

KIC 007815931

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})
007815931-01	OBS	2861.01	1.868553	132.517795	164.4	1.506	13.3	16.0	1.02	6065	1.77	1419.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007815931-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_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.

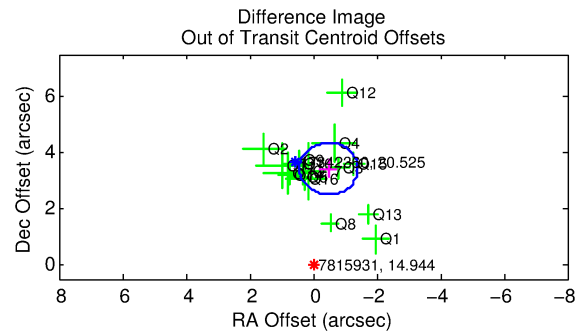
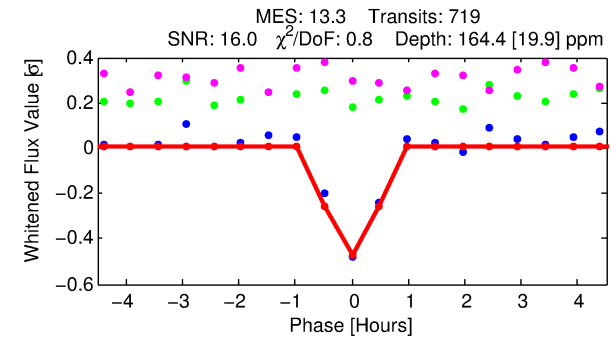
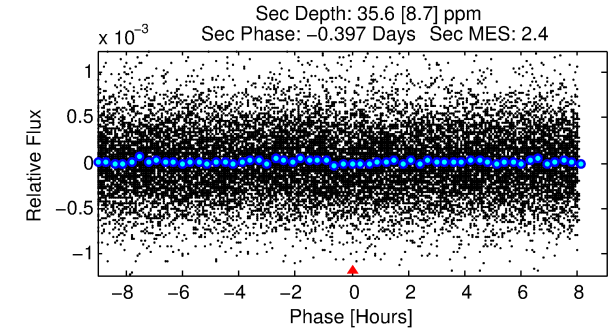
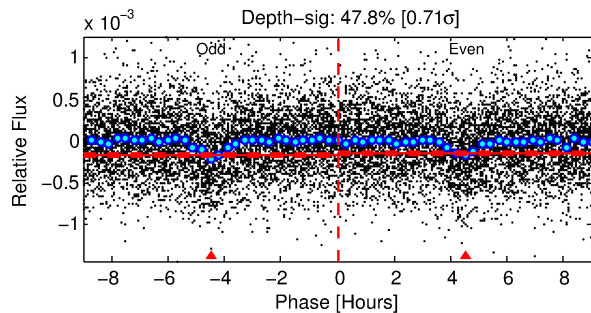
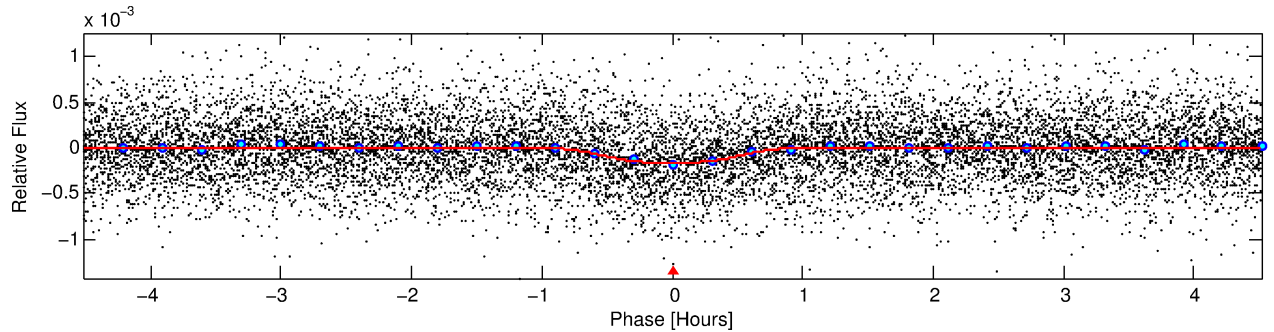
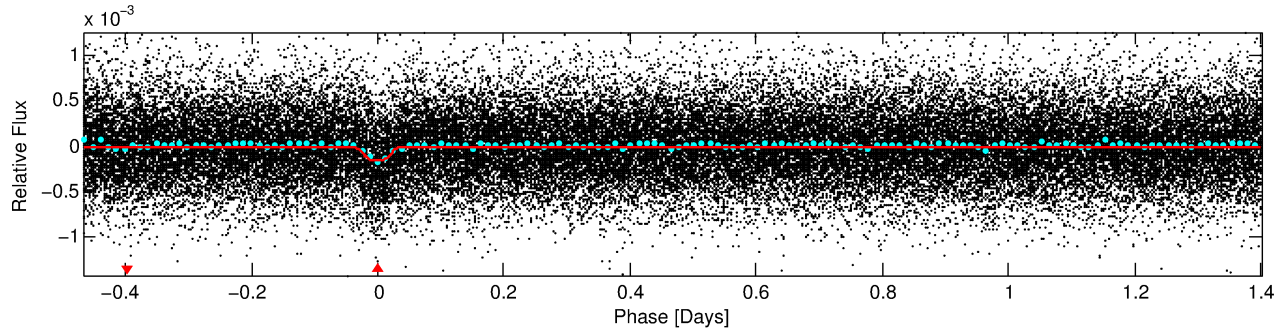
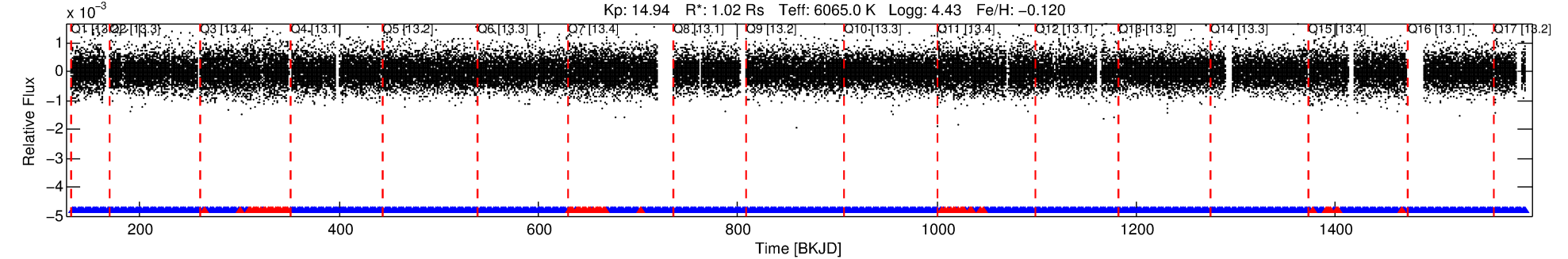
Ephemeris Match Information For 007815931-01

No Significant Match Found

DV One-Page Summary

KIC: 7815931 Candidate: 1 of 1 Period: 1.869 d
KOI: K02861.01 Corr: 0.850

Kp: 14.94 R*: 1.02 Rs Teff: 6065.0 K Logg: 4.43 Fe/H: -0.120



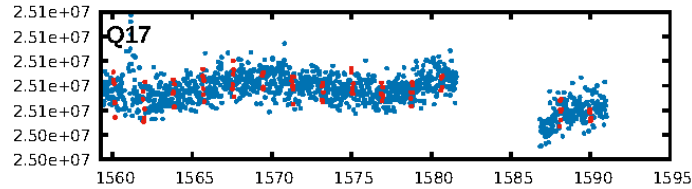
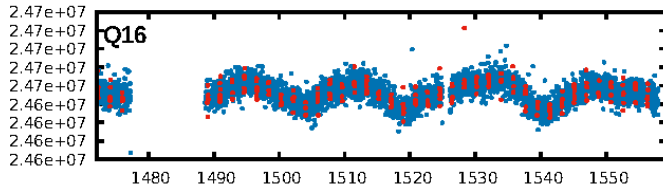
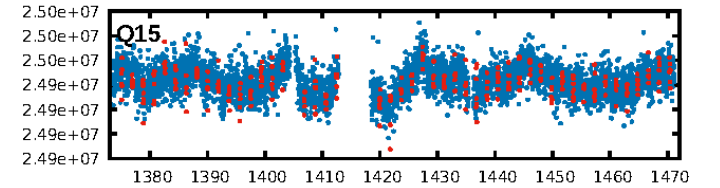
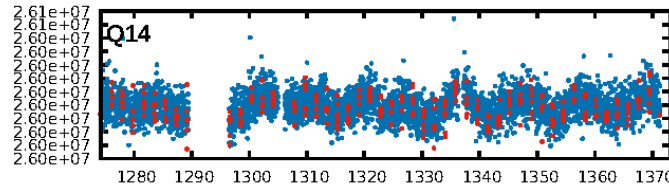
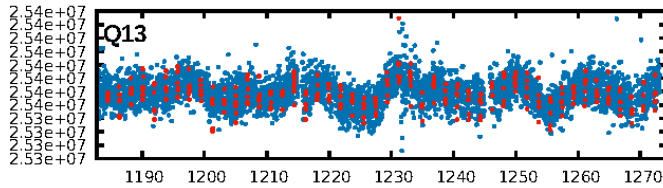
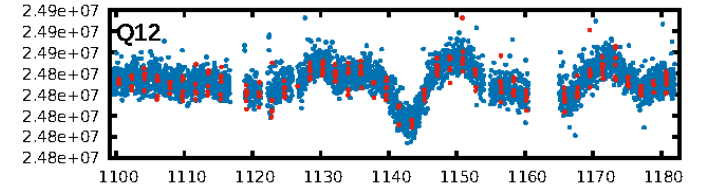
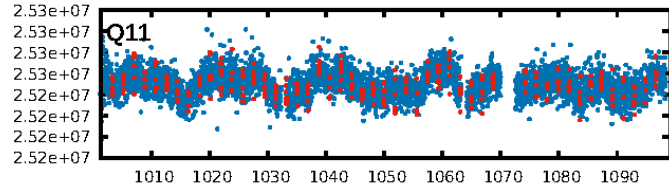
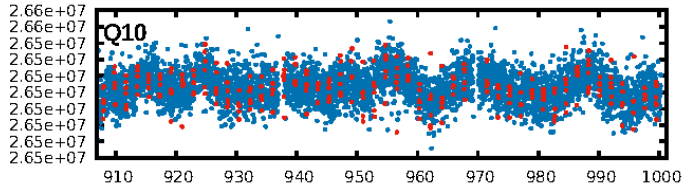
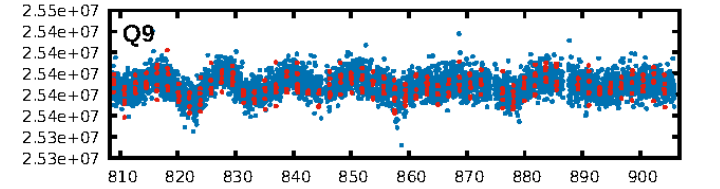
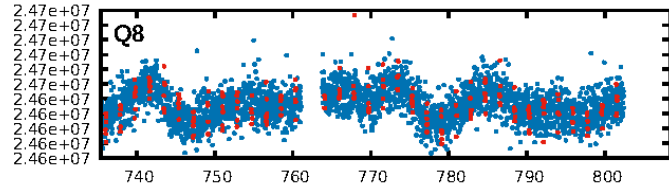
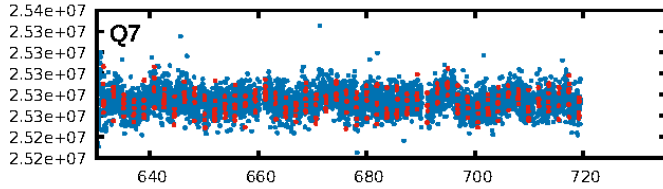
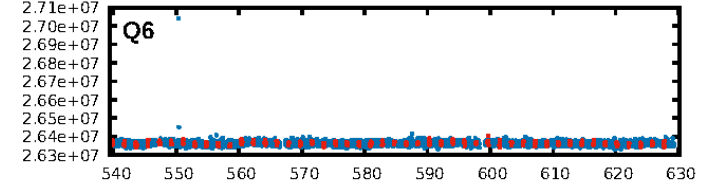
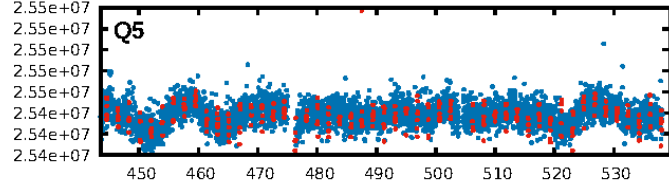
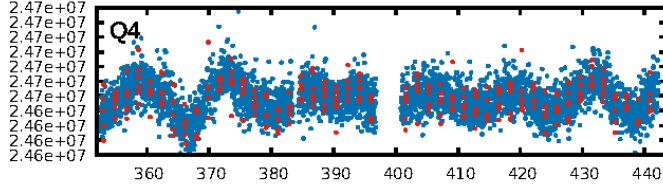
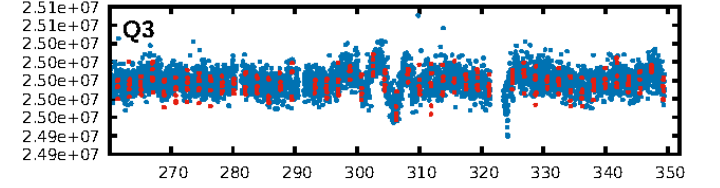
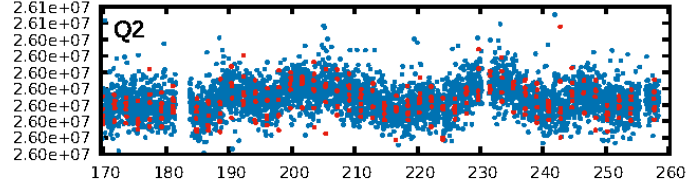
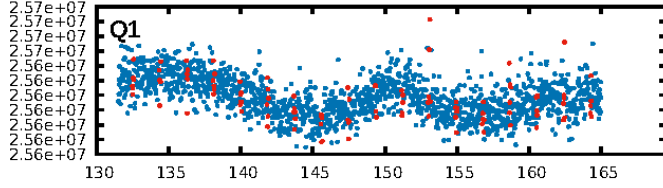
DV Fit Results:

