

KIC 005781965

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})
005781965-01	OBS	No	613.969473	305.576390	770.3	43.646	10.3	14.1	0.85	5978	2.64	0.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005781965-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

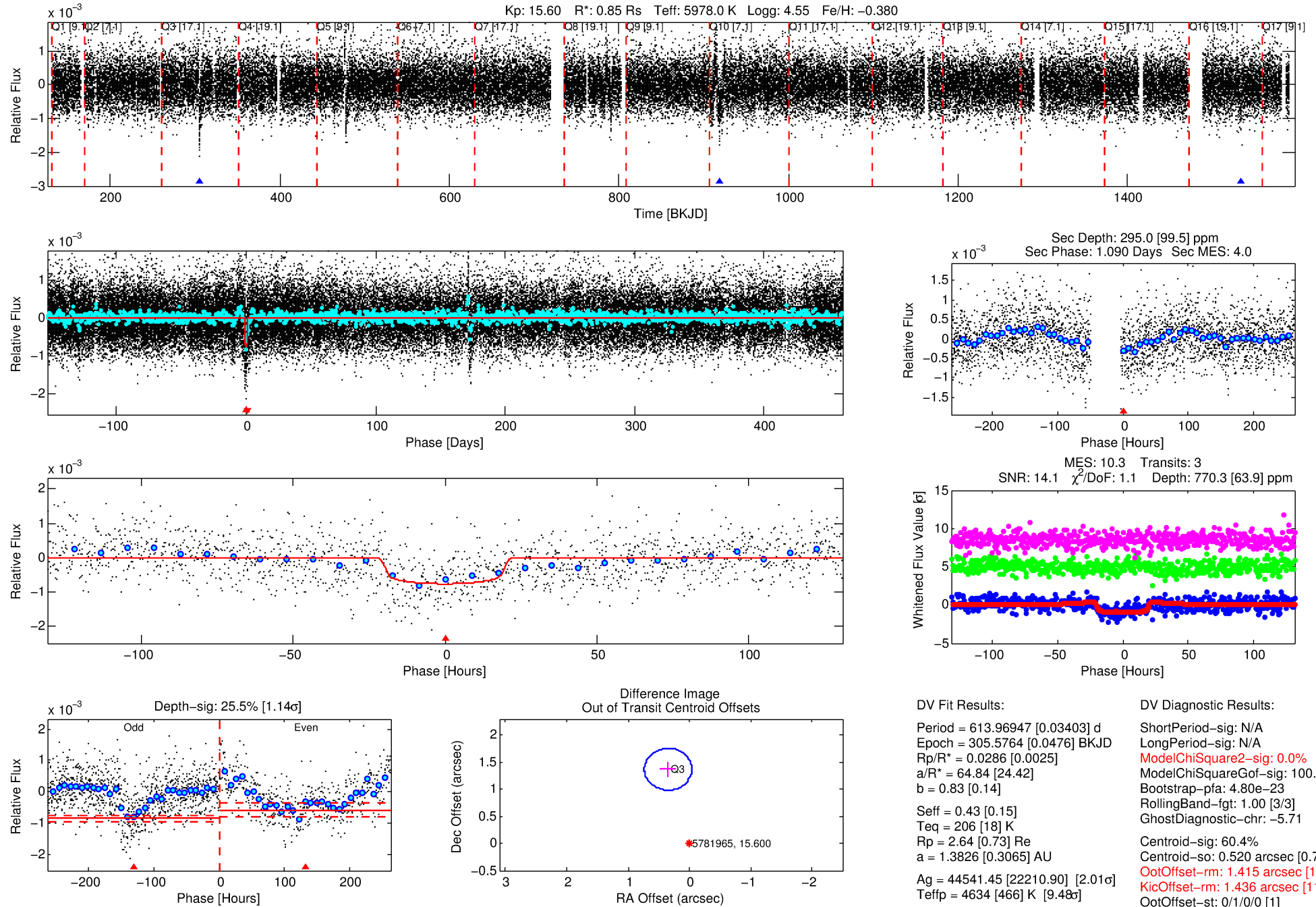
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005781965-01

No Significant Match Found

DV One-Page Summary

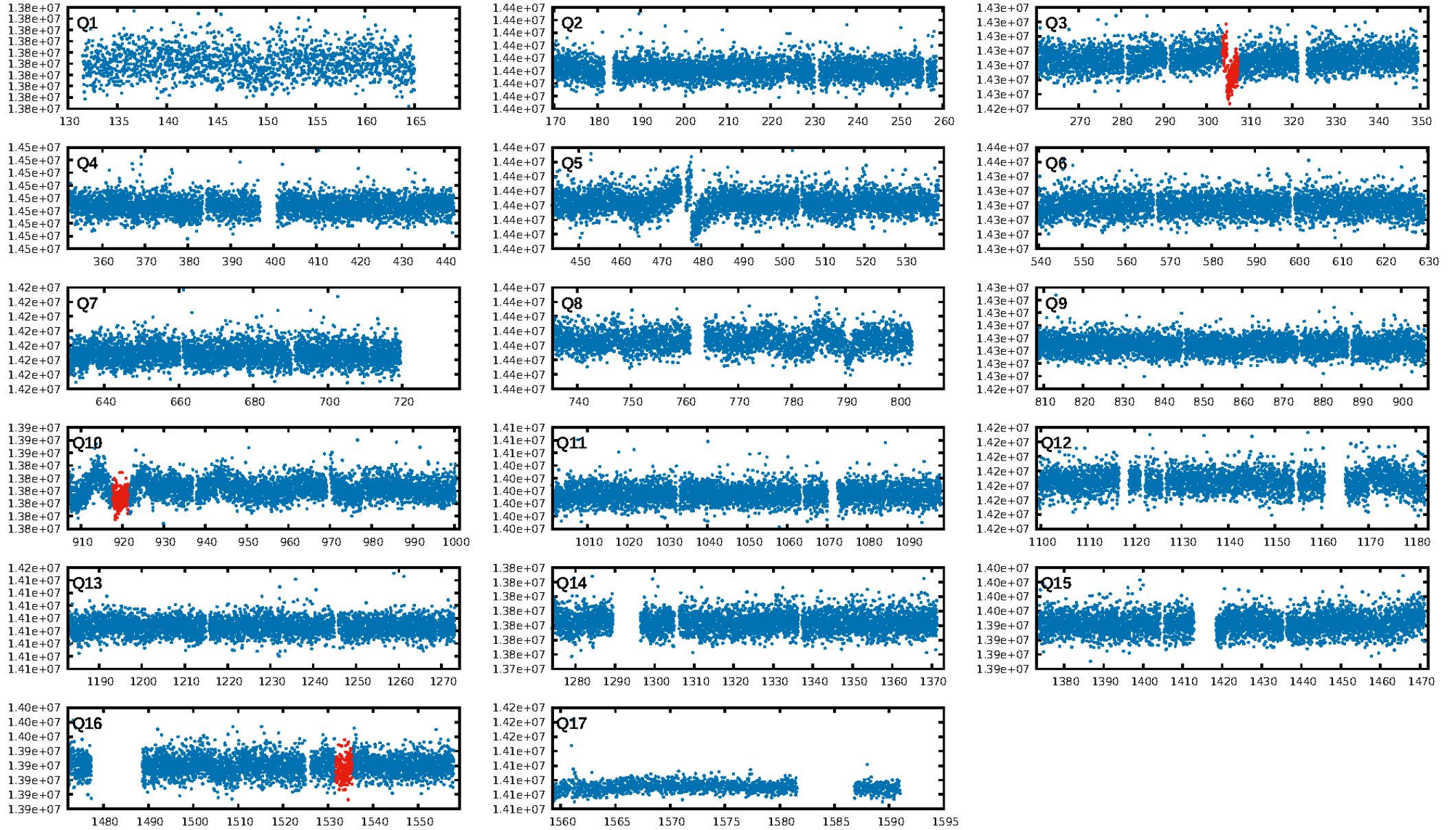
KIC: 5781965 Candidate: 1 of 1 Period: 613.969 d



