

KIC 004147444

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})
004147444-01	OBS	3880.01	1.803701	133.314428	74.8	1.511	18.5	41.2	1.17	6438	1.08	2392.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004147444-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—CENT_SATURATED

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

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

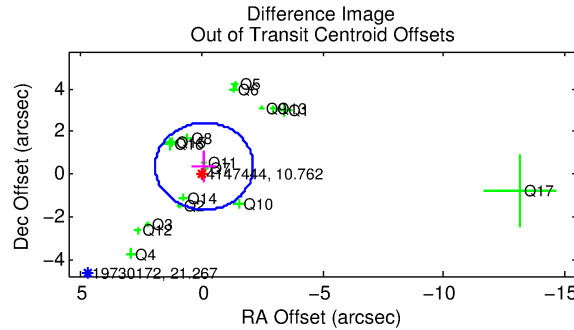
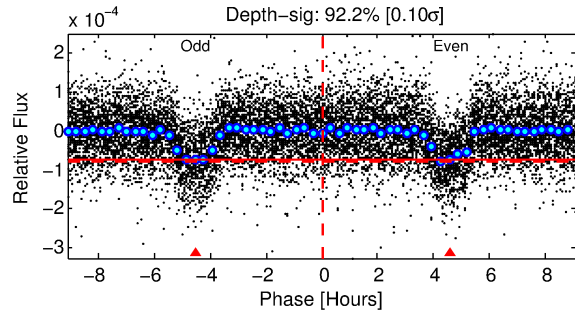
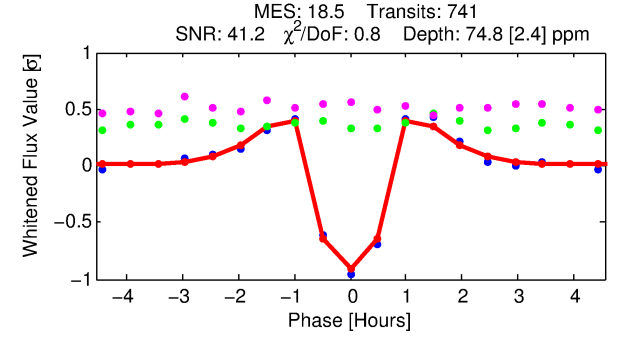
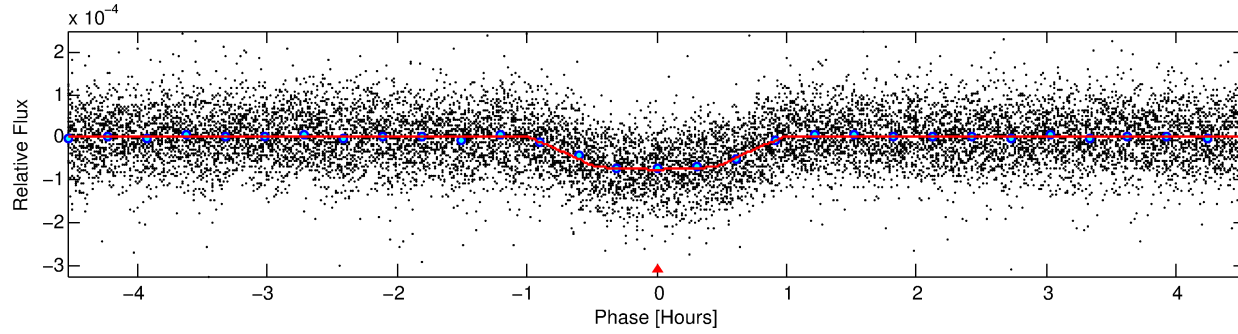
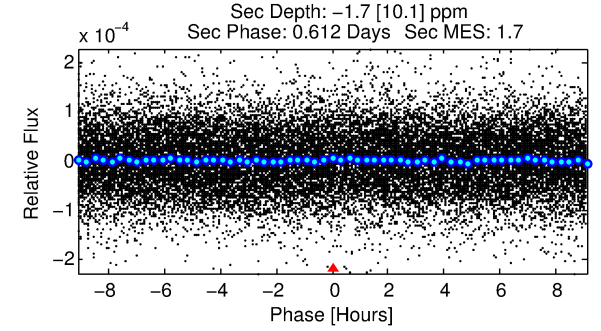
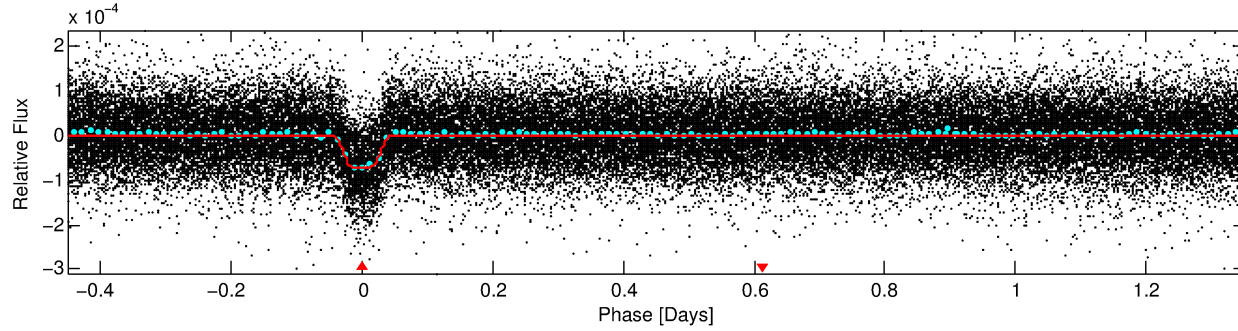
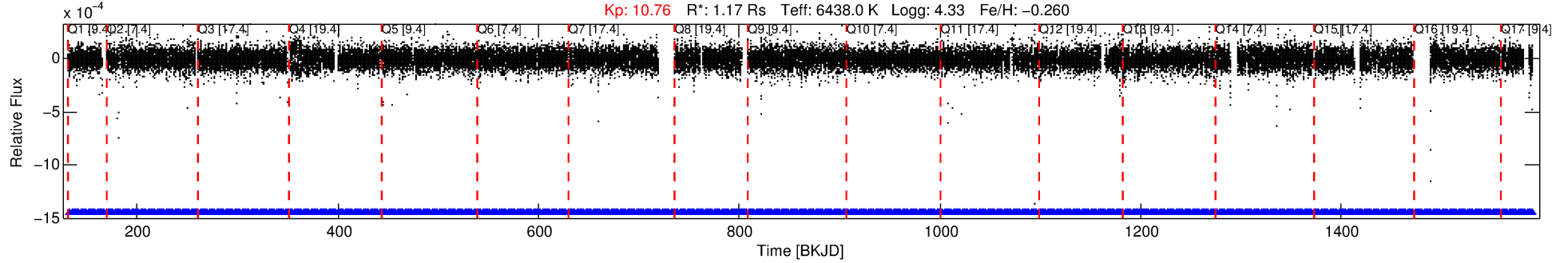
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004147444-01

