

KIC 007670700

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})
007670700-01	OBS	No	515.238427	511.655770	421.1	9.117	8.5	3.3	0.31	3432	0.69	0.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007670700-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_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.

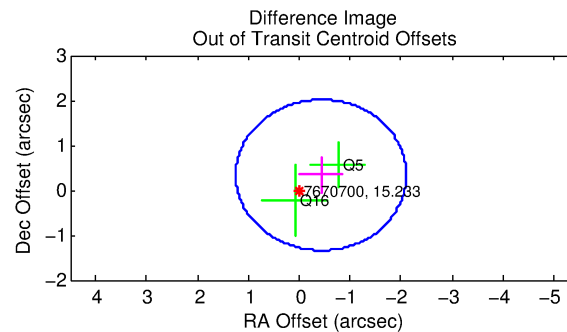
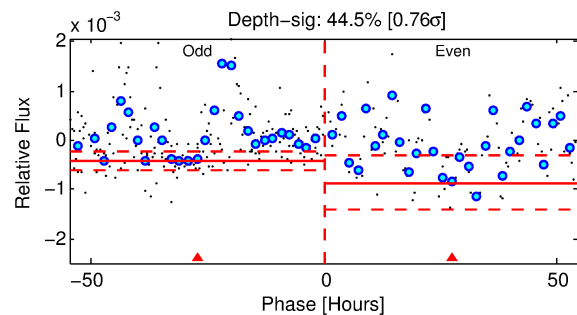
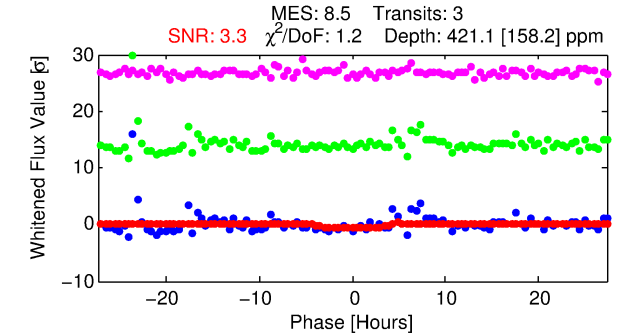
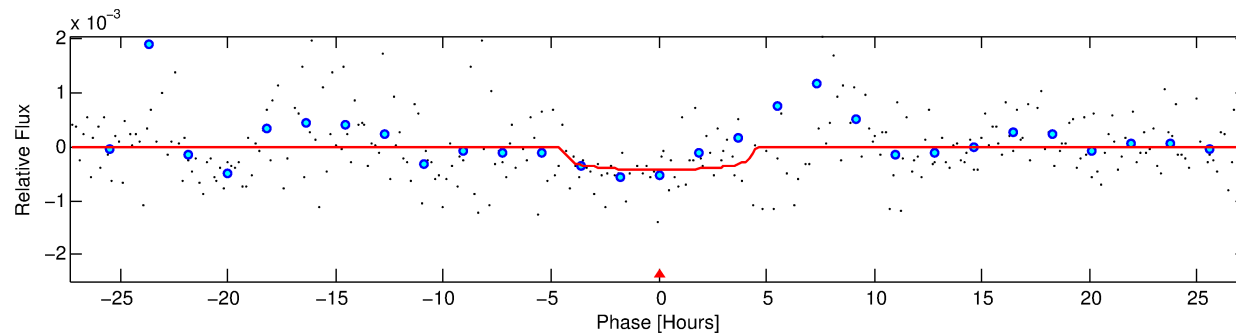
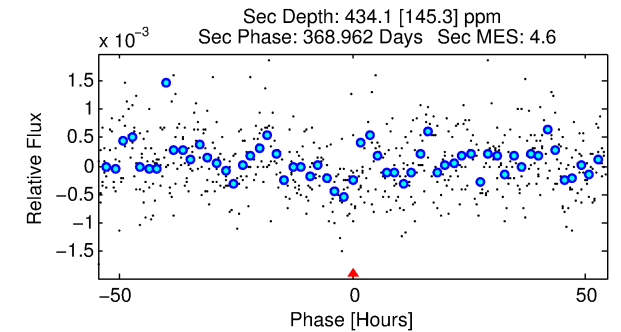
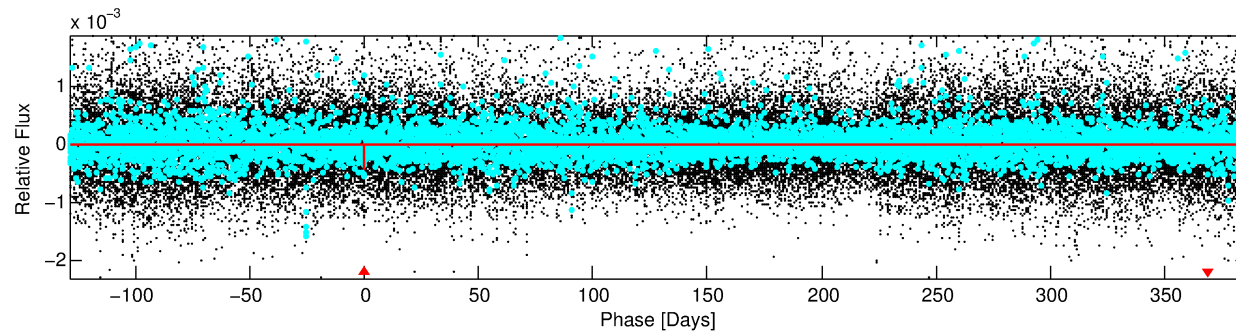
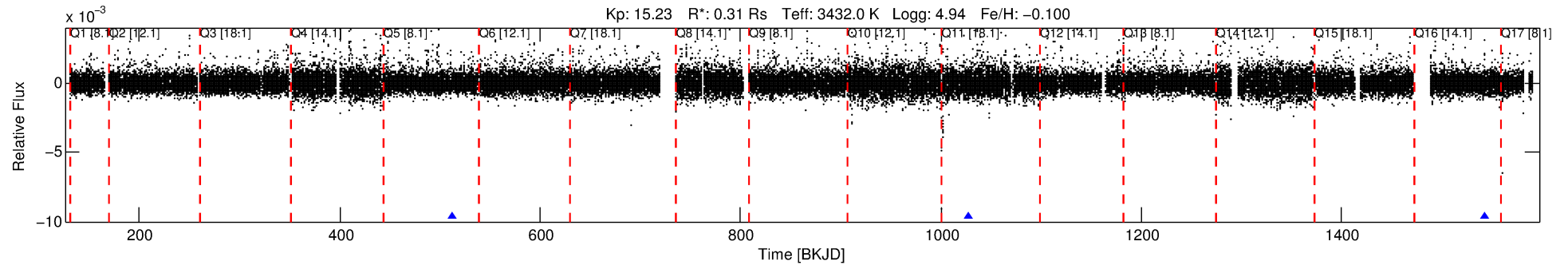
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007670700-01

No Significant Match Found

DV One-Page Summary

KIC: 7670700 Candidate: 1 of 1 Period: 515.238 d



DV Fit Results:

Period = 515.23843 [0.02177] d
Epoch = 511.6558 [0.0257] BKJD
Rp/R* = 0.0201 [0.0233]
a/R* = 312.63 [1528.87]
b = 0.72 [3.31]
Seff = 0.02 [0.00]
Teq = 92 [3] K
Rp = 0.69 [0.80] Re
a = 0.8524 [0.0679] AU
Ag = 364215.77 [850708.70] [0.43 σ]
Teffp = 3490 [2037] K [1.67 σ]

