

KIC 007829623

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})
007829623-01	OBS	No	0.984271	131.857706	40.6	2.709	7.5	8.2	0.80	5828	0.60	1904.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007829623-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

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

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

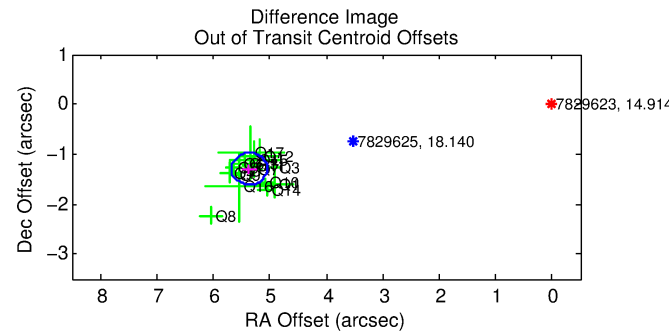
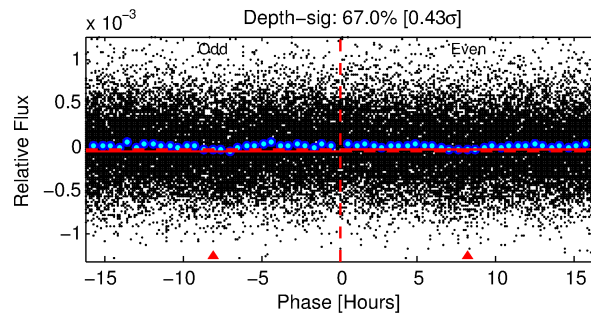
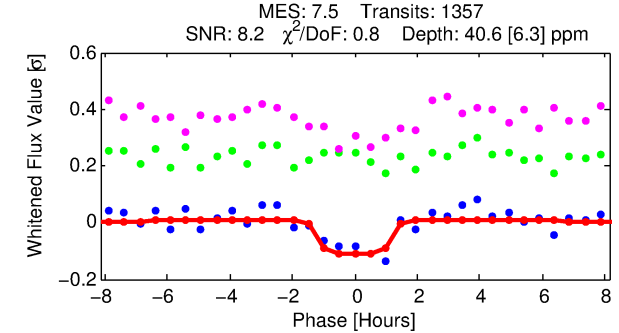
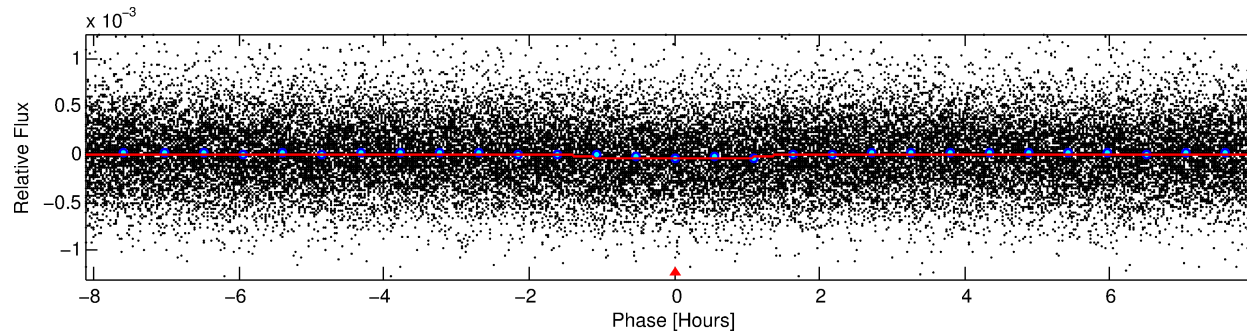
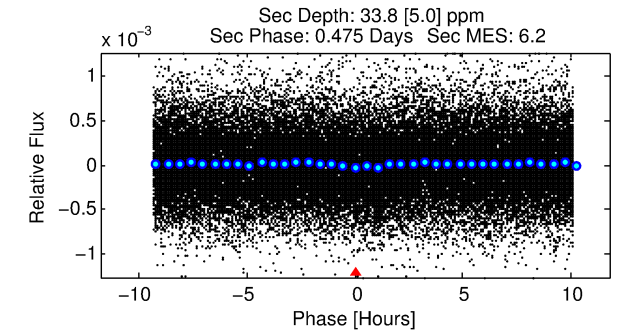
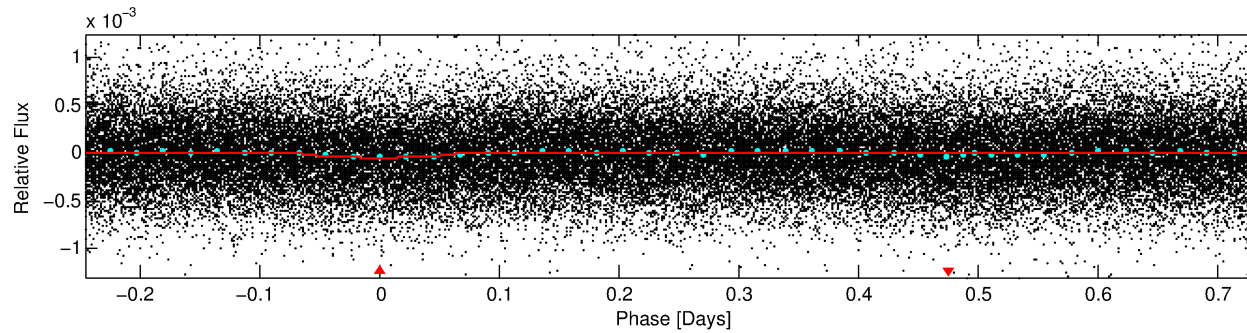
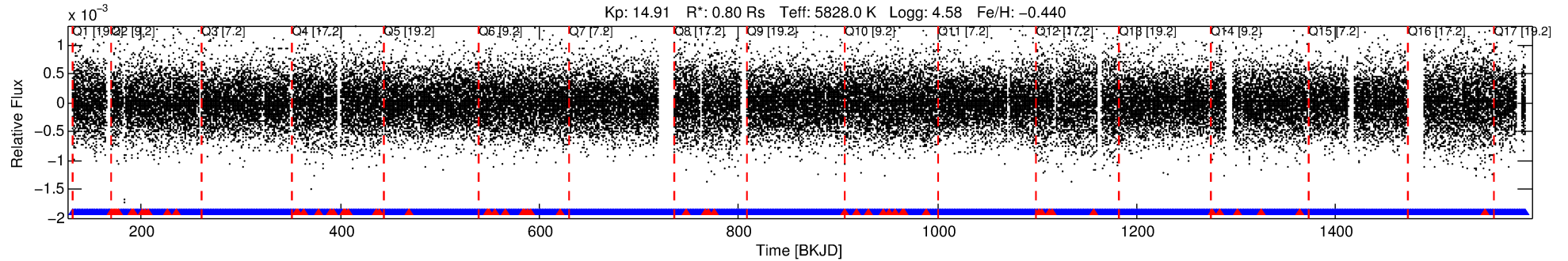
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007829623-01

No Significant Match Found

DV One-Page Summary

KIC: 7829623 Candidate: 1 of 1 Period: 0.984 d



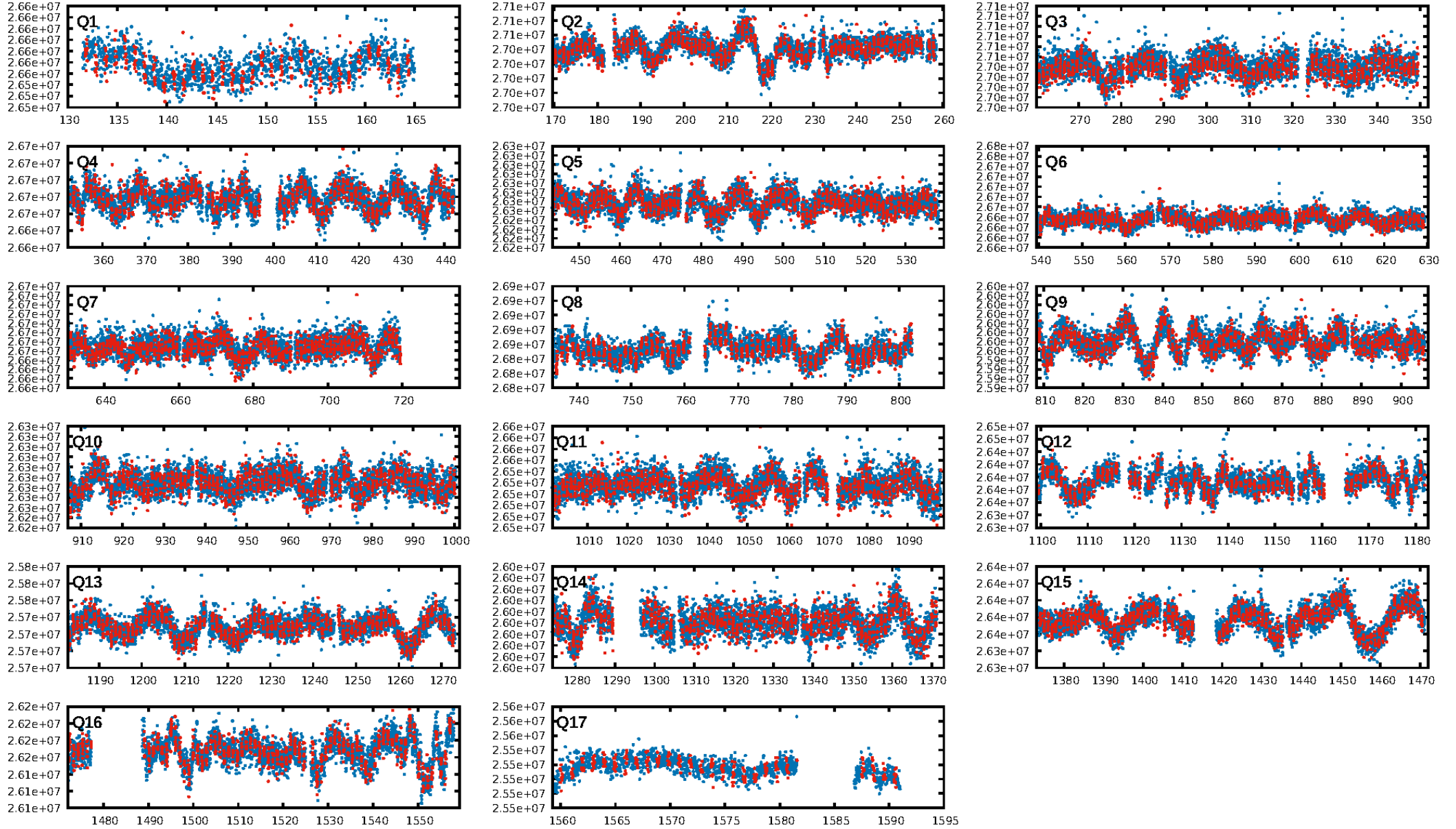
DV Fit Results:

