

KIC 008874135

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})
008874135-01	OBS	No	479.231166	602.808824	643.8	6.565	7.5	7.3	1.19	6469	3.20	1.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008874135-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

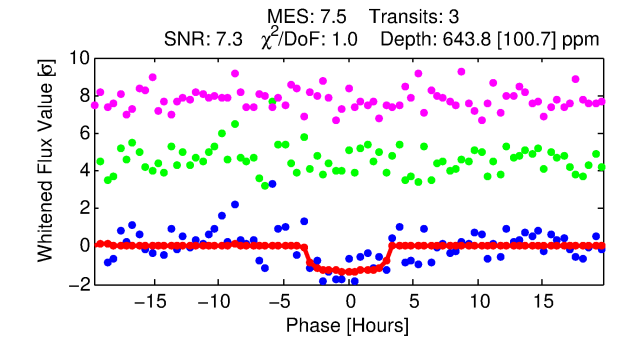
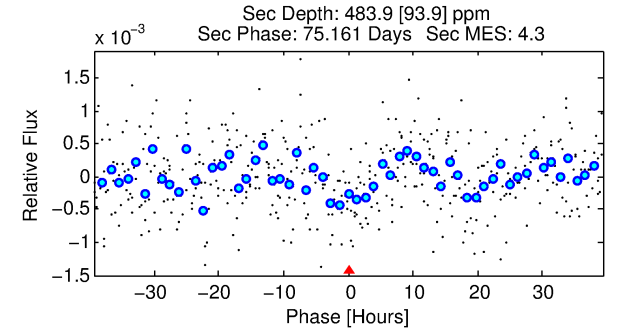
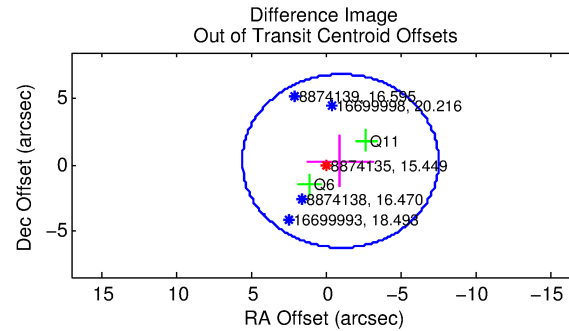
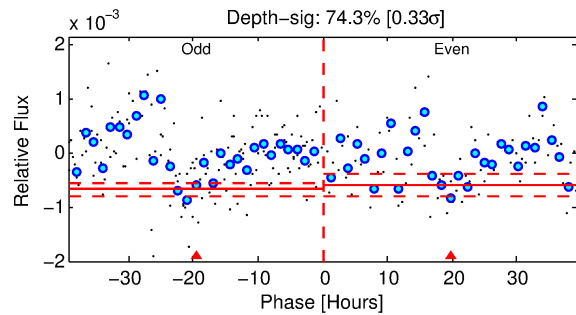
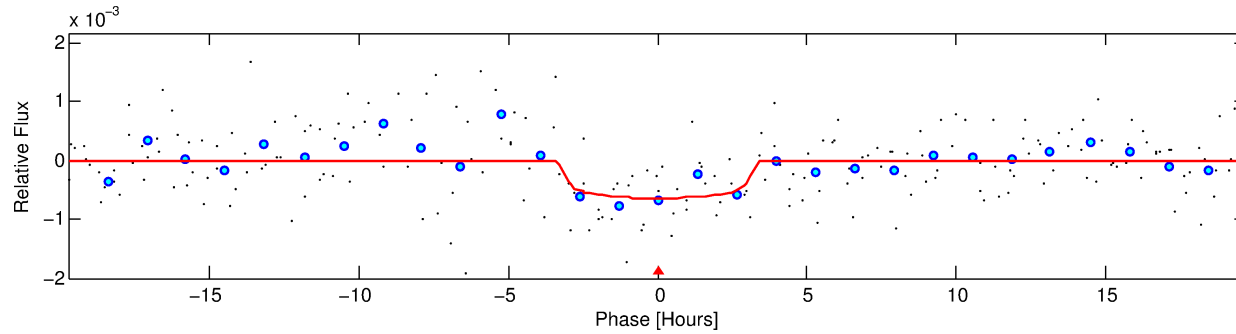
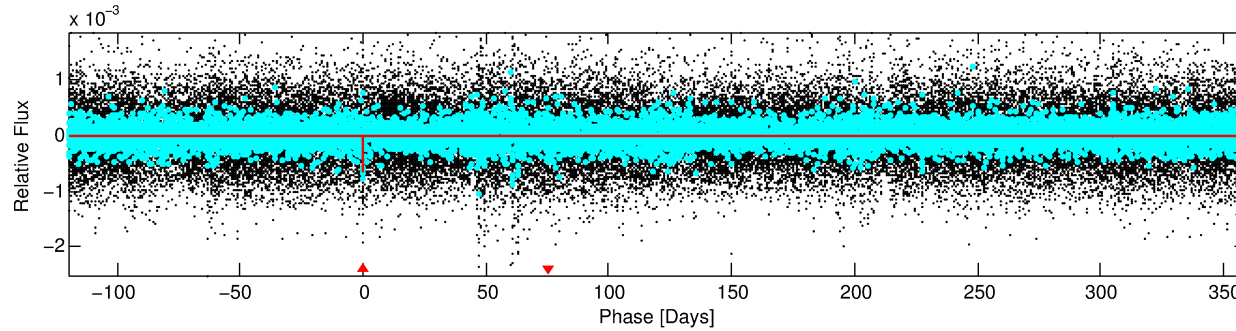
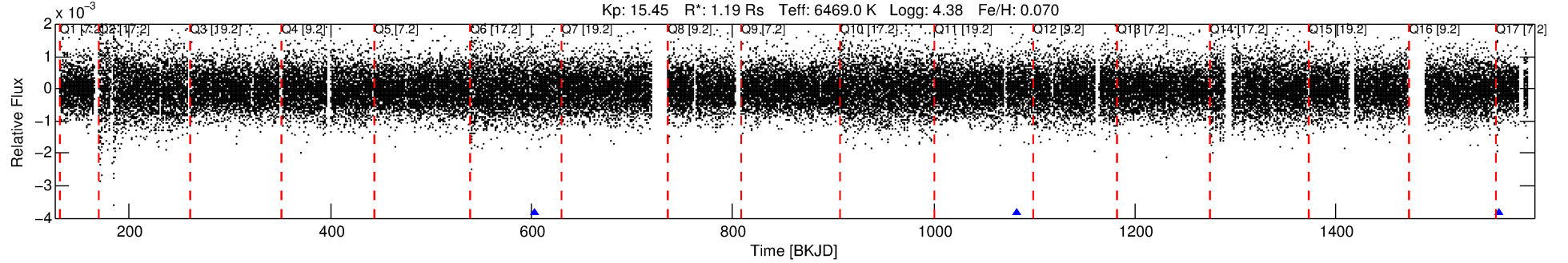
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008874135-01

No Significant Match Found

DV One-Page Summary

KIC: 8874135 Candidate: 1 of 1 Period: 479.231 d



DV Fit Results:

Period = 479.23117 [0.01300] d
Epoch = 602.8088 [0.0190] BKJD
Rp/R* = 0.0246 [0.0244]
a/R* = 439.57 [2288.60]
b = 0.65 [4.56]
Seff = 1.33 [0.48]
Teq = 274 [25] K
Rp = 3.20 [3.31] Re
a = 1.2947 [0.3053] AU
Ag = 43490.48 [87927.61] [0.49 σ]
Teffp = 6117 [3056] K [1.91 σ]

