

KIC 005872552

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})
005872552-01	OBS	No	419.954647	378.999584	678.7	19.082	8.7	8.4	1.18	6442	3.12	1.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005872552-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

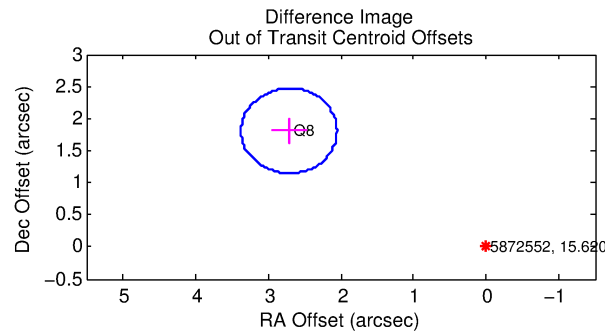
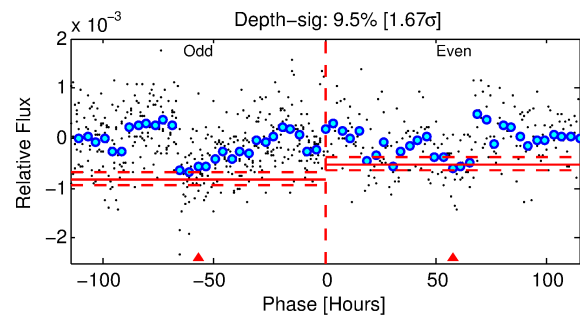
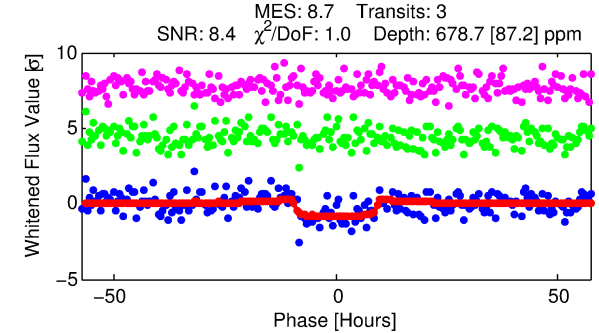
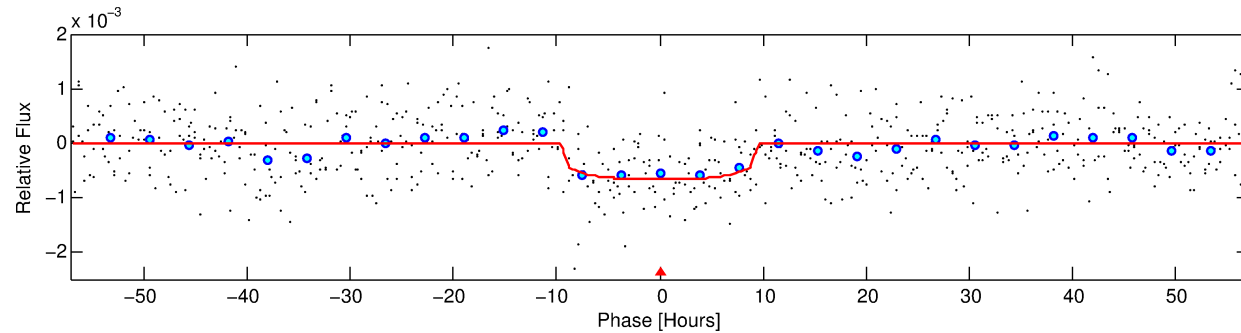
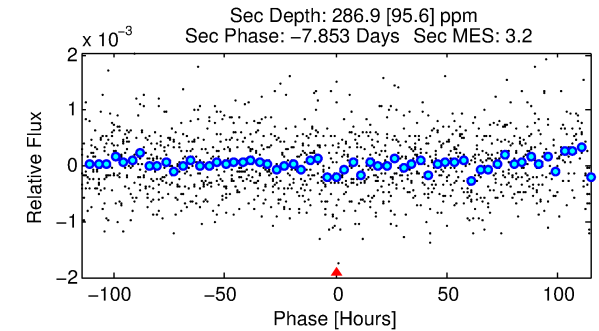
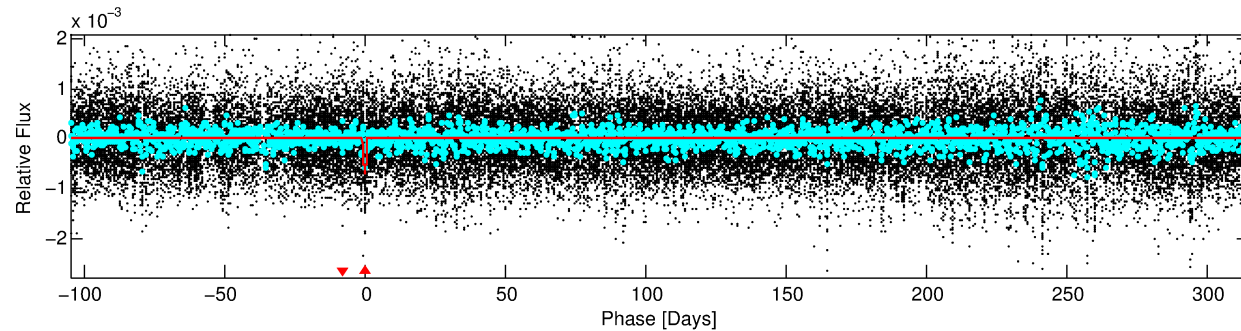
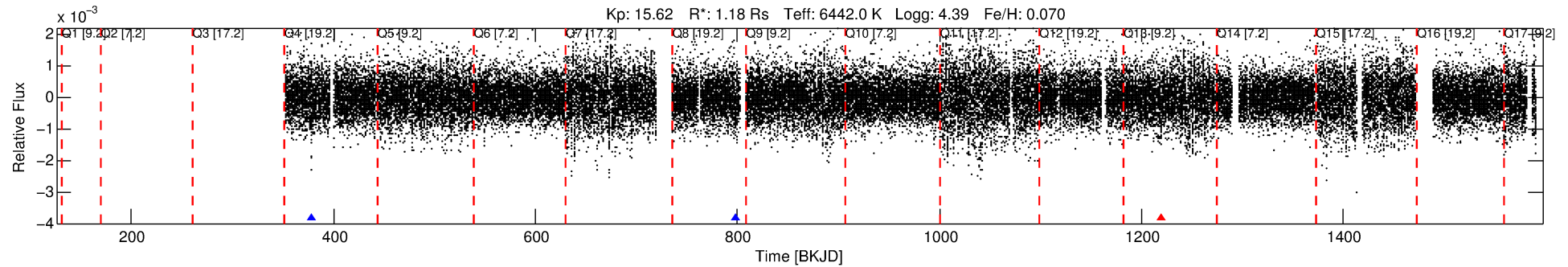
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005872552-01

No Significant Match Found

DV One-Page Summary

KIC: 5872552 Candidate: 1 of 1 Period: 419.955 d



DV Fit Results:

