

KIC 005482181

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})
005482181-01	OBS	No	87.972566	201.037563	869.0	2.654	12.2	6.4	4.36	5017	14.44	56.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005482181-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—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.

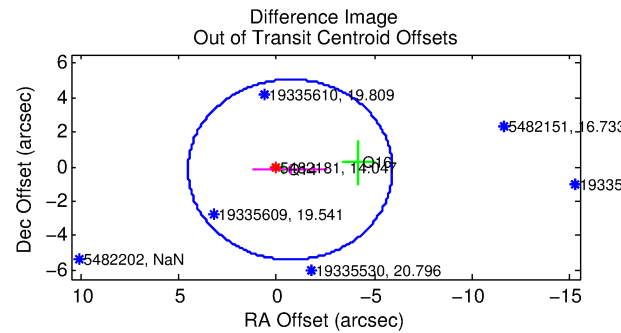
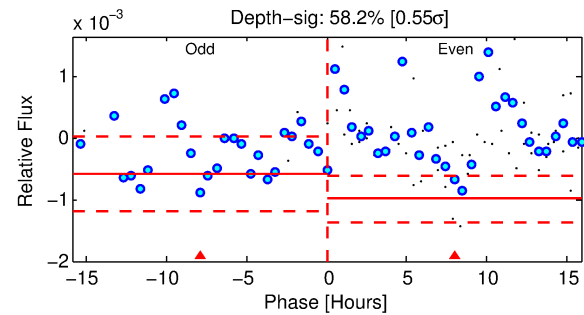
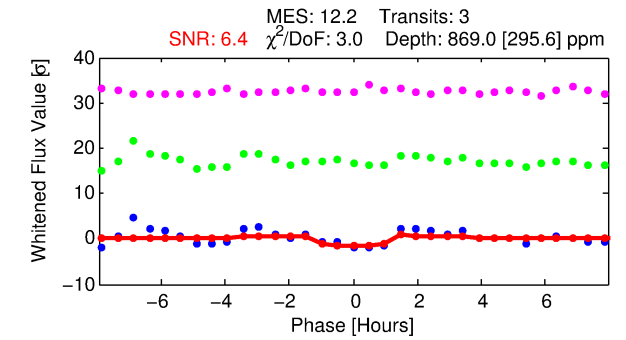
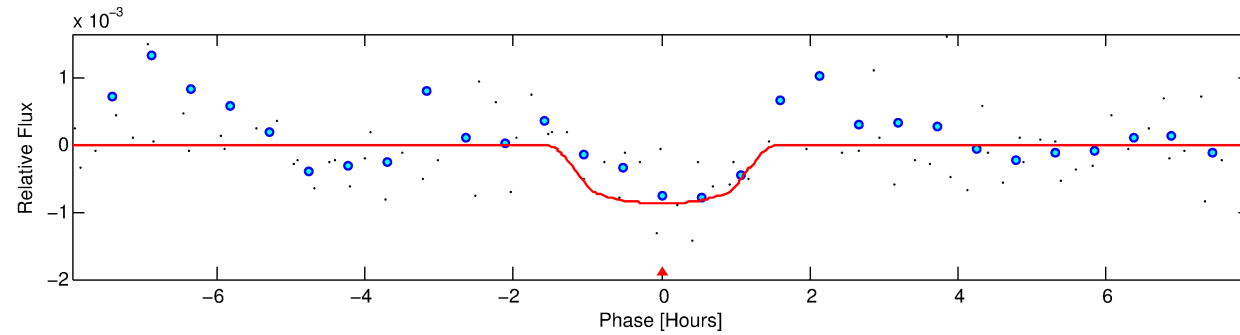
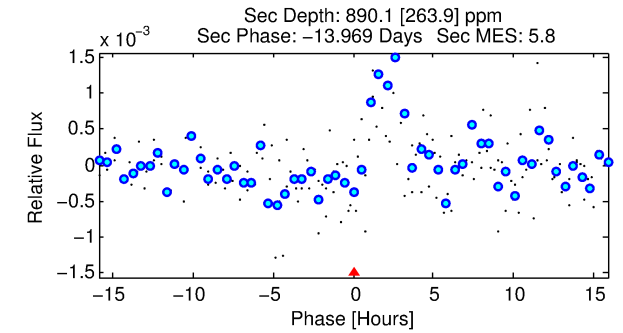
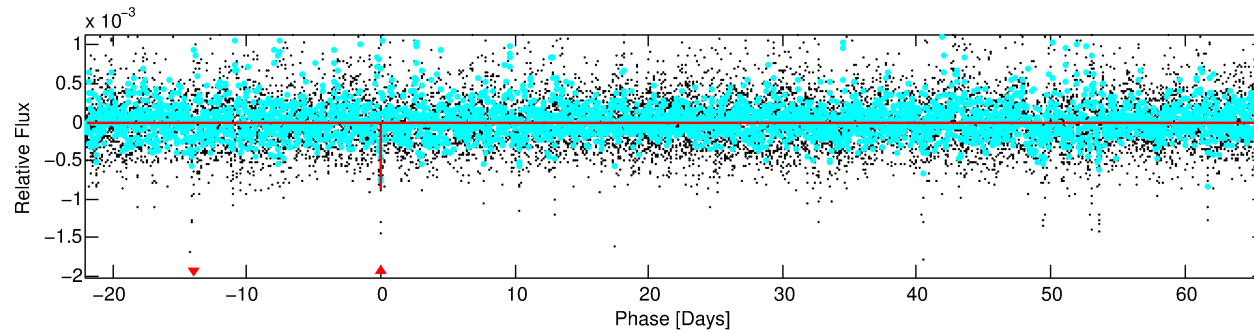
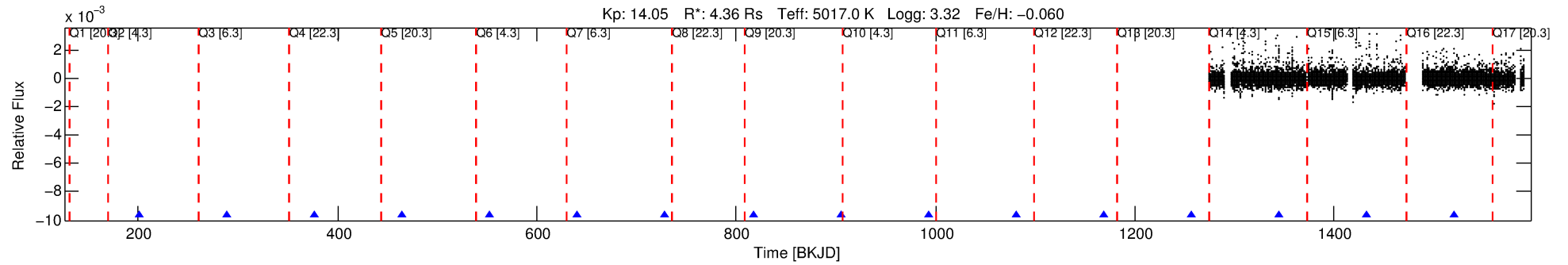
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005482181-01

No Significant Match Found

DV One-Page Summary

KIC: 5482181 Candidate: 1 of 1 Period: 87.973 d



DV Fit Results:

Period = 87.97257 [0.00610] d
Epoch = 201.0376 [0.0886] BKJD
Rp/R* = 0.0303 [0.0777]
a/R* = 163.25 [1539.08]
b = 0.80 [4.25]
Seff = 56.41 [36.43]
Teff = 699 [113] K
Rp = 14.44 [37.50] Re
a = 0.4376 [0.1753] AU
Ag = 449.77 [2326.93] [0.19σ]
Teffp = 4976 [6388] K [0.67σ]

