

KIC 007968405

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})
007968405-01	OBS	No	371.125994	232.709254	805.7	46.784	7.4	6.4	0.86	5799	4.75	0.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007968405-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

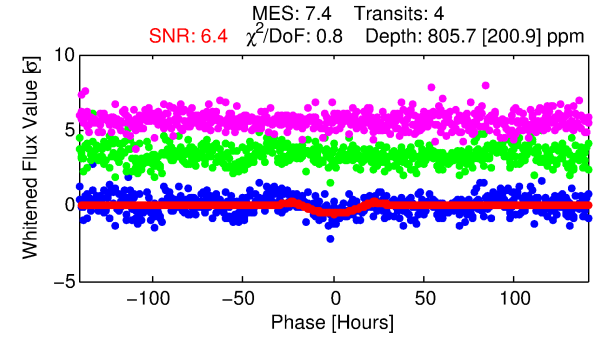
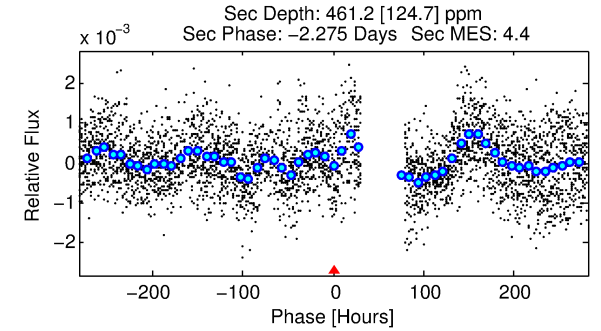
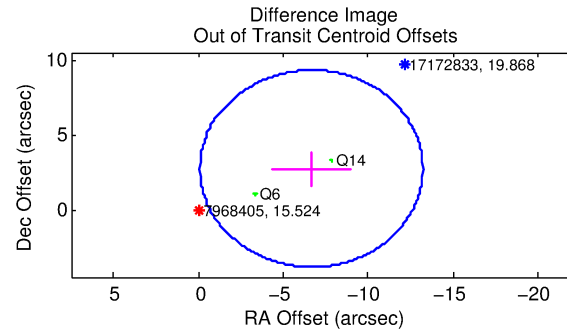
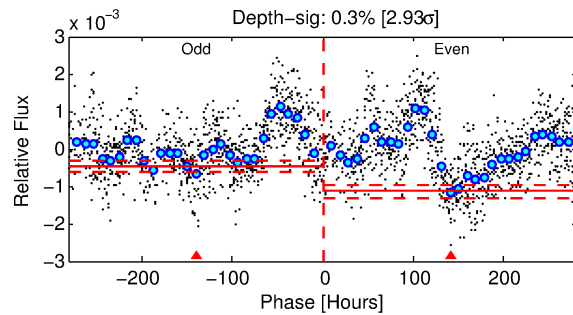
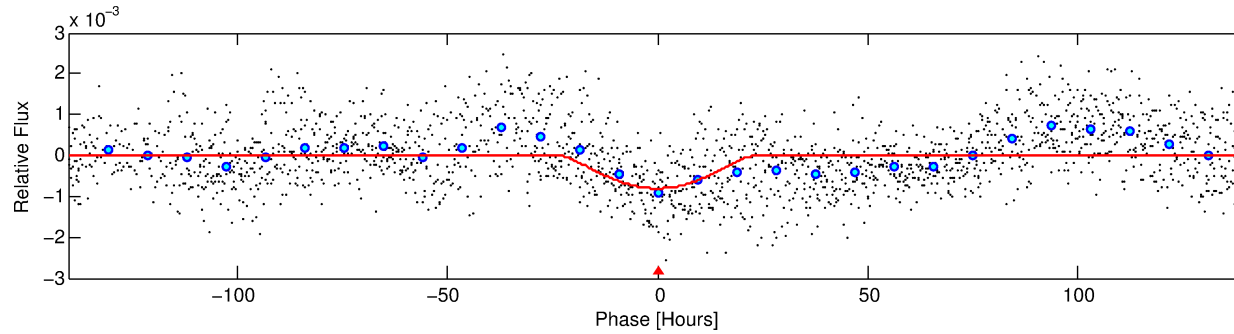
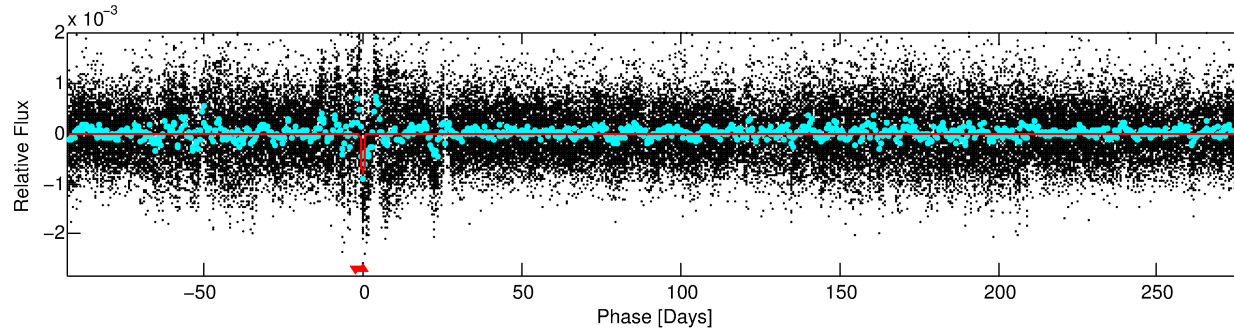
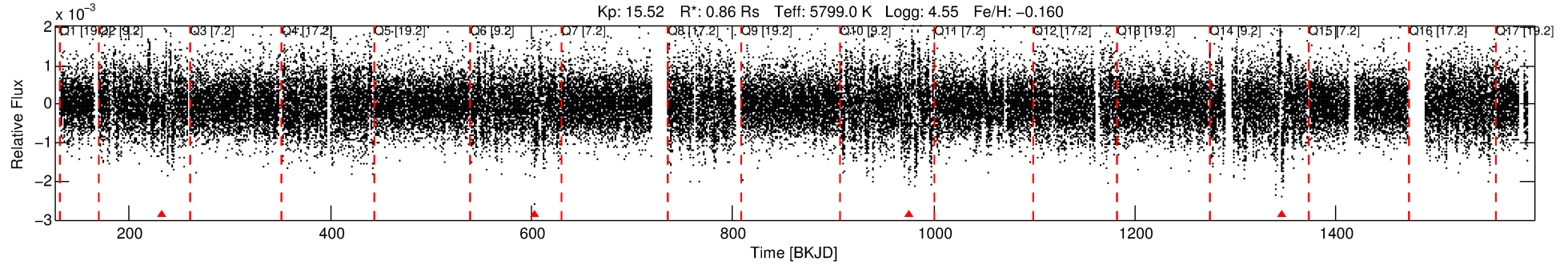
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007968405-01

No Significant Match Found

DV One-Page Summary

KIC: 7968405 Candidate: 1 of 1 Period: 371.126 d



DV Fit Results:

Period = 371.12599 [0.05210] d
Epoch = 232.7093 [0.0885] BKJD
Rp/R* = 0.0506 [0.1160]
a/R* = 19.62 [10.72]
b = 1.00 [0.17]
Seff = 0.76 [0.28]
Teq = 238 [22] K
Rp = 4.75 [10.97] Re
a = 0.9947 [0.2404] AU
Ag = 11128.87 [51260.53] [0.22 σ]
Teffp = 3777 [4338] K [0.82 σ]

