

KIC 008491277

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})
008491277-01	OBS	0234.01	9.613740	132.186505	788.7	4.783	83.5	91.8	1.11	5997	3.50	177.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008491277-01	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.

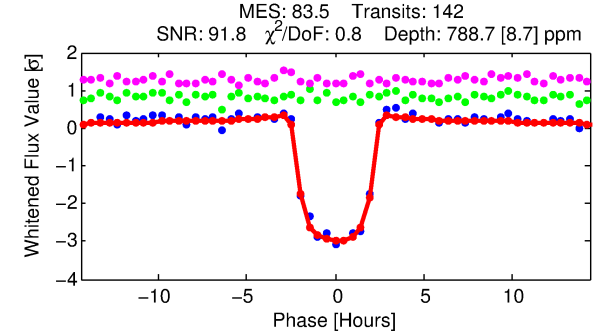
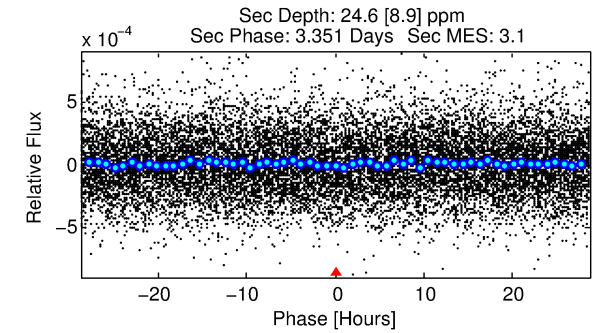
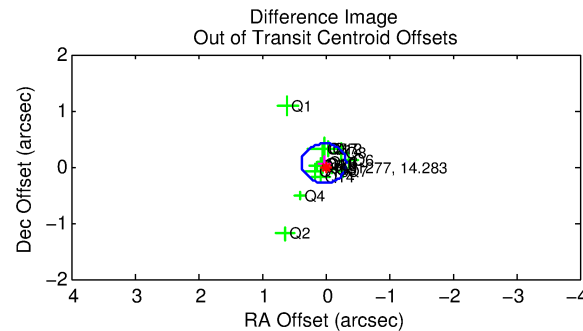
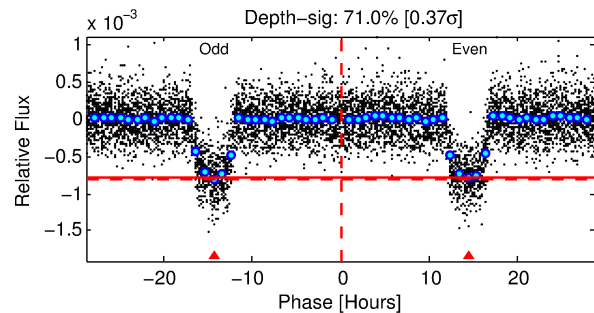
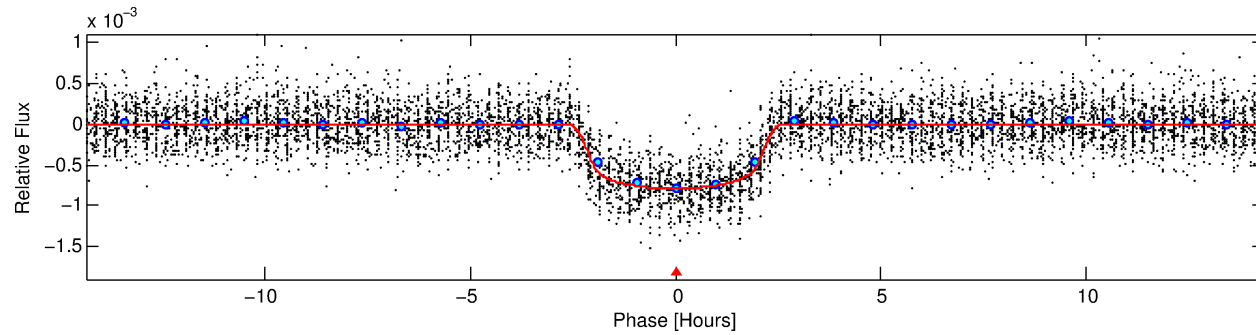
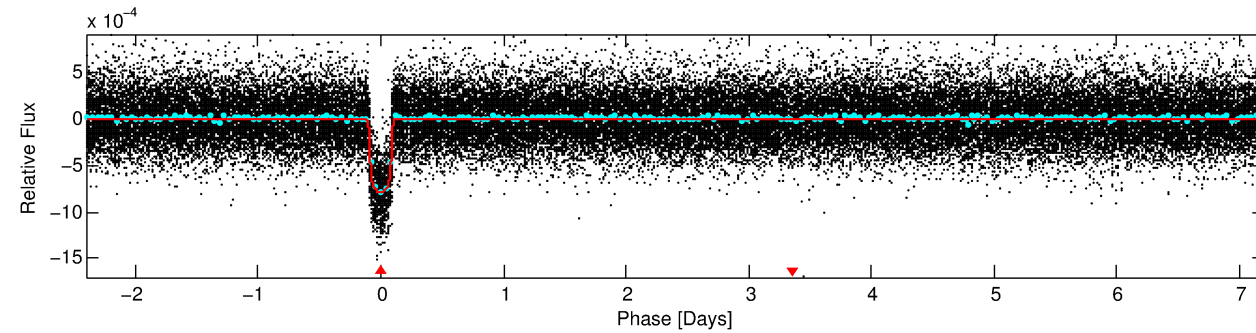
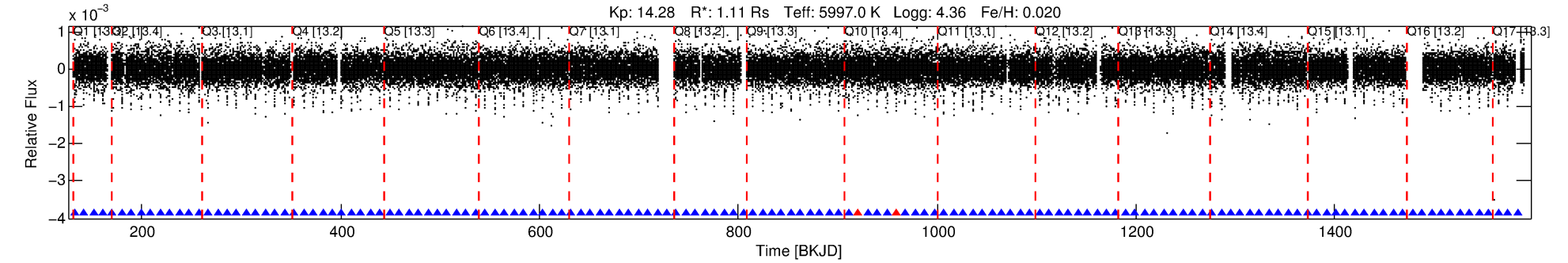
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008491277-01

No Significant Match Found

DV One-Page Summary

KIC: 8491277 Candidate: 1 of 1 Period: 9.614 d
KOI: K00234.01 Corr: 0.994



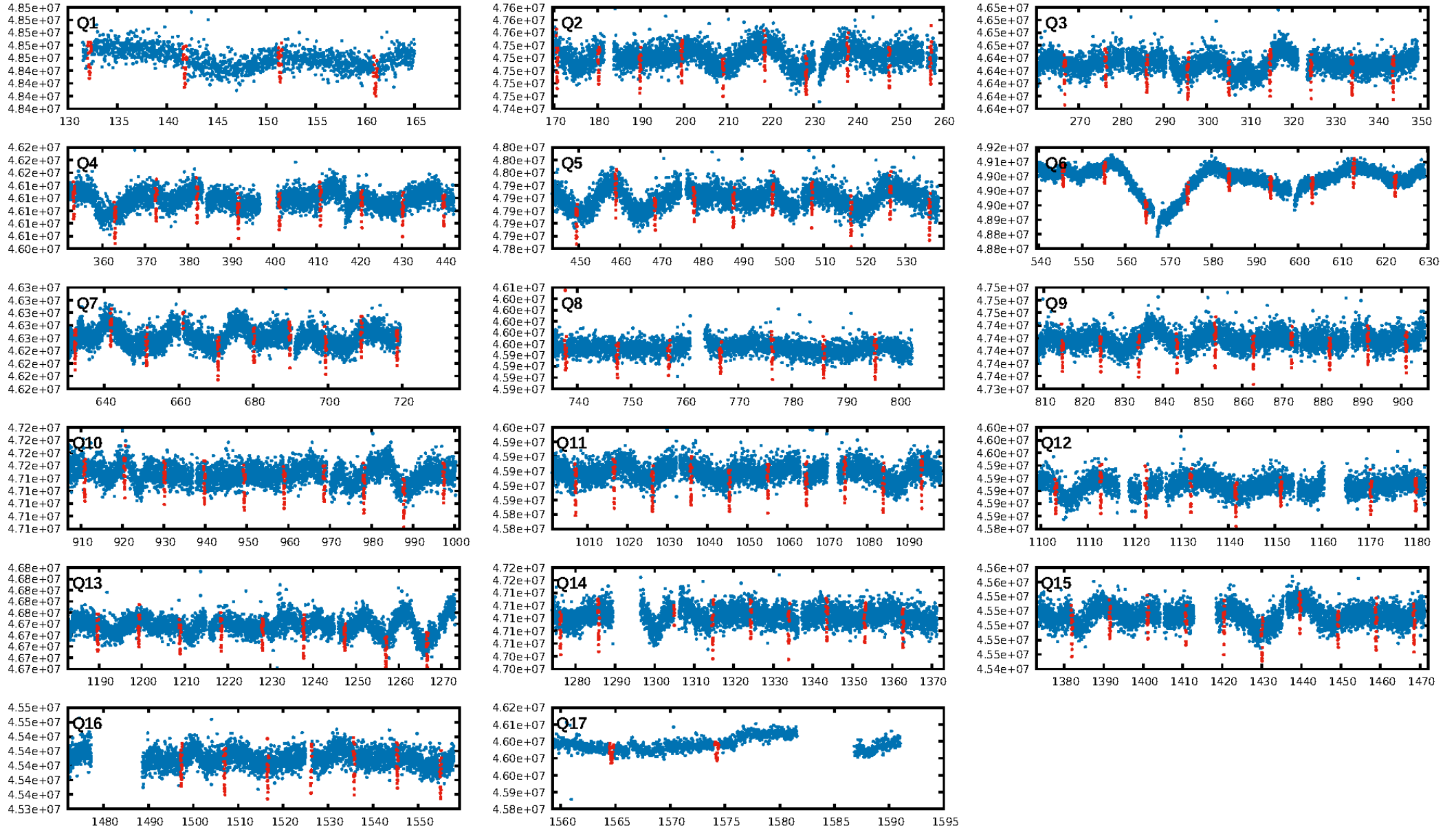
DV Fit Results:

Period = 9.61374 [0.00001] d
Epoch = 132.1865 [0.0010] BKJD
Rp/R* = 0.0289 [0.0011]
a/R* = 9.42 [1.61]
b = 0.83 [0.07]
Seff = 177.69 [69.30]
Teff = 931 [91] K
Rp = 3.50 [1.05] Re
a = 0.0896 [0.0225] AU
Ag = 8.84 [4.60] [1.70 σ]
Teffp = 2482 [243] K [5.97 σ]

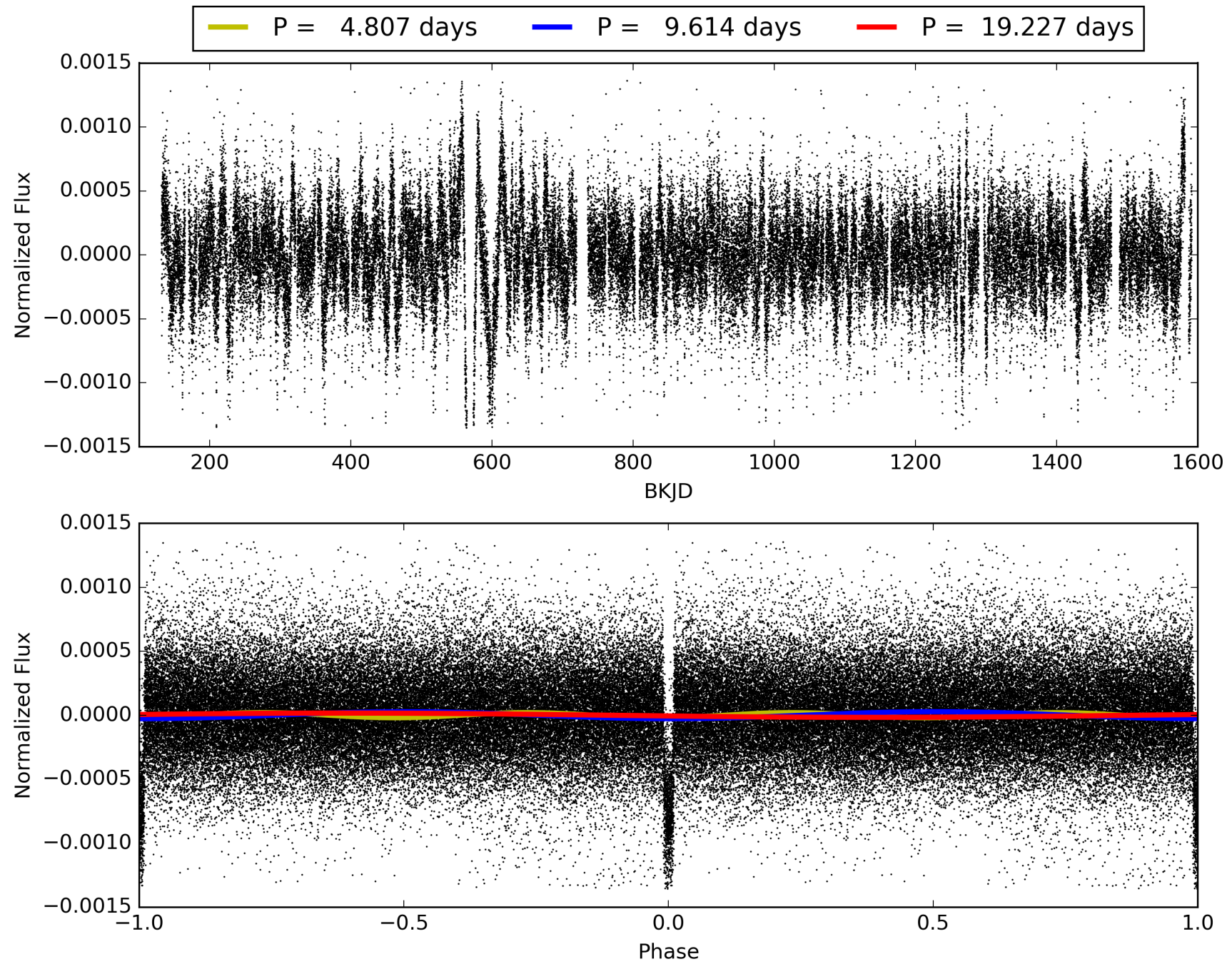
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.99 [134/136]
GhostDiagnostic-chr: 3.777
Centroid-sig: 5.7%
Centroid-so: 0.256 arcsec [1.73 σ]
OotOffset-rm: 0.066 arcsec [0.56 σ]
KicOffset-rm: 0.028 arcsec [0.23 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008491277-01, PDC Light Curves