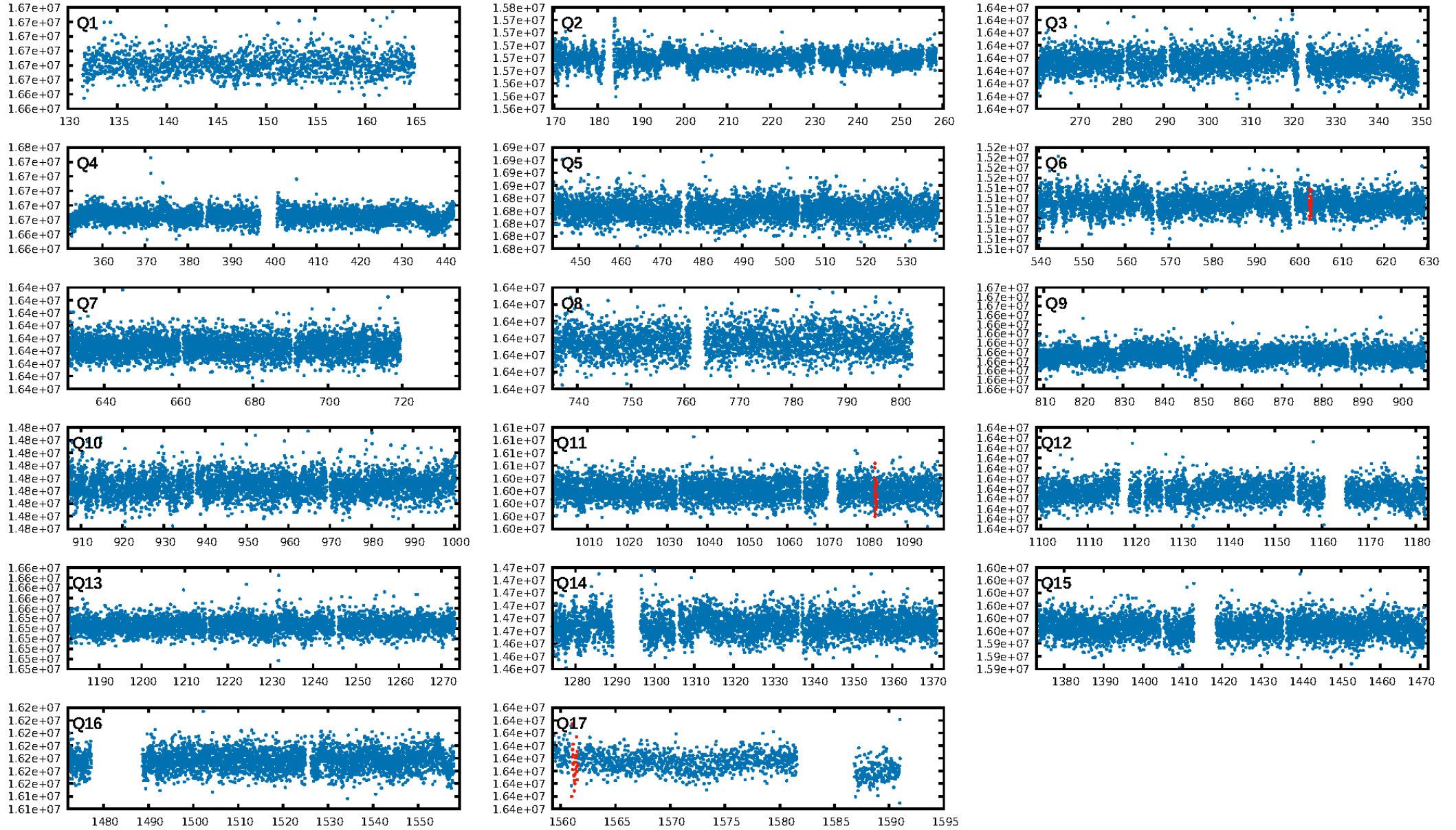
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 82.6%
ModelChiSquareGof-sig: 97.6%
Bootstrap-pfa: 4.84e-12
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 5.405
Centroid-sig: 37.1%
Centroid-so: 0.545 arcsec [0.34 σ]
OotOffset-rm: 1.037 arcsec [0.47 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-rm: 0.833 arcsec [0.37 σ]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

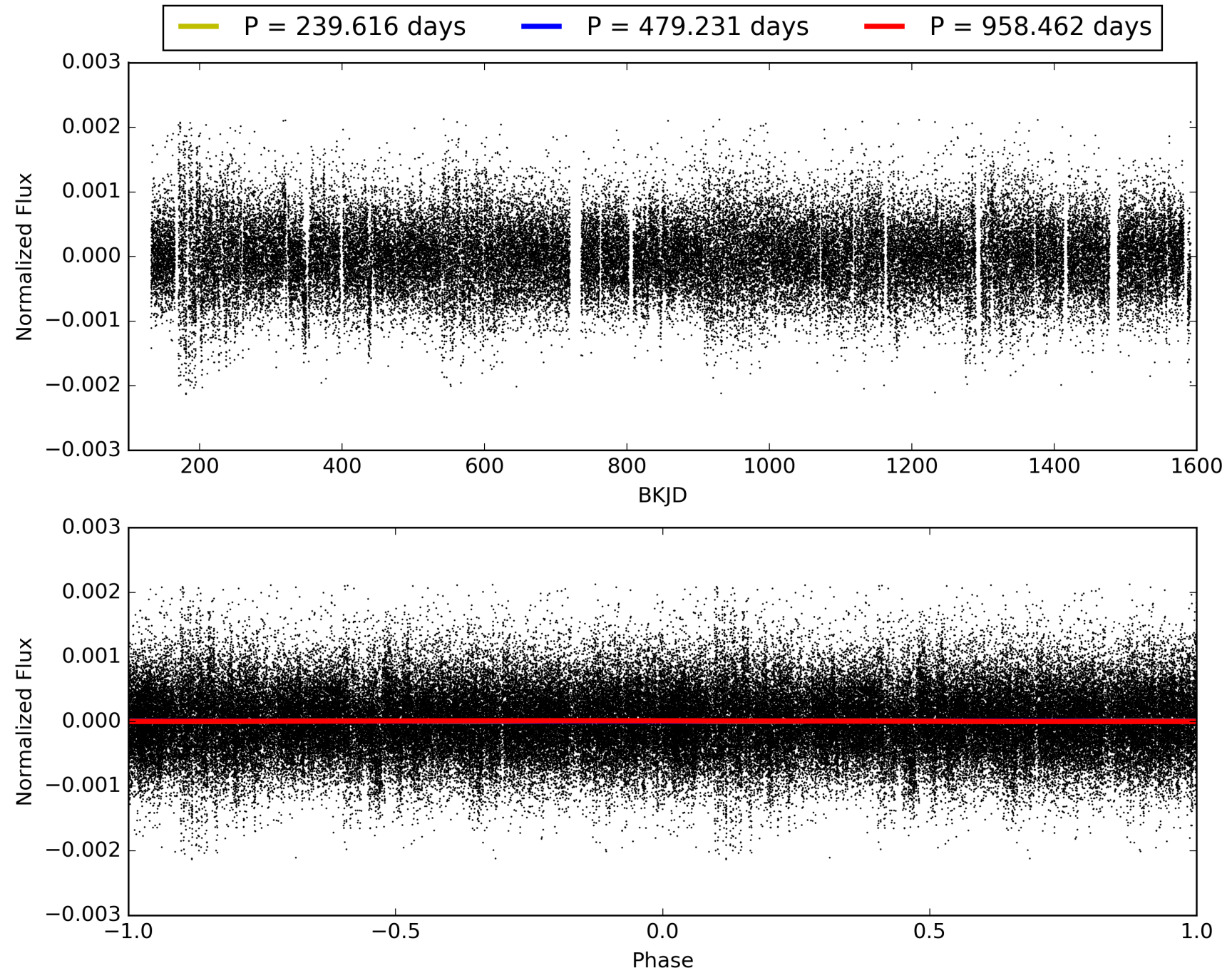
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:48:34 Z

