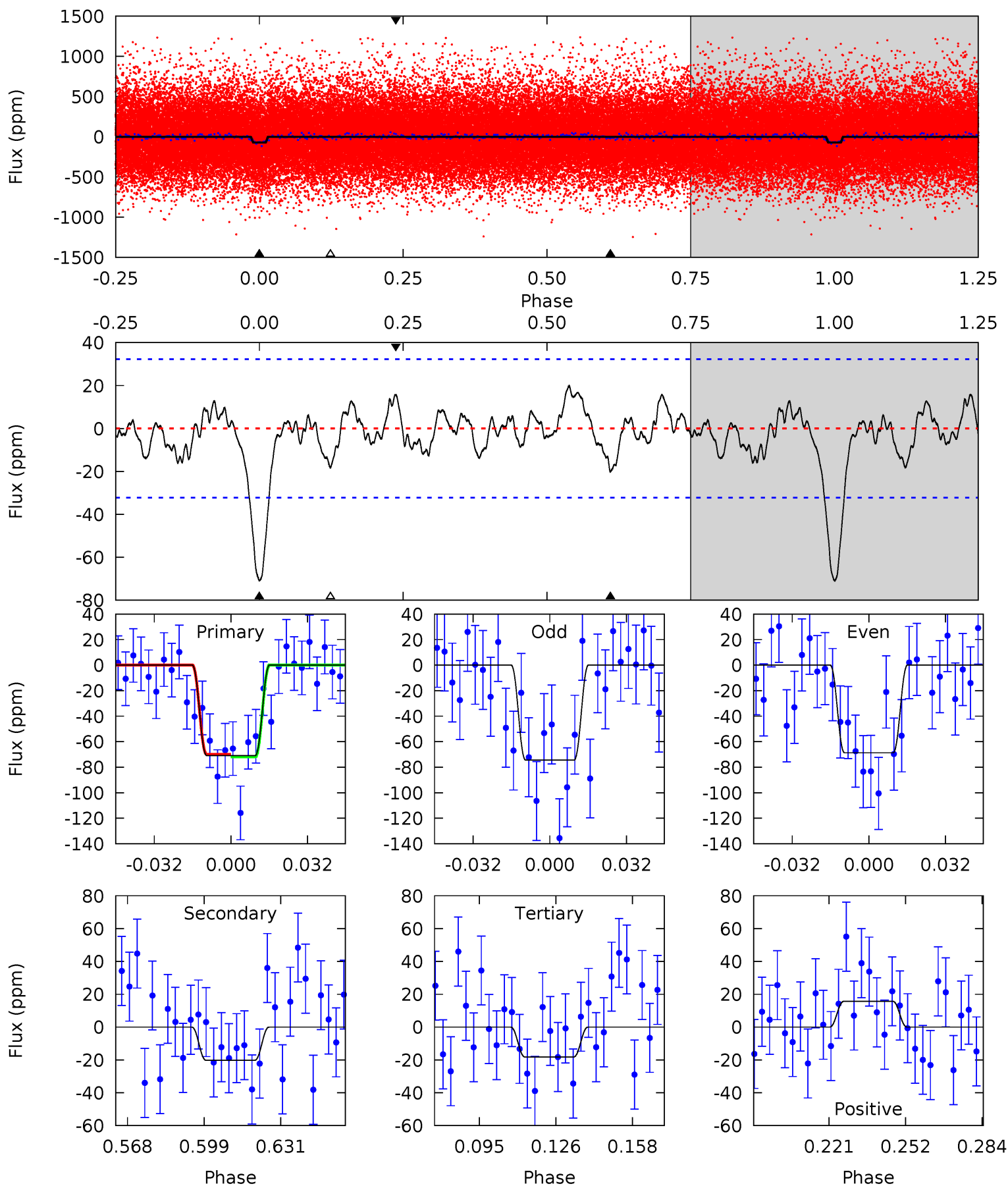
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	3.35	2.54	3.21	4.80	2.16	1.18	8.48	7.81	0.81	0.15	0.94	0.83	0.23	0.58



Alt Model-Shift Uniqueness Test

008700895-01, P = 5.682216 Days, E = 126.021849 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	3.01	2.71	2.34	4.80	2.15	1.12	7.83	8.20	0.30	0.67	0.42	0.88	0.22	0.14



Stellar Parameters For KIC 008700895

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5753^{+78}_{-78}	$4.319^{+0.115}_{-0.115}$	$0.160^{+0.150}_{-0.150}$	$1.157^{+0.189}_{-0.155}$	$1.016^{+0.074}_{-0.062}$	$0.924^{+0.467}_{-0.308}$
	+1%/-1%	+3%/-3%	+94%/-94%	+16%/-13%	+7%/-6%	+50%/-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 008700895-01 / KOI 4523.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-23 ± 7	$1.31^{+0.79}_{-0.74}$	1521^{+68}_{-60}	4116^{+1862}_{-596}	28^{+126}_{-17}
Alt.	-20 ± 7	$1.17^{+0.82}_{-0.67}$	1525^{+69}_{-65}	4211^{+1796}_{-737}	30^{+135}_{-20}

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

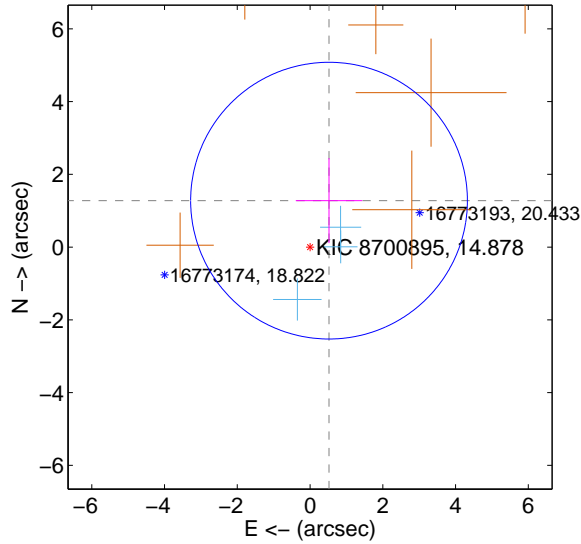
Supplemental centroid analysis for 008700895-01. Kepler magnitude: 14.88. Transit SNR 8.74

