

KIC 009667178

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})
009667178-01	OBS	No	319.275964	152.511321	91.5	2.845	13.8	5.0	153.06	3286	185.83	2691.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009667178-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

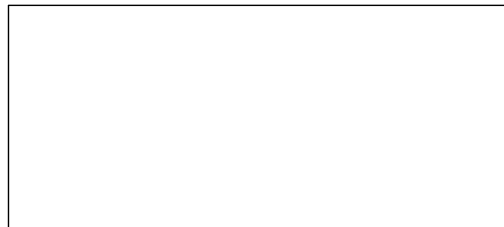
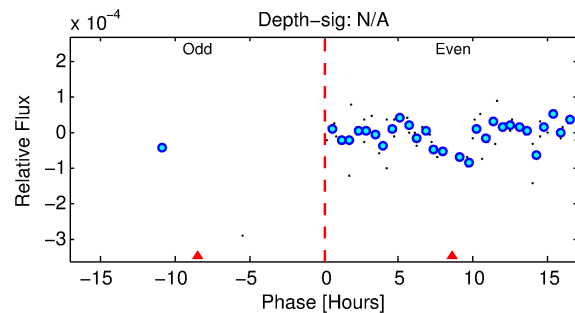
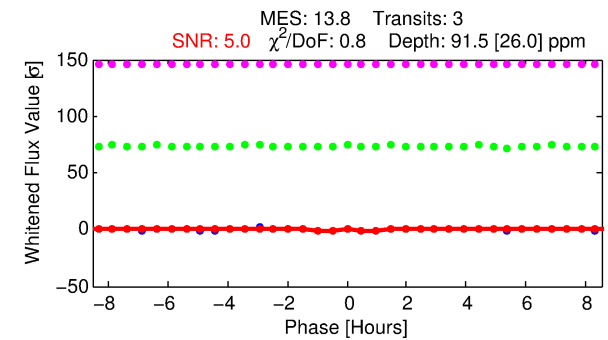
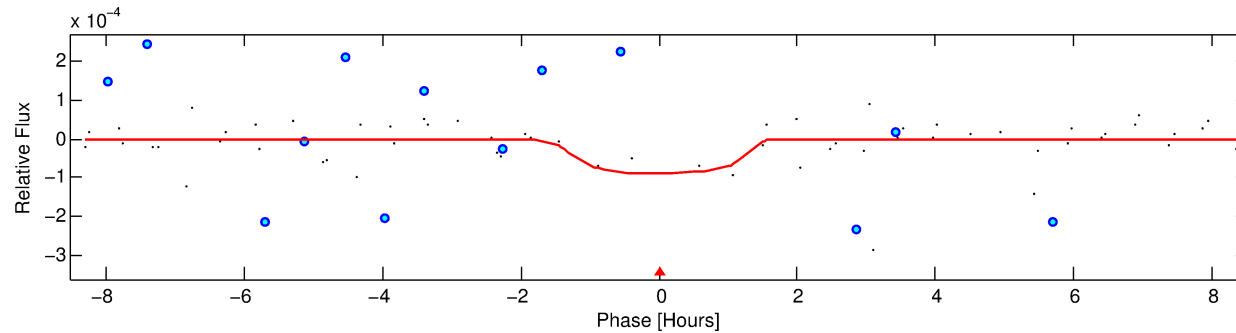
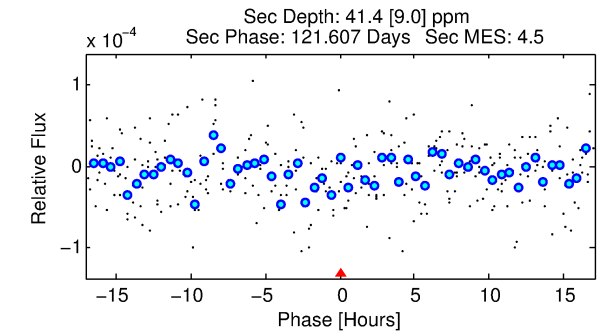
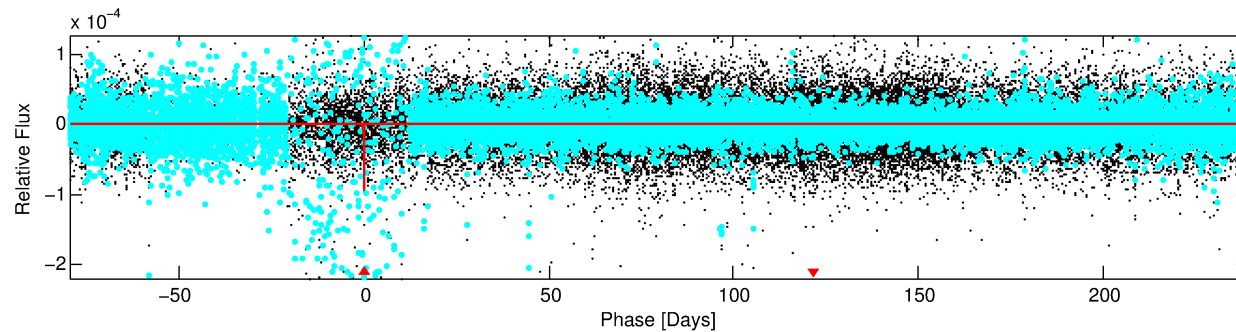
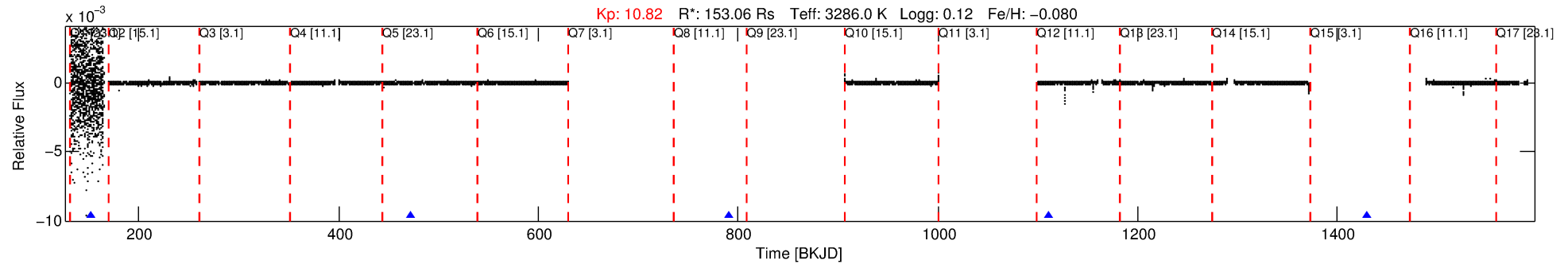
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009667178-01

No Significant Match Found

DV One-Page Summary

KIC: 9667178 Candidate: 1 of 1 Period: 319.276 d



DV Fit Results:

Period = 319.27596 [0.00583] d
Epoch = 152.5113 [0.0124] BKJD
Rp/R* = 0.0111 [0.0212]
a/R* = 409.52 [2462.62]
b = 0.89 [1.43]
Seff = 2691.00 [966.39]
Teq = 1837 [165] K
Rp = 185.83 [355.92] Re
a = 0.9536 [0.1859] AU
Ag = 0.60 [2.30] [-0.17σ]
Teffp = 2498 [2388] K [0.28σ]

