

KIC 005876919

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})
005876919-01	OBS	No	430.368989	190.864600	1013.5	13.963	7.2	6.5	10.74	4700	39.26	28.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005876919-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL

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

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

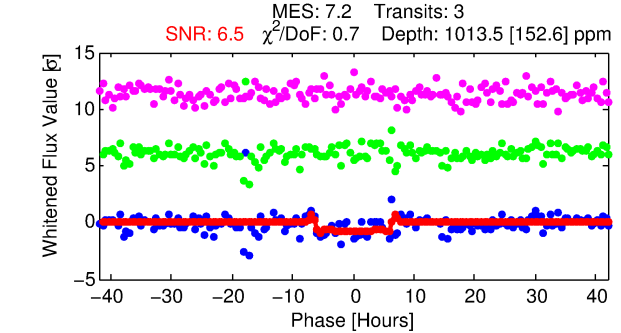
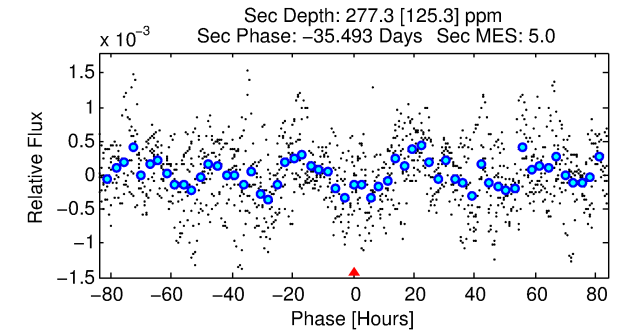
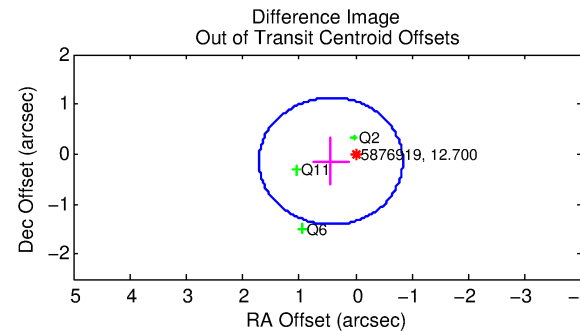
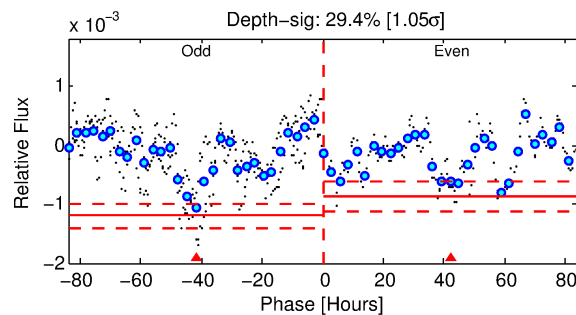
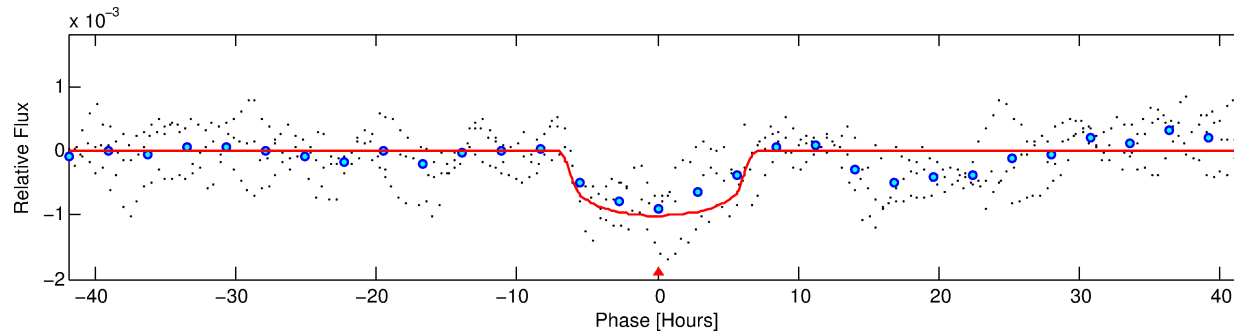
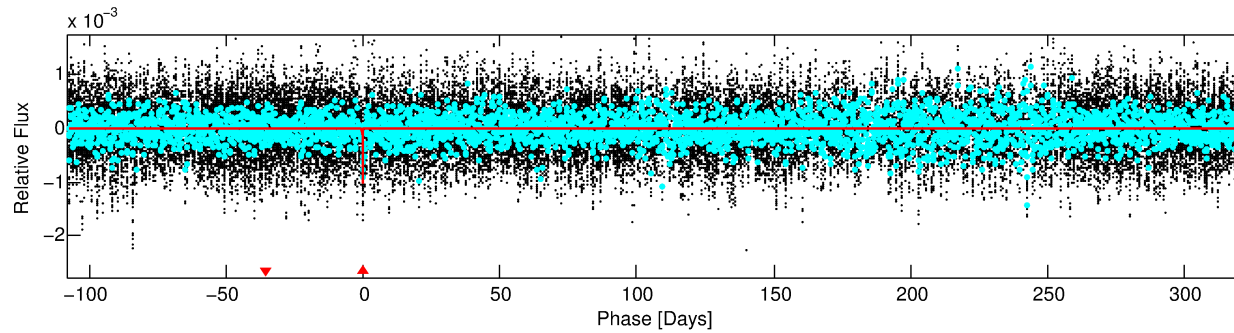
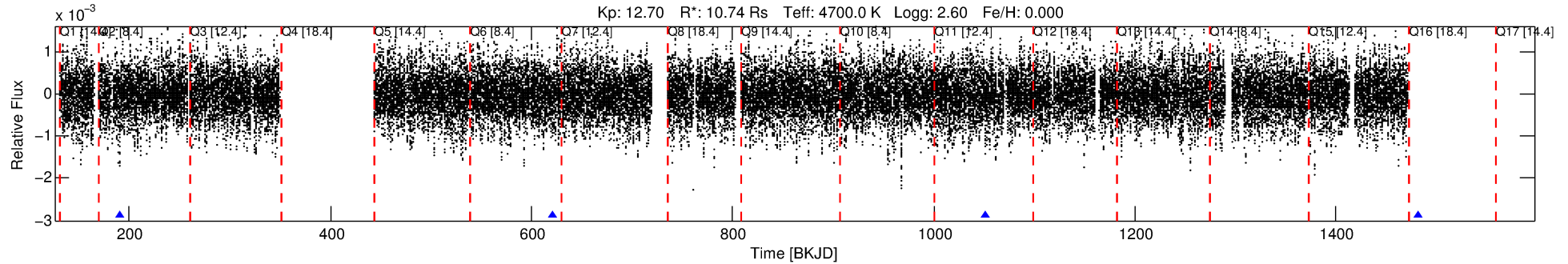
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005876919-01

No Significant Match Found

DV One-Page Summary

KIC: 5876919 Candidate: 1 of 1 Period: 430.369 d



DV Fit Results:

Period = 430.36899 [0.00706] d
Epoch = 190.8646 [0.0087] BKJD
Rp/R* = 0.0335 [0.0028]
a/R* = 145.04 [17.75]
b = 0.83 [0.05]
Seff = 28.90 [4.91]
Teq = 591 [25] K
Rp = 39.25 [8.24] Re
a = 1.3215 [0.1726] AU
Ag = 172.86 [86.73] [1.98 σ]
Teffp = 3315 [408] K [6.66 σ]