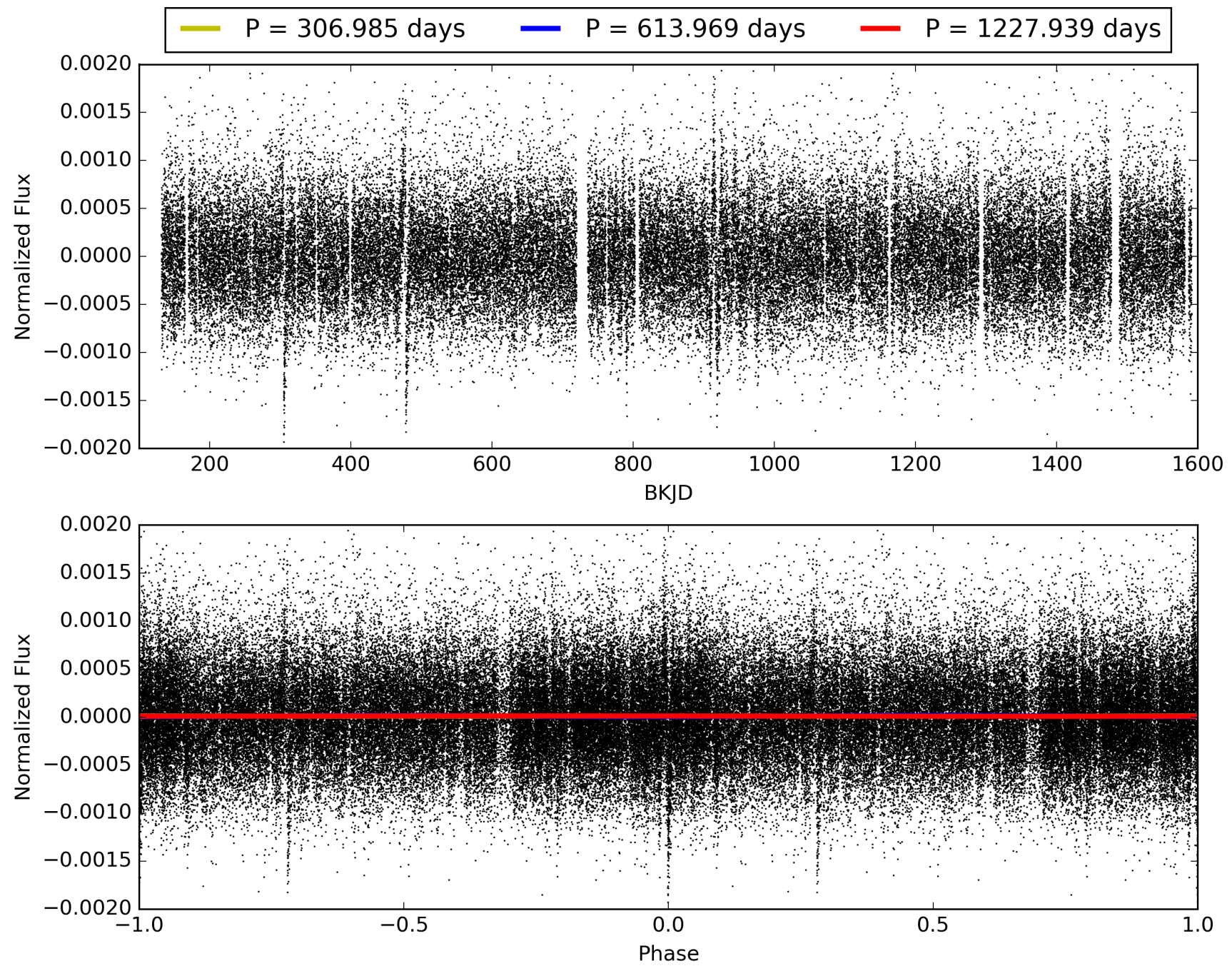
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:48:59 Z

