

KIC 010118266

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})
010118266-01	OBS	4755.01	3.743196	135.136432	262.3	0.802	9.1	11.5	0.85	5207	1.36	235.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010118266-01	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.

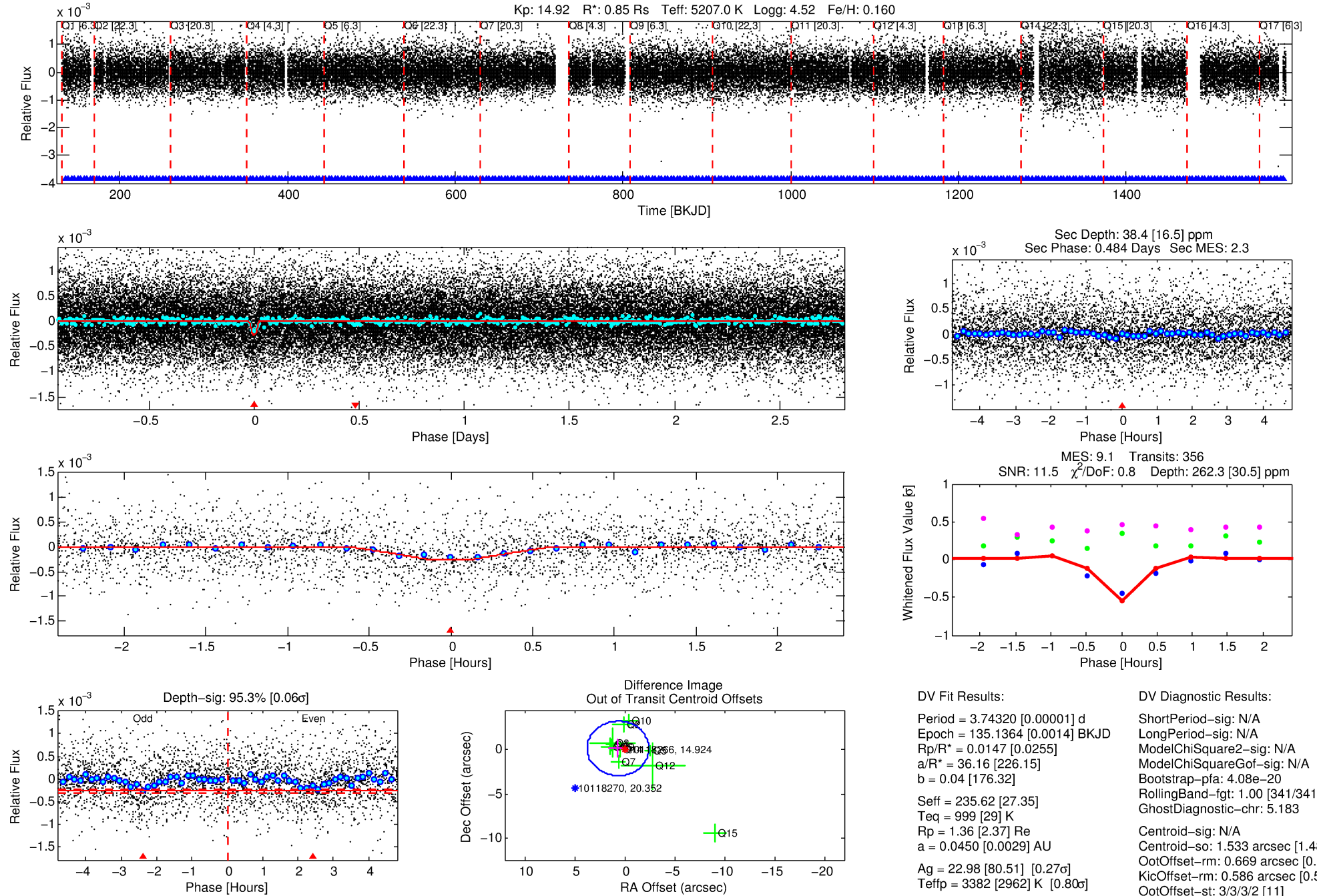
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010118266-01

No Significant Match Found

DV One-Page Summary

KIC: 10118266 Candidate: 1 of 1 Period: 3.743 d
KOI: K04755.01 Corr: 0.874



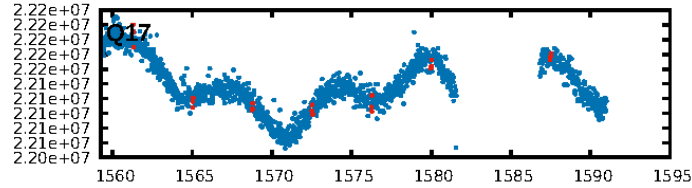
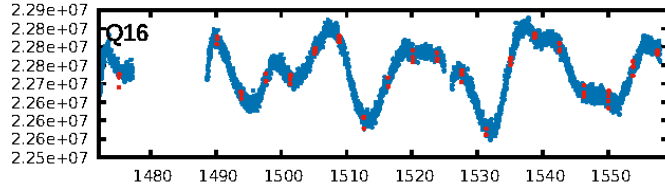
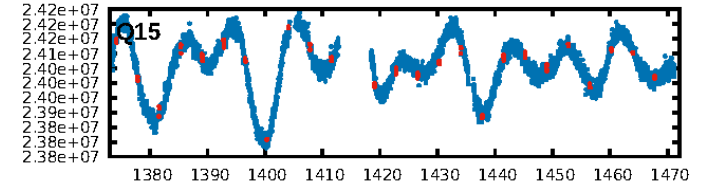
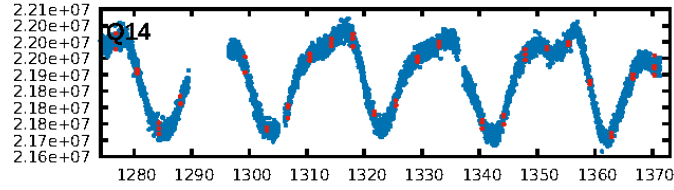
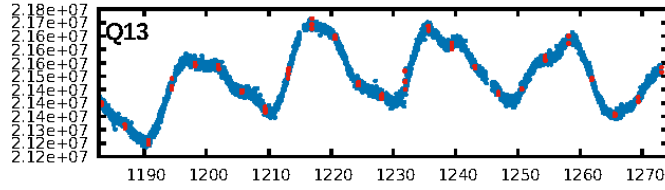
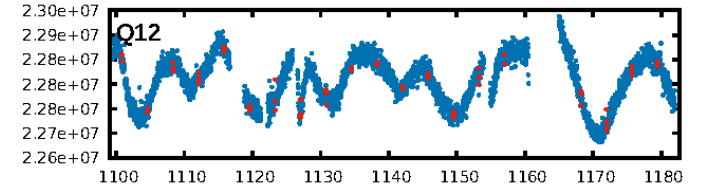
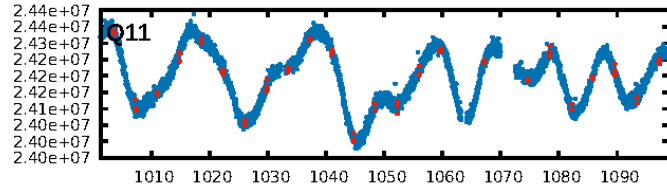
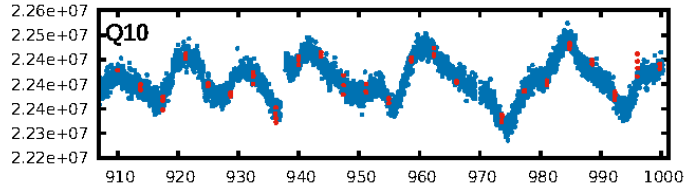
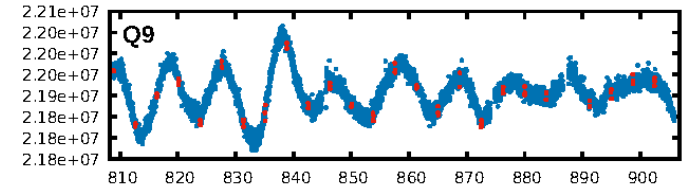
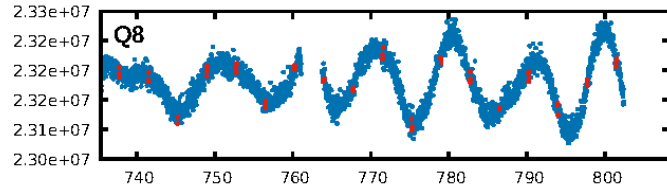
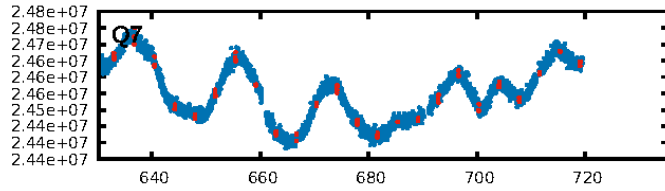
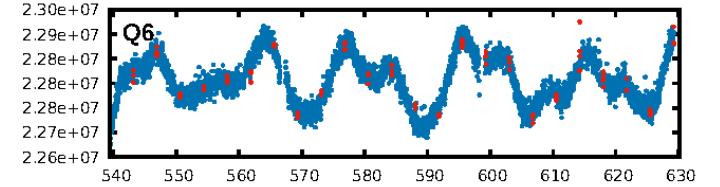
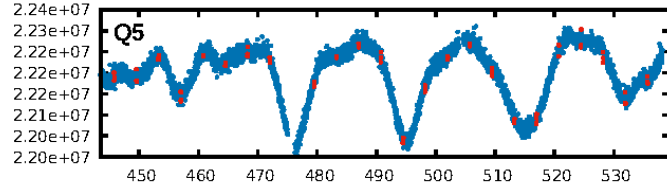
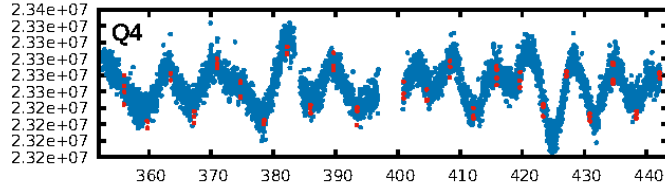
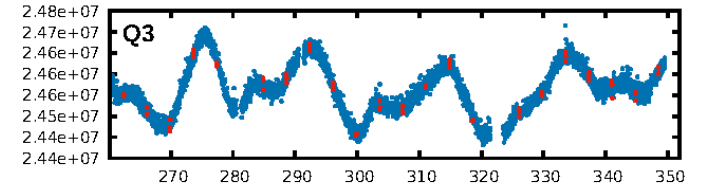
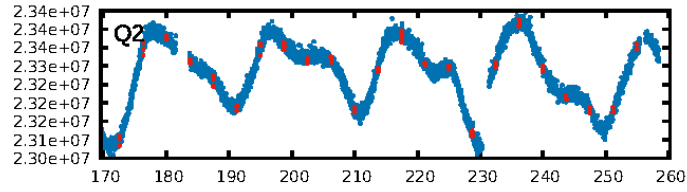
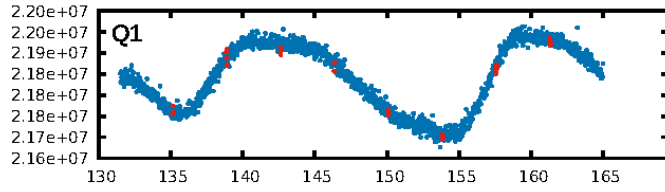
DV Fit Results:

