

KIC 009336200

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})
009336200-01	OBS	2242.01	1.755841	133.155663	377.7	2.063	22.9	26.0	0.83	5569	2.03	769.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009336200-01	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.

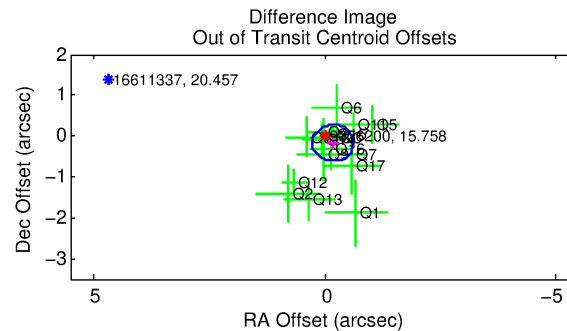
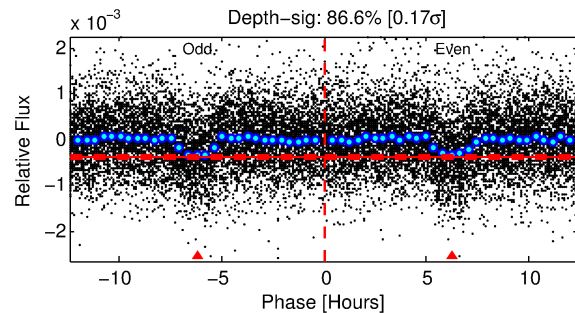
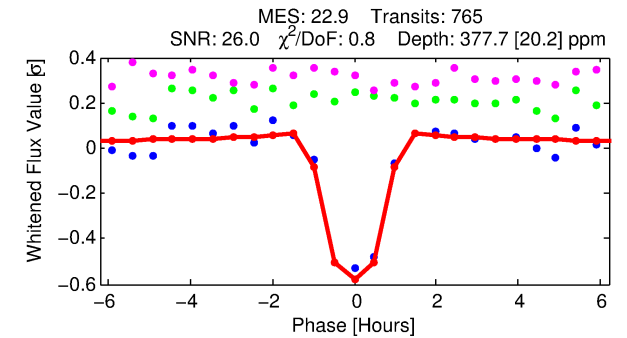
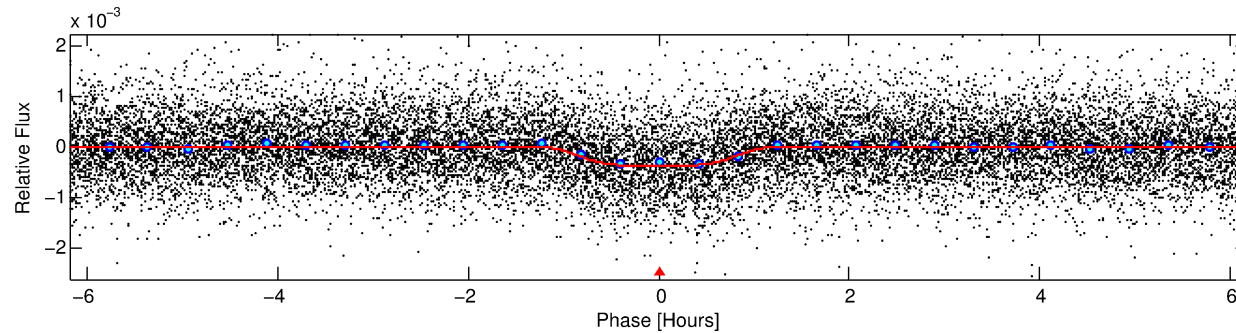
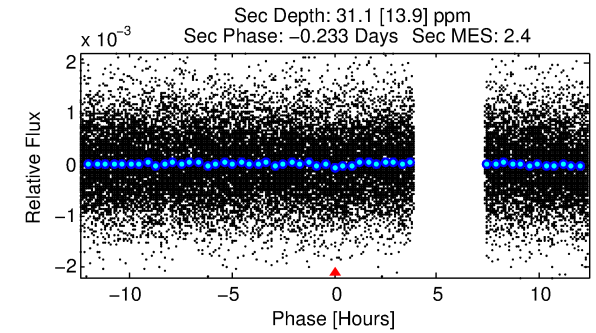
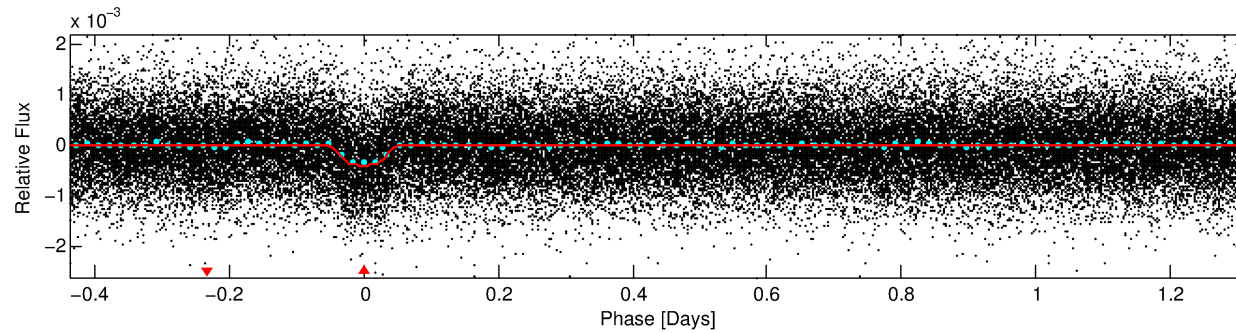
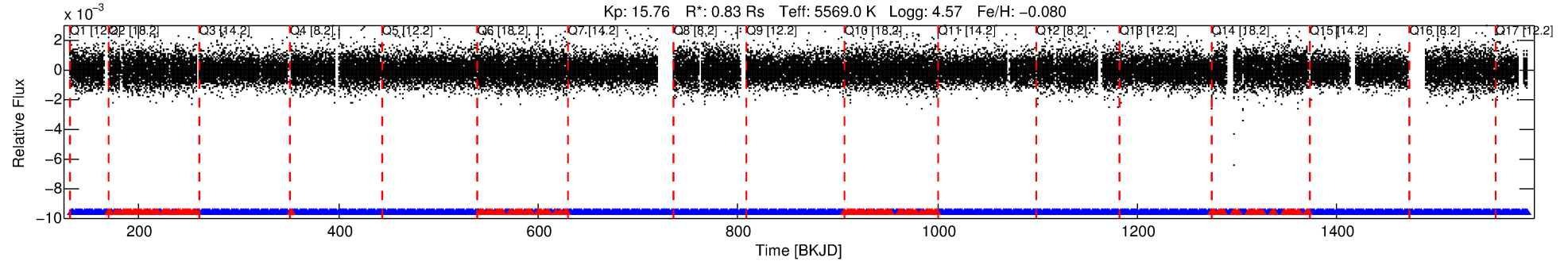
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009336200-01

No Significant Match Found

DV One-Page Summary

KIC: 9336200 Candidate: 1 of 1 Period: 1.756 d
KOI: K02242.01 Corr: 0.937



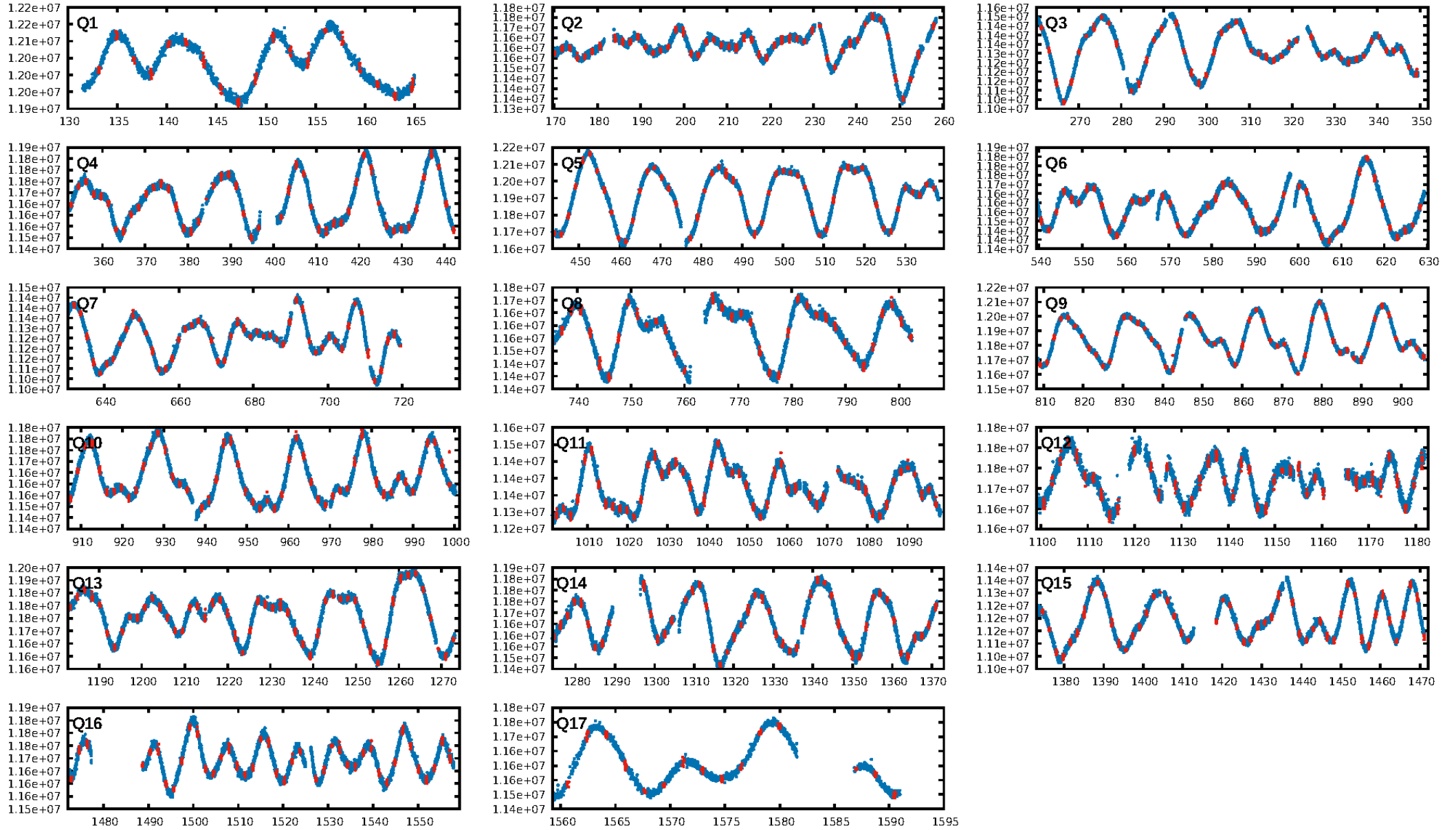
DV Fit Results:

