

KIC 007034974

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})
007034974-01	OBS	No	547.580608	427.072024	573.8	39.258	7.9	9.4	0.80	5334	1.91	0.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007034974-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

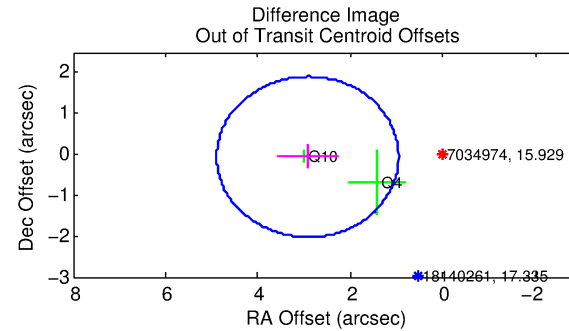
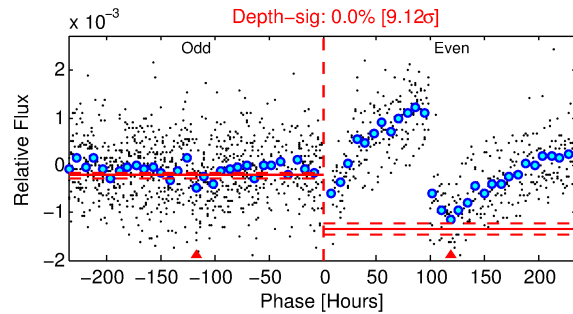
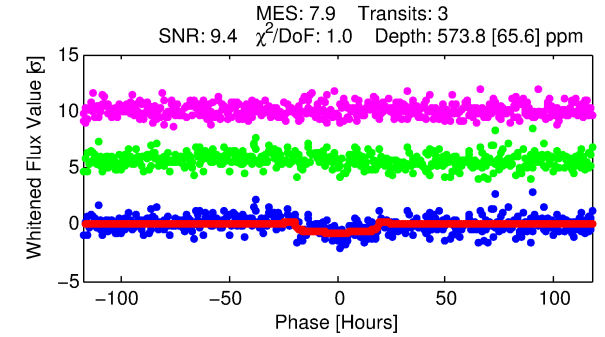
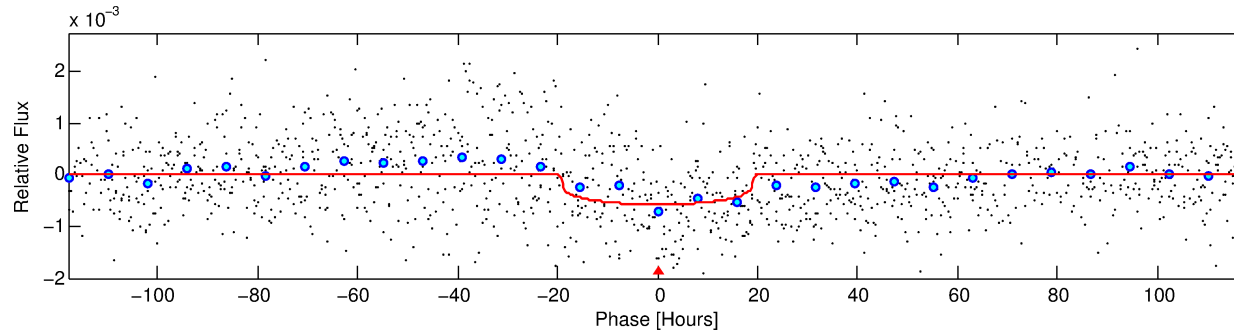
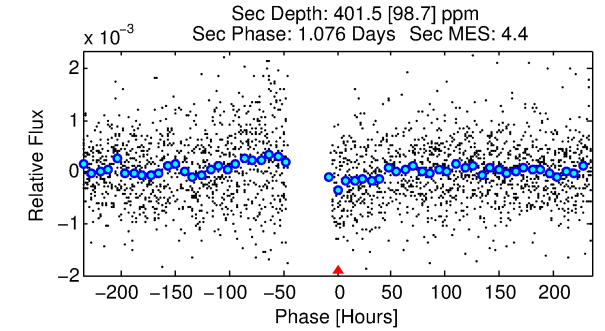
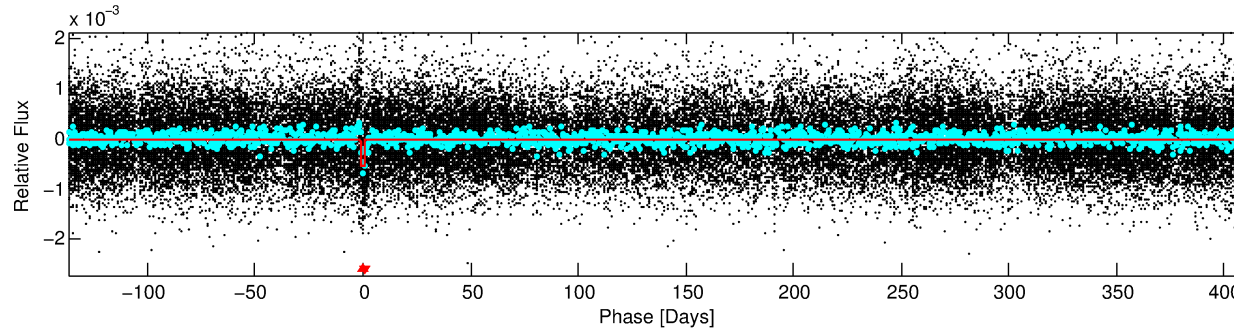
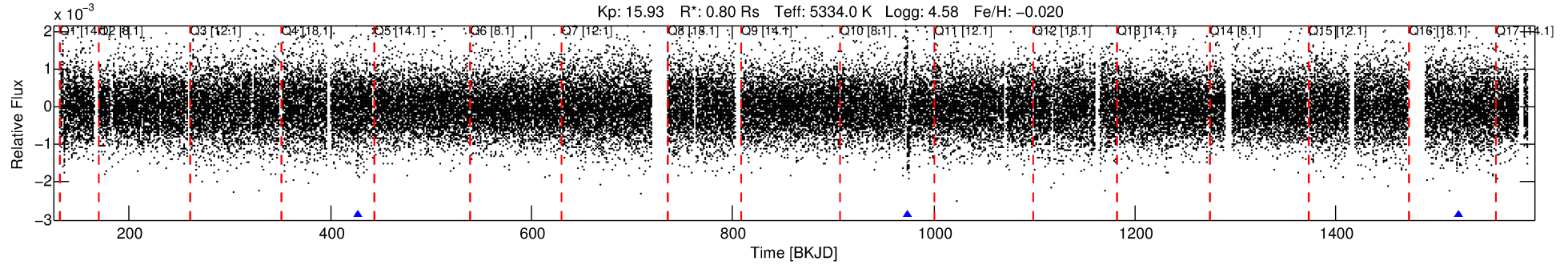
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007034974-01

No Significant Match Found

DV One-Page Summary

KIC: 7034974 Candidate: 1 of 1 Period: 547.581 d



DV Fit Results:

Period = 547.58061 [0.03380] d
Epoch = 427.0720 [0.0412] BKJD
Rp/R* = 0.0220 [0.0092]
a/R* = 99.84 [157.90]
b = 0.41 [3.25]
Seff = 0.29 [0.07]
Teq = 187 [11] K
Rp = 1.91 [0.86] Re
a = 1.2597 [0.1764] AU
Ag = 96401.82 [86295.32] [1.12σ]
Teffp = 5096 [1121] K [4.38σ]

