

KIC 008487673

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})
008487673-01	OBS	No	458.820232	176.343901	517.1	20.564	8.9	7.1	1.17	6440	3.14	1.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008487673-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

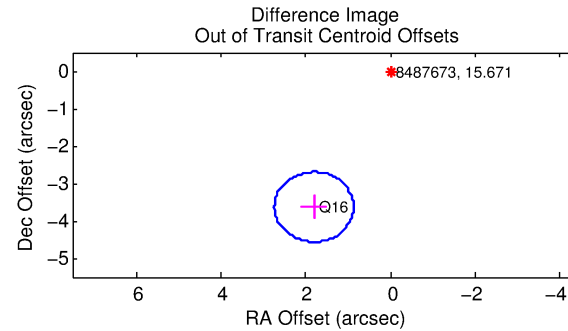
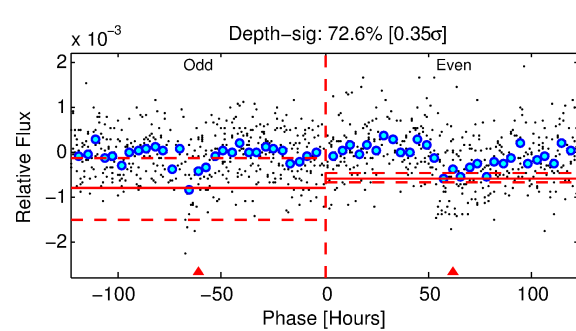
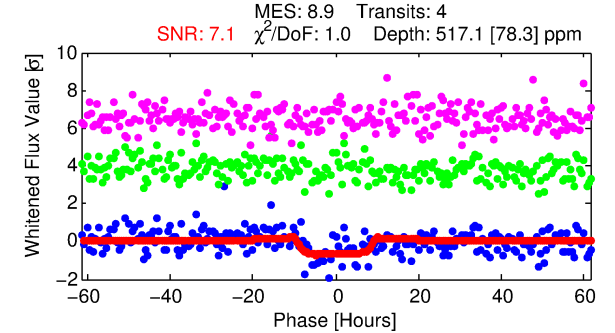
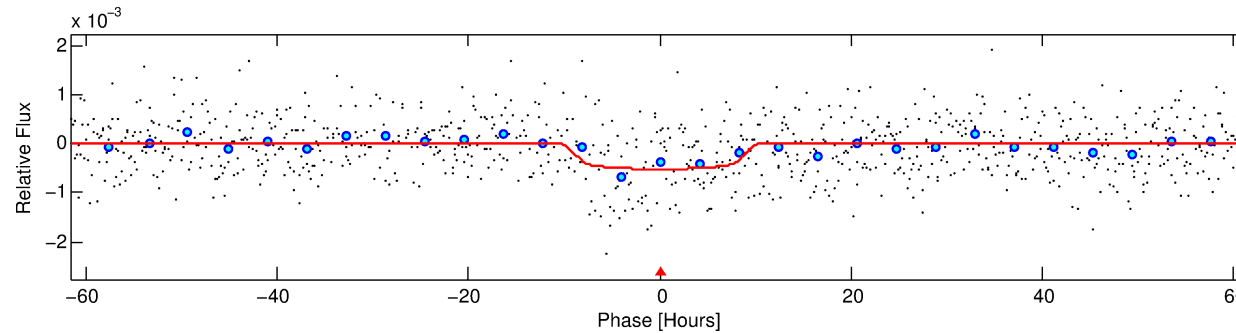
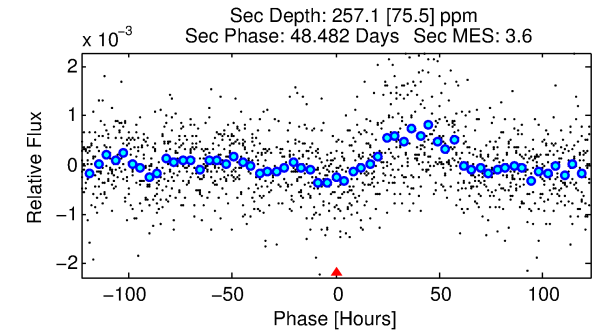
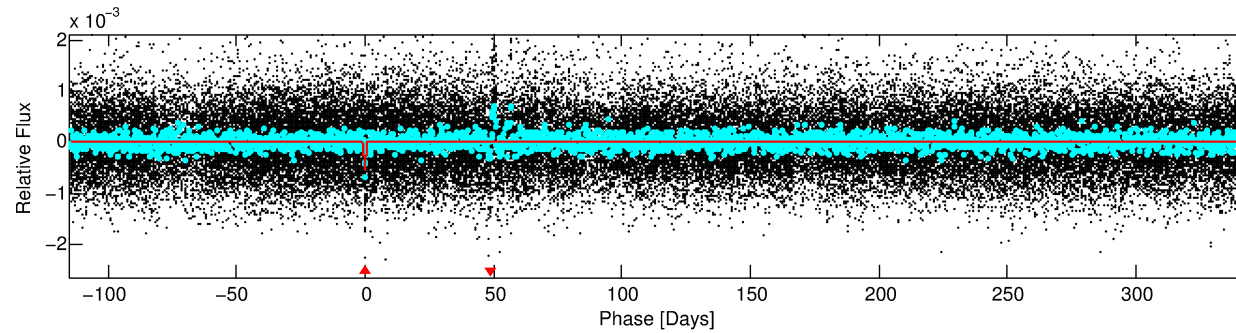
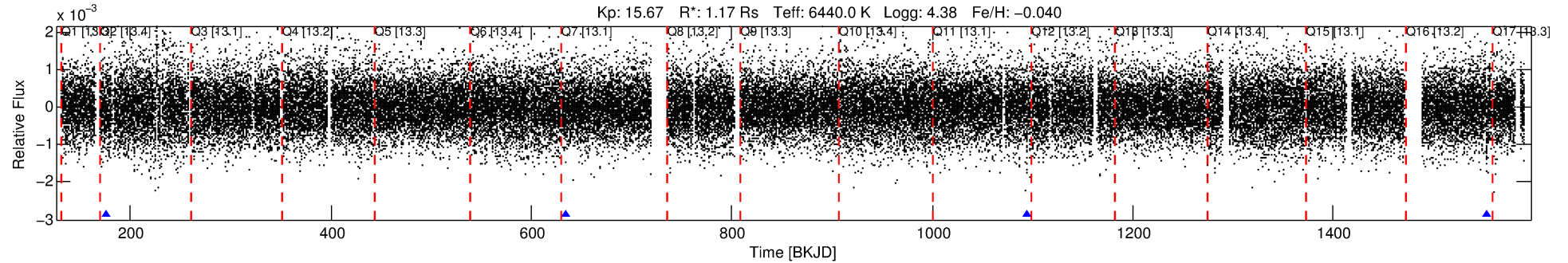
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008487673-01

No Significant Match Found

DV One-Page Summary

KIC: 8487673 Candidate: 1 of 1 Period: 458.820 d



DV Fit Results:

Period = 458.82023 [0.02356] d
Epoch = 176.3439 [0.0442] BKJD
Rp/R* = 0.0246 [0.0033]
a/R* = 79.98 [44.19]
b = 0.91 [0.10]
Seff = 1.38 [0.52]
Teq = 276 [26] K
Rp = 3.14 [1.06] Re
a = 1.2360 [0.3119] AU
Ag = 21893.61 [11626.38] [1.88σ]
Teff = 5196 [540] K [9.09σ]

