

KIC 010010246

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})
010010246-01	OBS	No	538.289704	141.264062	3298.4	23.453	10.8	11.8	0.83	5569	8.99	0.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010010246-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—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.

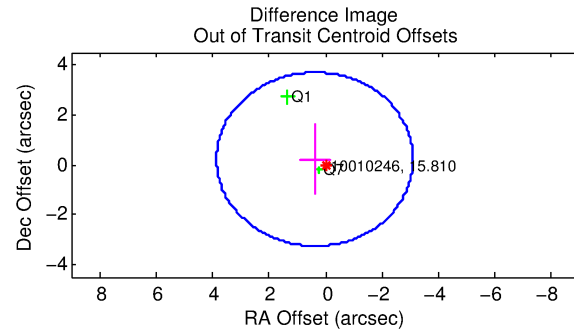
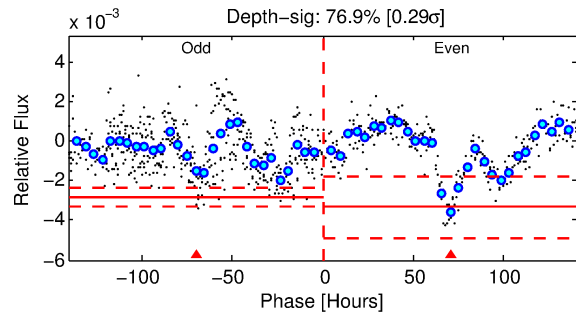
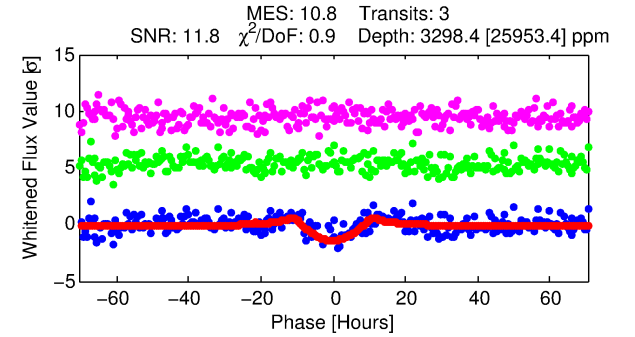
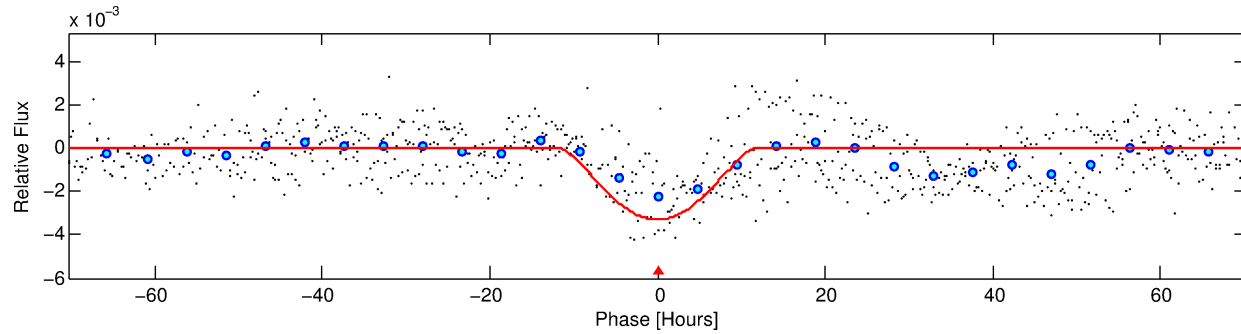
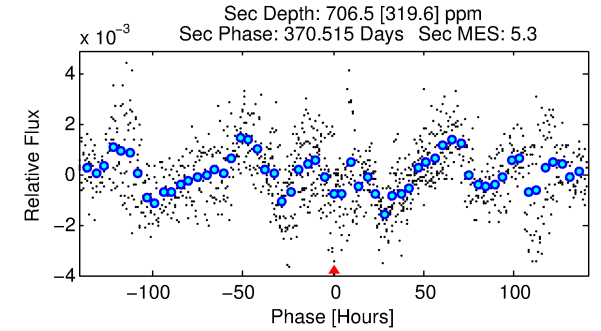
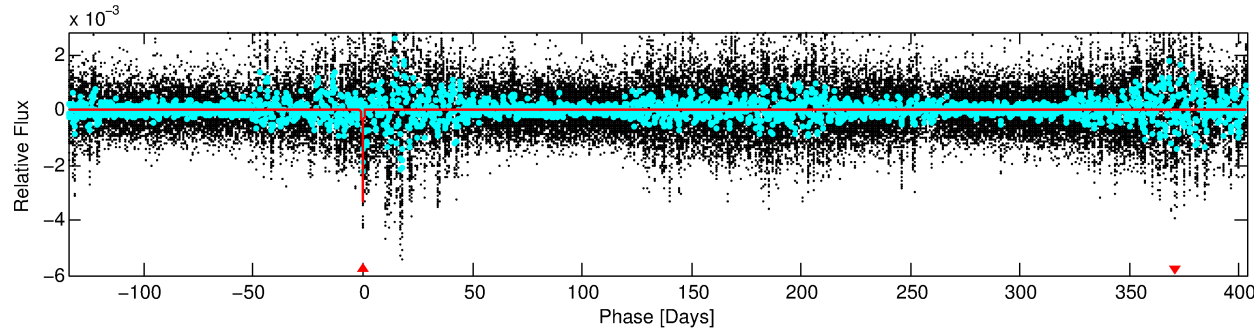
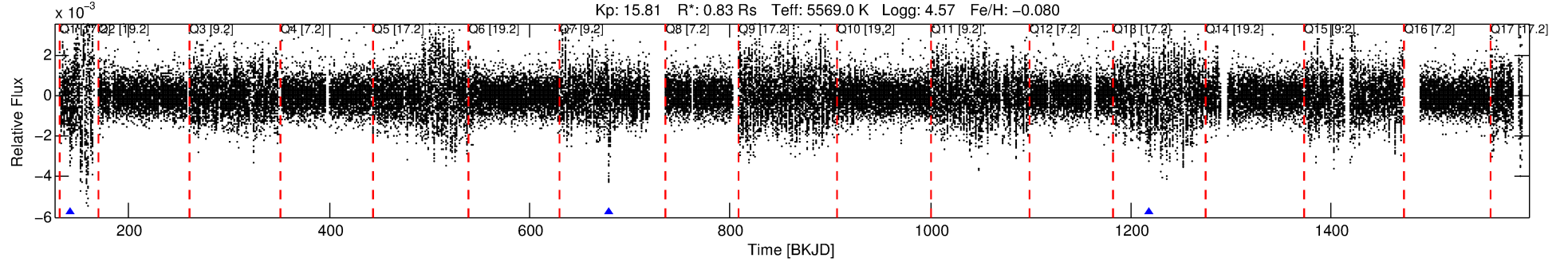
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010010246-01

