

KIC 007971206

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})
007971206-01	OBS	No	369.463346	232.978041	2552.3	25.043	12.8	13.2	0.83	5598	6.63	0.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007971206-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_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.

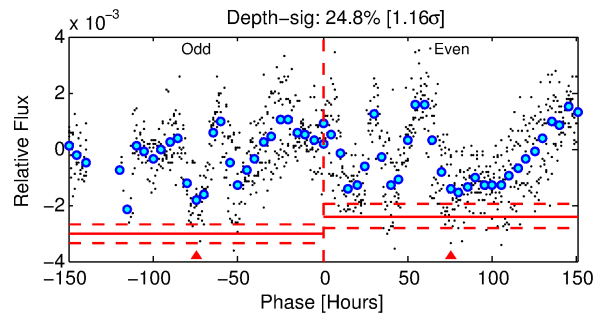
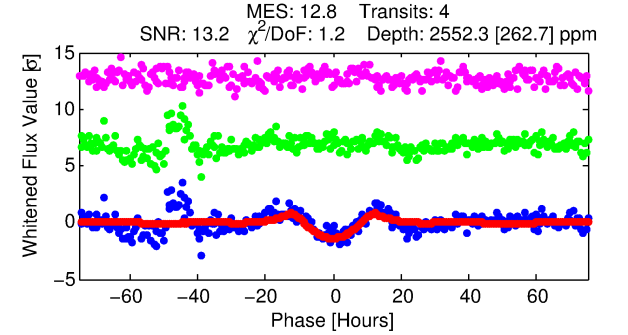
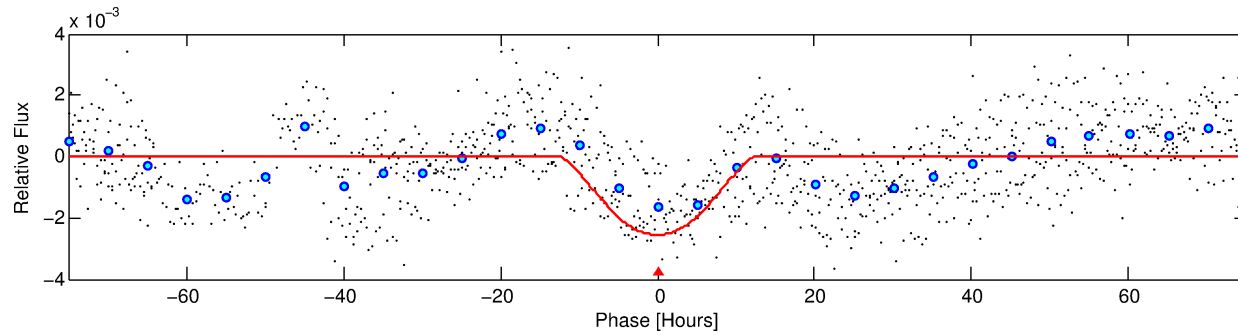
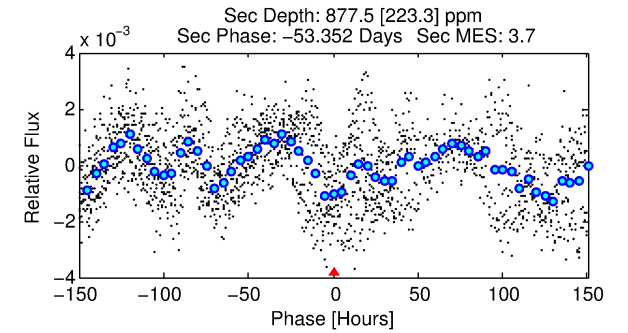
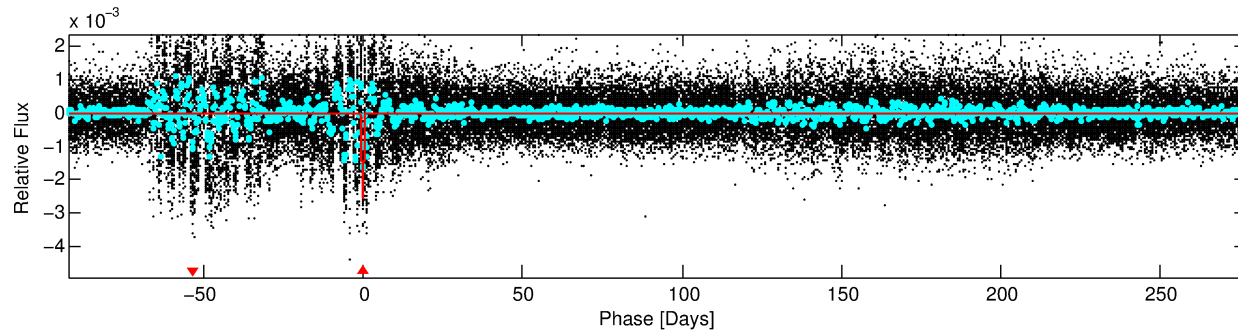
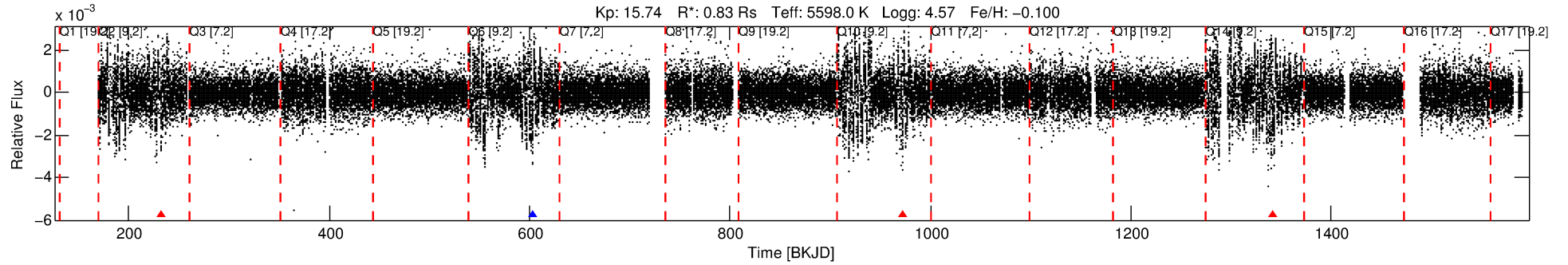
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007971206-01

No Significant Match Found

DV One-Page Summary

KIC: 7971206 Candidate: 1 of 1 Period: 369.463 d



DV Fit Results:

Period = 369.46335 [0.01558] d
Epoch = 232.9780 [0.0279] BKJD
Rp/R* = 0.0733 [0.0600]
a/R* = 50.16 [12.23]
b = 0.98 [0.10]
Seff = 0.63 [0.21]
Teq = 227 [19] K
Rp = 6.64 [5.70] Re
a = 0.9813 [0.2118] AU
Ag = 10559.06 [17811.71] [0.59 σ]
Teffp = 3560 [1479] K [2.25 σ]