Period = 419.95465 [0.01648] d
Epoch = 378.9996 [0.0201] BKJD
Rp/R* = 0.0242 [0.0243]
a/R* = 162.66 [837.33]
b = 0.34 [13.67]
Seff = 1.55 [0.66]
Teq = 284 [30] K
Rp = 3.13 [3.31] Re
a = 1.1816 [0.3285] AU
Ag = 22570.33 [46835.78] [0.48σ]
Teff = 5389 [2751] K [1.86σ]

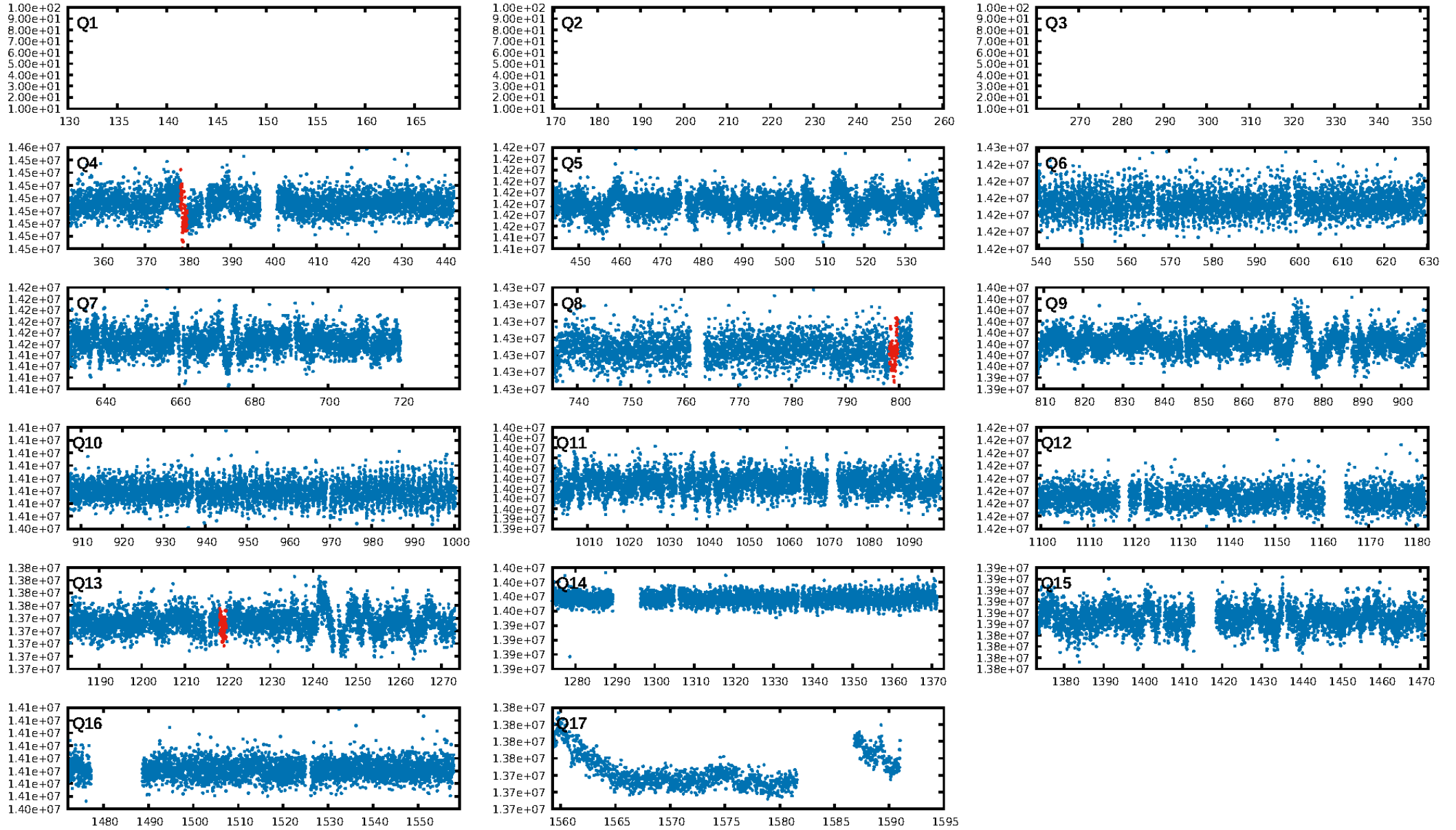
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.58e-17
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 1.606
Centroid-sig: 96.7%
Centroid-so: 0.364 arcsec [0.20σ]
OotOffset-rm: 3.259 arcsec [14.80σ]
KicOffset-rm: 3.282 arcsec [14.87σ]
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]

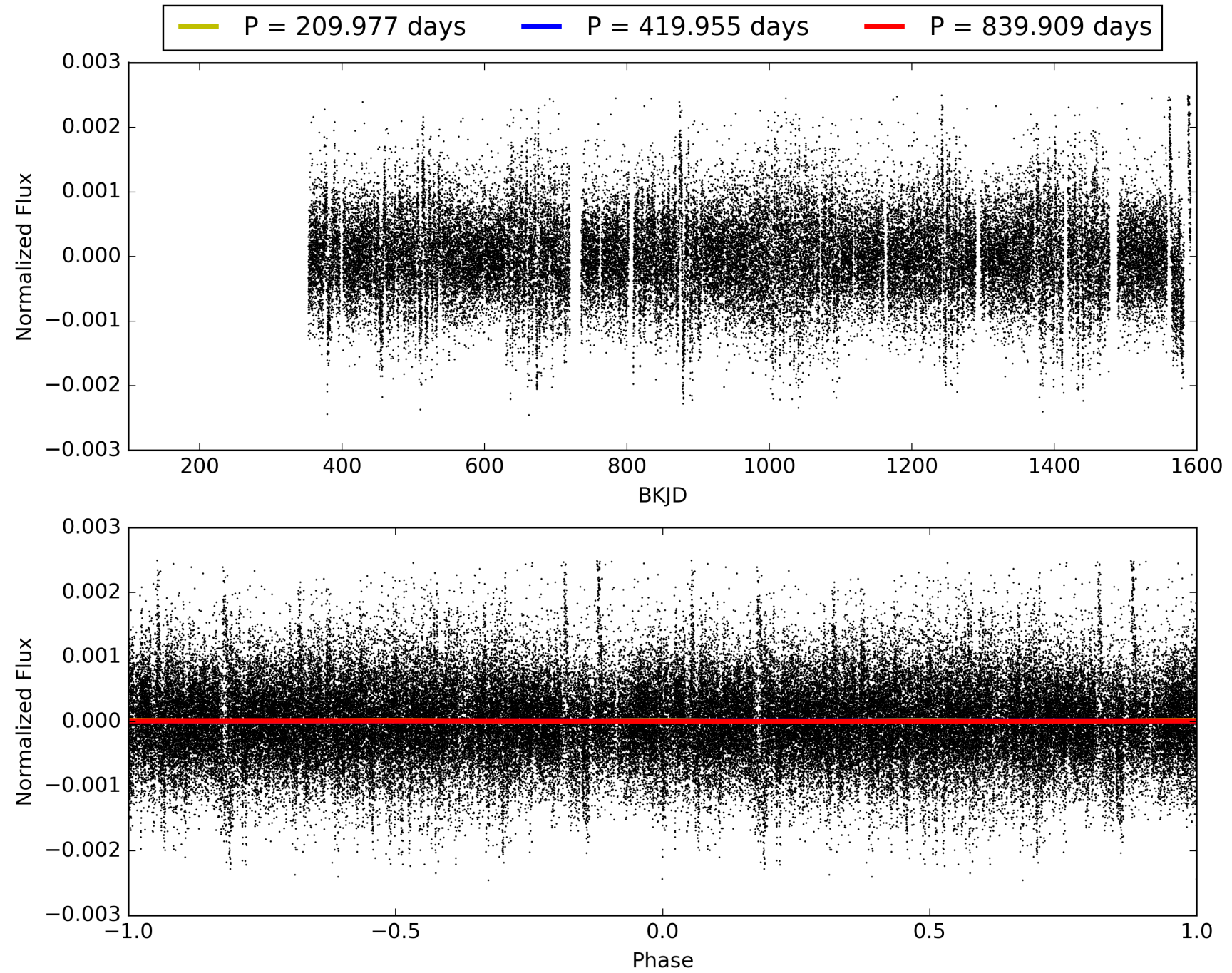
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:06:12 Z

