

KIC 005217332

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})
005217332-01	OBS	No	236.538486	319.927035	702.3	2.799	12.1	6.2	1.05	6207	3.02	2.58
005217332-02	OBS	No	395.226647	522.517974	1426.1	5.118	11.1	6.0	1.05	6207	4.11	1.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005217332-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
005217332-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—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.

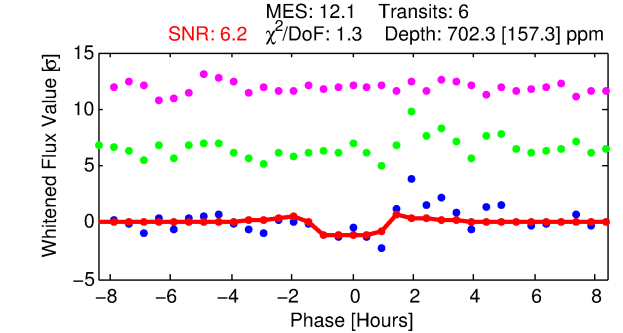
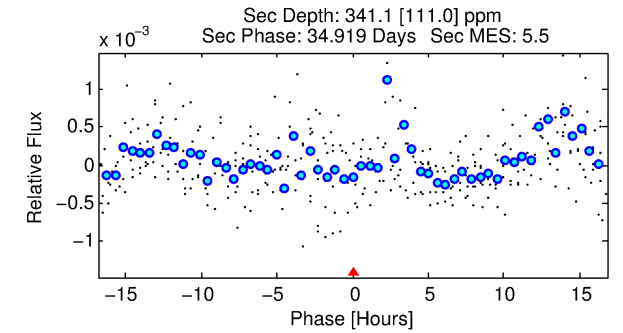
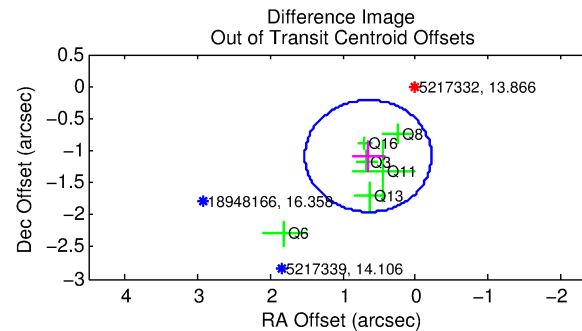
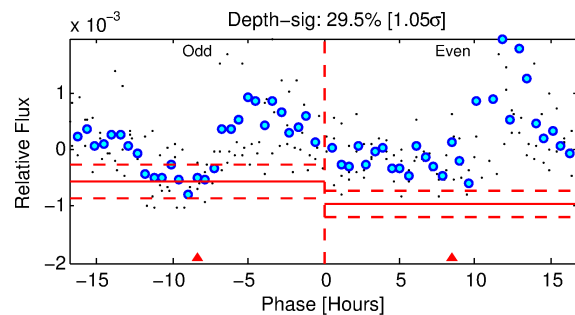
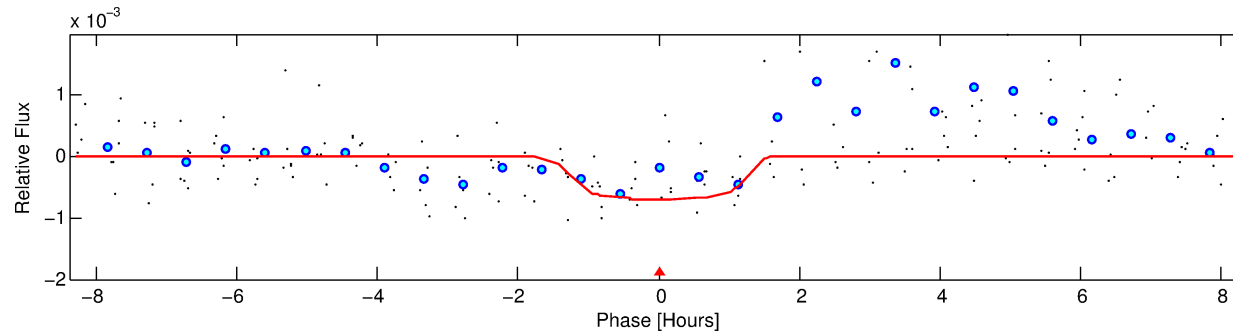
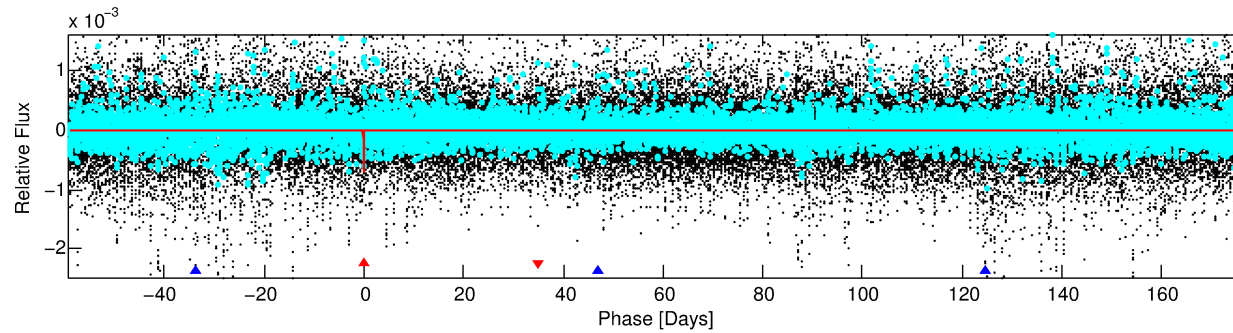
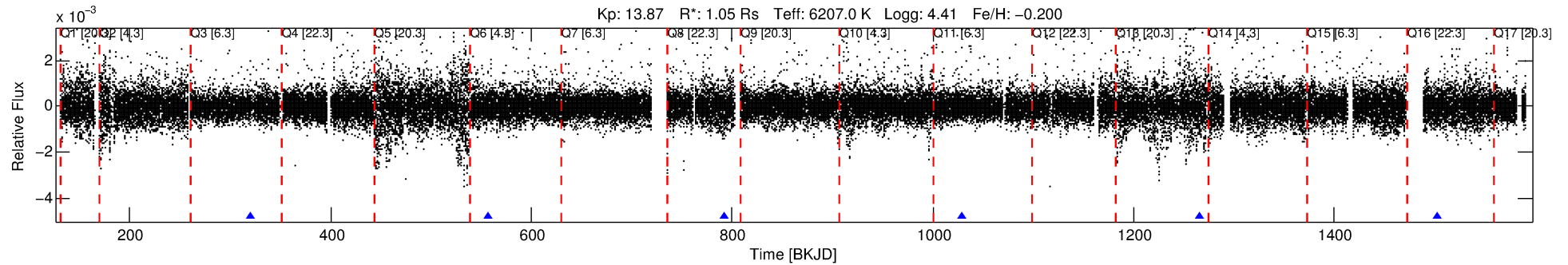
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005217332-01

No Significant Match Found

DV One-Page Summary

KIC: 5217332 Candidate: 1 of 2 Period: 236.538 d



DV Fit Results:

Period = 236.53849 [0.00288] d
Epoch = 319.9270 [0.0099] BKJD
Rp/R* = 0.0263 [0.0313]
a/R* = 458.06 [2736.55]
b = 0.74 [3.67]
Seff = 2.58 [1.02]
Teq = 323 [32] K
Rp = 3.02 [3.71] Re
a = 0.7546 [0.1954] AU
Ag = 11729.85 [28483.69] [0.41 σ]
Teffp = 5200 [3124] K [1.56 σ]

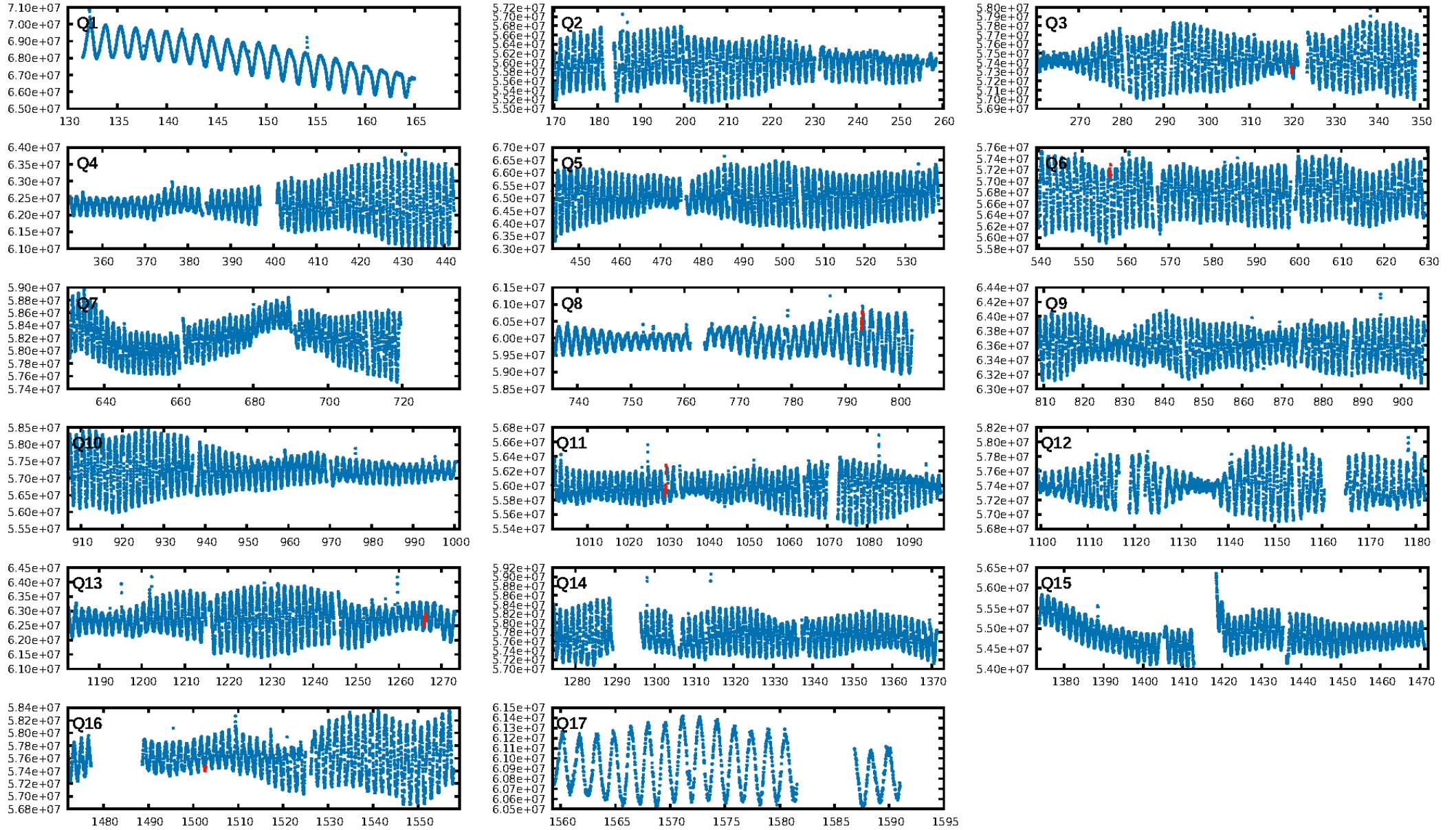
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [652.91 σ]
ModelChiSquare2-sig: 2.0%
ModelChiSquareGof-sig: 65.9%
Bootstrap-pfa: 3.33e-11
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 0.4684
Centroid-sig: 1.0%
Centroid-so: 3.797 arcsec [3.36 σ]
OotOffset-rm: 1.265 arcsec [4.36 σ]
KicOffset-rm: 3.460 arcsec [28.76 σ]
OotOffset-st: 1/2/2/1 [6]
KicOffset-st: 1/2/2/1 [6]
DiffImageQuality-fgm: 0.67 [4/6]
DiffImageOverlap-fno: 1.00 [6/6]

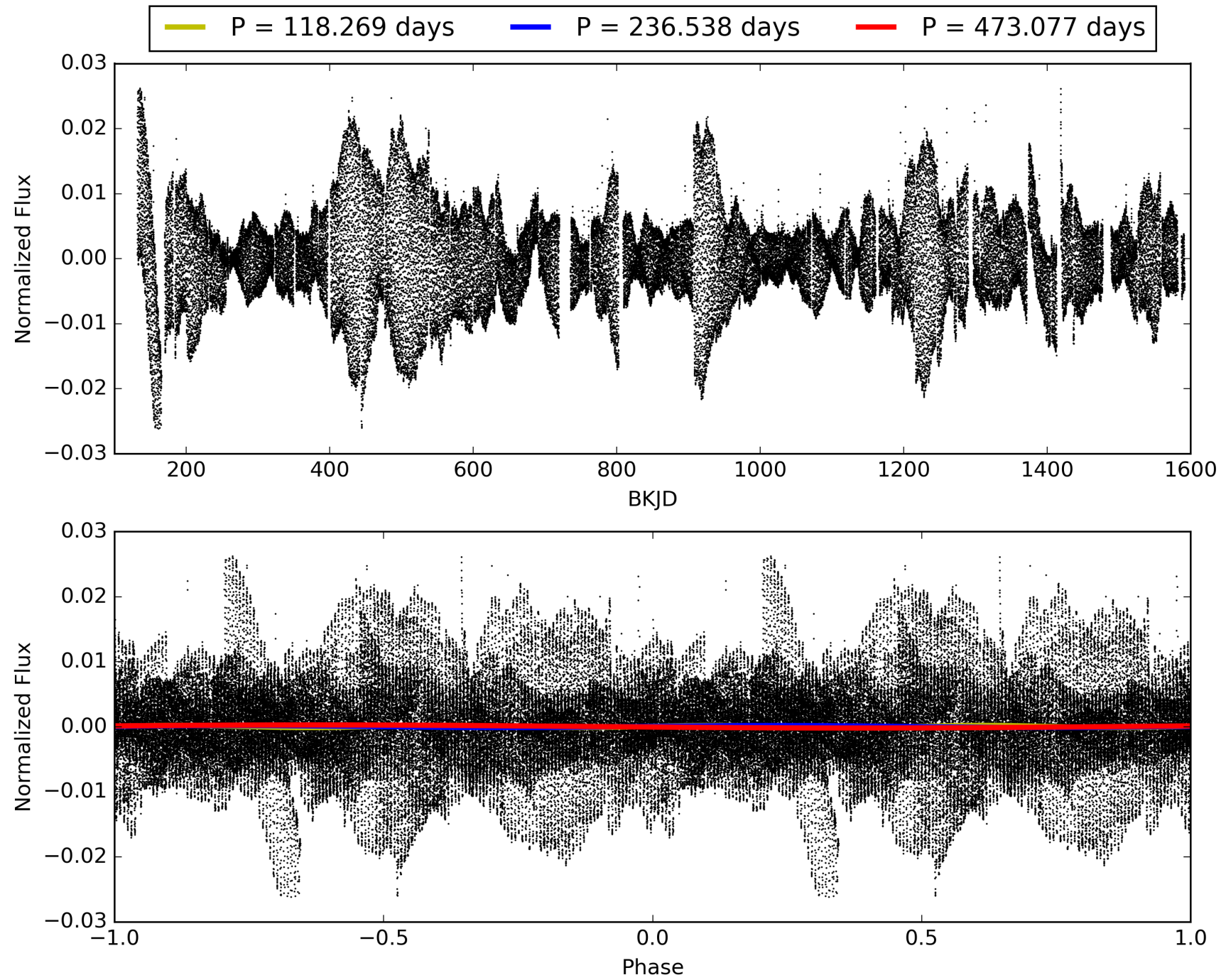
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:29:04 Z

