

KIC 007521682

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})
007521682-01	OBS	No	0.710780	132.074264	636.9	4.394	9.3	1.5	1.28	6684	3.33	10369.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007521682-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

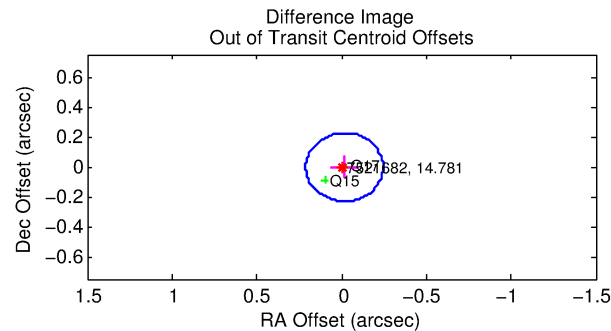
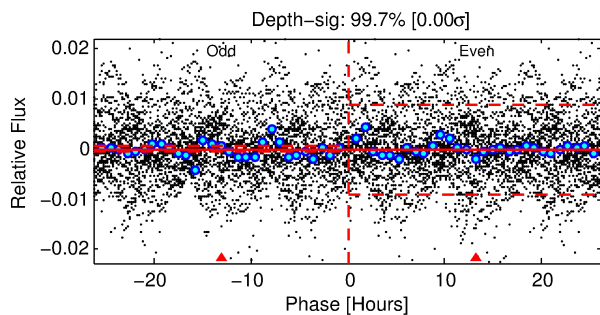
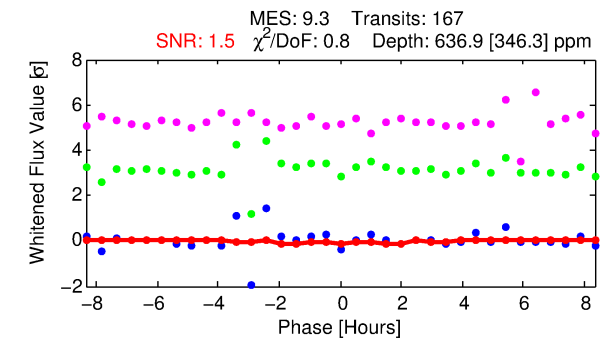
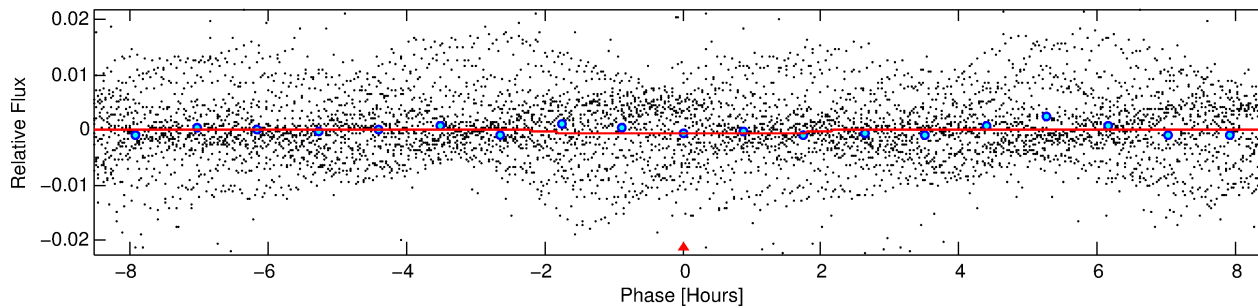
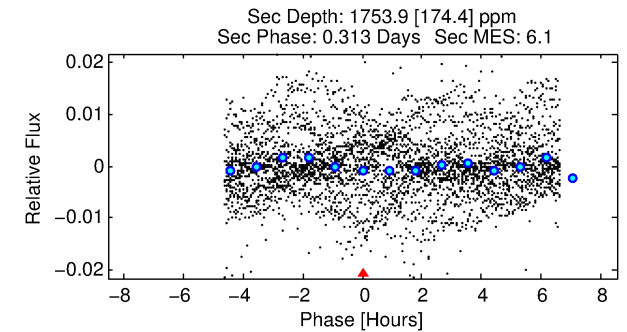
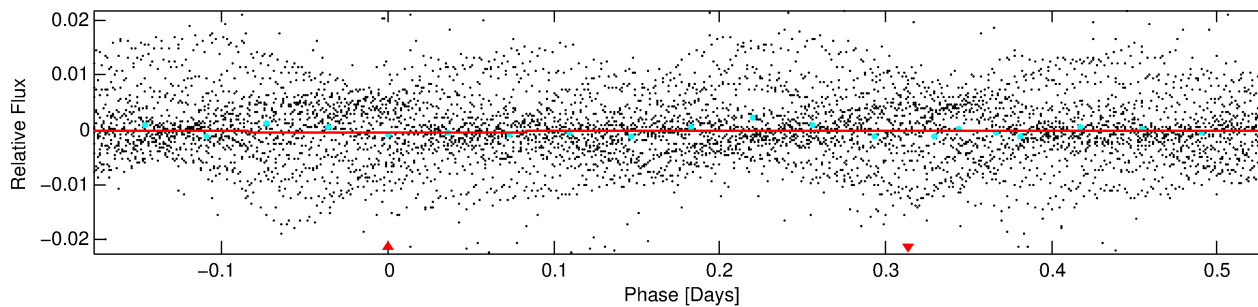
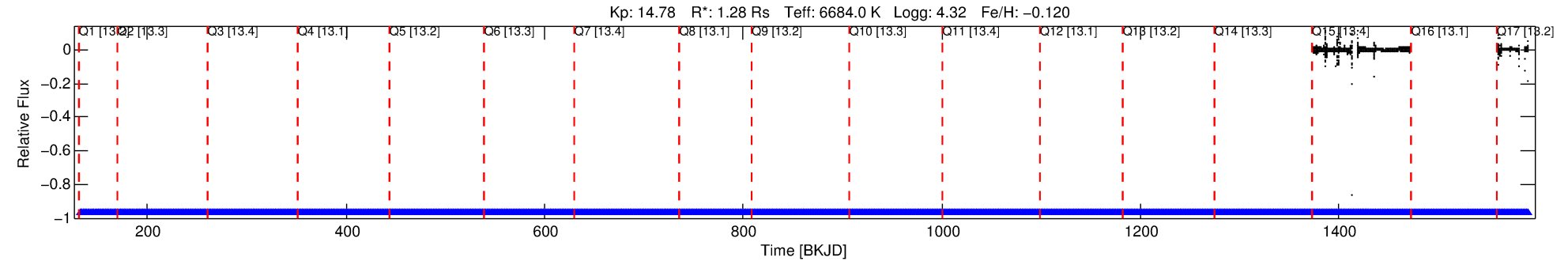
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007521682-01