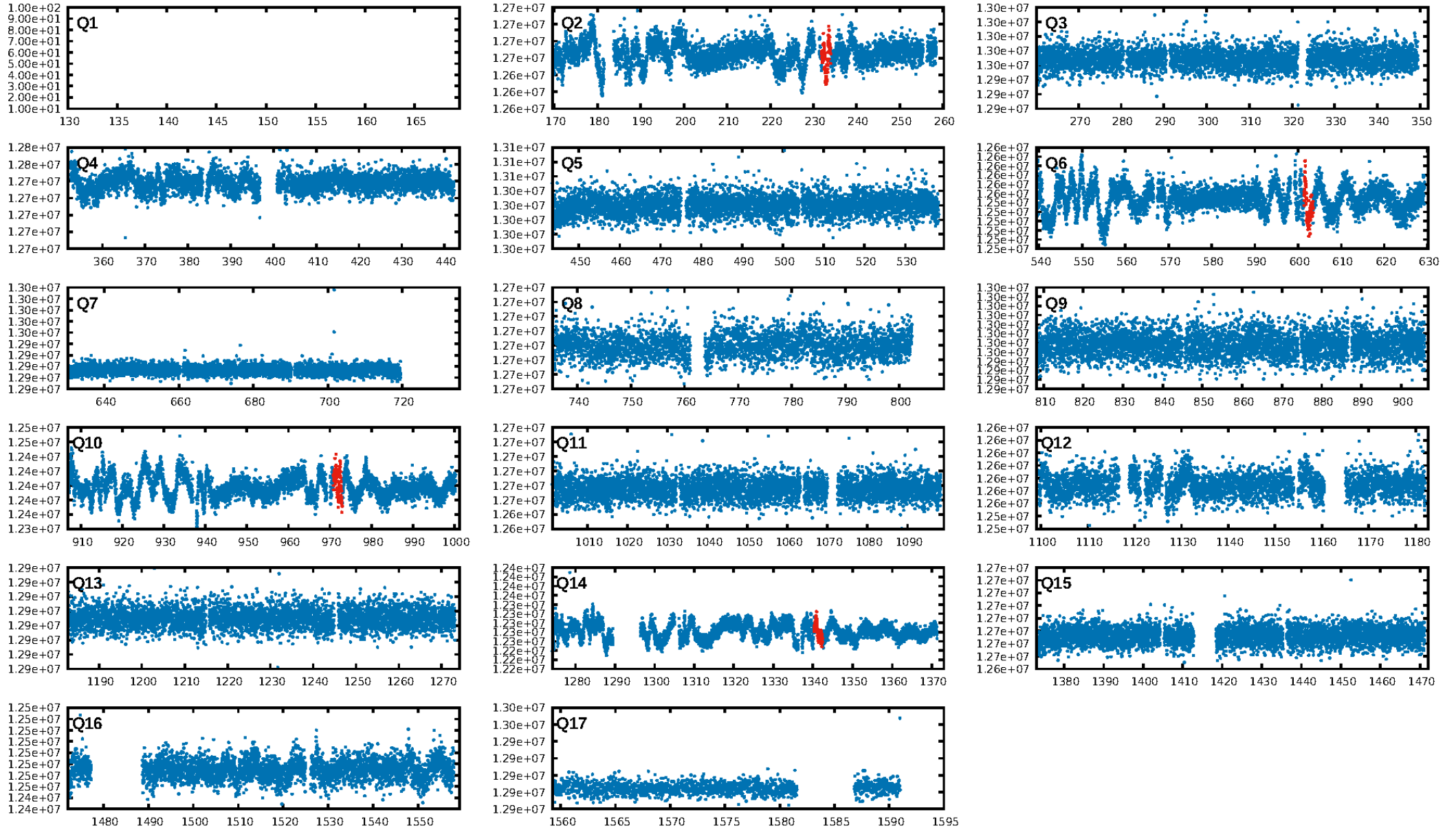
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.3%
ModelChiSquareGof-sig: 98.3%
Bootstrap-pfa: 1.59e-17
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 0.892
Centroid-sig: 0.0%
Centroid-so: 3.544 arcsec [2.39 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

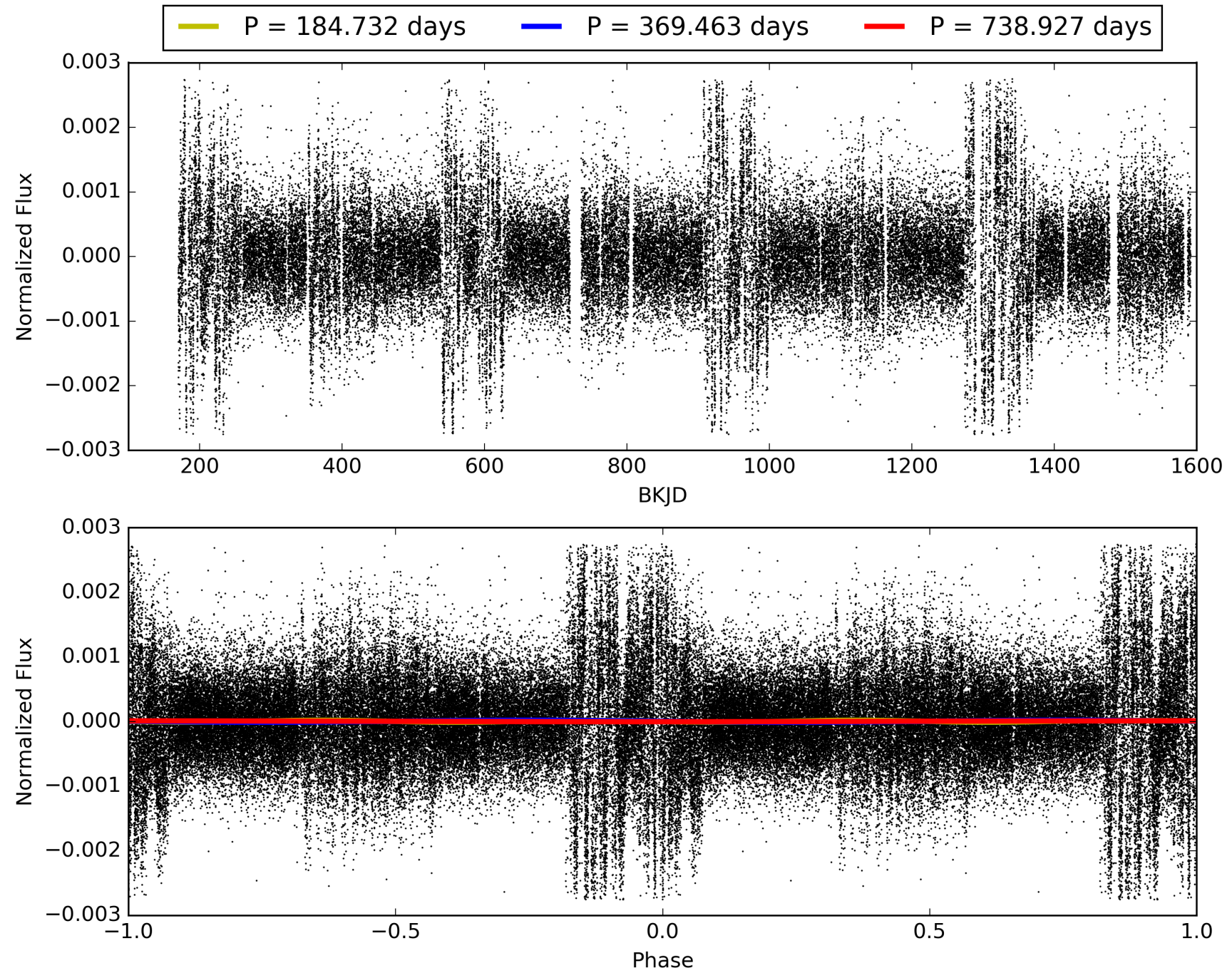
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:24:56 Z