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

TCE 005217332-01, PDC Light Curves

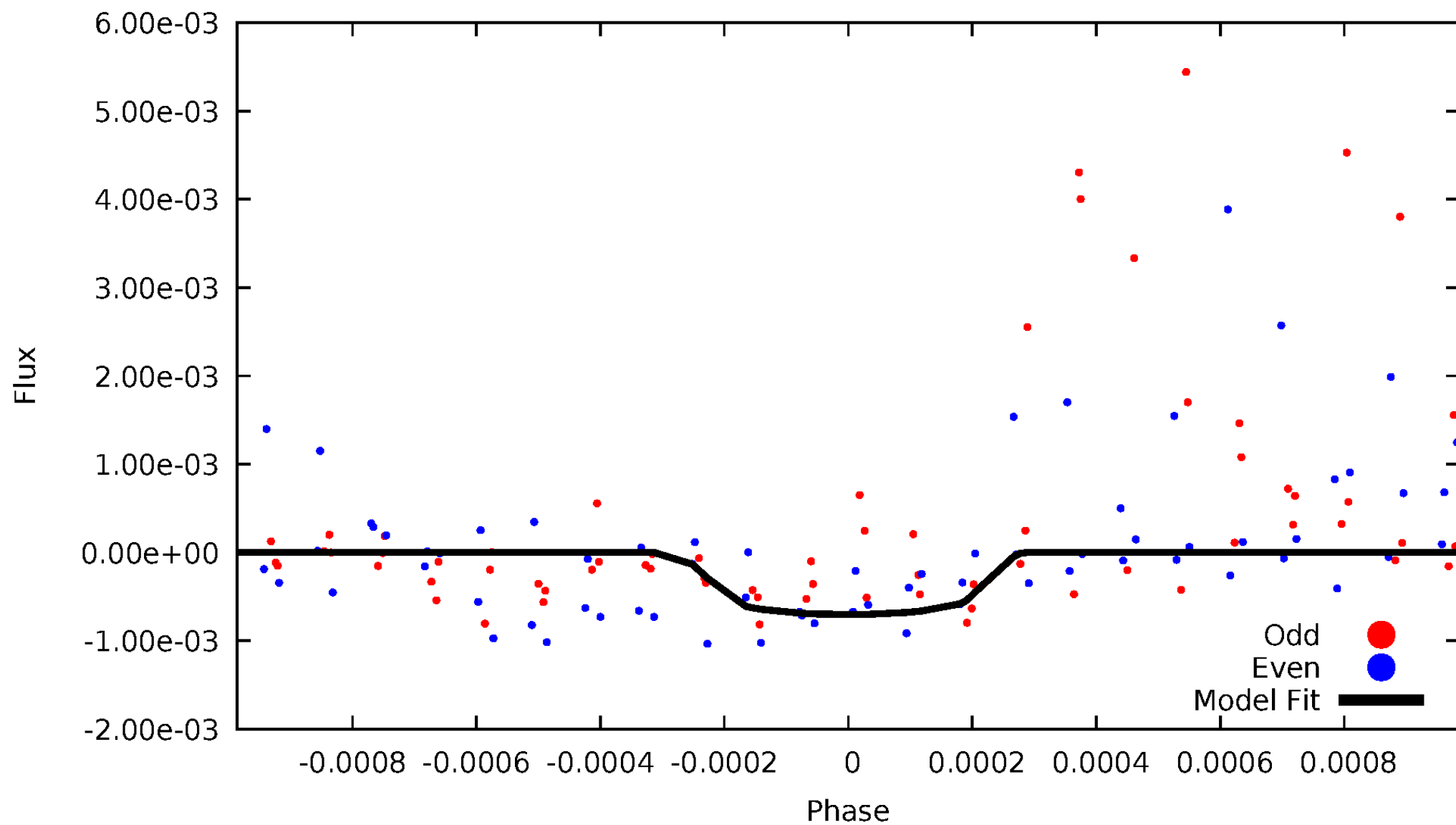


TCE 005217332-01



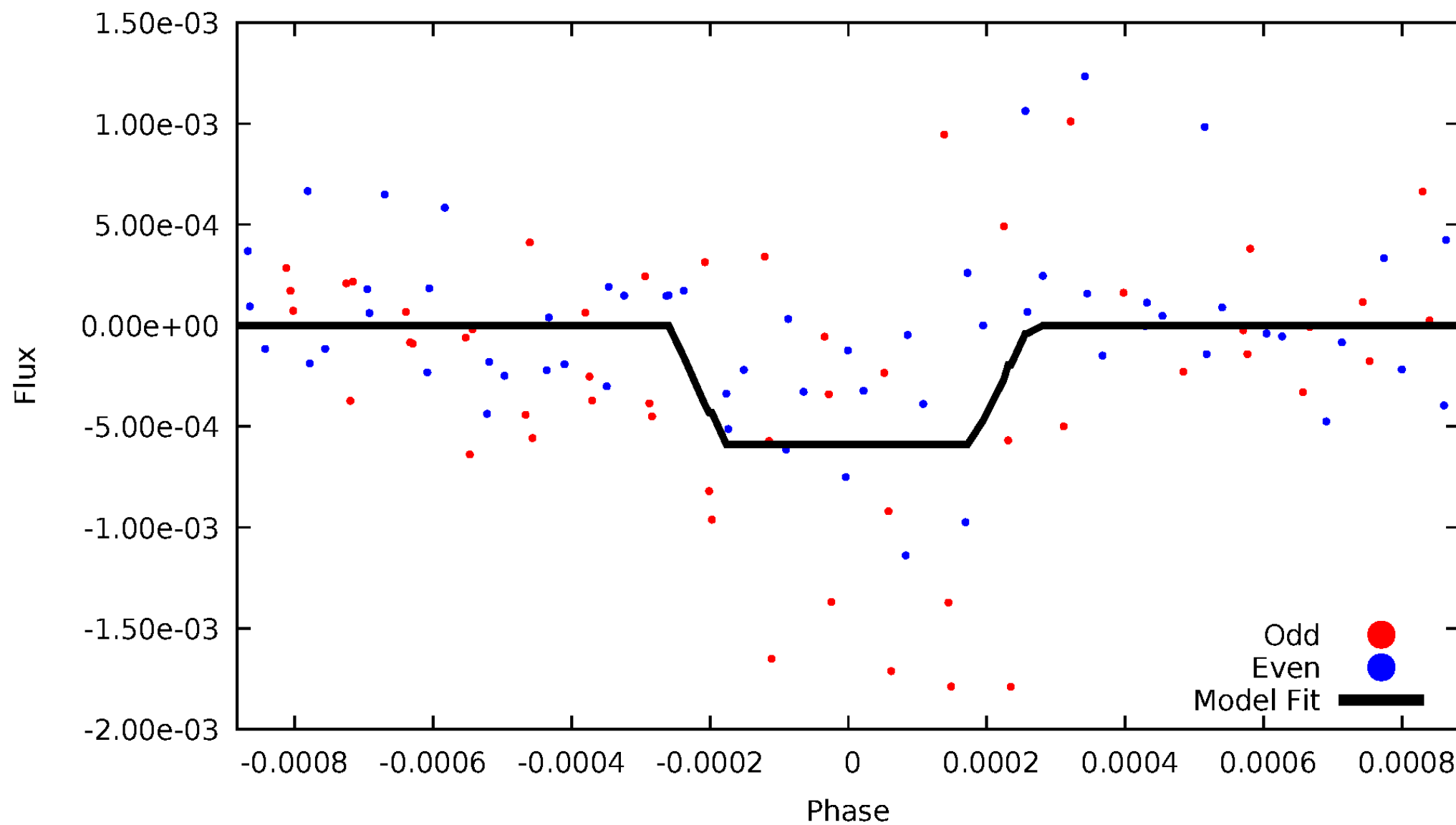
DV Odd/Even

TCE 005217332-01



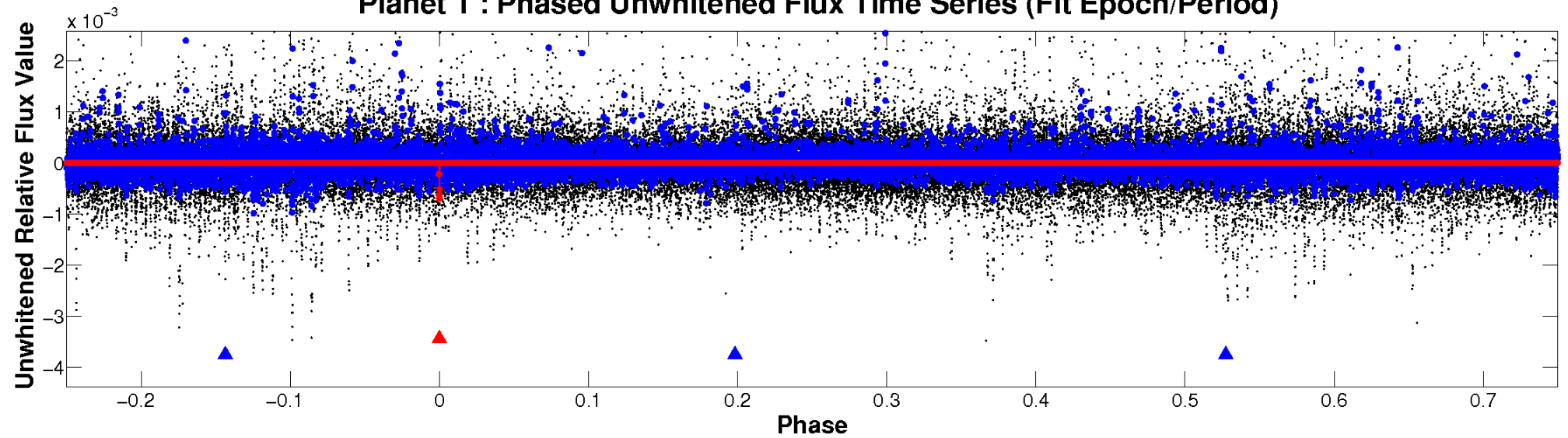
ALT Odd/Even

TCE 005217332-01

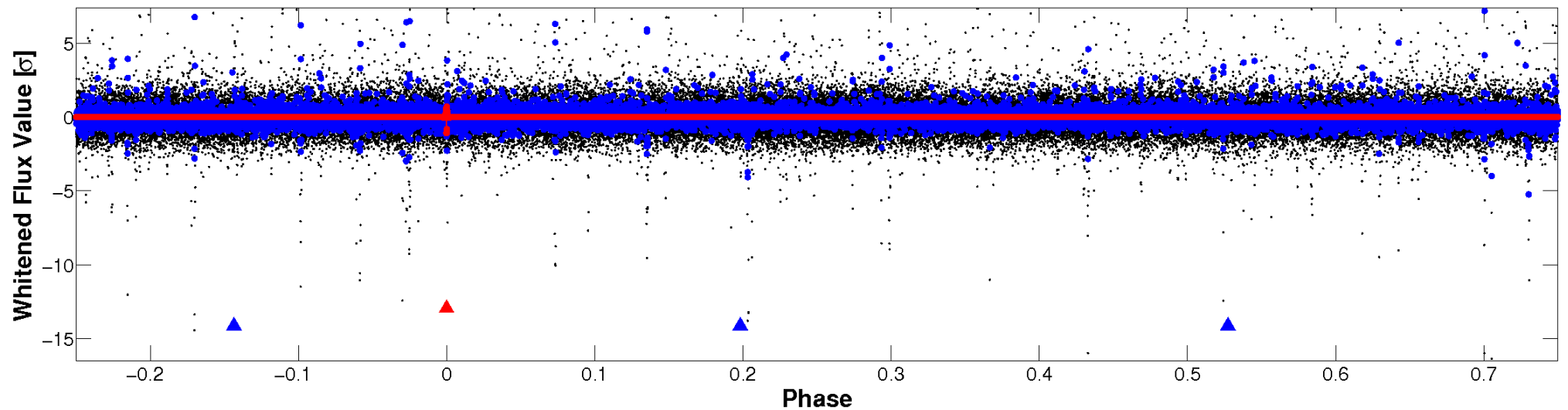


Non-Whitened Vs. Whitened Light Curve

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

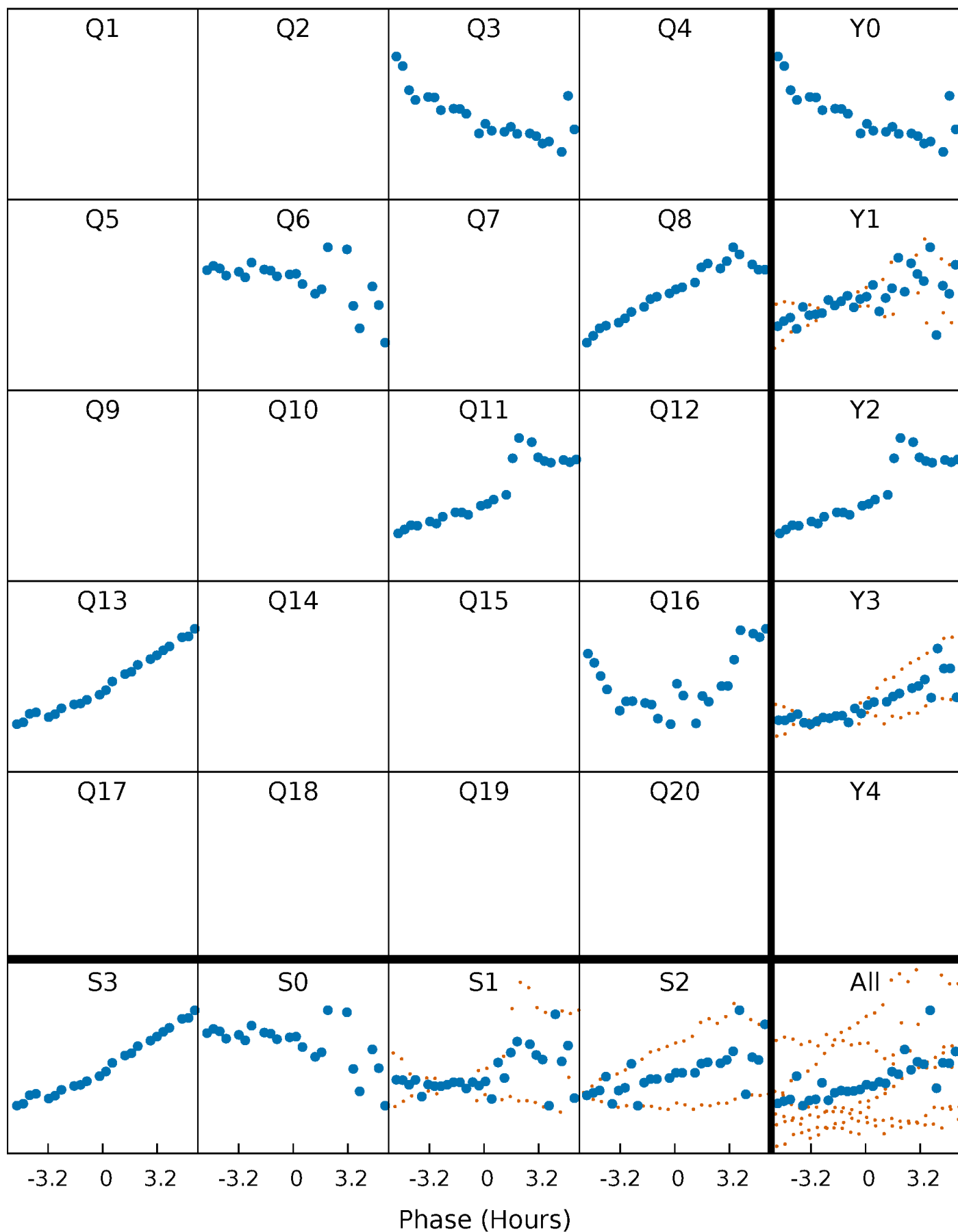


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



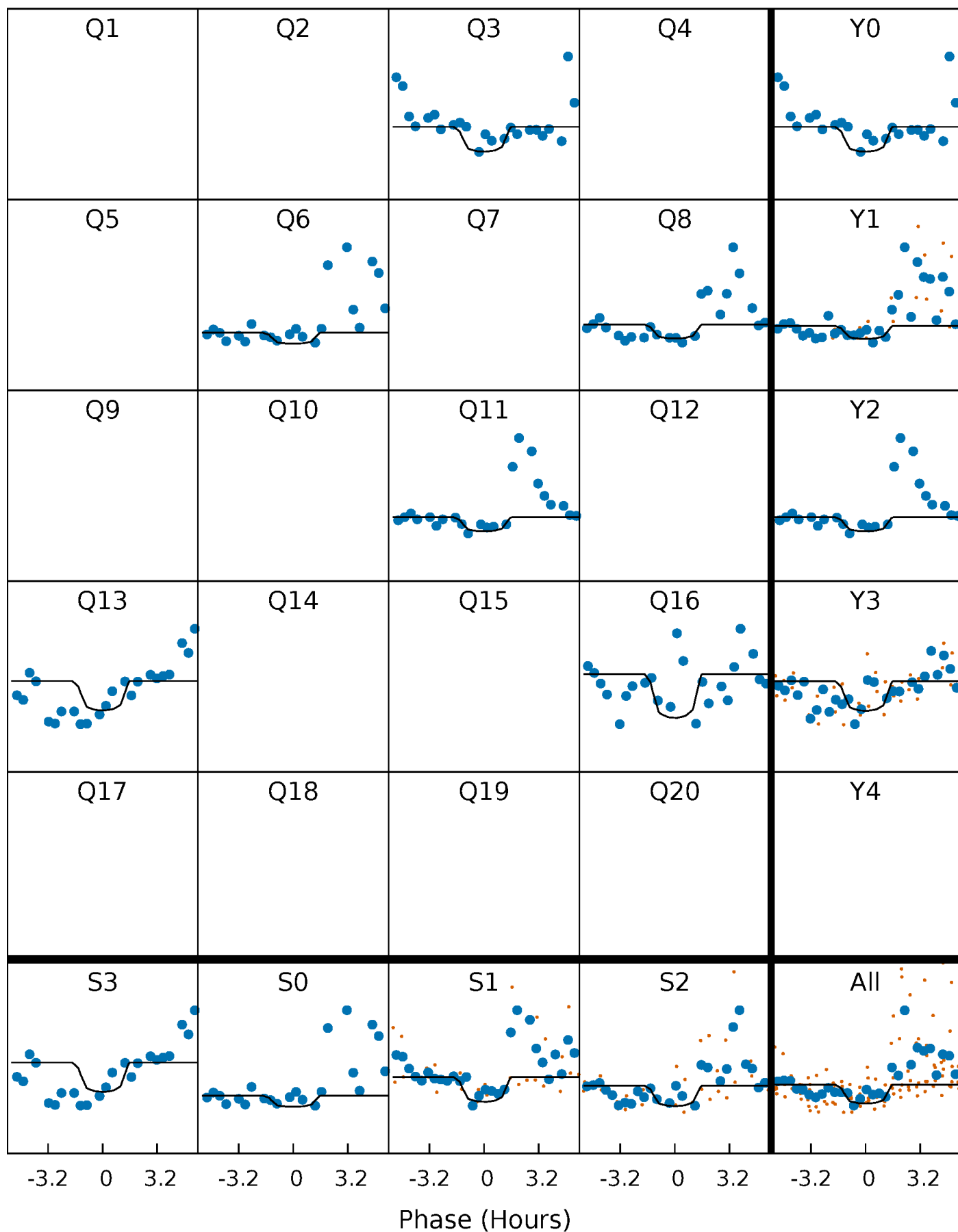
PDC Quarter-Phased Transit Curves

TCE 005217332-01 P=236.538486 Days $T_0=319.927035$ (BKJD)



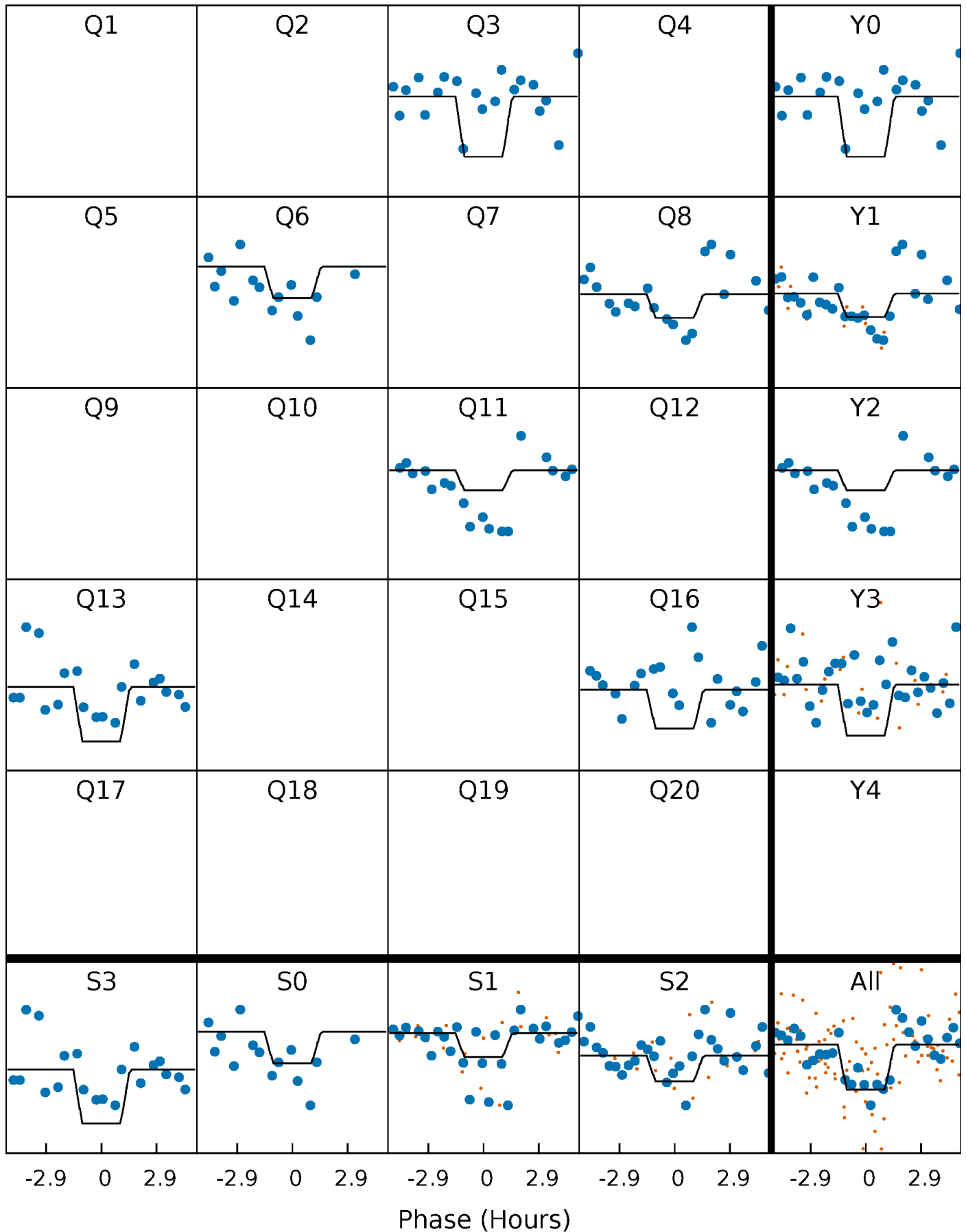
DV Quarter-Phased Transit Curves

TCE 005217332-01 P=236.538486 Days $T_0=319.927035$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