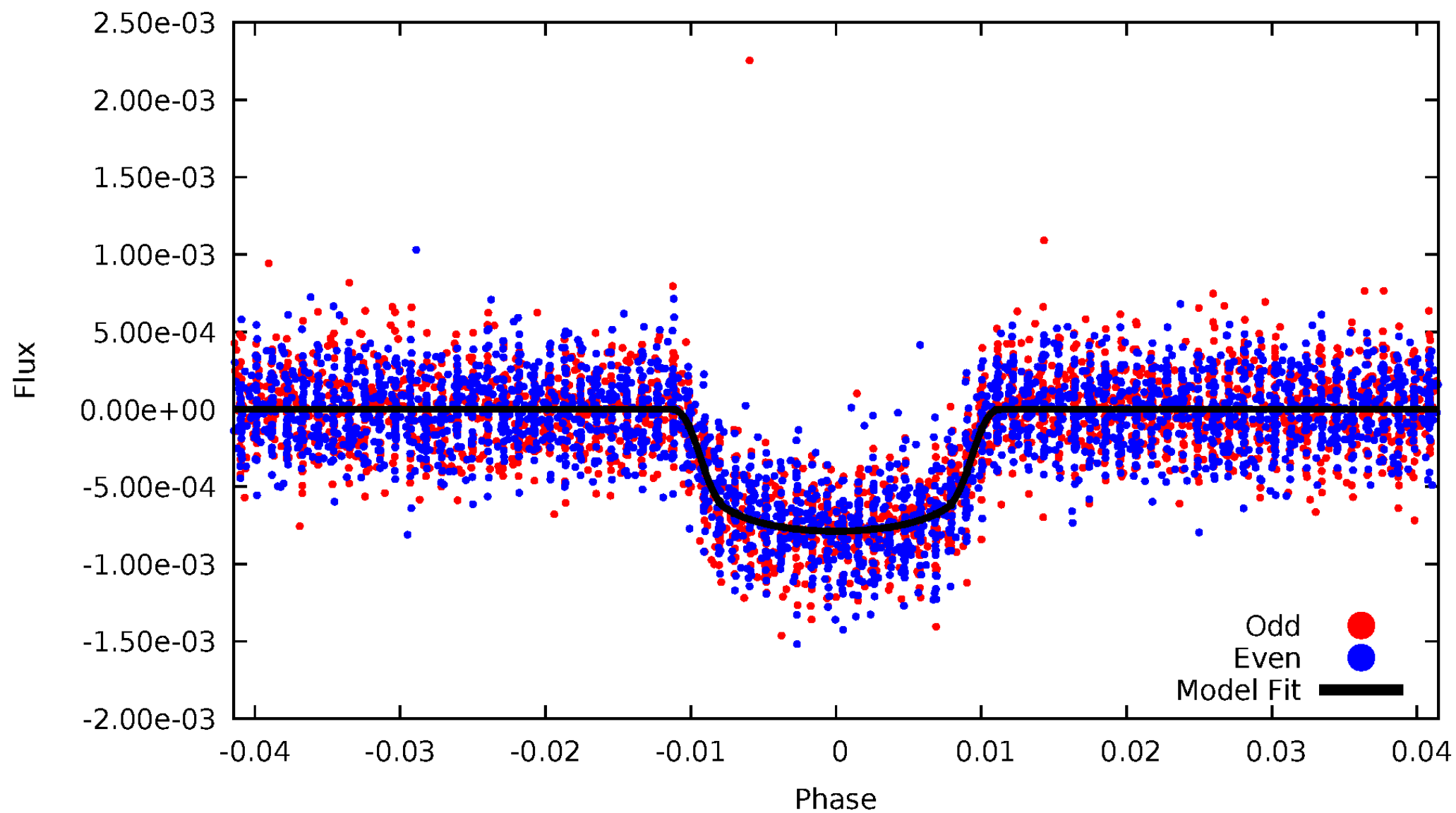


TCE 008491277-01



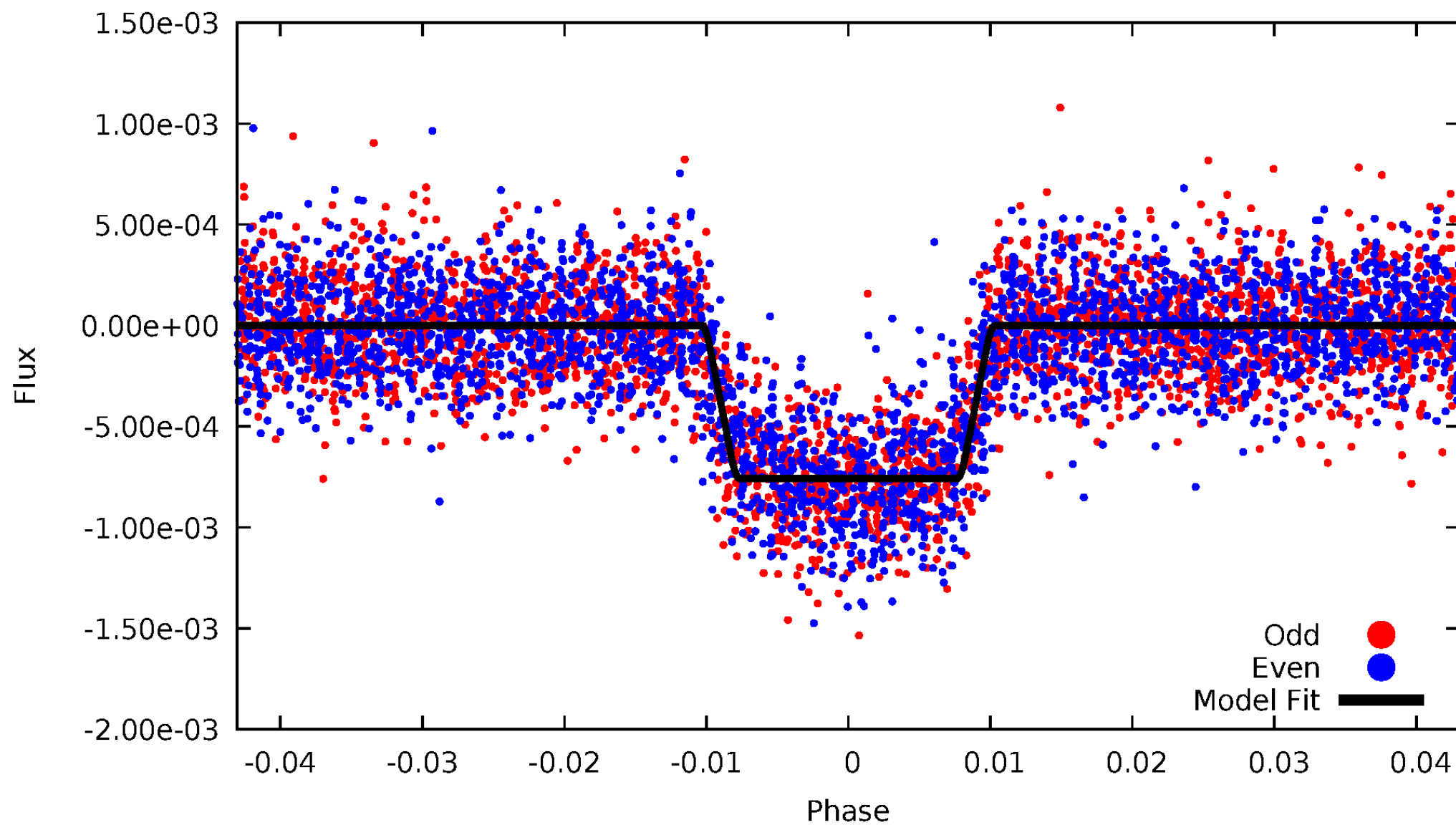
DV Odd/Even

TCE 008491277-01

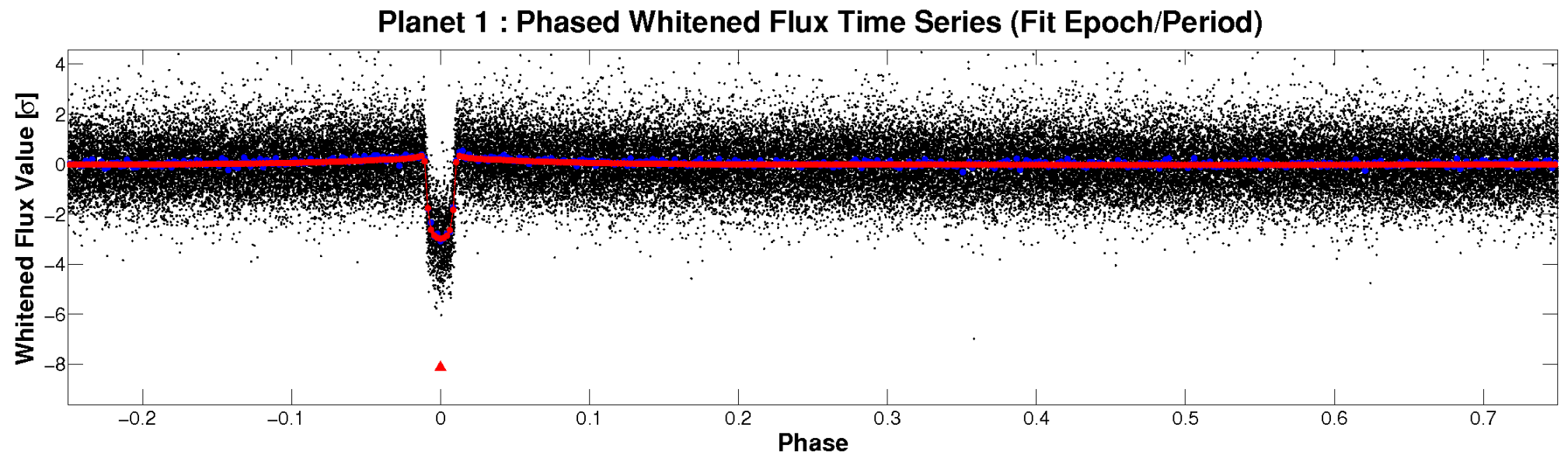
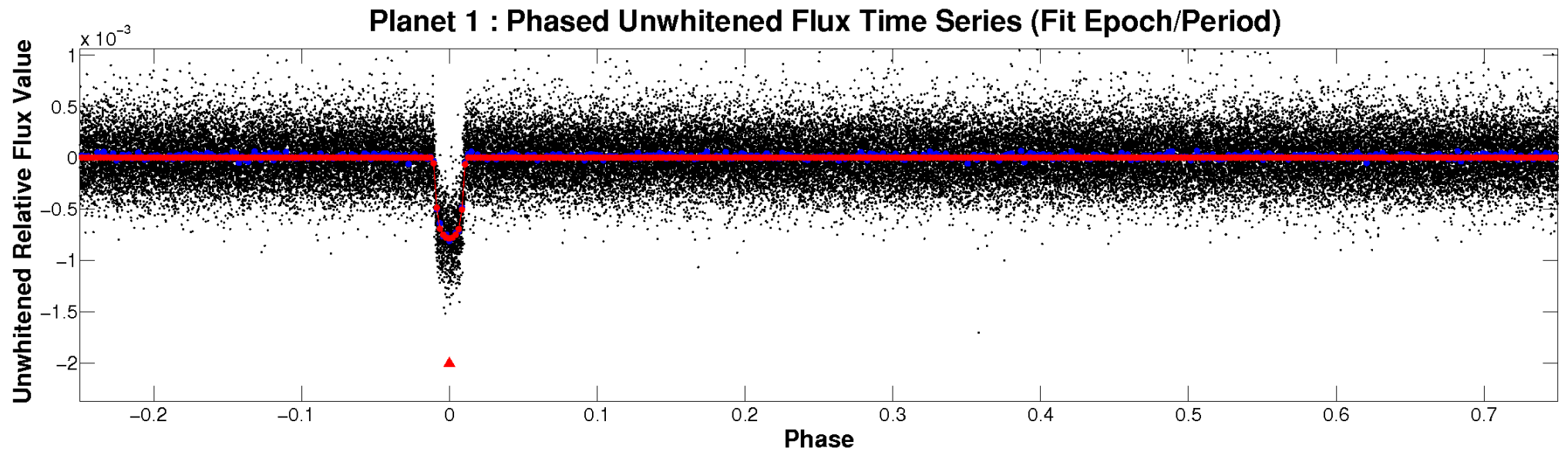