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

TCE 005781965-01, PDC Light Curves

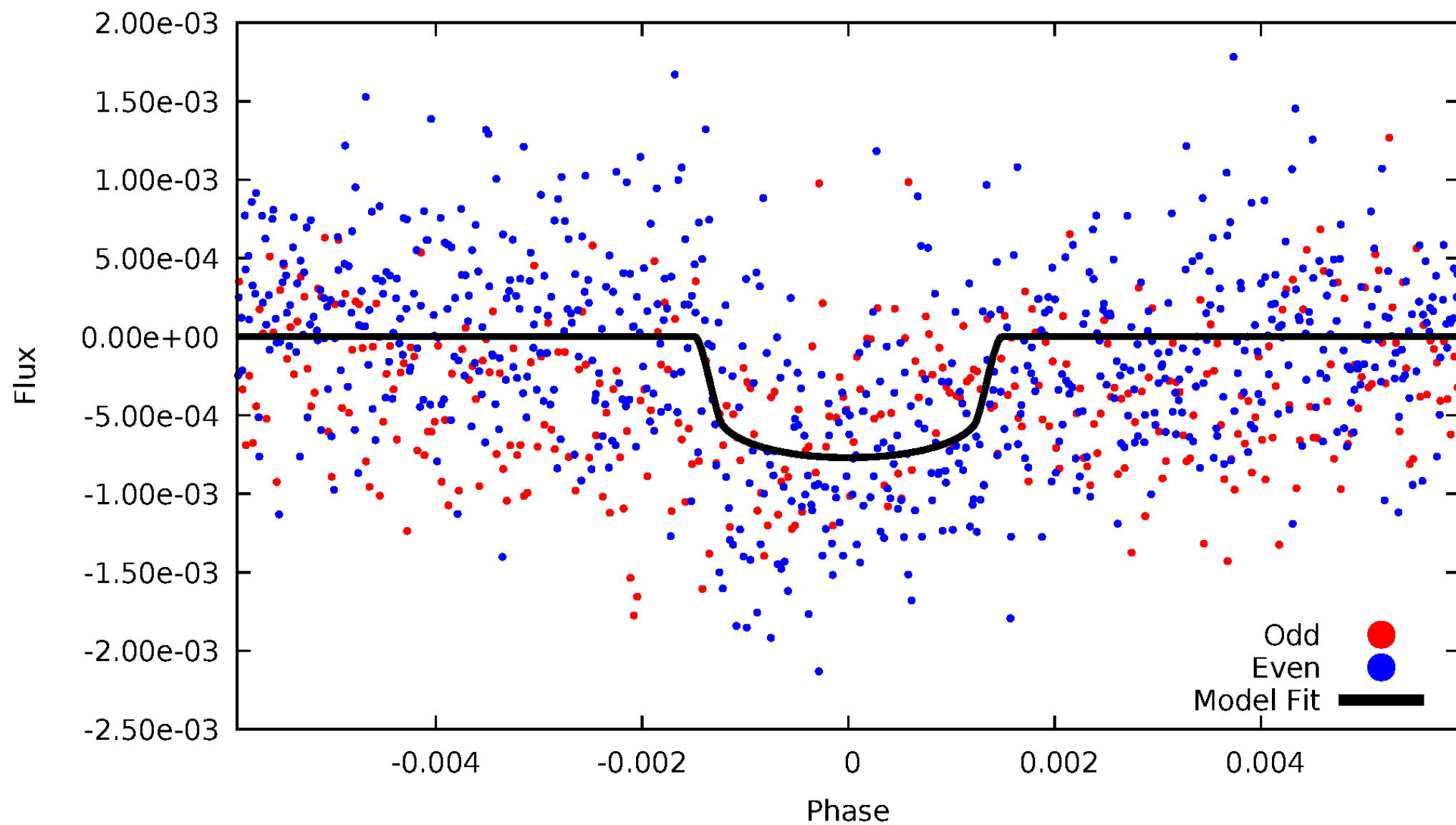


TCE 005781965-01



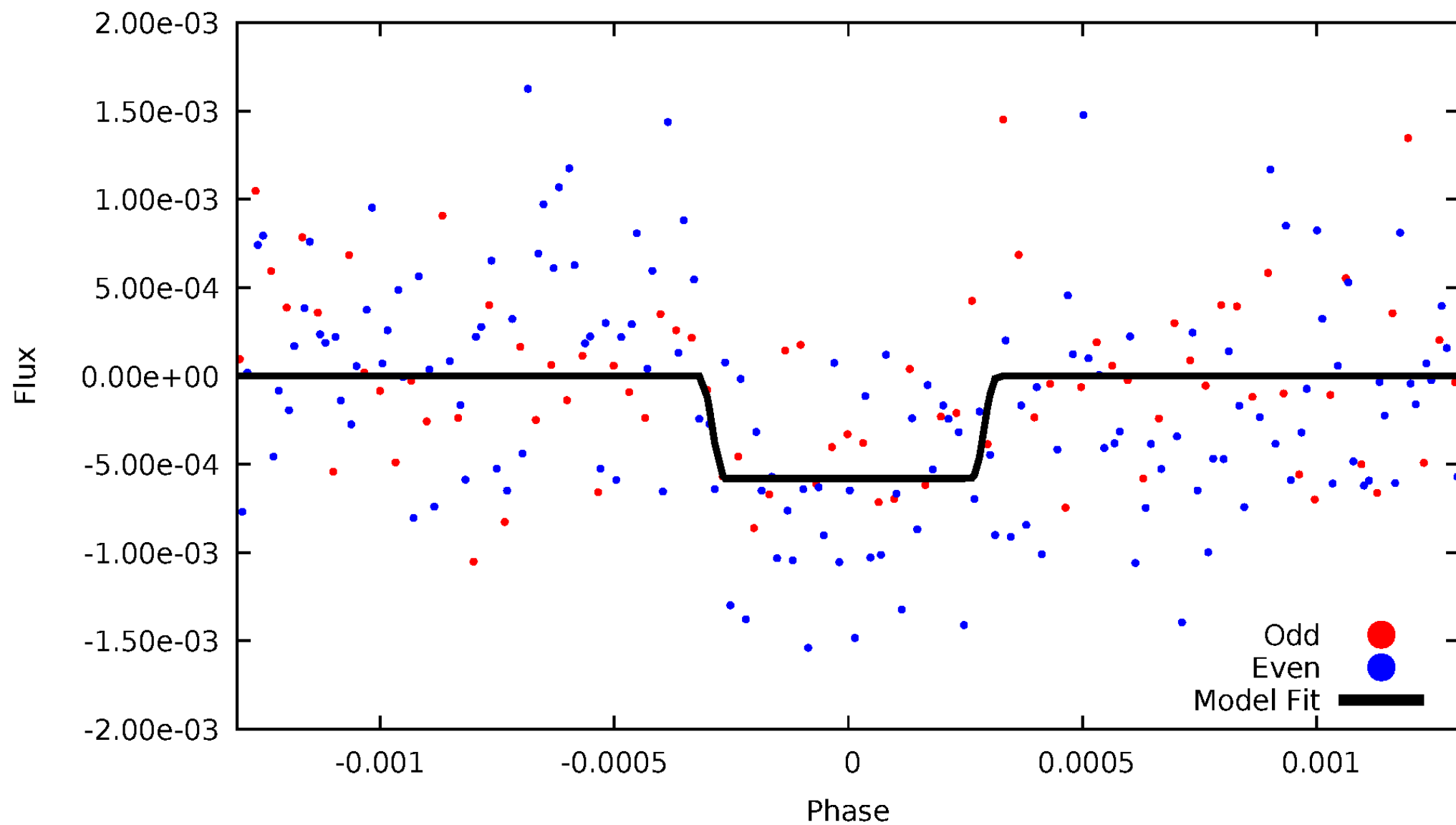
DV Odd/Even

TCE 005781965-01



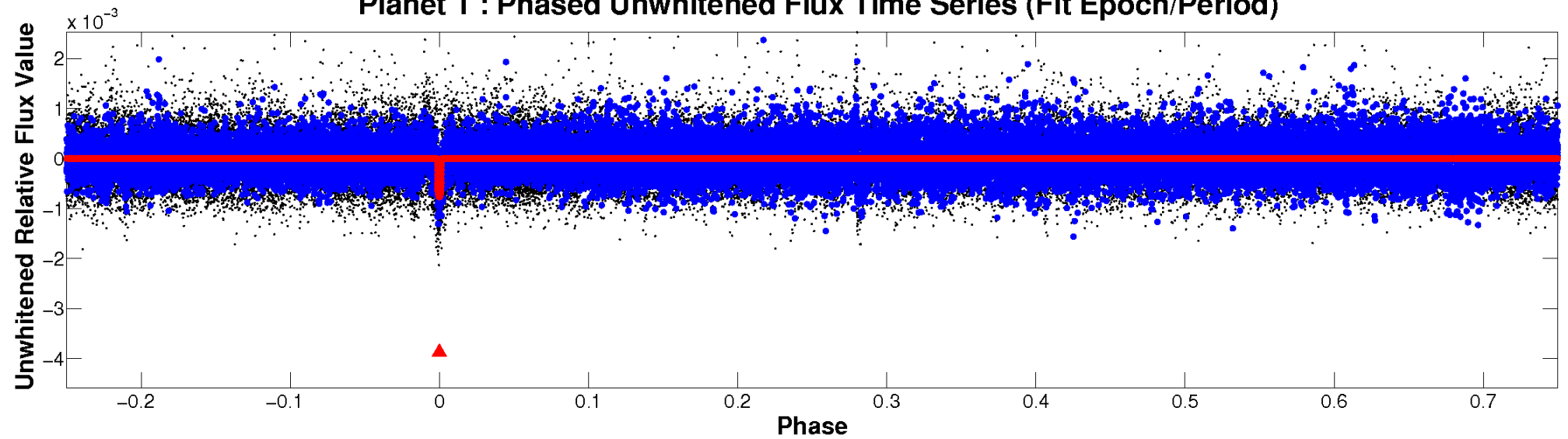
ALT Odd/Even

TCE 005781965-01

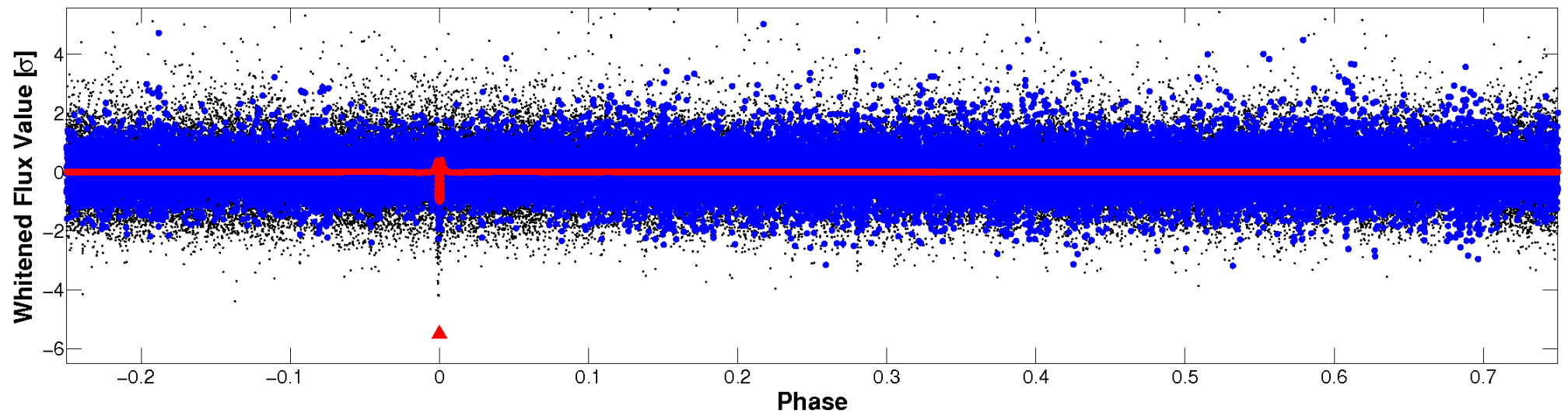


Non-Whitened Vs. Whitened Light Curve

