

KIC 007204722

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})
007204722-01	OBS	No	36.469818	161.357201	246.5	11.631	9.7	7.0	1.15	6224	1.89	40.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007204722-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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.

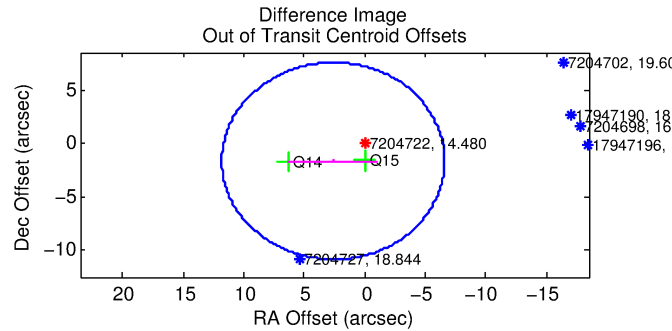
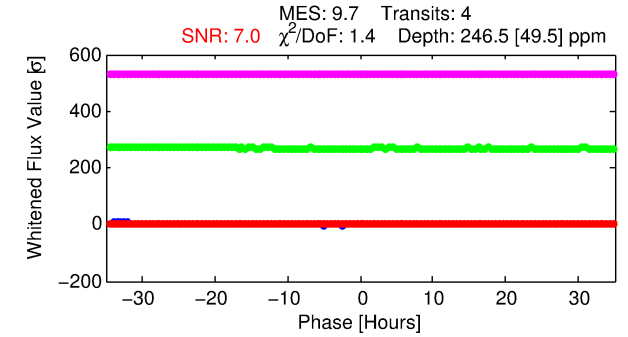
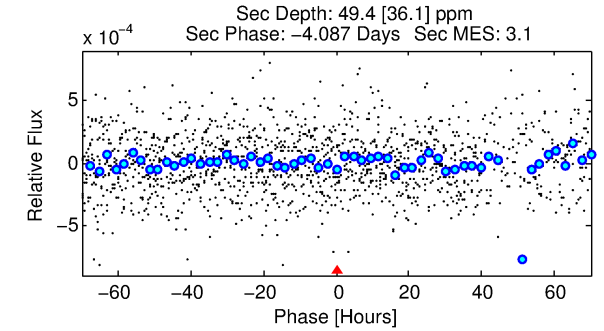
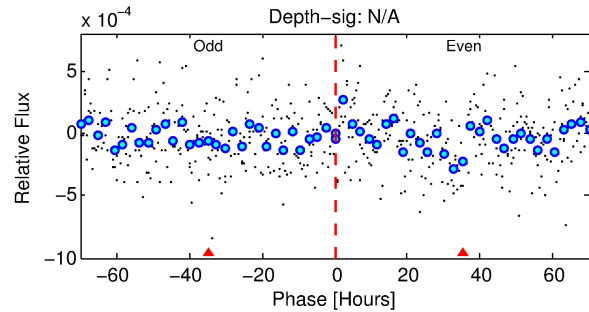
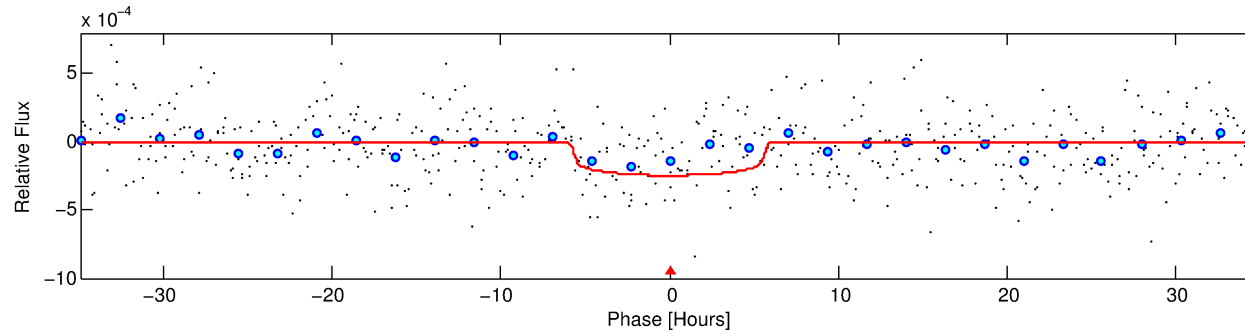
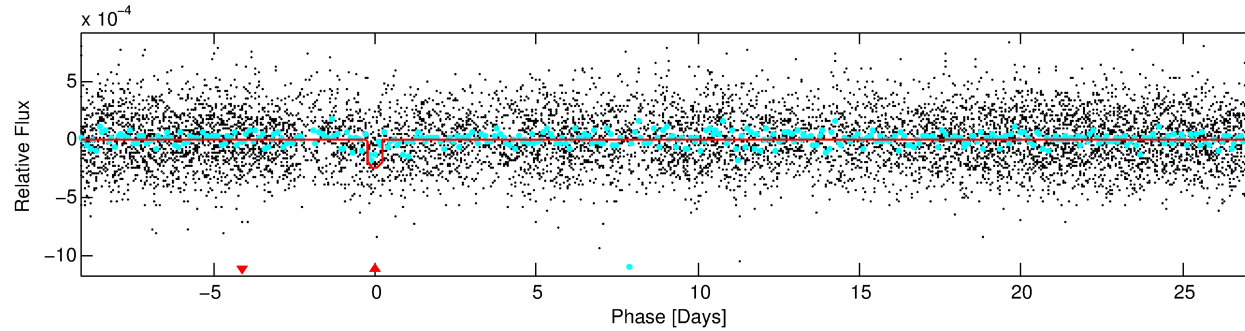
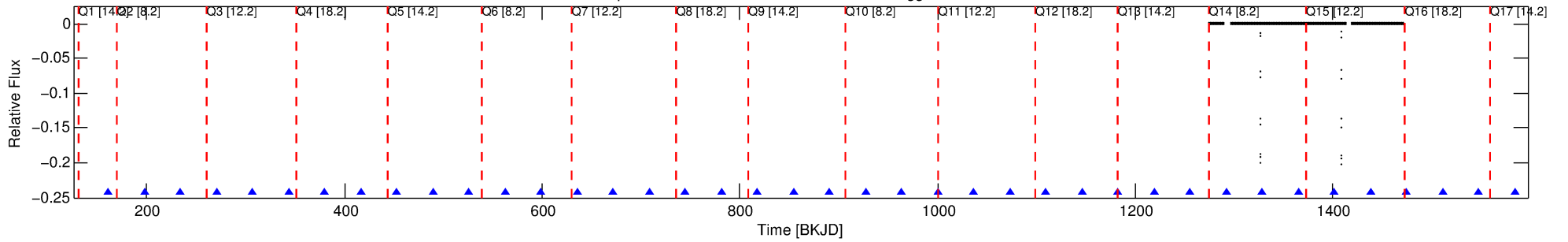
Ephemeris Match Information For 007204722-01

No Significant Match Found

DV One-Page Summary

KIC: 7204722 Candidate: 1 of 1 Period: 36.470 d

Kp: 14.48 R*: 1.15 Rs Teff: 6224.0 K Logg: 4.28 Fe/H: -0.560



DV Fit Results:

Period = 36.46982 [0.01036] d
Epoch = 161.3572 [0.3566] BKJD
Rp/R* = 0.0150 [0.0169]
a/R* = 19.89 [119.66]
b = 0.58 [6.81]
Seff = 40.90 [15.73]
Teff = 645 [62] K
Rp = 1.89 [2.19] Re
a = 0.2085 [0.0497] AU
Ag = 332.31 [795.58] [0.42σ]
Teffp = 4257 [2526] K [1.43σ]

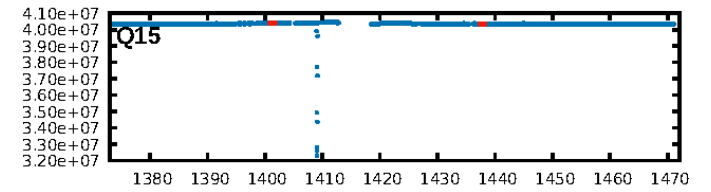
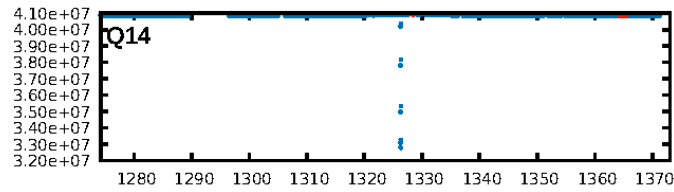
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 78.2%
Bootstrap-pfa: 1.44e-16
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -4.262
Centroid-sig: 81.2%
Centroid-so: 0.971 arcsec [0.58σ]
OotOffset-rm: 3.086 arcsec [1.01σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-rm: 3.164 arcsec [1.02σ]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

