

KIC 010275974

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})
010275974-01	OBS	No	370.906895	500.732856	1529.8	15.421	7.9	7.7	0.86	5591	4.06	0.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010275974-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

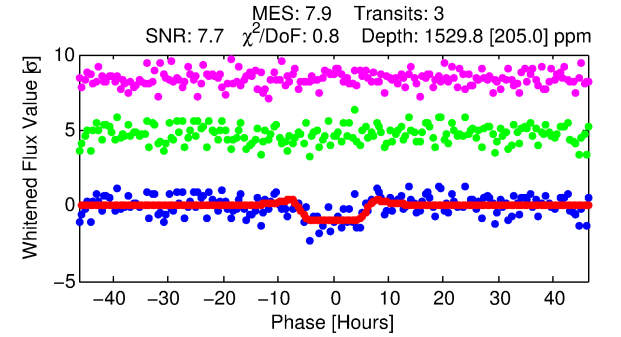
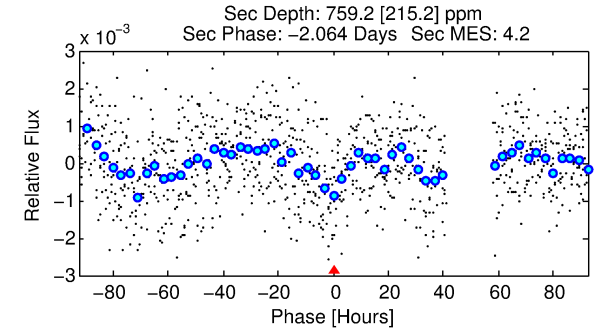
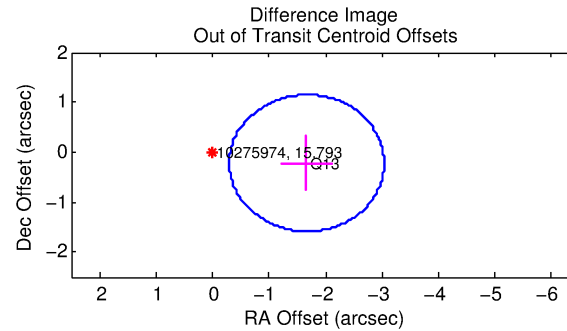
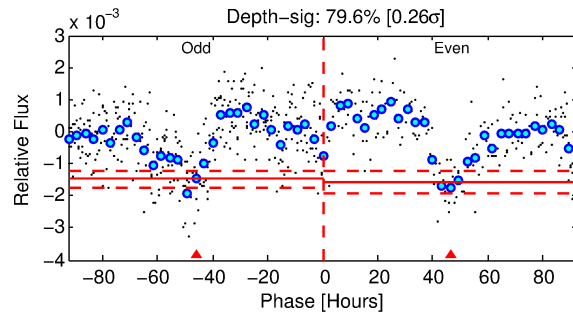
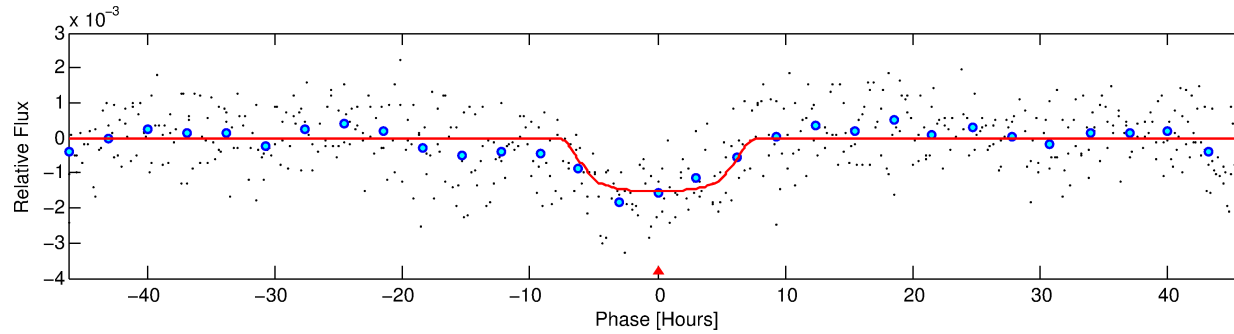
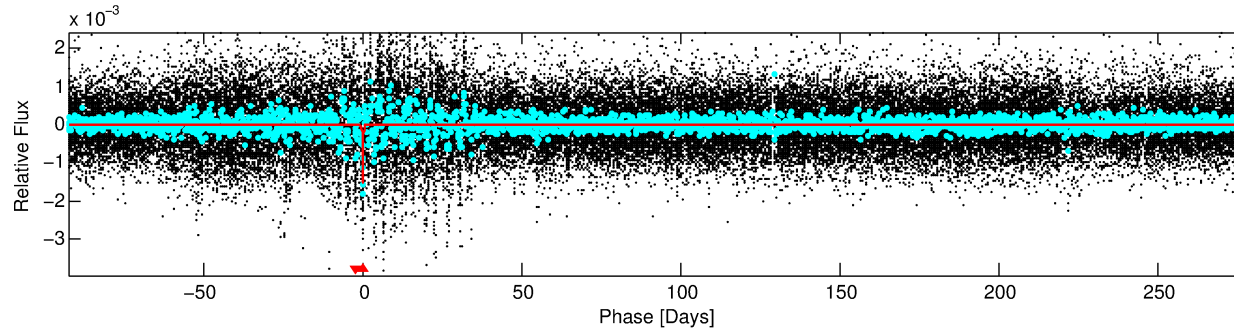
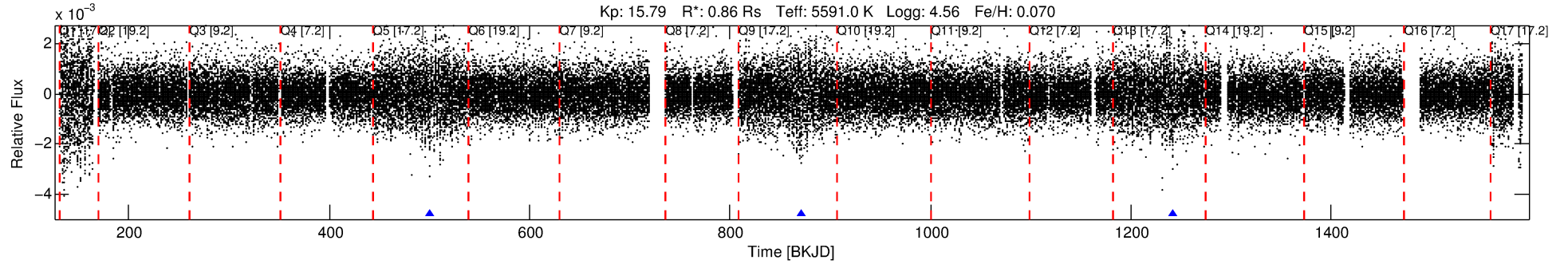
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010275974-01

No Significant Match Found

DV One-Page Summary

KIC: 10275974 Candidate: 1 of 1 Period: 370.907 d



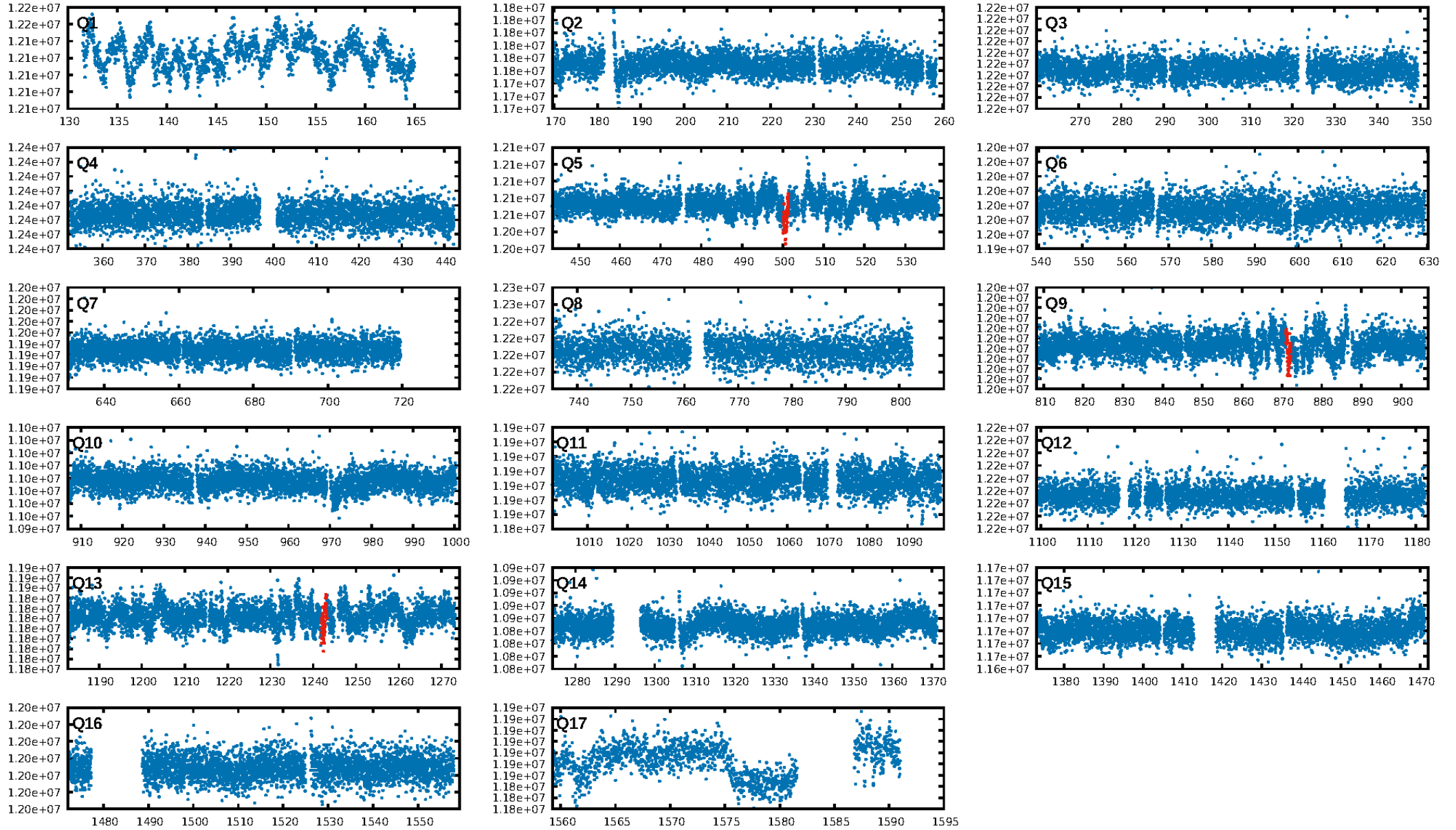
DV Fit Results:

Period = 370.90690 [0.01865] d
Epoch = 500.7329 [0.0245] BKJD
Rp/R* = 0.0432 [0.0041]
a/R* = 95.01 [23.07]
b = 0.91 [0.05]
Seff = 0.64 [0.19]
Teq = 228 [17] K
Rp = 4.06 [0.94] Re
a = 1.0028 [0.1835] AU
Ag = 25526.03 [11184.35] [2.28 σ]
Teffp = 4464 [405] K [10.45 σ]

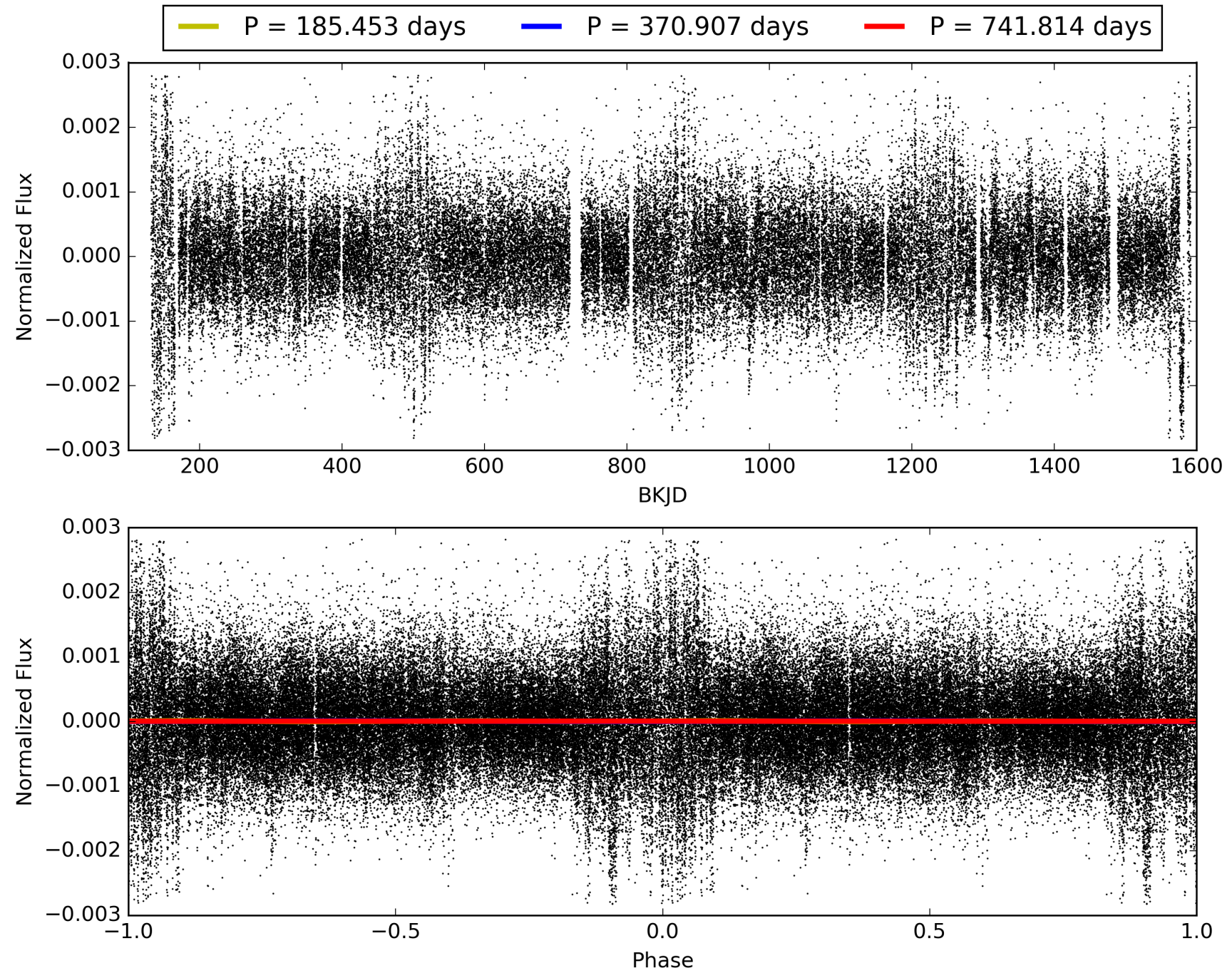
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 86.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.21e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.7434
Centroid-sig: 0.0%
Centroid-so: 8.368 arcsec [3.77 σ]
OotOffset-rm: 1.681 arcsec [3.69 σ]
KicOffset-rm: 1.691 arcsec [3.71 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 010275974-01, PDC Light Curves

