

KIC 008949538

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})
008949538-01	OBS	No	401.640296	373.787662	817.7	17.126	9.2	9.5	0.66	4331	1.96	0.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008949538-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—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.

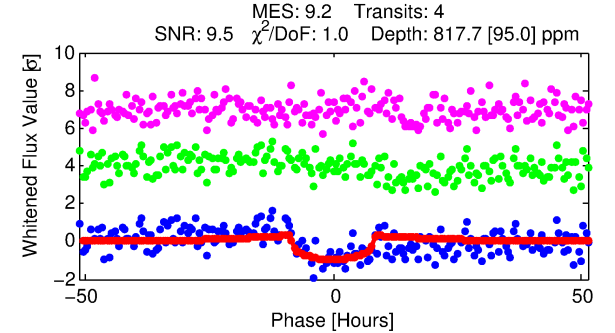
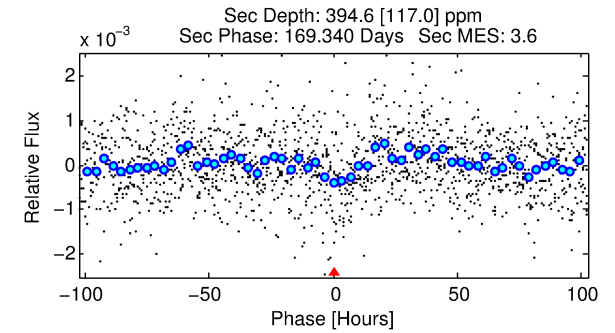
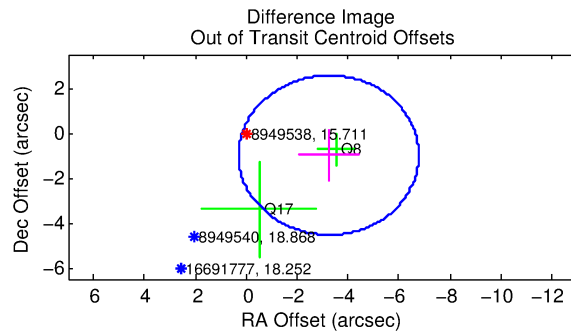
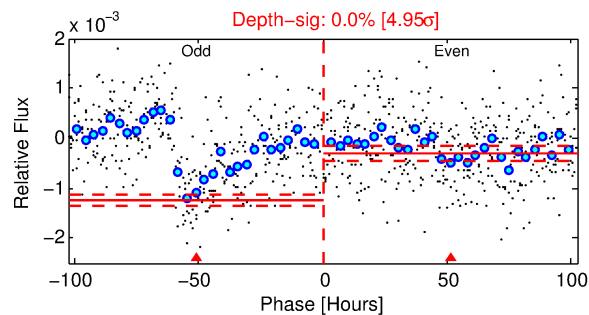
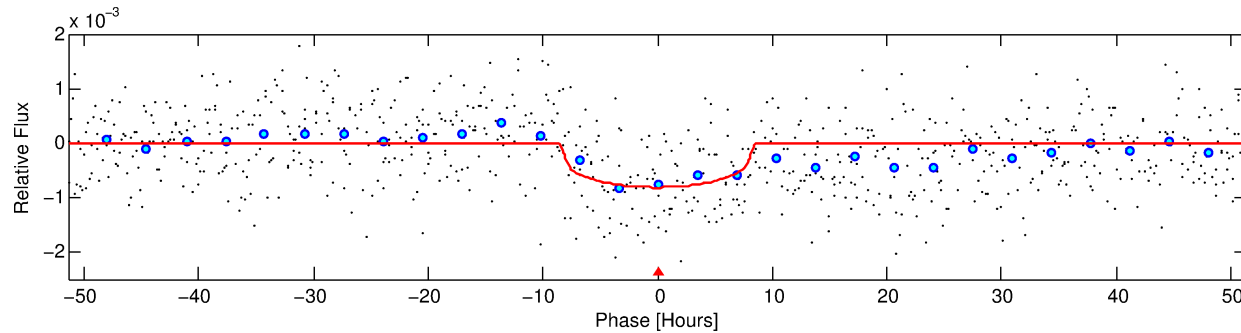
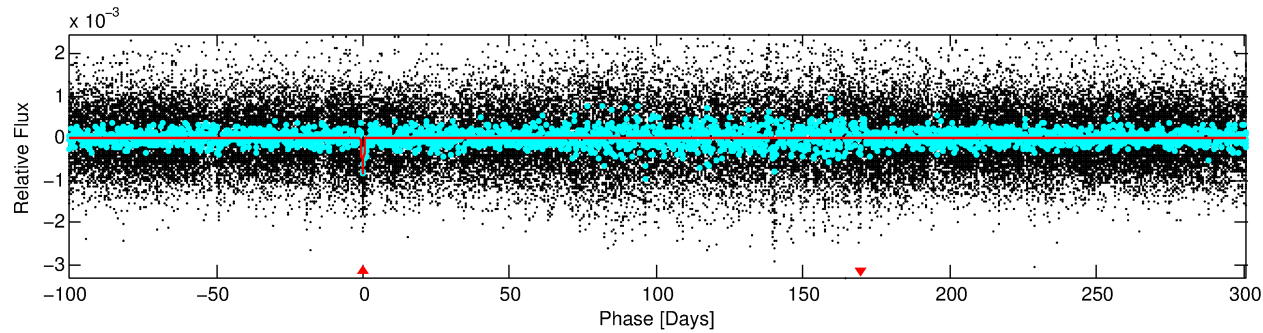
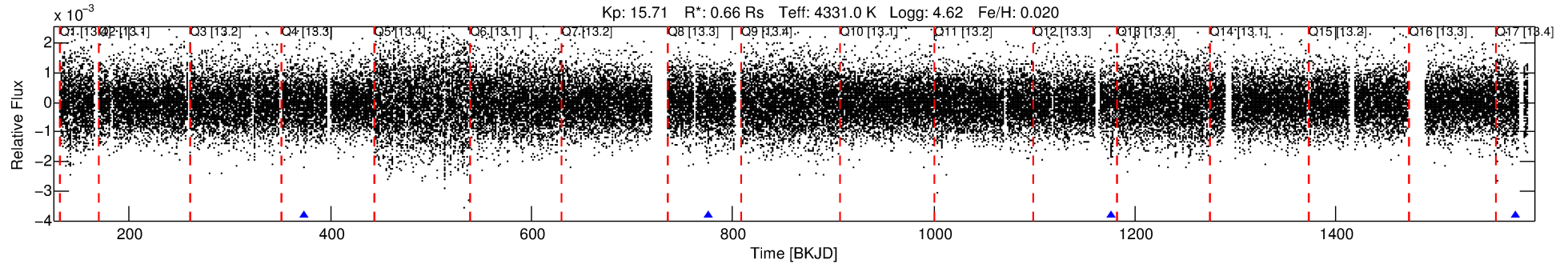
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008949538-01

No Significant Match Found

DV One-Page Summary

KIC: 8949538 Candidate: 1 of 1 Period: 401.640 d



DV Fit Results:

Period = 401.64030 [0.01223] d
Epoch = 373.7877 [0.0223] BKJD
Rp/R* = 0.0271 [0.0131]
a/R* = 146.48 [214.08]
b = 0.62 [1.46]
Seff = 0.16 [0.02]
Teq = 161 [6] K
Rp = 1.96 [0.96] Re
a = 0.9281 [0.0605] AU
Ag = 48573.53 [49218.73] [0.99 σ]
Teffp = 3707 [942] K [3.76 σ]

