

KIC 009650762

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})
009650762-01	OBS	7954.01	372.065473	453.815845	570.4	20.110	8.9	9.4	0.81	5769	2.32	0.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009650762-01	OBS	PC	0.84	0	0	0	0	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.

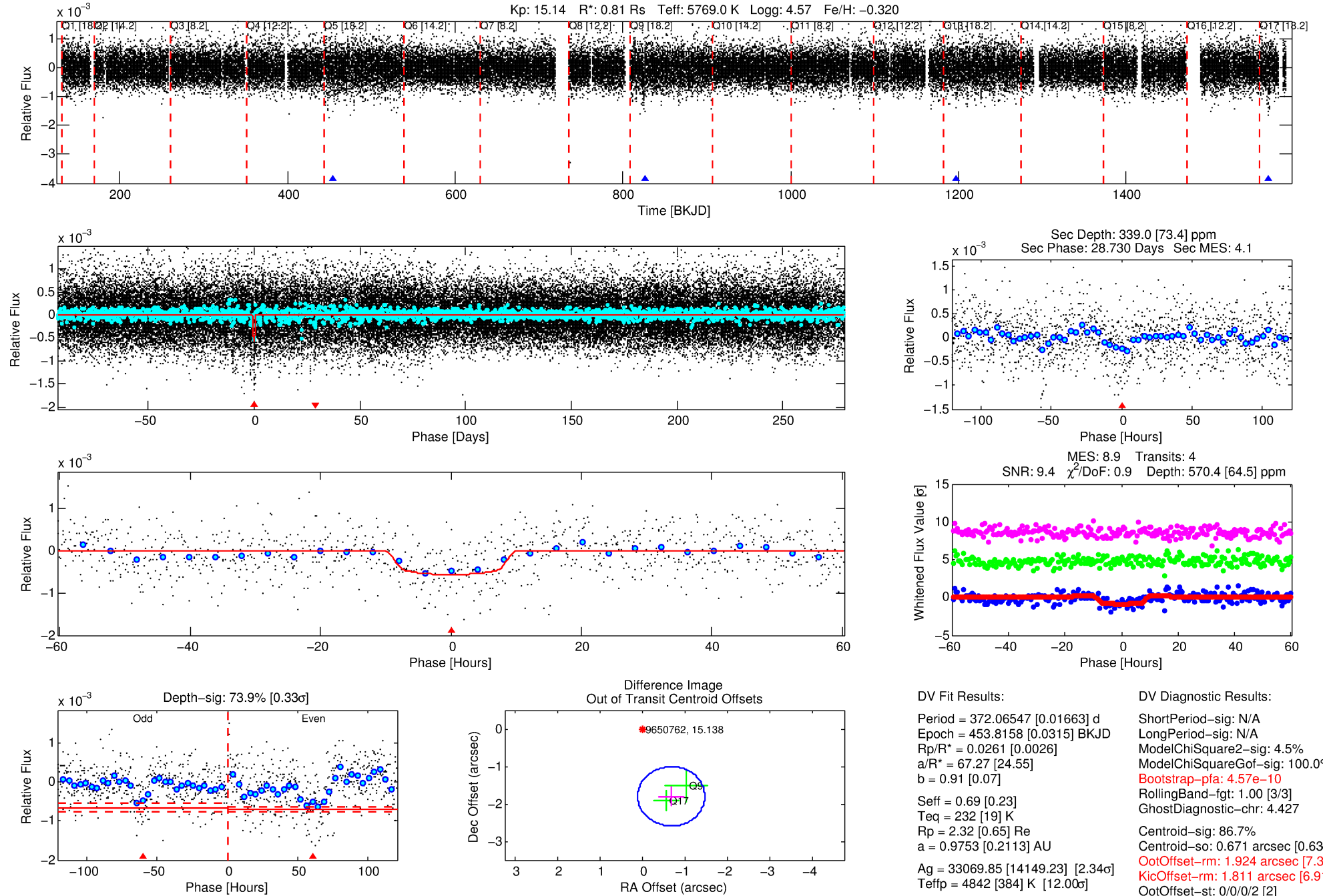
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009650762-01

No Significant Match Found

DV One-Page Summary

KIC: 9650762 Candidate: 1 of 1 Period: 372.065 d



DV Fit Results:

Period = 372.06547 [0.01663] d
Epoch = 453.8158 [0.0315] BKJD
Rp/R* = 0.0261 [0.0026]
a/R* = 67.27 [24.55]
b = 0.91 [0.07]
Seff = 0.69 [0.23]
Teq = 232 [19] K
Rp = 2.32 [0.65] Re
a = 0.9753 [0.2113] AU
Ag = 33069.85 [14149.23] [2.34 σ]
Teffp = 4842 [384] K [12.00 σ]

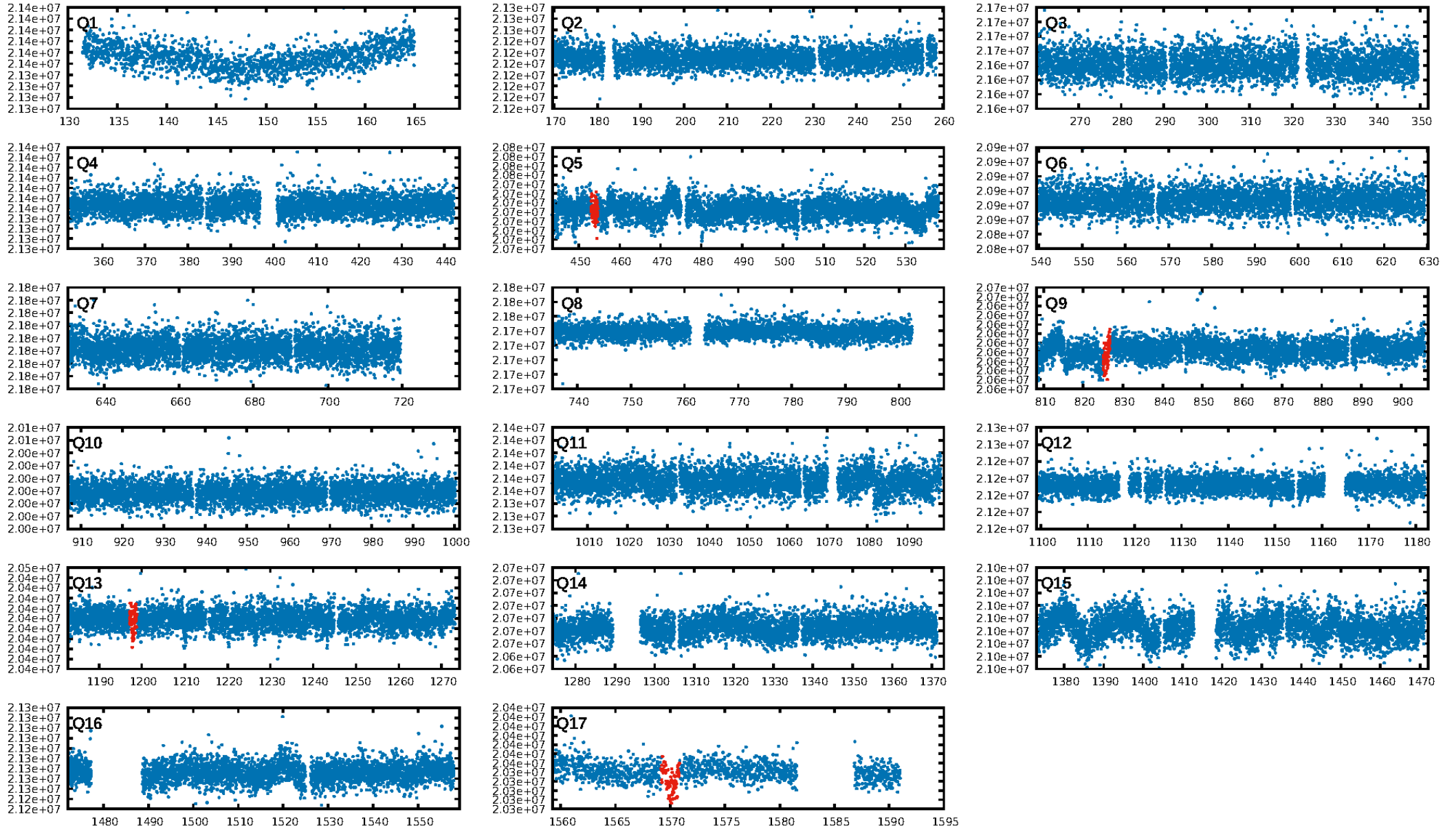
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.57e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 4.427
Centroid-sig: 86.7%
Centroid-so: 0.671 arcsec [0.63 σ]
OotOffset-rm: 1.924 arcsec [7.30 σ]
KicOffset-rm: 1.811 arcsec [6.91 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