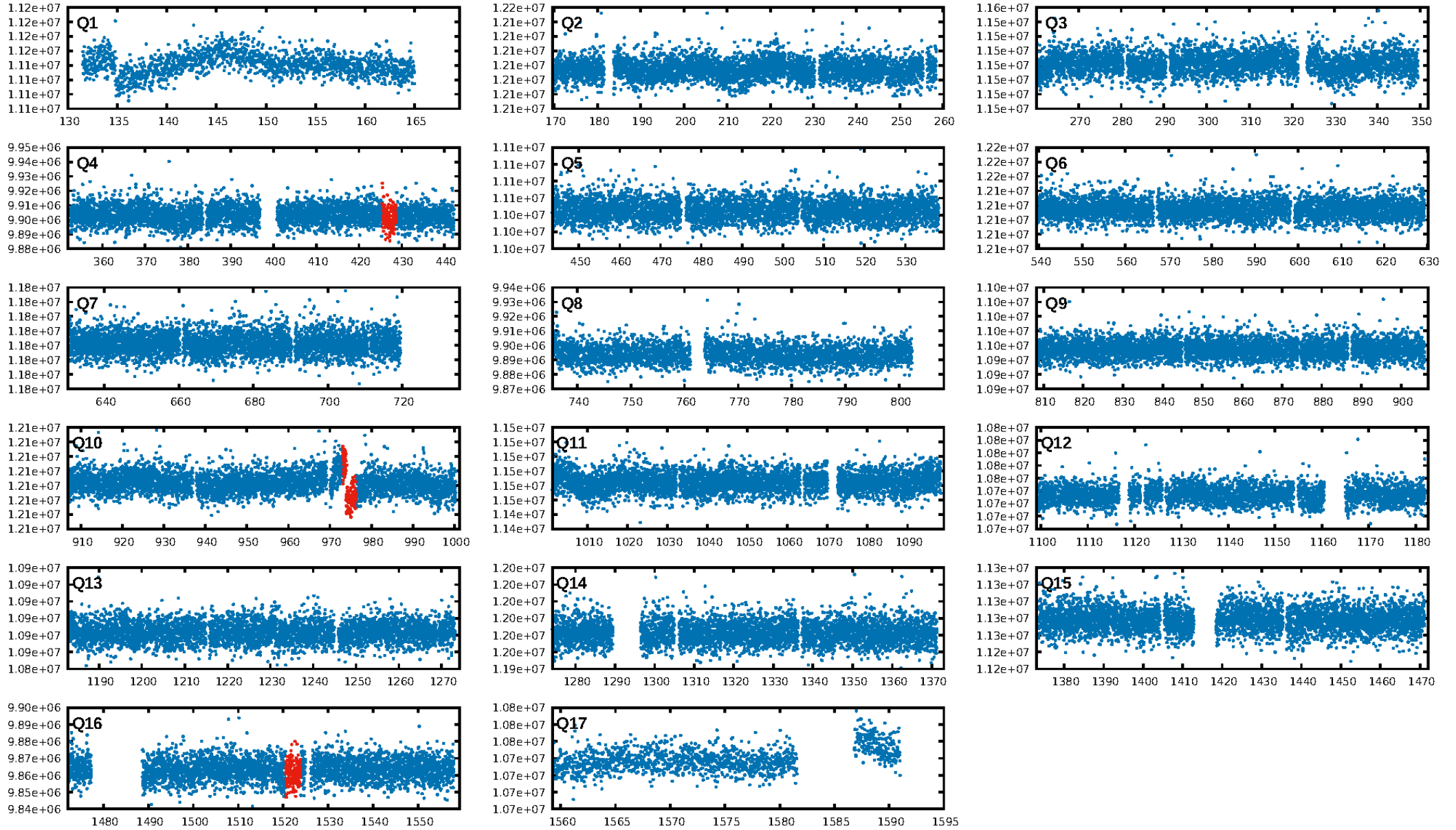
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 2.71e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.895
Centroid-sig: 74.0%
Centroid-so: 0.422 arcsec [0.36σ]
OotOffset-rm: 2.929 arcsec [4.47σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-rm: 3.050 arcsec [2.89σ]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

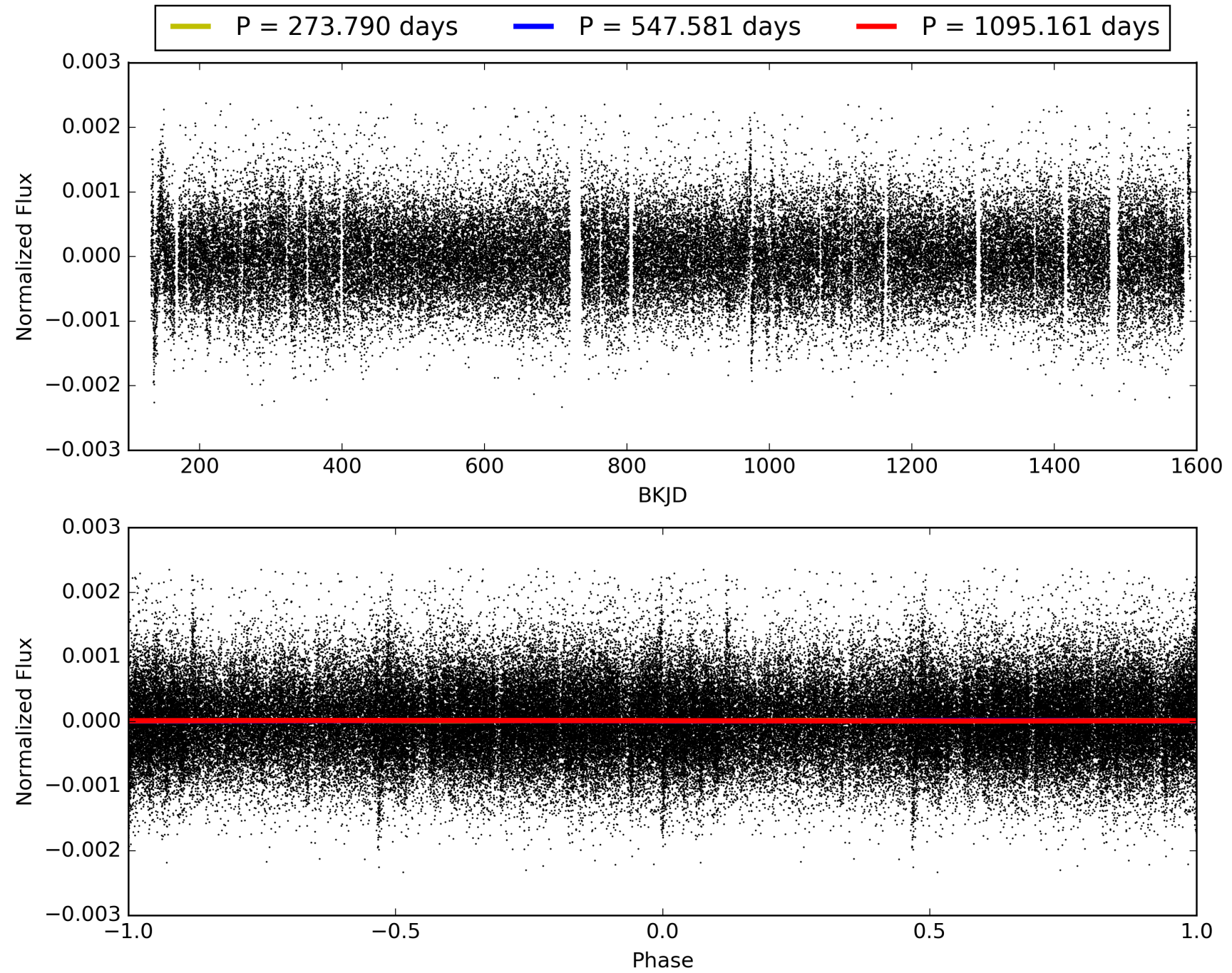
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:18:09 Z

