

KIC 006587002

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})
006587002-01	OBS	0612.02	47.427800	169.127583	821.8	5.417	46.9	44.3	0.77	5132	2.51	6.47
006587002-02	OBS	0612.01	20.739871	131.739480	610.7	3.242	38.6	42.3	0.77	5132	2.15	19.50
006587002-03	OBS	0612.03	122.080383	155.025952	764.1	3.557	18.9	20.0	0.77	5132	2.59	1.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006587002-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006587002-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006587002-03	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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

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

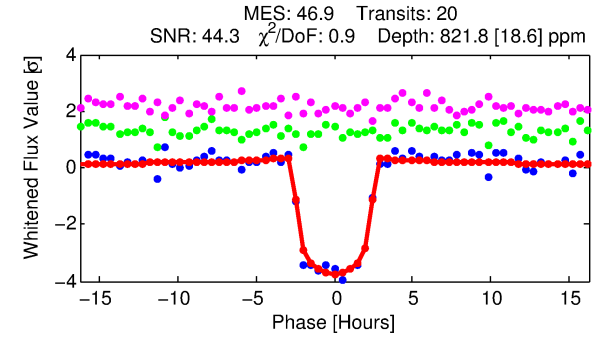
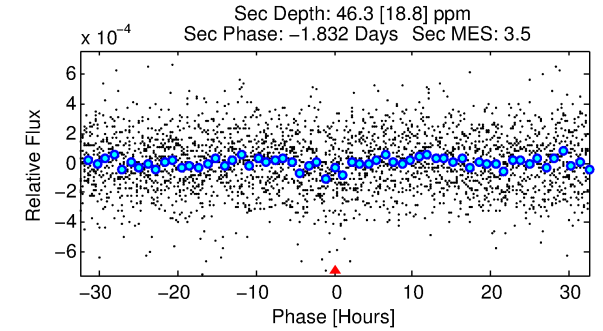
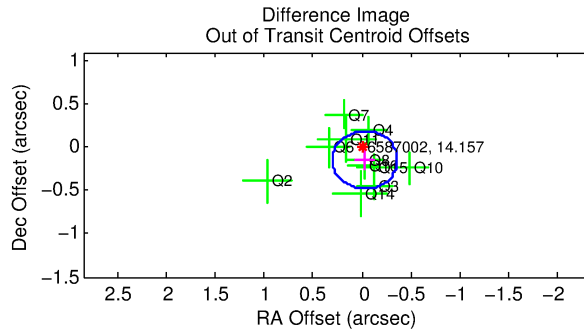
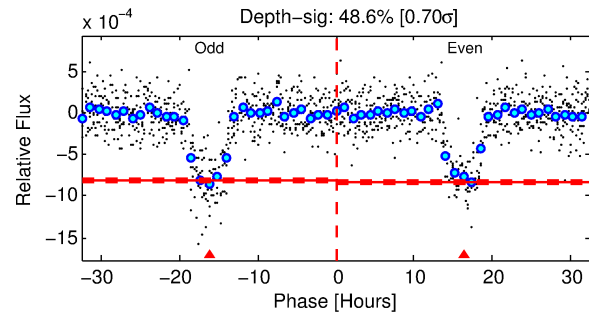
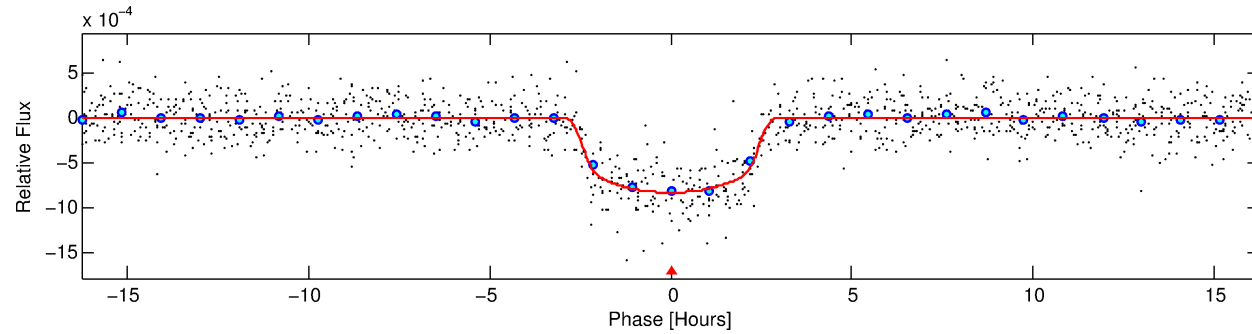
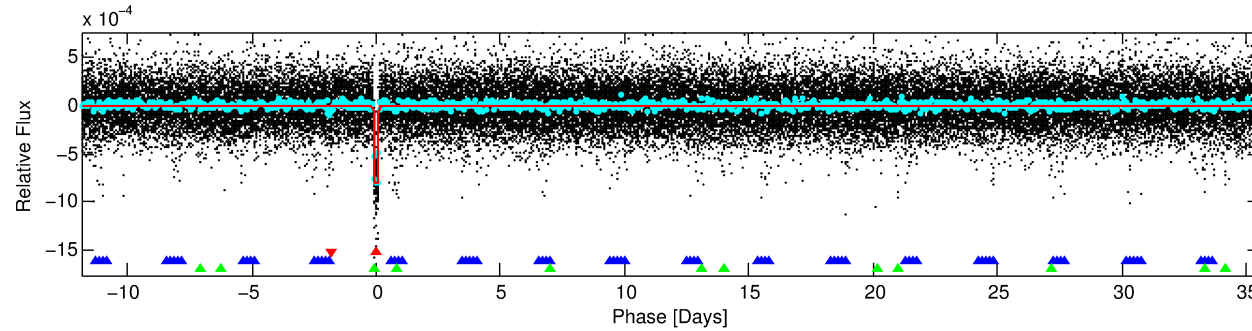
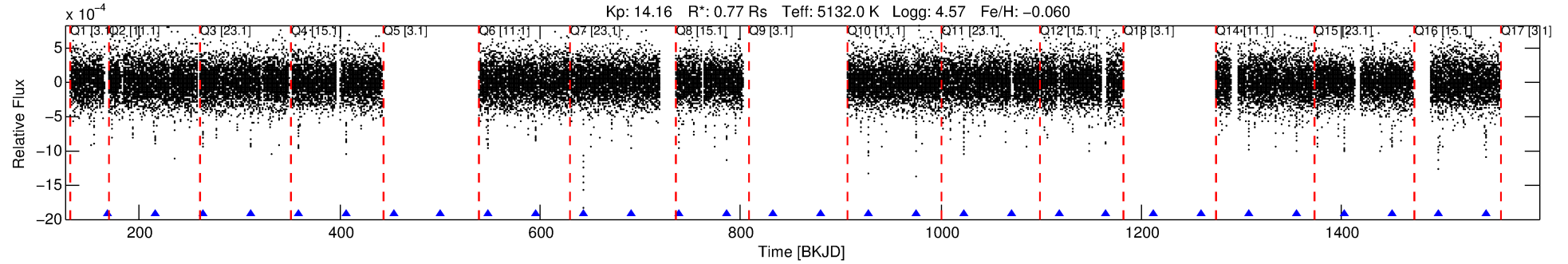
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006587002-01

No Significant Match Found

DV One-Page Summary

KIC: 6587002 Candidate: 1 of 3 Period: 47.428 d
KOI: K00612.02 Name: Kepler-196c Corr: 0.978



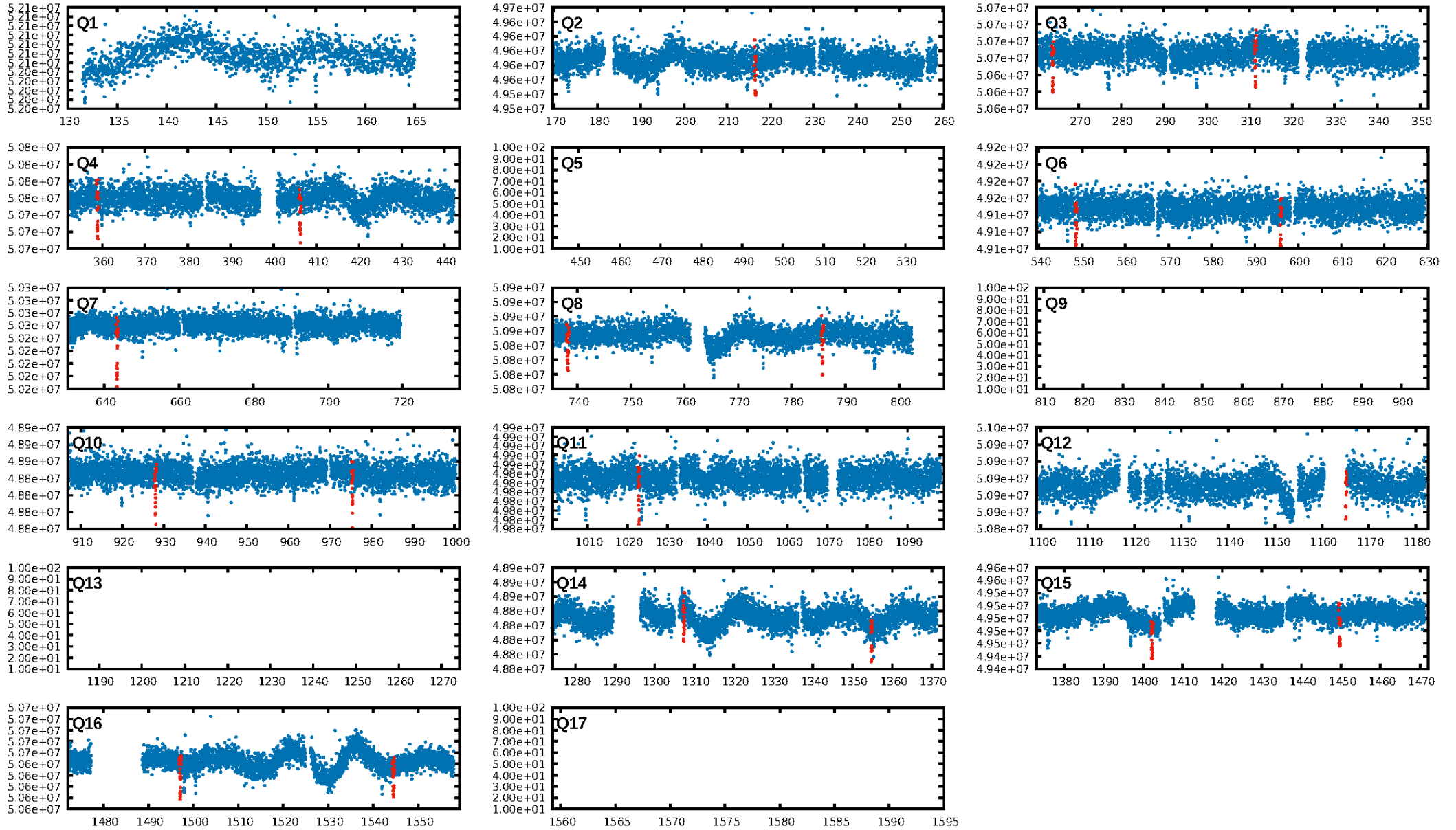
DV Fit Results:

Period = 47.42780 [0.00014] d
Epoch = 169.1276 [0.0023] BKJD
Rp/R* = 0.0298 [0.0028]
a/R* = 41.19 [14.56]
b = 0.83 [0.14]
Seff = 6.47 [0.79]
Teq = 407 [12] K
Rp = 2.51 [0.29] Re
a = 0.2386 [0.0147] AU
Ag = 230.71 [105.46] [2.18 σ]
Teffp = 2451 [279] K [7.33 σ]

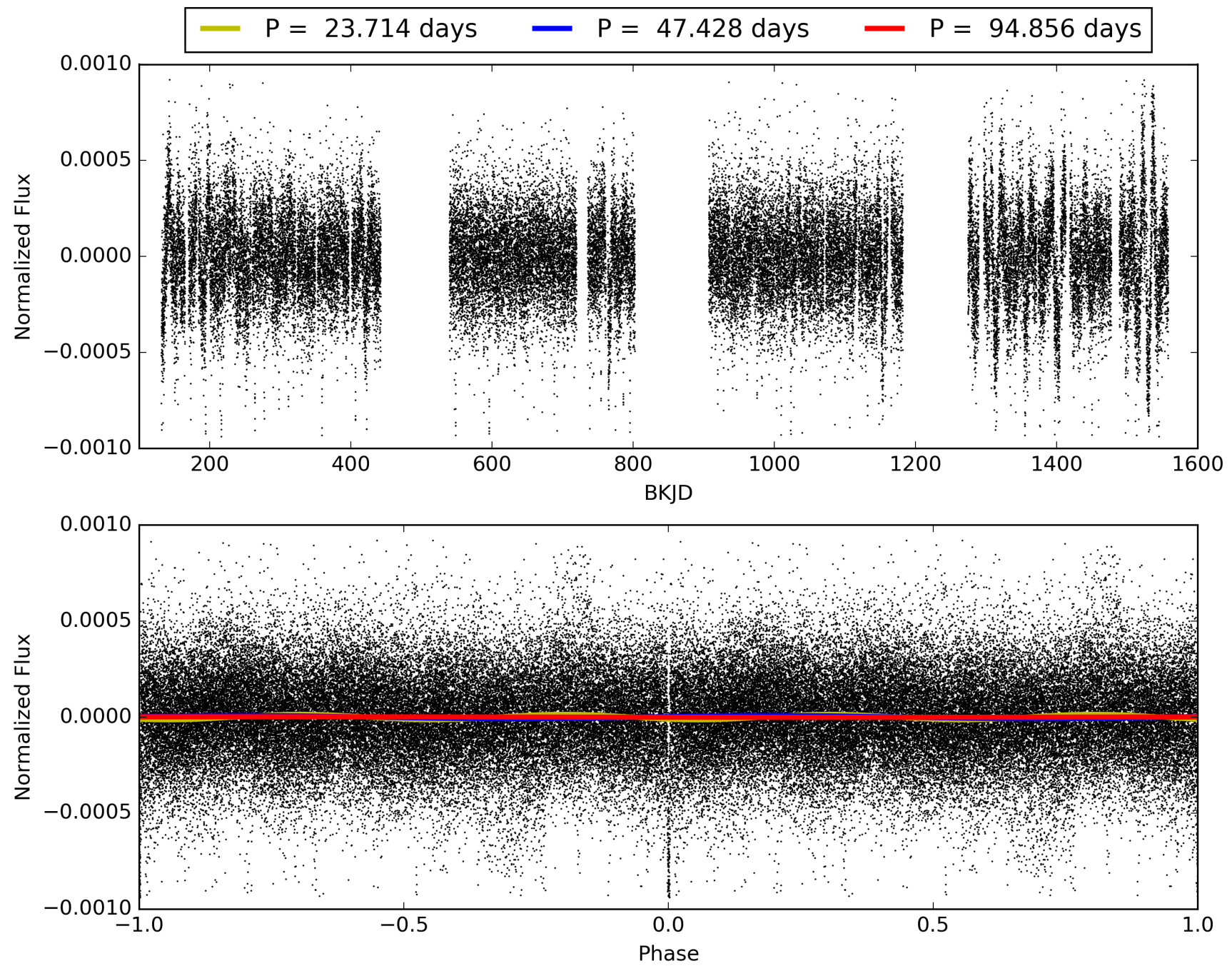
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [101.45 σ]
LongPeriod-sig: 100.0% [276.47 σ]
ModelChiSquare2-sig: 83.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [20/20]
GhostDiagnostic-chr: 15.43
Centroid-sig: 1.8%
Centroid-so: 0.399 arcsec [1.43 σ]
OotOffset-rm: 0.149 arcsec [1.34 σ]
OotOffset-st: 4/4/3/0 [11]
KicOffset-rm: 0.365 arcsec [3.42 σ]
KicOffset-st: 4/4/3/0 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 0.91 [10/11]