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

TCE 007971206-01, PDC Light Curves

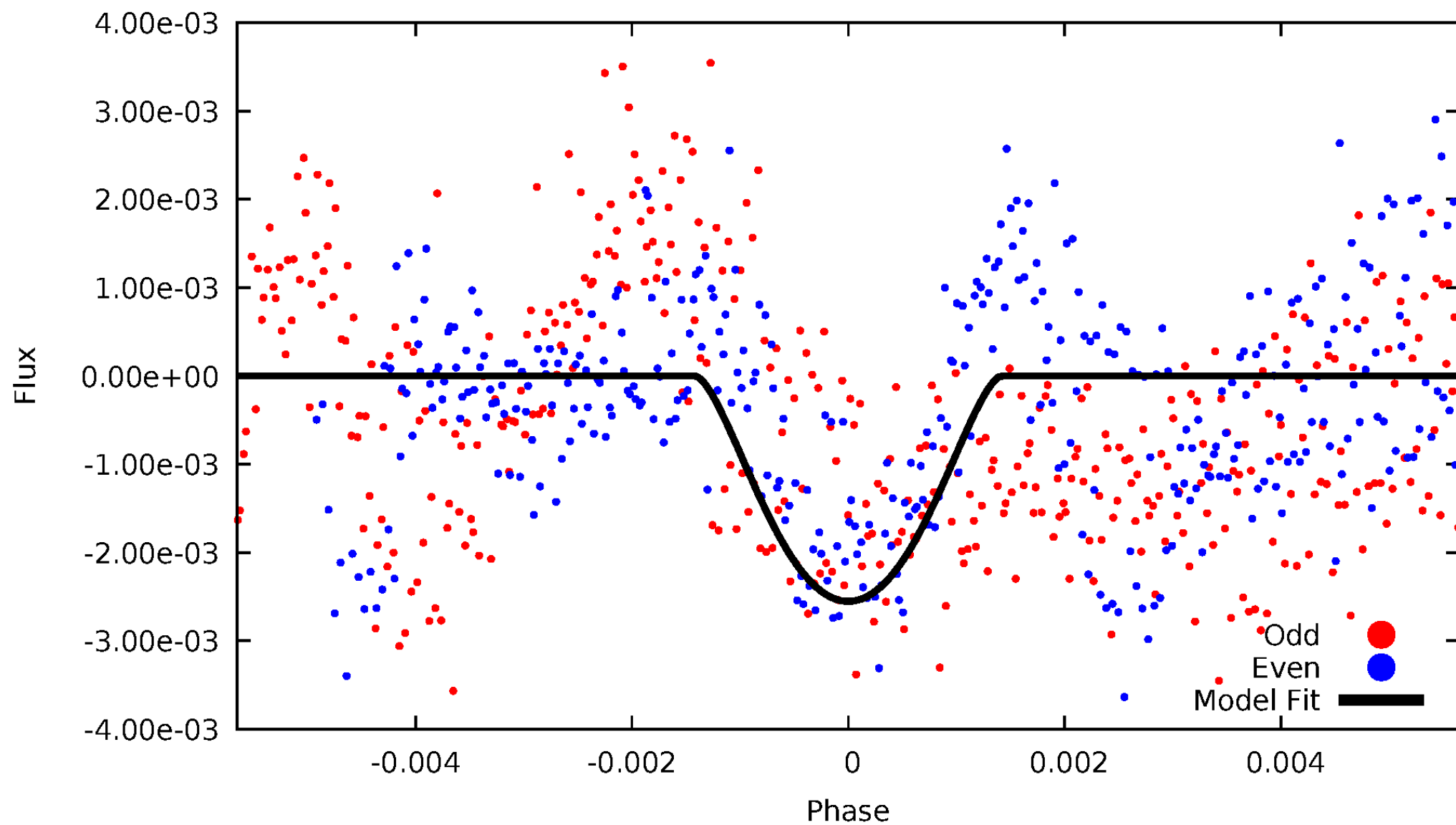


TCE 007971206-01



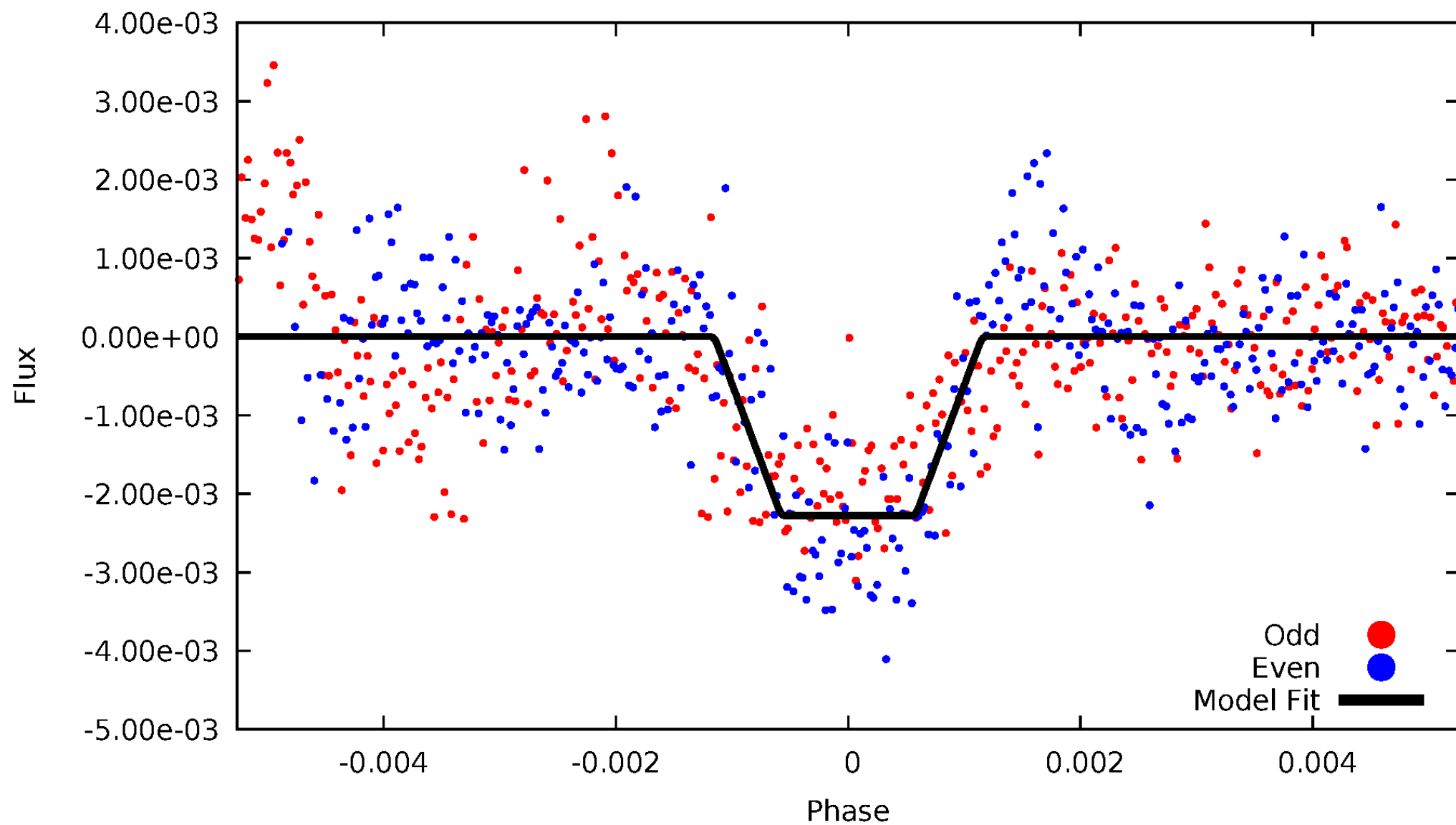
DV Odd/Even

TCE 007971206-01