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

TCE 007034974-01, PDC Light Curves

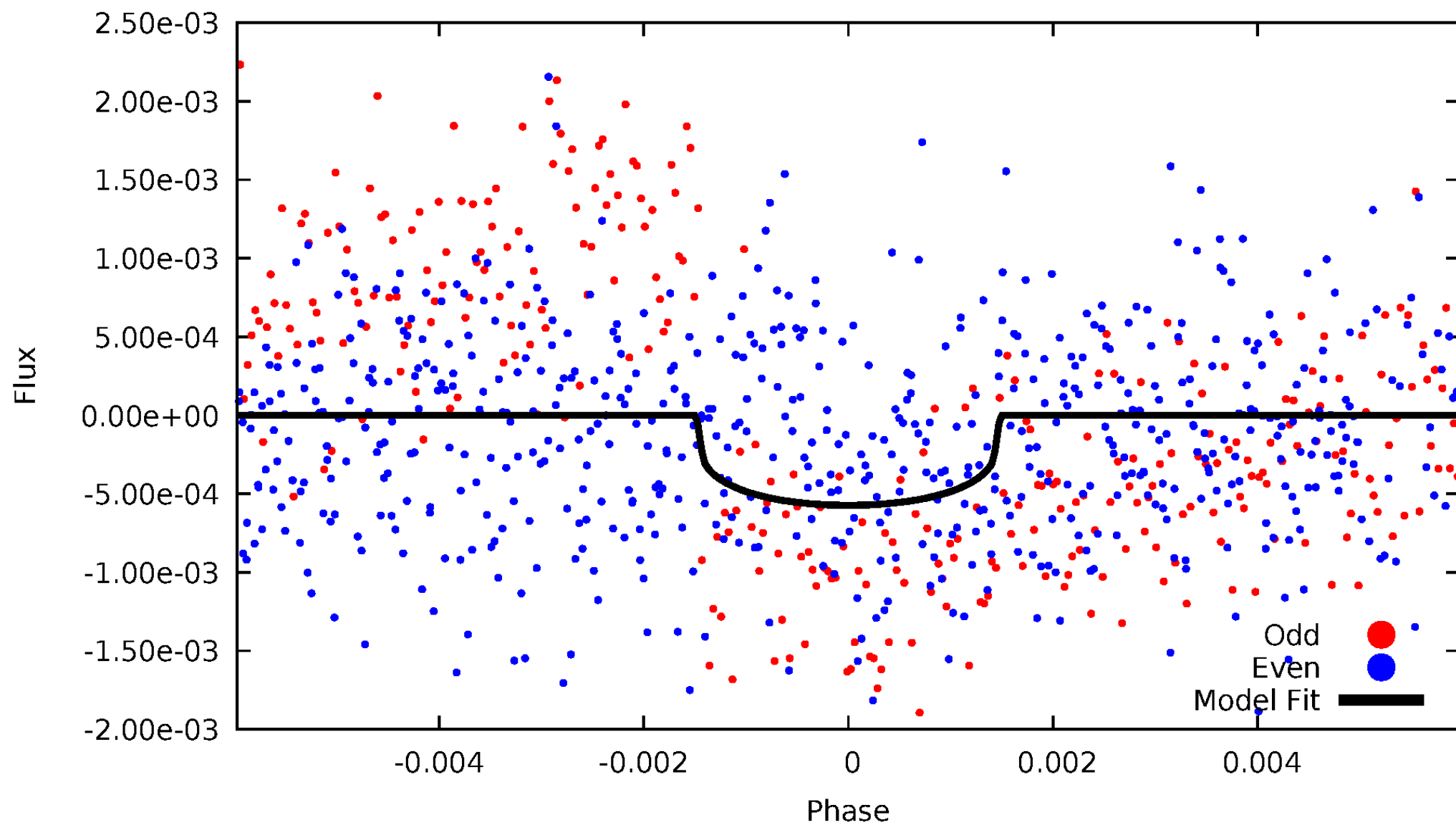


TCE 007034974-01



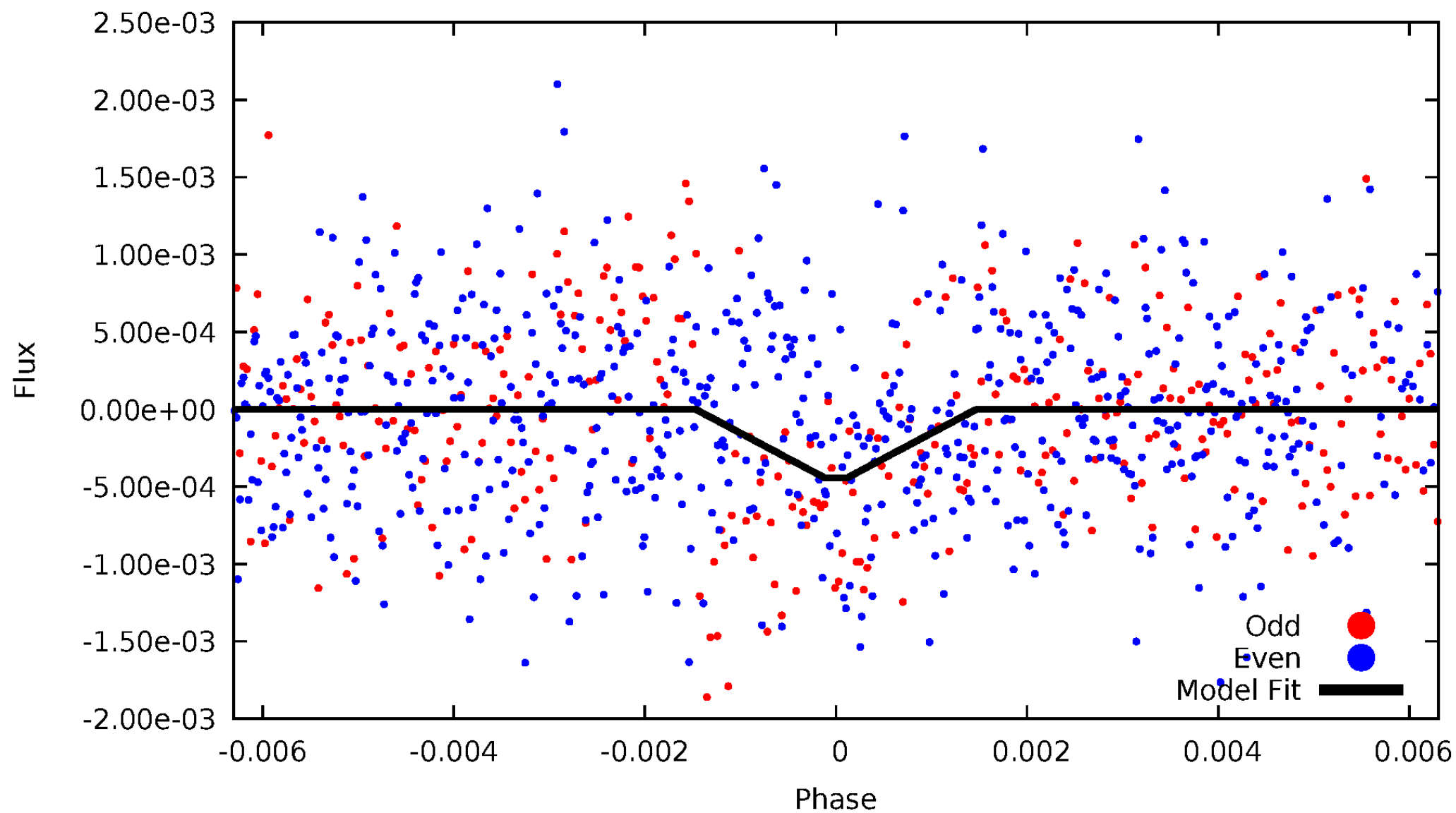
DV Odd/Even

TCE 007034974-01



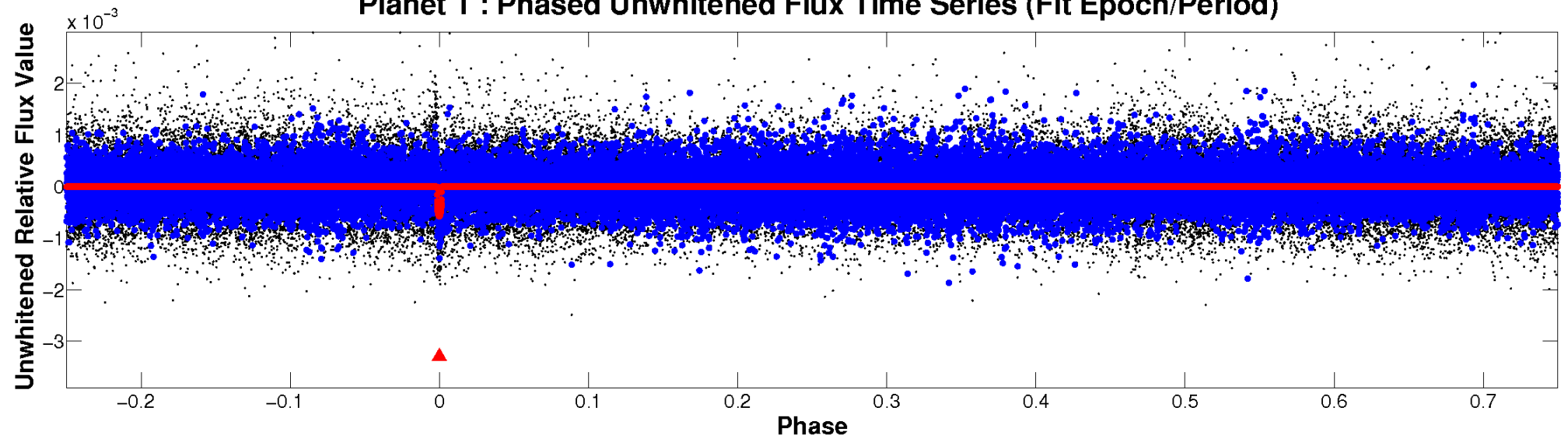
ALT Odd/Even

TCE 007034974-01

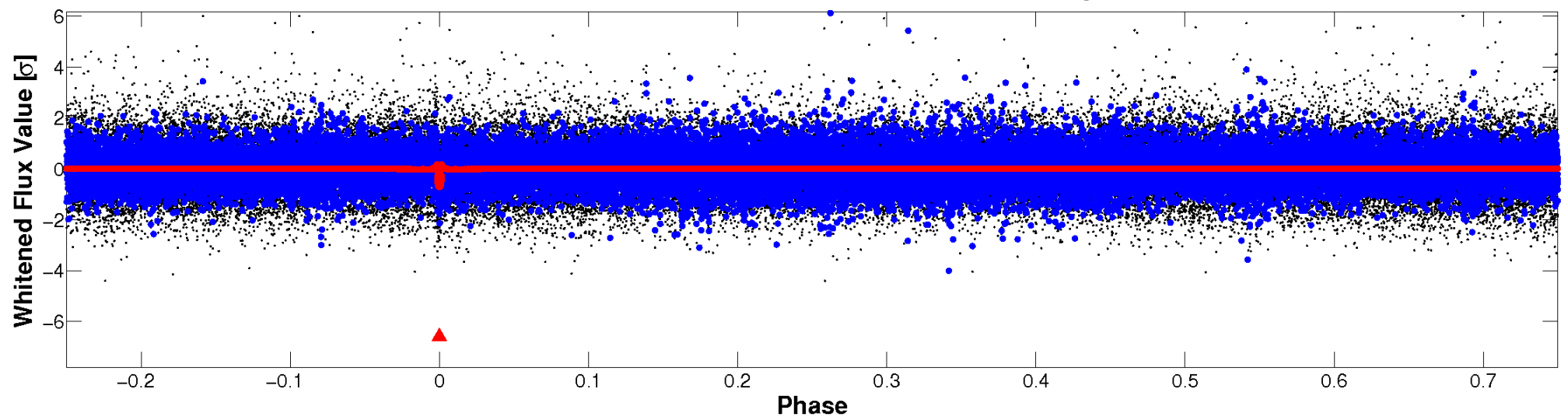


