

KIC 011673686

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})
011673686-01	OBS	6243.01	4.618768	133.386740	32583.8	5.990	1726.7	3154.7	1.78	6195	32.29	1419.50
011673686-02	OBS	No	2.309368	133.389430	1204.7	6.249	148.4	139.6	1.78	6195	7.24	3576.94
011673686-03	OBS	No	133.965500	174.671203	504.9	23.089	9.4	3.2	1.78	6195	5.06	15.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011673686-01	OBS	FP	0.31	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
011673686-02	OBS	FP	0.00	1	1	0	1	IS_SEC_TCE—EPHEM_MATCH
011673686-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV

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 011673686-01

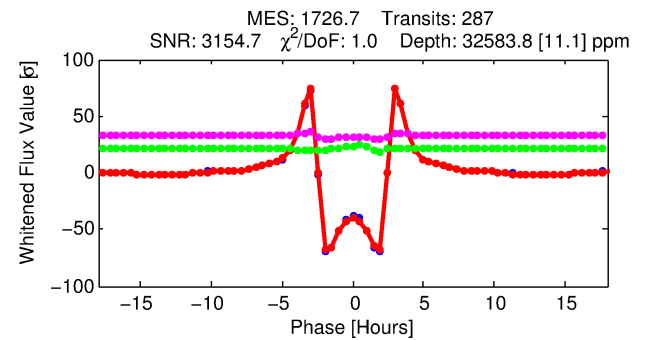
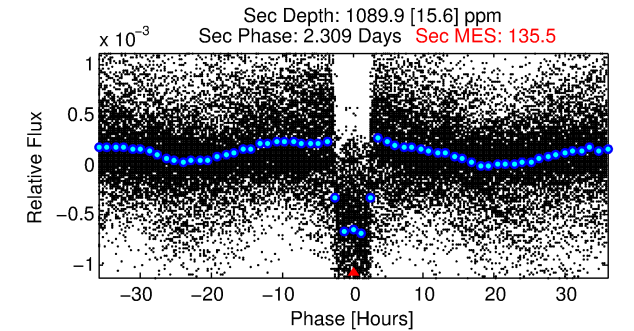
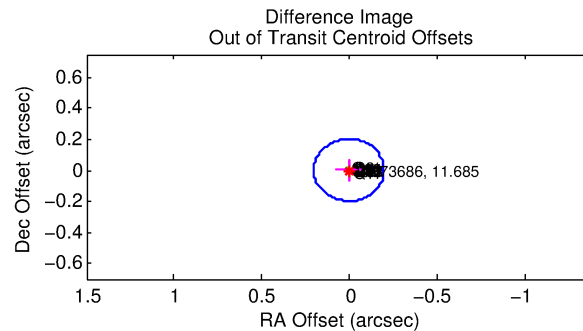
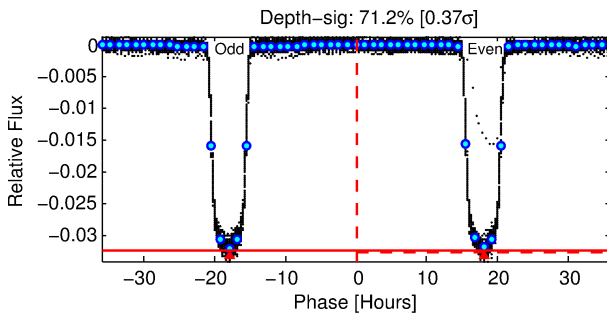
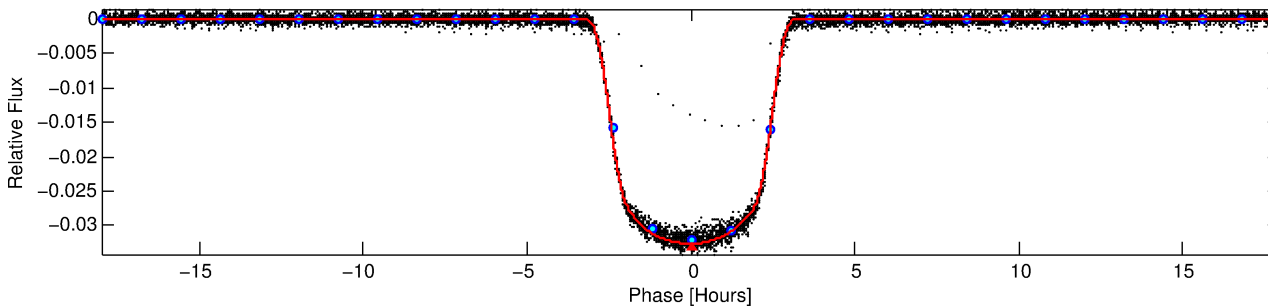
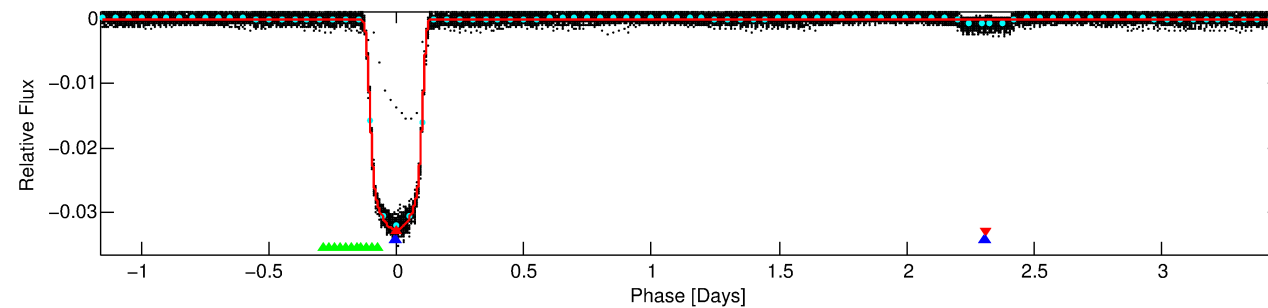
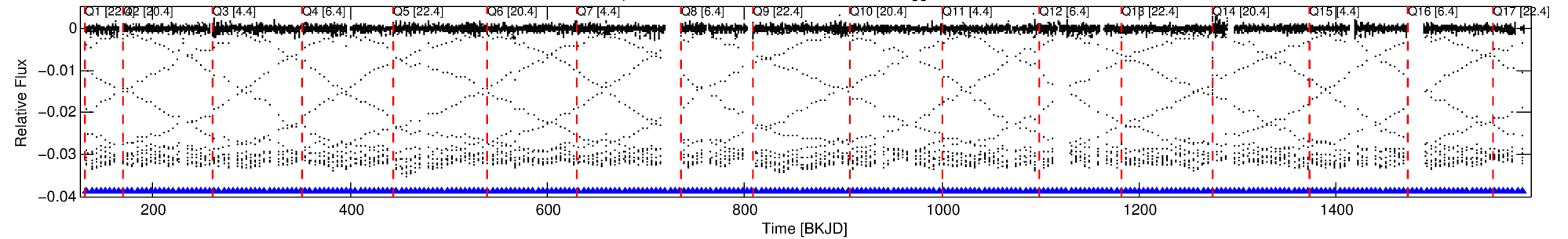
No Significant Match Found

DV One-Page Summary

KIC: 11673686 Candidate: 1 of 3 Period: 4.619 d

KOI: K06243.01 Corr: 0.998

Kp: 11.69 R*: 1.78 Rs Teff: 6195.0 K Logg: 3.94 Fe/H: -0.580



DV Fit Results:

Period = 4.61877 [0.00000] d
Epoch = 133.3867 [0.0000] BKJD
Rp/R* = 0.1662 [0.0000]
a/R* = 6.89 [0.00]
b = 0.06 [0.01]
Seff = 1419.50 [1129.23]
Teff = 1565 [311] K
Rp = 32.29 [14.80] Re
a = 0.0543 [0.0257] AU
Ag = 1.70 [1.33] [0.52σ]
Teffp = 2761 [84] K [3.71σ]

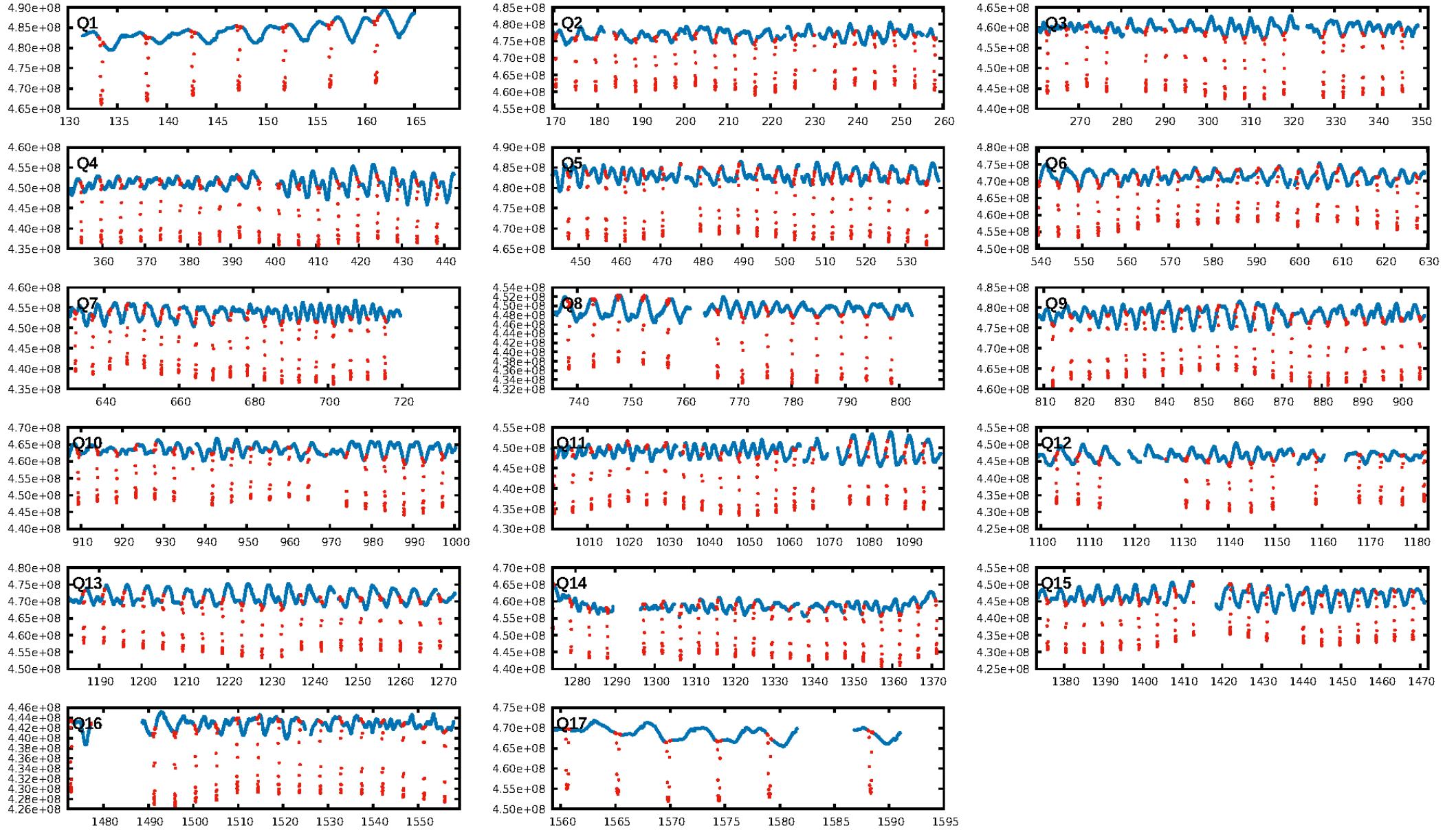
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [6.40σ]
LongPeriod-sig: 100.0% [130.14σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [274/274]
GhostDiagnostic-chr: 2.826
Centroid-sig: 0.0%
Centroid-so: 0.289 arcsec [131.58σ]
OotOffset-rm: 0.006 arcsec [0.09σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.156 arcsec [2.30σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

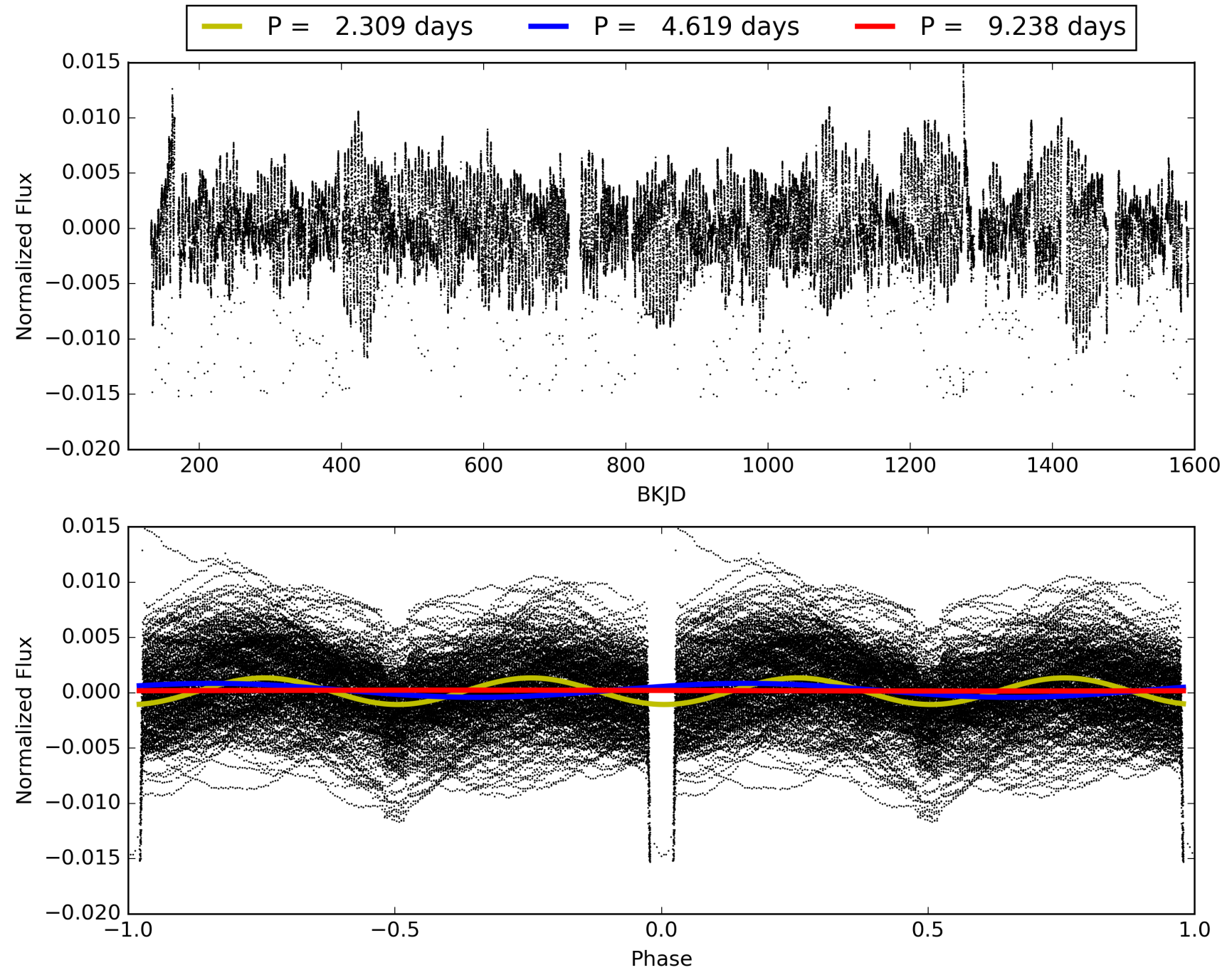
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:29:36 Z

