

KIC 010666949

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})
010666949-01	OBS	No	0.933411	131.681712	3342.2	1.929	7.2	8.3	1.00	5780	6.93	2860.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010666949-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_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.

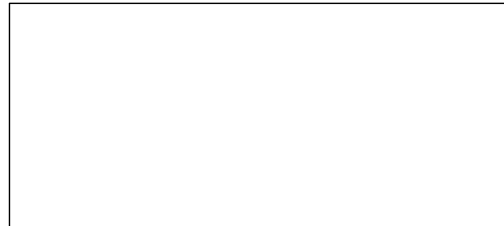
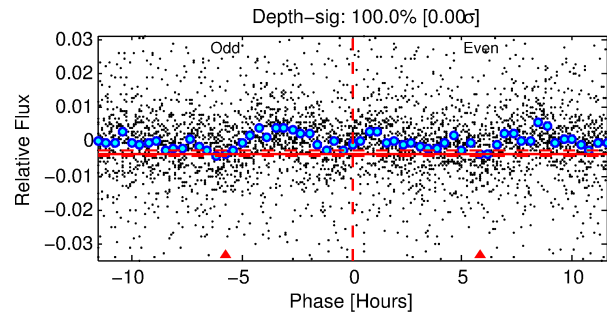
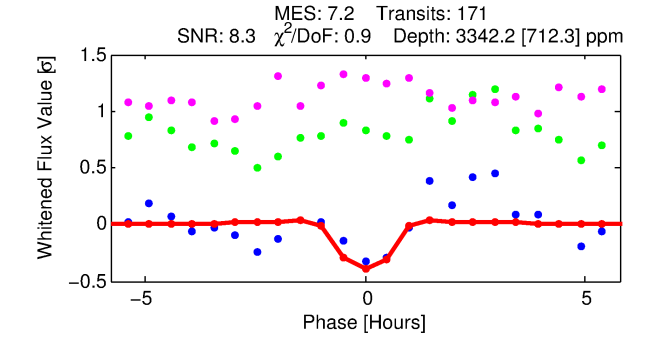
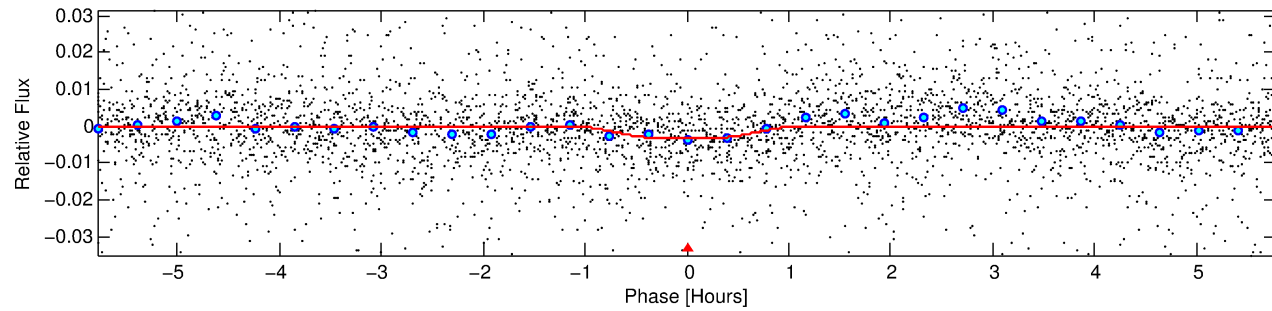
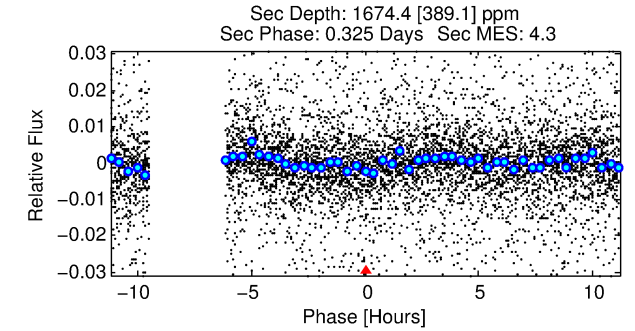
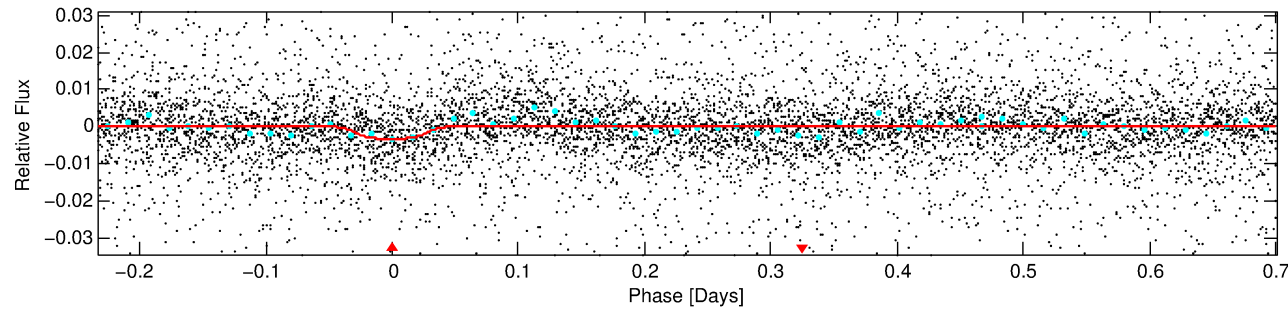
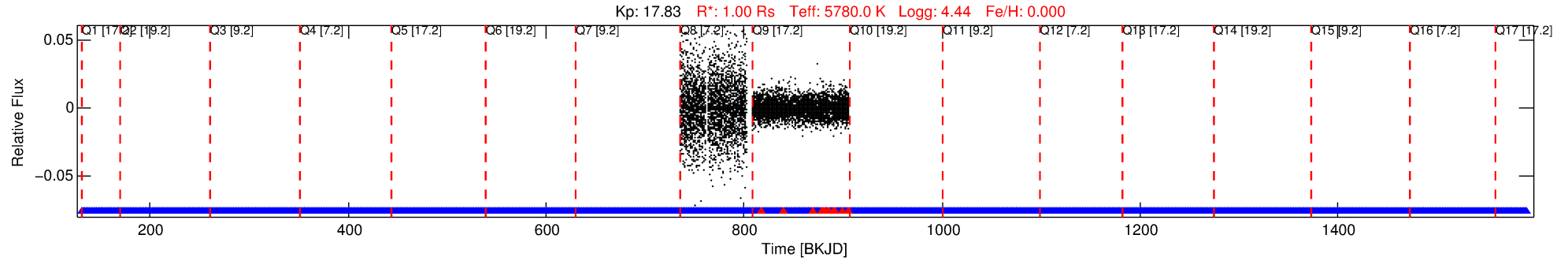
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010666949-01

No Significant Match Found

DV One-Page Summary

KIC: 10666949 Candidate: 1 of 1 Period: 0.933 d



DV Fit Results:

