

KIC 005802205

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})
005802205-01	OBS	8107.01	578.871050	219.304235	80.6	22.616	7.6	7.9	1.92	6180	1.88	2.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005802205-01	OBS	PC	0.38	0	0	0	0	CENT_SATURATED

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

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

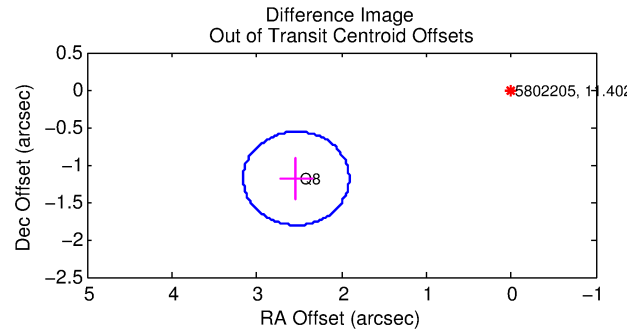
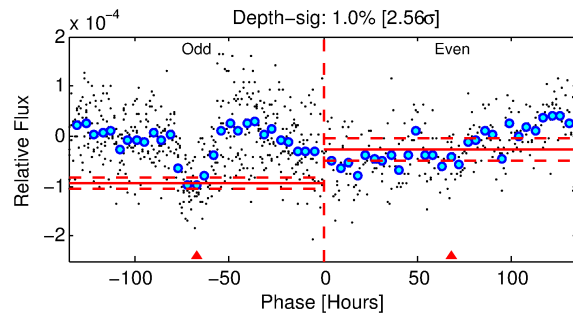
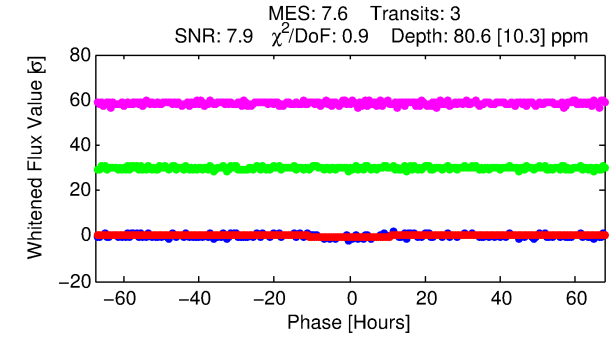
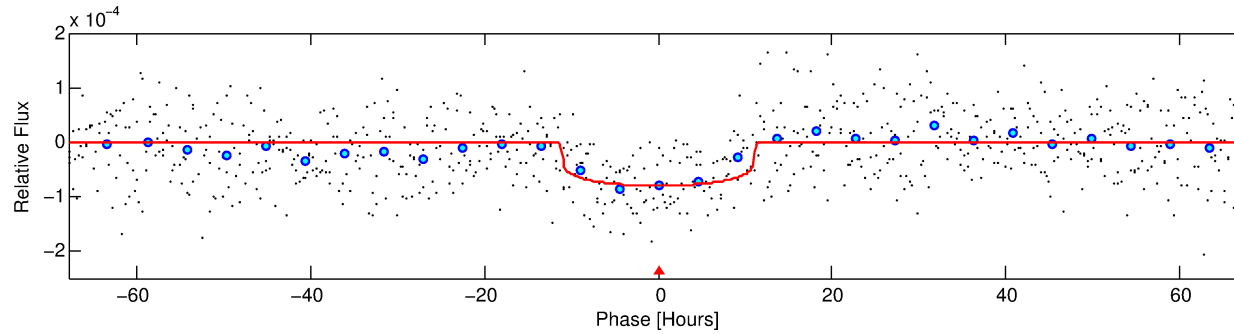
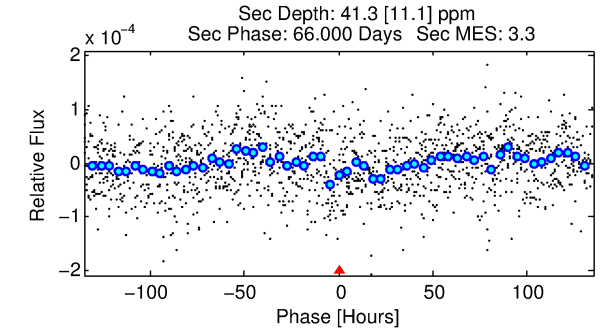
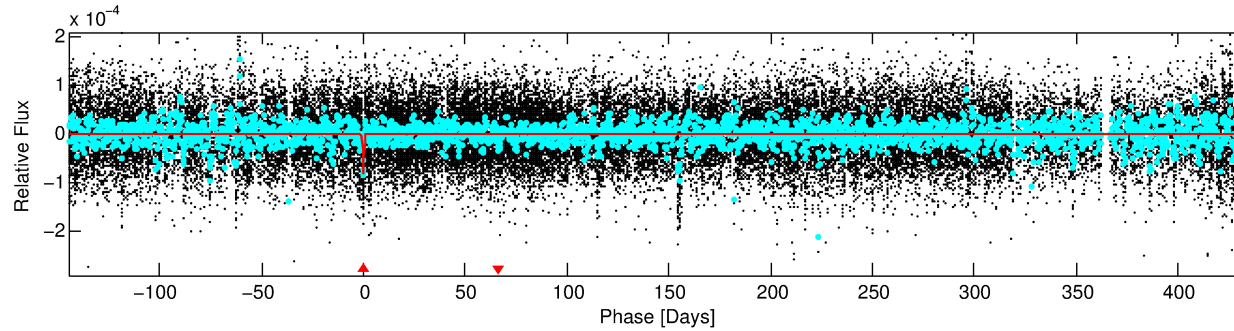
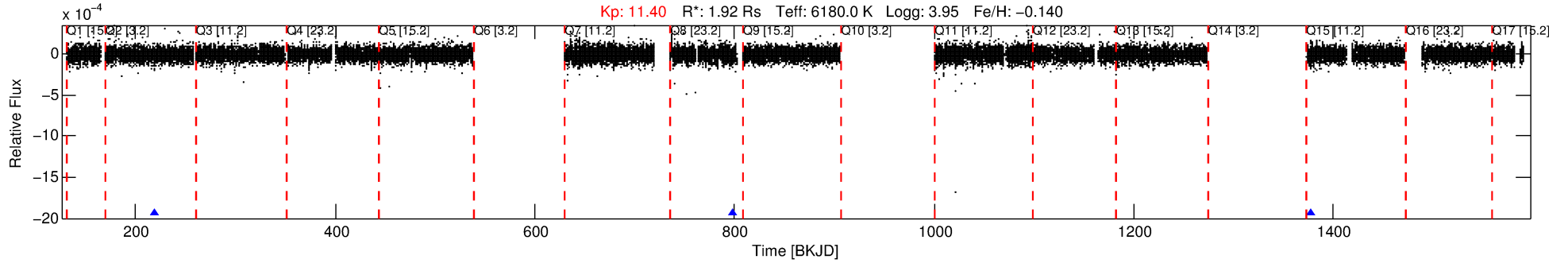
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005802205-01

