

KIC 008172382

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})
008172382-01	OBS	No	550.130216	187.362347	243.6	29.192	7.1	7.3	0.86	5883	1.79	0.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008172382-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—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.

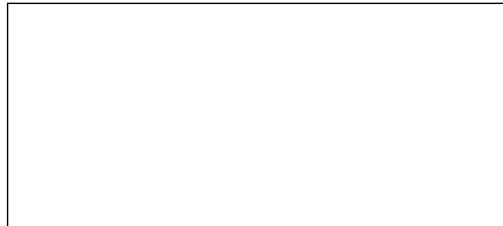
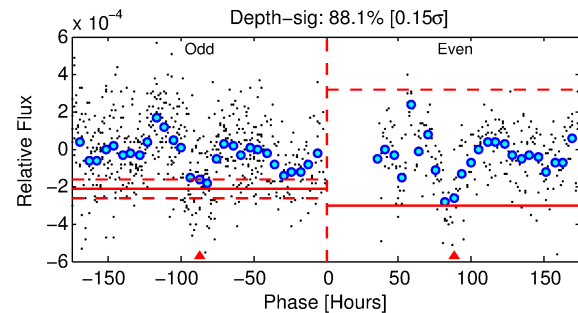
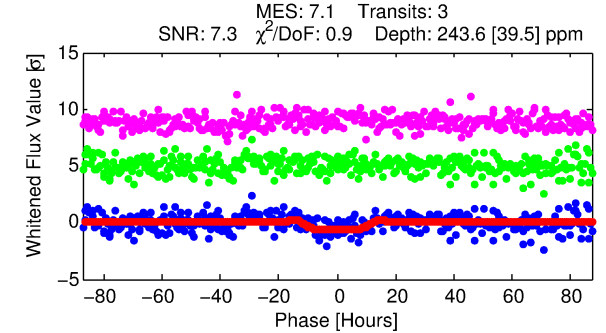
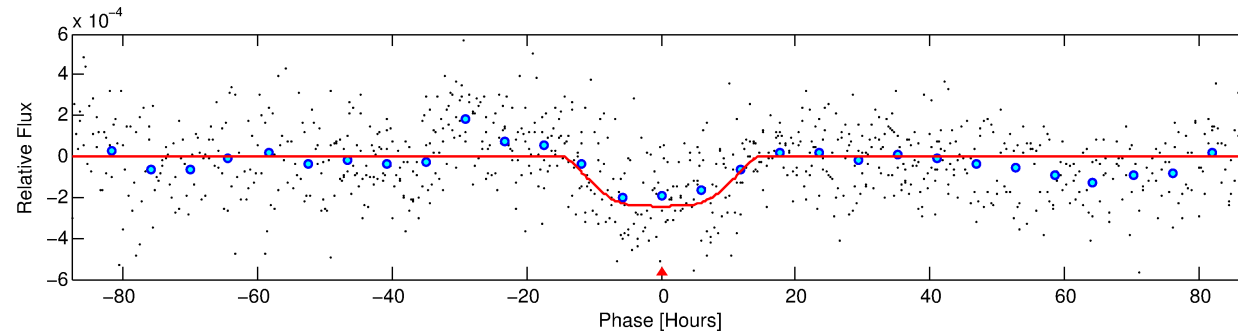
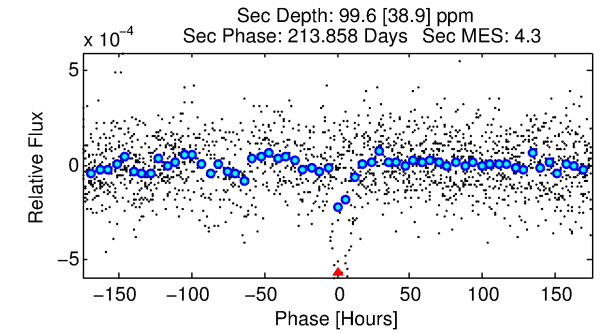
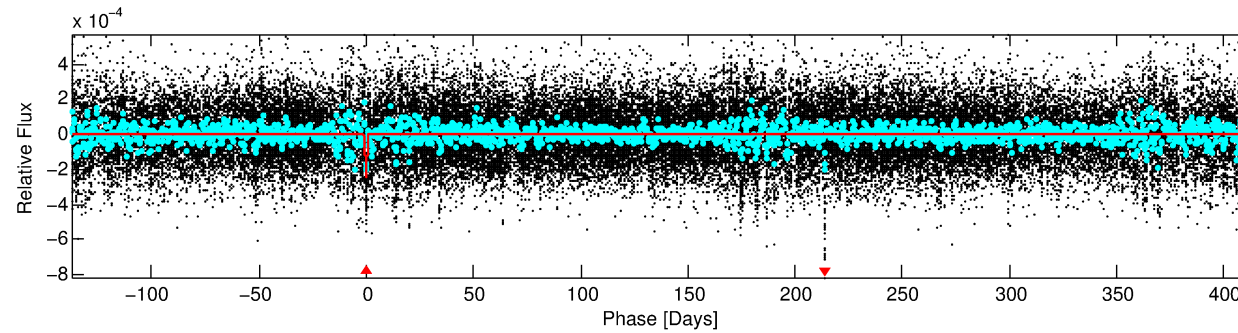
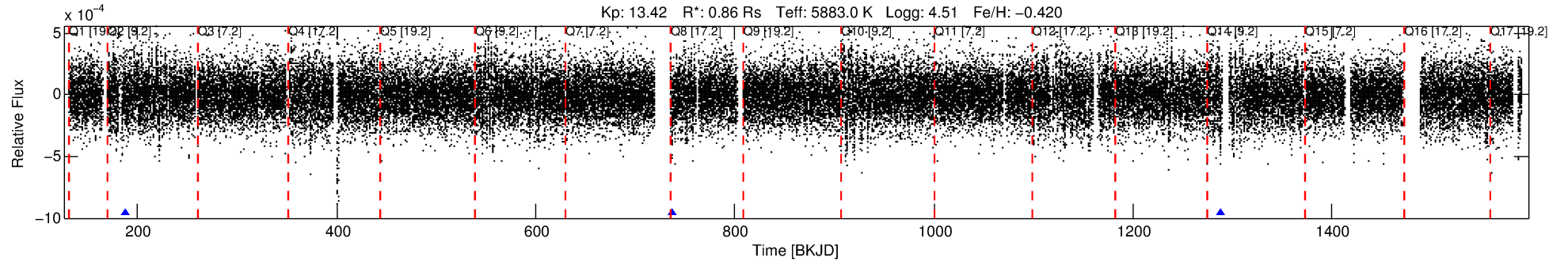
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008172382-01

No Significant Match Found

DV One-Page Summary

KIC: 8172382 Candidate: 1 of 1 Period: 550.130 d



DV Fit Results:

Period = 550.13022 [0.05409] d
Epoch = 187.3623 [0.0617] BKJD
Rp/R* = 0.0190 [0.0019]
a/R* = 42.98 [7.88]
b = 0.97 [0.01]
Seff = 0.51 [0.18]
Teq = 215 [19] K
Rp = 1.79 [0.52] Re
a = 1.2561 [0.2918] AU
Ag = 26989.04 [14985.05] [1.80σ]
Teffp = 4266 [481] K [8.42σ]