No Significant Match Found

DV One-Page Summary

KIC: 4147444 Candidate: 1 of 1 Period: 1.804 d
KOI: K03880.01 Corr: 0.992



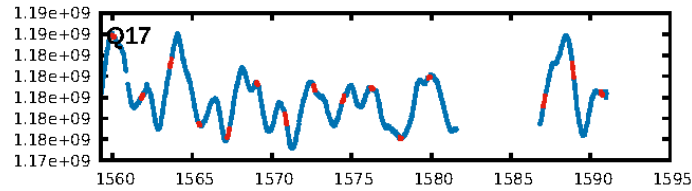
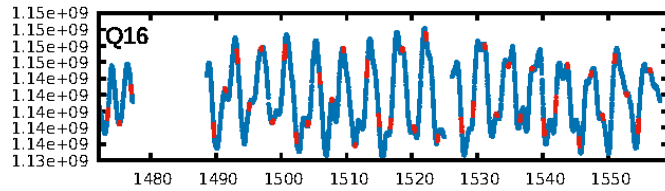
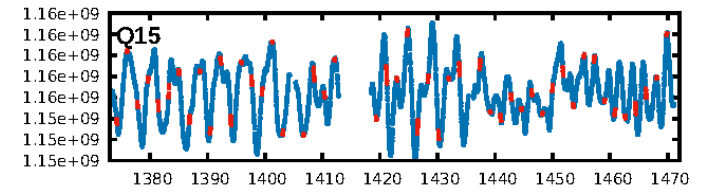
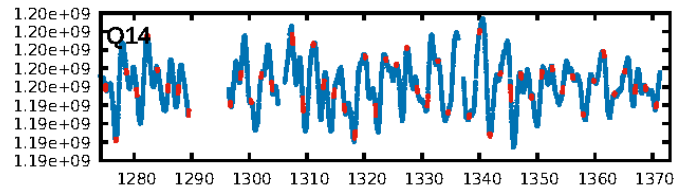
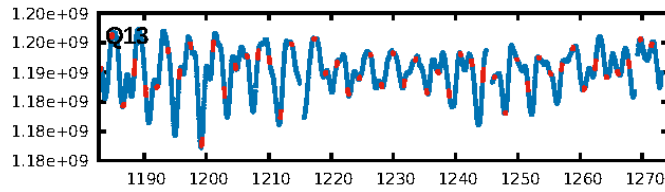
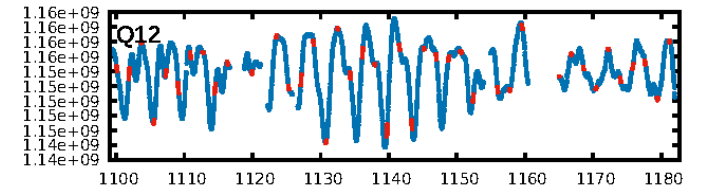
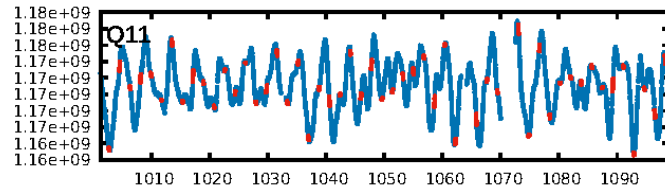
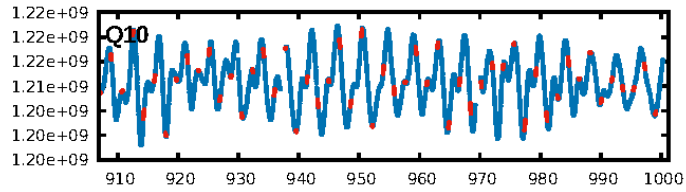
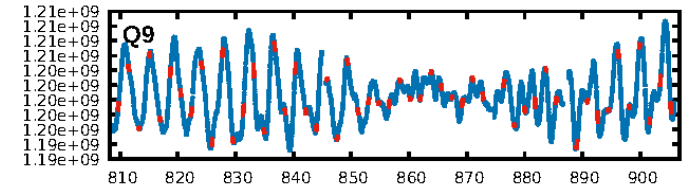
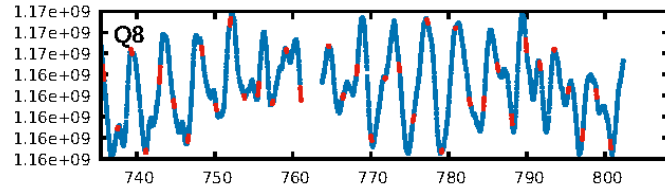
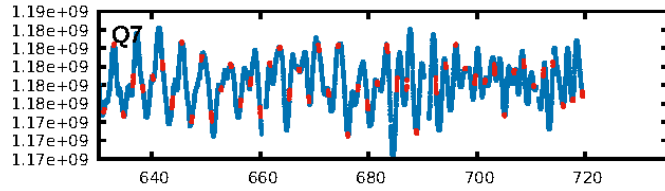
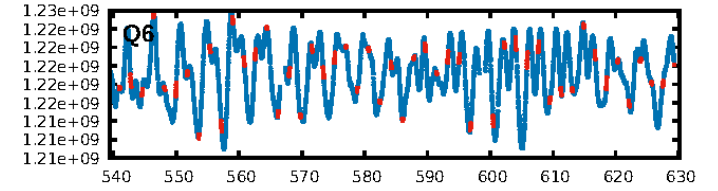
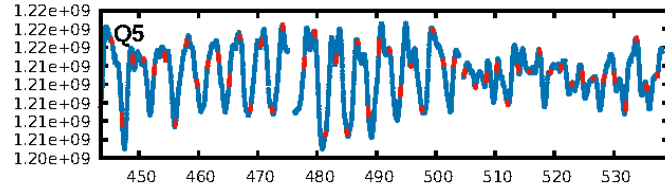
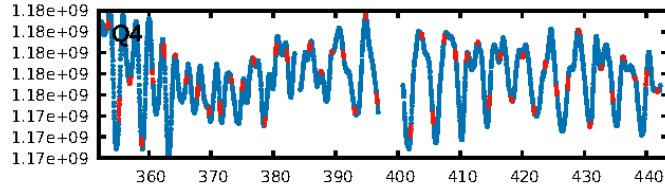
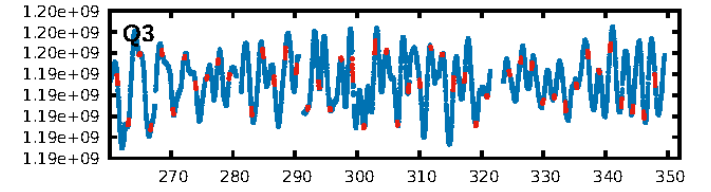
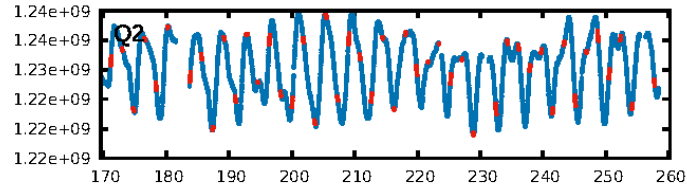
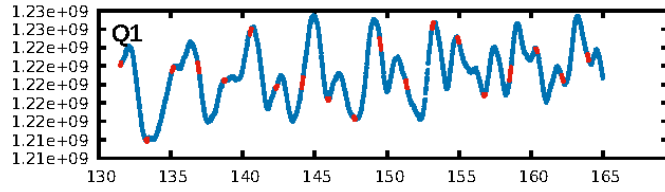
DV Fit Results:

Period = 1.80370 [0.00000] d
Epoch = 133.3144 [0.0004] BKJD
 $R_p/R^* = 0.0085$ [0.0005]
 $a/R^* = 6.67$ [1.91]
 $b = 0.70$ [0.22]
 $S_{\text{eff}} = 2392.28$ [947.16]
 $T_{\text{eq}} = 1783$ [177] K
 $R_p = 1.08$ [0.34] R_e
 $a = 0.0296$ [0.0076] AU
 $A_g = \text{N/A}$
 $T_{\text{eff}} = \text{N/A}$

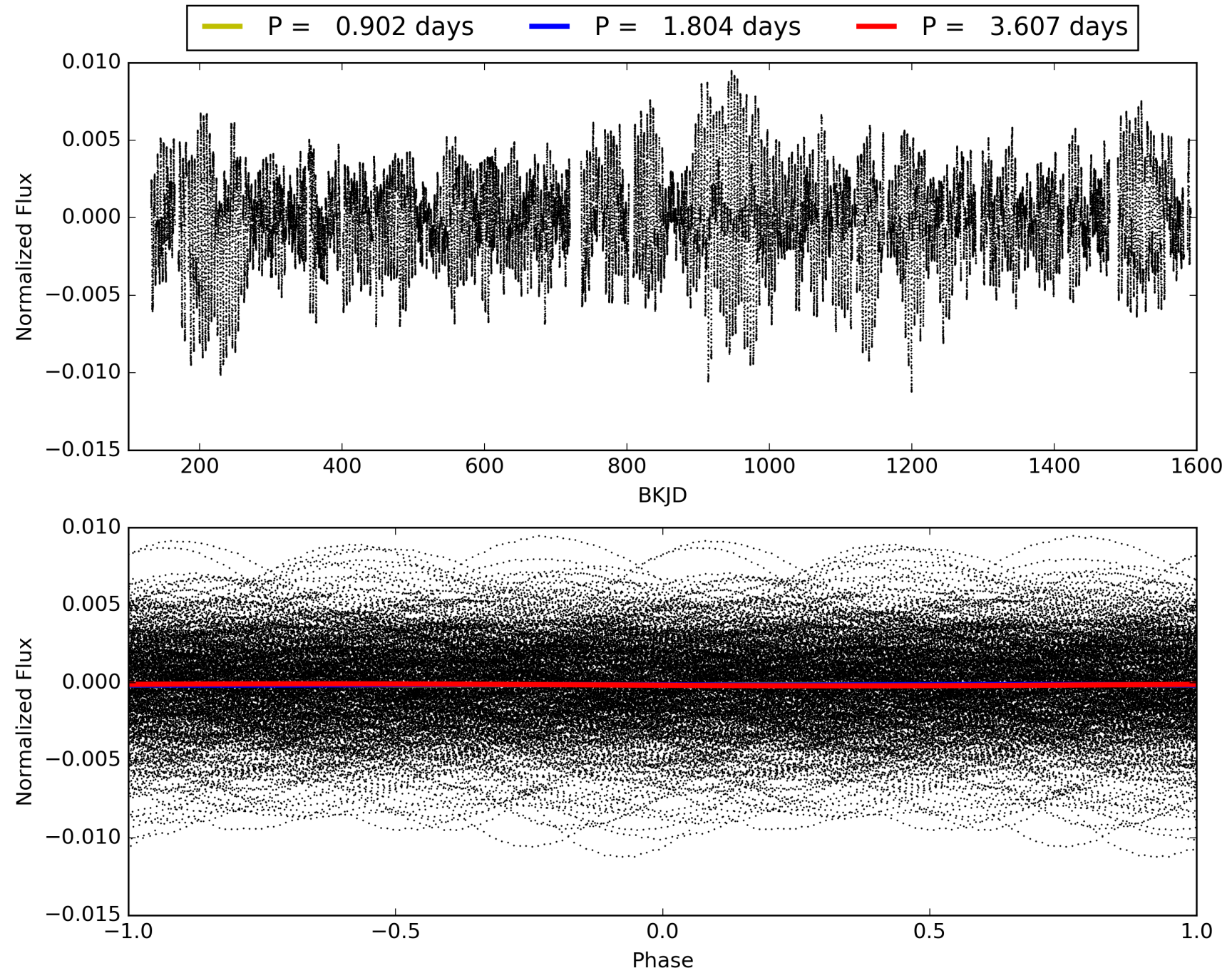
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.02e-65
RollingBand-fgt: 1.00 [707/707]
GhostDiagnostic-chr: 2.744
Centroid-sig: 1.5%
Centroid-so: 0.568 arcsec [2.46σ]
OotOffset-rm: 0.397 arcsec [0.59σ]
KicOffset-rm: 0.309 arcsec [0.50σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004147444-01, PDC Light Curves

