

KIC 009026007

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})
009026007-01	OBS	5602.01	403.160177	434.745658	666.4	6.273	8.9	8.9	0.96	5812	2.65	0.79
009026007-02	OBS	No	359.740475	490.407910	494.6	9.266	8.0	7.8	0.96	5812	2.52	0.92
009026007-03	OBS	No	407.991034	448.535148	636.9	7.555	7.8	7.8	0.96	5812	2.53	0.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009026007-01	OBS	FP	0.31	1	0	0	0	ALL_TRANS_CHASES—CENT_FEW_DIFFS
009026007-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES
009026007-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

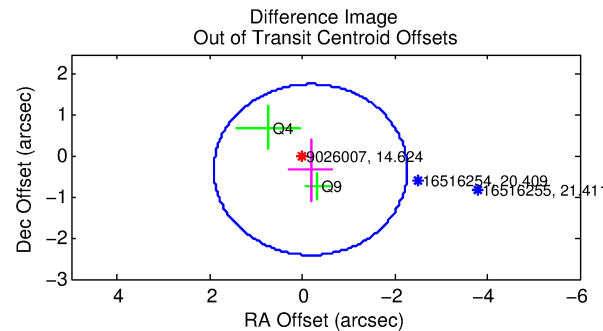
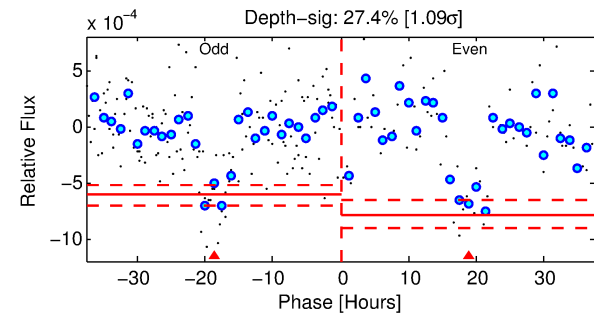
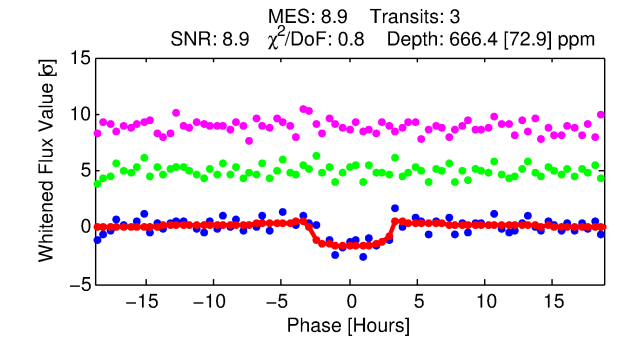
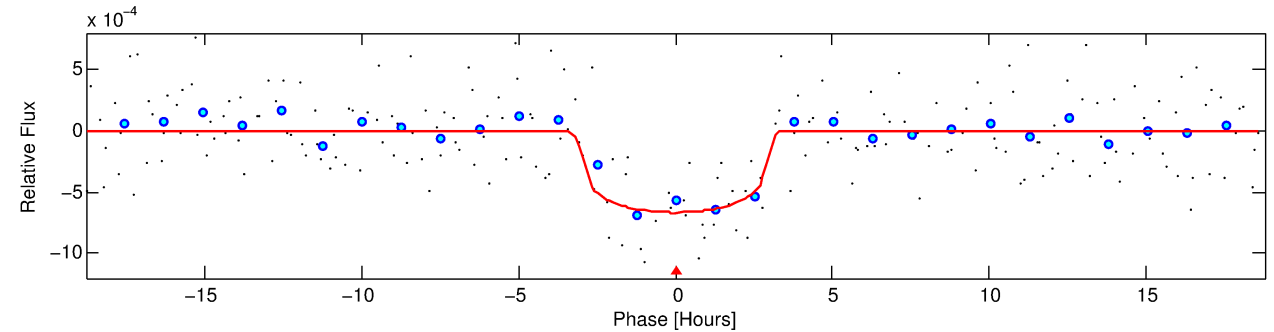
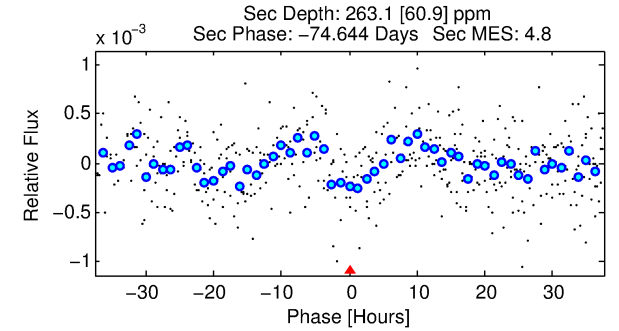
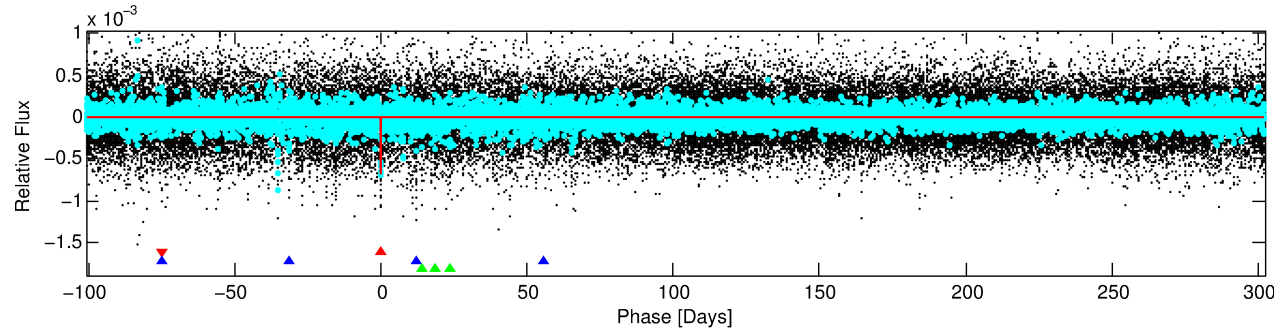
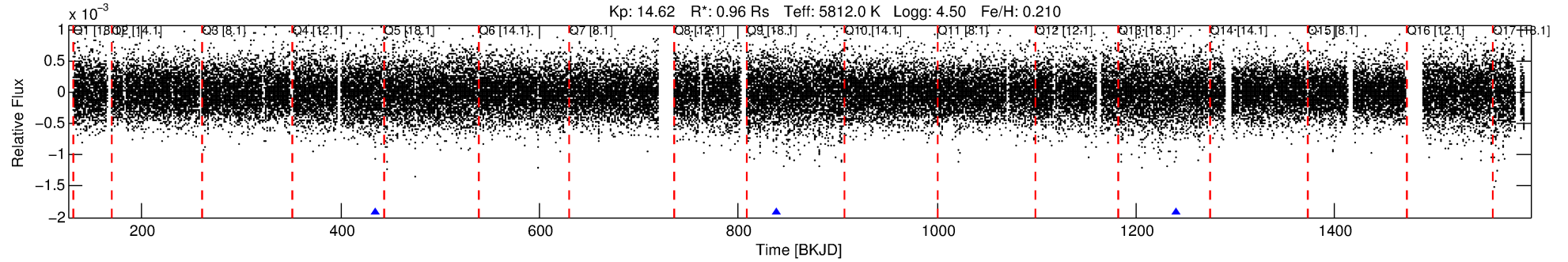
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009026007-01

No Significant Match Found

DV One-Page Summary

KIC: 9026007 Candidate: 1 of 3 Period: 403.160 d
KOI: K05602.01 Corr: 0.950



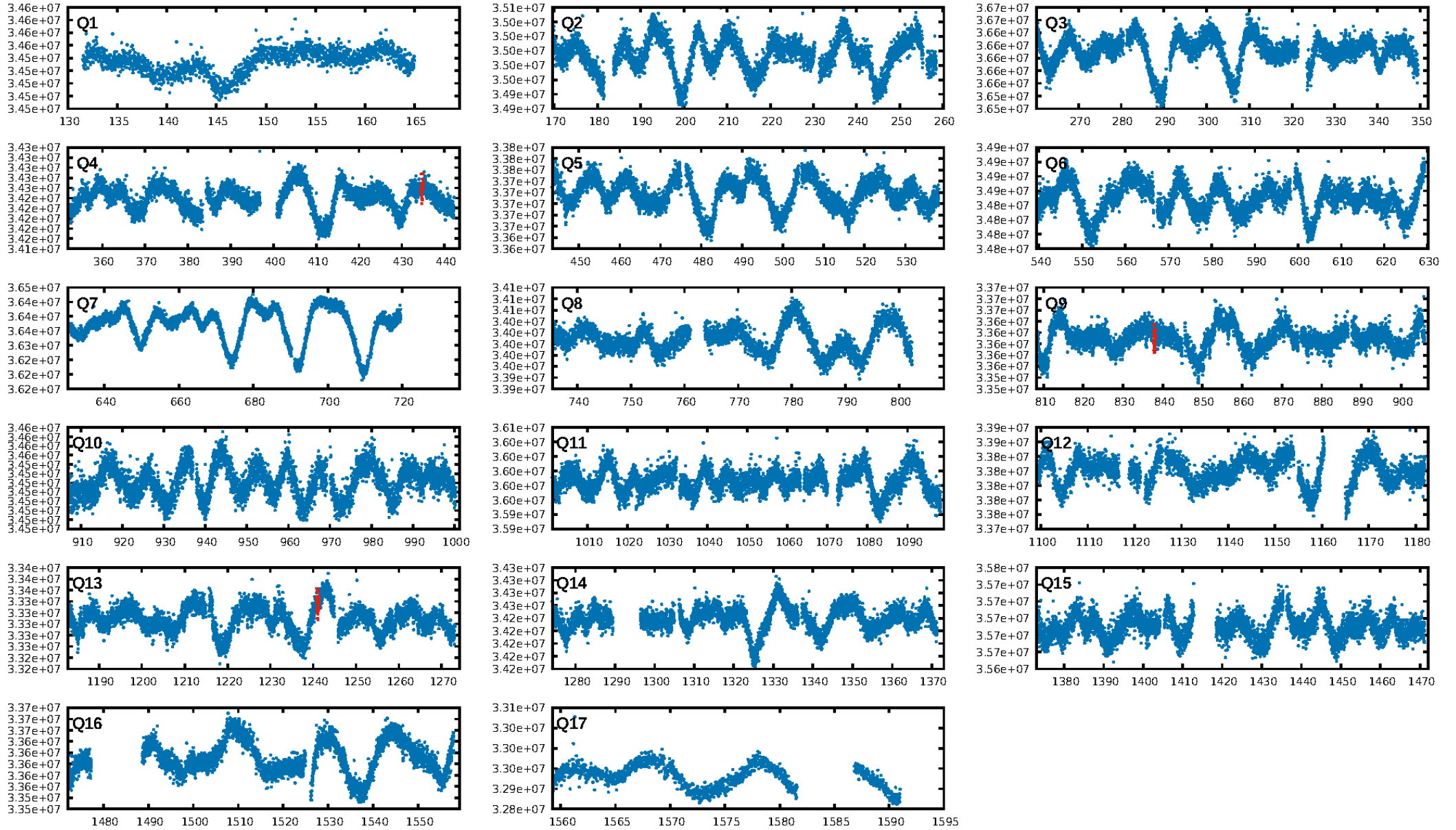
DV Fit Results:

Period = 403.16018 [0.00720] d
Epoch = 434.7457 [0.0085] BKJD
Rp/R* = 0.0252 [0.0135]
a/R* = 371.09 [846.27]
b = 0.69 [1.74]
Seff = 0.79 [0.19]
Teff = 240 [15] K
Rp = 2.65 [1.50] Re
a = 1.0959 [0.1718] AU
Ag = 24807.04 [27890.38] [0.89 σ]
Teffp = 4664 [1283] K [3.45 σ]

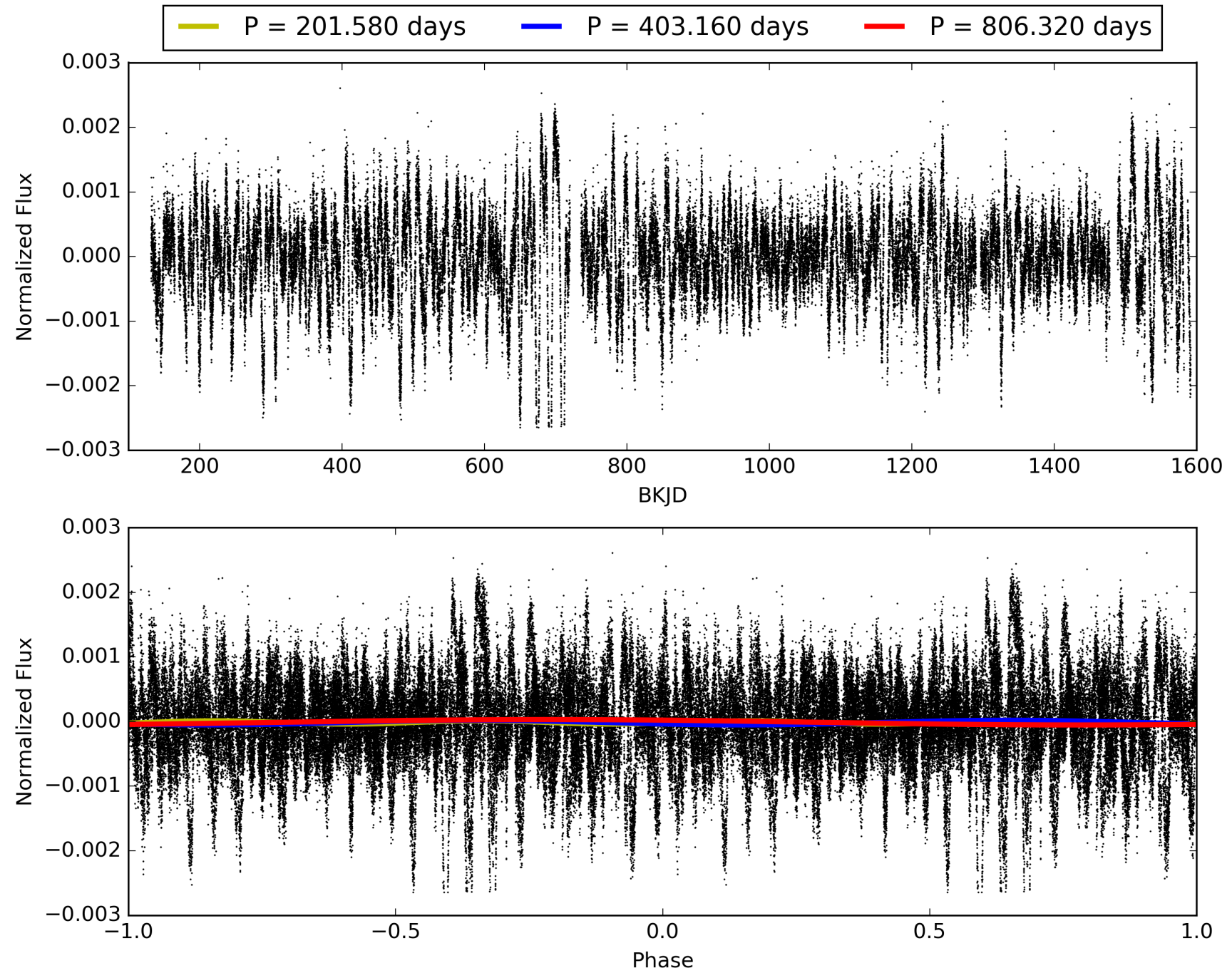
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [93.13 σ]
LongPeriod-sig: 100.0% [11.81 σ]
ModelChiSquare2-sig: 31.1%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 4.87e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -11.36
Centroid-sig: 99.8%
Centroid-so: 0.077 arcsec [0.07 σ]
OotOffset-rm: 0.369 arcsec [0.53 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-rm: 0.267 arcsec [0.39 σ]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 009026007-01, PDC Light Curves