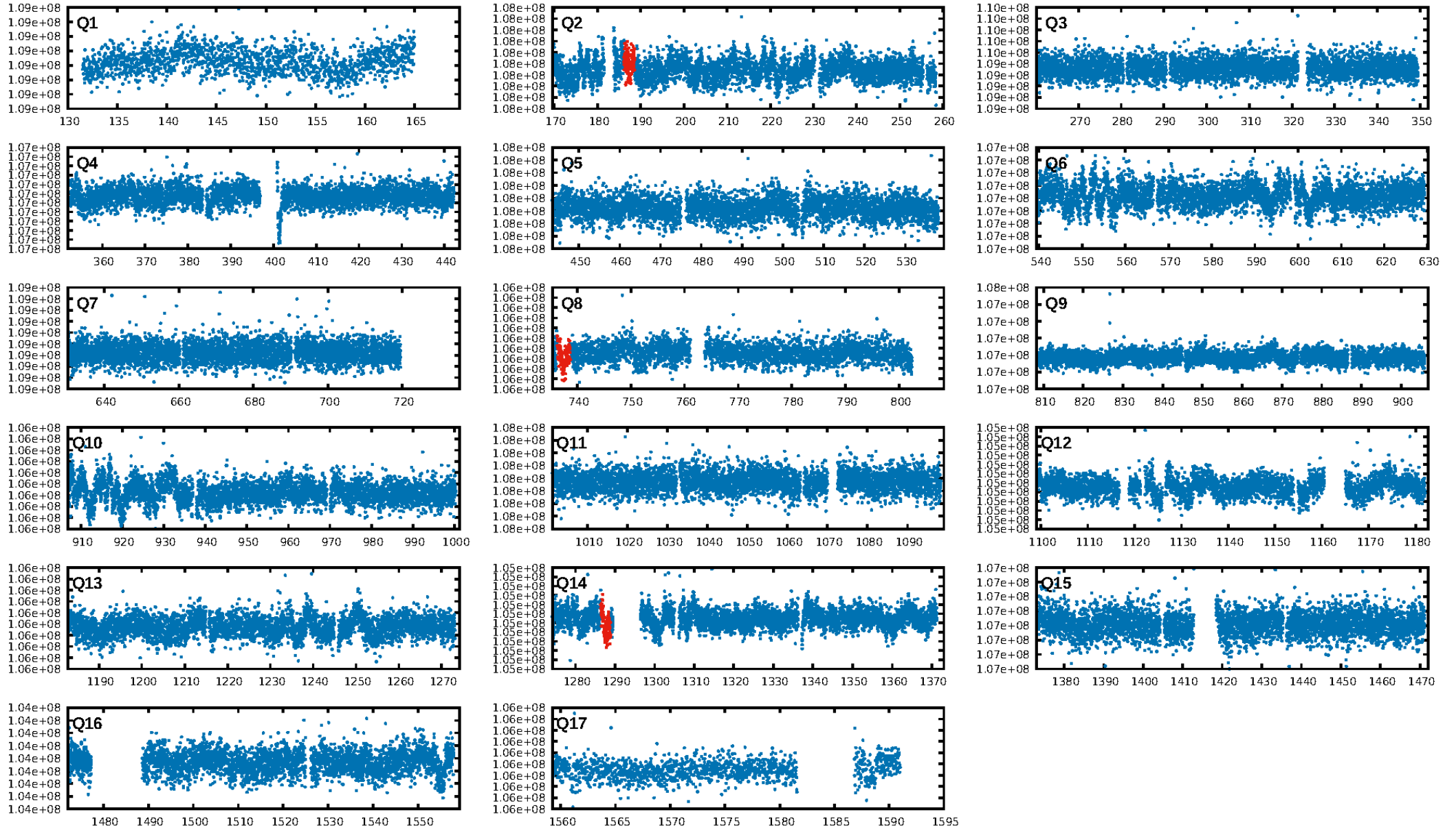
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.64e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 10.67
Centroid-sig: N/A
Centroid-so: 1.139 arcsec [0.50σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-rm: N/A
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [1/1]

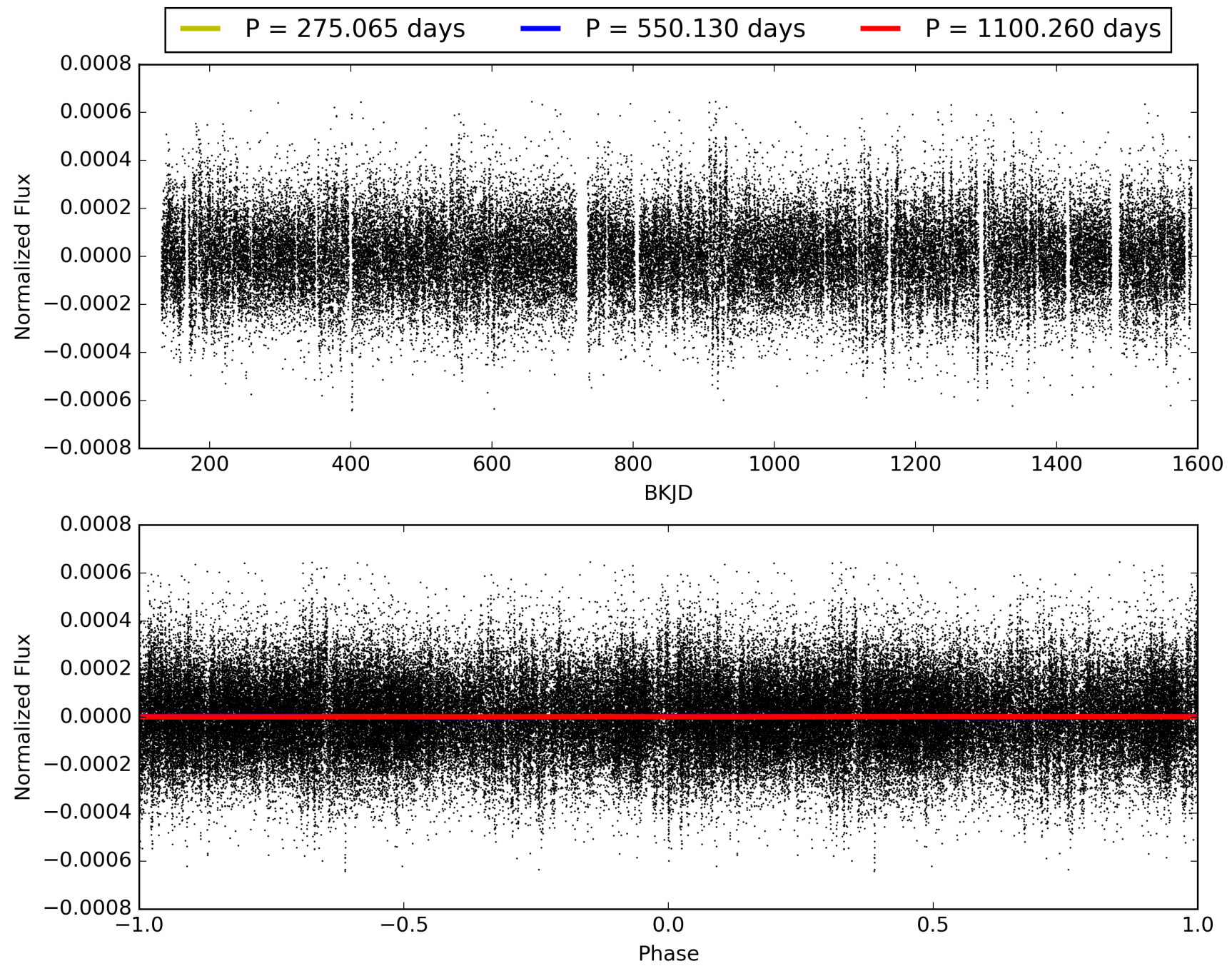
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:02:54 Z