ALT Odd/Even

TCE 008491277-01

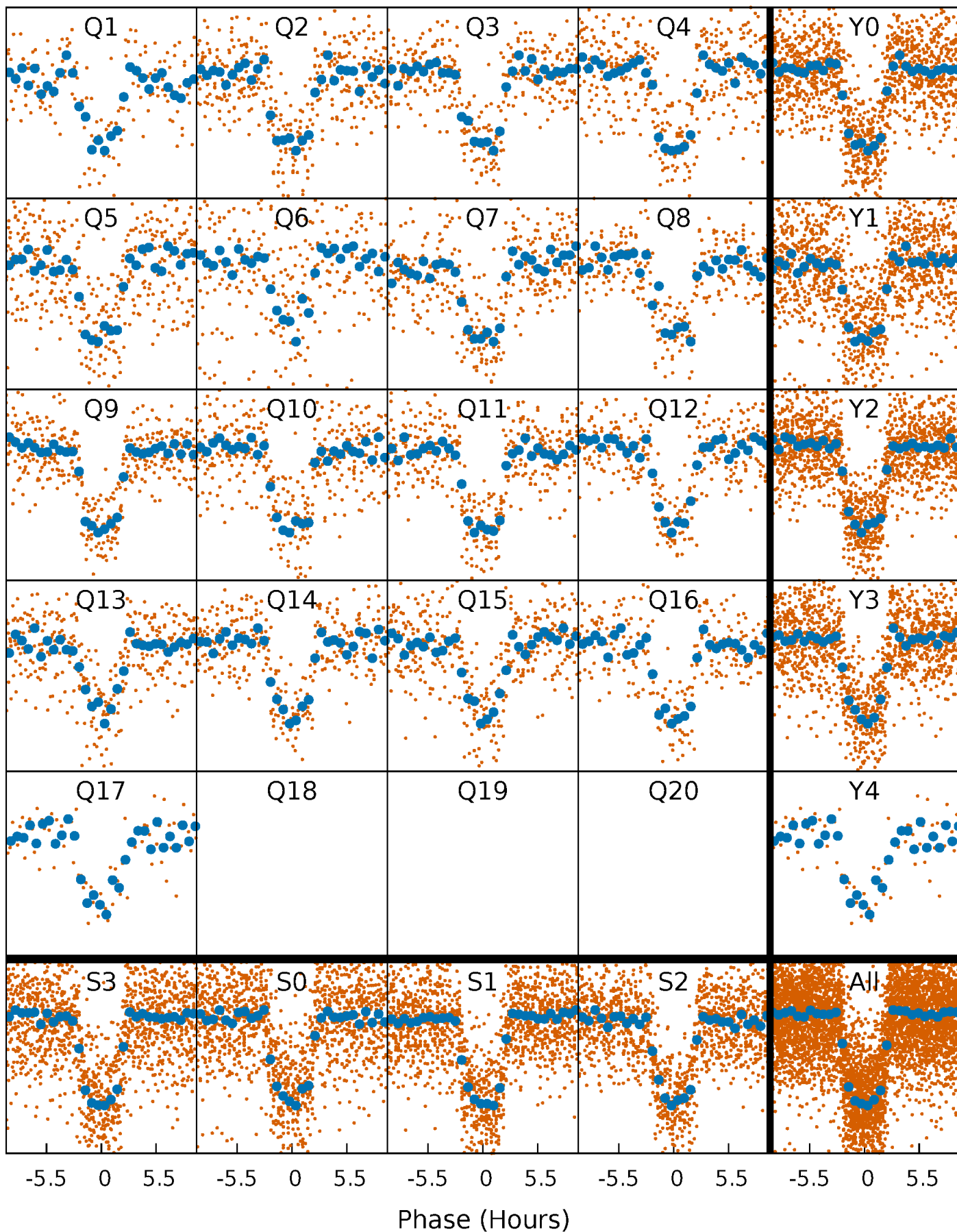


Non-Whitened Vs. Whitened Light Curve



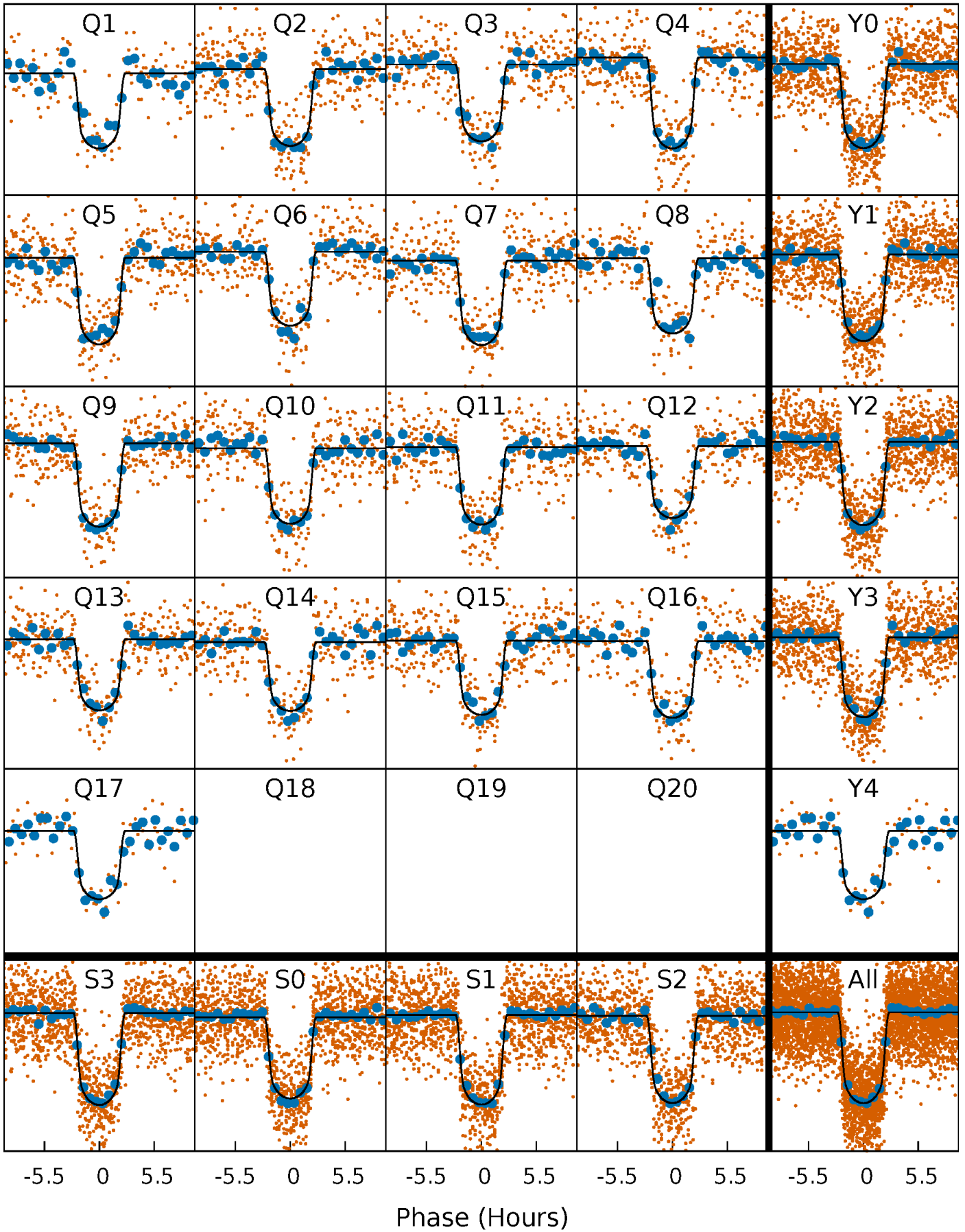
PDC Quarter-Phased Transit Curves

TCE 008491277-01 P= 9.613740 Days $T_0=132.186505$ (BKJD)