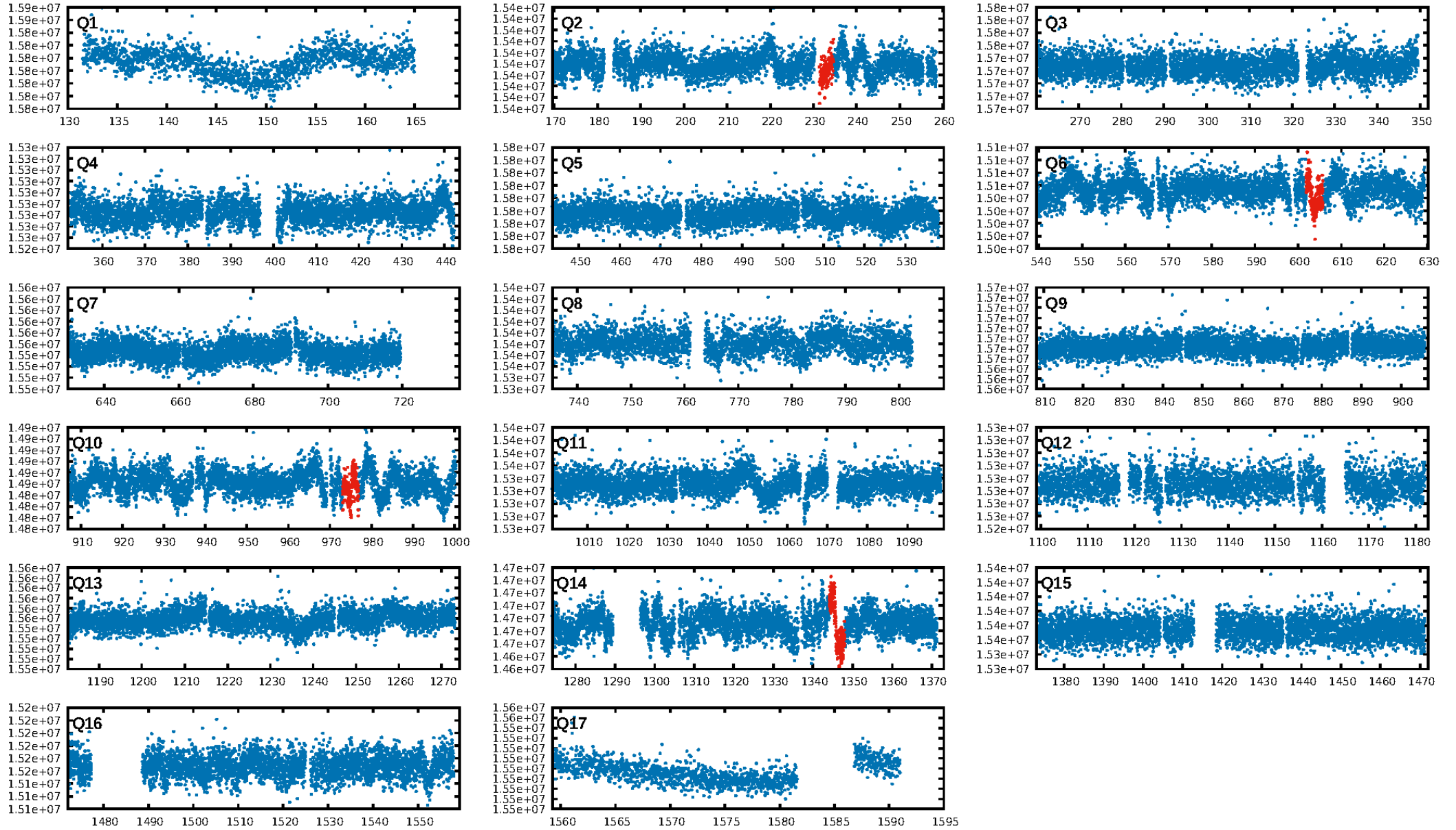
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 18.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.86e-09
RollingBand-fgt: 0.00 [0/4]
GhostDiagnostic-chr: -0.1088
Centroid-sig: 1.4%
Centroid-so: 5.898 arcsec [1.73 σ]
OotOffset-rm: 7.207 arcsec [3.29 σ]
KicOffset-rm: 7.172 arcsec [3.26 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

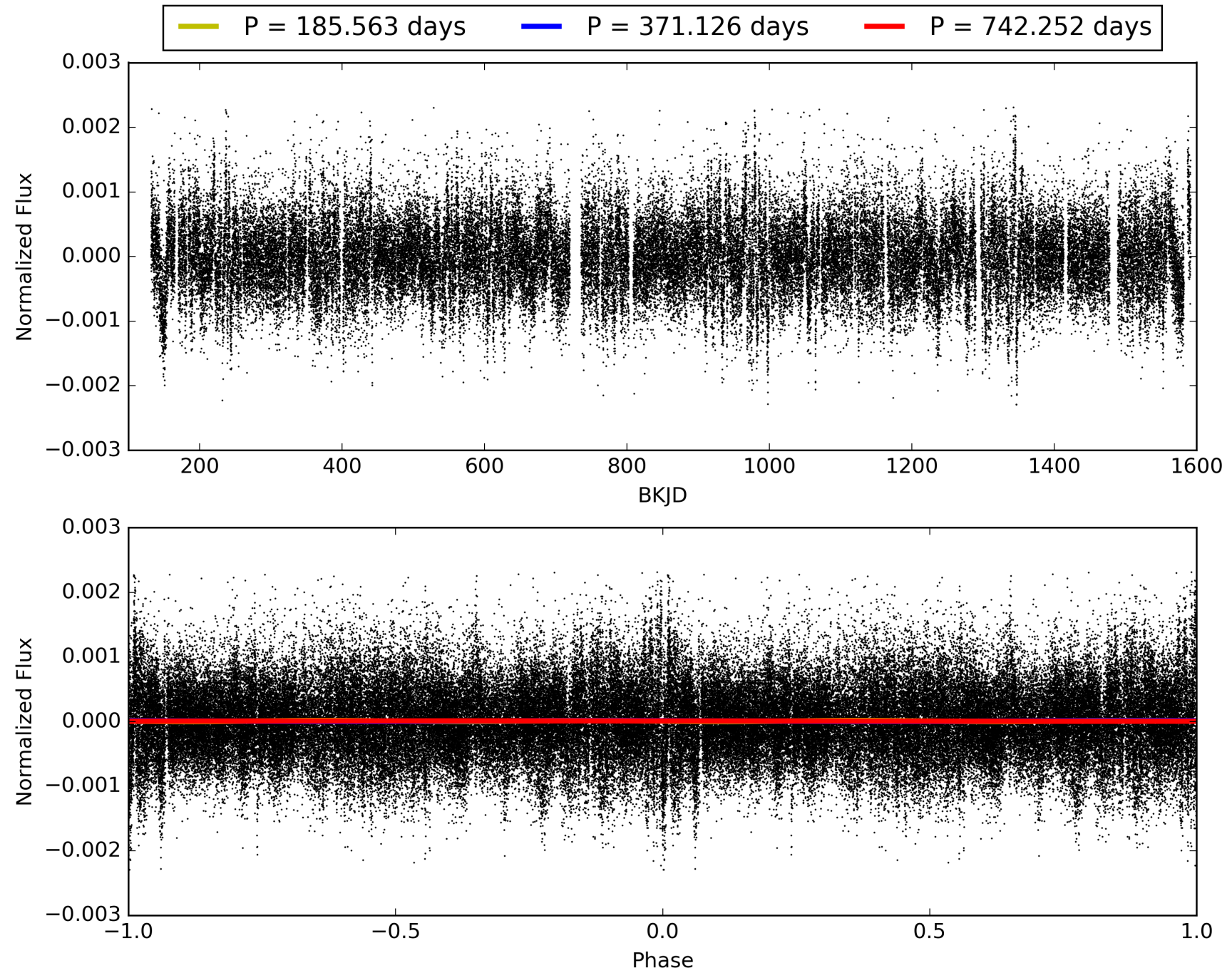
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:25:27 Z