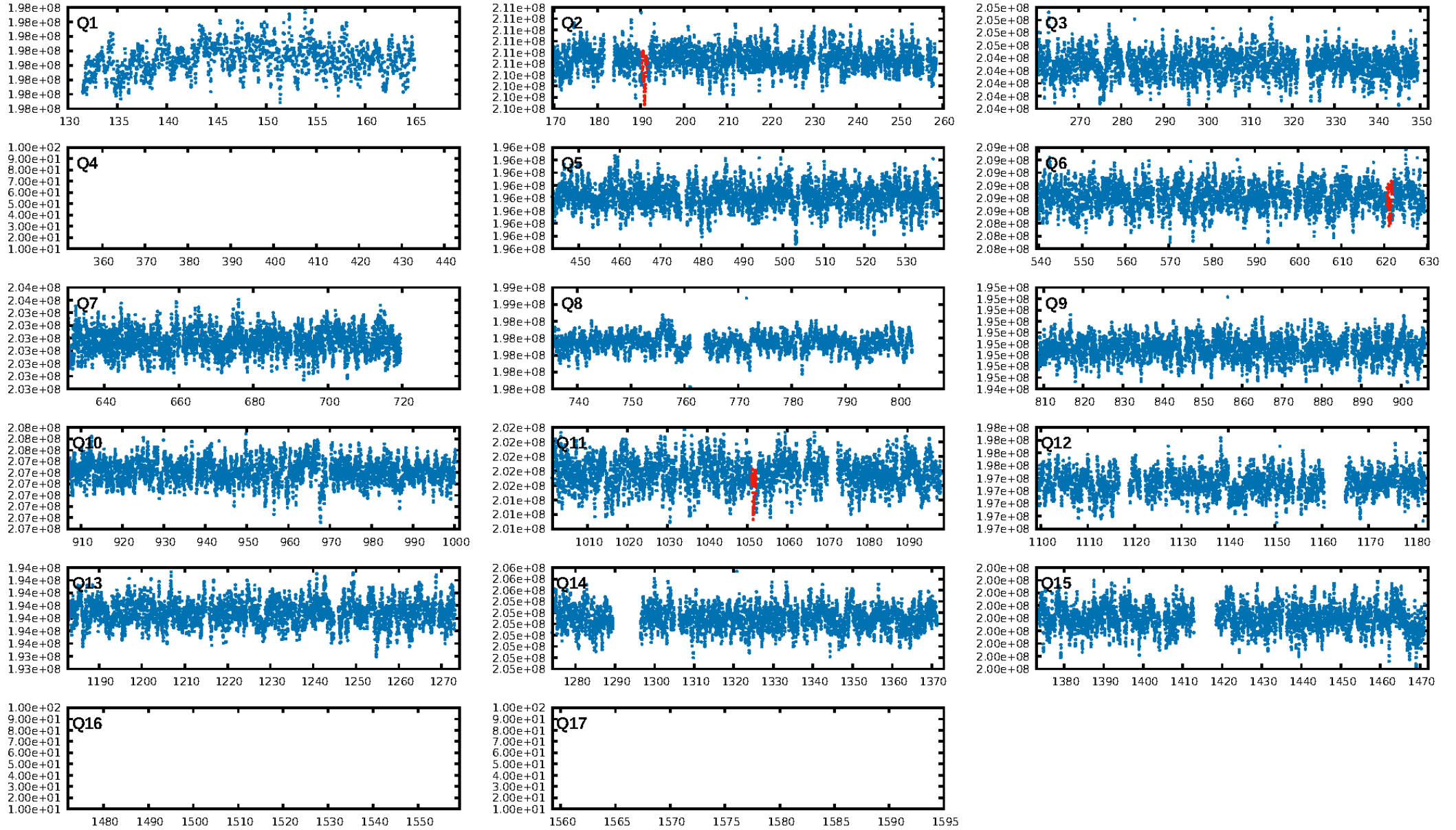
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 37.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.64e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.7136
Centroid-sig: 7.2%
Centroid-so: 0.086 arcsec [0.50 σ]
OotOffset-rm: 0.462 arcsec [1.09 σ]
KicOffset-rm: 0.347 arcsec [0.75 σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

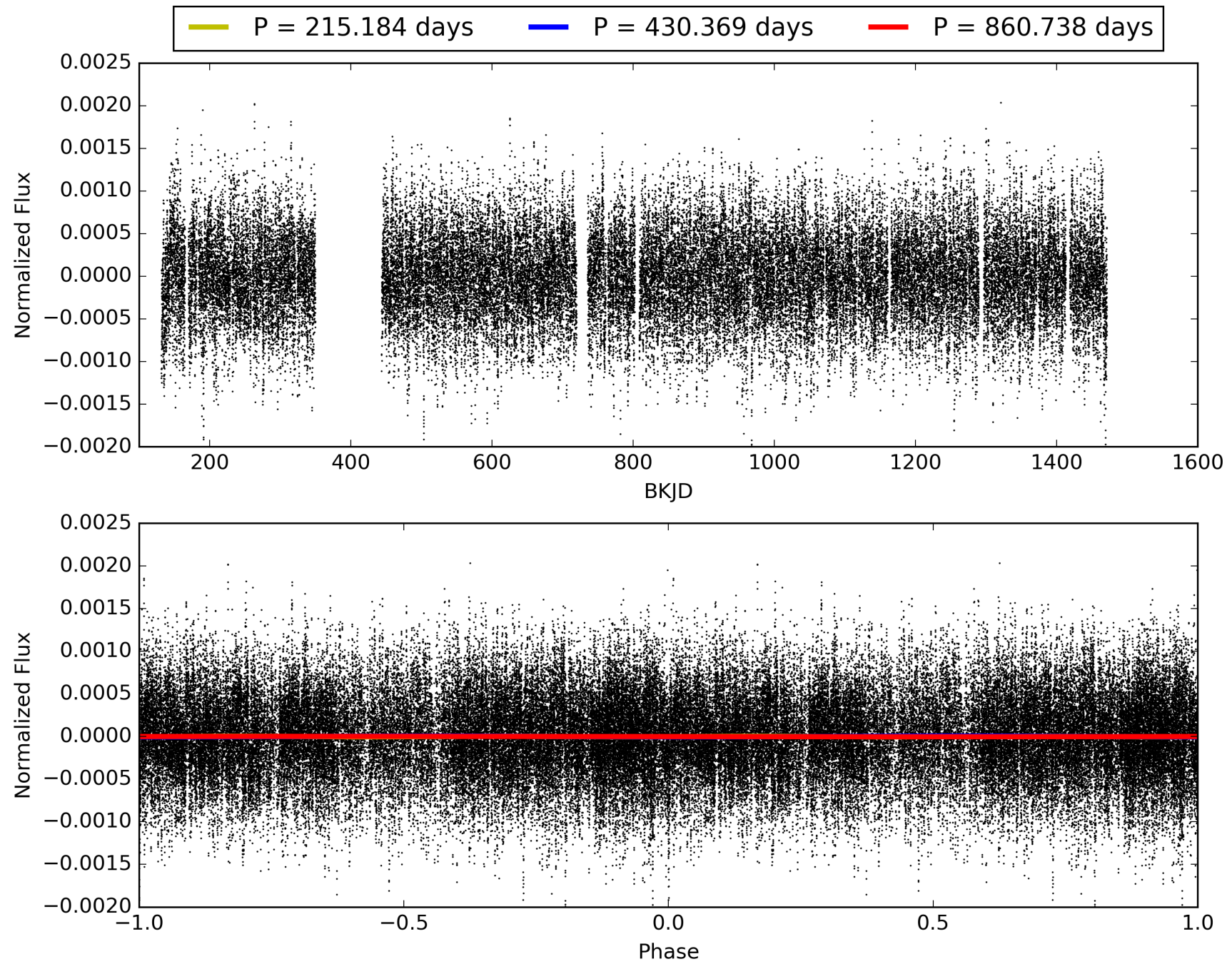
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:06:40 Z