No Significant Match Found

DV One-Page Summary

KIC: 5802205 Candidate: 1 of 1 Period: 578.871 d



DV Fit Results:

Period = 578.87105 [0.01259] d
Epoch = 219.3042 [0.0158] BKJD
Rp/R* = 0.0090 [0.0014]
a/R* = 127.30 [92.68]
b = 0.77 [0.38]
Seff = 2.32 [1.61]
Teq = 315 [55] K
Rp = 1.88 [0.80] Re
a = 1.4382 [0.5868] AU
Ag = 13273.64 [10523.55] [1.26σ]
Teffp = 5224 [578] K [8.45σ]

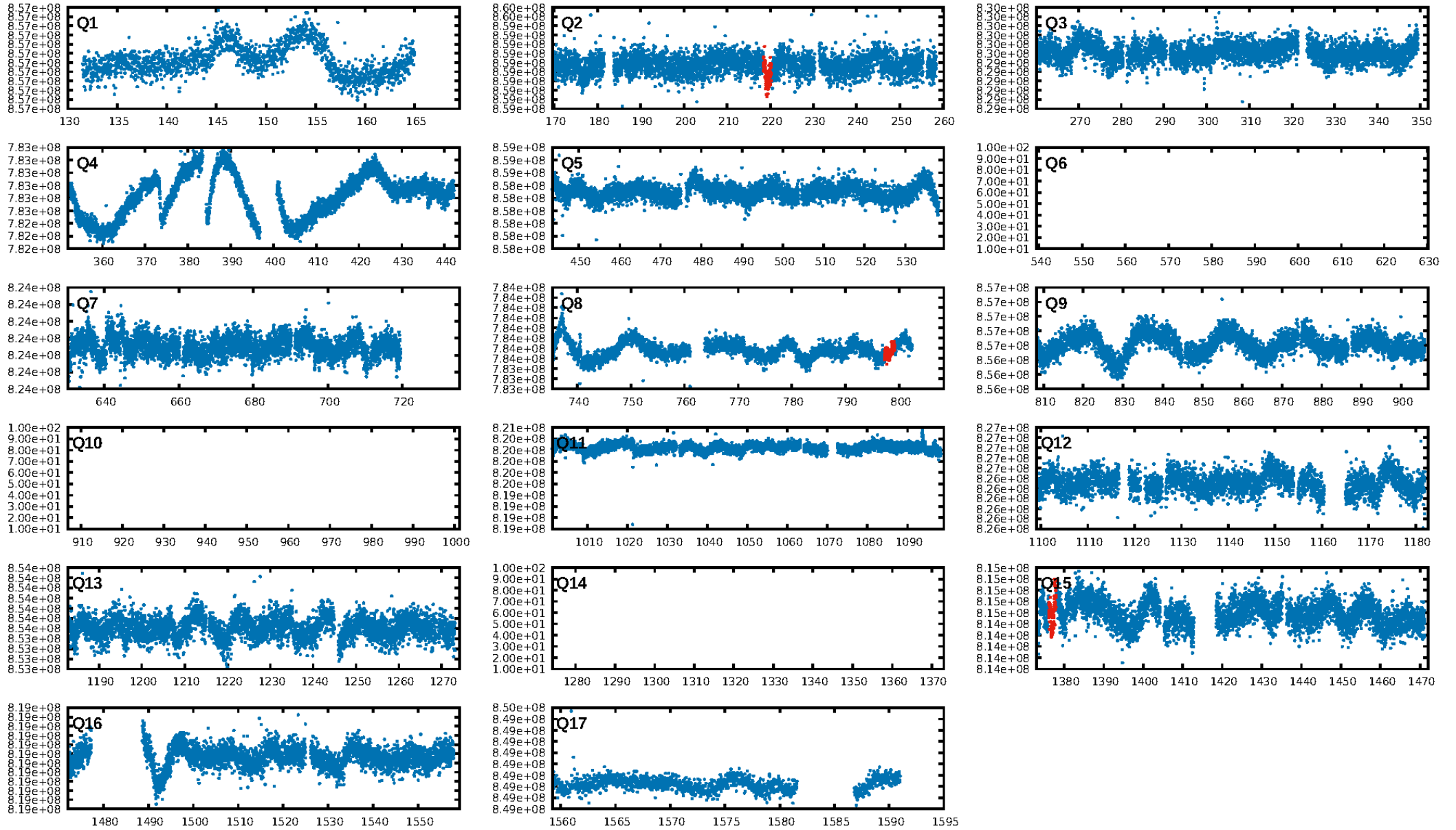
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 9.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.44e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -9.318
Centroid-sig: 50.9%
Centroid-so: 2.152 arcsec [1.07σ]
OotOffset-rm: 2.796 arcsec [13.45σ]
KicOffset-rm: 2.843 arcsec [12.05σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

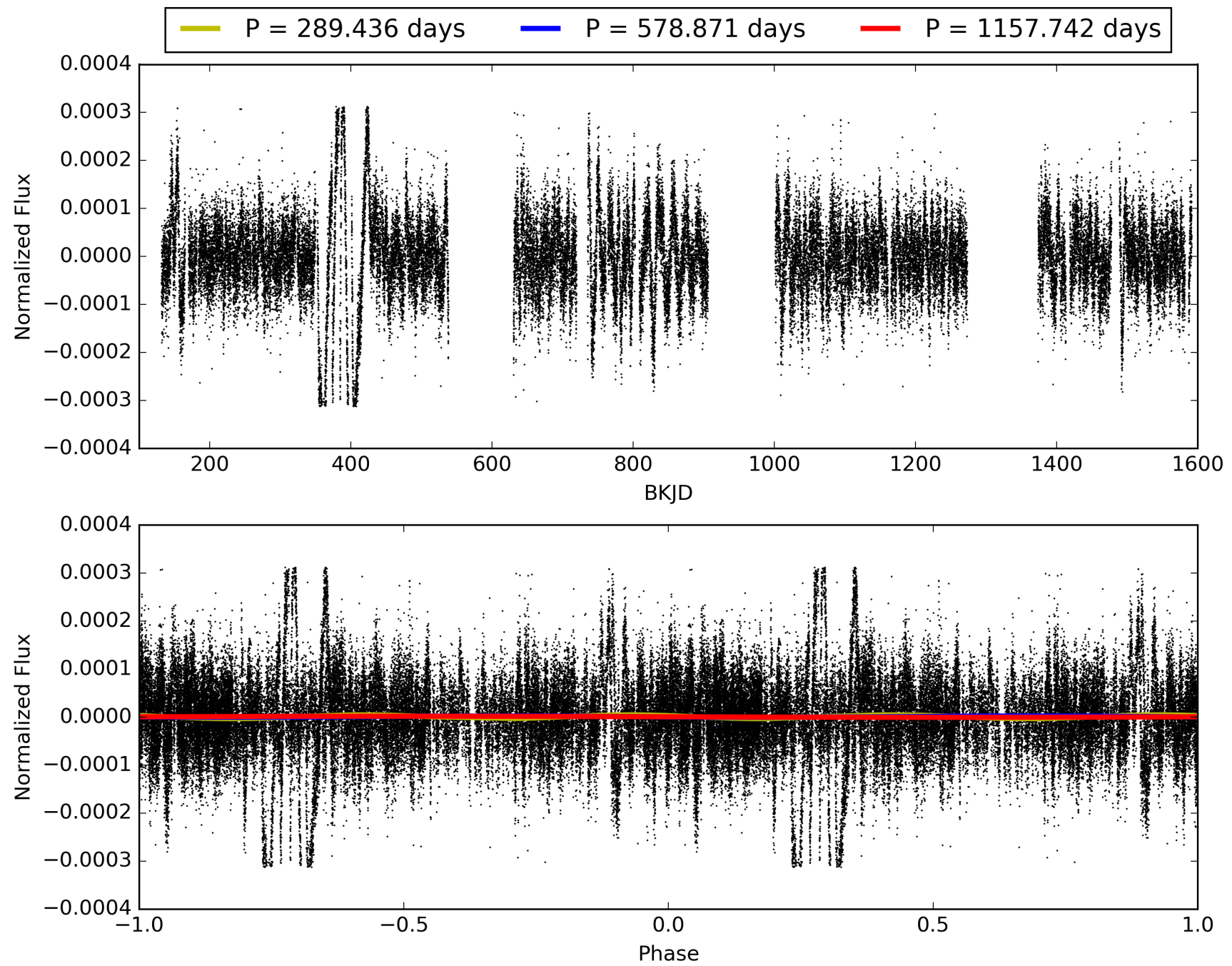
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:35:56 Z