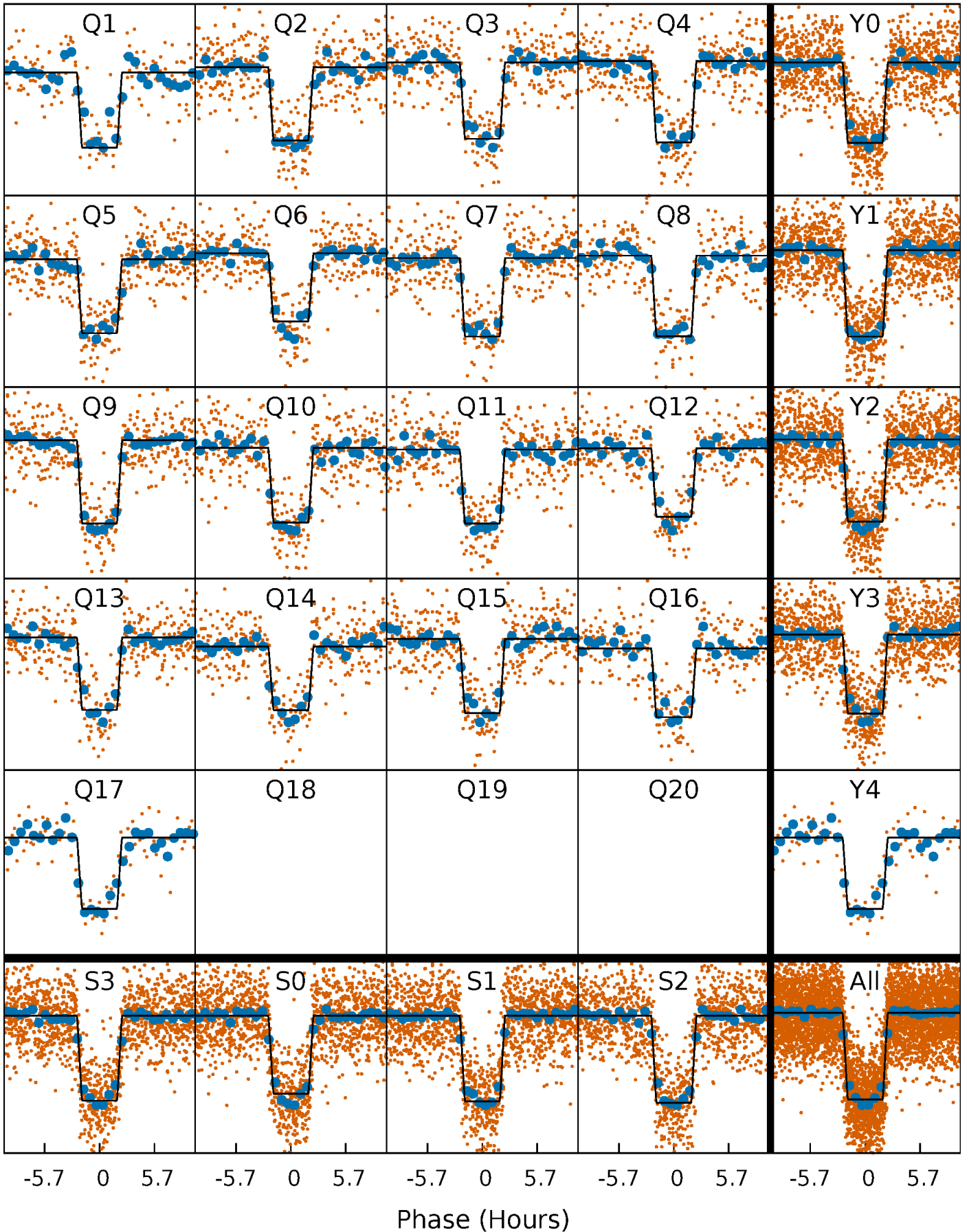
DV Quarter-Phased Transit Curves

TCE 008491277-01 P= 9.613740 Days $T_0=132.186505$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

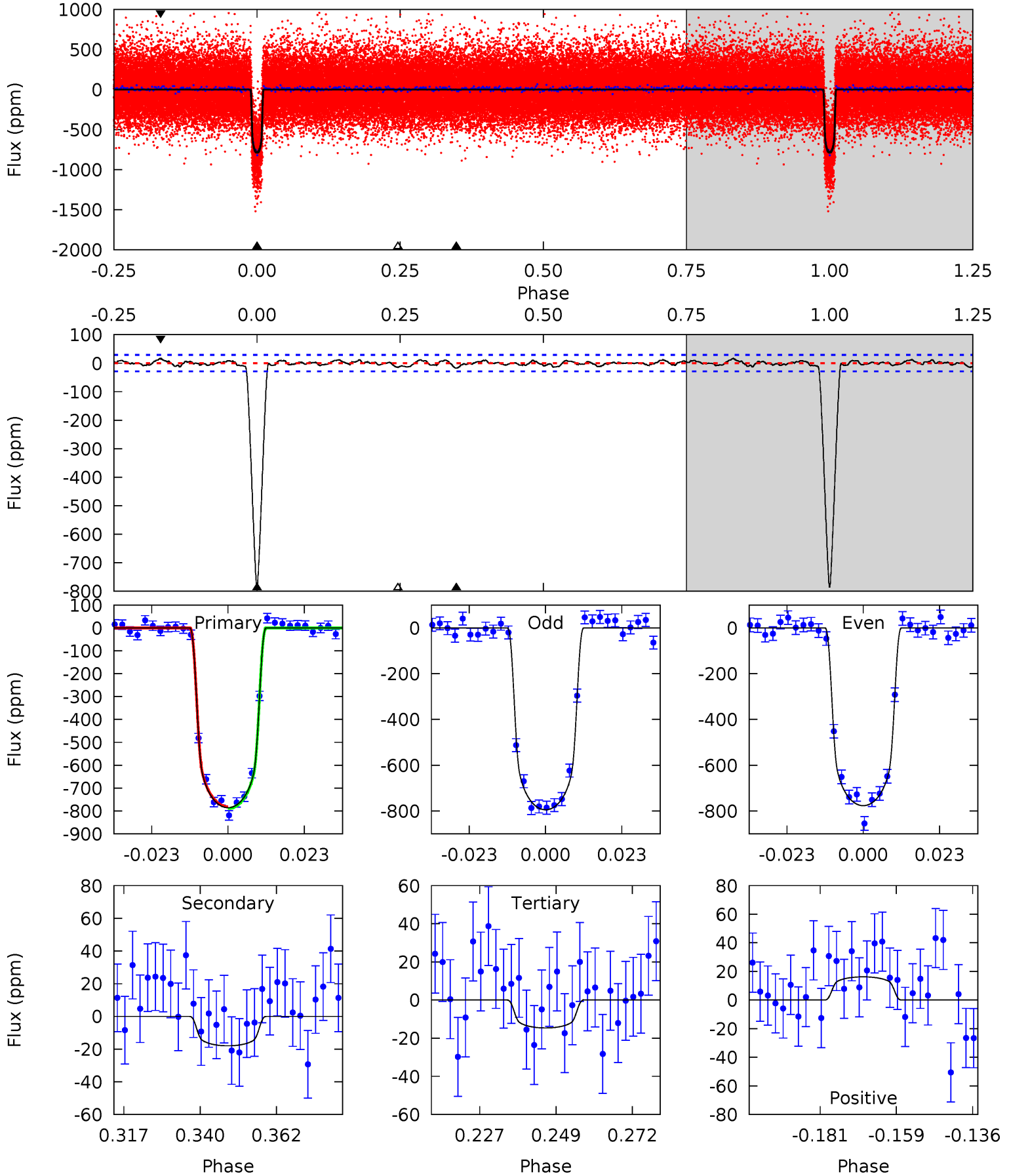
TCE 008491277-01 P= 9.613836 Days $T_0=132.179354$ (BKJD)



DV Model-Shift Uniqueness Test

008491277-01, P = 9.613740 Days, E = 122.572765 Days

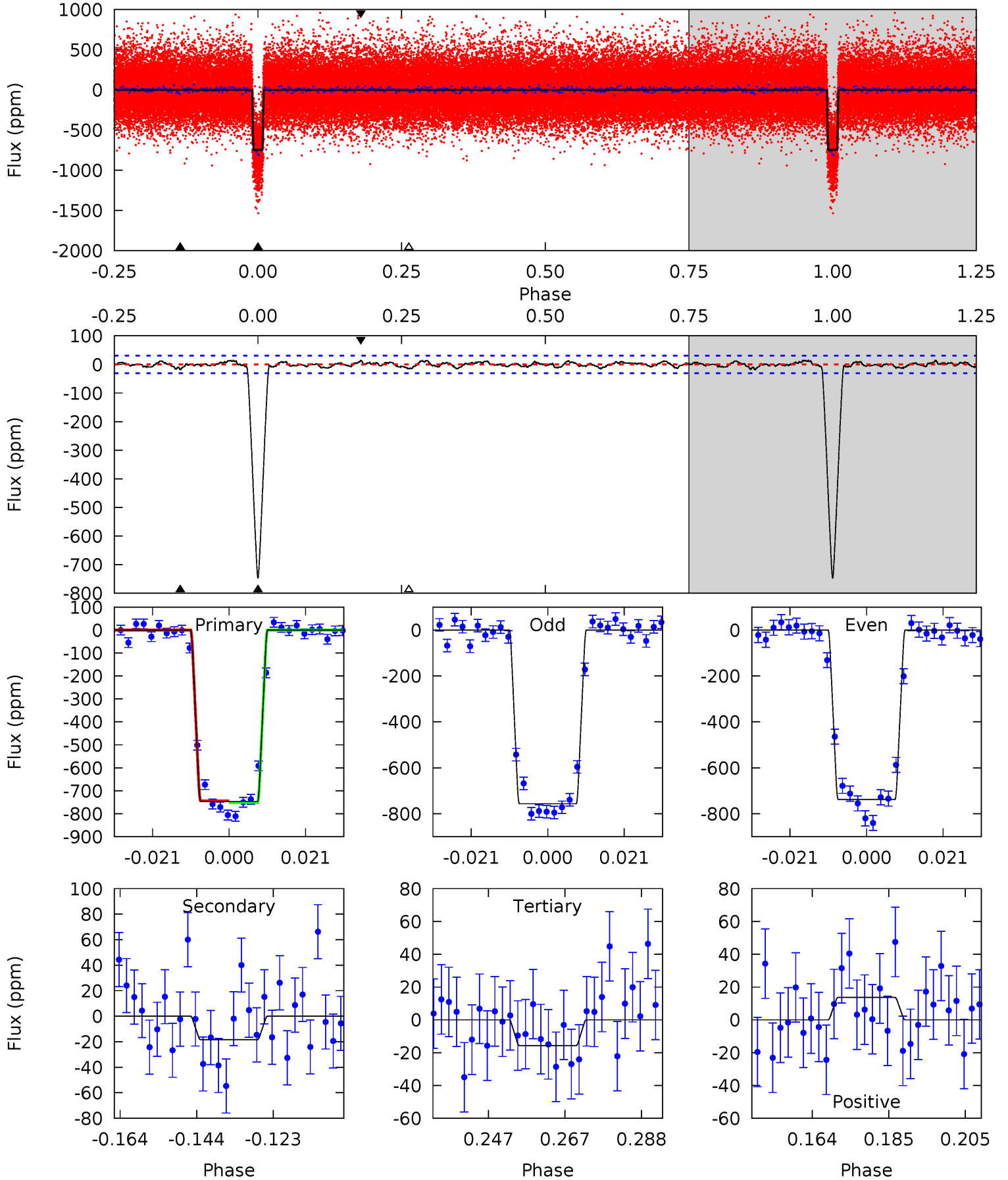
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
131.9	3.02	2.46	2.72	4.87	2.28	1.02	129.4	129.2	0.56	0.30	1.51	1.00	0.02	0.64