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

TCE 011673686-01, PDC Light Curves

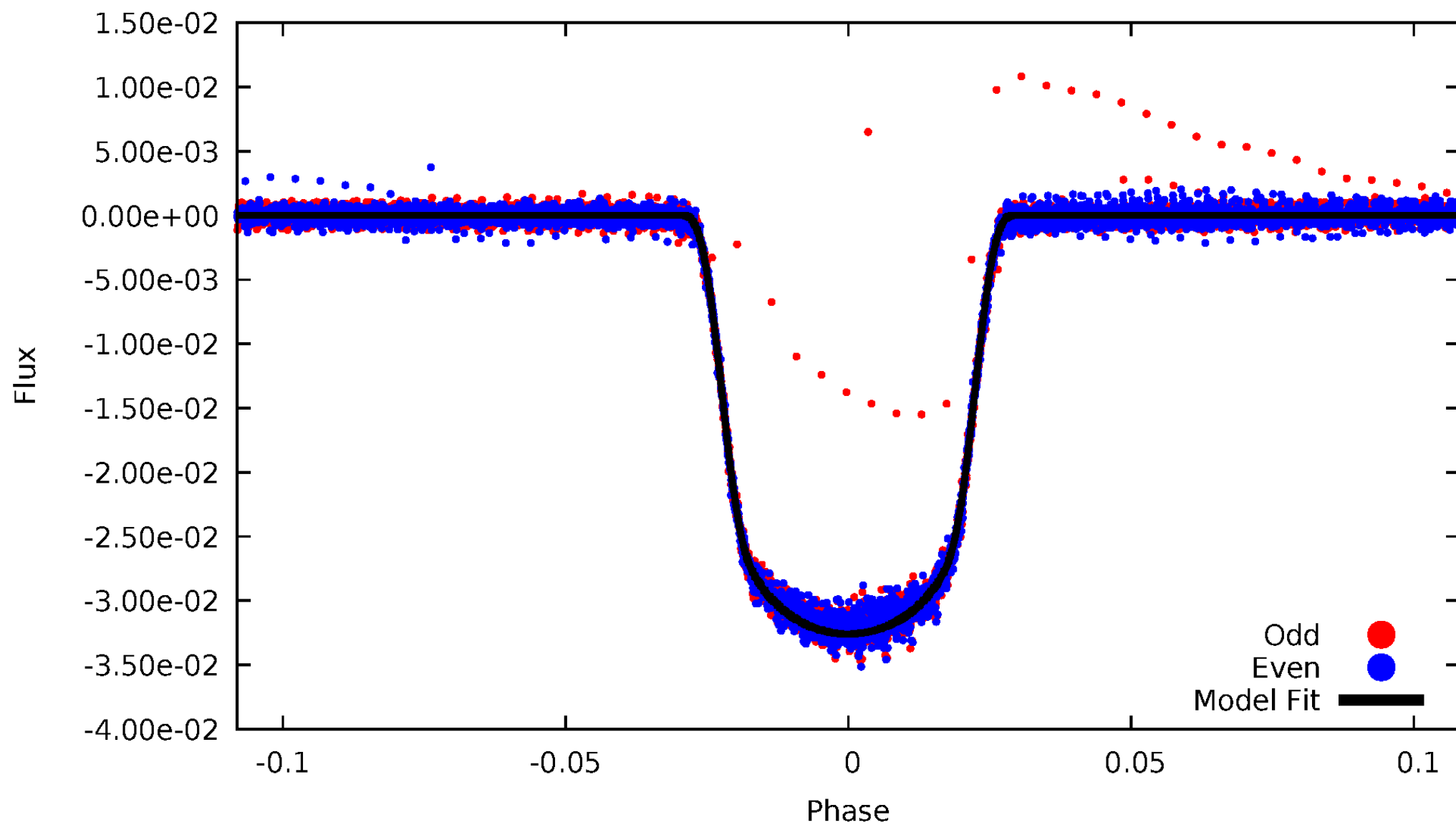


TCE 011673686-01



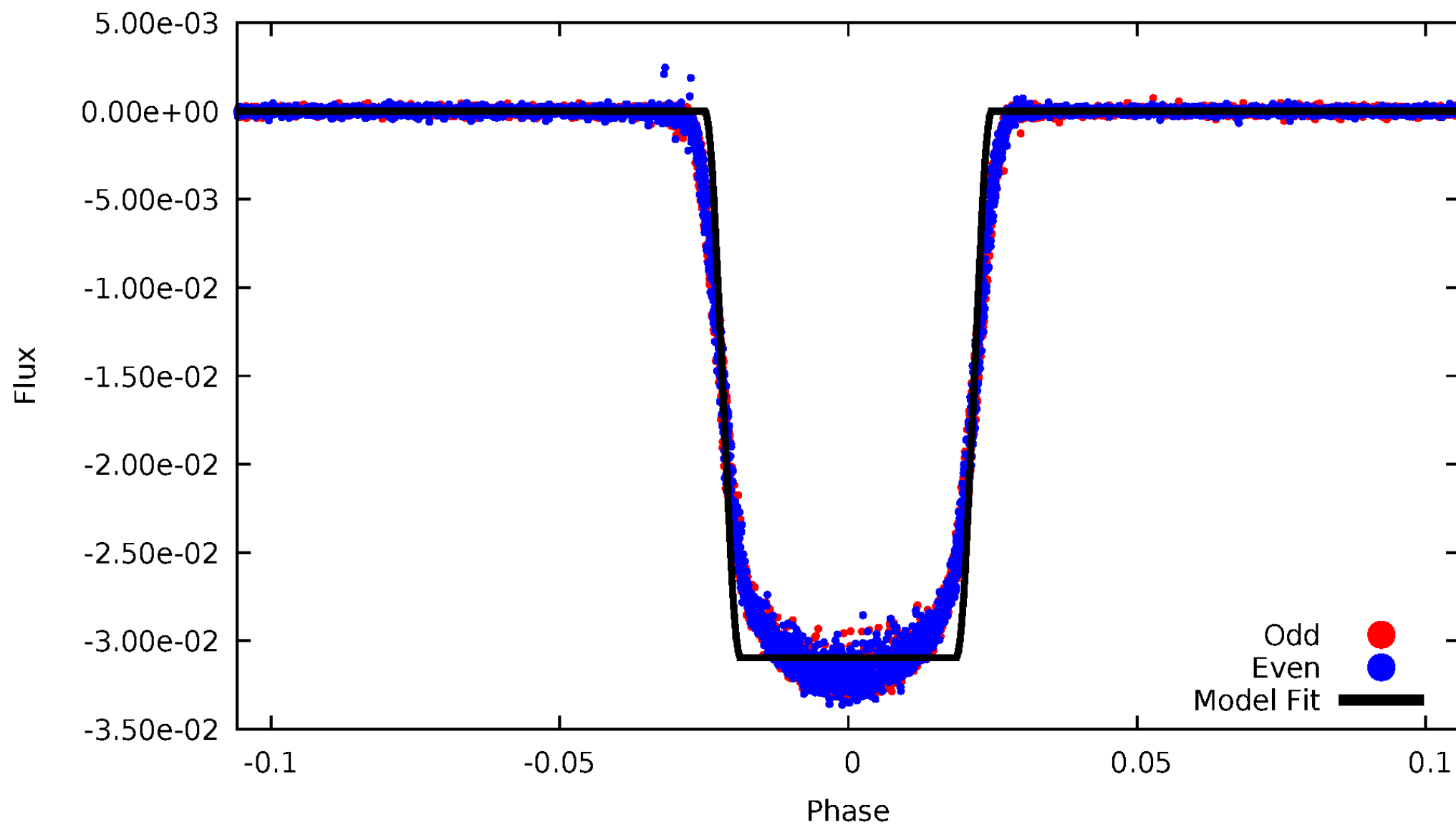
DV Odd/Even

TCE 011673686-01



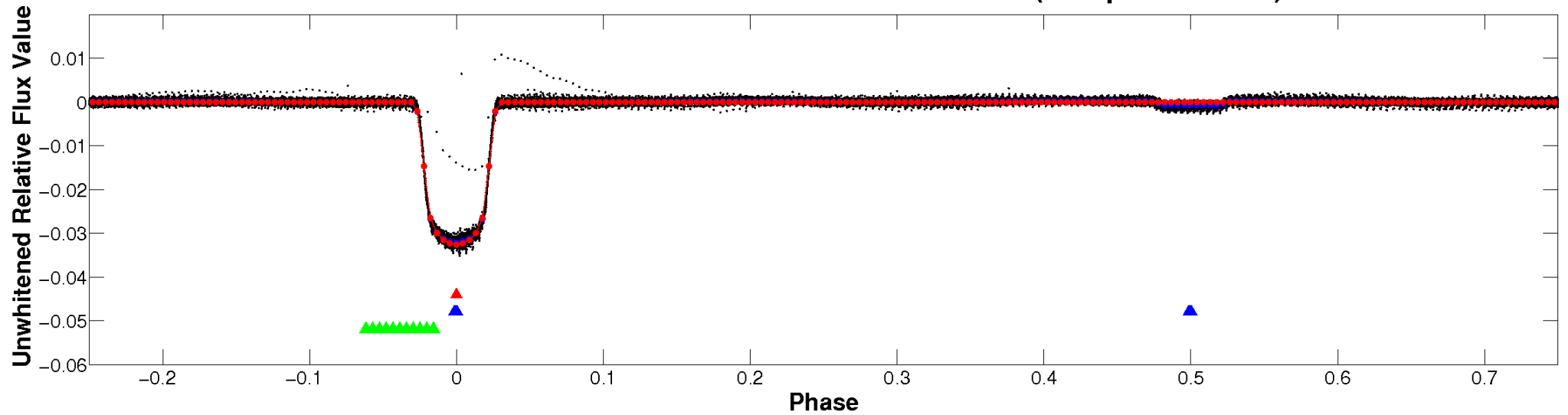
ALT Odd/Even

TCE 011673686-01

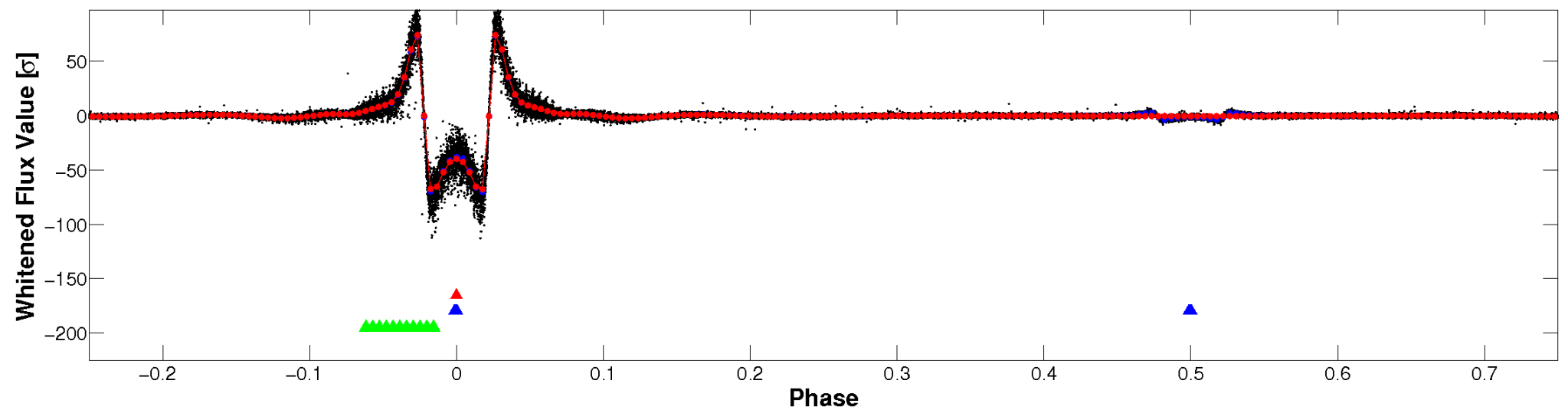


Non-Whitened Vs. Whitened Light Curve

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

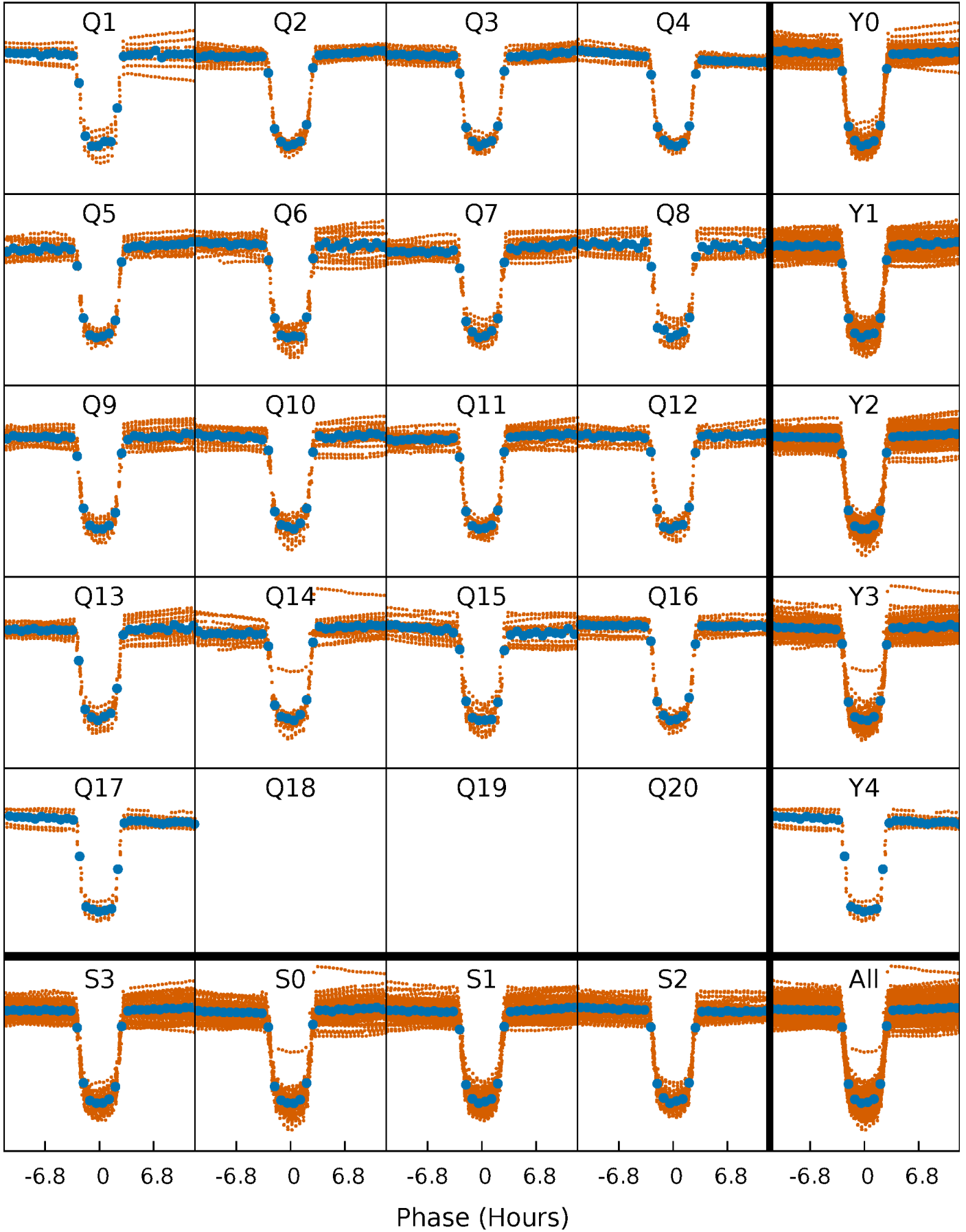


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



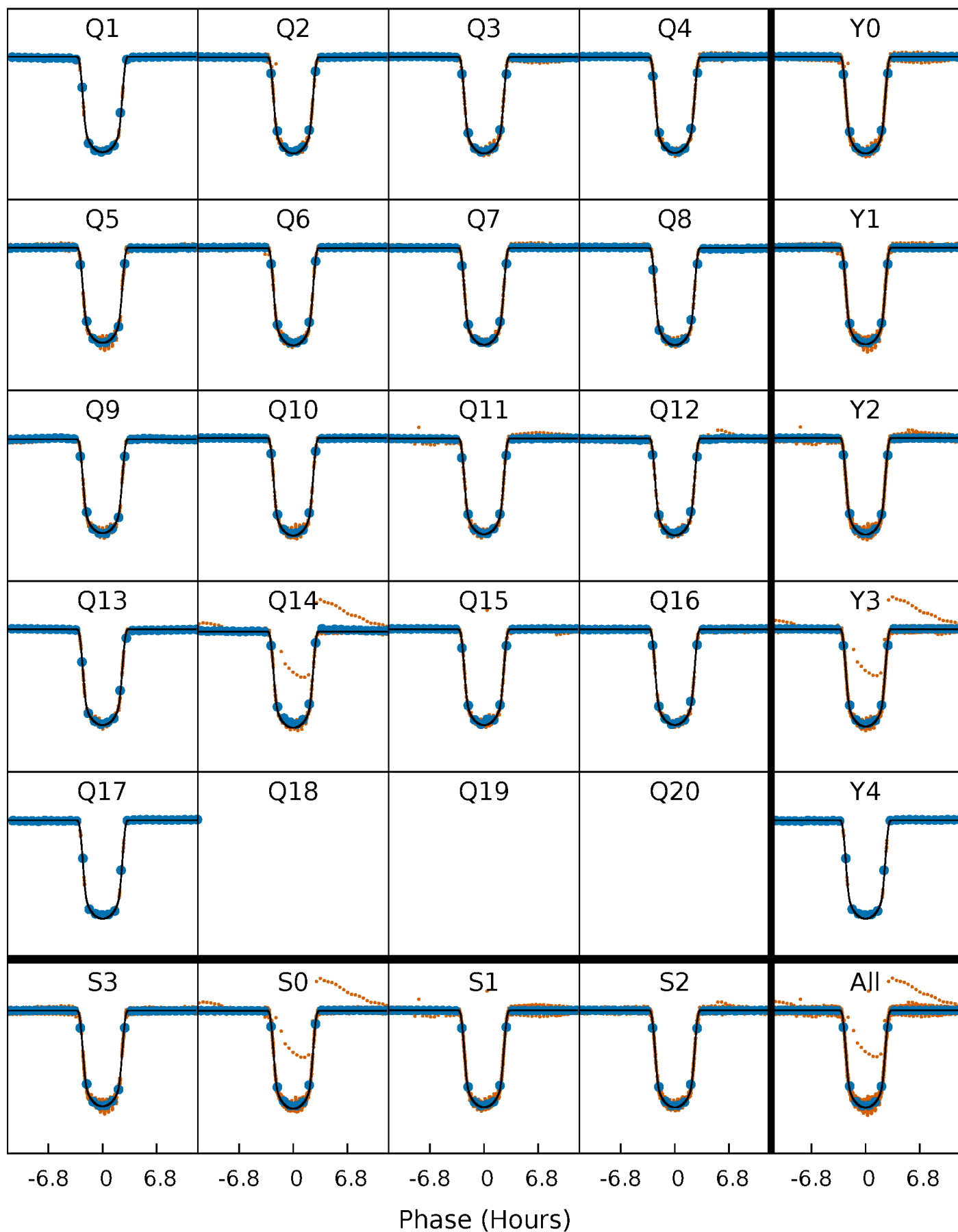
PDC Quarter-Phased Transit Curves

TCE 011673686-01 P= 4.618768 Days $T_0=133.386740$ (BKJD)



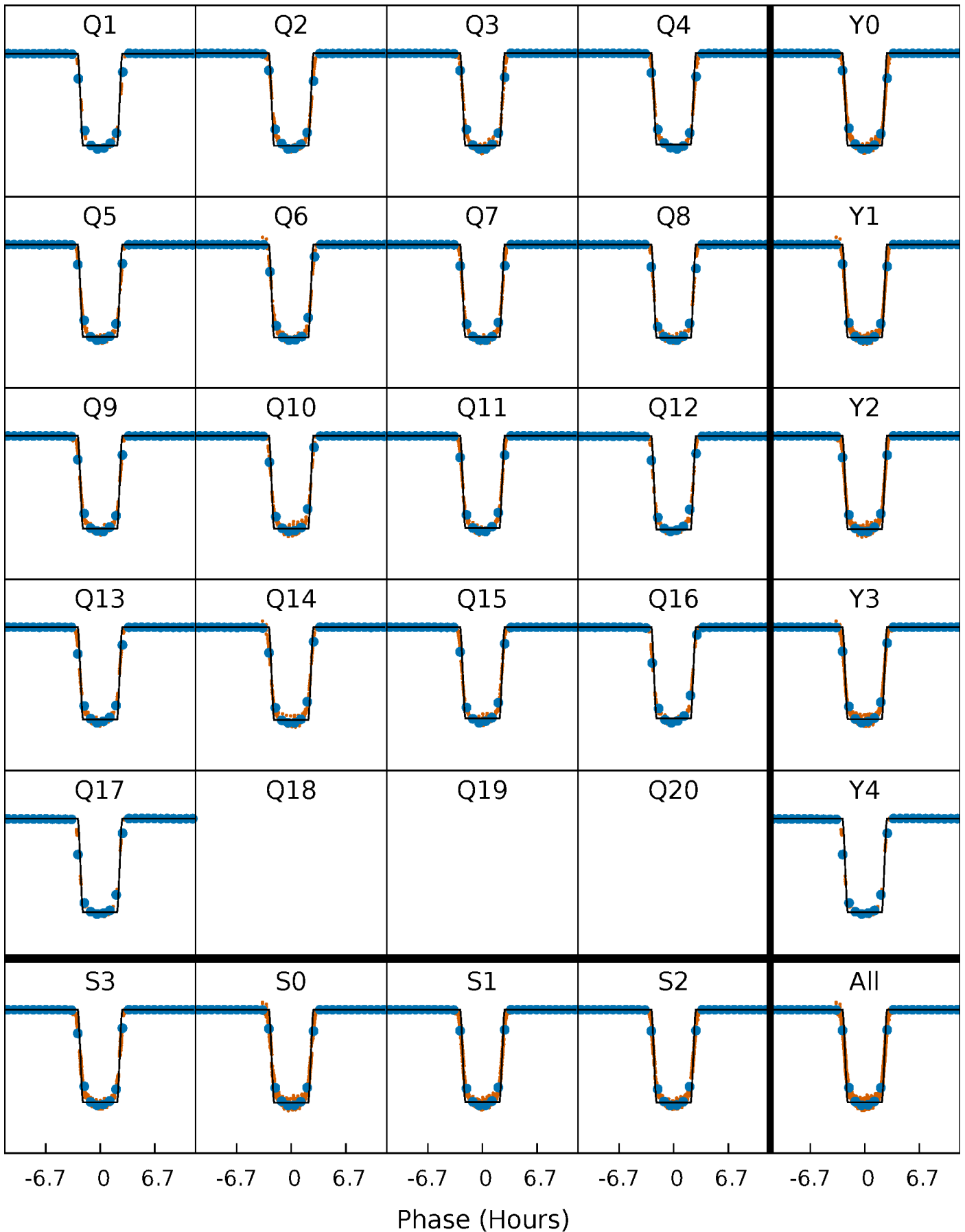
DV Quarter-Phased Transit Curves

TCE 011673686-01 P= 4.618768 Days $T_0=133.386740$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

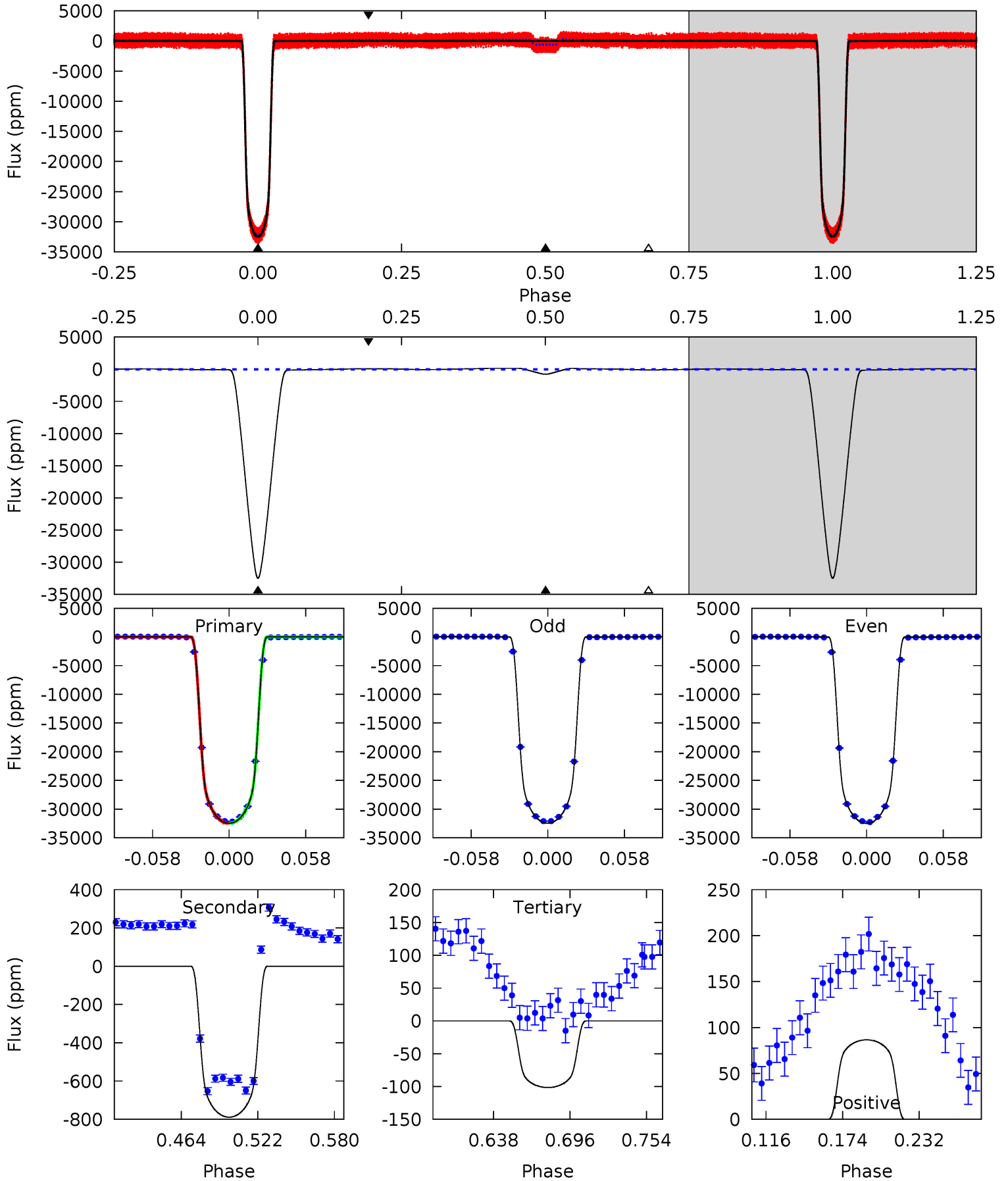
TCE 011673686-01 P= 4.618790 Days $T_0=133.383353$ (BKJD)