Period = 3.74320 [0.00001] d
Epoch = 135.1364 [0.0014] BKJD
Rp/R* = 0.0147 [0.0255]
a/R* = 36.16 [226.15]
b = 0.04 [176.32]
Seff = 235.62 [27.35]
Teff = 999 [29] K
Rp = 1.36 [2.37] Re
a = 0.0450 [0.0029] AU
Ag = 22.98 [80.51] [0.27 σ]
Teffp = 3382 [2962] K [0.80 σ]

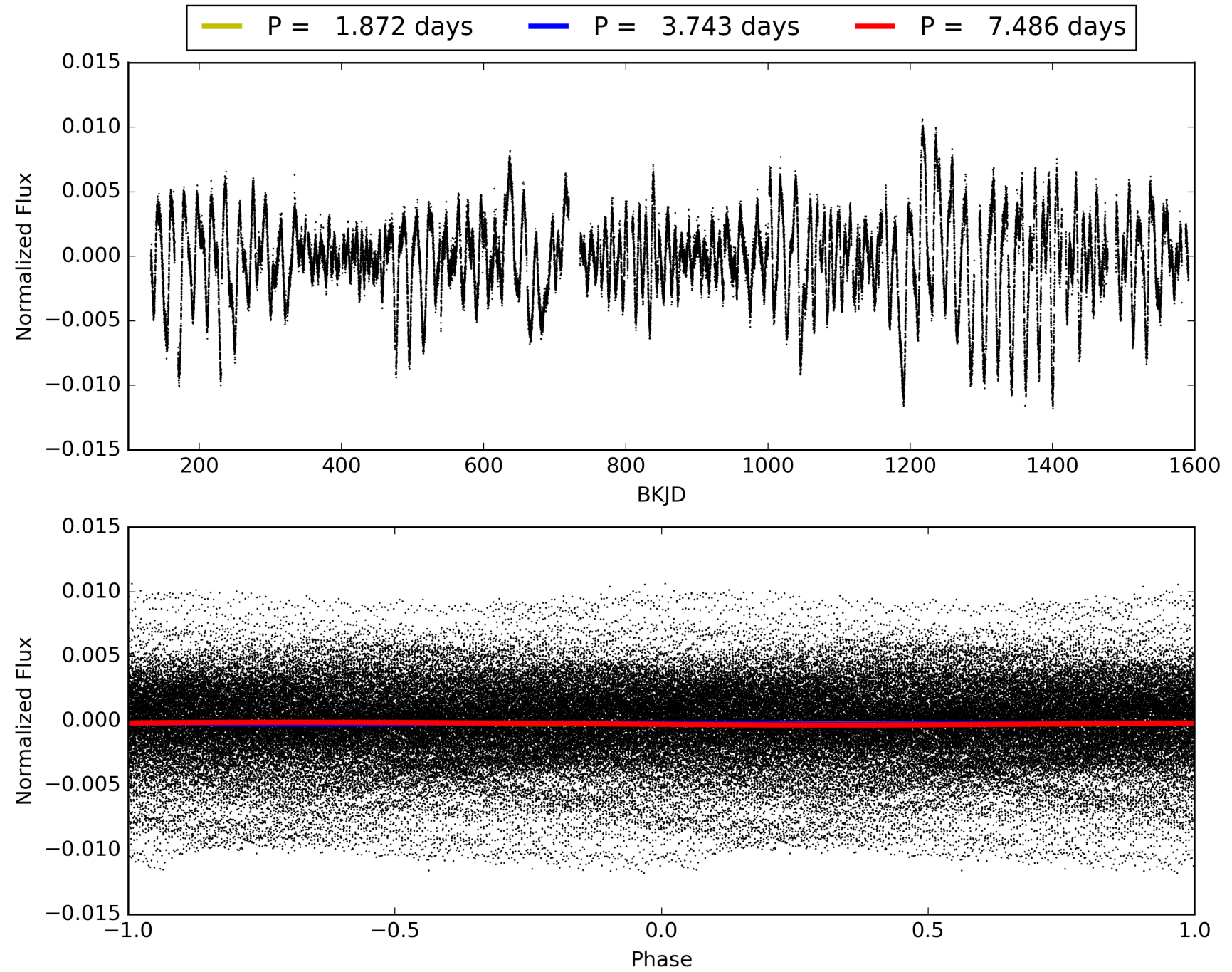
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.08e-20
RollingBand-fgt: 1.00 [341/341]
GhostDiagnostic-chr: 5.183
Centroid-sig: N/A
Centroid-so: 1.533 arcsec [1.48 σ]
OotOffset-rm: 0.669 arcsec [0.65 σ]
KicOffset-rm: 0.586 arcsec [0.57 σ]
OotOffset-st: 3/3/2 [11]
KicOffset-st: 3/3/2 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010118266-01, PDC Light Curves