Period = 1.86855 [0.00001] d
Epoch = 132.5178 [0.0014] BKJD
Rp/R* = 0.0159 [0.0018]
a/R* = 2.76 [0.89]
b = 0.98 [0.02]
Seff = 1419.47 [568.51]
Teq = 1565 [157] K
Rp = 1.77 [0.60] Re
a = 0.0299 [0.0079] AU
Ag = 5.56 [2.79] [1.64σ]
Teffp = 3717 [329] K [5.91σ]

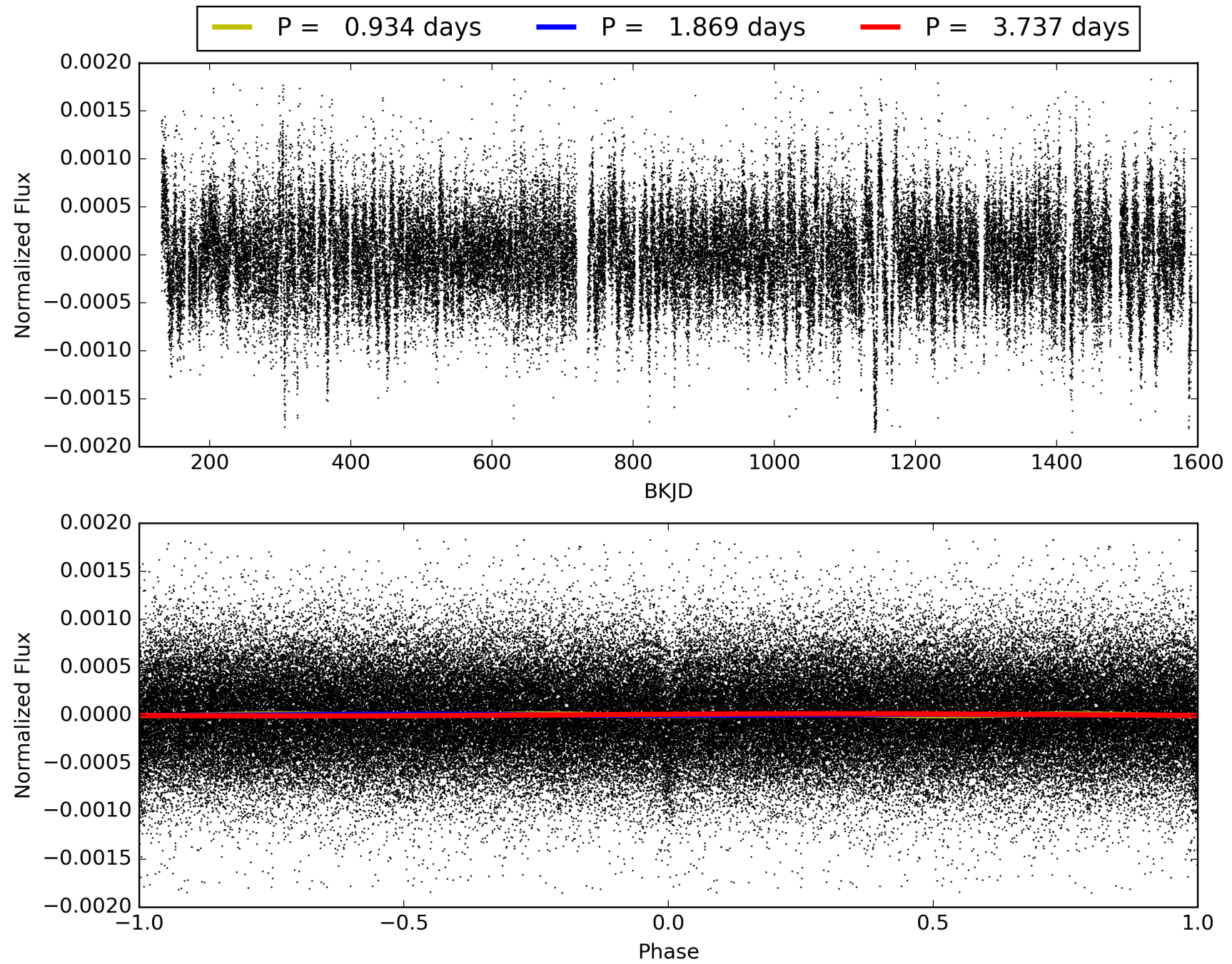
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.84e-38
RollingBand-fgt: 0.91 [623/687]
GhostDiagnostic-chr: 1.311
Centroid-sig: 0.0%
Centroid-so: 4.971 arcsec [4.83σ]
OotOffset-rm: 3.461 arcsec [11.26σ]
KicOffset-rm: 3.297 arcsec [11.69σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.81 [13/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007815931-01, PDC Light Curves

