

KIC 007971524

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})
007971524-01	OBS	No	368.262431	172.007671	1291.1	24.716	8.2	10.2	1.95	6514	8.35	4.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007971524-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

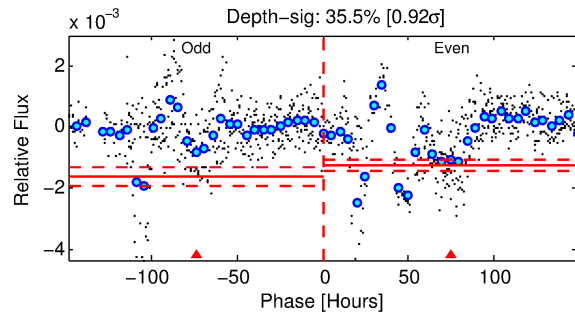
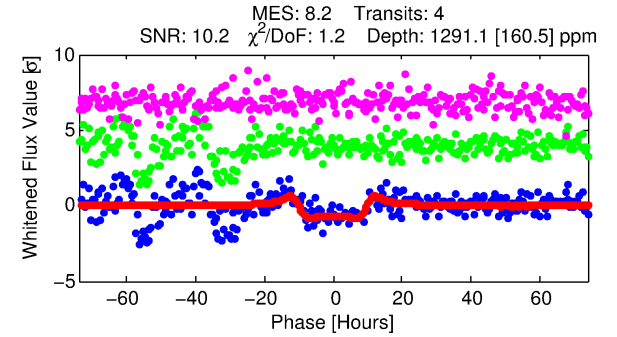
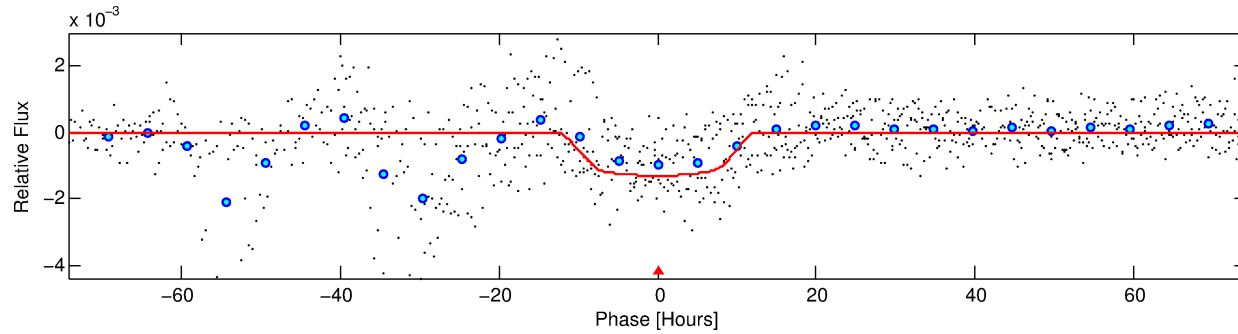
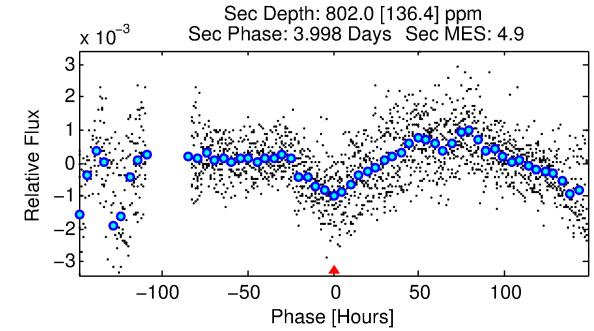
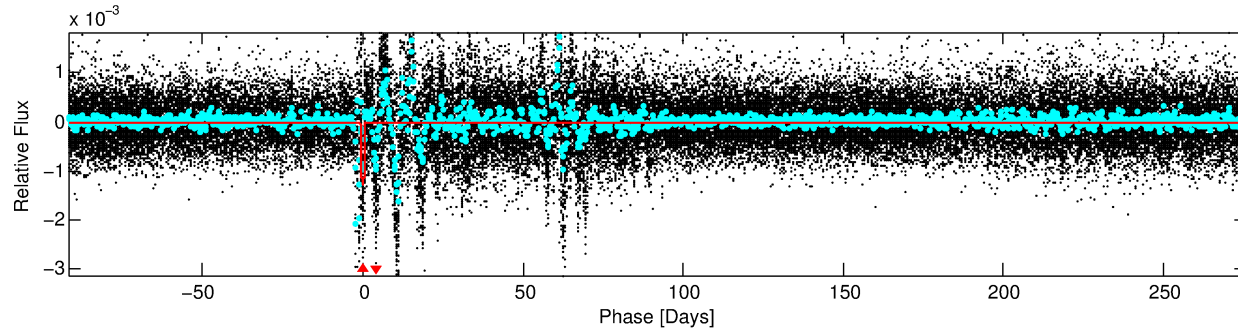
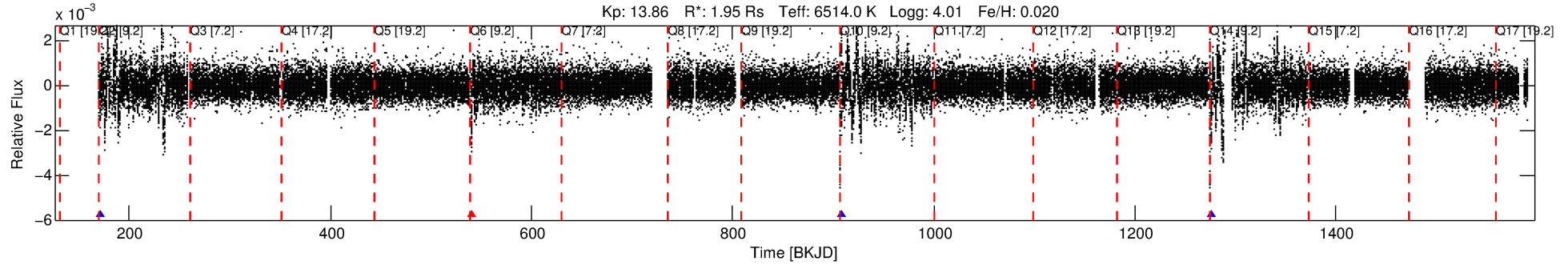
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007971524-01

No Significant Match Found

DV One-Page Summary

KIC: 7971524 Candidate: 1 of 1 Period: 368.262 d



DV Fit Results:

Period = 368.26243 [0.01696] d
Epoch = 172.0077 [0.0295] BKJD
Rp/R* = 0.0392 [0.0029]
a/R* = 55.45 [8.46]
b = 0.92 [0.03]
Seff = 4.80 [2.55]
Teq = 377 [50] K
Rp = 8.35 [3.03] Re
a = 1.1326 [0.3699] AU
Ag = 8111.16 [4508.09] [1.80σ]
Teffp = 5538 [375] K [13.62σ]

