

KIC 008672566

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})
008672566-01	OBS	No	553.543058	421.521775	610.9	8.012	8.3	8.1	1.20	5566	3.17	0.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008672566-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_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.

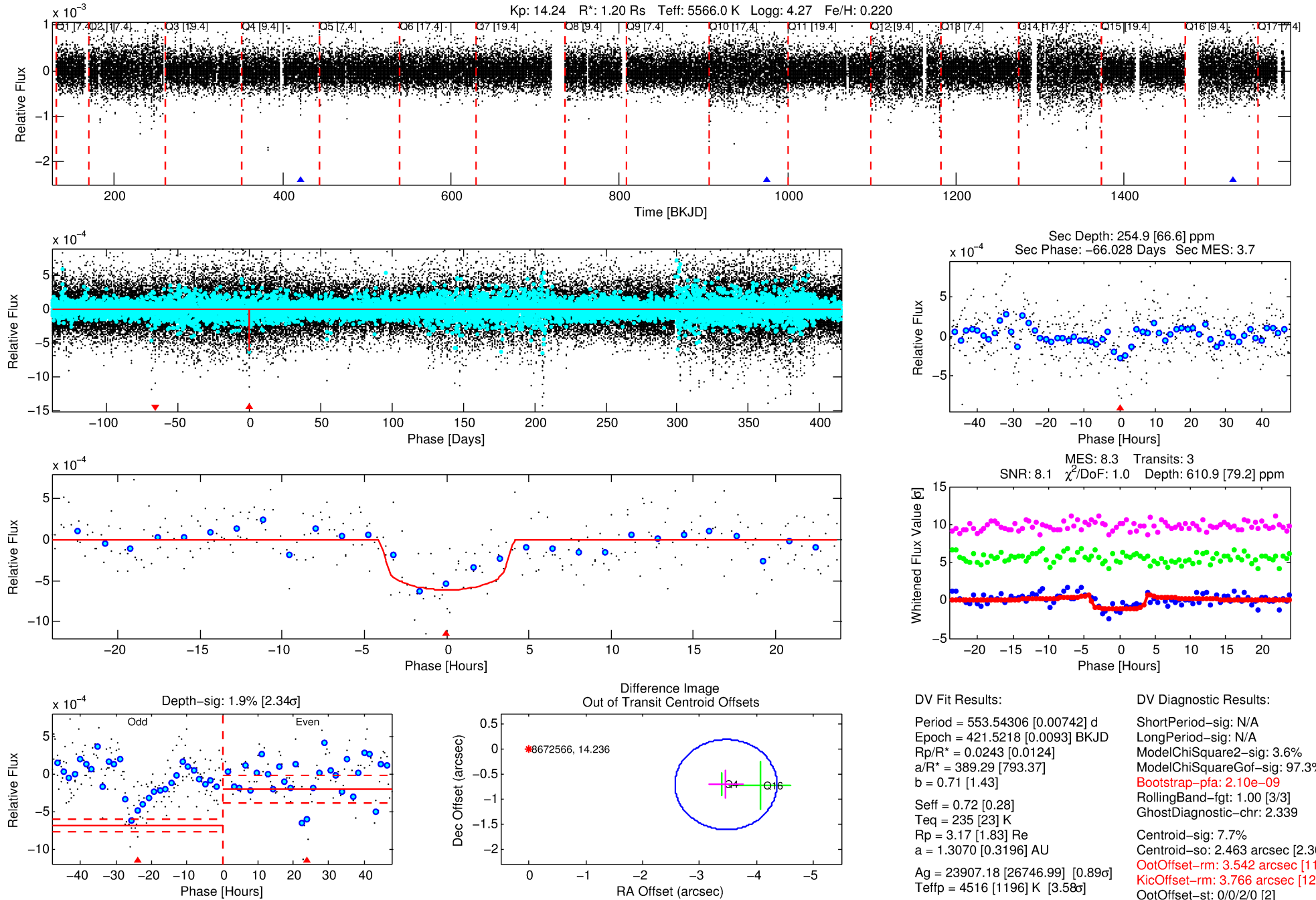
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008672566-01

No Significant Match Found

DV One-Page Summary

KIC: 8672566 Candidate: 1 of 1 Period: 553.543 d



DV Fit Results:

Period = 553.54306 [0.00742] d
 Epoch = 421.5218 [0.0093] BKJD
 Rp/R* = 0.0243 [0.0124]
 a/R* = 389.29 [793.37]
 b = 0.71 [1.43]
 Seff = 0.72 [0.28]
 Teq = 235 [23] K
 Rp = 3.17 [1.83] Re
 a = 1.3070 [0.3196] AU
 Ag = 23907.18 [26746.99] [0.89σ]
 Teffp = 4516 [1196] K [3.58σ]

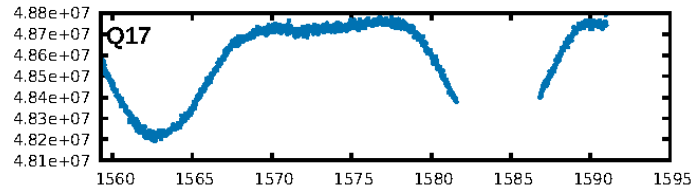
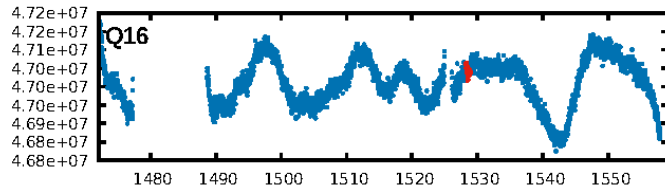
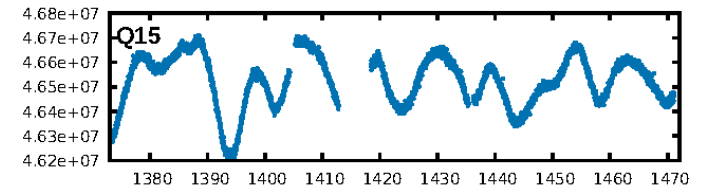
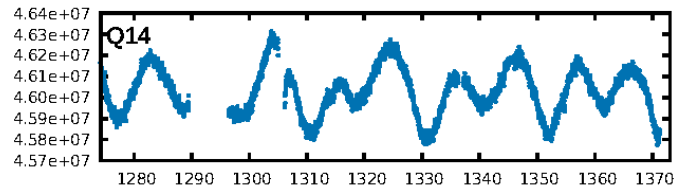
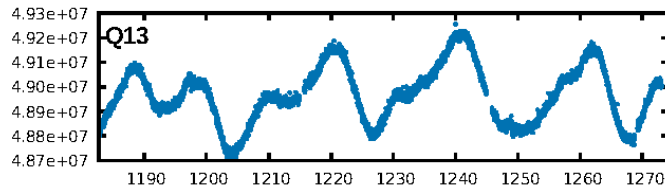
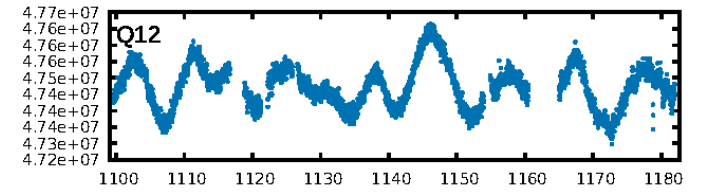
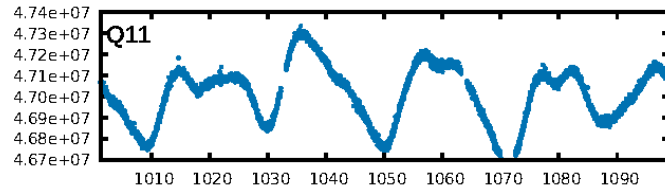
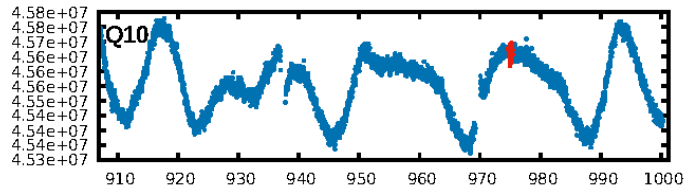
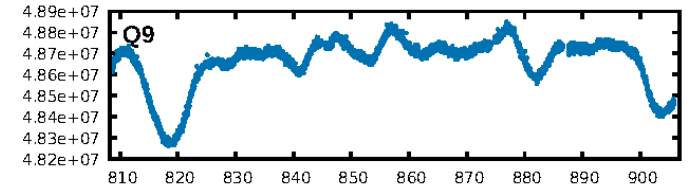
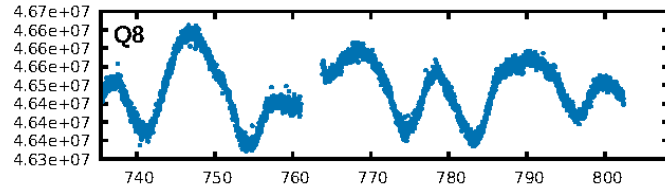
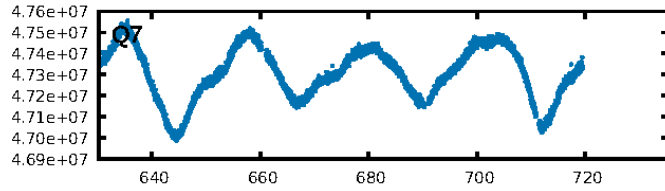
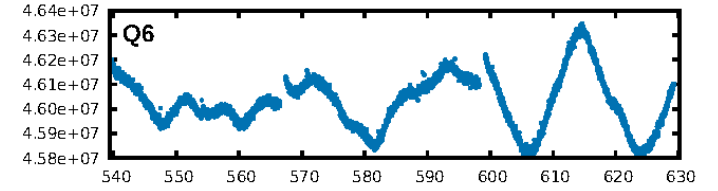
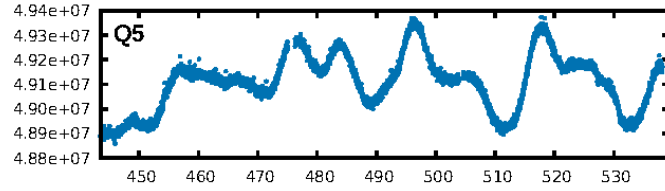
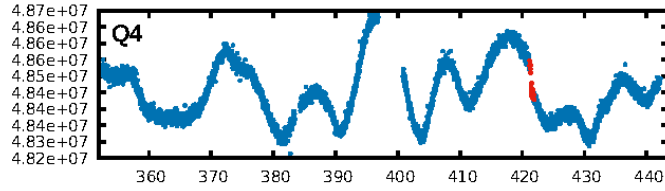
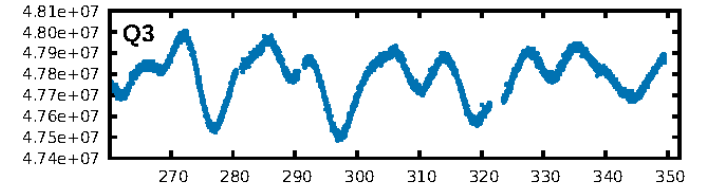
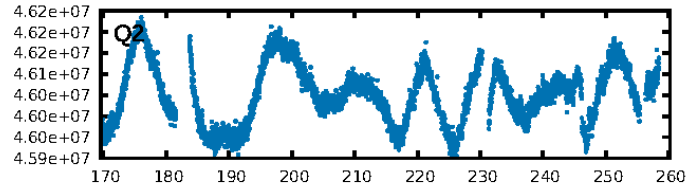
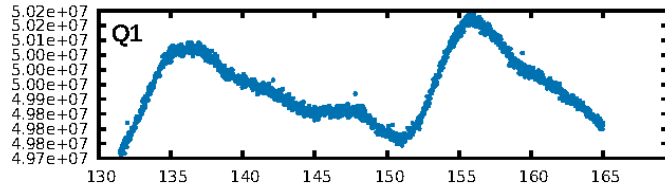
DV Diagnostic Results:

