

KIC 007018210

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})
007018210-01	OBS	No	4.228170	135.771314	0.0	31.525	9.7	0.0	3.02	5997	0.06	2939.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007018210-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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.

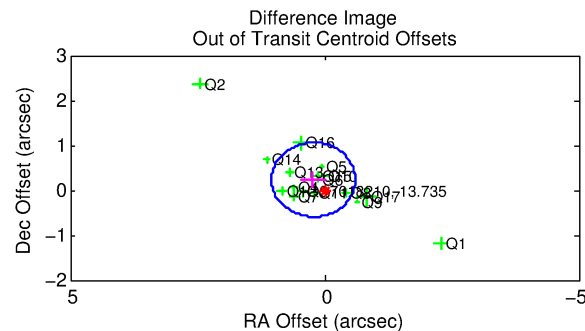
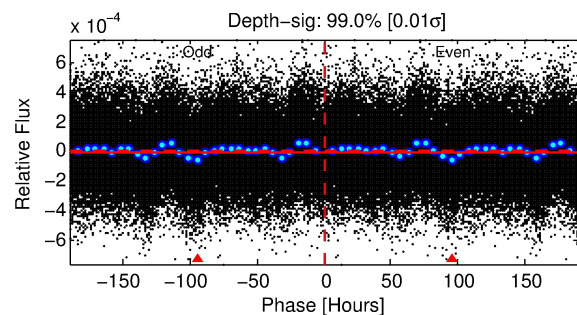
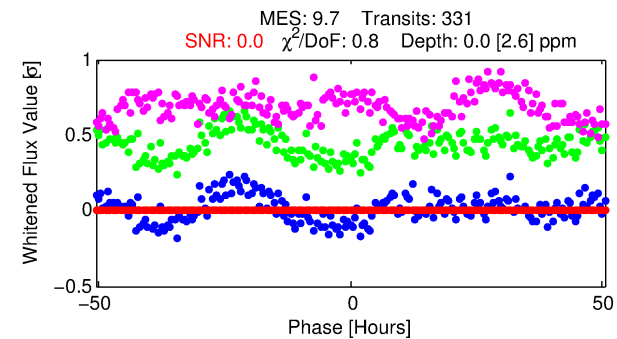
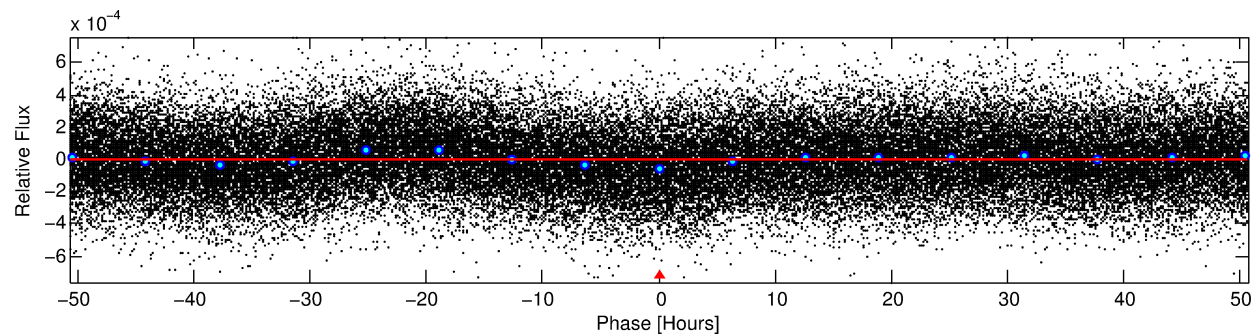
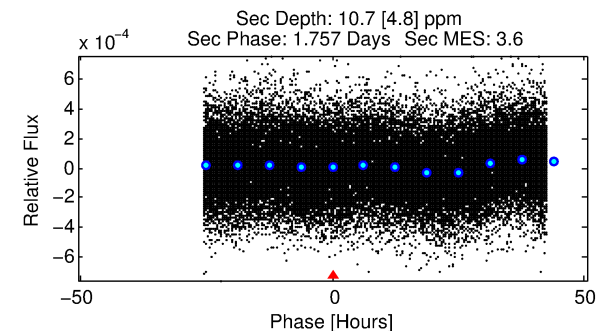
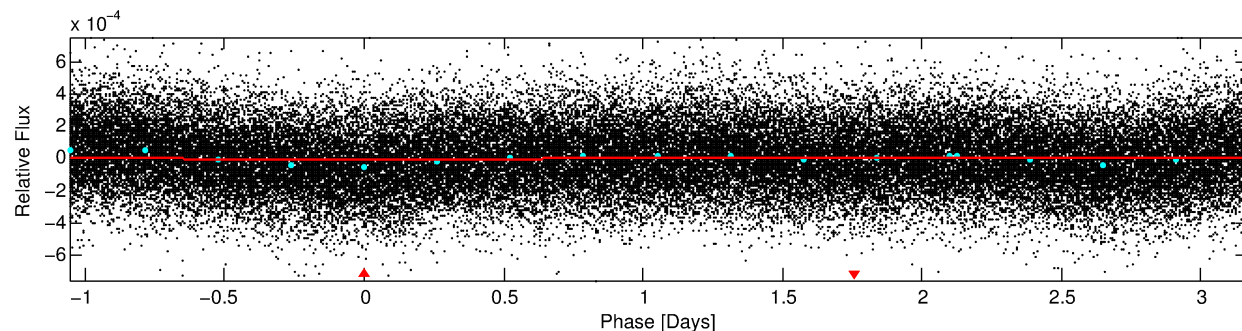
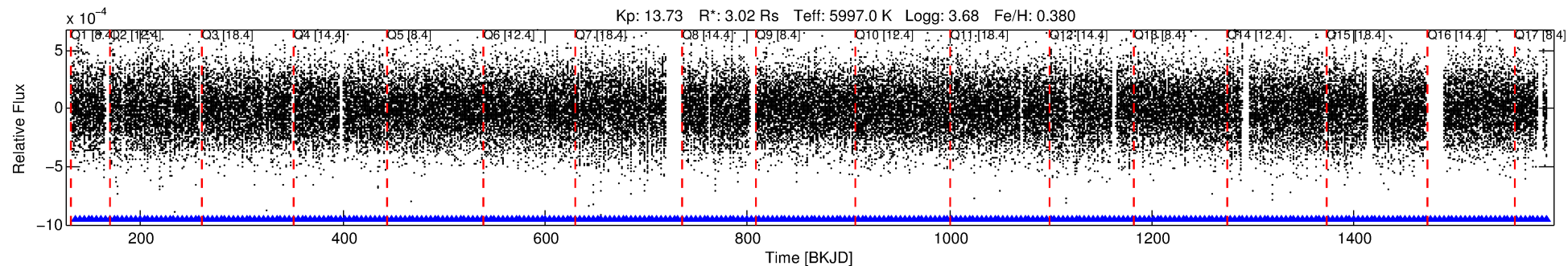
Ephemeris Match Information For 007018210-01

No Significant Match Found

DV One-Page Summary

KIC: 7018210 Candidate: 1 of 1 Period: 4.228 d
KOI: K05344 Corr: No Ephemeris Match

Kp: 13.73 R*: 3.02 Rs Teff: 5997.0 K Logg: 3.68 Fe/H: 0.380



DV Fit Results:

Period = 4.22817 [0.06546] d
Epoch = 135.7713 [10.1812] BKJD
Rp/R* = 0.0002 [0.0651]
a/R* = 1.20 [610.93]
b = 0.19 [8469.29]
Seff = 2939.27 [1120.04]
Teq = 1878 [179] K
Rp = 0.06 [21.43] Re
a = 0.0599 [0.0146] AU
Ag = 5955.43 [4275118.78] [0.00σ]
Teffp = 25501 [4576490] K [0.01σ]