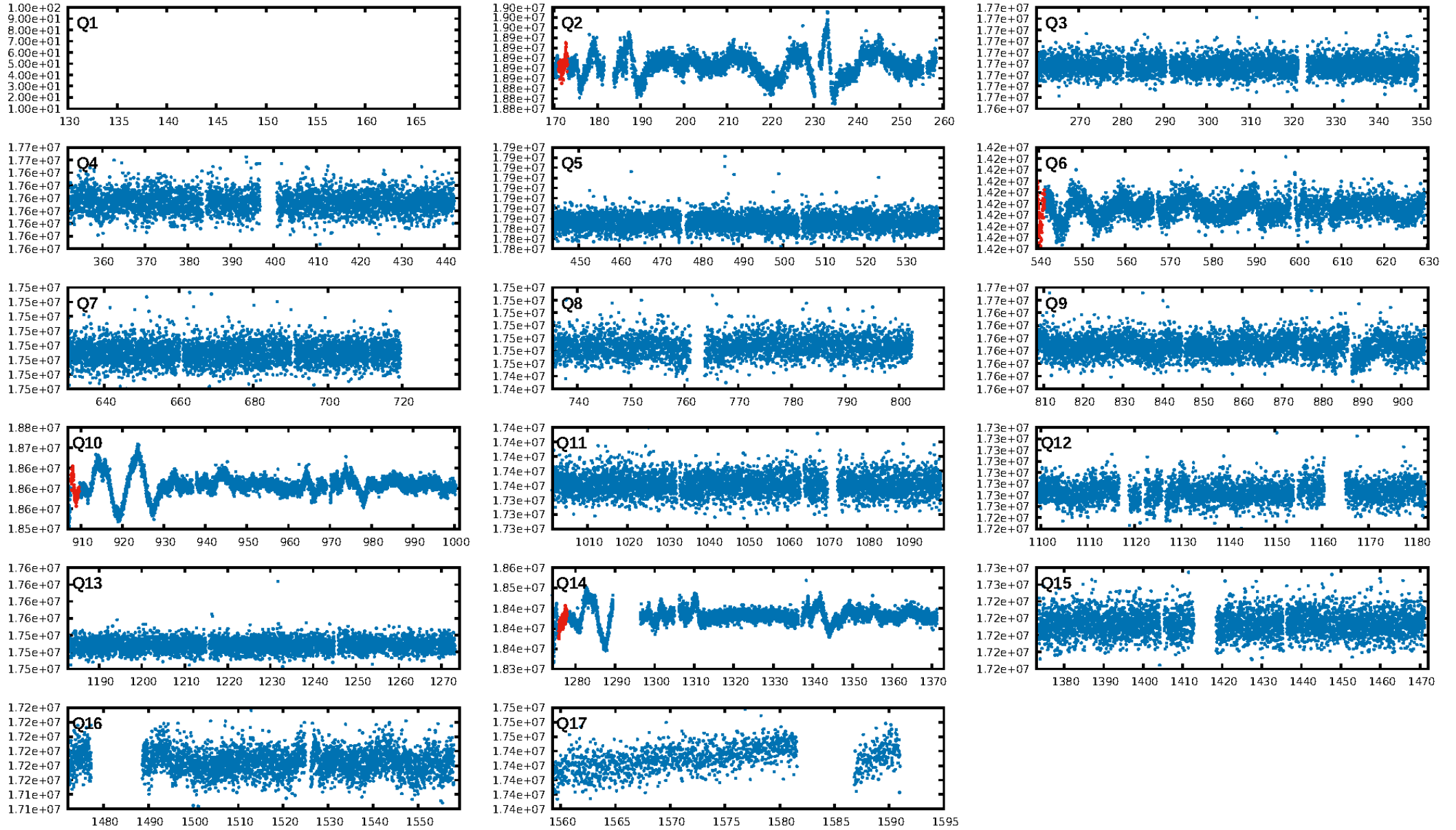
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.3%
ModelChiSquareGof-sig: 98.5%
Bootstrap-pfa: 3.26e-09
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: -11.57
Centroid-sig: 0.0%
Centroid-so: 6.415 arcsec [3.71σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [1/1]

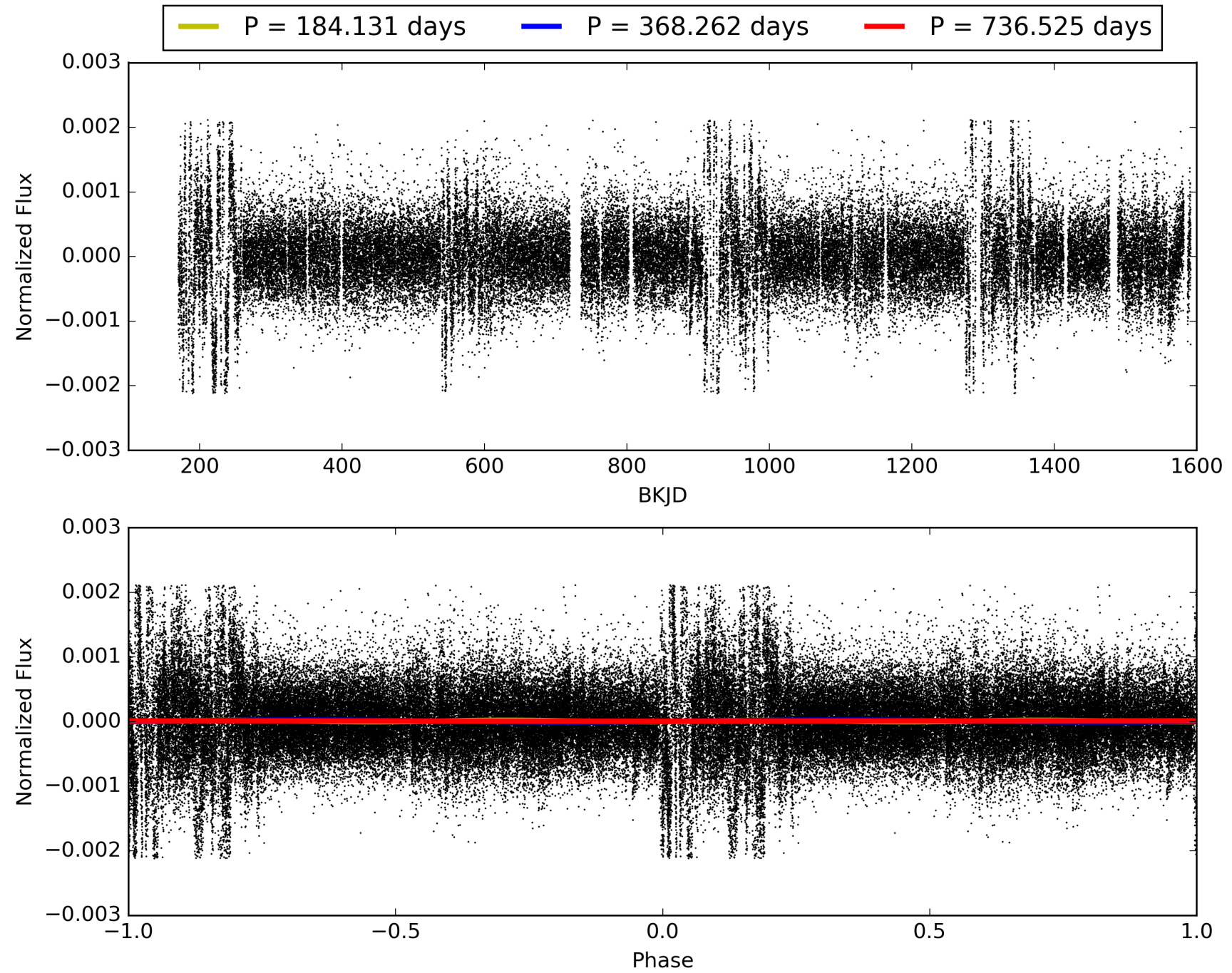
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:26:36 Z

