

KIC 009718641

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})
009718641-01	OBS	No	152.789671	175.638611	377.9	2.943	7.1	7.4	2.05	9280	4.52	53.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009718641-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

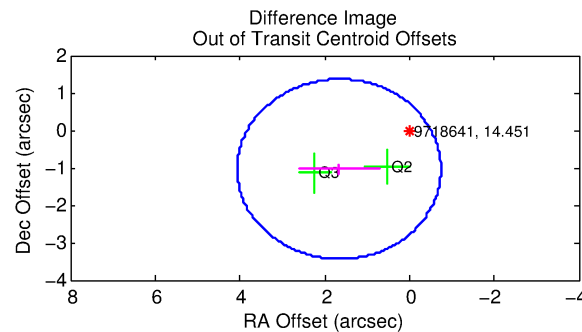
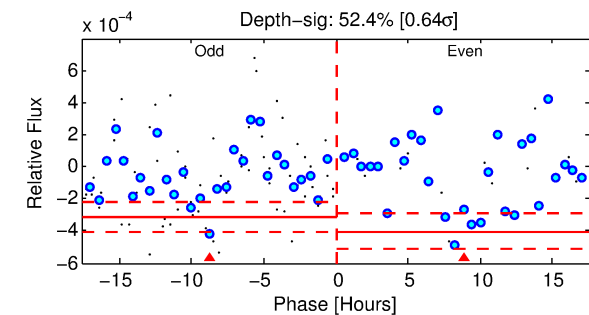
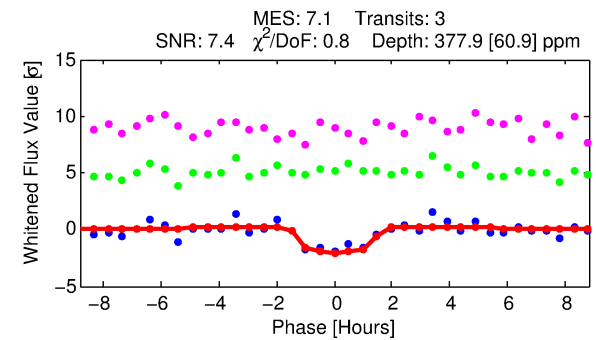
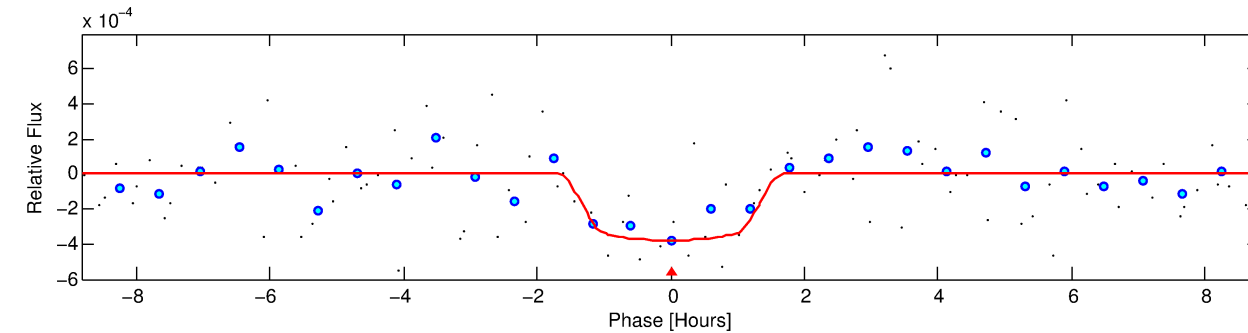
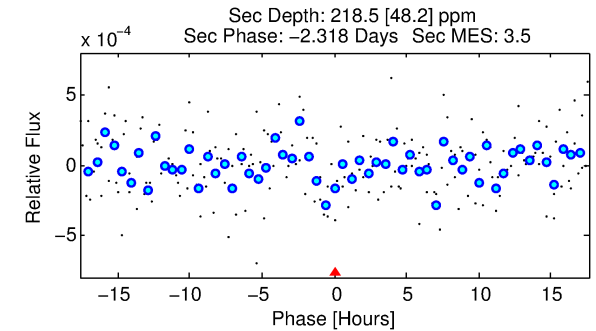
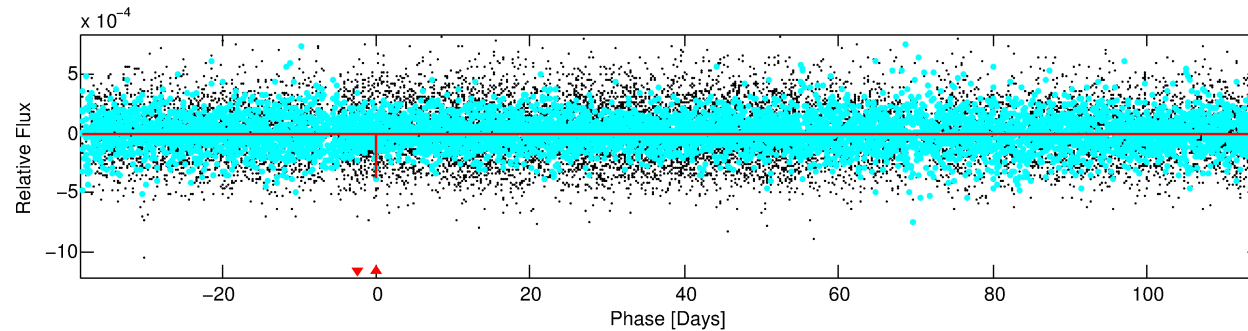
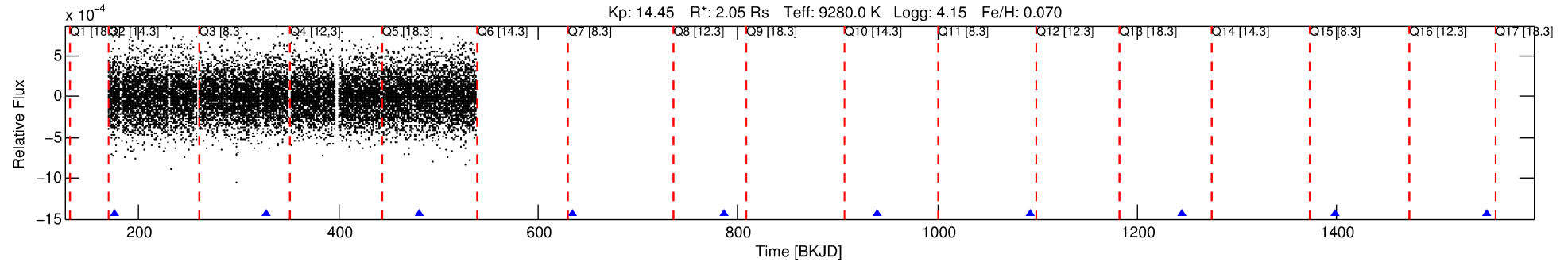
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009718641-01

No Significant Match Found

DV One-Page Summary

KIC: 9718641 Candidate: 1 of 1 Period: 152.790 d



DV Fit Results:

Period = 152.78967 [0.00736] d
Epoch = 175.6386 [0.0096] BKJD
Rp/R* = 0.0202 [0.0134]
a/R* = 207.41 [981.59]
b = 0.88 [1.27]
Seff = 53.01 [22.71]
Teq = 688 [74] K
Rp = 4.52 [3.41] Re
a = 0.7247 [0.2057] AU
Ag = 3089.97 [4310.03] [0.72σ]
Teffp = 7931 [2688] K [2.69σ]