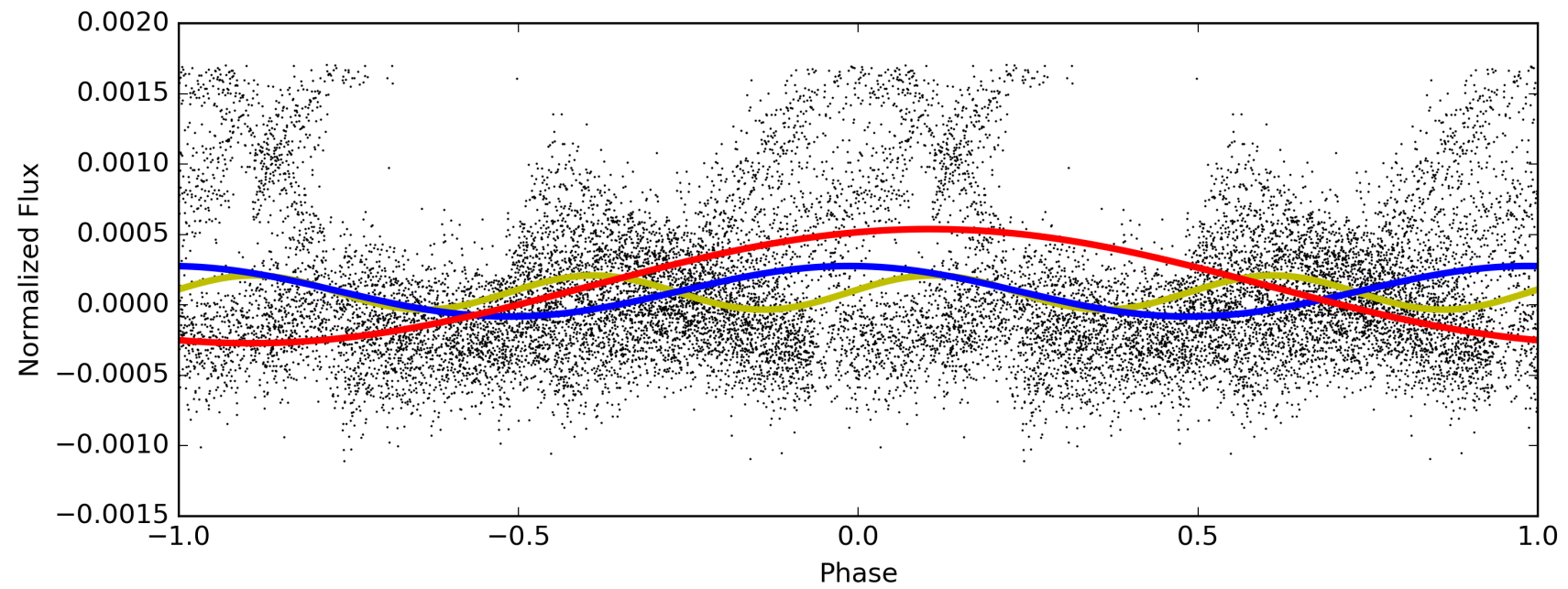
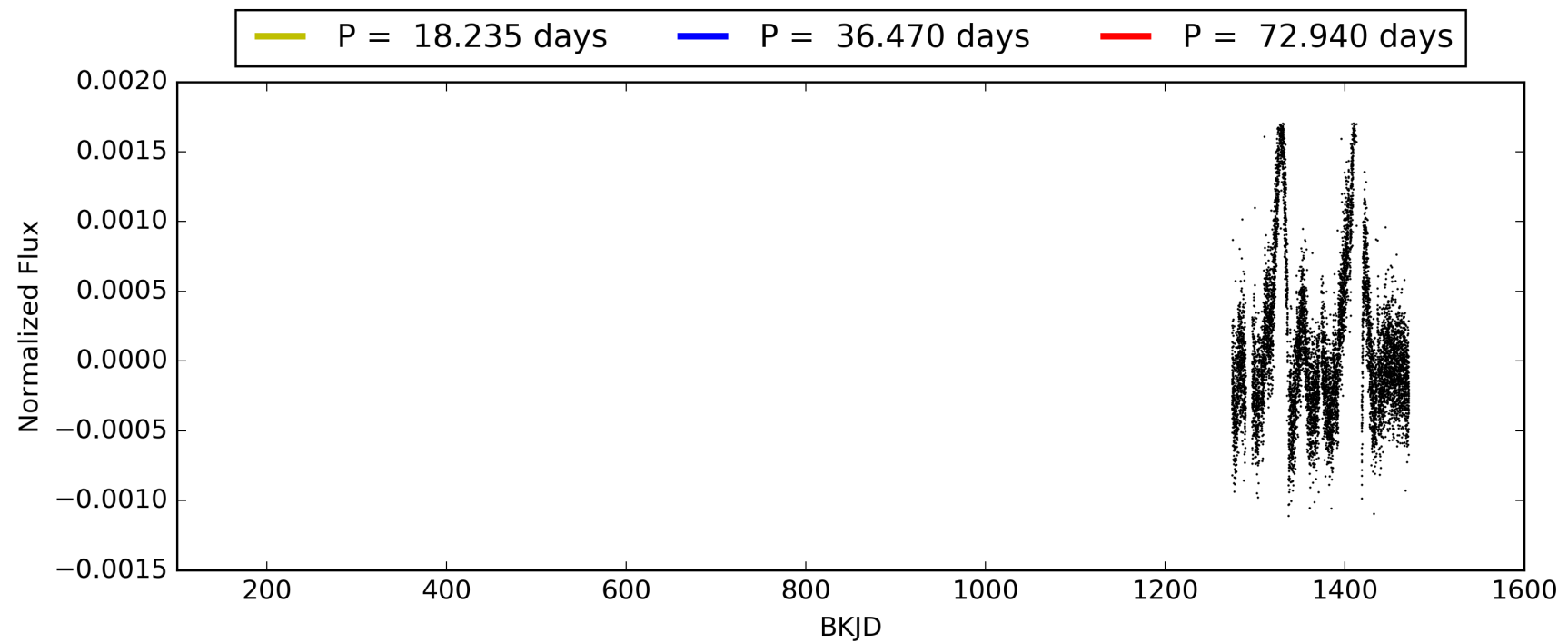
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:36:25 Z