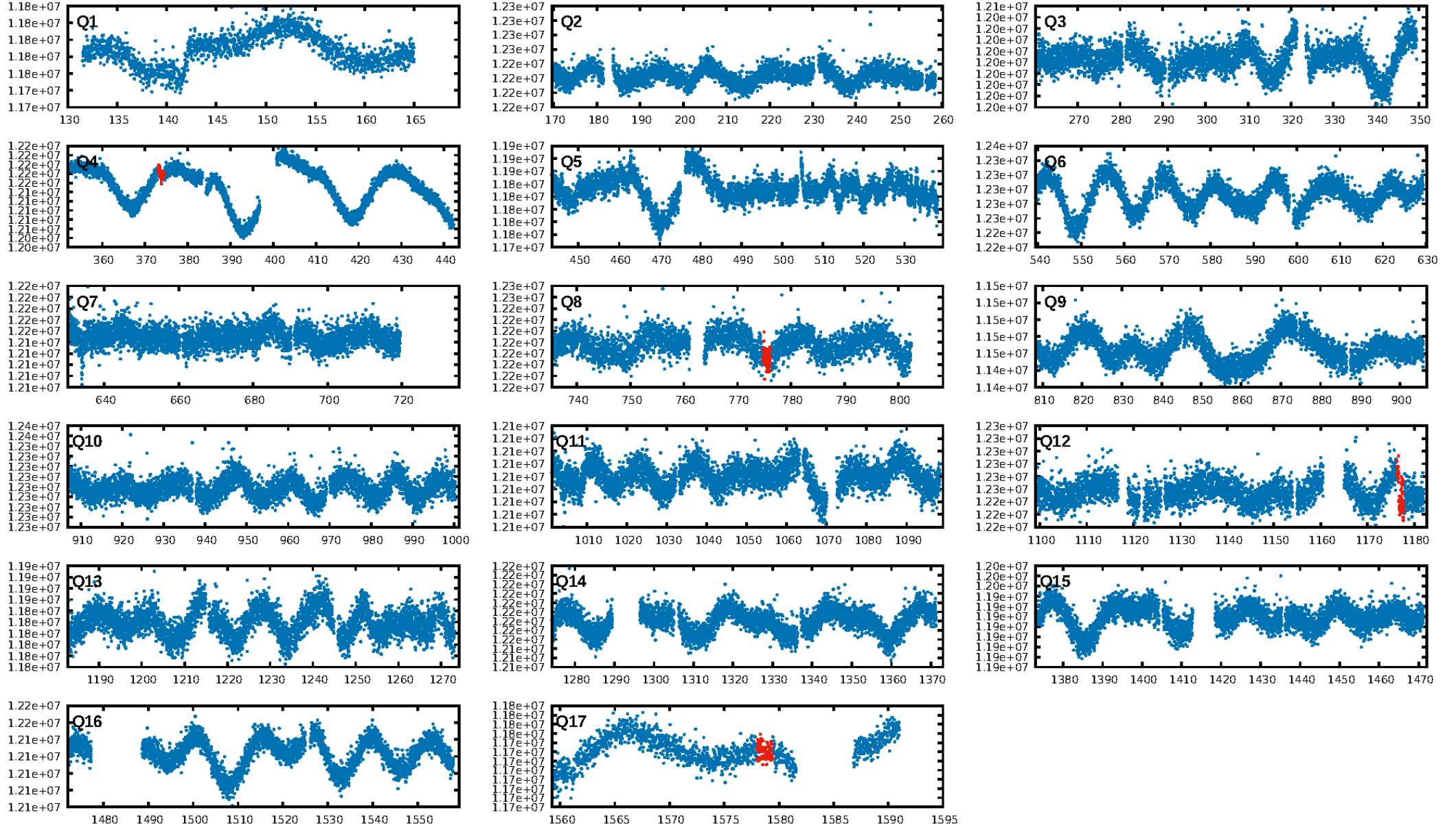
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 5.98e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.077
Centroid-sig: 34.6%
Centroid-so: 1.173 arcsec [1.08 σ]
OotOffset-rm: 3.390 arcsec [2.87 σ]
KicOffset-rm: 3.181 arcsec [2.69 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

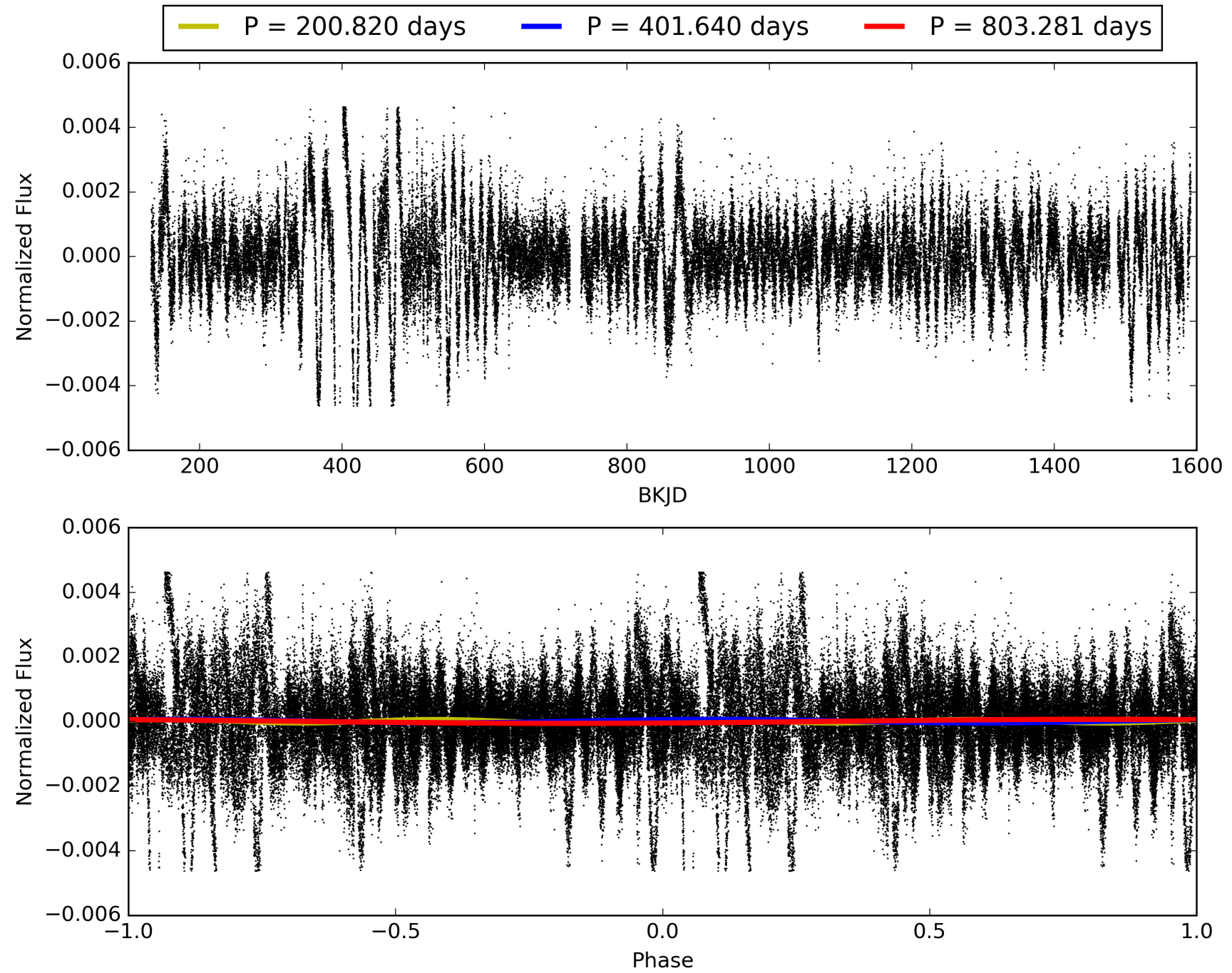
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:00:56 Z