Period = 0.93341 [0.00001] d
Epoch = 131.6817 [0.0030] BKJD
Rp/R* = 0.0635 [0.0139]
a/R* = 2.30 [1.22]
b = 0.90 [0.15]
Seff = 2860.94 [0.05]
Teq = 1865 [0] K
Rp = 6.93 [1.51] Re
a = 0.0187 [0.0000] AU
Ag = 6.71 [3.32] [1.72σ]
Teffp = 4640 [574] K [4.83σ]

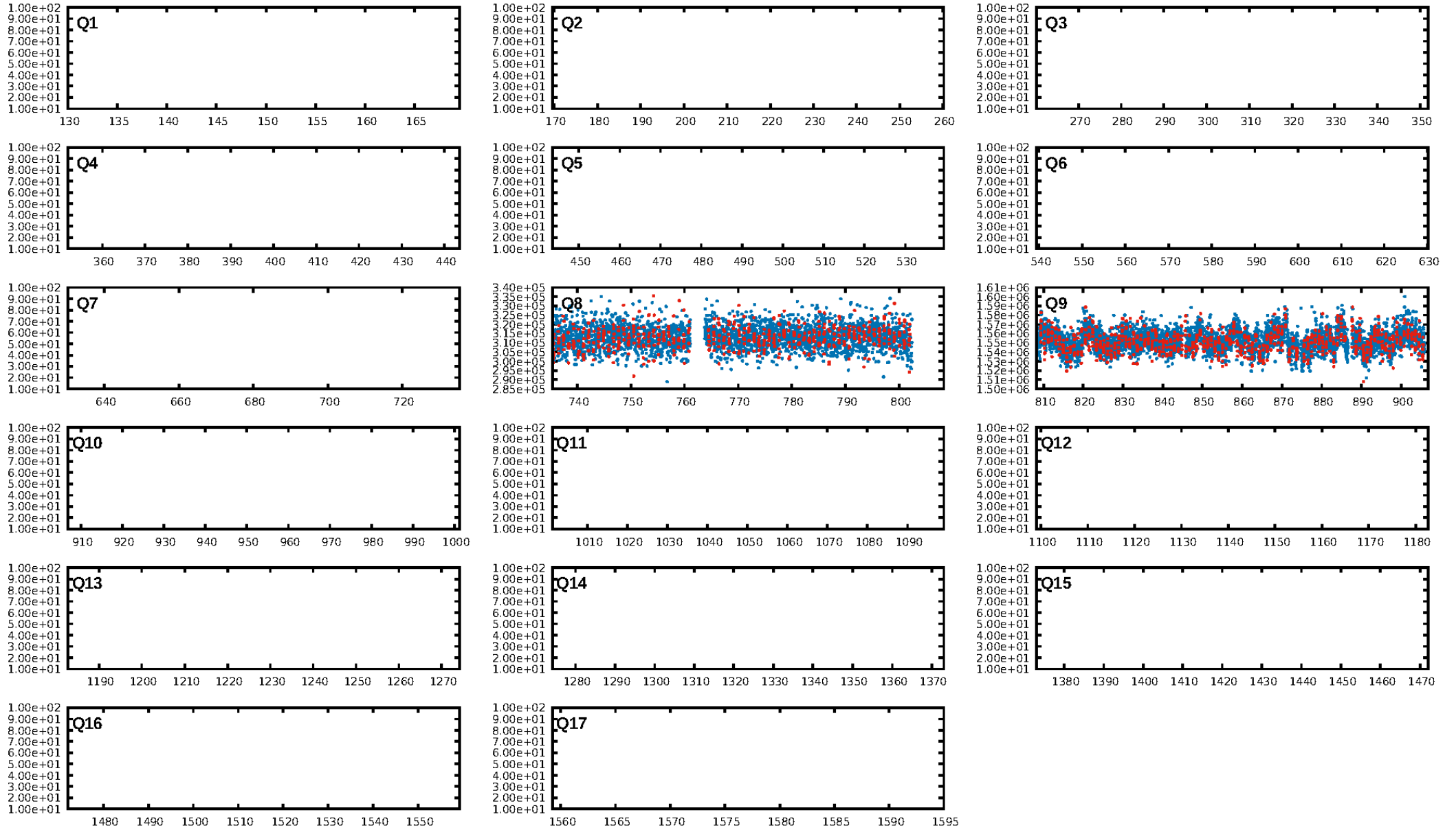
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.33e-16
RollingBand-fgt: 0.92 [158/171]
GhostDiagnostic-chr: 1.264
Centroid-sig: 93.4%
Centroid-so: 1.344 arcsec [1.62σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

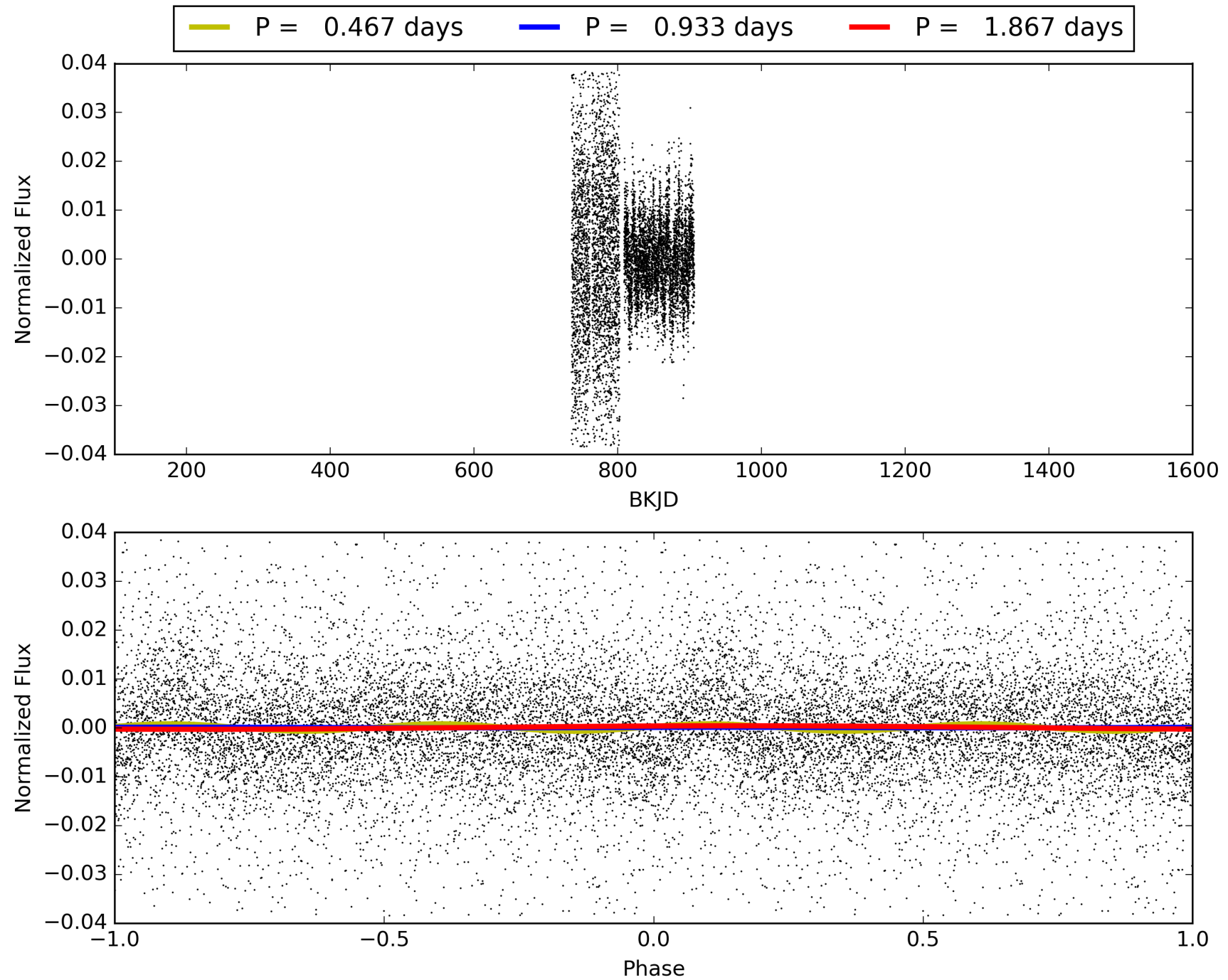
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:03:51 Z