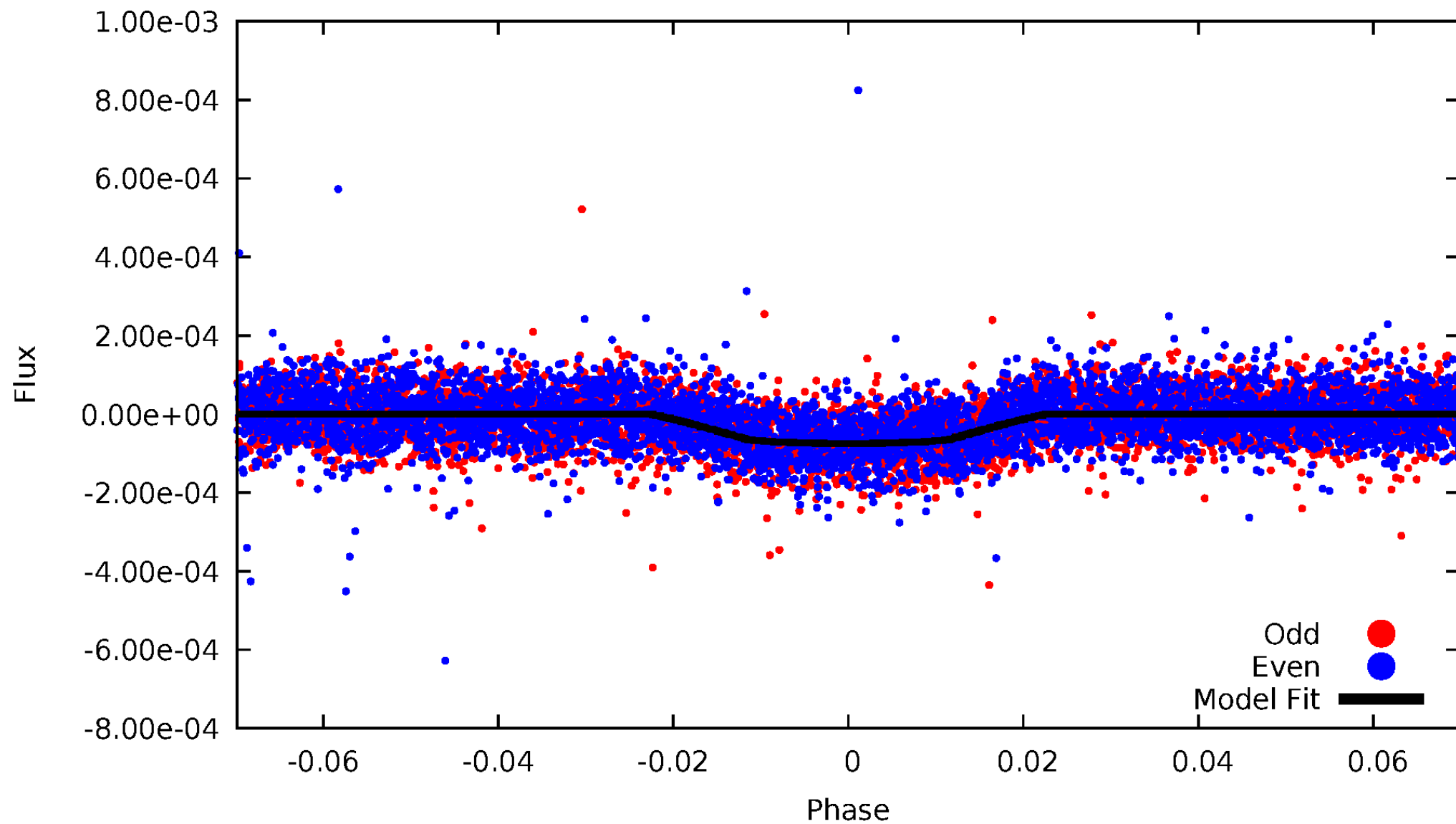


TCE 004147444-01



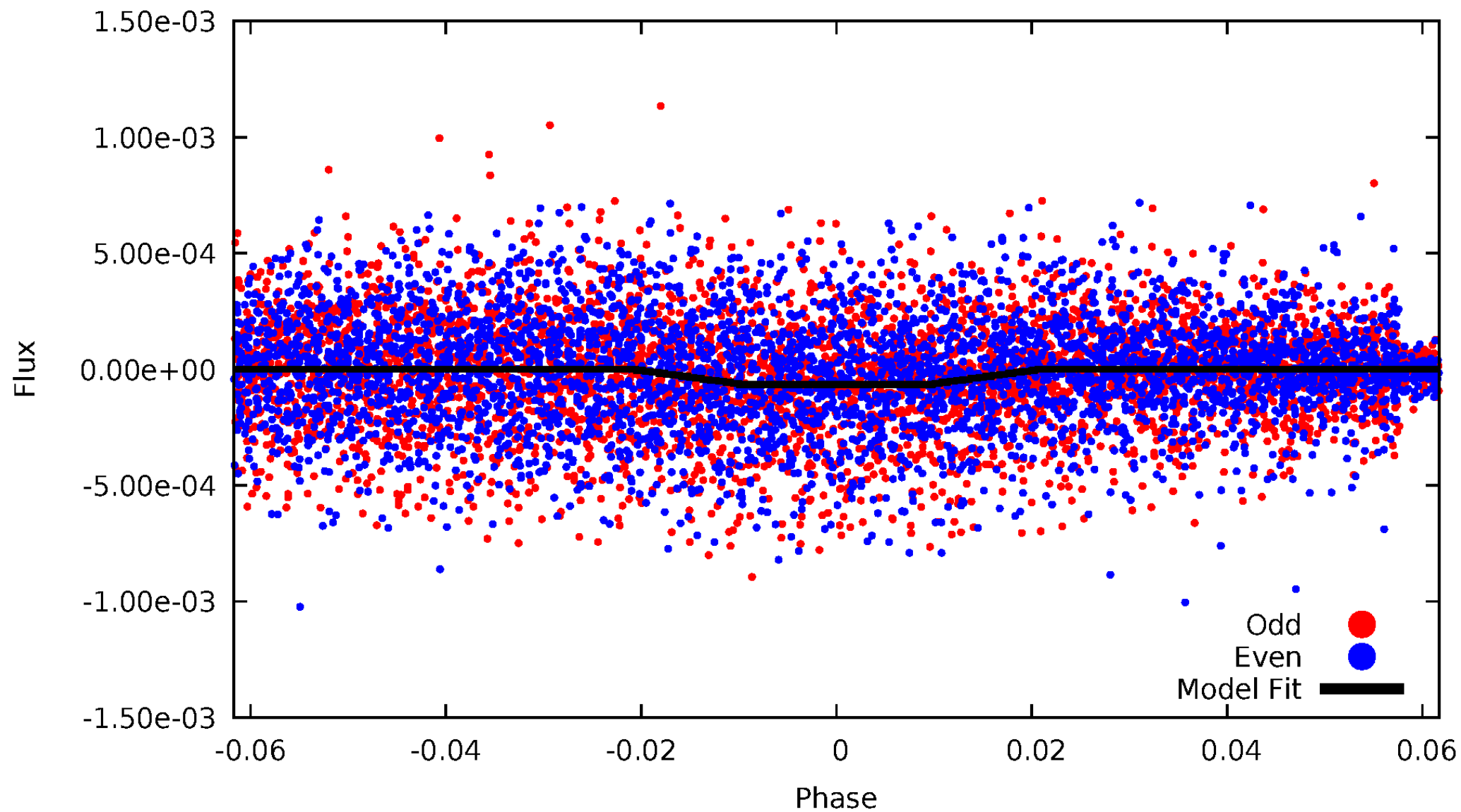
DV Odd/Even

TCE 004147444-01

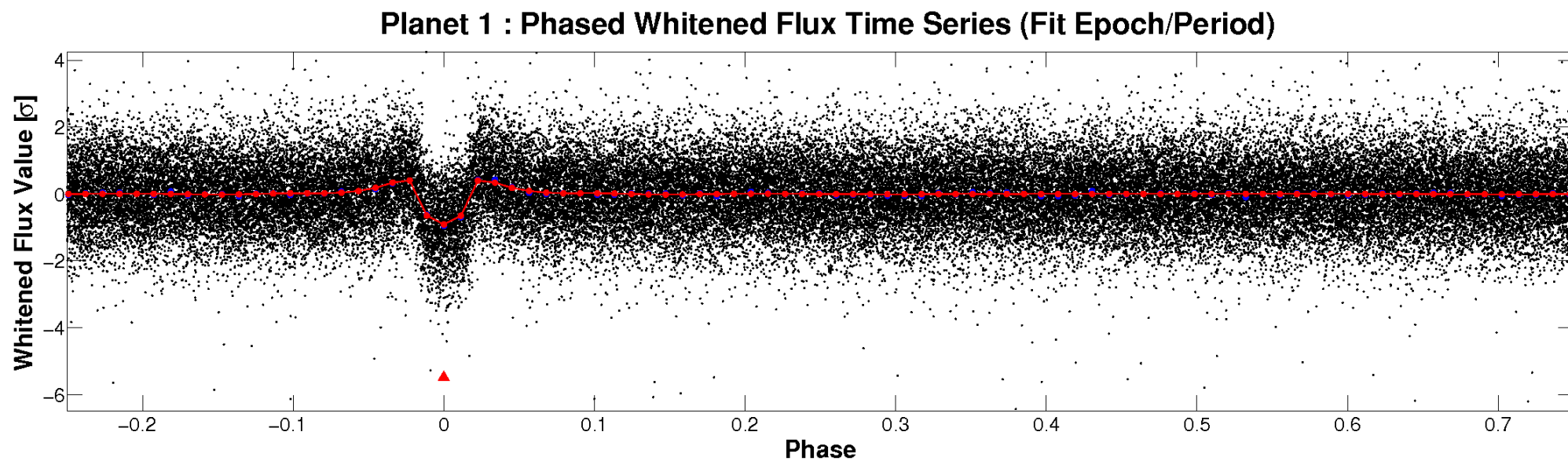
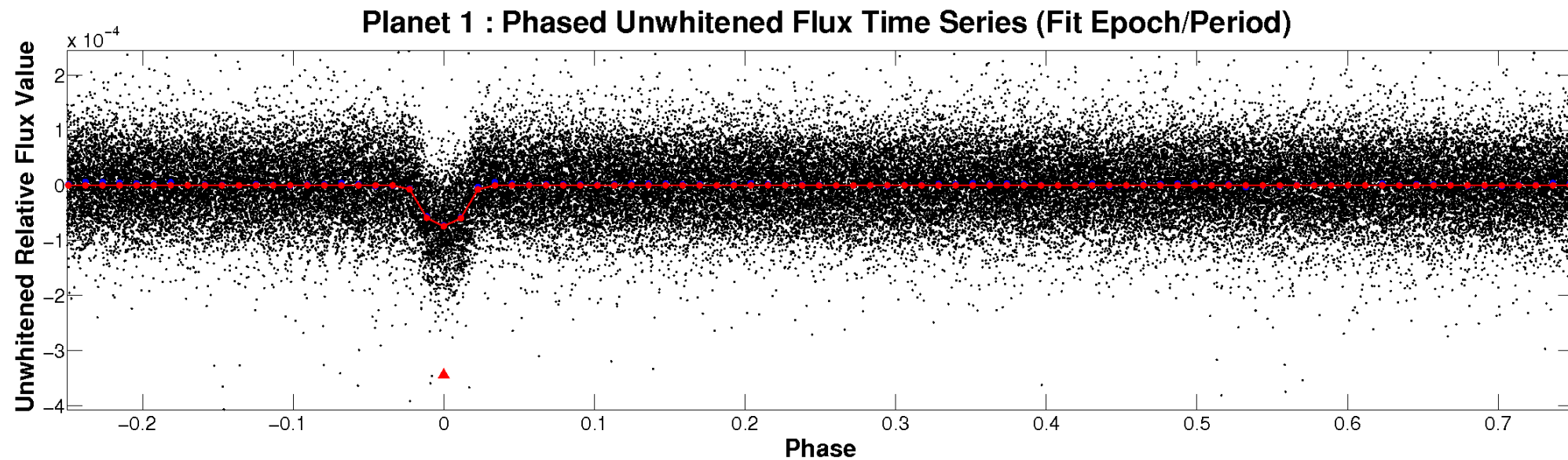