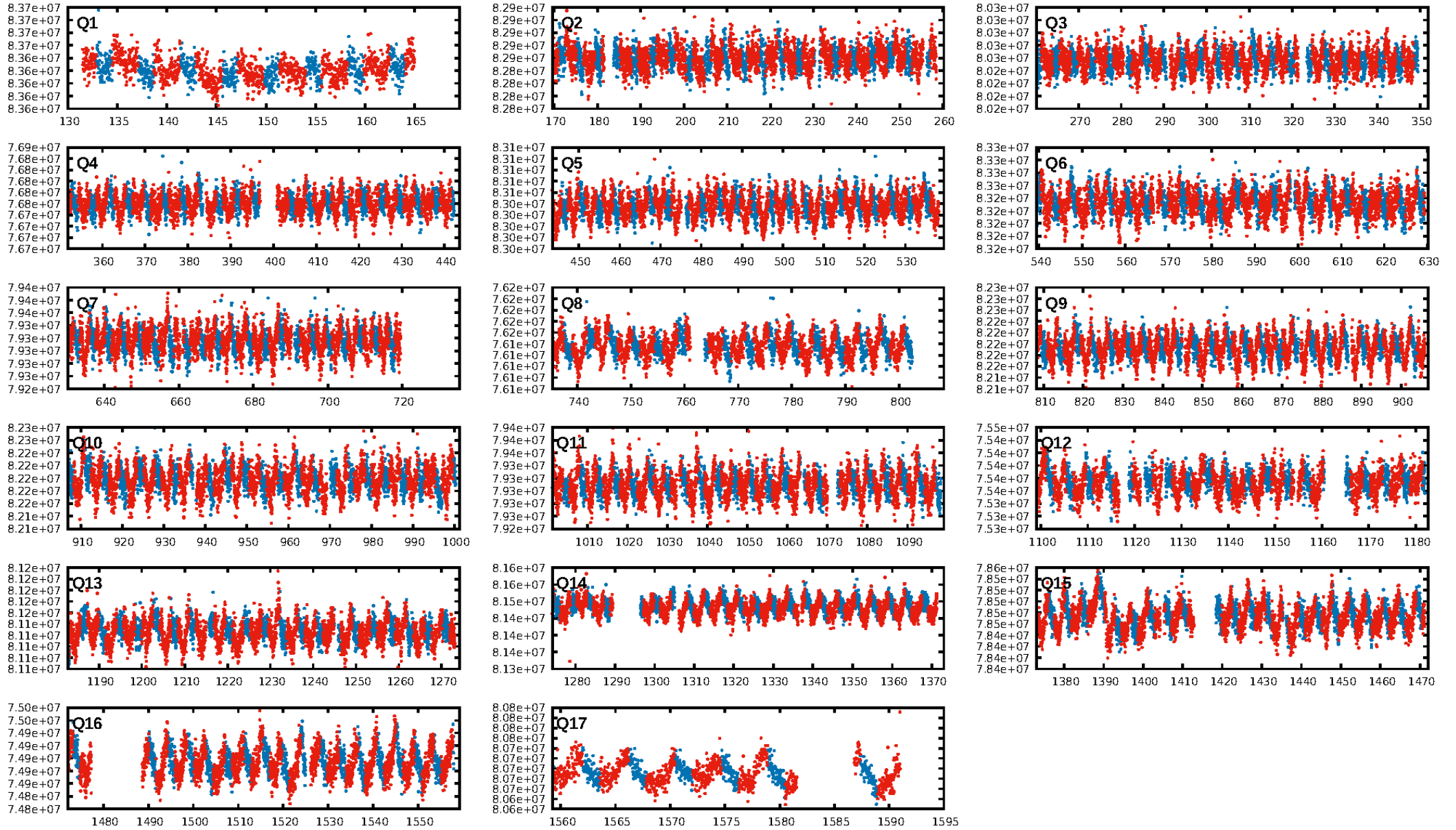
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [315/315]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.321 arcsec [1.17σ]
KicOffset-rm: 0.271 arcsec [0.97σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 1.00 [17/17]

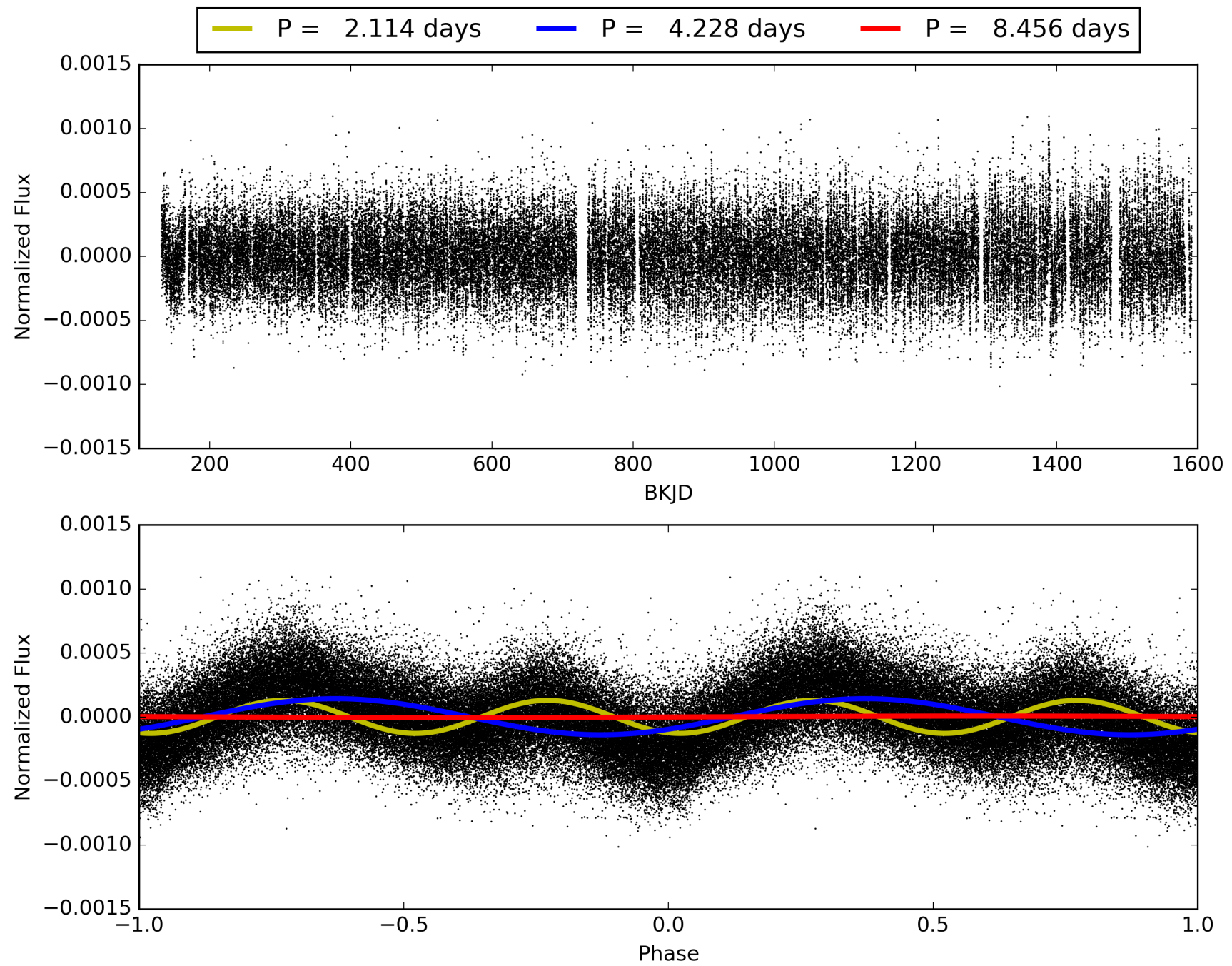
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:58:24 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007018210-01, PDC Light Curves