TCE 006587002-01, PDC Light Curves

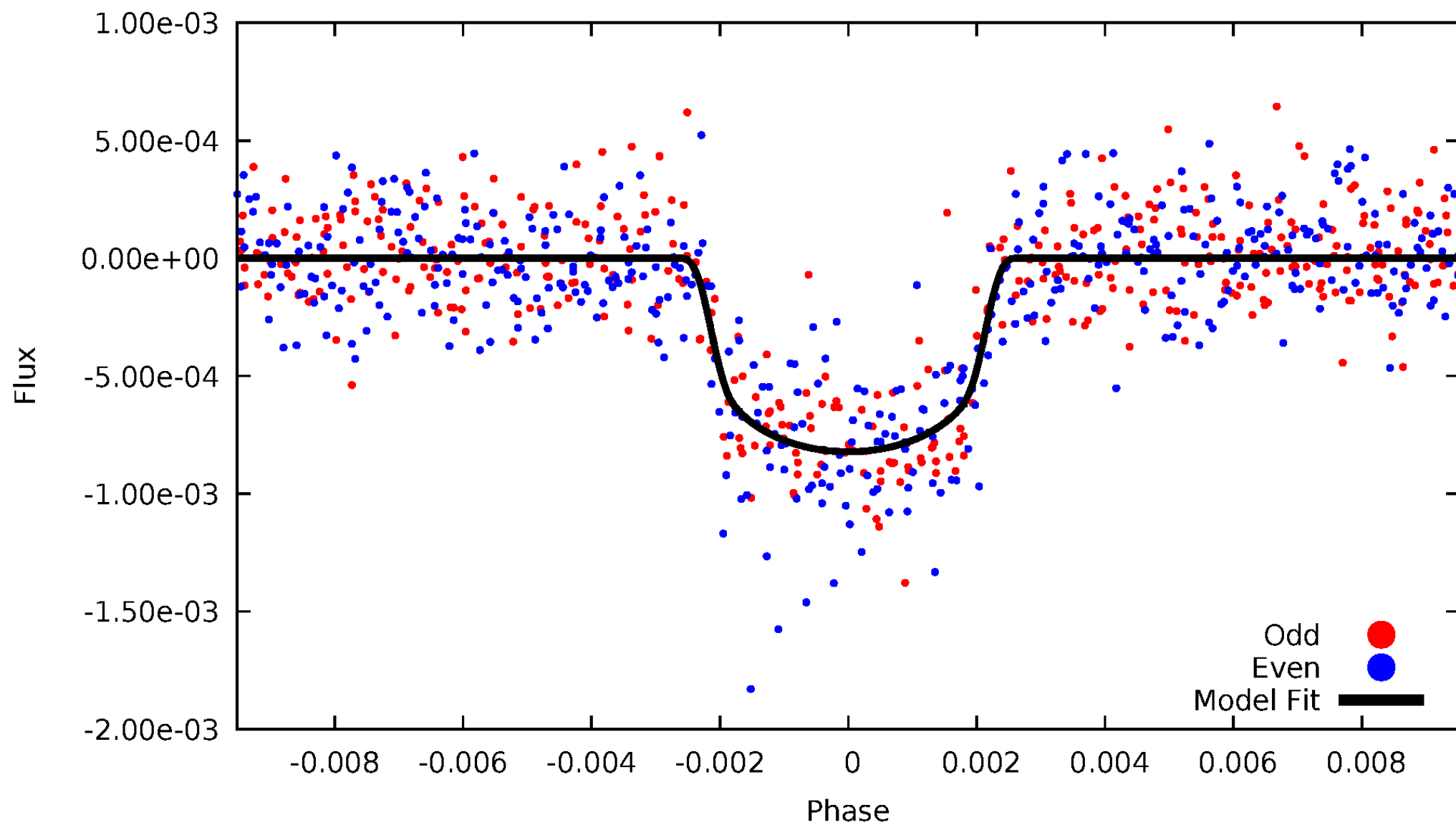


TCE 006587002-01



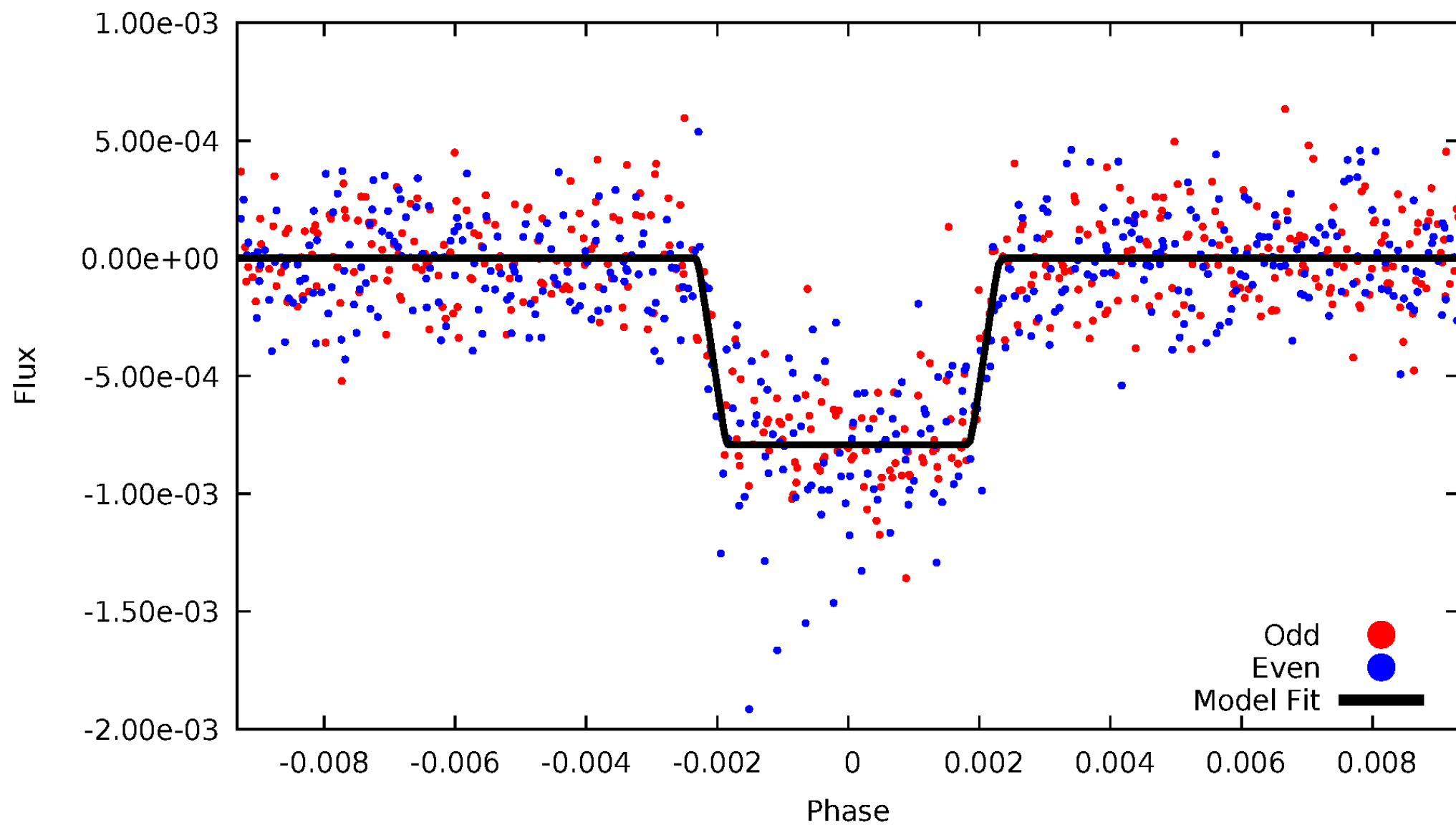
DV Odd/Even

TCE 006587002-01



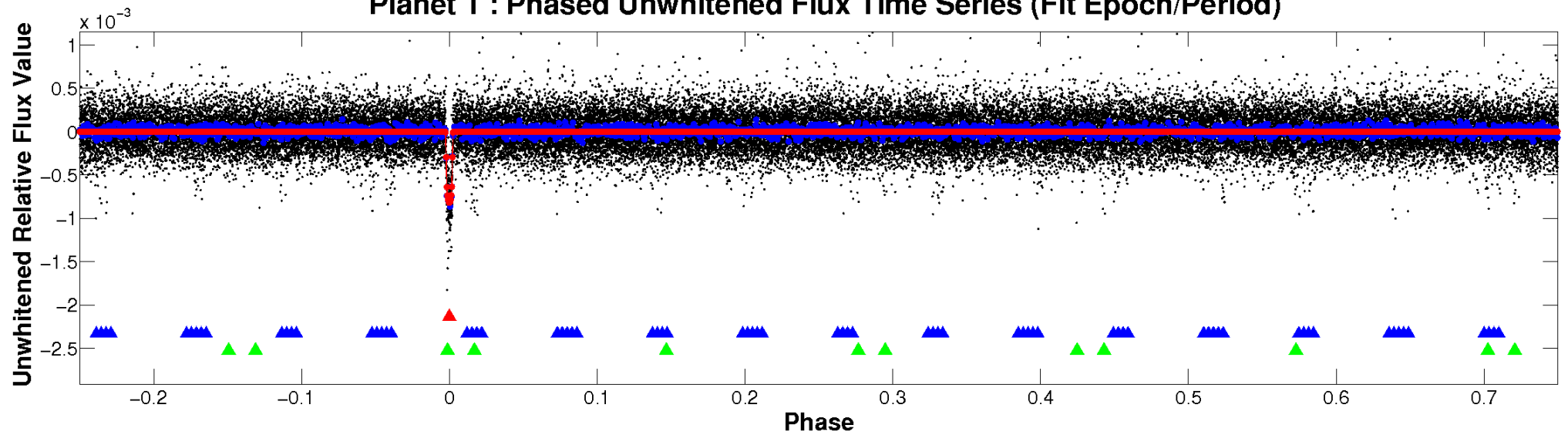
ALT Odd/Even

TCE 006587002-01

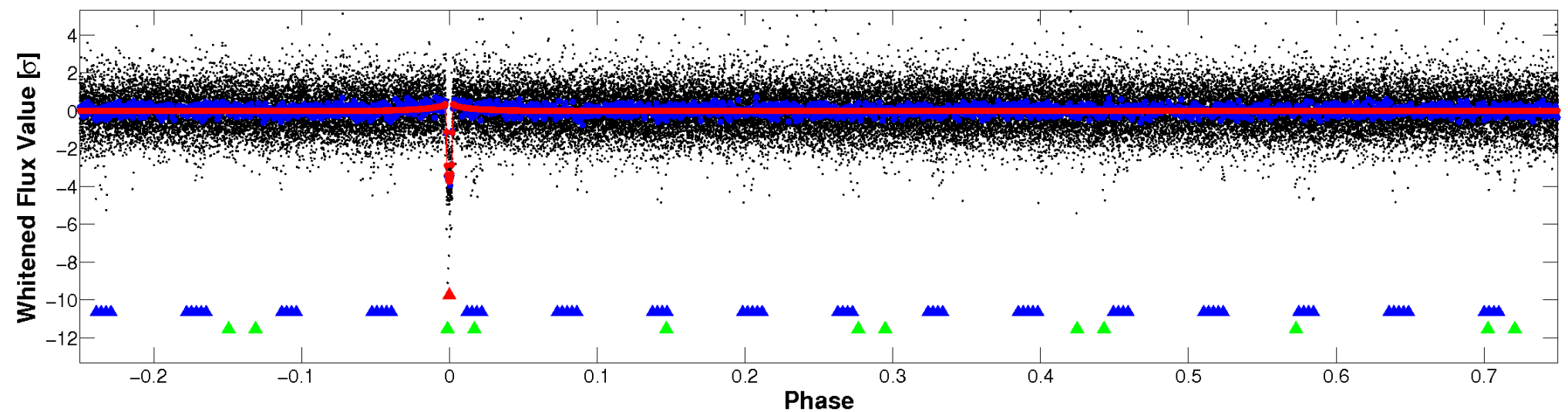


Non-Whitened Vs. Whitened Light Curve

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

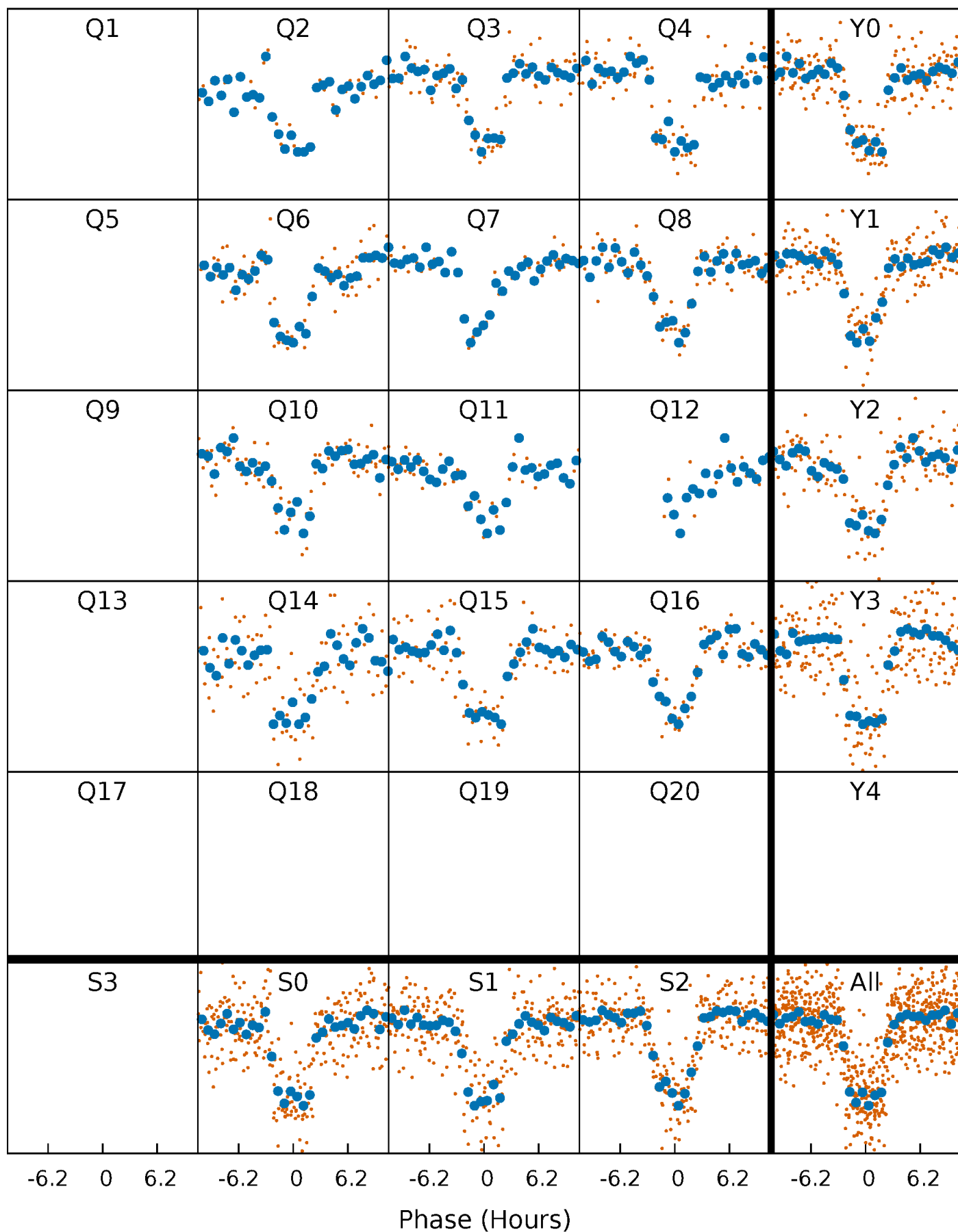


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



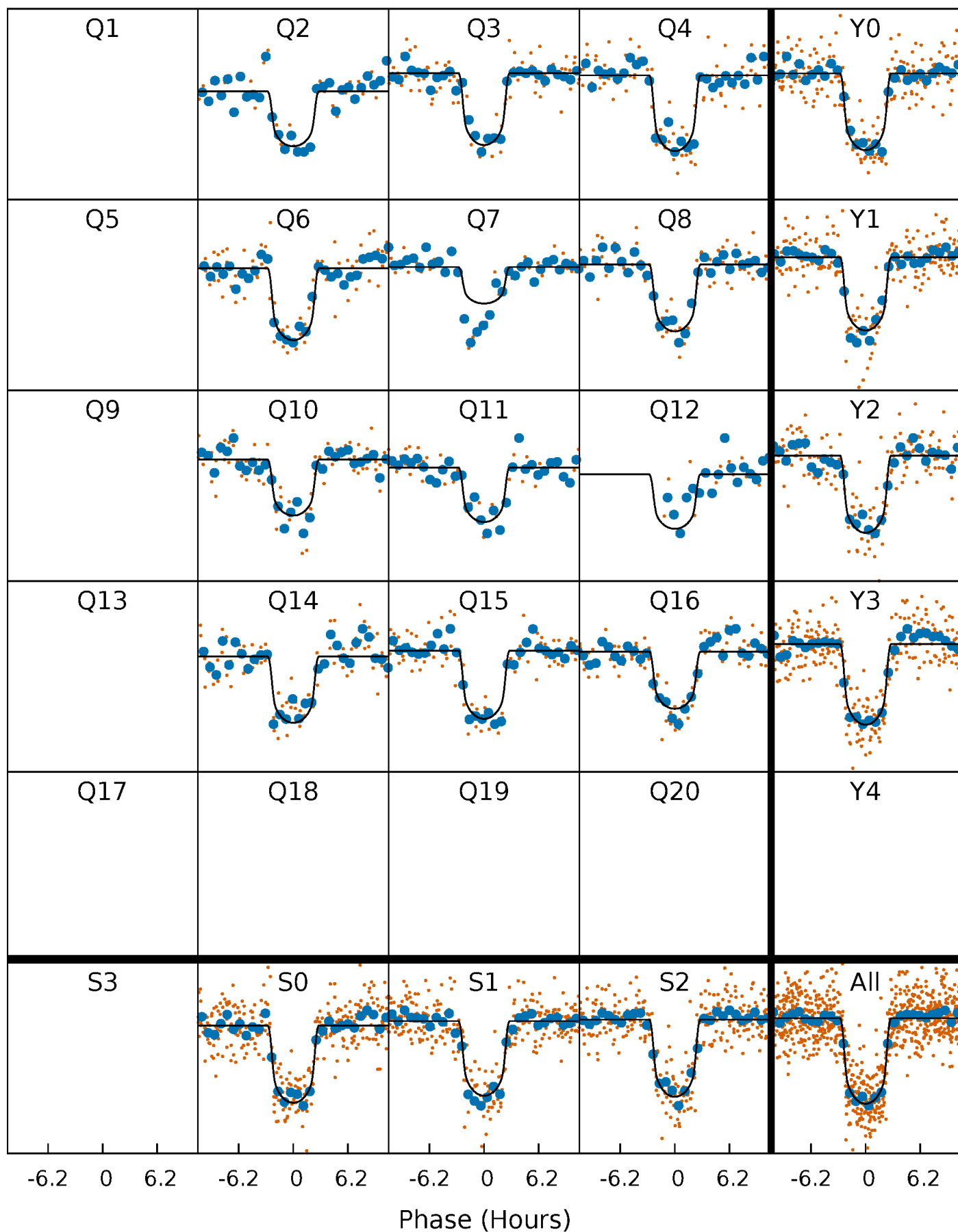
PDC Quarter-Phased Transit Curves

TCE 006587002-01 P= 47.427800 Days $T_0=169.127583$ (BKJD)



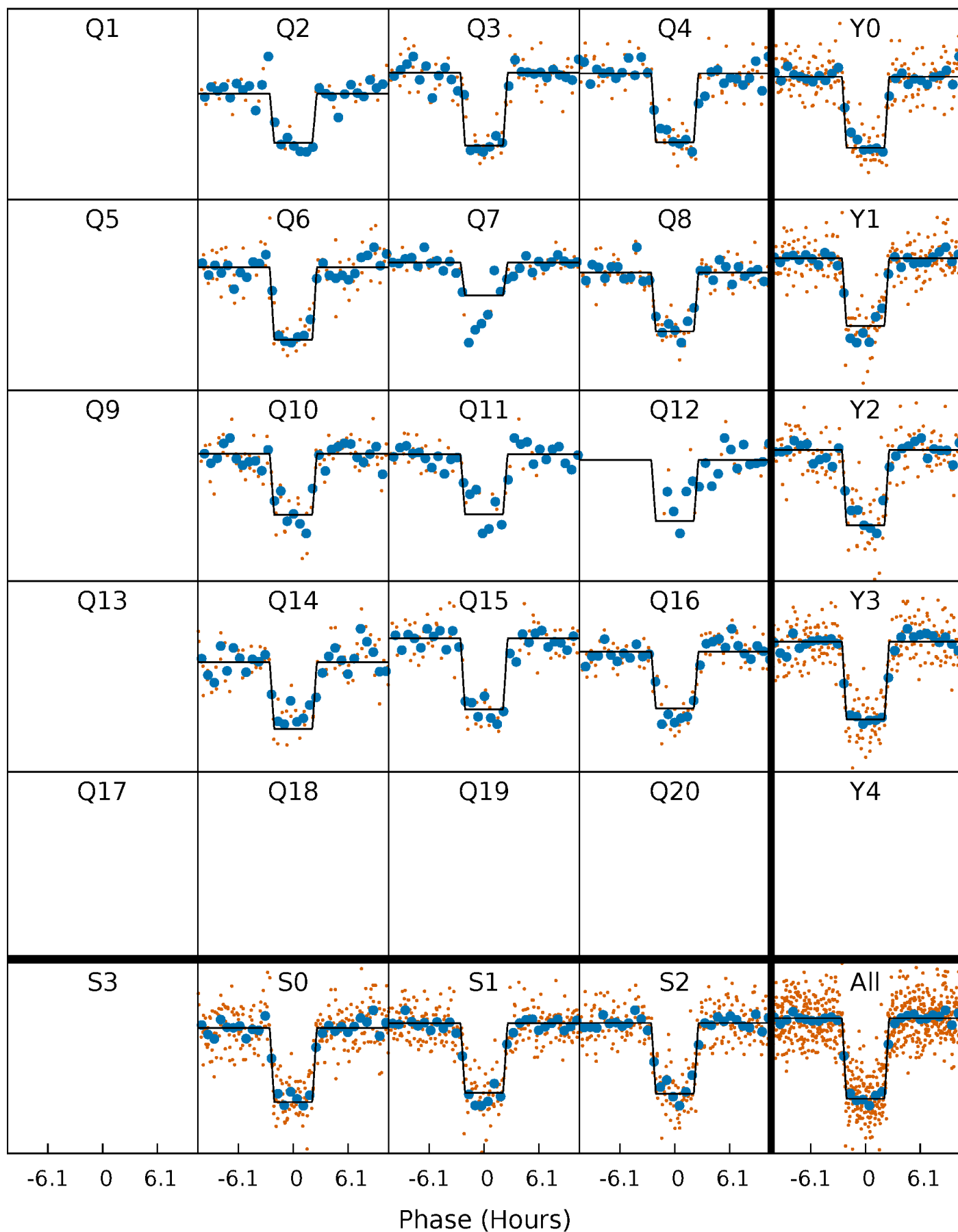
DV Quarter-Phased Transit Curves

TCE 006587002-01 P= 47.427800 Days $T_0=169.127583$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

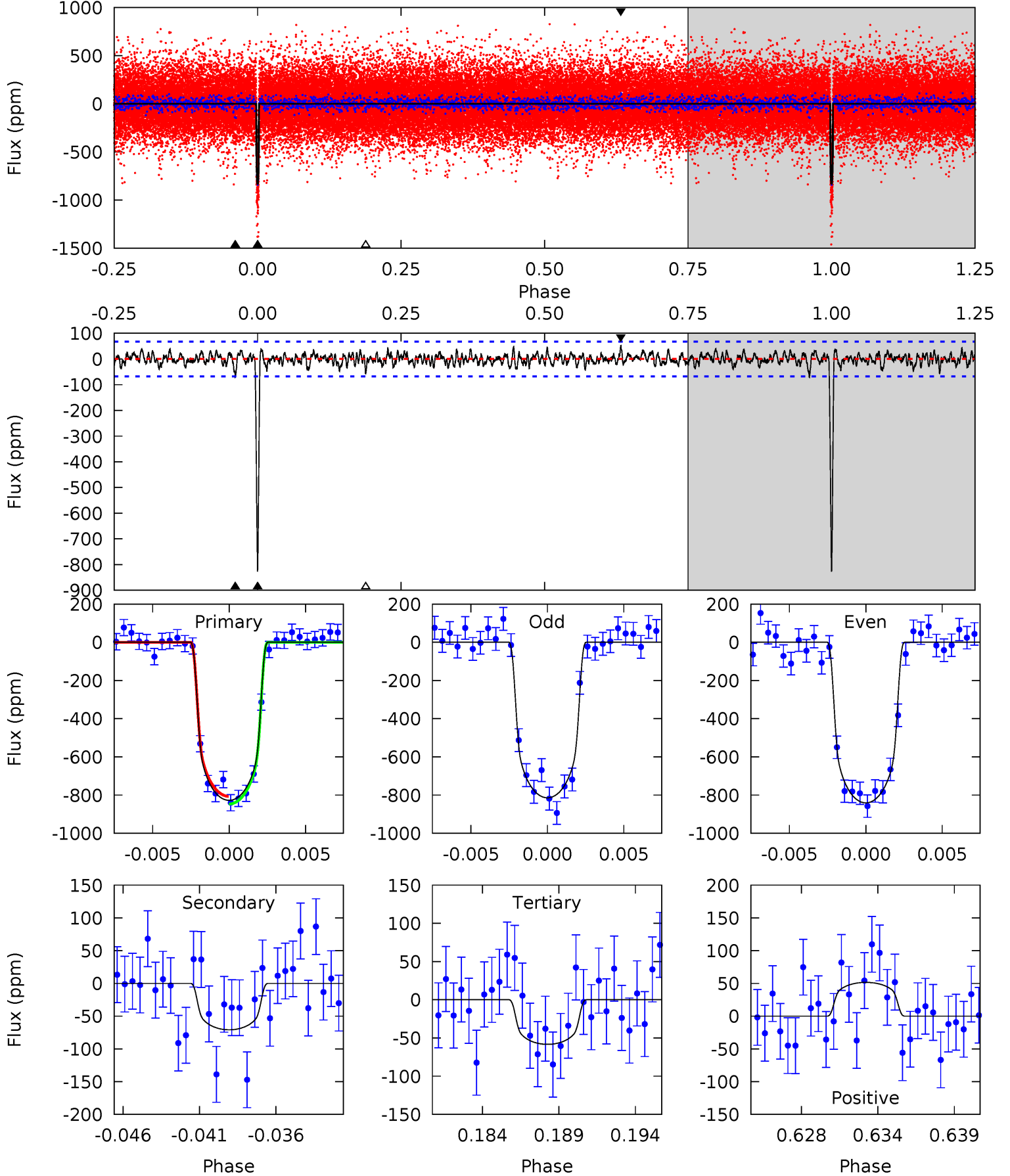
TCE 006587002-01 P= 47.427823 Days $T_0=169.127260$ (BKJD)



DV Model-Shift Uniqueness Test

006587002-01, $P = 47.427800$ Days, $E = 121.699783$ Days

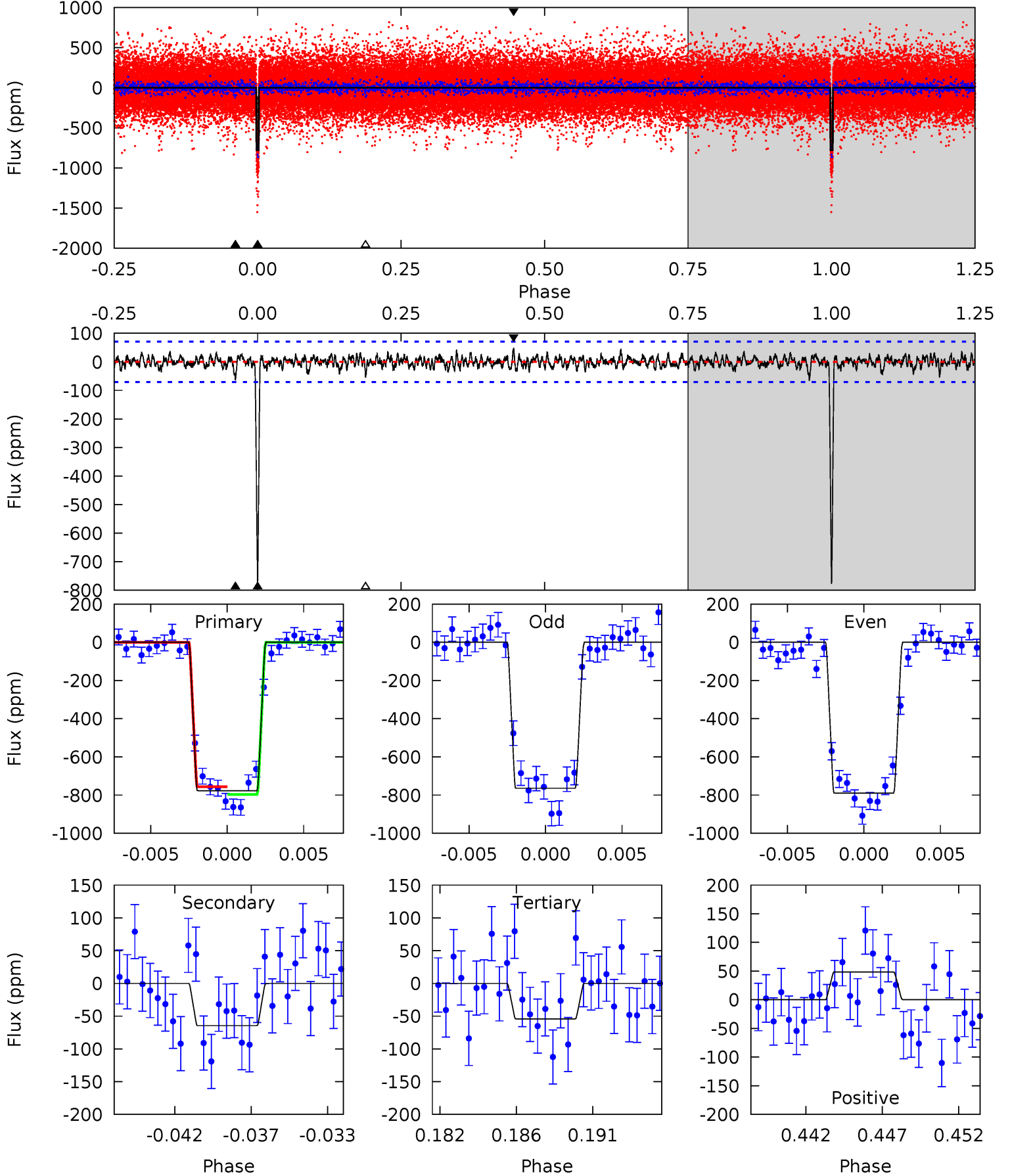
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.0	5.40	4.44	3.92	5.15	2.80	1.25	58.6	59.1	0.95	1.47	1.02	1.01	0.06	1.52



Alt Model-Shift Uniqueness Test

006587002-01, $P = 47.427823$ Days, $E = 121.699437$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.8	4.72	3.97	3.54	5.17	2.83	1.03	52.8	53.3	0.75	1.18	0.93	1.02	0.06	1.45



Stellar Parameters For KIC 006587002

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5132^{+102}_{-102}	$4.571^{+0.032}_{-0.052}$	$-0.060^{+0.150}_{-0.150}$	$0.770^{+0.054}_{-0.040}$	$0.805^{+0.045}_{-0.045}$	$2.482^{+0.314}_{-0.406}$
	+2%/-2%	+1%/-1%	+250%/-250%	+7%/-5%	+6%/-6%	+13%/-16%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 006587002-01 / KOI 0612.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-71 ± 13	$2.54^{+0.24}_{-0.26}$	571^{+15}_{-14}	3251^{+142}_{-129}	346^{+95}_{-84}
Alt.	-65 ± 14	$2.38^{+0.26}_{-0.25}$	571^{+15}_{-15}	3272^{+156}_{-149}	355^{+120}_{-100}

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

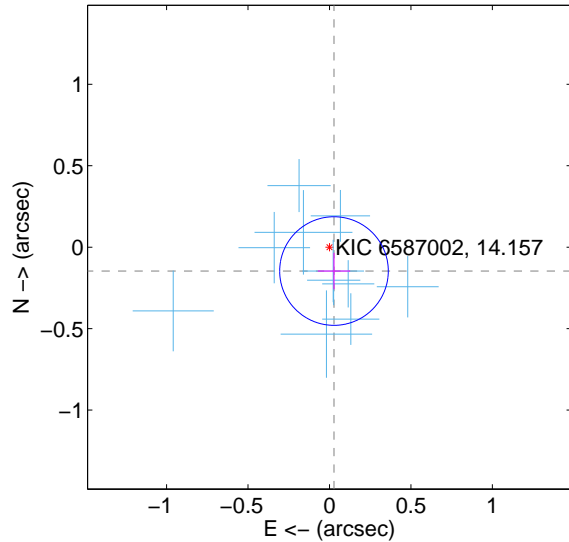
Supplemental centroid analysis for 006587002-01. Kepler magnitude: 14.16. Transit SNR 44.35

There are 11 quarters with good PRF difference image offsets

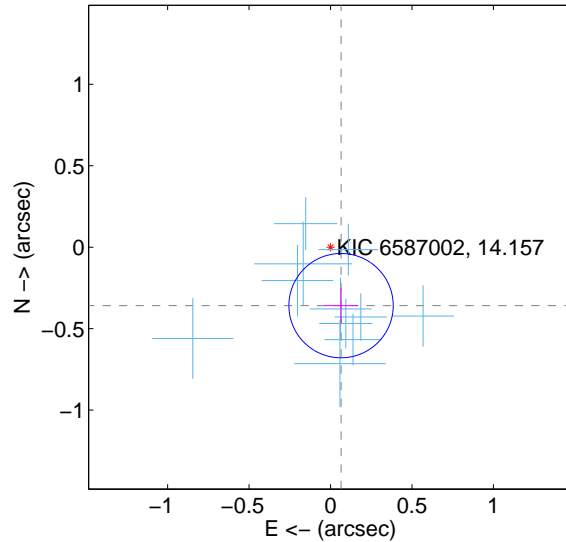
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.149 ± 0.111	1.34	-0.028 ± 0.099	-0.147 ± 0.111
PRF-fit source offset from KIC position	0.365 ± 0.107	3.42	-0.065 ± 0.104	-0.359 ± 0.107
photometric centroid source offset	0.40 ± 0.28	1.43	0.40 ± 0.28	0.00 ± 0.30

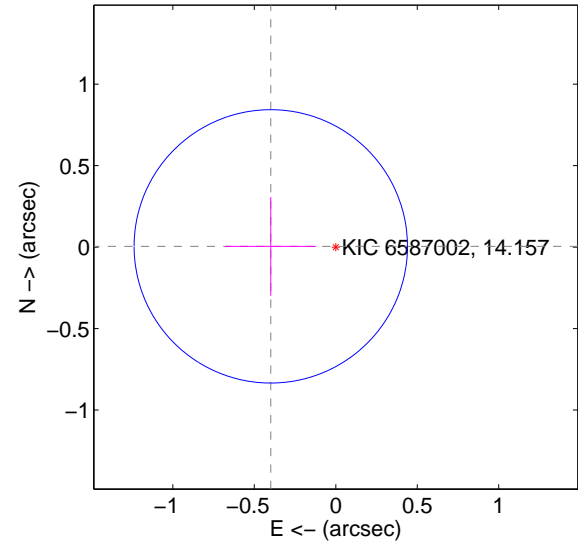
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