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

TCE 005876919-01, PDC Light Curves

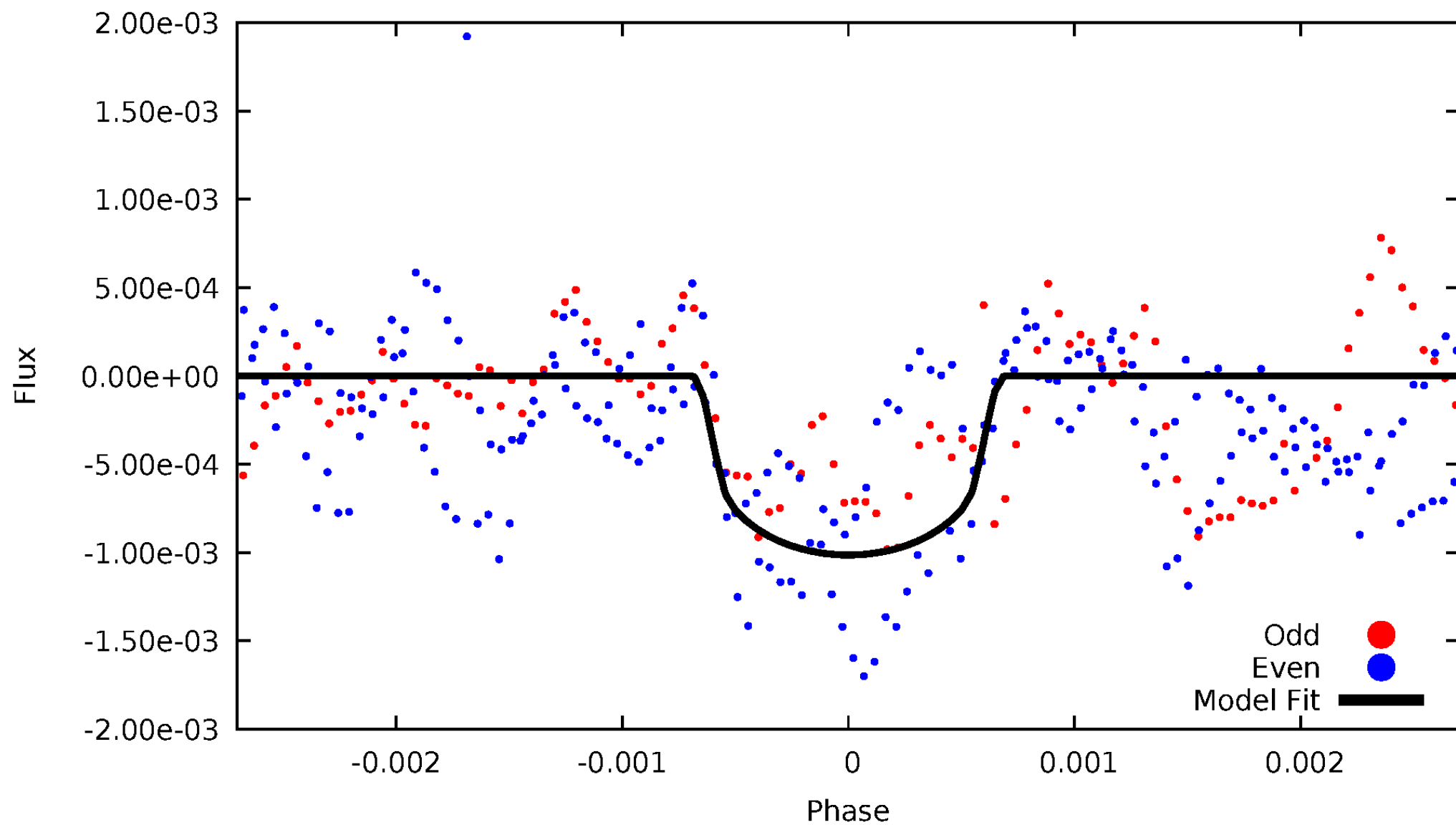


TCE 005876919-01



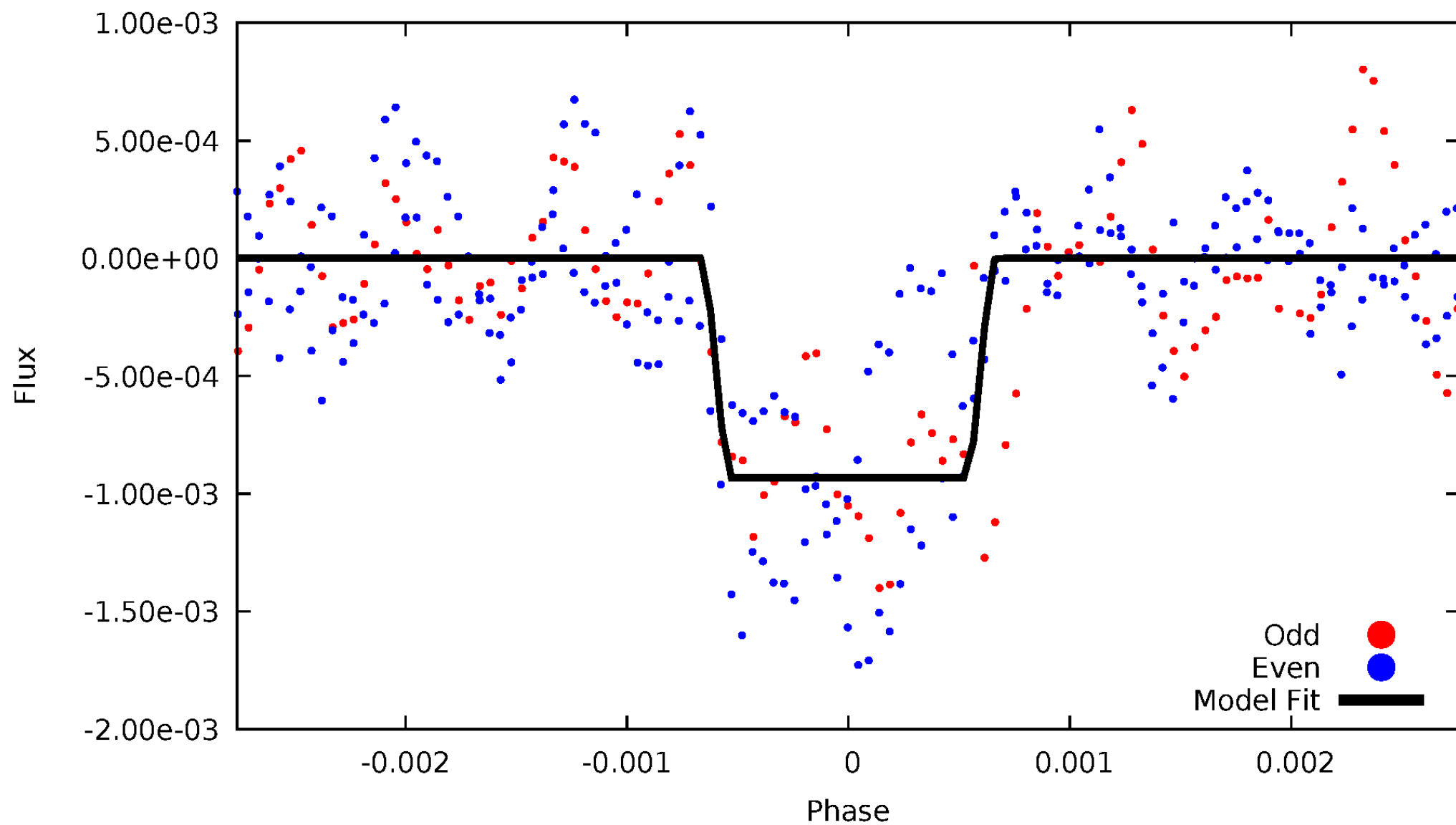
DV Odd/Even

TCE 005876919-01



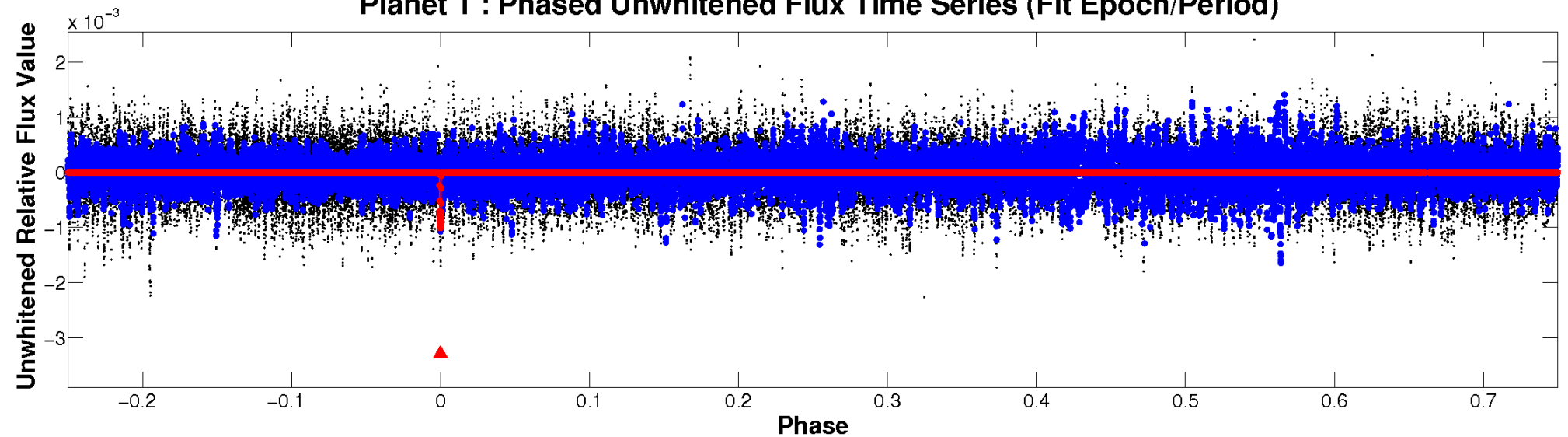
ALT Odd/Even

TCE 005876919-01

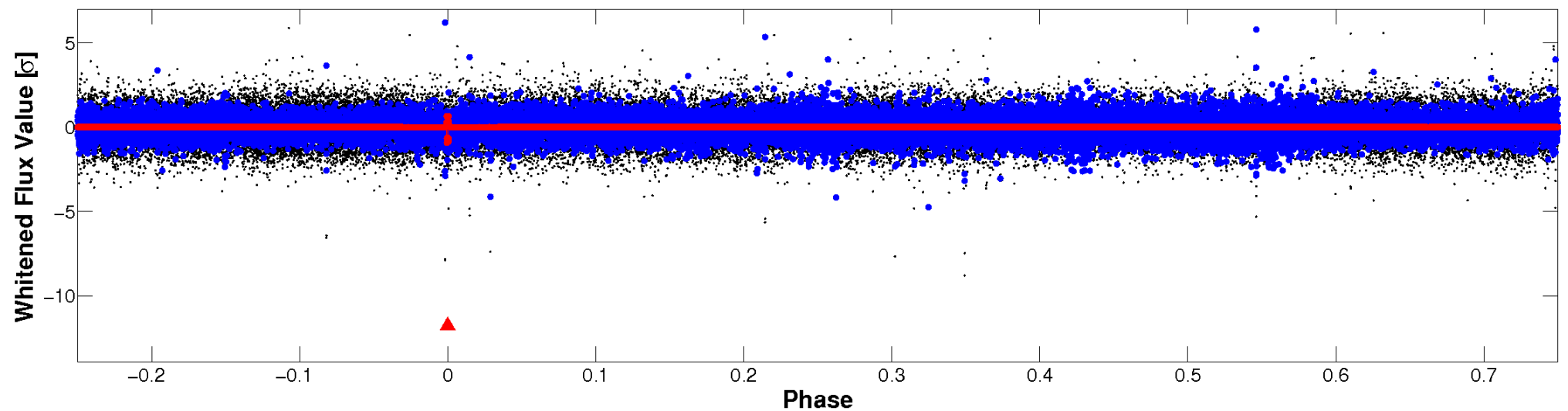