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

TCE 007204722-01, PDC Light Curves

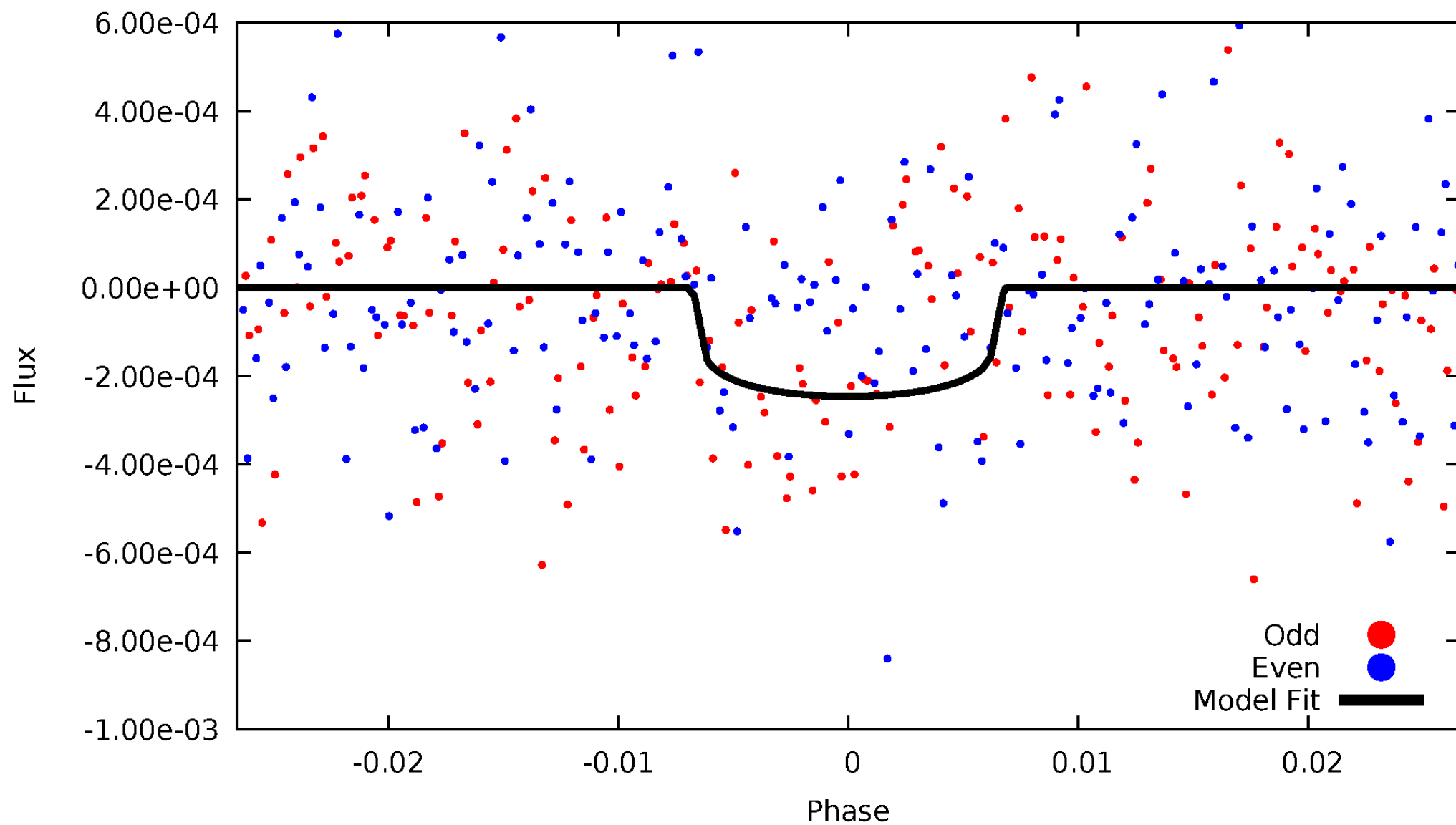


TCE 007204722-01



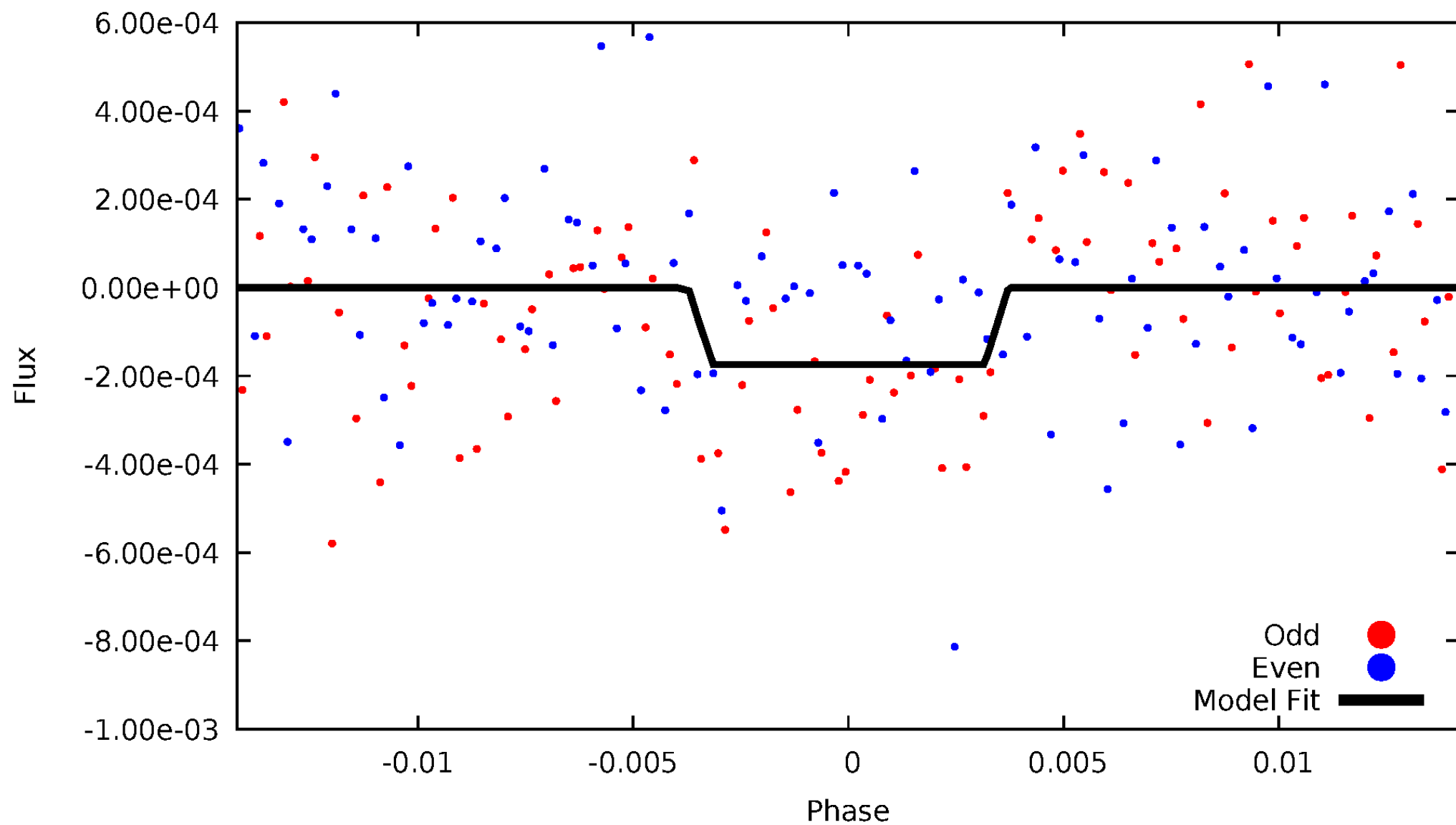
DV Odd/Even

TCE 007204722-01



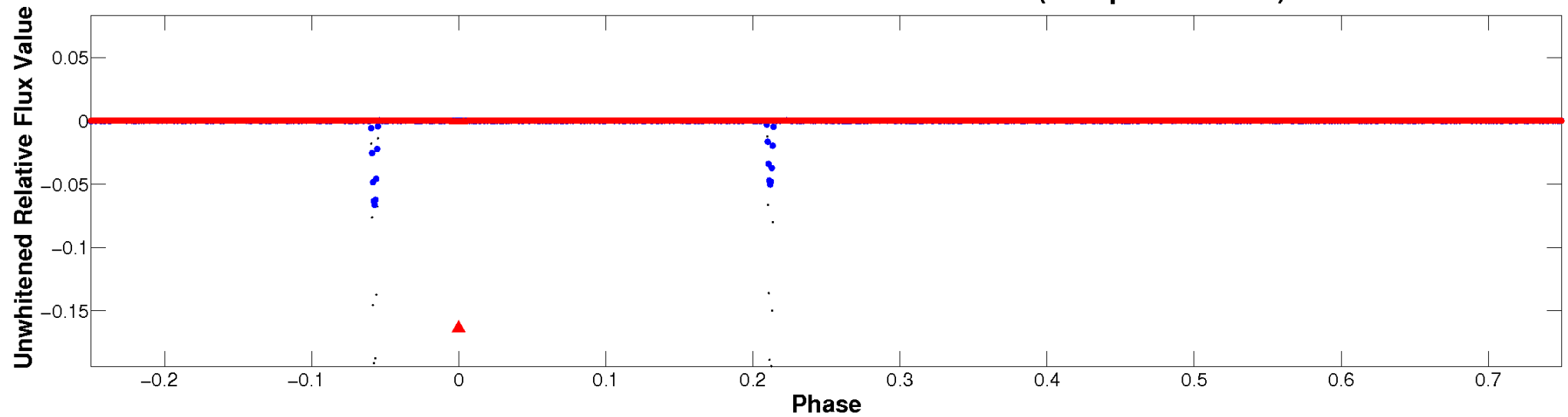
ALT Odd/Even

TCE 007204722-01

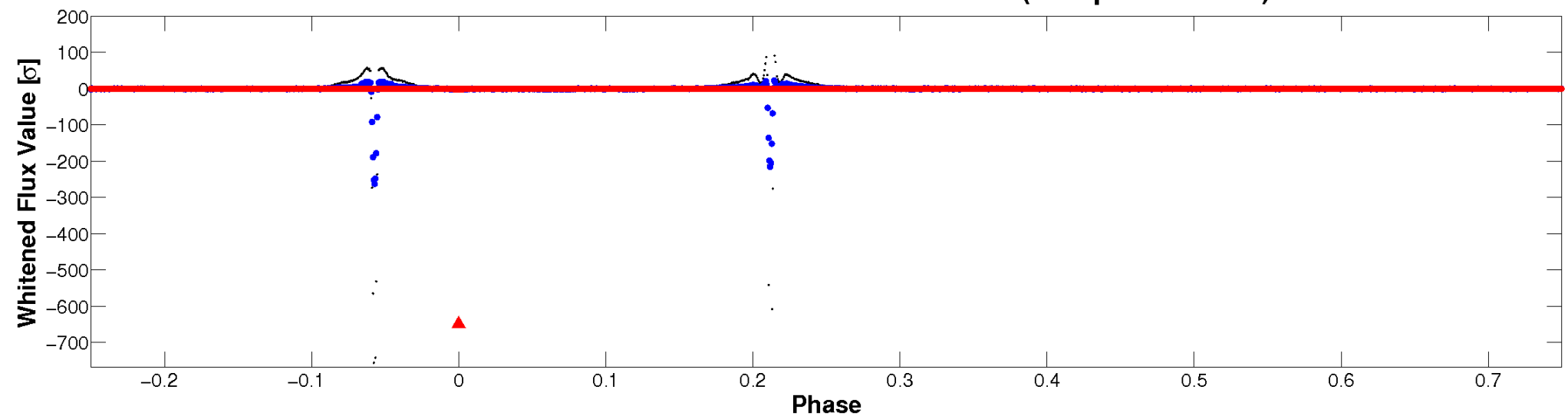