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

TCE 005872552-01, PDC Light Curves

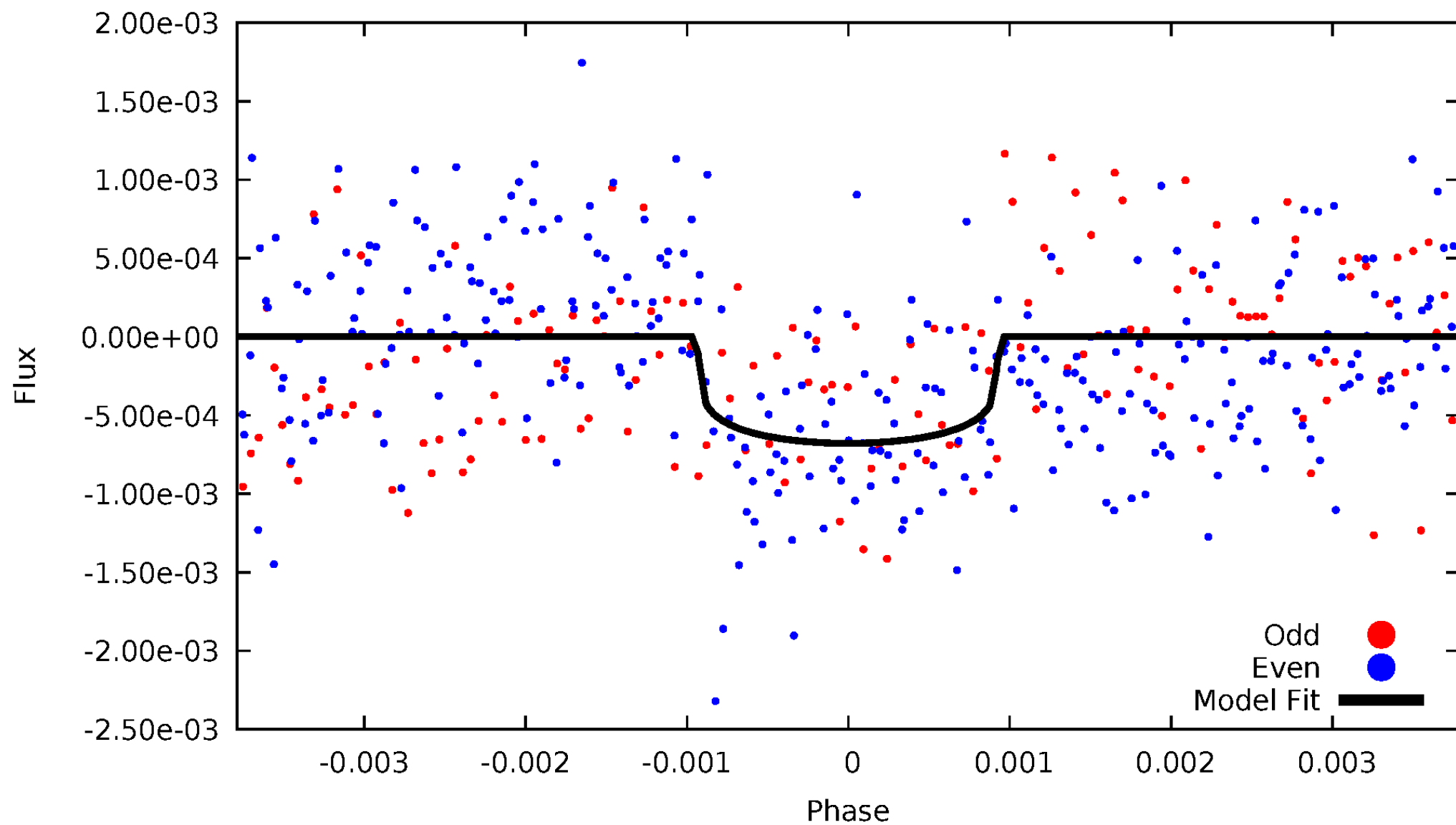


TCE 005872552-01



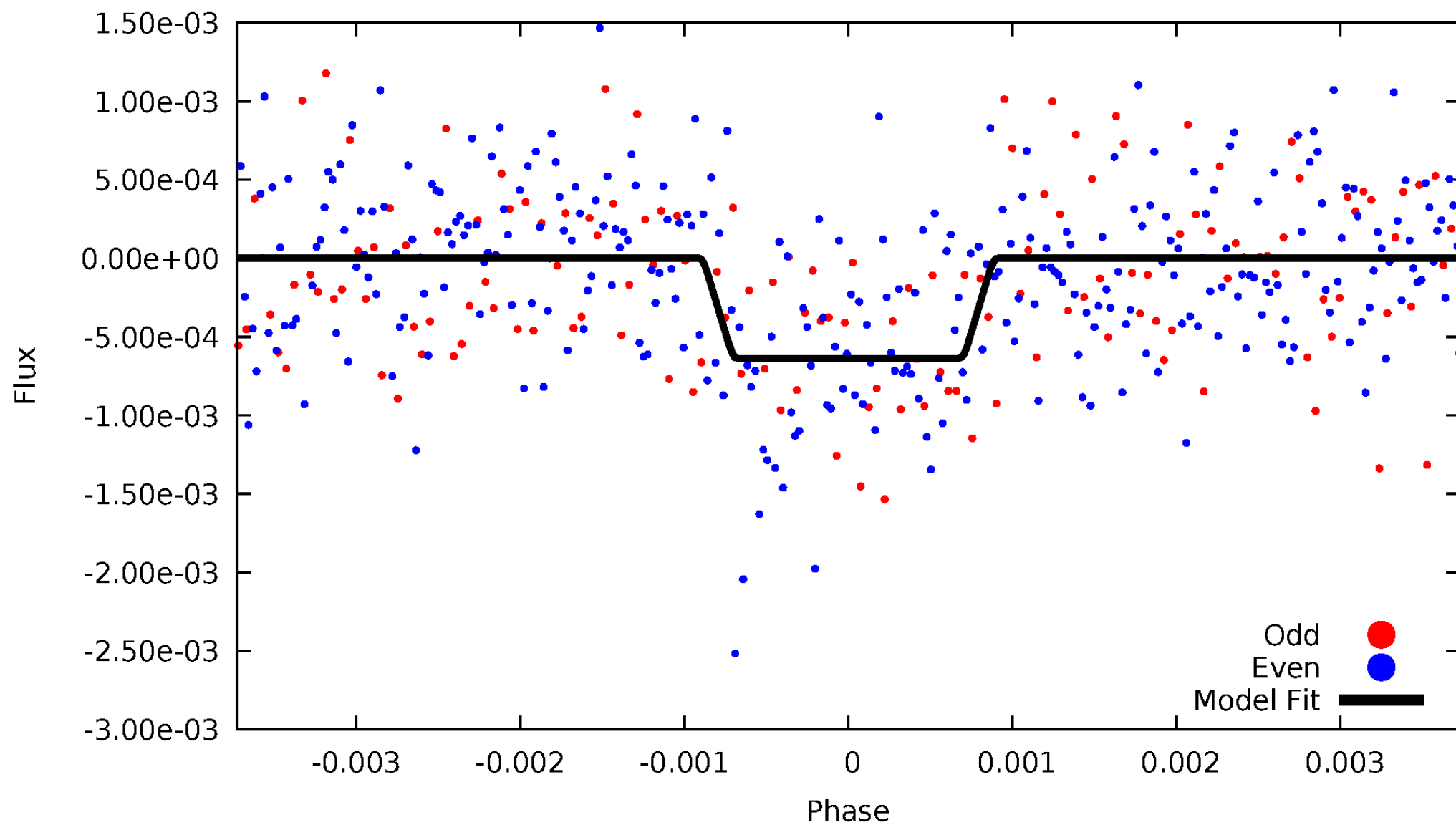
DV Odd/Even

TCE 005872552-01



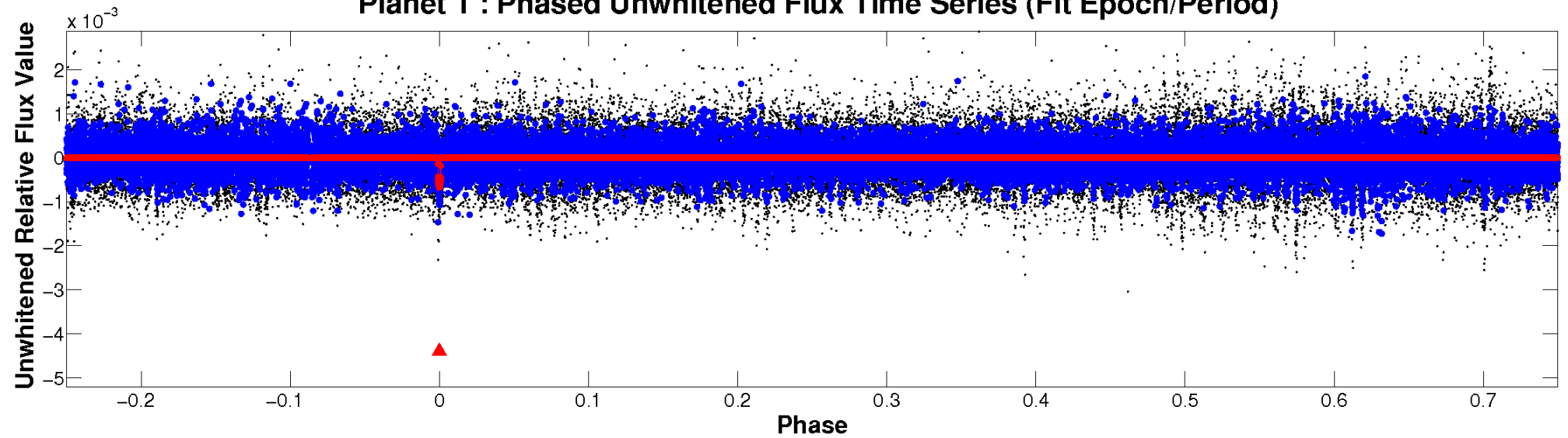