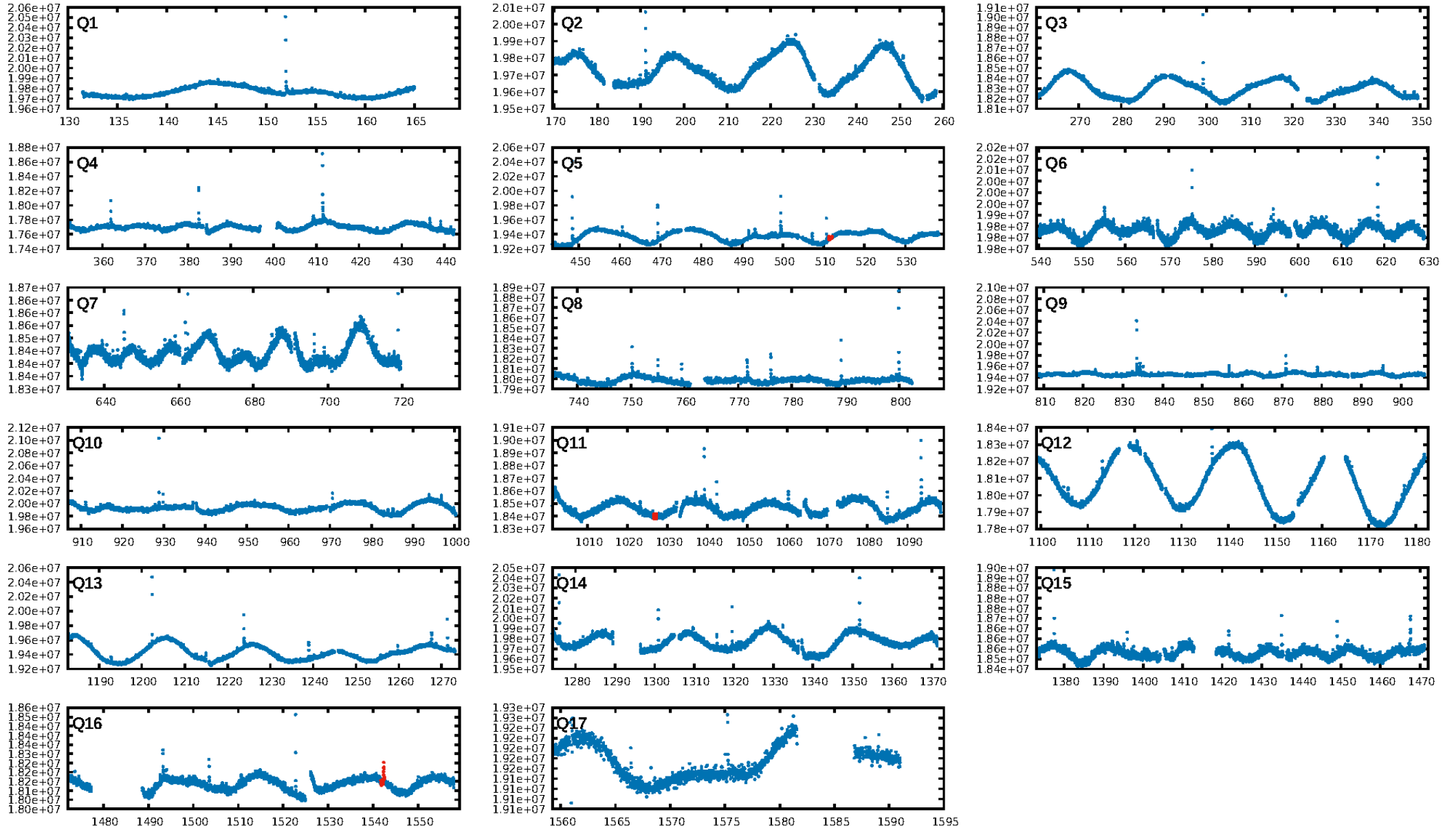
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 32.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.11e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.5332
Centroid-sig: 3.2%
Centroid-so: 3.665 arcsec [1.97 σ]
OotOffset-rm: 0.546 arcsec [0.98 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-rm: 1.007 arcsec [2.16 σ]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

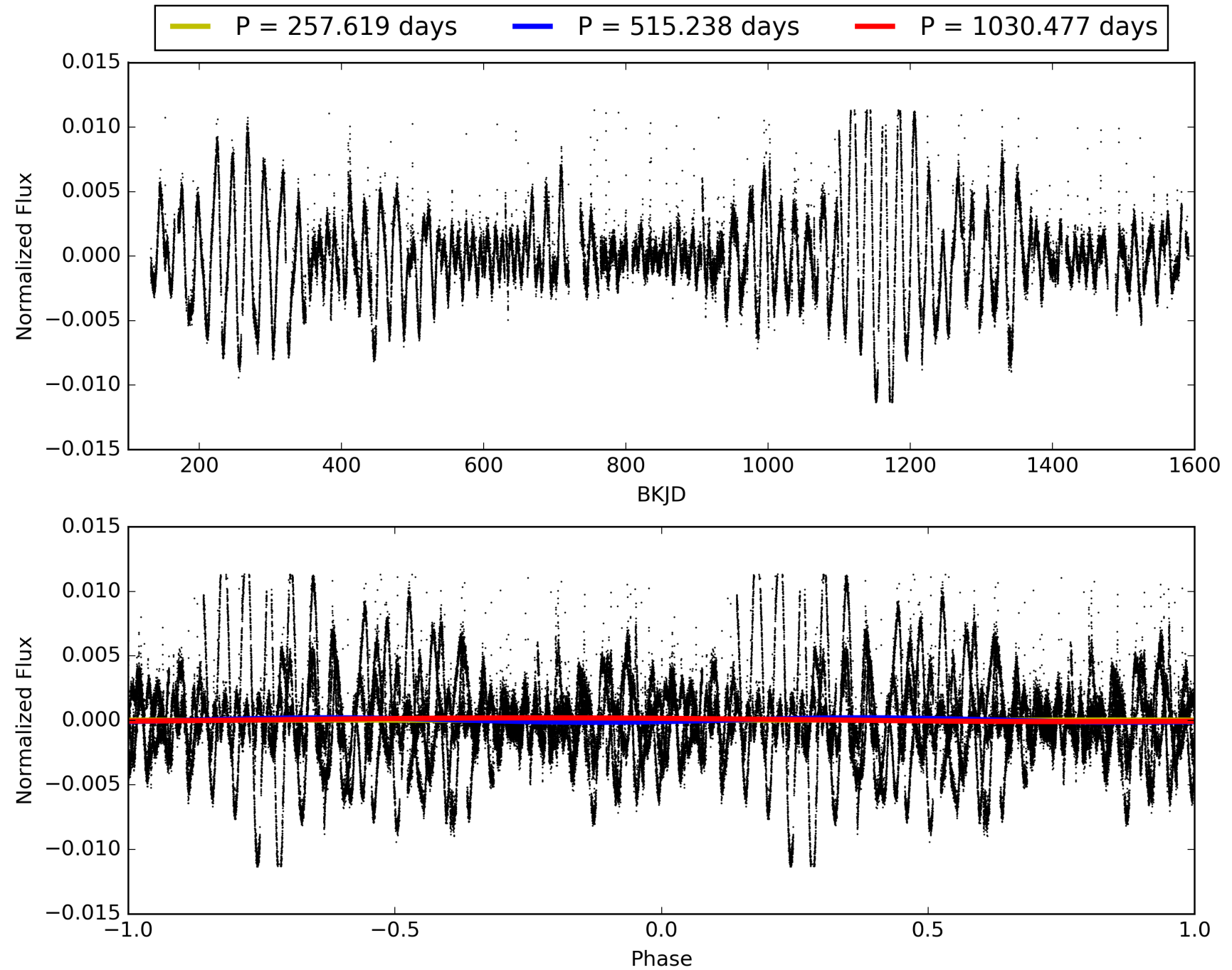
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:59:37 Z