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

TCE 008949538-01, PDC Light Curves

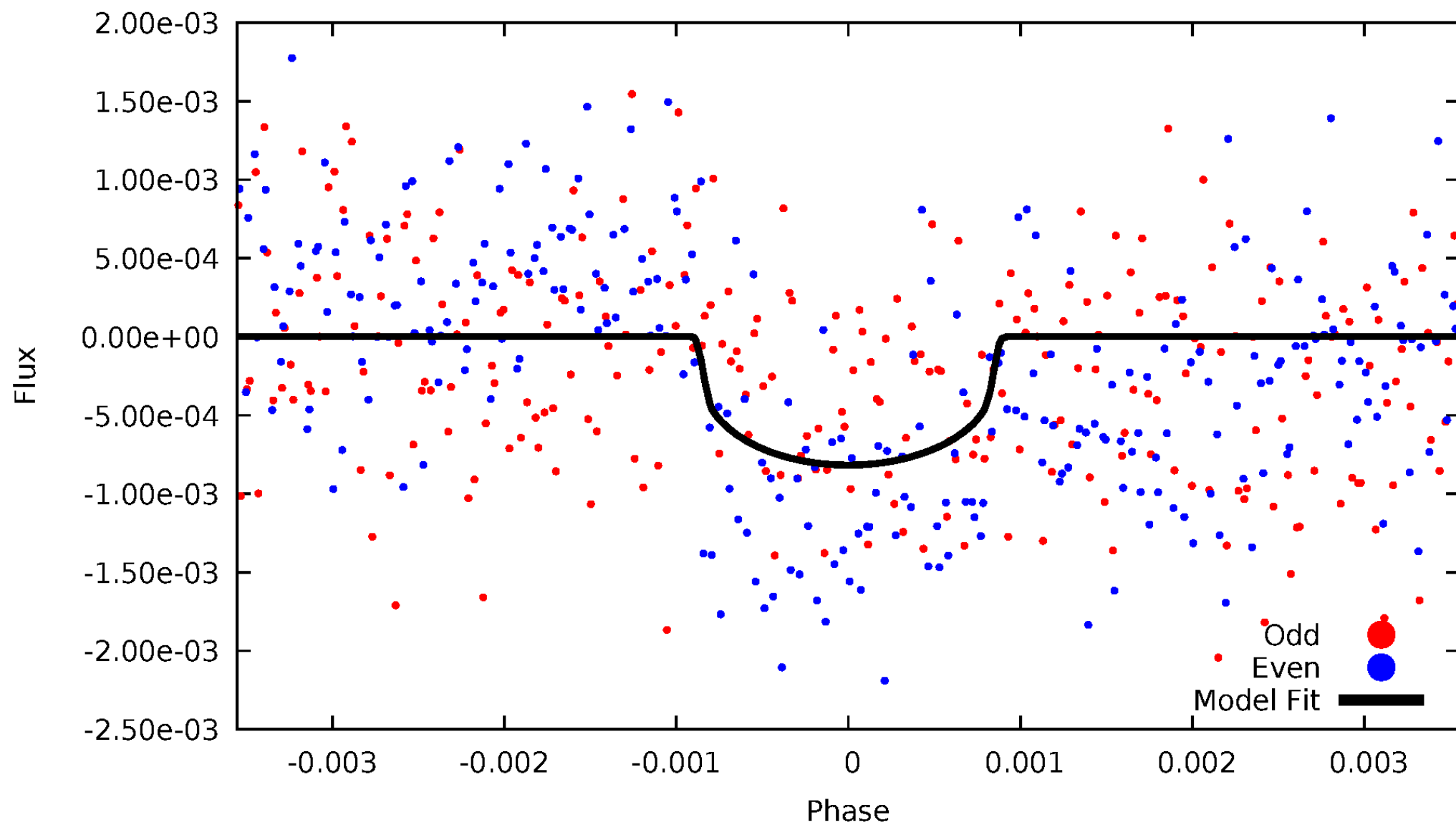


TCE 008949538-01



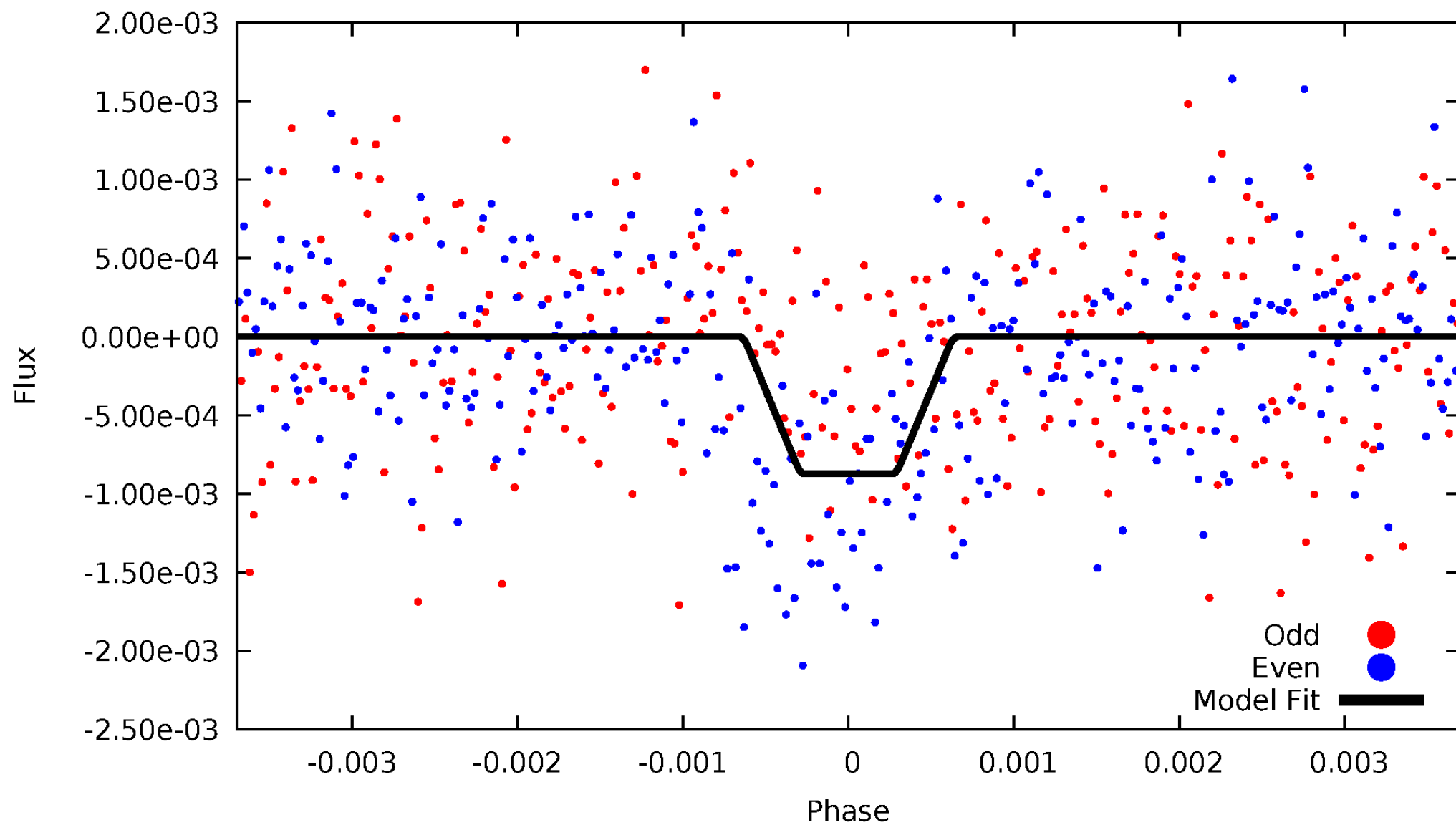
DV Odd/Even

TCE 008949538-01



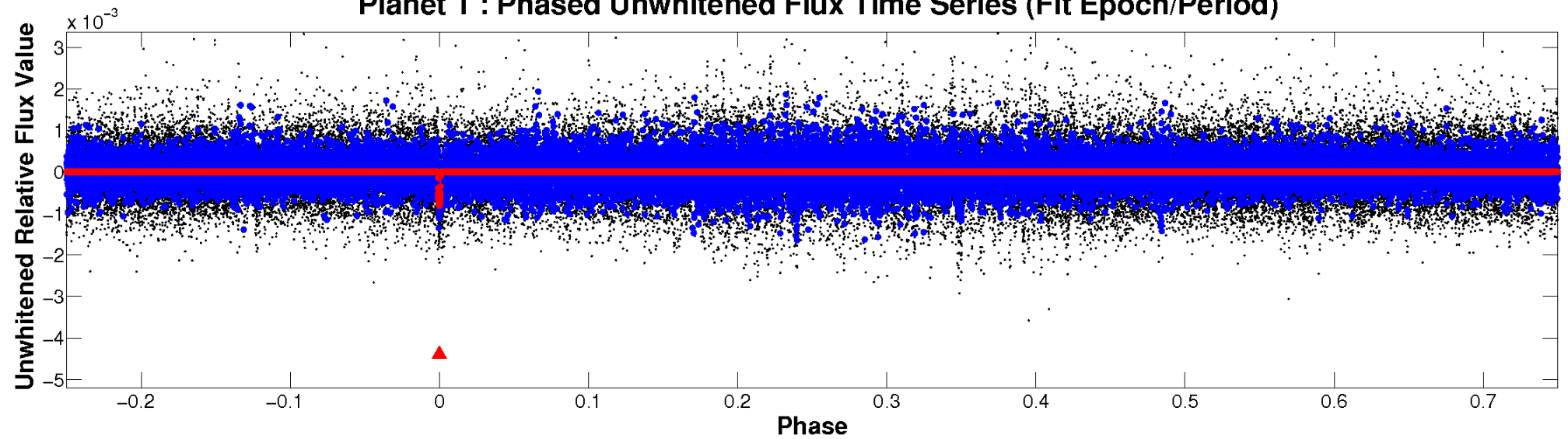
ALT Odd/Even