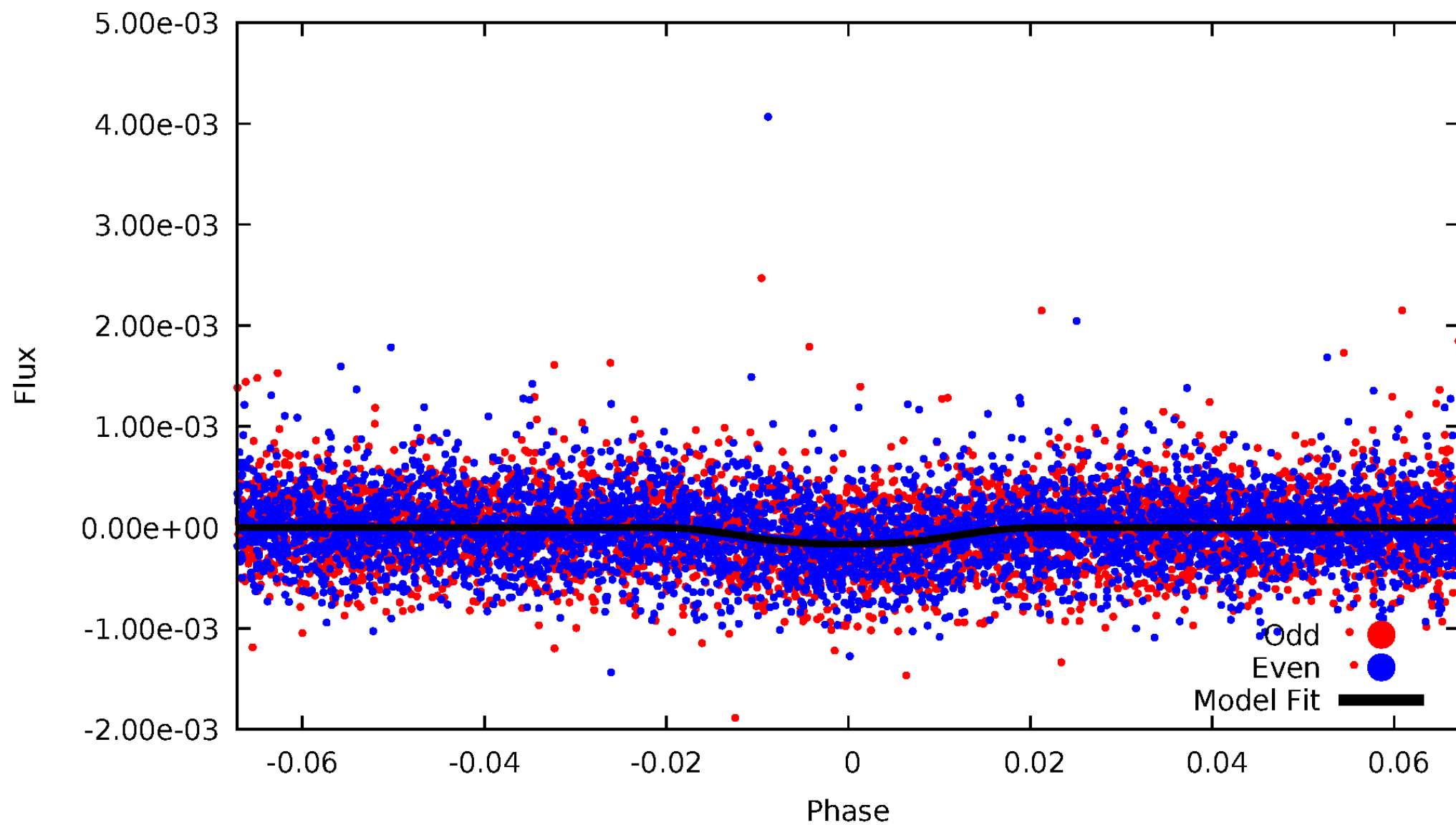


TCE 007815931-01



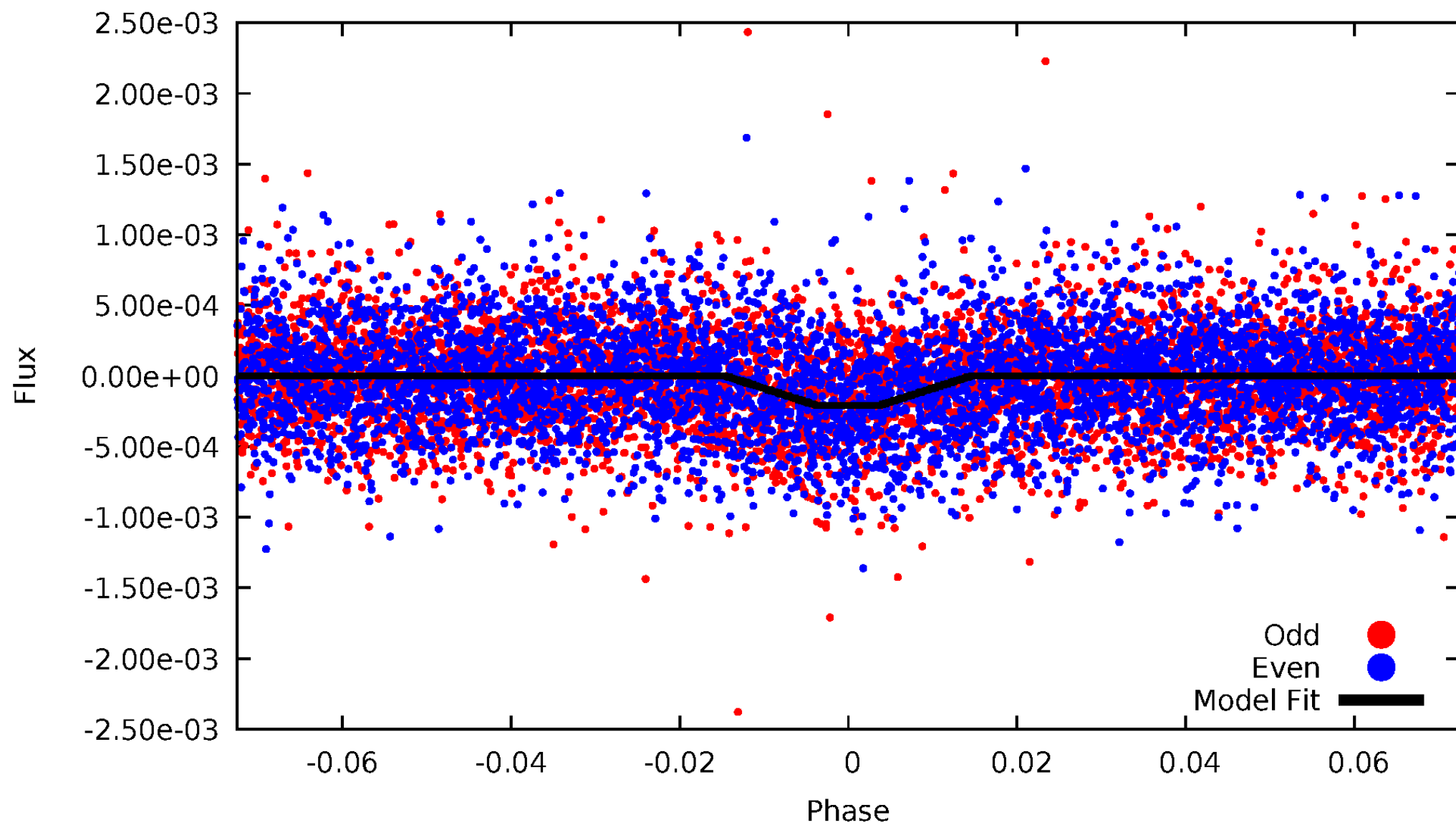
DV Odd/Even

TCE 007815931-01



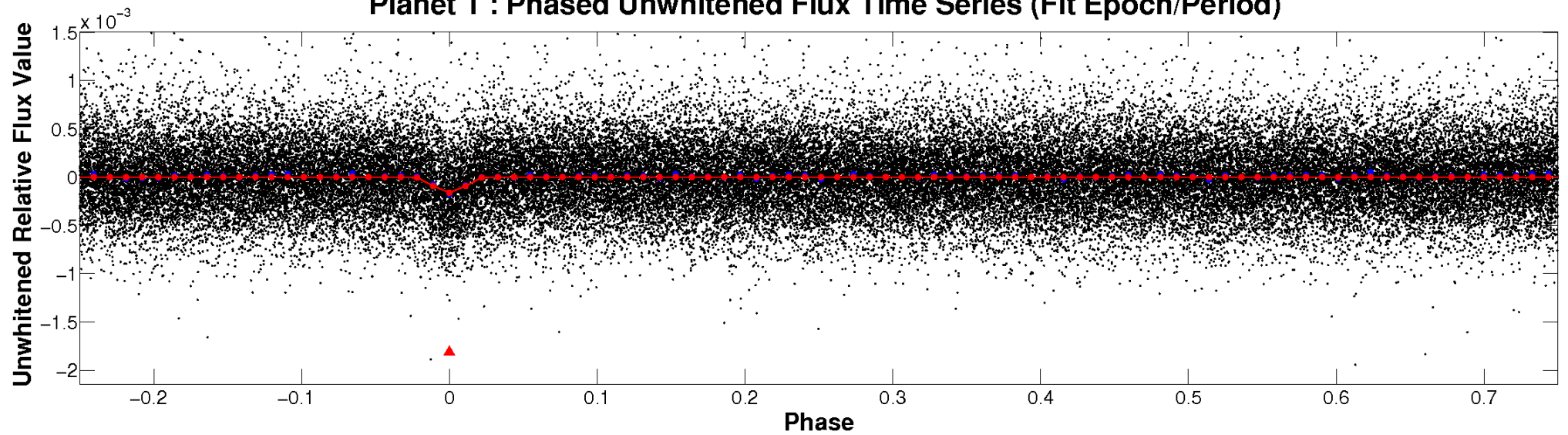
ALT Odd/Even

TCE 007815931-01

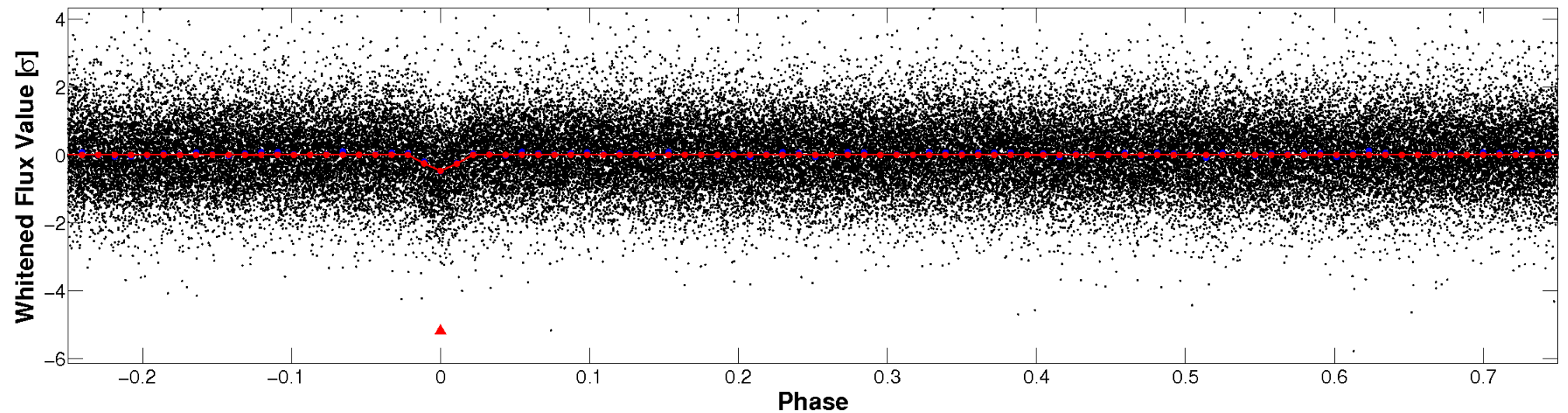


Non-Whitened Vs. Whitened Light Curve

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

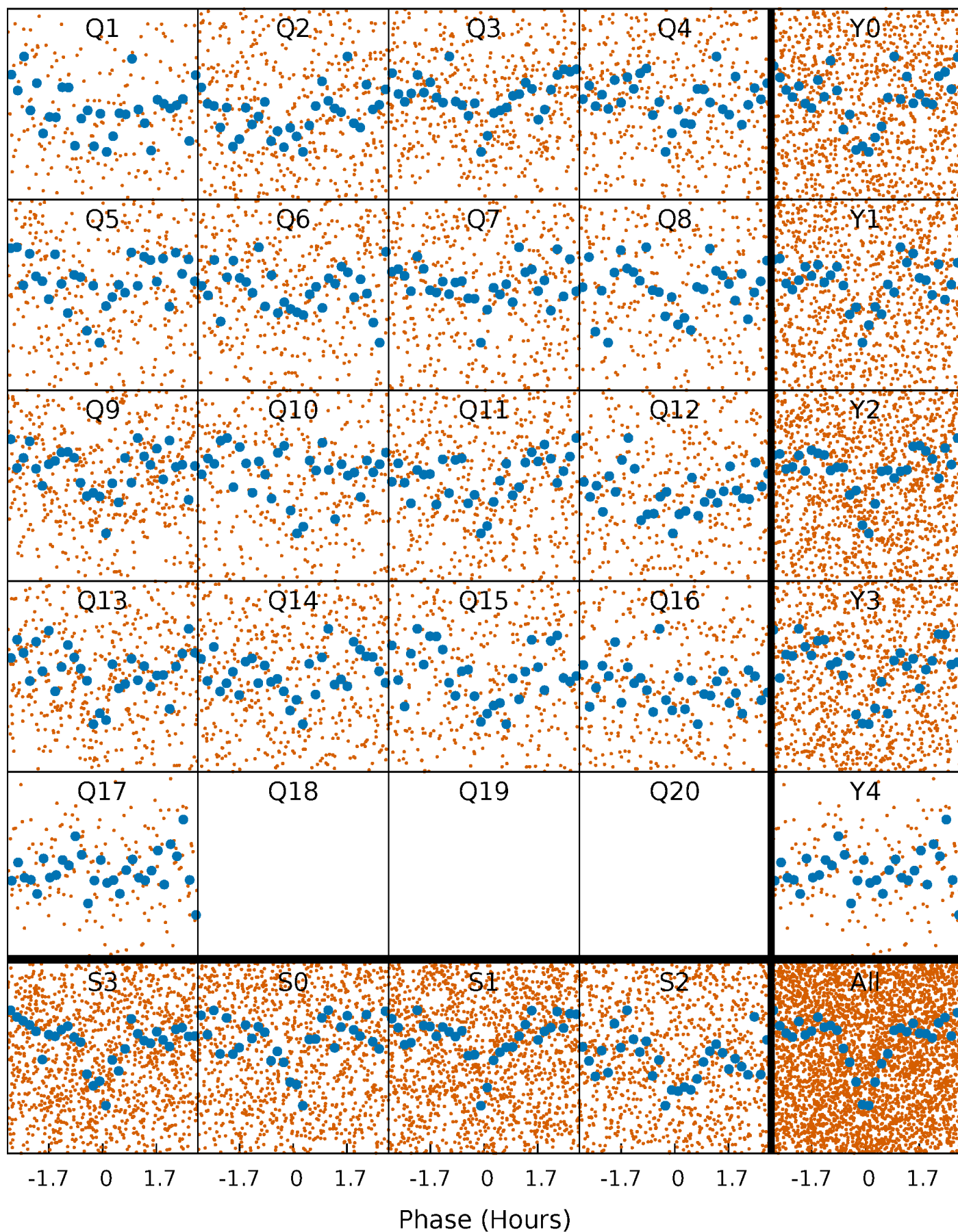