There are 3 quarters with good PRF difference image offsets

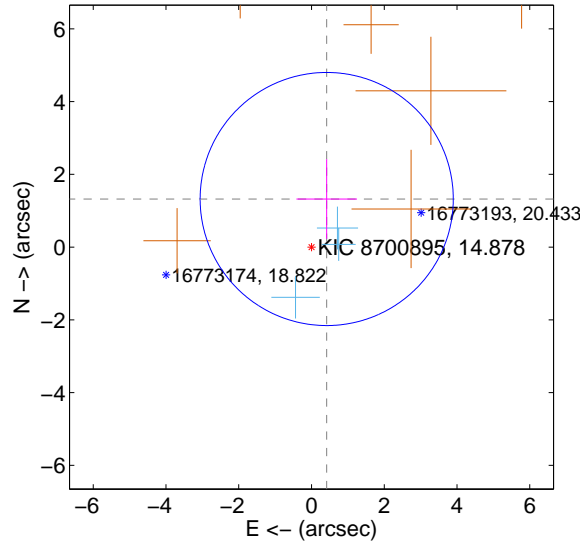
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.379 ± 1.268	1.09	-0.522 ± 0.913	1.277 ± 1.168
PRF-fit source offset from KIC position	1.386 ± 1.160	1.20	-0.418 ± 0.832	1.322 ± 1.094
photometric centroid source offset	1.05 ± 1.50	0.70	-1.02 ± 1.50	0.24 ± 1.51

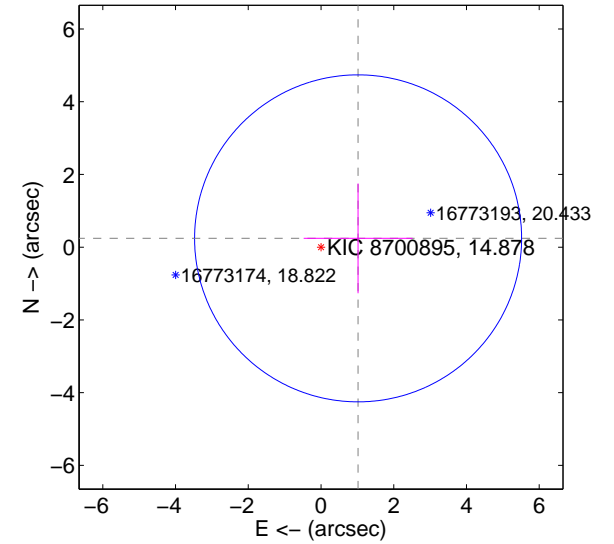
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