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

TCE 007968405-01, PDC Light Curves

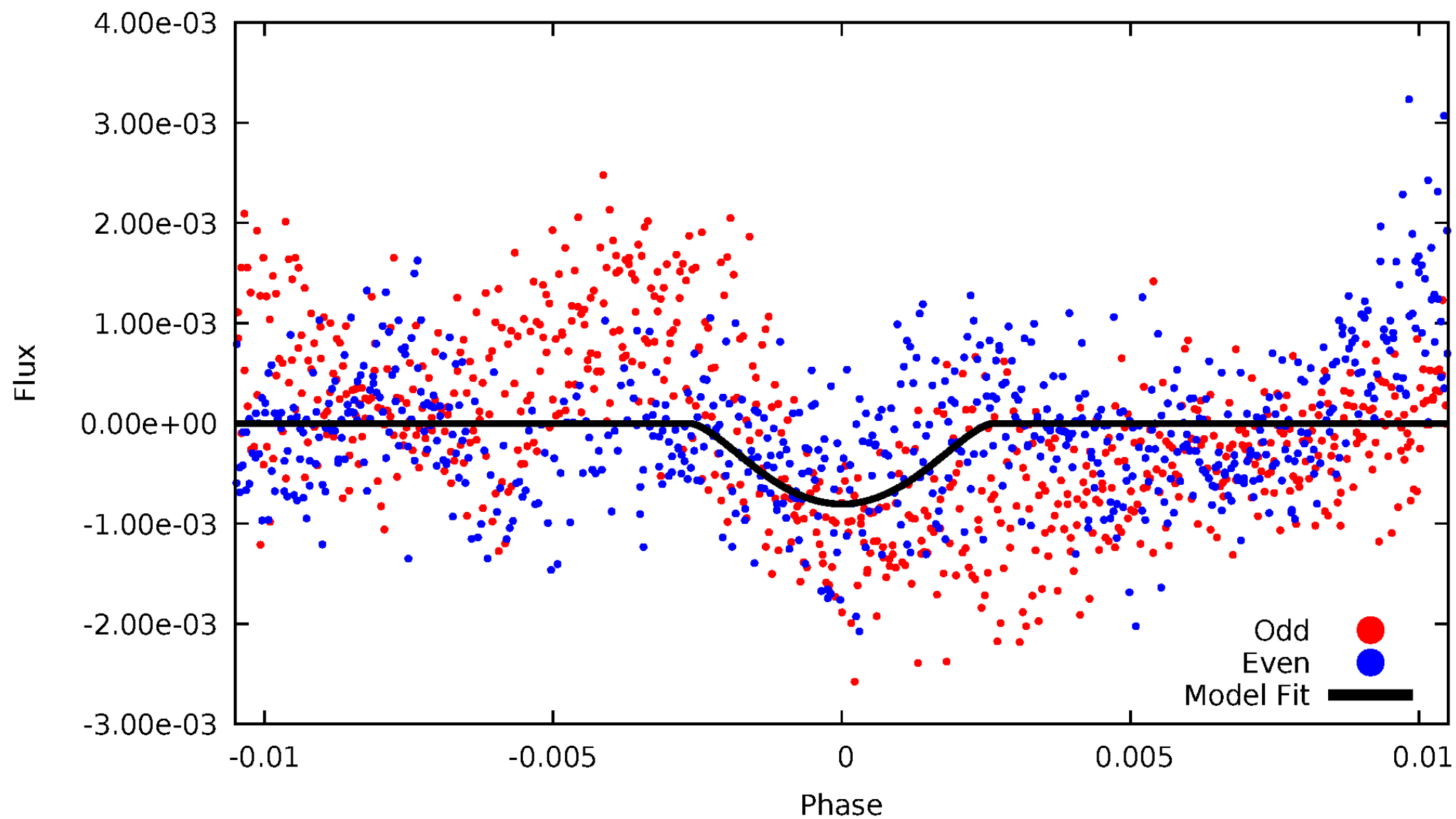


TCE 007968405-01



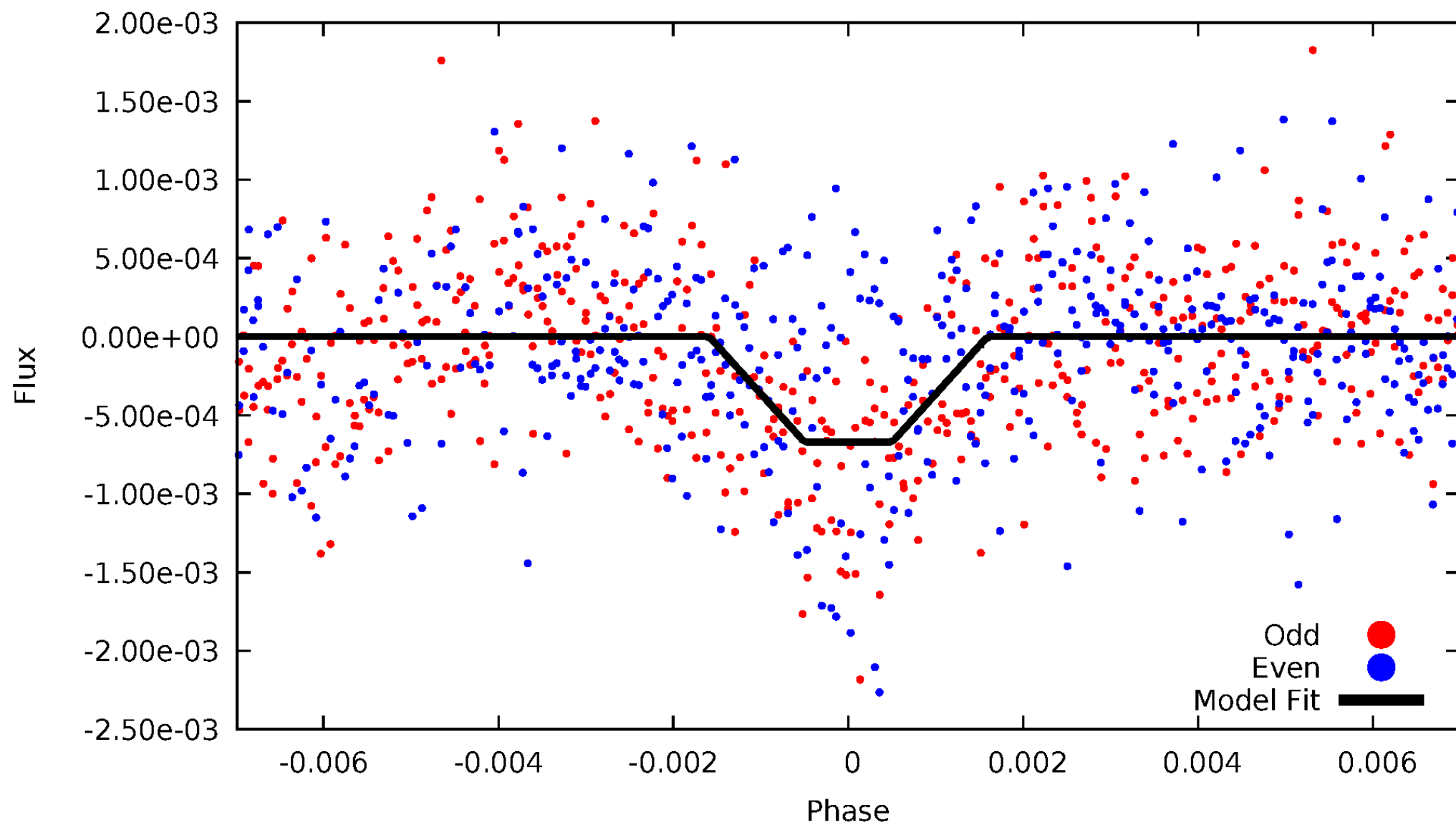
DV Odd/Even

TCE 007968405-01



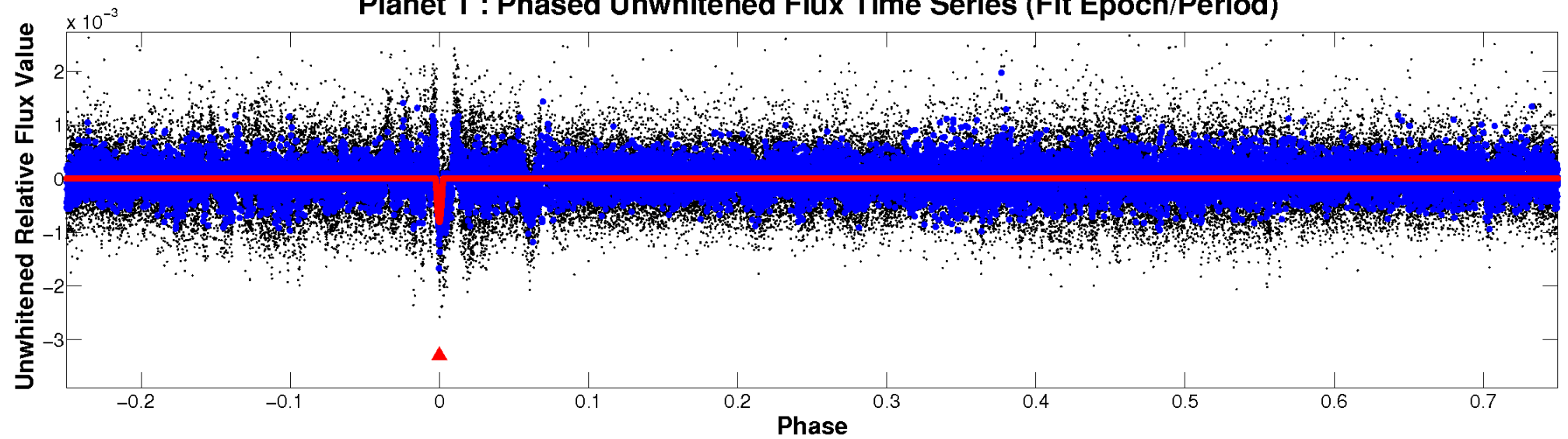
ALT Odd/Even

TCE 007968405-01