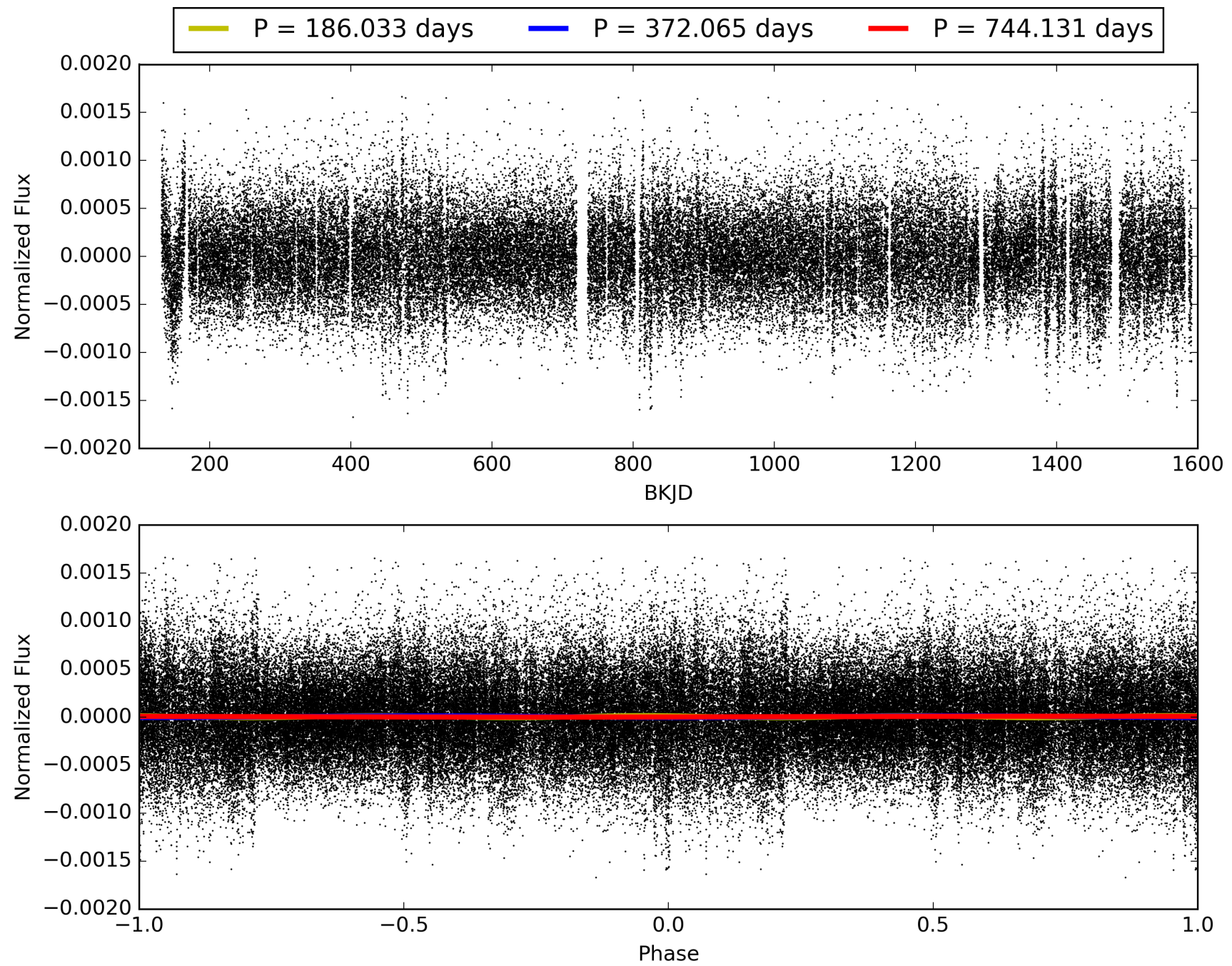
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:28:05 Z