TCE 008949538-01

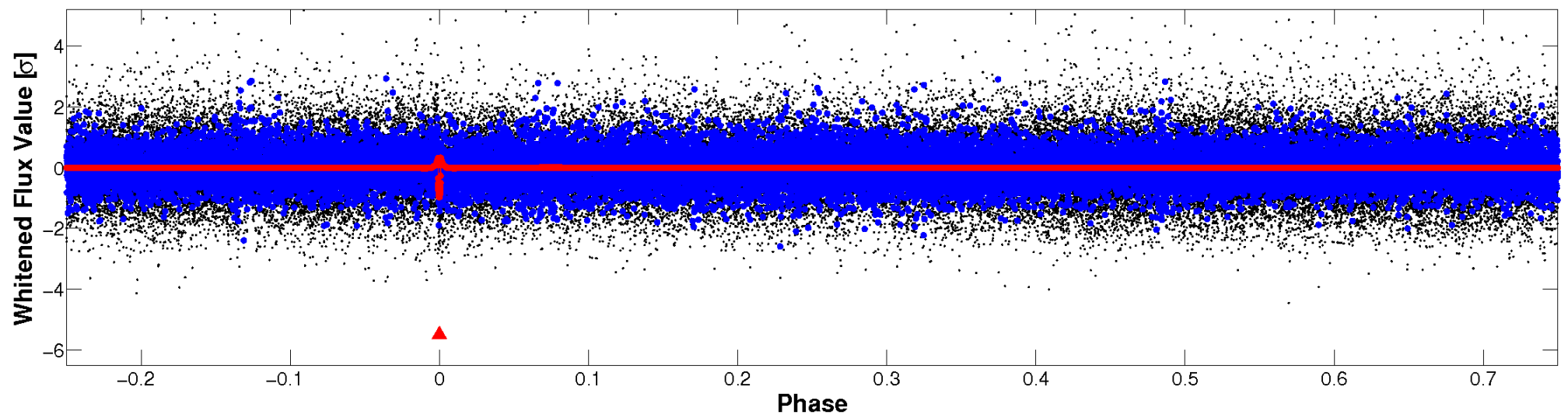


Non-Whitened Vs. Whitened Light Curve

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

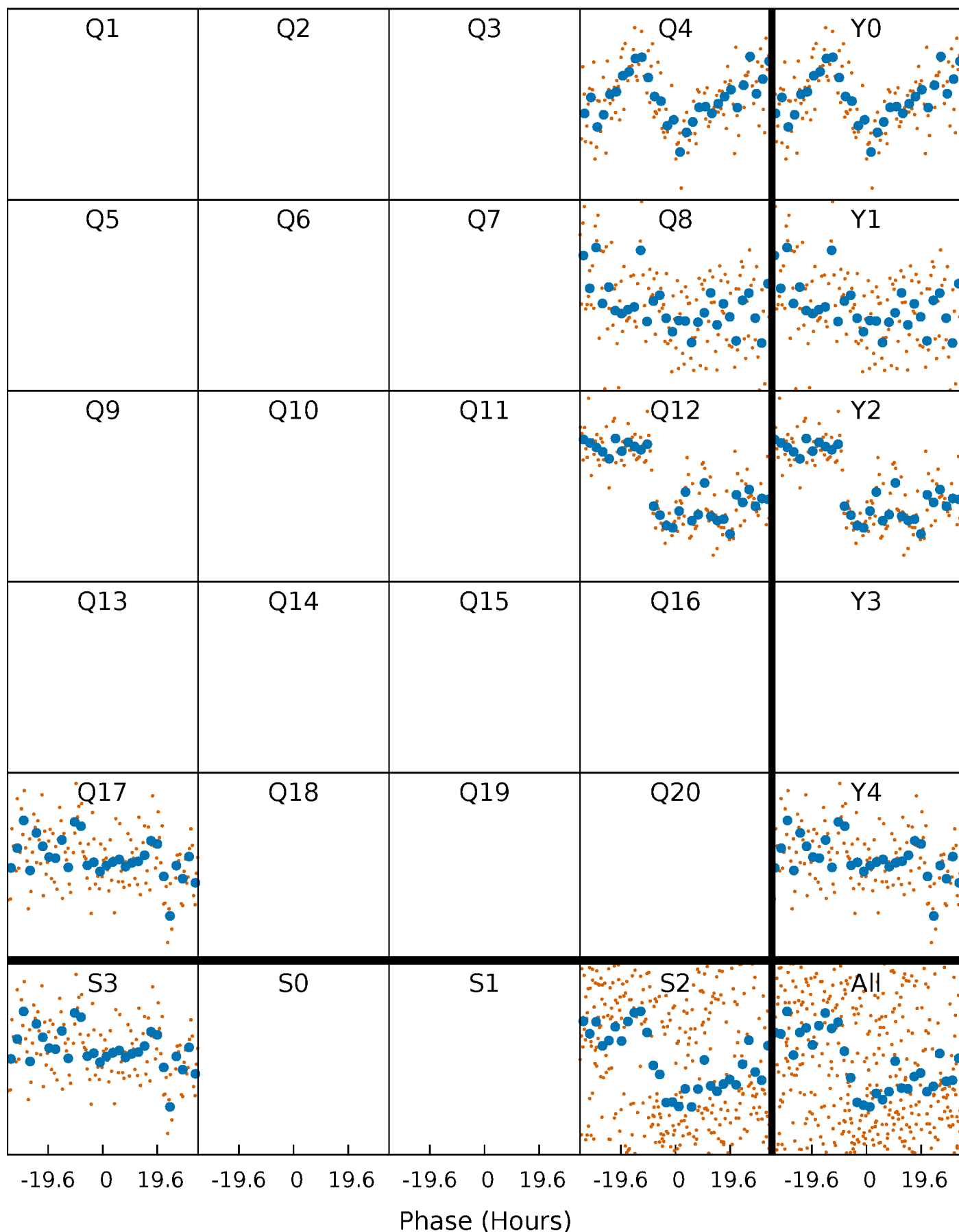


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



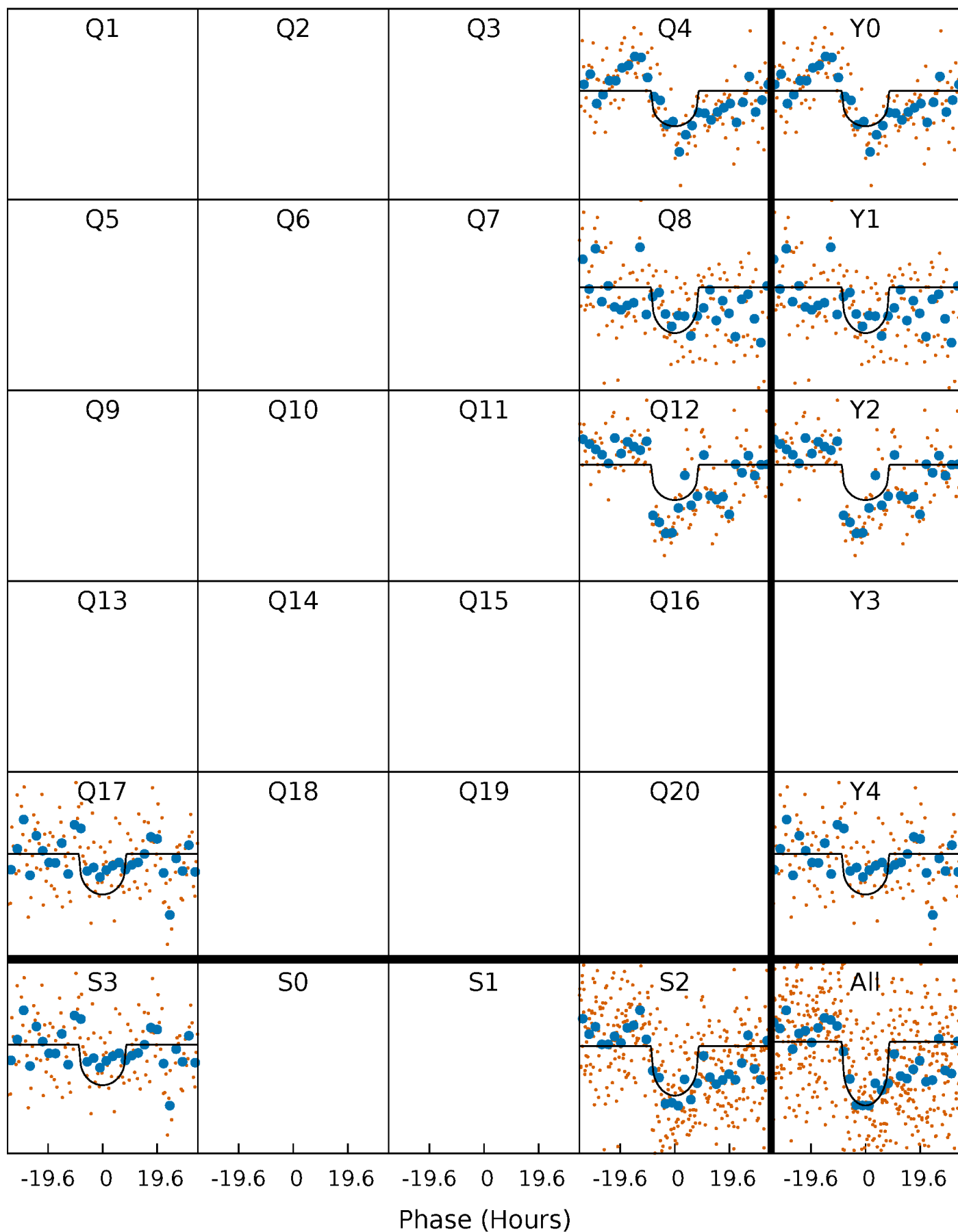