ShortPeriod-sig: N/A
 LongPeriod-sig: N/A
 ModelChiSquare2-sig: 3.6%
 ModelChiSquareGof-sig: 97.3%
 Bootstrap-pfa: 2.10e-09
 RollingBand-fgt: 1.00 [3/3]
 GhostDiagnostic-chr: 2.339
 Centroid-sig: 7.7%
 Centroid-so: 2.463 arcsec [2.30σ]
 OotOffset-rm: 3.542 arcsec [11.83σ]
 KicOffset-rm: 3.766 arcsec [12.05σ]
 OotOffset-st: 0/0/2/0 [2]
 KicOffset-st: 0/0/2/0 [2]
 DiffImageQuality-fgm: 0.50 [1/2]
 DiffImageOverlap-fno: 1.00 [3/3]

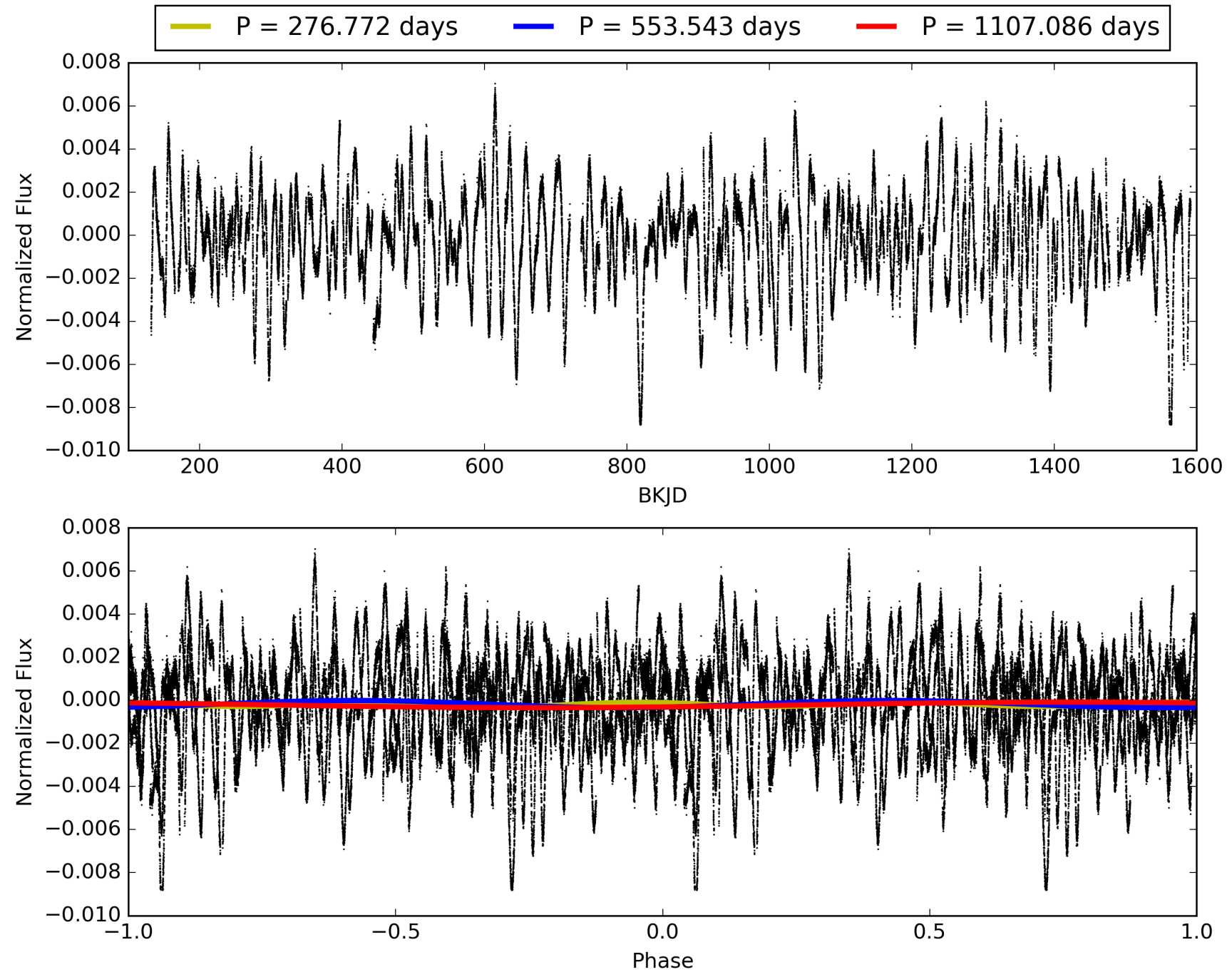
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:23:55 Z