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

TCE 010666949-01, PDC Light Curves

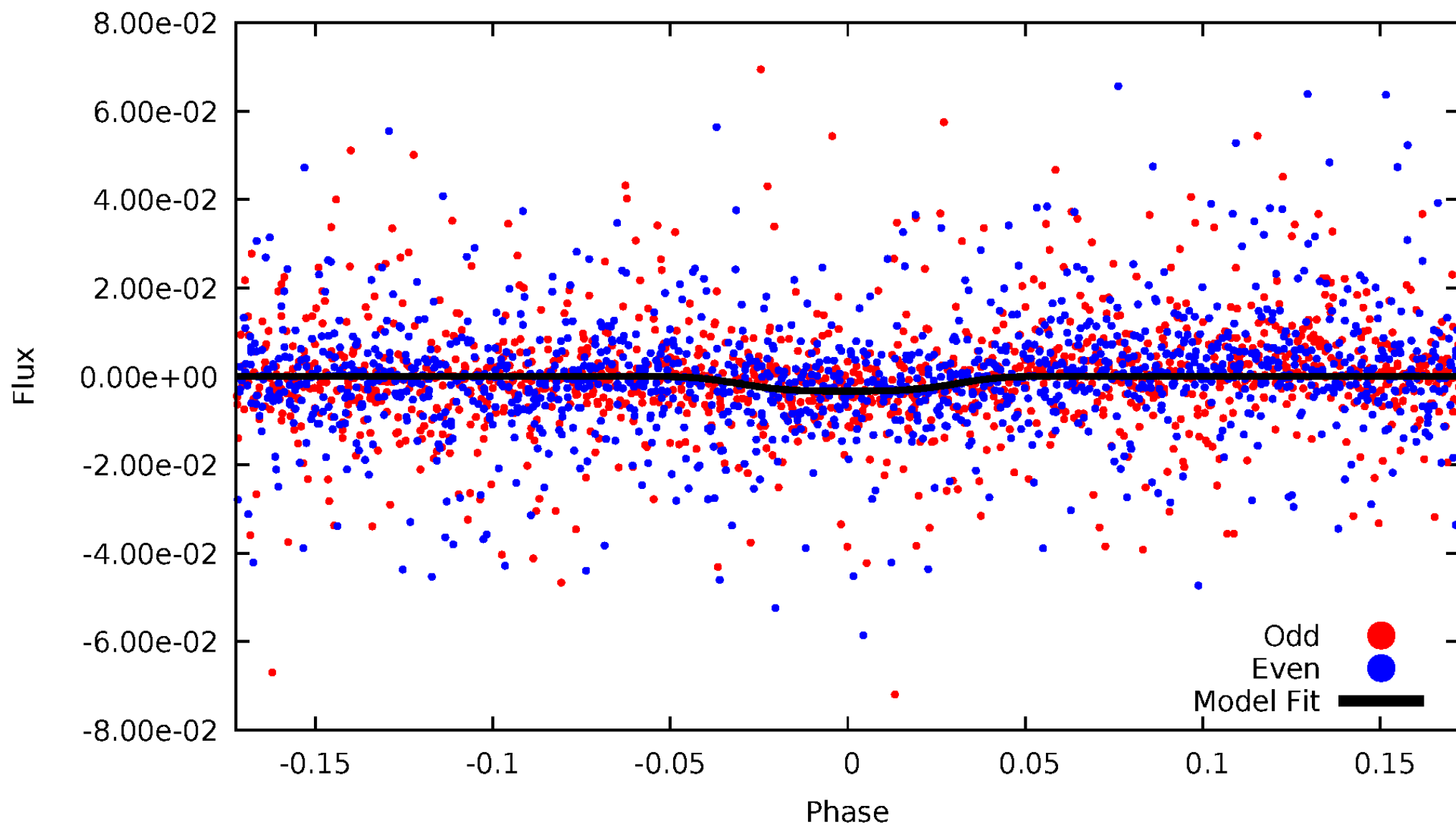


TCE 010666949-01



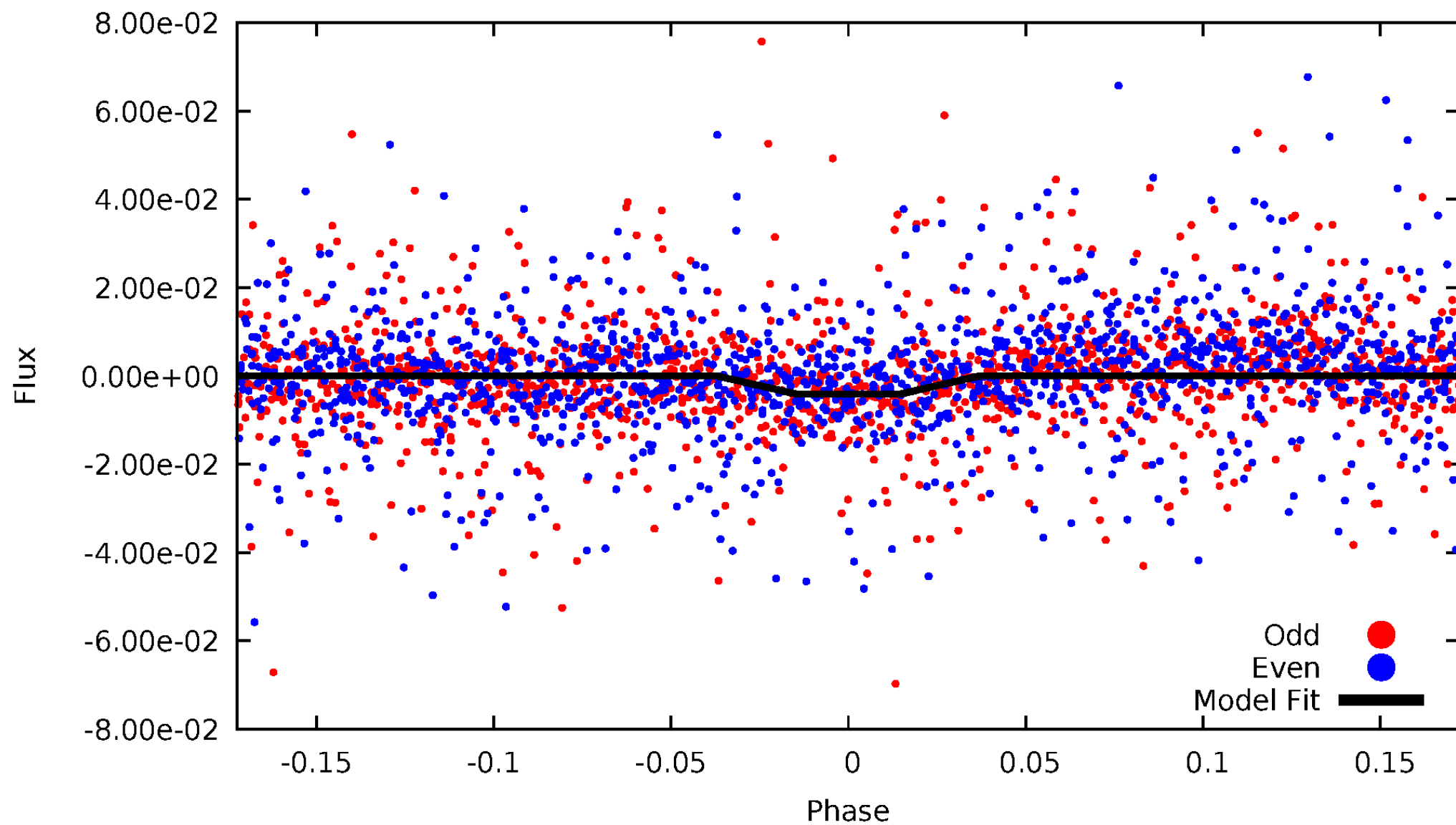
DV Odd/Even

TCE 010666949-01



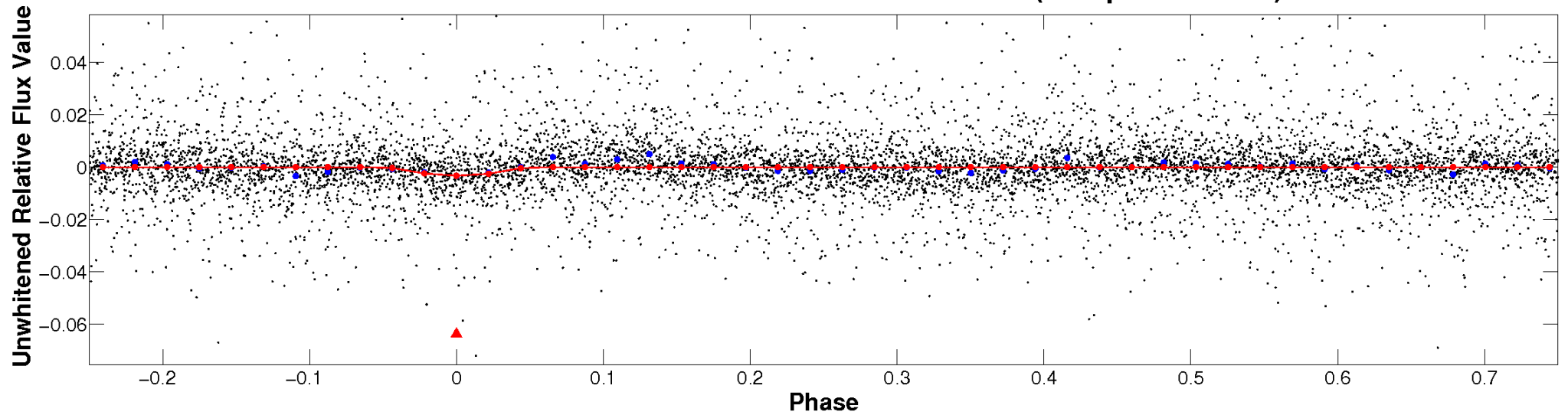
ALT Odd/Even

TCE 010666949-01

