

KIC 003549707

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})
003549707-01	OBS	No	378.670187	361.856404	458.7	15.008	8.8	6.4	0.78	4979	1.76	0.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003549707-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_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.

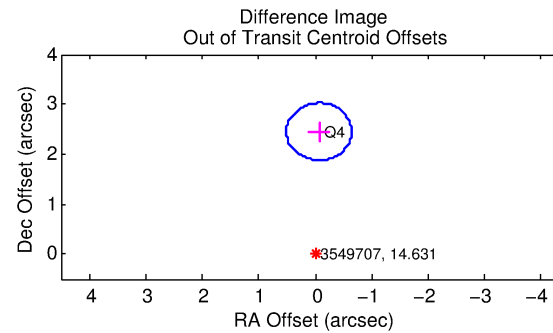
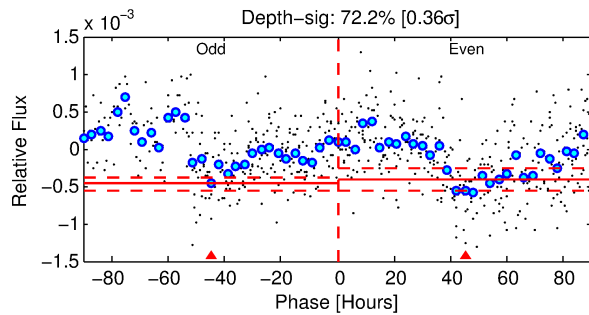
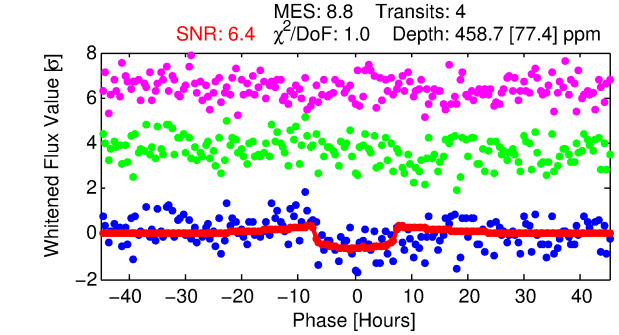
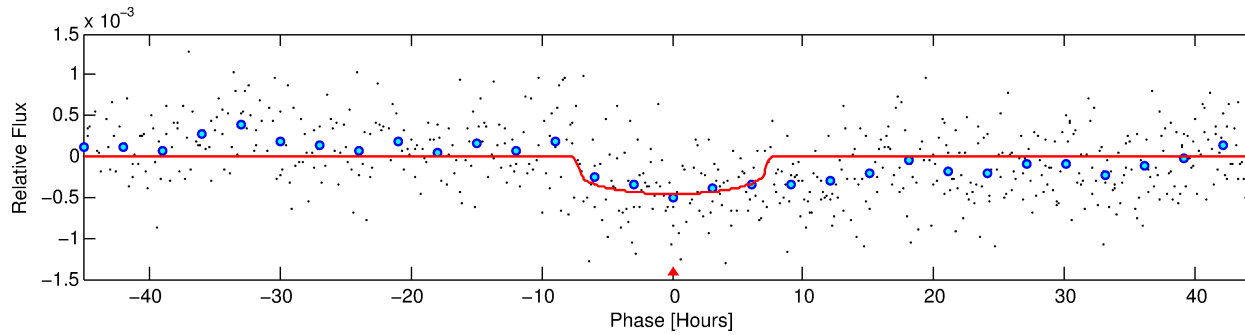
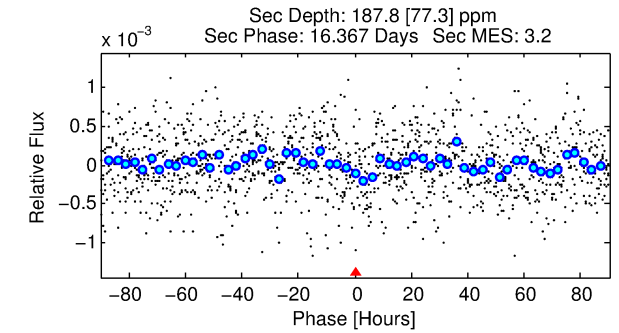
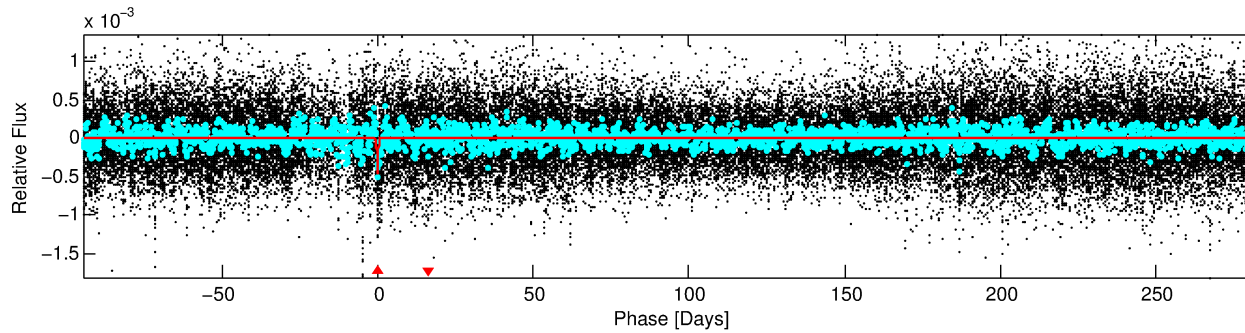
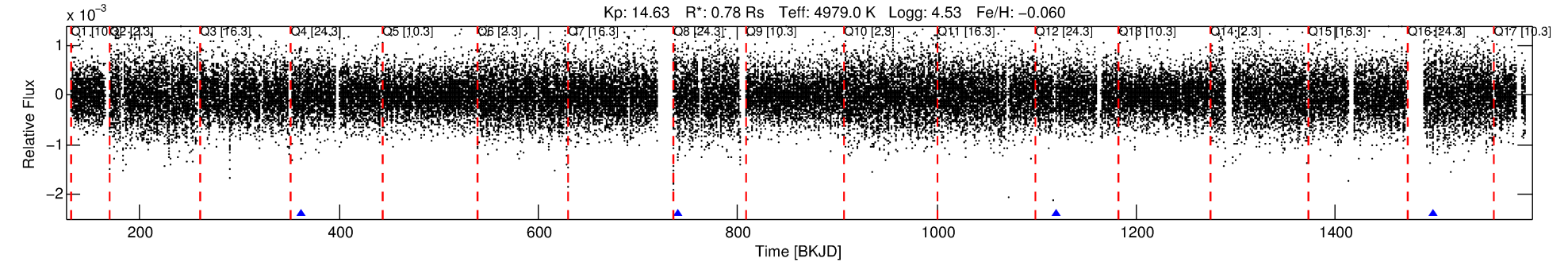
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003549707-01

No Significant Match Found

DV One-Page Summary

KIC: 3549707 Candidate: 1 of 1 Period: 378.670 d



DV Fit Results:

Period = 378.67019 [0.01249] d
Epoch = 361.8564 [0.0231] BKJD
Rp/R* = 0.0208 [0.0103]
a/R* = 145.25 [247.32]
b = 0.69 [1.31]
Seff = 0.38 [0.07]
Teq = 201 [9] K
Rp = 1.76 [0.89] Re
a = 0.9285 [0.0826] AU
Ag = 28622.53 [30944.31] [0.92σ]
Teffp = 4038 [1090] K [3.52σ]