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

TCE 008672566-01, PDC Light Curves

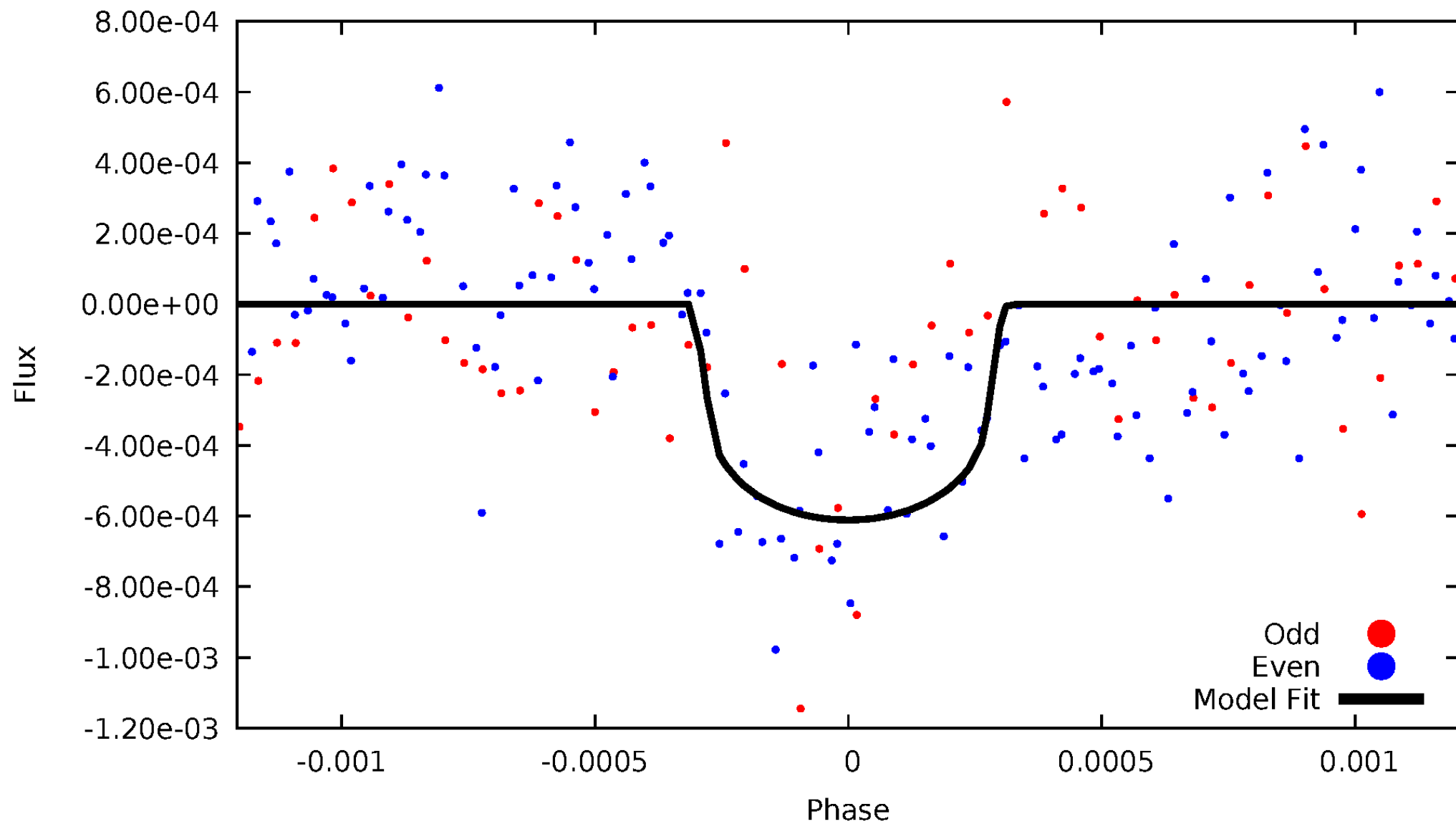


TCE 008672566-01



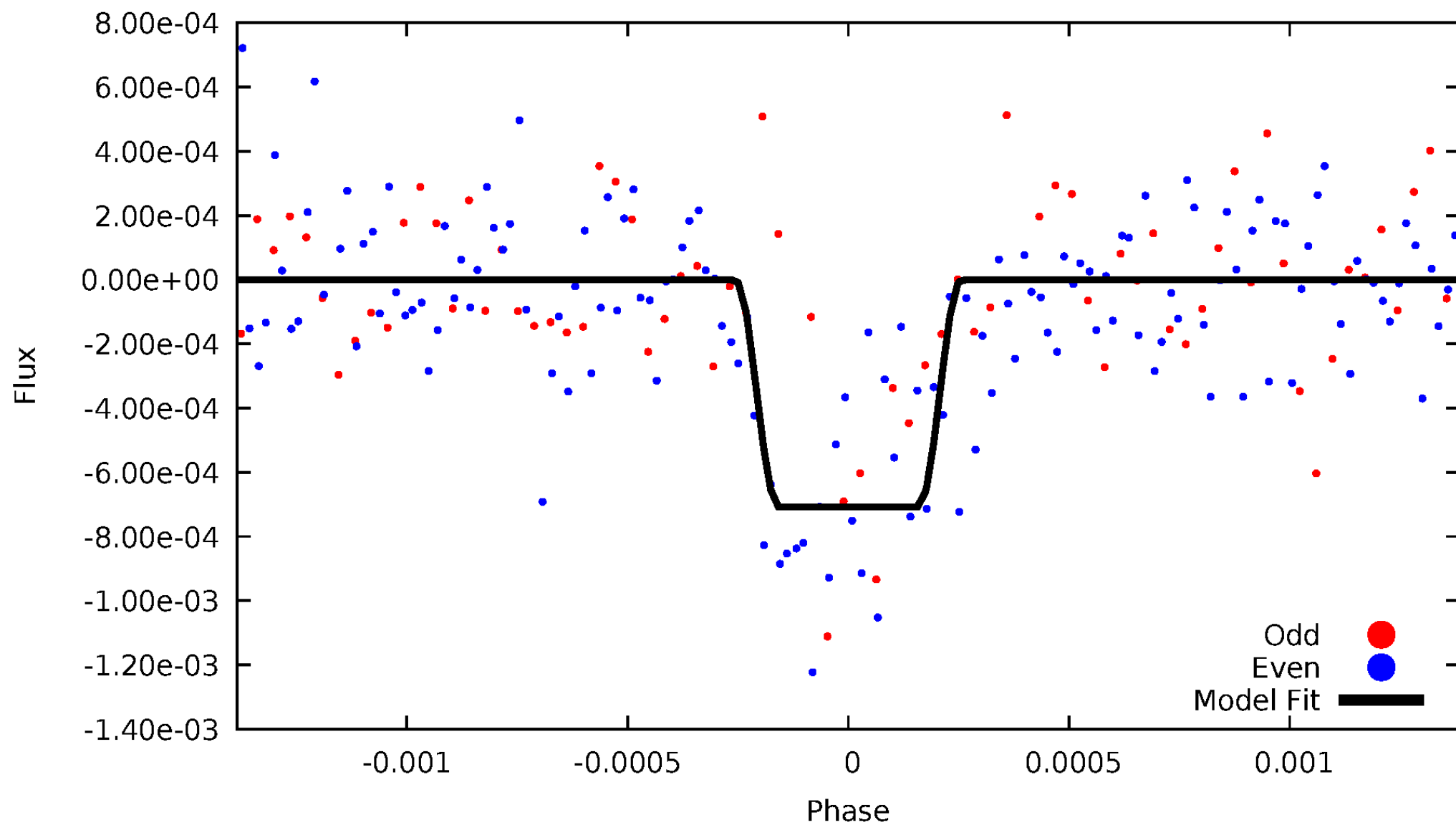
DV Odd/Even

TCE 008672566-01



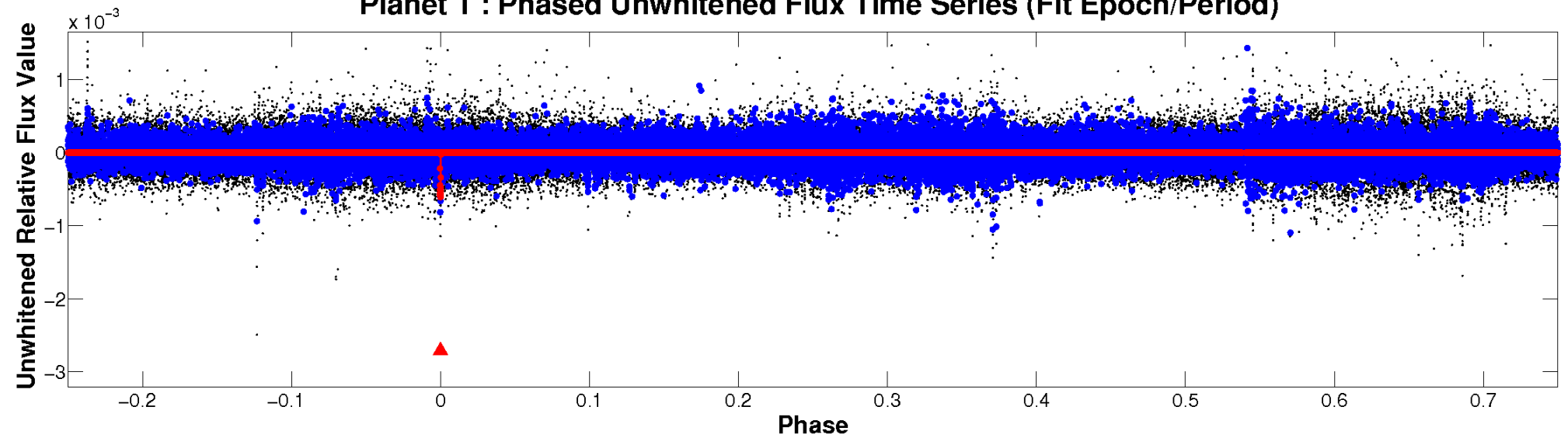
ALT Odd/Even

TCE 008672566-01

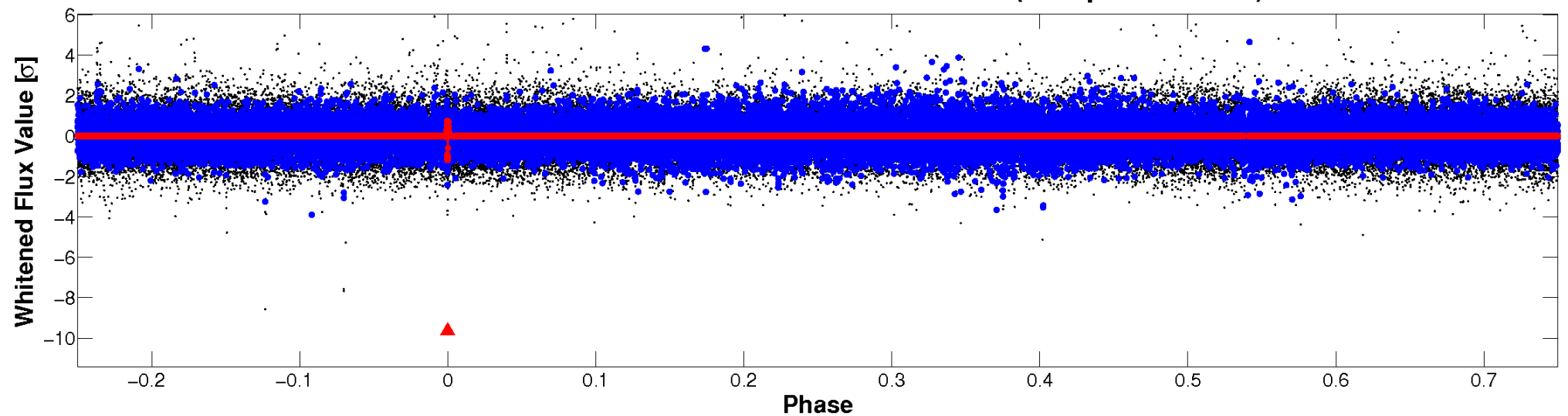