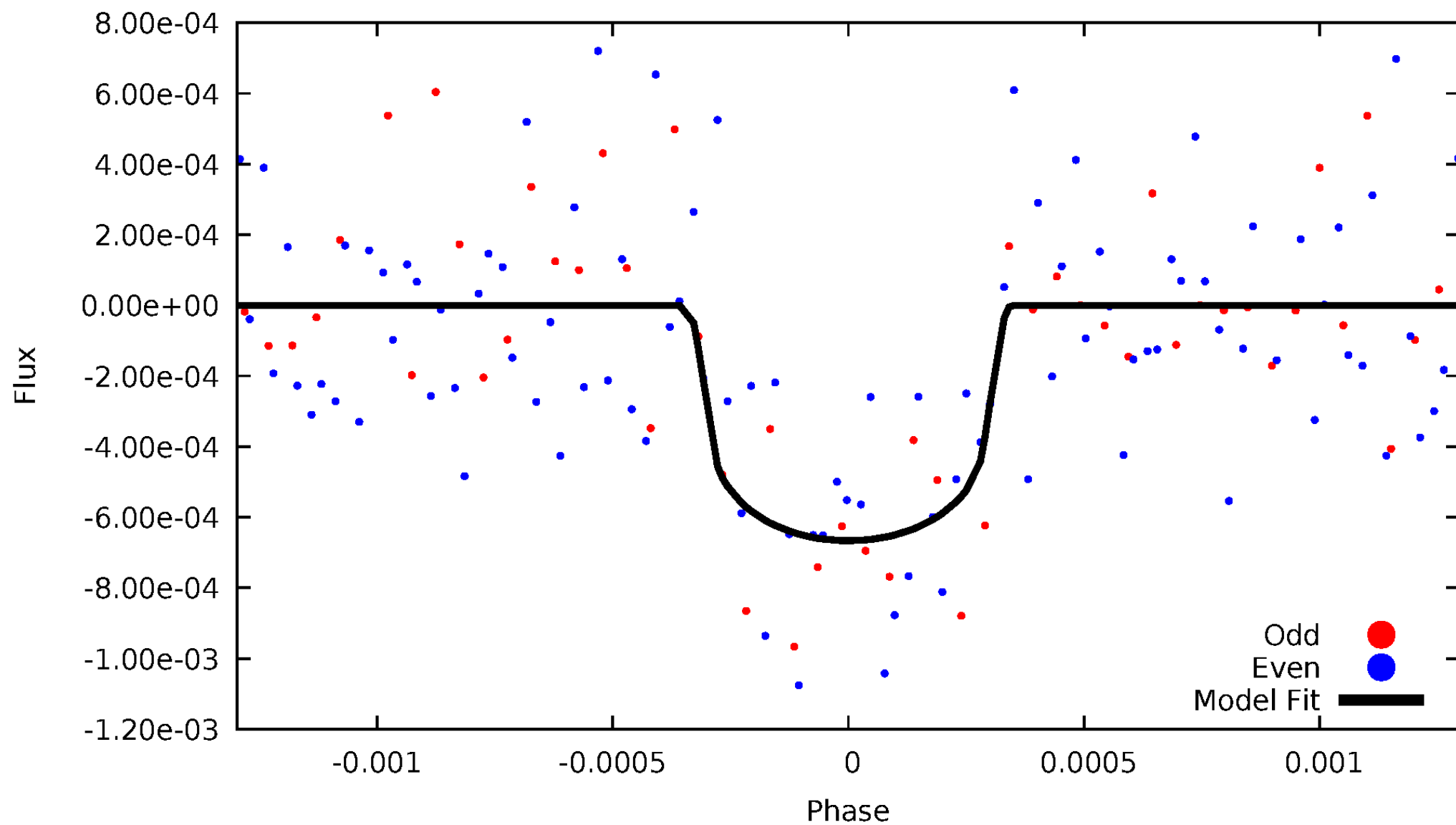


TCE 009026007-01



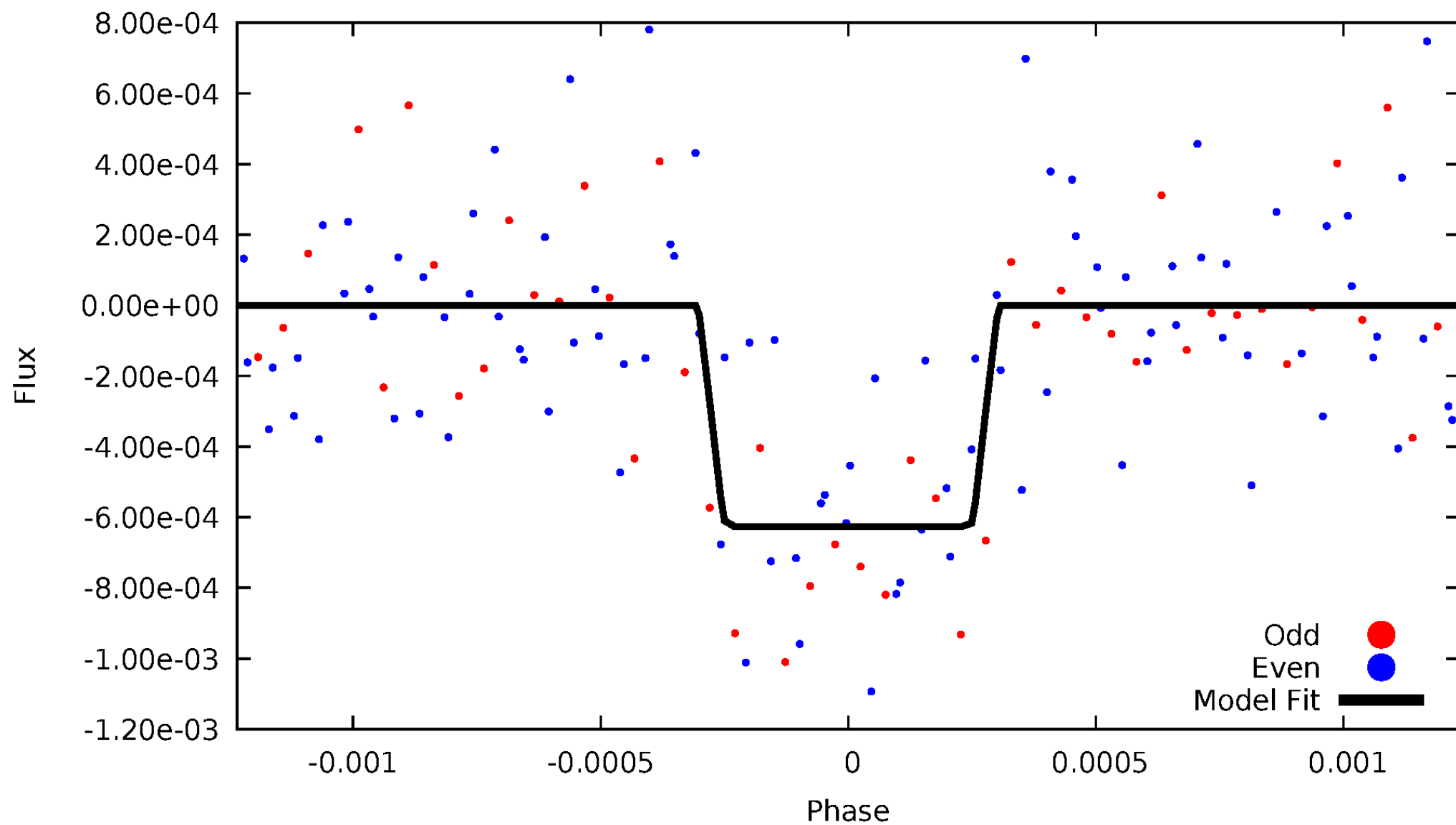
DV Odd/Even

TCE 009026007-01



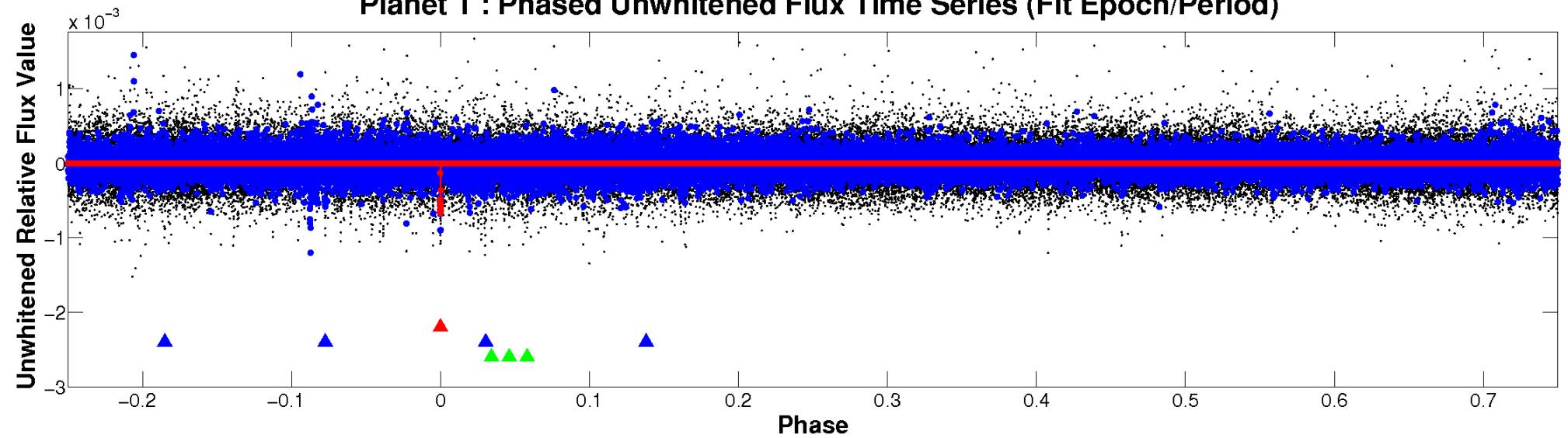
ALT Odd/Even

TCE 009026007-01

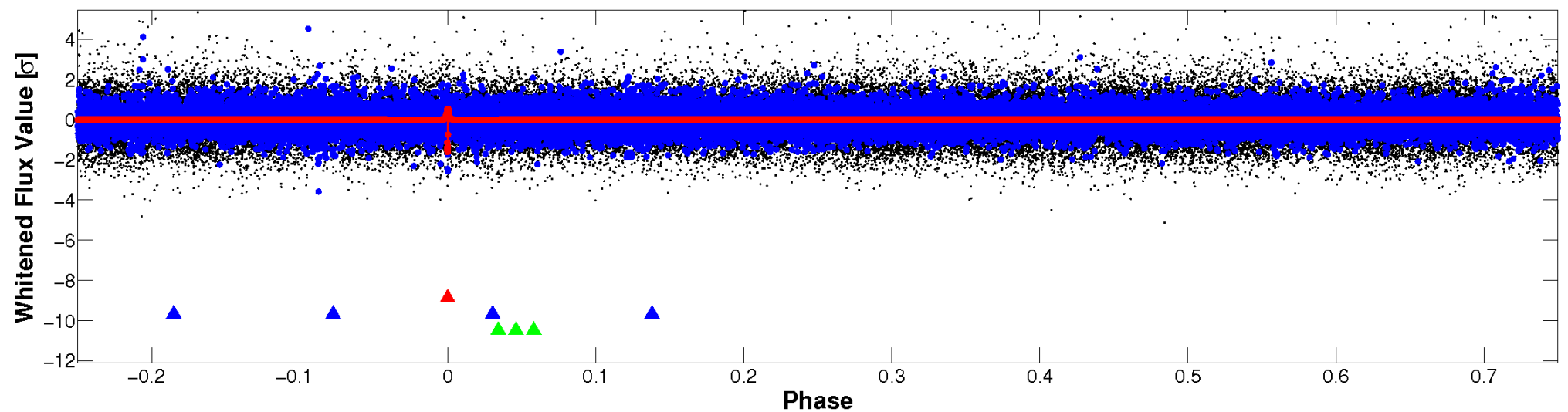


Non-Whitened Vs. Whitened Light Curve

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

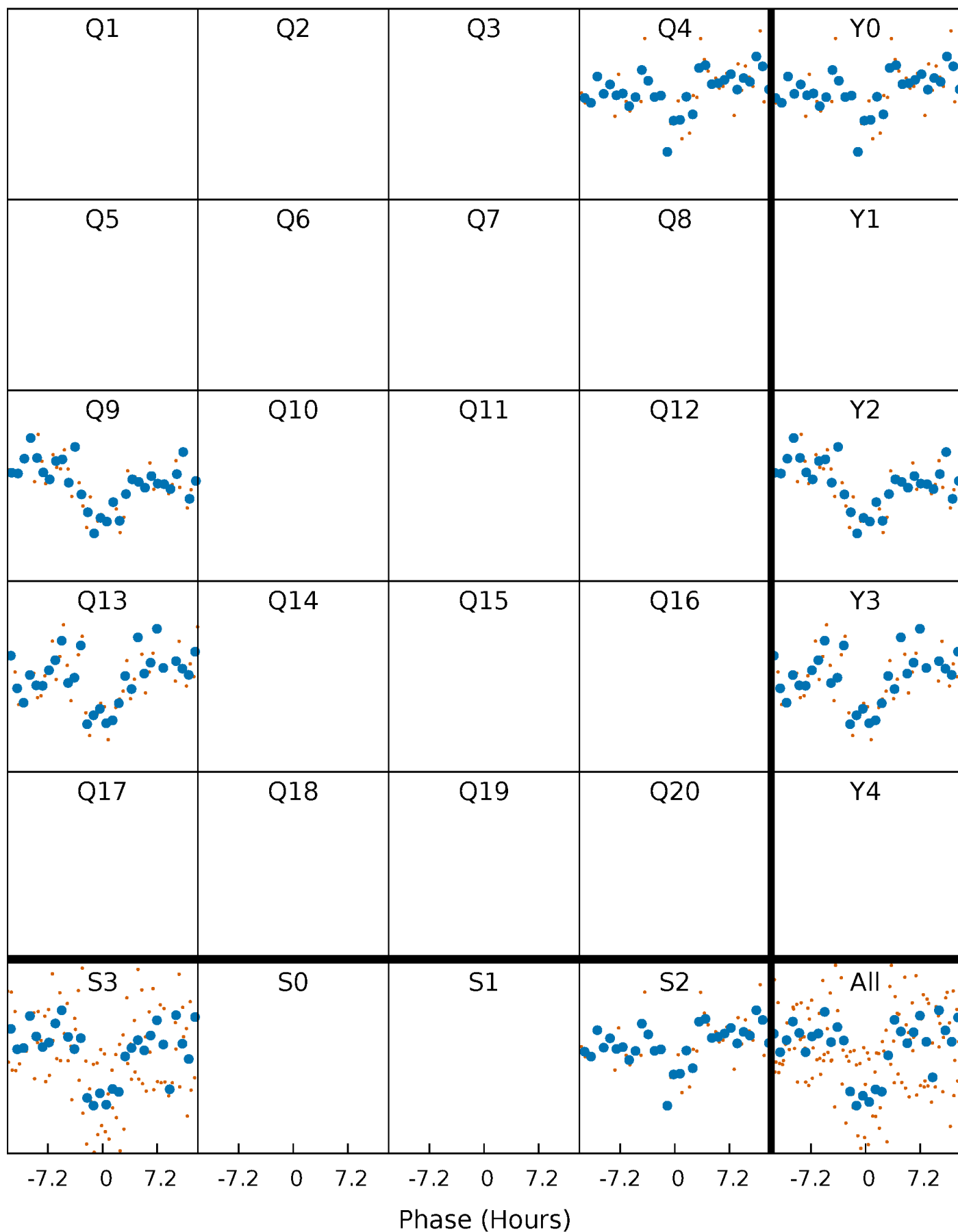


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



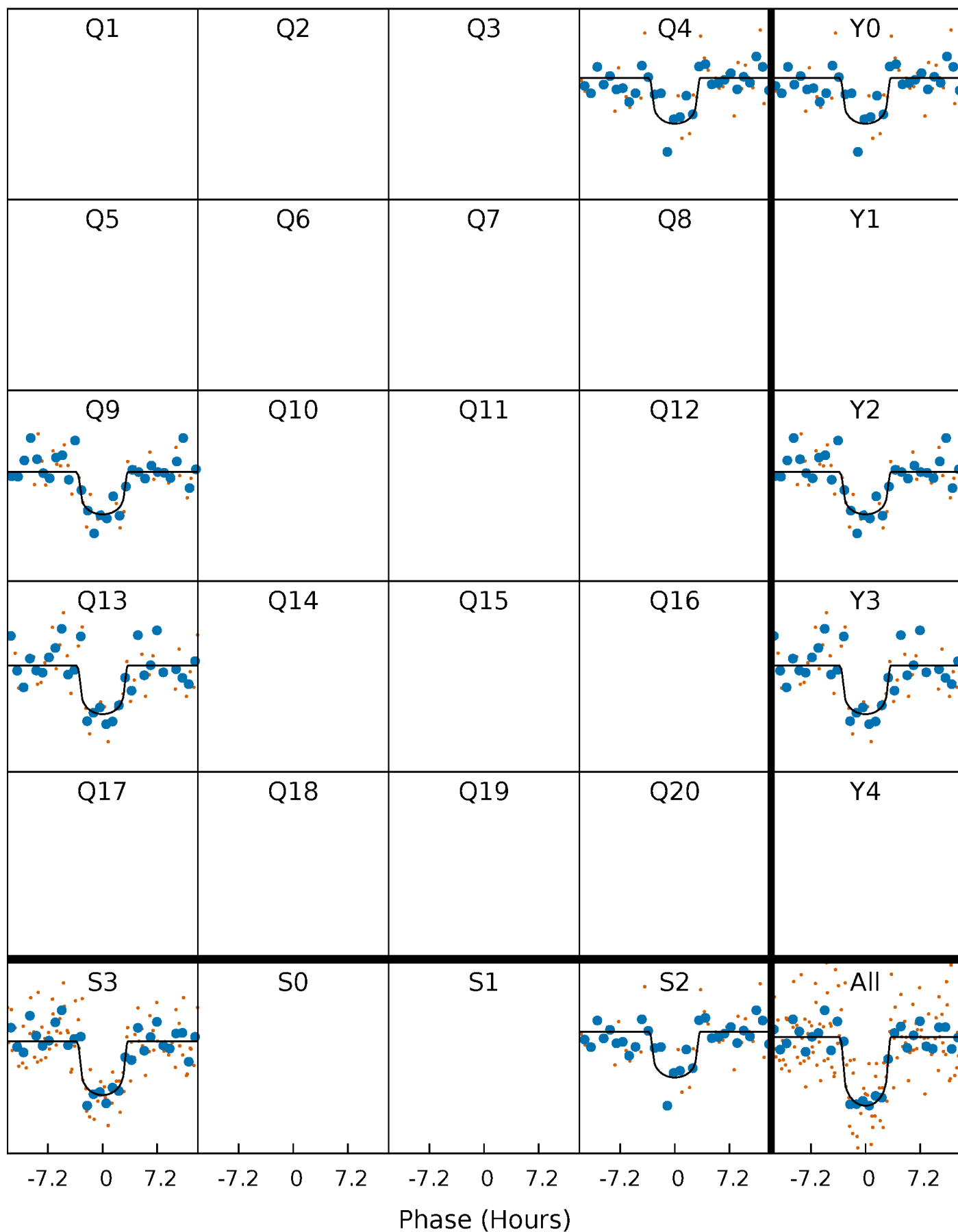
PDC Quarter-Phased Transit Curves

TCE 009026007-01 P=403.160177 Days $T_0=434.745658$ (BKJD)



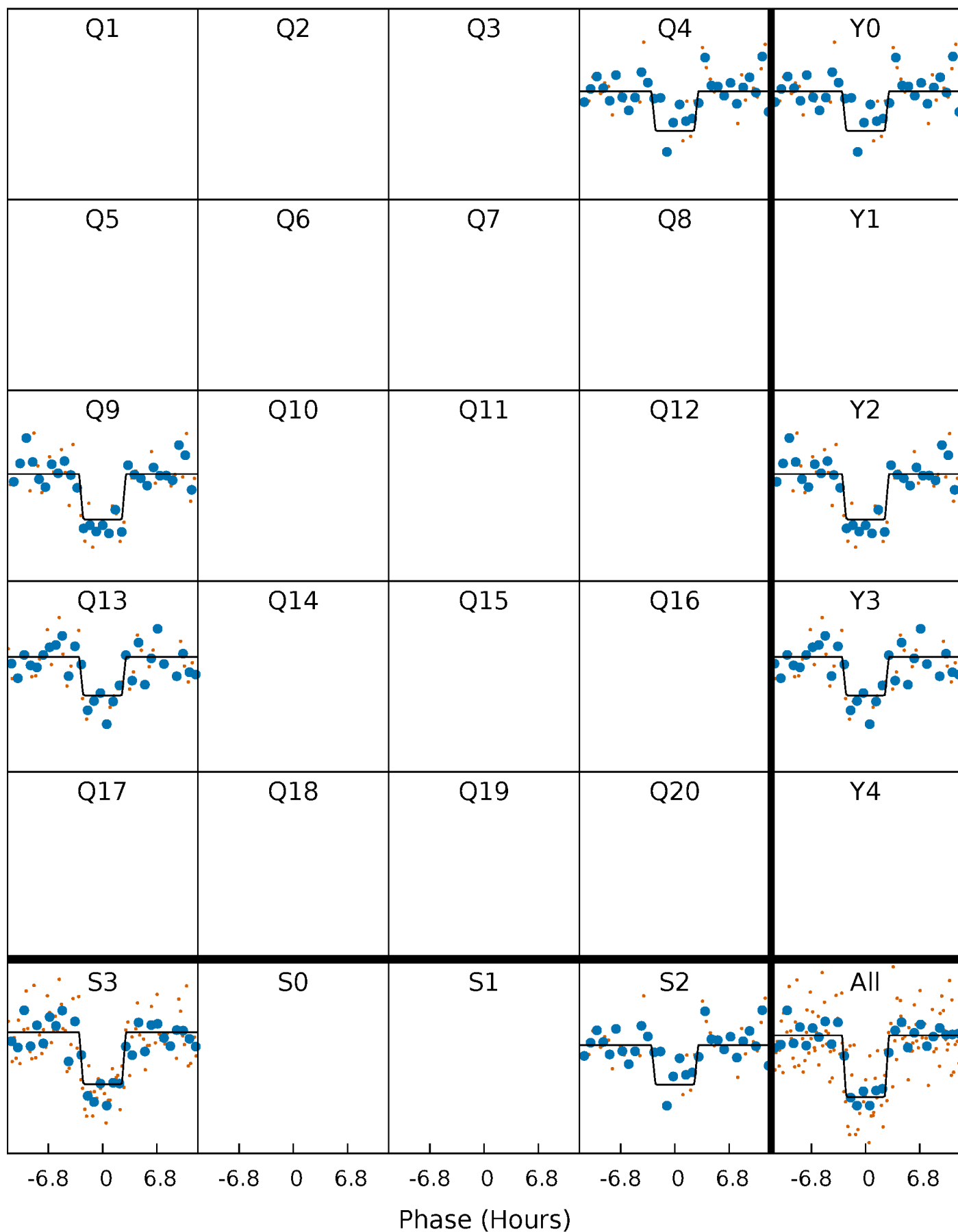
DV Quarter-Phased Transit Curves

TCE 009026007-01 P=403.160177 Days $T_0=434.745658$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

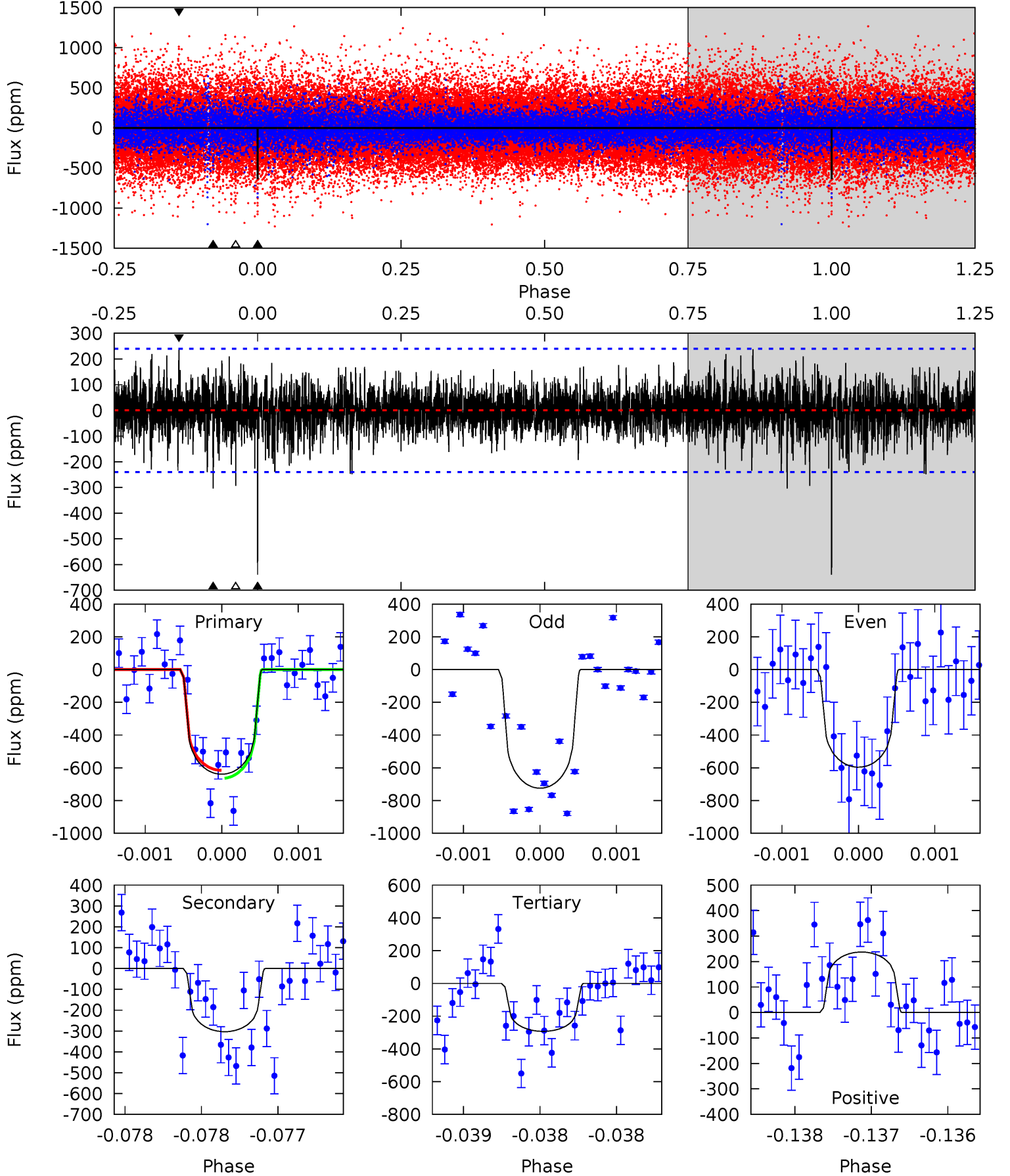
TCE 009026007-01 P=403.167761 Days $T_0=434.743045$ (BKJD)



DV Model-Shift Uniqueness Test

009026007-01, $P = 403.160177$ Days, $E = 31.585481$ Days

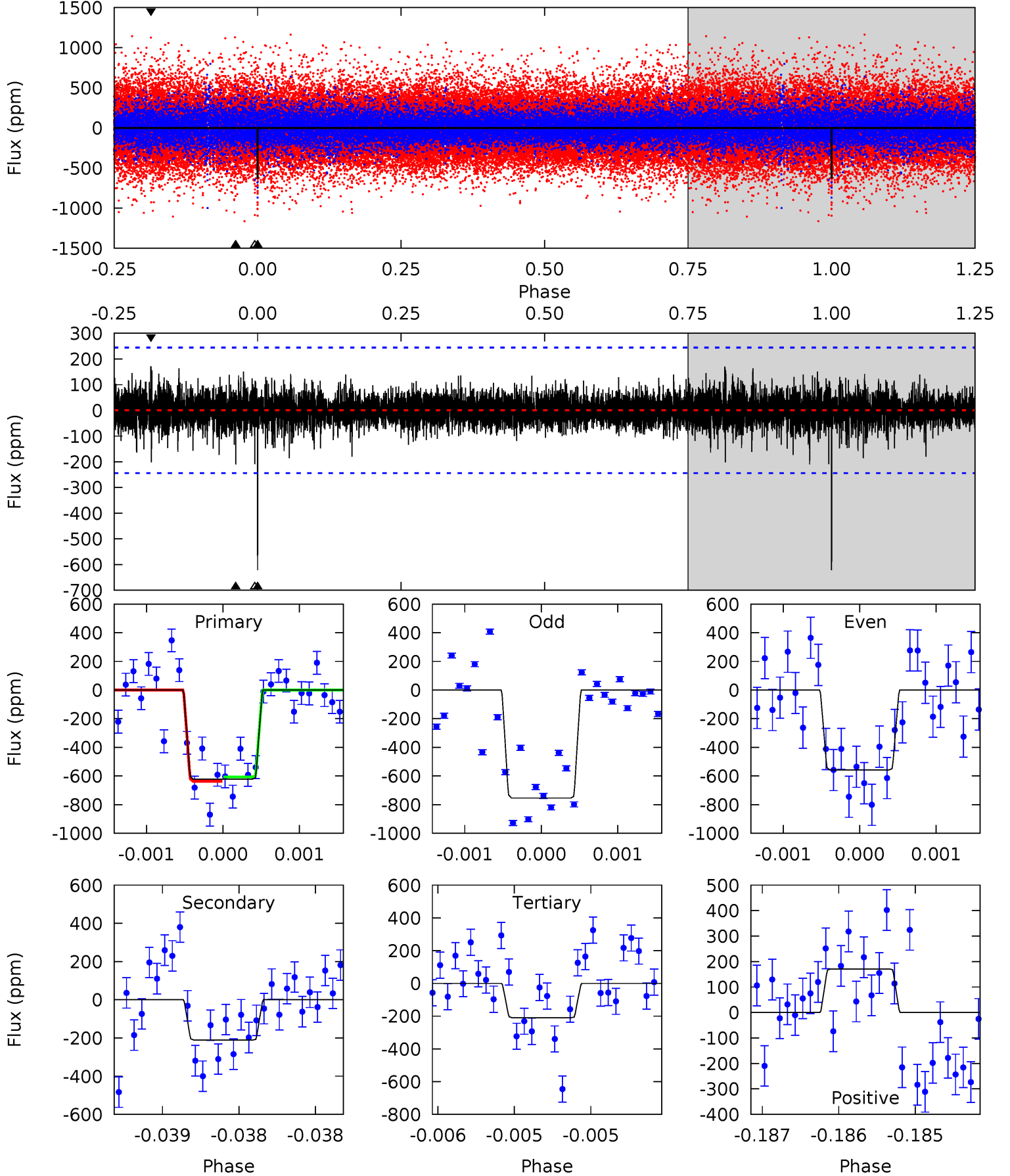
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	6.99	6.75	5.47	5.53	3.41	1.35	7.98	9.26	0.23	1.52	1.37	0.99	0.27	0.56



Alt Model-Shift Uniqueness Test

009026007-01, $P = 403.167761$ Days, $E = 31.575284$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	4.78	4.76	3.88	5.55	3.44	0.95	9.37	10.3	0.02	0.90	2.09	0.87	0.22	0.34



Stellar Parameters For KIC 009026007

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5812^{+70}_{-87}	$4.504^{+0.016}_{-0.136}$	$0.210^{+0.150}_{-0.150}$	$0.963^{+0.169}_{-0.040}$	$1.079^{+0.048}_{-0.074}$	$1.701^{+0.147}_{-0.637}$
	+1%/-1%	+0%/-3%	+71%/-71%	+18%/-4%	+4%/-7%	+9%/-37%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 009026007-01 / KOI 5602.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-303 ± 43	$2.78^{+1.46}_{-1.36}$	341^{+14}_{-8}	4887^{+1797}_{-717}	25587^{+70718}_{-14605}
Alt.	-210 ± 44	$2.85^{+1.41}_{-1.47}$	341^{+13}_{-7}	4484^{+1759}_{-640}	16766^{+55541}_{-9445}

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 $A_{obs} \gg 1.0$

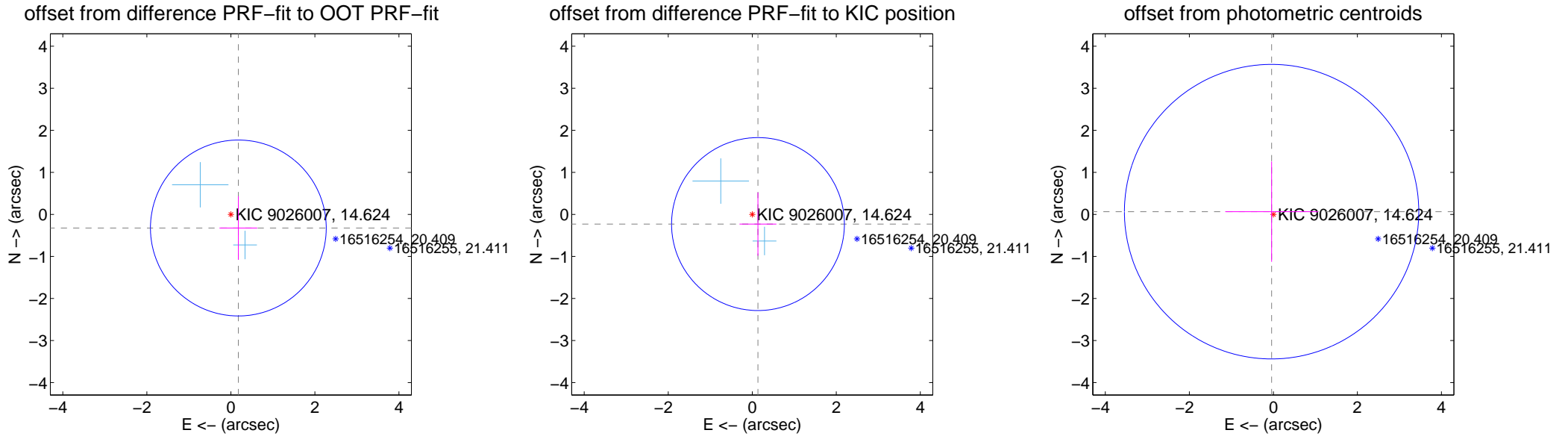
DV Centroid Data

Supplemental centroid analysis for 009026007-01. Kepler magnitude: 14.62. Transit SNR 8.86

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.369 ± 0.697	0.53	-0.178 ± 0.450	-0.324 ± 0.756
PRF-fit source offset from KIC position	0.267 ± 0.686	0.39	-0.136 ± 0.439	-0.230 ± 0.753
photometric centroid source offset	0.08 ± 1.17	0.07	0.04 ± 1.10	0.06 ± 1.19



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.