Non-Whitened Vs. Whitened Light Curve

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 005876919-01 P=430.368989 Days $T_0=190.864600$ (BKJD)



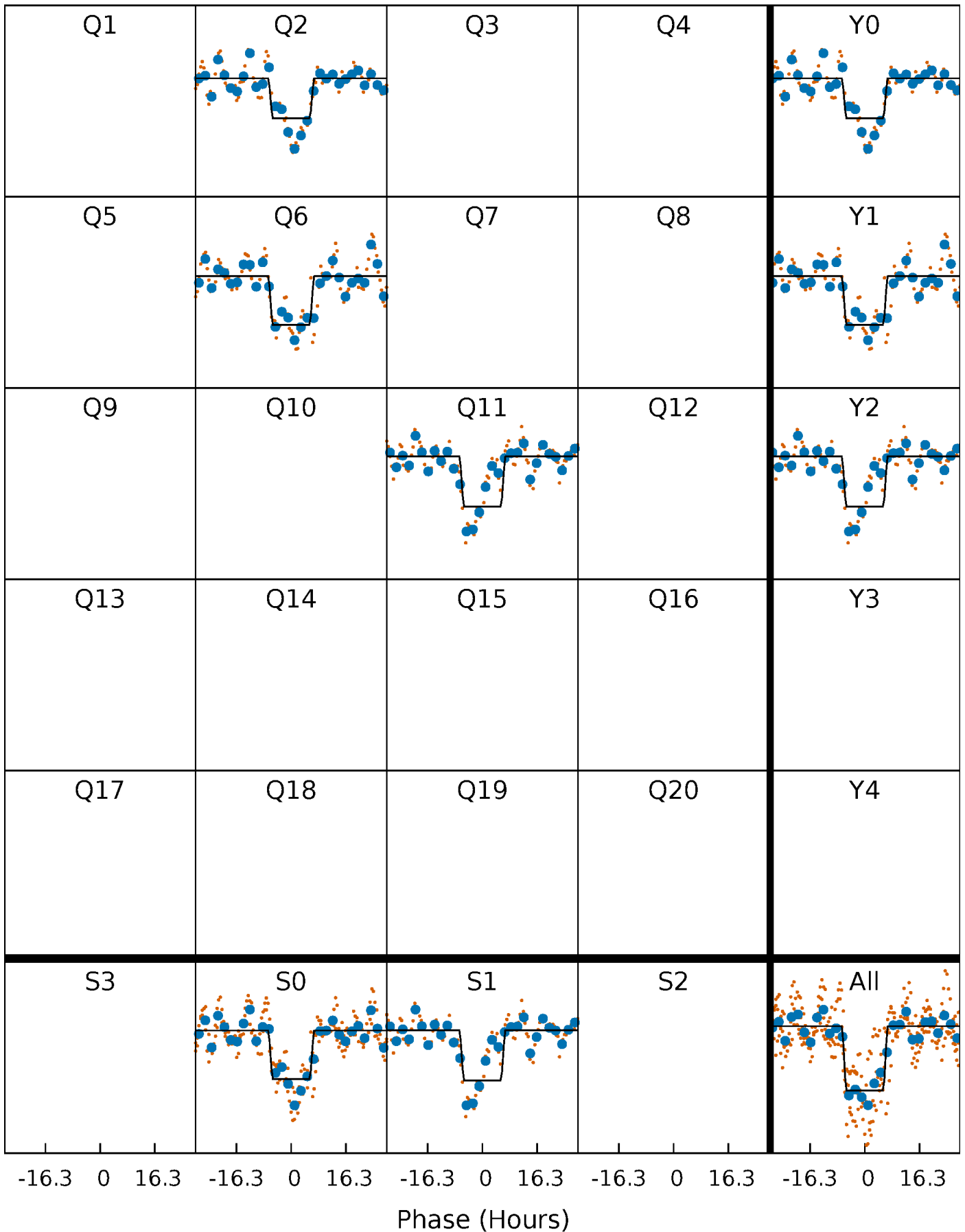
DV Quarter-Phased Transit Curves

TCE 005876919-01 P=430.368989 Days $T_0=190.864600$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

