

KIC 001722506

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})
001722506-01	OBS	No	549.545445	332.886278	1145.5	28.395	11.4	6.7	0.50	4335	2.05	0.07
001722506-03	OBS	No	606.951347	296.316810	898.0	8.114	11.1	7.4	0.50	4335	1.56	0.06
001722506-04	OBS	No	502.536591	488.978005	677.7	13.996	10.2	6.6	0.50	4335	1.32	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001722506-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
001722506-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
001722506-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

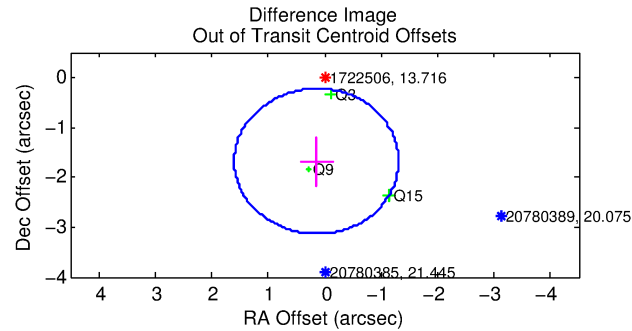
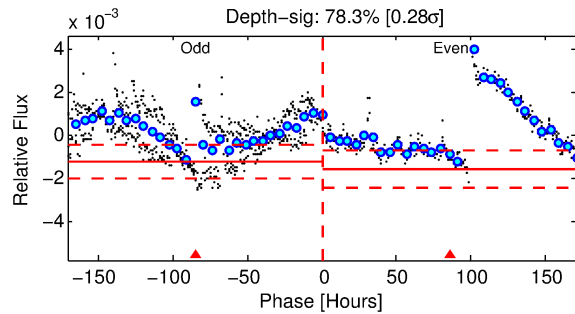
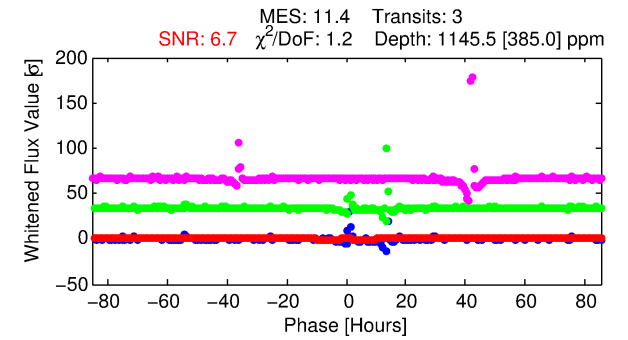
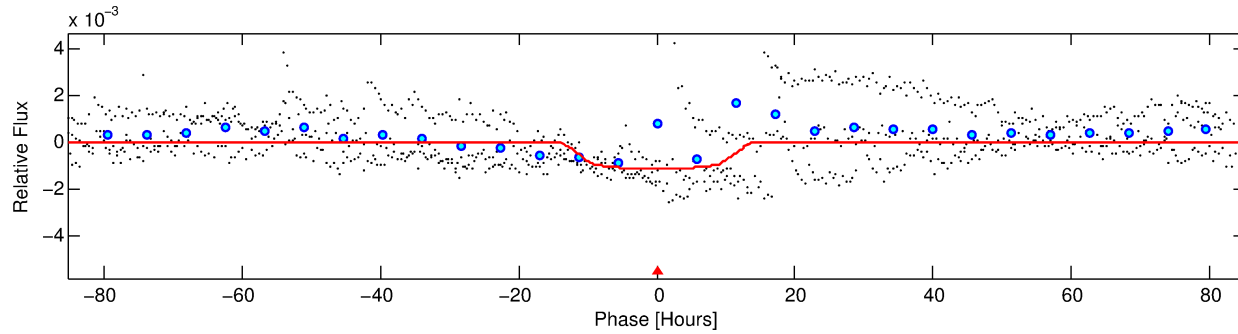
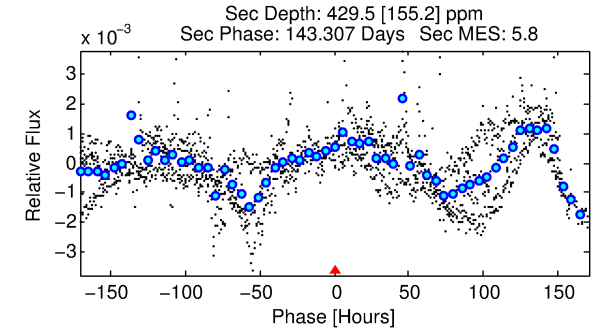
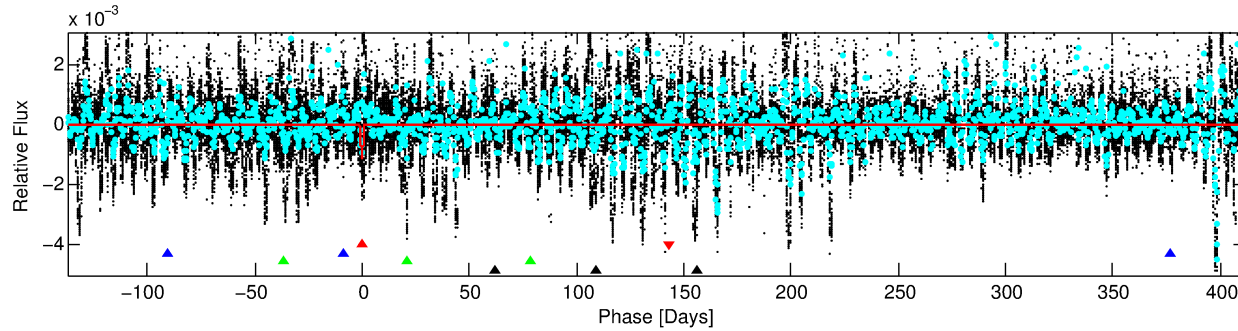
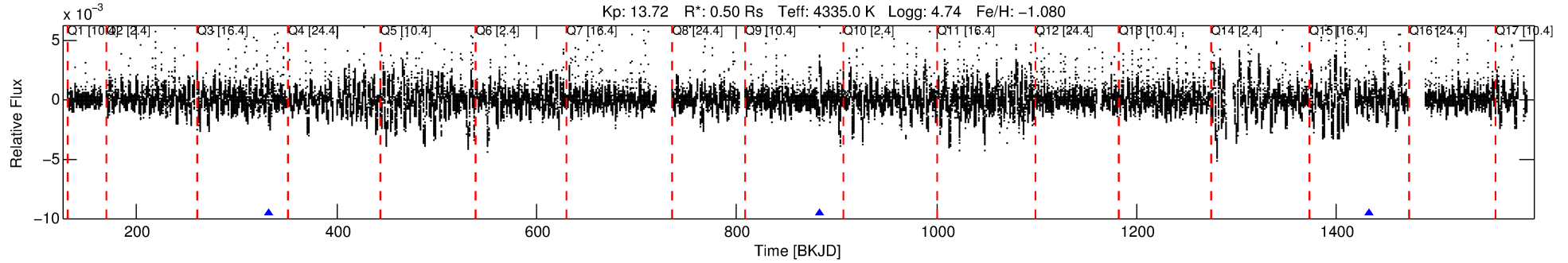
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001722506-01

No Significant Match Found

DV One-Page Summary

KIC: 1722506 Candidate: 1 of 4 Period: 549.545 d



DV Fit Results:

Period = 549.54544 [0.04718] d
Epoch = 332.8863 [0.0696] BKJD
Rp/R* = 0.0375 [0.0070]
a/R* = 72.96 [20.43]
b = 0.91 [0.05]
Seff = 0.07 [0.01]
Teq = 133 [6] K
Rp = 2.05 [0.44] Re
a = 1.0435 [0.0912] AU
Ag = 61087.87 [32718.85] [1.87 σ]
Teffp = 3224 [433] K [7.13 σ]

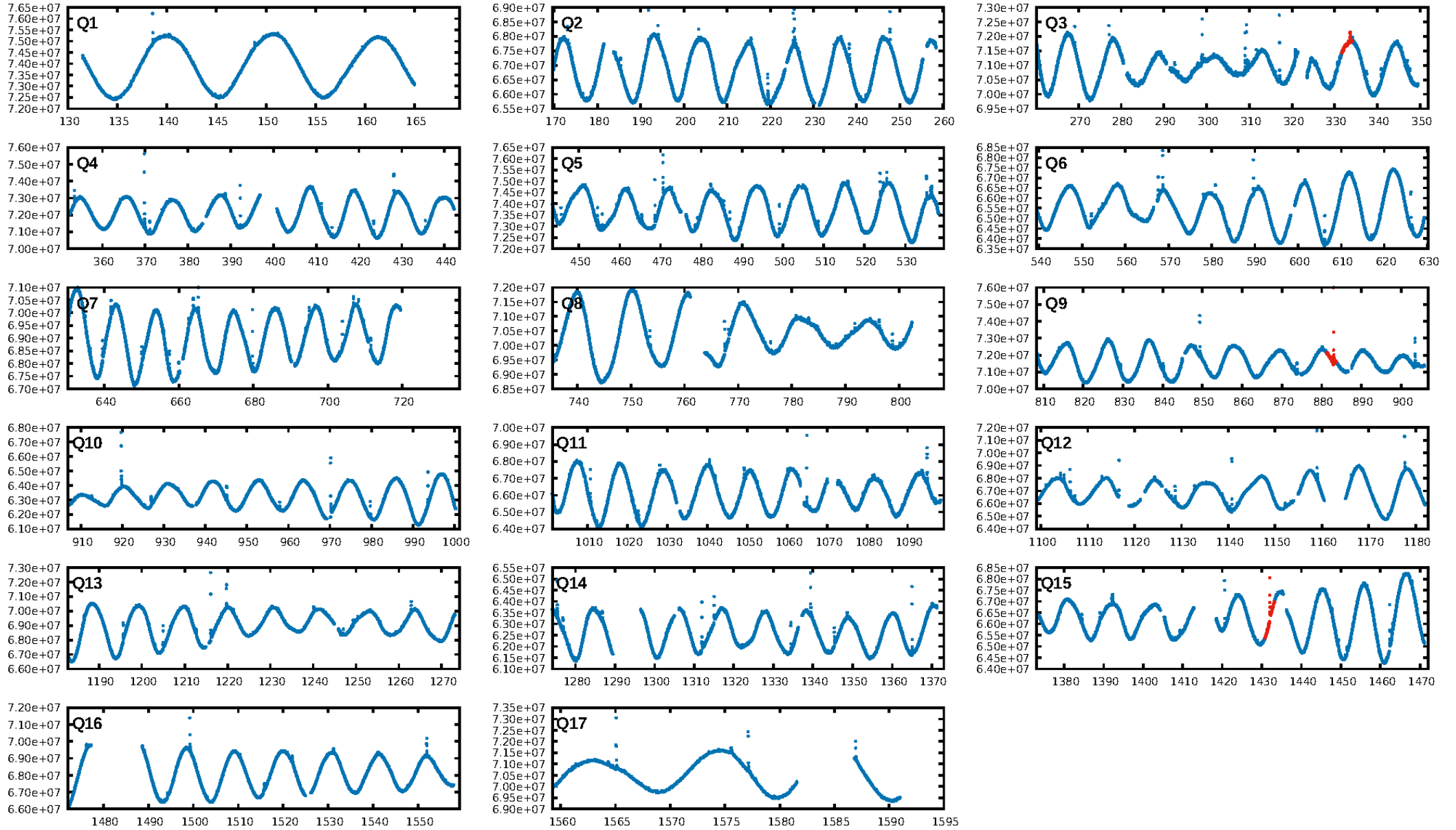
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [35.64 σ]
LongPeriod-sig: 100.0% [46.65 σ]
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 99.2%
Bootstrap-pfa: 7.04e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.5344
Centroid-sig: 36.6%
Centroid-so: 1.172 arcsec [2.22 σ]
OotOffset-rm: 1.689 arcsec [3.48 σ]
KicOffset-rm: 1.937 arcsec [3.92 σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

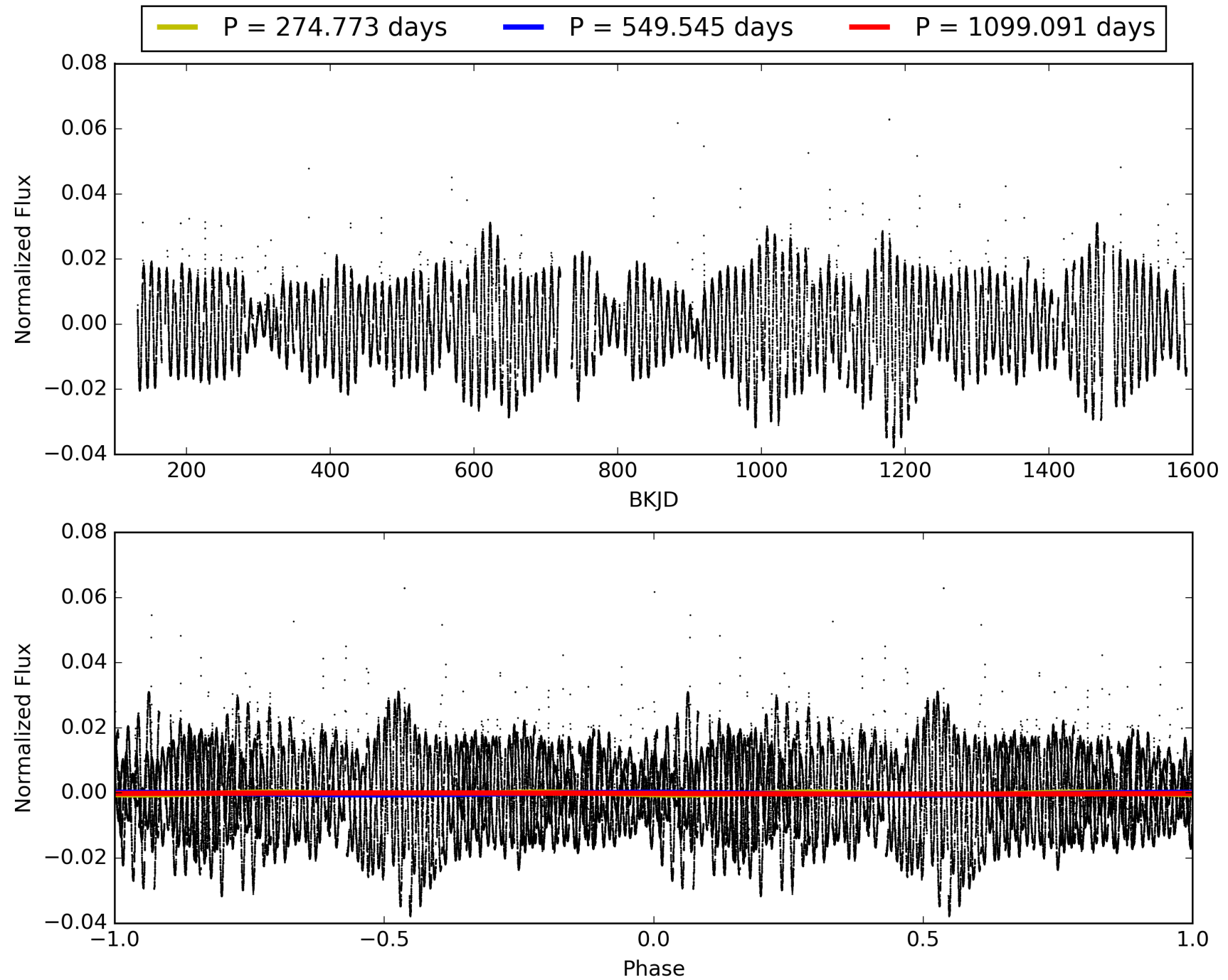
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 12:50:10 Z

