

KIC 007272132

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})
007272132-01	OBS	4466.01	154.678284	177.338066	461.5	10.356	11.2	11.3	1.00	6338	2.75	4.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007272132-01	OBS	PC	0.98	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.

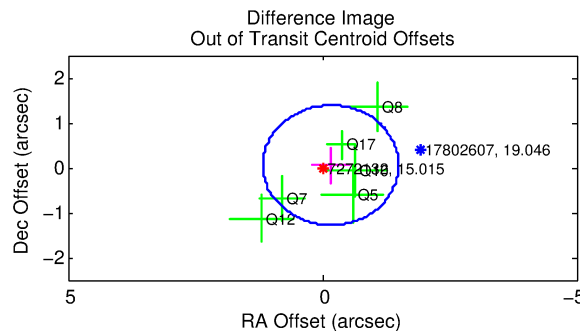
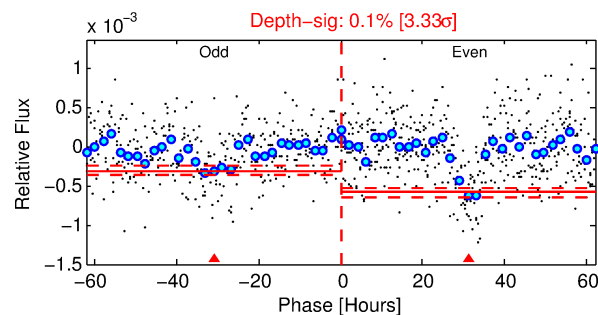
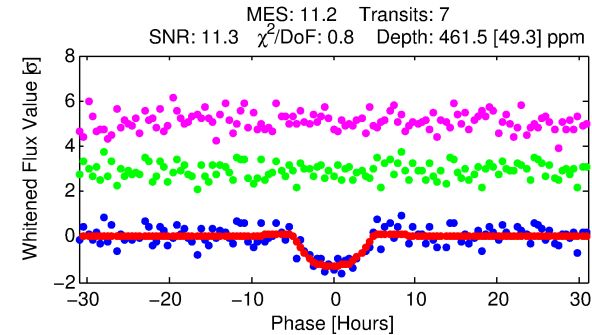
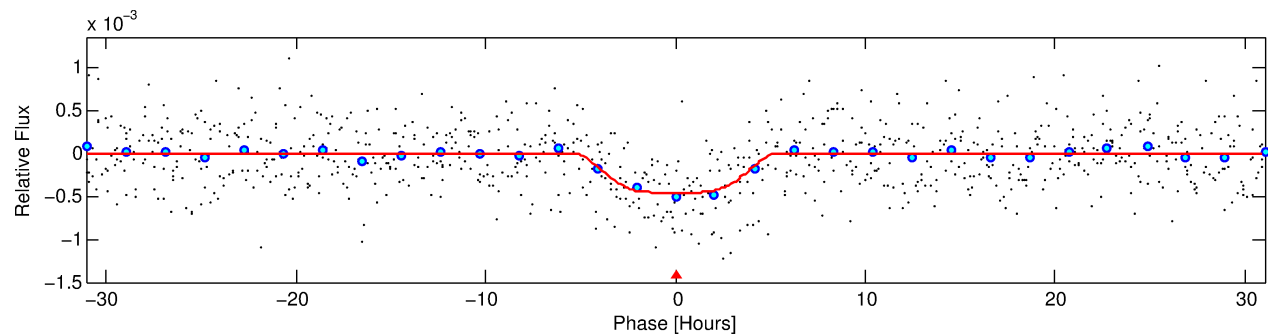
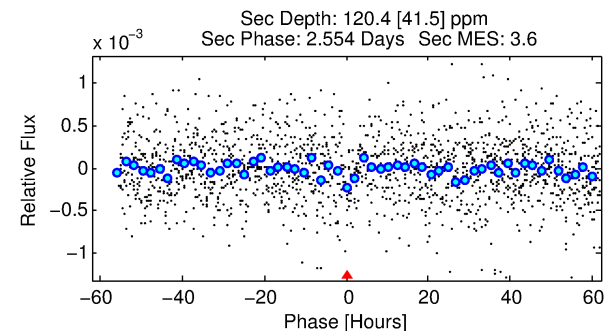
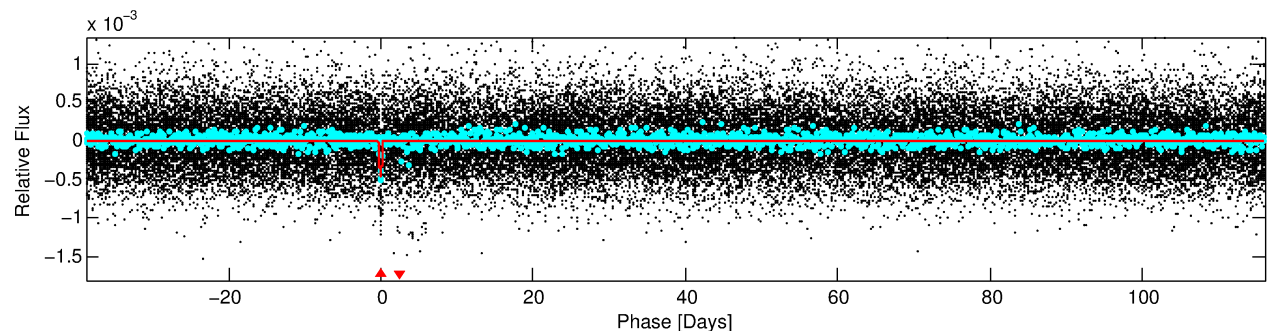
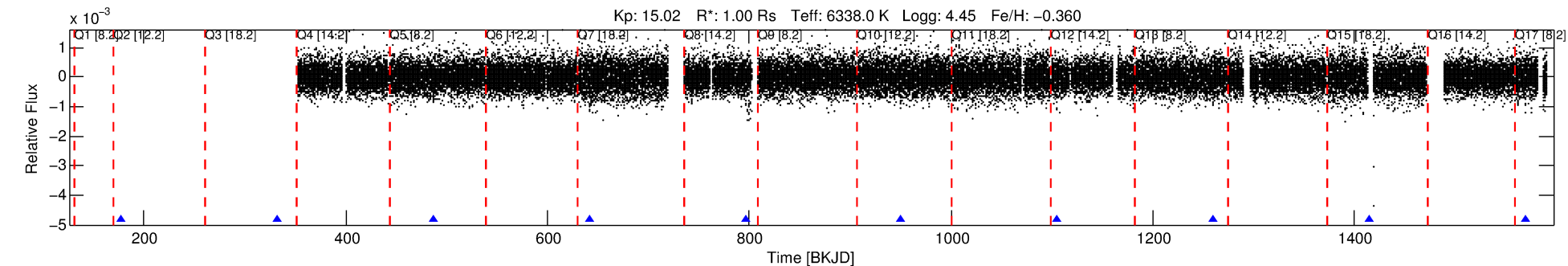
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007272132-01