Non-Whitened Vs. Whitened Light Curve

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

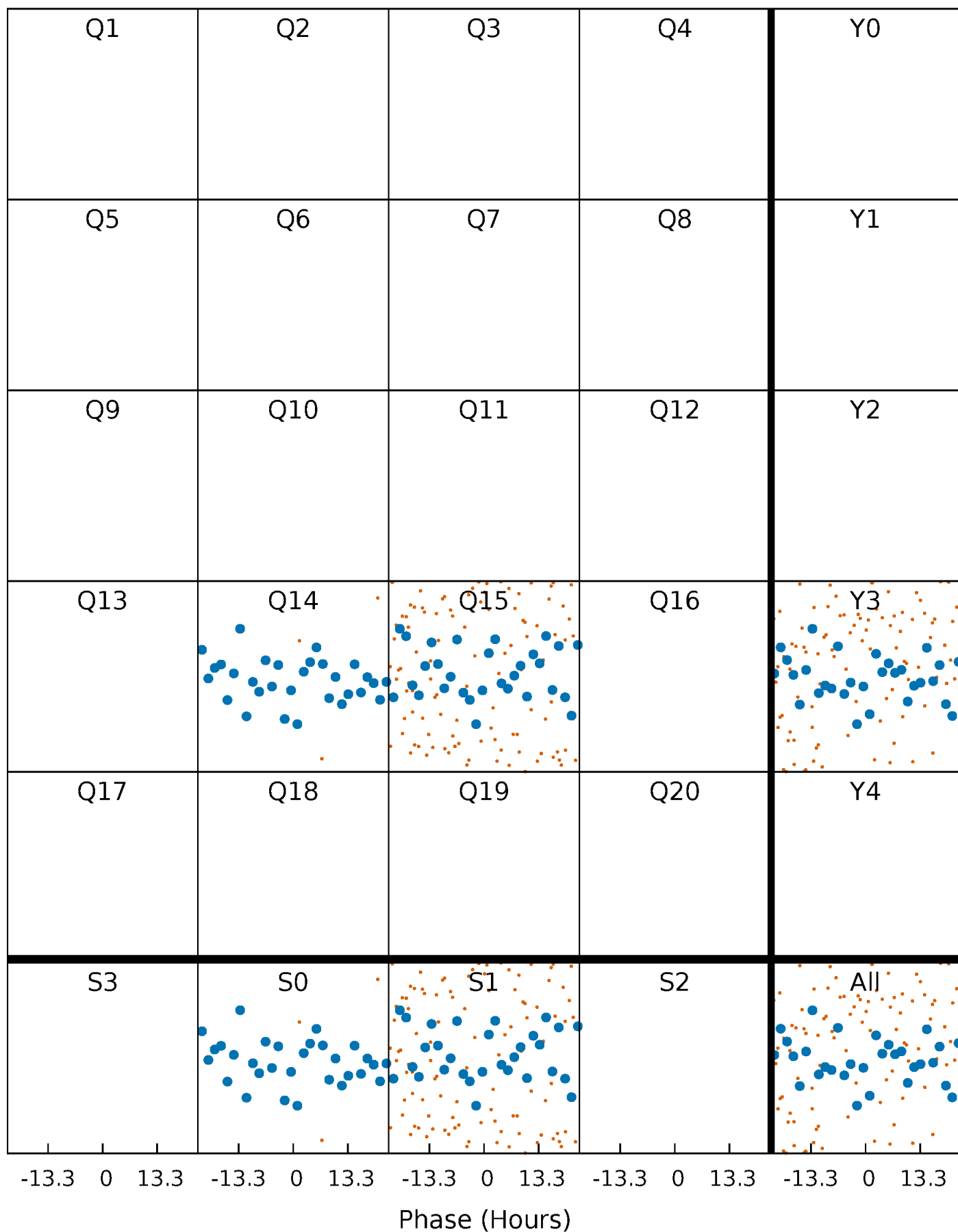


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



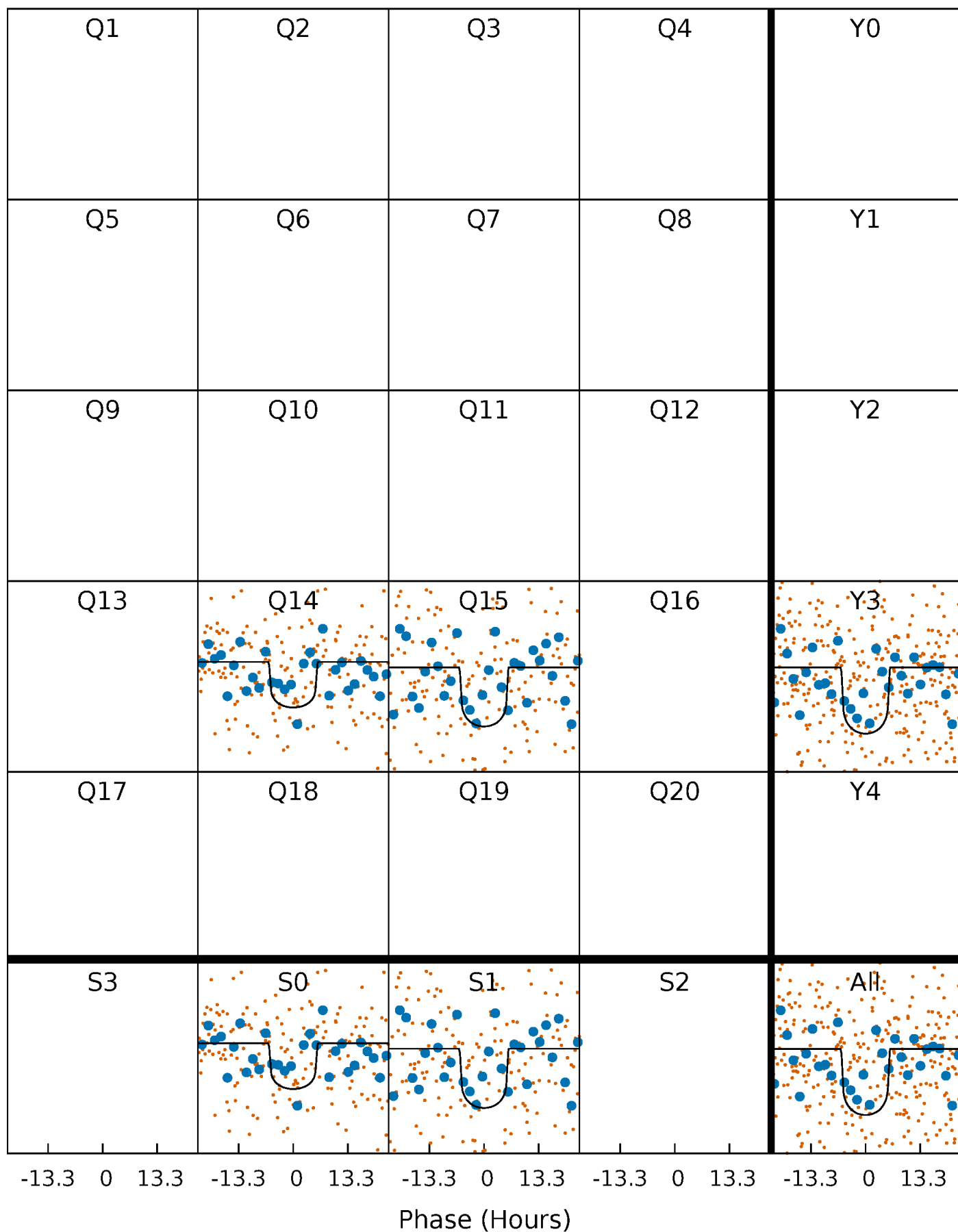
PDC Quarter-Phased Transit Curves

TCE 007204722-01 P= 36.469818 Days $T_0=161.357201$ (BKJD)