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 005781965-01 P=613.969473 Days $T_0=305.576390$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 005781965-01 P=613.969473 Days $T_0=305.576390$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

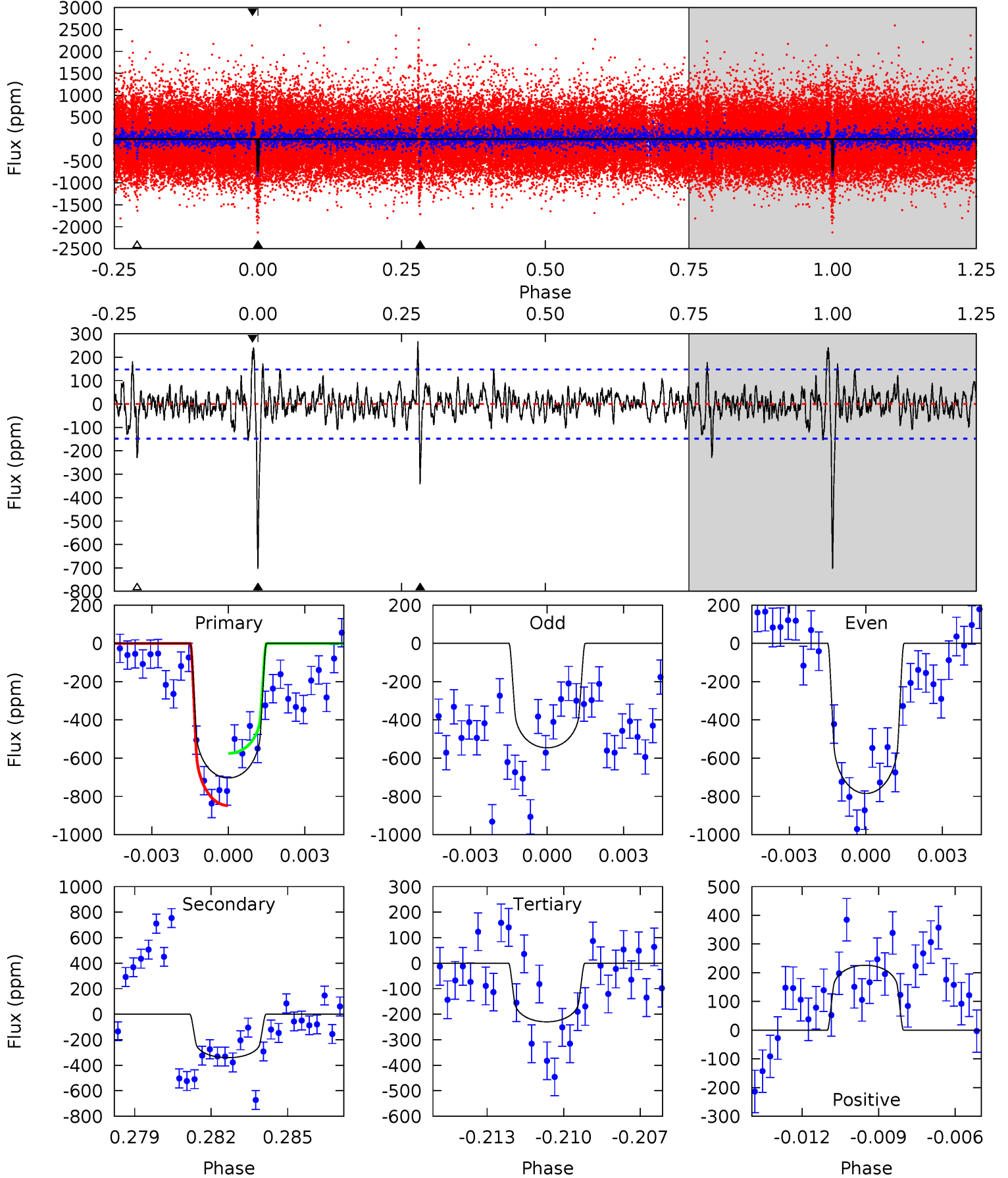
TCE 005781965-01 P=614.205569 Days $T_0=304.963765$ (BKJD)