Non-Whitened Vs. Whitened Light Curve

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

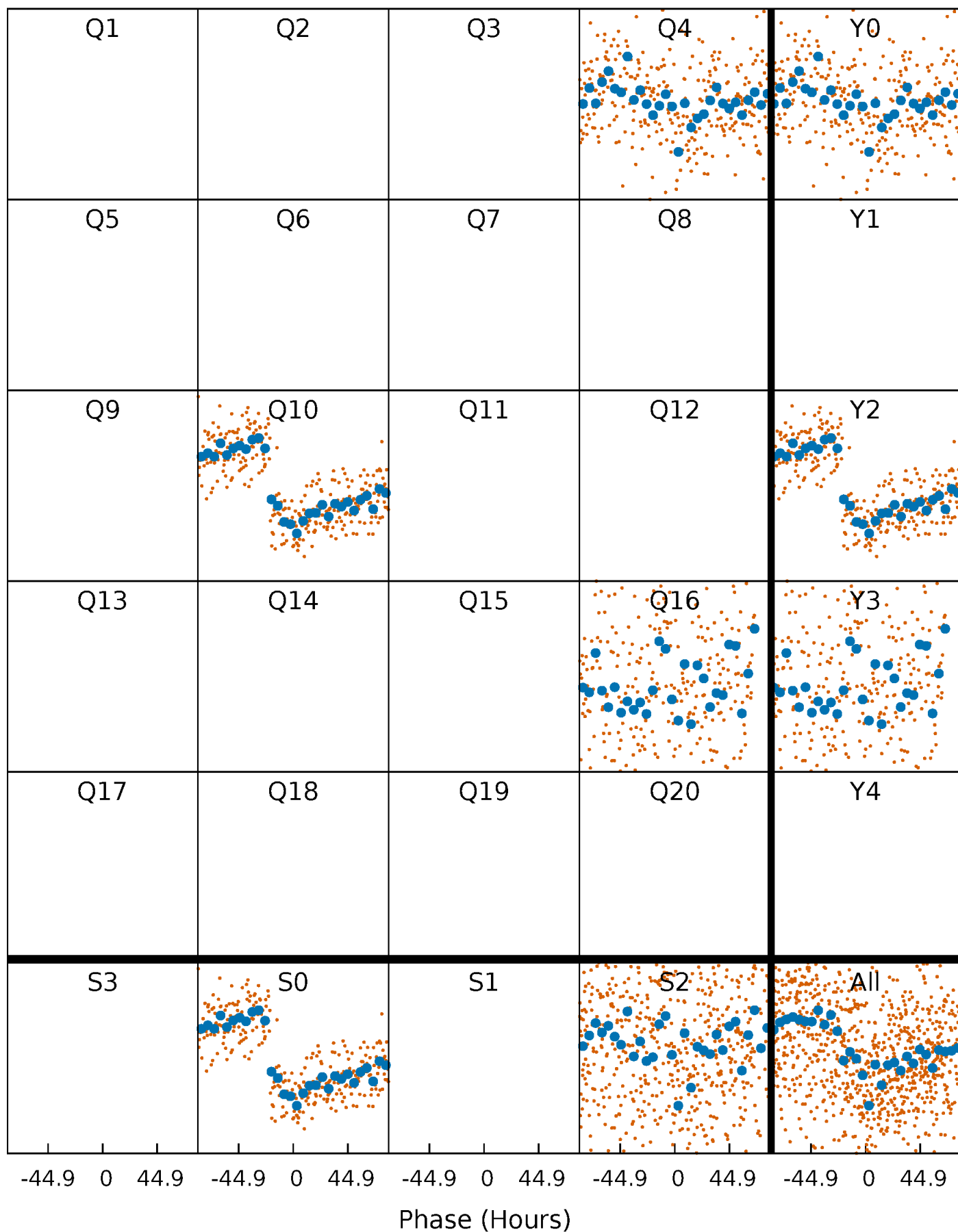


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



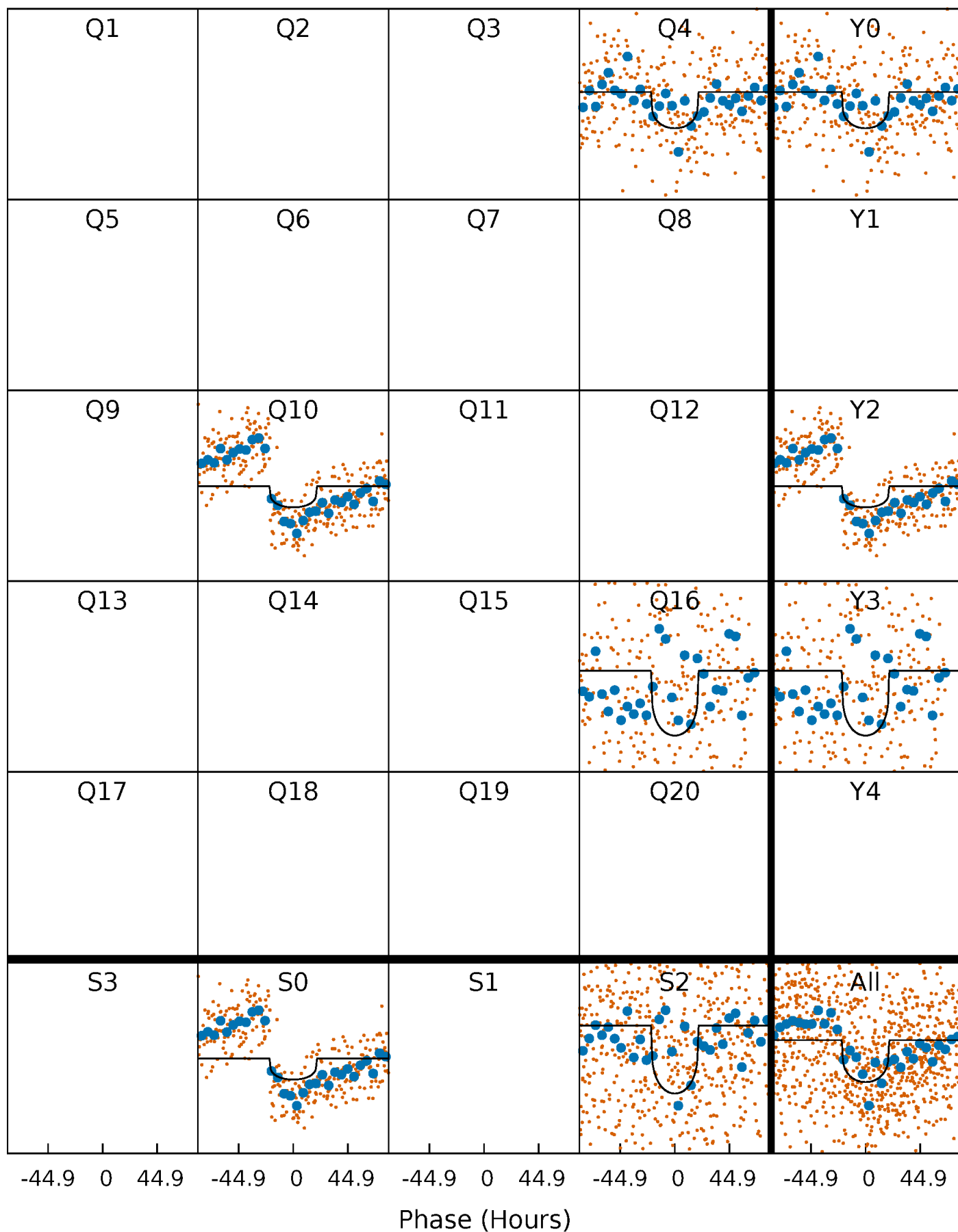
PDC Quarter-Phased Transit Curves

TCE 007034974-01 P=547.580608 Days $T_0=427.072024$ (BKJD)