Non-Whitened Vs. Whitened Light Curve

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

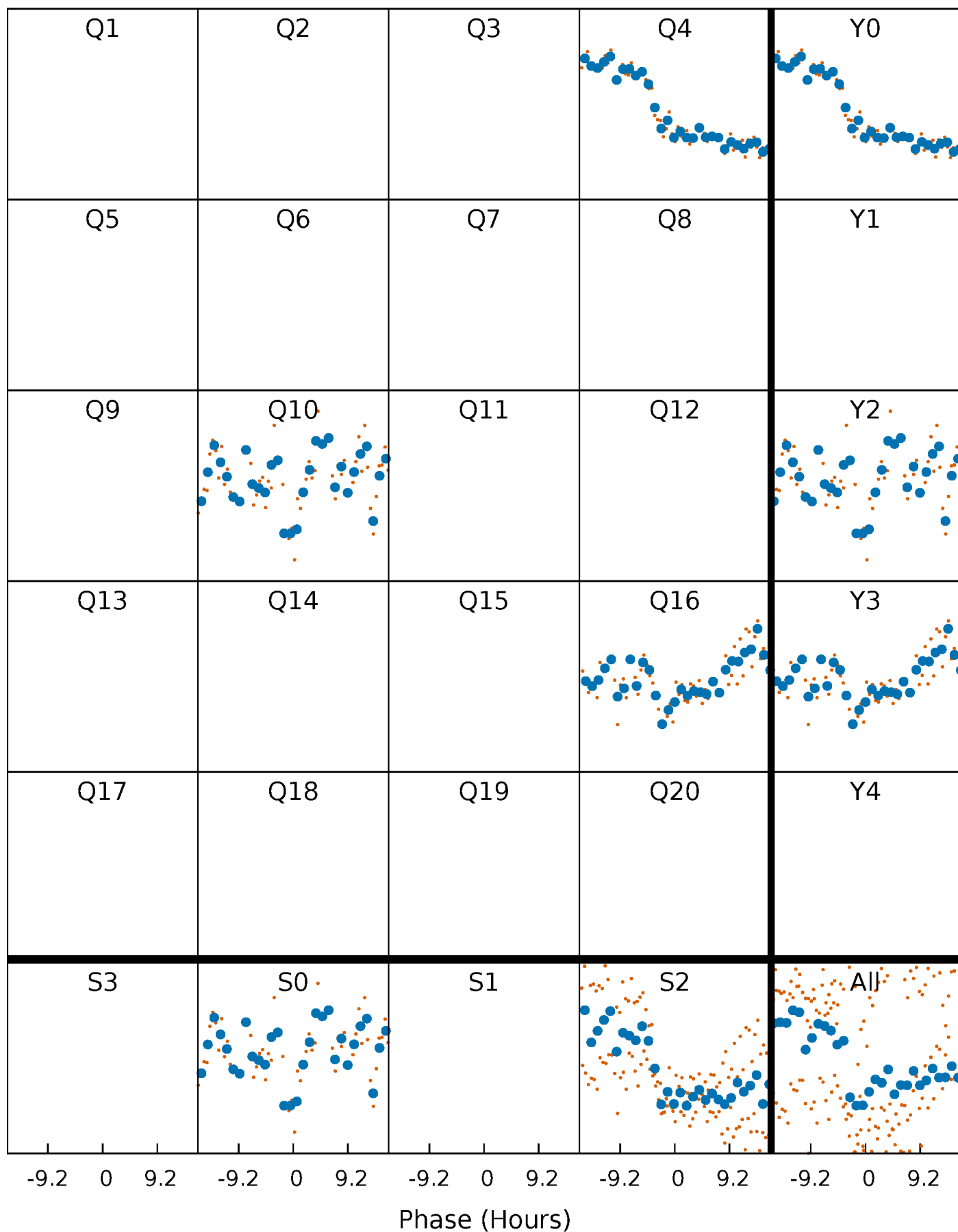


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



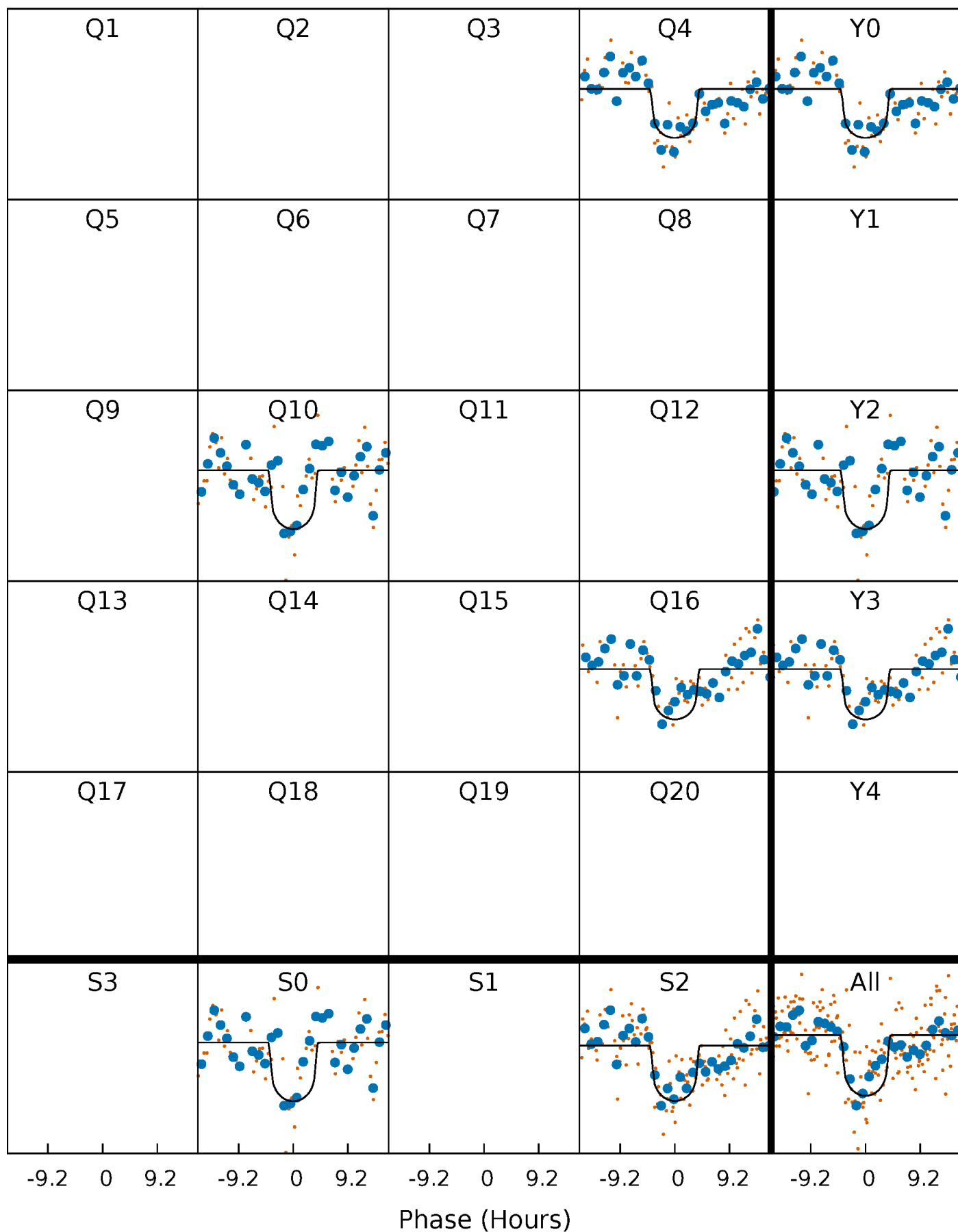
PDC Quarter-Phased Transit Curves

TCE 008672566-01 P=553.543058 Days $T_0=421.521775$ (BKJD)