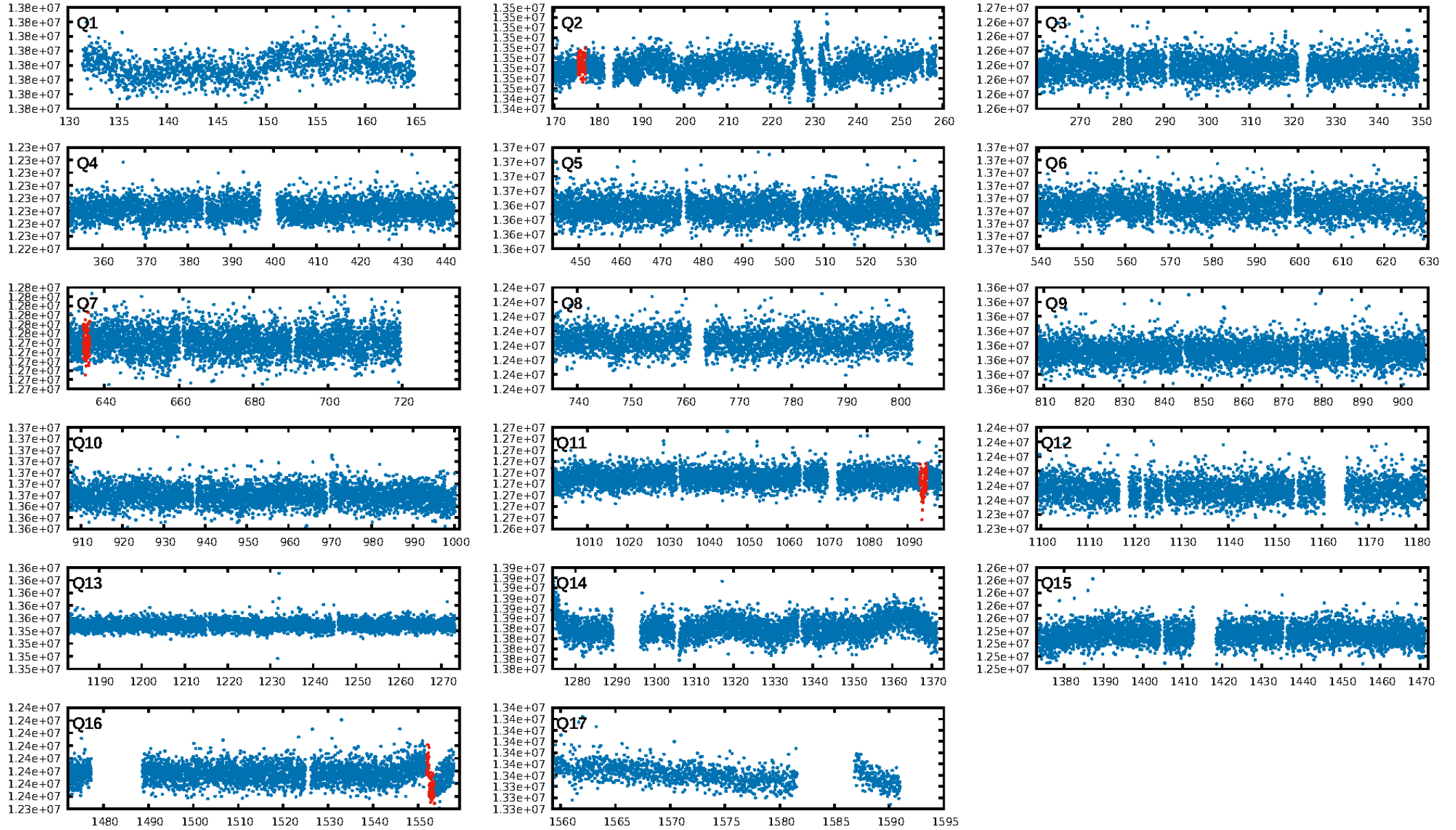
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 99.5%
Bootstrap-pfa: 1.72e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -4.752
Centroid-sig: 16.2%
Centroid-so: 1.616 arcsec [1.12σ]
OotOffset-rm: 4.054 arcsec [13.04σ]
KicOffset-rm: 3.902 arcsec [12.55σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

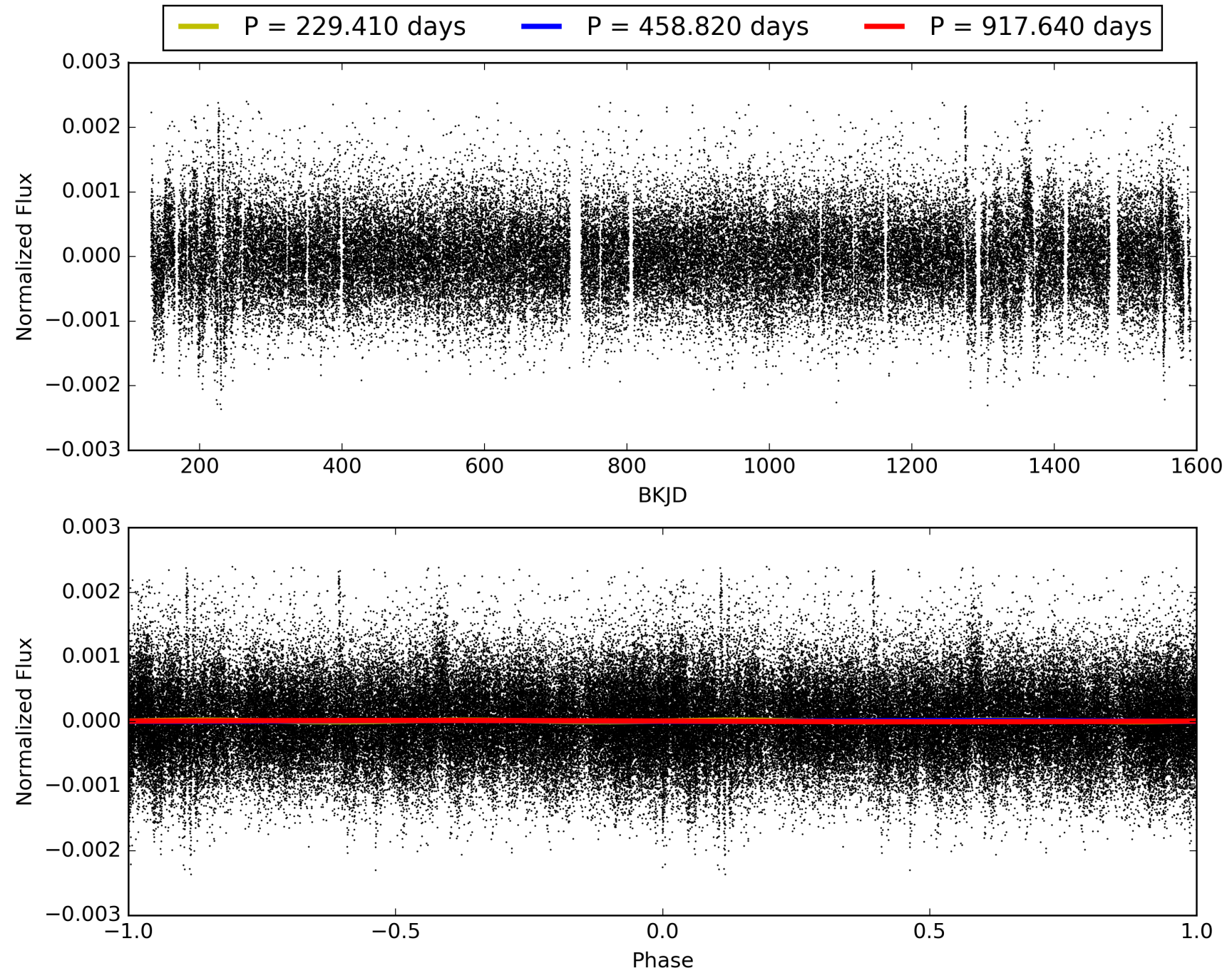
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:28:26 Z