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

TCE 008172382-01, PDC Light Curves

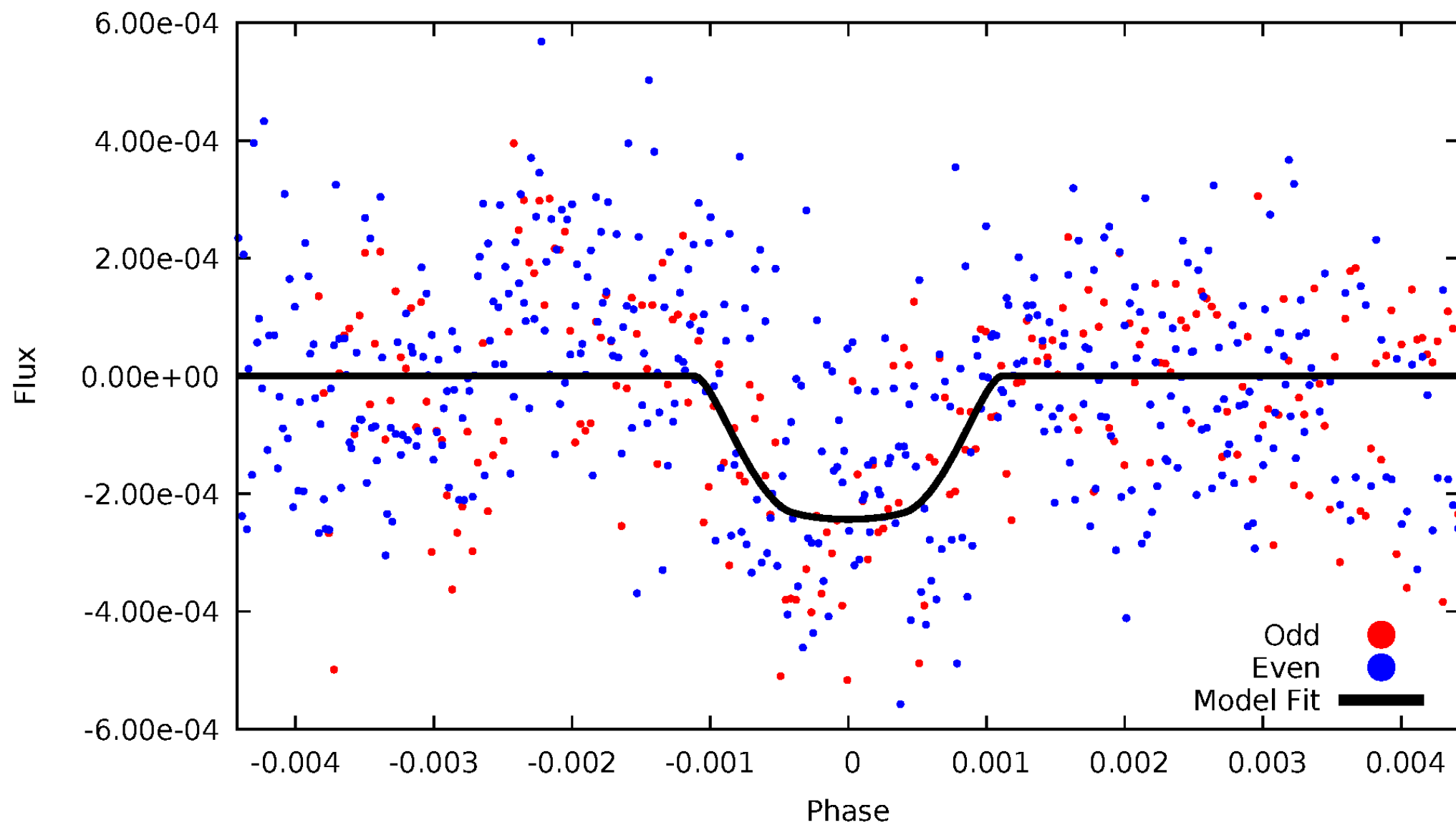


TCE 008172382-01



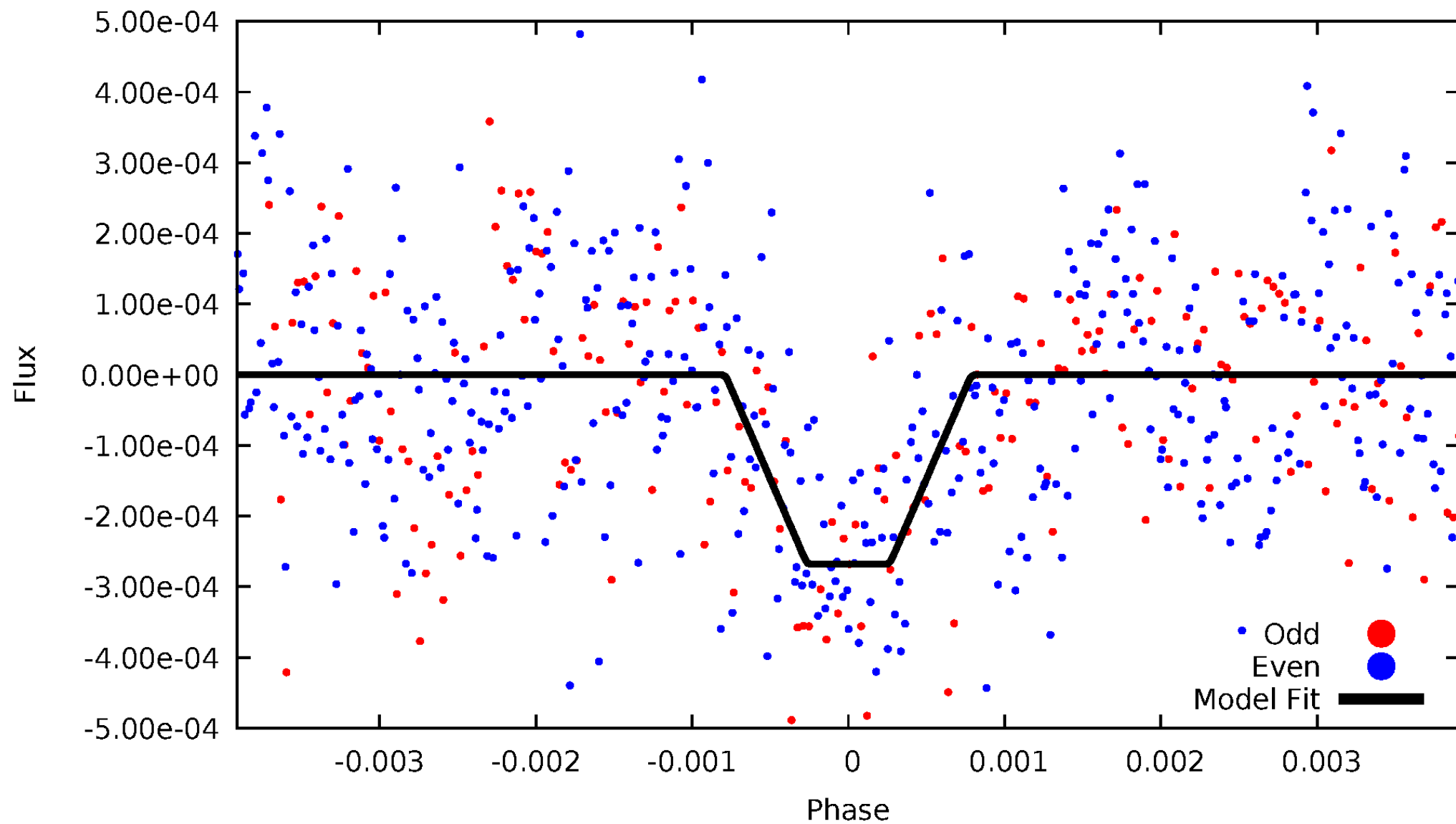
DV Odd/Even

TCE 008172382-01

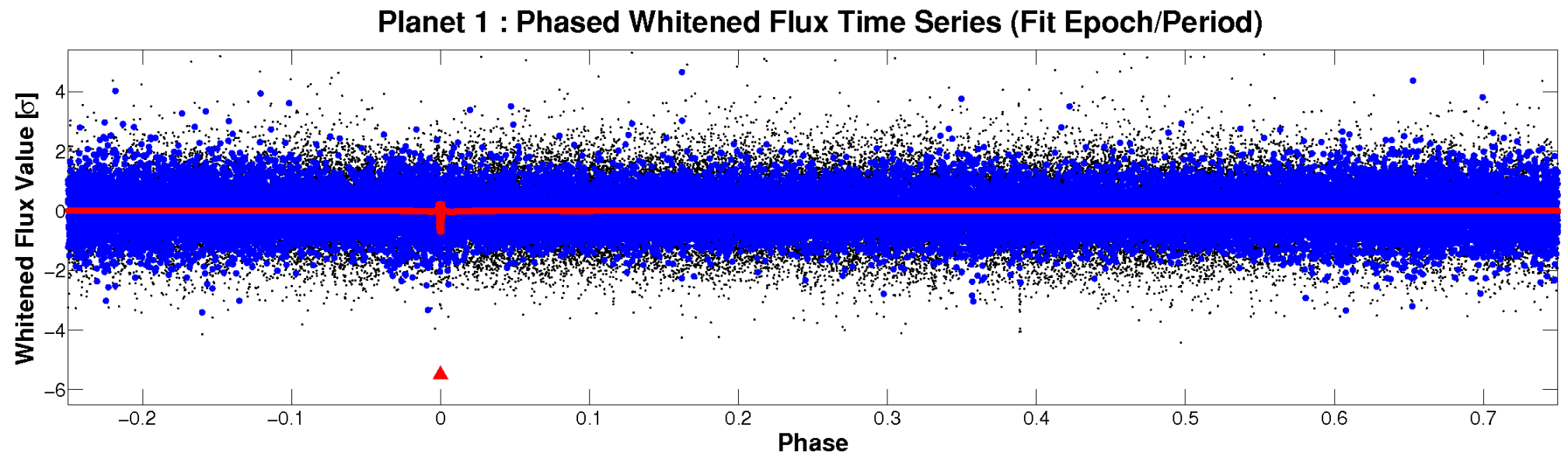
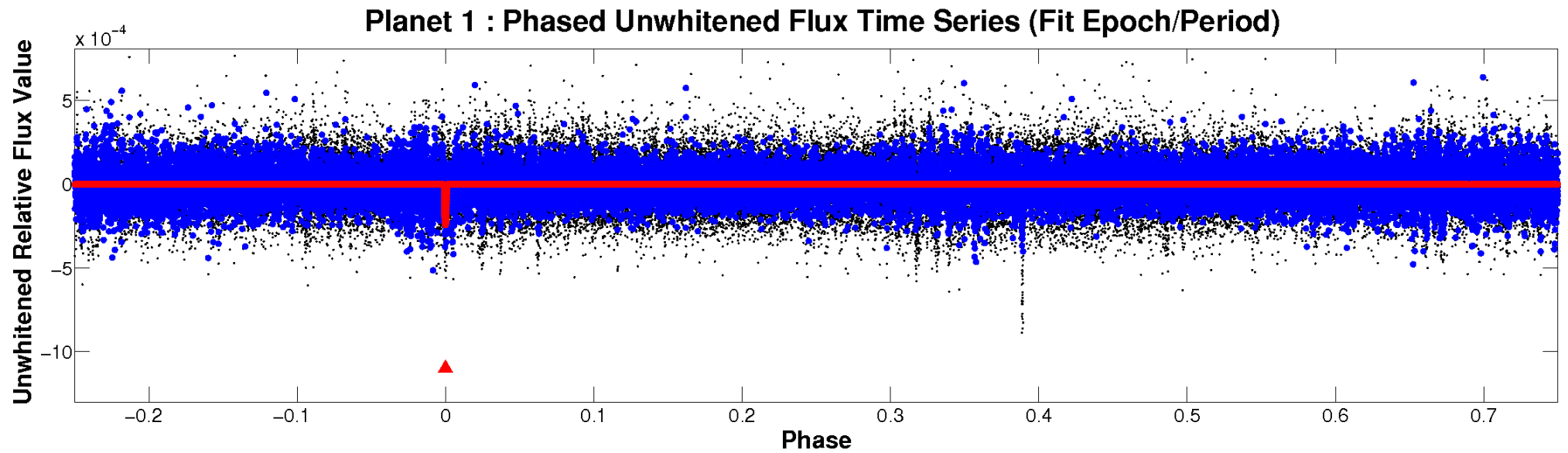