ALT Odd/Even

TCE 004147444-01

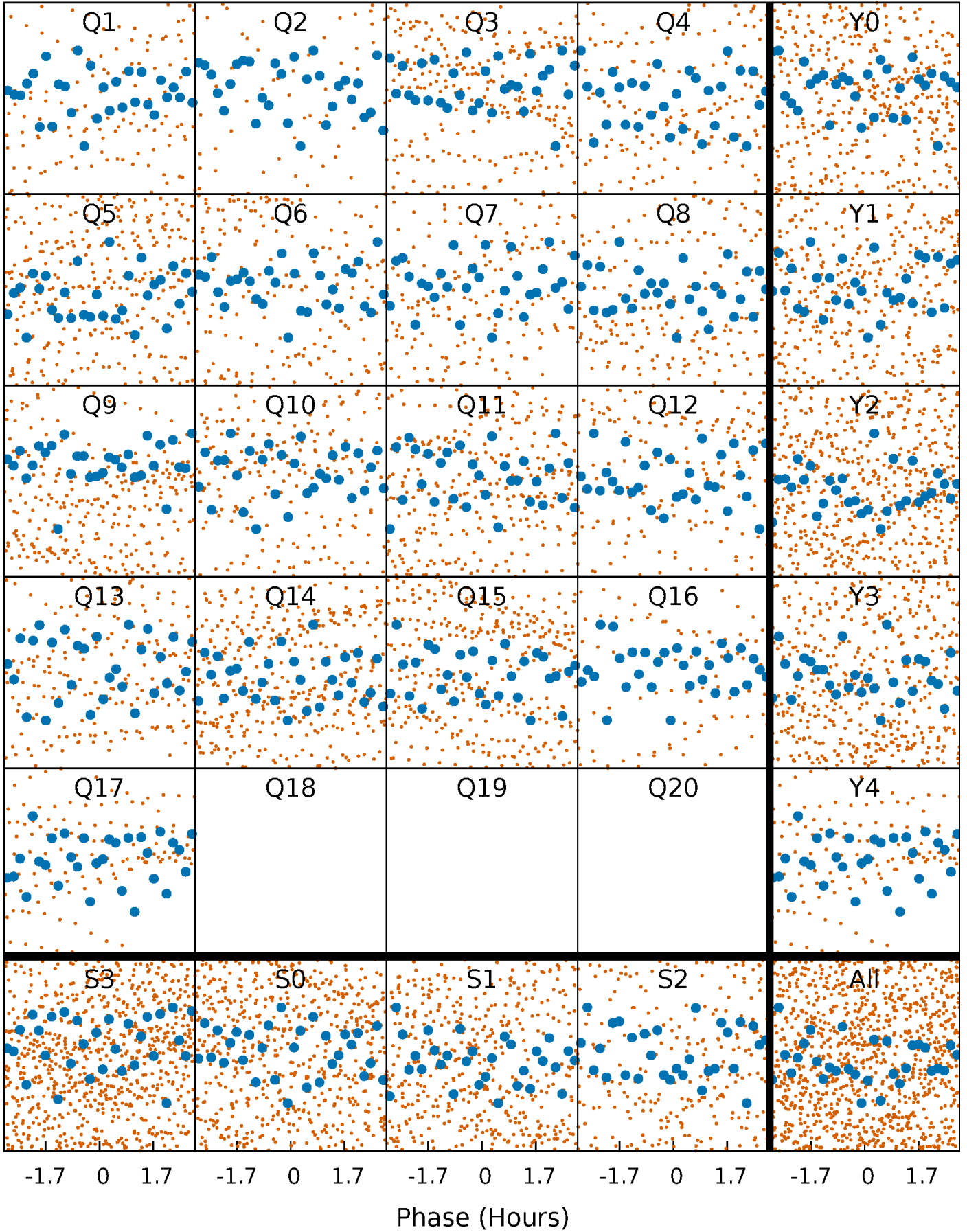


Non-Whitened Vs. Whitened Light Curve



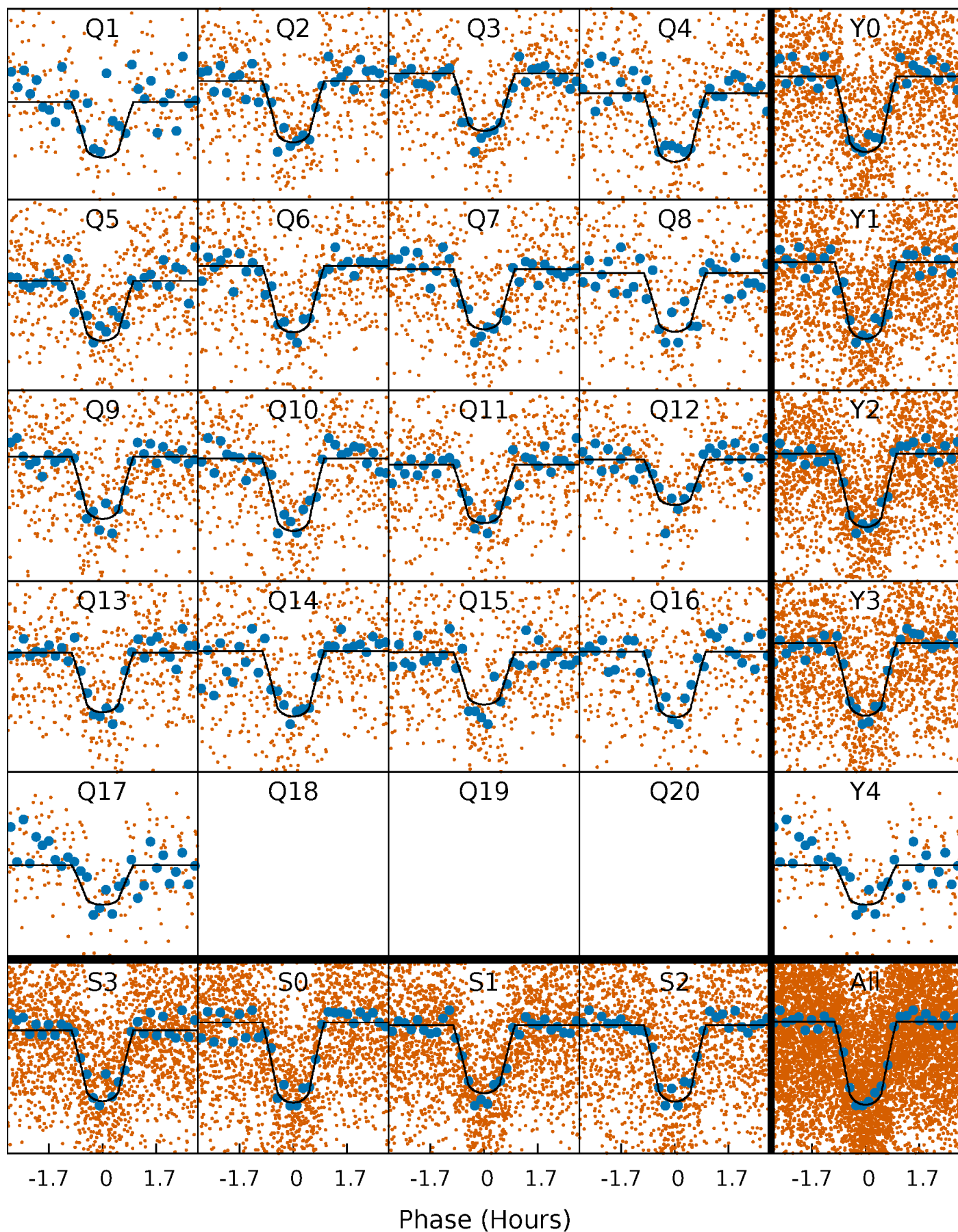
PDC Quarter-Phased Transit Curves

TCE 004147444-01 P= 1.803701 Days $T_0=133.314428$ (BKJD)