Period = 0.98427 [0.00001] d
Epoch = 131.8577 [0.0041] BKJD
Rp/R* = 0.0069 [0.0049]
a/R* = 1.57 [3.45]
b = 0.90 [0.81]
Seff = 1904.28 [590.48]
Teff = 1684 [131] K
Rp = 0.60 [0.45] Re
a = 0.0185 [0.0037] AU
Ag = 17.92 [26.17] [0.65σ]
Teffp = 5359 [1922] K [1.91σ]

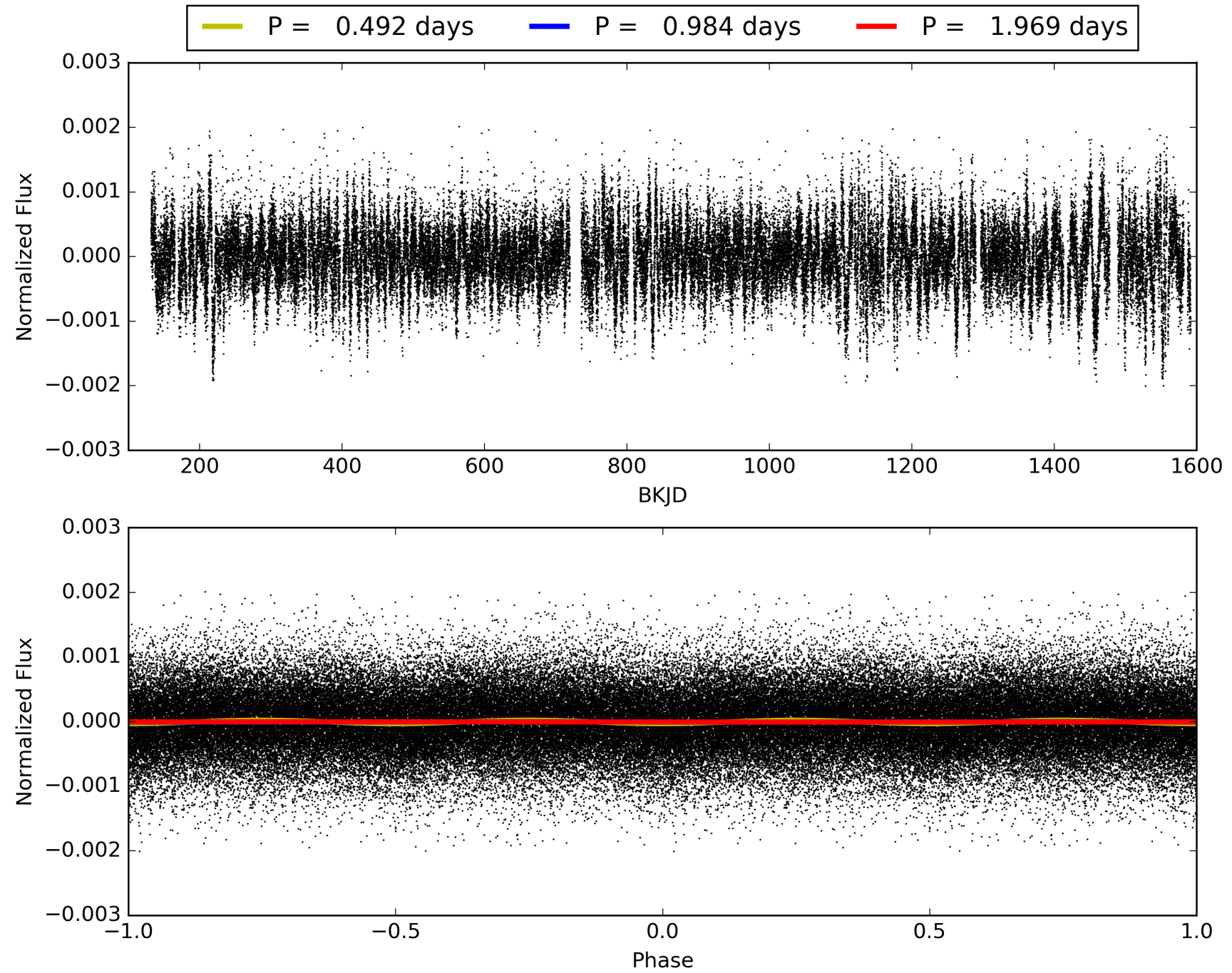
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.23e-14
RollingBand-fgt: 0.95 [1234/1297]
GhostDiagnostic-chr: 0.5942
Centroid-sig: 0.0%
Centroid-so: 7.653 arcsec [4.19σ]
OotOffset-rm: 5.519 arcsec [51.84σ]
KicOffset-rm: 5.423 arcsec [40.64σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007829623-01, PDC Light Curves