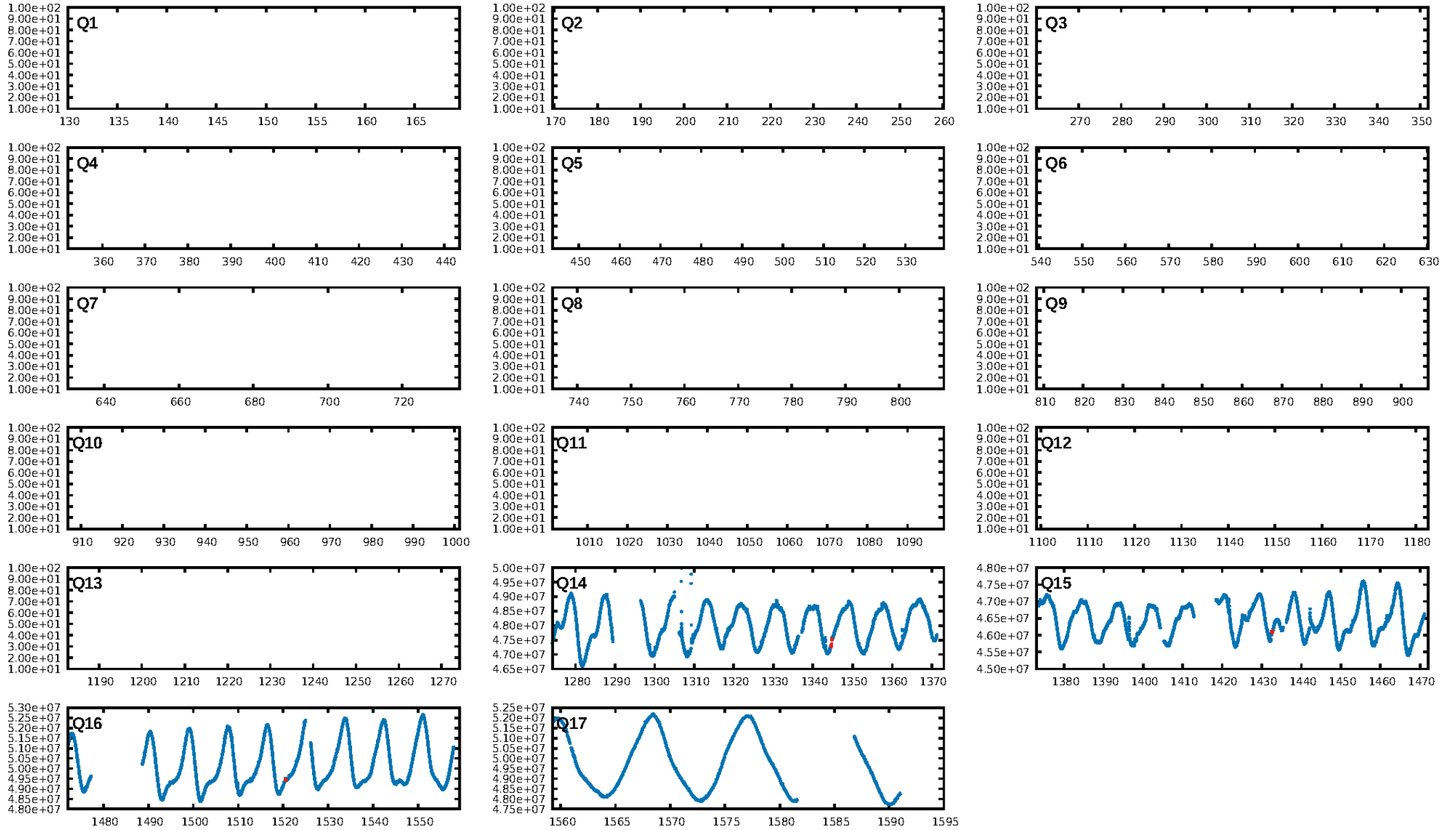
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 10.6%
Bootstrap-pfa: 1.95e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 4.193
Centroid-sig: 6.2%
Centroid-so: 2.725 arcsec [1.85σ]
OotOffset-rm: 0.725 arcsec [0.42σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-rm: 0.586 arcsec [0.45σ]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

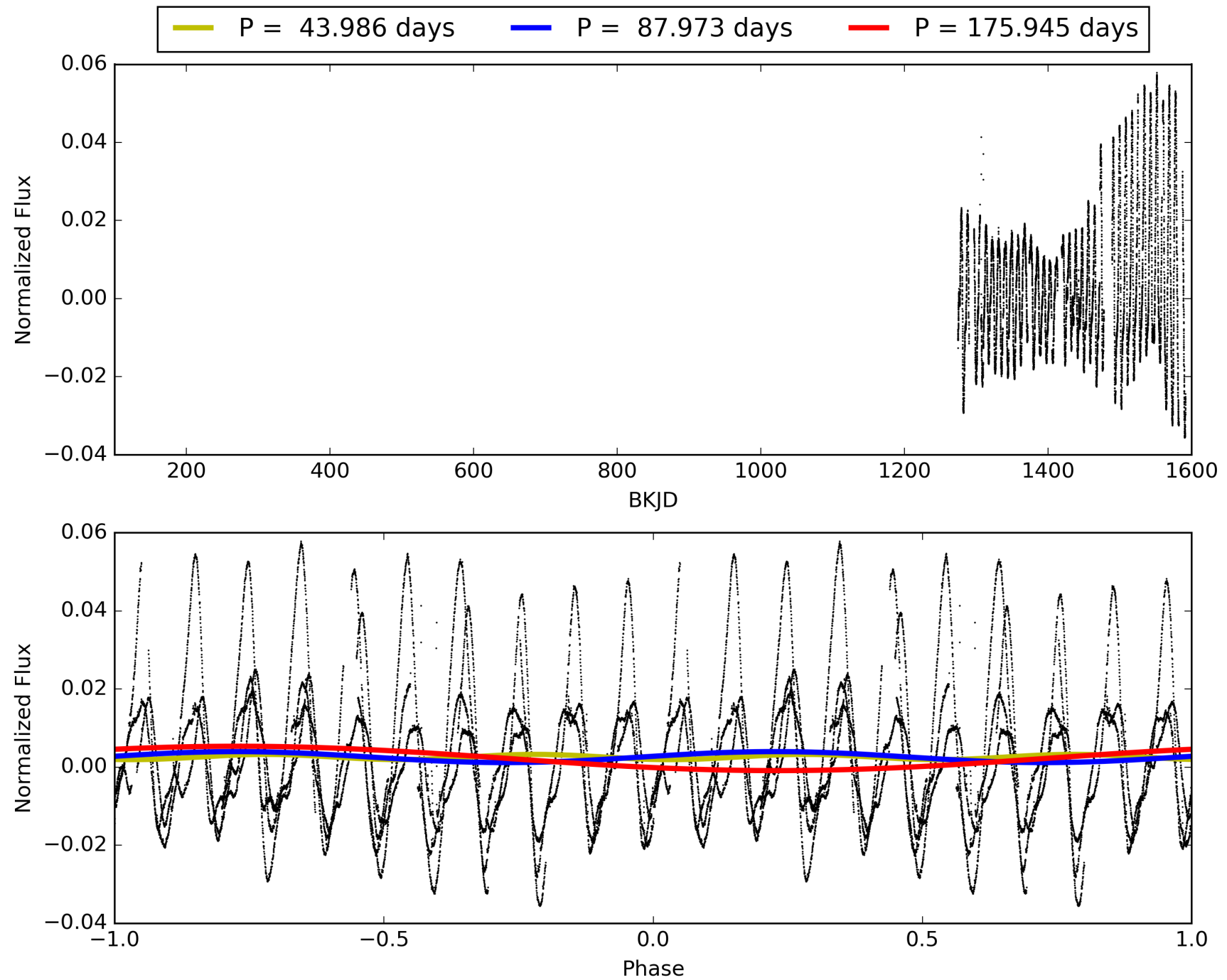
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:28:13 Z

