

KIC 009773869

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})
009773869-01	OBS	3568.01	15.651294	138.724634	488636.7	6.314	2809.2	1474.8	1.10	6137	82.07	93.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009773869-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—DEEP_V_SHAPED—CENT_KIC_POS

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 009773869-01

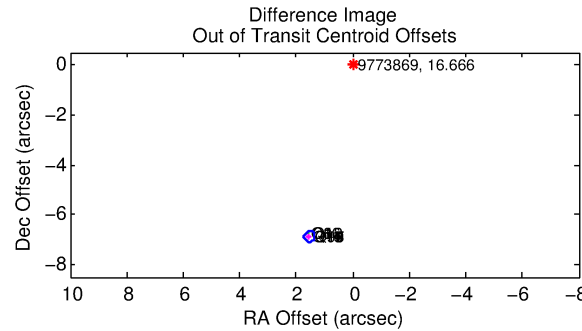
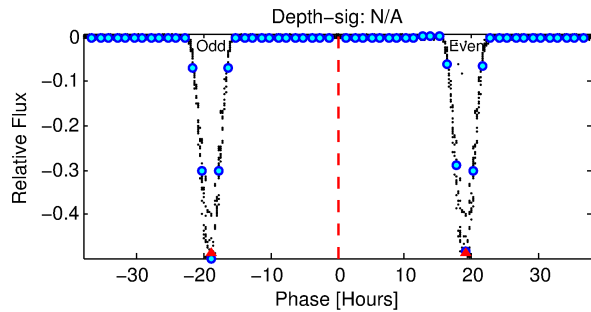
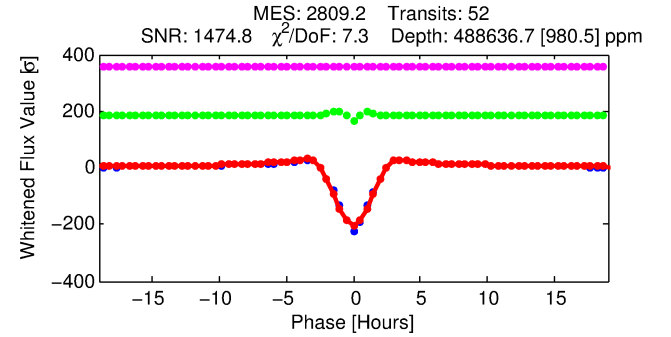
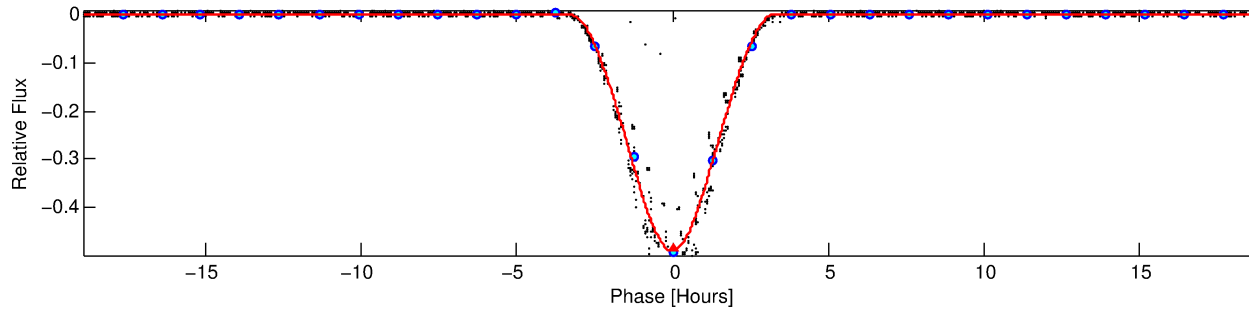
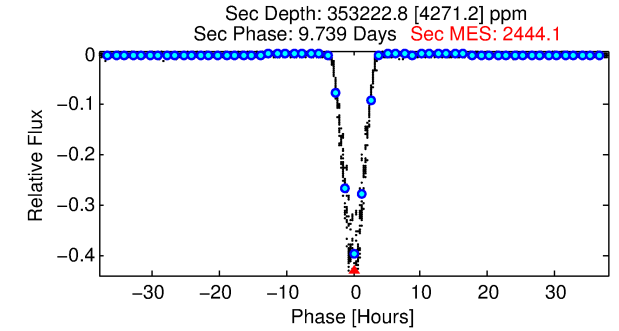
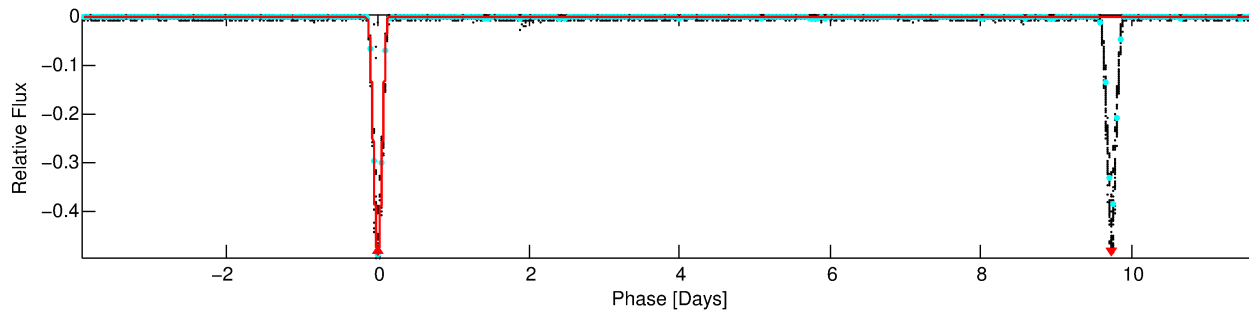
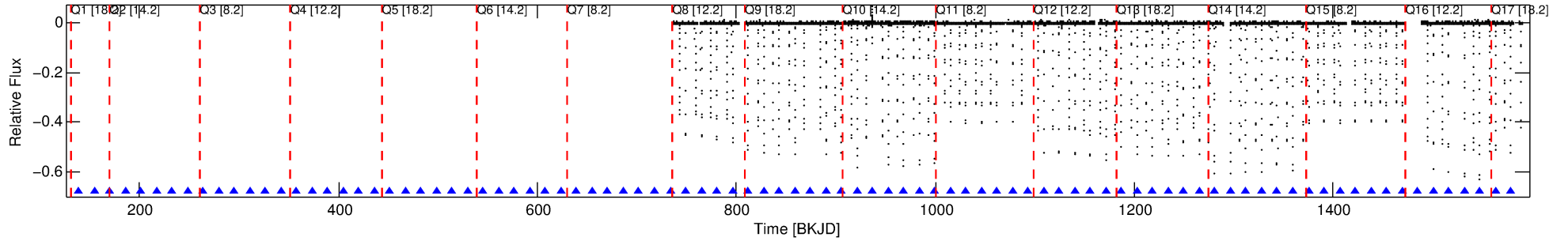
No Significant Match Found

DV One-Page Summary

KIC: 9773869 Candidate: 1 of 1 Period: 15.651 d

KOI: K03568 Corr: No Ephemeris Match

Kp: 16.67 R*: 1.10 Rs Teff: 6137.0 K Logg: 4.42 Fe/H: 0.140



DV Fit Results:

Period = 15.65129 [0.00000] d
Epoch = 138.7246 [0.0003] BKJD
Rp/R* = 0.6818 [0.0072]
a/R* = 31.12 [0.07]
b = 0.36 [0.02]
Seff = 93.26 [41.37]
Teff = 792 [88] K
Rp = 82.07 [27.91] Re
a = 0.1288 [0.0366] AU
Ag = 478.37 [197.35] [2.42σ]
Teff = 5730 [239] K [19.41σ]