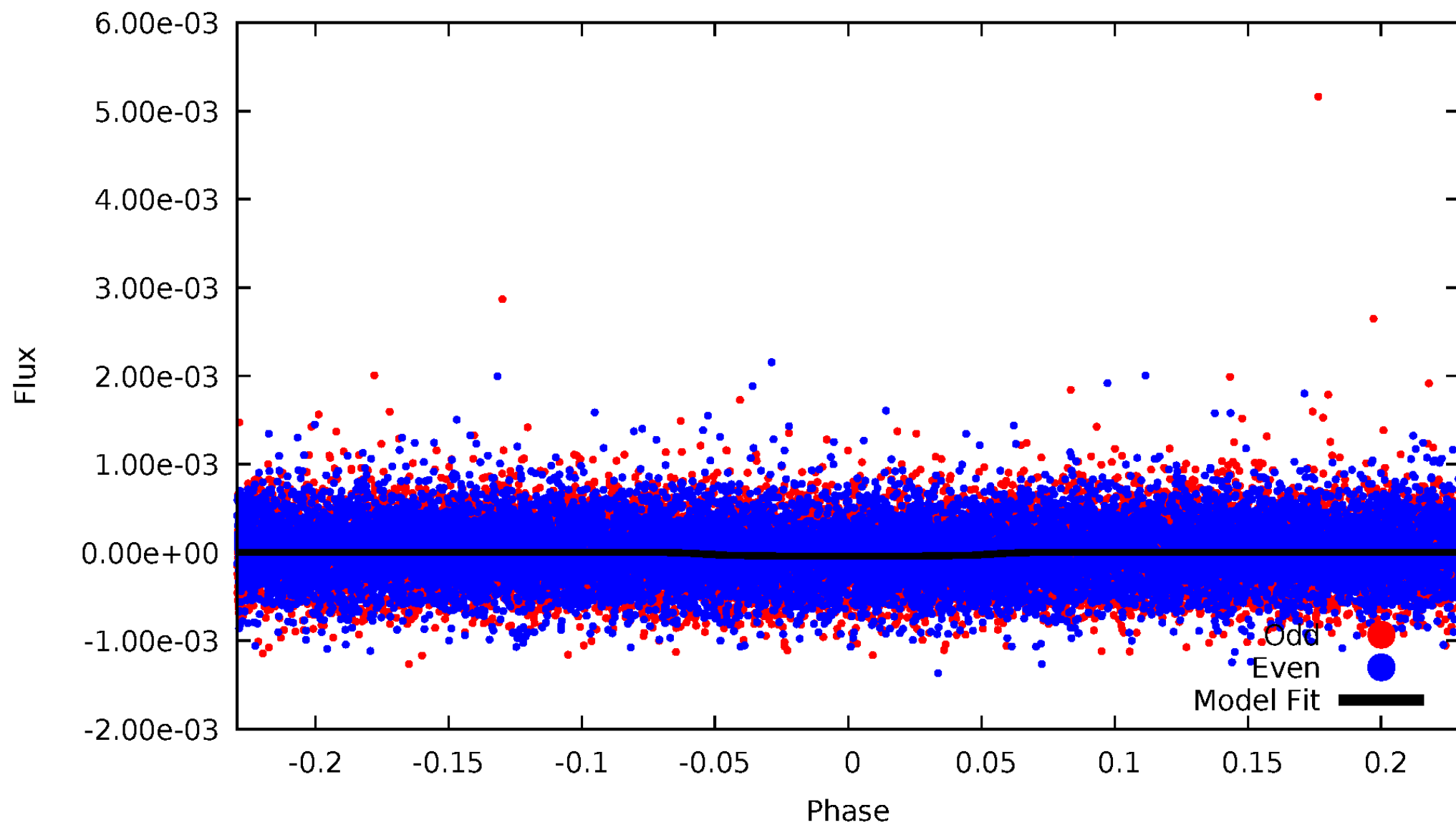


TCE 007829623-01



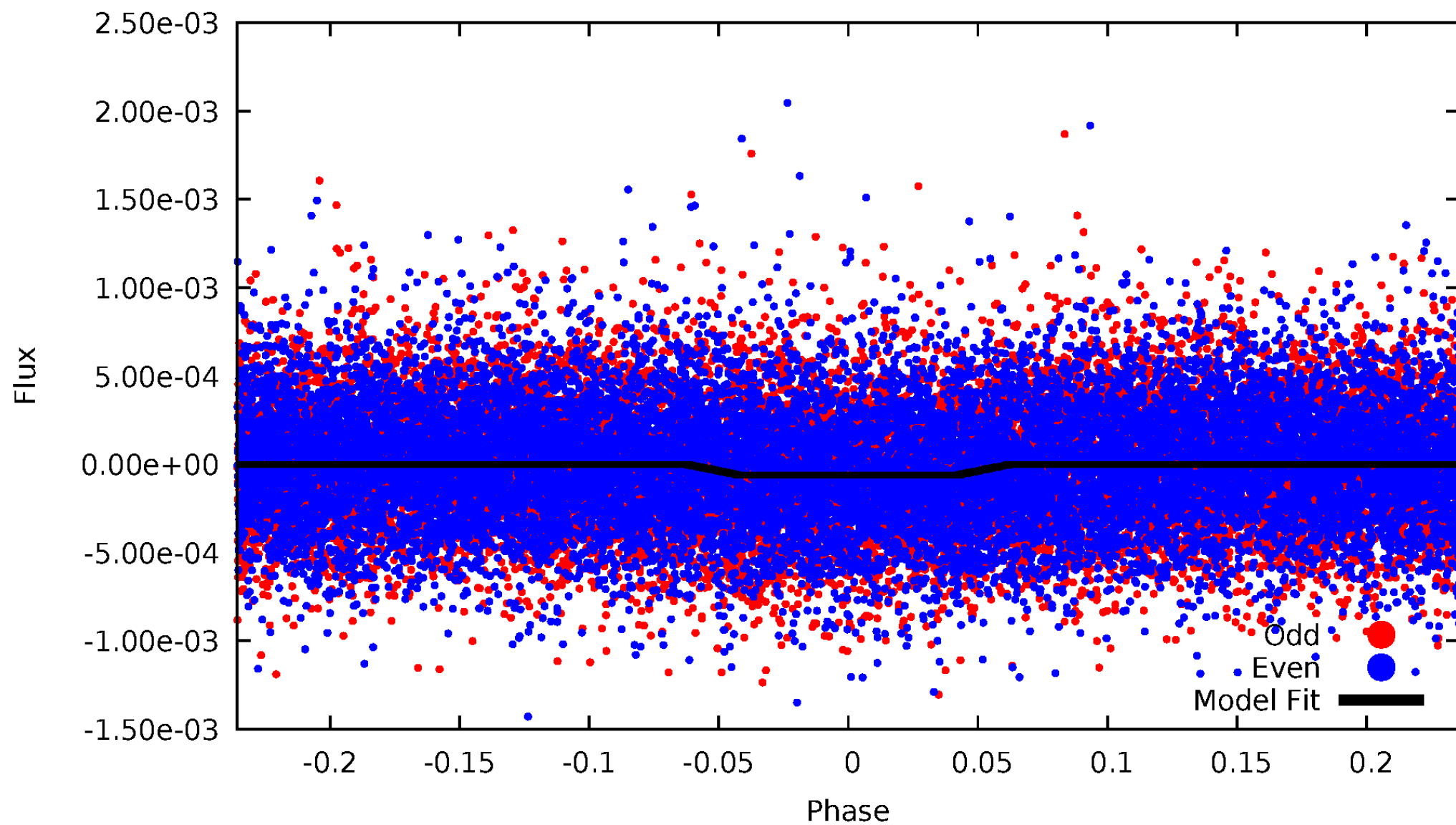
DV Odd/Even

TCE 007829623-01



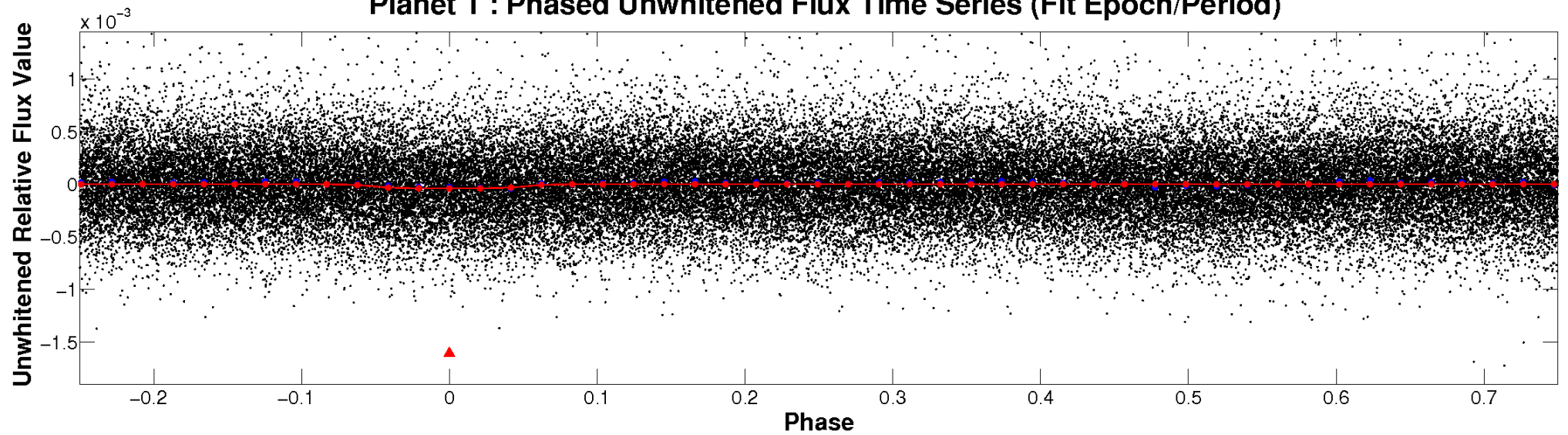
ALT Odd/Even

TCE 007829623-01

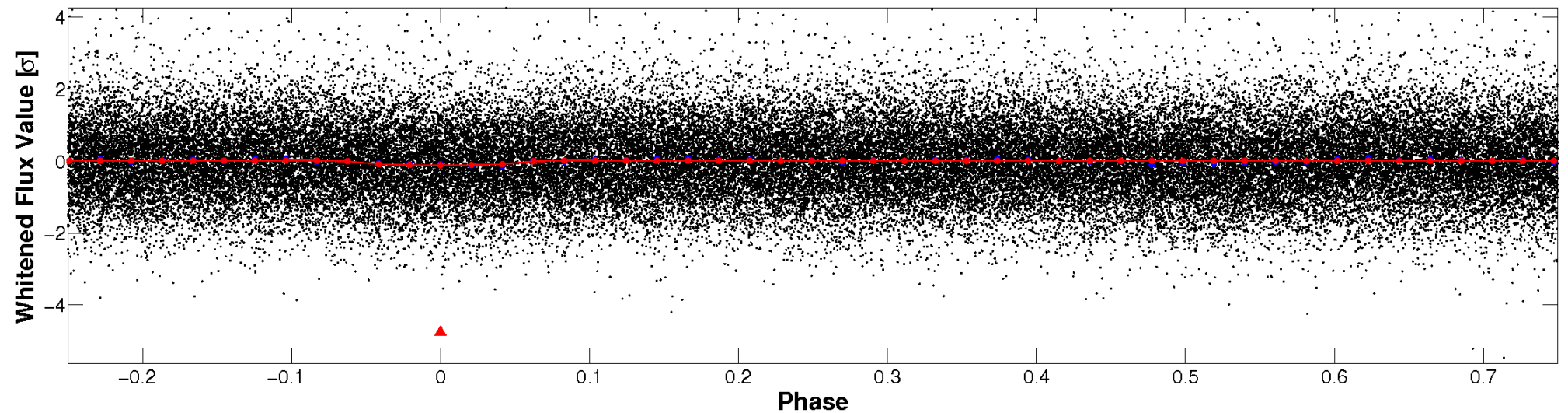


Non-Whitened Vs. Whitened Light Curve

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

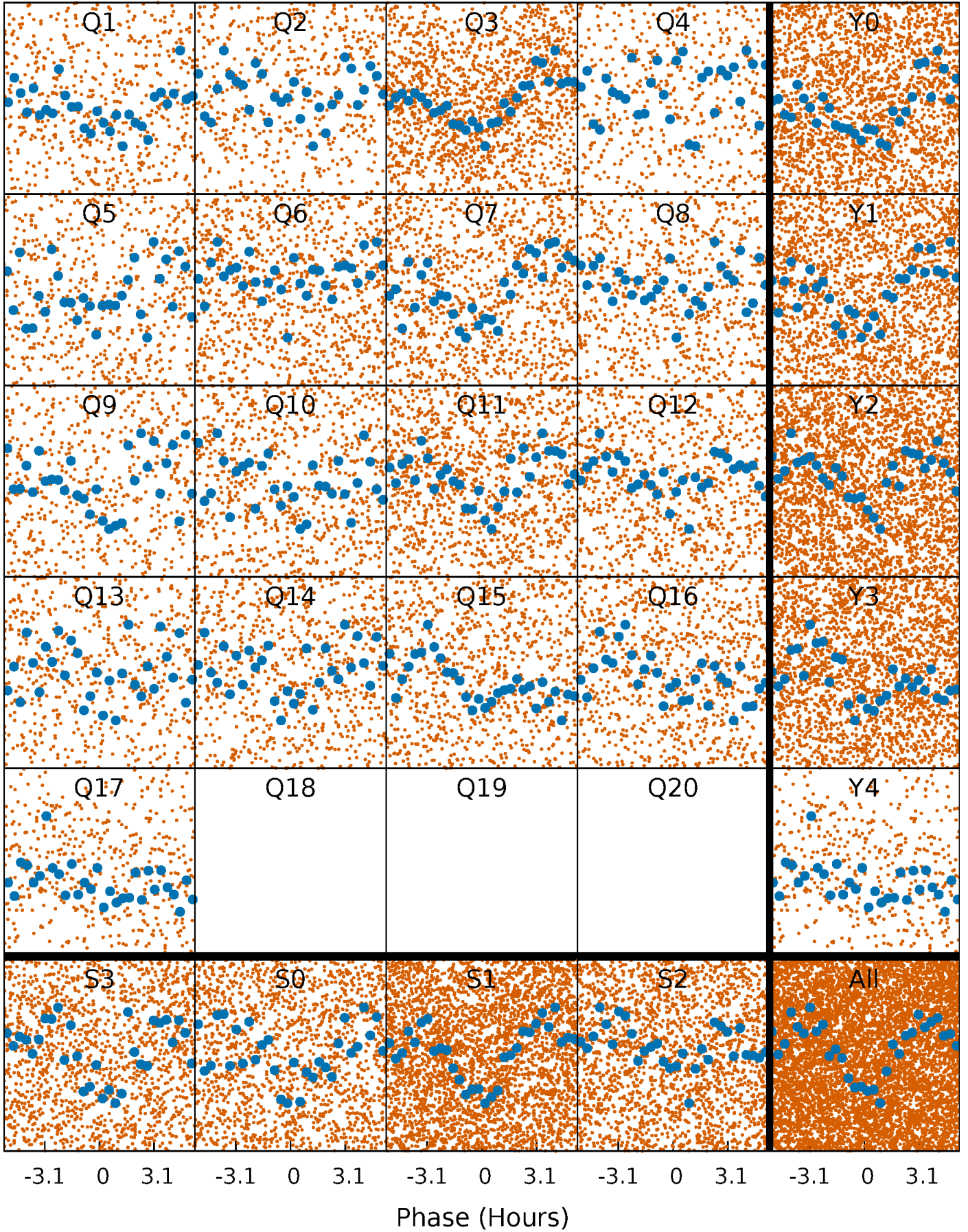


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