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

TCE 007670700-01, PDC Light Curves

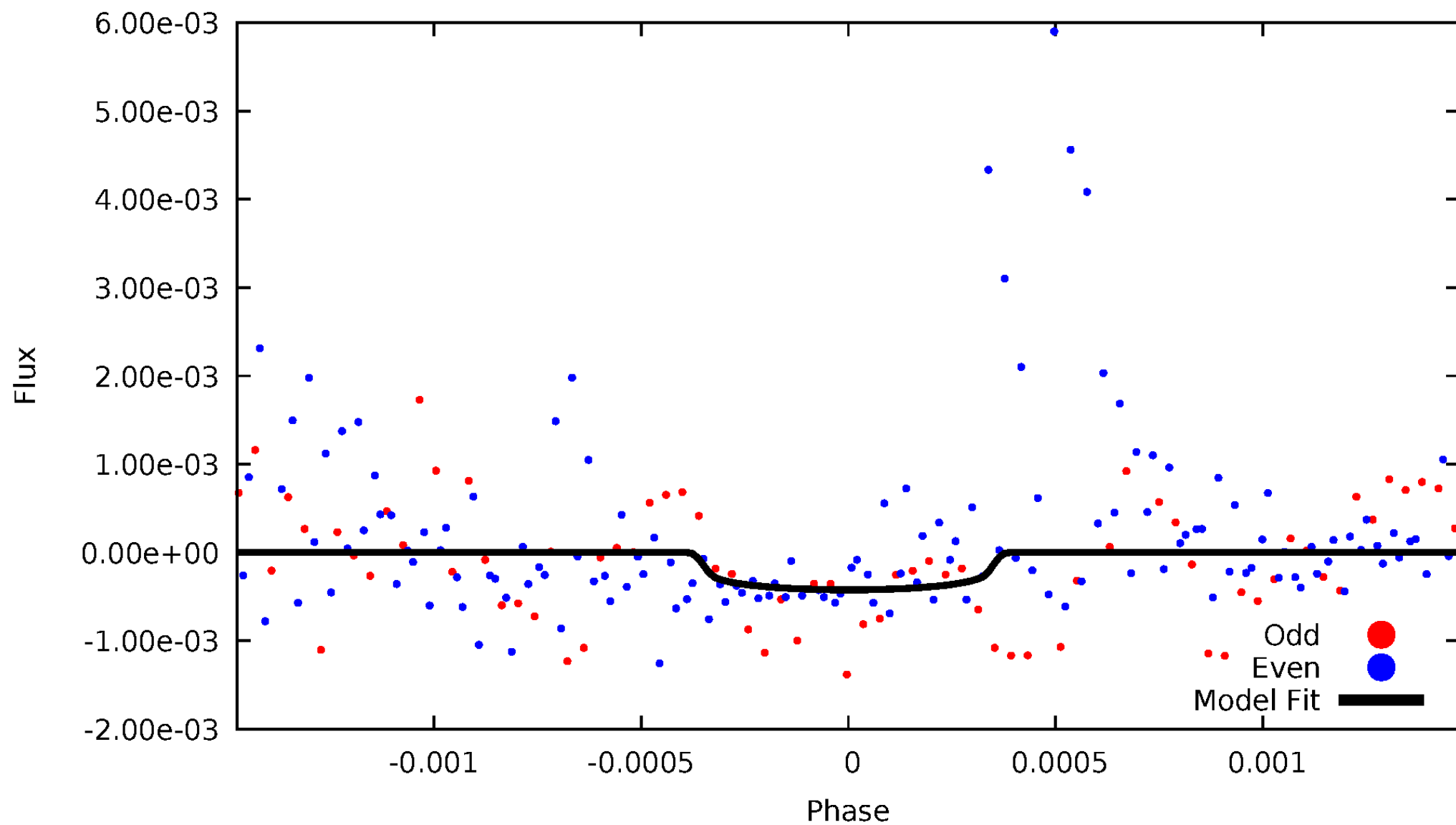


TCE 007670700-01



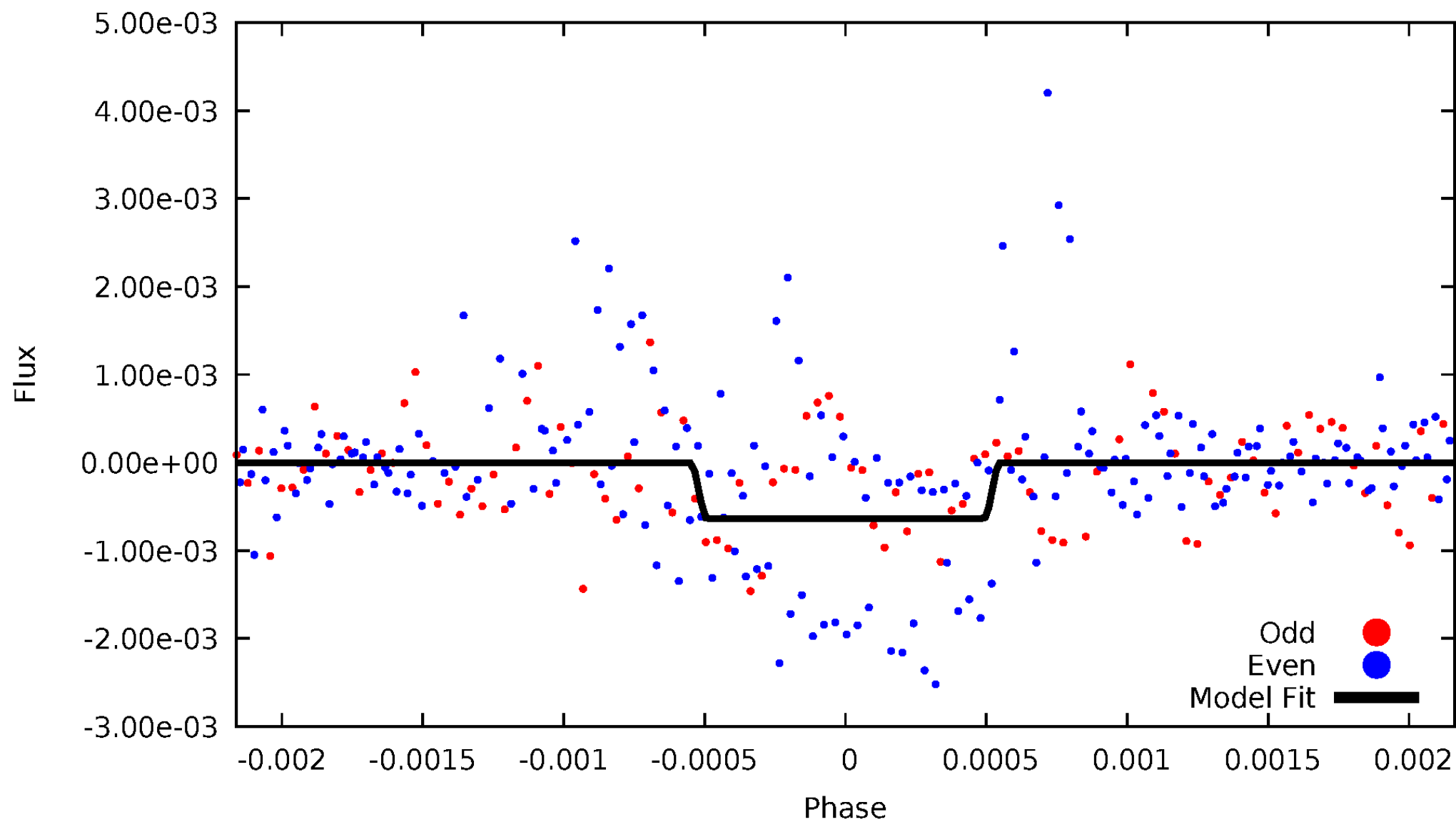
DV Odd/Even

TCE 007670700-01



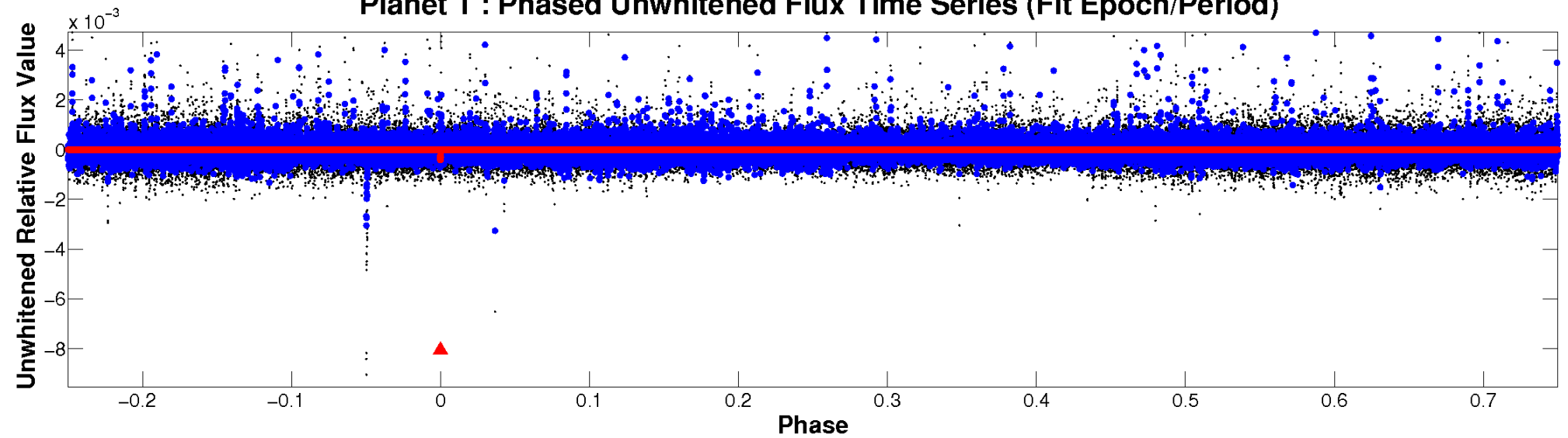
ALT Odd/Even

TCE 007670700-01