Period = 1.75584 [0.00000] d
Epoch = 133.1557 [0.0011] BKJD
Rp/R* = 0.0225 [0.0022]
a/R* = 2.78 [1.03]
b = 0.94 [0.05]
Seff = 769.83 [233.80]
Teq = 1343 [102] K
Rp = 2.03 [0.50] Re
a = 0.0277 [0.0053] AU
Ag = 3.19 [1.79] [1.22σ]
Teffp = 2775 [348] K [3.95σ]

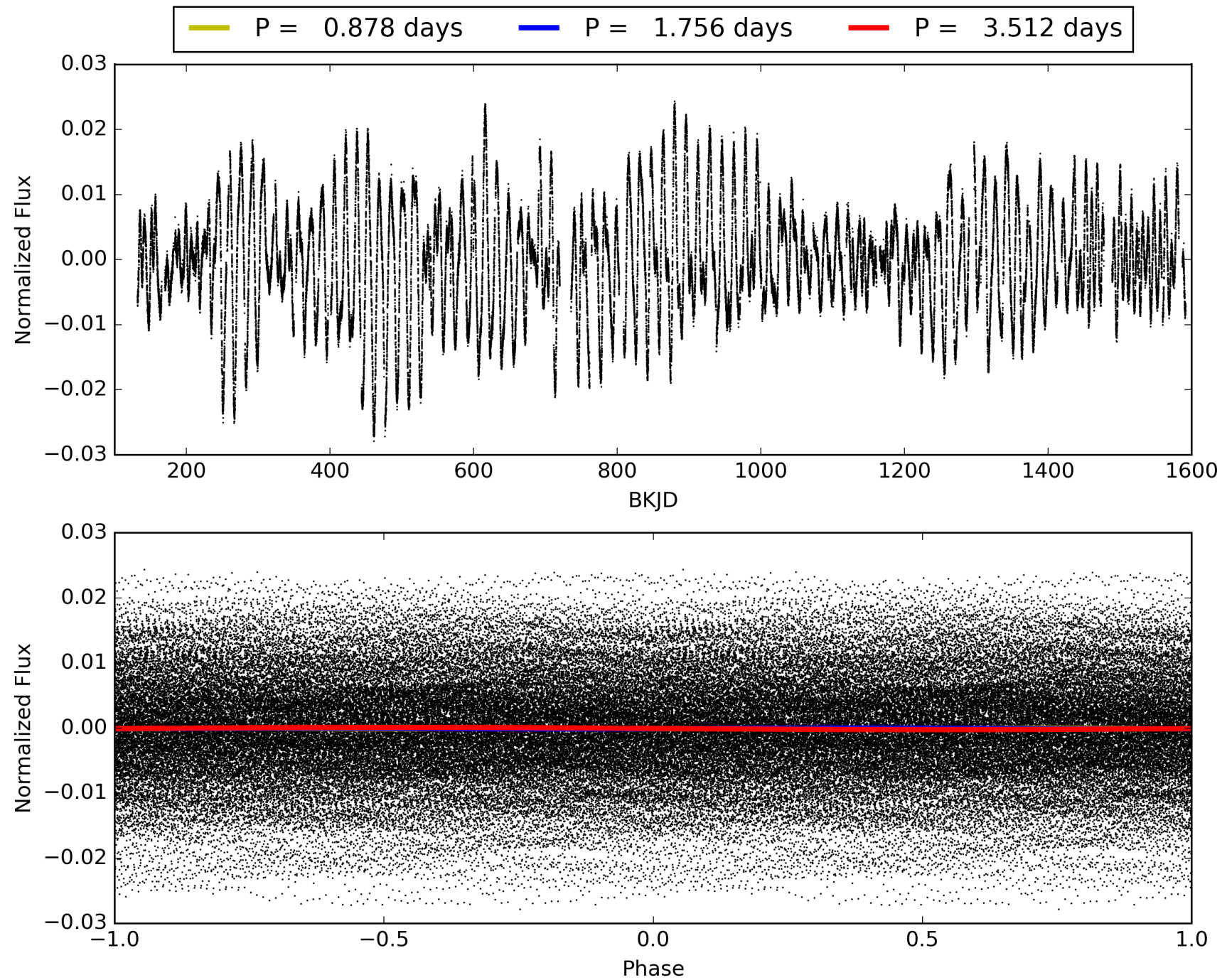
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.62e-110
RollingBand-fgt: 0.81 [590/731]
GhostDiagnostic-chr: 1.666
Centroid-sig: 63.7%
Centroid-so: 0.680 arcsec [1.29σ]
OotOffset-rm: 0.245 arcsec [1.65σ]
KicOffset-rm: 0.278 arcsec [1.52σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009336200-01, PDC Light Curves