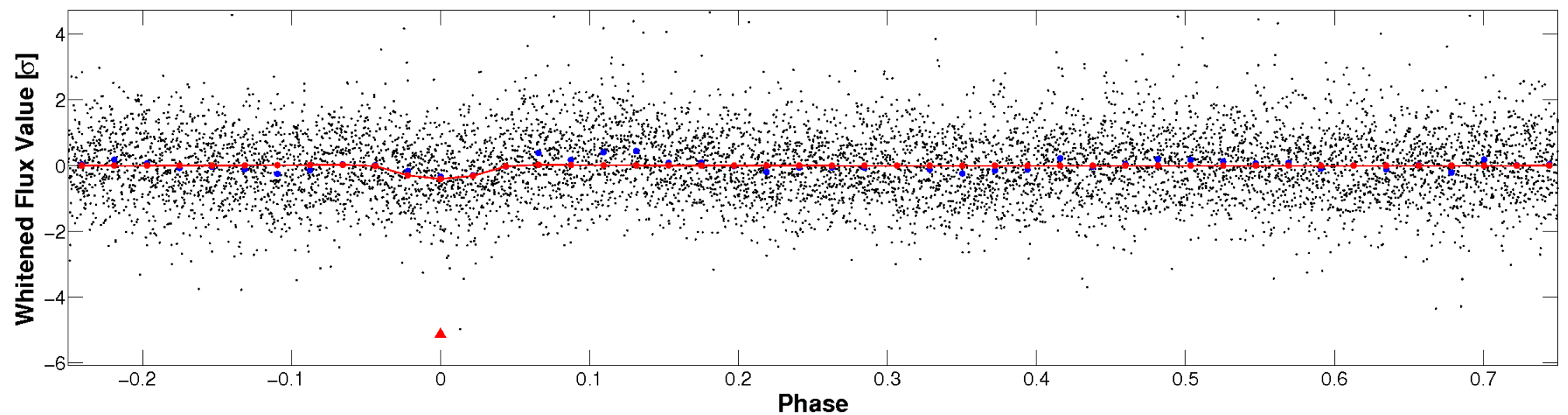


Non-Whitened Vs. Whitened Light Curve

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 010666949-01 P= 0.933411 Days $T_0=131.681712$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010666949-01 P= 0.933411 Days $T_0=131.681712$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