No Significant Match Found

DV One-Page Summary

KIC: 10010246 Candidate: 1 of 1 Period: 538.290 d



DV Fit Results:

Period = 538.28970 [0.03081] d
Epoch = 141.2641 [0.0387] BKJD
Rp/R* = 0.0994 [0.1730]
a/R* = 80.09 [26.95]
b = 1.00 [0.27]
Seff = 0.37 [0.11]
Teq = 199 [15] K
Rp = 8.99 [15.78] Re
a = 1.2611 [0.2408] AU
Ag = 7649.44 [26937.49] [0.28σ]
Teffp = 2880 [2529] K [1.06σ]

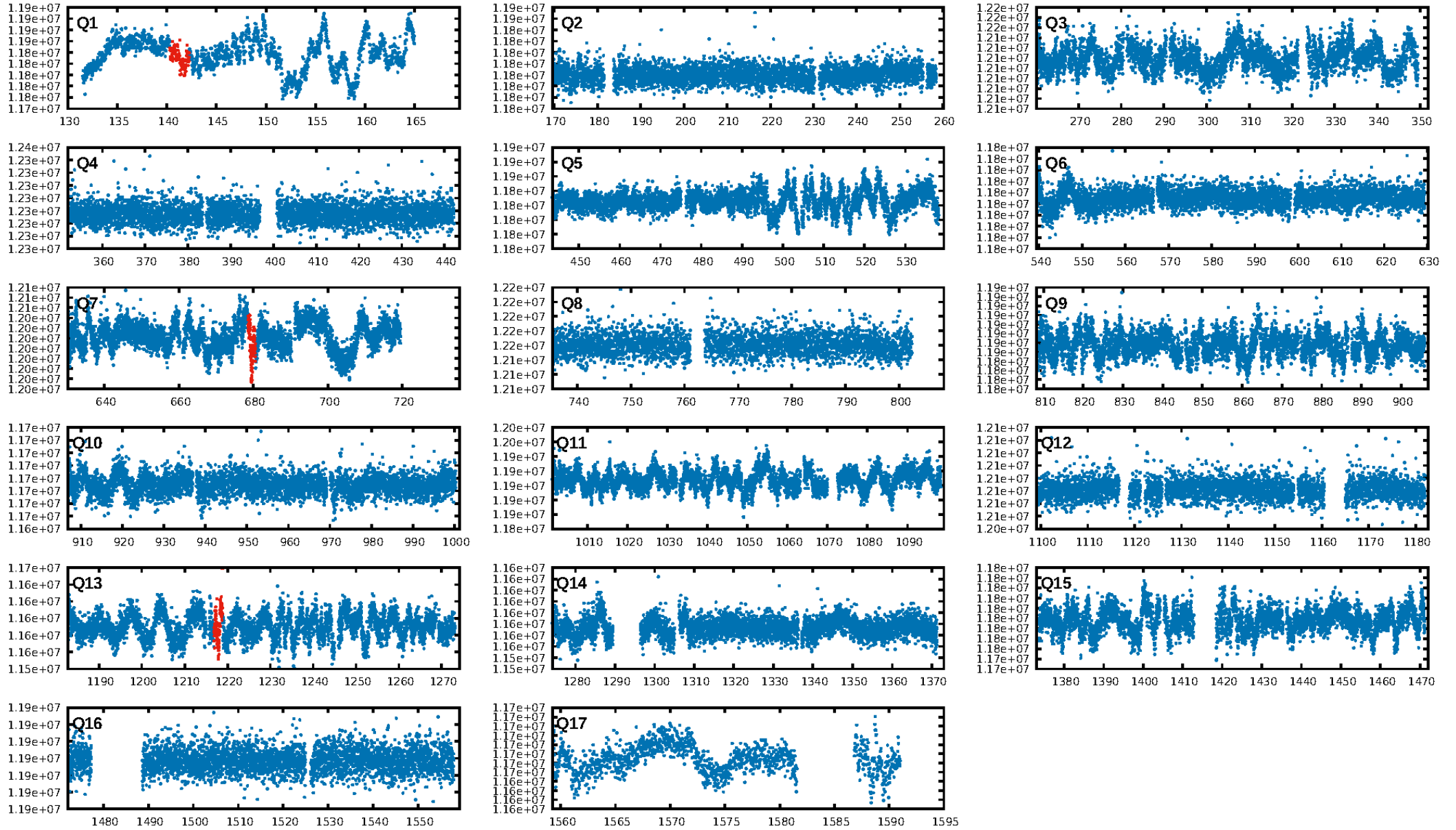
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 30.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.20e-14
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -4.355
Centroid-sig: 22.1%
Centroid-so: 1.339 arcsec [0.97σ]
OotOffset-rm: 0.437 arcsec [0.38σ]
KicOffset-rm: 0.372 arcsec [0.45σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