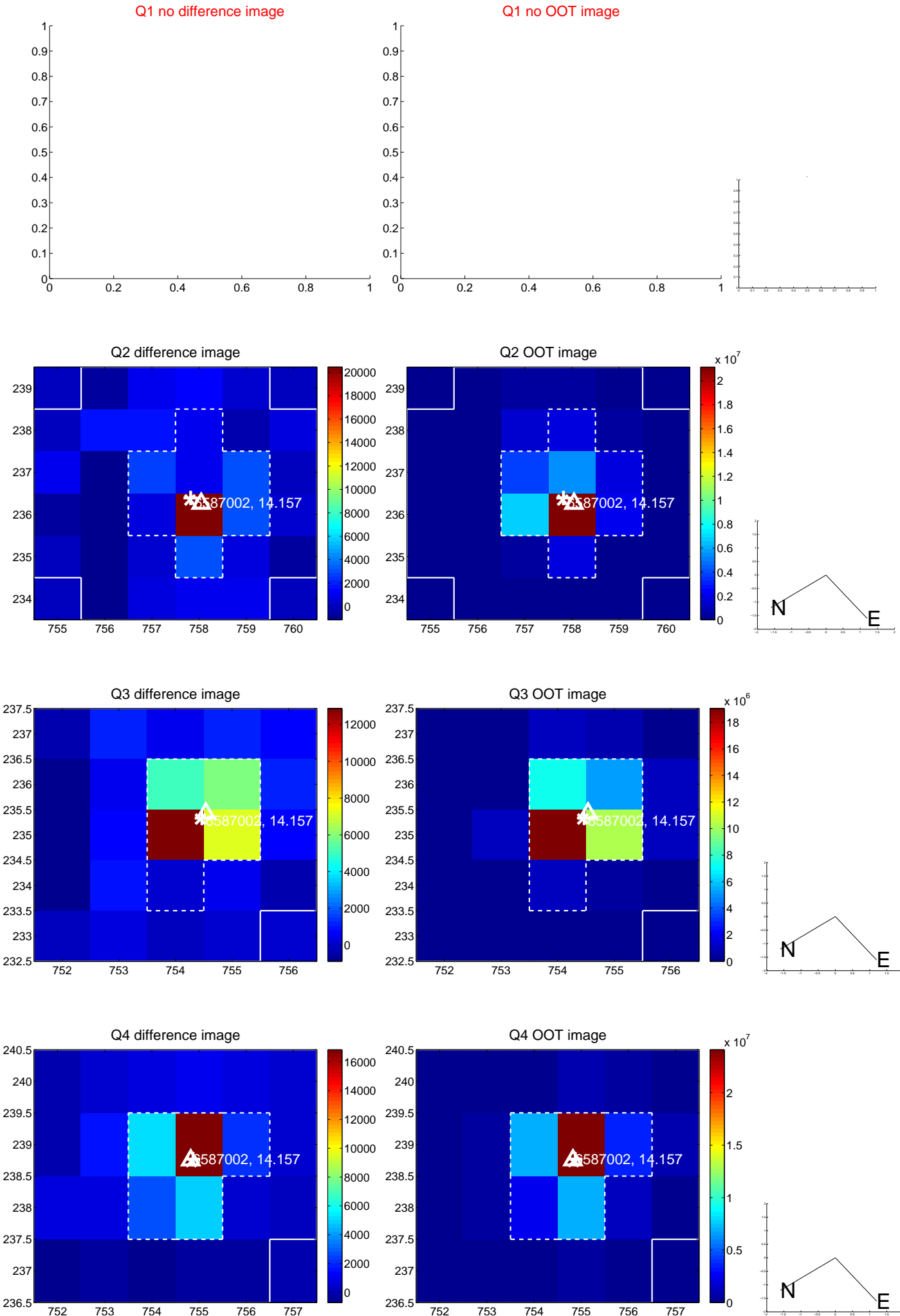


offset from photometric centroids

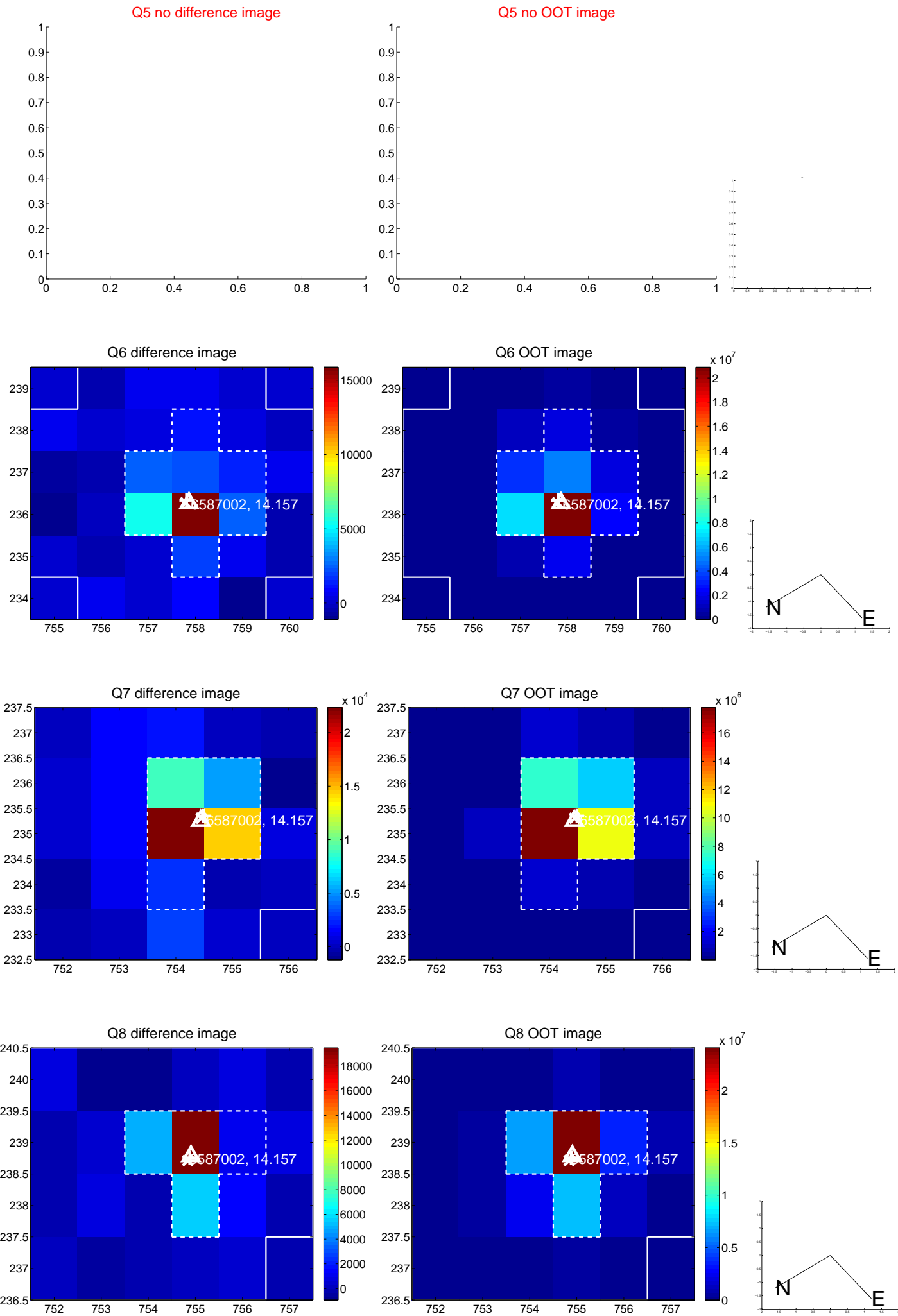


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

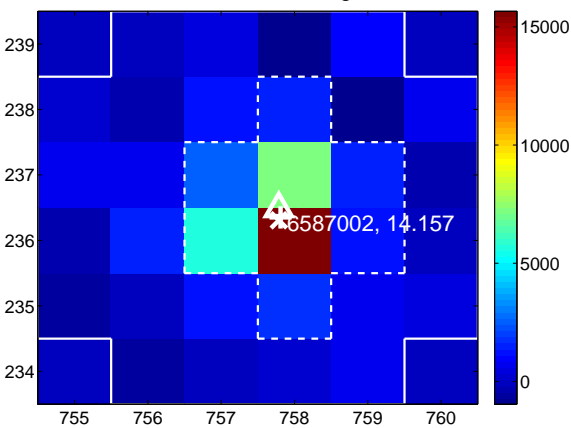
Q9 no difference image



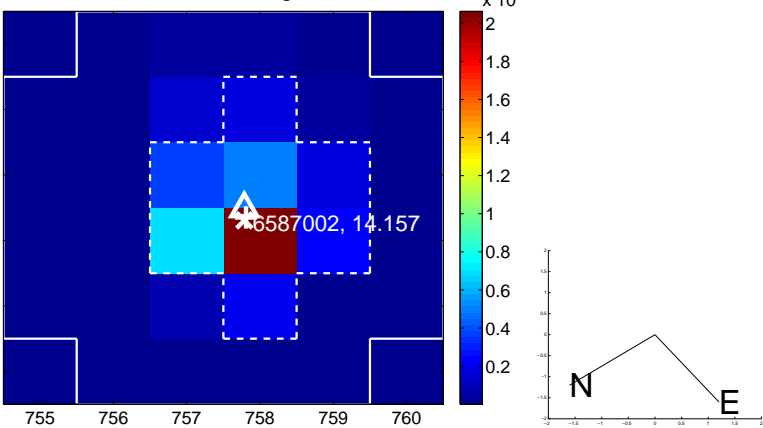
Q9 no OOT image



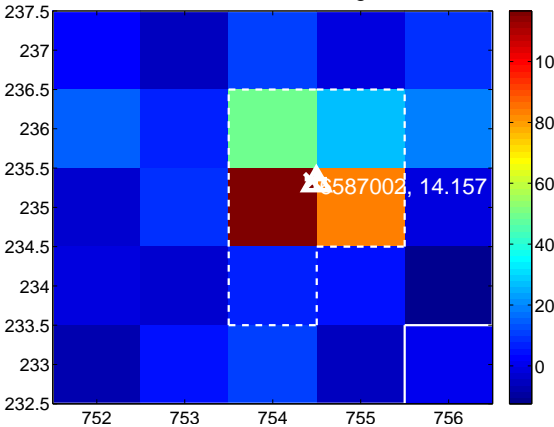
Q10 difference image



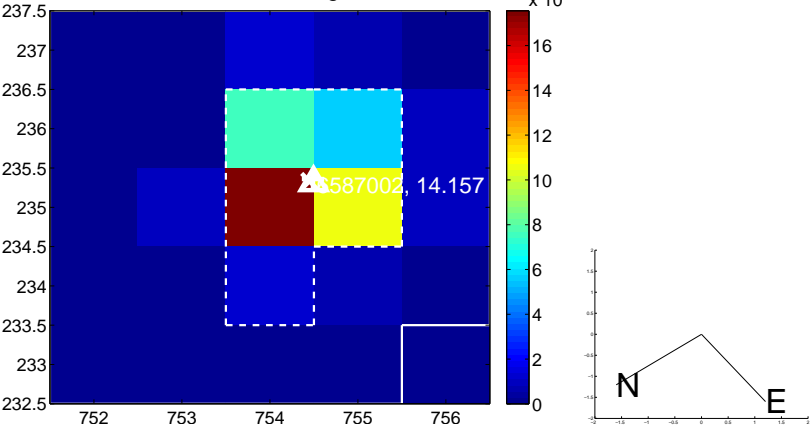
Q10 OOT image



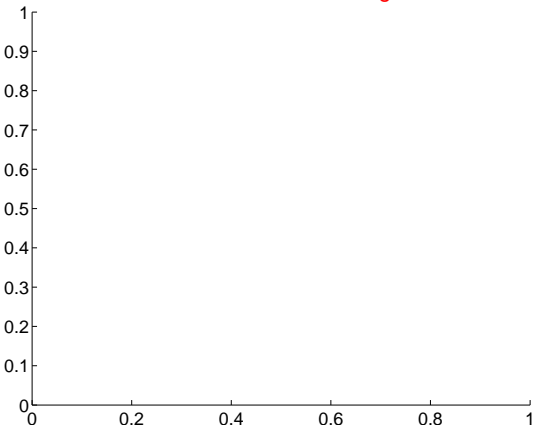
Q11 difference image



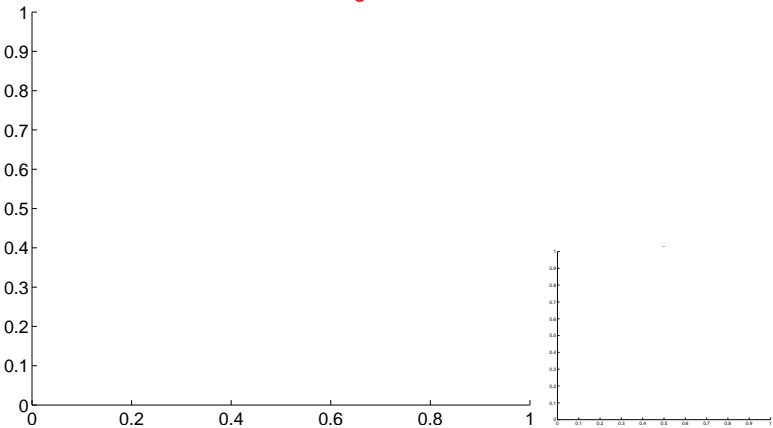
Q11 OOT image



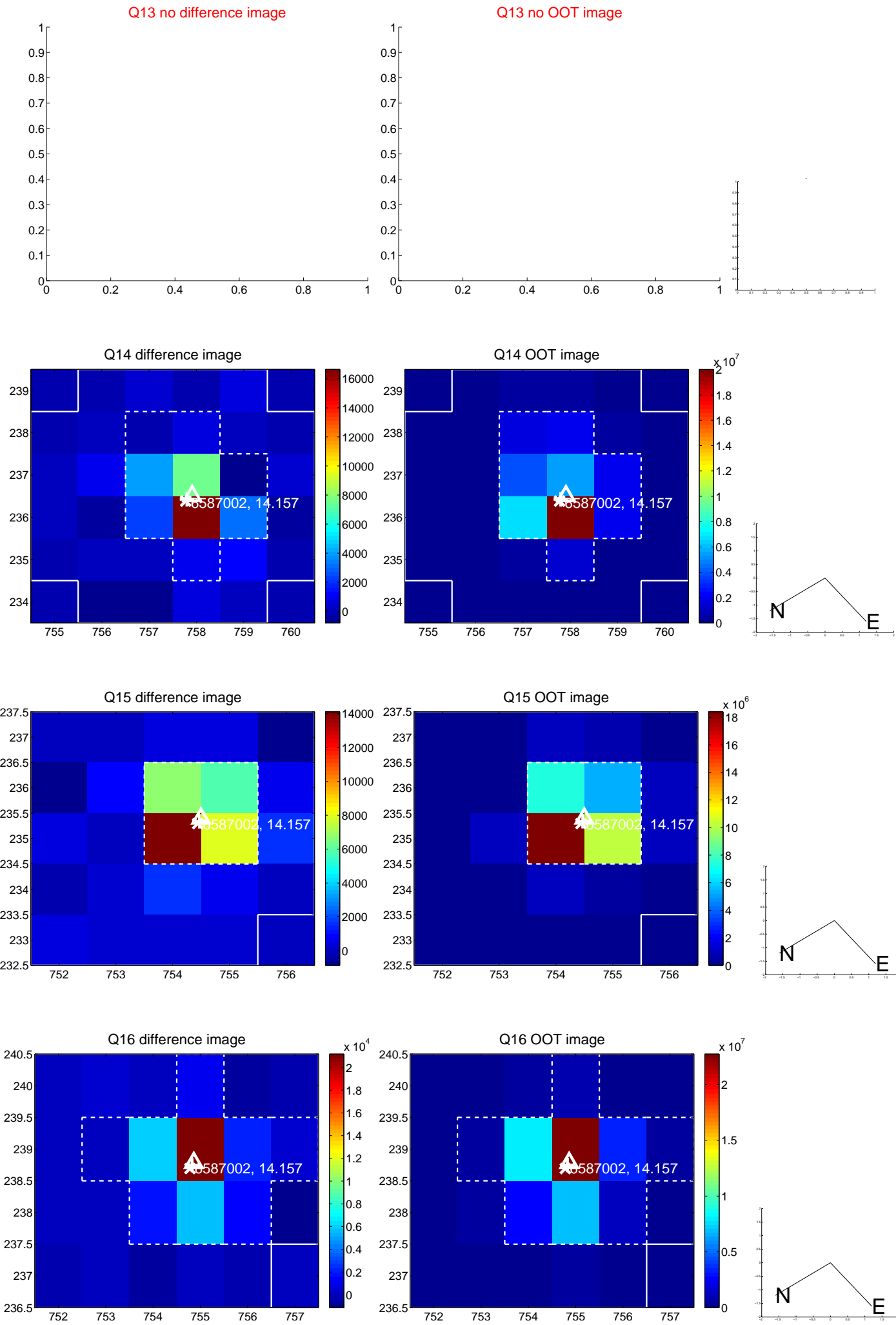
Q12 no difference image



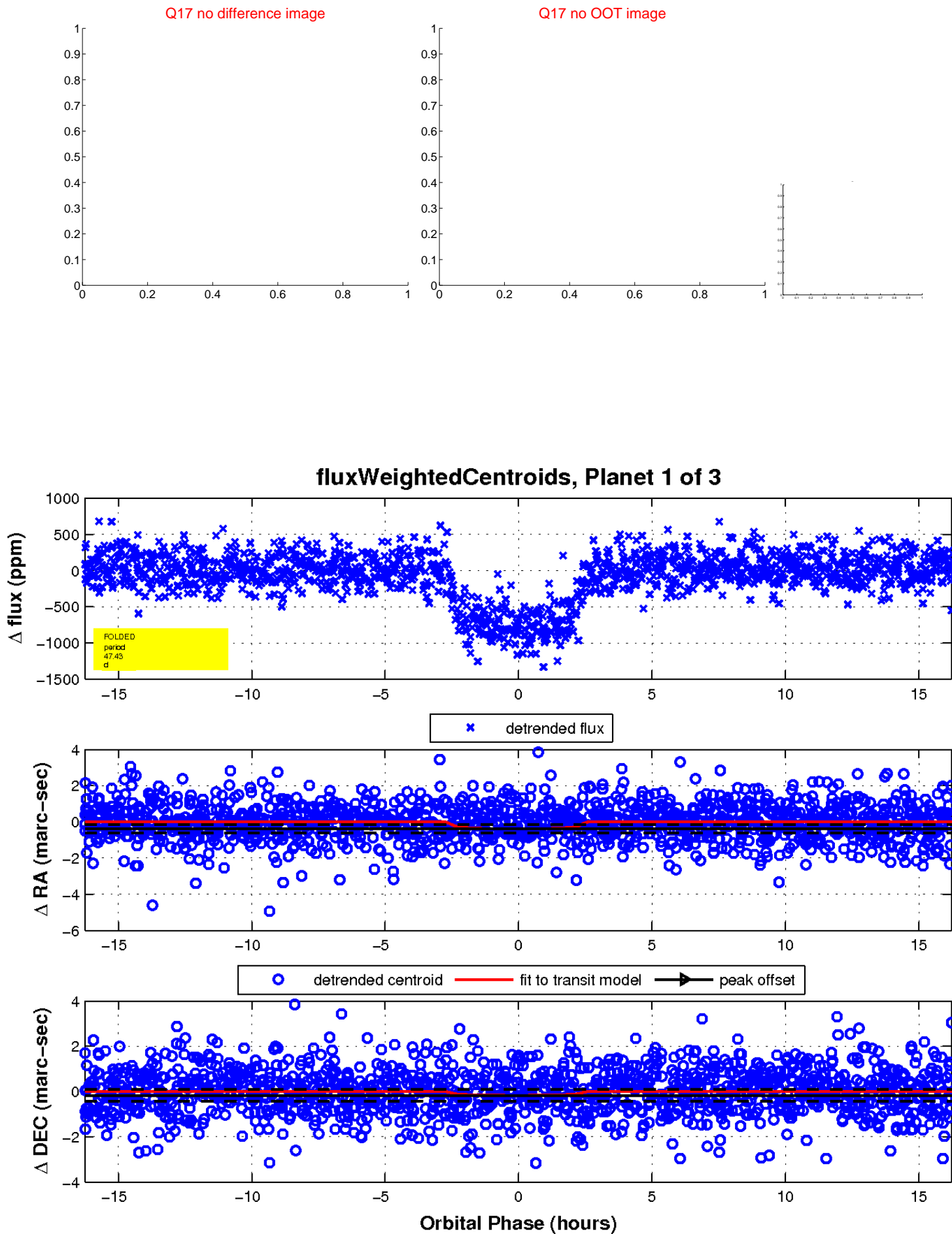
Q12 no OOT image



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

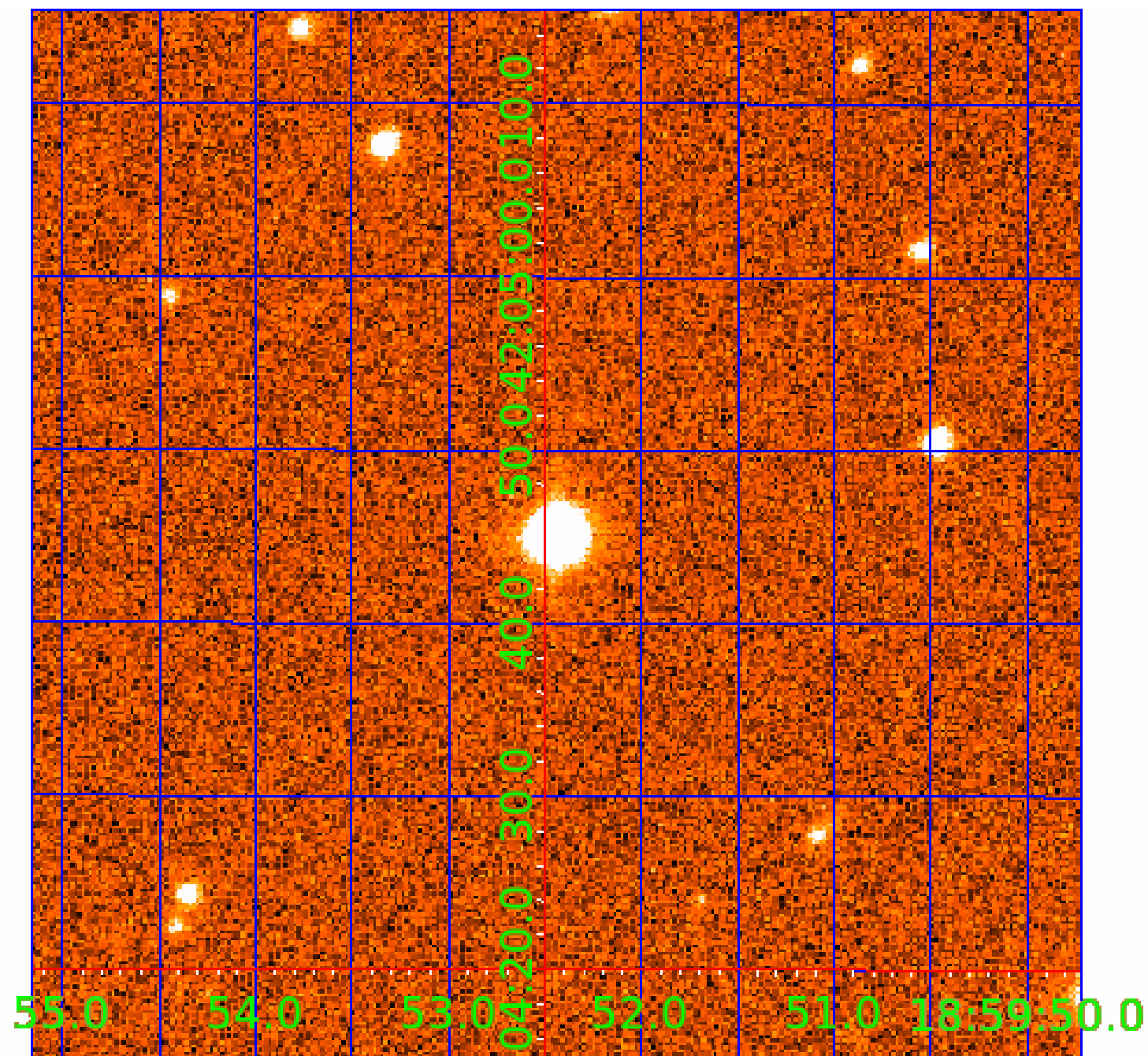


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006587002

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})
006587002-01	OBS	0612.02	47.427800	169.127583	821.8	5.417	46.9	44.3	0.77	5132	2.51	6.47
006587002-02	OBS	0612.01	20.739871	131.739480	610.7	3.242	38.6	42.3	0.77	5132	2.15	19.50
006587002-03	OBS	0612.03	122.080383	155.025952	764.1	3.557	18.9	20.0	0.77	5132	2.59	1.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006587002-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006587002-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006587002-03	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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.

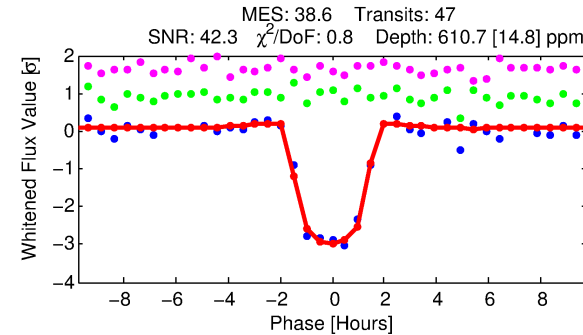
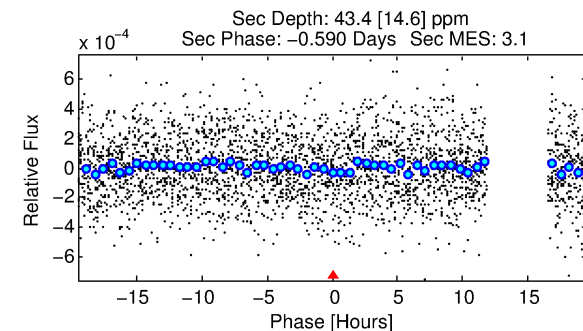
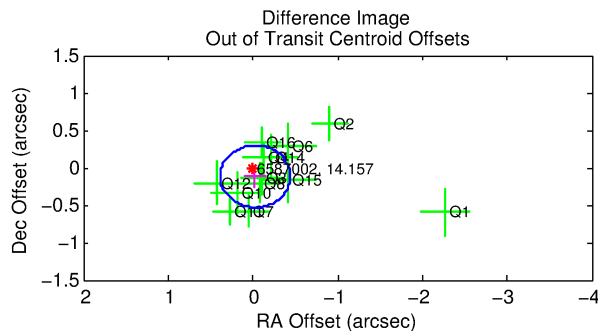
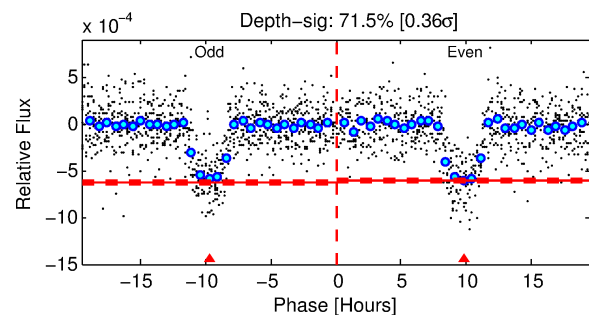
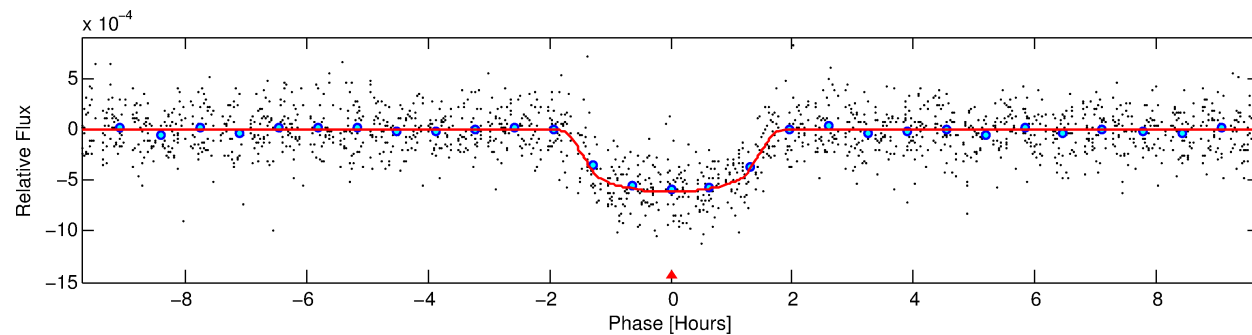
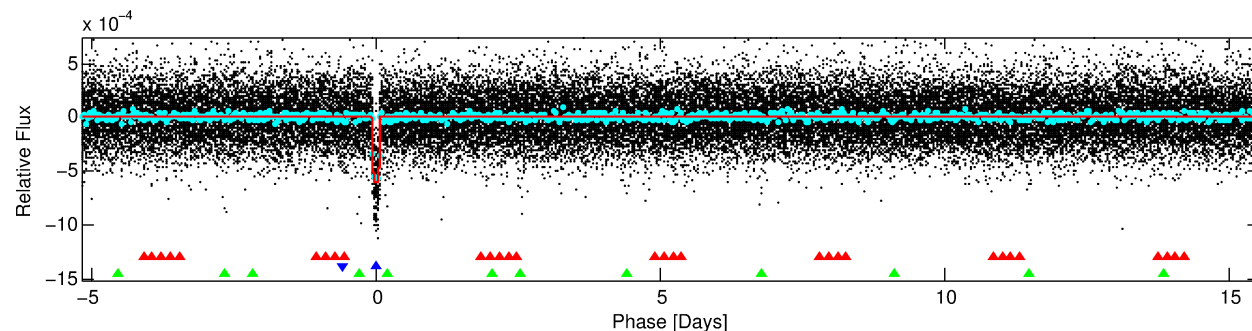
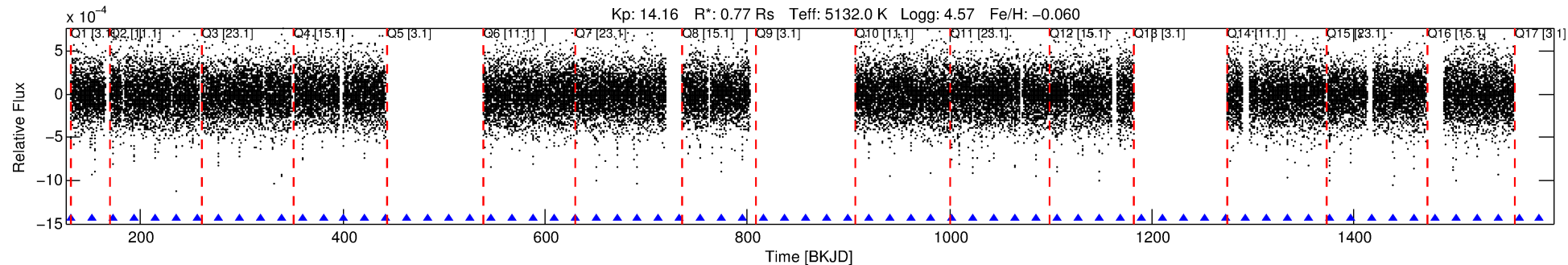
Ephemeris Match Information For 006587002-02

No Significant Match Found

DV One-Page Summary

KIC: 6587002 Candidate: 2 of 3 Period: 20.740 d
KOI: K00612.01 Name: Kepler-196b Corr: 0.970