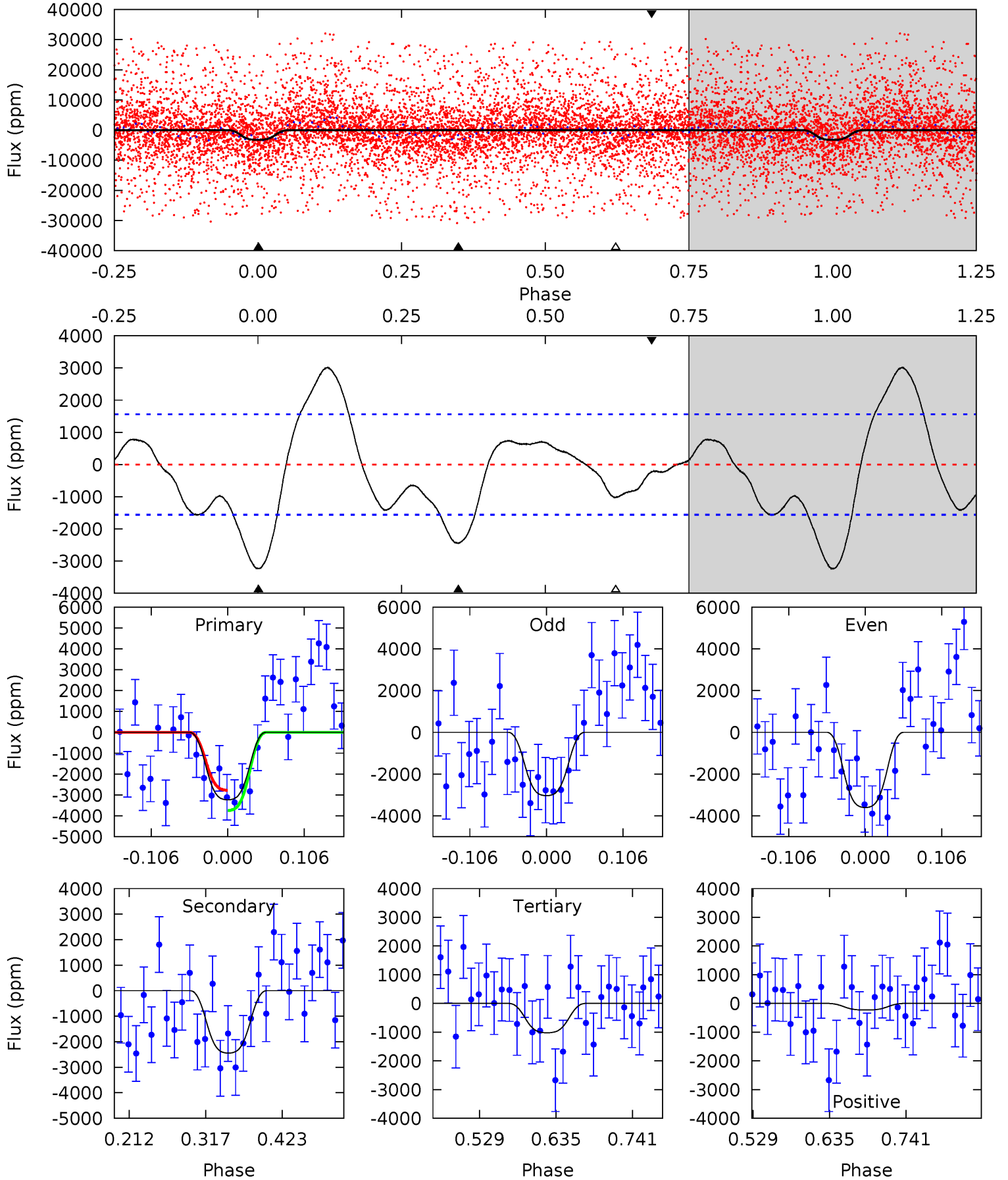
TCE 010666949-01 P= 0.933411 Days $T_0=131.681712$ (BKJD)



DV Model-Shift Uniqueness Test

010666949-01, P = 0.933411 Days, E = 131.681712 Days

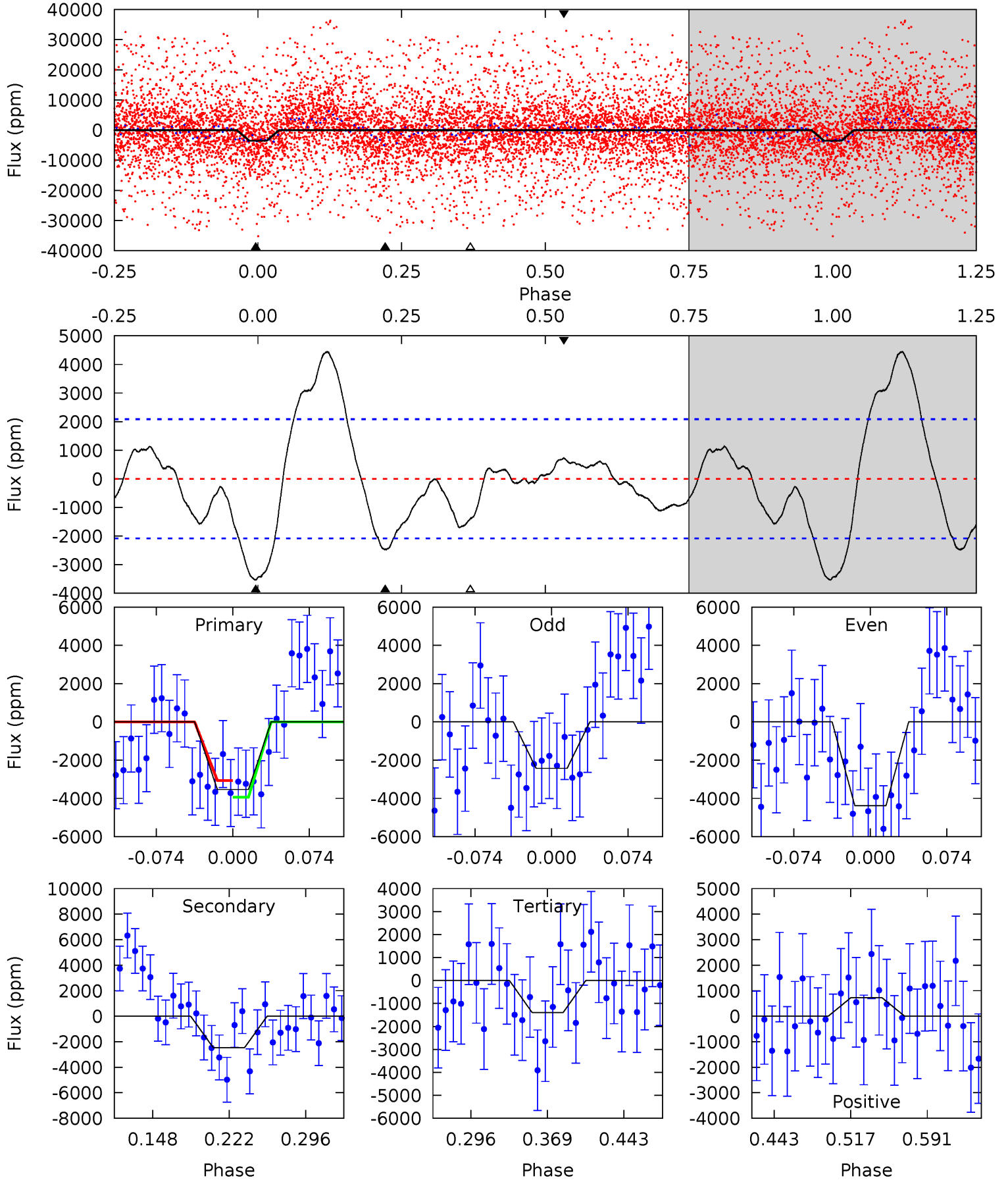
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.45	7.14	2.98	-0.66	4.55	1.62	3.03	6.47	10.1	4.16	7.81	0.86	1.14	0.48	1.45