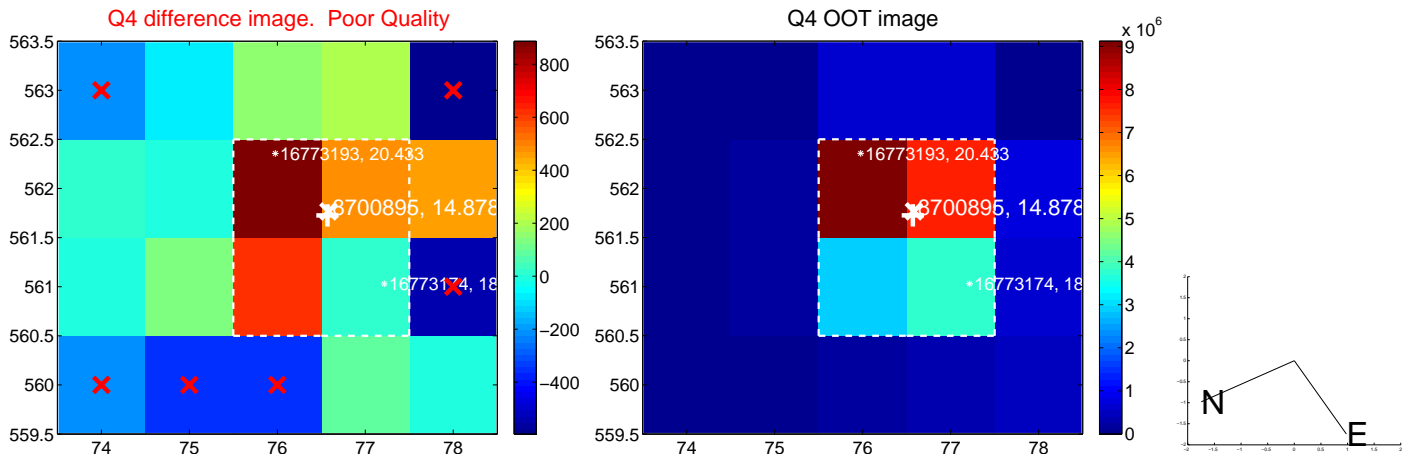
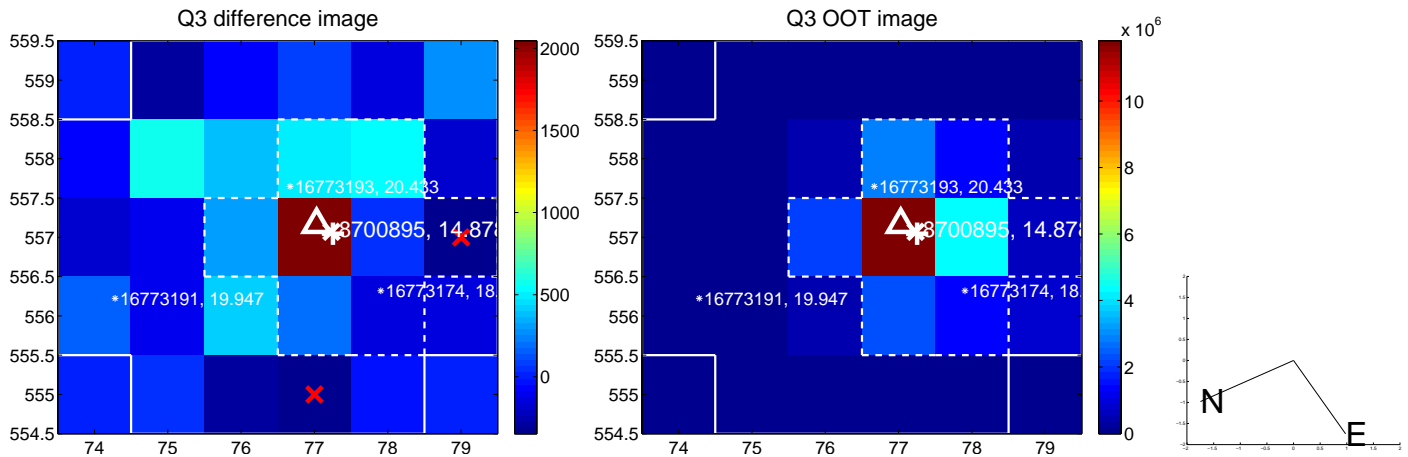