ALT Odd/Even

TCE 008172382-01



Non-Whitened Vs. Whitened Light Curve



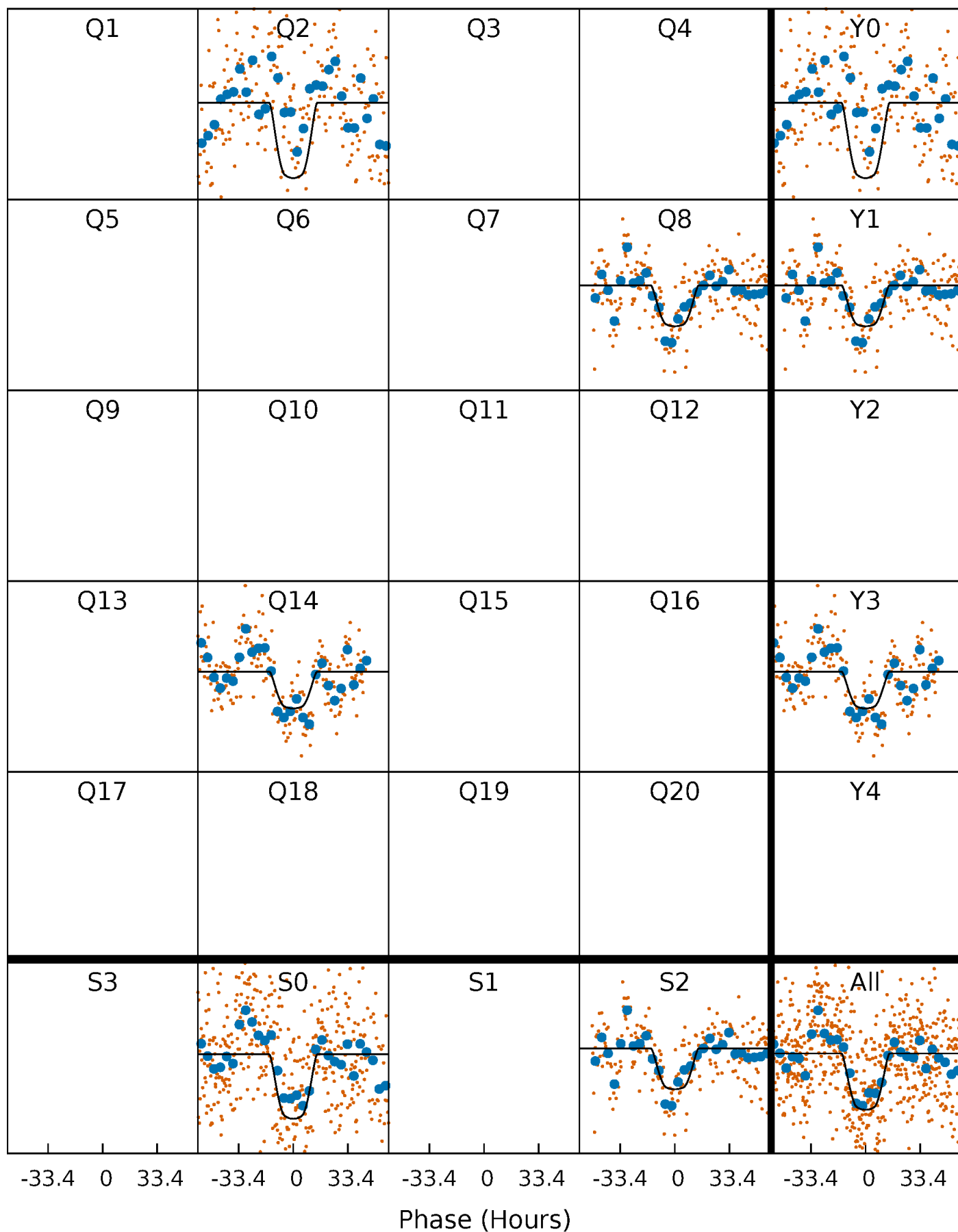
PDC Quarter-Phased Transit Curves

TCE 008172382-01 P=550.130216 Days $T_0=187.362347$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008172382-01 P=550.130216 Days $T_0=187.362347$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

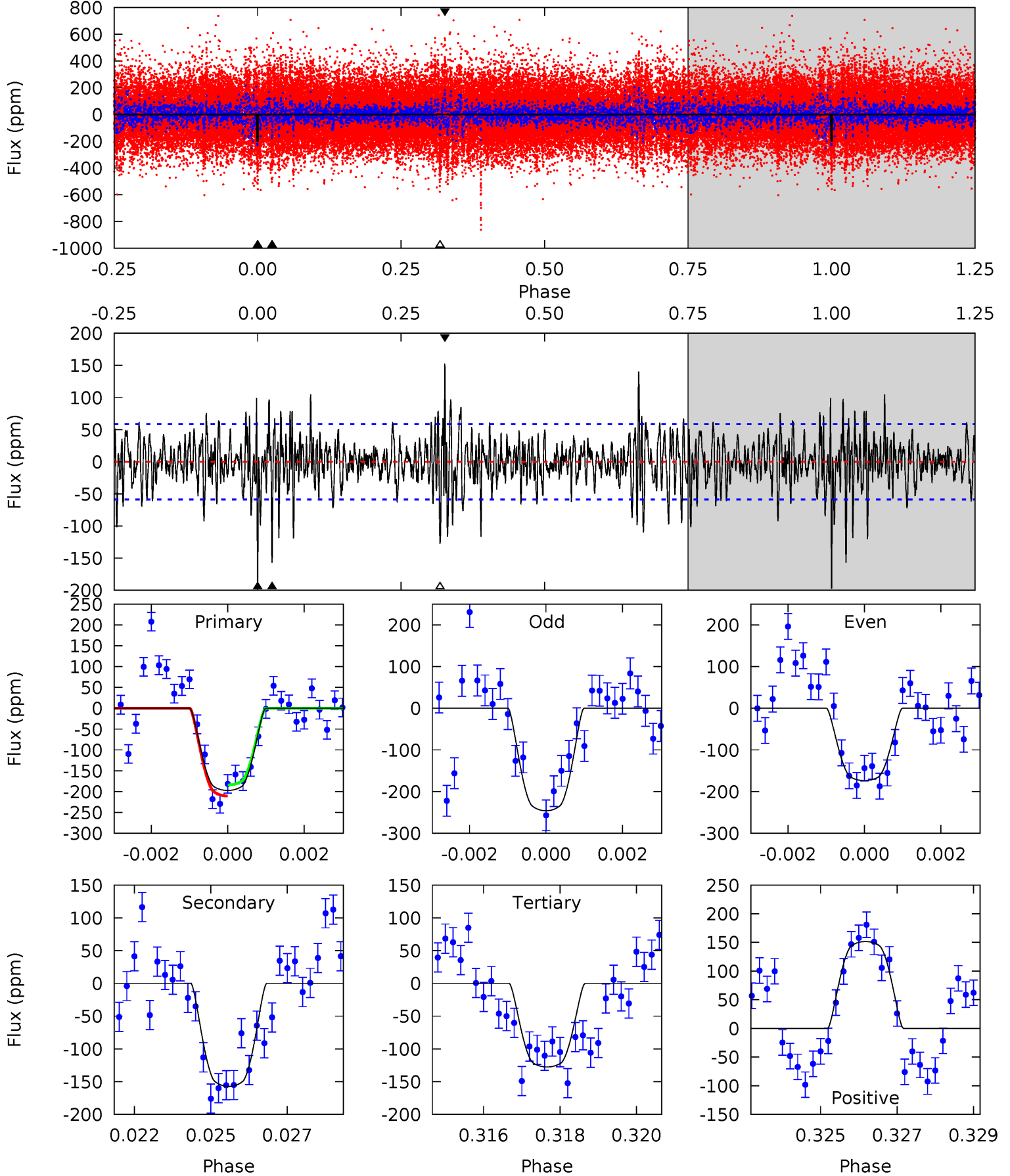
TCE 008172382-01 P=549.921589 Days $T_0=187.501164$ (BKJD)