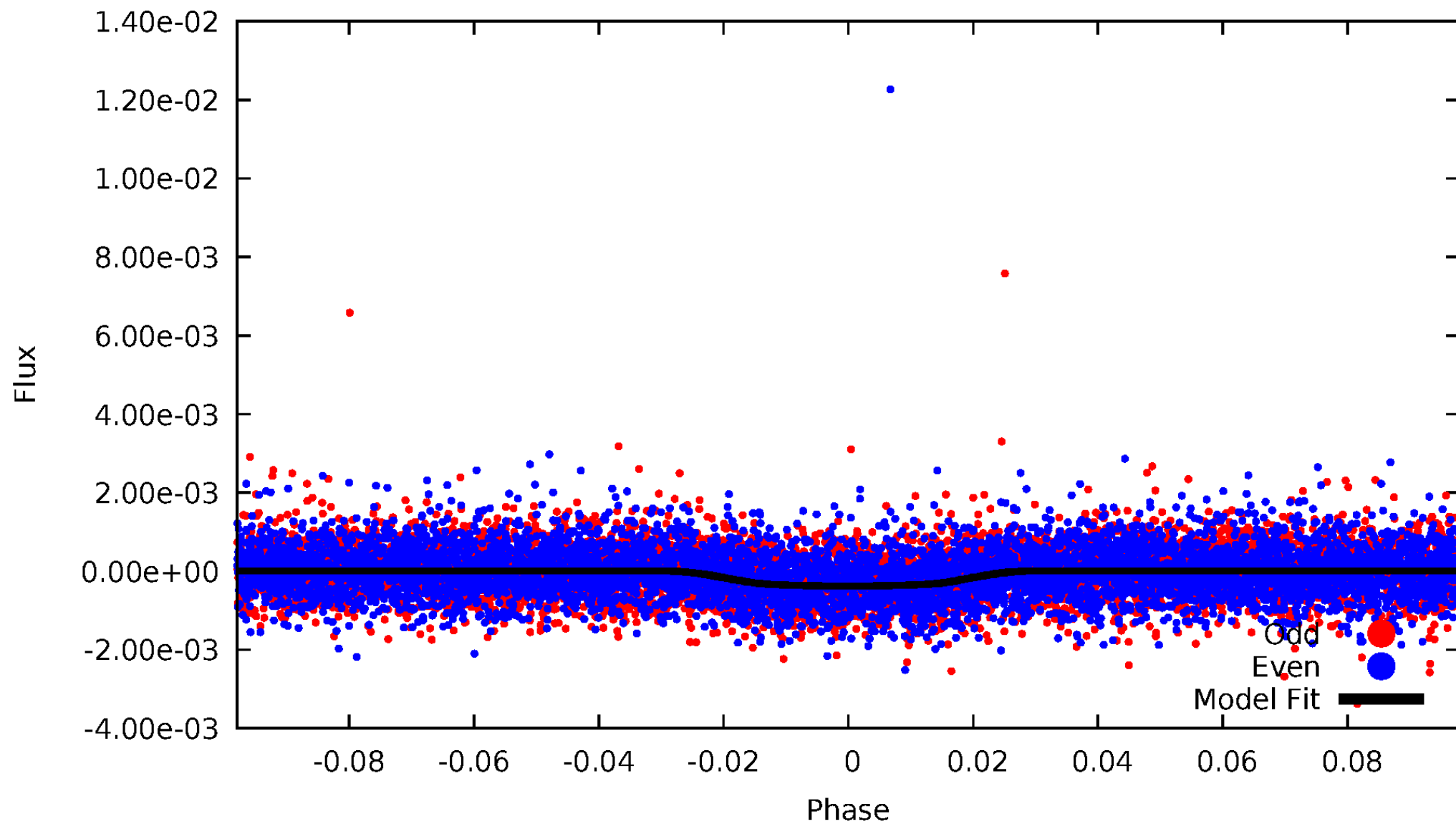


TCE 009336200-01



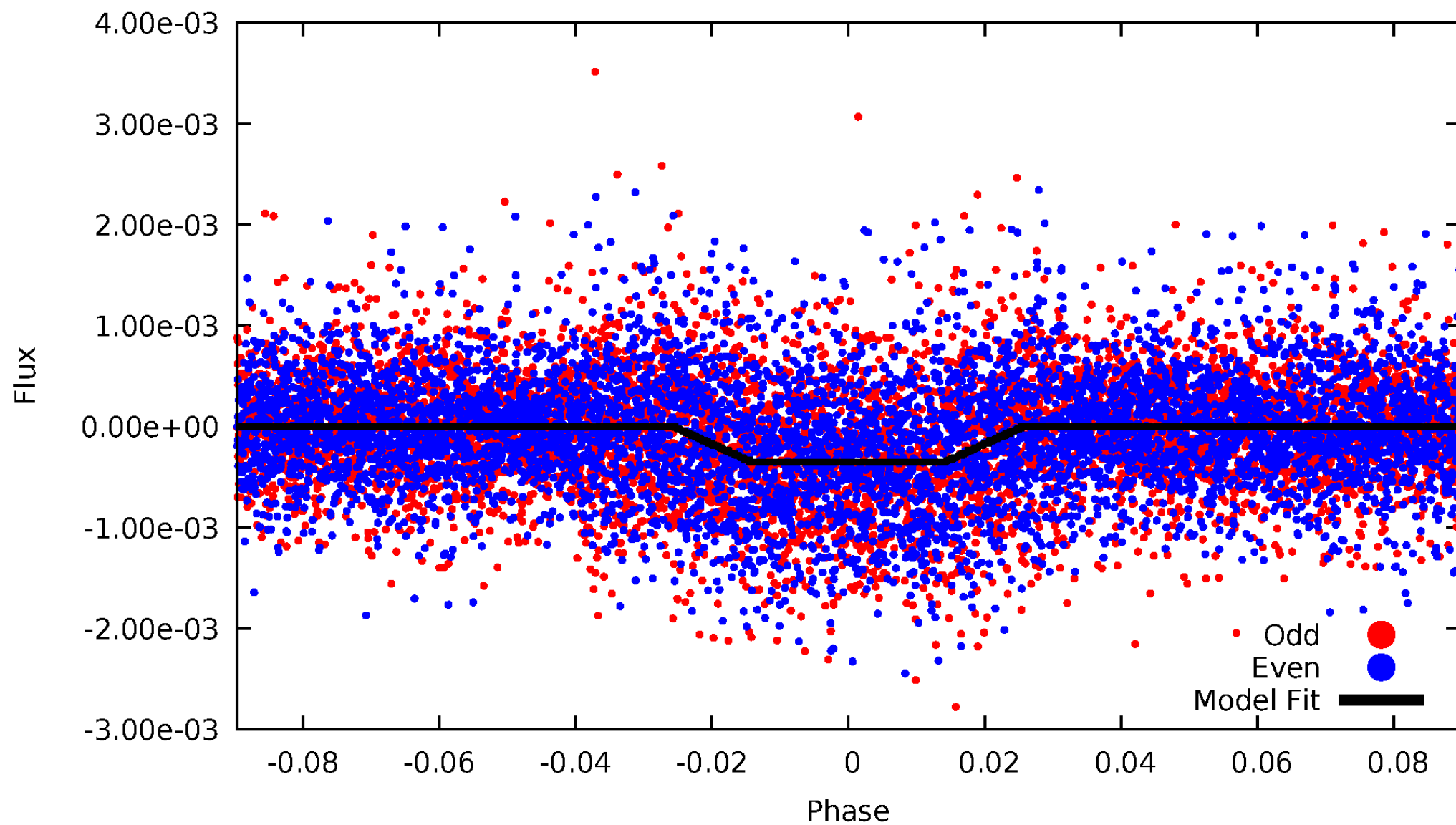
DV Odd/Even

TCE 009336200-01

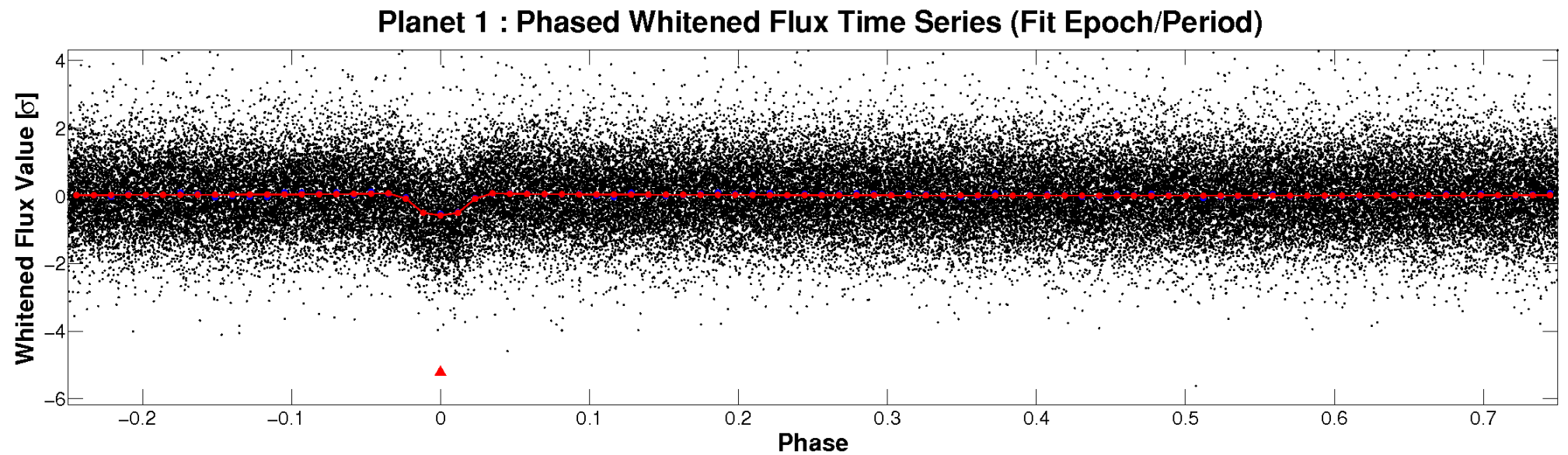
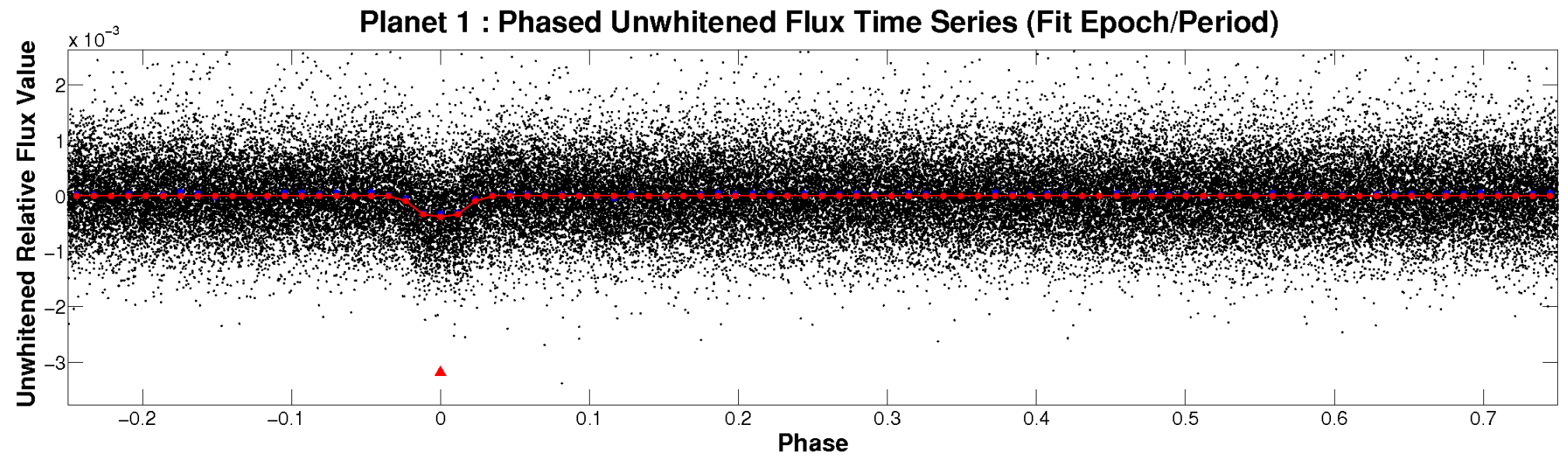