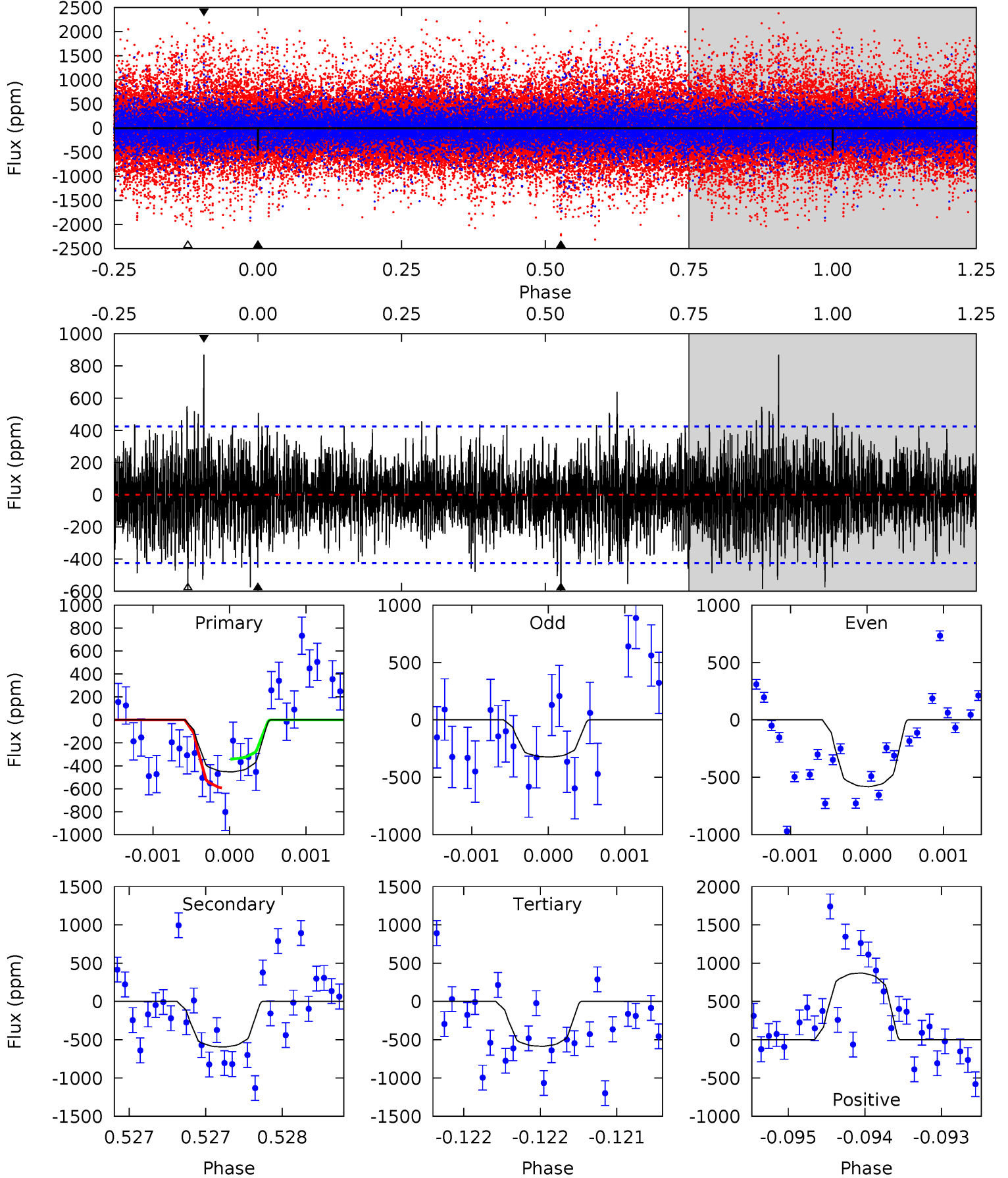
TCE 005217332-01 P=236.528156 Days $T_0=319.950315$ (BKJD)



DV Model-Shift Uniqueness Test

005217332-01, P = 236.538486 Days, E = 83.388549 Days

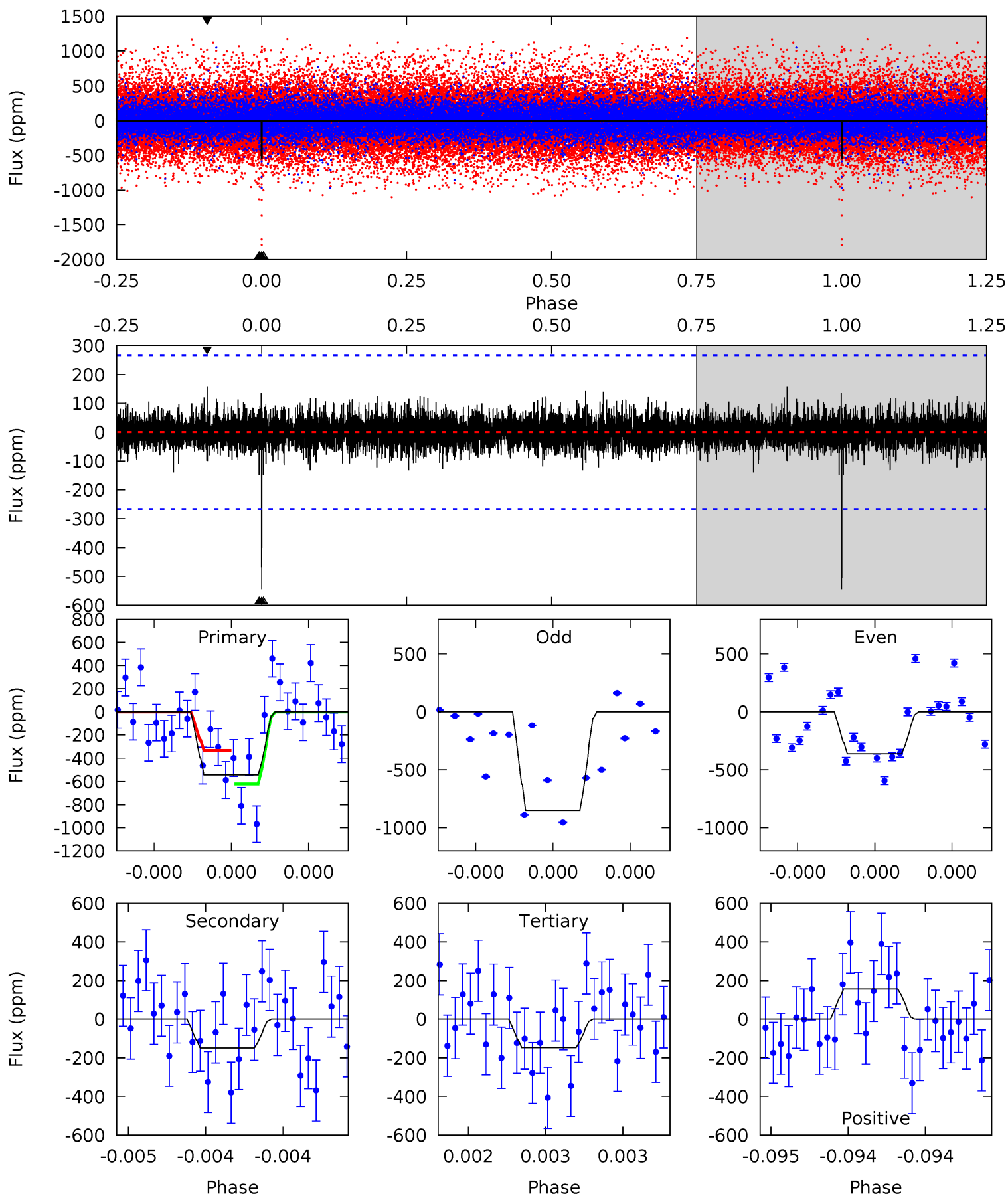
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.94	7.79	7.67	11.4	5.56	3.46	2.02	-1.74	-5.47	0.12	-3.62	1.63	0.99	0.59	1.64



Alt Model-Shift Uniqueness Test

005217332-01, P = 236.528156 Days, E = 83.422159 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	3.10	3.08	3.26	5.57	3.48	0.72	8.28	8.10	0.03	-0.15	4.90	1.10	0.22	2.92



Stellar Parameters For KIC 005217332

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6207^{+169}_{-206}	$4.405^{+0.087}_{-0.203}$	$-0.200^{+0.250}_{-0.300}$	$1.051^{+0.326}_{-0.140}$	$1.018^{+0.158}_{-0.115}$	$1.237^{+0.473}_{-0.663}$
	+3%/-3%	+2%/-5%	+125%/-150%	+31%/-13%	+16%/-11%	+38%/-54%
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 005217332-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-595 ± 76	$4.19^{+3.39}_{-2.78}$	459^{+34}_{-24}	5285^{+4181}_{-1130}	10771^{+79735}_{-7515}
Alt.	-149 ± 48	$3.88^{+3.55}_{-2.51}$	457^{+34}_{-25}	4089^{+1937}_{-845}	3117^{+16237}_{-2370}

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 $A_{obs} \gg 1.0$

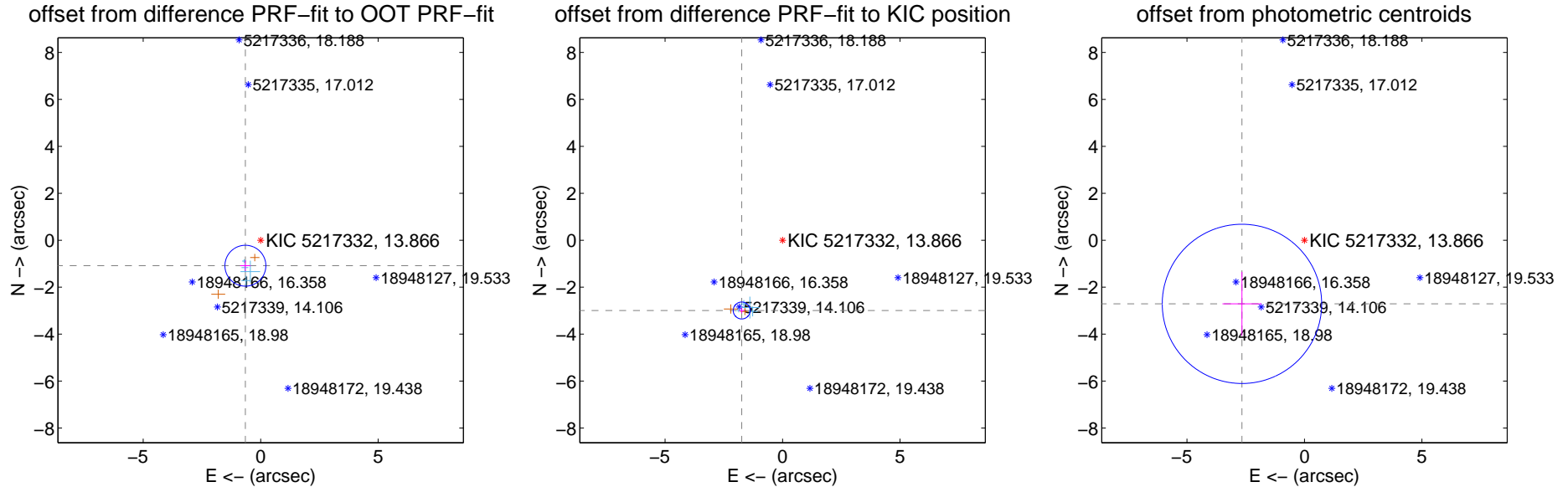
DV Centroid Data

Supplemental centroid analysis for 005217332-01. Kepler magnitude: 13.87. Transit SNR 6.16

There are 4 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 2.40 arcsec so the offset from difference PRF-fit to OOT-PRF-fit may be invalid.

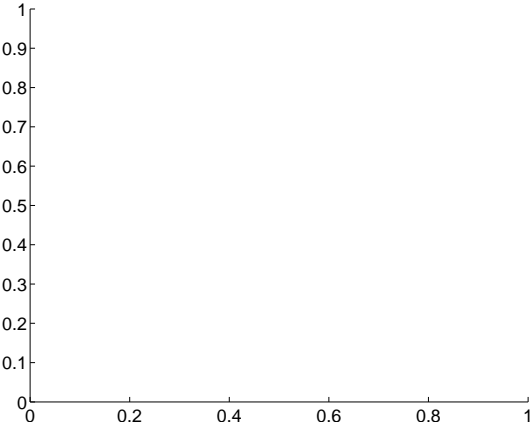
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.265 ± 0.290	4.36	0.650 ± 0.221	-1.085 ± 0.224
PRF-fit source offset from KIC position	3.460 ± 0.120	28.76	1.737 ± 0.122	-2.992 ± 0.120
photometric centroid source offset	3.80 ± 1.13	3.36	2.66 ± 0.83	-2.71 ± 1.36



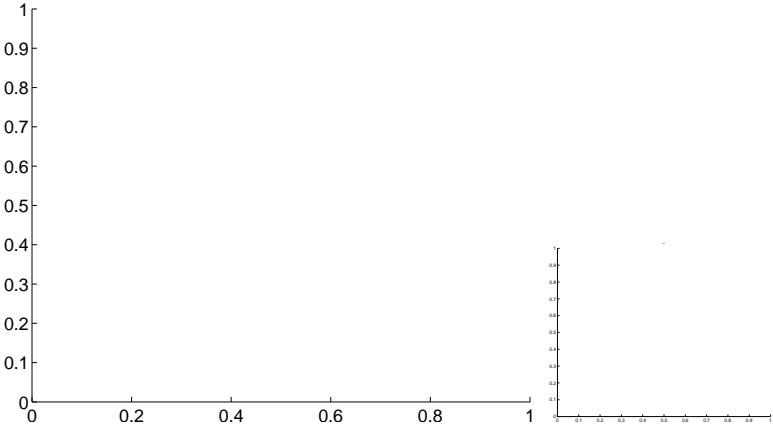
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