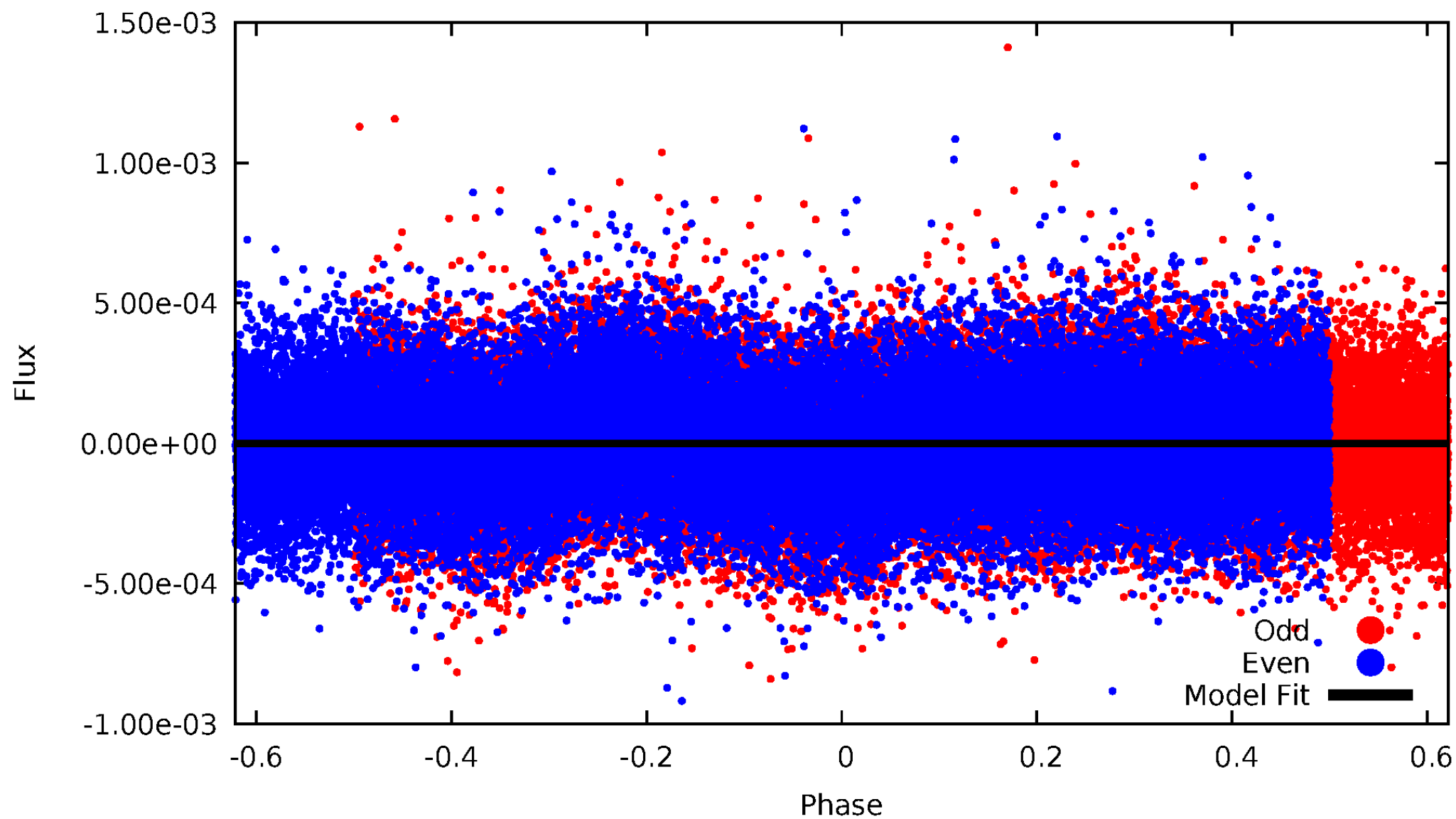


TCE 007018210-01



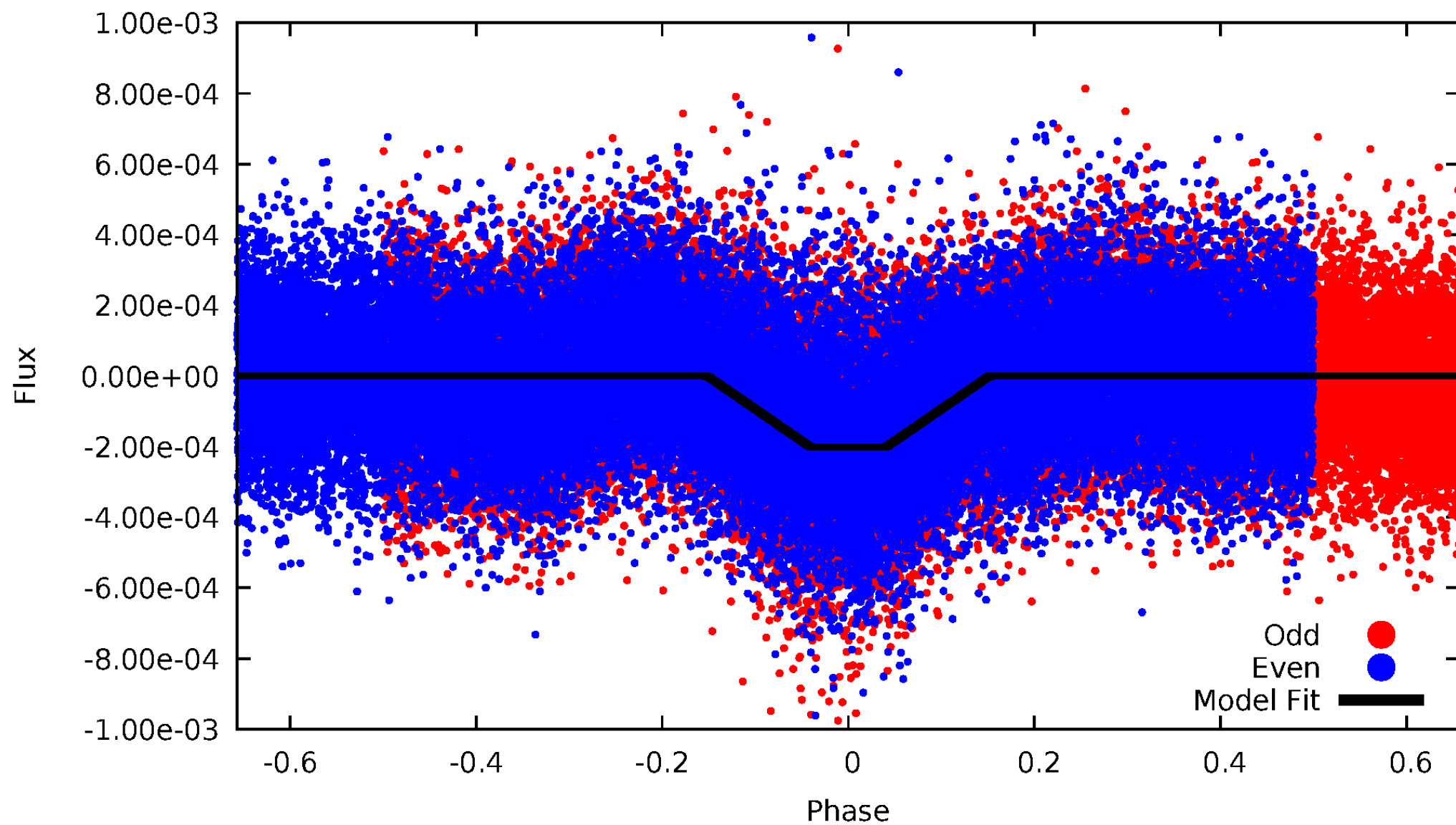
DV Odd/Even

TCE 007018210-01



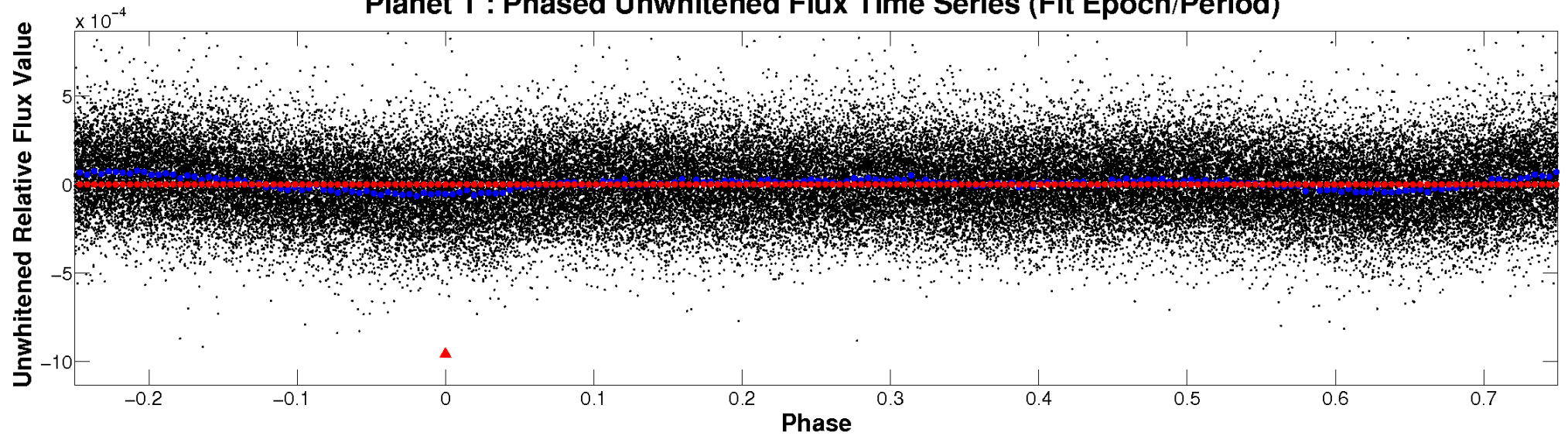
ALT Odd/Even

TCE 007018210-01

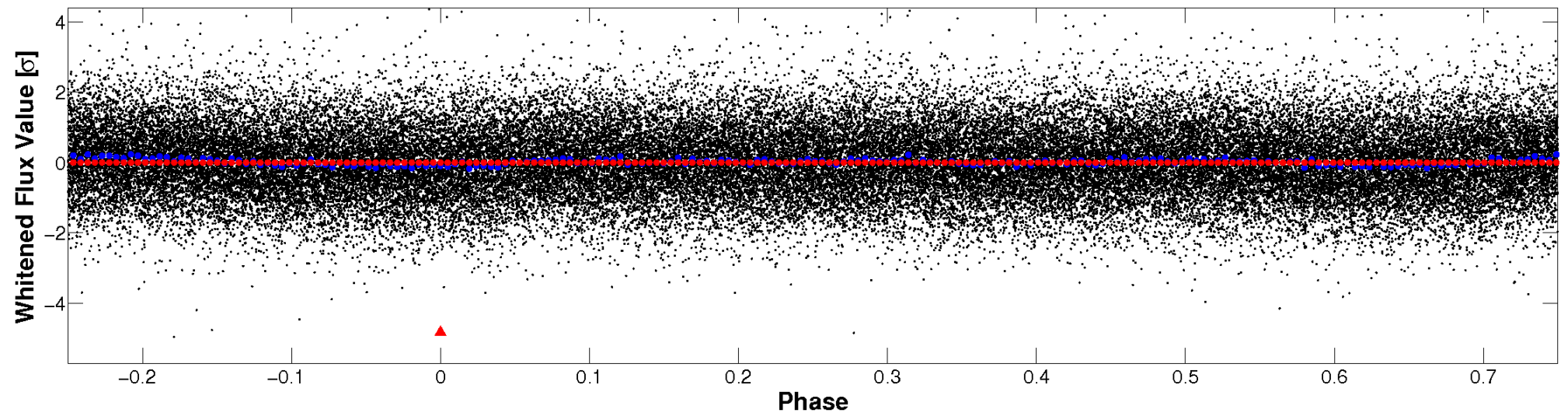


Non-Whitened Vs. Whitened Light Curve