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

TCE 009650762-01, PDC Light Curves

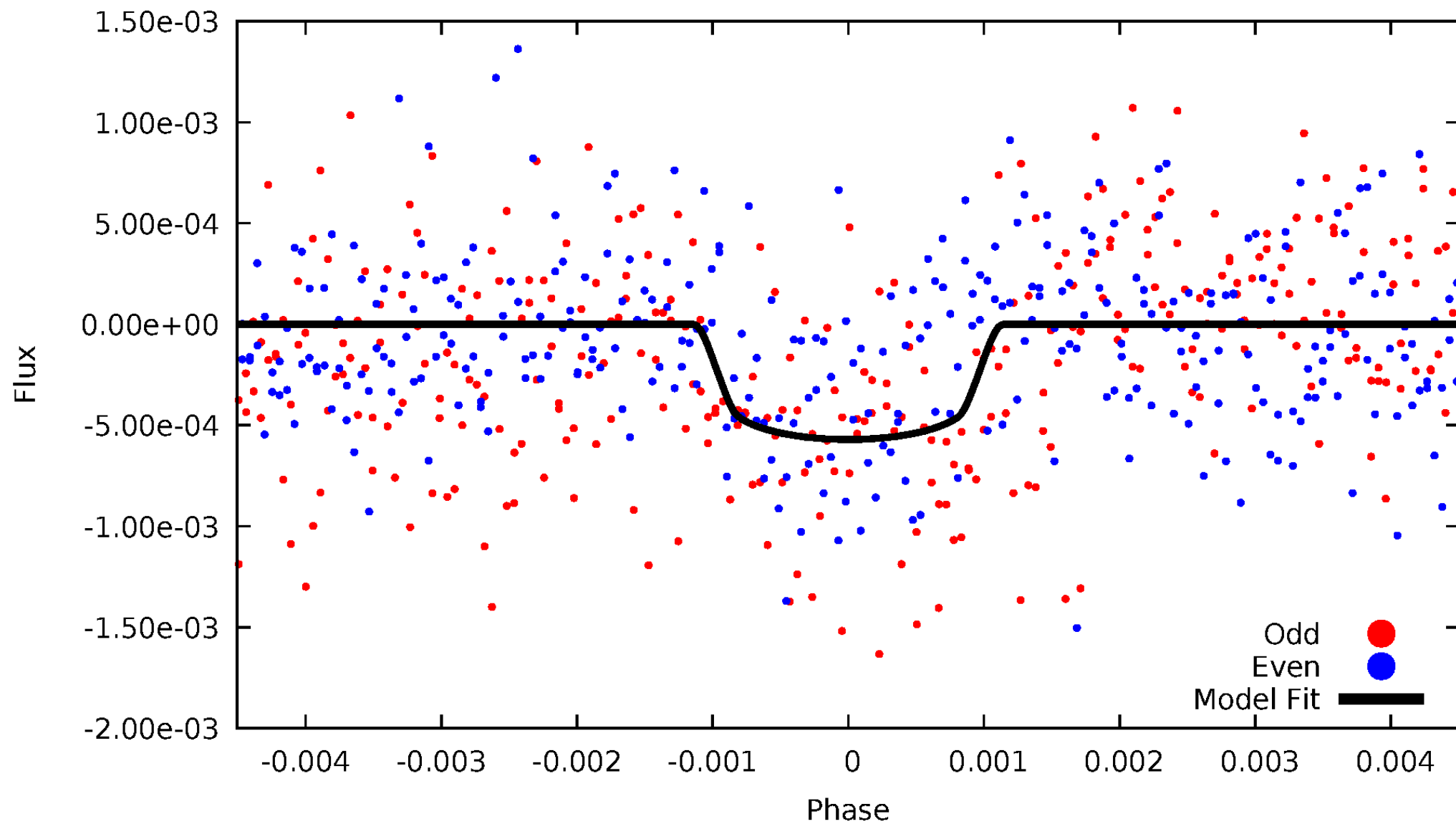


TCE 009650762-01



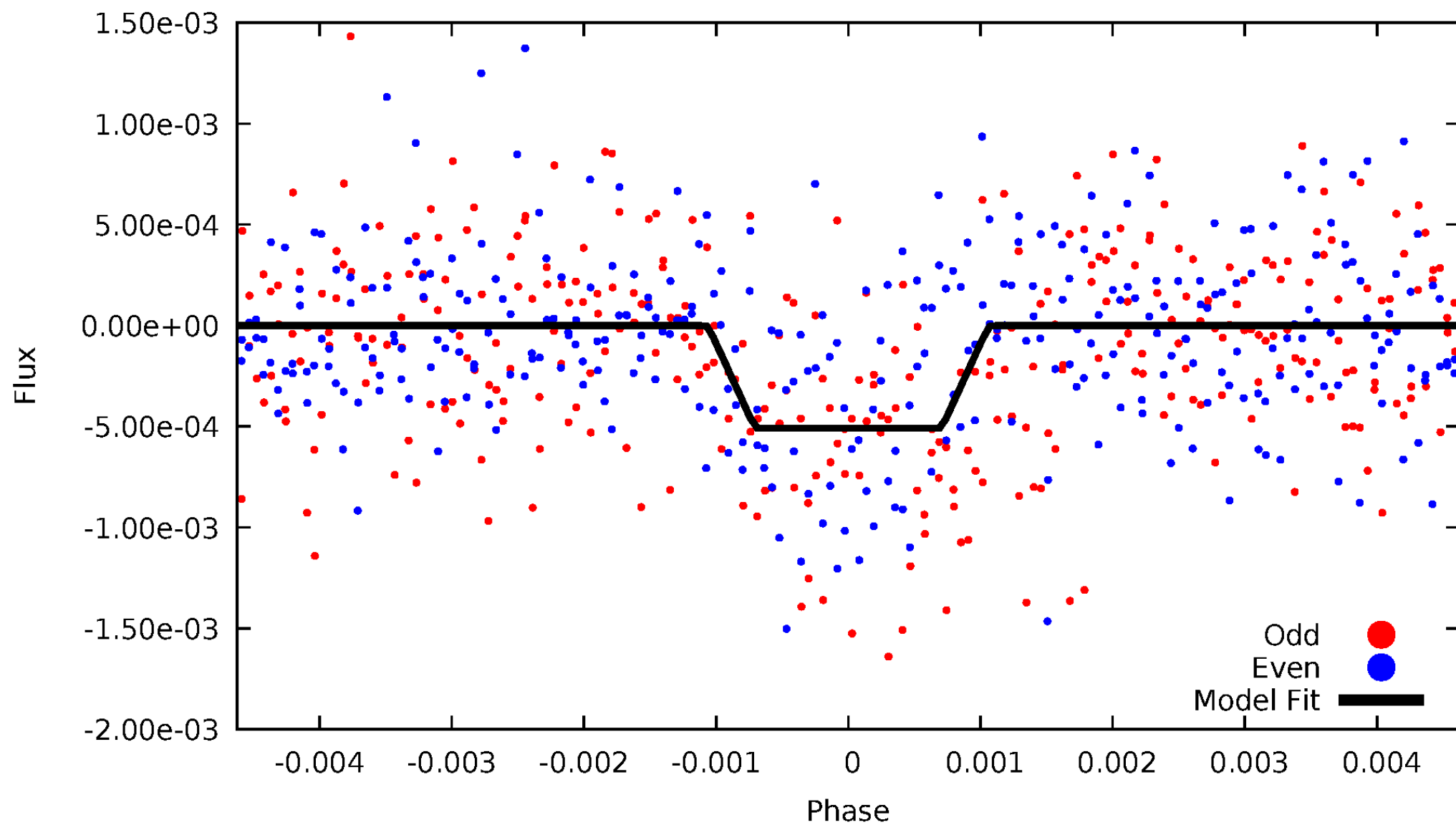
DV Odd/Even

TCE 009650762-01



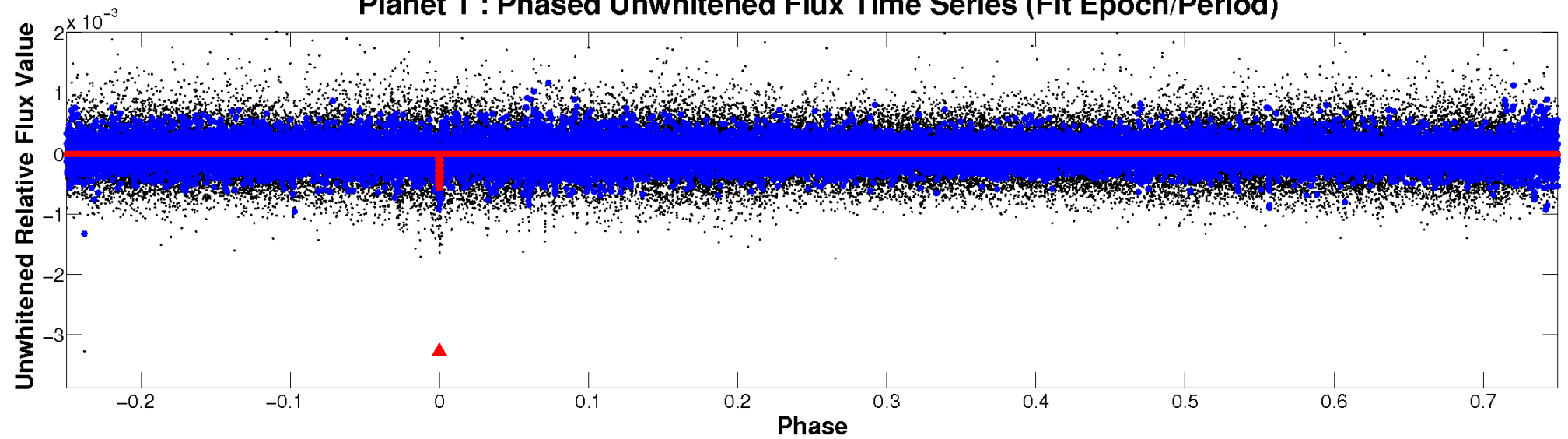
ALT Odd/Even

TCE 009650762-01

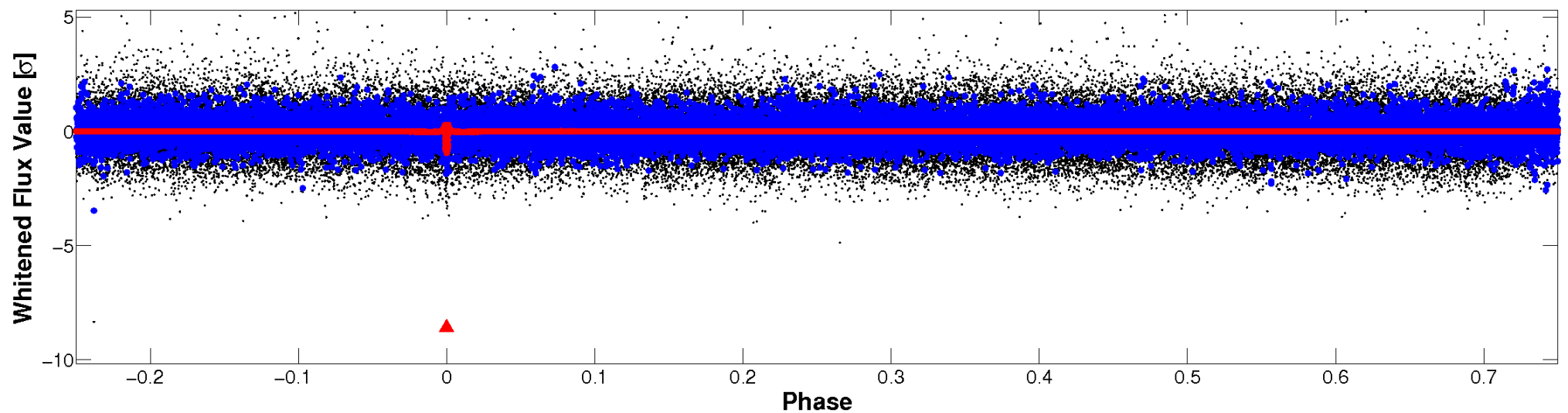