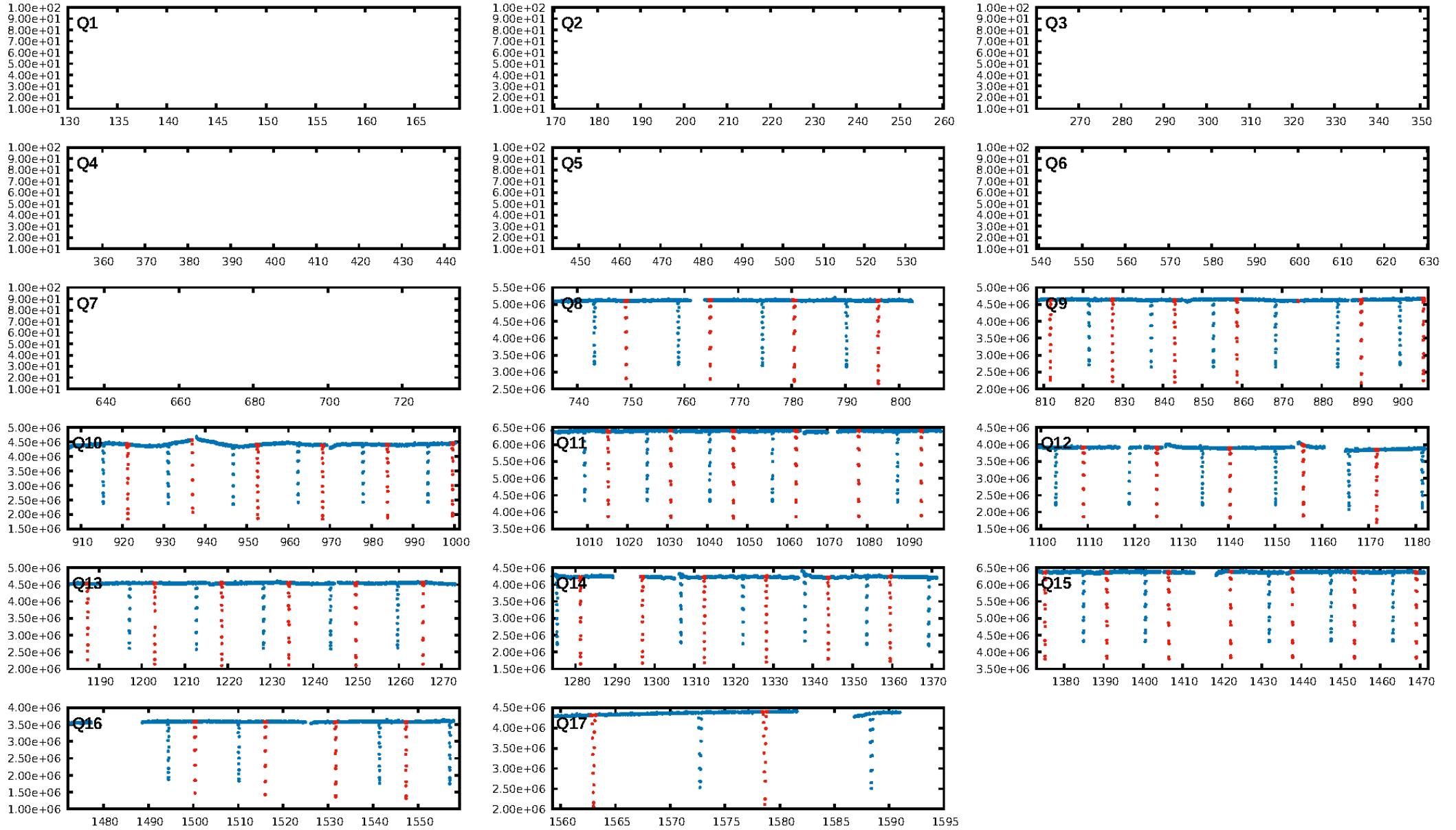
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [50/50]
GhostDiagnostic-chr: 5.224
Centroid-sig: 0.0%
Centroid-so: 4.717 arcsec [15025.54σ]
OotOffset-rm: 7.053 arcsec [101.79σ]
KicOffset-rm: 0.135 arcsec [1.98σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

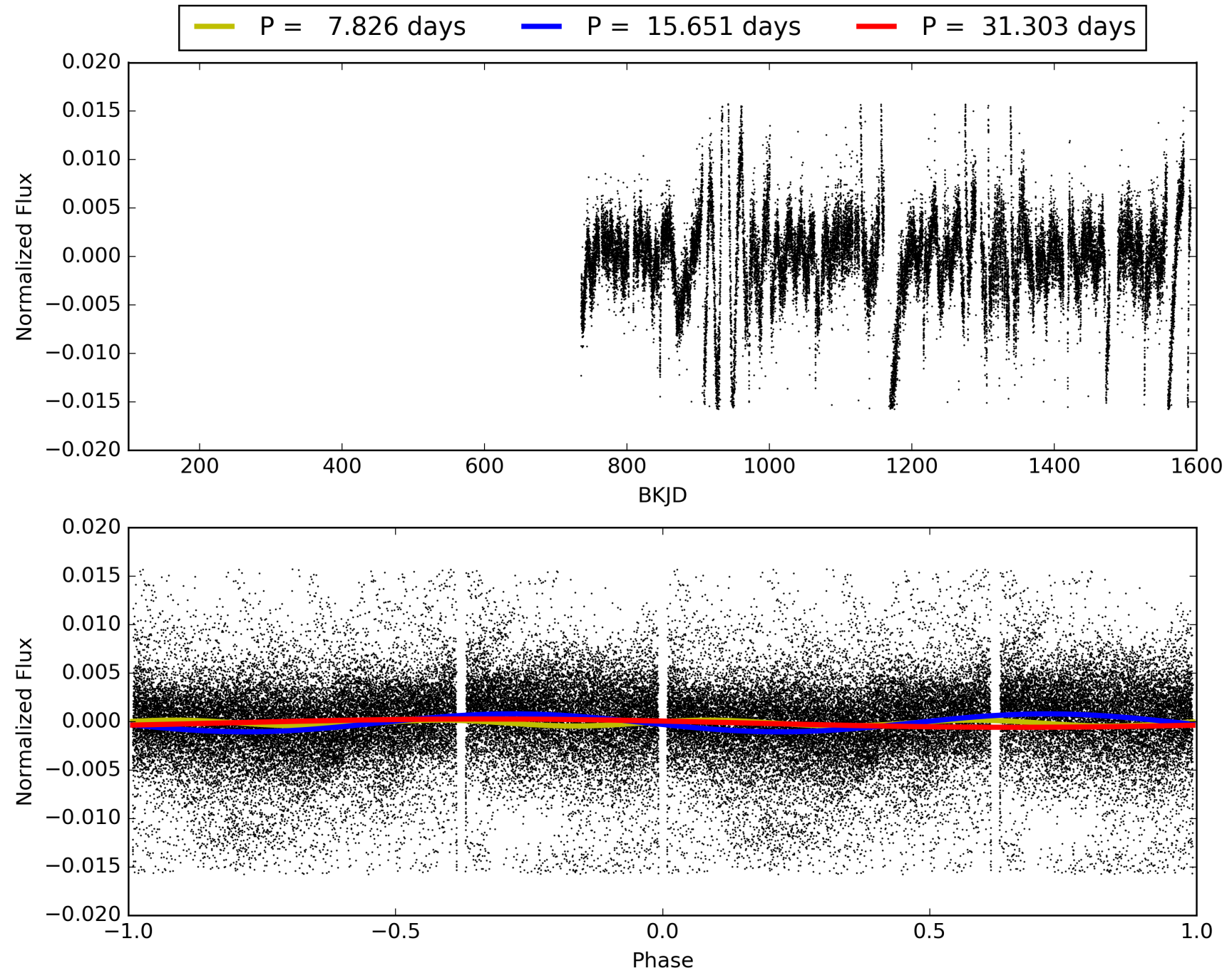
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:16:39 Z