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

TCE 008874135-01, PDC Light Curves

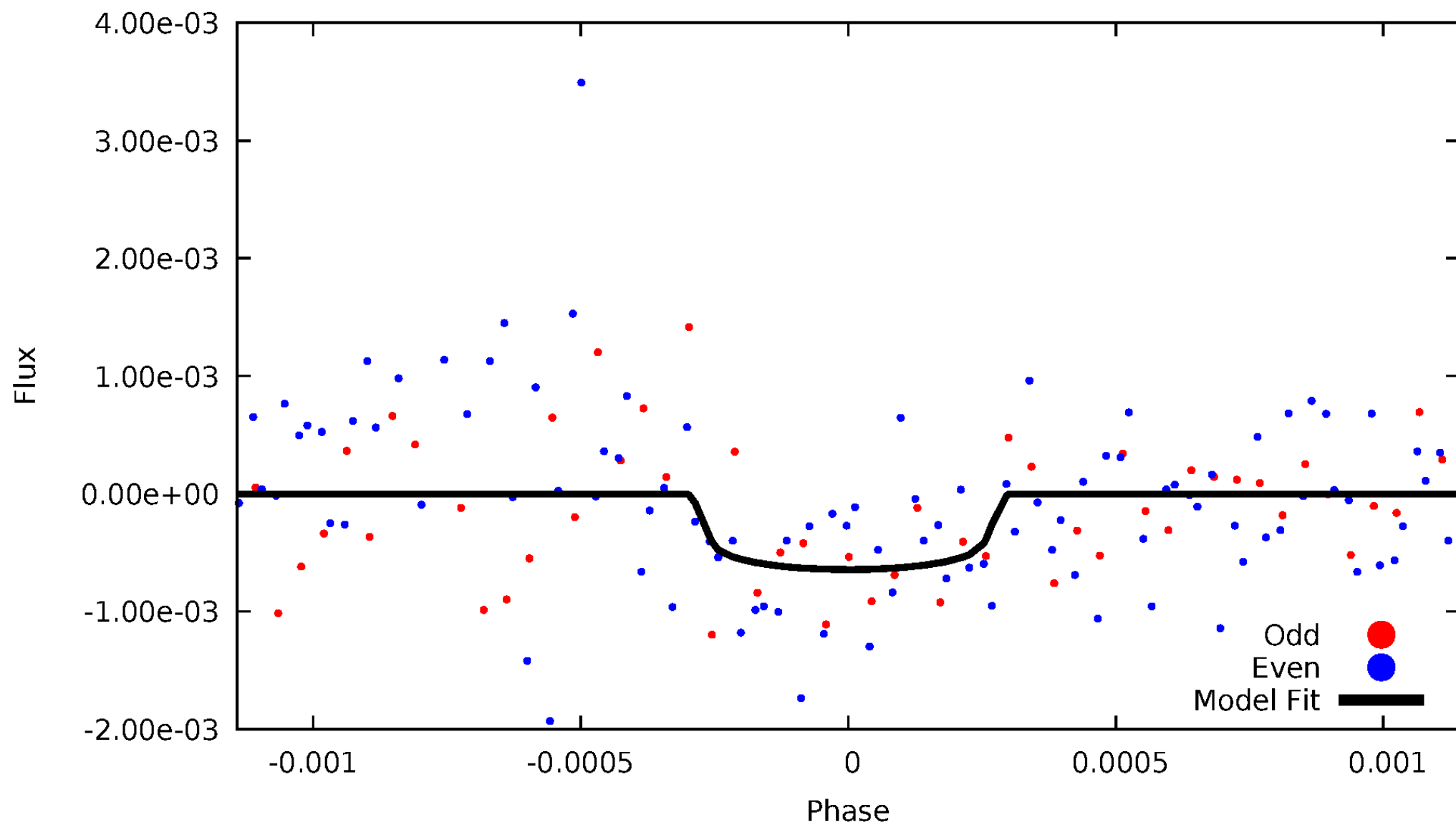


TCE 008874135-01



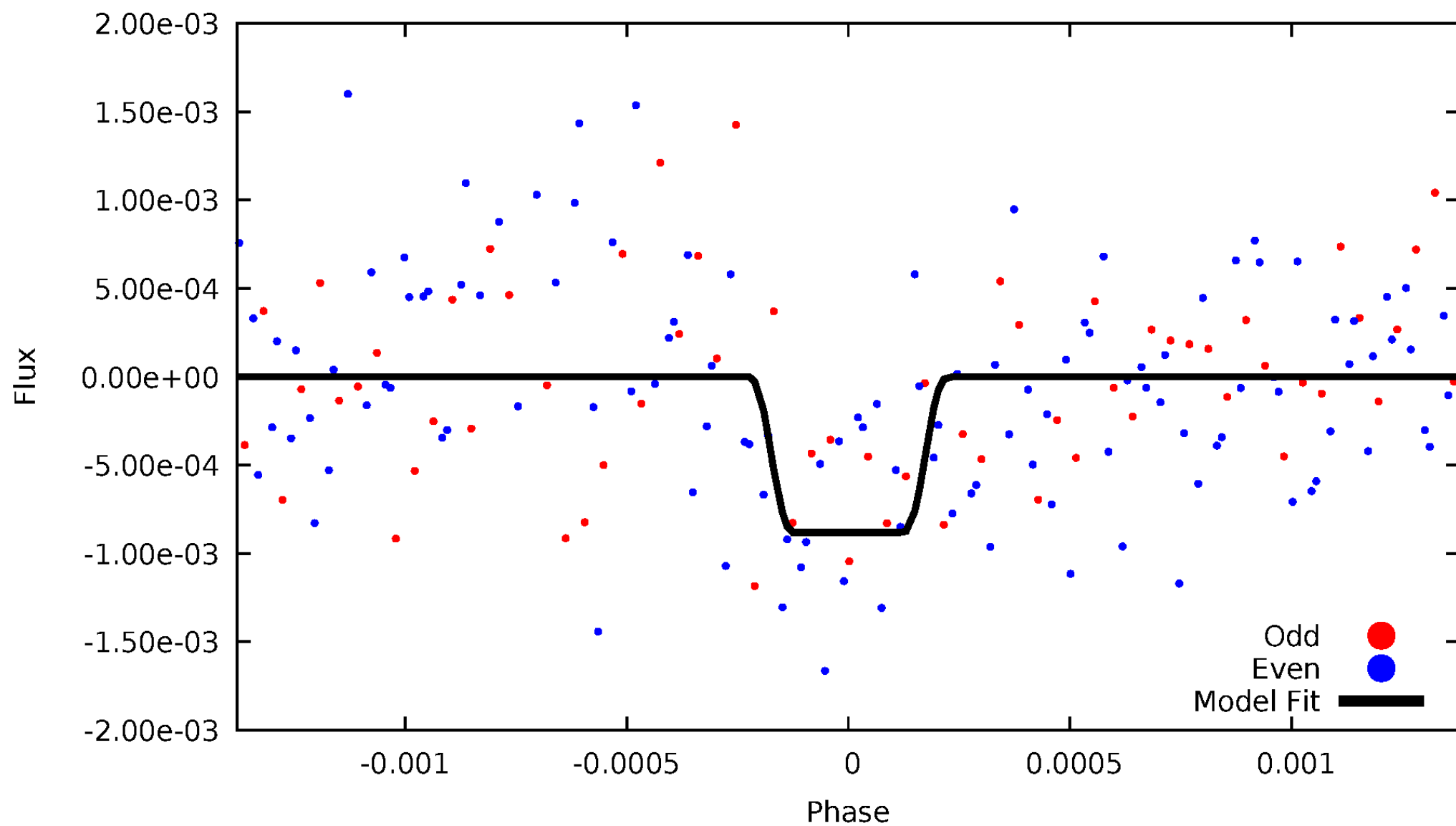
DV Odd/Even

TCE 008874135-01



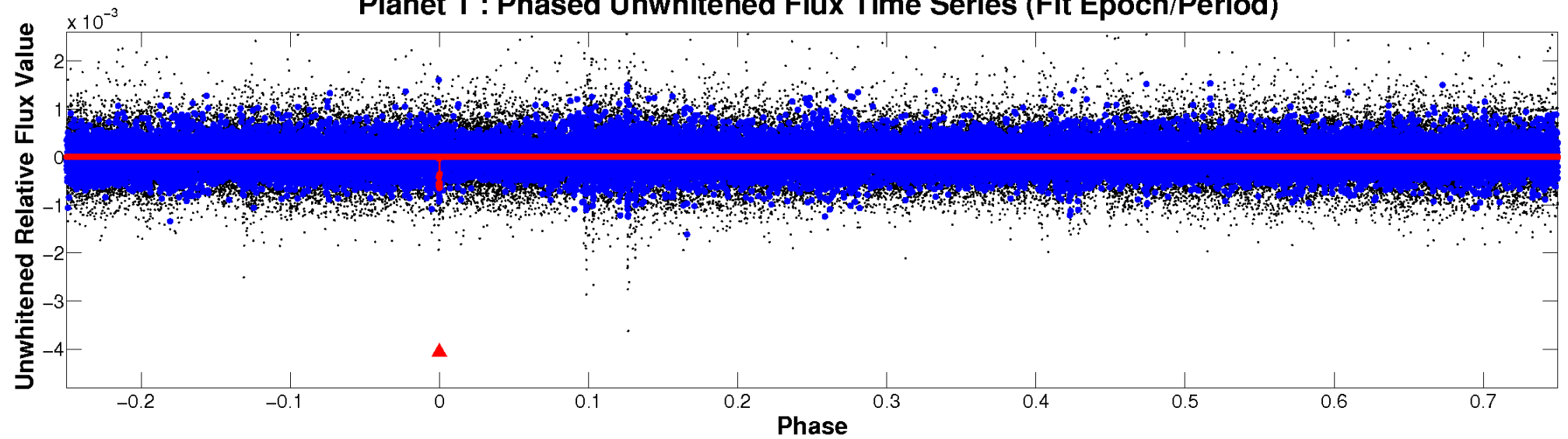
ALT Odd/Even

TCE 008874135-01

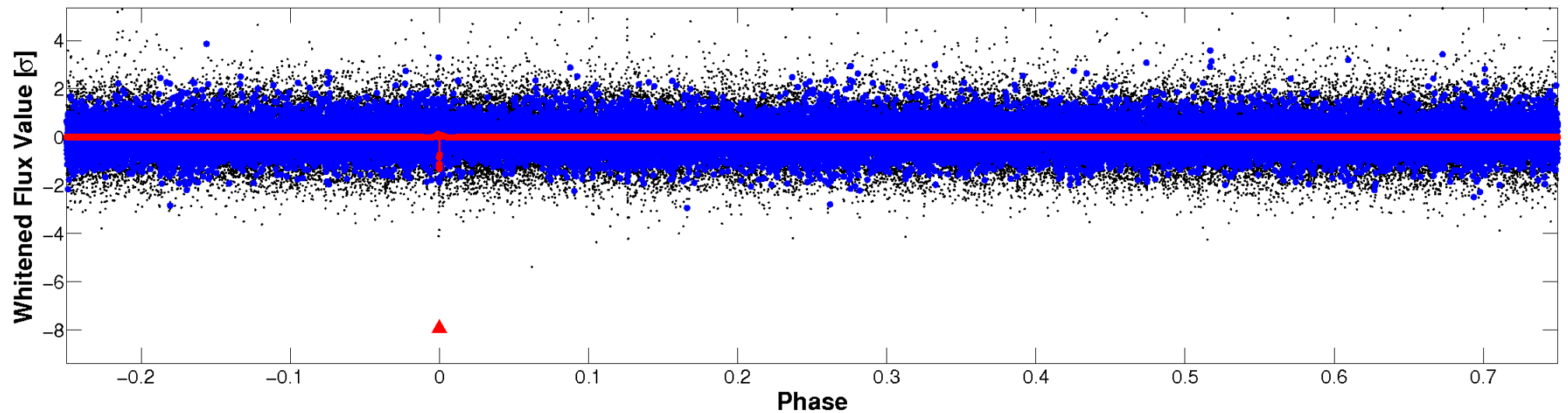


Non-Whitened Vs. Whitened Light Curve