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

TCE 008487673-01, PDC Light Curves

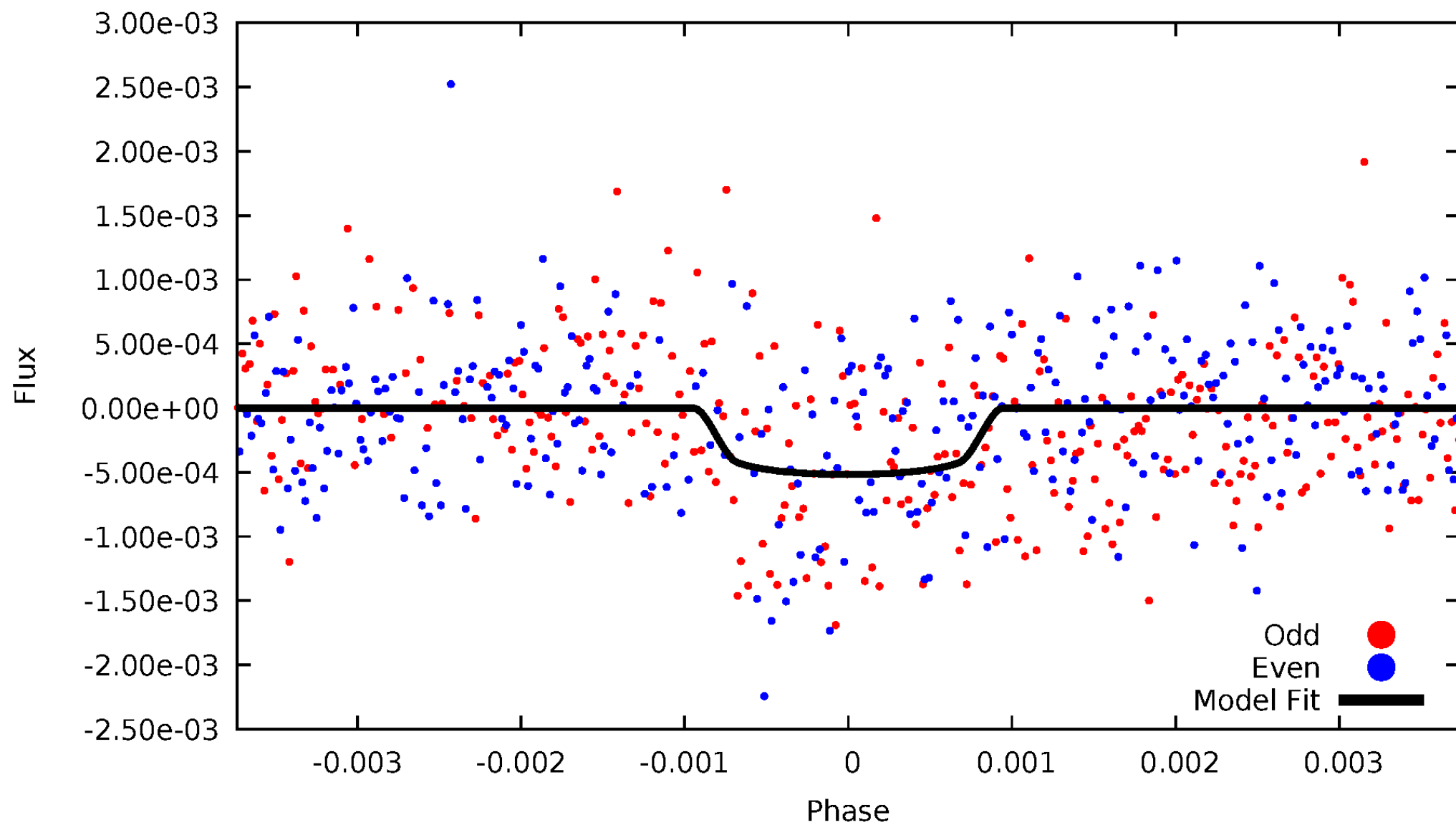


TCE 008487673-01



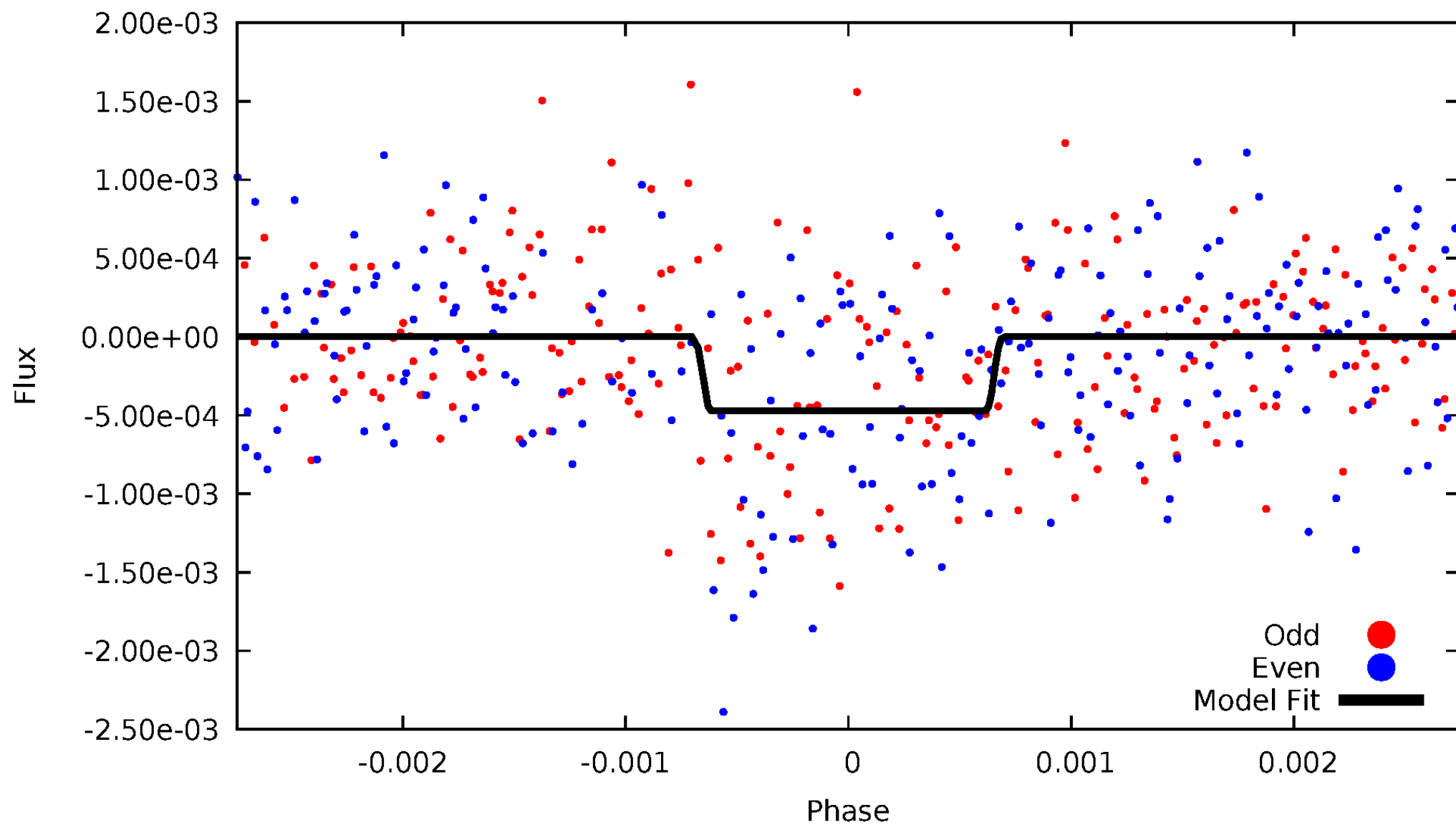
DV Odd/Even

TCE 008487673-01



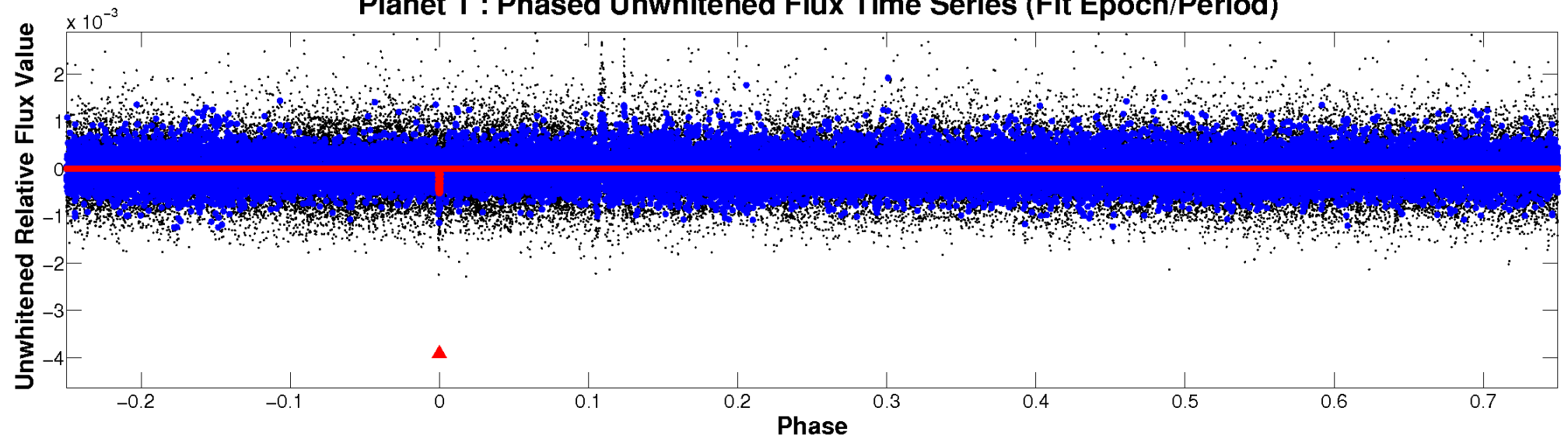
ALT Odd/Even

TCE 008487673-01