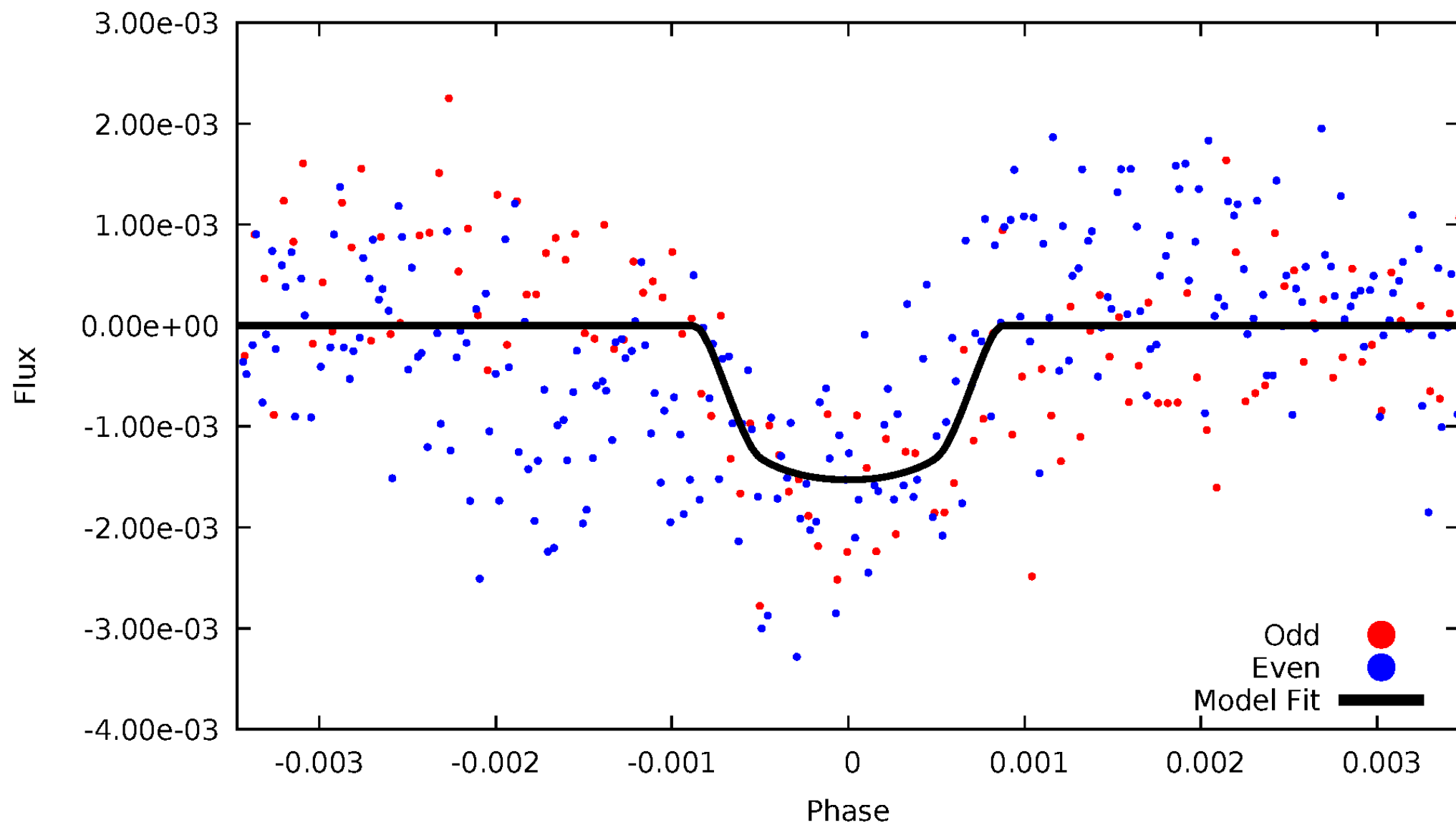


TCE 010275974-01



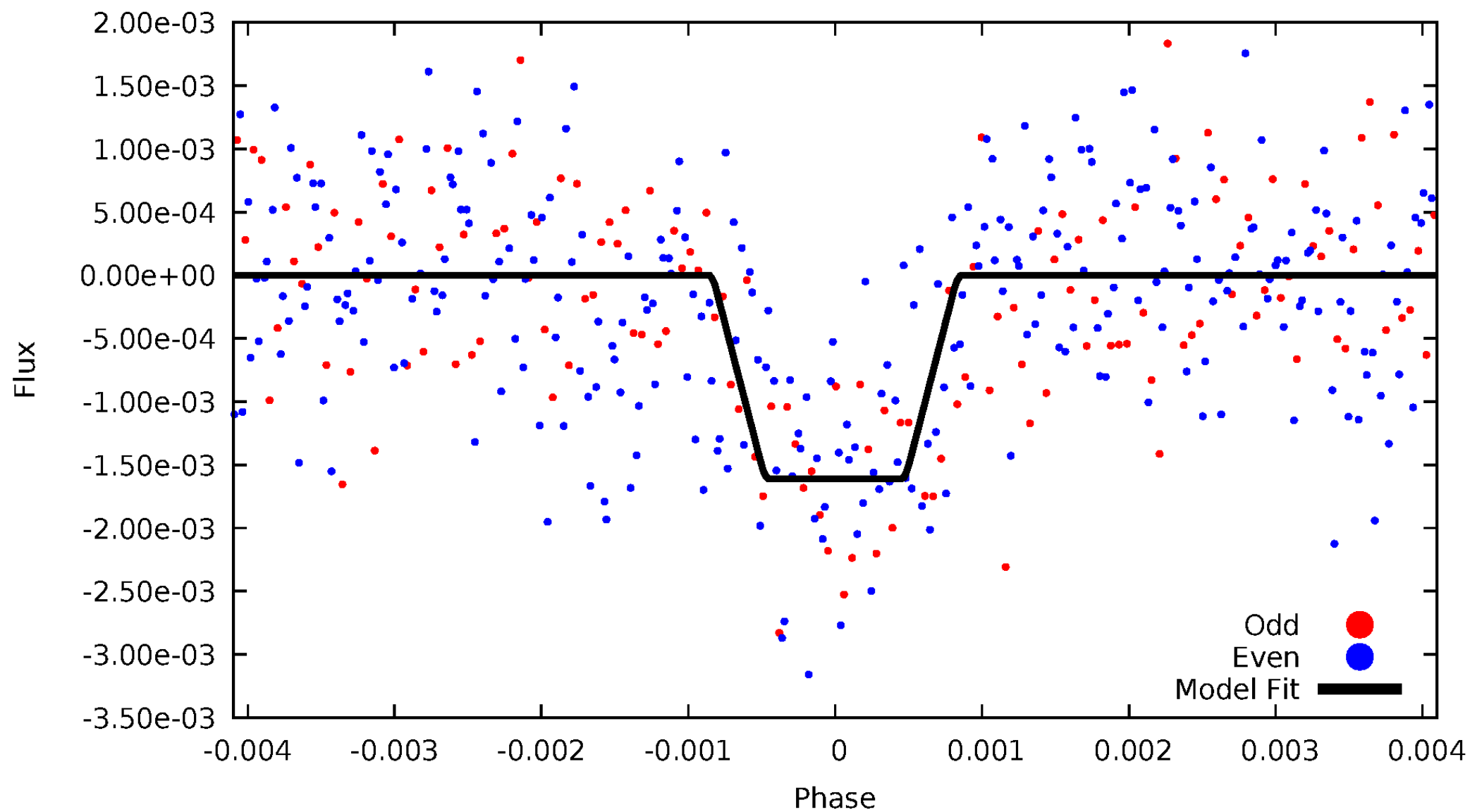
DV Odd/Even

TCE 010275974-01



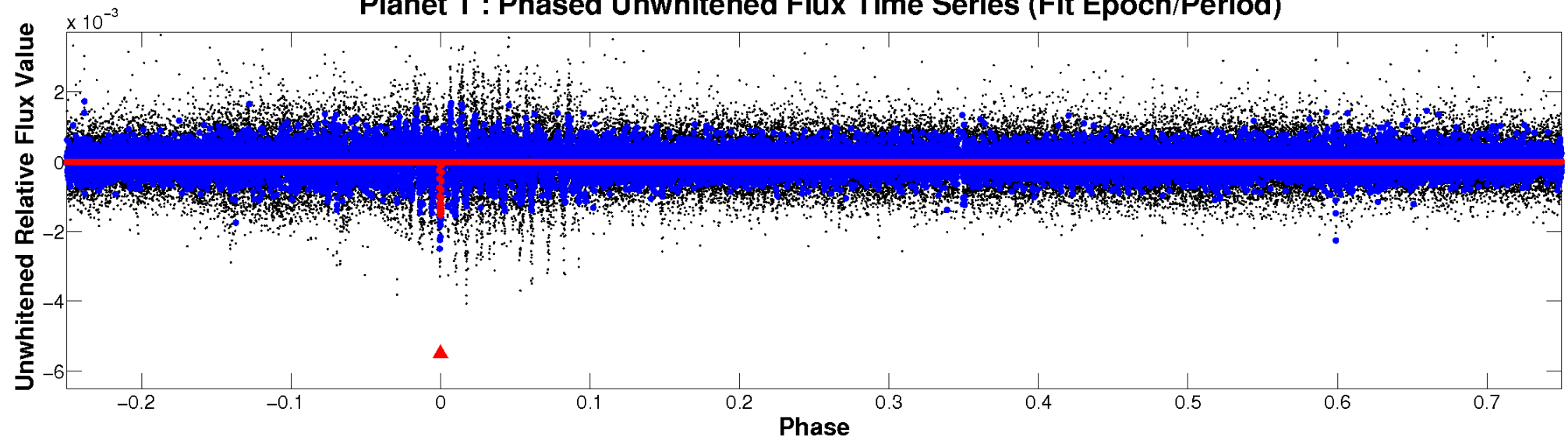
ALT Odd/Even

TCE 010275974-01

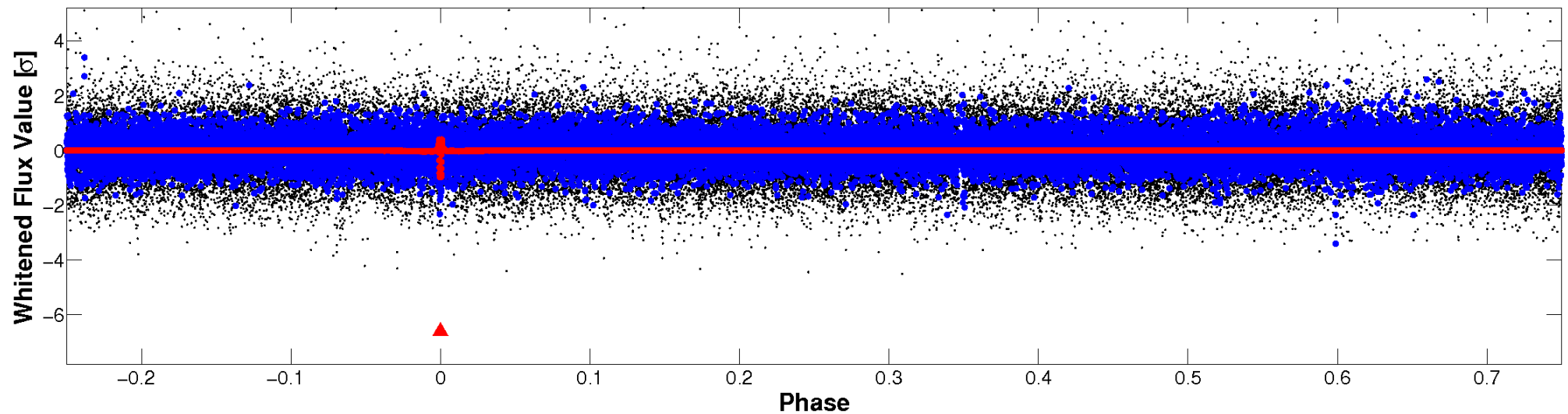


Non-Whitened Vs. Whitened Light Curve