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

TCE 009773869-01, PDC Light Curves

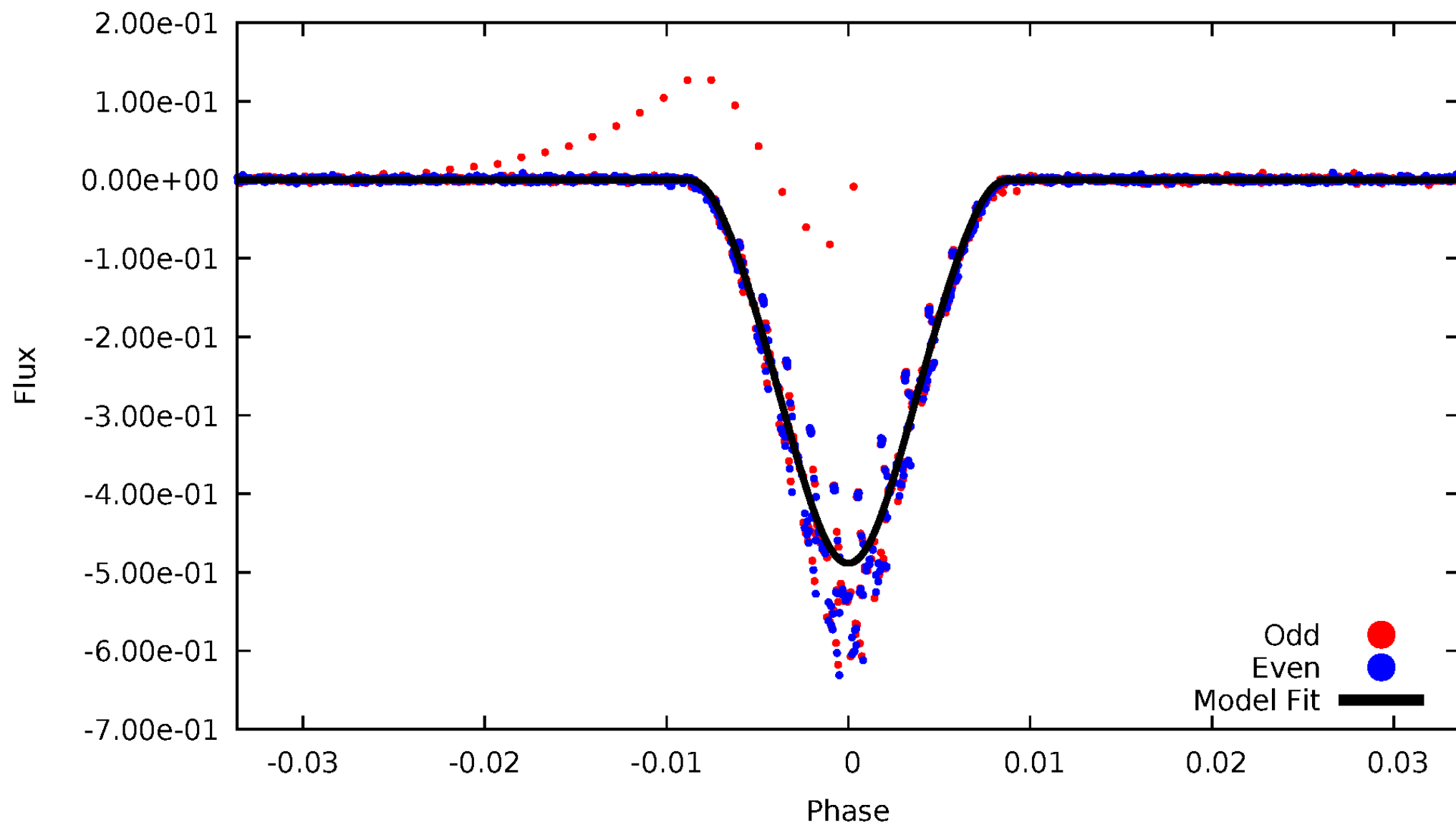


TCE 009773869-01



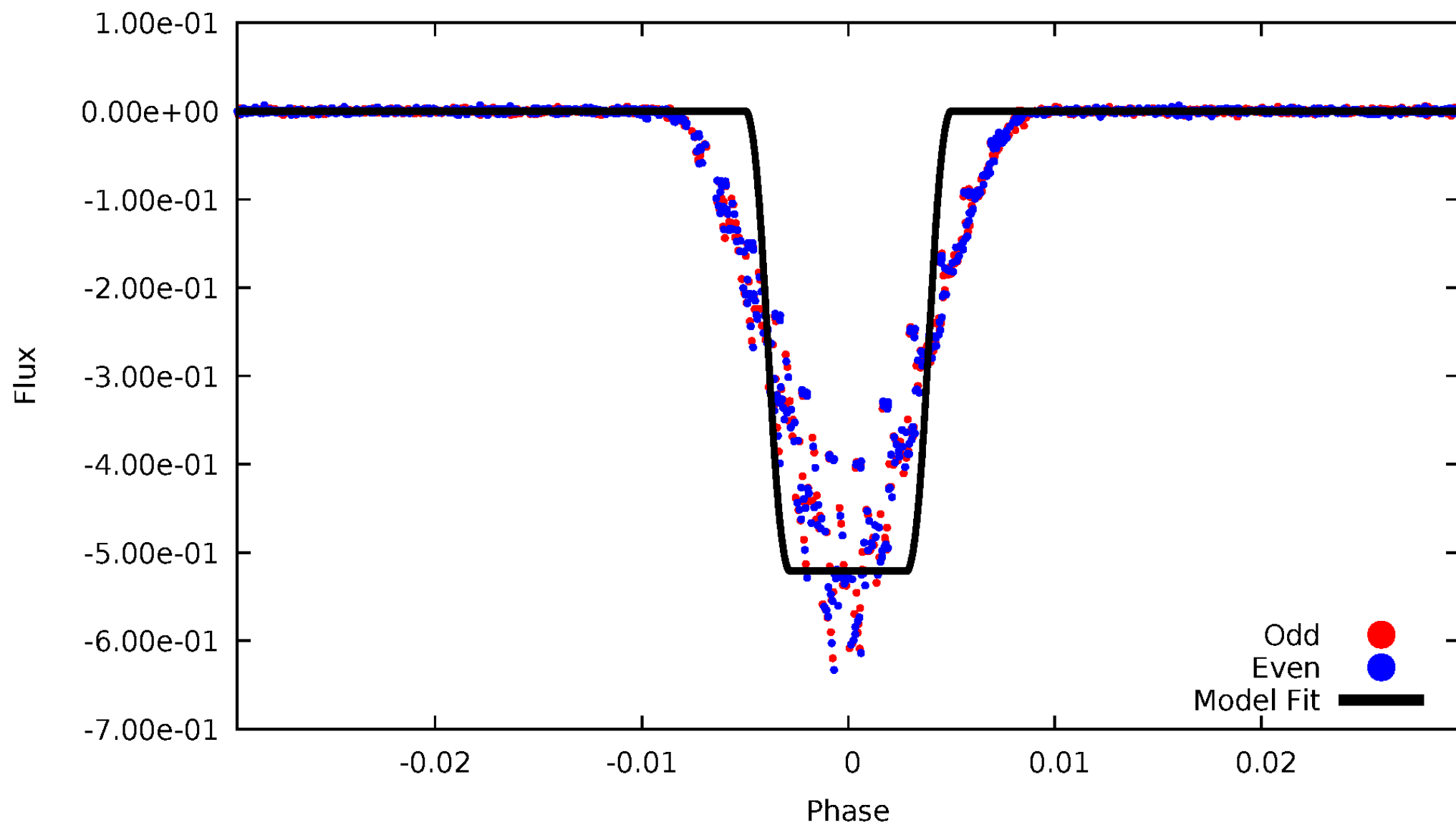
DV Odd/Even

TCE 009773869-01



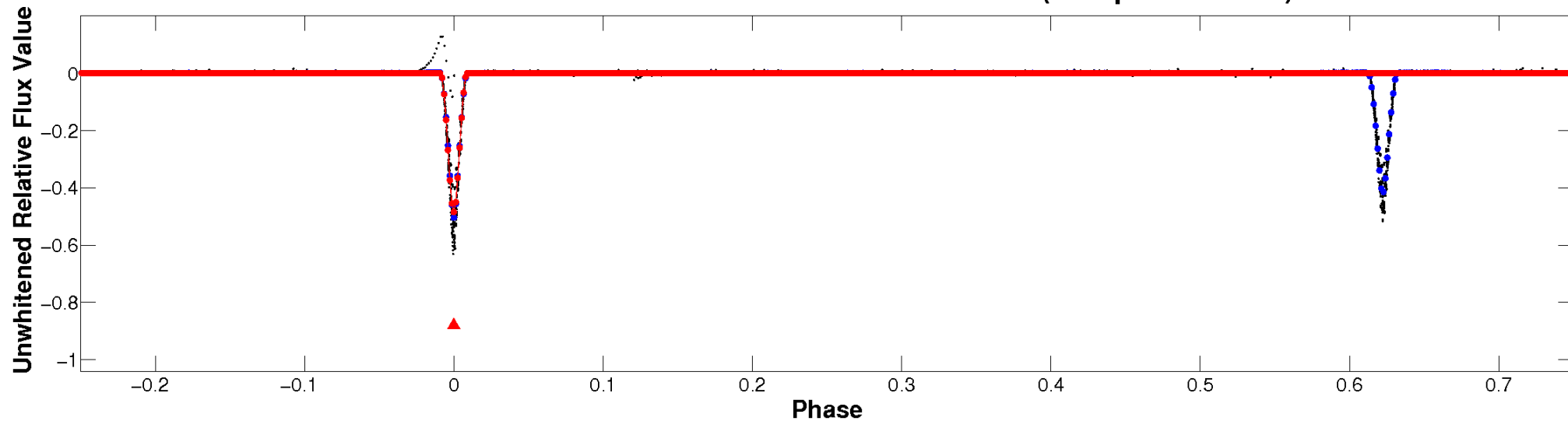
ALT Odd/Even

TCE 009773869-01

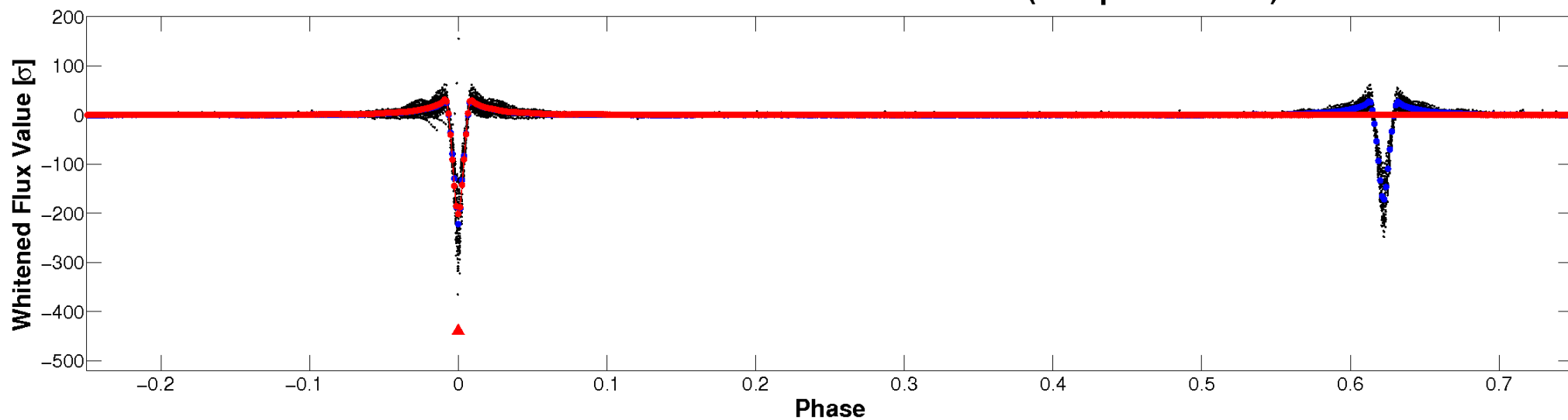


