

KIC 008172214

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})
008172214-01	OBS	No	366.854302	182.260093	714.4	23.364	7.8	7.9	1.11	6465	3.54	1.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008172214-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

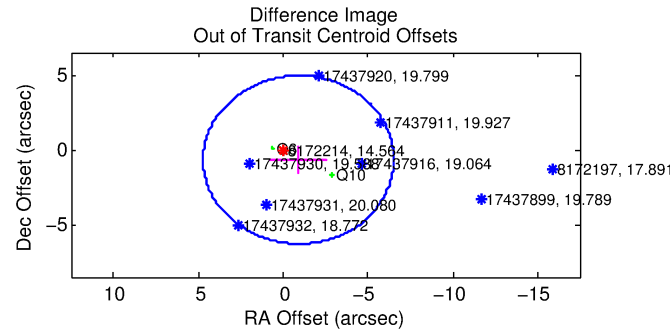
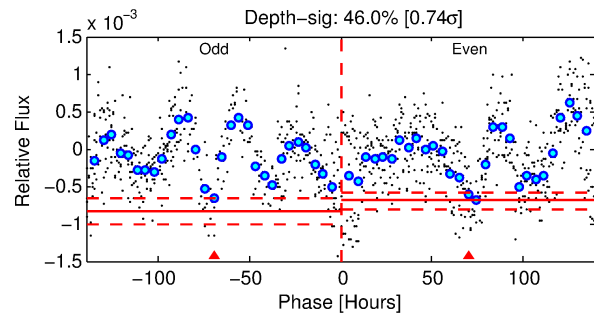
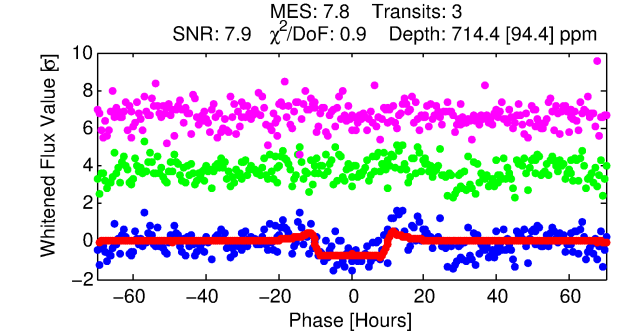
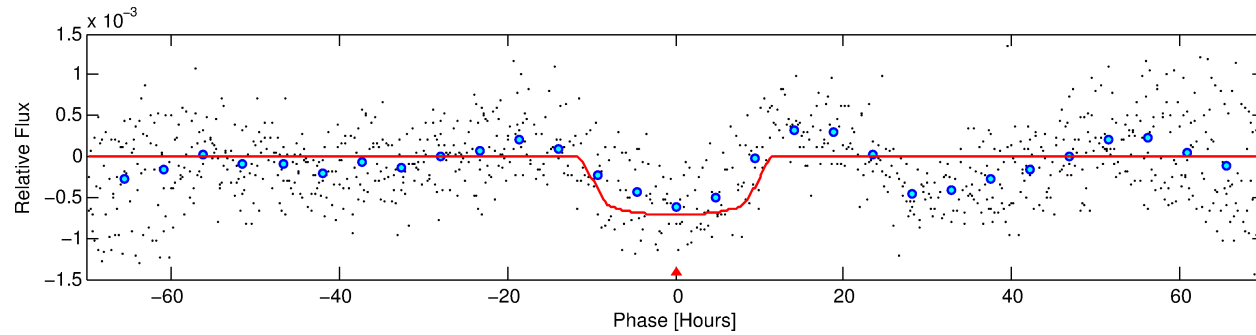
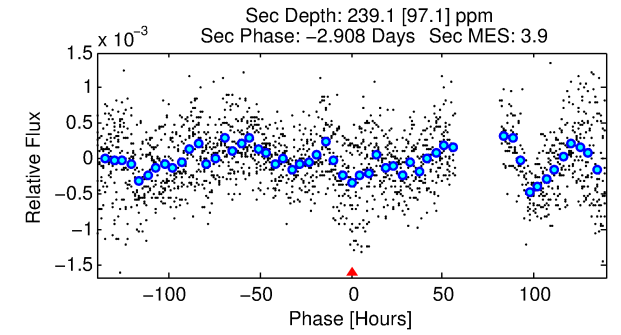
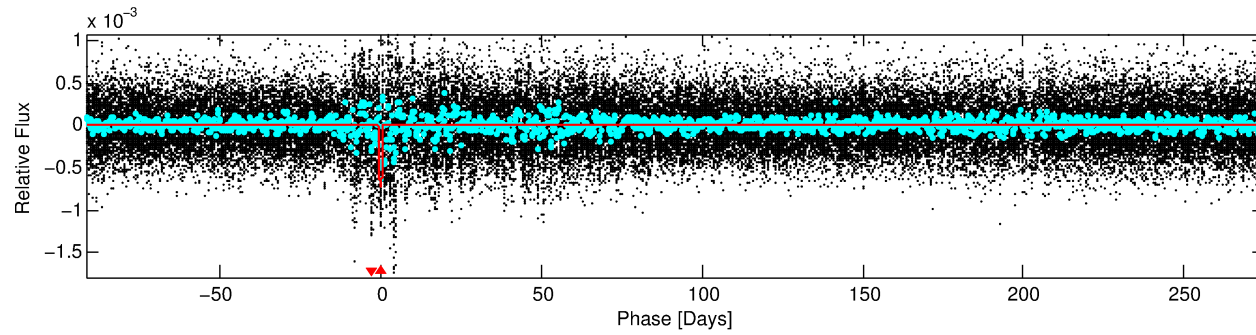
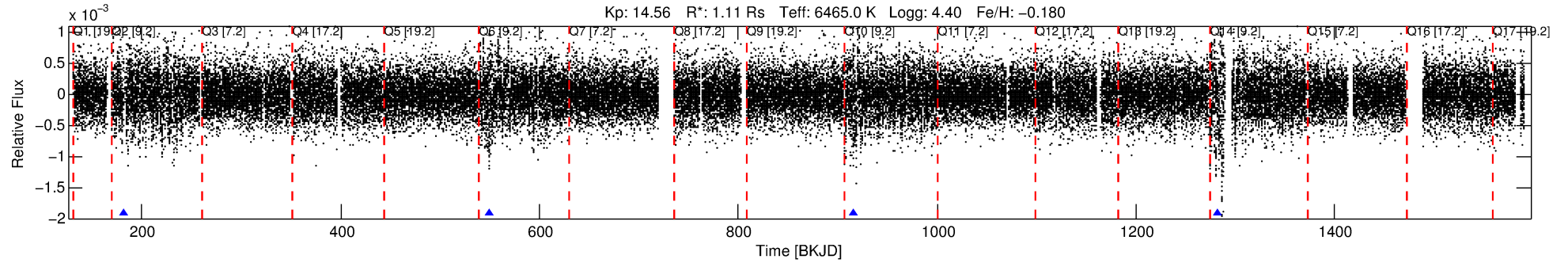
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008172214-01

No Significant Match Found

DV One-Page Summary

KIC: 8172214 Candidate: 1 of 1 Period: 366.854 d



DV Fit Results:

Period = 366.85430 [0.02183] d
Epoch = 182.2601 [0.0442] BKJD
Rp/R* = 0.0291 [0.0023]
a/R* = 55.86 [11.36]
b = 0.92 [0.04]
Seff = 1.76 [0.71]
Teq = 294 [30] K
Rp = 3.54 [1.20] Re
a = 1.0500 [0.2826] AU
Ag = 11563.01 [6694.06] [1.73 σ]
Teff = 4712 [537] K [8.21 σ]

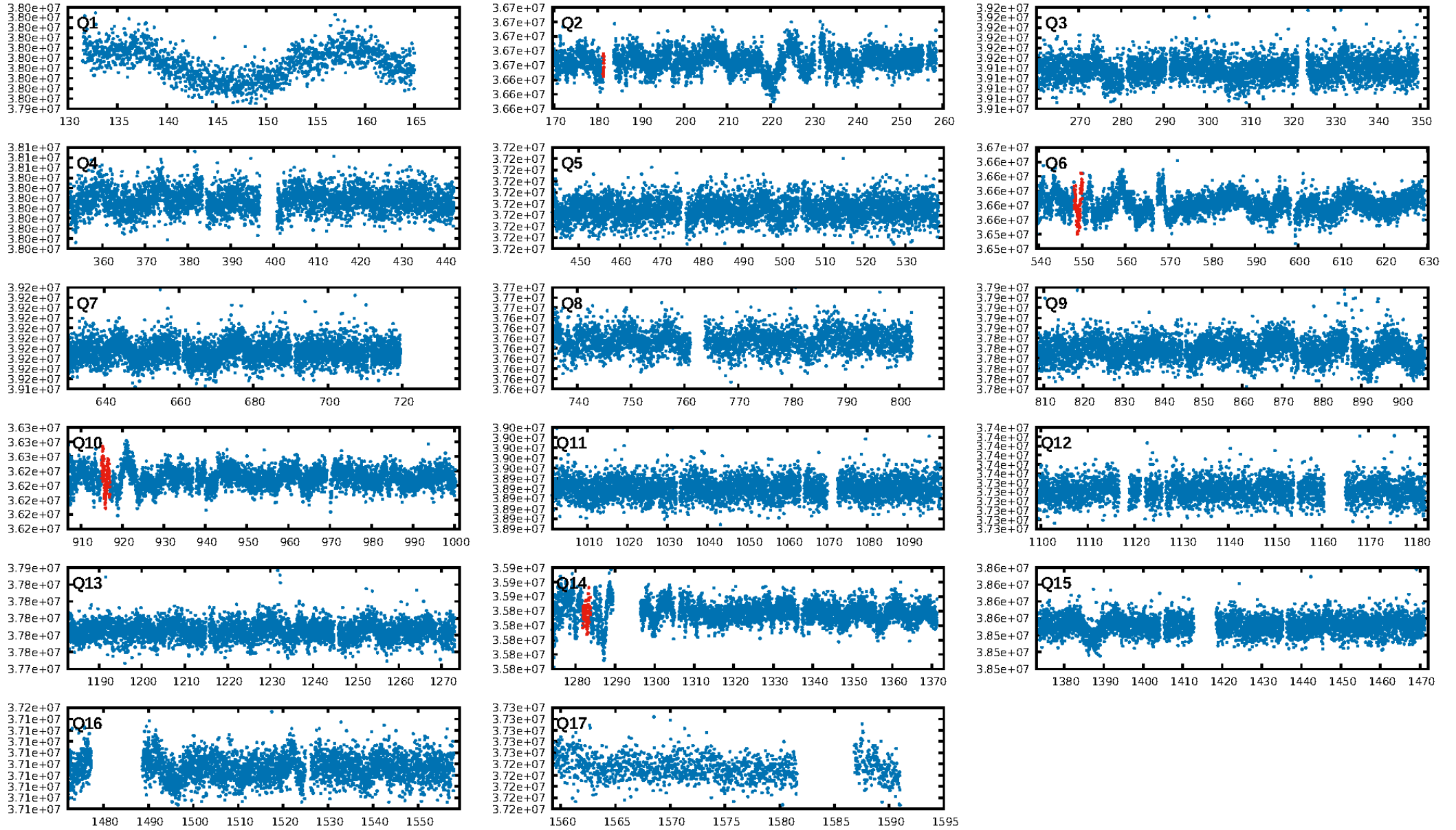
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 31.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.37e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 7.137
Centroid-sig: 0.0%
Centroid-so: 7.743 arcsec [3.86 σ]
OotOffset-rm: 1.138 arcsec [0.61 σ]
KicOffset-rm: 1.050 arcsec [0.61 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