DV Model-Shift Uniqueness Test

011673686-01, P = 4.618768 Days, E = 128.767972 Days

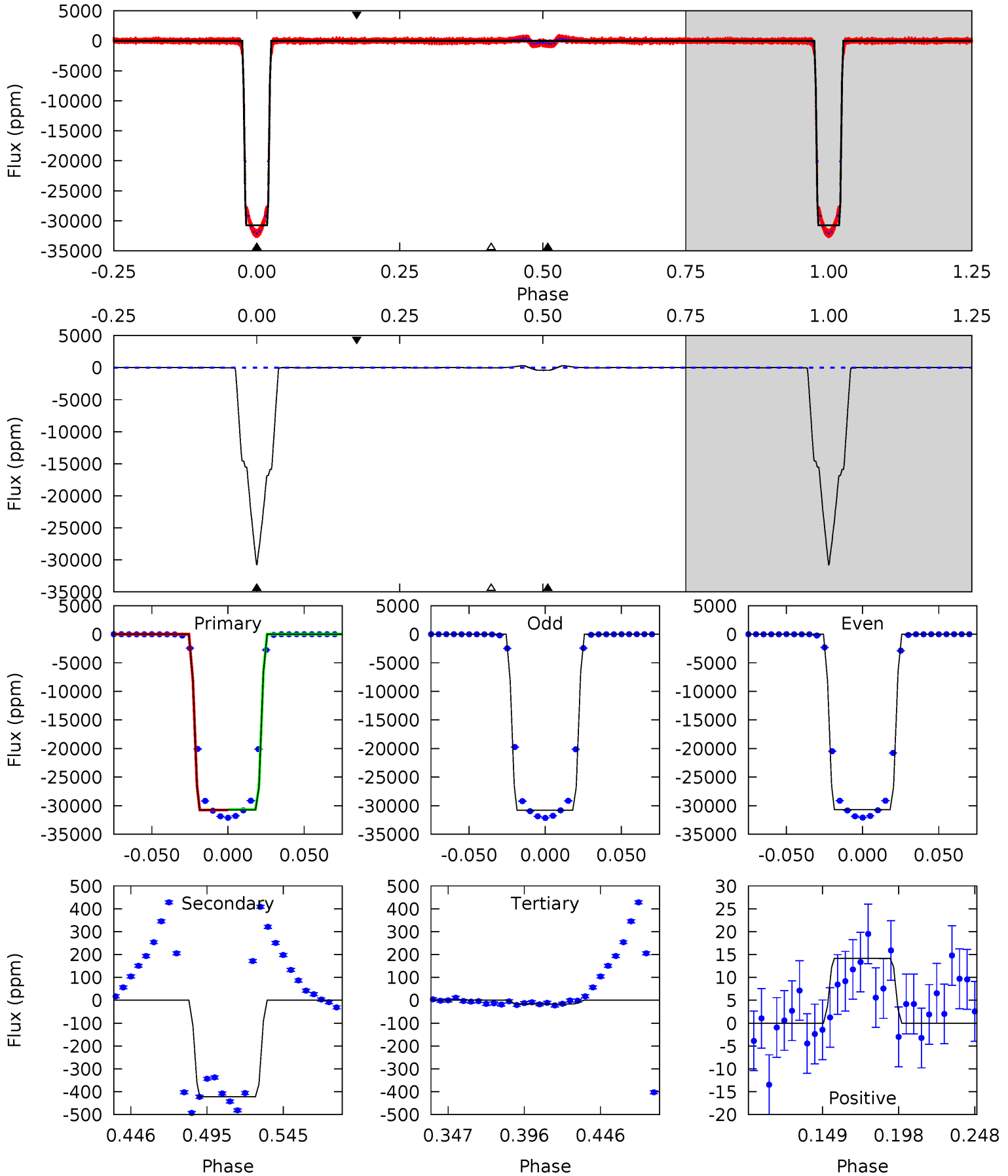
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5152	125.1	16.1	13.7	4.68	1.90	10.6	5136	5139	109.0	111.4	2.22	1.00	0.00	0.27



Alt Model-Shift Uniqueness Test

011673686-01, P = 4.618790 Days, E = 128.764563 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9409	129.0	5.09	4.33	4.71	1.96	7.74	9404	9405	123.9	124.6	10.7	1.00	0.01	17.0



Stellar Parameters For KIC 011673686

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6195^{+169}_{-187}	$3.937^{+0.472}_{-0.157}$	$-0.580^{+0.300}_{-0.300}$	$1.781^{+0.440}_{-0.816}$	$1.000^{+0.131}_{-0.146}$	$0.249^{+1.162}_{-0.112}$
	+3%/-3%	+12%/-4%	+52%/-52%	+25%/-46%	+13%/-15%	+466%/-45%
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 011673686-01 / KOI 6243.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-789 ± 6	$31.69^{+4.43}_{-7.87}$	2153^{+157}_{-296}	3042^{+69}_{-68}	$1.289^{+0.973}_{-0.285}$
Alt.	-421 ± 3	$33.82^{+4.86}_{-8.20}$	2149^{+175}_{-268}	2617^{+114}_{-135}	$0.620^{+0.441}_{-0.155}$

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

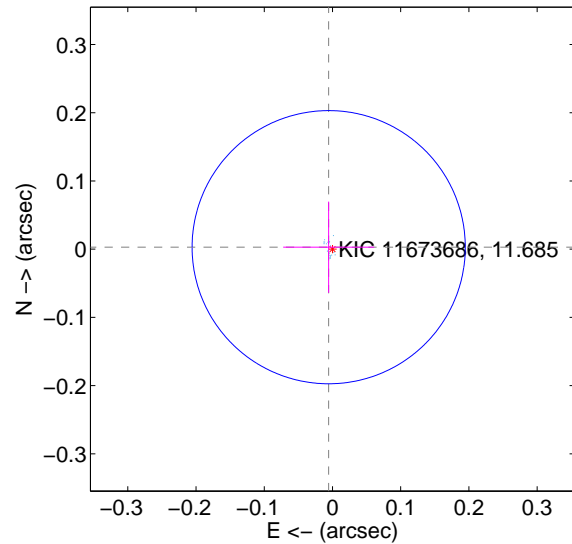
Supplemental centroid analysis for 011673686-01. **Kepler magnitude: 11.69.** Transit SNR 3154.70

There are 17 quarters with good PRF difference image offsets

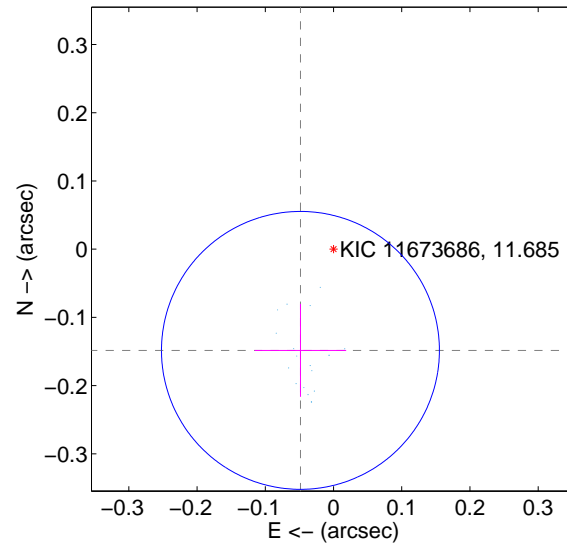
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.006 ± 0.067	0.09	0.006 ± 0.067	0.003 ± 0.067
PRF-fit source offset from KIC position	0.156 ± 0.068	2.30	0.048 ± 0.067	-0.148 ± 0.068
photometric centroid source offset	0.29 ± 0.00	131.58	0.00 ± 0.00	-0.29 ± 0.00

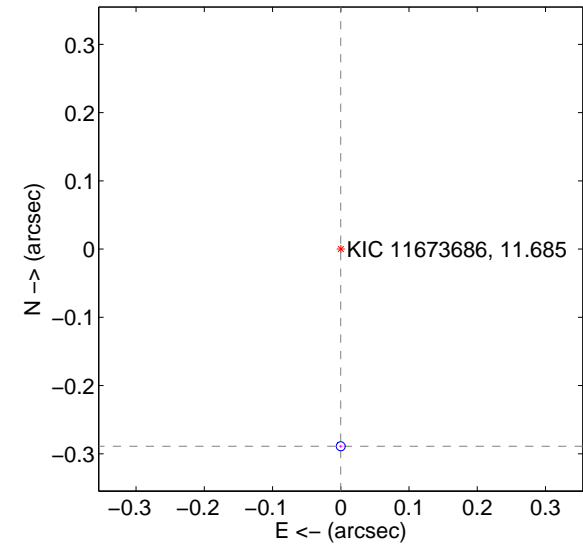
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