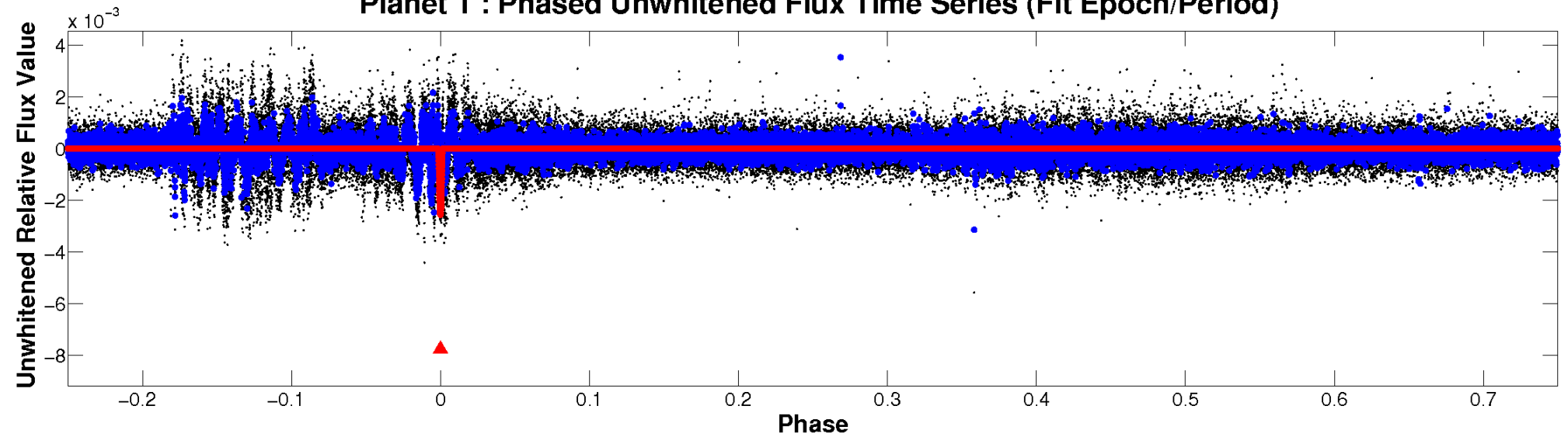
ALT Odd/Even

TCE 007971206-01

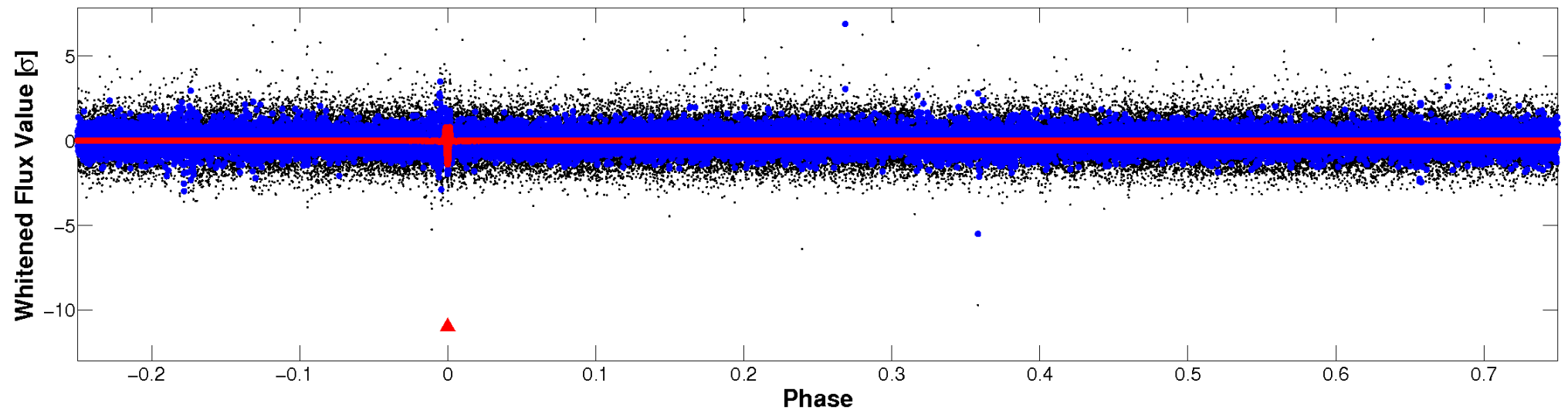


Non-Whitened Vs. Whitened Light Curve

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 007971206-01 P=369.463346 Days $T_0=232.978041$ (BKJD)