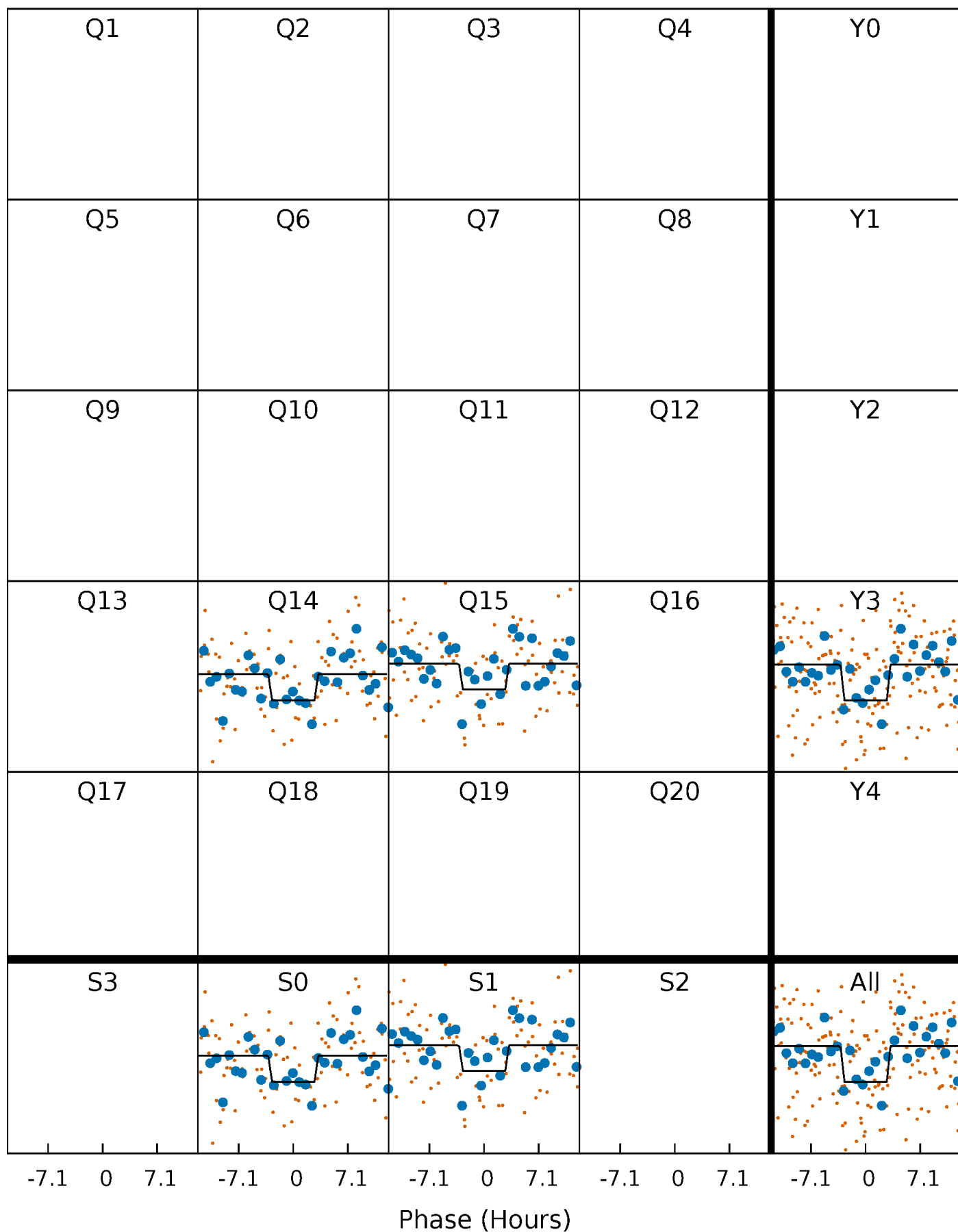
DV Quarter-Phased Transit Curves

TCE 007204722-01 P= 36.469818 Days $T_0=161.357201$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

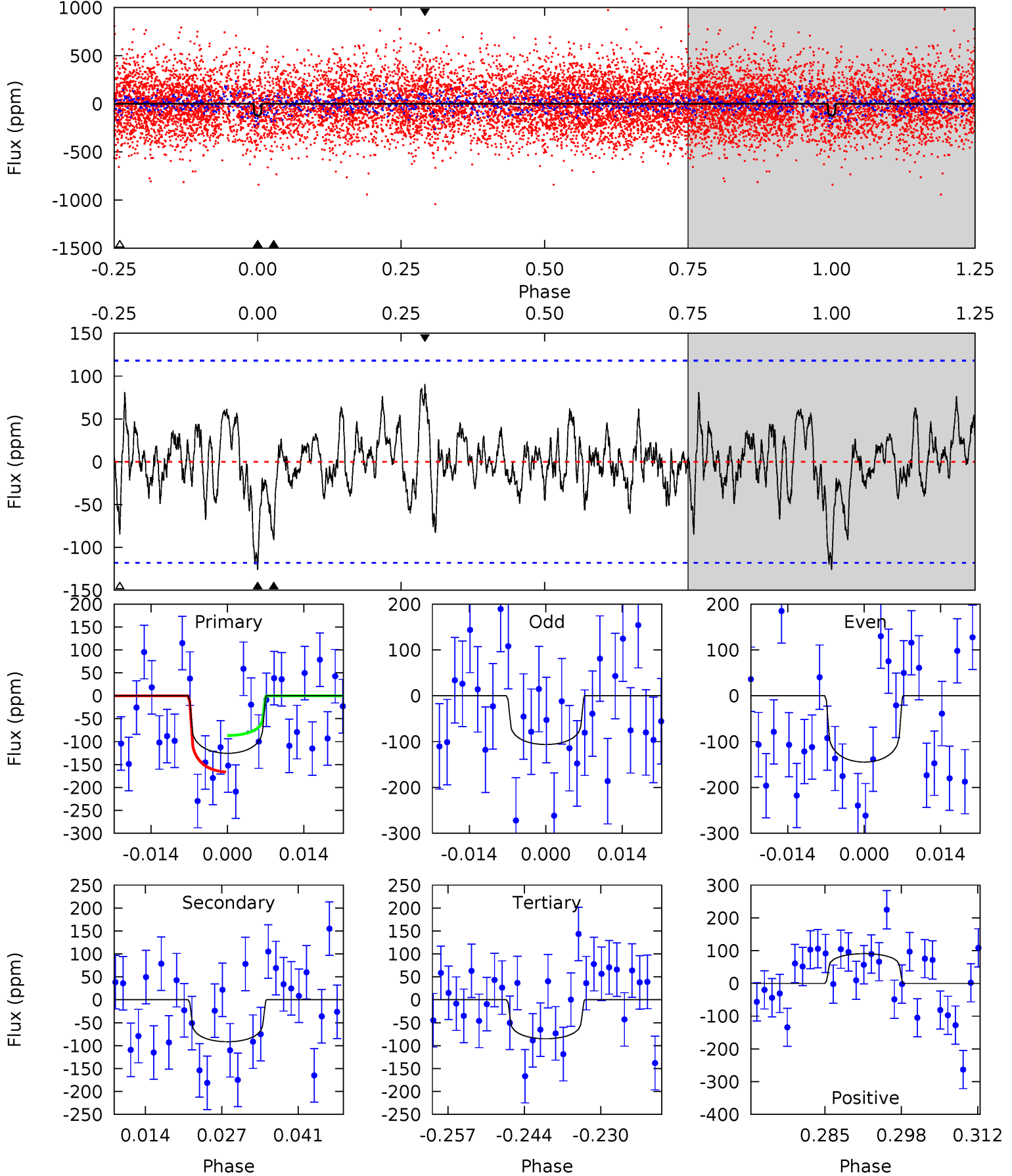
TCE 007204722-01 P= 36.449155 Days $T_0=161.990386$ (BKJD)