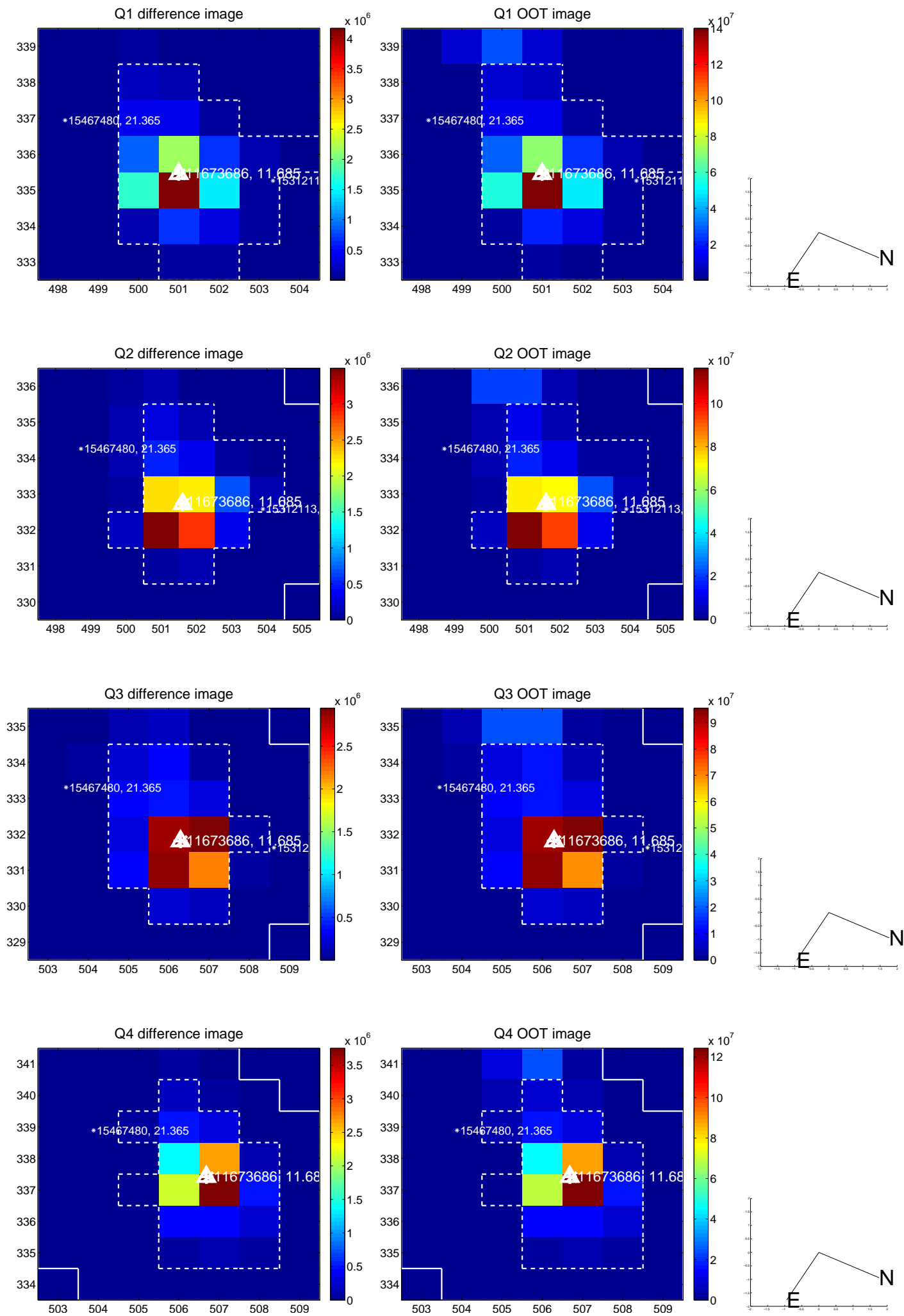


offset from photometric centroids

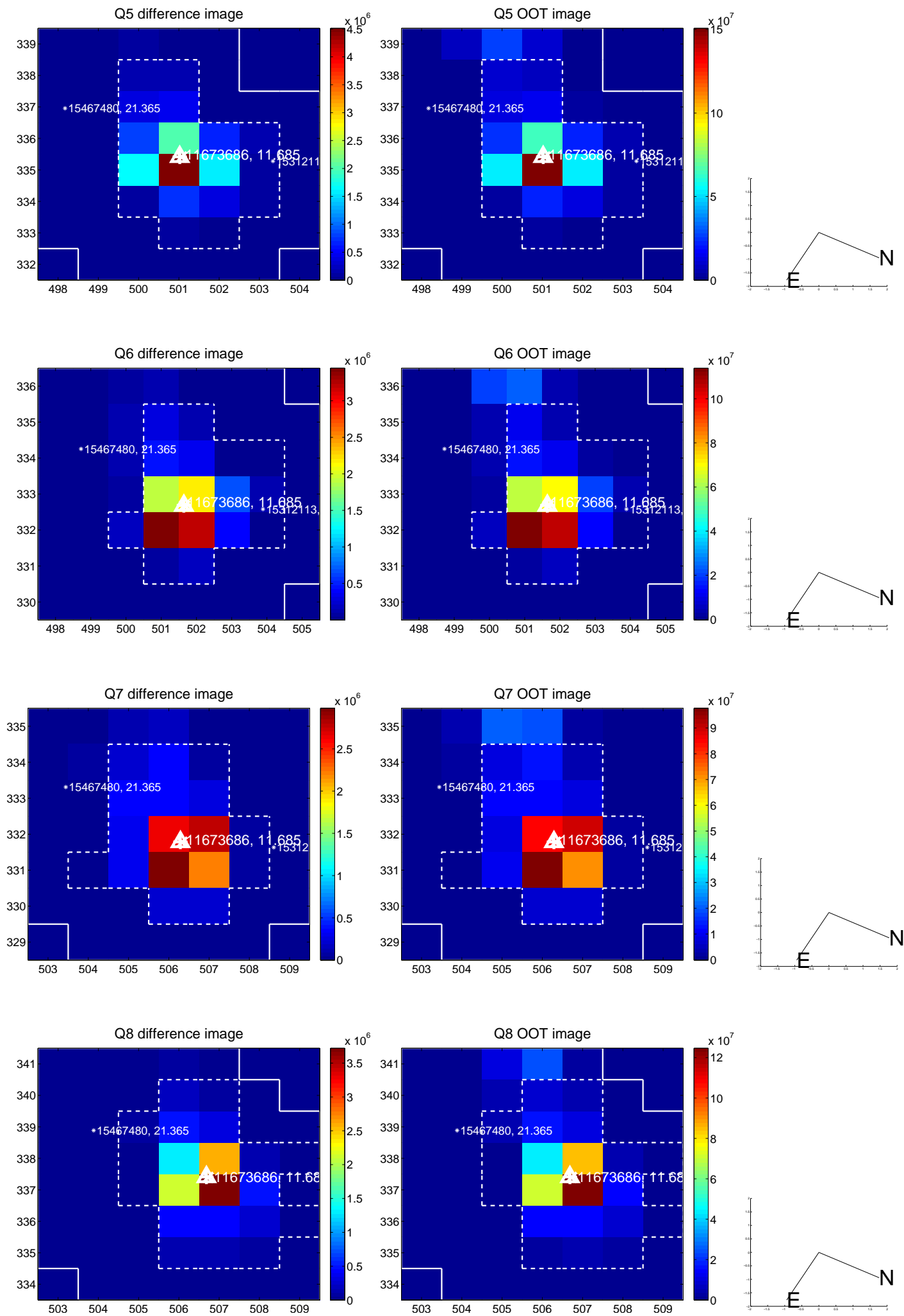


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

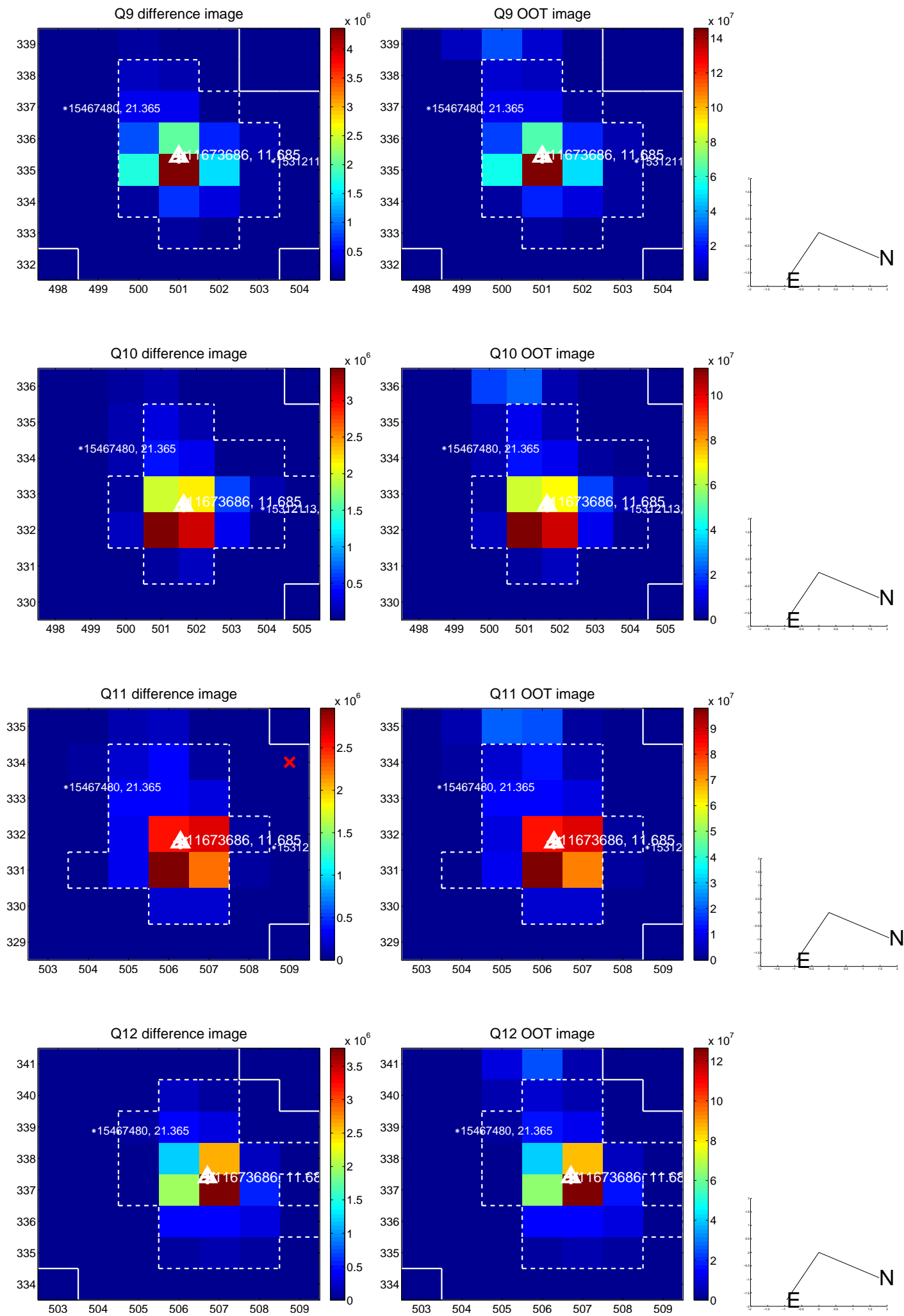
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



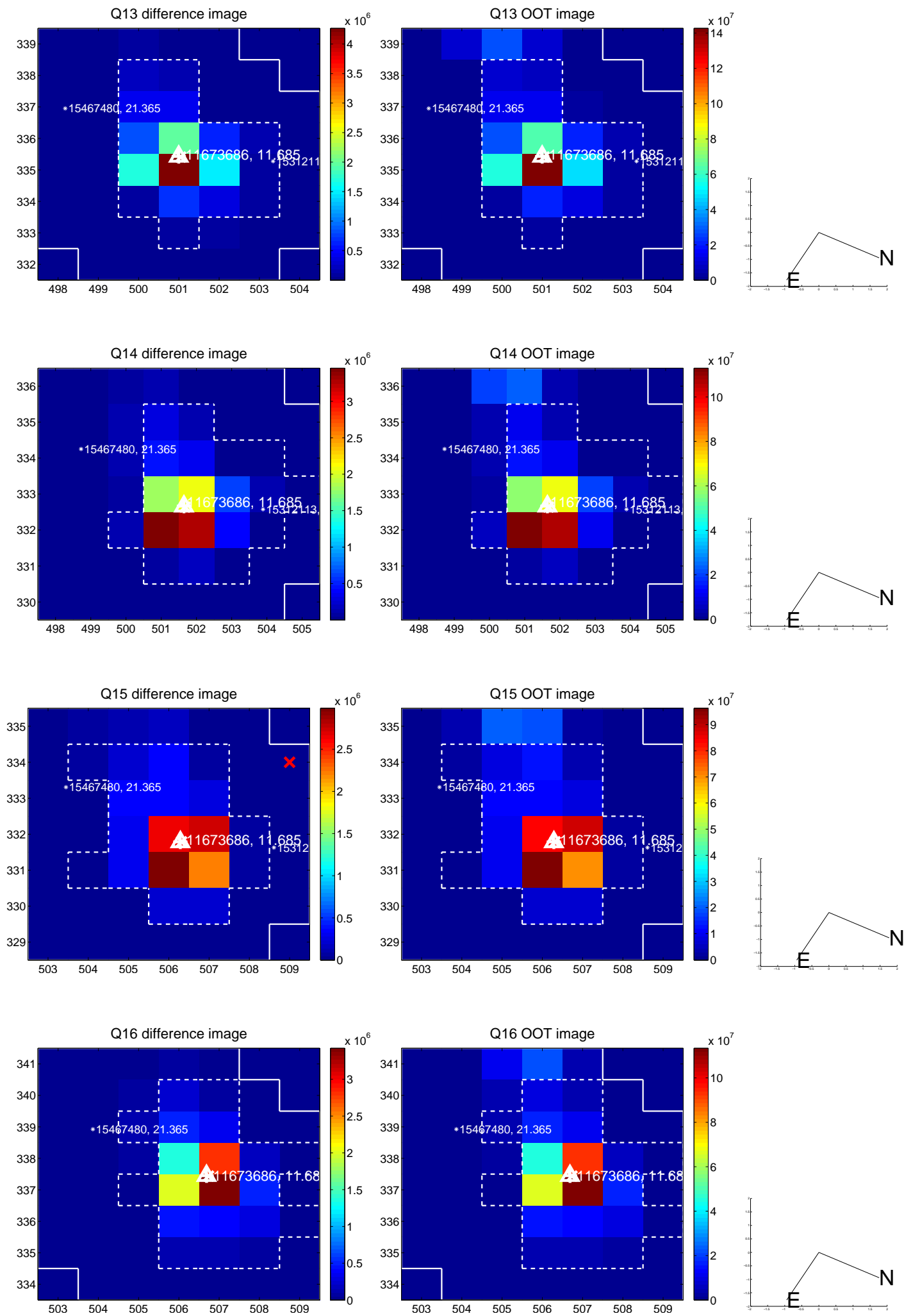
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



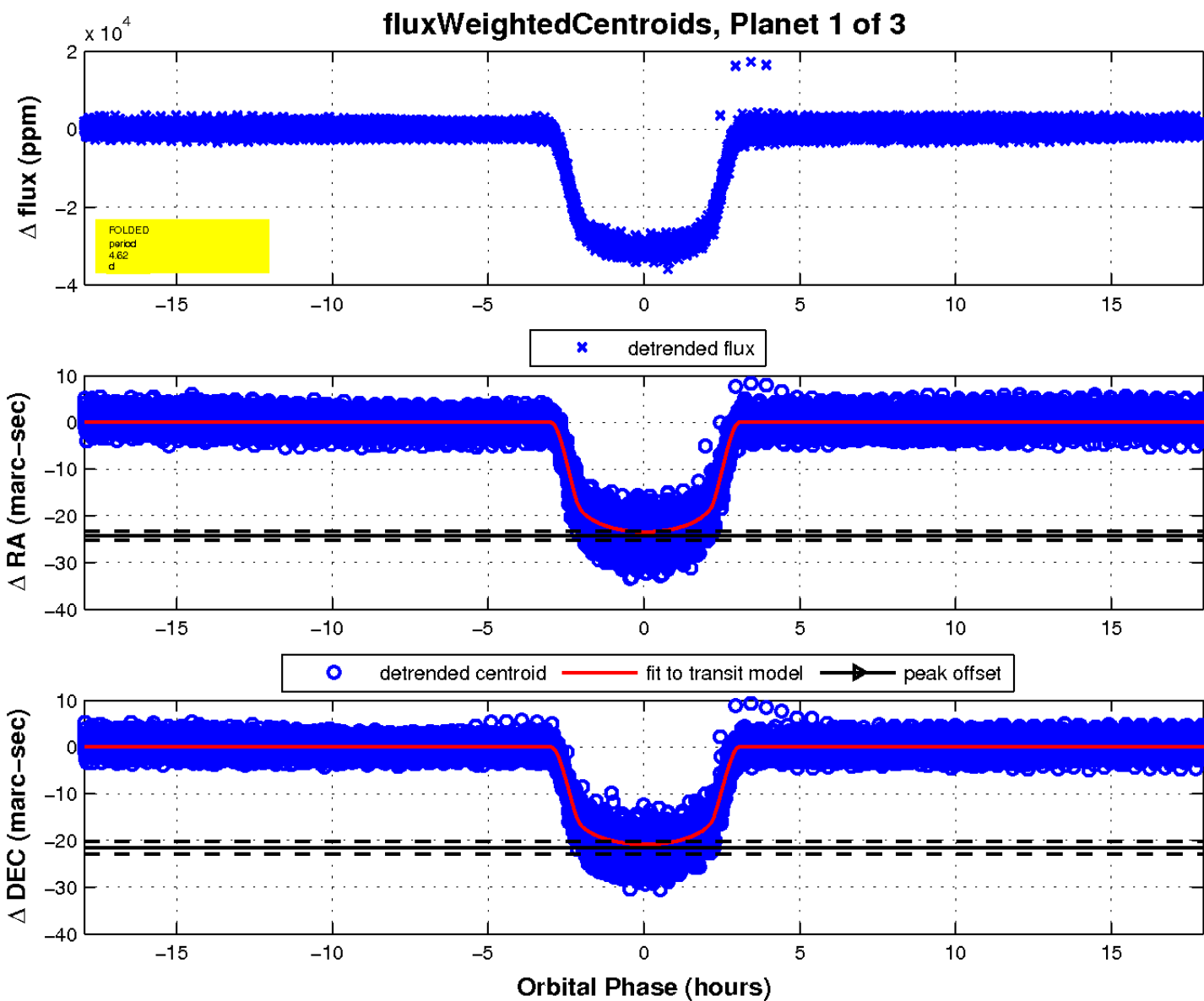
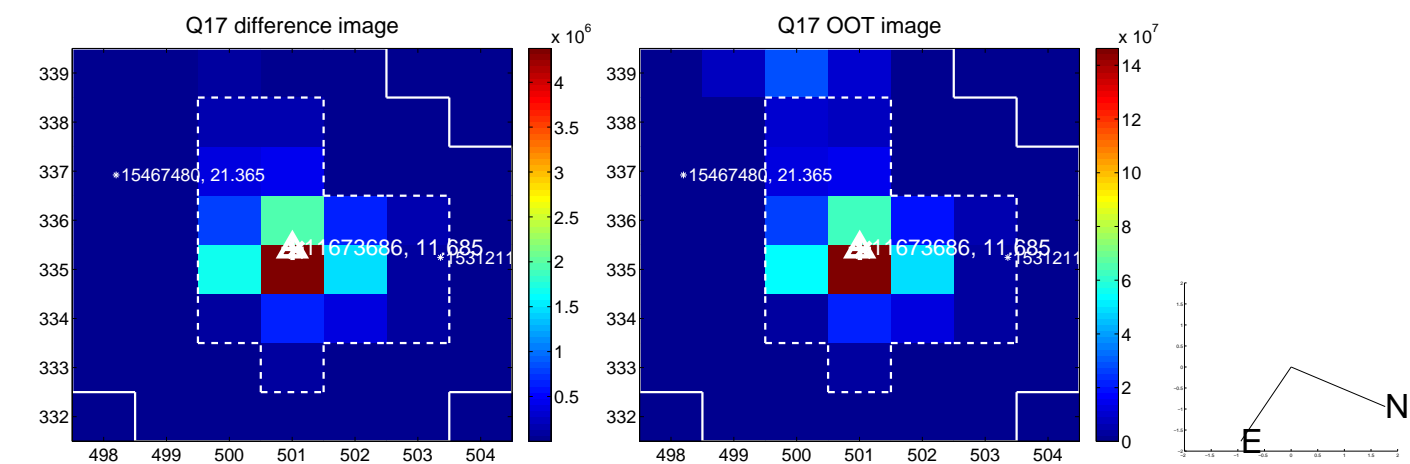
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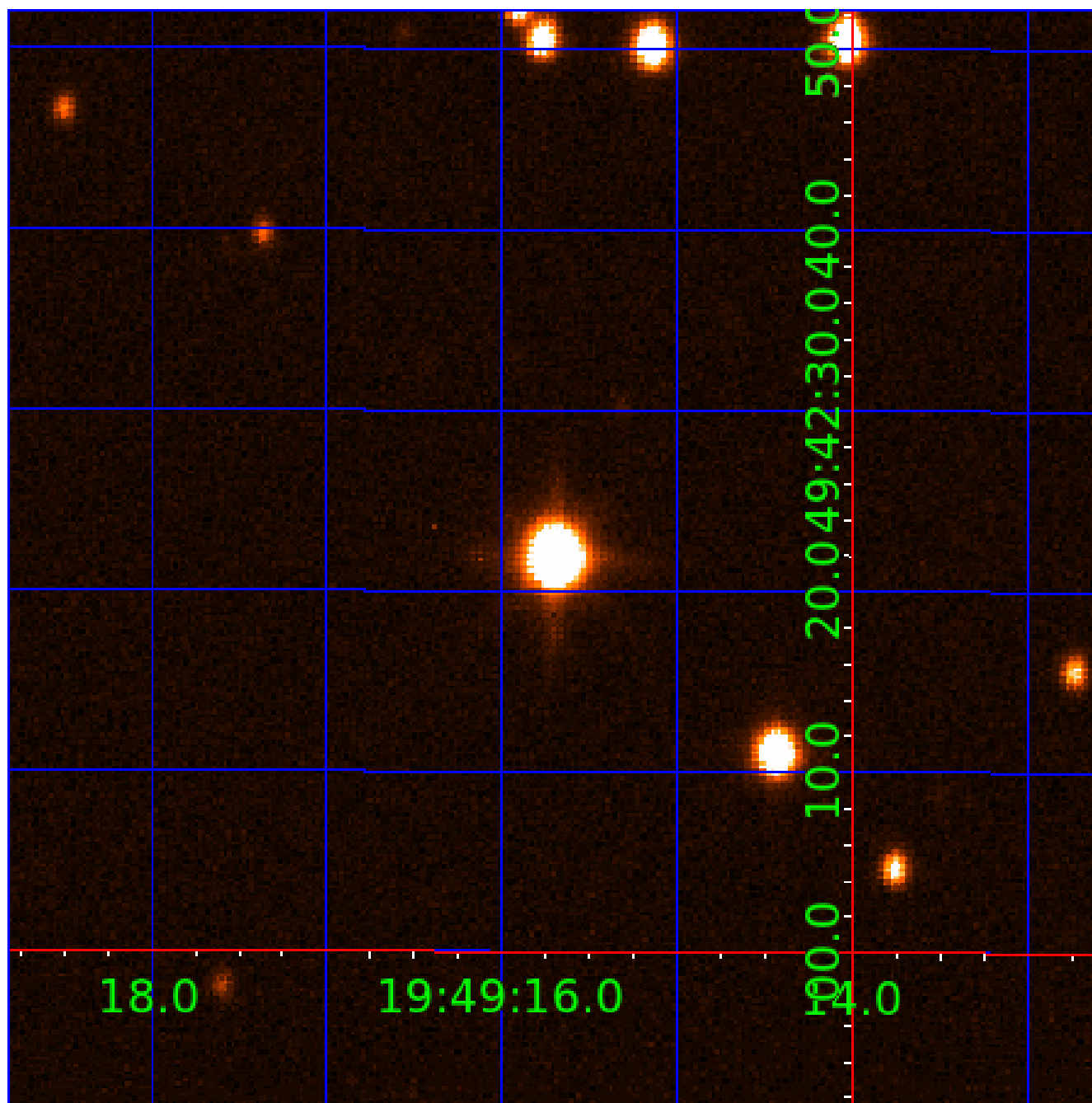