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



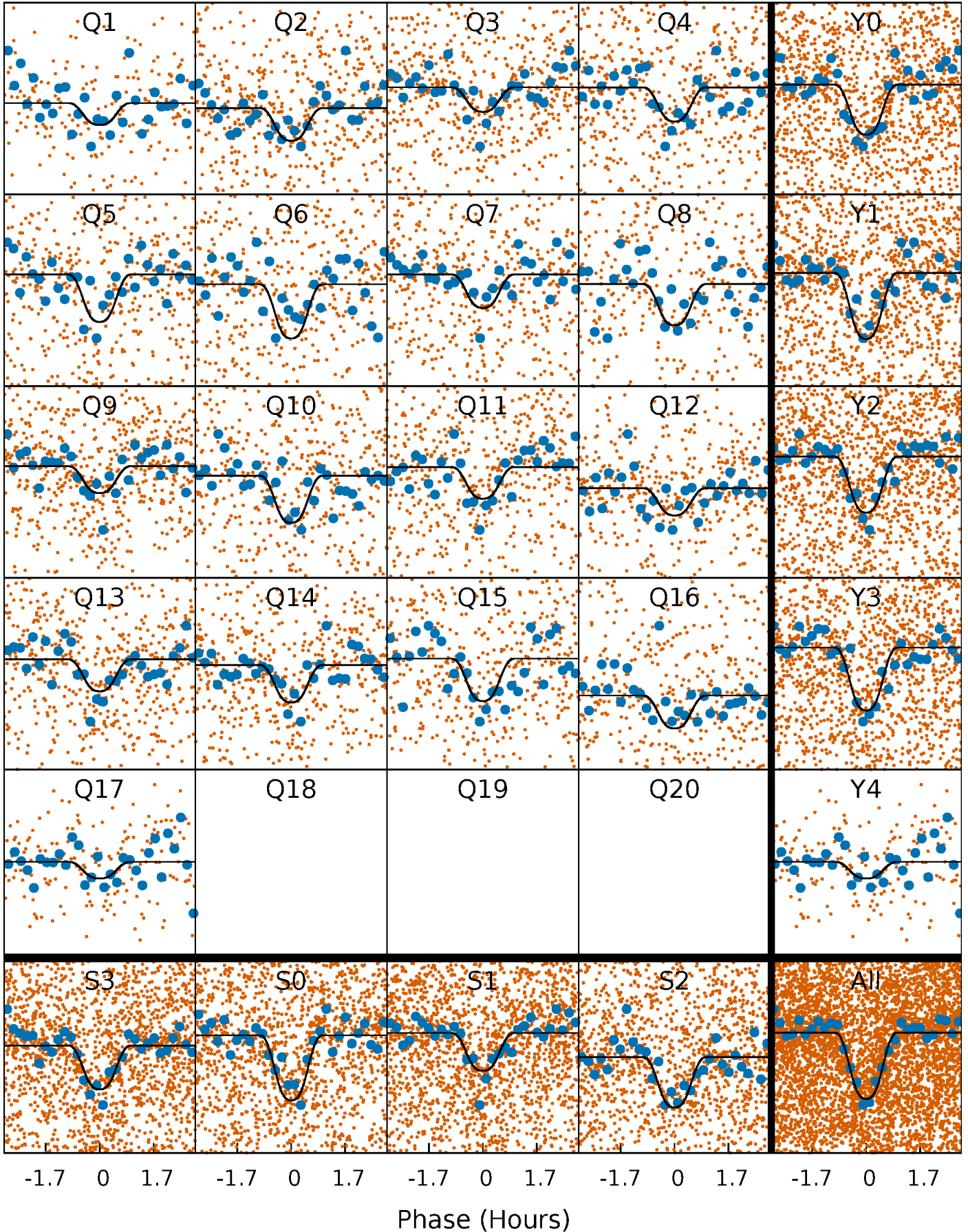
PDC Quarter-Phased Transit Curves

TCE 007815931-01 P= 1.868553 Days $T_0=132.517795$ (BKJD)



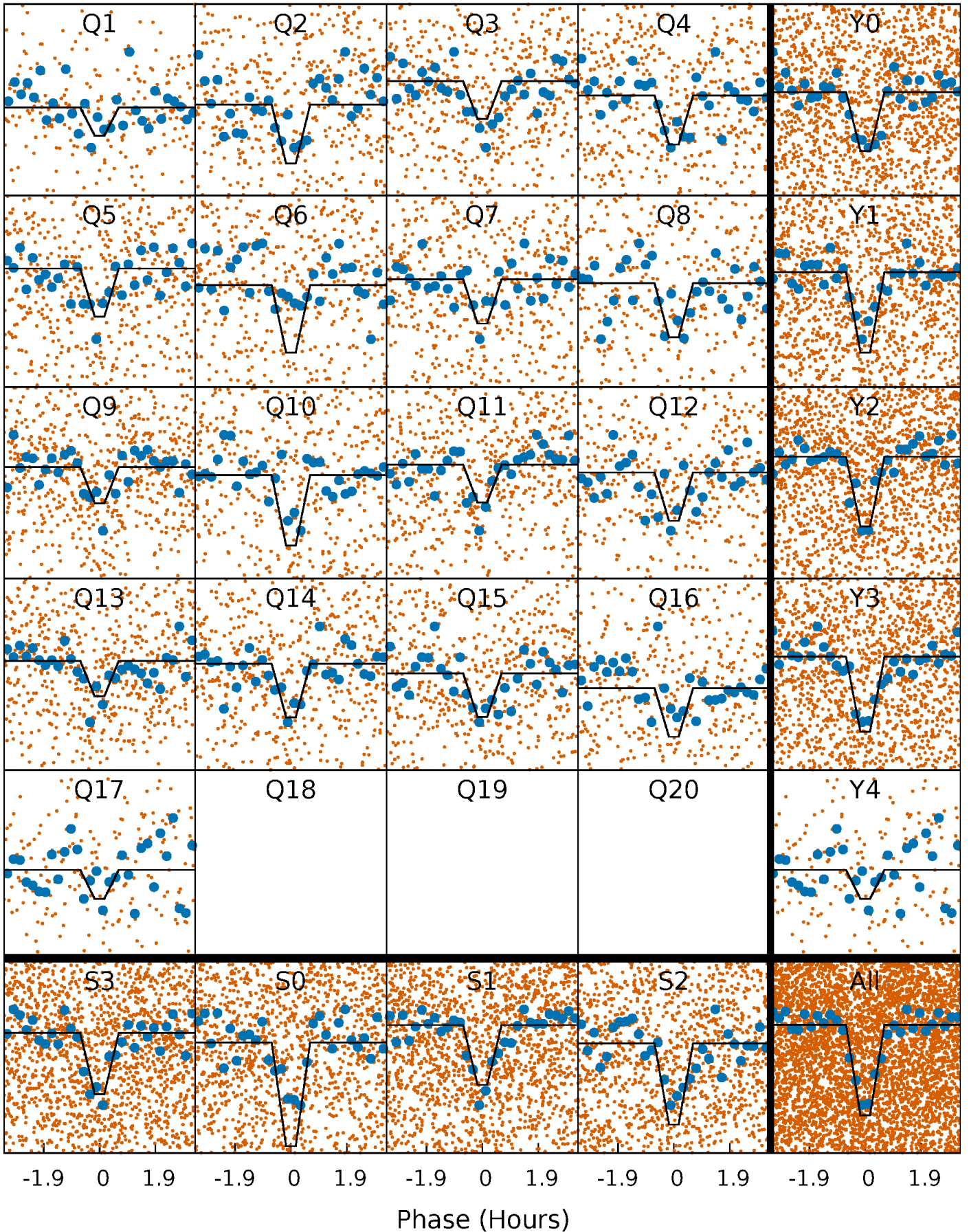
DV Quarter-Phased Transit Curves

TCE 007815931-01 P= 1.868553 Days $T_0=132.517795$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