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

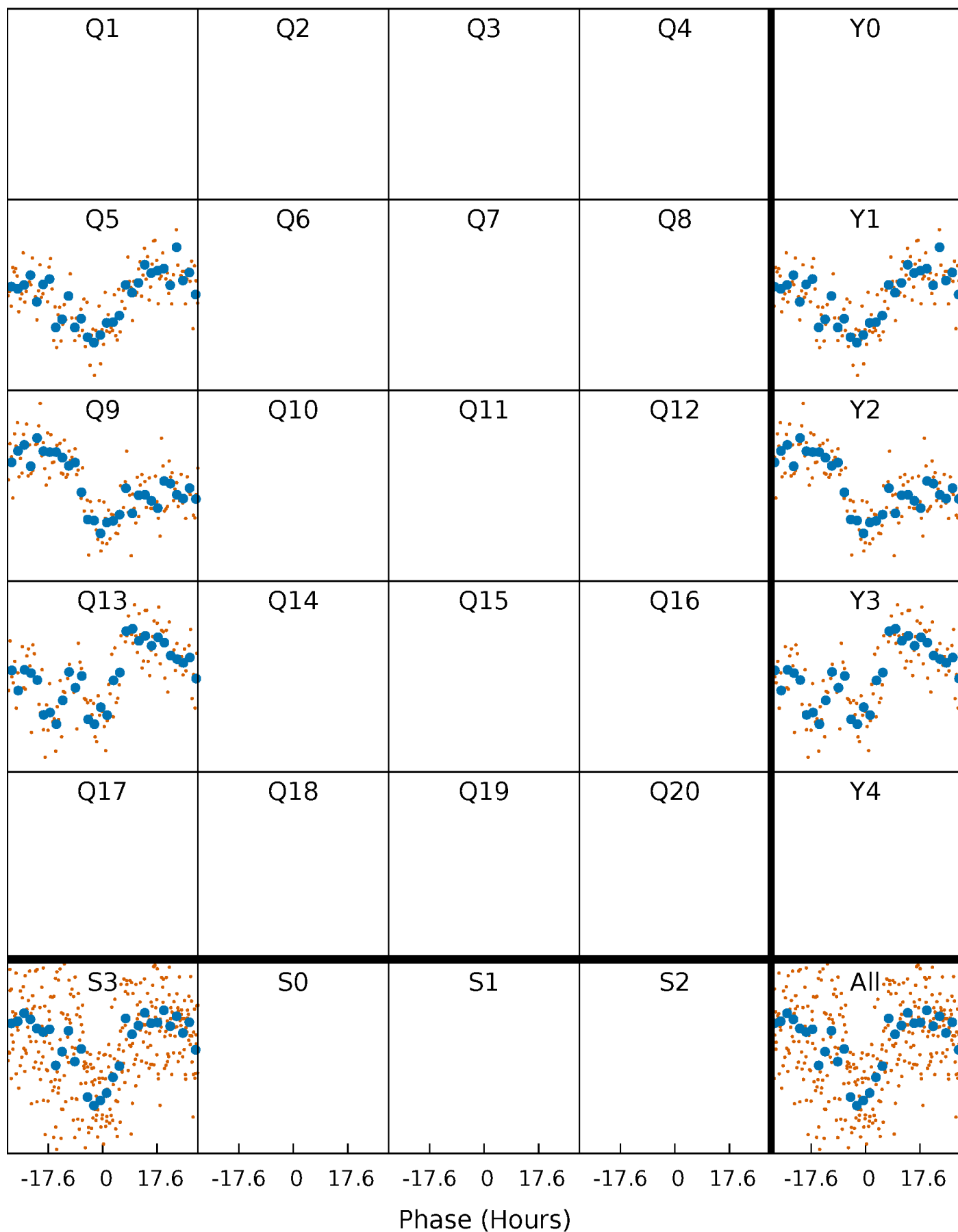


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



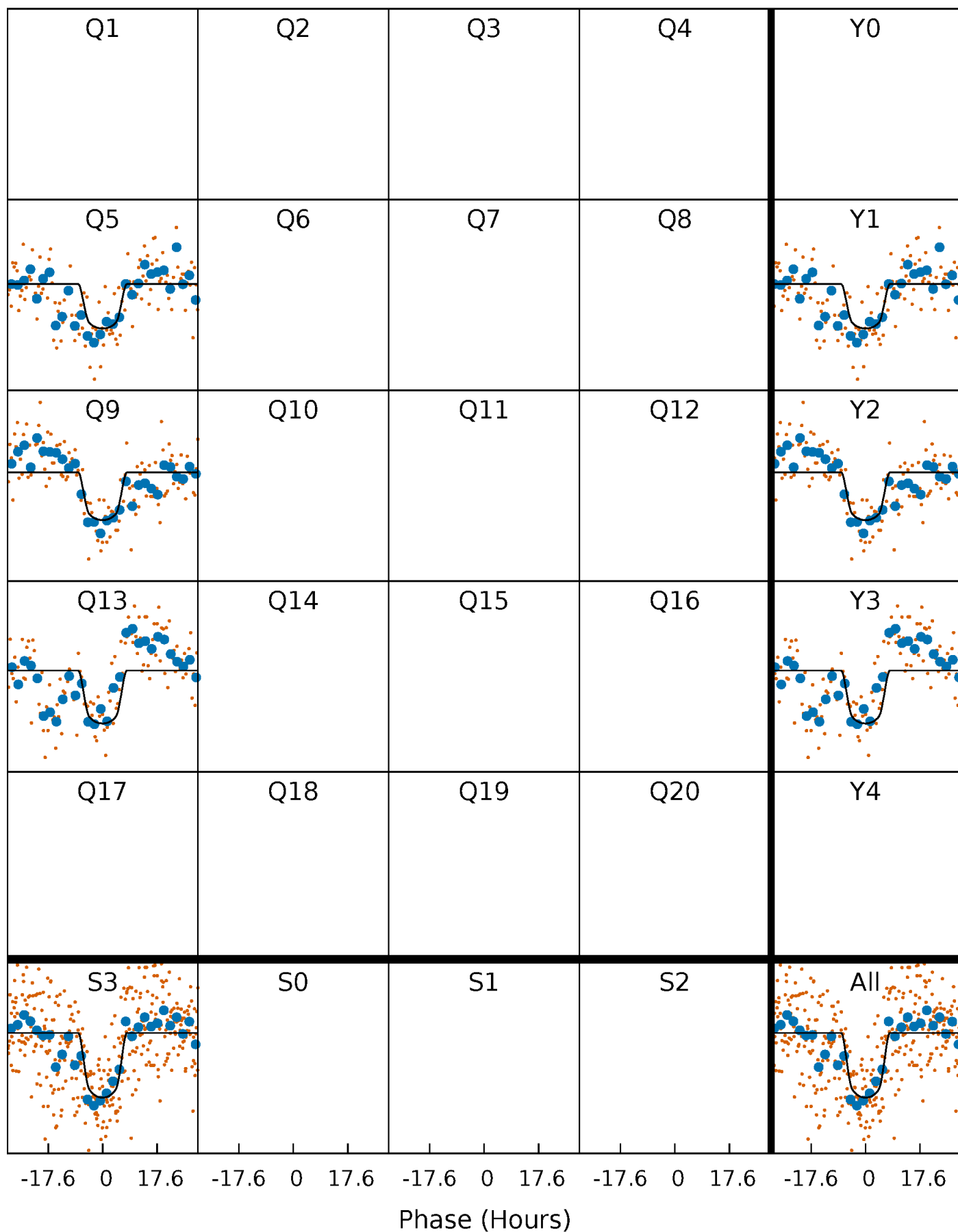
PDC Quarter-Phased Transit Curves

TCE 010275974-01 P=370.906895 Days $T_0=500.732856$ (BKJD)