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

TCE 005482181-01, PDC Light Curves

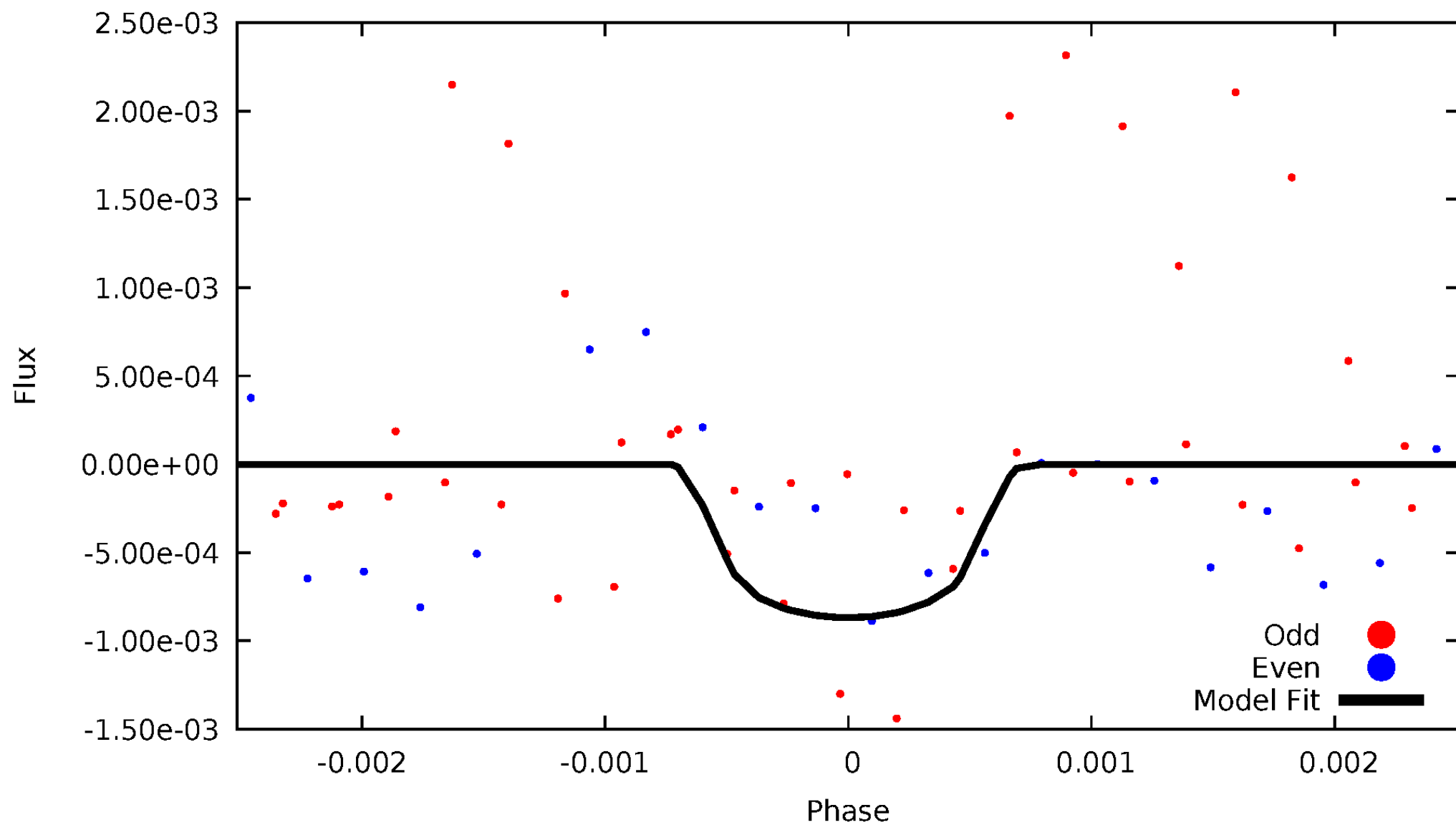


TCE 005482181-01



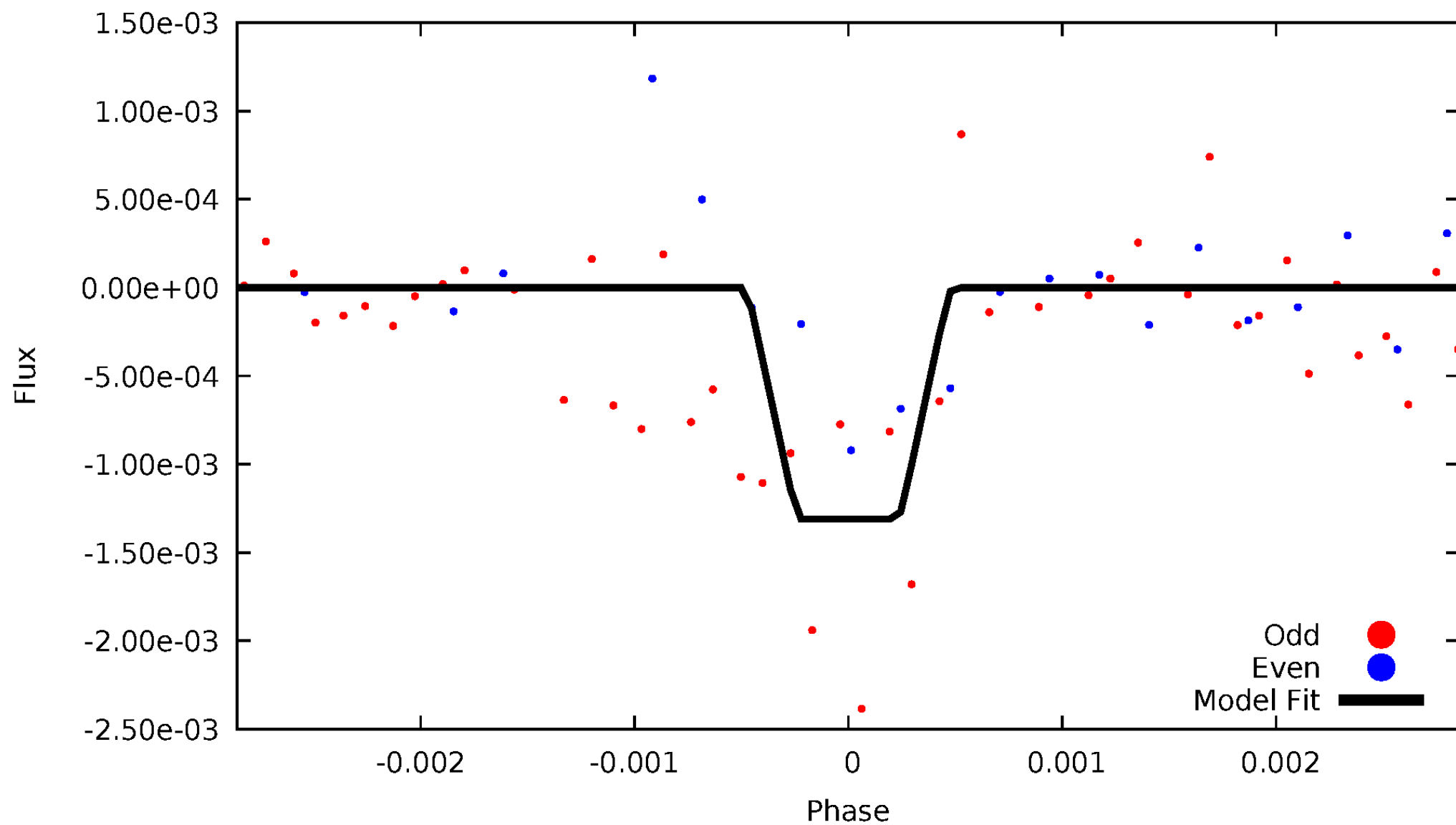
DV Odd/Even

TCE 005482181-01