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

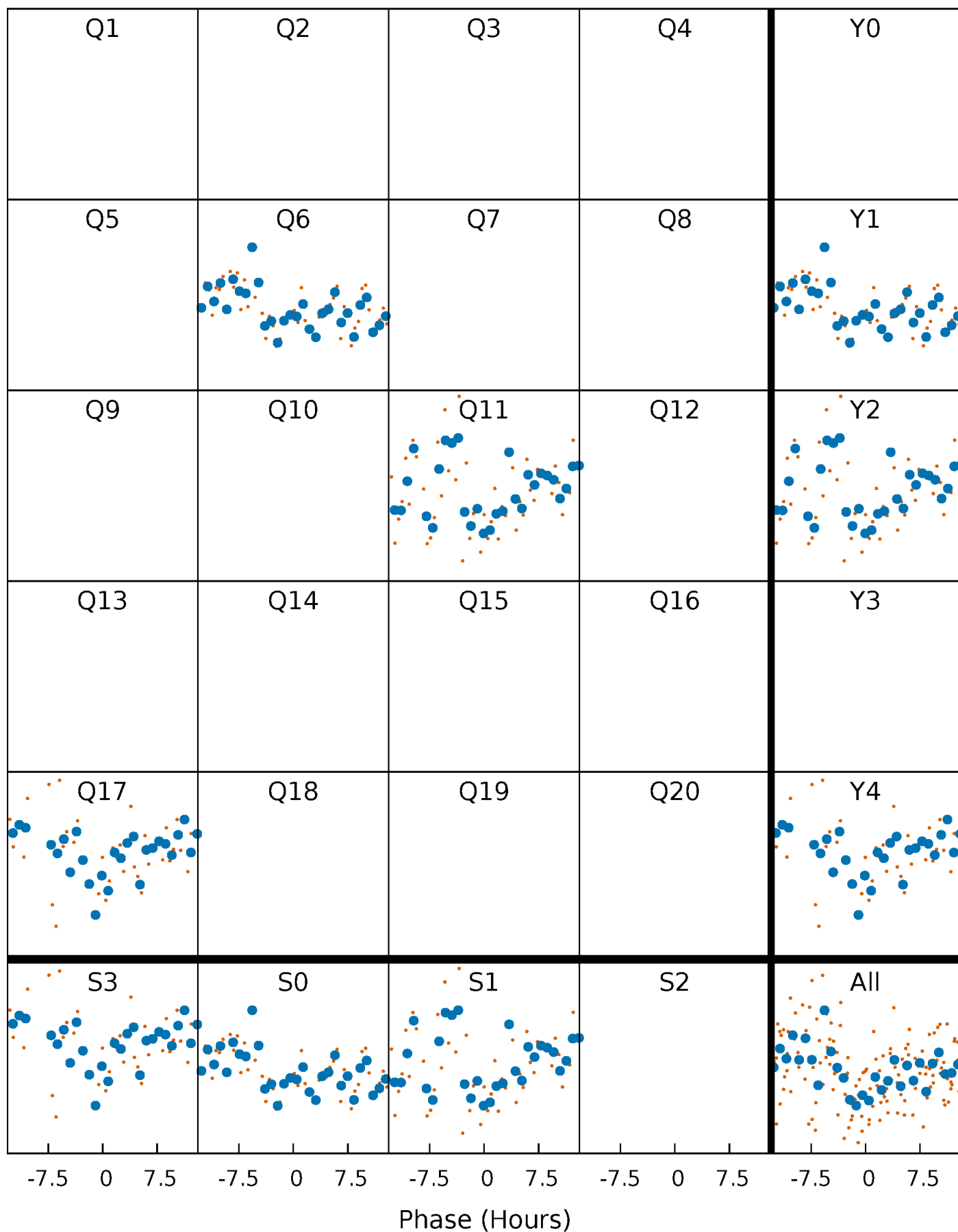


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 008874135-01 P=479.231166 Days $T_0=602.808824$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008874135-01 P=479.231166 Days $T_0=602.808824$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