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

TCE 007971524-01, PDC Light Curves

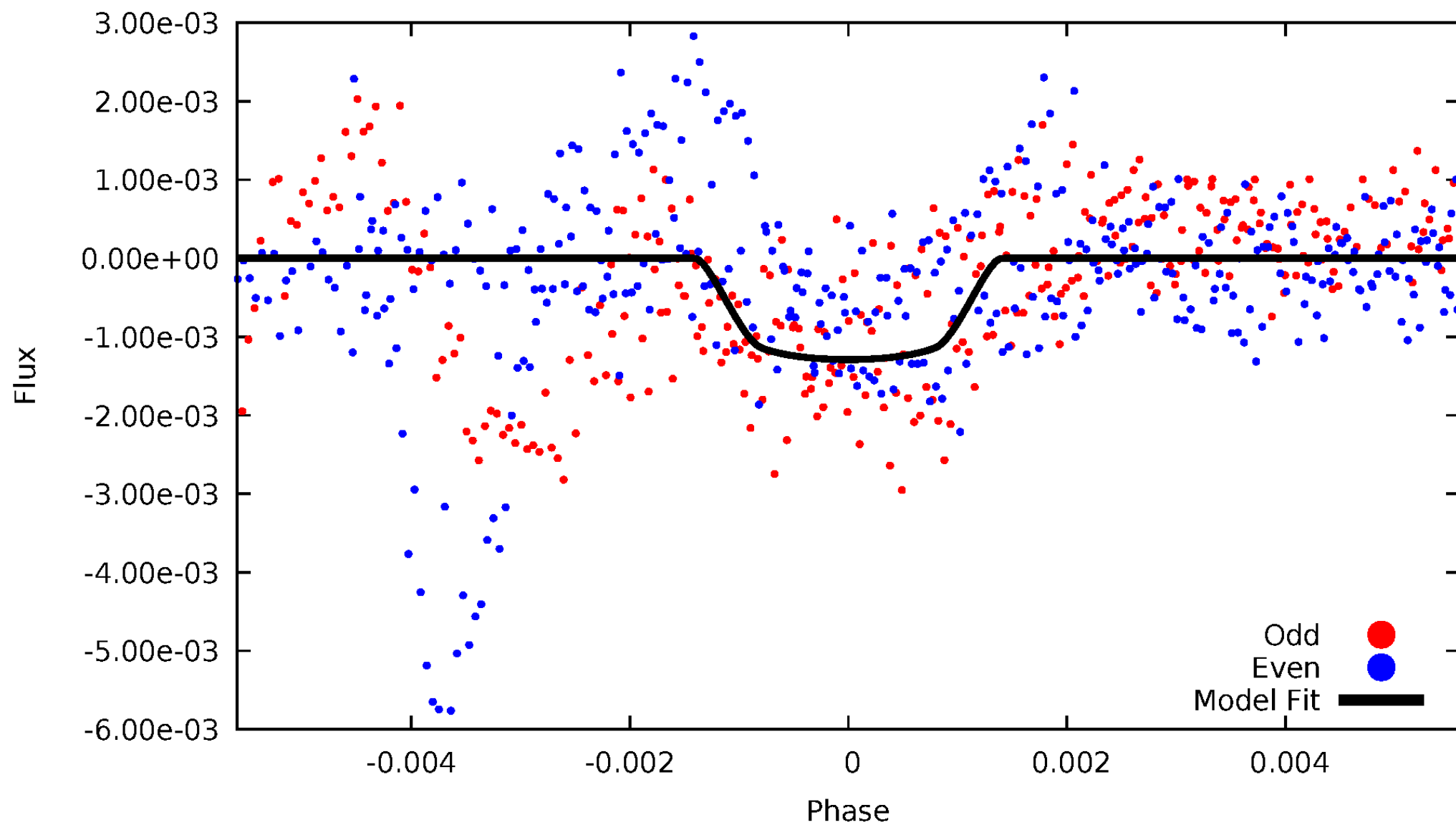


TCE 007971524-01



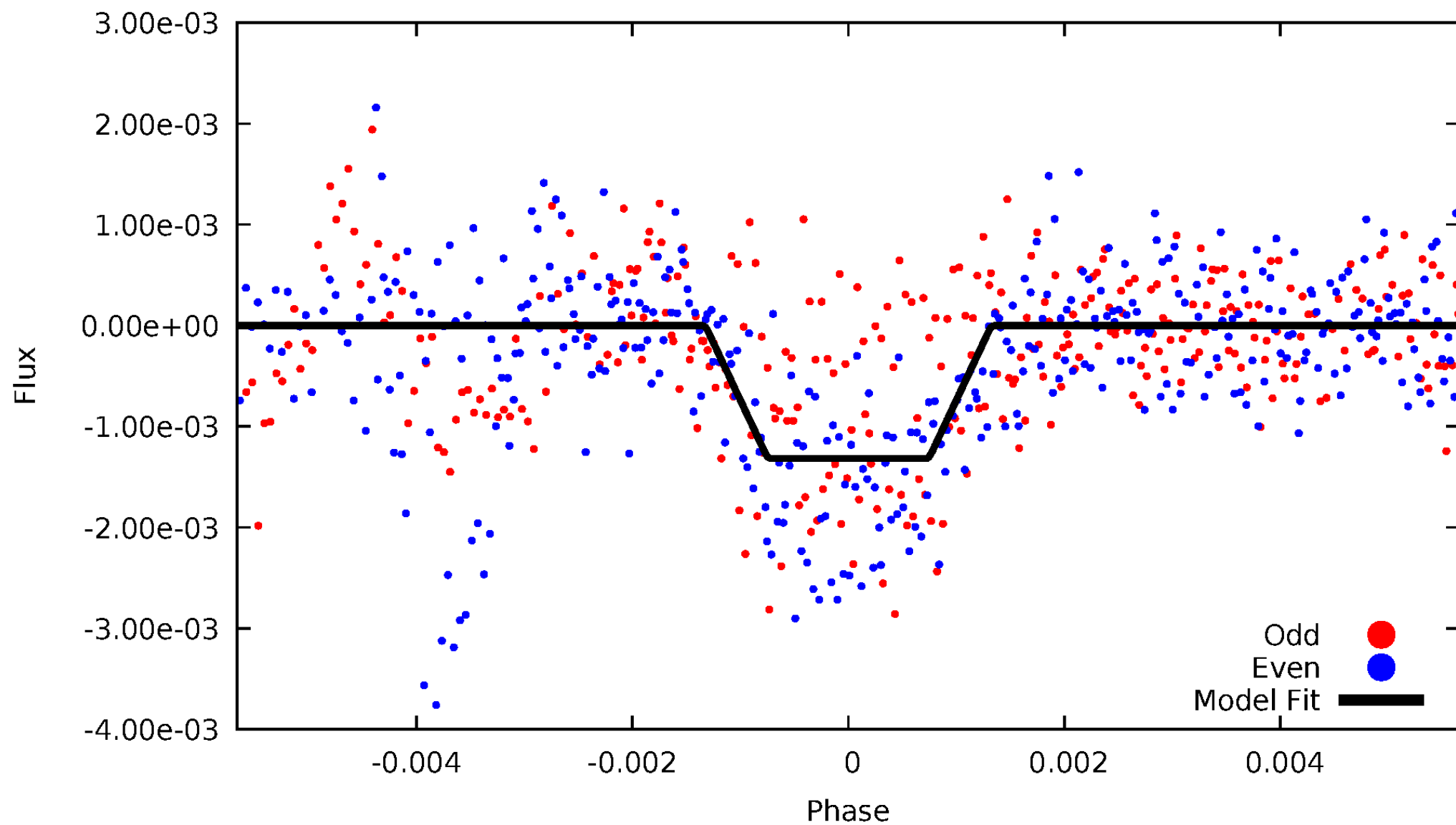
DV Odd/Even

TCE 007971524-01



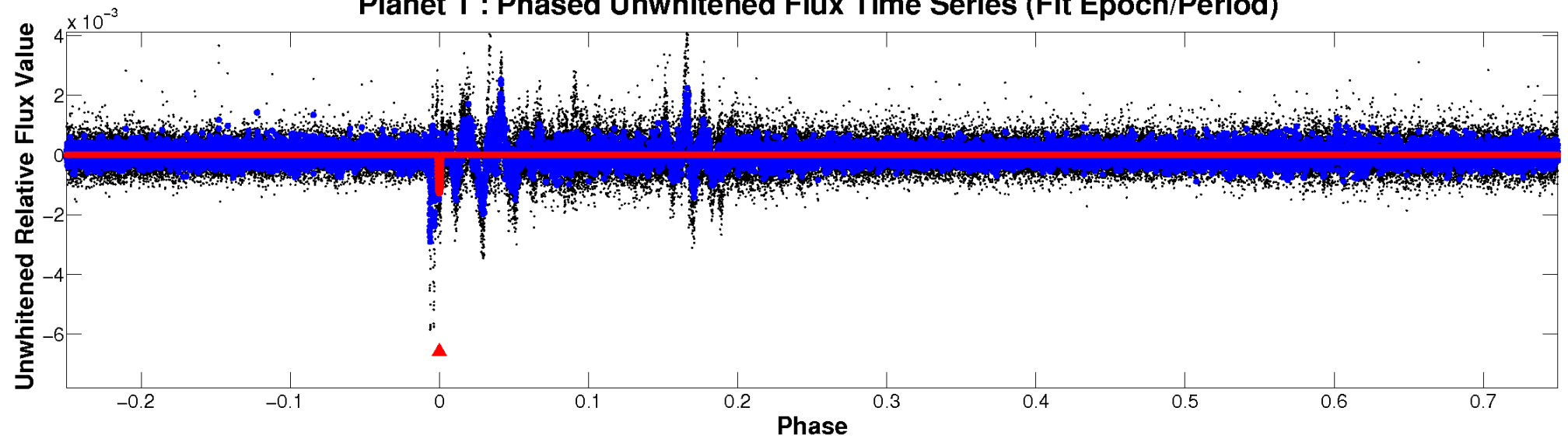