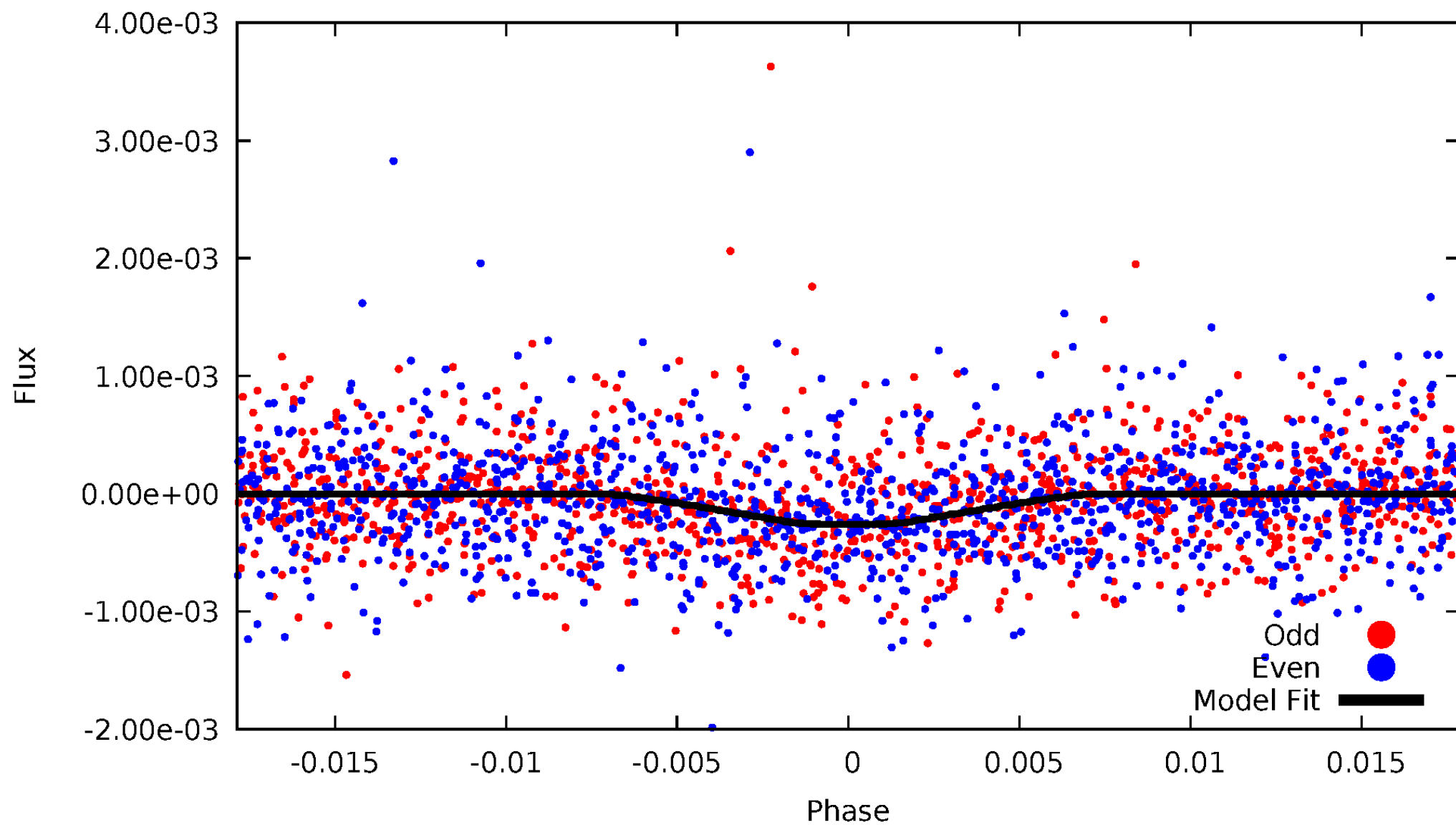


TCE 010118266-01



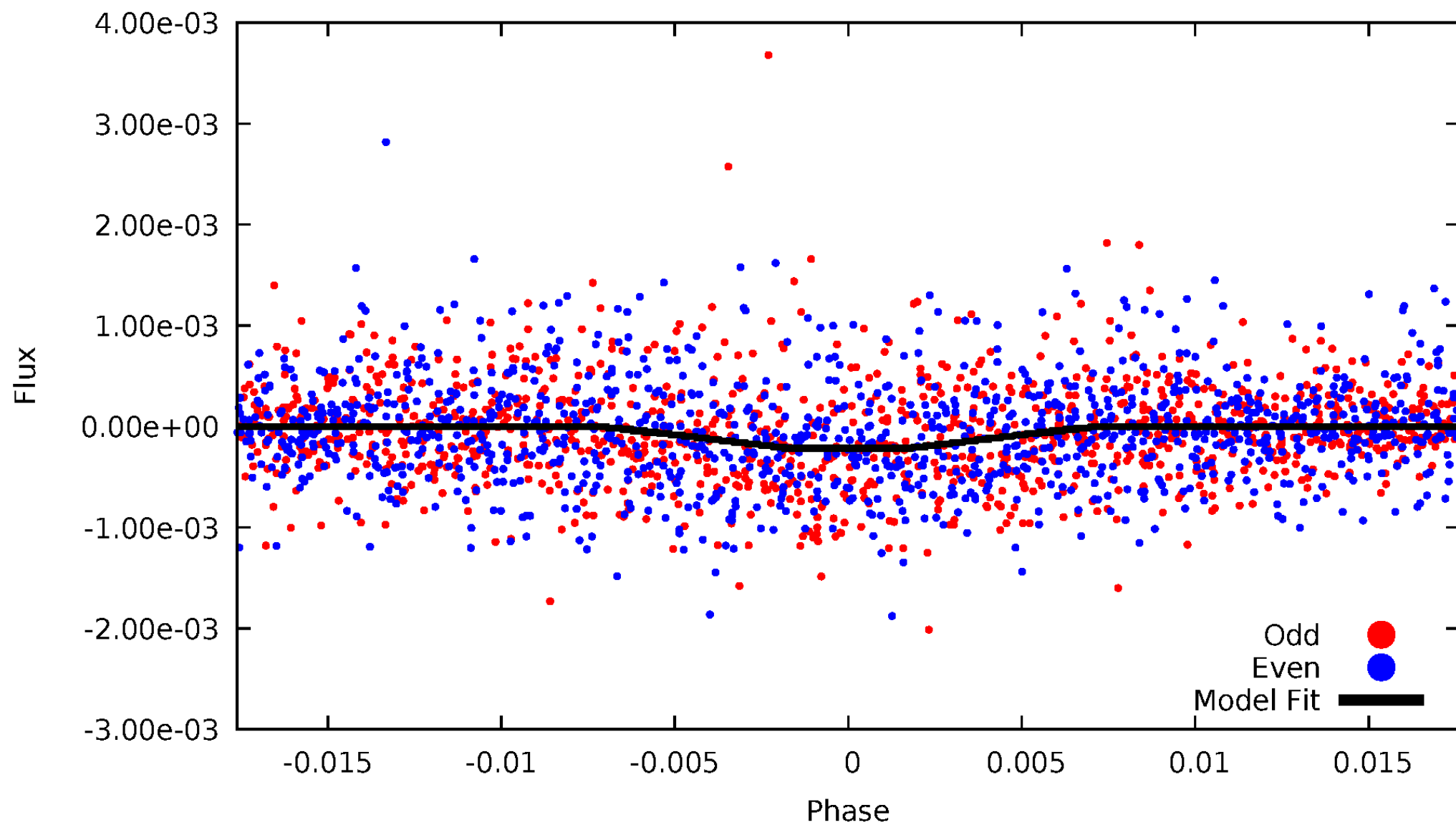
DV Odd/Even

TCE 010118266-01



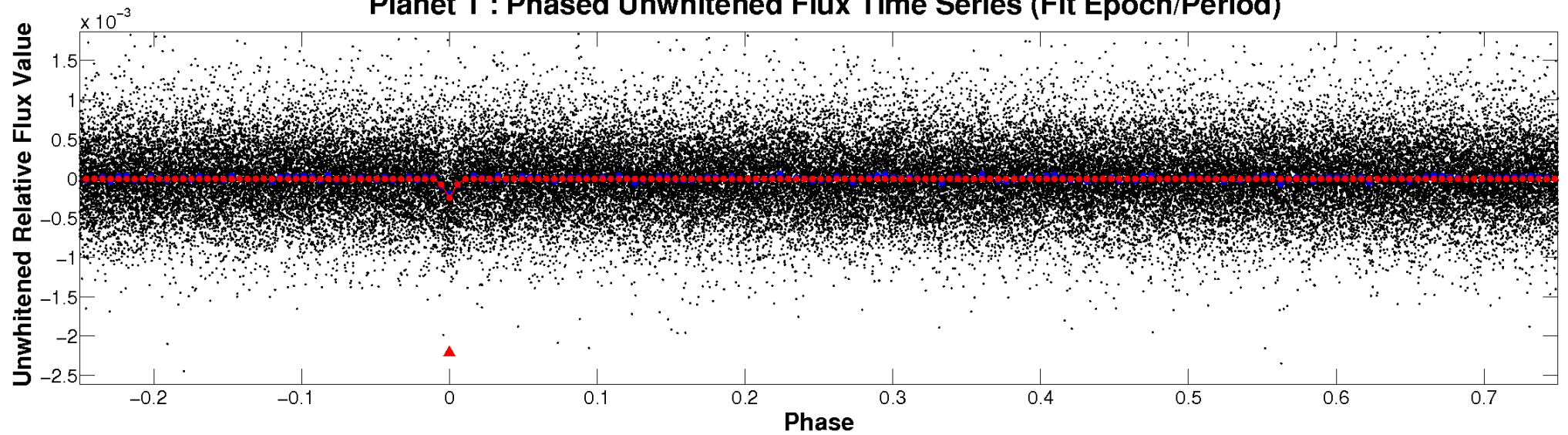
ALT Odd/Even

TCE 010118266-01

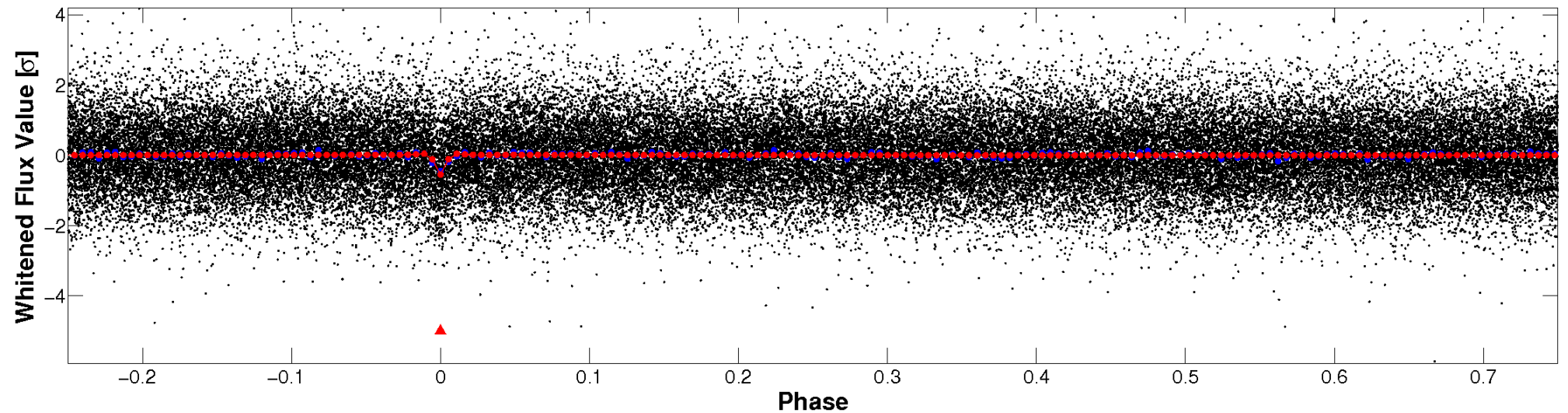


Non-Whitened Vs. Whitened Light Curve

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

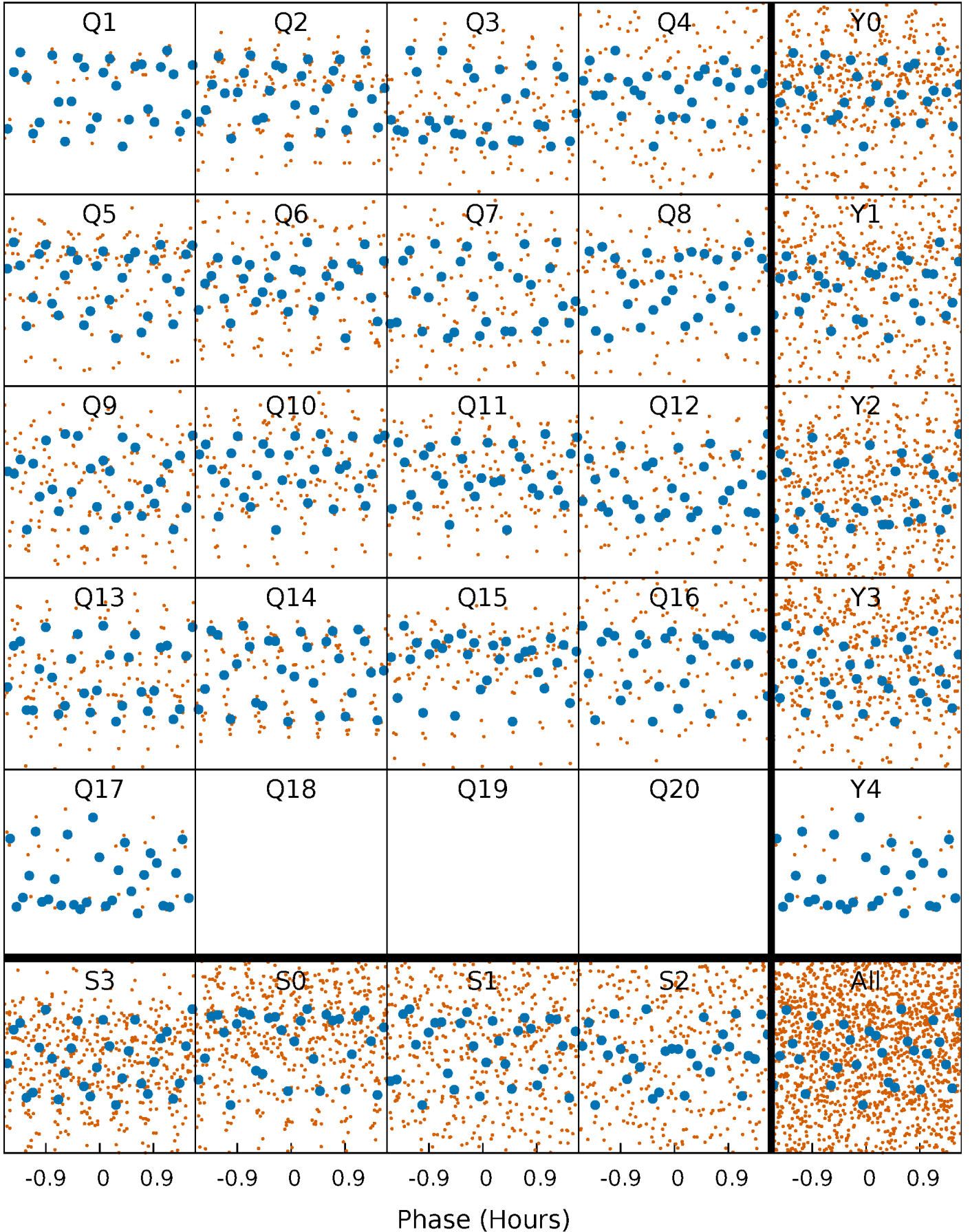