DV Model-Shift Uniqueness Test

005781965-01, P = 613.969473 Days, E = 305.576390 Days

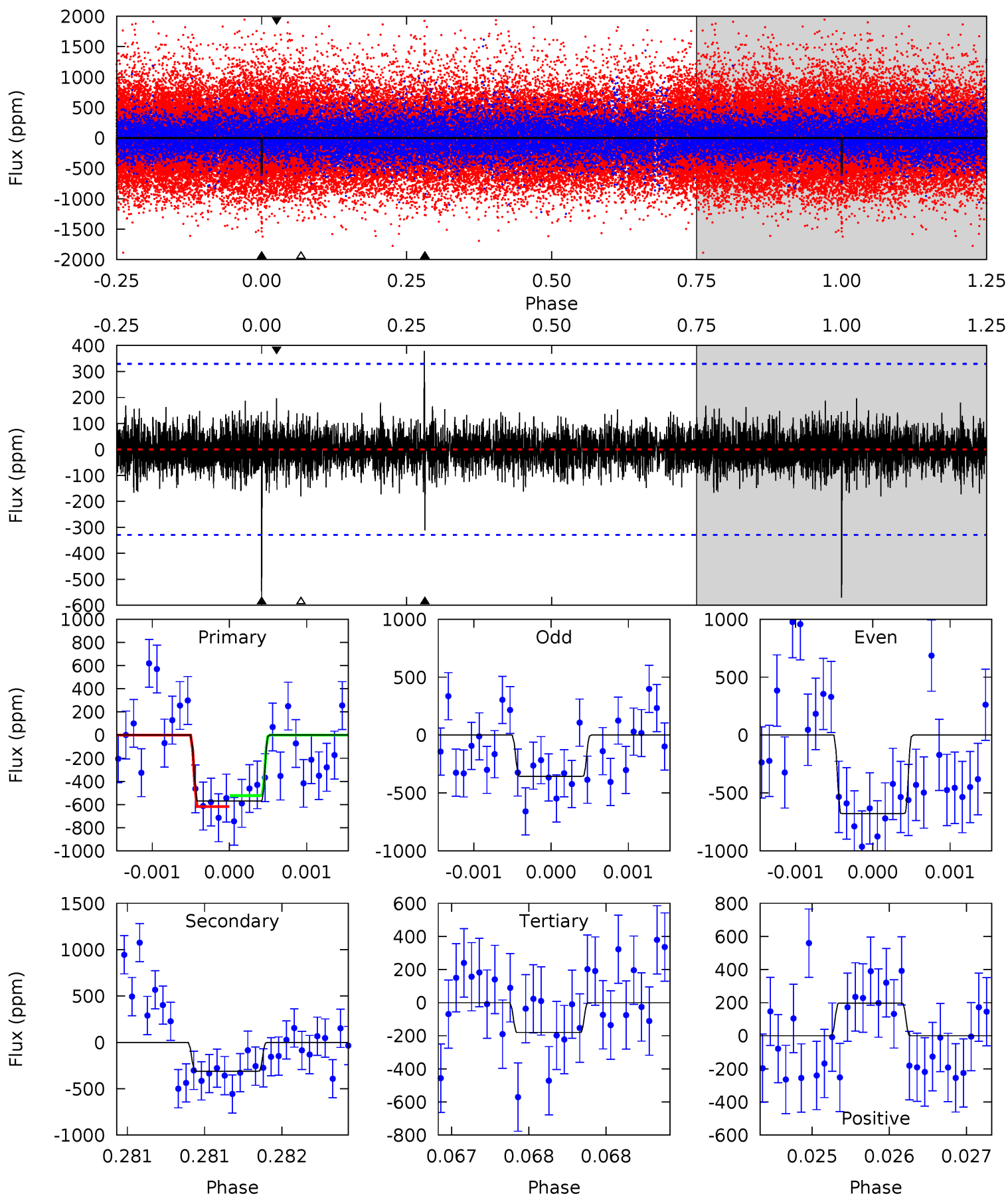
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.0	12.1	8.17	8.05	5.25	2.97	1.81	16.8	17.0	3.95	4.08	4.02	1.29	0.28	4.83



Alt Model-Shift Uniqueness Test

005781965-01, P = 614.205569 Days, E = 304.963765 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.58	5.23	3.03	3.31	5.53	3.42	0.85	6.55	6.27	2.20	1.92	2.53	1.42	0.40	0.80



Stellar Parameters For KIC 005781965

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5978^{+161}_{-197}	$4.554^{+0.044}_{-0.176}$	$-0.380^{+0.300}_{-0.300}$	$0.846^{+0.223}_{-0.074}$	$0.932^{+0.098}_{-0.109}$	$2.172^{+0.391}_{-1.004}$
	+3%/-3%	+1%/-4%	+79%/-79%	+26%/-9%	+11%/-12%	+18%/-46%
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 005781965-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-341 ± 28	$2.72^{+0.43}_{-0.31}$	293^{+20}_{-14}	4901^{+238}_{-230}	47370^{+12832}_{-11720}
Alt.	-311 ± 60	$2.31^{+0.36}_{-0.30}$	293^{+19}_{-13}	5177^{+364}_{-335}	60999^{+20897}_{-18260}