Non-Whitened Vs. Whitened Light Curve

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

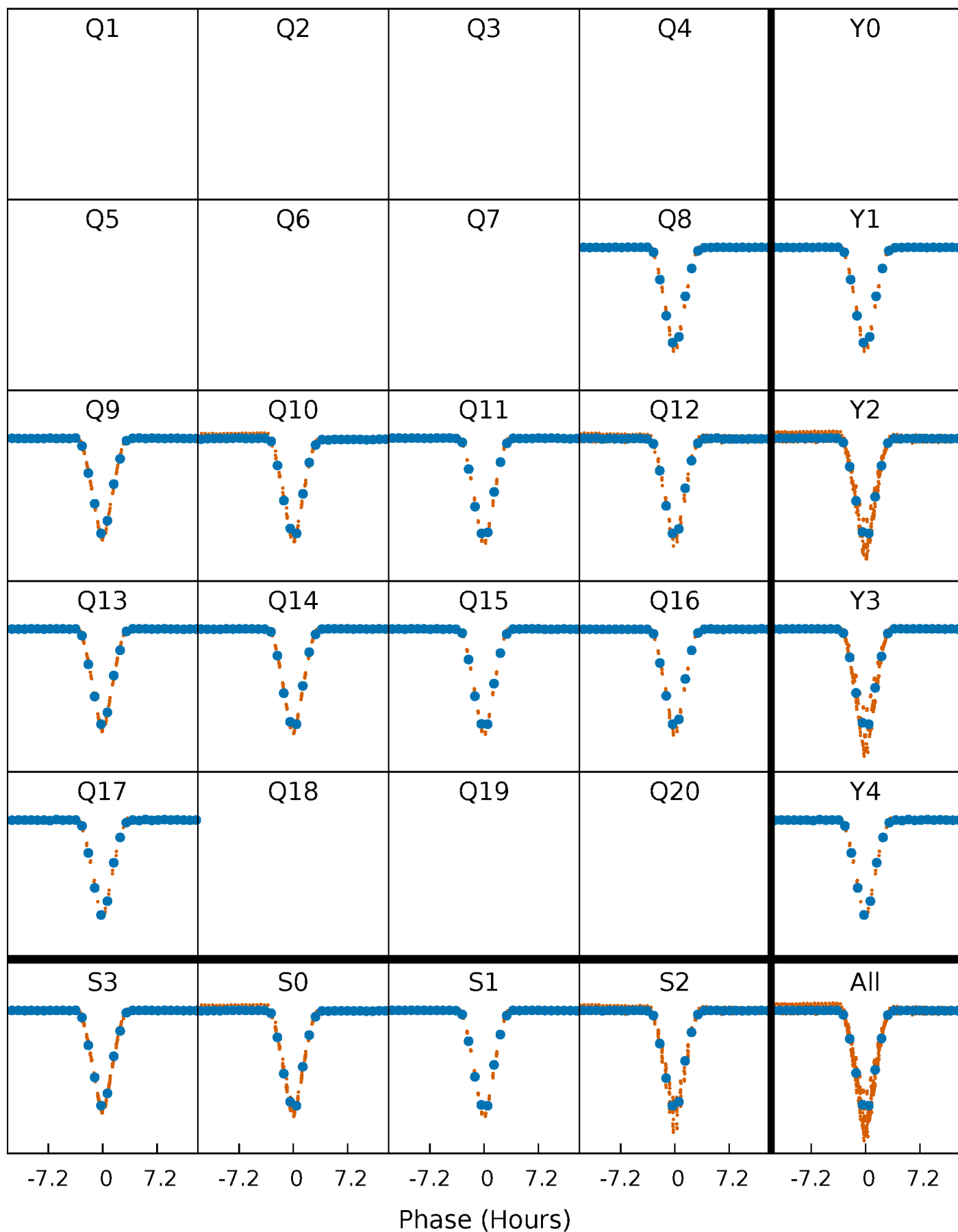


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



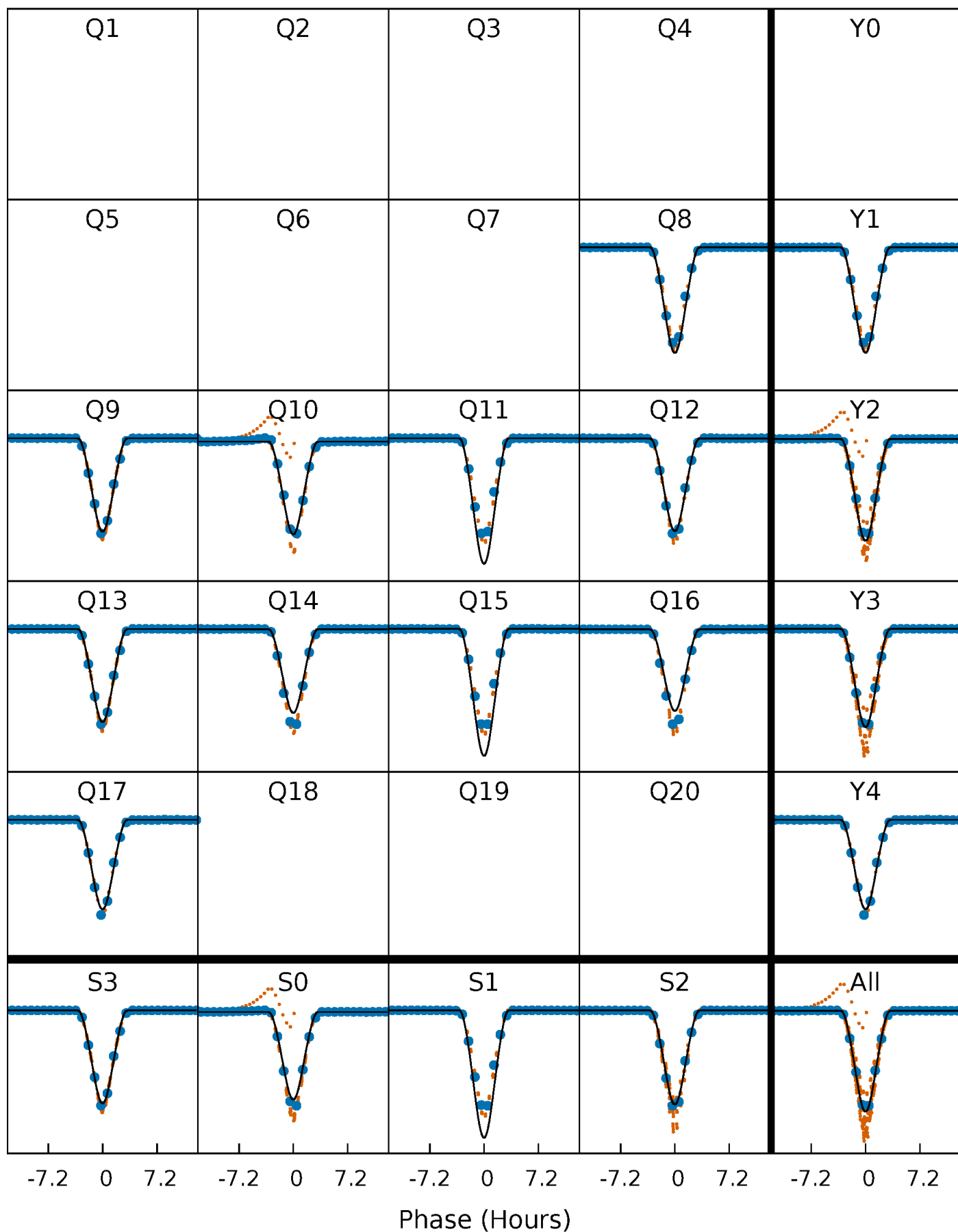
PDC Quarter-Phased Transit Curves

TCE 009773869-01 P= 15.651294 Days $T_0=138.724634$ (BKJD)