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



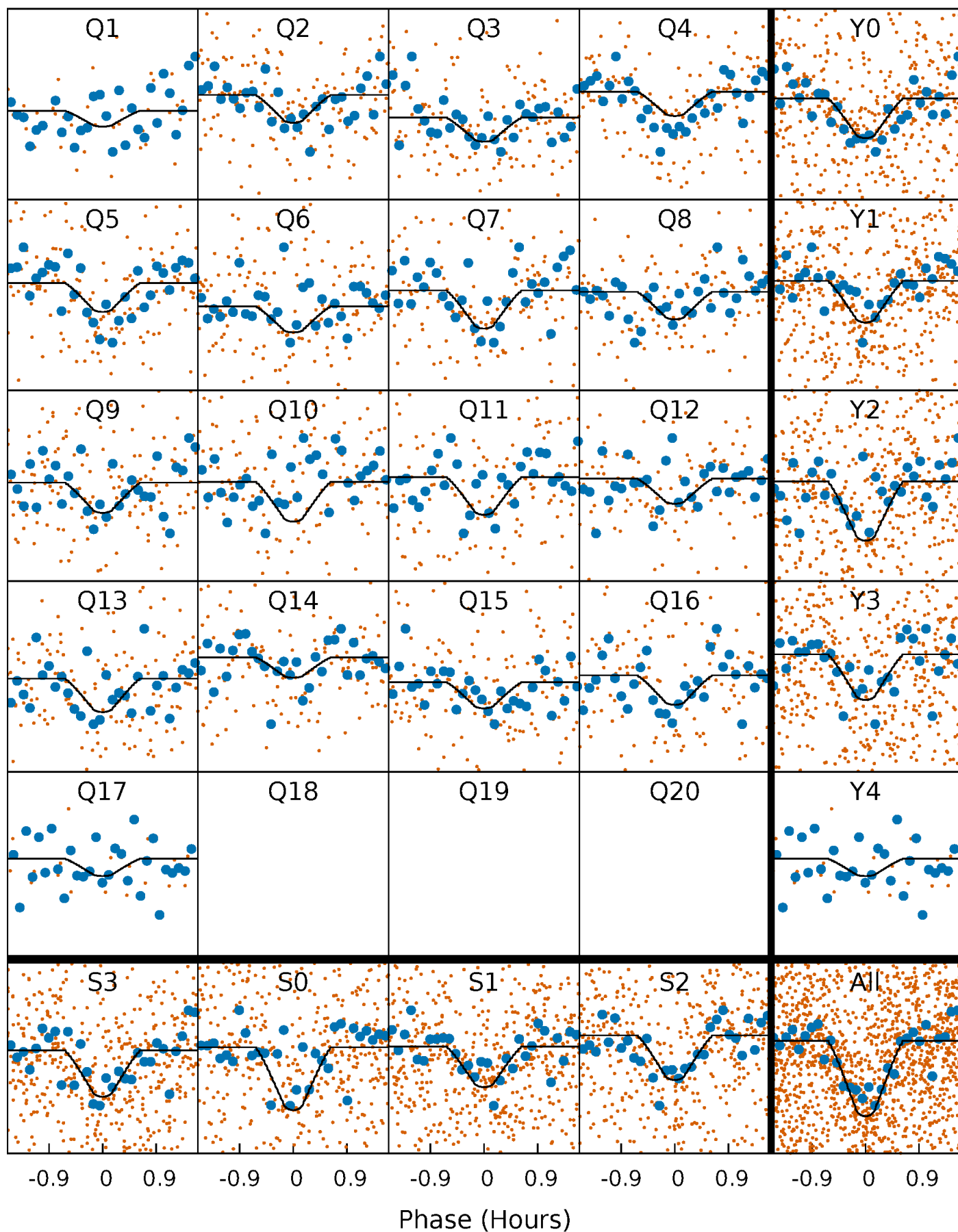
PDC Quarter-Phased Transit Curves

TCE 010118266-01 P= 3.743196 Days $T_0=135.136432$ (BKJD)



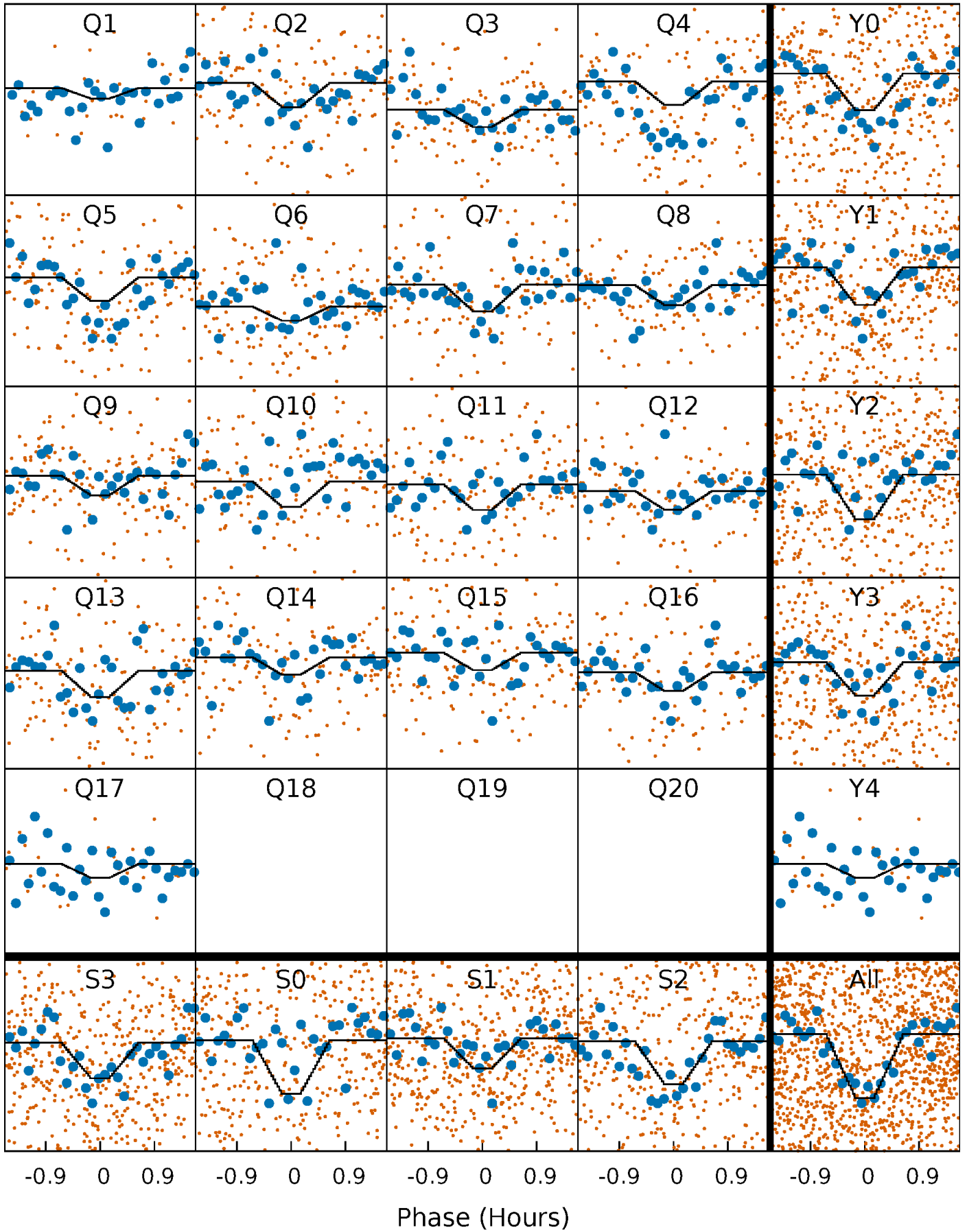
DV Quarter-Phased Transit Curves

TCE 010118266-01 P= 3.743196 Days $T_0=135.136432$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