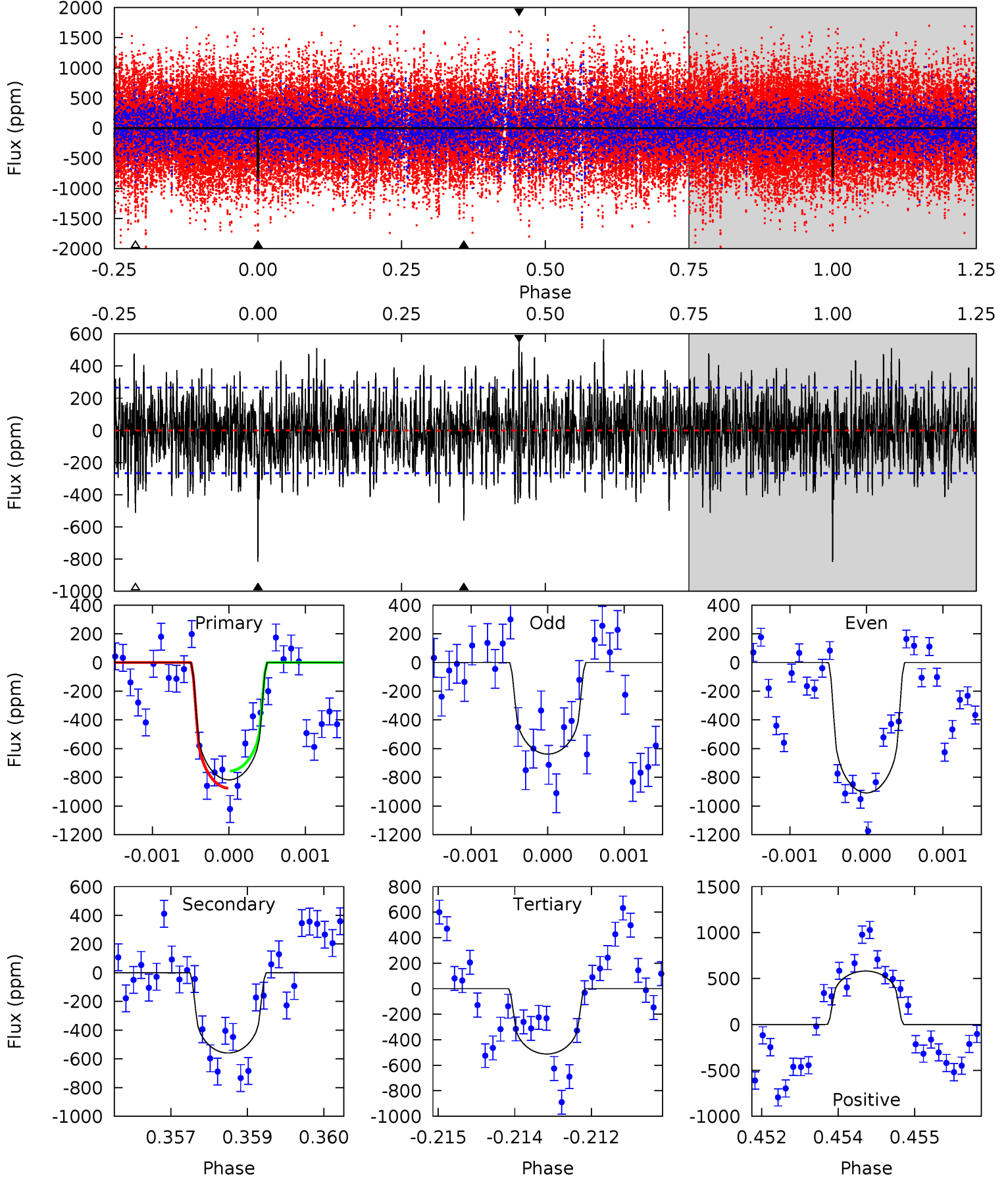
TCE 005876919-01 P=430.371641 Days $T_0=190.875239$ (BKJD)



DV Model-Shift Uniqueness Test

005876919-01, $P = 430.368989$ Days, $E = 190.864600$ Days

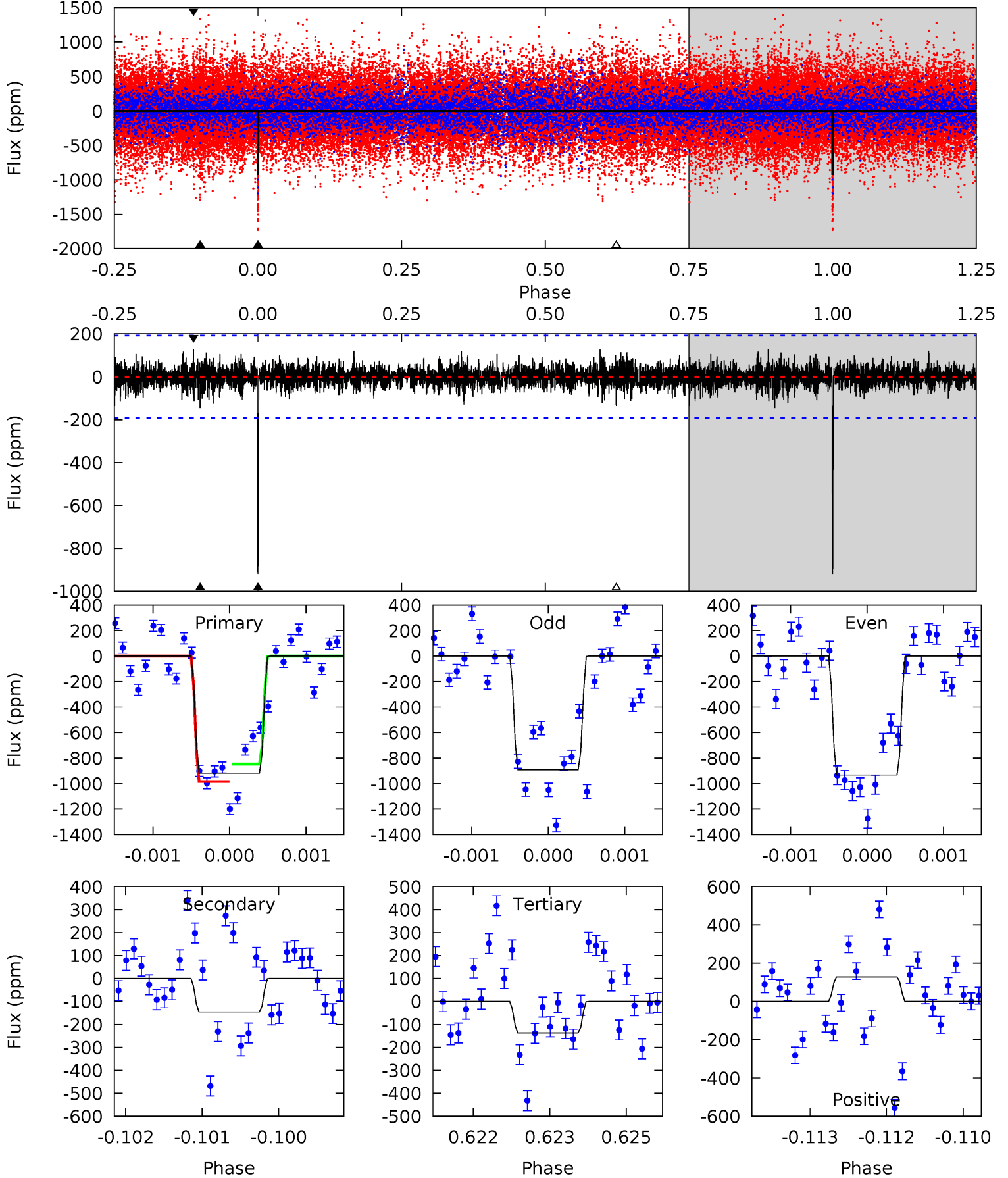
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	11.3	10.4	11.8	5.39	3.20	3.33	6.19	4.79	0.96	-0.45	2.60	1.16	0.42	1.21



Alt Model-Shift Uniqueness Test

005876919-01, $P = 430.371641$ Days, $E = 190.875239$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.8	4.09	3.84	3.62	5.40	3.21	0.95	22.0	22.2	0.25	0.47	0.54	1.03	0.12	1.91