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

TCE 001722506-01, PDC Light Curves

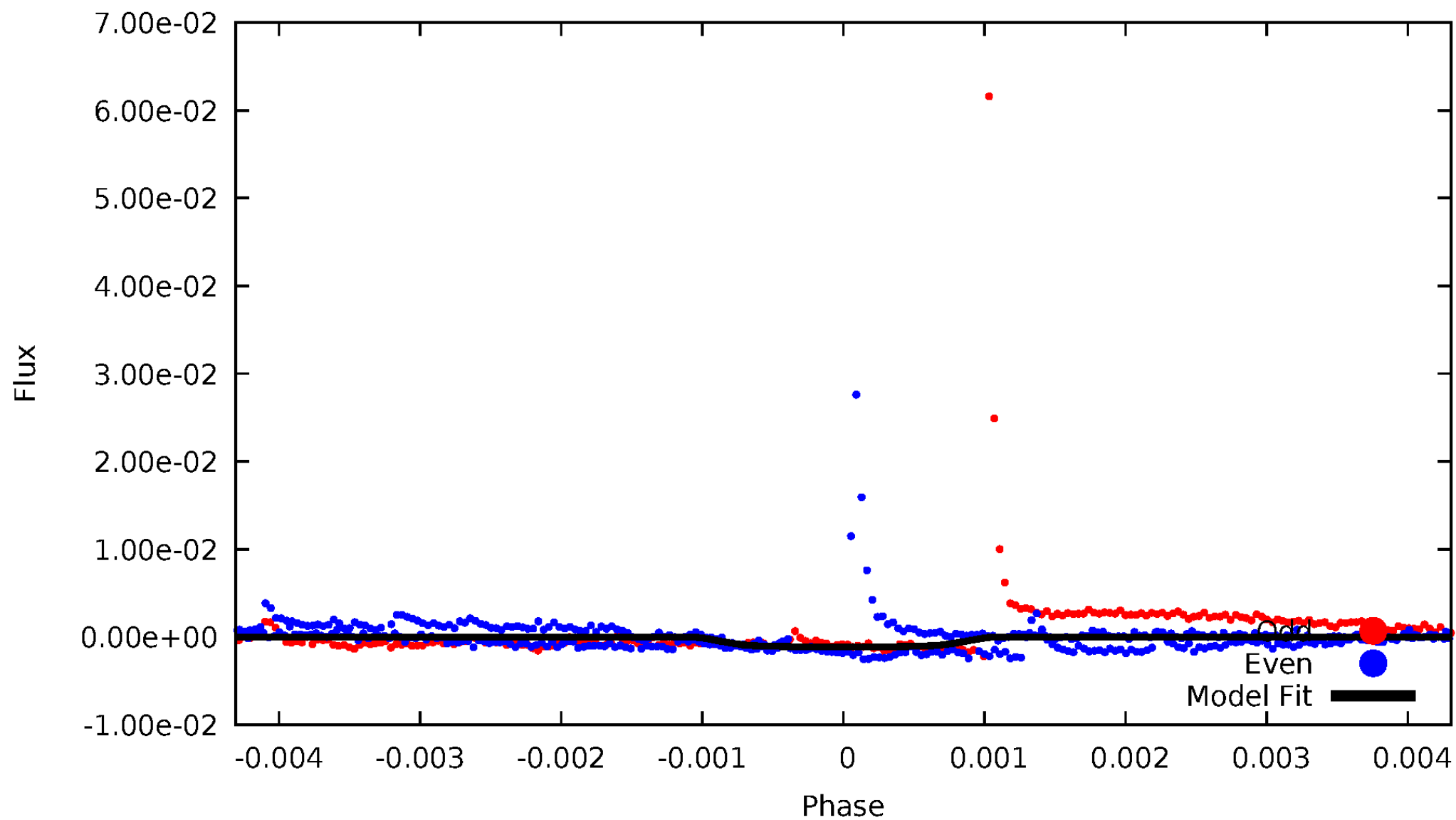


TCE 001722506-01



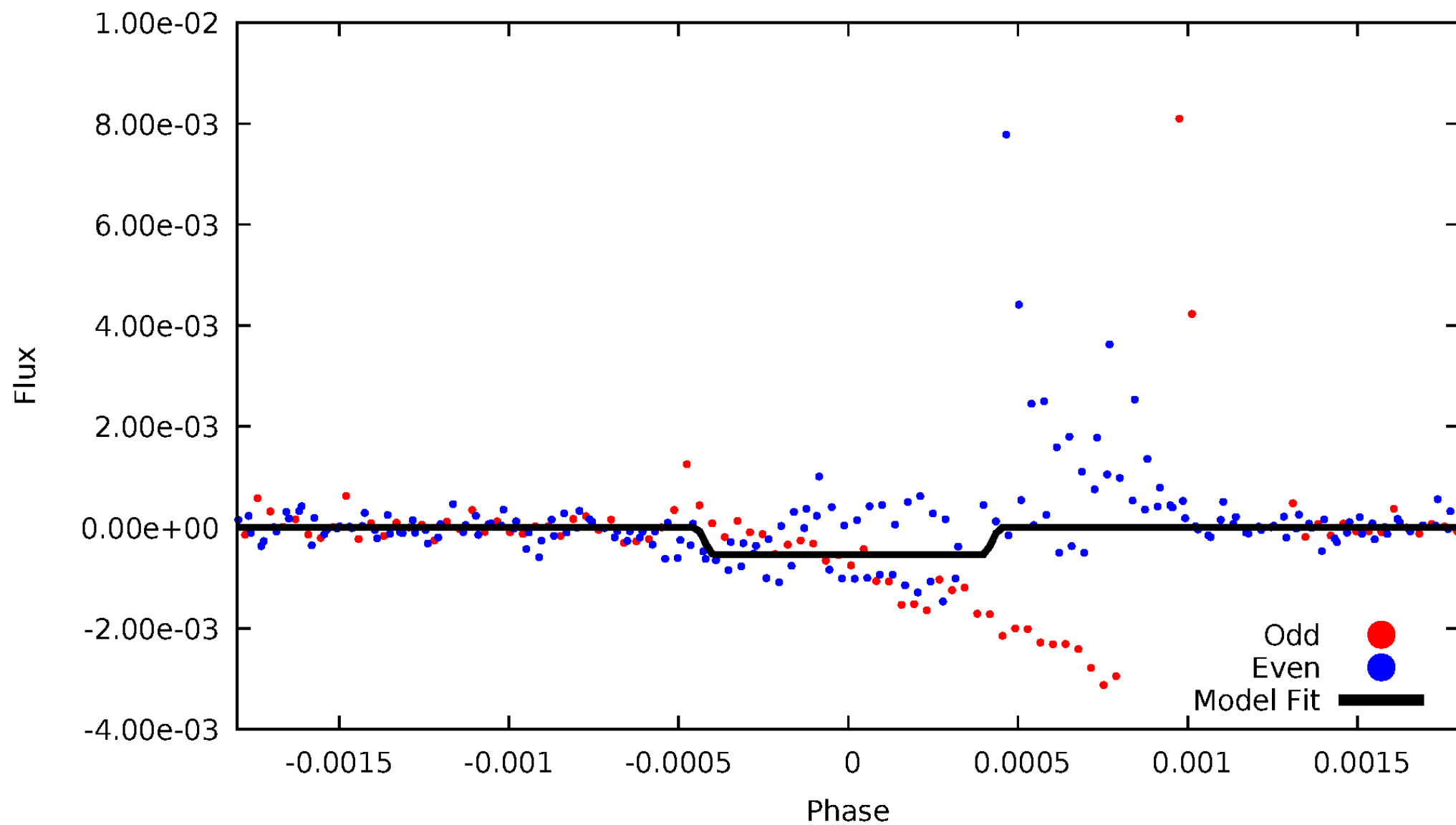
DV Odd/Even

TCE 001722506-01

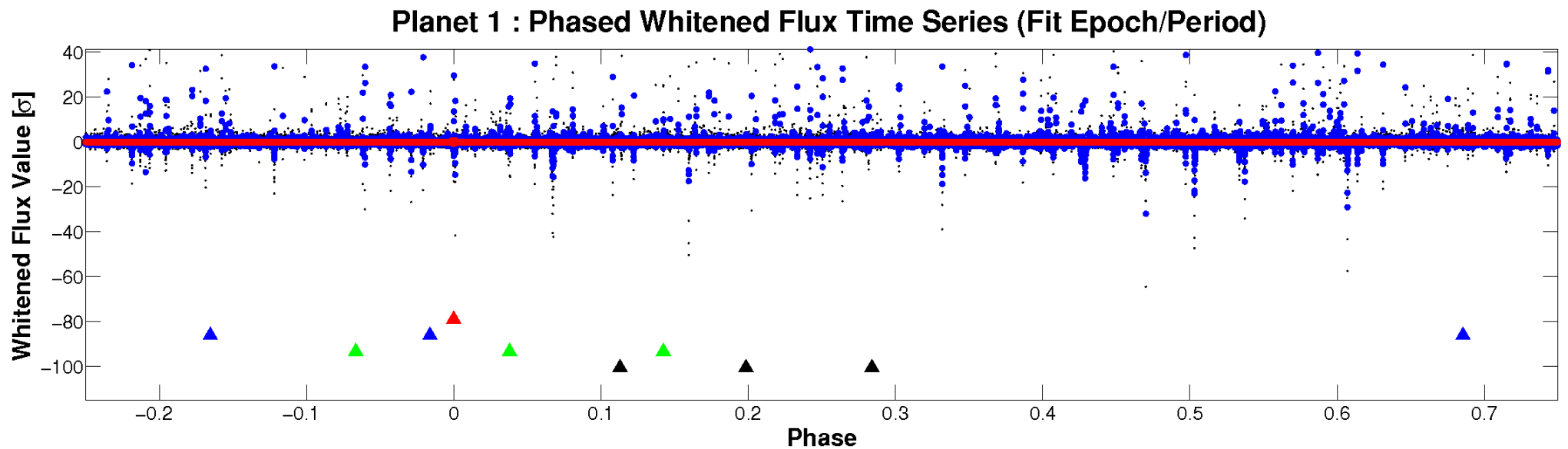
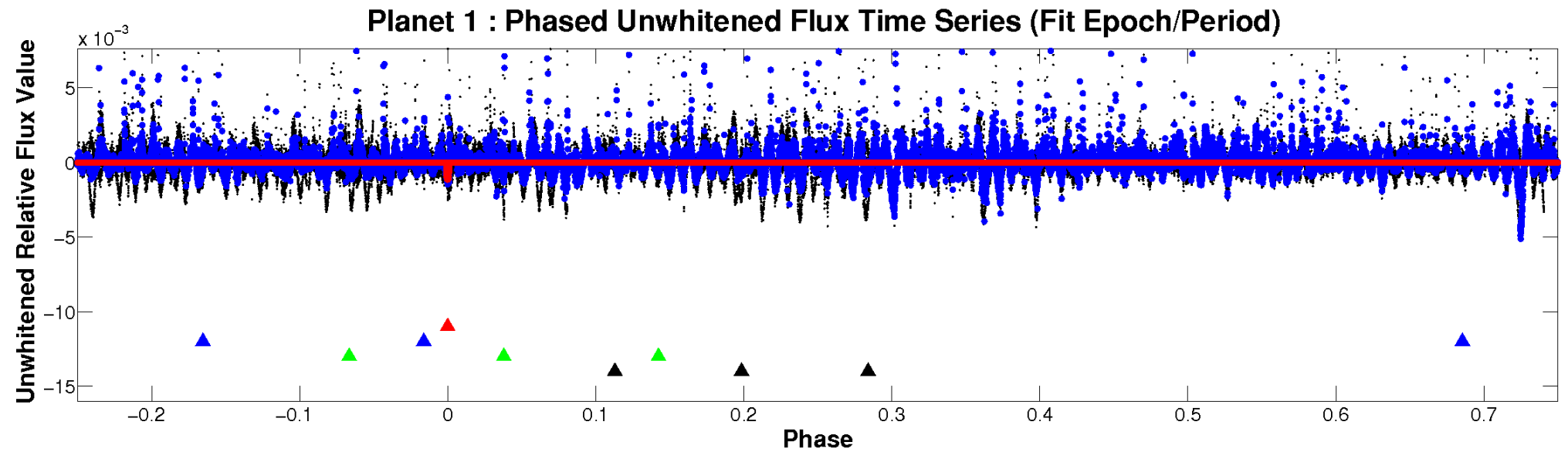


ALT Odd/Even

TCE 001722506-01



Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 001722506-01 P=549.545445 Days $T_0=332.886278$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 001722506-01 P=549.545445 Days $T_0=332.886278$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

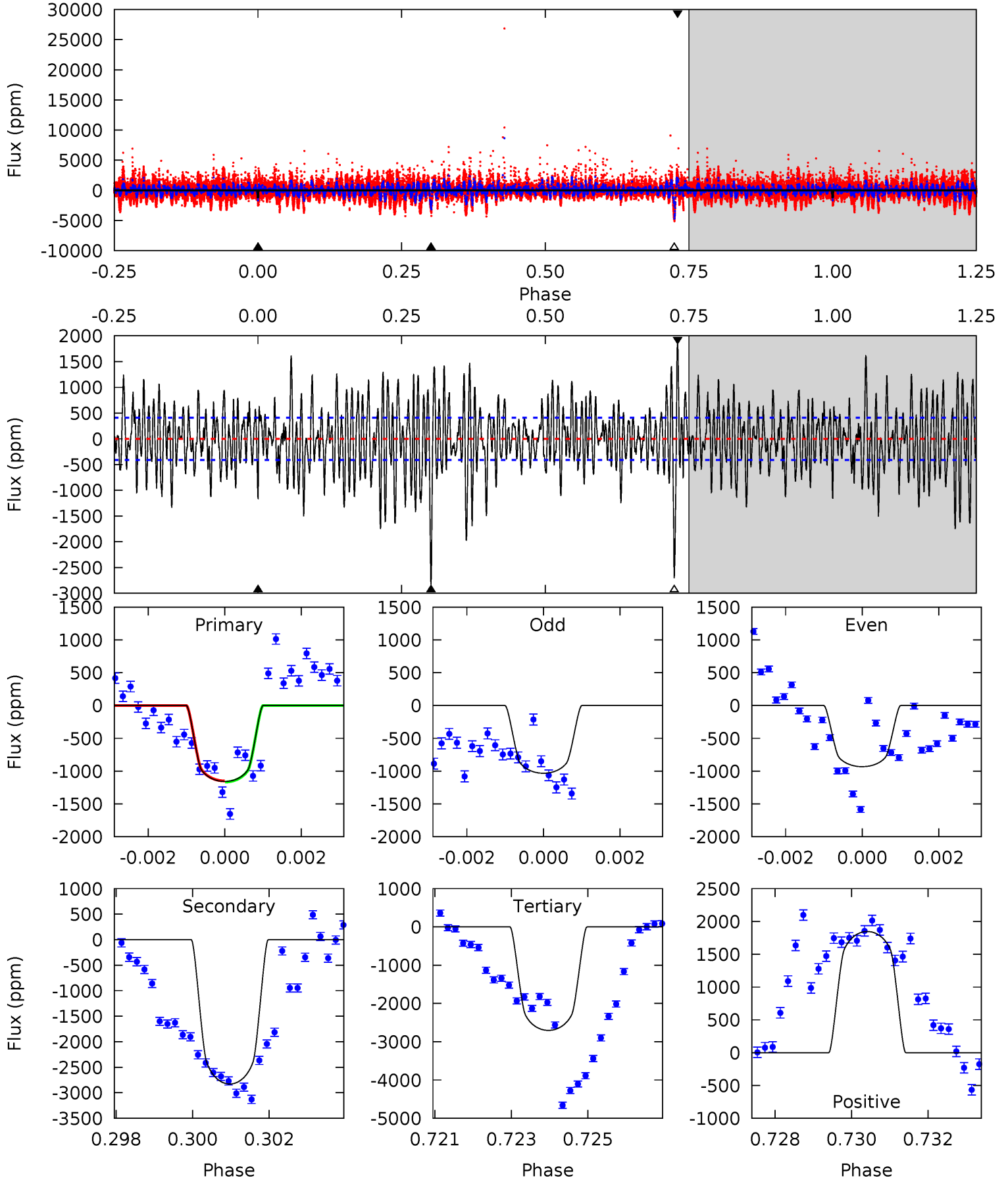
TCE 001722506-01 $P=549.308582$ Days $T_0=333.196220$ (BKJD)



DV Model-Shift Uniqueness Test

001722506-01, P = 549.545445 Days, E = 332.886278 Days

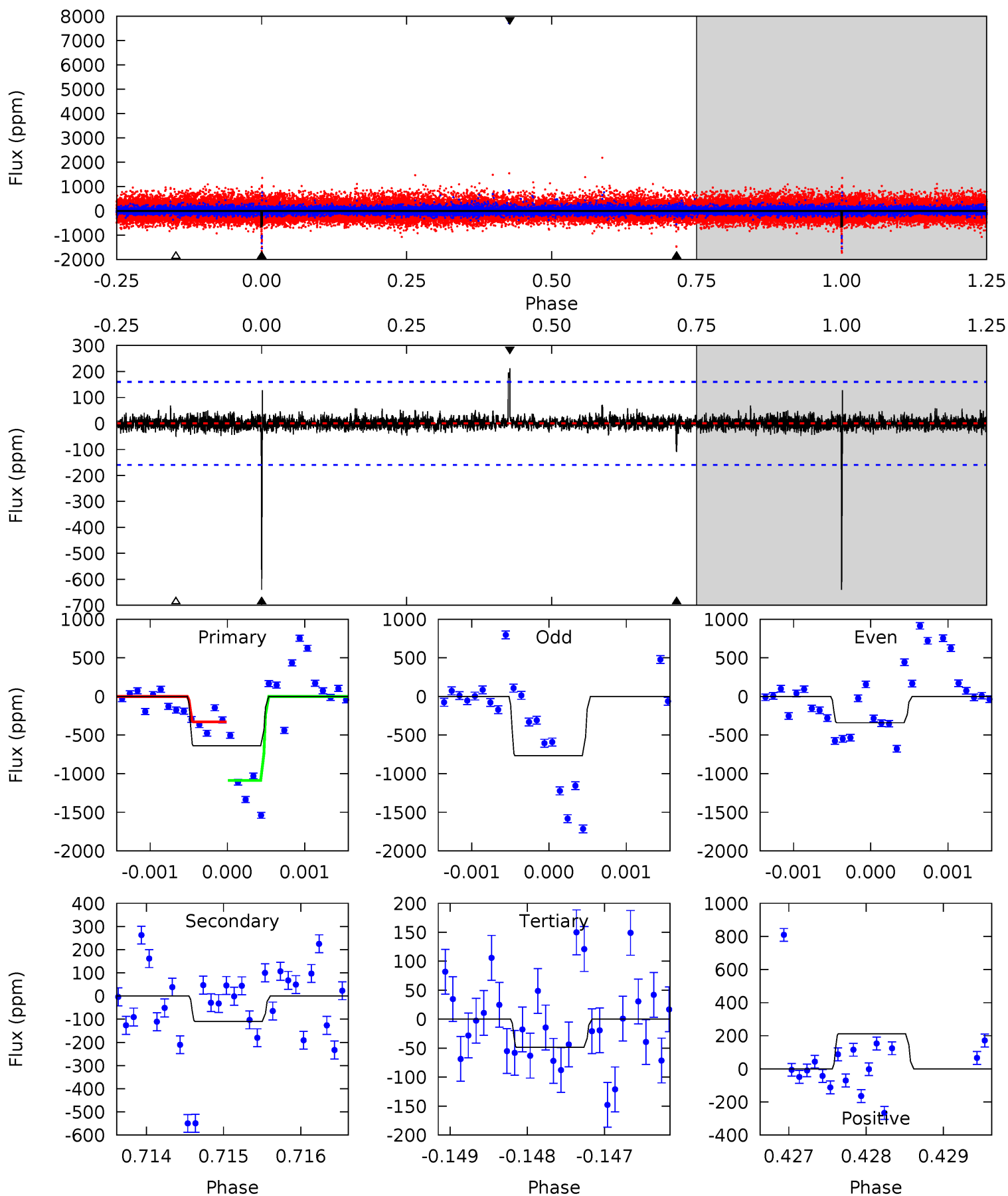
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	36.7	35.1	24.0	5.31	3.07	7.38	-20.1	-8.94	1.61	12.7	0.48	0.45	0.39	0.11



Alt Model-Shift Uniqueness Test

001722506-01, P = 549.308582 Days, E = 333.196220 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.9	3.76	1.67	7.25	5.47	3.33	0.50	20.3	14.7	2.10	-3.48	6.56	0.65	0.25	12.9



Stellar Parameters For KIC 001722506

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4335^{+130}_{-143}	$4.737^{+0.065}_{-0.035}$	$-1.080^{+0.300}_{-0.350}$	$0.502^{+0.036}_{-0.054}$	$0.502^{+0.039}_{-0.039}$	$5.579^{+1.730}_{-0.755}$
	+3%/-3%	+1%/-1%	+28%/-32%	+7%/-11%	+8%/-8%	+31%/-14%
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 001722506-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2828 ± 77	$2.02^{+0.42}_{-0.38}$	184^{+7}_{-7}	4969^{+526}_{-344}	$414851^{+216322}_{-126659}$
Alt.	-110 ± 29	$1.27^{+0.39}_{-0.38}$	185^{+6}_{-7}	3300^{+402}_{-302}	39816^{+42765}_{-17845}

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

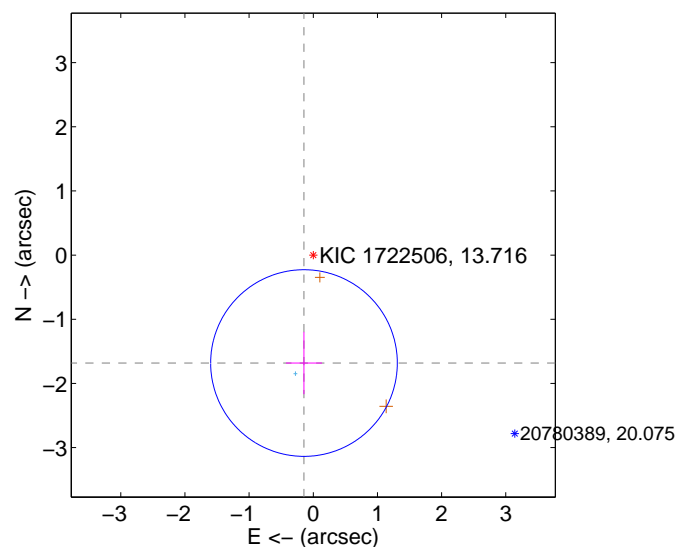
Supplemental centroid analysis for 001722506-01. Kepler magnitude: 13.72. Transit SNR 6.74

There are 1 quarters with good PRF difference image offsets

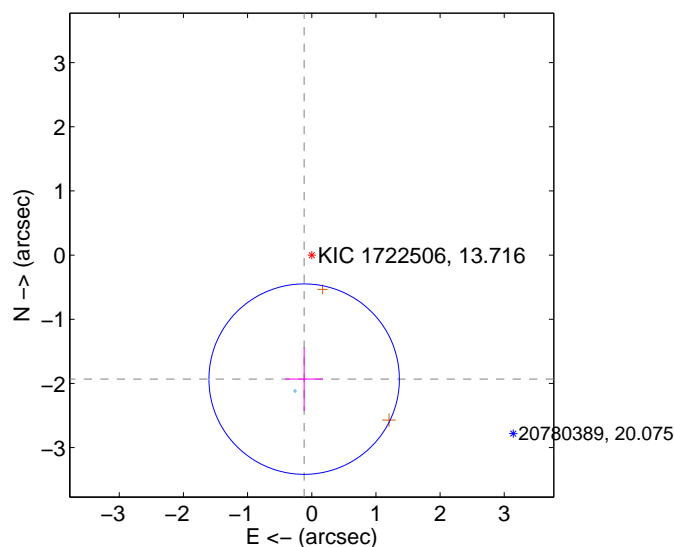
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.689 ± 0.485	3.48	0.145 ± 0.281	-1.682 ± 0.486
PRF-fit source offset from KIC position	1.937 ± 0.495	3.92	0.118 ± 0.293	-1.933 ± 0.495
photometric centroid source offset	1.17 ± 0.53	2.22	-0.63 ± 0.59	-0.99 ± 0.50

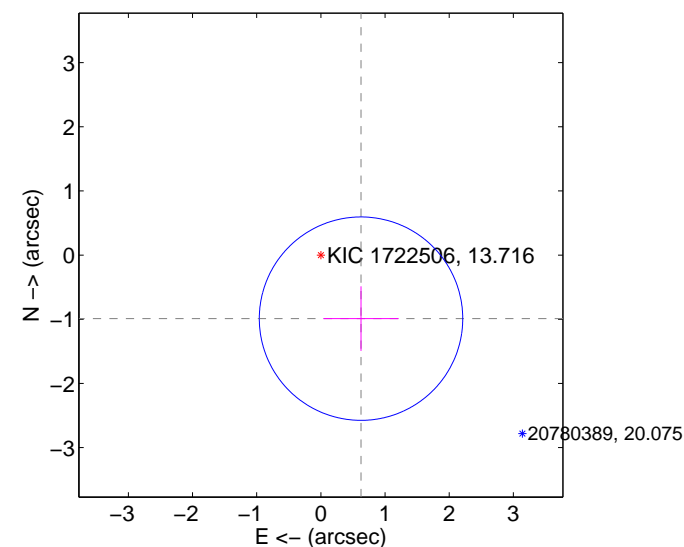
offset from difference PRF-fit to OOT PRF-fit



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.

Q1 no difference image



Q1 no OOT image



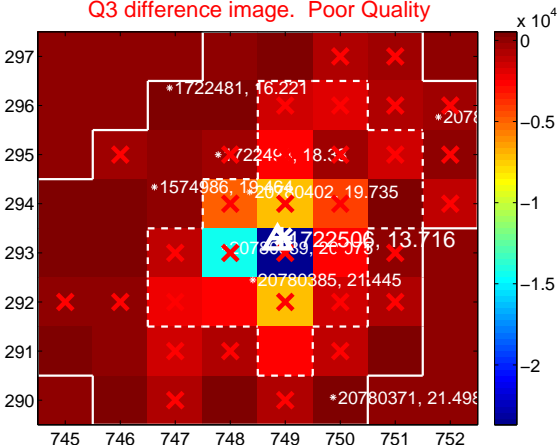
Q2 no difference image



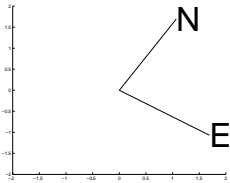
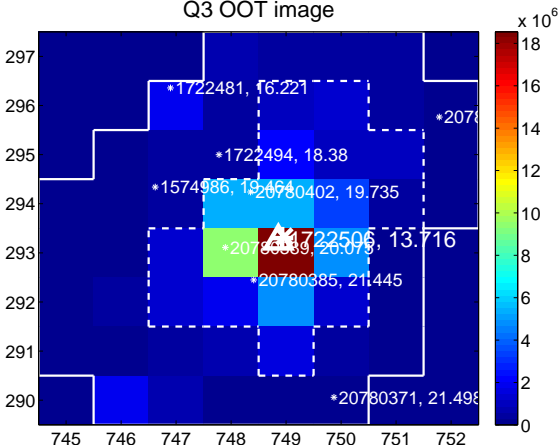
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



Q4 no difference image



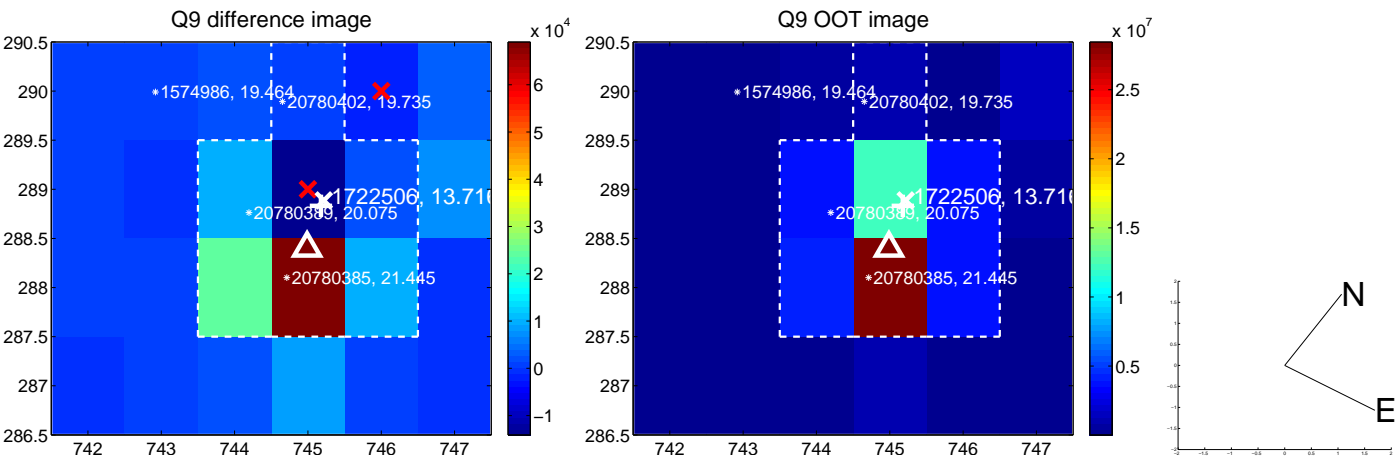
Q4 no OOT image



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.