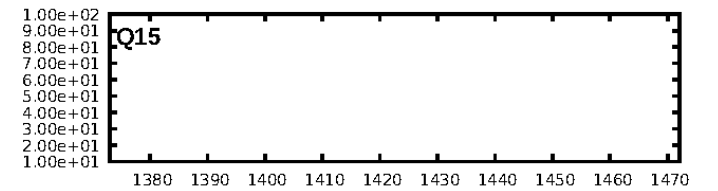
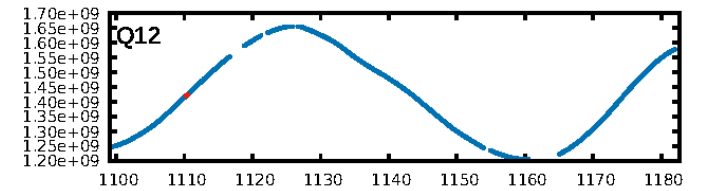
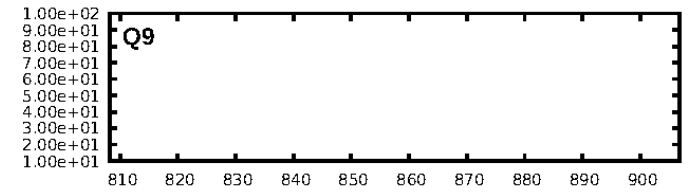
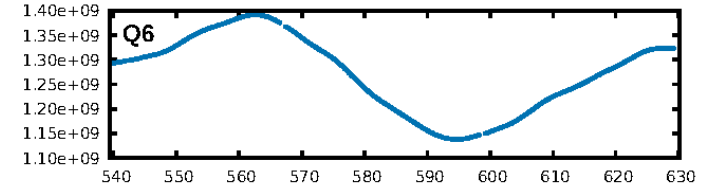
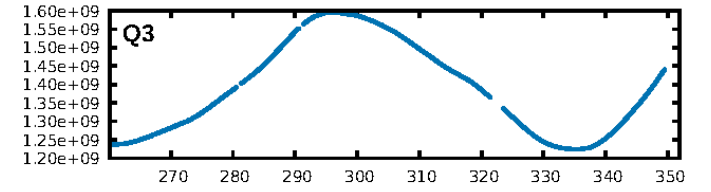
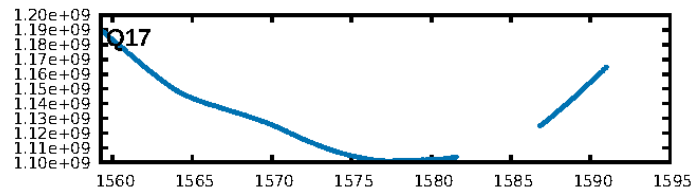
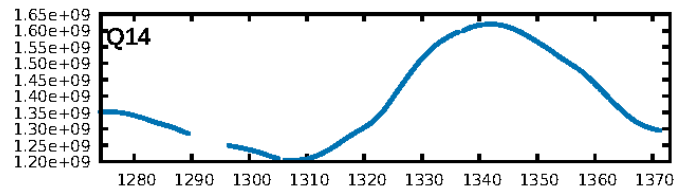
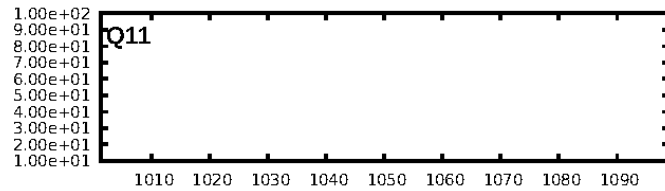
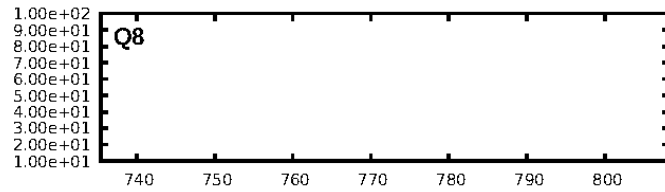
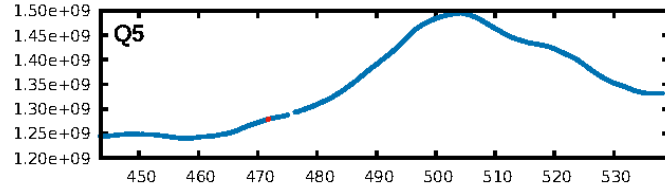
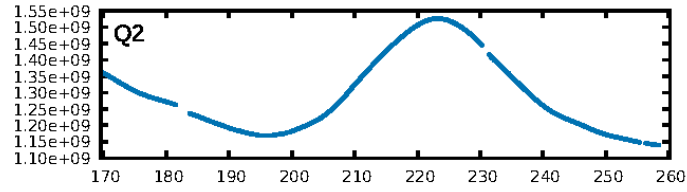
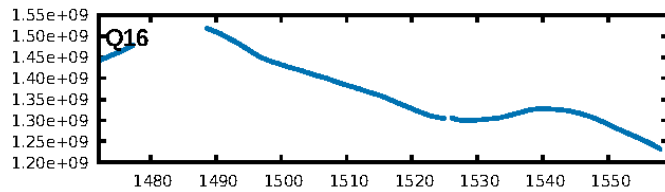
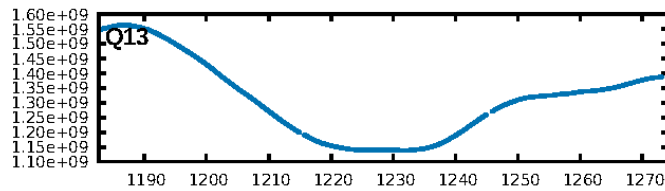
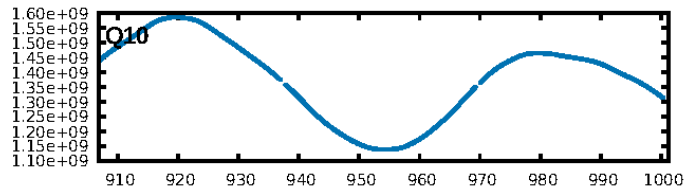
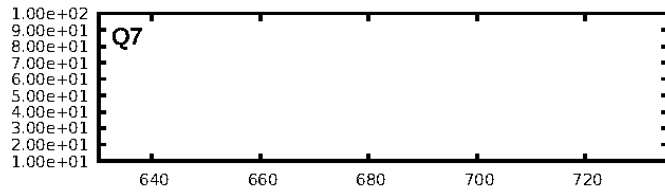
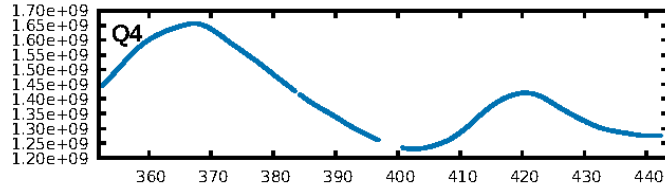
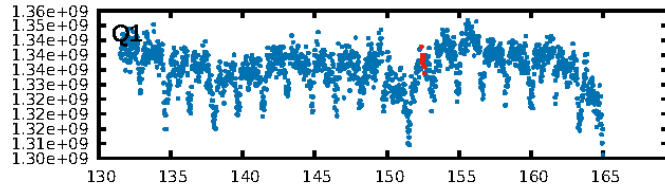
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 87.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.72e-04
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -0.2318
Centroid-sig: 19.5%
Centroid-so: 14.623 arcsec [1.21σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

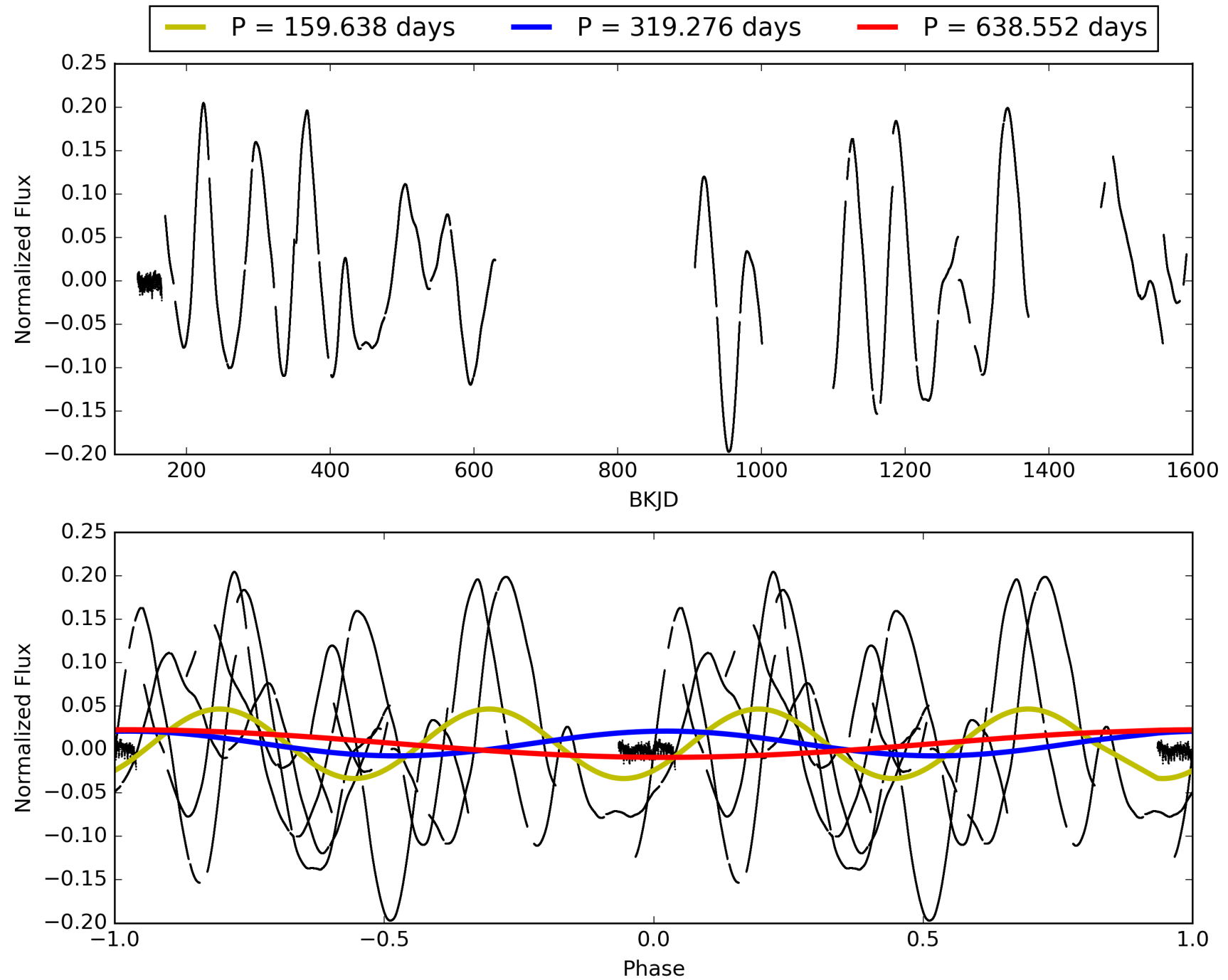
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:23:33 Z