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011673686

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})
011673686-01	OBS	6243.01	4.618768	133.386740	32583.8	5.990	1726.7	3154.7	1.78	6195	32.29	1419.50
011673686-02	OBS	No	2.309368	133.389430	1204.7	6.249	148.4	139.6	1.78	6195	7.24	3576.94
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011673686-01	OBS	FP	0.31	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
011673686-02	OBS	FP	0.00	1	1	0	1	IS_SEC_TCE—EPHEM_MATCH
011673686-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV

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 011673686-02

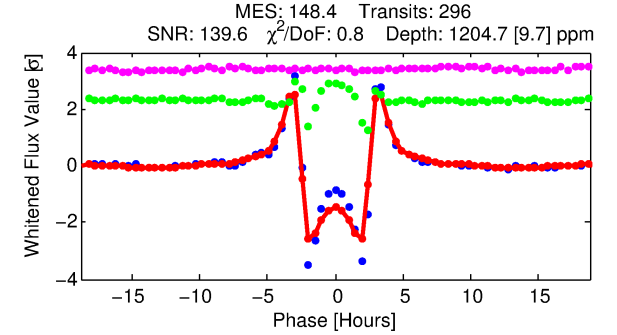
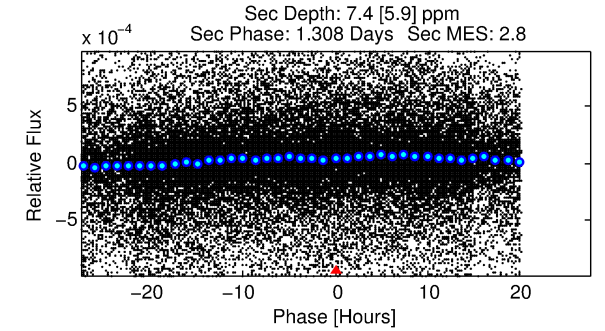
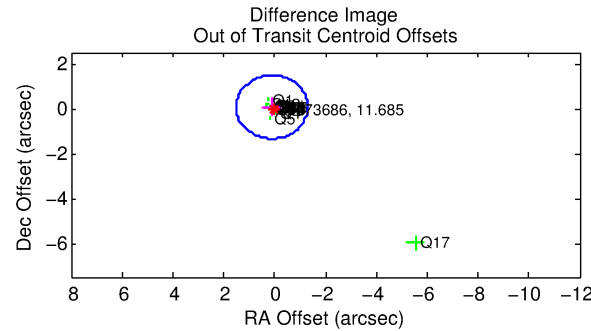
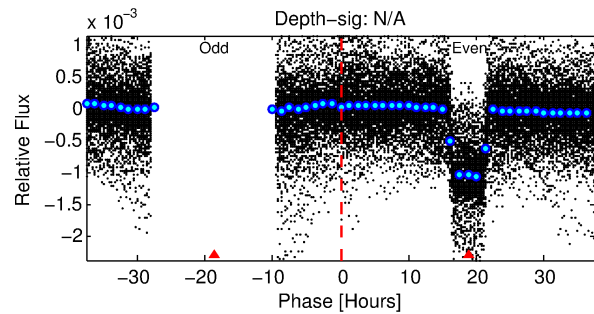
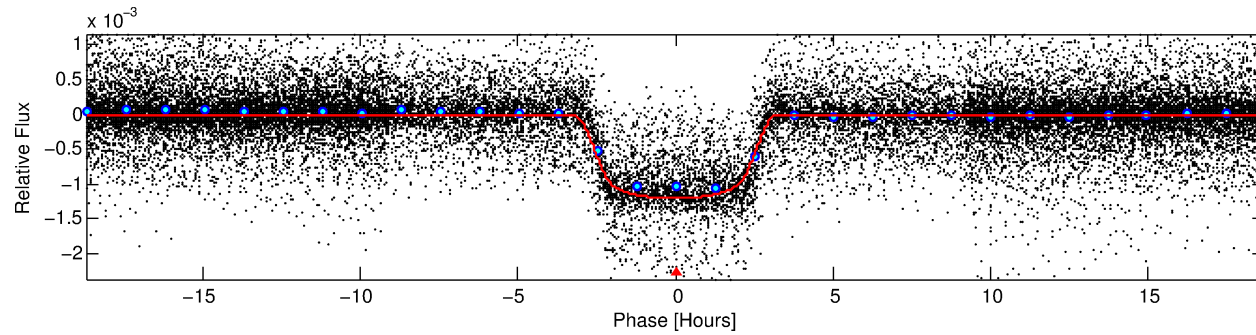
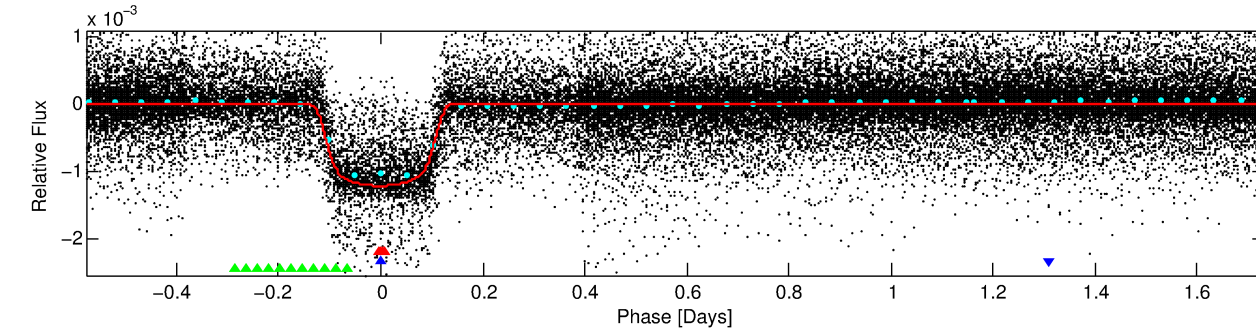
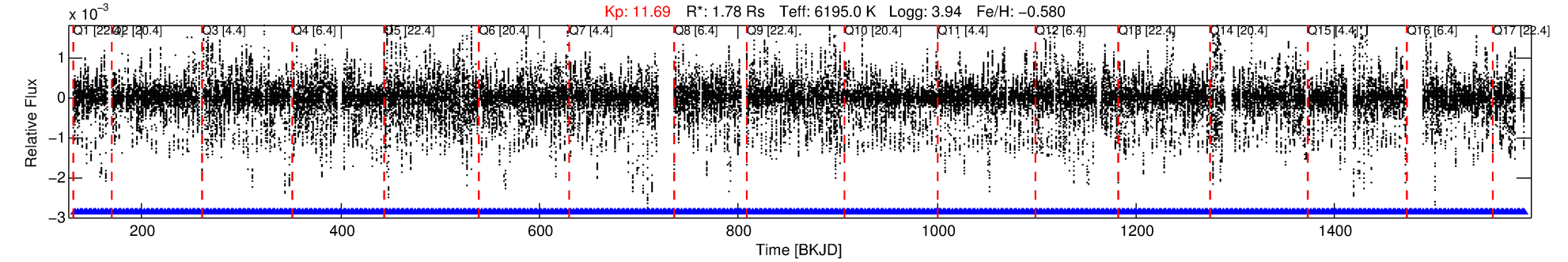
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (μ)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
011673686-02	11673686	133.01	11673674	1:2	16.5	-4	1	13.65	11.68	4.19	Direct-PRF	0	0.90	0.15

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 11673686 Candidate: 2 of 3 Period: 2.309 d

KOI: K06243 Corr: No Ephemeris Match



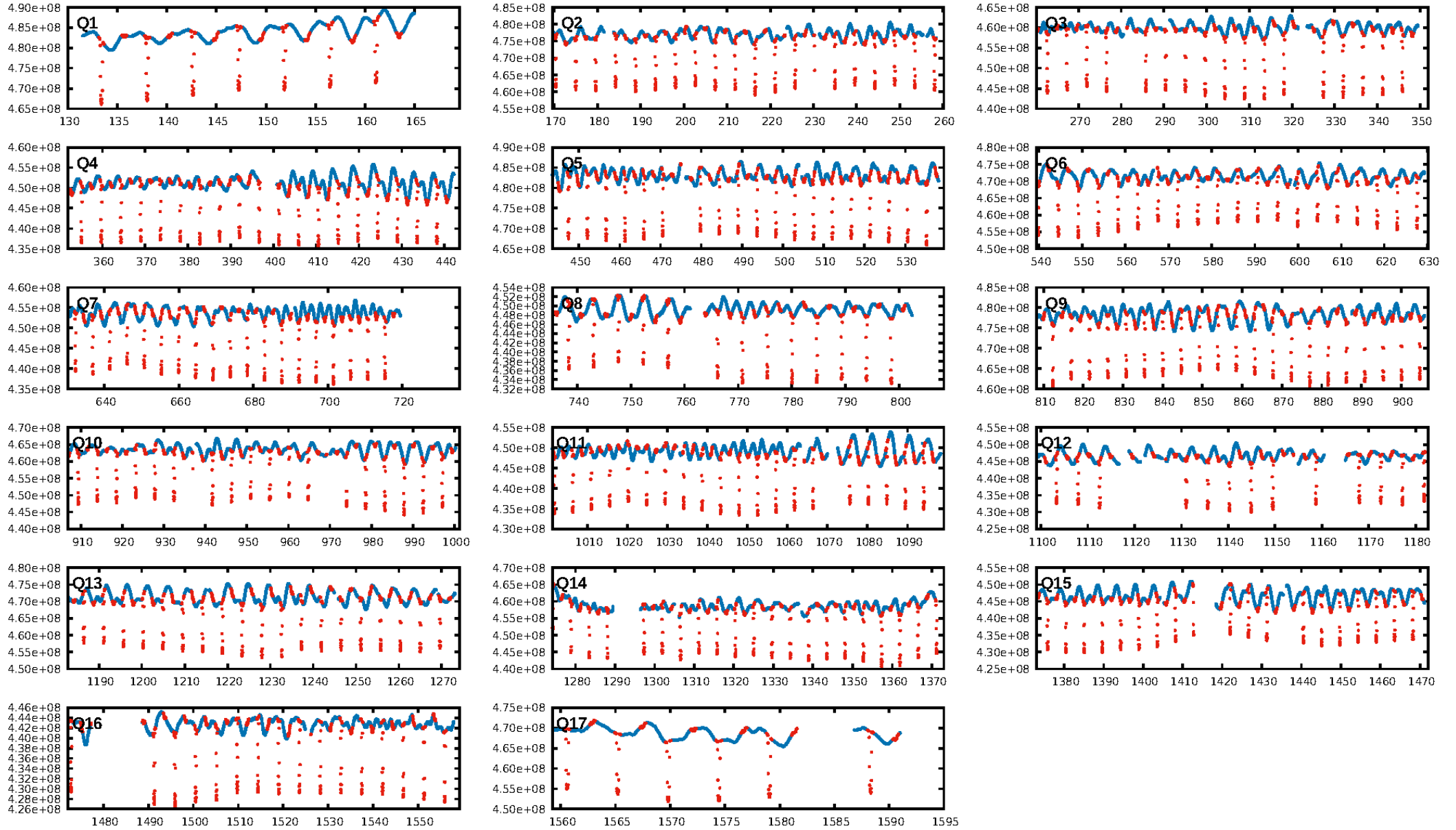
DV Fit Results:

Period = 2.30937 [0.00000] d
Epoch = 133.3894 [0.0002] BKJD
Rp/R* = 0.0372 [0.0002]
a/R* = 1.74 [0.01]
b = 0.90 [0.00]
Seff = 3576.94 [2845.51]
Teff = 1972 [392] K
Rp = 7.24 [3.32] Re
a = 0.0342 [0.0162] AU
Ag = 0.09 [0.10] [-8.94σ]
Teffp = 1673 [338] K [-0.58σ]