No Significant Match Found

DV One-Page Summary

KIC: 7272132 Candidate: 1 of 1 Period: 154.678 d
KOI: K04466.01 Corr: 0.940



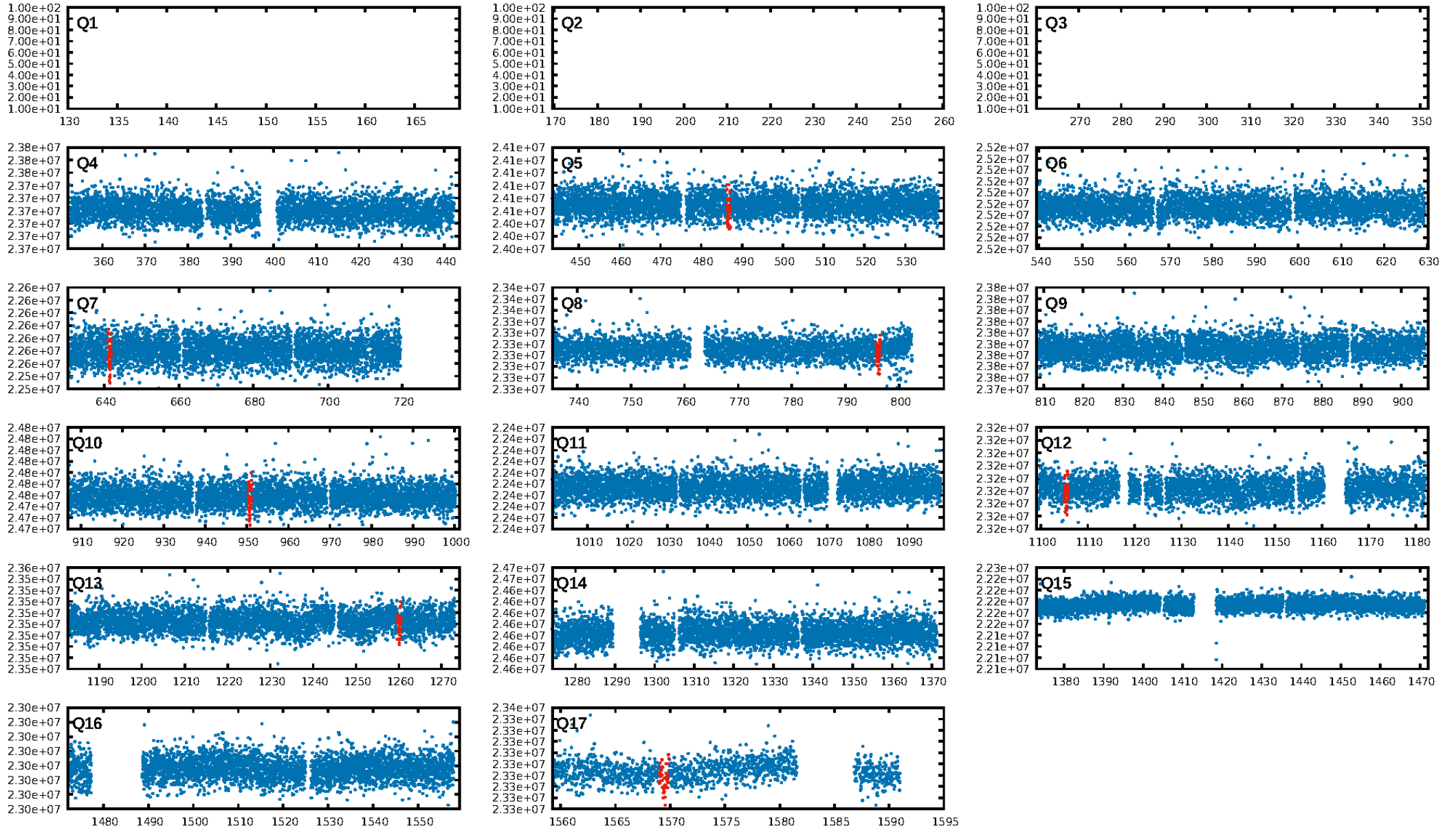
DV Fit Results:

Period = 154.67828 [0.00489] d
Epoch = 177.3381 [0.0278] BKJD
Rp/R* = 0.0252 [0.0020]
a/R* = 39.33 [8.65]
b = 0.97 [0.02]
Seff = 4.47 [1.85]
Teff = 371 [38] K
Rp = 2.75 [0.88] Re
a = 0.5696 [0.1494] AU
Ag = 2839.61 [1532.46] [1.85 σ]
Teffp = 4186 [429] K [8.86 σ]

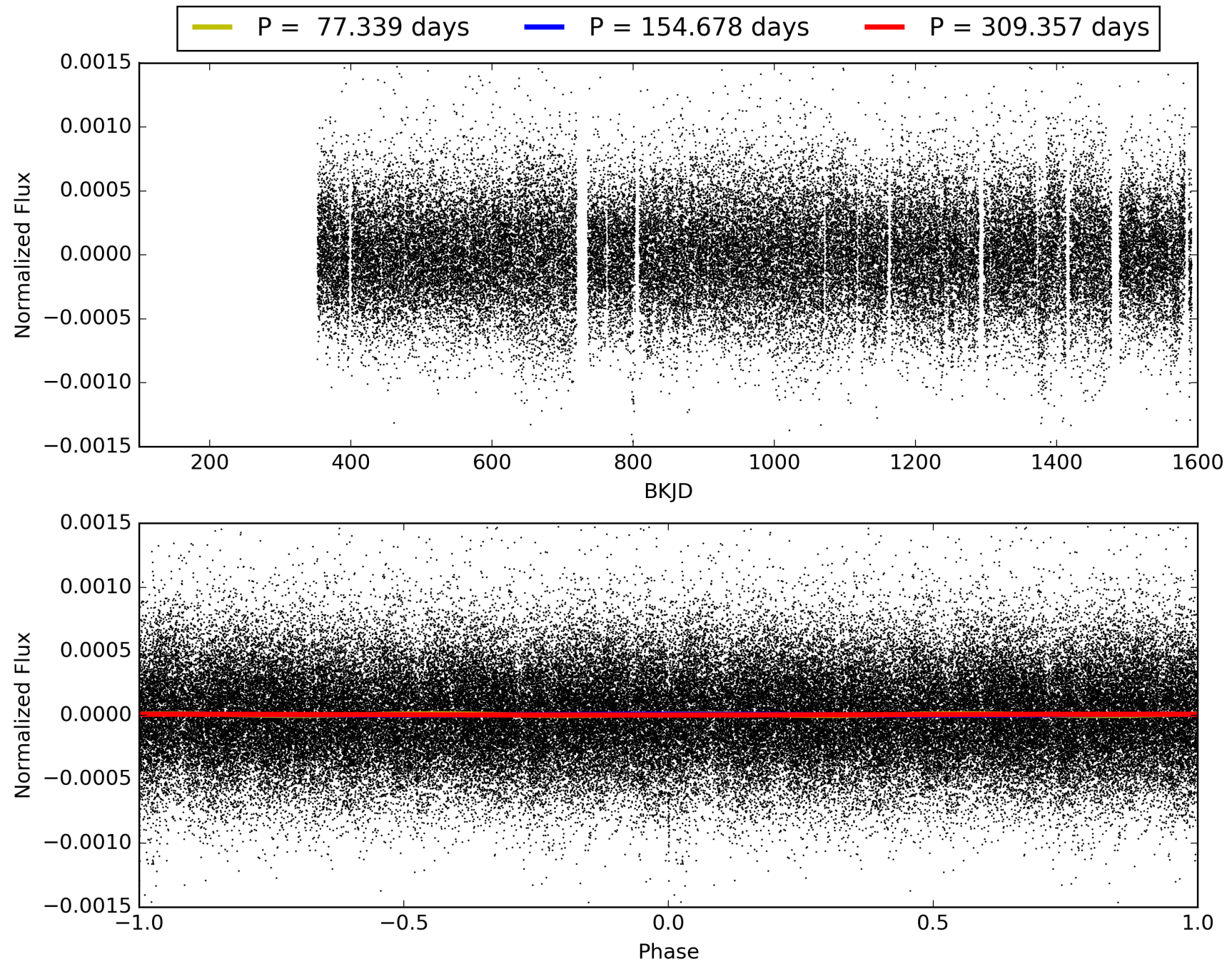
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 50.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.76e-27
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -14.13
Centroid-sig: 61.1%
Centroid-so: 0.954 arcsec [0.75 σ]
OotOffset-rm: 0.170 arcsec [0.38 σ]
OotOffset-st: 1/1/2/2 [6]
KicOffset-rm: 0.228 arcsec [0.62 σ]
KicOffset-st: 1/1/2/2 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [7/7]