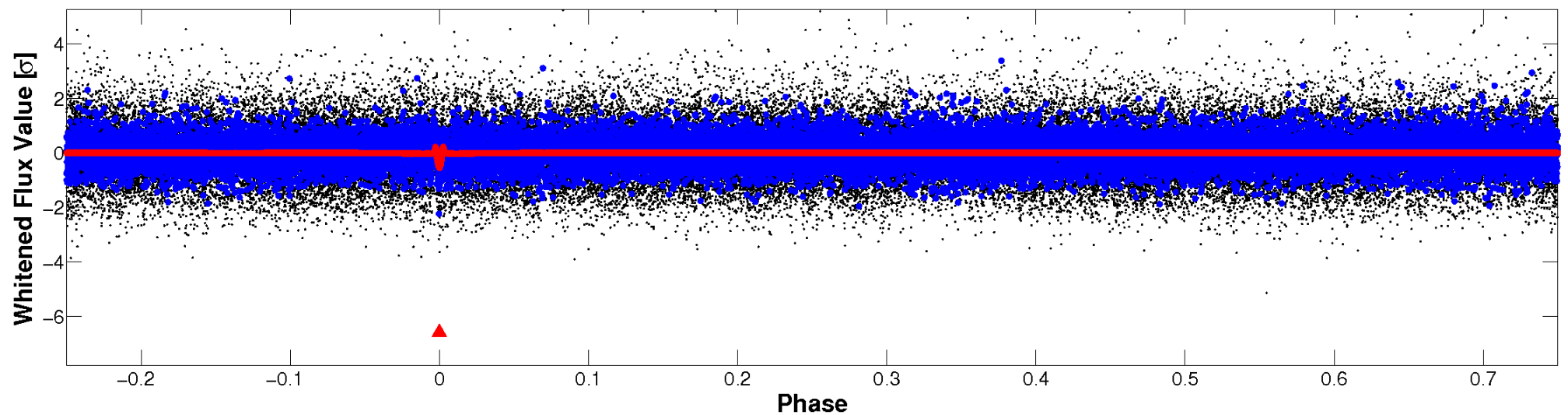


Non-Whitened Vs. Whitened Light Curve

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

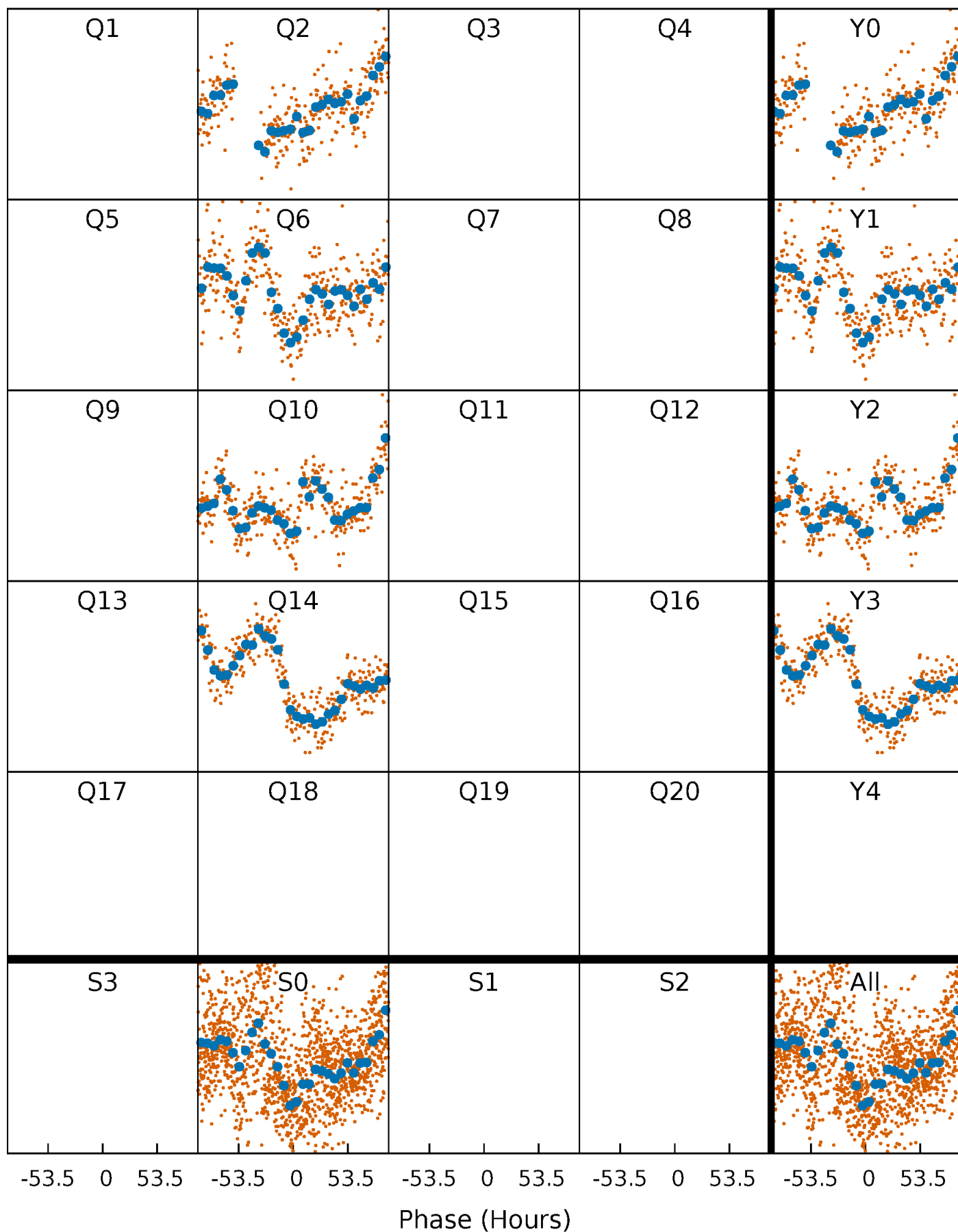


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



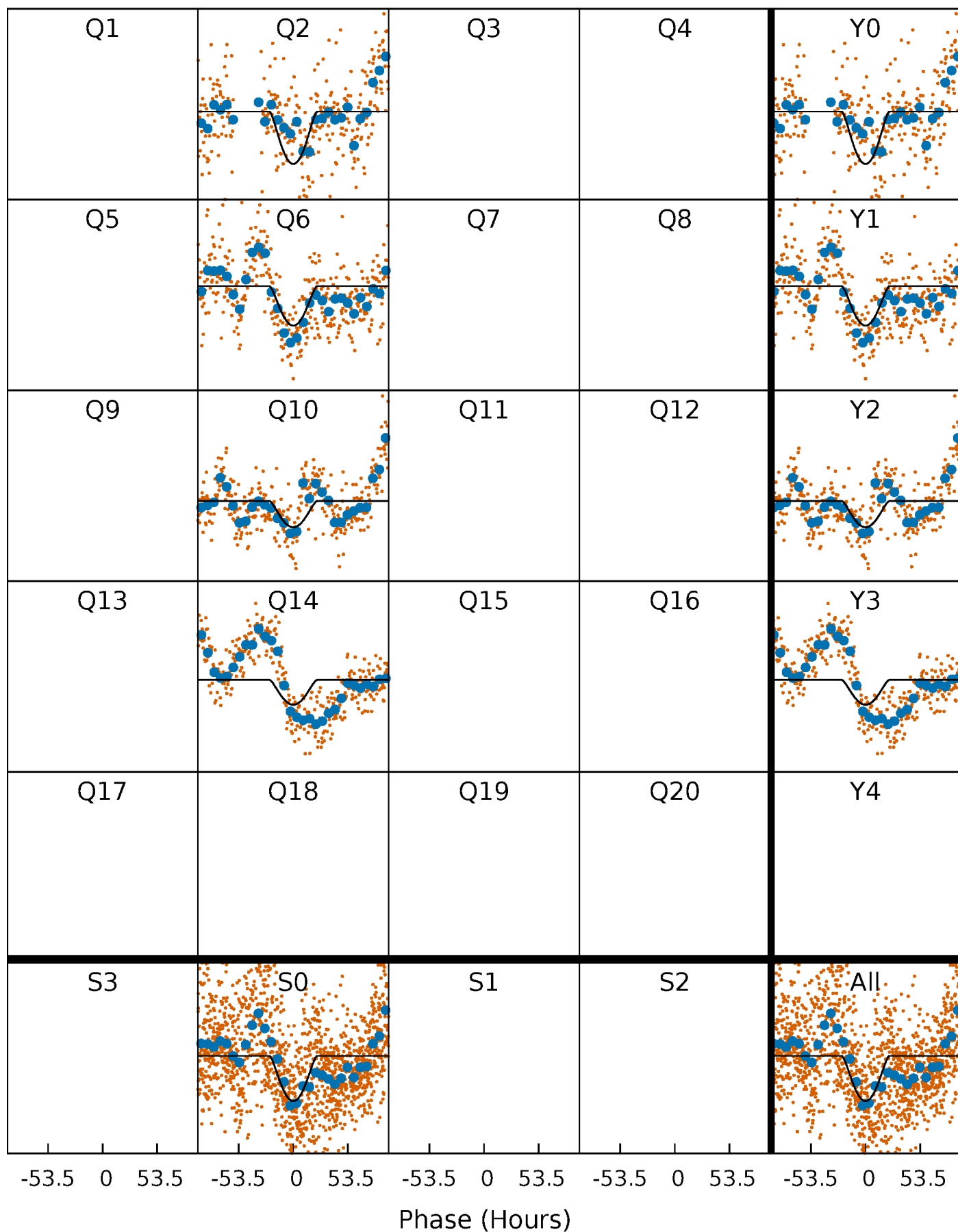
PDC Quarter-Phased Transit Curves