No Significant Match Found

DV One-Page Summary

KIC: 7521682 Candidate: 1 of 1 Period: 0.711 d



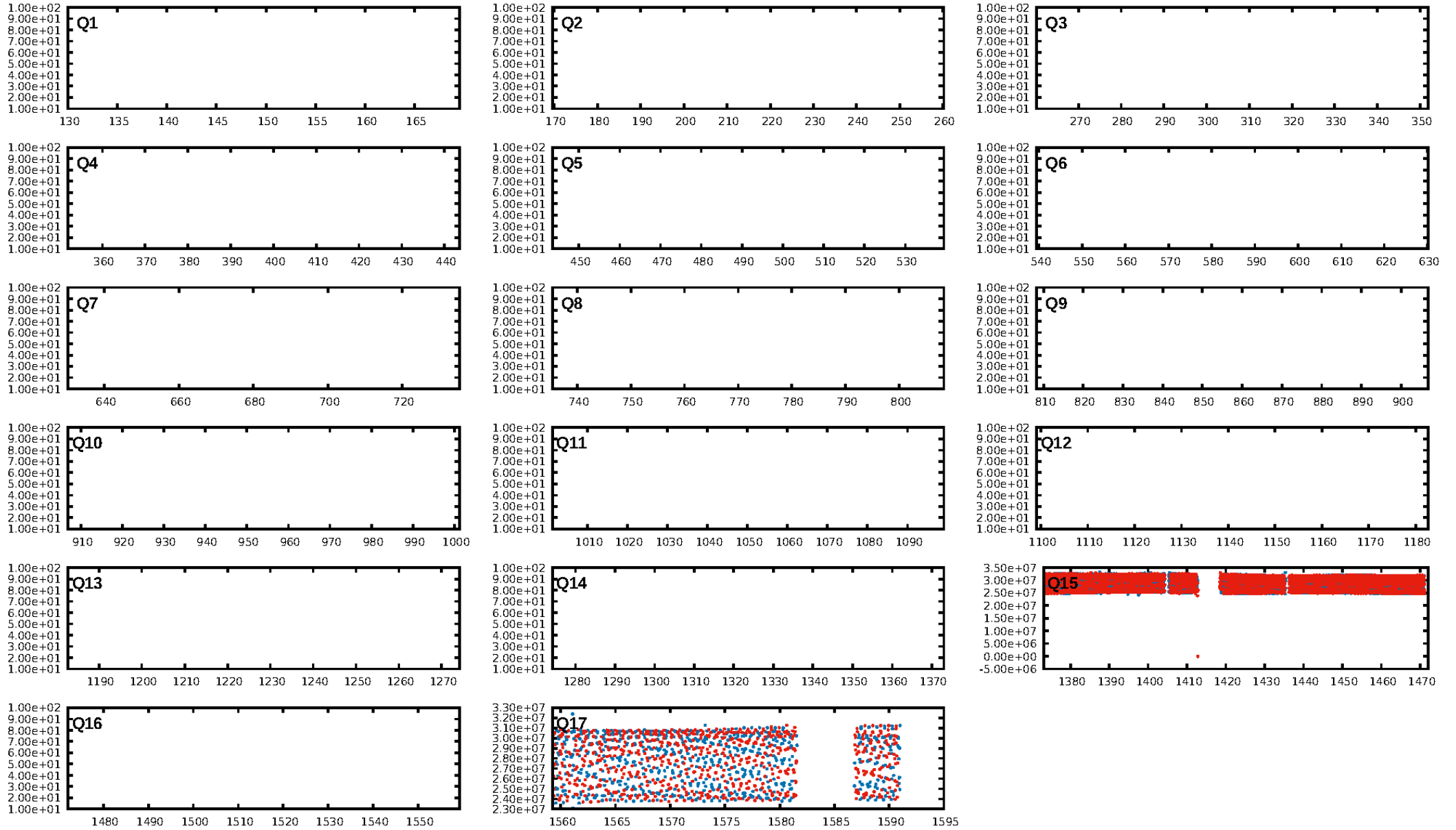
DV Fit Results:

Period = 0.71078 [0.00003] d
Epoch = 132.0743 [0.0399] BKJD
Rp/R* = 0.0238 [0.0905]
a/R* = 1.34 [12.58]
b = 0.47 [34.60]
Seff = 10369.25 [4295.09]
Teff = 2573 [266] K
Rp = 3.33 [12.67] Re
a = 0.0168 [0.0045] AU
Ag = 24.58 [186.87] [0.13σ]
Teffp = 8858 [16820] K [0.37σ]

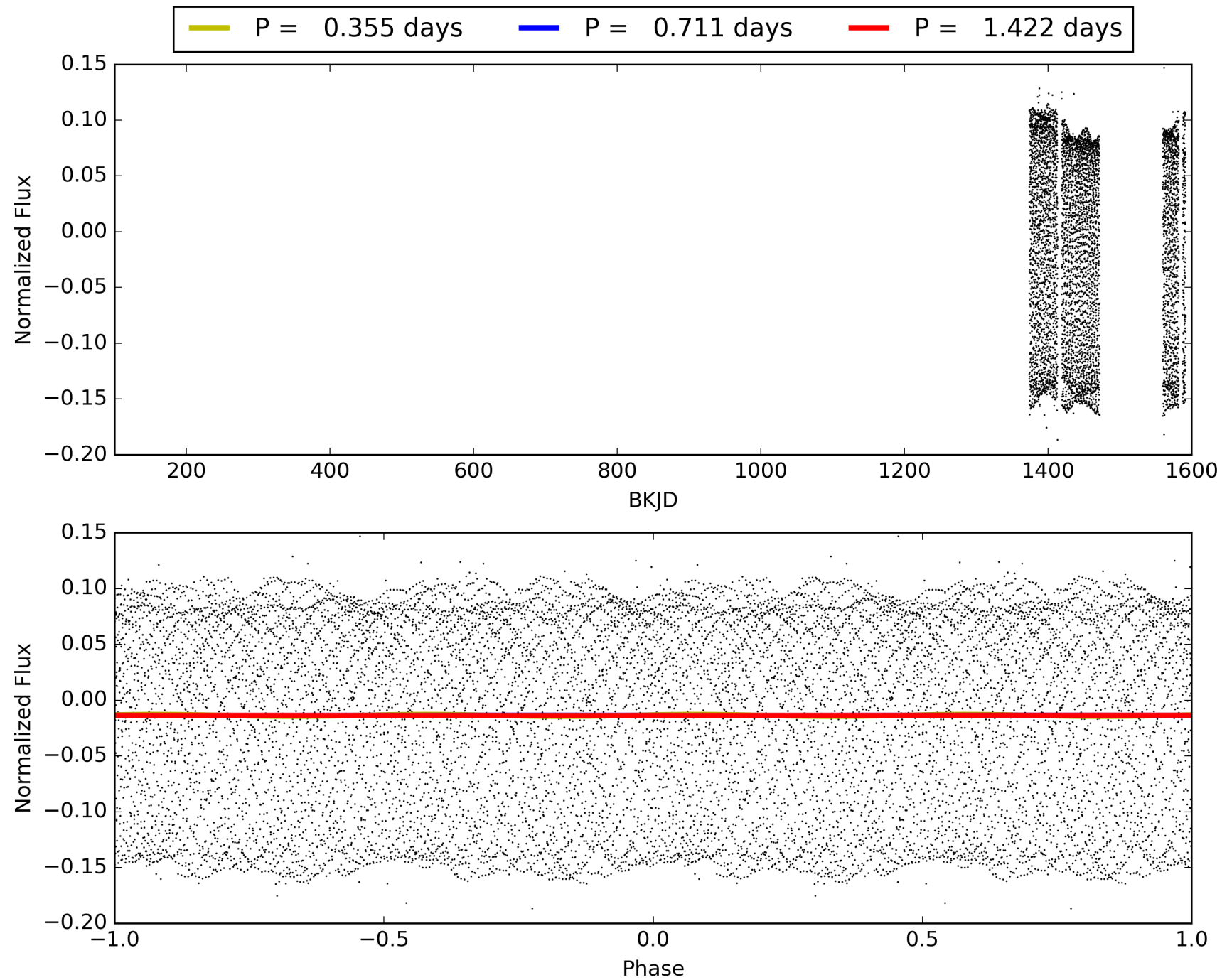
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 84.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.17e-12
RollingBand-fgt: 1.00 [129/129]
GhostDiagnostic-chr: 0.05128
Centroid-sig: 53.0%
Centroid-so: 0.269 arcsec [0.86σ]
OotOffset-rm: 0.017 arcsec [0.22σ]
KicOffset-rm: 0.093 arcsec [1.02σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 007521682-01, PDC Light Curves