ALT Odd/Even

TCE 007971524-01

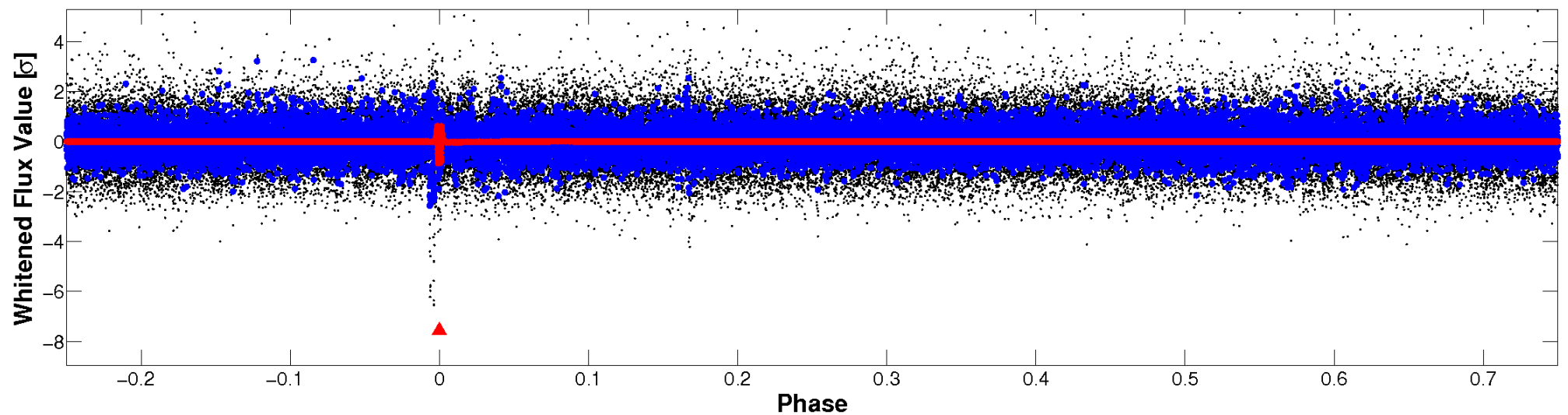


Non-Whitened Vs. Whitened Light Curve

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



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



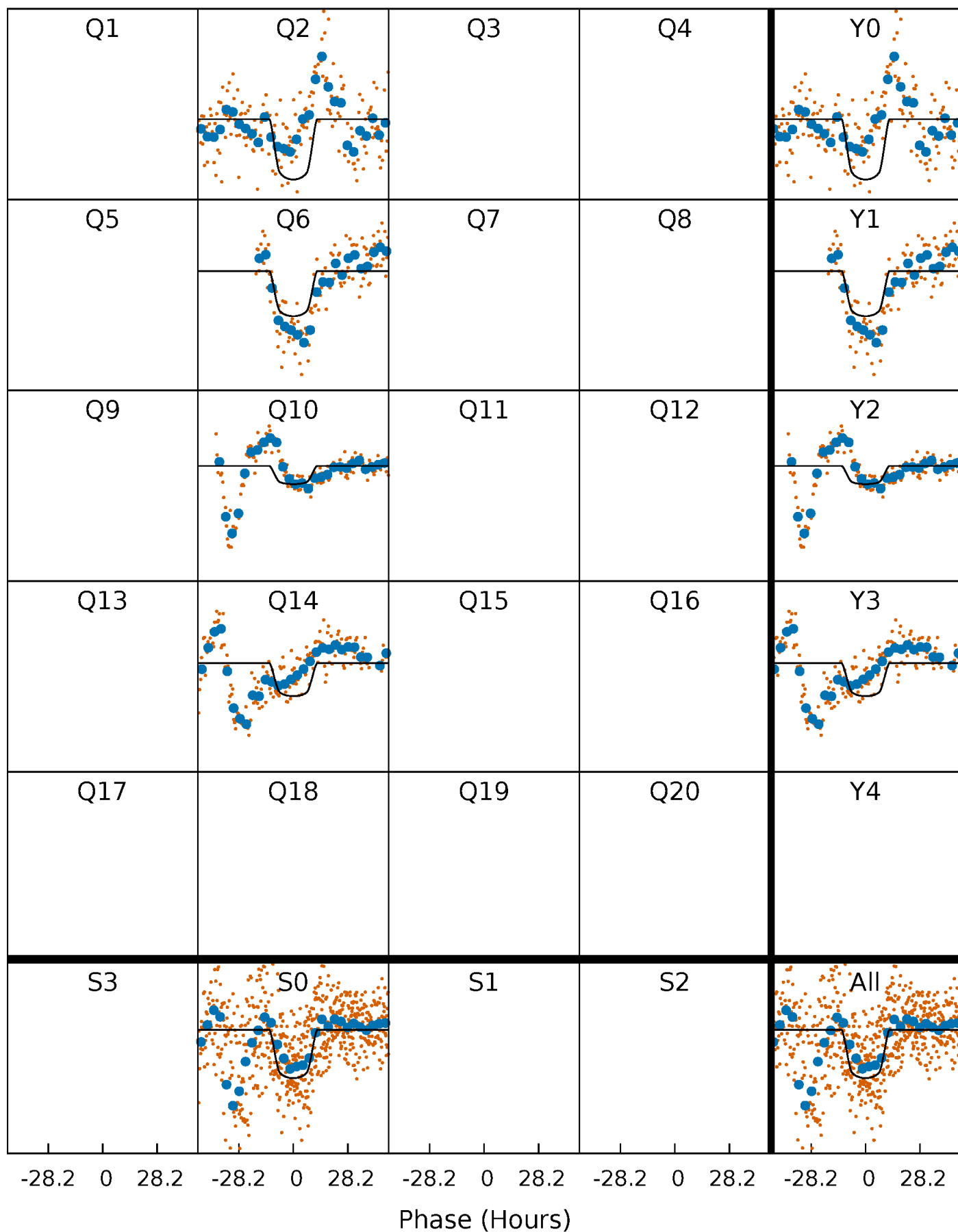