TCE 007968405-01 P=371.125994 Days $T_0=232.709254$ (BKJD)



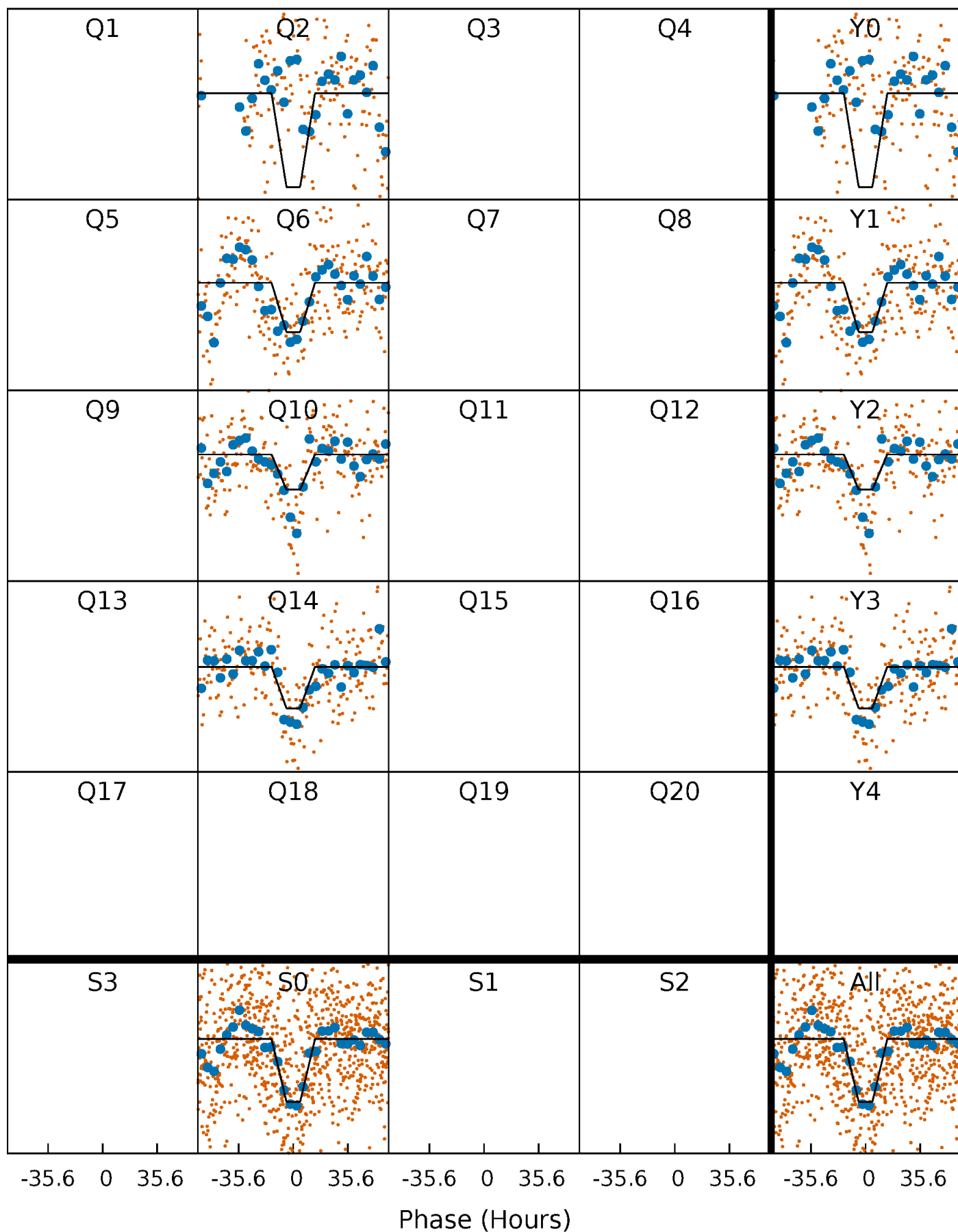
DV Quarter-Phased Transit Curves

TCE 007968405-01 $P=371.125994$ Days $T_0=232.709254$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

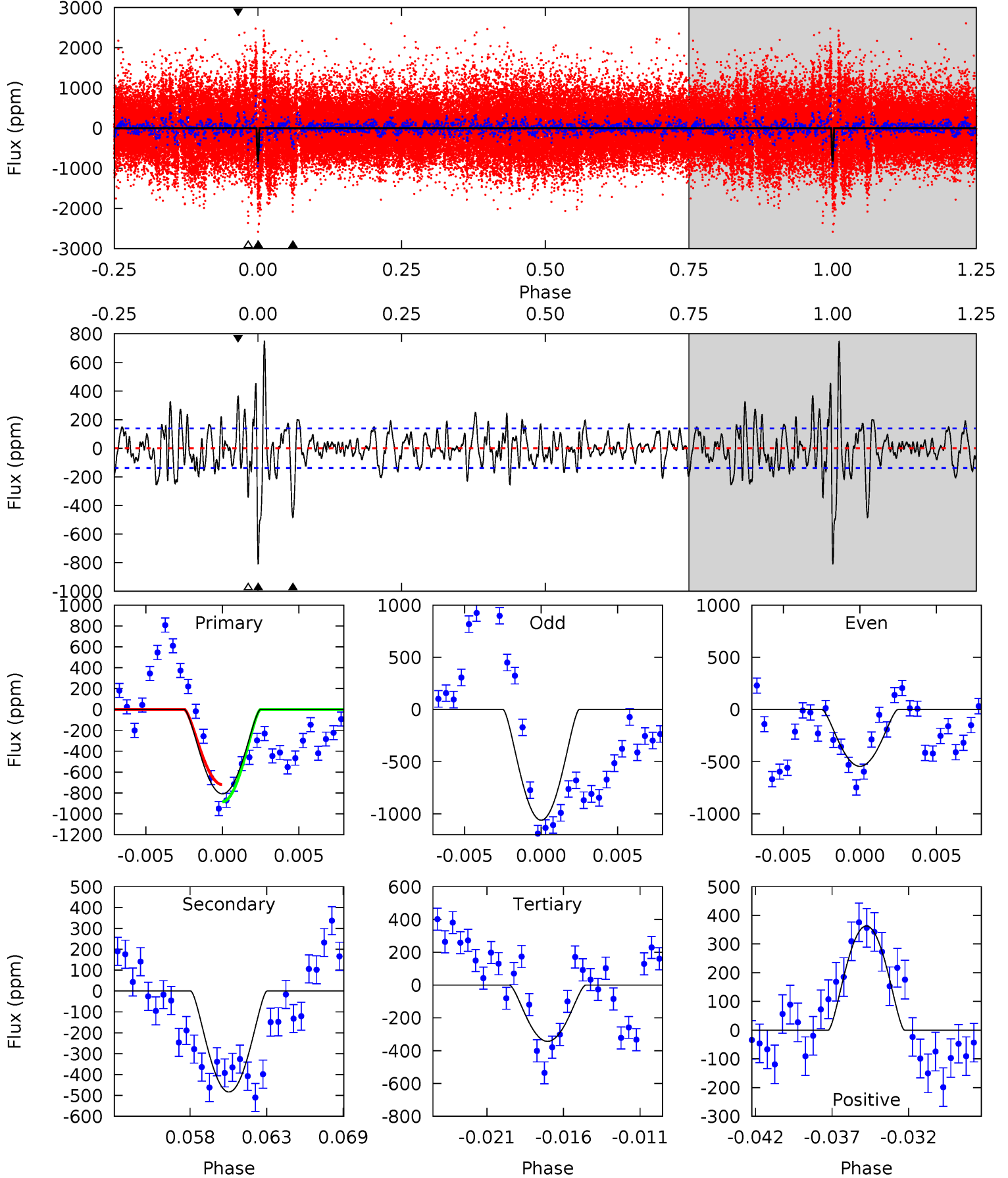
TCE 007968405-01 P=371.073450 Days $T_0=232.795217$ (BKJD)