DV Model-Shift Uniqueness Test

008172382-01, P = 550.130216 Days, E = 187.362347 Days

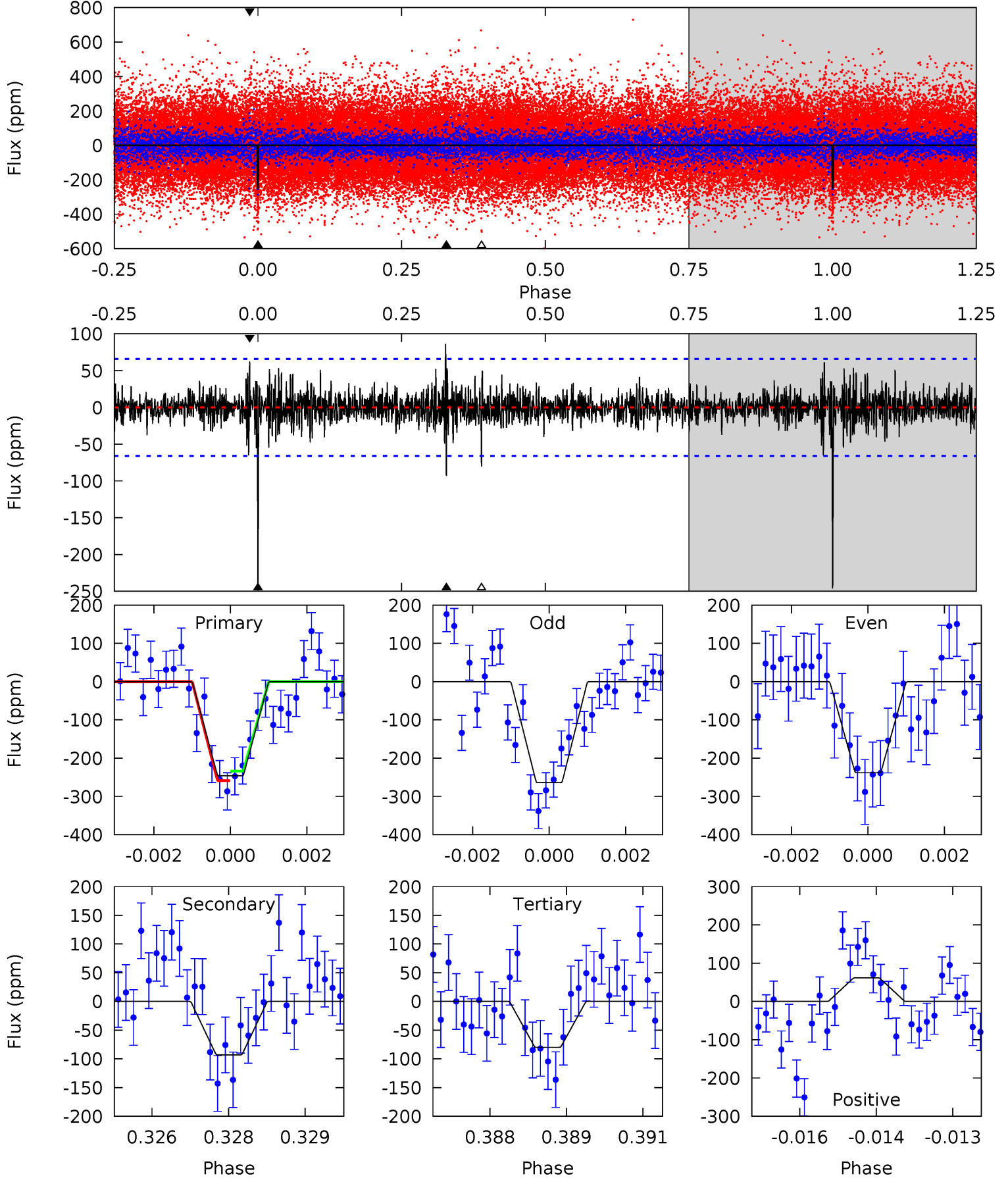
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	14.2	11.5	13.7	5.31	3.06	2.92	6.29	4.13	2.68	0.51	3.11	0.81	0.43	1.20



Alt Model-Shift Uniqueness Test

008172382-01, P = 549.921589 Days, E = 187.501164 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.0	7.57	6.51	5.02	5.37	3.16	1.18	13.5	15.0	1.07	2.55	1.01	0.95	0.26	1.02



Stellar Parameters For KIC 008172382

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5883^{+140}_{-158}	$4.506^{+0.062}_{-0.188}$	$-0.420^{+0.300}_{-0.300}$	$0.864^{+0.236}_{-0.094}$	$0.873^{+0.099}_{-0.089}$	$1.908^{+0.602}_{-0.899}$
	+2%/-3%	+1%/-4%	+71%/-71%	+27%/-11%	+11%/-10%	+32%/-47%
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 008172382-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-157 ± 11	$1.87^{+0.31}_{-0.25}$	306^{+21}_{-14}	4876^{+255}_{-224}	38543^{+12693}_{-9166}
Alt.	-93 ± 12	$1.60^{+0.28}_{-0.22}$	305^{+20}_{-13}	4652^{+298}_{-246}	31042^{+11773}_{-8703}

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

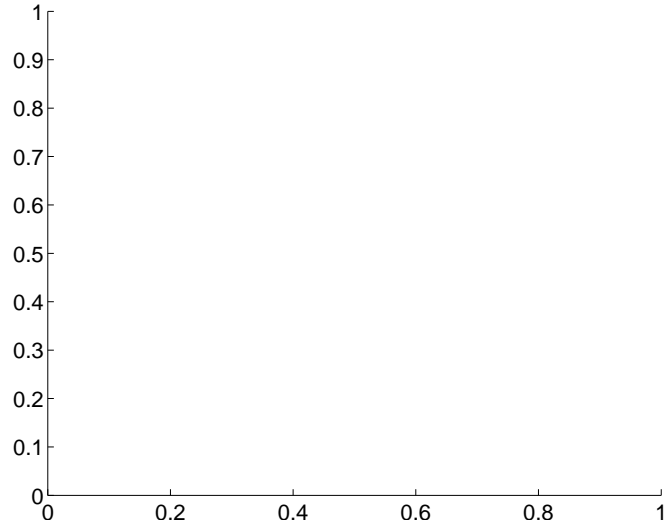
Supplemental centroid analysis for 008172382-01. Kepler magnitude: 13.42. Transit SNR 7.26