PDC Quarter-Phased Transit Curves

TCE 007971524-01 P=368.262431 Days $T_0=172.007671$ (BKJD)



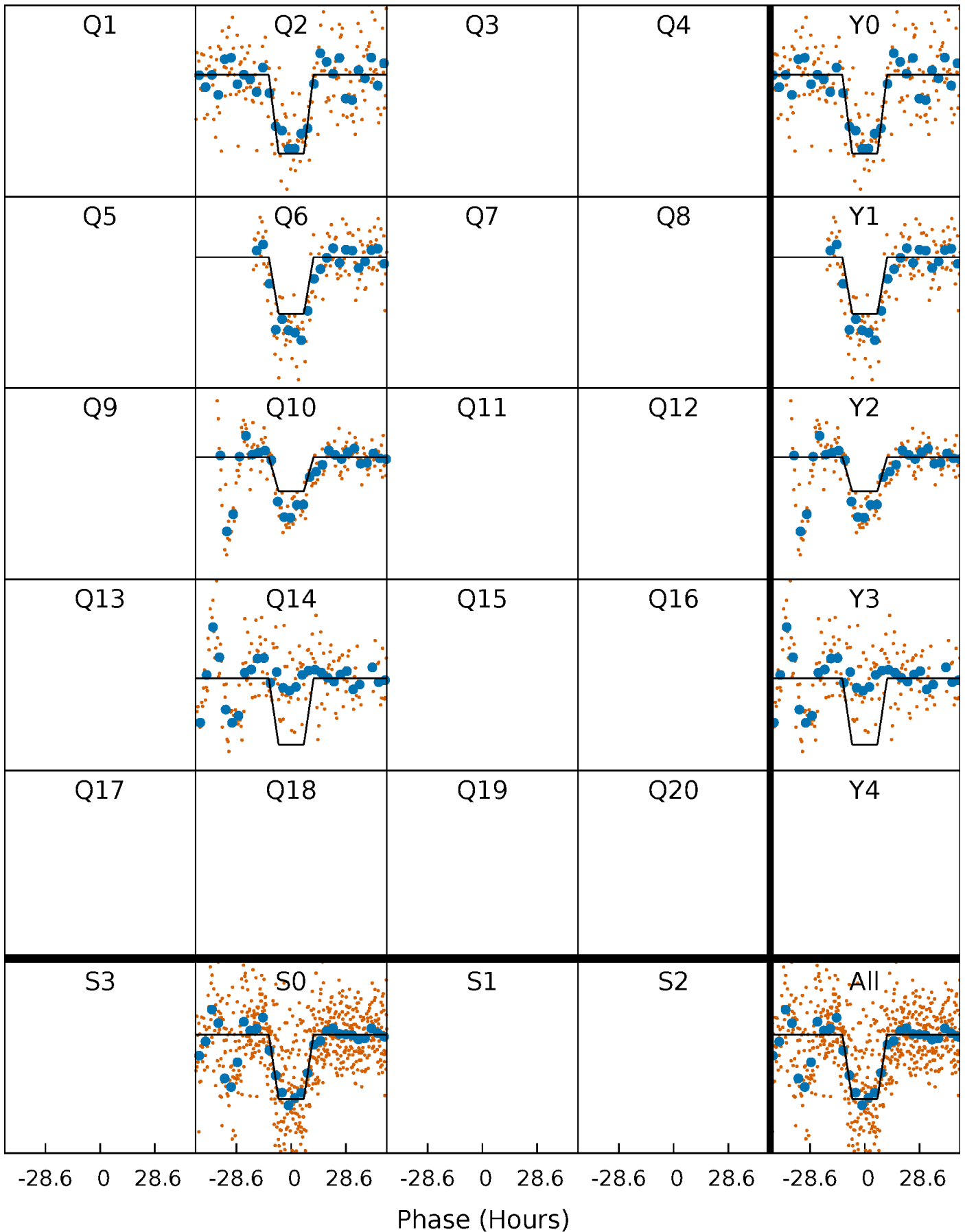
DV Quarter-Phased Transit Curves

TCE 007971524-01 P=368.262431 Days $T_0=172.007671$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