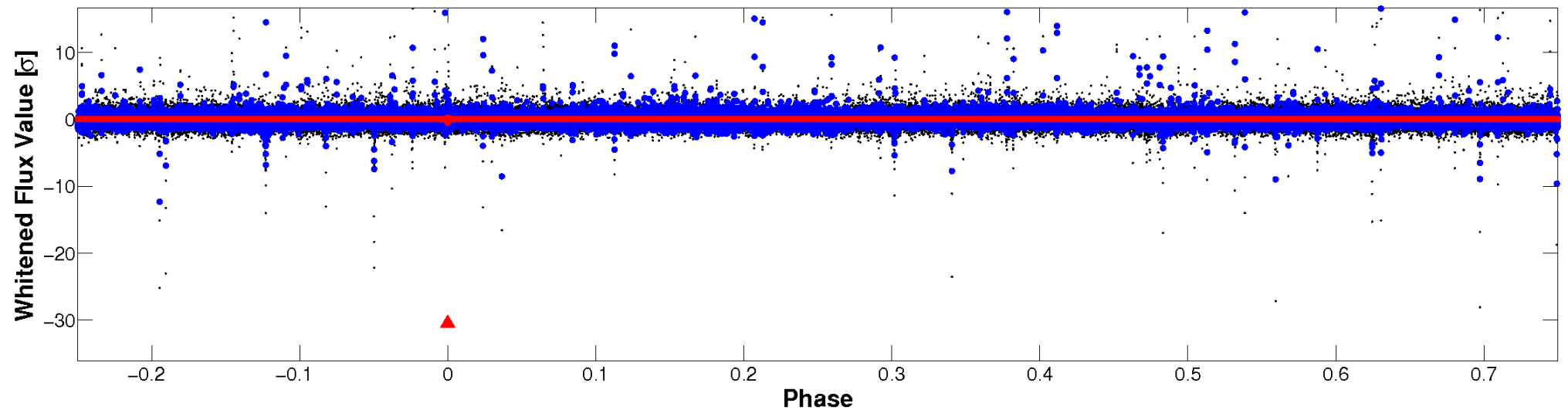


Non-Whitened Vs. Whitened Light Curve

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

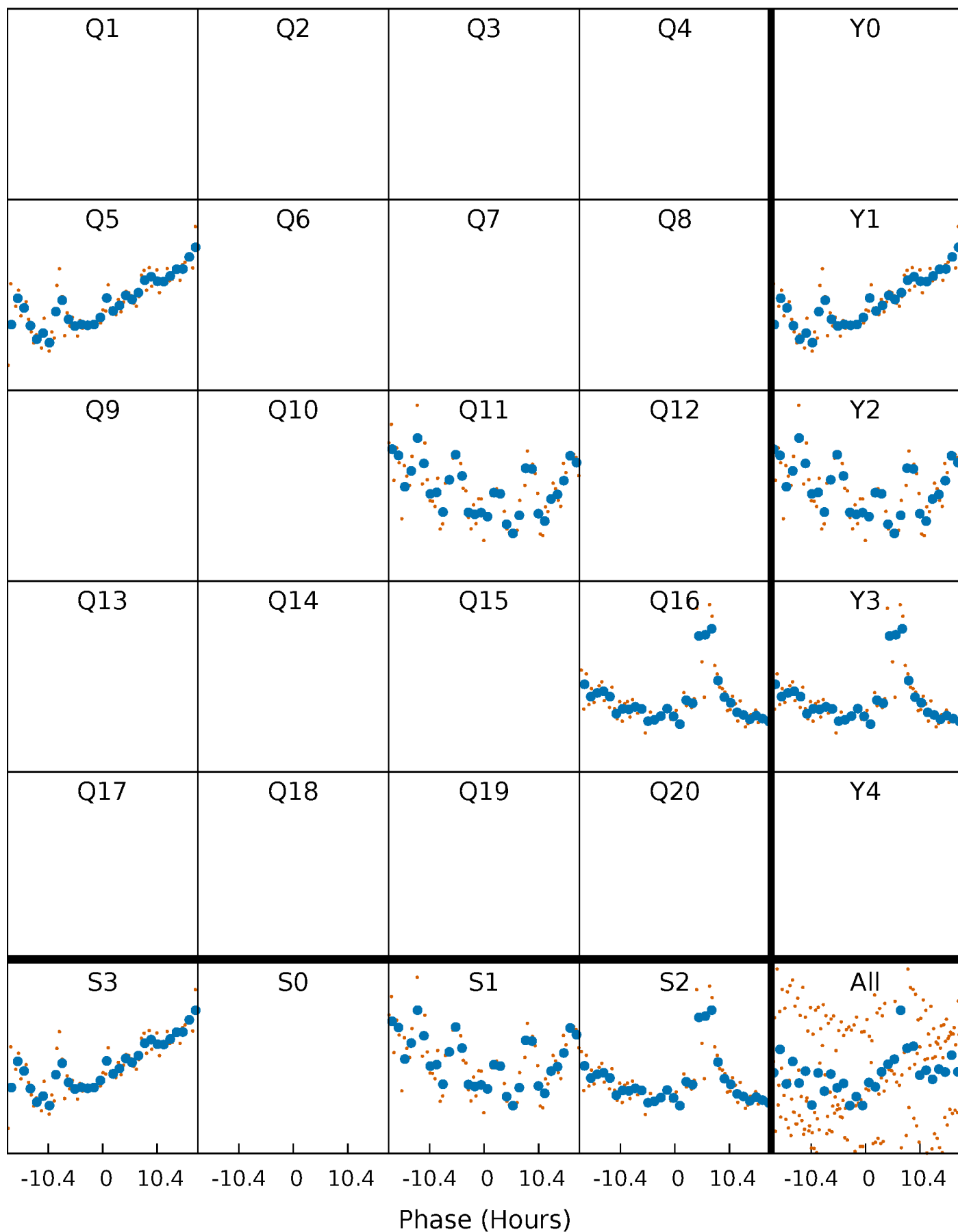


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



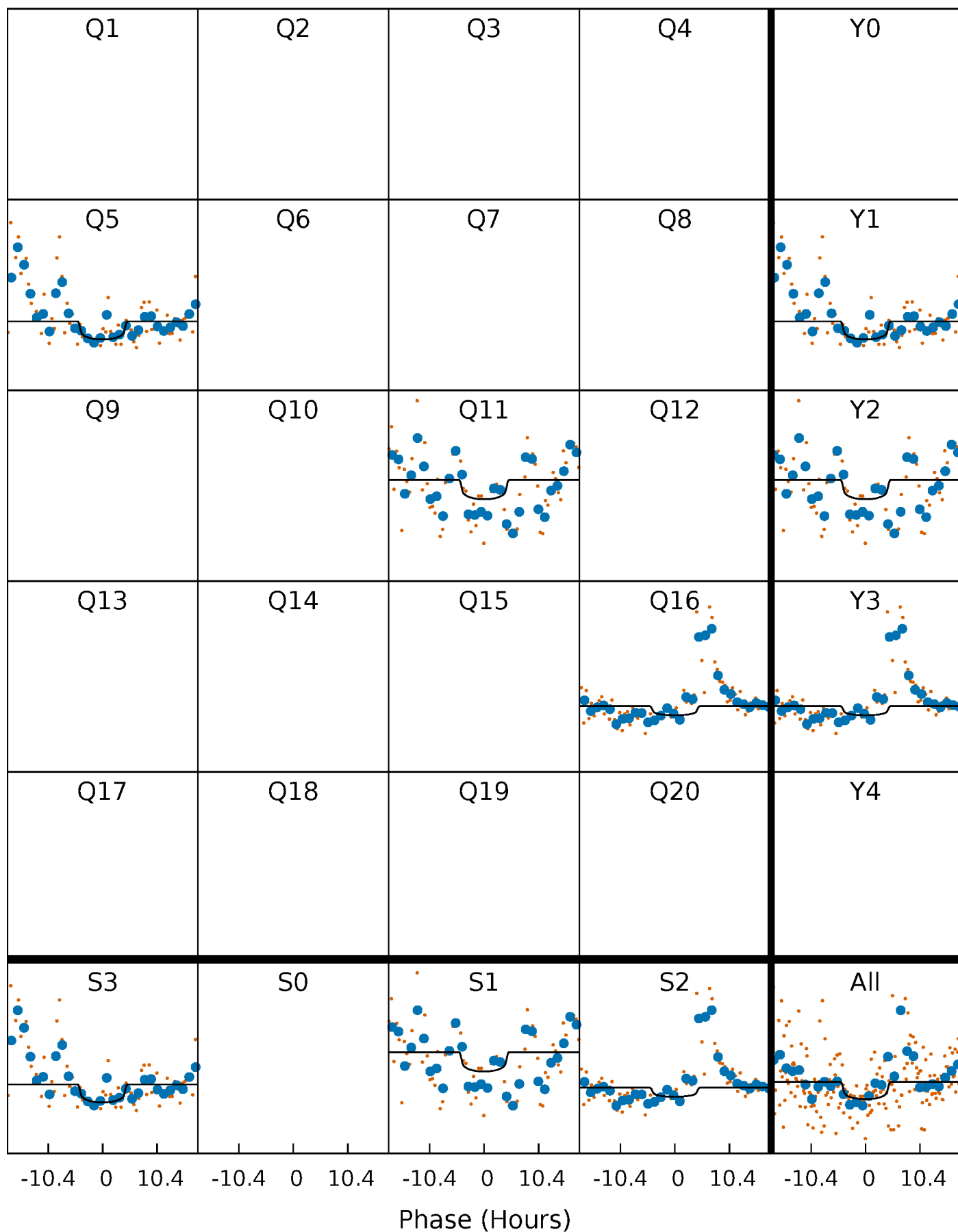
PDC Quarter-Phased Transit Curves