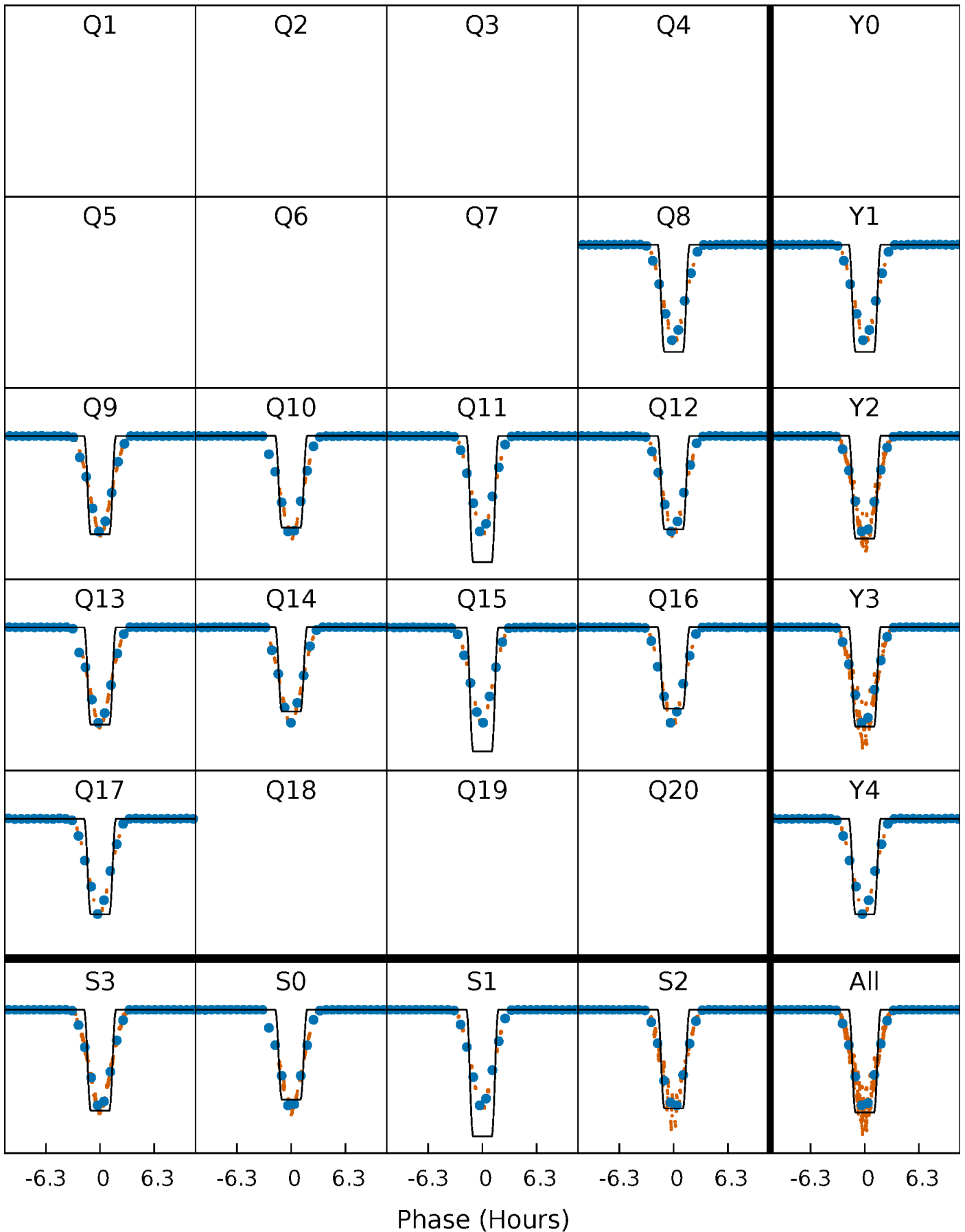
DV Quarter-Phased Transit Curves

TCE 009773869-01 P= 15.651294 Days $T_0=138.724634$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

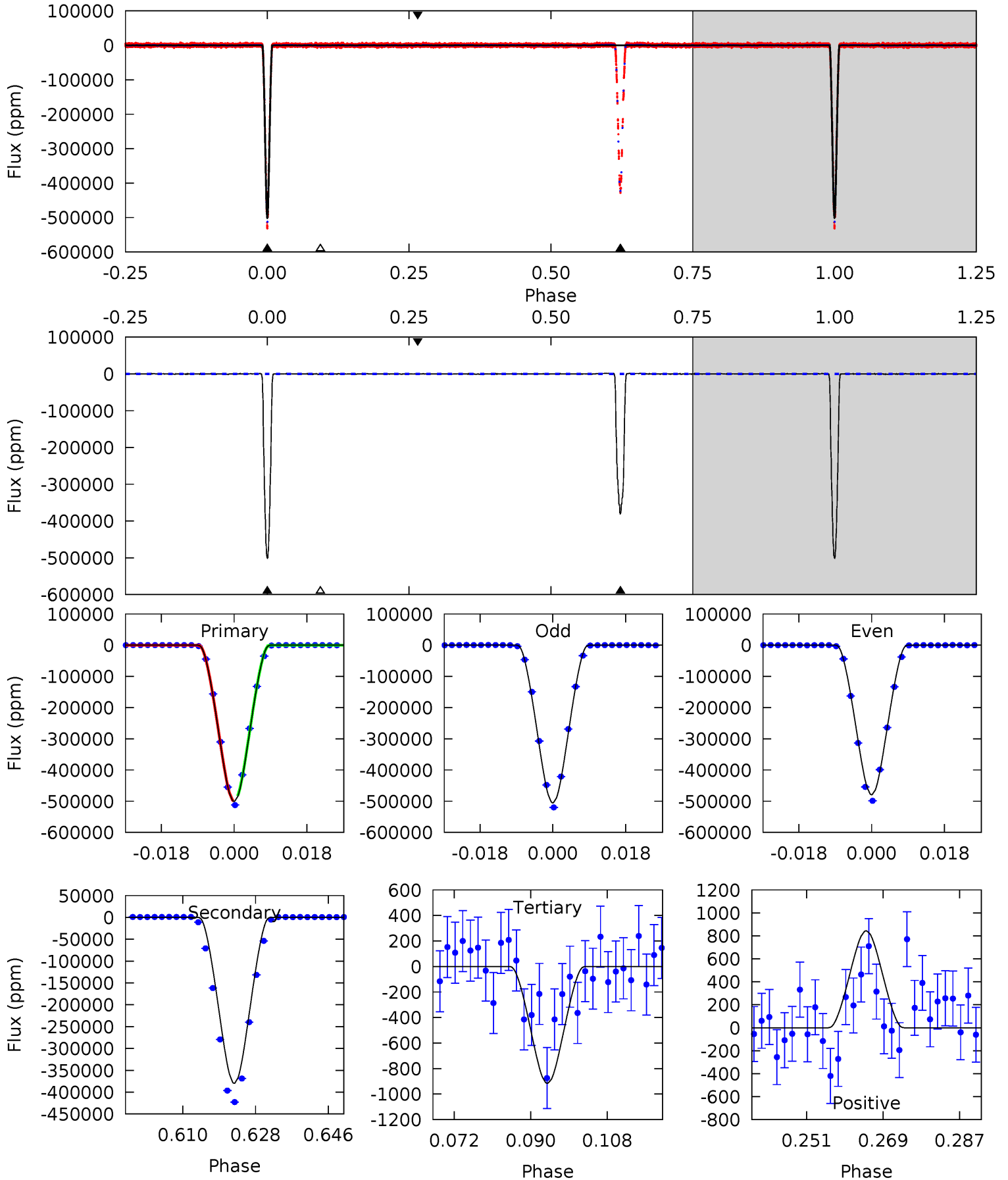
TCE 009773869-01 P= 15.651419 Days $T_0=138.716467$ (BKJD)



DV Model-Shift Uniqueness Test

009773869-01, P = 15.651294 Days, E = 138.724634 Days

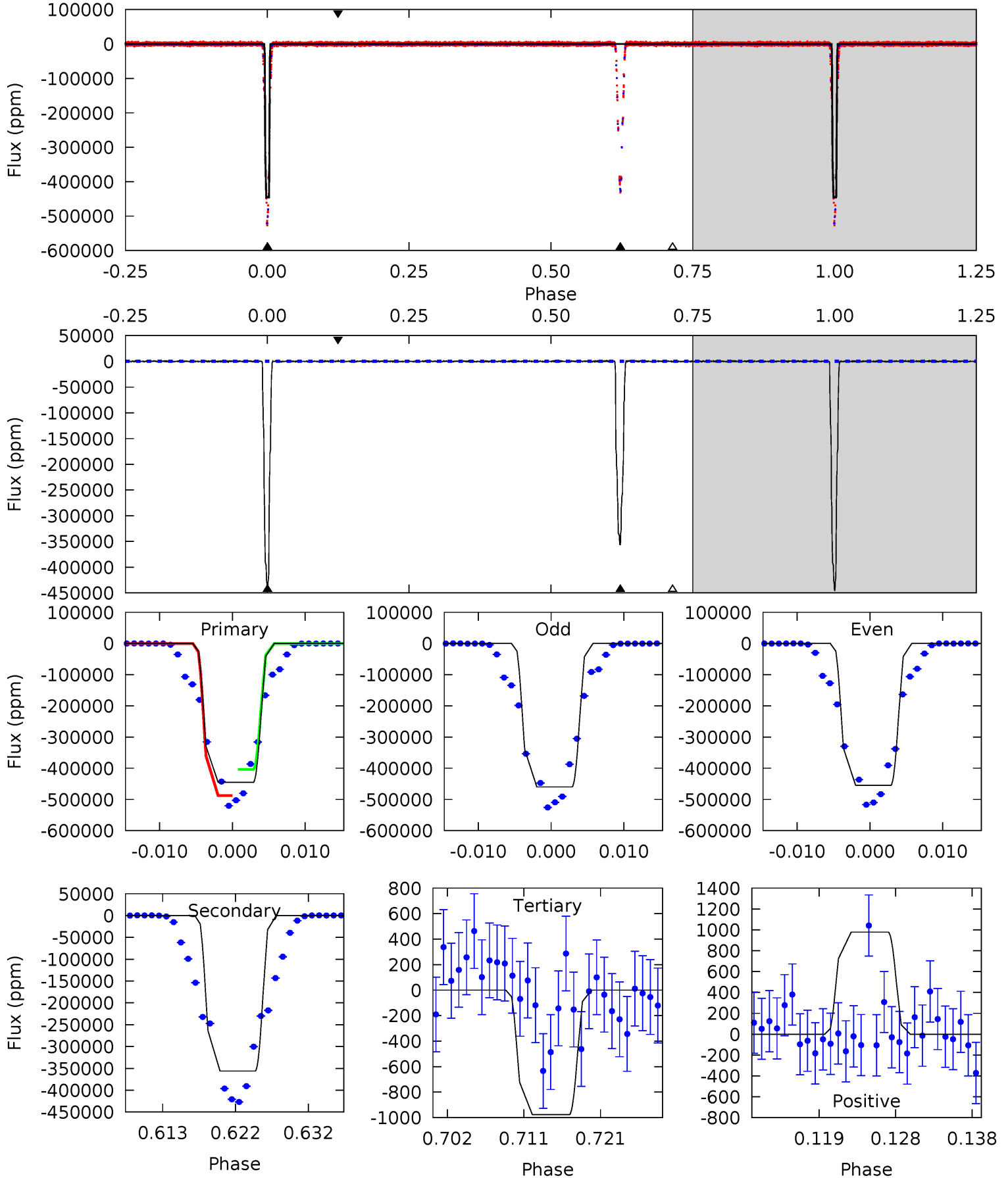
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4837	3669	8.85	8.15	4.91	2.37	3.69	4828	4828	3660	3661	124.6	0.96	0.00	0