Alt Model-Shift Uniqueness Test

010666949-01, P = 0.933411 Days, E = 131.681712 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.85	5.50	3.10	1.61	4.63	1.79	3.08	4.76	6.24	2.40	3.89	2.26	0.85	0.56	0.99



Stellar Parameters For KIC 010666949

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 010666949-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2447 ± 343	$6.96^{+1.58}_{-1.70}$	2606^{+123}_{-128}	5111^{+704}_{-458}	$9.713^{+7.162}_{-3.417}$
Alt.	-2474 ± 450	$6.95^{+1.65}_{-1.45}$	2605^{+111}_{-124}	5126^{+638}_{-474}	10^{+6}_{-4}

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

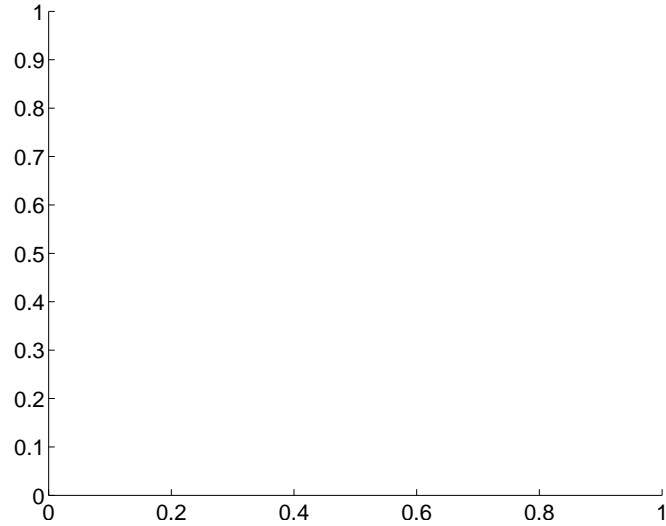
Supplemental centroid analysis for 010666949-01. Kepler magnitude: 17.83. Transit SNR 8.31

There are 0 quarters with good PRF difference image offsets

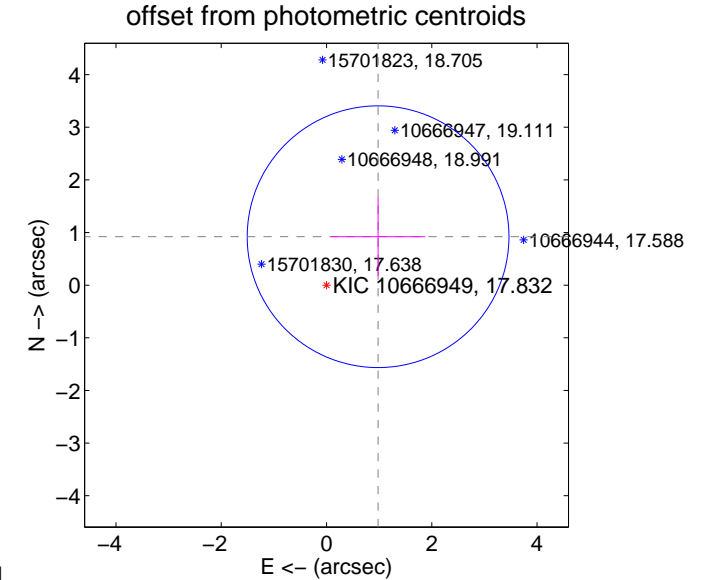
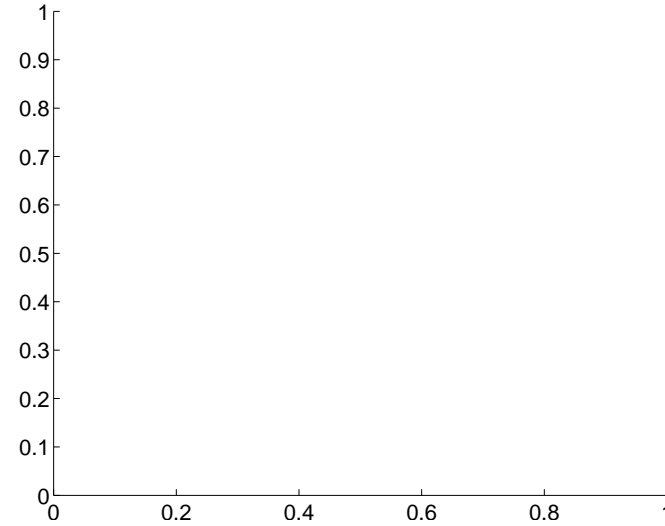
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	1.34 ± 0.83	1.62	-0.98 ± 0.89	0.92 ± 0.75