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



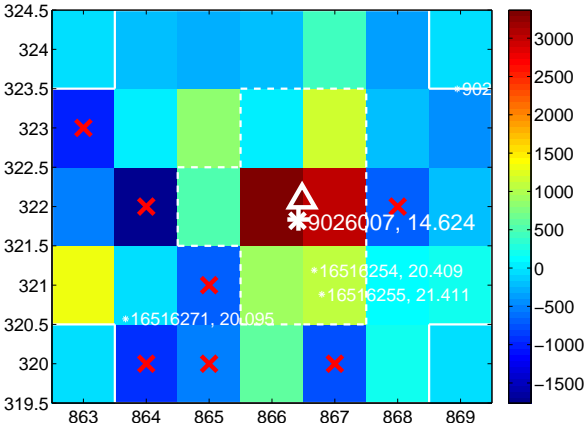
Q3 no difference image



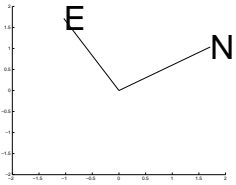
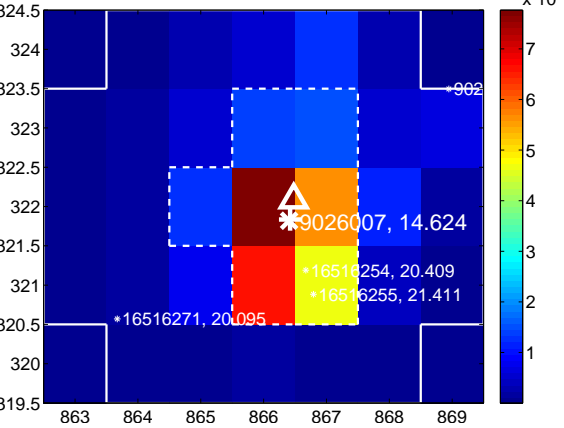
Q3 no OOT image



Q4 difference image



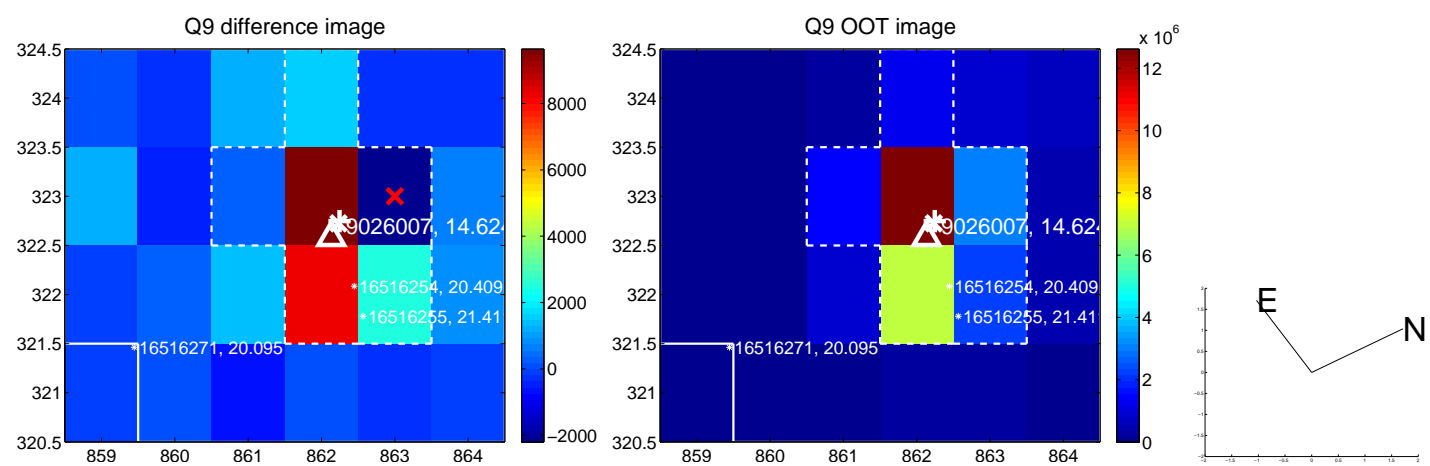
Q4 OOT image



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



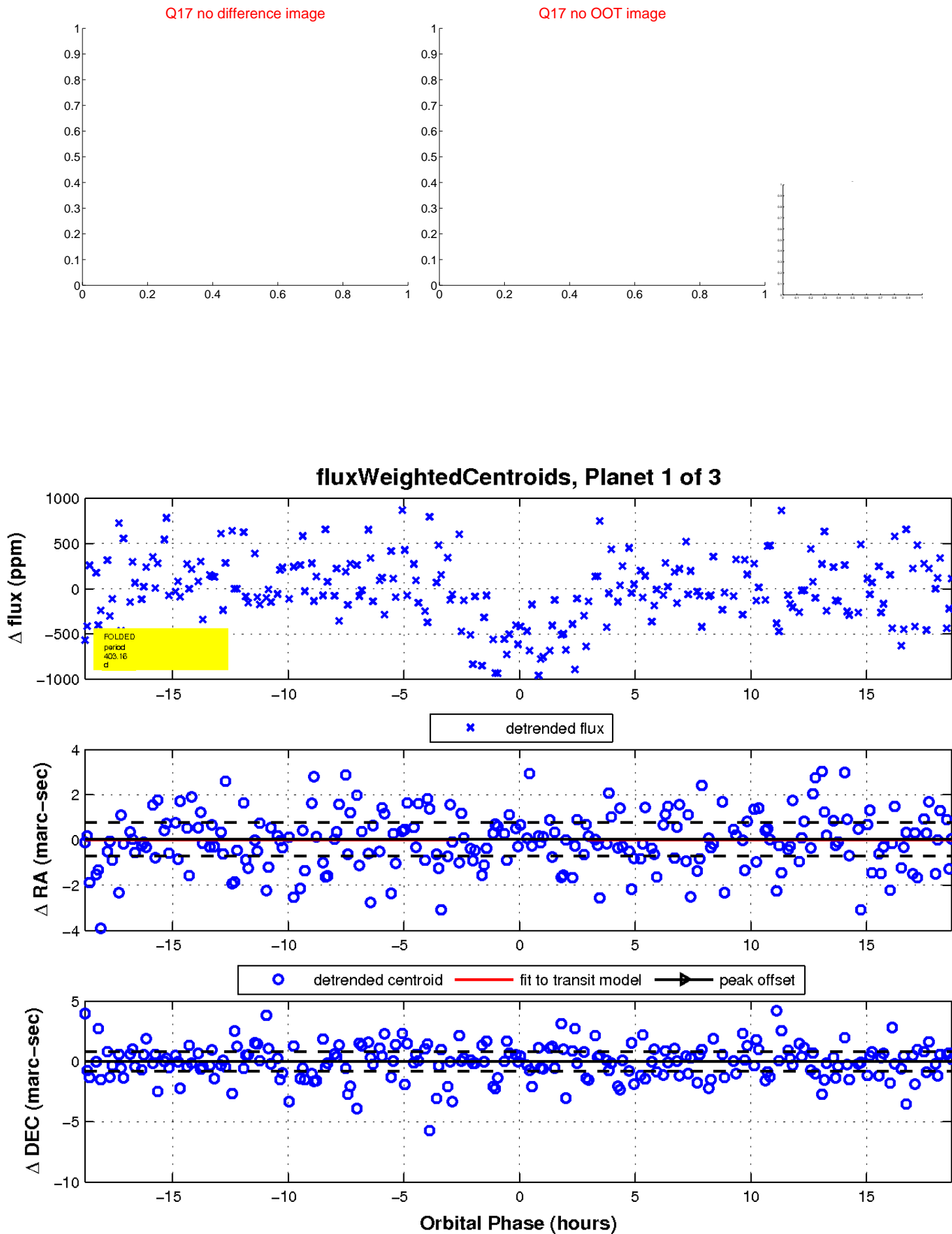
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

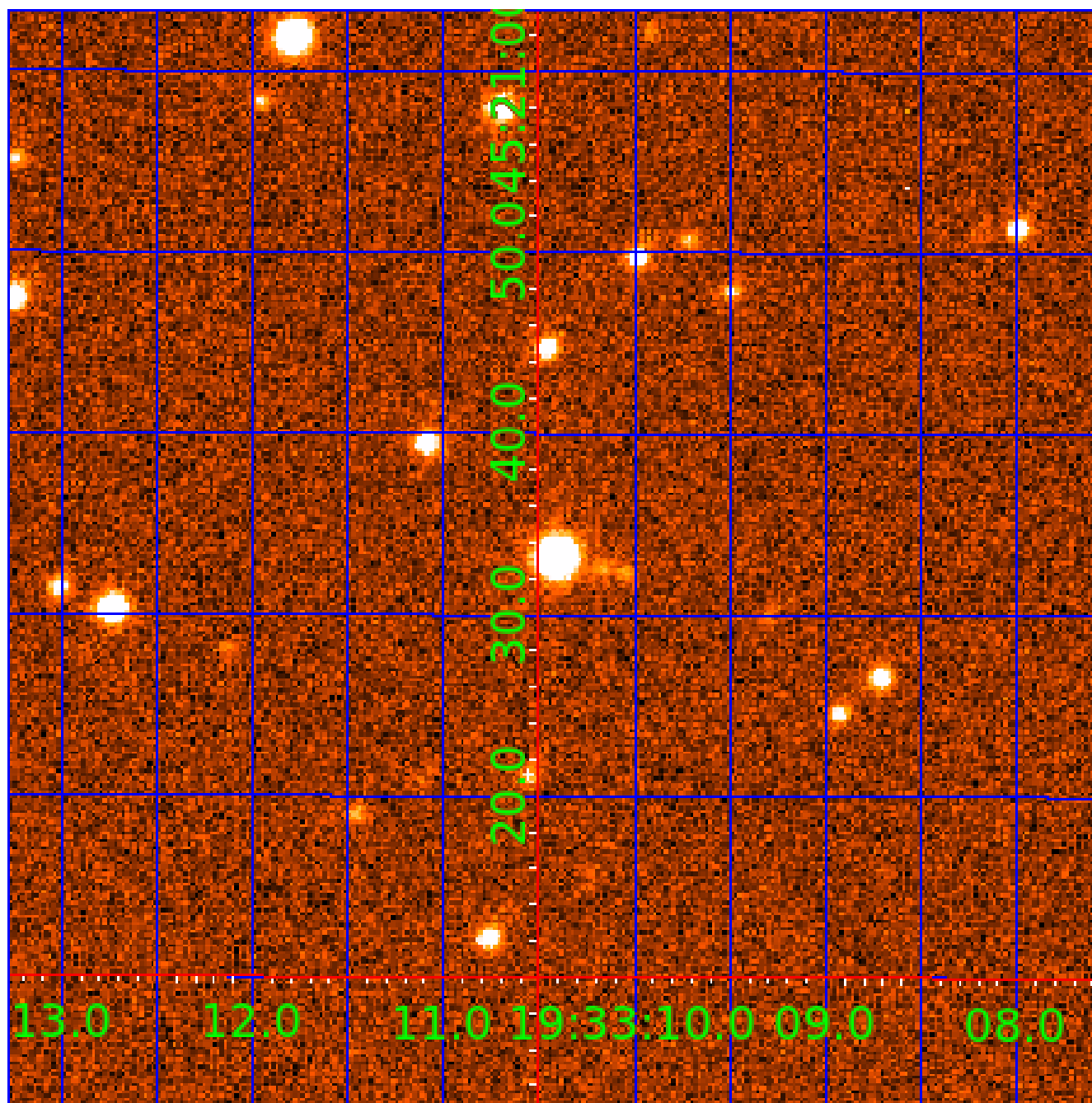


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009026007

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})
009026007-01	OBS	5602.01	403.160177	434.745658	666.4	6.273	8.9	8.9	0.96	5812	2.65	0.79
009026007-02	OBS	No	359.740475	490.407910	494.6	9.266	8.0	7.8	0.96	5812	2.52	0.92
009026007-03	OBS	No	407.991034	448.535148	636.9	7.555	7.8	7.8	0.96	5812	2.53	0.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009026007-01	OBS	FP	0.31	1	0	0	0	ALL_TRANS_CHASES—CENT_FEW_DIFFS
009026007-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES
009026007-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

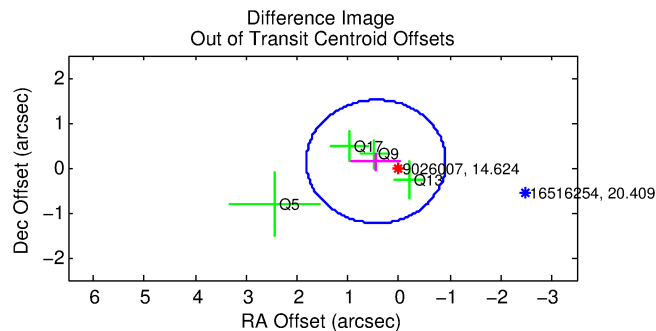
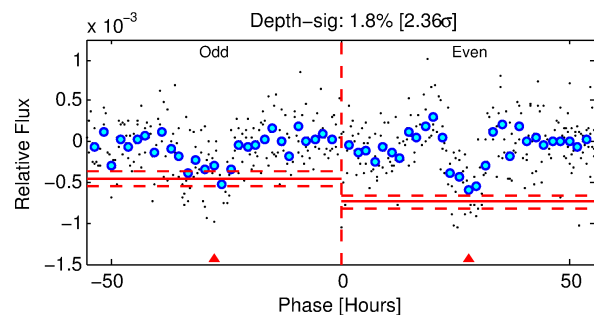
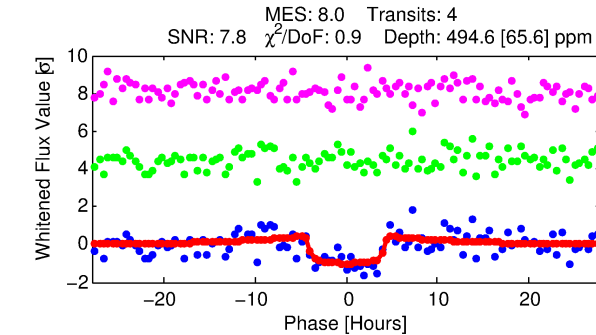
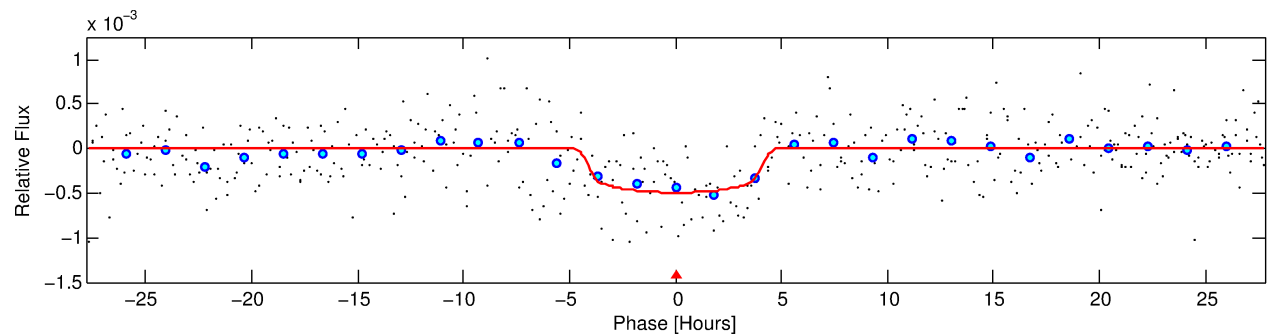
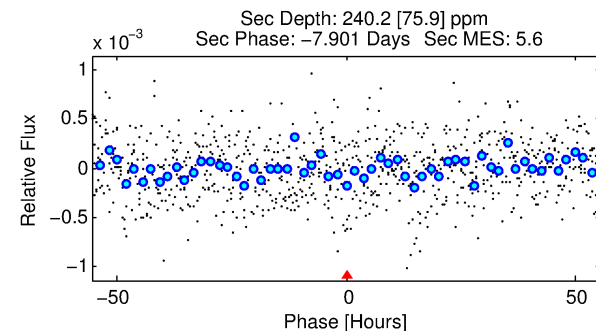
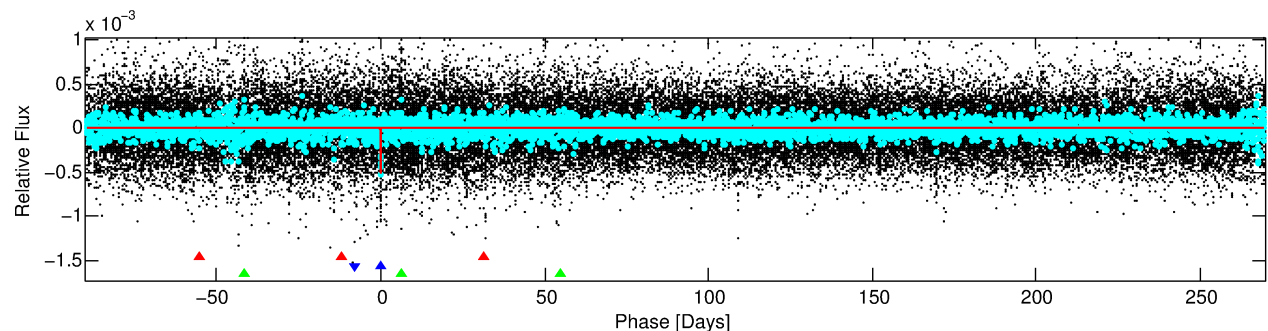
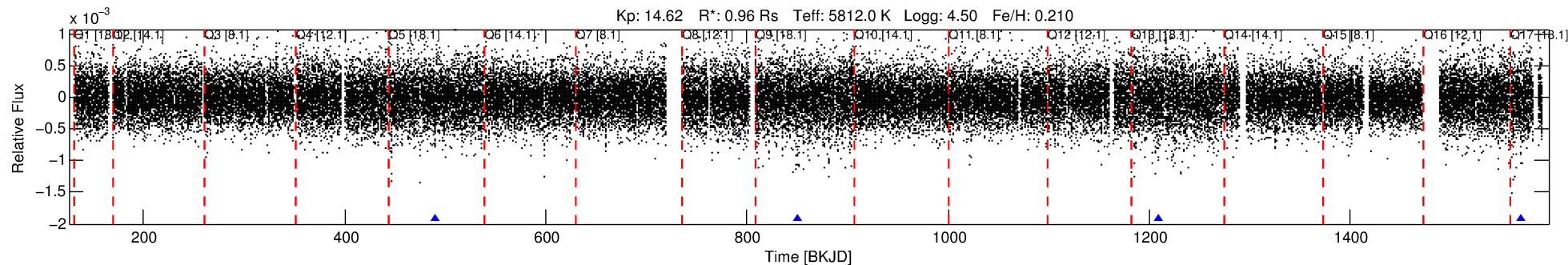
Ephemeris Match Information For 009026007-02

No Significant Match Found

DV One-Page Summary

KIC: 9026007 Candidate: 2 of 3 Period: 359.740 d
KOI: K05602 Corr: No Ephemeris Match

Kp: 14.62 R*: 0.96 Rs Teff: 5812.0 K Logg: 4.50 Fe/H: 0.210



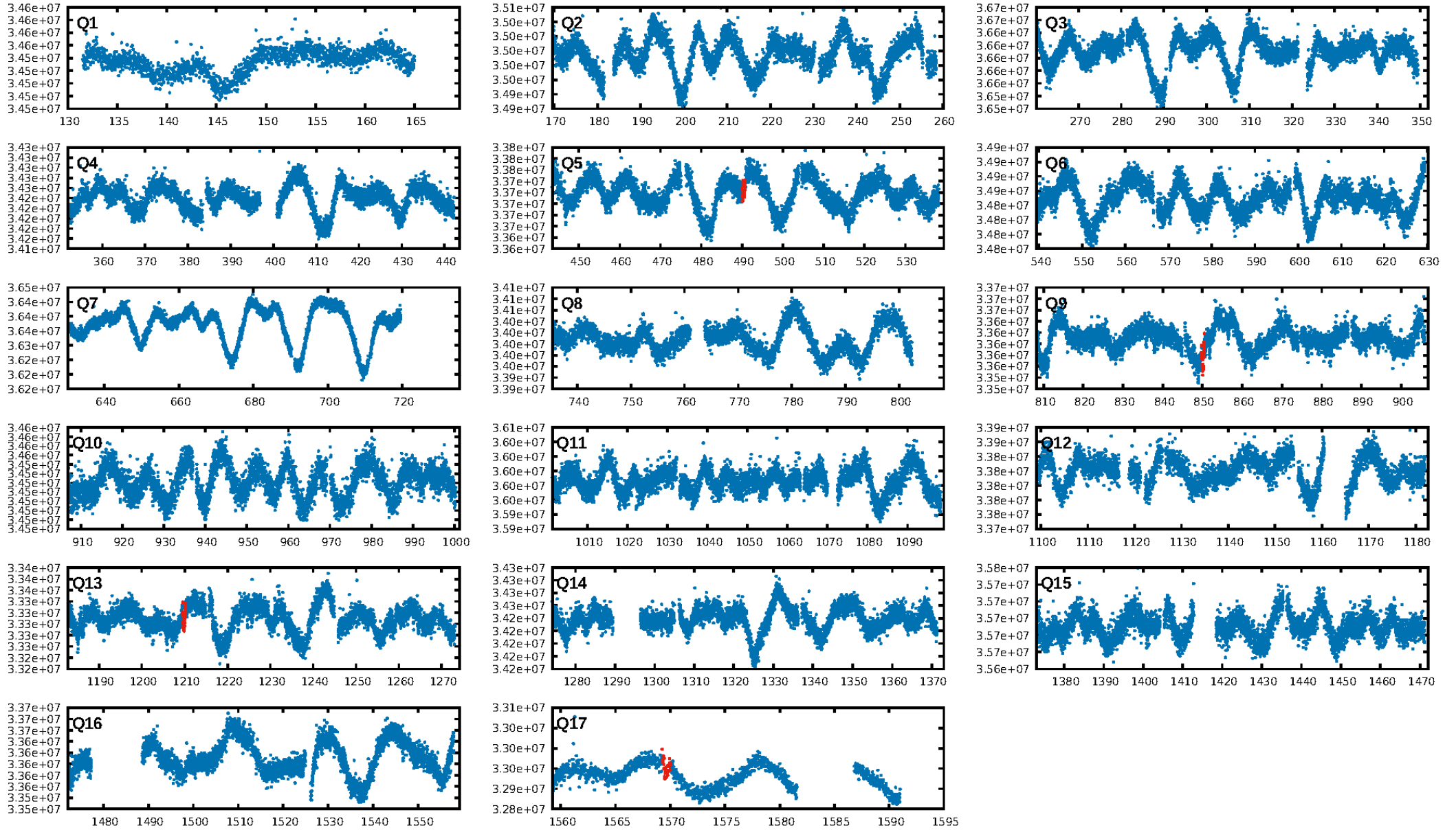
DV Fit Results:

Period = 359.74047 [0.00742] d
Epoch = 490.4079 [0.0143] BKJD
Rp/R* = 0.0240 [0.0036]
a/R* = 150.73 [88.58]
b = 0.89 [0.14]
Seff = 0.92 [0.23]
Teq = 250 [15] K
Rp = 2.52 [0.58] Re
a = 1.0157 [0.1593] AU
Ag = 21395.88 [10639.60] [2.01σ]
Teffp = 4668 [514] K [8.60σ]

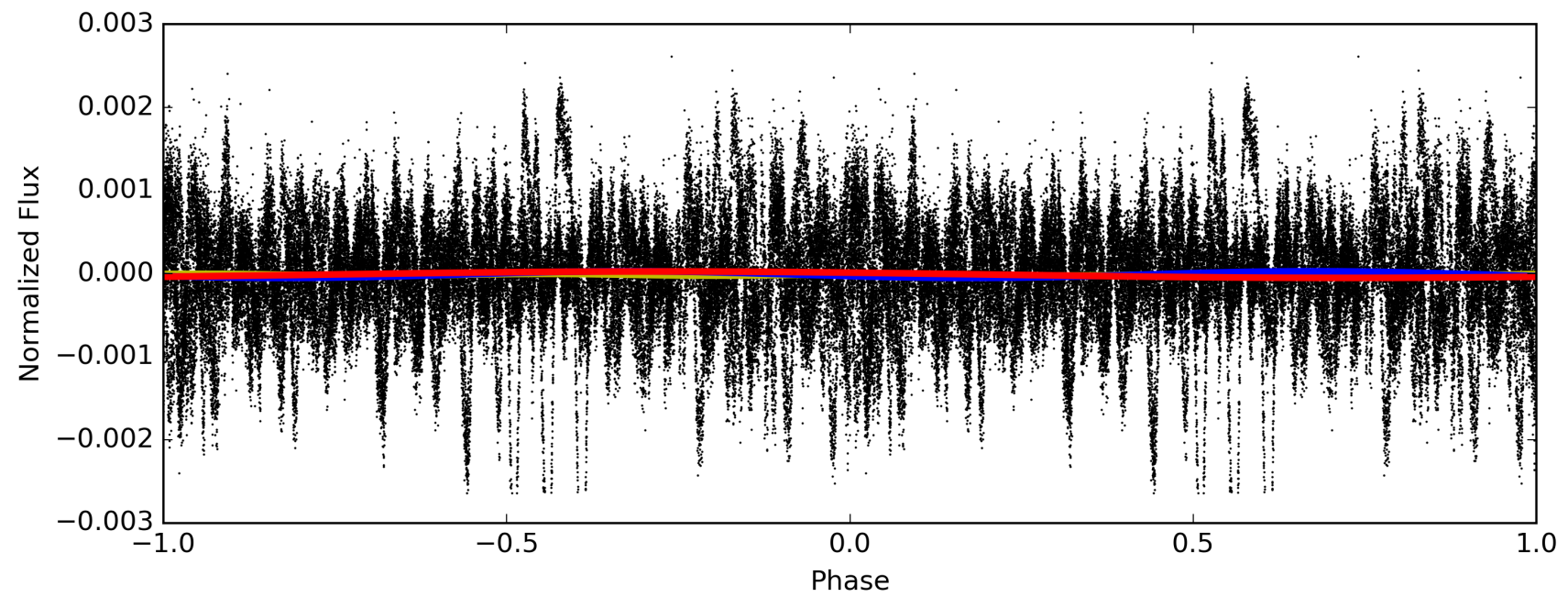
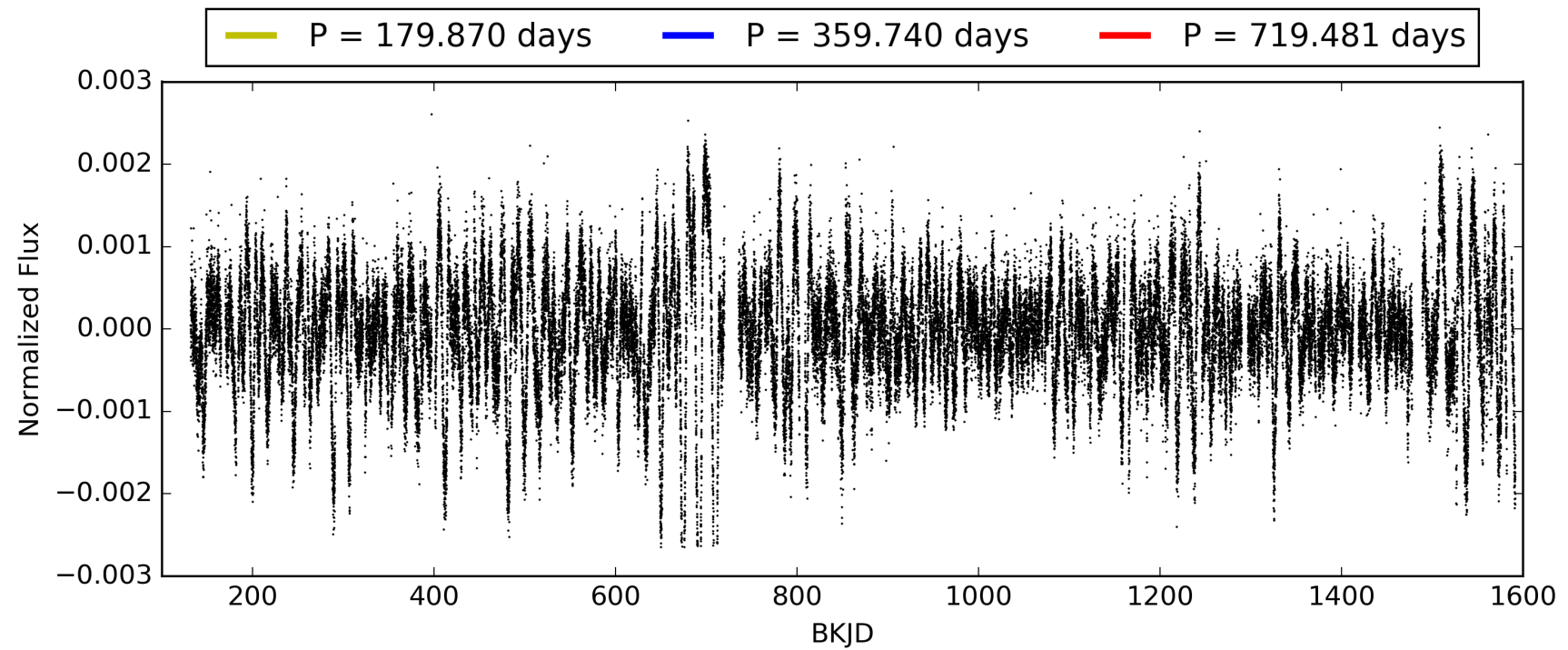
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [93.13σ]
ModelChiSquare2-sig: 10.1%
ModelChiSquareGof-sig: 97.7%
Bootstrap-pfa: 2.40e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 5.484
Centroid-sig: 36.8%
Centroid-so: 1.098 arcsec [0.98σ]
OotOffset-rm: 0.467 arcsec [1.02σ]
KicOffset-rm: 0.532 arcsec [1.13σ]
OotOffset-st: 0/0/0/4 [4]
KicOffset-st: 0/0/0/4 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 009026007-02, PDC Light Curves