Alt Model-Shift Uniqueness Test

009773869-01, P = 15.651419 Days, E = 138.716467 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1922	1537	4.21	4.22	5.03	2.58	1.26	1918	1918	1533	1533	10.9	0.97	0.00	167.3



Stellar Parameters For KIC 009773869

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6137^{+190}_{-253}	$4.418^{+0.056}_{-0.224}$	$0.140^{+0.200}_{-0.300}$	$1.103^{+0.375}_{-0.125}$	$1.165^{+0.151}_{-0.166}$	$1.222^{+0.368}_{-0.666}$
	+3%/-4%	+1%/-5%	+143%/-214%	+34%/-11%	+13%/-14%	+30%/-54%
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 009773869-01 / KOI 3568.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-379753 ± 103	$85.04^{+14.69}_{-7.88}$	1135^{+86}_{-65}	6591^{+224}_{-301}	760^{+129}_{-195}
Alt.	-356121 ± 232	$89.20^{+15.59}_{-7.66}$	1126^{+92}_{-59}	6224^{+194}_{-264}	621^{+102}_{-158}

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 $A_{obs} \gg 1.0$

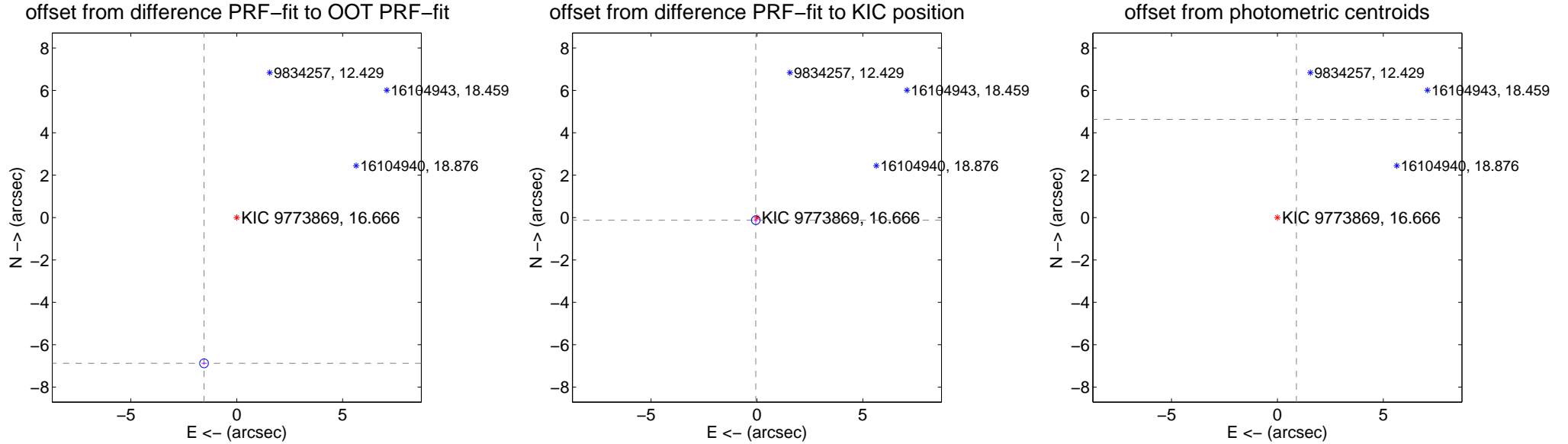
DV Centroid Data

Supplemental centroid analysis for 009773869-01. Kepler magnitude: 16.67. Transit SNR 1474.83

There are 10 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 6.90 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	7.053 \pm 0.069	101.79	1.544 \pm 0.068	-6.882 \pm 0.069
PRF-fit source offset from KIC position	0.135 \pm 0.068	1.98	0.054 \pm 0.071	-0.124 \pm 0.068
photometric centroid source offset	4.72 \pm 0.00	15025.53	-0.90 \pm 0.00	4.63 \pm 0.00