DV Model-Shift Uniqueness Test

007204722-01, P = 36.469818 Days, E = 161.357201 Days

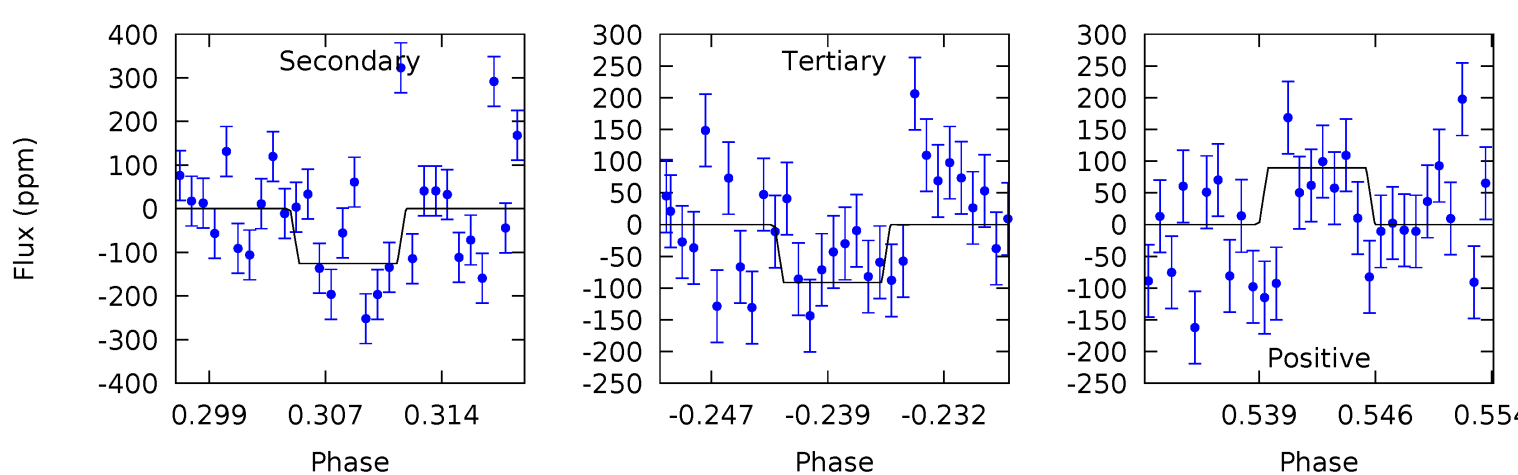
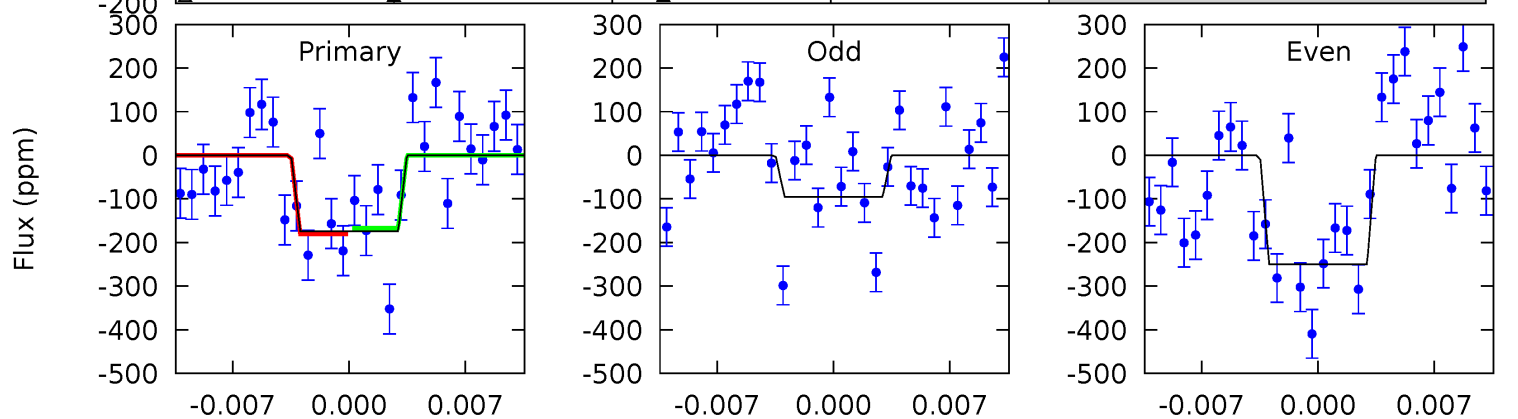
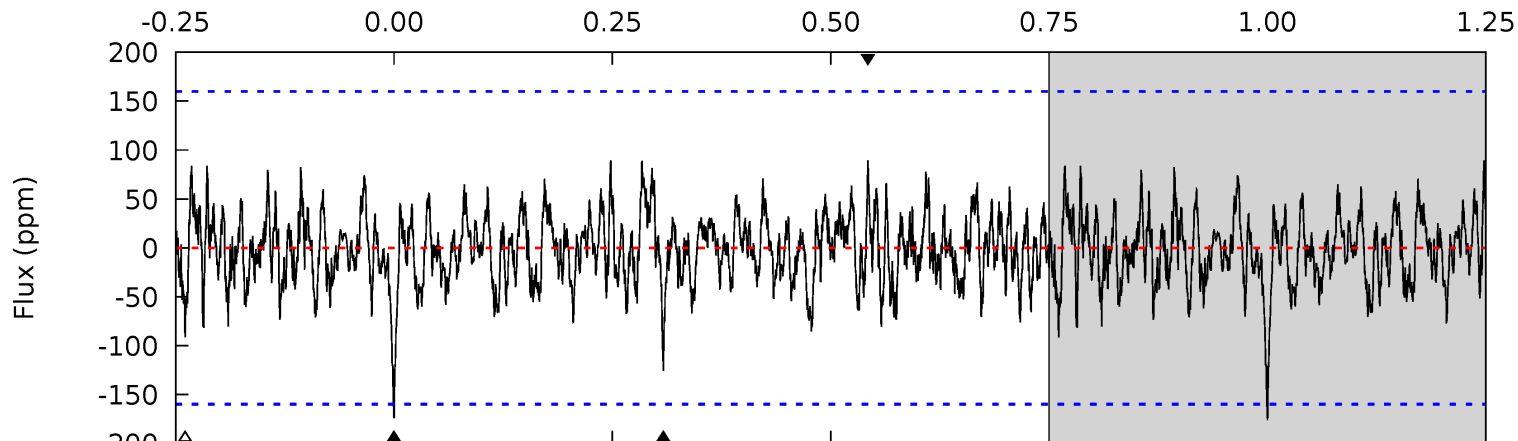
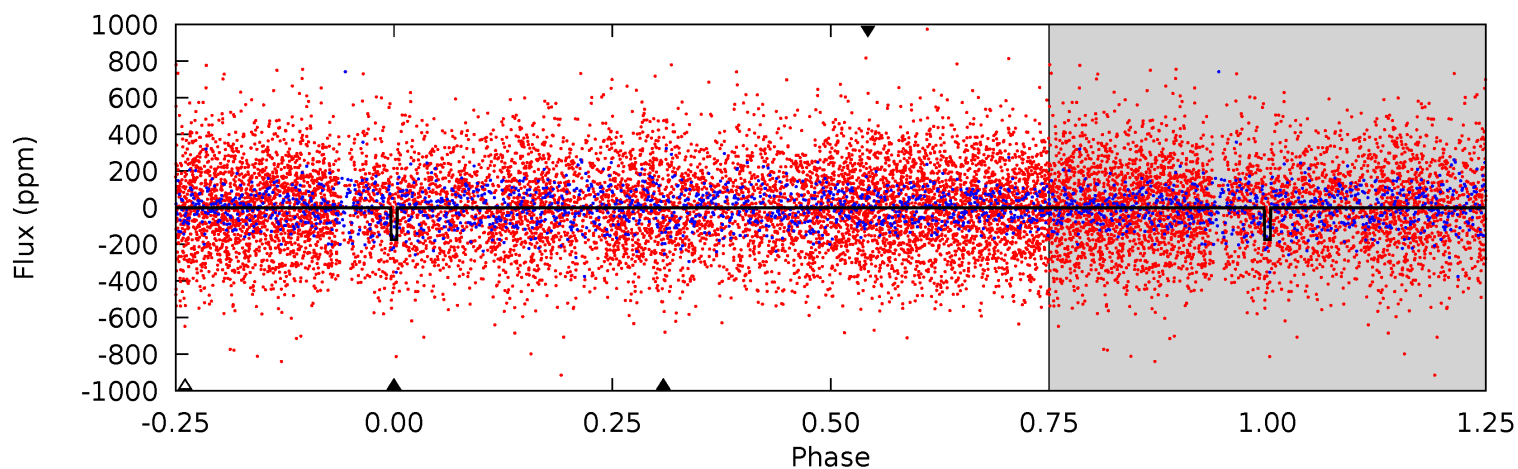
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.28	3.85	3.58	3.82	4.97	2.47	1.17	1.71	1.46	0.28	0.03	0.81	0.95	0.42	1.69



Alt Model-Shift Uniqueness Test

007204722-01, P = 36.449155 Days, E = 161.990386 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.53	3.99	2.90	2.84	5.08	2.67	1.02	2.63	2.69	1.09	1.15	2.46	1.01	0.34	0.23



Stellar Parameters For KIC 007204722

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6224^{+197}_{-241}	$4.275^{+0.195}_{-0.175}$	$-0.560^{+0.300}_{-0.300}$	$1.150^{+0.320}_{-0.262}$	$0.909^{+0.128}_{-0.093}$	$0.841^{+0.952}_{-0.423}$
	+3%/-4%	+5%/-4%	+54%/-54%	+28%/-23%	+14%/-10%	+113%/-50%
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 007204722-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-92 ± 24	$2.42^{+1.91}_{-1.56}$	902^{+64}_{-70}	4590^{+2740}_{-945}	378^{+2565}_{-266}
Alt.	-126 ± 31	$2.19^{+1.82}_{-1.42}$	897^{+67}_{-58}	5073^{+3660}_{-1119}	622^{+4160}_{-442}