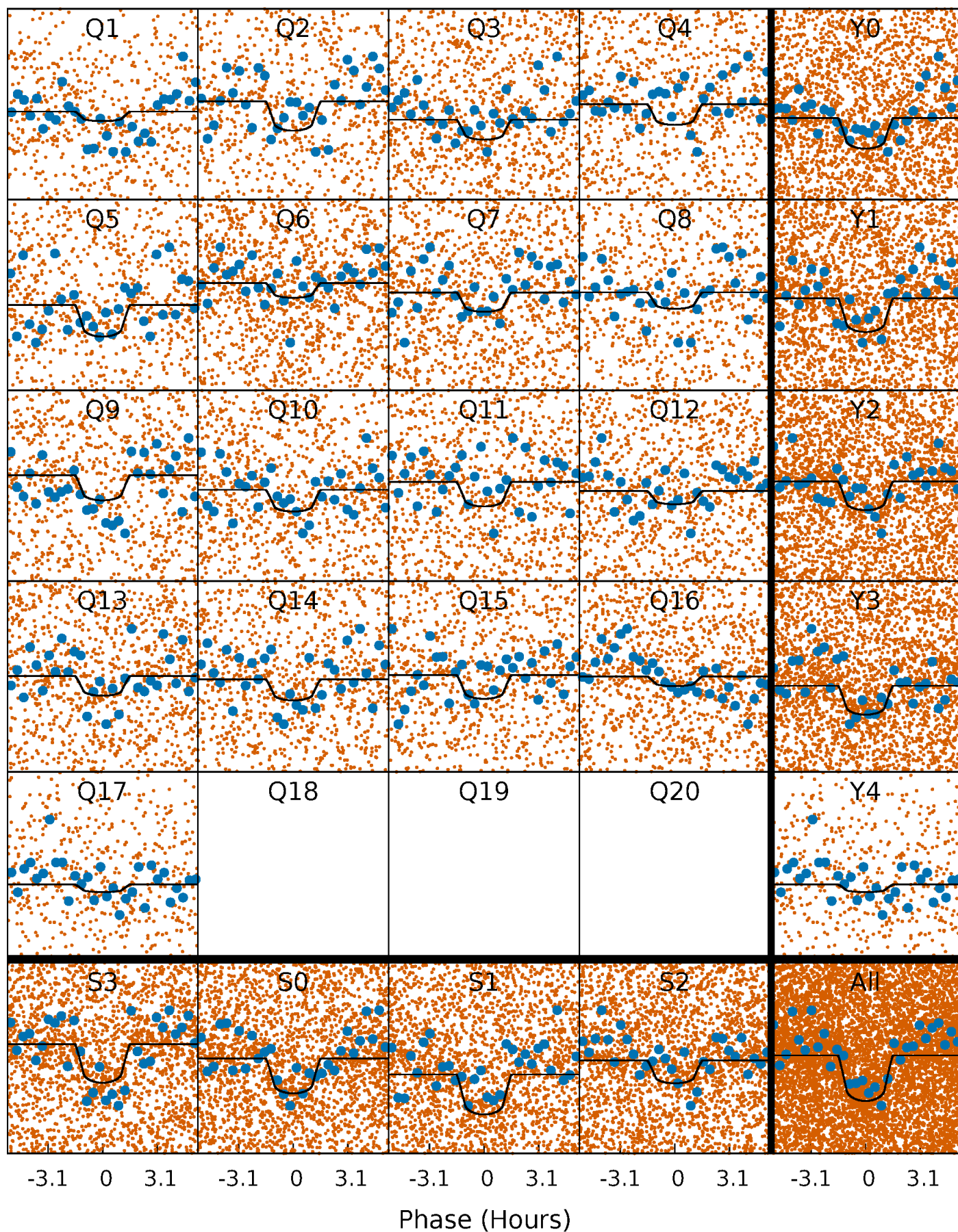
PDC Quarter-Phased Transit Curves

TCE 007829623-01 P= 0.984271 Days $T_0=131.857706$ (BKJD)



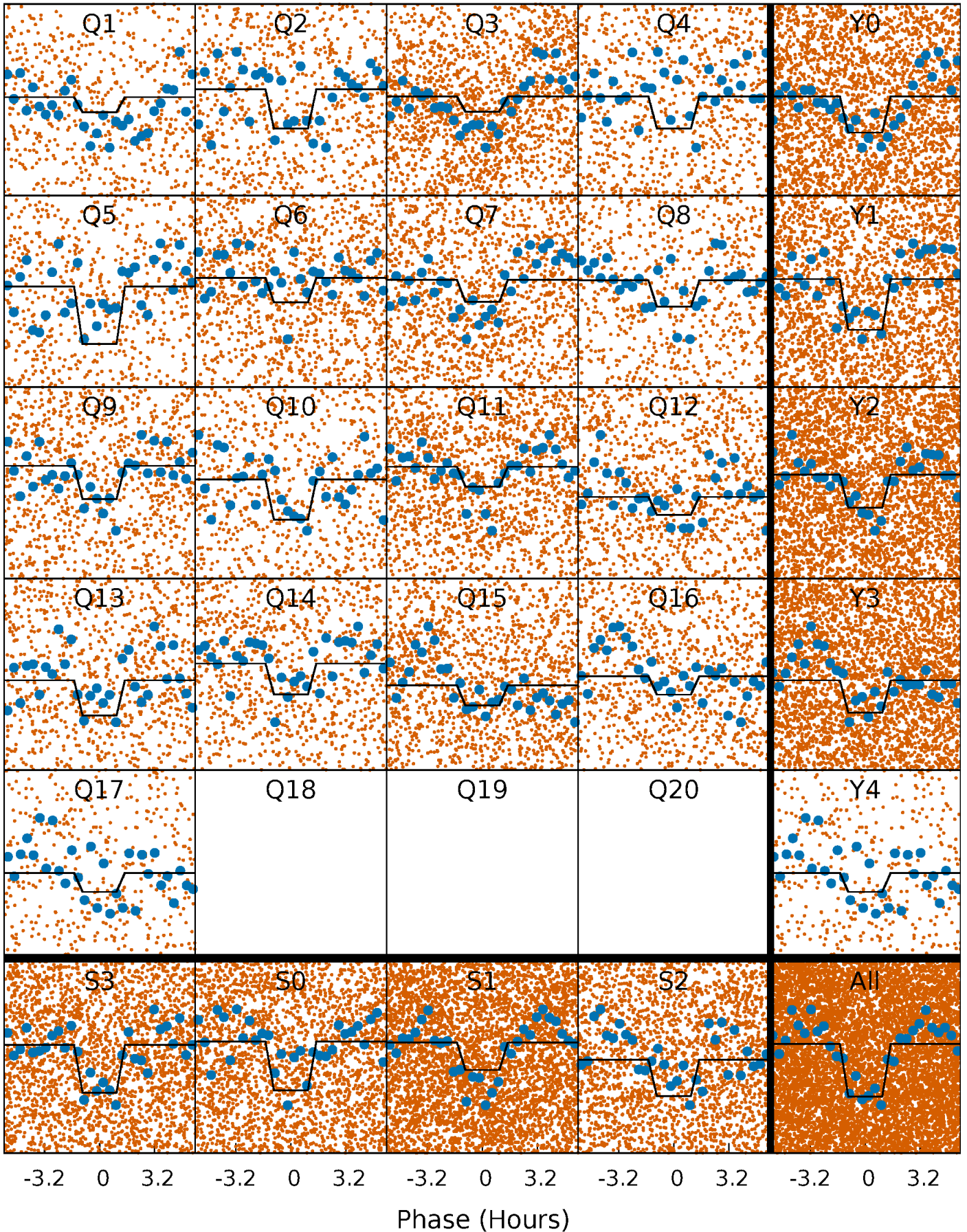
DV Quarter-Phased Transit Curves

TCE 007829623-01 P= 0.984271 Days $T_0=131.857706$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

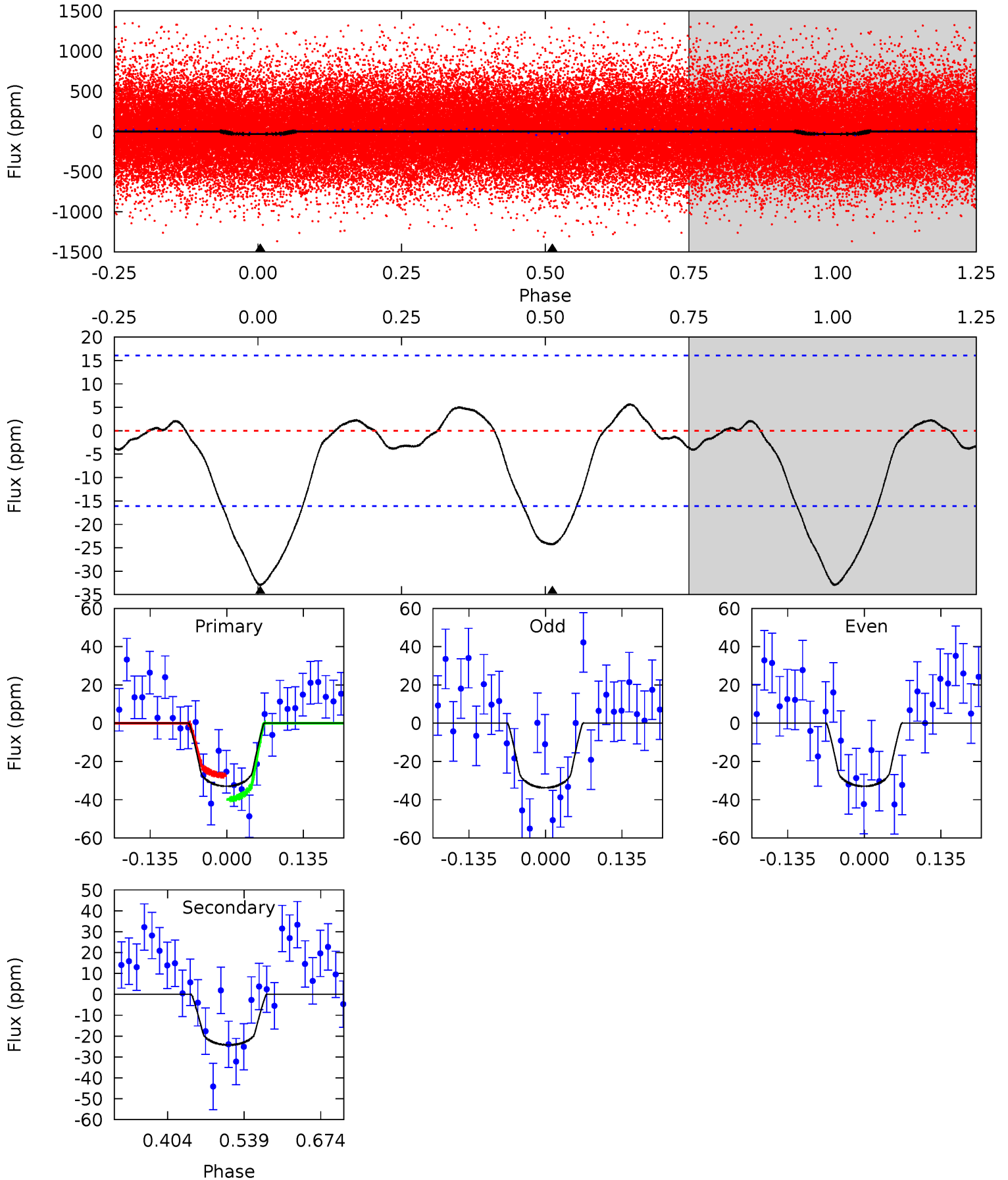
TCE 007829623-01 P= 0.984281 Days $T_0=131.851378$ (BKJD)