Stellar Parameters For KIC 005876919

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4700^{+82}_{-117}	$2.596^{+0.030}_{-0.033}$	$0.000^{+0.200}_{-0.200}$	$10.745^{+1.271}_{-2.065}$	$1.662^{+0.431}_{-0.593}$	$0.002^{+0.001}_{-0.000}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+12%/-19%	+26%/-36%	+27%/-11%
Source	PHO56	AST56	PHO56	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005876919-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-559 ± 49	$39.79^{+5.33}_{-5.83}$	827^{+23}_{-27}	4107^{+166}_{-158}	347^{+87}_{-63}
Alt.	-145 ± 36	$36.46^{+4.96}_{-5.03}$	827^{+22}_{-25}	3378^{+169}_{-165}	108^{+38}_{-30}

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 $A_{obs} \gg 1.0$

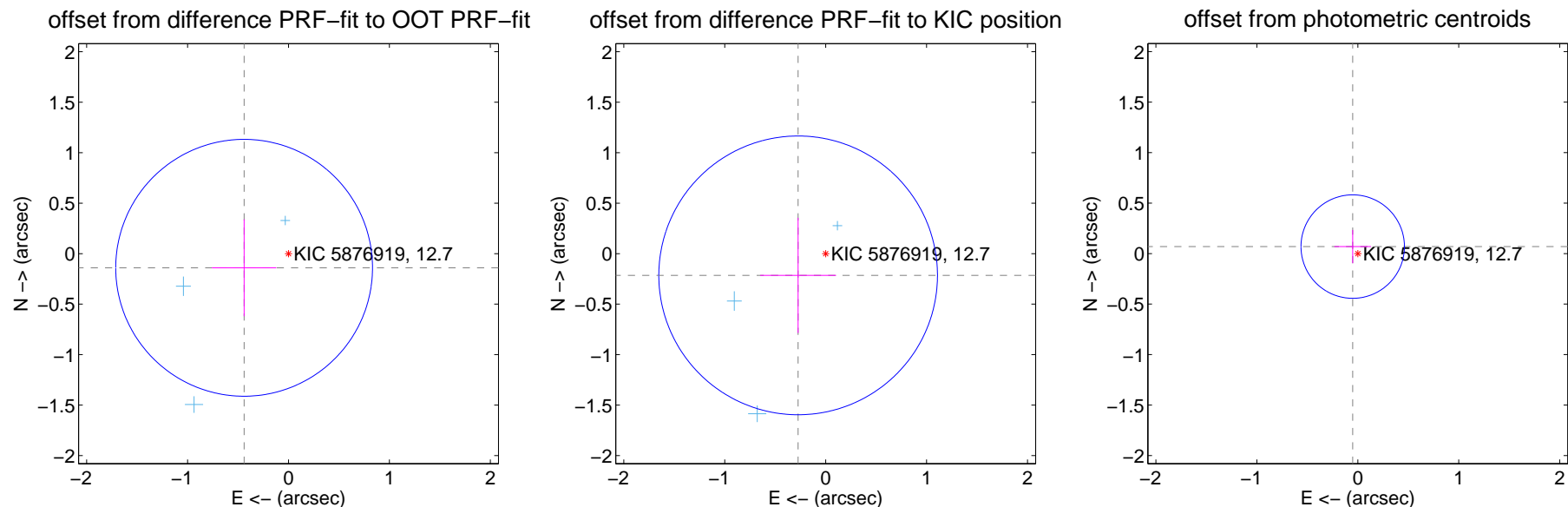
DV Centroid Data

Supplemental centroid analysis for 005876919-01. Kepler magnitude: 12.70. Transit SNR 6.51

There are 3 quarters with good PRF difference image offsets

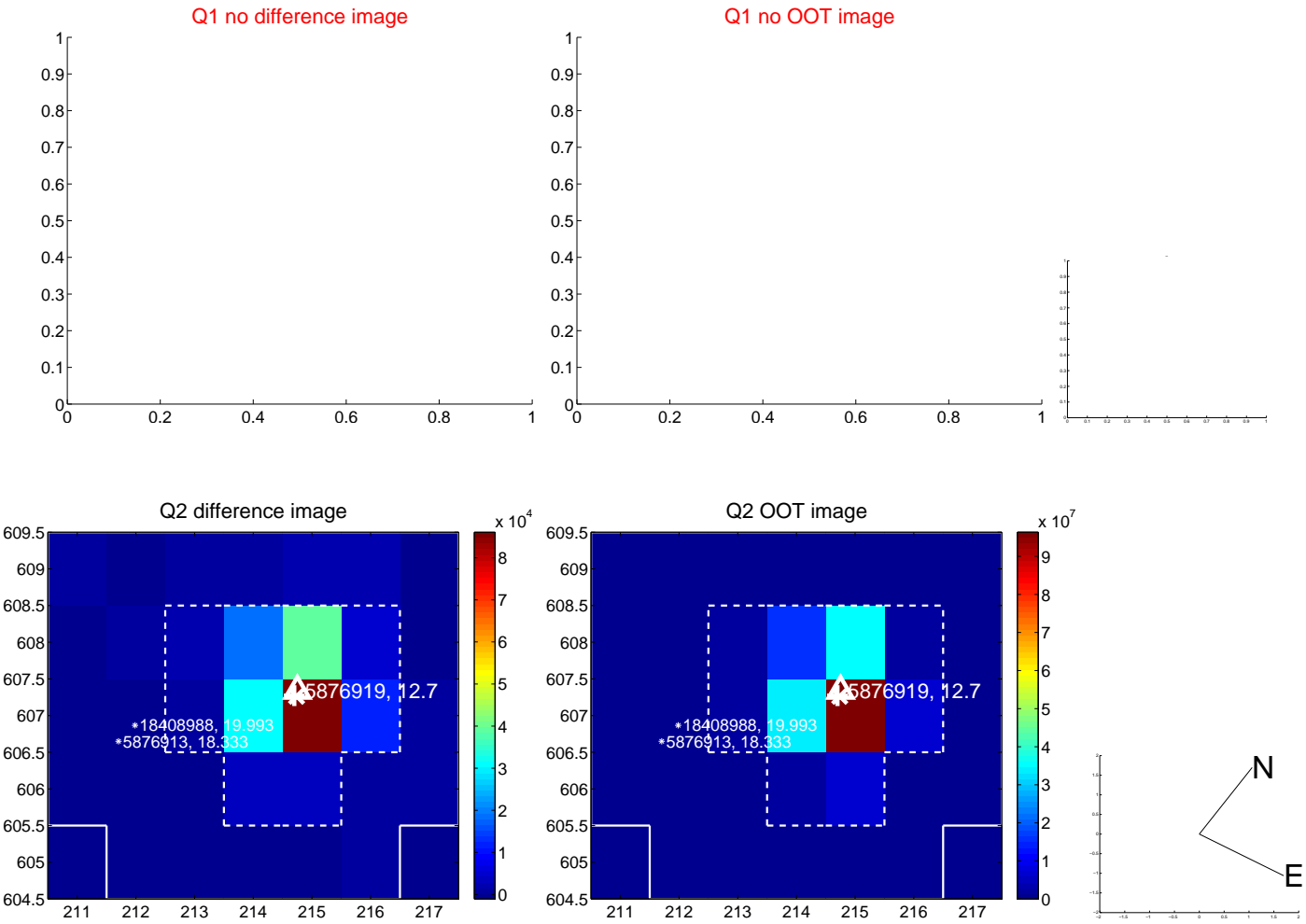
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.462 ± 0.424	1.09	0.440 ± 0.319	-0.140 ± 0.480
PRF-fit source offset from KIC position	0.347 ± 0.460	0.75	0.273 ± 0.375	-0.215 ± 0.571
photometric centroid source offset	0.09 ± 0.17	0.50	0.05 ± 0.18	0.07 ± 0.16