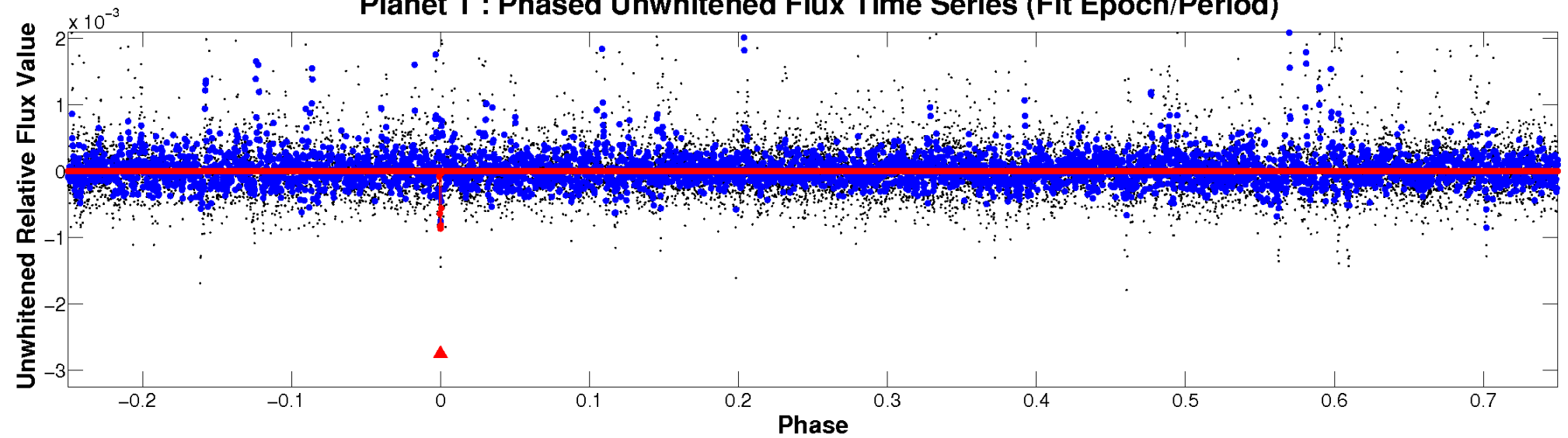
ALT Odd/Even

TCE 005482181-01

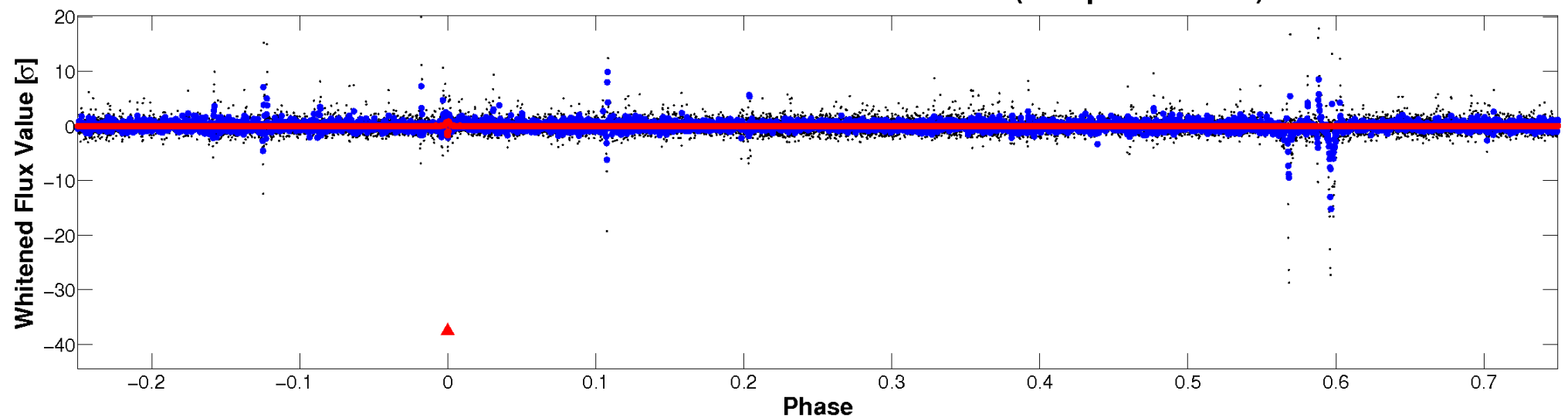


Non-Whitened Vs. Whitened Light Curve

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