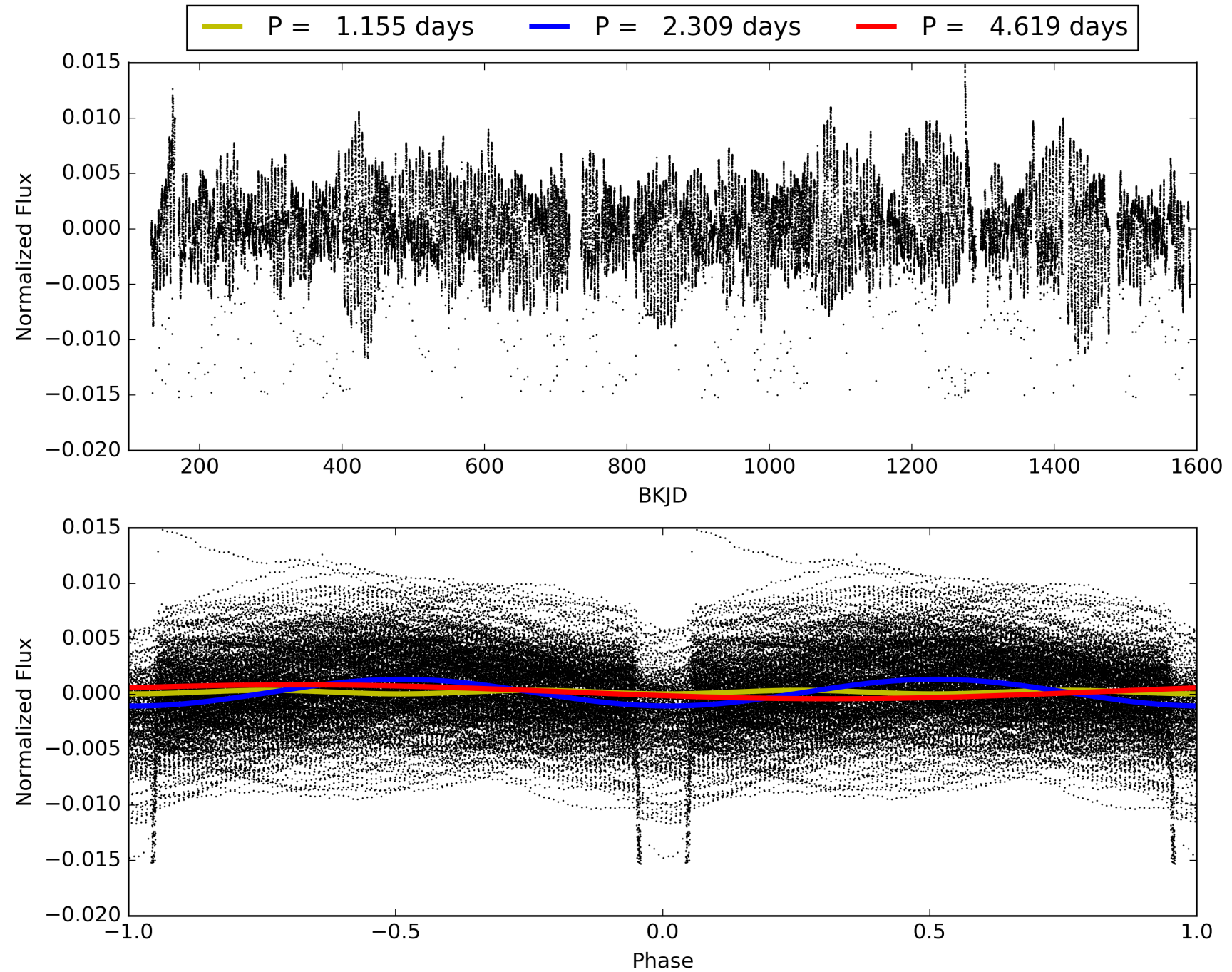
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [6.40σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [283/283]
GhostDiagnostic-chr: 2.474
Centroid-sig: 0.0%
Centroid-so: 0.201 arcsec [4.64σ]
OotOffset-rm: 0.125 arcsec [0.27σ]
KicOffset-rm: 0.177 arcsec [1.16σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011673686-02, PDC Light Curves