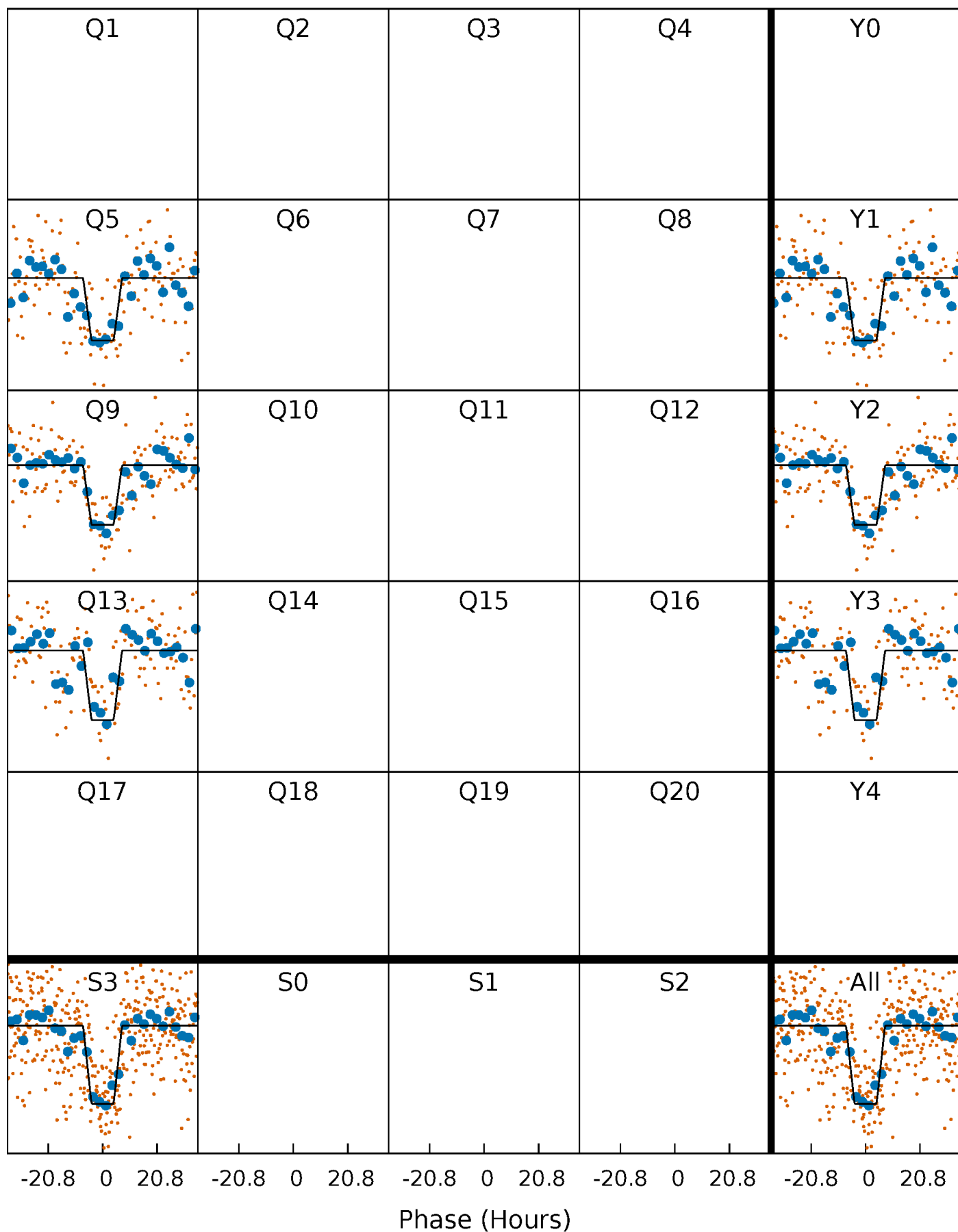
DV Quarter-Phased Transit Curves

TCE 010275974-01 $P=370.906895$ Days $T_0=500.732856$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

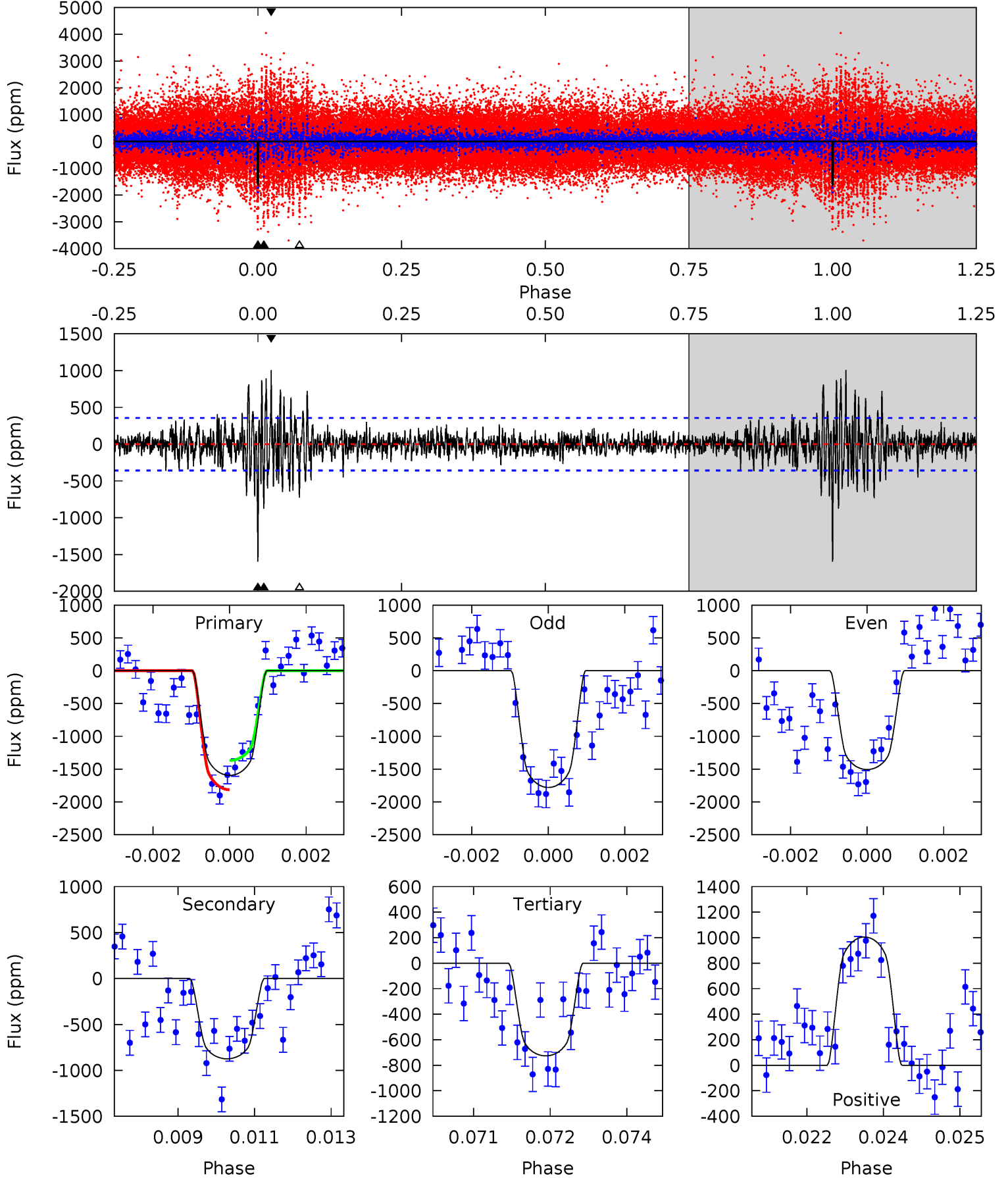
TCE 010275974-01 P=370.903170 Days $T_0=500.691407$ (BKJD)



DV Model-Shift Uniqueness Test

010275974-01, P = 370.906895 Days, E = 129.825961 Days

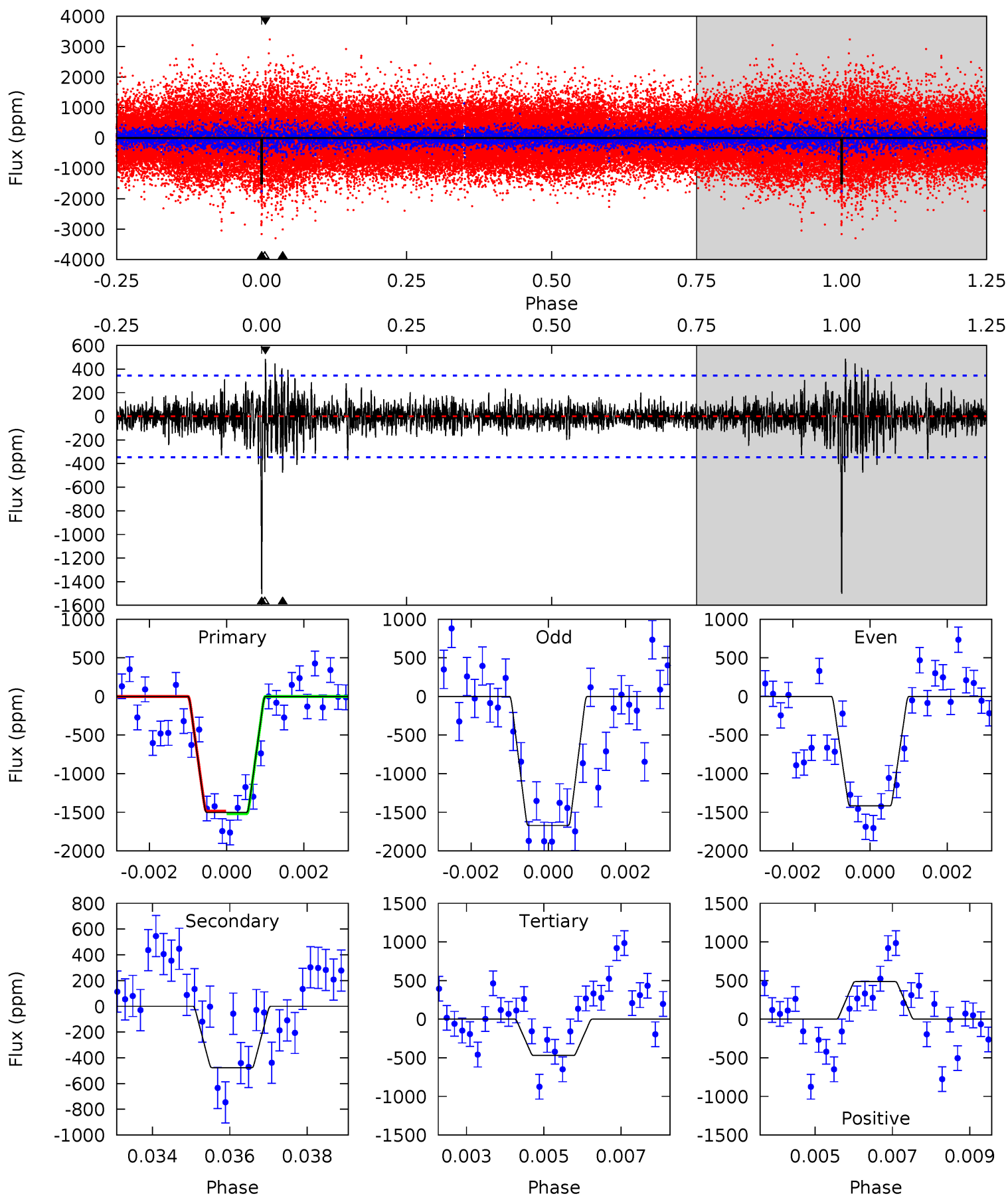
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.9	13.1	10.9	15.0	5.35	3.12	2.28	13.0	8.83	2.21	-1.95	1.90	0.91	0.39	3.34