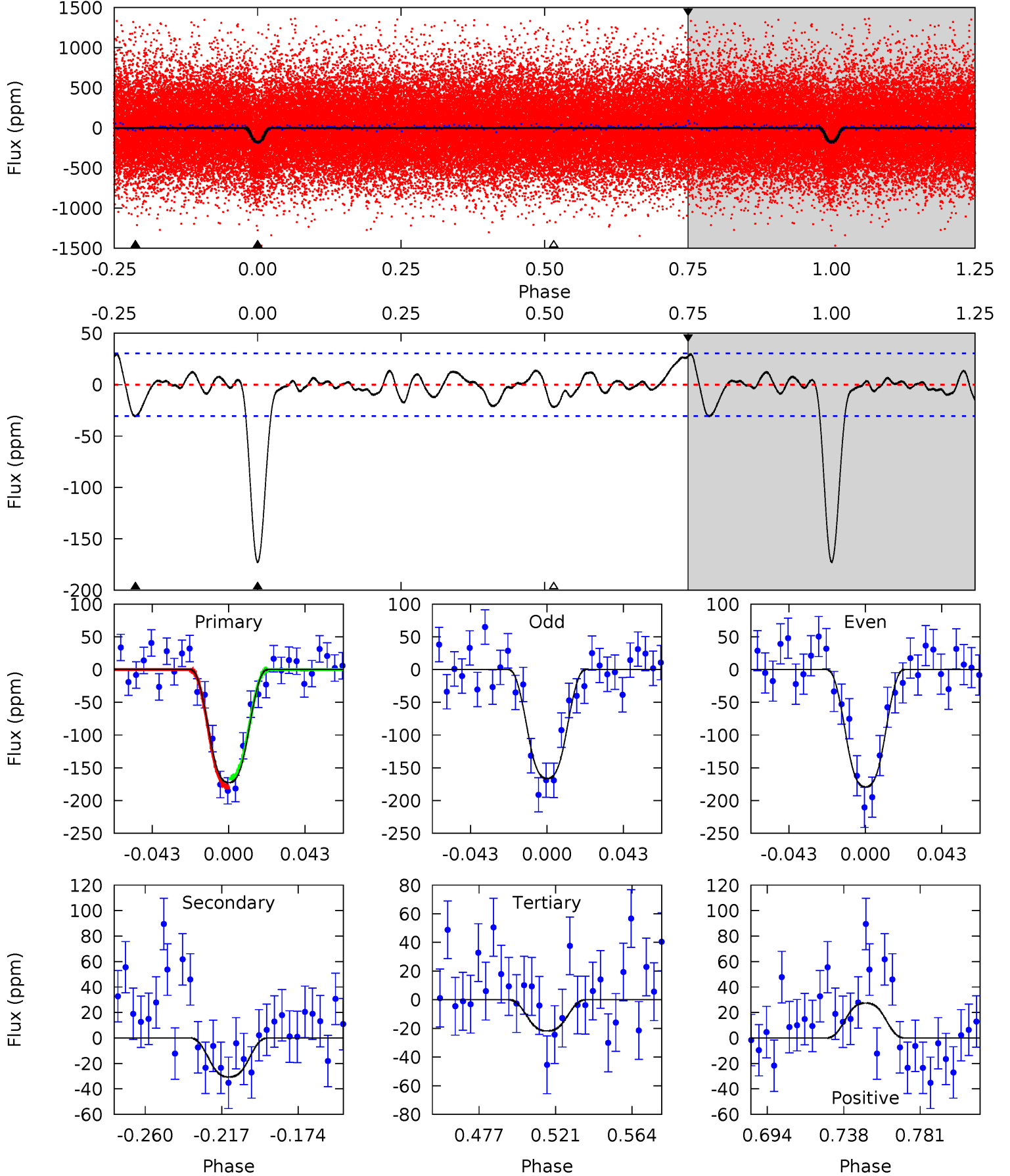
TCE 007815931-01 P= 1.868565 Days $T_0=132.513684$ (BKJD)



DV Model-Shift Uniqueness Test

007815931-01, P = 1.868553 Days, E = 130.649242 Days

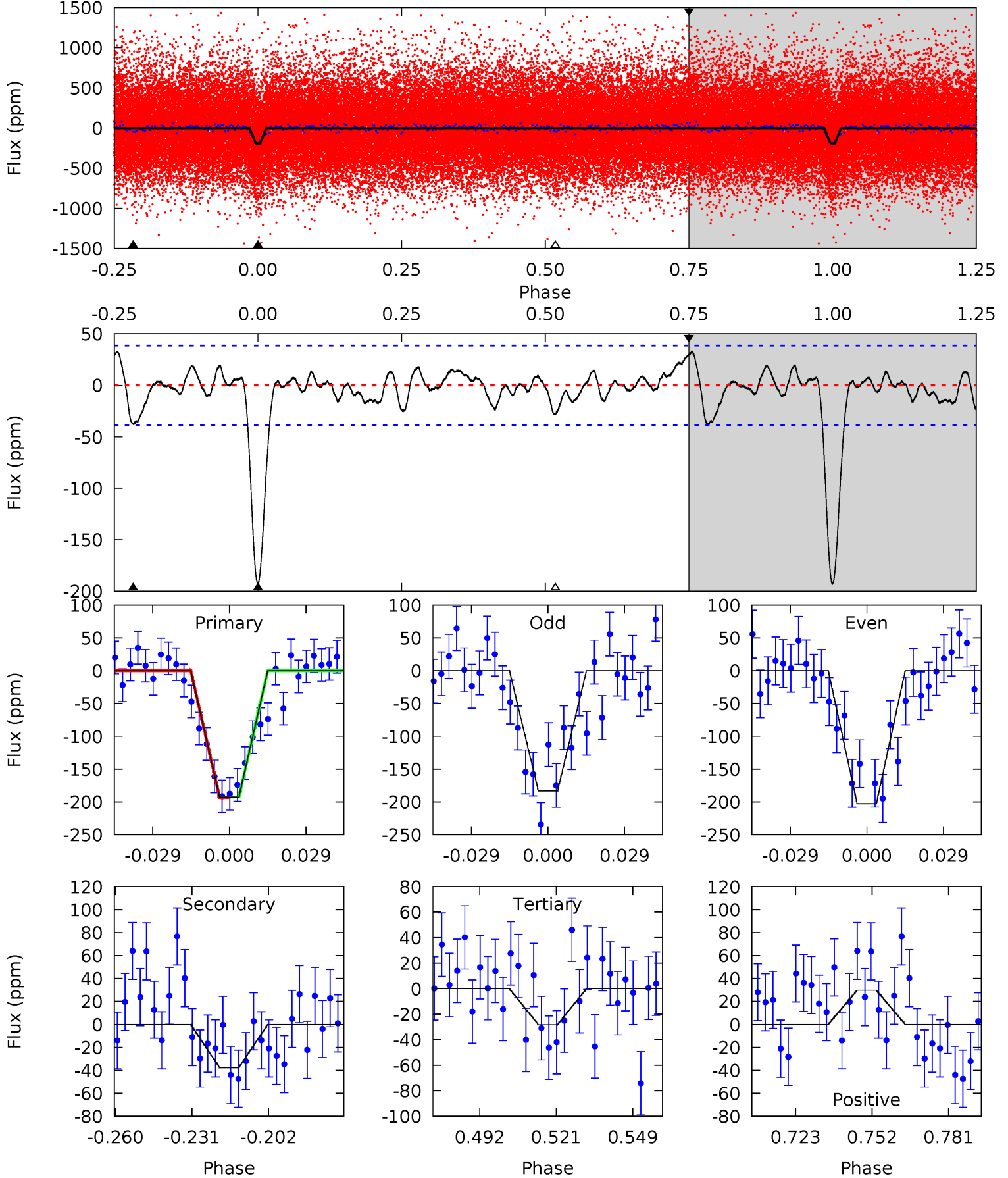
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.8	4.75	3.38	4.26	4.74	2.02	1.37	23.5	22.6	1.38	0.50	0.99	0.97	0.15	0.95



Alt Model-Shift Uniqueness Test

007815931-01, P = 1.868565 Days, E = 130.645119 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.1	4.70	3.52	3.72	4.82	2.18	1.31	20.6	20.4	1.18	0.98	1.22	1.07	0.14	0.06



Stellar Parameters For KIC 007815931

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6065^{+180}_{-198}	$4.427^{+0.072}_{-0.203}$	$-0.120^{+0.300}_{-0.300}$	$1.023^{+0.330}_{-0.132}$	$1.018^{+0.153}_{-0.126}$	$1.341^{+0.505}_{-0.707}$
	+3%/-3%	+2%/-5%	+250%/-250%	+32%/-13%	+15%/-12%	+38%/-53%
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 007815931-01 / KOI 2861.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-31 ± 6	$1.83^{+0.37}_{-0.28}$	2219^{+168}_{-111}	3849^{+261}_{-224}	$4.244^{+2.117}_{-1.378}$
Alt.	-38 ± 8	$1.66^{+0.33}_{-0.26}$	2226^{+169}_{-118}	4176^{+273}_{-279}	$6.405^{+3.010}_{-2.151}$

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

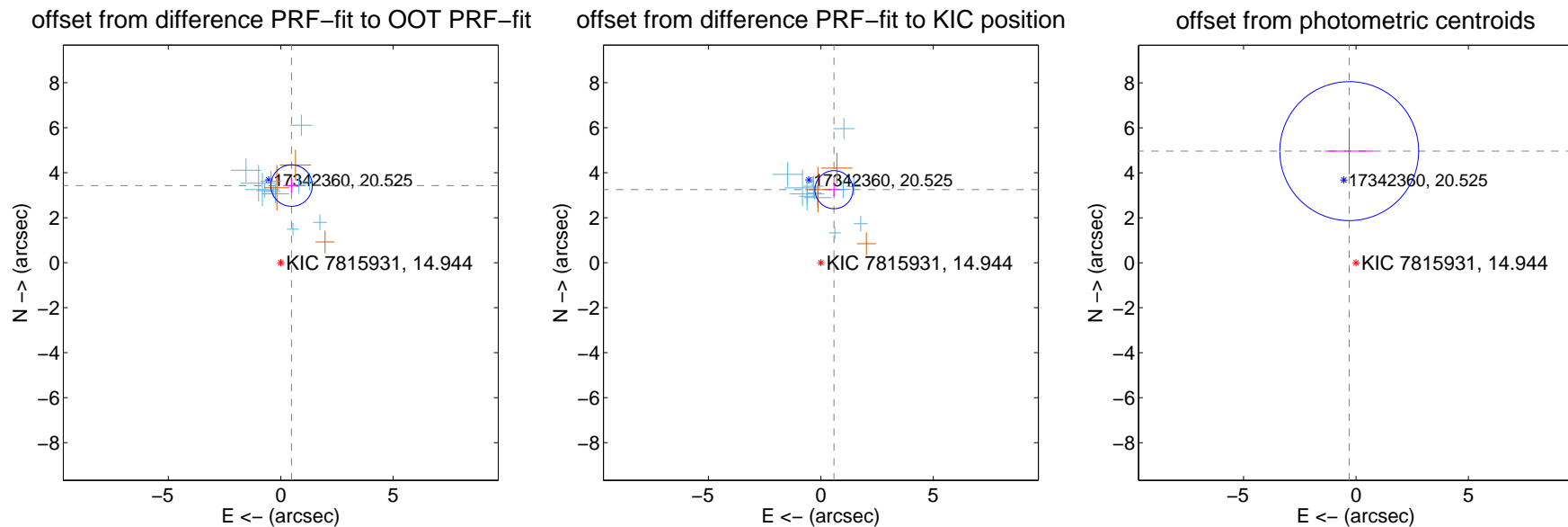
DV Centroid Data

Supplemental centroid analysis for 007815931-01. Kepler magnitude: 14.94. Transit SNR 15.99