Non-Whitened Vs. Whitened Light Curve

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

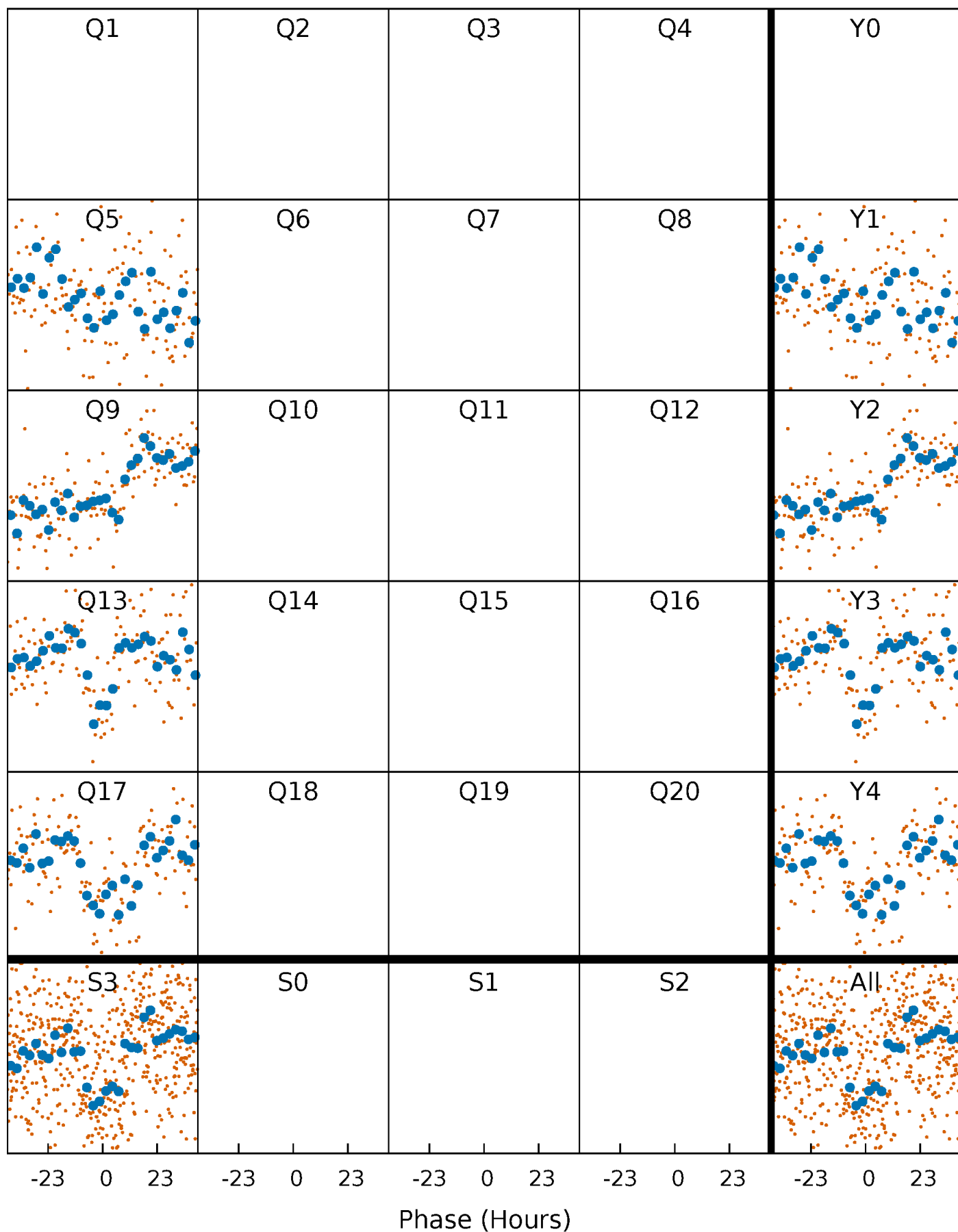


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



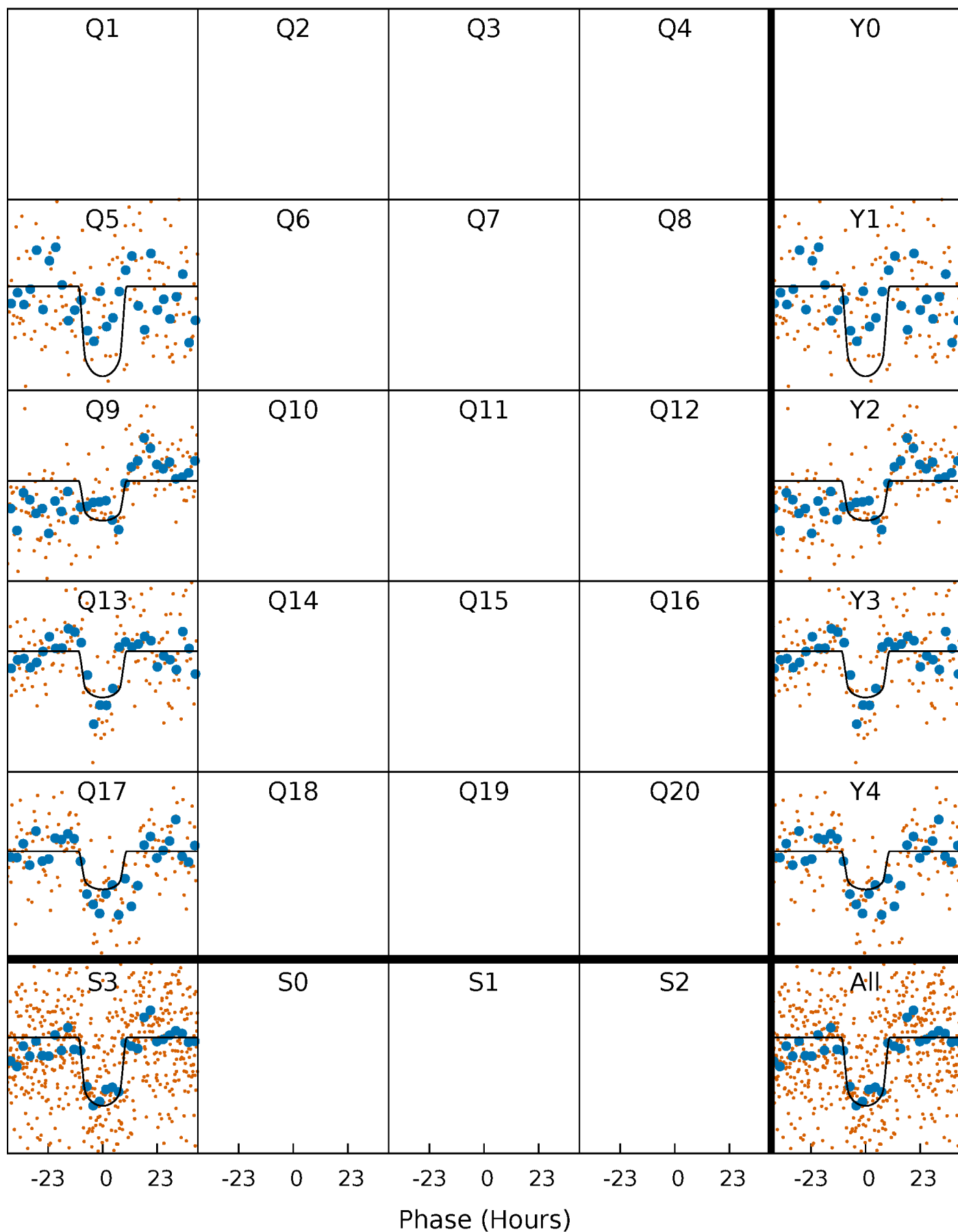
PDC Quarter-Phased Transit Curves

TCE 009650762-01 $P=372.065473$ Days $T_0=453.815845$ (BKJD)