TCE 007272132-01, PDC Light Curves

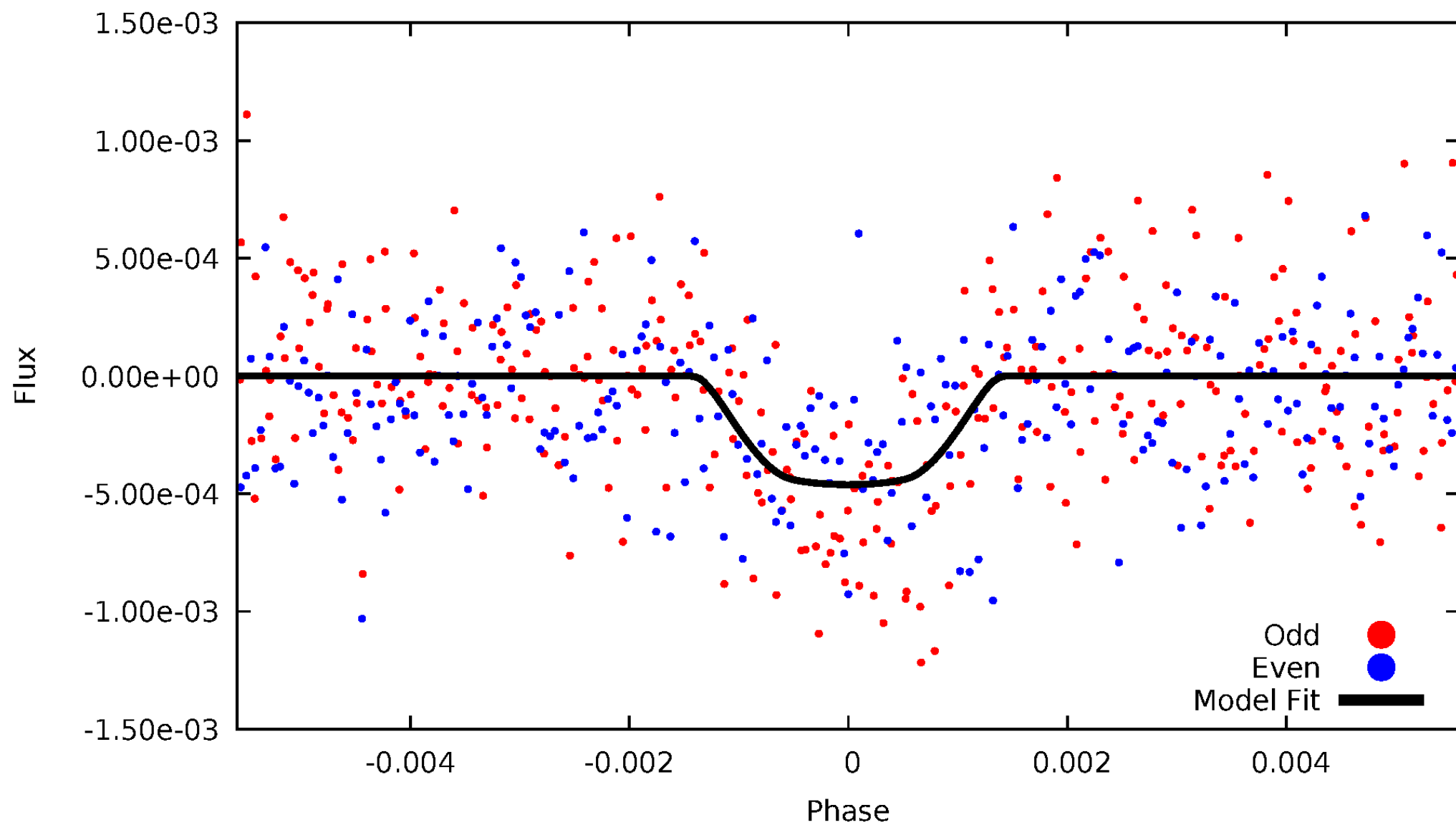


TCE 007272132-01



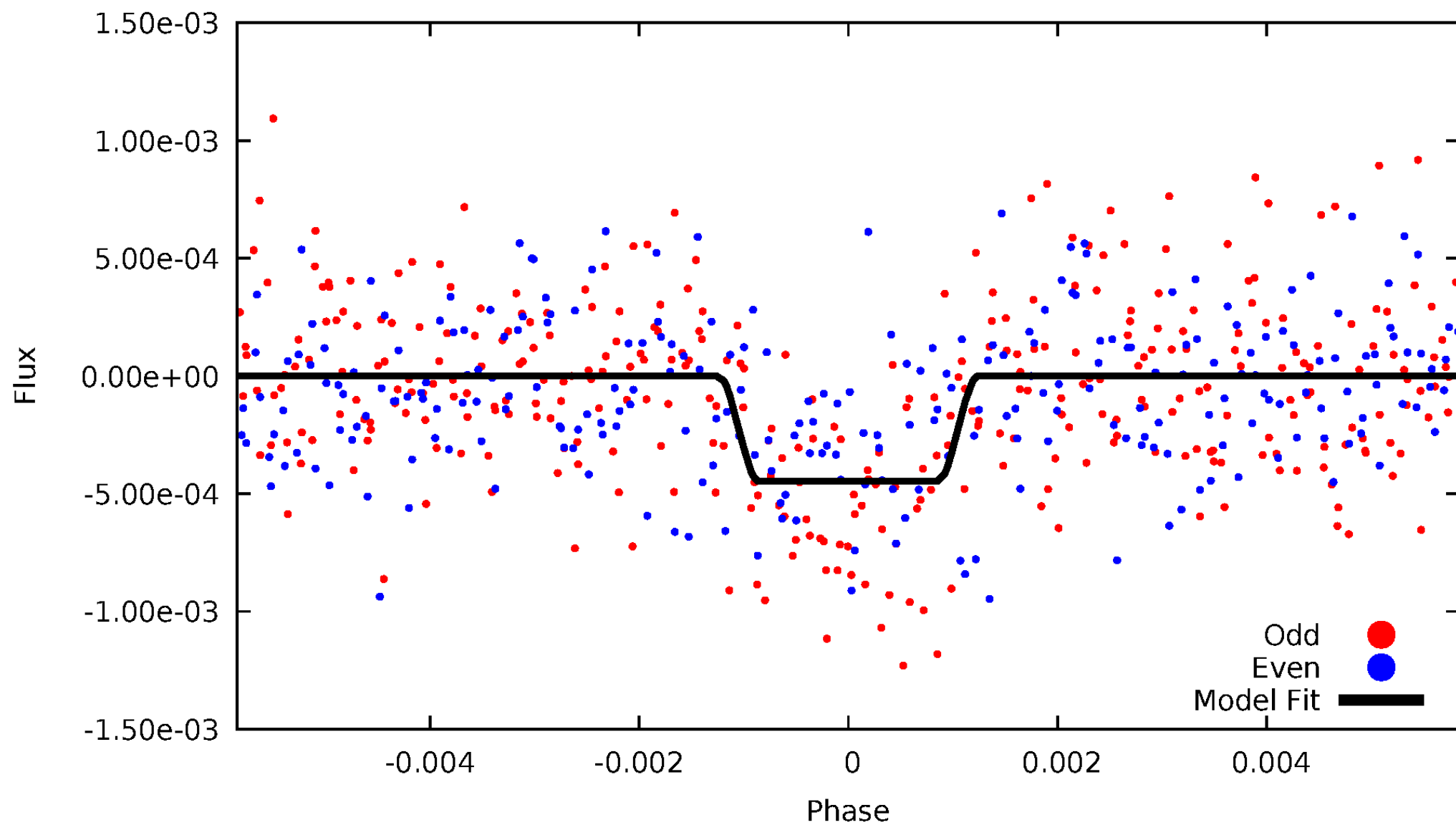
DV Odd/Even

TCE 007272132-01



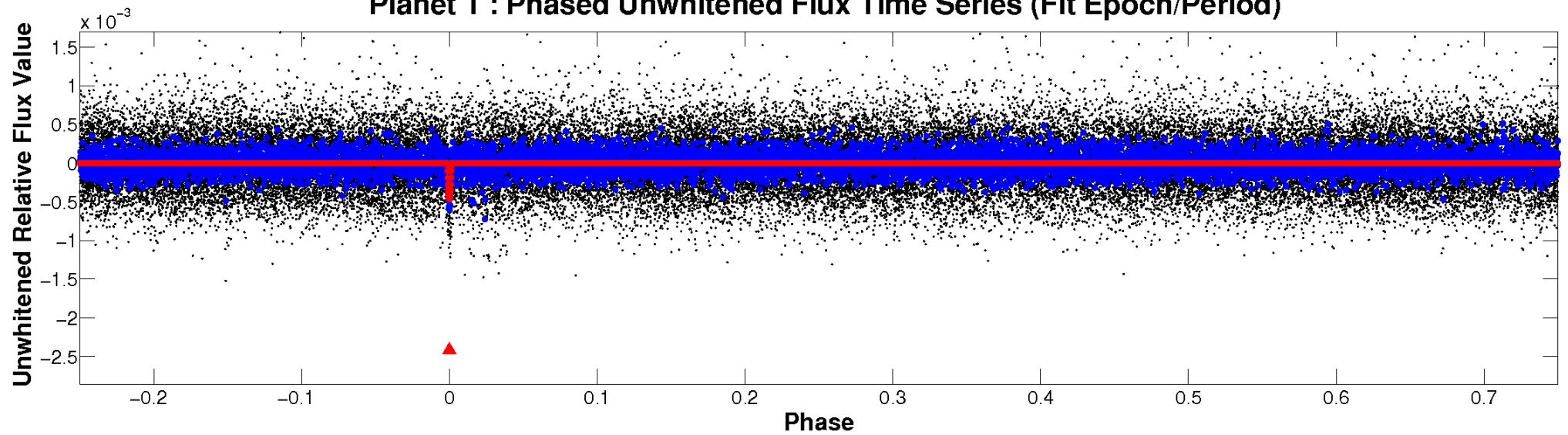
ALT Odd/Even

TCE 007272132-01

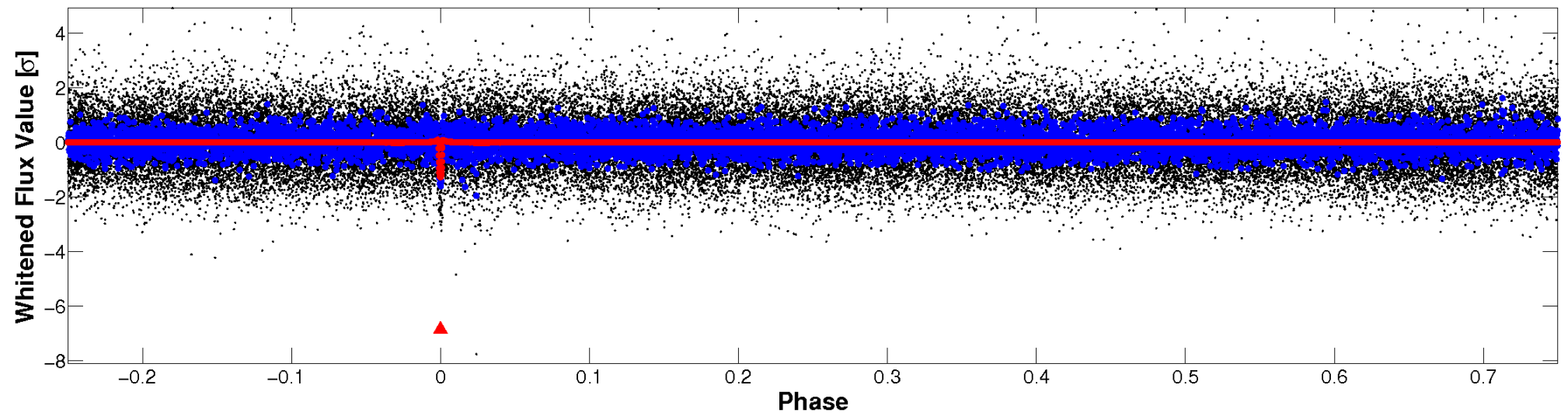