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

TCE 009667178-01, PDC Light Curves

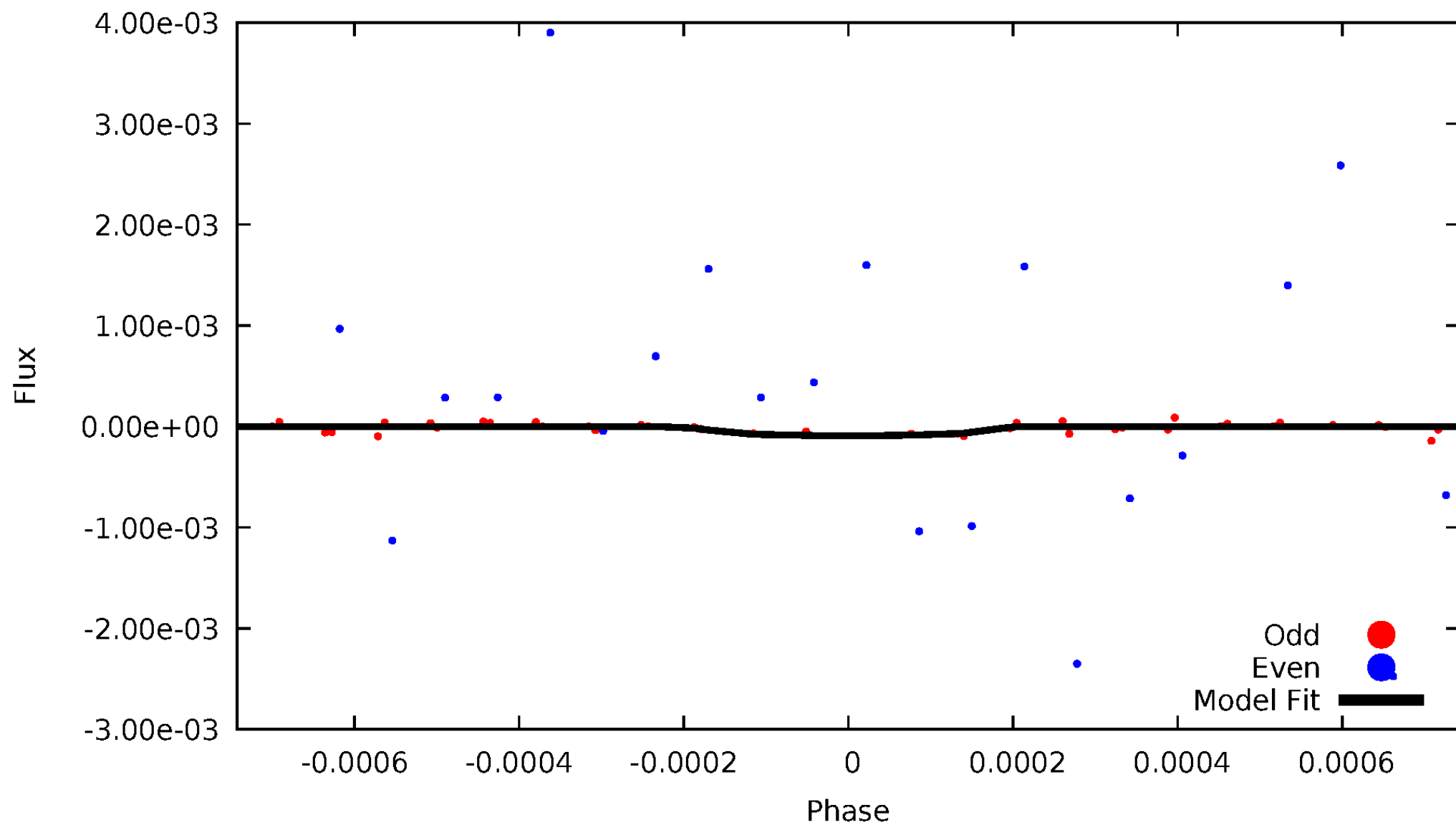


TCE 009667178-01



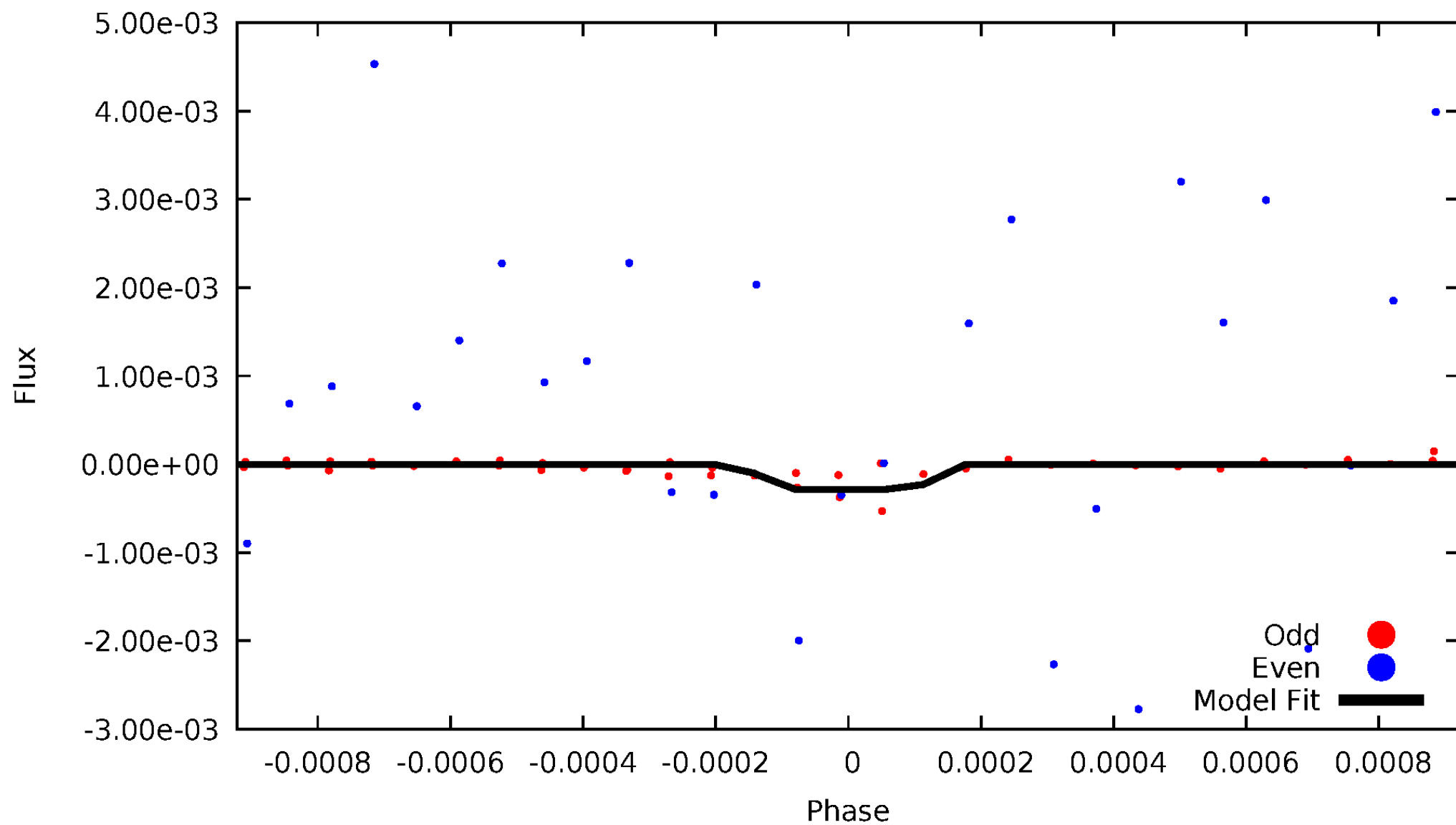
DV Odd/Even

TCE 009667178-01

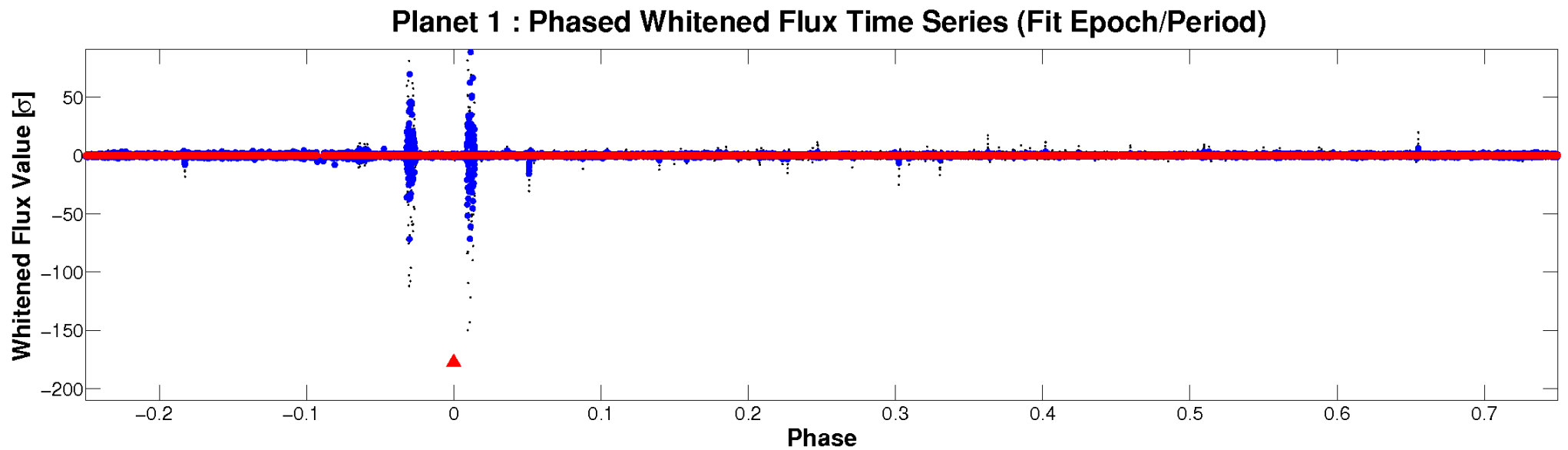