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 $A_{obs} \gg 1.0$

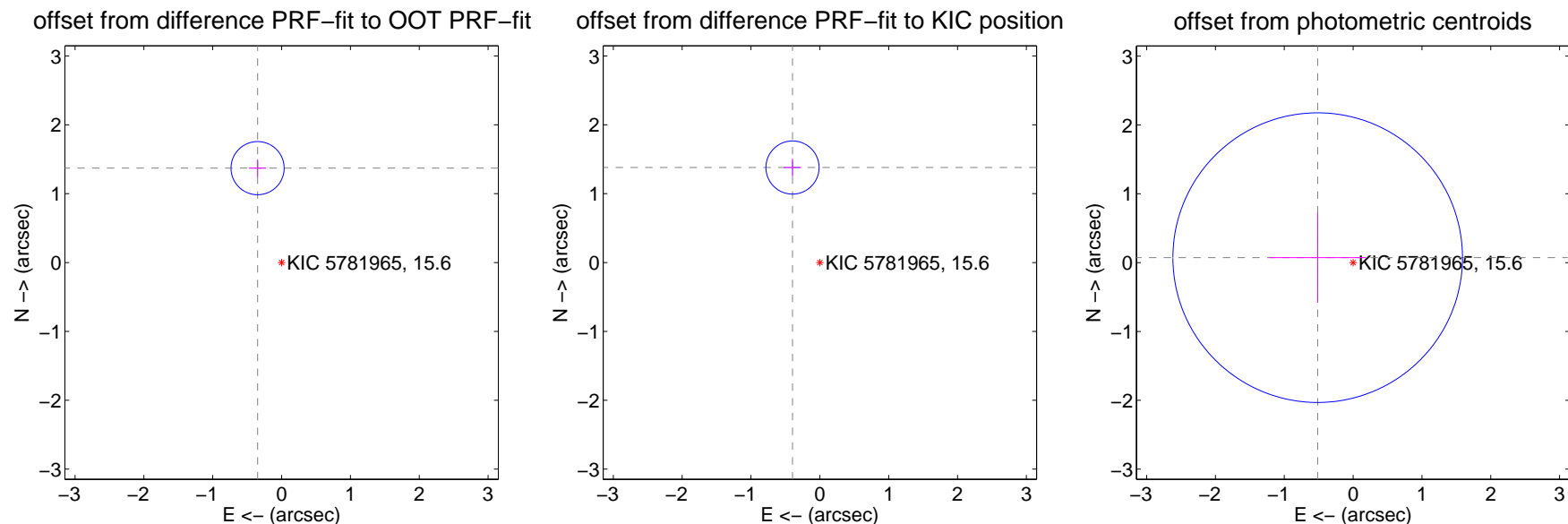
DV Centroid Data

Supplemental centroid analysis for 005781965-01. Kepler magnitude: 15.60. Transit SNR 14.15

There are 1 quarters with good PRF difference image offsets

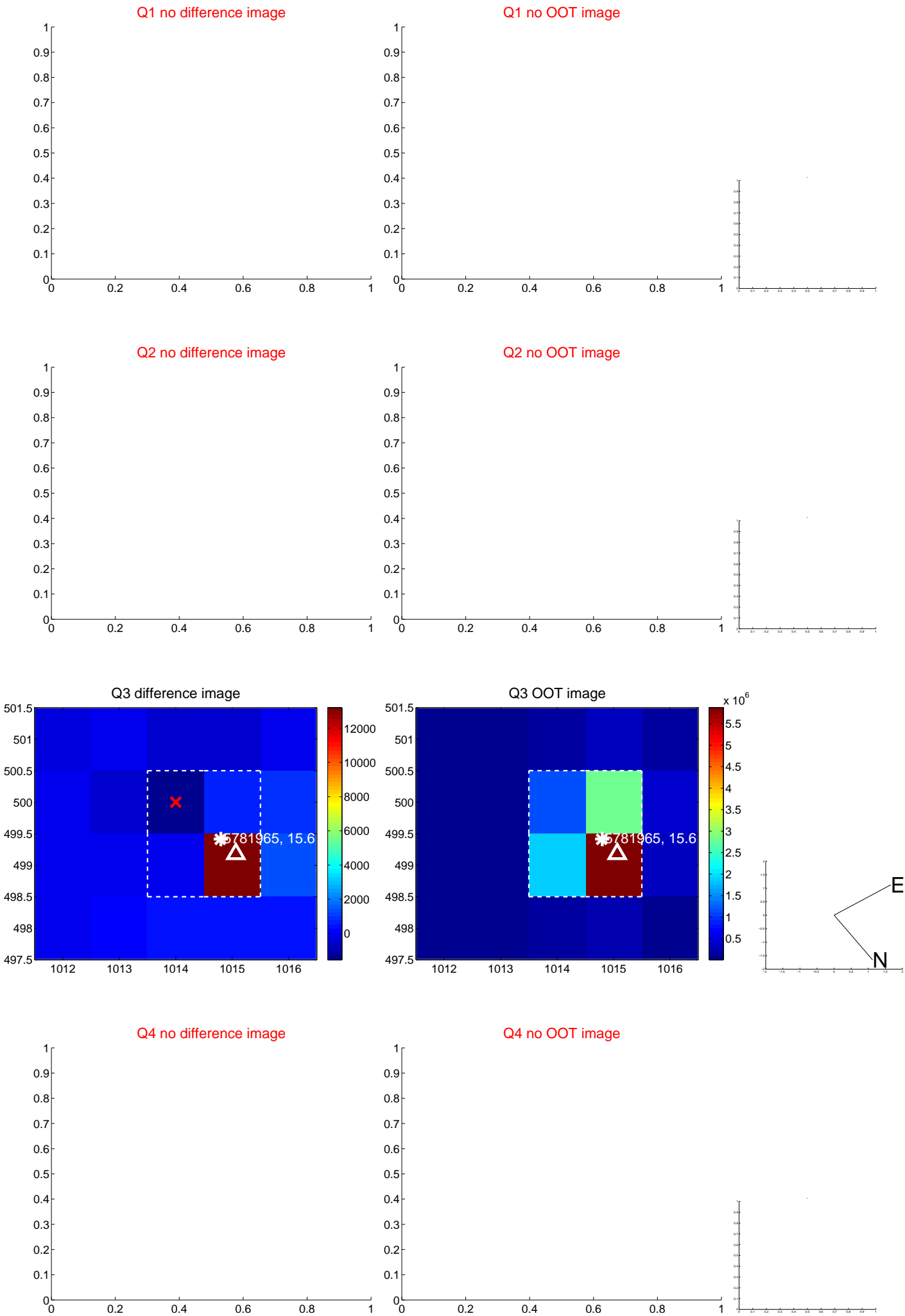
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.415 ± 0.129	10.99	0.349 ± 0.126	1.371 ± 0.129
PRF-fit source offset from KIC position	1.436 ± 0.129	11.16	0.397 ± 0.126	1.380 ± 0.129
photometric centroid source offset	0.52 ± 0.70	0.74	0.51 ± 0.70	0.07 ± 0.65



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.

