

KIC 008818205

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})
008818205-01	OBS	No	561.839210	422.378512	88.6	17.491	7.2	7.4	2.06	8749	2.13	7.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008818205-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

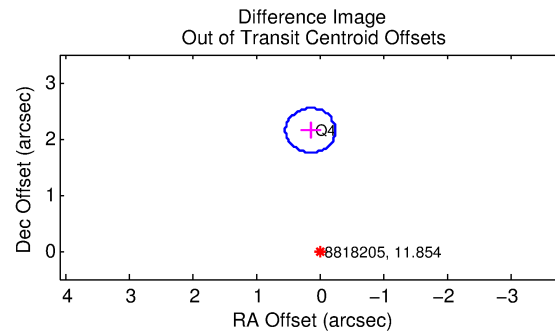
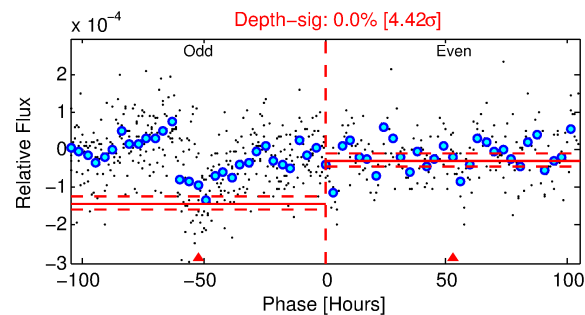
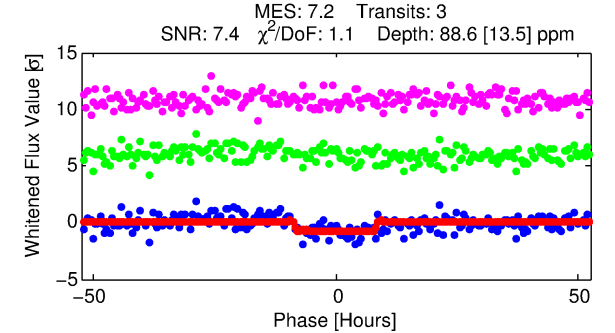
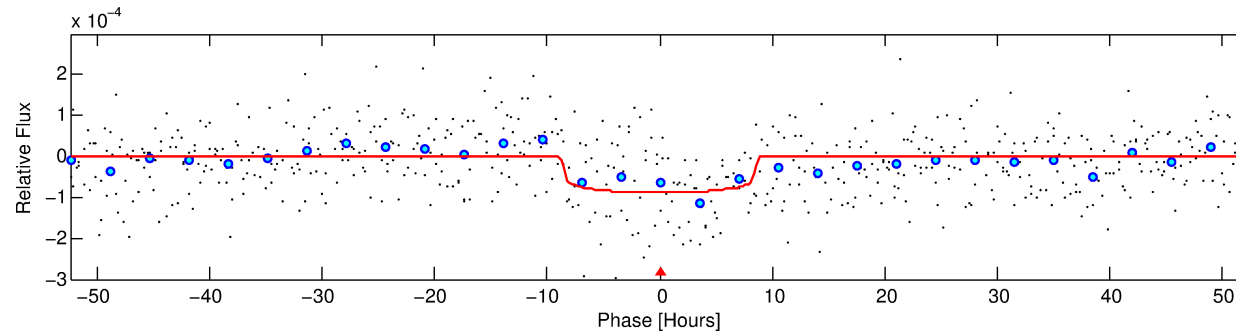
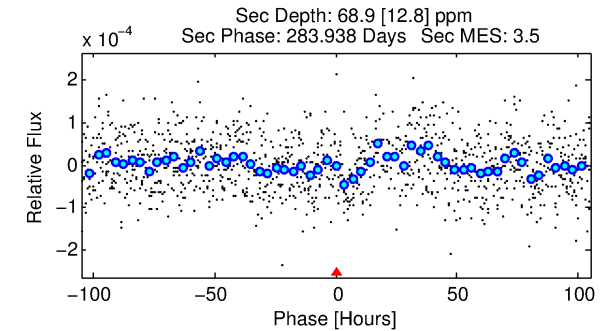
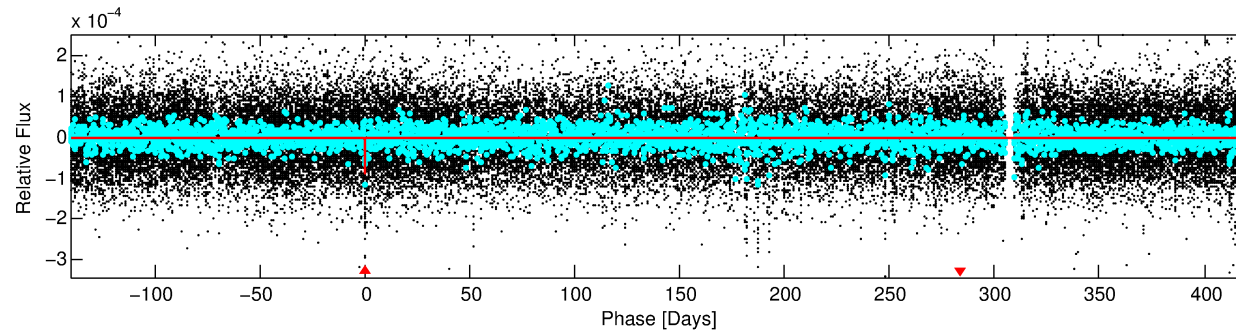
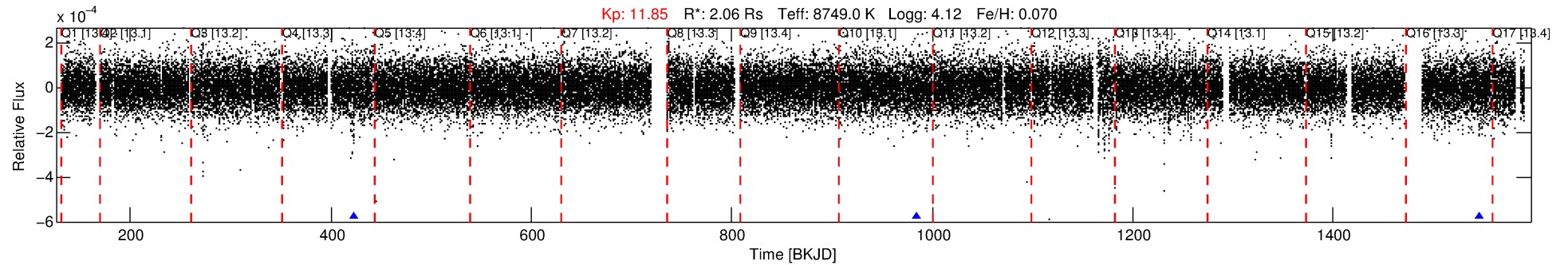
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008818205-01

No Significant Match Found

DV One-Page Summary

KIC: 8818205 Candidate: 1 of 1 Period: 561.839 d



DV Fit Results:

Period = 561.83921 [0.01428] d
Epoch = 422.3785 [0.0201] BKJD
Rp/R* = 0.0095 [0.0024]
a/R* = 155.43 [237.91]
b = 0.79 [0.75]
Seff = 7.82 [2.78]
Teq = 426 [38] K
Rp = 2.13 [0.78] Re
a = 1.6914 [0.3641] AU
Ag = 23860.09 [14640.85] [1.63σ]
Teff = 8193 [1160] K [6.69σ]