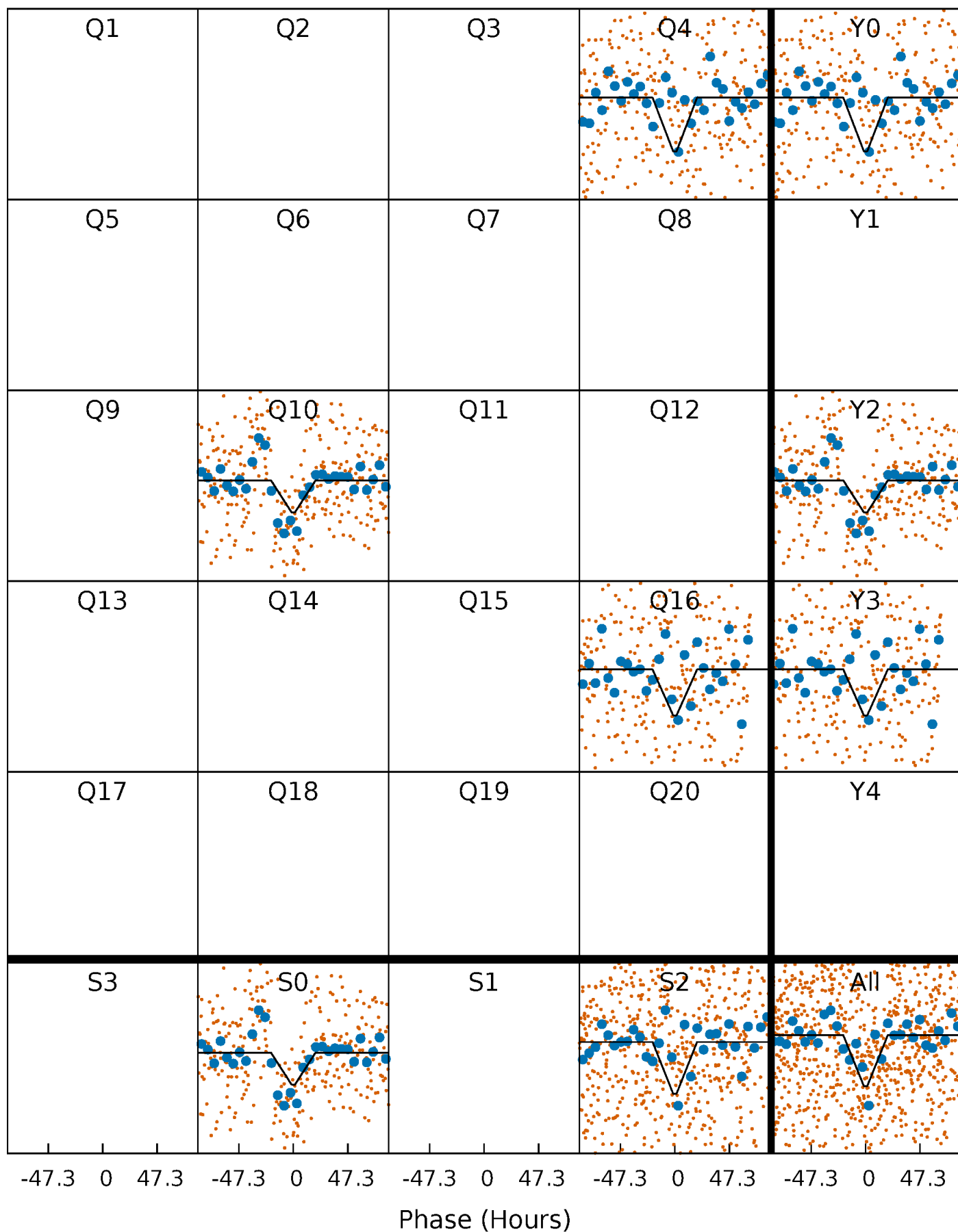
DV Quarter-Phased Transit Curves

TCE 007034974-01 P=547.580608 Days $T_0=427.072024$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

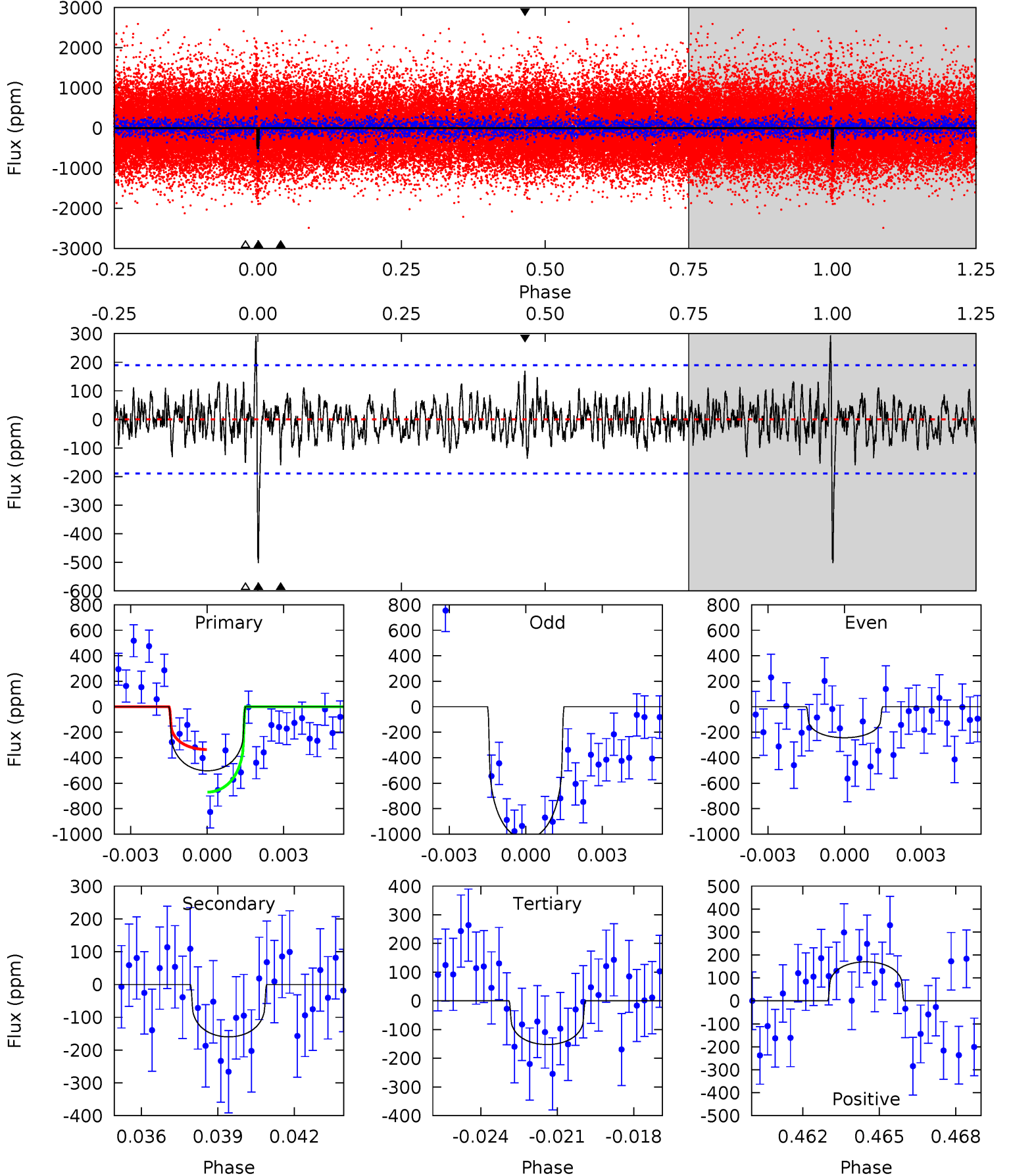
TCE 007034974-01 P=547.585352 Days $T_0=427.064855$ (BKJD)