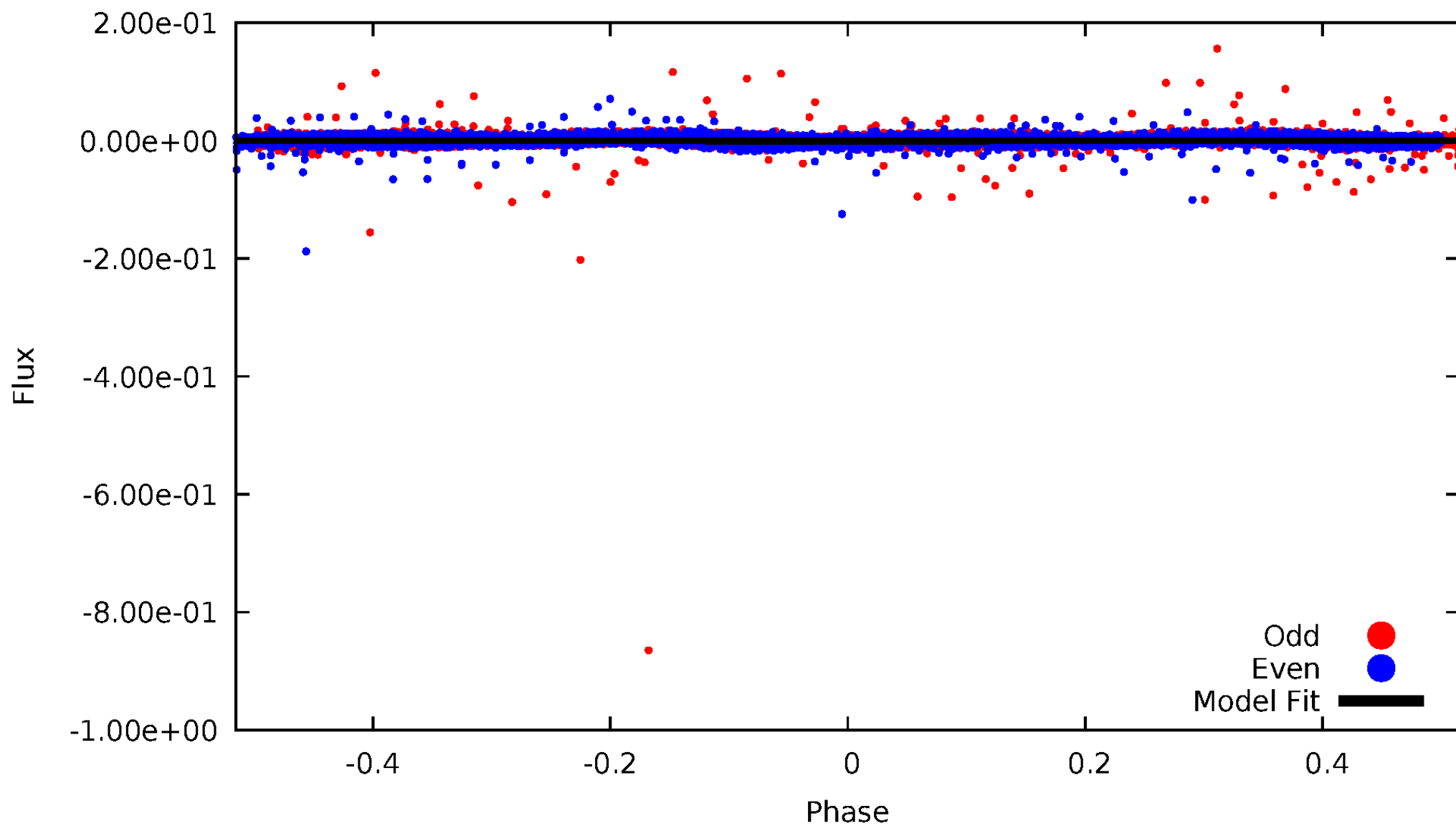


TCE 007521682-01



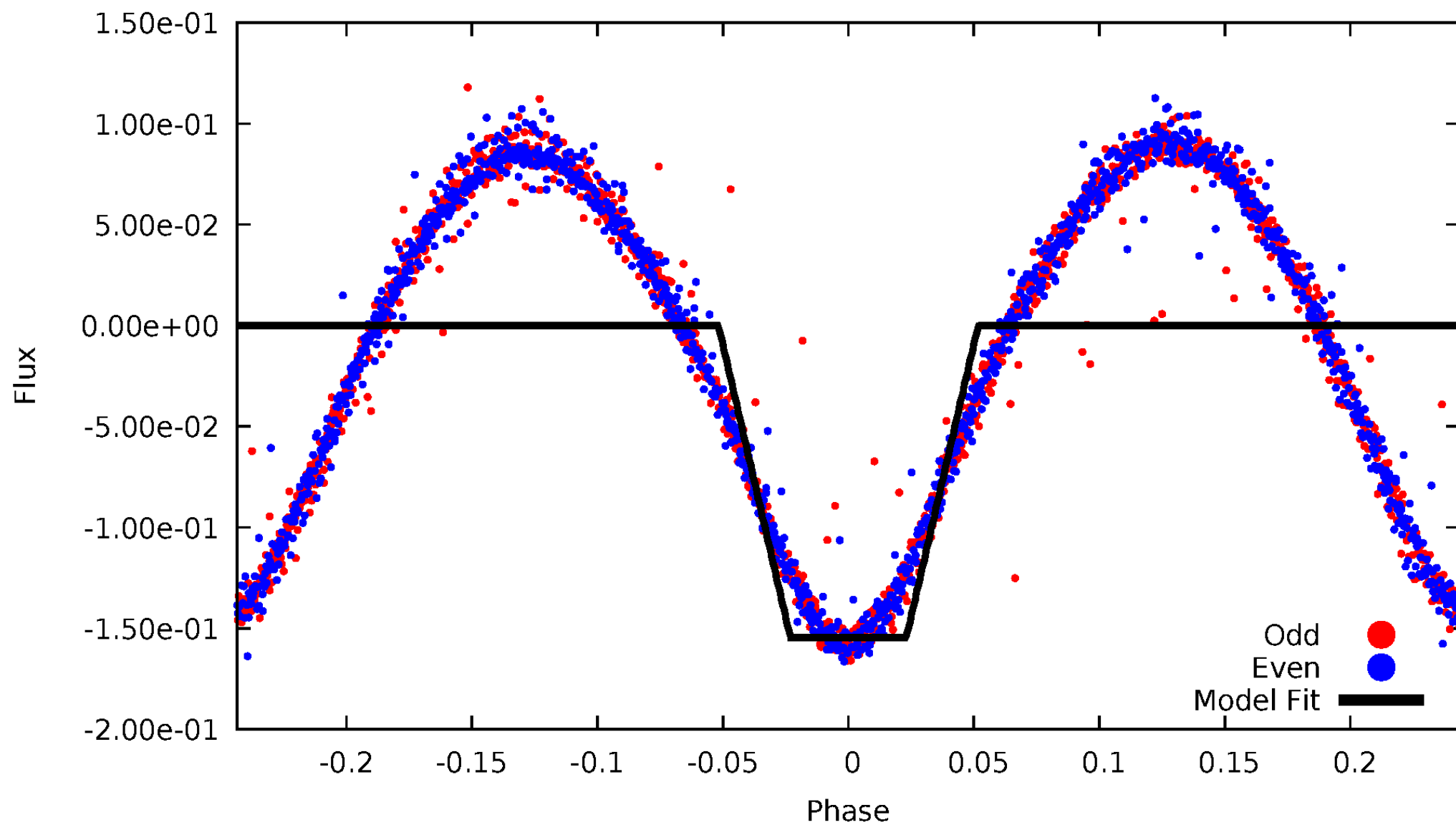
DV Odd/Even

TCE 007521682-01



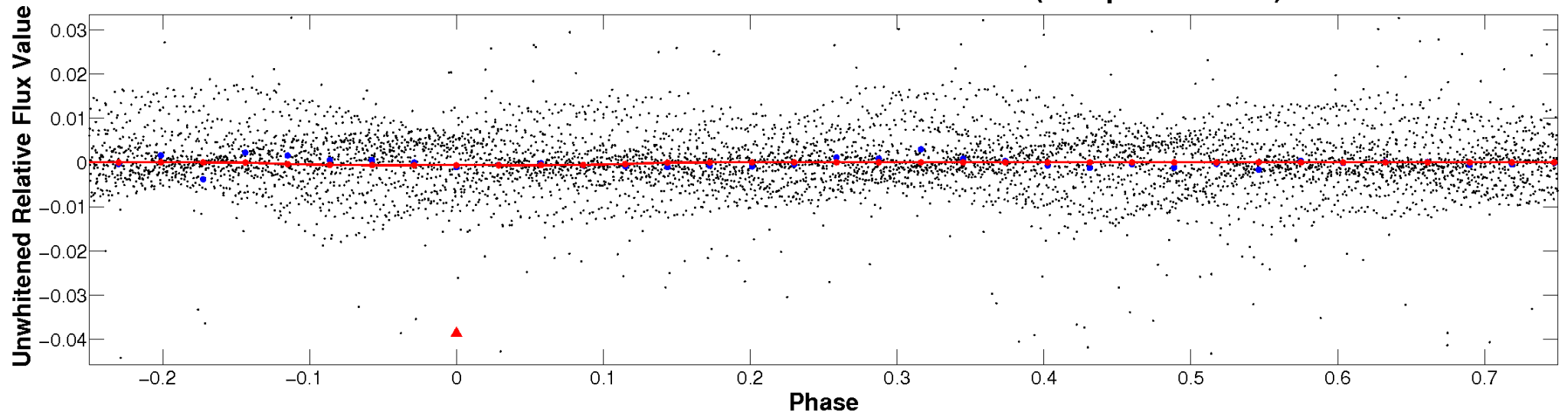
ALT Odd/Even

TCE 007521682-01

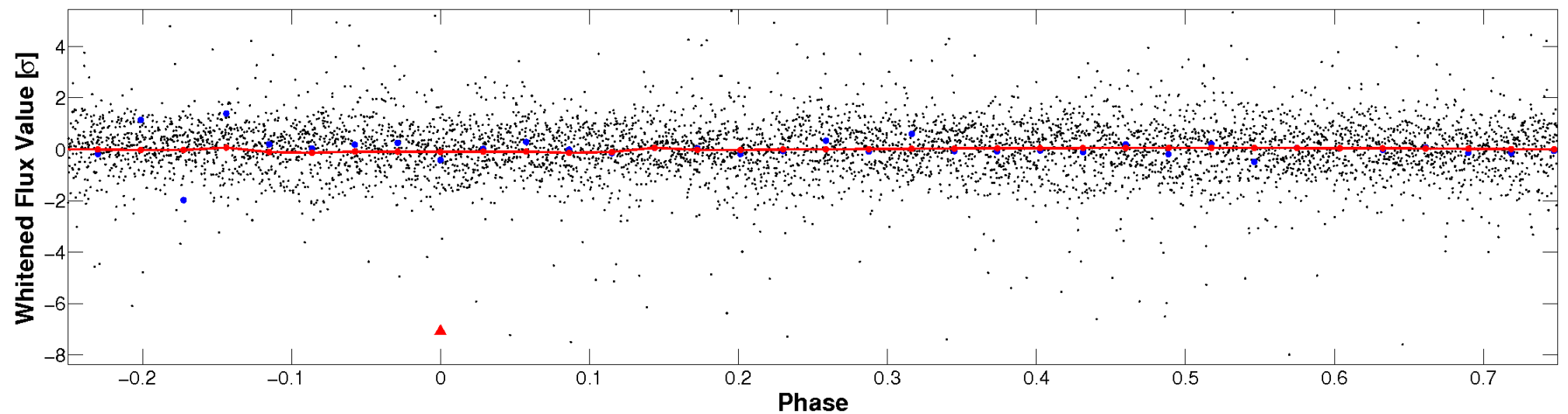