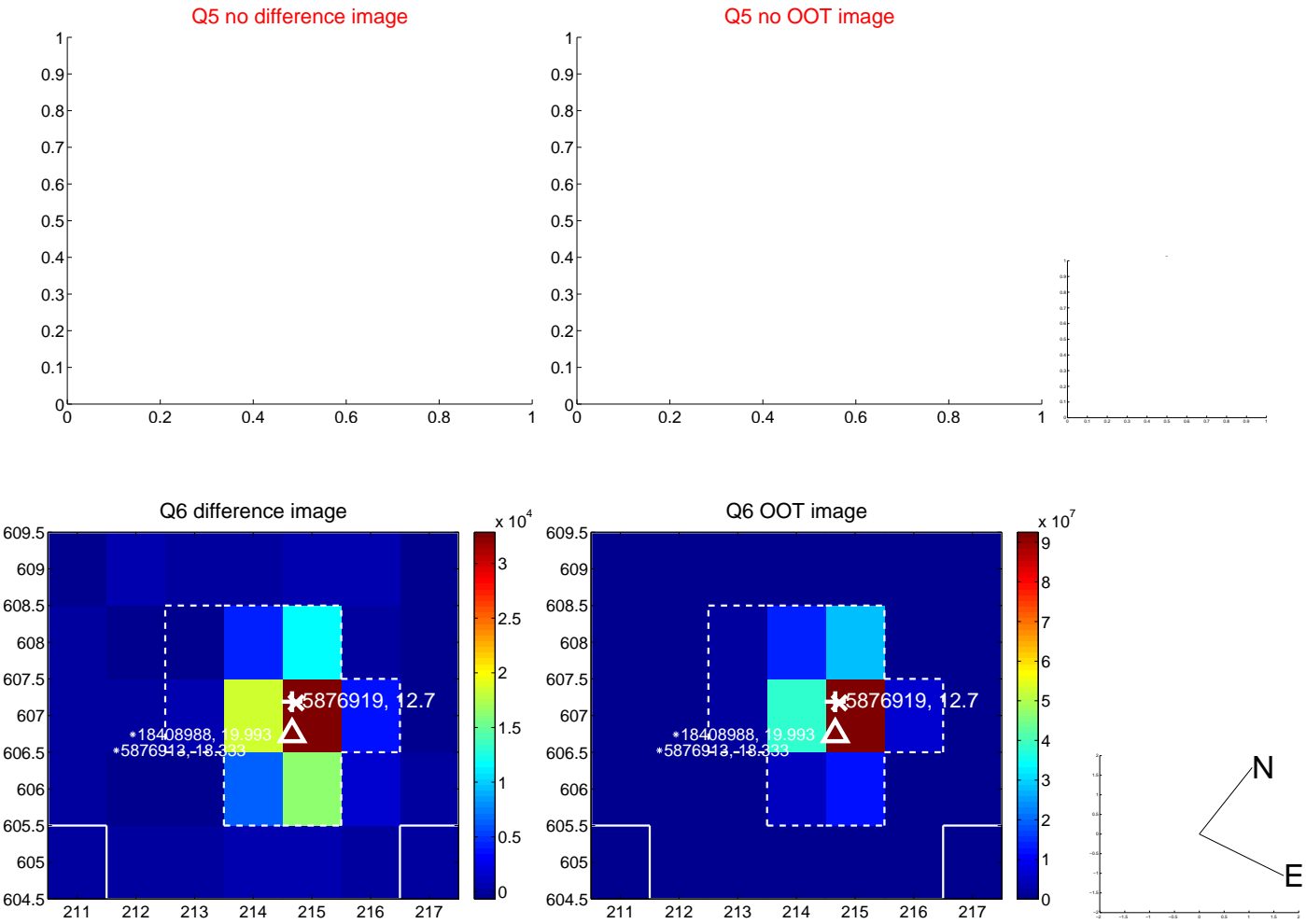


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

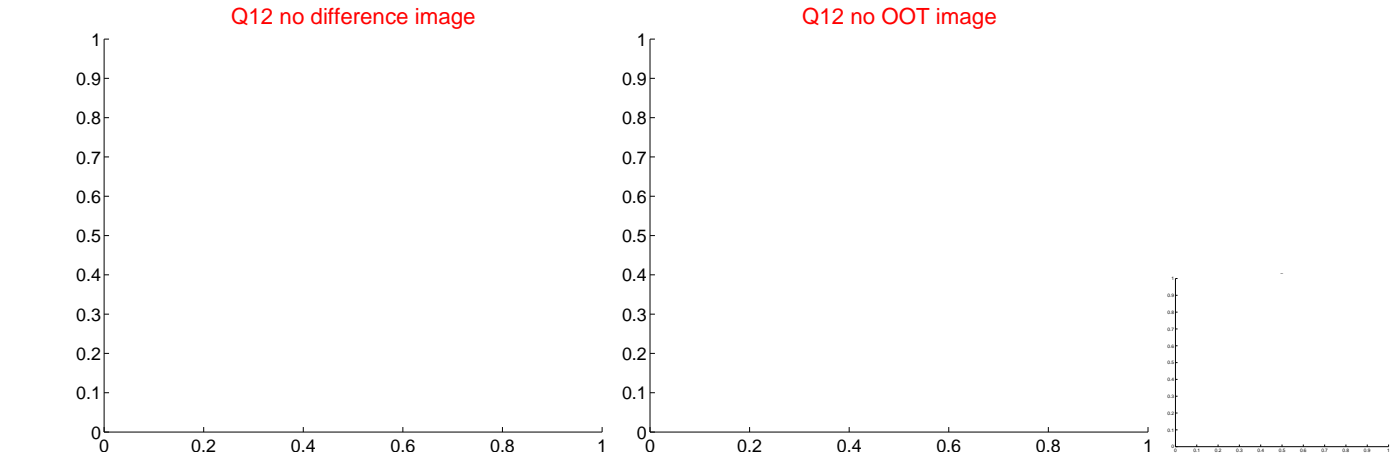
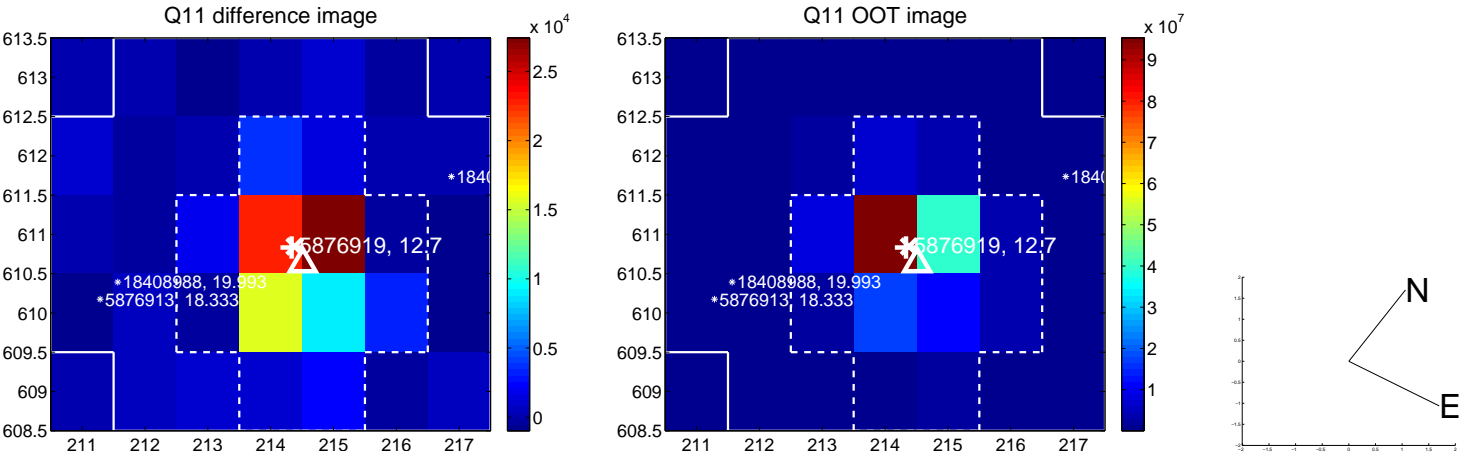
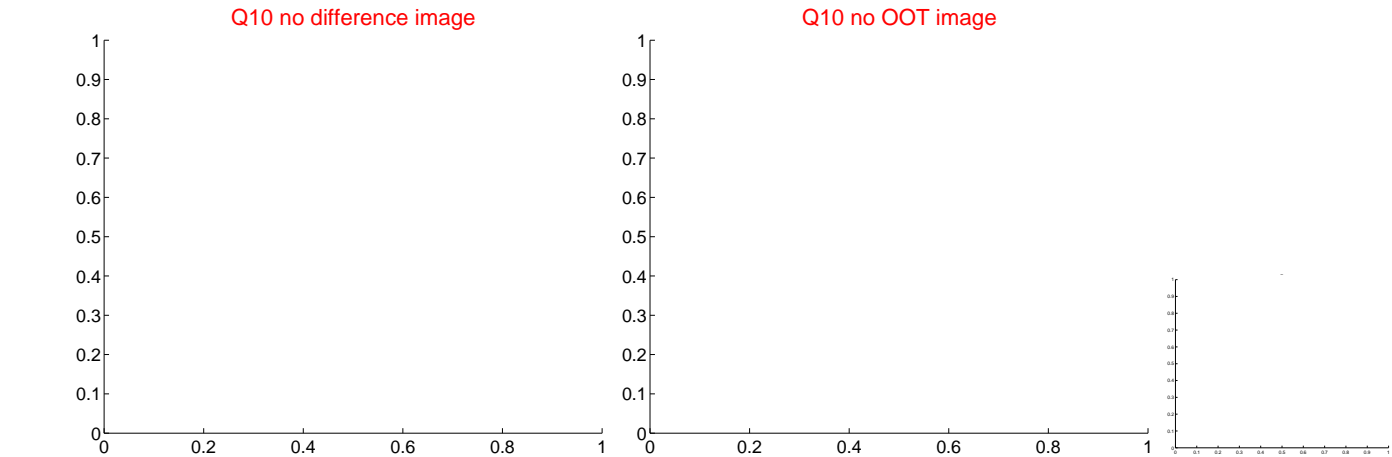
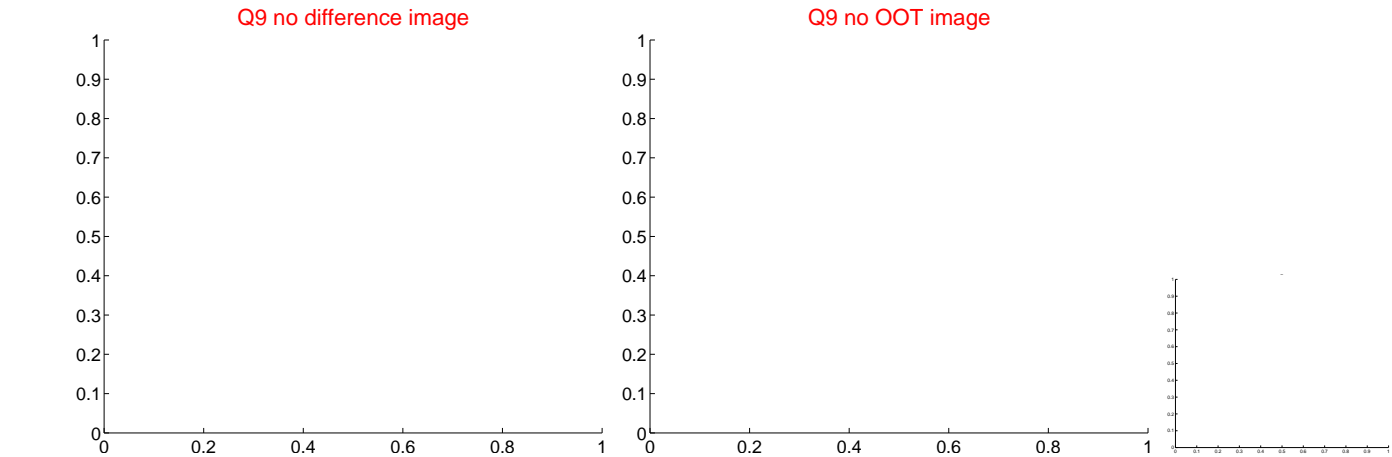
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