There are 13 quarters with good PRF difference image offsets

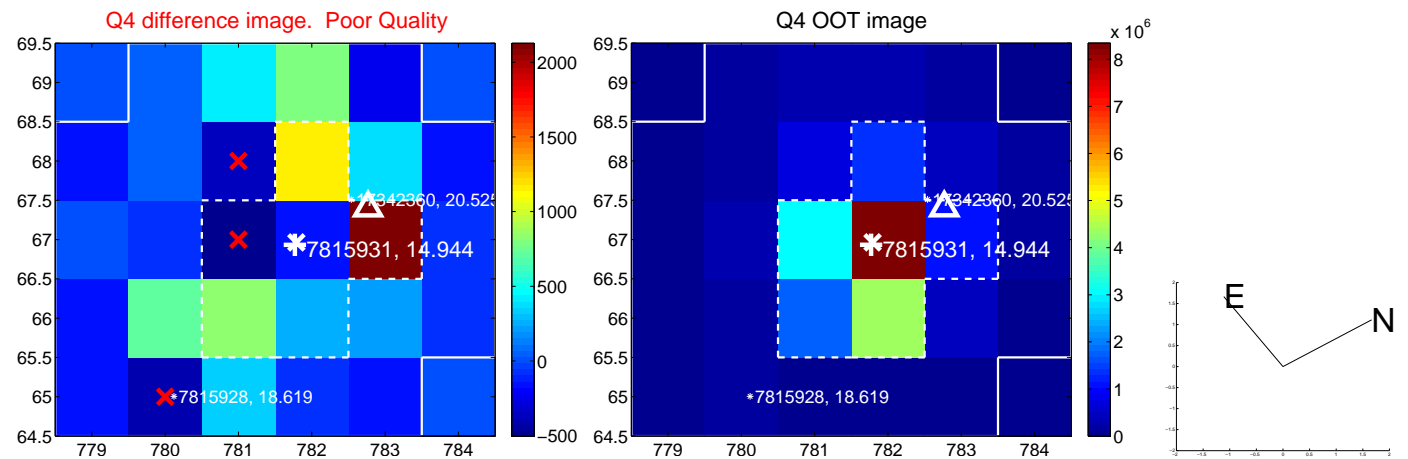
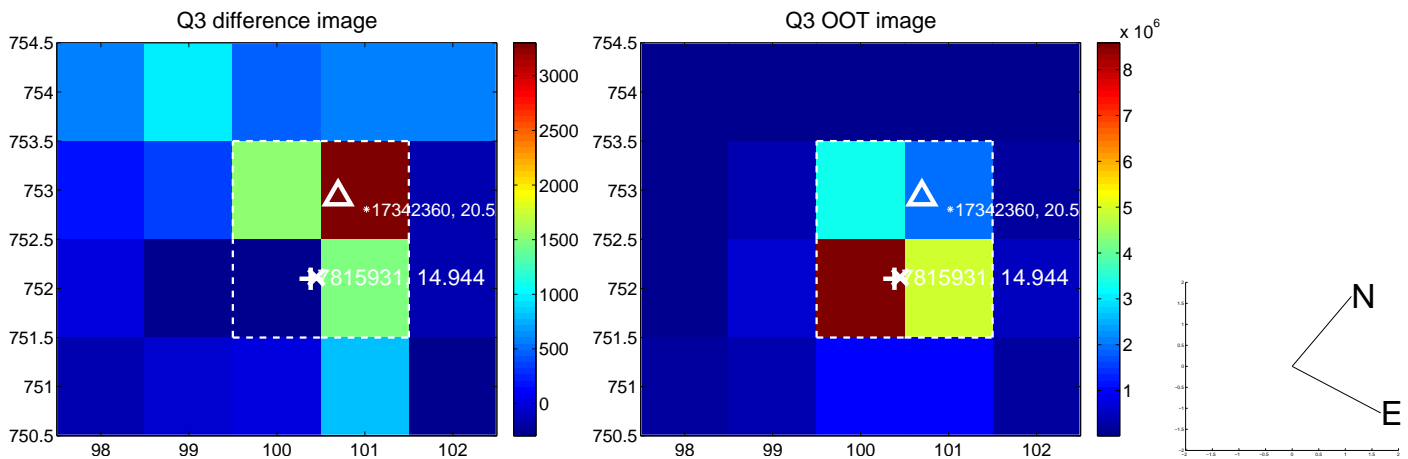
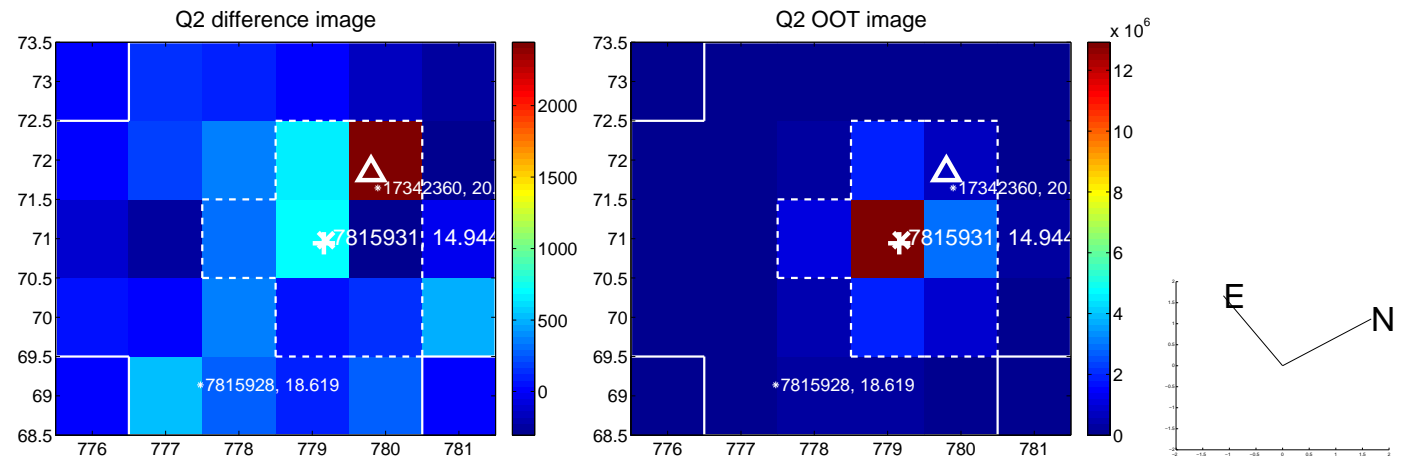
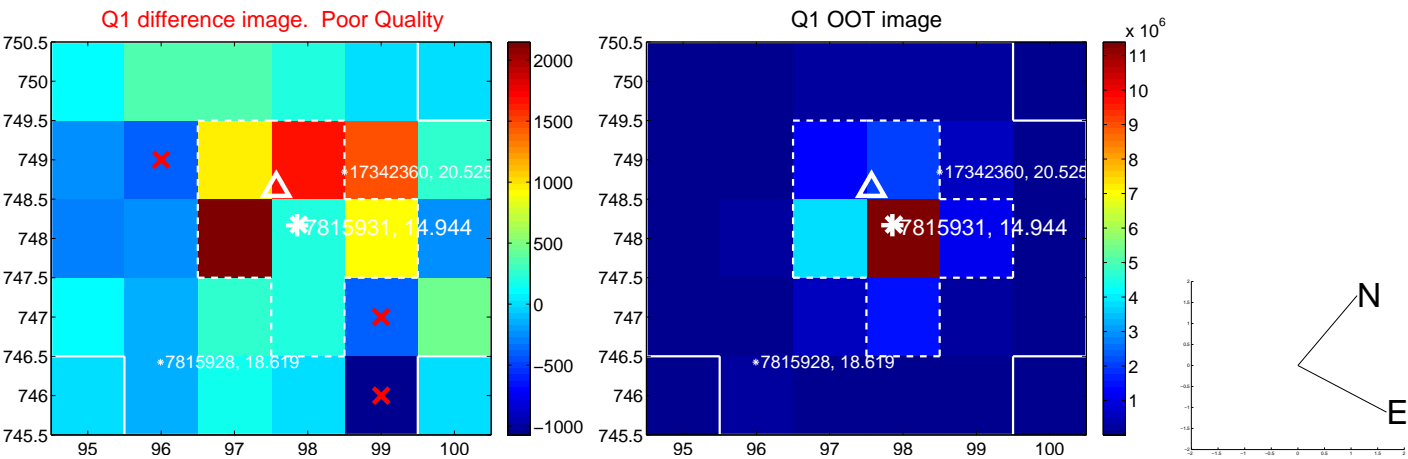
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.461 ± 0.307	11.26	-0.480 ± 0.251	3.427 ± 0.318
PRF-fit source offset from KIC position	3.297 ± 0.282	11.69	-0.583 ± 0.258	3.245 ± 0.295
photometric centroid source offset	4.97 ± 1.03	4.83	0.30 ± 1.08	4.96 ± 1.03