DV Model-Shift Uniqueness Test

007829623-01, P = 0.984271 Days, E = 130.873435 Days

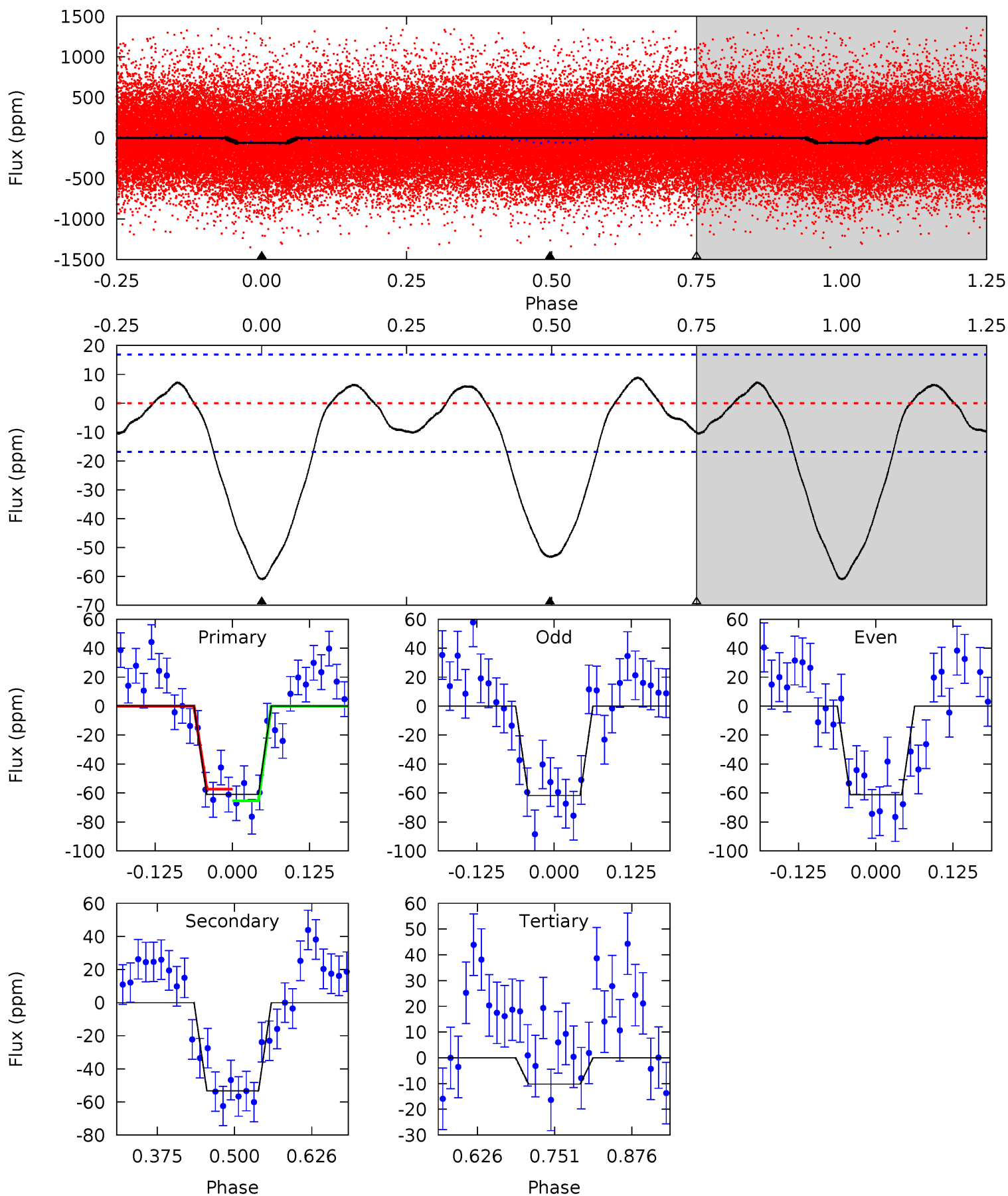
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.23	6.79	0	0	4.50	1.50	0.74	9.23	9.23	6.79	6.79	0.11	0.89	0.15	1.75



Alt Model-Shift Uniqueness Test

007829623-01, P = 0.984281 Days, E = 130.867097 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	14.3	2.74	0	4.52	1.53	1.61	13.6	16.3	11.5	14.3	0.08	0.96	0.13	1.07



Stellar Parameters For KIC 007829623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5828^{+158}_{-158}	$4.579^{+0.040}_{-0.160}$	$-0.440^{+0.300}_{-0.300}$	$0.795^{+0.185}_{-0.066}$	$0.880^{+0.089}_{-0.099}$	$2.468^{+0.498}_{-1.098}$
	+3%/-3%	+1%/-3%	+68%/-68%	+23%/-8%	+10%/-11%	+20%/-44%
Source	PHO1	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 007829623-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-24 ± 4	$0.65^{+0.44}_{-0.36}$	2396^{+131}_{-93}	4857^{+2303}_{-905}	10^{+42}_{-7}
Alt.	-53 ± 4	$0.72^{+0.44}_{-0.37}$	2393^{+140}_{-97}	5539^{+2640}_{-990}	19^{+60}_{-12}

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 $A_{obs} \gg 1.0$

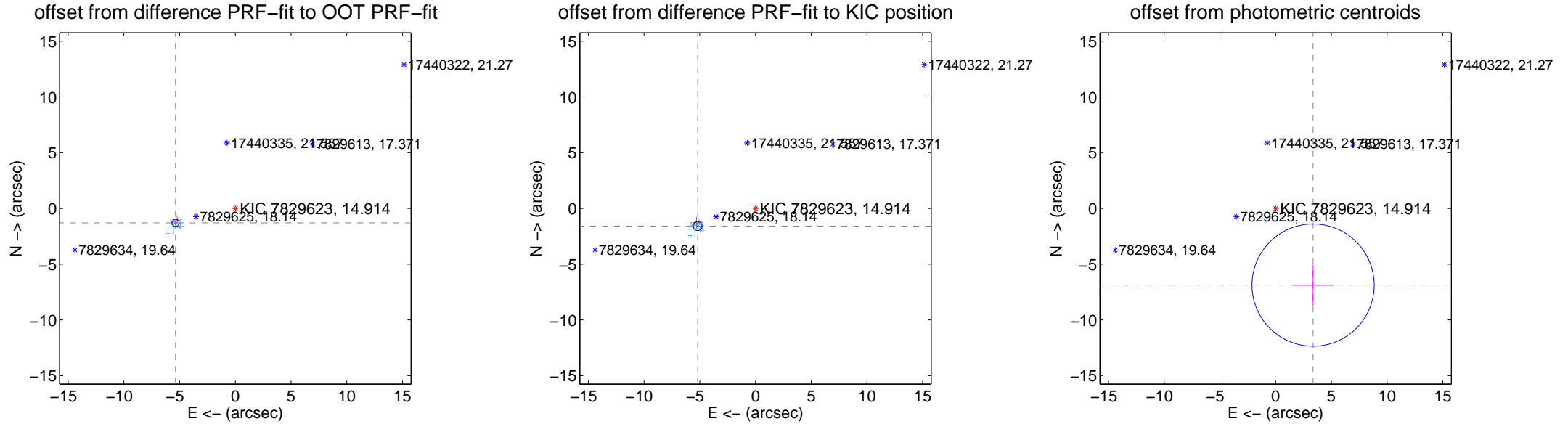
DV Centroid Data

Supplemental centroid analysis for 007829623-01. Kepler magnitude: 14.91. Transit SNR 8.18

There are 15 quarters with good PRF difference image offsets

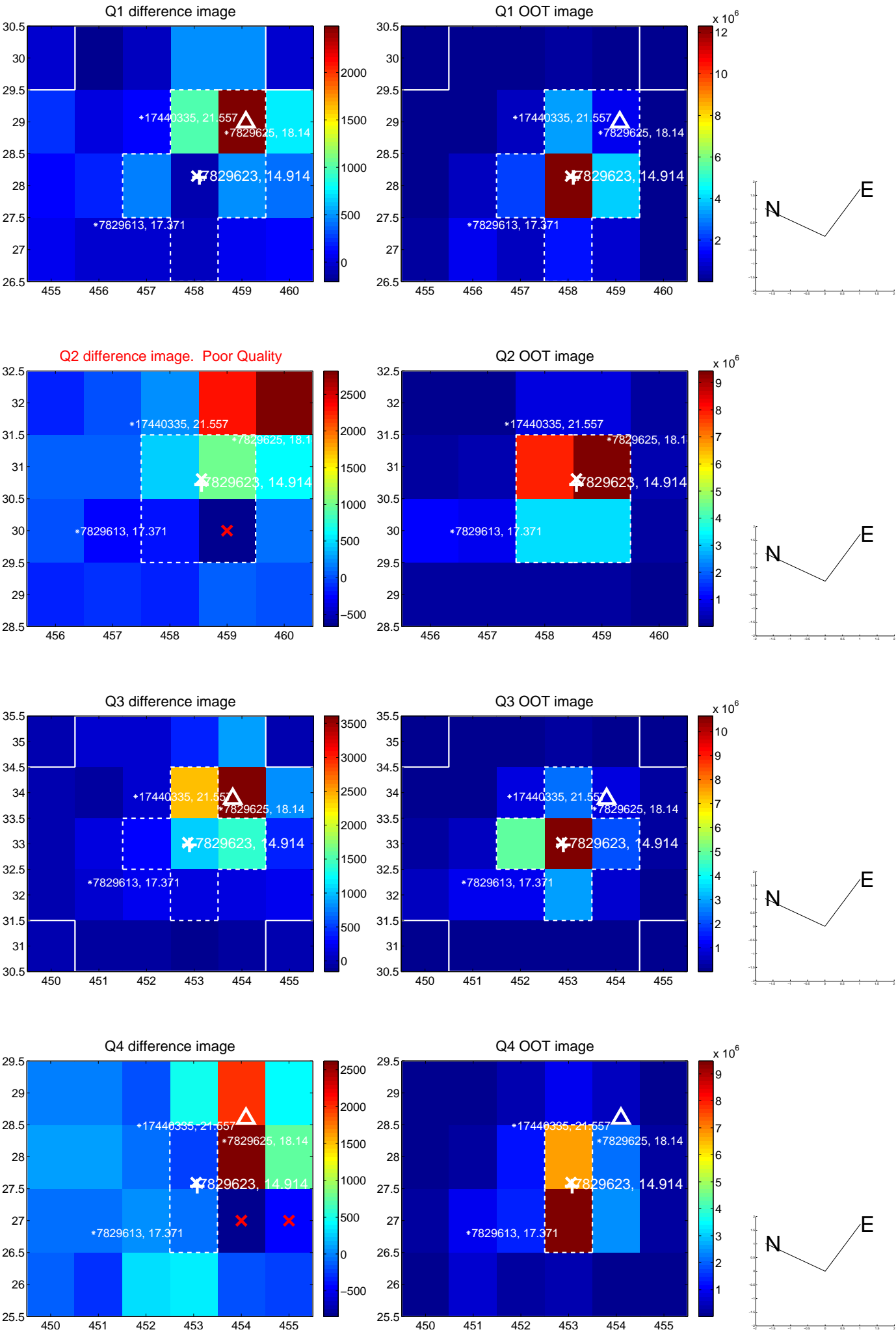
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.519 ± 0.106	51.84	5.365 ± 0.108	-1.293 ± 0.076
PRF-fit source offset from KIC position	5.423 ± 0.133	40.64	5.187 ± 0.137	-1.583 ± 0.091
photometric centroid source offset	7.65 ± 1.83	4.19	-3.36 ± 1.83	-6.88 ± 1.83