Non-Whitened Vs. Whitened Light Curve

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

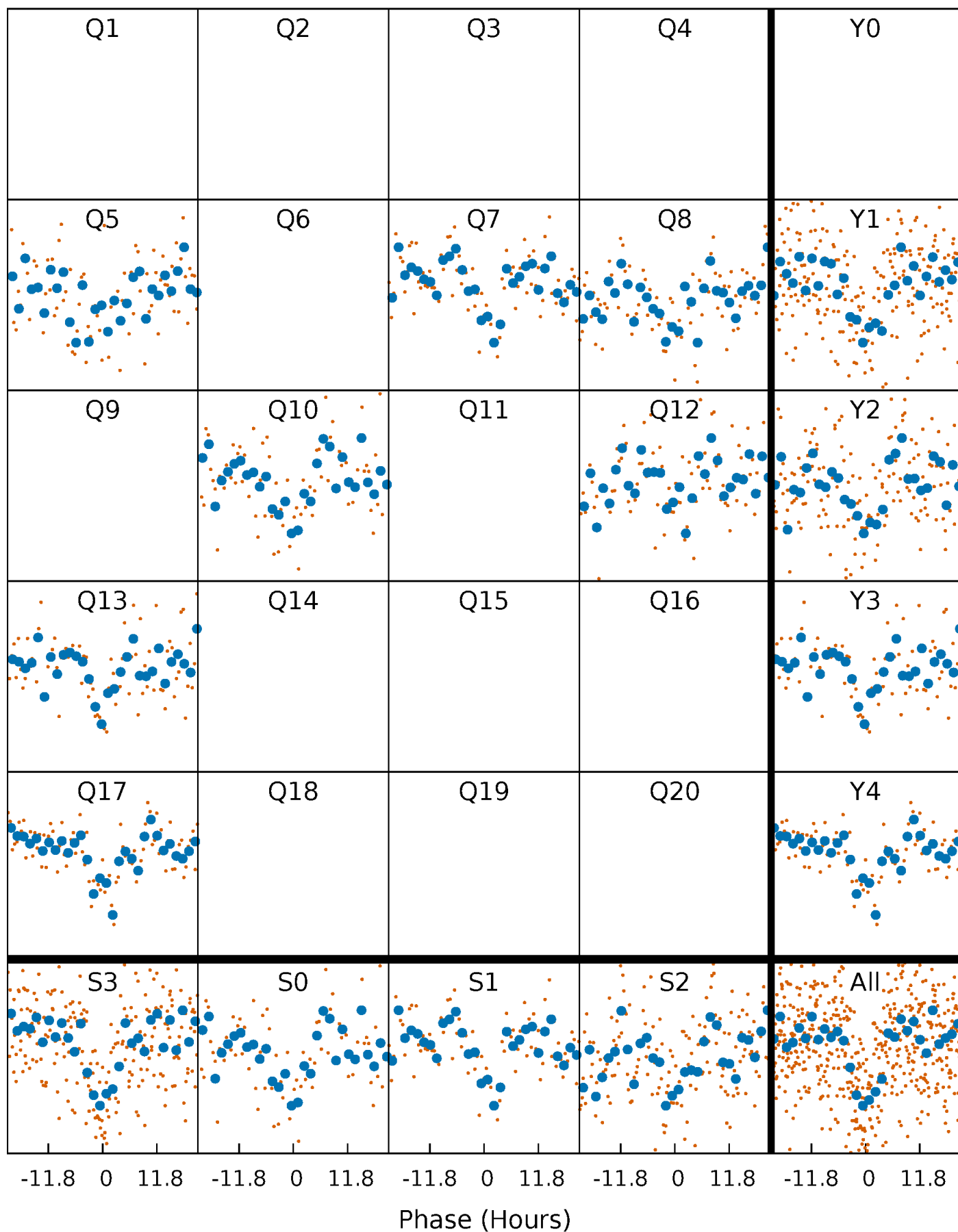


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 007272132-01 P=154.678284 Days $T_0=177.338066$ (BKJD)