Alt Model-Shift Uniqueness Test

008491277-01, P = 9.613836 Days, E = 122.565518 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
119.4	2.94	2.50	2.19	4.89	2.32	1.01	116.9	117.2	0.44	0.75	1.52	1.00	0.02	0.60



Stellar Parameters For KIC 008491277

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5997^{+181}_{-199}	$4.364^{+0.108}_{-0.201}$	$0.020^{+0.250}_{-0.300}$	$1.110^{+0.330}_{-0.178}$	$1.037^{+0.160}_{-0.120}$	$1.067^{+0.507}_{-0.544}$
	+3%/-3%	+2%/-5%	+1250%/-1500%	+30%/-16%	+15%/-12%	+47%/-51%
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 008491277-01 / KOI 0234.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-18 ± 6	$3.55^{+0.62}_{-0.35}$	1314^{+97}_{-75}	2962^{+141}_{-200}	$6.061^{+2.717}_{-2.389}$
Alt.	-18 ± 6	$3.42^{+0.59}_{-0.36}$	1320^{+96}_{-79}	2998^{+153}_{-181}	$6.722^{+2.994}_{-2.674}$

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 $A_{obs} \gg 1.0$

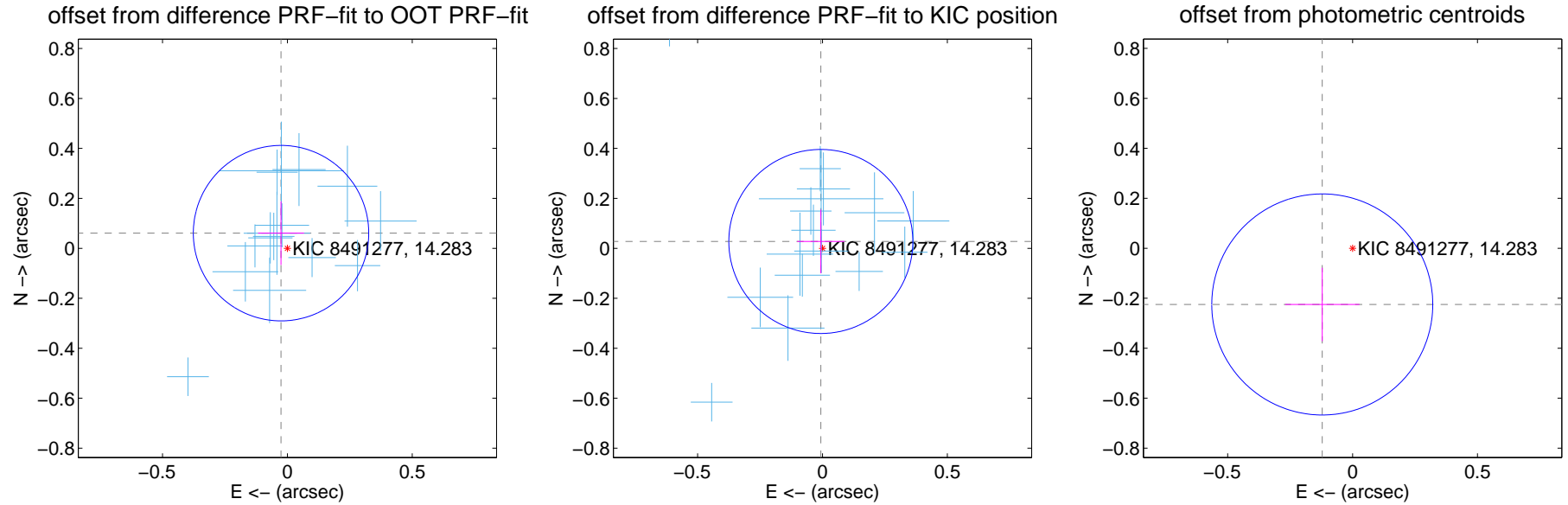
DV Centroid Data

Supplemental centroid analysis for 008491277-01. Kepler magnitude: 14.28. Transit SNR 91.77

There are 17 quarters with good PRF difference image offsets

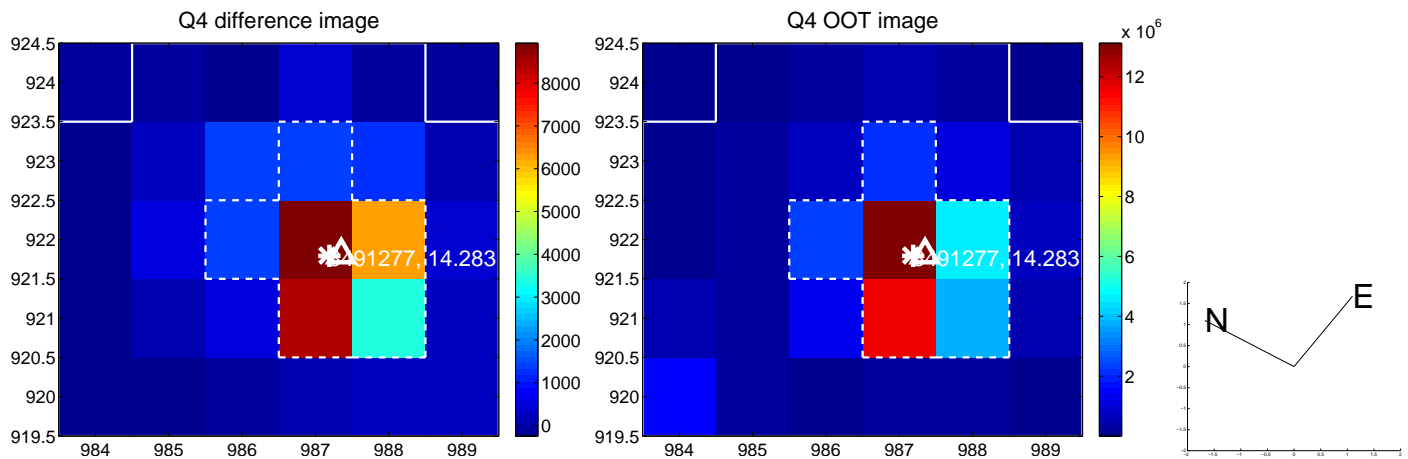
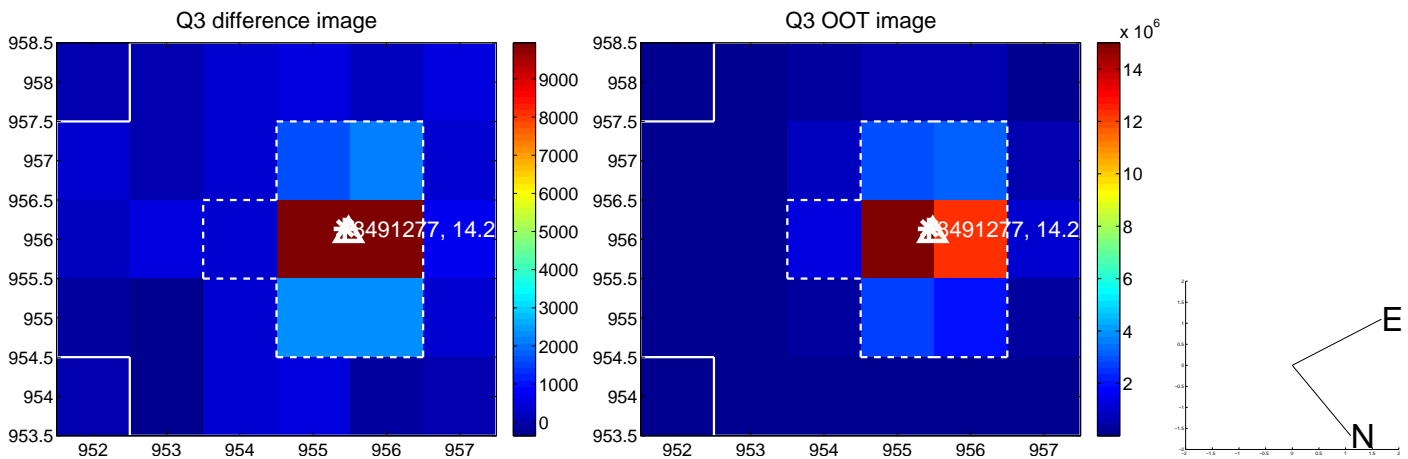
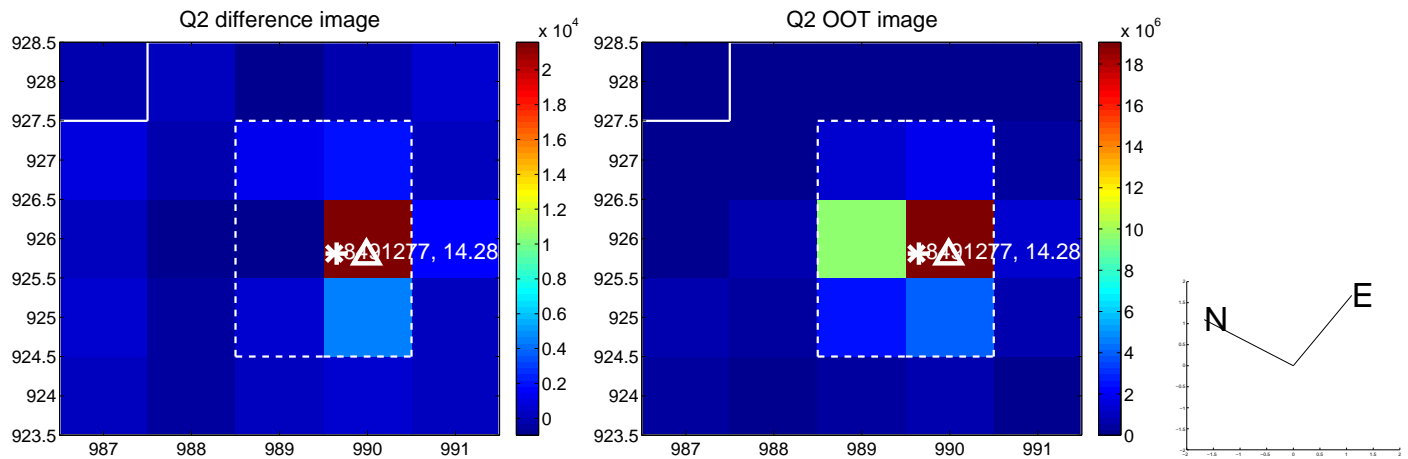
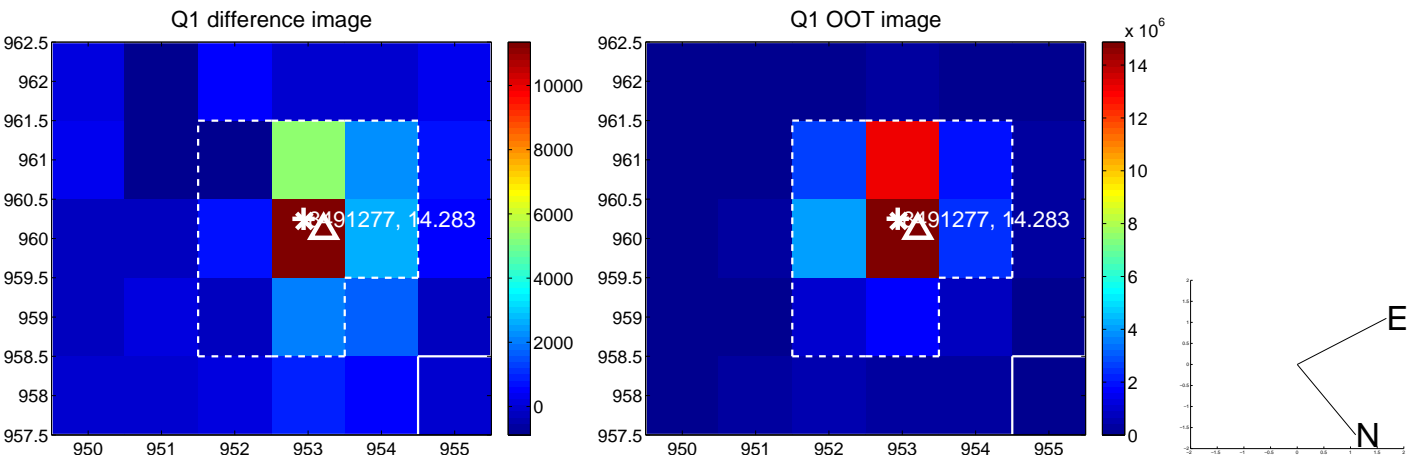
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.066 ± 0.117	0.56	0.025 ± 0.092	0.061 ± 0.127
PRF-fit source offset from KIC position	0.028 ± 0.123	0.23	0.007 ± 0.095	0.027 ± 0.127
photometric centroid source offset	0.26 ± 0.15	1.73	0.12 ± 0.15	-0.22 ± 0.15