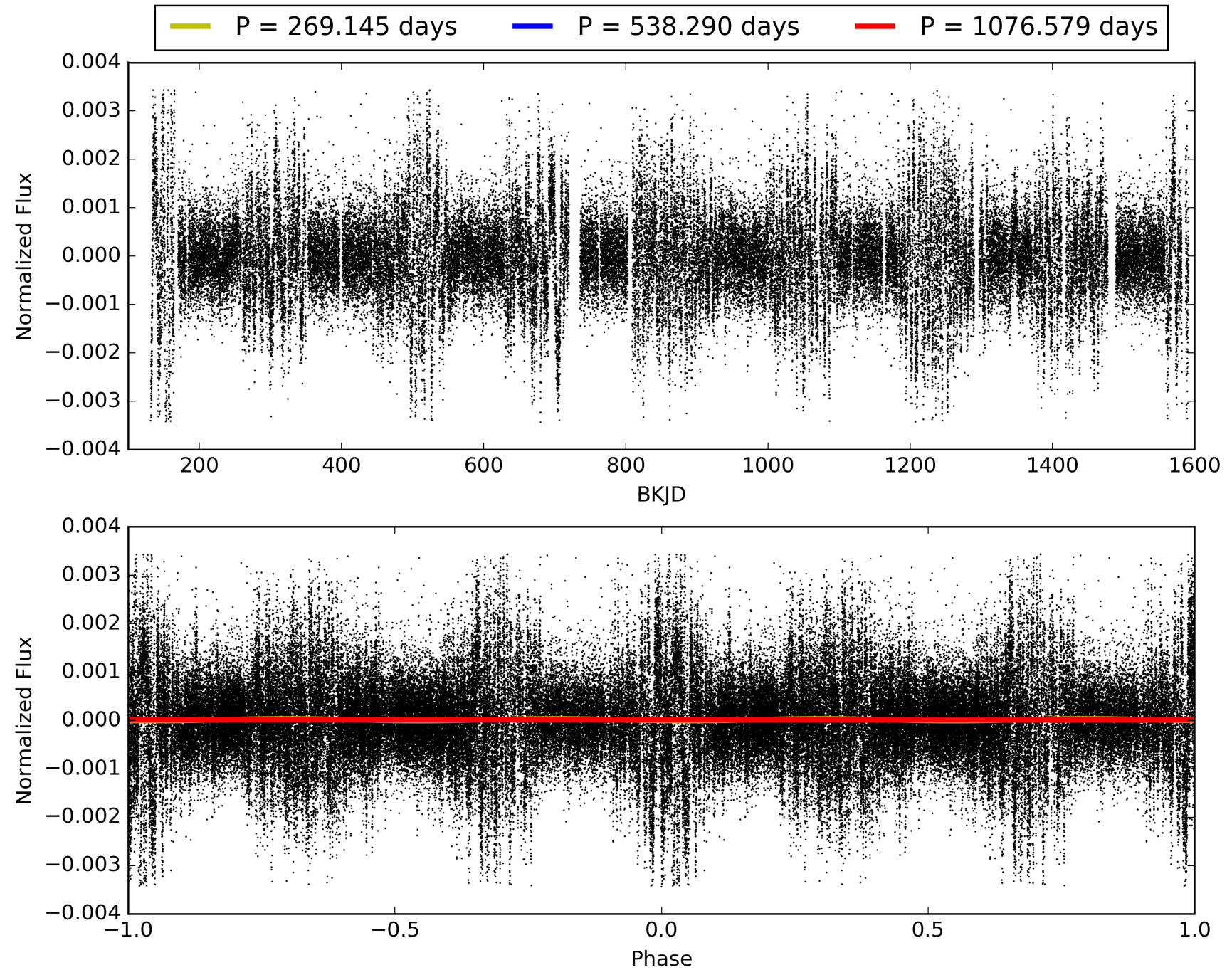
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:10:09 Z