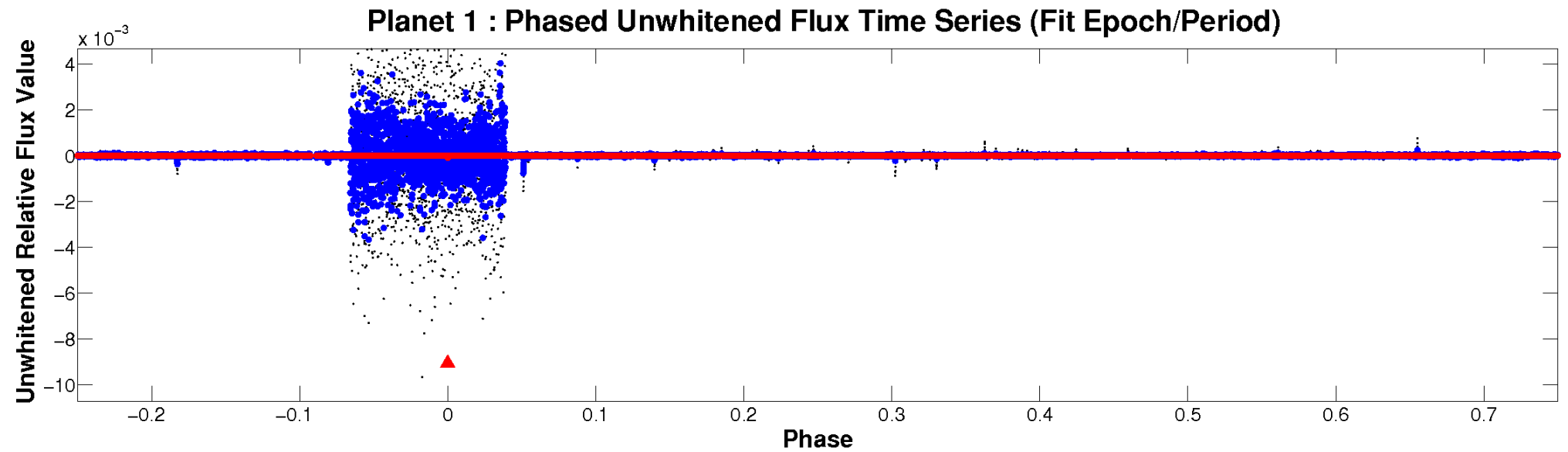


ALT Odd/Even

TCE 009667178-01

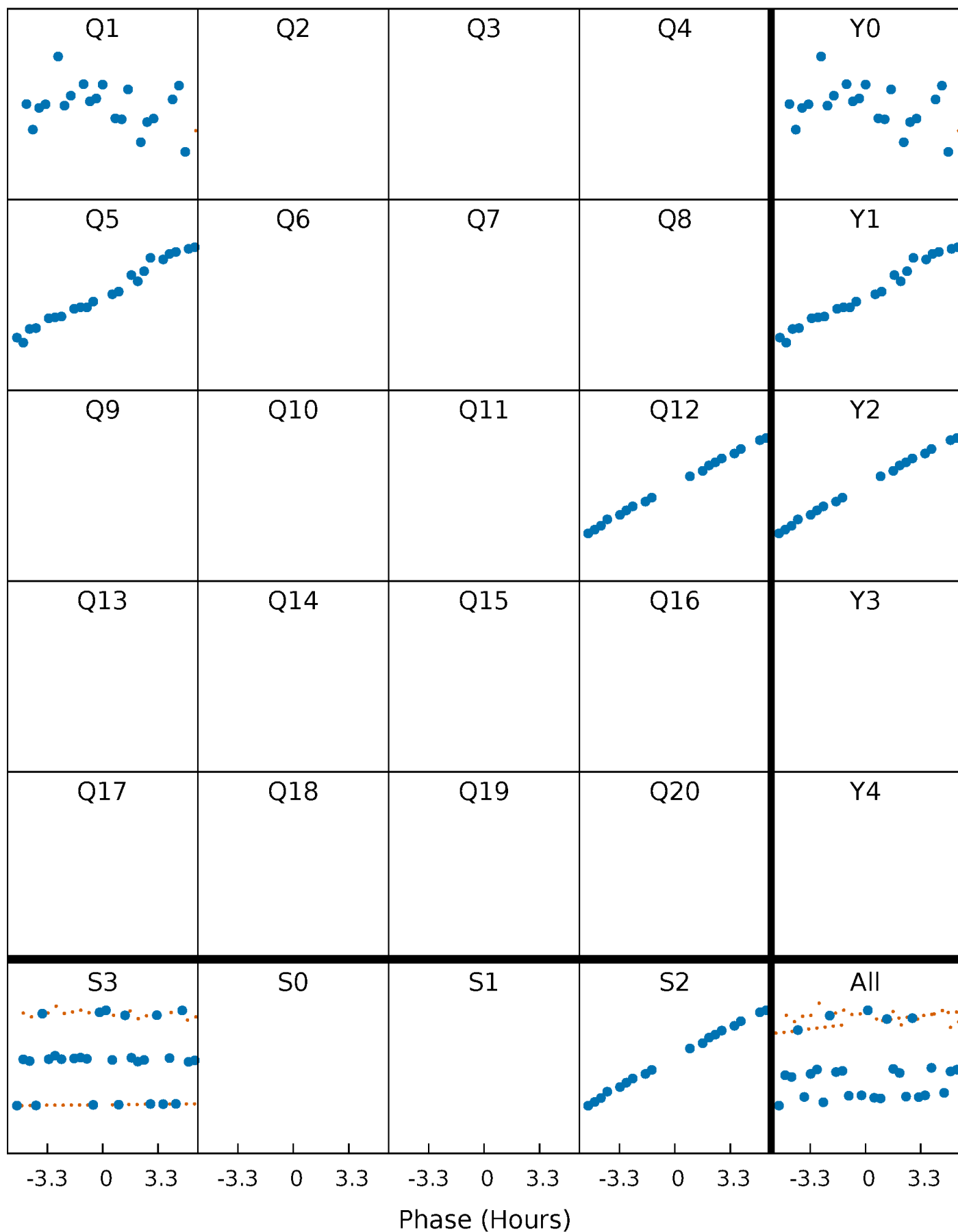


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 009667178-01 P=319.275964 Days $T_0=152.511321$ (BKJD)