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

TCE 005802205-01, PDC Light Curves

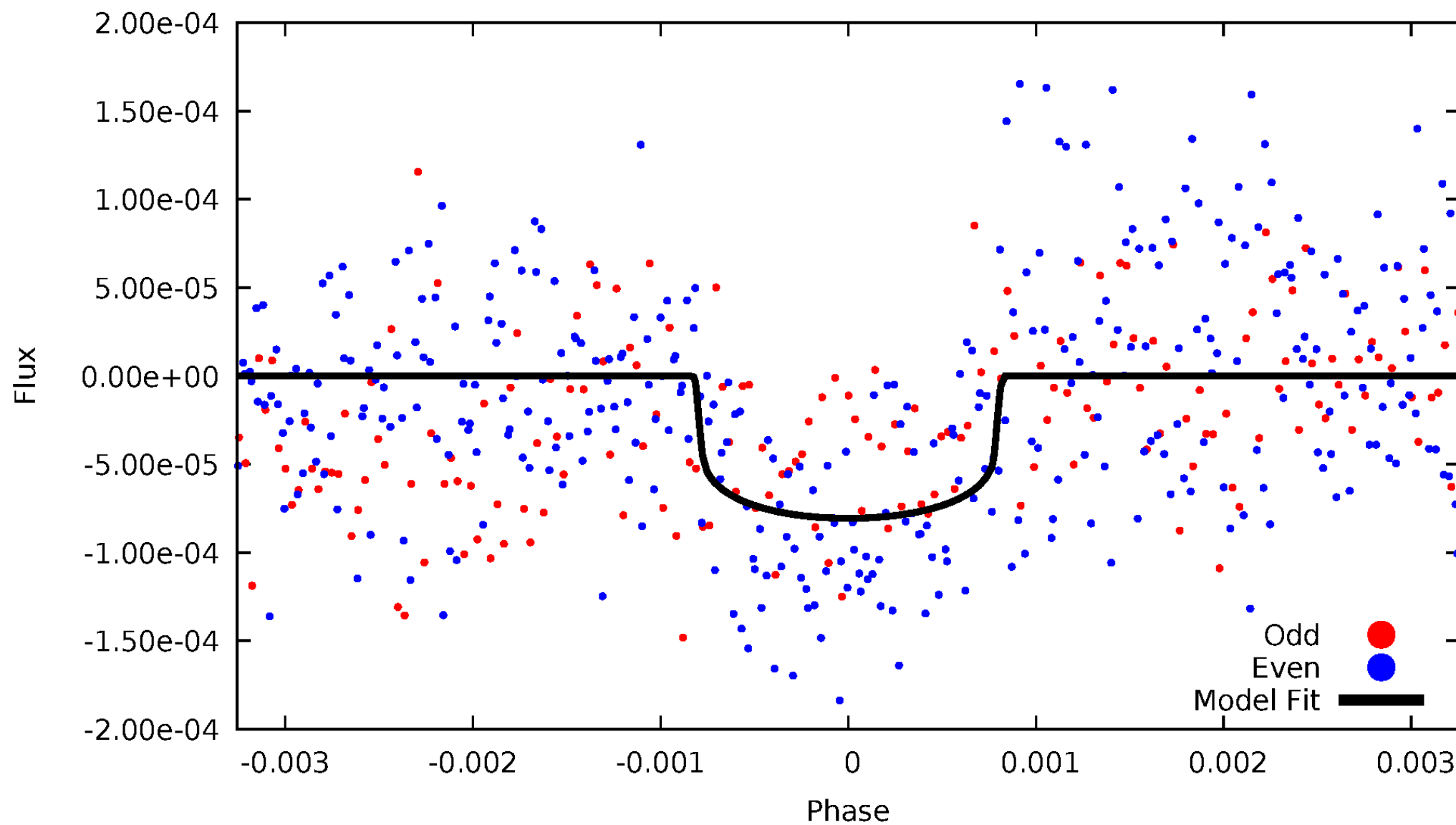


TCE 005802205-01



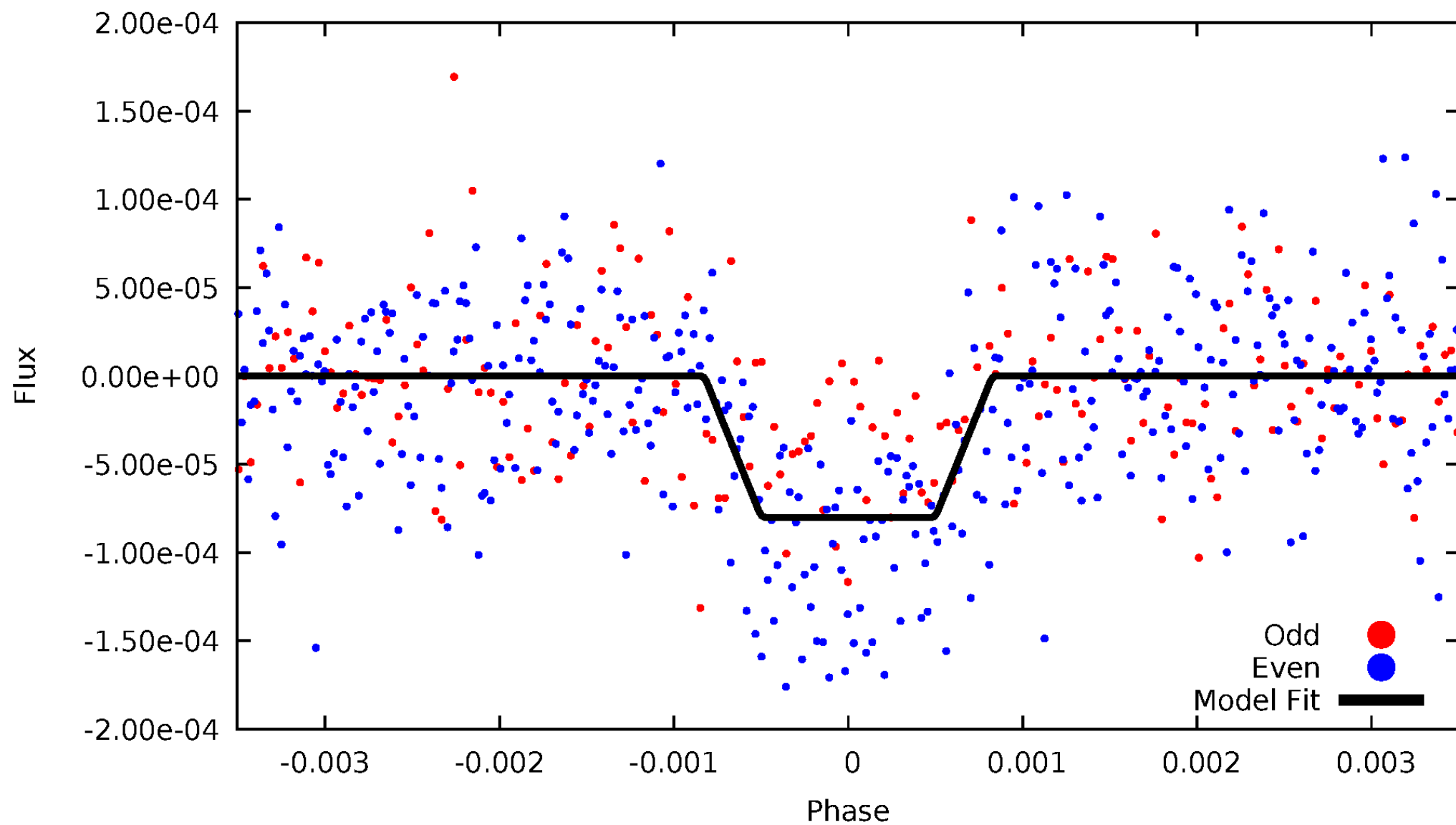
DV Odd/Even

TCE 005802205-01