Alt Model-Shift Uniqueness Test

010275974-01, $P = 370.903170$ Days, $E = 129.788237$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.2	7.38	7.28	7.52	5.35	3.13	1.32	16.0	15.7	0.10	-0.14	1.83	0.94	0.24	0.26



Stellar Parameters For KIC 010275974

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5591^{+169}_{-169}	$4.559^{+0.036}_{-0.153}$	$0.070^{+0.200}_{-0.350}$	$0.860^{+0.181}_{-0.078}$	$0.977^{+0.076}_{-0.123}$	$2.163^{+0.420}_{-0.891}$
	+3%/-3%	+1%/-3%	+286%/-500%	+21%/-9%	+8%/-13%	+19%/-41%
Source	PHO1	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 010275974-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-874 ± 67	$4.21^{+0.58}_{-0.51}$	326^{+18}_{-15}	4731^{+237}_{-221}	26563^{+7739}_{-6090}
Alt.	-476 ± 65	$3.88^{+0.63}_{-0.48}$	326^{+17}_{-14}	4331^{+241}_{-220}	16726^{+5997}_{-4119}

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

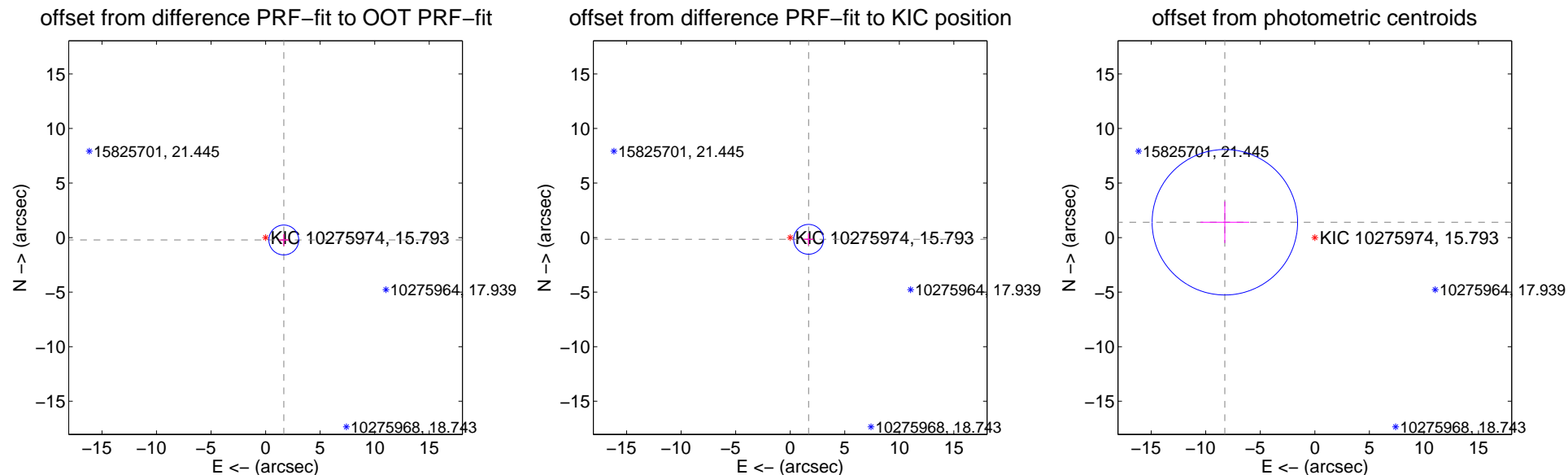
DV Centroid Data

Supplemental centroid analysis for 010275974-01. Kepler magnitude: 15.79. Transit SNR 7.71

There are 0 quarters with good PRF difference image offsets

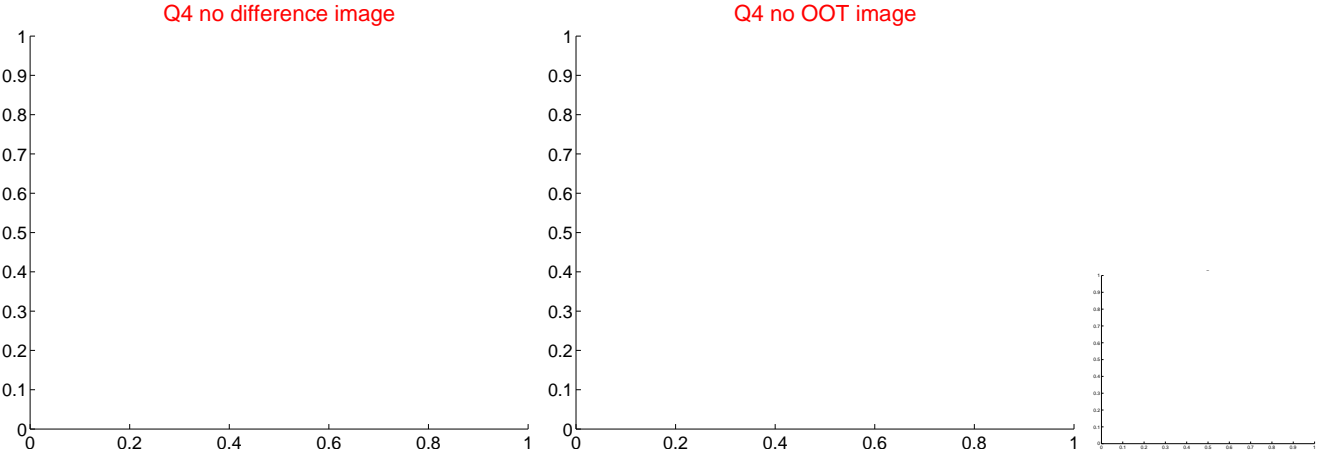
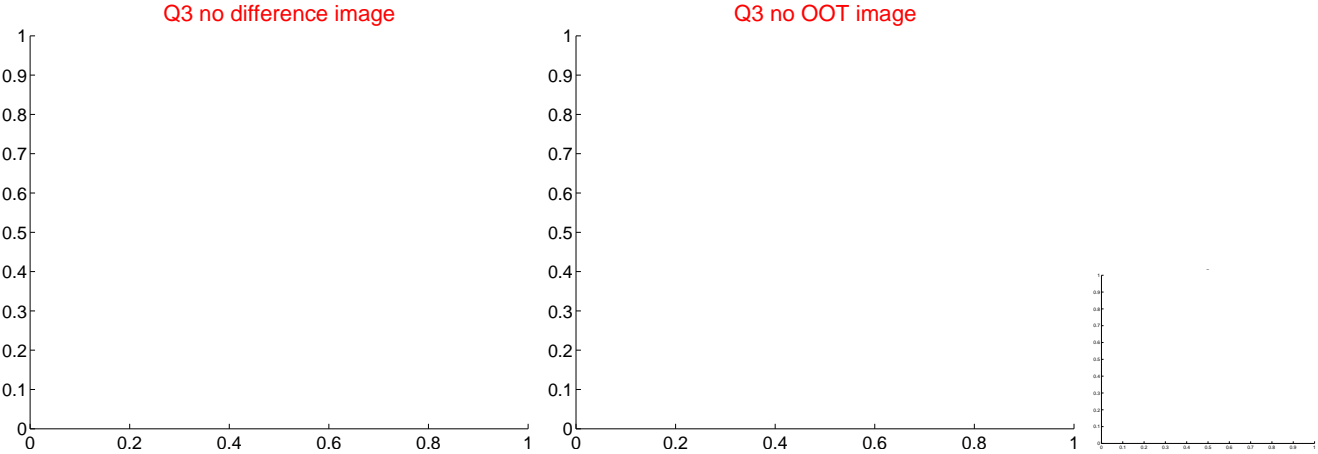
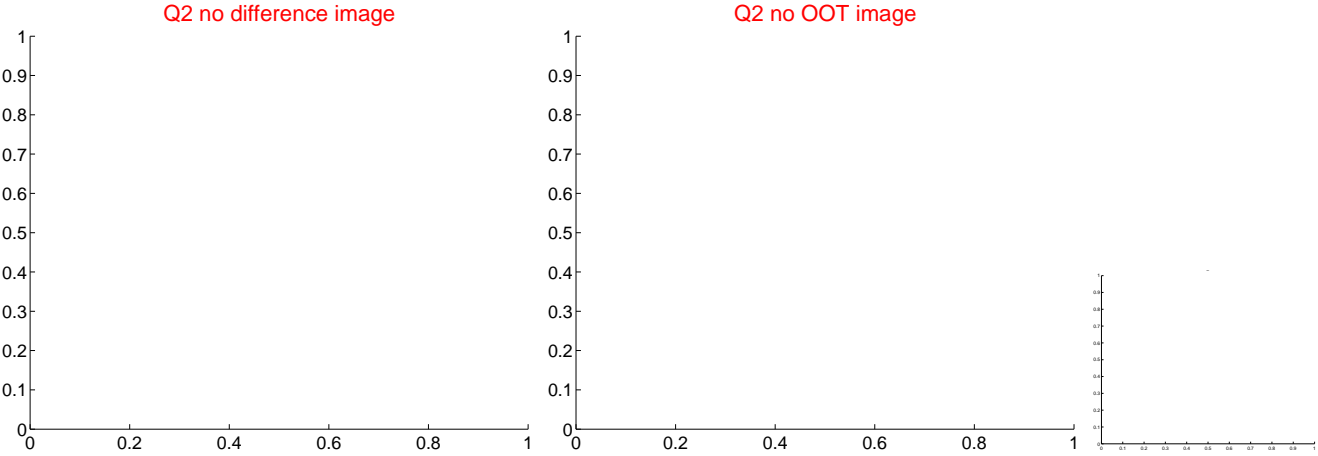
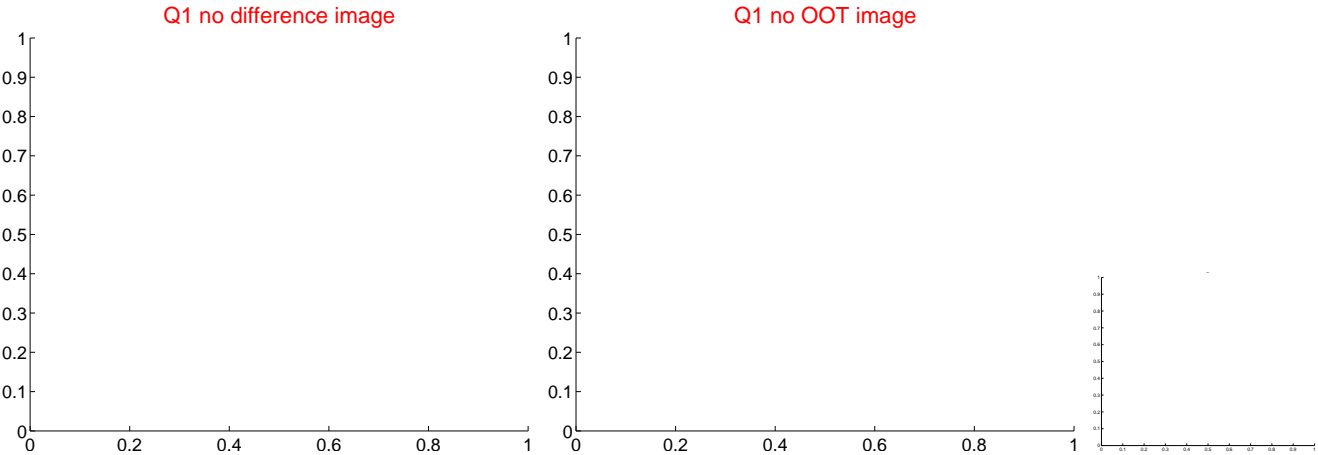
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.681 ± 0.456	3.69	-1.667 ± 0.454	-0.219 ± 0.547
PRF-fit source offset from KIC position	1.691 ± 0.455	3.71	-1.684 ± 0.454	-0.160 ± 0.547
photometric centroid source offset	8.37 ± 2.22	3.77	8.25 ± 2.23	1.41 ± 1.90