TCE 007670700-01 P=515.238427 Days $T_0=511.655770$ (BKJD)



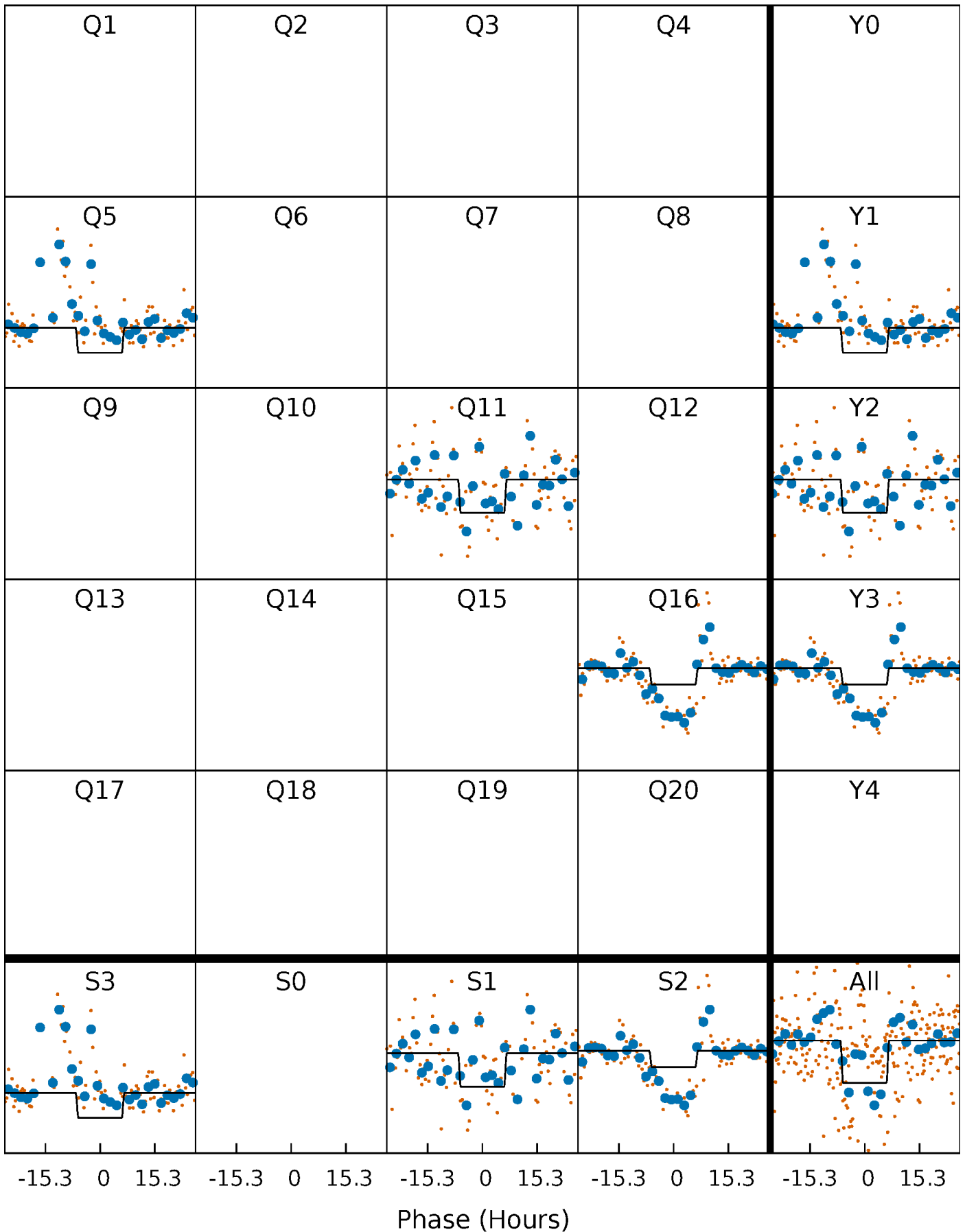
DV Quarter-Phased Transit Curves

TCE 007670700-01 P=515.238427 Days $T_0=511.655770$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

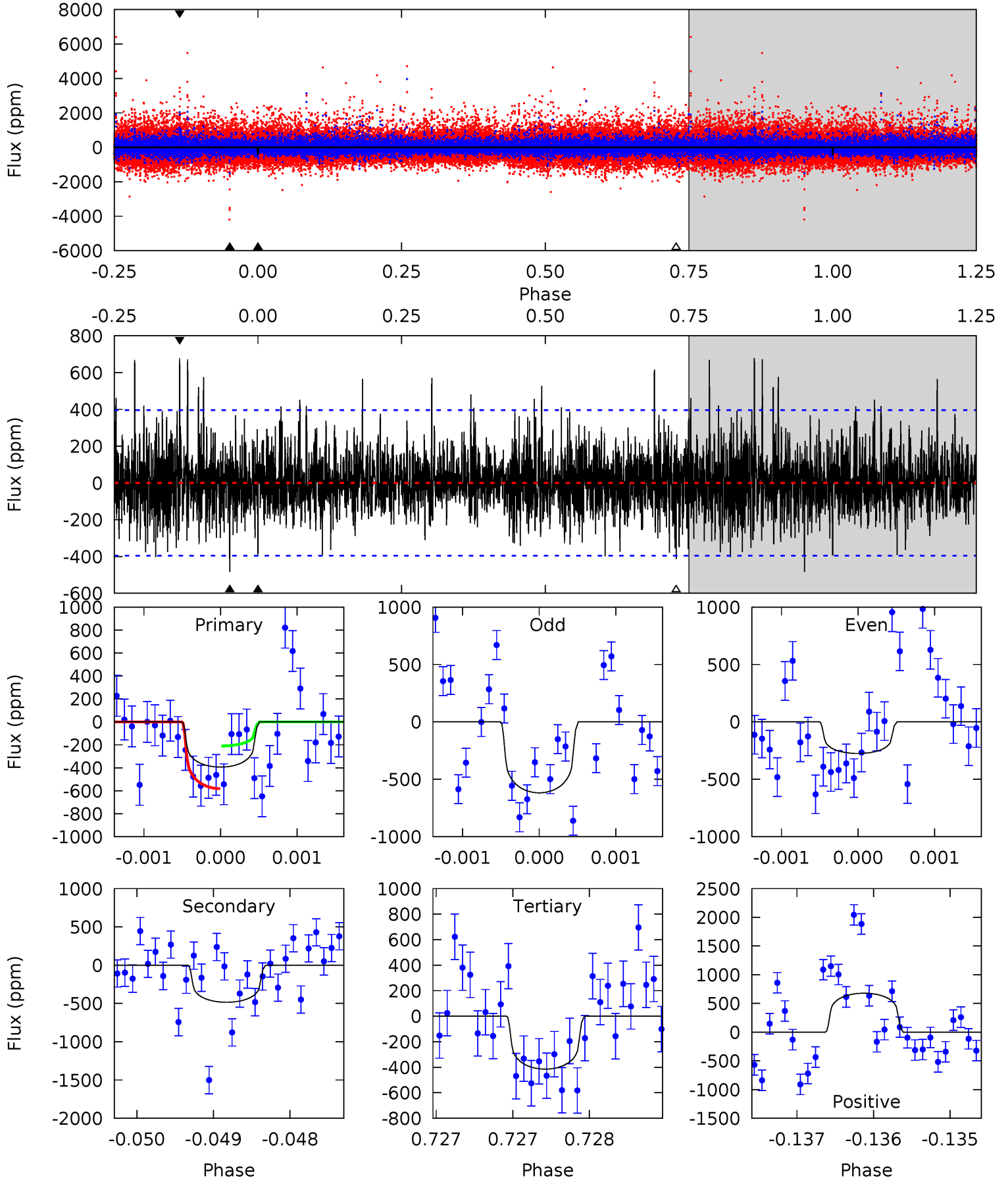
TCE 007670700-01 P=515.300327 Days $T_0=511.418126$ (BKJD)



