

KIC 006034185

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})
006034185-01	OBS	No	1.465814	133.107746	239.0	1.500	7.5	6.3	2.94	11086	5.07	87846.85
006034185-02	OBS	No	1.465915	132.813077	996.8	2.500	7.6	-1.0	2.94	11086	9.56	87838.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006034185-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006034185-02	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

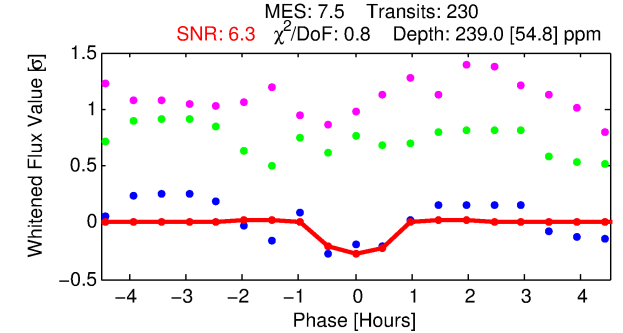
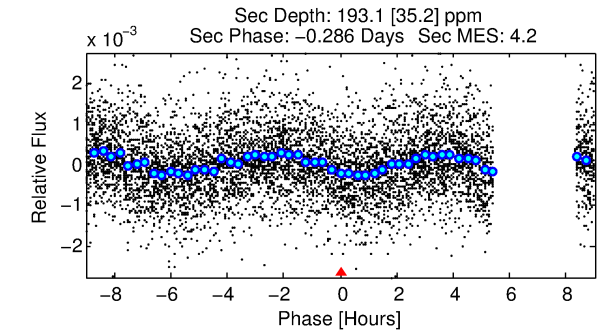
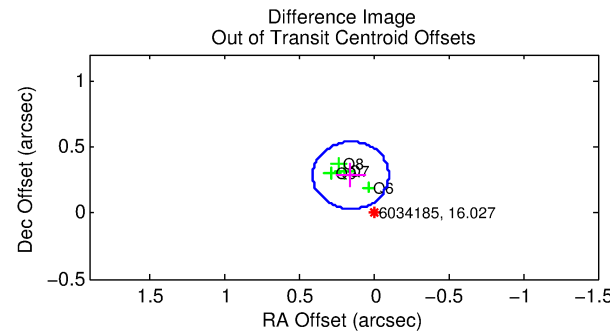
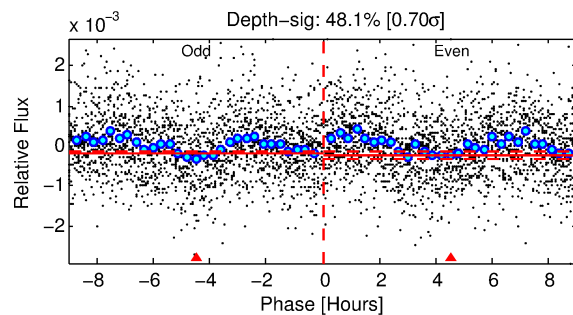
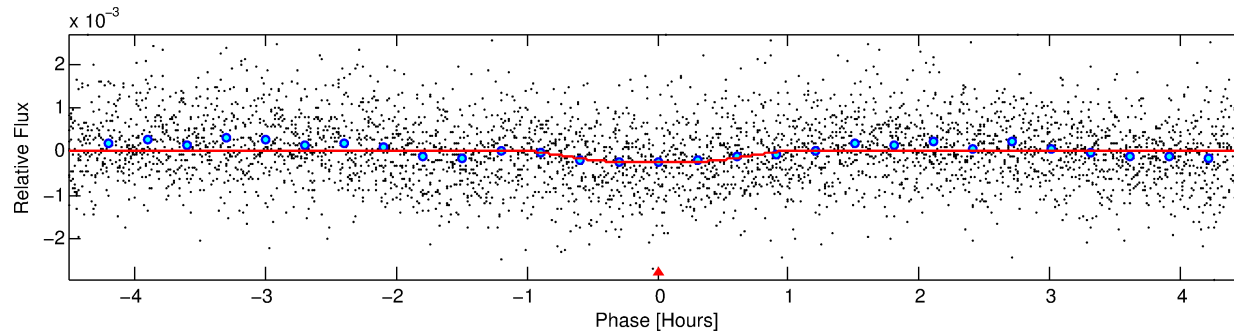
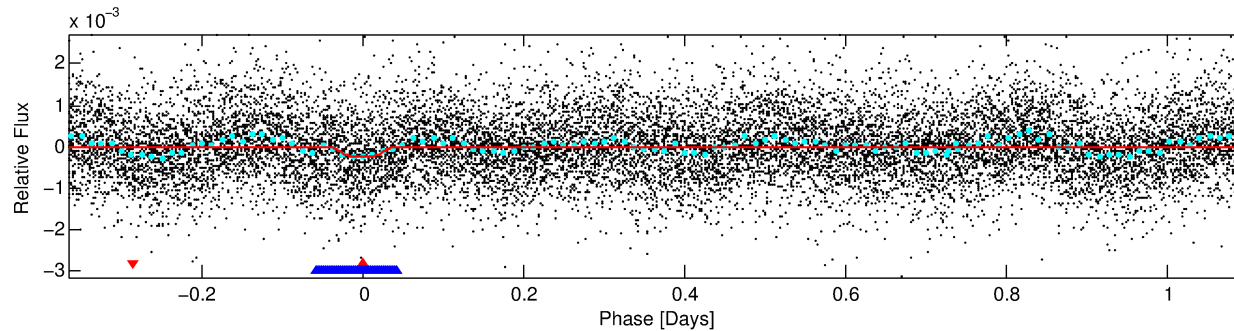
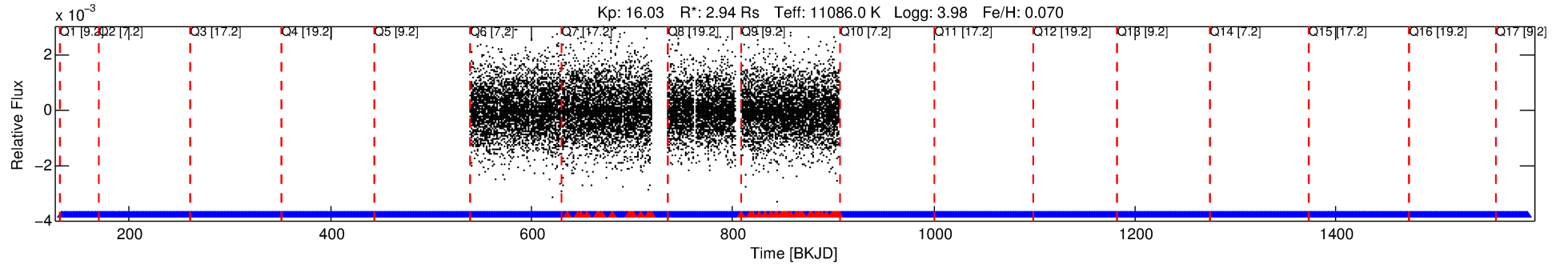
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006034185-01

No Significant Match Found

DV One-Page Summary

KIC: 6034185 Candidate: 1 of 2 Period: 1.466 d



DV Fit Results:

Period = 1.46581 [0.00002] d
Epoch = 133.1077 [0.0038] BKJD
Rp/R* = 0.0158 [0.0095]
a/R* = 4.30 [19.91]
b = 0.85 [1.67]
Seff = 87846.85 [46012.27]
Teq = 4390 [575] K
Rp = 5.07 [3.53] Re
a = 0.0364 [0.0116] AU
Ag = 5.49 [7.19] [0.62 σ]
Teffp = 10388 [3194] K [1.85 σ]

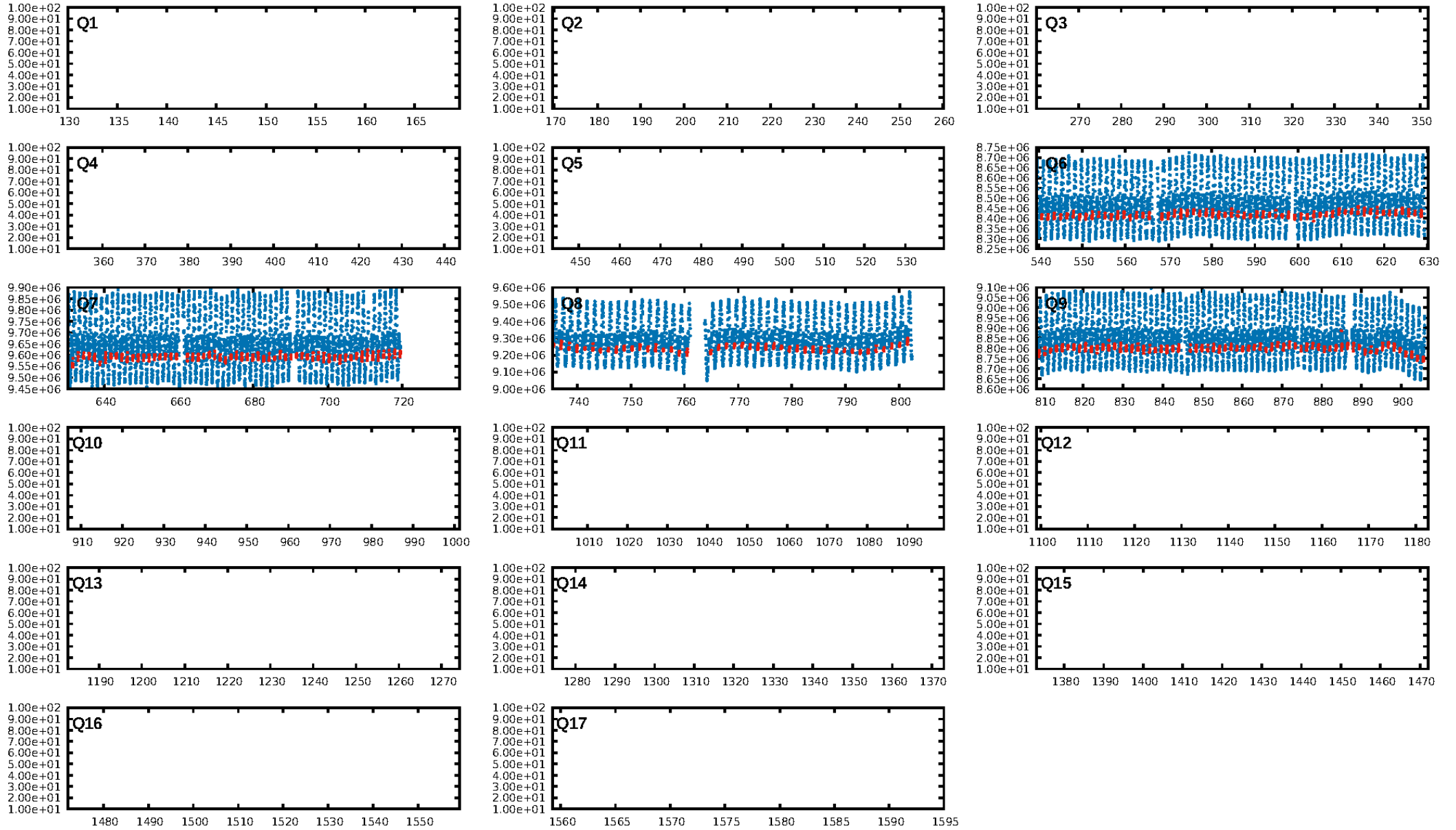
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.78e-13
RollingBand-fgt: 0.80 [185/230]
GhostDiagnostic-chr: -12.22
Centroid-sig: 53.6%
Centroid-so: 1.420 arcsec [0.84 σ]
OotOffset-rm: 0.323 arcsec [3.80 σ]
KicOffset-rm: 0.159 arcsec [1.79 σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.00 [0/4]

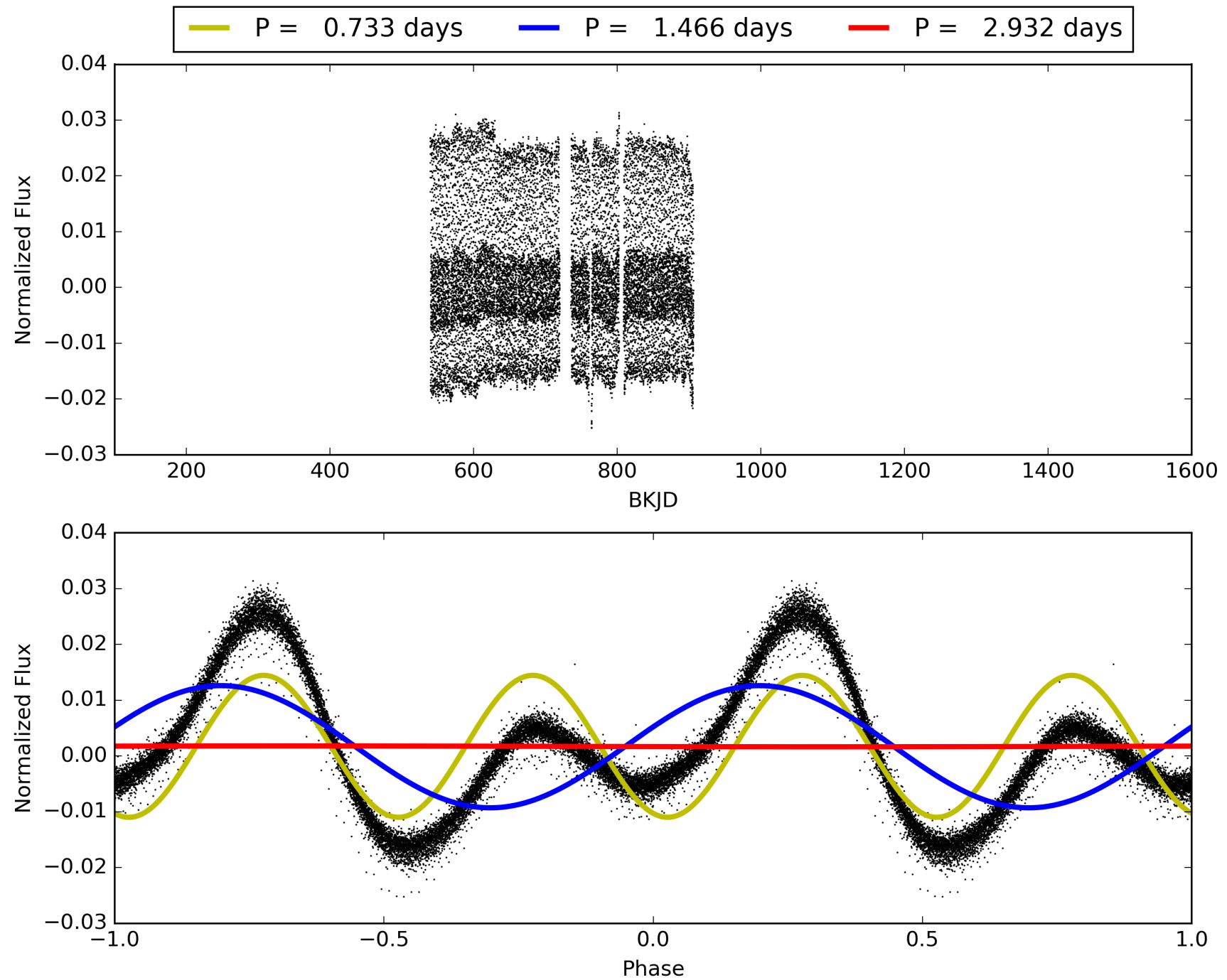
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:36:04 Z