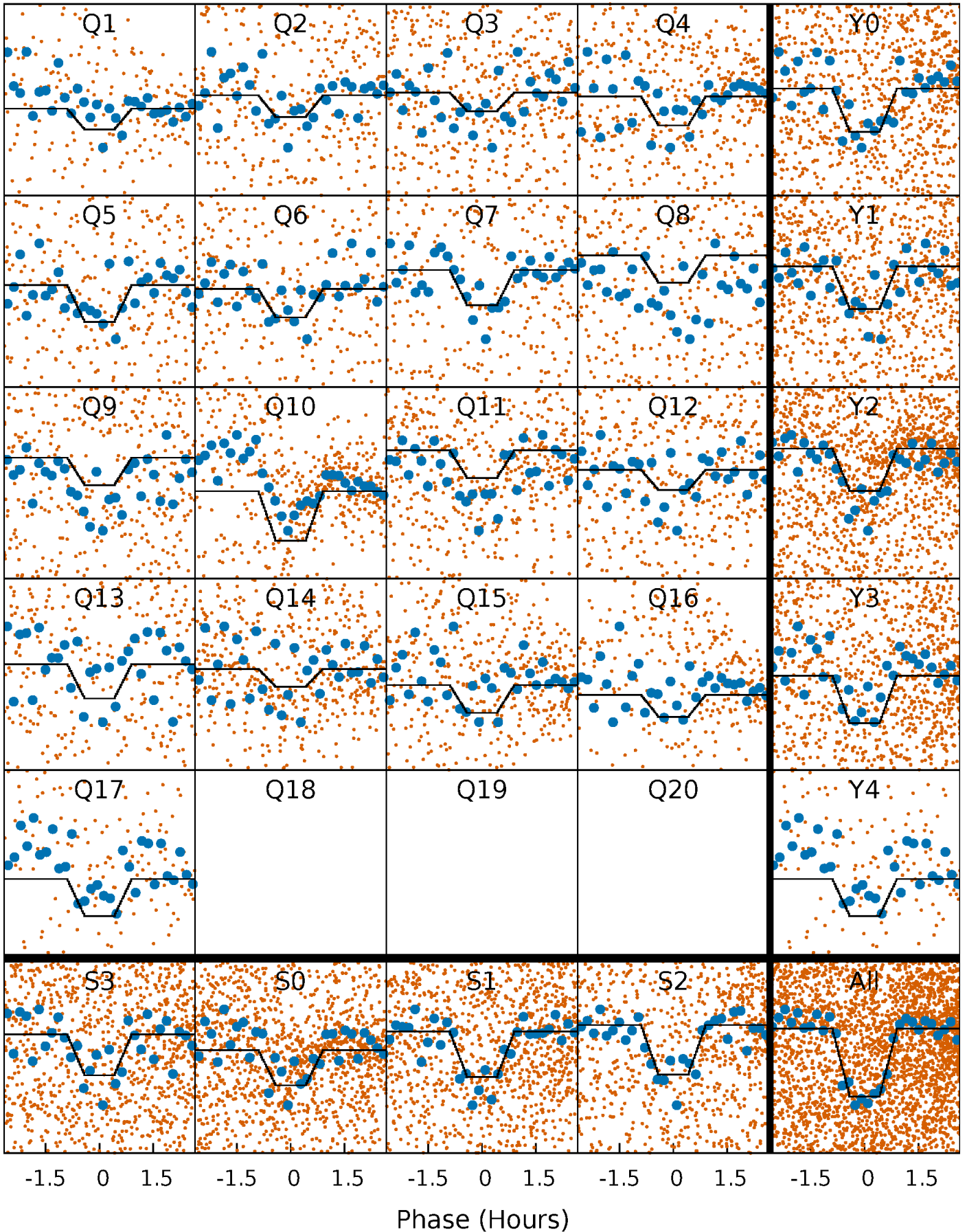
DV Quarter-Phased Transit Curves

TCE 004147444-01 P= 1.803701 Days $T_0=133.314428$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

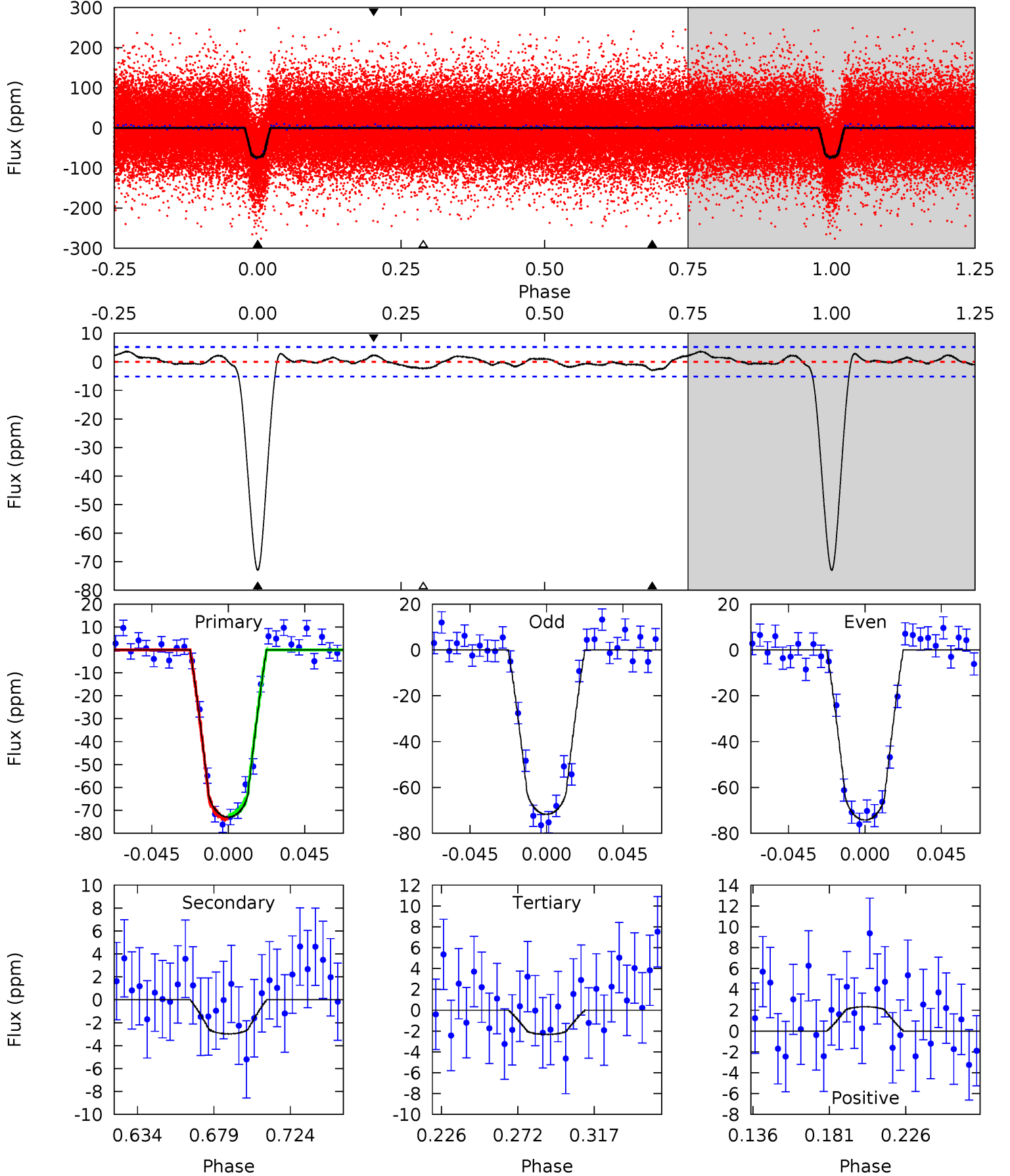
TCE 004147444-01 P= 1.803711 Days $T_0=133.312680$ (BKJD)



DV Model-Shift Uniqueness Test

004147444-01, P = 1.803701 Days, E = 131.510727 Days

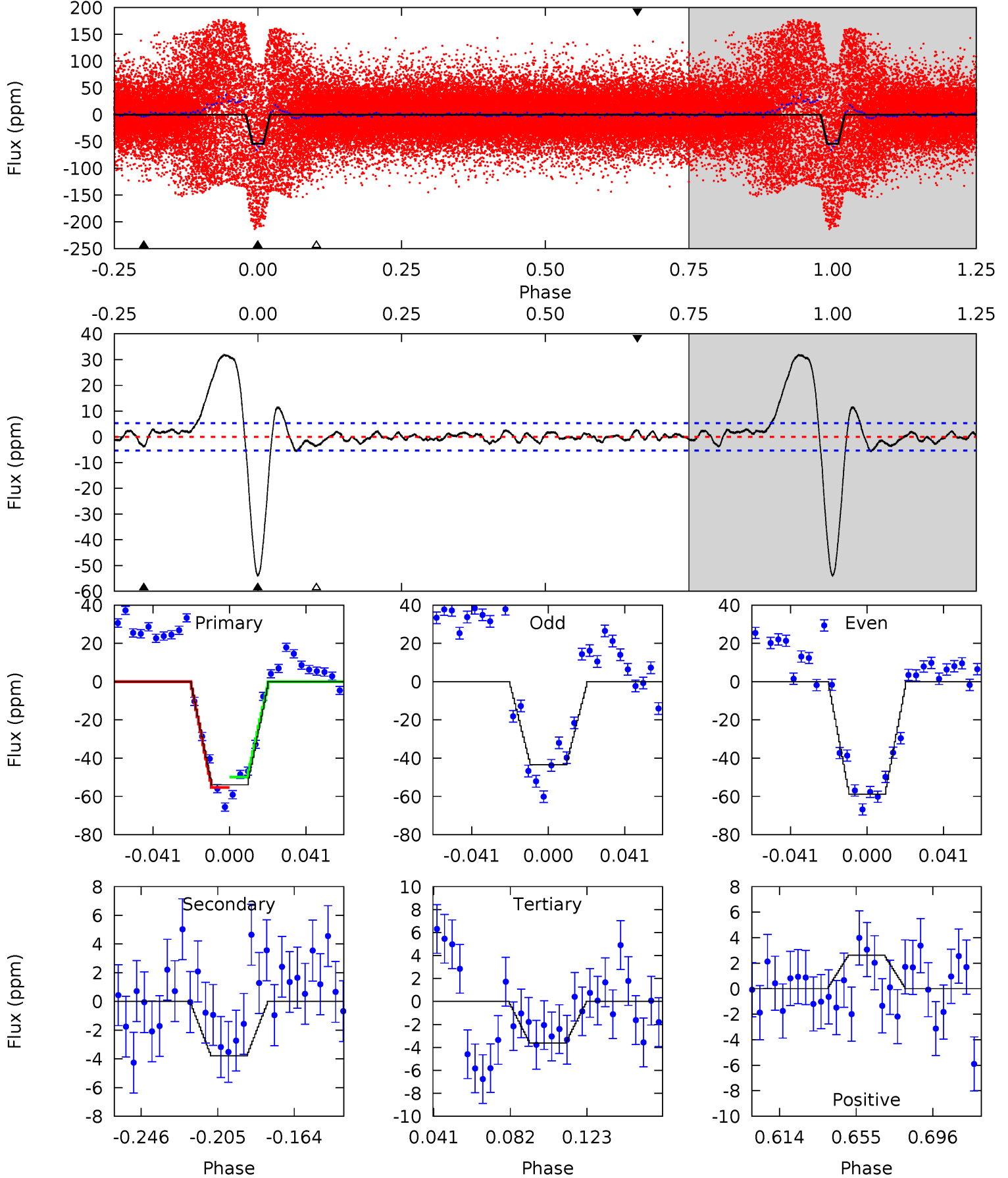
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
66.6	2.71	2.12	2.12	4.73	2.00	1.17	64.5	64.4	0.59	0.59	1.14	1.03	0.05	0.76