Non-Whitened Vs. Whitened Light Curve

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

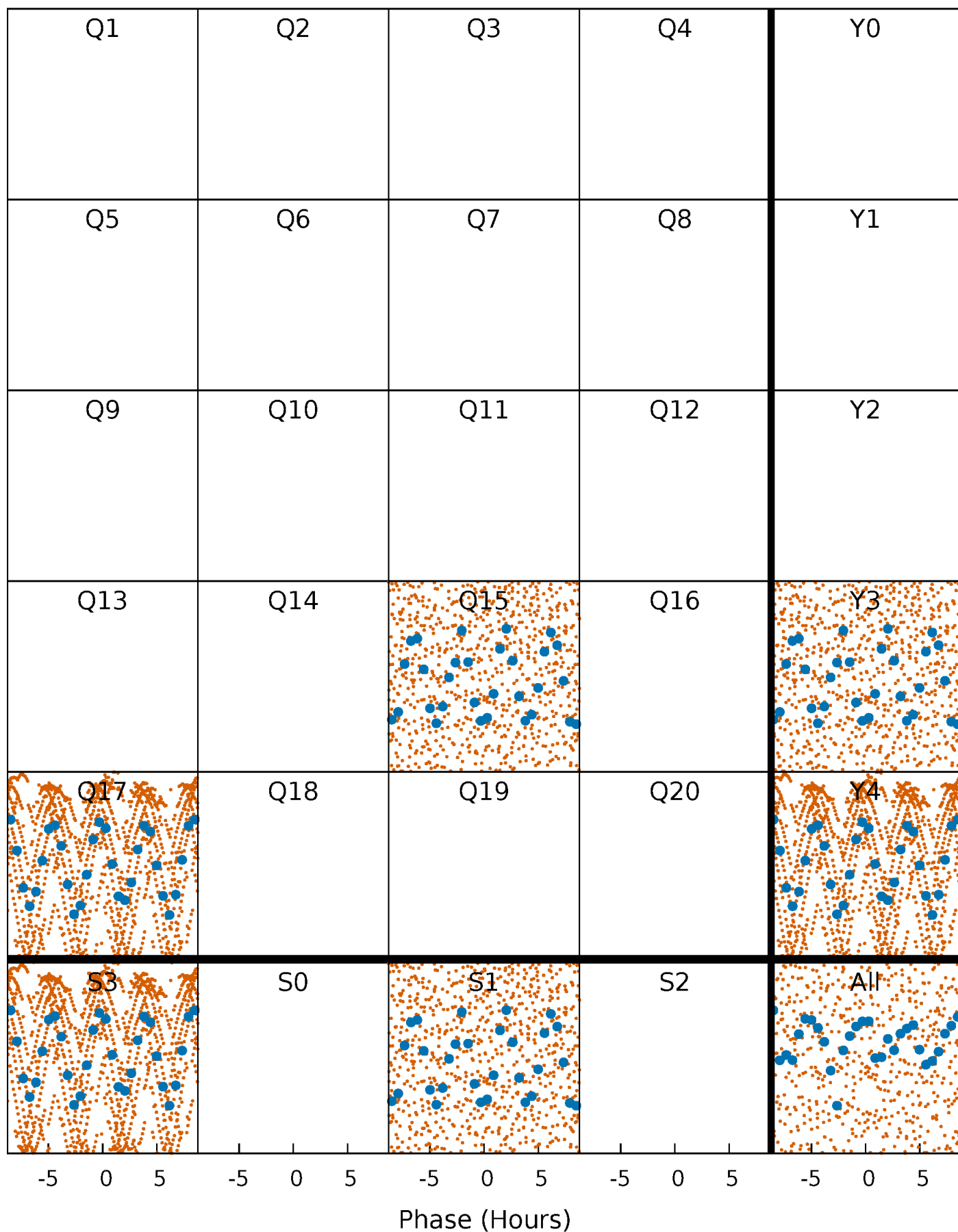


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



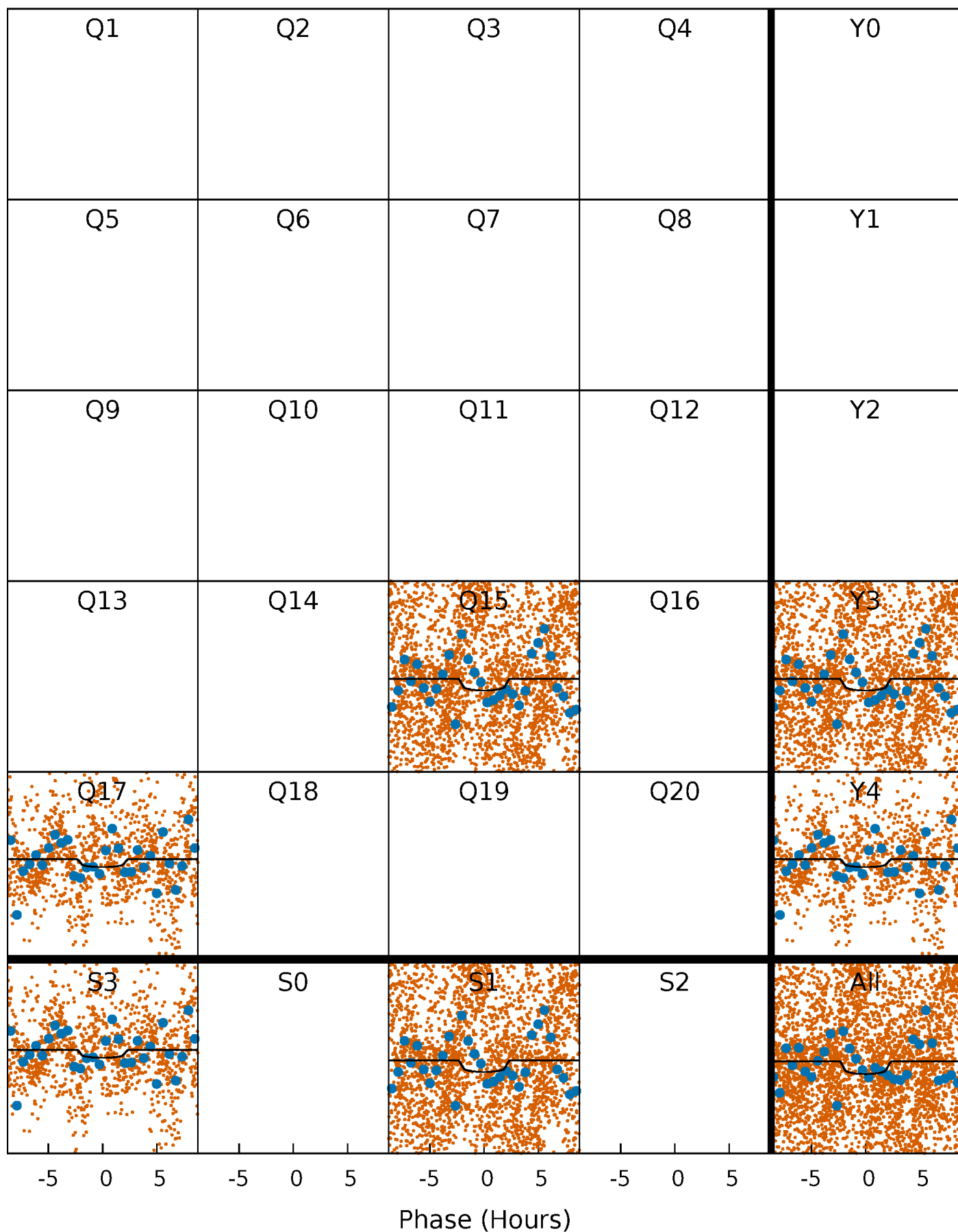
PDC Quarter-Phased Transit Curves

