

KIC 009827393

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})
009827393-01	OBS	No	481.427183	496.169117	2378.0	14.461	10.8	10.1	0.60	4454	2.83	0.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009827393-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

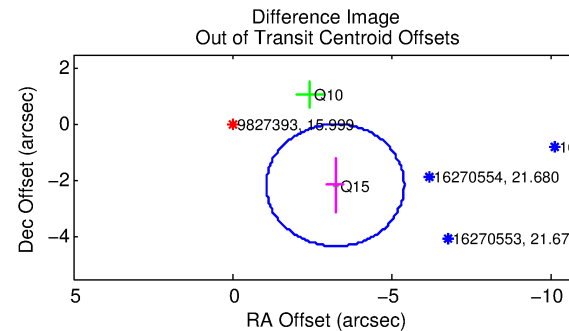
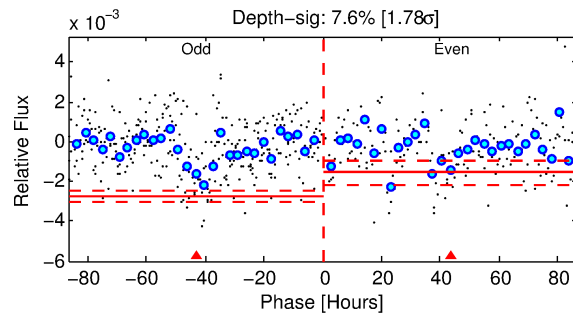
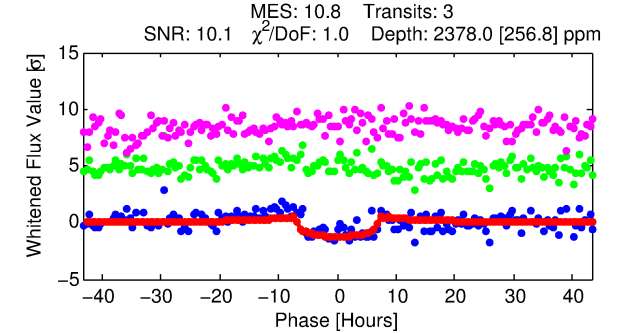
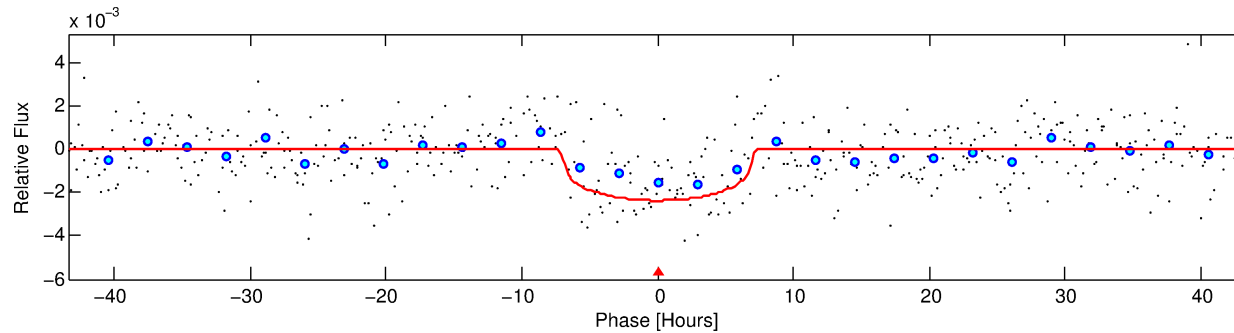
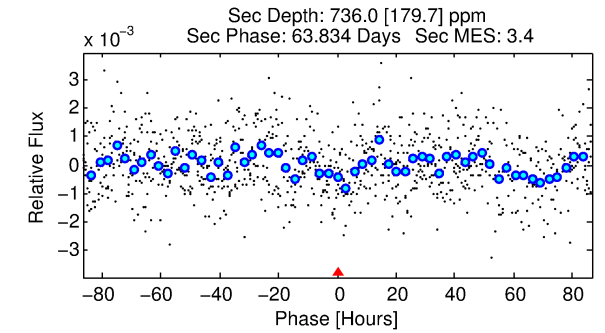
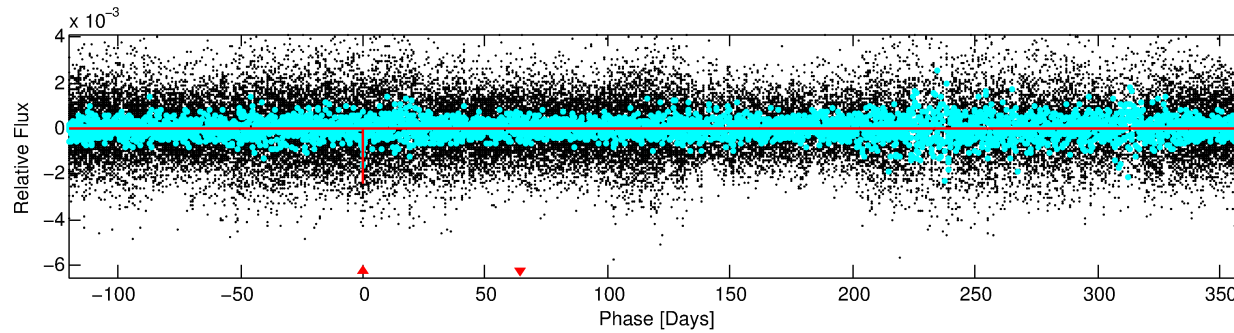
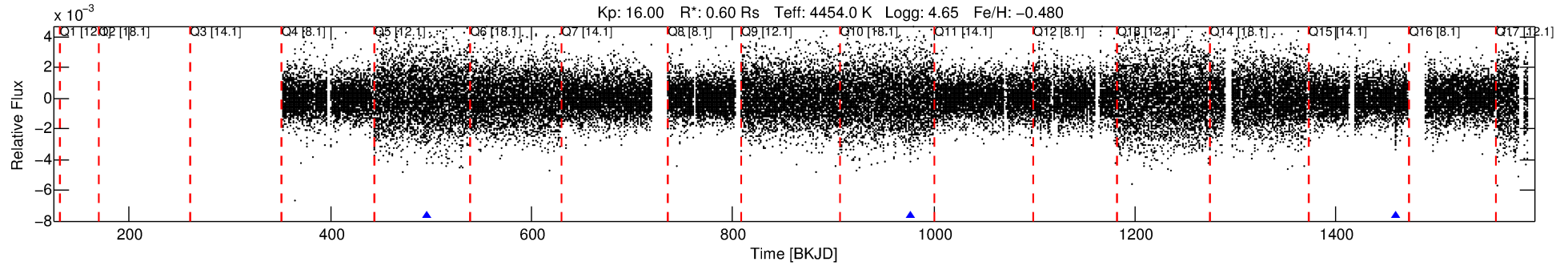
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009827393-01

No Significant Match Found

DV One-Page Summary

KIC: 9827393 Candidate: 1 of 1 Period: 481.427 d



DV Fit Results:

Period = 481.42718 [0.01431] d
Epoch = 496.1691 [0.0192] BKJD
Rp/R* = 0.0430 [0.0266]
a/R* = 265.15 [521.34]
b = 0.03 [63.95]
Seff = 0.13 [0.02]
Teq = 152 [7] K
Rp = 2.82 [1.77] Re
a = 1.0064 [0.0759] AU
Ag = 51392.85 [65095.56] [0.79σ]
Teffp = 3538 [1125] K [3.01σ]

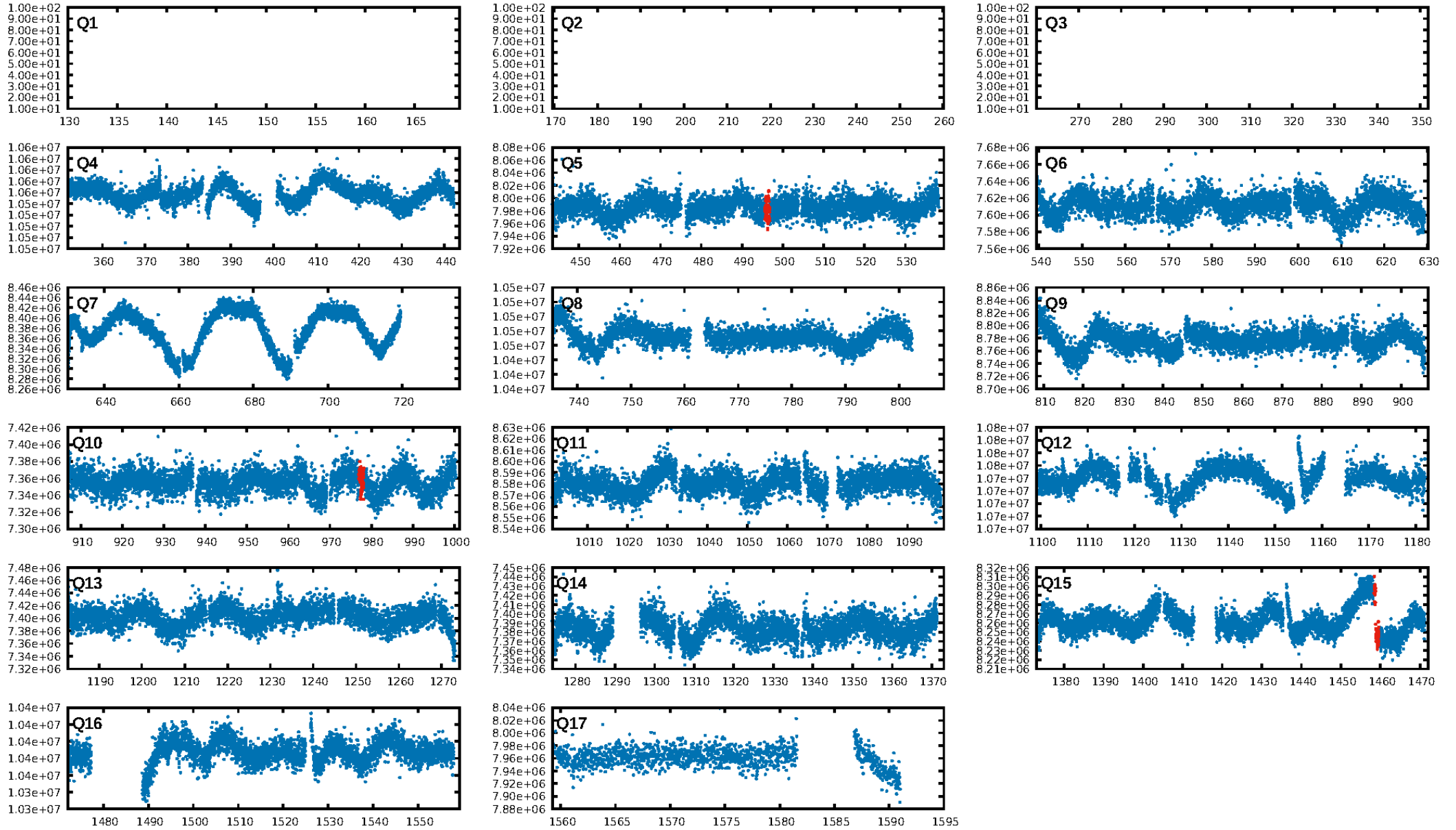
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 95.6%
Bootstrap-pfa: 1.62e-17
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 16.03
Centroid-sig: 0.0%
Centroid-so: 4.831 arcsec [34.17σ]
OotOffset-rm: 3.896 arcsec [5.38σ]
KicOffset-rm: 4.919 arcsec [6.92σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

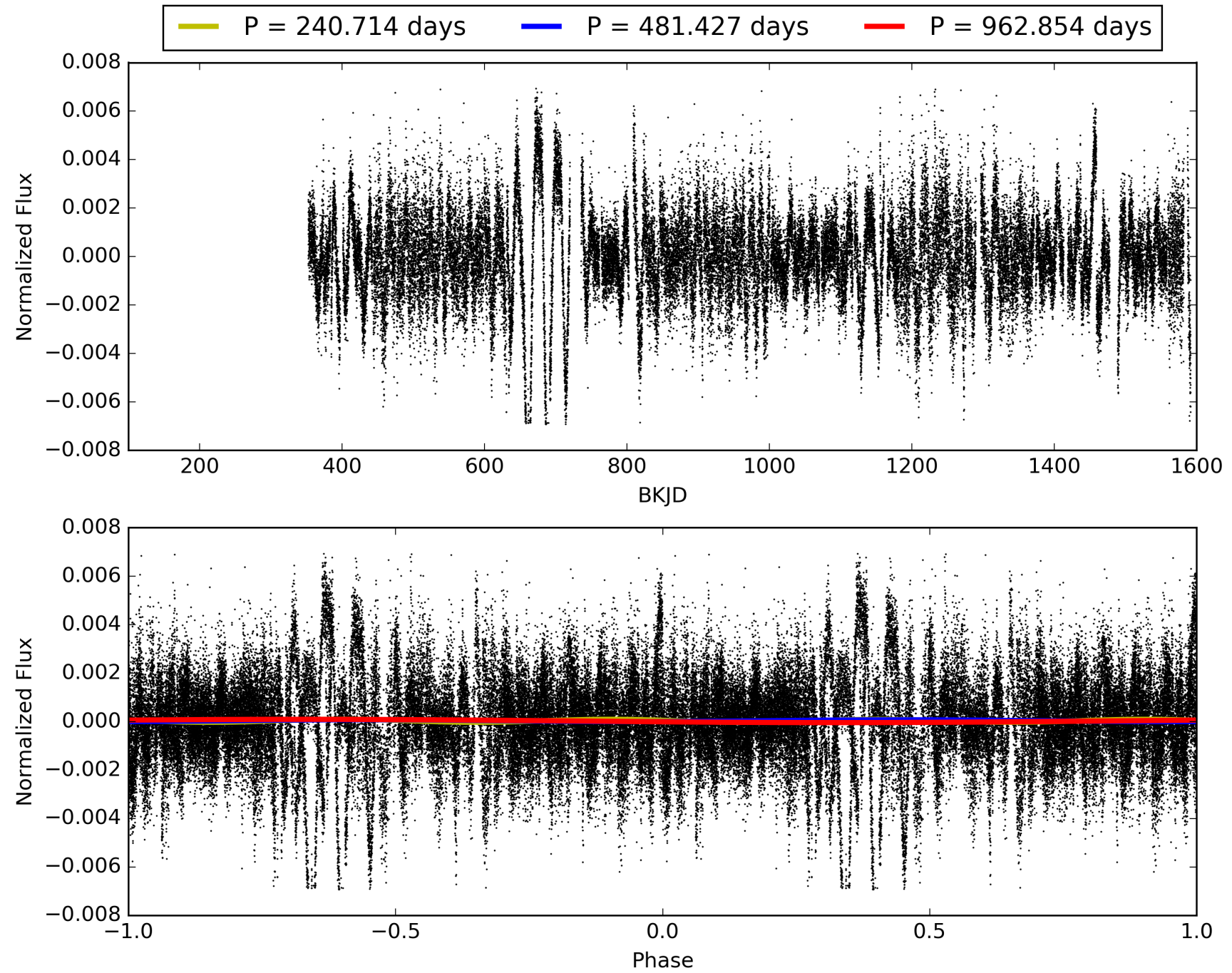
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:02:59 Z