DV Model-Shift Uniqueness Test

007968405-01, P = 371.125994 Days, E = 232.709254 Days

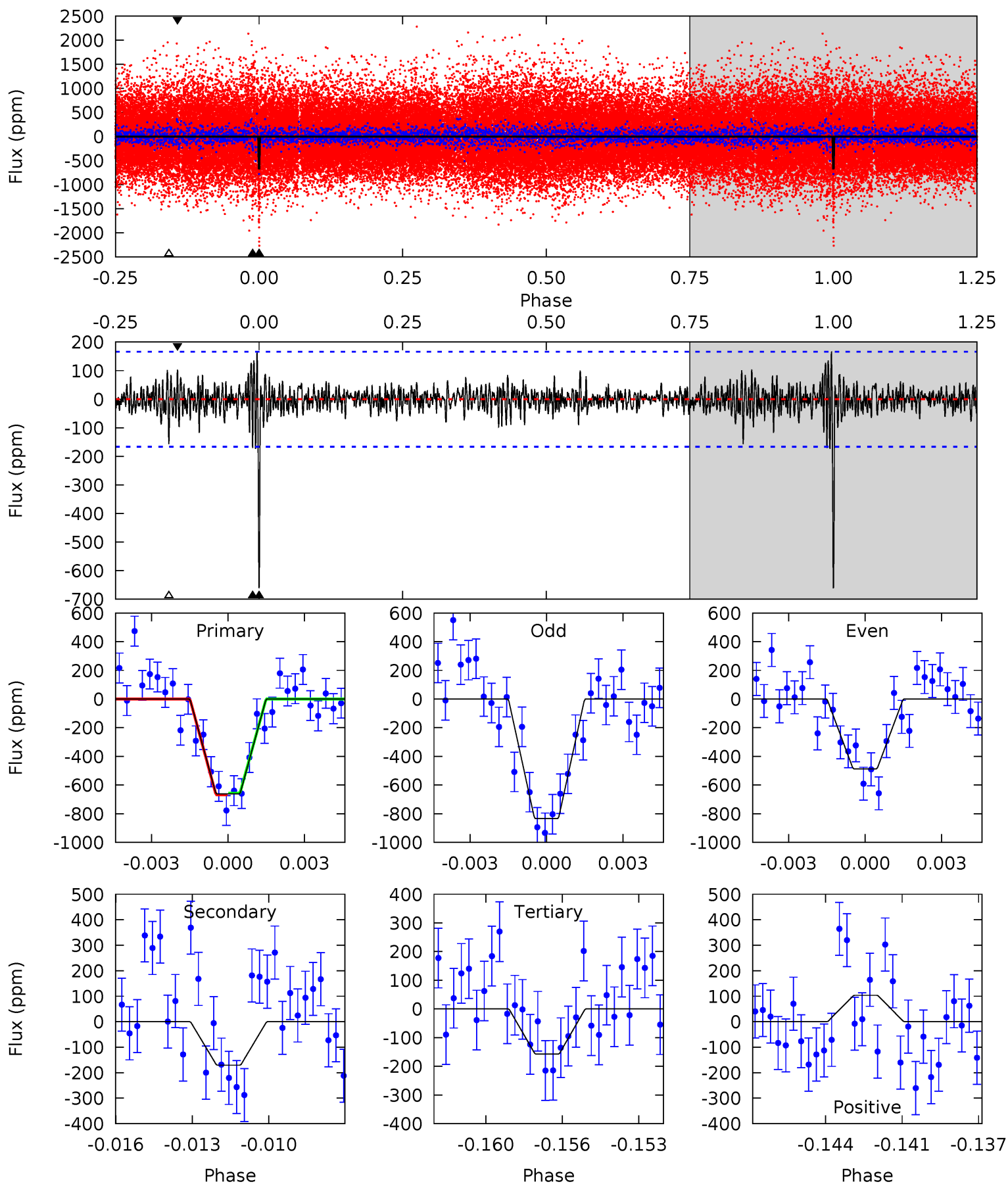
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.0	17.9	12.7	13.4	5.15	2.79	4.03	17.2	16.5	5.20	4.47	9.58	0.97	0.48	3.03



Alt Model-Shift Uniqueness Test

007968405-01, $P = 371.073450$ Days, $E = 232.795217$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.9	5.39	4.97	3.27	5.24	2.95	1.01	15.9	17.6	0.42	2.12	5.45	0.79	0.20	0.19



Stellar Parameters For KIC 007968405

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5799^{+155}_{-172}	$4.548^{+0.035}_{-0.196}$	$-0.160^{+0.300}_{-0.300}$	$0.860^{+0.244}_{-0.076}$	$0.955^{+0.100}_{-0.111}$	$2.112^{+0.385}_{-1.025}$
	+3%/-3%	+1%/-4%	+188%/-188%	+28%/-9%	+10%/-12%	+18%/-49%
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 007968405-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-484 ± 27	$9.21^{+10.53}_{-6.14}$	339^{+23}_{-14}	3326^{+1622}_{-610}	2975^{+24507}_{-2304}
Alt.	-171 ± 32	$8.95^{+9.33}_{-6.21}$	342^{+23}_{-16}	2911^{+1252}_{-500}	1114^{+10350}_{-857}

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 $A_{obs} \gg 1.0$

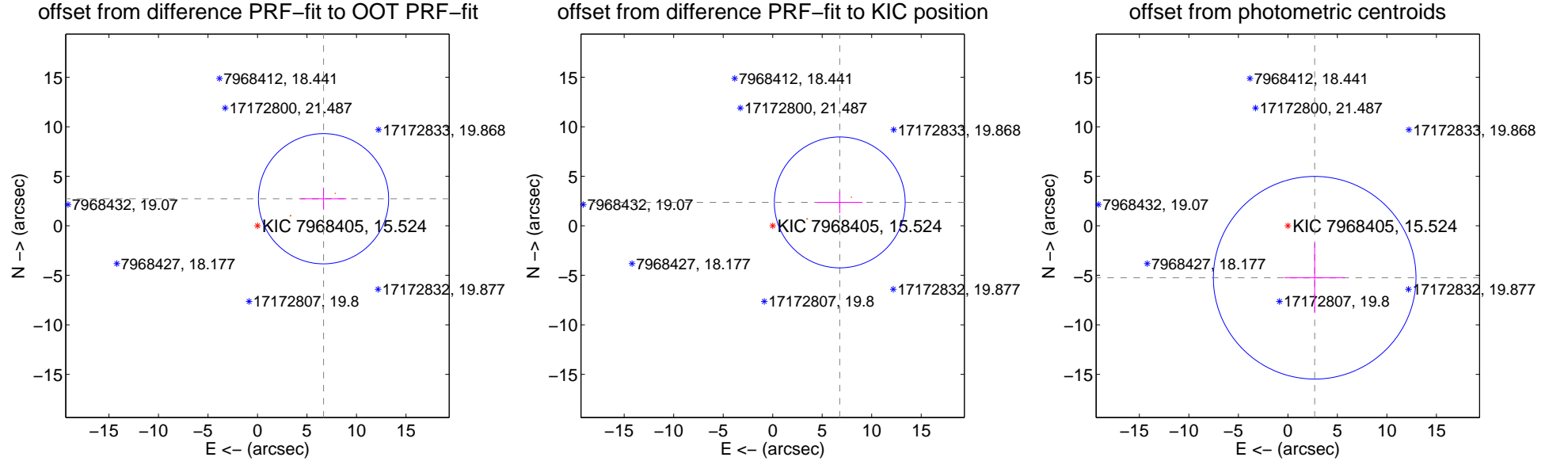
DV Centroid Data

Supplemental centroid analysis for 007968405-01. Kepler magnitude: 15.52. Transit SNR 6.40