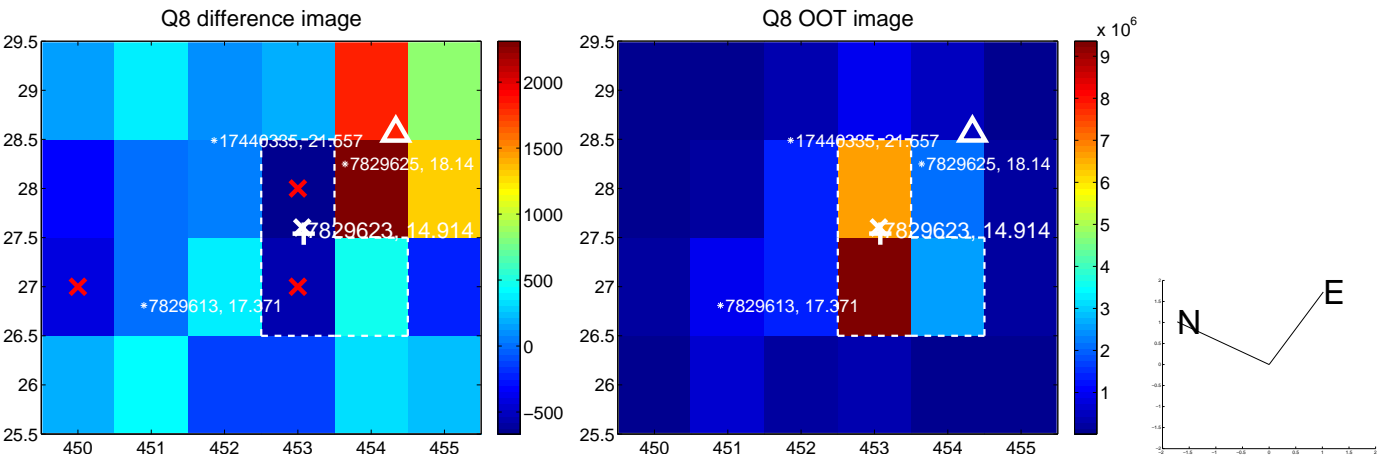
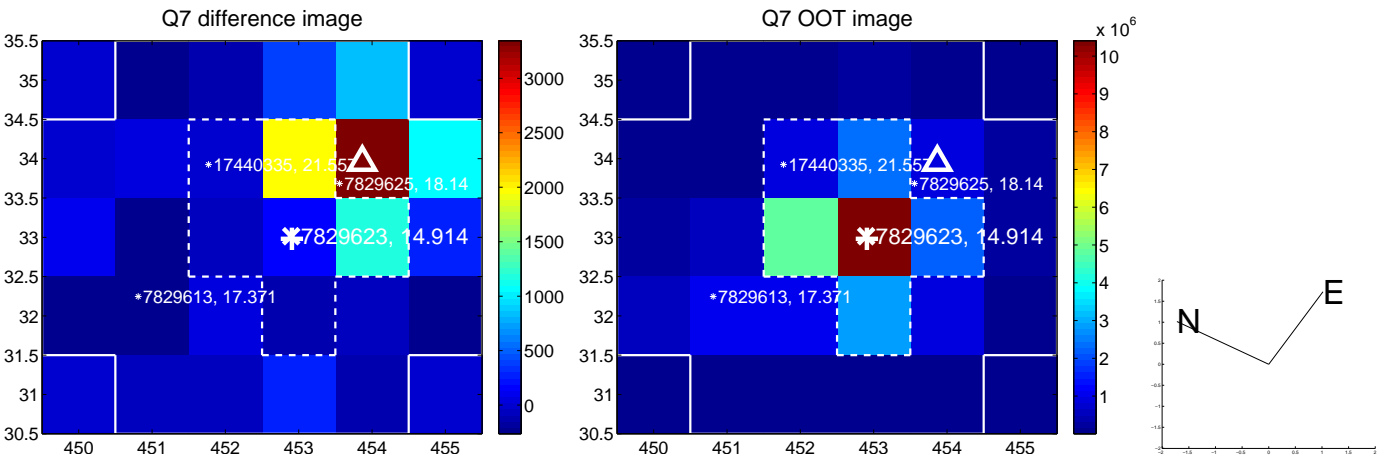
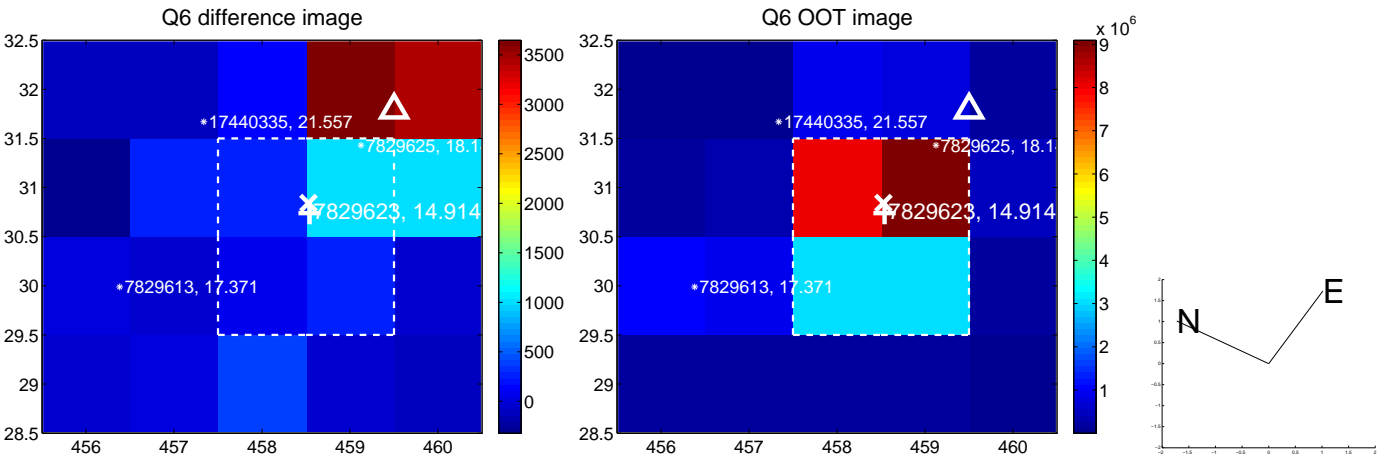
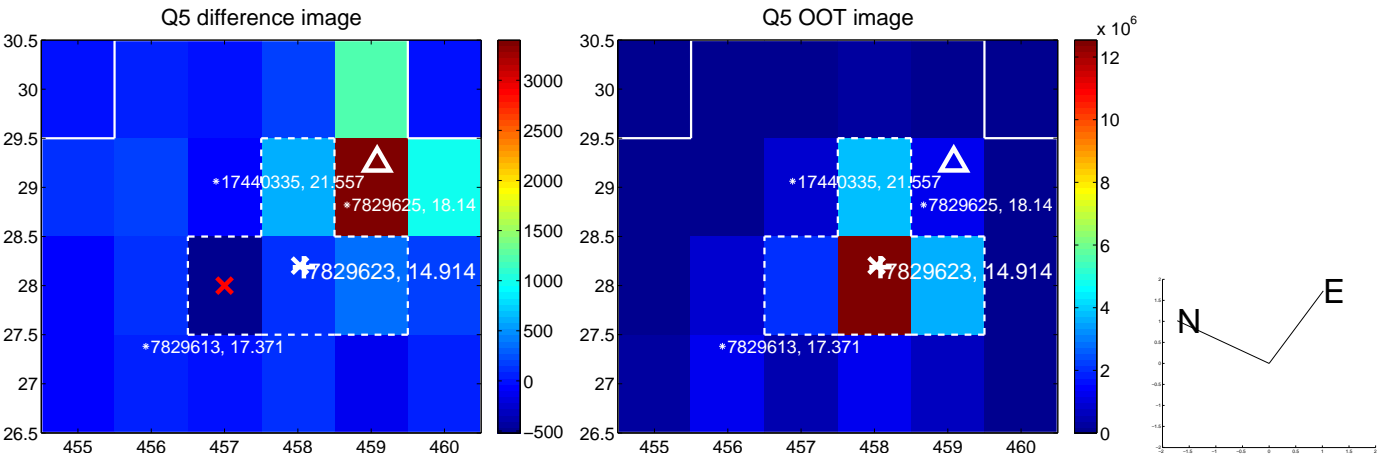