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

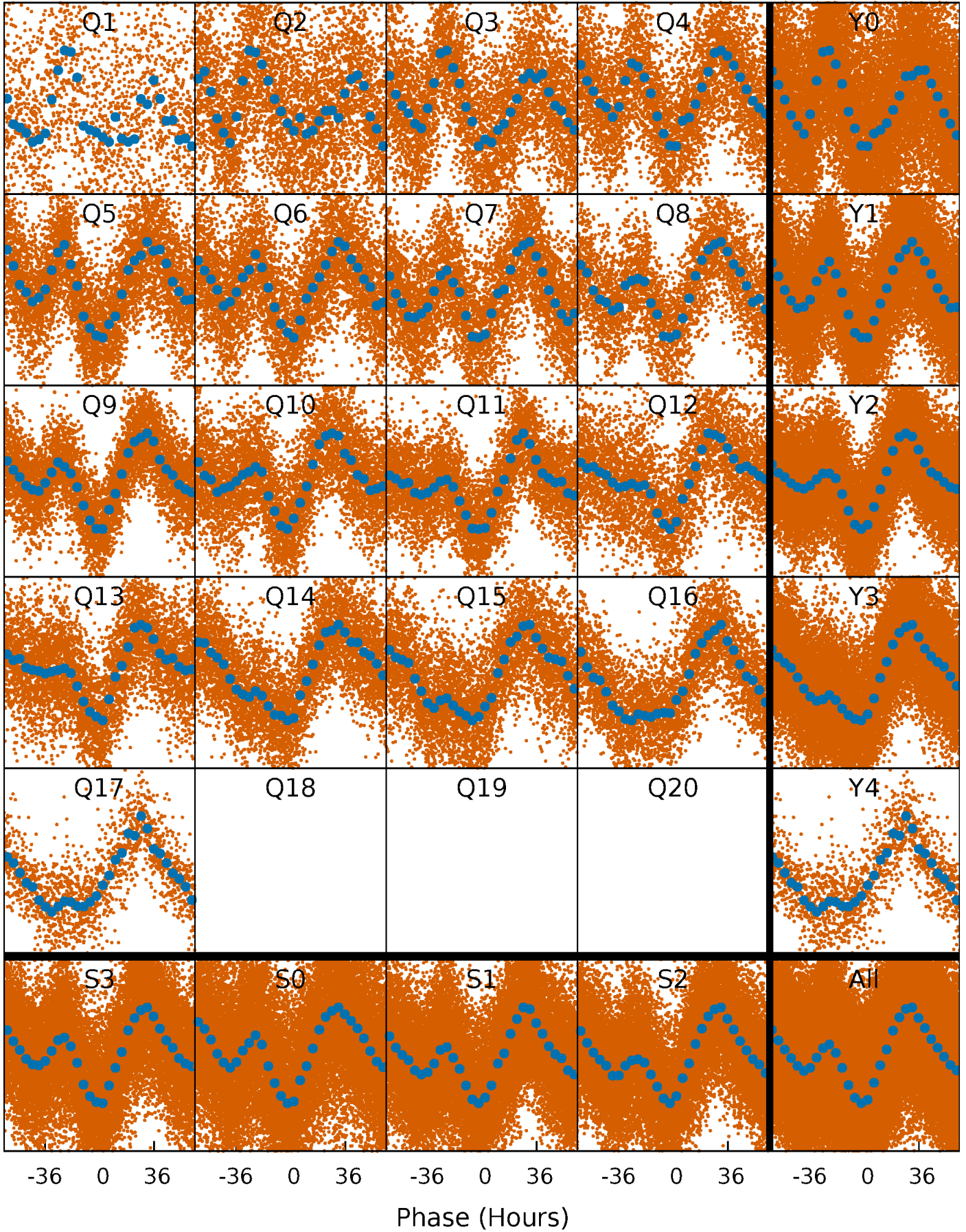


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



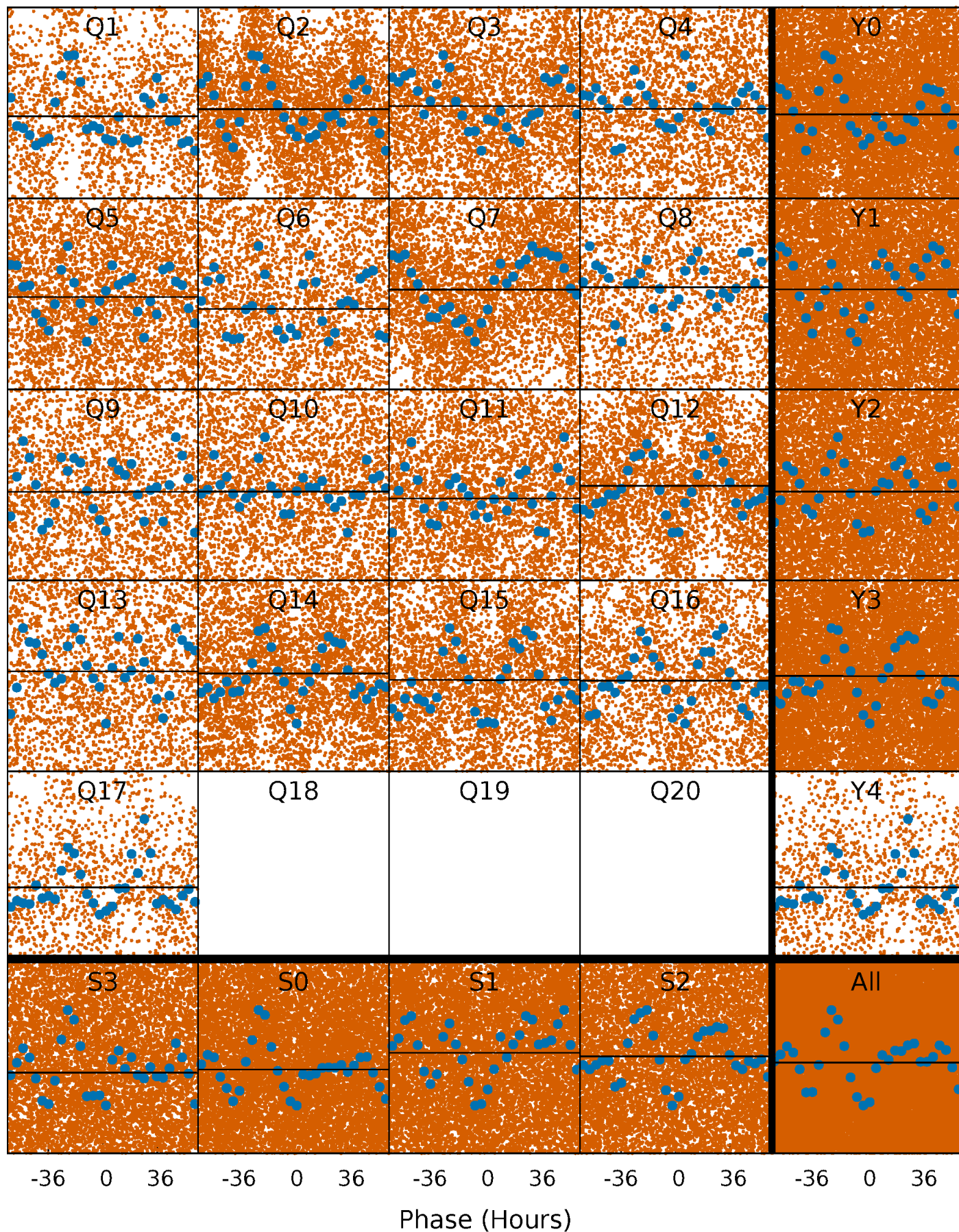
PDC Quarter-Phased Transit Curves

TCE 007018210-01 P= 4.228170 Days $T_0=135.771314$ (BKJD)