ALT Odd/Even

TCE 009336200-01

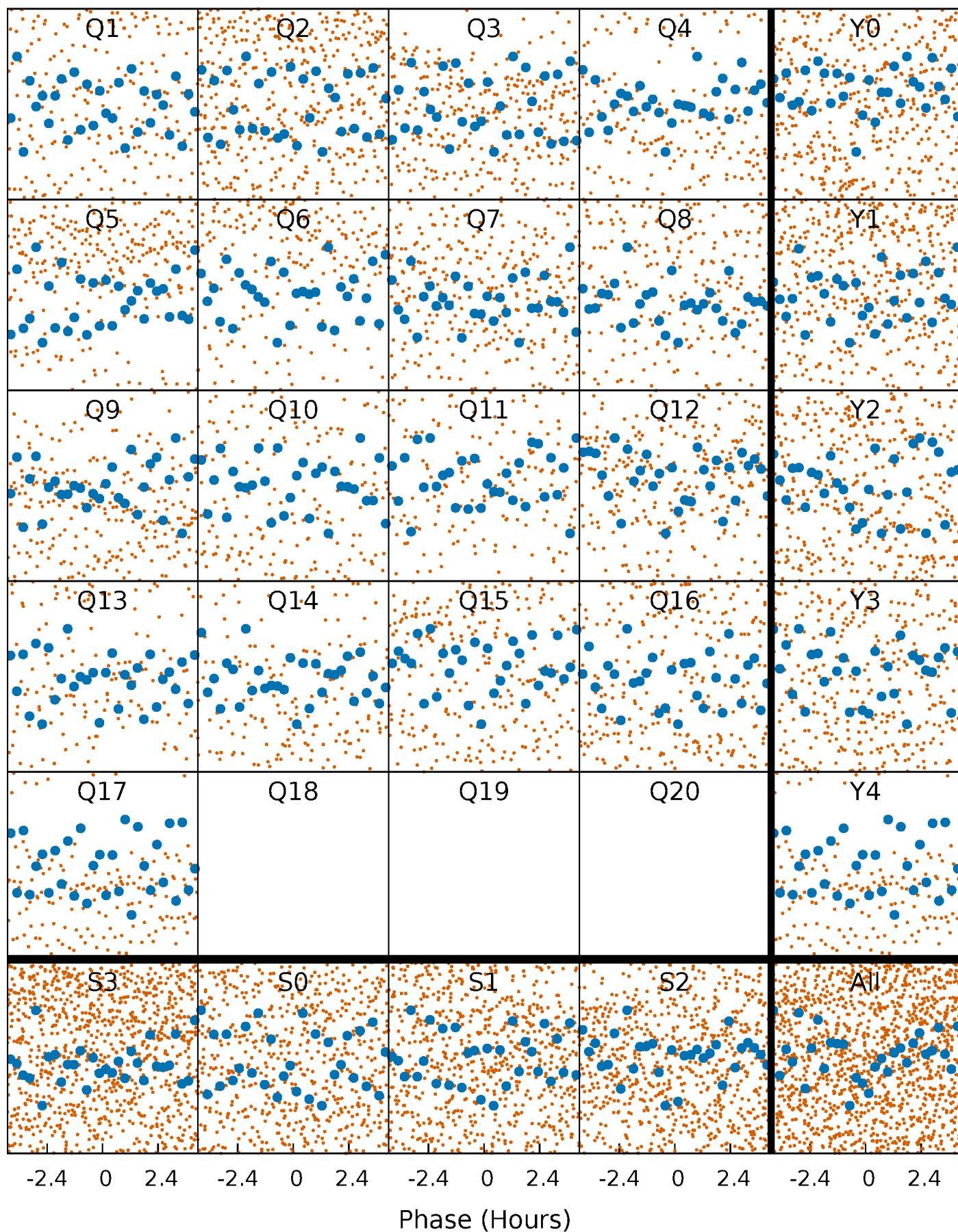


Non-Whitened Vs. Whitened Light Curve



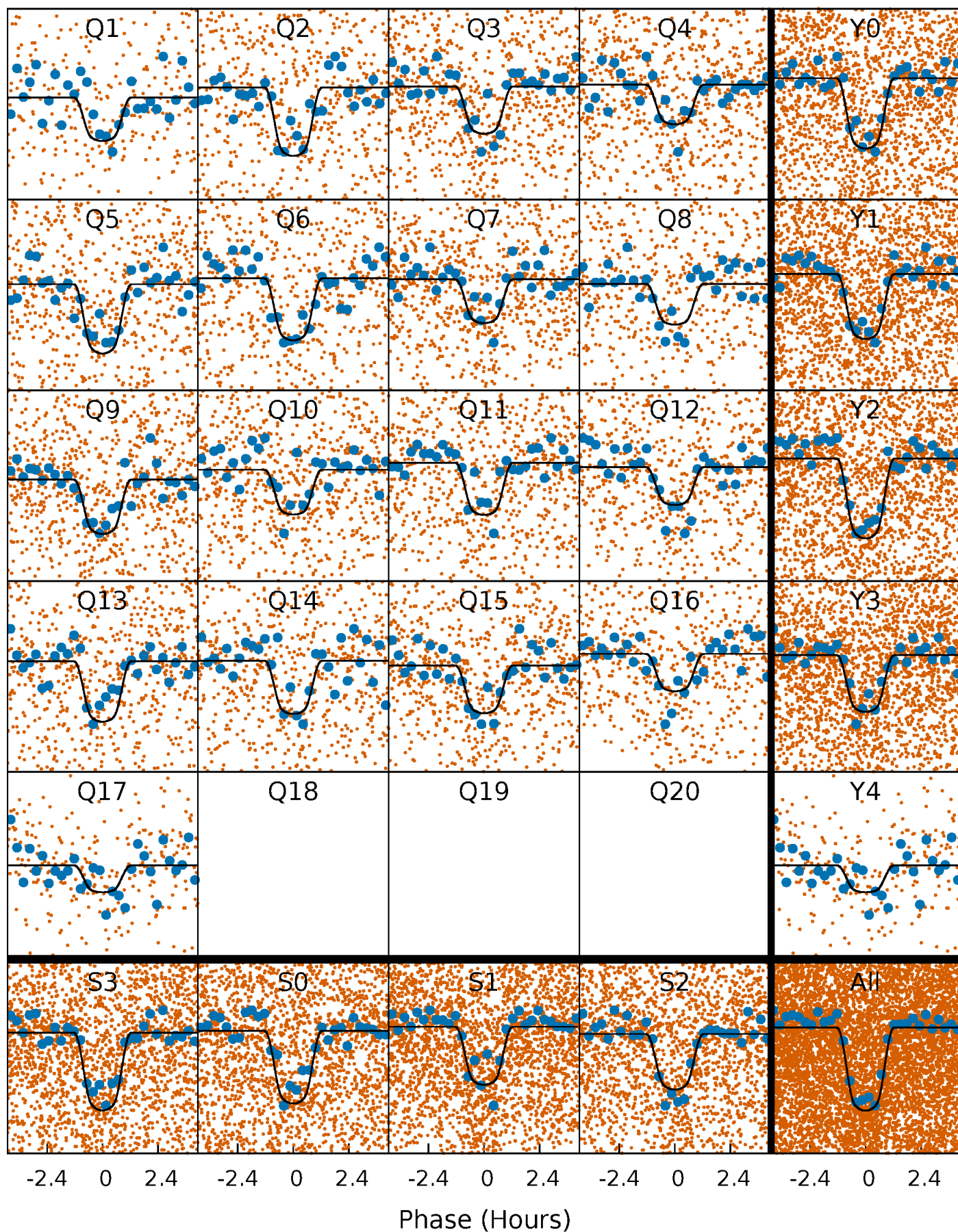
PDC Quarter-Phased Transit Curves

TCE 009336200-01 P= 1.755841 Days $T_0=133.155663$ (BKJD)



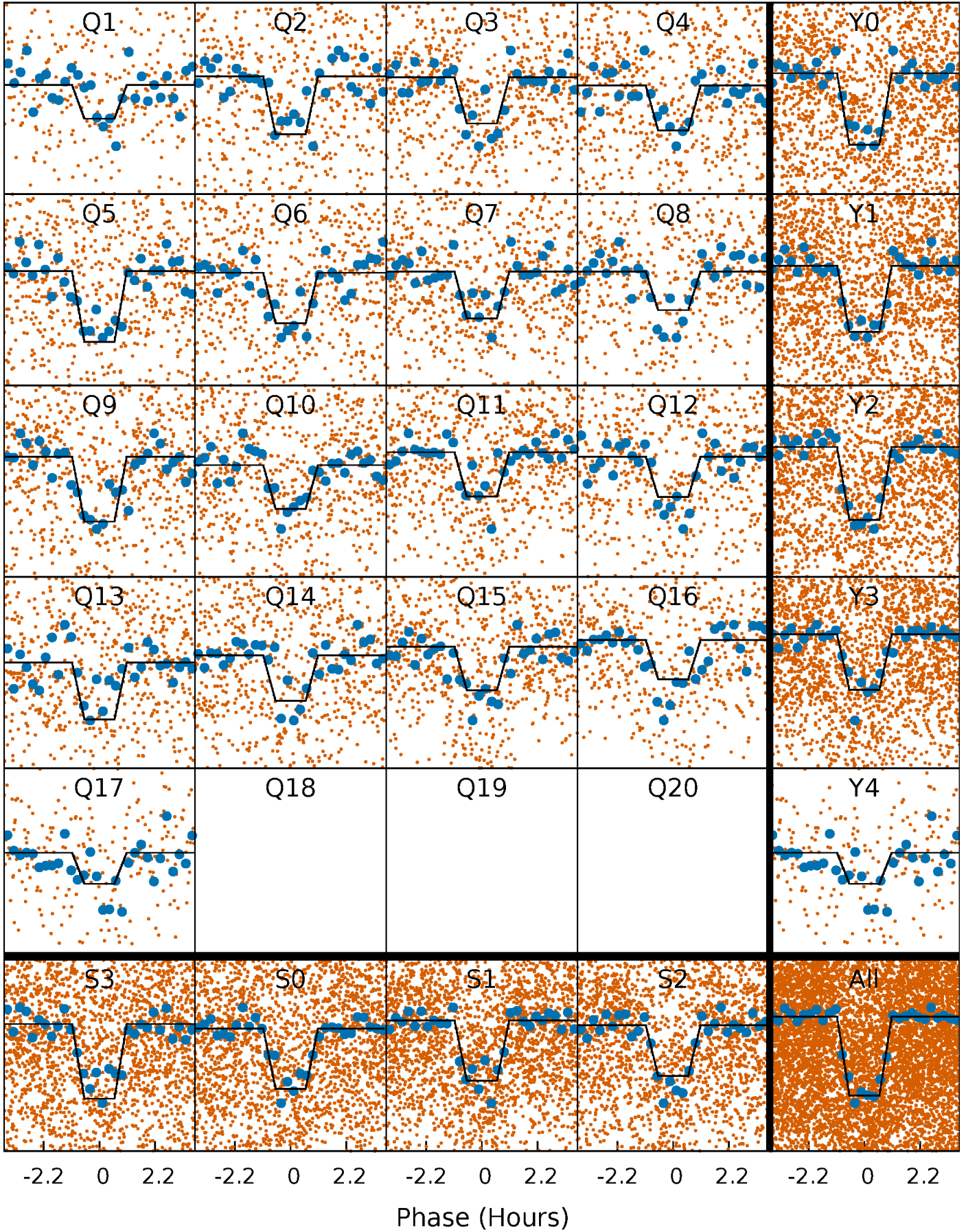
DV Quarter-Phased Transit Curves

TCE 009336200-01 P= 1.755841 Days $T_0=133.155663$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