DV Model-Shift Uniqueness Test

007670700-01, P = 515.238427 Days, E = 511.655770 Days

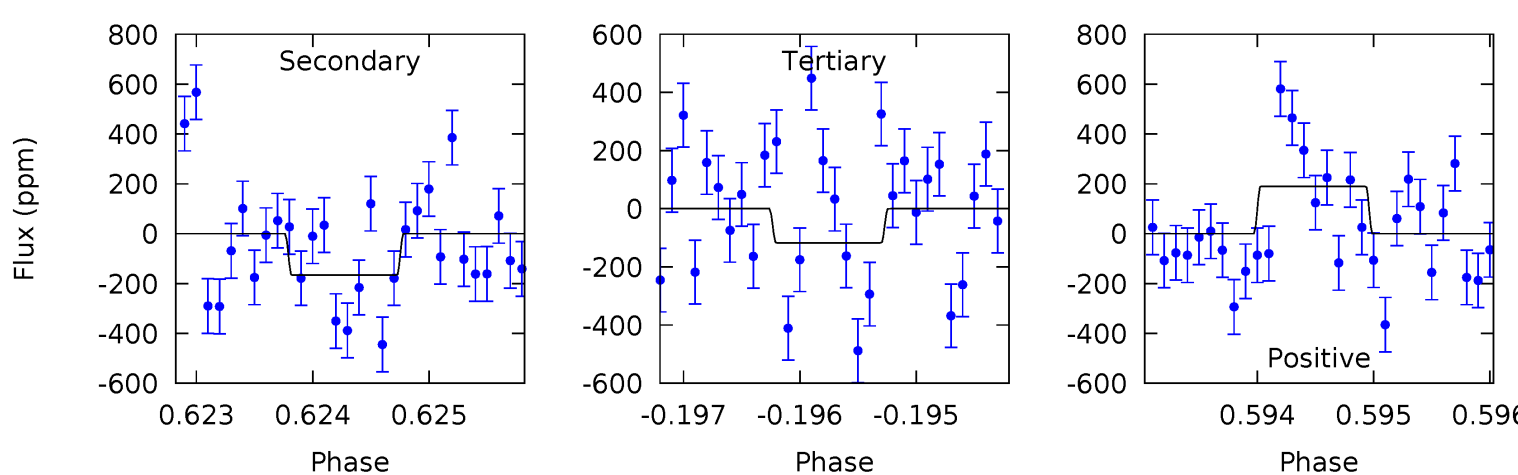
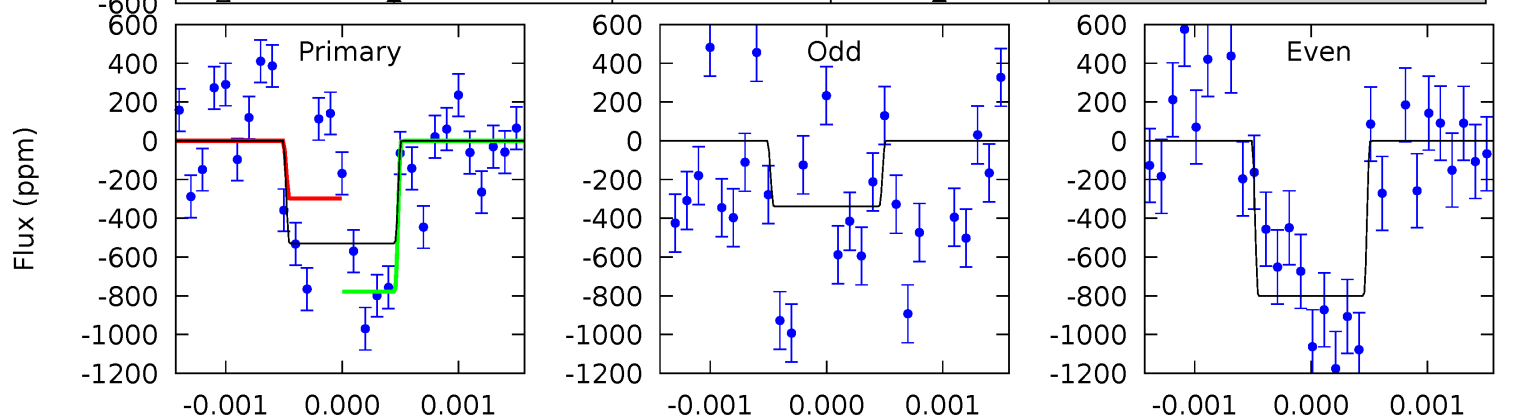
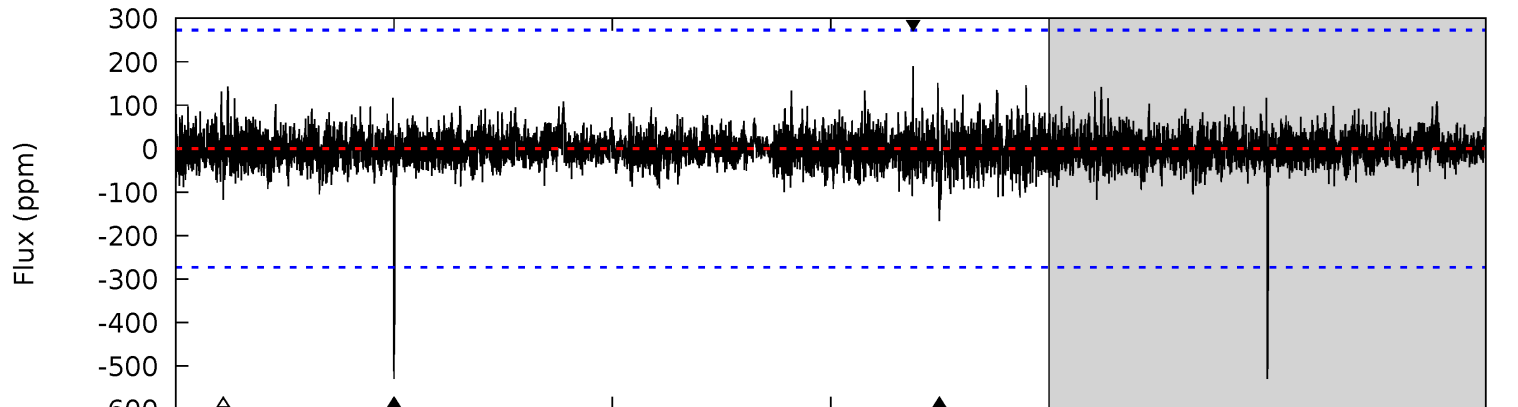
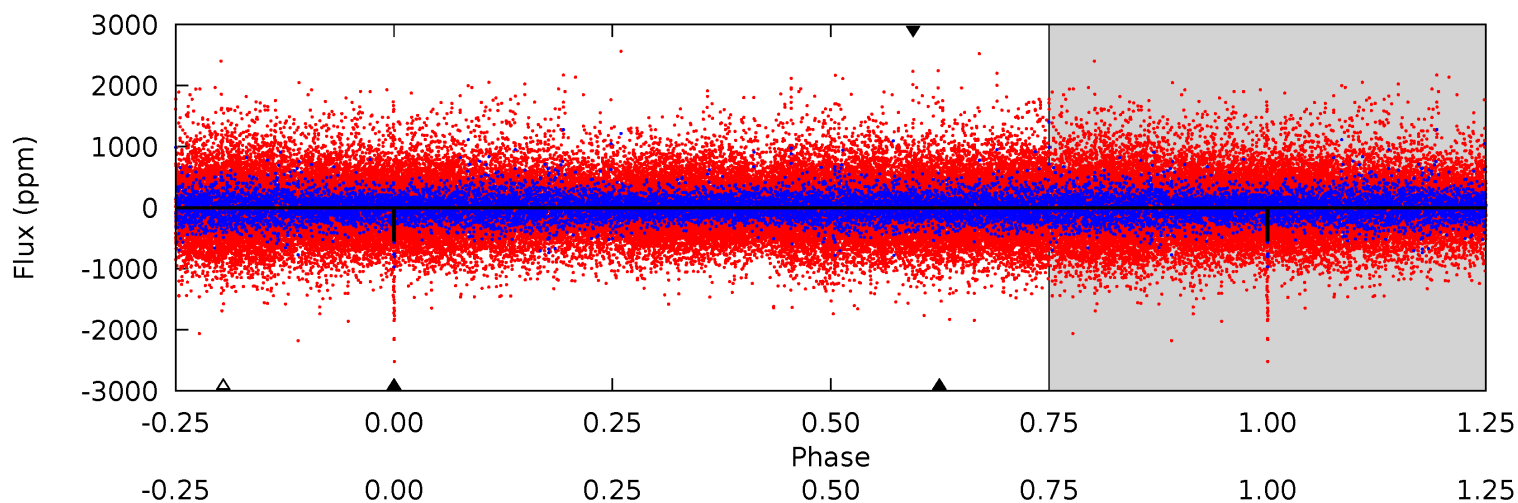
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.47	6.73	5.76	9.42	5.50	3.36	1.80	-0.29	-3.95	0.97	-2.69	1.72	0.97	0.58	2.61