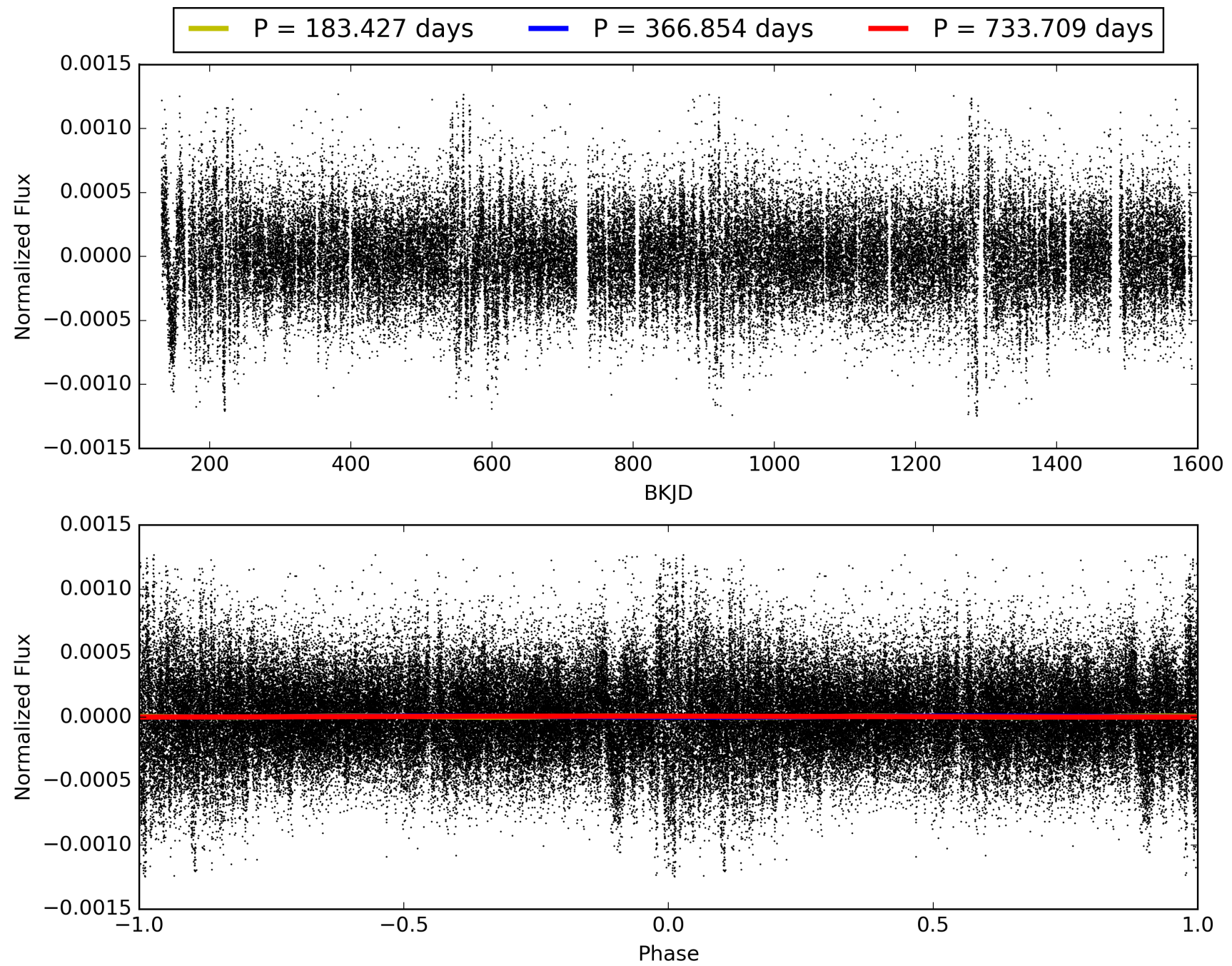
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:39:29 Z