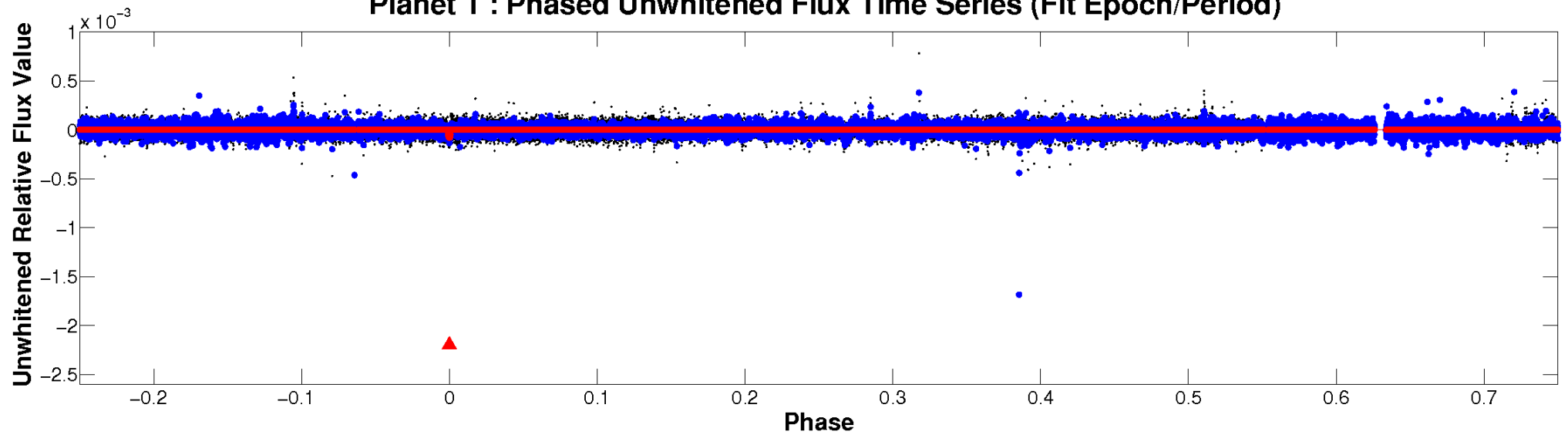
ALT Odd/Even

TCE 005802205-01

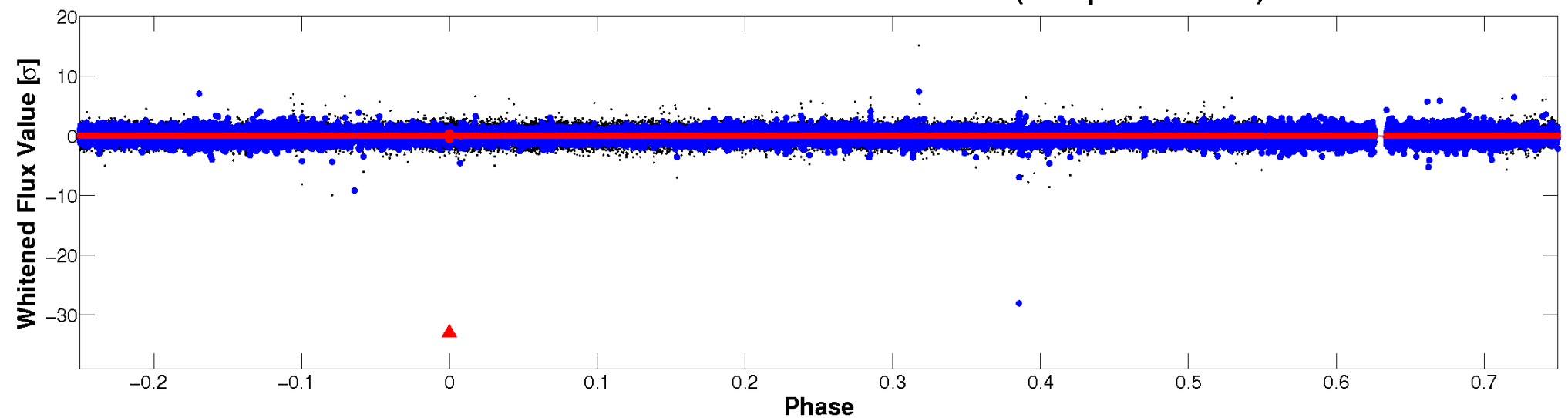


Non-Whitened Vs. Whitened Light Curve

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 005802205-01 P=578.871050 Days $T_0=219.304235$ (BKJD)