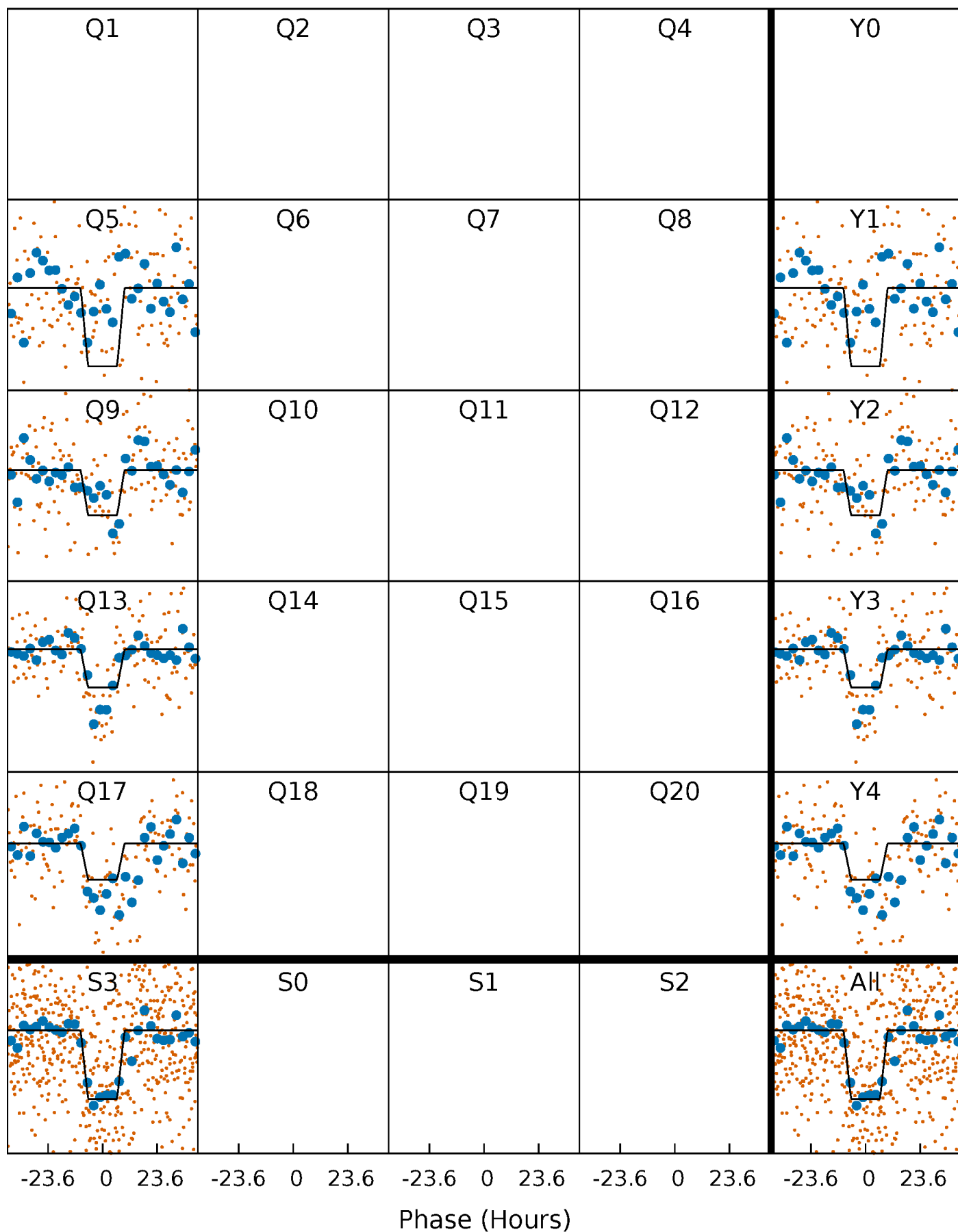
DV Quarter-Phased Transit Curves

TCE 009650762-01 $P=372.065473$ Days $T_0=453.815845$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

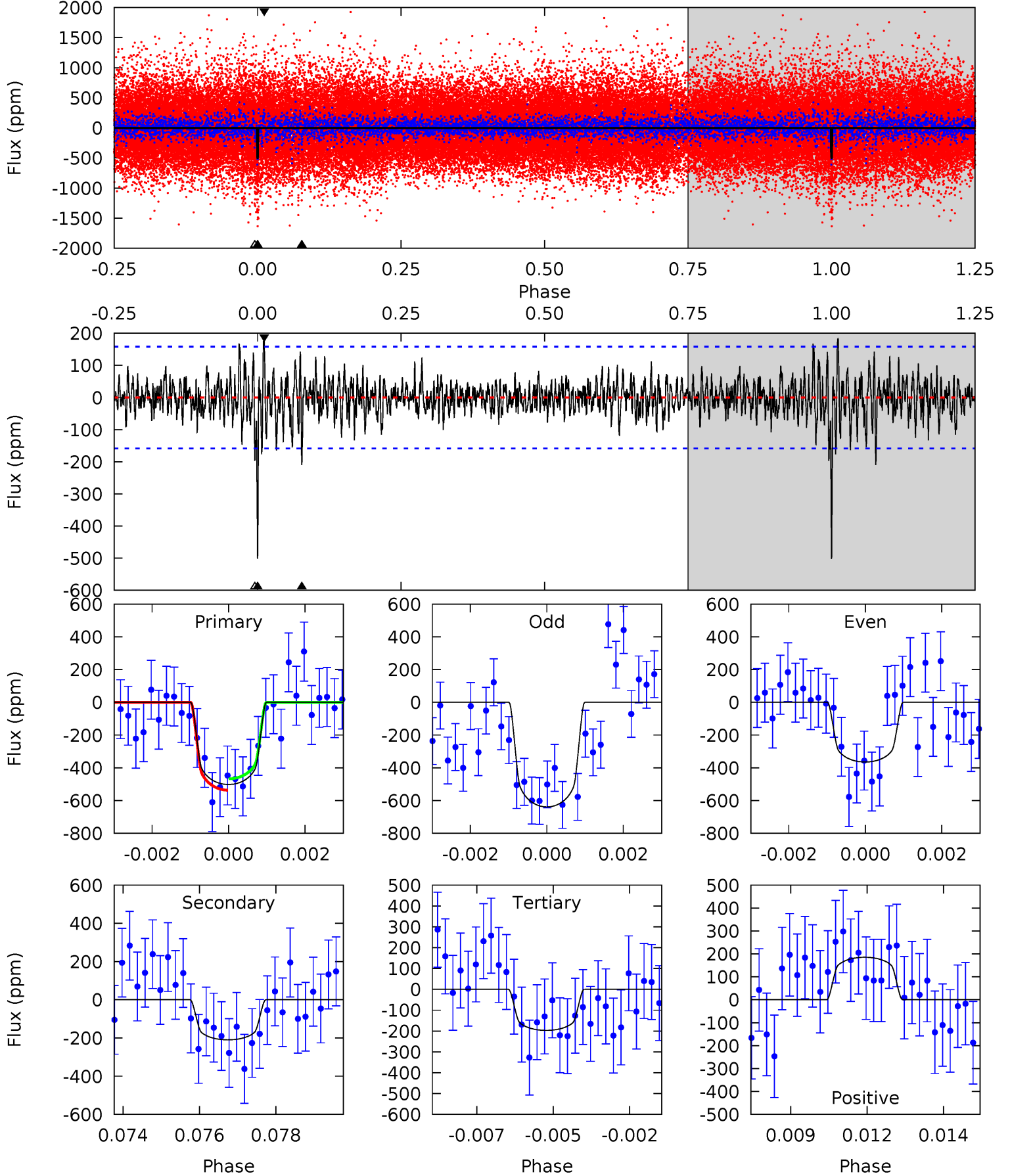
TCE 009650762-01 P=372.033827 Days $T_0=453.882476$ (BKJD)