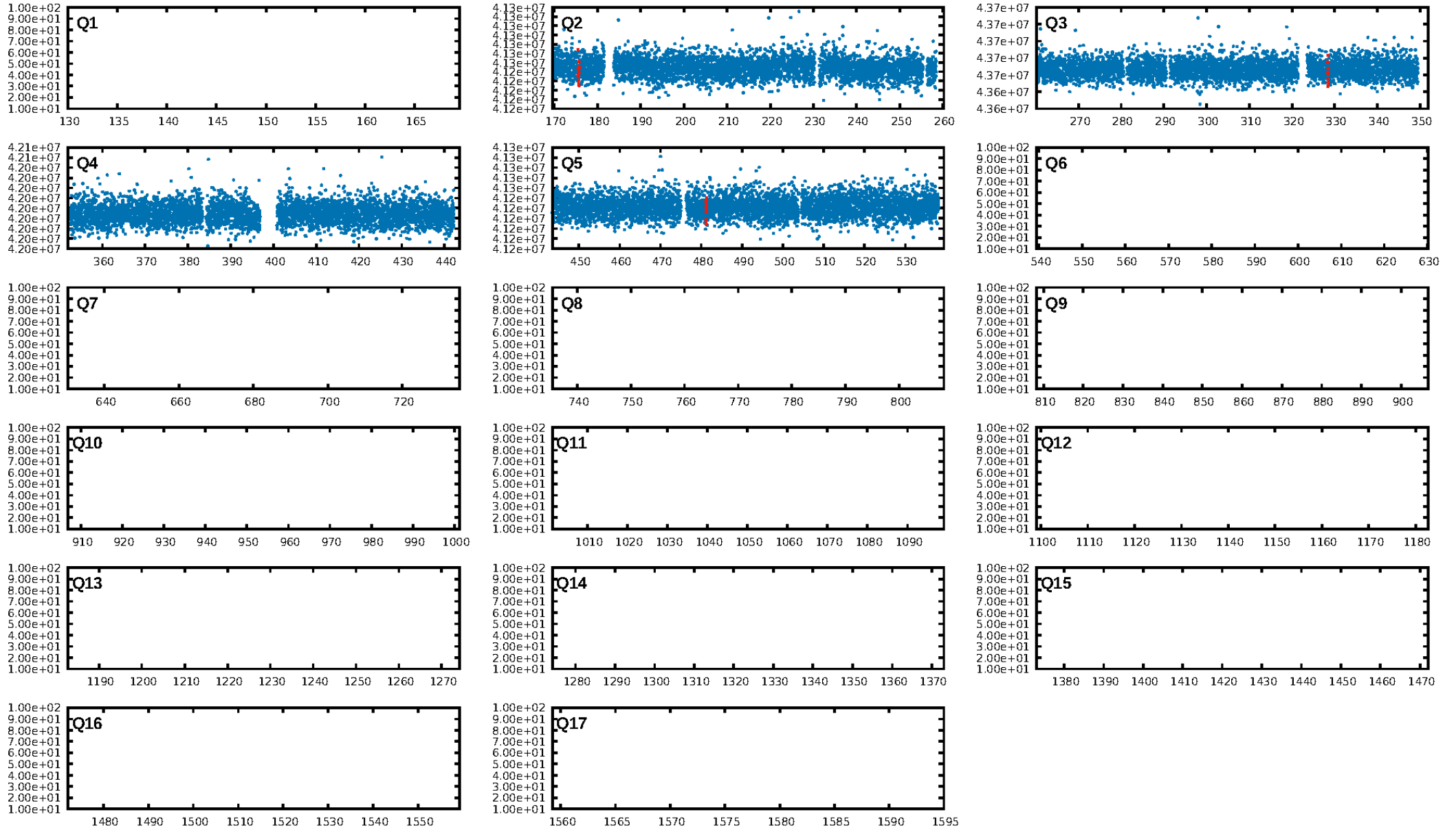
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 59.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.38e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -5.364
Centroid-sig: 52.1%
Centroid-so: 1.850 arcsec [0.78σ]
OotOffset-rm: 1.958 arcsec [2.44σ]
KicOffset-rm: 1.864 arcsec [2.46σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

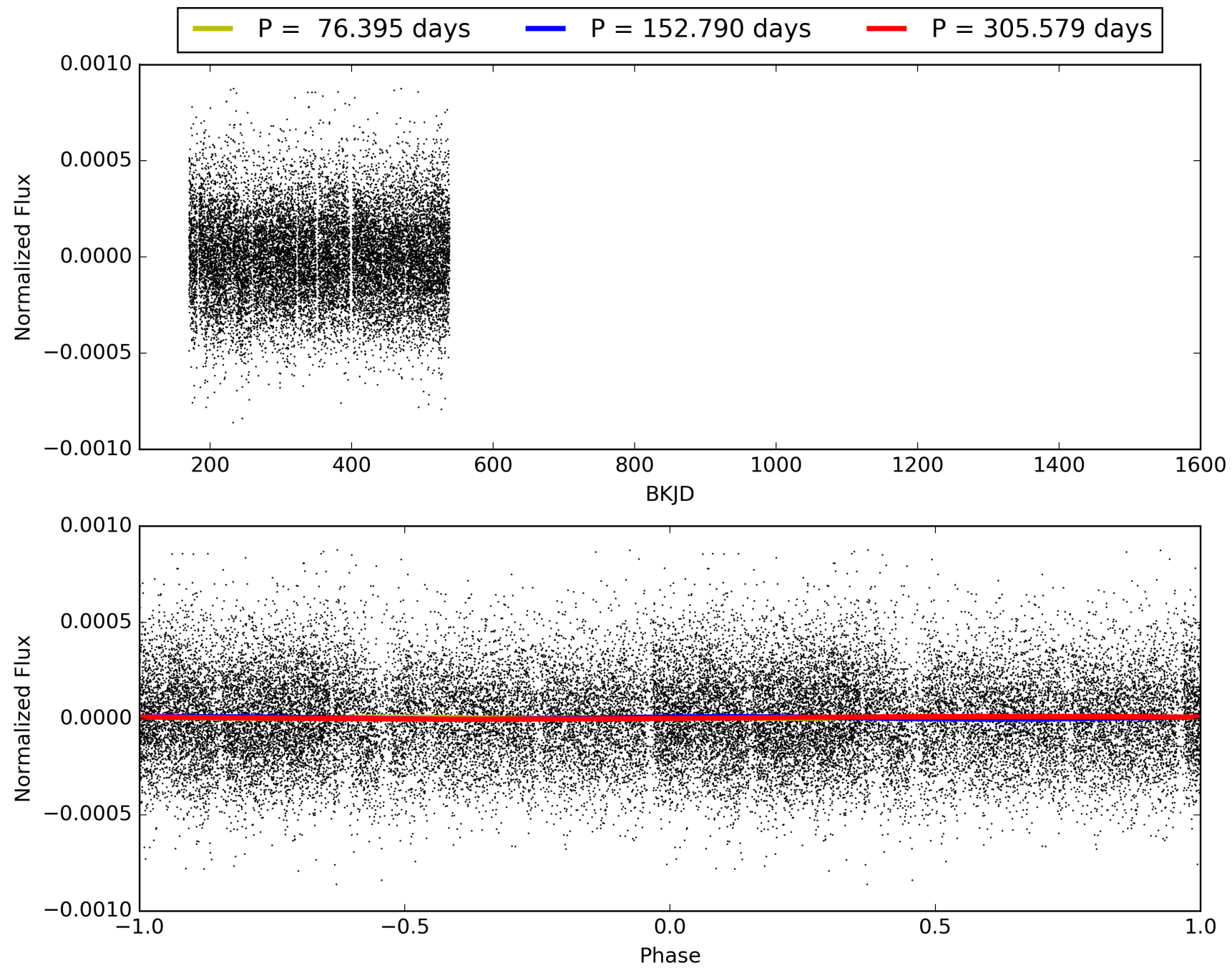
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:44:08 Z