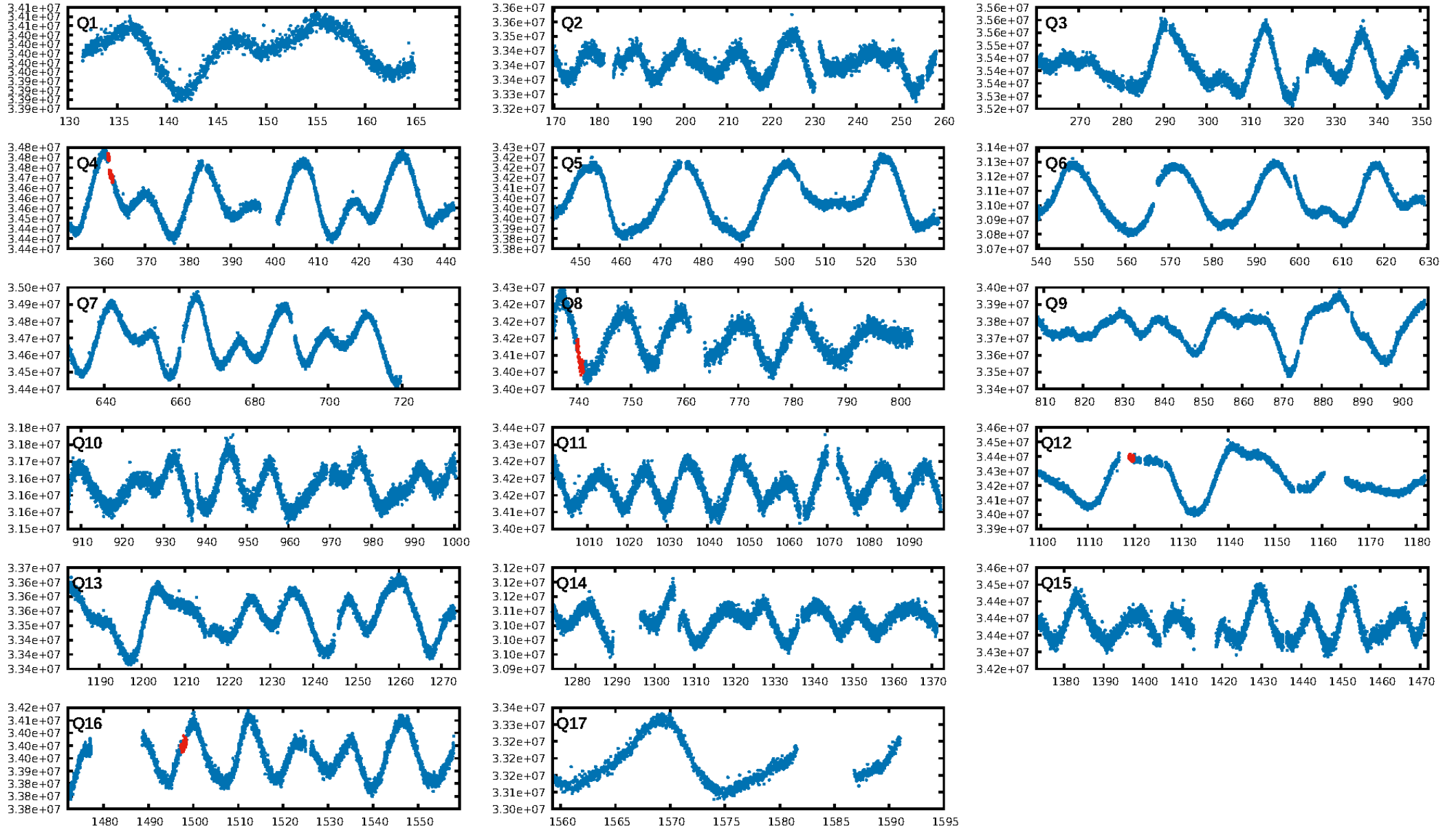
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.13e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.9875
Centroid-sig: 7.8%
Centroid-so: 1.862 arcsec [1.54σ]
OotOffset-rm: 2.454 arcsec [12.79σ]
KicOffset-rm: 2.816 arcsec [14.68σ]
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]

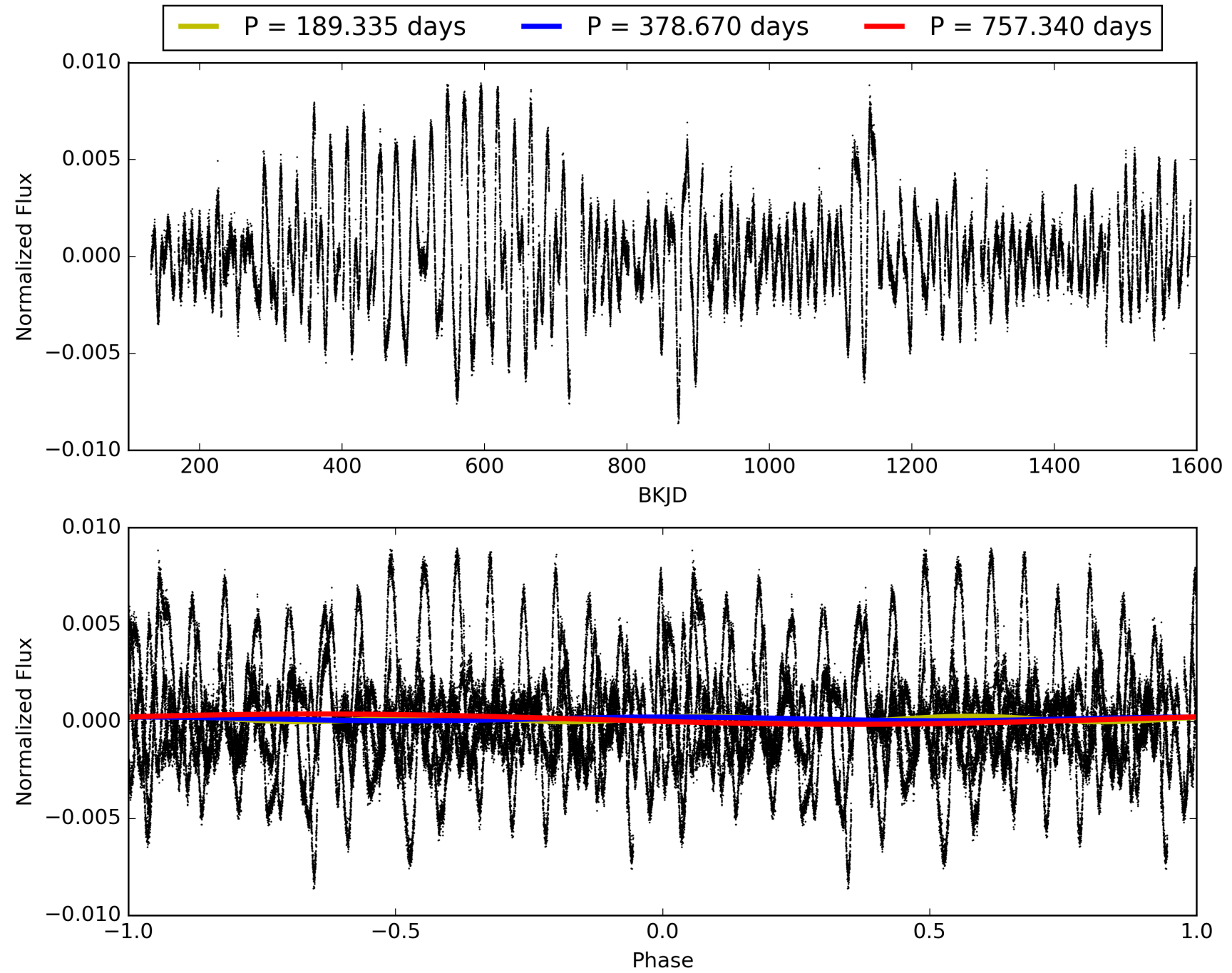
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:41:58 Z