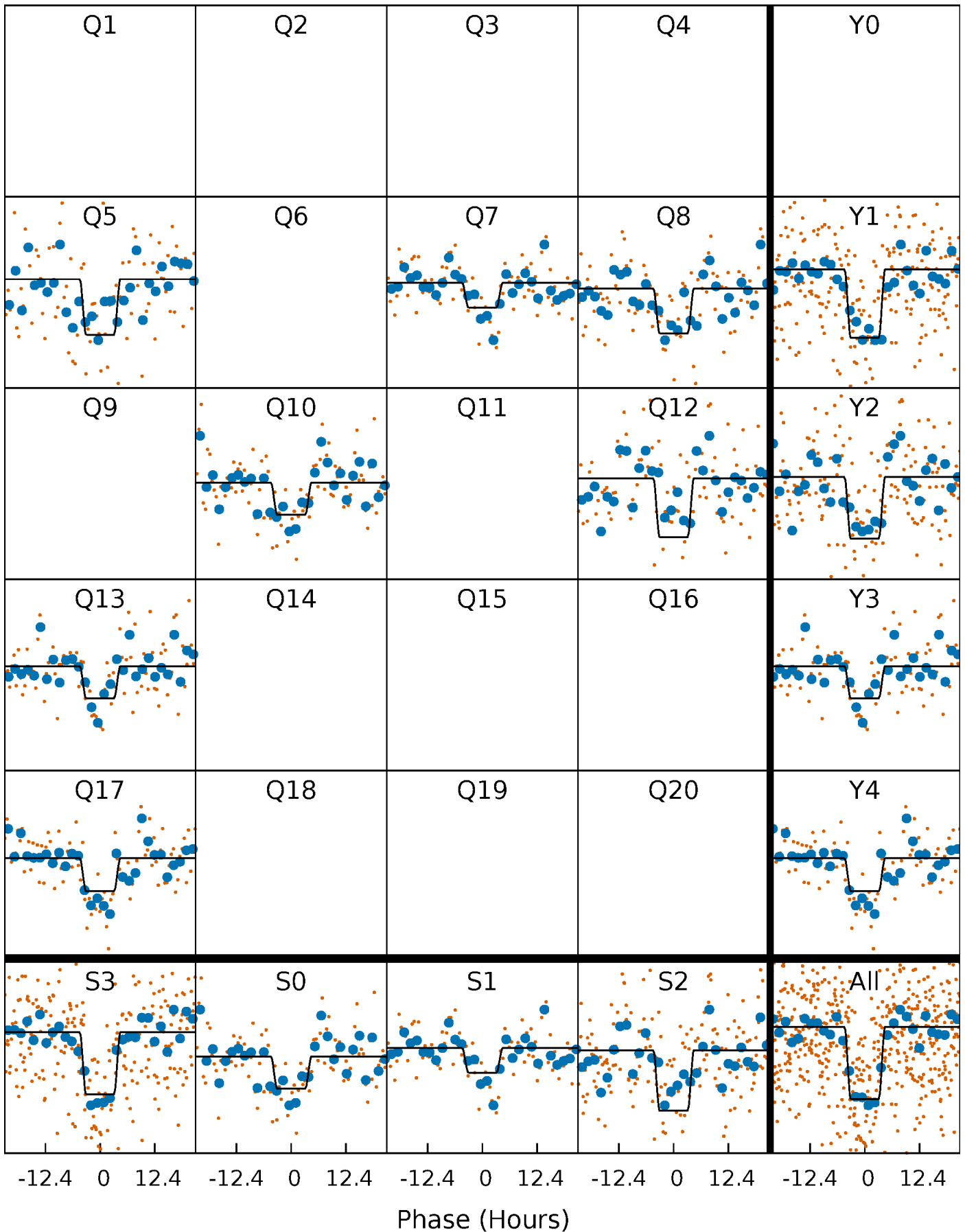
DV Quarter-Phased Transit Curves

TCE 007272132-01 P=154.678284 Days $T_0=177.338066$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

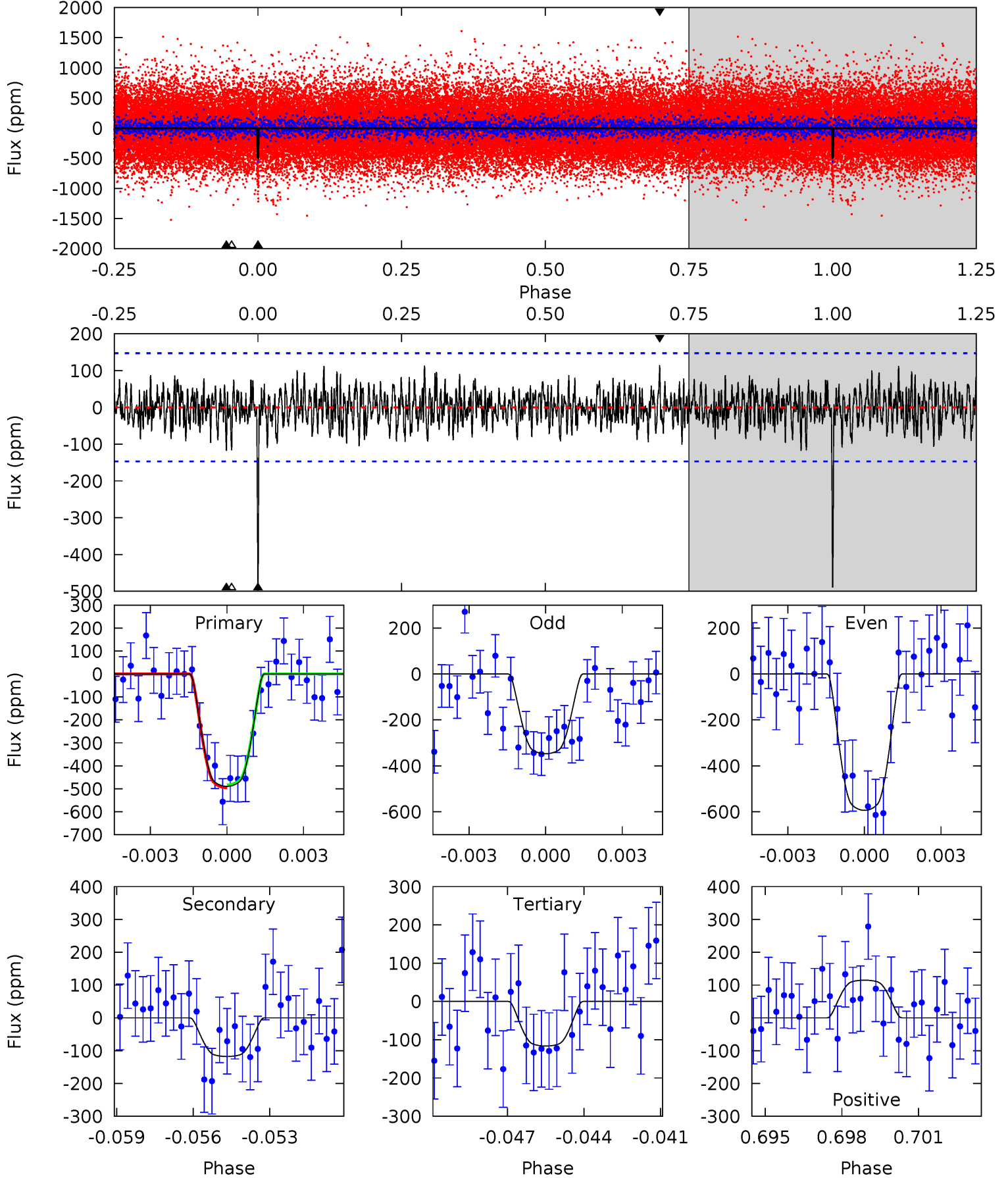
TCE 007272132-01 P=154.683531 Days $T_0=177.312471$ (BKJD)