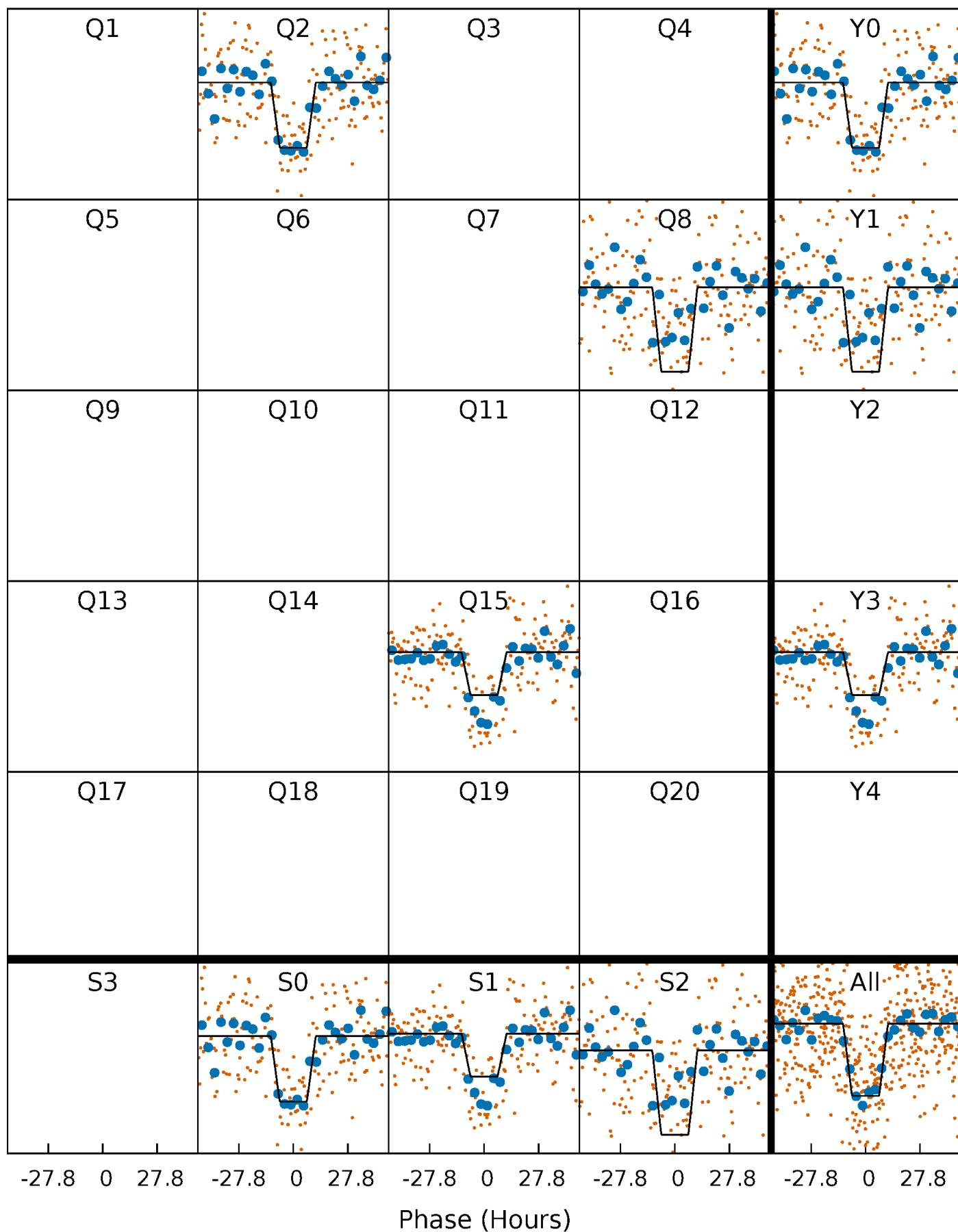
DV Quarter-Phased Transit Curves

TCE 005802205-01 P=578.871050 Days $T_0=219.304235$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

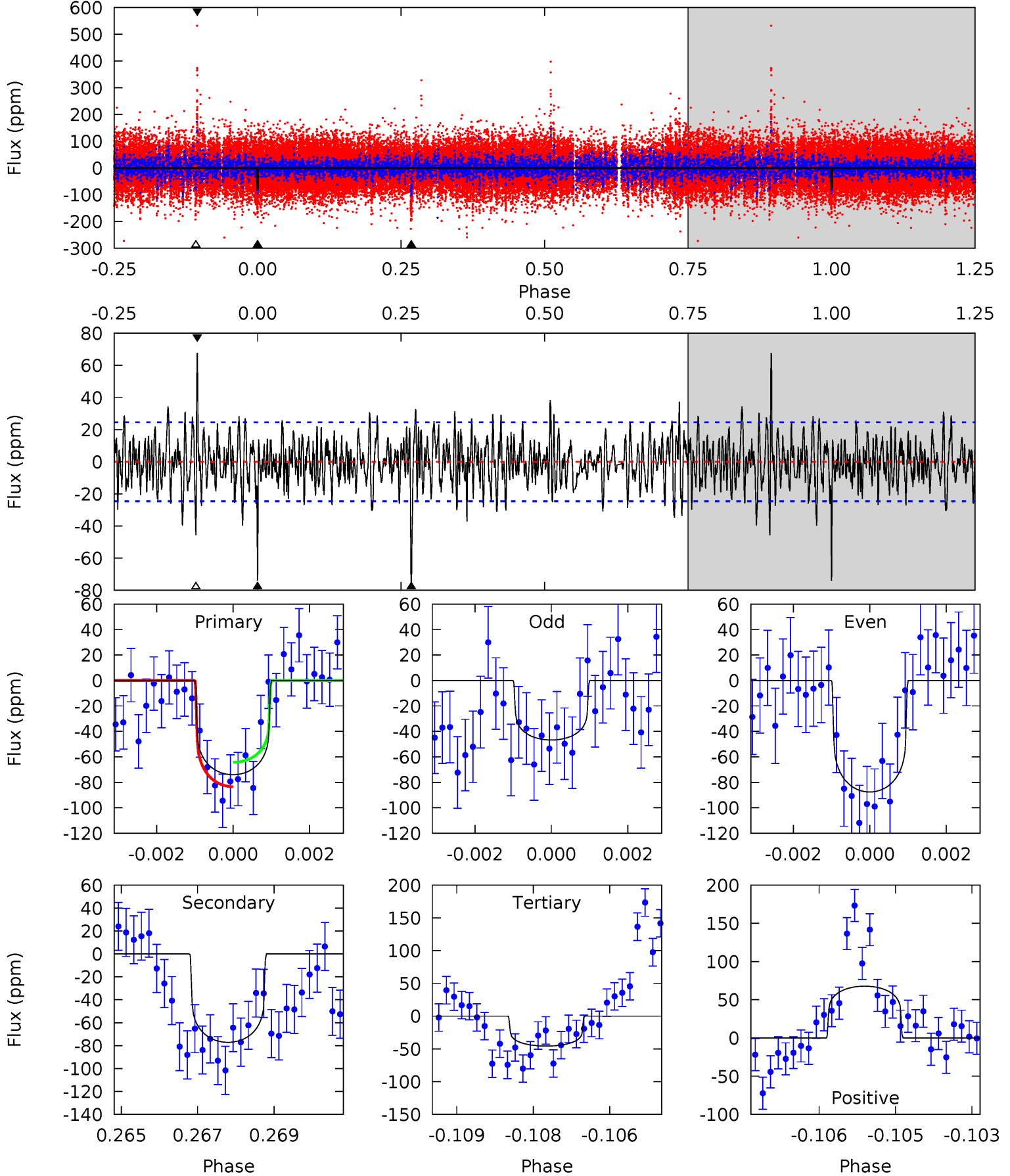
TCE 005802205-01 P=578.869132 Days $T_0=219.287549$ (BKJD)