There are 0 quarters with good PRF difference image offsets

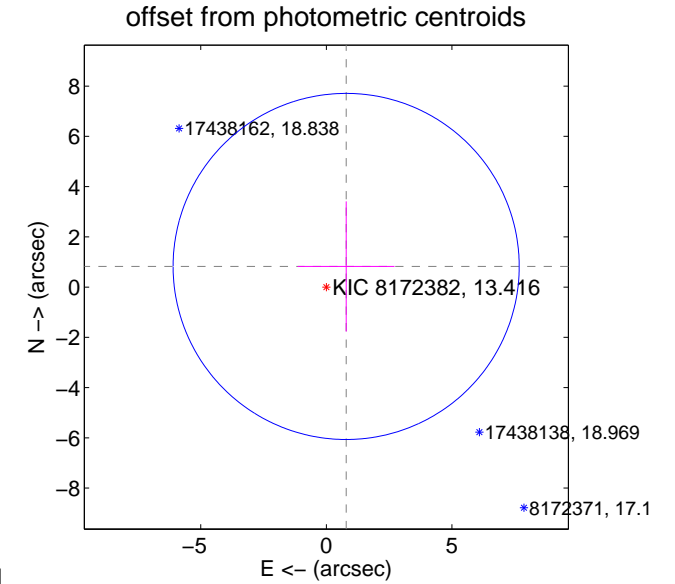
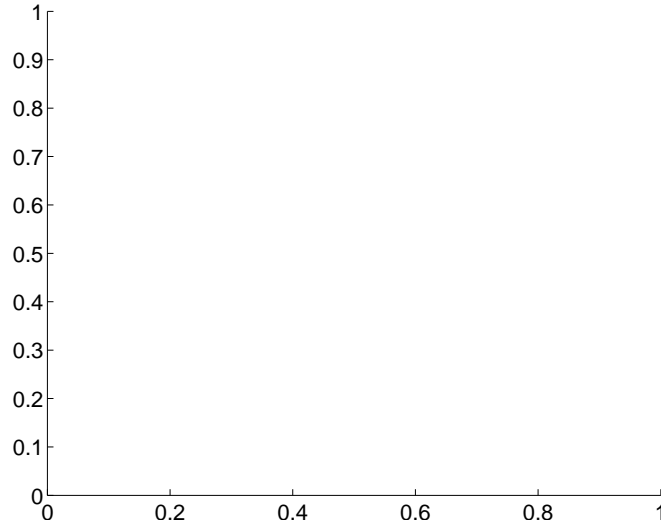
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	1.14 ± 2.30	0.50	-0.79 ± 1.92	0.82 ± 2.59