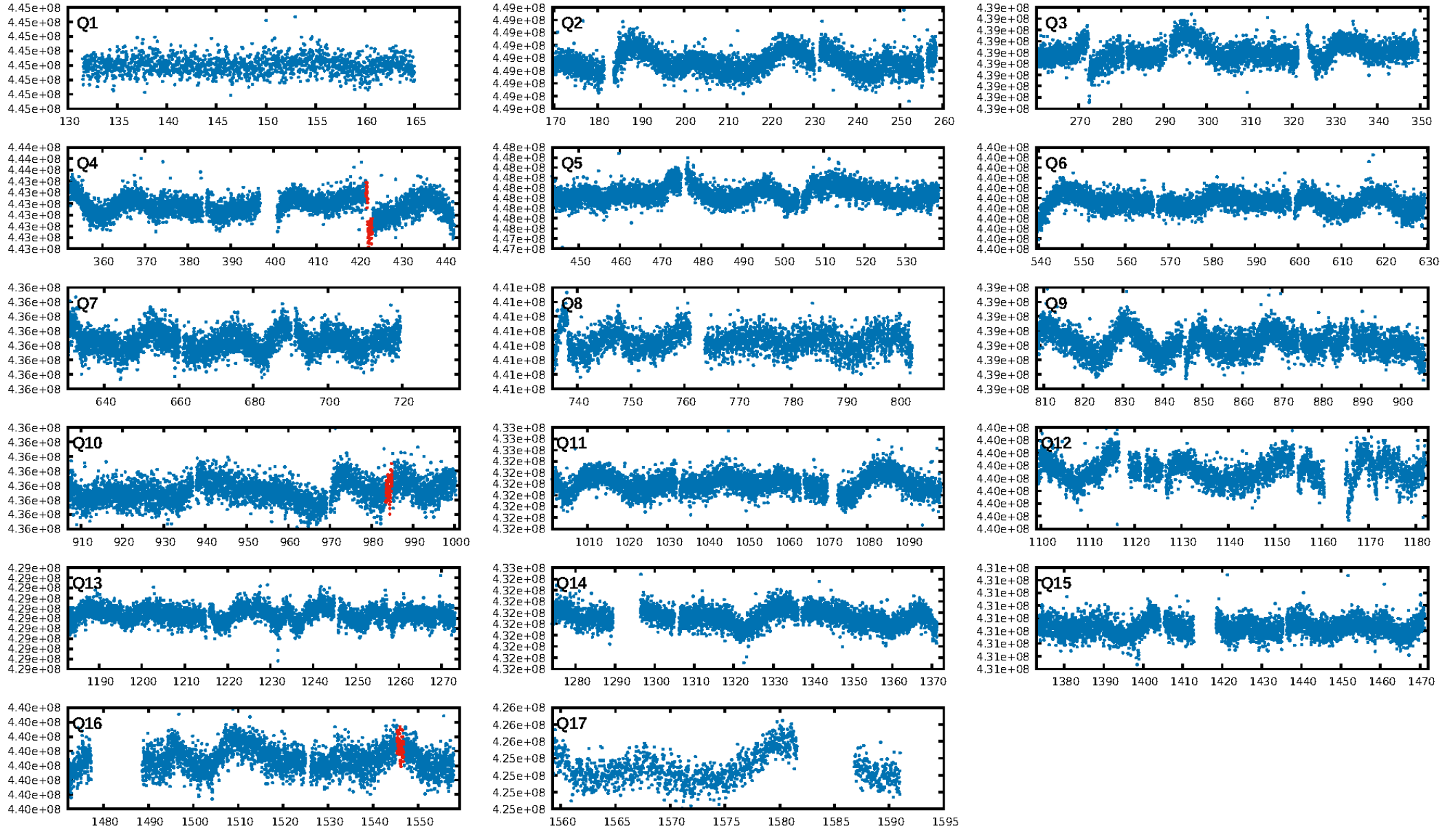
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 55.4%
Bootstrap-pfa: 3.67e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -8.432
Centroid-sig: 6.1%
Centroid-so: 1.942 arcsec [1.27σ]
OotOffset-rm: 2.153 arcsec [16.45σ]
KicOffset-rm: 2.078 arcsec [15.87σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

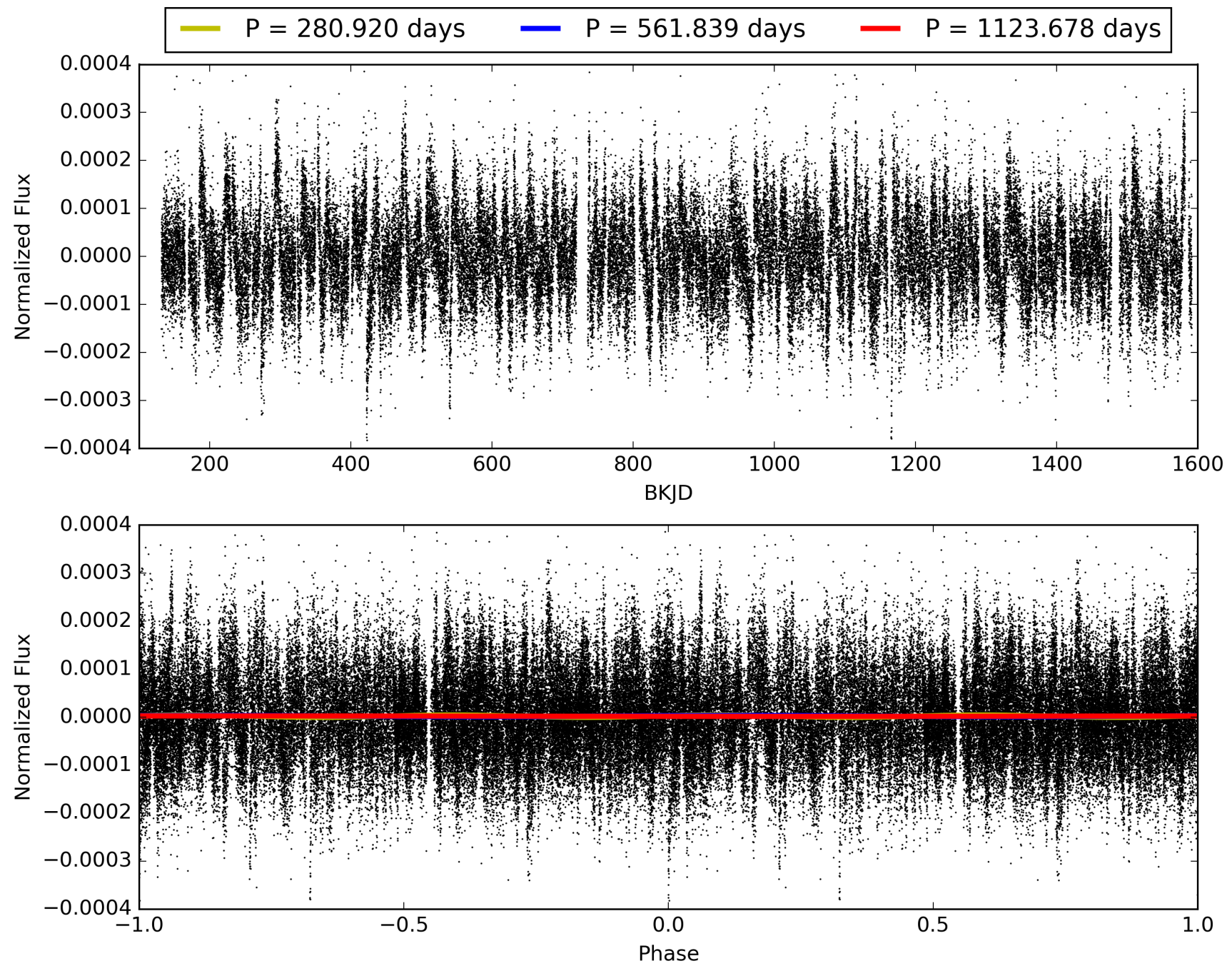
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:10:44 Z