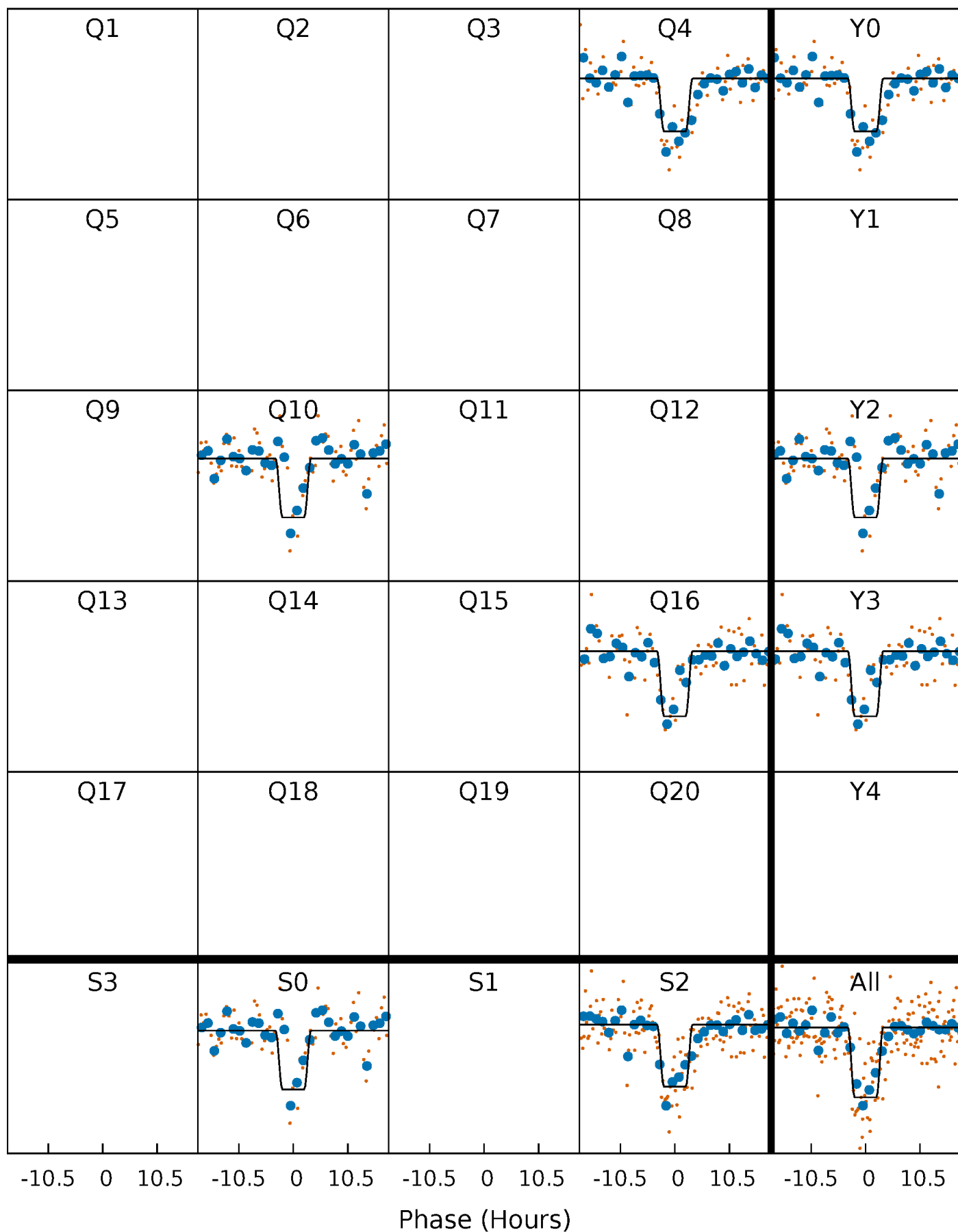
DV Quarter-Phased Transit Curves

TCE 008672566-01 P=553.543058 Days $T_0=421.521775$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

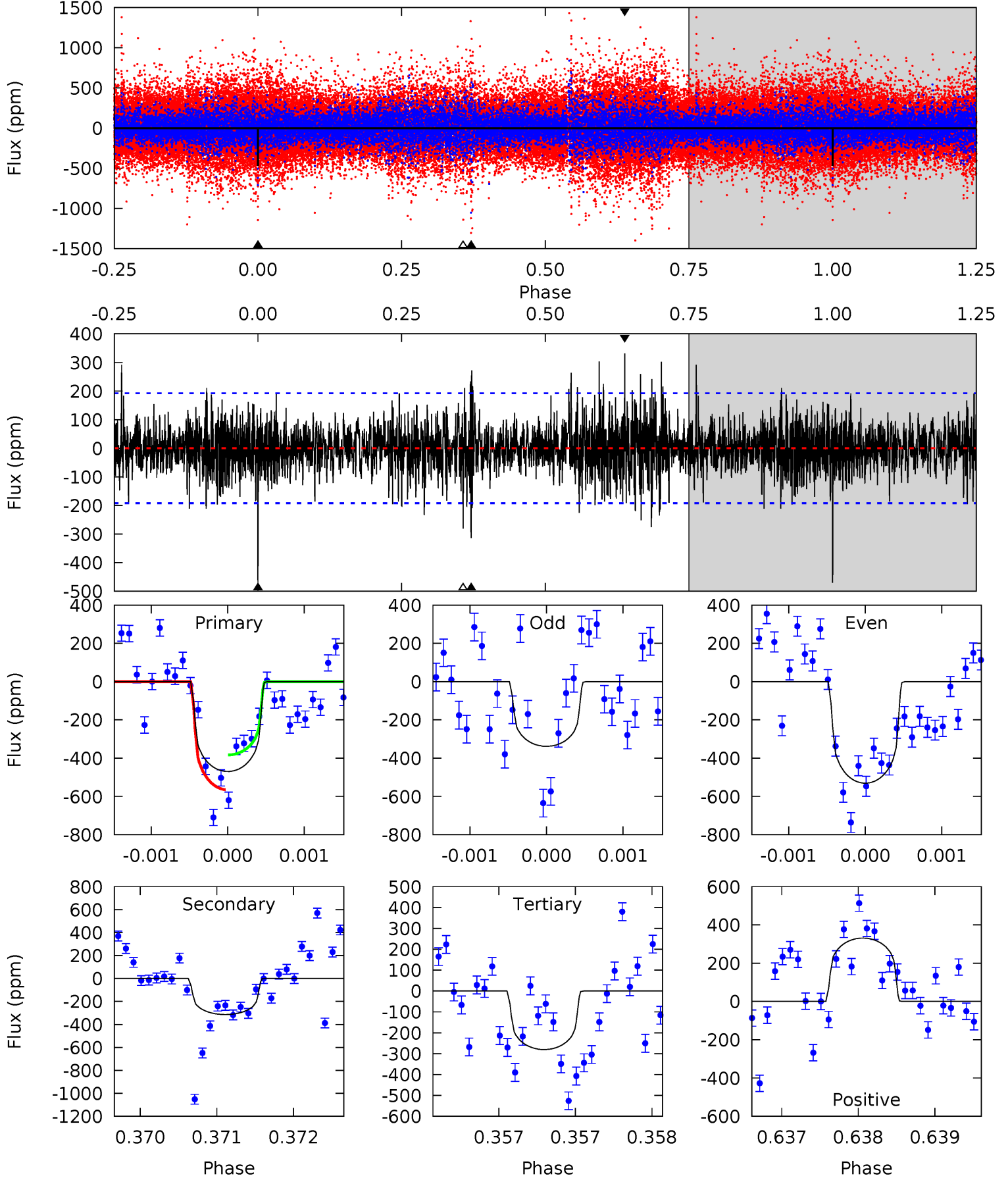
TCE 008672566-01 P=553.551952 Days $T_0=421.487018$ (BKJD)