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

TCE 009827393-01, PDC Light Curves

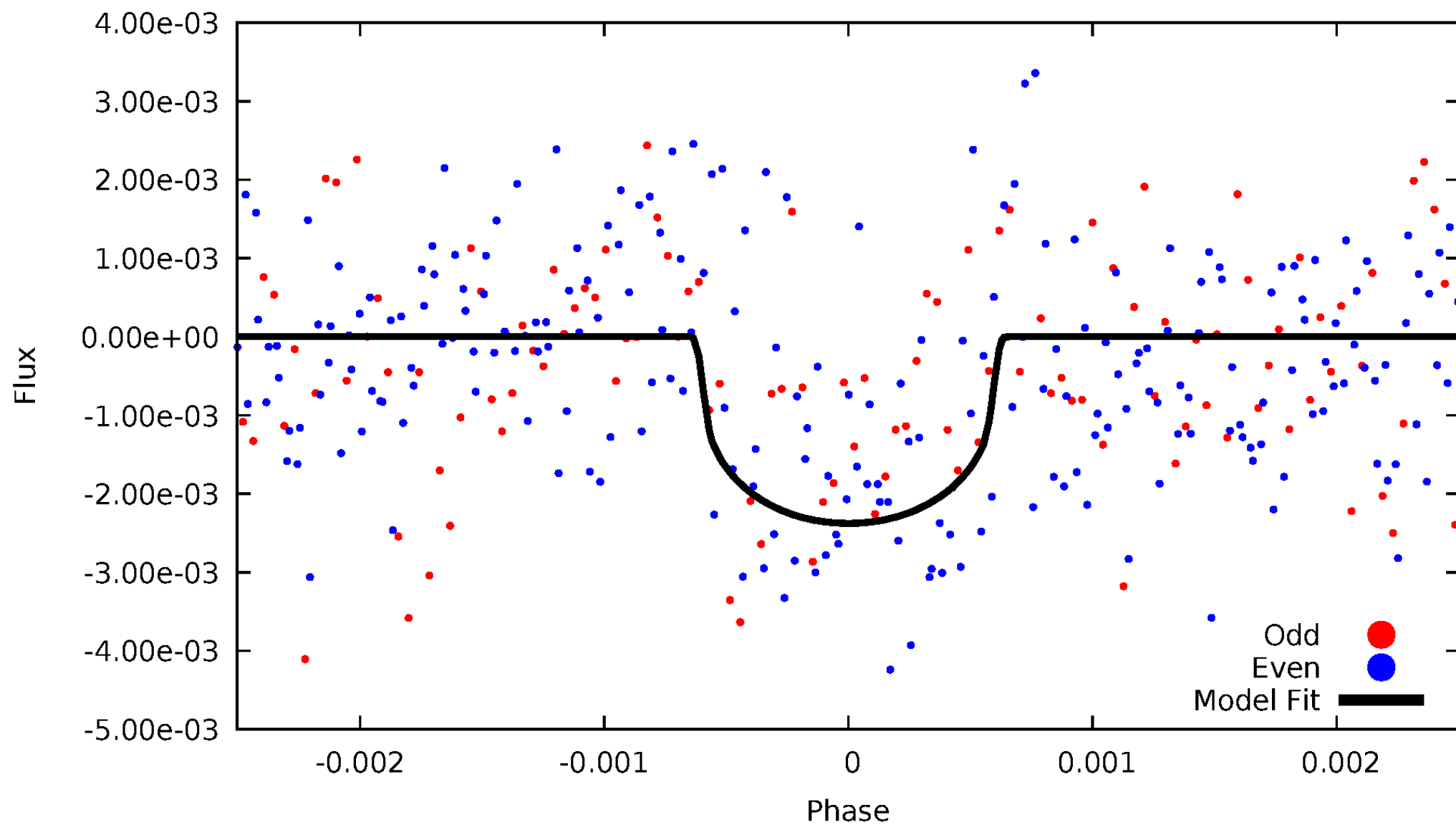


TCE 009827393-01



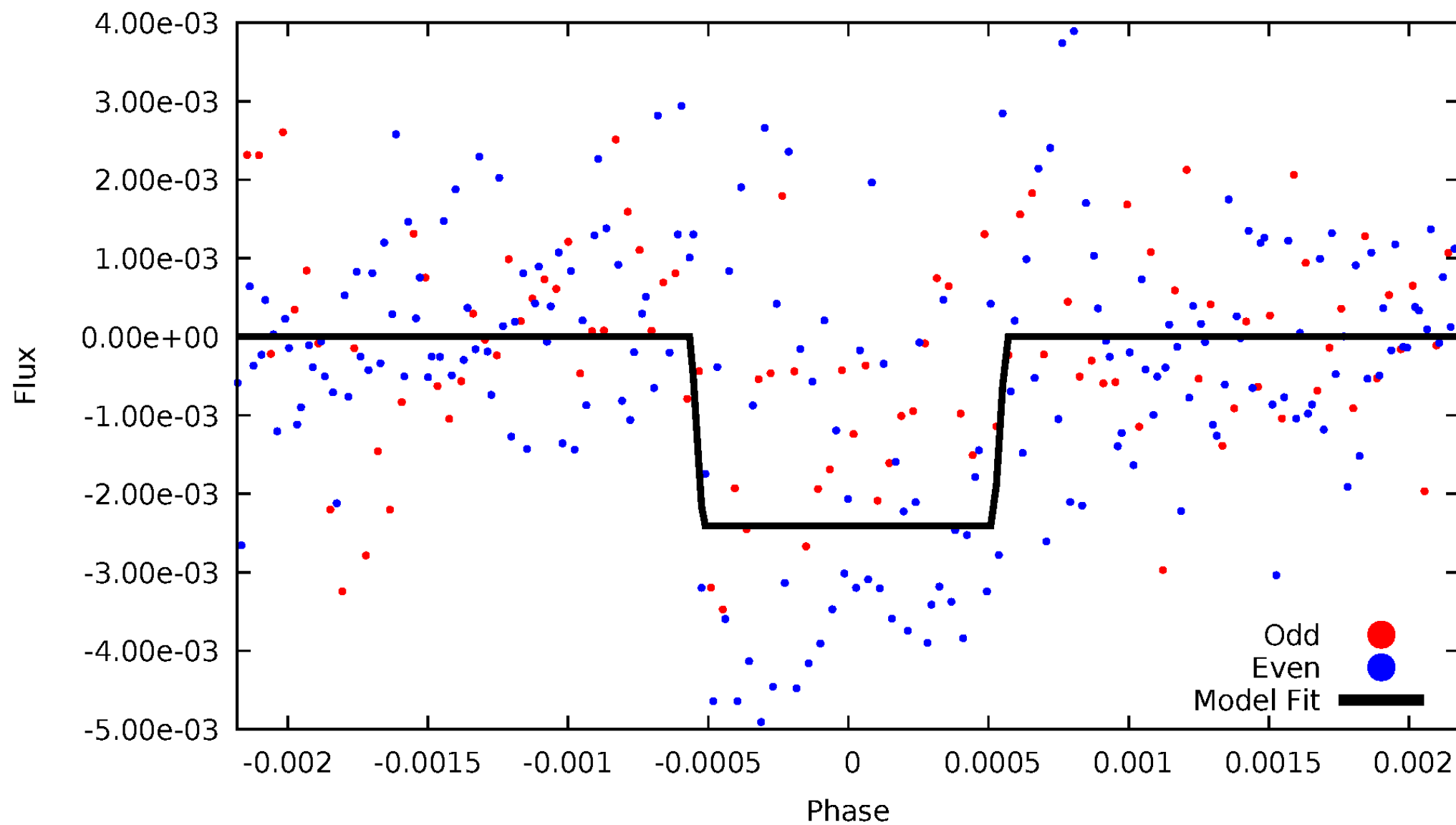
DV Odd/Even

TCE 009827393-01