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

TCE 006034185-01, PDC Light Curves

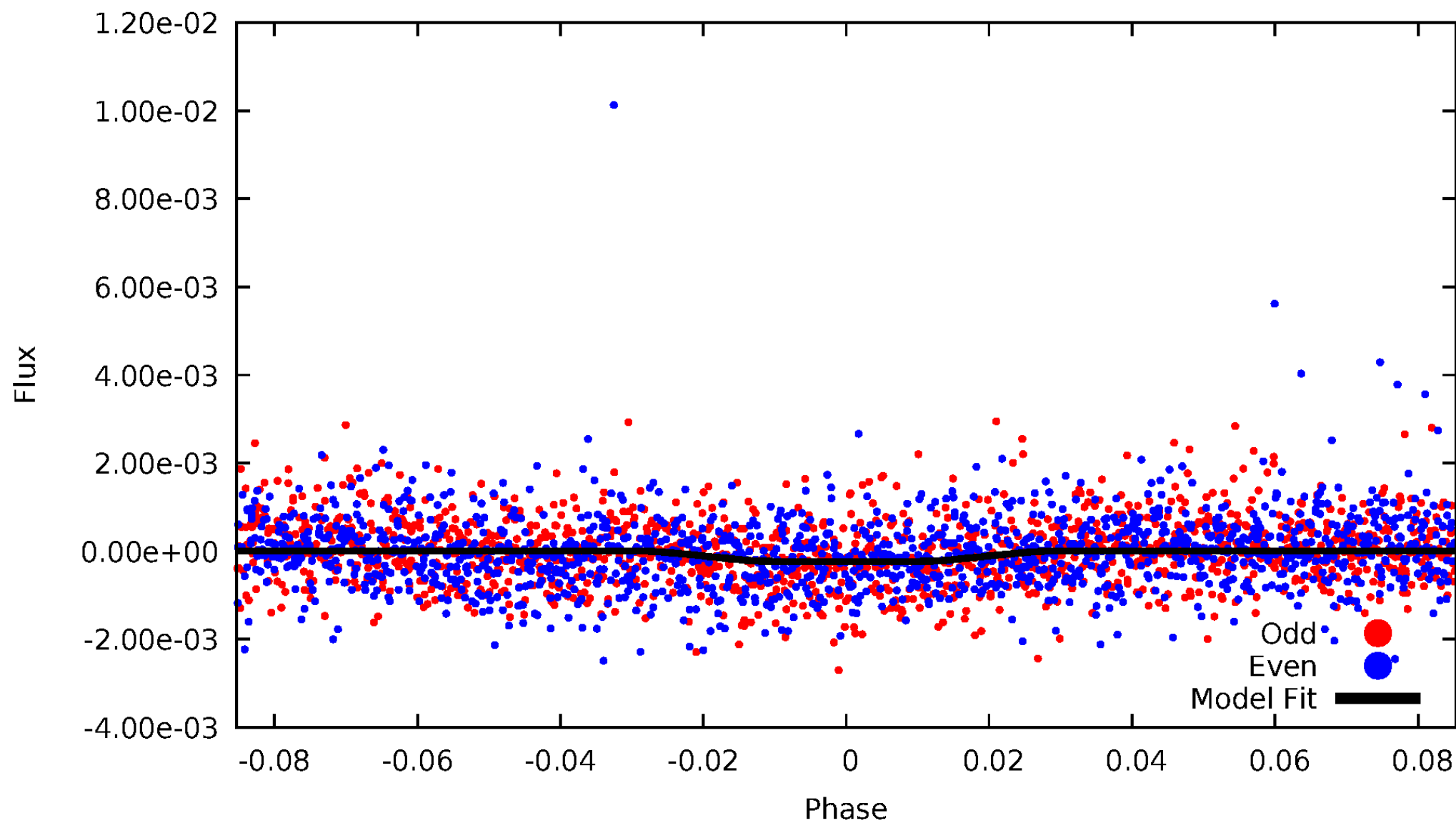


TCE 006034185-01



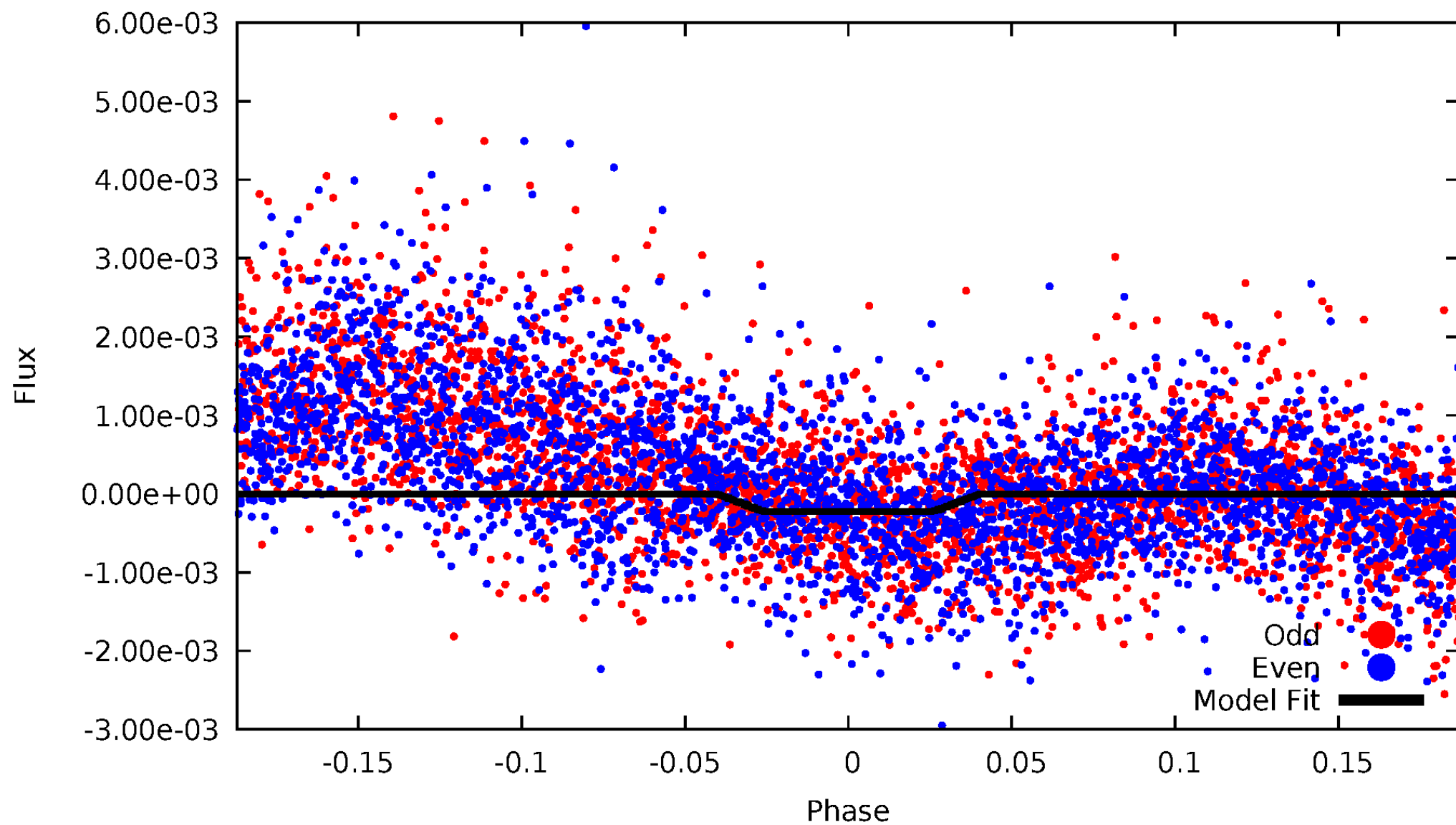
DV Odd/Even

TCE 006034185-01



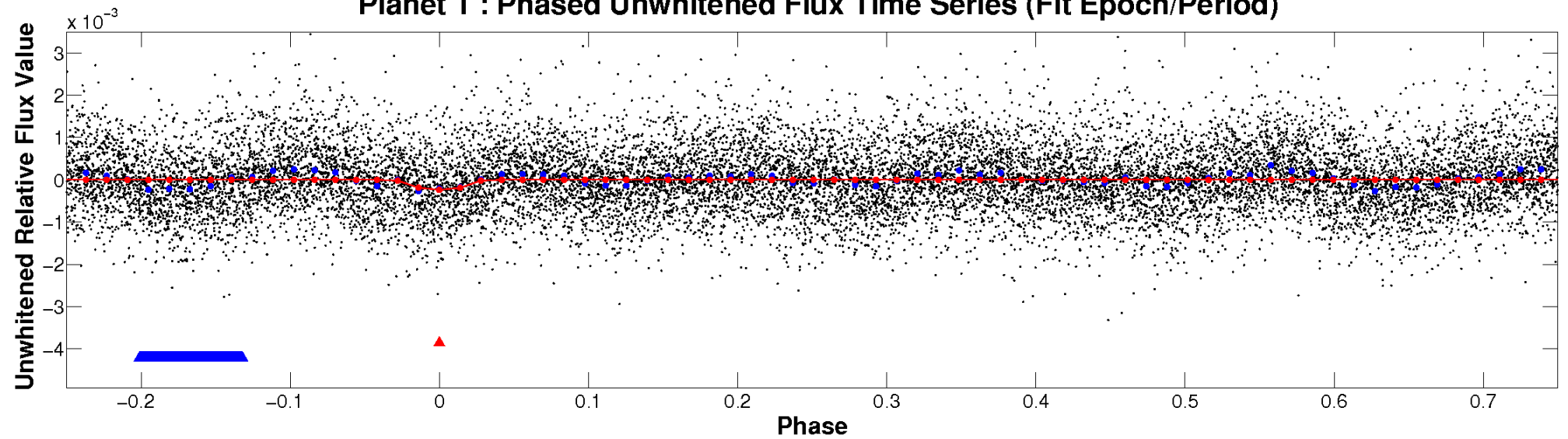
ALT Odd/Even

TCE 006034185-01

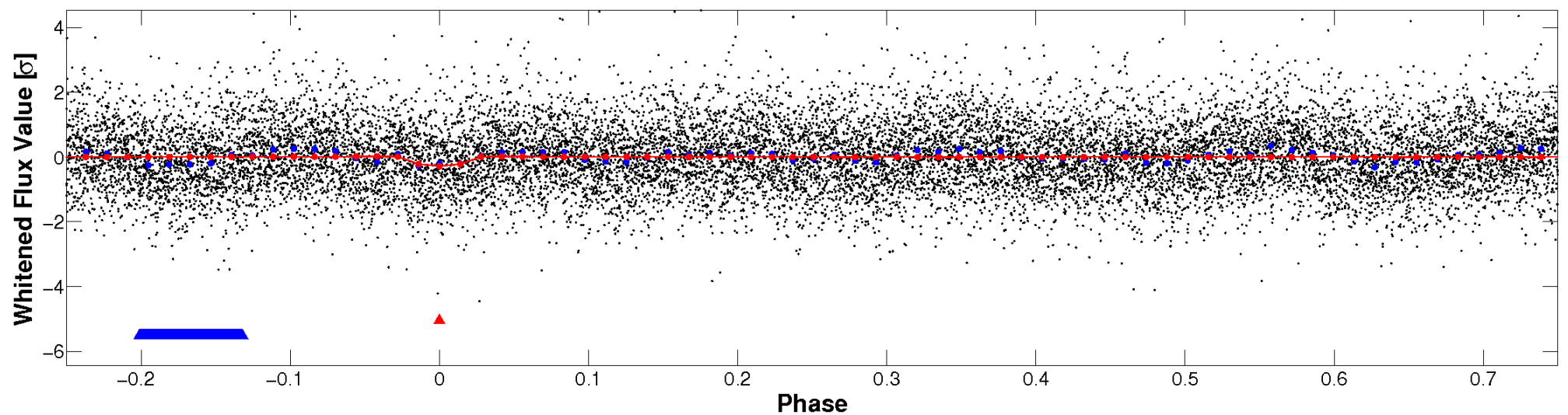


Non-Whitened Vs. Whitened Light Curve

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

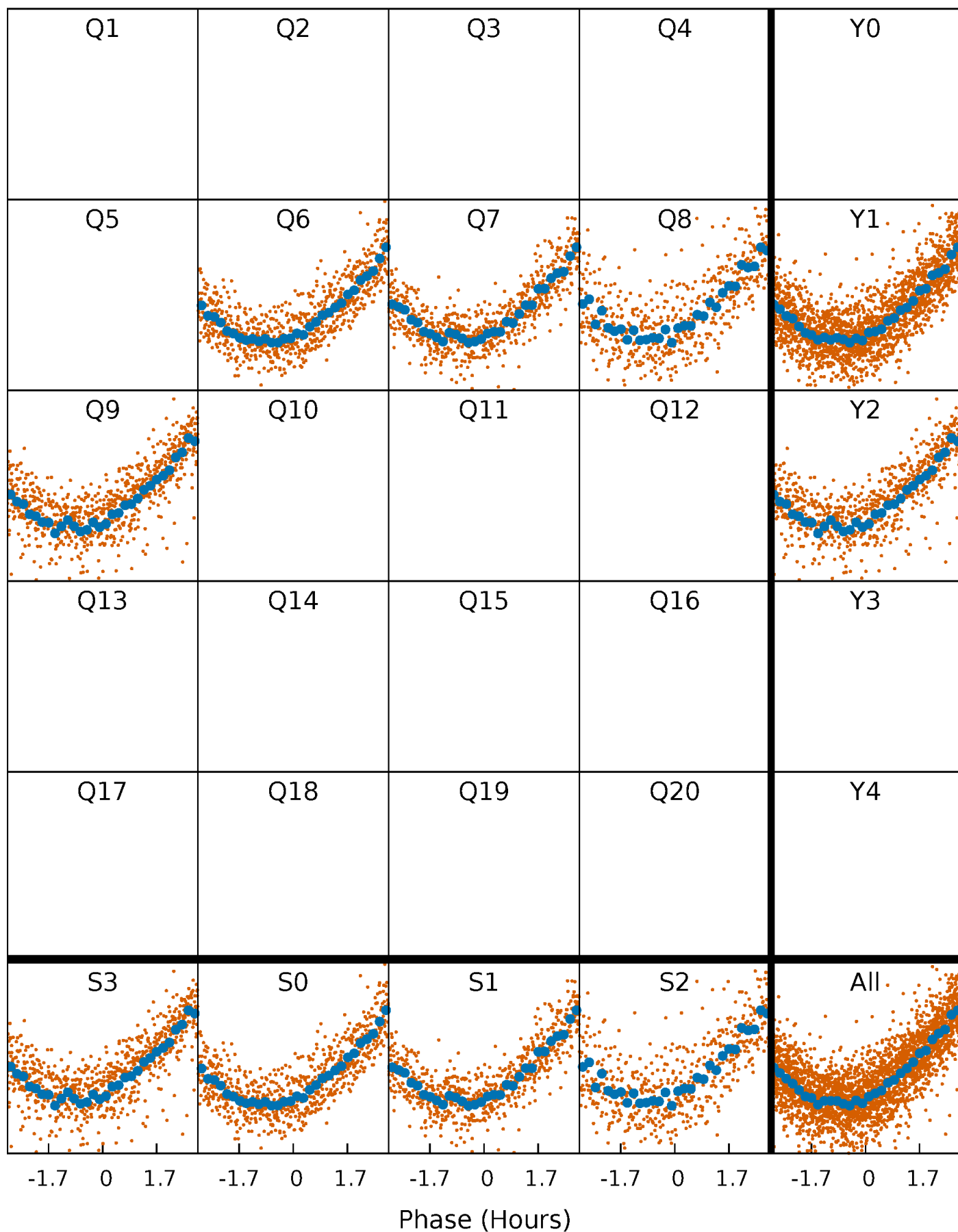


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 006034185-01 P= 1.465814 Days $T_0=133.107746$ (BKJD)