Q13 no difference image



Q13 no OOT image



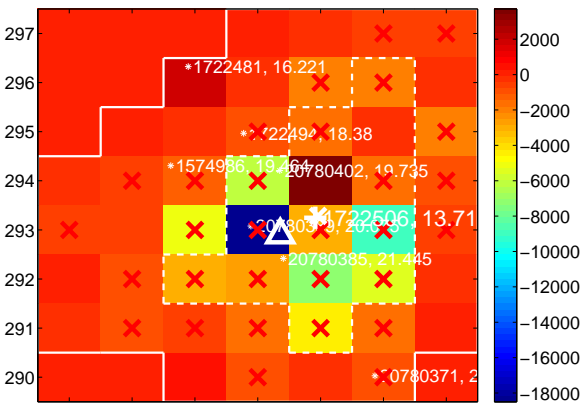
Q14 no difference image



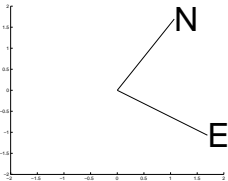
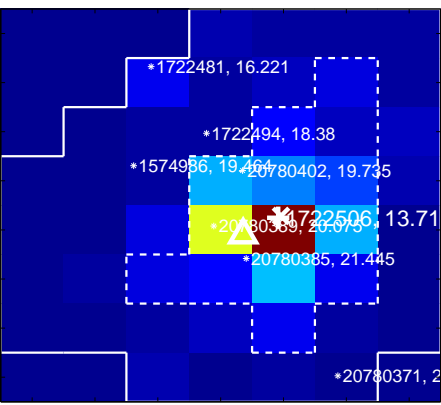
Q14 no OOT image



Q15 difference image. Poor Quality



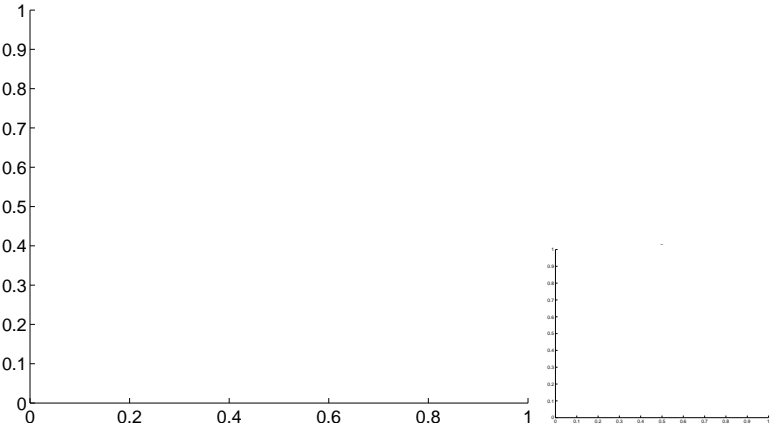
Q15 OOT image



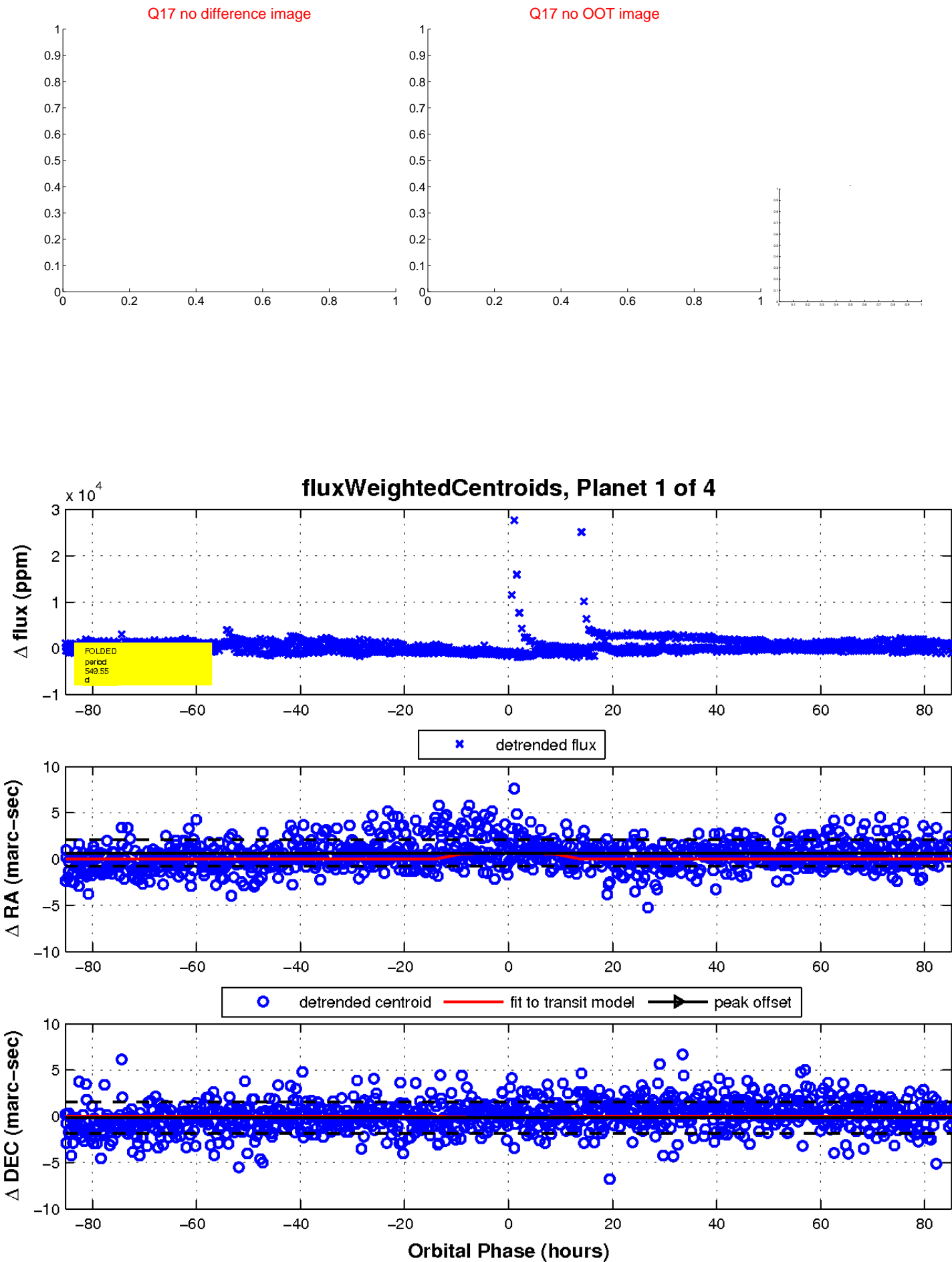
Q16 no difference image



Q16 no OOT image

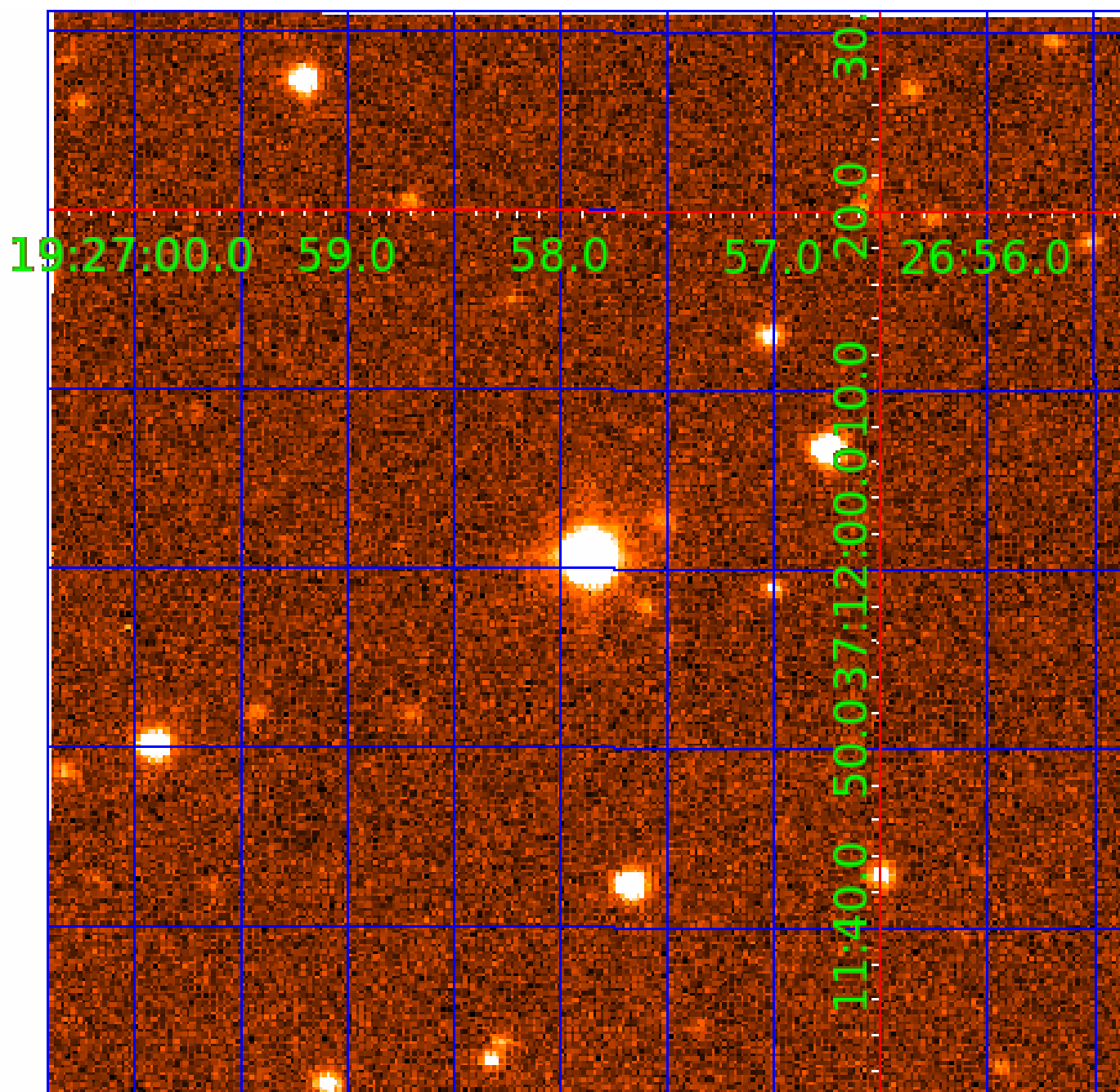


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 001722506

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})
001722506-01	OBS	No	549.545445	332.886278	1145.5	28.395	11.4	6.7	0.50	4335	2.05	0.07
001722506-03	OBS	No	606.951347	296.316810	898.0	8.114	11.1	7.4	0.50	4335	1.56	0.06
001722506-04	OBS	No	502.536591	488.978005	677.7	13.996	10.2	6.6	0.50	4335	1.32	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001722506-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
001722506-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
001722506-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

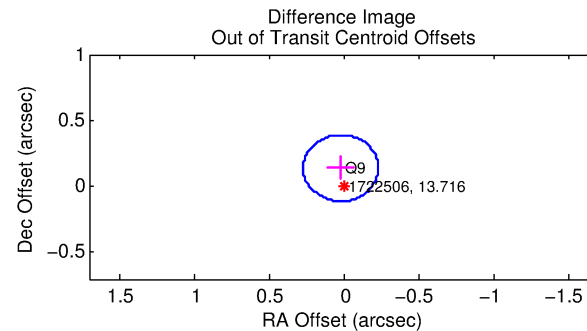
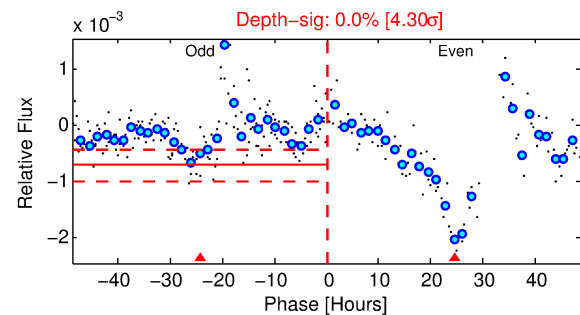
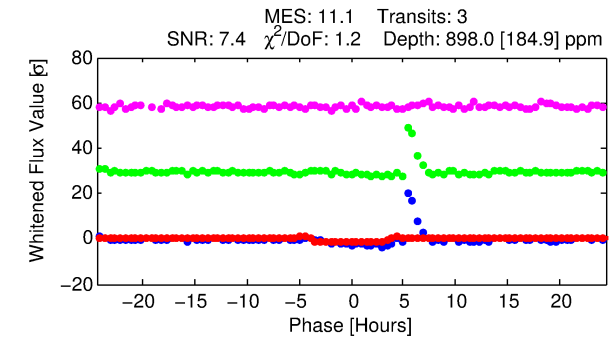
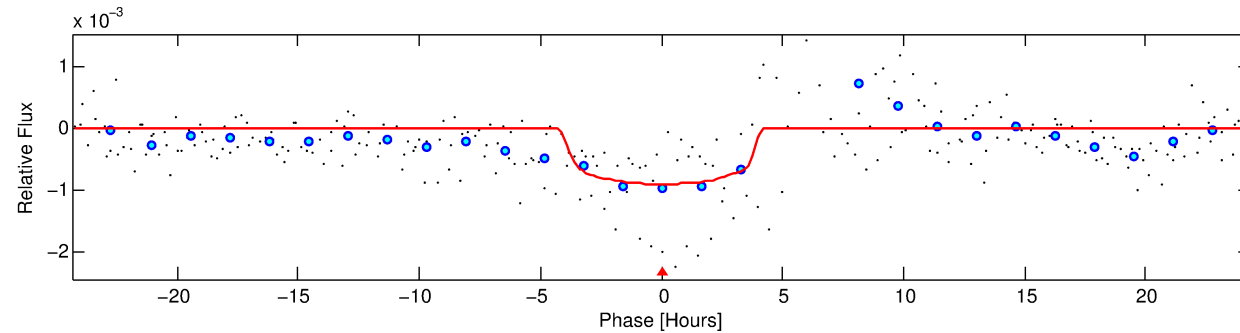
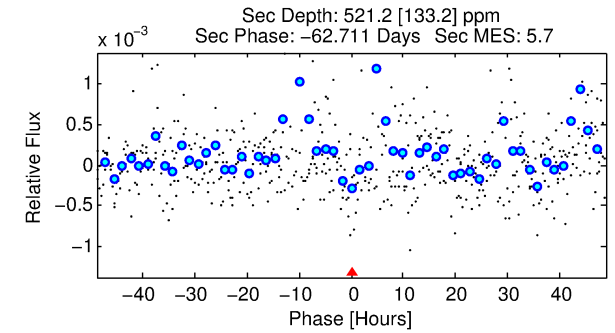
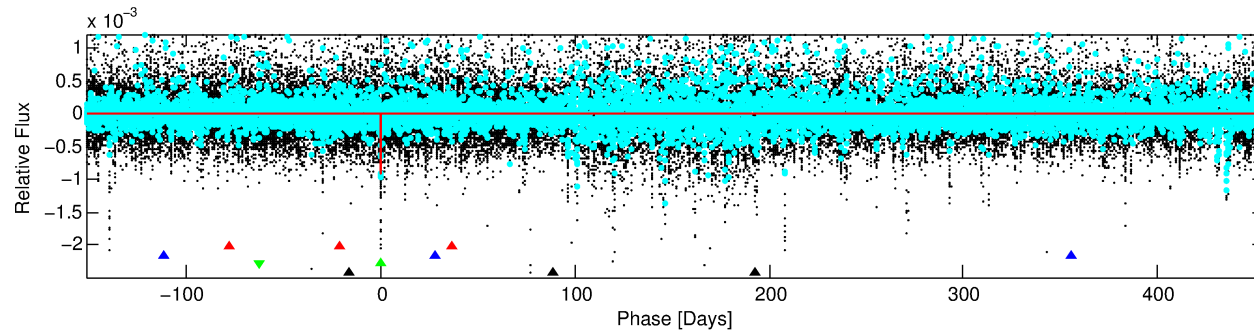
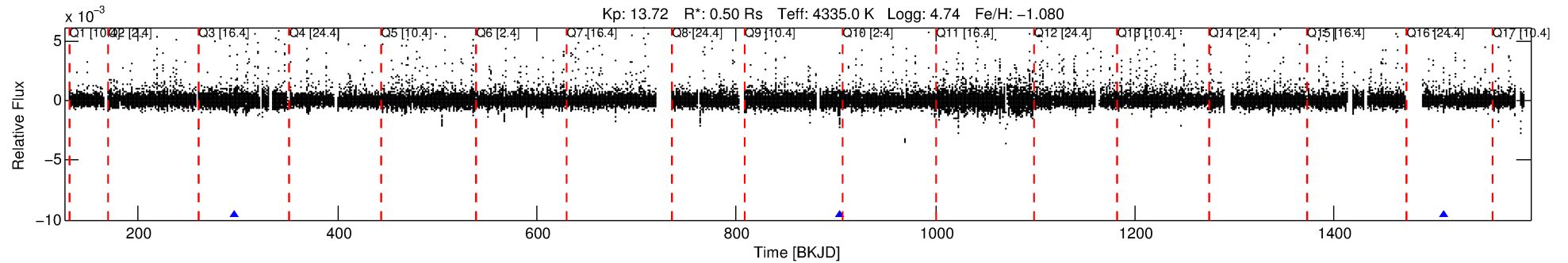
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001722506-03

No Significant Match Found

DV One-Page Summary

KIC: 1722506 Candidate: 3 of 4 Period: 606.951 d



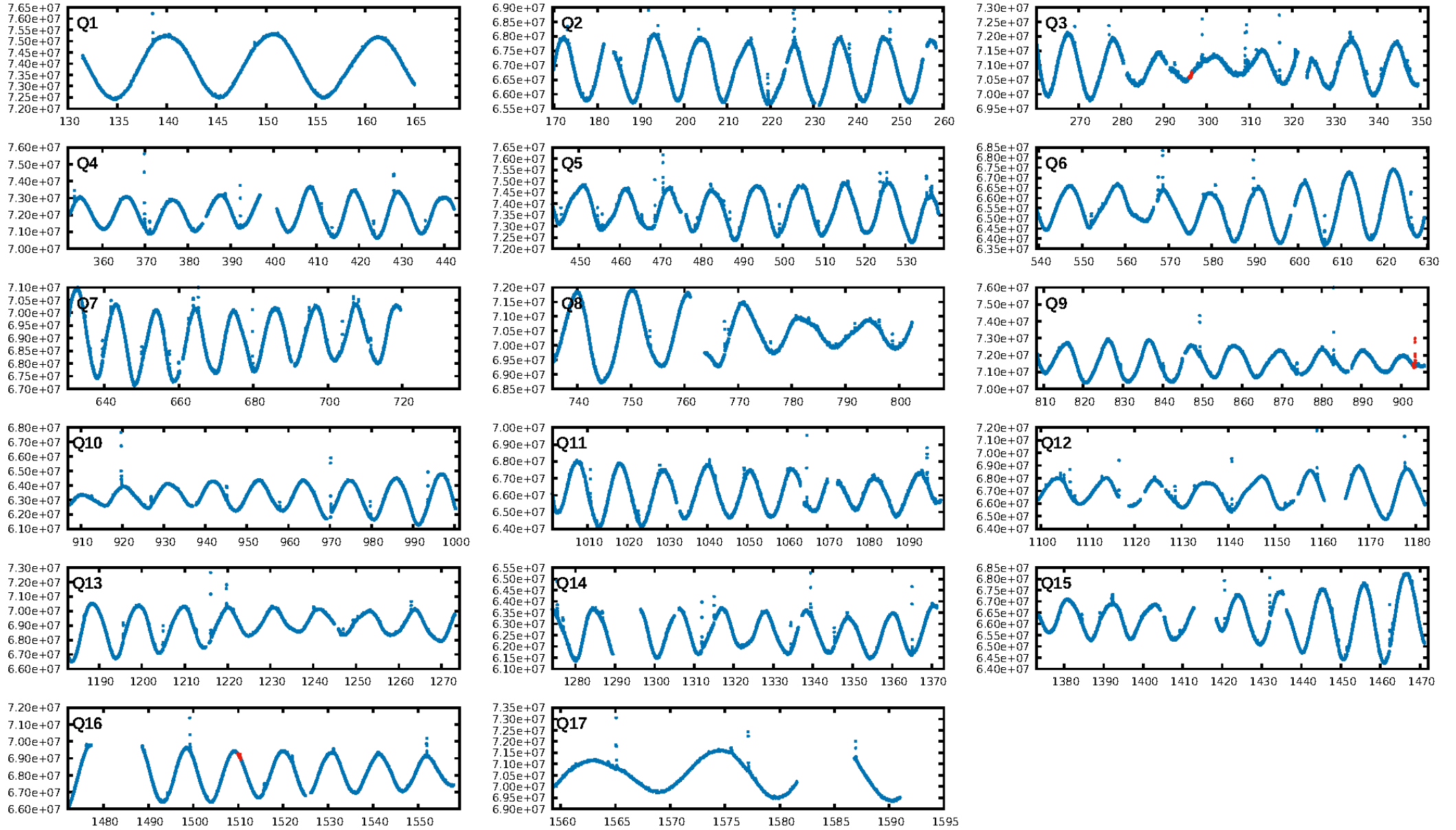
DV Fit Results:

Period = 606.95135 [0.00980] d
Epoch = 296.3168 [0.0146] BKJD
Rp/R* = 0.0284 [0.0186]
a/R* = 486.79 [1305.91]
b = 0.58 [3.14]
Seff = 0.06 [0.01]
Teq = 128 [6] K
Rp = 1.56 [1.03] Re
a = 1.1150 [0.0974] AU
Ag = 147113.40 [197100.98] [0.75σ]
Teffp = 3886 [1302] K [2.89σ]

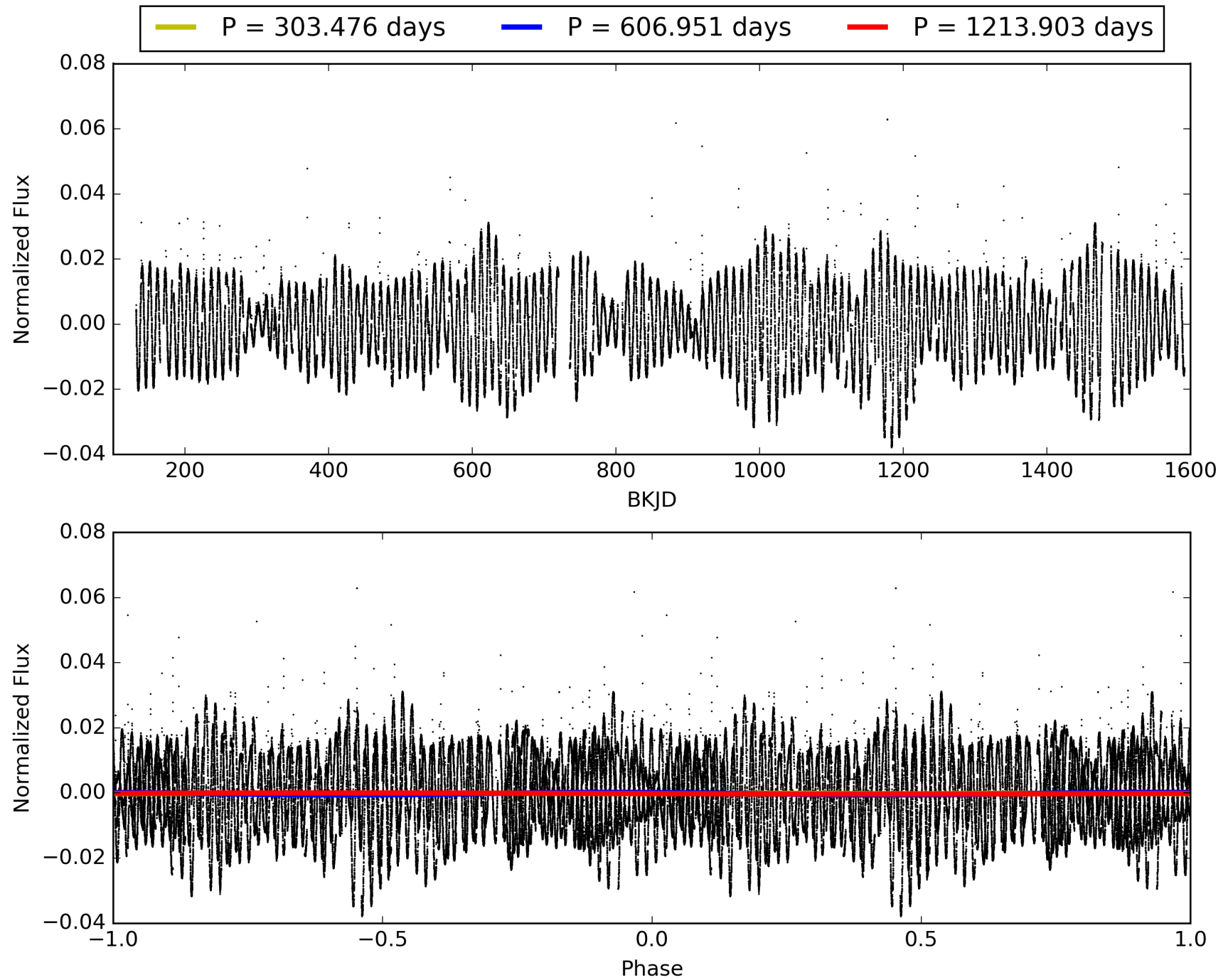
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [46.65σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 87.5%
Bootstrap-pfa: 2.04e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.213
Centroid-sig: 0.2%
Centroid-so: 2.357 arcsec [3.40σ]
OotOffset-rm: 0.140 arcsec [1.68σ]
KicOffset-rm: 0.167 arcsec [1.99σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 001722506-03, PDC Light Curves