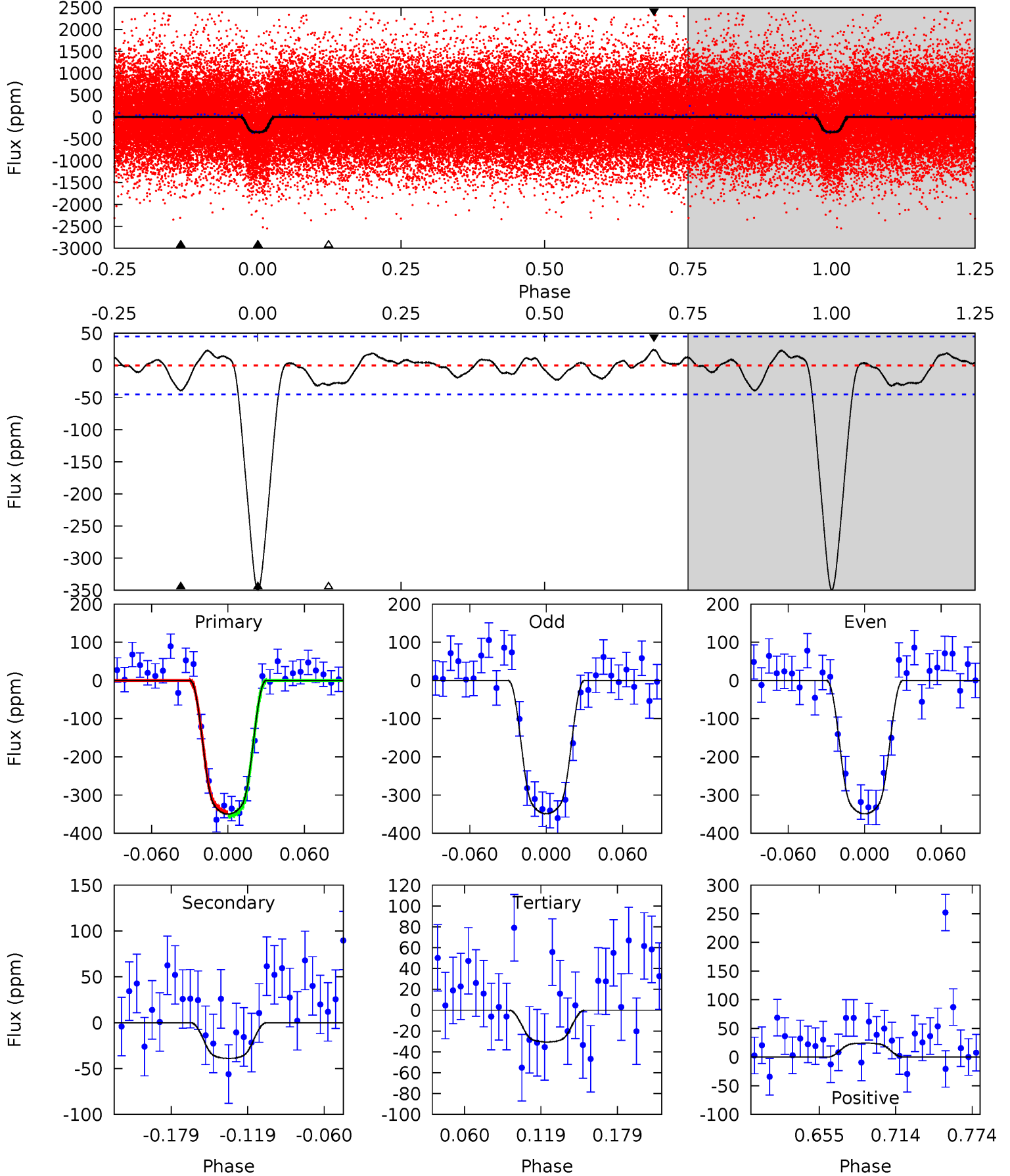
TCE 009336200-01 P= 1.755848 Days $T_0=133.153180$ (BKJD)



DV Model-Shift Uniqueness Test

009336200-01, P = 1.755841 Days, E = 131.399822 Days

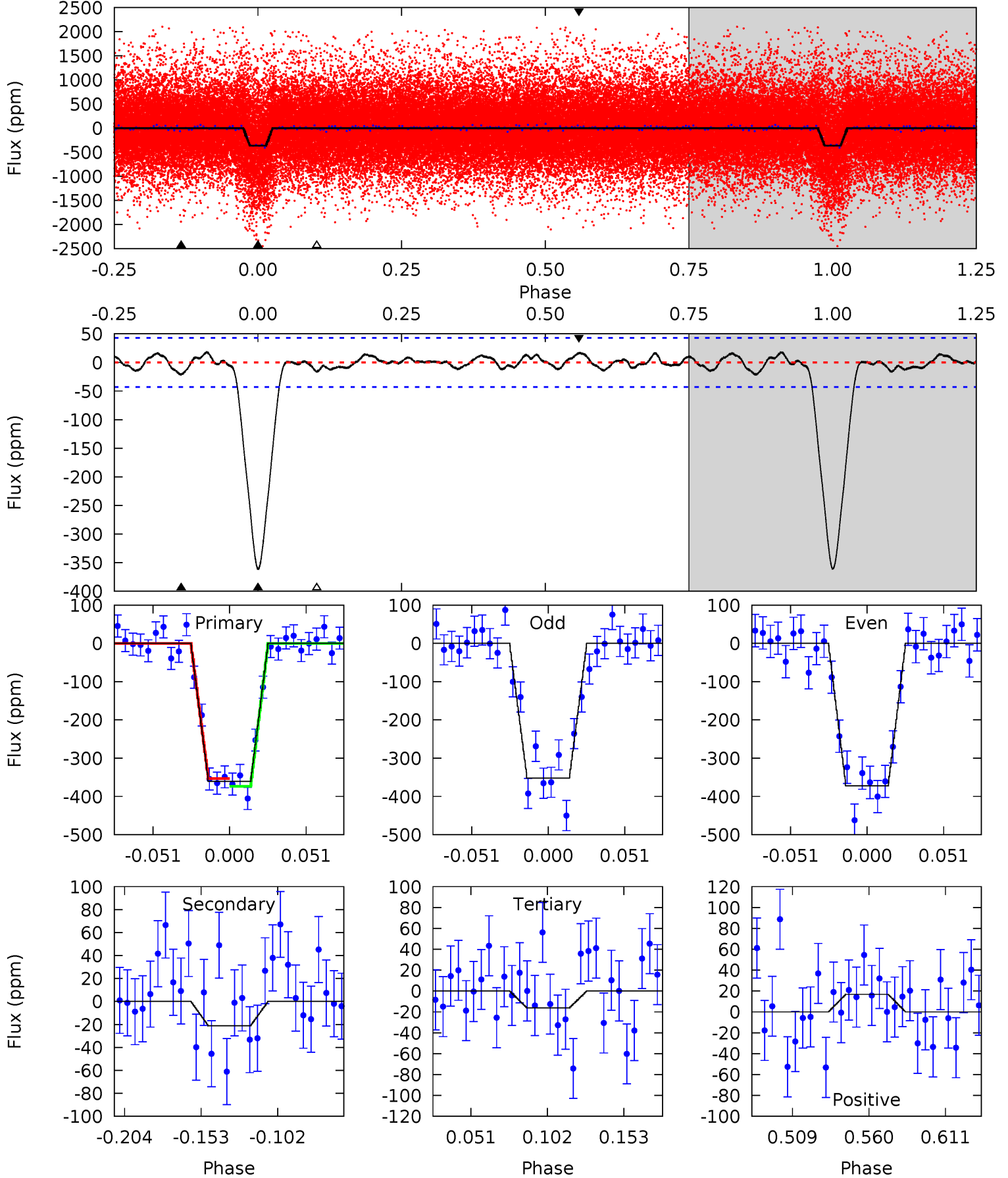
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.3	4.05	3.18	2.54	4.67	1.88	1.31	33.1	33.8	0.87	1.51	0.02	0.94	0.07	0.58



Alt Model-Shift Uniqueness Test

009336200-01, P = 1.755848 Days, E = 131.397332 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.5	2.31	1.78	1.84	4.70	1.95	0.82	37.8	37.7	0.53	0.47	1.12	0.98	0.05	1.13



Stellar Parameters For KIC 009336200

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5569^{+149}_{-166}	$4.566^{+0.036}_{-0.153}$	$-0.080^{+0.300}_{-0.300}$	$0.829^{+0.188}_{-0.075}$	$0.928^{+0.081}_{-0.102}$	$2.295^{+0.445}_{-0.945}$
	+3%/-3%	+1%/-3%	+375%/-375%	+23%/-9%	+9%/-11%	+19%/-41%
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 009336200-01 / KOI 2242.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-39 ± 10	$2.11^{+0.32}_{-0.25}$	1914^{+103}_{-77}	3377^{+193}_{-197}	$3.616^{+1.367}_{-1.158}$
Alt.	-21 ± 9	$1.75^{+0.28}_{-0.23}$	1908^{+104}_{-78}	3233^{+274}_{-349}	$2.821^{+1.631}_{-1.405}$

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

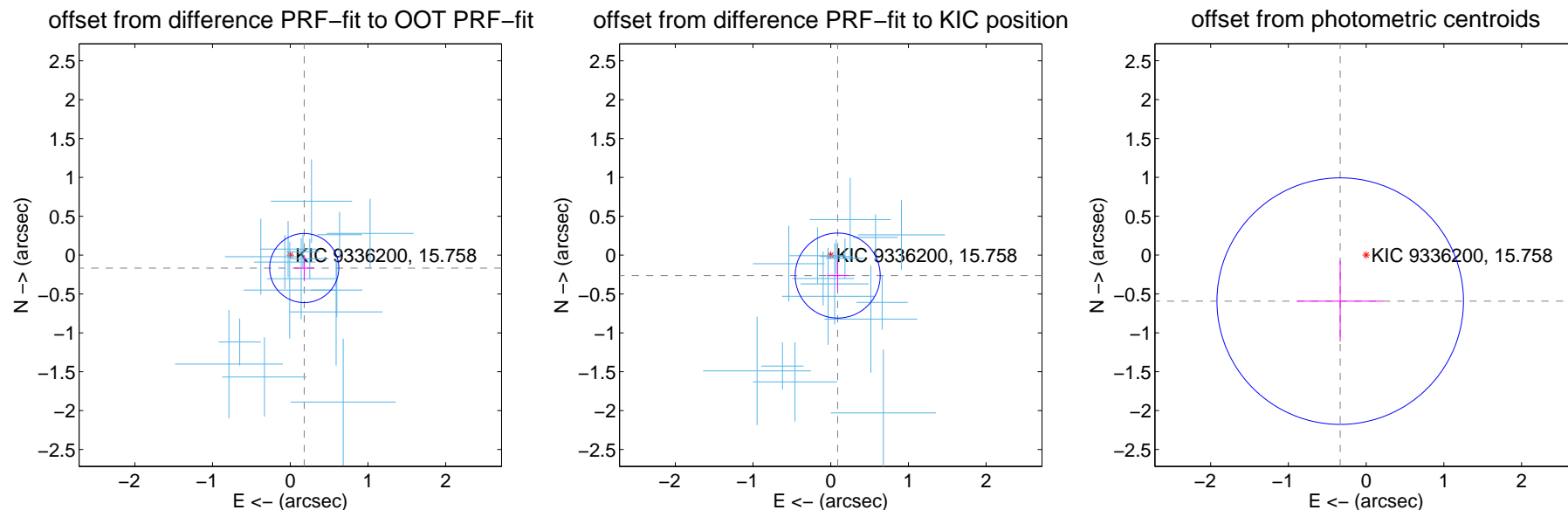
DV Centroid Data

Supplemental centroid analysis for 009336200-01. Kepler magnitude: 15.76. Transit SNR 25.97