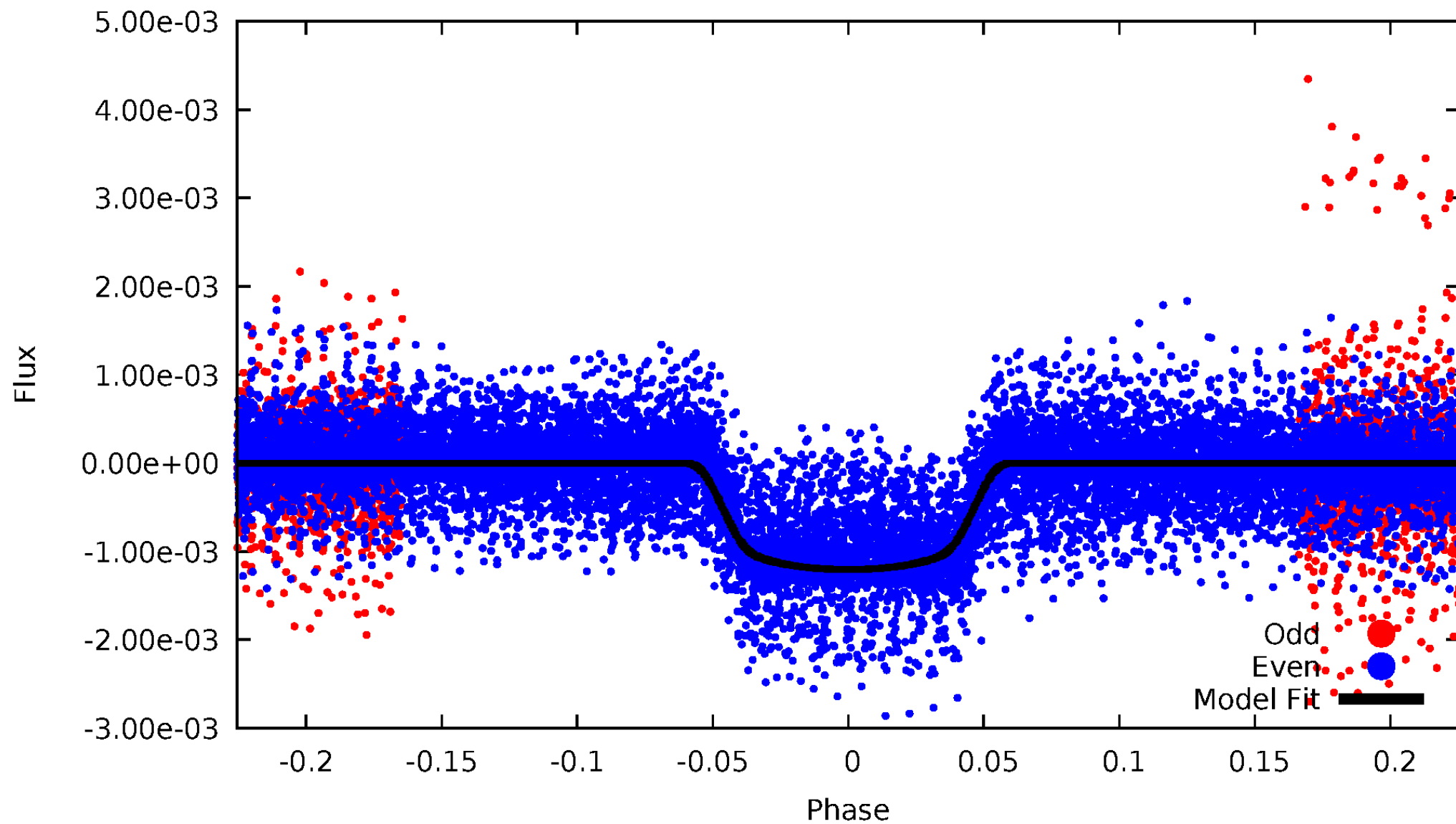


TCE 011673686-02



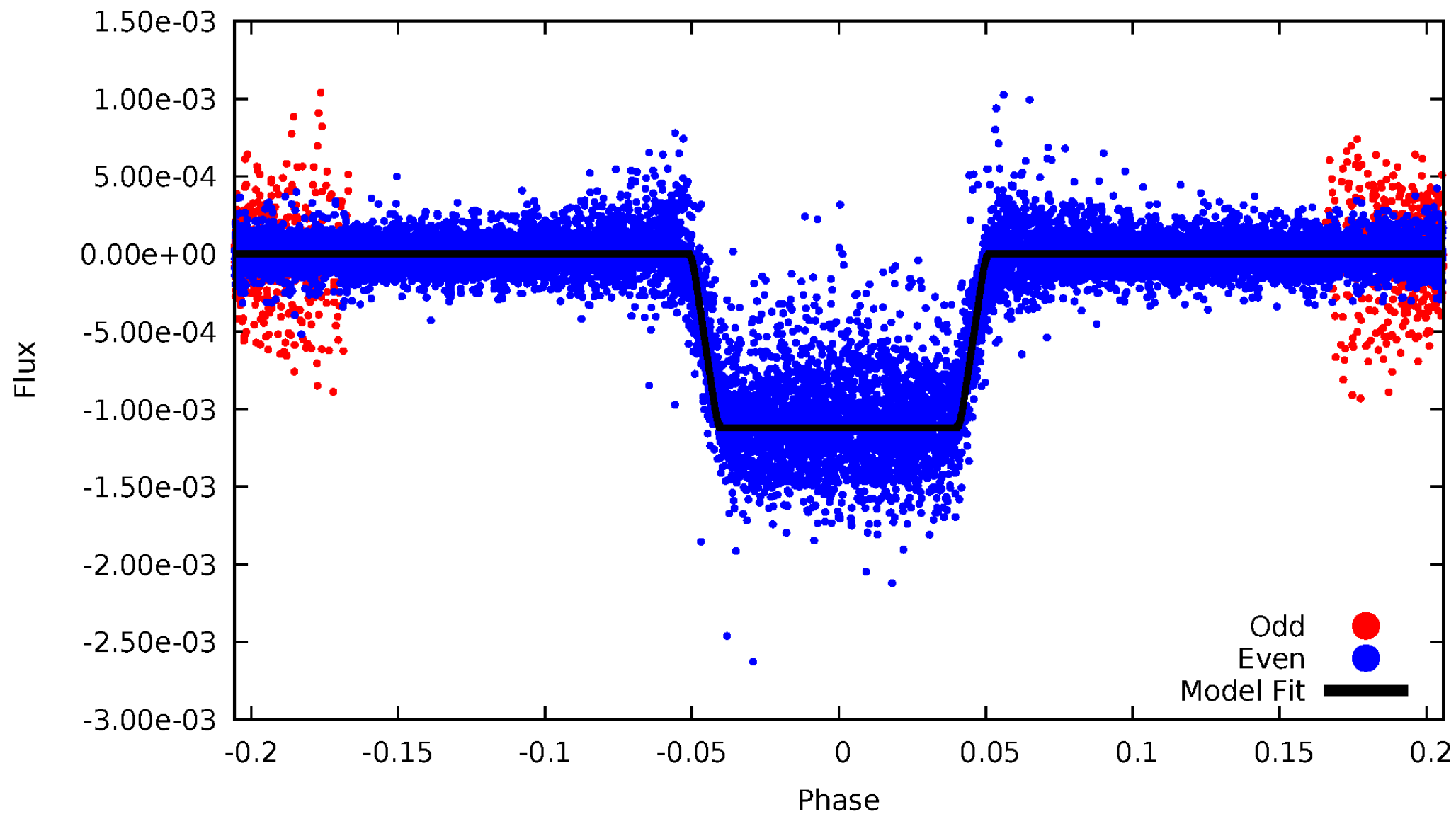
DV Odd/Even

TCE 011673686-02



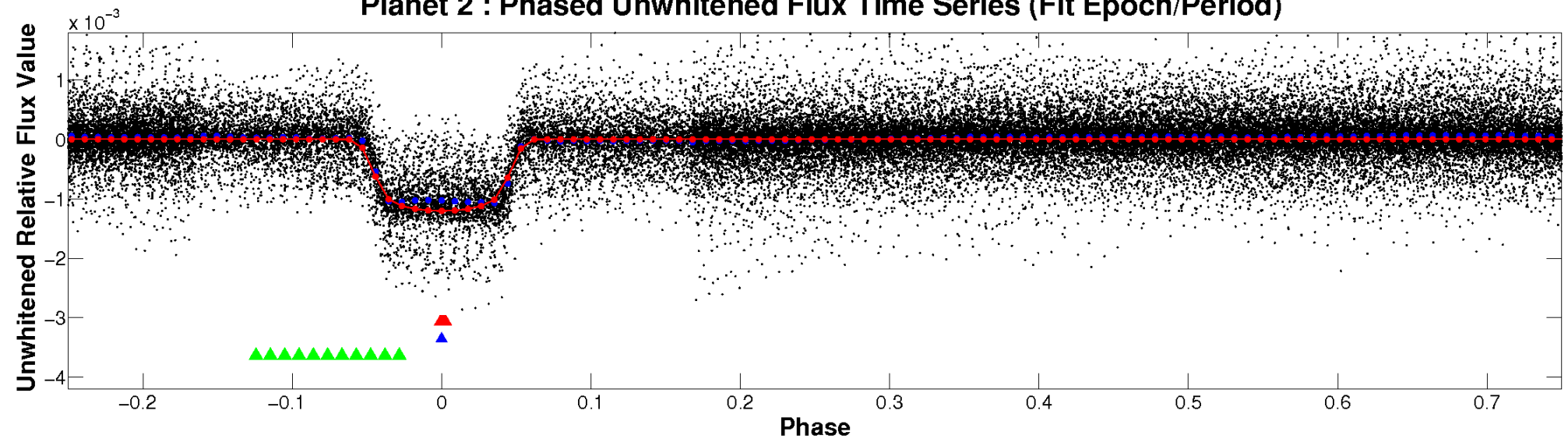
ALT Odd/Even

TCE 011673686-02

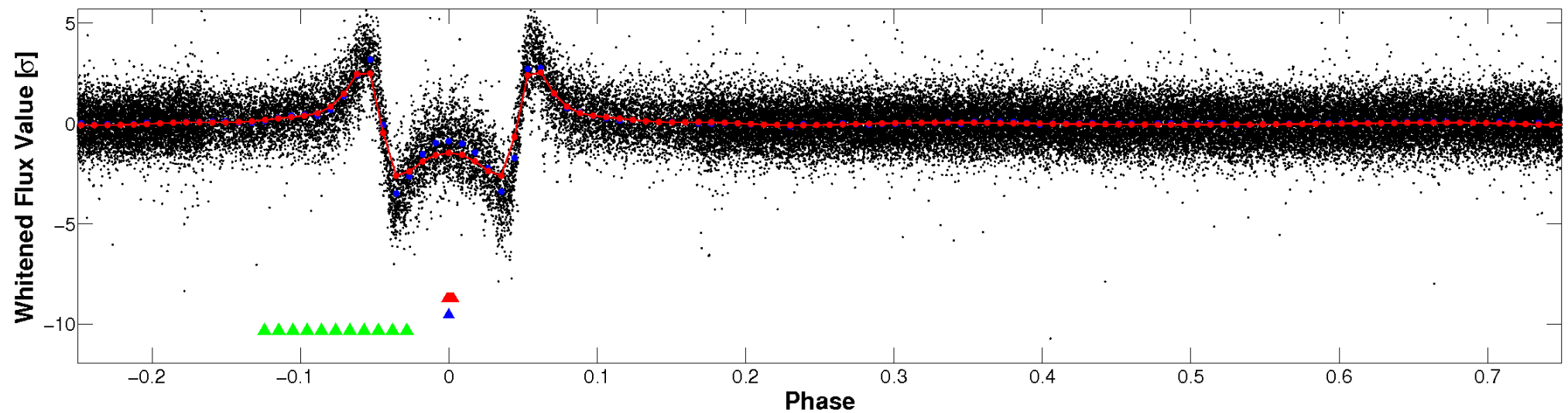


Non-Whitened Vs. Whitened Light Curve

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

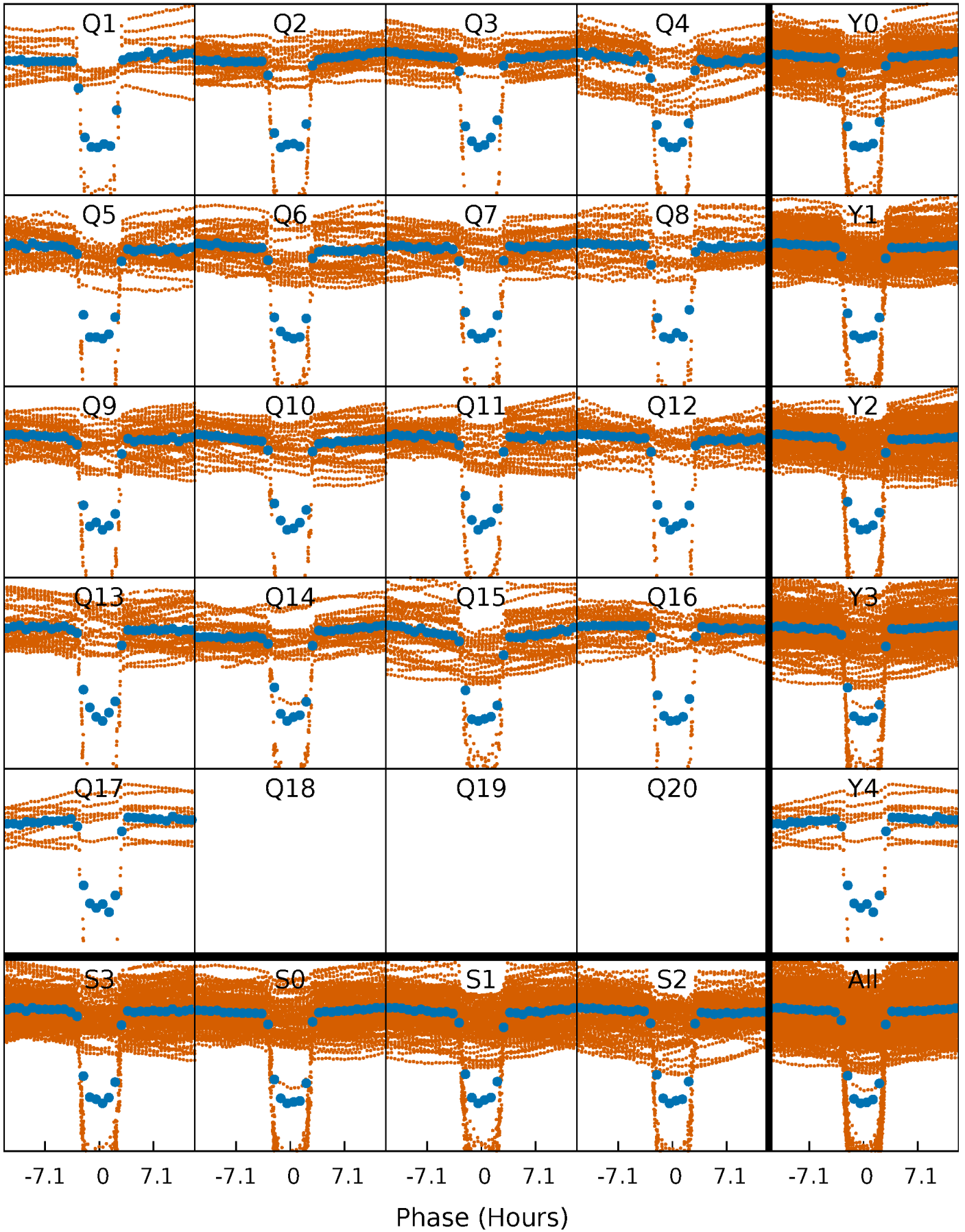


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



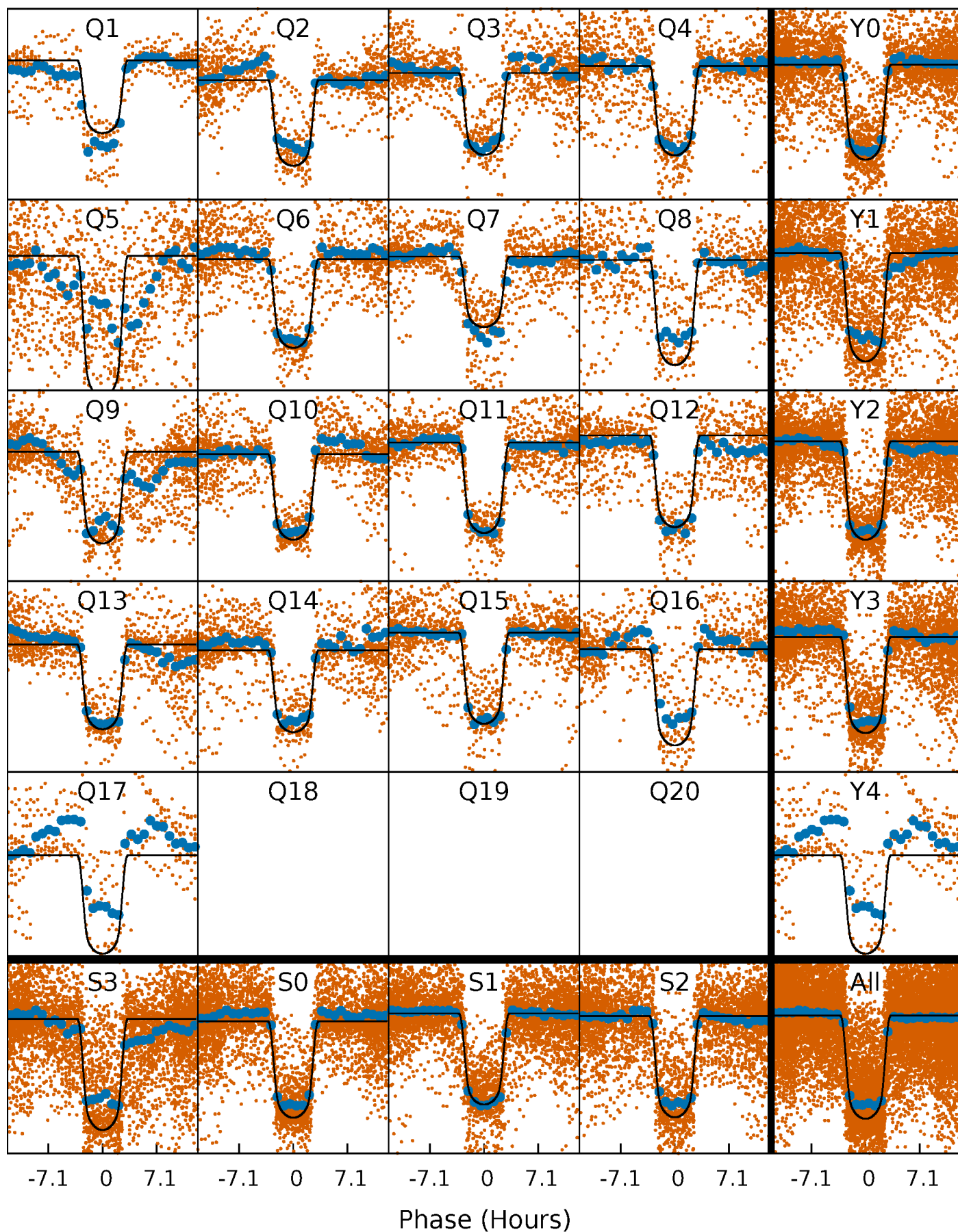