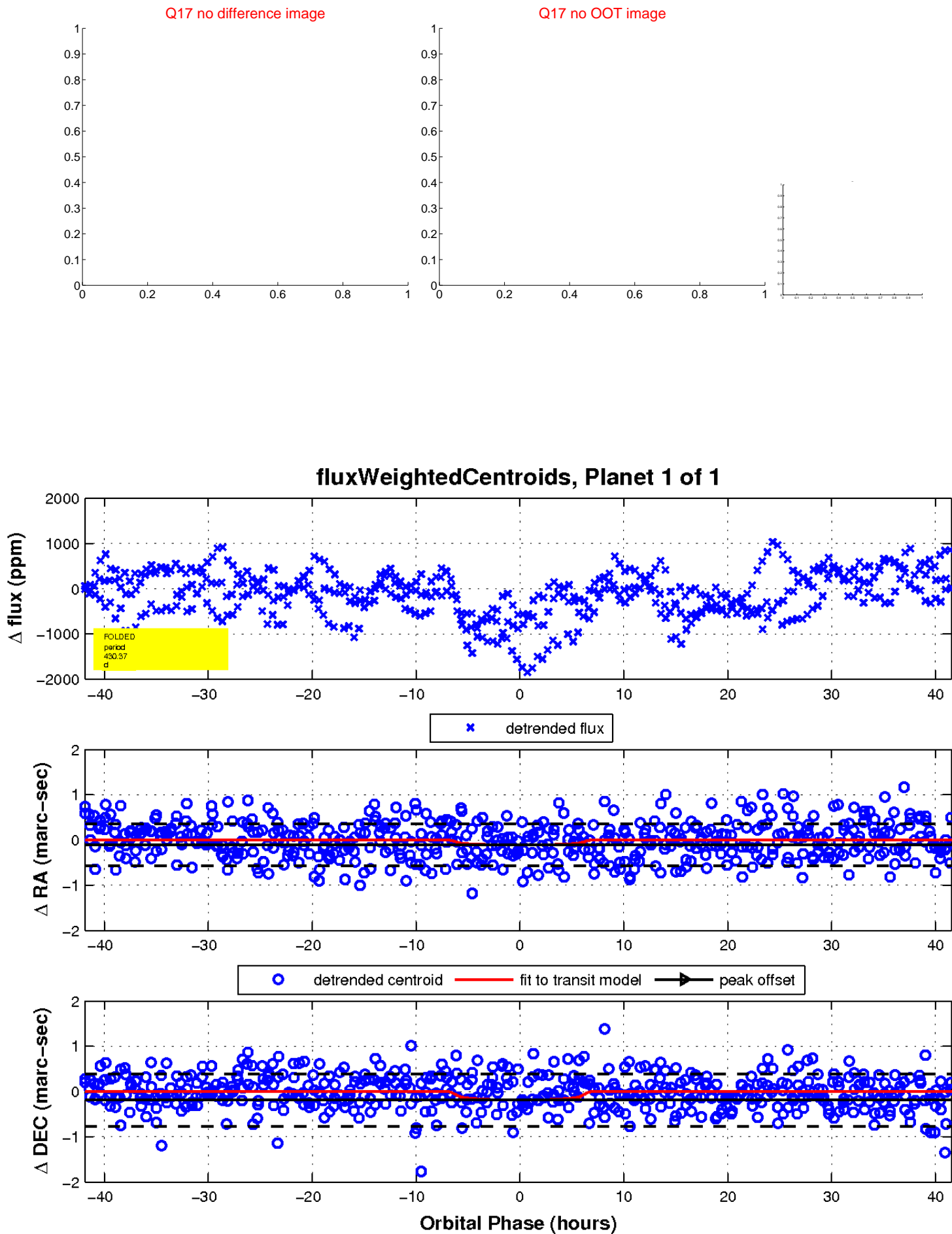
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