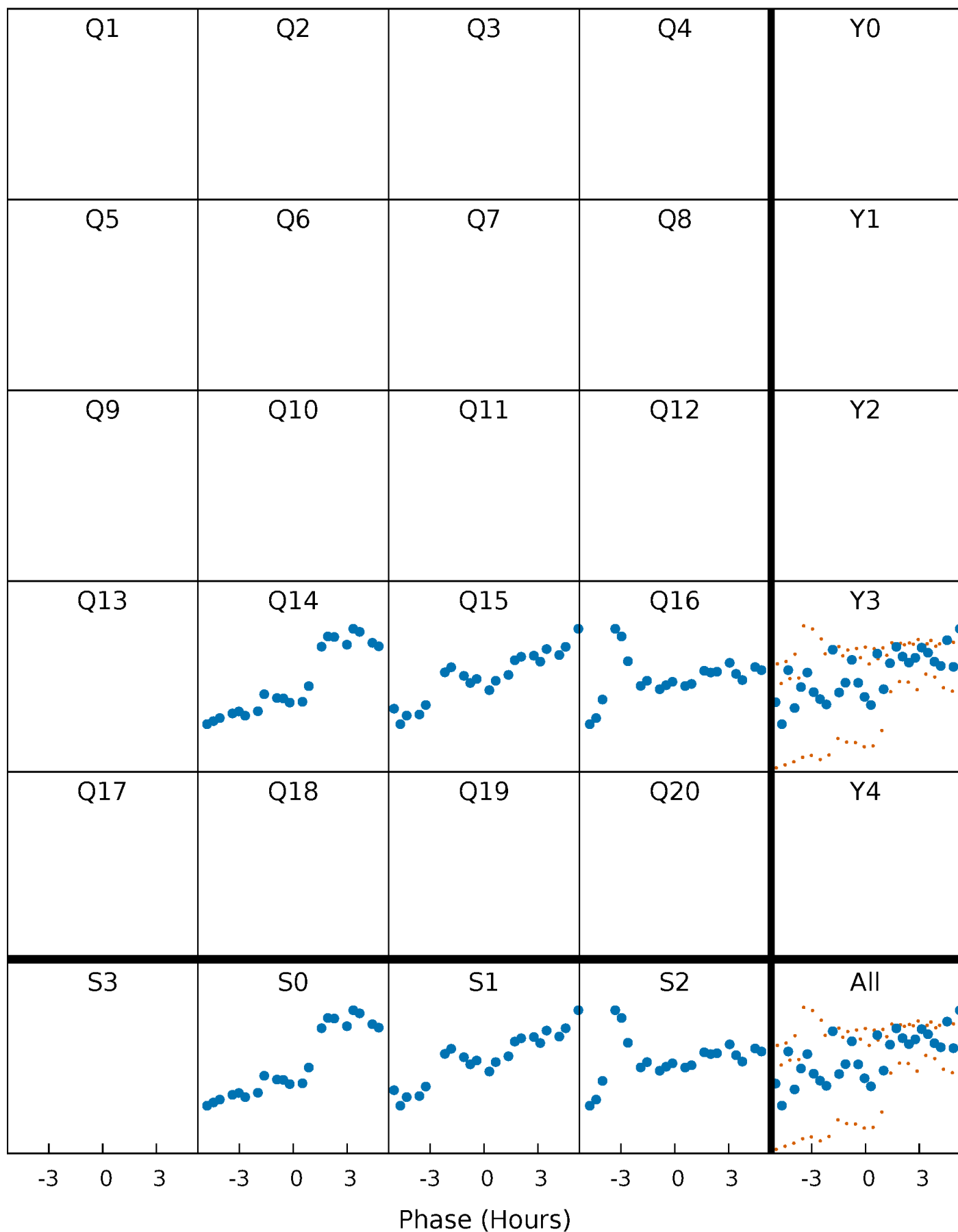


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



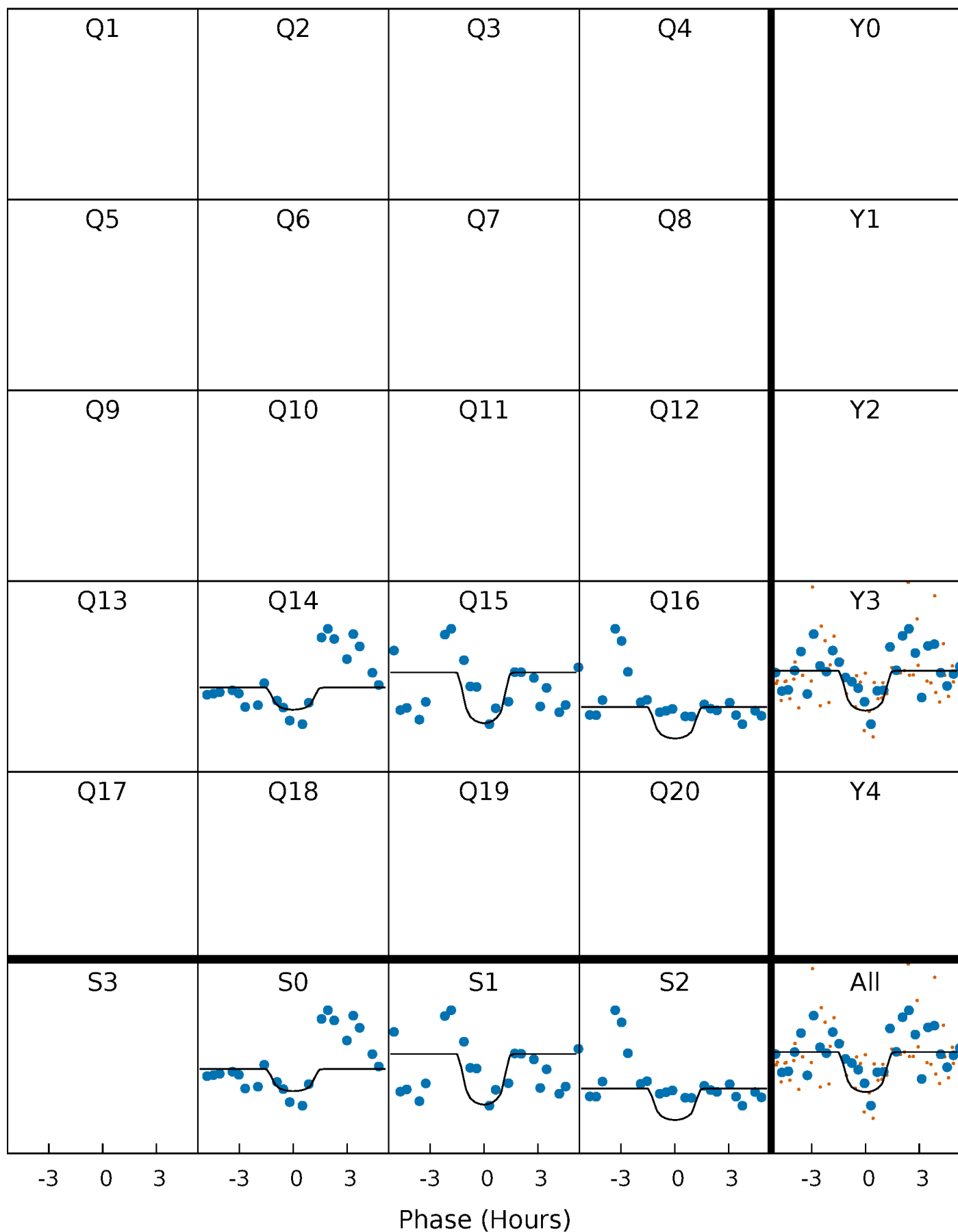
PDC Quarter-Phased Transit Curves

TCE 005482181-01 P= 87.972566 Days $T_0=201.037563$ (BKJD)