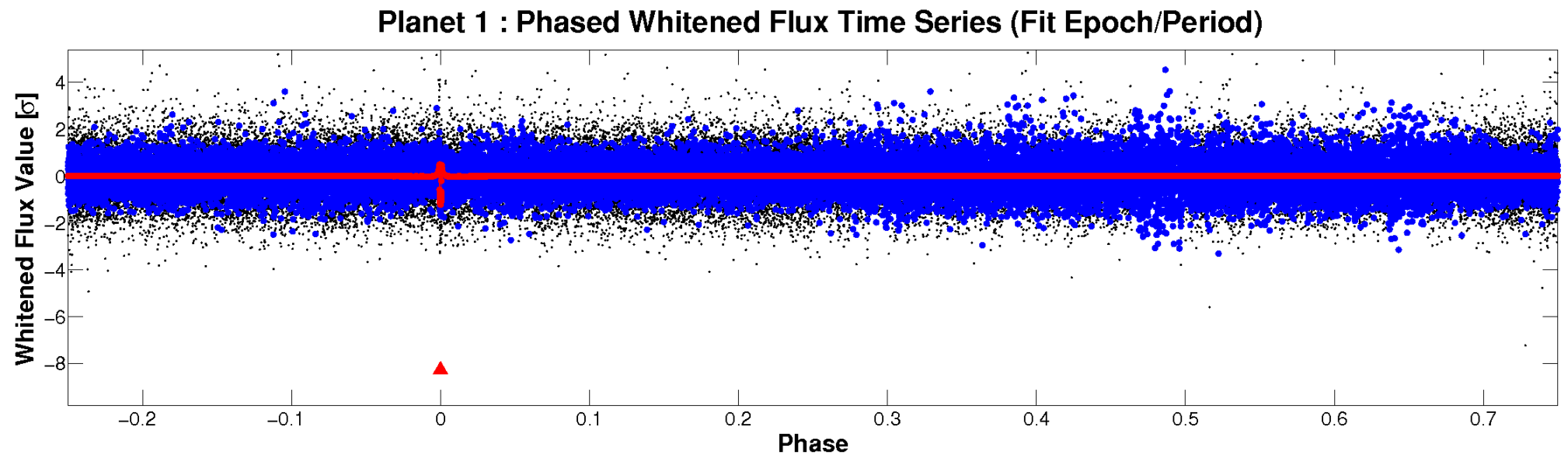
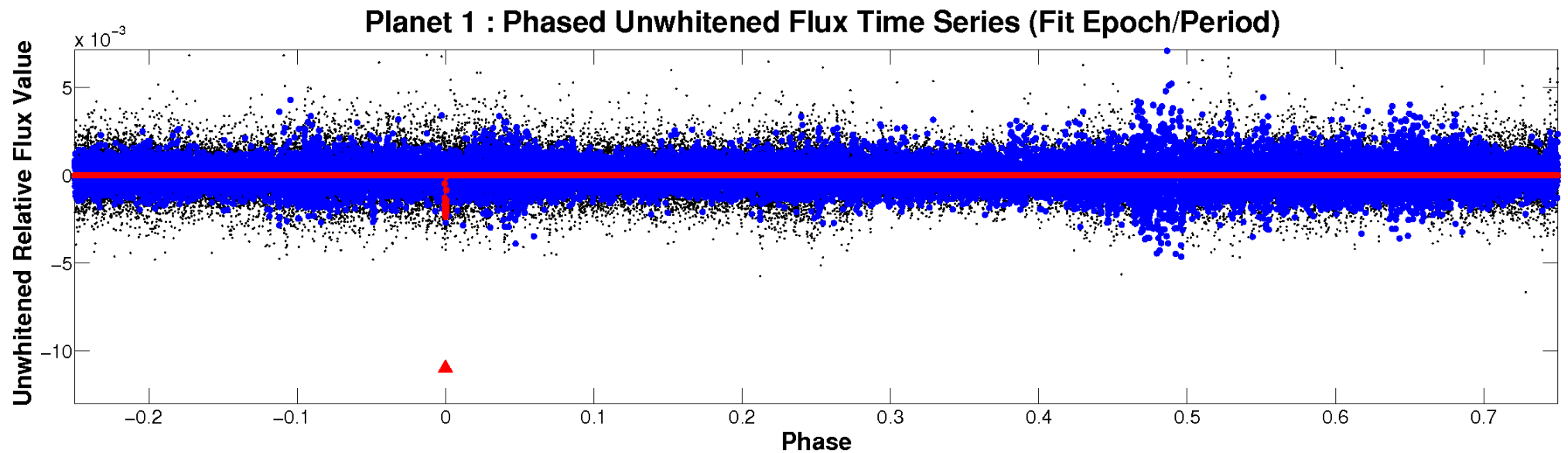


ALT Odd/Even

TCE 009827393-01



Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 009827393-01 P=481.427183 Days $T_0=496.169117$ (BKJD)