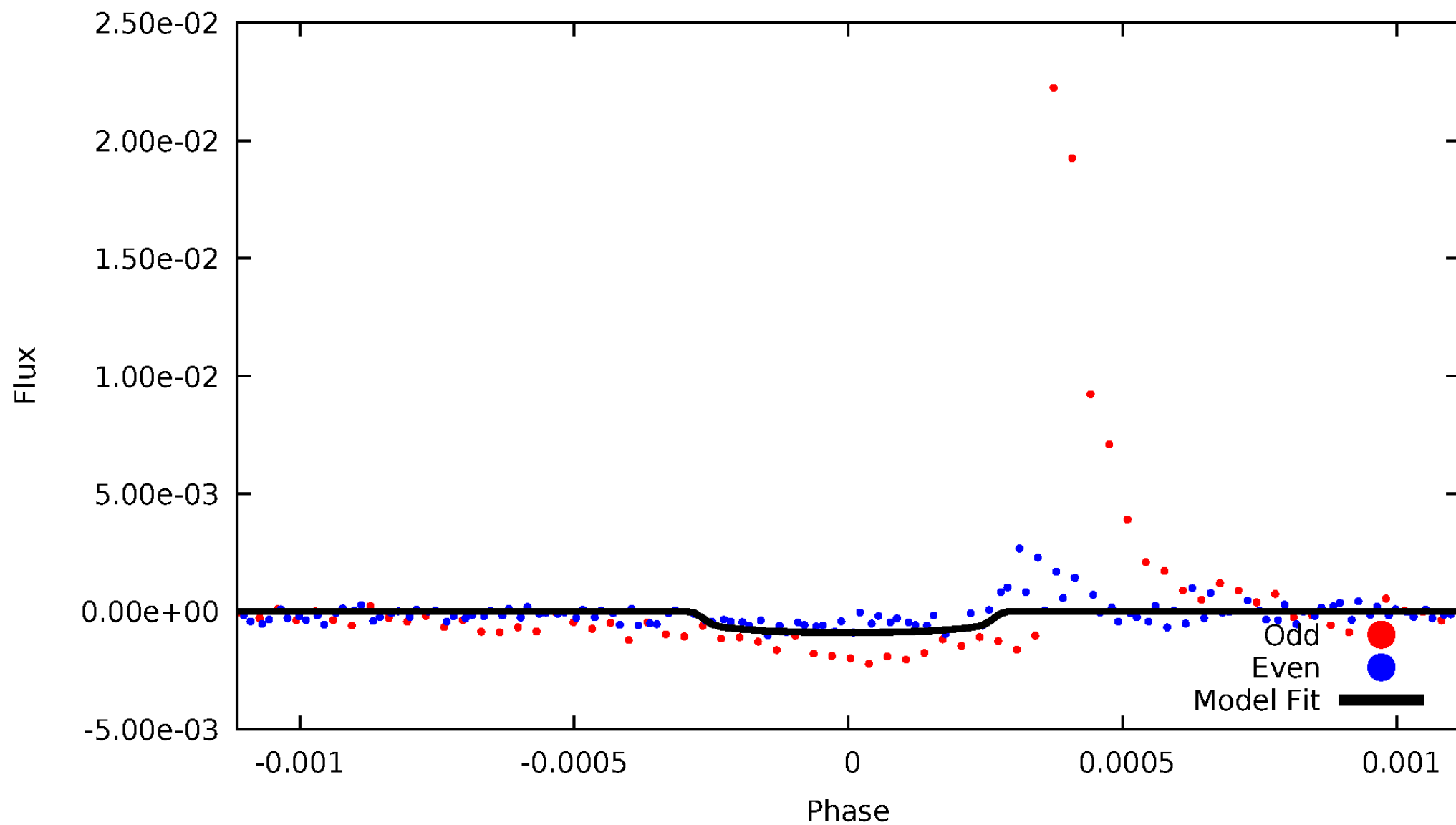


TCE 001722506-03



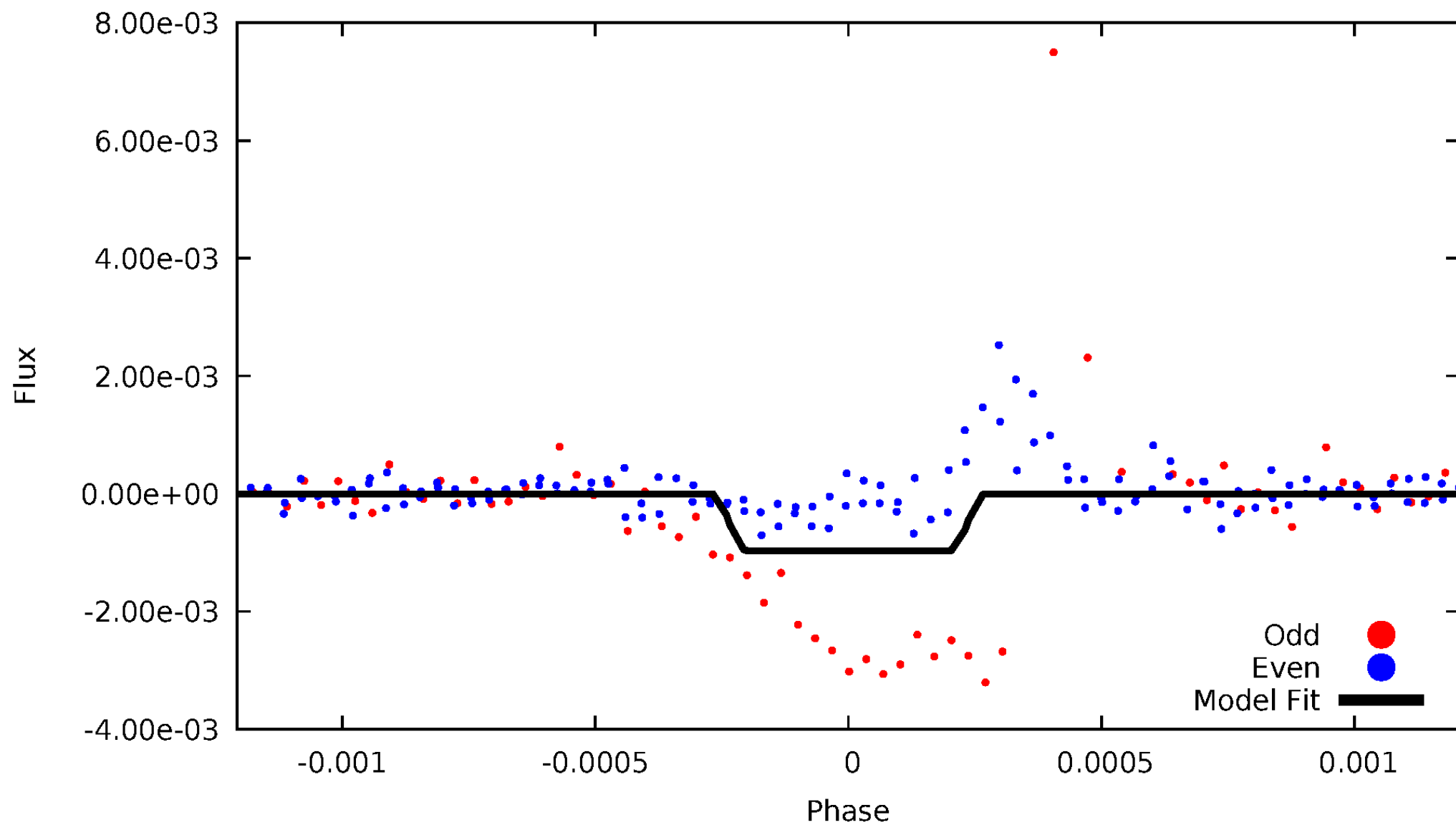
DV Odd/Even

TCE 001722506-03



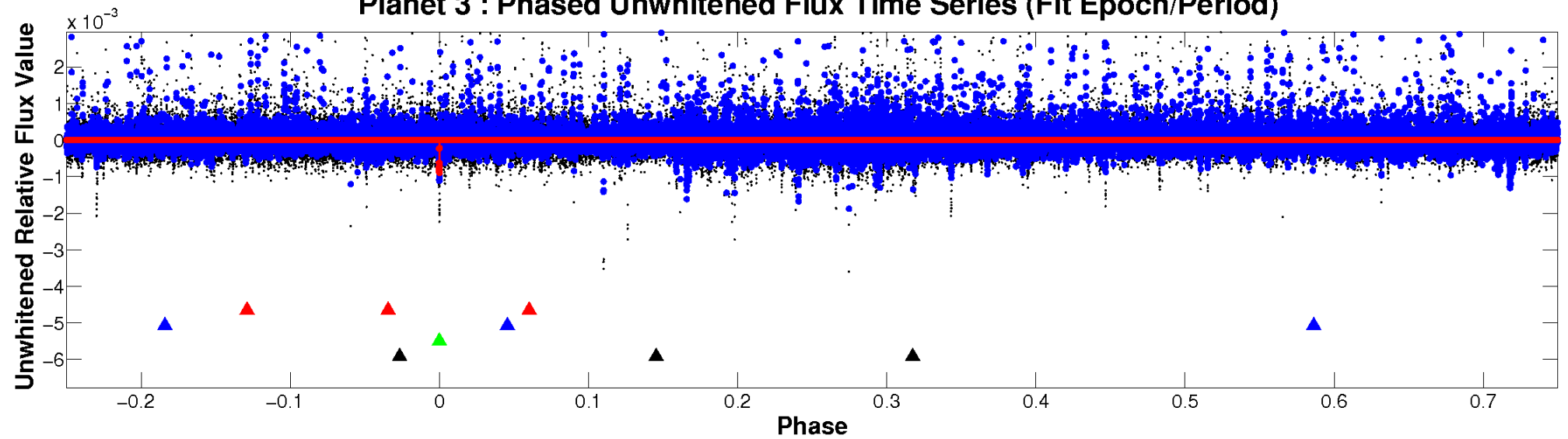
ALT Odd/Even

TCE 001722506-03

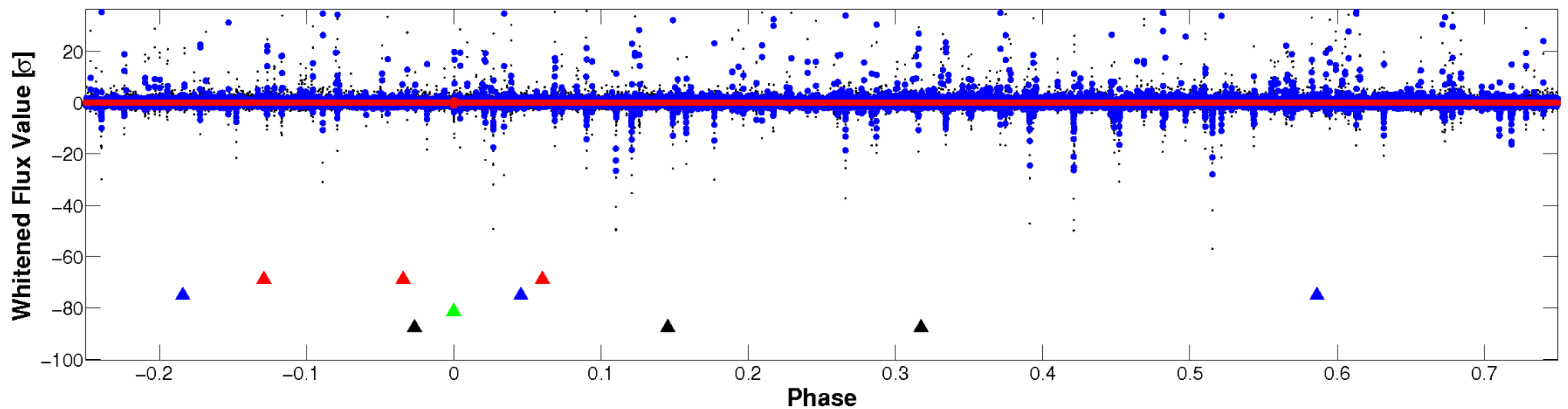


Non-Whitened Vs. Whitened Light Curve

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

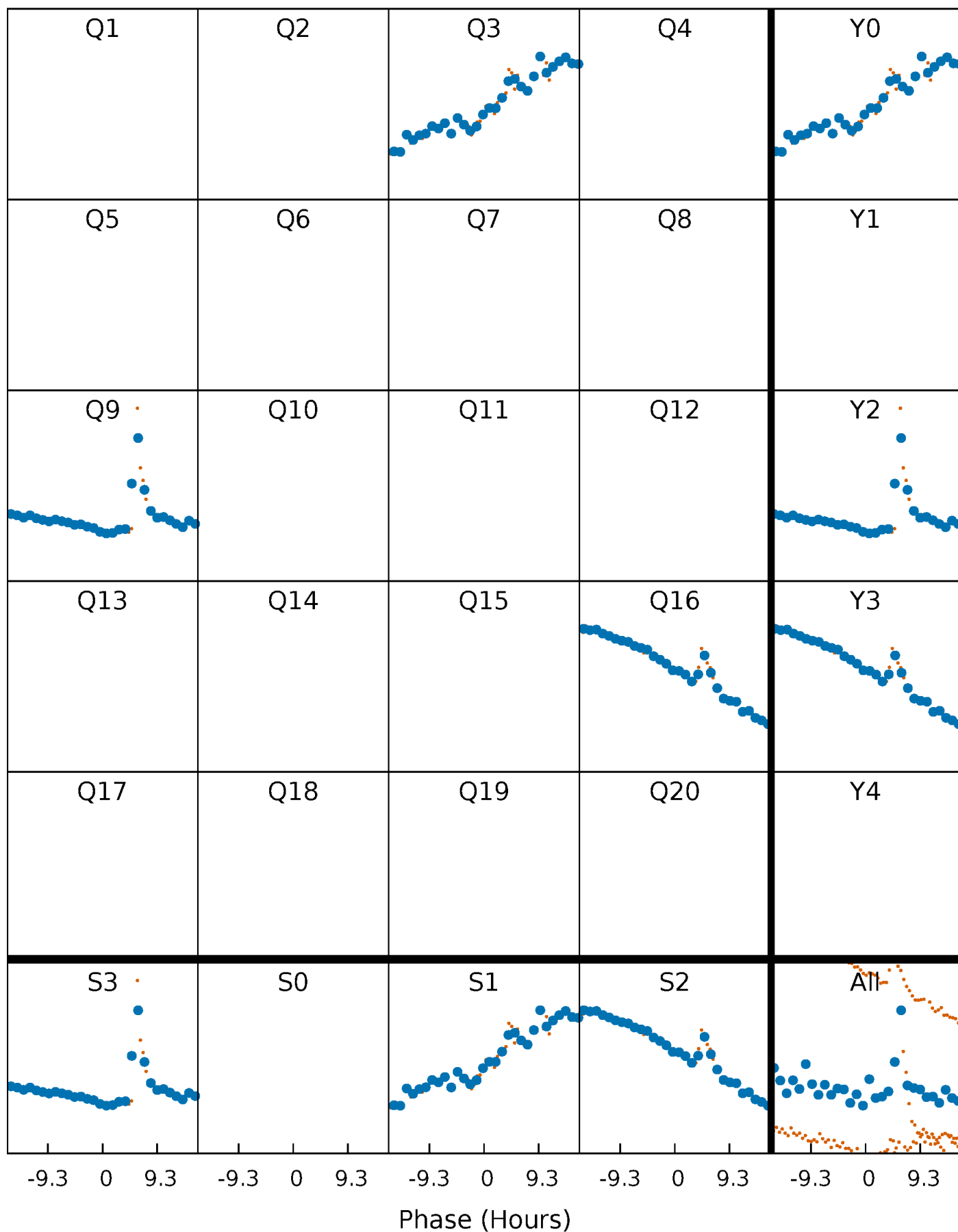


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



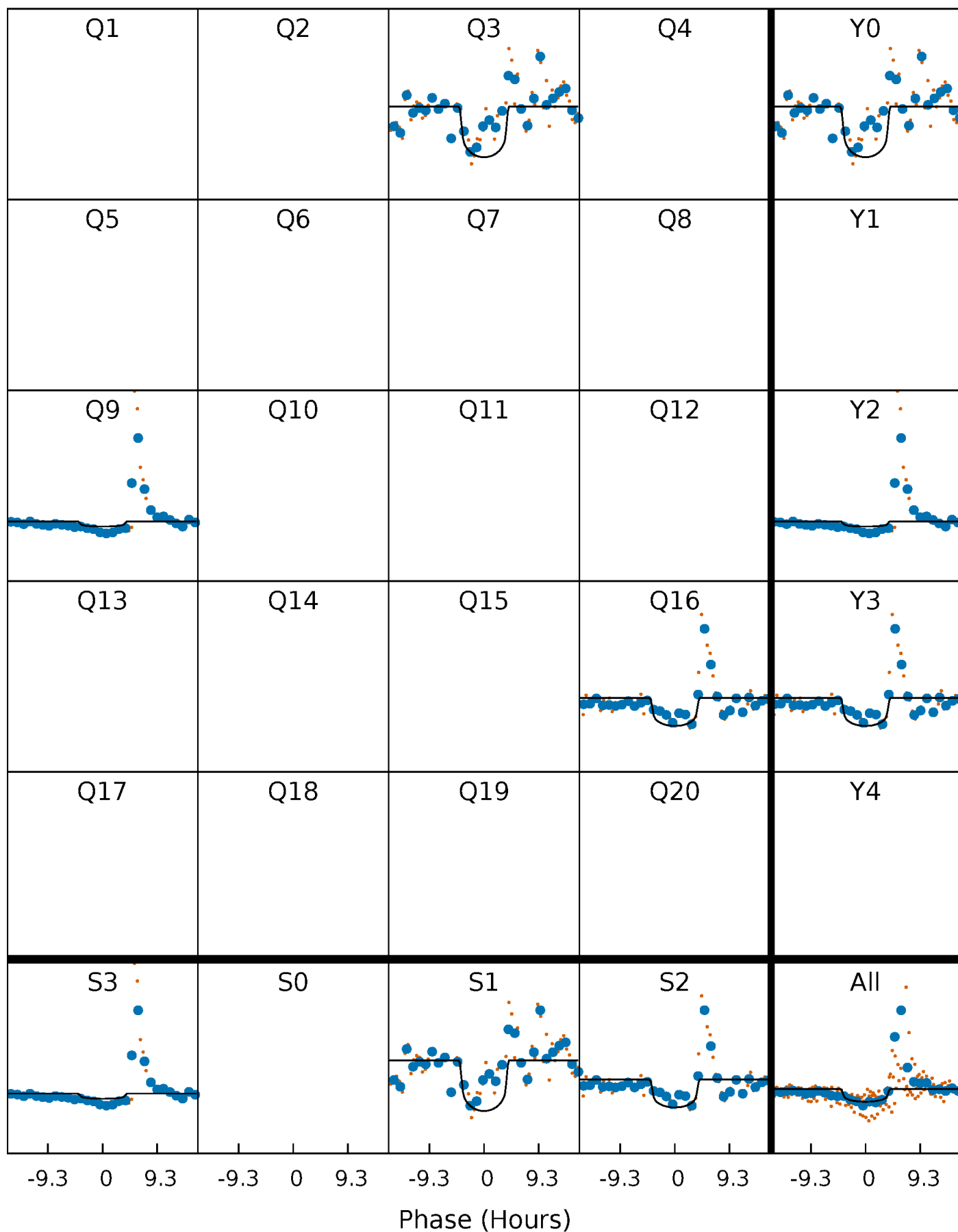
PDC Quarter-Phased Transit Curves

TCE 001722506-03 P=606.951347 Days $T_0=296.316810$ (BKJD)



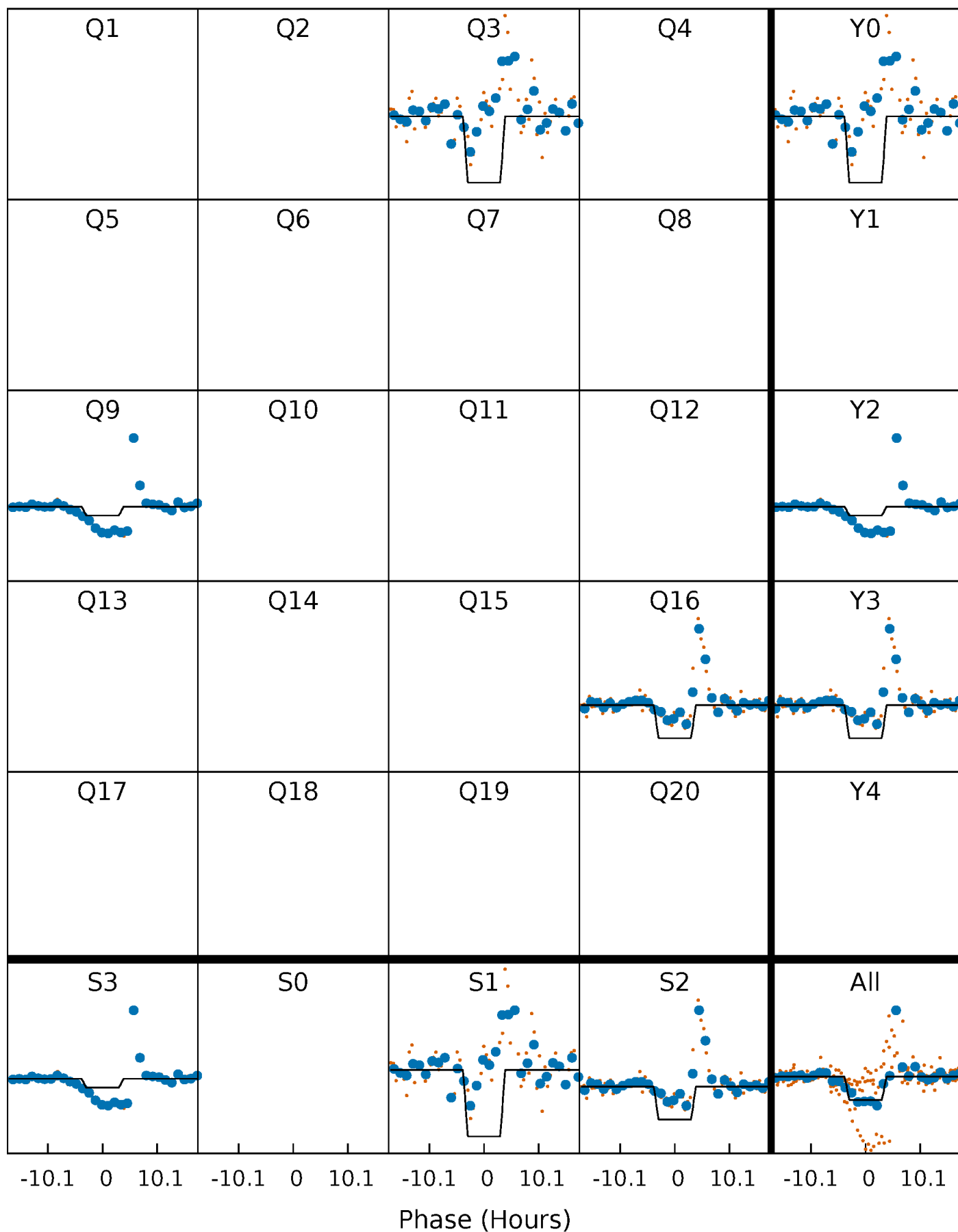
DV Quarter-Phased Transit Curves

TCE 001722506-03 $P=606.951347$ Days $T_0=296.316810$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