DV Model-Shift Uniqueness Test

008672566-01, P = 553.543058 Days, E = 421.521775 Days

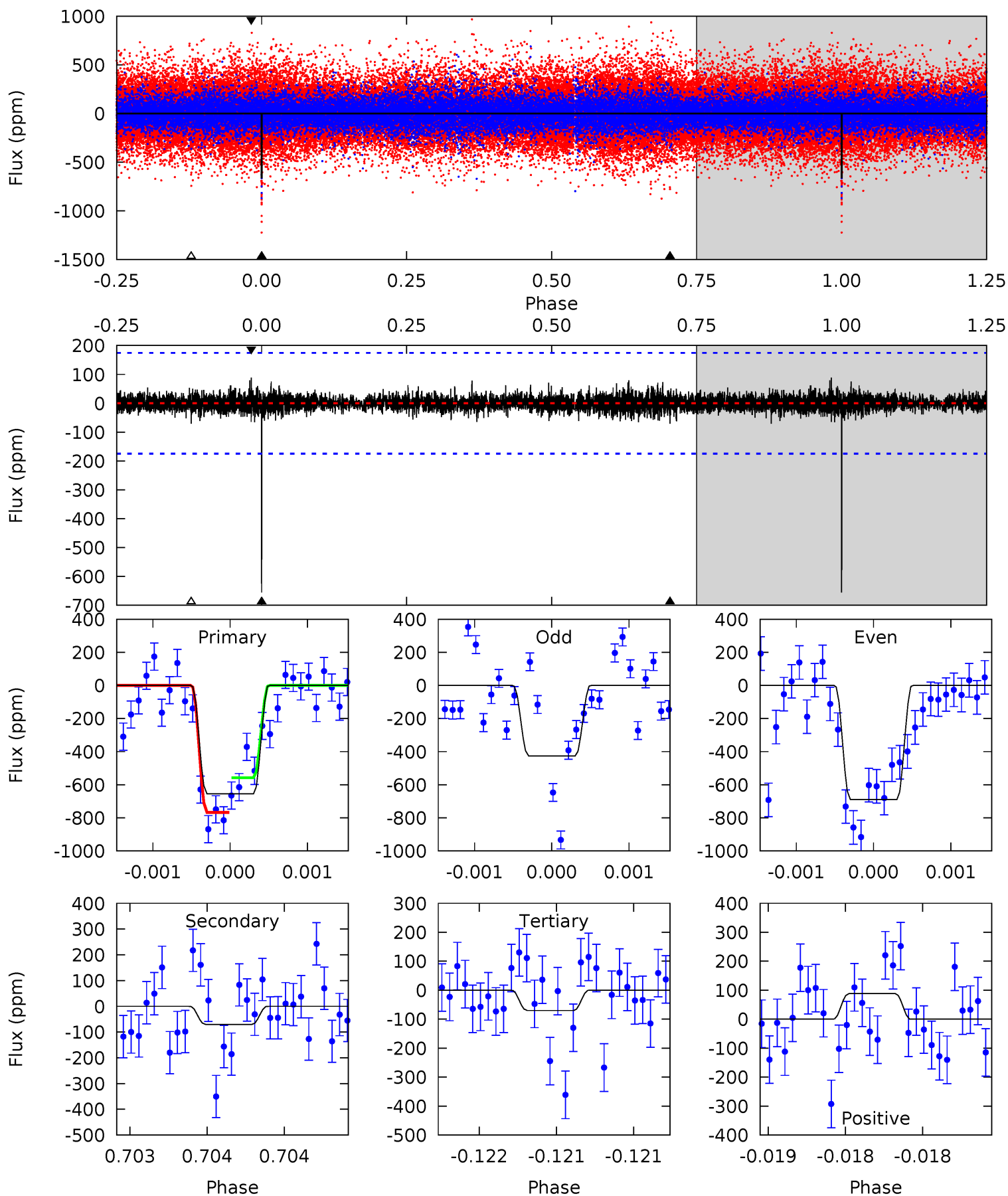
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	9.04	8.07	9.53	5.53	3.41	1.86	5.44	3.98	0.97	-0.49	2.57	1.10	0.41	2.61



Alt Model-Shift Uniqueness Test

008672566-01, P = 553.551952 Days, E = 421.487018 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.9	2.24	2.23	2.81	5.57	3.47	0.53	18.7	18.1	0.00	-0.57	4.01	1.13	0.12	3.34



Stellar Parameters For KIC 008672566

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5566^{+150}_{-150}	$4.270^{+0.214}_{-0.175}$	$0.220^{+0.200}_{-0.250}$	$1.196^{+0.325}_{-0.266}$	$0.970^{+0.104}_{-0.085}$	$0.799^{+0.816}_{-0.380}$
	+3%/-3%	+5%/-4%	+91%/-114%	+27%/-22%	+11%/-9%	+102%/-47%
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 008672566-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-314 ± 35	$3.18^{+1.82}_{-1.45}$	329^{+24}_{-24}	4825^{+1526}_{-710}	29331^{+69757}_{-17587}
Alt.	-70 ± 31	$3.46^{+1.77}_{-1.45}$	328^{+23}_{-23}	3533^{+733}_{-502}	5274^{+10375}_{-3502}

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

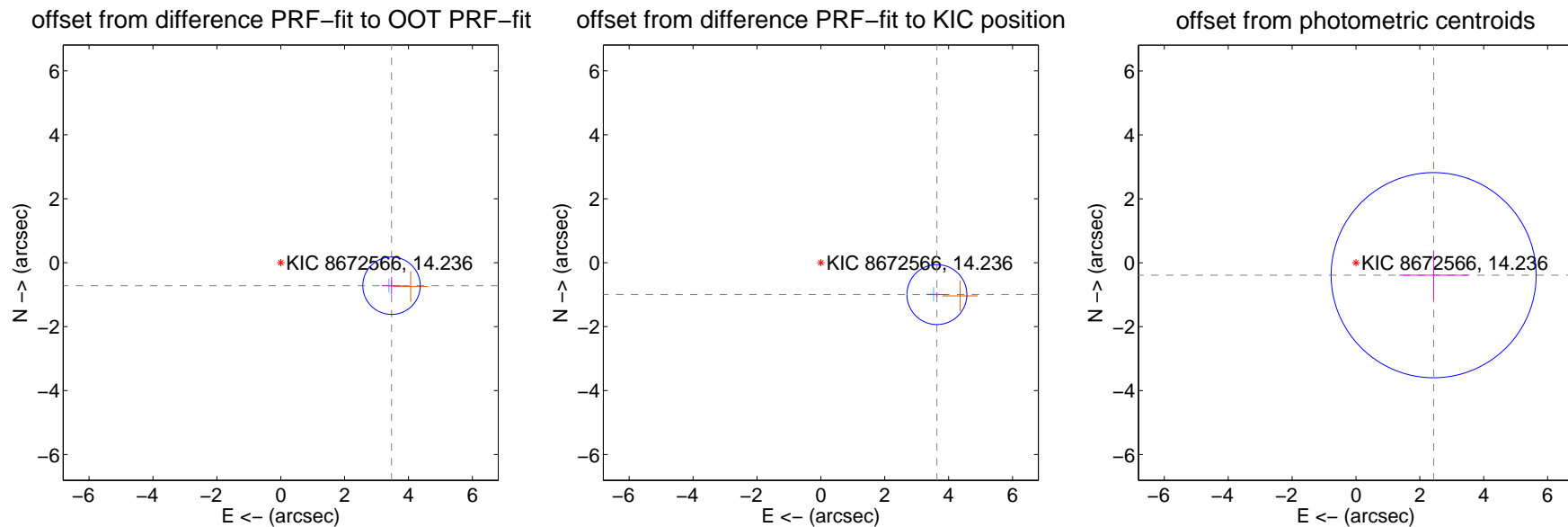
DV Centroid Data

Supplemental centroid analysis for 008672566-01. Kepler magnitude: 14.24. Transit SNR 8.11