There are 16 quarters with good PRF difference image offsets

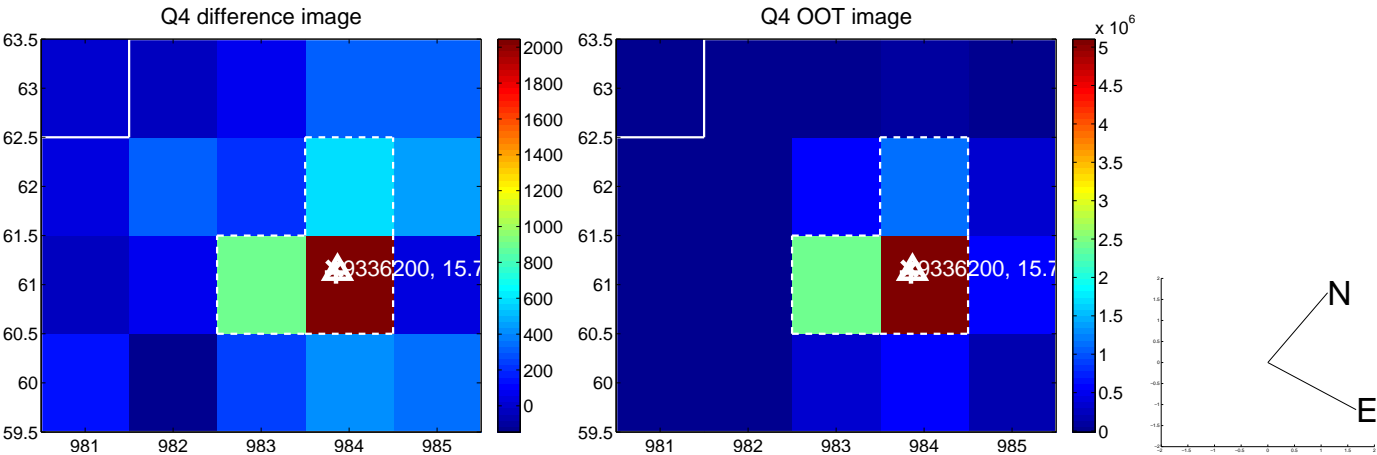
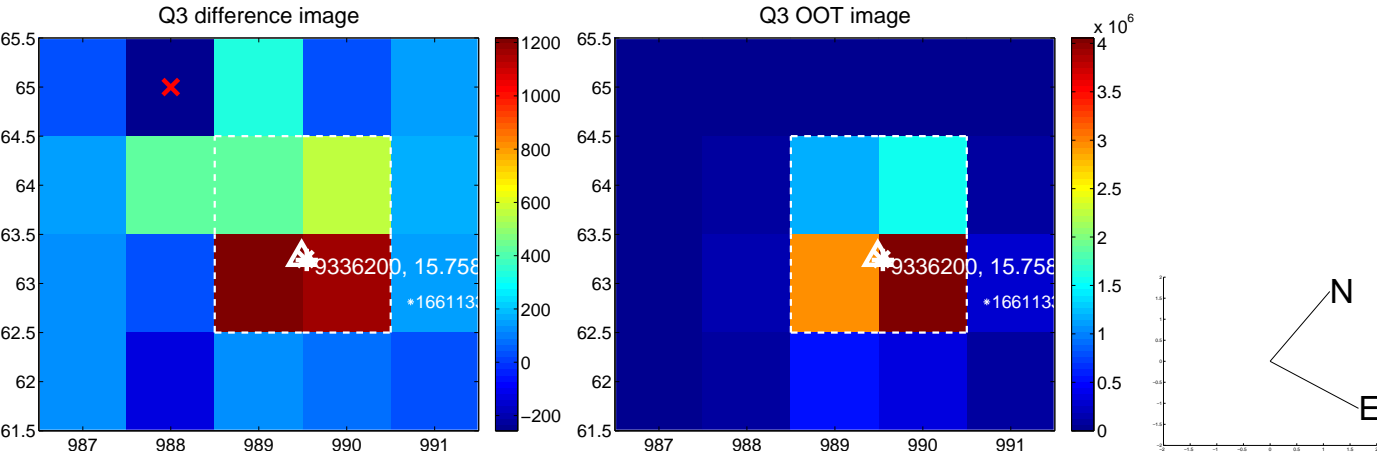
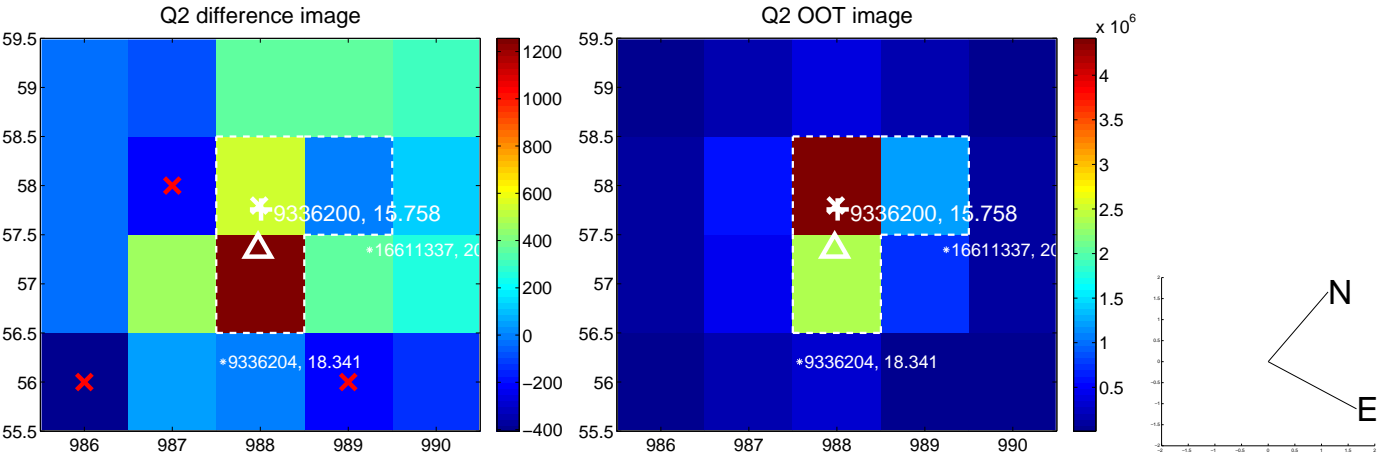
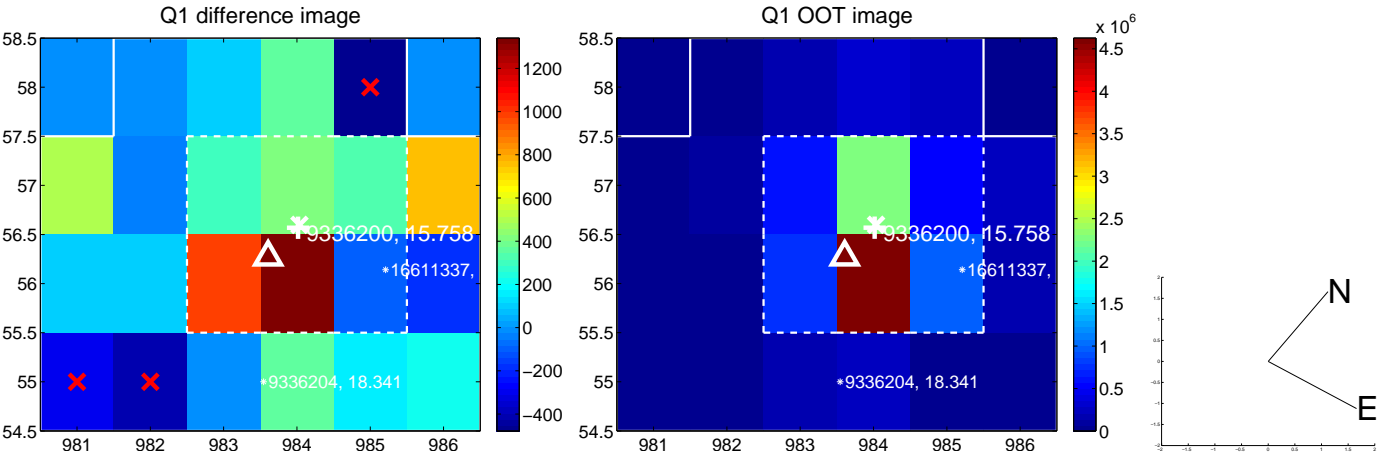
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.245 ± 0.148	1.65	-0.180 ± 0.130	-0.166 ± 0.167
PRF-fit source offset from KIC position	0.278 ± 0.182	1.52	-0.090 ± 0.139	-0.263 ± 0.200
photometric centroid source offset	0.68 ± 0.53	1.29	0.33 ± 0.56	-0.59 ± 0.52