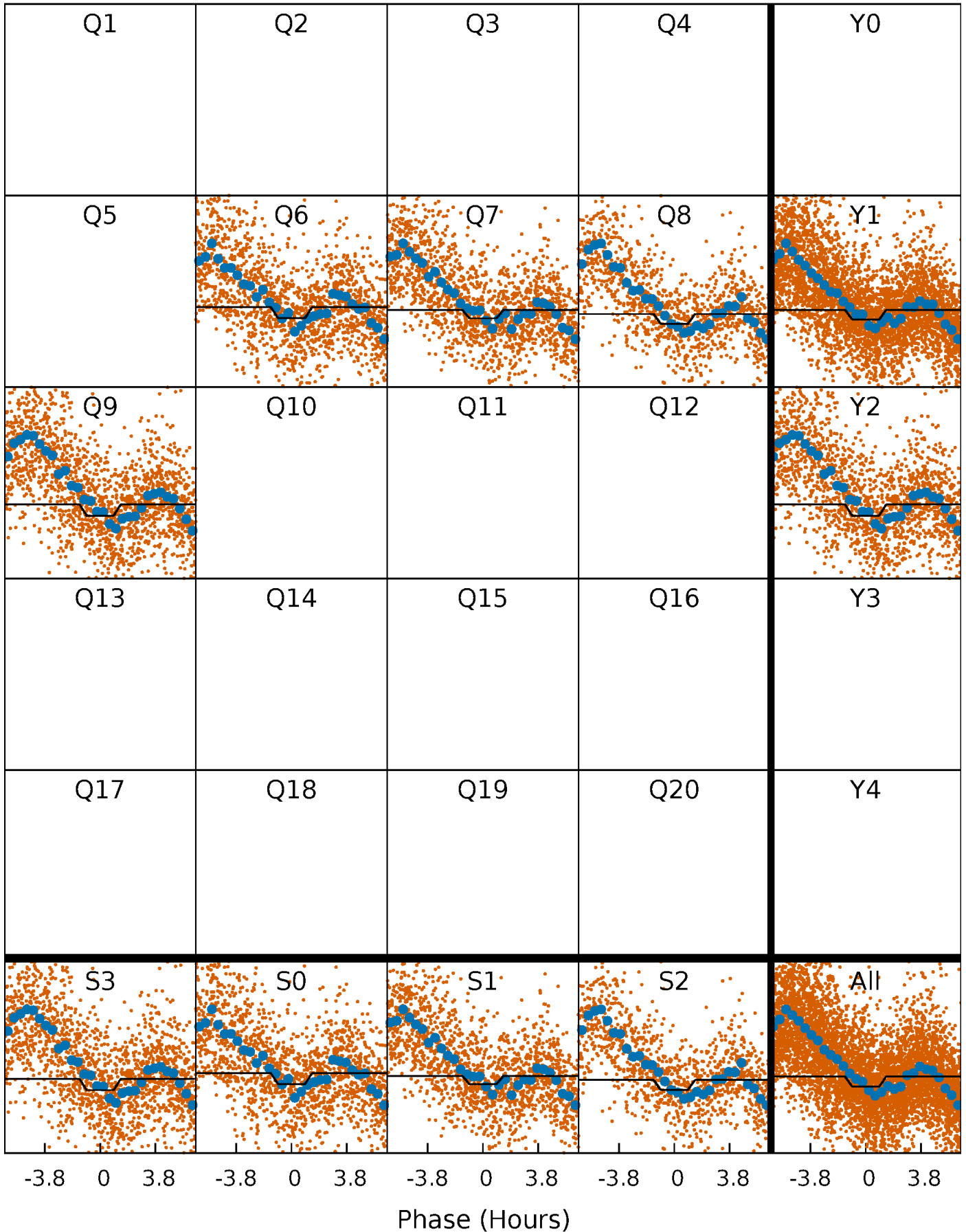
DV Quarter-Phased Transit Curves

TCE 006034185-01 P= 1.465814 Days $T_0=133.107746$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

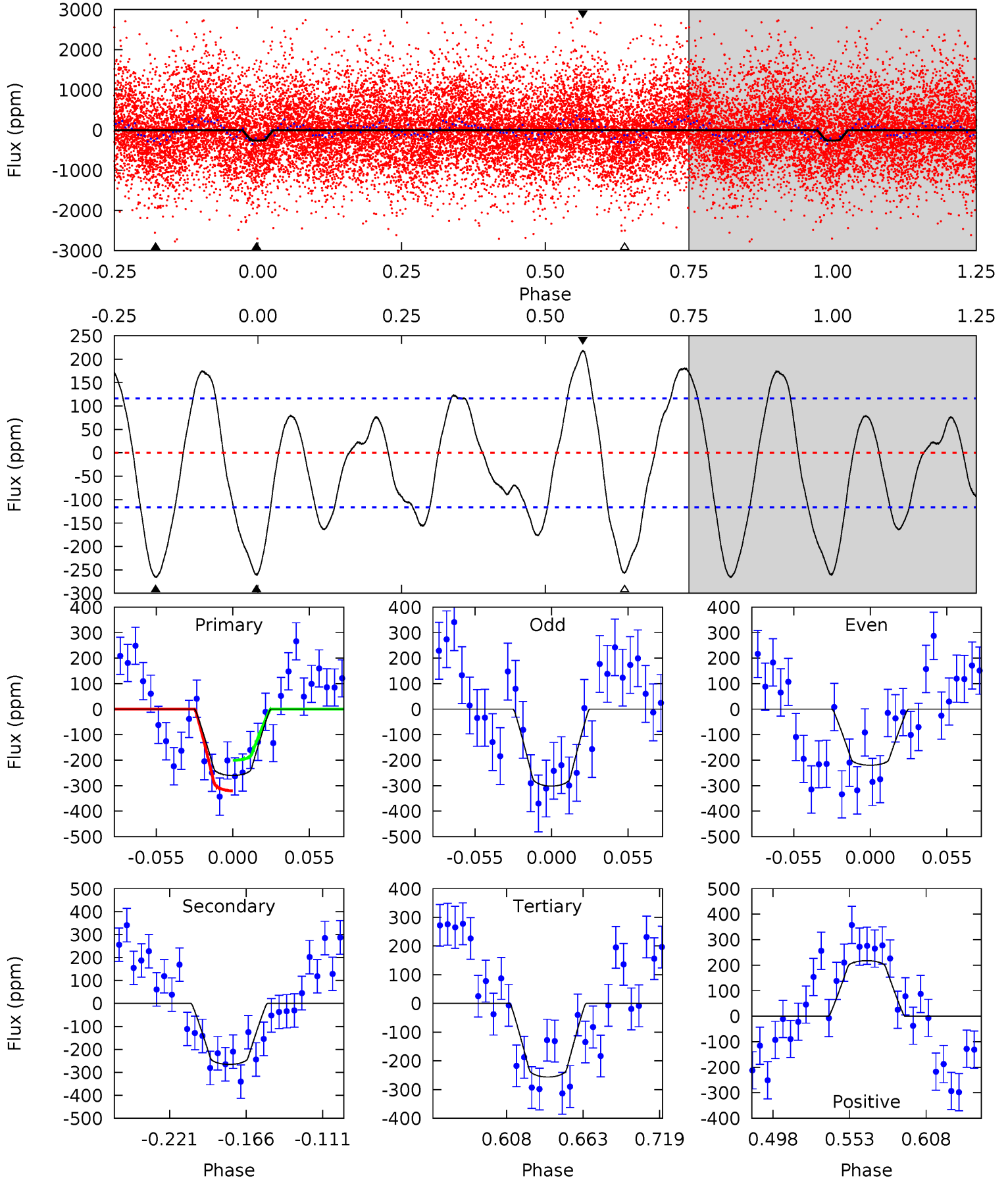
TCE 006034185-01 P= 1.465685 Days $T_0=133.058405$ (BKJD)



DV Model-Shift Uniqueness Test

006034185-01, P = 1.465814 Days, E = 133.107746 Days

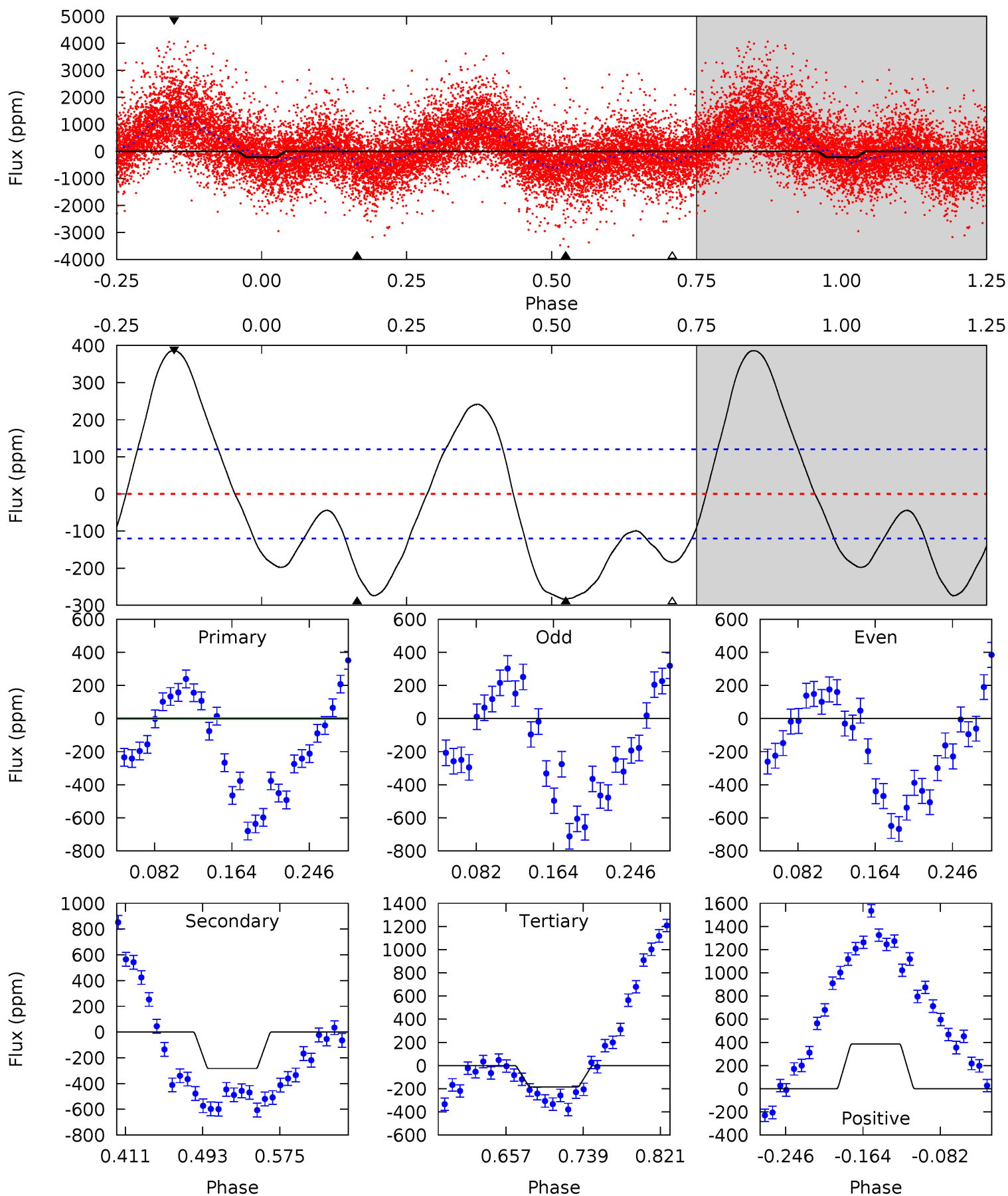
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	10.7	10.3	8.76	4.69	1.92	4.75	0.16	1.72	0.36	1.92	1.65	1.02	0.45	2.42



Alt Model-Shift Uniqueness Test

006034185-01, P = 1.465685 Days, E = 133.058405 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.15	10.9	7.05	14.8	4.61	1.74	6.89	1.10	-6.65	3.80	-3.94	0.36	1.05	0.58	6.11



Stellar Parameters For KIC 006034185

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	11086^{+348}_{-522}	$3.980^{+0.279}_{-0.150}$	$0.070^{+0.150}_{-0.650}$	$2.936^{+0.605}_{-1.037}$	$3.002^{+0.193}_{-0.771}$	$0.167^{+0.353}_{-0.064}$
	+3%/-5%	+7%/-4%	+214%/-929%	+21%/-35%	+6%/-26%	+211%/-38%
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 006034185-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-265 ± 25	$5.15^{+2.90}_{-2.81}$	6061^{+470}_{-533}	10702^{+10608}_{-2969}	$7.288^{+27.210}_{-4.359}$
Alt.	-283 ± 26	$4.60^{+3.22}_{-2.51}$	6060^{+438}_{-578}	11595^{+15020}_{-3538}	$9.107^{+34.614}_{-5.750}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

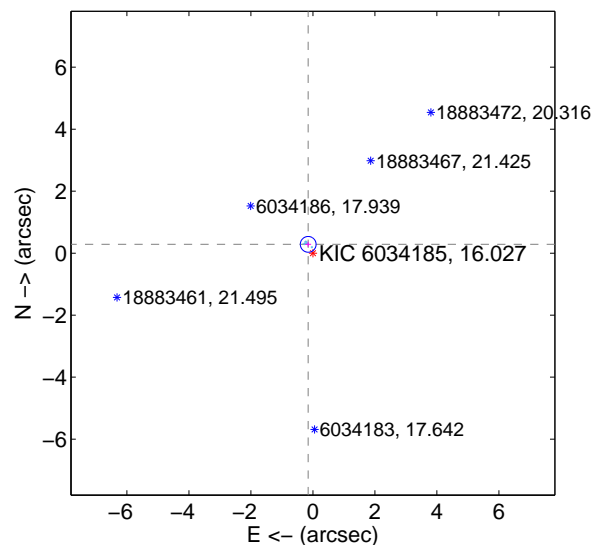
Supplemental centroid analysis for 006034185-01. Kepler magnitude: 16.03. Transit SNR 6.31

There are 4 quarters with good PRF difference image offsets

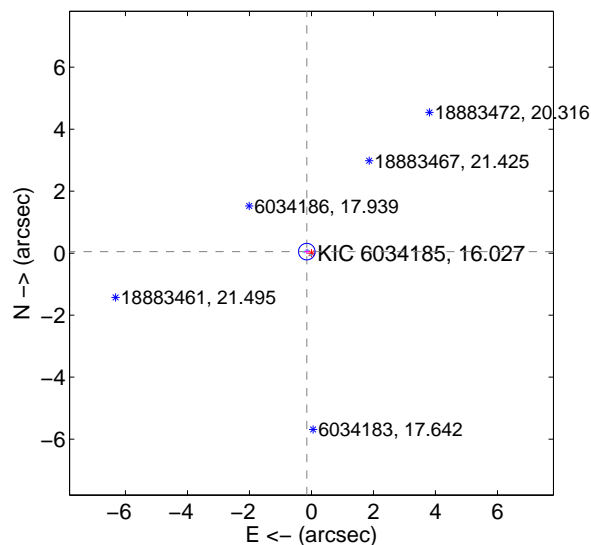
The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.323 \pm 0.085	3.80	0.151 \pm 0.096	0.285 \pm 0.081
PRF-fit source offset from KIC position	0.159 \pm 0.089	1.79	0.151 \pm 0.085	0.050 \pm 0.073
photometric centroid source offset	1.42 \pm 1.70	0.84	0.10 \pm 1.58	-1.42 \pm 1.70

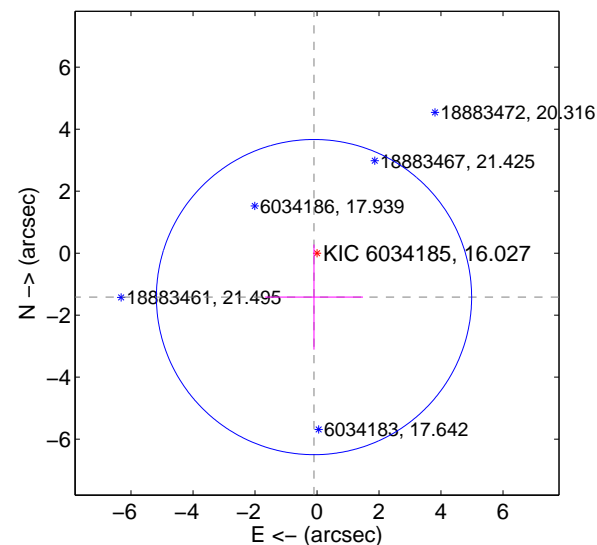
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