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

TCE 008172214-01, PDC Light Curves

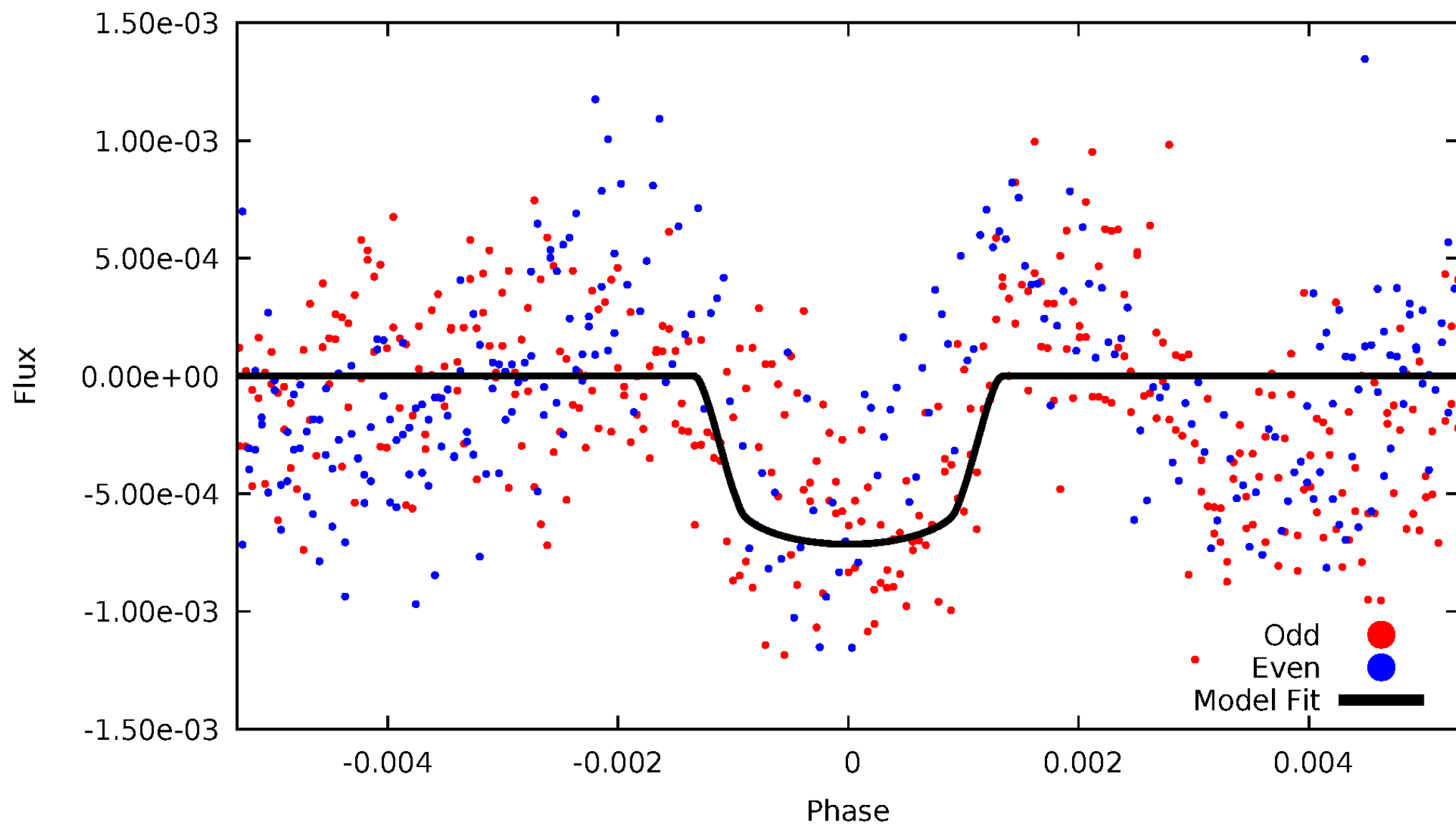


TCE 008172214-01



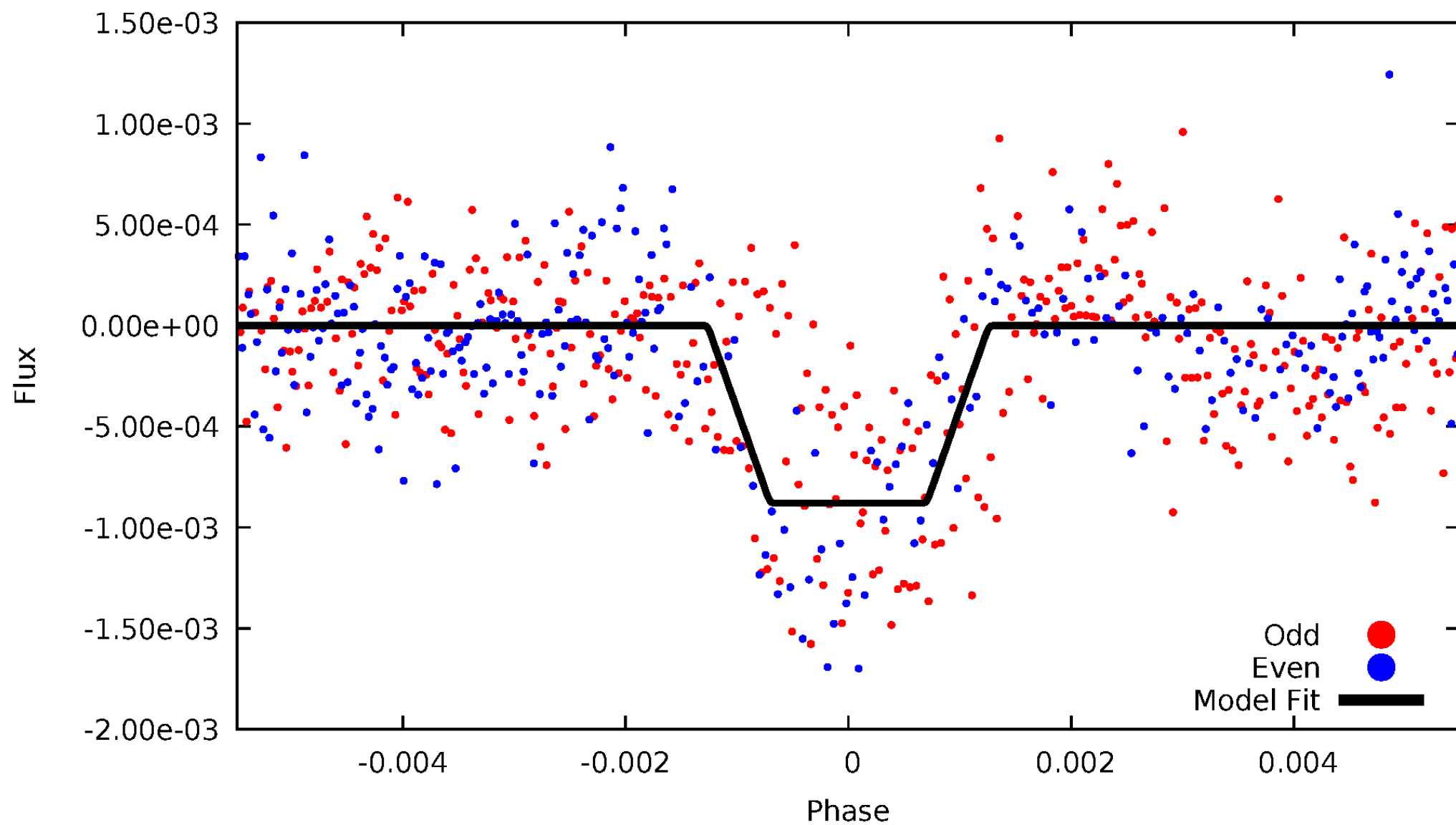
DV Odd/Even

TCE 008172214-01



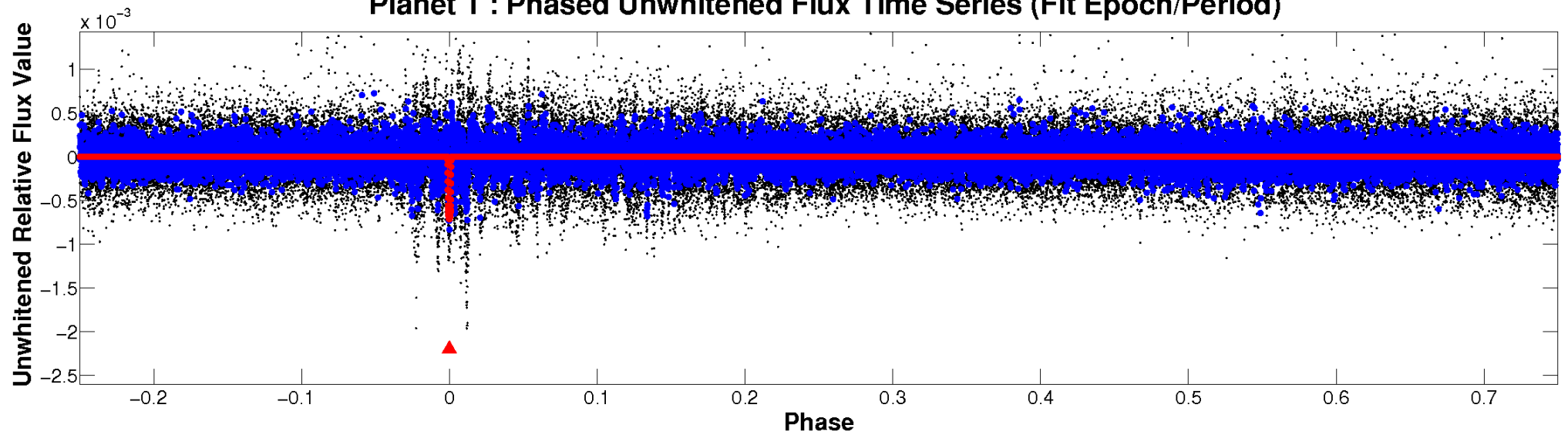
ALT Odd/Even

TCE 008172214-01

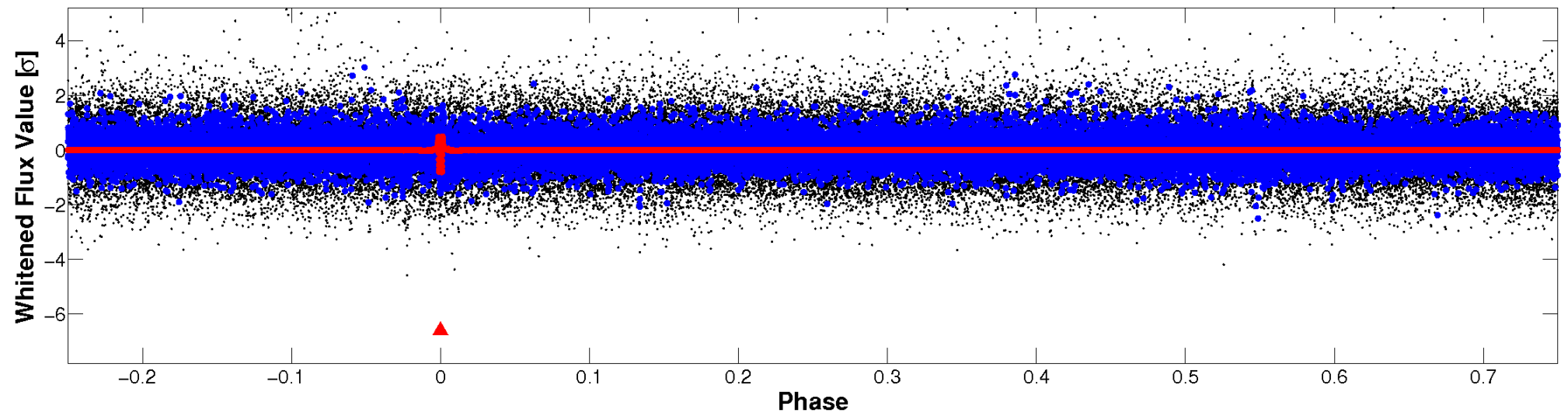


Non-Whitened Vs. Whitened Light Curve

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