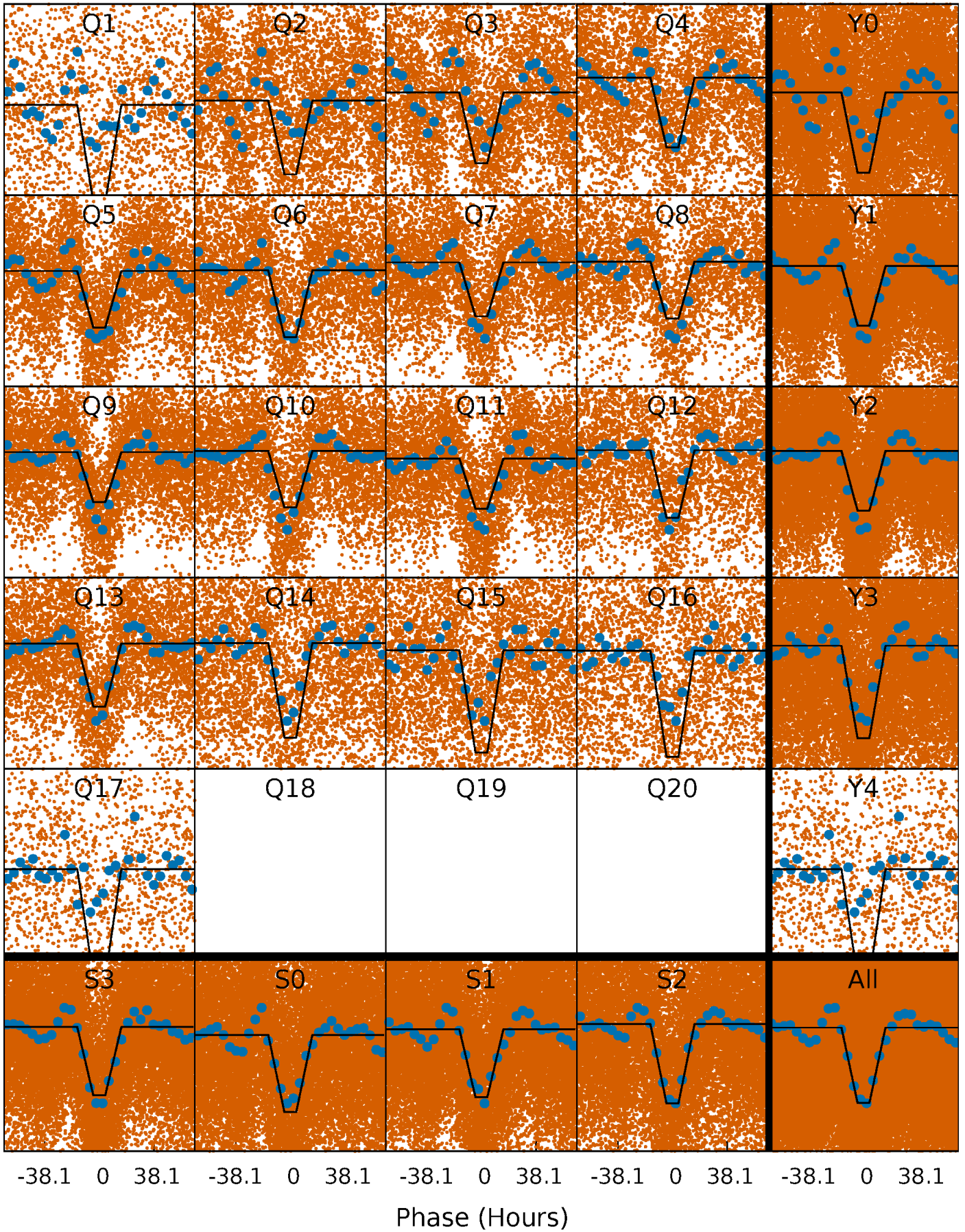
DV Quarter-Phased Transit Curves

TCE 007018210-01 P= 4.228170 Days $T_0=135.771314$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

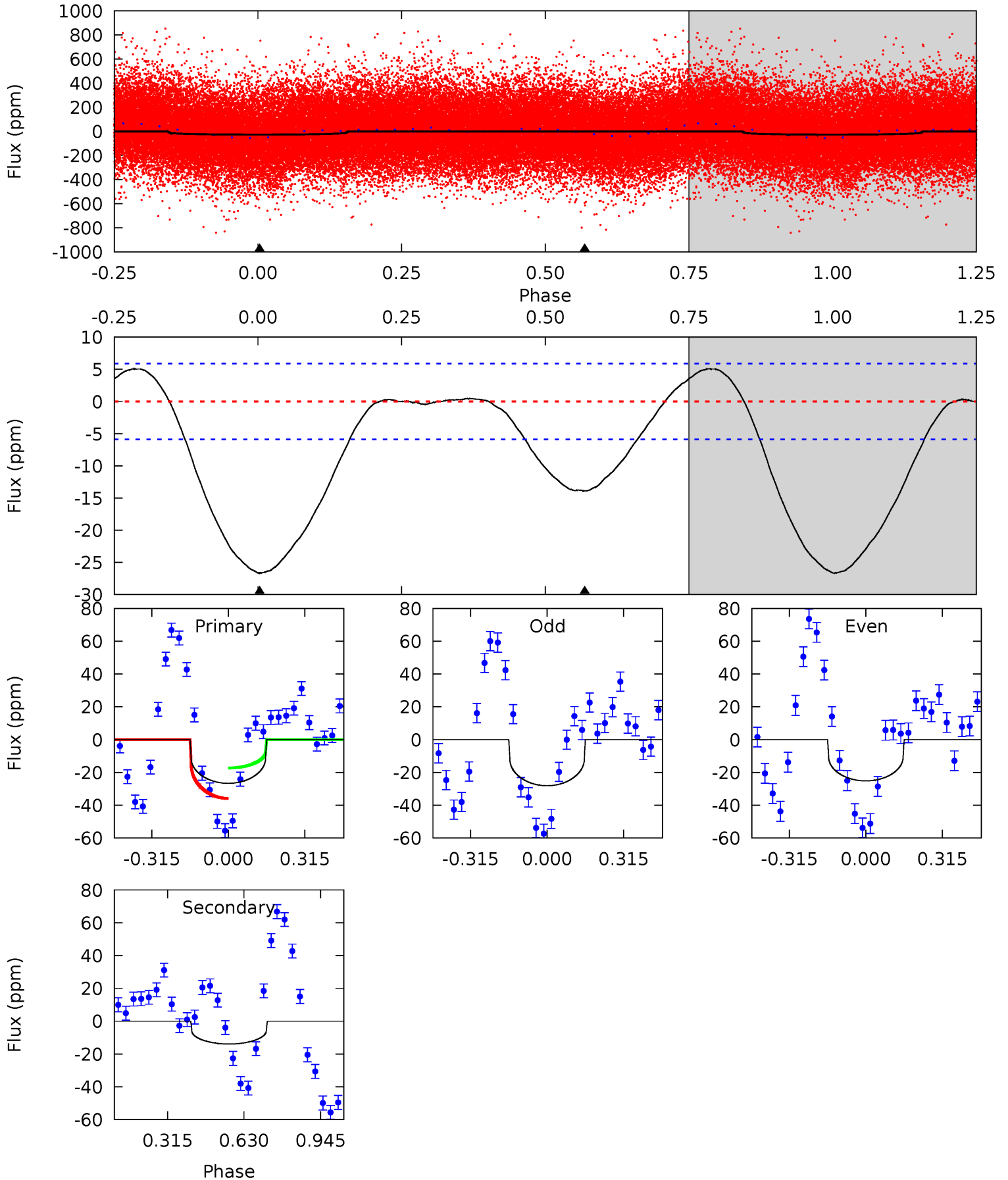
TCE 007018210-01 P= 4.229262 Days $T_0=135.543490$ (BKJD)



DV Model-Shift Uniqueness Test

007018210-01, P = 4.228170 Days, E = 127.314974 Days

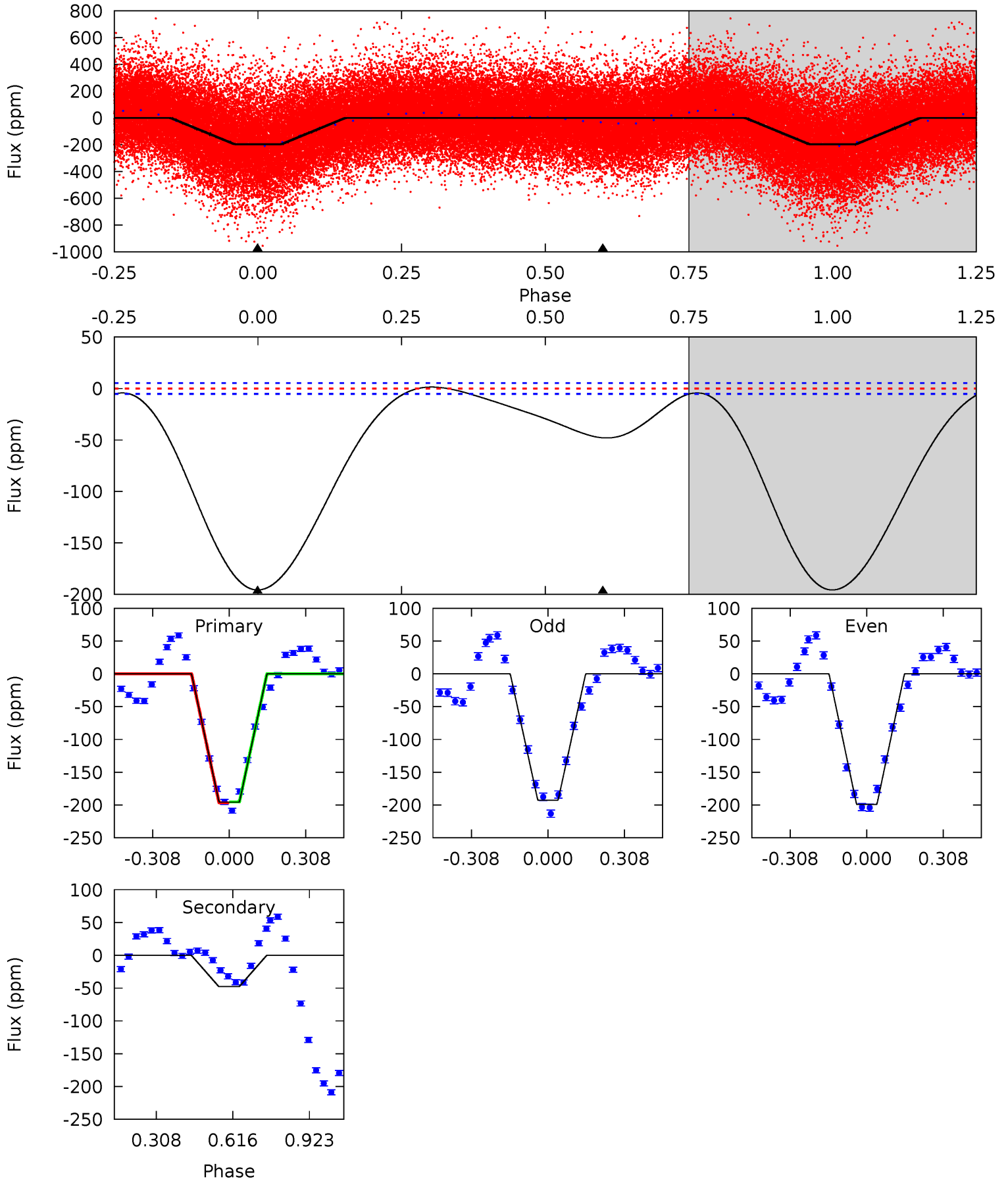
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	10.2	0	0	4.32	1.00	0.14	19.5	19.5	10.2	10.2	1.08	1.19	0.16	6.91