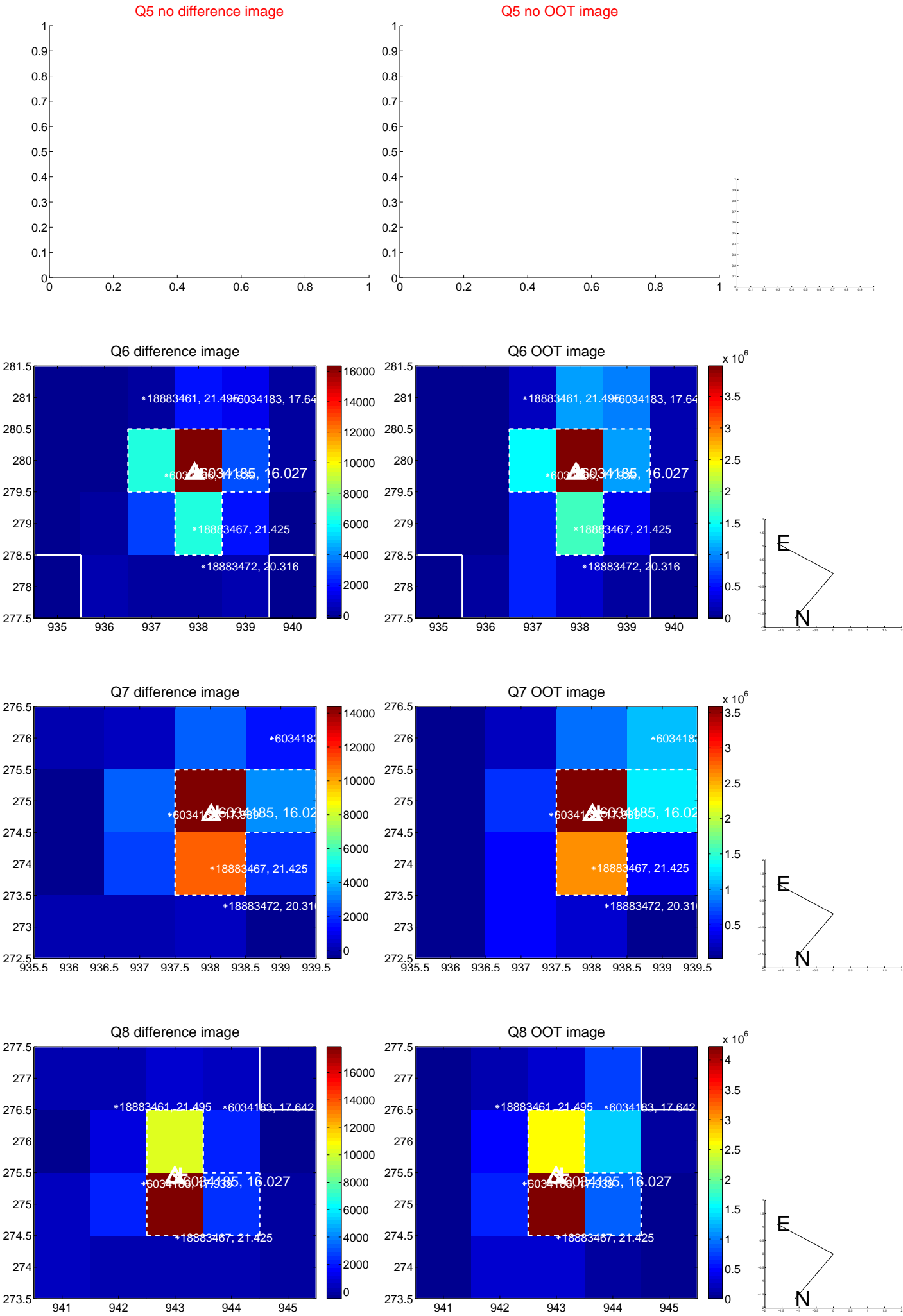


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

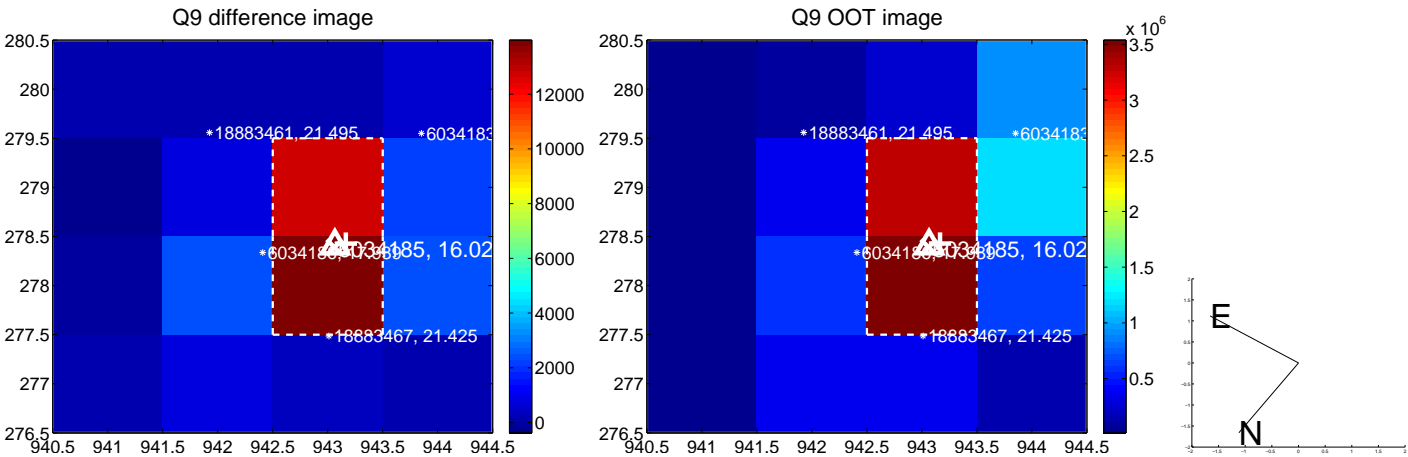
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



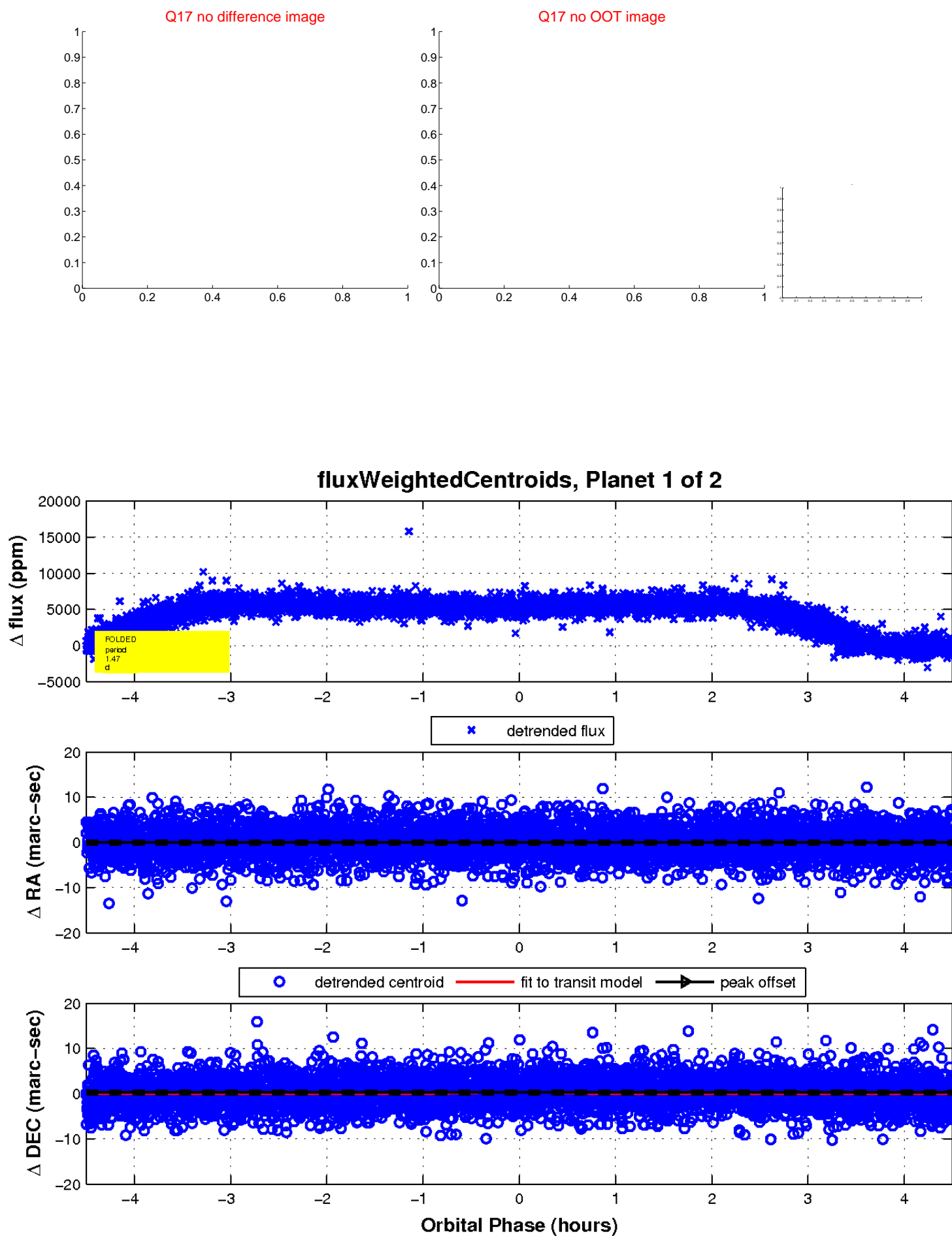
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

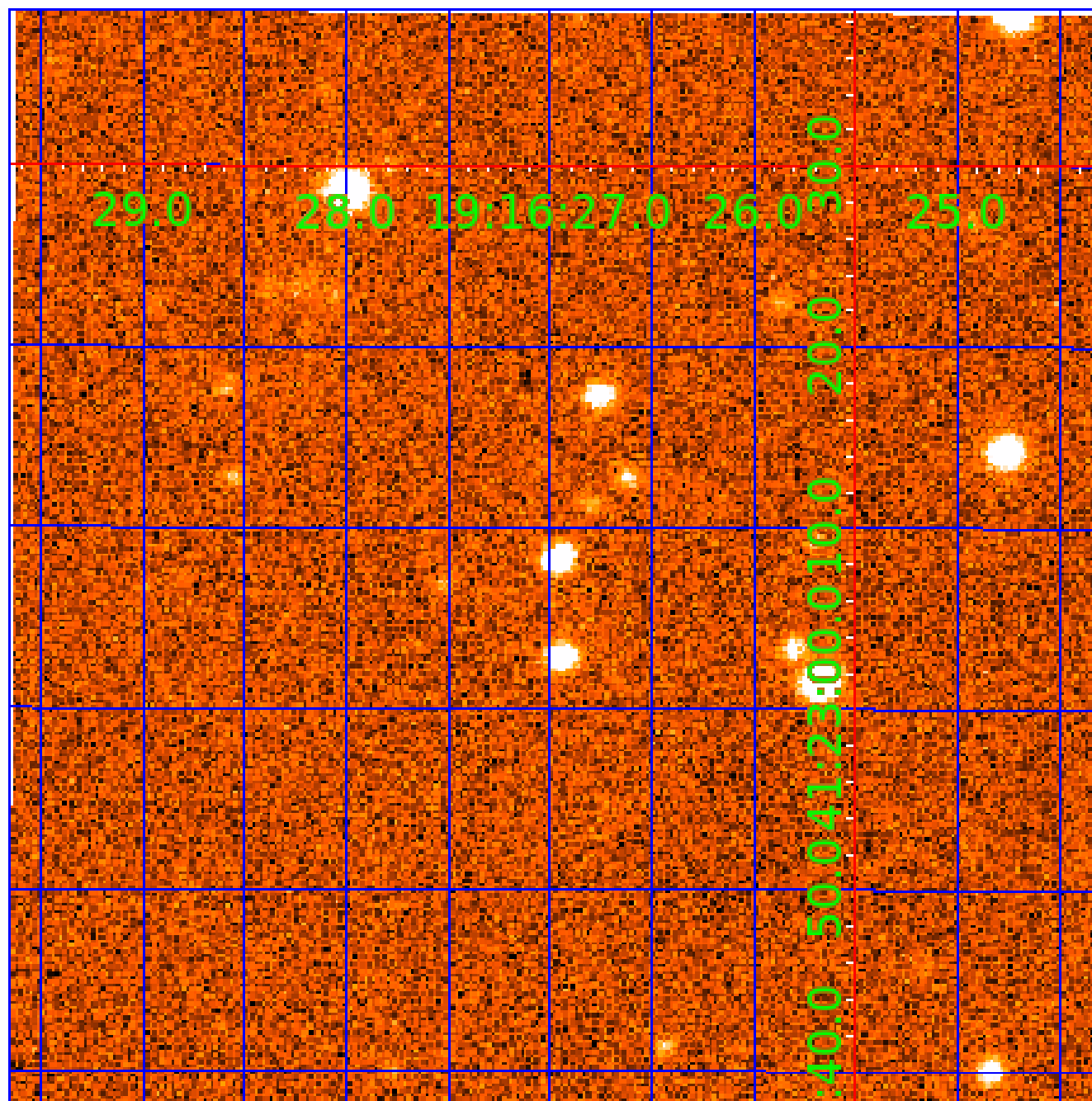


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006034185

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})
006034185-01	OBS	No	1.465814	133.107746	239.0	1.500	7.5	6.3	2.94	11086	5.07	87846.85
006034185-02	OBS	No	1.465915	132.813077	996.8	2.500	7.6	-1.0	2.94	11086	9.56	87838.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006034185-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006034185-02	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