Kp: 14.16 R*: 0.77 Rs Teff: 5132.0 K Logg: 4.57 Fe/H: -0.060



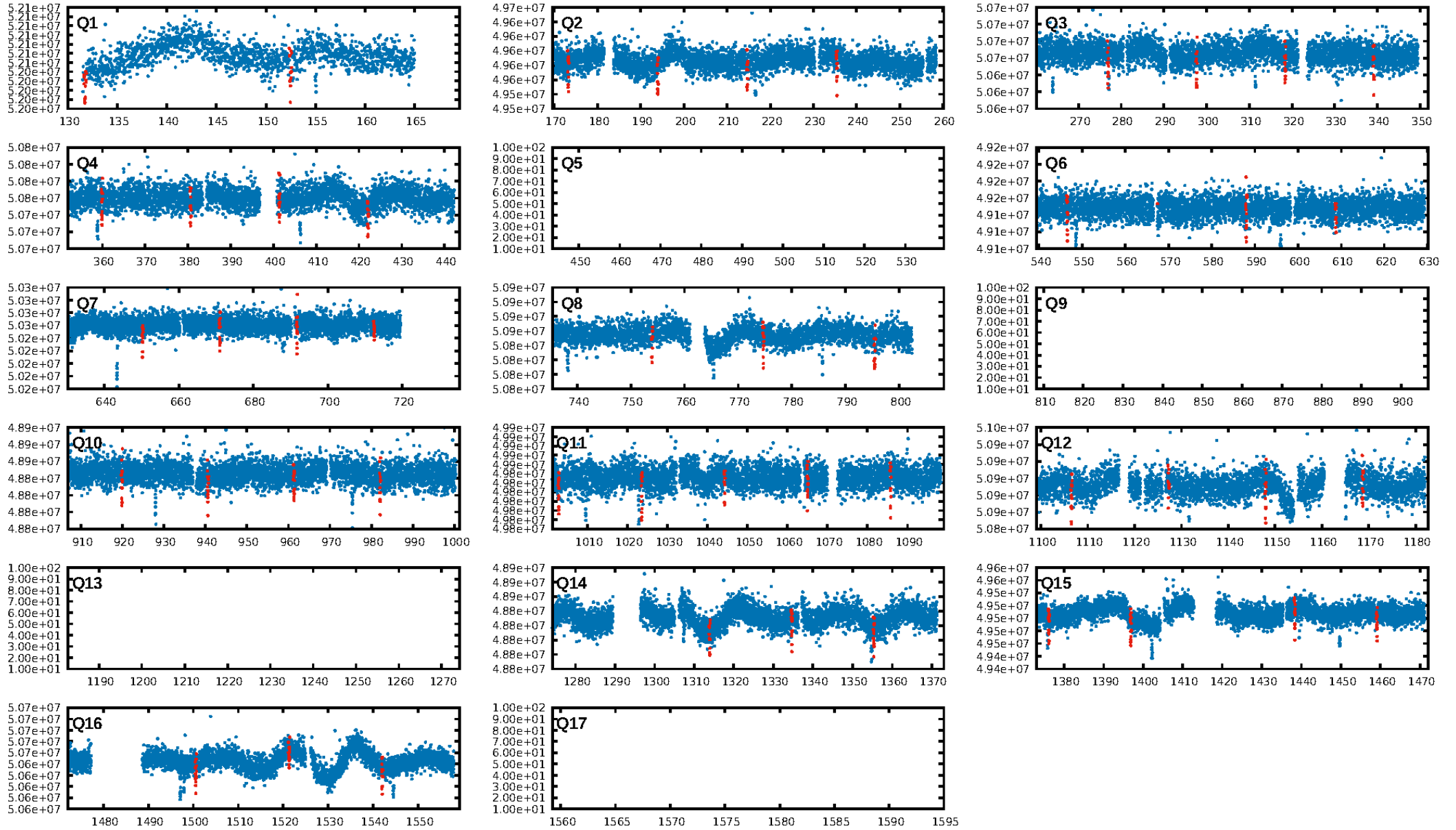
DV Fit Results:

Period = 20.73987 [0.00004] d
Epoch = 131.7395 [0.0016] BKJD
Rp/R* = 0.0256 [0.0055]
a/R* = 30.23 [24.34]
b = 0.82 [0.33]
Seff = 19.50 [2.38]
Teq = 536 [16] K
Rp = 2.15 [0.48] Re
a = 0.1375 [0.0085] AU
Ag = 97.31 [53.77] [1.79σ]
Teffp = 2602 [358] K [5.76σ]

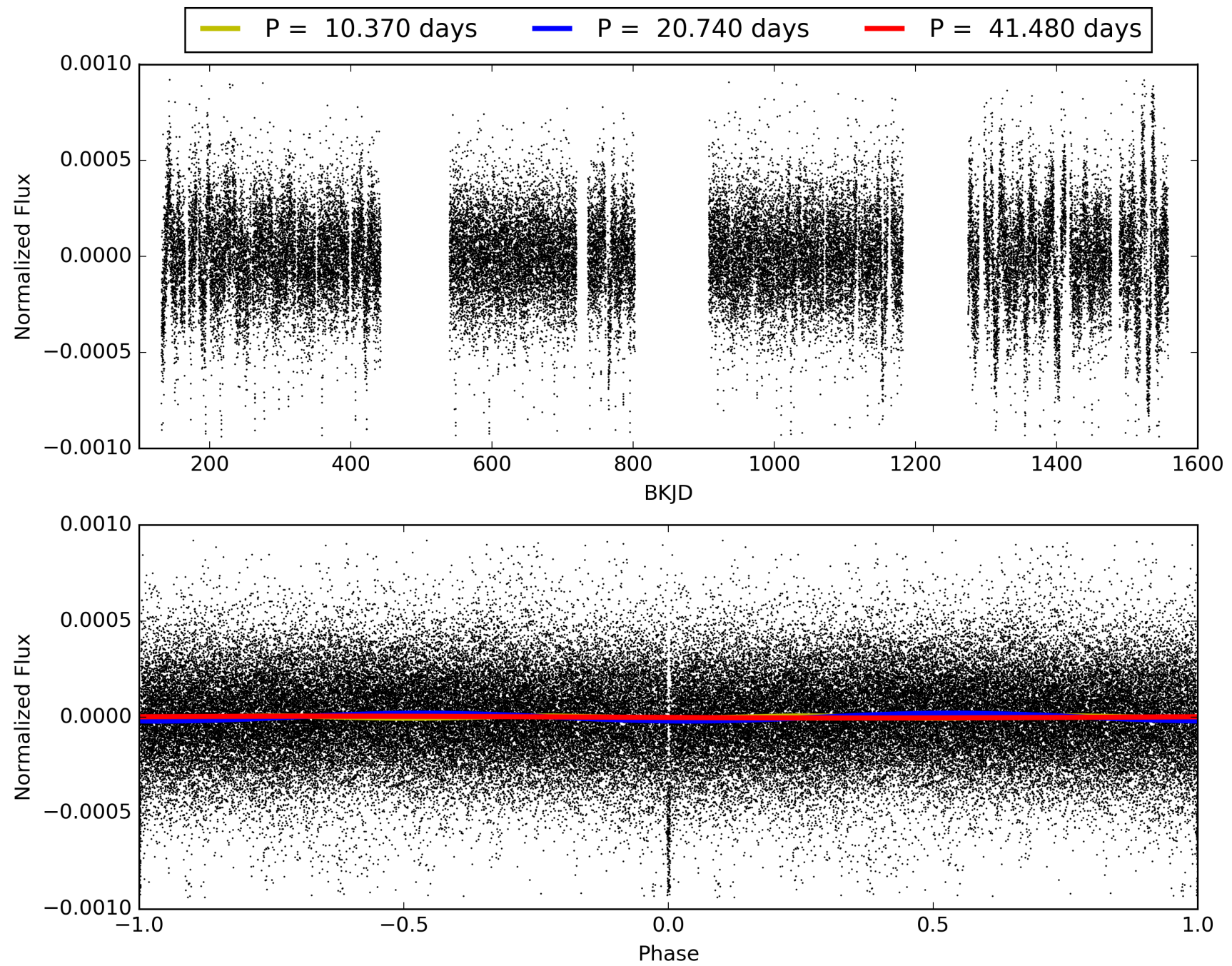
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [101.45σ]
ModelChiSquare2-sig: 84.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [45/45]
GhostDiagnostic-chr: 7.748
Centroid-sig: 0.5%
Centroid-so: 0.784 arcsec [2.48σ]
OotOffset-rm: 0.119 arcsec [0.86σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-rm: 0.313 arcsec [2.33σ]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 006587002-02, PDC Light Curves

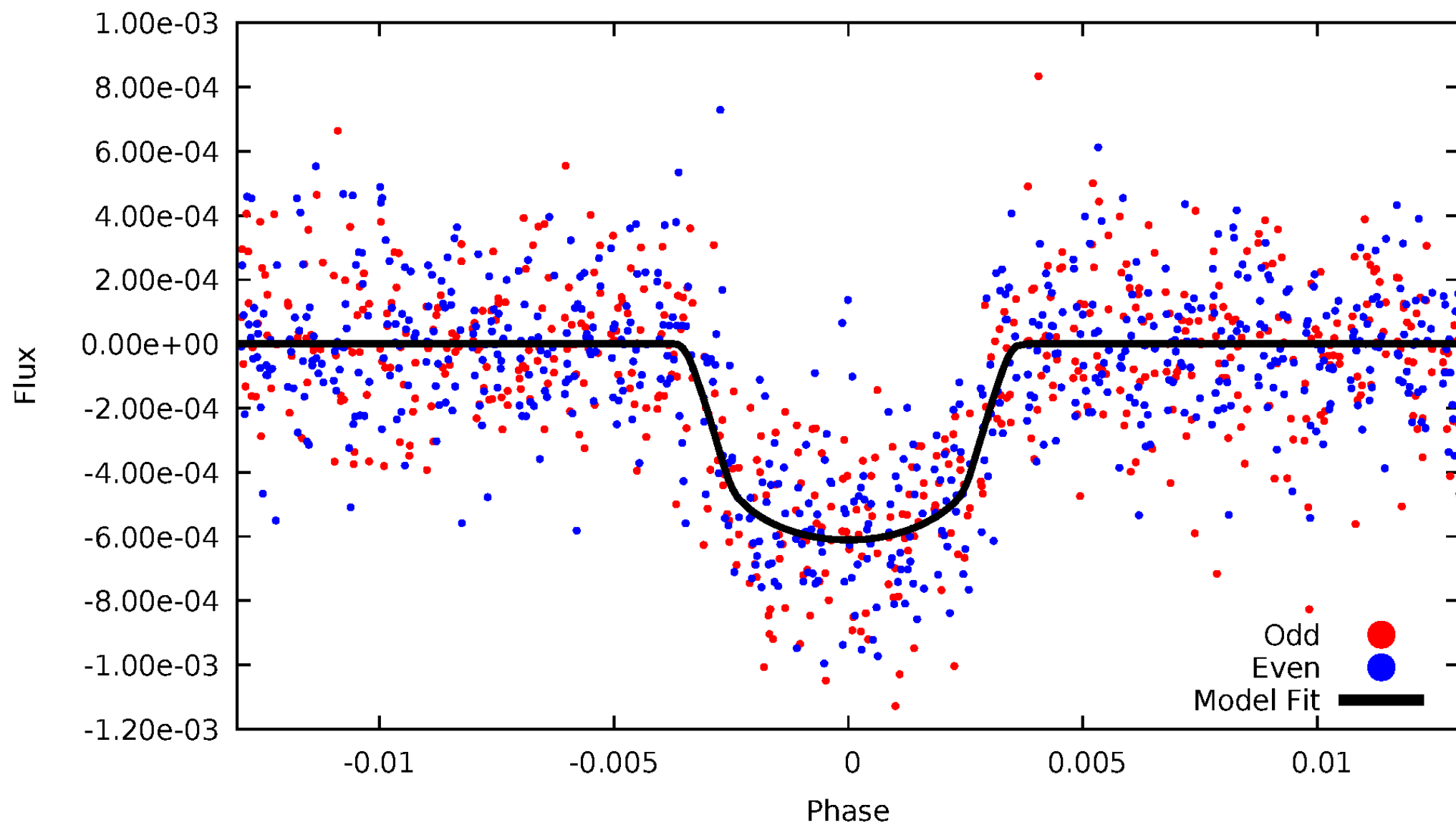


TCE 006587002-02



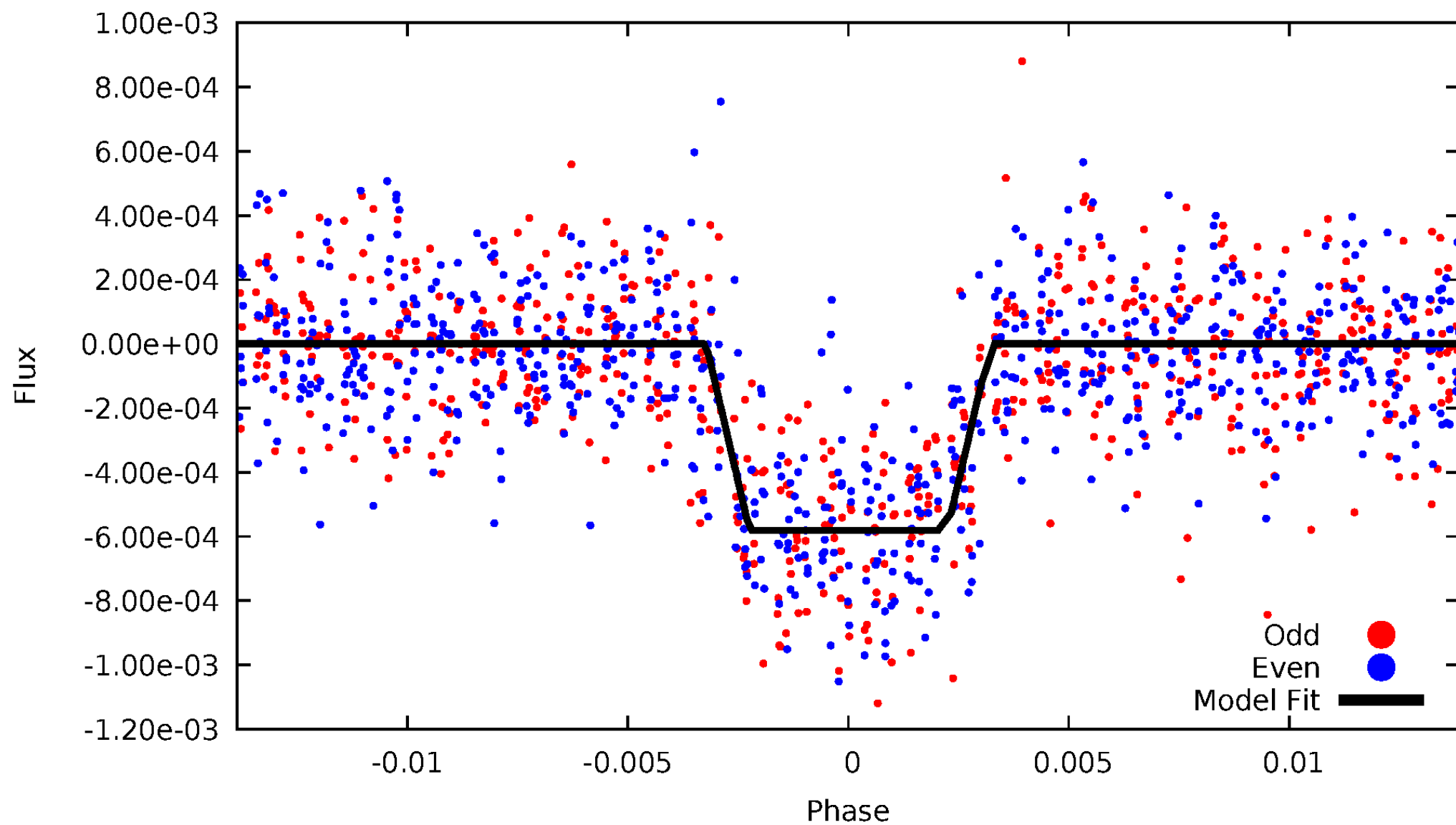
DV Odd/Even

TCE 006587002-02



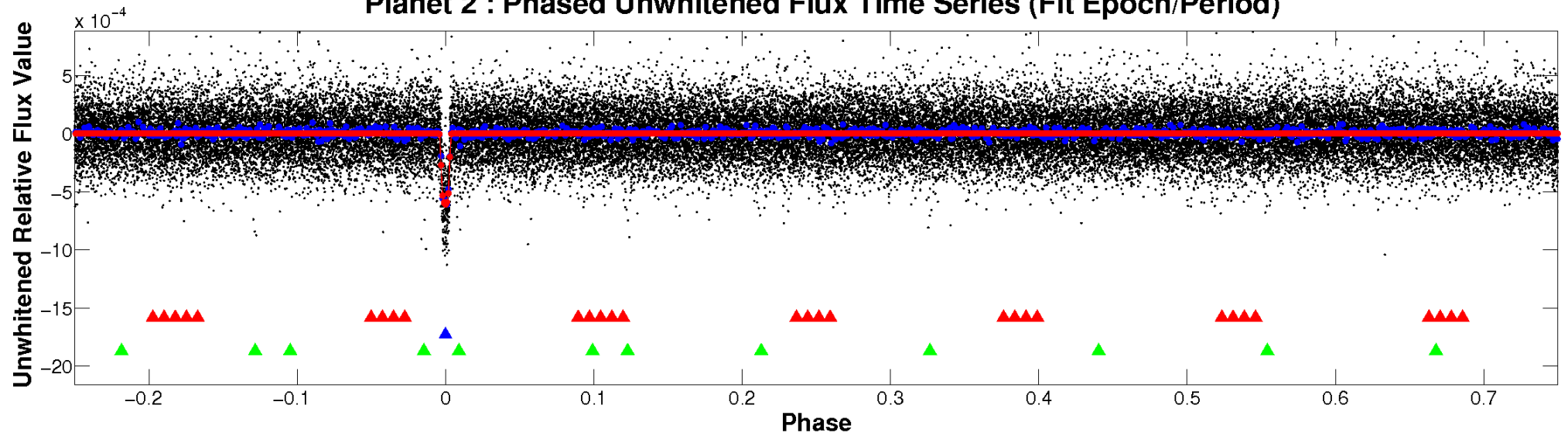
ALT Odd/Even

TCE 006587002-02

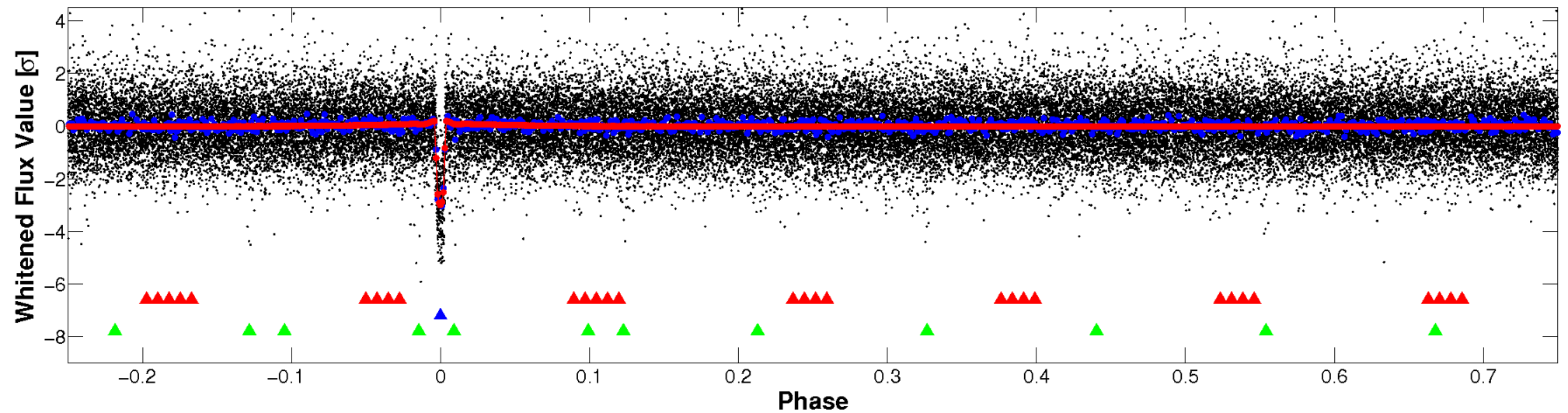


Non-Whitened Vs. Whitened Light Curve

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

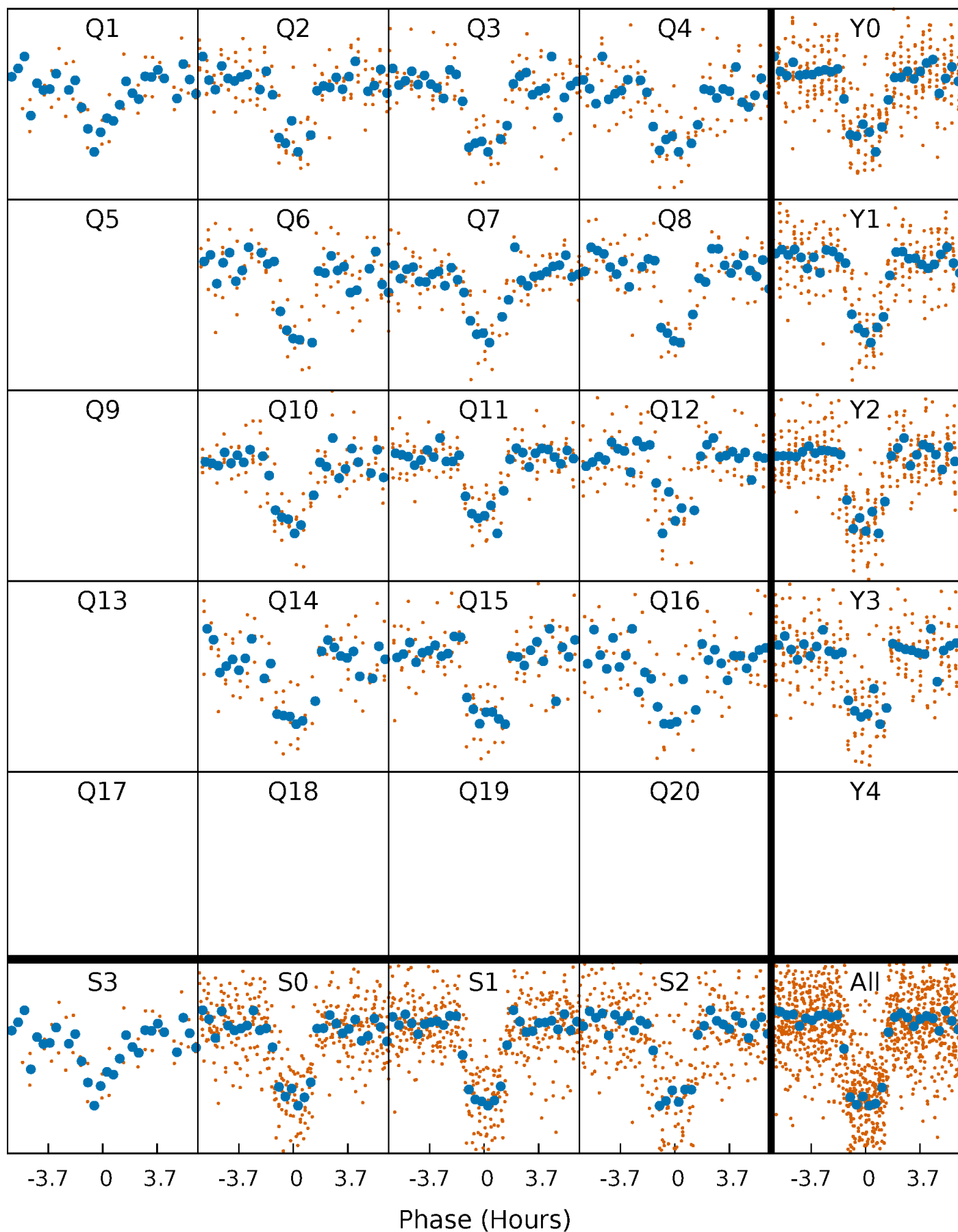


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



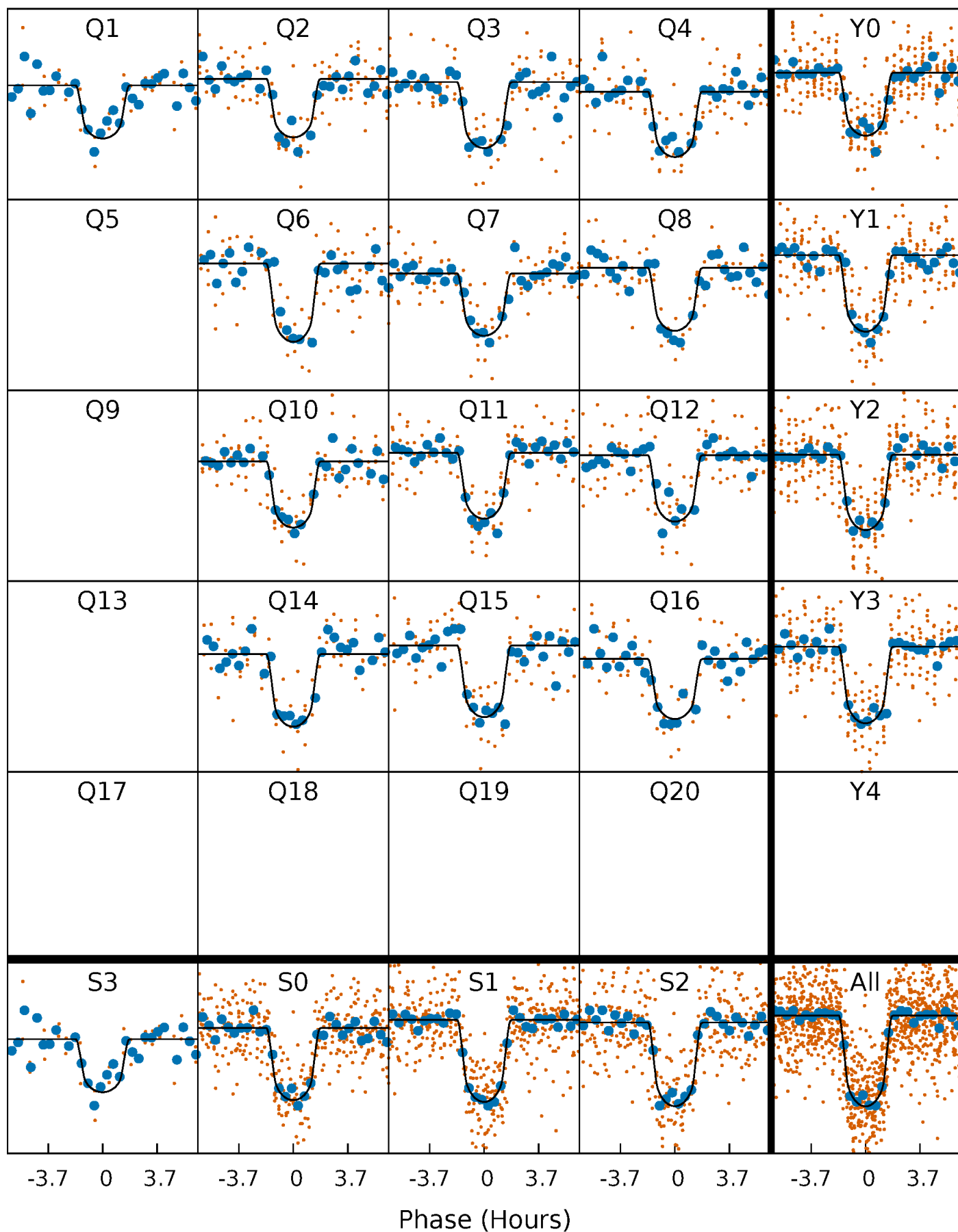
PDC Quarter-Phased Transit Curves

TCE 006587002-02 P= 20.739871 Days $T_0=131.739480$ (BKJD)