ALT Odd/Even

TCE 005872552-01

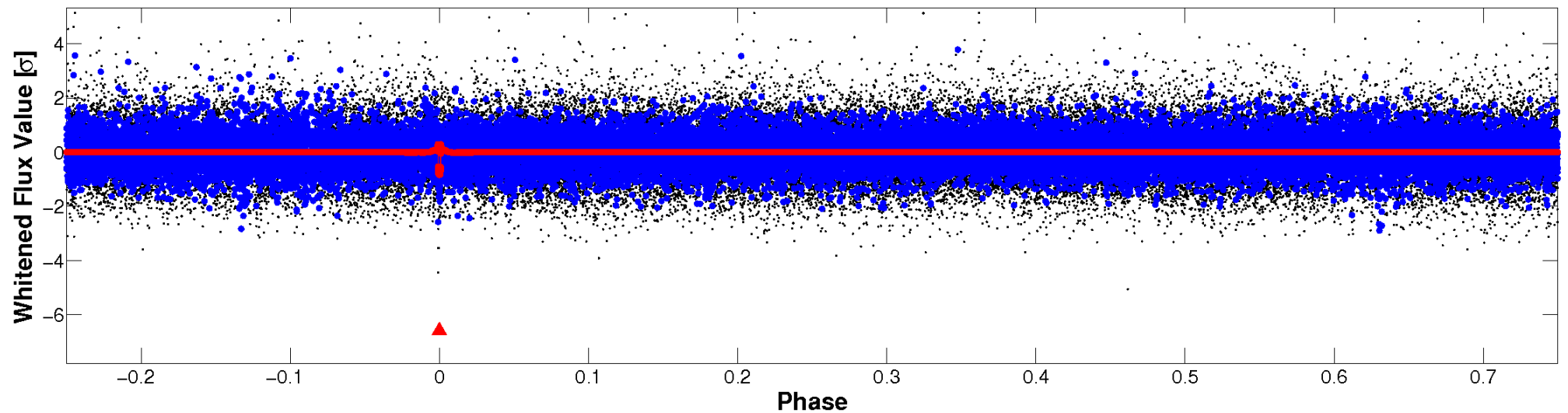


Non-Whitened Vs. Whitened Light Curve

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



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



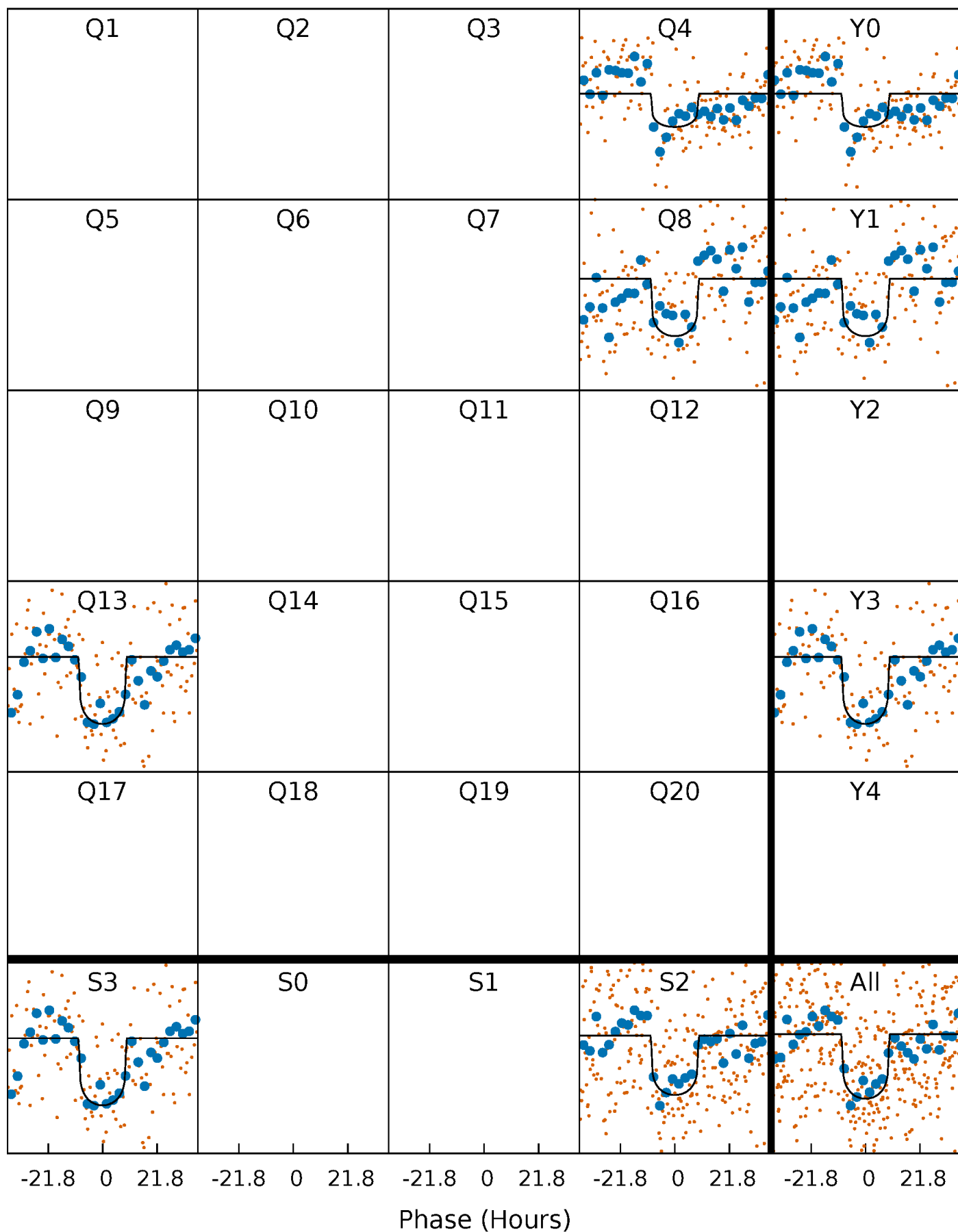