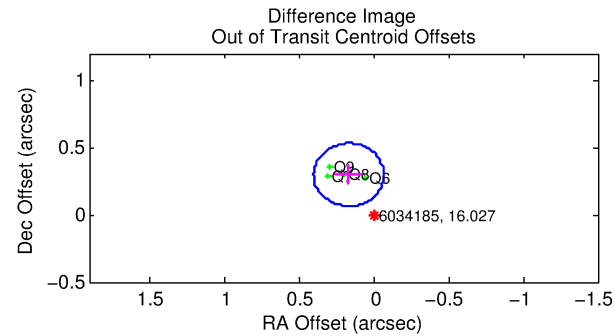
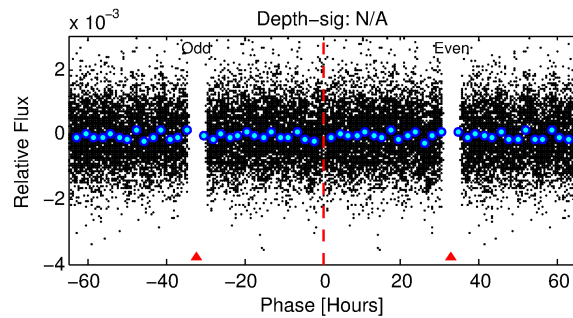
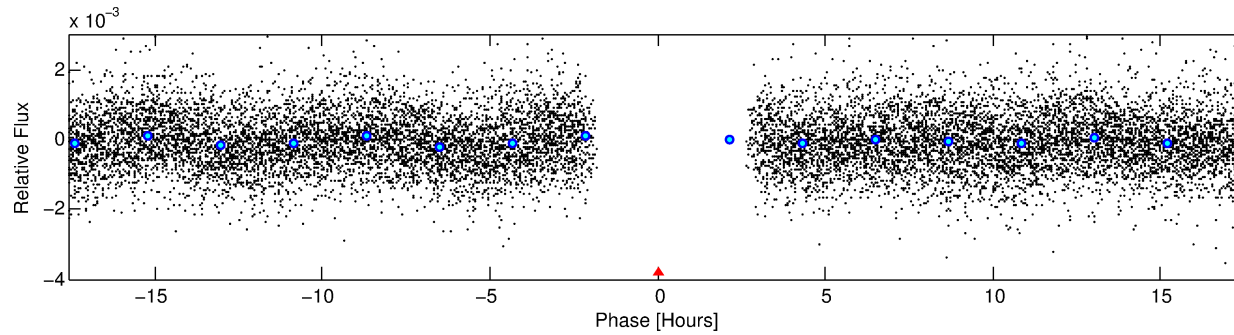
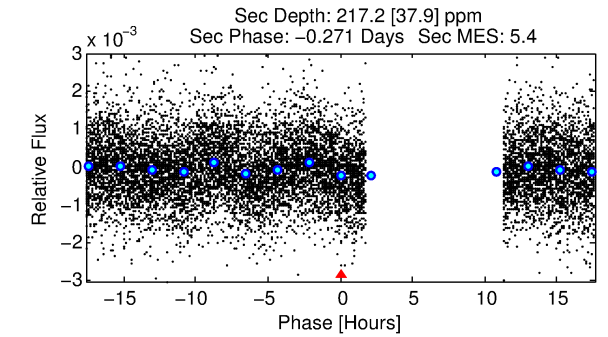
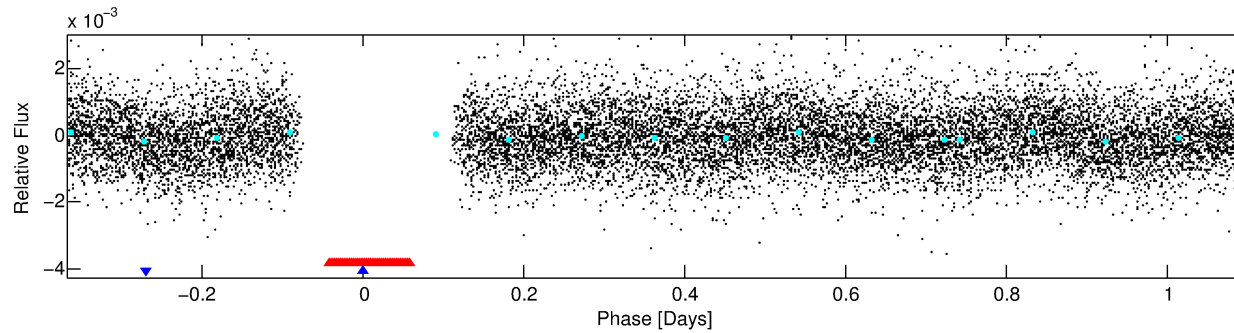
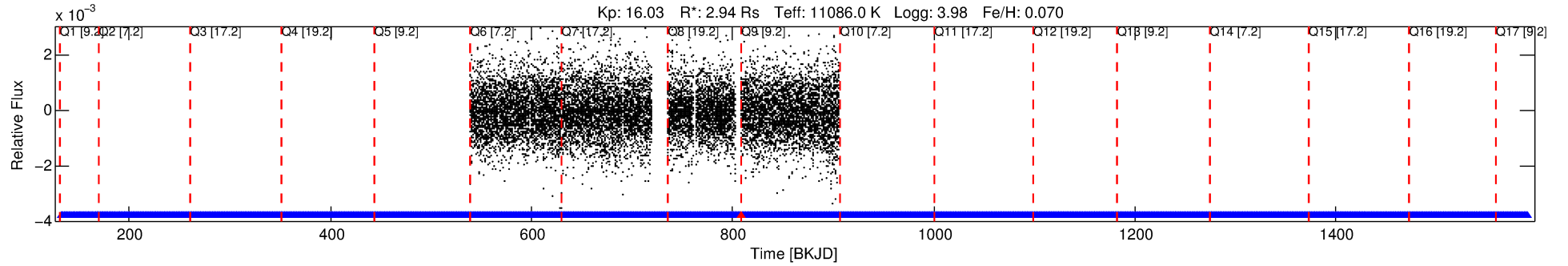
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006034185-02

No Significant Match Found

DV One-Page Summary

KIC: 6034185 Candidate: 2 of 2 Period: 1.466 d



TPS TCE Results:

Period = 1.46592 d
Epoch = 132.8131 BKJD

DV fit results are unavailable

DV Diagnostic Results:

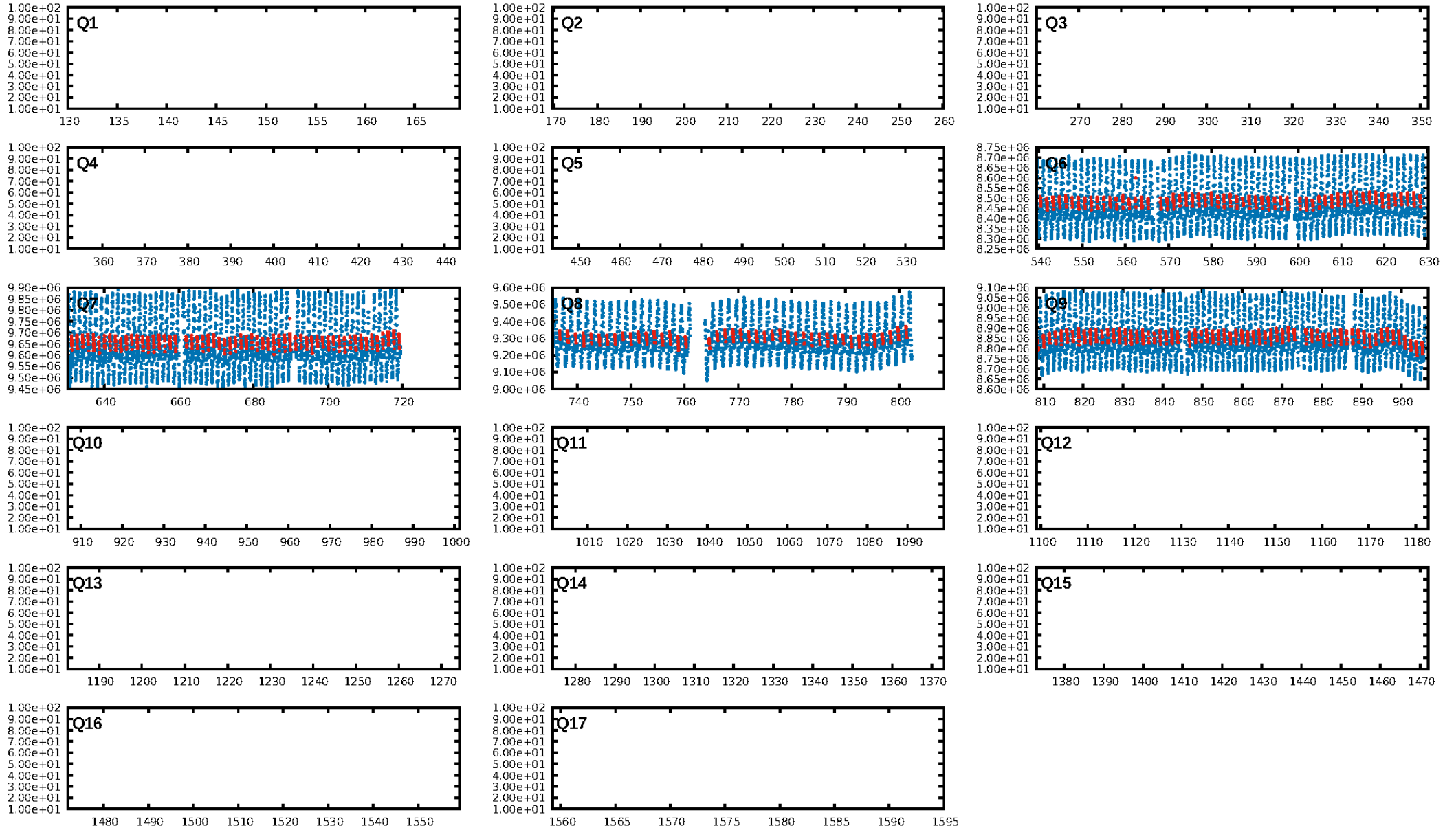
ShortPeriod-sig: 0.1% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.98e-14
RollingBand-fgt: 1.00 [231/232]
GhostDiagnostic-chr: -0.1951

Centroid-sig: 1.8%
Centroid-so: 0.348 arcsec [10.03 σ]
OotOffset-rm: 0.341 arcsec [4.37 σ]
KicOffset-rm: 0.206 arcsec [2.63 σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.00 [0/4]

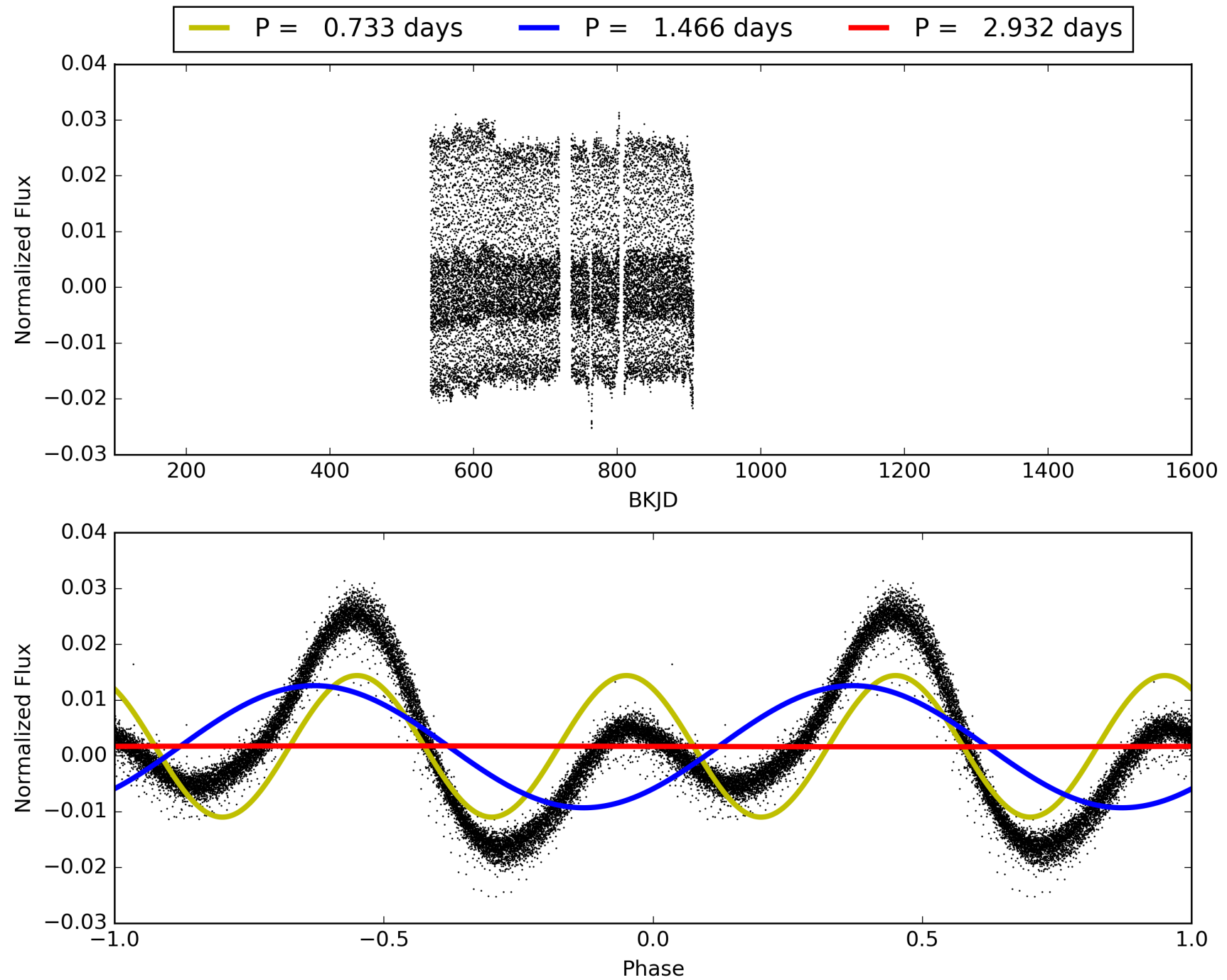
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:36:12 Z