There is no PRF-fit offset from OOT-fit

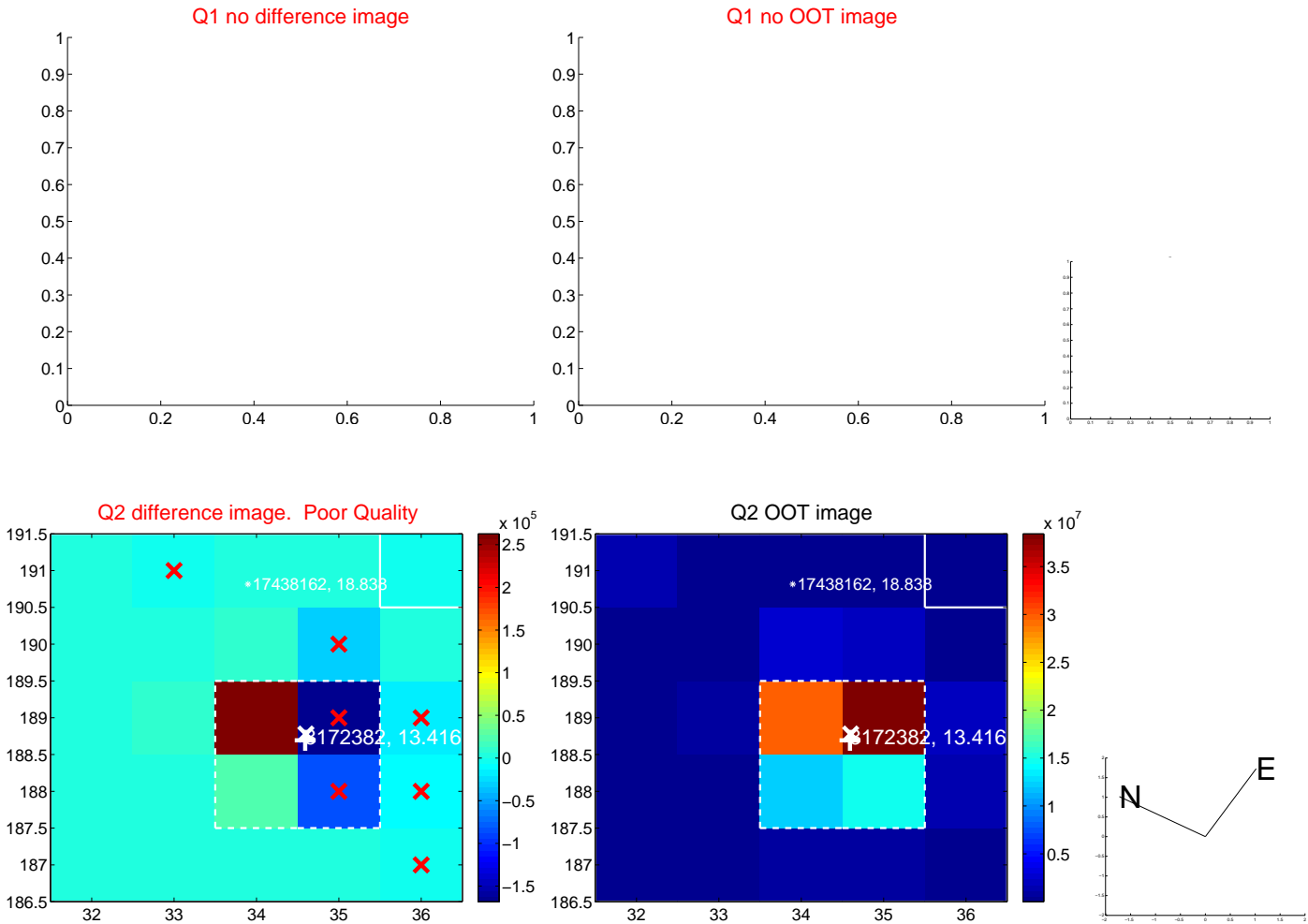


There is no PRF-fit offset from KIC

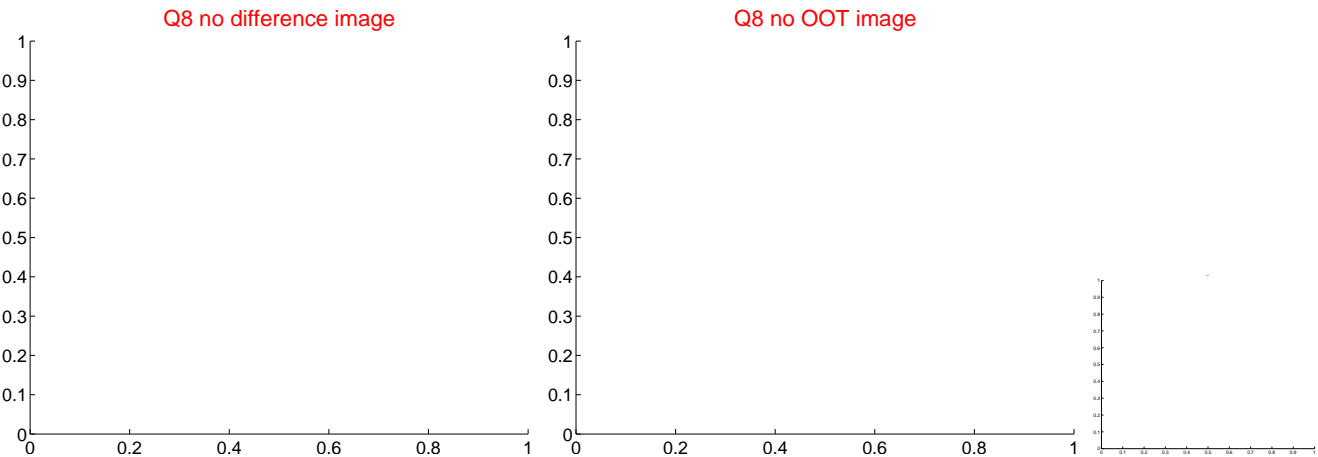
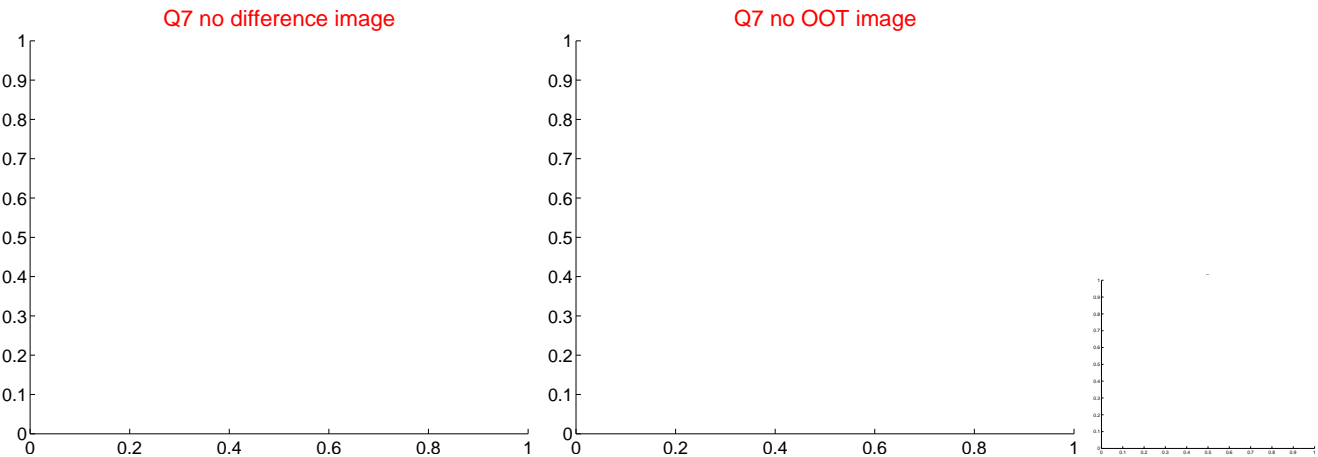
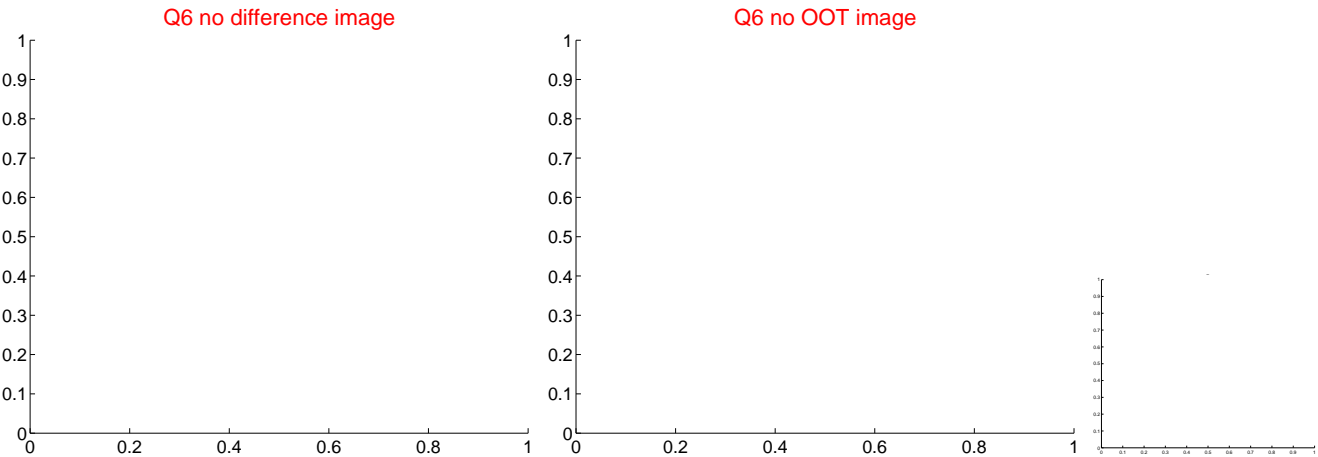
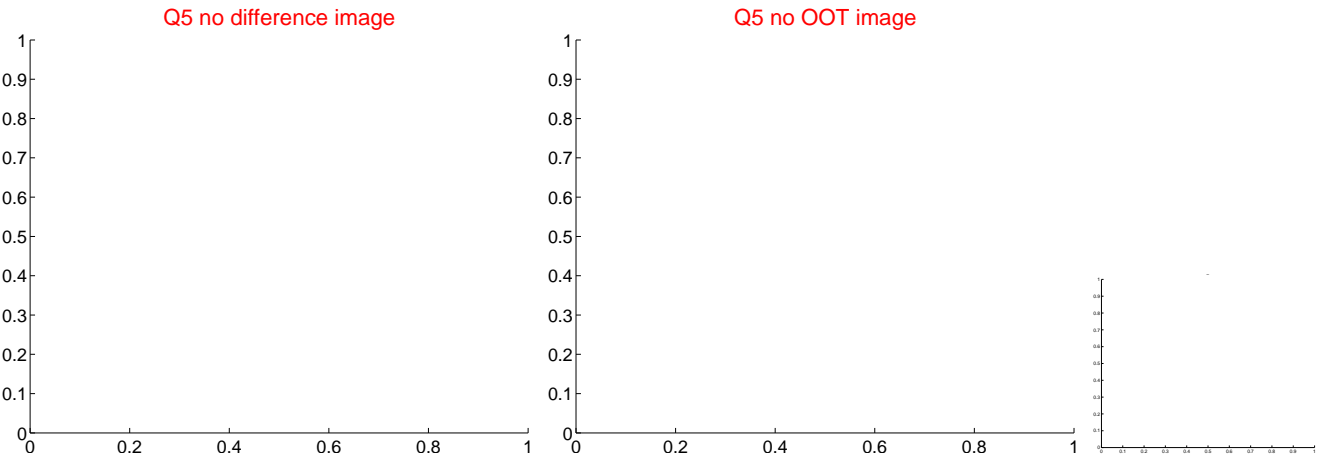