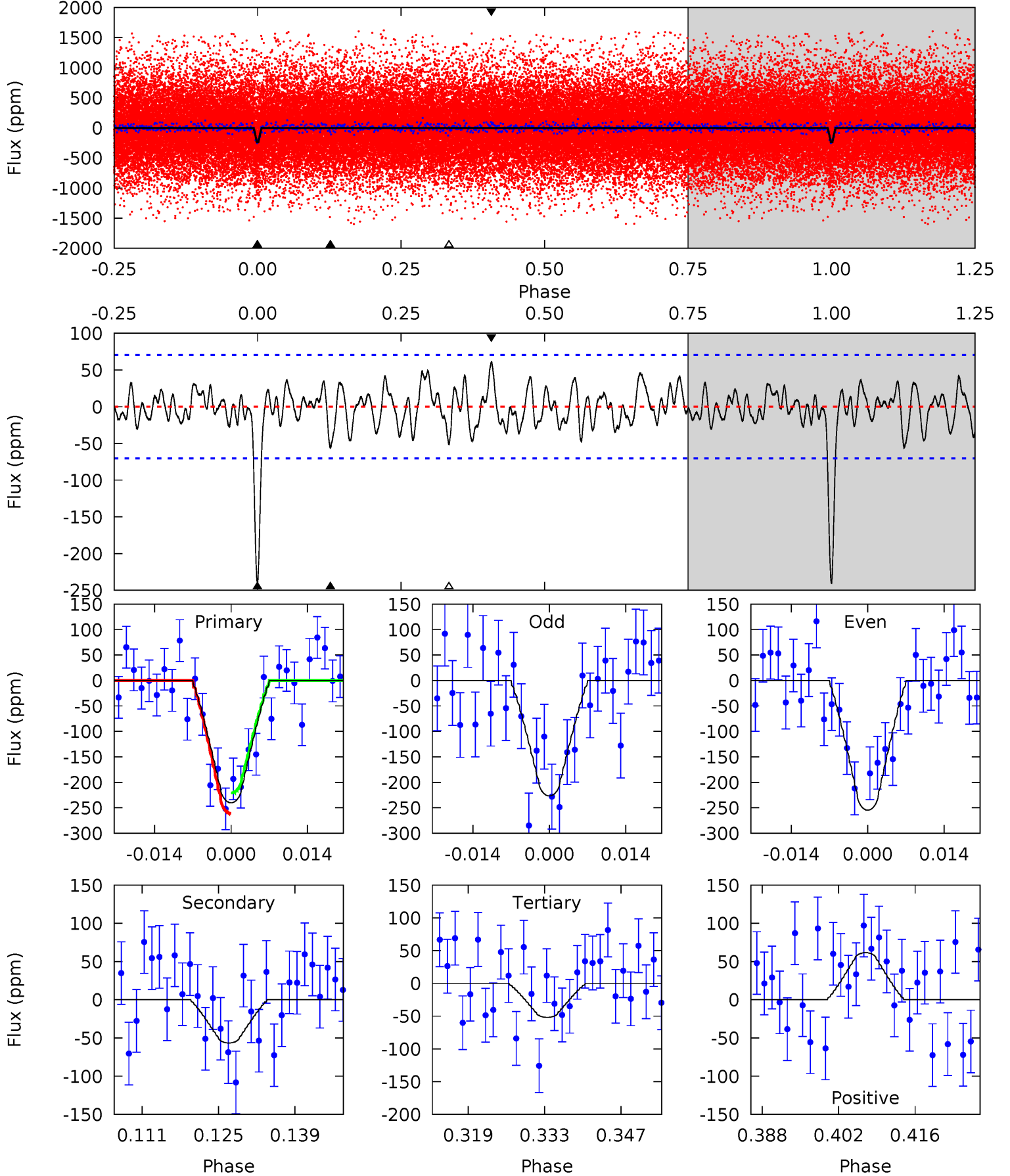
TCE 010118266-01 P= 3.743195 Days $T_0=135.136624$ (BKJD)



DV Model-Shift Uniqueness Test

010118266-01, P = 3.743196 Days, E = 131.393236 Days

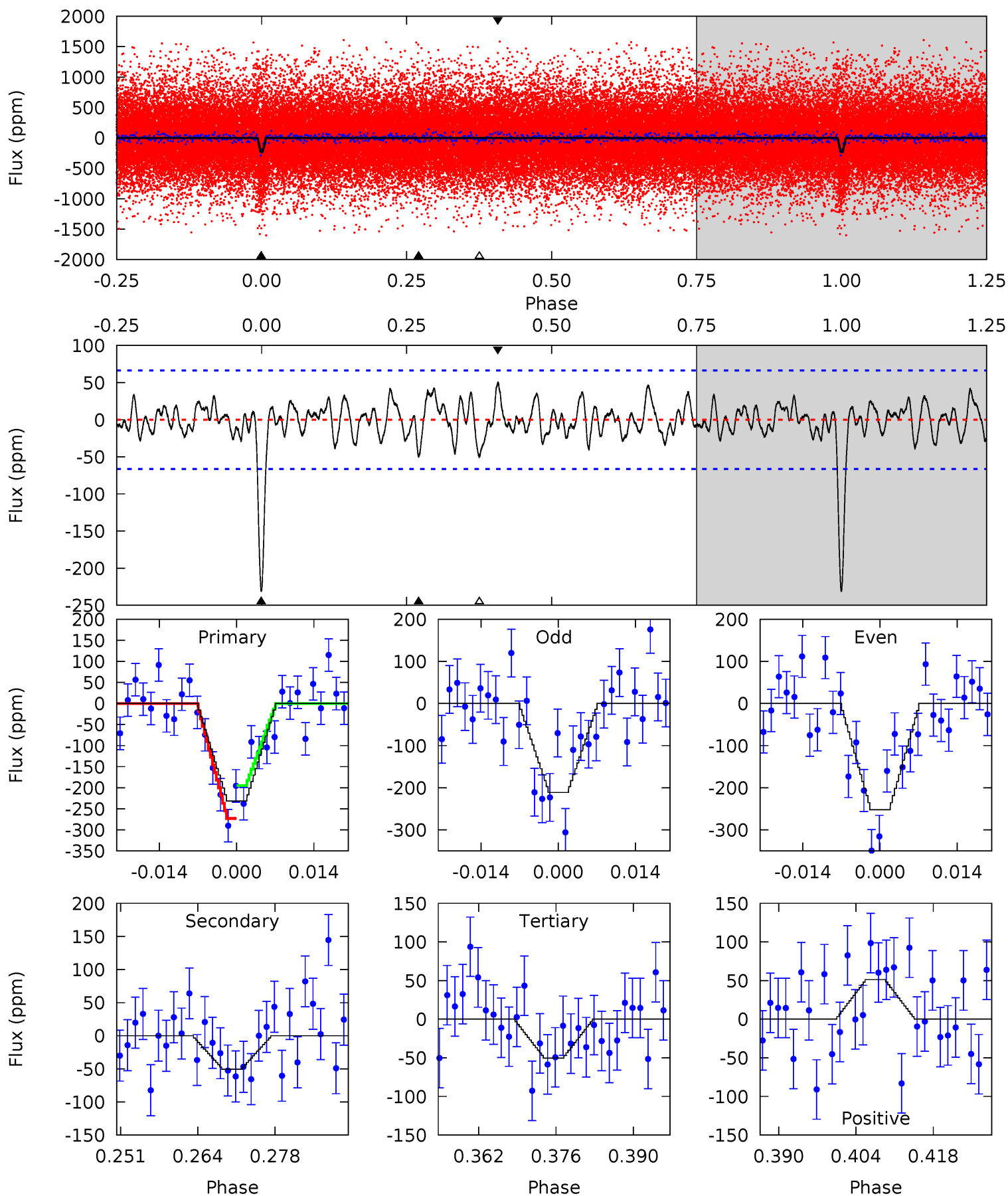
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	3.99	3.66	4.35	4.96	2.46	1.48	13.3	12.6	0.33	-0.36	0.99	0.77	0.20	1.43



Alt Model-Shift Uniqueness Test

010118266-01, P = 3.743195 Days, E = 131.393429 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	3.78	3.77	3.84	4.96	2.46	1.38	13.6	13.5	0.01	-0.06	1.54	0.81	0.18	2.92



Stellar Parameters For KIC 010118266

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5207^{+83}_{-83}	$4.516^{+0.050}_{-0.055}$	$0.160^{+0.150}_{-0.150}$	$0.851^{+0.061}_{-0.050}$	$0.866^{+0.044}_{-0.044}$	$1.978^{+0.370}_{-0.339}$
	+2%/-2%	+1%/-1%	+94%/-94%	+7%/-6%	+5%/-5%	+19%/-17%
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 010118266-01 / KOI 4755.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-57 ± 14	$2.12^{+2.03}_{-1.39}$	1397^{+34}_{-33}	3424^{+1719}_{-628}	14^{+105}_{-10}
Alt.	-50 ± 13	$2.25^{+1.94}_{-1.53}$	1400^{+34}_{-34}	3310^{+1637}_{-592}	11^{+88}_{-8}

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

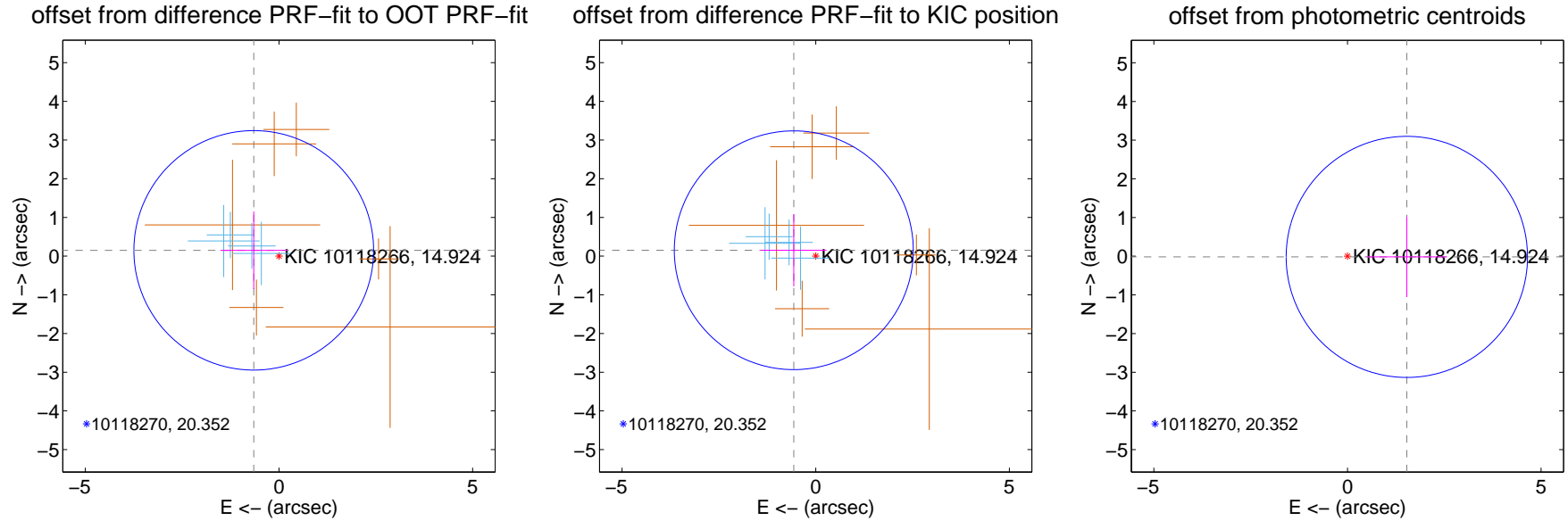
DV Centroid Data

Supplemental centroid analysis for 010118266-01. Kepler magnitude: 14.92. Transit SNR 11.46