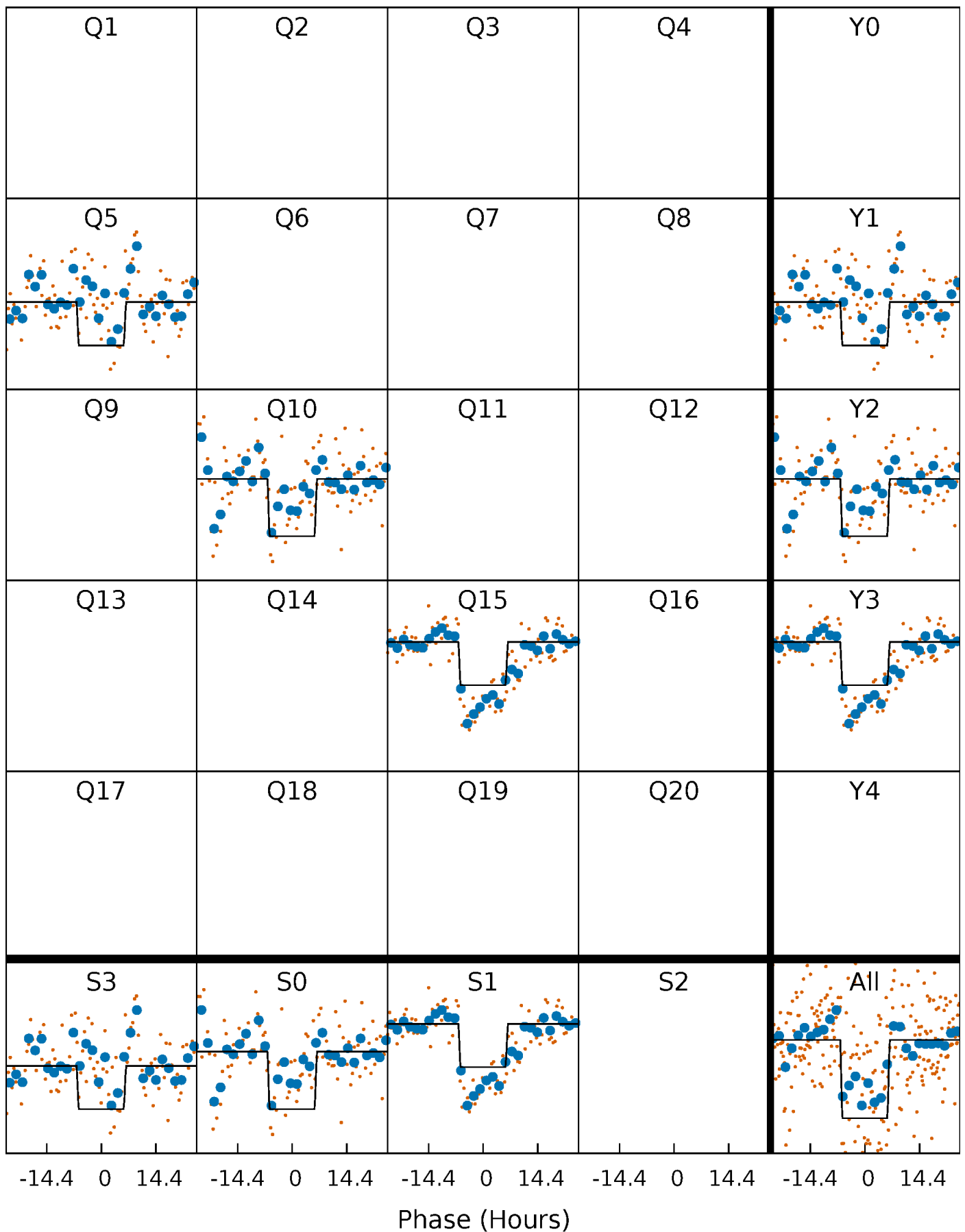
DV Quarter-Phased Transit Curves

TCE 009827393-01 P=481.427183 Days $T_0=496.169117$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

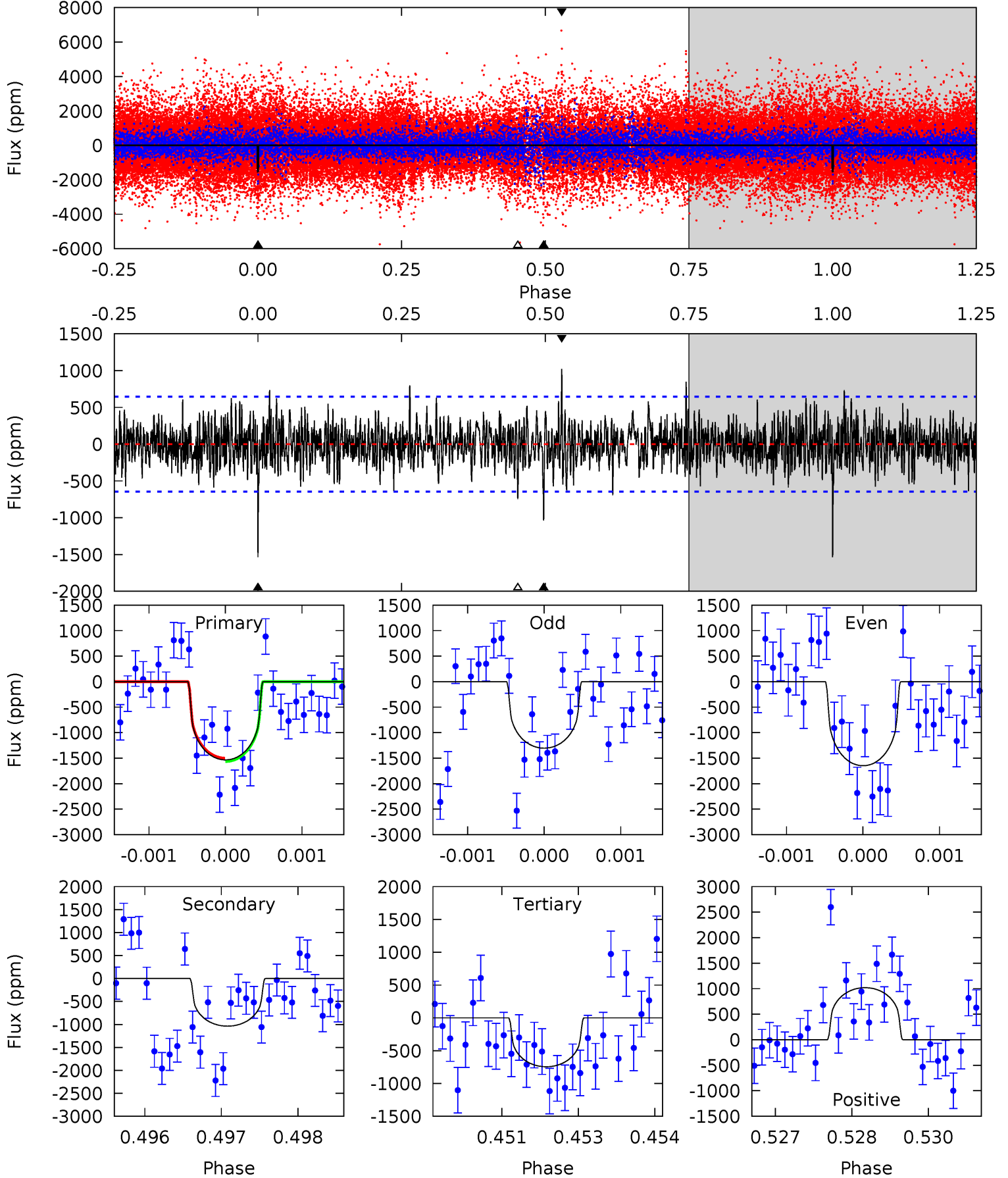
TCE 009827393-01 P=481.448730 Days $T_0=496.150043$ (BKJD)