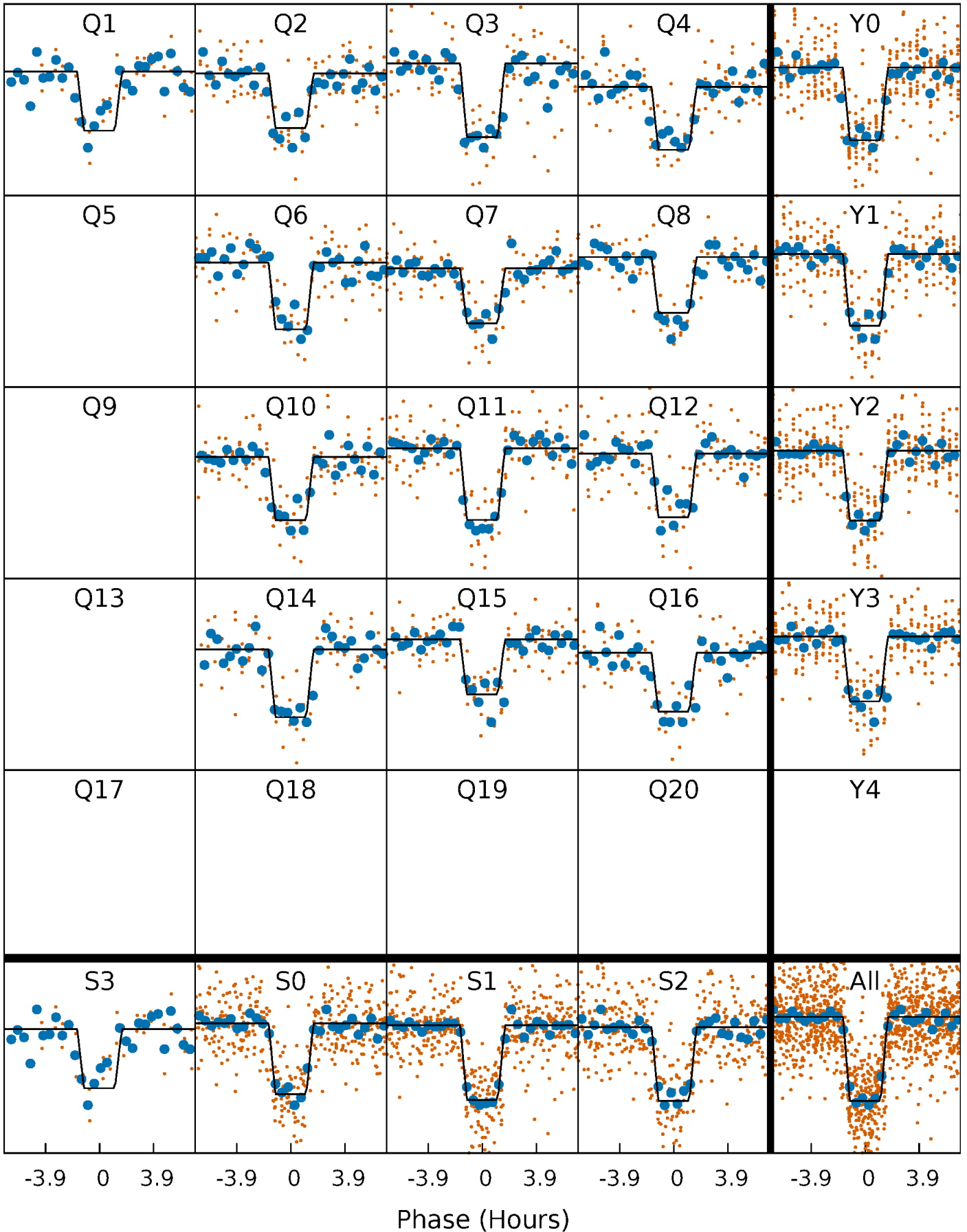
DV Quarter-Phased Transit Curves

TCE 006587002-02 P= 20.739871 Days $T_0=131.739480$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

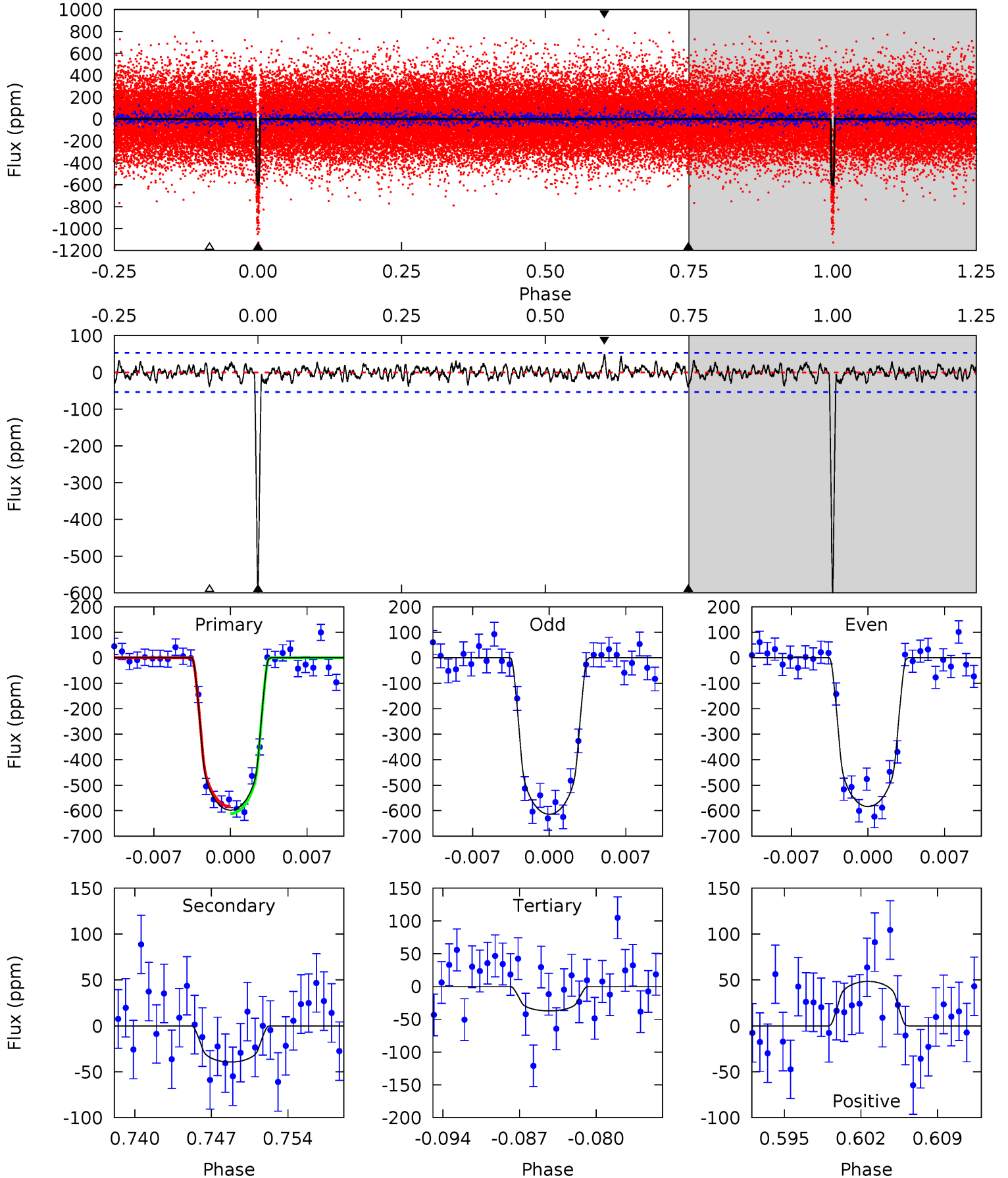
TCE 006587002-02 P= 20.739656 Days $T_0=131.747584$ (BKJD)



DV Model-Shift Uniqueness Test

006587002-02, P = 20.739871 Days, E = 110.999609 Days

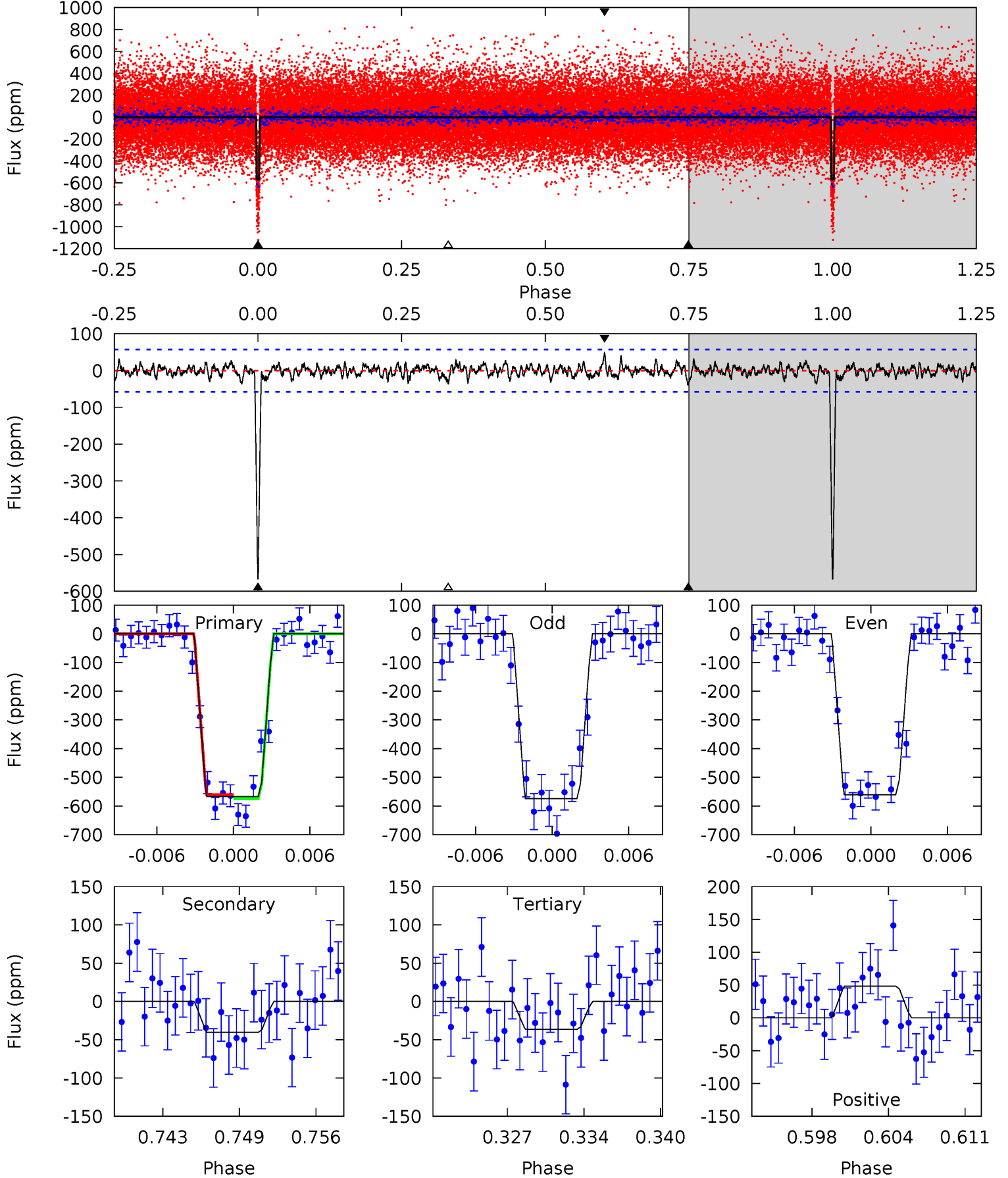
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.9	3.76	3.55	4.61	5.09	2.69	1.19	53.4	52.3	0.21	-0.85	1.43	0.99	0.07	1.28



Alt Model-Shift Uniqueness Test

006587002-02, P = 20.739656 Days, E = 111.007928 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.4	3.58	3.24	4.28	5.11	2.73	1.06	47.2	46.1	0.35	-0.70	0.61	0.98	0.08	0.60



Stellar Parameters For KIC 006587002

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5132^{+102}_{-102}	$4.571^{+0.032}_{-0.052}$	$-0.060^{+0.150}_{-0.150}$	$0.770^{+0.054}_{-0.040}$	$0.805^{+0.045}_{-0.045}$	$2.482^{+0.314}_{-0.406}$
	+2%/-2%	+1%/-1%	+250%/-250%	+7%/-5%	+6%/-6%	+13%/-16%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 006587002-02 / KOI 0612.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-39 ± 11	$2.17^{+0.45}_{-0.50}$	752^{+19}_{-19}	3131^{+263}_{-205}	87^{+63}_{-33}
Alt.	-40 ± 11	$2.04^{+0.48}_{-0.49}$	751^{+20}_{-19}	3204^{+281}_{-241}	103^{+75}_{-44}

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

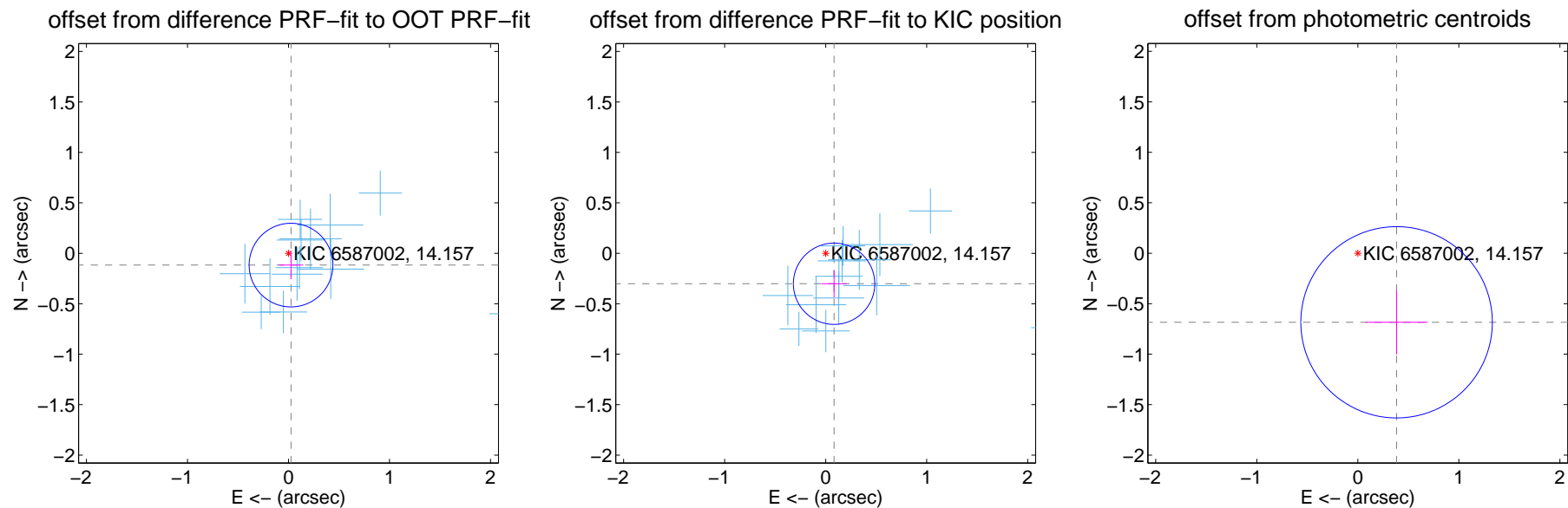
DV Centroid Data

Supplemental centroid analysis for 006587002-02. Kepler magnitude: 14.16. Transit SNR 42.35

There are 13 quarters with good PRF difference image offsets

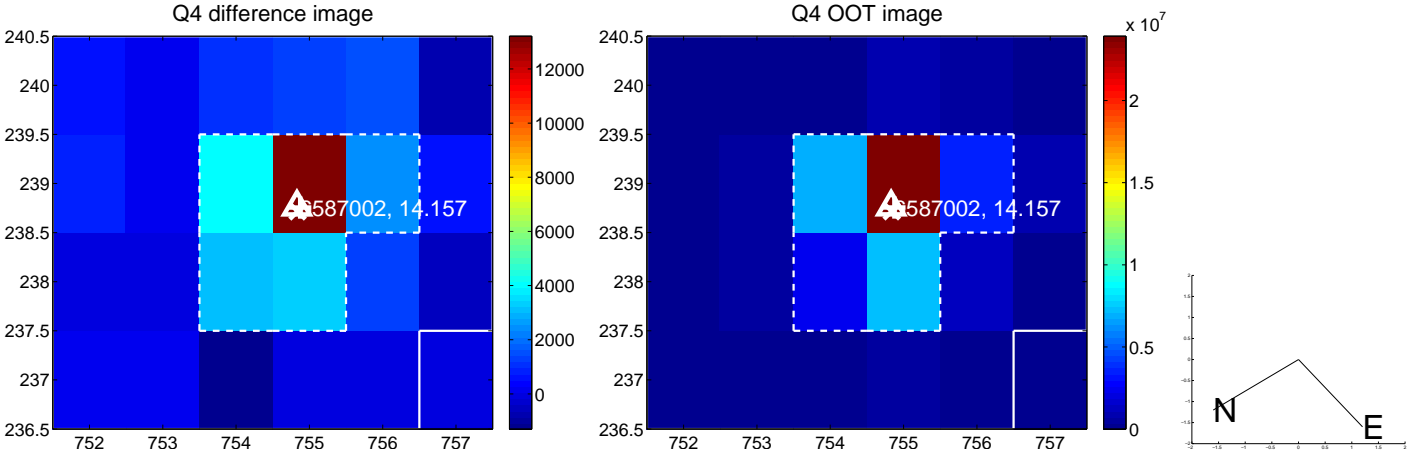
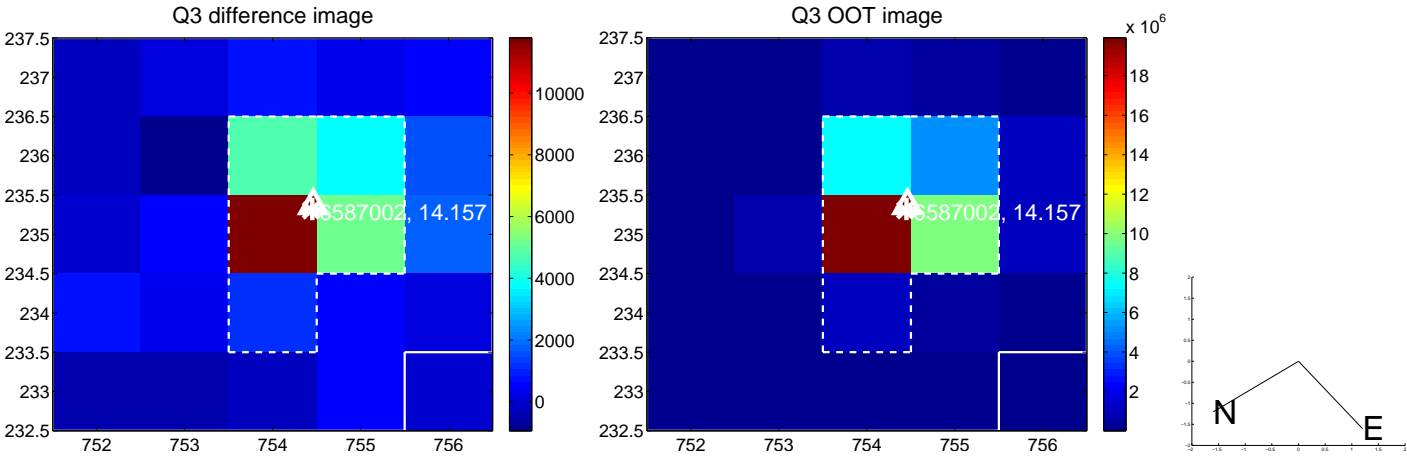
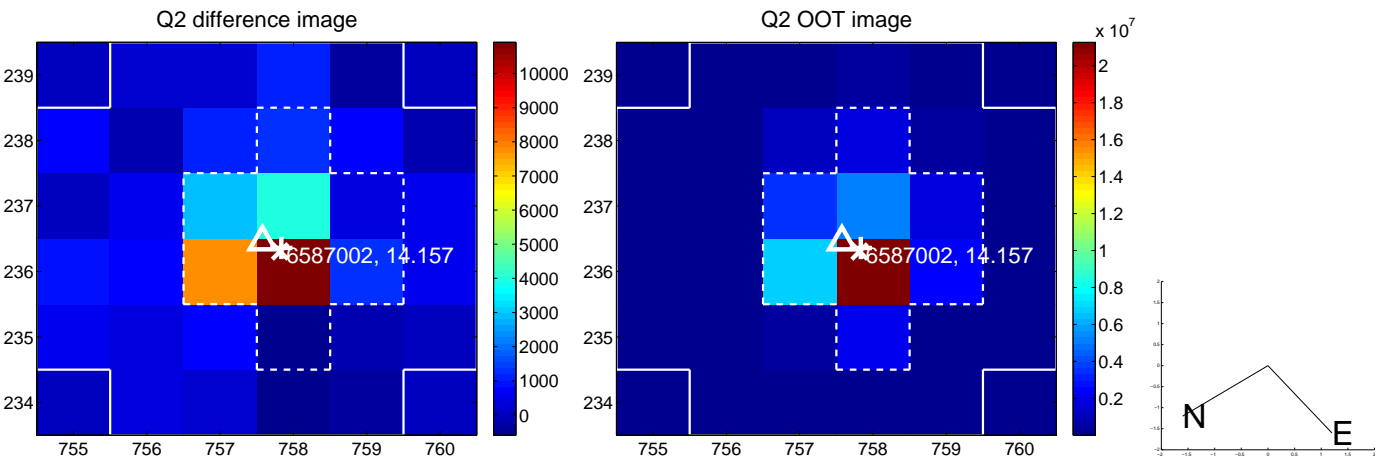
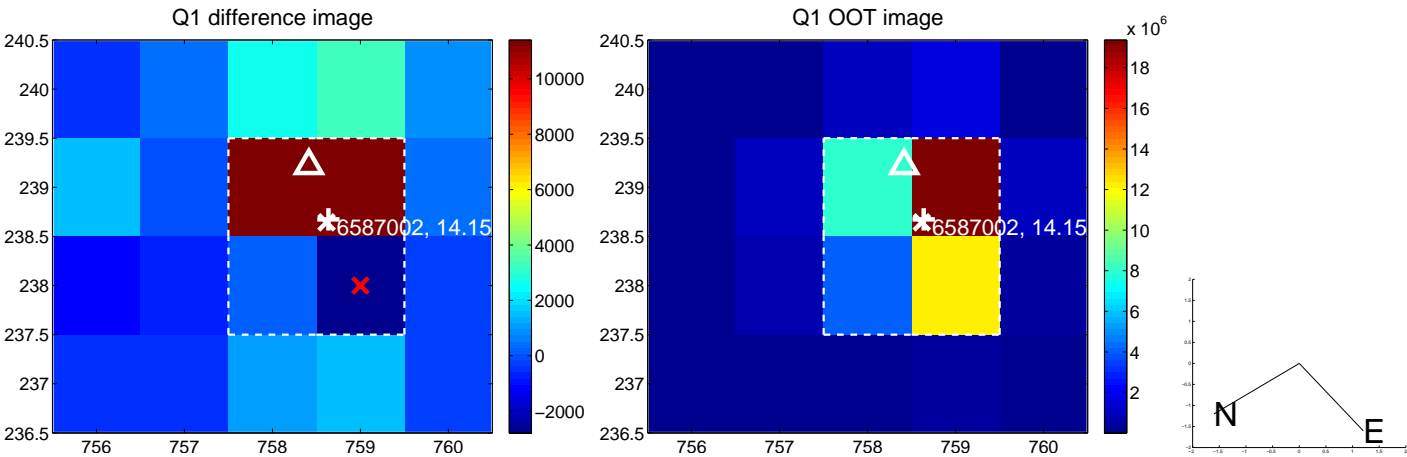
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.119 ± 0.138	0.86	-0.025 ± 0.120	-0.117 ± 0.139
PRF-fit source offset from KIC position	0.313 ± 0.134	2.33	-0.083 ± 0.126	-0.302 ± 0.135
photometric centroid source offset	0.78 ± 0.32	2.48	-0.38 ± 0.31	-0.68 ± 0.32

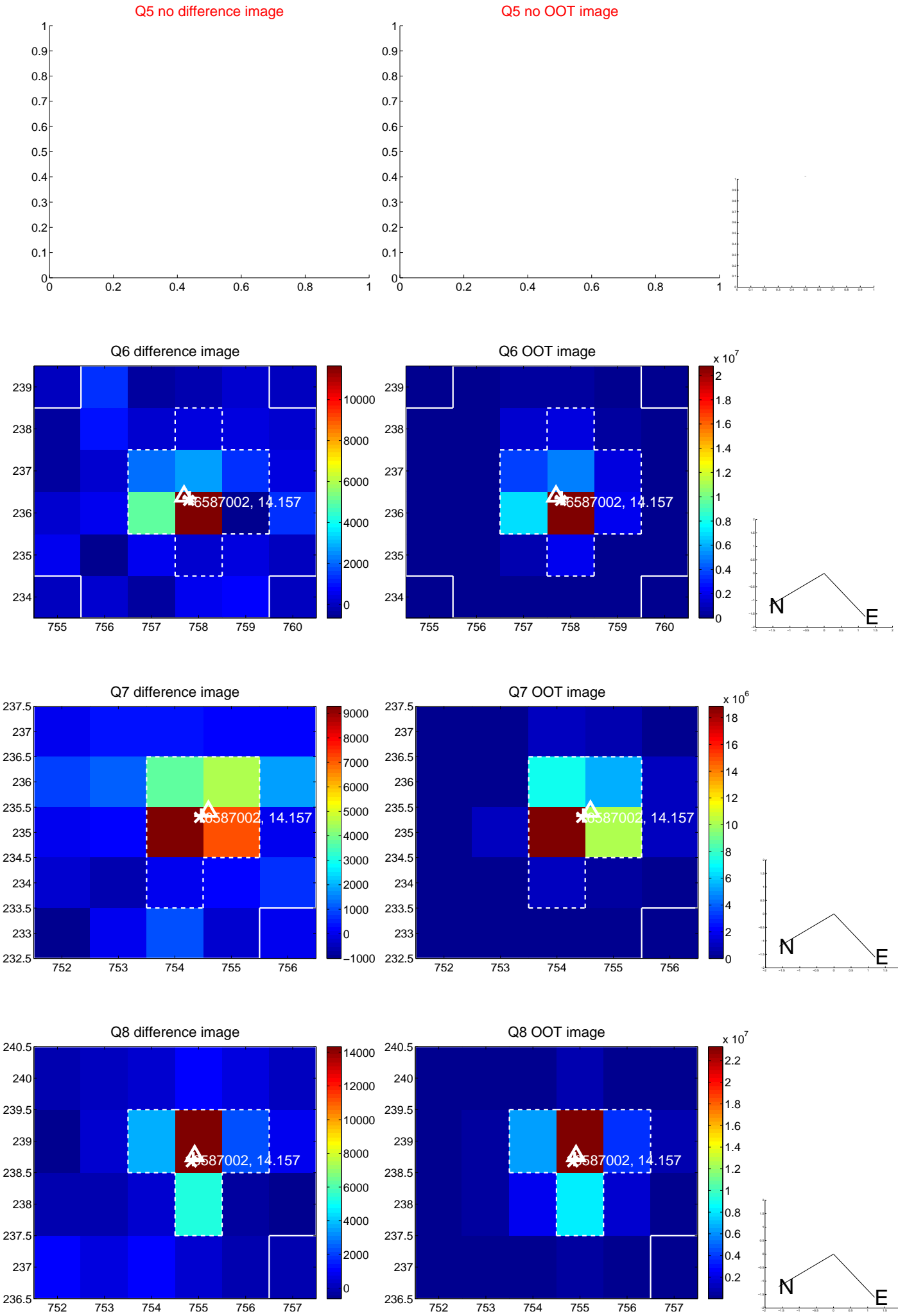


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

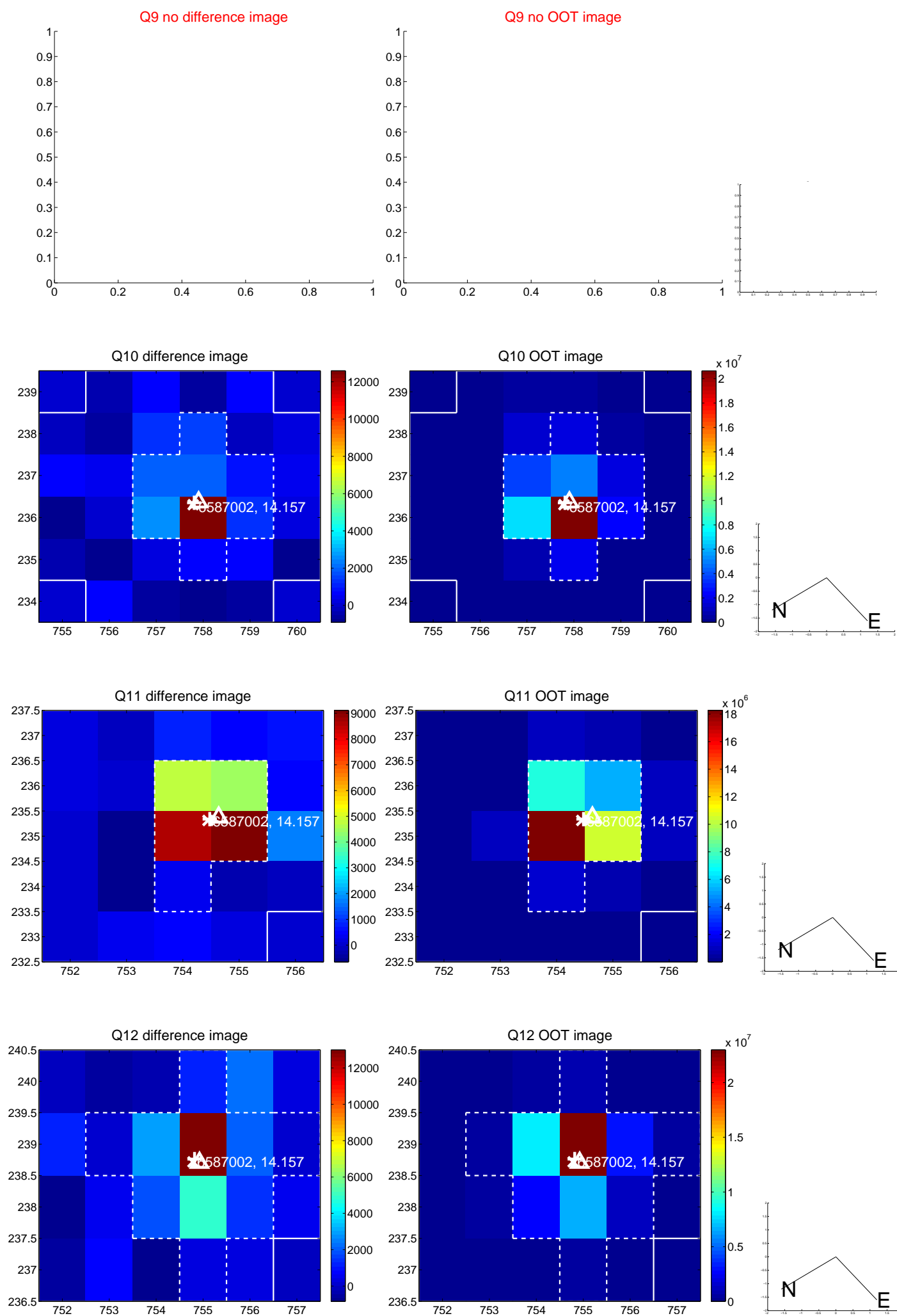
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