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

TCE 009718641-01, PDC Light Curves

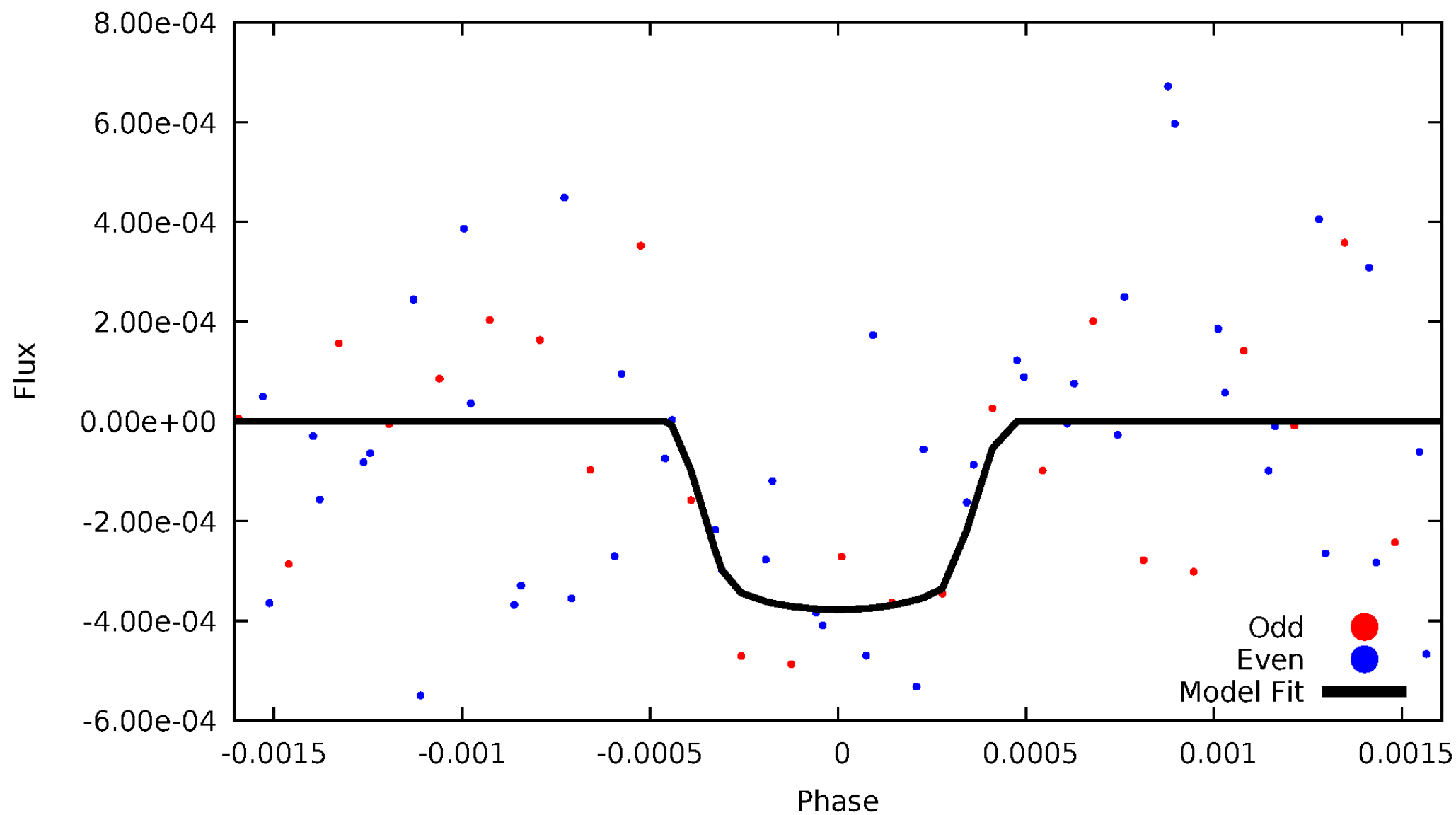


TCE 009718641-01