Alt Model-Shift Uniqueness Test

004147444-01, P = 1.803711 Days, E = 131.508969 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.1	3.37	3.23	2.34	4.75	2.04	4.71	44.9	45.7	0.14	1.03	6.99	1.31	0.37	0



Stellar Parameters For KIC 004147444

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6438^{+181}_{-227}	$4.330^{+0.108}_{-0.201}$	$-0.260^{+0.250}_{-0.300}$	$1.166^{+0.357}_{-0.192}$	$1.054^{+0.193}_{-0.113}$	$0.937^{+0.460}_{-0.493}$
	+3%/-4%	+2%/-5%	+96%/-115%	+31%/-16%	+18%/-11%	+49%/-53%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004147444-01 / KOI 3880.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3 ± 1	$1.10^{+0.20}_{-0.13}$	2519^{+169}_{-156}	3241^{+242}_{-319}	$1.124^{+0.576}_{-0.447}$
Alt.	-4 ± 1	$1.05^{+0.17}_{-0.13}$	2508^{+186}_{-132}	3491^{+209}_{-262}	$1.662^{+0.677}_{-0.619}$

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

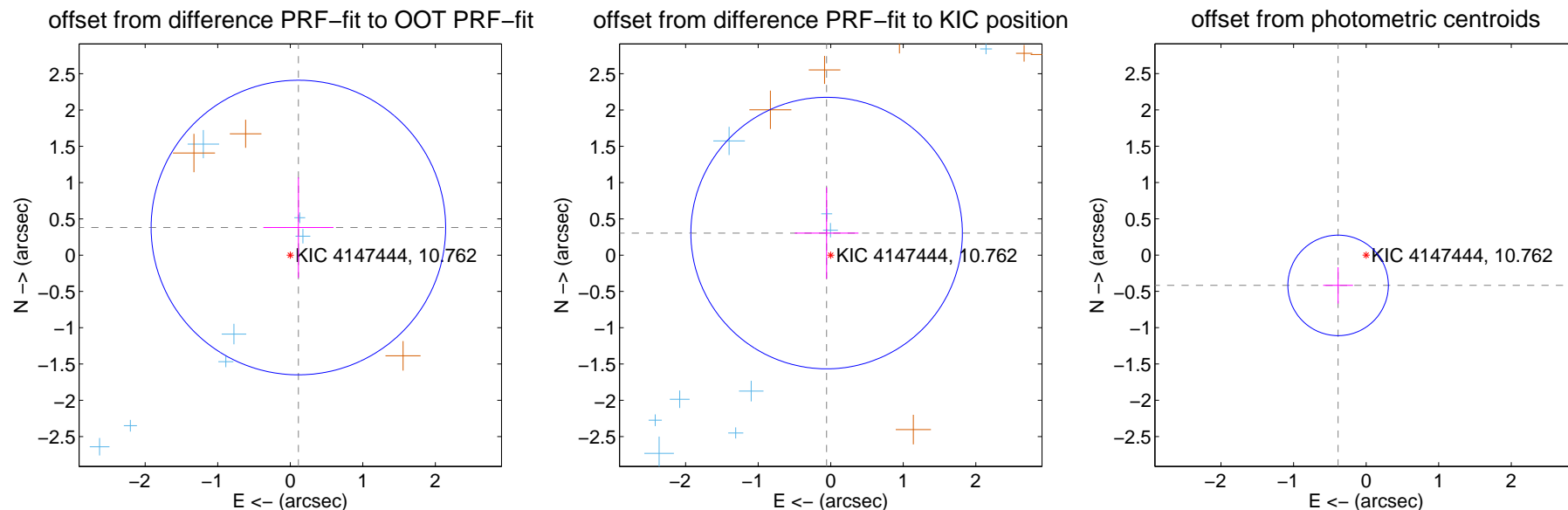
DV Centroid Data

Supplemental centroid analysis for 004147444-01. **Kepler magnitude: 10.76.** Transit SNR 41.20

There are 10 quarters with good PRF difference image offsets

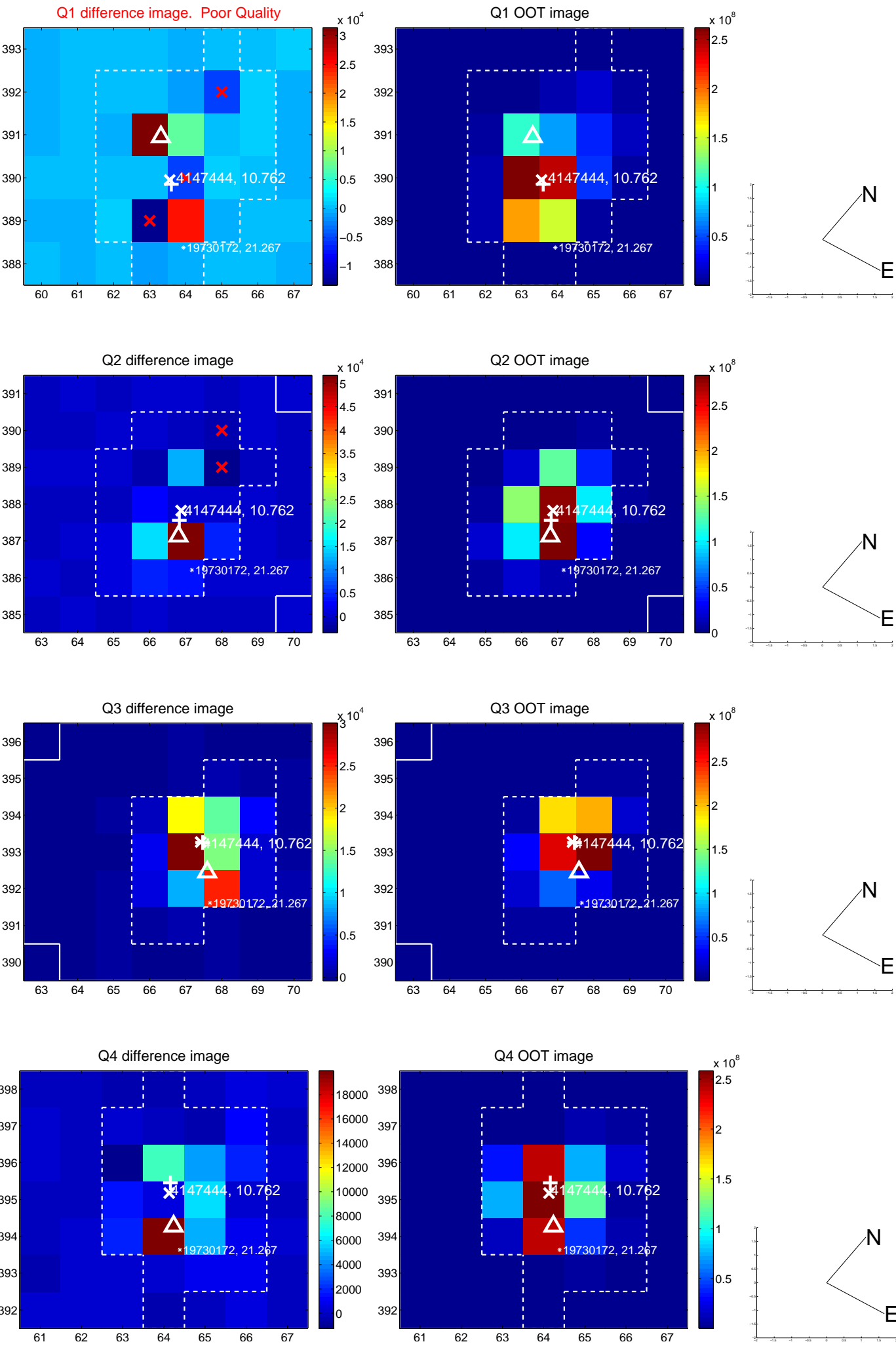
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.397 ± 0.676	0.59	-0.112 ± 0.483	0.380 ± 0.690
PRF-fit source offset from KIC position	0.309 ± 0.623	0.50	0.057 ± 0.439	0.304 ± 0.629
photometric centroid source offset	0.57 ± 0.23	2.46	0.39 ± 0.21	-0.42 ± 0.25