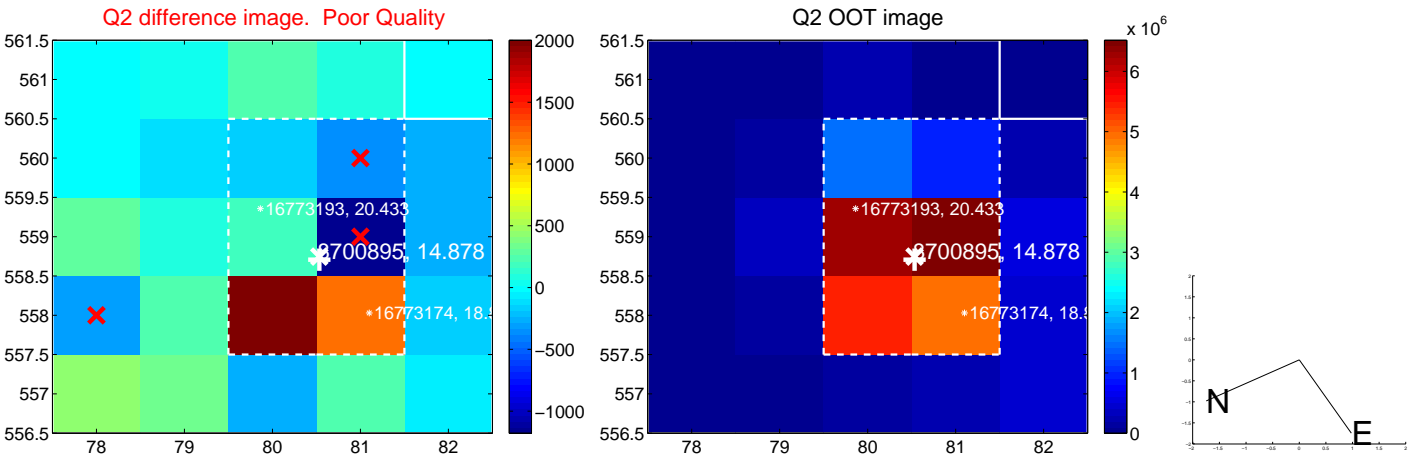
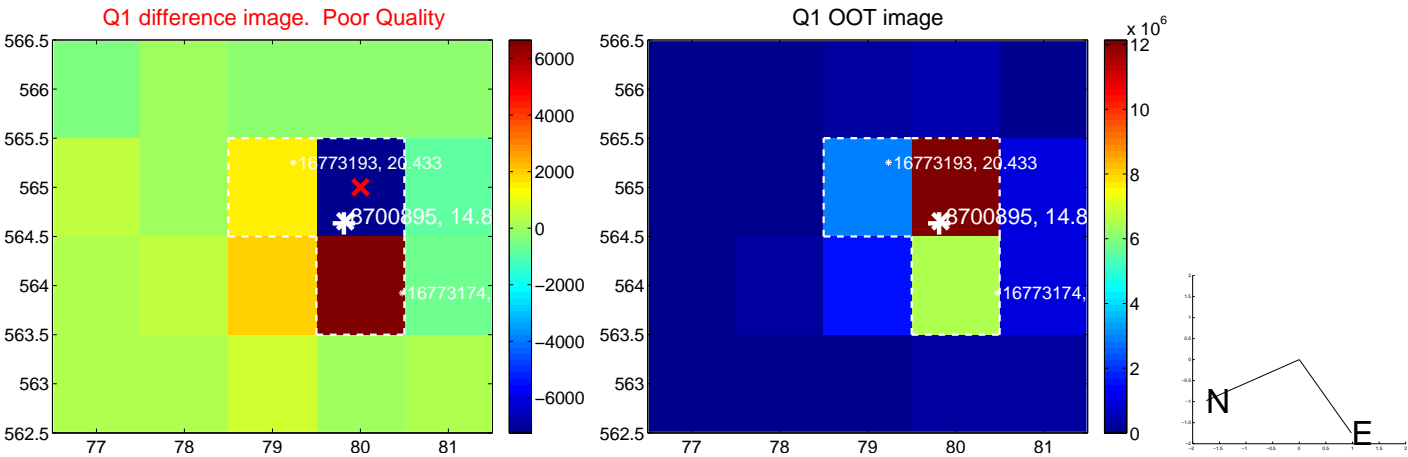