Alt Model-Shift Uniqueness Test

007670700-01, P = 515.300327 Days, E = 511.418126 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	3.31	2.34	3.79	5.44	3.27	0.62	8.21	6.76	0.97	-0.48	4.44	1.85	0.26	4.80



Stellar Parameters For KIC 007670700

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3432^{+44}_{-41}	$4.937^{+0.044}_{-0.032}$	$-0.100^{+0.100}_{-0.100}$	$0.314^{+0.034}_{-0.034}$	$0.311^{+0.042}_{-0.038}$	$14.150^{+3.367}_{-2.032}$
	+1%/-1%	+1%/-1%	+100%/-100%	+11%/-11%	+14%/-12%	+24%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007670700-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-485 ± 72	$0.87^{+0.75}_{-0.54}$	128^{+3}_{-3}	3296^{+1286}_{-526}	$265413^{+1538653}_{-188898}$
Alt.	-166 ± 50	$1.06^{+0.74}_{-0.64}$	128^{+3}_{-3}	2675^{+756}_{-338}	$58147^{+283765}_{-38971}$

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

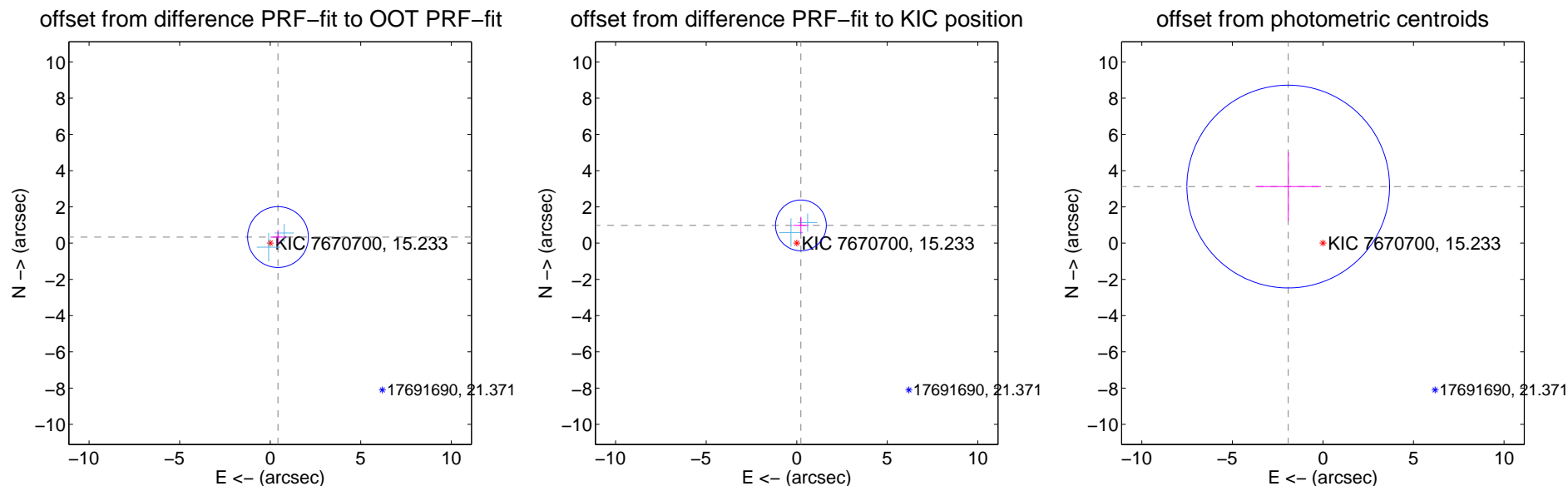
DV Centroid Data

Supplemental centroid analysis for 007670700-01. Kepler magnitude: 15.23. Transit SNR 3.35

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.84 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.546 ± 0.559	0.98	-0.431 ± 0.417	0.336 ± 0.381
PRF-fit source offset from KIC position	1.007 ± 0.467	2.16	-0.231 ± 0.426	0.980 ± 0.469
photometric centroid source offset	3.67 ± 1.86	1.97	1.92 ± 1.80	3.12 ± 1.89