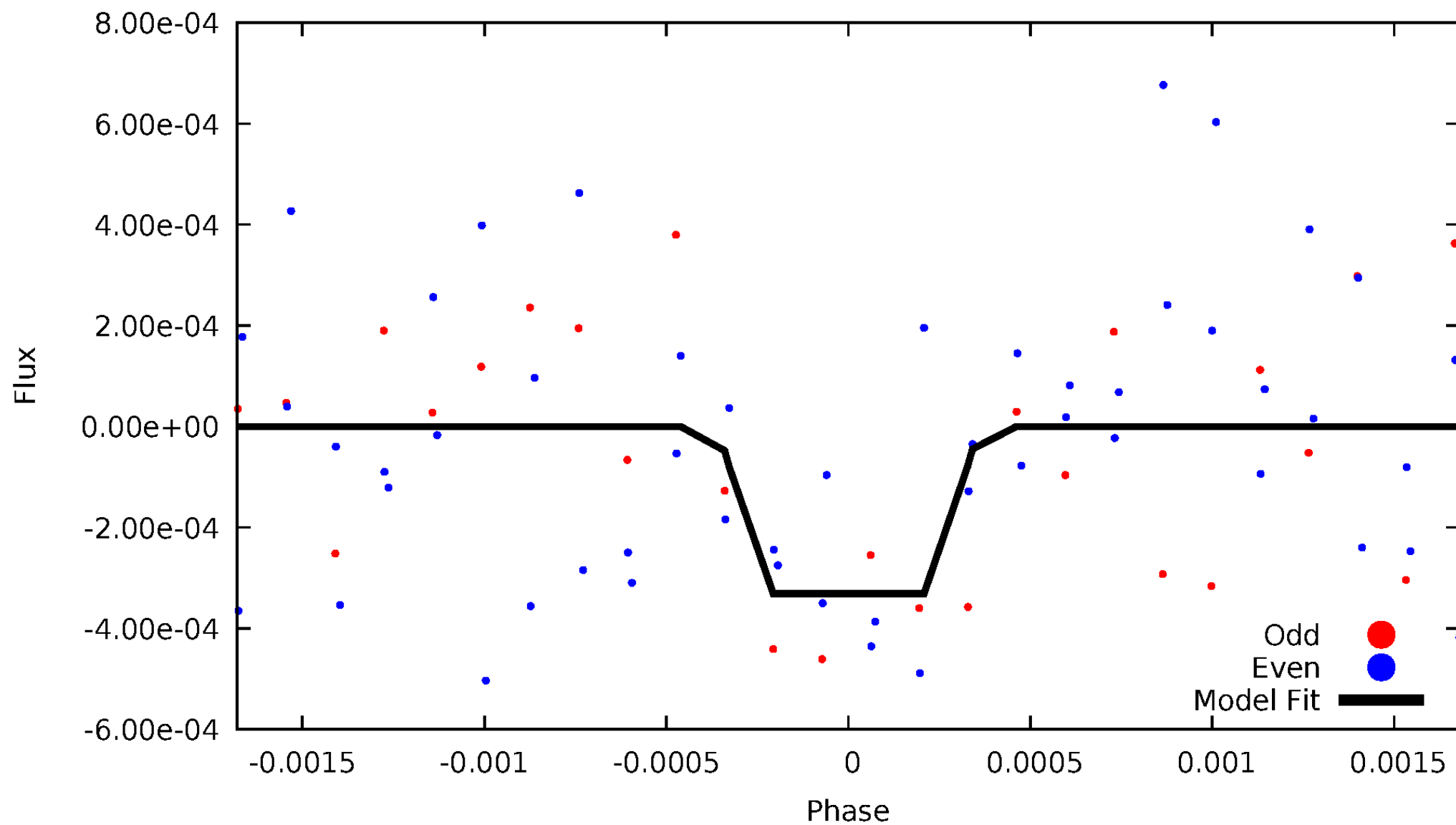
DV Odd/Even

TCE 009718641-01

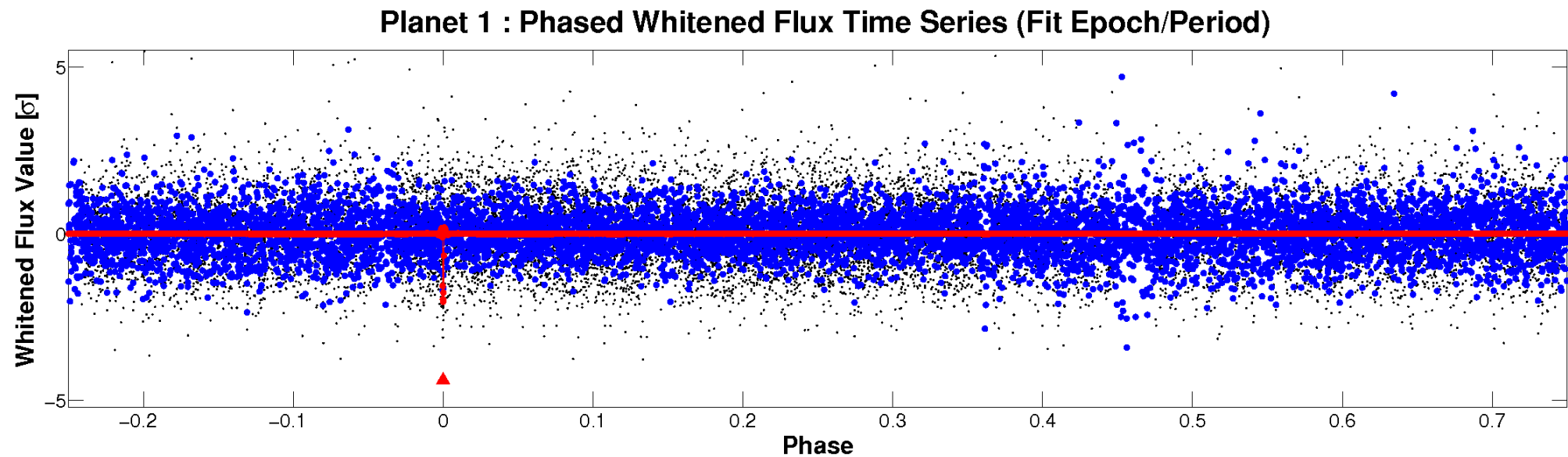
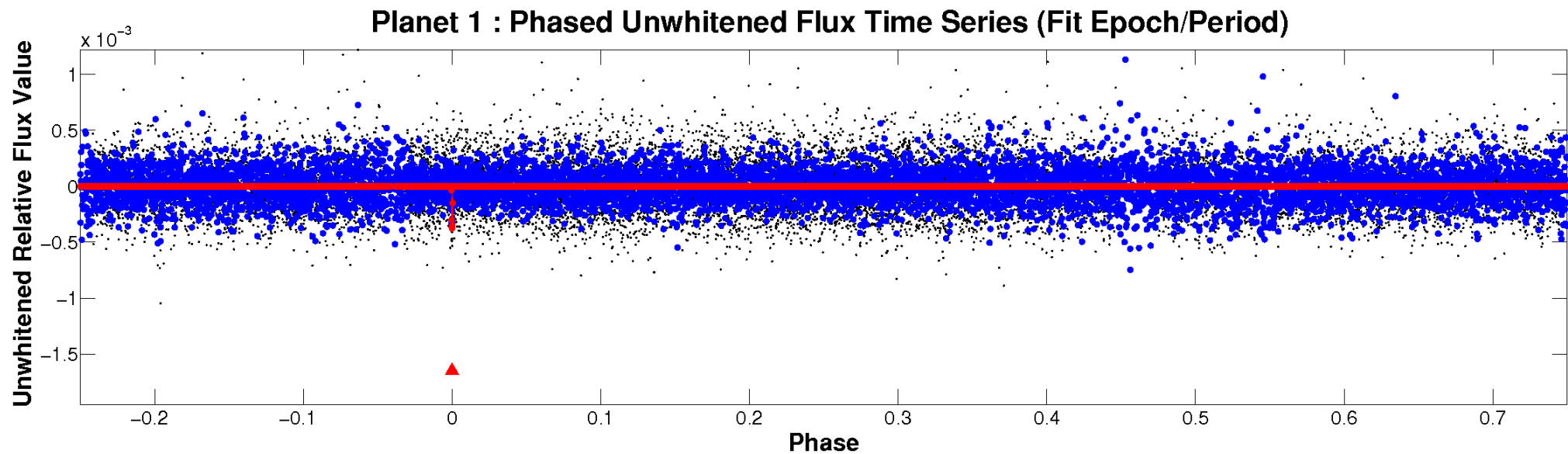