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

TCE 003549707-01, PDC Light Curves

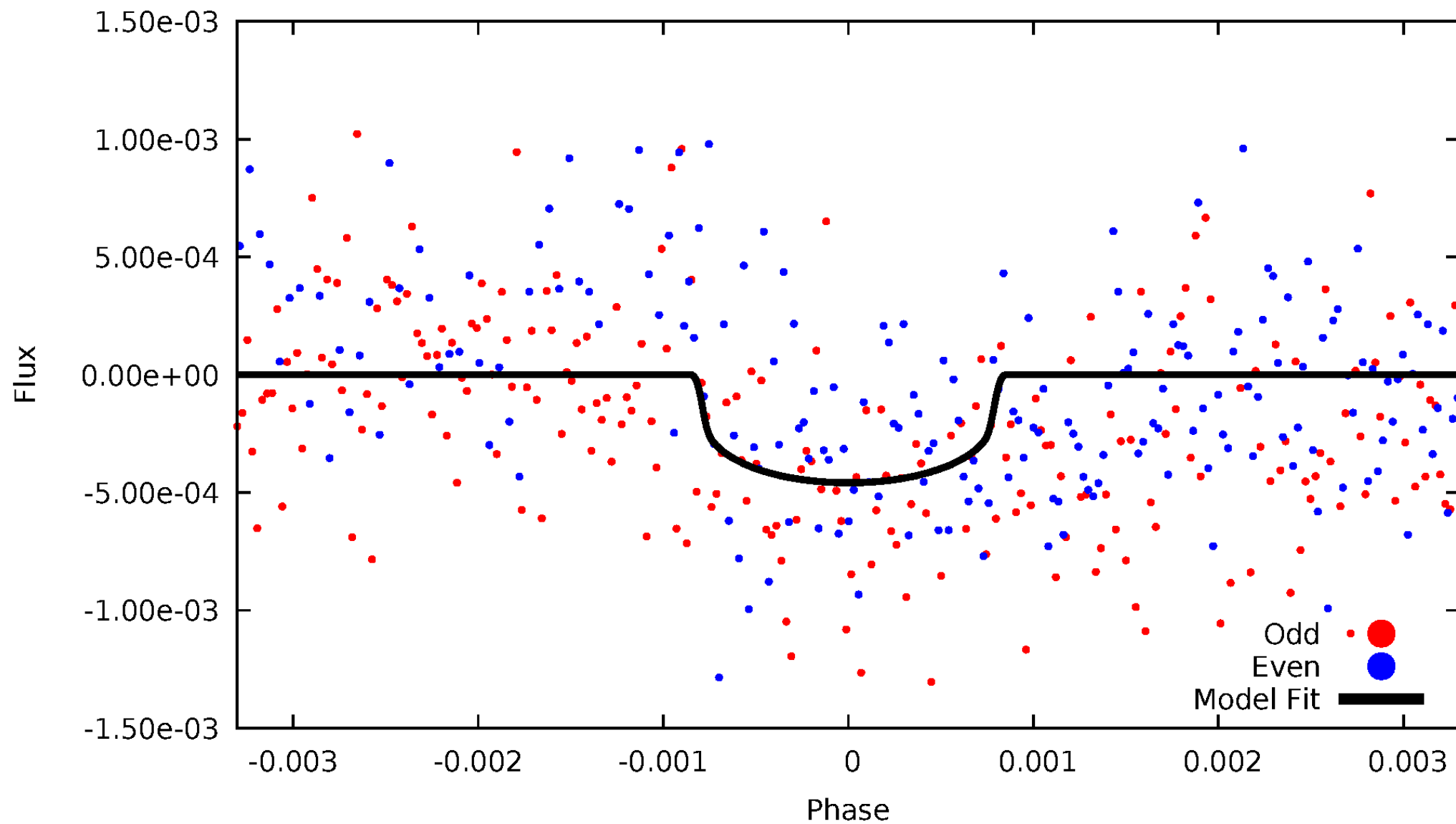


TCE 003549707-01