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

TCE 008818205-01, PDC Light Curves

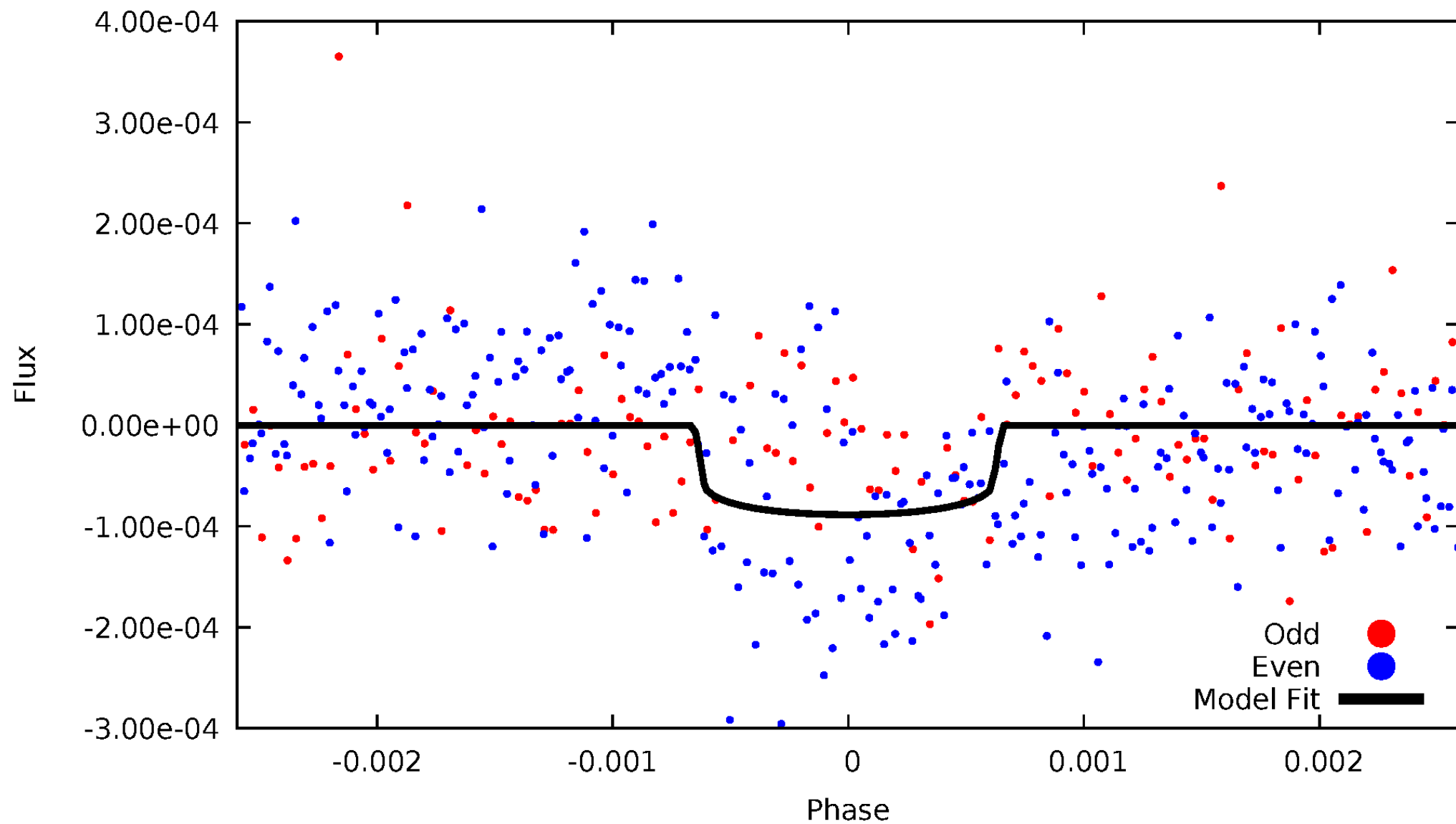


TCE 008818205-01



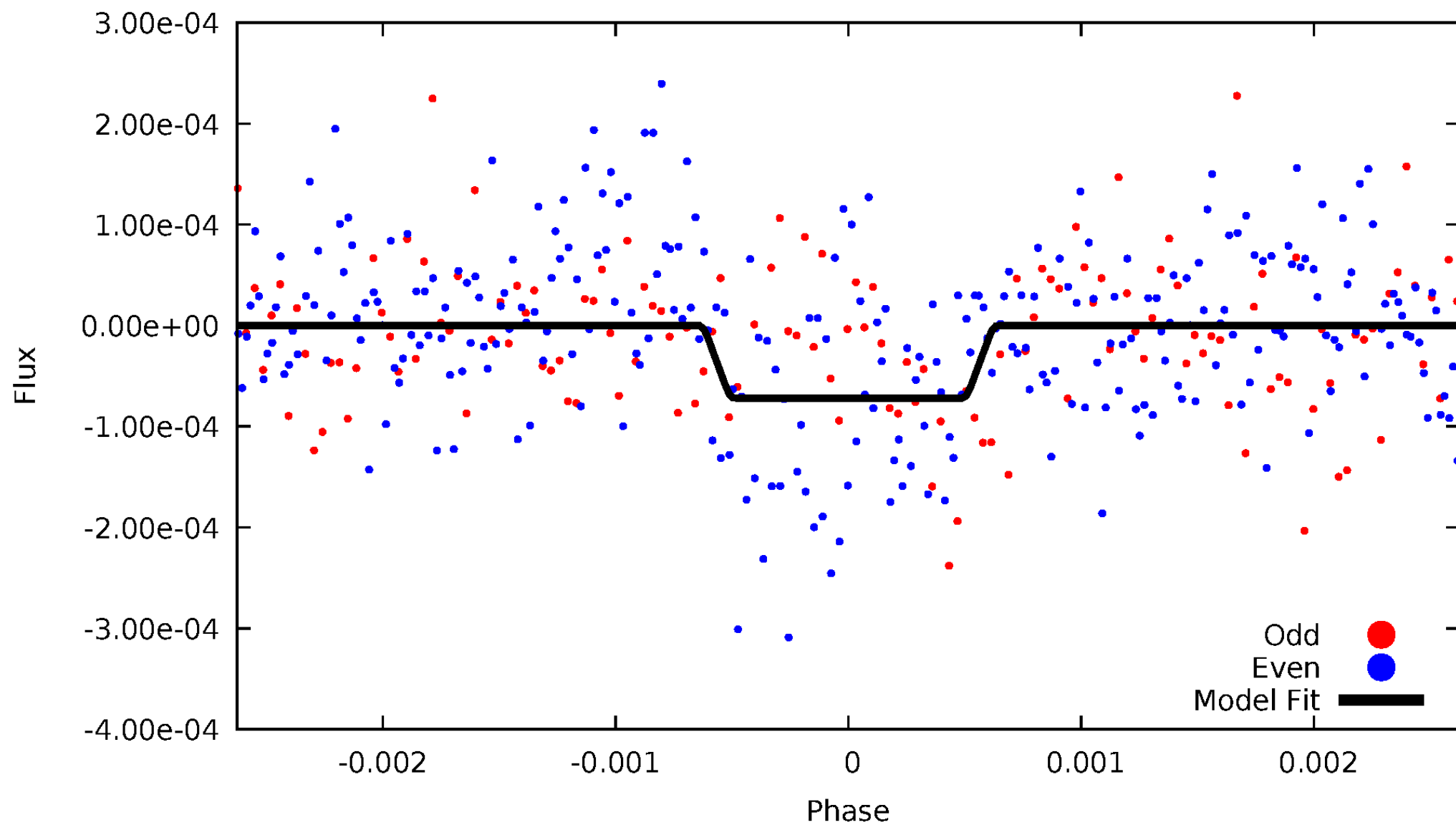
DV Odd/Even

TCE 008818205-01



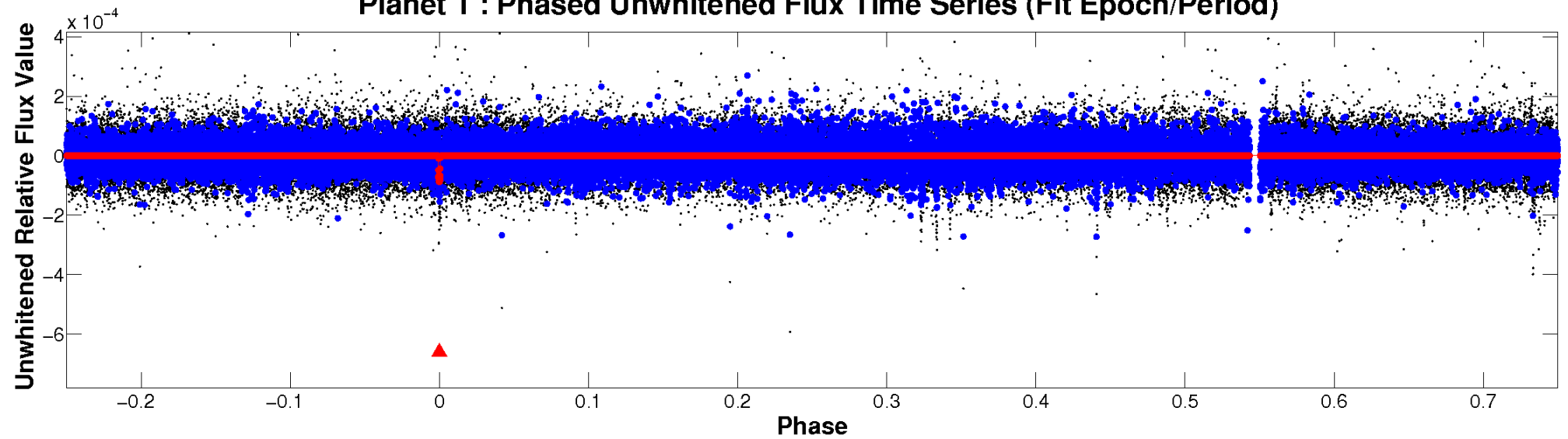
ALT Odd/Even

TCE 008818205-01

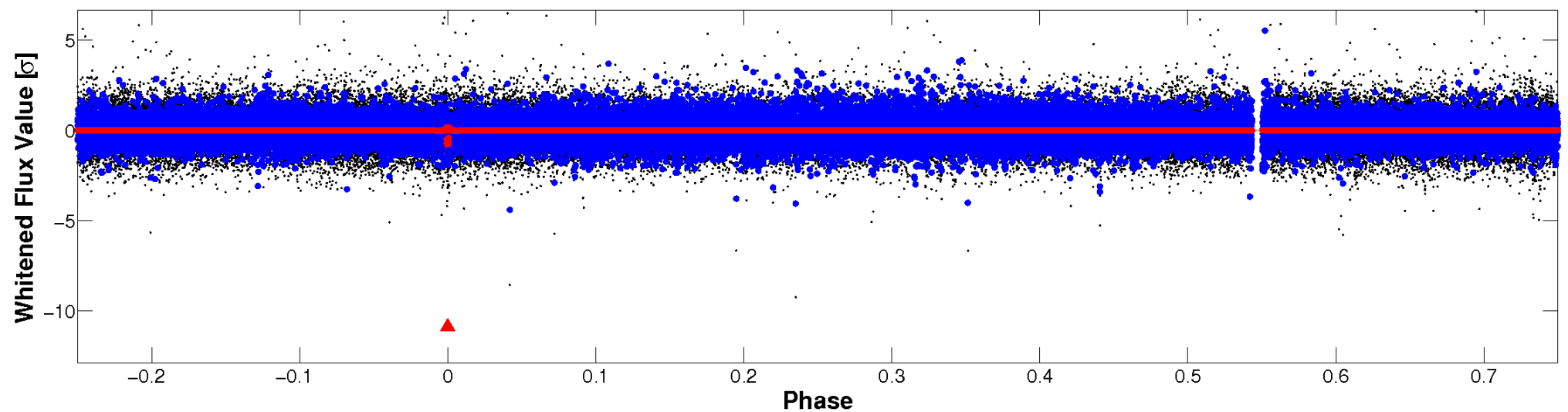