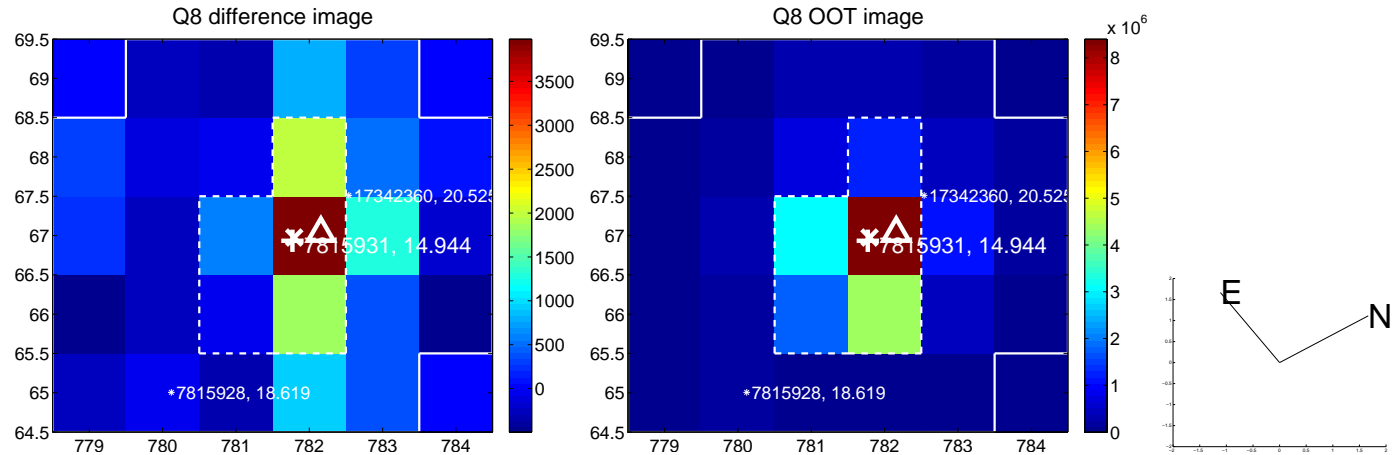
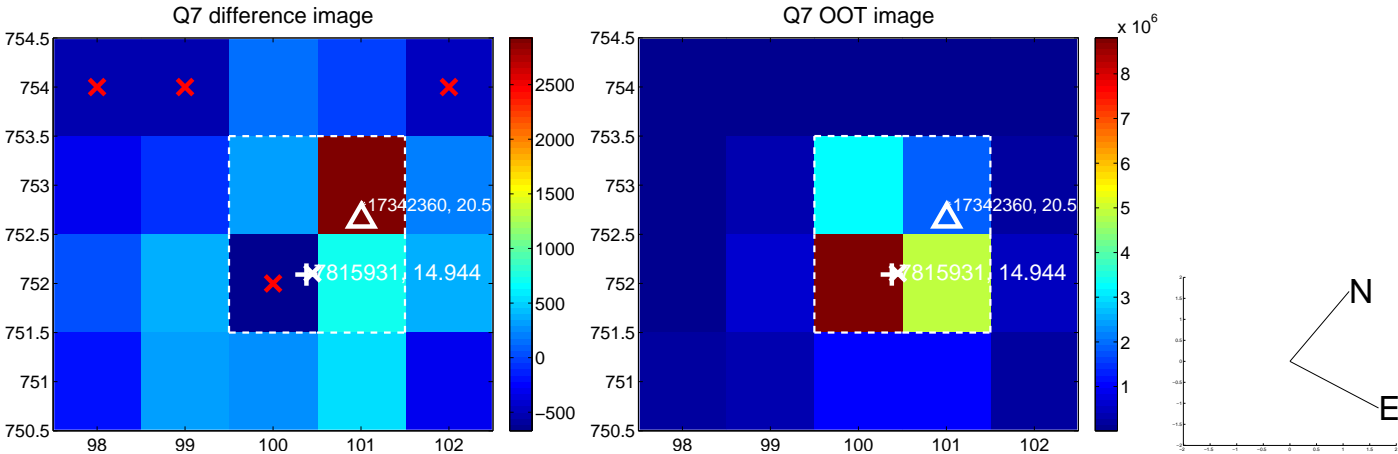
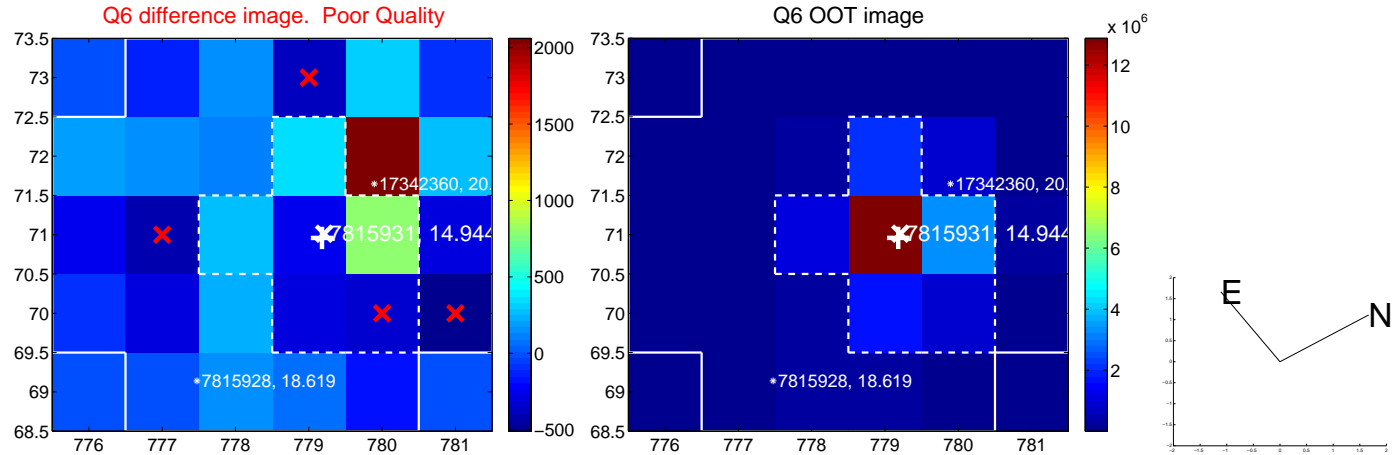
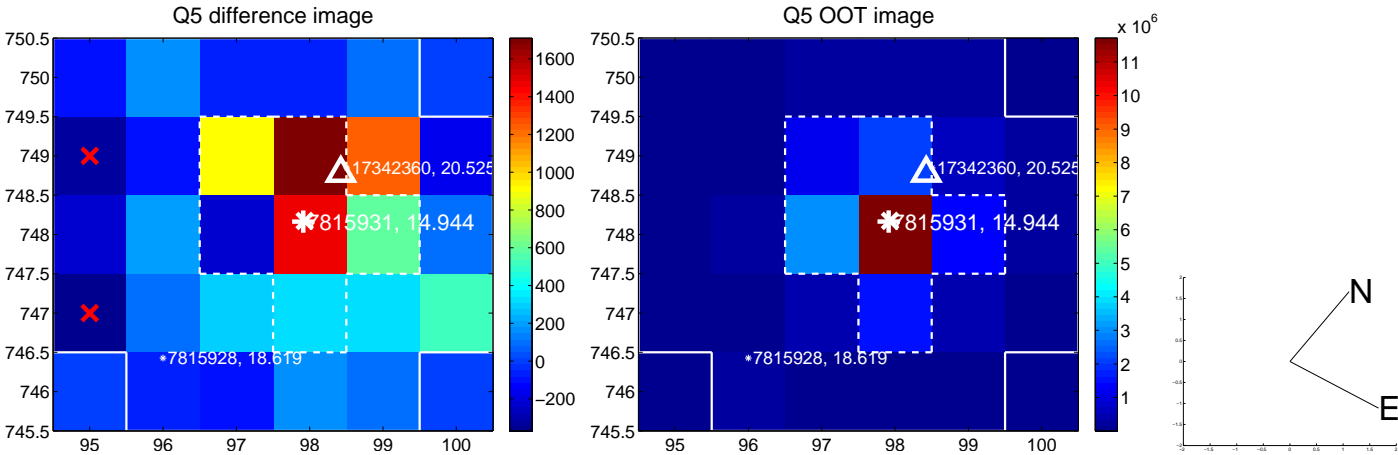


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

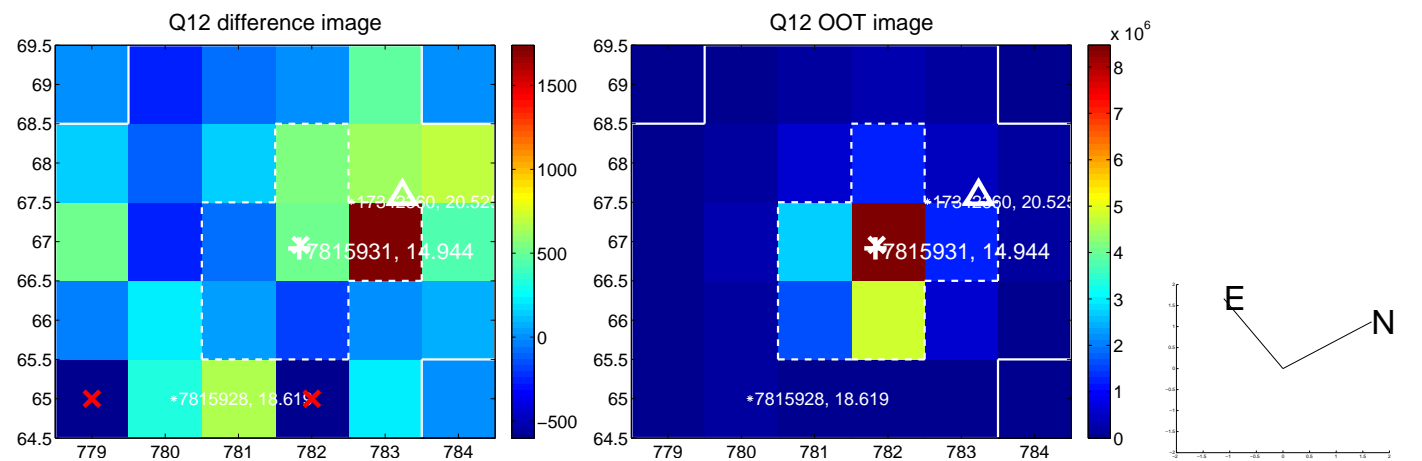
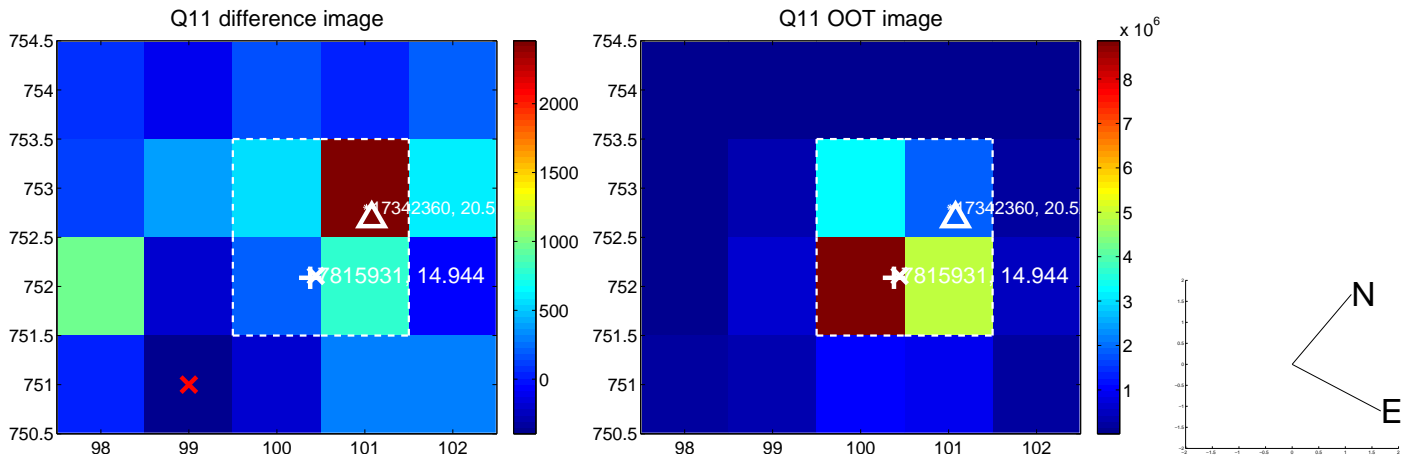
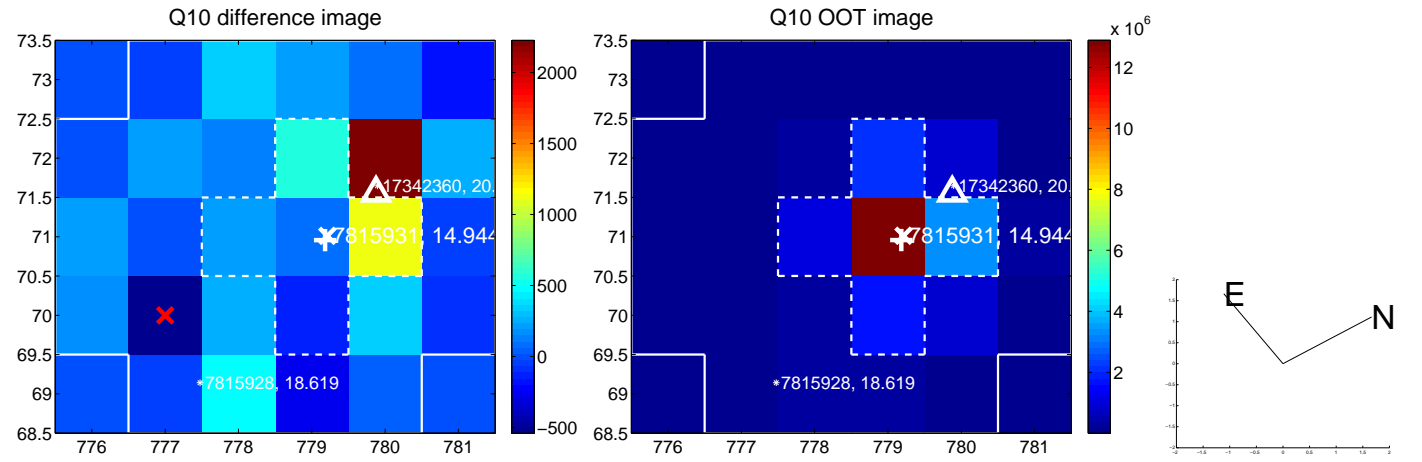
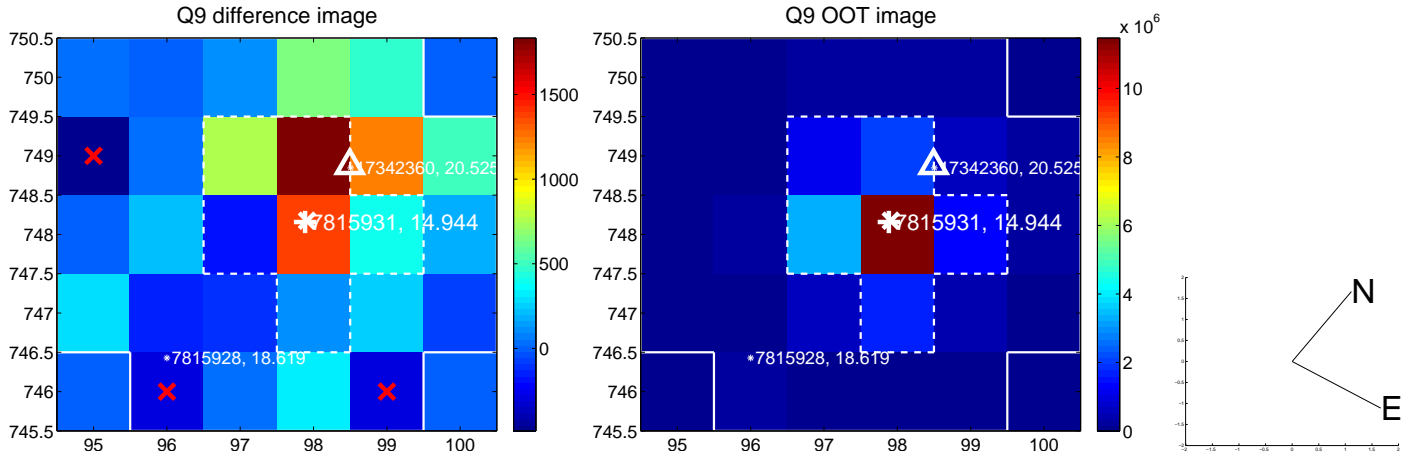
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