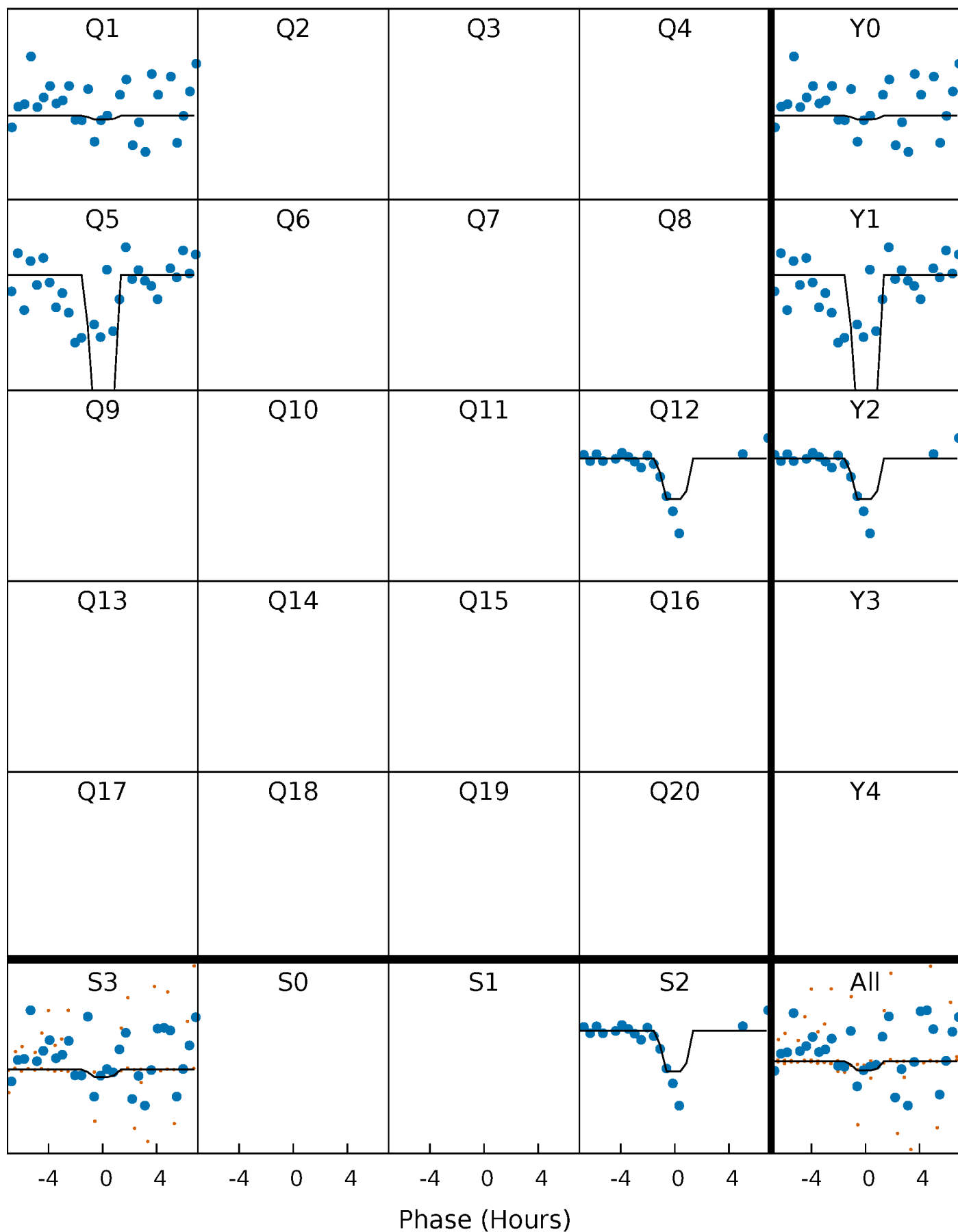
DV Quarter-Phased Transit Curves

TCE 009667178-01 P=319.275964 Days $T_0=152.511321$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

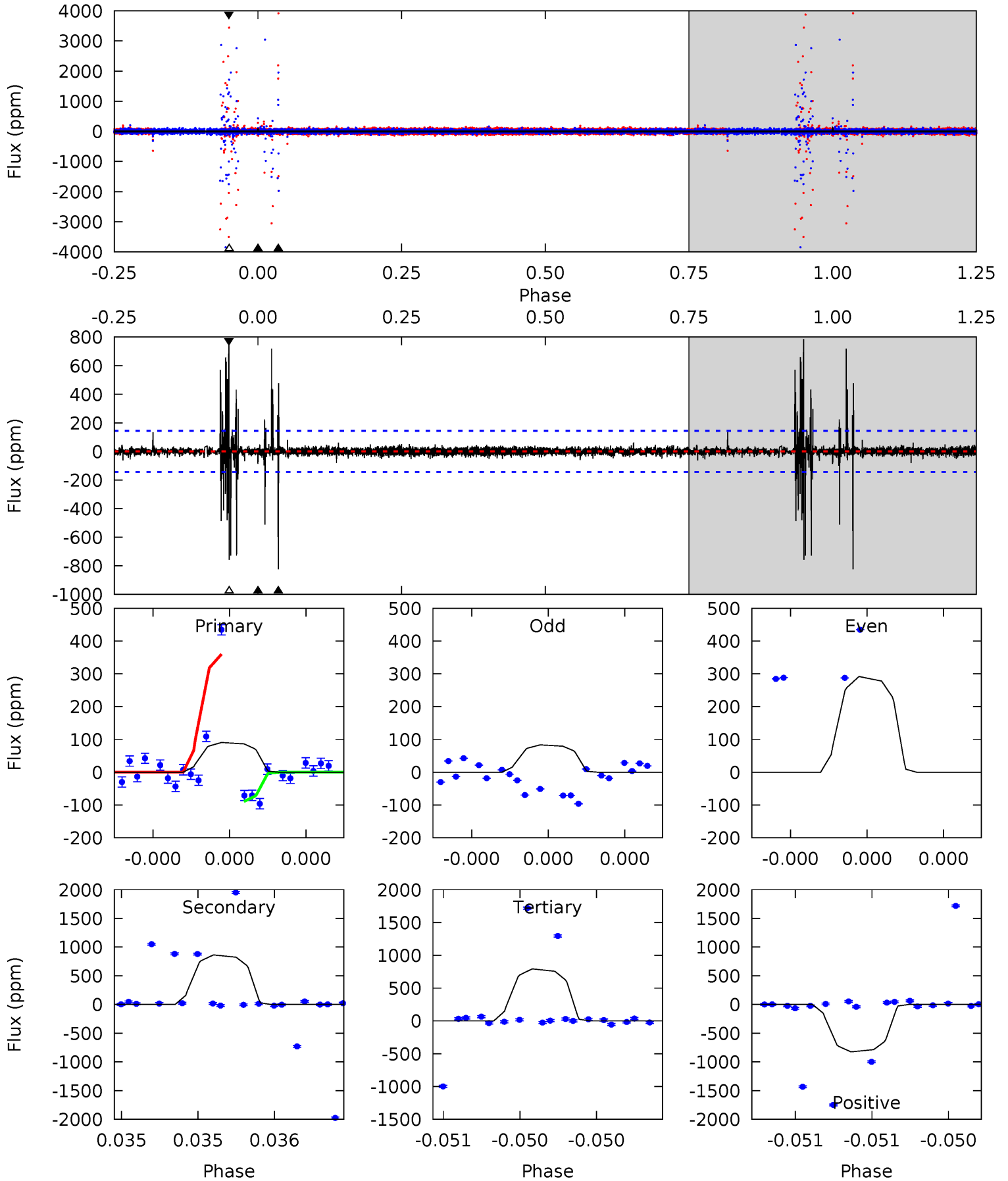
TCE 009667178-01 P=319.213074 Days $T_0=152.623857$ (BKJD)