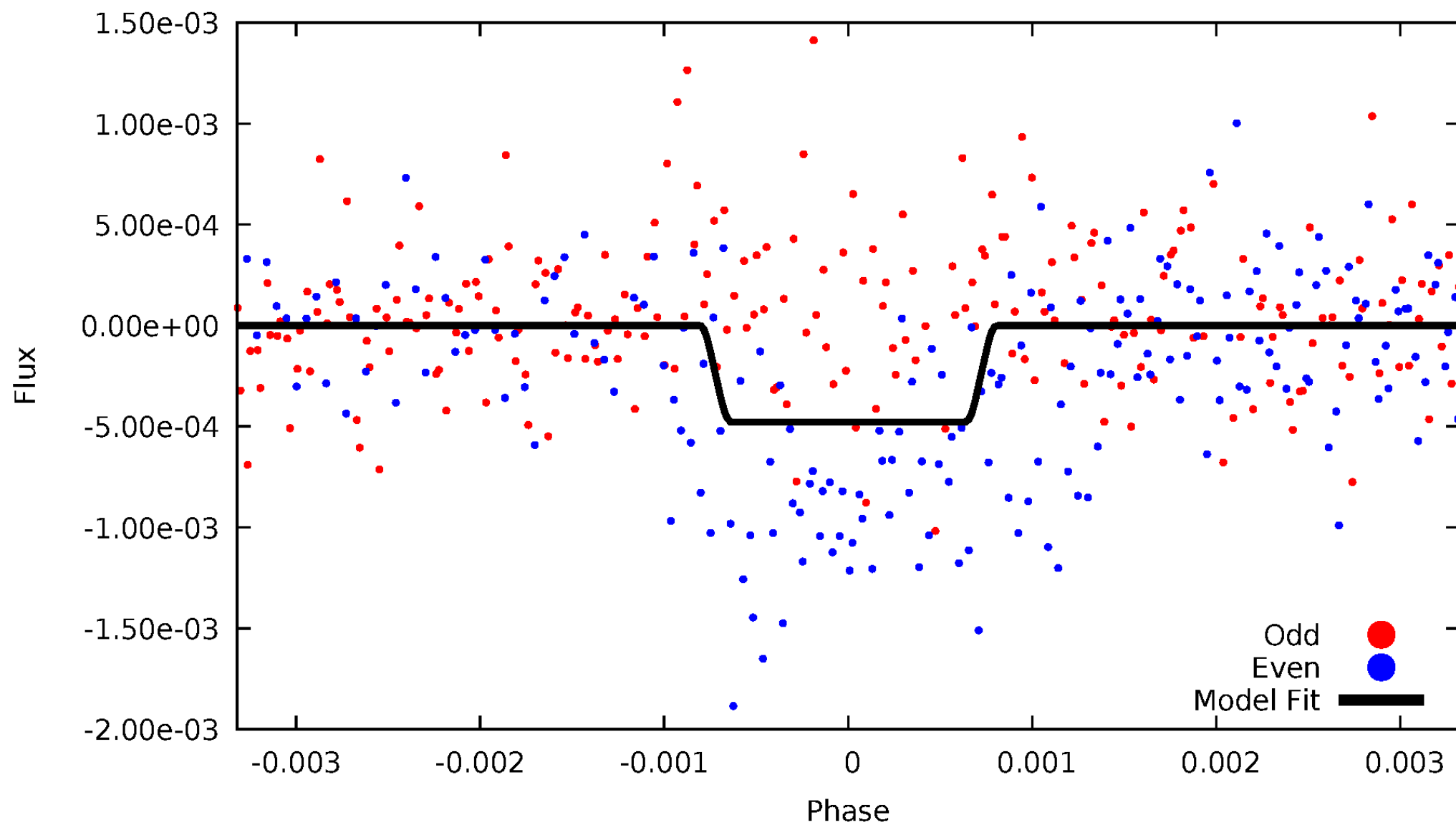
DV Odd/Even

TCE 003549707-01

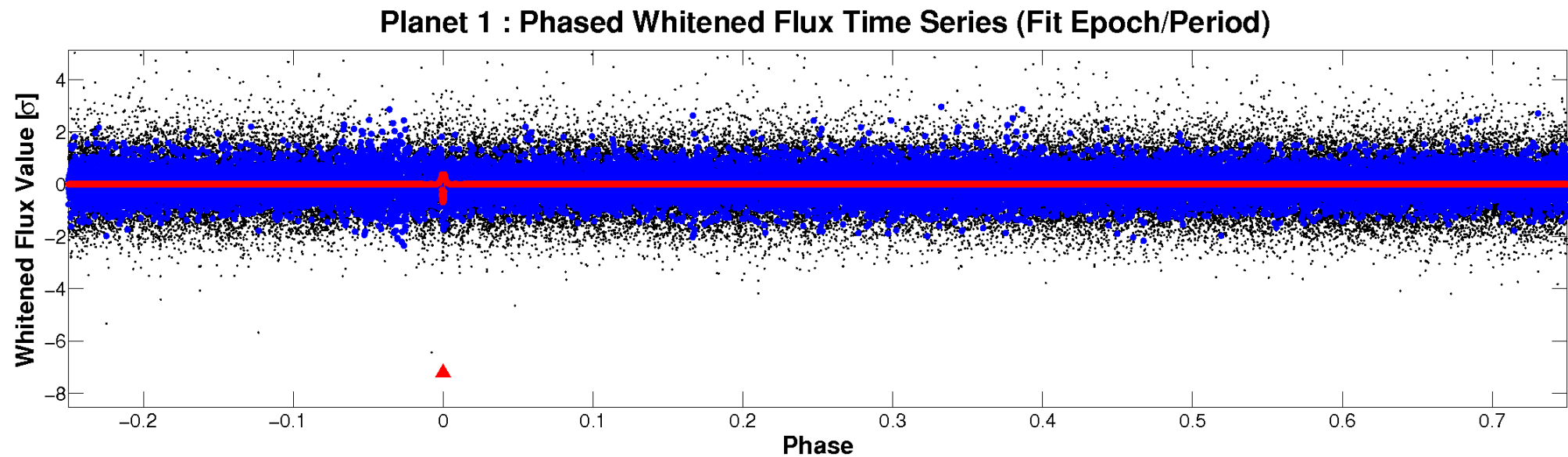
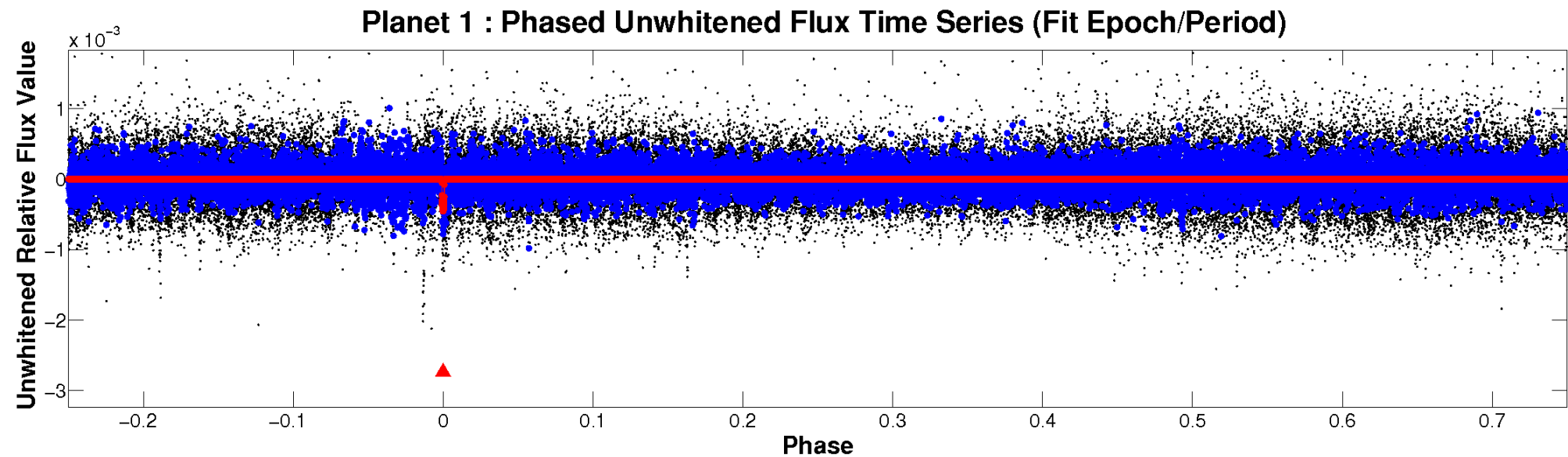