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.207 ± 2.191	3.29	-6.668 ± 2.323	2.735 ± 1.123
PRF-fit source offset from KIC position	7.172 ± 2.202	3.26	-6.771 ± 2.302	2.364 ± 1.091
photometric centroid source offset	5.90 ± 3.41	1.73	-2.71 ± 3.07	-5.24 ± 3.49

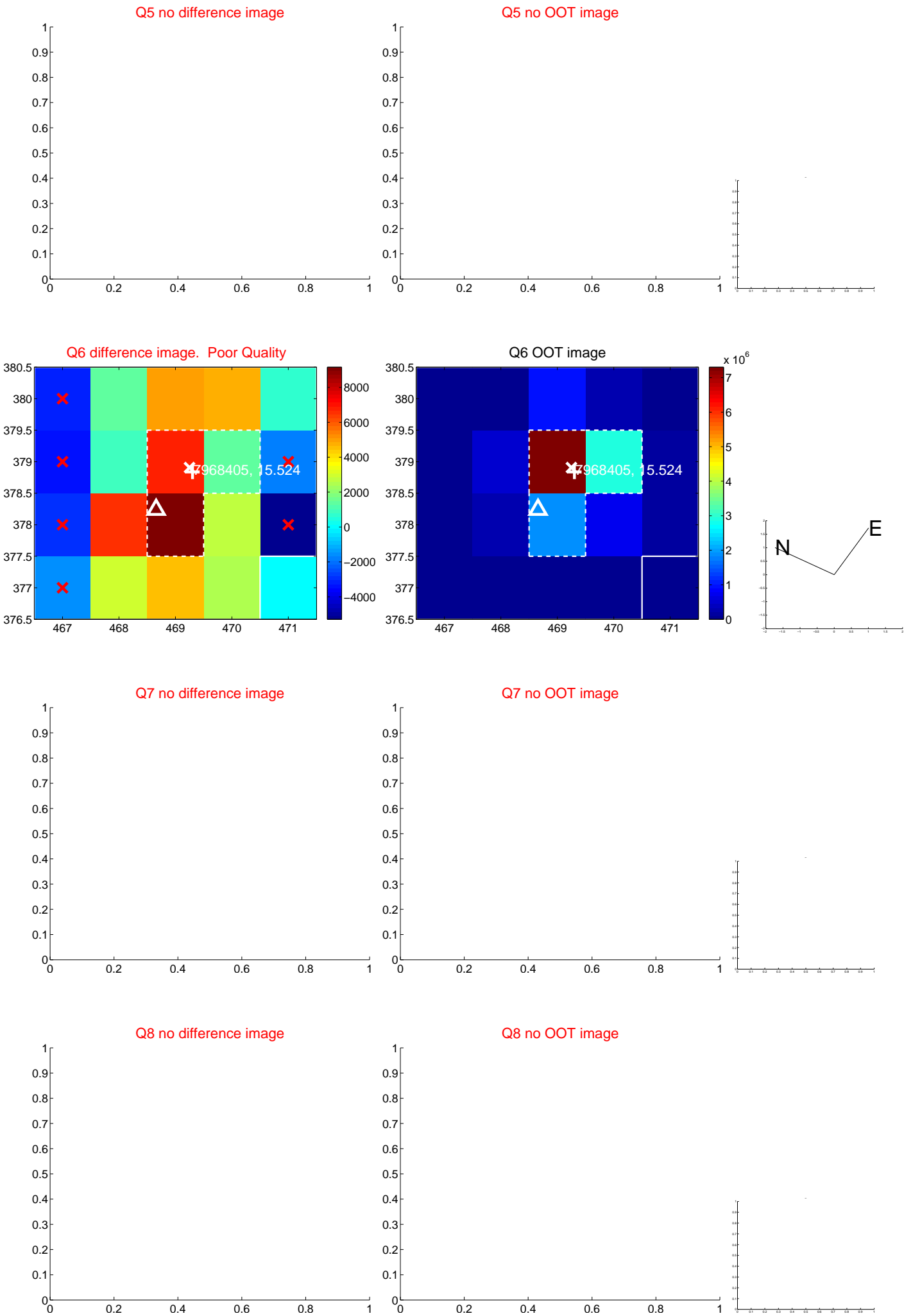


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

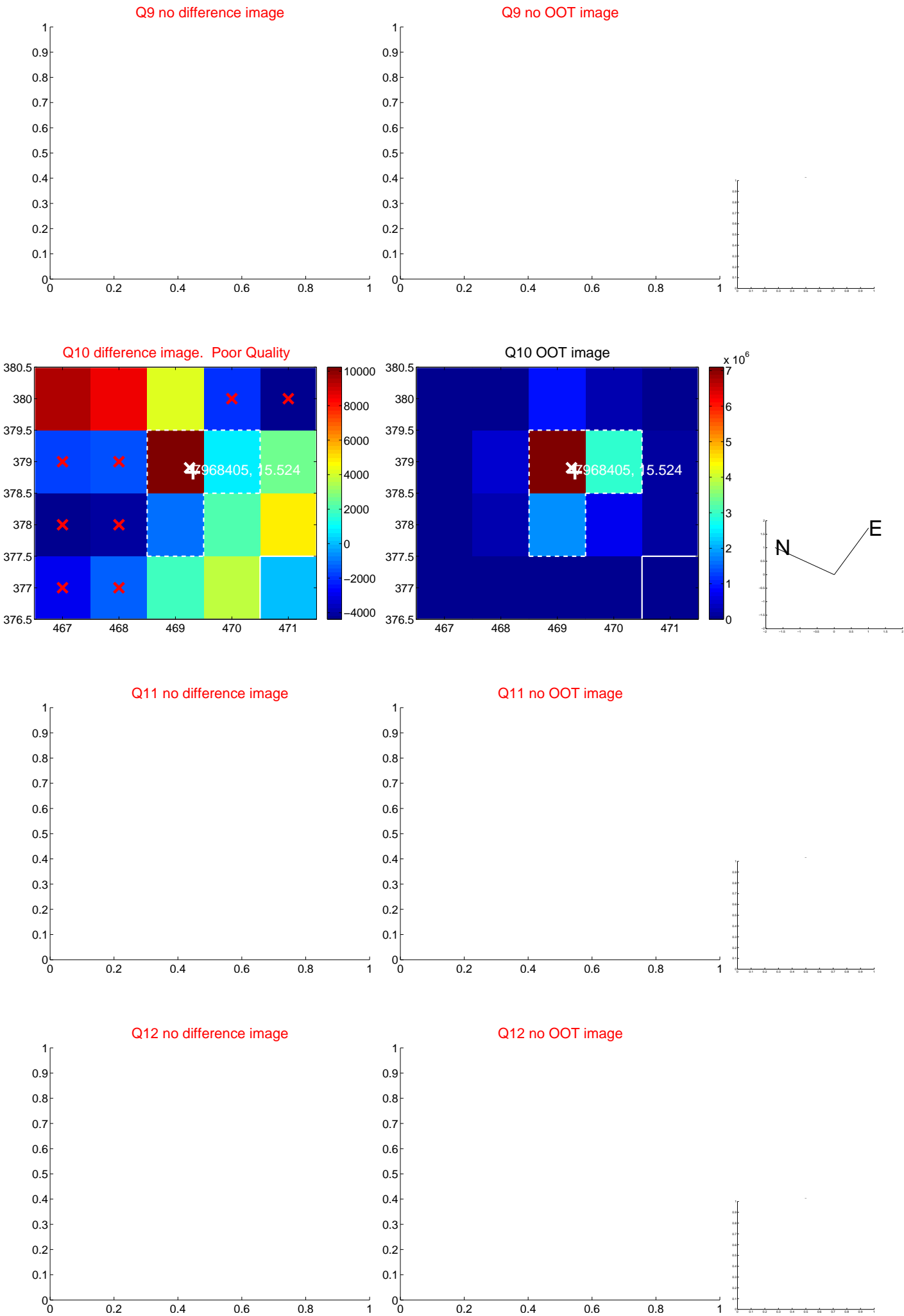
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