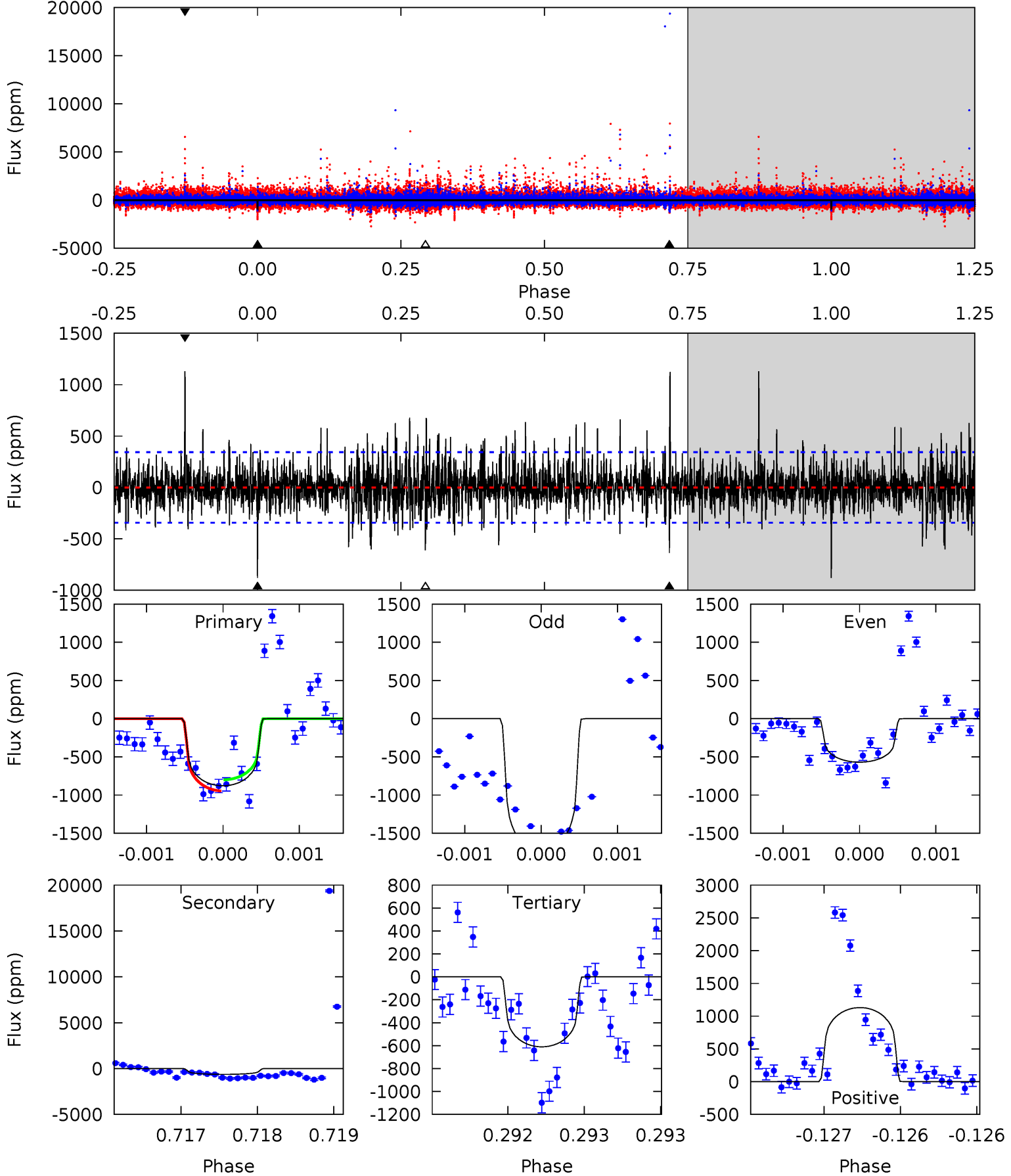
TCE 001722506-03 $P=606.958466$ Days $T_0=296.331533$ (BKJD)



DV Model-Shift Uniqueness Test

001722506-03, P = 606.951347 Days, E = 296.316810 Days

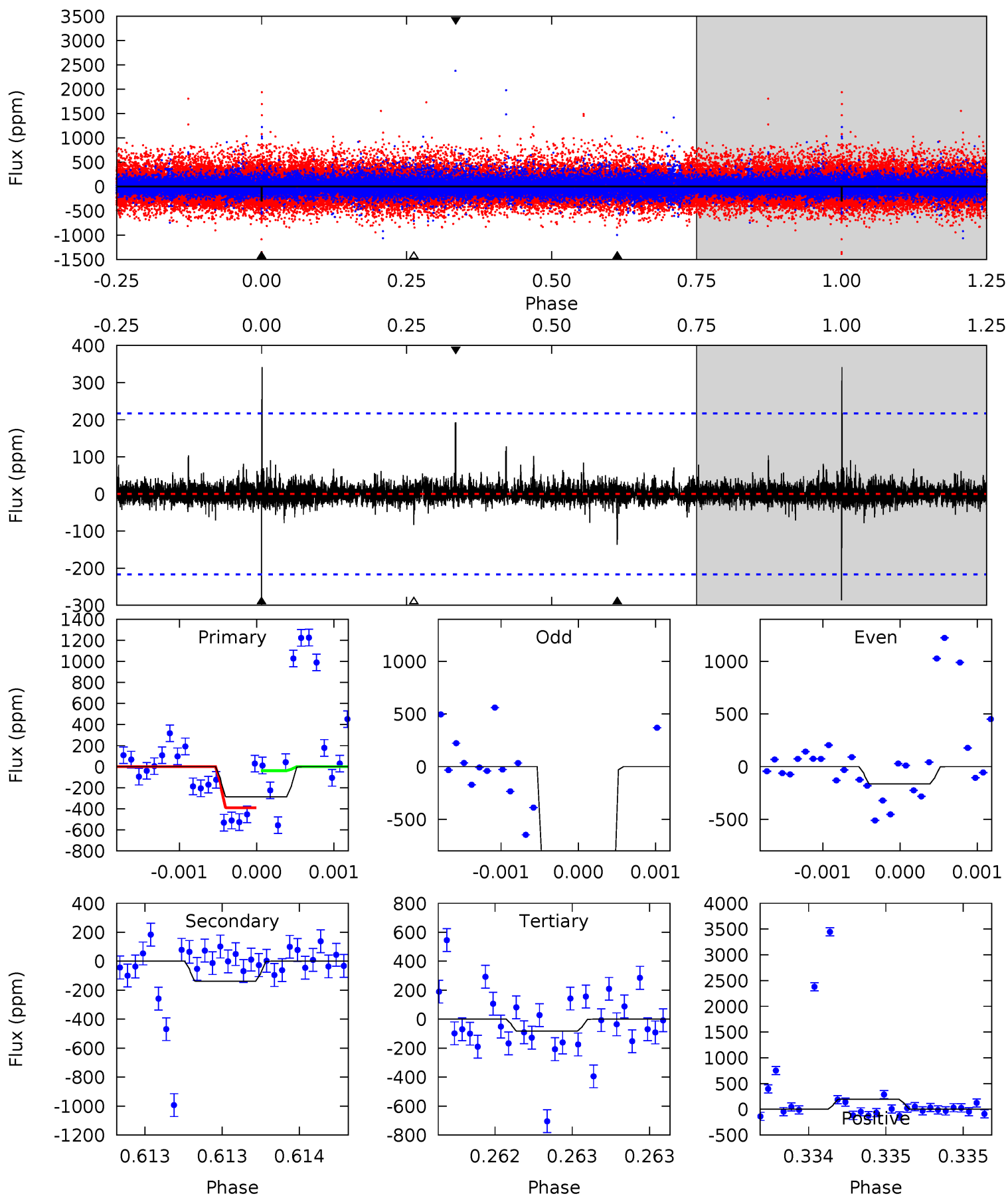
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	10.3	9.89	18.3	5.55	3.45	2.42	4.34	-4.08	0.40	-8.02	3.93	1.47	0.56	1.22



Alt Model-Shift Uniqueness Test

001722506-03, P = 606.958466 Days, E = 296.331533 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.36	3.52	2.13	4.96	5.57	3.47	0.43	5.23	2.41	1.39	-1.44	29.0	3.38	0.54	4.43



Stellar Parameters For KIC 001722506

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4335^{+130}_{-143}	$4.737^{+0.065}_{-0.035}$	$-1.080^{+0.300}_{-0.350}$	$0.502^{+0.036}_{-0.054}$	$0.502^{+0.039}_{-0.039}$	$5.579^{+1.730}_{-0.755}$
	+3%/-3%	+1%/-1%	+28%/-32%	+7%/-11%	+8%/-8%	+31%/-14%
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 001722506-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-635 ± 62	$1.62^{+0.93}_{-0.91}$	178^{+7}_{-7}	4092^{+1585}_{-593}	$168668^{+715741}_{-100825}$
Alt.	-137 ± 39	$1.72^{+0.99}_{-0.95}$	178^{+7}_{-6}	3080^{+969}_{-359}	$29741^{+125501}_{-17688}$

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

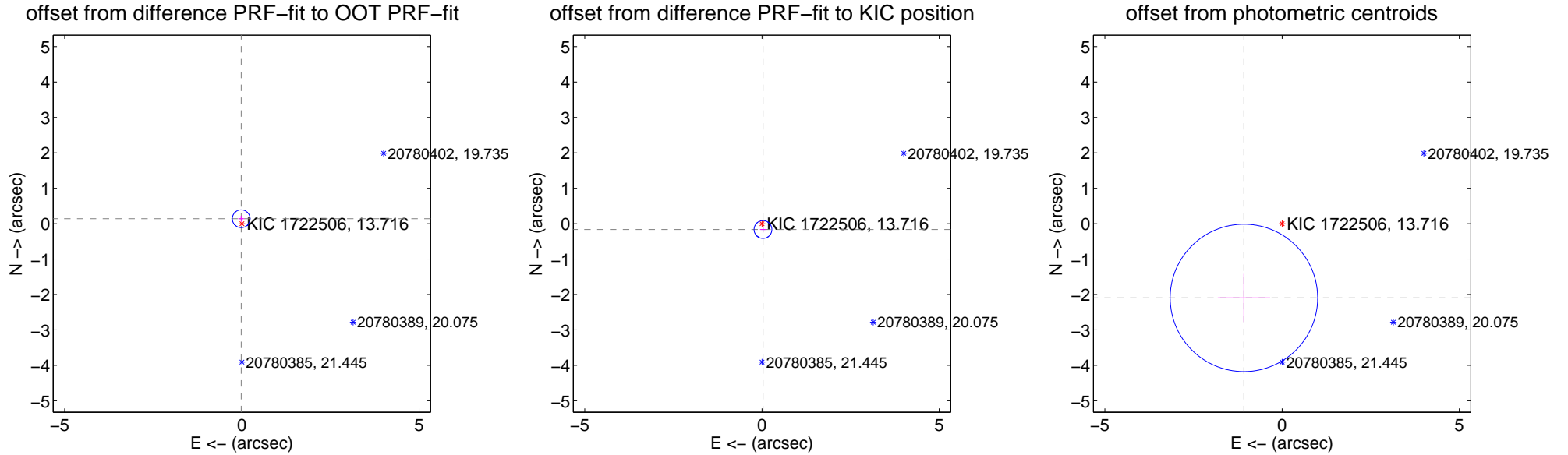
DV Centroid Data

Supplemental centroid analysis for 001722506-03. Kepler magnitude: 13.72. Transit SNR 7.42

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.140 ± 0.084	1.68	0.019 ± 0.085	0.139 ± 0.084
PRF-fit source offset from KIC position	0.167 ± 0.084	1.99	-0.028 ± 0.085	-0.164 ± 0.084
photometric centroid source offset	2.36 ± 0.69	3.40	1.08 ± 0.74	-2.10 ± 0.68



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.

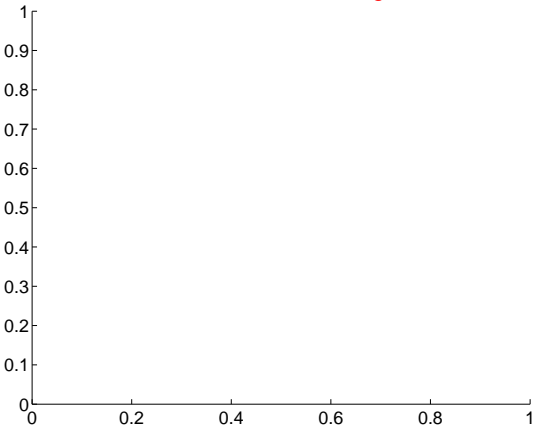
Q1 no difference image



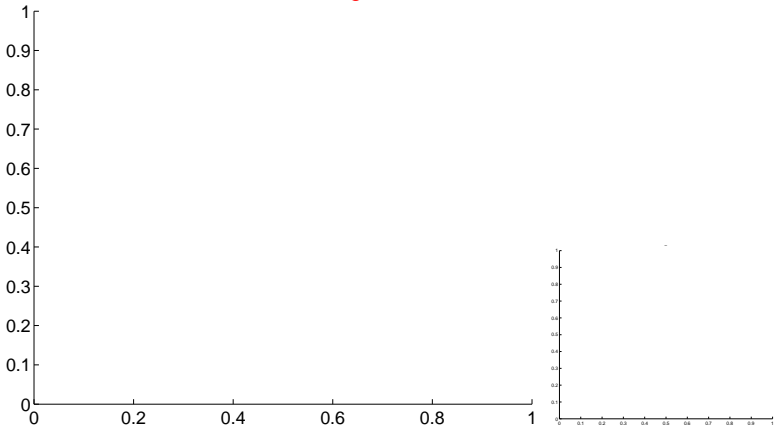
Q1 no OOT image



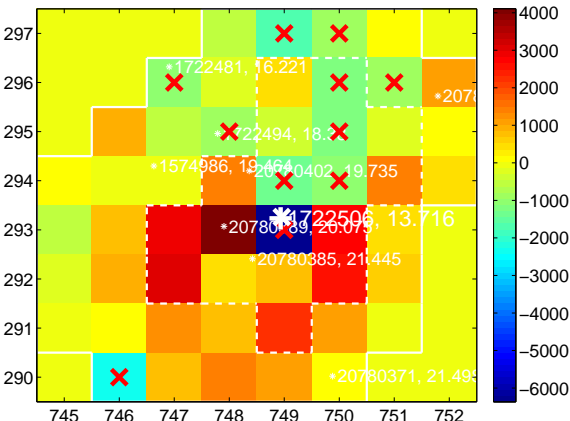
Q2 no difference image



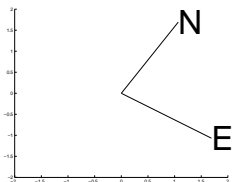
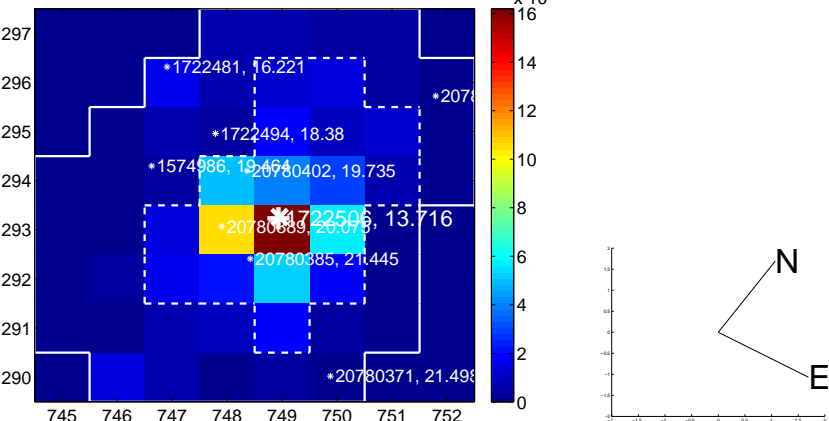
Q2 no OOT image



Q3 difference image. Poor Quality



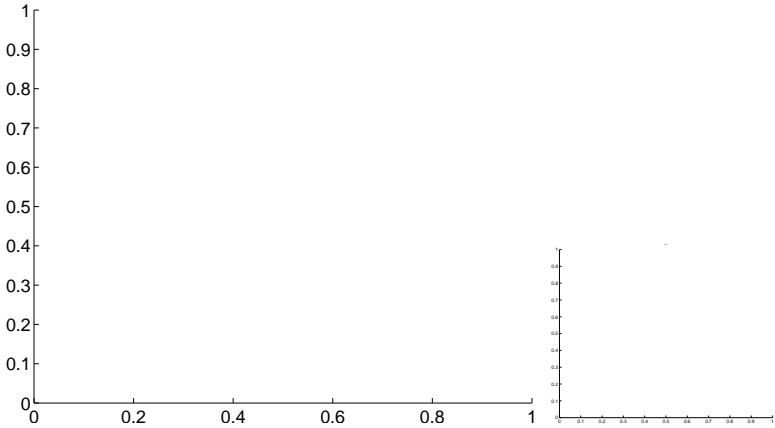
Q3 OOT image



Q4 no difference image



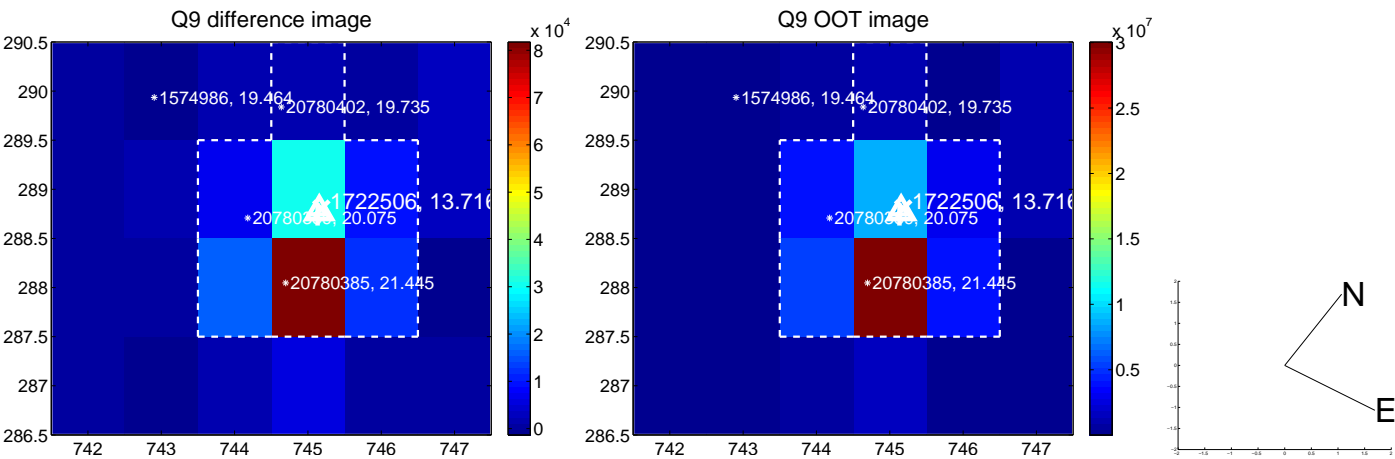
Q4 no OOT image



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



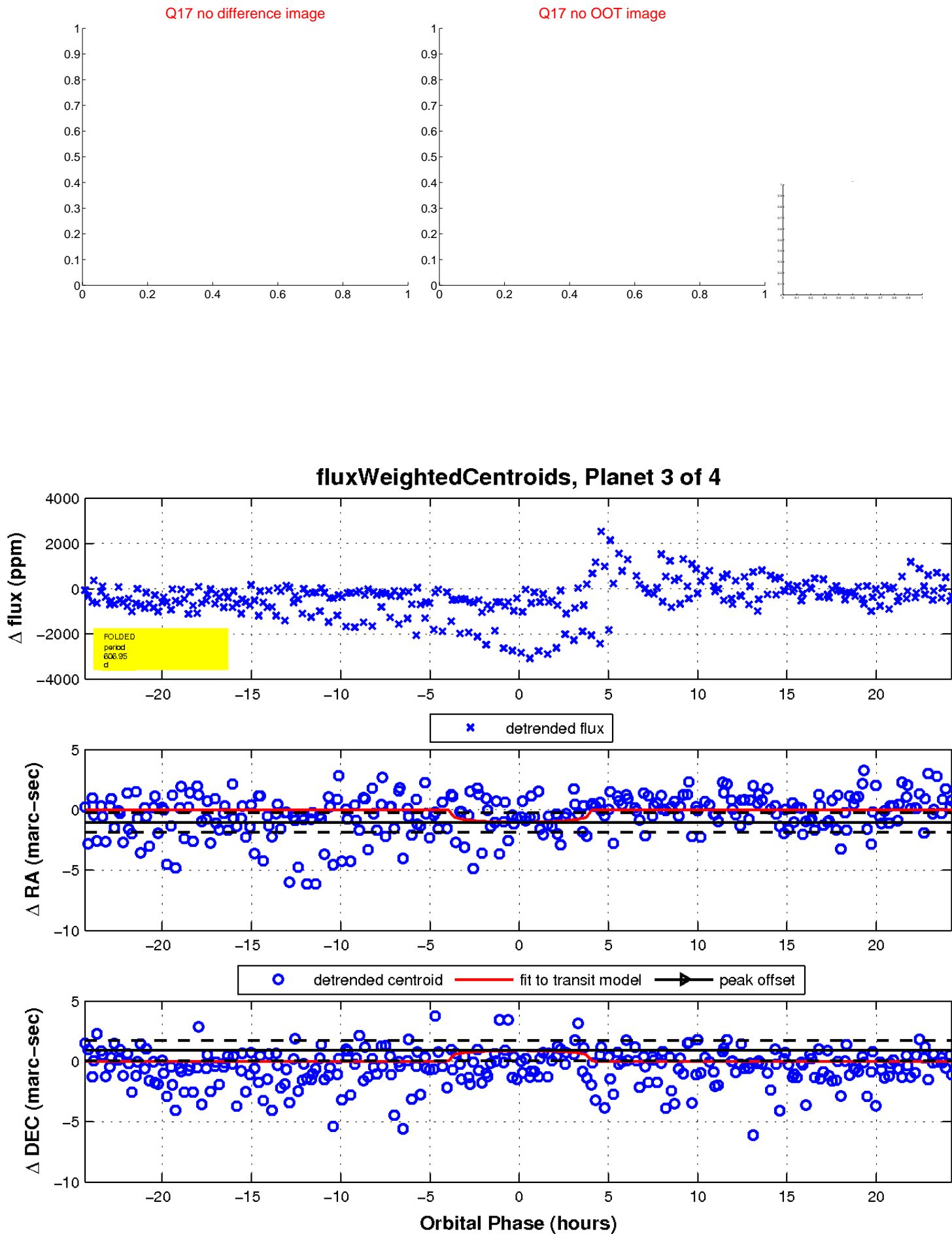
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