ALT Odd/Even

TCE 003549707-01

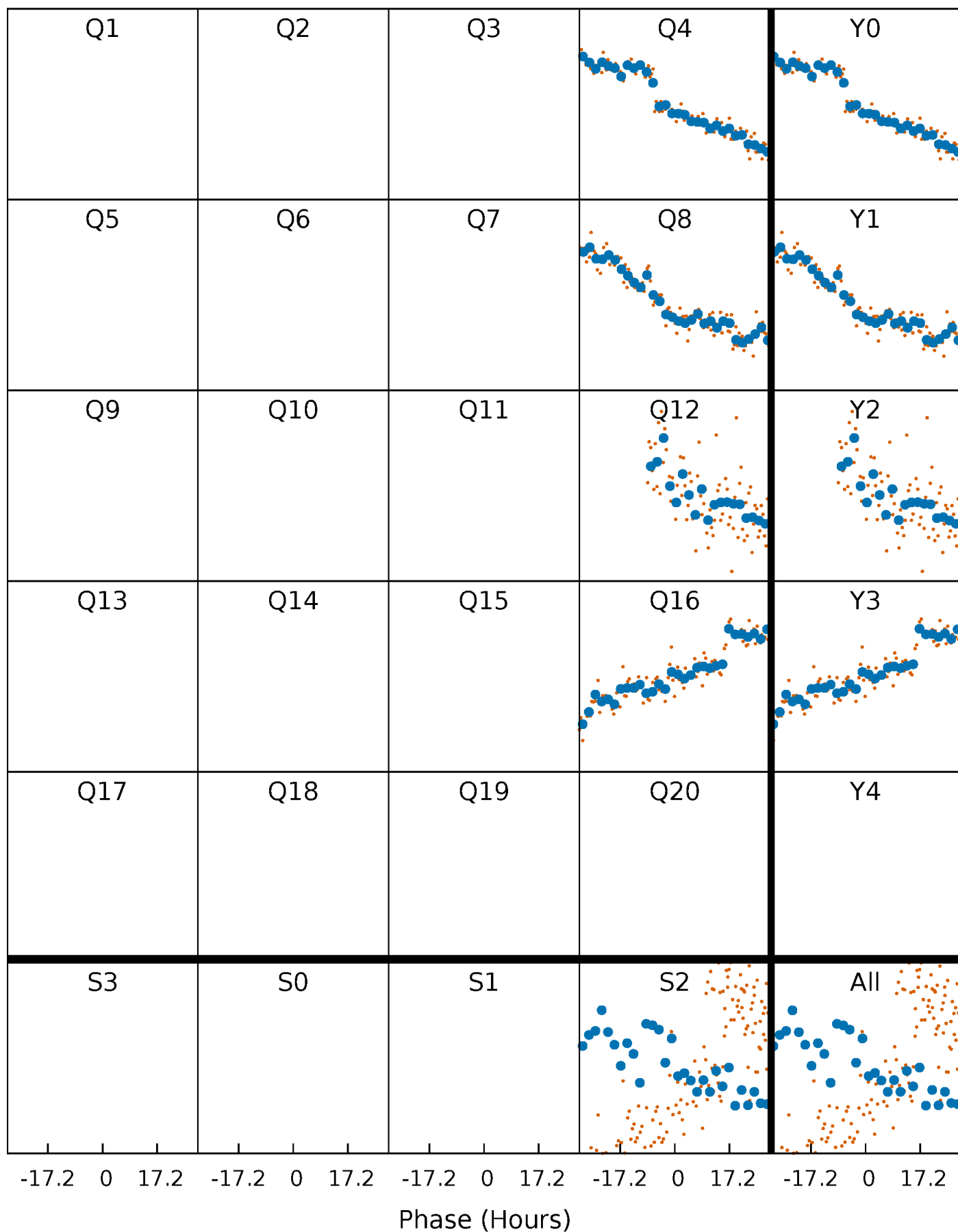


Non-Whitened Vs. Whitened Light Curve



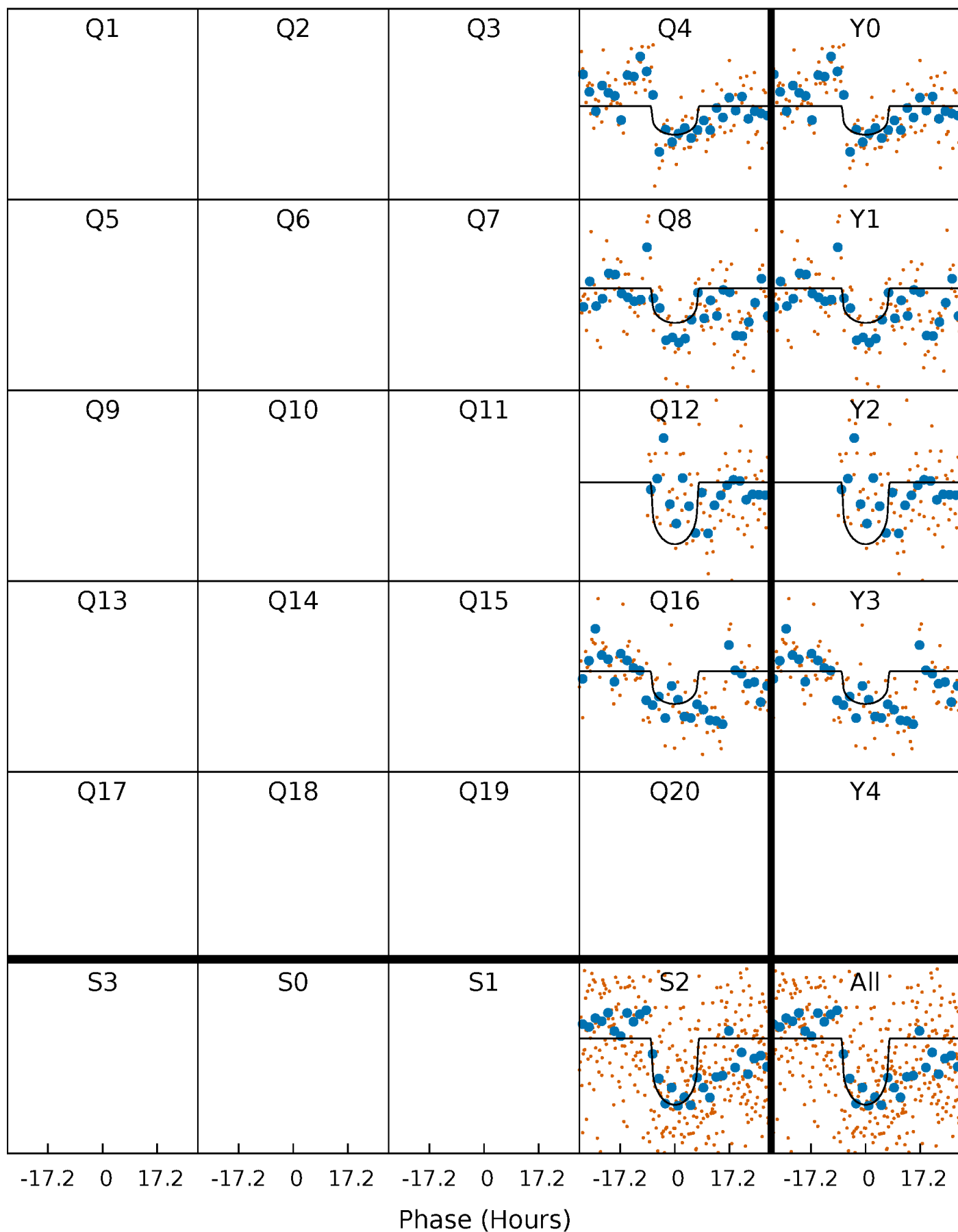
PDC Quarter-Phased Transit Curves

TCE 003549707-01 P=378.670187 Days $T_0=361.856404$ (BKJD)