PDC Quarter-Phased Transit Curves

TCE 008949538-01 P=401.640296 Days $T_0=373.787662$ (BKJD)



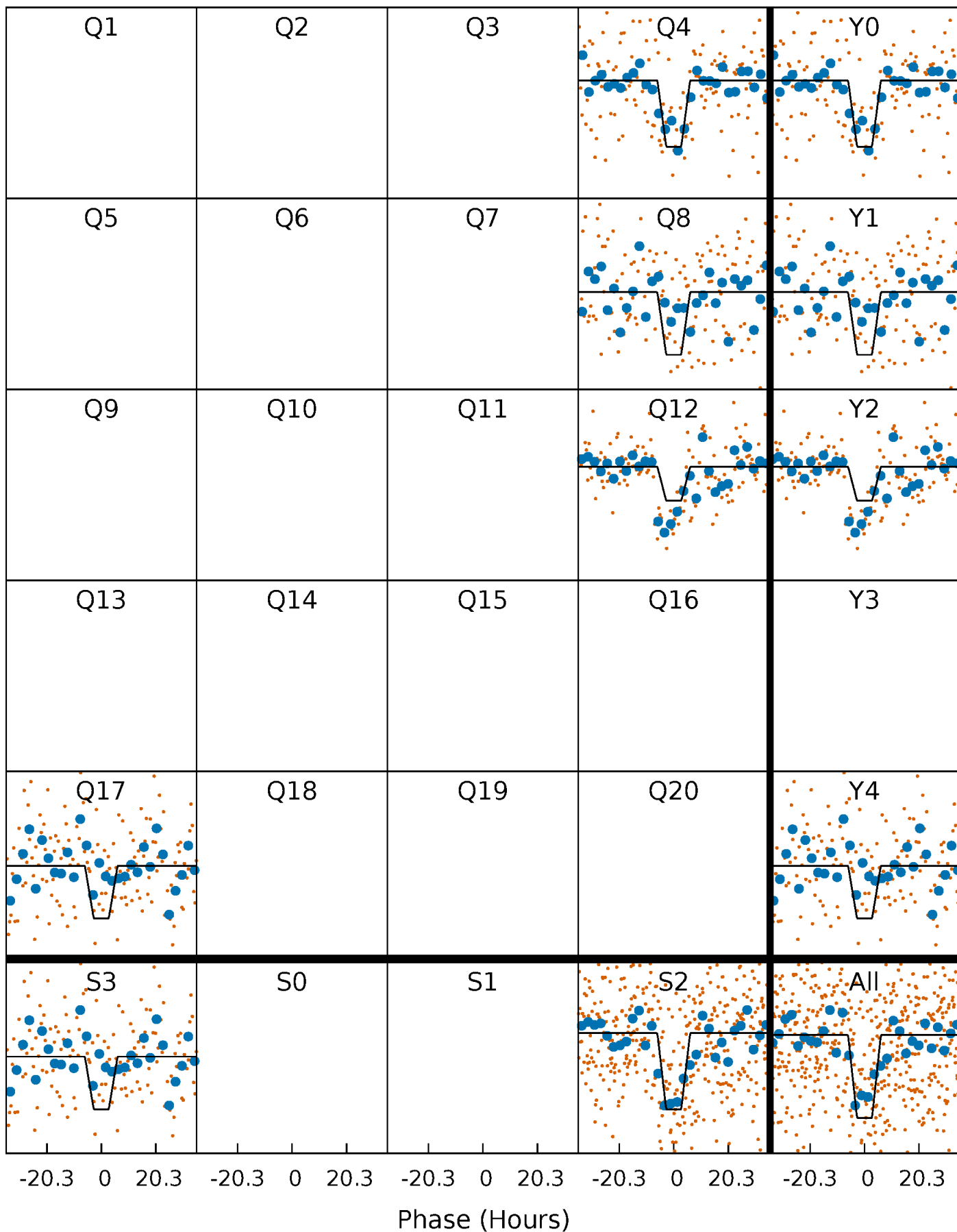
DV Quarter-Phased Transit Curves

TCE 008949538-01 P=401.640296 Days $T_0=373.787662$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