ALT Odd/Even

TCE 009718641-01

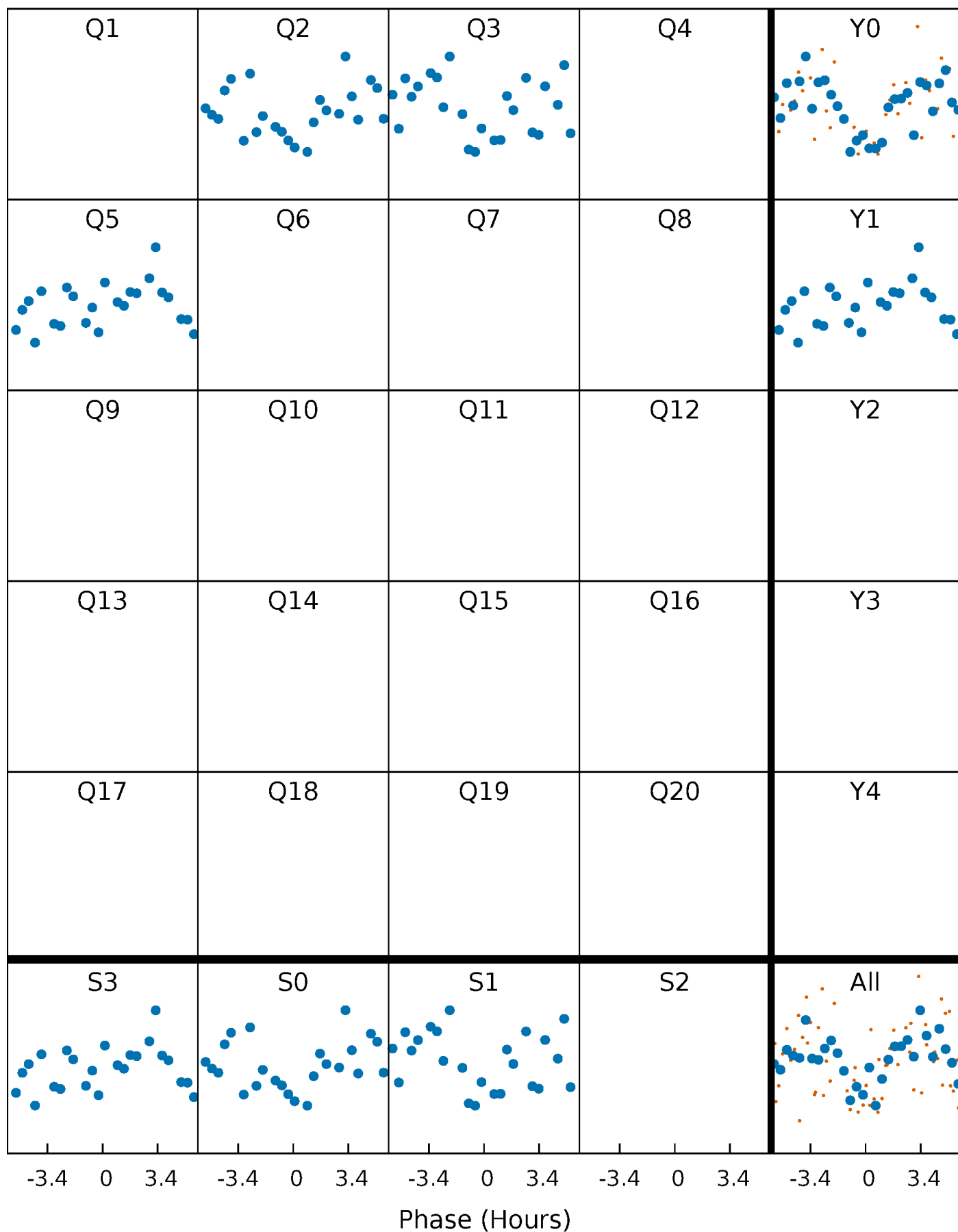


Non-Whitened Vs. Whitened Light Curve



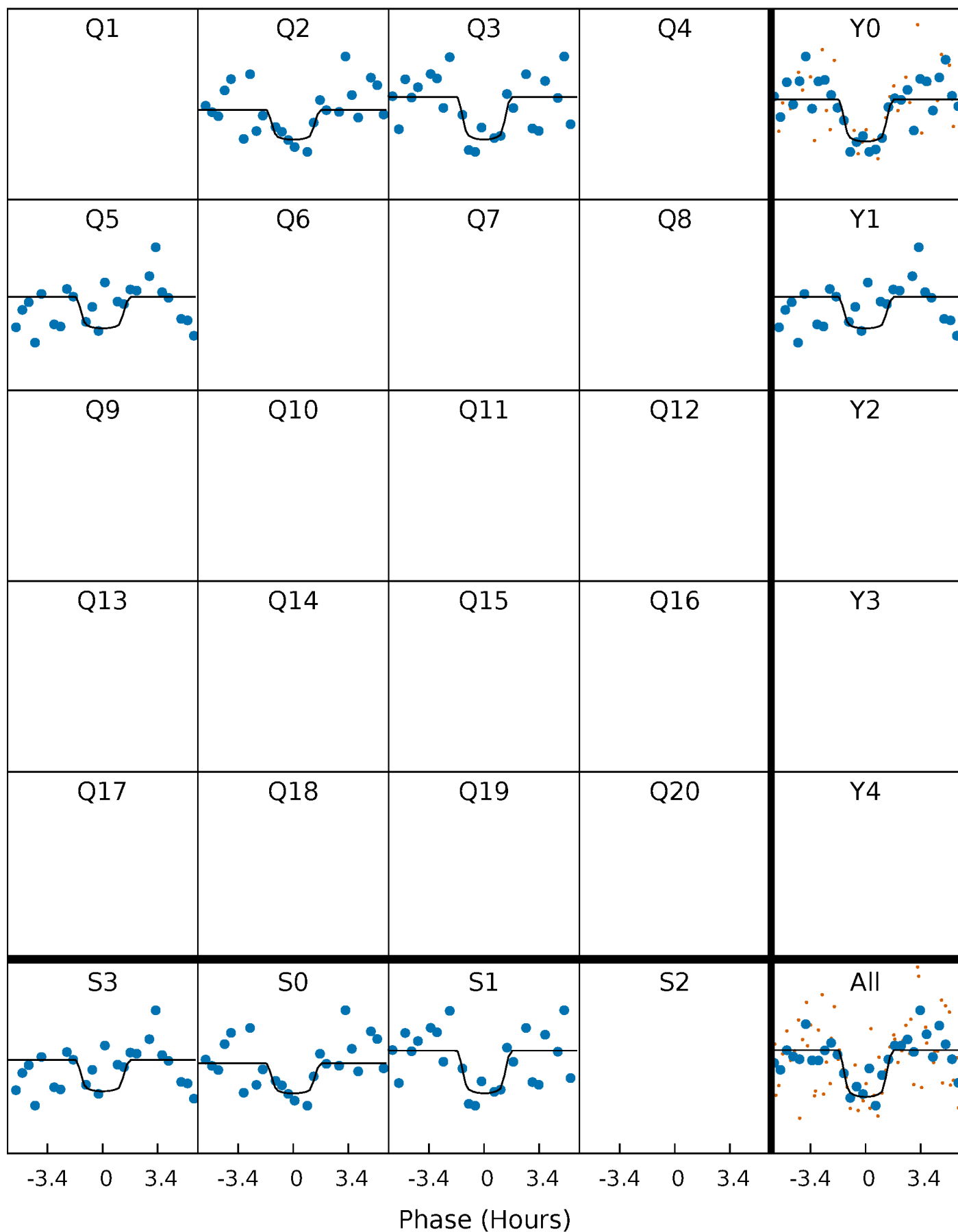
PDC Quarter-Phased Transit Curves

TCE 009718641-01 P=152.789671 Days $T_0=175.638611$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009718641-01 P=152.789671 Days $T_0=175.638611$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

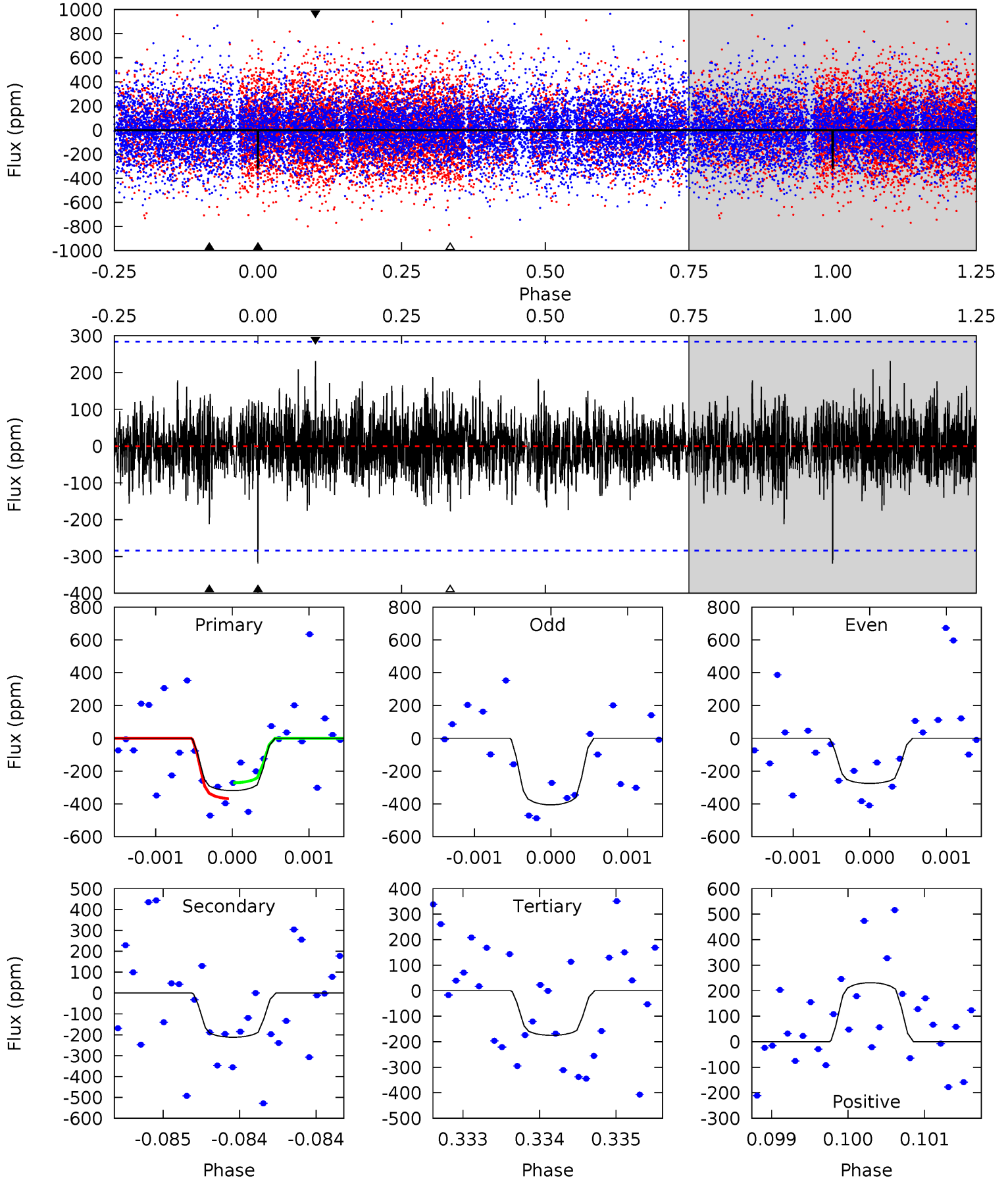
TCE 009718641-01 P=152.780001 Days $T_0=175.640429$ (BKJD)