DV Model-Shift Uniqueness Test

007272132-01, P = 154.678284 Days, E = 177.338066 Days

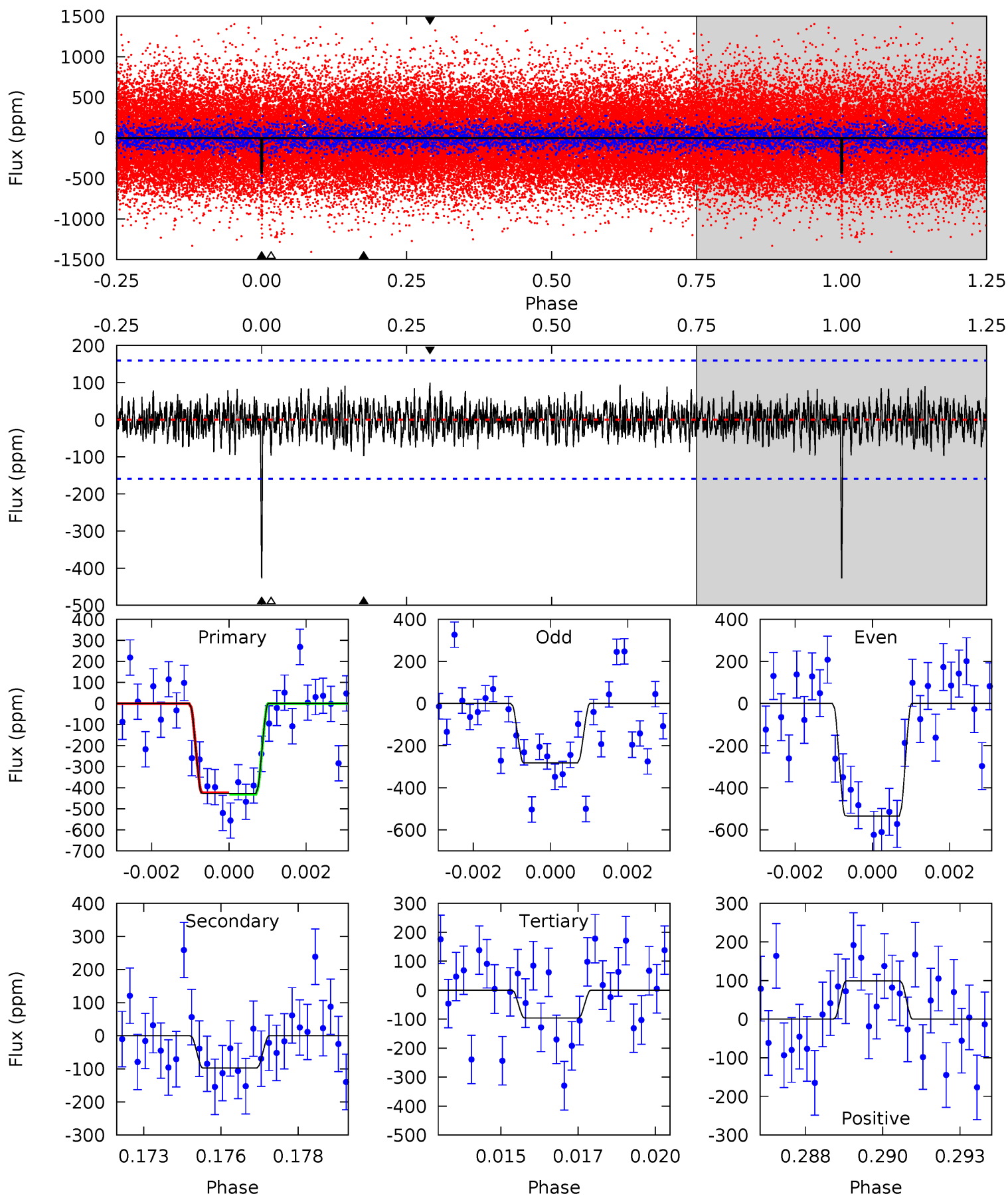
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	4.21	4.15	4.10	5.26	2.97	1.36	13.3	13.4	0.05	0.10	4.37	0.90	0.19	0.22



Alt Model-Shift Uniqueness Test

007272132-01, P = 154.683531 Days, E = 177.312471 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	3.24	3.18	3.29	5.29	3.03	1.02	11.0	10.9	0.06	-0.05	4.13	0.93	0.19	0.12



Stellar Parameters For KIC 007272132

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6338^{+176}_{-242}	$4.449^{+0.070}_{-0.210}$	$-0.360^{+0.300}_{-0.300}$	$1.002^{+0.311}_{-0.111}$	$1.023^{+0.146}_{-0.120}$	$1.435^{+0.515}_{-0.729}$
	+3%/-4%	+2%/-5%	+83%/-83%	+31%/-11%	+14%/-12%	+36%/-51%
Source	KIC0	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 007272132-01 / KOI 4466.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-118 ± 28	$2.84^{+0.51}_{-0.34}$	528^{+38}_{-28}	4368^{+262}_{-277}	2519^{+1033}_{-845}
Alt.	-98 ± 30	$2.38^{+0.46}_{-0.32}$	524^{+40}_{-27}	4489^{+351}_{-347}	2956^{+1429}_{-1158}

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

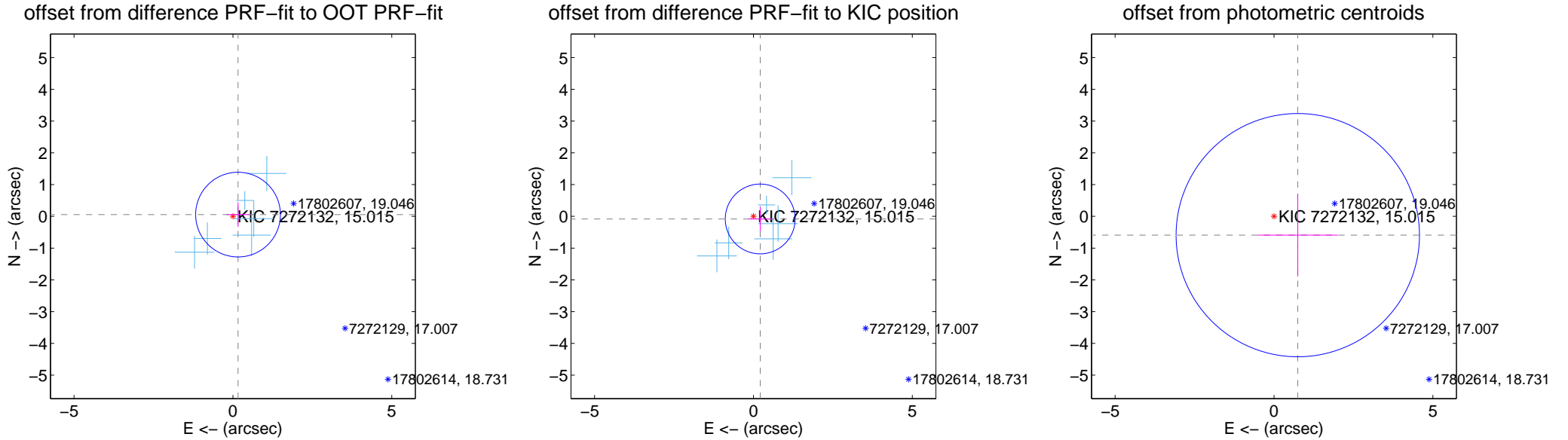
DV Centroid Data

Supplemental centroid analysis for 007272132-01. Kepler magnitude: 15.02. Transit SNR 11.29