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

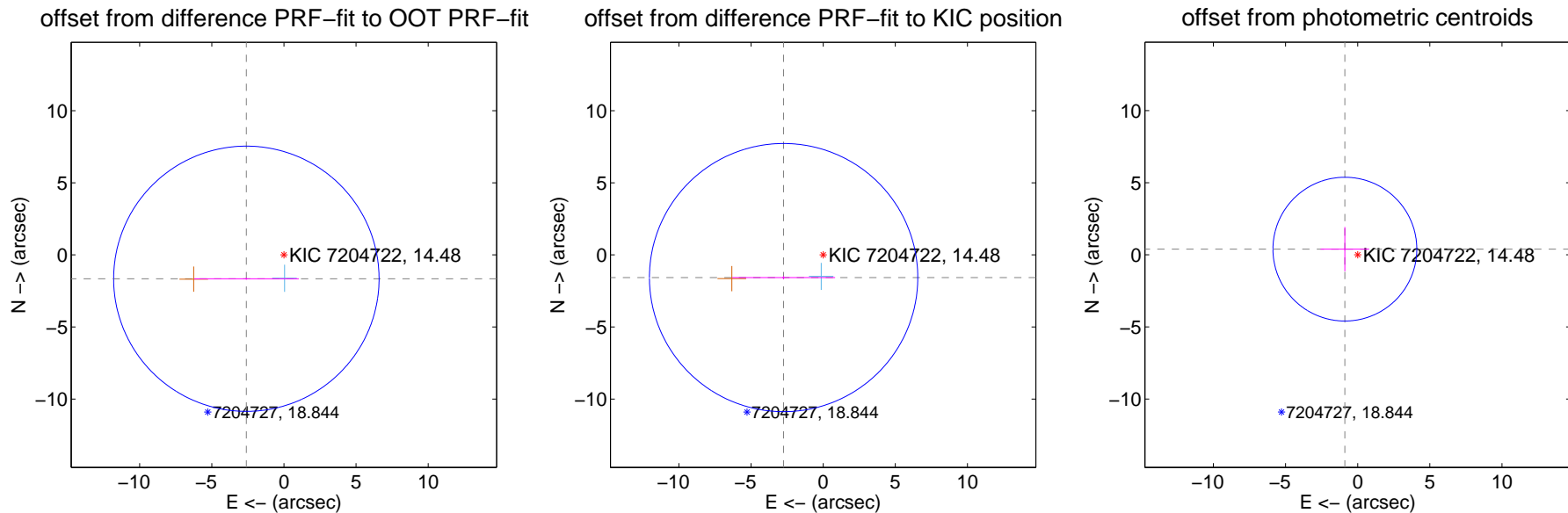
DV Centroid Data

Supplemental centroid analysis for 007204722-01. Kepler magnitude: 14.48. Transit SNR 6.97

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.086 ± 3.067	1.01	2.605 ± 3.633	-1.655 ± 0.076
PRF-fit source offset from KIC position	3.164 ± 3.101	1.02	2.744 ± 3.574	-1.574 ± 0.111
photometric centroid source offset	0.97 ± 1.66	0.58	0.89 ± 1.69	0.39 ± 1.54



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.

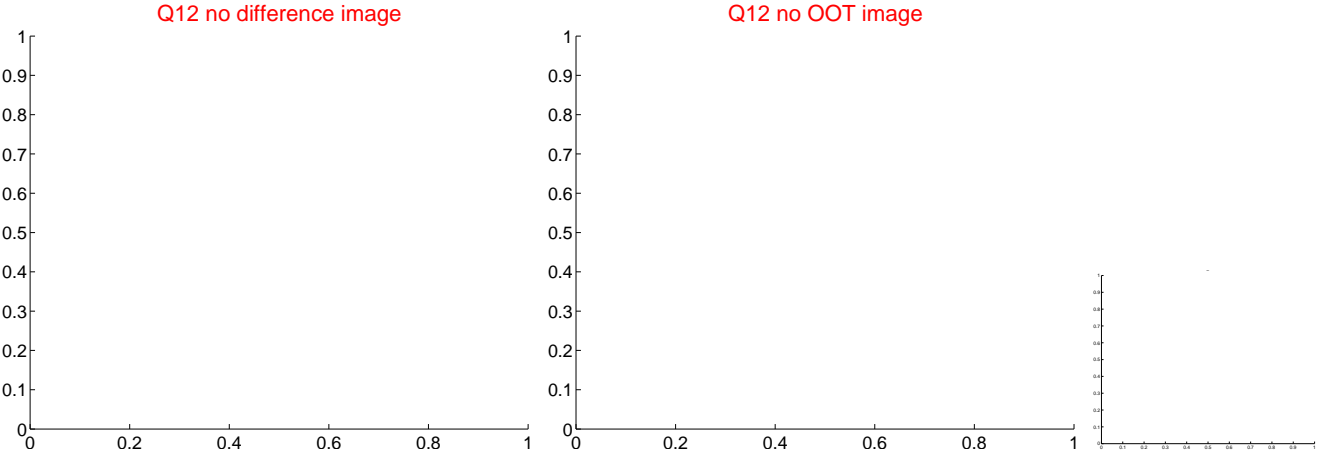
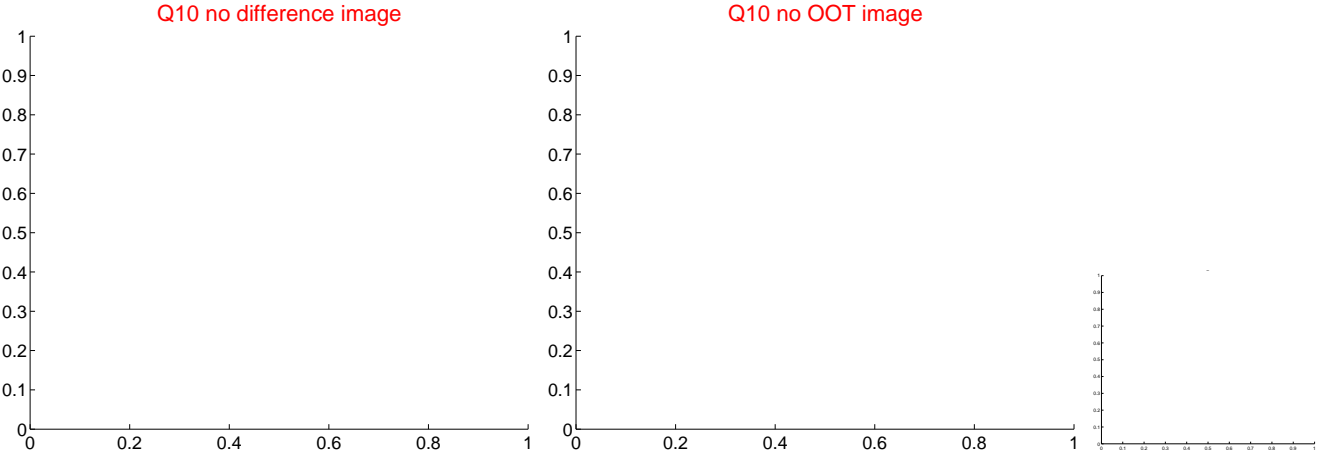
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