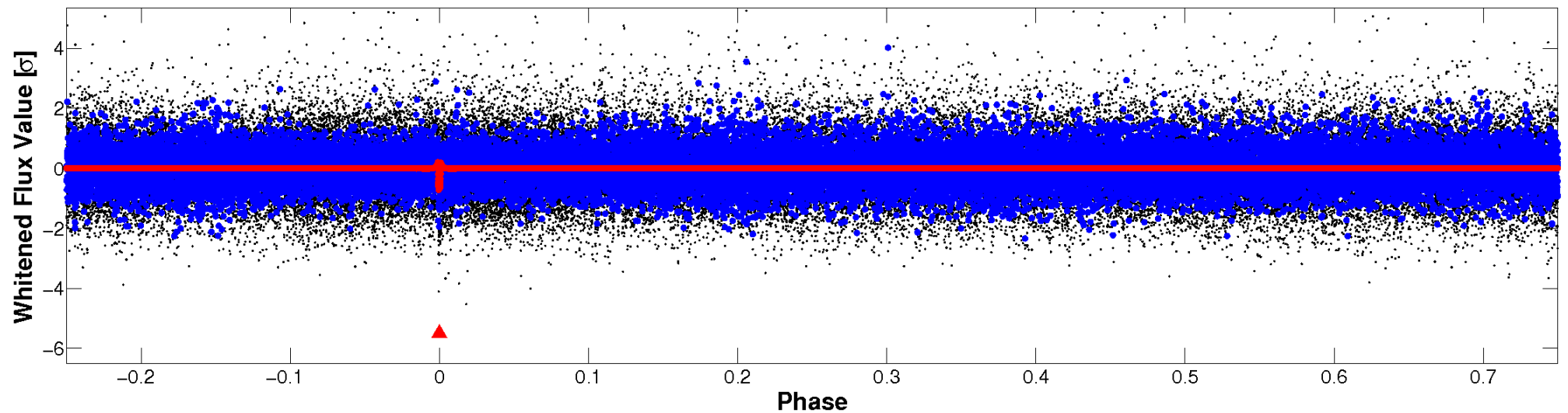


Non-Whitened Vs. Whitened Light Curve

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

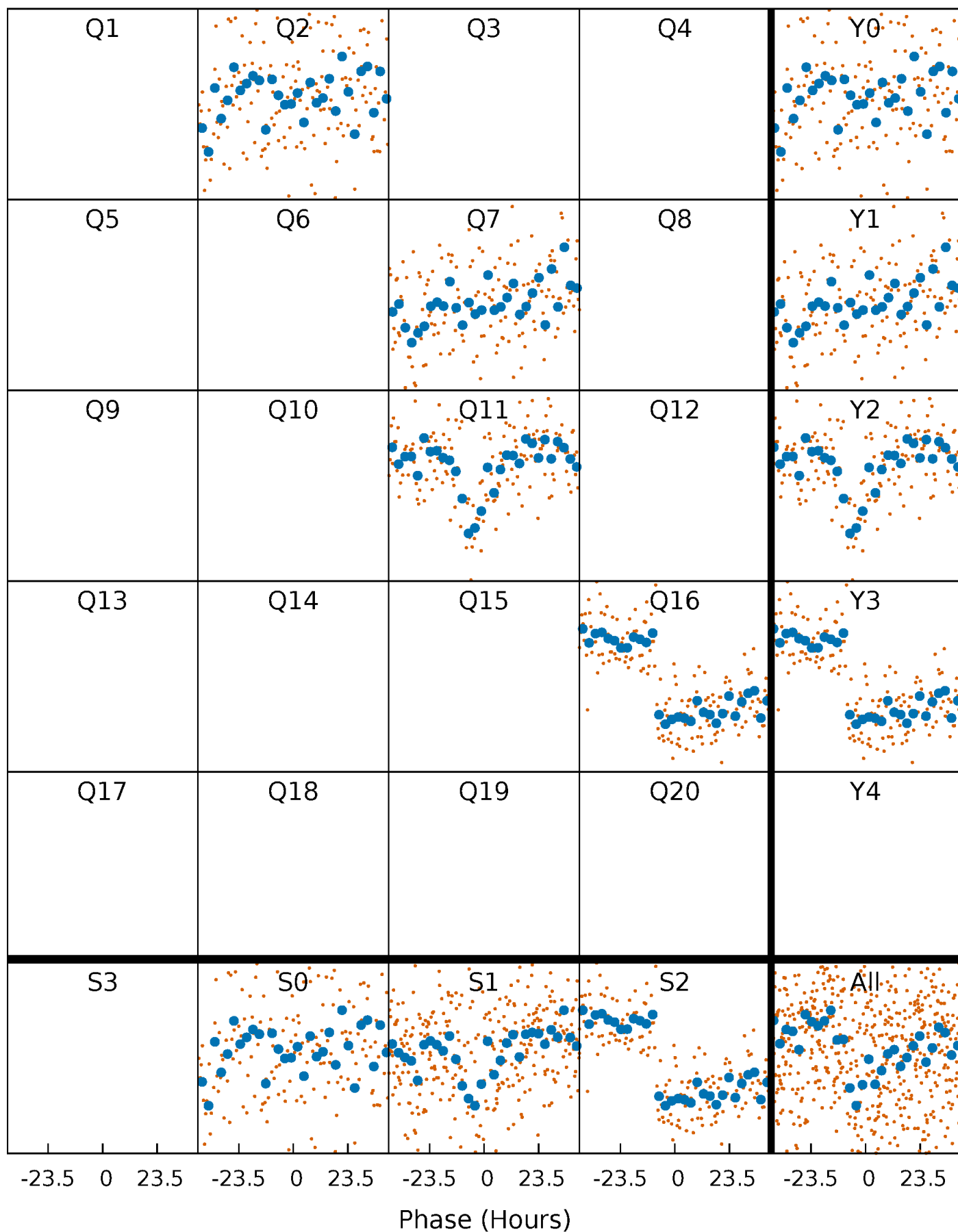


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



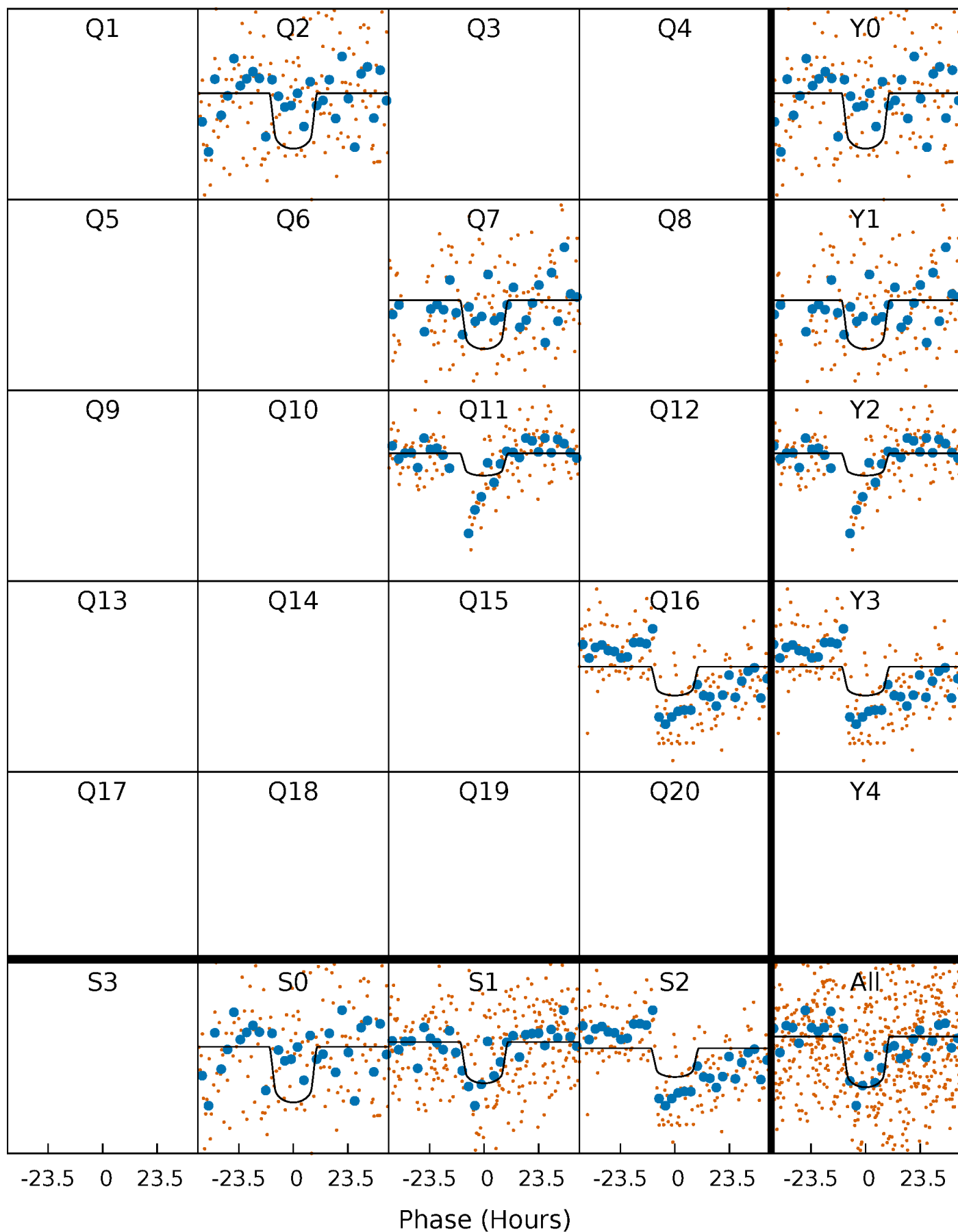
PDC Quarter-Phased Transit Curves