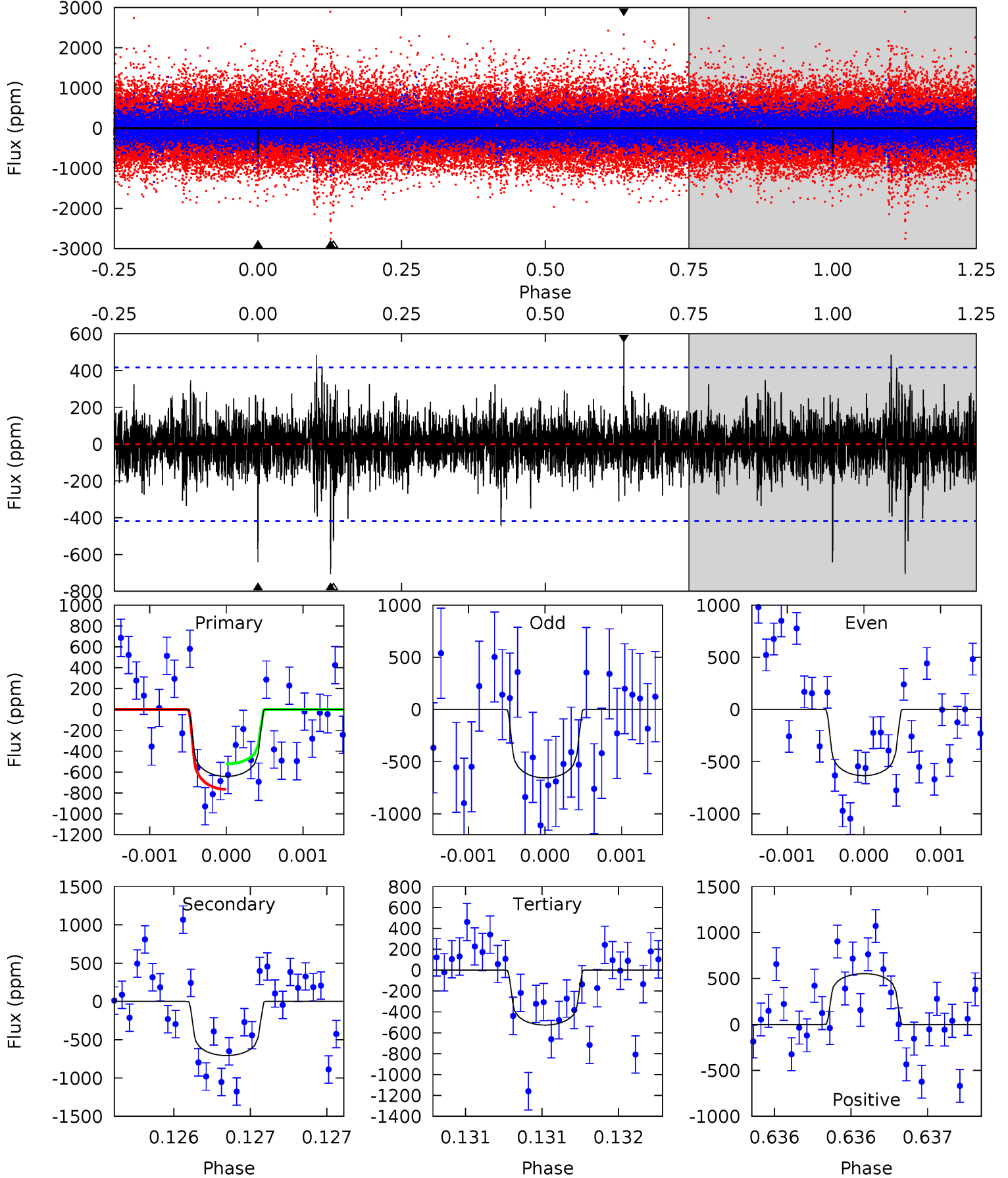
TCE 008874135-01 P=479.235094 Days $T_0=602.783953$ (BKJD)



DV Model-Shift Uniqueness Test

008874135-01, P = 479.231166 Days, E = 123.577658 Days

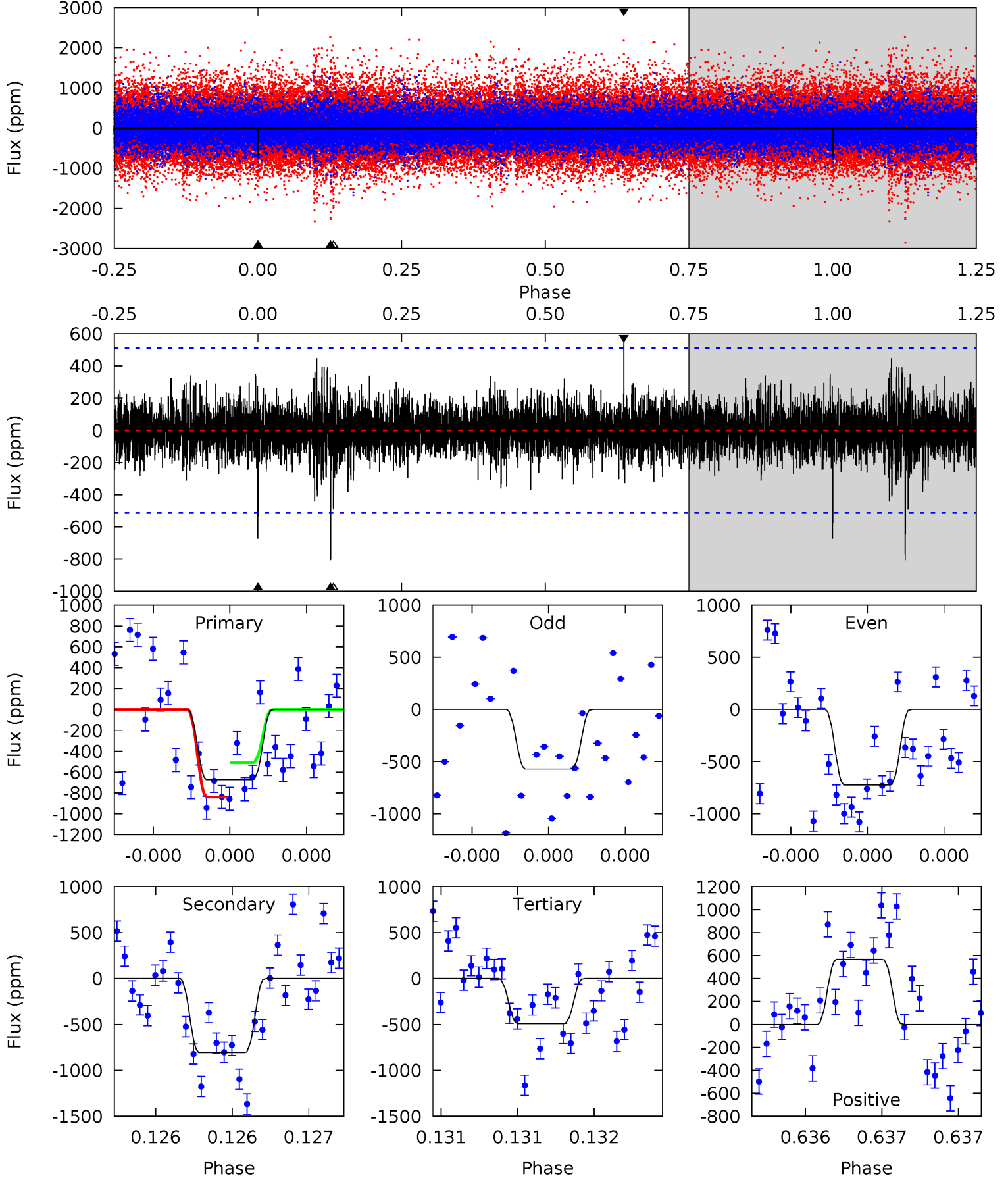
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.51	9.36	6.98	7.33	5.54	3.43	1.24	1.53	1.18	2.39	2.03	0.13	0.98	0.44	1.62