TCE 007521682-01 P= 0.710780 Days $T_0=132.074264$ (BKJD)



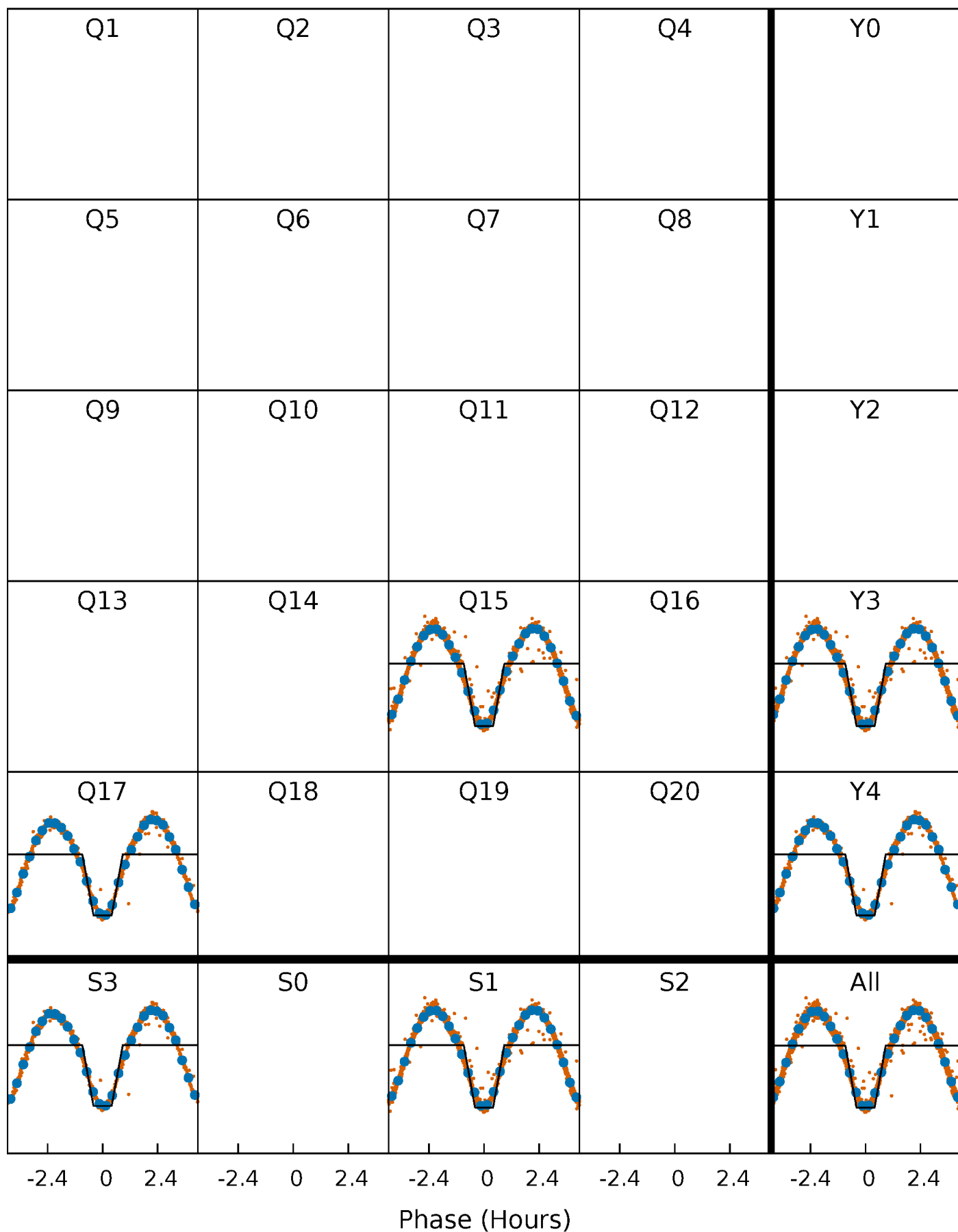
DV Quarter-Phased Transit Curves

TCE 007521682-01 P= 0.710780 Days $T_0=132.074264$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