DV Model-Shift Uniqueness Test

009667178-01, P = 319.275964 Days, E = 152.511321 Days

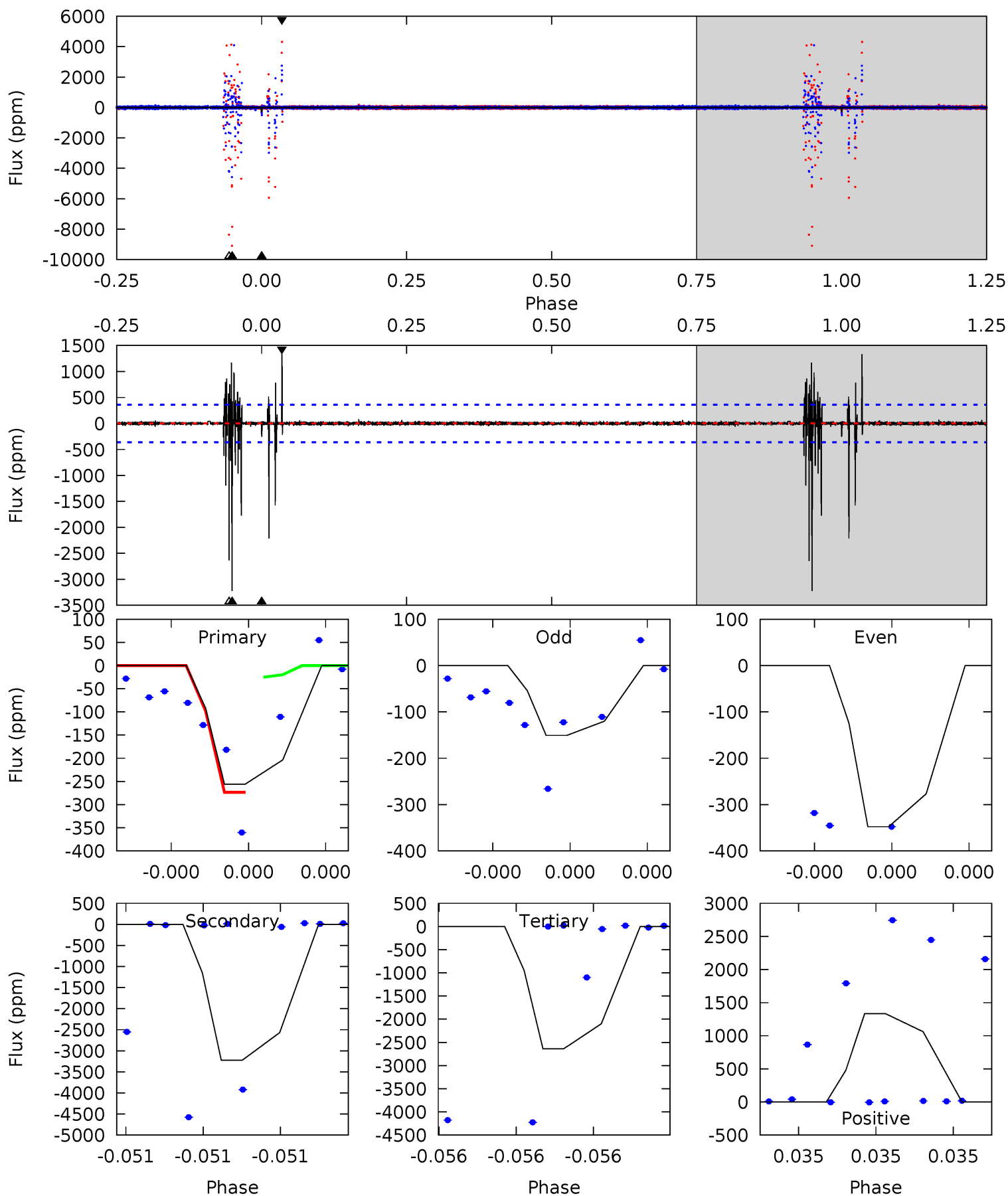
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.37	32.1	29.5	30.7	5.61	3.54	1.21	-26.1	-27.3	2.64	1.47	1.15	-0.61	0.49	4.10



Alt Model-Shift Uniqueness Test

009667178-01, P = 319.213074 Days, E = 152.623857 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.03	50.8	41.5	21.0	5.69	3.66	1.09	-37.5	-17.0	9.27	29.8	0.35	0.82	0.29	2.21



Stellar Parameters For KIC 009667178

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3286^{+117}_{-88}	$0.123^{+0.200}_{-0.050}$	$-0.080^{+0.250}_{-0.150}$	$153.058^{+9.192}_{-27.576}$	$1.134^{+0.191}_{-0.143}$	$0.000^{+0.000}_{-0.000}$
	+4%/-3%	+163%/-41%	+312%/-188%	+6%/-18%	+17%/-13%	+86%/-14%
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 009667178-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-824 ± 26	$310.68^{+289.46}_{-210.88}$	2519^{+128}_{-125}	3720^{+2093}_{-789}	$4.395^{+38.300}_{-3.225}$
Alt.	-3225 ± 63	$356.58^{+334.67}_{-250.70}$	2529^{+117}_{-131}	4561^{+3865}_{-1006}	13^{+135}_{-9}

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 $A_{obs} \gg 1.0$

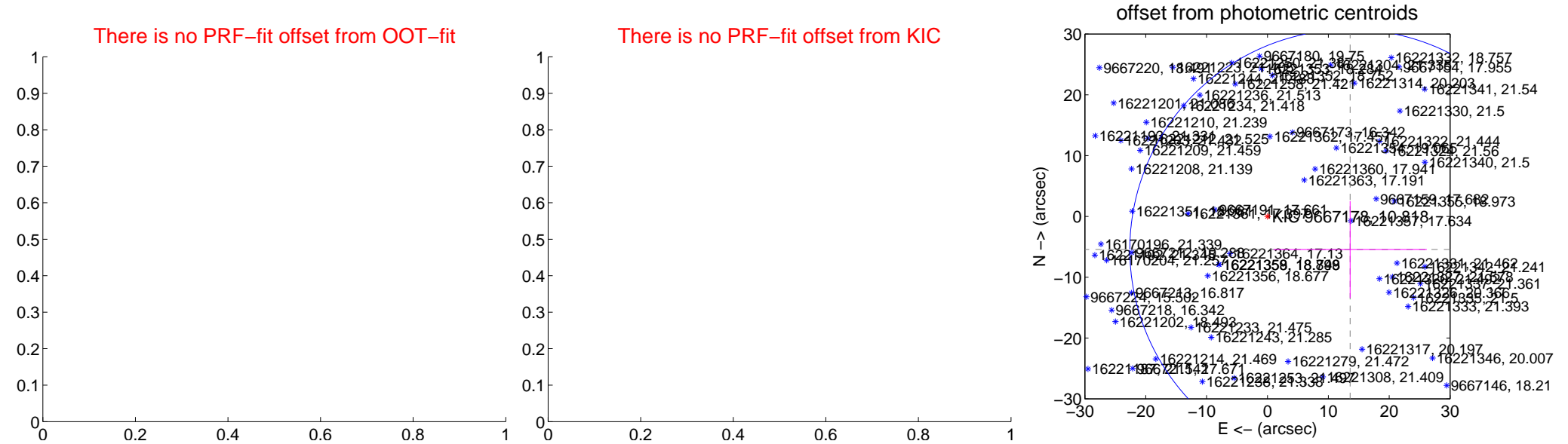
DV Centroid Data

Supplemental centroid analysis for 009667178-01. **Kepler magnitude: 10.82.** Transit SNR 5.01