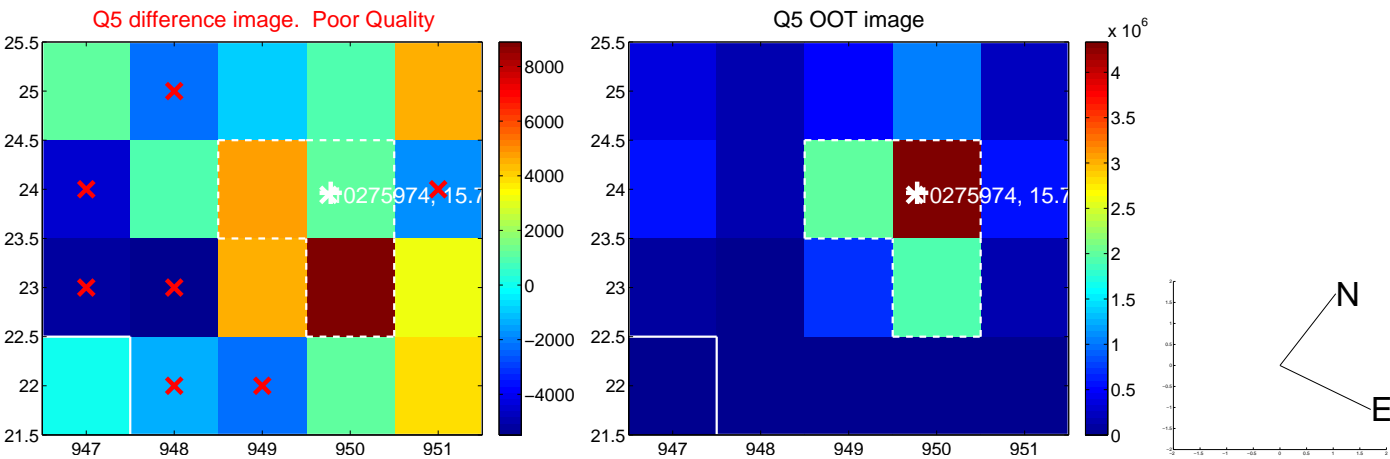


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

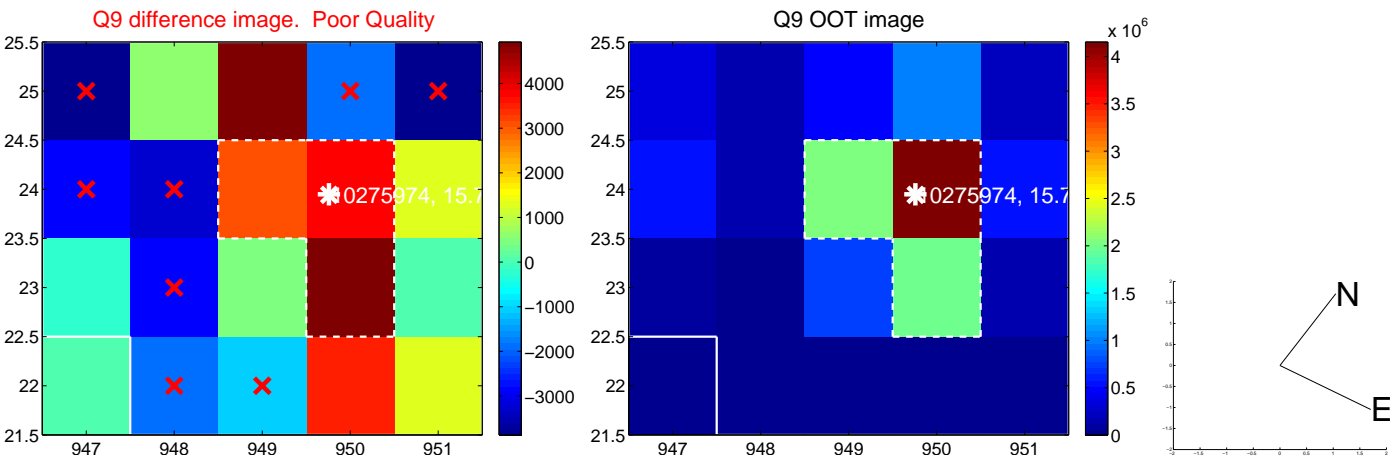
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