There are 1 quarters with good PRF difference image offsets

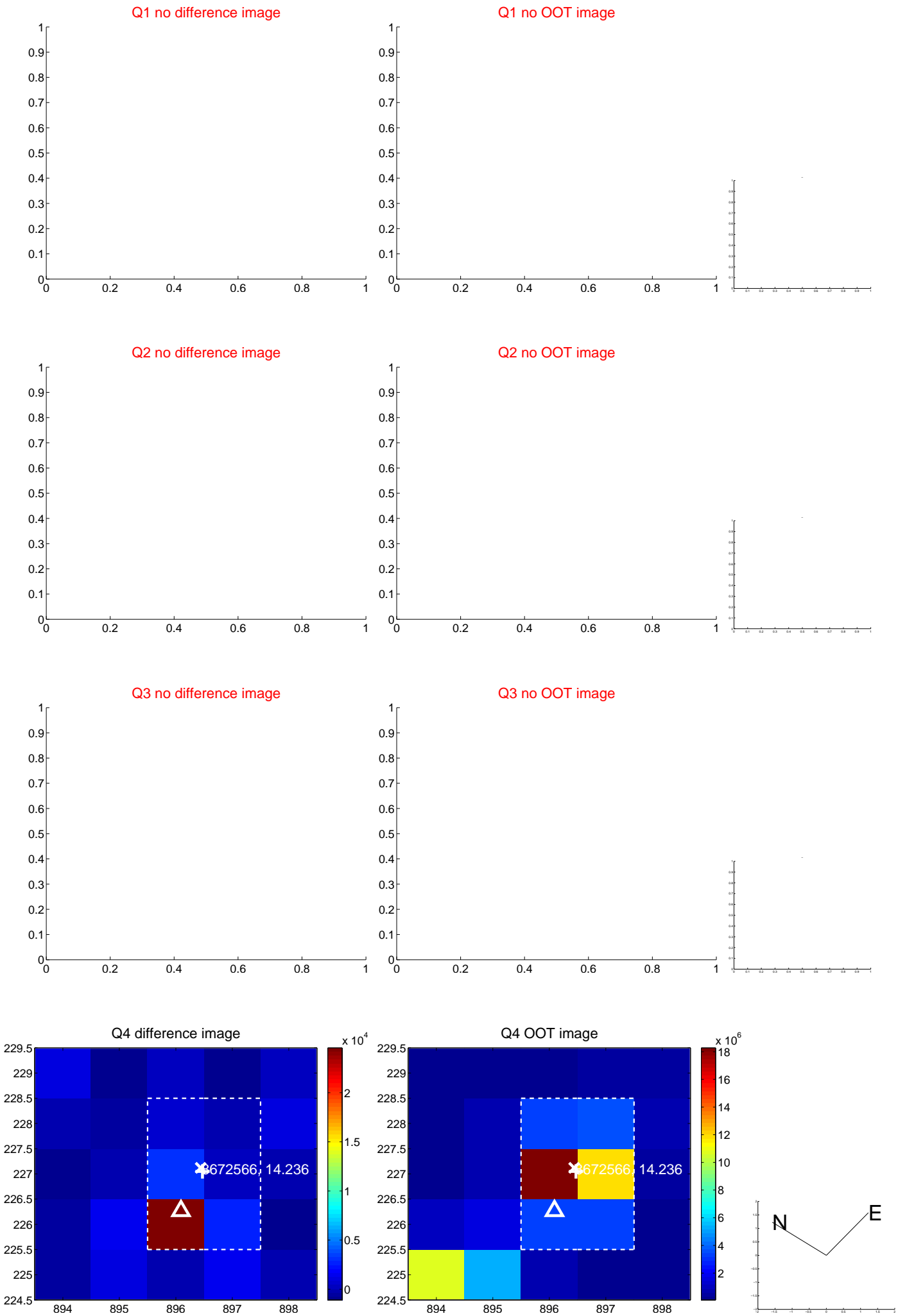
The direct PRF centroid is offset from the target star catalog position by about 0.41 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.542 ± 0.299	11.83	-3.468 ± 0.301	-0.720 ± 0.273
PRF-fit source offset from KIC position	3.766 ± 0.313	12.05	-3.632 ± 0.324	-0.997 ± 0.071
photometric centroid source offset	2.46 ± 1.07	2.30	-2.43 ± 1.08	-0.39 ± 0.77



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.

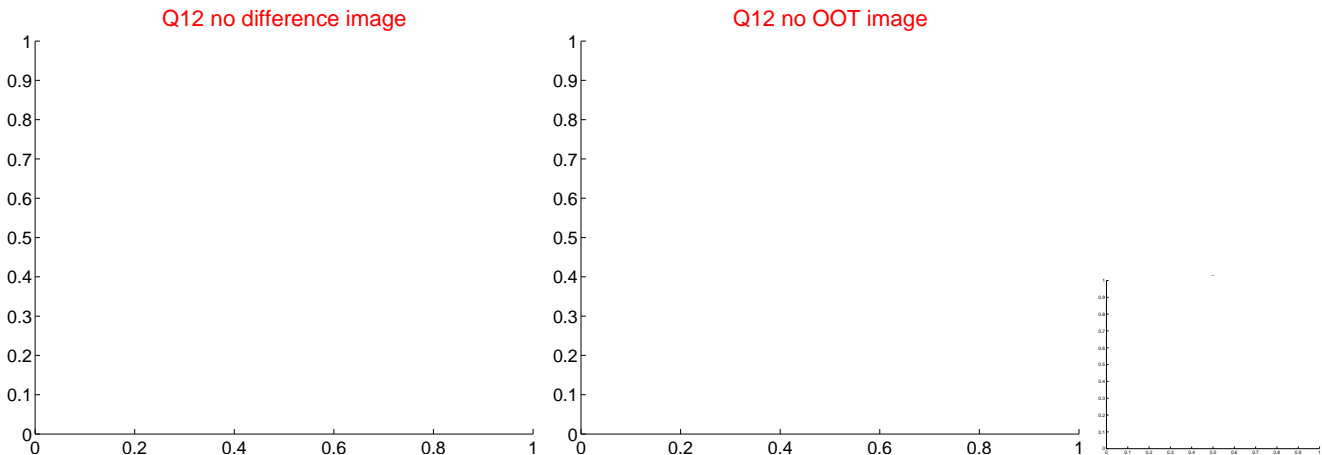
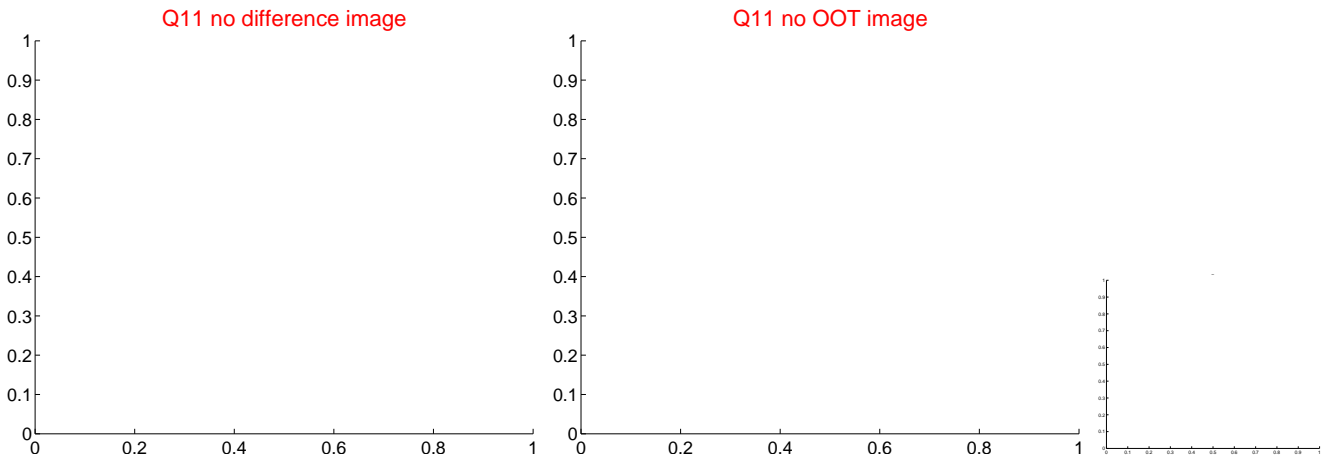
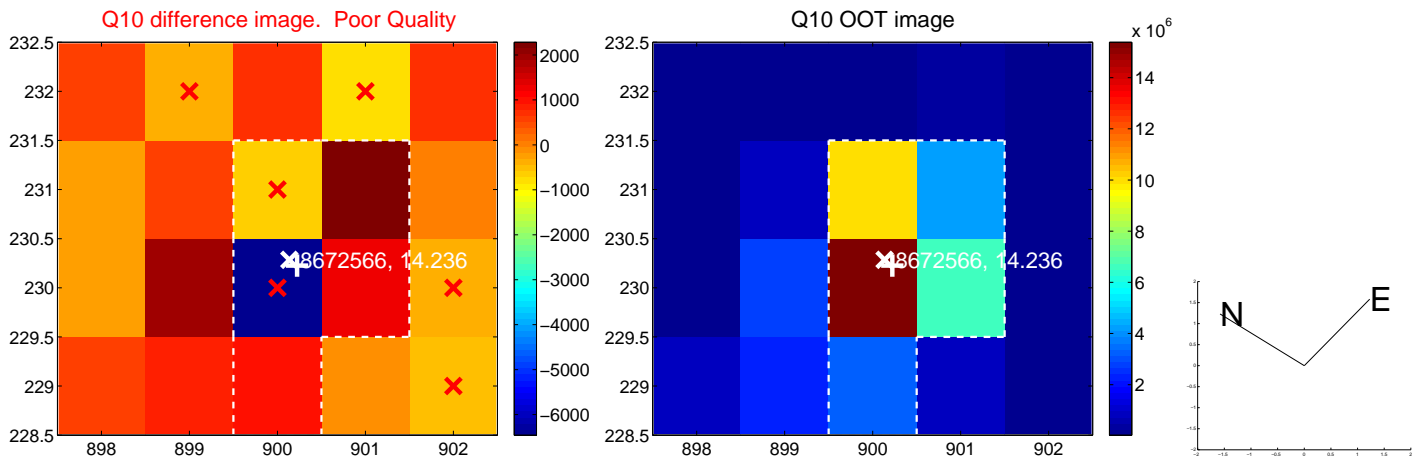
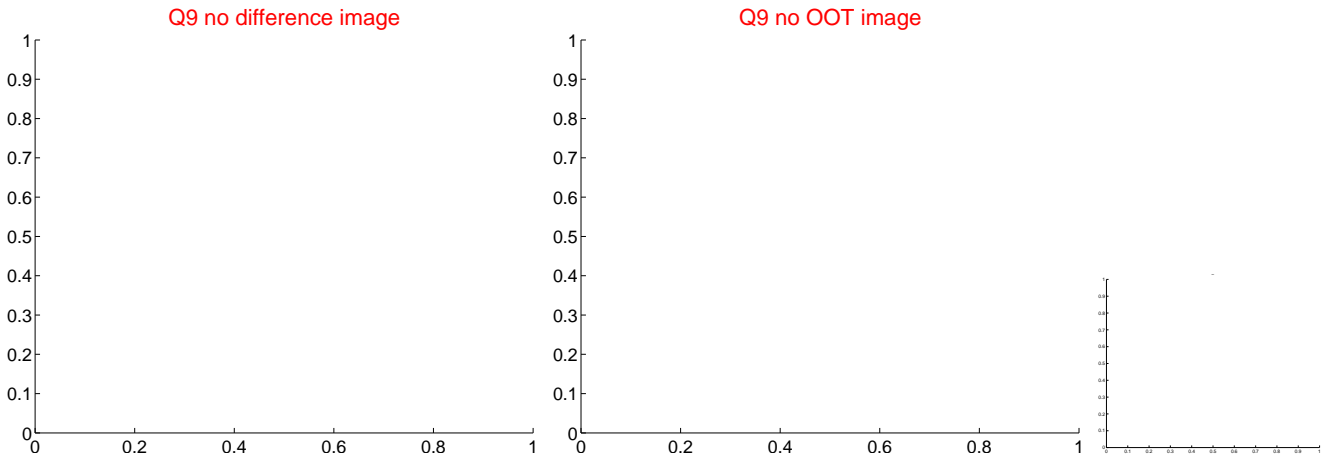
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