DV Model-Shift Uniqueness Test

009827393-01, $P = 481.427183$ Days, $E = 14.741934$ Days

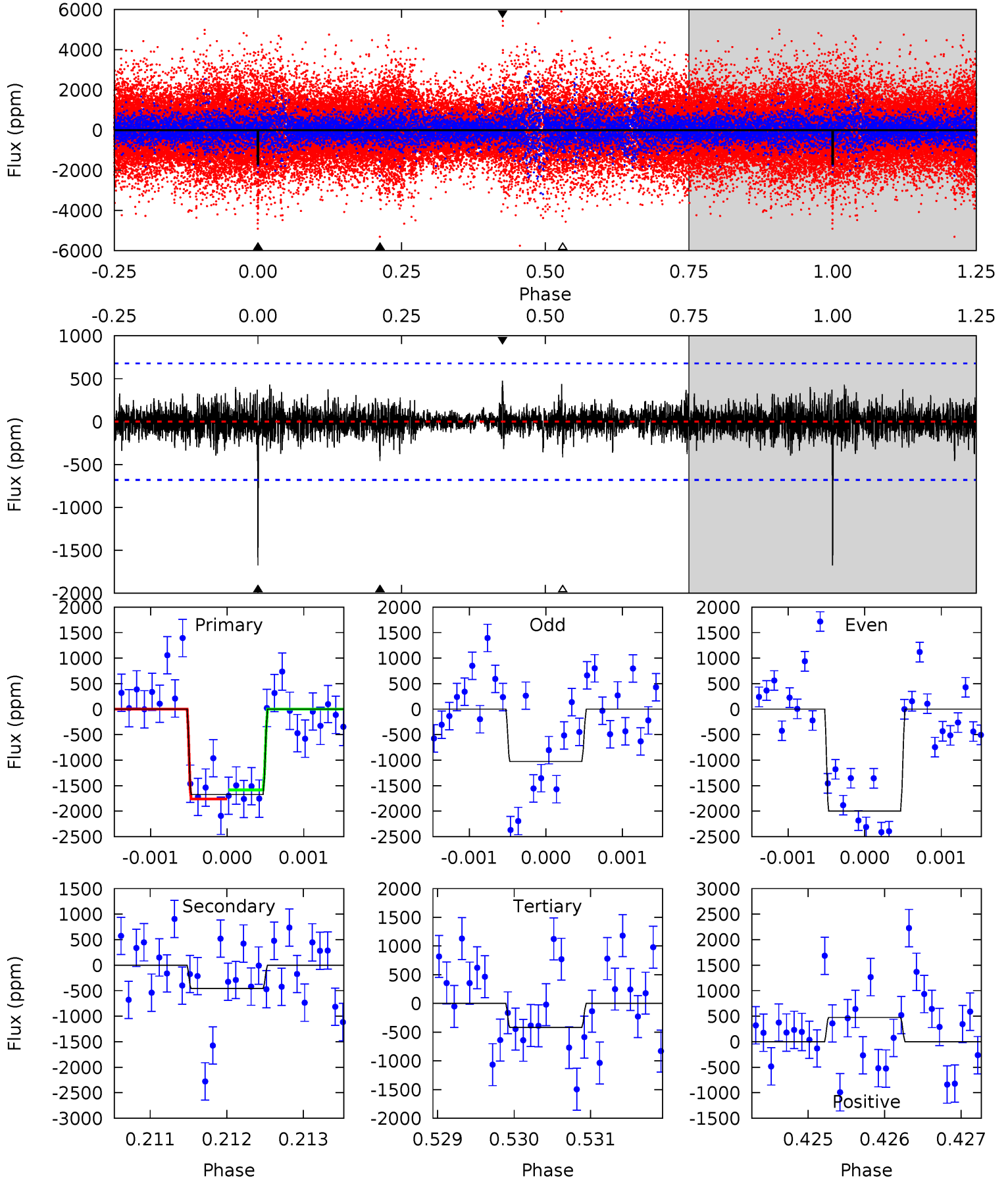
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	8.68	6.24	8.53	5.40	3.21	1.76	6.60	4.30	2.45	0.15	1.36	1.18	0.40	0.27



Alt Model-Shift Uniqueness Test

009827393-01, P = 481.448730 Days, E = 14.701313 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	3.66	3.35	3.81	5.44	3.27	0.84	10.1	9.60	0.32	-0.14	3.67	1.63	0.22	0.72



Stellar Parameters For KIC 009827393

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4454^{+157}_{-174}	$4.647^{+0.056}_{-0.028}$	$-0.480^{+0.300}_{-0.300}$	$0.602^{+0.050}_{-0.056}$	$0.587^{+0.070}_{-0.041}$	$3.791^{+0.951}_{-0.487}$
	+4%/-4%	+1%/-1%	+62%/-62%	+8%/-9%	+12%/-7%	+25%/-13%
Source	KIC0	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 009827393-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1037 ± 119	$2.96^{+1.74}_{-1.58}$	211^{+9}_{-9}	3929^{+1408}_{-564}	$64584^{+245316}_{-37582}$
Alt.	-457 ± 125	$3.24^{+1.69}_{-1.55}$	211^{+8}_{-8}	3311^{+855}_{-407}	24126^{+65526}_{-14470}

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 $A_{obs} \gg 1.0$

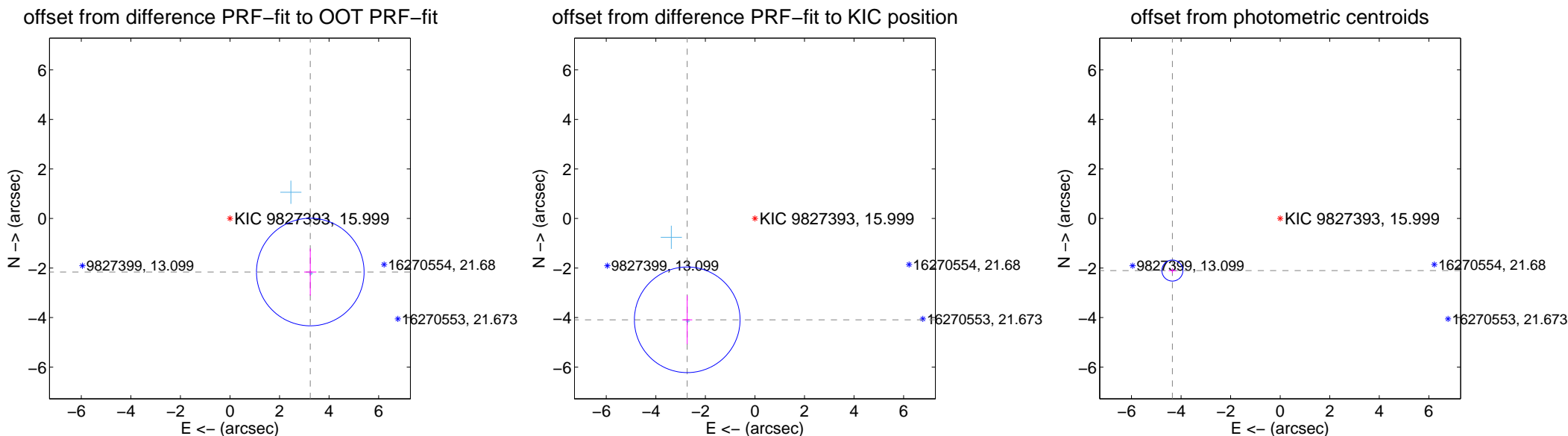
DV Centroid Data

Supplemental centroid analysis for 009827393-01. Kepler magnitude: 16.00. Transit SNR 10.13