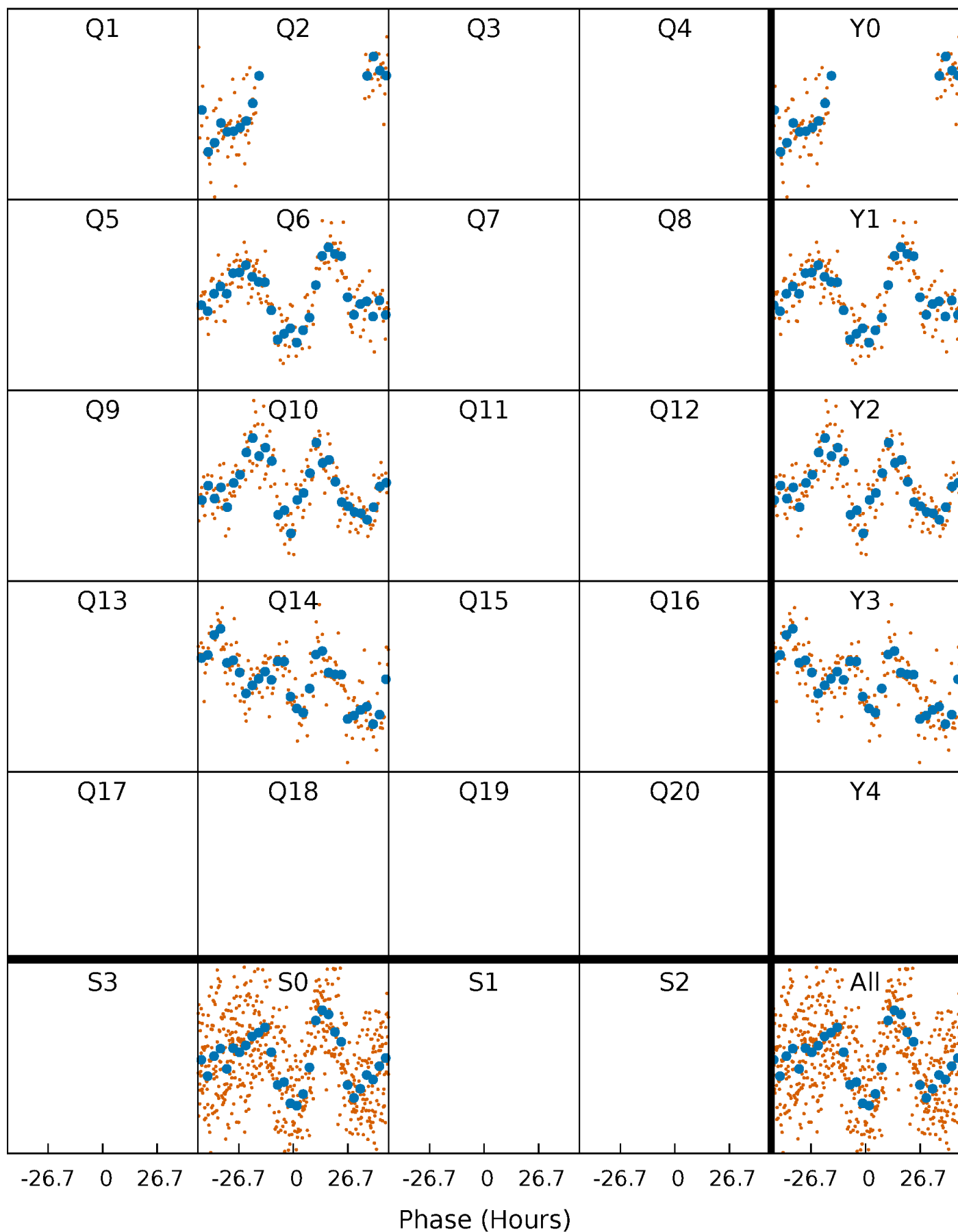


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



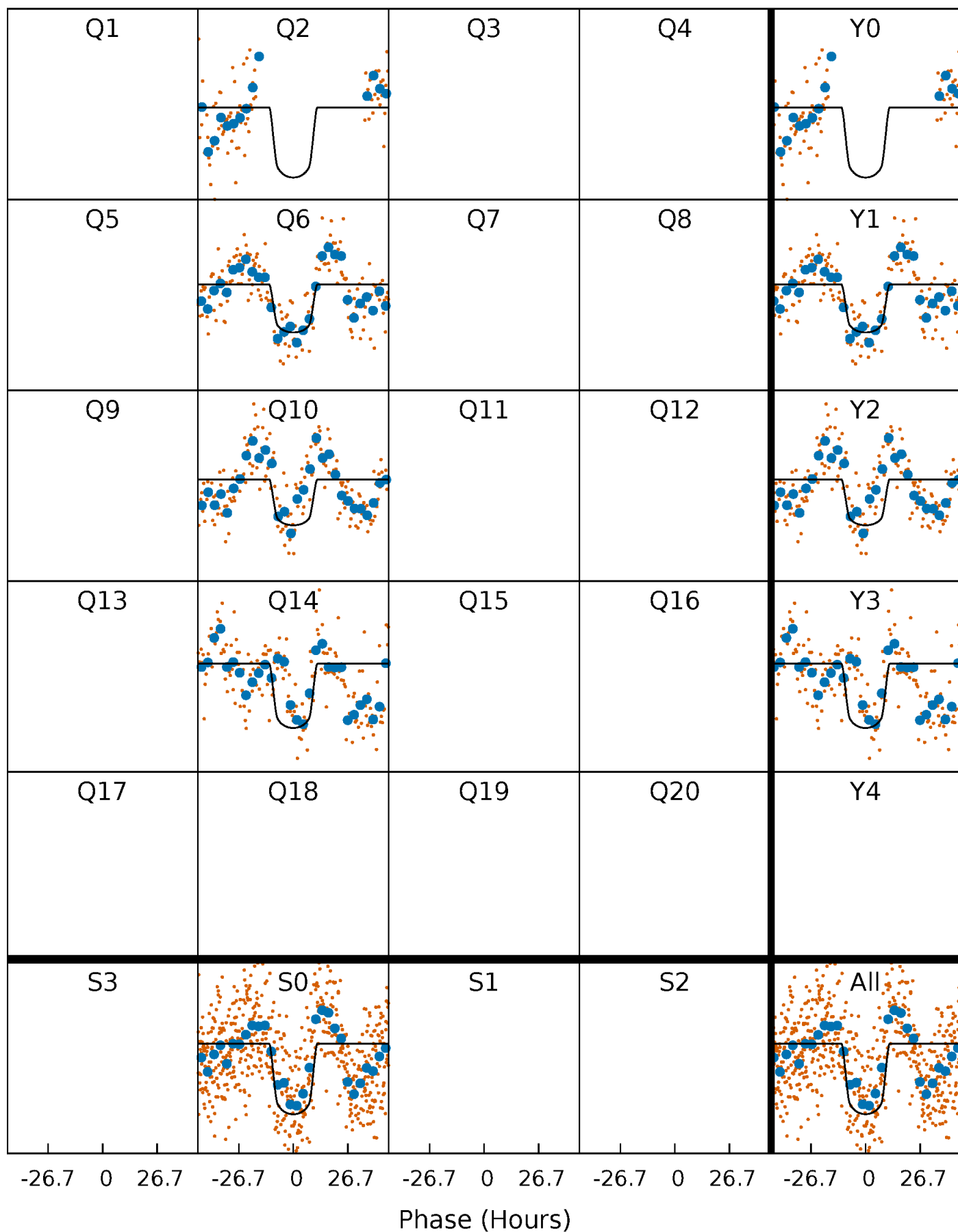
PDC Quarter-Phased Transit Curves

TCE 008172214-01 P=366.854302 Days $T_0=182.260093$ (BKJD)



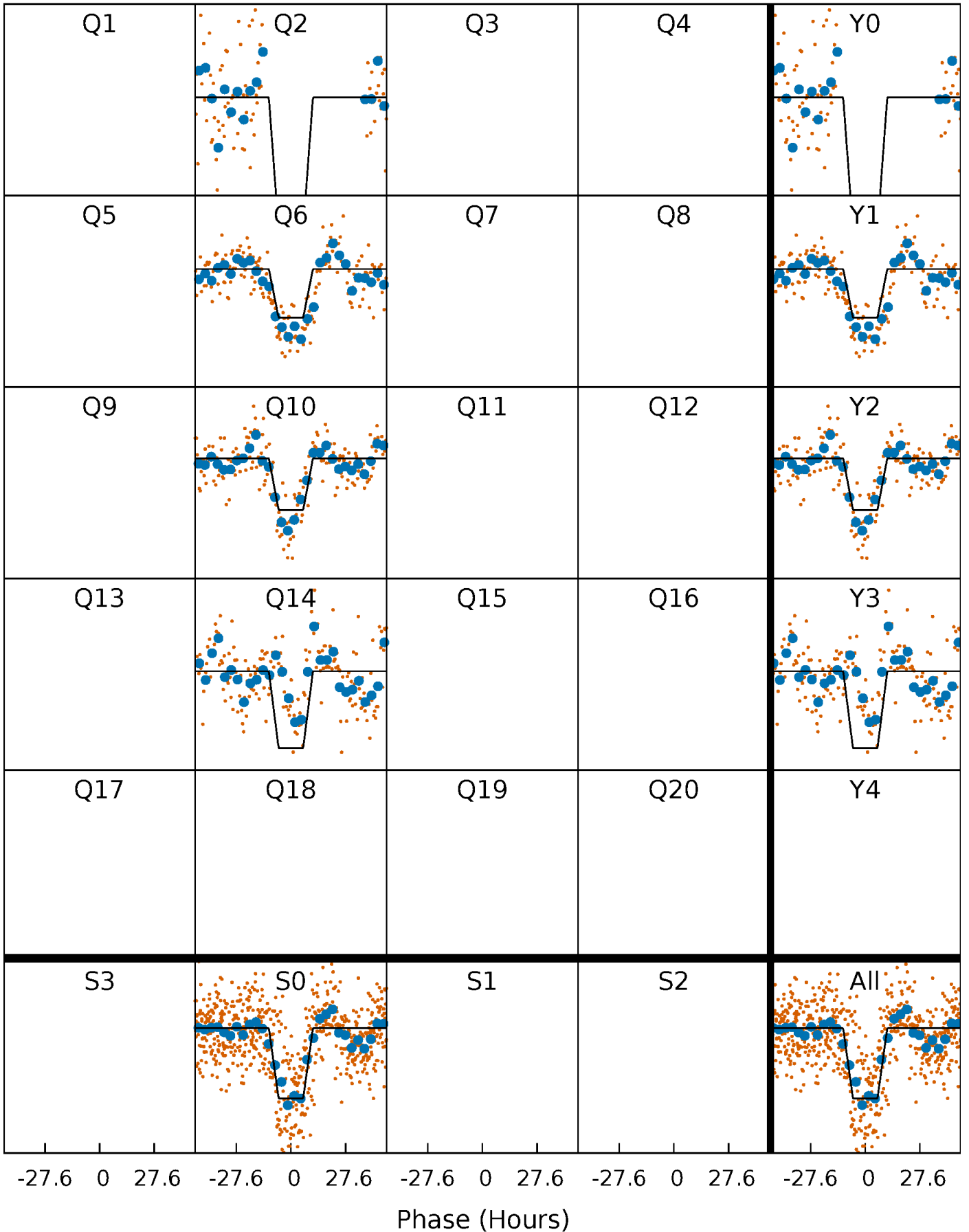
DV Quarter-Phased Transit Curves

TCE 008172214-01 P=366.854302 Days $T_0=182.260093$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

