

KIC 006468904

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})
006468904-01	OBS	4743.01	49.538537	132.507002	687.1	1.853	10.2	12.3	0.75	5683	2.27	8.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006468904-01	OBS	PC	1.00	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.

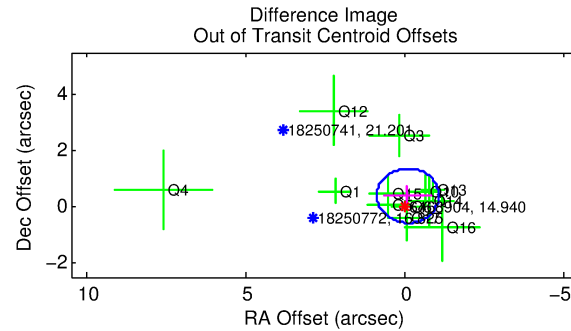
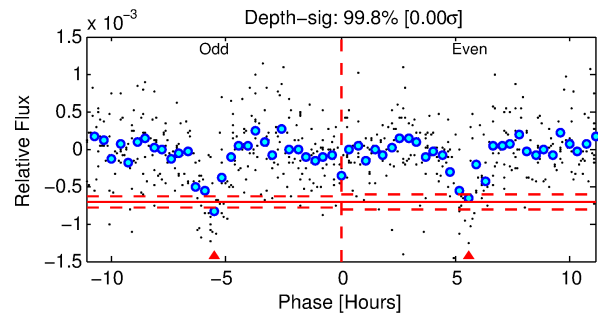
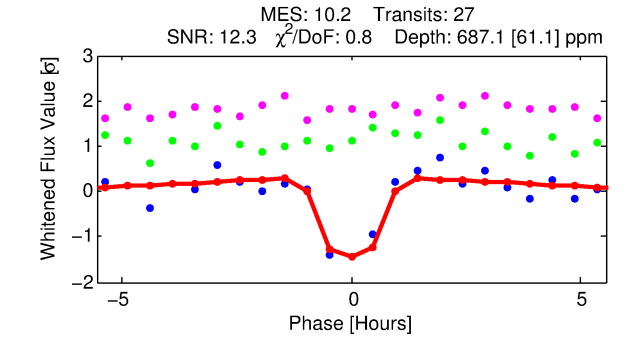
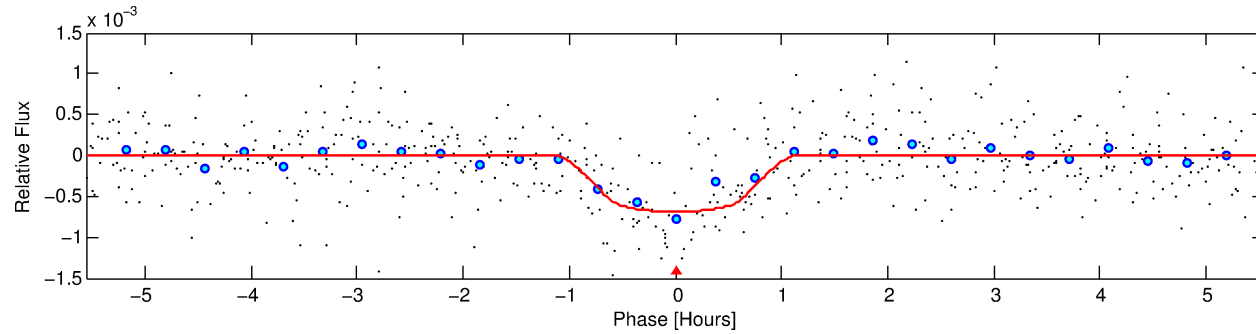
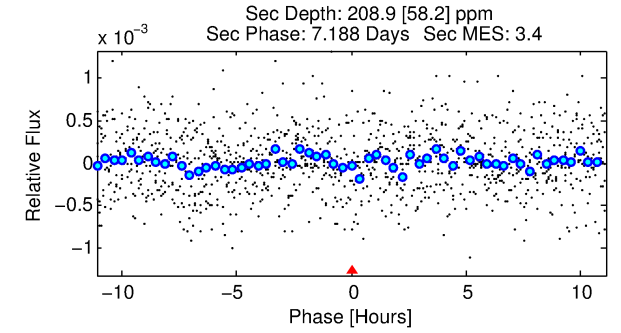
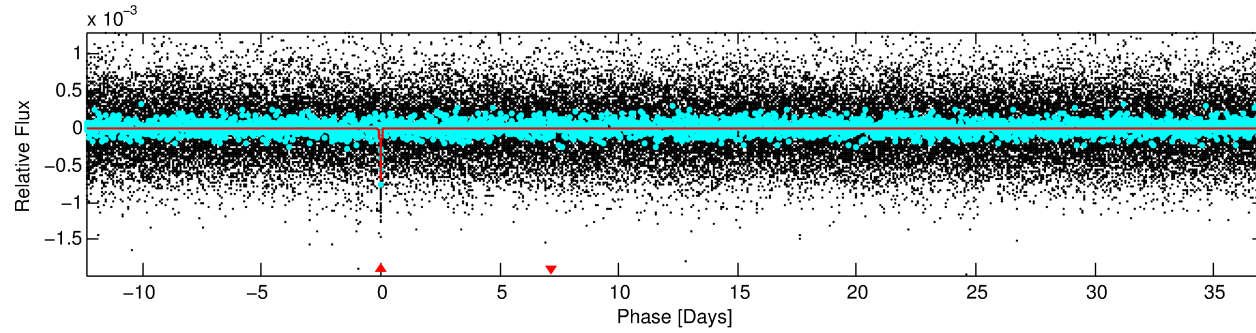
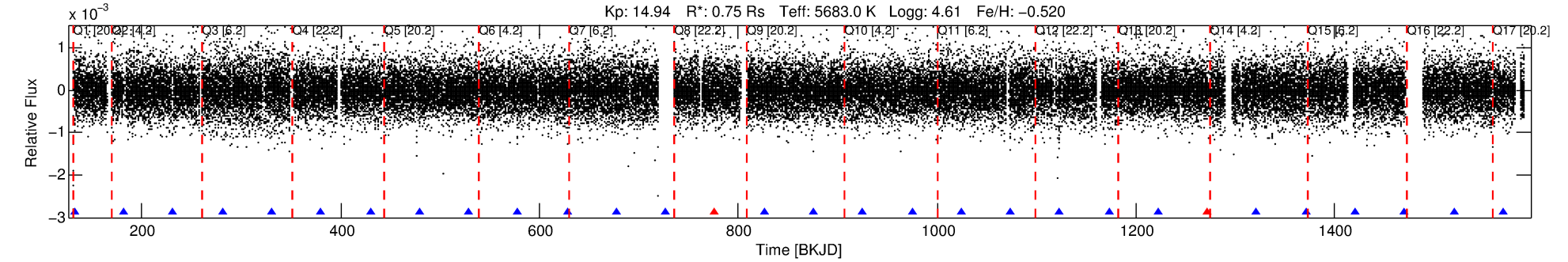
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006468904-01

No Significant Match Found

DV One-Page Summary

KIC: 6468904 Candidate: 1 of 1 Period: 49.539 d
KOI: K04743.01 Corr: 0.924



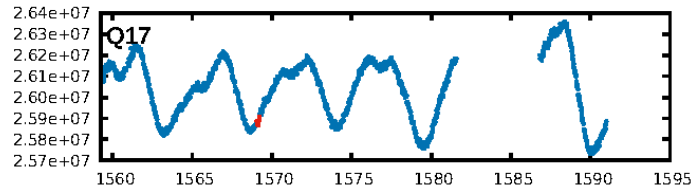
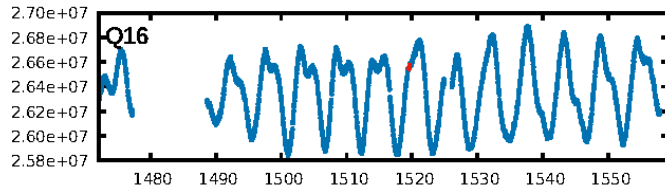
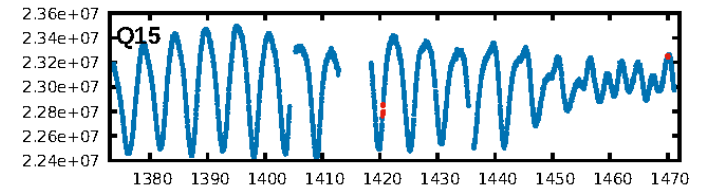
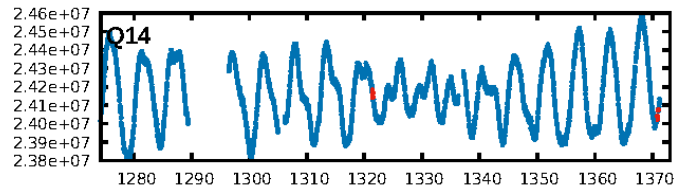
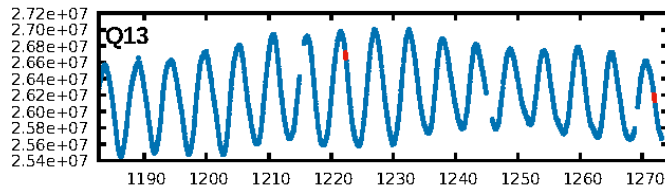
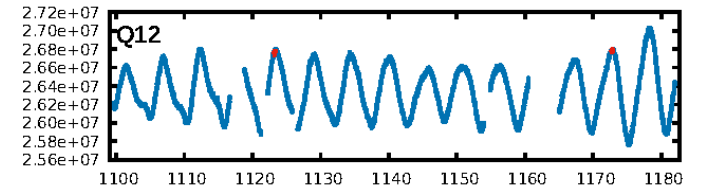
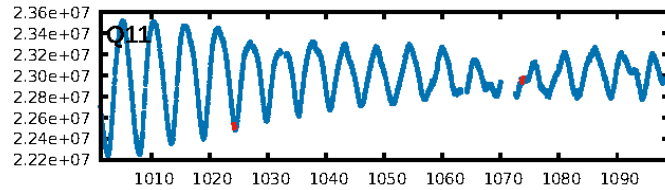
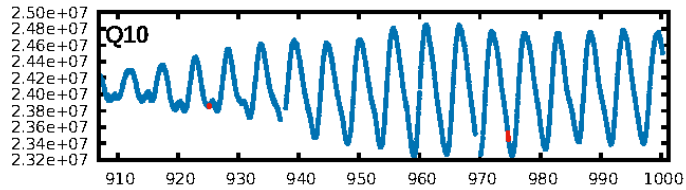
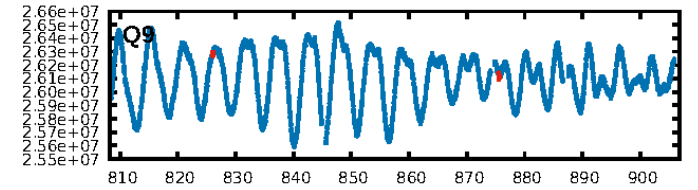
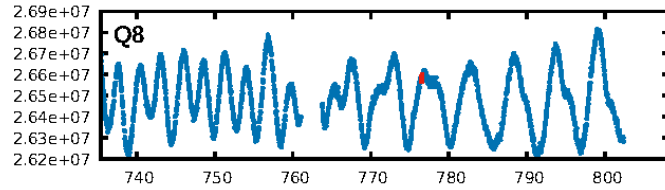
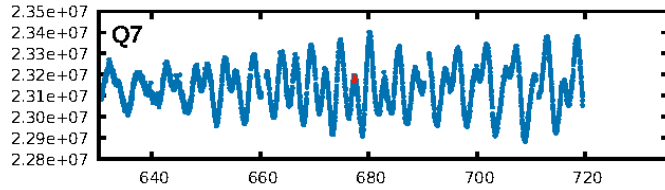
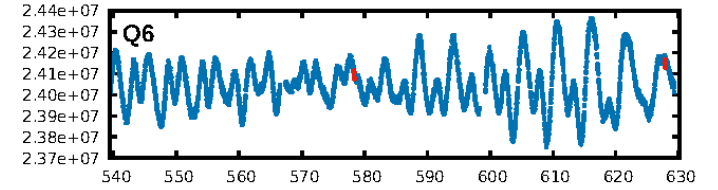
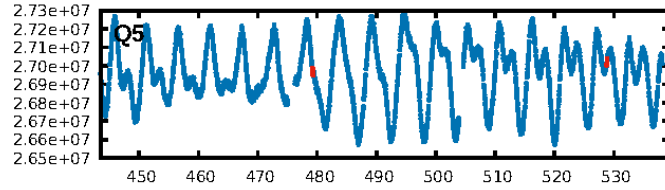
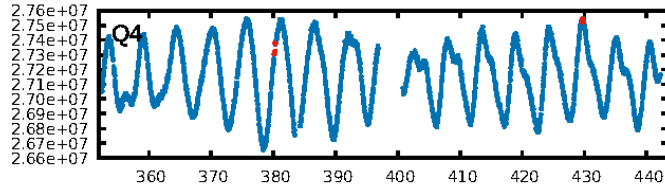
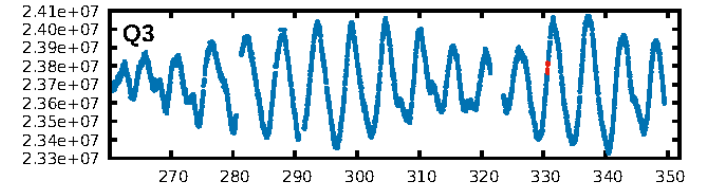
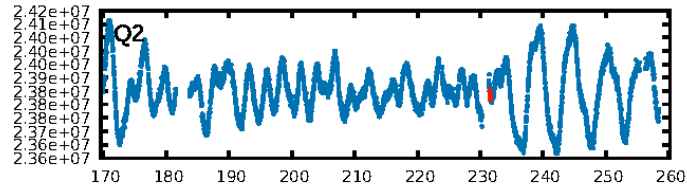
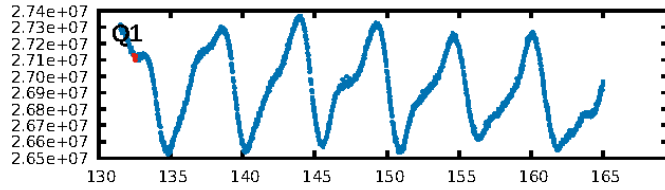
DV Fit Results:

Period = 49.53854 [0.00021] d
Epoch = 132.5070 [0.0038] BKJD
Rp/R* = 0.0278 [0.0109]
a/R* = 111.63 [204.45]
b = 0.87 [0.52]
Seff = 8.54 [2.51]
Teq = 436 [32] K
Rp = 2.27 [1.02] Re
a = 0.2471 [0.0460] AU
Ag = 1365.77 [1189.98] [1.15σ]
Teffp = 4097 [859] K [4.26σ]

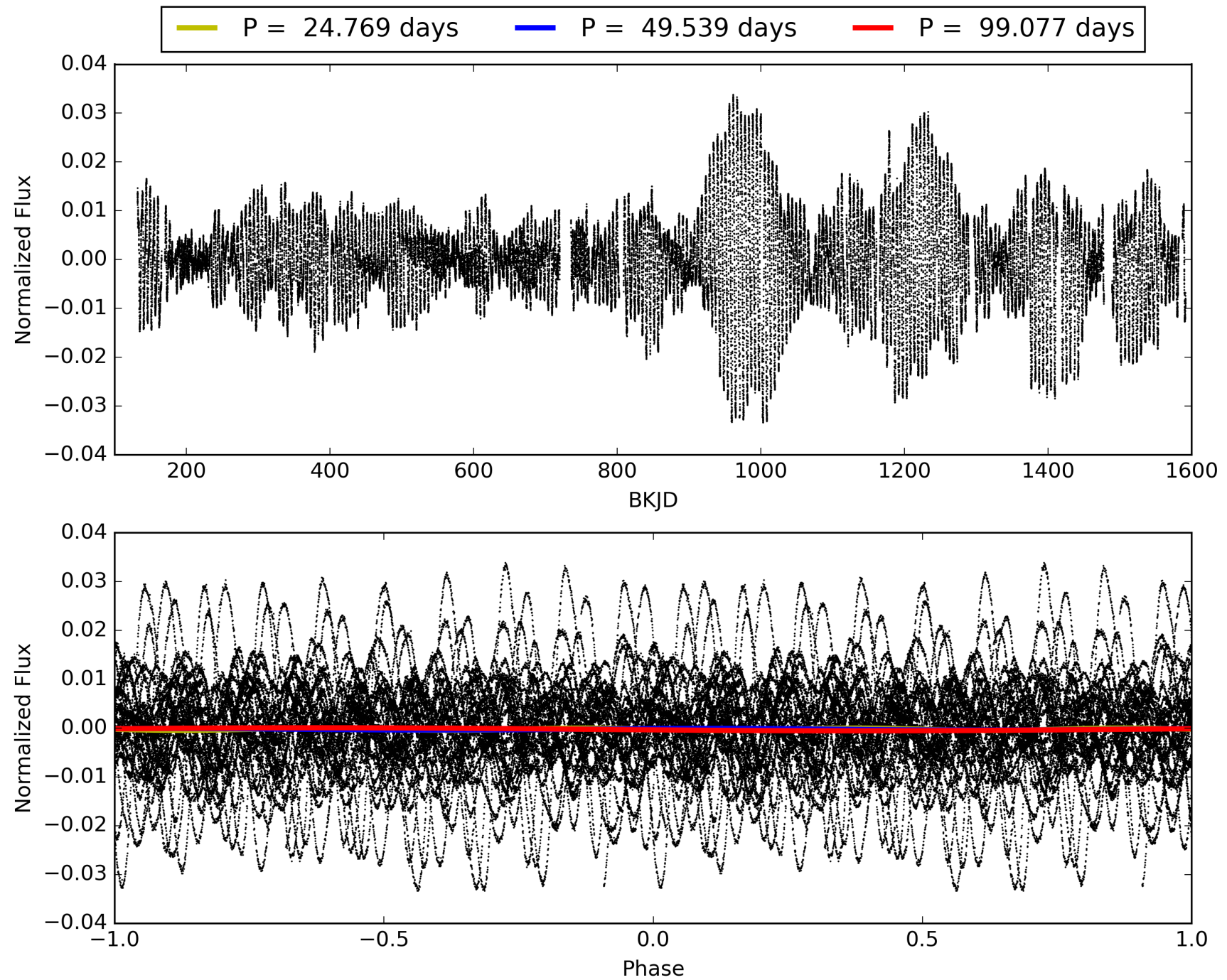
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 95.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.41e-21
RollingBand-fgt: 0.92 [23/25]
GhostDiagnostic-chr: 0.4037
Centroid-sig: 1.3%
Centroid-so: 1.841 arcsec [1.84σ]
OotOffset-rm: 0.402 arcsec [1.24σ]
KicOffset-rm: 0.407 arcsec [1.26σ]
OotOffset-st: 3/2/3/4 [12]
KicOffset-st: 3/2/3/4 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 1.00 [16/16]