PDC Quarter-Phased Transit Curves

TCE 005872552-01 P=419.954647 Days $T_0=378.999584$ (BKJD)



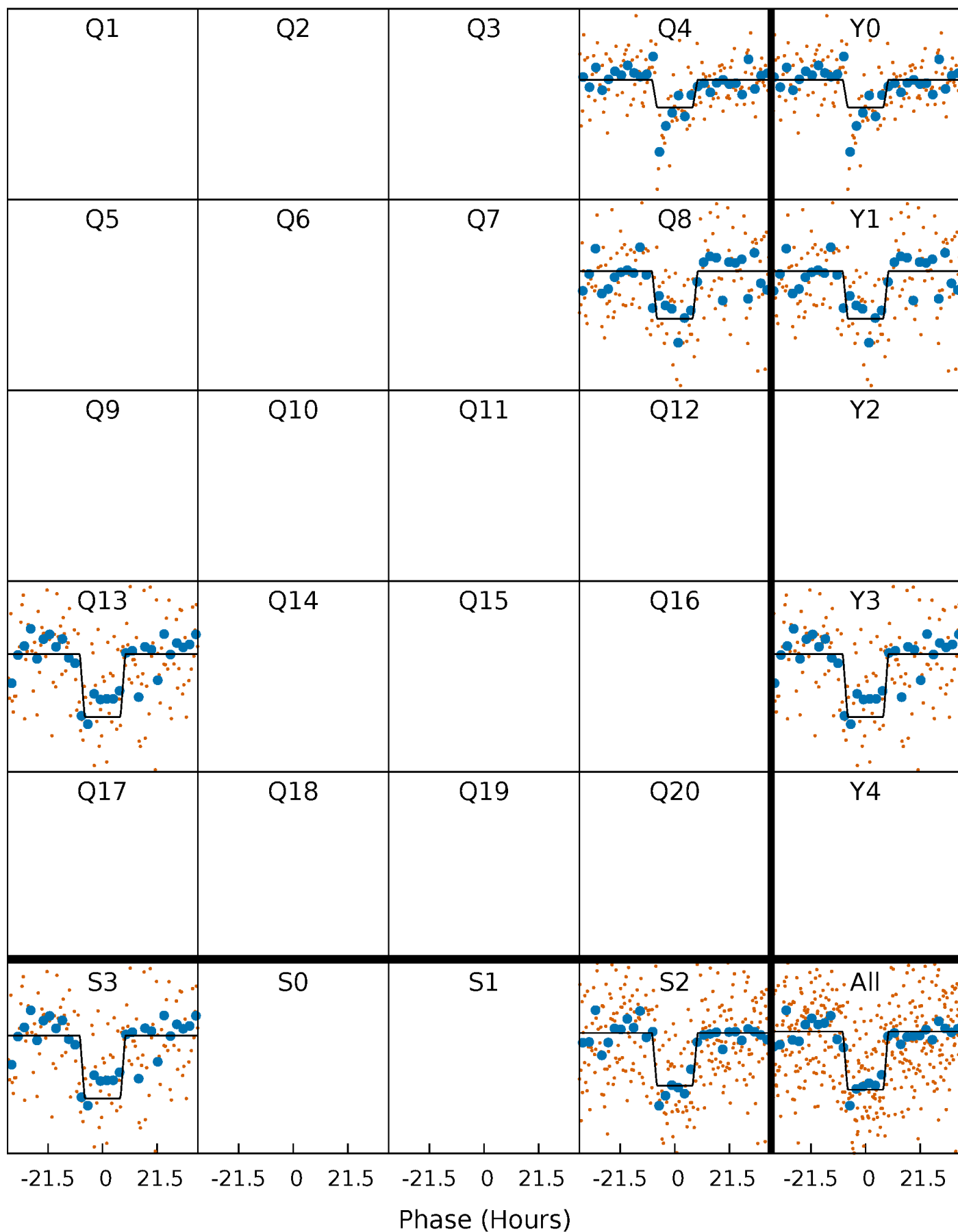
DV Quarter-Phased Transit Curves

TCE 005872552-01 P=419.954647 Days $T_0=378.999584$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