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

TCE 010010246-01, PDC Light Curves

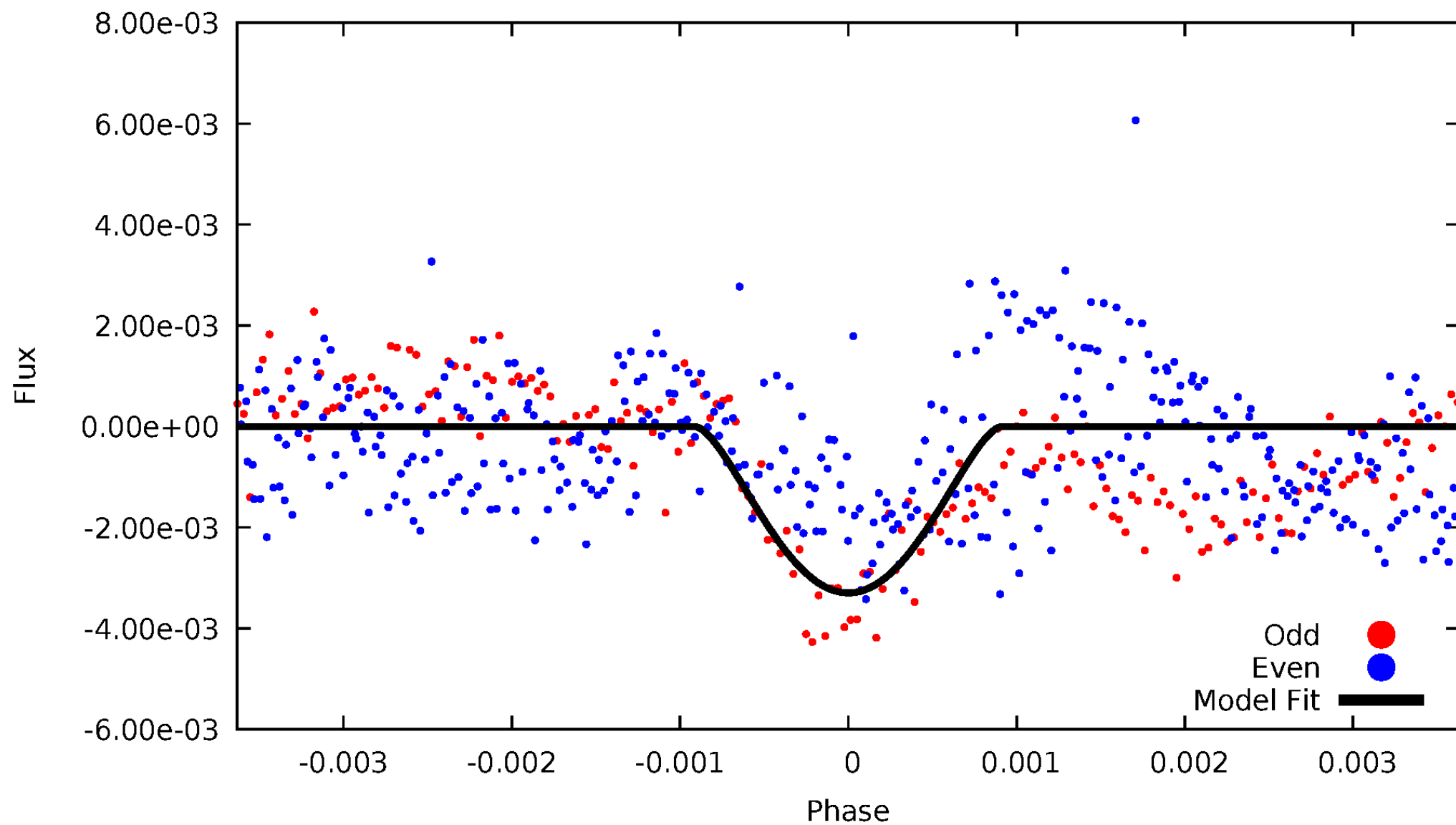


TCE 010010246-01



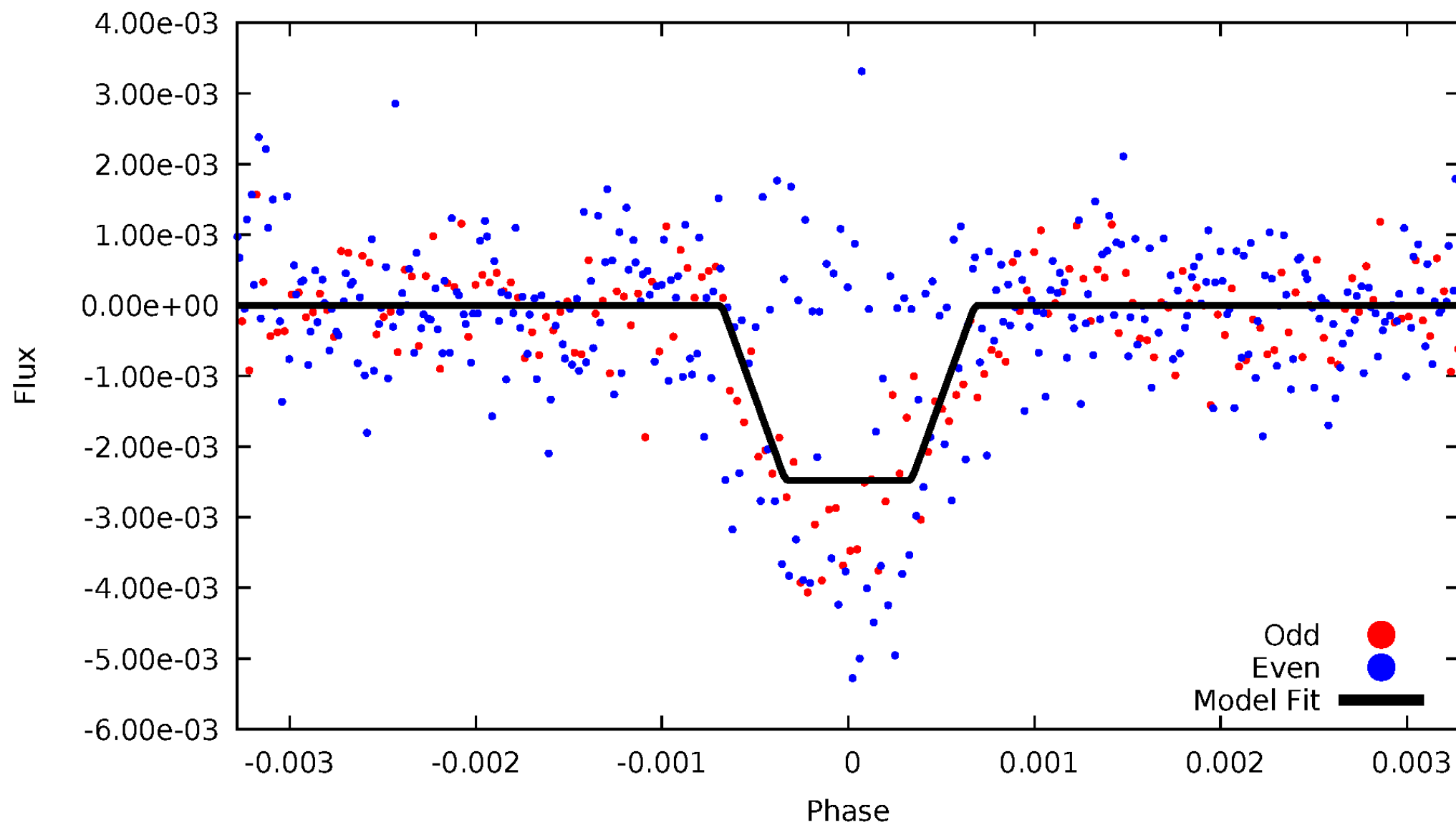
DV Odd/Even

TCE 010010246-01



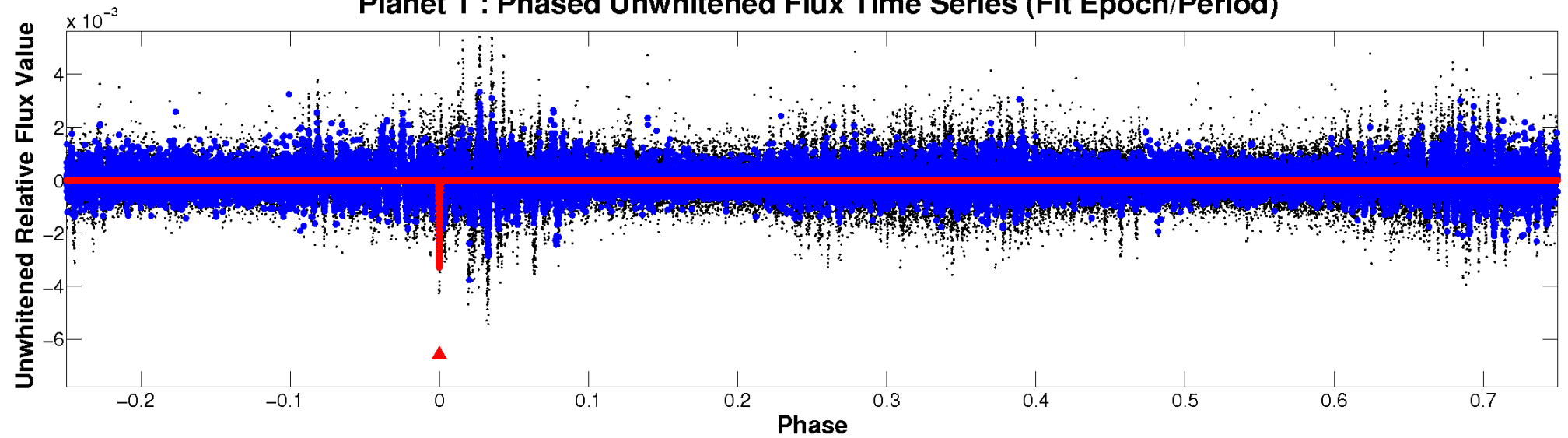
ALT Odd/Even

TCE 010010246-01

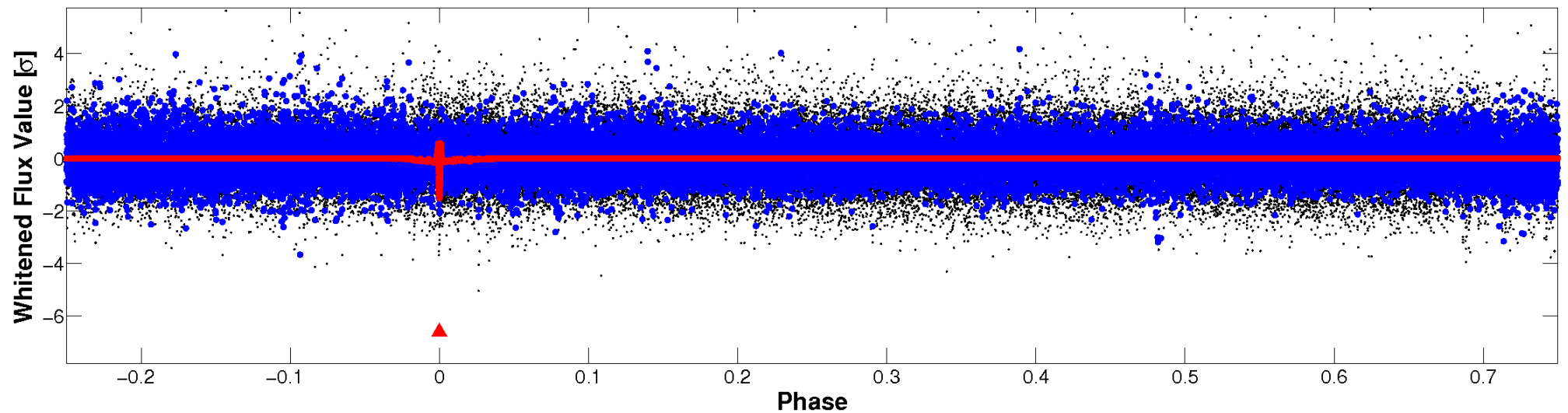


Non-Whitened Vs. Whitened Light Curve

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 010010246-01 P=538.289704 Days $T_0=141.264062$ (BKJD)