TCE 006468904-01, PDC Light Curves

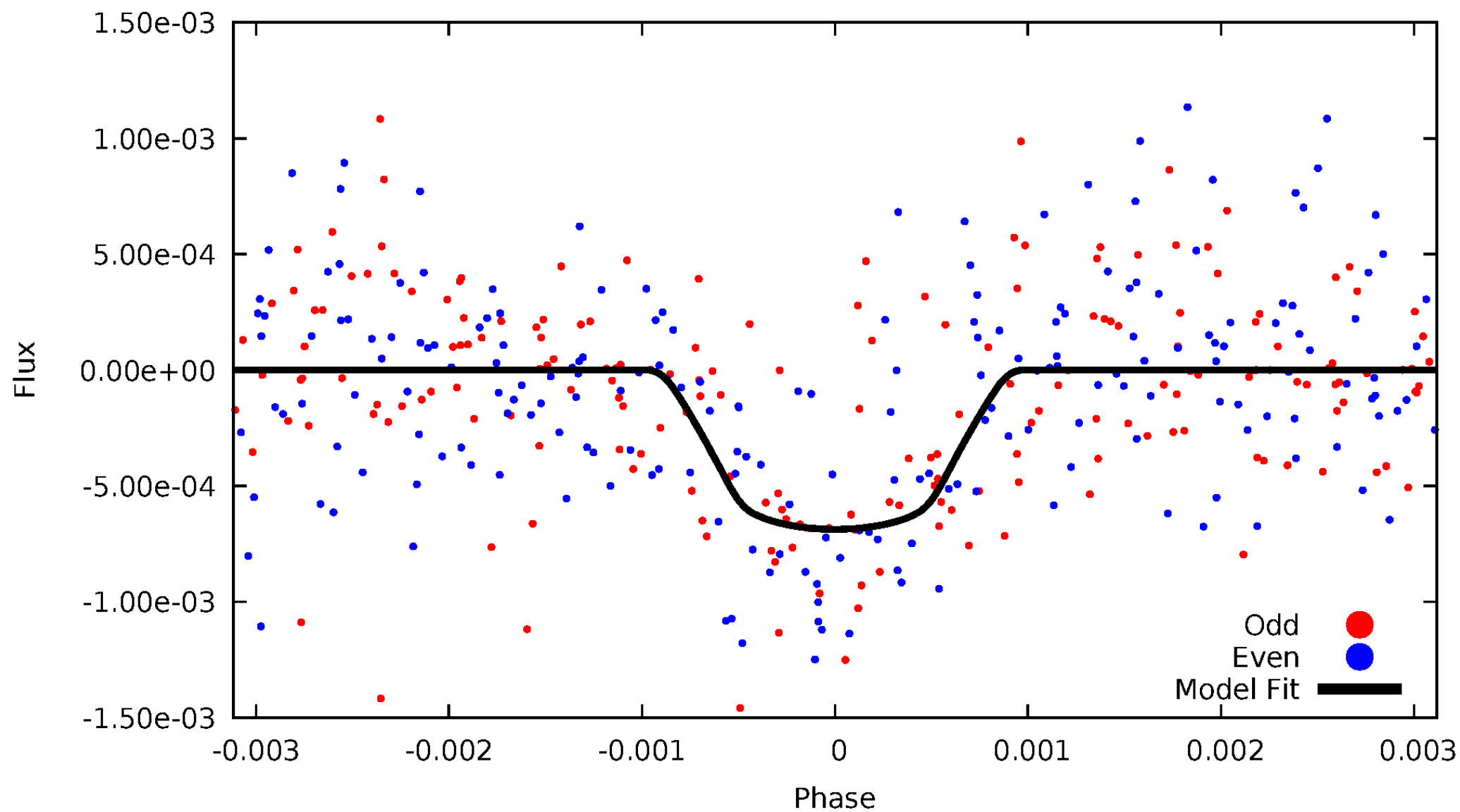


TCE 006468904-01



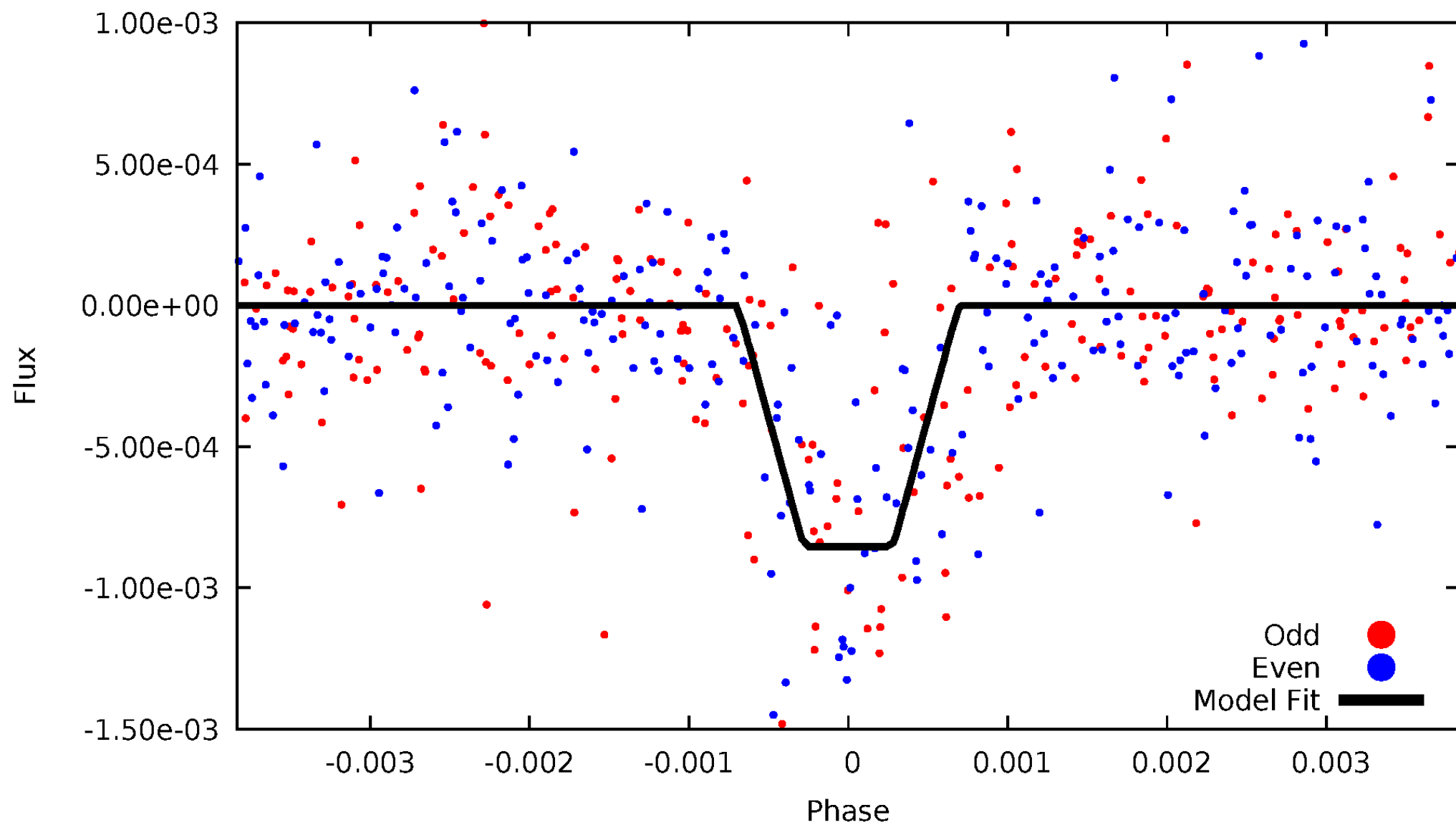
DV Odd/Even

TCE 006468904-01

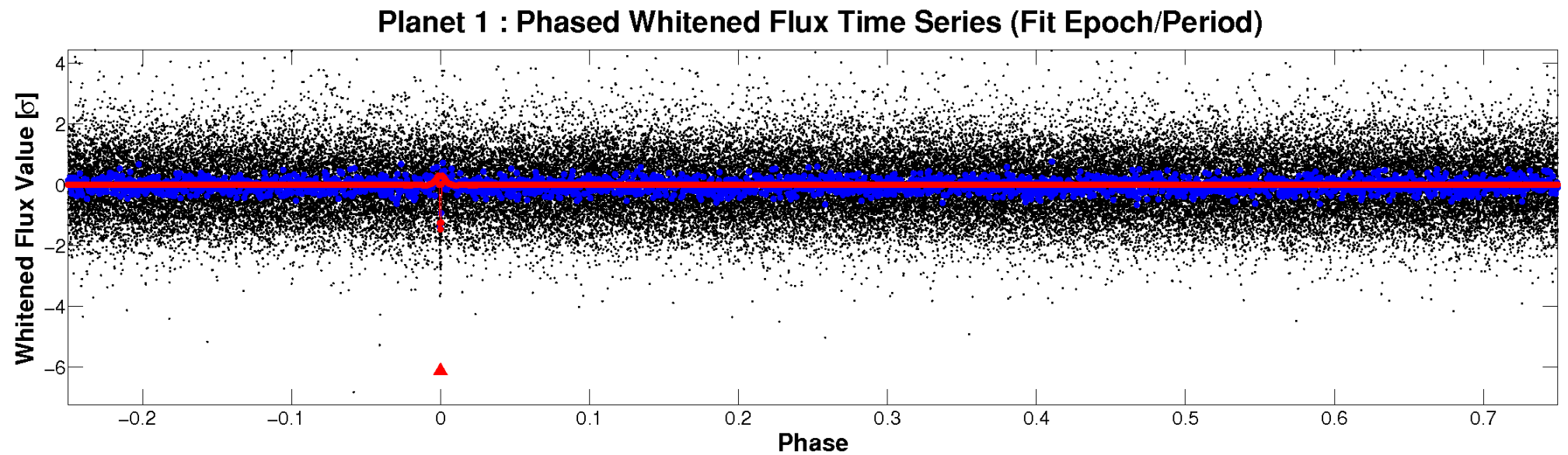
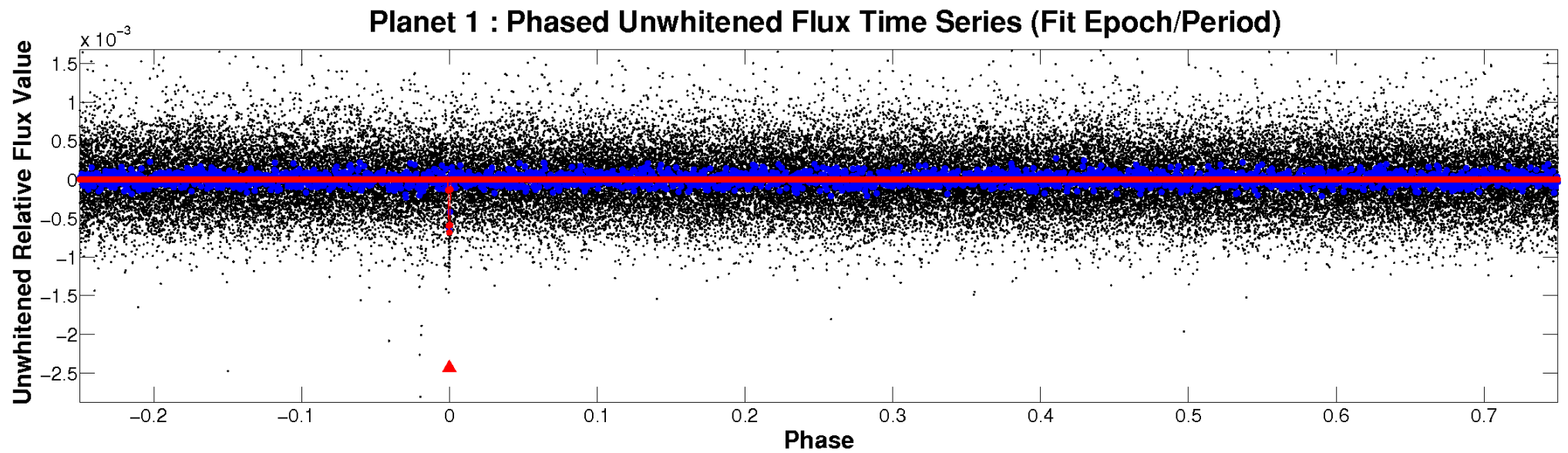