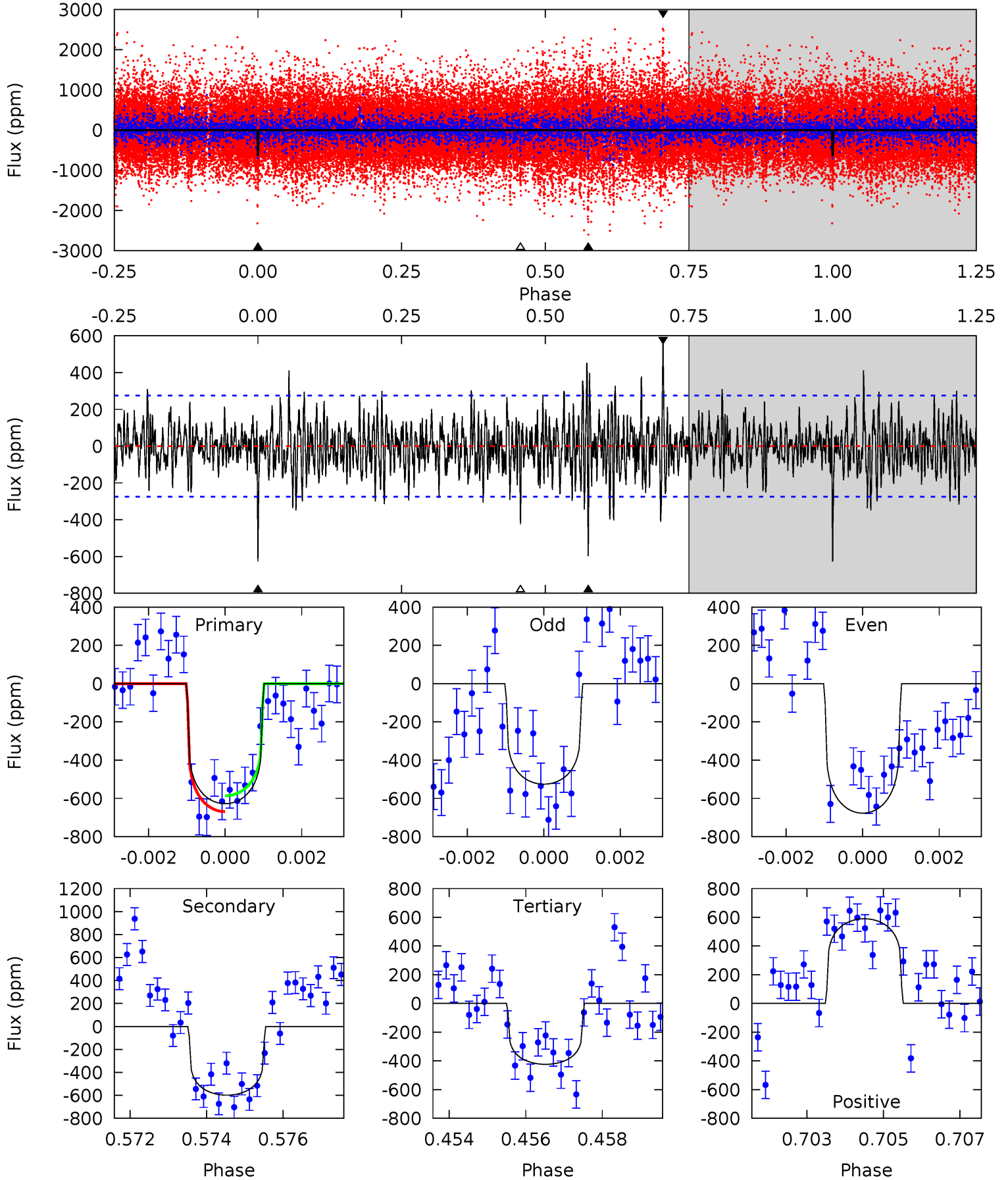
TCE 005872552-01 P=420.018637 Days $T_0=378.943115$ (BKJD)



DV Model-Shift Uniqueness Test

005872552-01, P = 419.954647 Days, E = 378.999584 Days

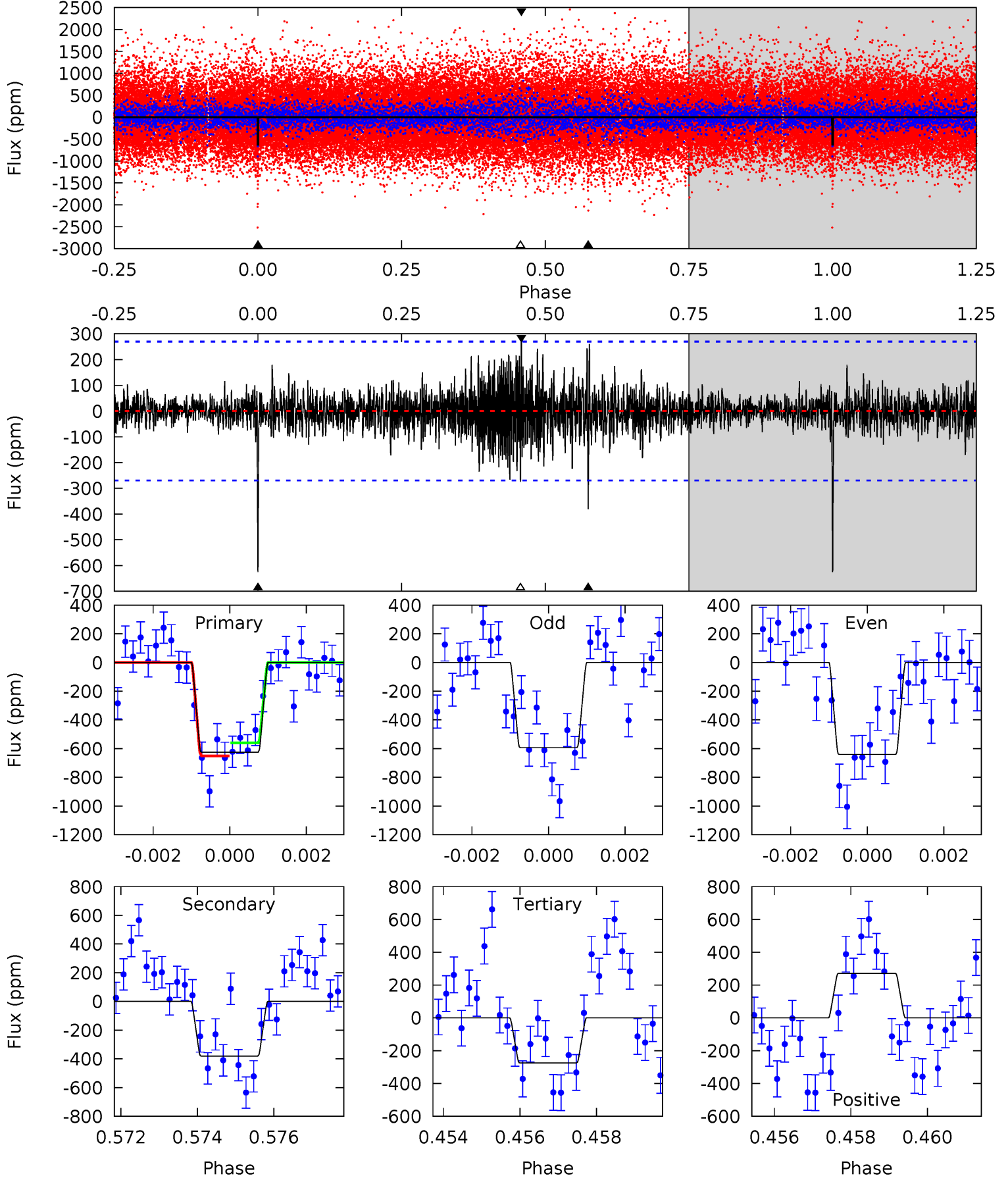
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	11.6	8.22	11.4	5.34	3.11	2.22	3.95	0.73	3.38	0.17	1.37	0.98	0.48	0.80