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

TCE 006034185-02, PDC Light Curves

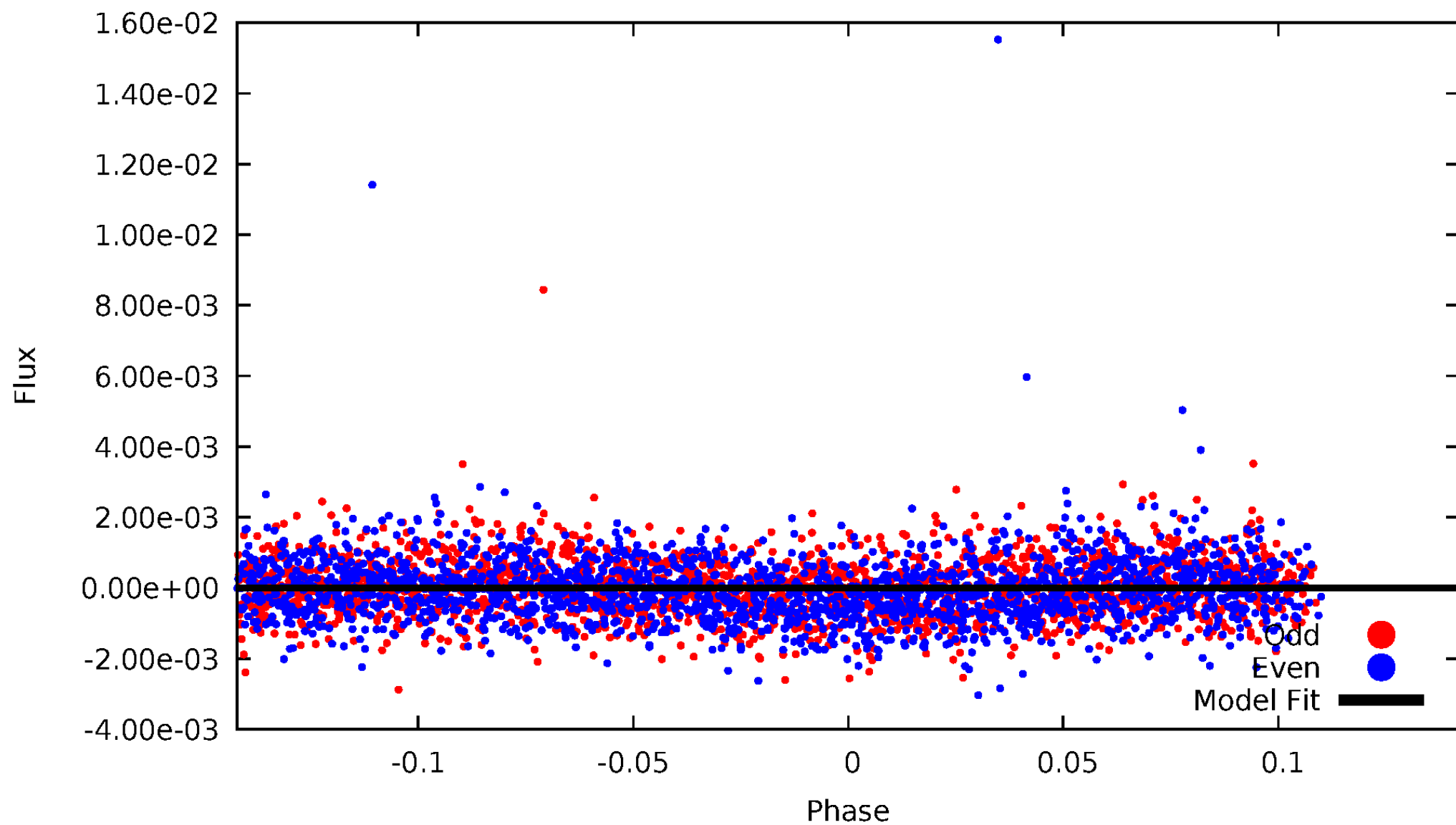


TCE 006034185-02



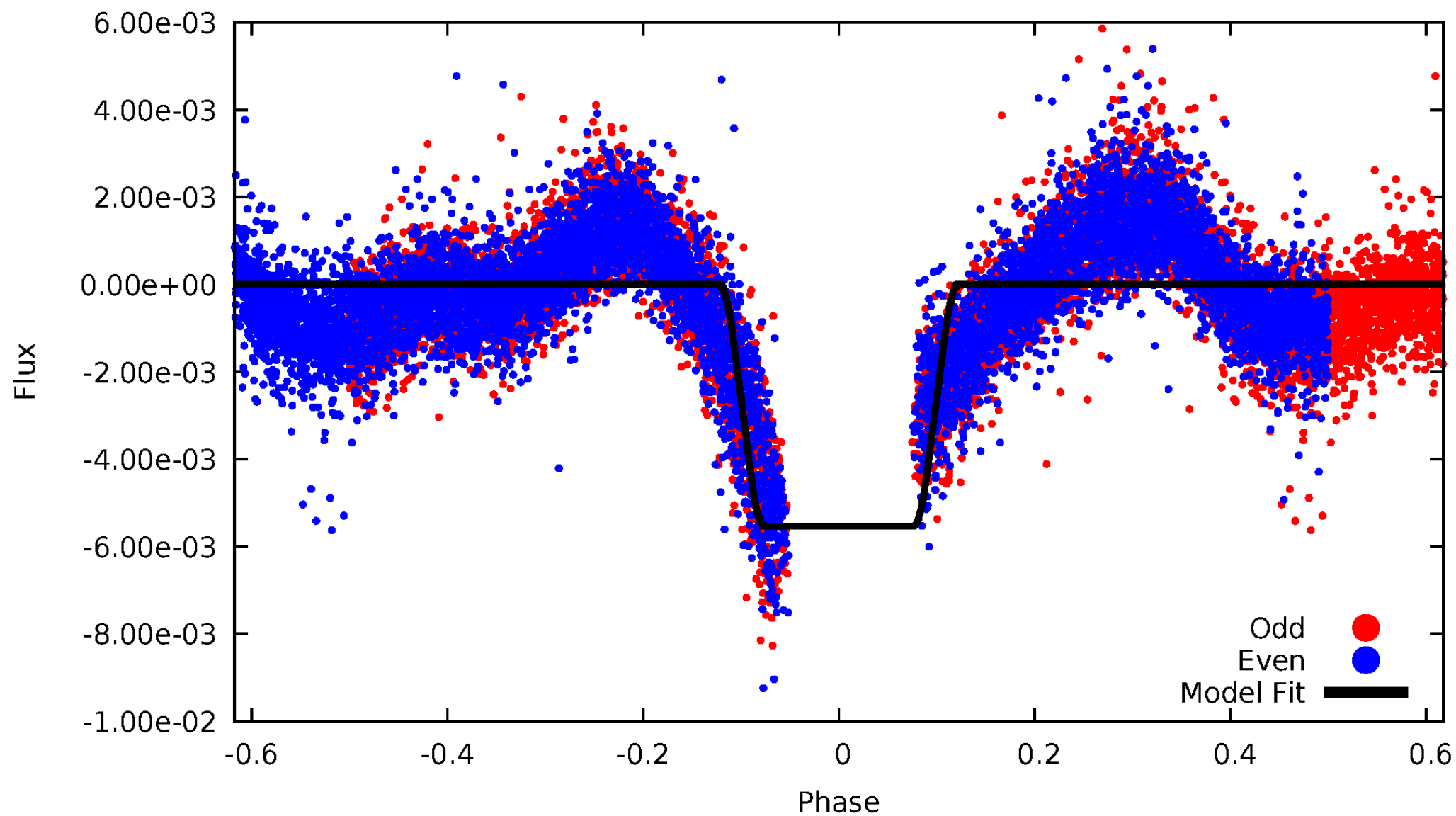
DV Odd/Even

TCE 006034185-02



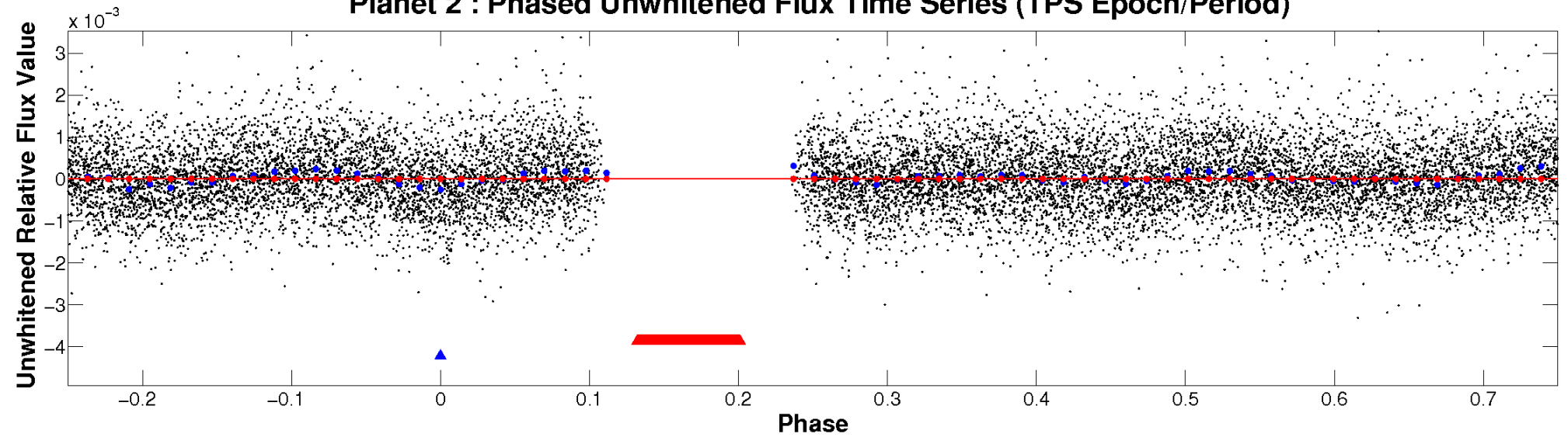
ALT Odd/Even

TCE 006034185-02

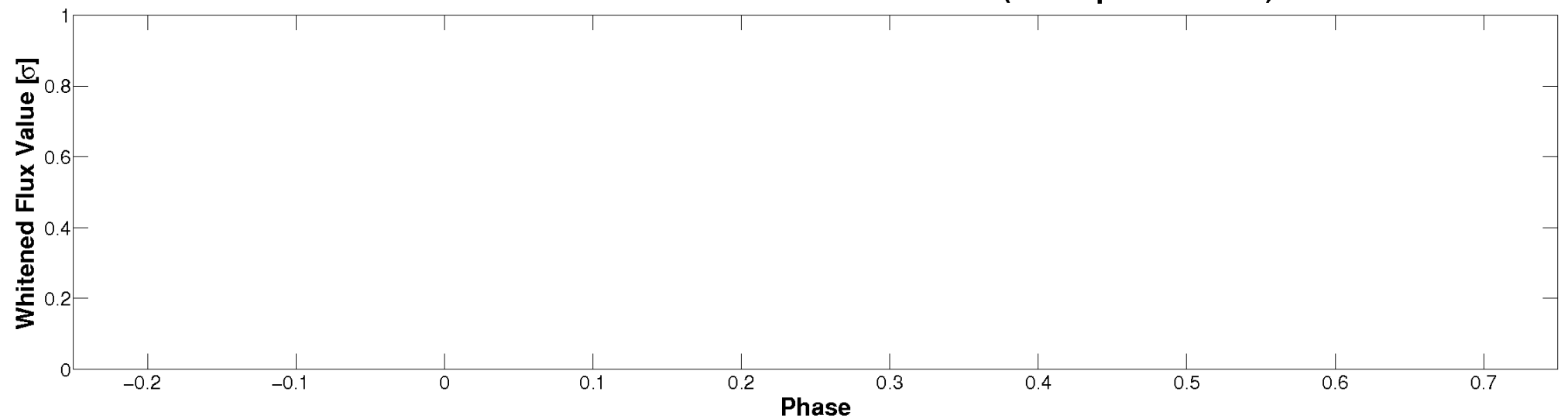


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

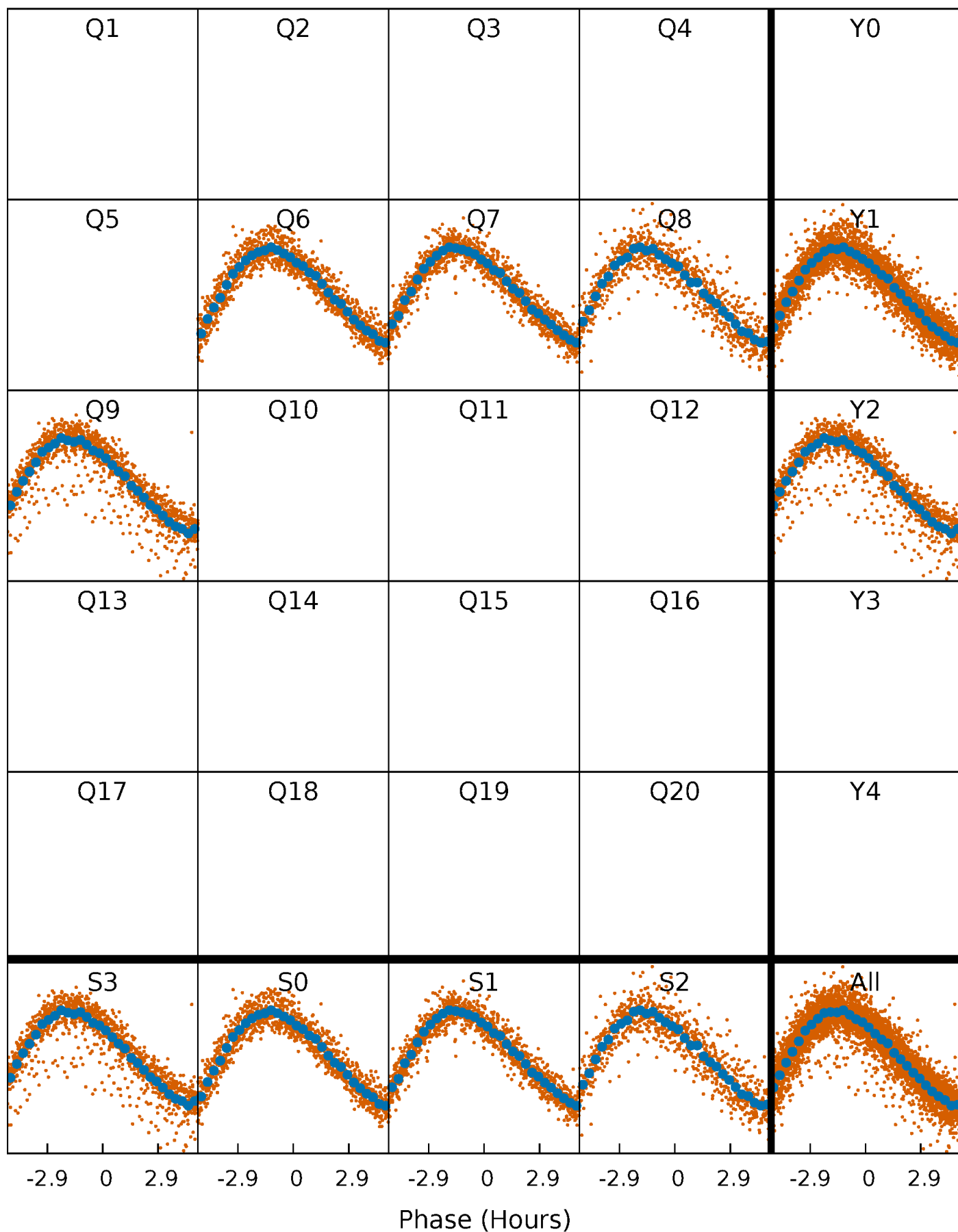


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



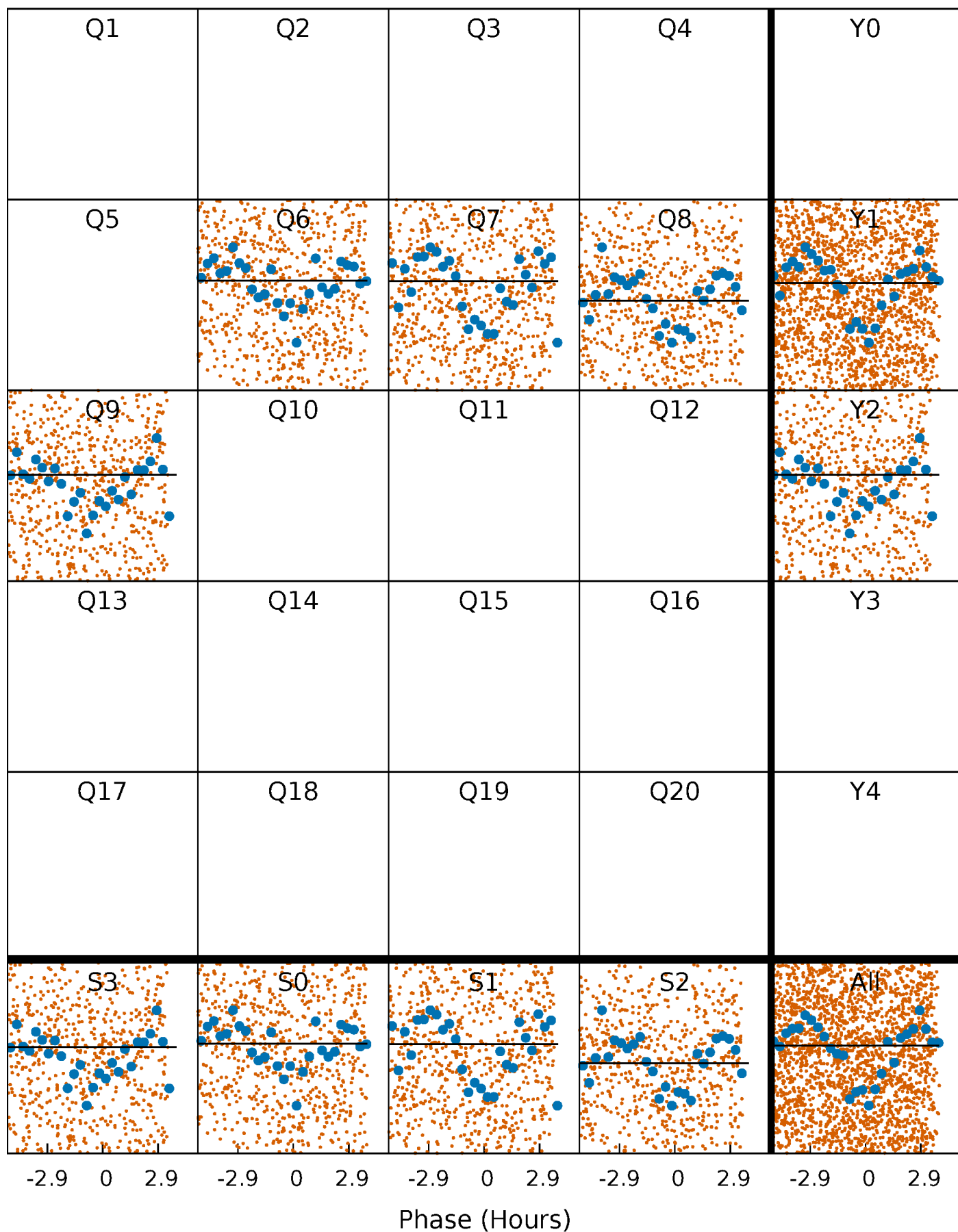
PDC Quarter-Phased Transit Curves

TCE 006034185-02 $P = 1.465915$ Days $T_0 = 132.813077$ (BKJD)