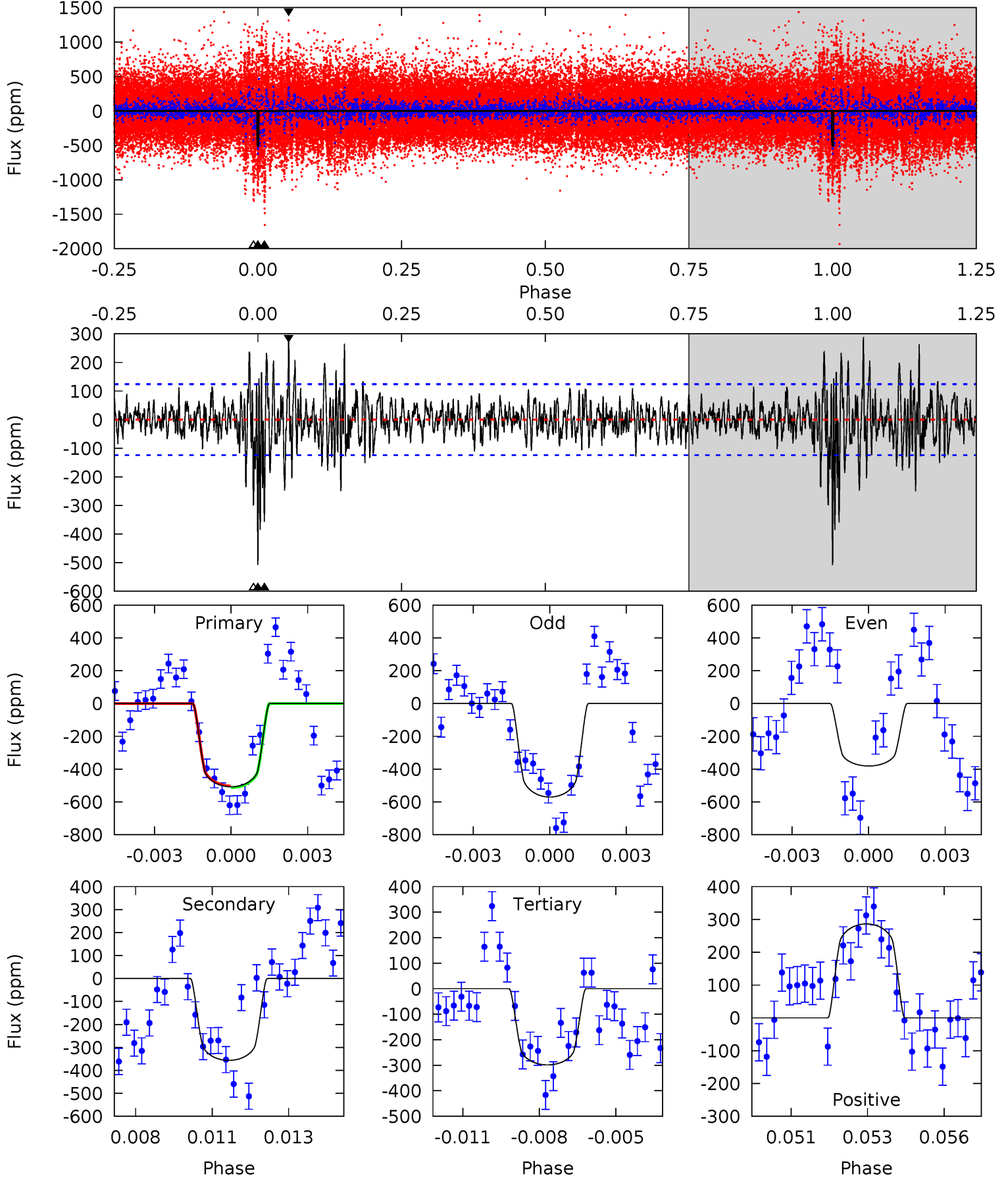
TCE 008172214-01 P=366.911814 Days $T_0=182.122615$ (BKJD)



DV Model-Shift Uniqueness Test

008172214-01, P = 366.854302 Days, E = 182.260093 Days

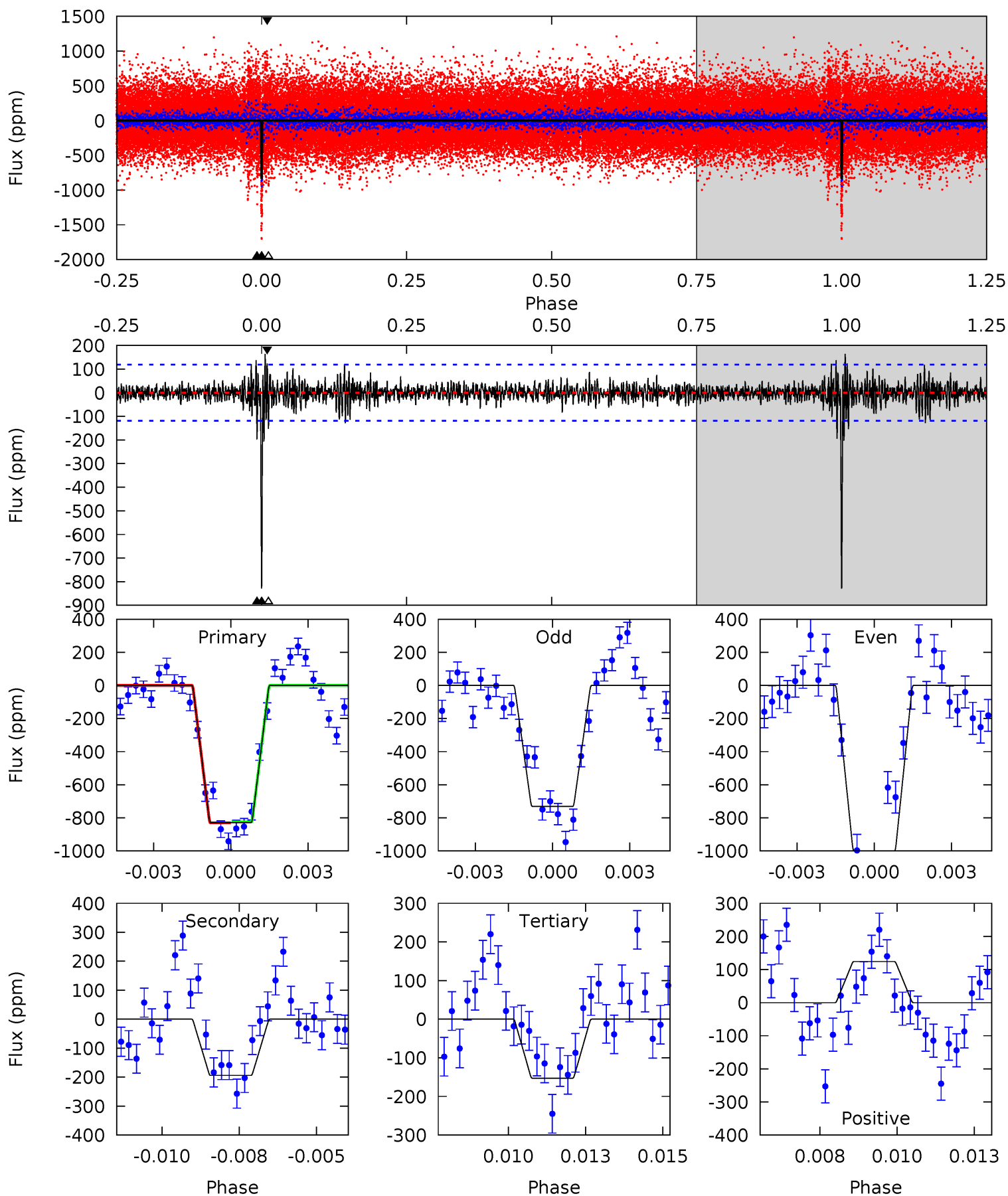
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.6	15.2	12.7	12.2	5.27	3.00	2.54	8.90	9.43	2.47	3.00	3.79	1.33	0.36	0.21



Alt Model-Shift Uniqueness Test

008172214-01, P = 366.911814 Days, E = 182.122615 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.9	8.63	6.79	5.52	5.28	3.02	1.26	30.1	31.3	1.84	3.11	5.68	0.82	0.17	0.12



Stellar Parameters For KIC 008172214

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6465^{+155}_{-213}	$4.403^{+0.067}_{-0.202}$	$-0.180^{+0.250}_{-0.300}$	$1.115^{+0.368}_{-0.123}$	$1.148^{+0.165}_{-0.150}$	$1.165^{+0.338}_{-0.589}$
	+2%/-3%	+2%/-5%	+139%/-167%	+33%/-11%	+14%/-13%	+29%/-51%
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 008172214-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-357 ± 24	$3.64^{+0.66}_{-0.44}$	418^{+30}_{-23}	5244^{+242}_{-203}	16107^{+4350}_{-4468}
Alt.	-194 ± 22	$3.71^{+0.63}_{-0.46}$	416^{+29}_{-21}	4565^{+218}_{-191}	8243^{+2837}_{-2087}

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

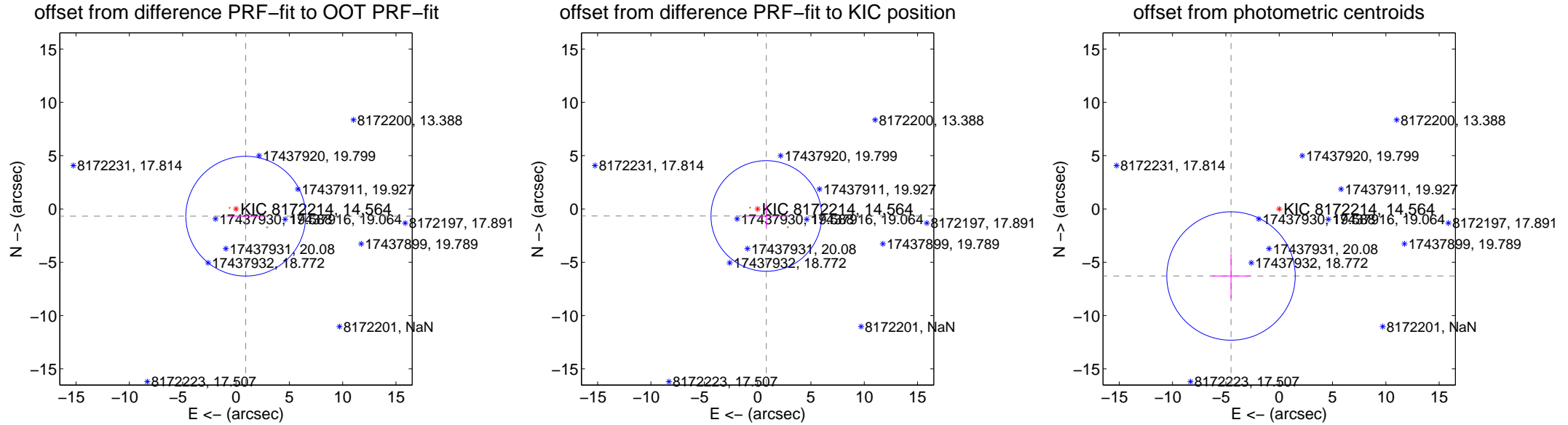
DV Centroid Data

Supplemental centroid analysis for 008172214-01. Kepler magnitude: 14.56. Transit SNR 7.94