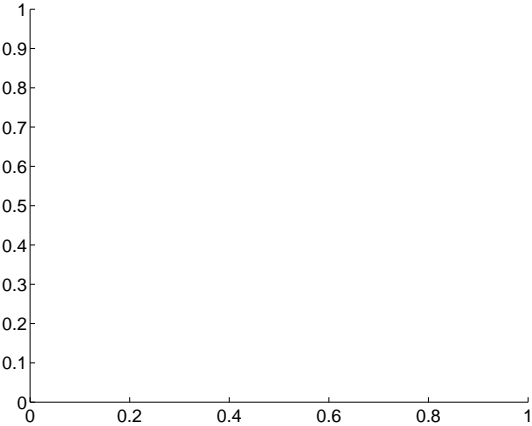
Q1 no difference image



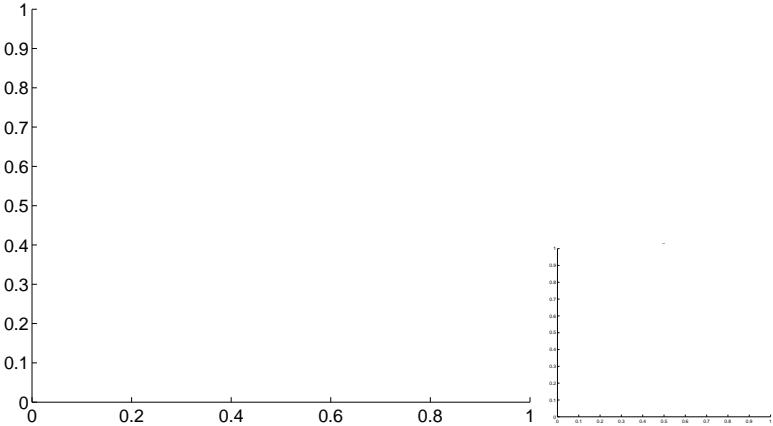
Q1 no OOT image



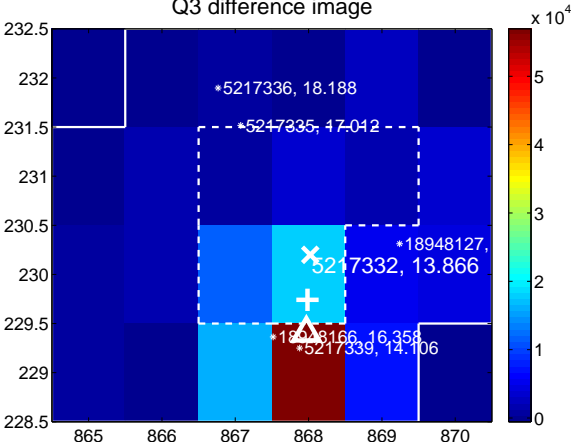
Q2 no difference image



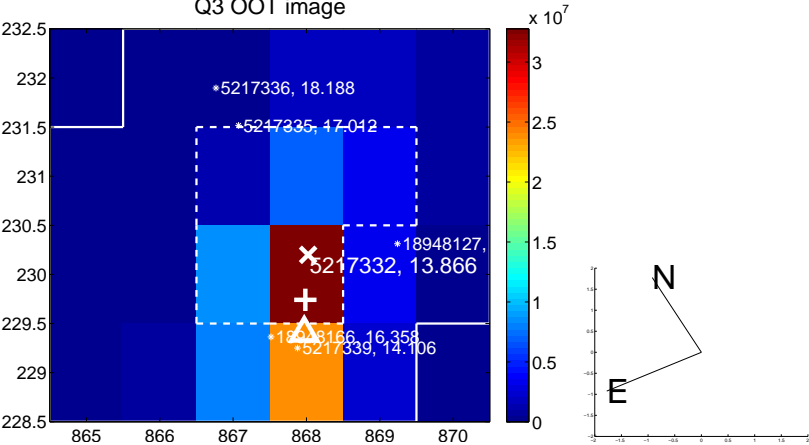
Q2 no OOT image



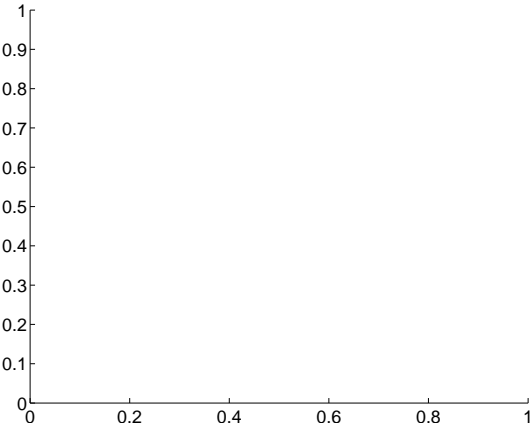
Q3 difference image



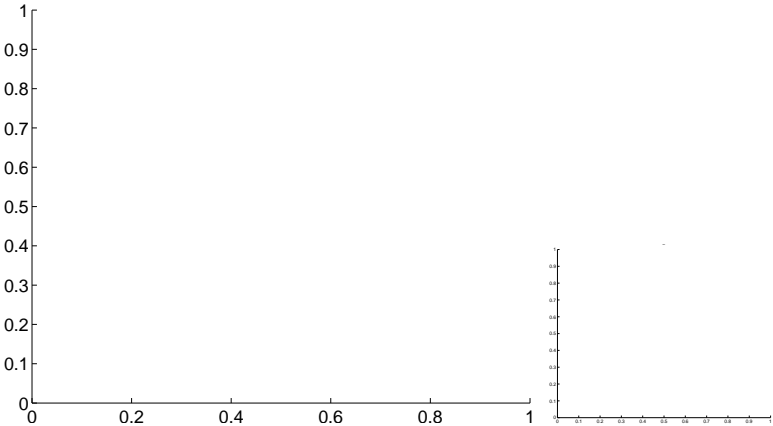
Q3 OOT image



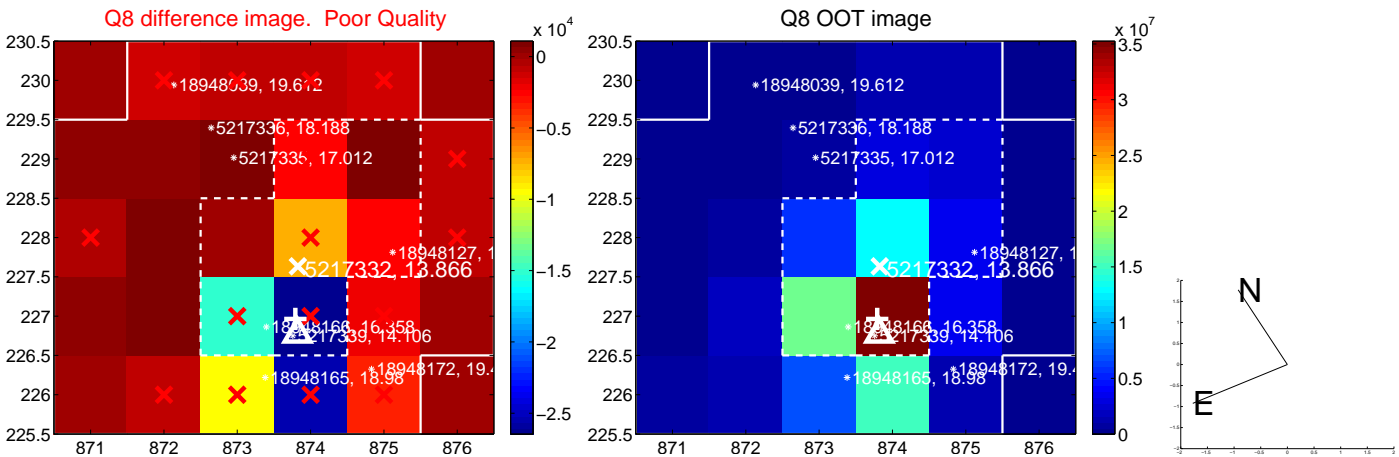
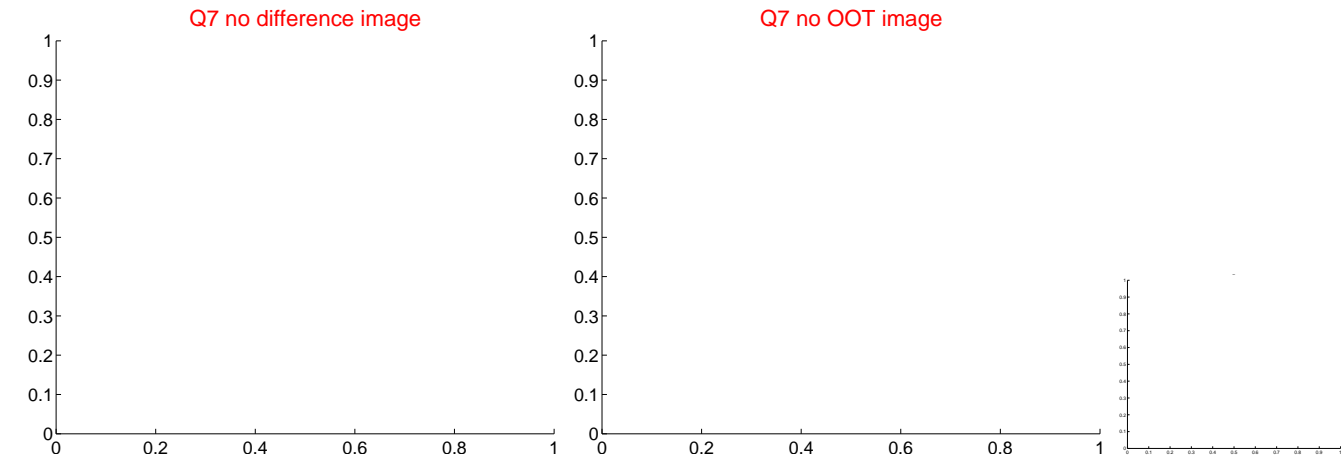
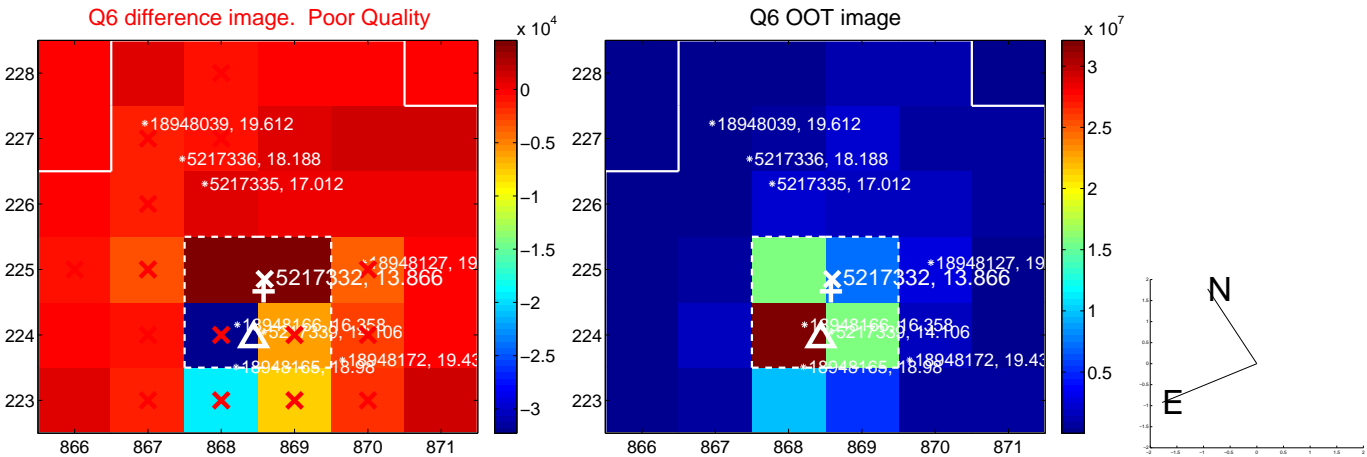
Q4 no difference image



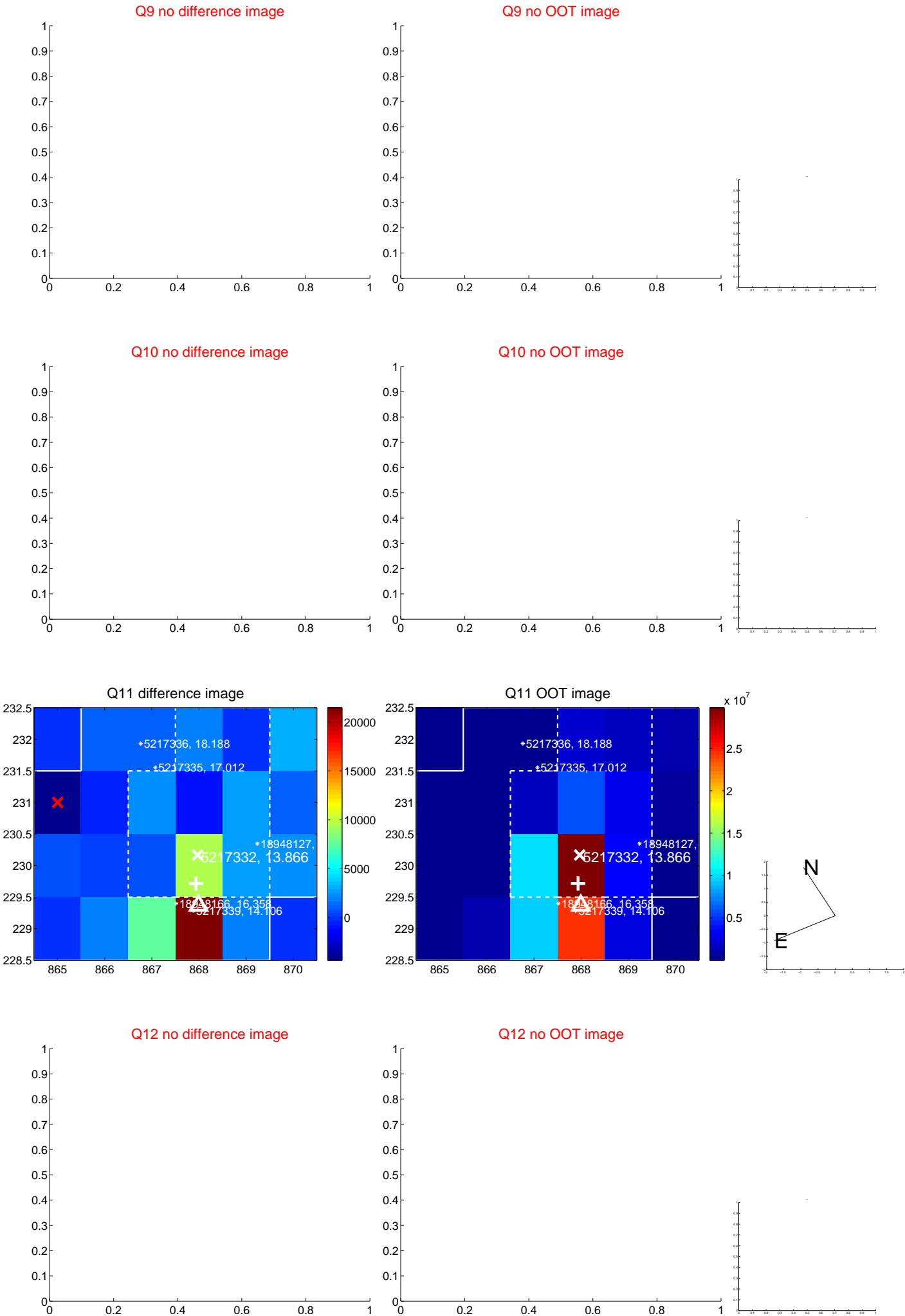
Q4 no OOT image



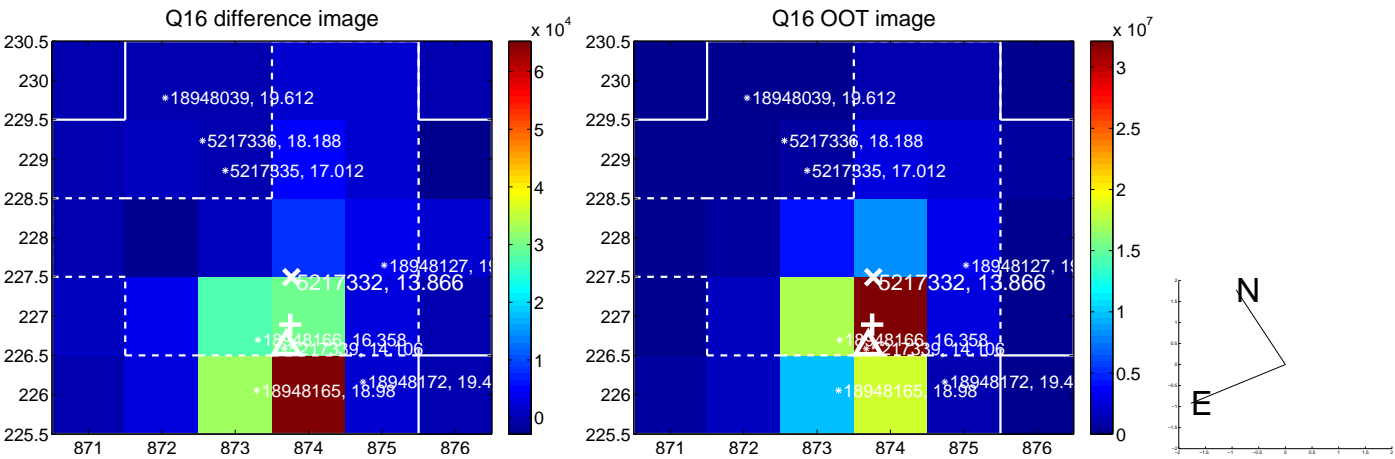
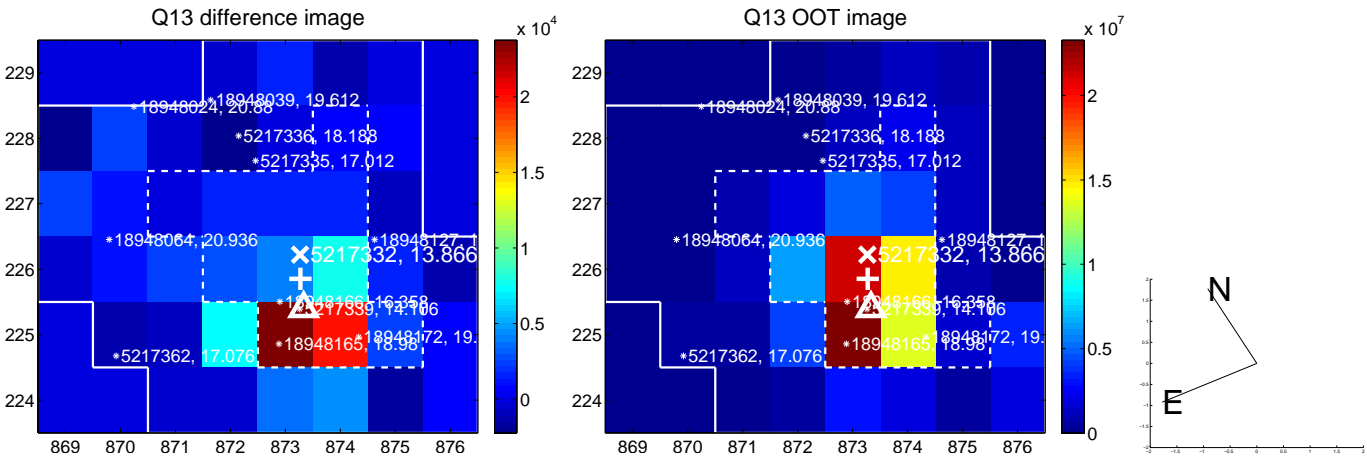
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



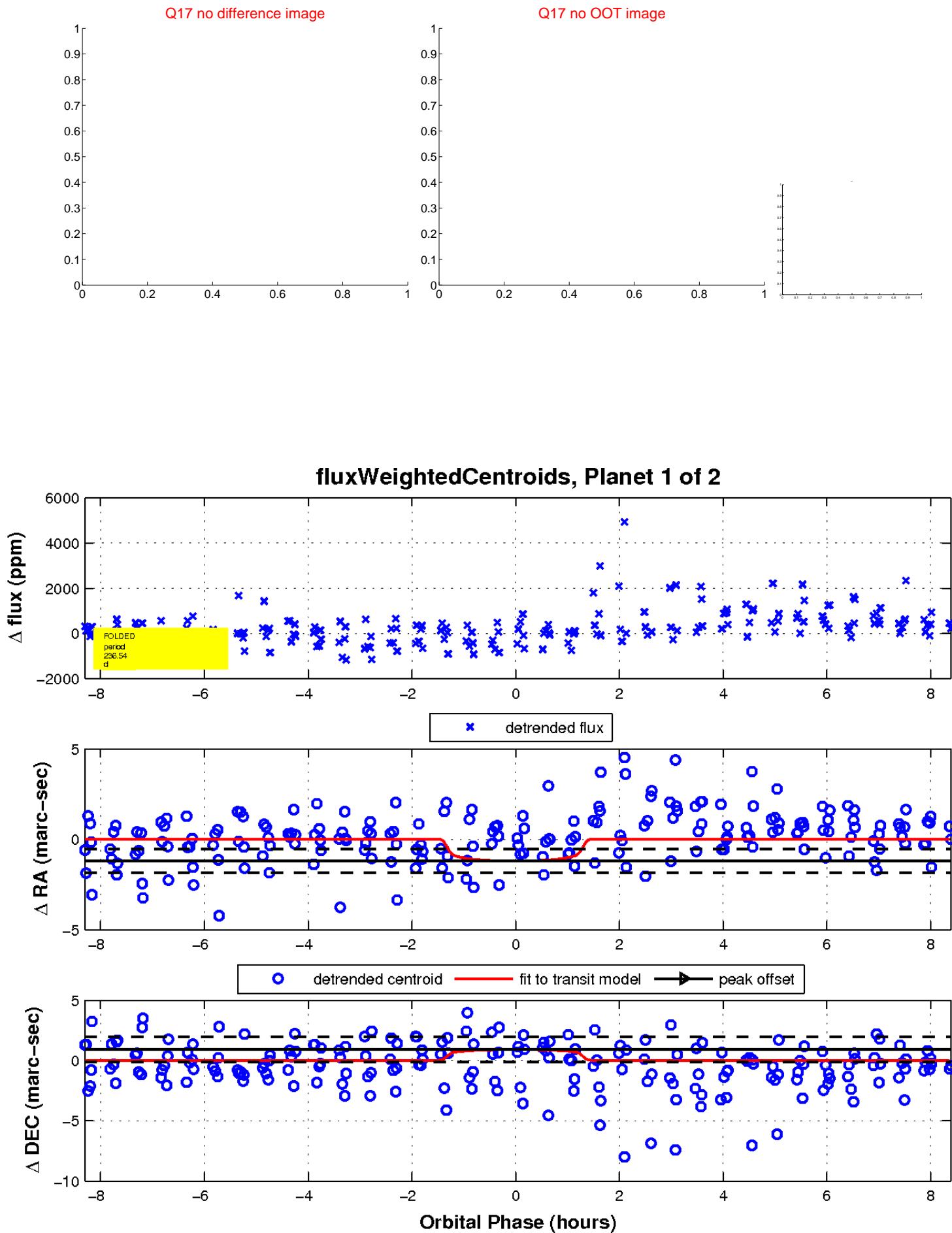
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

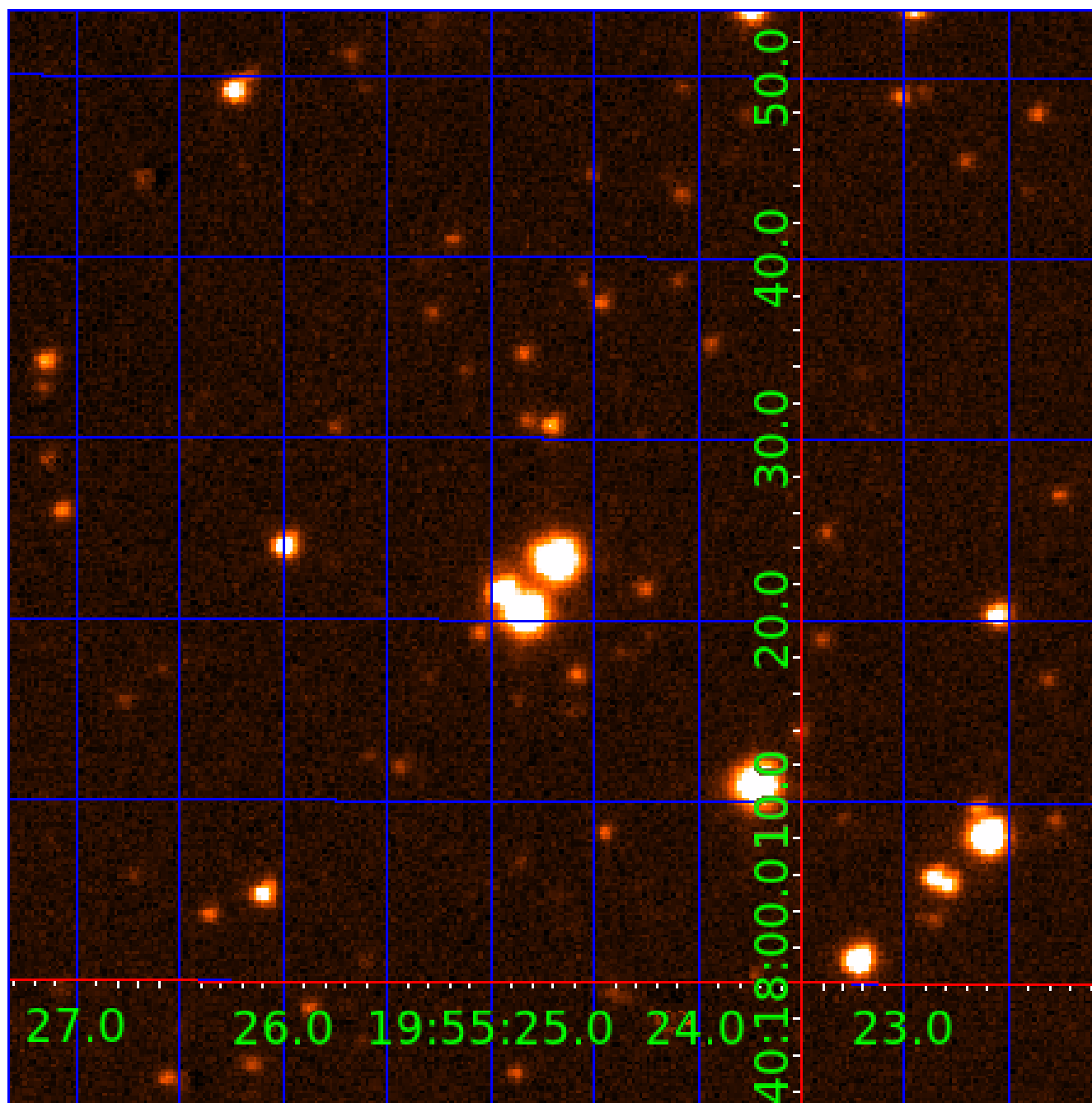


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005217332

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})
005217332-01	OBS	No	236.538486	319.927035	702.3	2.799	12.1	6.2	1.05	6207	3.02	2.58
005217332-02	OBS	No	395.226647	522.517974	1426.1	5.118	11.1	6.0	1.05	6207	4.11	1.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005217332-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_KIC_POS
005217332-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—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.