Non-Whitened Vs. Whitened Light Curve

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 008818205-01 P=561.839210 Days $T_0=422.378512$ (BKJD)



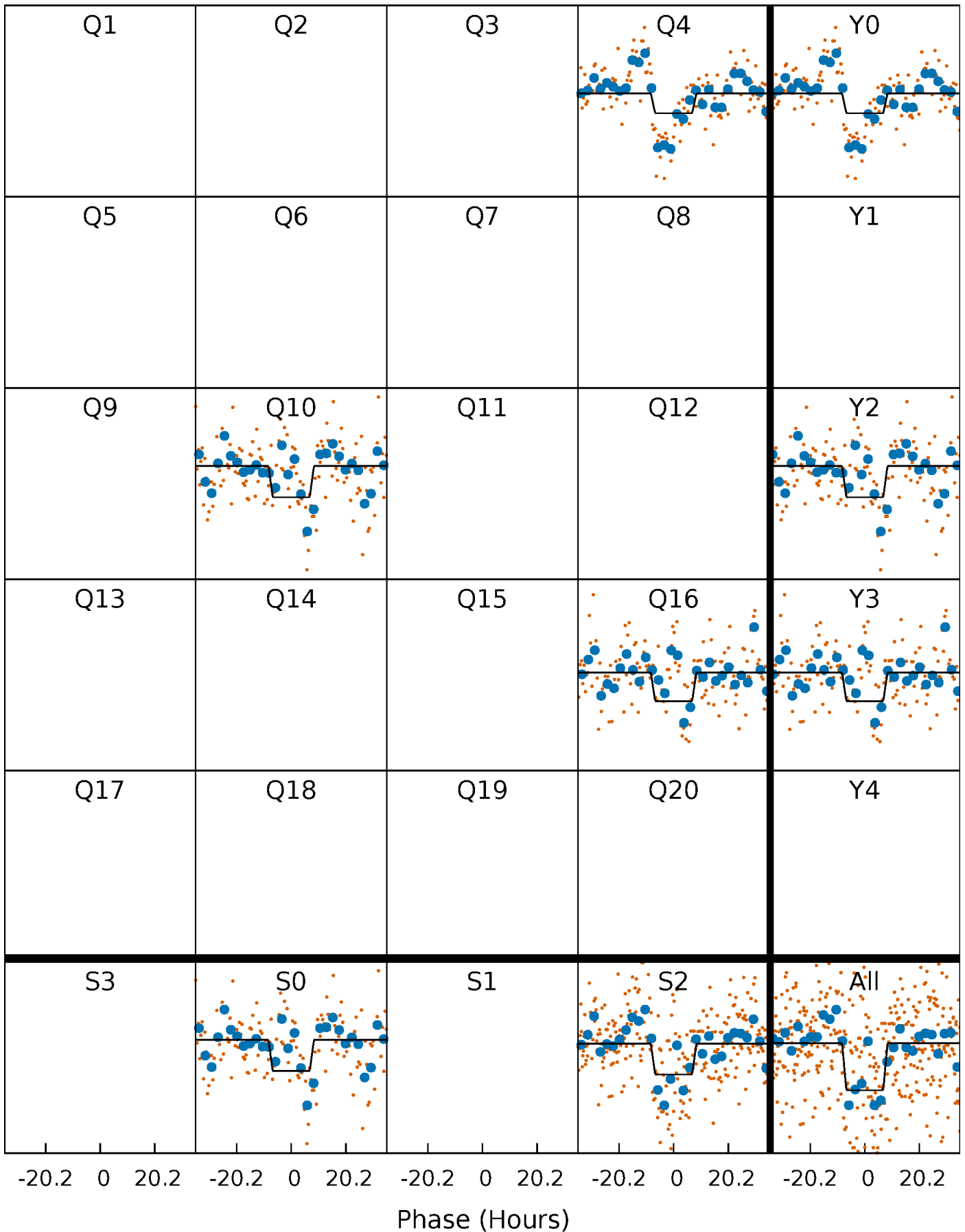
DV Quarter-Phased Transit Curves

TCE 008818205-01 P=561.839210 Days $T_0=422.378512$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