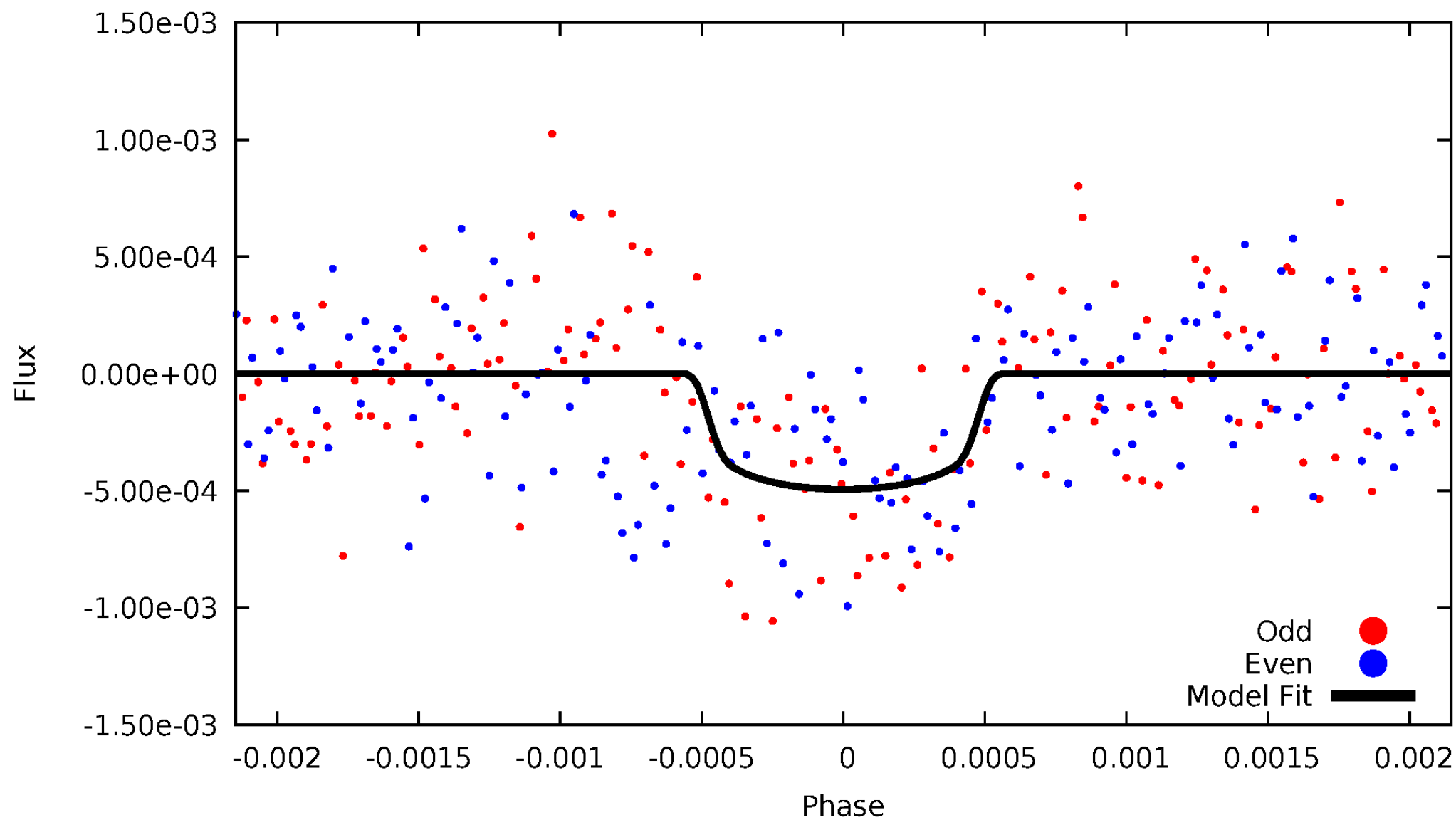


TCE 009026007-02



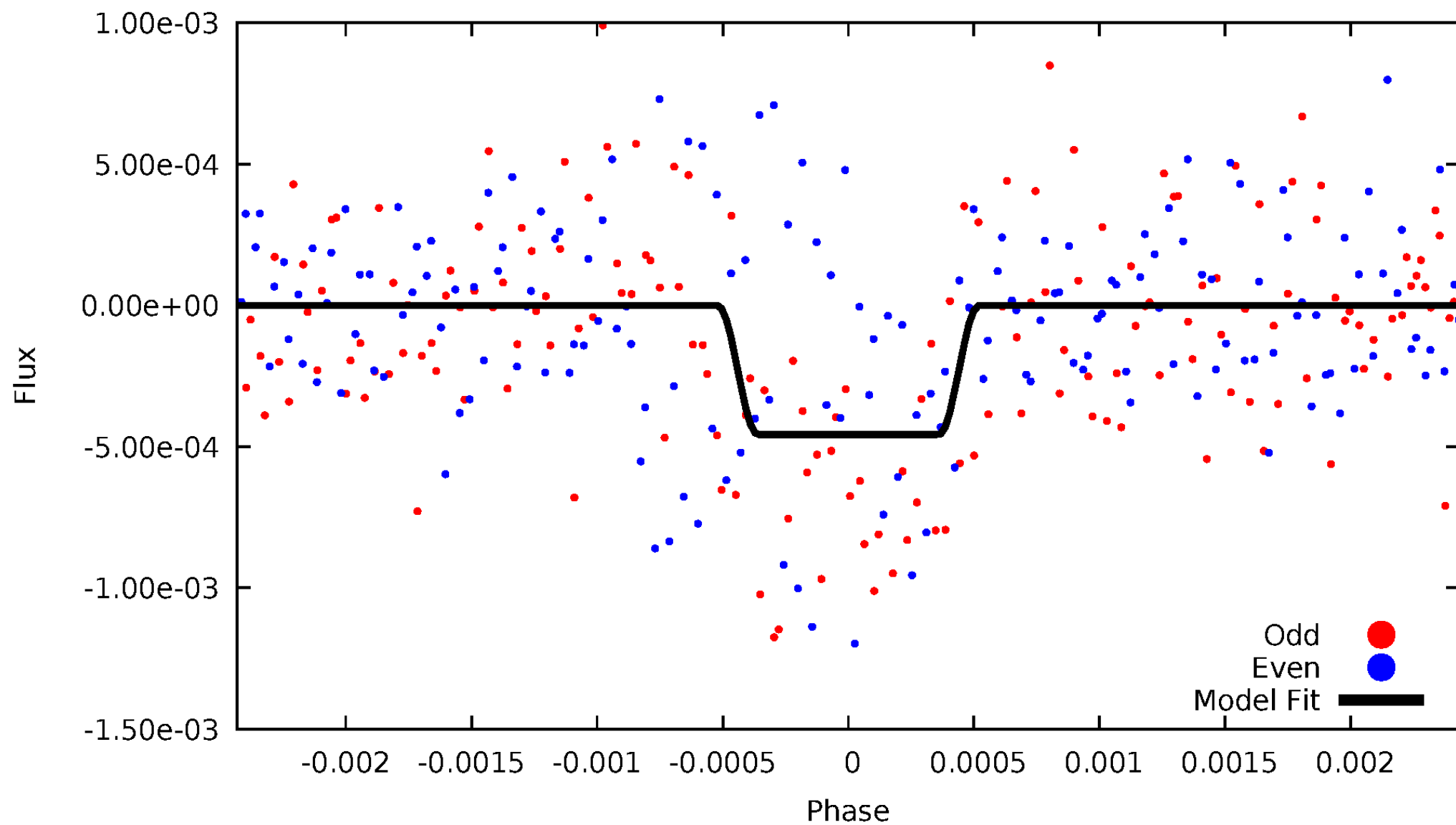
DV Odd/Even

TCE 009026007-02



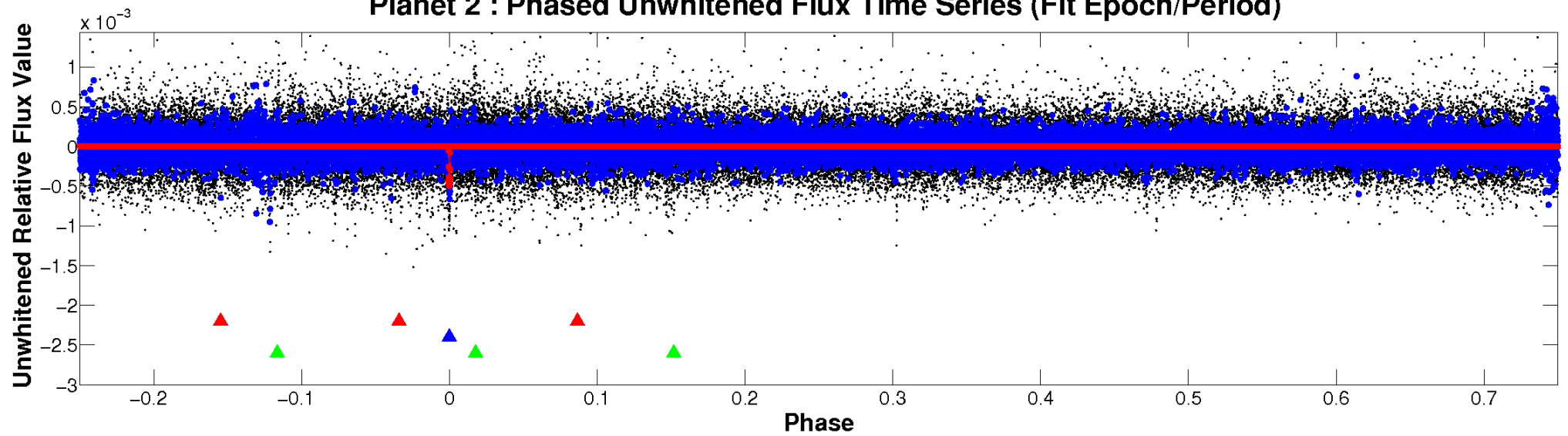
ALT Odd/Even

TCE 009026007-02

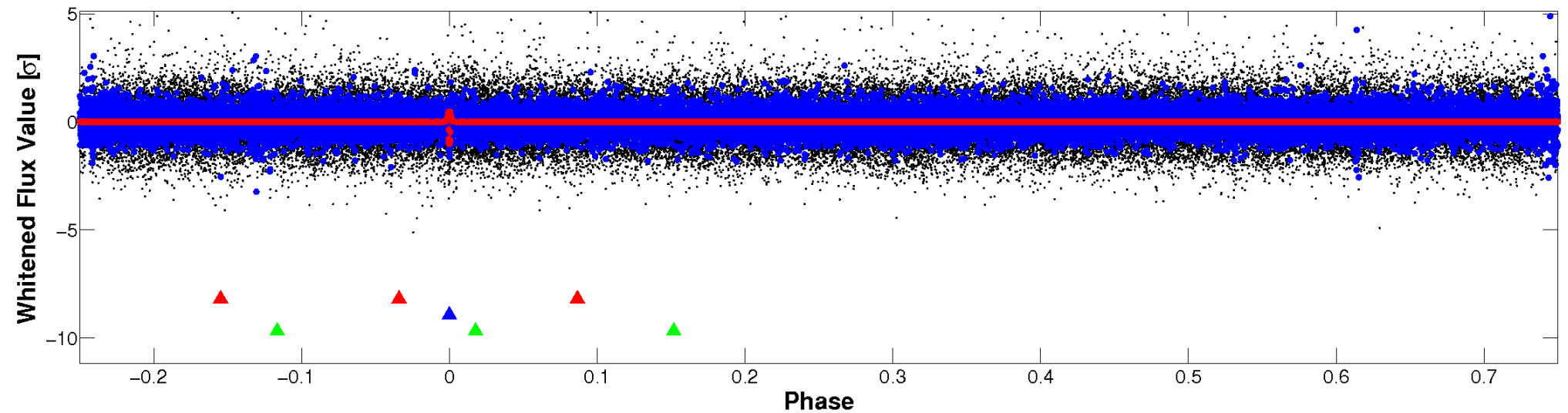


Non-Whitened Vs. Whitened Light Curve

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

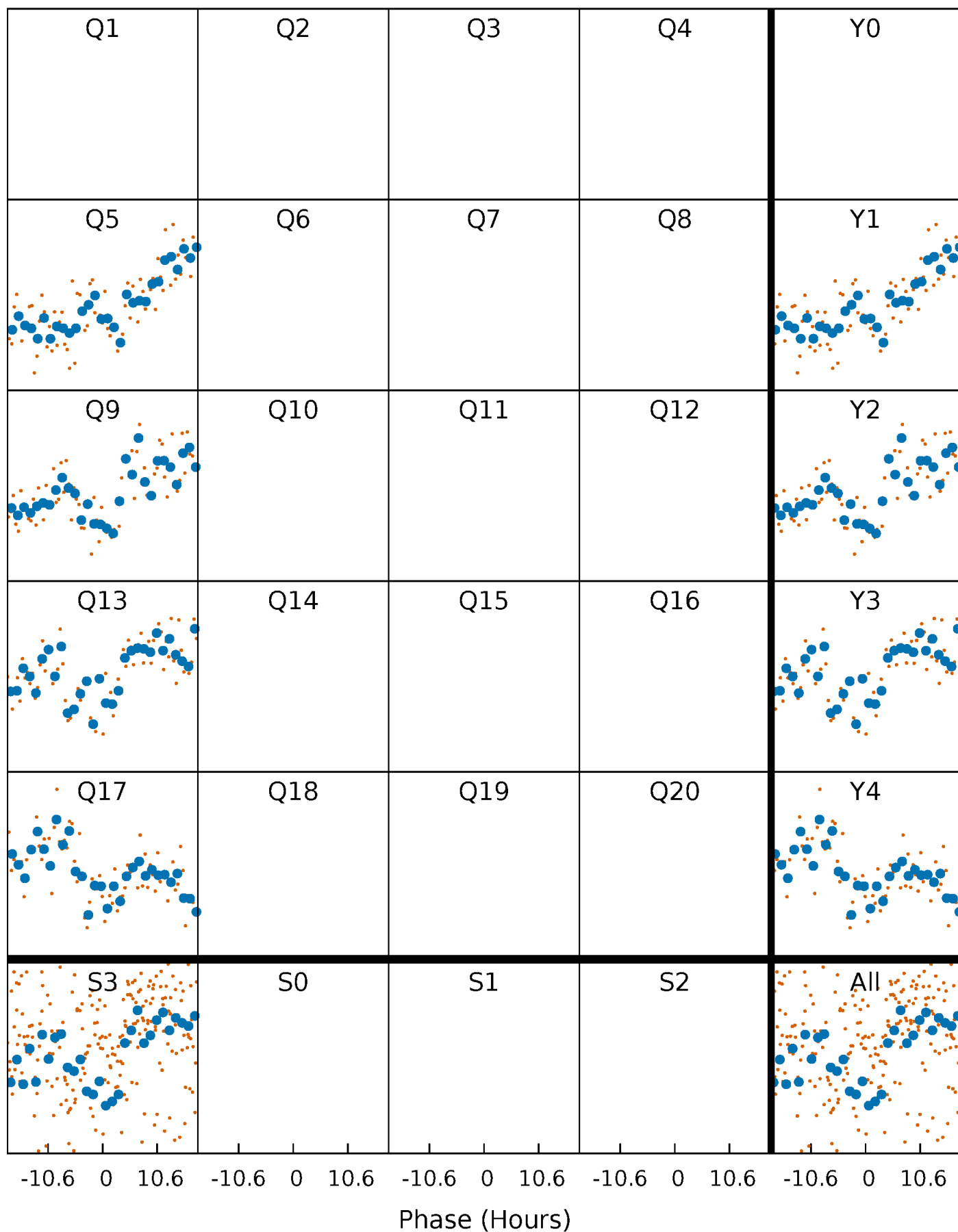


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



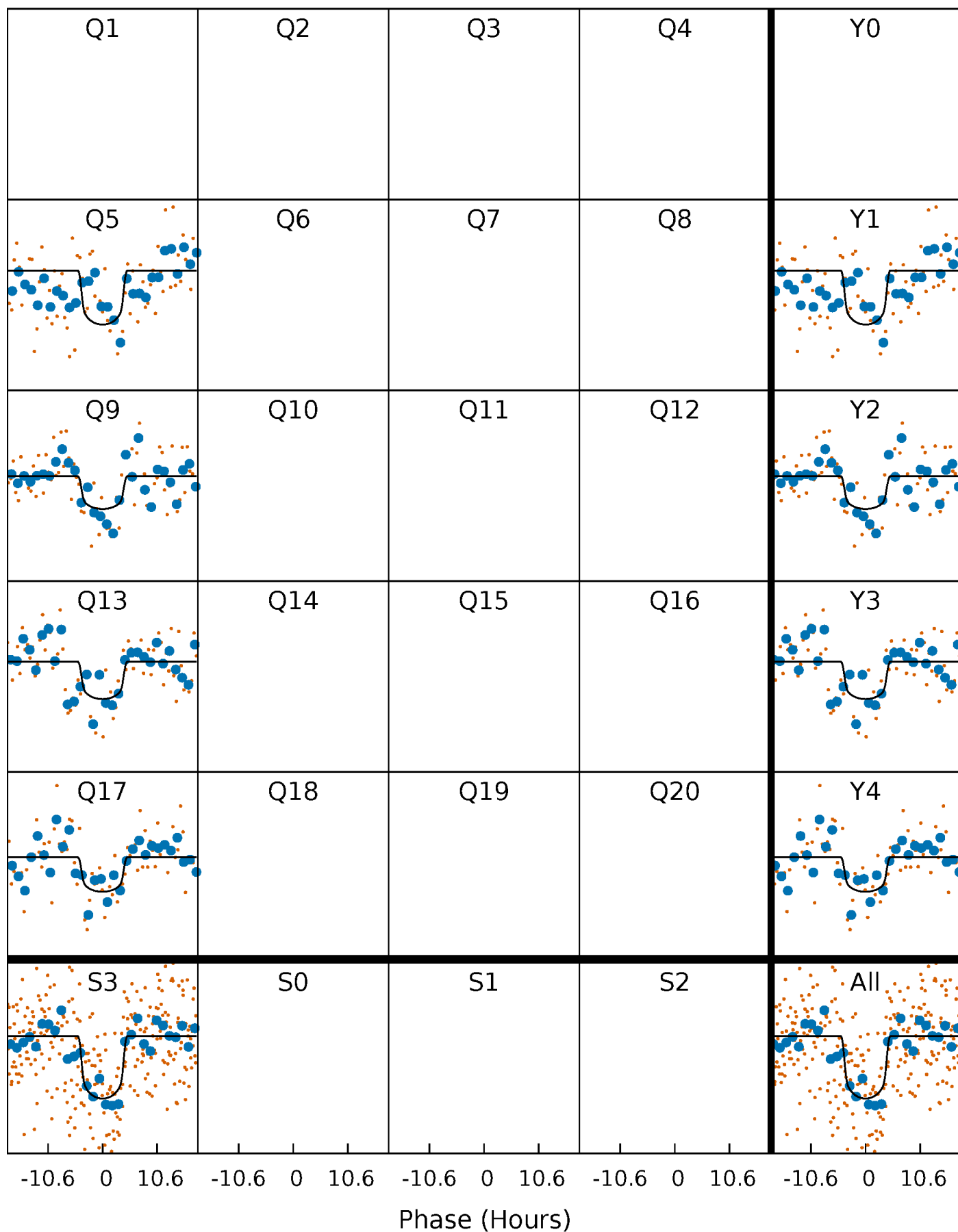
PDC Quarter-Phased Transit Curves

TCE 009026007-02 $P=359.740475$ Days $T_0=490.407910$ (BKJD)



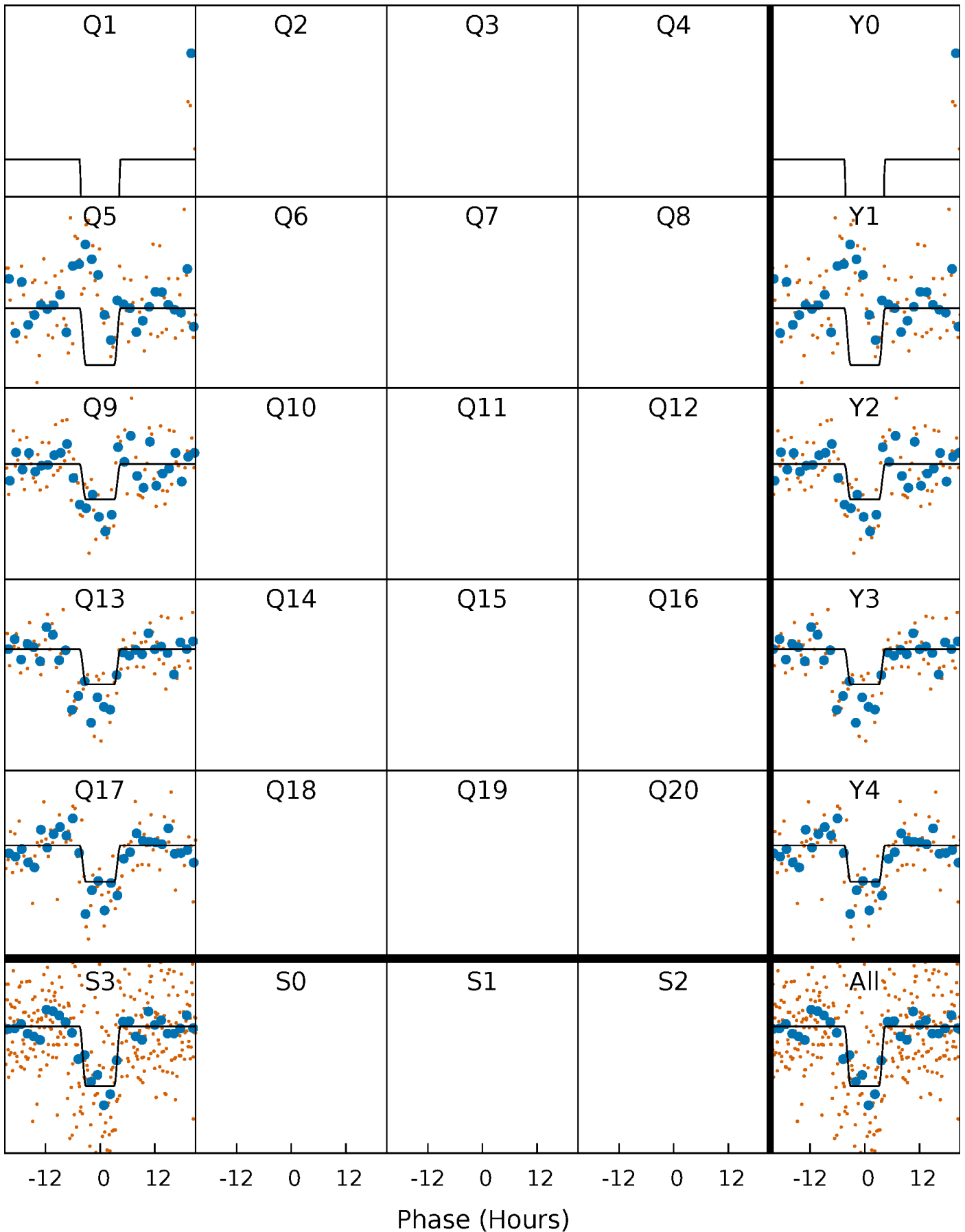
DV Quarter-Phased Transit Curves

TCE 009026007-02 $P=359.740475$ Days $T_0=490.407910$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