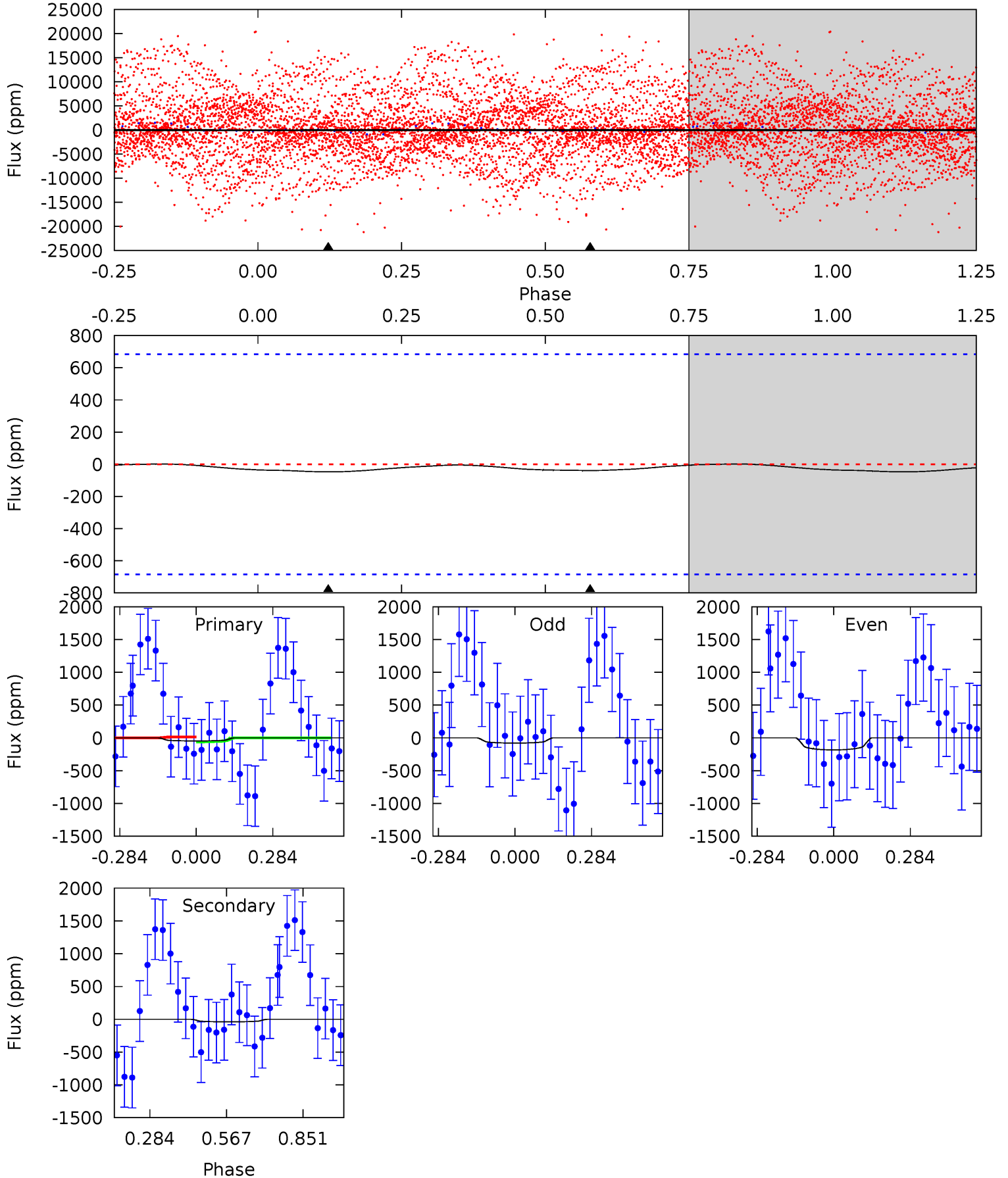
TCE 007521682-01 P= 0.713215 Days $T_0=132.030328$ (BKJD)



DV Model-Shift Uniqueness Test

007521682-01, P = 0.710780 Days, E = 132.074264 Days

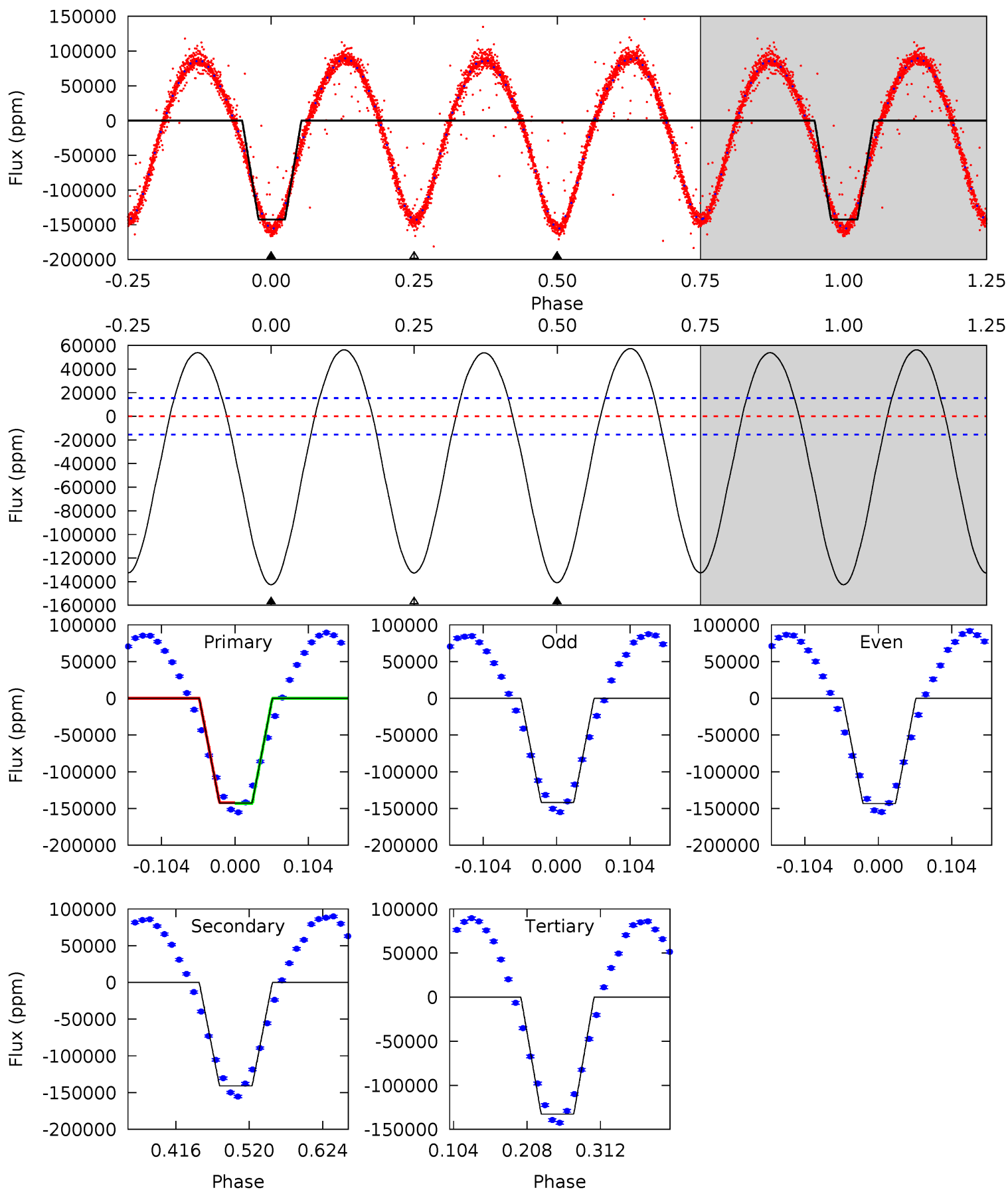
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.30	0.25	0	0	4.34	1.07	0.02	0.30	0.30	0.25	0.25	0.34	-0.44	0.03	0.16



Alt Model-Shift Uniqueness Test

007521682-01, P = 0.713215 Days, E = 132.030328 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.0	41.5	39.1	0	4.56	1.63	20.1	2.91	42.0	2.41	41.5	0.23	0.99	0.29	0.16