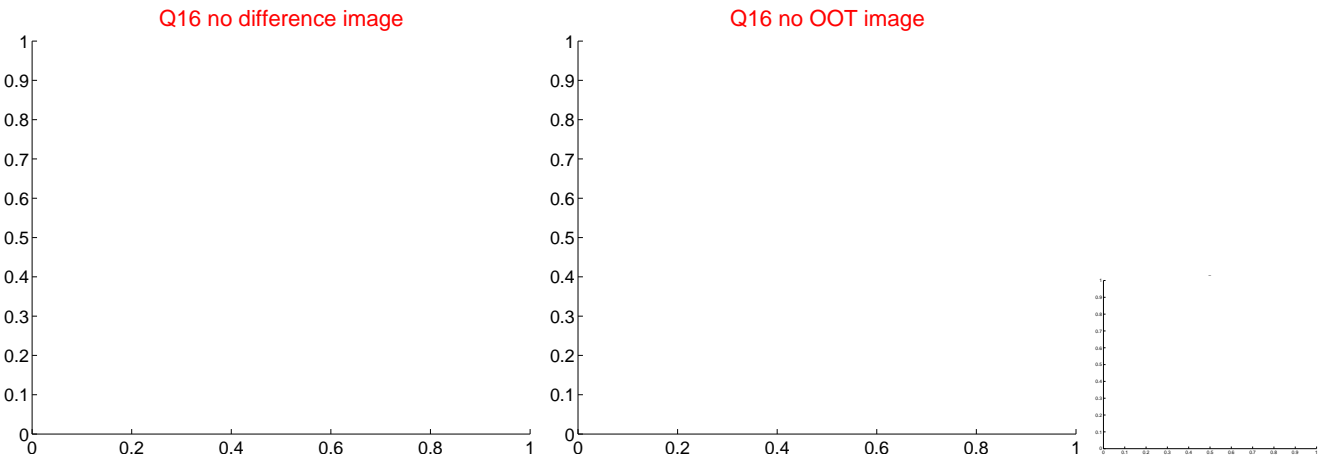
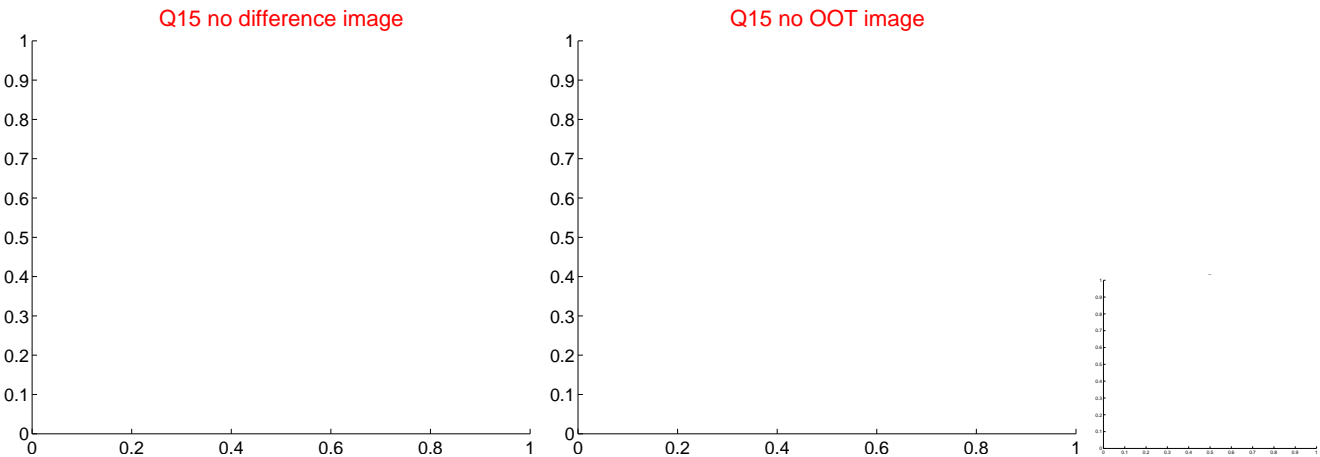
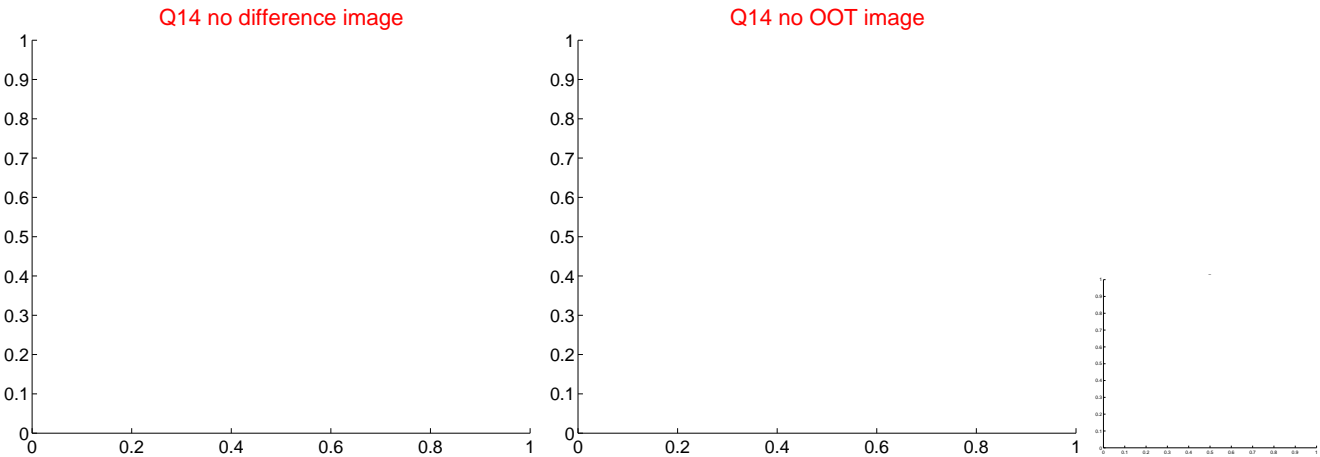
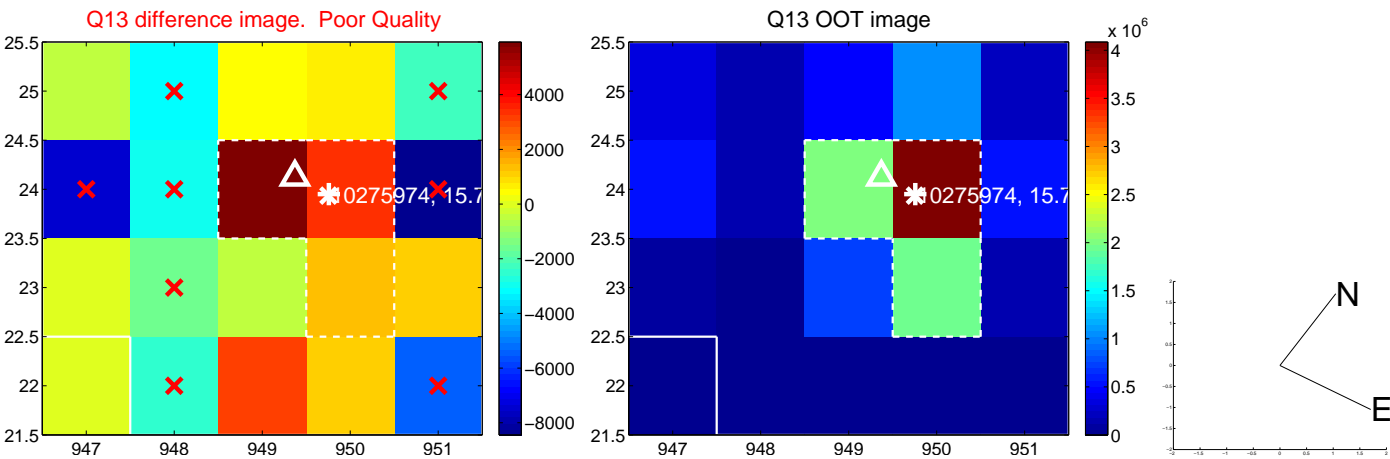
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



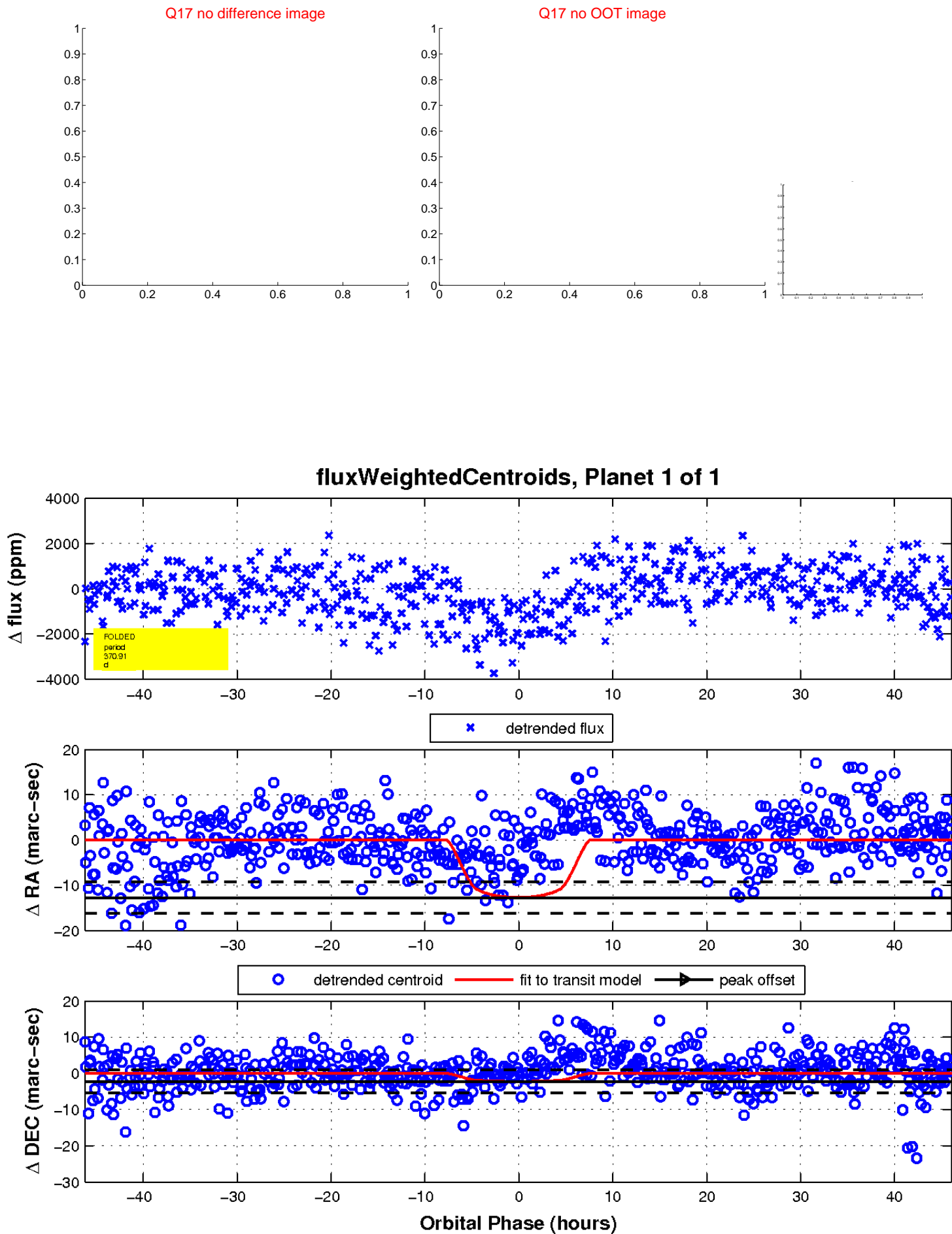
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UKIRT Image

Declination