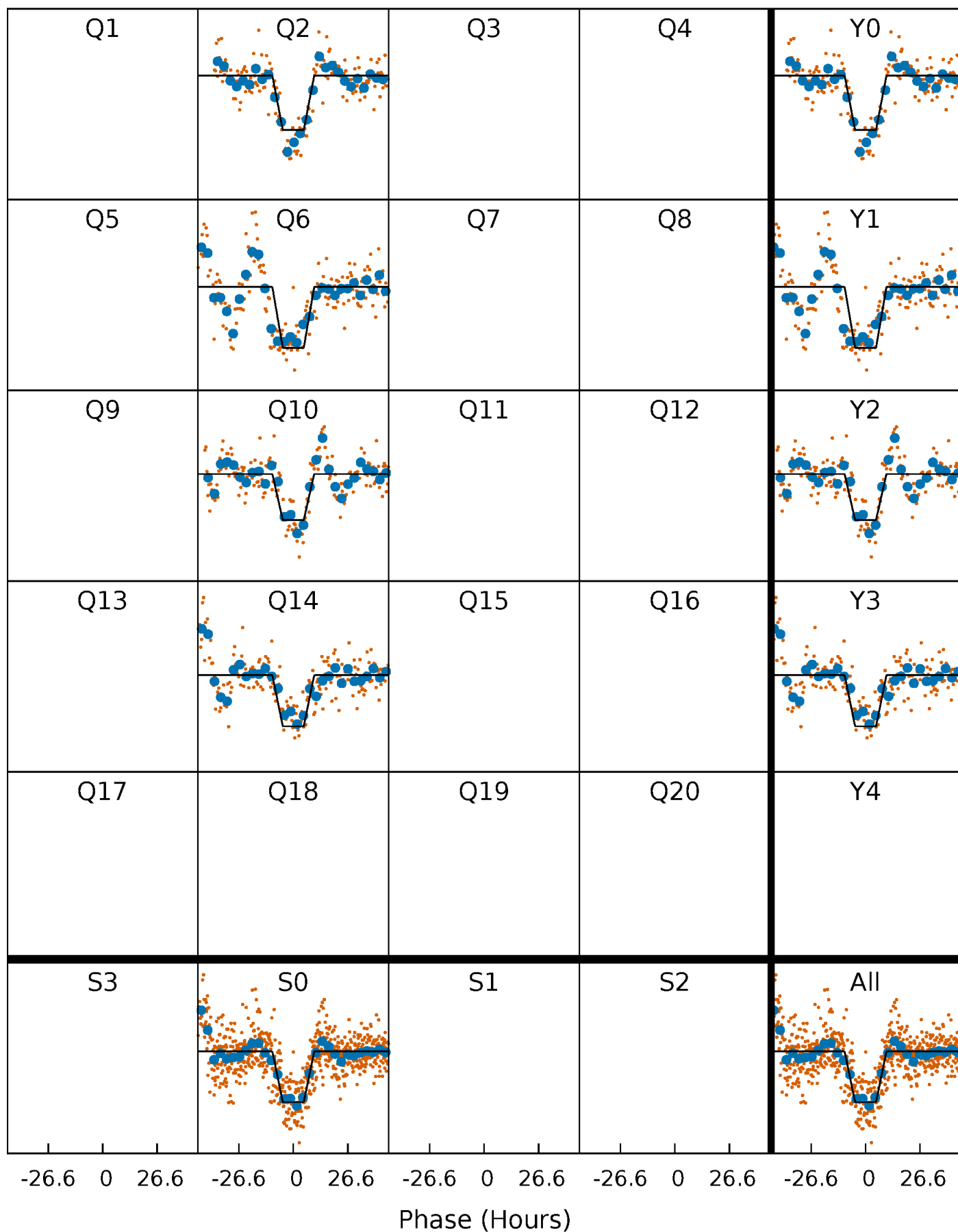
DV Quarter-Phased Transit Curves

TCE 007971206-01 P=369.463346 Days $T_0=232.978041$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

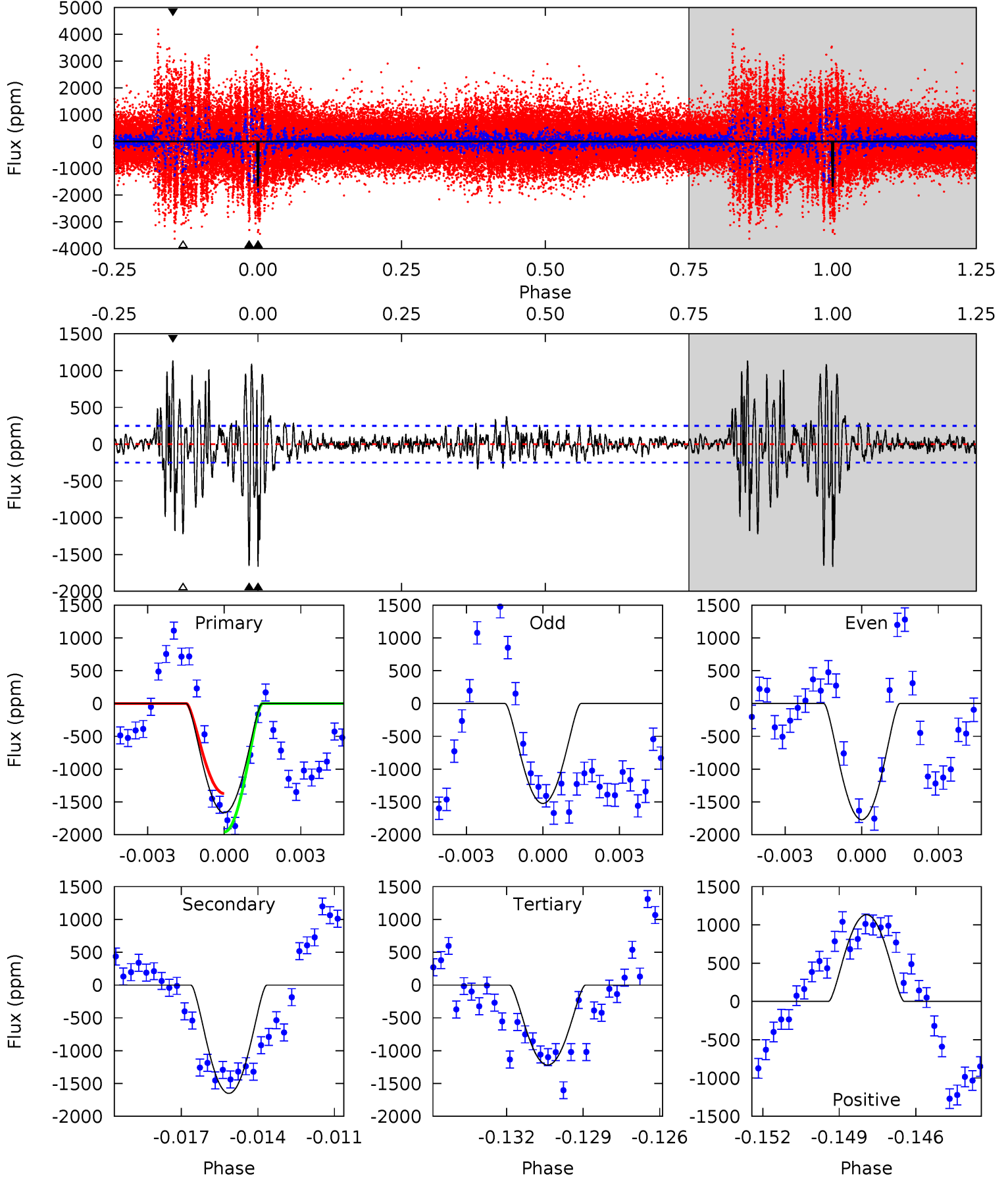
TCE 007971206-01 P=369.445576 Days $T_0=232.998286$ (BKJD)