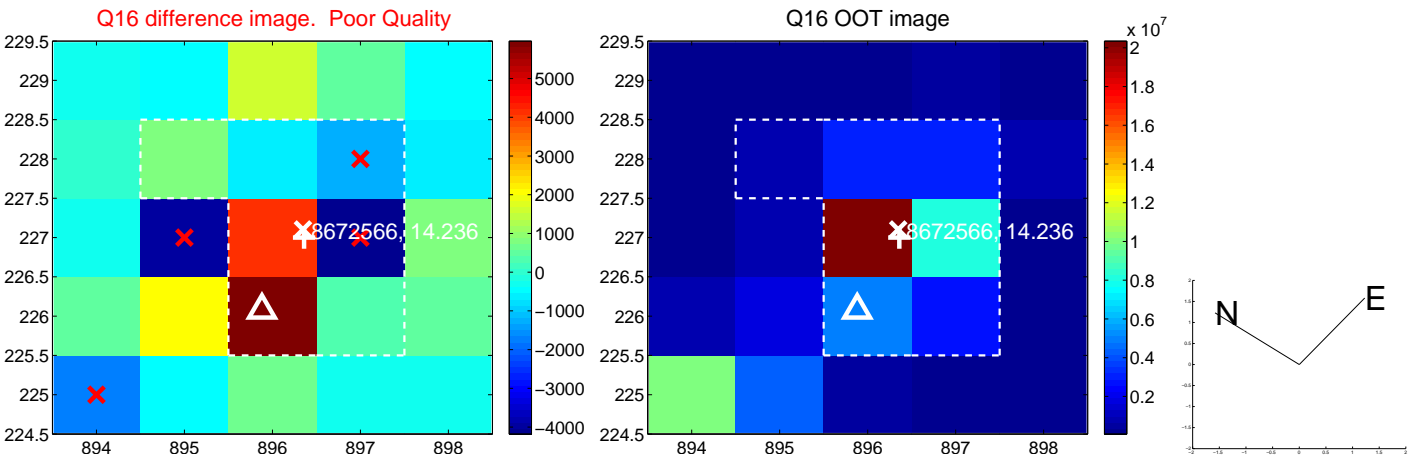
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



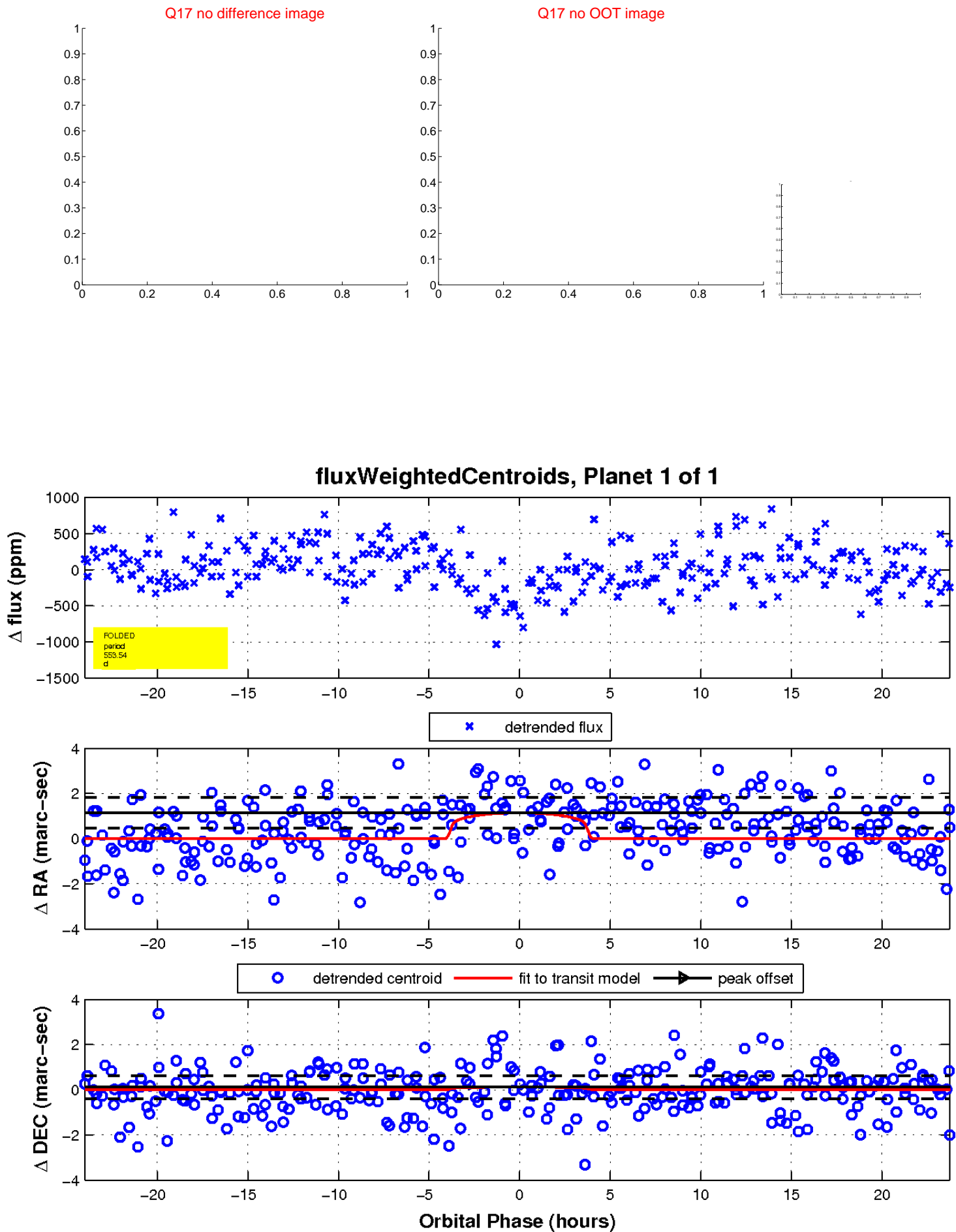
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