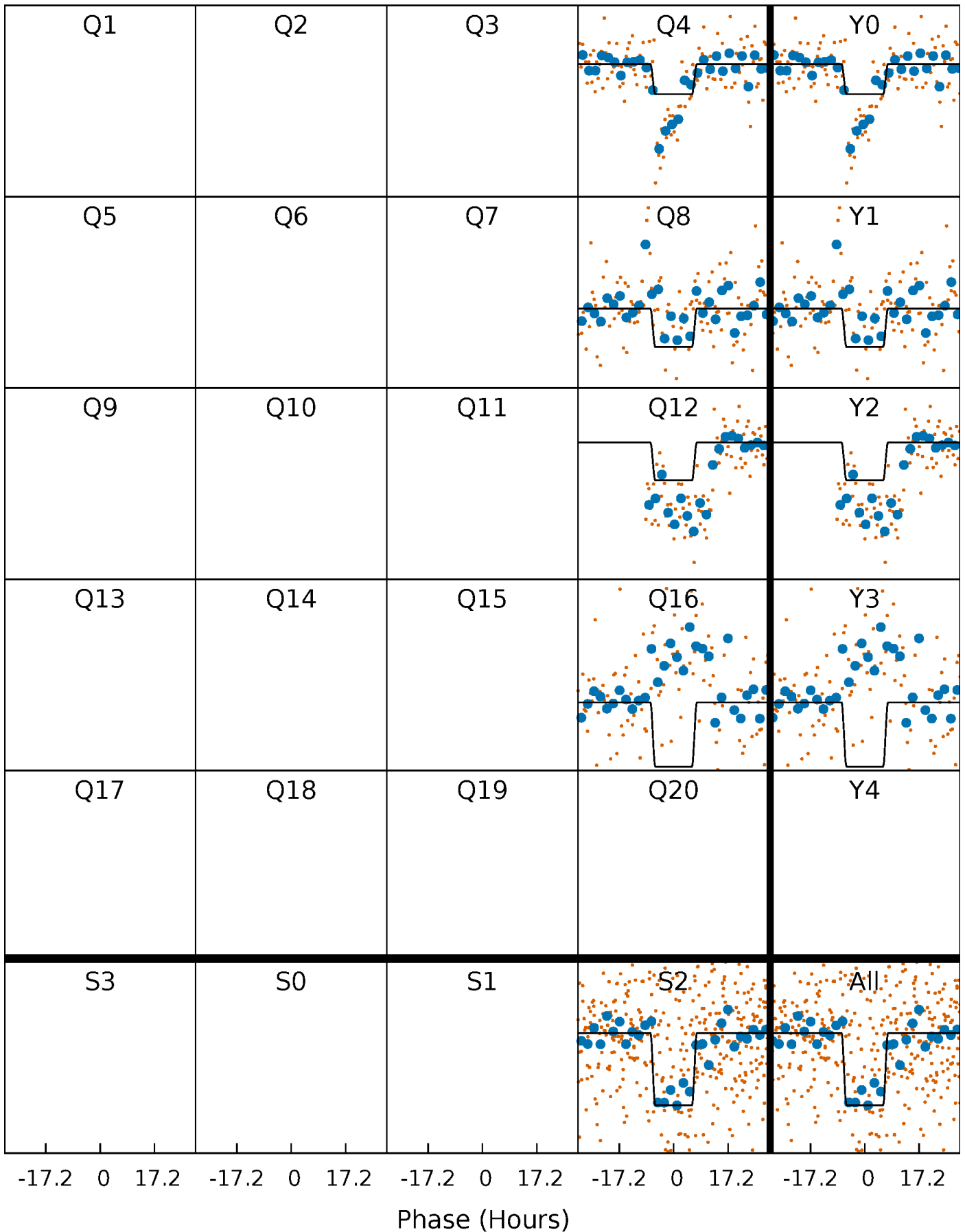
DV Quarter-Phased Transit Curves

TCE 003549707-01 P=378.670187 Days $T_0=361.856404$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

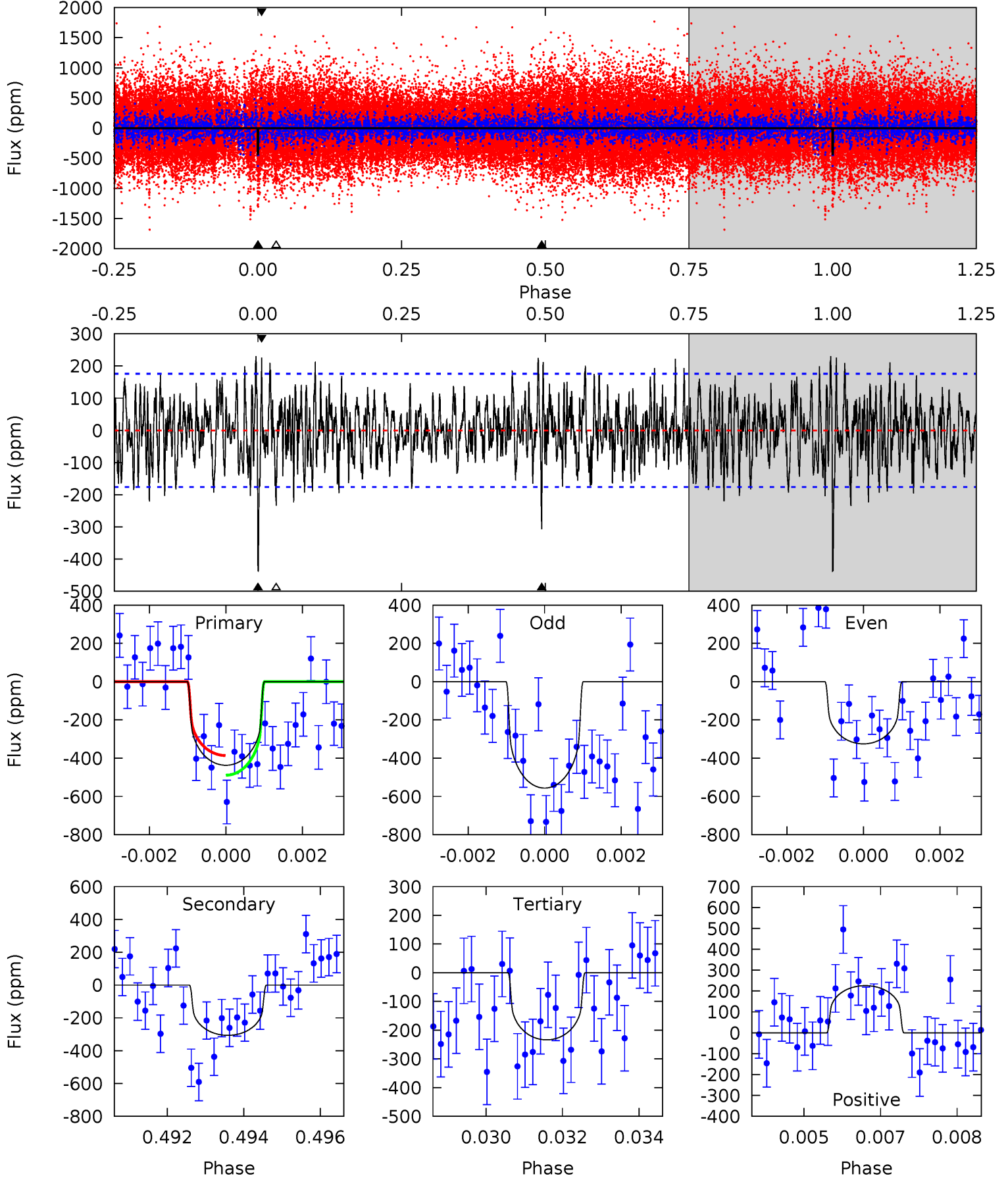
TCE 003549707-01 $P=378.688356$ Days $T_0=361.828423$ (BKJD)