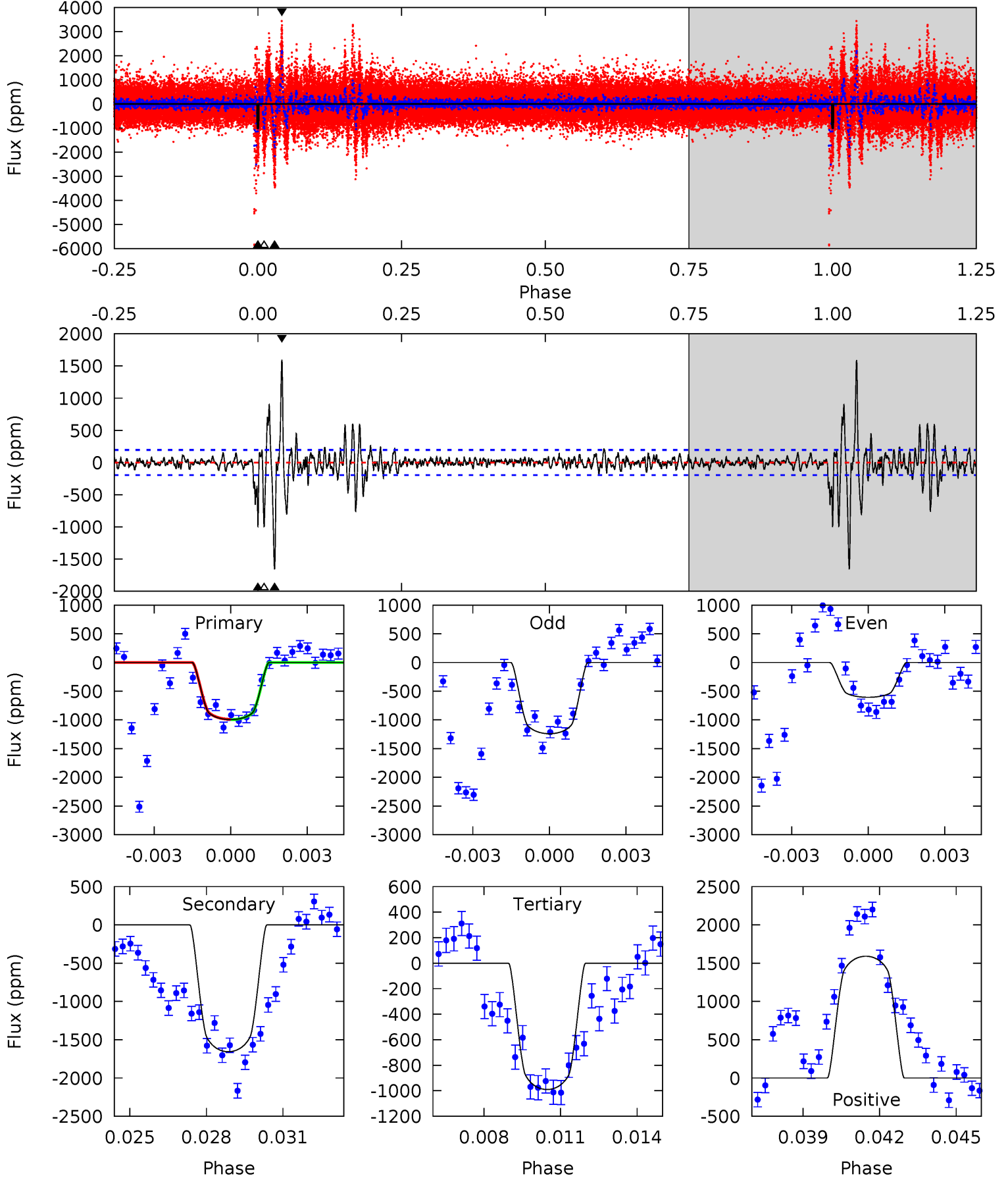
TCE 007971524-01 P=368.308108 Days $T_0=171.983597$ (BKJD)



DV Model-Shift Uniqueness Test

007971524-01, P = 368.262431 Days, E = 172.007671 Days

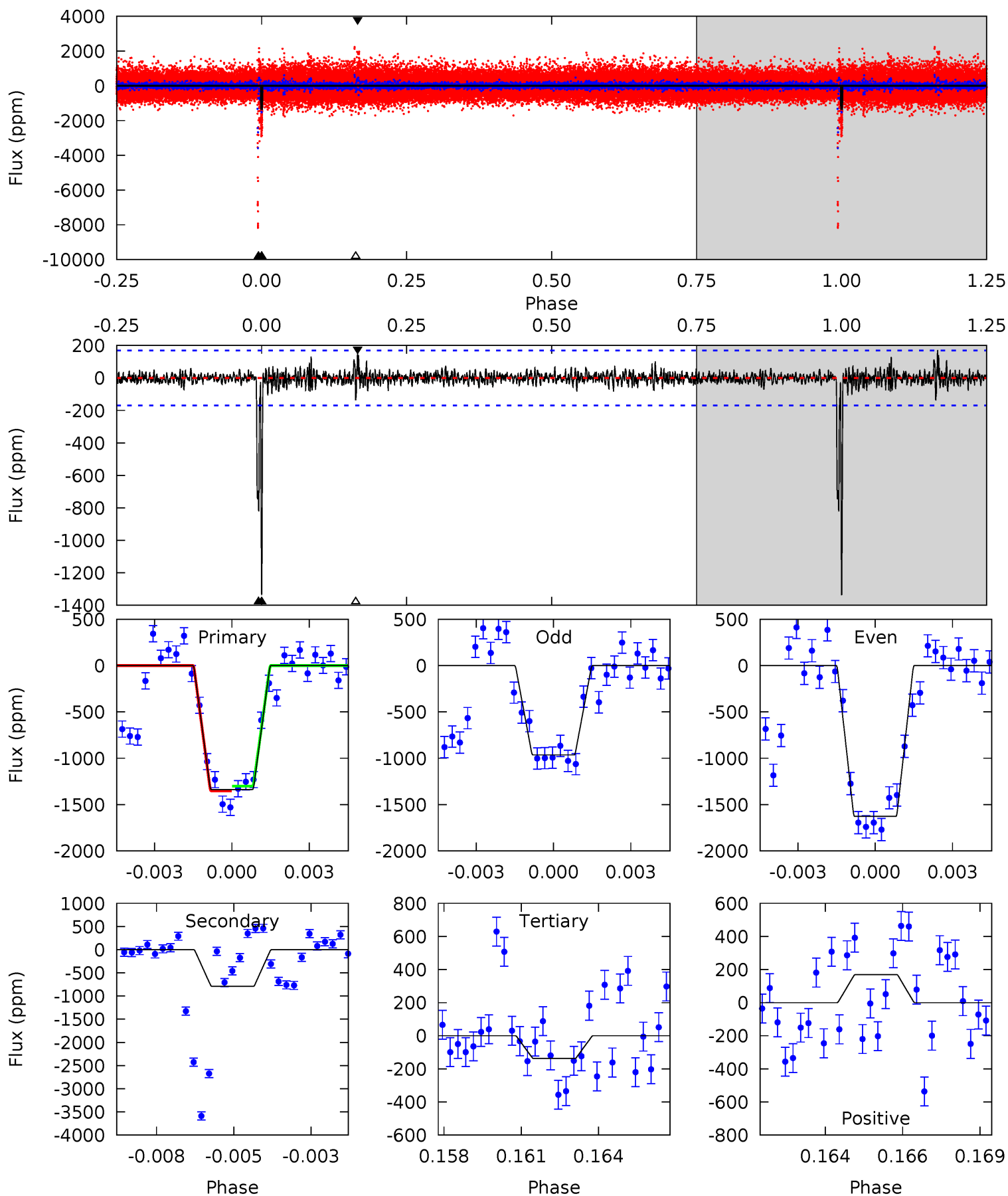
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.9	44.7	26.7	43.0	5.26	2.99	4.32	0.12	-16.1	18.0	1.78	8.45	1.34	0.49	0.08