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

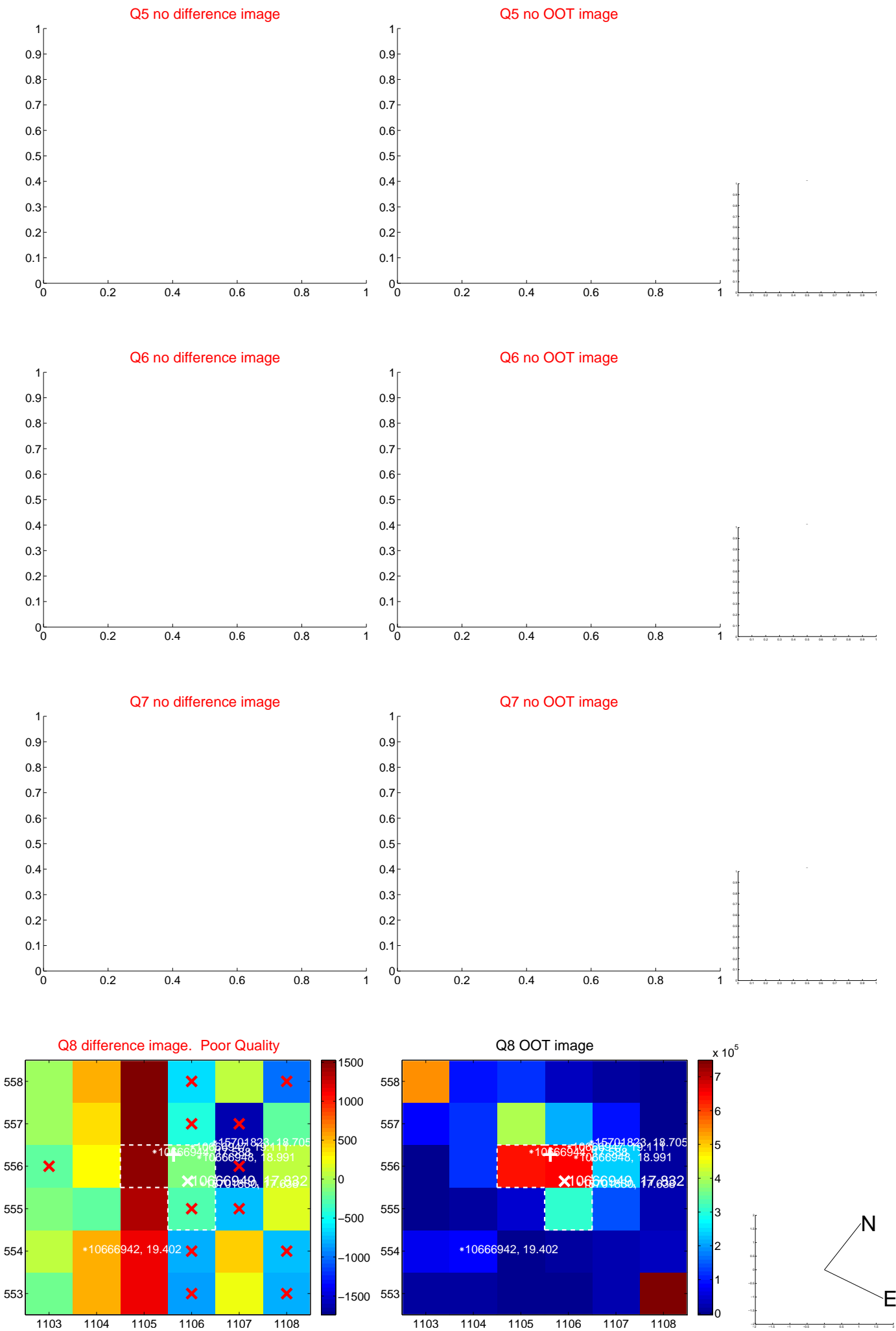


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

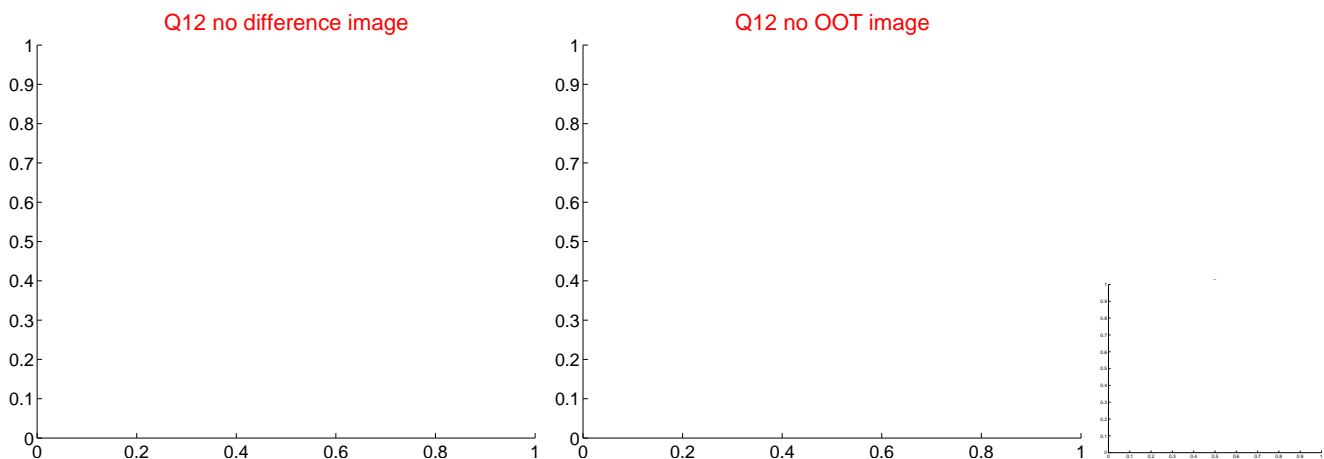
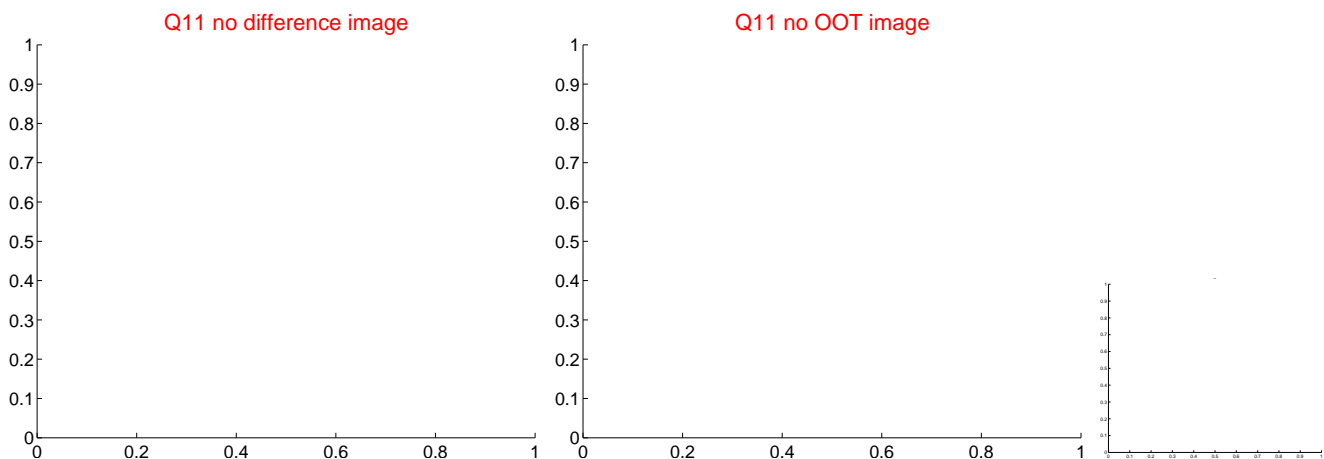
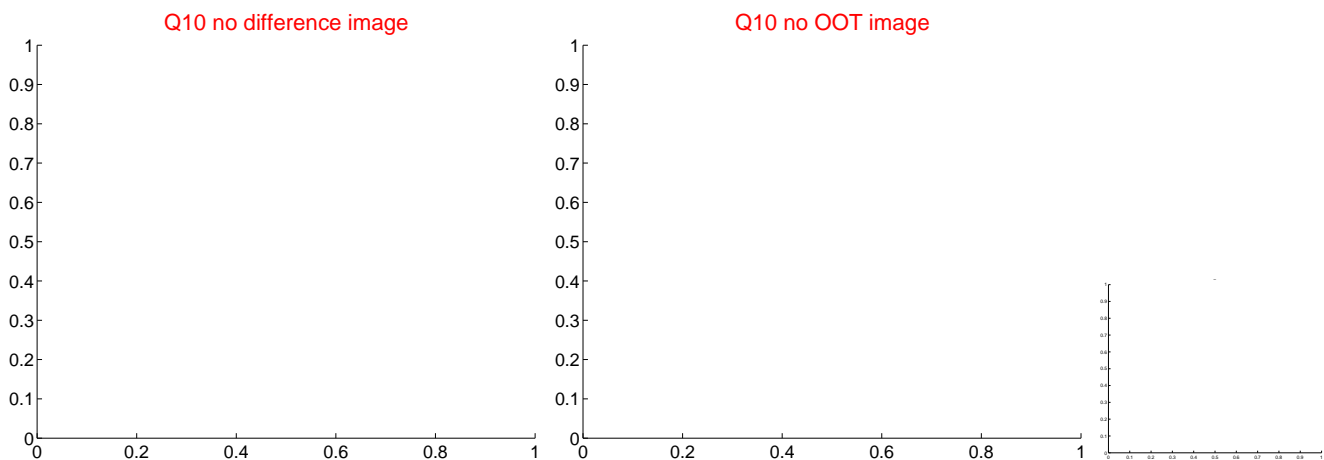
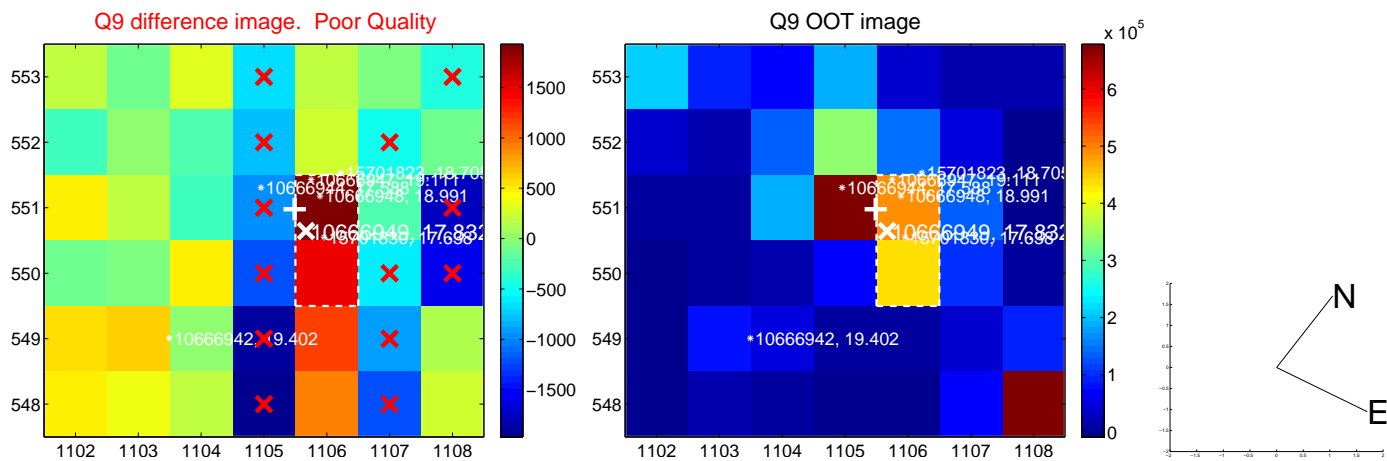
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