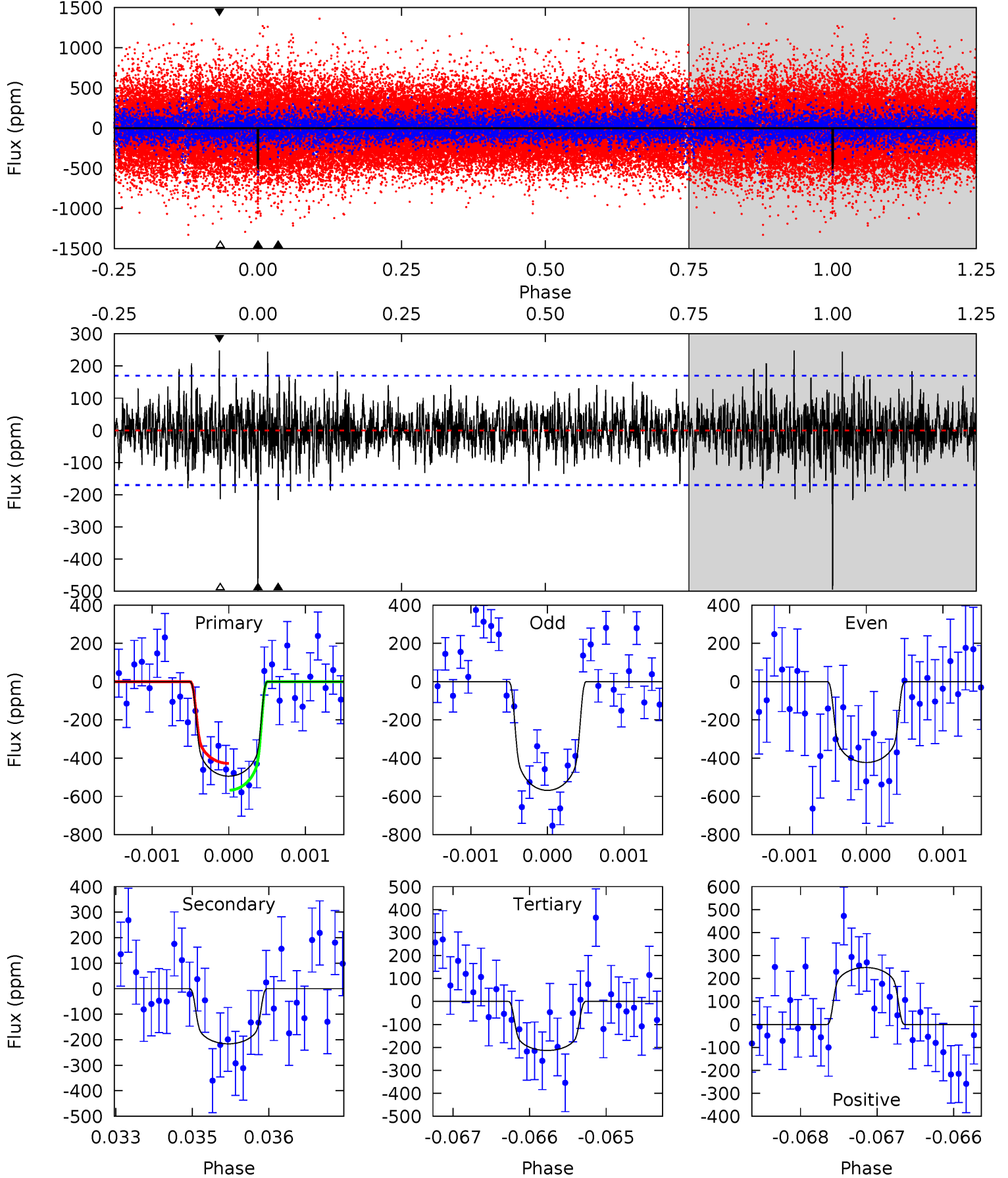
TCE 009026007-02 $P=359.726013$ Days $T_0=490.432428$ (BKJD)



DV Model-Shift Uniqueness Test

009026007-02, $P = 359.740475$ Days, $E = 130.667435$ Days

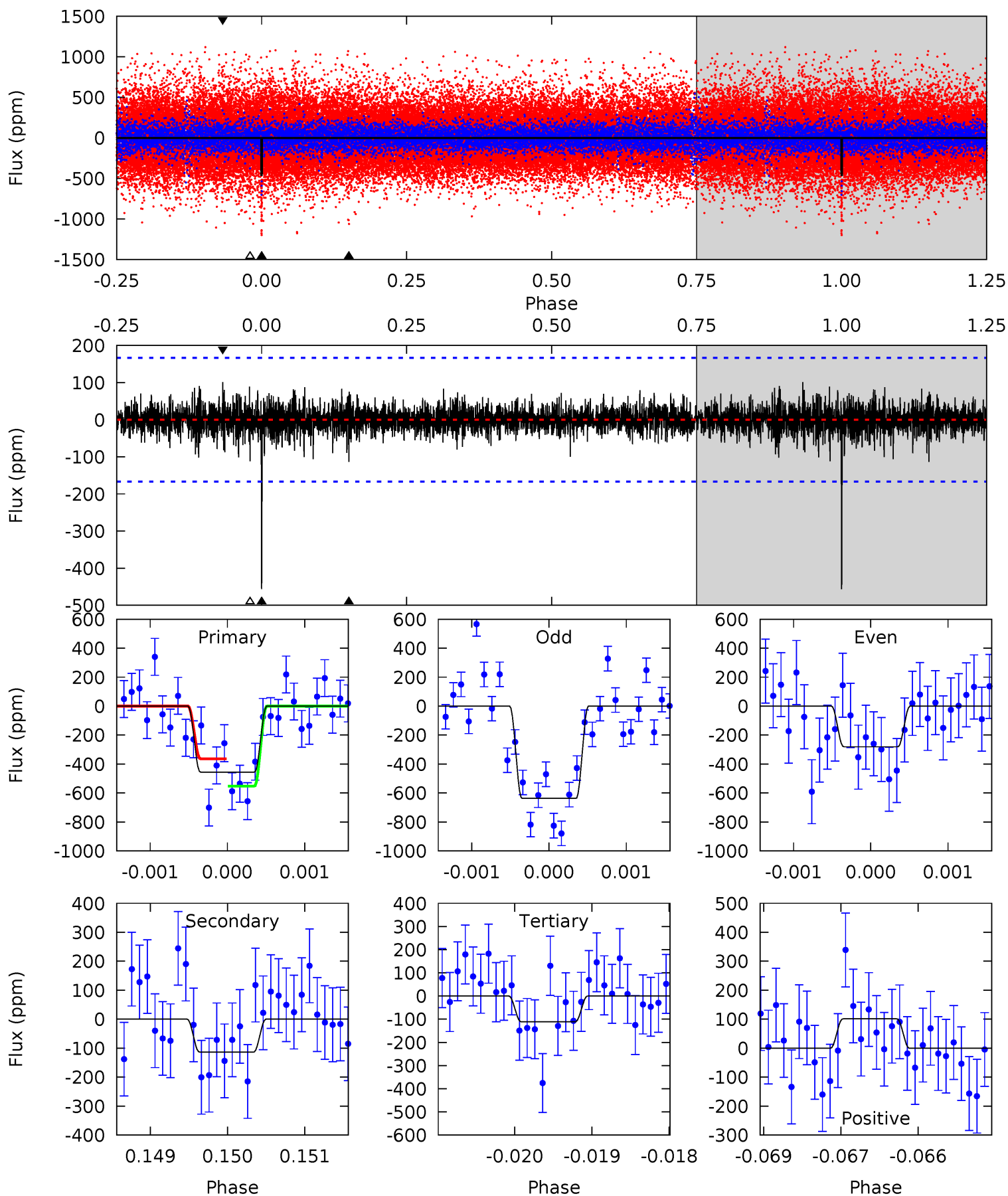
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	6.91	6.83	7.92	5.43	3.26	1.67	8.98	7.88	0.08	-1.02	2.34	0.95	0.33	2.24



Alt Model-Shift Uniqueness Test

009026007-02, P = 359.726013 Days, E = 130.706415 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	3.71	3.64	3.30	5.45	3.28	0.83	11.3	11.6	0.07	0.41	5.87	0.72	0.18	3.08



Stellar Parameters For KIC 009026007

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5812^{+70}_{-87}	$4.504^{+0.016}_{-0.136}$	$0.210^{+0.150}_{-0.150}$	$0.963^{+0.169}_{-0.040}$	$1.079^{+0.048}_{-0.074}$	$1.701^{+0.147}_{-0.637}$
	+1%/-1%	+0%/-3%	+71%/-71%	+18%/-4%	+4%/-7%	+9%/-37%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 009026007-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-216 ± 31	$2.60^{+0.42}_{-0.43}$	354^{+13}_{-8}	4693^{+356}_{-307}	17669^{+8166}_{-4987}
Alt.	-114 ± 31	$2.34^{+0.40}_{-0.41}$	354^{+16}_{-9}	4337^{+374}_{-319}	11710^{+6461}_{-3892}

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 $A_{\text{obs}} \gg 1.0$

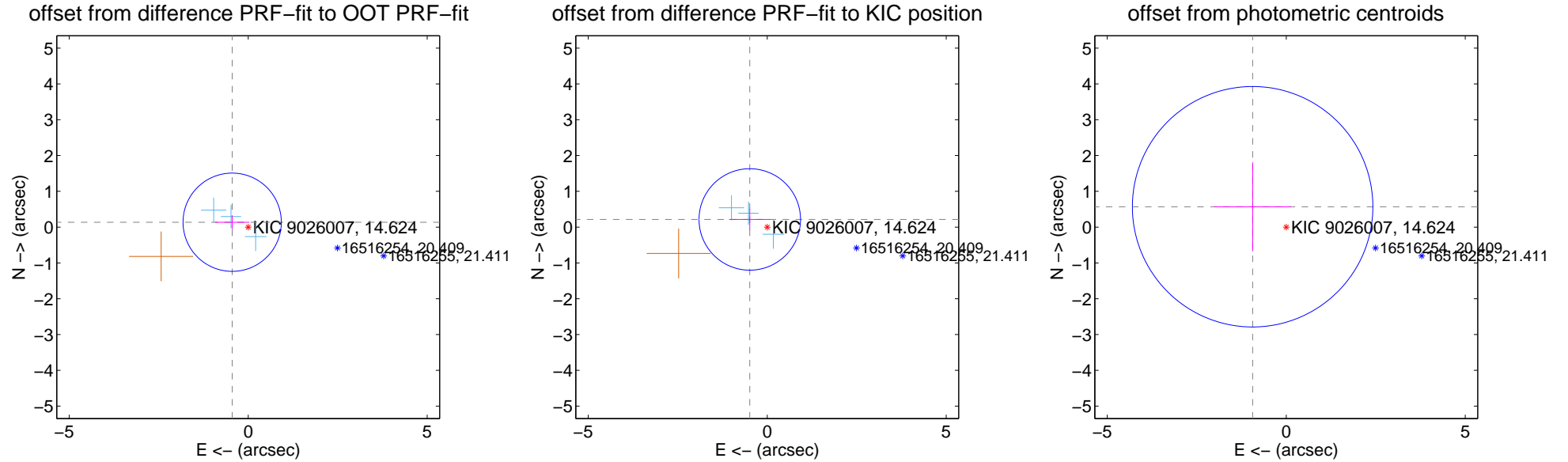
DV Centroid Data

Supplemental centroid analysis for 009026007-02. Kepler magnitude: 14.62. Transit SNR 7.79

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.467 ± 0.457	1.02	0.447 ± 0.478	0.137 ± 0.194
PRF-fit source offset from KIC position	0.532 ± 0.472	1.13	0.487 ± 0.580	0.214 ± 0.291
photometric centroid source offset	1.10 ± 1.12	0.98	0.94 ± 1.07	0.57 ± 1.24

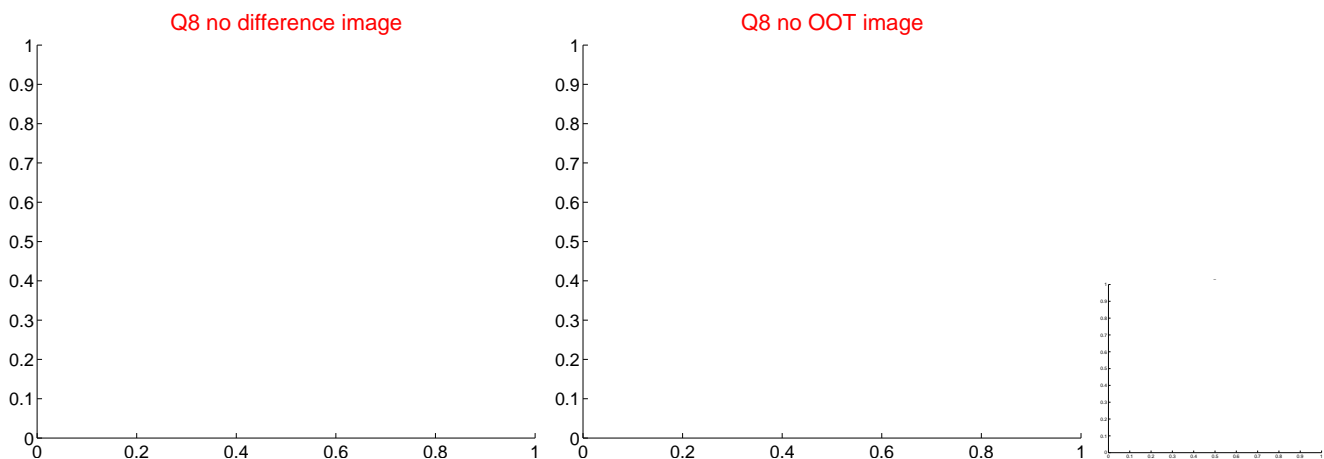
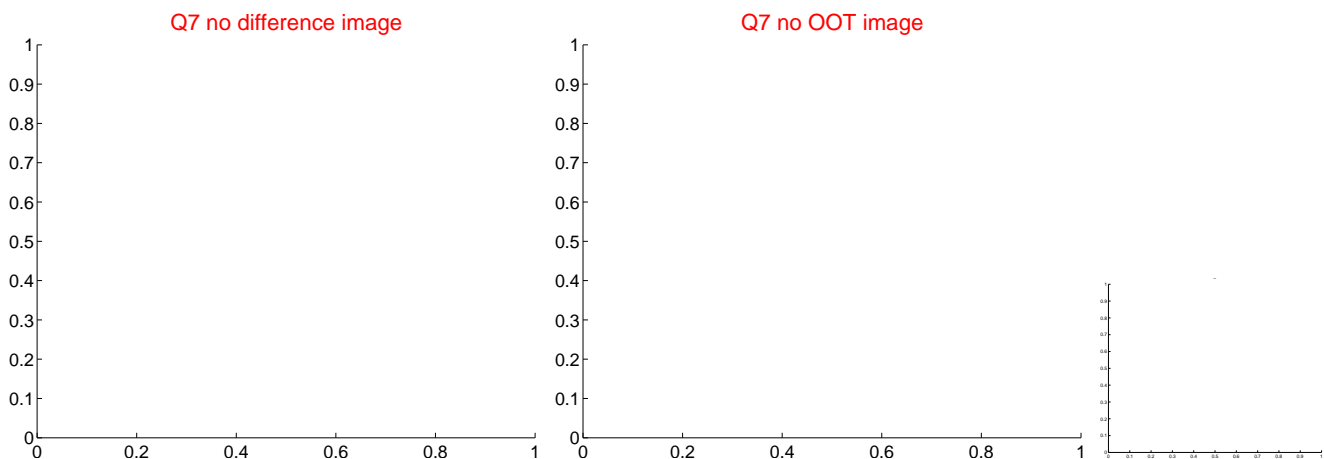
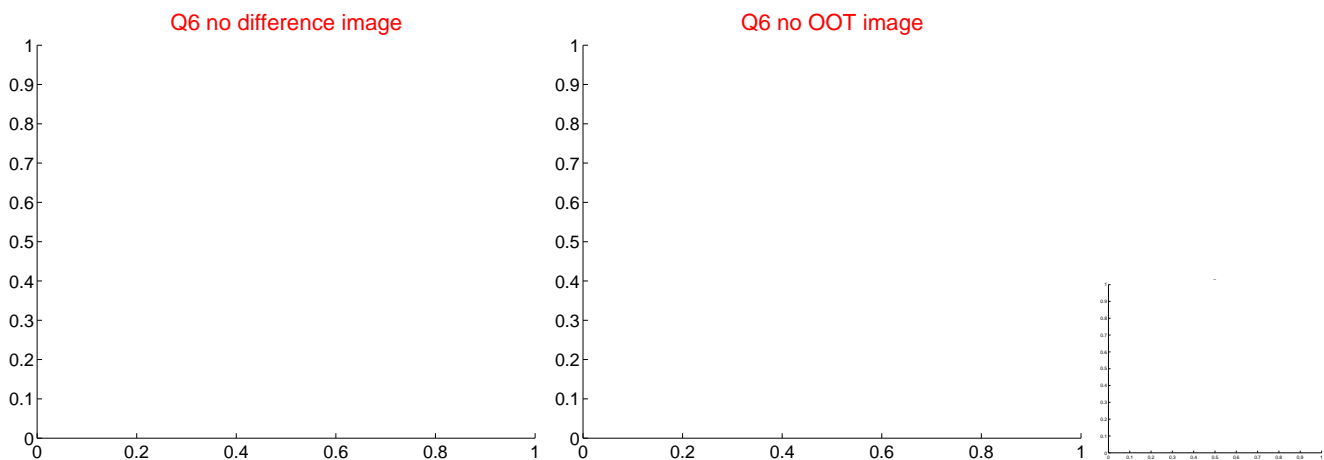
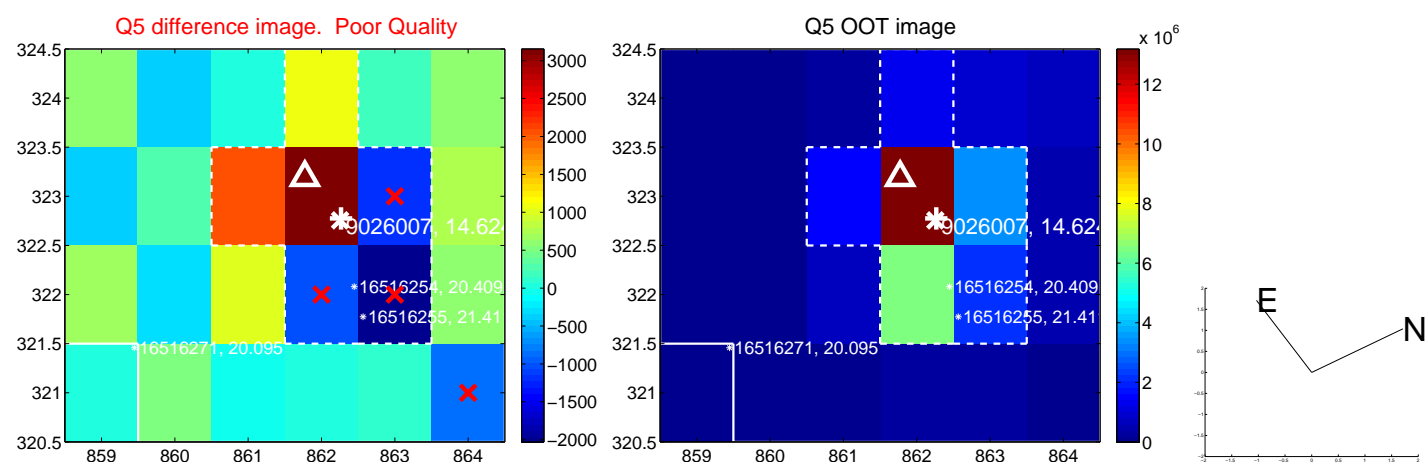


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

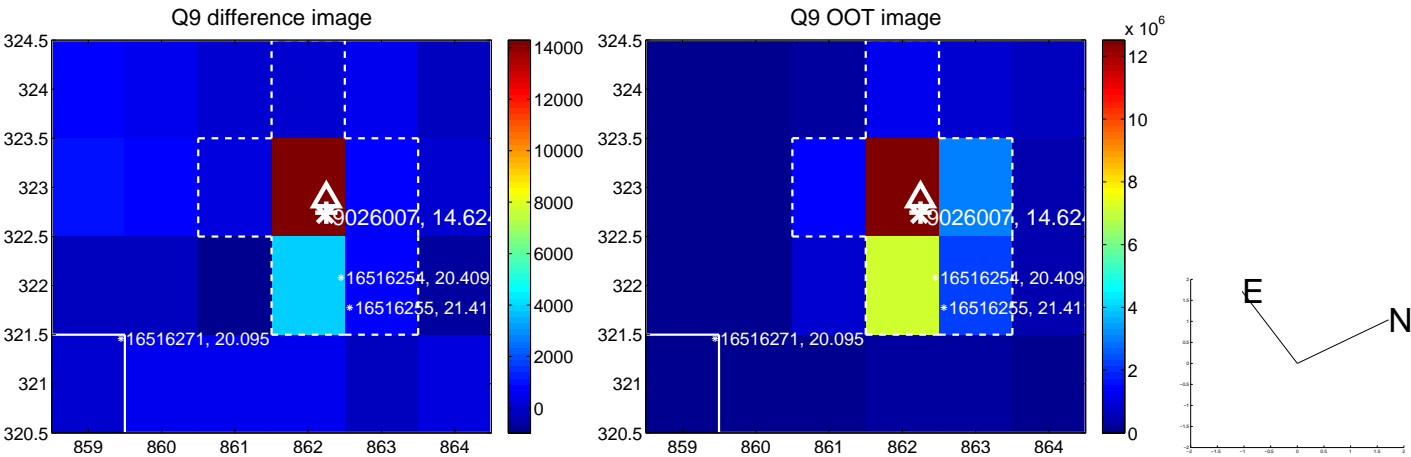
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



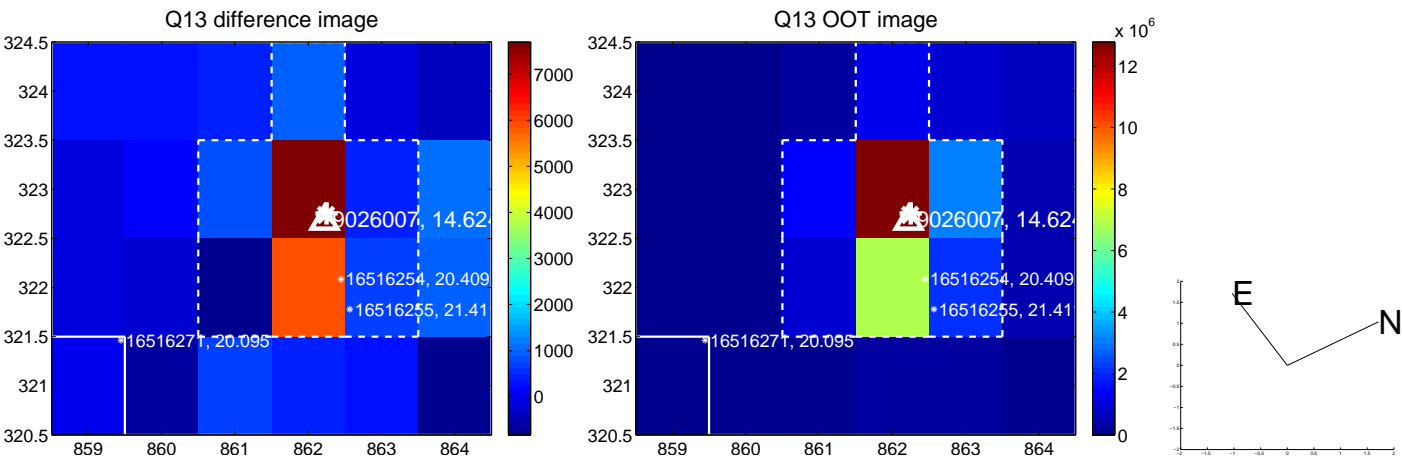
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



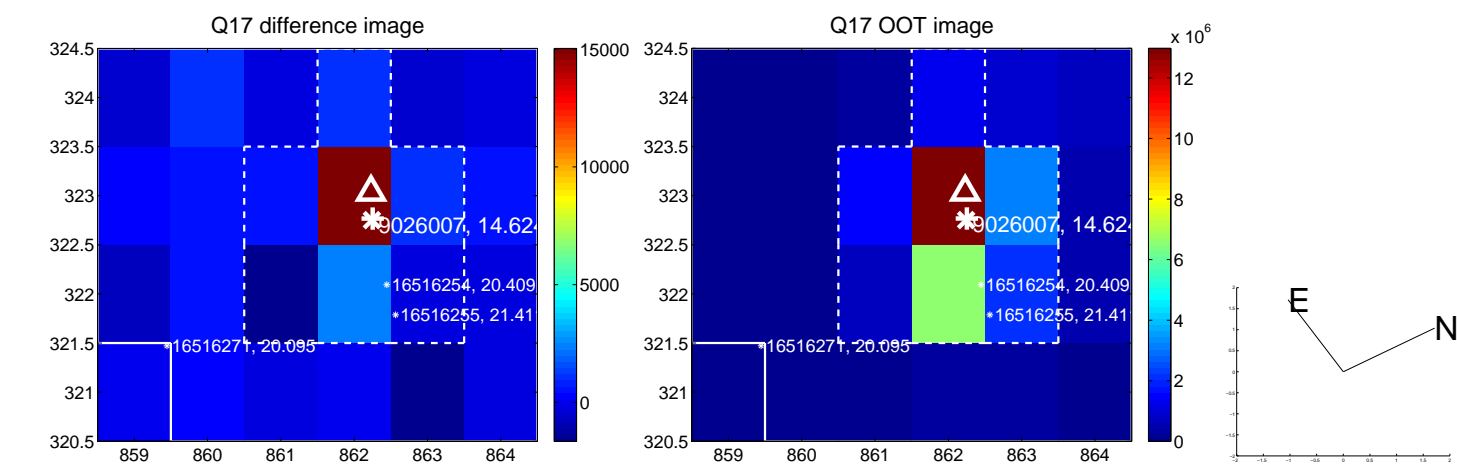
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