DV Model-Shift Uniqueness Test

007034974-01, P = 547.580608 Days, E = 427.072024 Days

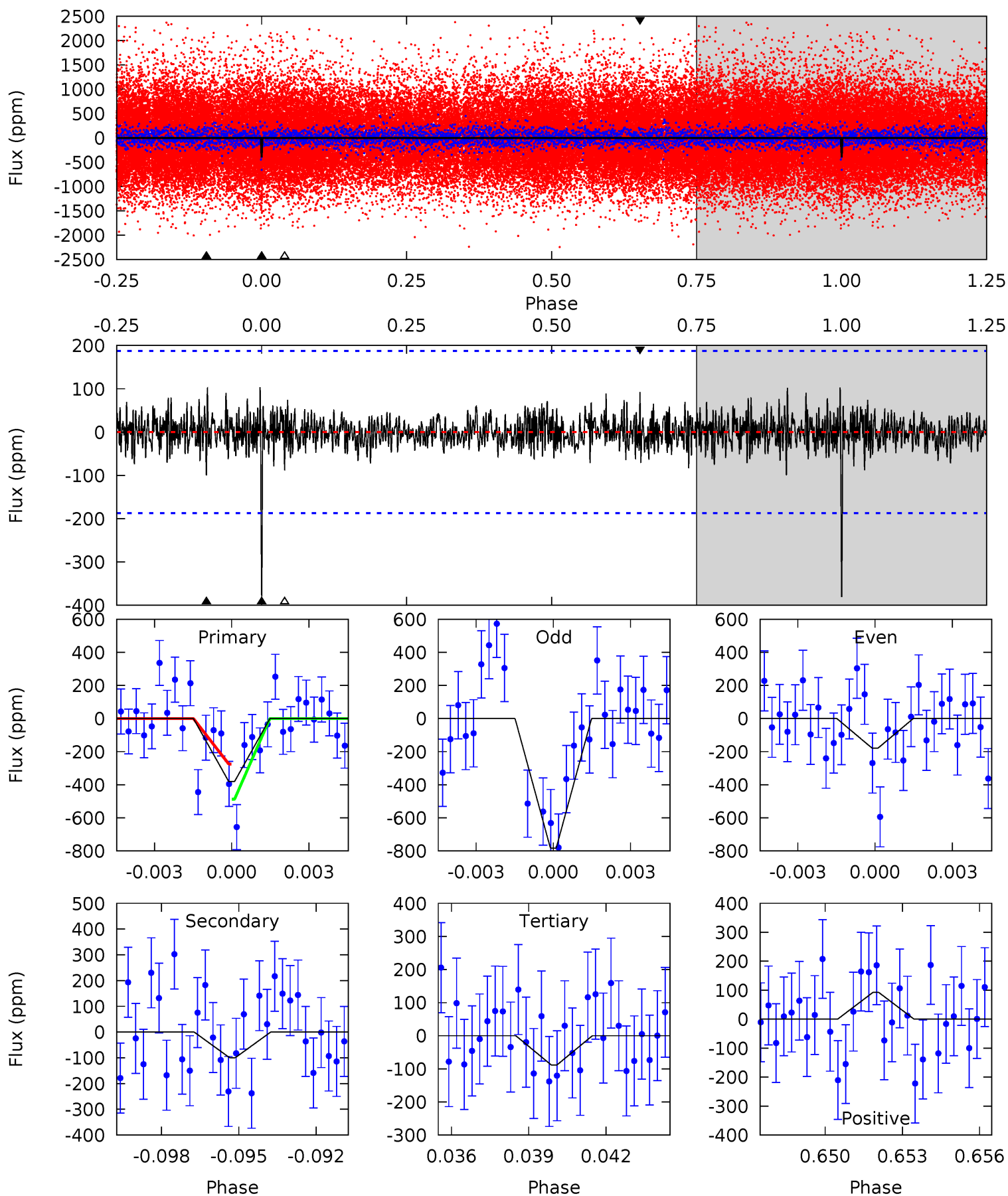
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	4.43	4.22	4.72	5.25	2.97	1.40	9.72	9.22	0.21	-0.28	10.3	1.24	0.37	4.65



Alt Model-Shift Uniqueness Test

007034974-01, P = 547.585352 Days, E = 427.064855 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	2.79	2.47	2.59	5.25	2.97	0.77	8.22	8.10	0.32	0.20	7.99	2.00	0.21	2.99



Stellar Parameters For KIC 007034974

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5334^{+159}_{-159}	$4.585^{+0.028}_{-0.112}$	$-0.020^{+0.300}_{-0.300}$	$0.796^{+0.132}_{-0.066}$	$0.893^{+0.061}_{-0.104}$	$2.497^{+0.465}_{-0.817}$
	+3%/-3%	+1%/-2%	+1500%/-1500%	+17%/-8%	+7%/-12%	+19%/-33%
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 007034974-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-160 ± 36	$1.95^{+0.84}_{-0.78}$	266^{+11}_{-11}	4263^{+939}_{-517}	34738^{+63125}_{-17560}
Alt.	-100 ± 36	$1.91^{+0.86}_{-0.76}$	265^{+12}_{-10}	3939^{+840}_{-504}	22882^{+38054}_{-13222}

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

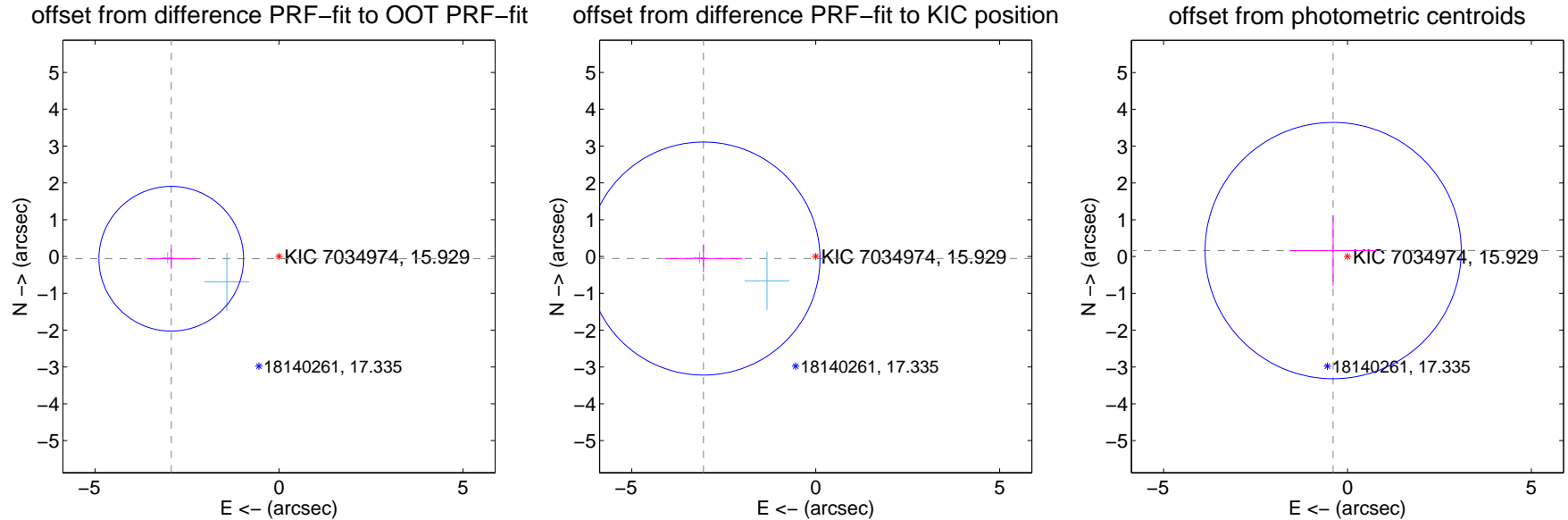
DV Centroid Data

Supplemental centroid analysis for 007034974-01. Kepler magnitude: 15.93. Transit SNR 9.38