DV Model-Shift Uniqueness Test

007971206-01, P = 369.463346 Days, E = 232.978041 Days

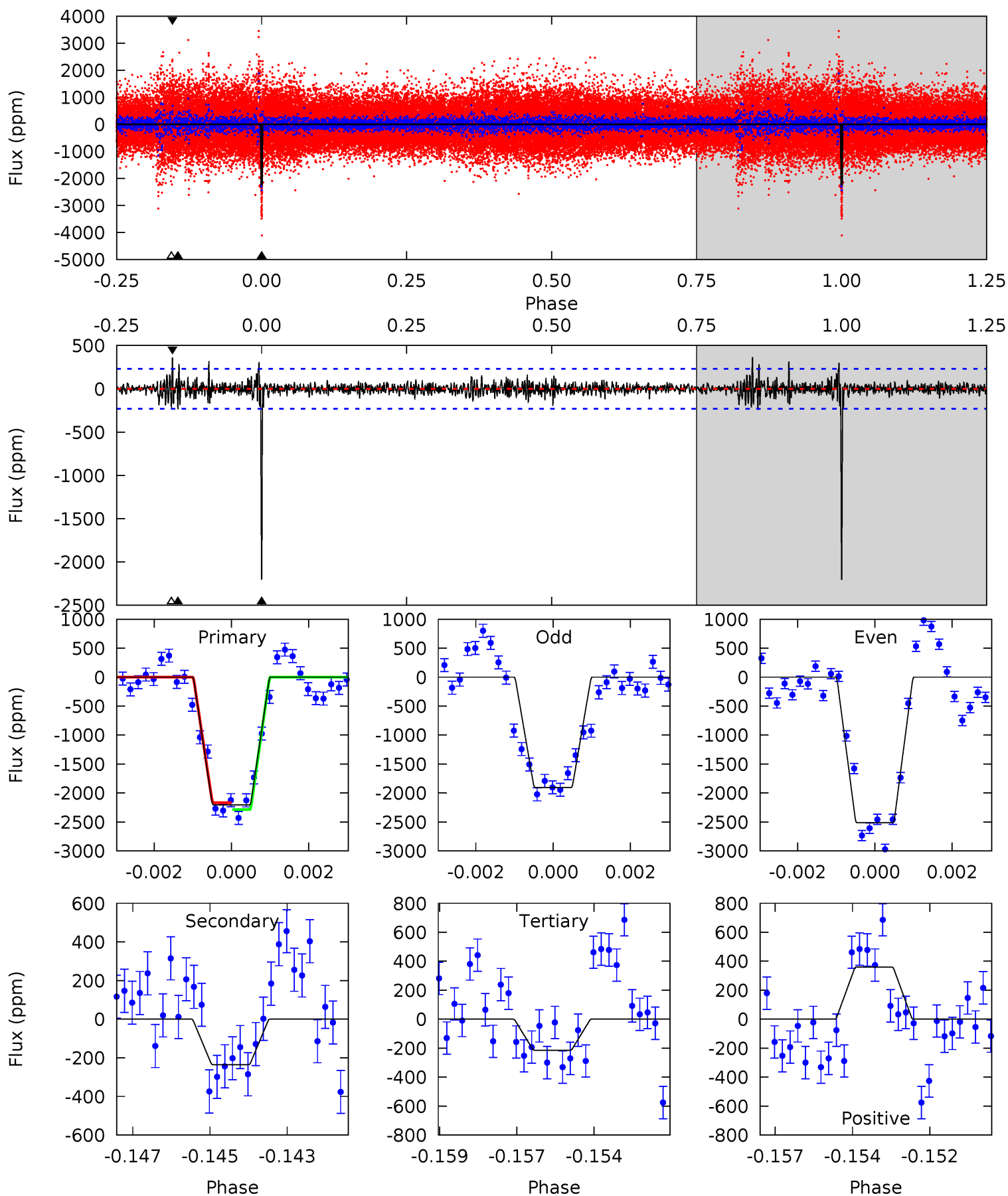
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.1	34.8	25.7	23.9	5.26	2.98	4.76	9.40	11.2	9.08	10.9	2.57	0.94	0.40	6.15



Alt Model-Shift Uniqueness Test

007971206-01, P = 369.445576 Days, E = 232.998286 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.5	5.39	4.90	8.21	5.30	3.04	1.13	45.6	42.3	0.49	-2.83	7.03	1.03	0.14	1.36



Stellar Parameters For KIC 007971206

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5598^{+149}_{-166}	$4.565^{+0.030}_{-0.170}$	$-0.100^{+0.300}_{-0.300}$	$0.830^{+0.214}_{-0.067}$	$0.928^{+0.091}_{-0.112}$	$2.285^{+0.388}_{-1.067}$
	+3%/-3%	+1%/-4%	+300%/-300%	+26%/-8%	+10%/-12%	+17%/-47%
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 007971206-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1651 ± 47	$7.41^{+5.71}_{-4.29}$	324^{+19}_{-13}	4274^{+1958}_{-772}	15813^{+71459}_{-10789}
Alt.	-235 ± 44	$5.79^{+5.56}_{-3.62}$	325^{+18}_{-14}	3320^{+1401}_{-561}	3529^{+22535}_{-2594}

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

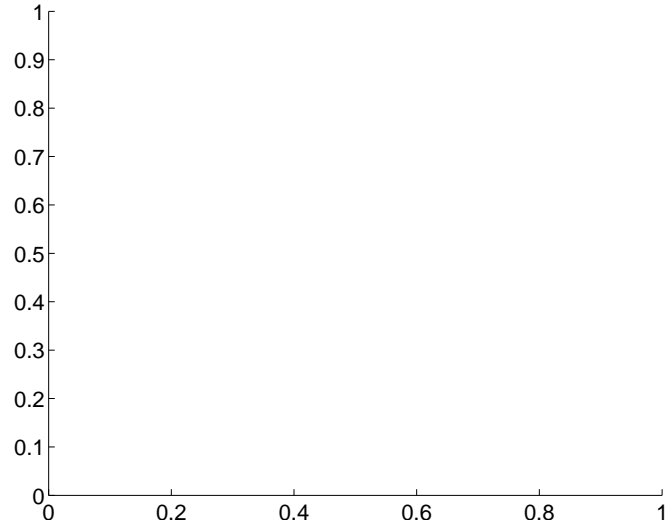
Supplemental centroid analysis for 007971206-01. Kepler magnitude: 15.74. Transit SNR 13.17