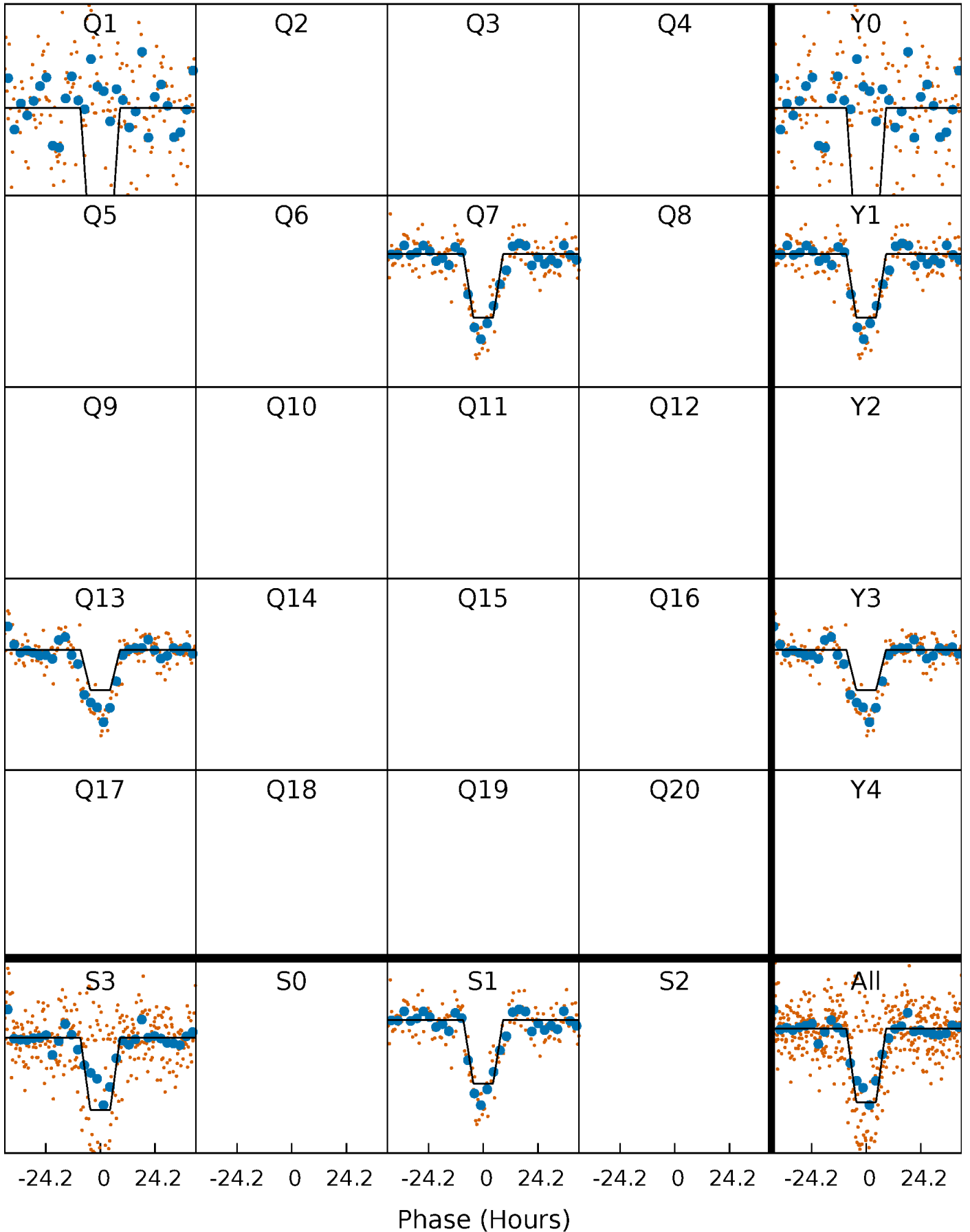
DV Quarter-Phased Transit Curves

TCE 010010246-01 P=538.289704 Days $T_0=141.264062$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