Stellar Parameters For KIC 007521682

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6684^{+187}_{-281}	$4.321^{+0.087}_{-0.203}$	$-0.120^{+0.250}_{-0.300}$	$1.278^{+0.412}_{-0.176}$	$1.255^{+0.187}_{-0.187}$	$0.847^{+0.320}_{-0.443}$
	+3%/-4%	+2%/-5%	+208%/-250%	+32%/-14%	+15%/-15%	+38%/-52%
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 007521682-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-39 ± 158	$10.57^{+11.33}_{-7.73}$	3631^{+264}_{-184}	-3411^{+6924}_{-521}	$0.023^{+0.599}_{-0.280}$
Alt.	-140841 ± 3393	$56.42^{+15.62}_{-14.88}$	3649^{+277}_{-210}	6724^{+1234}_{-774}	$7.866^{+6.088}_{-3.022}$

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 $A_{obs} \gg 1.0$

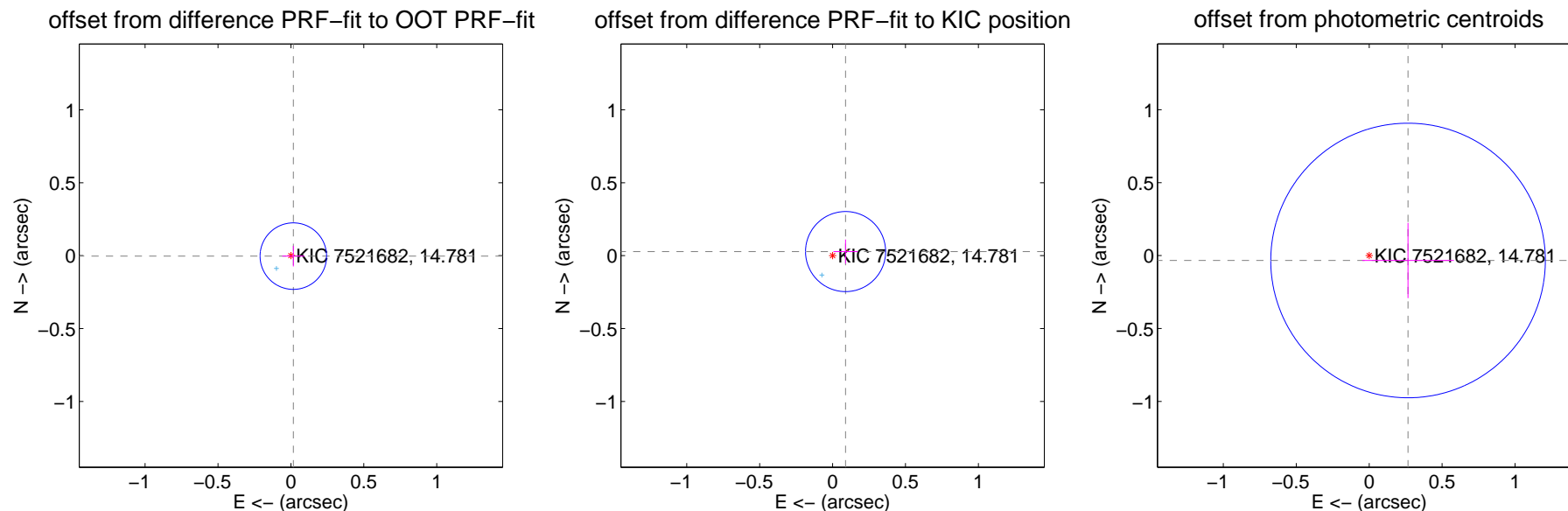
DV Centroid Data

Supplemental centroid analysis for 007521682-01. Kepler magnitude: 14.78. Transit SNR 1.55

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.017 ± 0.076	0.22	-0.017 ± 0.076	-0.003 ± 0.070
PRF-fit source offset from KIC position	0.093 ± 0.092	1.02	-0.089 ± 0.084	0.028 ± 0.083
photometric centroid source offset	0.27 ± 0.31	0.86	-0.27 ± 0.31	-0.03 ± 0.26



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.



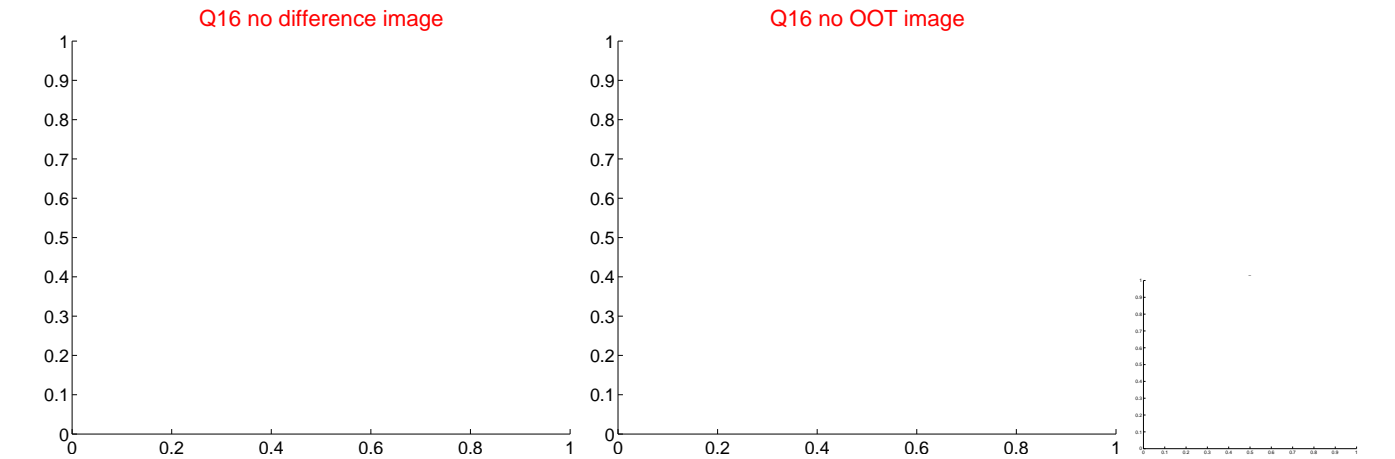
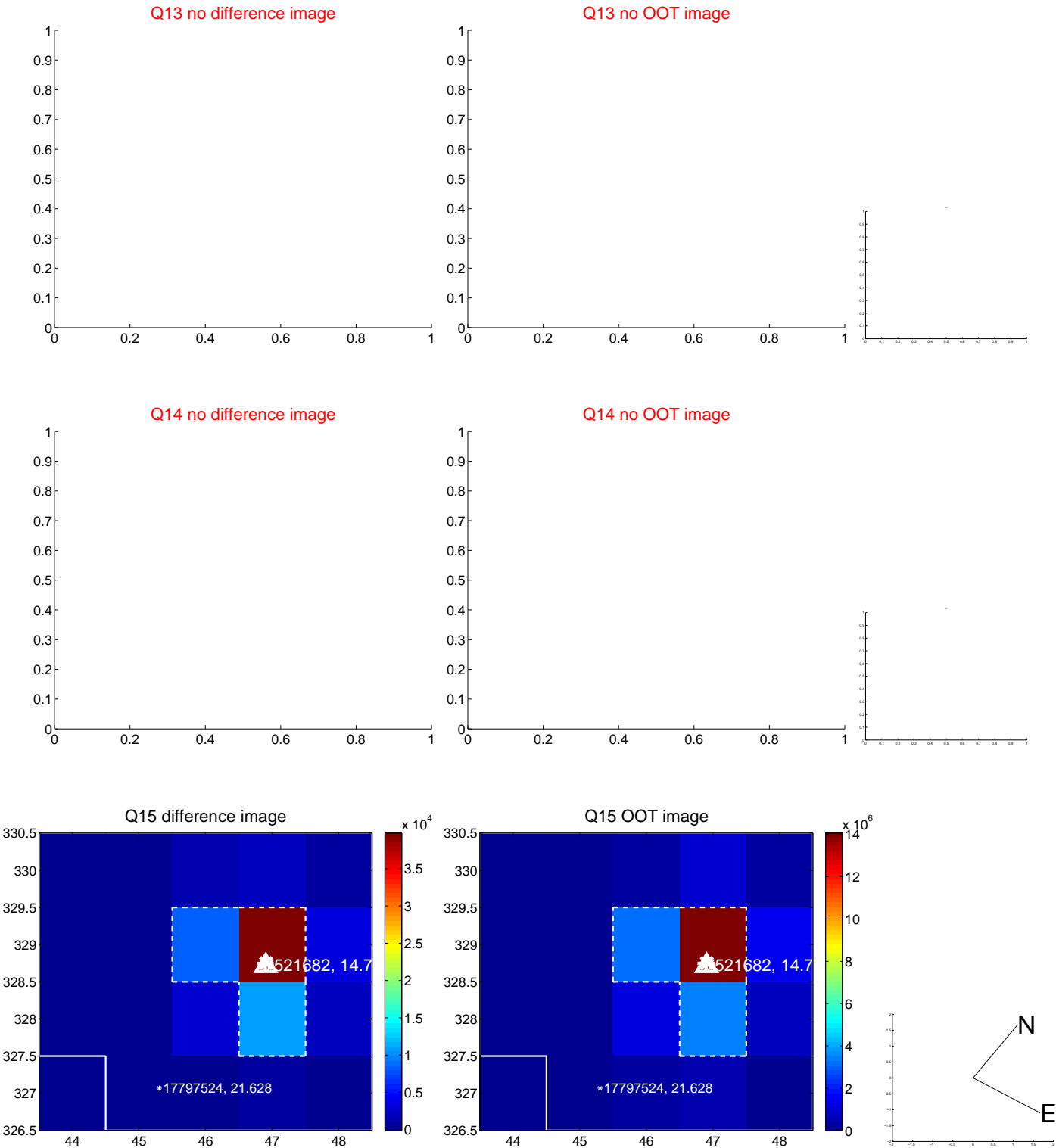
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