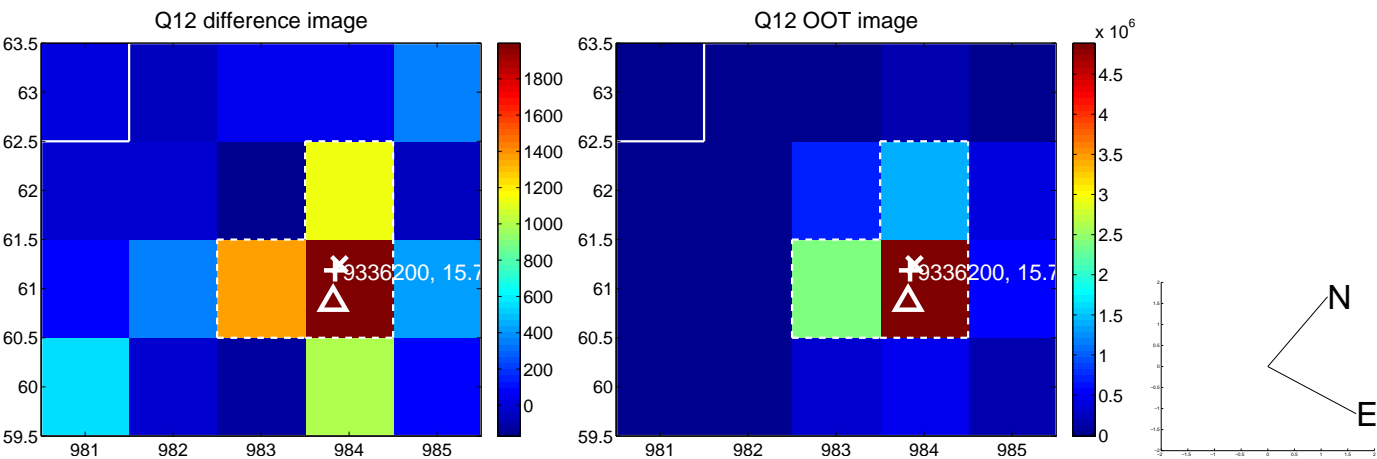
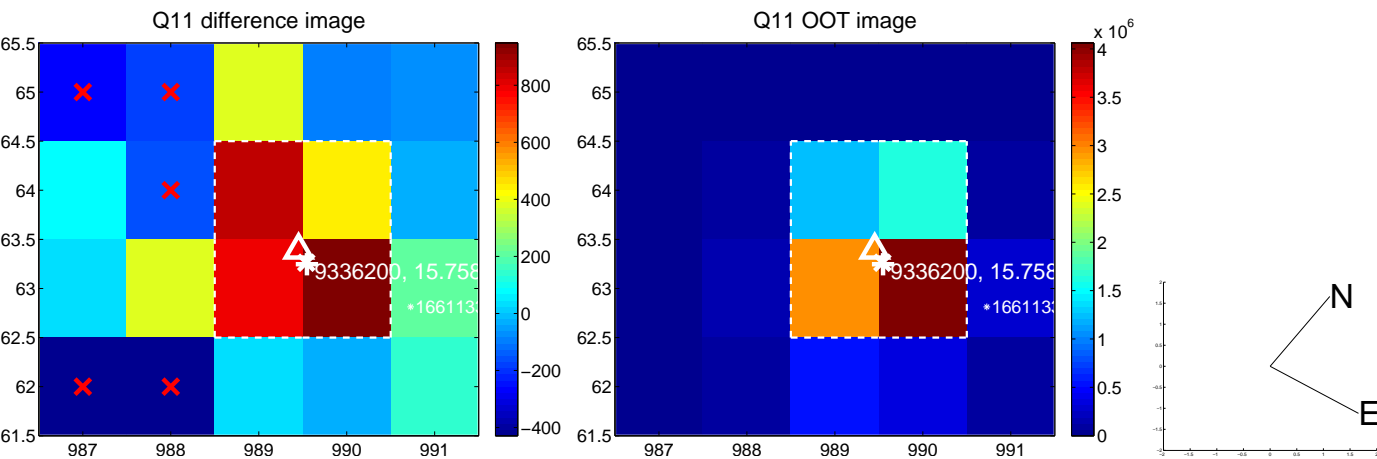
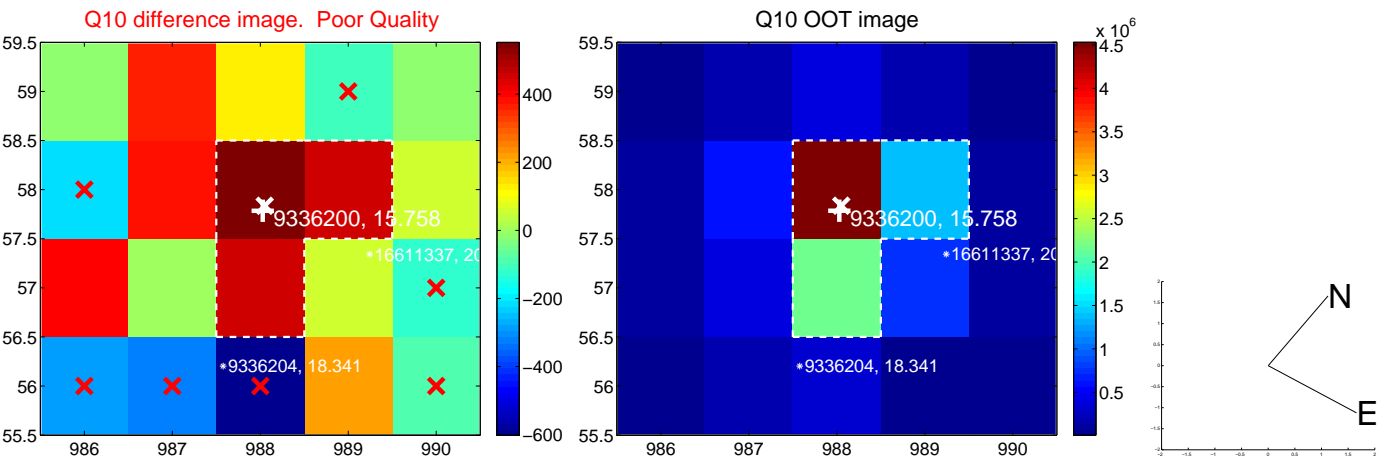
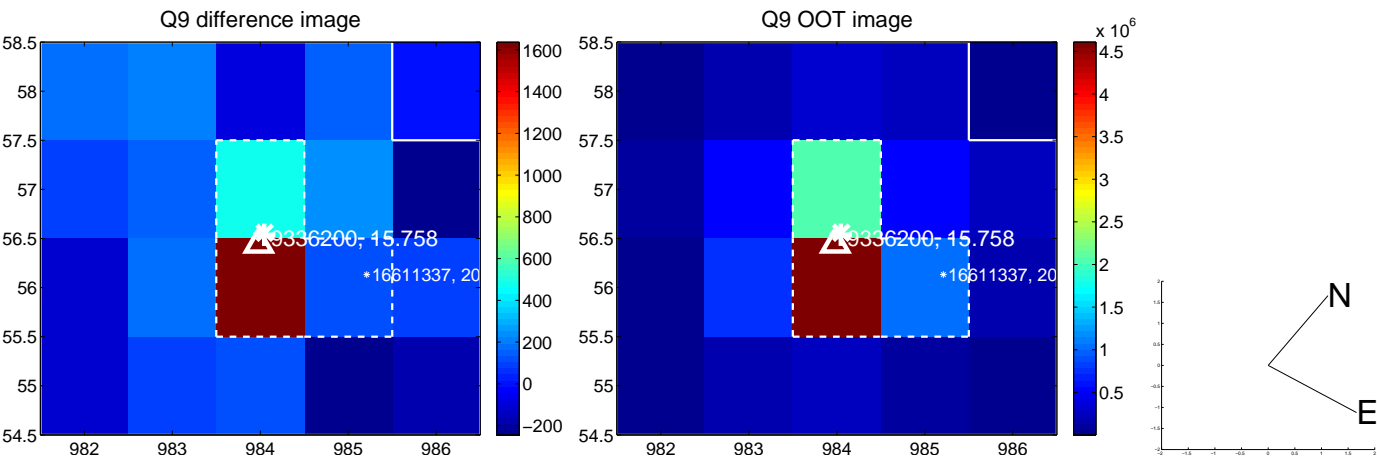