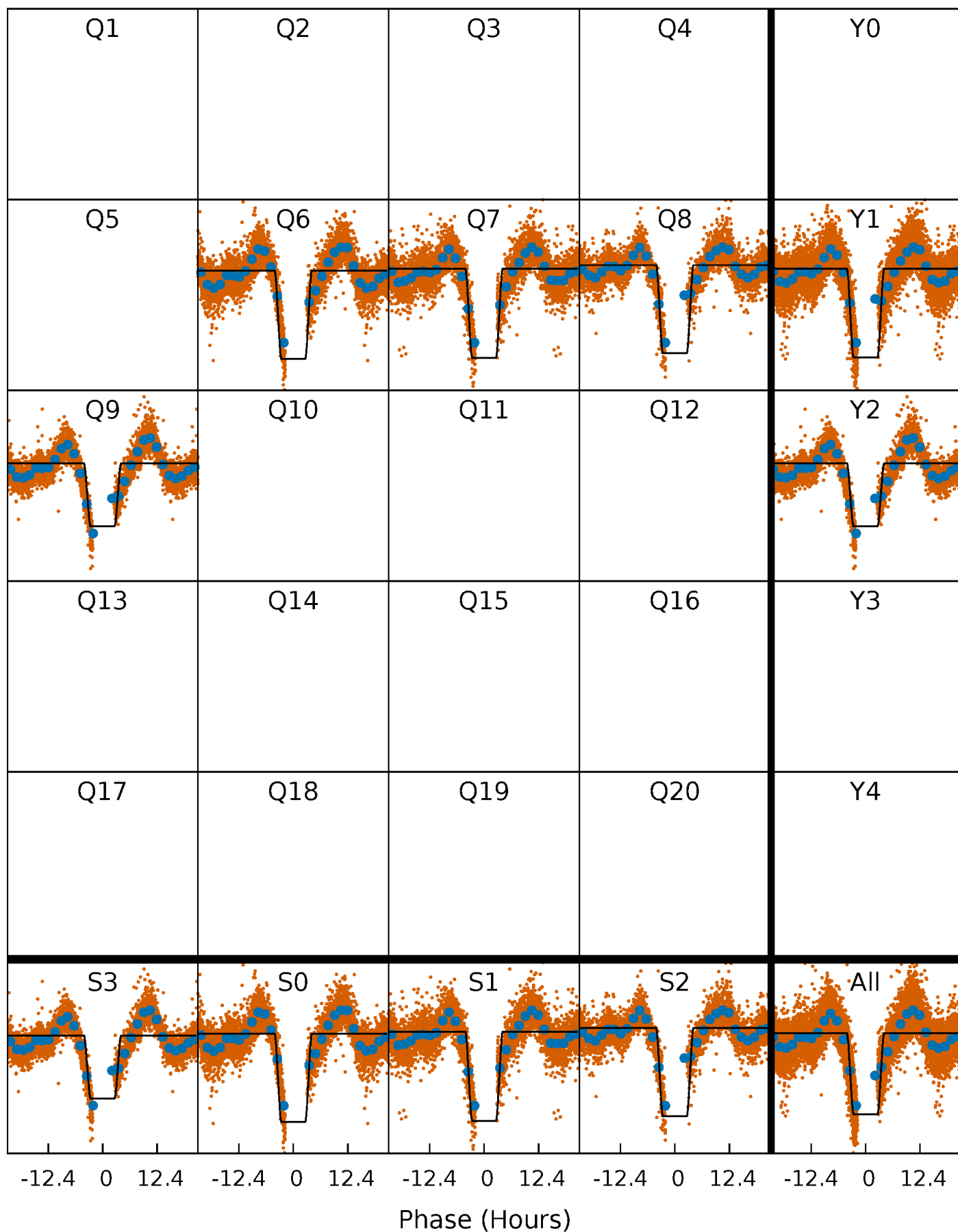
DV Quarter-Phased Transit Curves

TCE 006034185-02 P= 1.465915 Days $T_0=132.813077$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

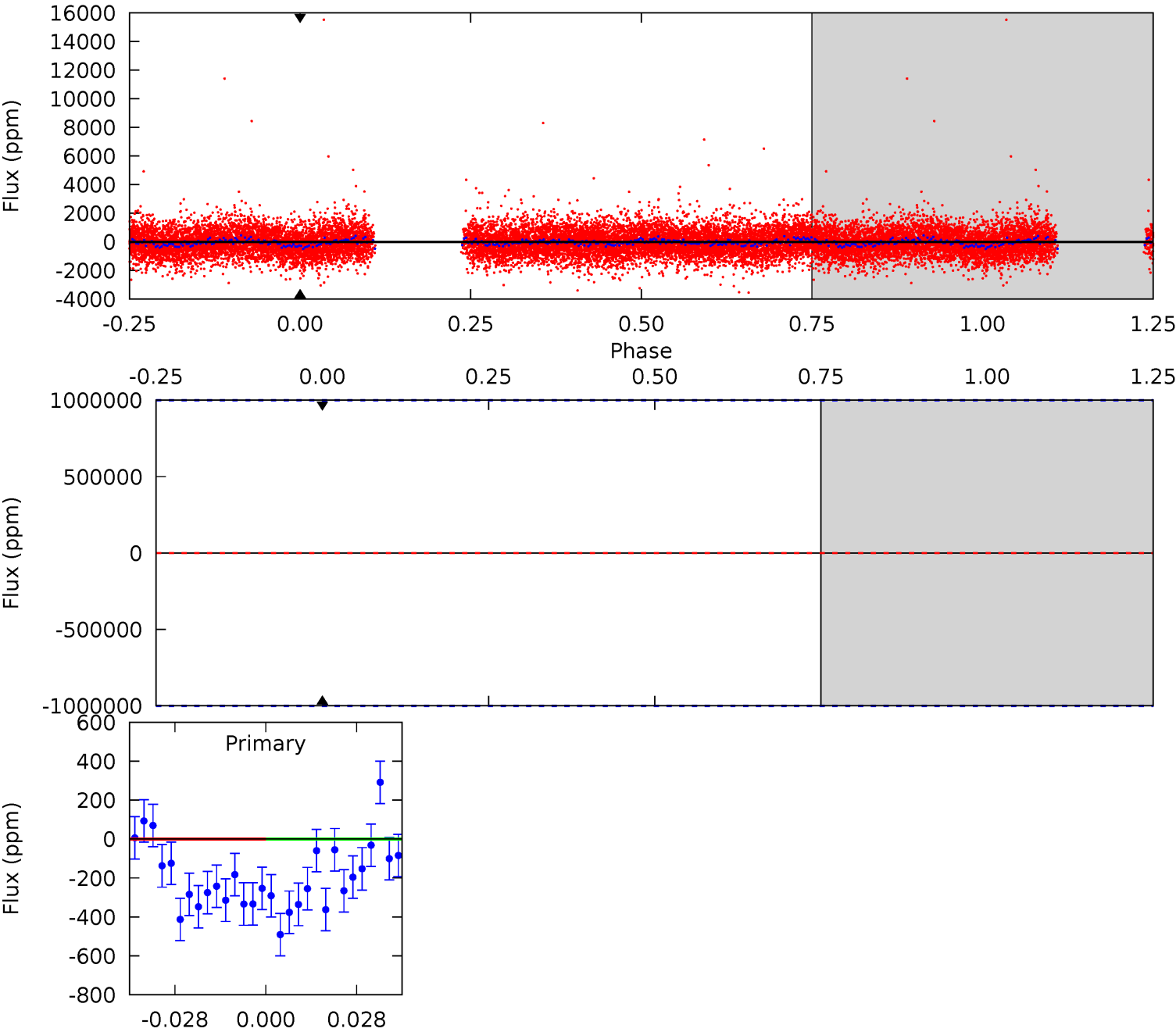
TCE 006034185-02 $P = 1.465915$ Days $T_0 = 133.049418$ (BKJD)



DV Model-Shift Uniqueness Test

006034185-02, P = 1.465915 Days, E = 132.813077 Days

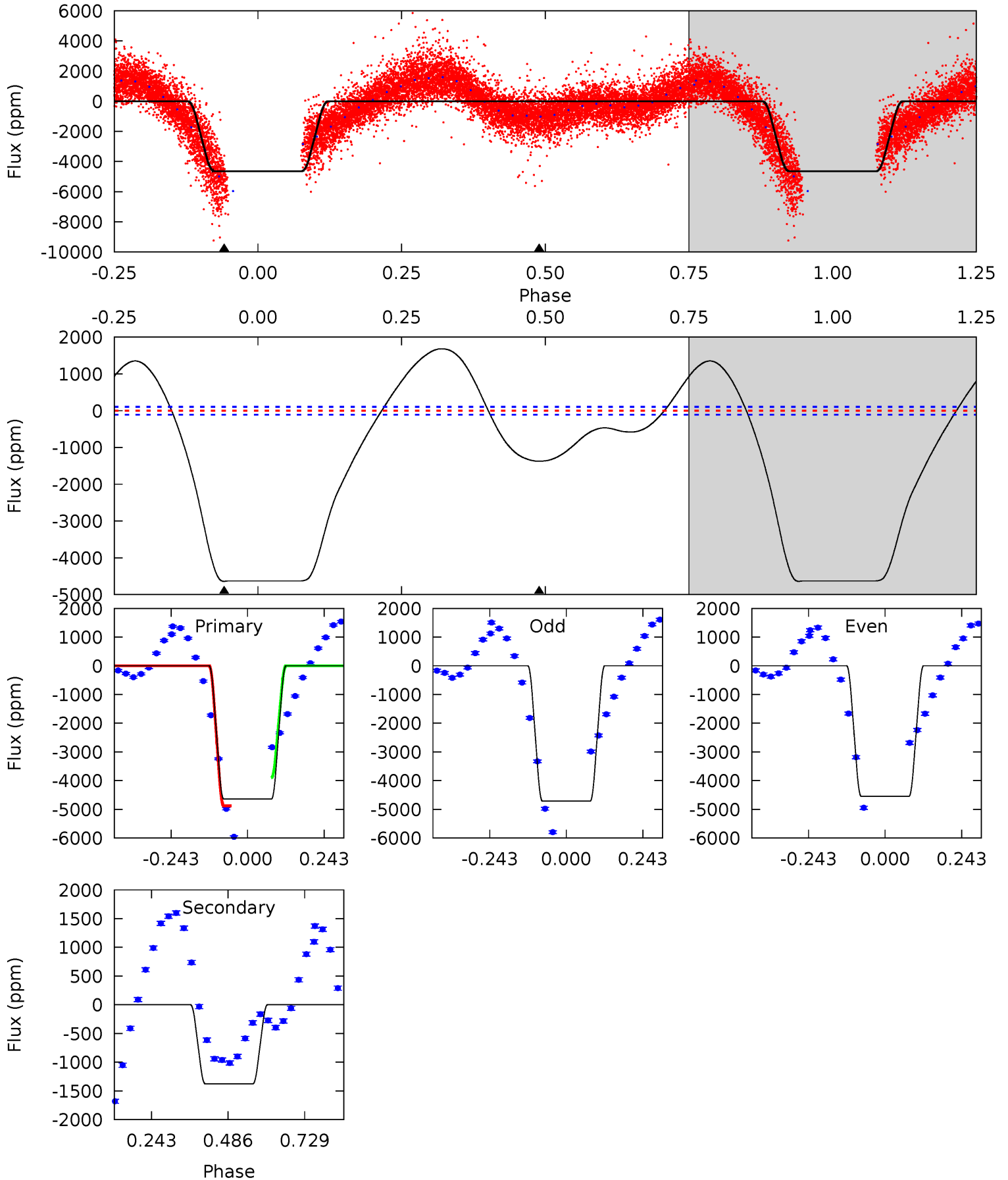
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006034185-02, P = 1.465915 Days, E = 133.049418 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
188.1	55.8	0	0	4.37	1.17	24.9	188.1	188.1	55.8	55.8	3.37	1.03	0.27	12.5



Stellar Parameters For KIC 006034185

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	11086^{+348}_{-522}	$3.980^{+0.279}_{-0.150}$	$0.070^{+0.150}_{-0.650}$	$2.936^{+0.605}_{-1.037}$	$3.002^{+0.193}_{-0.771}$	$0.167^{+0.353}_{-0.064}$
	+3%/-5%	+7%/-4%	+214%/-929%	+21%/-35%	+6%/-26%	+211%/-38%
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 006034185-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$23.87^{+25.34}_{-17.02}$	6065^{+434}_{-558}	$-3886^{+106684}_{-80633}$	$0.198^{+262.757}_{-204.630}$
Alt.	-1375 ± 25	$33.52^{+27.15}_{-22.83}$	6039^{+501}_{-566}	5200^{+5756}_{-8383}	$0.889^{+7.478}_{-0.623}$

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 $A_{obs} \gg 1.0$

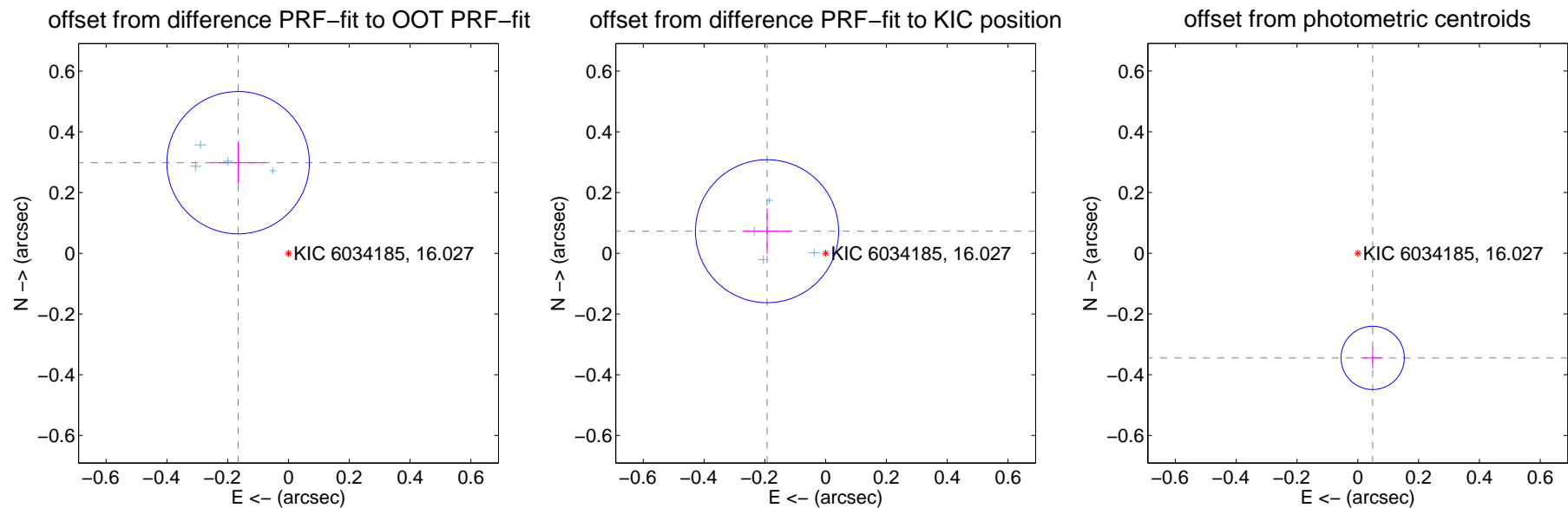
DV Centroid Data

Supplemental centroid analysis for 006034185-02. Kepler magnitude: 16.03. Transit SNR -1.00