DV Model-Shift Uniqueness Test

003549707-01, $P = 378.670187$ Days, $E = 361.856404$ Days

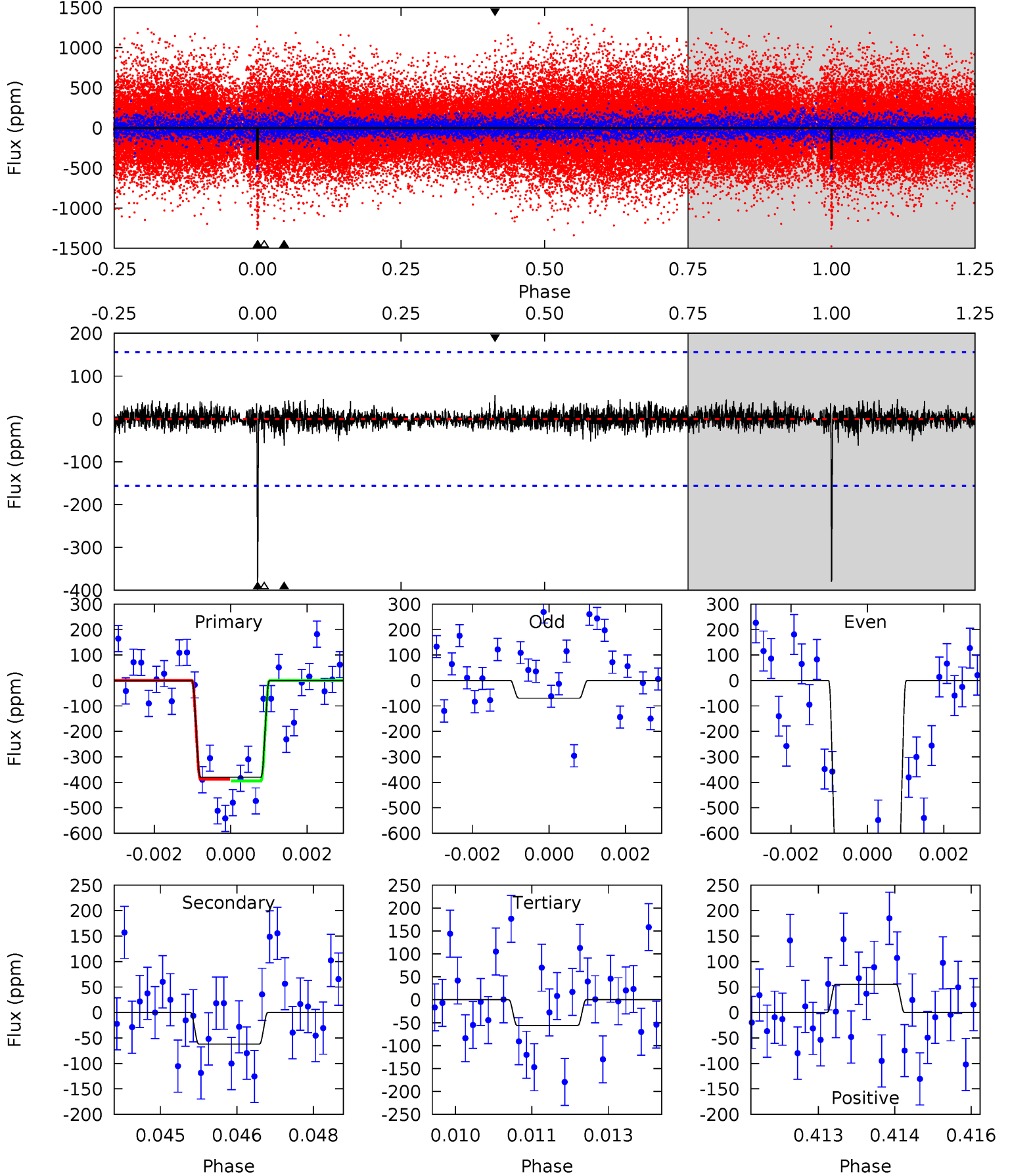
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	9.33	7.11	6.87	5.36	3.14	2.31	6.19	6.43	2.22	2.46	3.51	0.83	0.35	1.57



Alt Model-Shift Uniqueness Test

003549707-01, P = 378.688356 Days, E = 361.828423 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	2.13	1.93	1.90	5.37	3.16	0.42	11.1	11.2	0.20	0.23	13.4	0.75	0.13	0.13



Stellar Parameters For KIC 003549707

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4979^{+151}_{-151}	$4.530^{+0.075}_{-0.060}$	$-0.060^{+0.300}_{-0.300}$	$0.776^{+0.071}_{-0.079}$	$0.745^{+0.093}_{-0.057}$	$2.244^{+0.718}_{-0.455}$
	+3%/-3%	+2%/-1%	+500%/-500%	+9%/-10%	+12%/-8%	+32%/-20%
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 003549707-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-307 ± 33	$1.75^{+0.91}_{-0.82}$	280^{+11}_{-11}	4608^{+1589}_{-631}	$47643^{+115843}_{-26964}$
Alt.	-62 ± 29	$1.86^{+0.92}_{-0.83}$	281^{+11}_{-12}	3401^{+890}_{-469}	8320^{+21822}_{-5371}

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

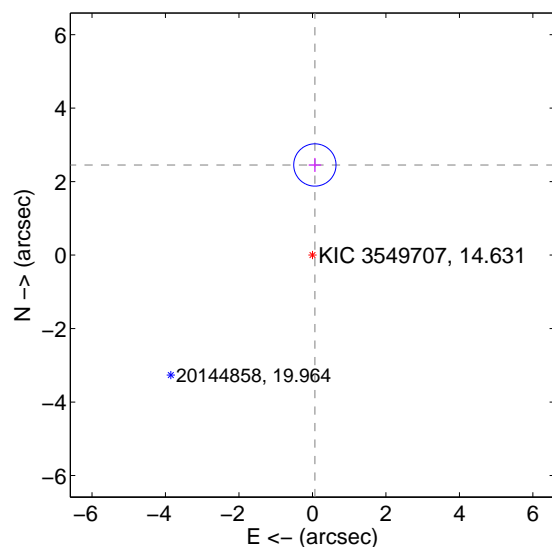
Supplemental centroid analysis for 003549707-01. Kepler magnitude: 14.63. Transit SNR 6.43

There are 1 quarters with good PRF difference image offsets

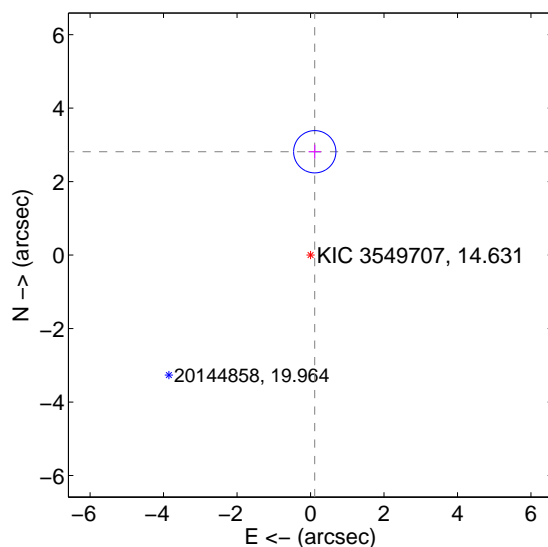
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.454 ± 0.192	12.79	-0.066 ± 0.171	2.453 ± 0.192
PRF-fit source offset from KIC position	2.816 ± 0.192	14.68	-0.115 ± 0.171	2.813 ± 0.192
photometric centroid source offset	1.86 ± 1.21	1.54	-1.38 ± 1.12	1.25 ± 1.31

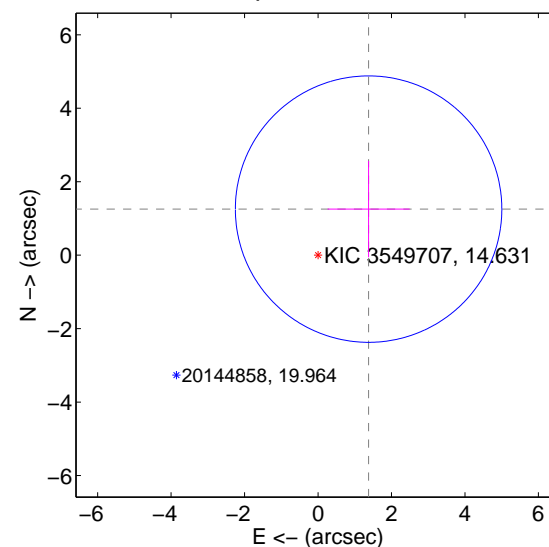
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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