There are 0 quarters with good PRF difference image offsets

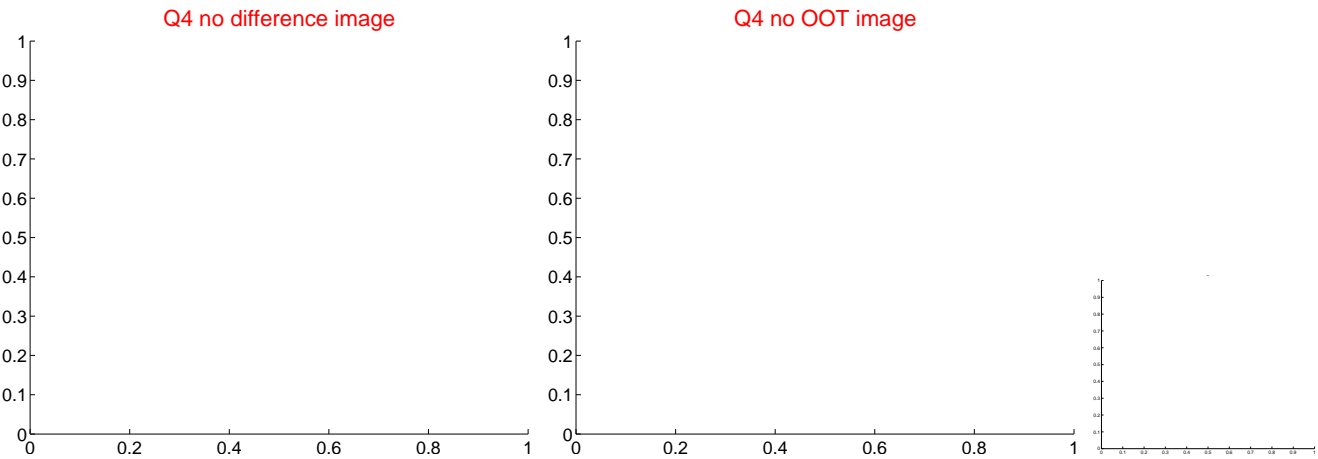
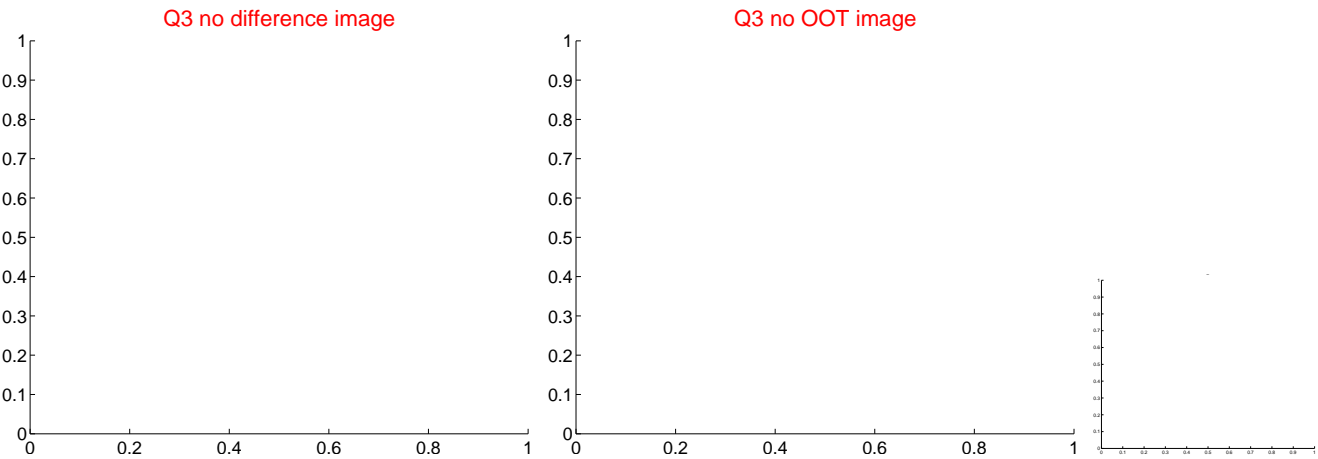
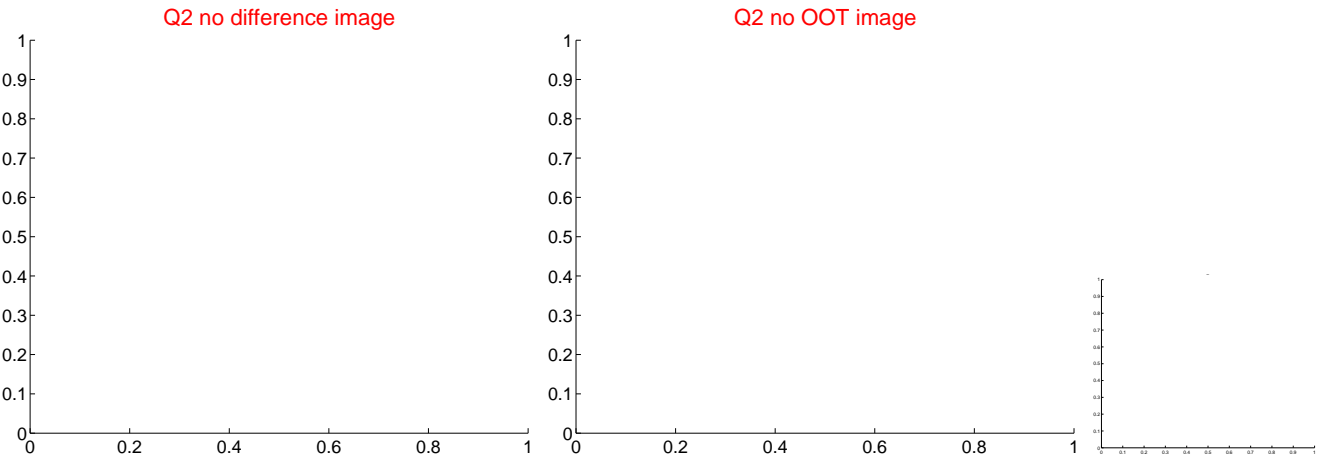
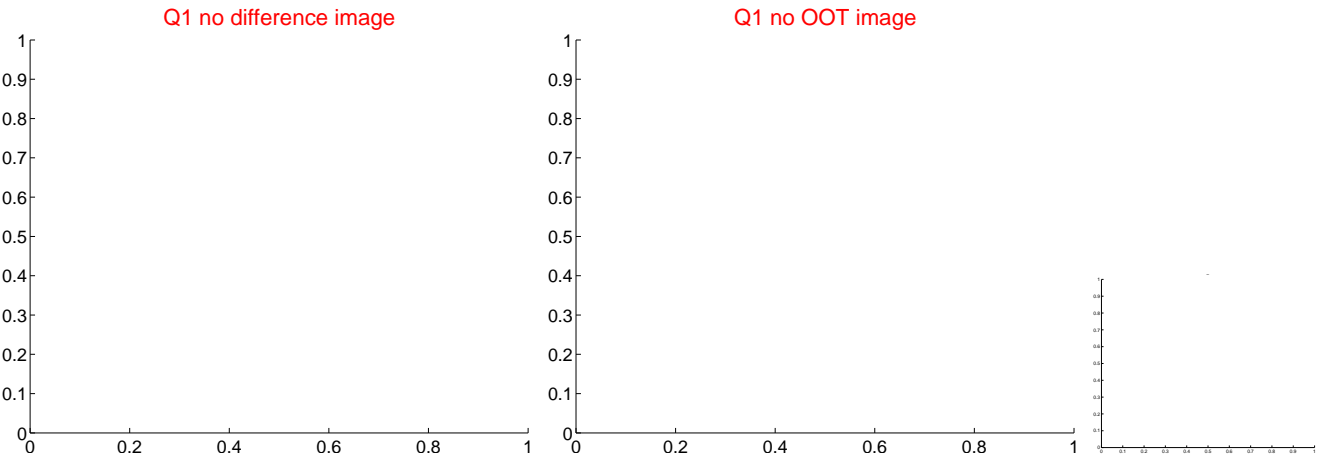
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.138 ± 1.872	0.61	-0.914 ± 1.683	-0.678 ± 0.875
PRF-fit source offset from KIC position	1.050 ± 1.729	0.61	-0.817 ± 2.049	-0.659 ± 1.061
photometric centroid source offset	7.74 ± 2.01	3.86	4.52 ± 1.83	-6.29 ± 2.09