Alt Model-Shift Uniqueness Test

007018210-01, P = 4.229262 Days, E = 131.314228 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
158.4	38.7	0	0	4.32	1.02	1.67	158.4	158.4	38.7	38.7	2.64	1.03	0.01	0.53



Stellar Parameters For KIC 007018210

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5997^{+90}_{-72}	$3.684^{+0.215}_{-0.099}$	$0.380^{+0.050}_{-0.100}$	$3.018^{+0.406}_{-0.813}$	$1.602^{+0.108}_{-0.162}$	$0.082^{+0.105}_{-0.024}$
	+2%/-1%	+6%/-3%	+13%/-26%	+13%/-27%	+7%/-10%	+128%/-30%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 007018210-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-14 ± 1	$14.04^{+16.29}_{-9.83}$	2623^{+113}_{-168}	-2601^{+6083}_{-242}	$0.139^{+1.314}_{-0.109}$
Alt.	-48 ± 1	$16.16^{+15.99}_{-10.97}$	2613^{+117}_{-169}	2323^{+1792}_{-5052}	$0.361^{+3.149}_{-0.270}$

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

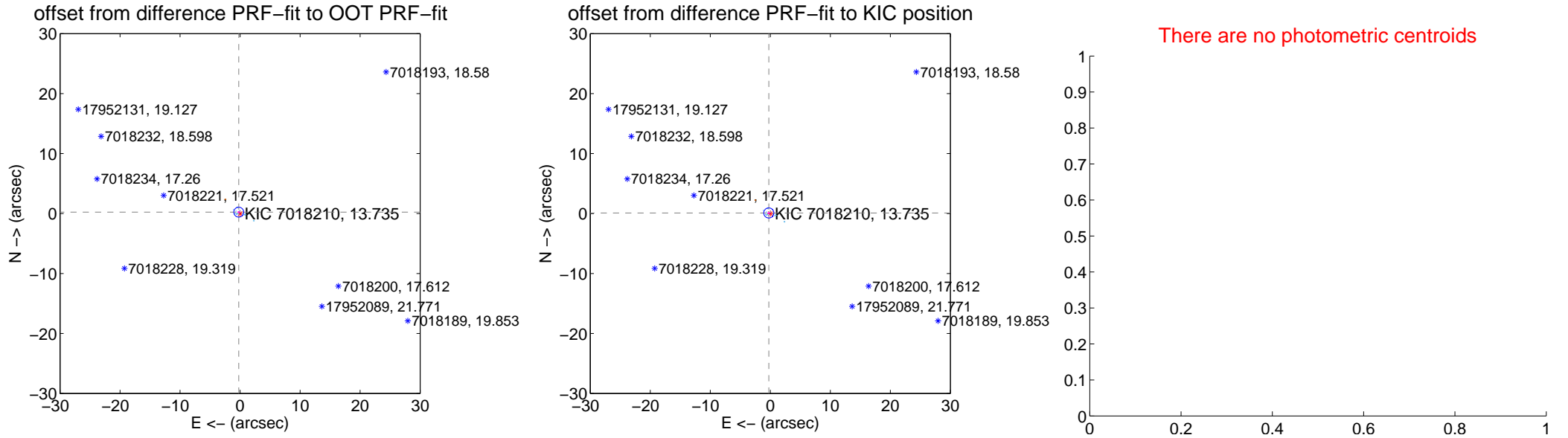
DV Centroid Data

Supplemental centroid analysis for 007018210-01. Kepler magnitude: 13.73. Transit SNR 0.02

There are 16 quarters with good PRF difference image offsets

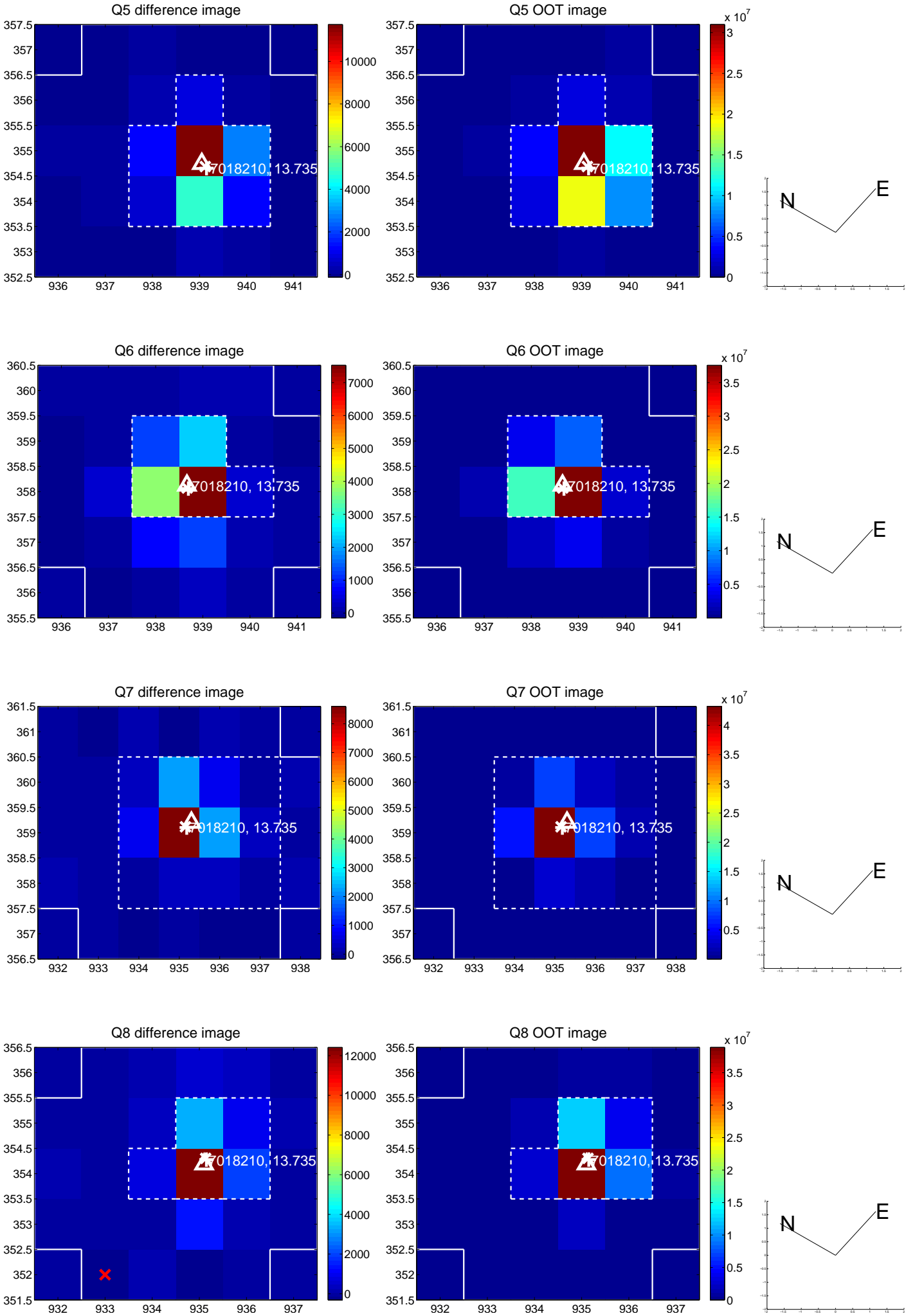
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.321 ± 0.275	1.17	0.223 ± 0.237	0.232 ± 0.181
PRF-fit source offset from KIC position	0.271 ± 0.281	0.97	0.253 ± 0.244	0.098 ± 0.185
photometric centroid source offset	—	—	—	—