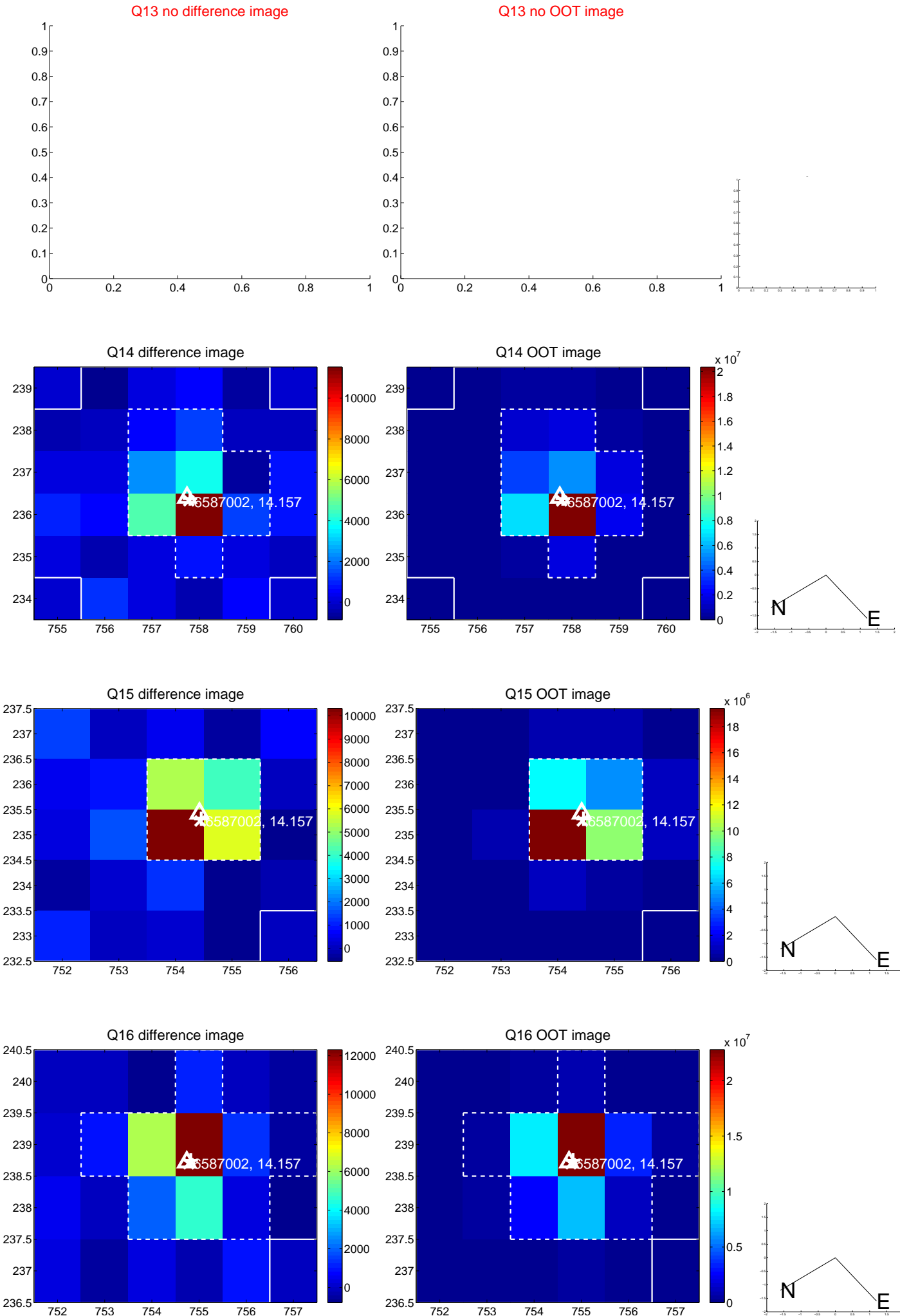
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



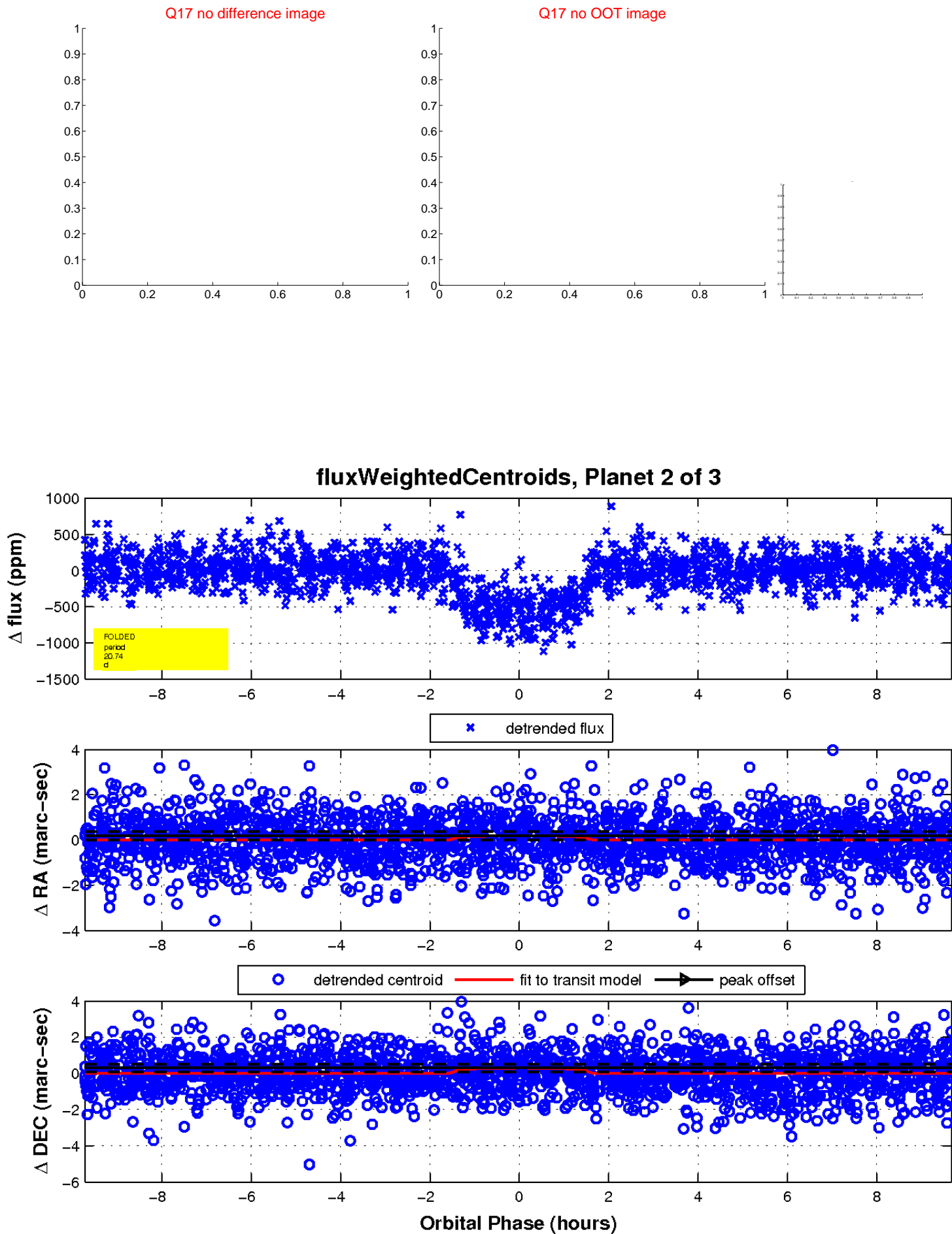
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

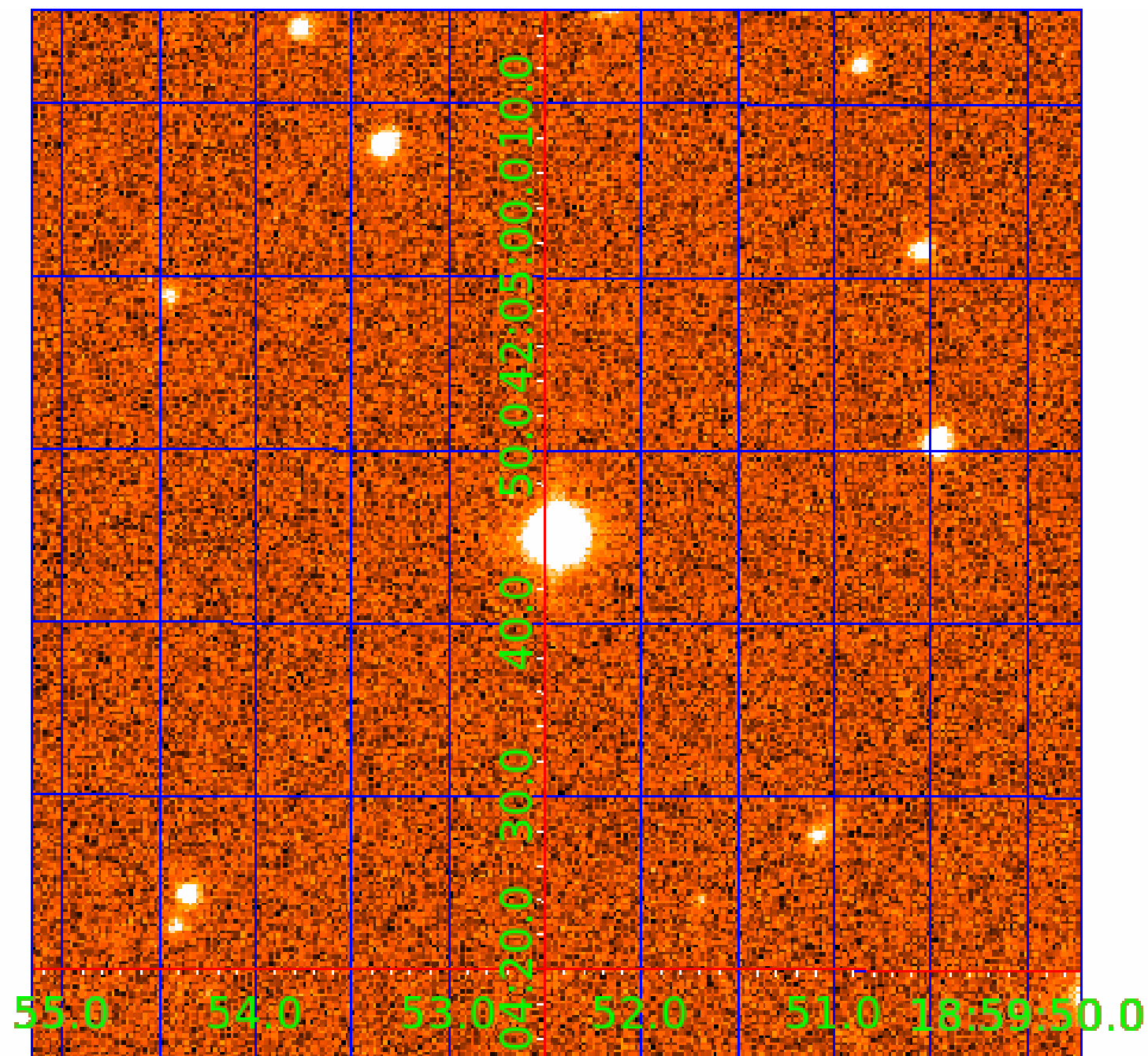


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006587002

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})
006587002-01	OBS	0612.02	47.427800	169.127583	821.8	5.417	46.9	44.3	0.77	5132	2.51	6.47
006587002-02	OBS	0612.01	20.739871	131.739480	610.7	3.242	38.6	42.3	0.77	5132	2.15	19.50
006587002-03	OBS	0612.03	122.080383	155.025952	764.1	3.557	18.9	20.0	0.77	5132	2.59	1.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006587002-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006587002-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006587002-03	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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

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

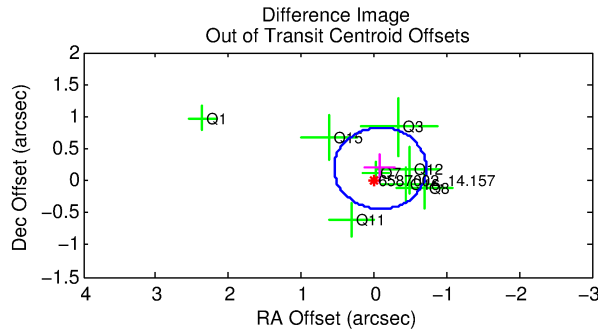
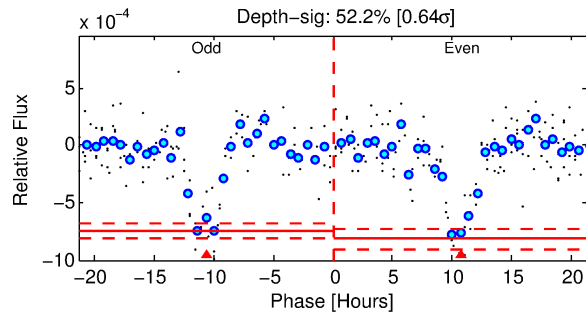
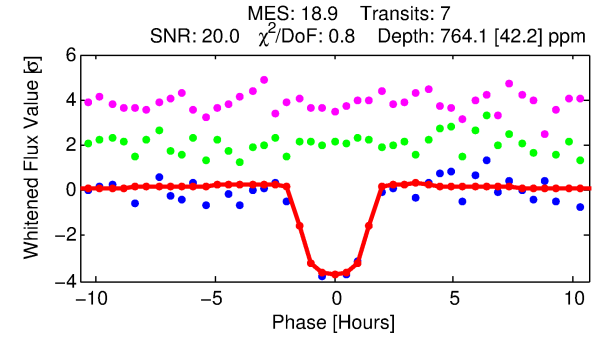
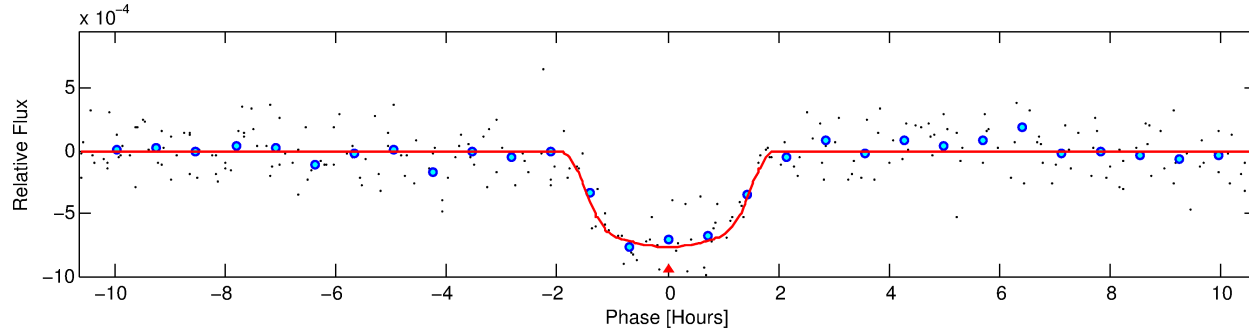
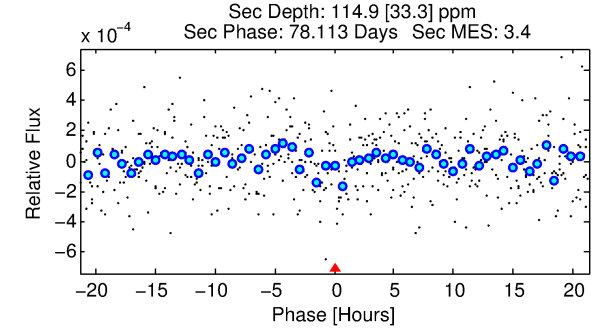
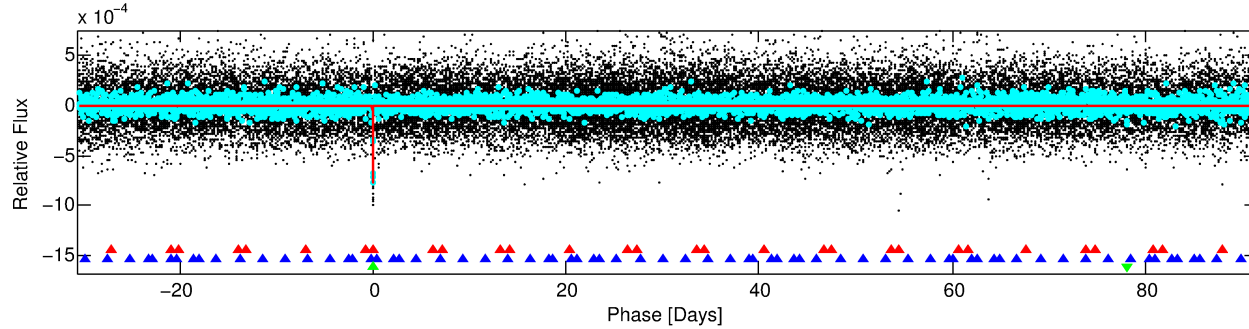
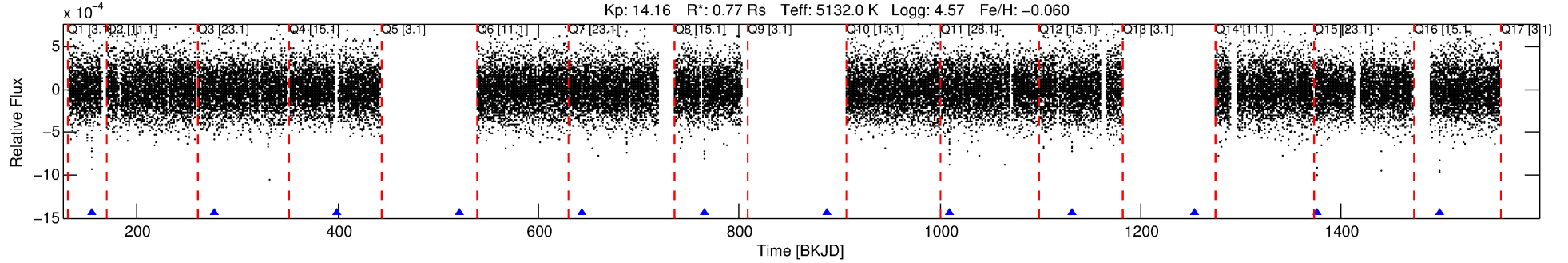
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006587002-03

No Significant Match Found

DV One-Page Summary

KIC: 6587002 Candidate: 3 of 3 Period: 122.080 d
KOI: K00612.03 Corr: 0.929



DV Fit Results:

Period = 122.08038 [0.00054] d
Epoch = 155.0260 [0.0039] BKJD
Rp/R* = 0.0308 [0.0037]
a/R* = 130.81 [59.66]
b = 0.90 [0.10]
Seff = 1.83 [0.22]
Teq = 297 [9] K
Rp = 2.59 [0.36] Re
a = 0.4482 [0.0276] AU
Ag = 1893.95 [737.75] [2.57σ]
Teffp = 3027 [293] K [9.33σ]

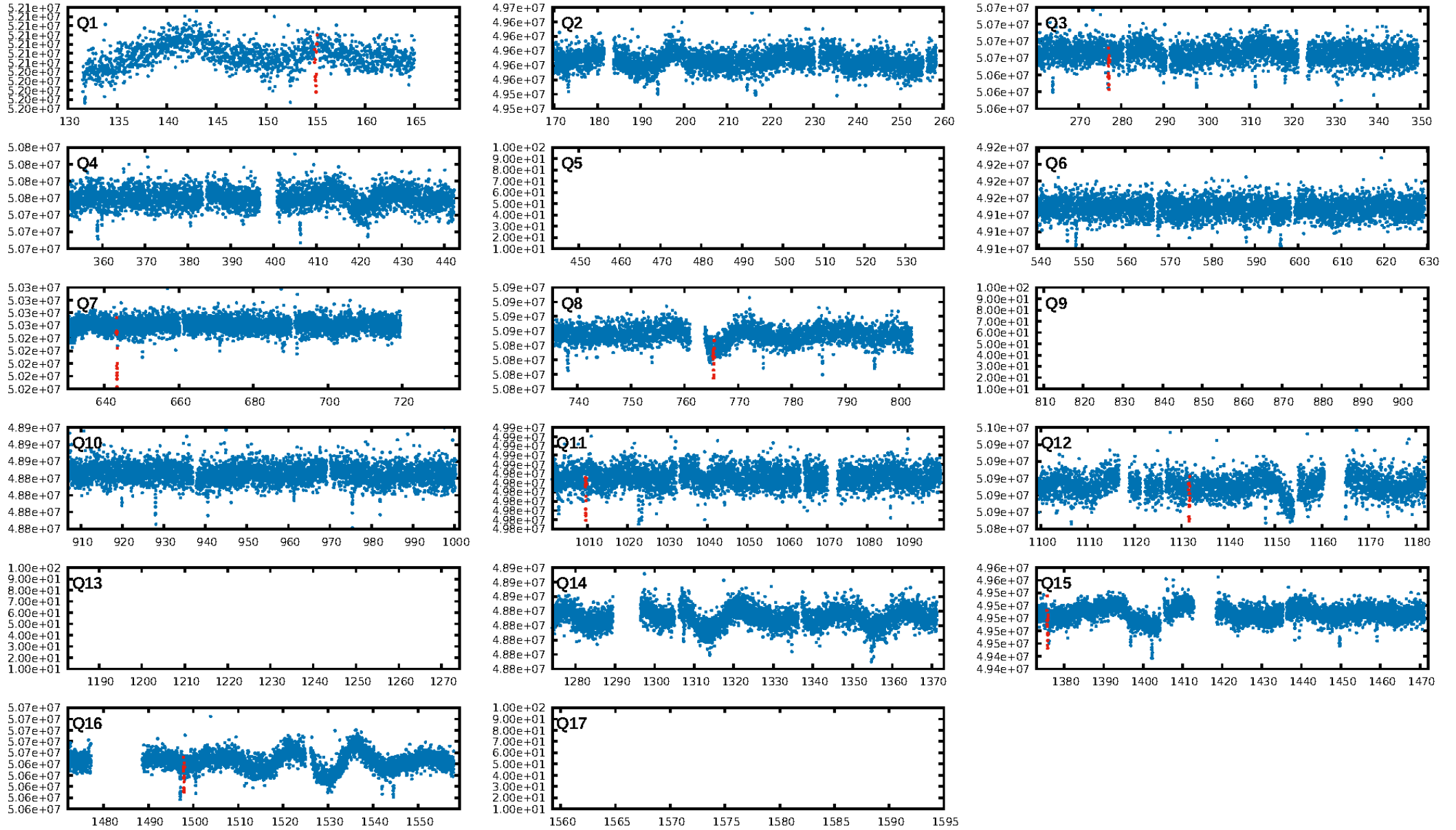
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [276.47σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.02e-78
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 3.439
Centroid-sig: 10.6%
Centroid-so: 0.836 arcsec [1.51σ]
OotOffset-rm: 0.211 arcsec [1.00σ]
OotOffset-st: 0/4/3/1 [8]
KicOffset-rm: 0.138 arcsec [0.37σ]
KicOffset-st: 0/4/3/1 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 0.62 [5/8]

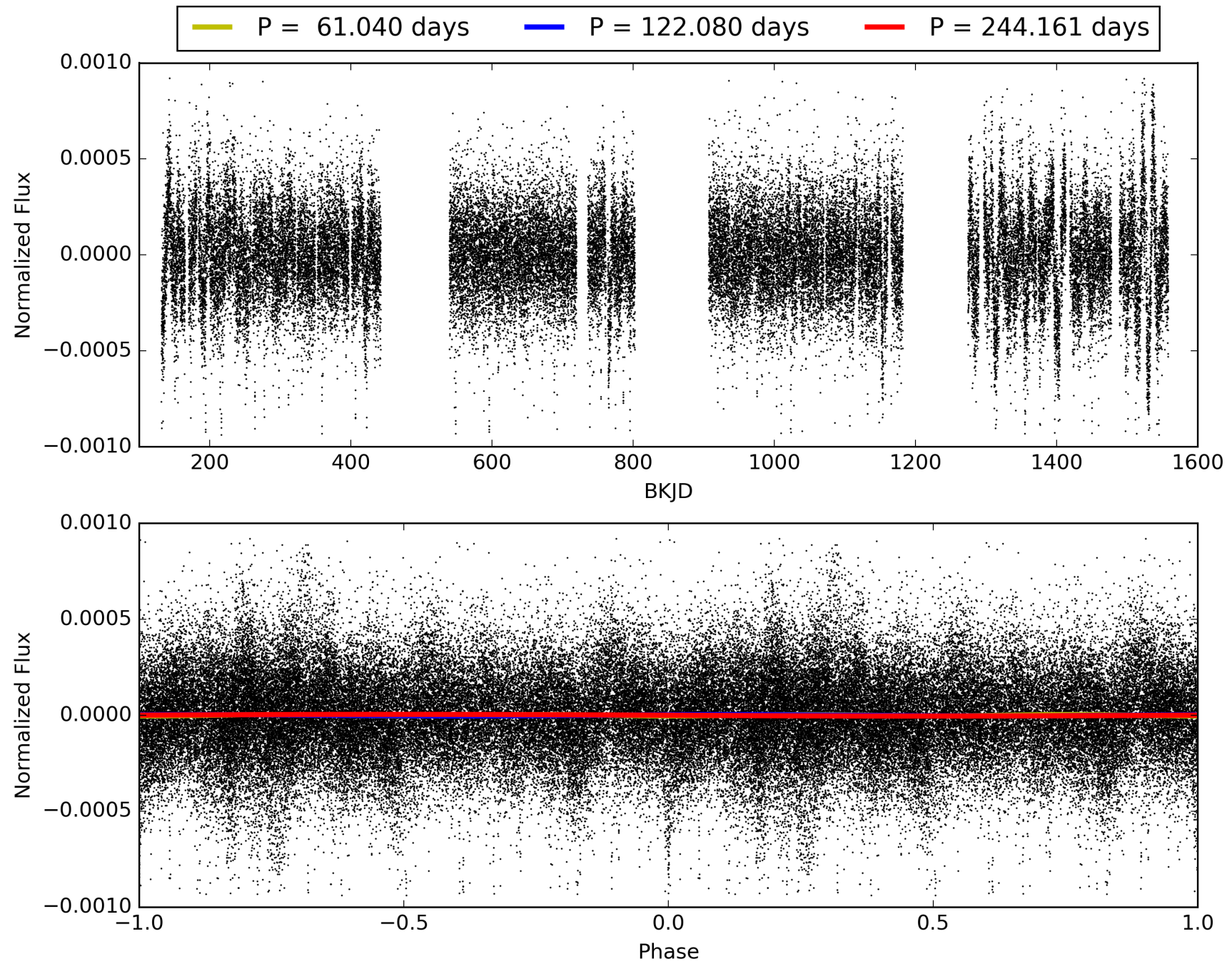
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:55:00 Z