ALT Odd/Even

TCE 006468904-01

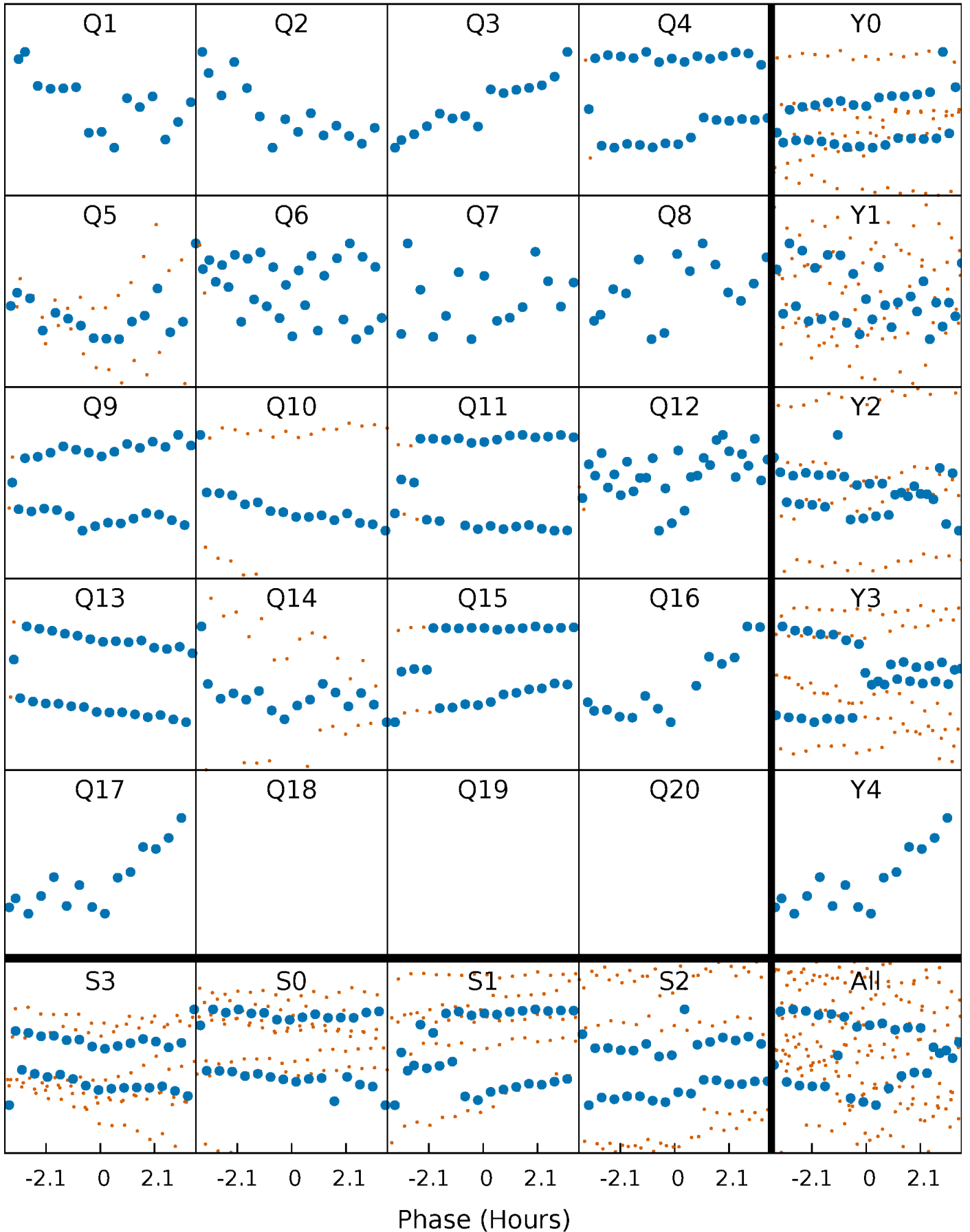


Non-Whitened Vs. Whitened Light Curve



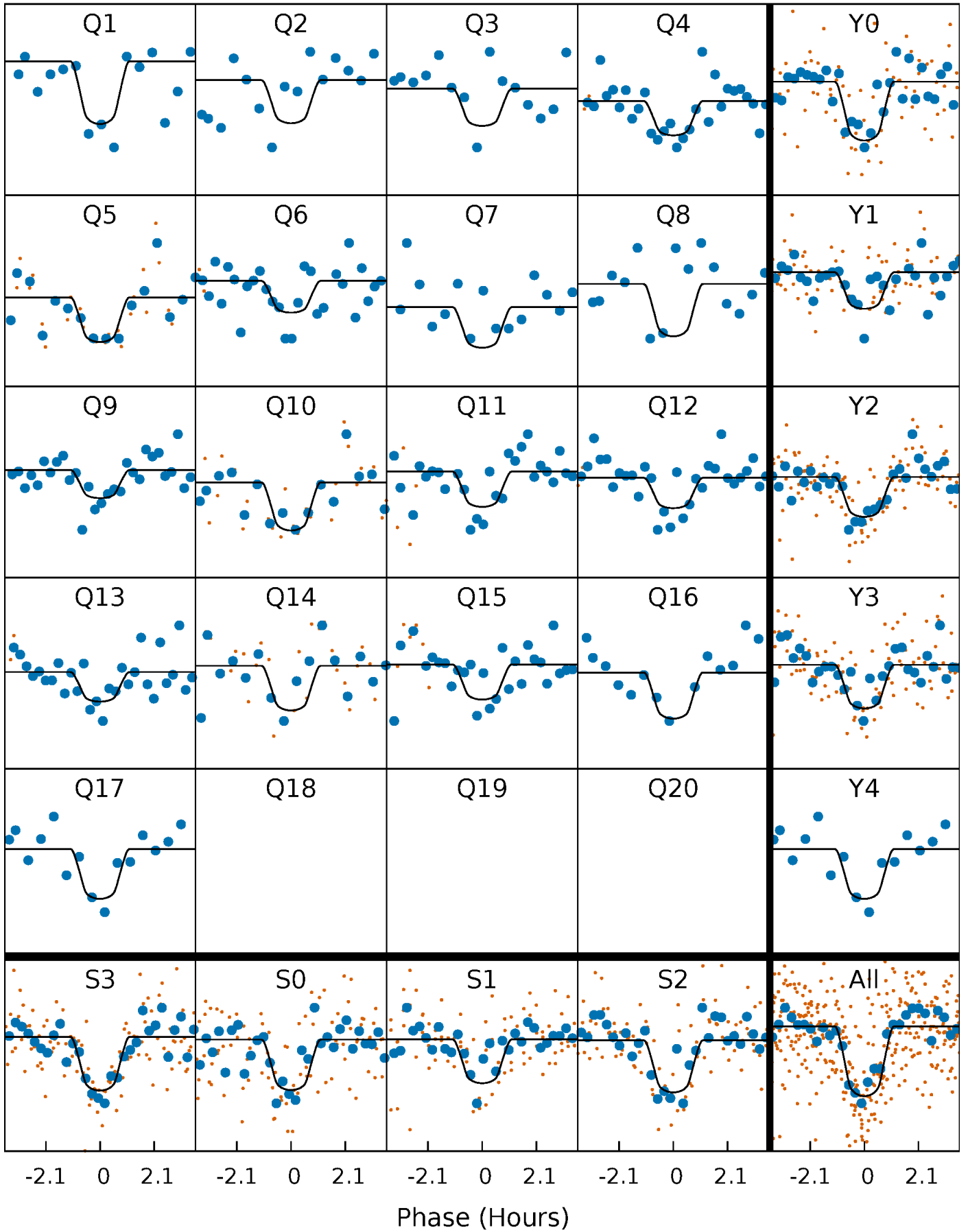
PDC Quarter-Phased Transit Curves

TCE 006468904-01 P= 49.538537 Days $T_0=132.507002$ (BKJD)



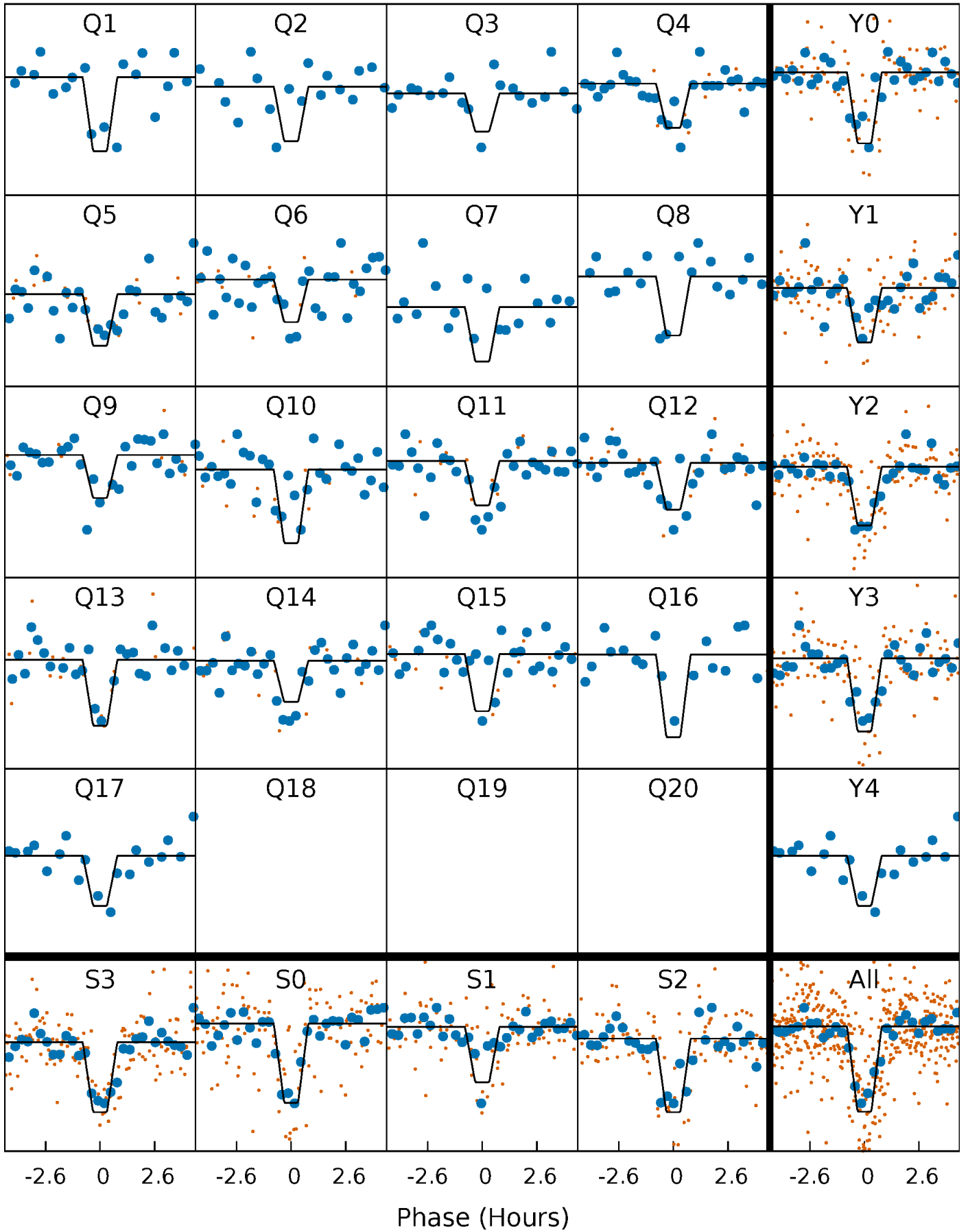
DV Quarter-Phased Transit Curves

TCE 006468904-01 P= 49.538537 Days $T_0=132.507002$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