Alt Model-Shift Uniqueness Test

008874135-01, P = 479.235094 Days, E = 123.548859 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.35	8.81	5.38	6.19	5.61	3.54	1.07	1.97	1.17	3.43	2.63	0.77	1.18	0.41	1.79



Stellar Parameters For KIC 008874135

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6469^{+145}_{-225}	$4.385^{+0.060}_{-0.180}$	$0.070^{+0.250}_{-0.300}$	$1.193^{+0.342}_{-0.147}$	$1.260^{+0.154}_{-0.188}$	$1.047^{+0.276}_{-0.532}$
	+2%/-3%	+1%/-4%	+357%/-429%	+29%/-12%	+12%/-15%	+26%/-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 008874135-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-706 ± 75	$4.08^{+3.03}_{-2.46}$	388^{+25}_{-20}	6021^{+4038}_{-1312}	$38672^{+194638}_{-26398}$
Alt.	-806 ± 91	$4.47^{+3.09}_{-2.48}$	389^{+26}_{-19}	6000^{+3590}_{-1305}	$37324^{+151303}_{-24706}$

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 $A_{obs} \gg 1.0$

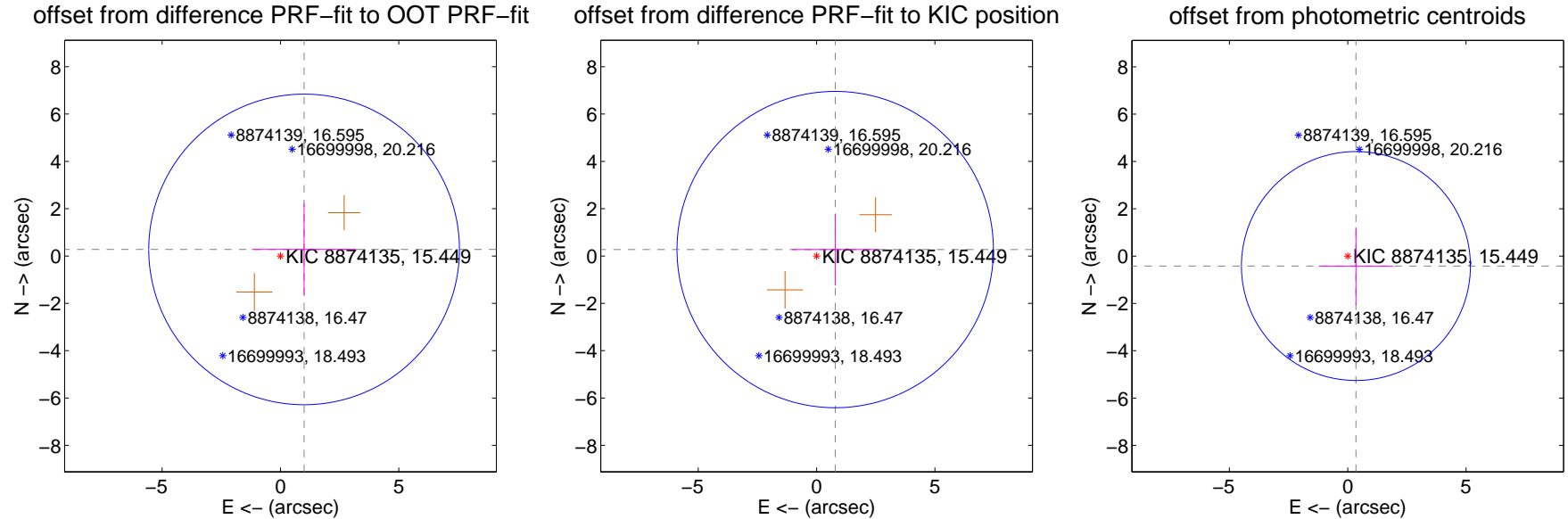
DV Centroid Data

Supplemental centroid analysis for 008874135-01. Kepler magnitude: 15.45. Transit SNR 7.34

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.037 ± 2.188	0.47	-0.999 ± 2.205	0.278 ± 1.955
PRF-fit source offset from KIC position	0.833 ± 2.228	0.37	-0.787 ± 1.831	0.273 ± 1.522
photometric centroid source offset	0.54 ± 1.61	0.34	-0.35 ± 1.57	-0.42 ± 1.64