DV Model-Shift Uniqueness Test

005802205-01, P = 578.871050 Days, E = 219.304235 Days

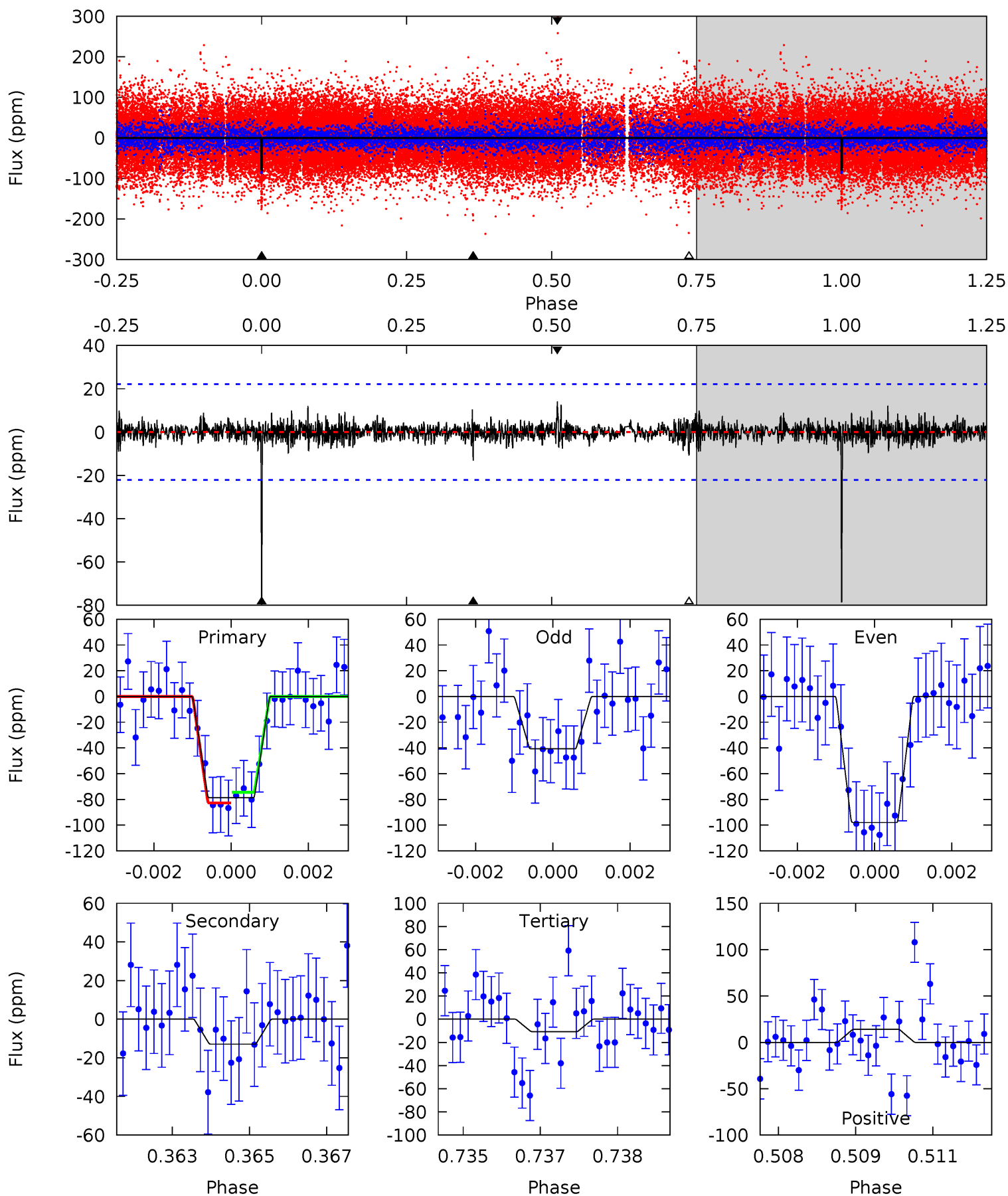
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	16.9	9.99	14.8	5.36	3.15	2.71	6.18	1.36	6.87	2.05	4.08	0.91	0.47	2.08



Alt Model-Shift Uniqueness Test

005802205-01, P = 578.869132 Days, E = 219.287549 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	3.13	2.60	3.41	5.36	3.15	0.66	16.5	15.7	0.53	-0.28	6.35	0.98	0.15	0.99



Stellar Parameters For KIC 005802205

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6180^{+195}_{-238}	$3.946^{+0.405}_{-0.135}$	$-0.140^{+0.300}_{-0.300}$	$1.917^{+0.507}_{-0.760}$	$1.185^{+0.190}_{-0.212}$	$0.237^{+0.800}_{-0.090}$
	+3%/-4%	+10%/-3%	+214%/-214%	+26%/-40%	+16%/-18%	+338%/-38%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005802205-01 / KOI 8107.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-77 ± 5	$1.78^{+0.44}_{-0.46}$	428^{+36}_{-45}	6110^{+558}_{-482}	27976^{+22080}_{-9468}
Alt.	-13 ± 4	$1.78^{+0.40}_{-0.44}$	427^{+37}_{-44}	4163^{+380}_{-357}	4668^{+3664}_{-2053}

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

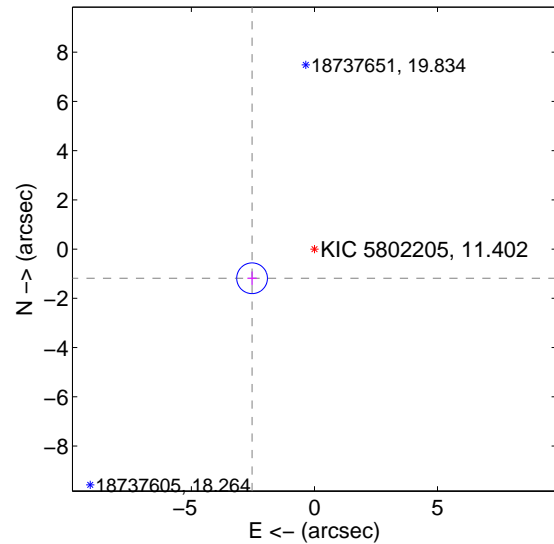
Supplemental centroid analysis for 005802205-01. **Kepler magnitude: 11.40.** Transit SNR 7.90