There are 0 quarters with good PRF difference image offsets

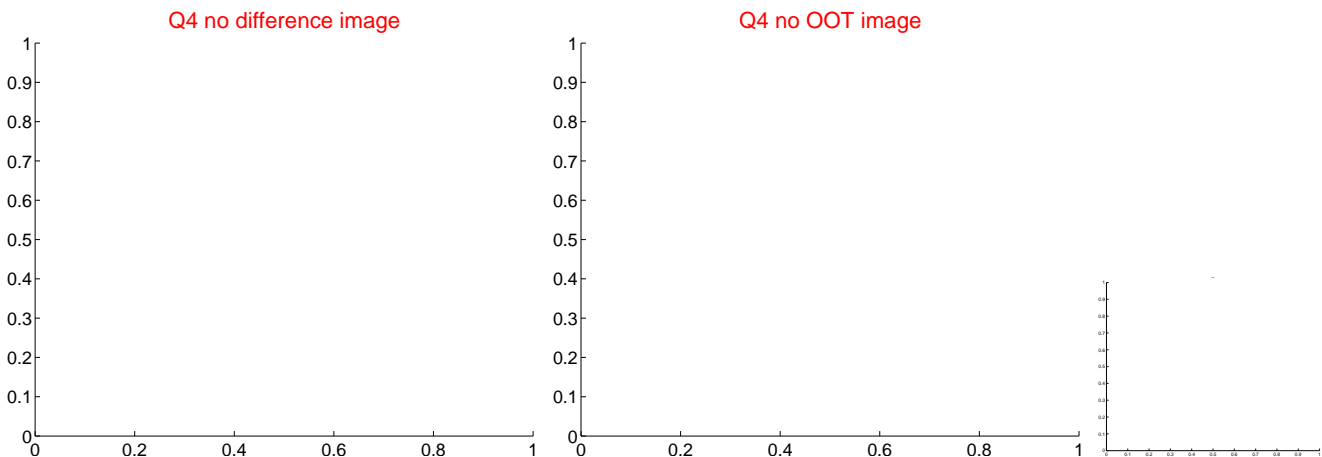
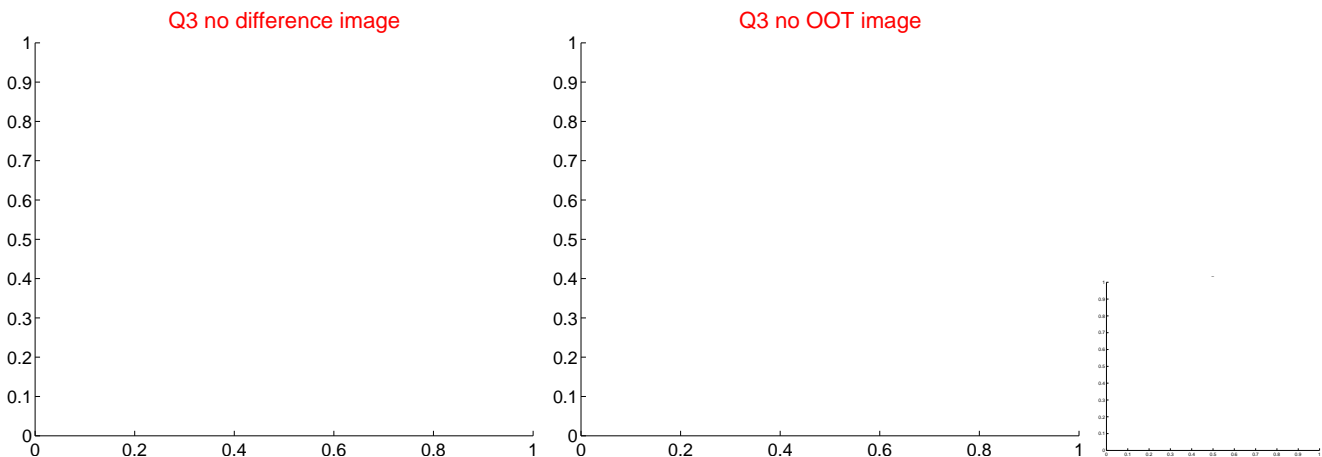
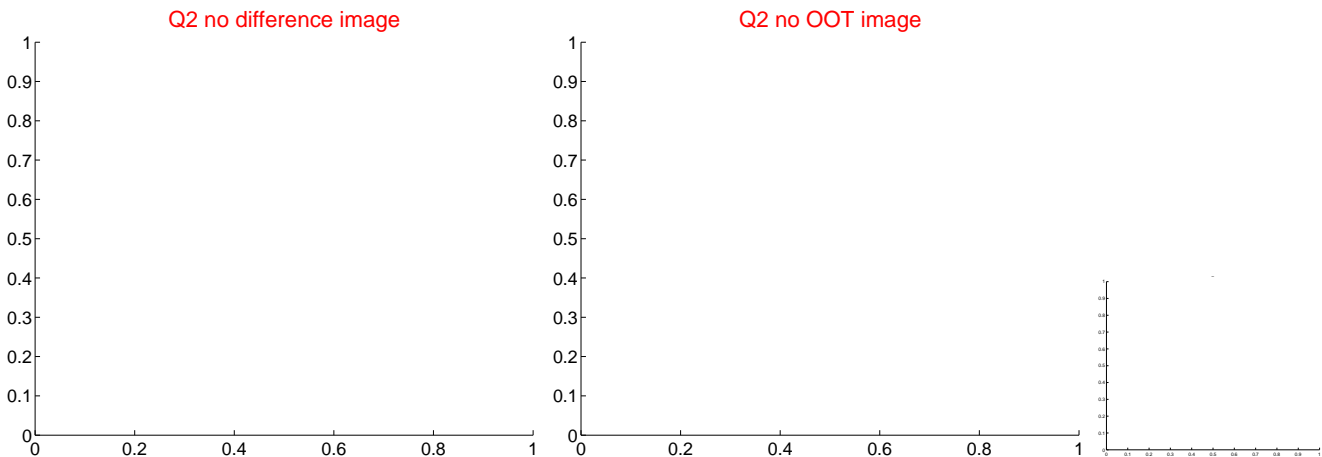
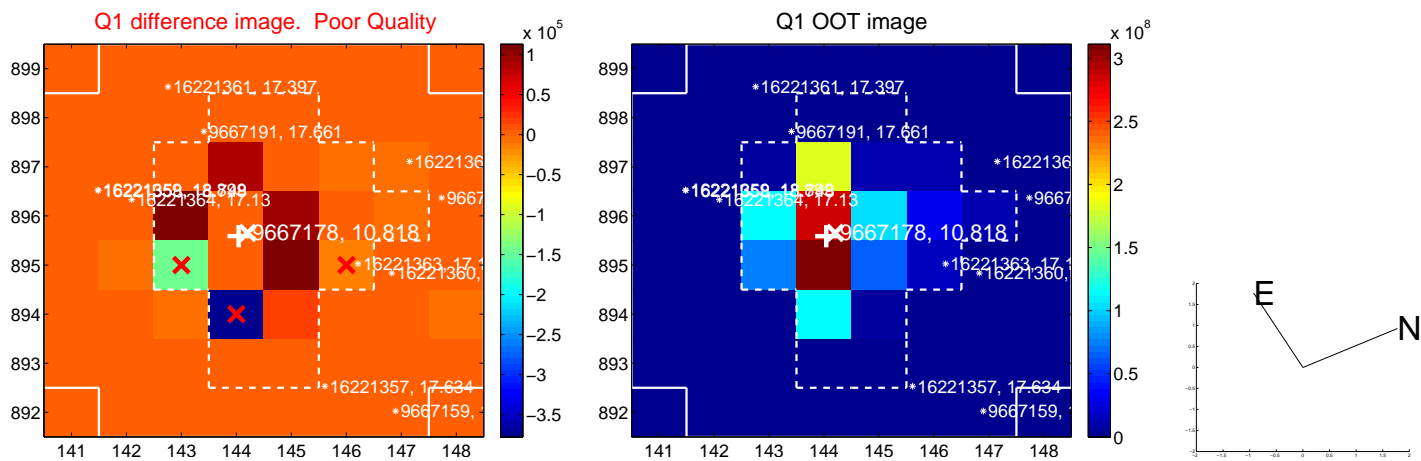
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	14.62 ± 12.06	1.21	-13.58 ± 12.60	-5.44 ± 7.96