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

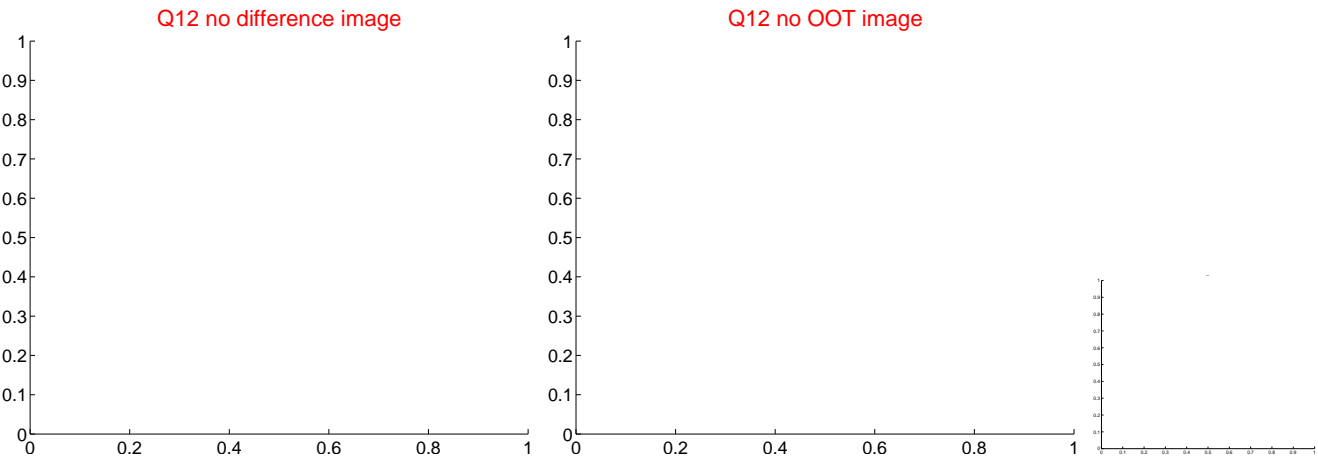
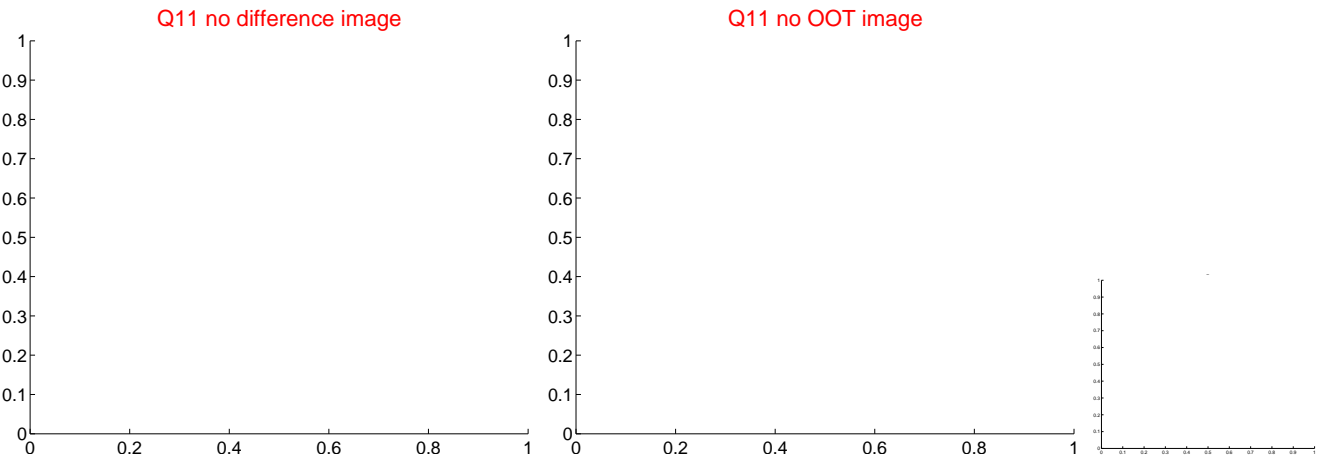
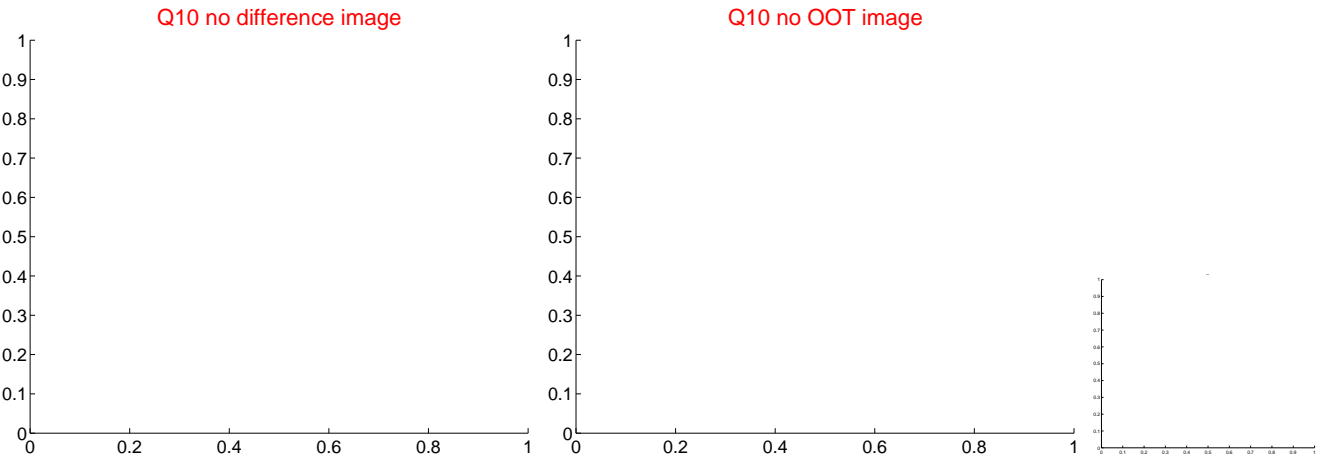
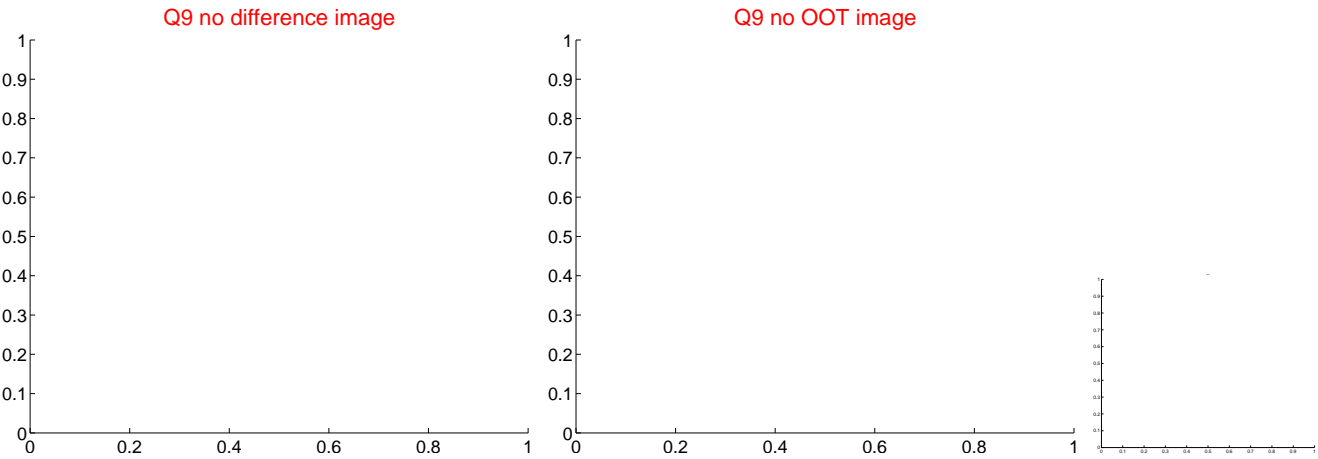
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



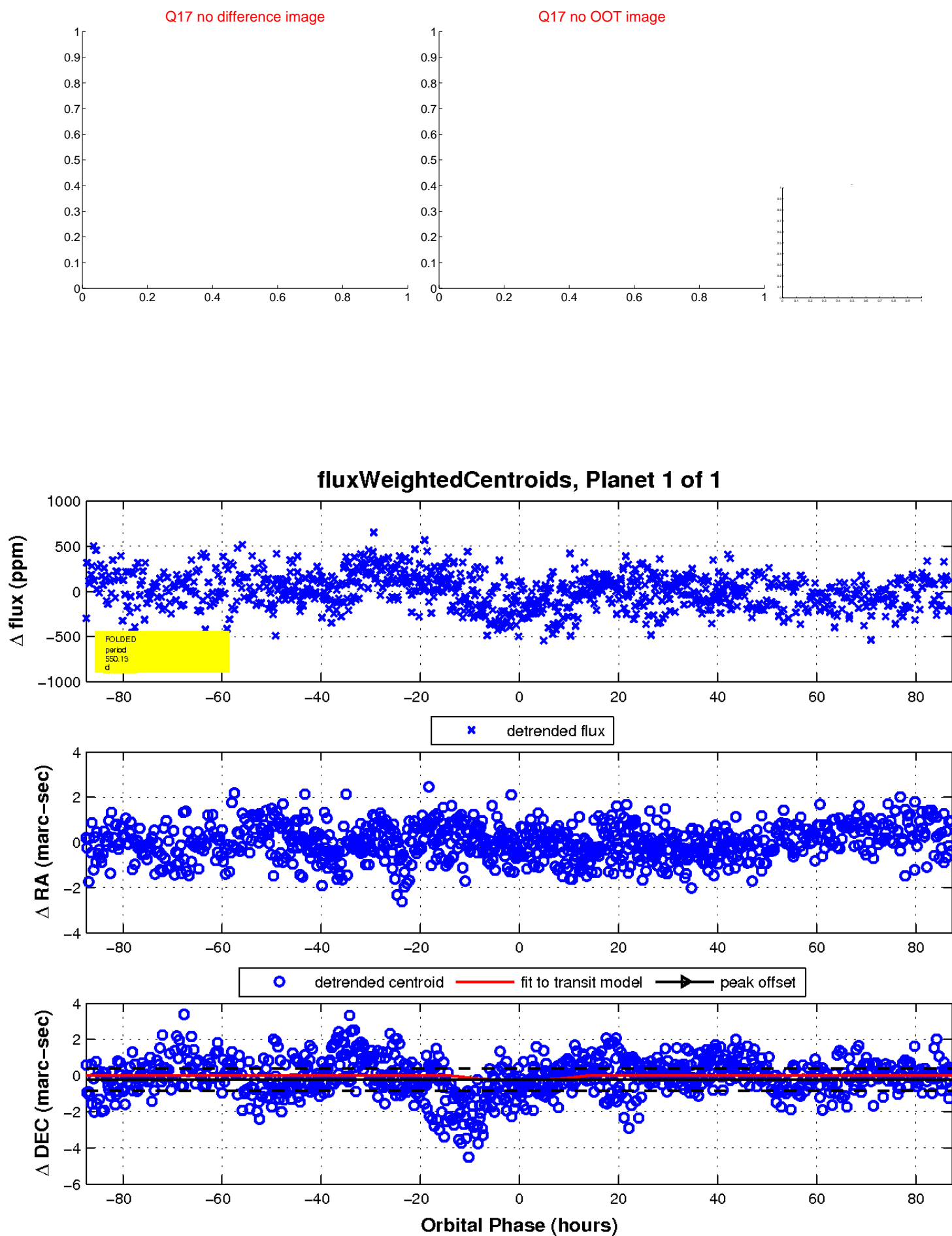
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