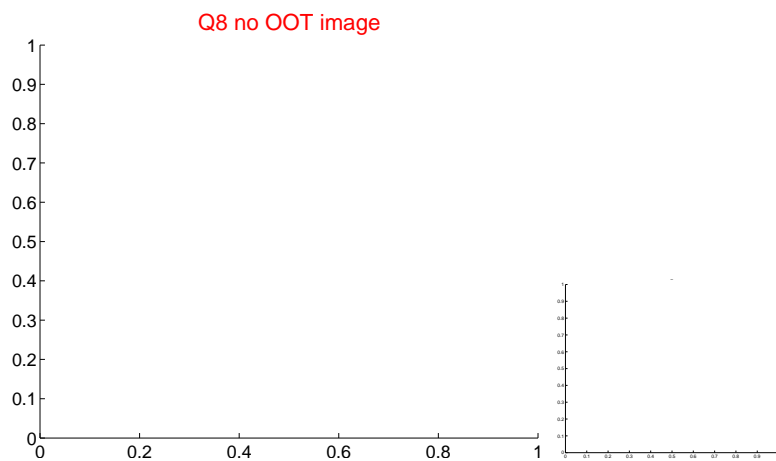
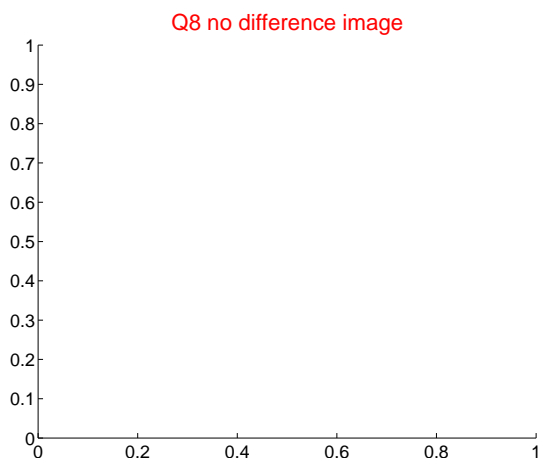
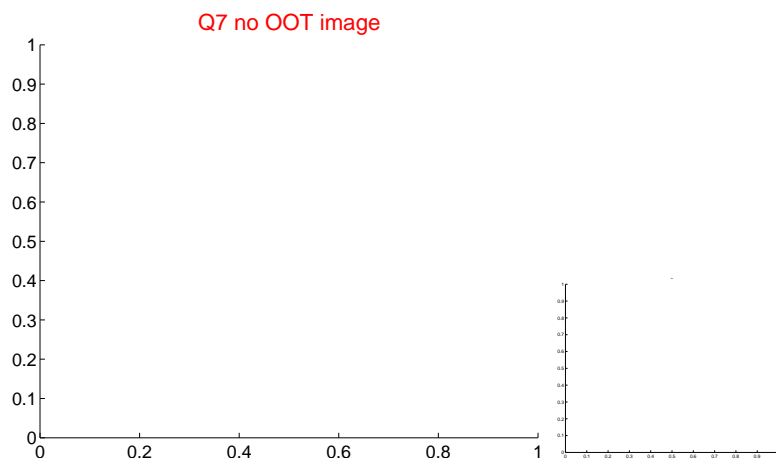
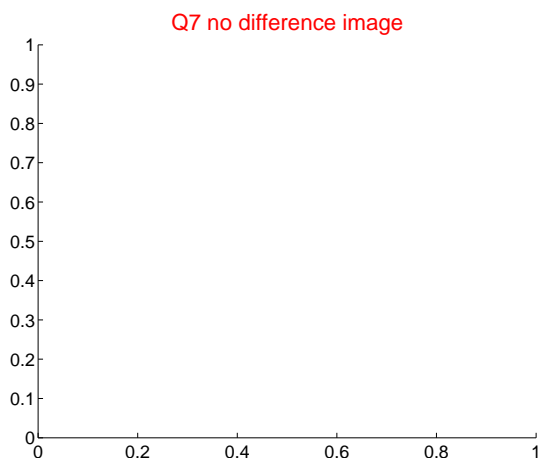
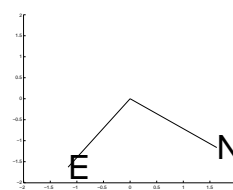
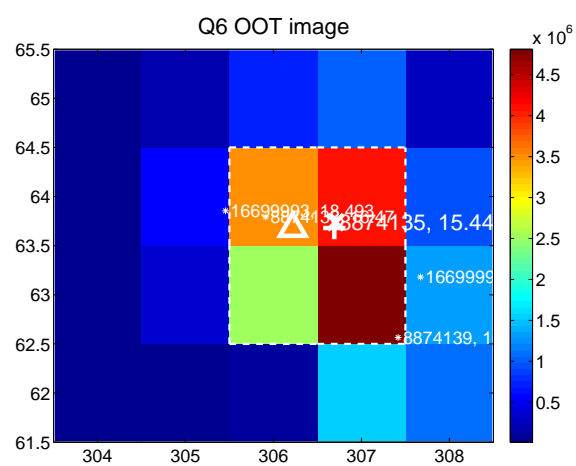
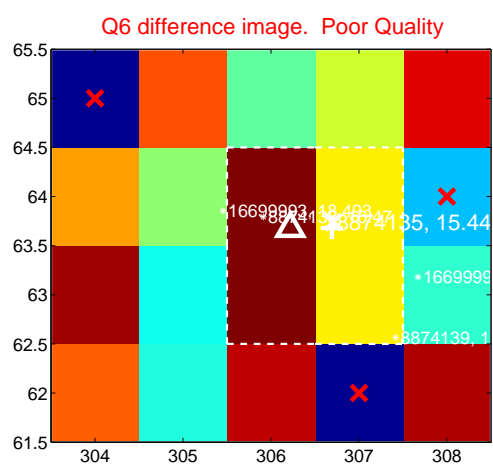
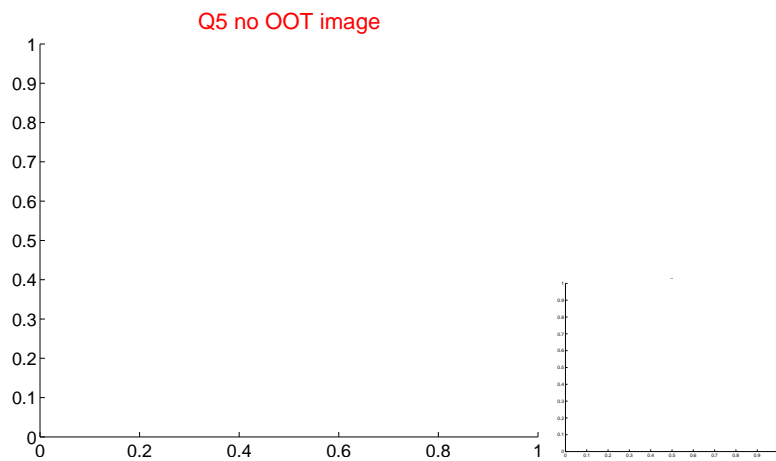
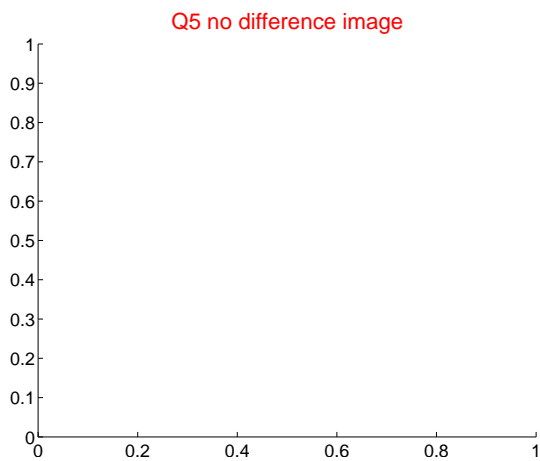