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

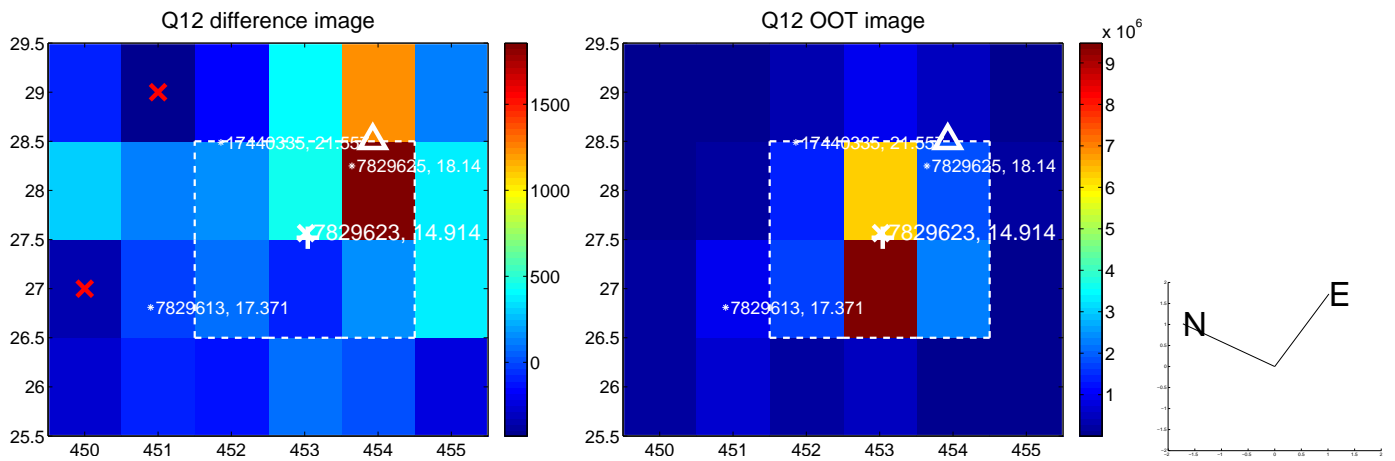
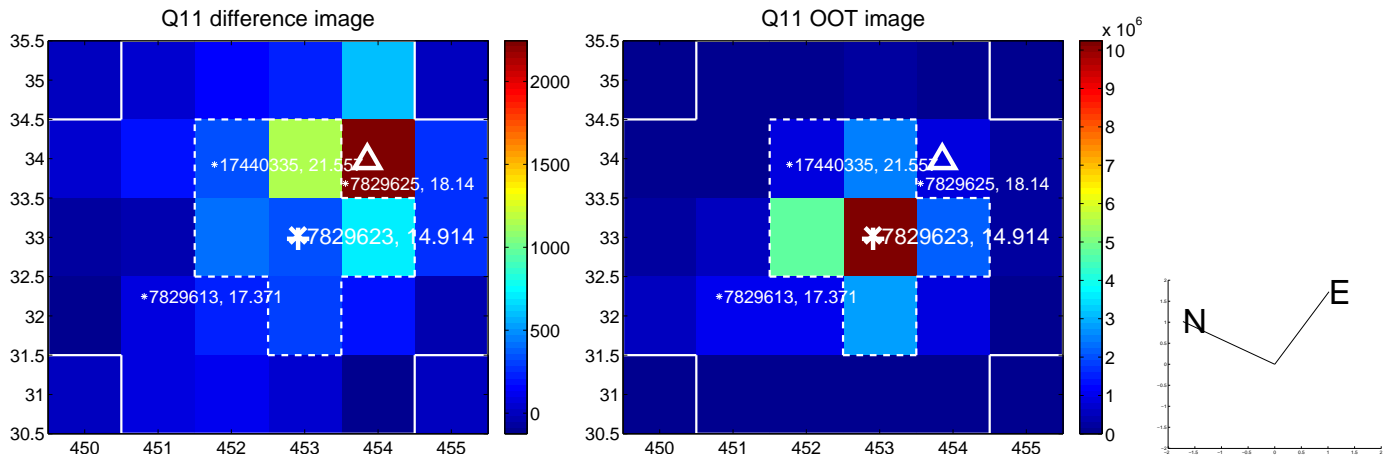
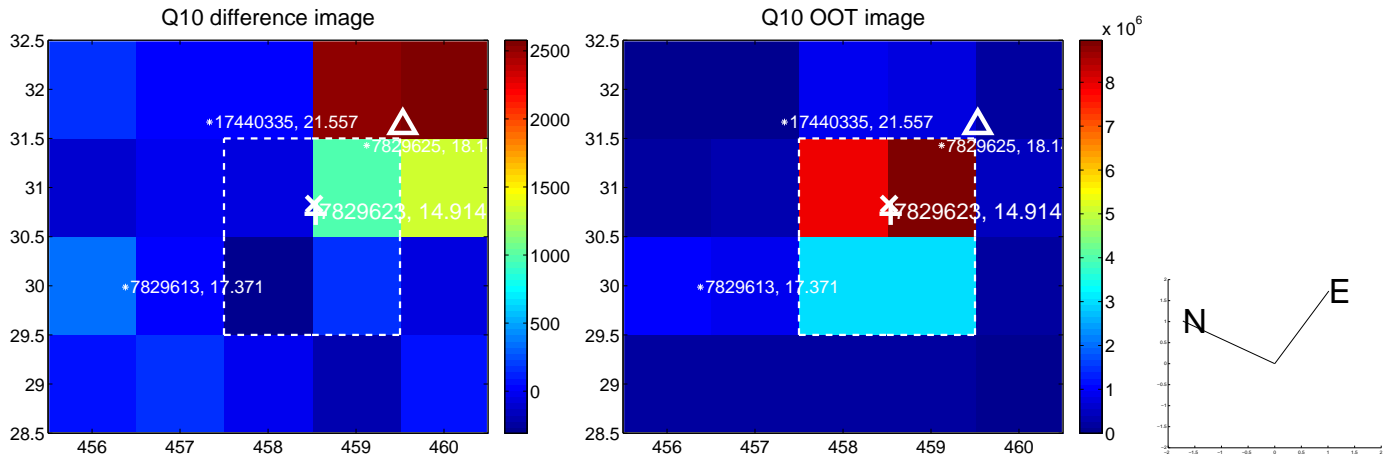
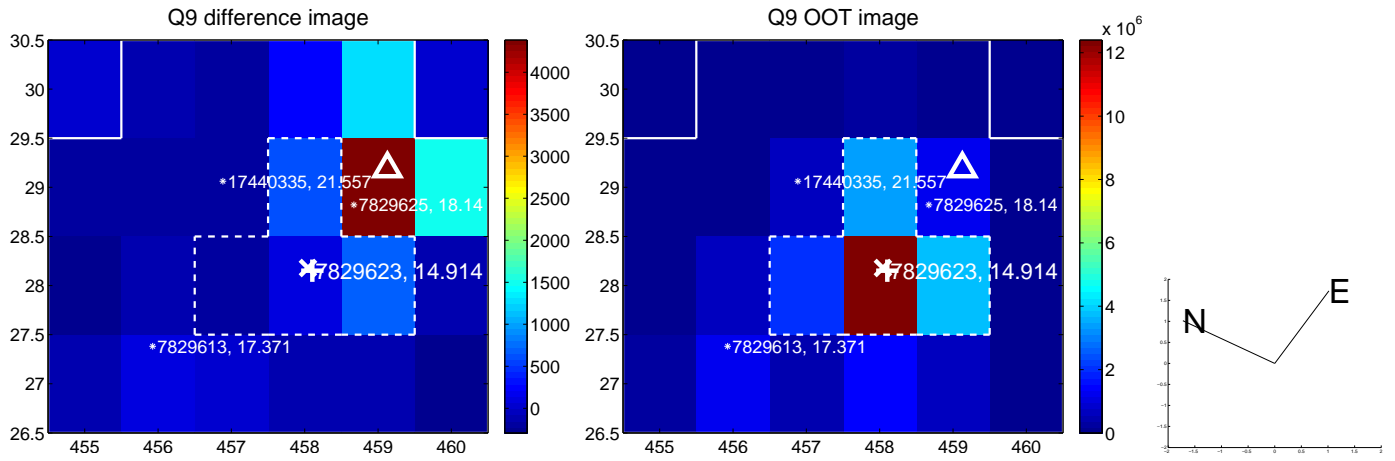
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