offset from photometric centroids

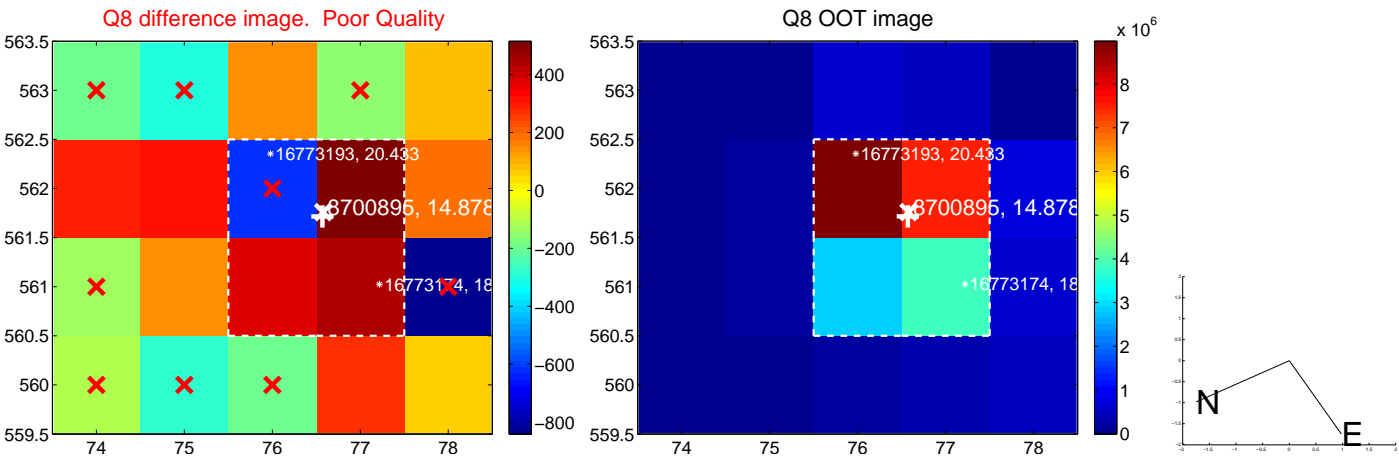
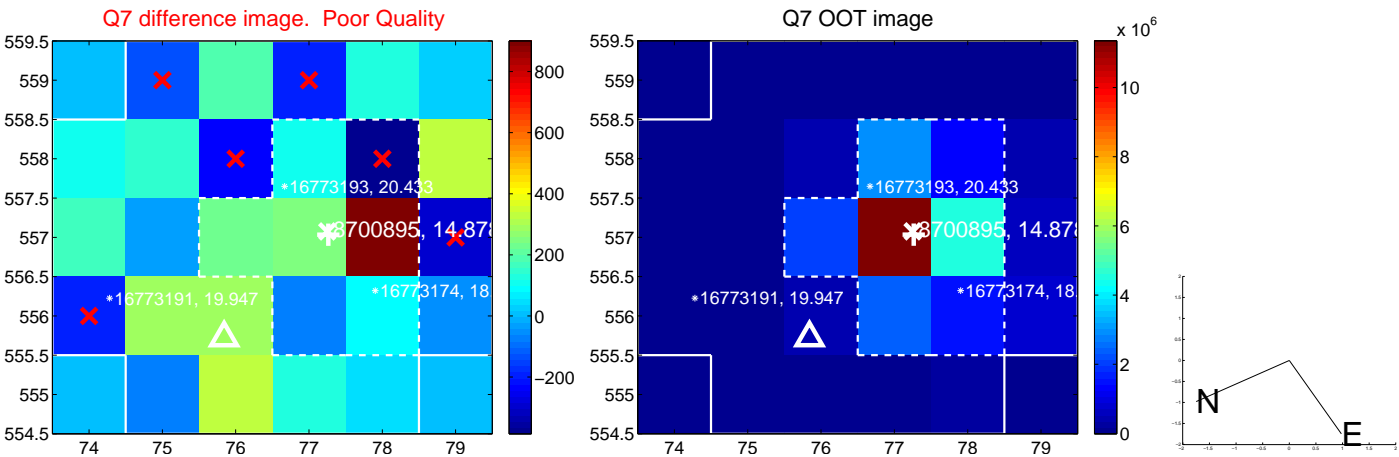
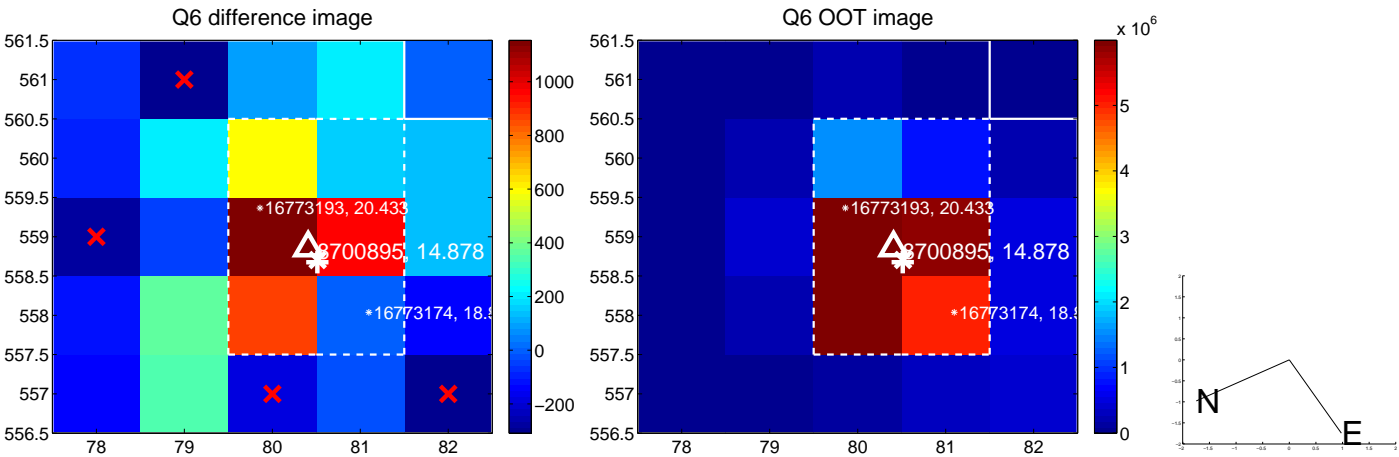
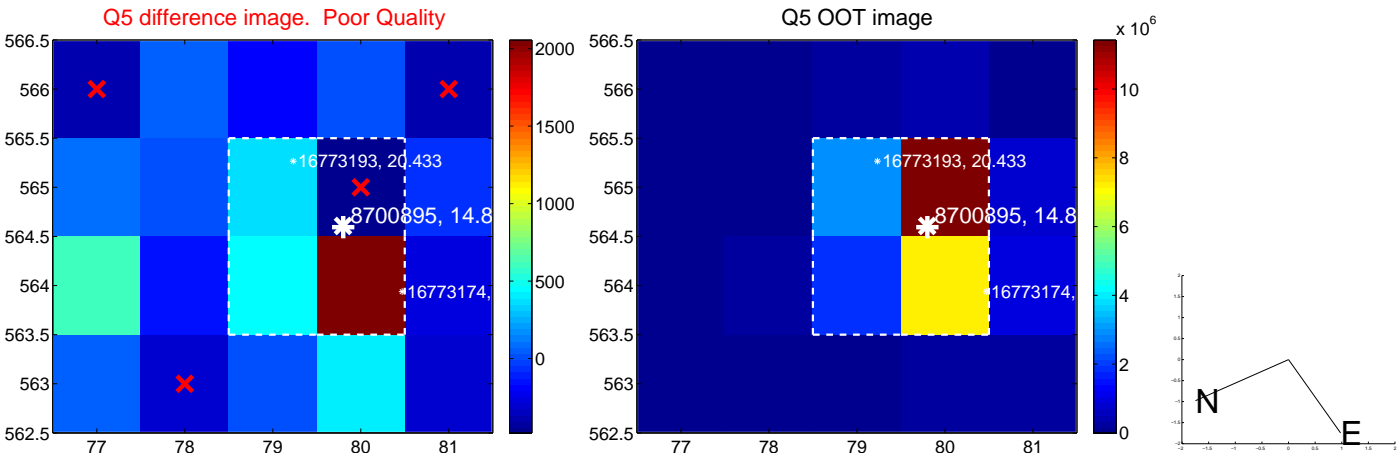