There are 2 quarters with good PRF difference image offsets

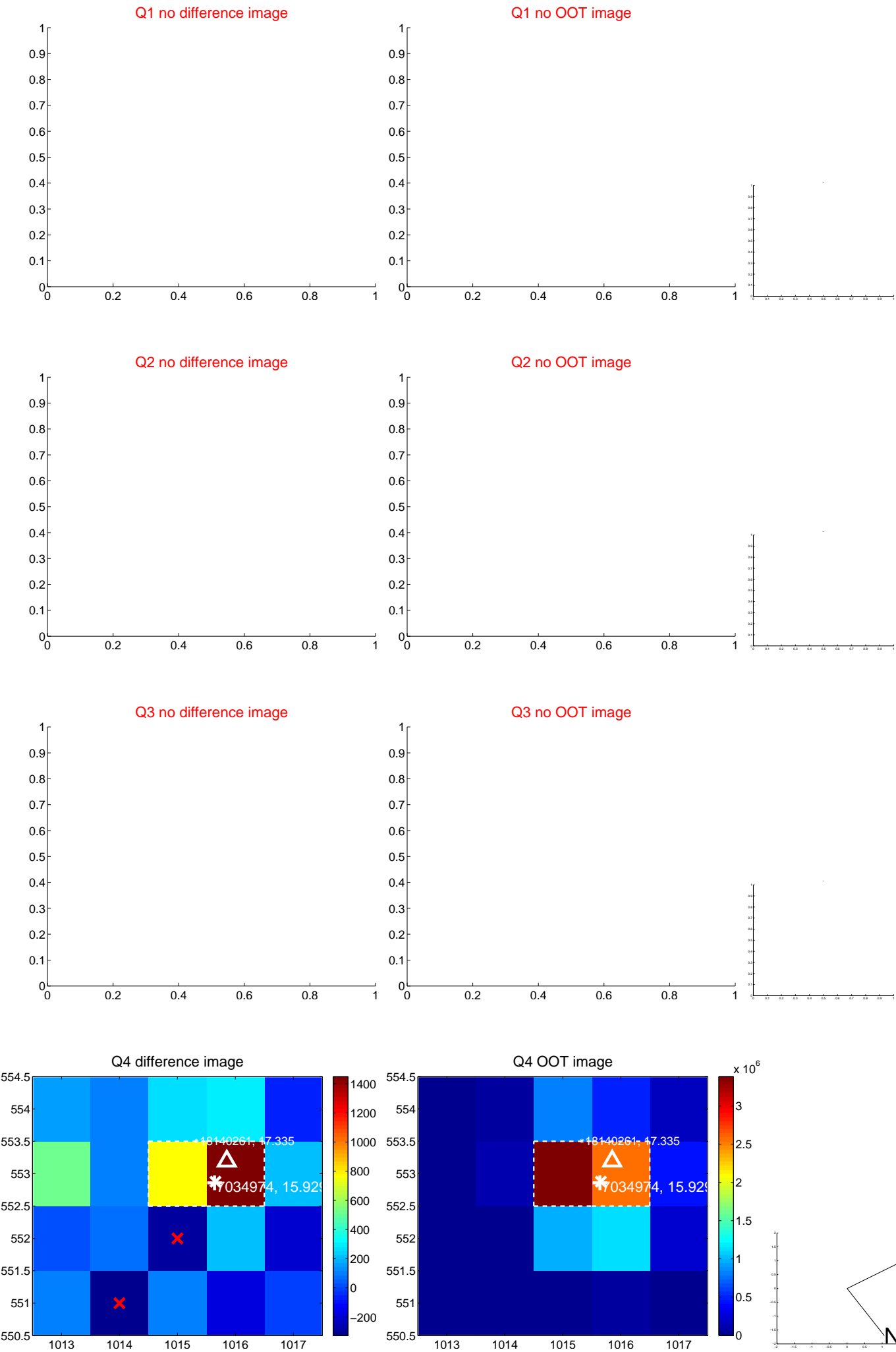
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.929 ± 0.655	4.47	2.928 ± 0.661	-0.060 ± 0.273
PRF-fit source offset from KIC position	3.050 ± 1.055	2.89	3.049 ± 1.062	-0.055 ± 0.368
photometric centroid source offset	0.42 ± 1.16	0.36	0.39 ± 1.19	0.16 ± 0.95



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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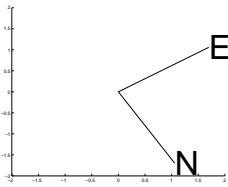
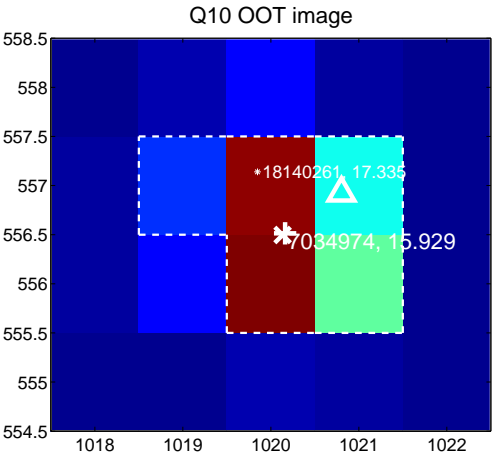
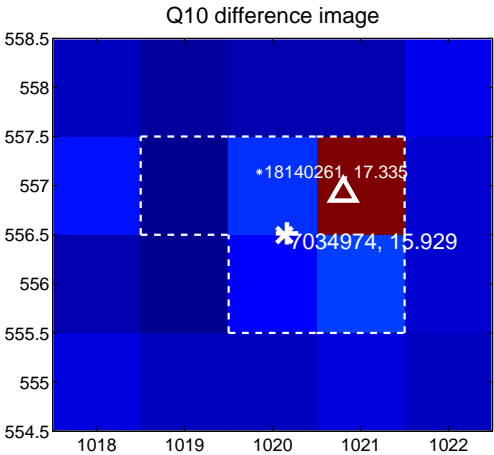