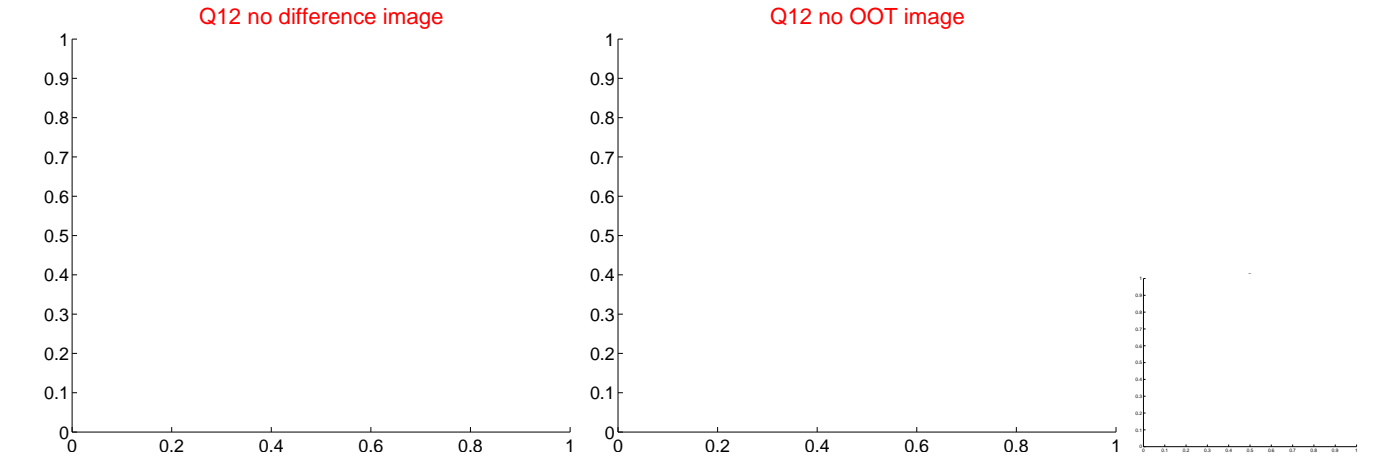
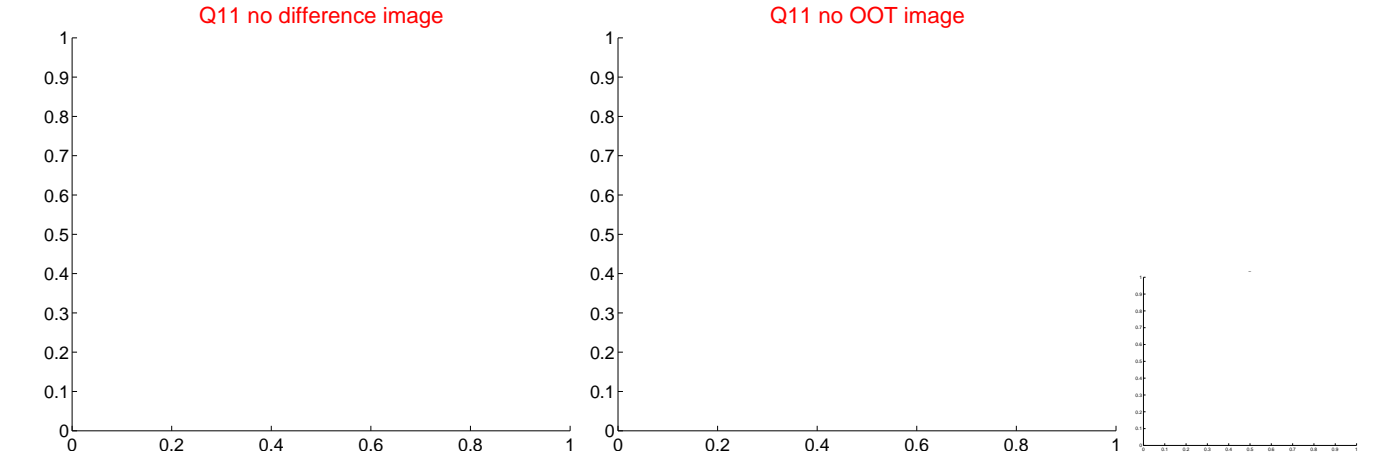
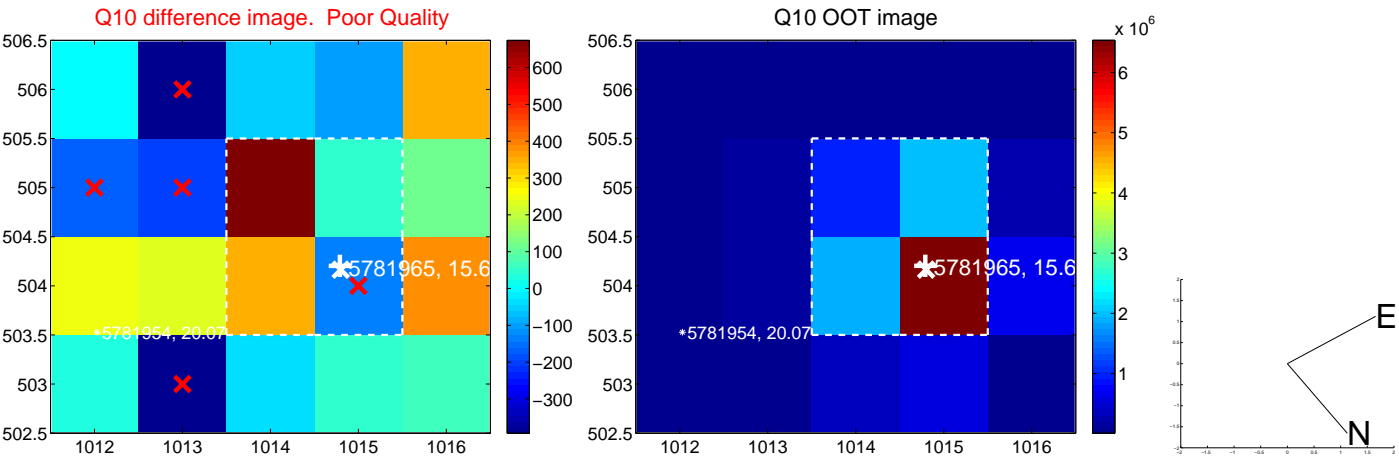
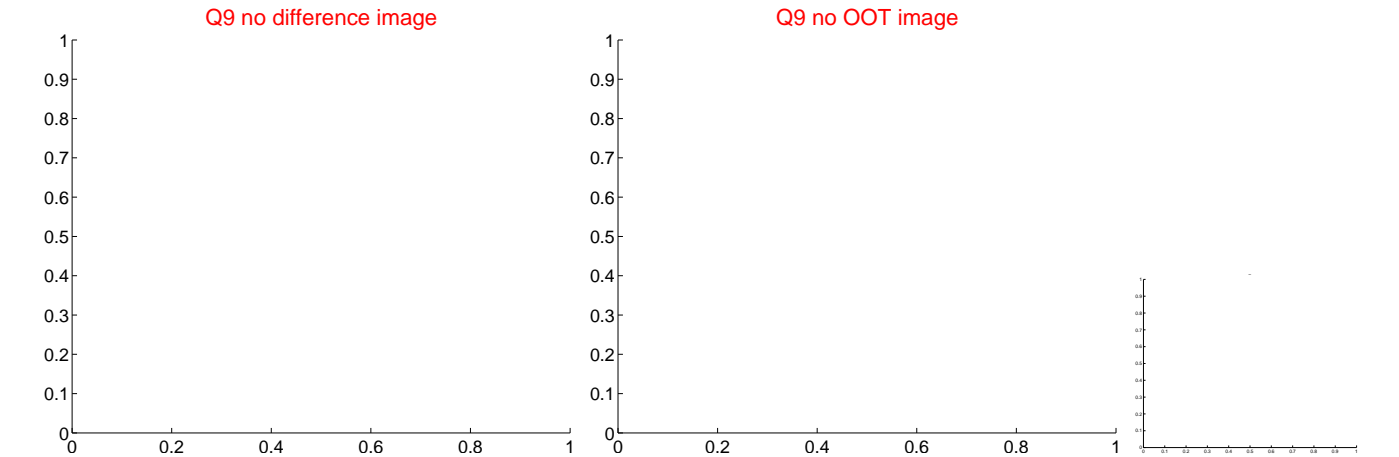
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