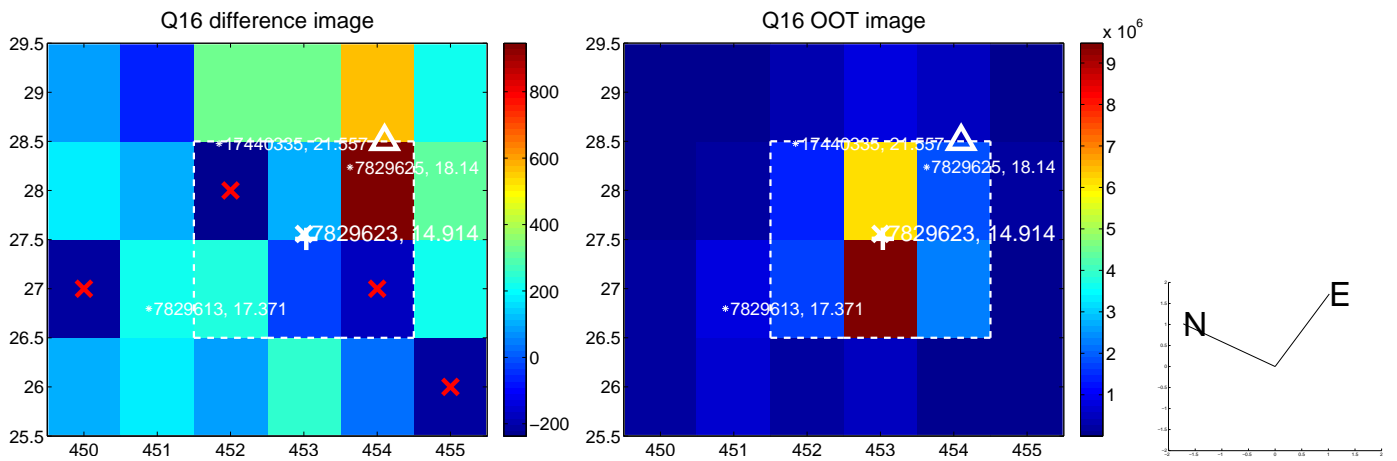
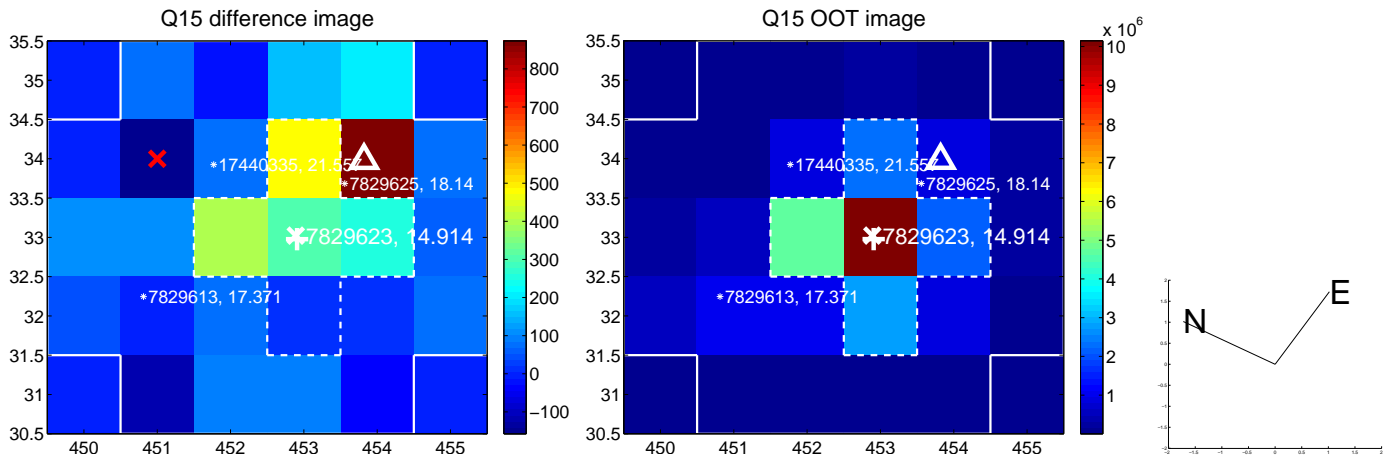
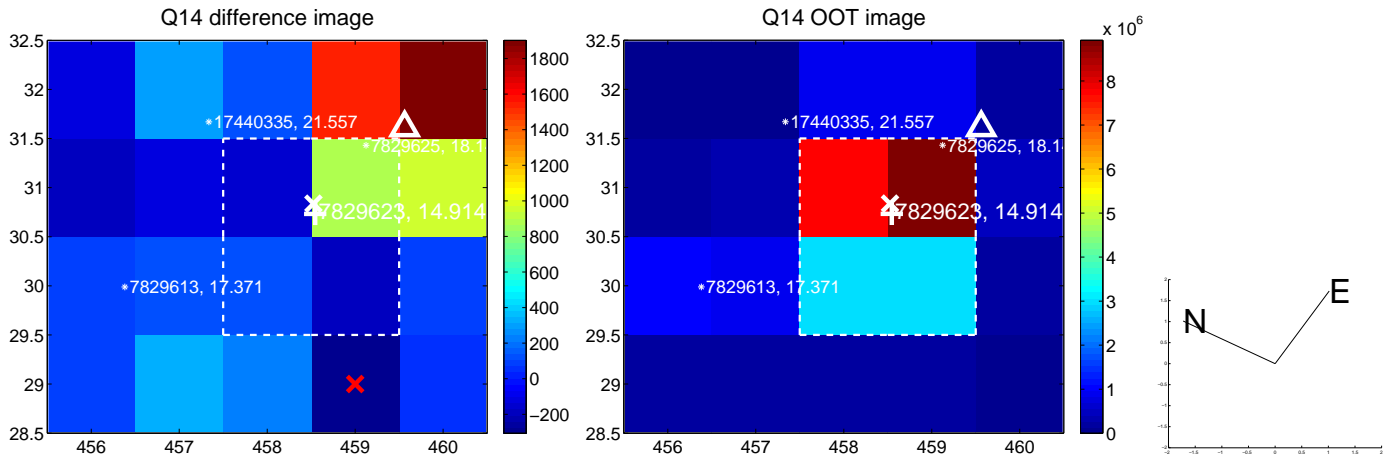
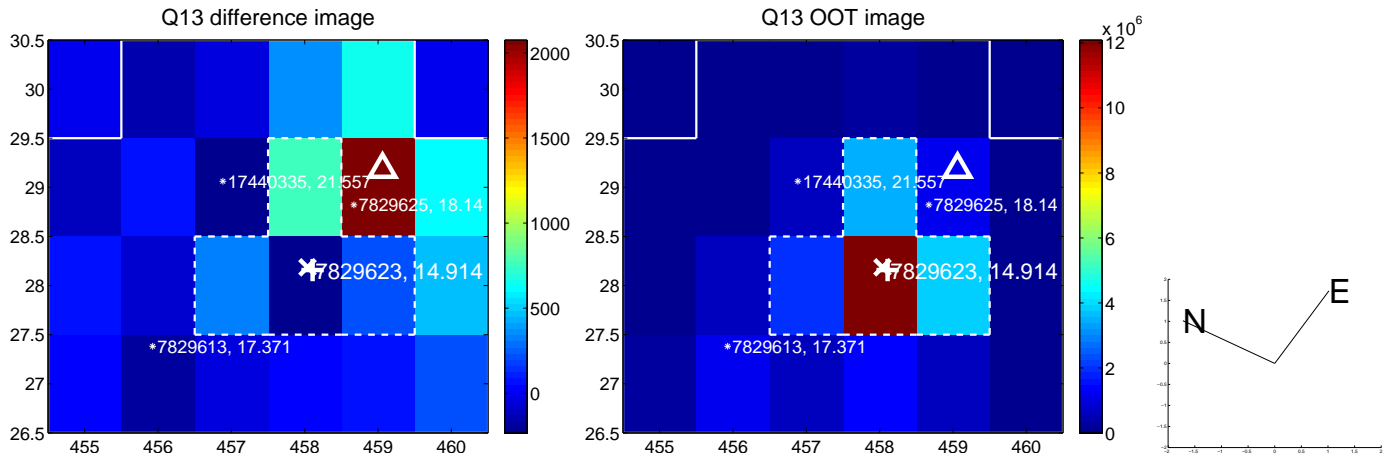
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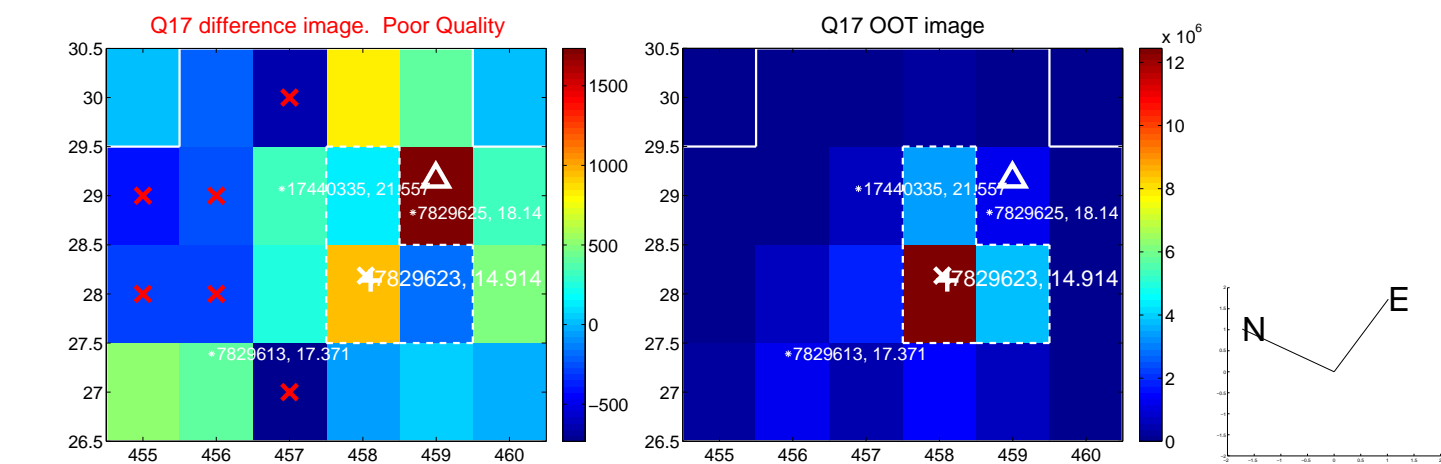
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



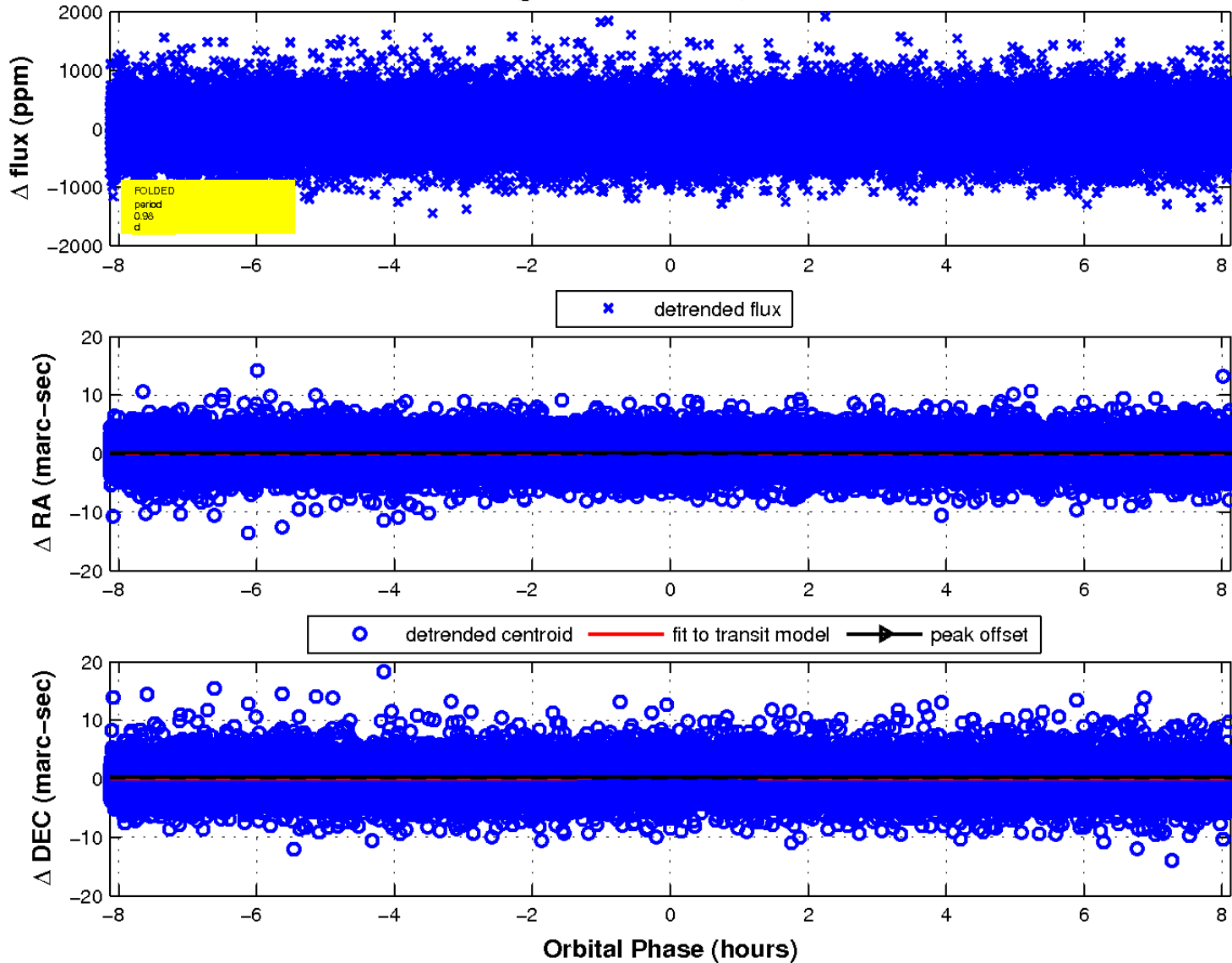
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