TCE 008487673-01 P=458.820232 Days $T_0=176.343900$ (BKJD)



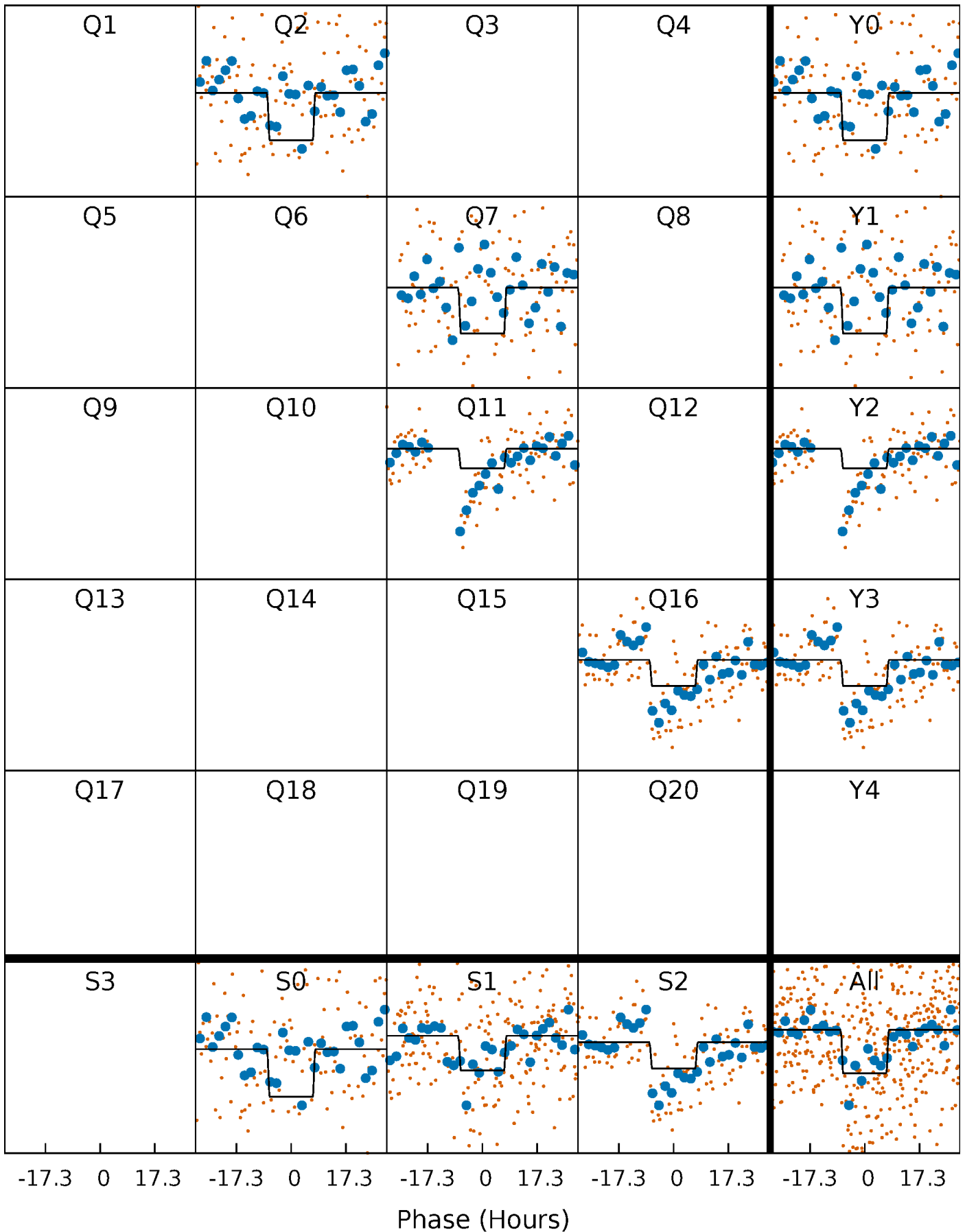
DV Quarter-Phased Transit Curves

TCE 008487673-01 P=458.820232 Days $T_0=176.343900$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

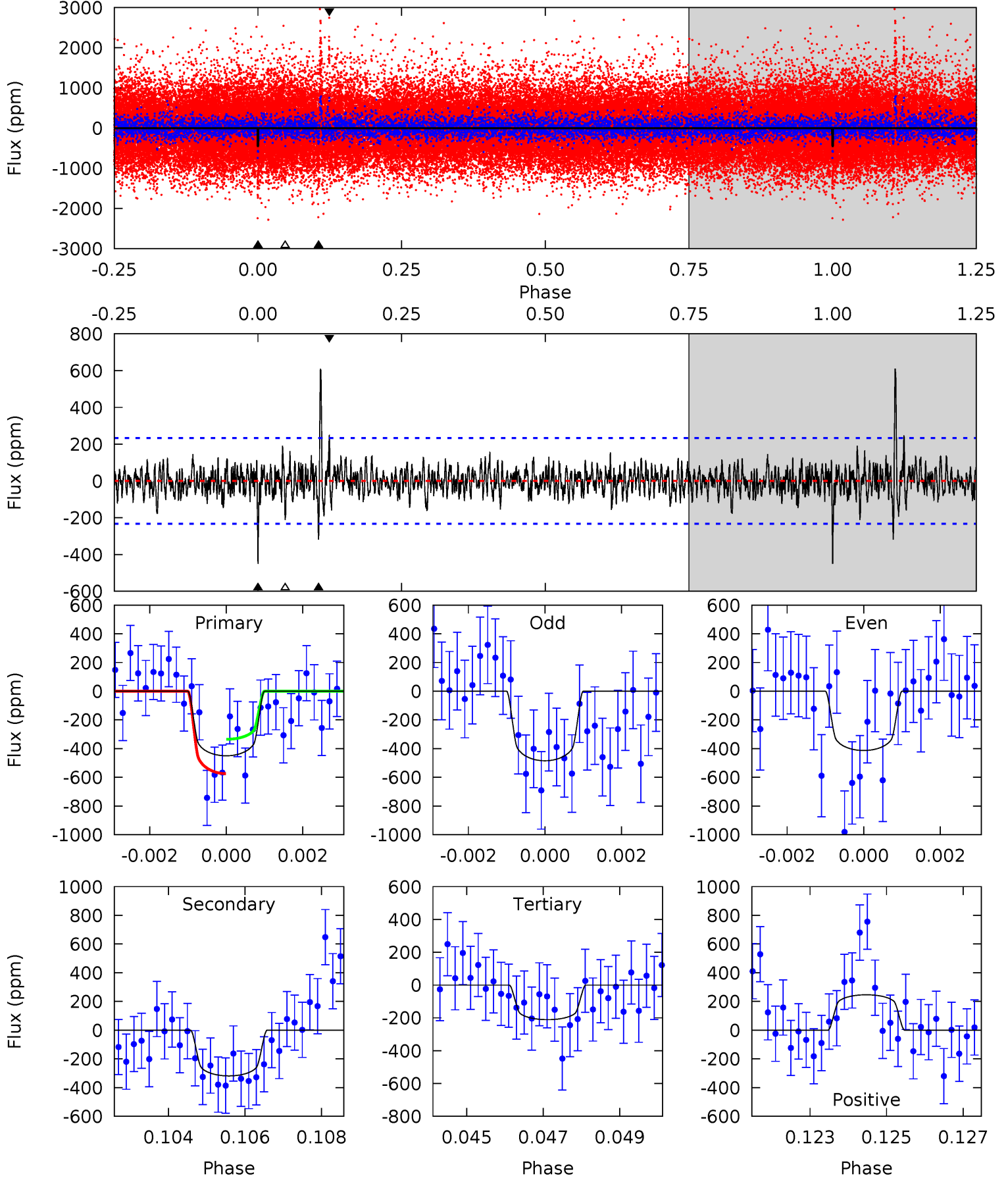
TCE 008487673-01 P=458.781100 Days $T_0=176.443553$ (BKJD)