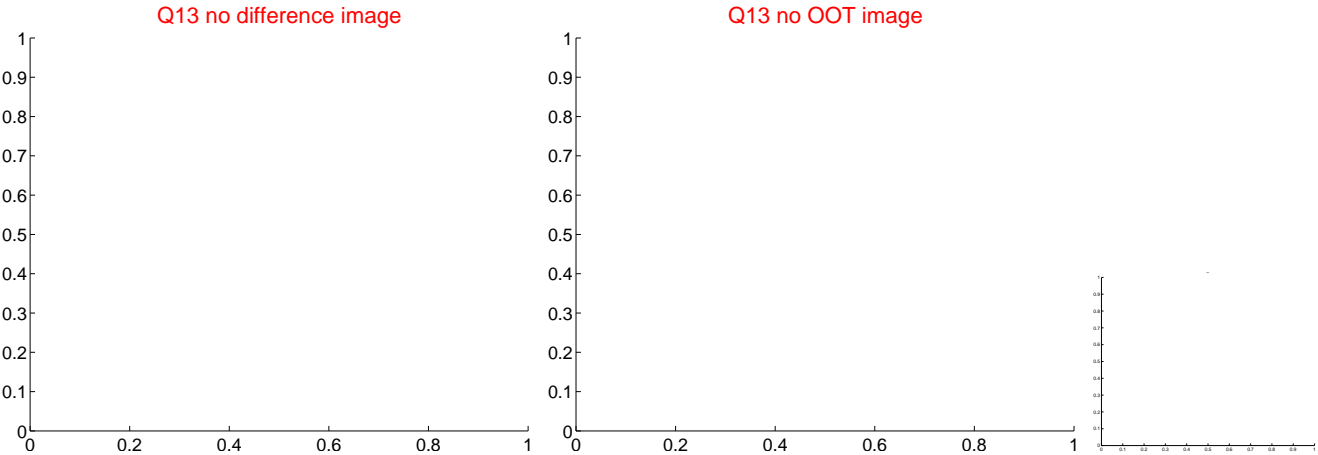
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



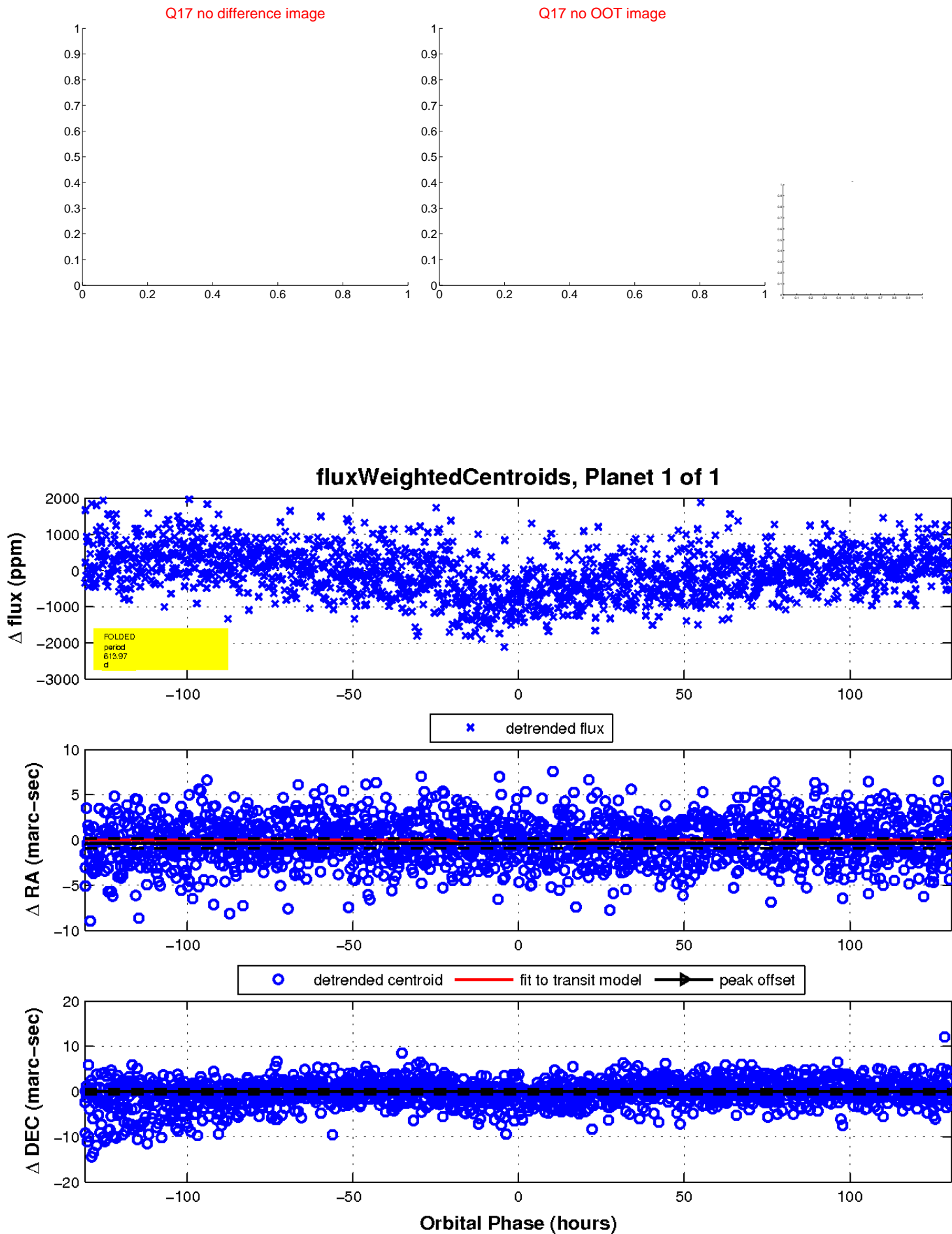
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