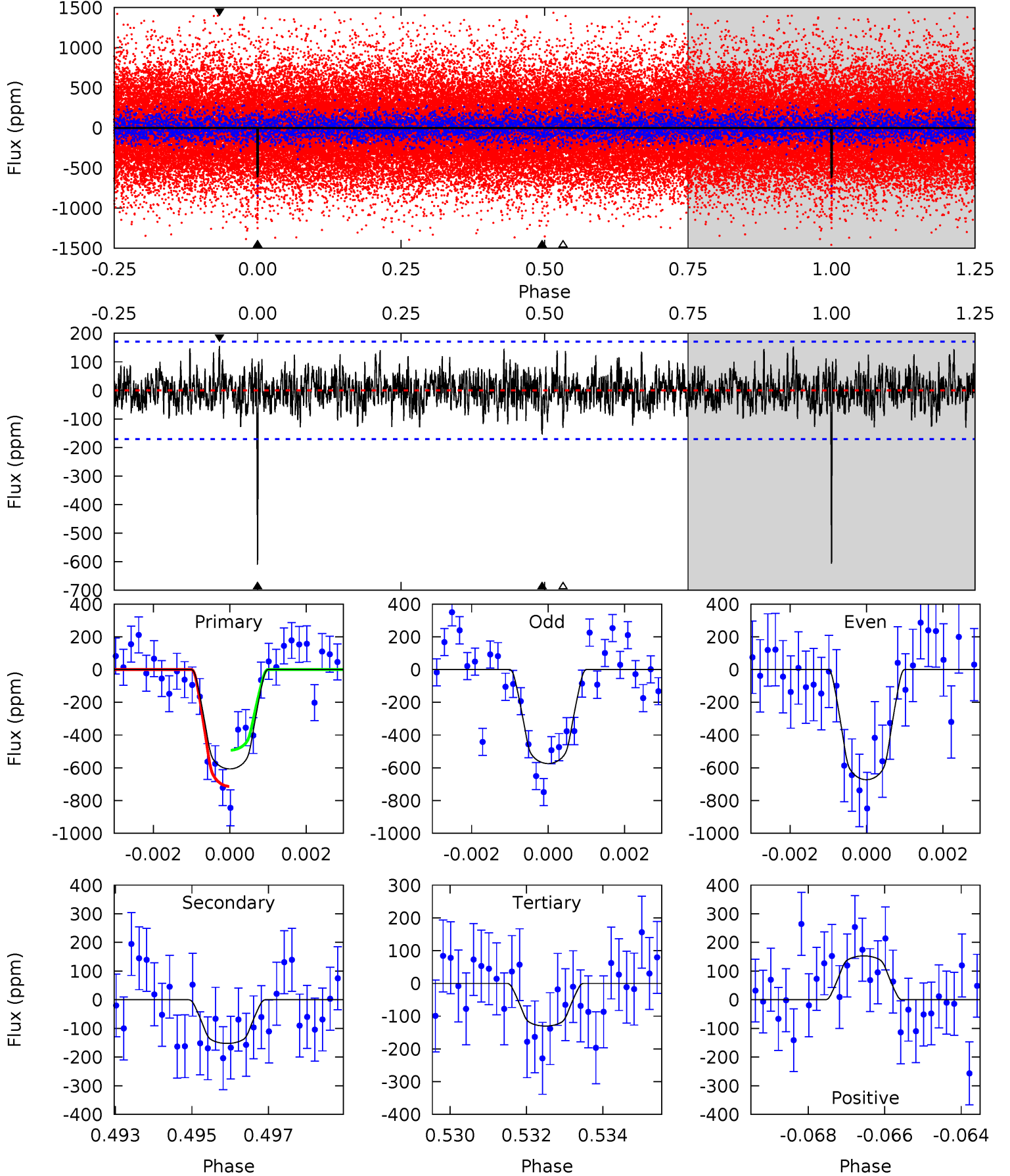
TCE 006468904-01 P= 49.538439 Days $T_0=132.504617$ (BKJD)



DV Model-Shift Uniqueness Test

006468904-01, P = 49.538537 Days, E = 82.968465 Days

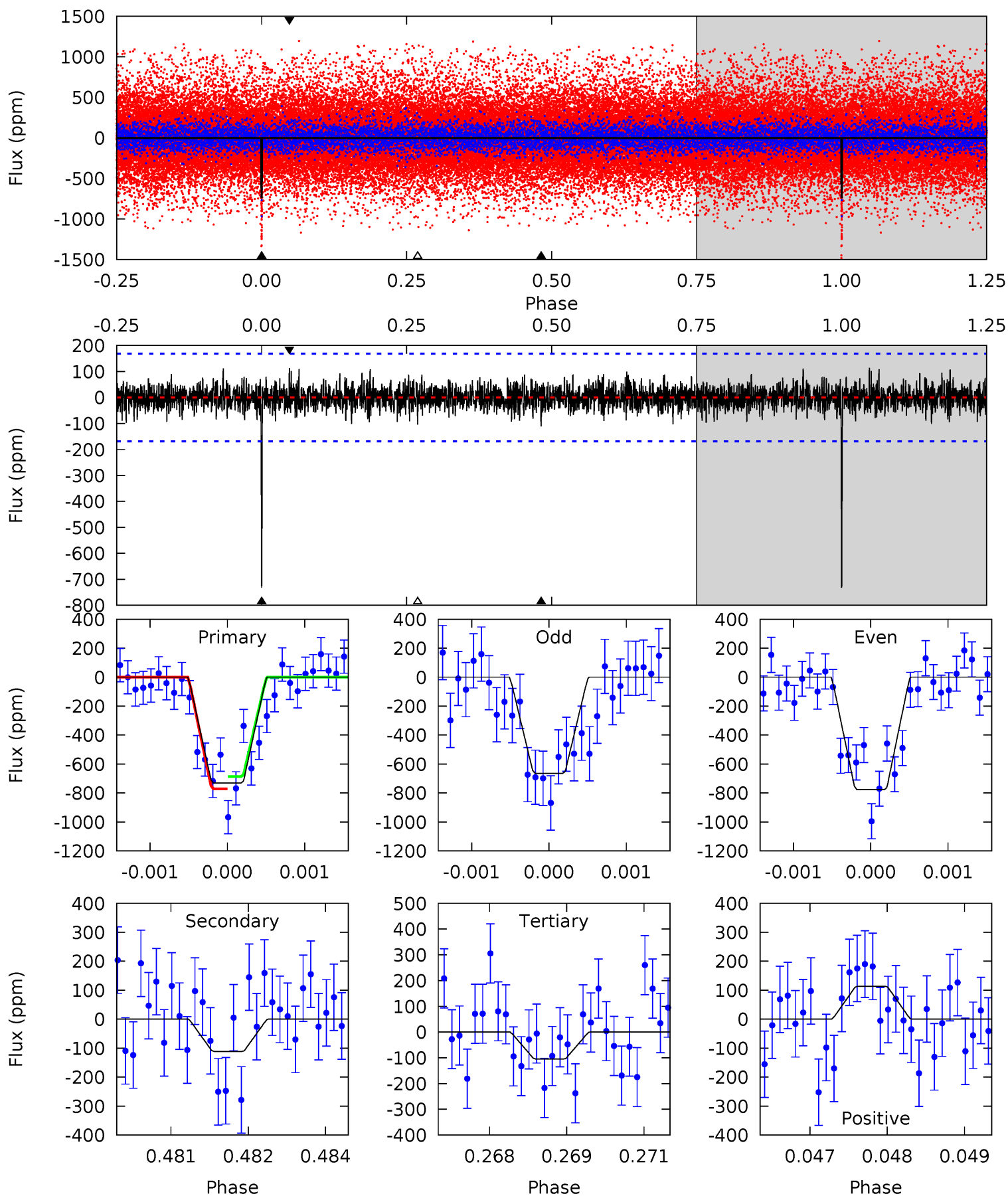
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	4.77	4.07	4.79	5.33	3.10	1.41	14.9	14.2	0.70	-0.02	1.54	0.94	0.20	3.47



Alt Model-Shift Uniqueness Test

006468904-01, P = 49.538439 Days, E = 82.966178 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	3.57	3.35	3.63	5.39	3.20	1.01	20.0	19.8	0.22	-0.07	1.79	1.04	0.13	1.37



Stellar Parameters For KIC 006468904

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5683^{+173}_{-155}	$4.605^{+0.036}_{-0.144}$	$-0.520^{+0.300}_{-0.300}$	$0.747^{+0.168}_{-0.056}$	$0.835^{+0.079}_{-0.096}$	$2.818^{+0.415}_{-1.190}$
	+3%/-3%	+1%/-3%	+58%/-58%	+22%/-7%	+9%/-11%	+15%/-42%
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 006468904-01 / KOI 4743.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-152 ± 32	$2.38^{+0.95}_{-0.94}$	620^{+34}_{-26}	4067^{+882}_{-469}	918^{+1575}_{-483}
Alt.	-112 ± 31	$2.48^{+0.92}_{-0.92}$	621^{+32}_{-24}	3790^{+689}_{-418}	589^{+912}_{-306}

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 $A_{obs} \gg 1.0$

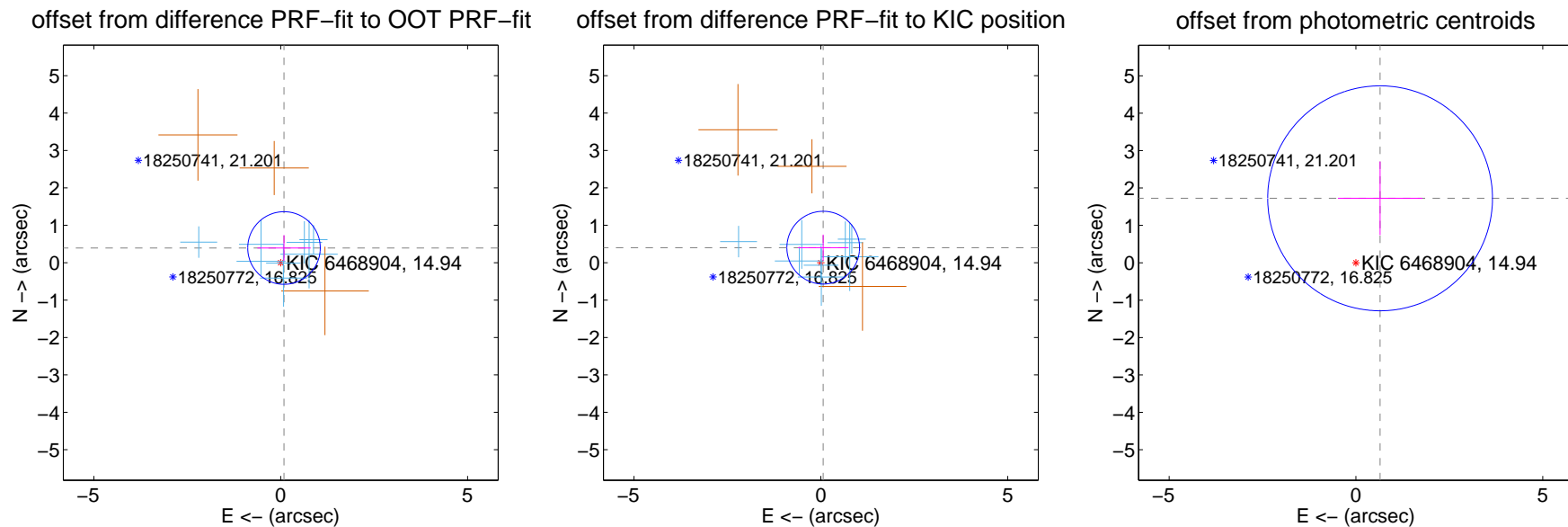
DV Centroid Data

Supplemental centroid analysis for 006468904-01. Kepler magnitude: 14.94. Transit SNR 12.27