DV Model-Shift Uniqueness Test

008487673-01, P = 458.820232 Days, E = 176.343900 Days

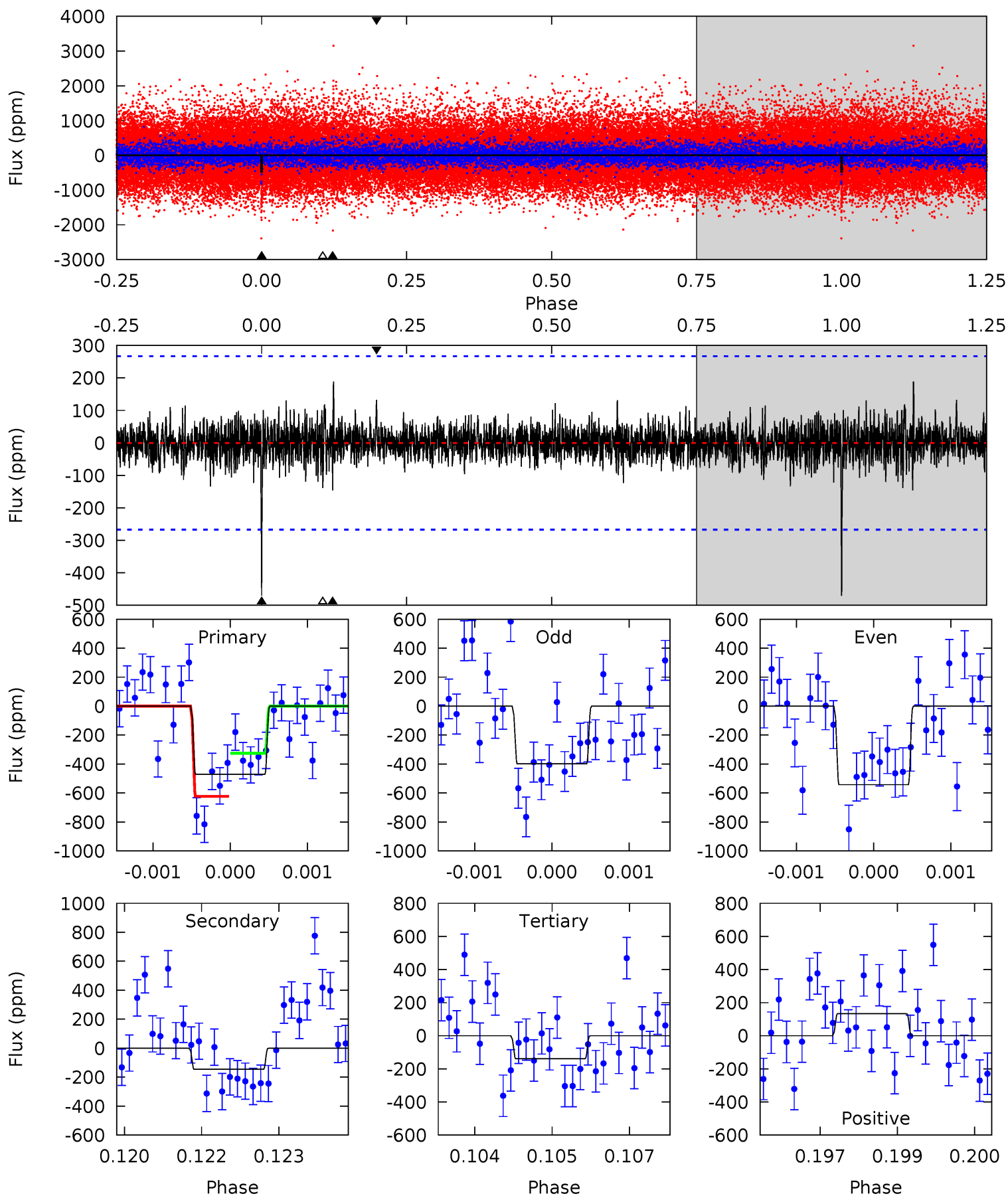
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	7.29	4.83	5.64	5.34	3.11	1.48	5.47	4.66	2.46	1.65	0.81	1.02	0.58	2.74



Alt Model-Shift Uniqueness Test

008487673-01, $P = 458.781100$ Days, $E = 176.443553$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.50	2.95	2.80	2.68	5.40	3.20	0.71	6.70	6.82	0.16	0.28	1.45	0.99	0.29	3.00



Stellar Parameters For KIC 008487673

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6440^{+153}_{-211}	$4.380^{+0.062}_{-0.188}$	$-0.040^{+0.250}_{-0.300}$	$1.169^{+0.363}_{-0.156}$	$1.196^{+0.169}_{-0.169}$	$1.053^{+0.348}_{-0.508}$
	+2%/-3%	+1%/-4%	+625%/-750%	+31%/-13%	+14%/-14%	+33%/-48%
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 008487673-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-319 ± 44	$3.29^{+0.67}_{-0.53}$	392^{+25}_{-19}	5452^{+408}_{-336}	24019^{+11088}_{-7649}
Alt.	-146 ± 50	$2.88^{+0.59}_{-0.51}$	392^{+28}_{-19}	4870^{+506}_{-473}	13928^{+9175}_{-6013}

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 $A_{obs} \gg 1.0$

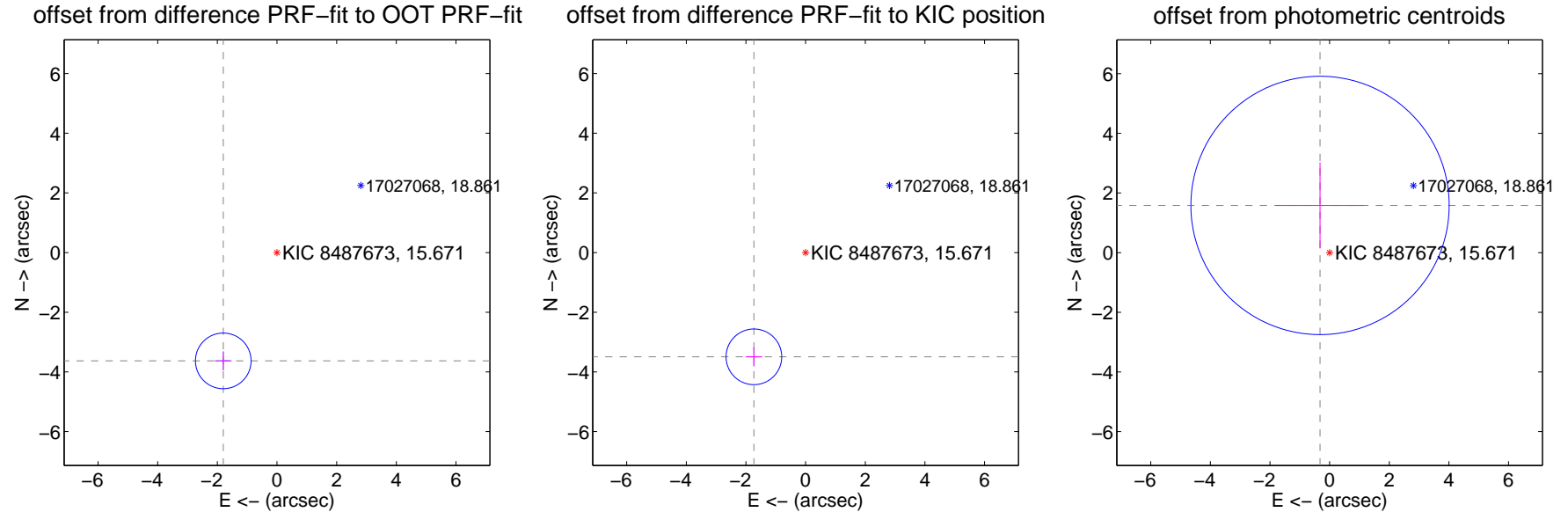
DV Centroid Data

Supplemental centroid analysis for 008487673-01. Kepler magnitude: 15.67. Transit SNR 7.07