There are 4 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.341 ± 0.078	4.37	0.166 ± 0.089	0.298 ± 0.069
PRF-fit source offset from KIC position	0.206 ± 0.078	2.63	0.193 ± 0.079	0.073 ± 0.074
photometric centroid source offset	0.35 ± 0.03	10.03	-0.05 ± 0.03	-0.34 ± 0.03

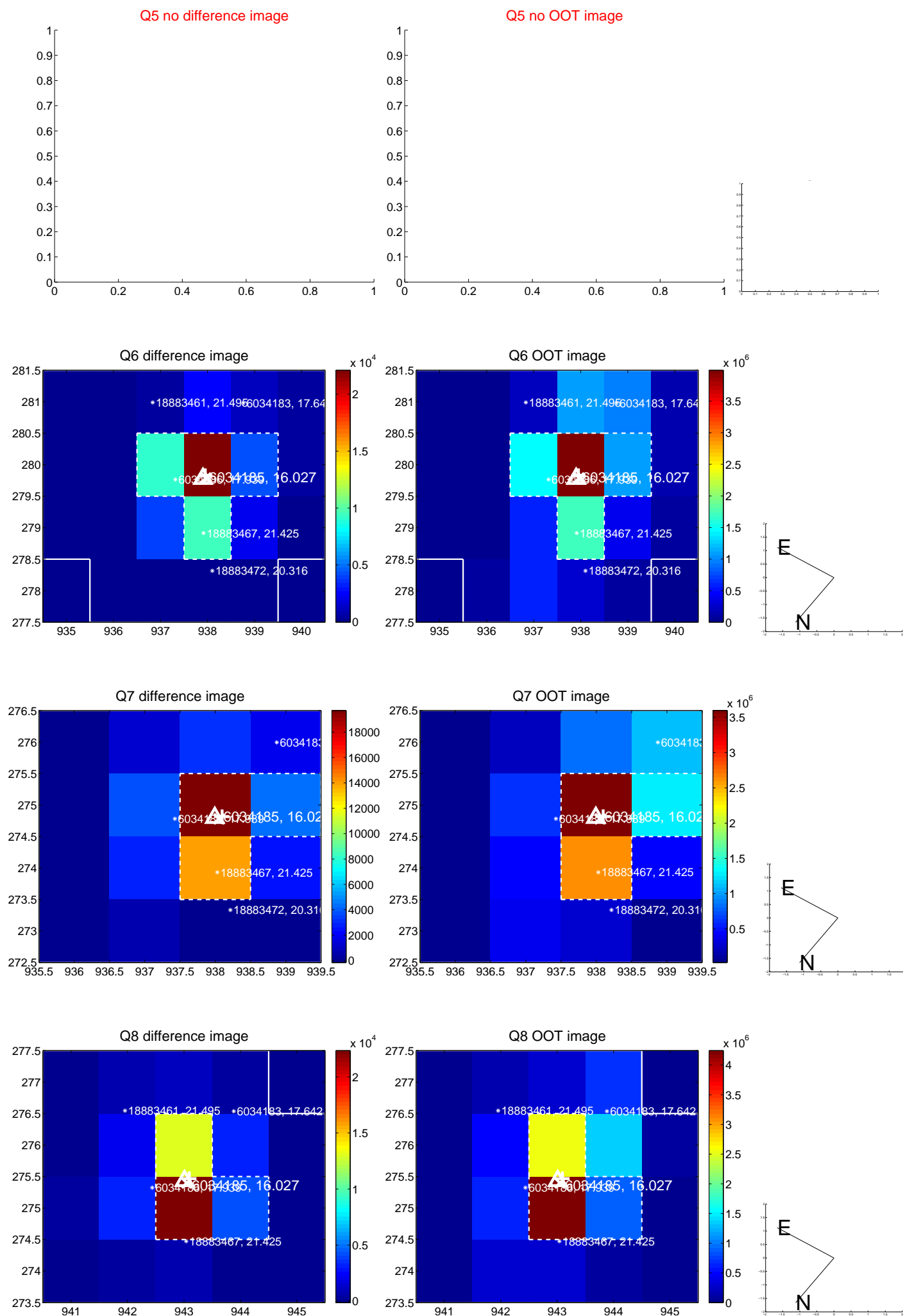


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

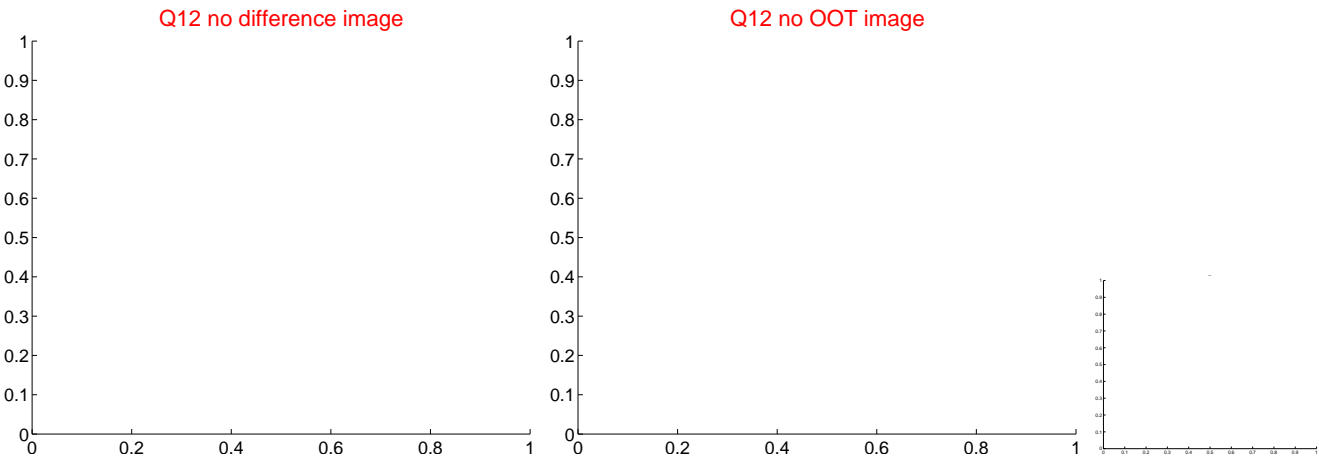
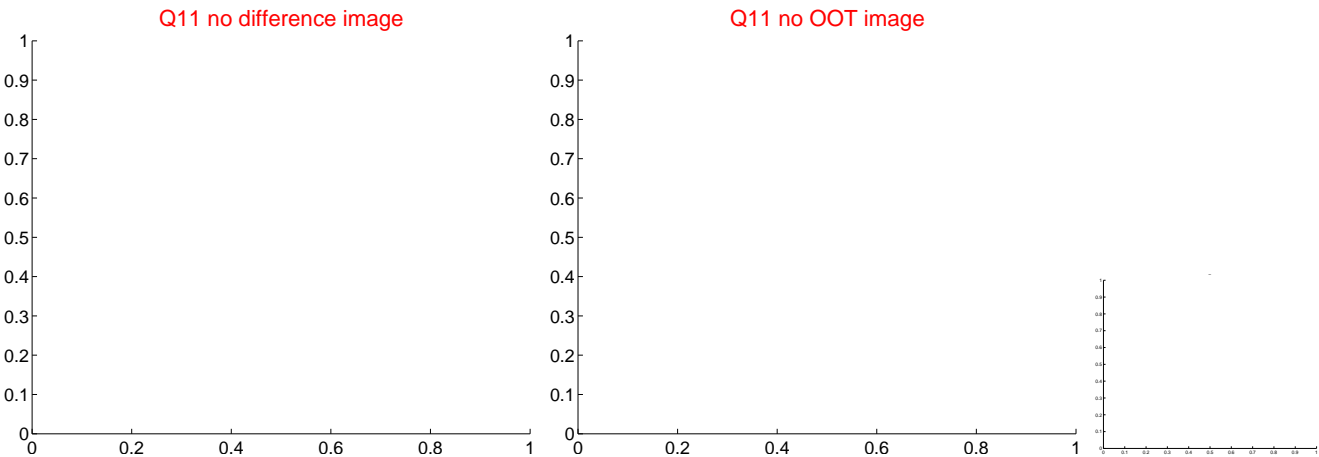
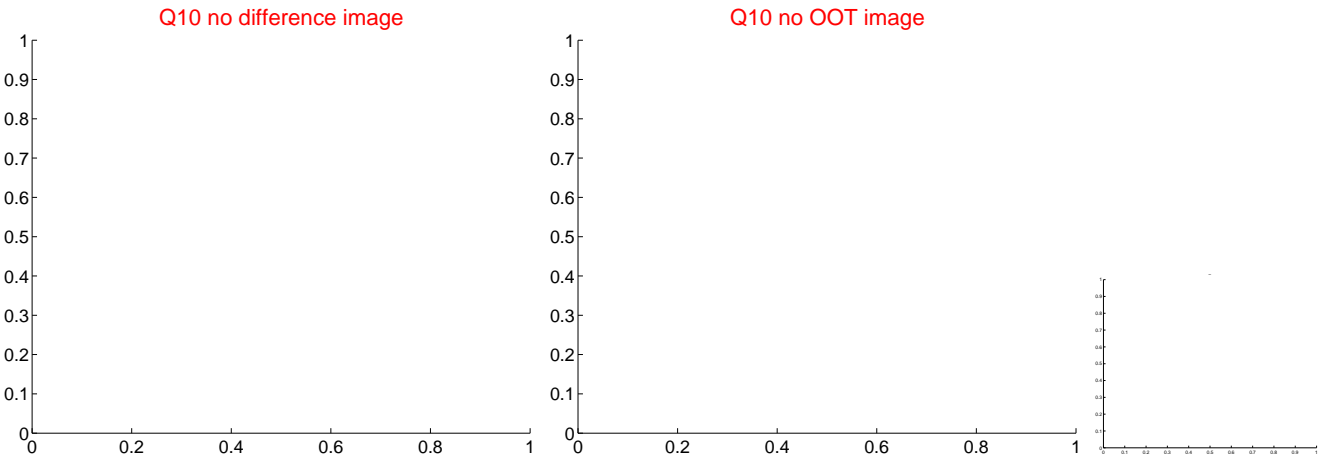
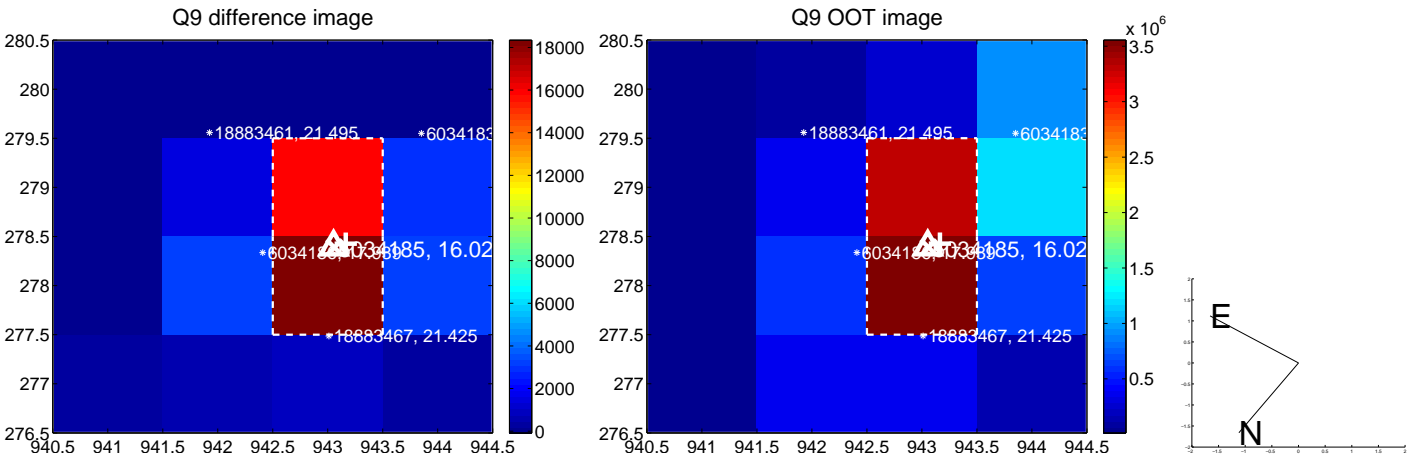
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



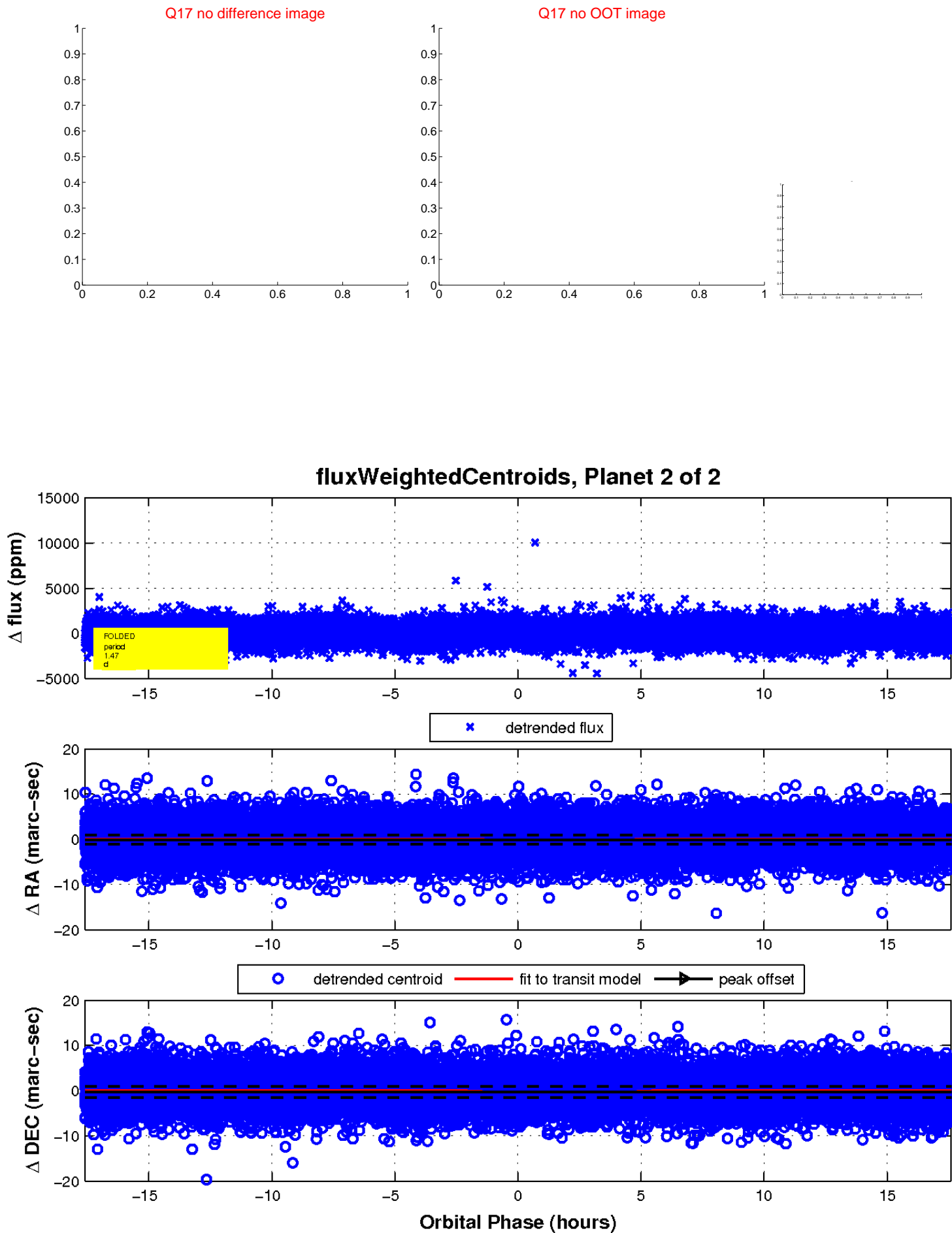
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