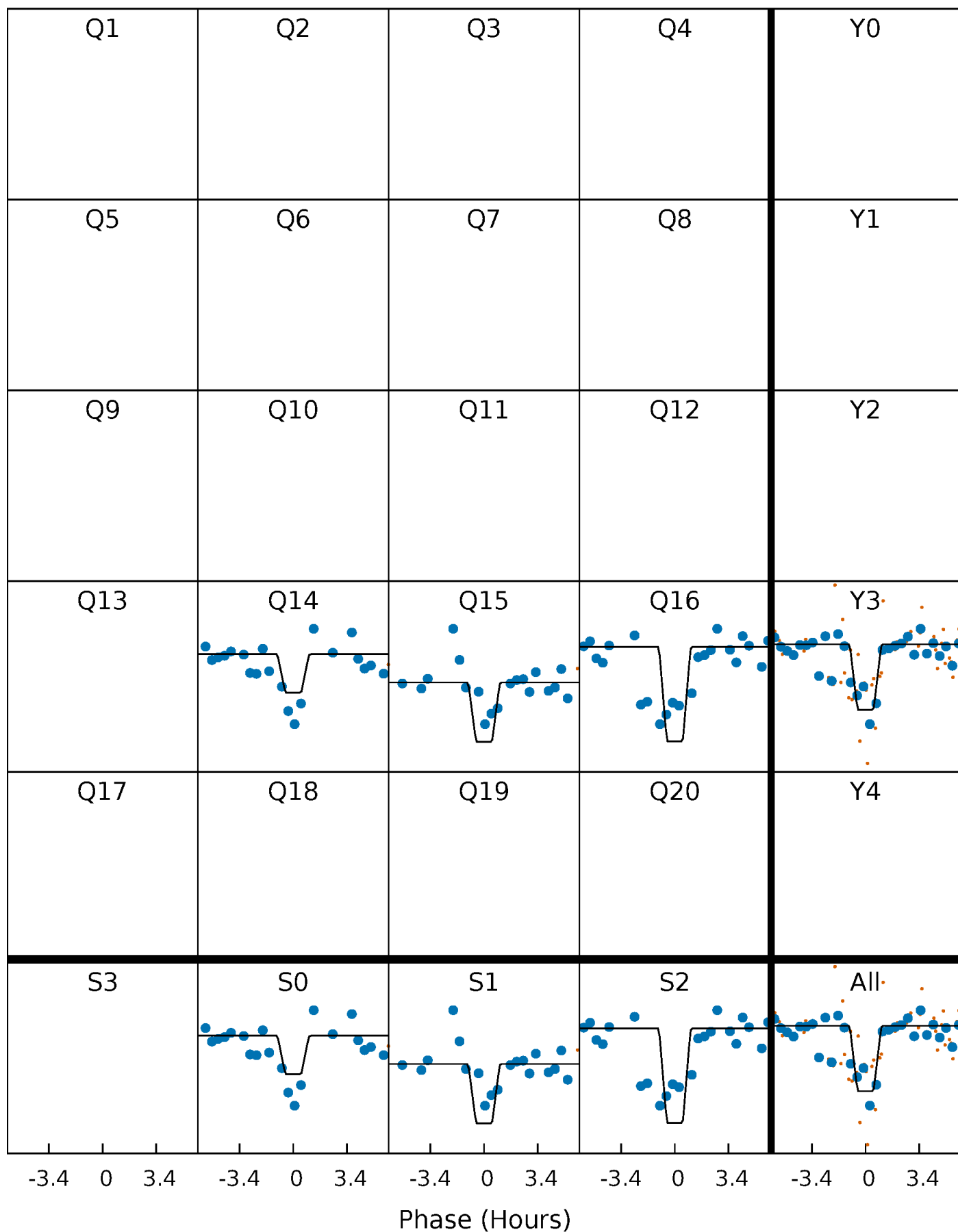
DV Quarter-Phased Transit Curves

TCE 005482181-01 P= 87.972566 Days $T_0=201.037563$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

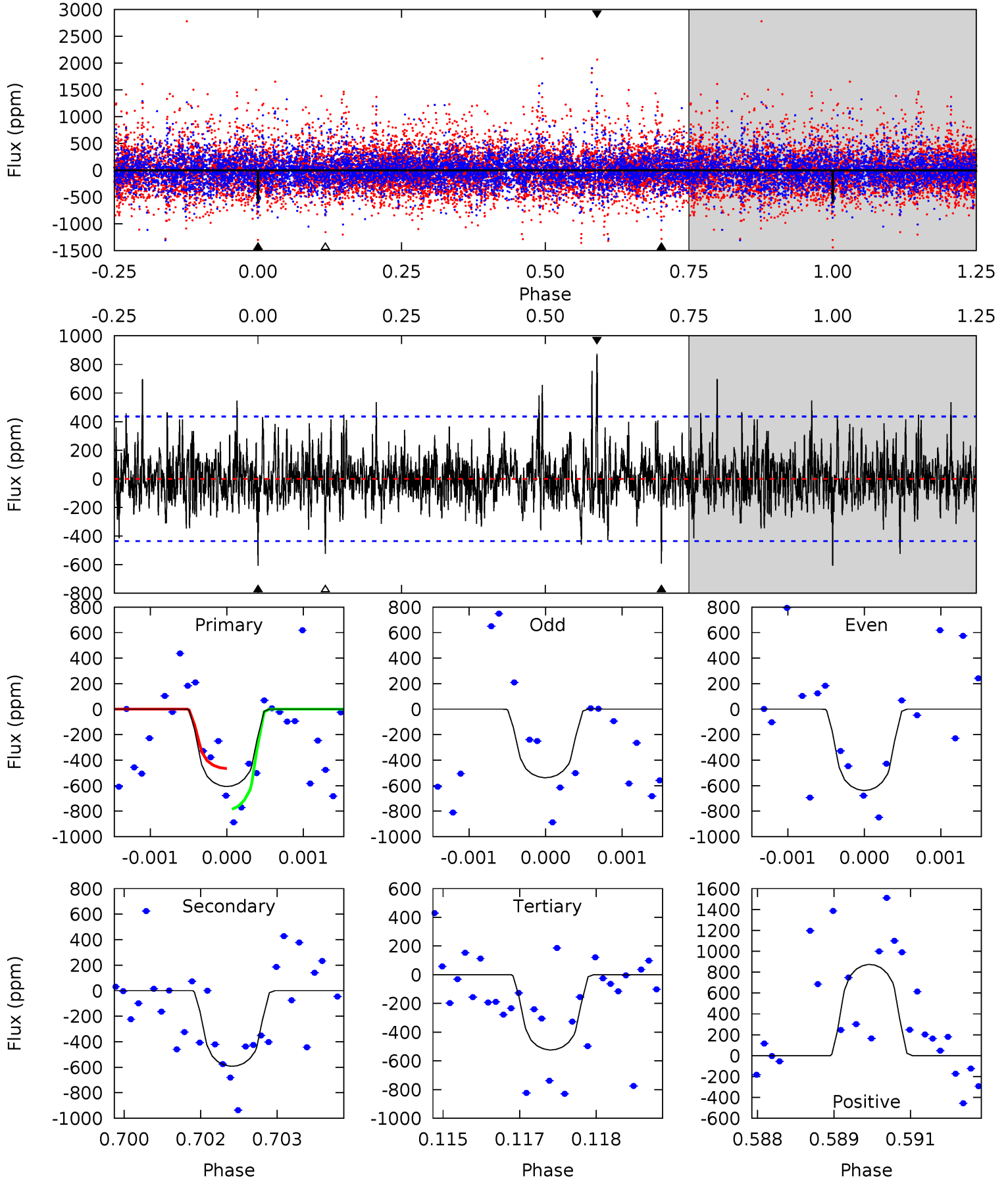
TCE 005482181-01 P= 87.968111 Days $T_0=201.107392$ (BKJD)