There are 0 quarters with good PRF difference image offsets

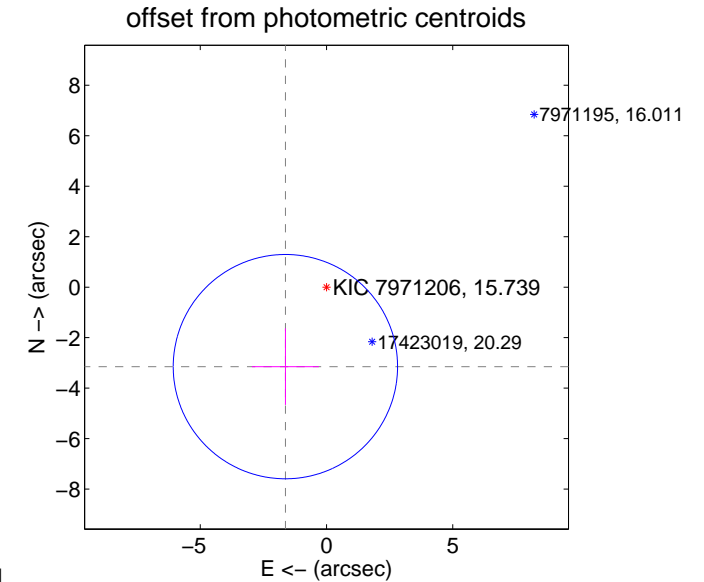
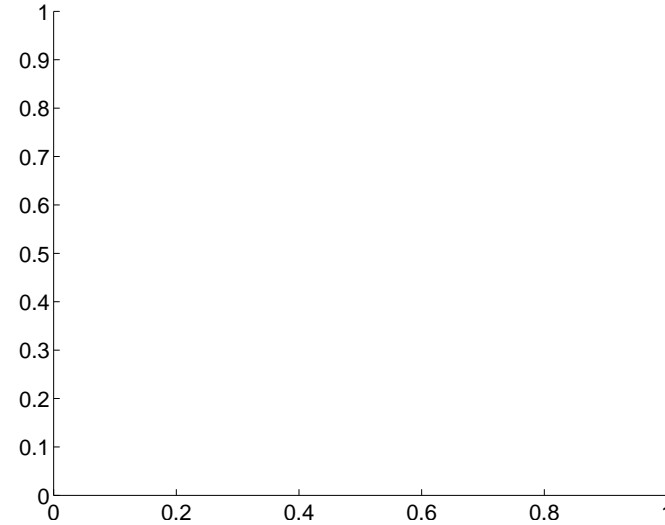
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	3.54 ± 1.48	2.39	1.63 ± 1.33	-3.15 ± 1.52