There are 4 quarters with good PRF difference image offsets

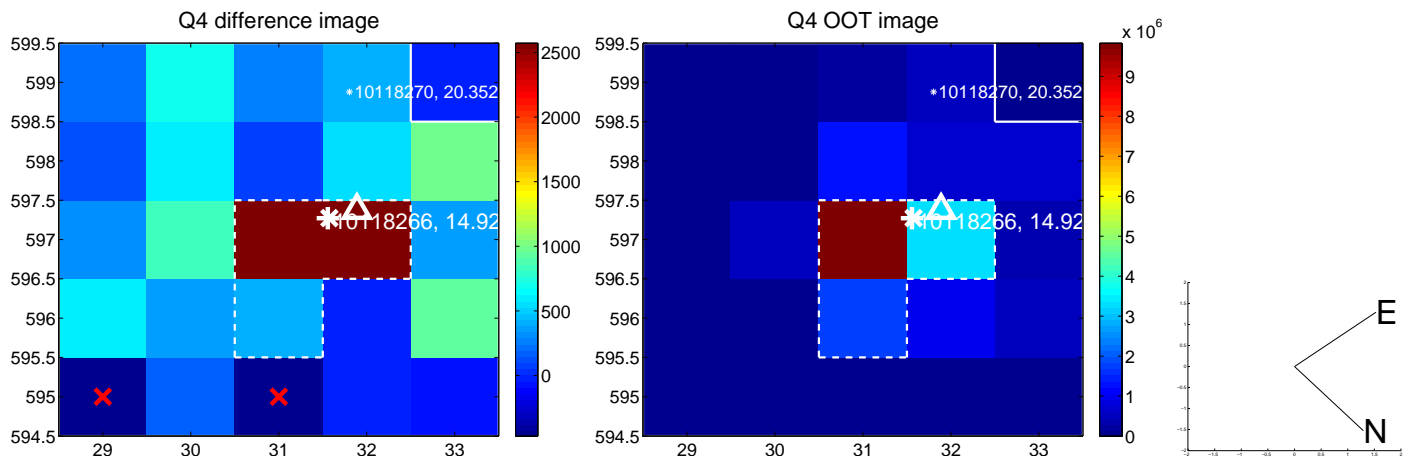
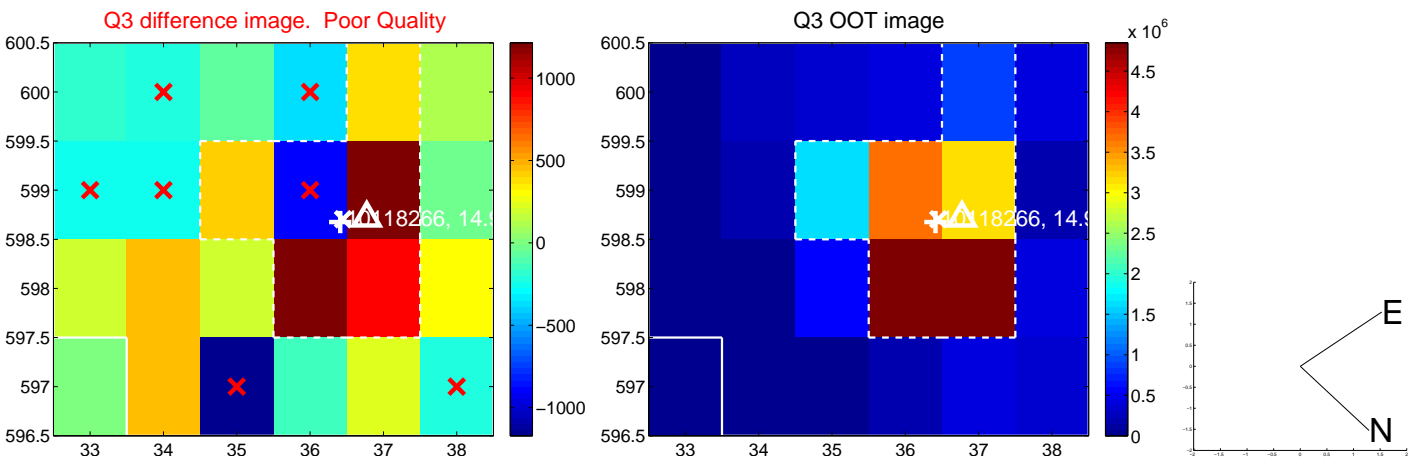
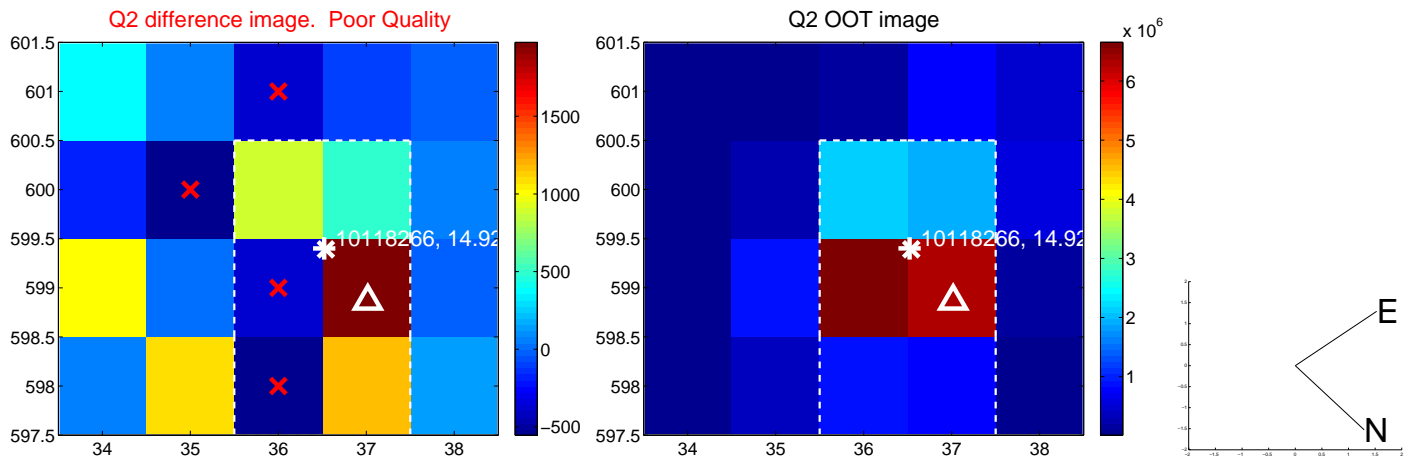
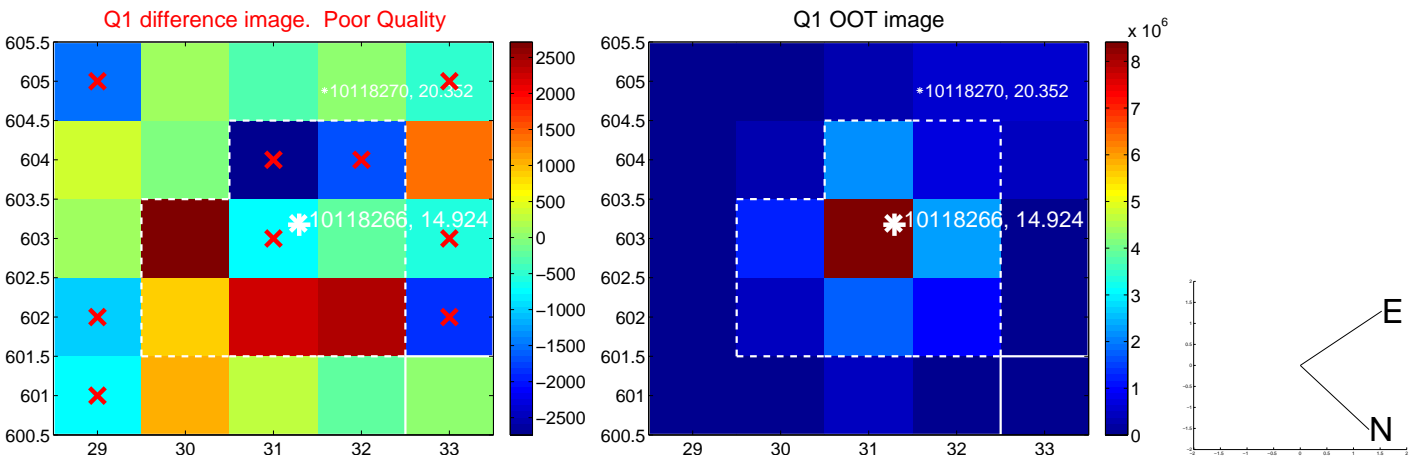
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.669 ± 1.031	0.65	0.652 ± 0.857	0.149 ± 1.003
PRF-fit source offset from KIC position	0.586 ± 1.028	0.57	0.566 ± 0.846	0.152 ± 0.935
photometric centroid source offset	1.53 ± 1.04	1.48	-1.53 ± 1.04	-0.02 ± 1.04