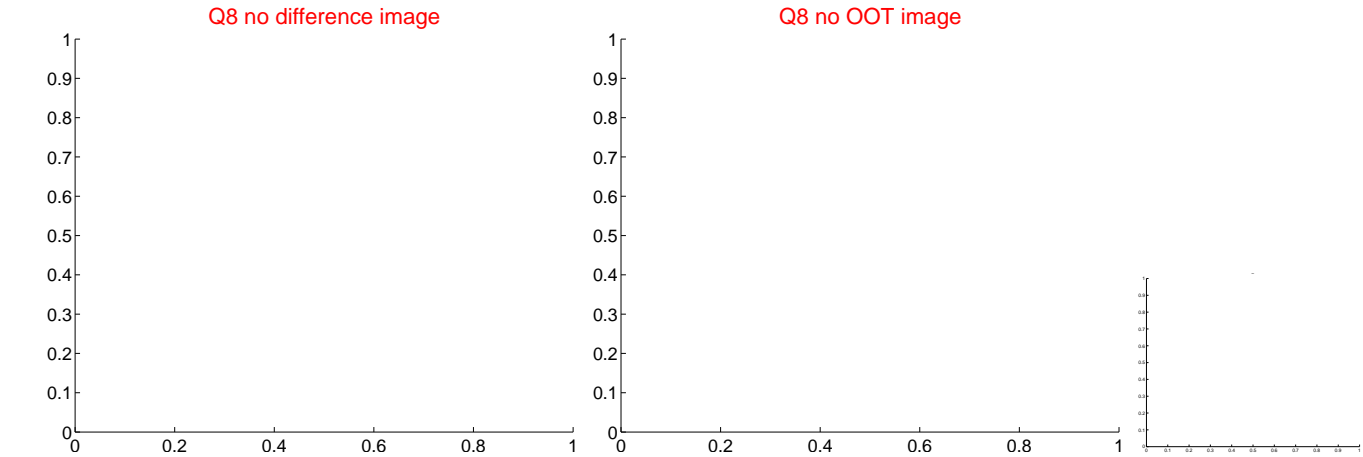
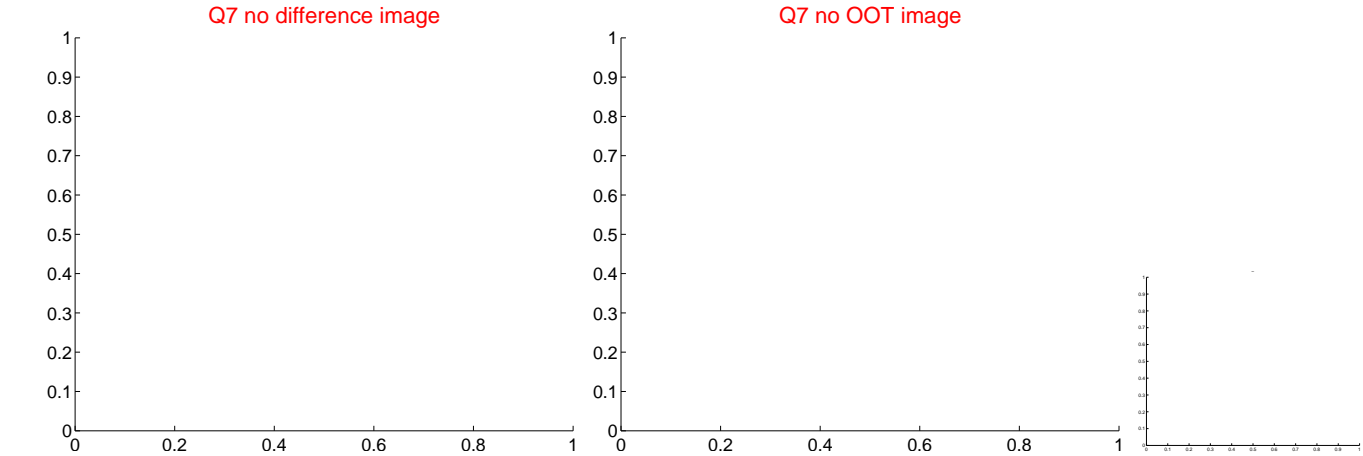
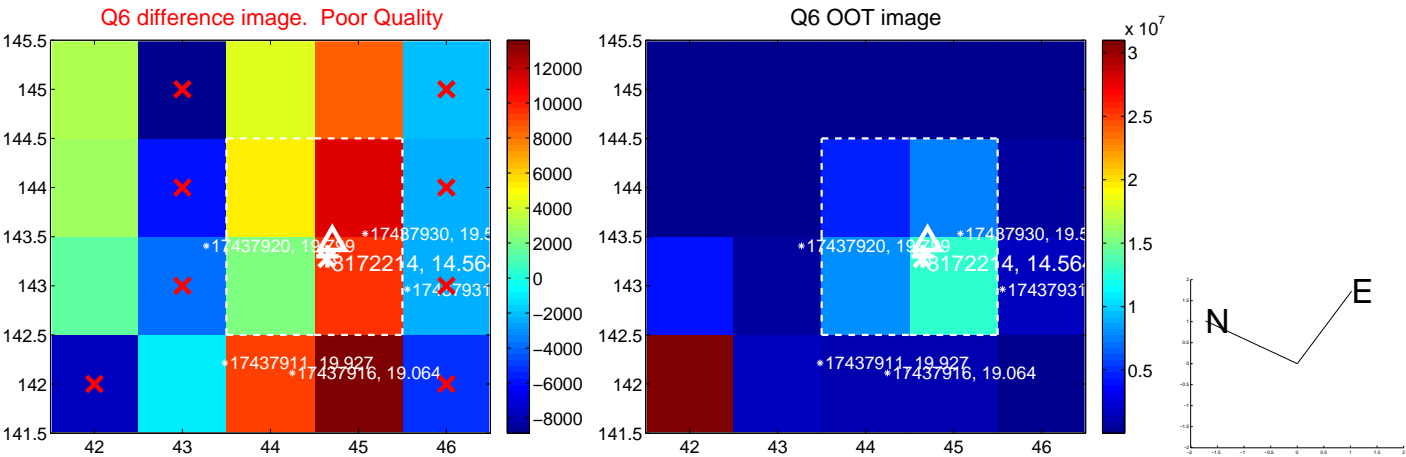
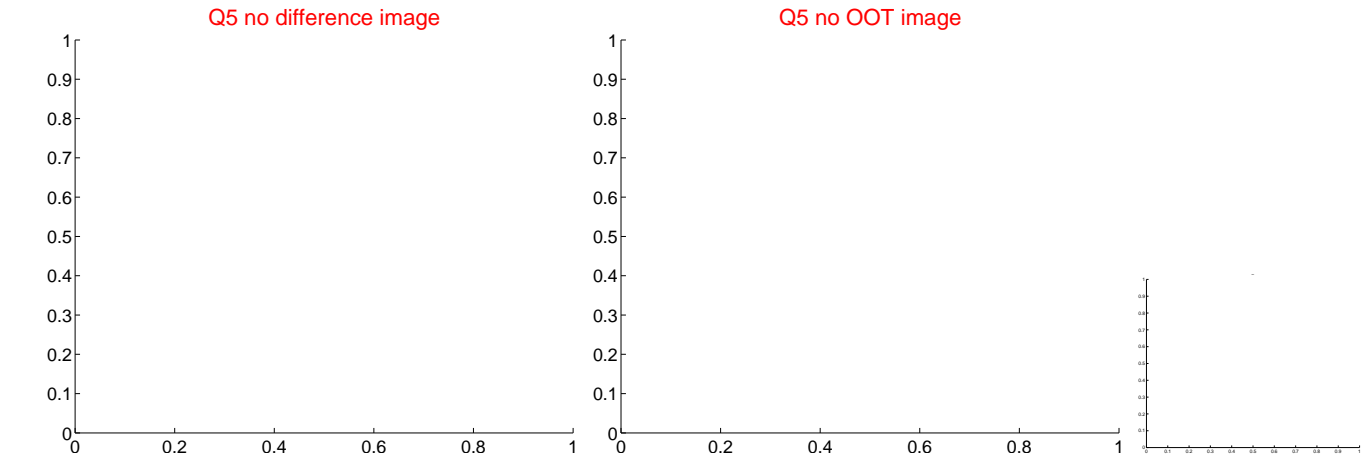