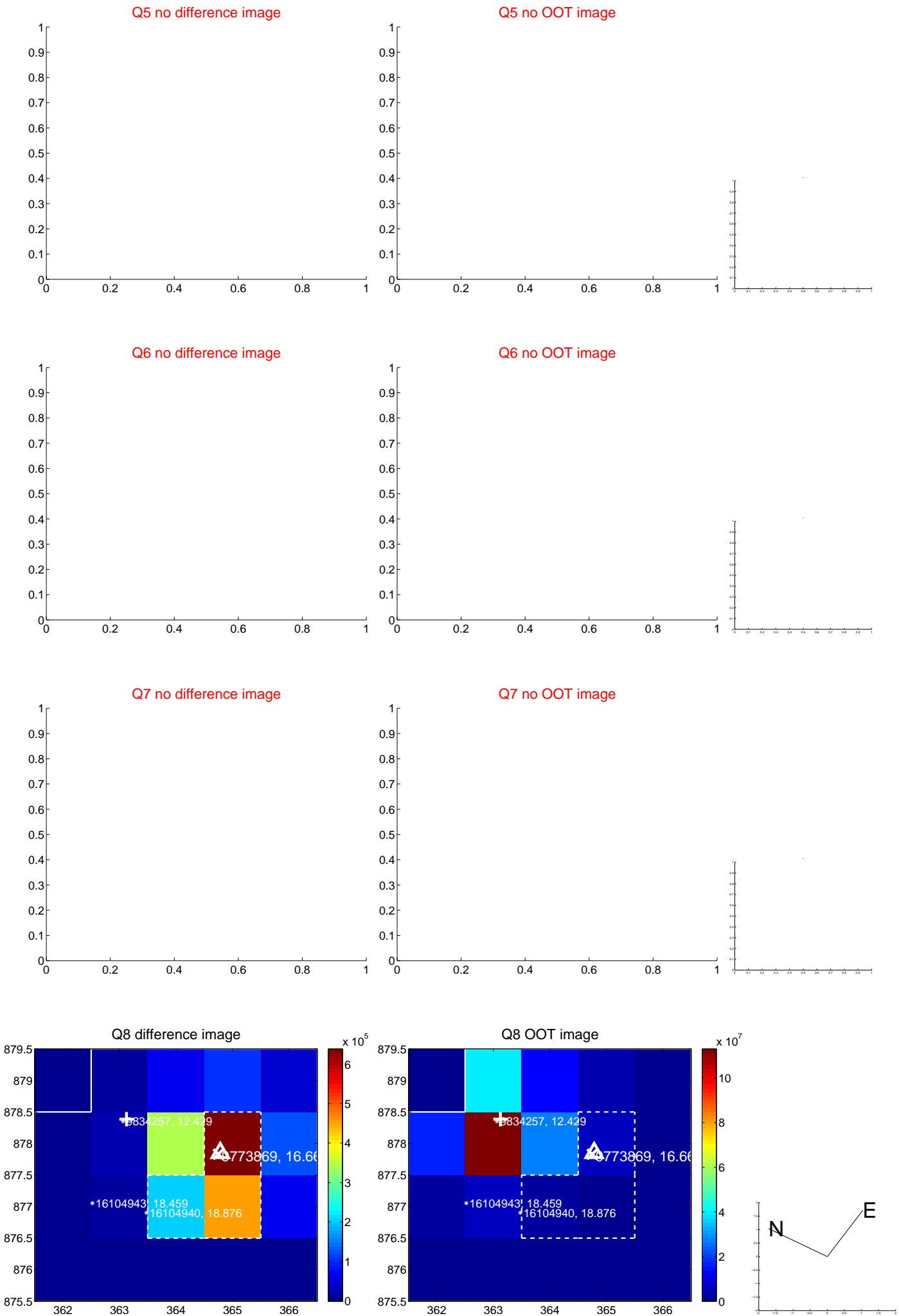


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

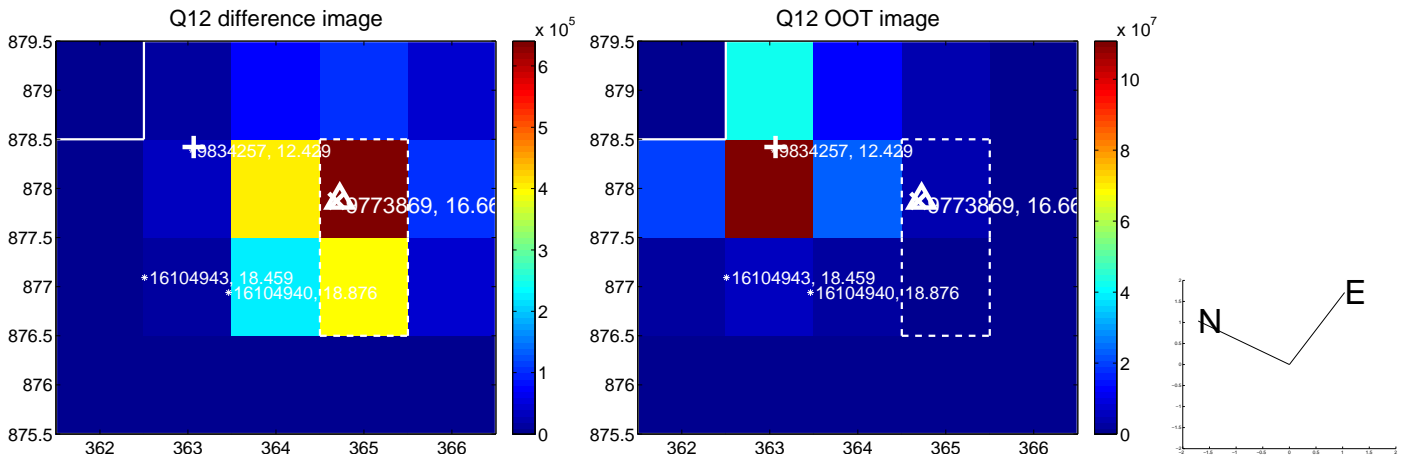
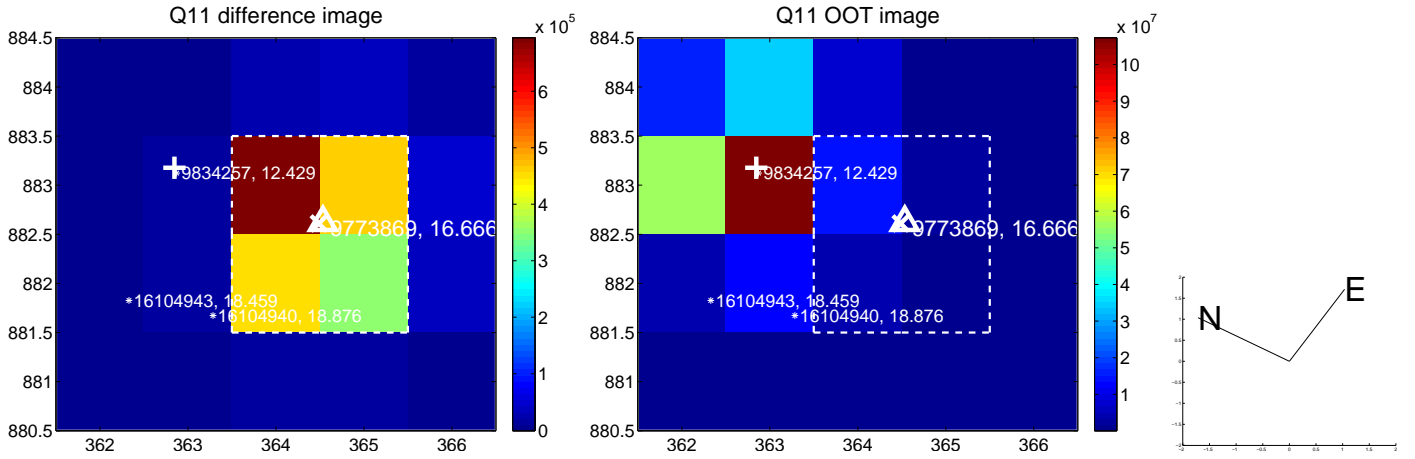
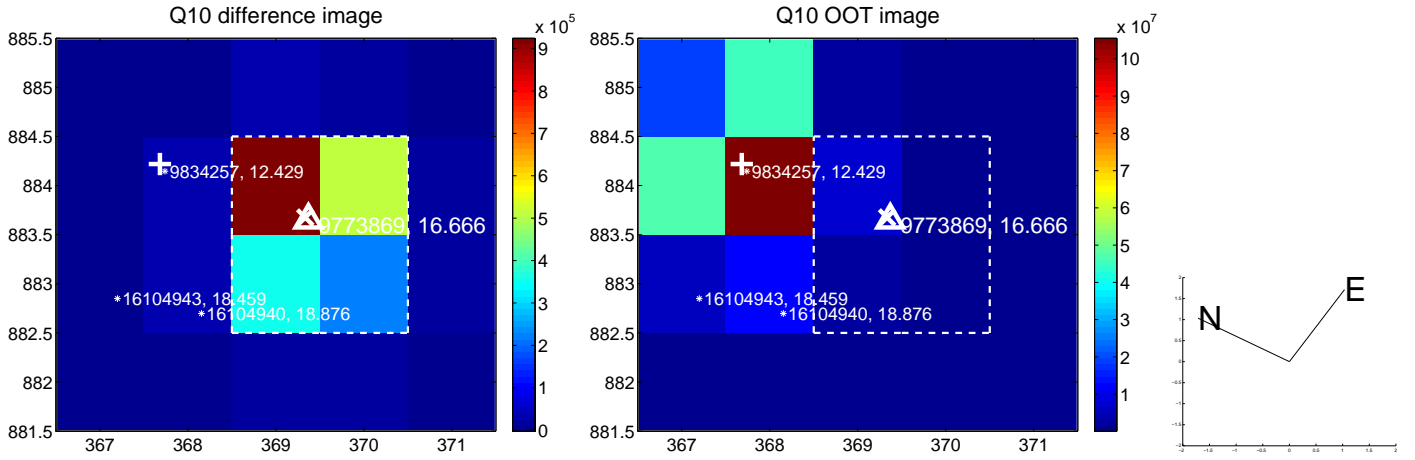
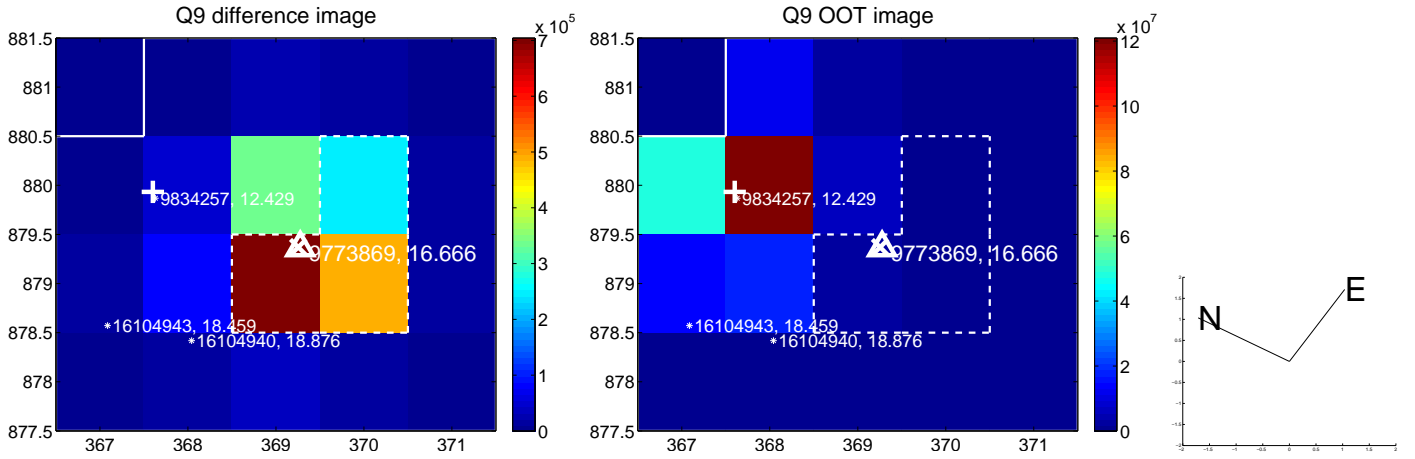
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