There are 1 quarters with good PRF difference image offsets

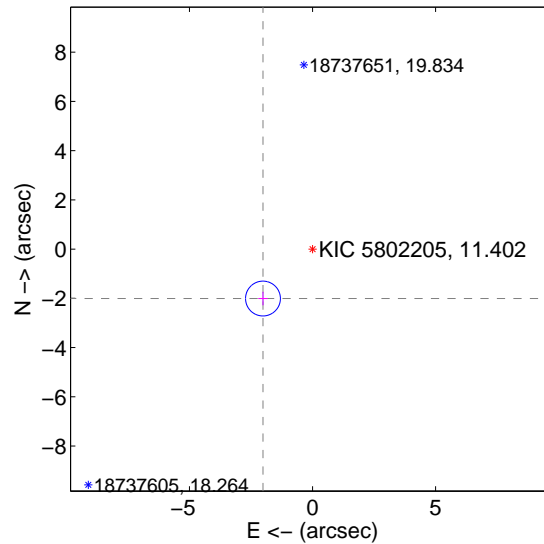
The direct PRF centroid is offset from the target star catalog position by about 0.97 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.796 ± 0.208	13.45	2.533 ± 0.190	-1.184 ± 0.274
PRF-fit source offset from KIC position	2.843 ± 0.236	12.05	2.012 ± 0.190	-2.008 ± 0.274
photometric centroid source offset	2.15 ± 2.01	1.07	-1.73 ± 1.68	-1.28 ± 2.50

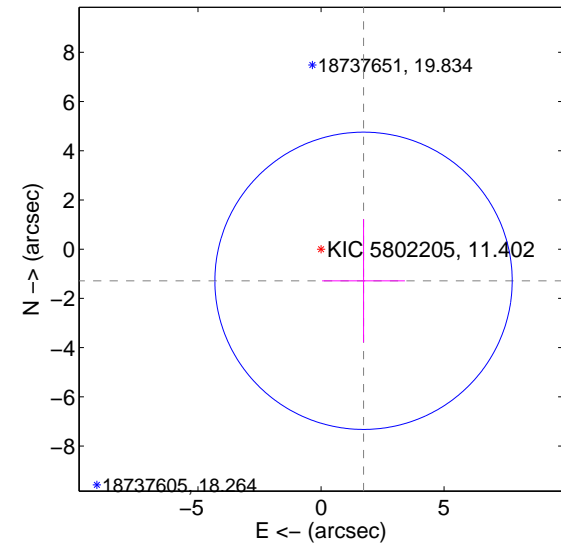
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