There are 1 quarters with good PRF difference image offsets

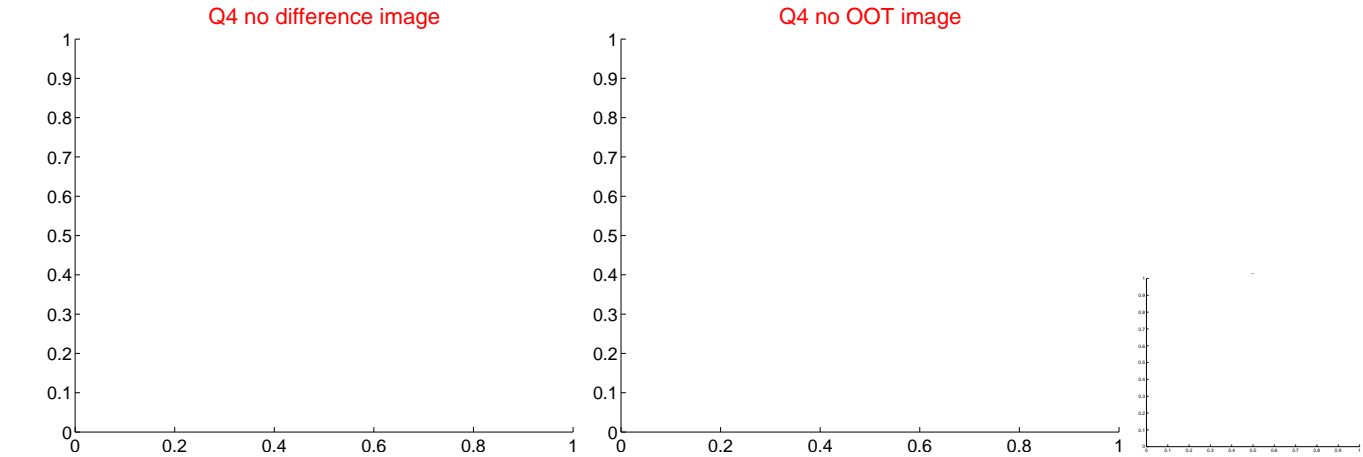
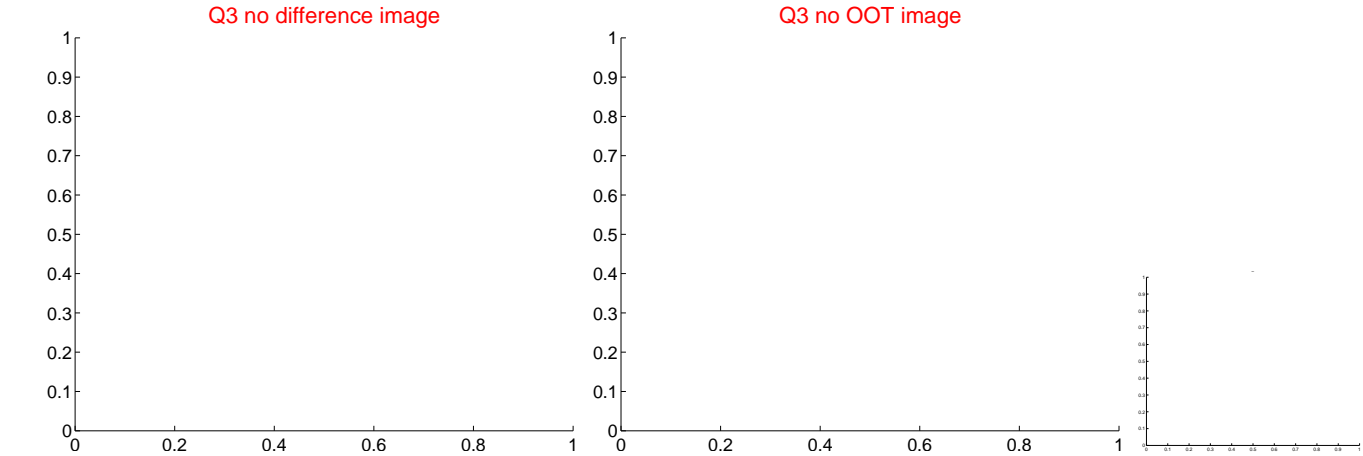
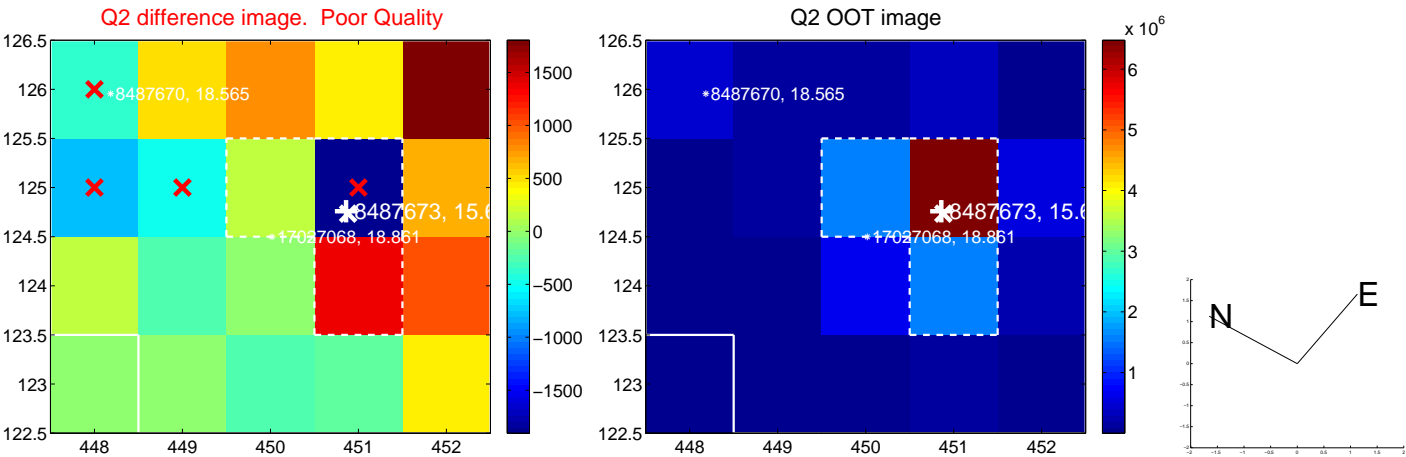
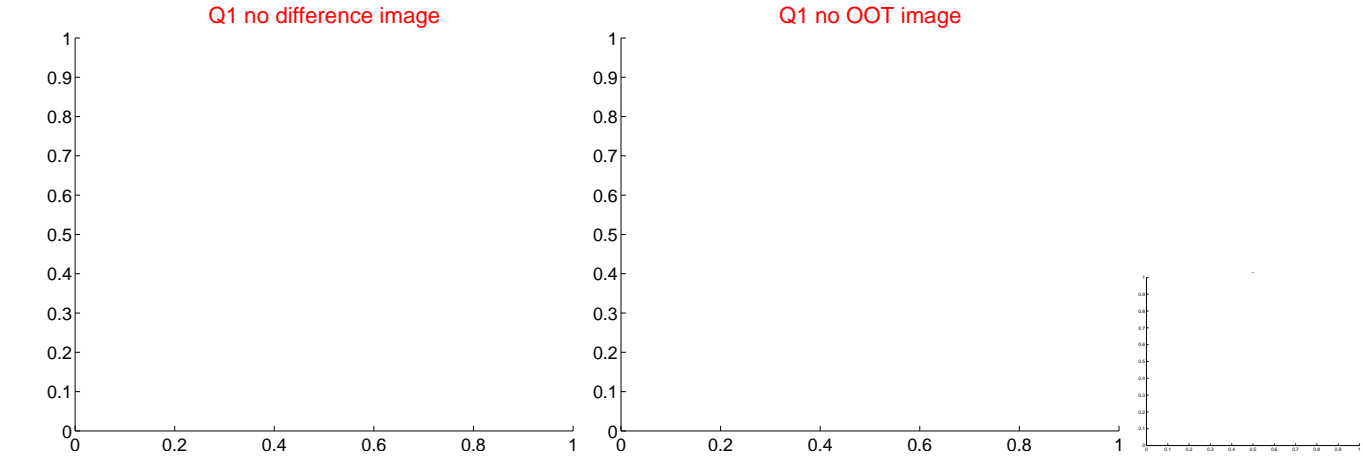
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.054 ± 0.311	13.04	1.803 ± 0.277	-3.631 ± 0.319
PRF-fit source offset from KIC position	3.902 ± 0.311	12.55	1.735 ± 0.277	-3.495 ± 0.319
photometric centroid source offset	1.62 ± 1.44	1.12	0.32 ± 1.48	1.58 ± 1.44



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.