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

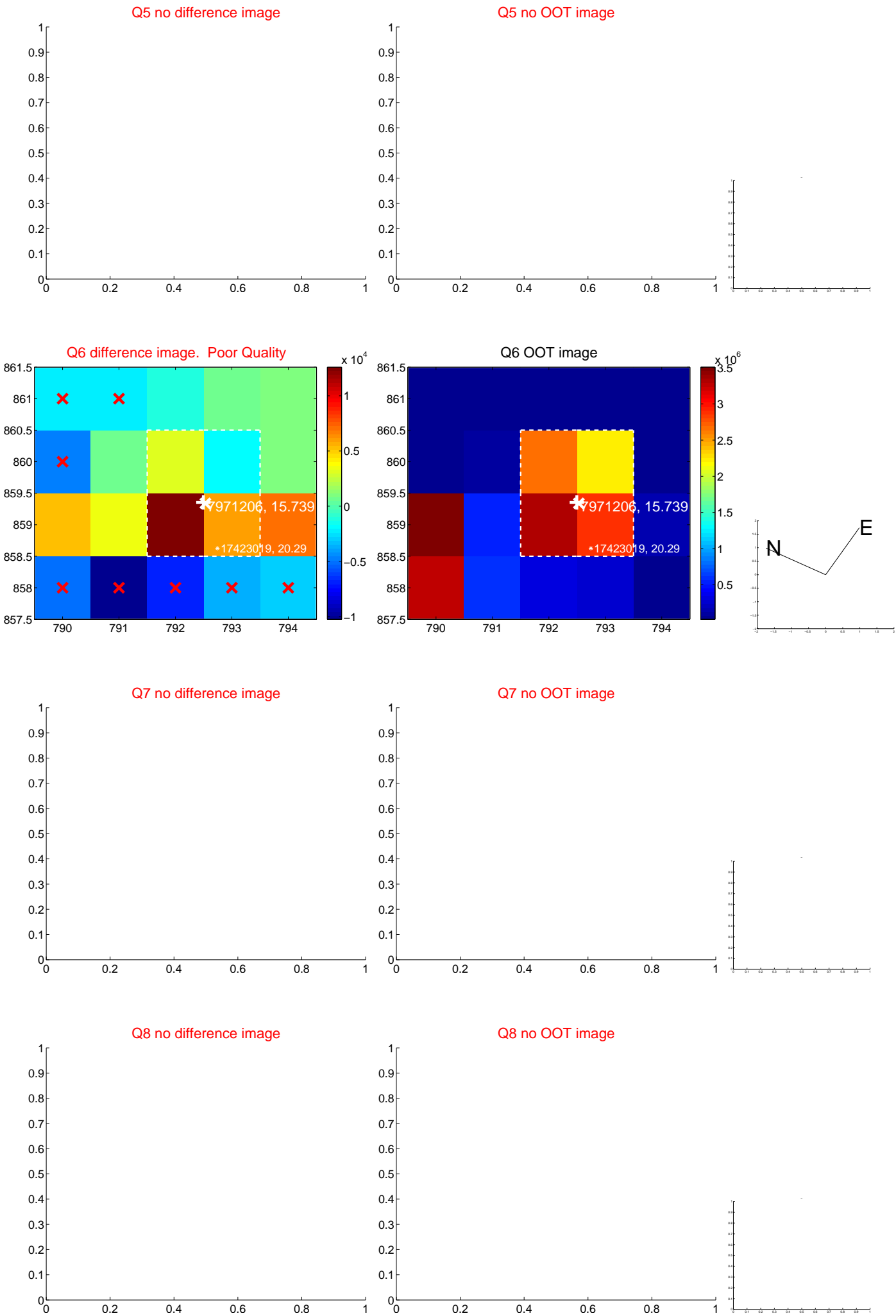


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



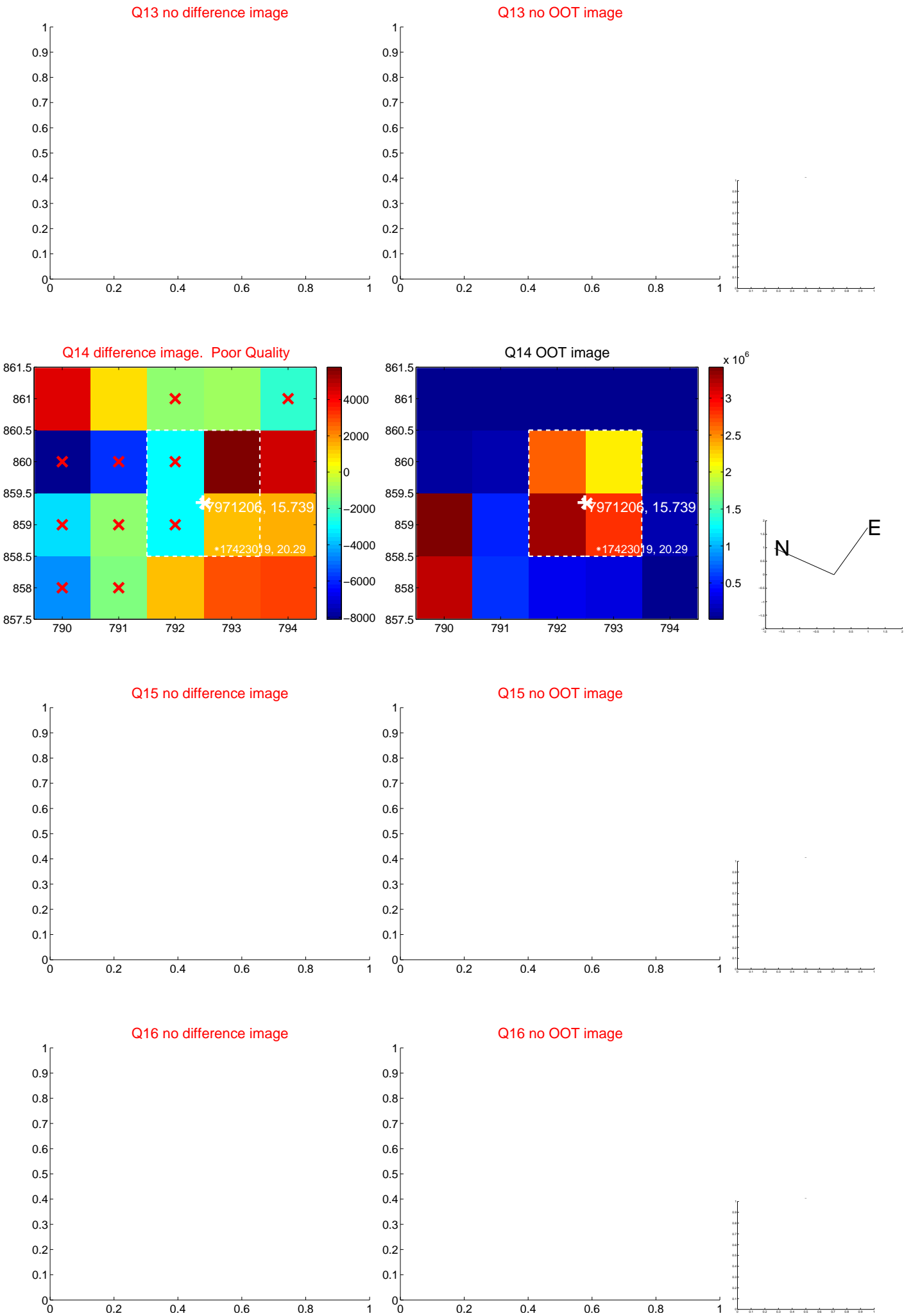
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



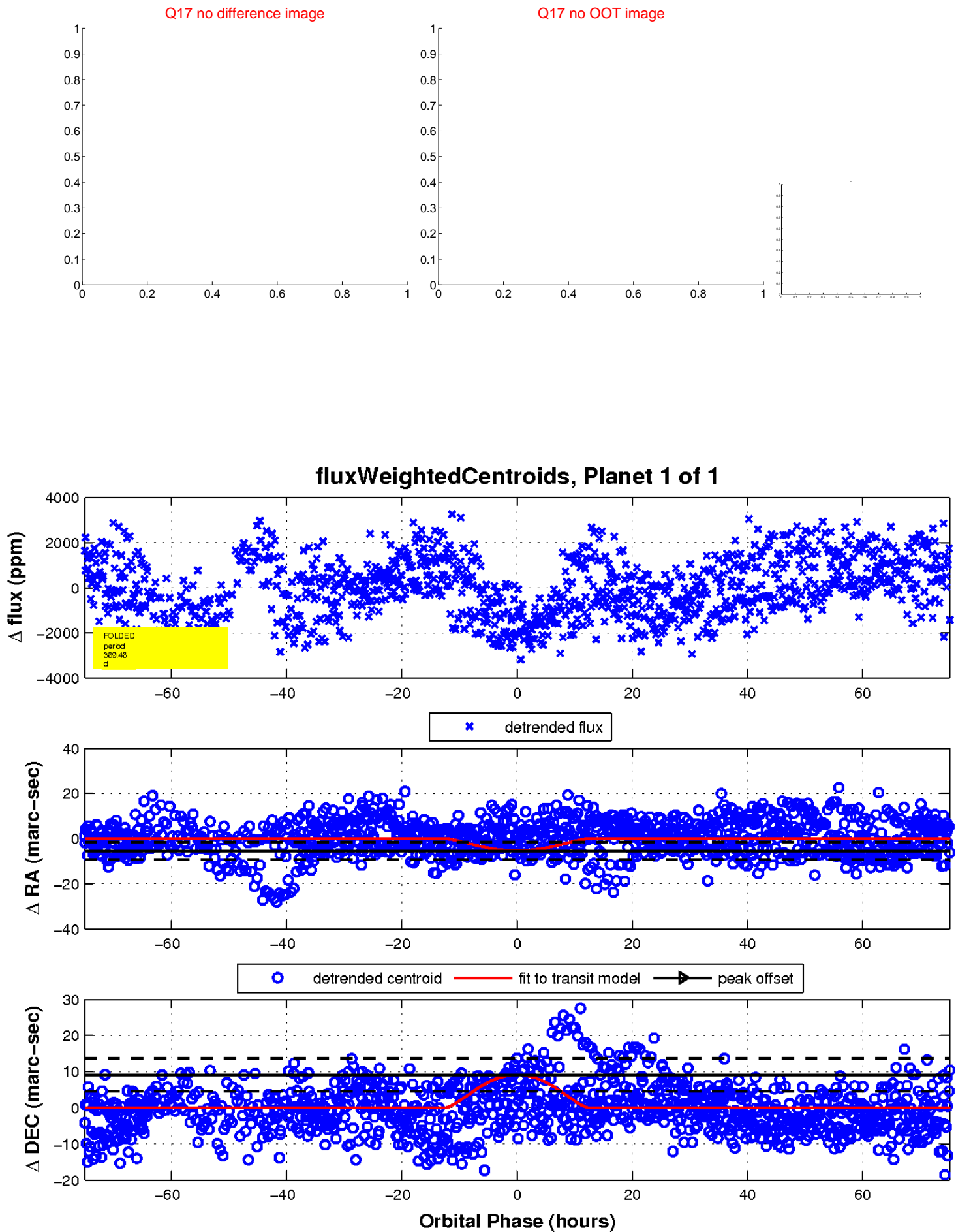
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