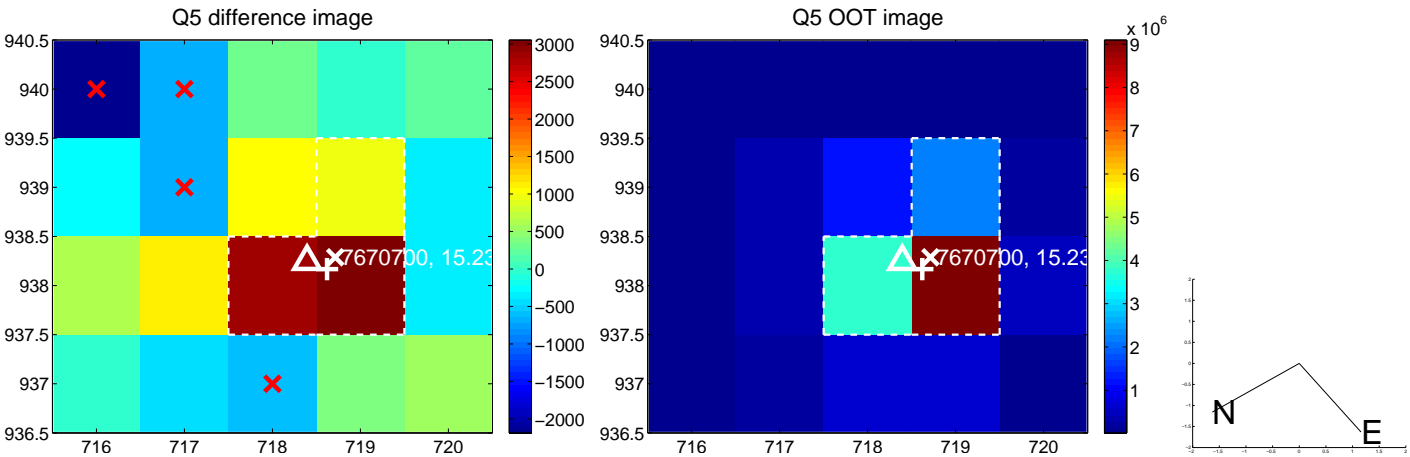


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



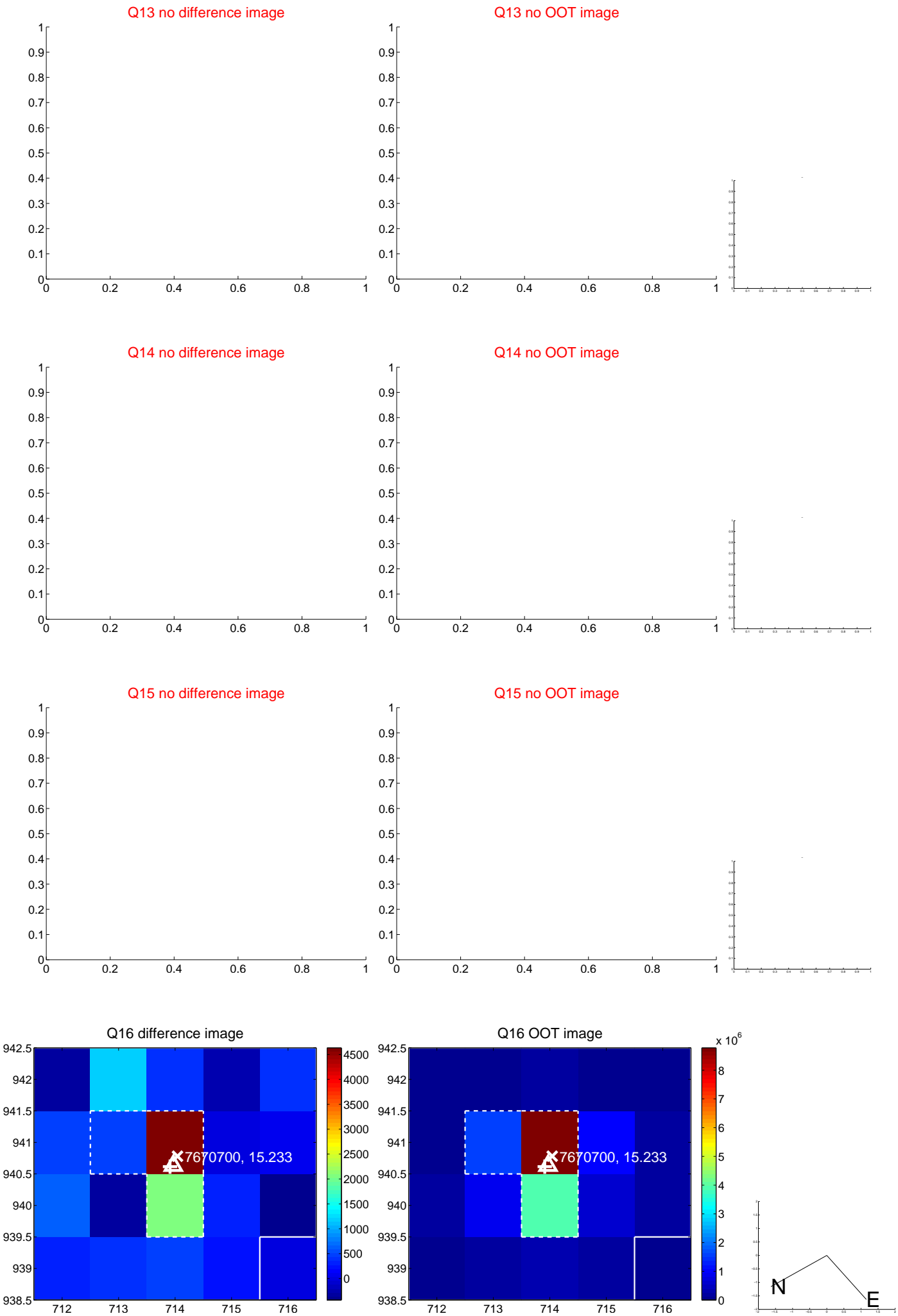
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



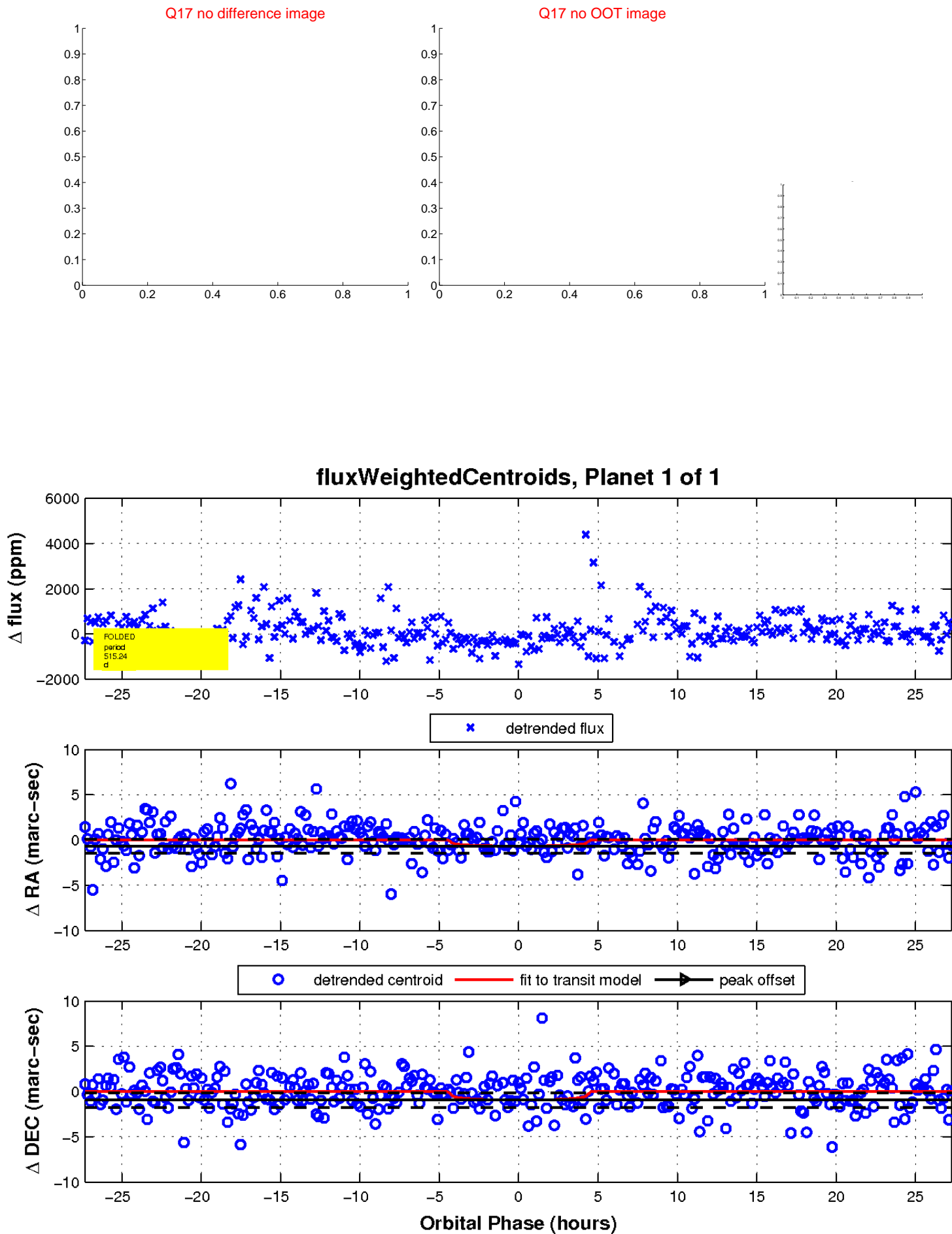
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UKIRT Image

Declination