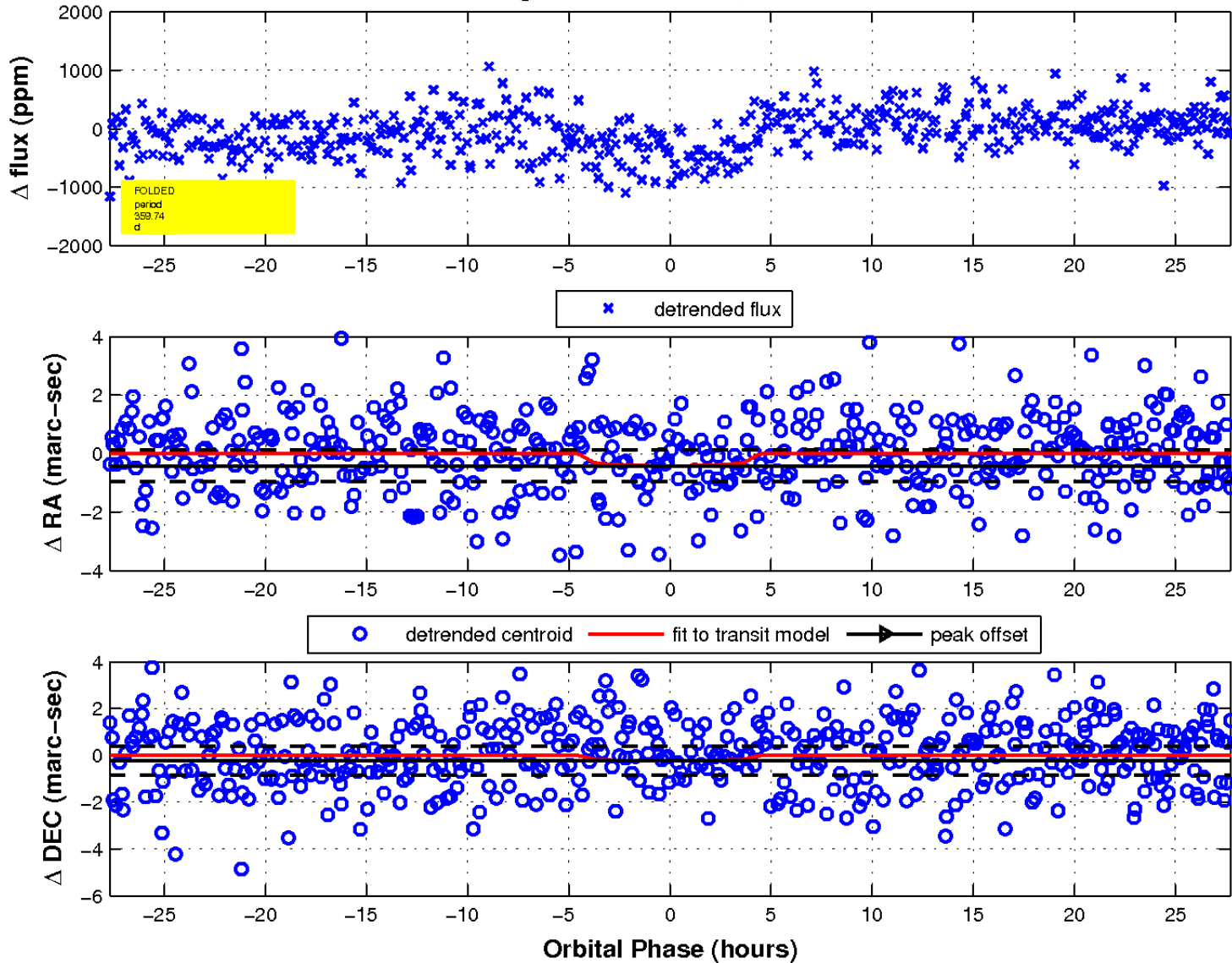
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

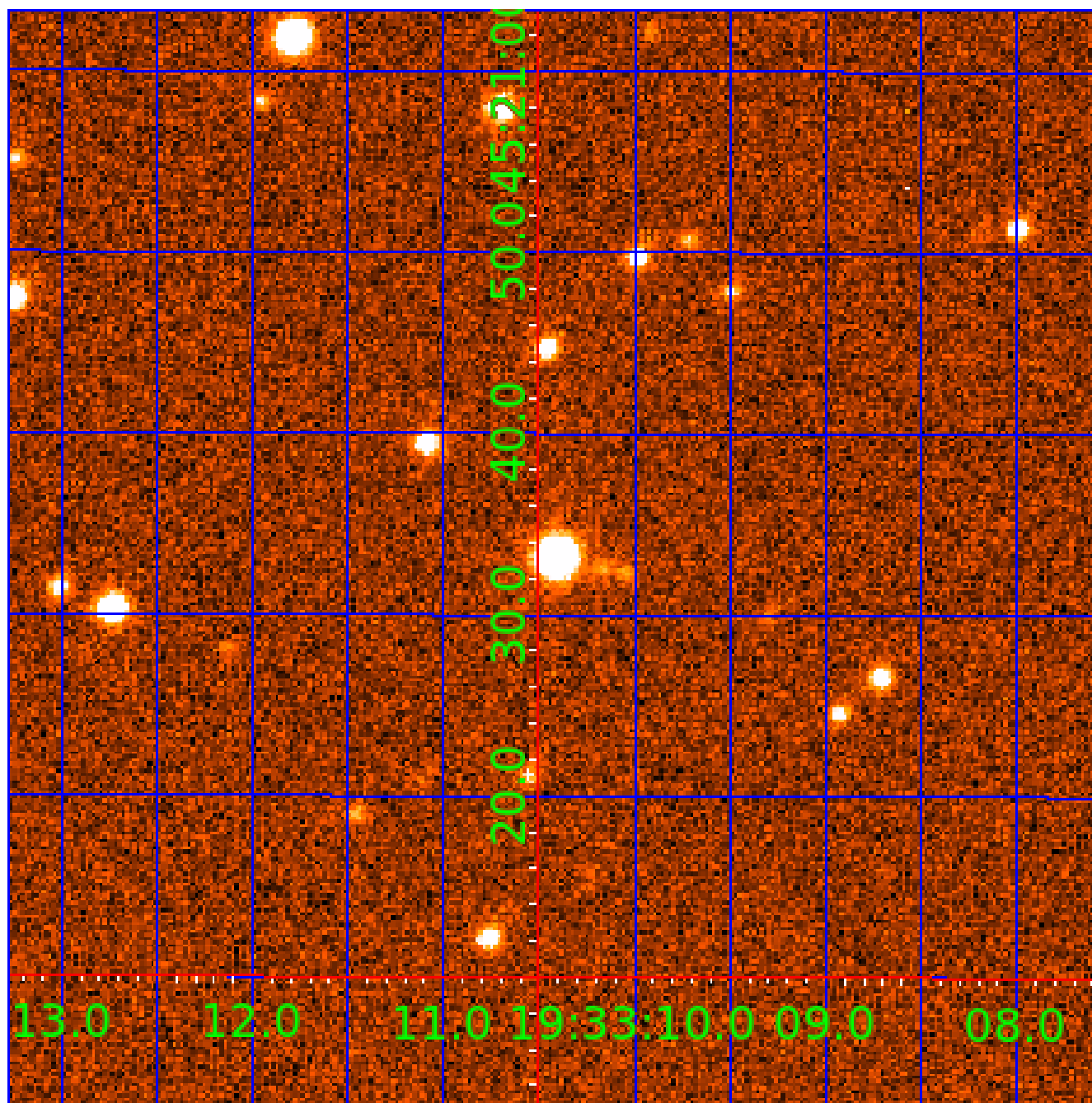


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 009026007

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})
009026007-01	OBS	5602.01	403.160177	434.745658	666.4	6.273	8.9	8.9	0.96	5812	2.65	0.79
009026007-02	OBS	No	359.740475	490.407910	494.6	9.266	8.0	7.8	0.96	5812	2.52	0.92
009026007-03	OBS	No	407.991034	448.535148	636.9	7.555	7.8	7.8	0.96	5812	2.53	0.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009026007-01	OBS	FP	0.31	1	0	0	0	ALL_TRANS_CHASES—CENT_FEW_DIFFS
009026007-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES
009026007-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

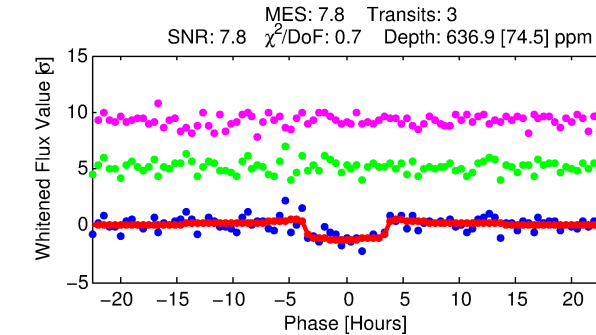
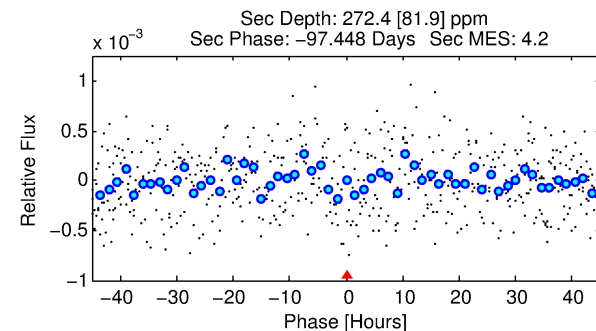
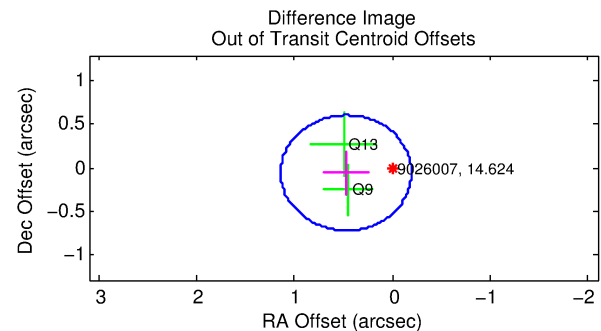
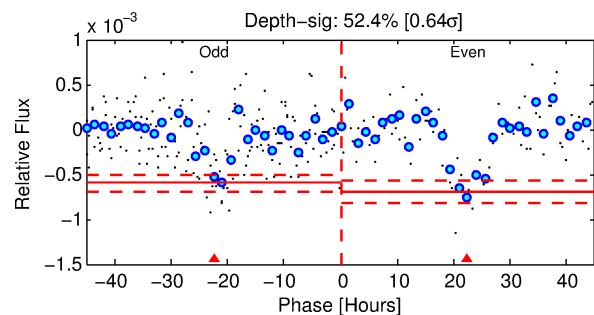
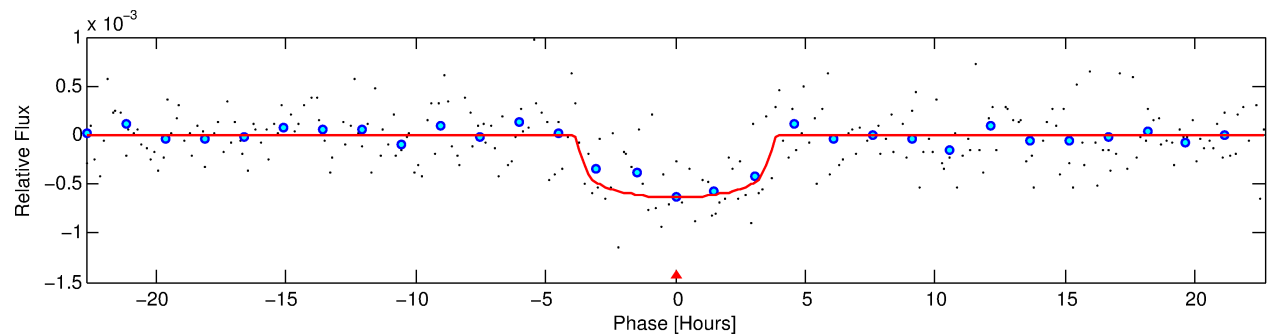
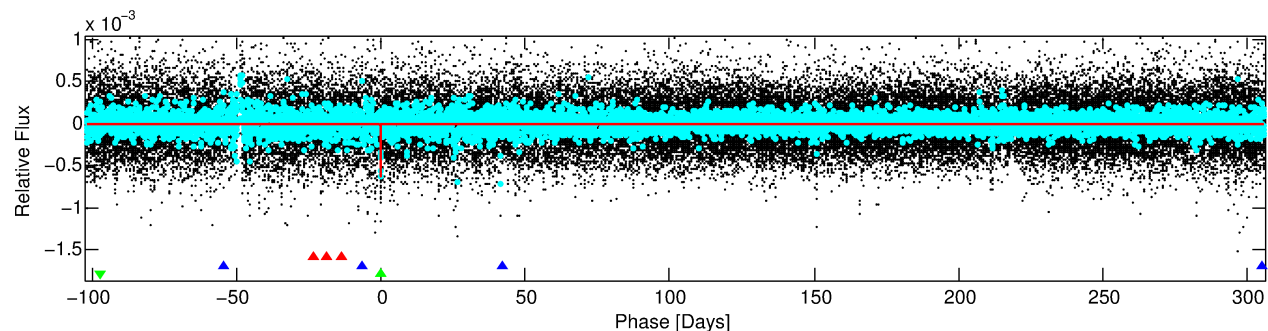
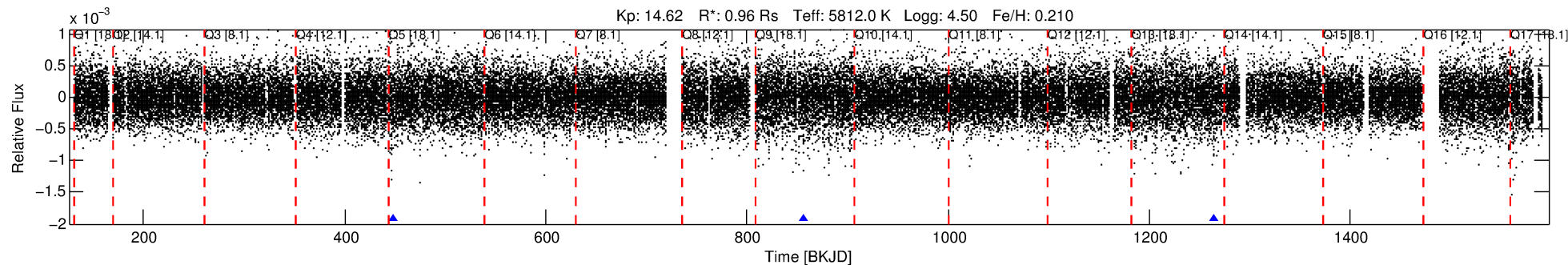
Ephemeris Match Information For 009026007-03

No Significant Match Found

DV One-Page Summary

KIC: 9026007 Candidate: 3 of 3 Period: 407.991 d
KOI: K05602 Corr: No Ephemeris Match

Kp: 14.62 R*: 0.96 Rs Teff: 5812.0 K Logg: 4.50 Fe/H: 0.210



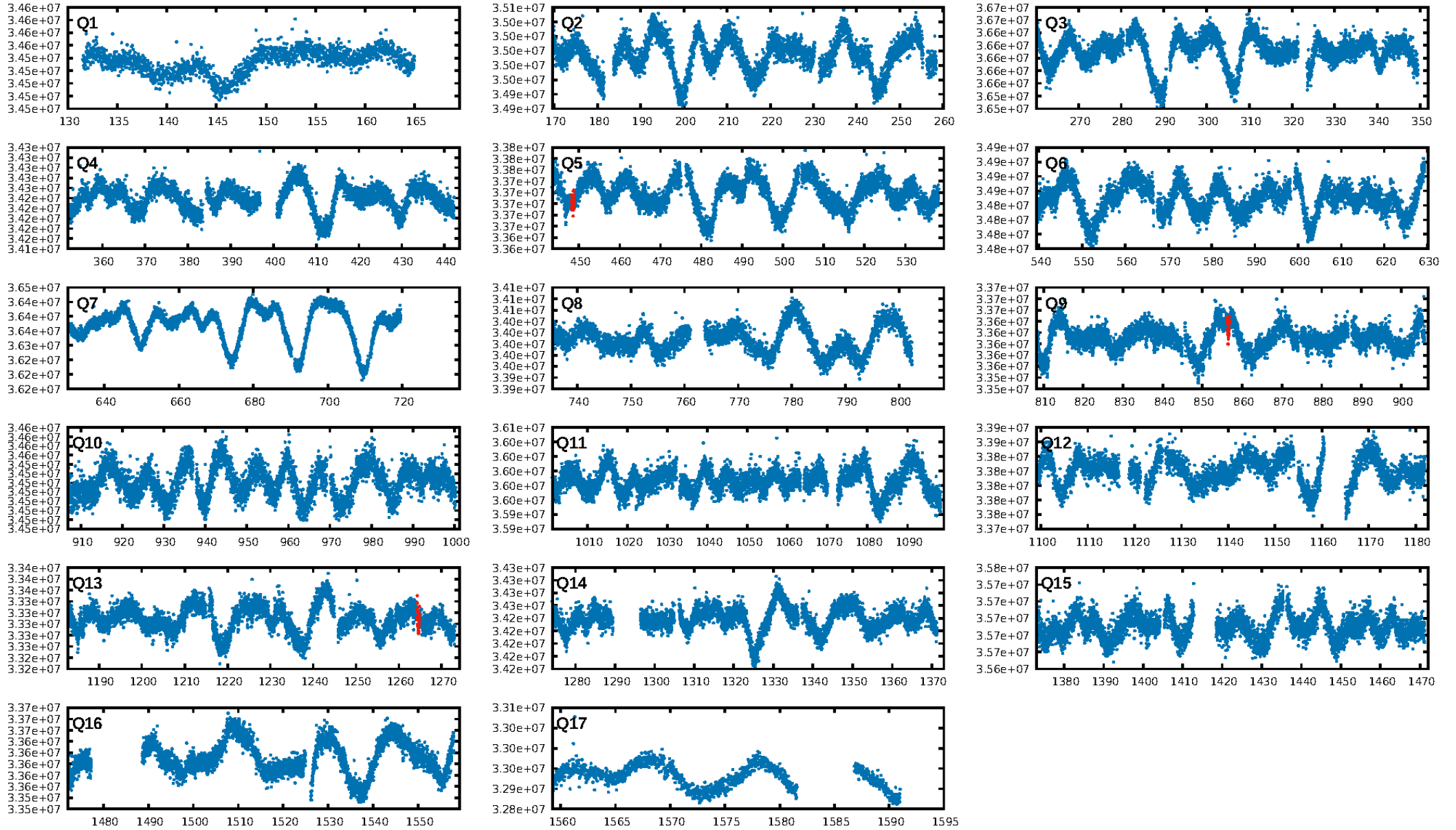
DV Fit Results:

Period = 407.99103 [0.00767] d
Epoch = 448.5351 [0.0100] BKJD
Rp/R* = 0.0241 [0.0173]
a/R* = 341.03 [1045.67]
b = 0.60 [3.24]
Seff = 0.78 [0.19]
Teq = 239 [15] K
Rp = 2.53 [1.88] Re
a = 1.1046 [0.1732] AU
Ag = 28584.96 [42630.65] [0.67σ]
Teffp = 4813 [1773] K [2.58σ]

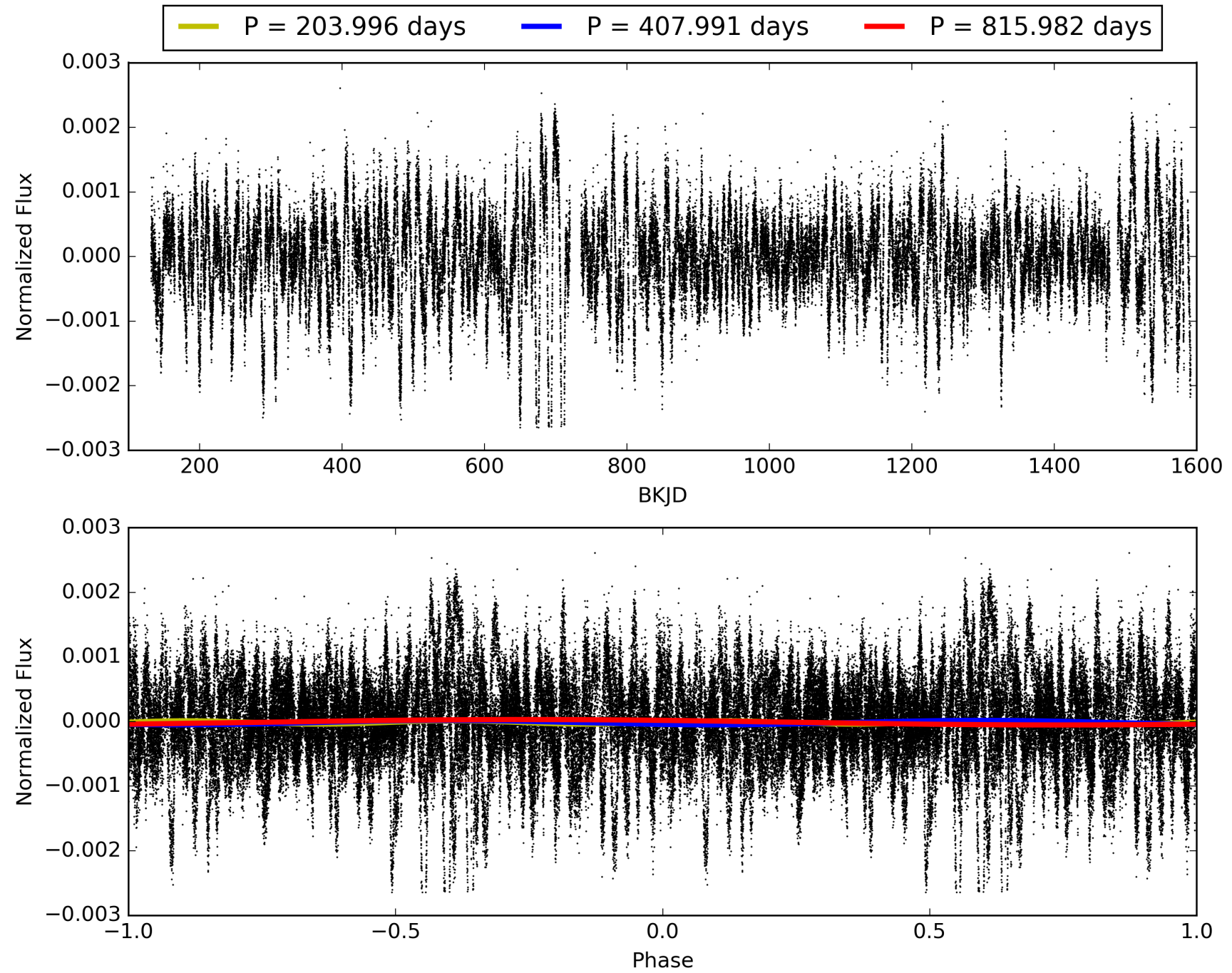
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [11.81σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 13.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.96e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 33.3
Centroid-sig: 6.0%
Centroid-so: 1.602 arcsec [1.43σ]
OotOffset-rm: 0.477 arcsec [2.14σ]
KicOffset-rm: 0.514 arcsec [2.31σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 009026007-03, PDC Light Curves