There are 6 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	0.170 ± 0.445	0.38	-0.161 ± 0.355	0.056 ± 0.390
PRF-fit source offset from KIC position	0.228 ± 0.366	0.62	-0.212 ± 0.365	-0.082 ± 0.377
photometric centroid source offset	0.95 ± 1.28	0.75	-0.75 ± 1.26	-0.59 ± 1.30

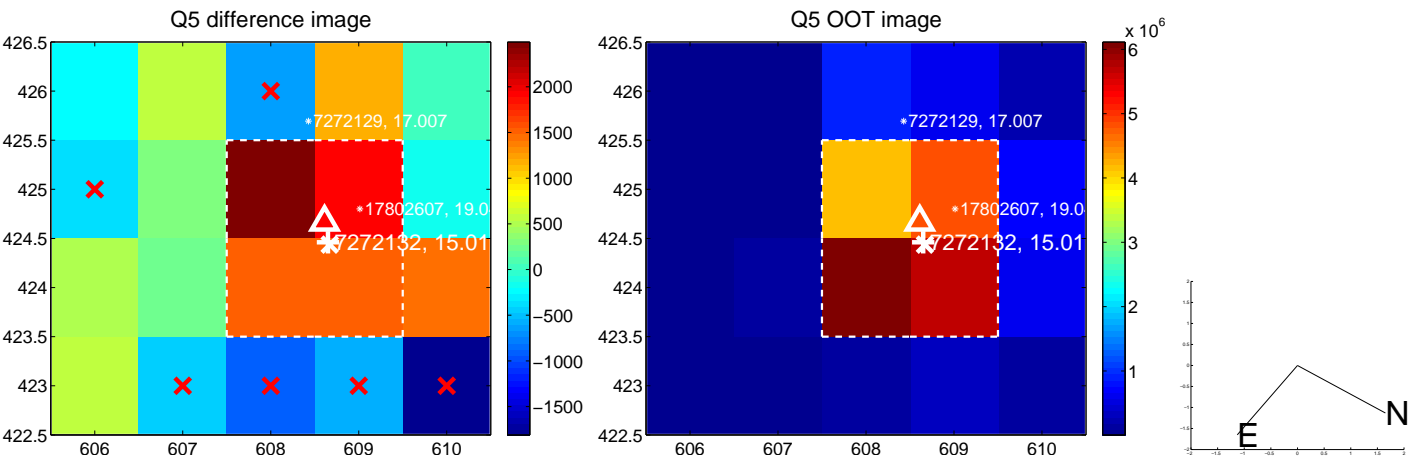


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

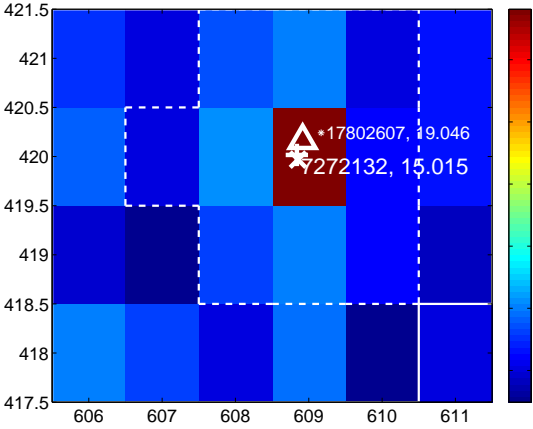
Q9 no difference image



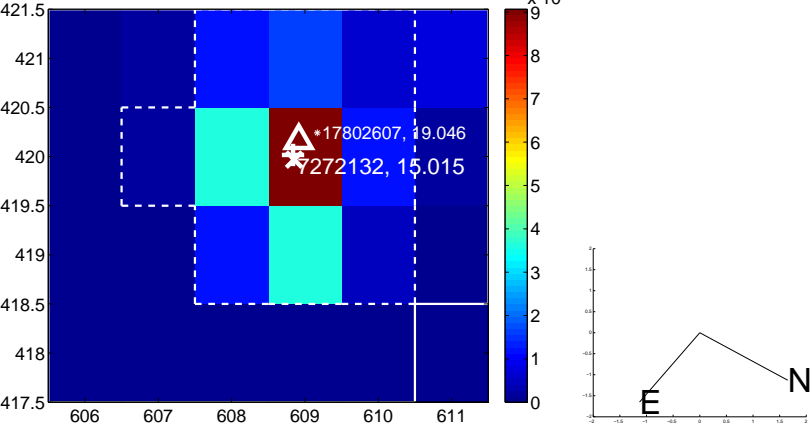