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

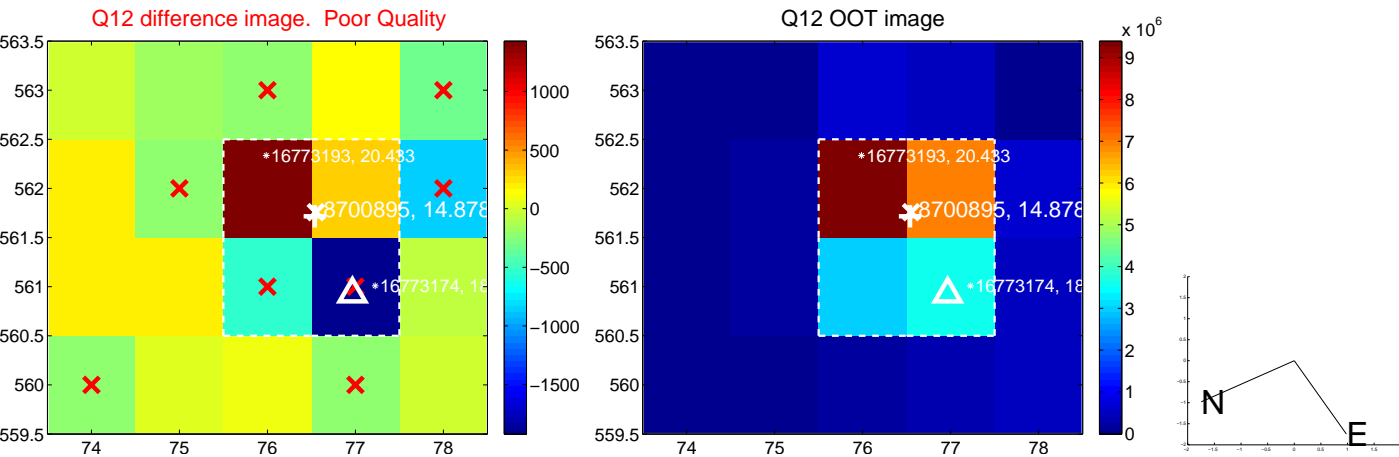
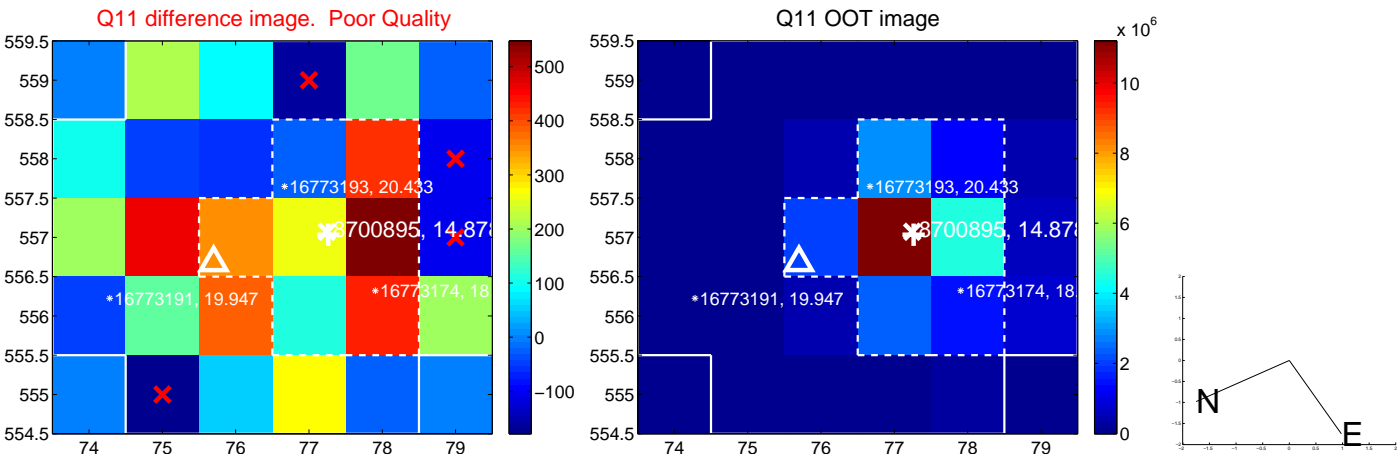
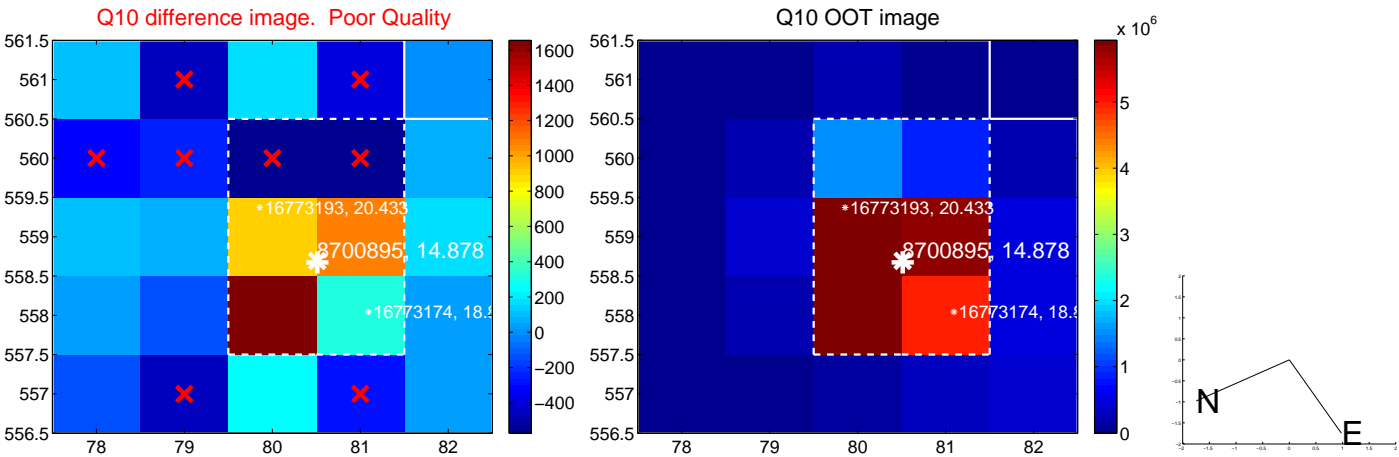
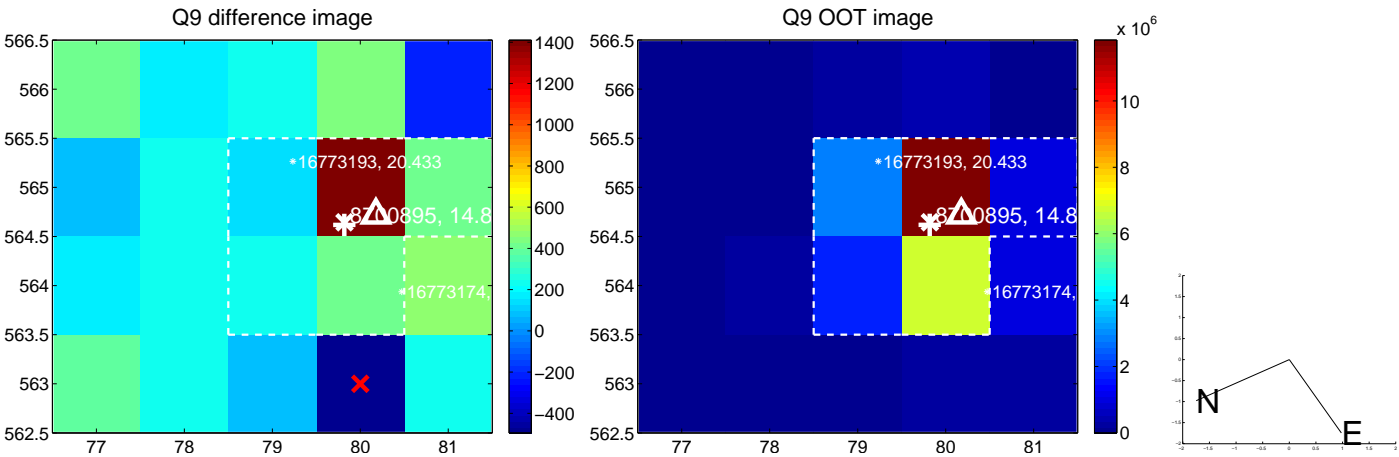
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