There are 2 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 6.28 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.896 ± 0.724	5.38	-3.241 ± 0.244	-2.162 ± 0.949
PRF-fit source offset from KIC position	4.919 ± 0.711	6.92	2.733 ± 0.203	-4.091 ± 0.981
photometric centroid source offset	4.83 ± 0.14	34.17	4.35 ± 0.15	-2.10 ± 0.10

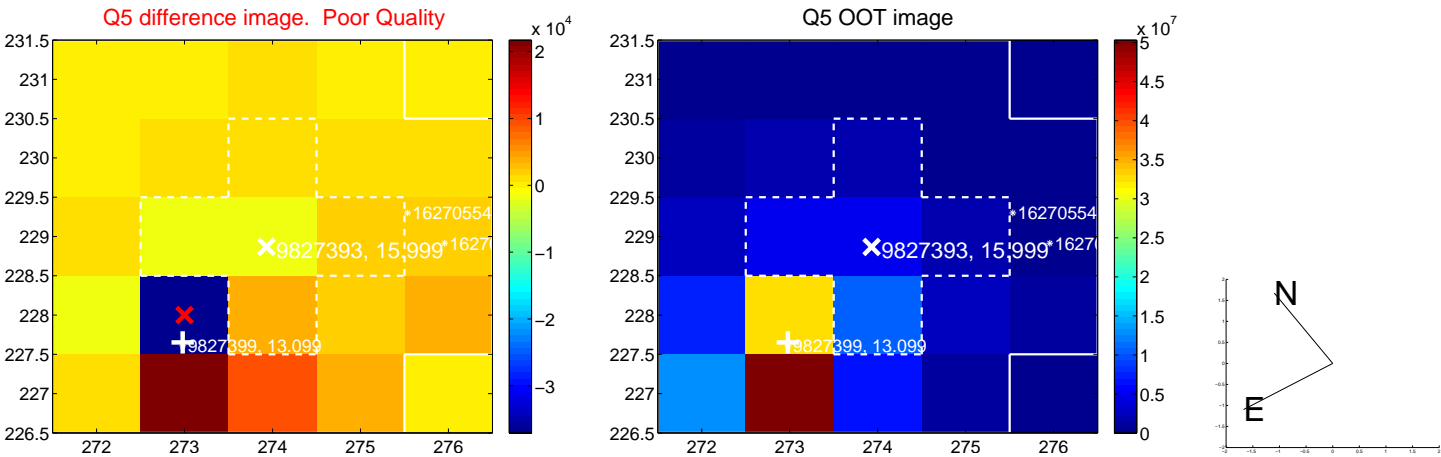


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

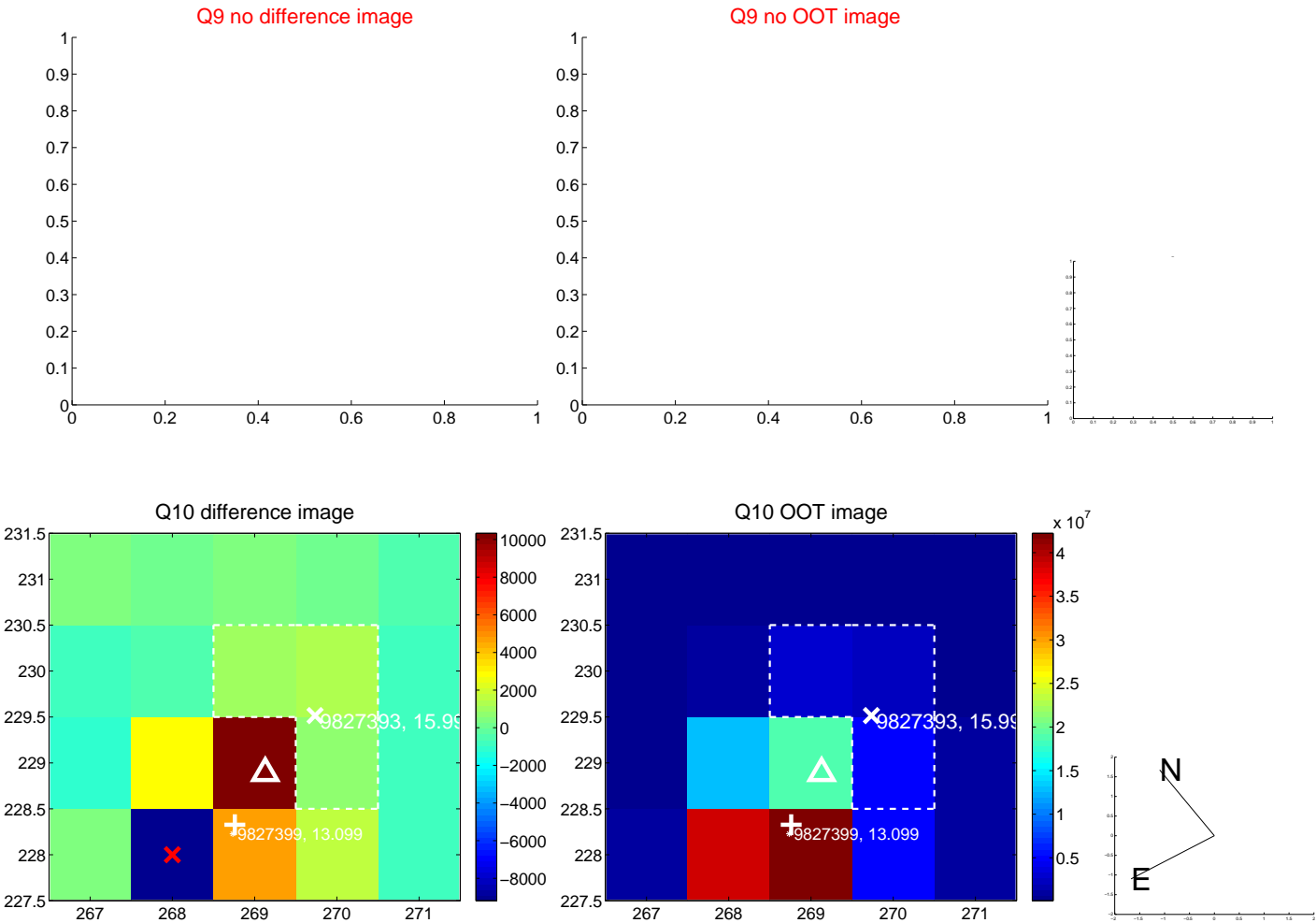
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