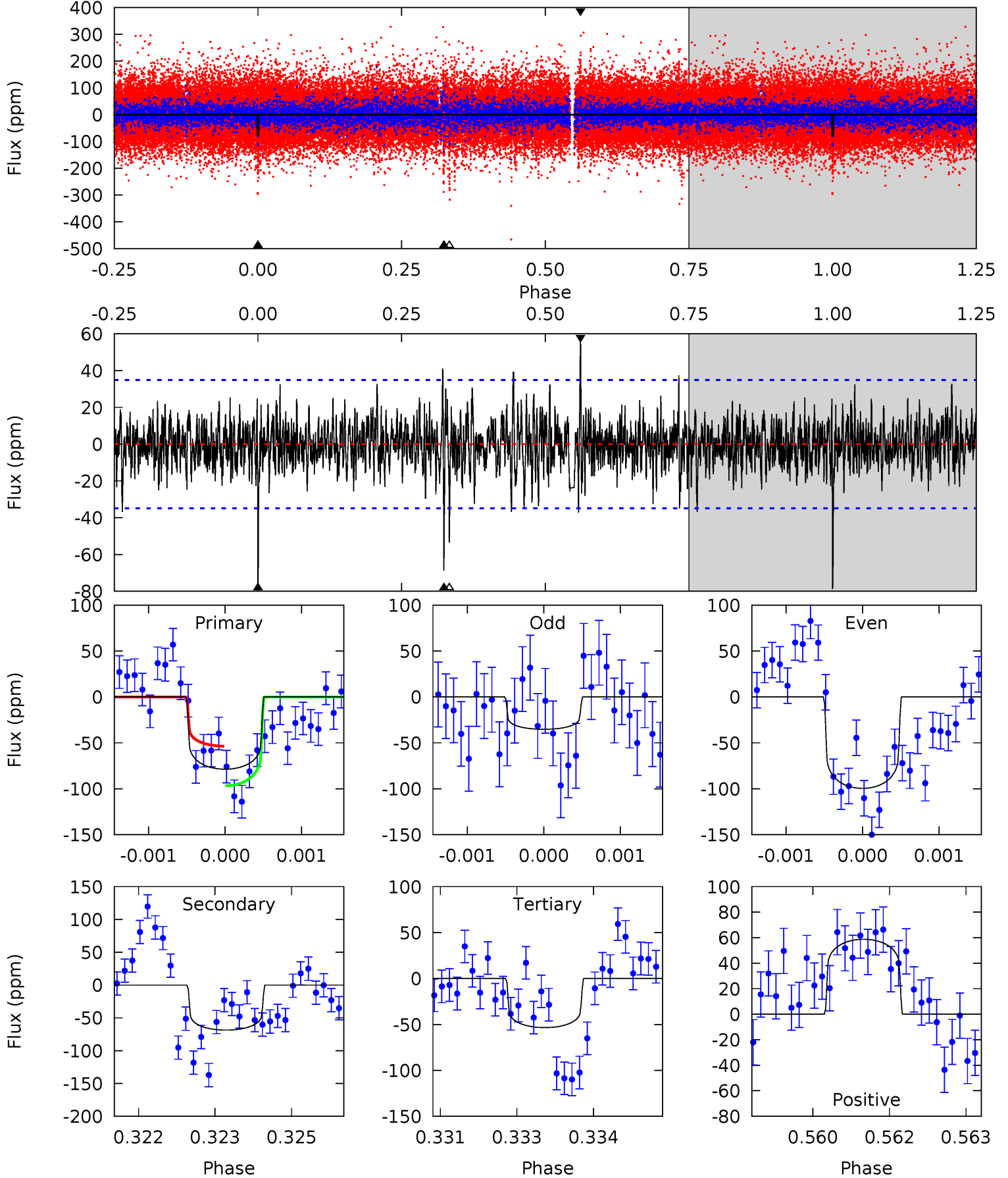
TCE 008818205-01 P=561.807110 Days $T_0=422.362218$ (BKJD)



DV Model-Shift Uniqueness Test

008818205-01, P = 561.839210 Days, E = 422.378512 Days

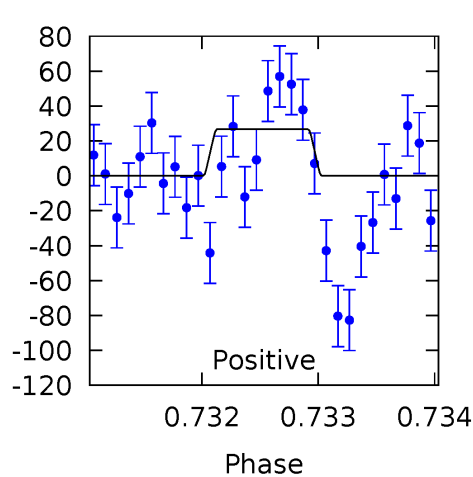
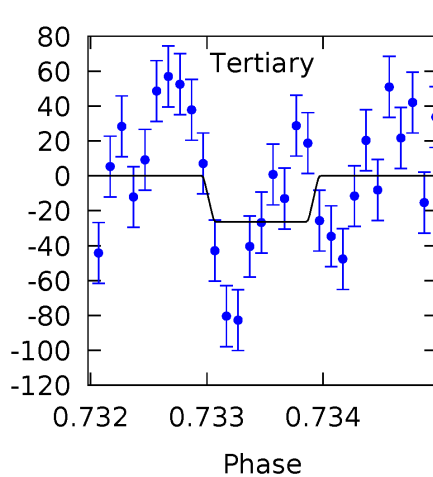
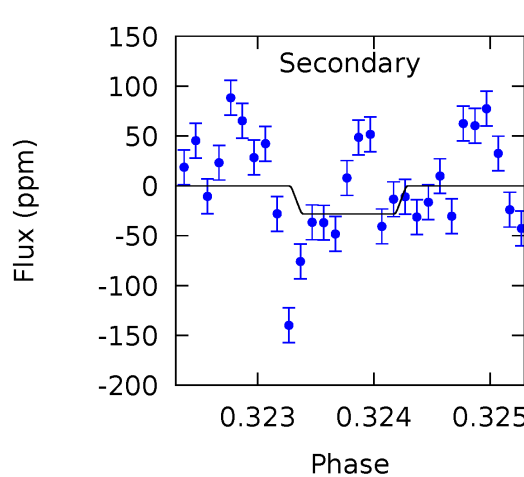
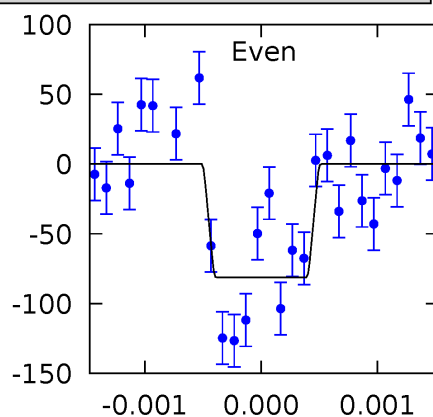
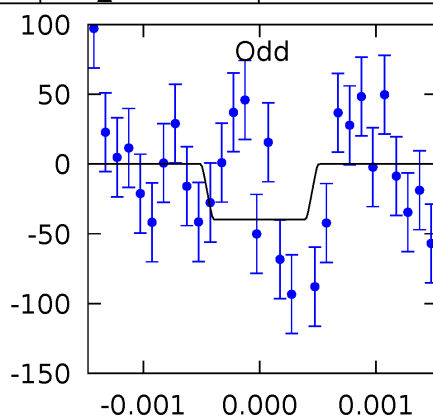
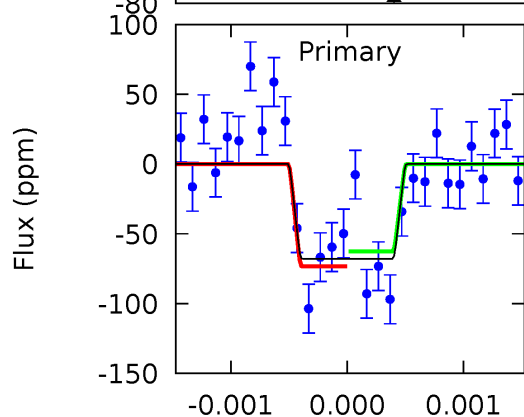
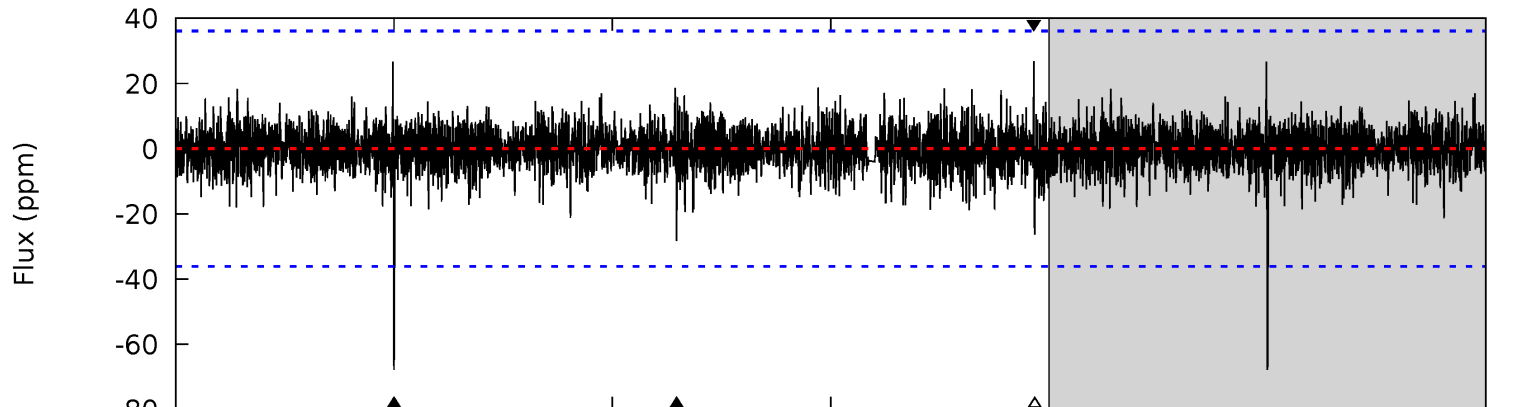
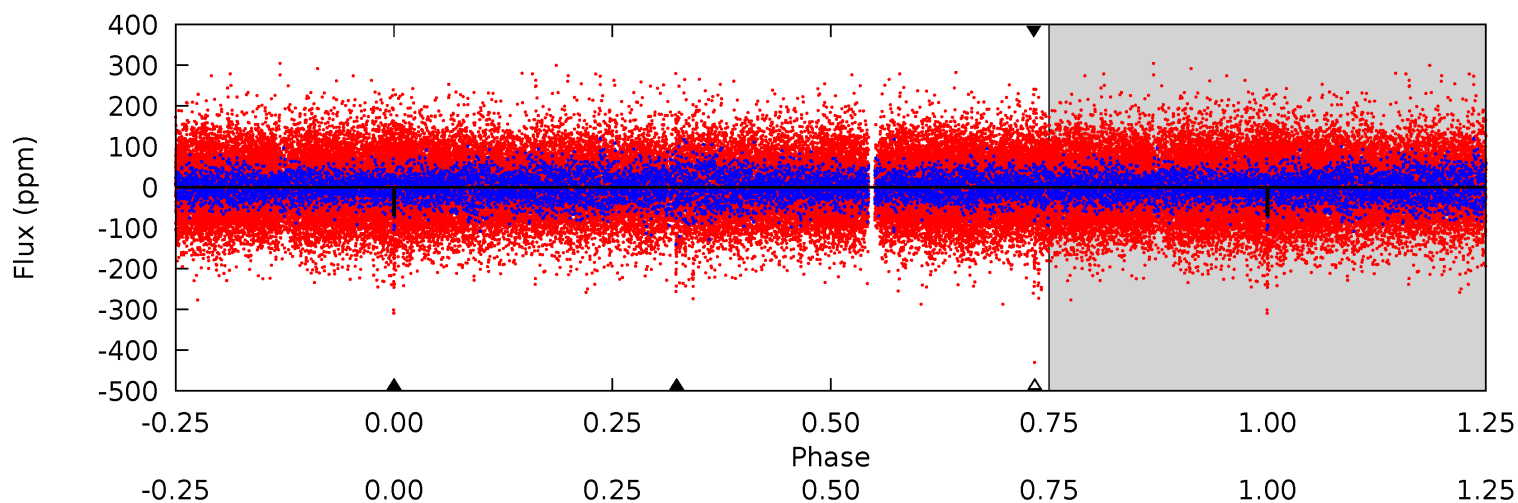
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	10.6	8.29	9.10	5.40	3.21	1.62	3.91	3.10	2.35	1.54	4.62	1.97	0.43	3.32