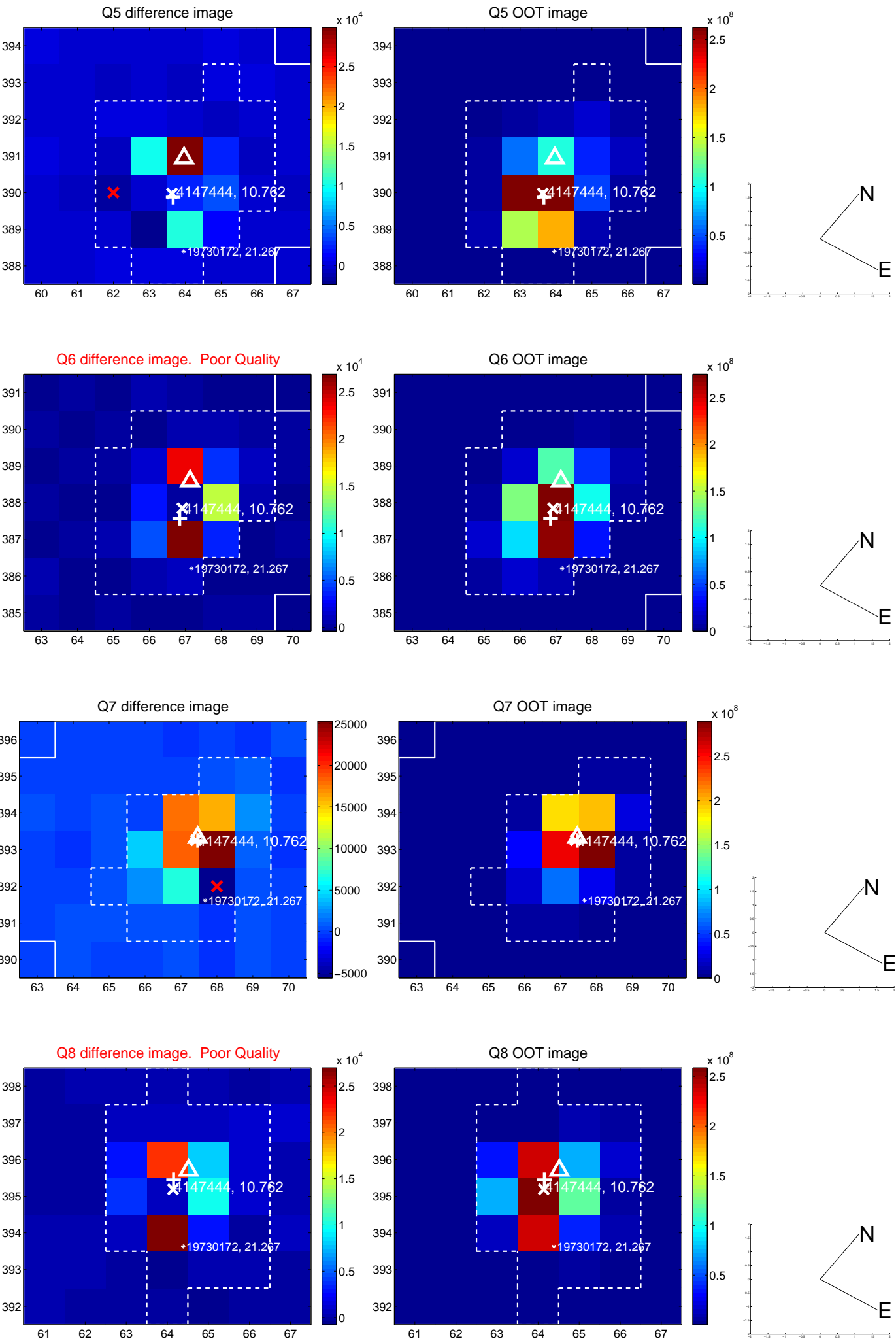


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

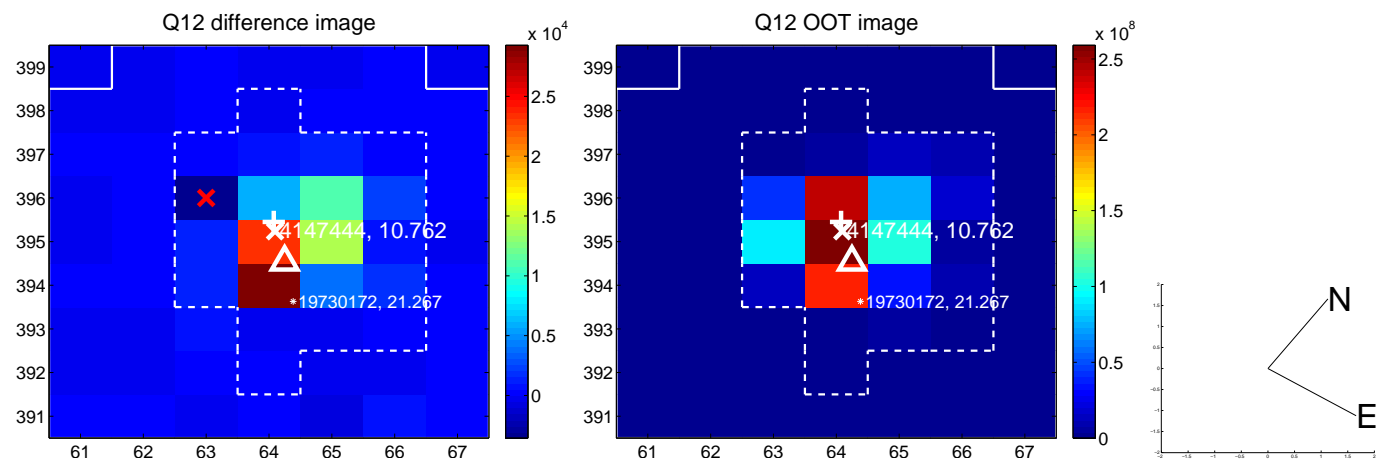
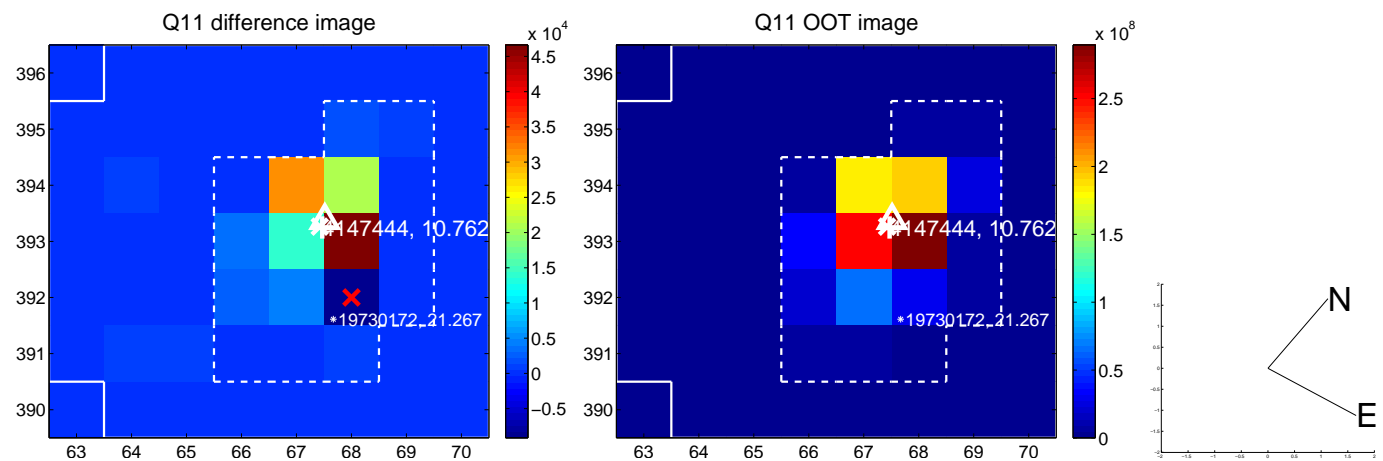
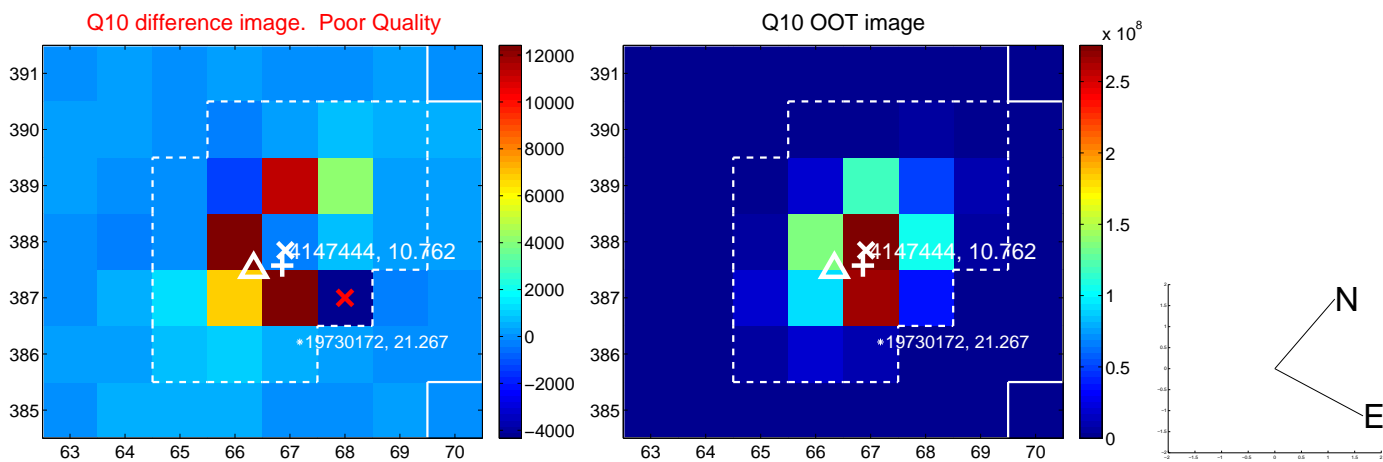
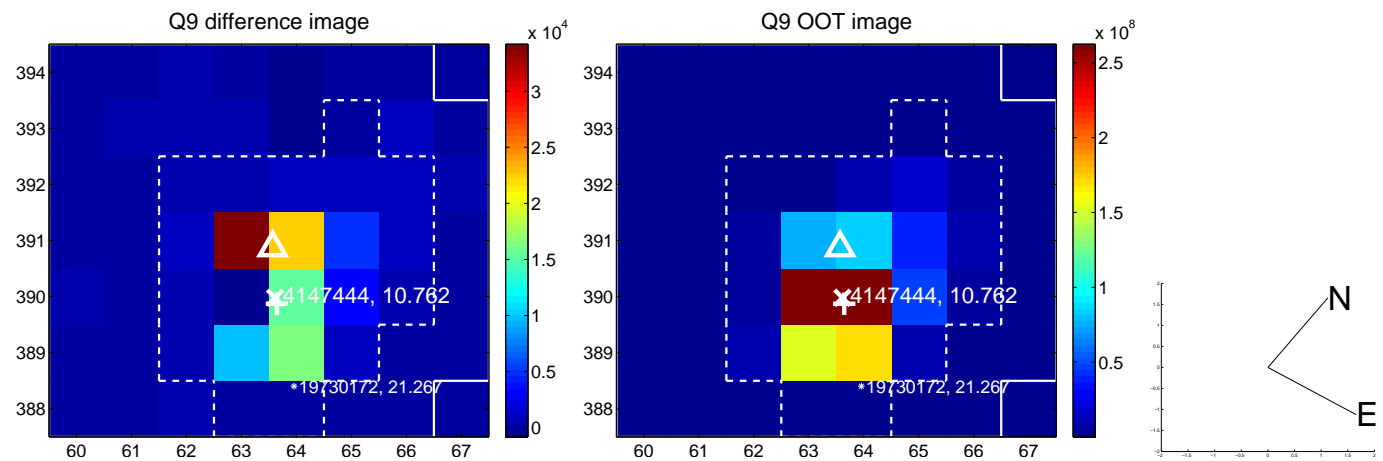
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