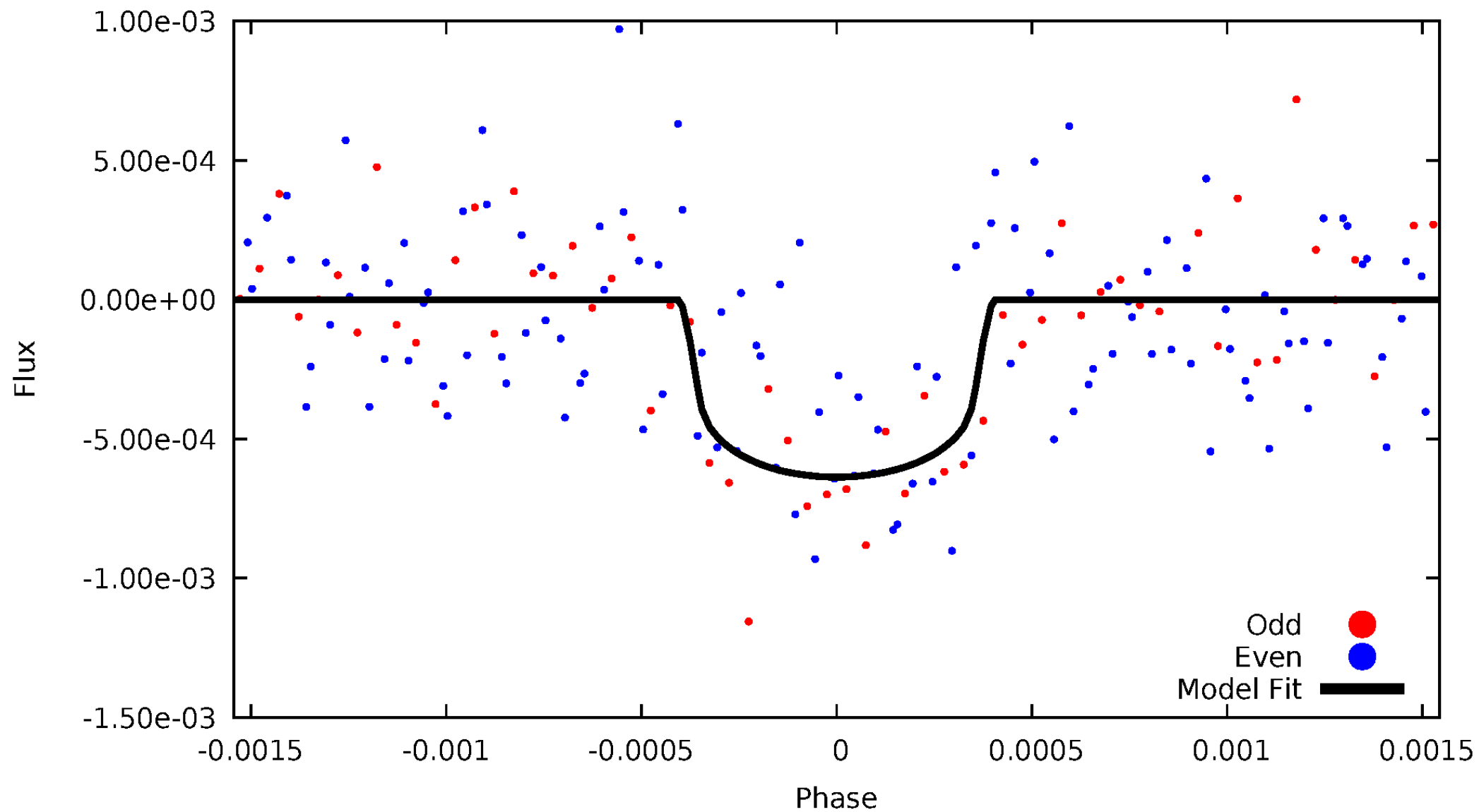


TCE 009026007-03



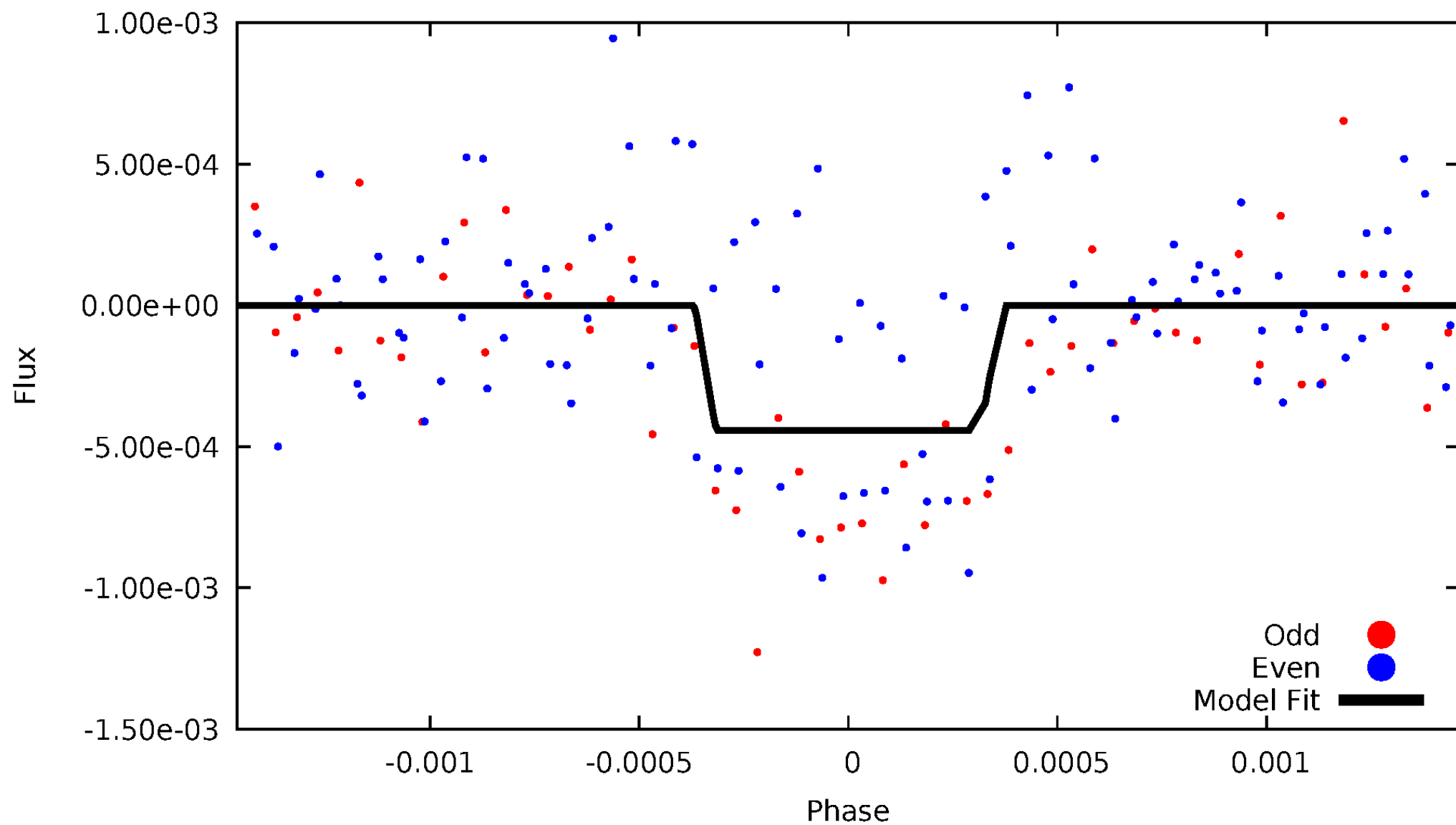
DV Odd/Even

TCE 009026007-03



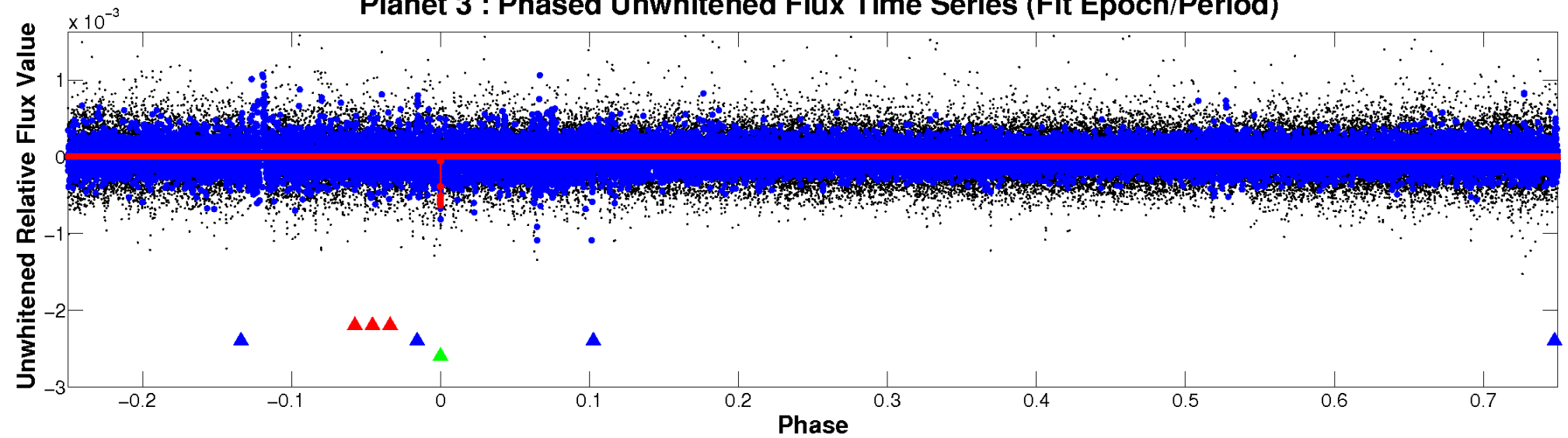
ALT Odd/Even

TCE 009026007-03

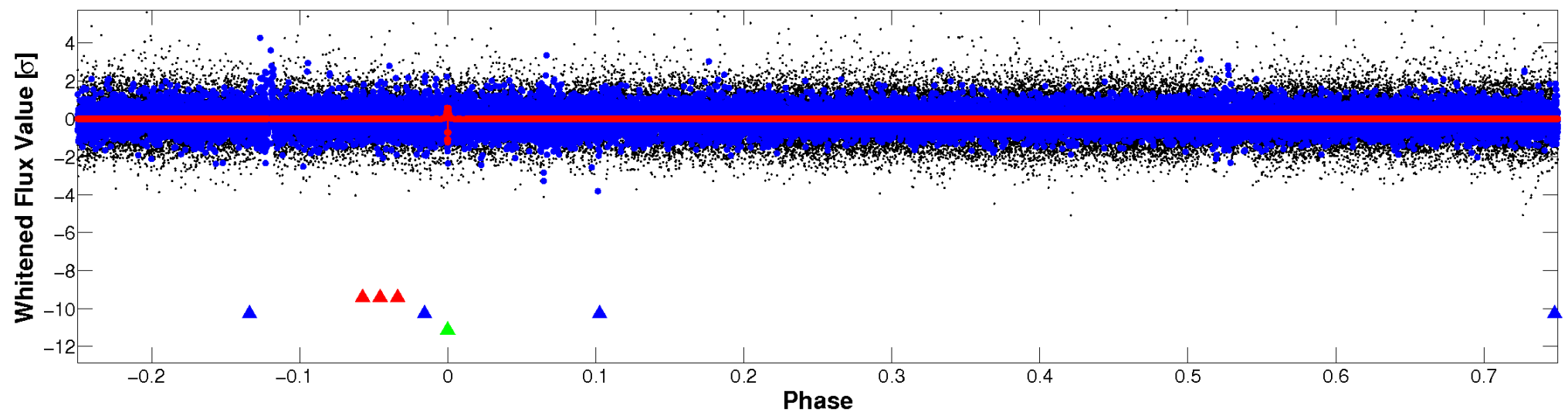


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

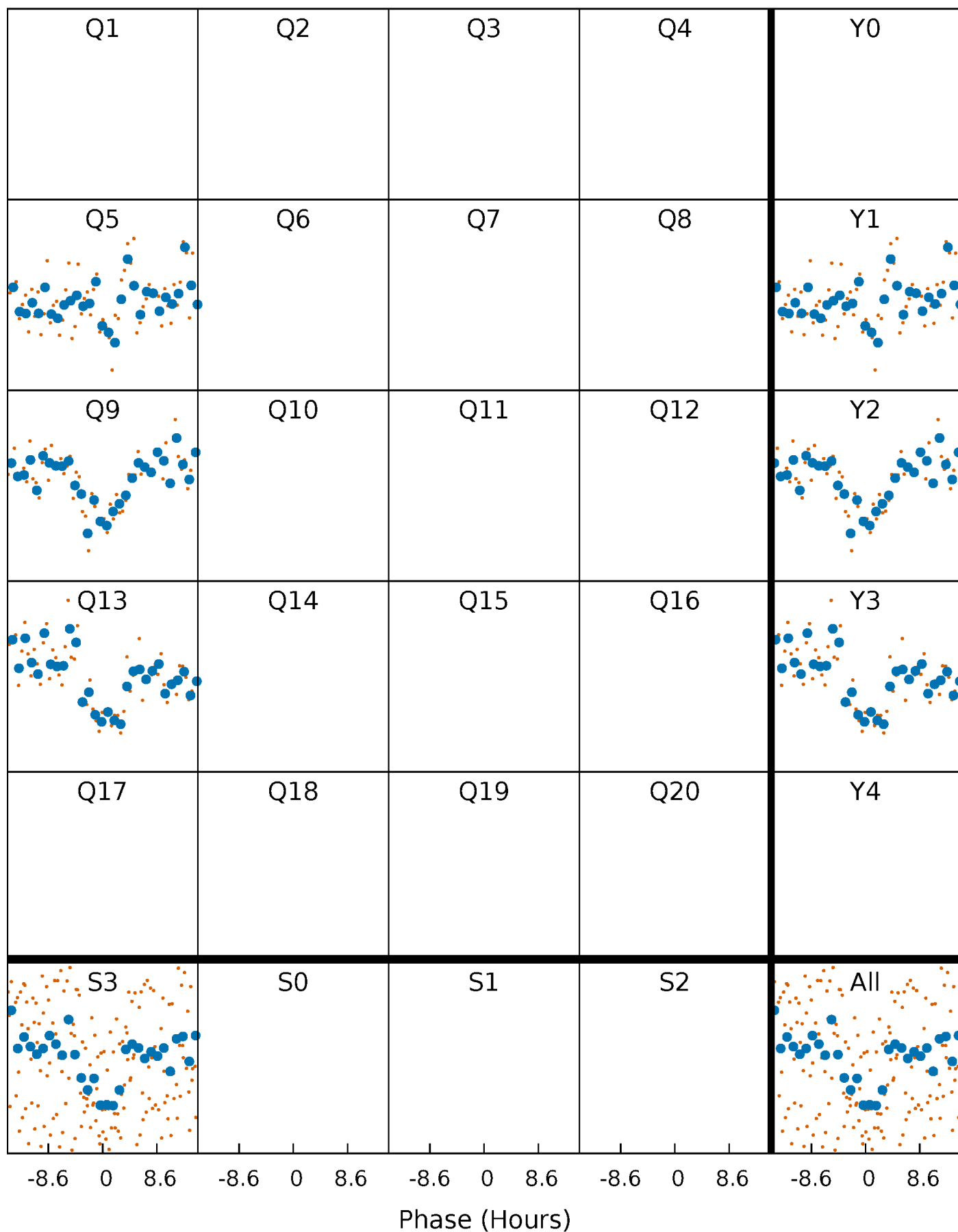


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



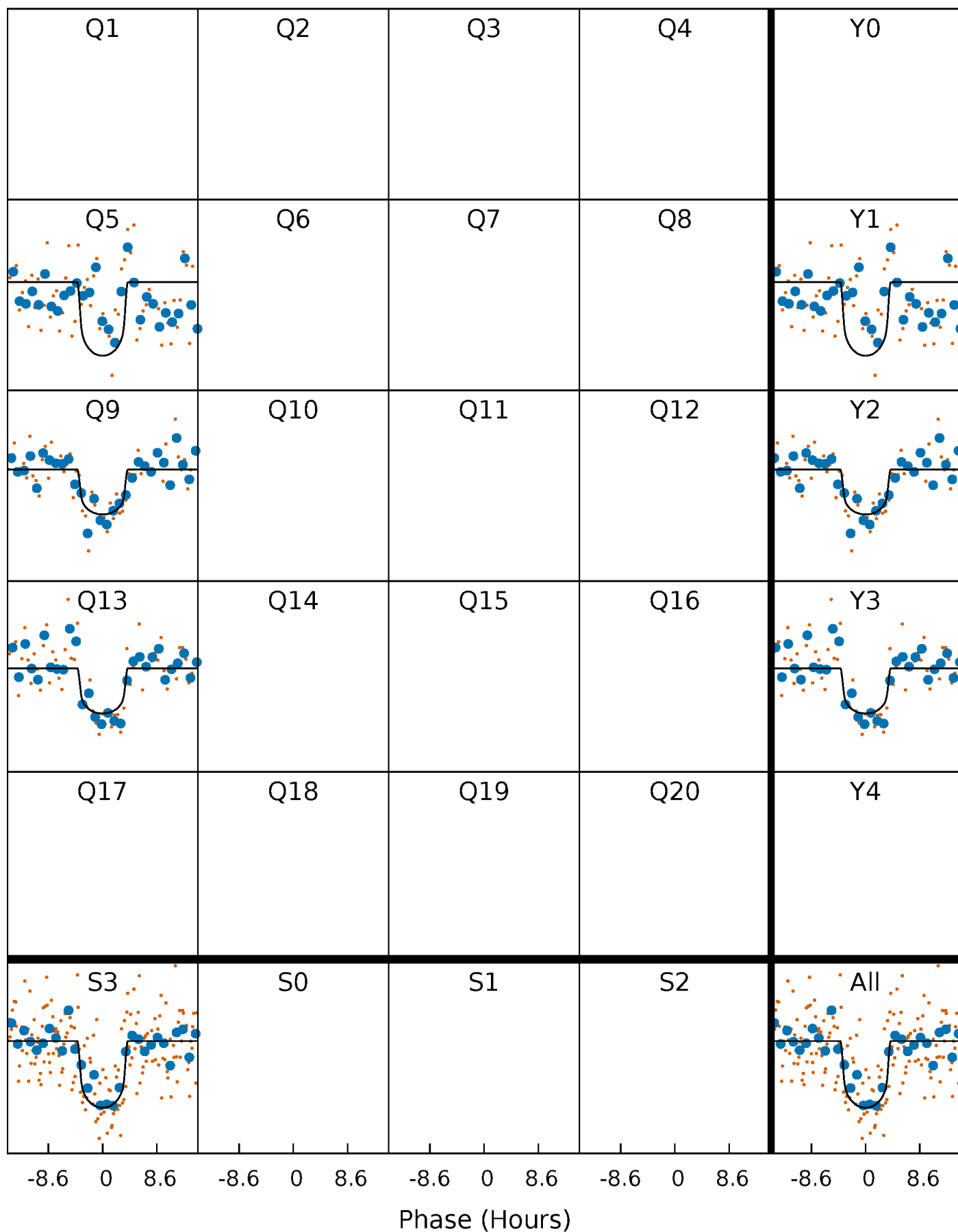
PDC Quarter-Phased Transit Curves

TCE 009026007-03 P=407.991034 Days $T_0=448.535148$ (BKJD)



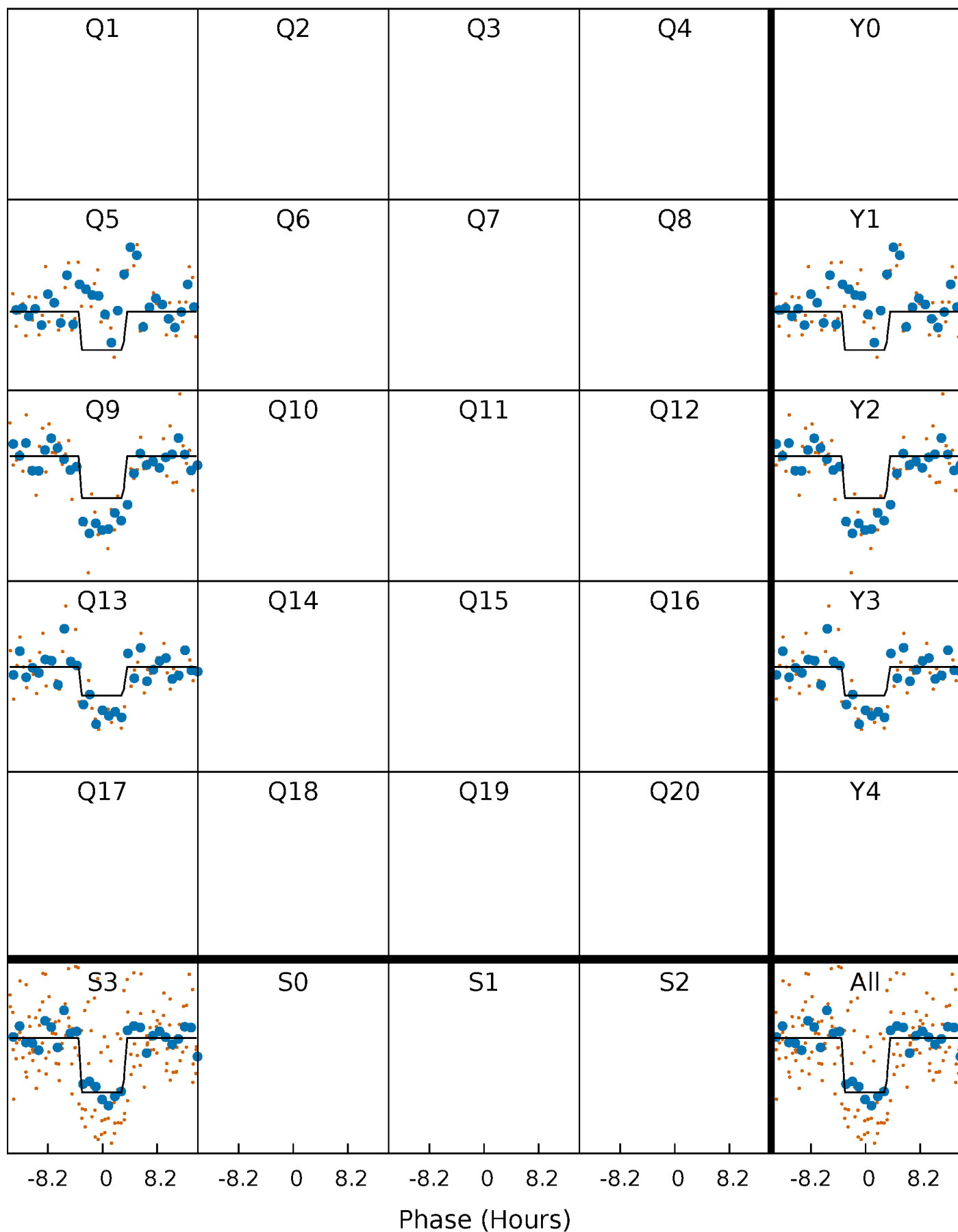
DV Quarter-Phased Transit Curves

TCE 009026007-03 $P=407.991034$ Days $T_0=448.535148$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

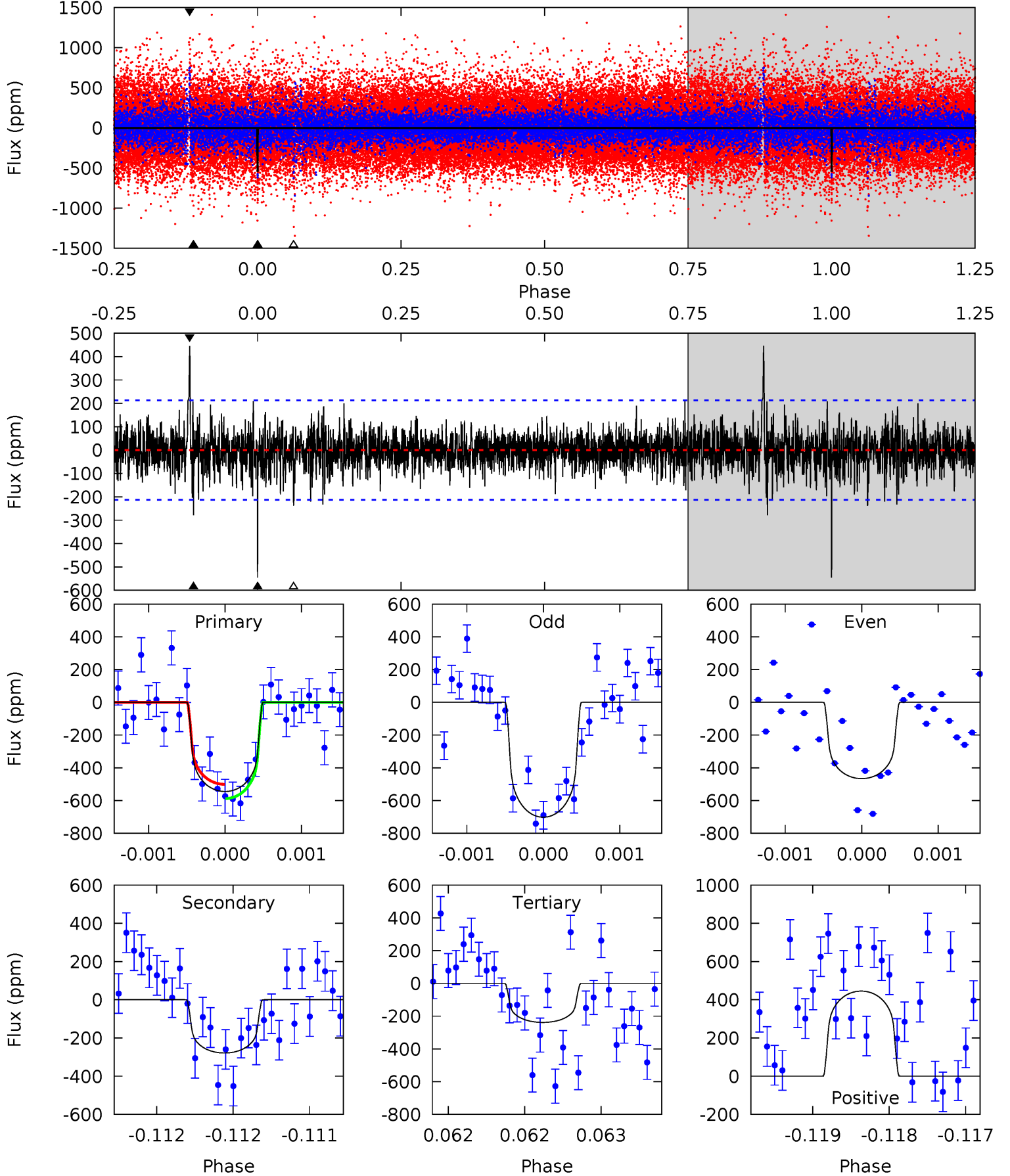
TCE 009026007-03 P=407.996893 Days $T_0=448.526192$ (BKJD)



DV Model-Shift Uniqueness Test

009026007-03, $P = 407.991034$ Days, $E = 40.544114$ Days

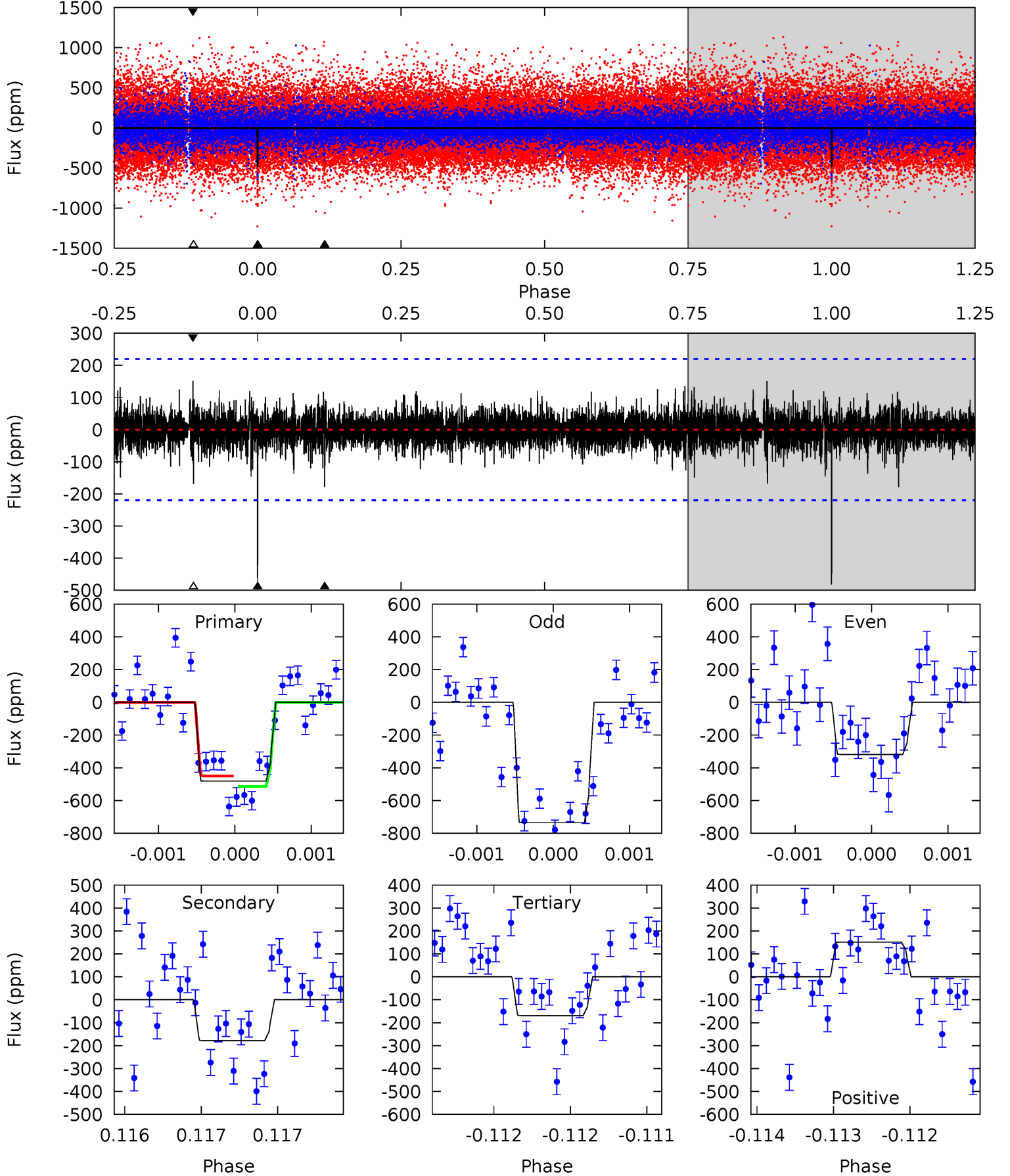
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	7.17	6.14	11.5	5.49	3.35	1.43	7.89	2.56	1.04	-4.29	2.87	0.78	0.45	1.12