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

TCE 006587002-03, PDC Light Curves

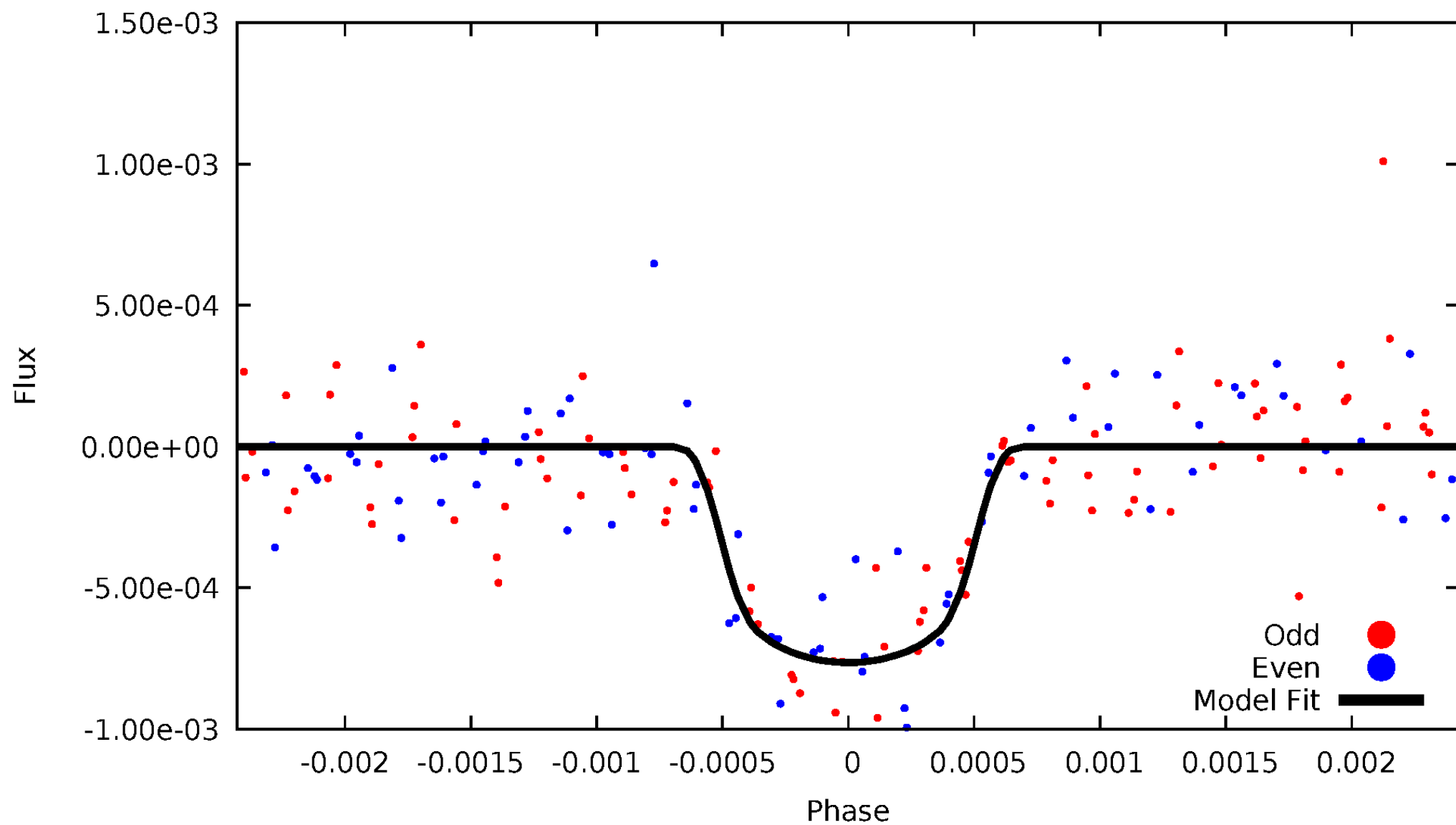


TCE 006587002-03



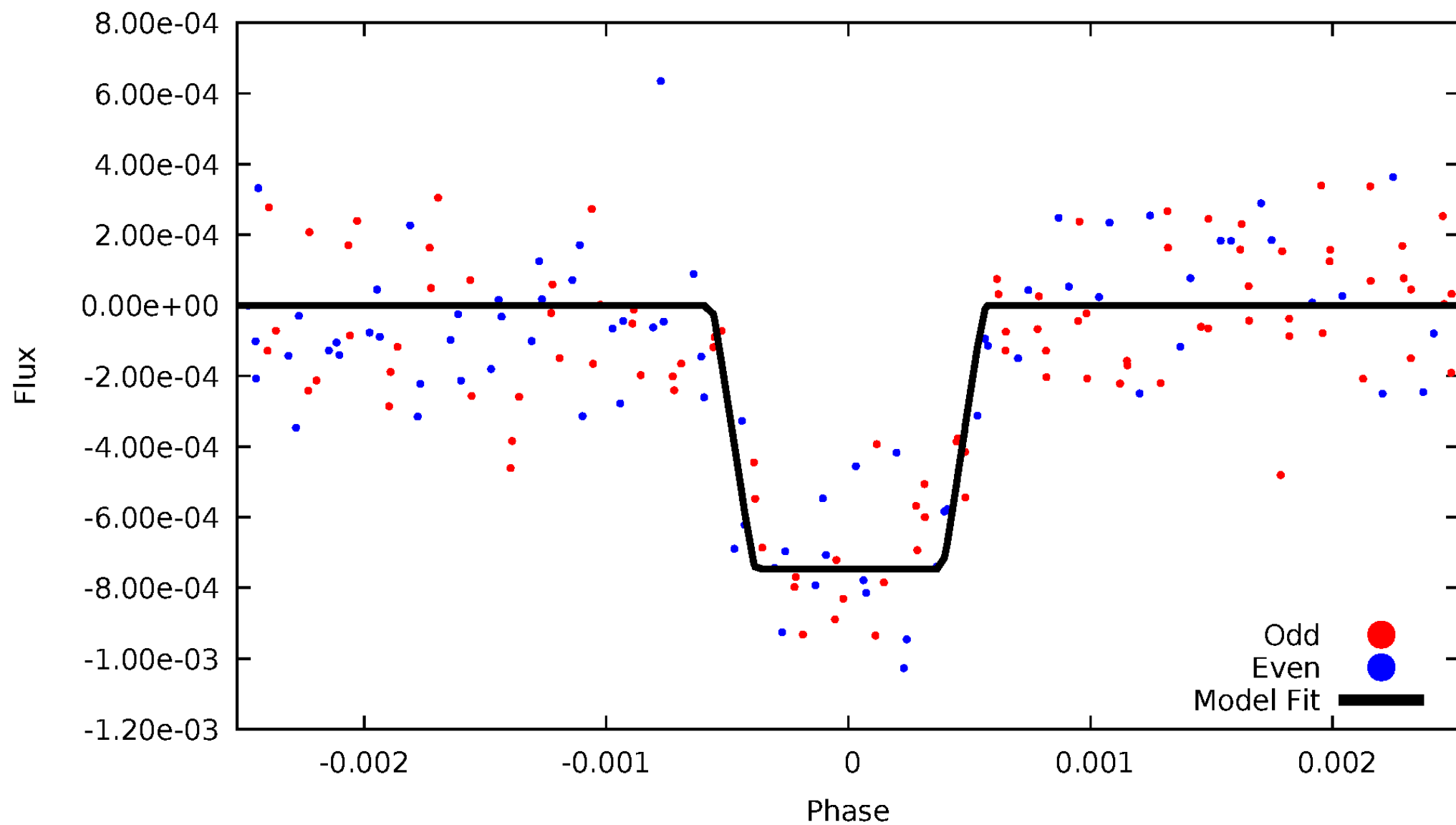
DV Odd/Even

TCE 006587002-03



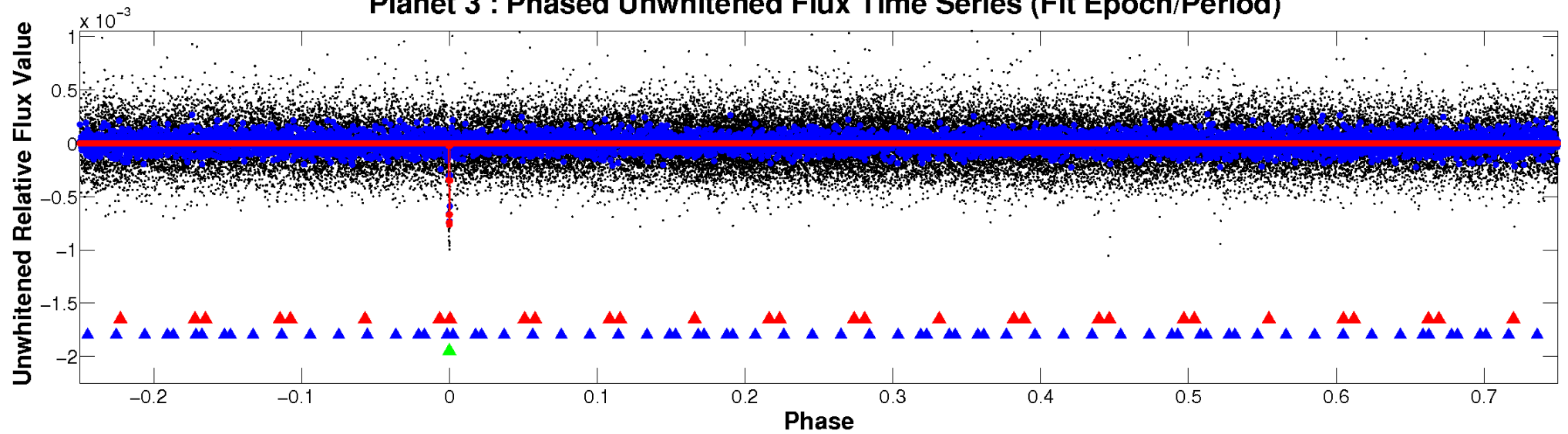
ALT Odd/Even

TCE 006587002-03

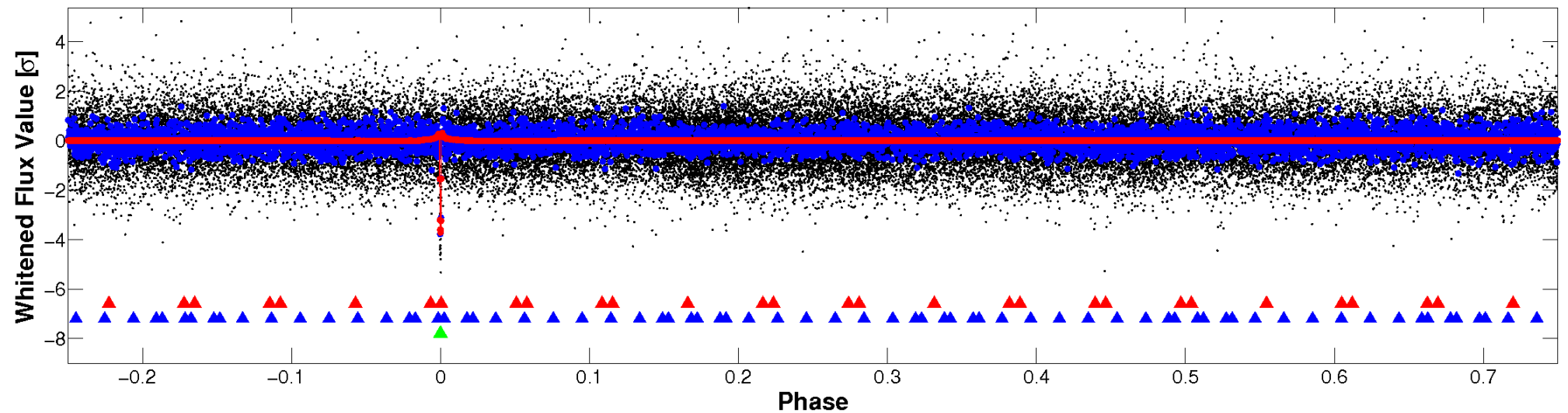


Non-Whitened Vs. Whitened Light Curve

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

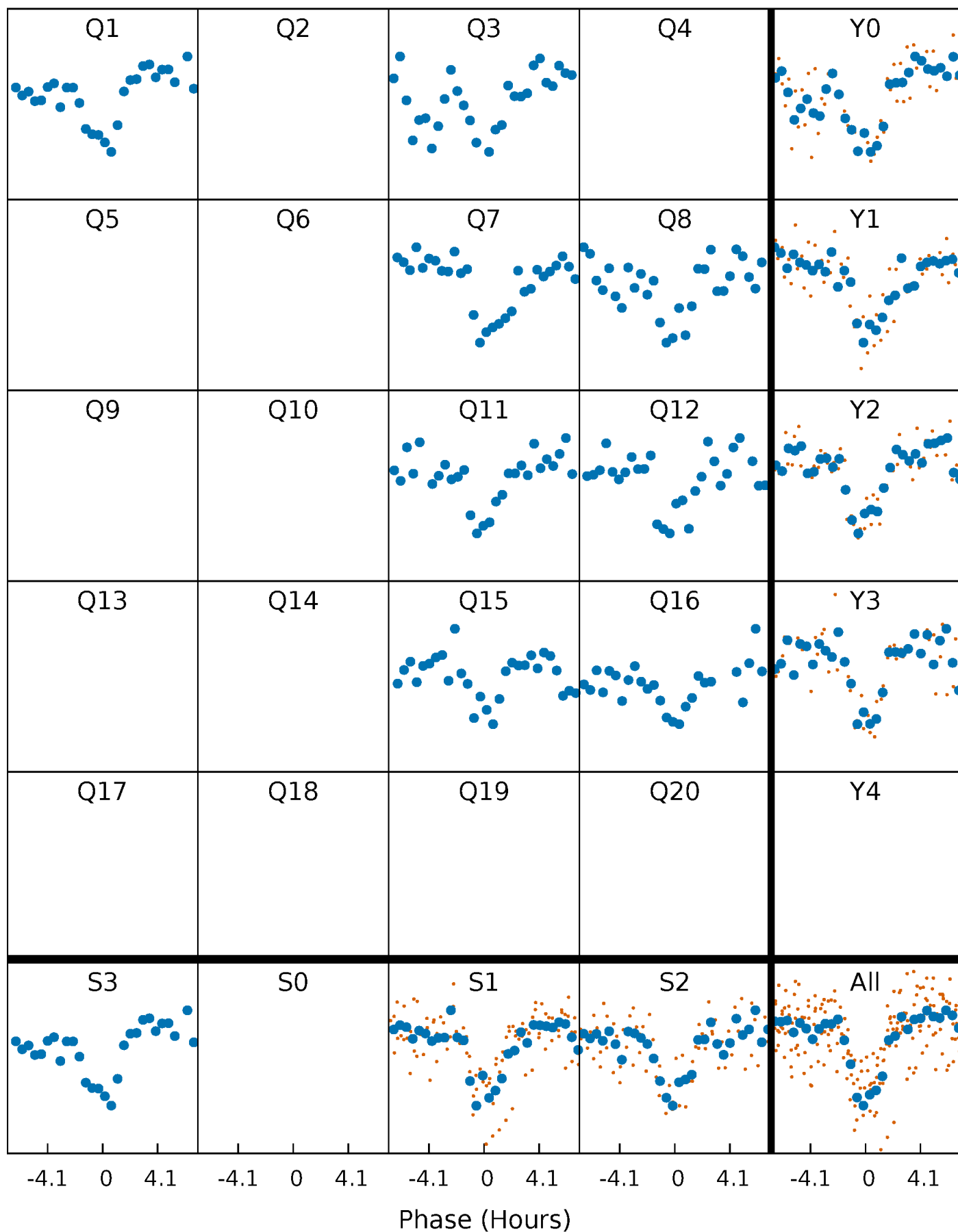


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



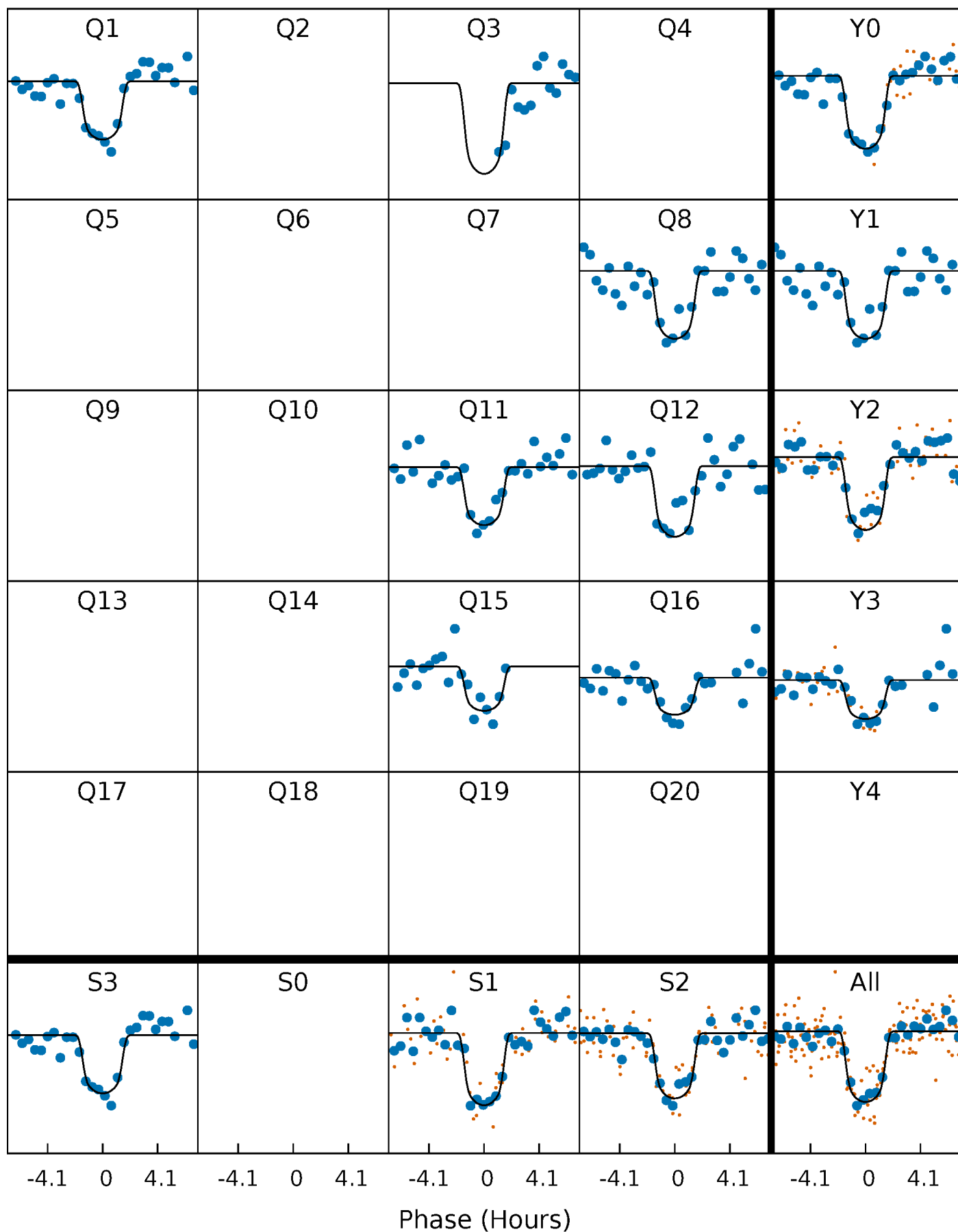
PDC Quarter-Phased Transit Curves

TCE 006587002-03 P=122.080383 Days $T_0=155.025952$ (BKJD)



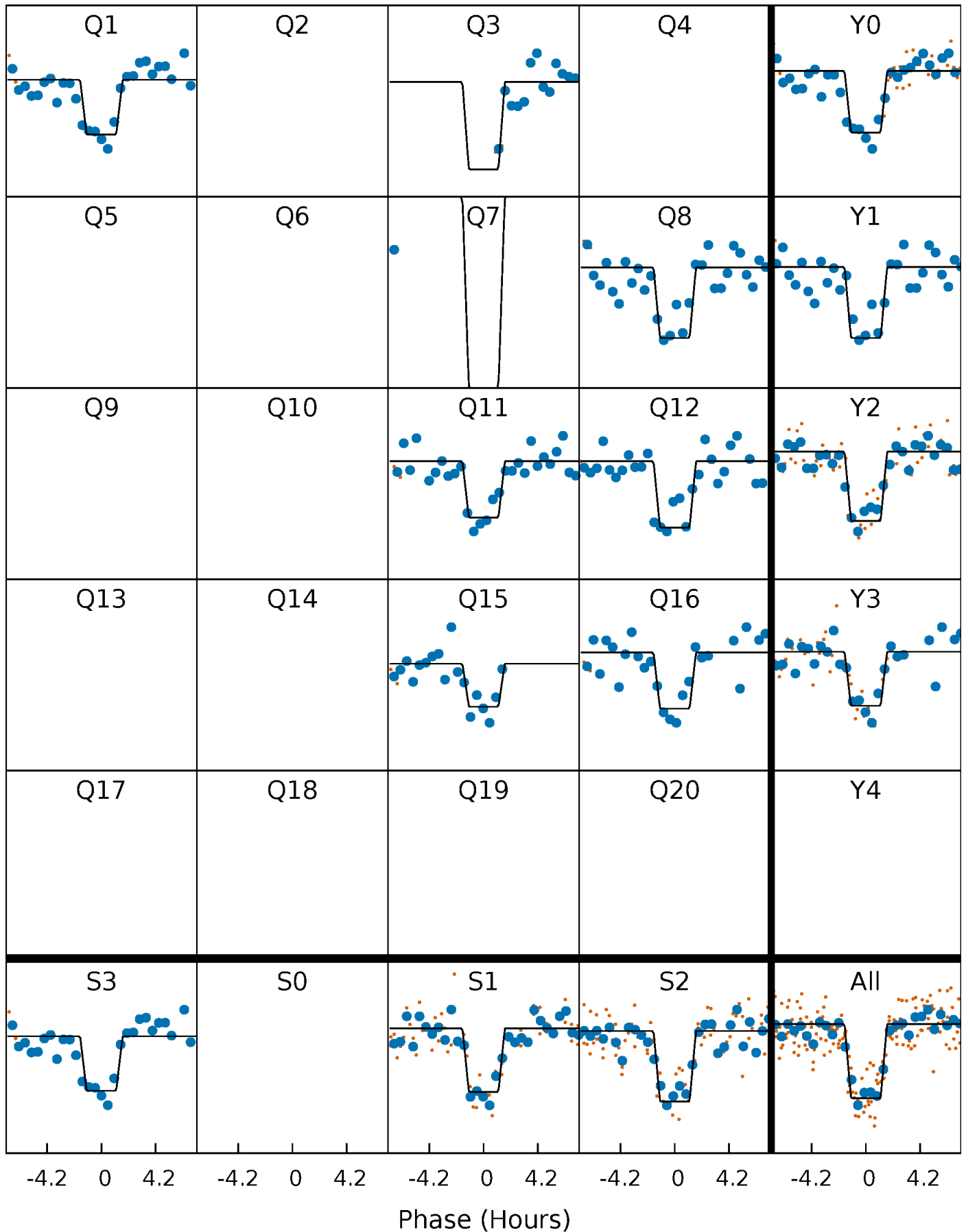
DV Quarter-Phased Transit Curves

TCE 006587002-03 $P=122.080383$ Days $T_0=155.025952$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

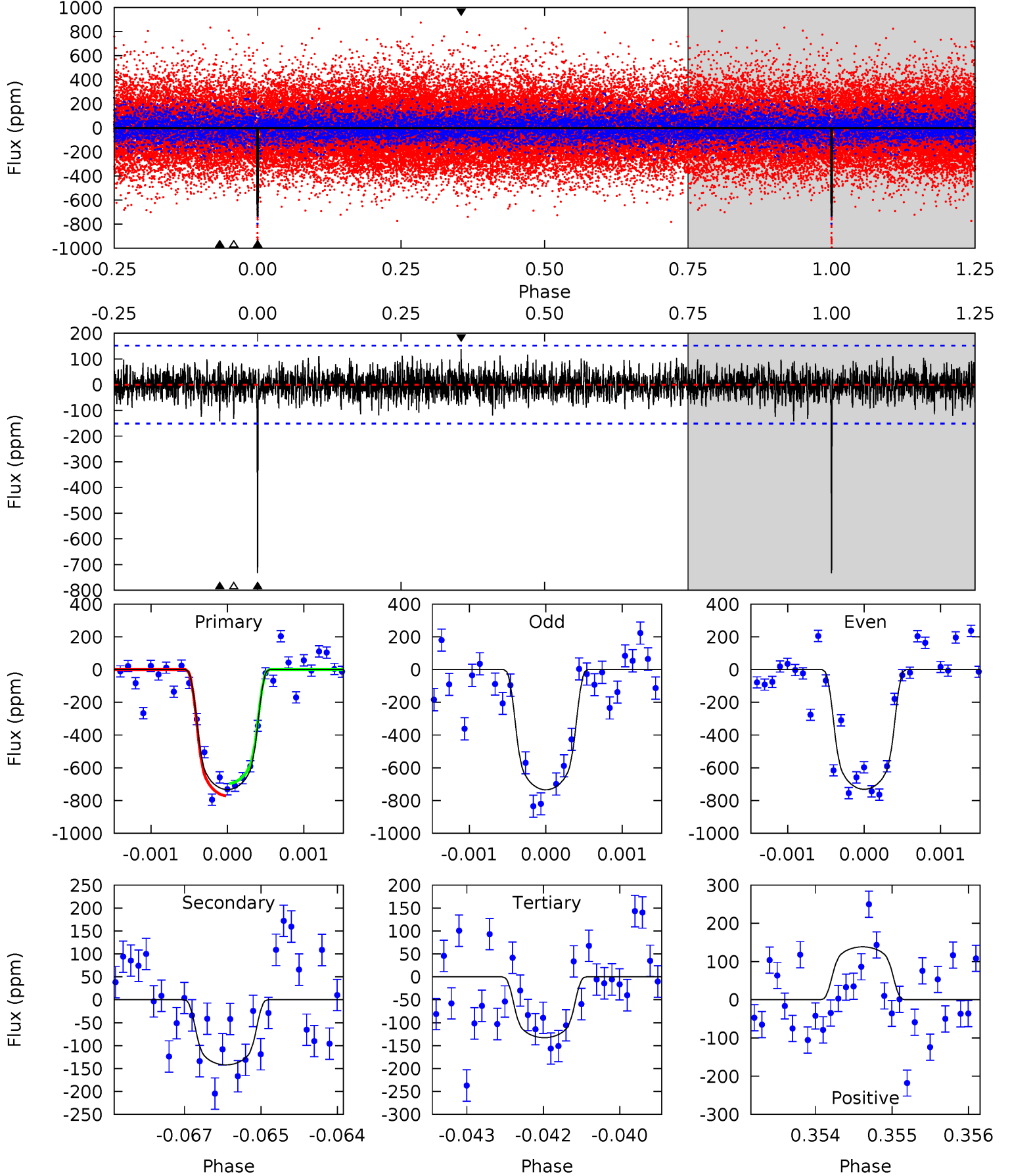
TCE 006587002-03 P=122.080641 Days $T_0=155.023645$ (BKJD)