DV Model-Shift Uniqueness Test

005482181-01, P = 87.972566 Days, E = 201.037563 Days

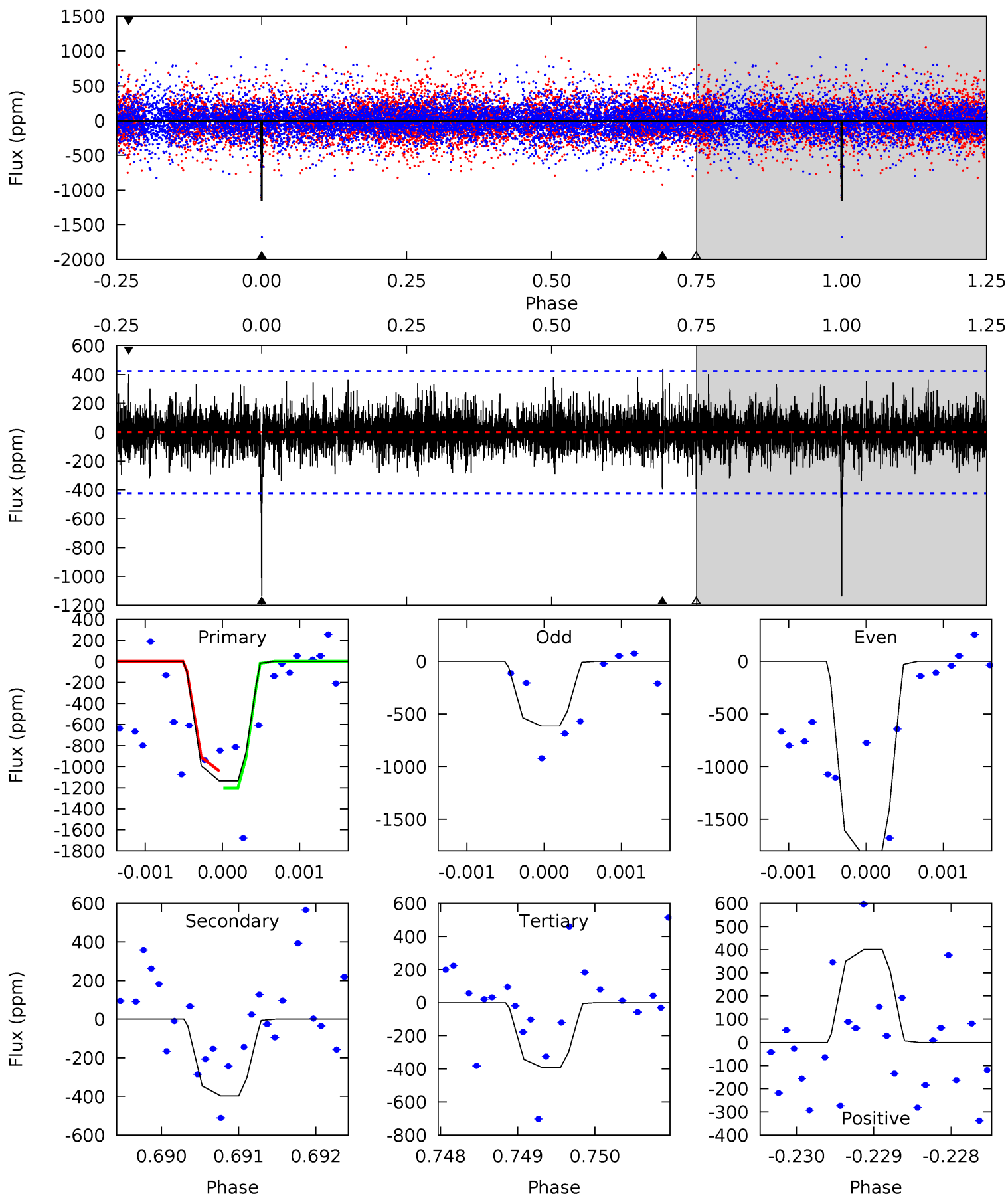
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.51	7.34	6.49	10.8	5.39	3.19	1.74	1.02	-3.31	0.84	-3.49	0.33	1.09	0.59	1.98



Alt Model-Shift Uniqueness Test

005482181-01, P = 87.968111 Days, E = 201.107392 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	5.11	5.06	5.17	5.45	3.30	1.22	9.58	9.47	0.05	-0.06	8.36	1.38	0.28	1.01



Stellar Parameters For KIC 005482181

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5017^{+137}_{-137}	$3.318^{+0.372}_{-0.248}$	$-0.060^{+0.250}_{-0.250}$	$4.362^{+1.505}_{-1.839}$	$1.445^{+0.231}_{-0.463}$	$0.025^{+0.073}_{-0.015}$
	+3%/-3%	+11%/-7%	+417%/-417%	+35%/-42%	+16%/-32%	+298%/-62%
Source	KIC0	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 005482181-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-592 ± 81	$30.92^{+30.95}_{-21.45}$	975^{+95}_{-111}	3489^{+1852}_{-643}	65^{+629}_{-50}
Alt.	-397 ± 78	$29.57^{+36.09}_{-19.59}$	970^{+106}_{-114}	3238^{+1588}_{-585}	45^{+362}_{-35}

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

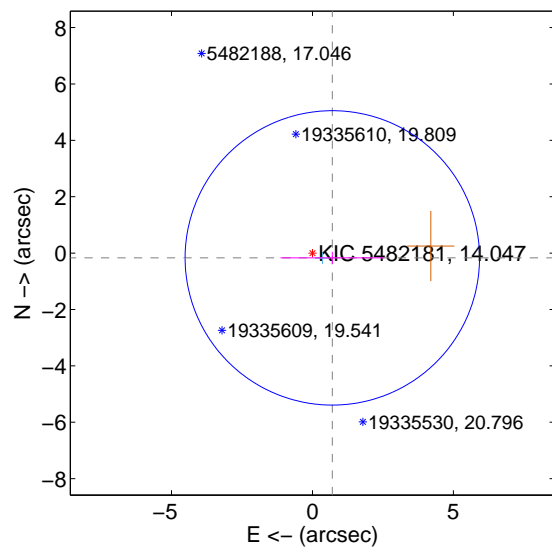
Supplemental centroid analysis for 005482181-01. Kepler magnitude: 14.05. Transit SNR 6.42

There are 1 quarters with good PRF difference image offsets

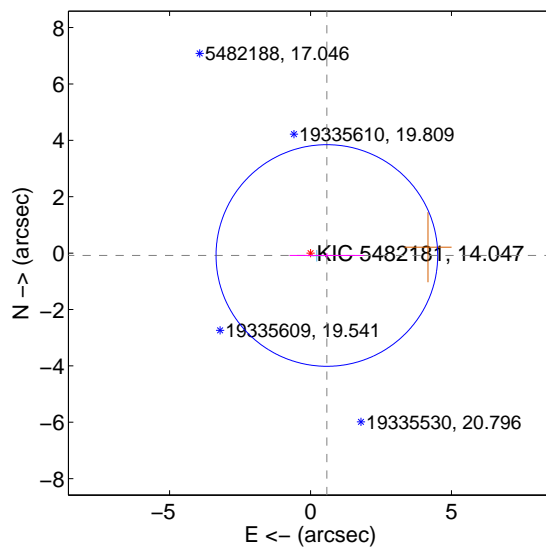
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.725 ± 1.740	0.42	-0.705 ± 1.840	-0.170 ± 0.217
PRF-fit source offset from KIC position	0.586 ± 1.310	0.45	-0.580 ± 1.324	-0.085 ± 0.088
photometric centroid source offset	2.73 ± 1.48	1.85	2.16 ± 1.38	-1.66 ± 1.62

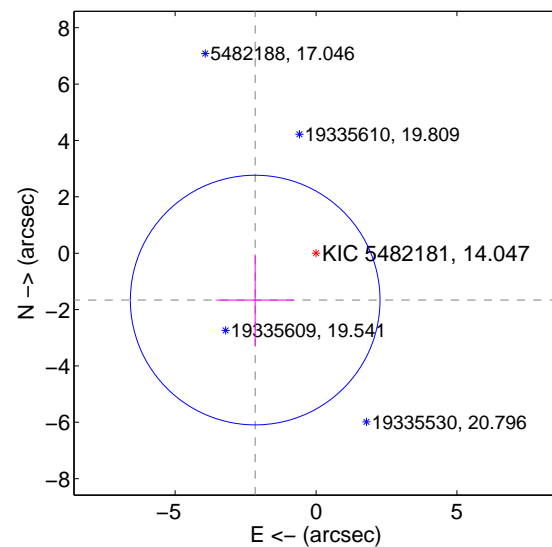
offset from difference PRF-fit to OOT PRF-fit



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.