Alt Model-Shift Uniqueness Test

005872552-01, P = 420.018637 Days, E = 378.943115 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	7.56	5.46	5.39	5.34	3.12	1.27	6.95	7.01	2.10	2.17	0.44	1.05	0.30	0.91



Stellar Parameters For KIC 005872552

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6442^{+179}_{-246}	$4.388^{+0.054}_{-0.216}$	$0.070^{+0.250}_{-0.350}$	$1.183^{+0.396}_{-0.132}$	$1.250^{+0.167}_{-0.201}$	$1.062^{+0.319}_{-0.584}$
	+3%/-4%	+1%/-5%	+357%/-500%	+33%/-11%	+13%/-16%	+30%/-55%
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 005872552-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-599 ± 52	$4.09^{+2.89}_{-2.63}$	404^{+34}_{-21}	5814^{+5046}_{-1211}	$27116^{+188616}_{-17779}$
Alt.	-381 ± 50	$4.00^{+2.78}_{-2.47}$	404^{+31}_{-19}	5231^{+3639}_{-995}	$17354^{+103016}_{-11194}$

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 $A_{obs} \gg 1.0$

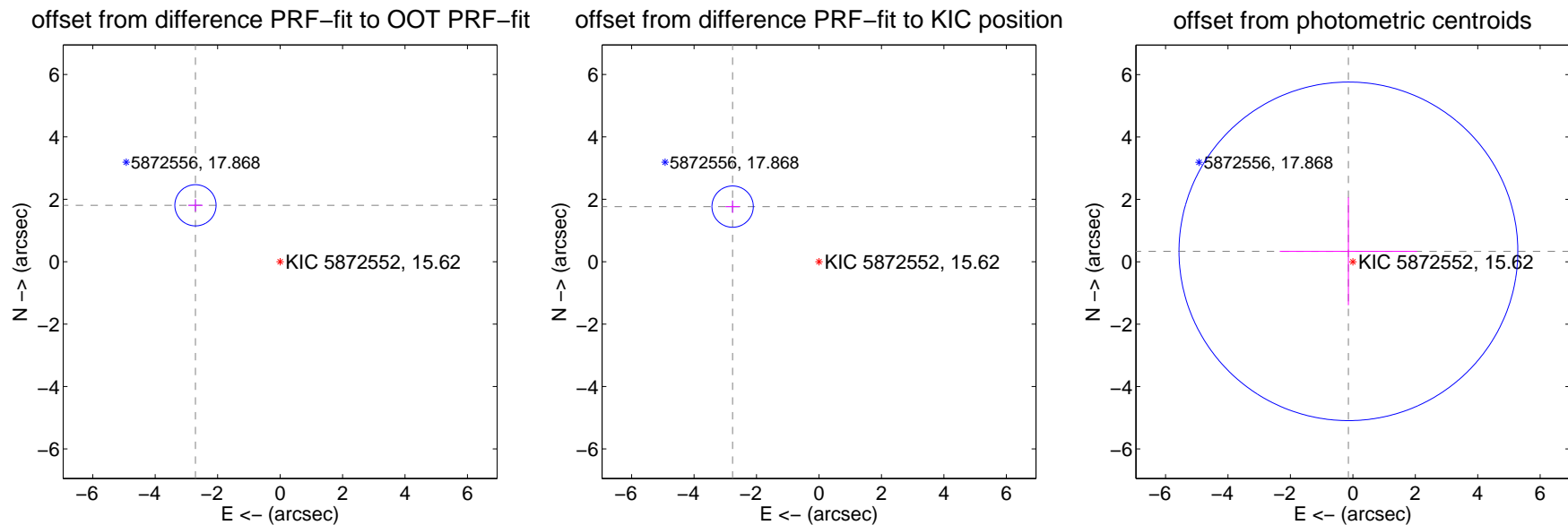
DV Centroid Data

Supplemental centroid analysis for 005872552-01. Kepler magnitude: 15.62. Transit SNR 8.36

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.259 ± 0.220	14.80	2.711 ± 0.230	1.808 ± 0.197
PRF-fit source offset from KIC position	3.282 ± 0.221	14.87	2.766 ± 0.230	1.766 ± 0.197
photometric centroid source offset	0.36 ± 1.81	0.20	0.14 ± 2.20	0.33 ± 1.73



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.