Alt Model-Shift Uniqueness Test

007971524-01, P = 368.308108 Days, E = 171.983597 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.7	24.7	4.28	5.28	5.27	3.00	0.88	37.5	36.5	20.4	19.4	10.3	0.86	0.11	0.76



Stellar Parameters For KIC 007971524

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6514^{+179}_{-247}	$4.011^{+0.293}_{-0.180}$	$0.020^{+0.250}_{-0.300}$	$1.954^{+0.568}_{-0.694}$	$1.427^{+0.197}_{-0.296}$	$0.270^{+0.549}_{-0.132}$
	+3%/-4%	+7%/-4%	+1250%/-1500%	+29%/-36%	+14%/-21%	+203%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007971524-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1657 ± 37	$8.21^{+1.52}_{-1.64}$	520^{+44}_{-48}	6620^{+346}_{-334}	17464^{+8131}_{-5134}
Alt.	-792 ± 32	$7.49^{+1.52}_{-1.37}$	522^{+43}_{-48}	5744^{+295}_{-278}	9879^{+4689}_{-2912}

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

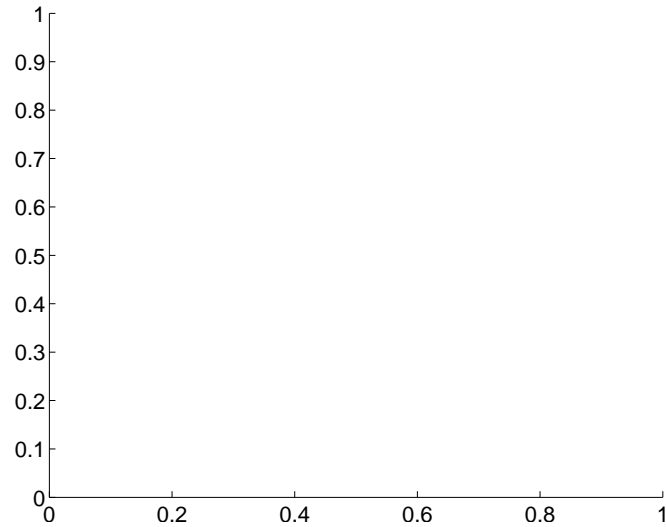
Supplemental centroid analysis for 007971524-01. Kepler magnitude: 13.86. Transit SNR 10.16

There are 0 quarters with good PRF difference image offsets

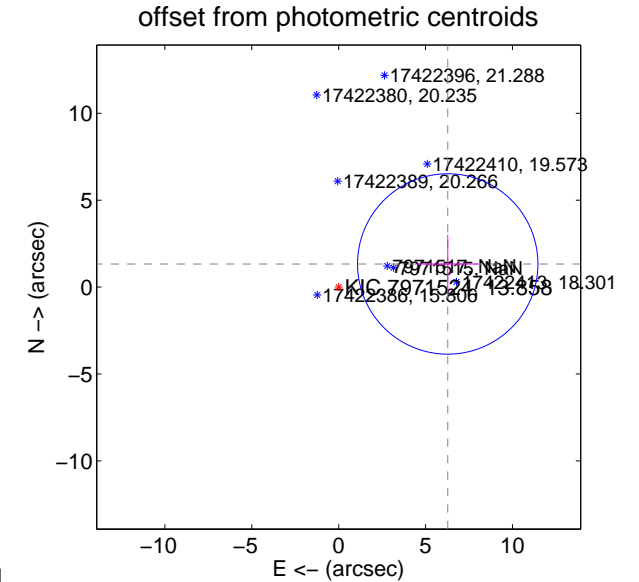
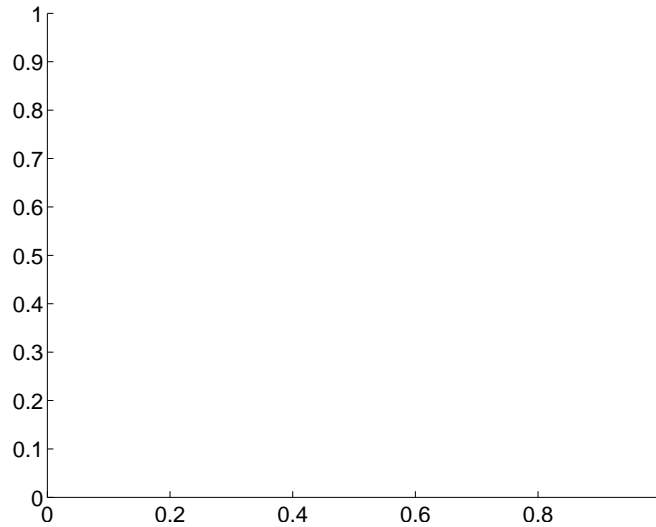
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	6.41 ± 1.73	3.71	-6.27 ± 1.73	1.33 ± 1.67

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC



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.