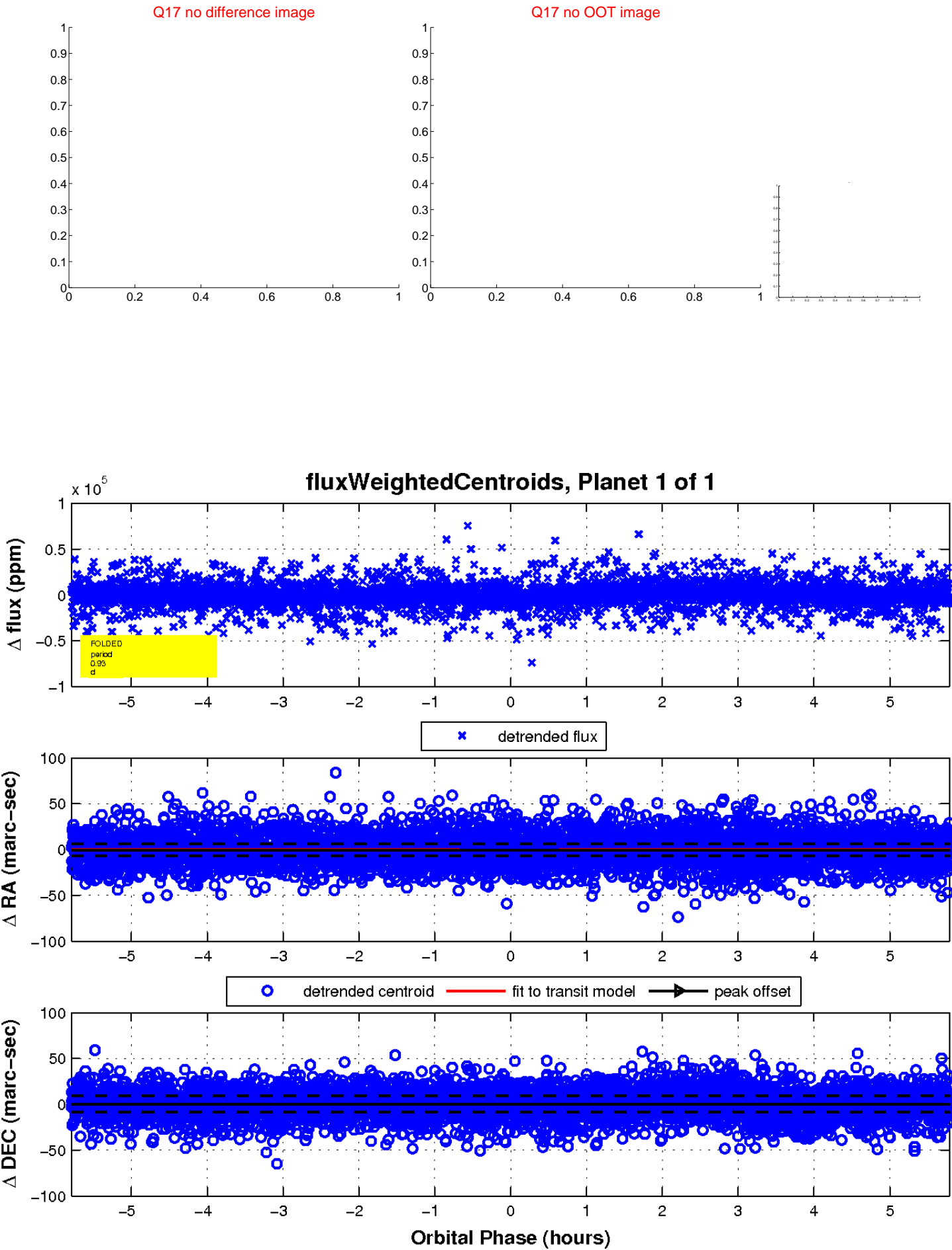
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