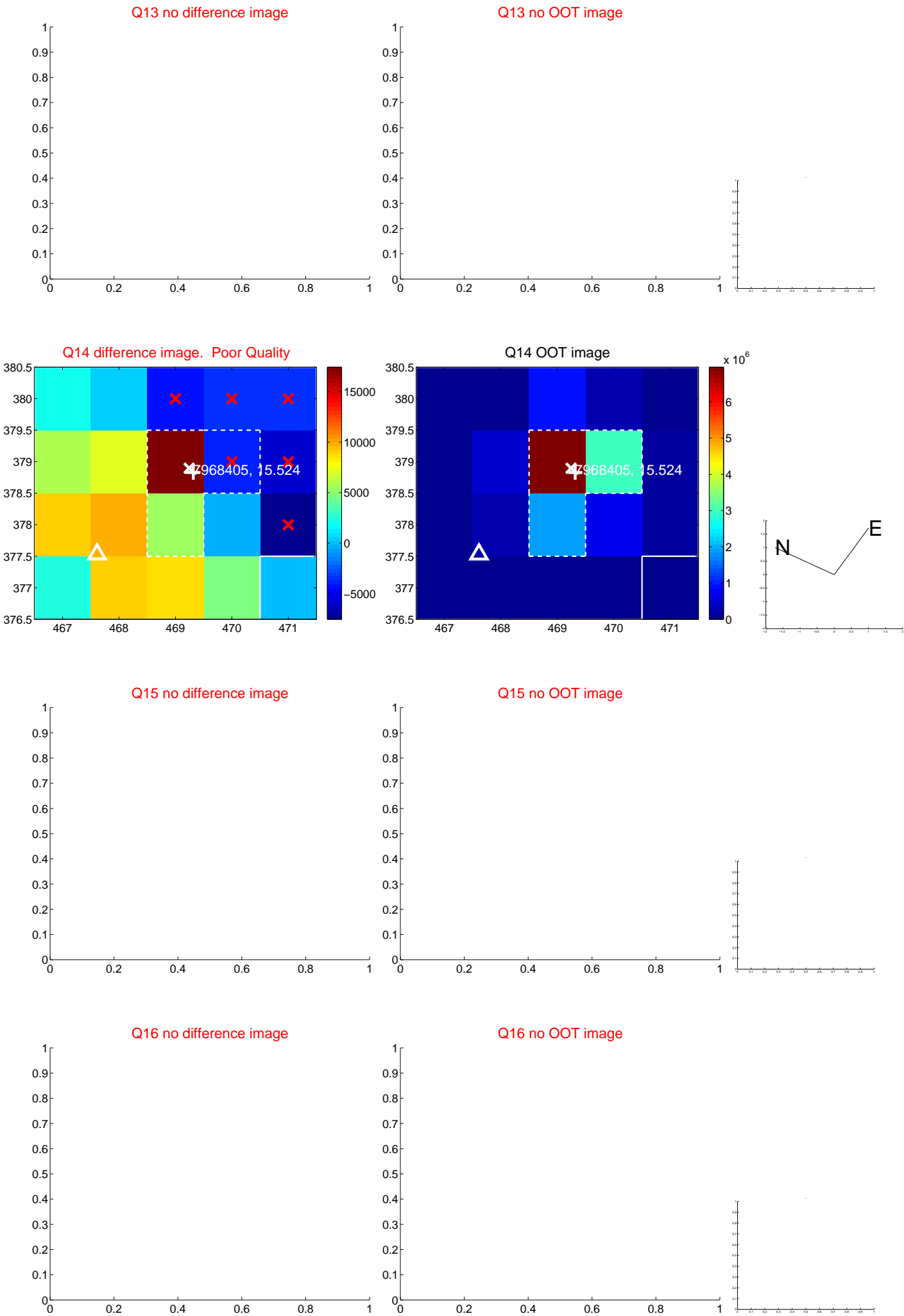
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



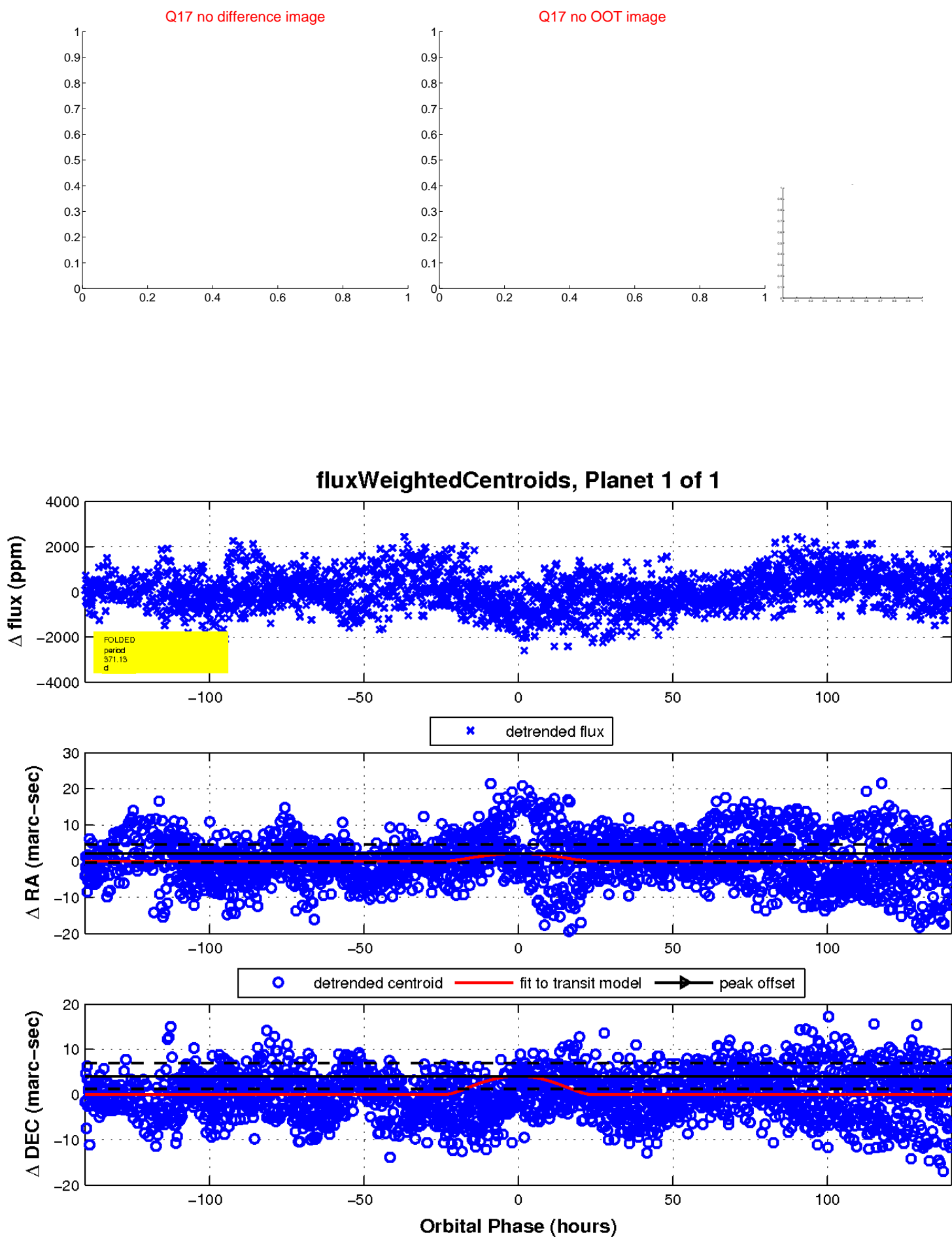
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