DV Model-Shift Uniqueness Test

009650762-01, $P = 372.065473$ Days, $E = 81.750372$ Days

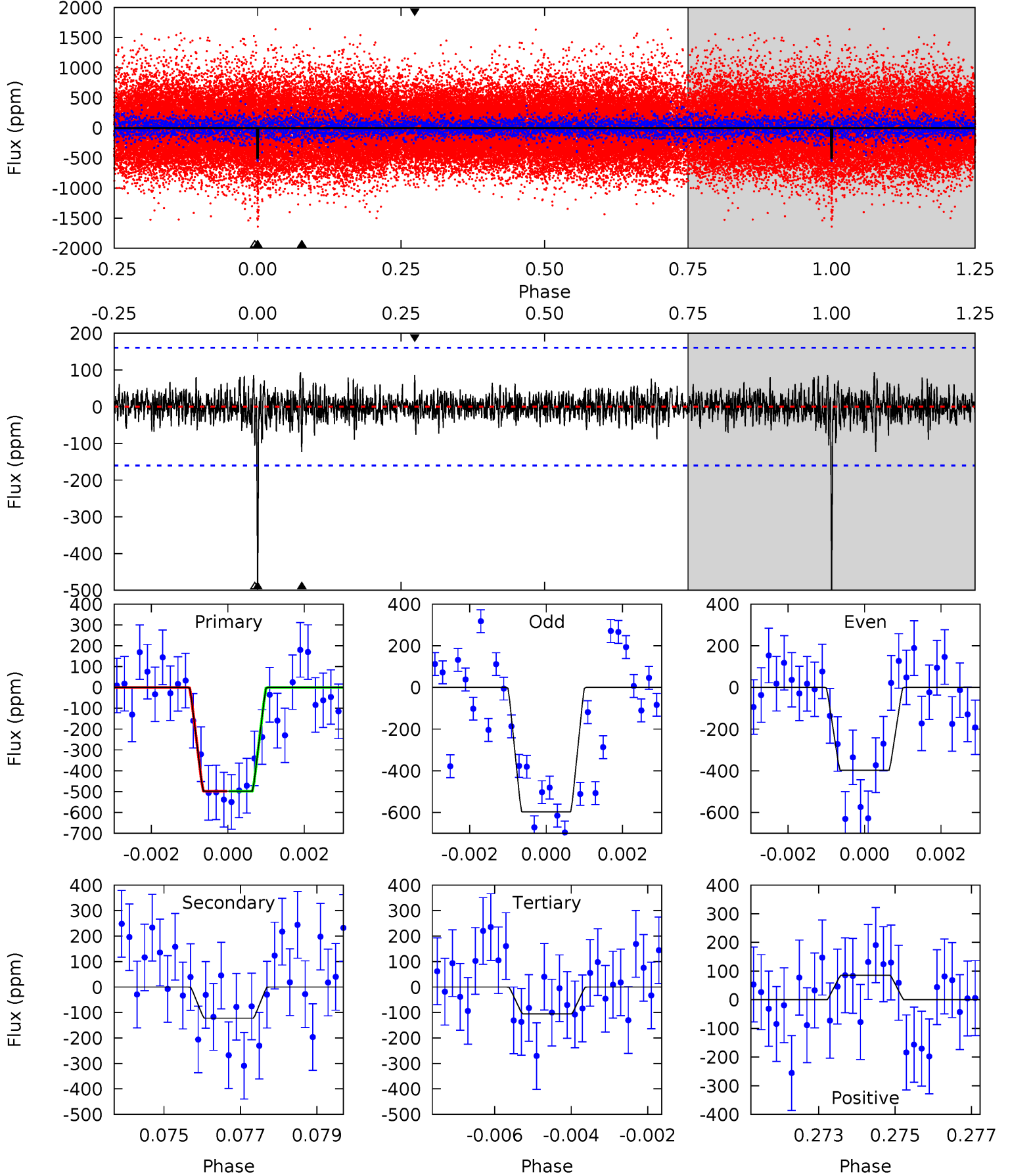
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	7.02	6.59	6.20	5.30	3.05	1.49	10.2	10.6	0.43	0.82	4.60	1.03	0.27	1.17



Alt Model-Shift Uniqueness Test

009650762-01, $P = 372.033827$ Days, $E = 81.848649$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	4.07	3.49	2.84	5.31	3.07	0.83	13.0	13.7	0.58	1.23	3.31	0.93	0.16	0.01



Stellar Parameters For KIC 009650762

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5769^{+155}_{-172}	$4.570^{+0.042}_{-0.168}$	$-0.320^{+0.300}_{-0.300}$	$0.812^{+0.212}_{-0.066}$	$0.900^{+0.090}_{-0.110}$	$2.366^{+0.506}_{-1.088}$
	+3%/-3%	+1%/-4%	+94%/-94%	+26%/-8%	+10%/-12%	+21%/-46%
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 009650762-01 / KOI 7954.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-210 ± 30	$2.40^{+0.36}_{-0.31}$	331^{+19}_{-14}	4484^{+239}_{-236}	18649^{+6499}_{-4649}
Alt.	-123 ± 30	$2.08^{+0.34}_{-0.28}$	330^{+20}_{-14}	4265^{+270}_{-289}	14354^{+6072}_{-4760}

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

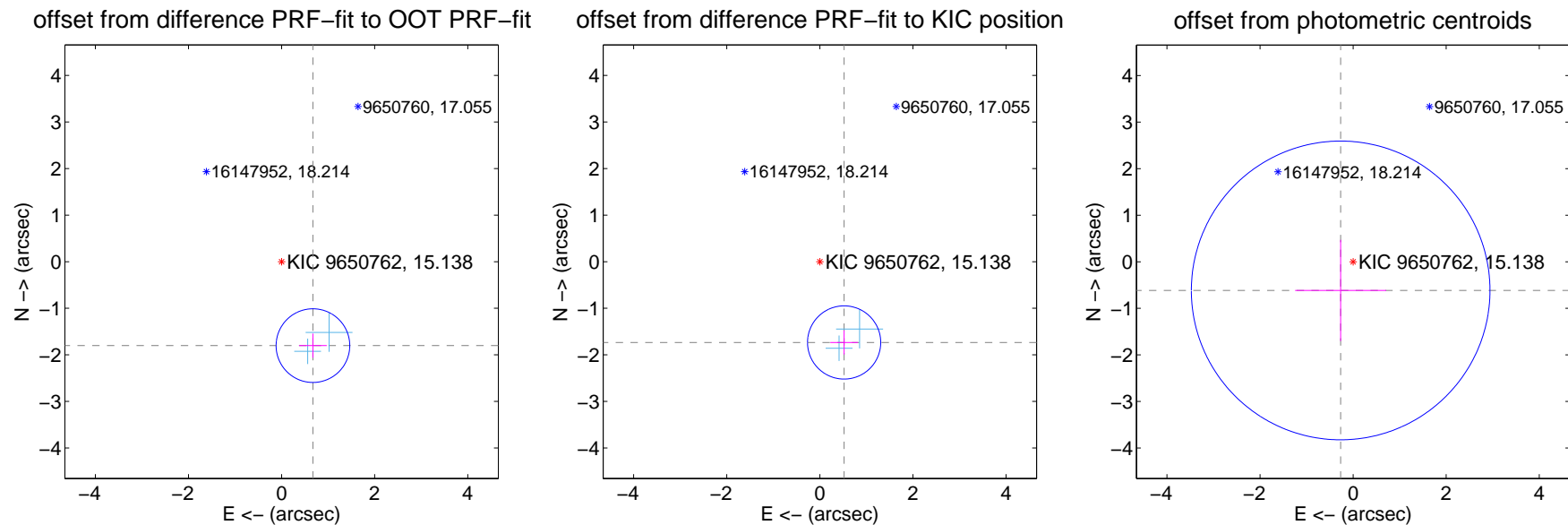
DV Centroid Data

Supplemental centroid analysis for 009650762-01. Kepler magnitude: 15.14. Transit SNR 9.37

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.924 ± 0.264	7.30	-0.673 ± 0.298	-1.802 ± 0.259
PRF-fit source offset from KIC position	1.811 ± 0.262	6.91	-0.522 ± 0.298	-1.734 ± 0.259
photometric centroid source offset	0.67 ± 1.07	0.63	0.27 ± 0.98	-0.62 ± 1.09