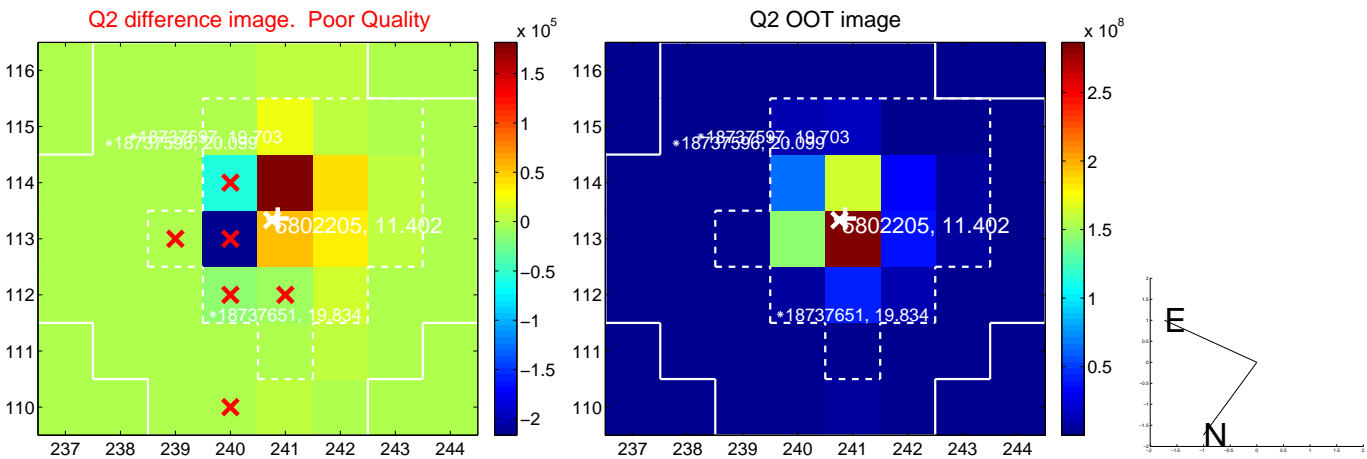


offset from photometric centroids

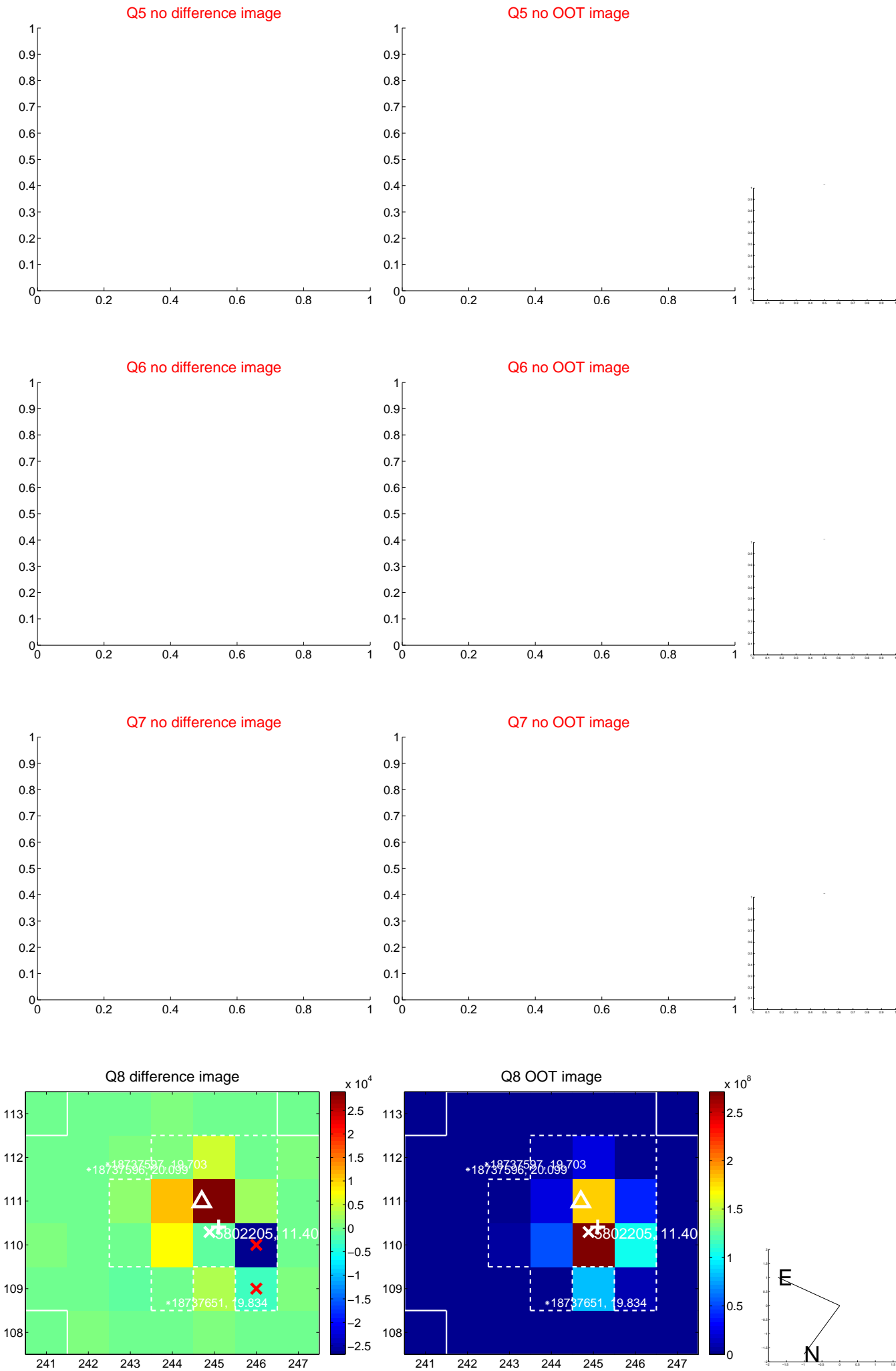


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



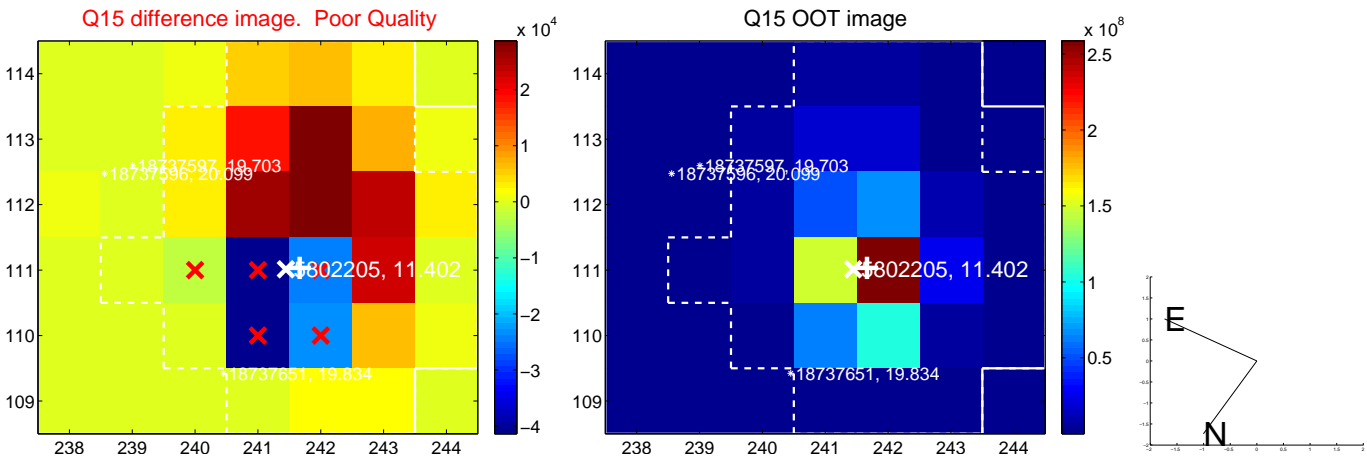
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



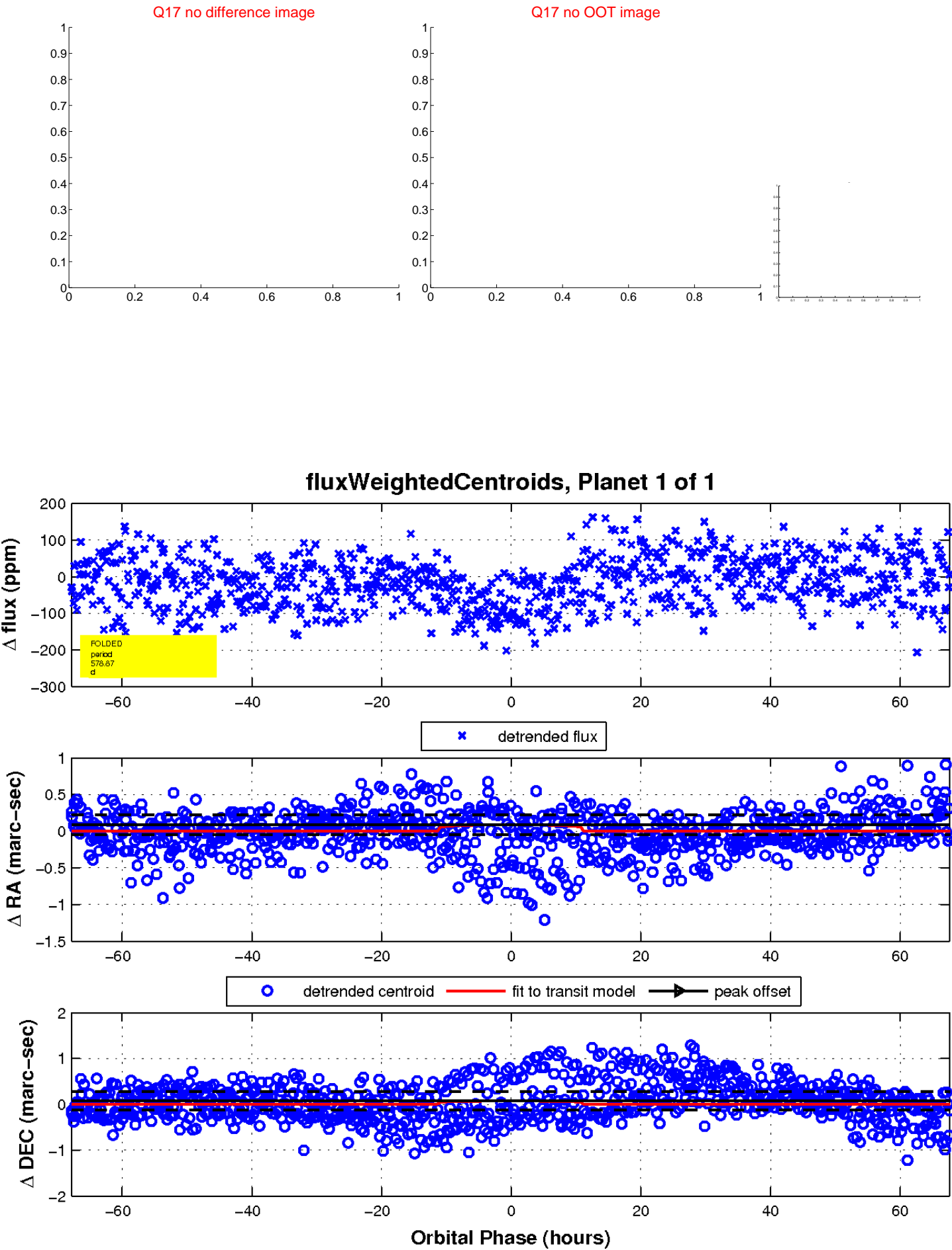
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