Q9 no OOT image



Q10 difference image



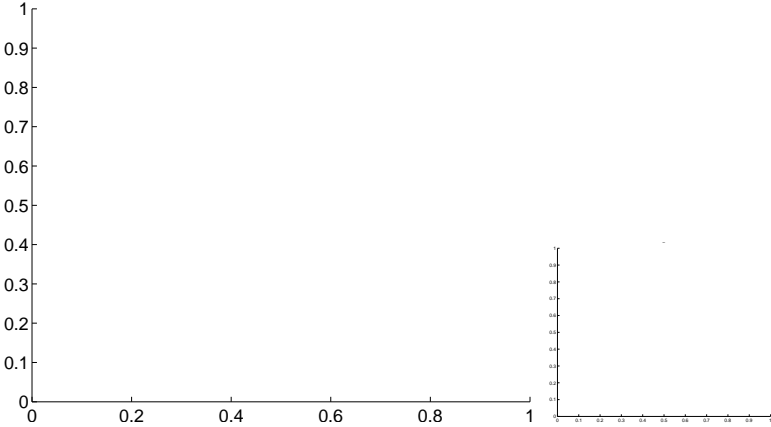
Q10 OOT image



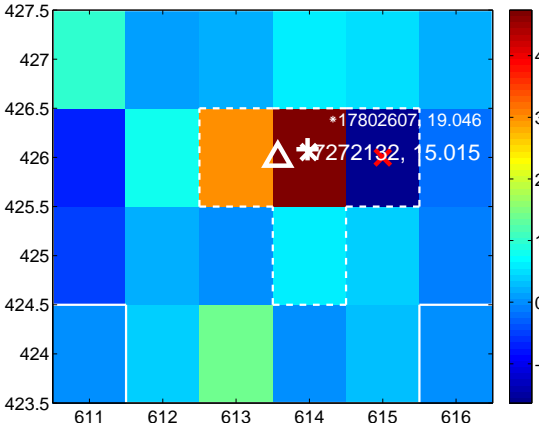
Q11 no difference image



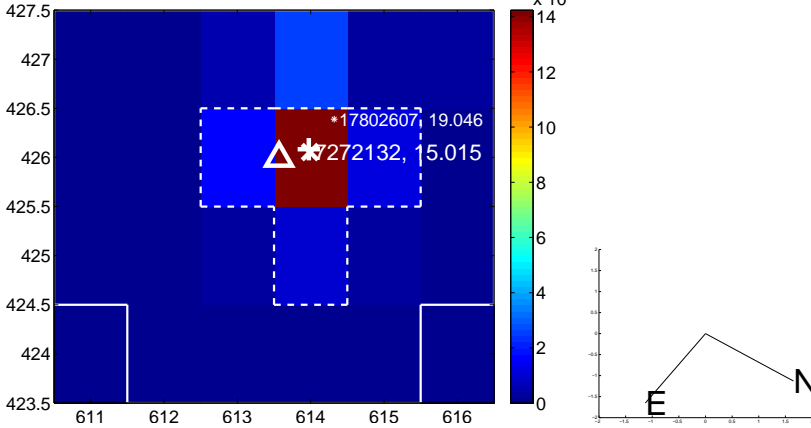
Q11 no OOT image



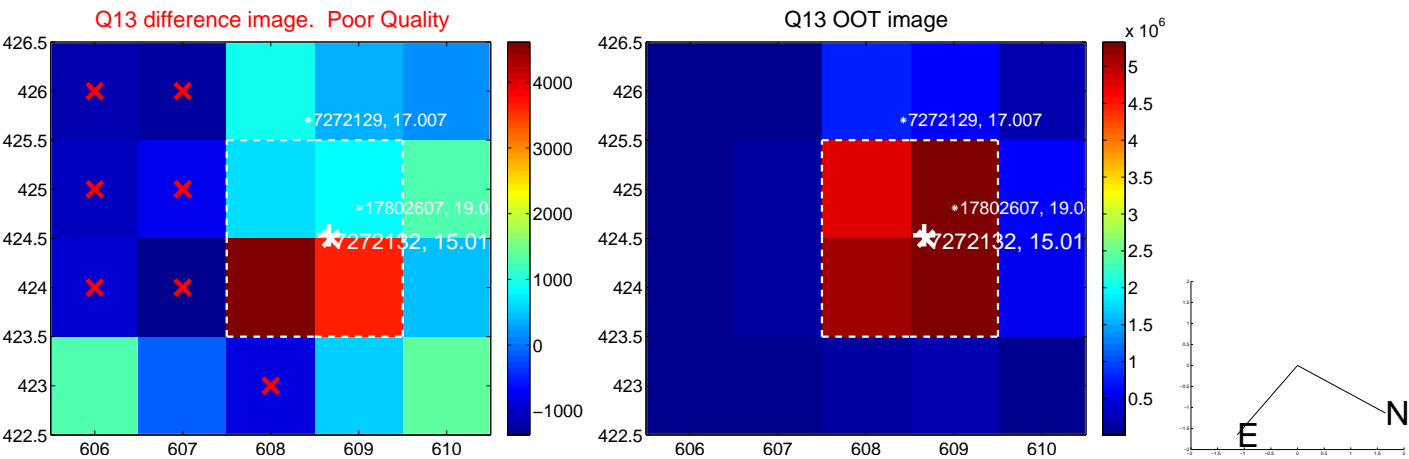
Q12 difference image



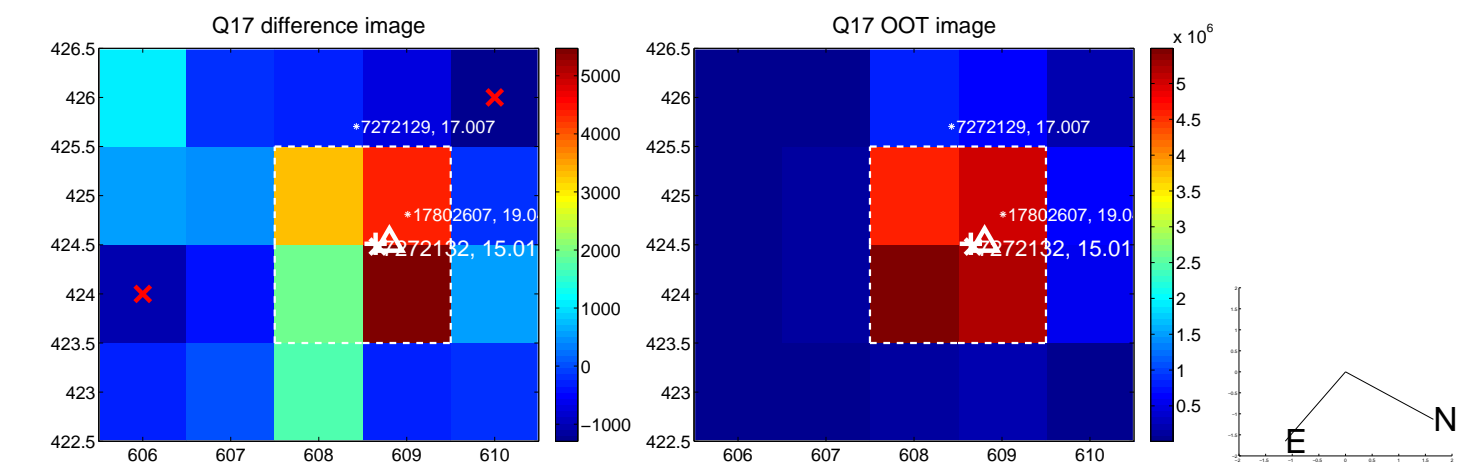
Q12 OOT image



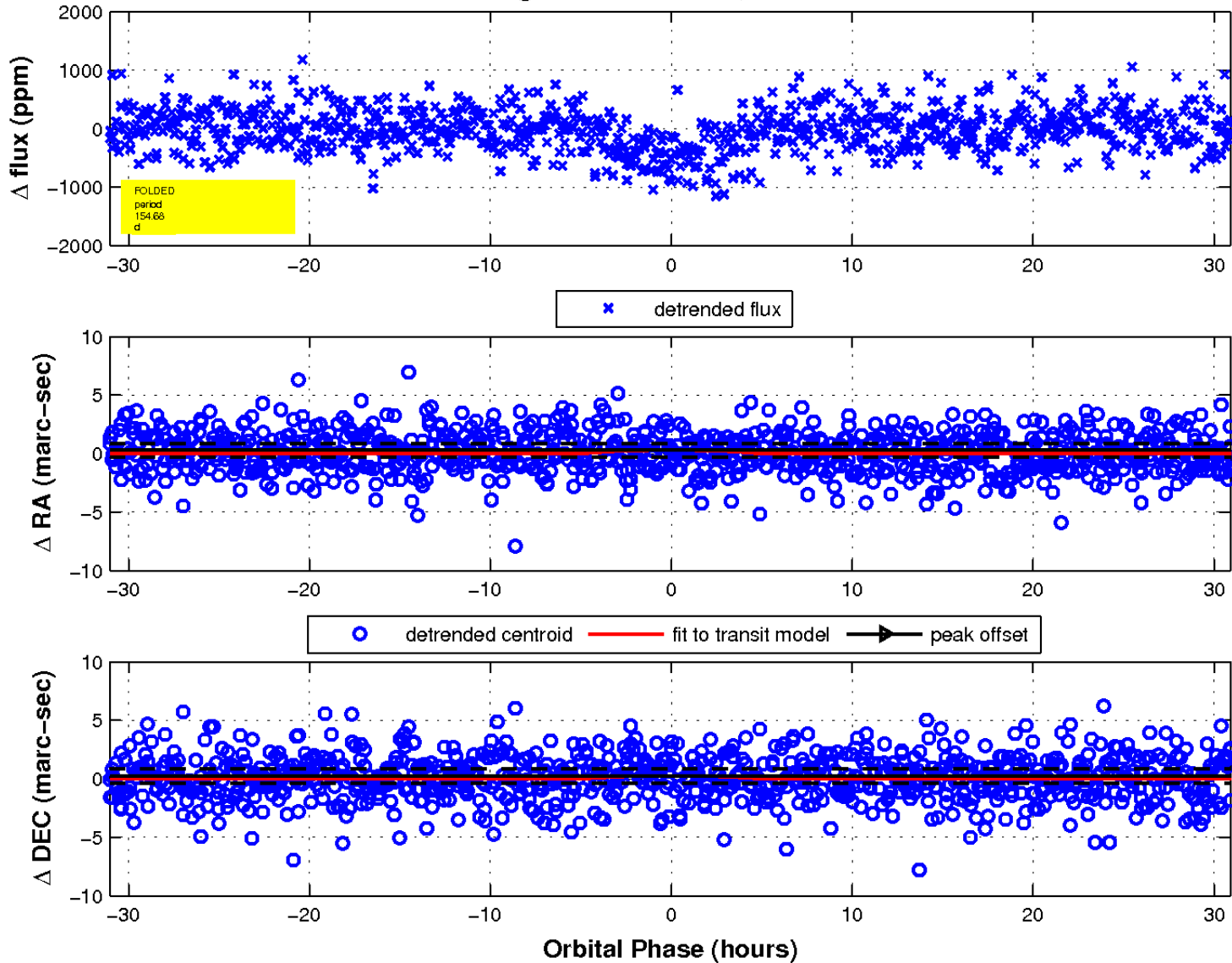
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