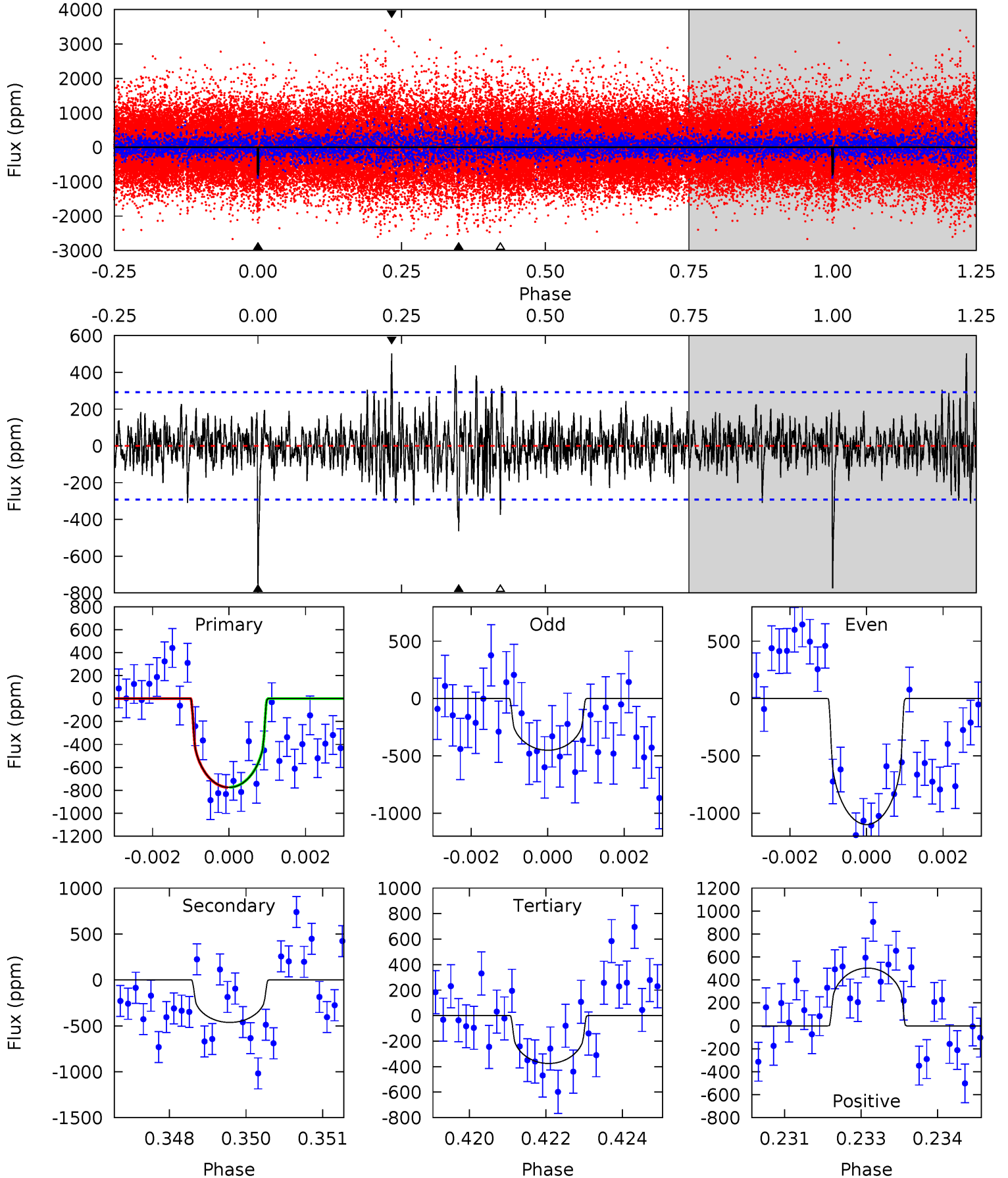
TCE 008949538-01 P=401.607999 Days $T_0=373.807413$ (BKJD)



DV Model-Shift Uniqueness Test

008949538-01, P = 401.640296 Days, E = 373.787662 Days

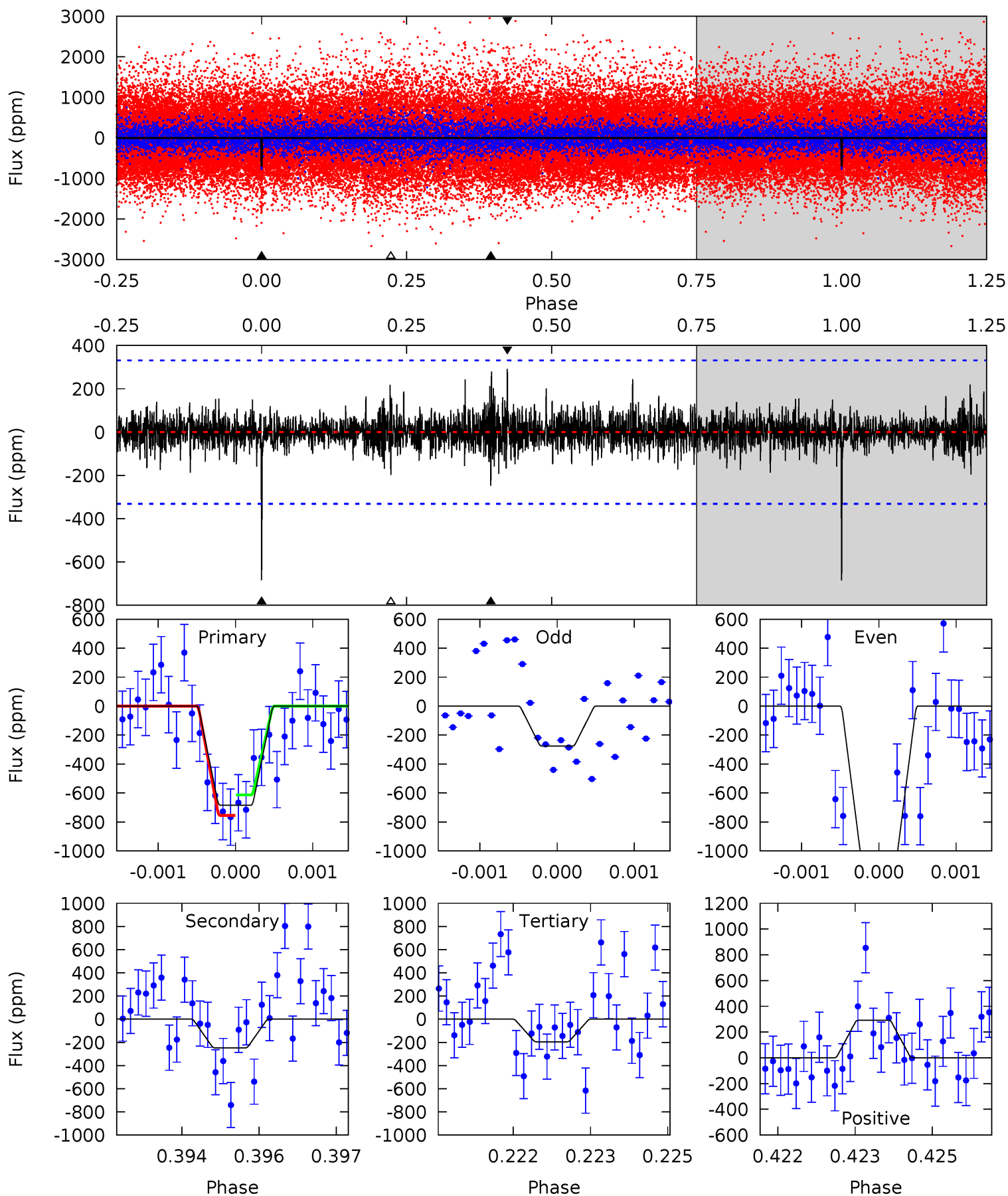
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	8.47	6.86	9.19	5.35	3.12	1.80	7.30	4.97	1.61	-0.72	5.94	1.05	0.39	0.02