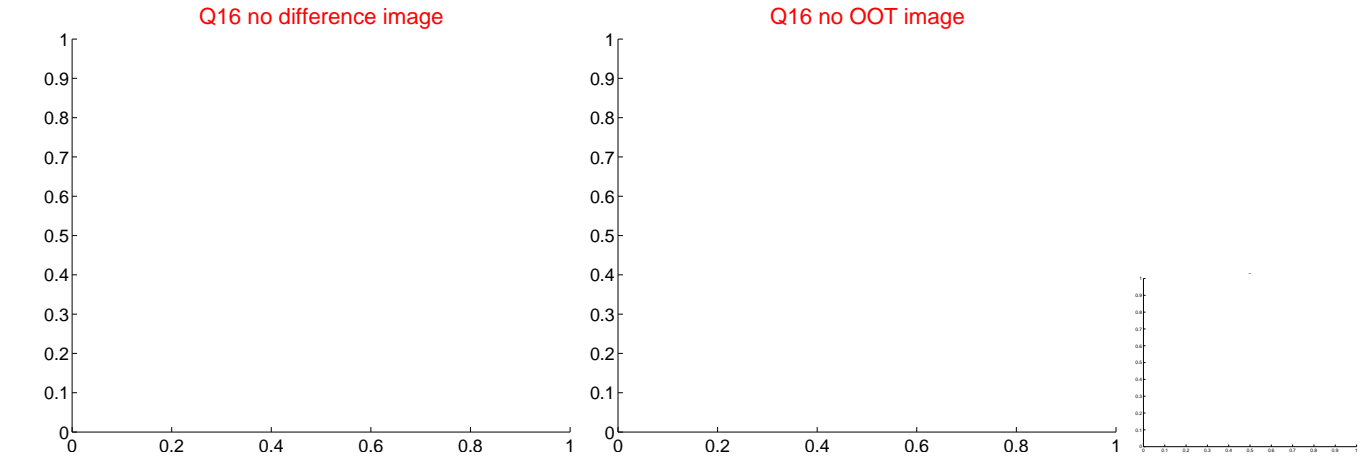
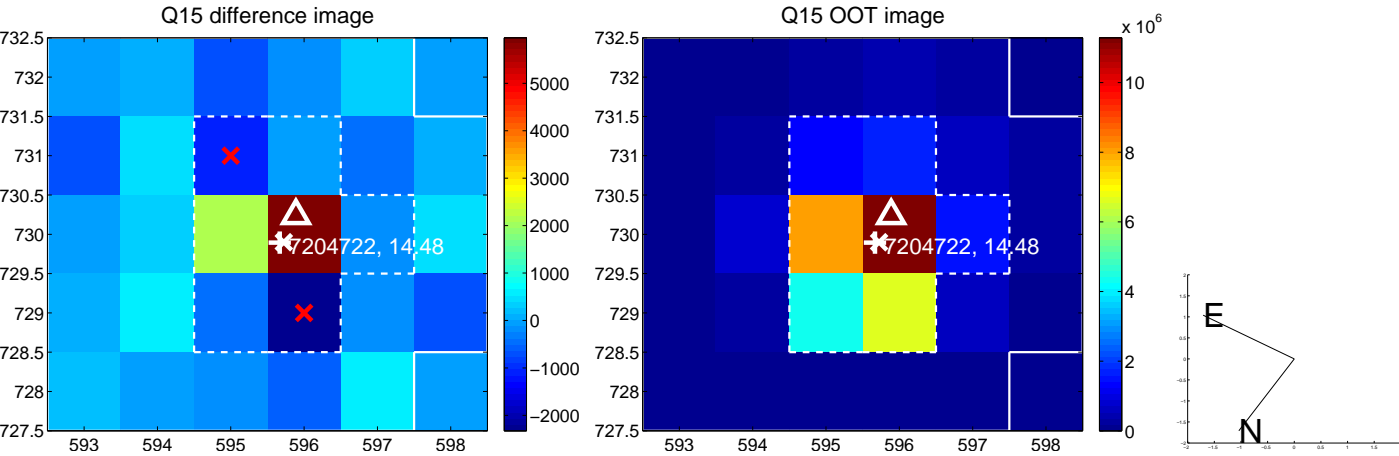
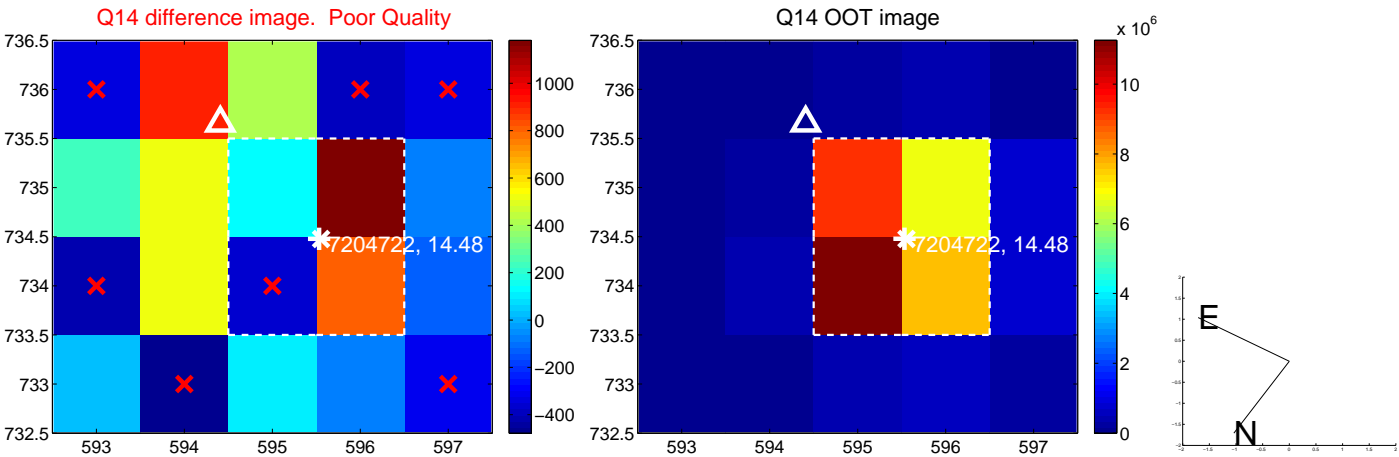
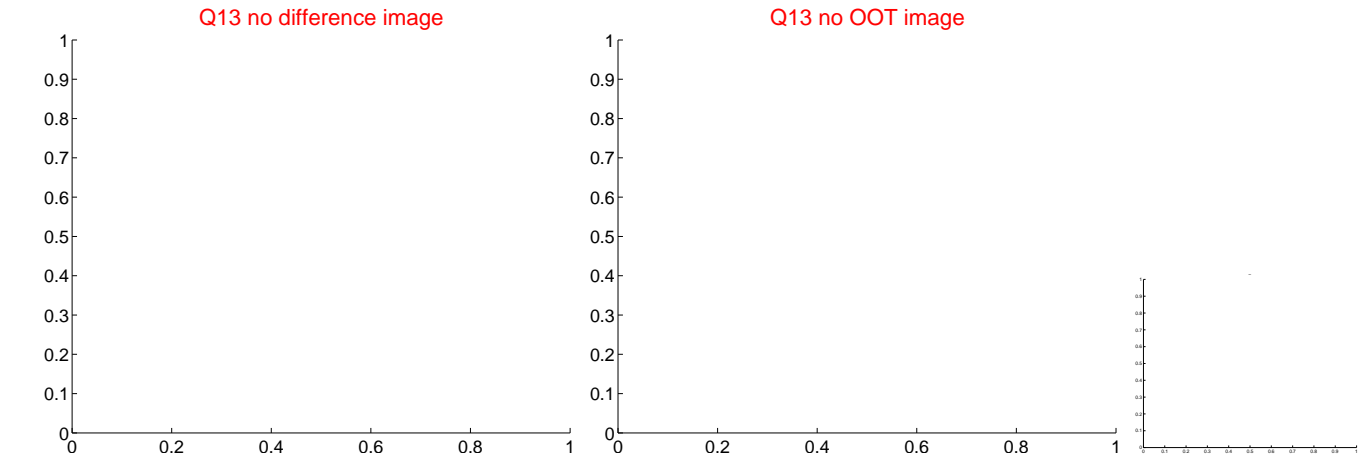
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



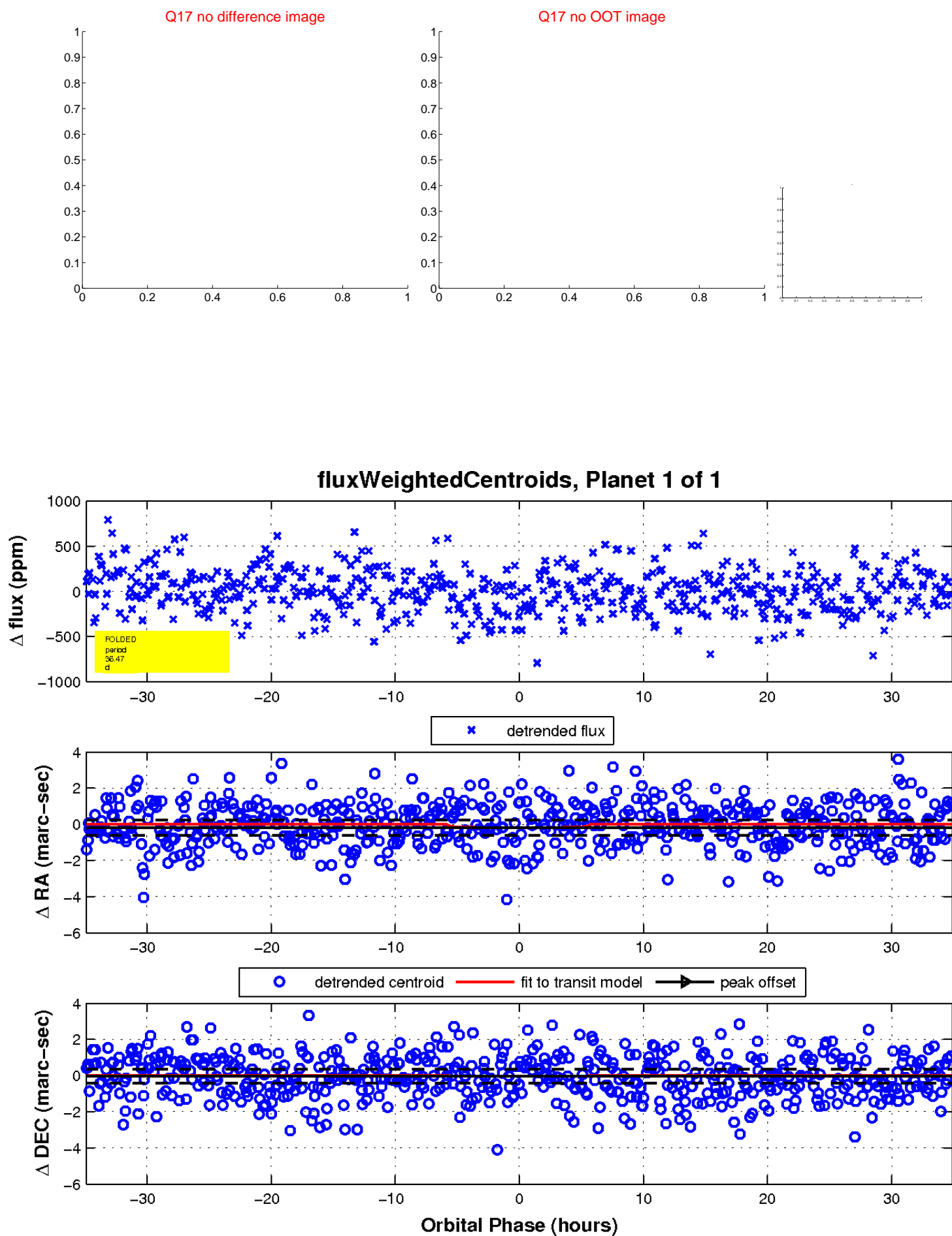
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UKIRT Image

Declination