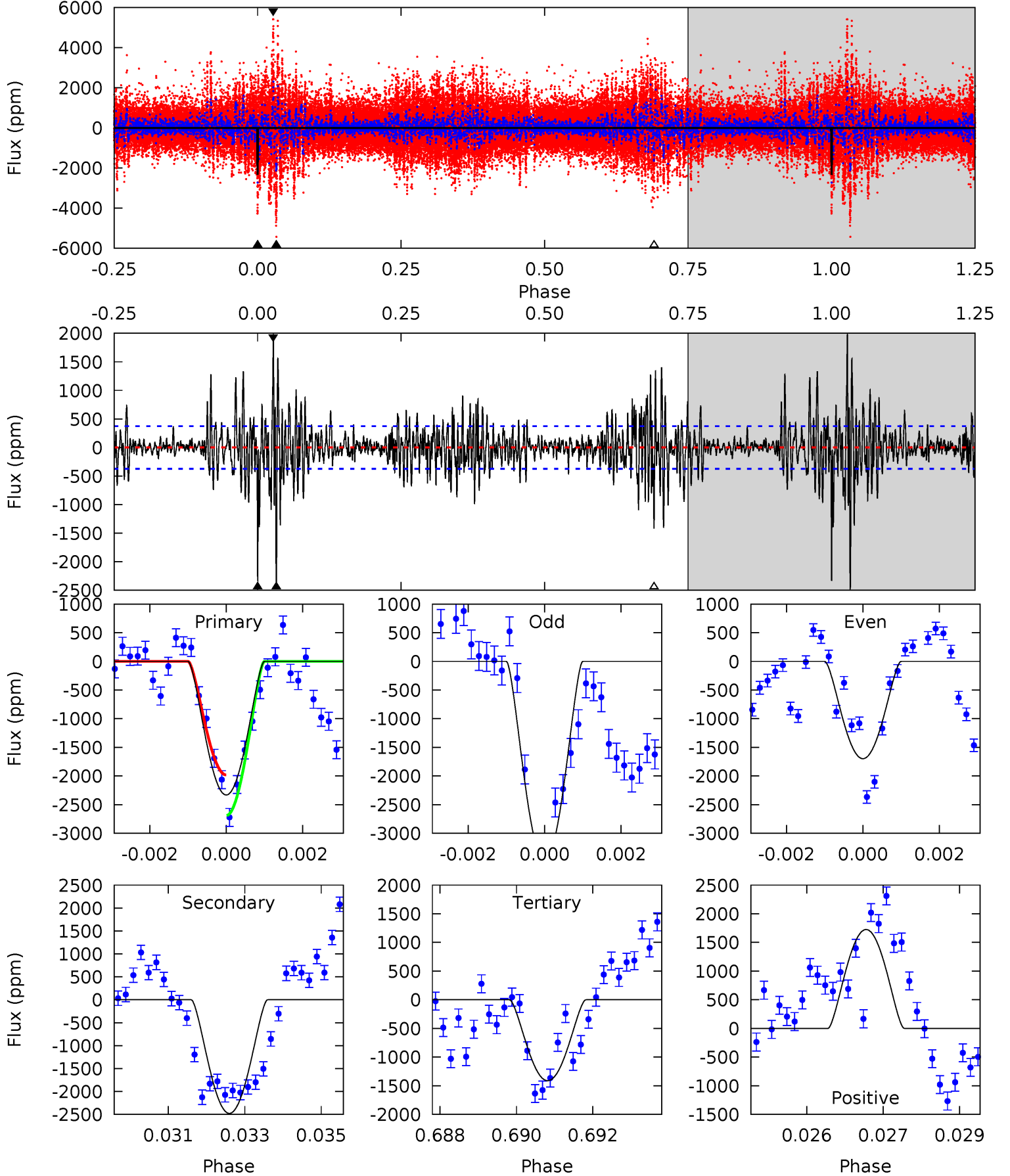
TCE 010010246-01 P=538.315327 Days $T_0=141.240761$ (BKJD)



DV Model-Shift Uniqueness Test

010010246-01, P = 538.289704 Days, E = 141.264062 Days

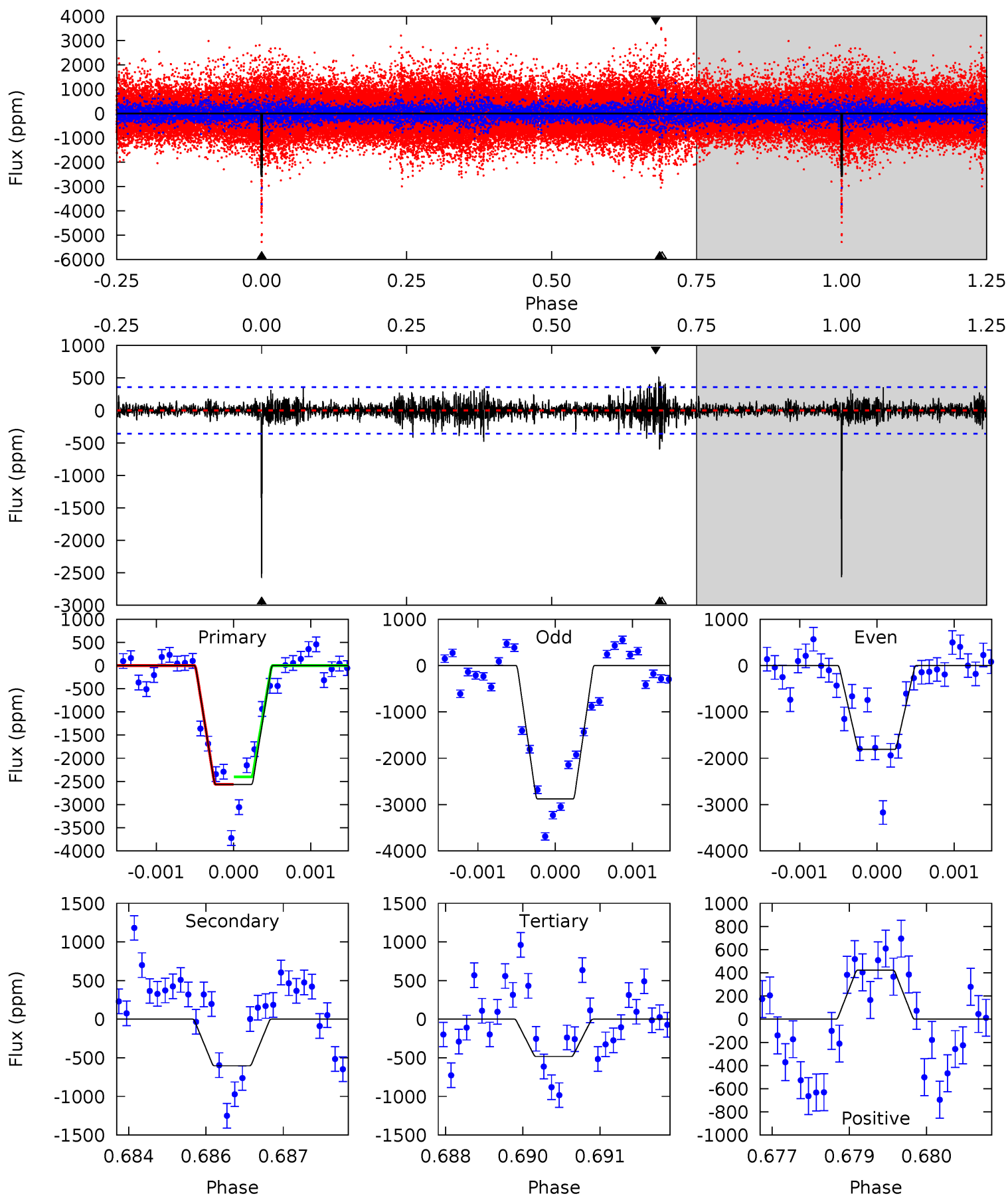
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.5	35.6	20.3	24.8	5.34	3.12	4.92	13.2	8.71	15.3	10.8	12.2	1.26	0.44	5.09



Alt Model-Shift Uniqueness Test

010010246-01, P = 538.315327 Days, E = 141.240761 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.7	9.09	7.28	6.37	5.39	3.20	1.44	31.4	32.4	1.80	2.71	7.95	0.75	0.17	1.20