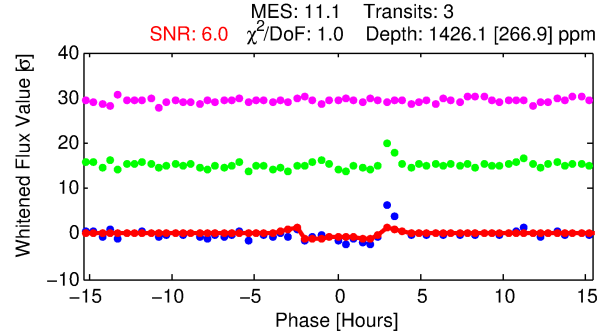
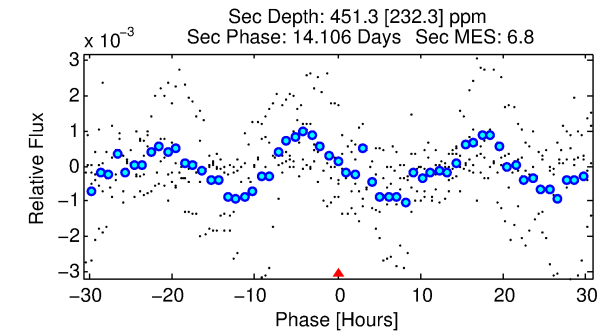
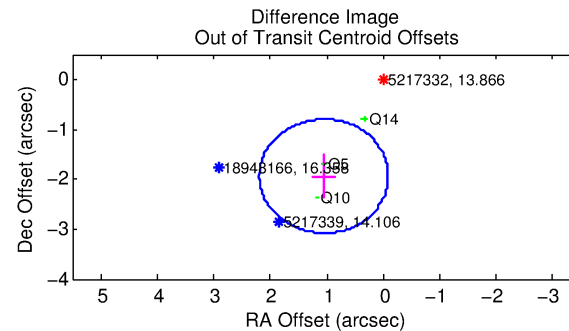
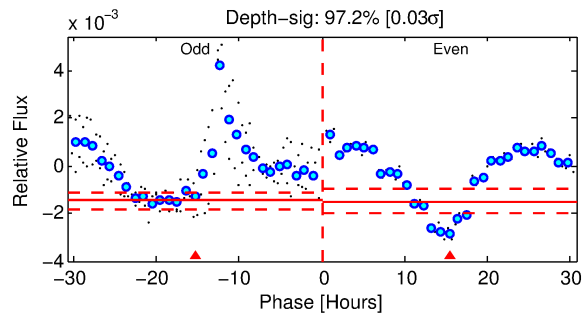
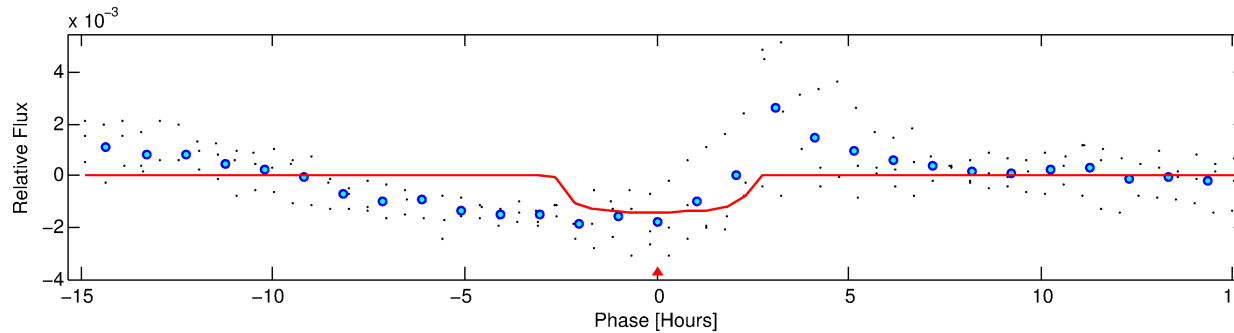
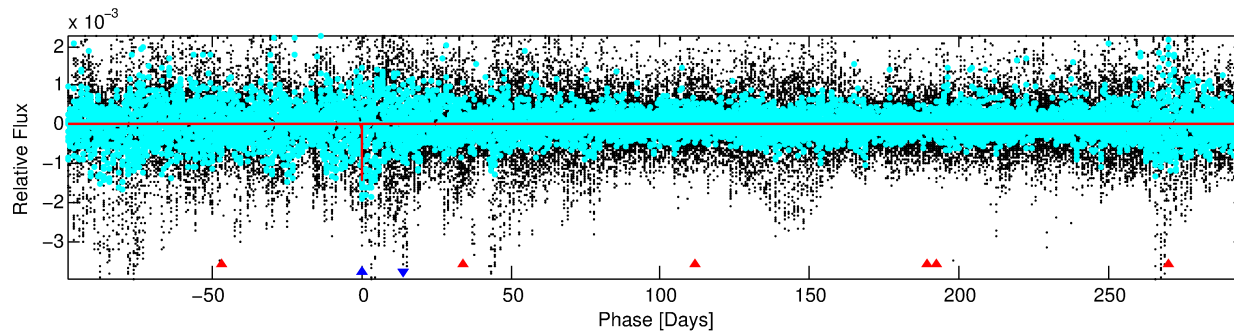
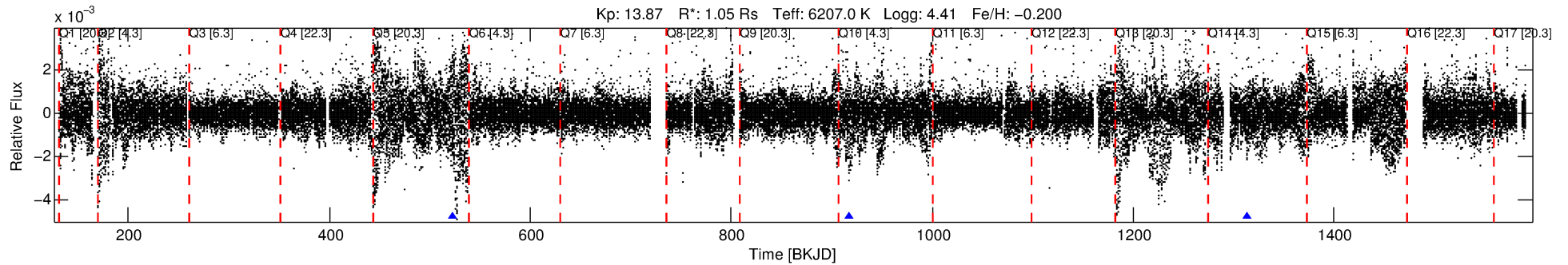
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005217332-02

No Significant Match Found

DV One-Page Summary

KIC: 5217332 Candidate: 2 of 2 Period: 395.227 d



DV Fit Results:

Period = 395.22665 [0.00498] d
Epoch = 522.5180 [0.0072] BKJD
Rp/R* = 0.0359 [0.0163]
a/R* = 521.39 [1083.71]
b = 0.54 [2.75]
Seff = 1.30 [0.52]
Teq = 272 [27] K
Rp = 4.11 [2.26] Re
a = 1.0625 [0.2751] AU
Ag = 16575.90 [18404.58] [0.90 σ]
Teff = 4778 [1259] K [3.58 σ]

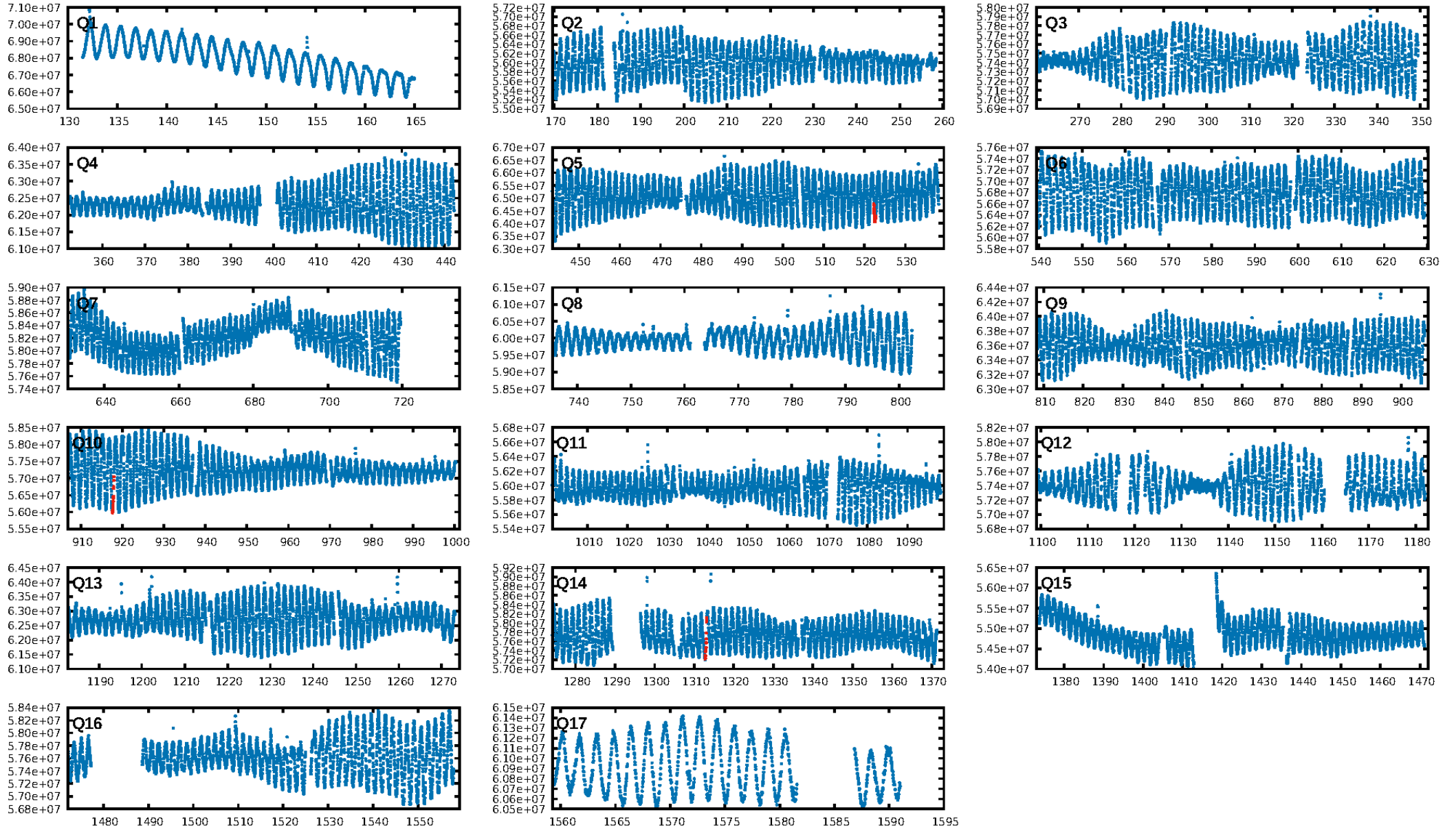
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [652.91 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 80.4%
ModelChiSquareGof-sig: 94.5%
Bootstrap-pfa: 2.87e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.7355
Centroid-sig: 1.6%
Centroid-so: 3.179 arcsec [3.75 σ]
OotOffset-rm: 2.206 arcsec [5.80 σ]
KicOffset-rm: 3.428 arcsec [45.14 σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

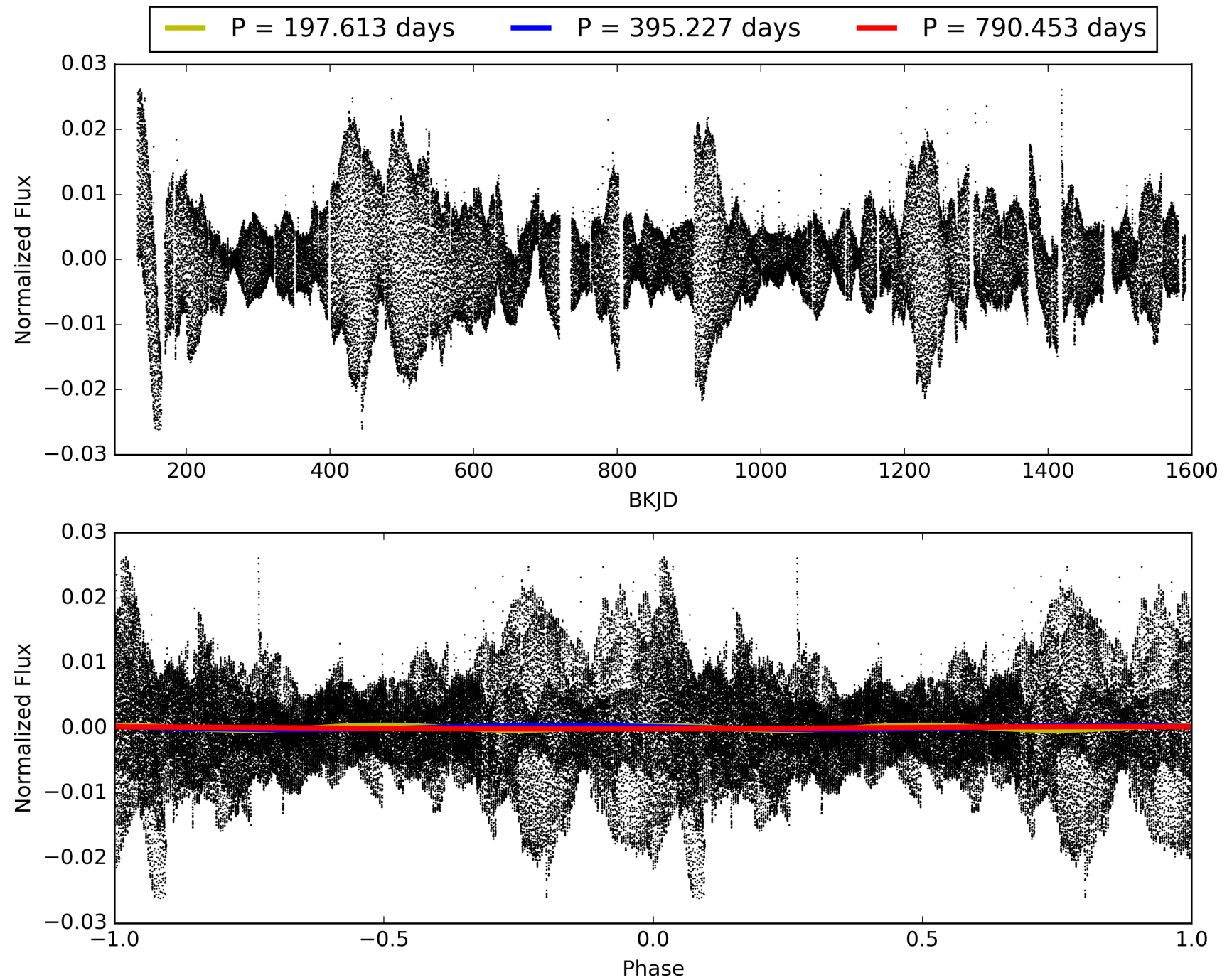
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:29:17 Z