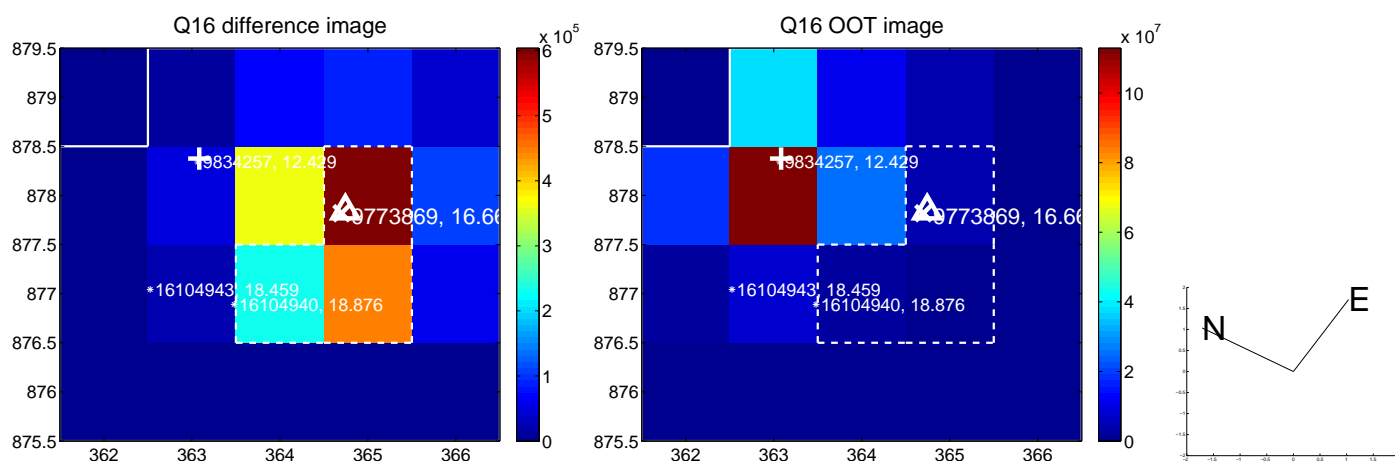
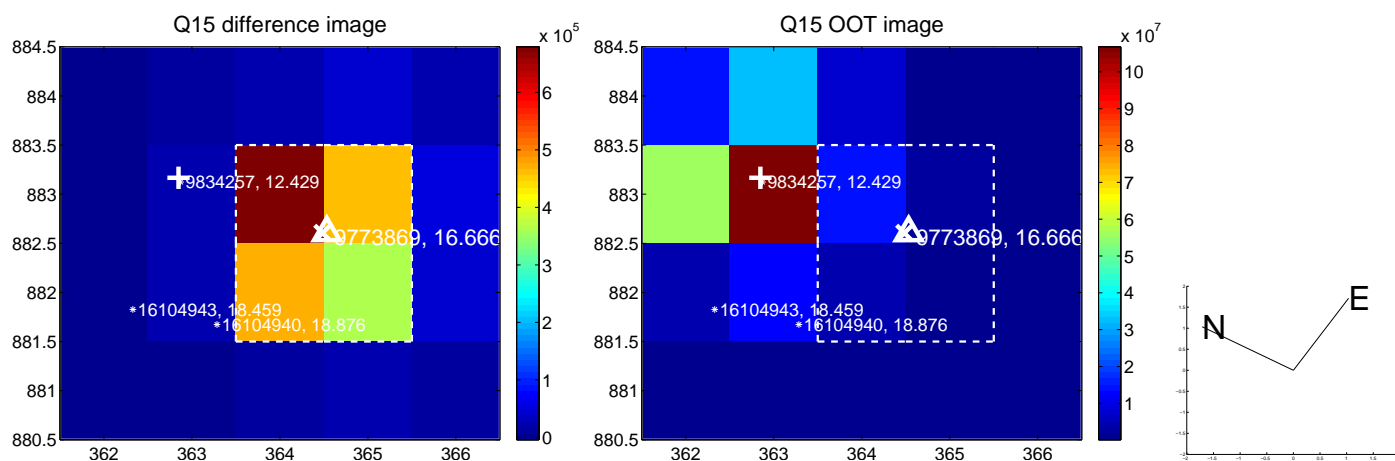
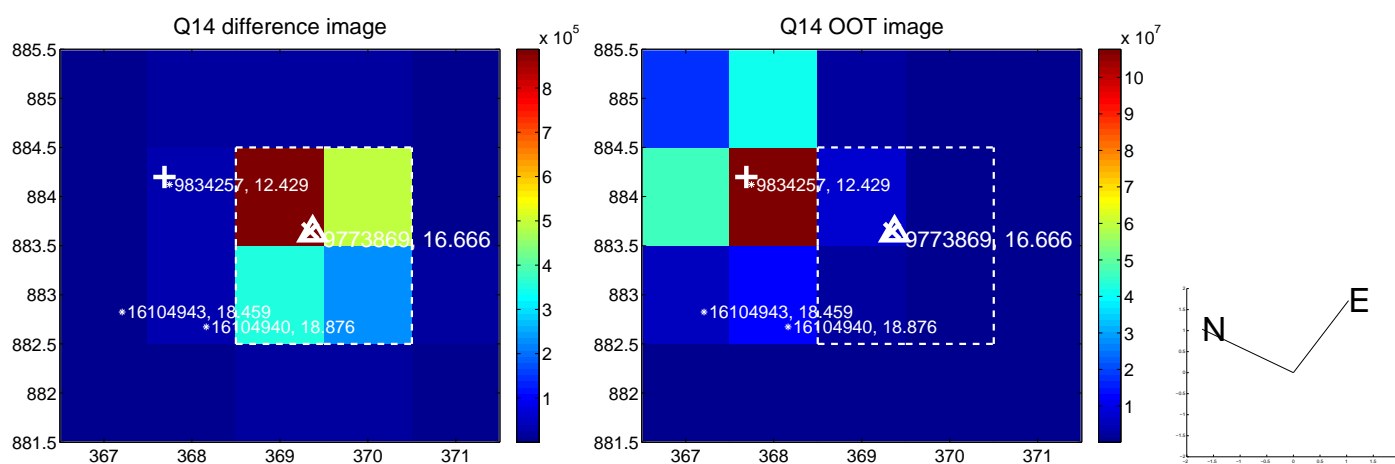
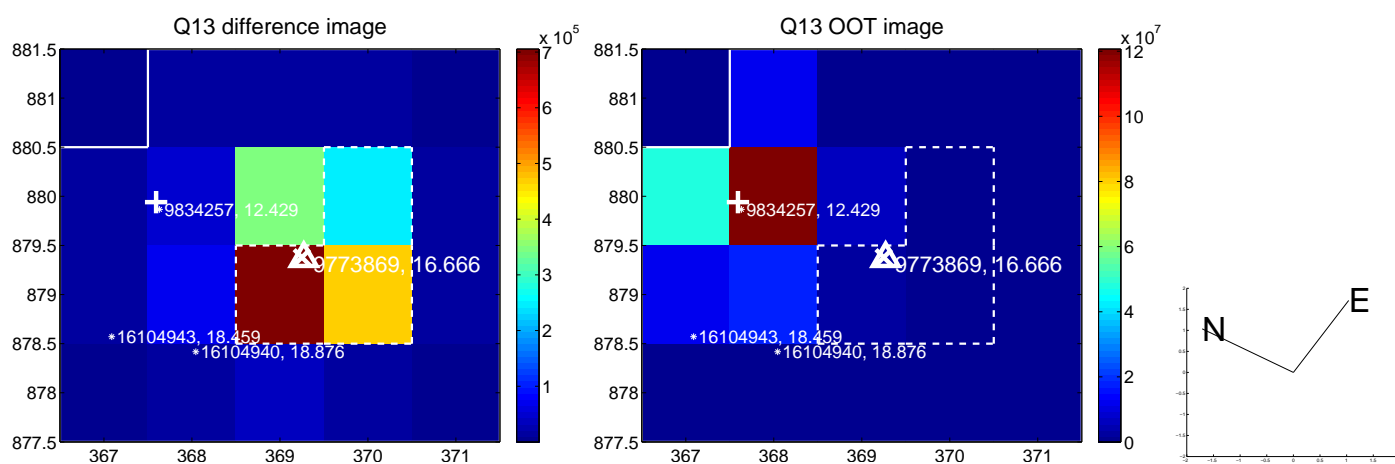
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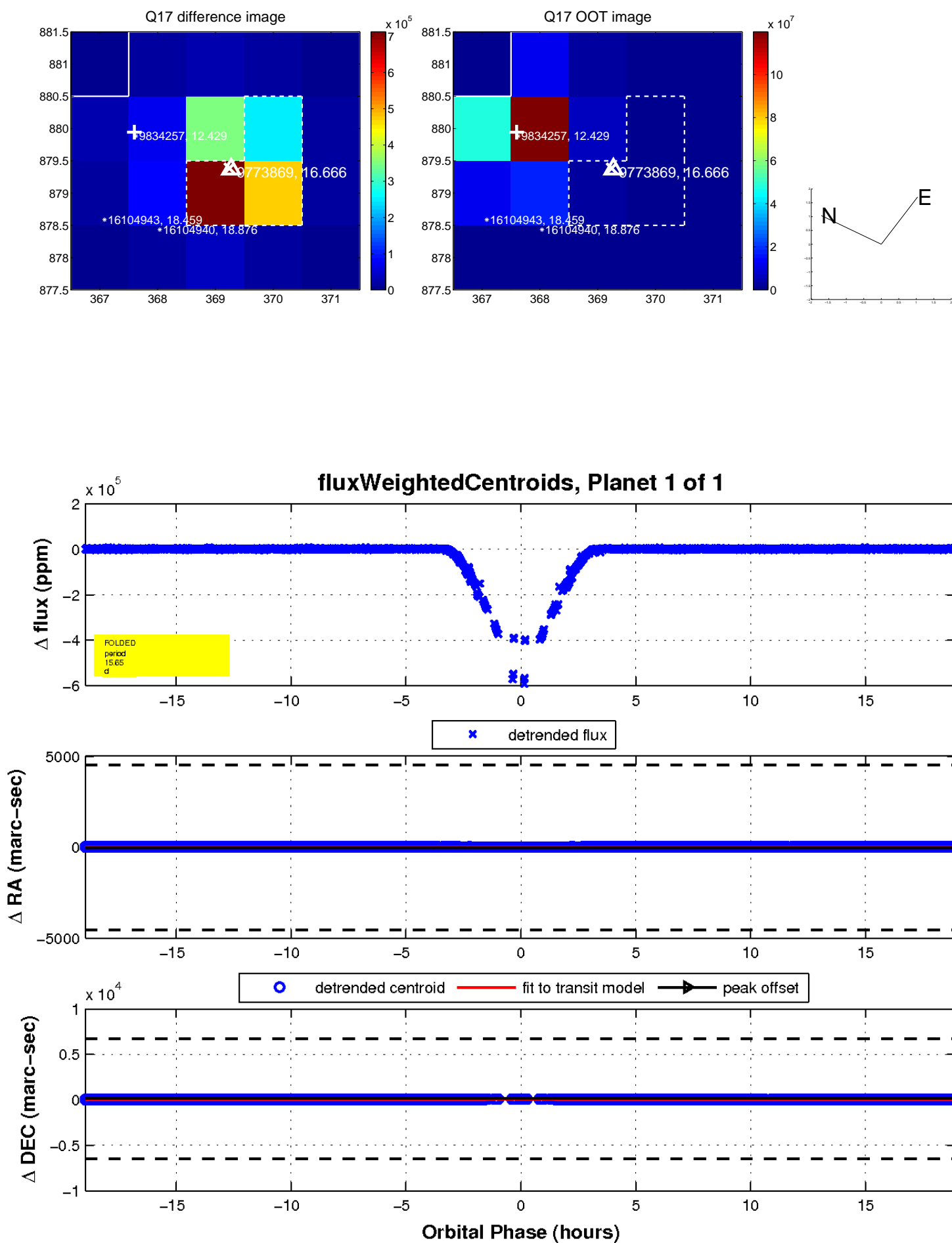
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UKIRT Image