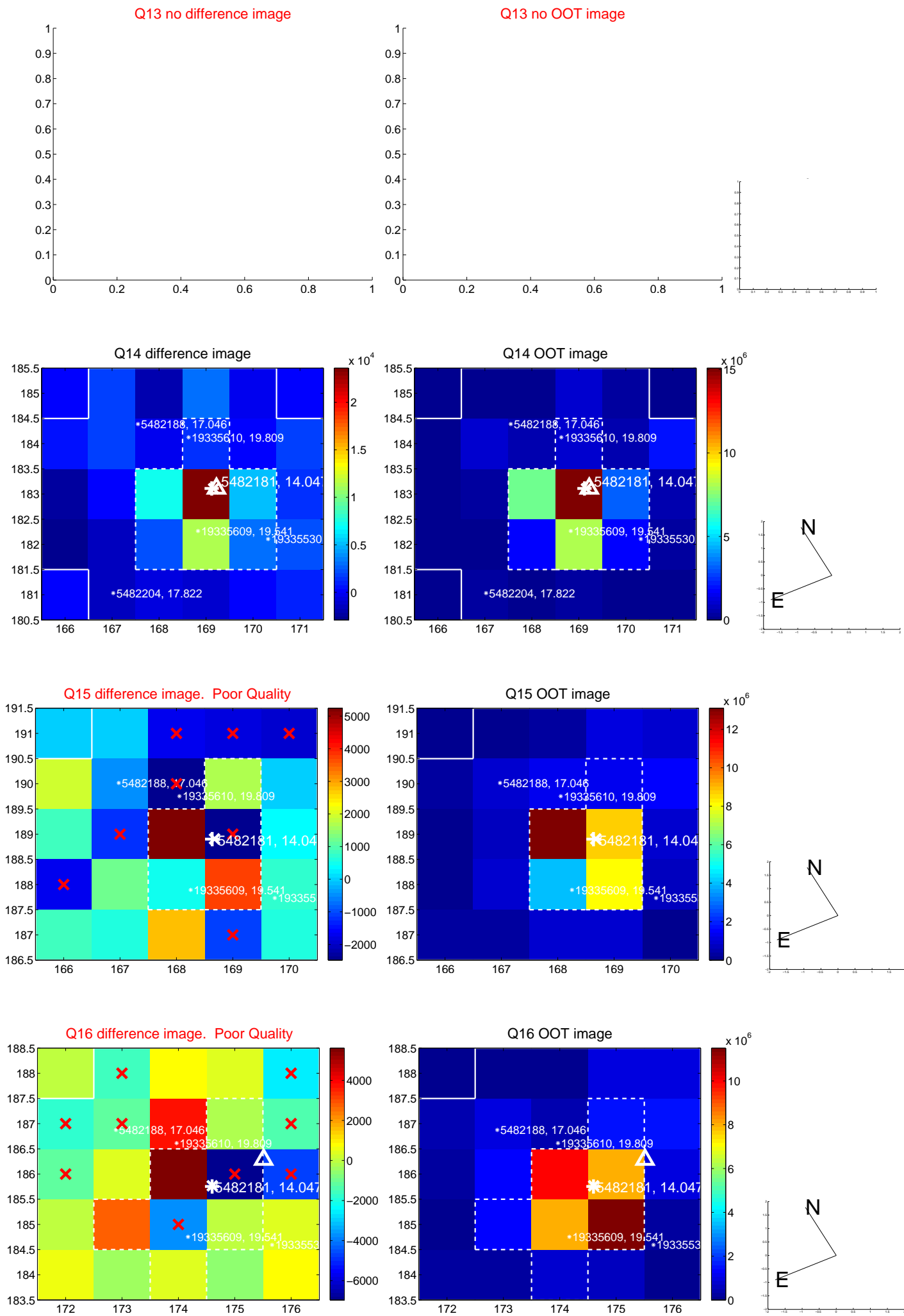
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



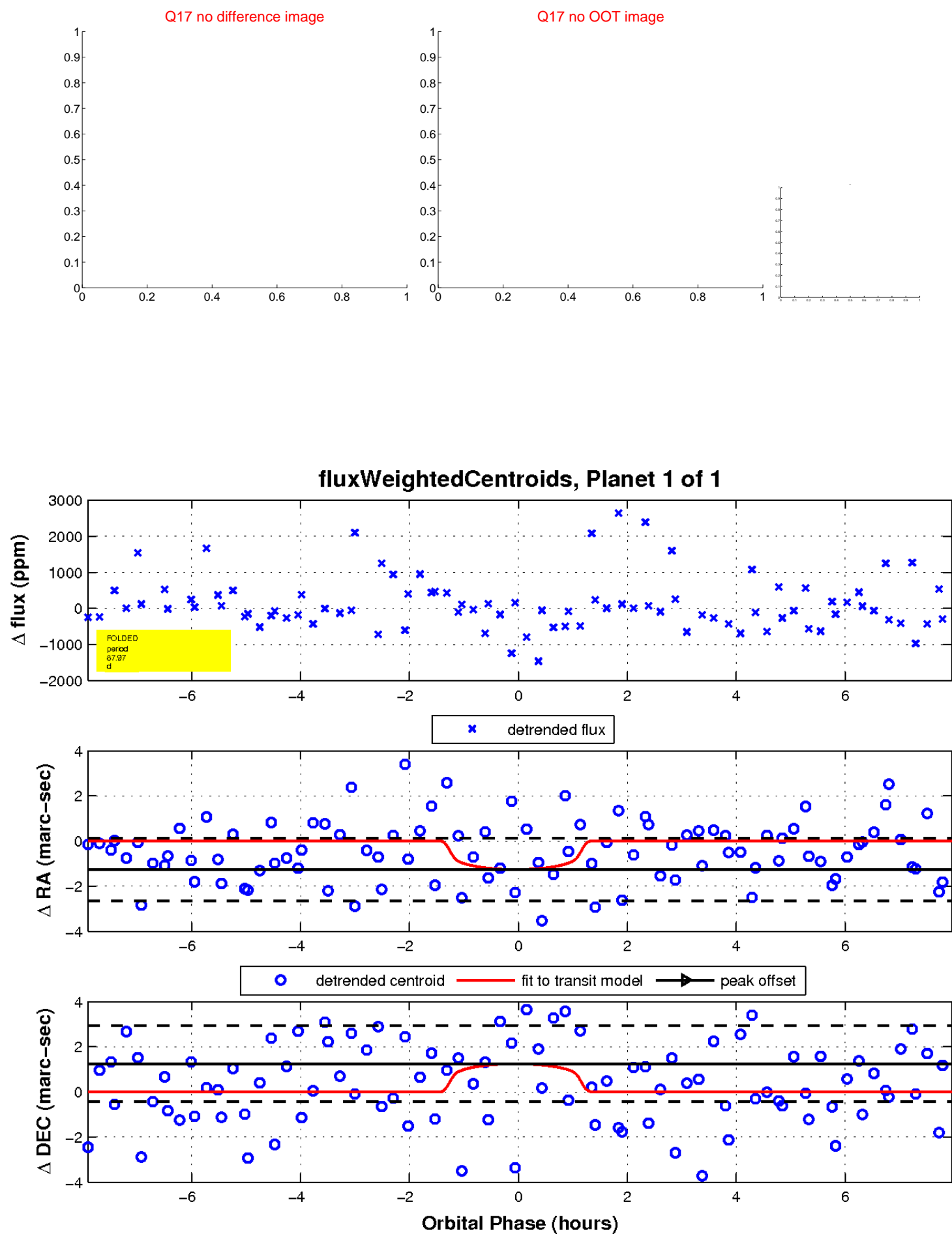
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