There are 8 quarters with good PRF difference image offsets

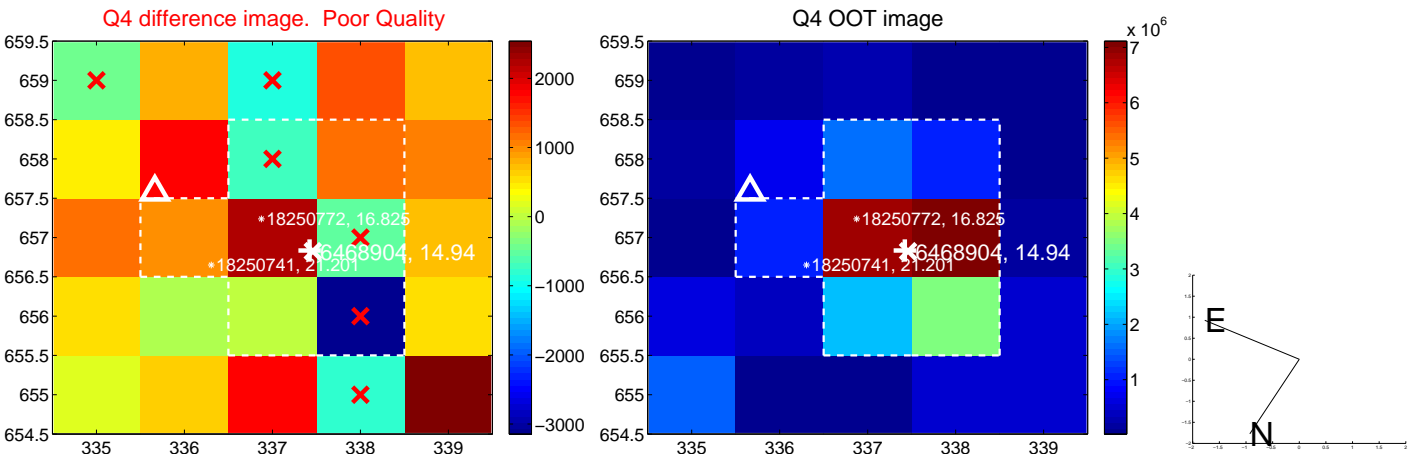
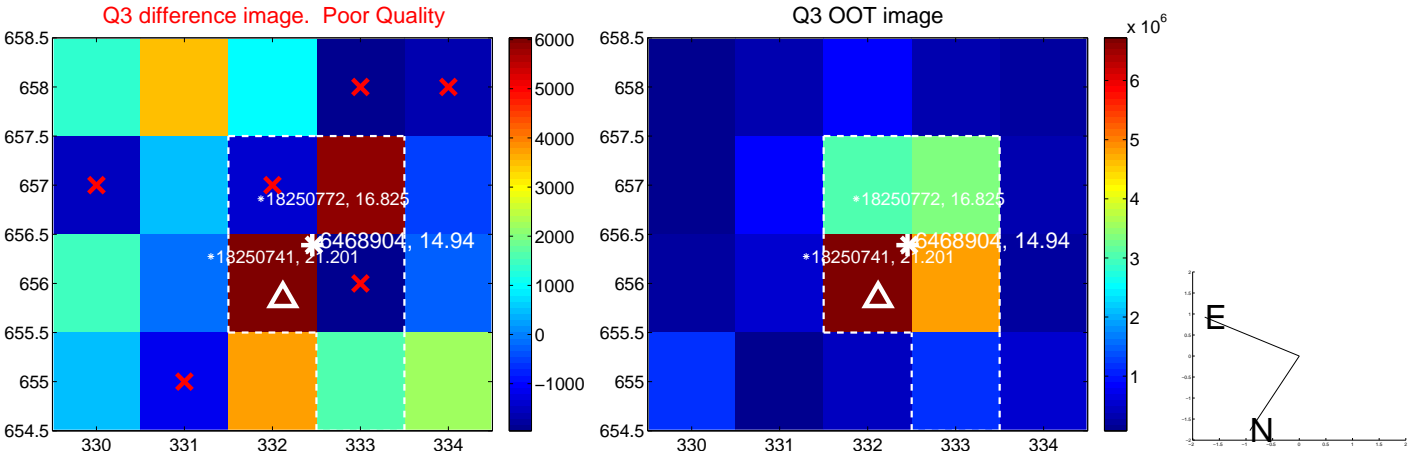
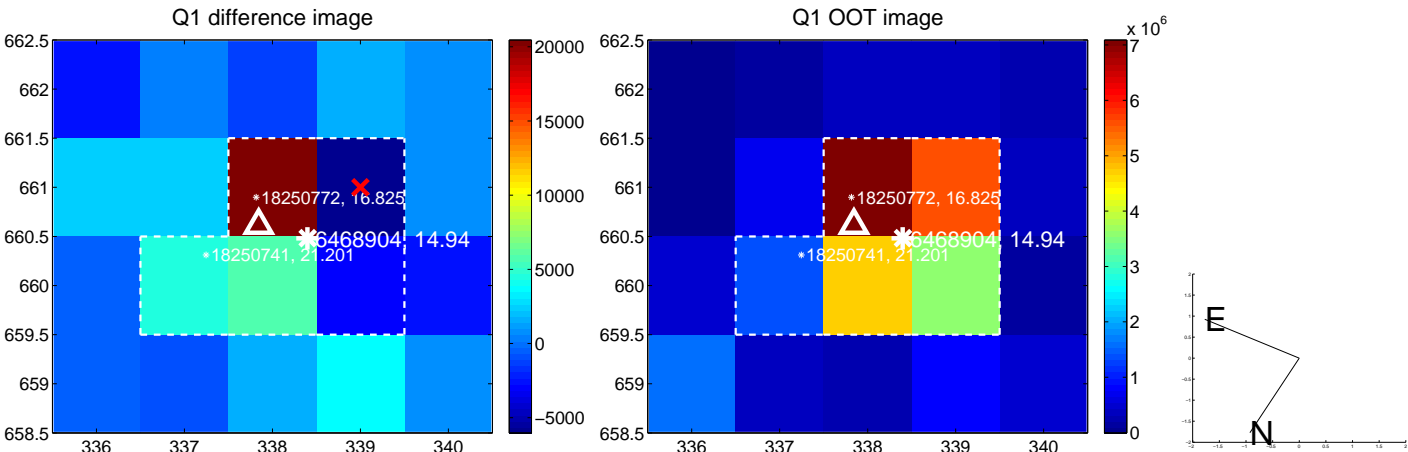
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.402 ± 0.324	1.24	-0.087 ± 0.715	0.393 ± 0.344
PRF-fit source offset from KIC position	0.407 ± 0.324	1.26	-0.063 ± 0.678	0.402 ± 0.348
photometric centroid source offset	1.84 ± 1.00	1.84	-0.65 ± 1.13	1.72 ± 0.98

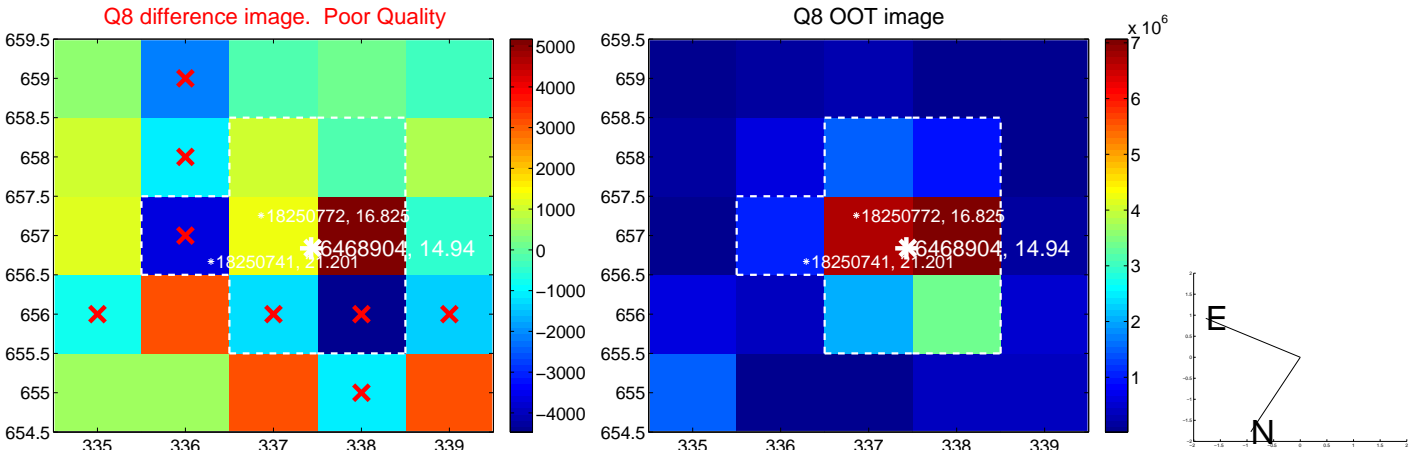
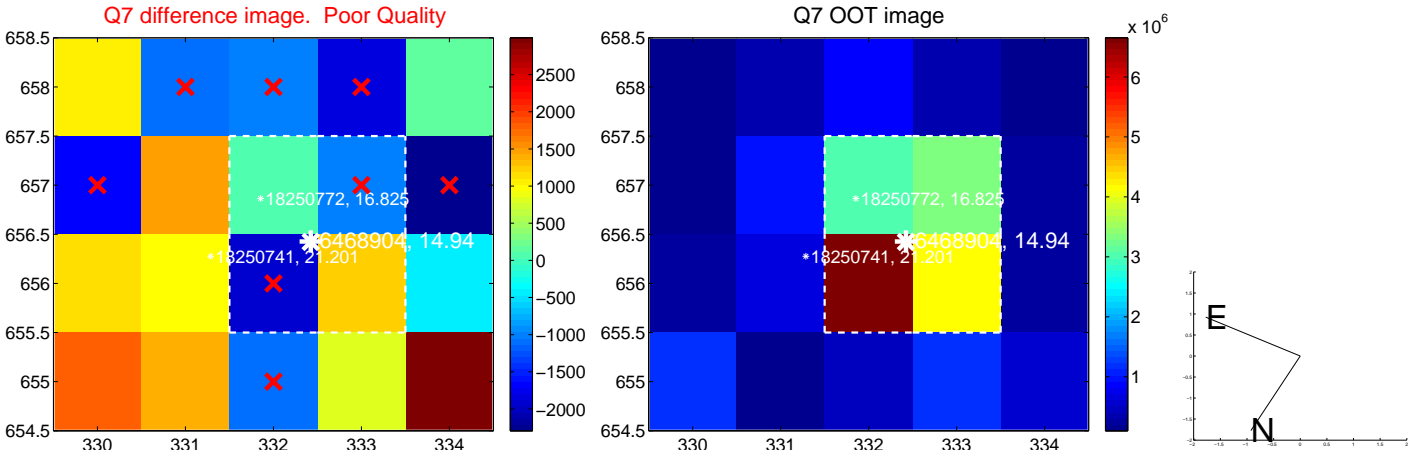
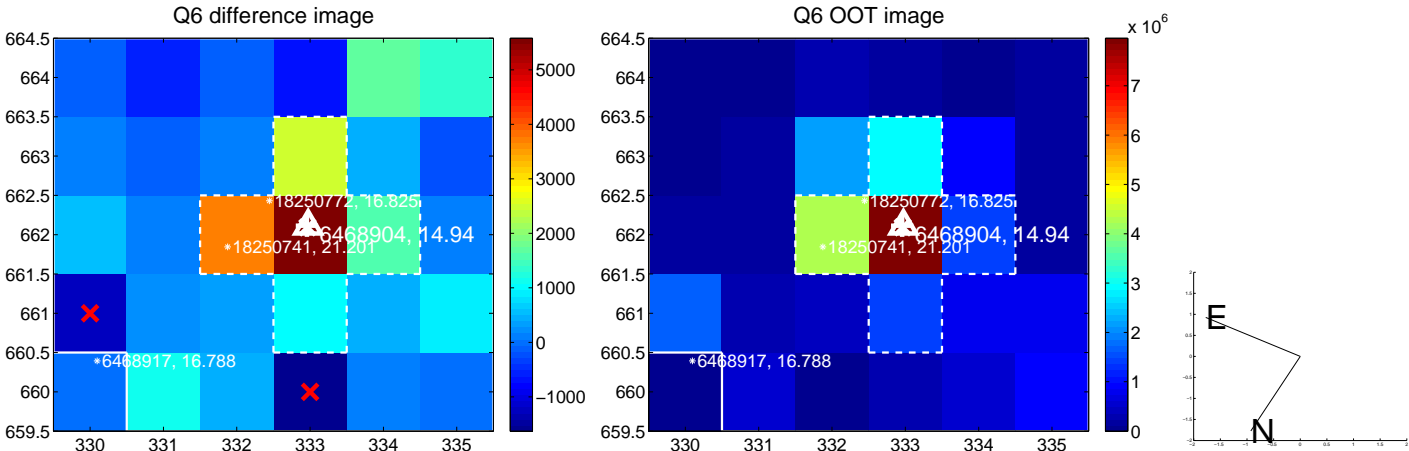
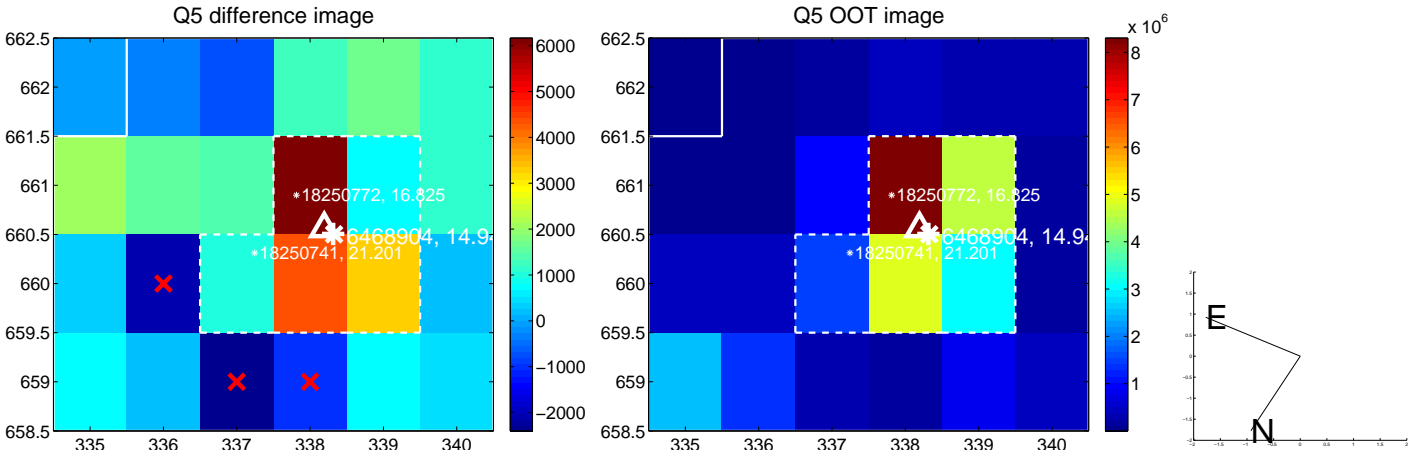