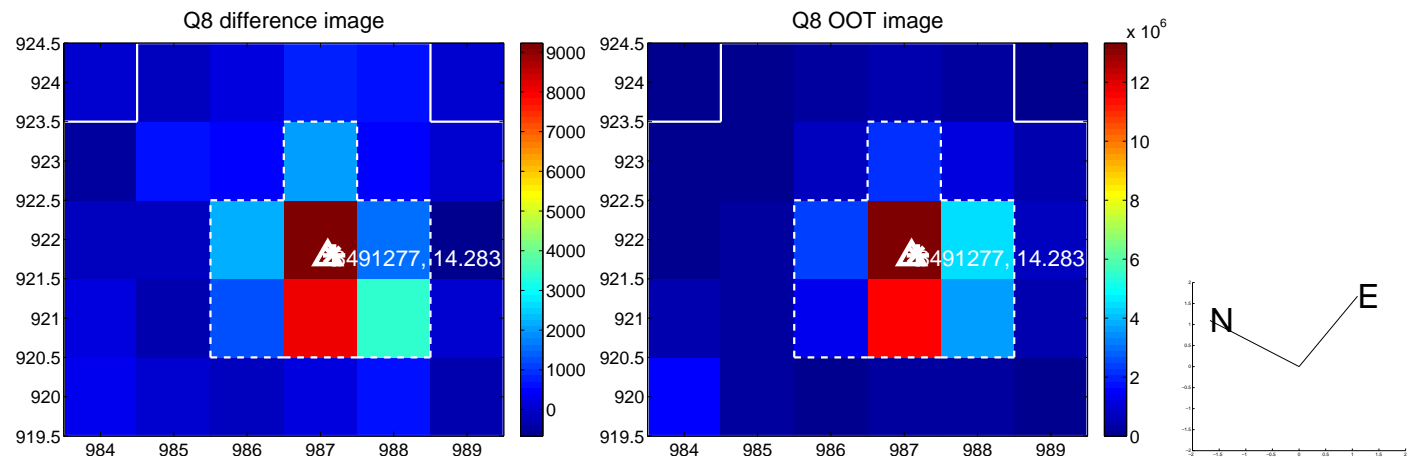
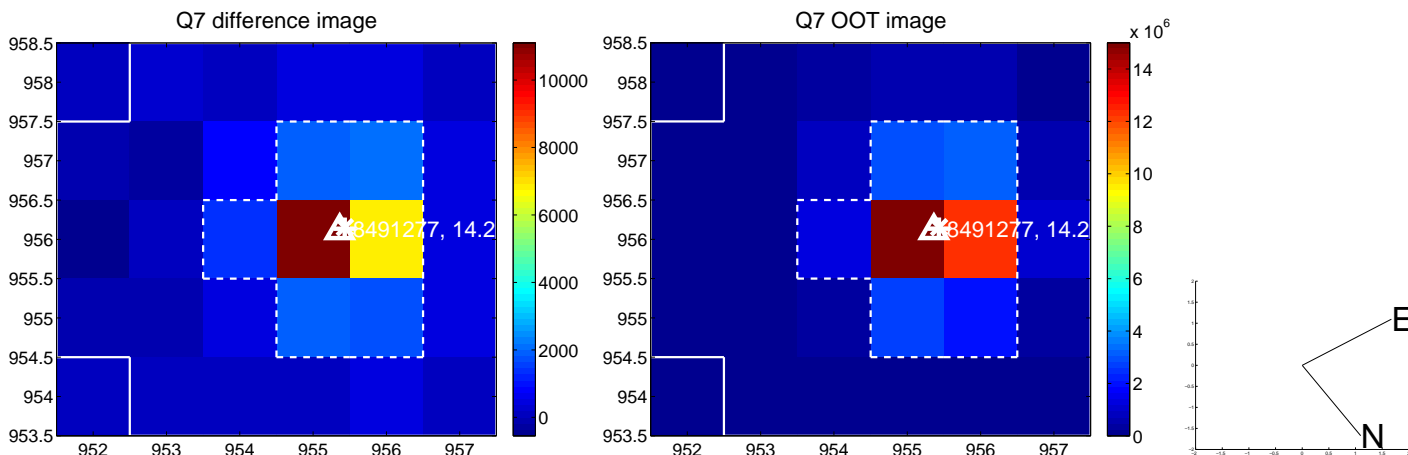
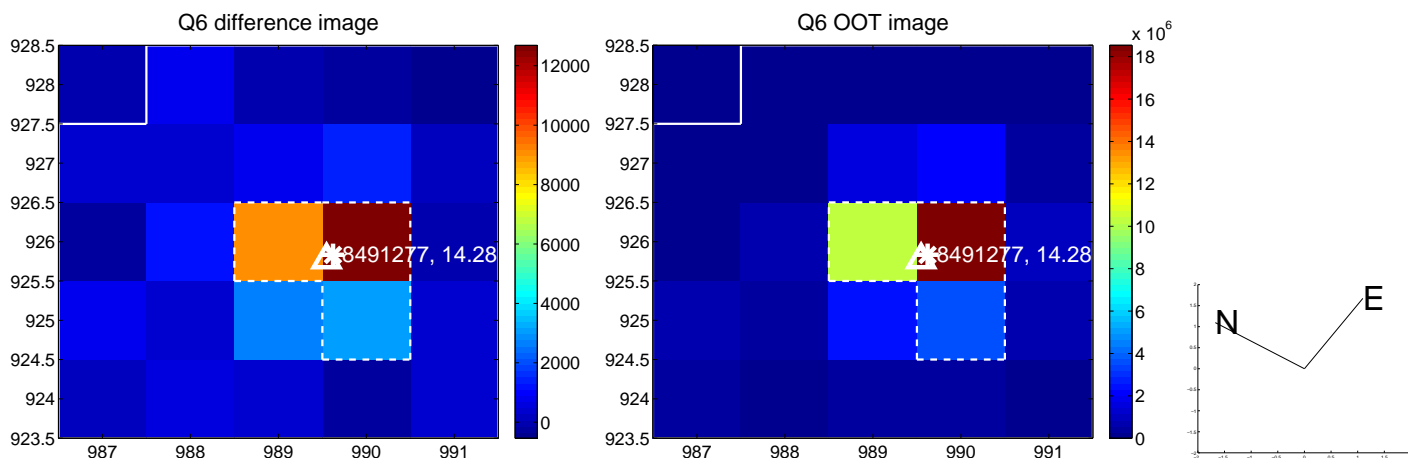
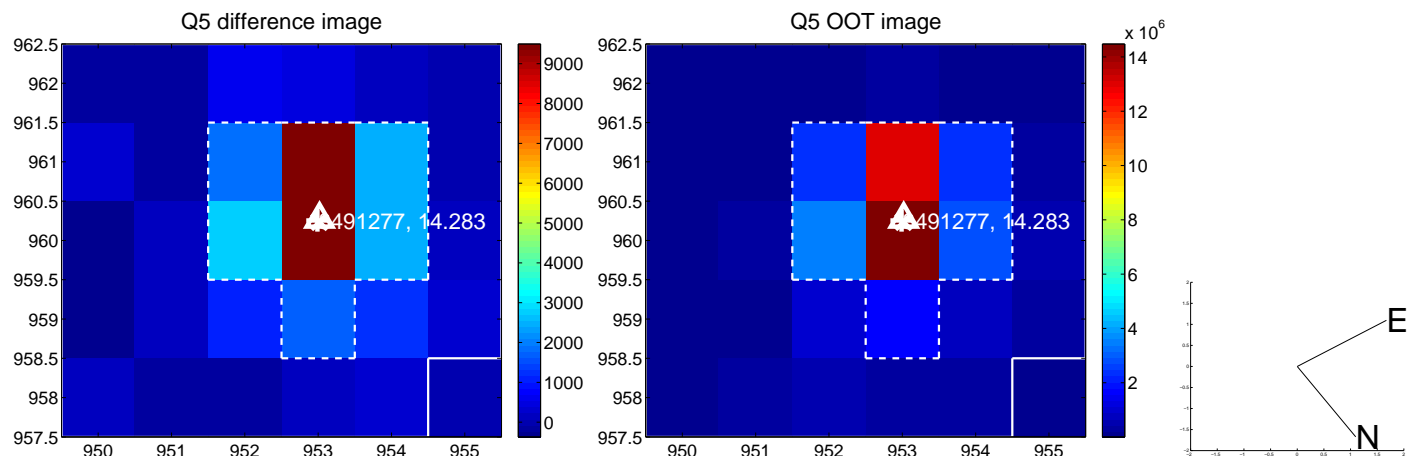