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

TCE 005217332-02, PDC Light Curves

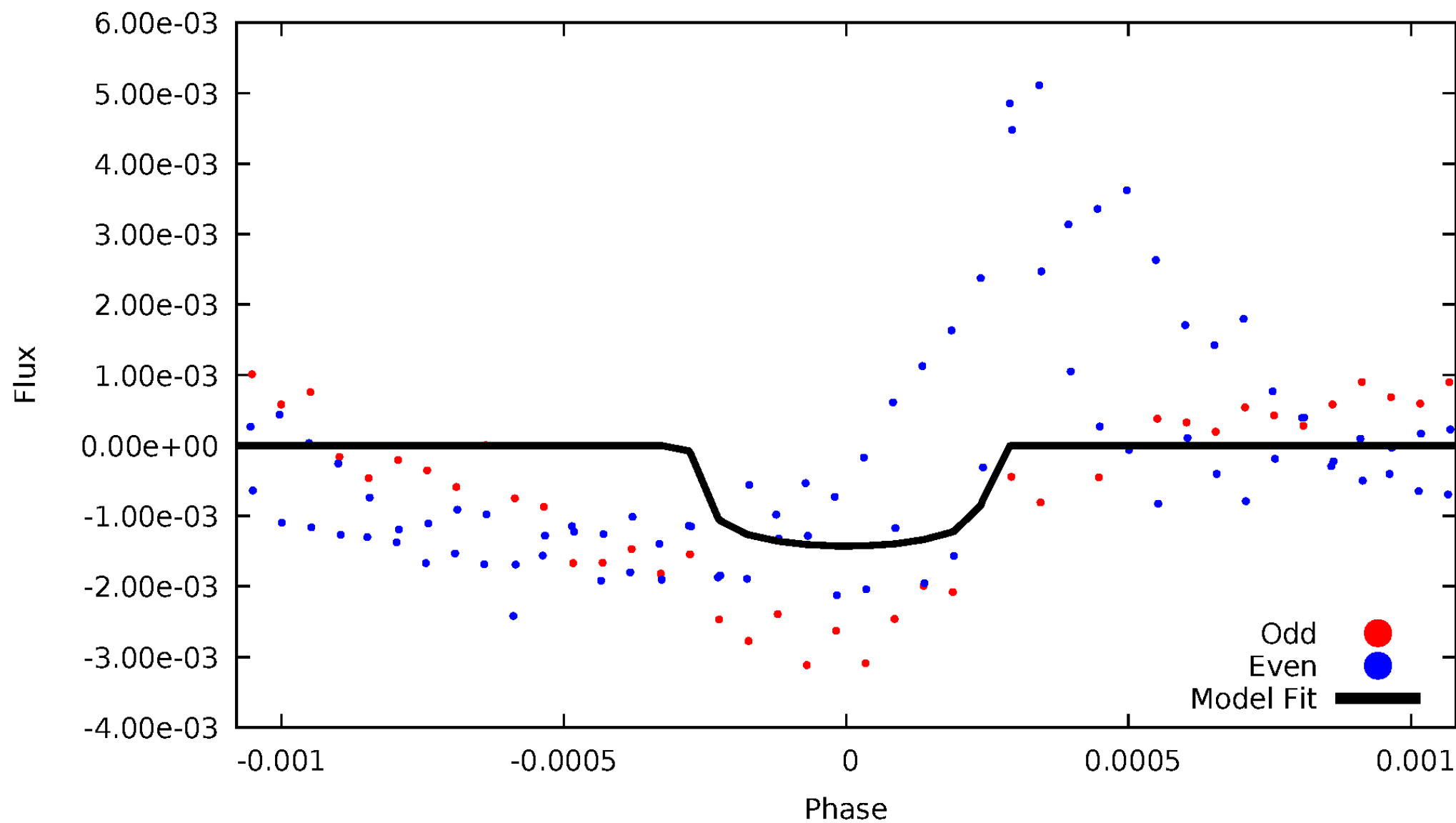


TCE 005217332-02



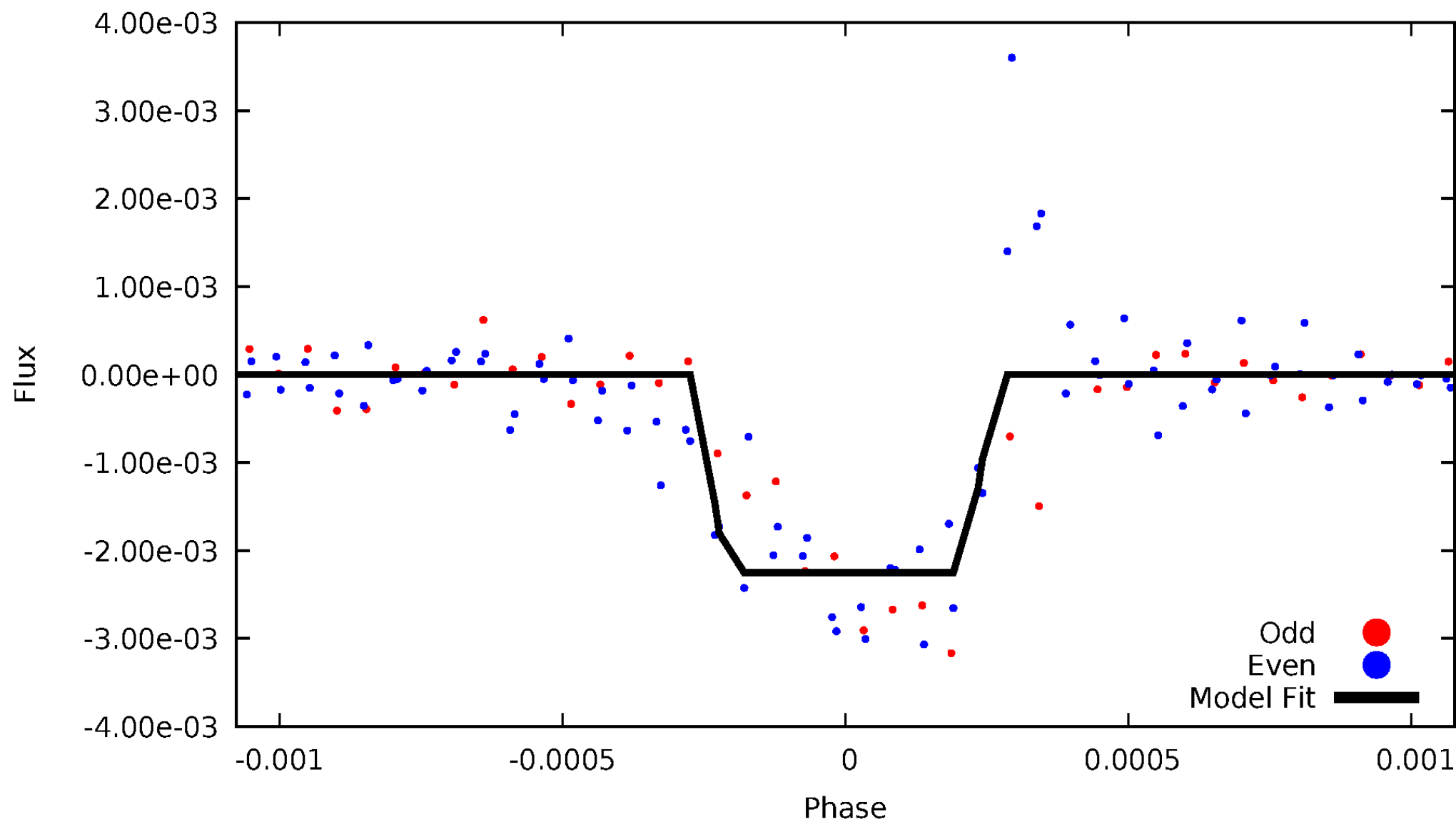
DV Odd/Even

TCE 005217332-02



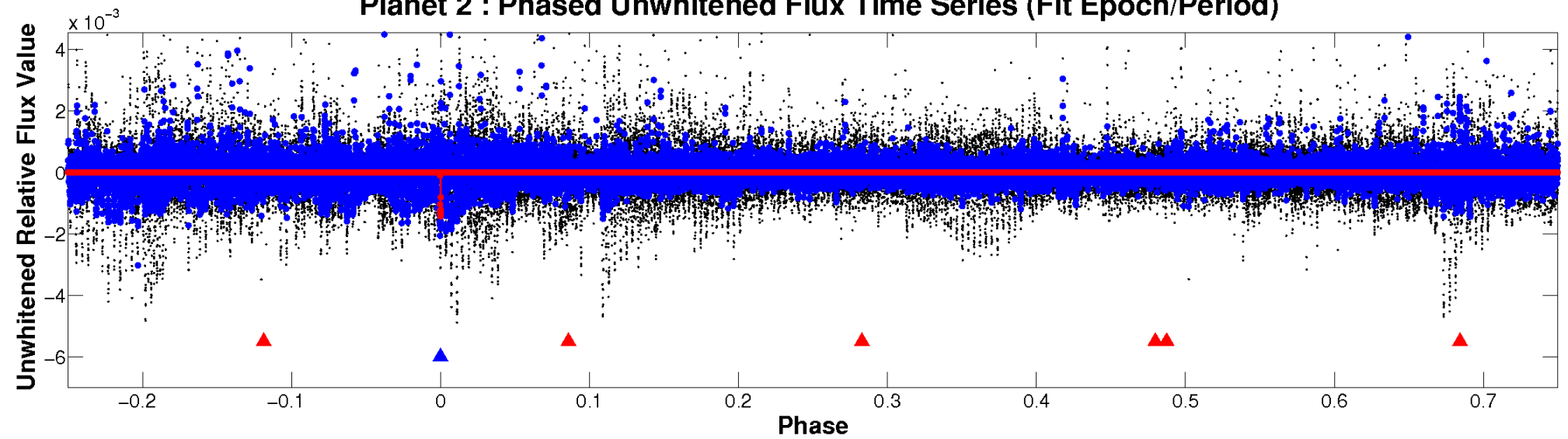
ALT Odd/Even

TCE 005217332-02

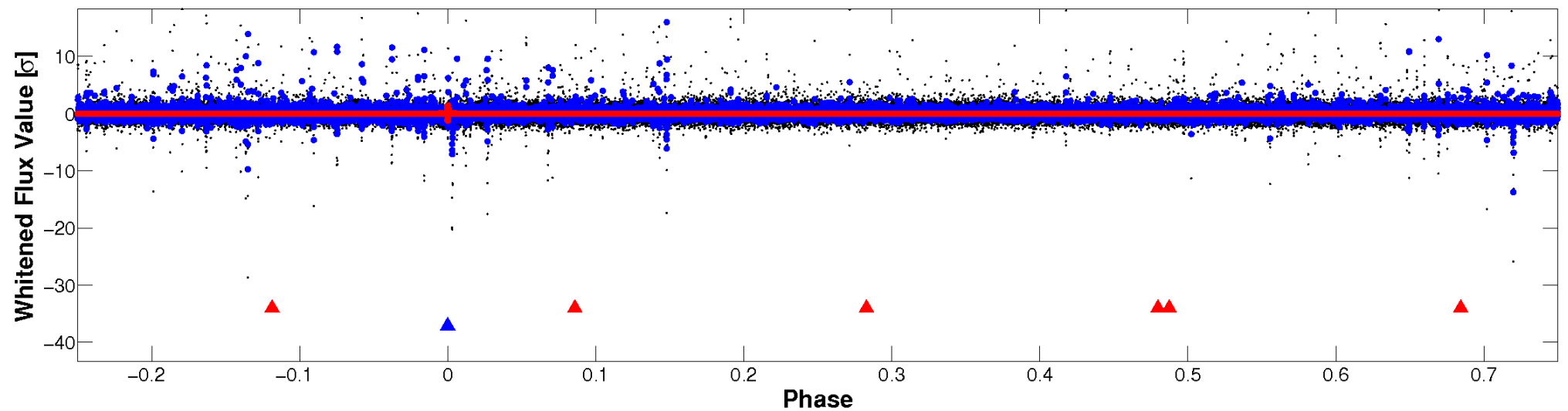


Non-Whitened Vs. Whitened Light Curve

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

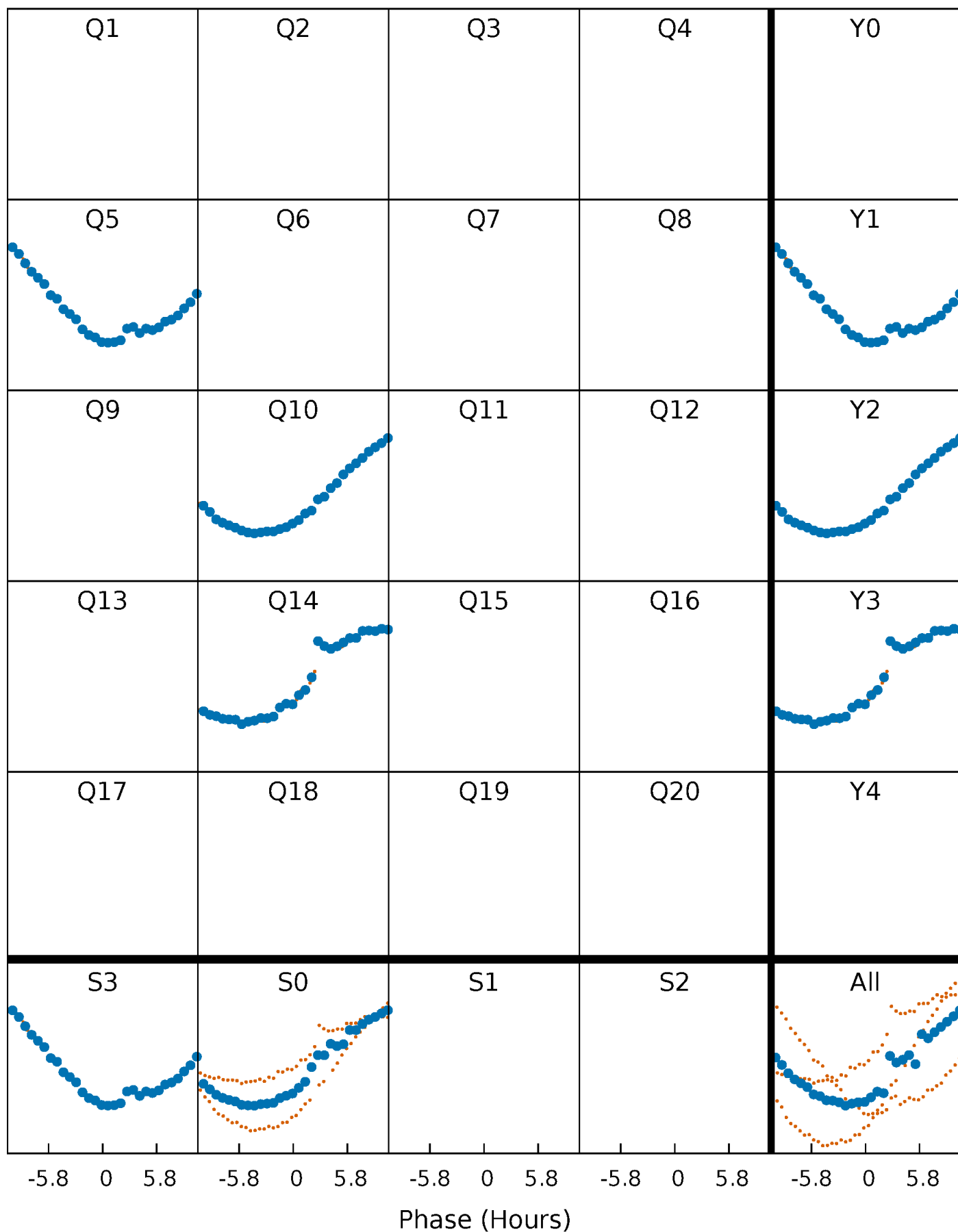


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



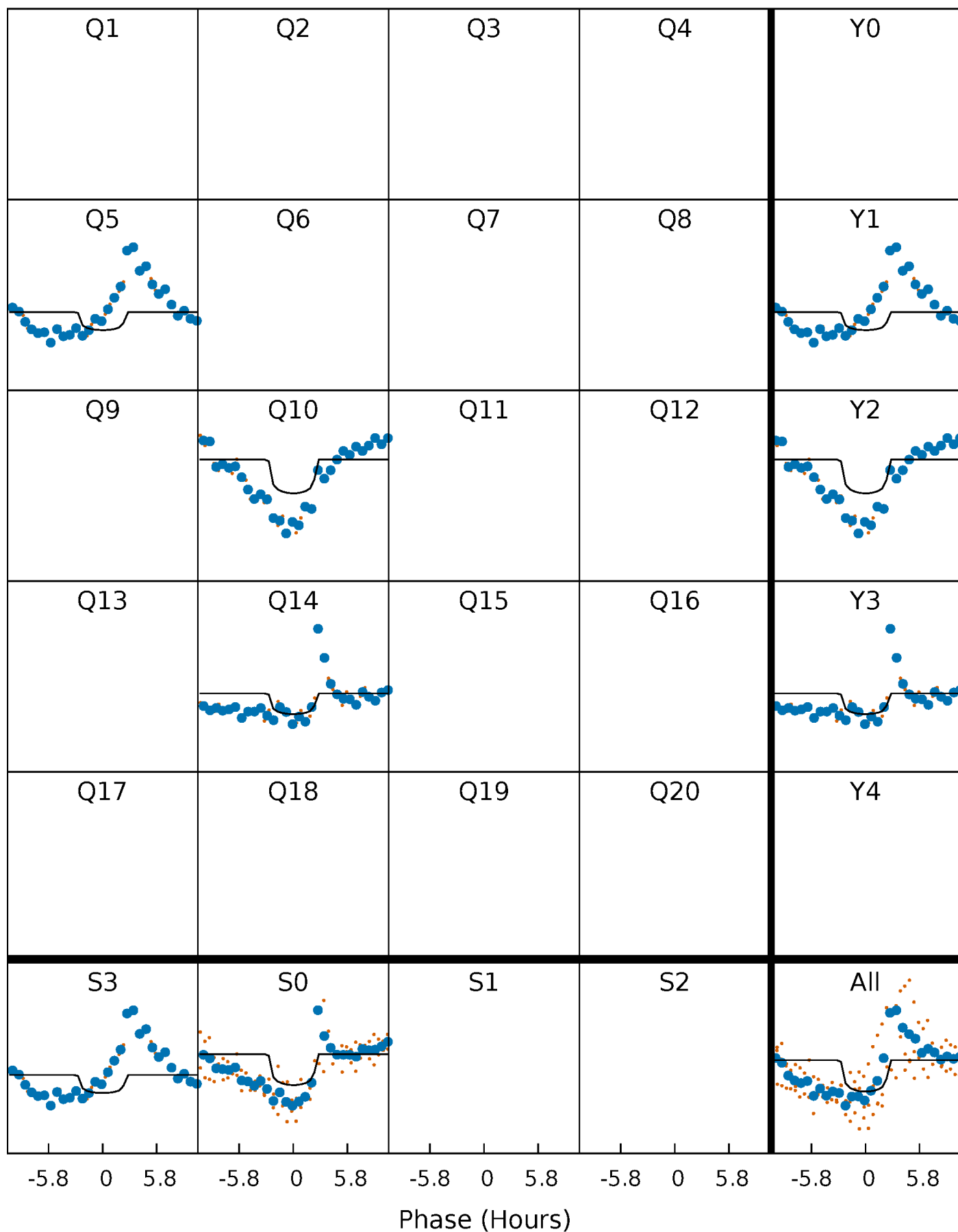
PDC Quarter-Phased Transit Curves

TCE 005217332-02 P=395.226647 Days $T_0=522.517974$ (BKJD)



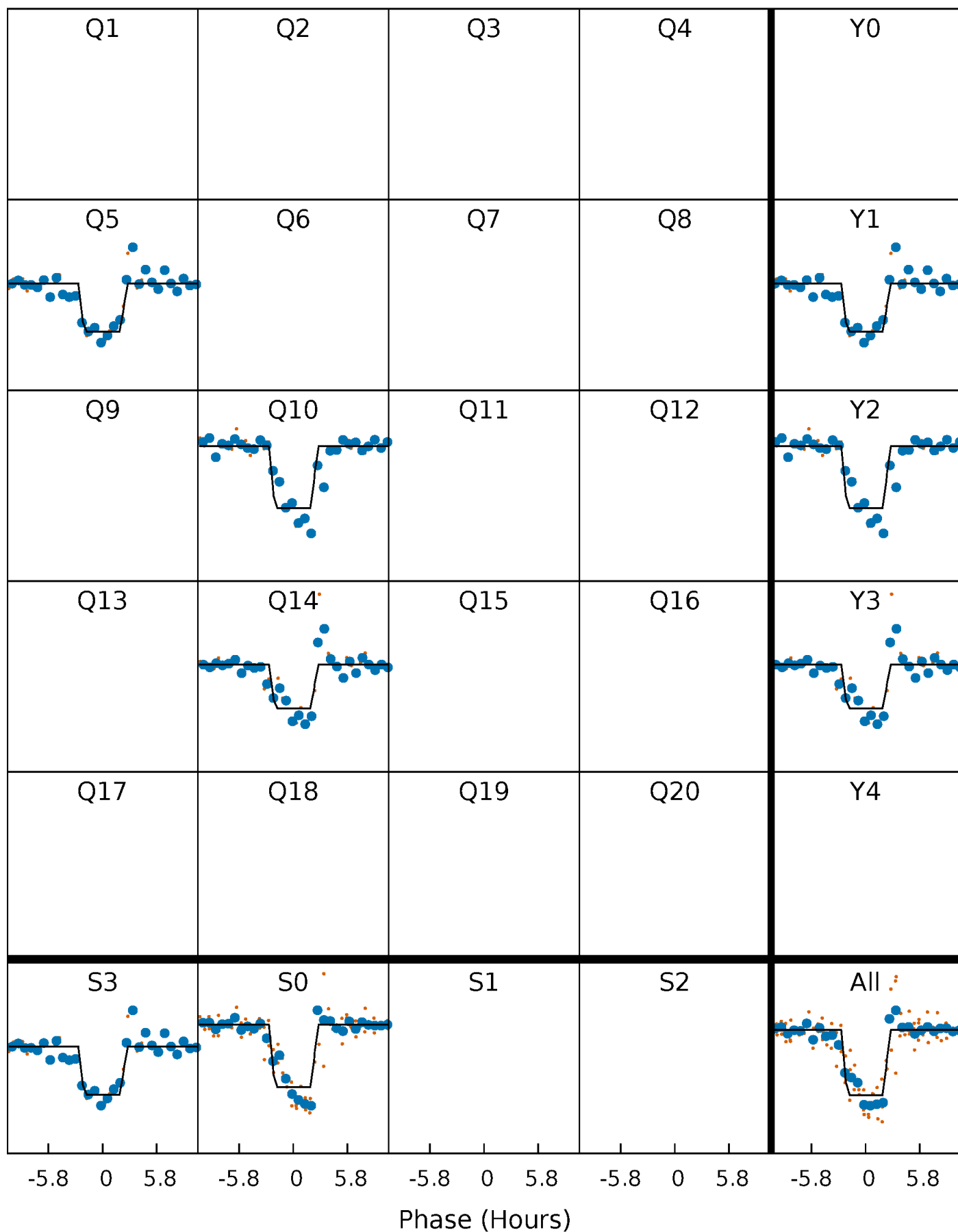
DV Quarter-Phased Transit Curves

TCE 005217332-02 P=395.226647 Days $T_0=522.517974$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