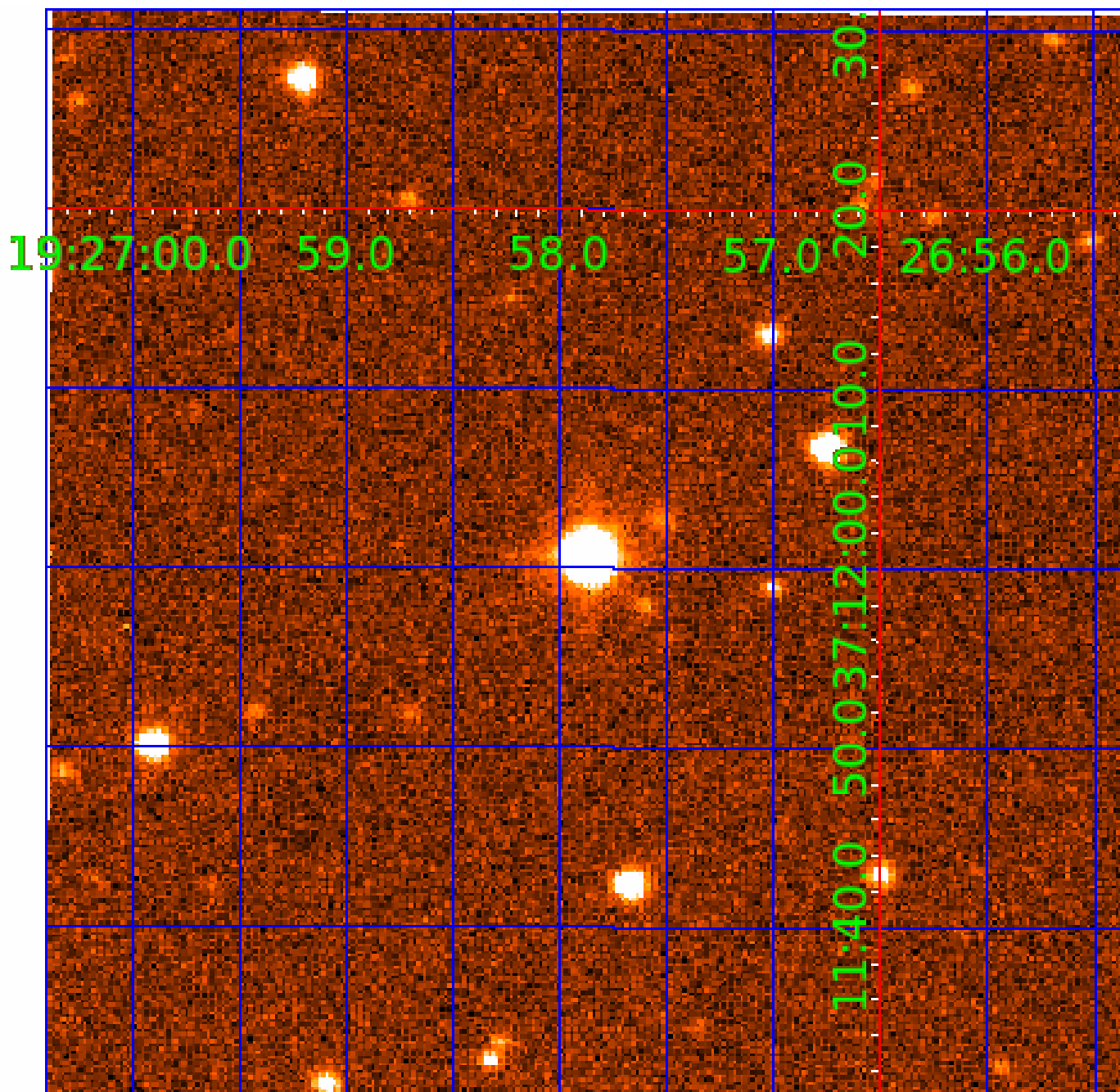


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 001722506

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})
001722506-01	OBS	No	549.545445	332.886278	1145.5	28.395	11.4	6.7	0.50	4335	2.05	0.07
001722506-03	OBS	No	606.951347	296.316810	898.0	8.114	11.1	7.4	0.50	4335	1.56	0.06
001722506-04	OBS	No	502.536591	488.978005	677.7	13.996	10.2	6.6	0.50	4335	1.32	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001722506-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
001722506-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
001722506-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

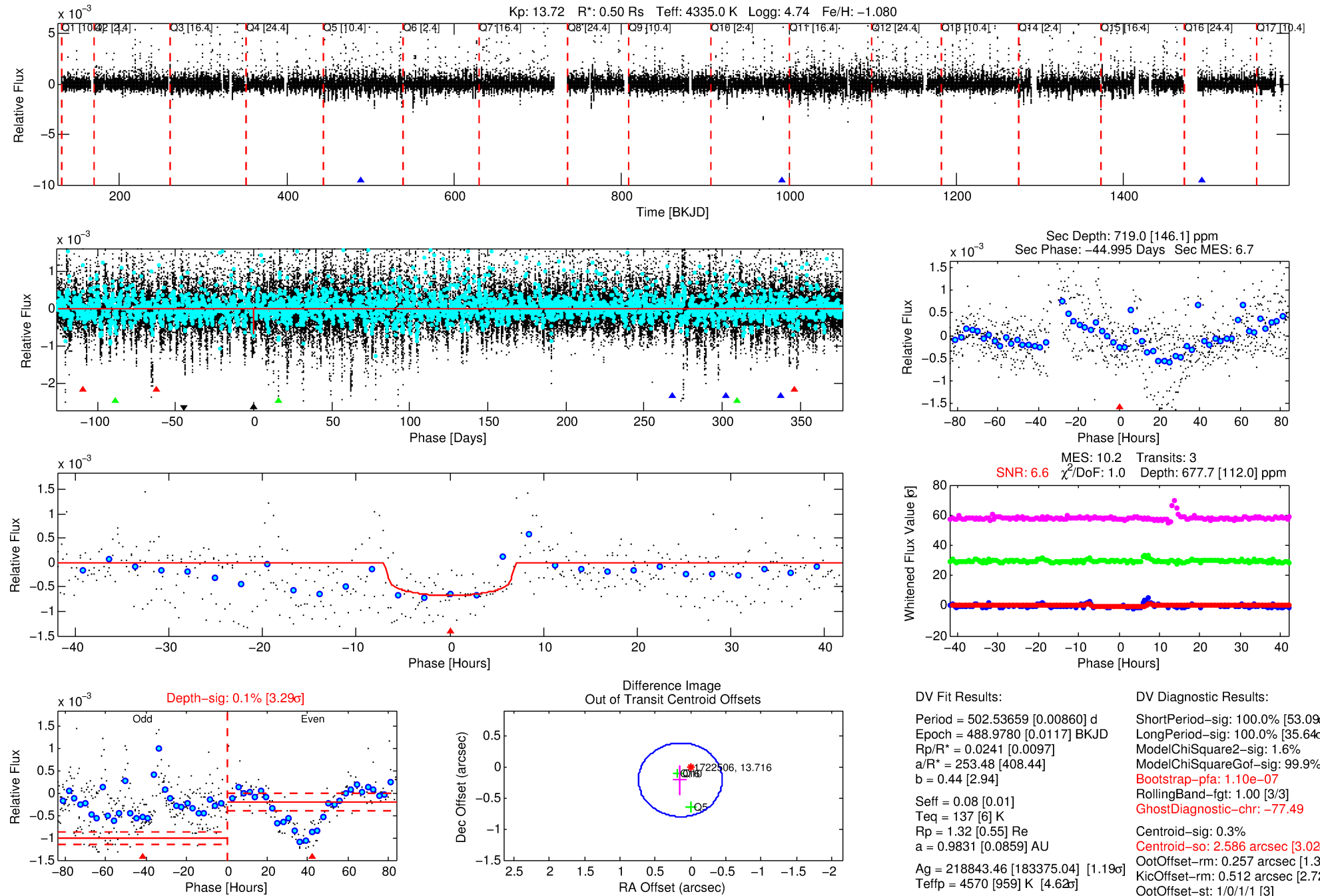
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001722506-04

No Significant Match Found

DV One-Page Summary

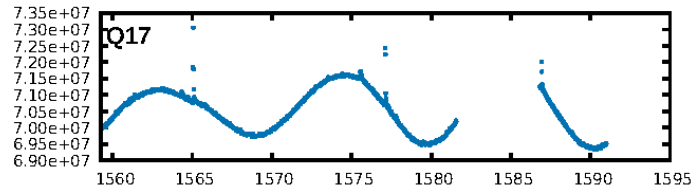
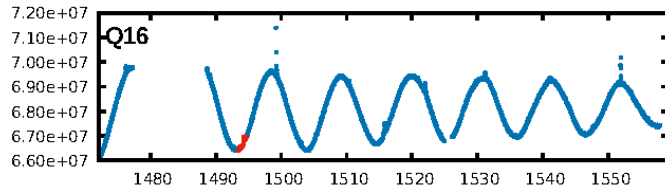
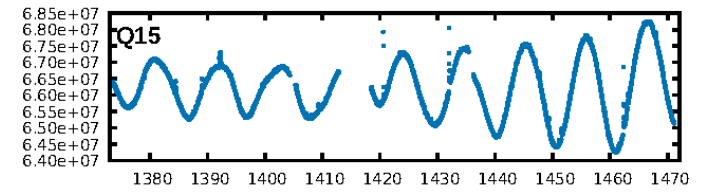
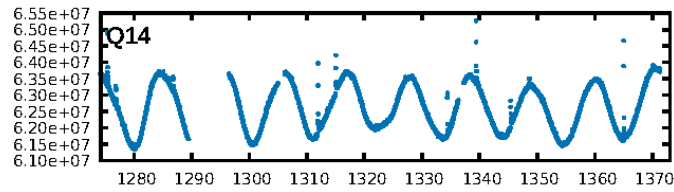
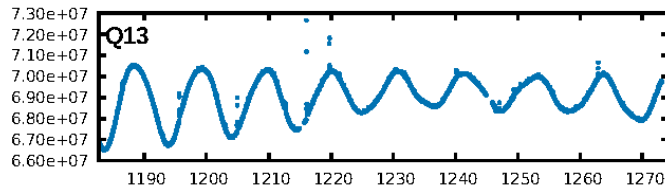
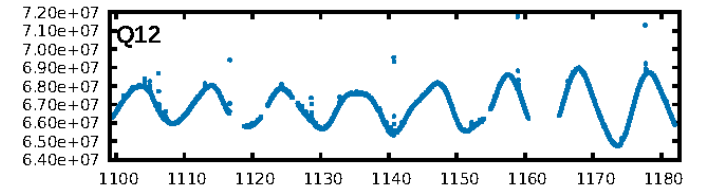
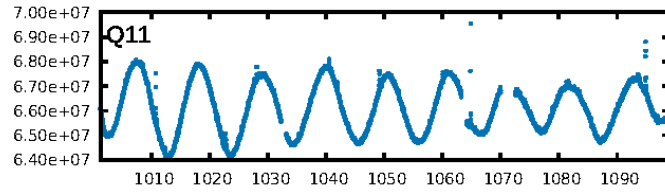
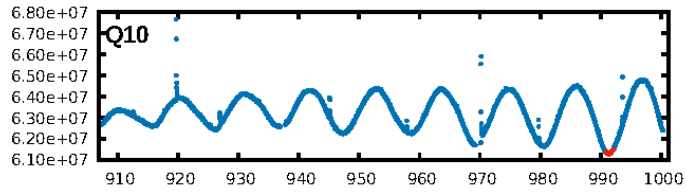
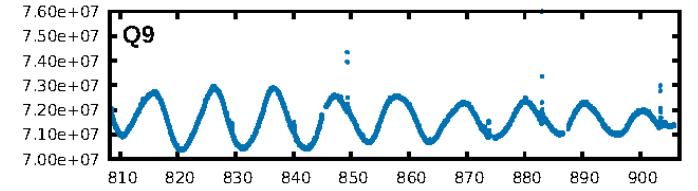
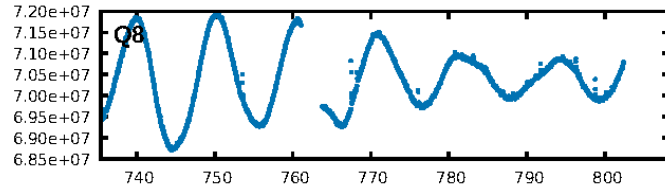
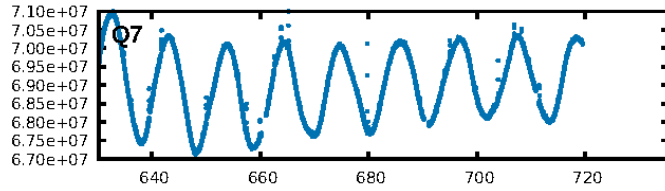
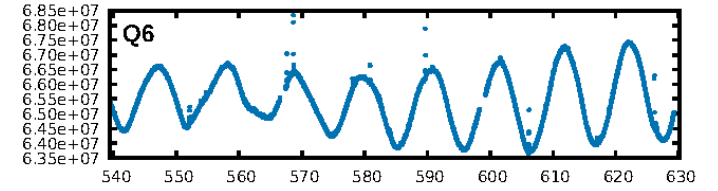
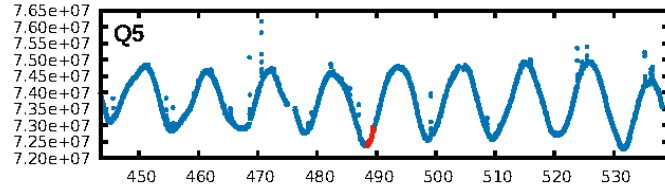
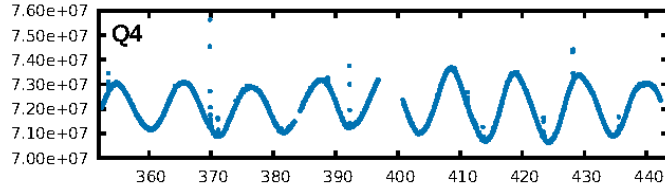
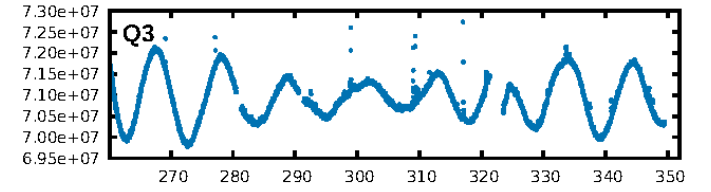
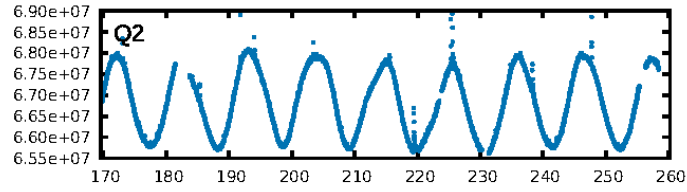
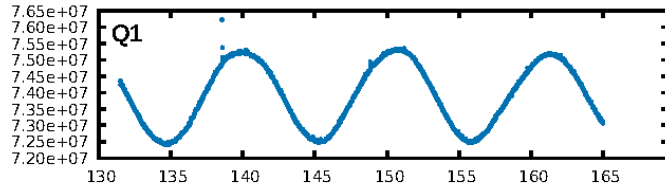
KIC: 1722506 Candidate: 4 of 4 Period: 502.537 d



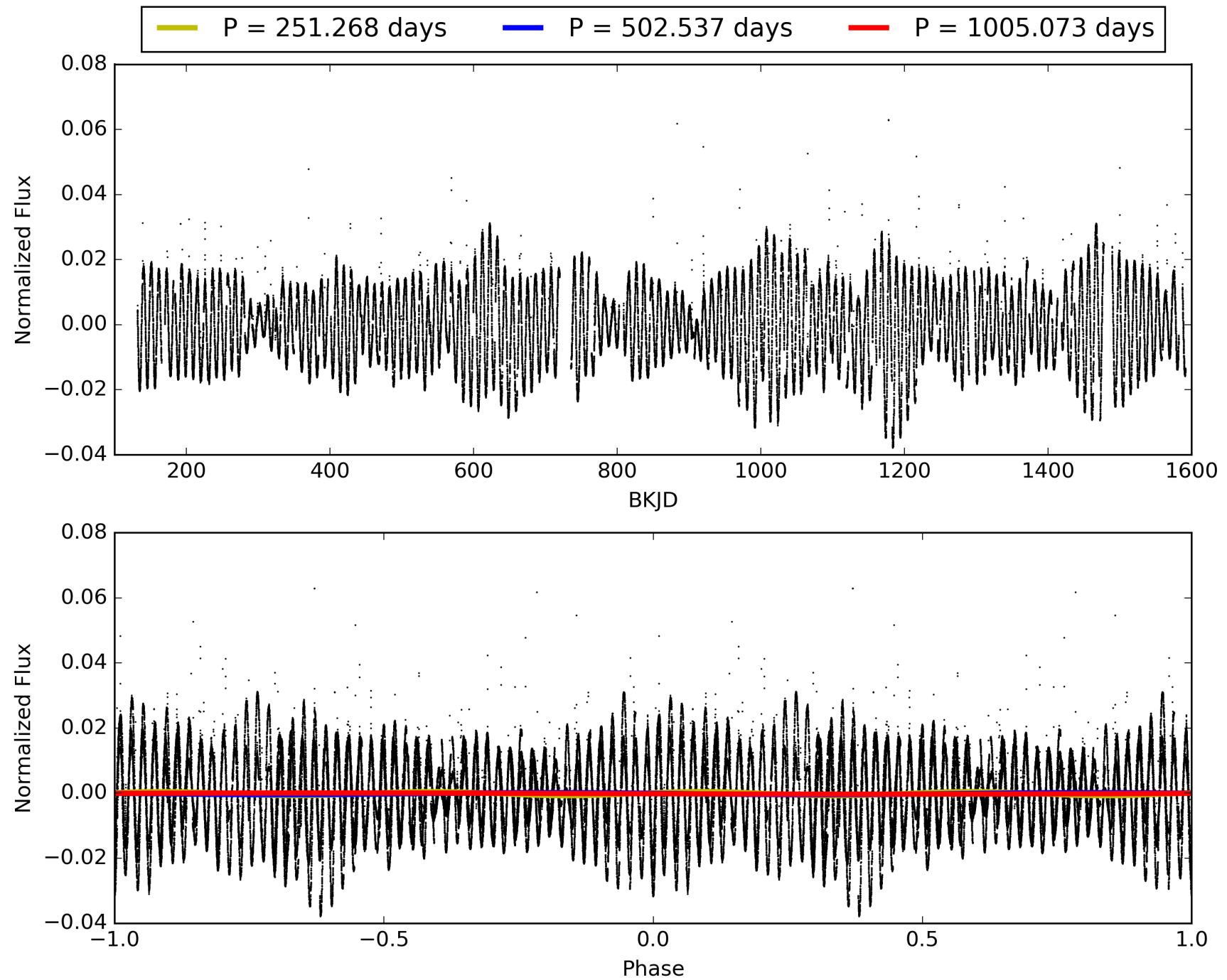
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 12:50:45 Z