Alt Model-Shift Uniqueness Test

008949538-01, P = 401.607999 Days, E = 373.807413 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	4.03	3.18	4.76	5.40	3.21	0.88	7.98	6.40	0.85	-0.73	6.68	1.26	0.30	1.15



Stellar Parameters For KIC 008949538

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4331^{+129}_{-129}	$4.615^{+0.045}_{-0.021}$	$0.020^{+0.250}_{-0.300}$	$0.663^{+0.036}_{-0.055}$	$0.662^{+0.057}_{-0.057}$	$3.195^{+0.680}_{-0.294}$
	+3%/-3%	+1%/-0%	+1250%/-1500%	+5%/-8%	+9%/-9%	+21%/-9%
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 008949538-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-463 ± 55	$1.96^{+0.99}_{-0.83}$	225^{+7}_{-8}	3963^{+976}_{-508}	$55884^{+120140}_{-30103}$
Alt.	-247 ± 61	$2.12^{+0.97}_{-0.95}$	225^{+7}_{-8}	3468^{+805}_{-391}	25513^{+57335}_{-13926}

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

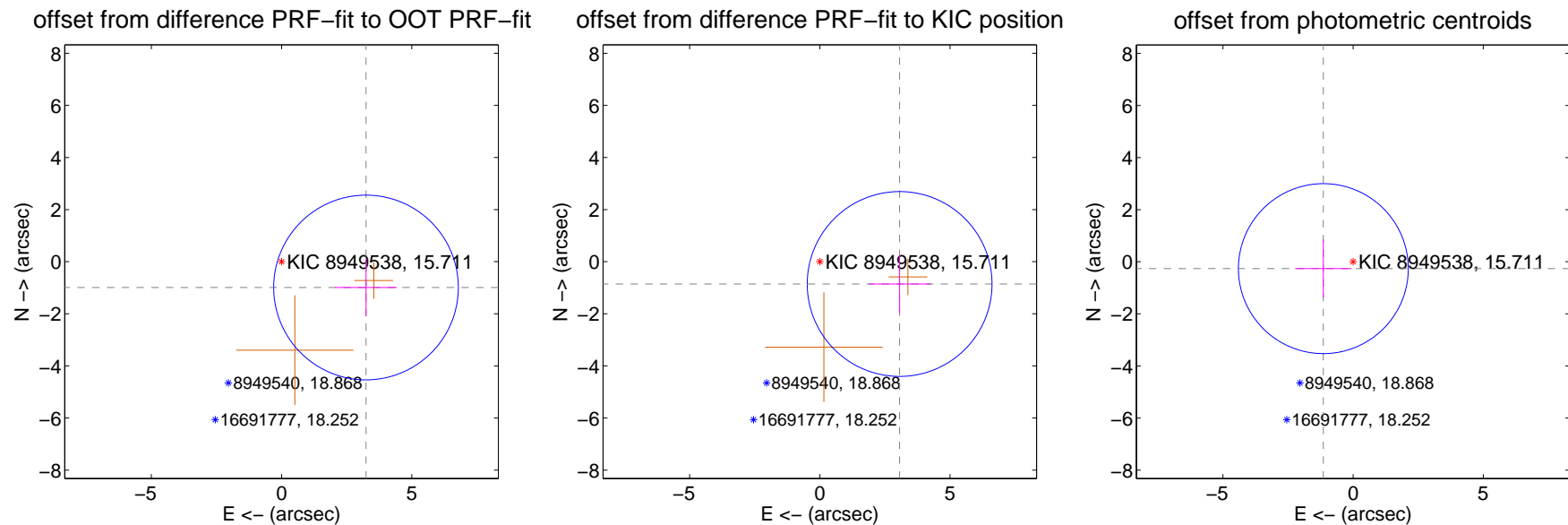
DV Centroid Data

Supplemental centroid analysis for 008949538-01. Kepler magnitude: 15.71. Transit SNR 9.52

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.390 ± 1.182	2.87	-3.242 ± 1.188	-0.991 ± 1.112
PRF-fit source offset from KIC position	3.181 ± 1.183	2.69	-3.064 ± 1.188	-0.856 ± 1.112
photometric centroid source offset	1.17 ± 1.09	1.08	1.14 ± 1.09	-0.26 ± 1.12