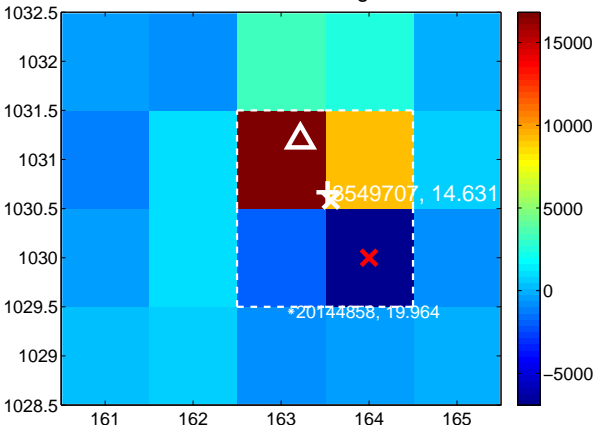
Q3 no difference image



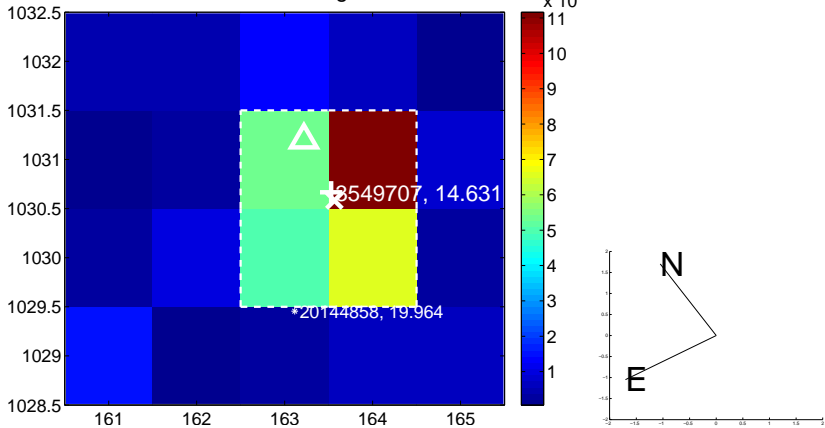
Q3 no OOT image



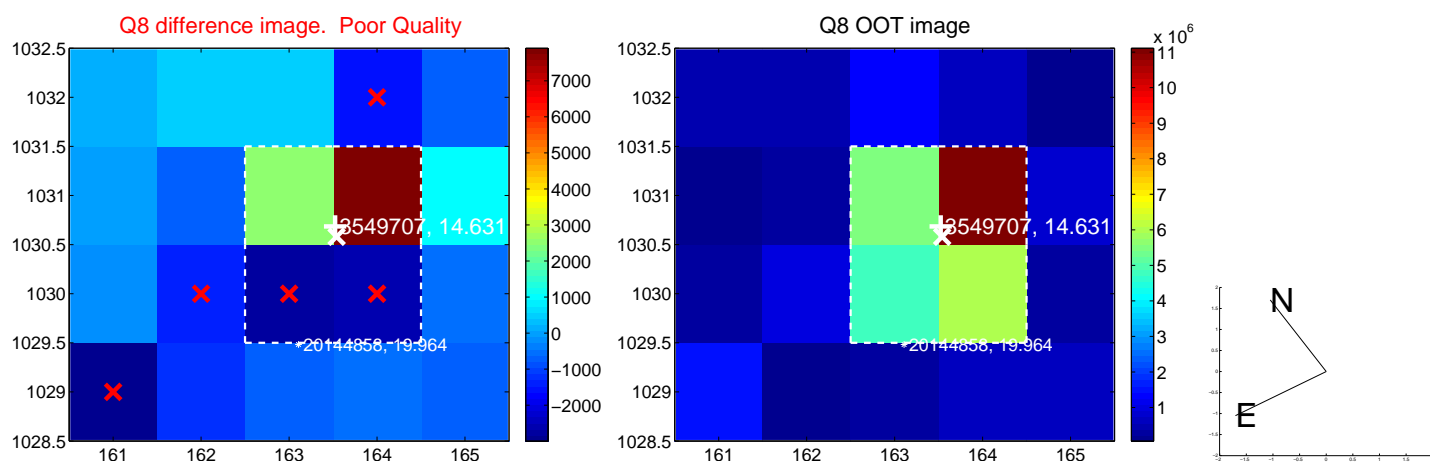
Q4 difference image



Q4 OOT image



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



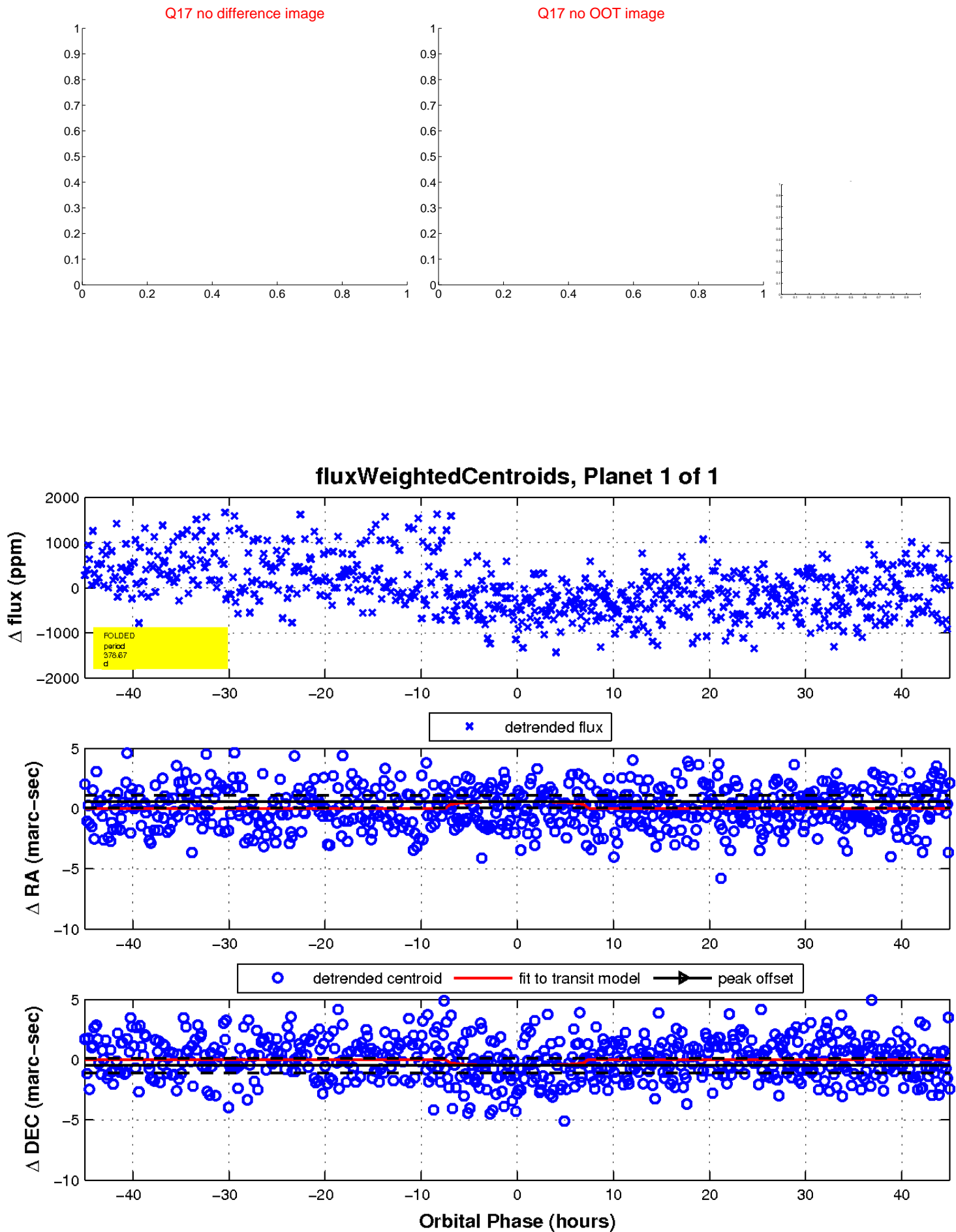
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