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

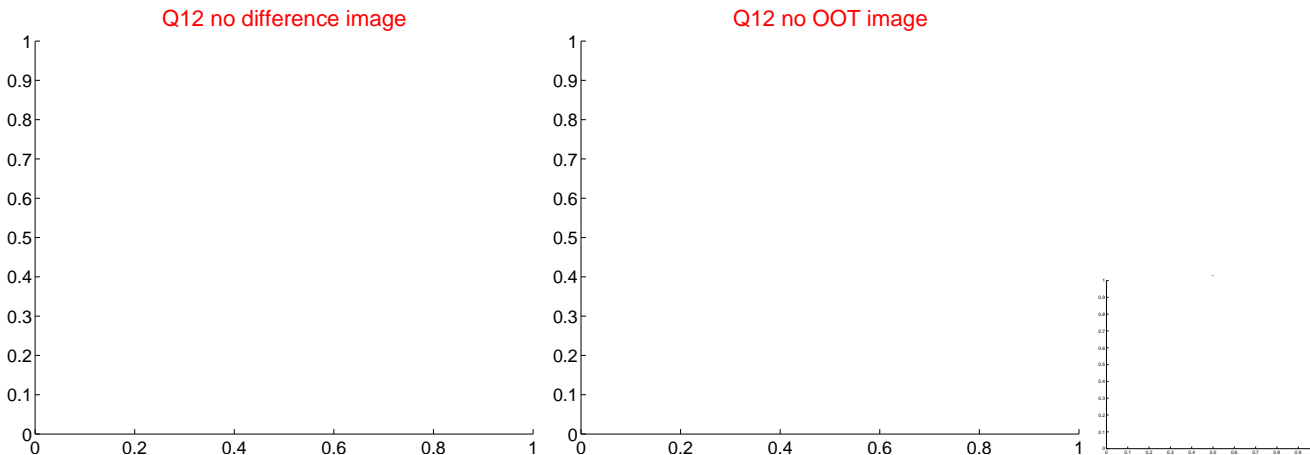
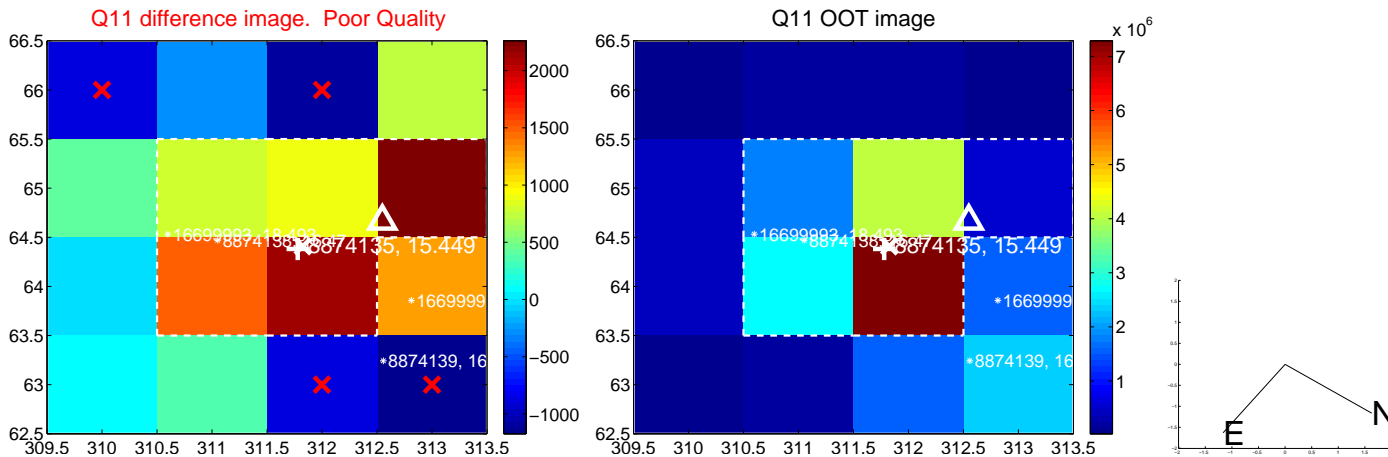
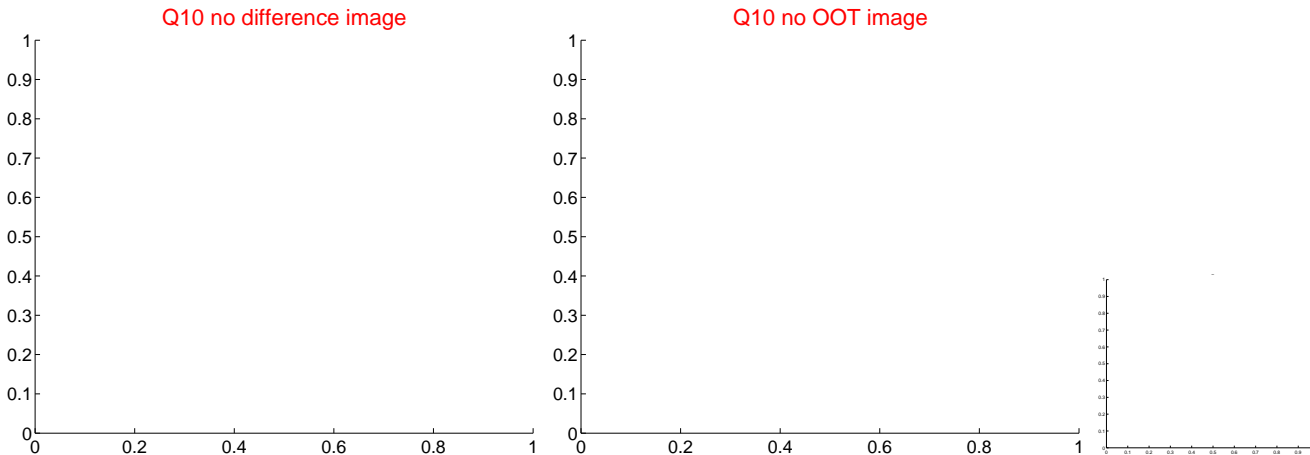
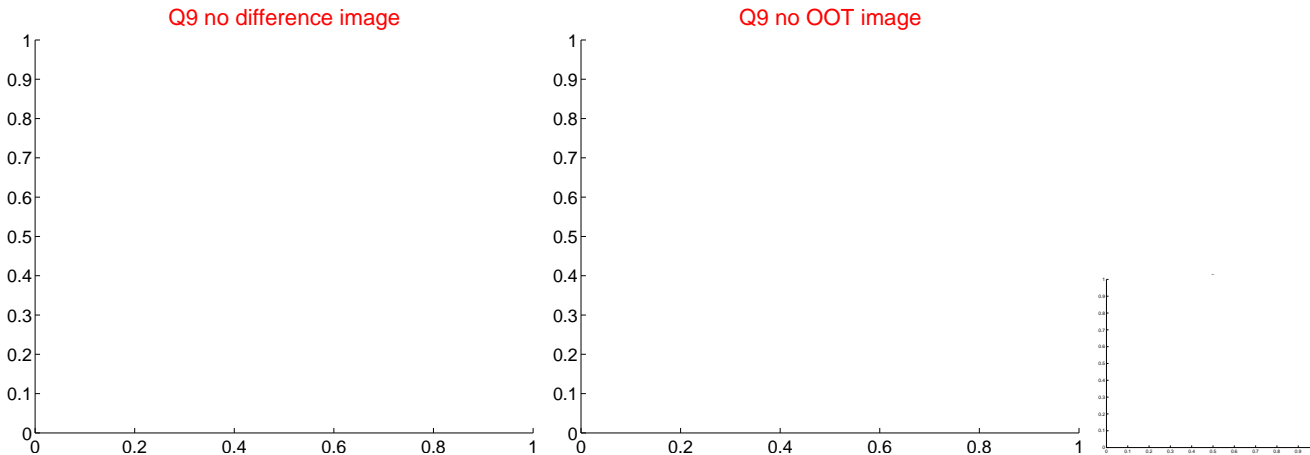
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



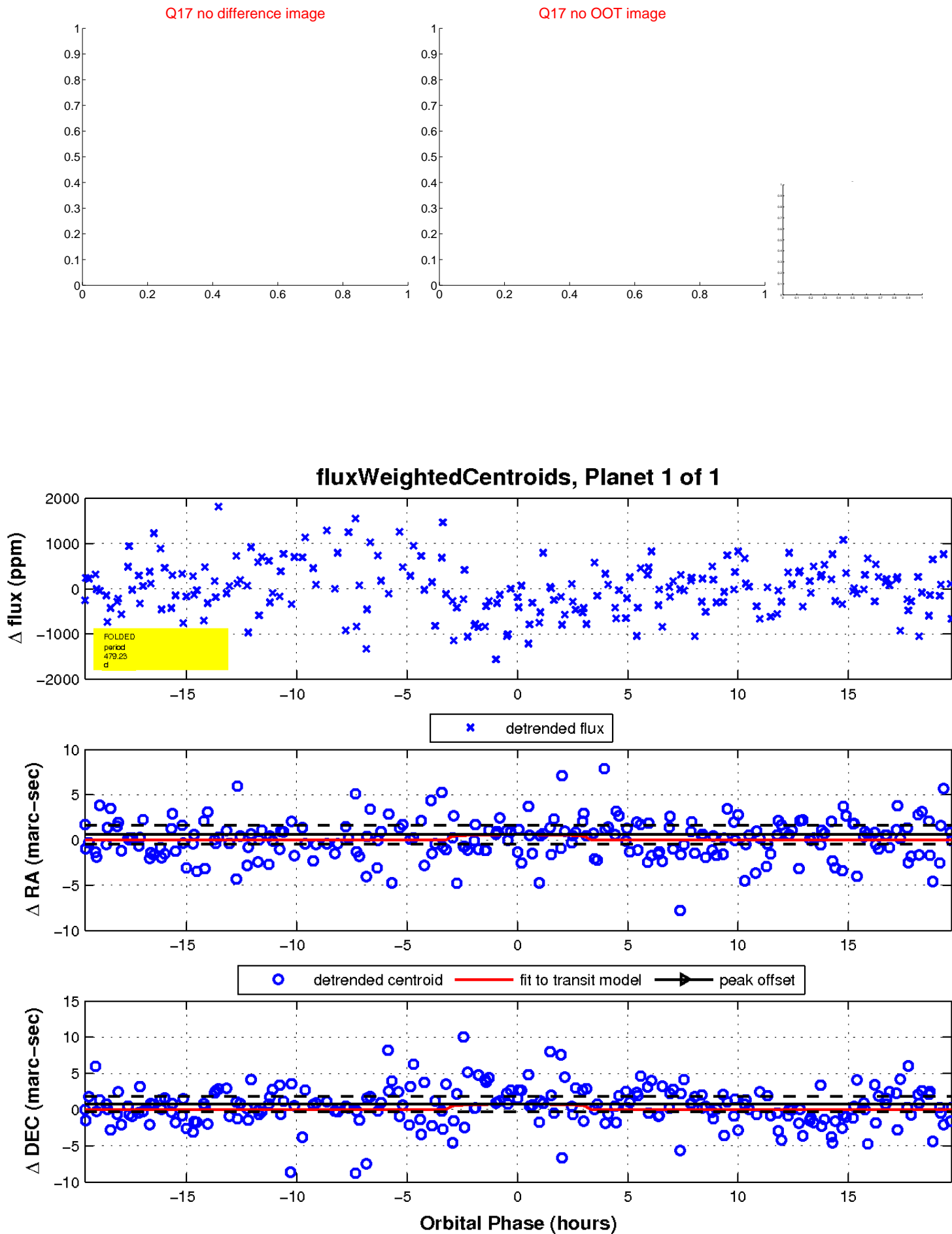
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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UKIRT Image

Declination