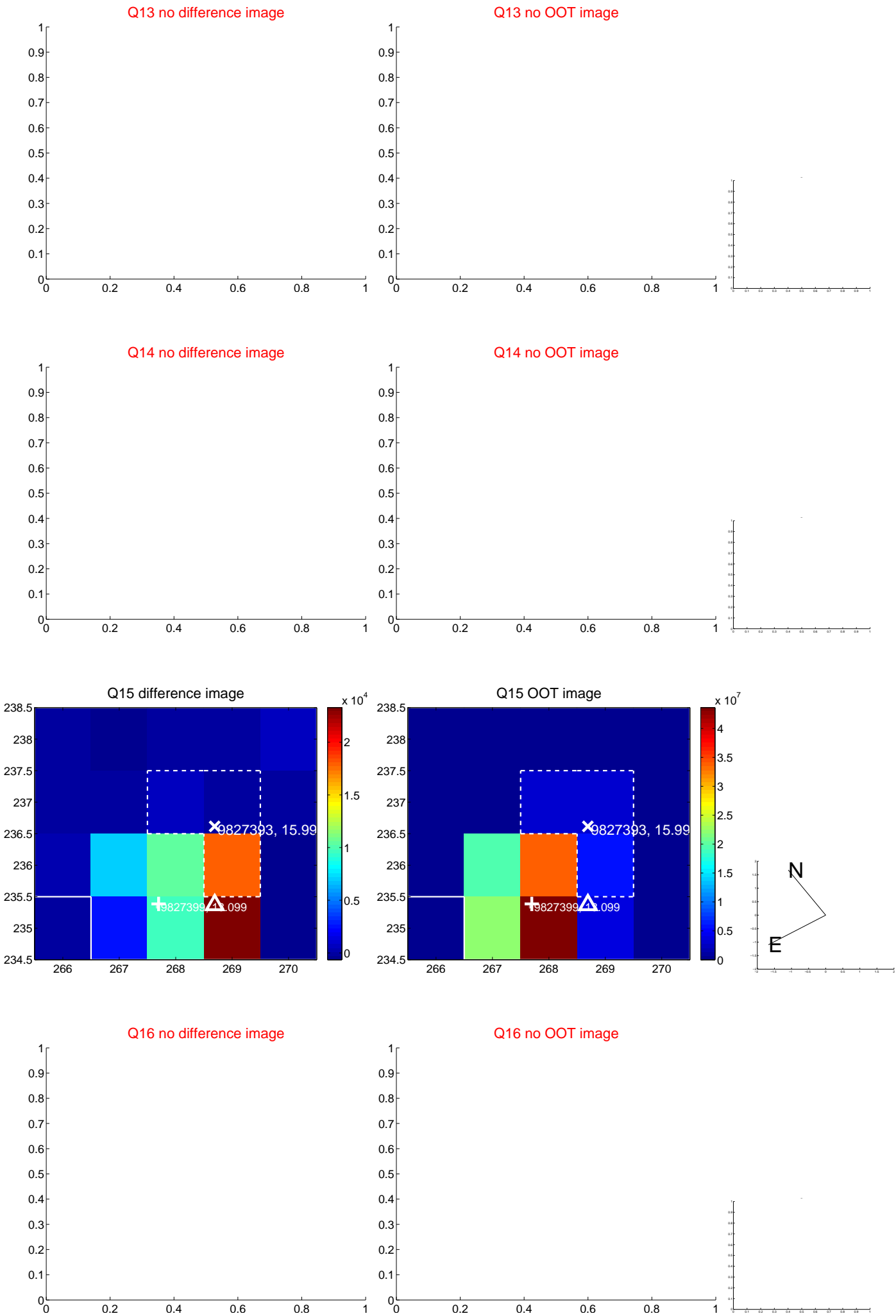
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



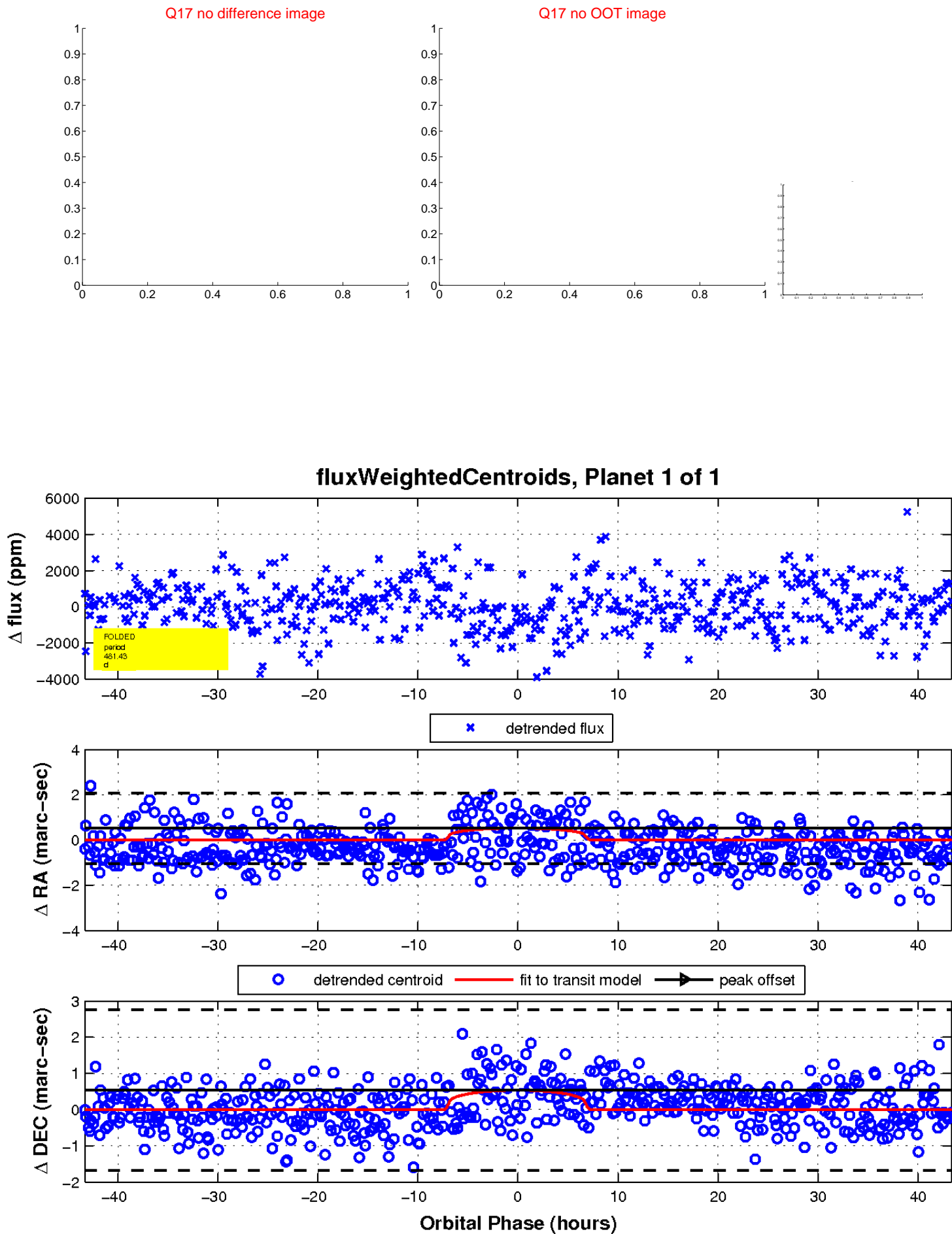
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