Stellar Parameters For KIC 010010246

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5569^{+166}_{-166}	$4.566^{+0.038}_{-0.152}$	$-0.080^{+0.300}_{-0.300}$	$0.829^{+0.188}_{-0.075}$	$0.928^{+0.083}_{-0.111}$	$2.295^{+0.449}_{-0.953}$
	+3%/-3%	+1%/-3%	+375%/-375%	+23%/-9%	+9%/-12%	+20%/-42%
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 010010246-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2478 ± 70	$14.84^{+14.21}_{-9.83}$	284^{+17}_{-12}	3567^{+1755}_{-643}	9707^{+72829}_{-7197}
Alt.	-602 ± 66	$12.52^{+12.49}_{-8.31}$	283^{+14}_{-12}	3046^{+1327}_{-521}	3268^{+25855}_{-2460}

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 $A_{obs} \gg 1.0$

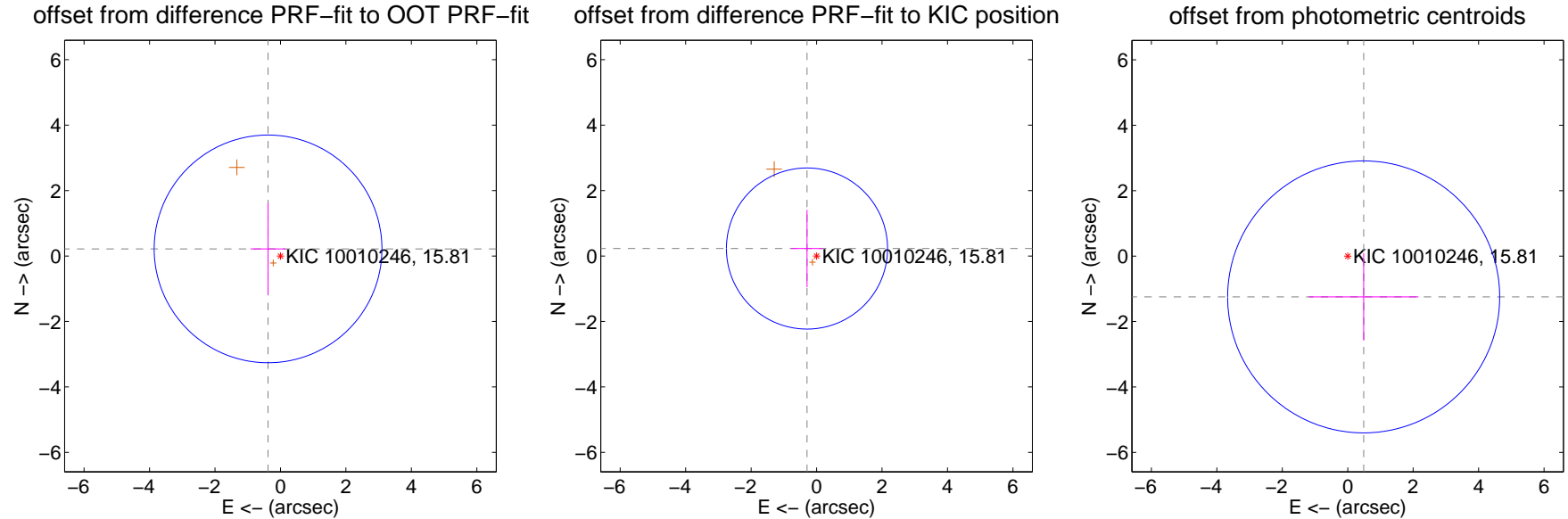
DV Centroid Data

Supplemental centroid analysis for 010010246-01. Kepler magnitude: 15.81. Transit SNR 11.78

There are 0 quarters with good PRF difference image offsets

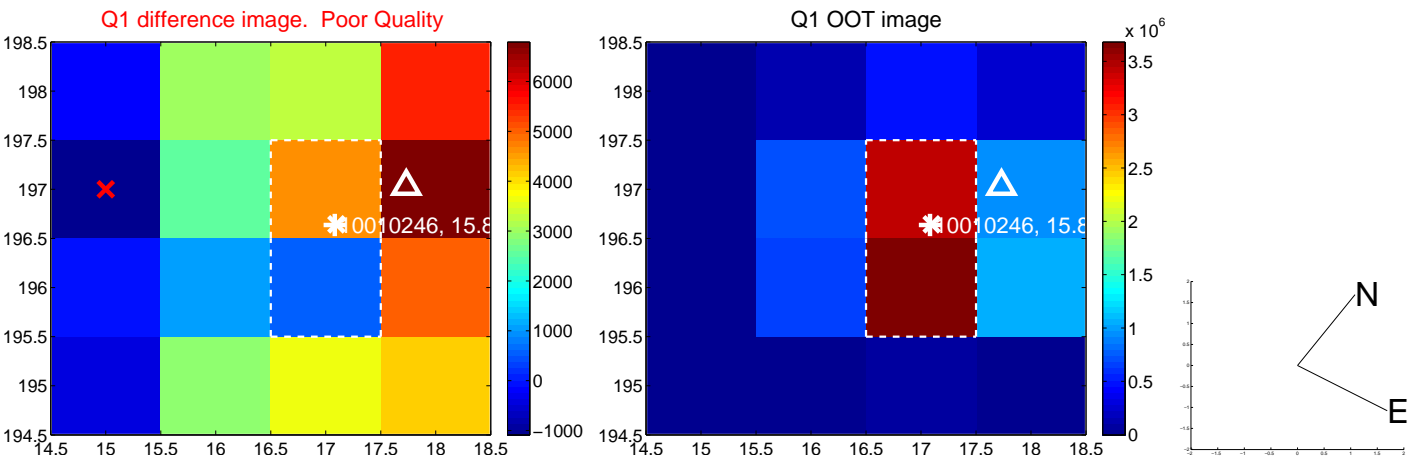
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.437 ± 1.160	0.38	0.379 ± 0.536	0.218 ± 1.400
PRF-fit source offset from KIC position	0.372 ± 0.820	0.45	0.293 ± 0.481	0.229 ± 1.180
photometric centroid source offset	1.34 ± 1.39	0.97	-0.49 ± 1.68	-1.25 ± 1.34