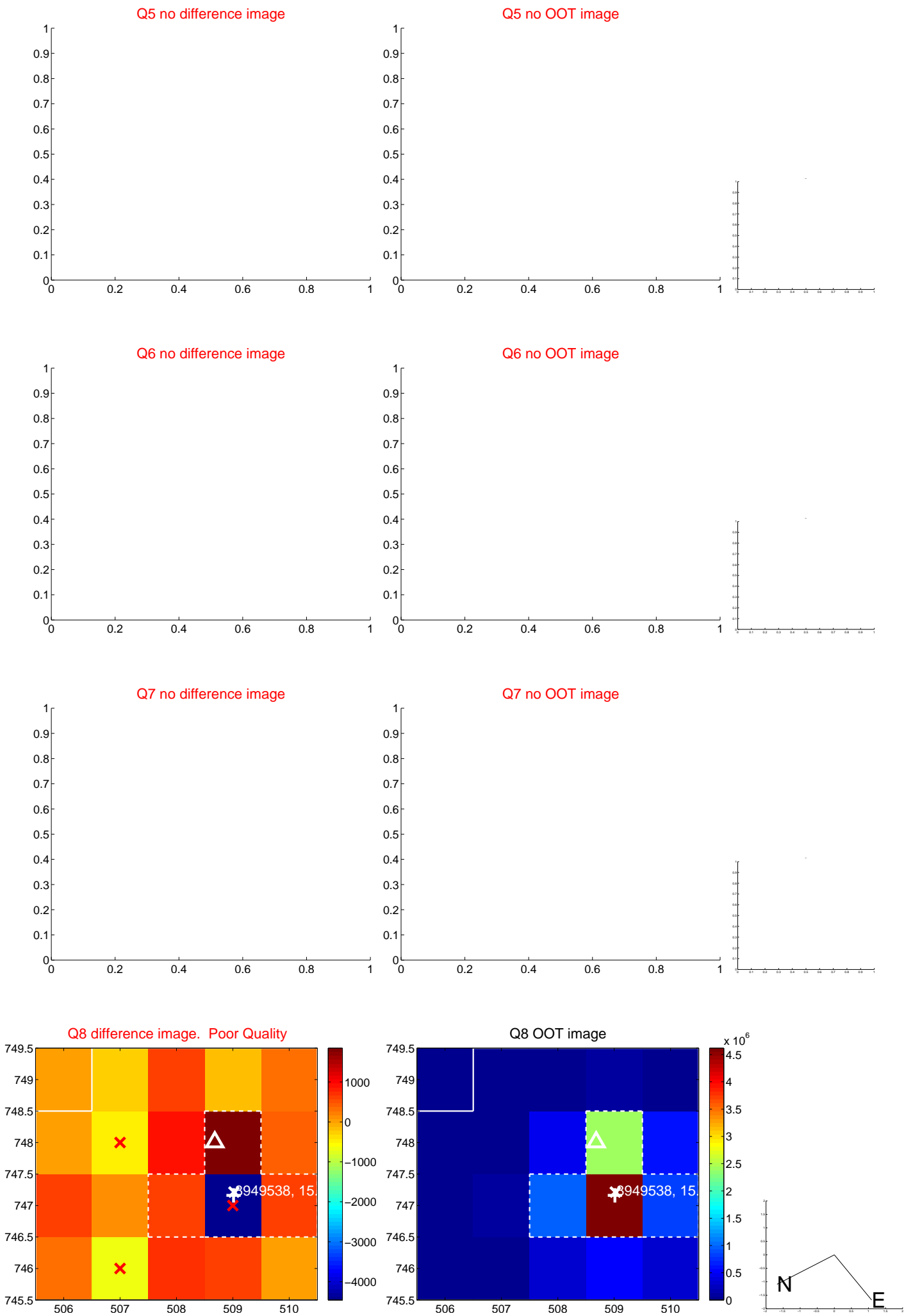


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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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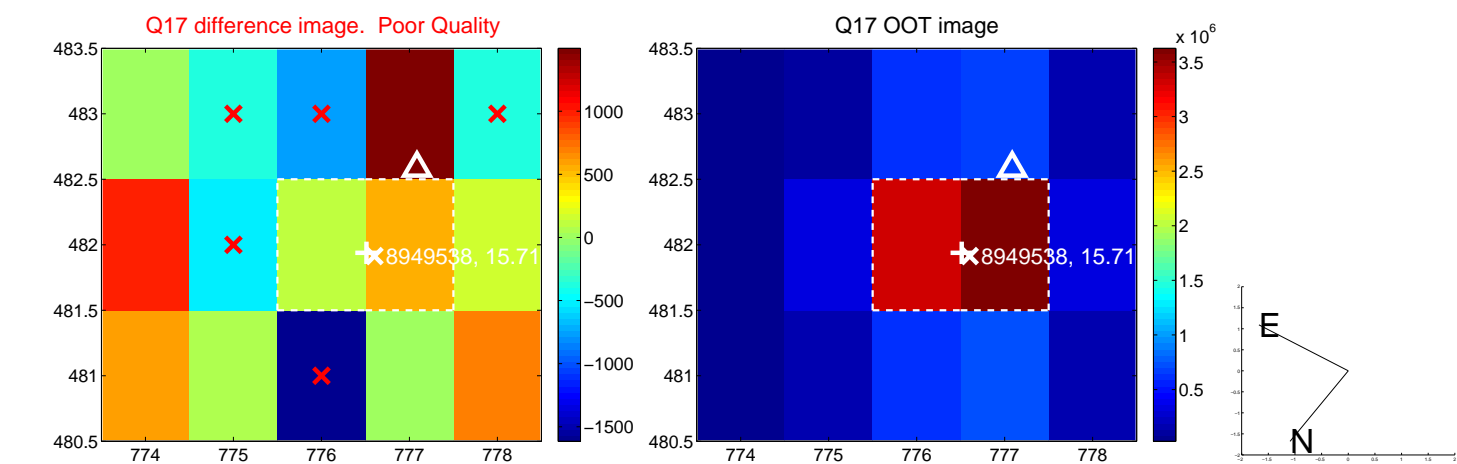
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



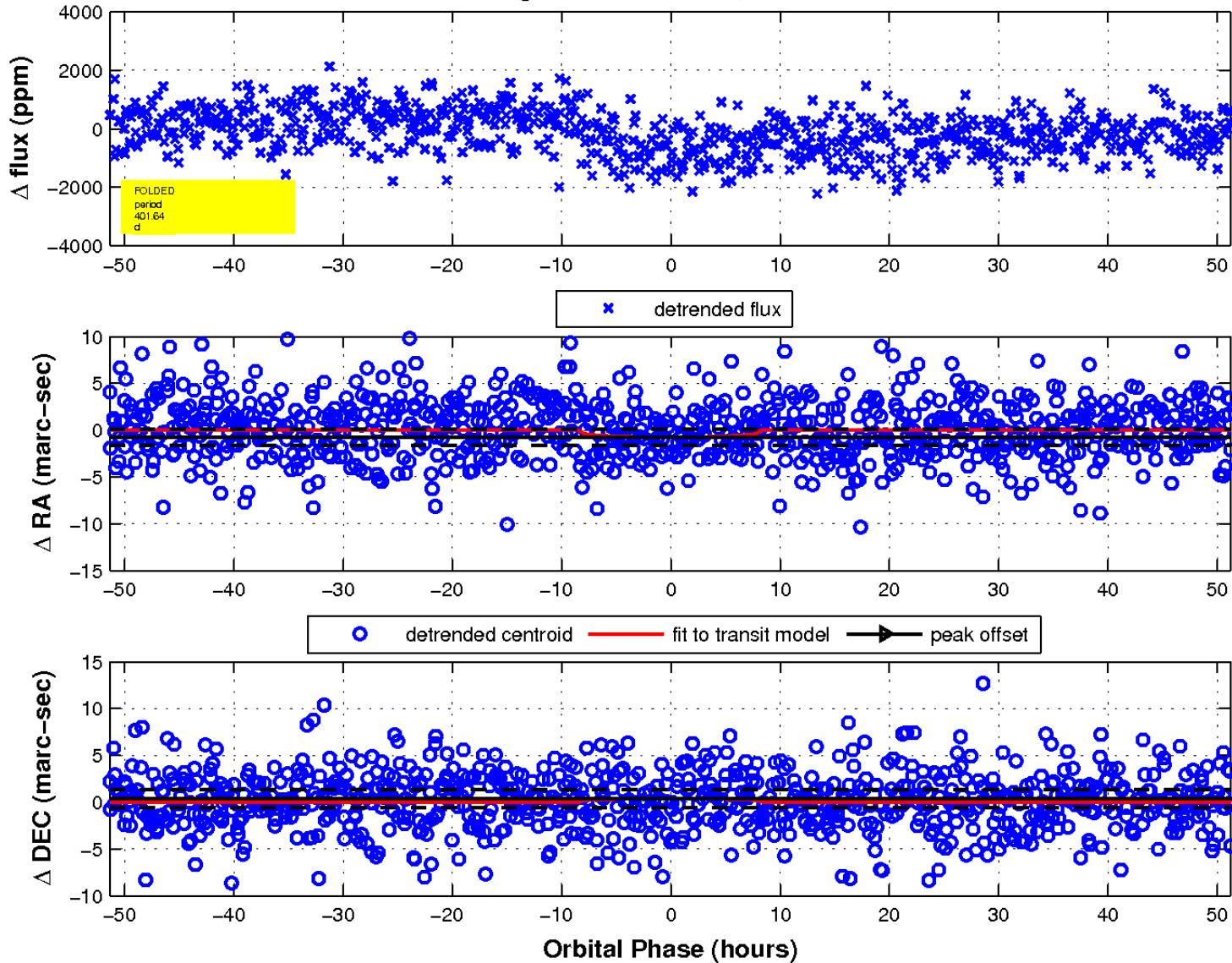
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