Alt Model-Shift Uniqueness Test

008818205-01, P = 561.807110 Days, E = 422.362218 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	4.23	3.94	4.01	5.41	3.23	0.84	6.23	6.16	0.29	0.22	2.88	1.68	0.28	0.81



Stellar Parameters For KIC 008818205

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8749^{+239}_{-410}	$4.119^{+0.116}_{-0.159}$	$0.070^{+0.200}_{-0.550}$	$2.064^{+0.549}_{-0.449}$	$2.041^{+0.368}_{-0.450}$	$0.327^{+0.241}_{-0.137}$
	+3%/-5%	+3%/-4%	+286%/-786%	+27%/-22%	+18%/-22%	+74%/-42%
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 008818205-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-69 ± 6	$2.13^{+0.63}_{-0.54}$	596^{+42}_{-39}	7993^{+1483}_{-977}	23090^{+17705}_{-9144}
Alt.	-28 ± 7	$1.91^{+0.66}_{-0.53}$	598^{+41}_{-37}	6637^{+1336}_{-919}	11535^{+11596}_{-5108}

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

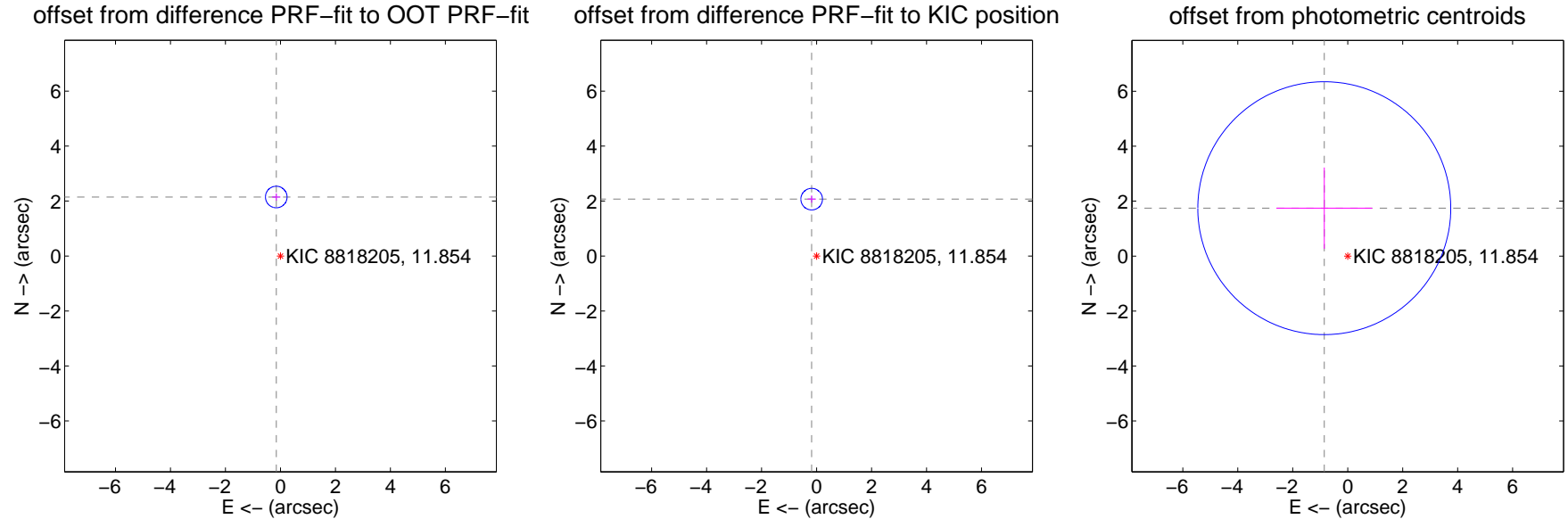
DV Centroid Data

Supplemental centroid analysis for 008818205-01. **Kepler magnitude: 11.85.** Transit SNR 7.36