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

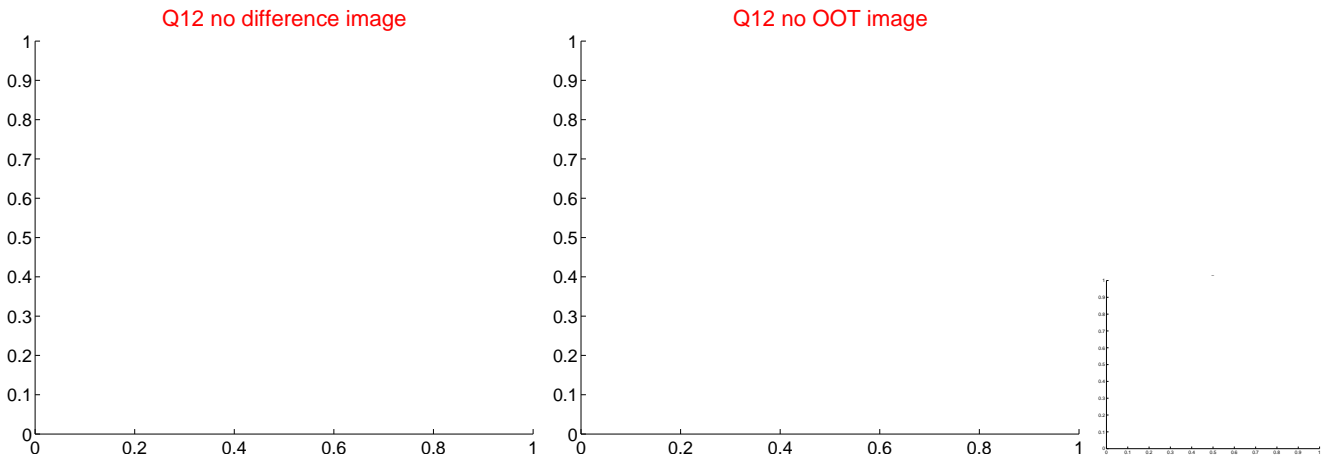
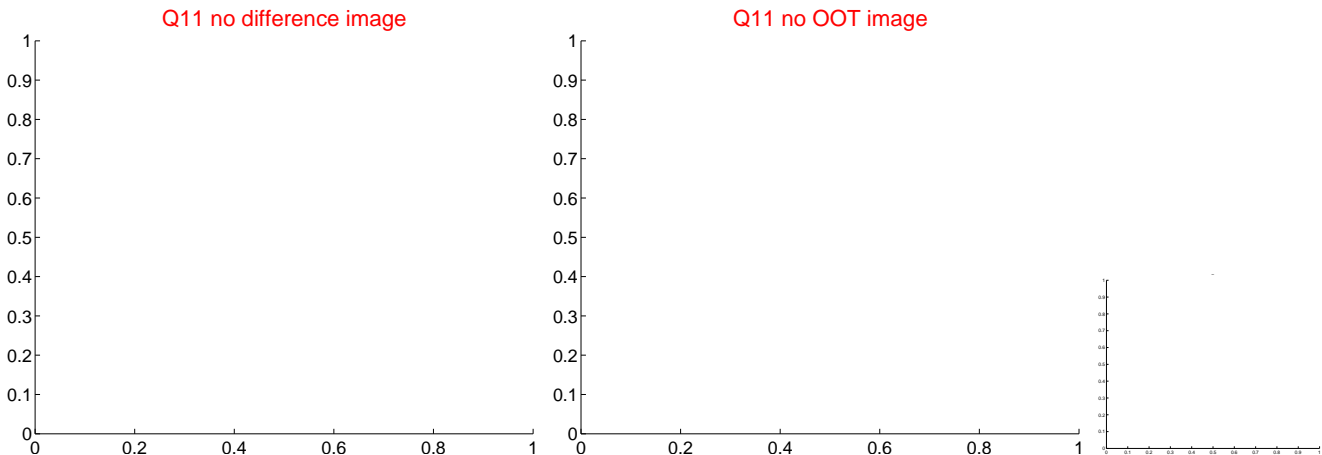
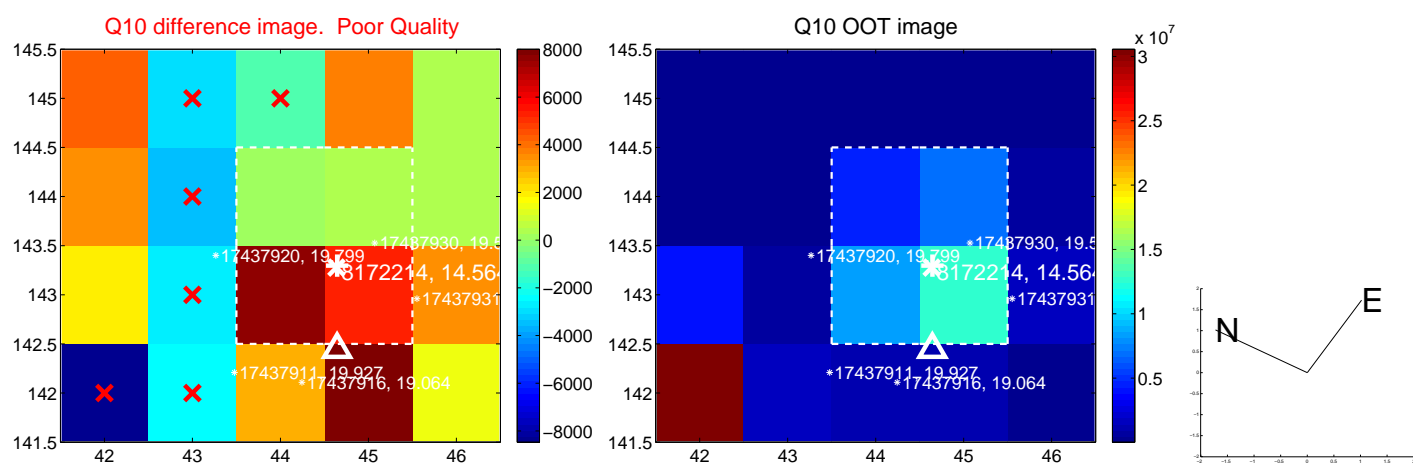
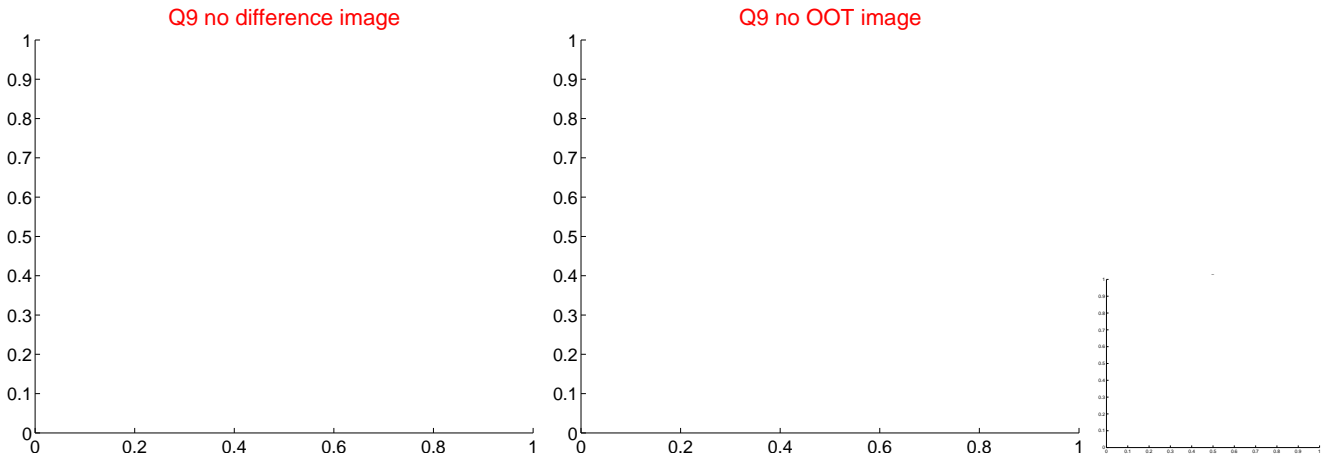
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



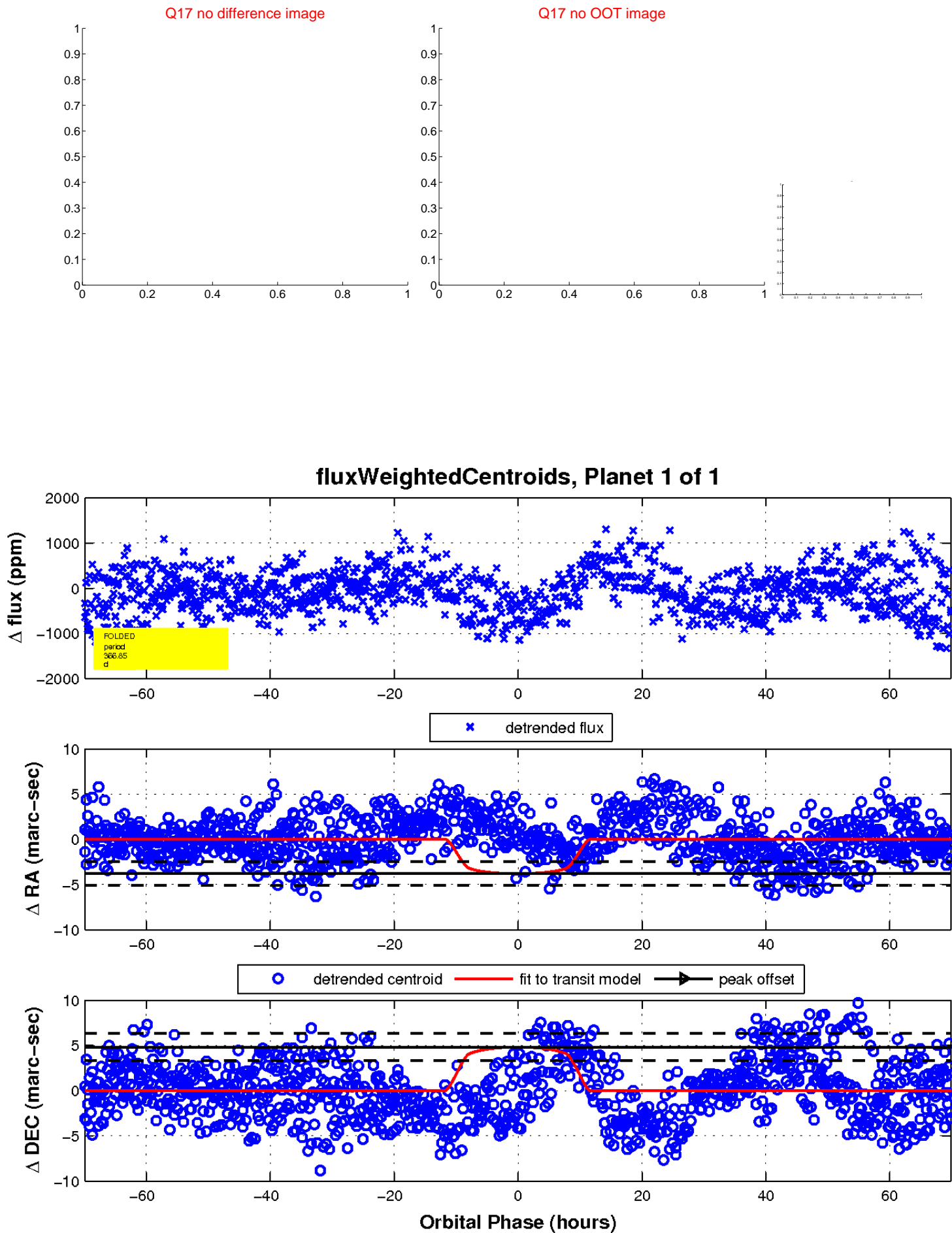
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