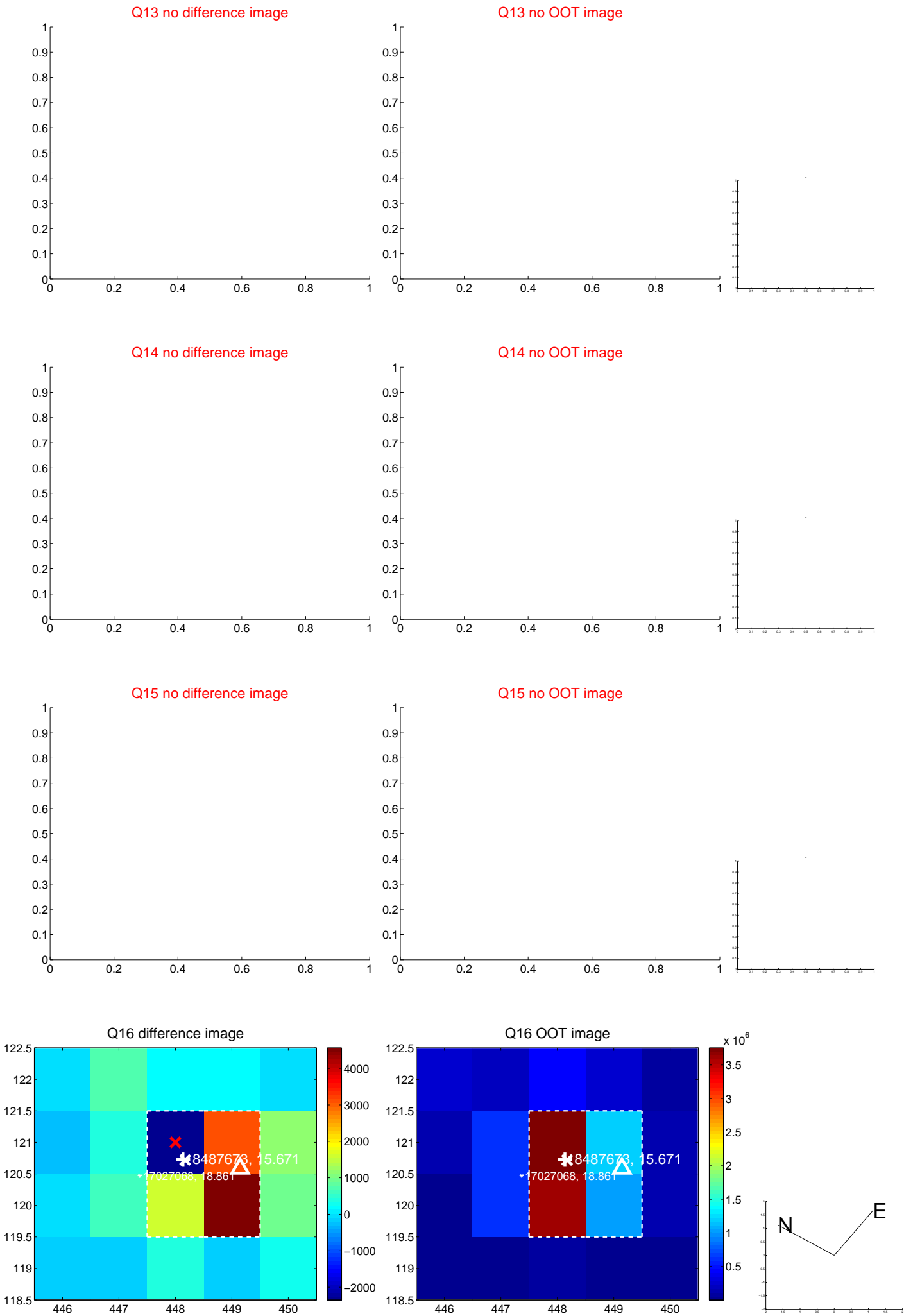
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



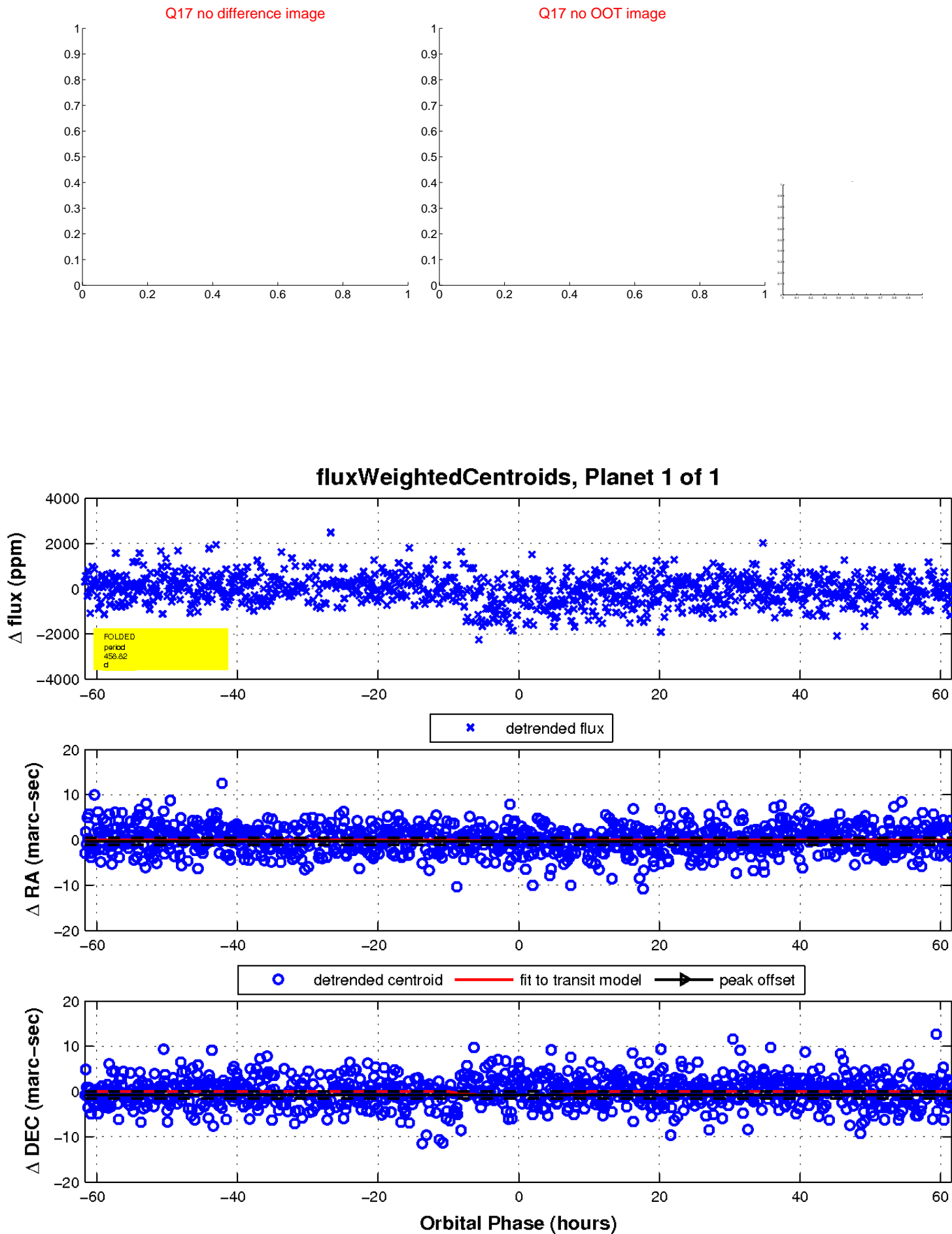
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