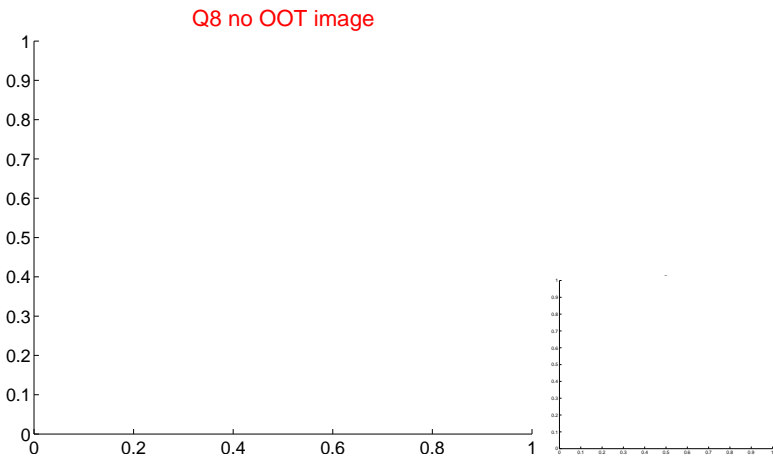
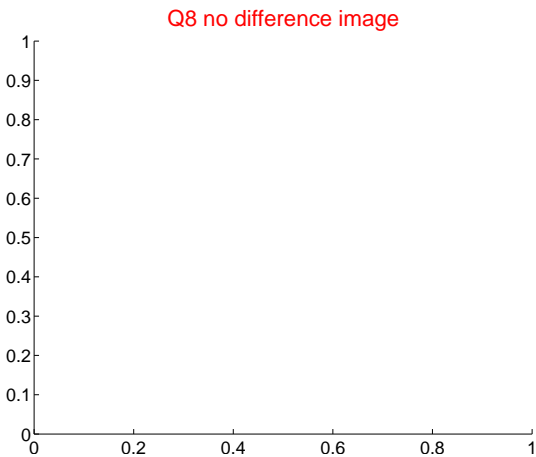
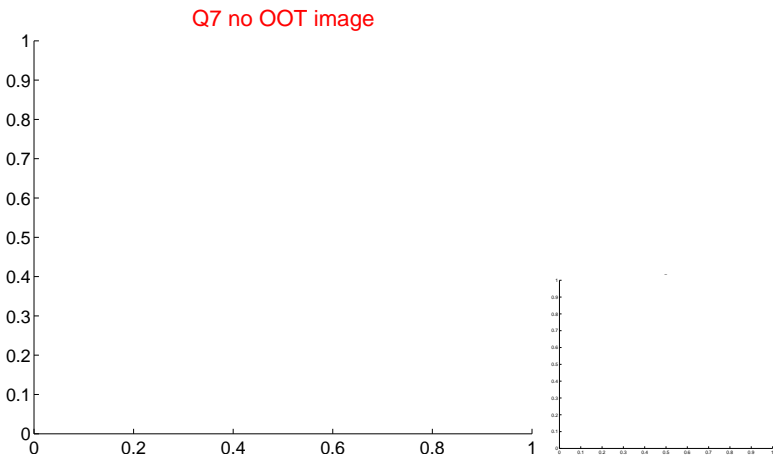
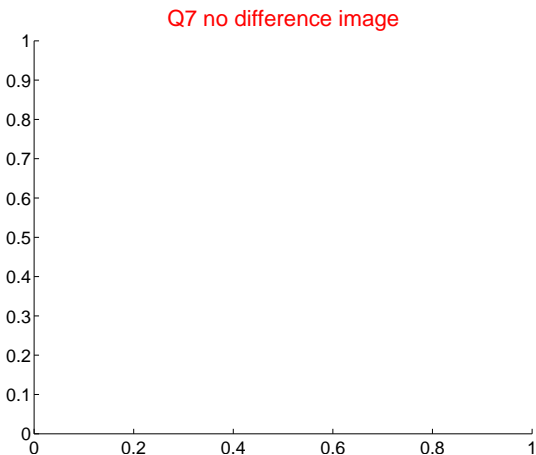
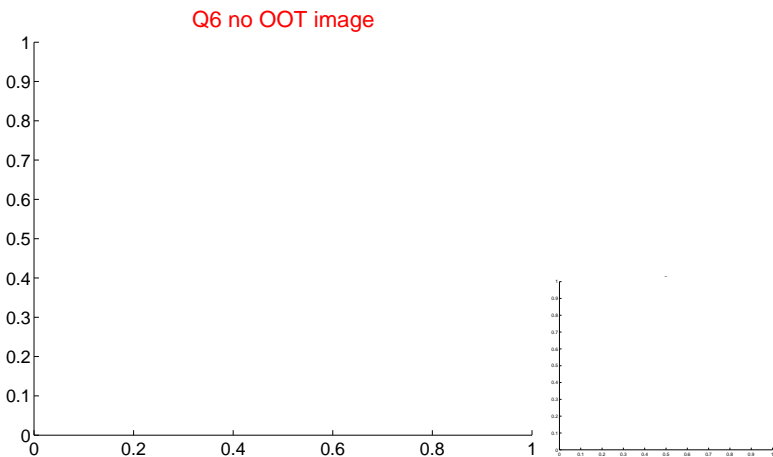
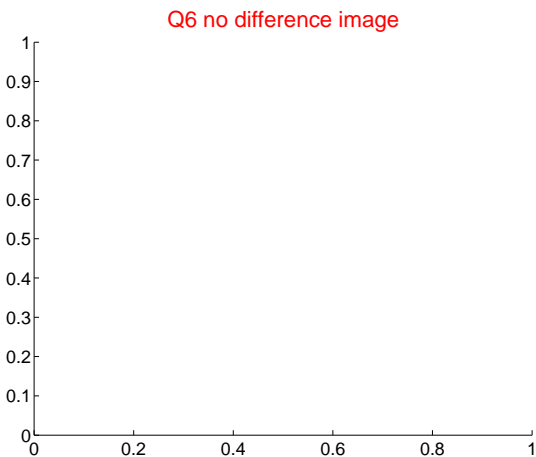
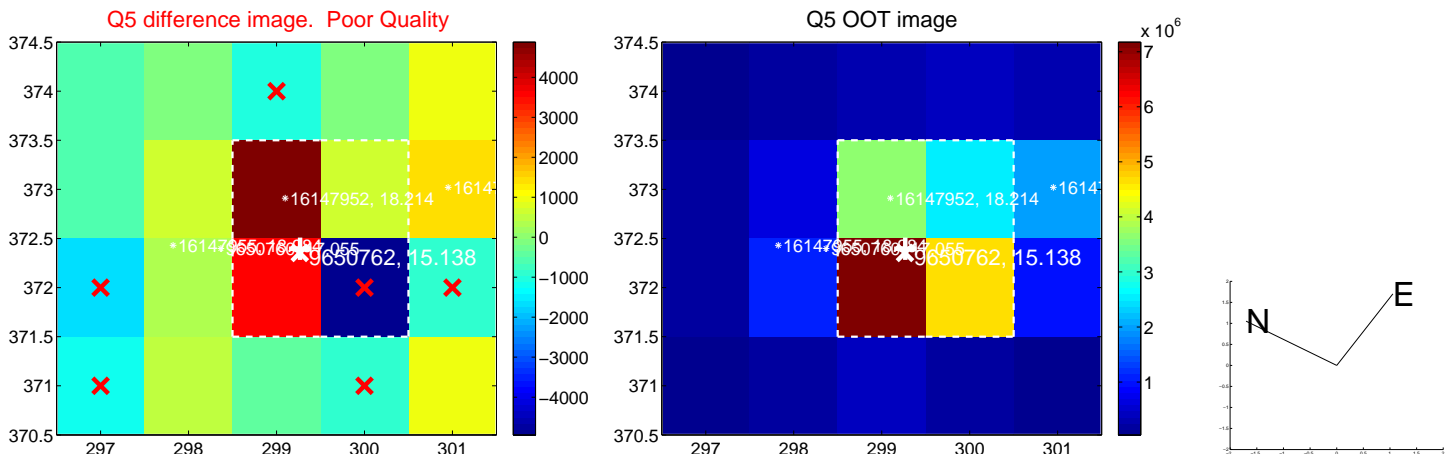