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

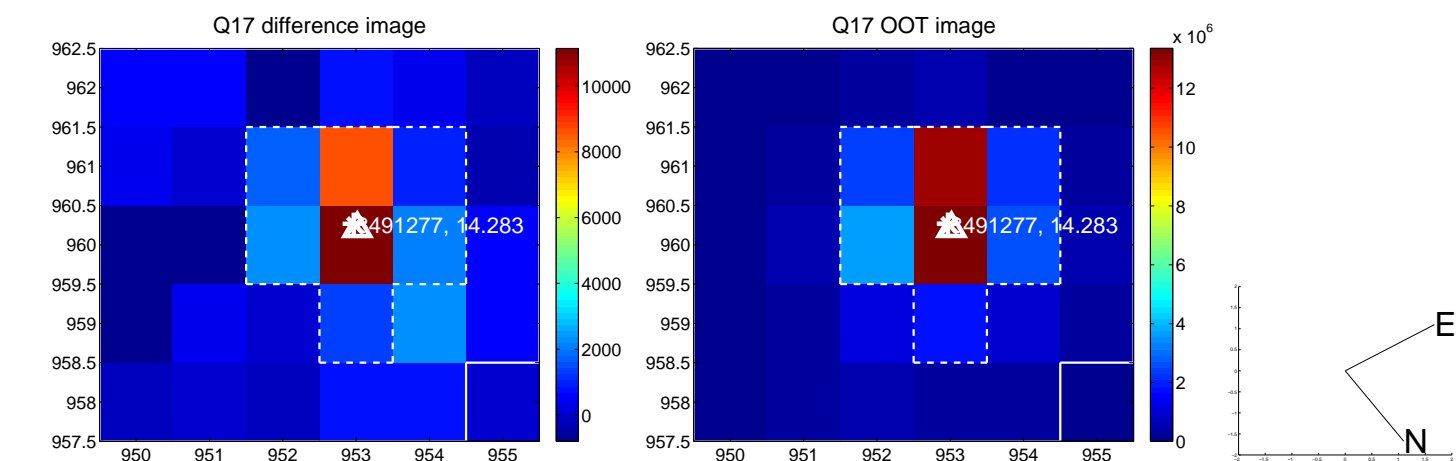
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



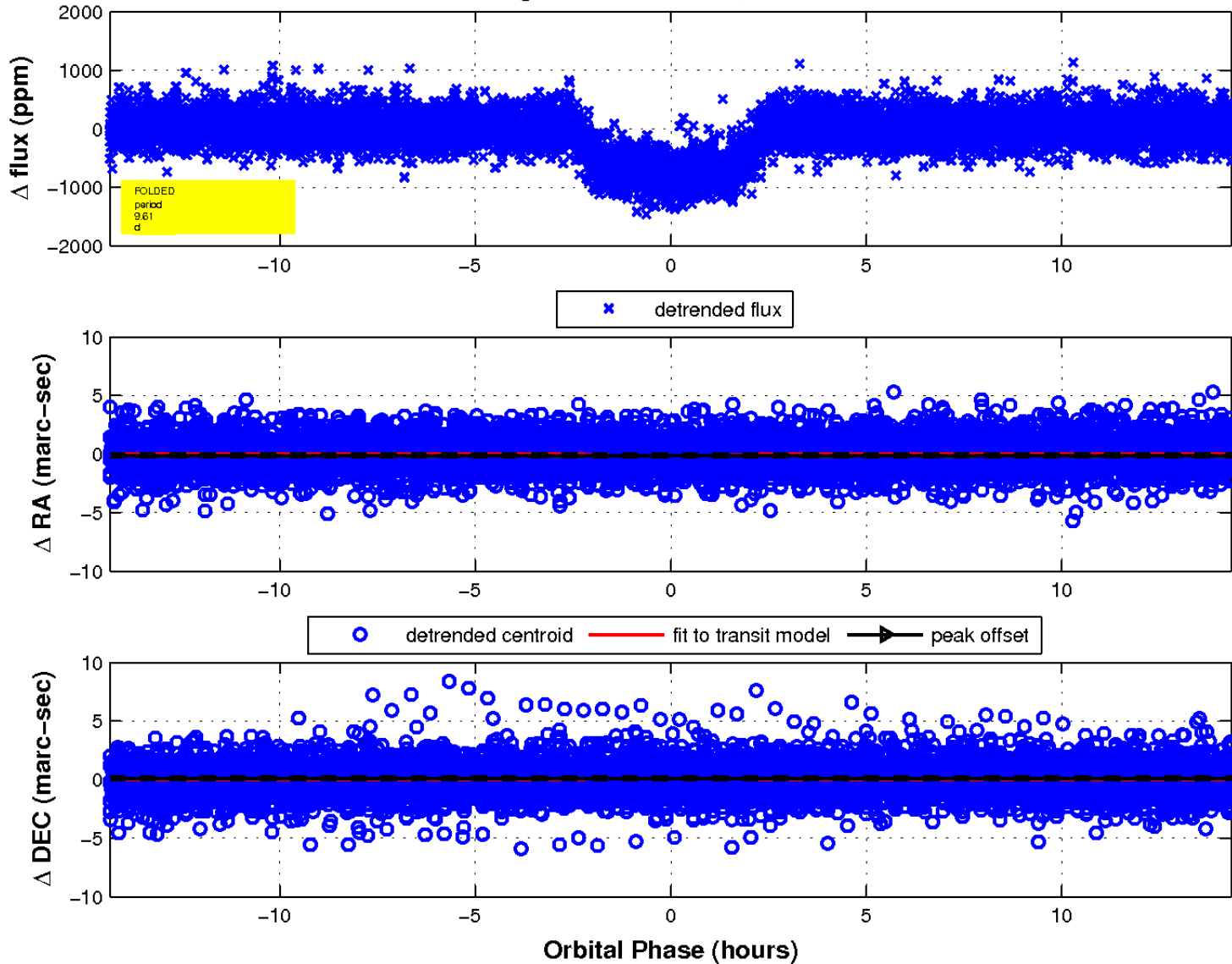
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