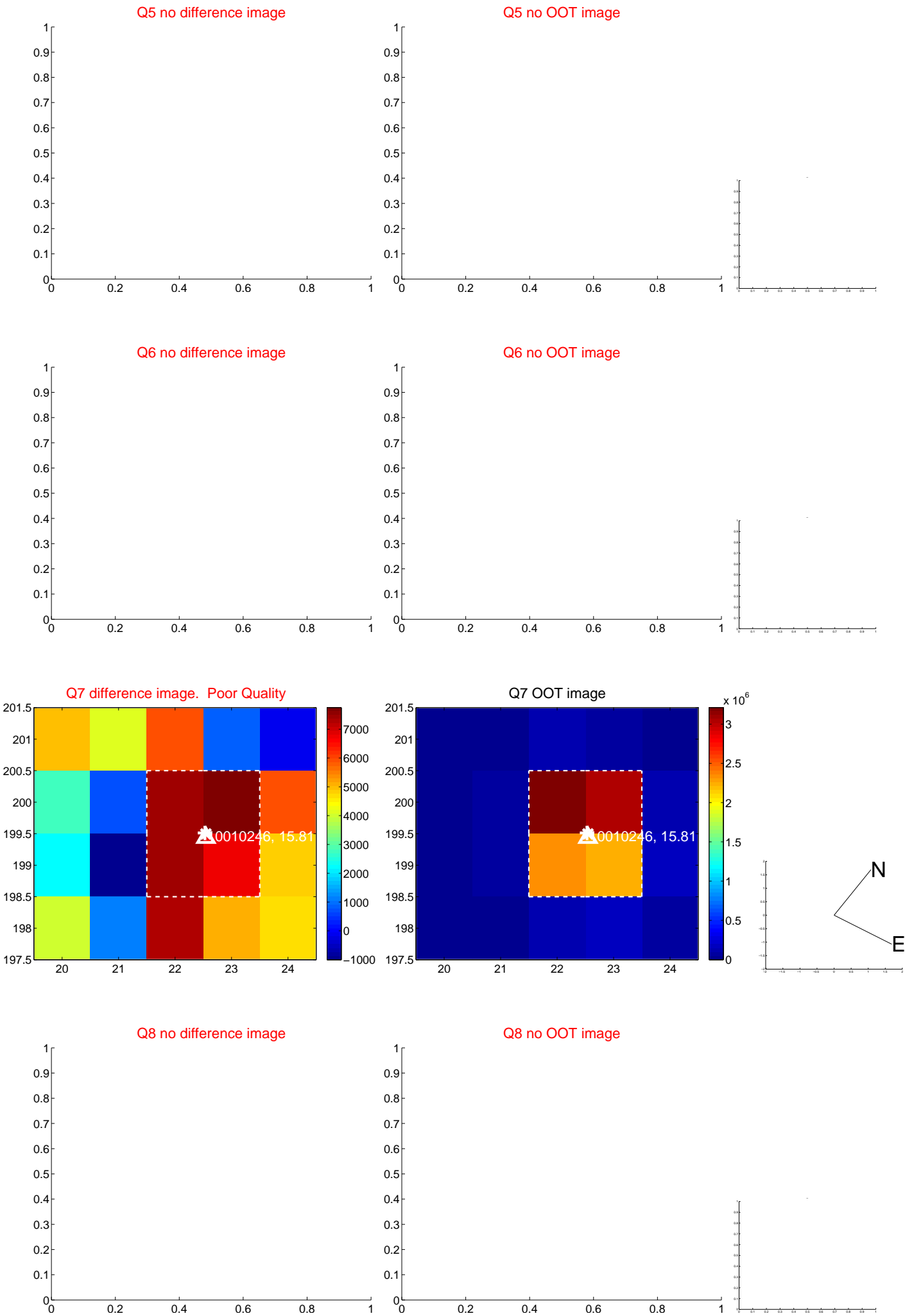


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



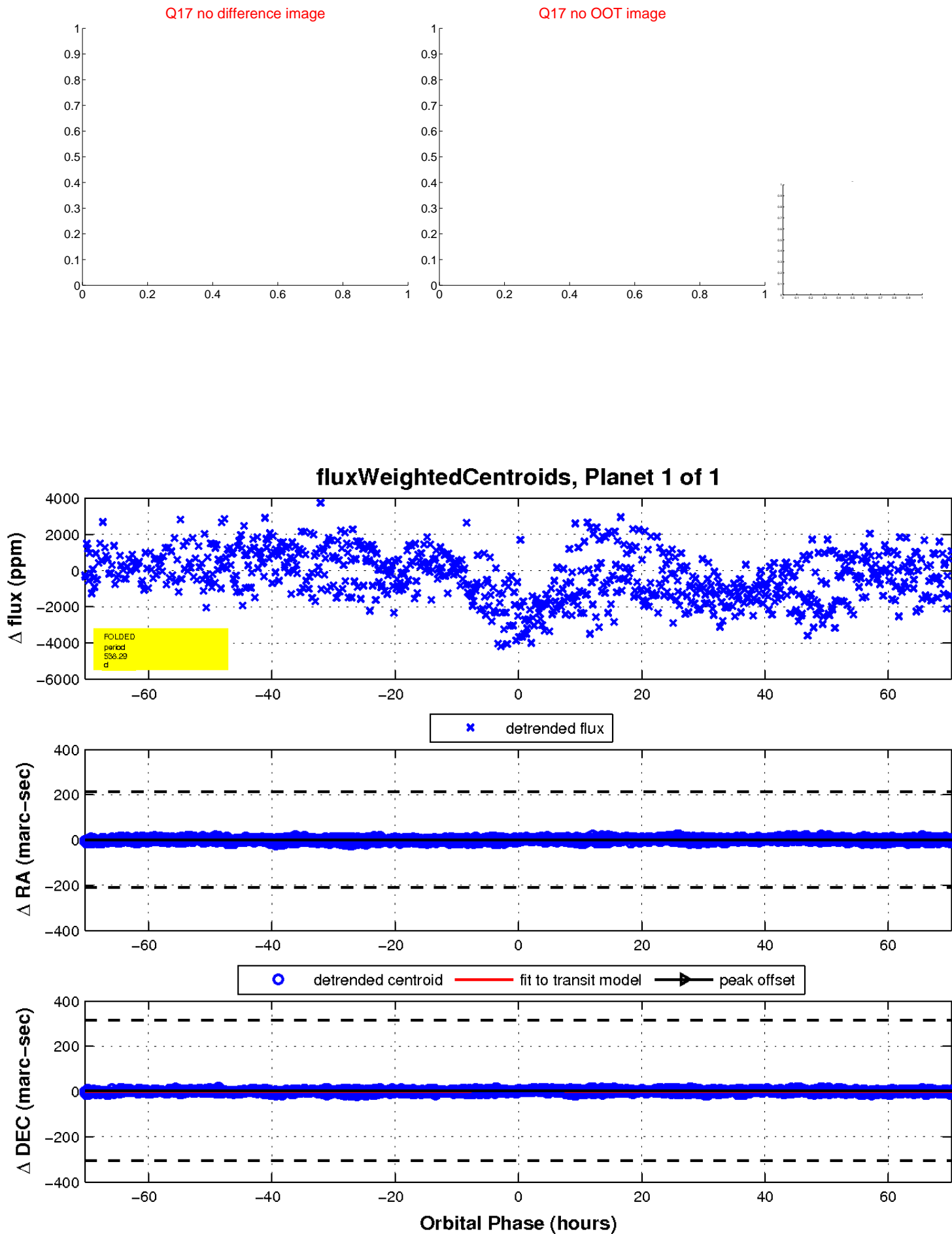
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