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



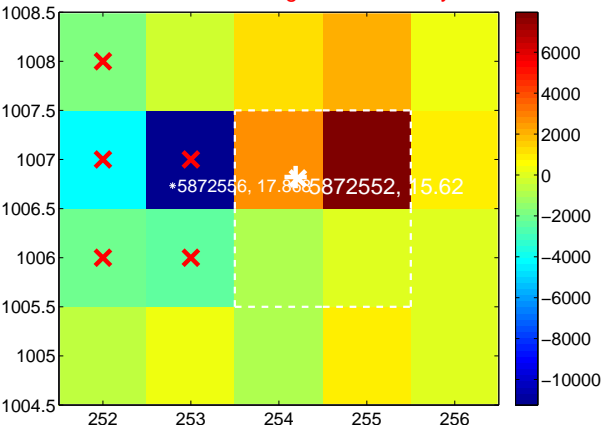
Q3 no difference image



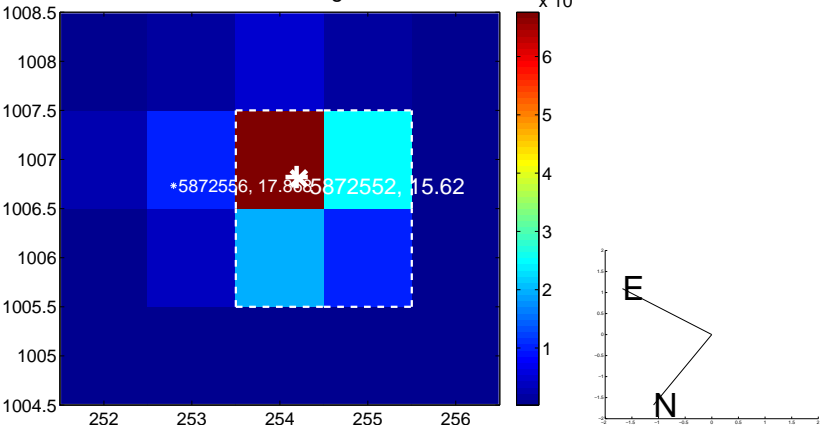
Q3 no OOT image



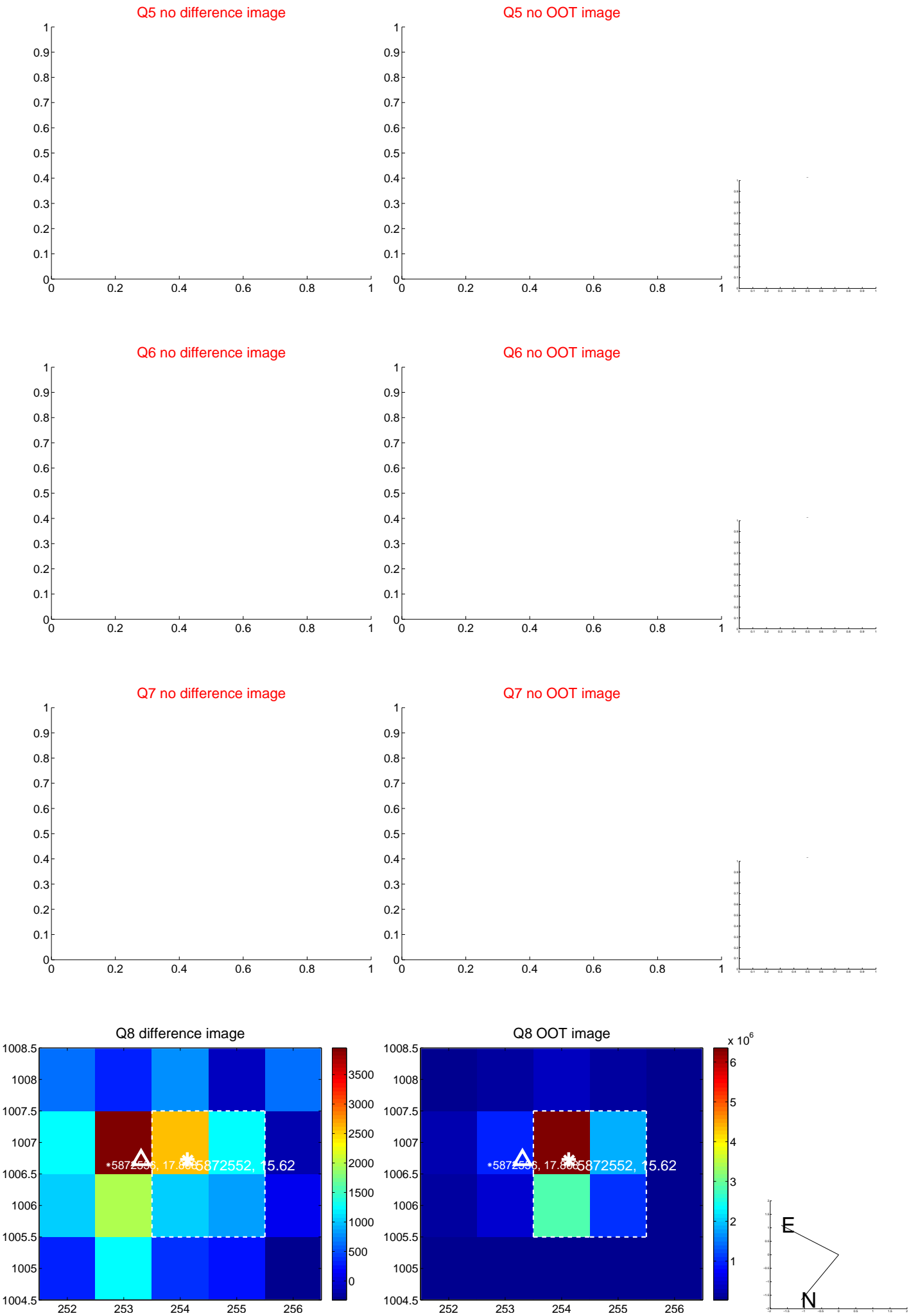
Q4 difference image. Poor Quality



Q4 OOT image



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



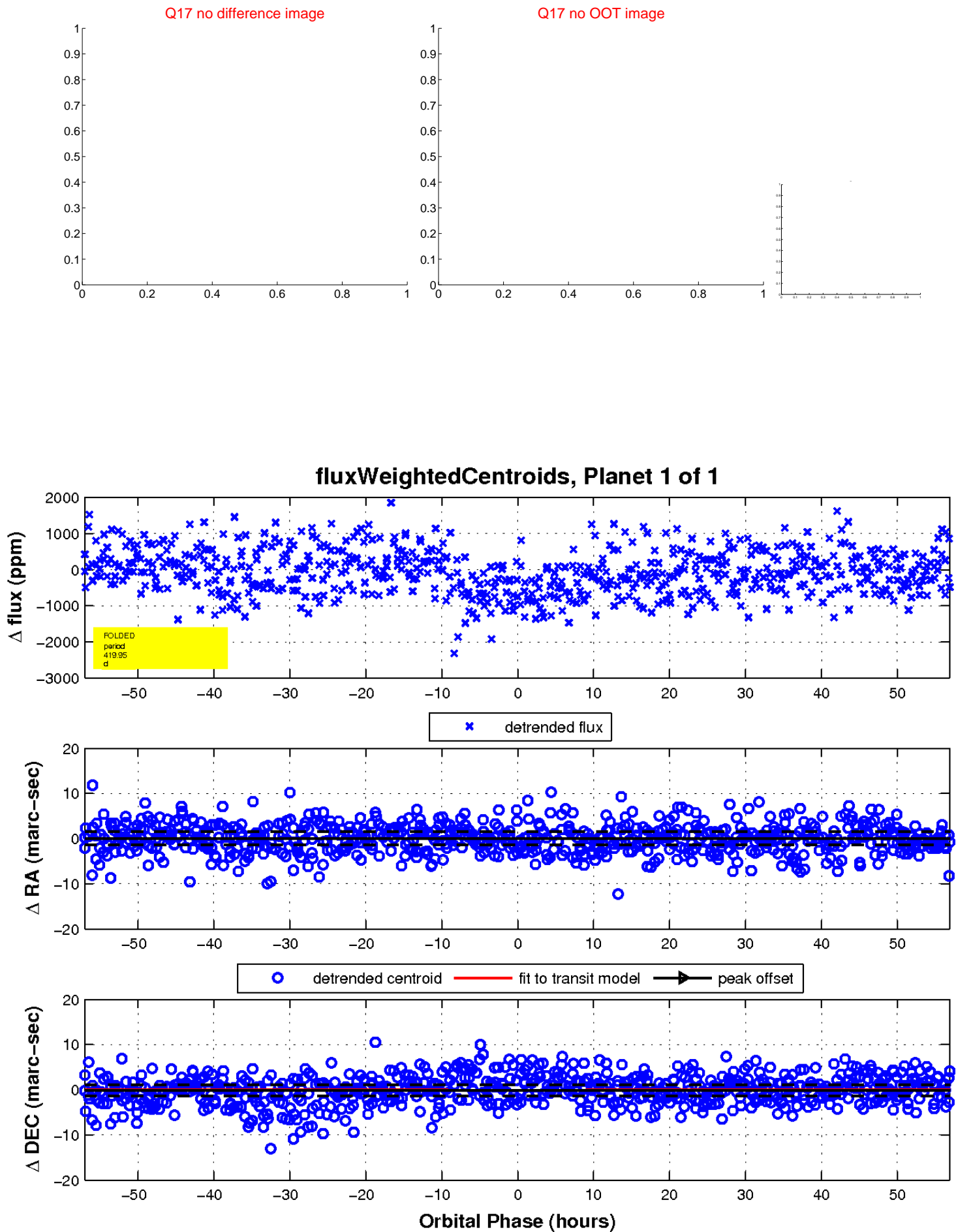
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