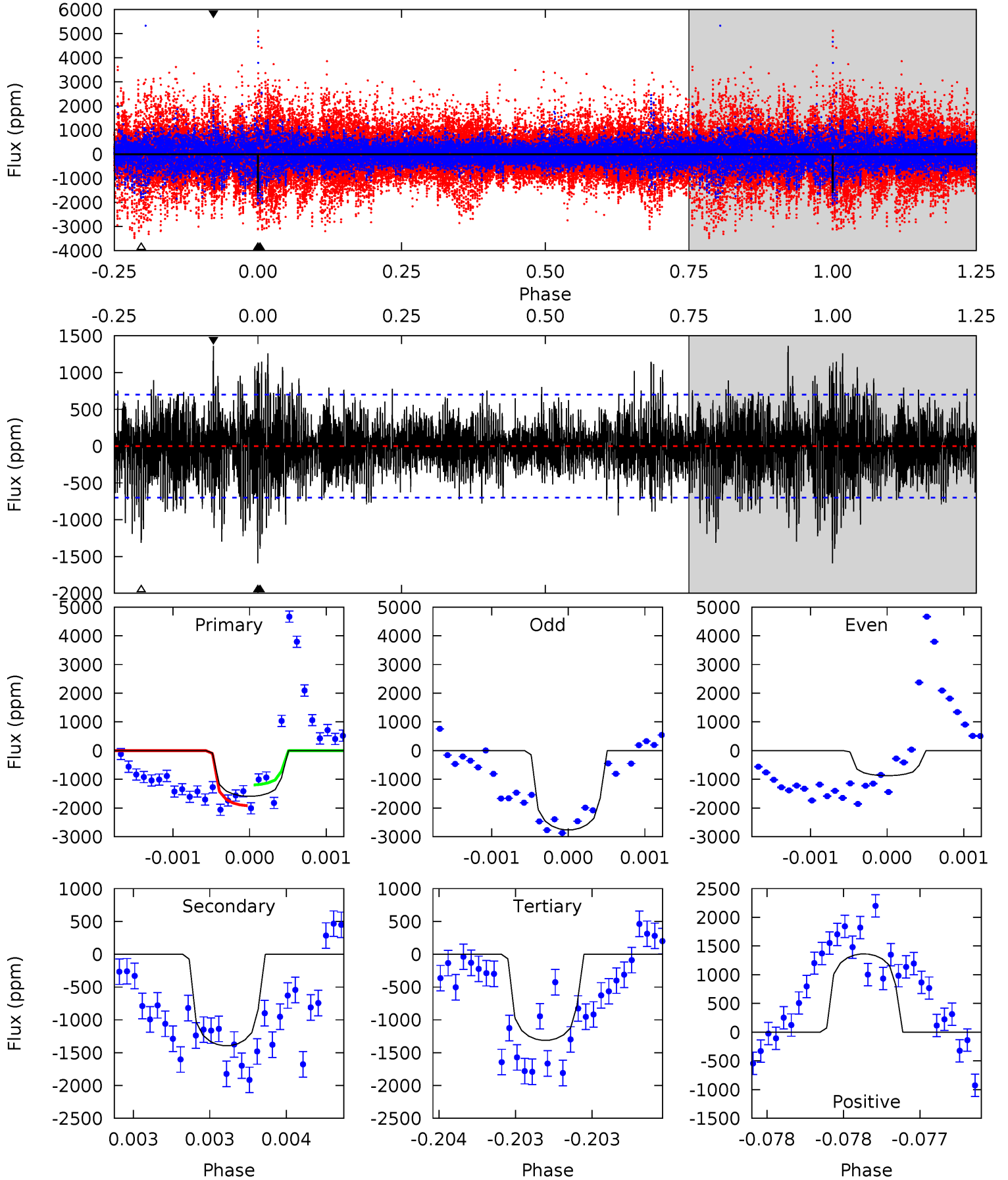
TCE 005217332-02 P=395.225917 Days $T_0=522.519315$ (BKJD)



DV Model-Shift Uniqueness Test

005217332-02, P = 395.226647 Days, E = 127.291327 Days

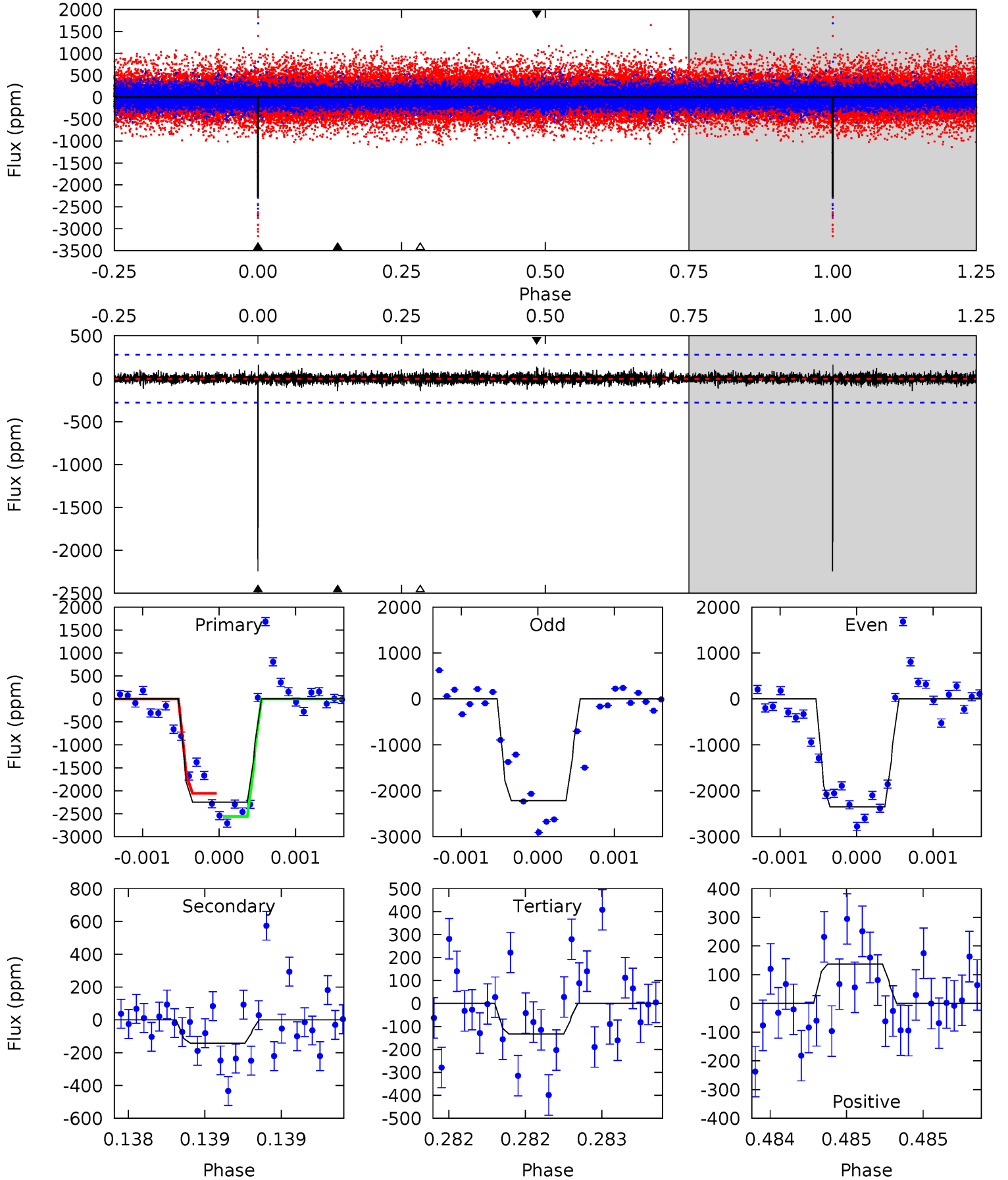
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	11.1	10.4	10.8	5.55	3.44	2.44	2.22	1.82	0.65	0.25	6.77	0.92	0.46	2.87



Alt Model-Shift Uniqueness Test

005217332-02, P = 395.225917 Days, E = 127.293398 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.7	2.83	2.65	2.74	5.57	3.47	0.57	42.0	41.9	0.17	0.09	1.28	1.00	0.07	4.94



Stellar Parameters For KIC 005217332

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6207^{+169}_{-206}	$4.405^{+0.087}_{-0.203}$	$-0.200^{+0.250}_{-0.300}$	$1.051^{+0.326}_{-0.140}$	$1.018^{+0.158}_{-0.115}$	$1.237^{+0.473}_{-0.663}$
	+3%/-3%	+2%/-5%	+125%/-150%	+31%/-13%	+16%/-11%	+38%/-54%
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 005217332-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1394 ± 126	$4.38^{+1.94}_{-1.90}$	384^{+28}_{-21}	6177^{+2547}_{-964}	$43333^{+100240}_{-21807}$
Alt.	-142 ± 50	$5.65^{+2.09}_{-1.95}$	384^{+28}_{-20}	3560^{+557}_{-380}	2737^{+4012}_{-1452}

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

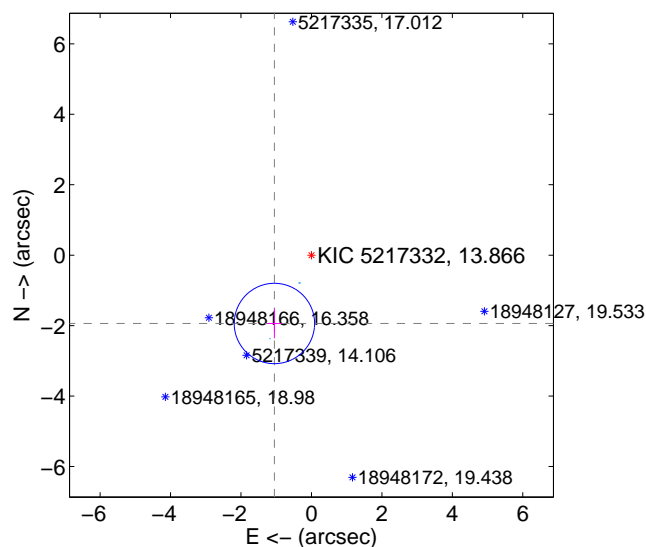
Supplemental centroid analysis for 005217332-02. Kepler magnitude: 13.87. Transit SNR 5.99

There are 3 quarters with good PRF difference image offsets

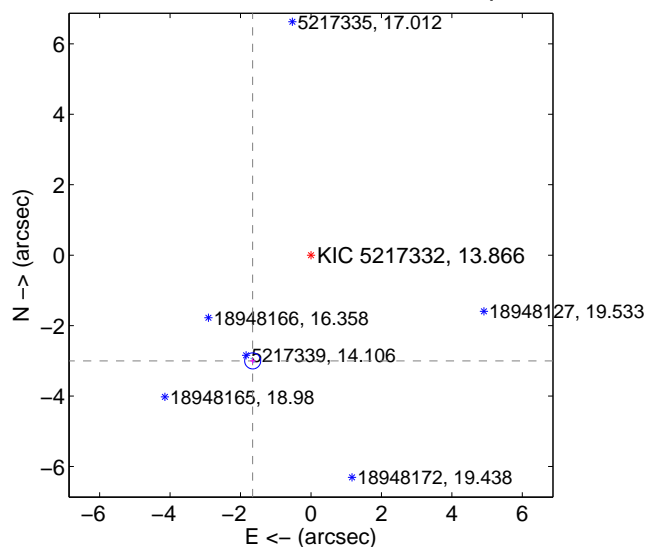
The OOT PRF centroid is offset from the target star catalog position by about 2.58 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.206 ± 0.380	5.80	1.052 ± 0.200	-1.940 ± 0.419
PRF-fit source offset from KIC position	3.428 ± 0.076	45.14	1.655 ± 0.072	-3.002 ± 0.077
photometric centroid source offset	3.18 ± 0.85	3.75	2.06 ± 0.67	-2.42 ± 0.96

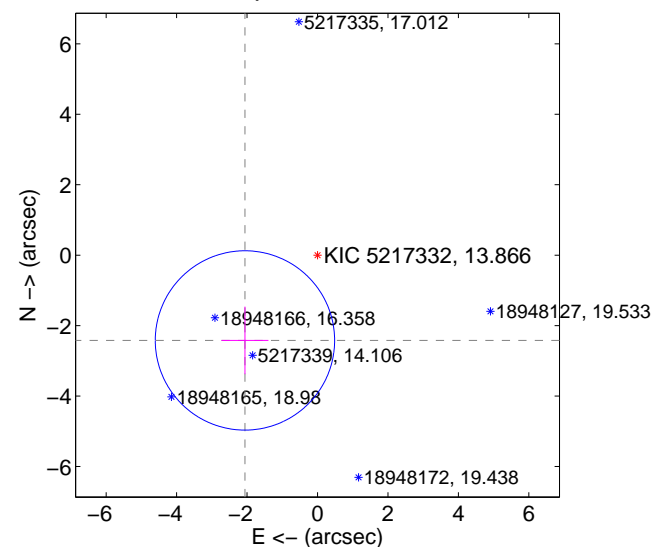
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

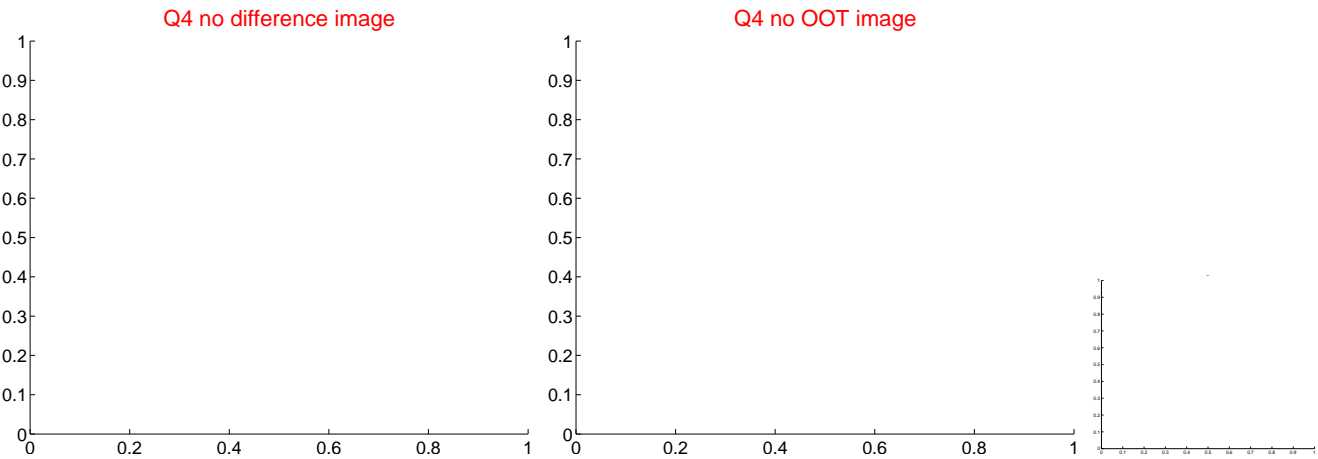
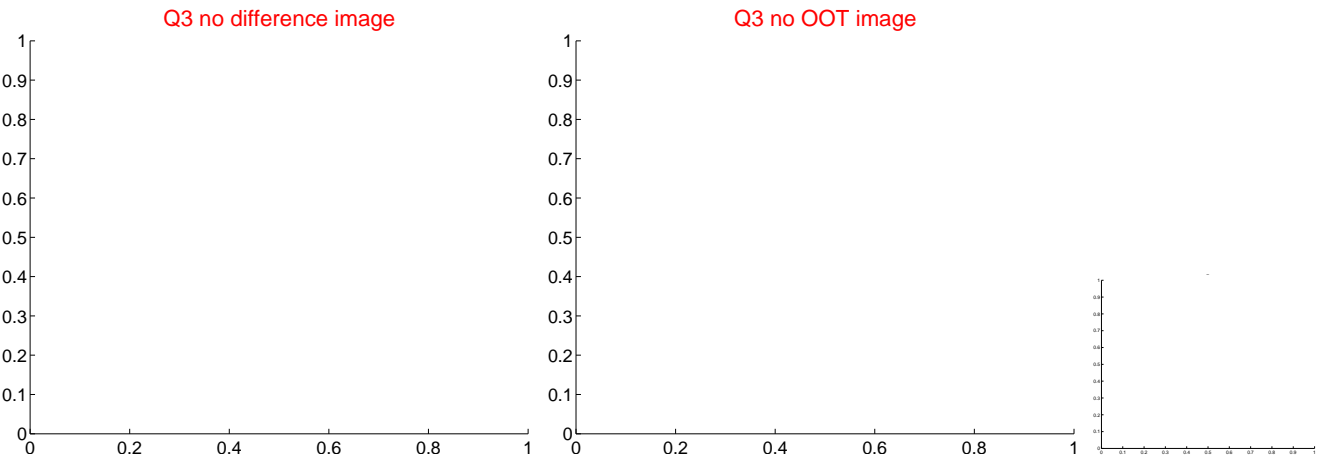
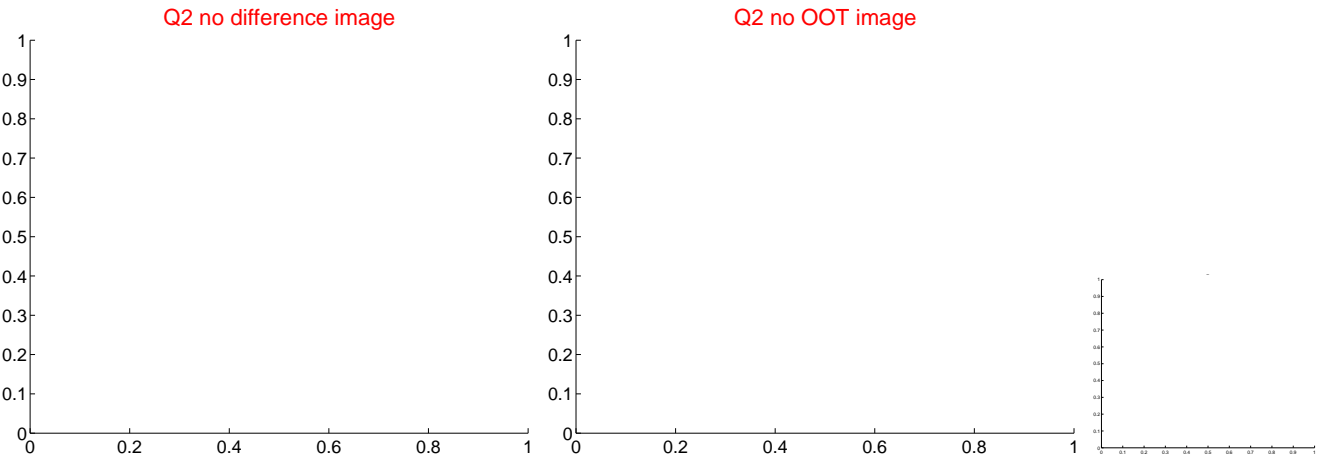
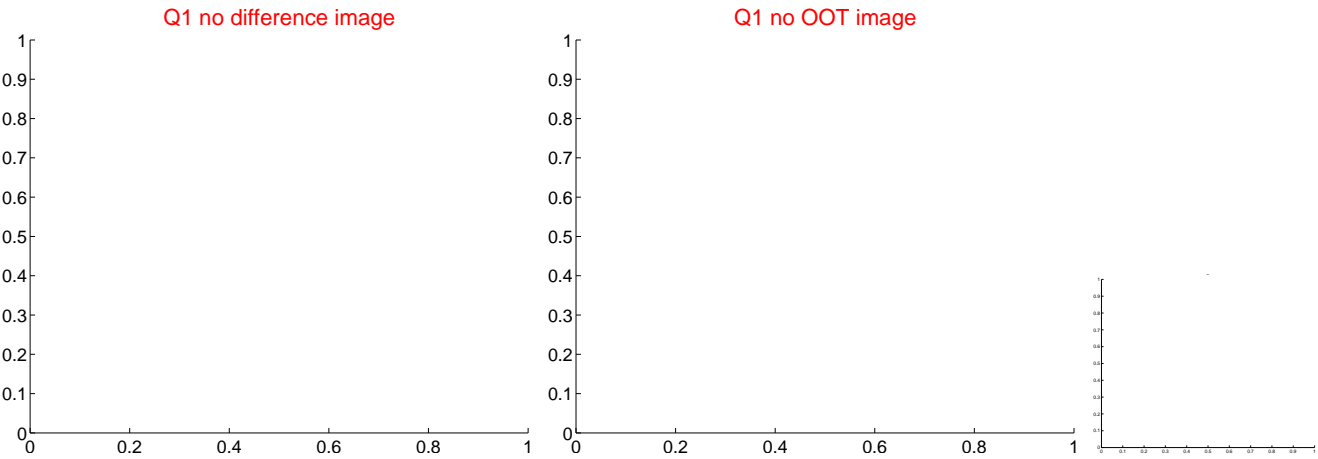