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

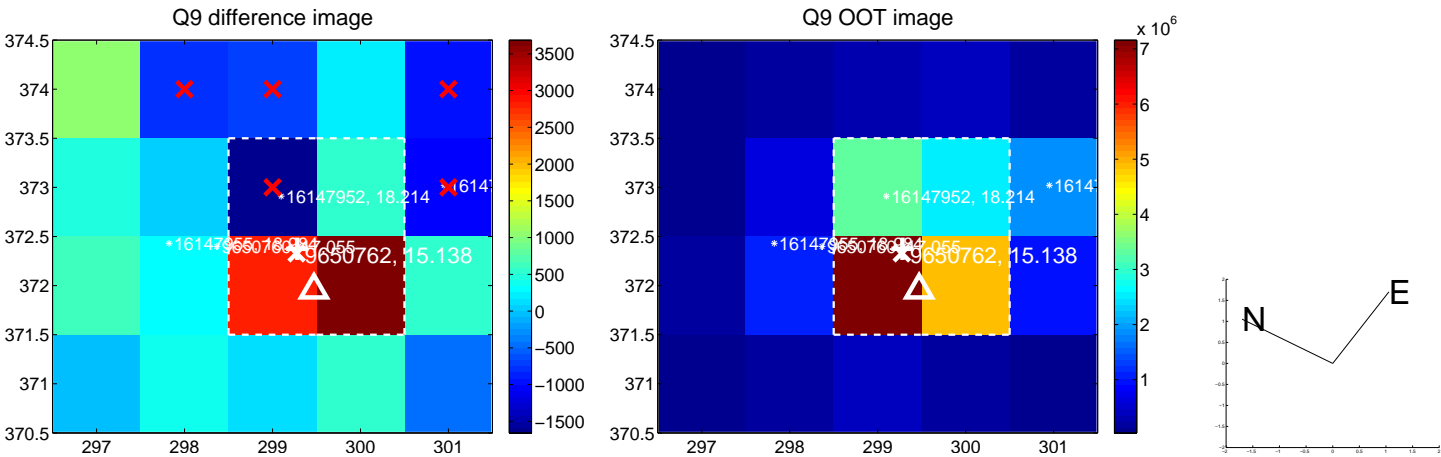
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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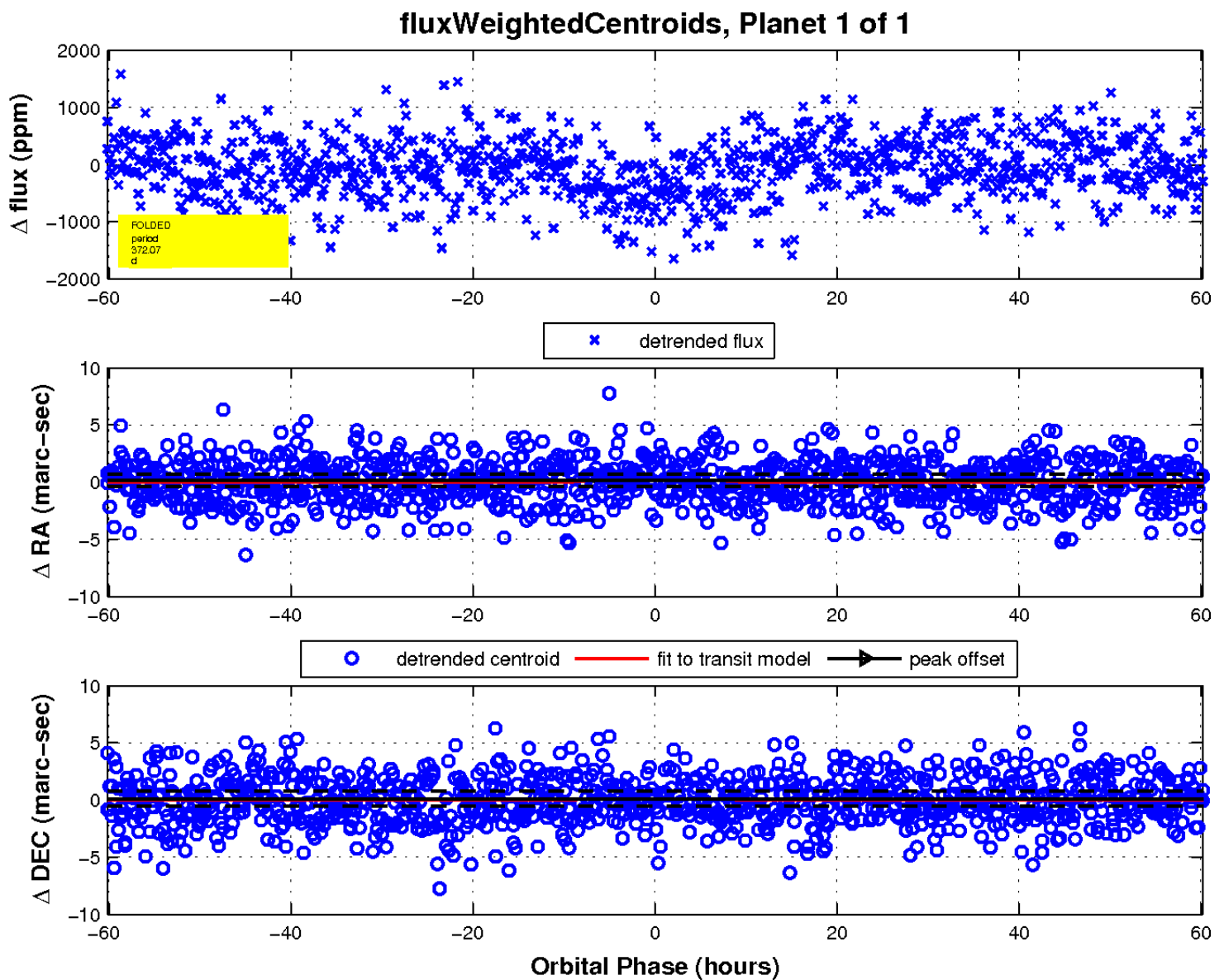
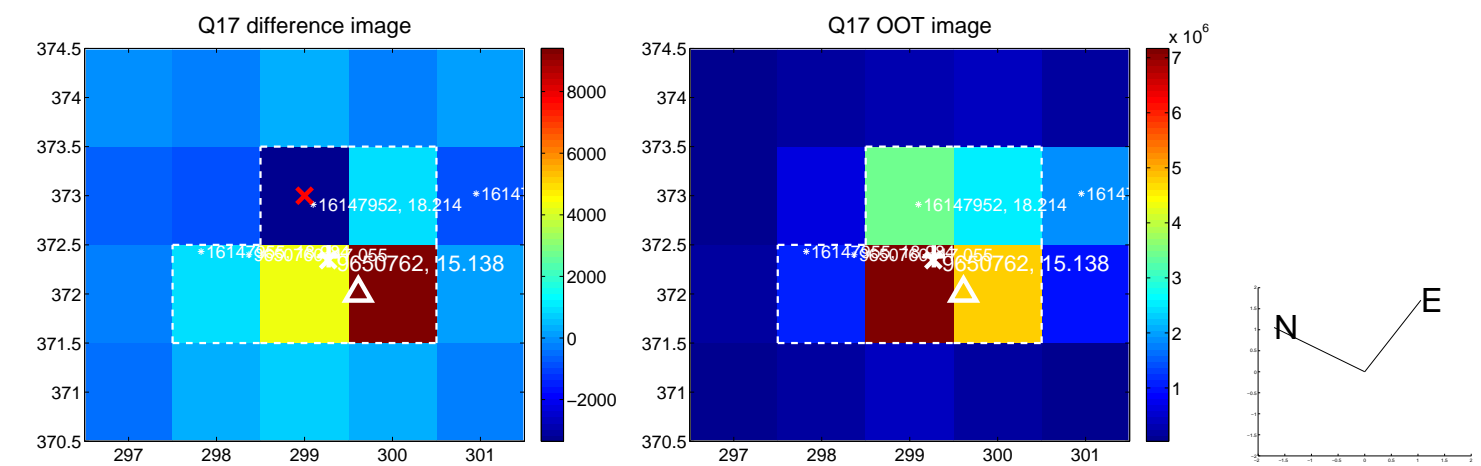
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UKIRT Image

Declination