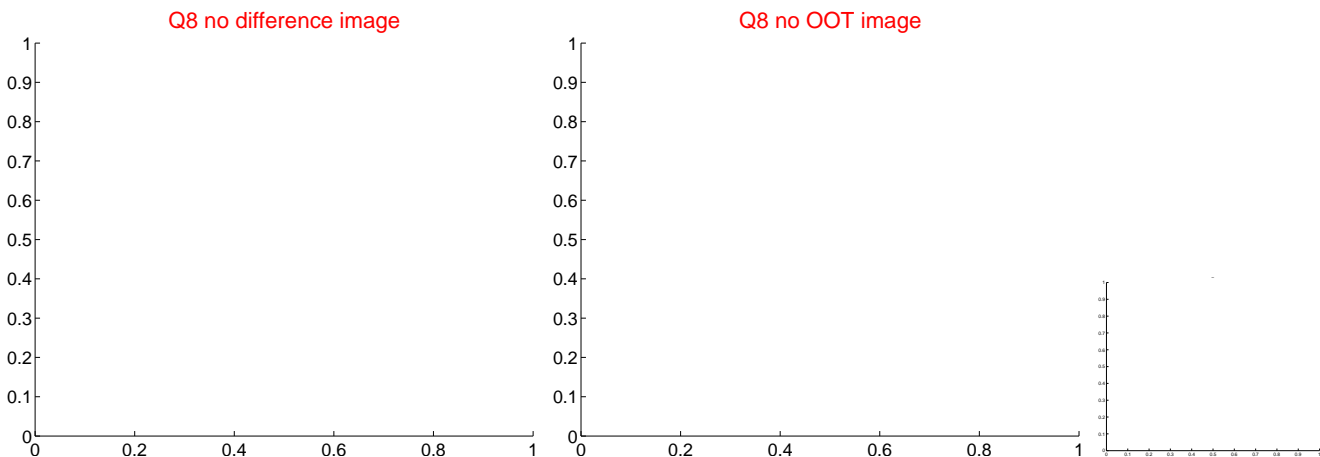
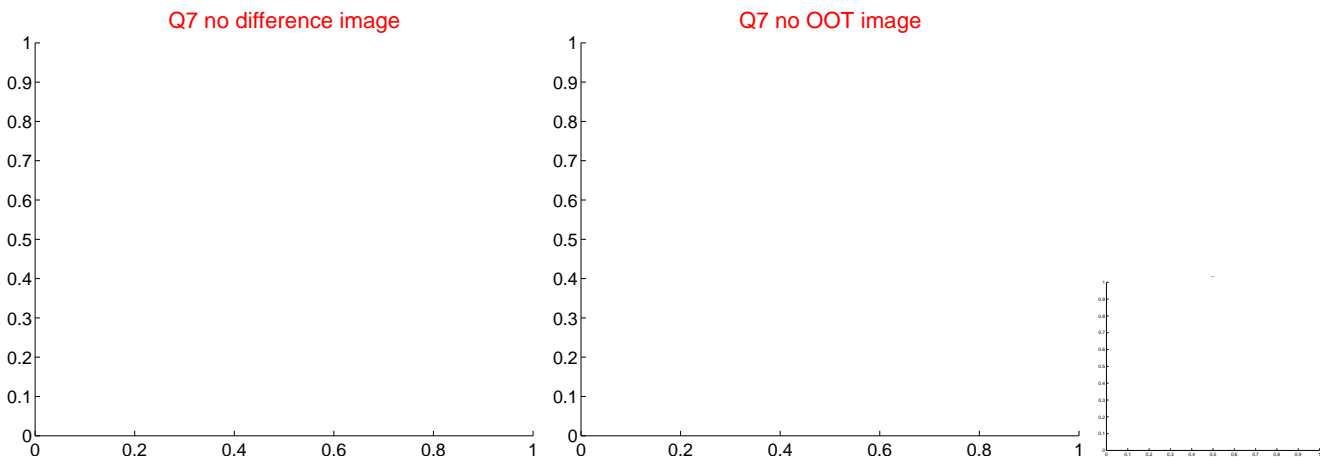
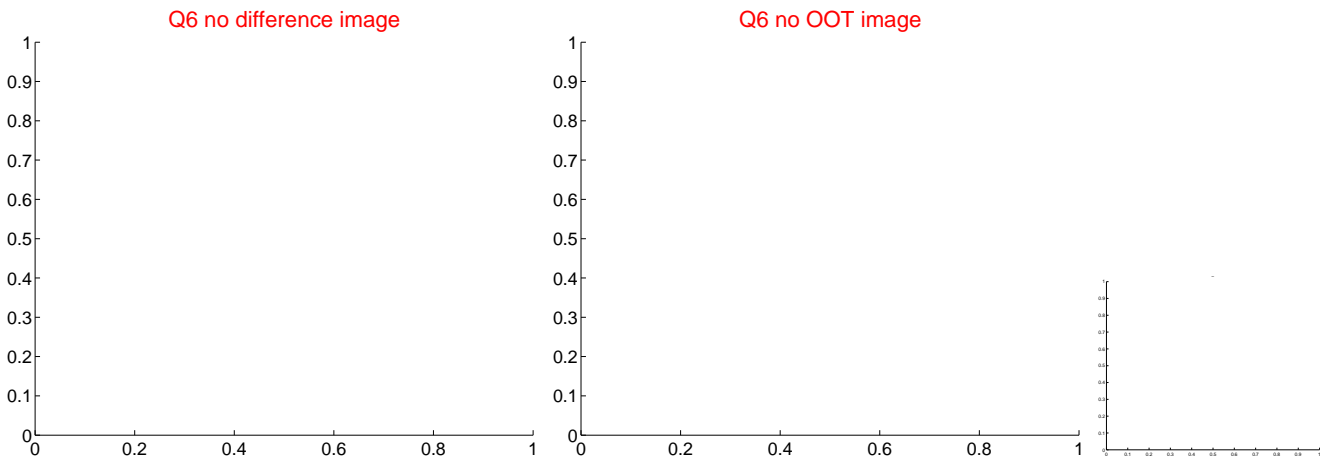
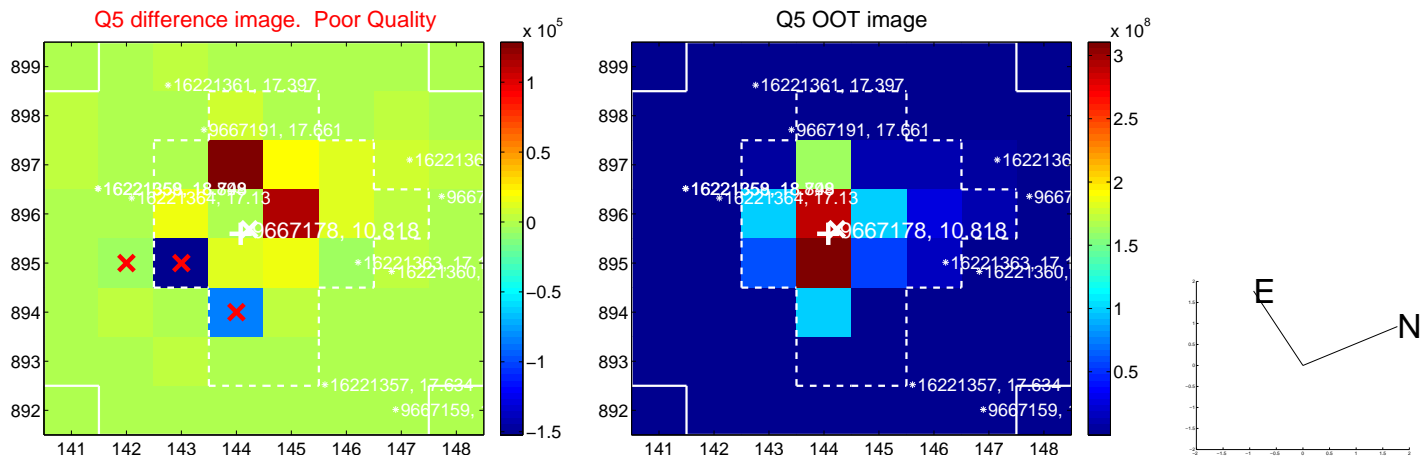


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



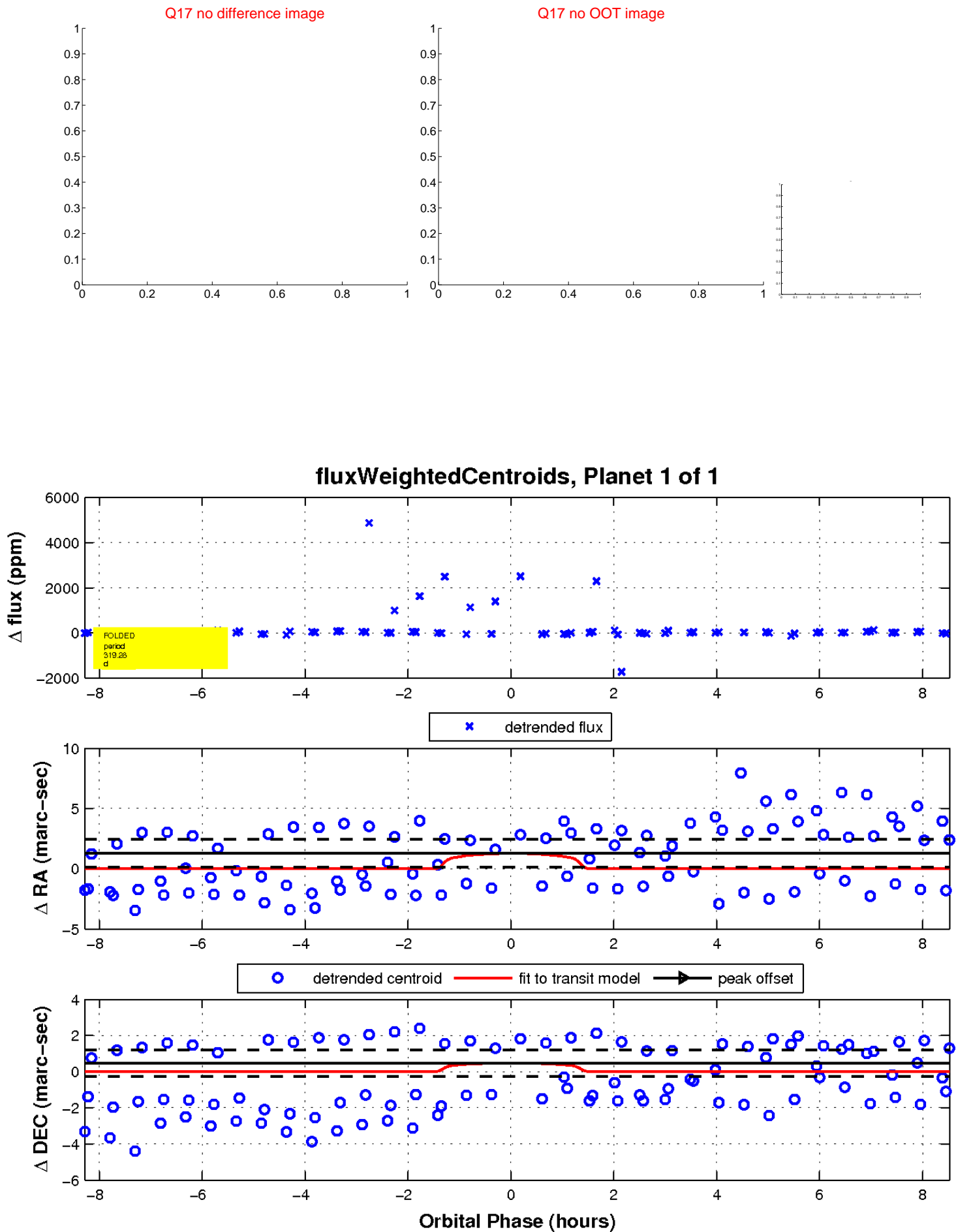
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