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

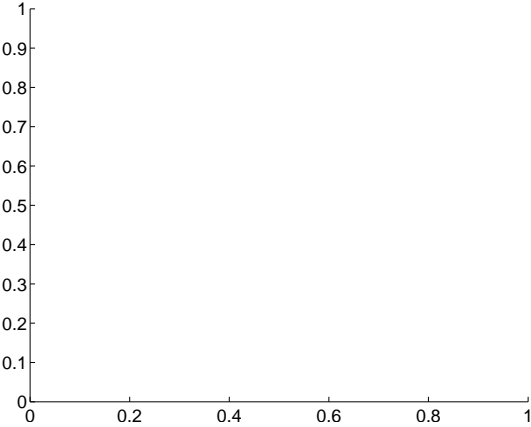
Q9 no difference image



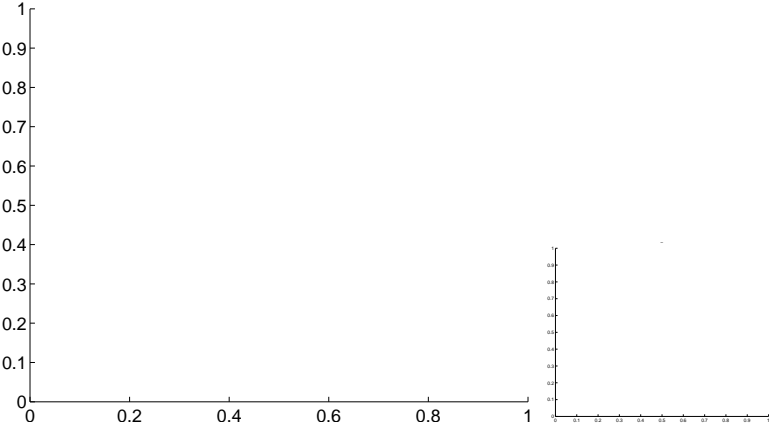
Q9 no OOT image



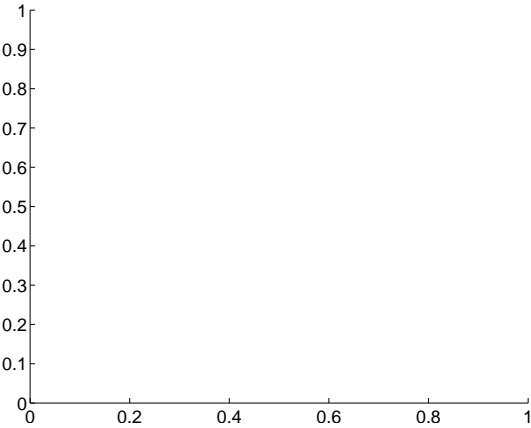
Q11 no difference image



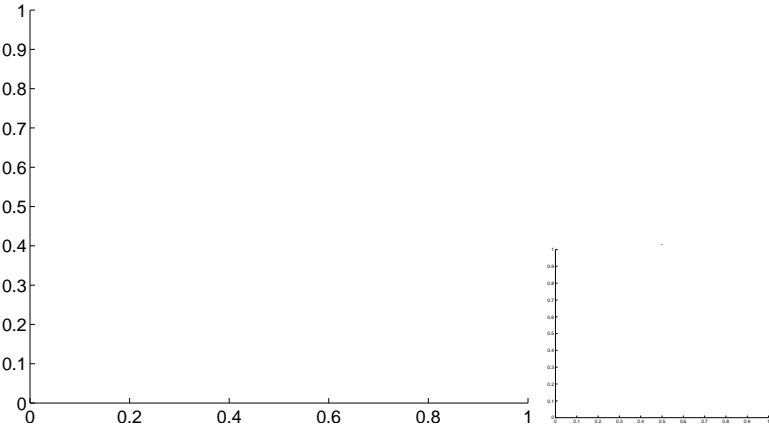
Q11 no OOT image



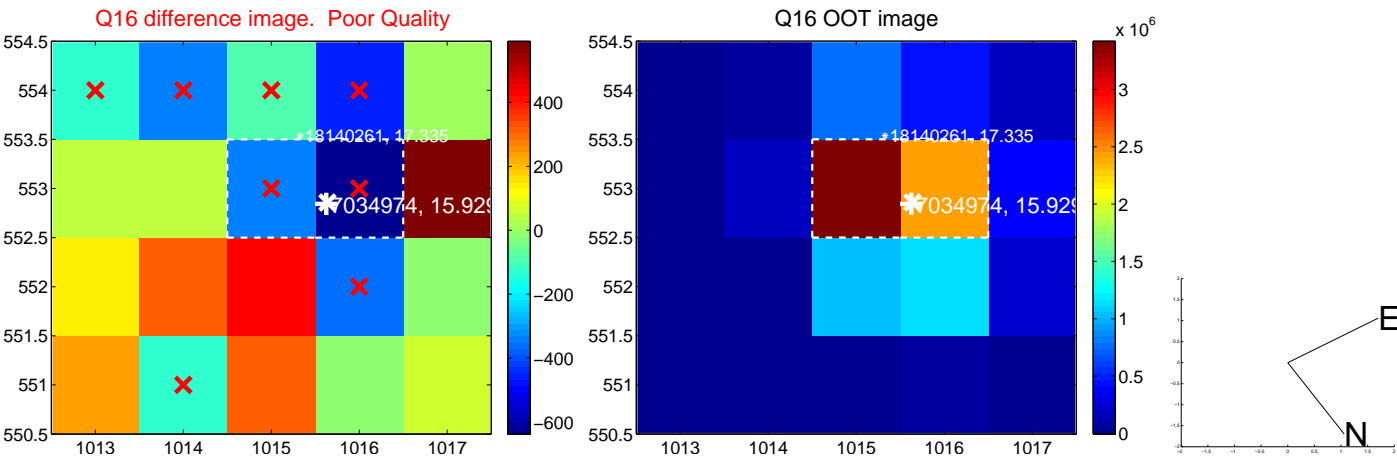
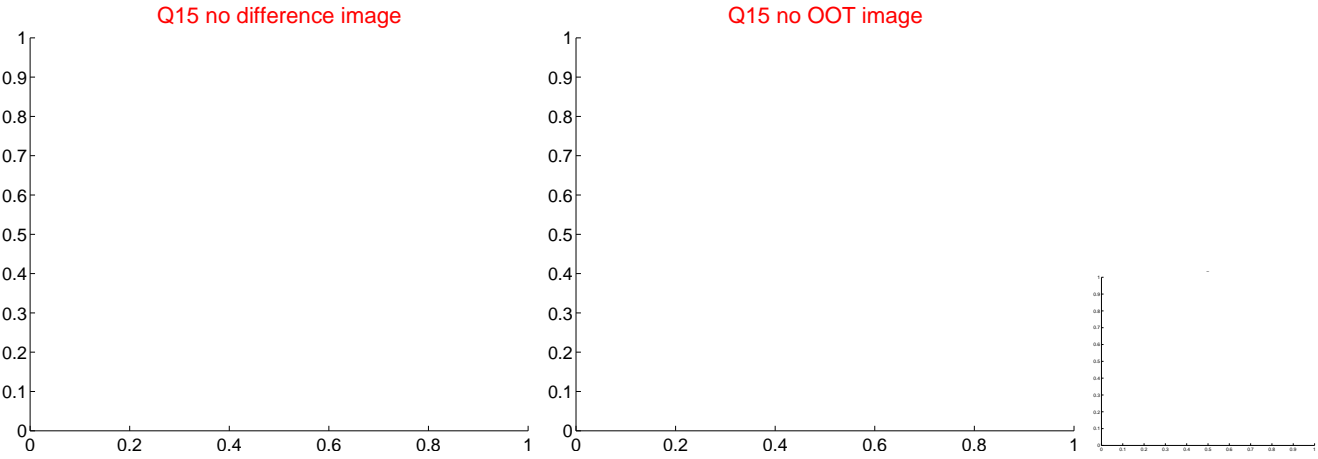
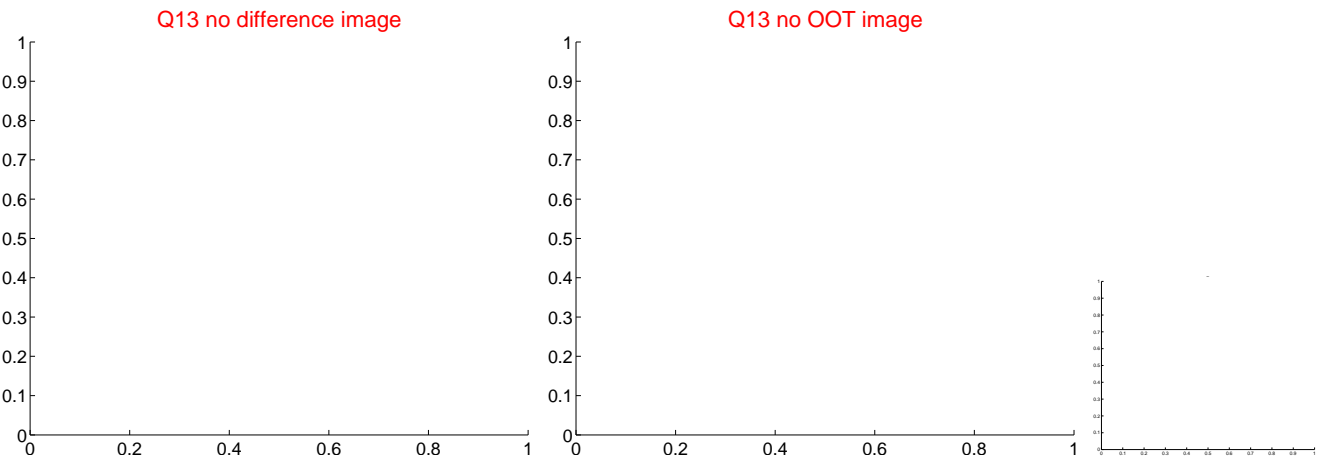
Q12 no difference image



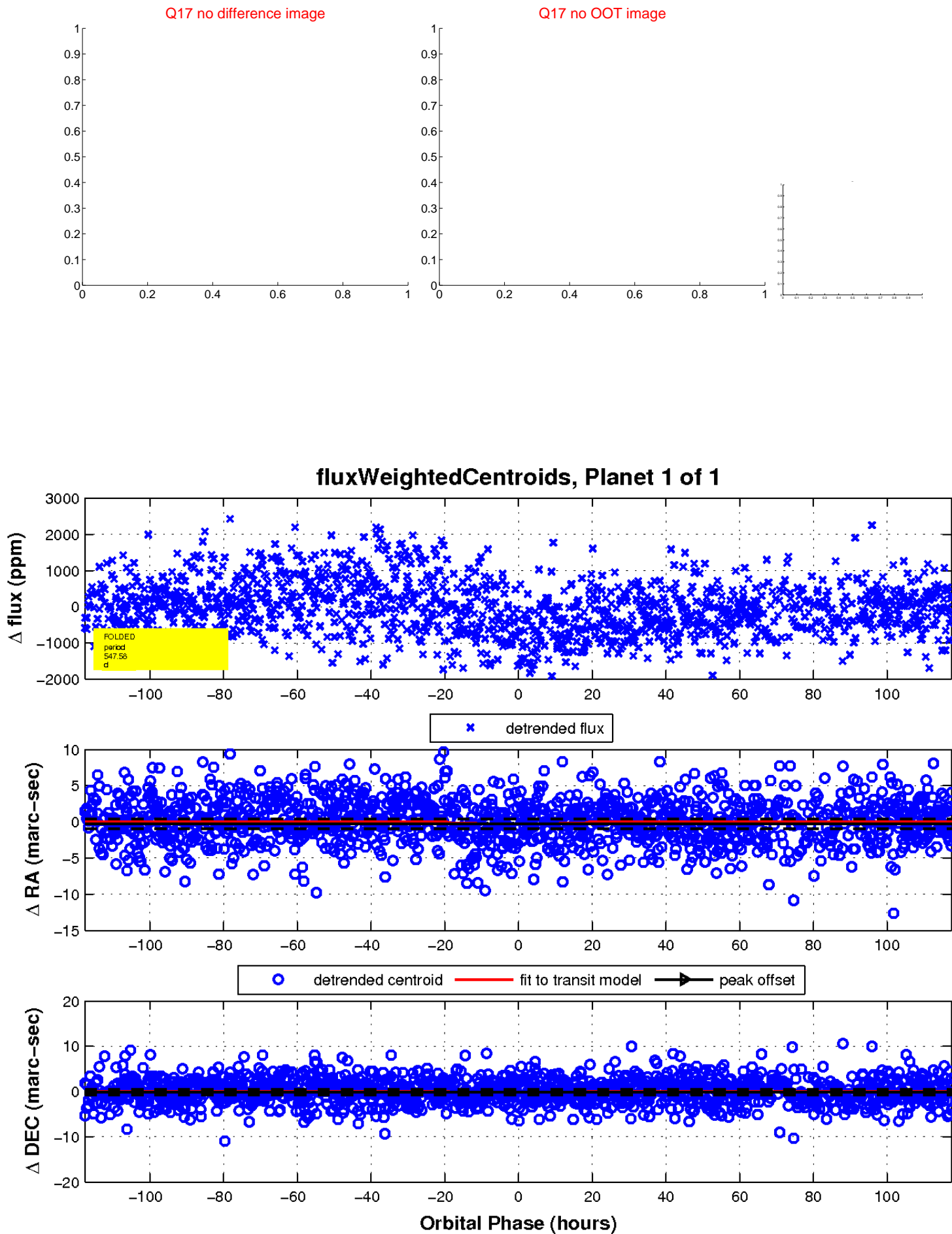
Q12 no OOT image



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.



UKIRT Image

Declination