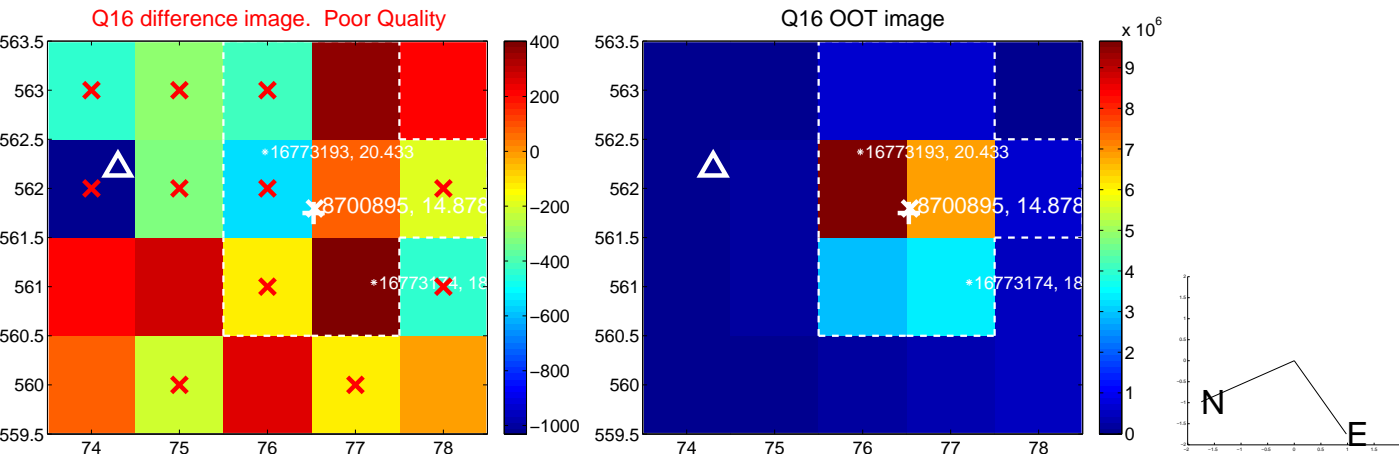
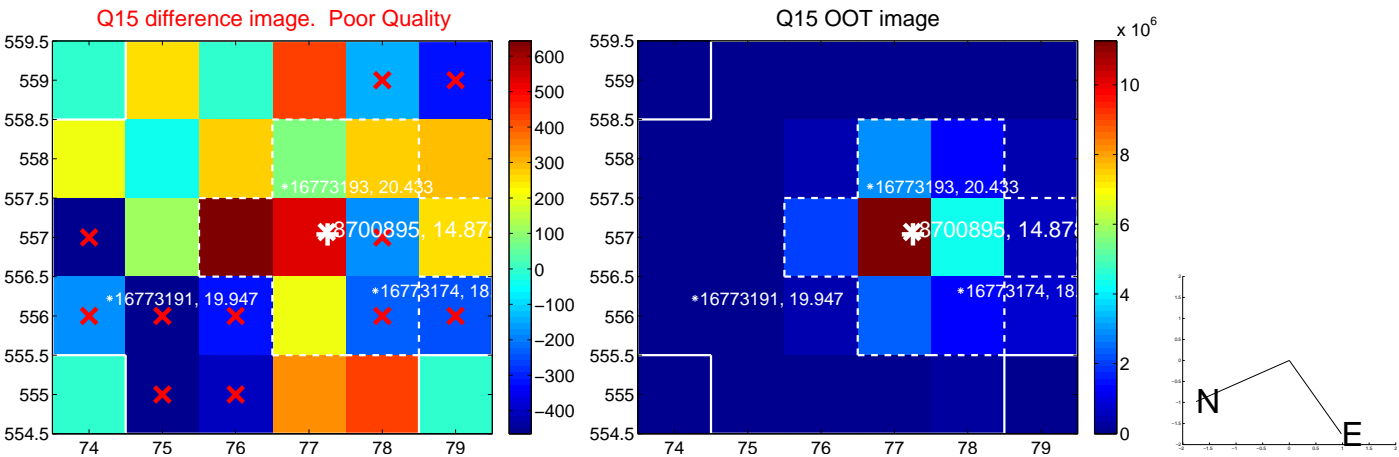
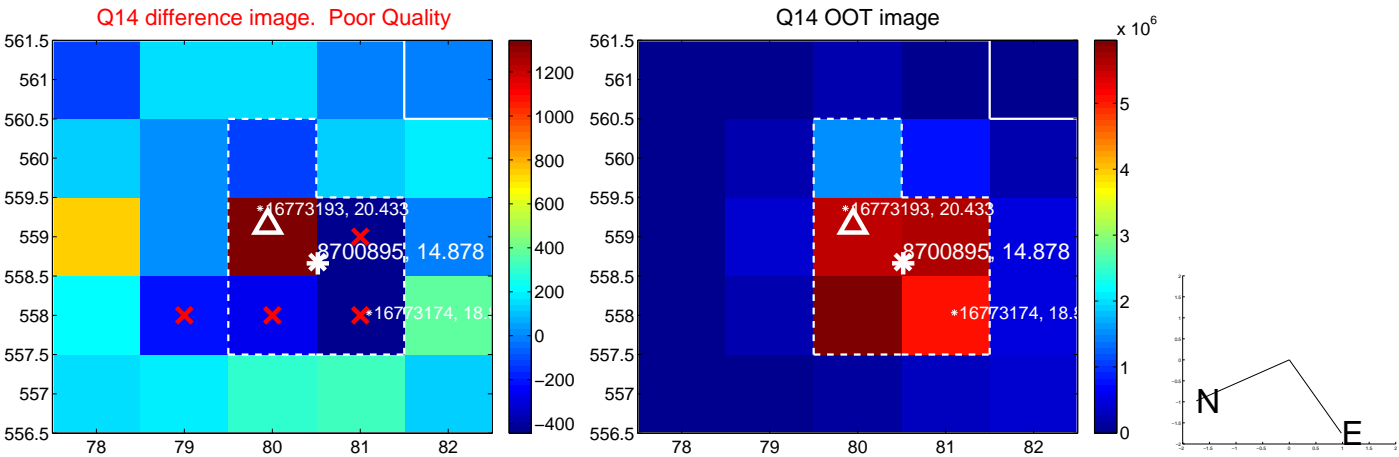
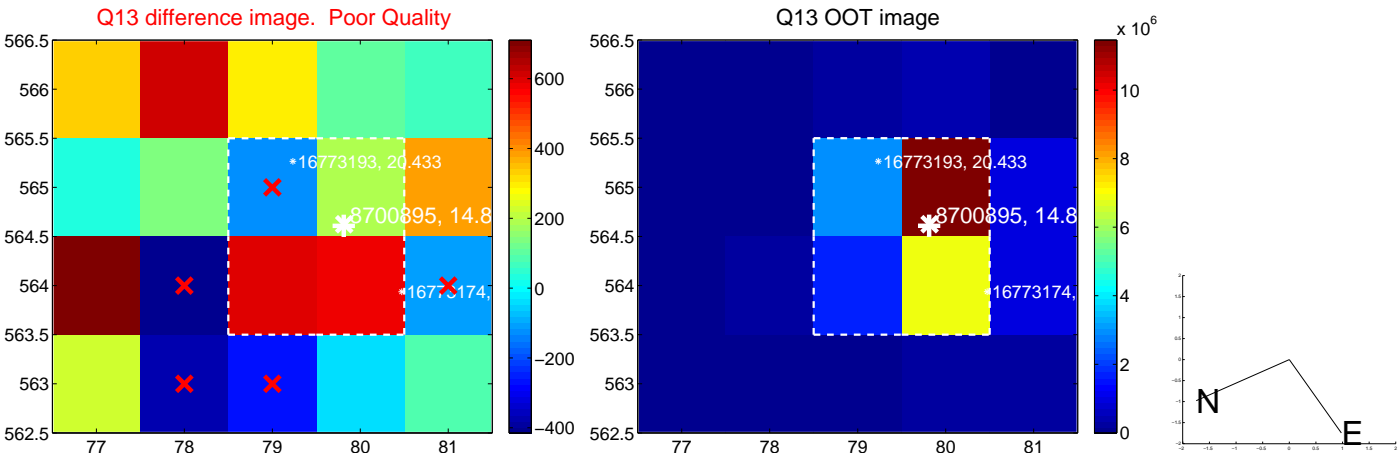