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

TCE 001722506-04, PDC Light Curves

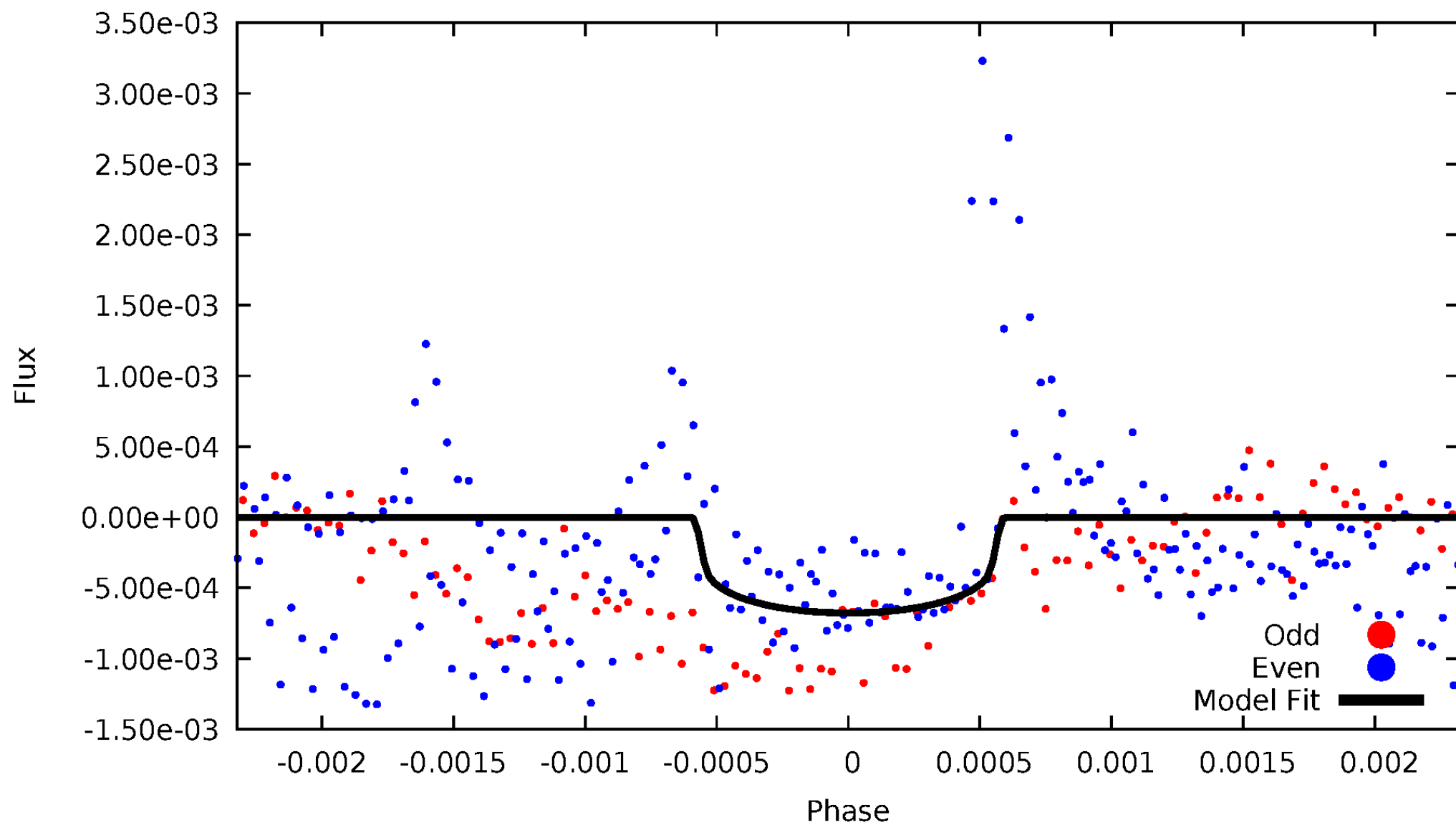


TCE 001722506-04



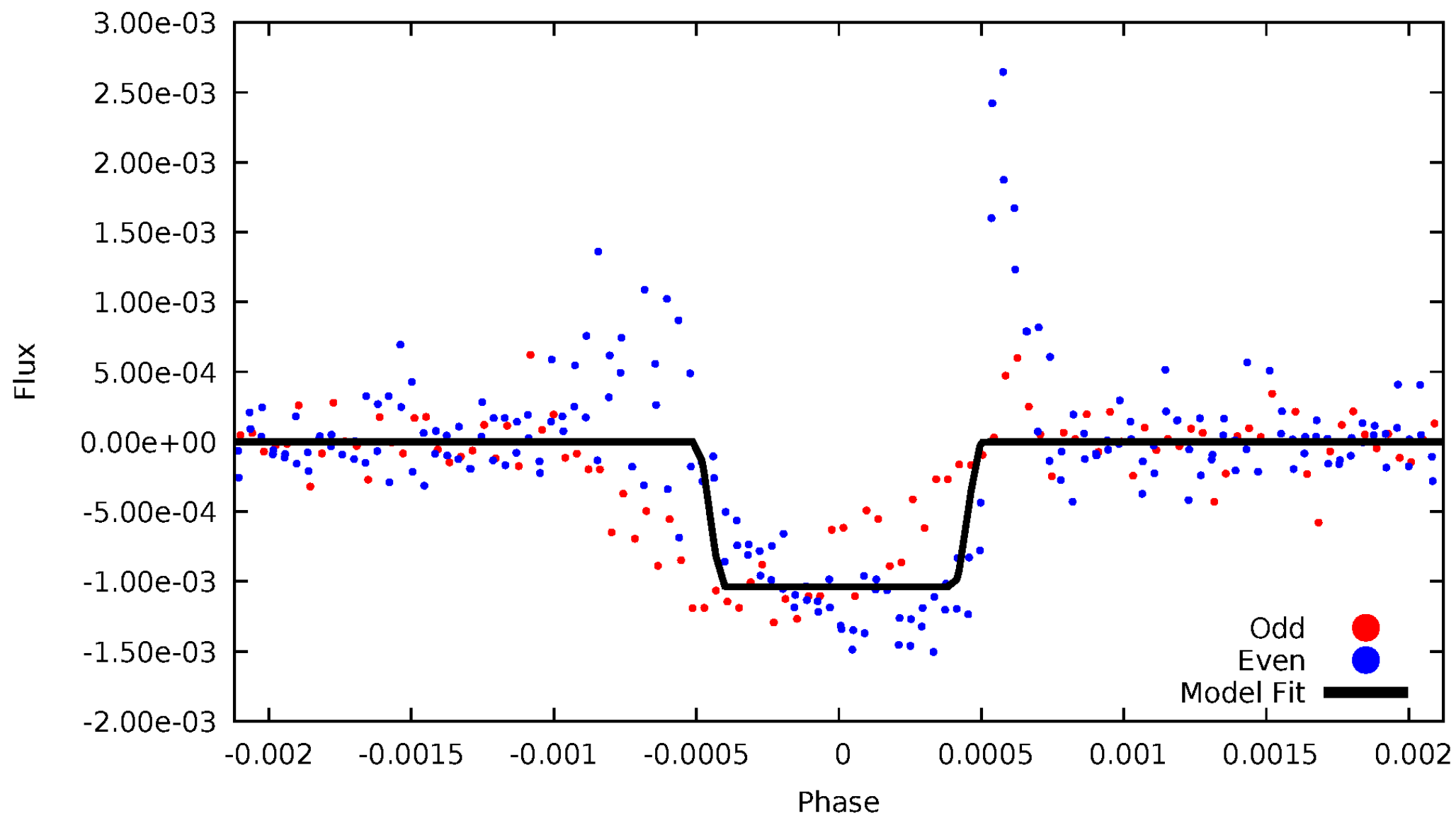
DV Odd/Even

TCE 001722506-04



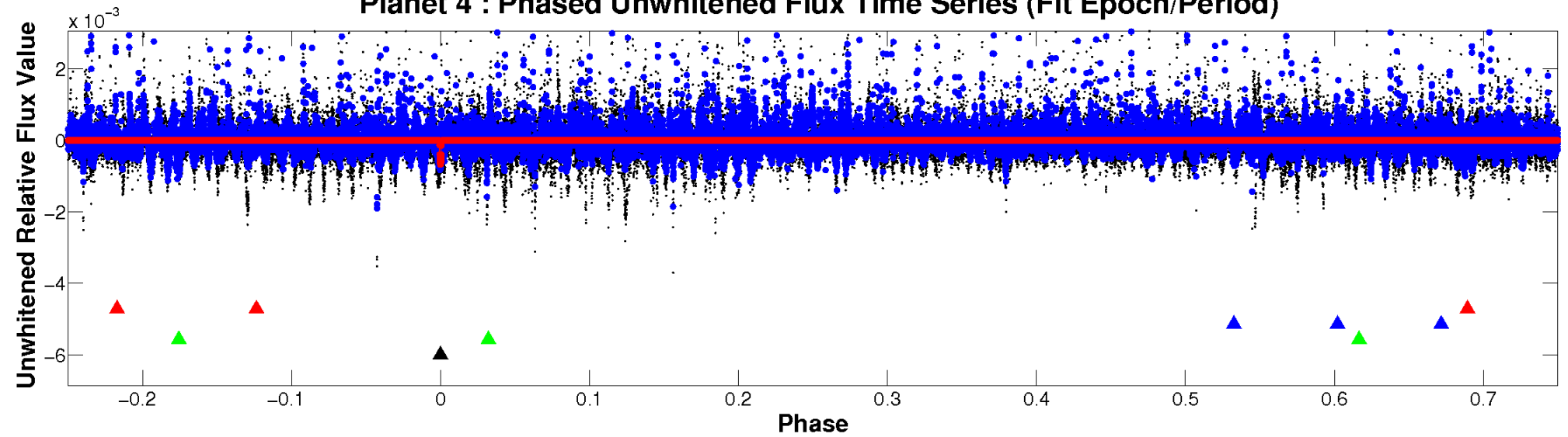
ALT Odd/Even

TCE 001722506-04

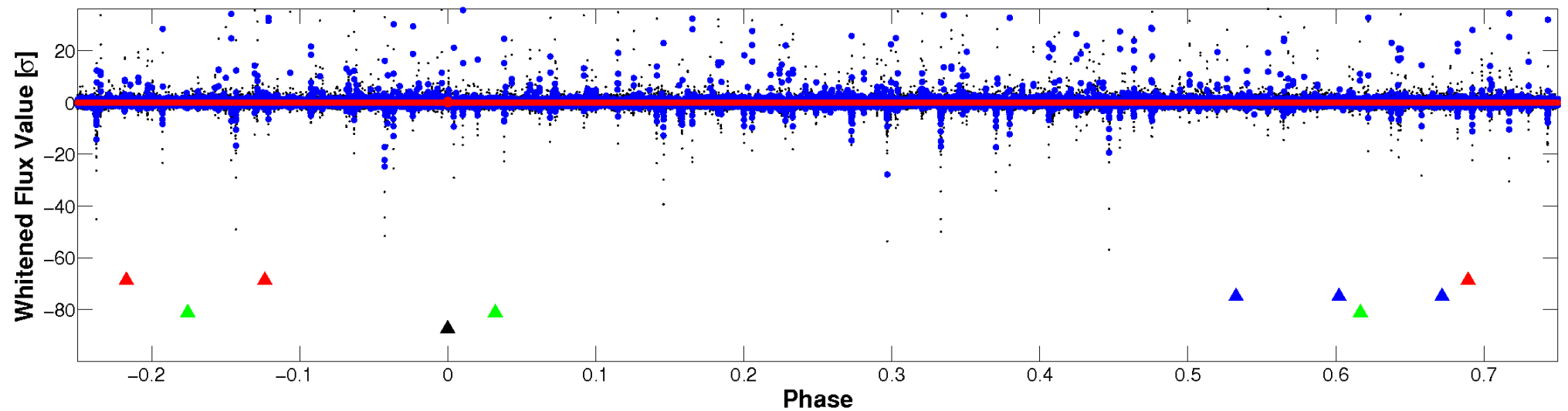


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

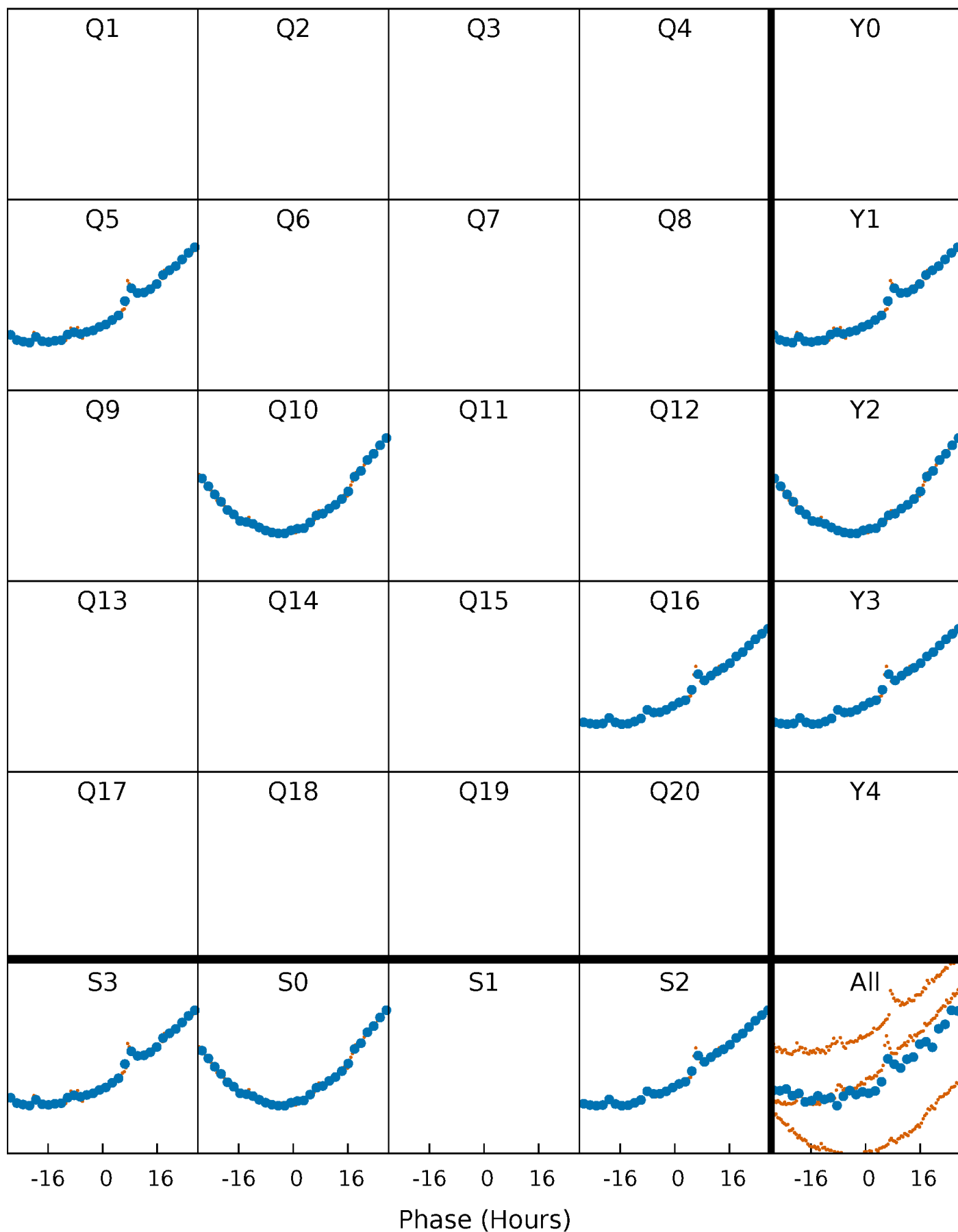


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



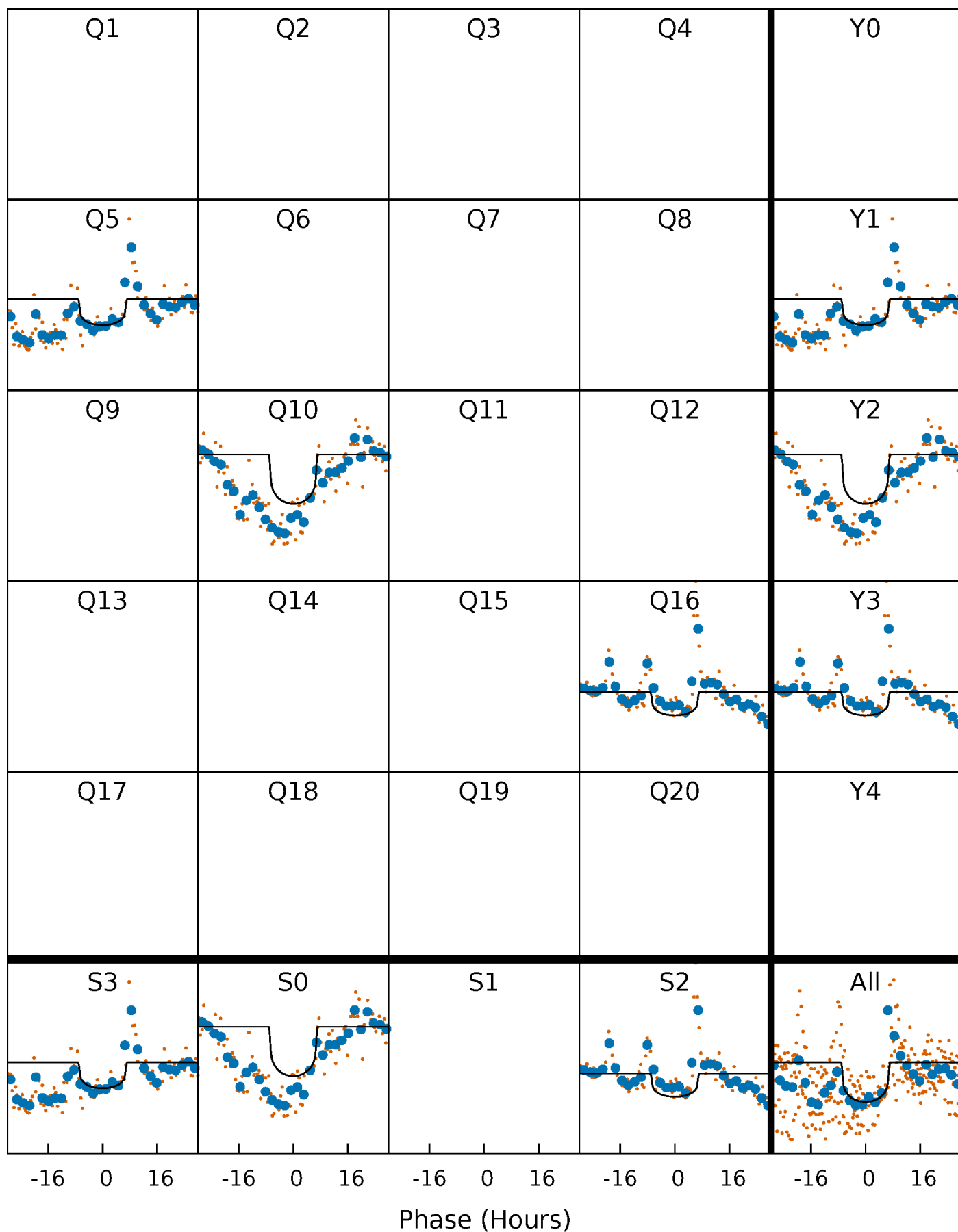
PDC Quarter-Phased Transit Curves

TCE 001722506-04 $P=502.536591$ Days $T_0=488.978005$ (BKJD)



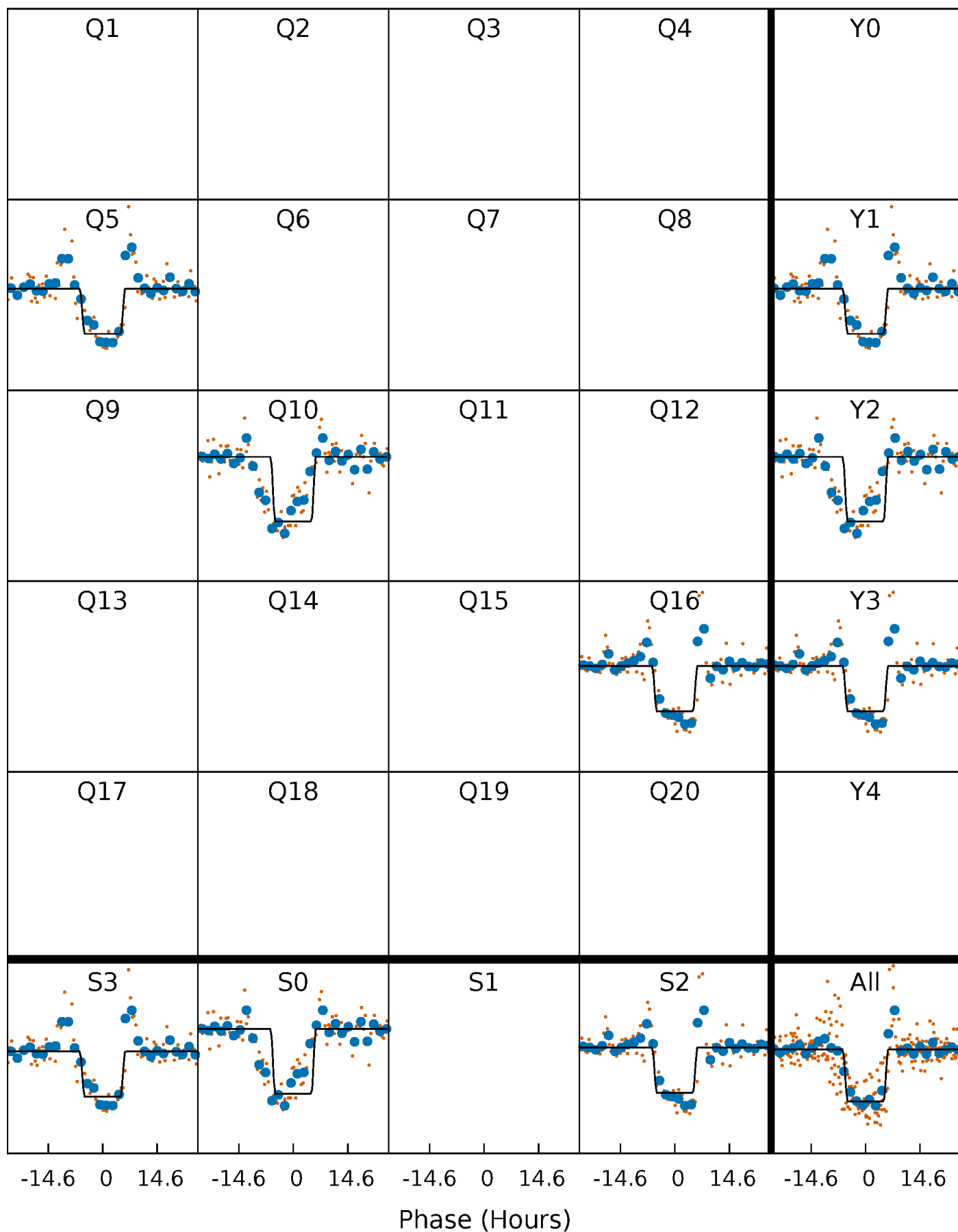
DV Quarter-Phased Transit Curves

TCE 001722506-04 P=502.536591 Days $T_0=488.978005$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

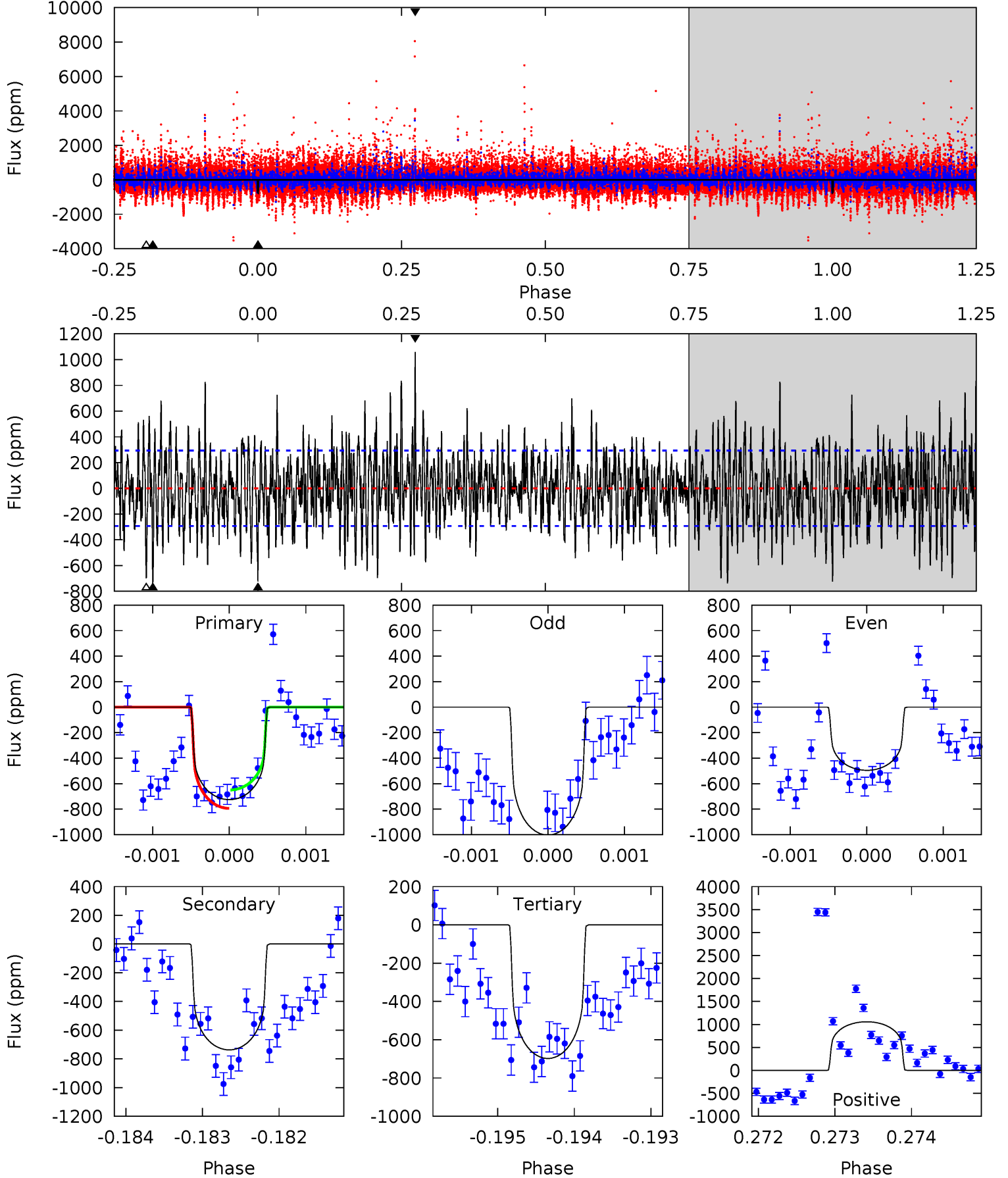
TCE 001722506-04 P=502.502108 Days $T_0=489.013519$ (BKJD)