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

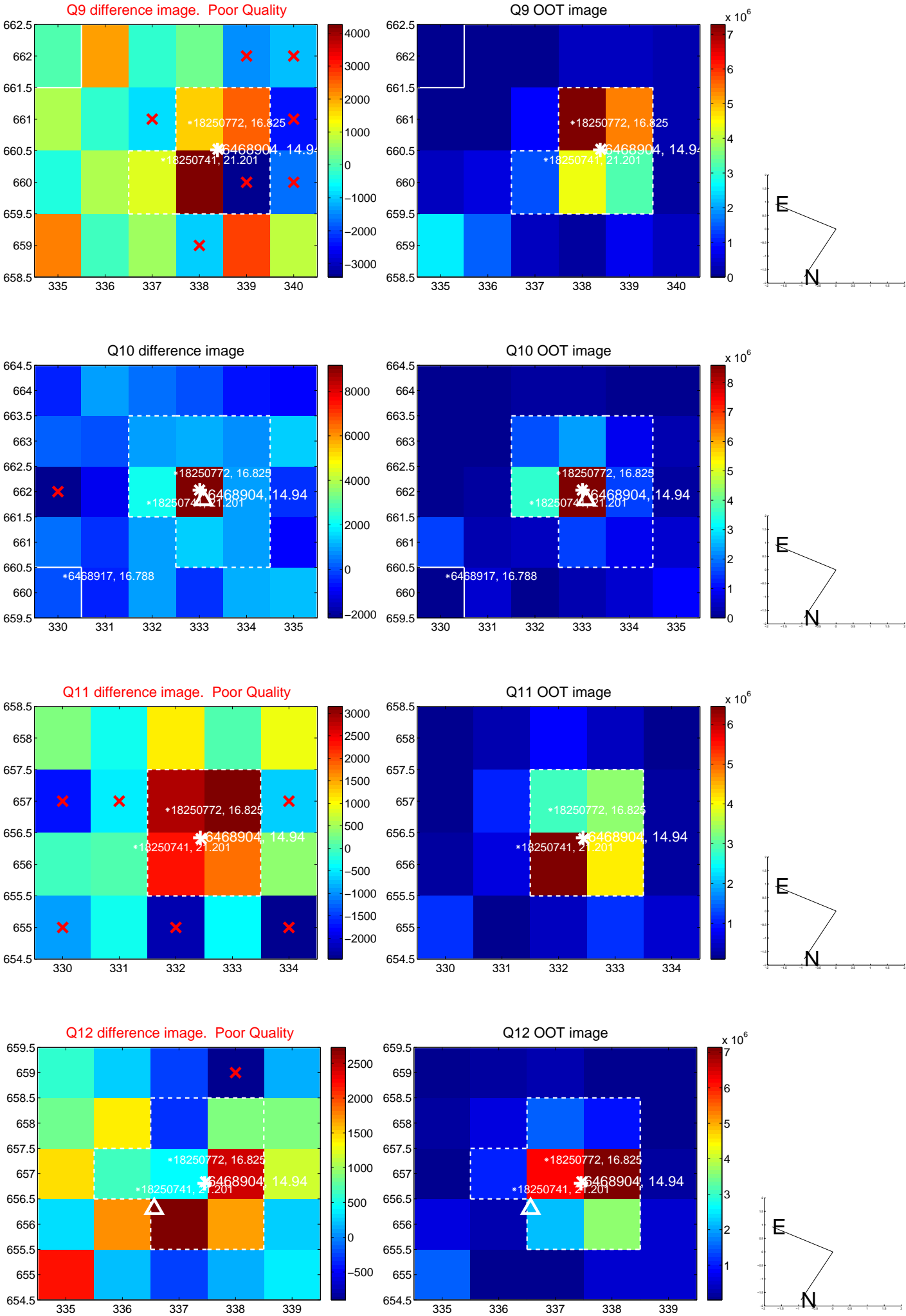
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