offset from photometric centroids

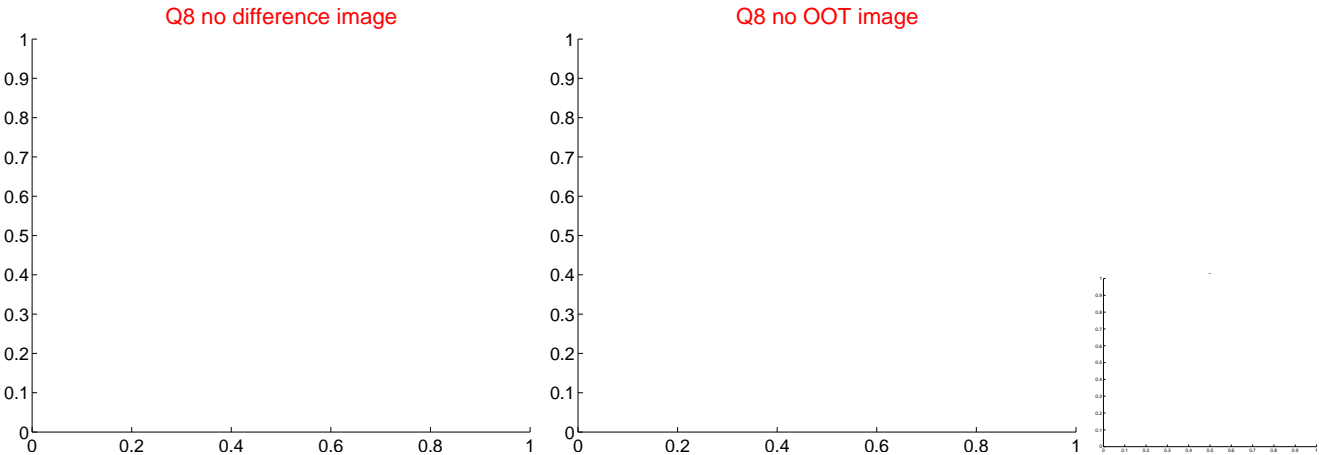
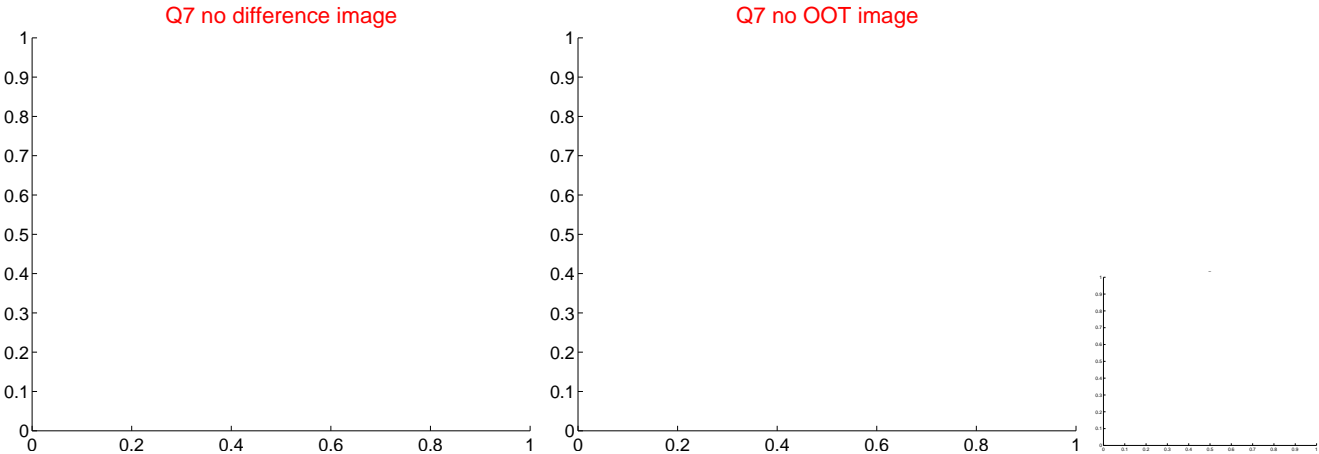
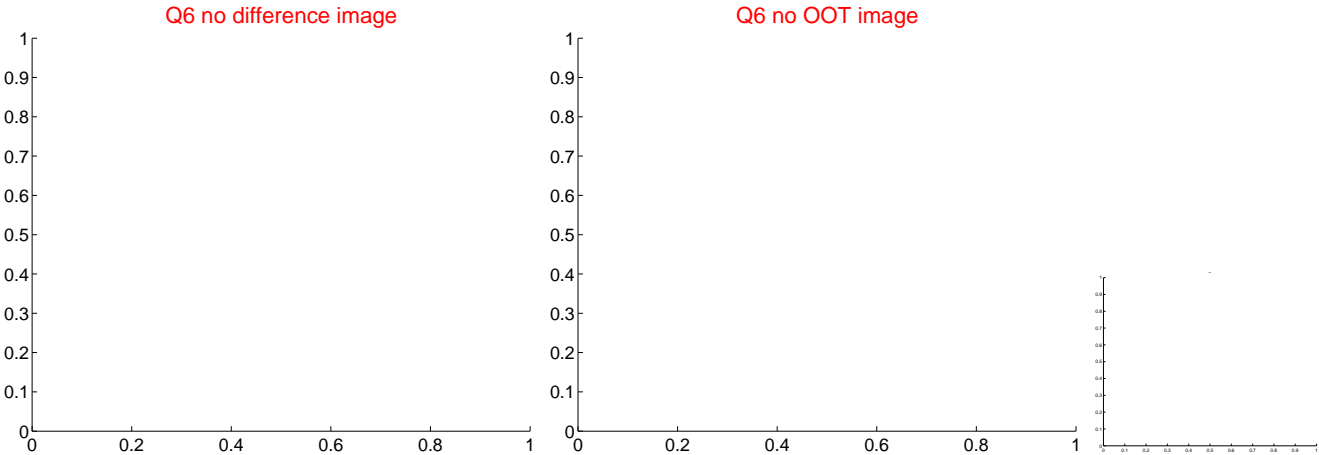
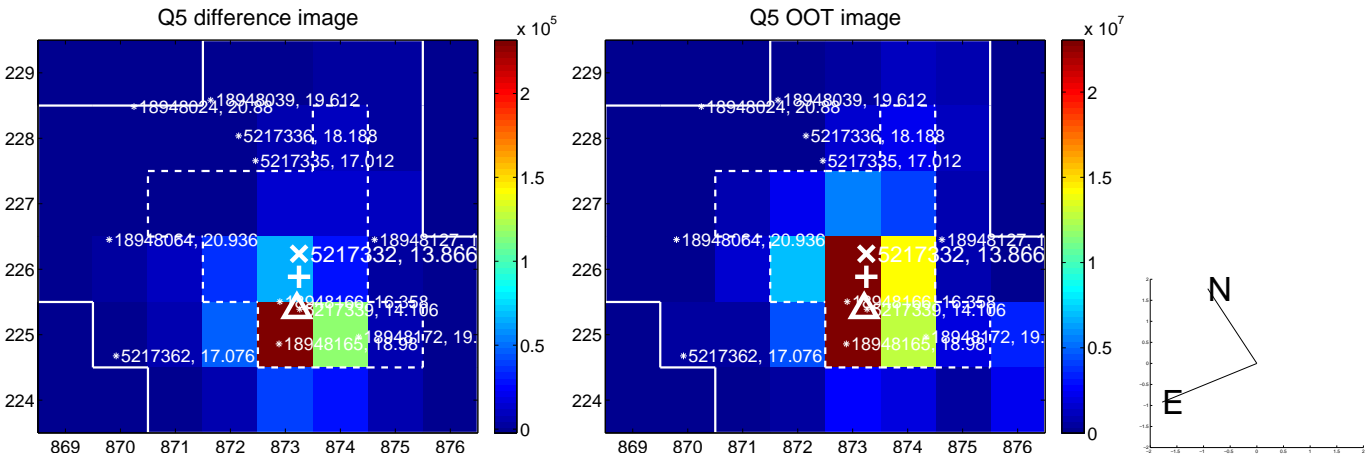


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

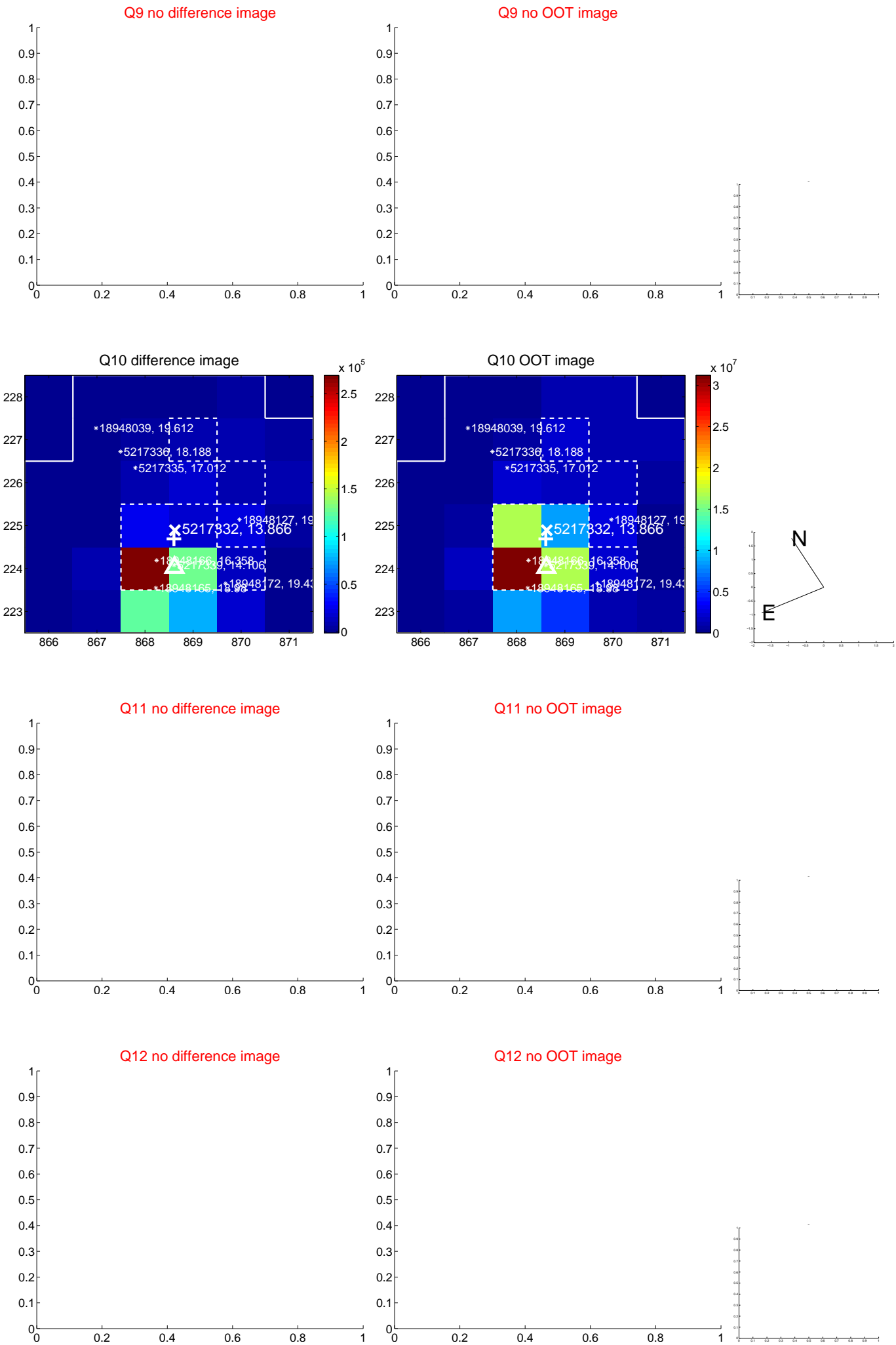
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



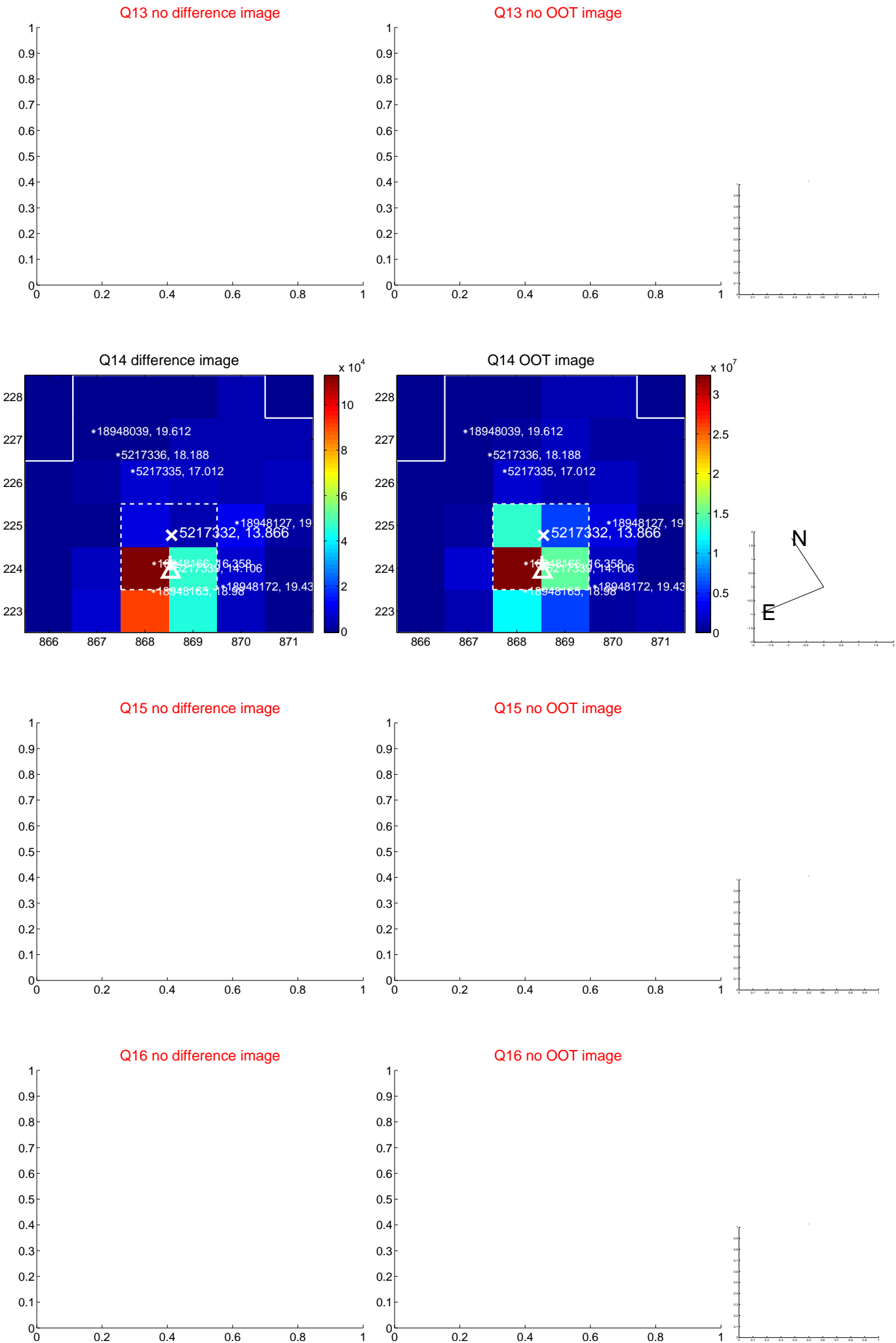
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



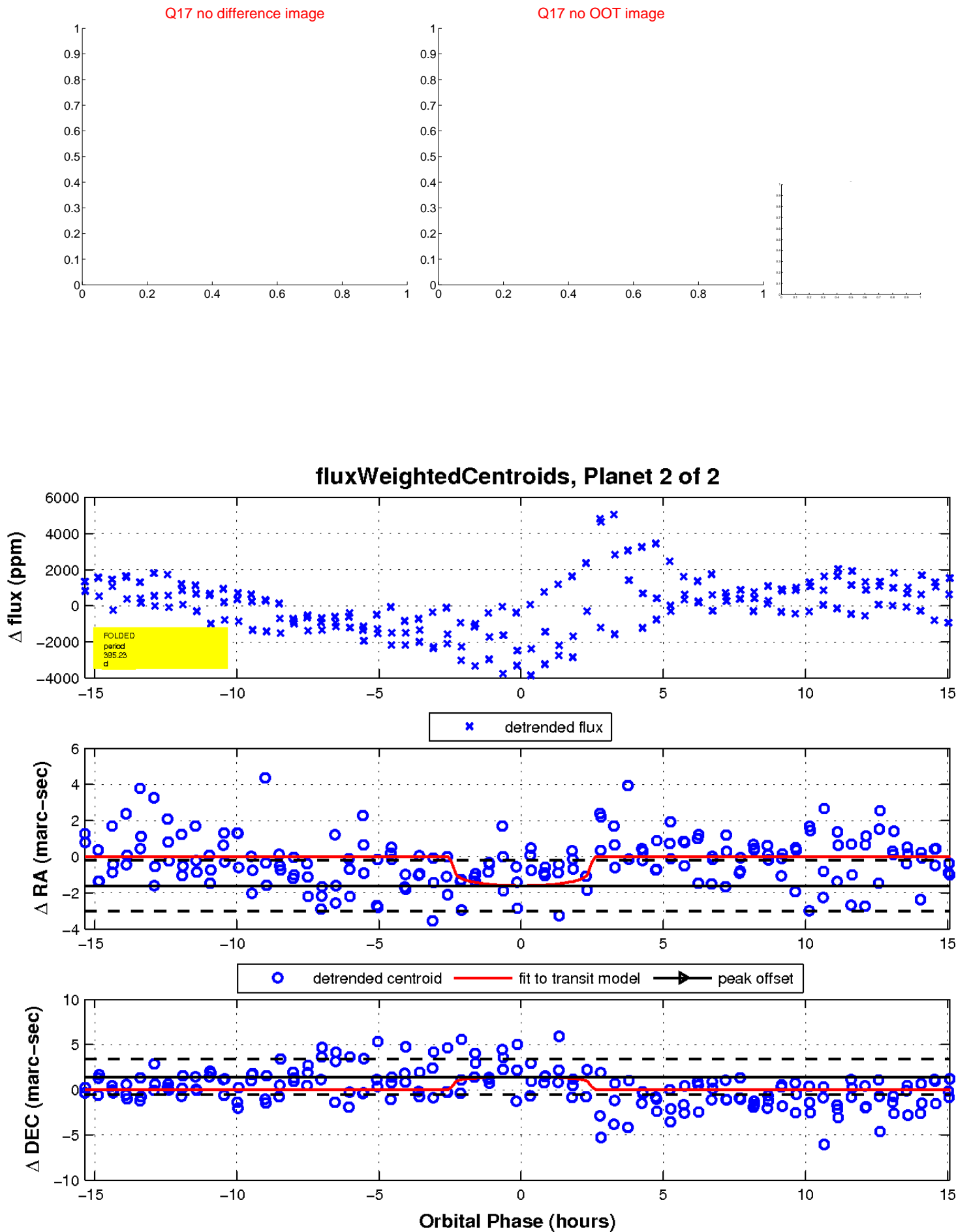
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