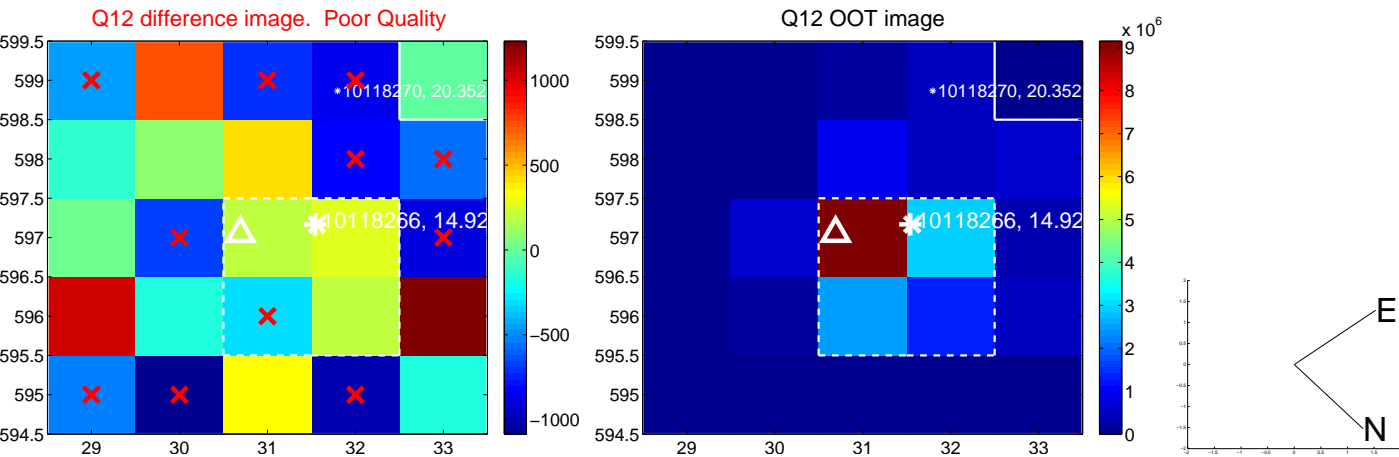
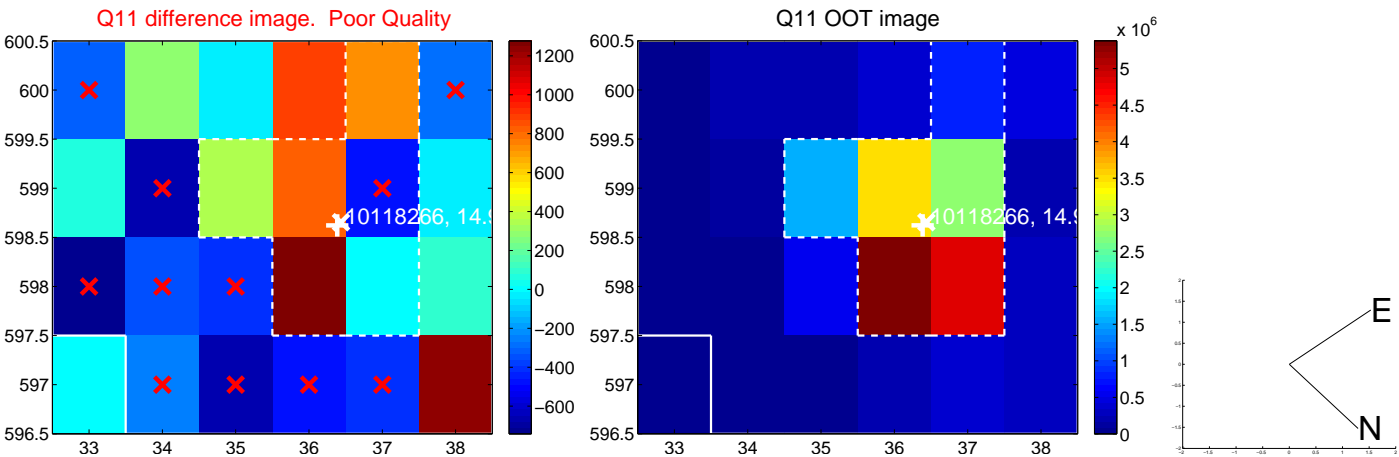
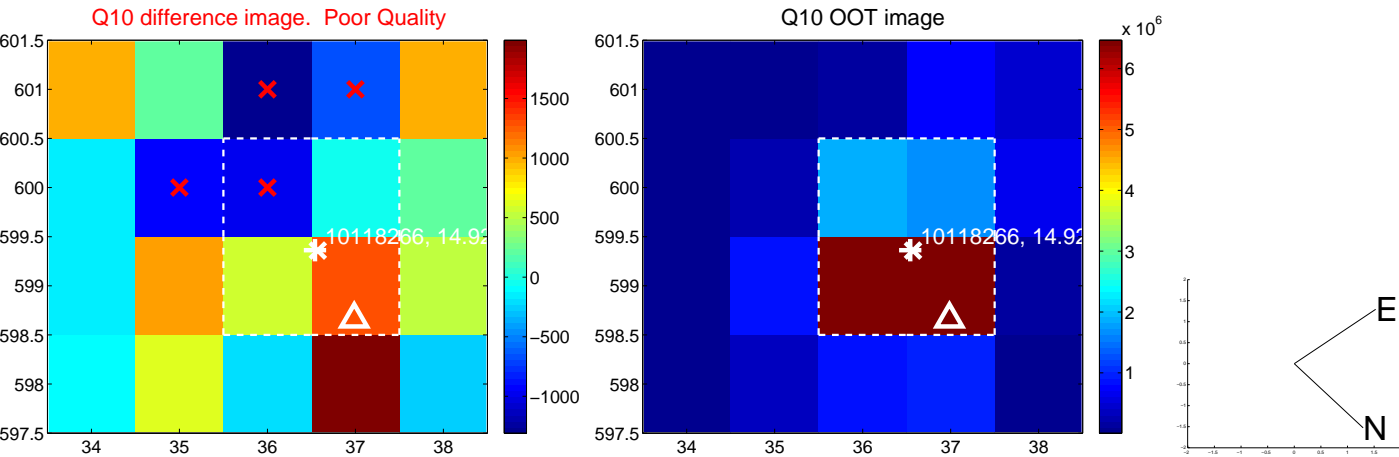
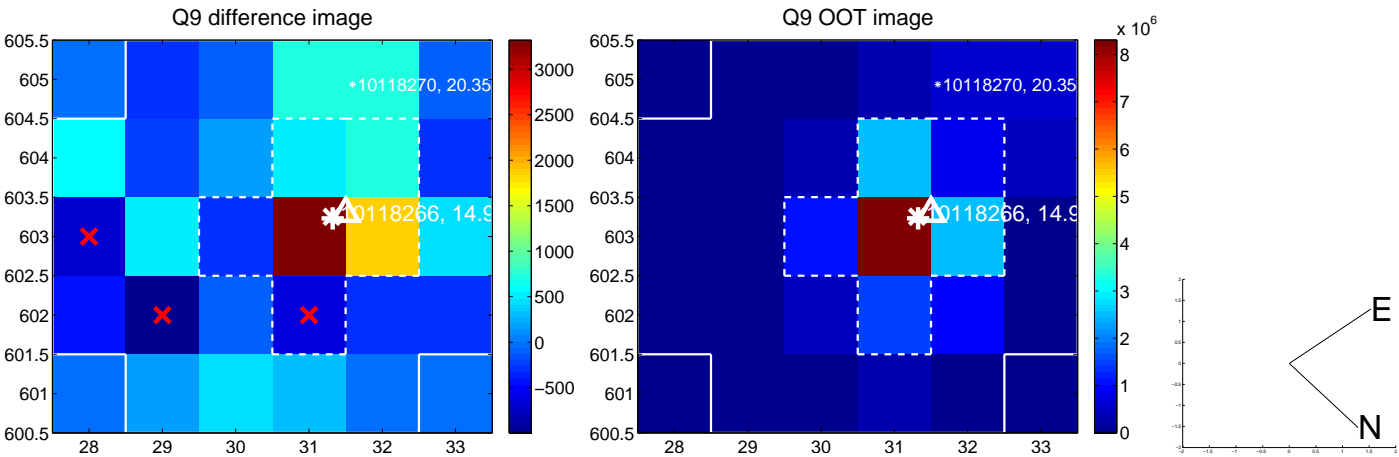