Alt Model-Shift Uniqueness Test

009026007-03, $P = 407.996893$ Days, $E = 40.529299$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	4.47	4.24	3.79	5.51	3.39	0.85	7.83	8.28	0.22	0.67	4.97	0.65	0.24	0.80



Stellar Parameters For KIC 009026007

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5812^{+70}_{-87}	$4.504^{+0.016}_{-0.136}$	$0.210^{+0.150}_{-0.150}$	$0.963^{+0.169}_{-0.040}$	$1.079^{+0.048}_{-0.074}$	$1.701^{+0.147}_{-0.637}$
	+1%/-1%	+0%/-3%	+71%/-71%	+18%/-4%	+4%/-7%	+9%/-37%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 009026007-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-279 ± 39	$2.83^{+1.86}_{-1.65}$	339^{+15}_{-8}	4770^{+2427}_{-821}	$21783^{+109683}_{-13465}$
Alt.	-178 ± 40	$2.54^{+1.78}_{-1.46}$	340^{+13}_{-8}	4562^{+2212}_{-807}	18539^{+80290}_{-12516}

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 $A_{obs} \gg 1.0$

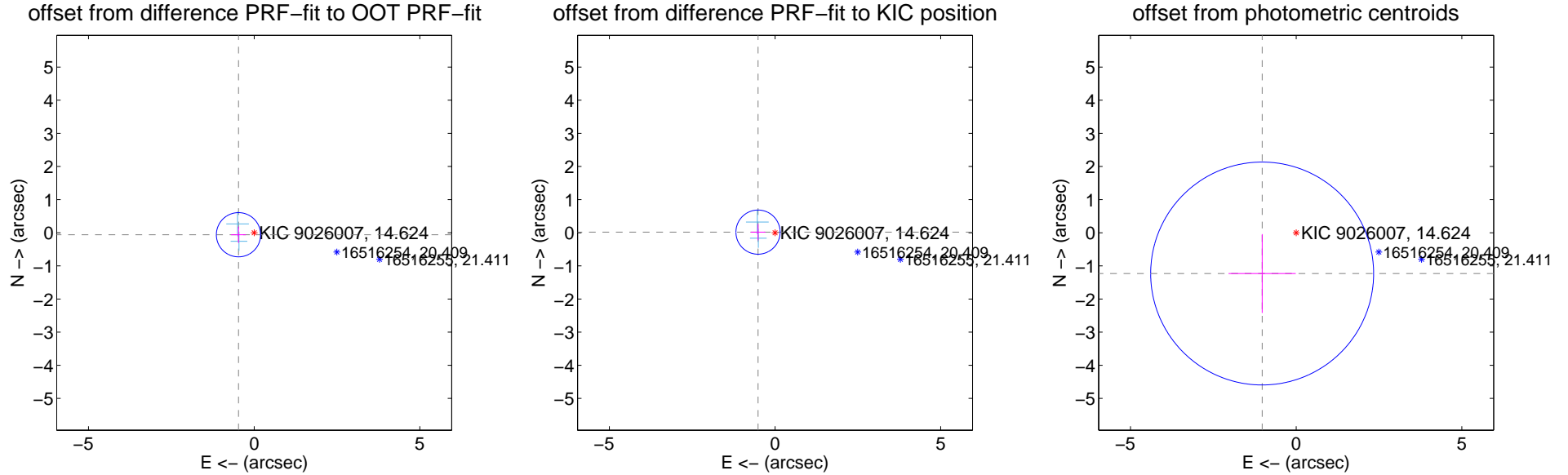
DV Centroid Data

Supplemental centroid analysis for 009026007-03. Kepler magnitude: 14.62. Transit SNR 7.84

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.477 ± 0.223	2.14	0.473 ± 0.222	-0.060 ± 0.245
PRF-fit source offset from KIC position	0.514 ± 0.222	2.31	0.513 ± 0.222	0.019 ± 0.245
photometric centroid source offset	1.60 ± 1.12	1.43	1.03 ± 1.01	-1.23 ± 1.19

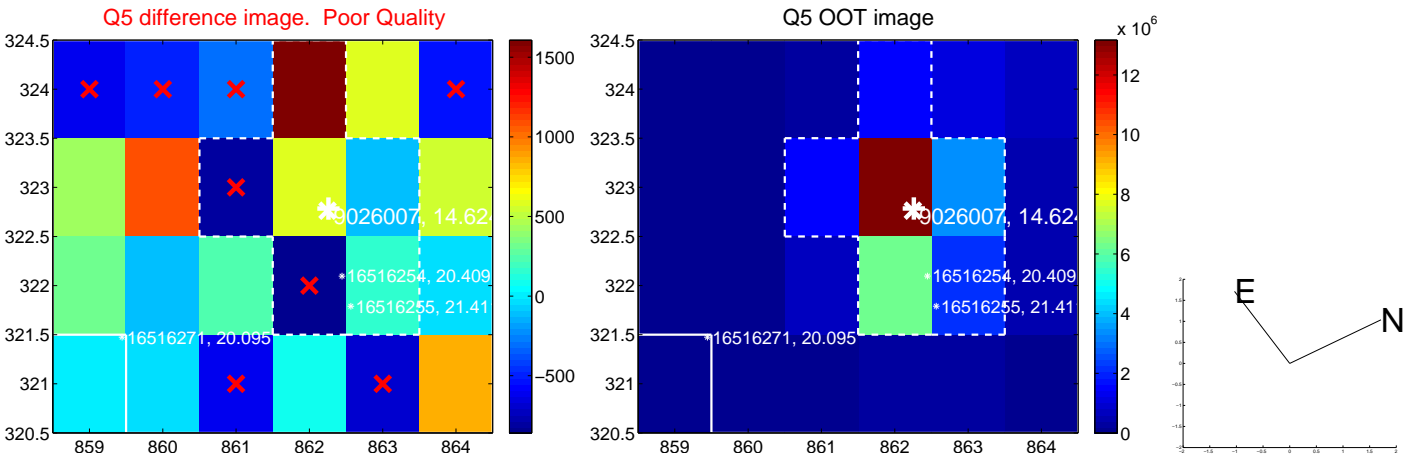


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

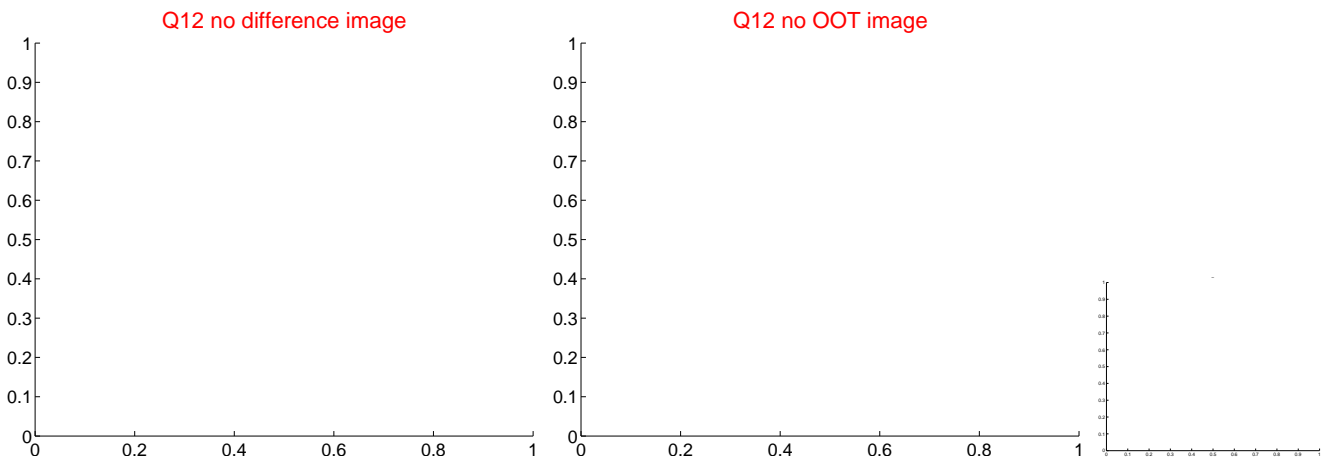
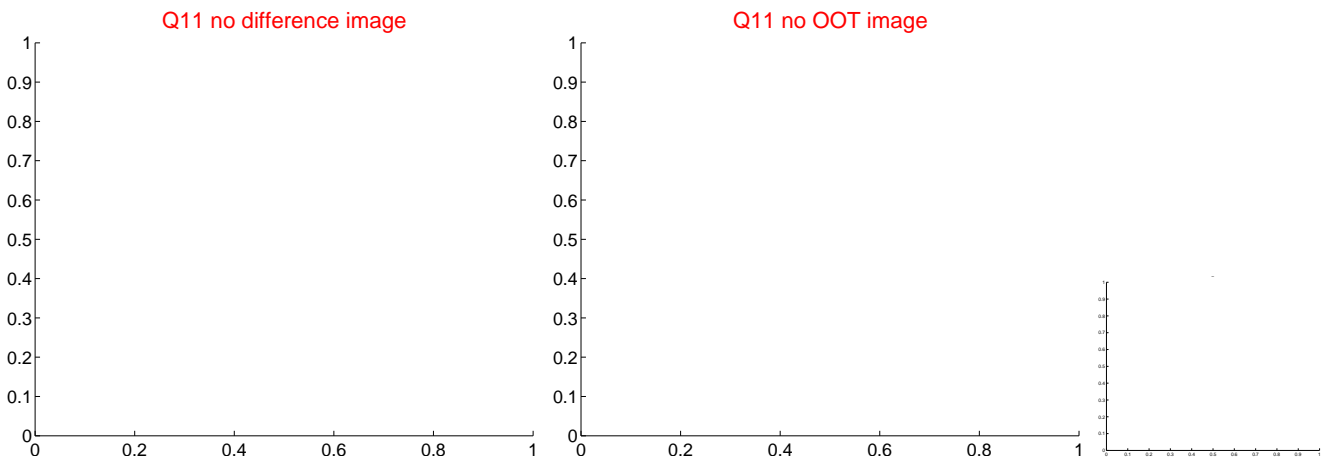
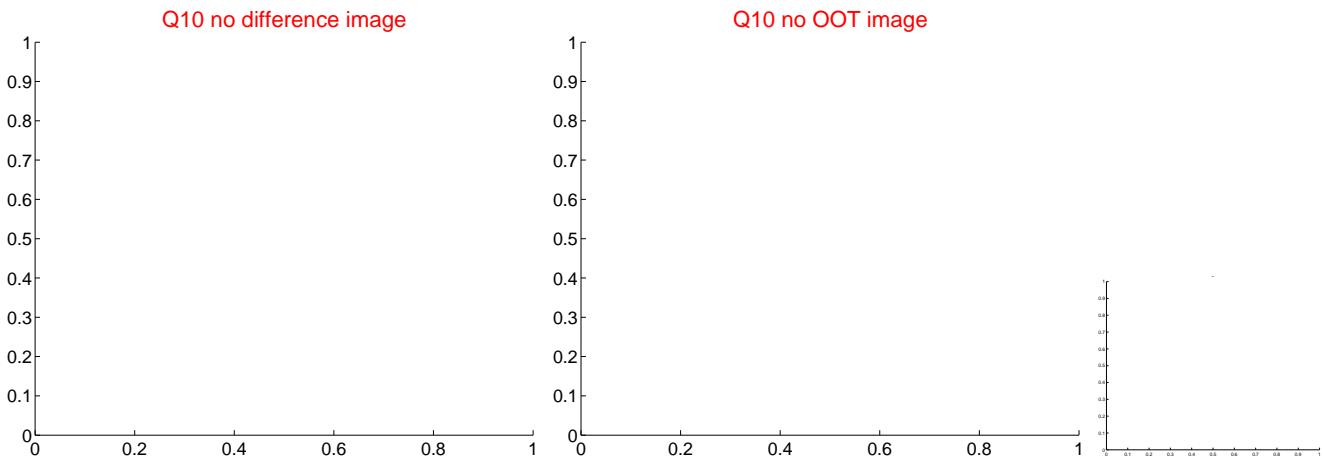
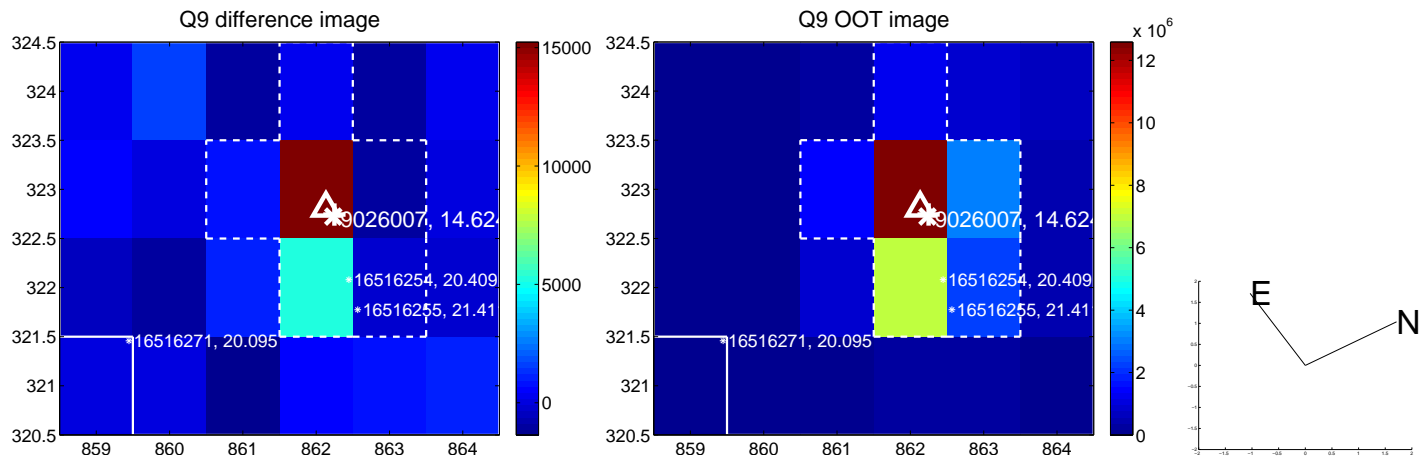
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



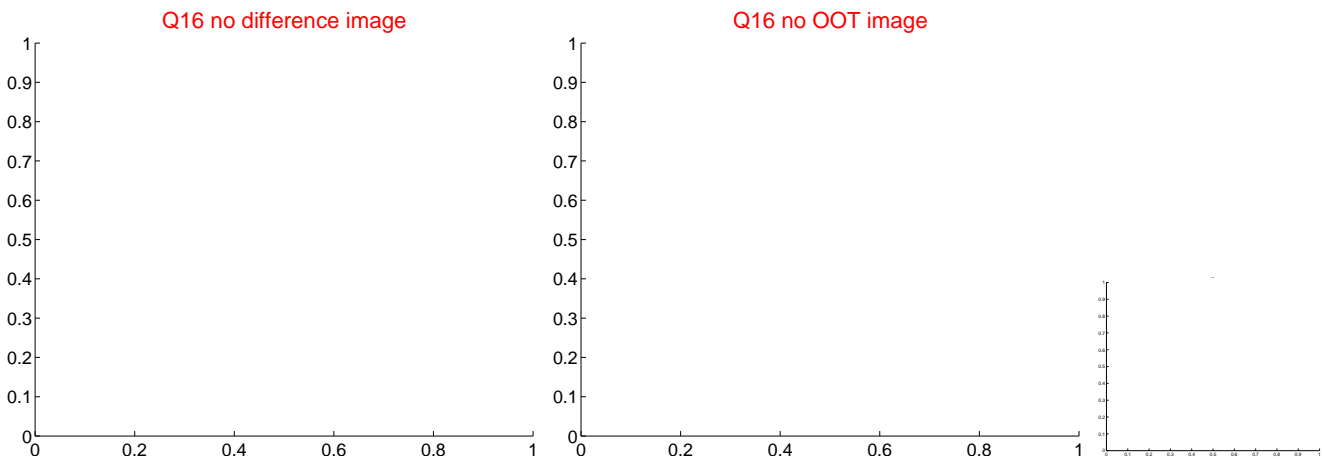
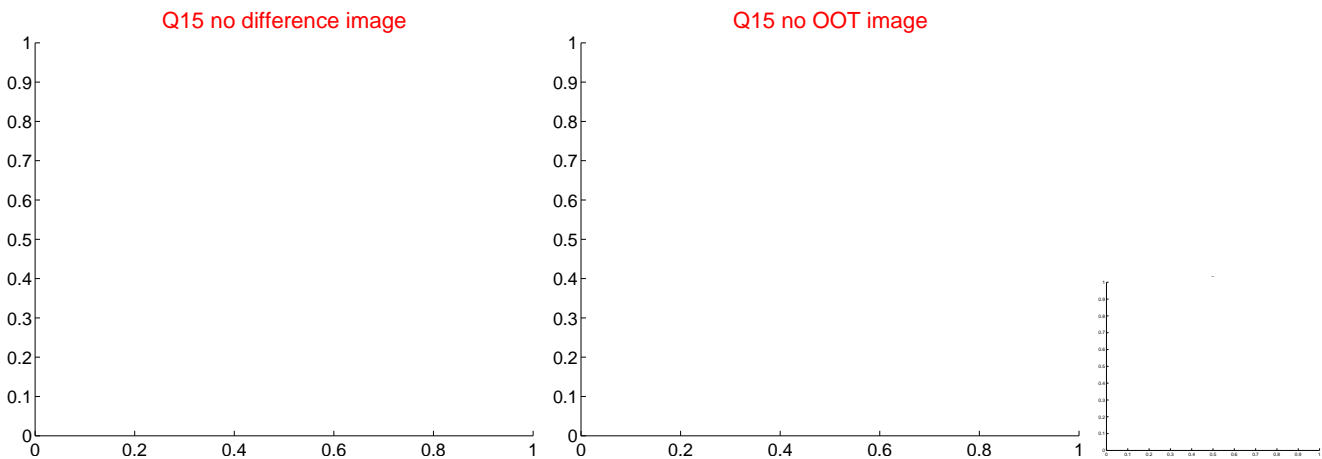
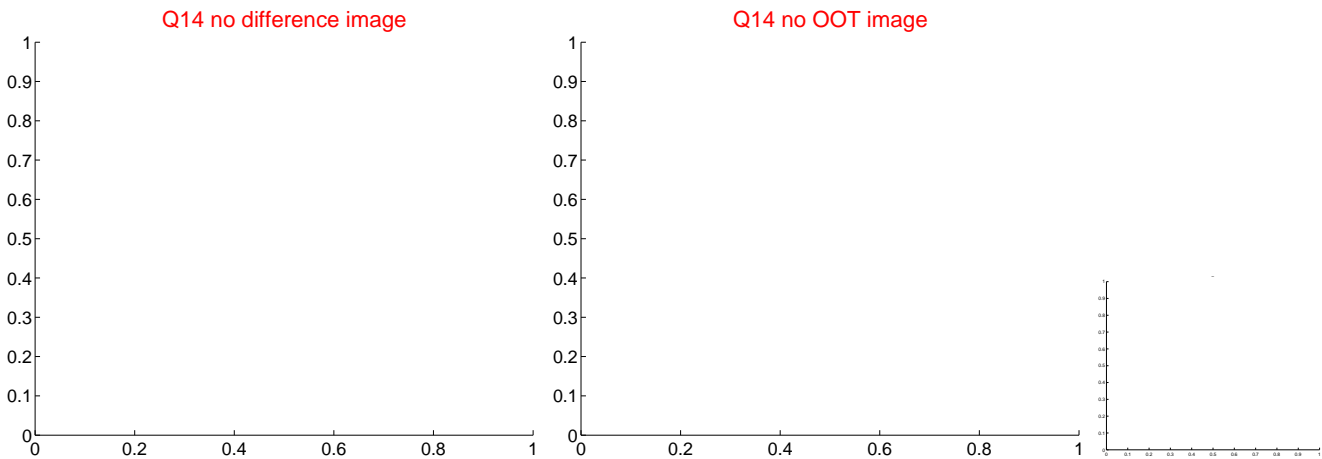
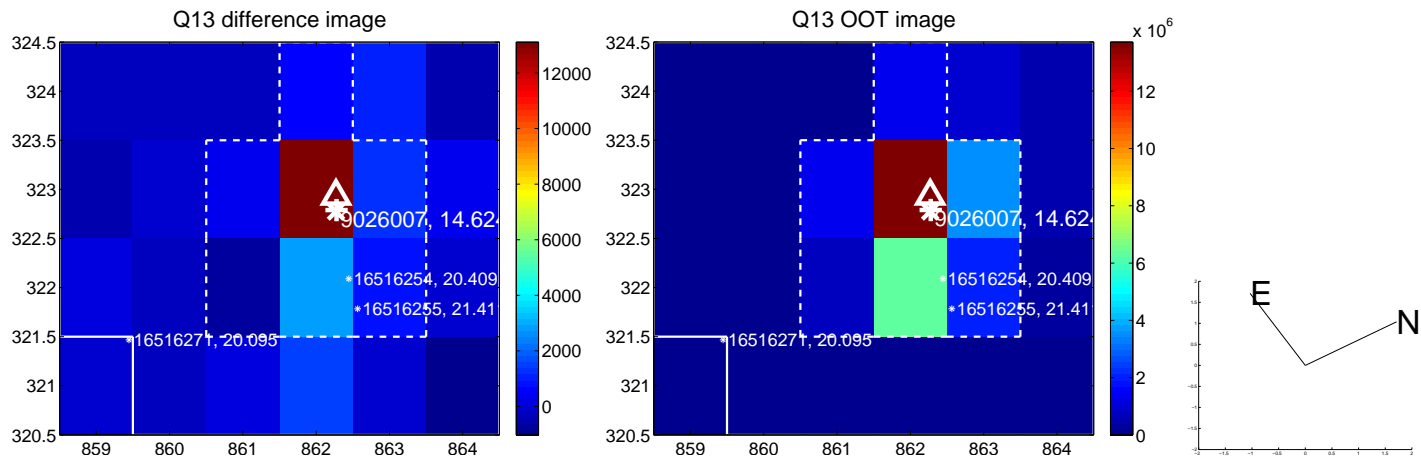
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



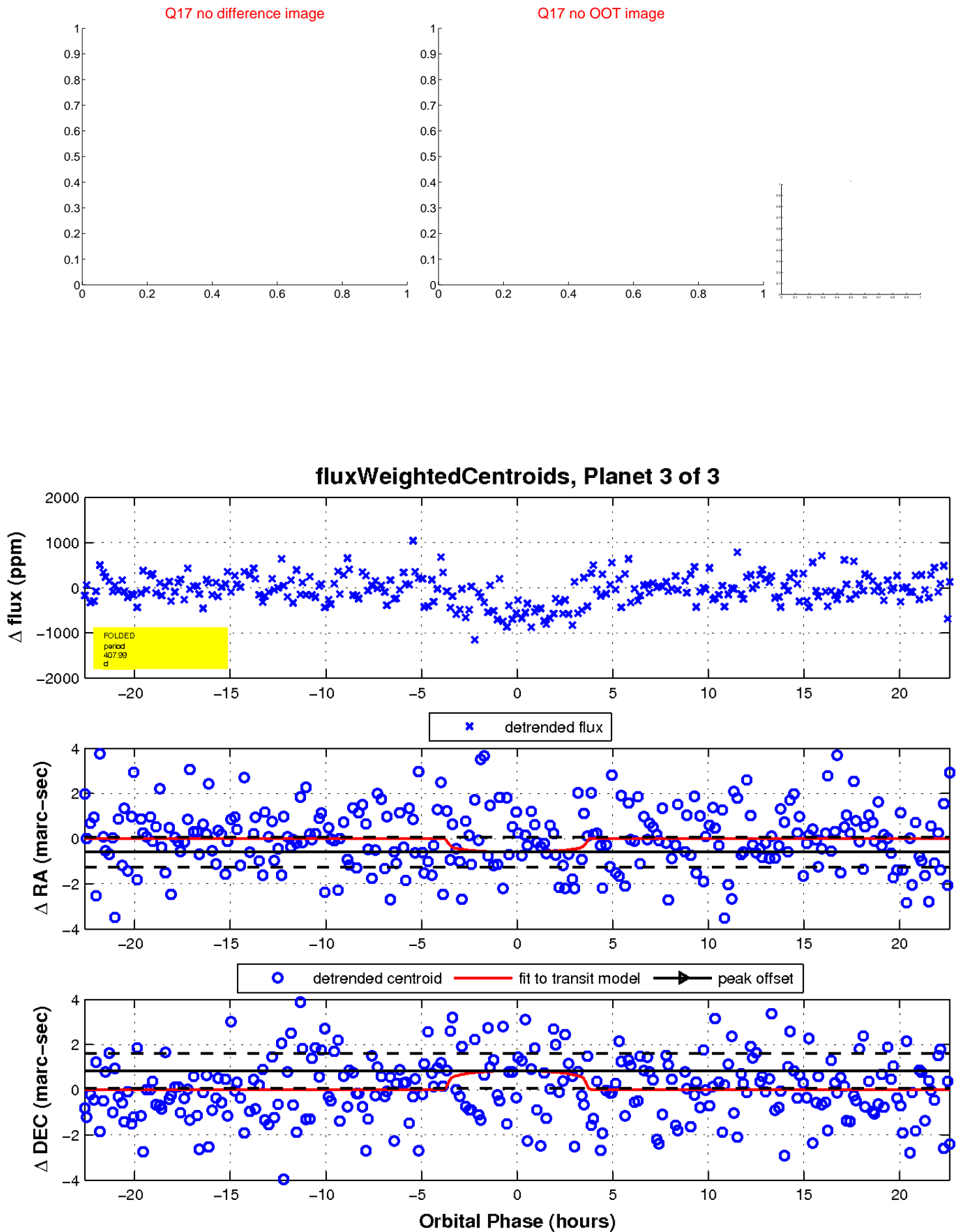
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