DV Model-Shift Uniqueness Test

009718641-01, P = 152.789671 Days, E = 22.848940 Days

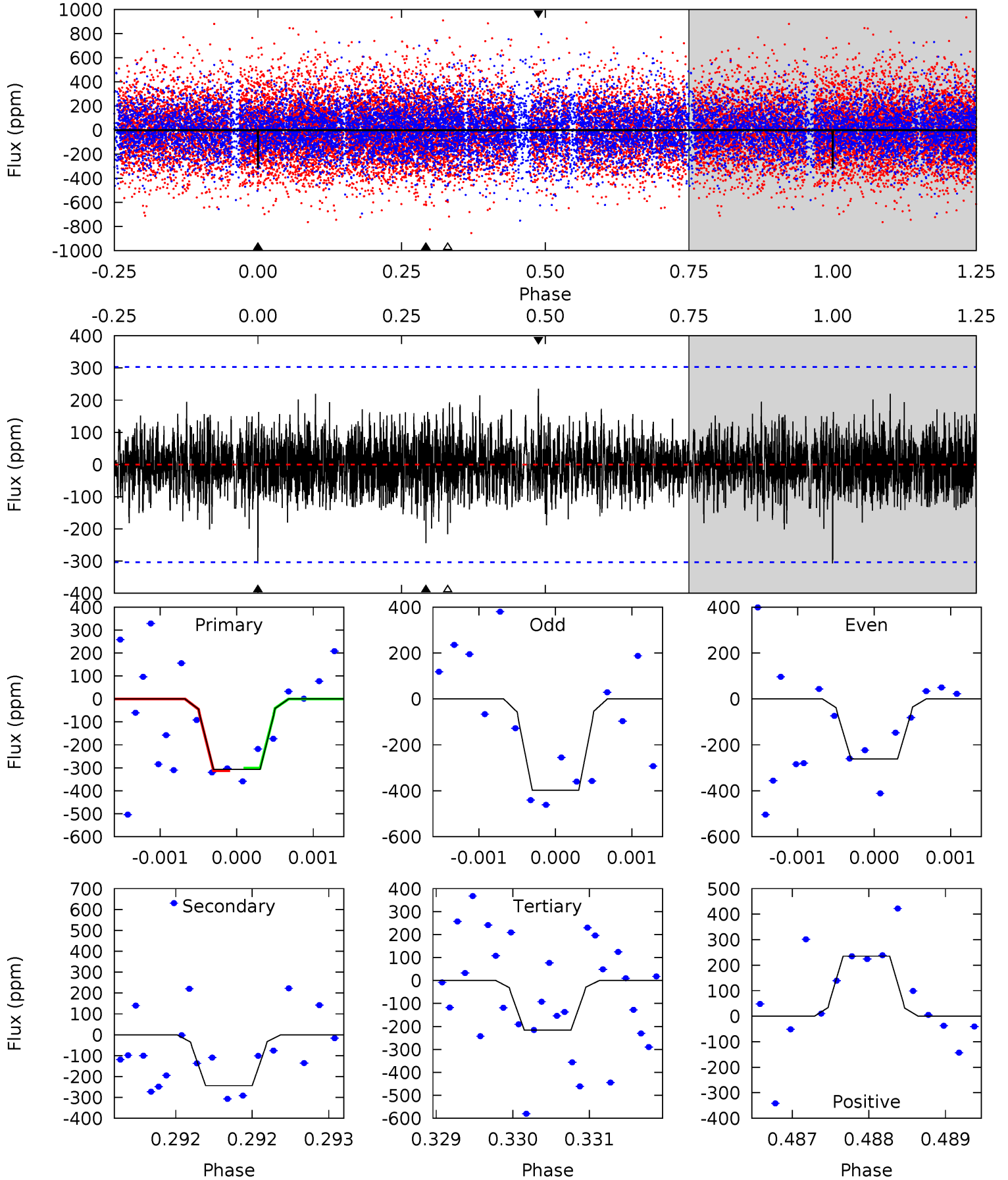
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.16	4.09	3.38	4.46	5.48	3.34	1.07	2.78	1.70	0.71	-0.38	1.20	0.79	0.42	0.94



Alt Model-Shift Uniqueness Test

009718641-01, P = 152.780001 Days, E = 22.860428 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.59	4.43	3.94	4.28	5.52	3.40	1.10	1.65	1.30	0.49	0.15	1.15	0.79	0.43	0.10



Stellar Parameters For KIC 009718641

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9280^{+263}_{-451}	$4.153^{+0.128}_{-0.192}$	$0.070^{+0.150}_{-0.700}$	$2.047^{+0.745}_{-0.497}$	$2.175^{+0.395}_{-0.592}$	$0.357^{+0.288}_{-0.184}$
	+3%/-5%	+3%/-5%	+214%/-1000%	+36%/-24%	+18%/-27%	+81%/-52%
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 009718641-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-212 ± 52	$4.61^{+2.78}_{-2.63}$	962^{+78}_{-67}	7432^{+5660}_{-1754}	2767^{+11660}_{-1755}
Alt.	-243 ± 55	$4.39^{+3.36}_{-2.52}$	970^{+74}_{-65}	7913^{+6996}_{-2018}	3393^{+14369}_{-2301}

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 $A_{obs} \gg 1.0$

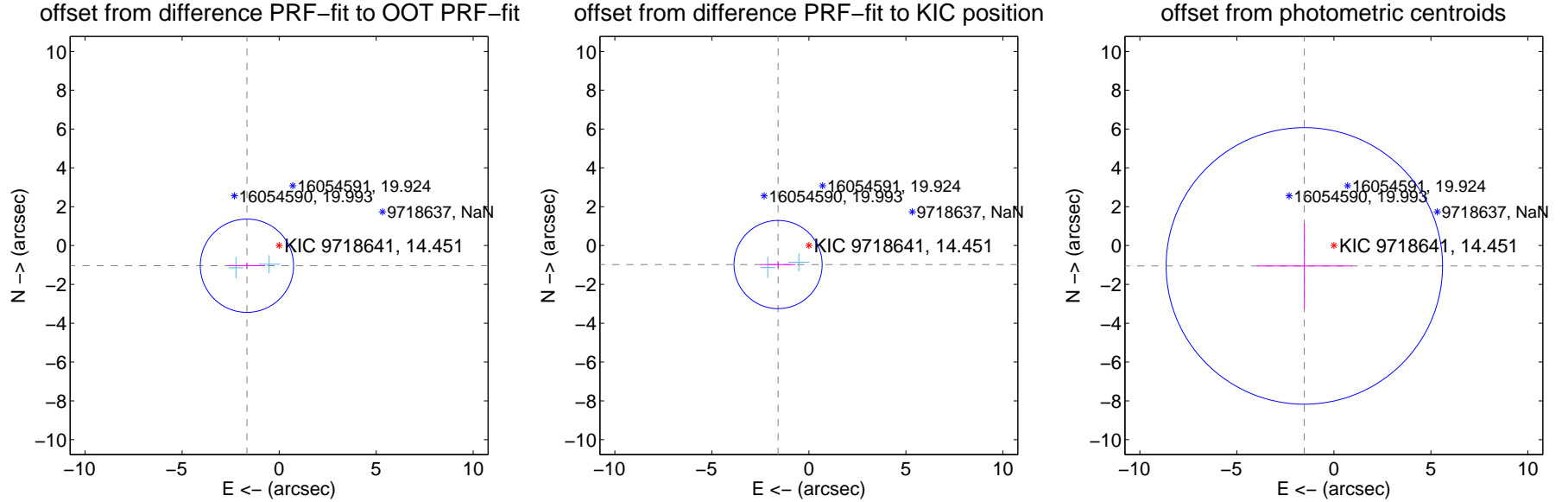
DV Centroid Data

Supplemental centroid analysis for 009718641-01. Kepler magnitude: 14.45. Transit SNR 7.36