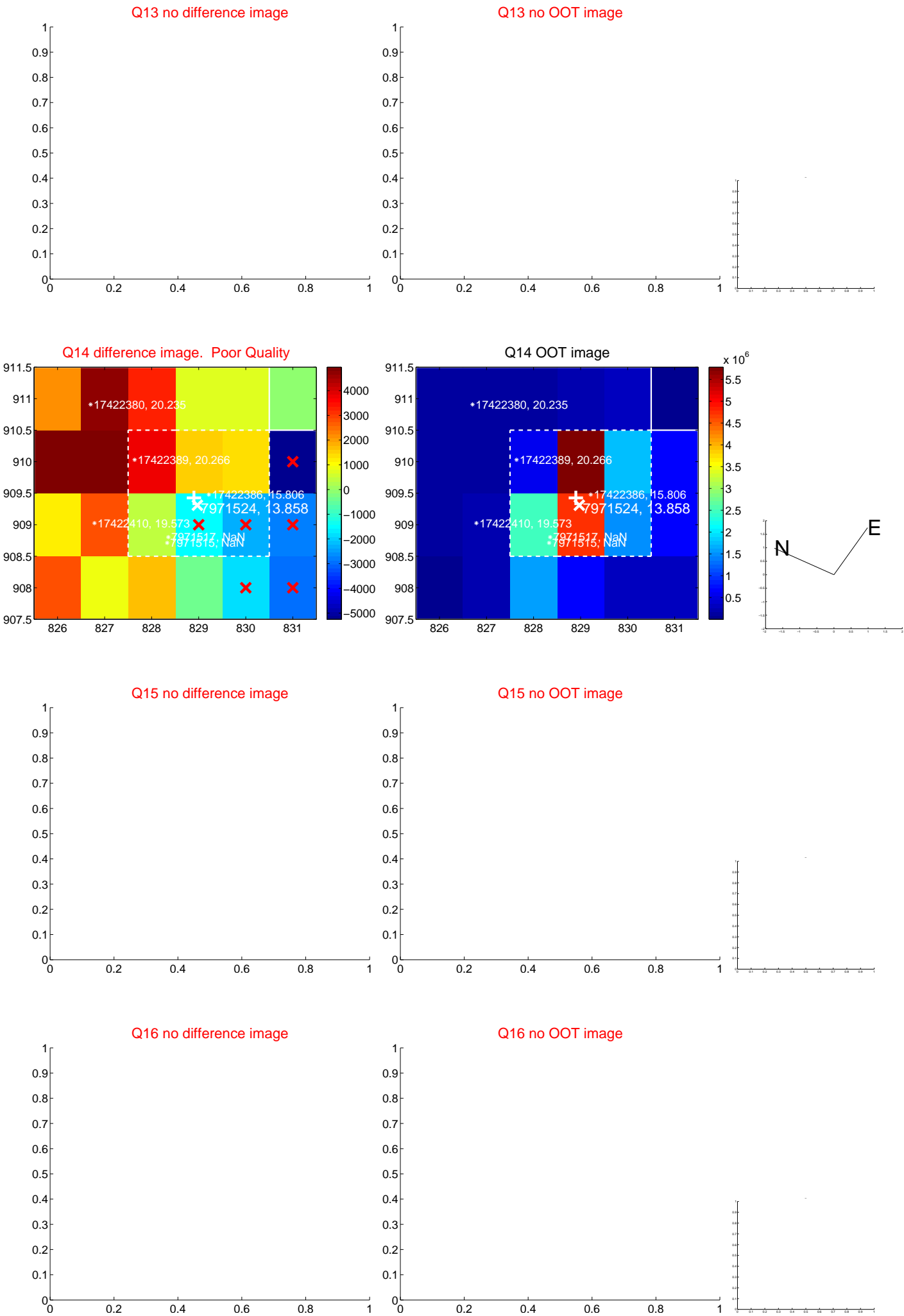
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



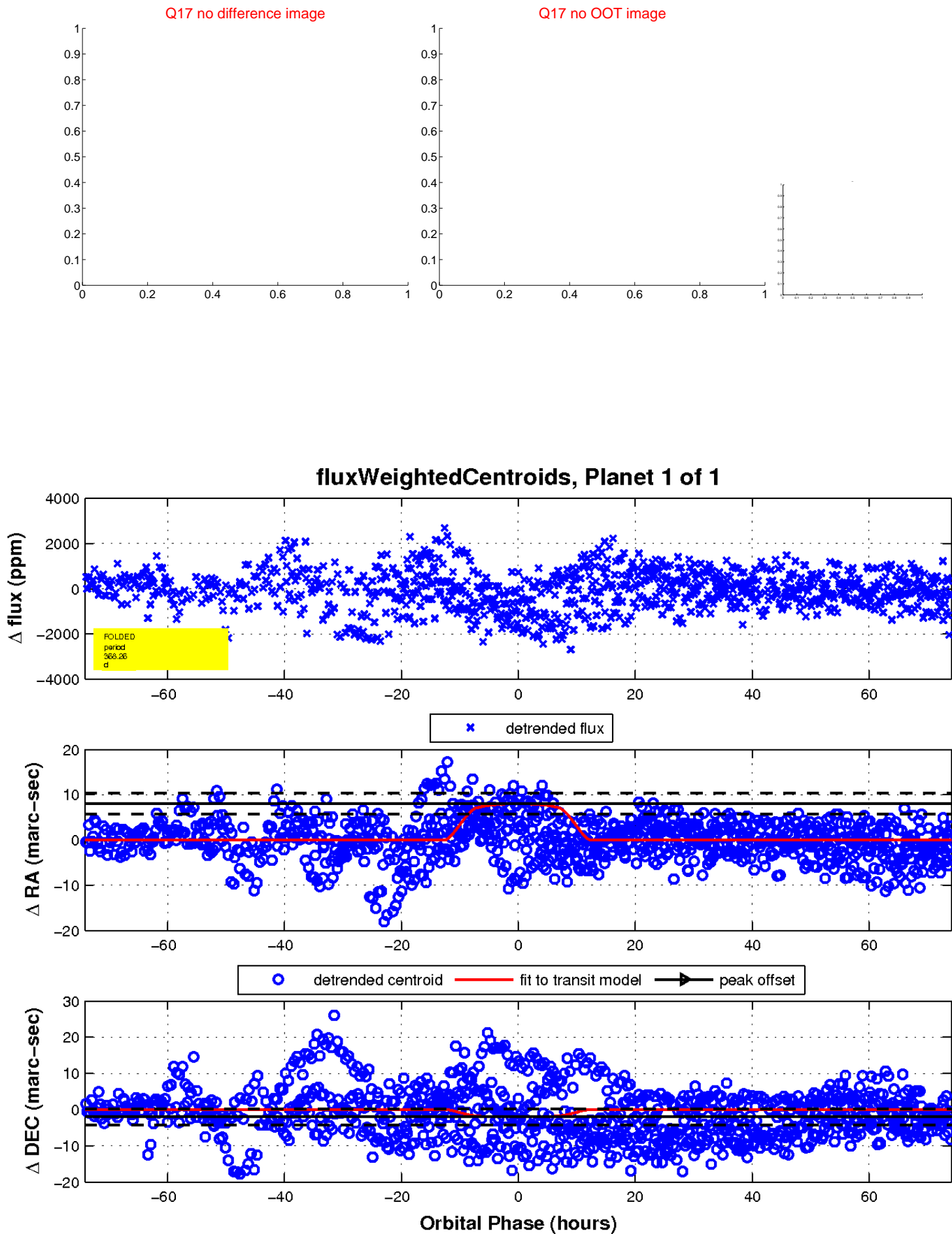
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