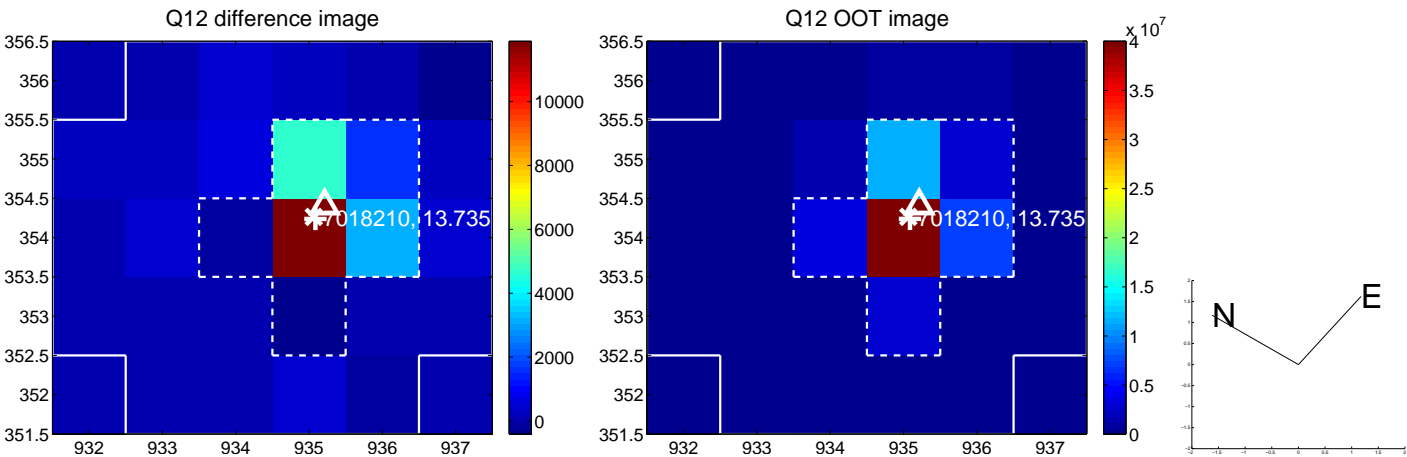
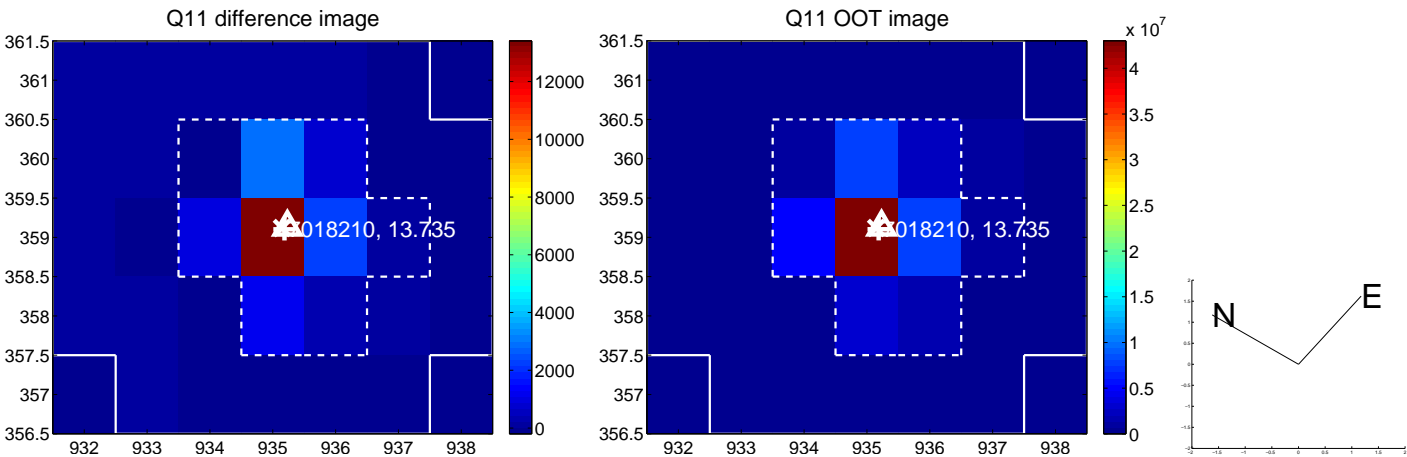
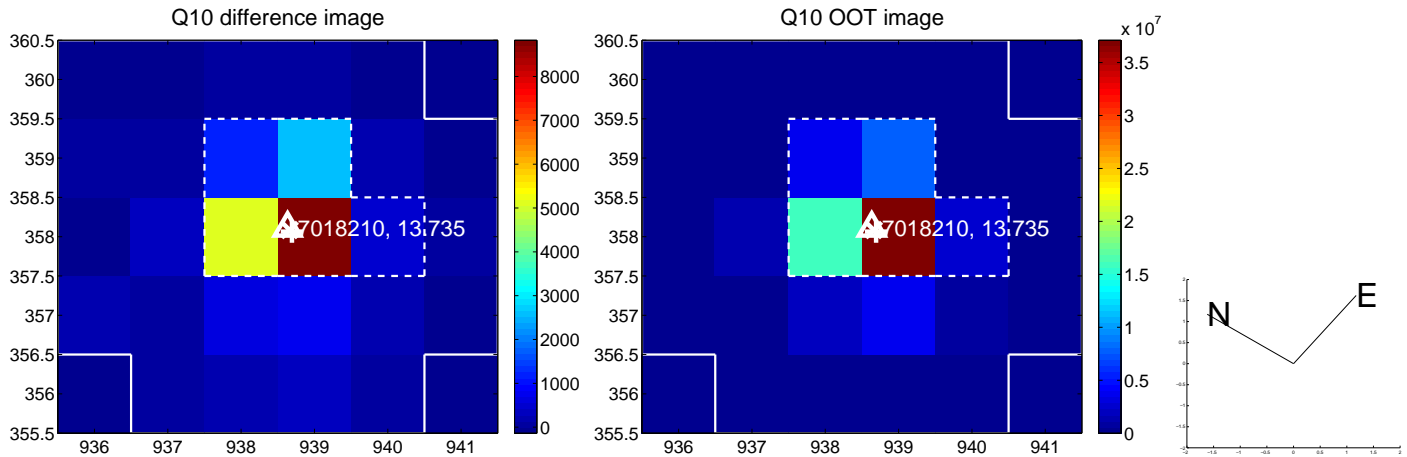
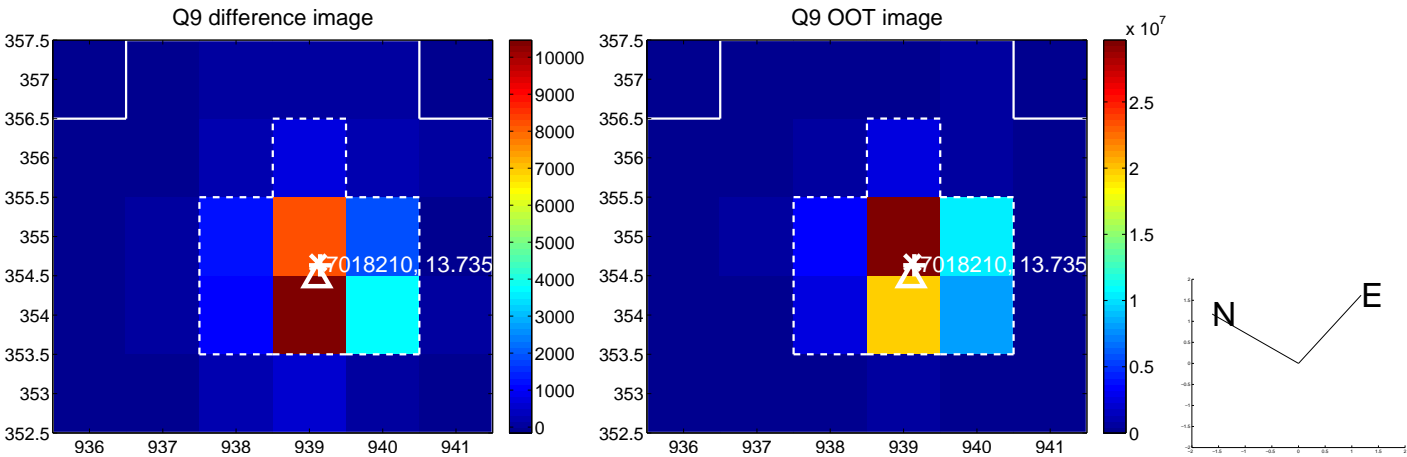