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.958 ± 0.801	2.44	1.659 ± 0.942	-1.039 ± 0.123
PRF-fit source offset from KIC position	1.864 ± 0.757	2.46	1.587 ± 0.883	-0.979 ± 0.171
photometric centroid source offset	1.85 ± 2.37	0.78	1.52 ± 2.45	-1.05 ± 2.20



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.

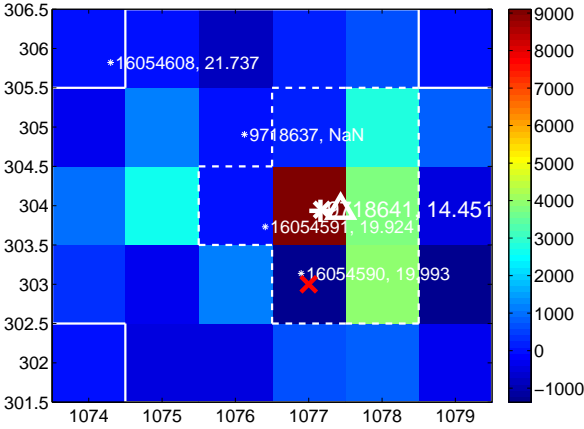
Q1 no difference image



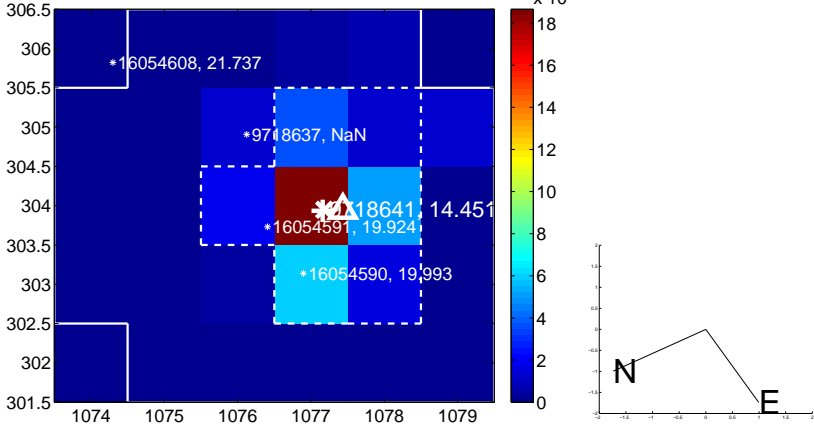
Q1 no OOT image