DV Model-Shift Uniqueness Test

001722506-04, P = 502.536591 Days, E = 488.978005 Days

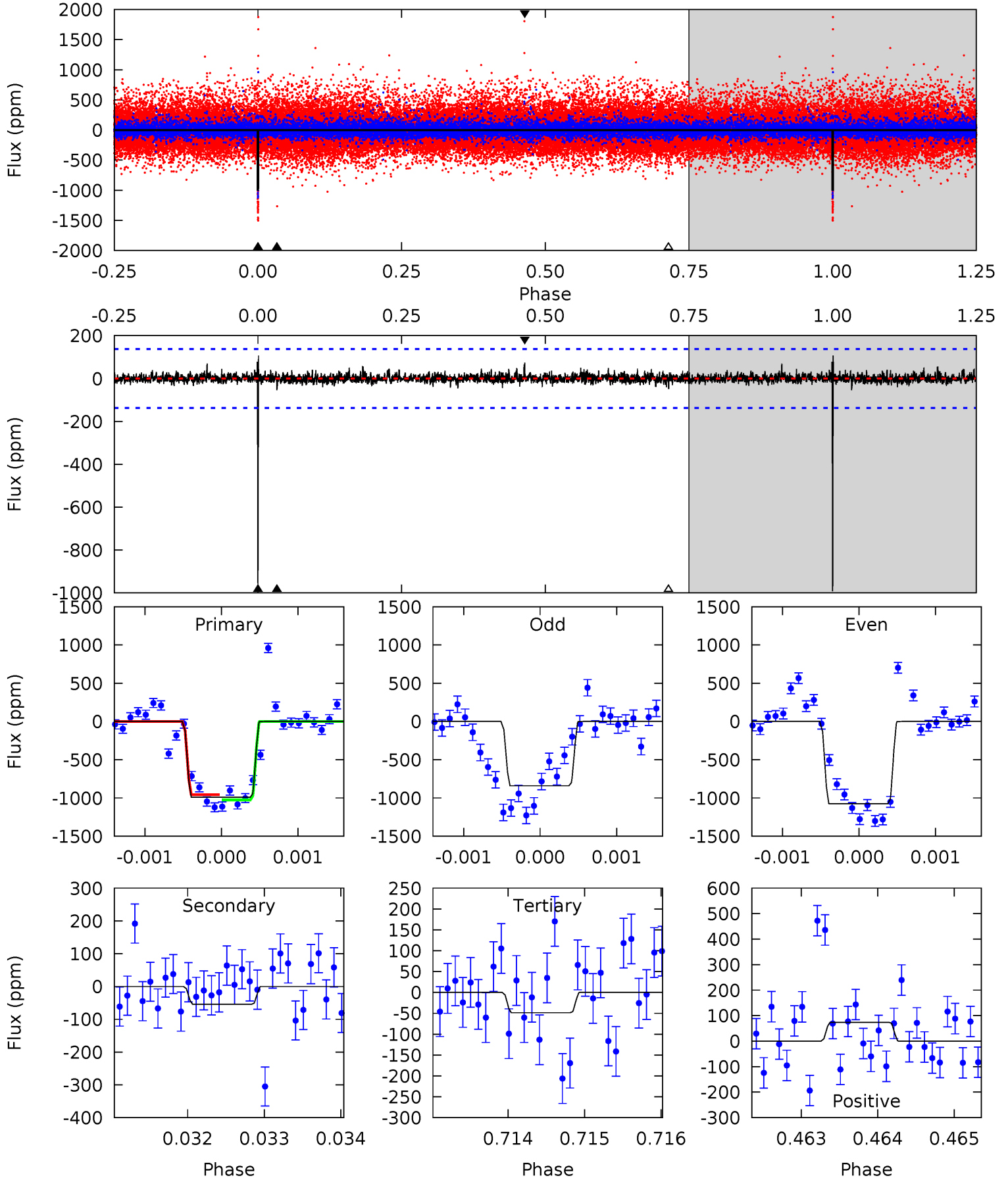
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	13.6	12.9	19.5	5.42	3.24	4.12	0.50	-6.15	0.73	-5.93	2.76	0.85	0.59	1.33



Alt Model-Shift Uniqueness Test

001722506-04, P = 502.502108 Days, E = 489.013519 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.3	2.15	1.92	2.92	5.45	3.29	0.47	37.3	36.3	0.23	-0.77	4.20	0.96	0.10	1.33



Stellar Parameters For KIC 001722506

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4335^{+130}_{-143}	$4.737^{+0.065}_{-0.035}$	$-1.080^{+0.300}_{-0.350}$	$0.502^{+0.036}_{-0.054}$	$0.502^{+0.039}_{-0.039}$	$5.579^{+1.730}_{-0.755}$
	+3%/-3%	+1%/-1%	+28%/-32%	+7%/-11%	+8%/-8%	+31%/-14%
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 001722506-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-737 ± 54	$1.32^{+0.56}_{-0.50}$	191^{+7}_{-8}	4503^{+1020}_{-547}	$229100^{+353360}_{-114668}$
Alt.	-54 ± 25	$1.77^{+0.53}_{-0.53}$	190^{+7}_{-7}	2722^{+314}_{-285}	9076^{+11203}_{-5133}

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

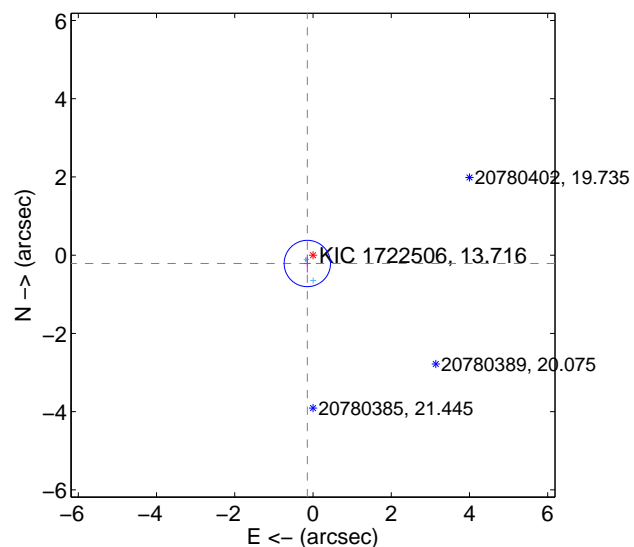
Supplemental centroid analysis for 001722506-04. Kepler magnitude: 13.72. Transit SNR 6.60

There are 3 quarters with good PRF difference image offsets

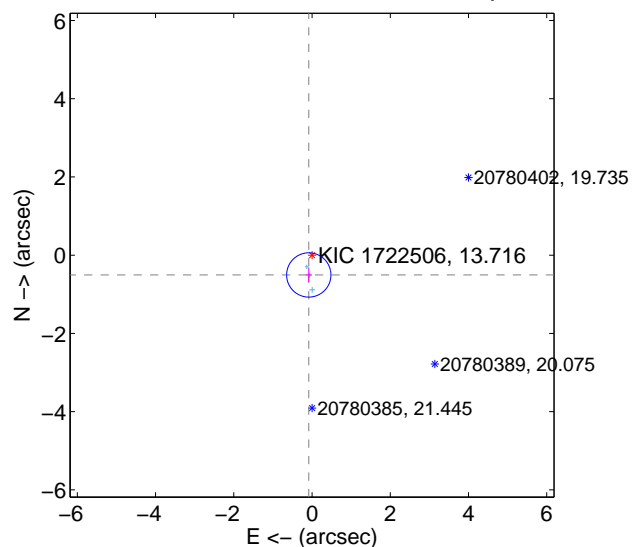
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.257 ± 0.197	1.30	0.145 ± 0.089	-0.213 ± 0.231
PRF-fit source offset from KIC position	0.512 ± 0.189	2.72	0.083 ± 0.078	-0.506 ± 0.191
photometric centroid source offset	2.59 ± 0.86	3.02	-1.99 ± 0.89	-1.65 ± 0.80

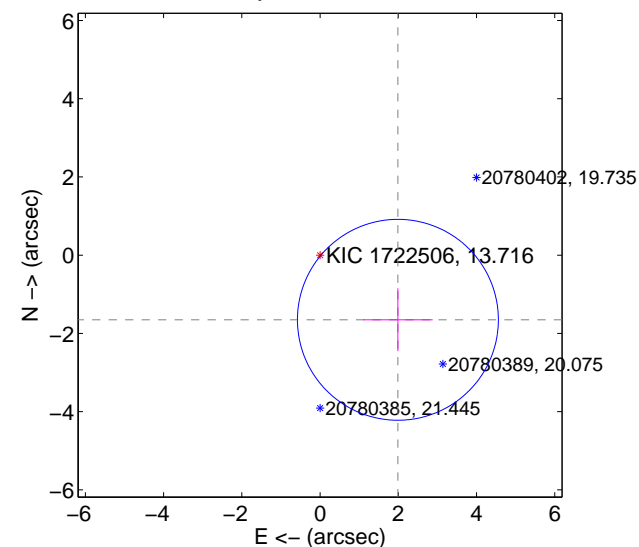
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

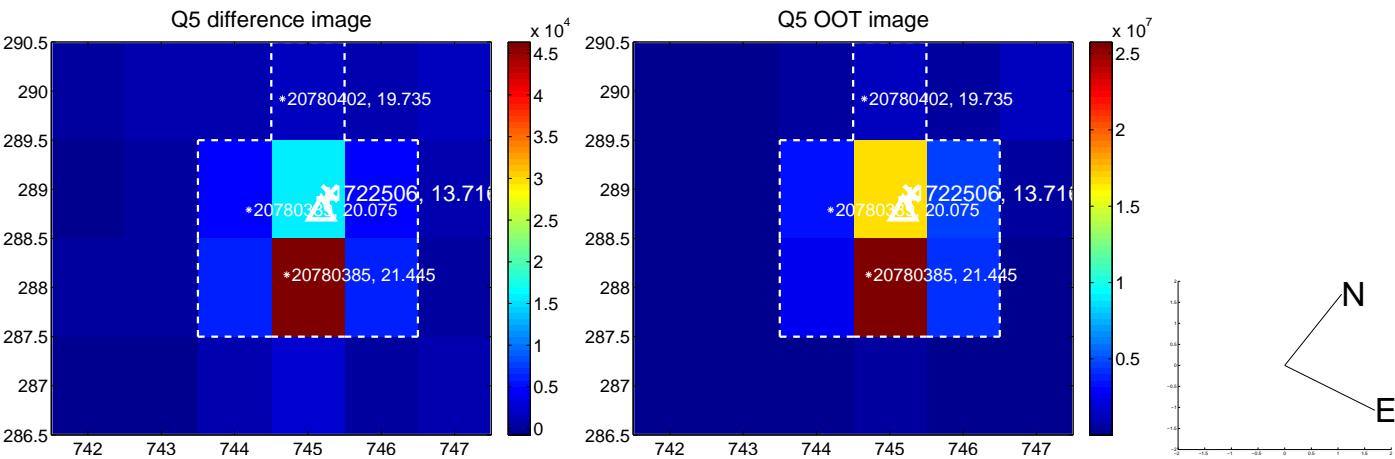


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

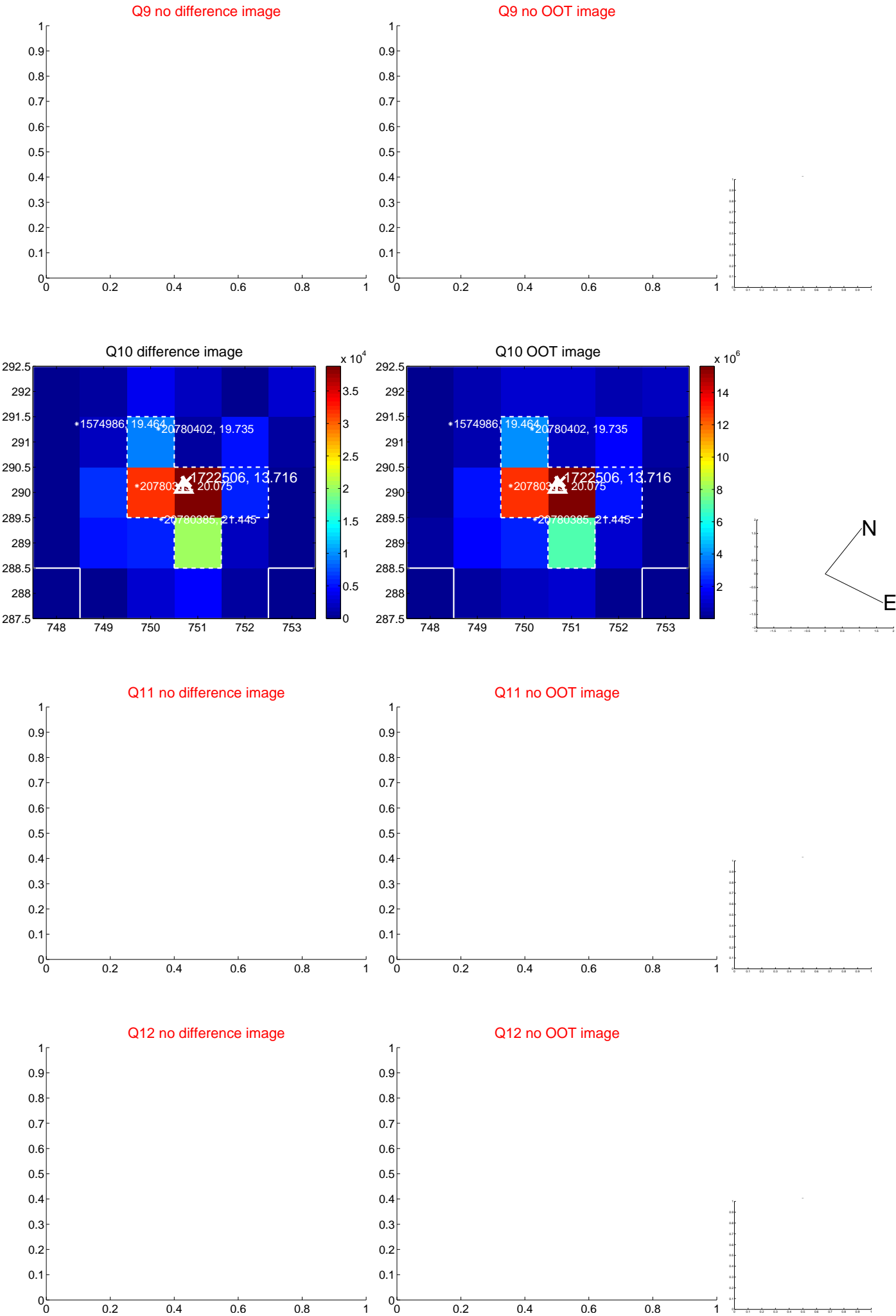
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



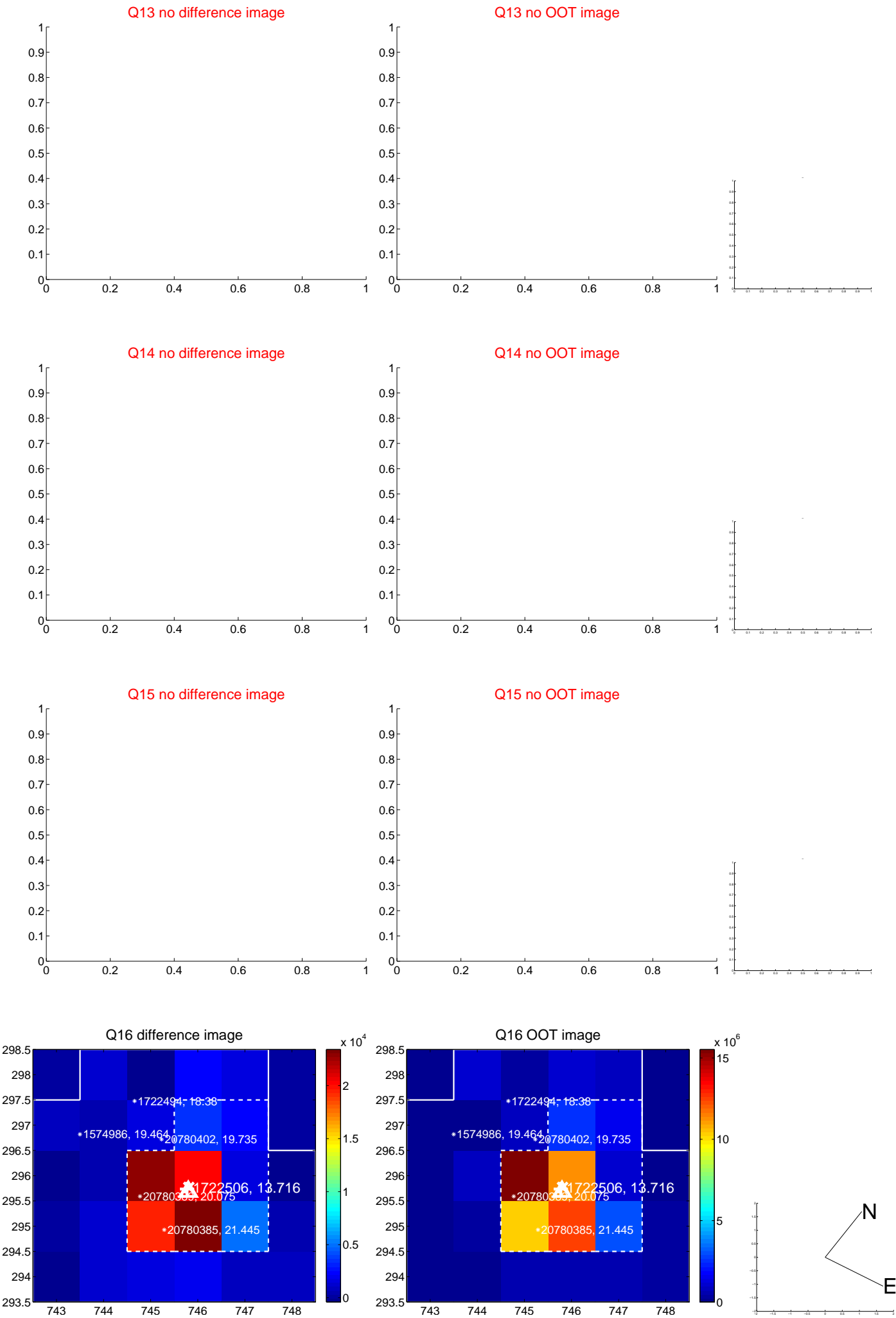
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



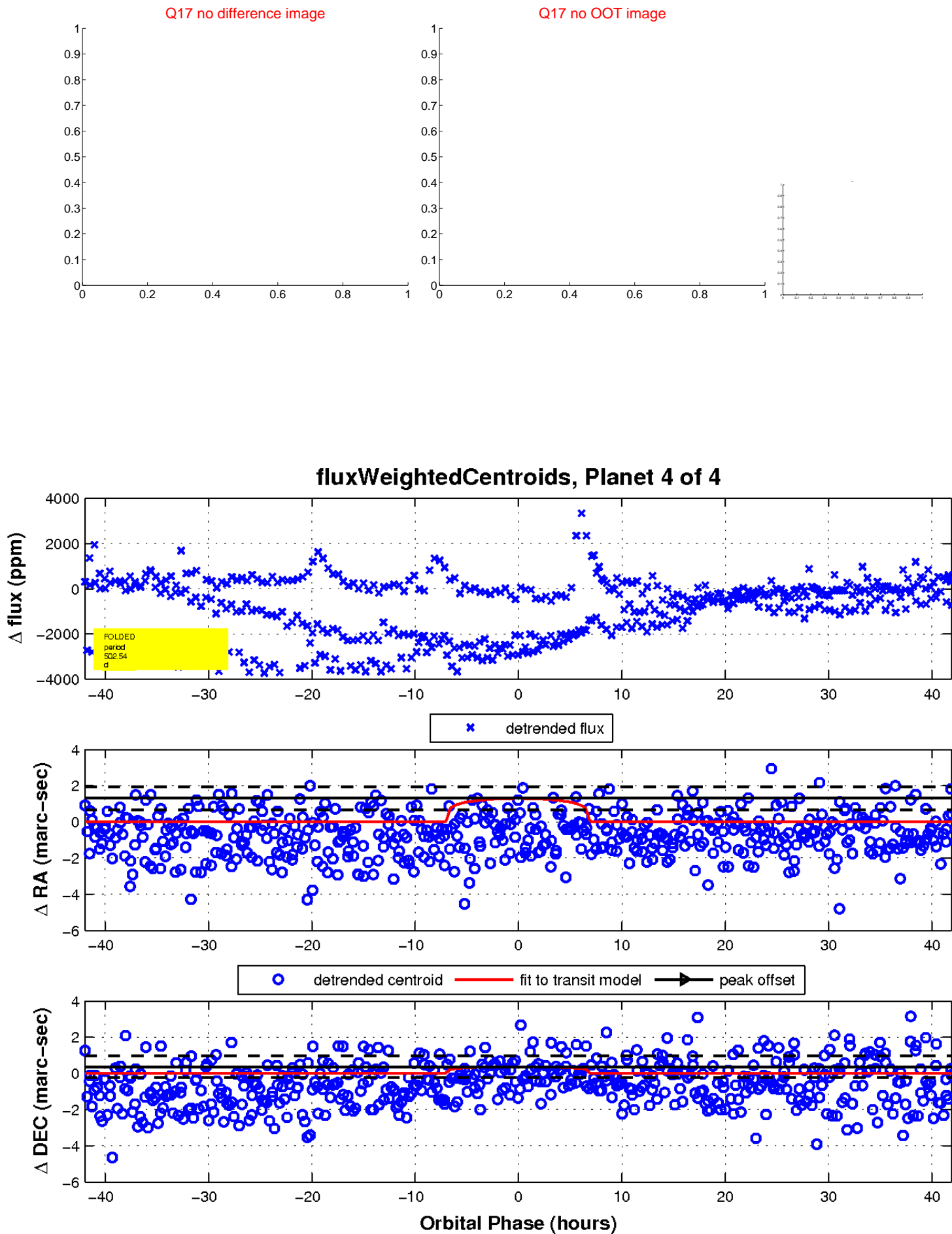
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