There are 1 quarters with good PRF difference image offsets

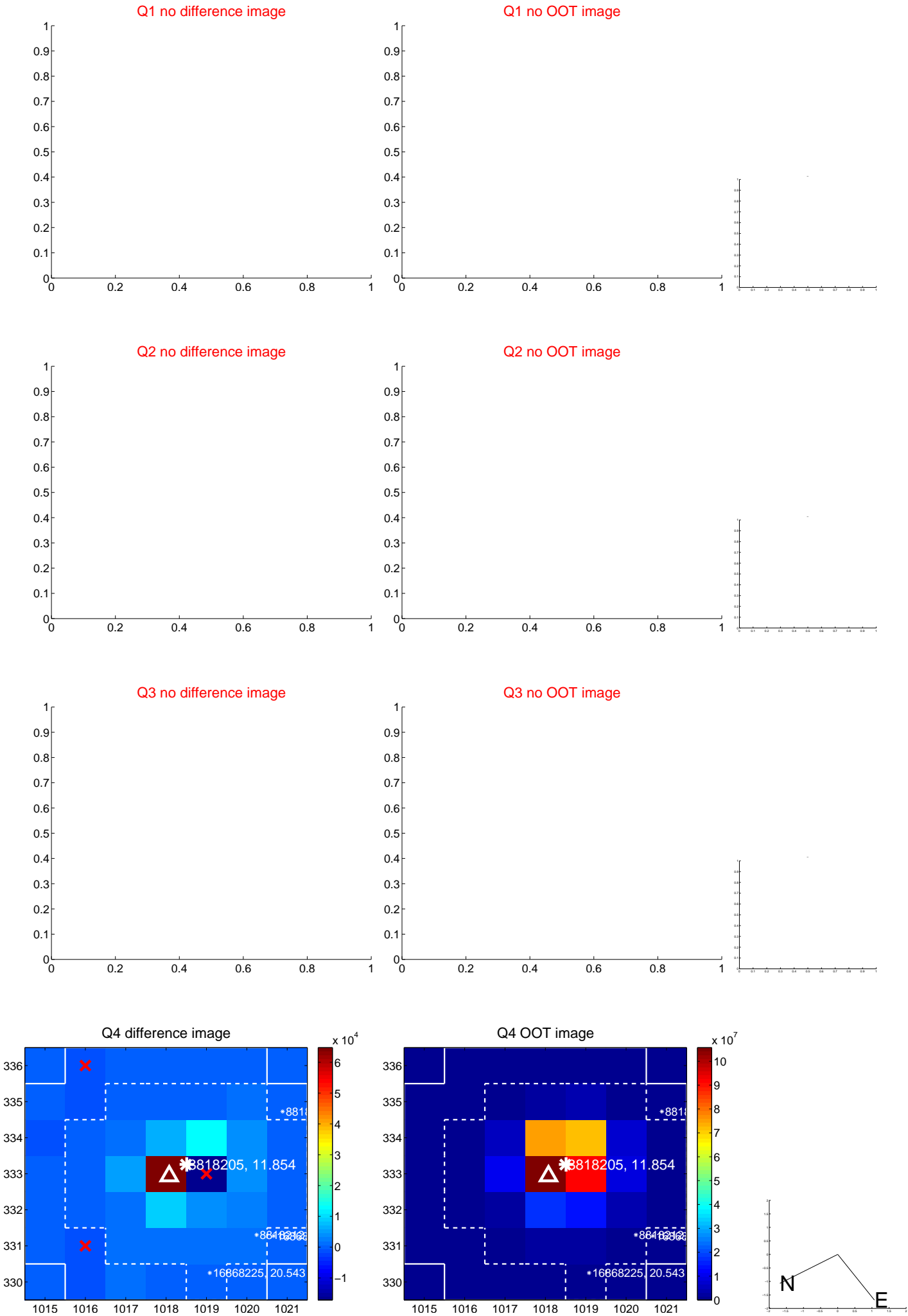
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.153 \pm 0.131	16.45	0.152 \pm 0.150	2.147 \pm 0.131
PRF-fit source offset from KIC position	2.078 \pm 0.131	15.87	0.179 \pm 0.150	2.070 \pm 0.131
photometric centroid source offset	1.94 \pm 1.53	1.27	0.85 \pm 1.74	1.74 \pm 1.48



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.