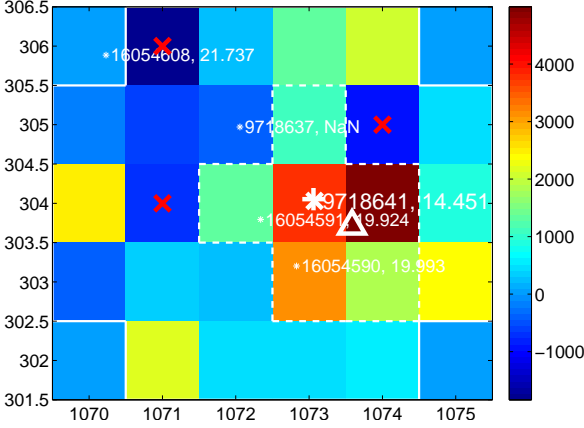
Q2 difference image



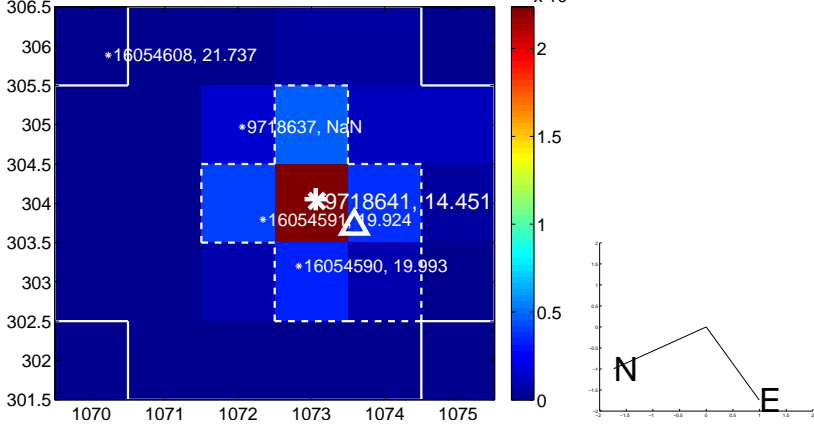
Q2 OOT image



Q3 difference image



Q3 OOT image



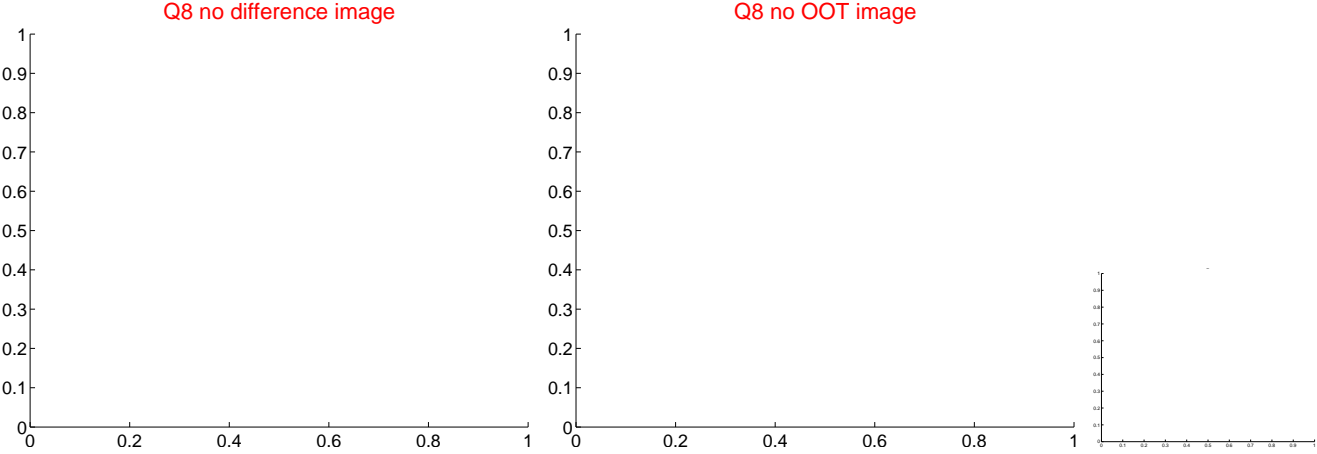
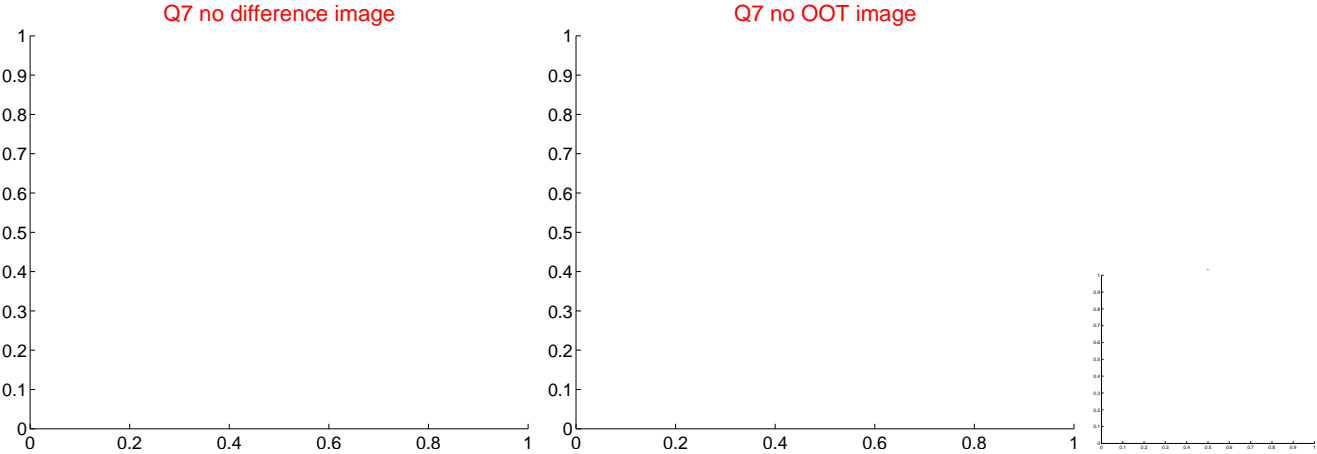
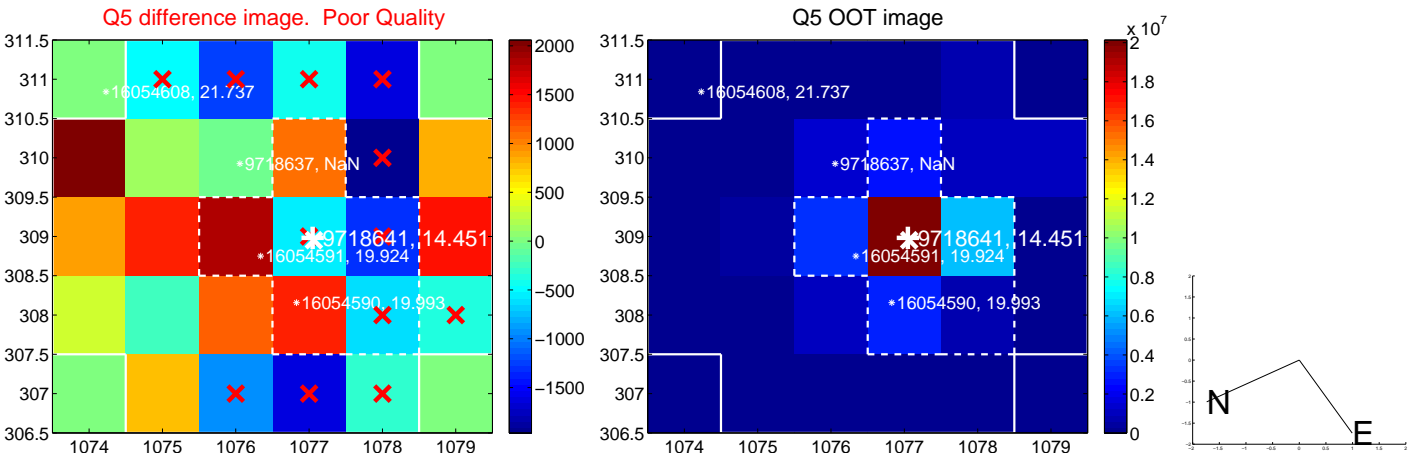
Q4 no difference image



Q4 no OOT image



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



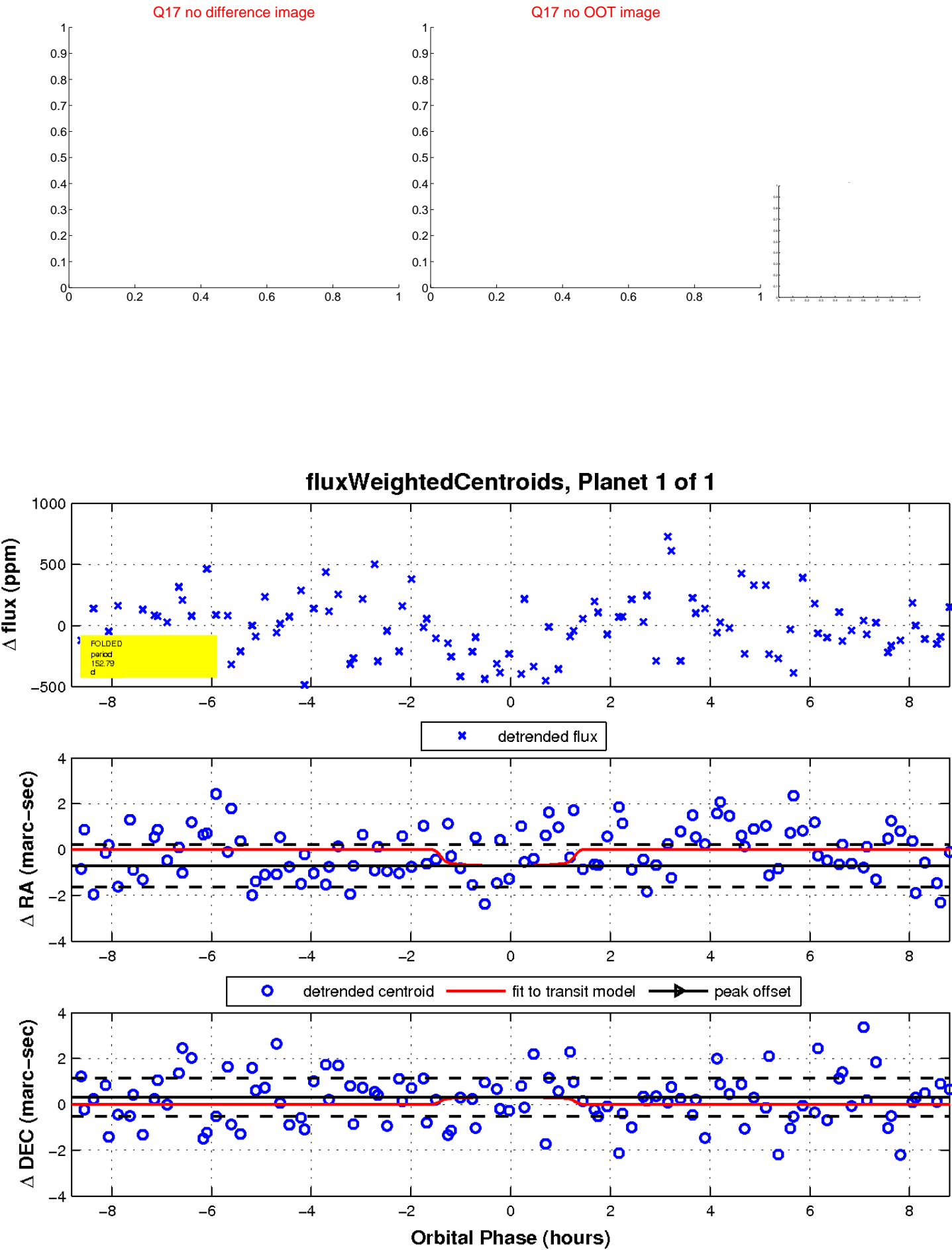
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