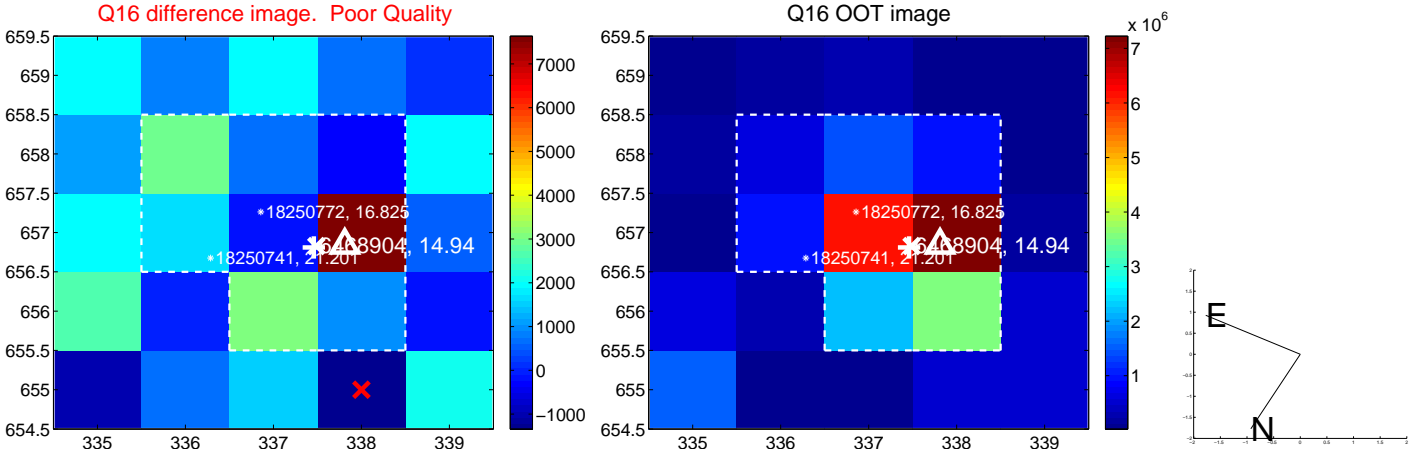
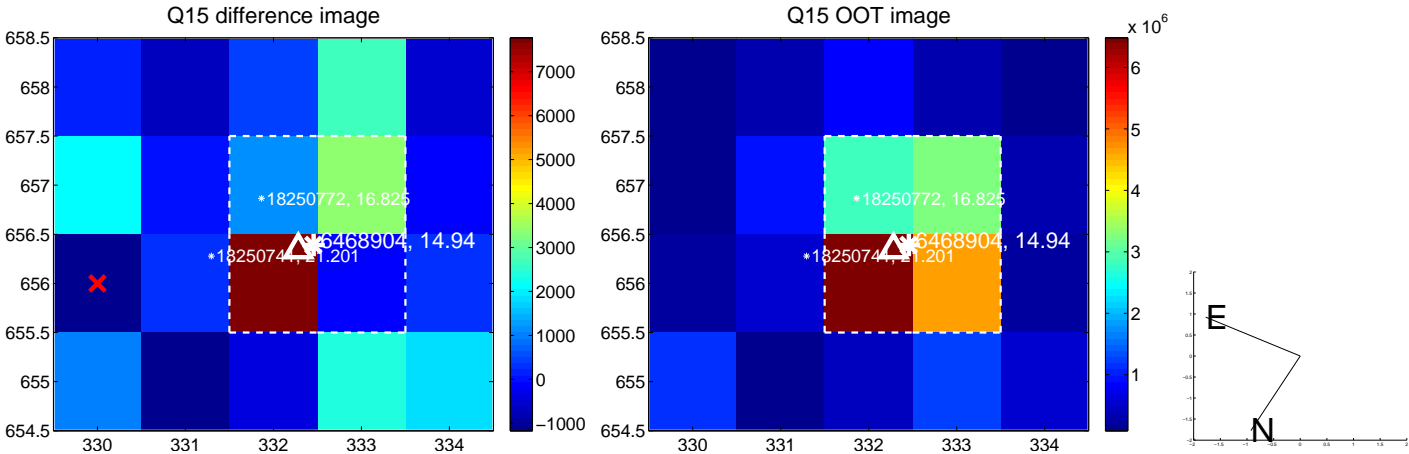
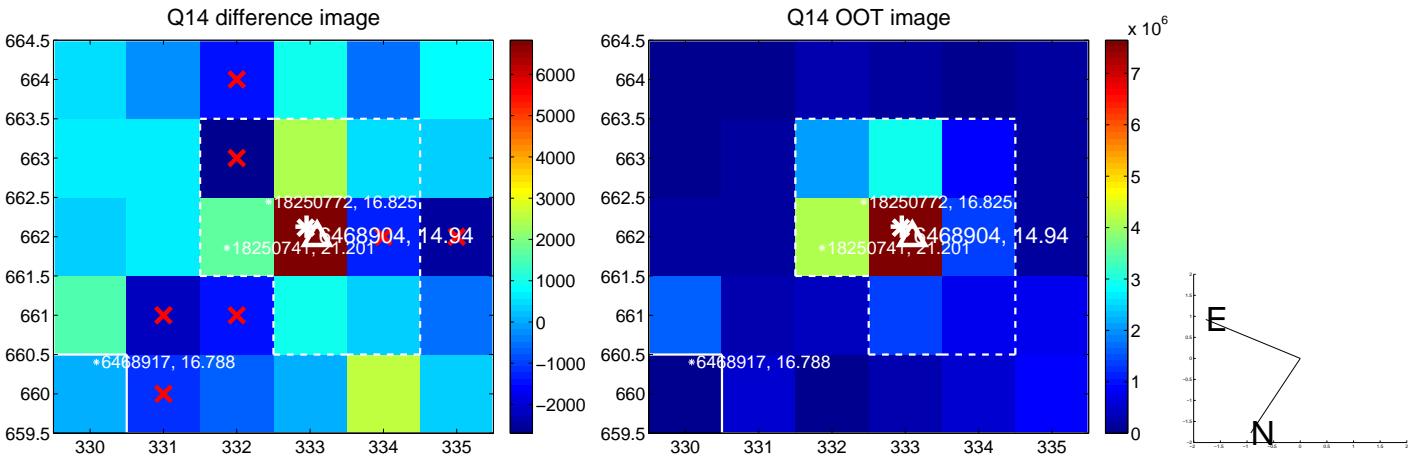
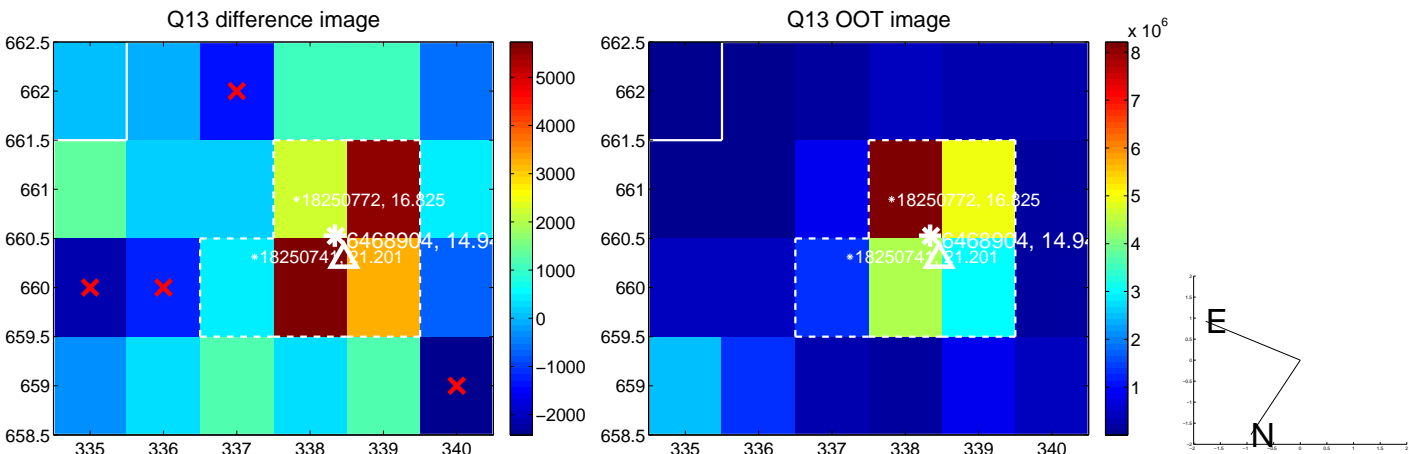
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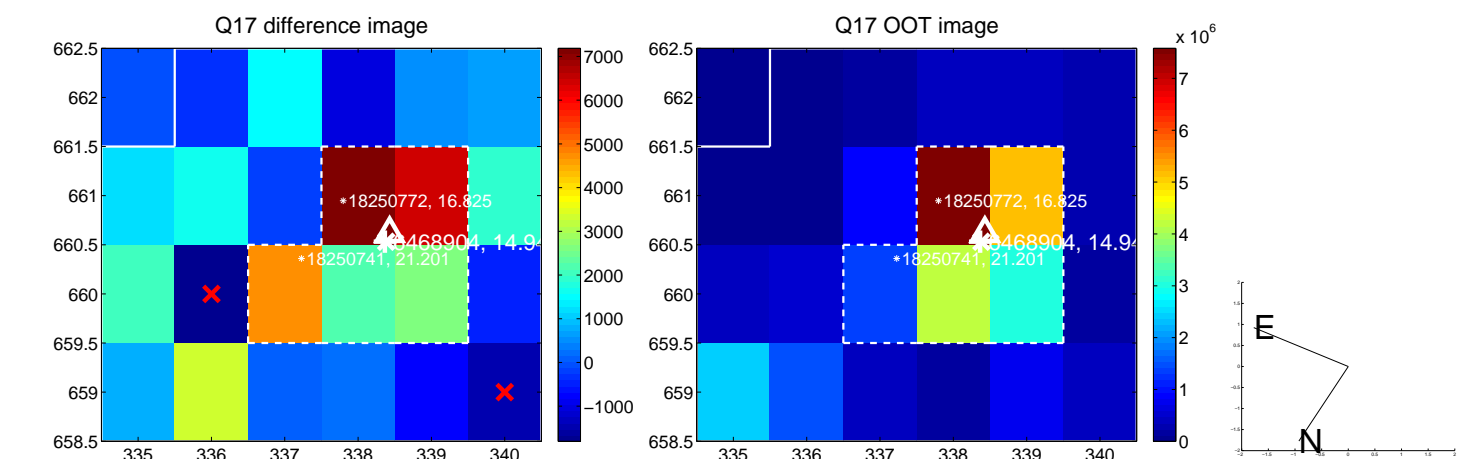
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



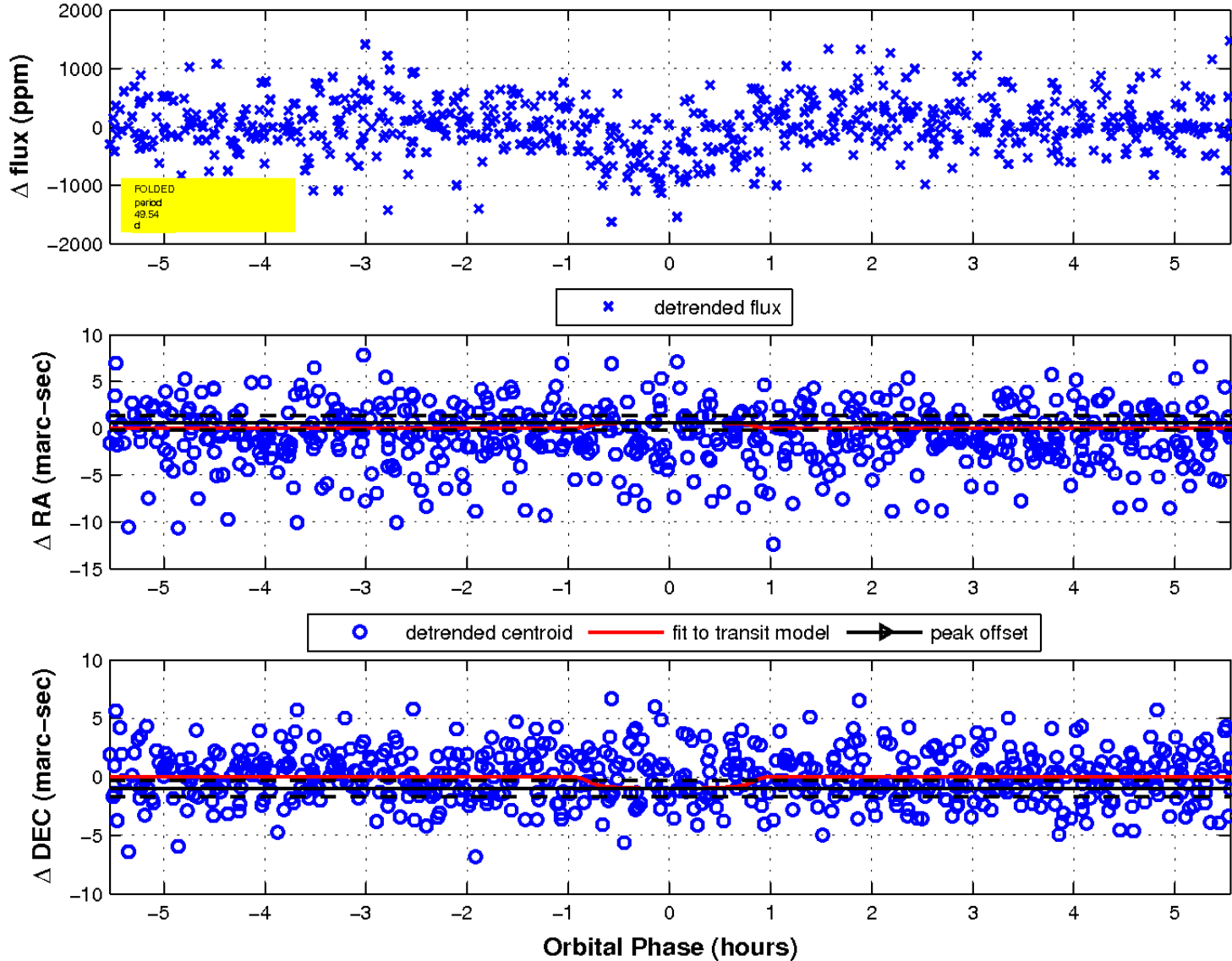
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