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

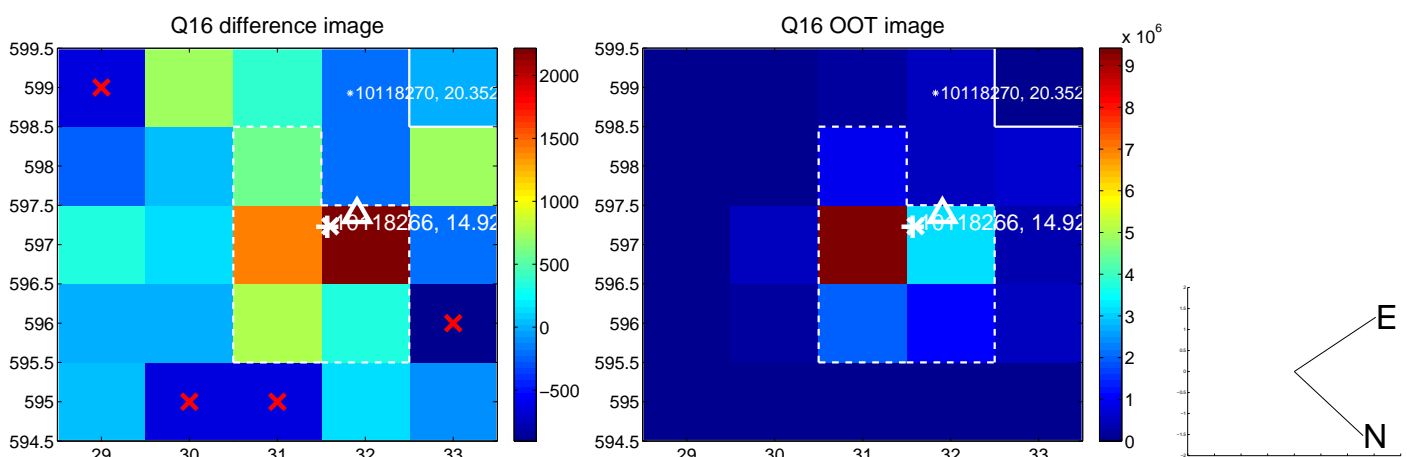
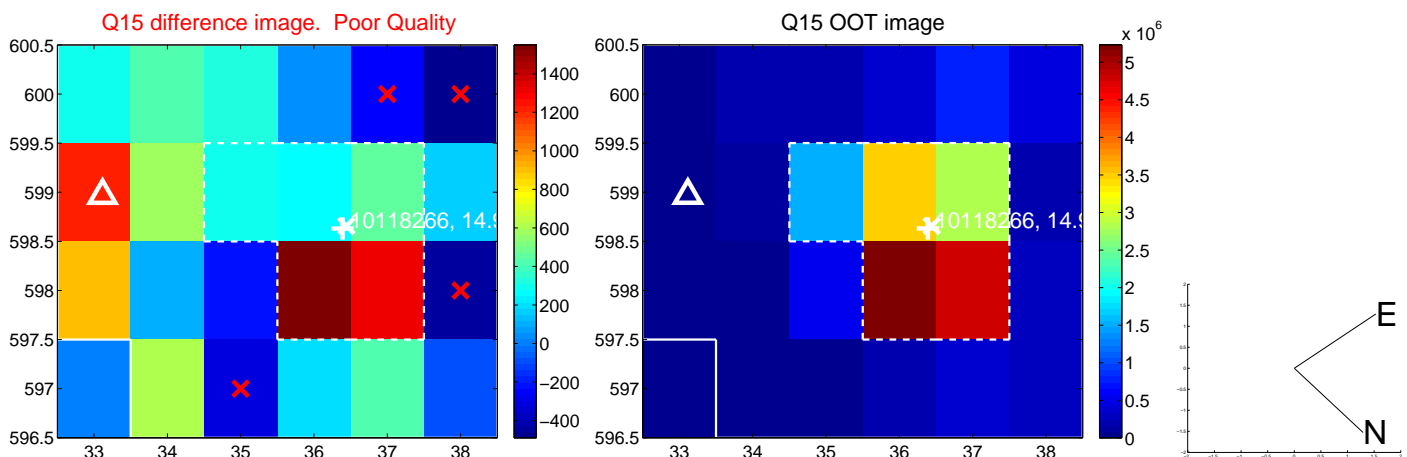
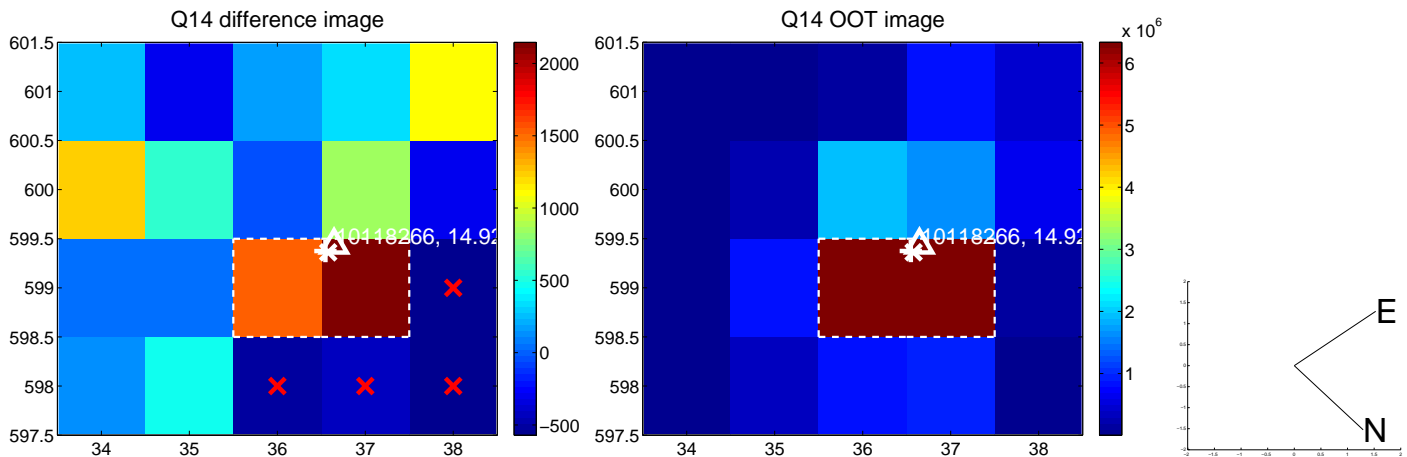
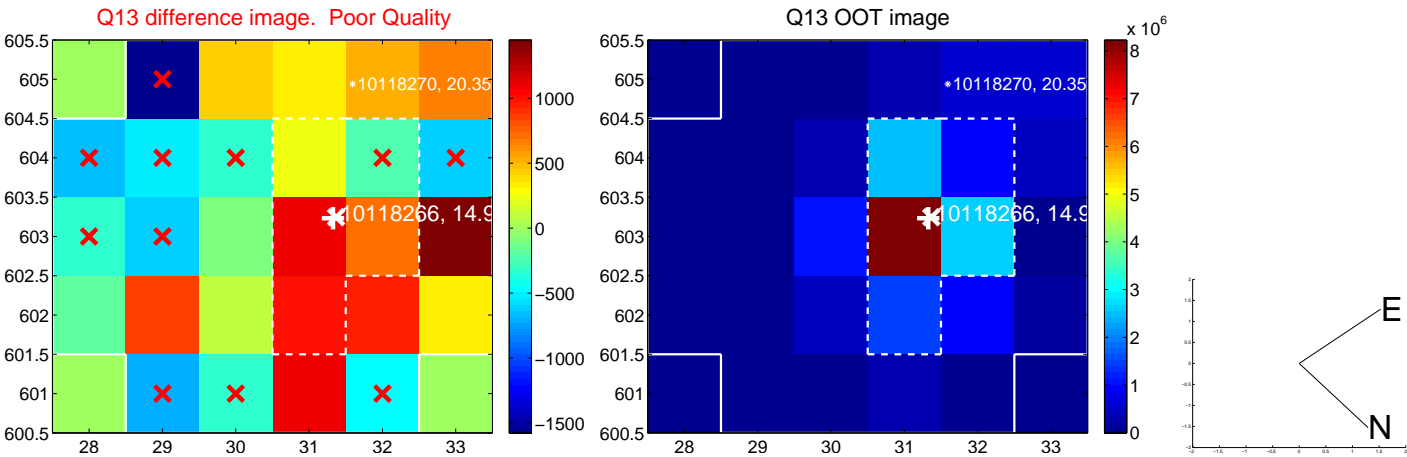
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



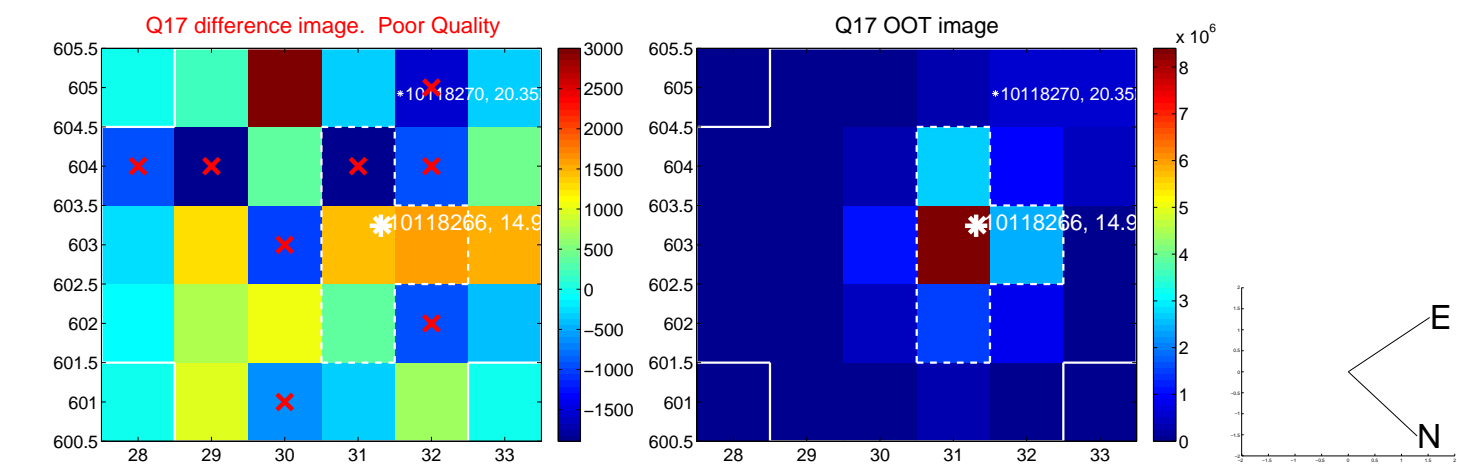
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



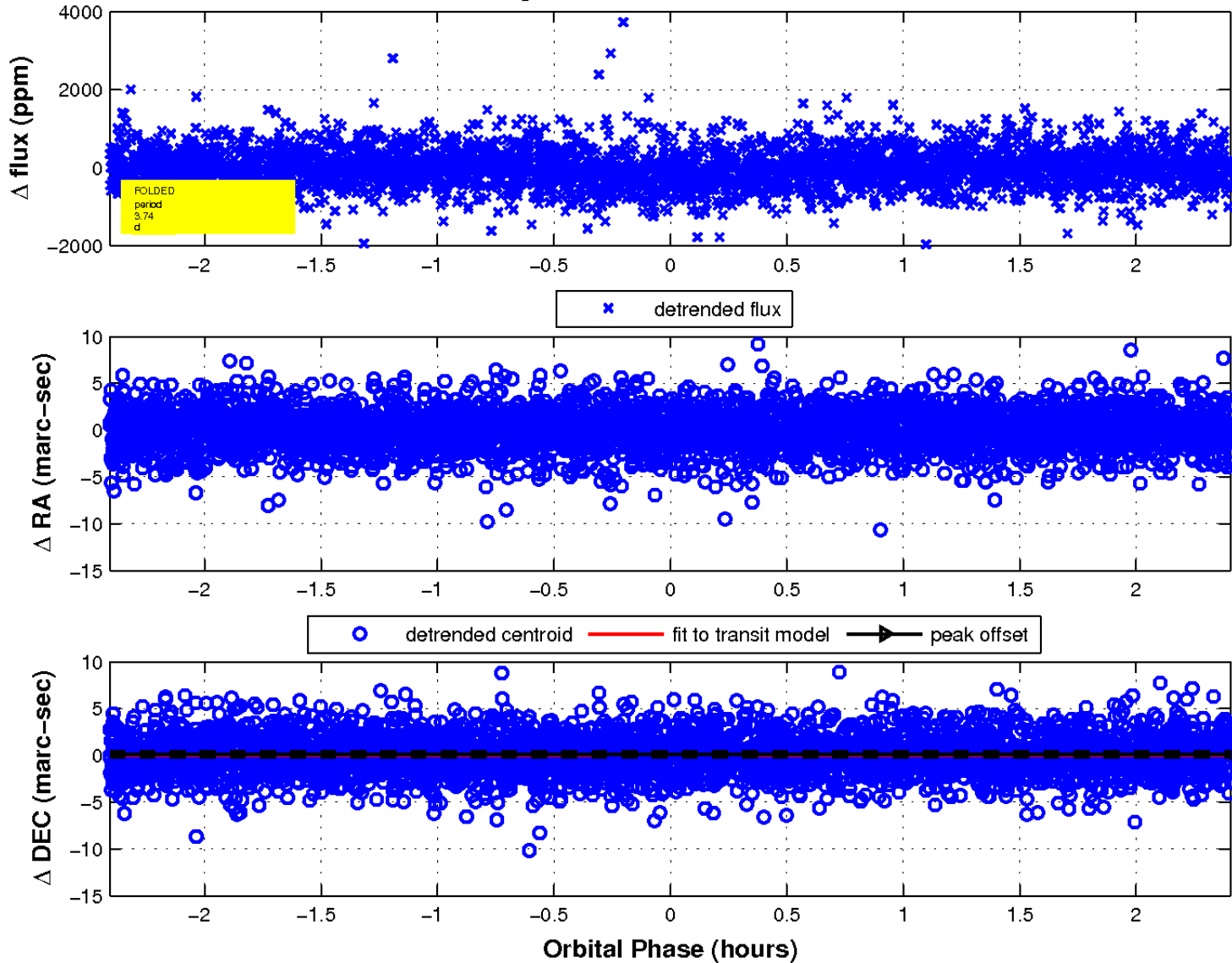
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