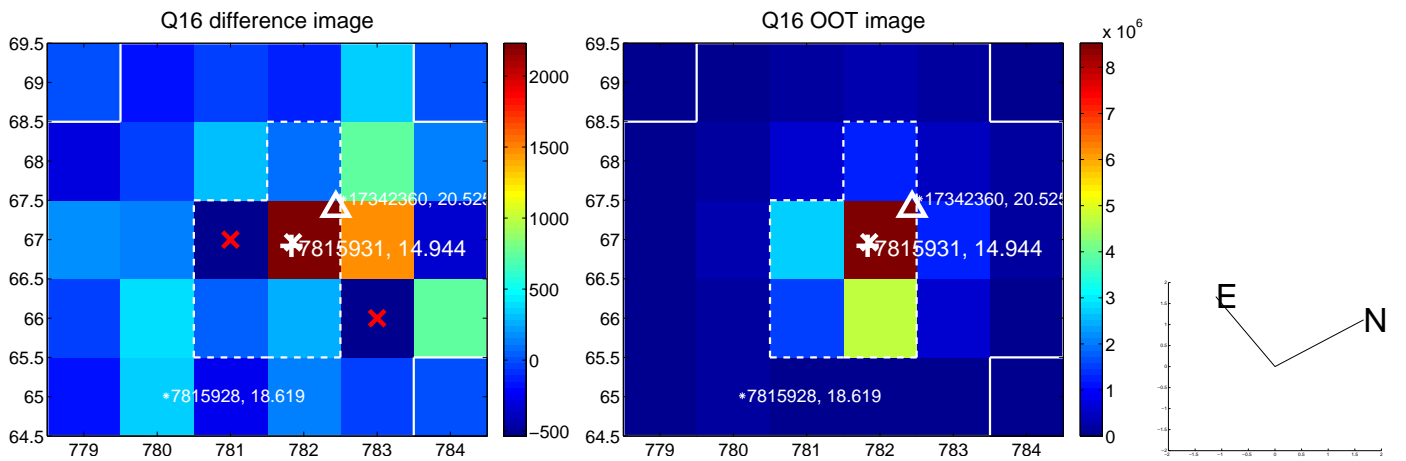
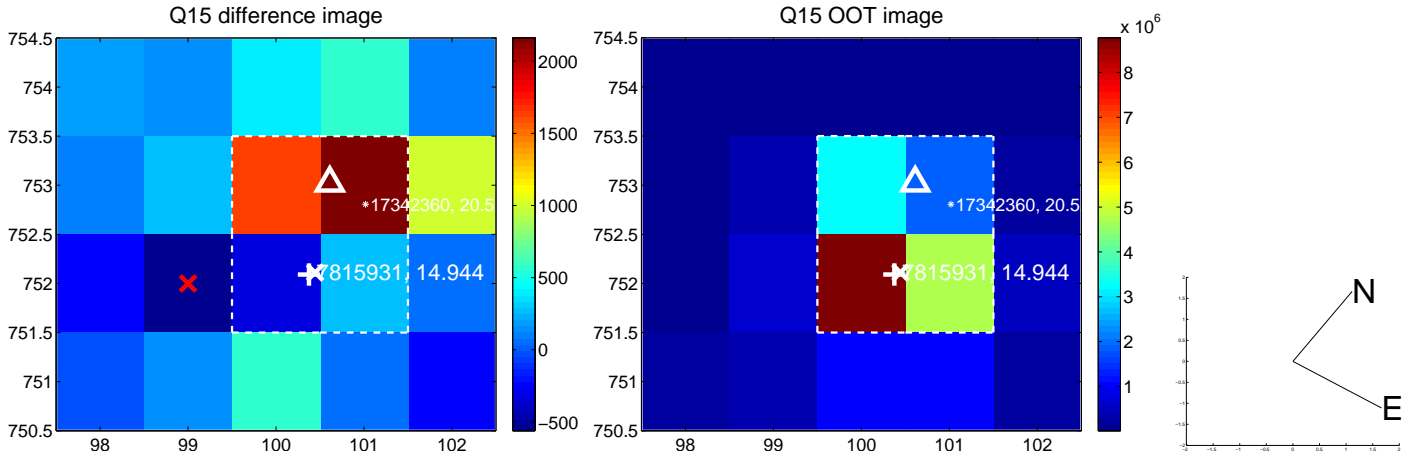
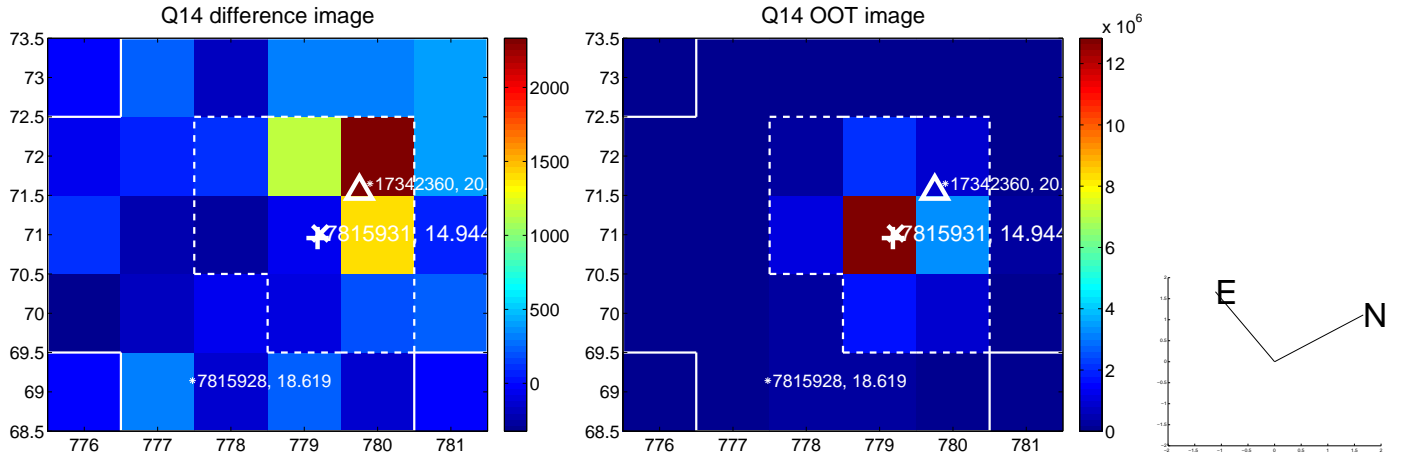
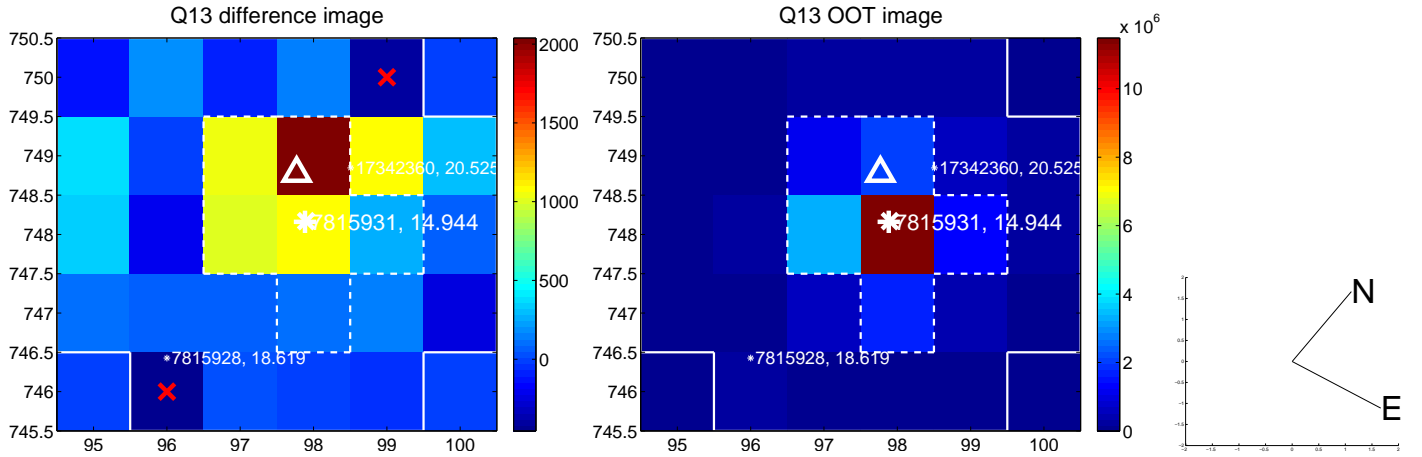
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