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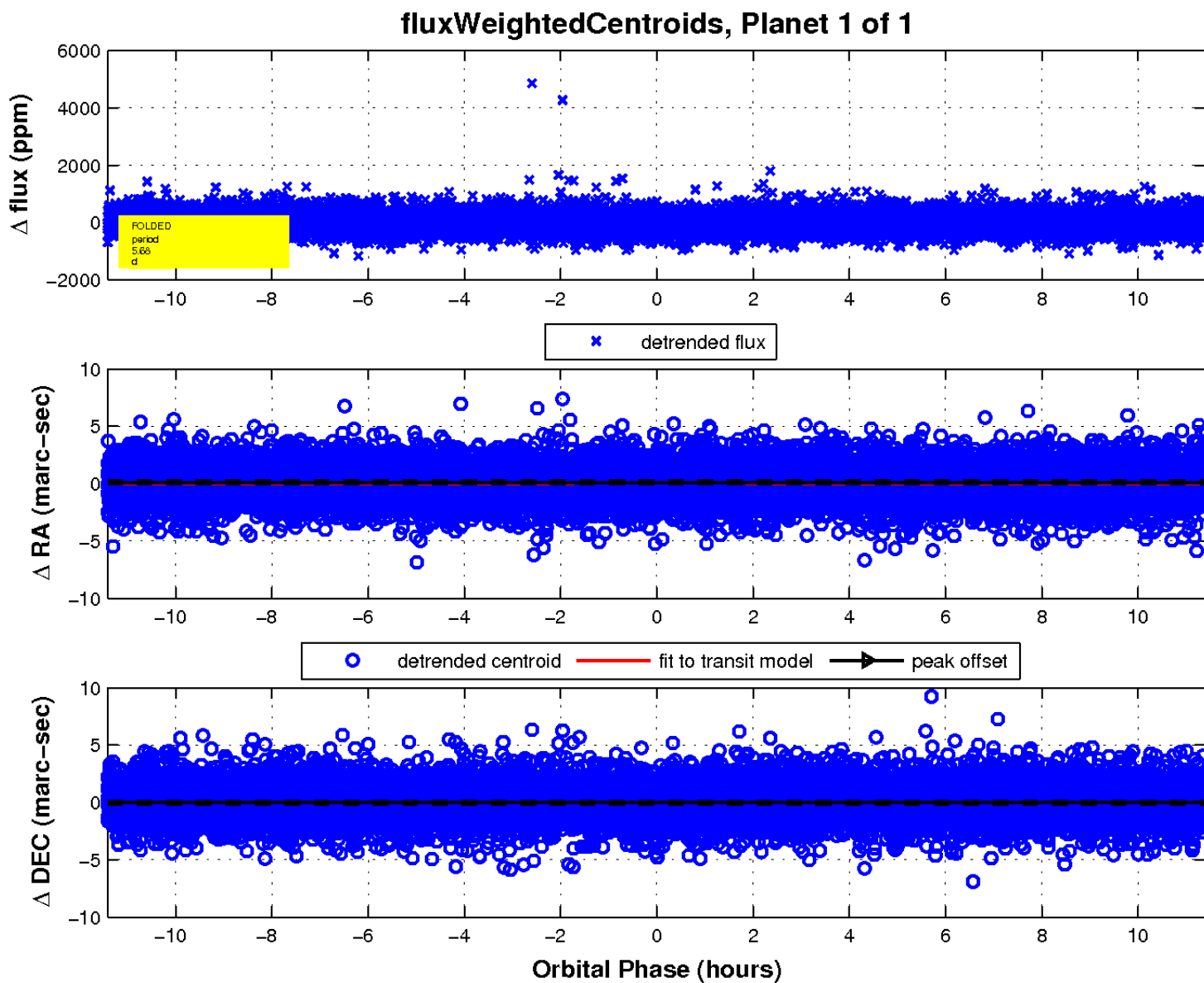
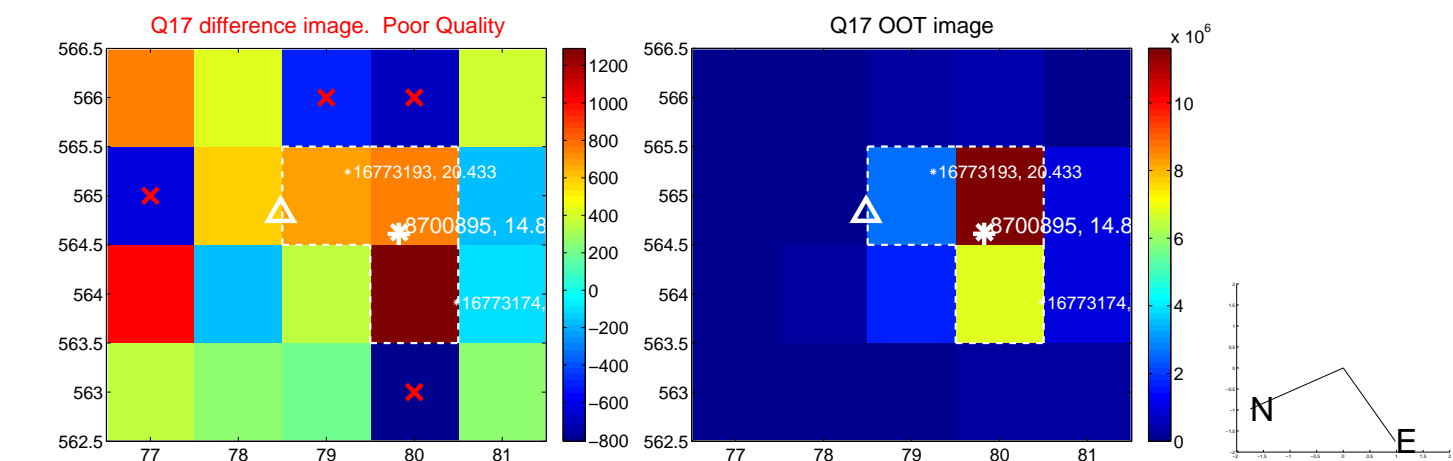
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