DV Model-Shift Uniqueness Test

006587002-03, $P = 122.080383$ Days, $E = 32.945569$ Days

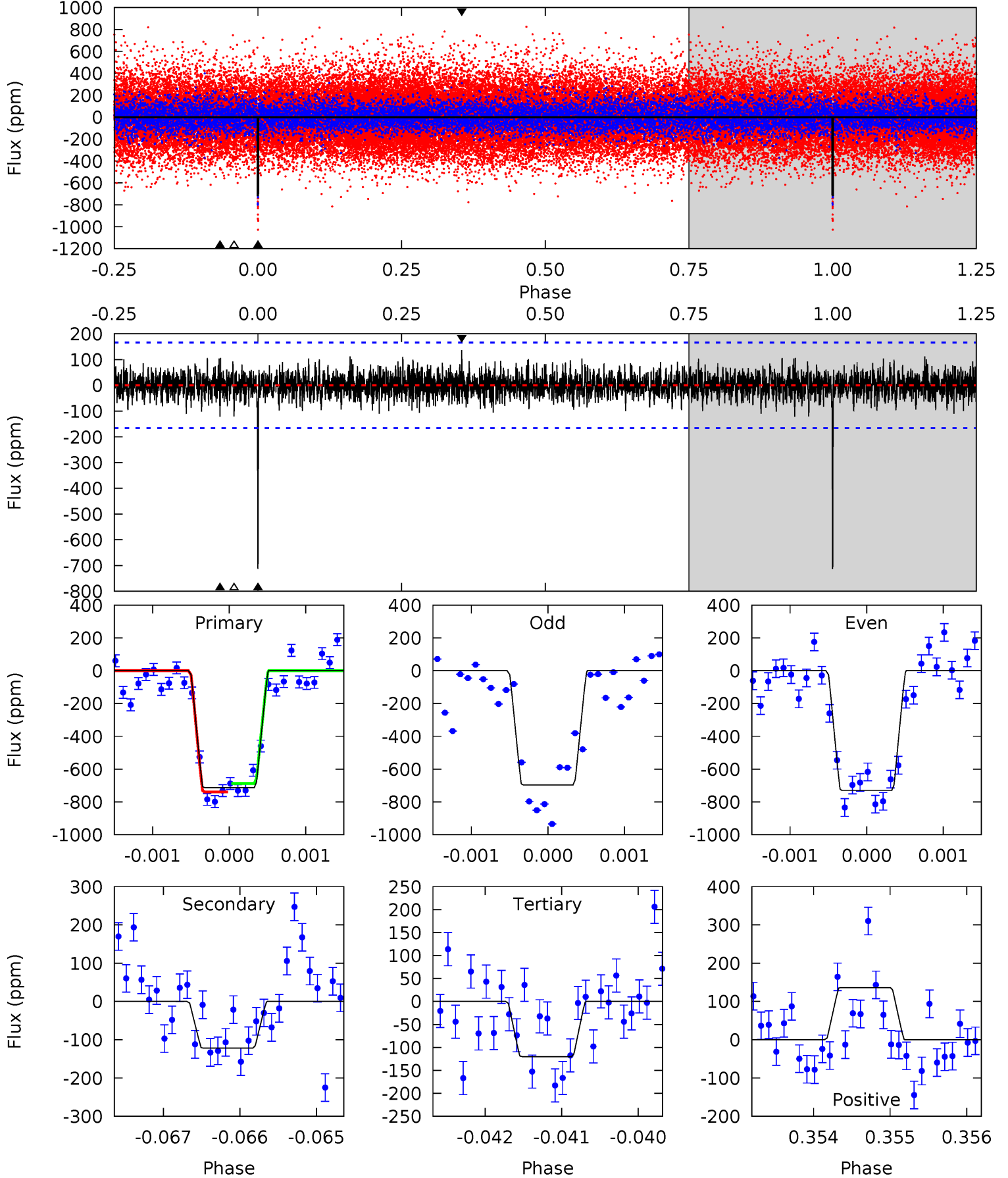
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.1	5.06	4.73	4.93	5.41	3.23	1.28	21.4	21.2	0.33	0.13	0.06	1.03	0.16	1.33



Alt Model-Shift Uniqueness Test

006587002-03, P = 122.080641 Days, E = 32.943004 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.3	3.98	3.92	4.46	5.43	3.26	1.11	19.4	18.9	0.06	-0.47	0.54	0.99	0.16	0.83



Stellar Parameters For KIC 006587002

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5132^{+102}_{-102}	$4.571^{+0.032}_{-0.052}$	$-0.060^{+0.150}_{-0.150}$	$0.770^{+0.054}_{-0.040}$	$0.805^{+0.045}_{-0.045}$	$2.482^{+0.314}_{-0.406}$
	+2%/-2%	+1%/-1%	+250%/-250%	+7%/-5%	+6%/-6%	+13%/-16%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 006587002-03 / KOI 0612.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-142 ± 28	$2.59^{+0.36}_{-0.33}$	417^{+11}_{-12}	3598^{+206}_{-171}	2324^{+876}_{-676}
Alt.	-122 ± 31	$2.33^{+0.34}_{-0.32}$	417^{+11}_{-10}	3648^{+218}_{-244}	2454^{+1029}_{-804}

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

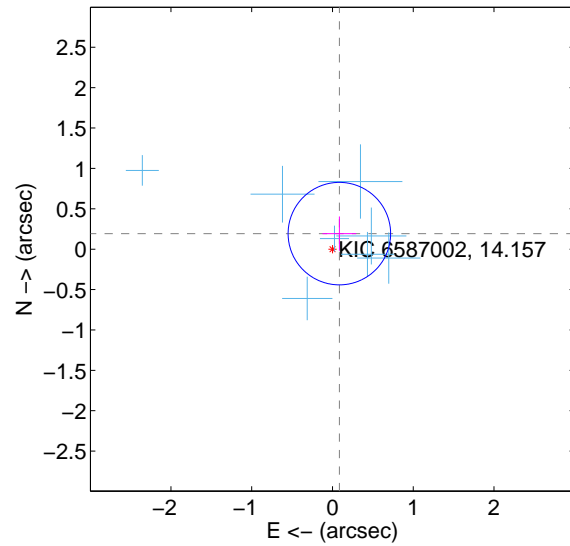
Supplemental centroid analysis for 006587002-03. Kepler magnitude: 14.16. Transit SNR 20.00

There are 8 quarters with good PRF difference image offsets

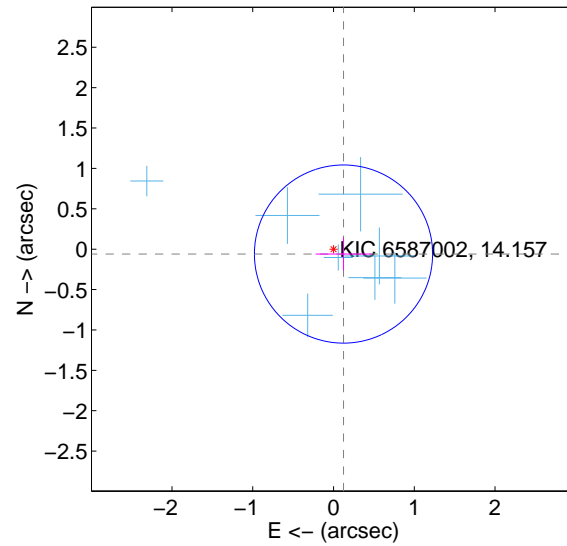
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.211 ± 0.211	1.00	-0.085 ± 0.209	0.193 ± 0.212
PRF-fit source offset from KIC position	0.138 ± 0.368	0.37	-0.124 ± 0.346	-0.060 ± 0.203
photometric centroid source offset	0.84 ± 0.55	1.51	-0.08 ± 0.54	-0.83 ± 0.55

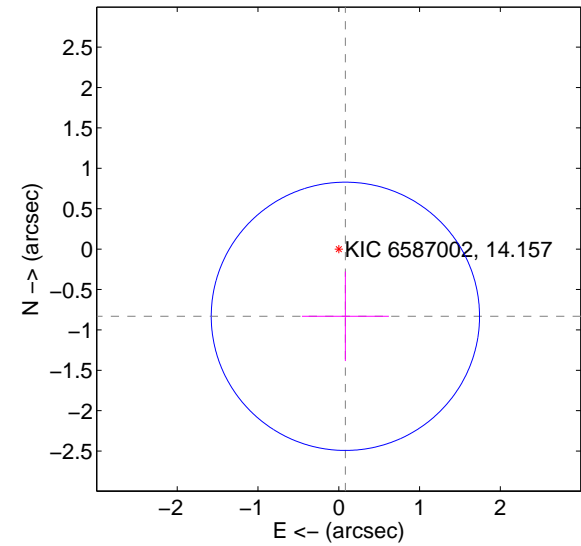
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

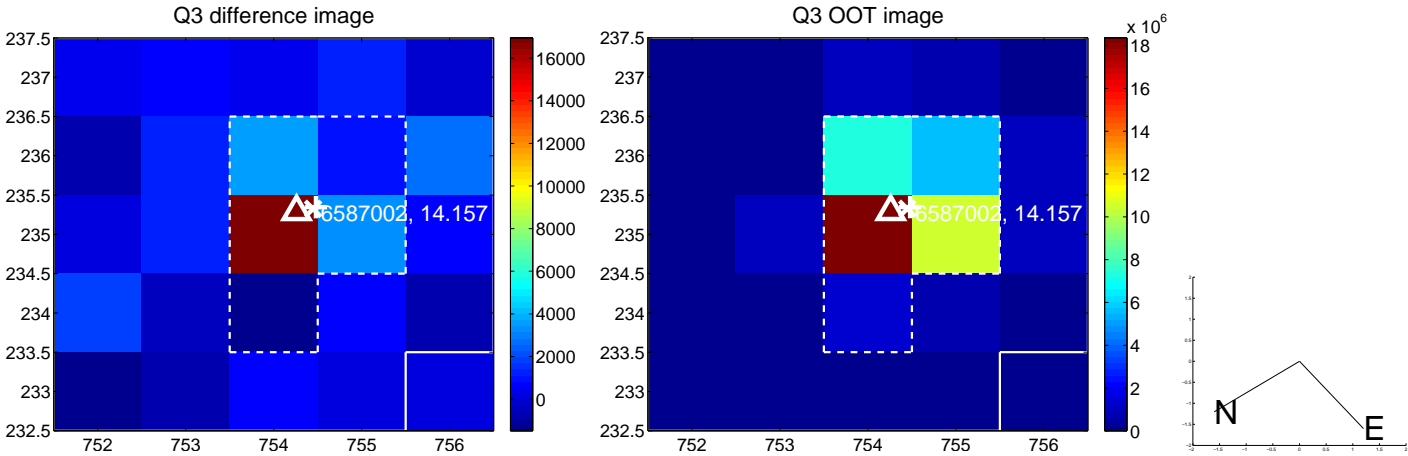
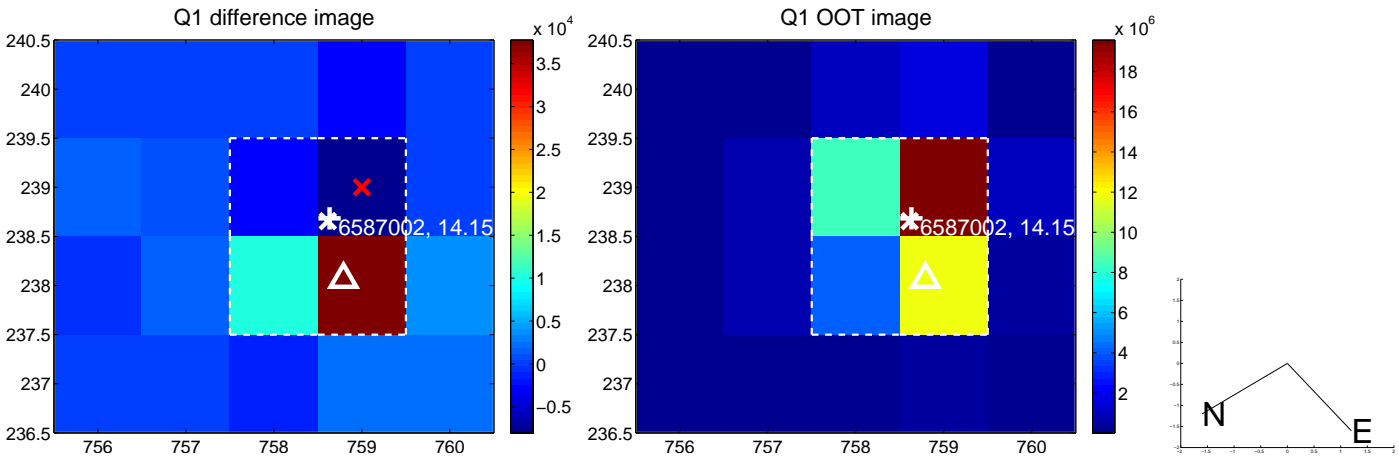


offset from photometric centroids

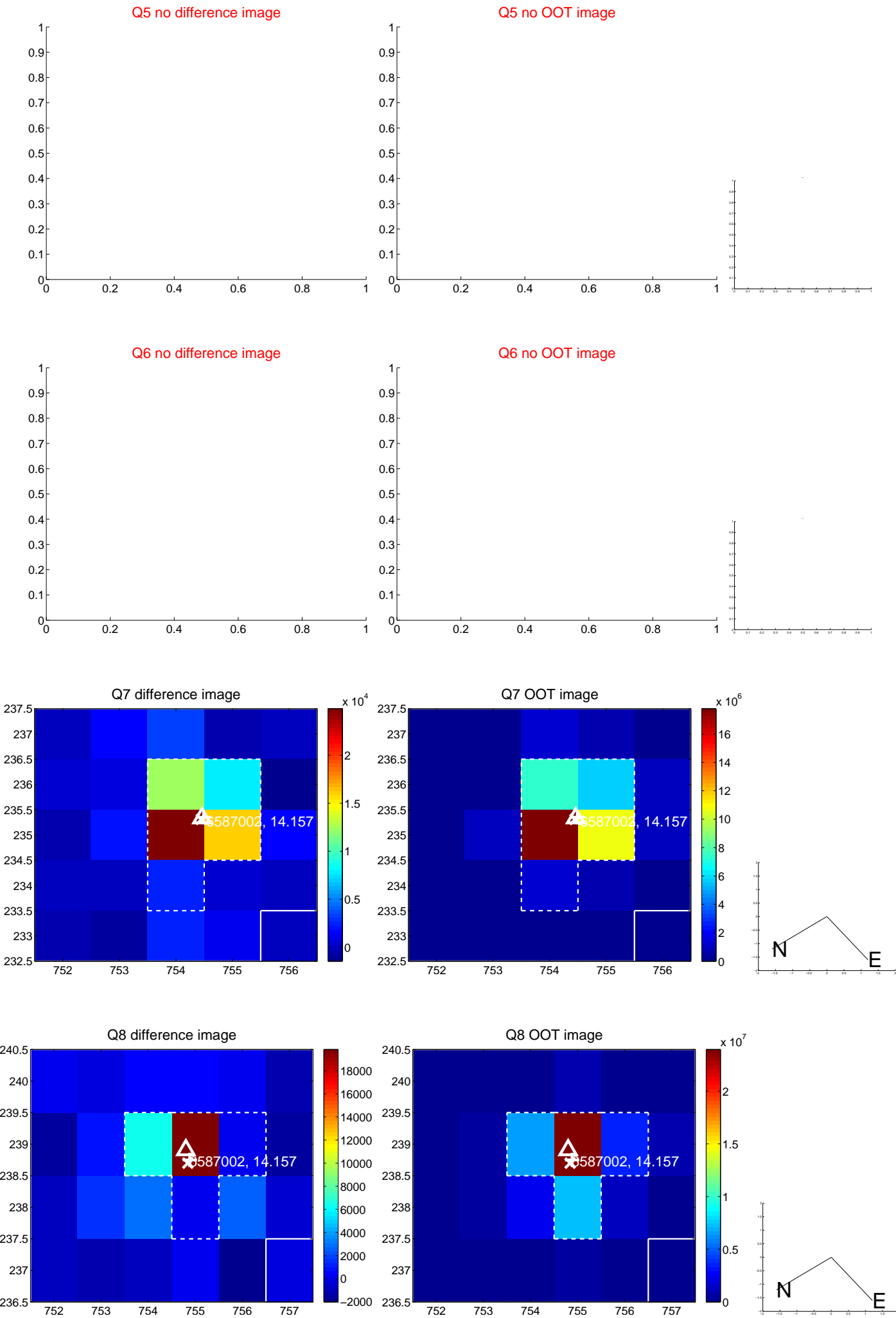


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

Q9 no difference image



Q9 no OOT image



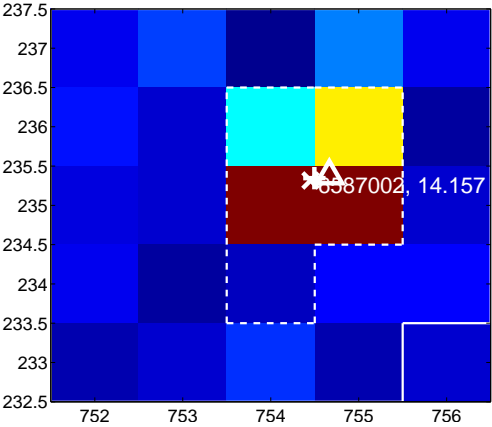
Q10 no difference image



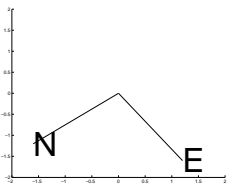
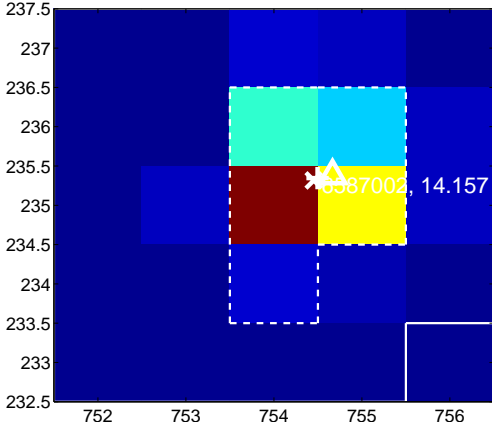
Q10 no OOT image



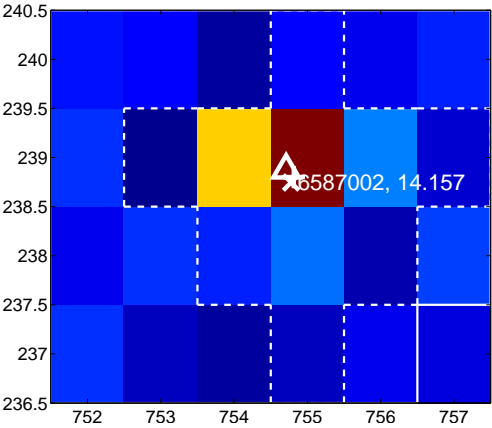
Q11 difference image



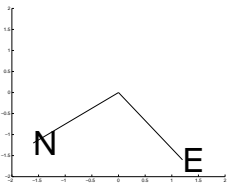
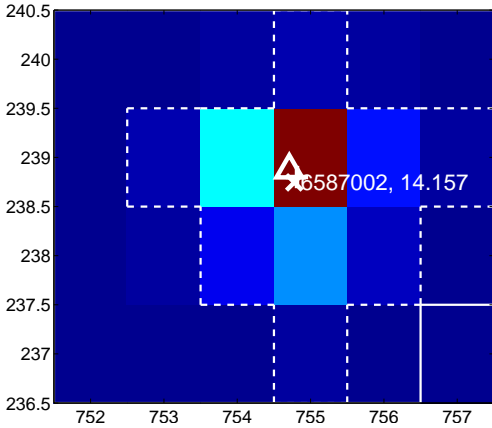
Q11 OOT image



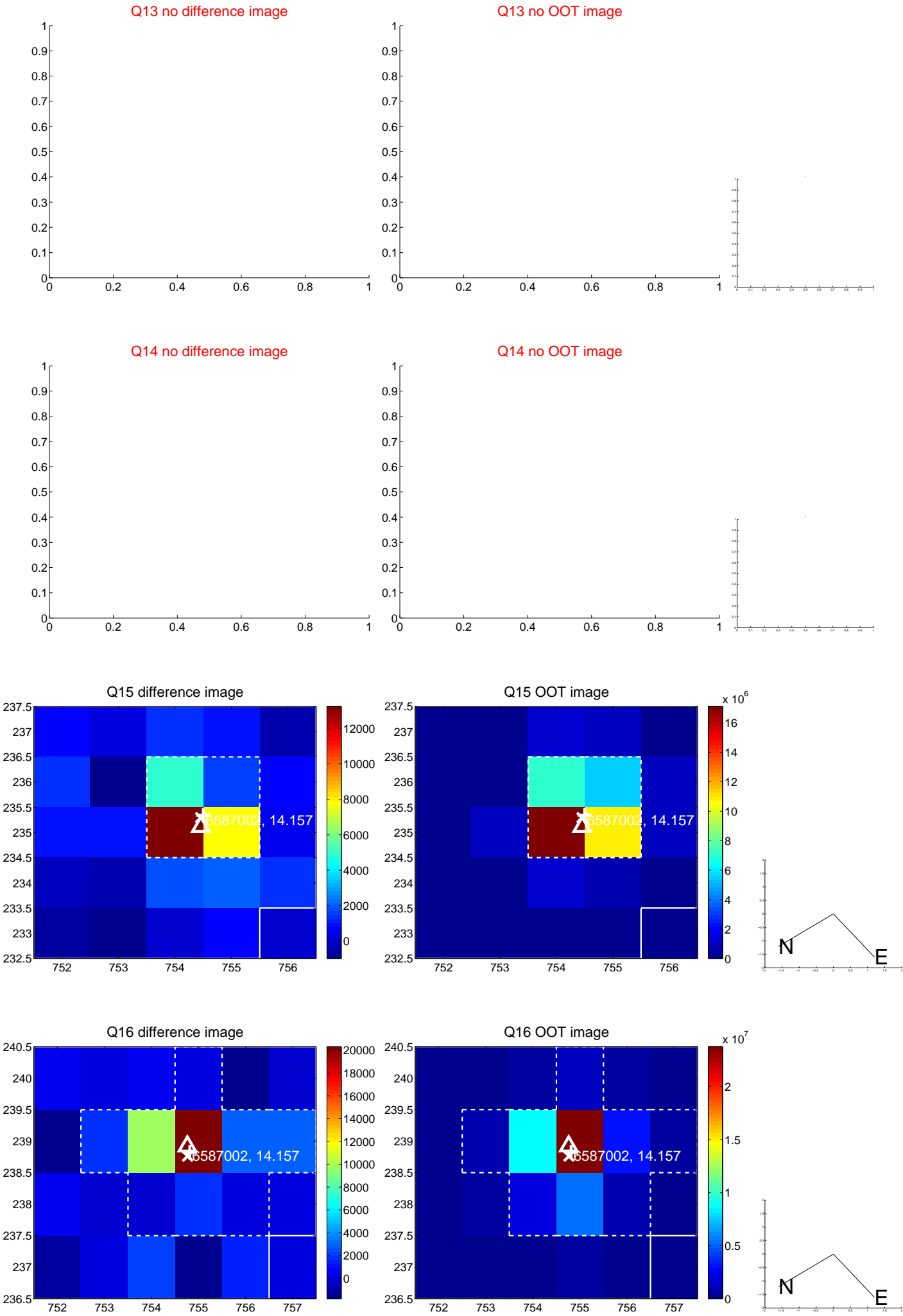
Q12 difference image



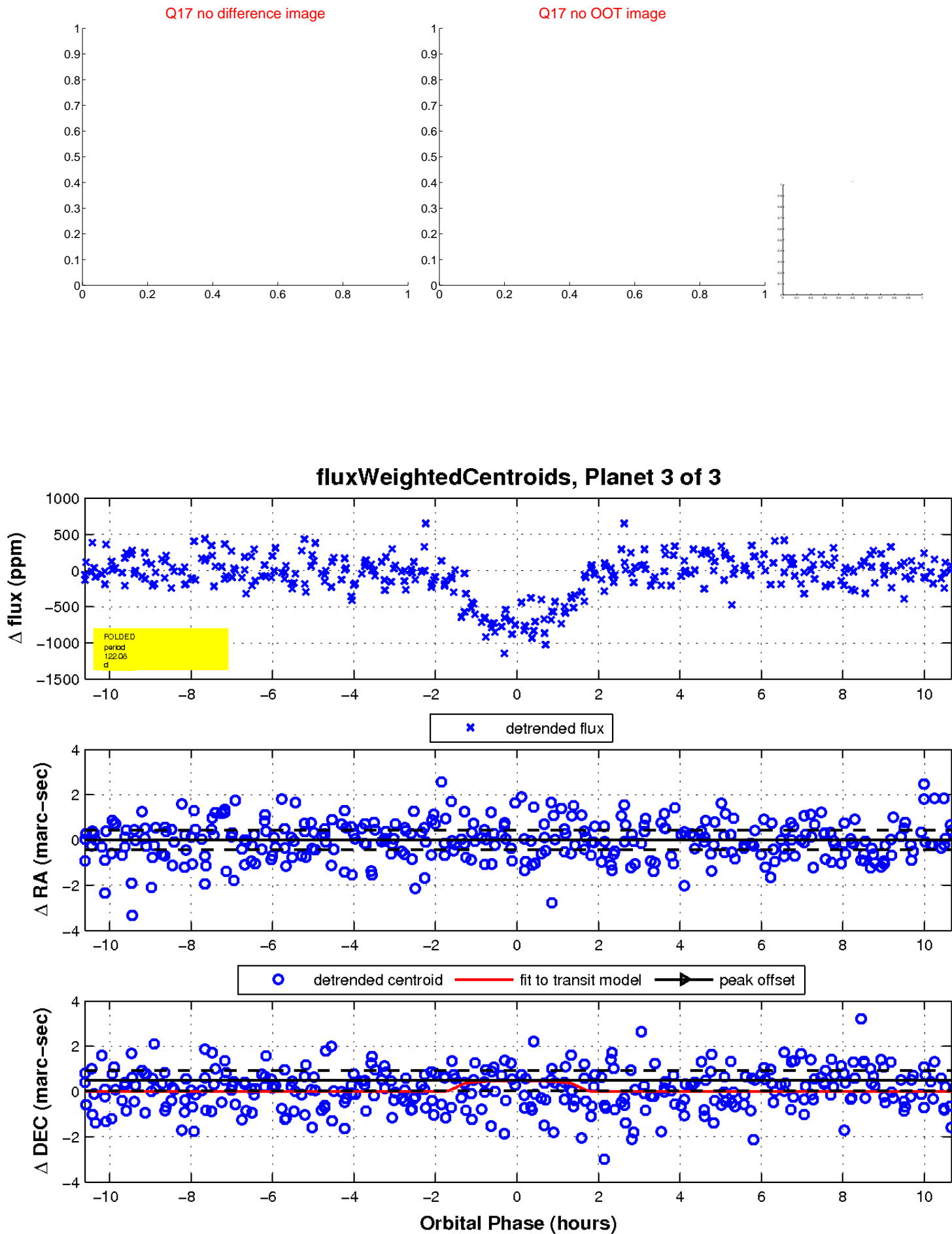
Q12 OOT image



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.



UKIRT Image

Declination