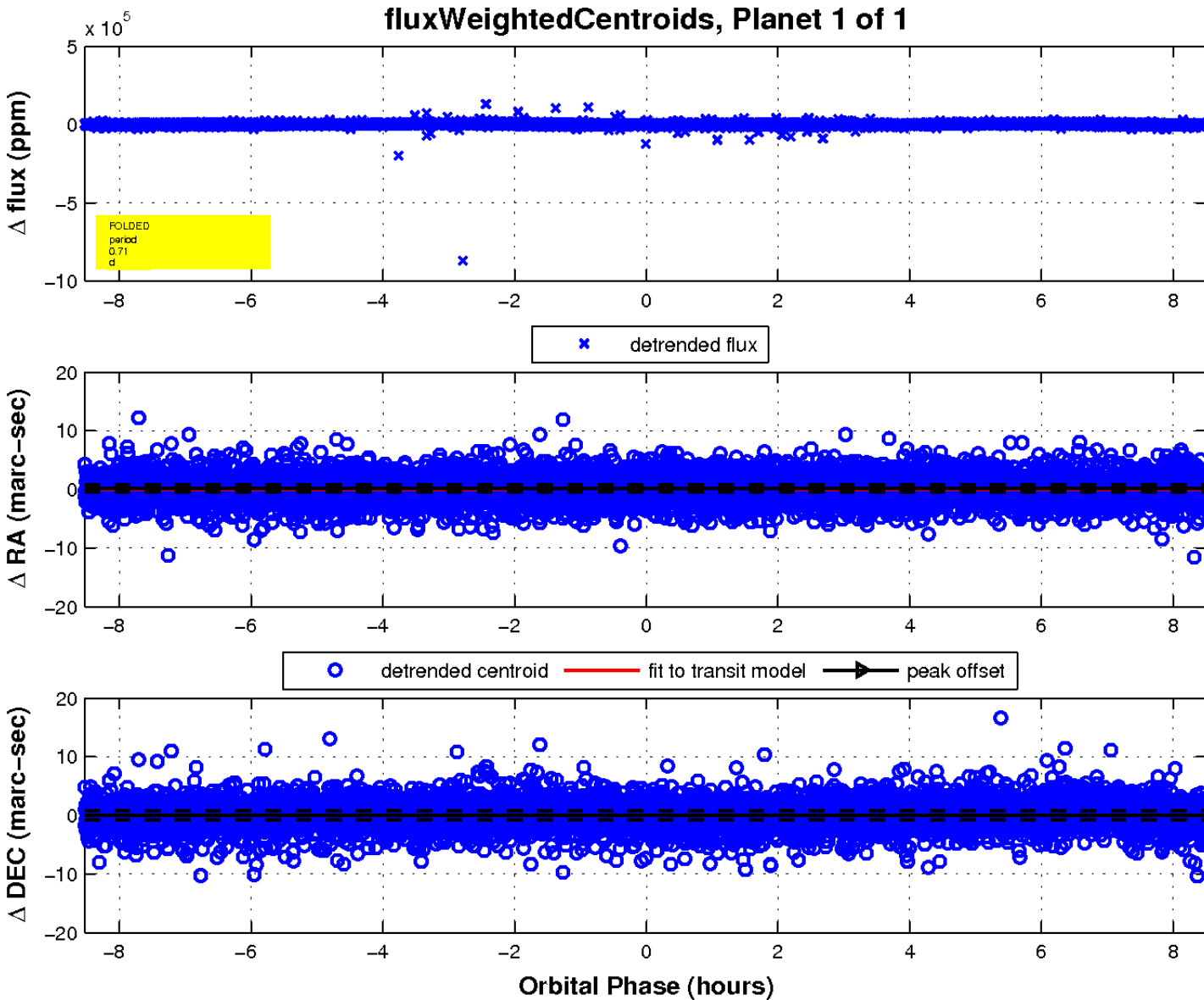
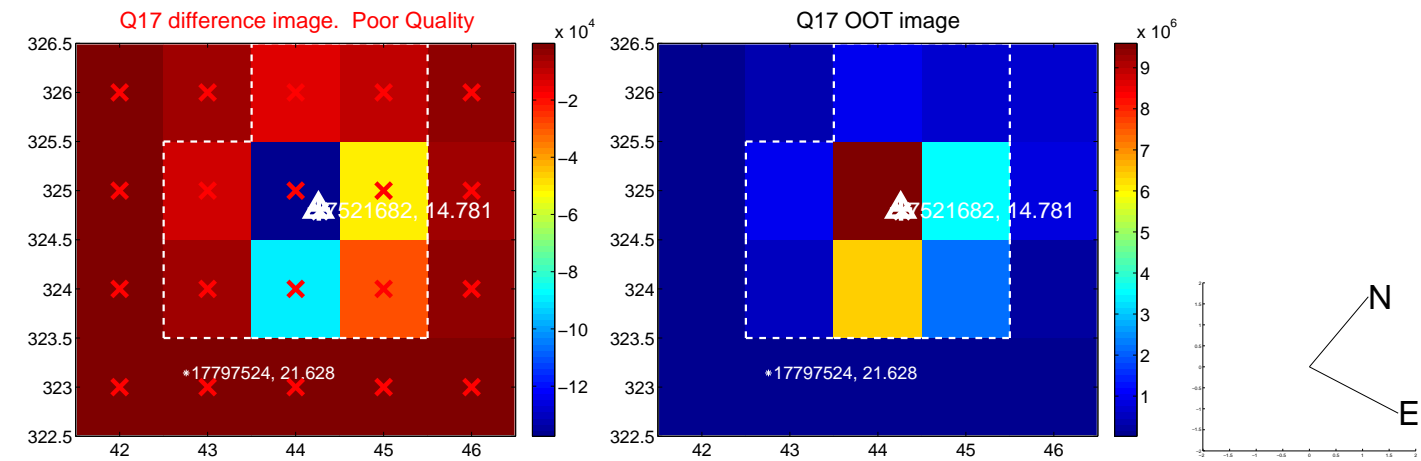
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