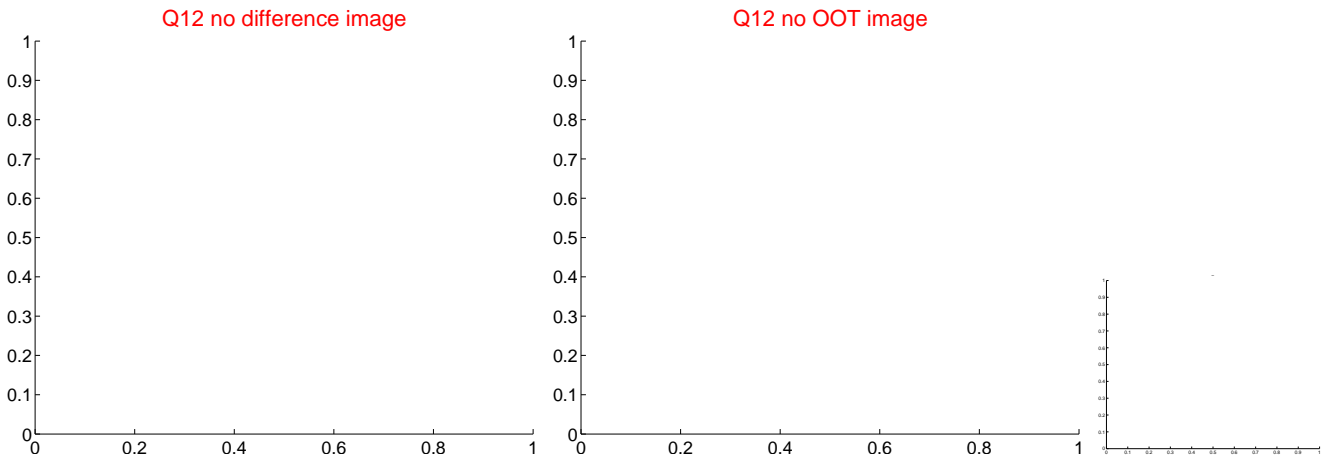
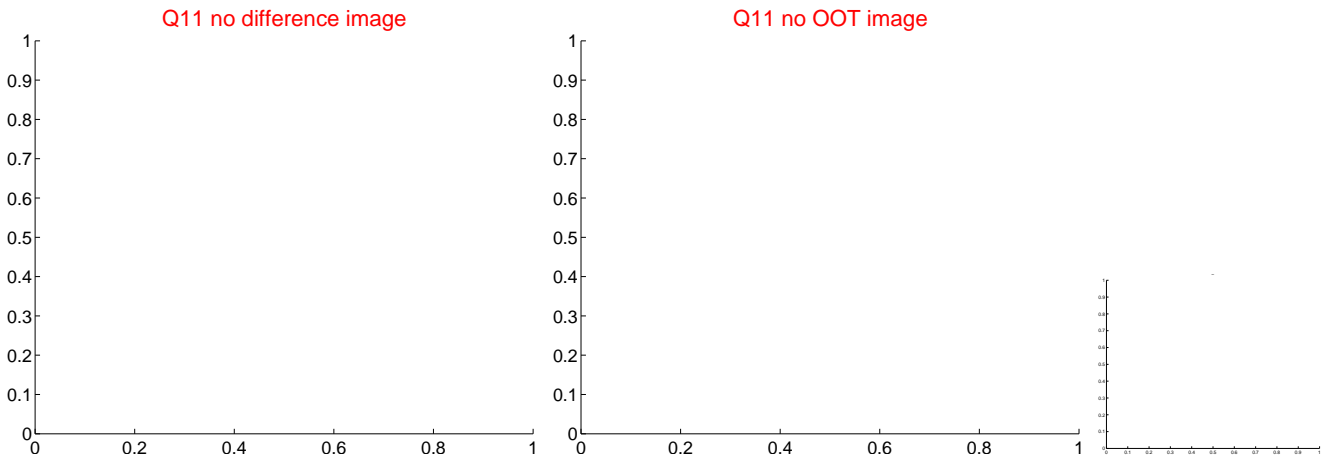
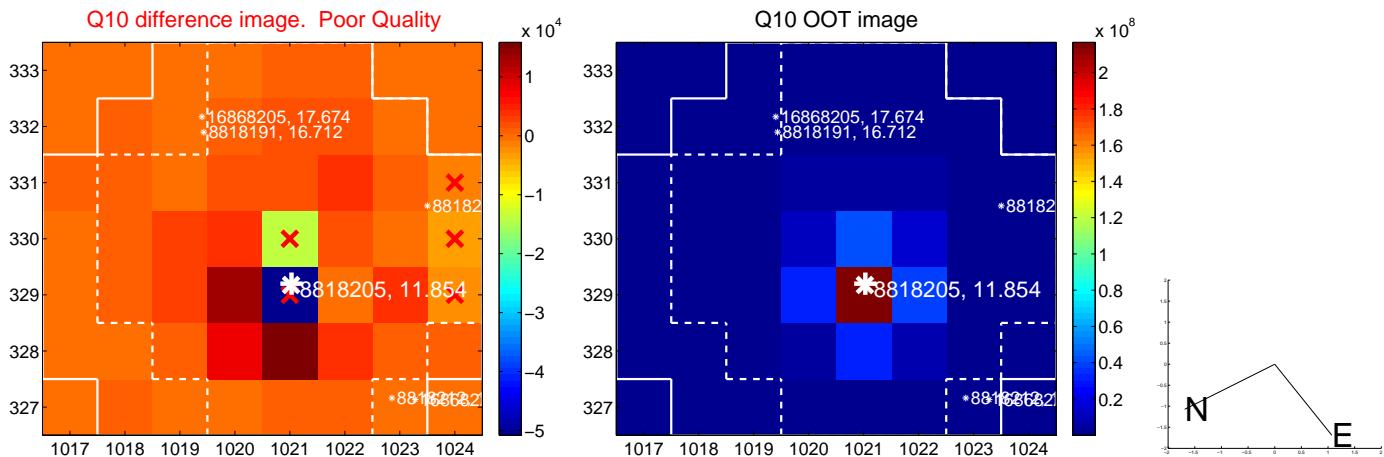
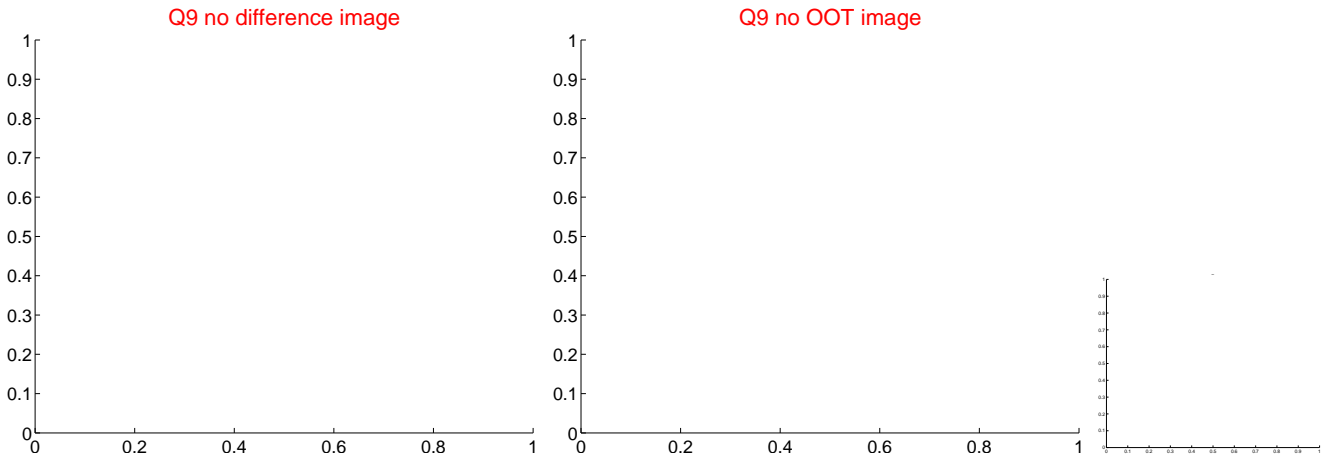
white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



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



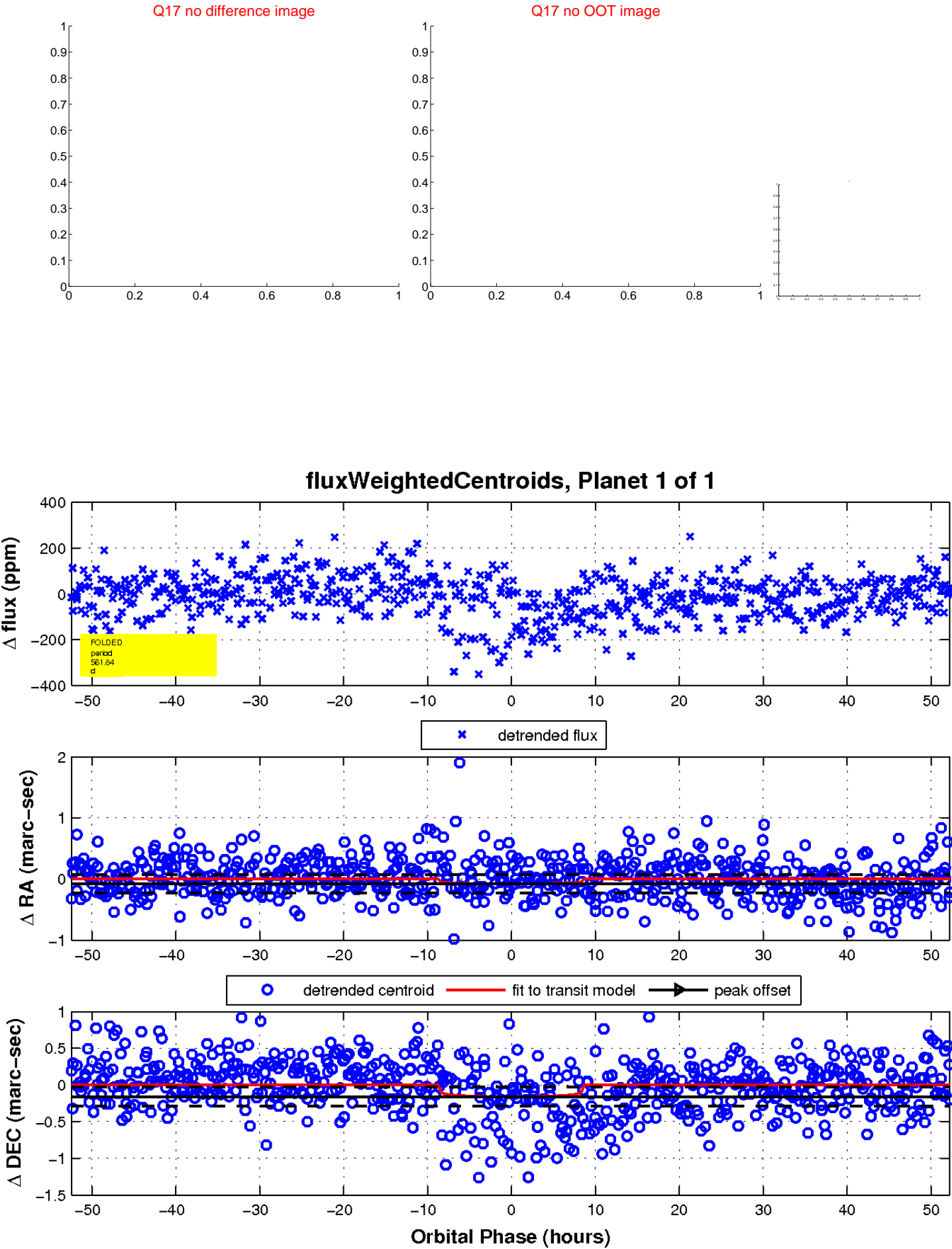
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