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

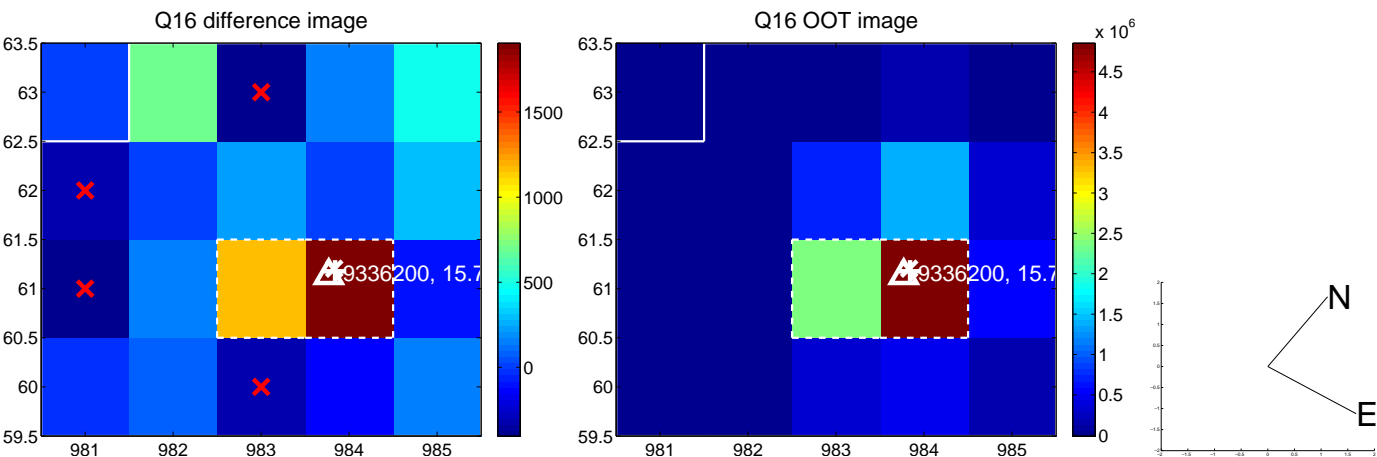
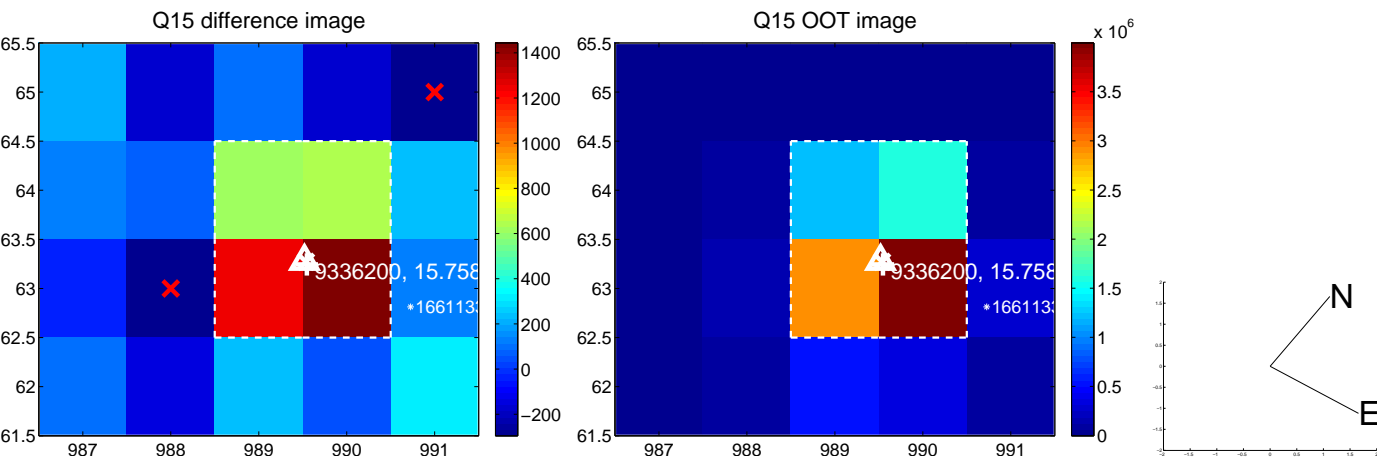
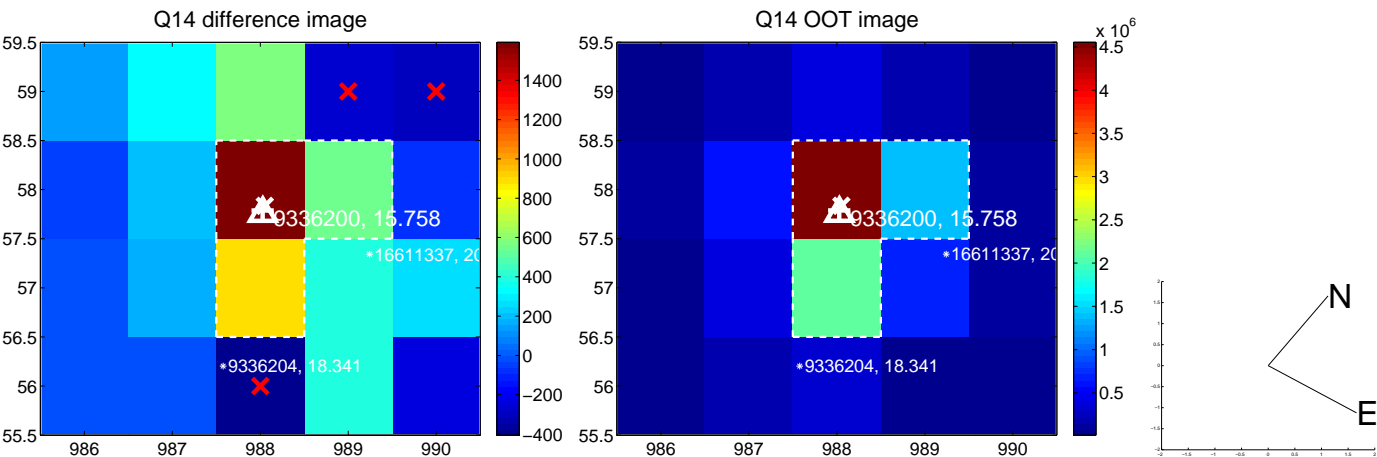
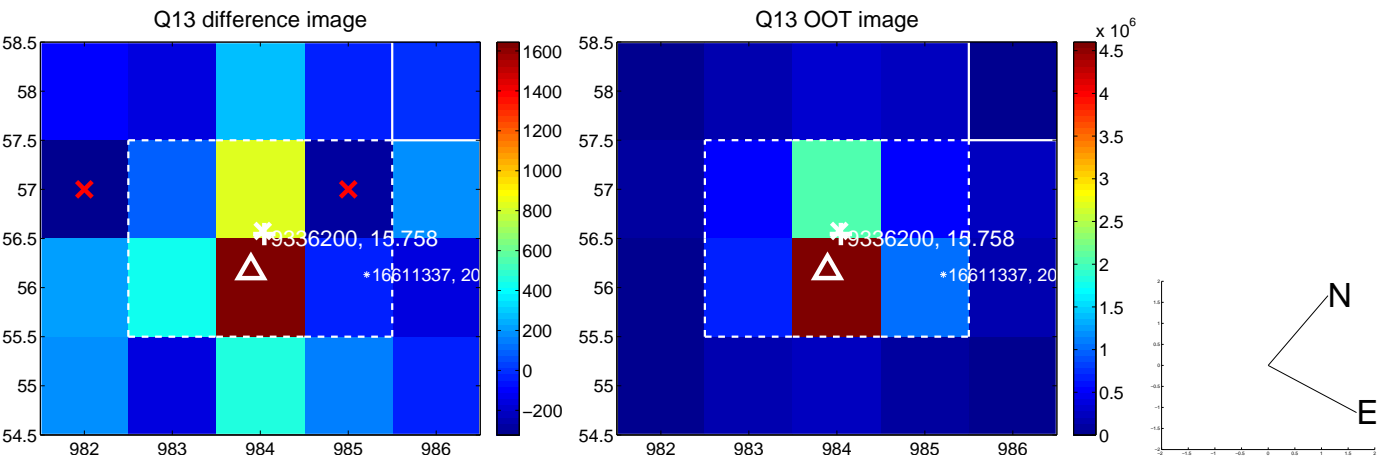
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



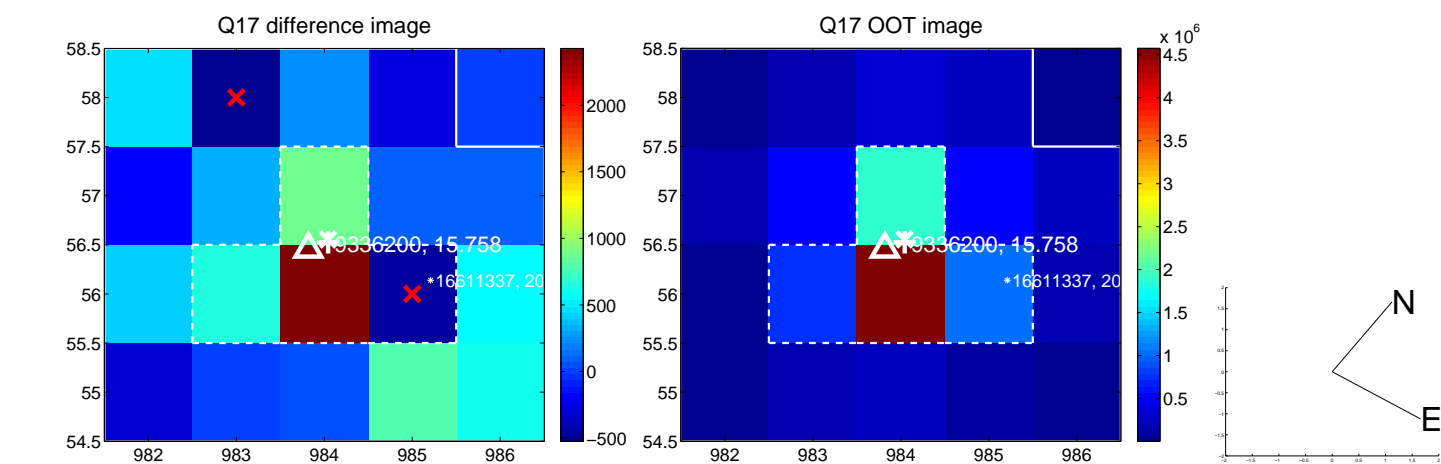
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



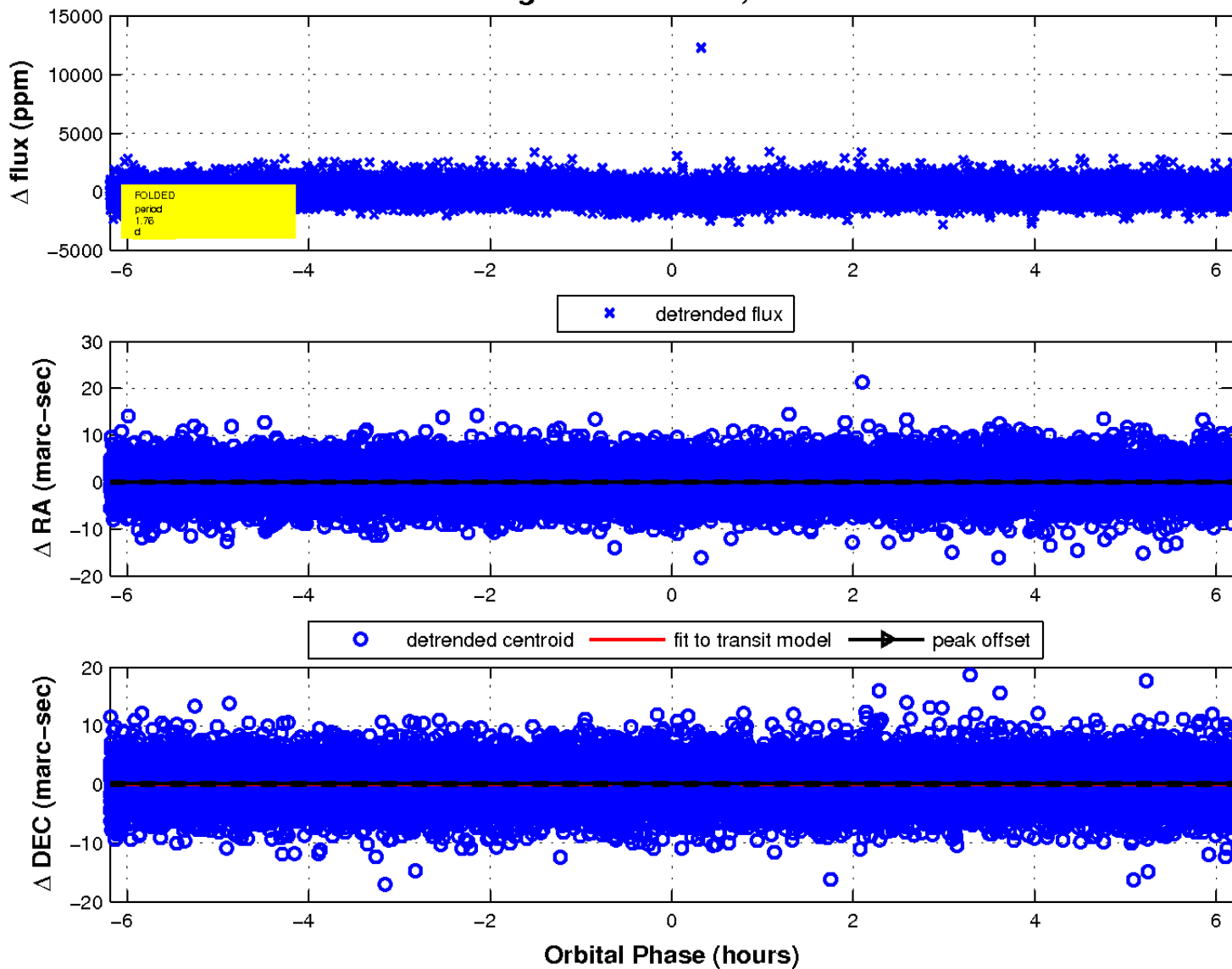
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