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

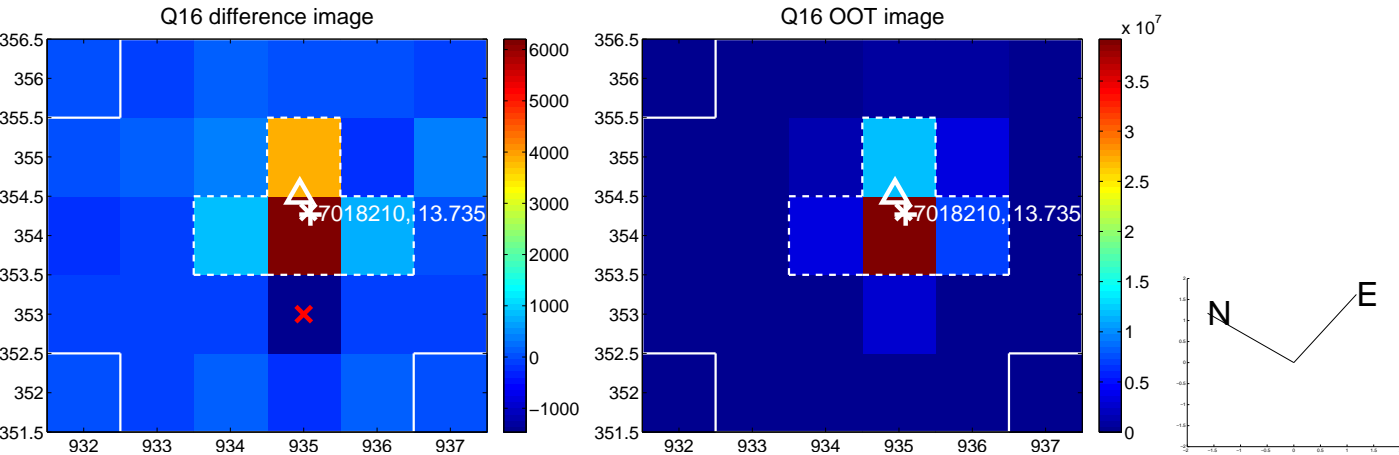
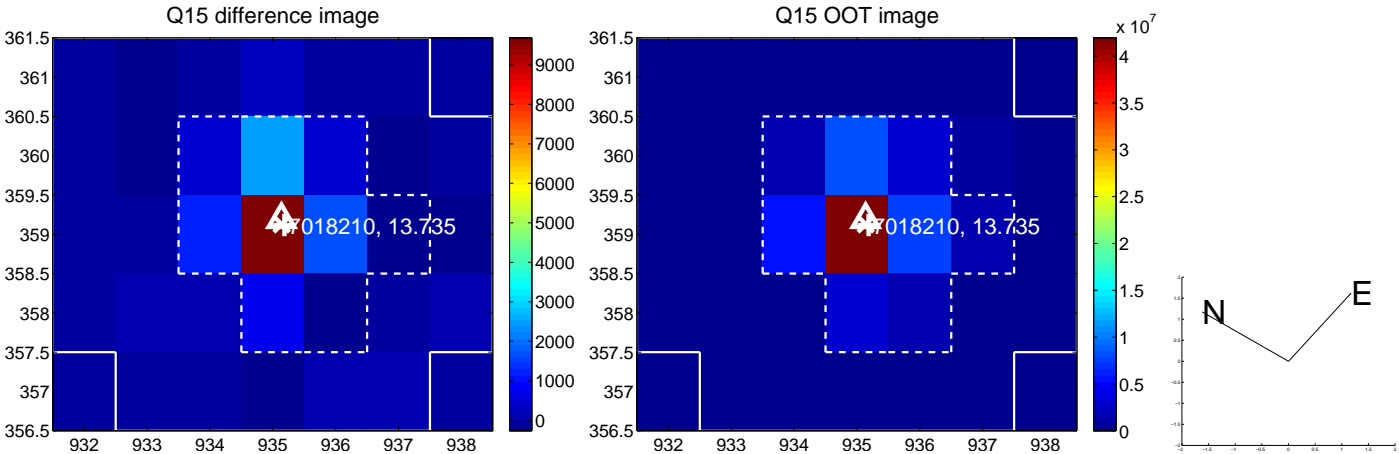
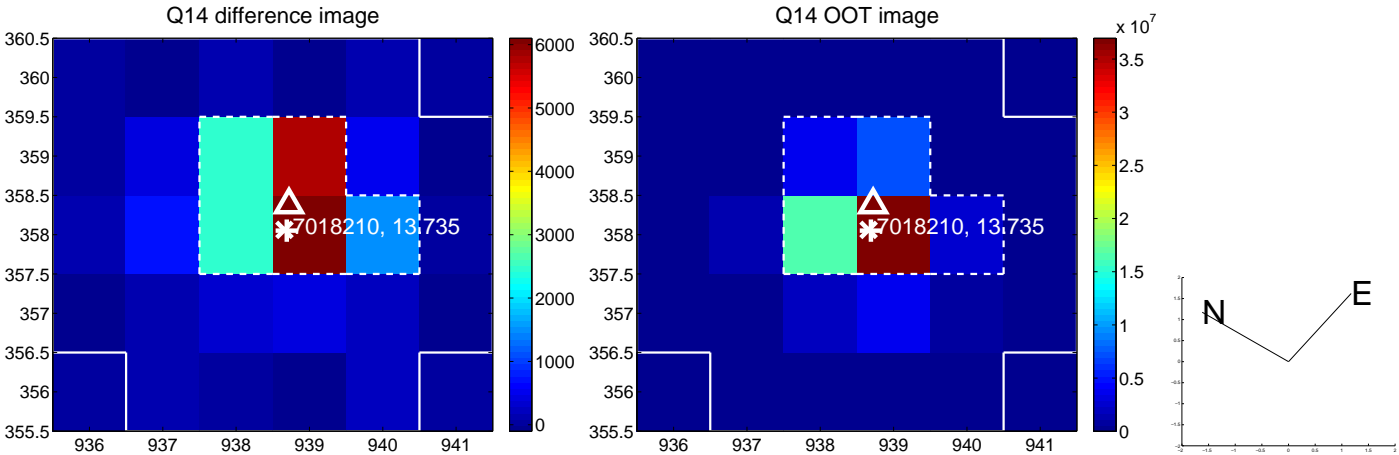
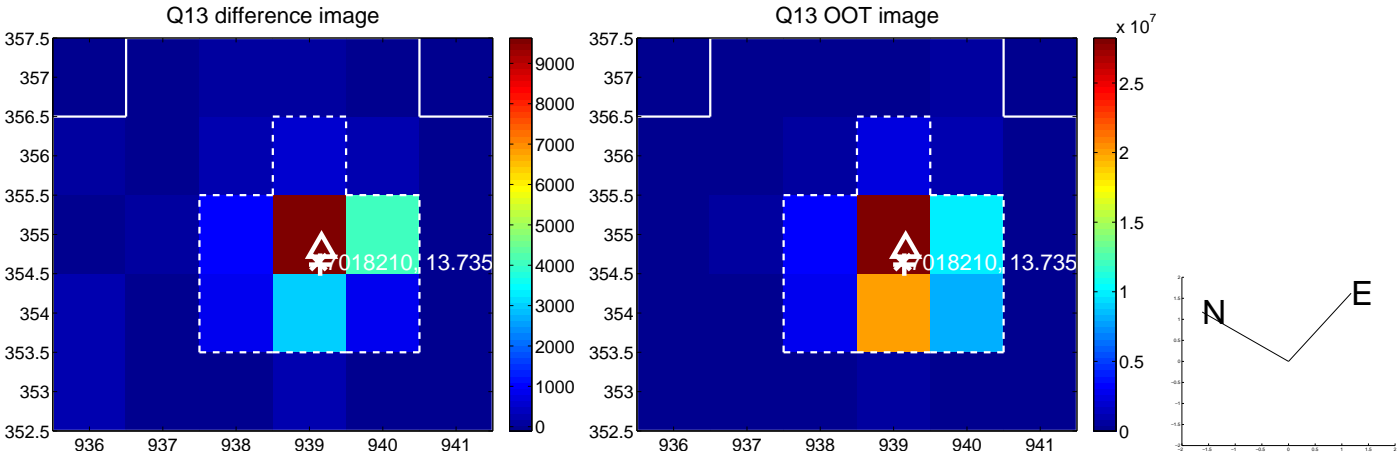
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



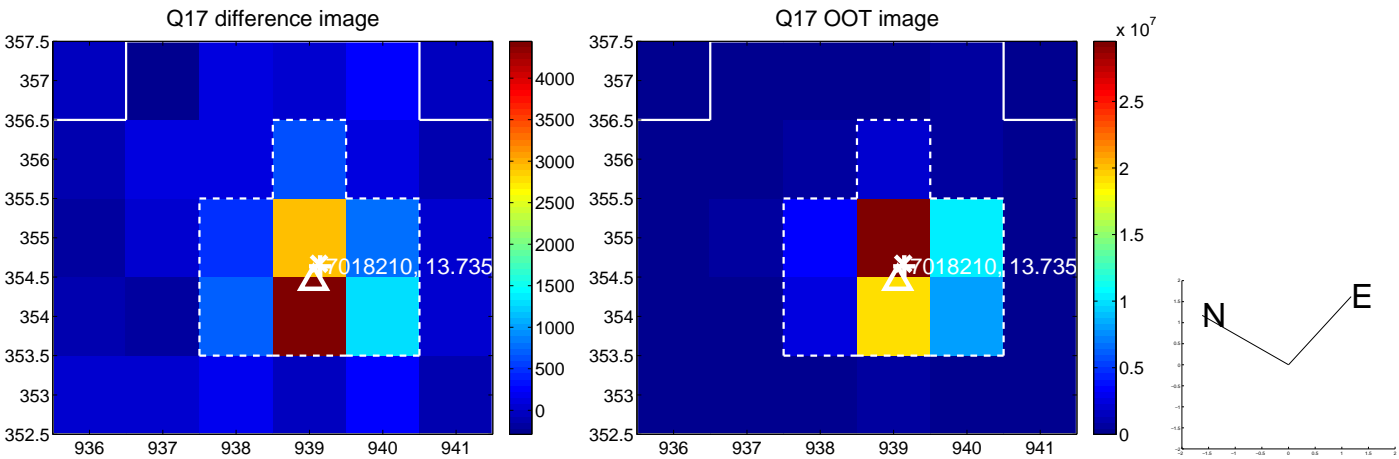
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



folded centroid time series figure for this object.

UKIRT Image

Declination