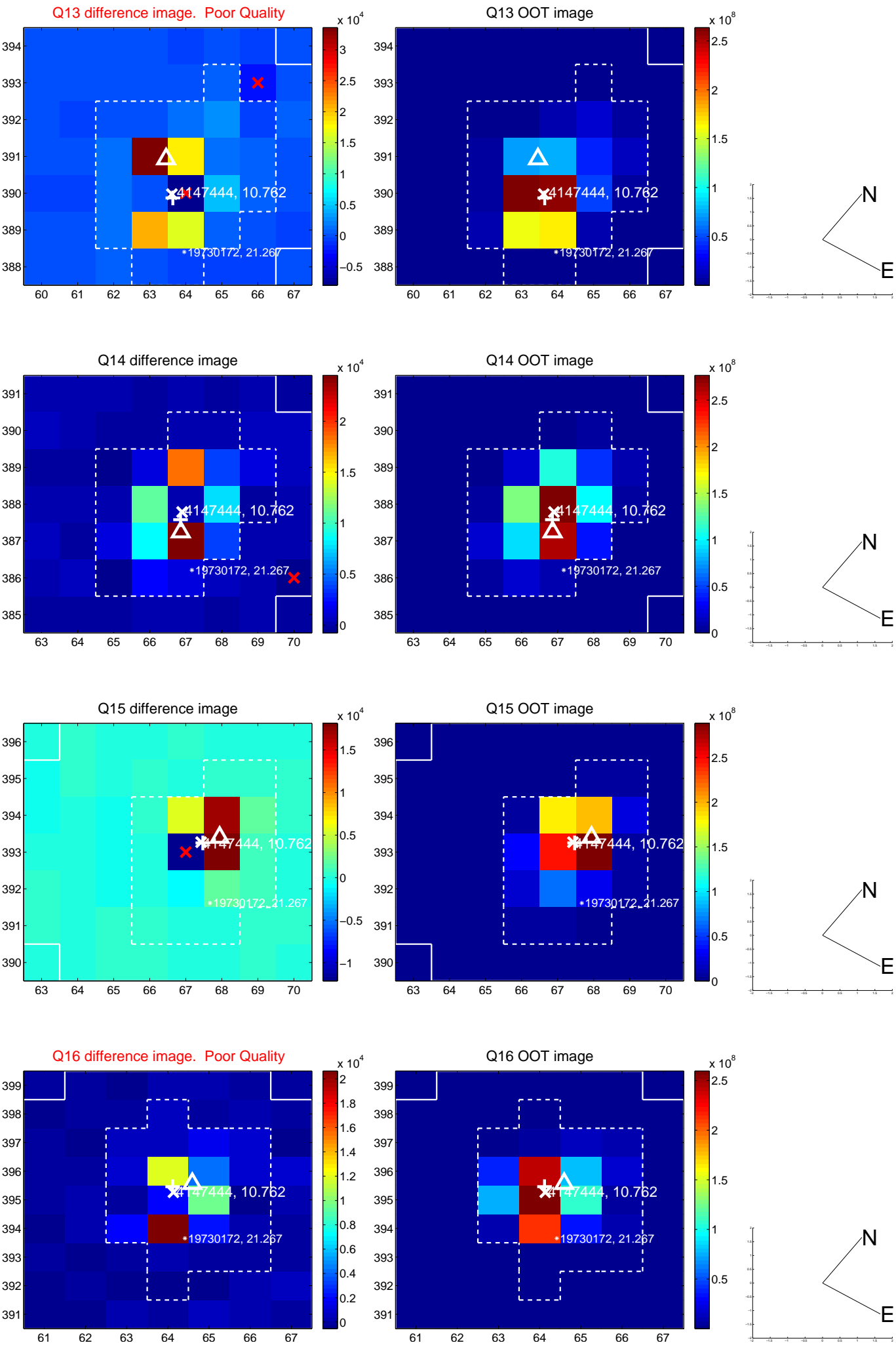
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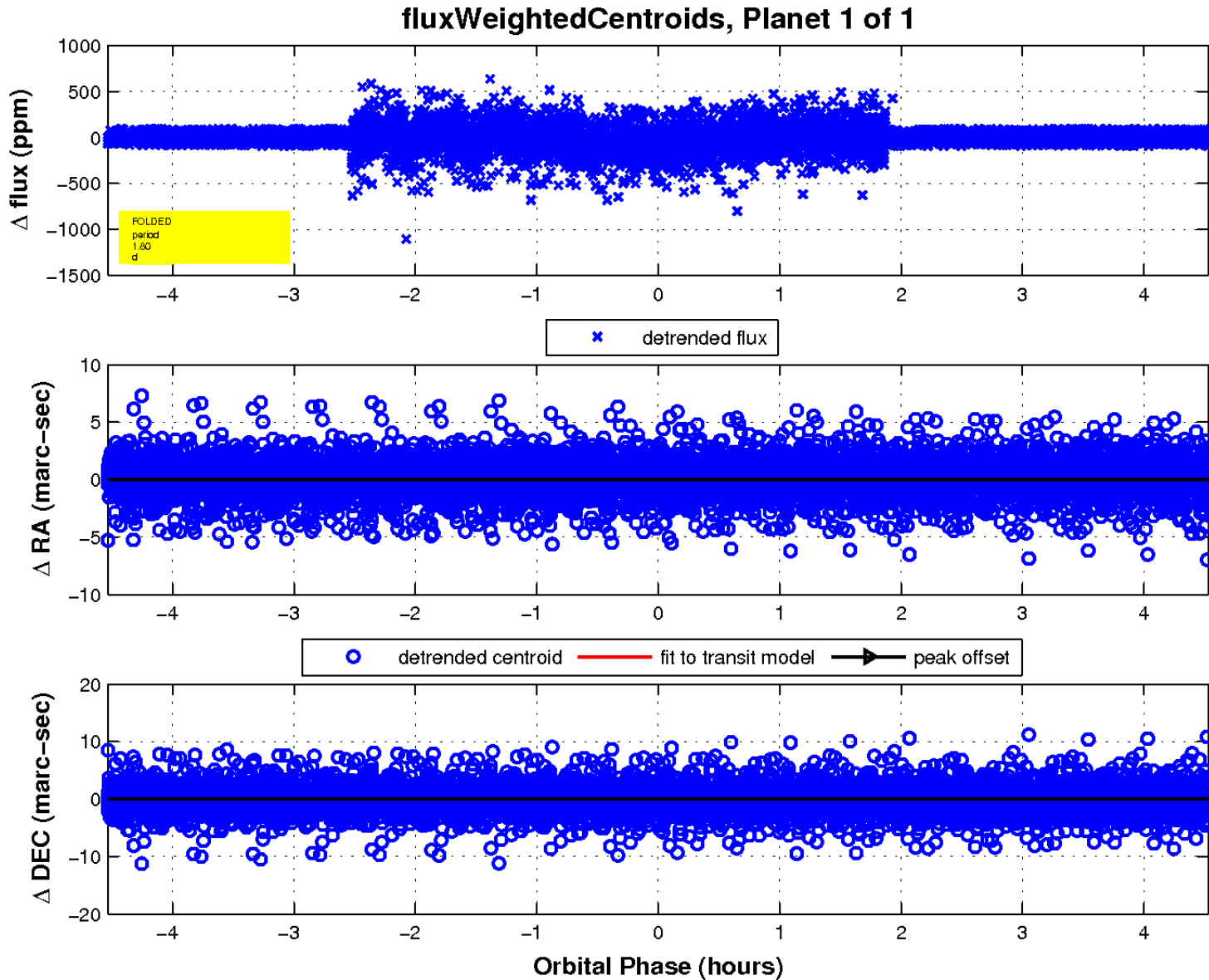
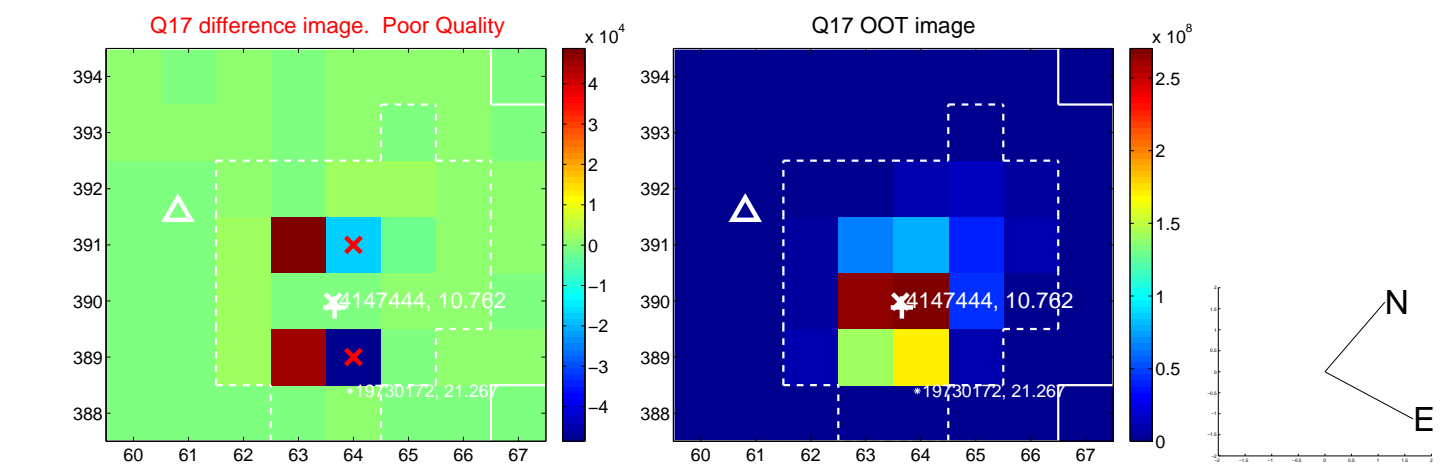
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