PDC Quarter-Phased Transit Curves

TCE 011673686-02 P= 2.309368 Days $T_0=133.389430$ (BKJD)



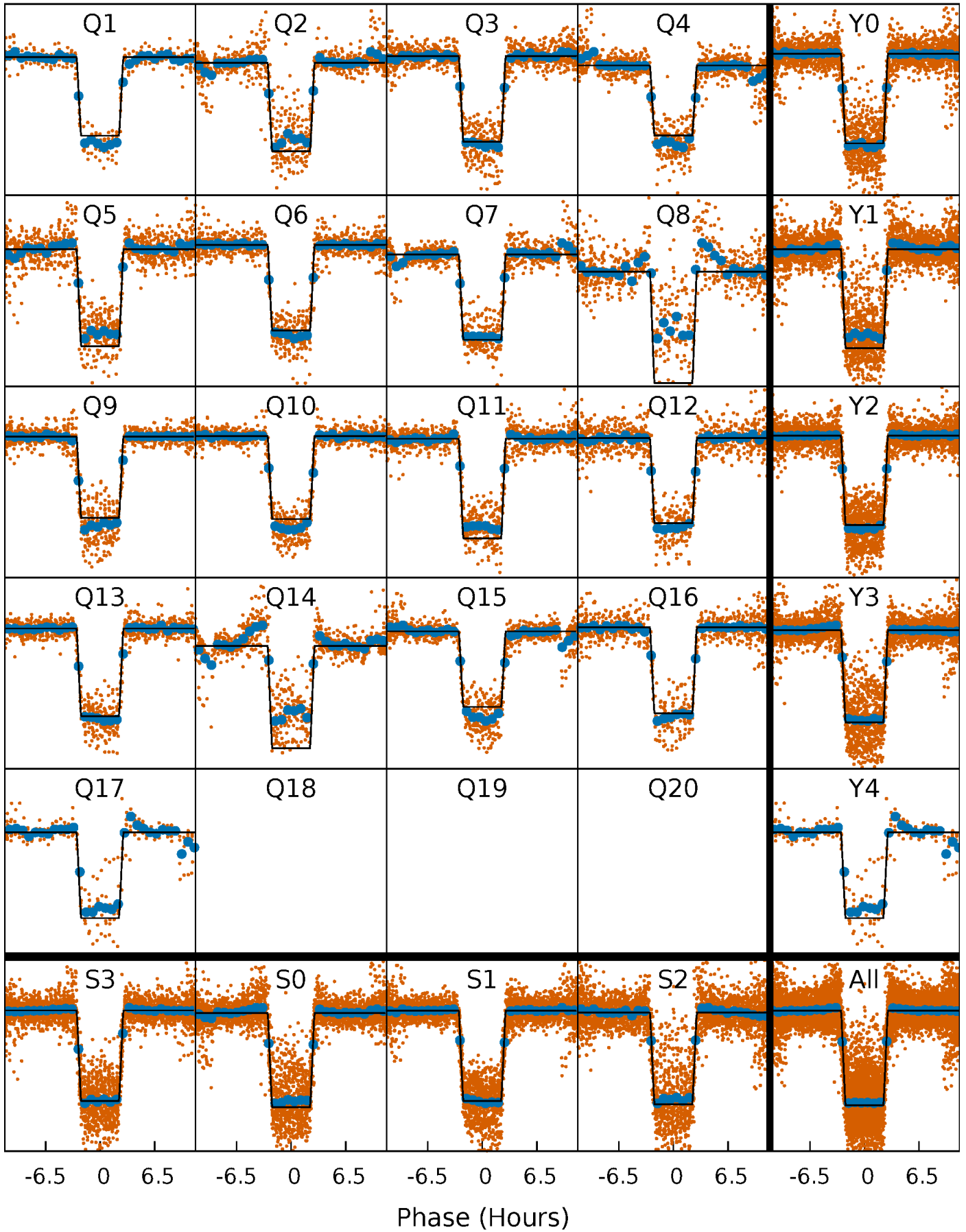
DV Quarter-Phased Transit Curves

TCE 011673686-02 P= 2.309368 Days $T_0=133.389430$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

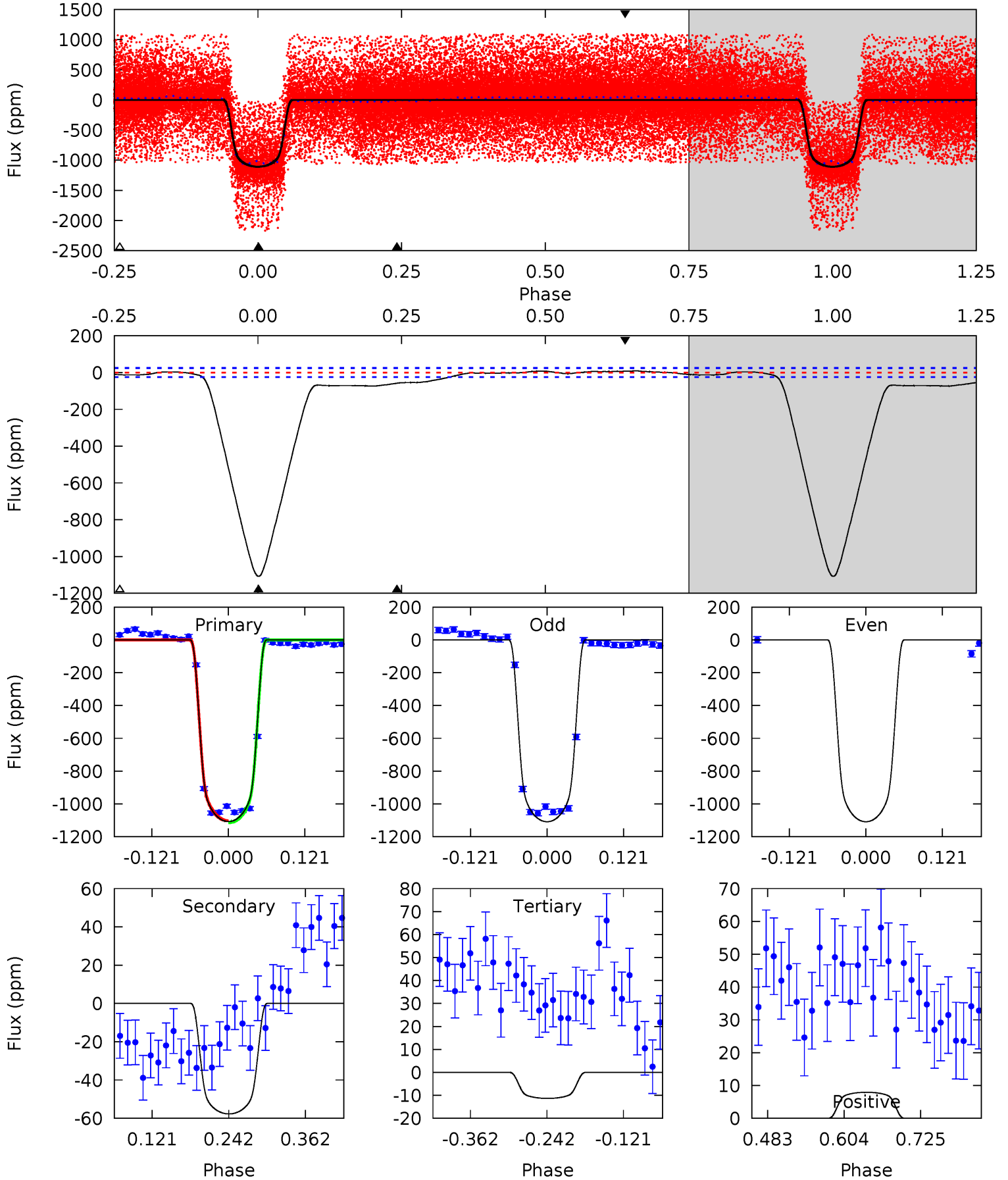
TCE 011673686-02 $P = 2.309379$ Days $T_0 = 133.388726$ (BKJD)



DV Model-Shift Uniqueness Test

011673686-02, P = 2.309368 Days, E = 131.080062 Days

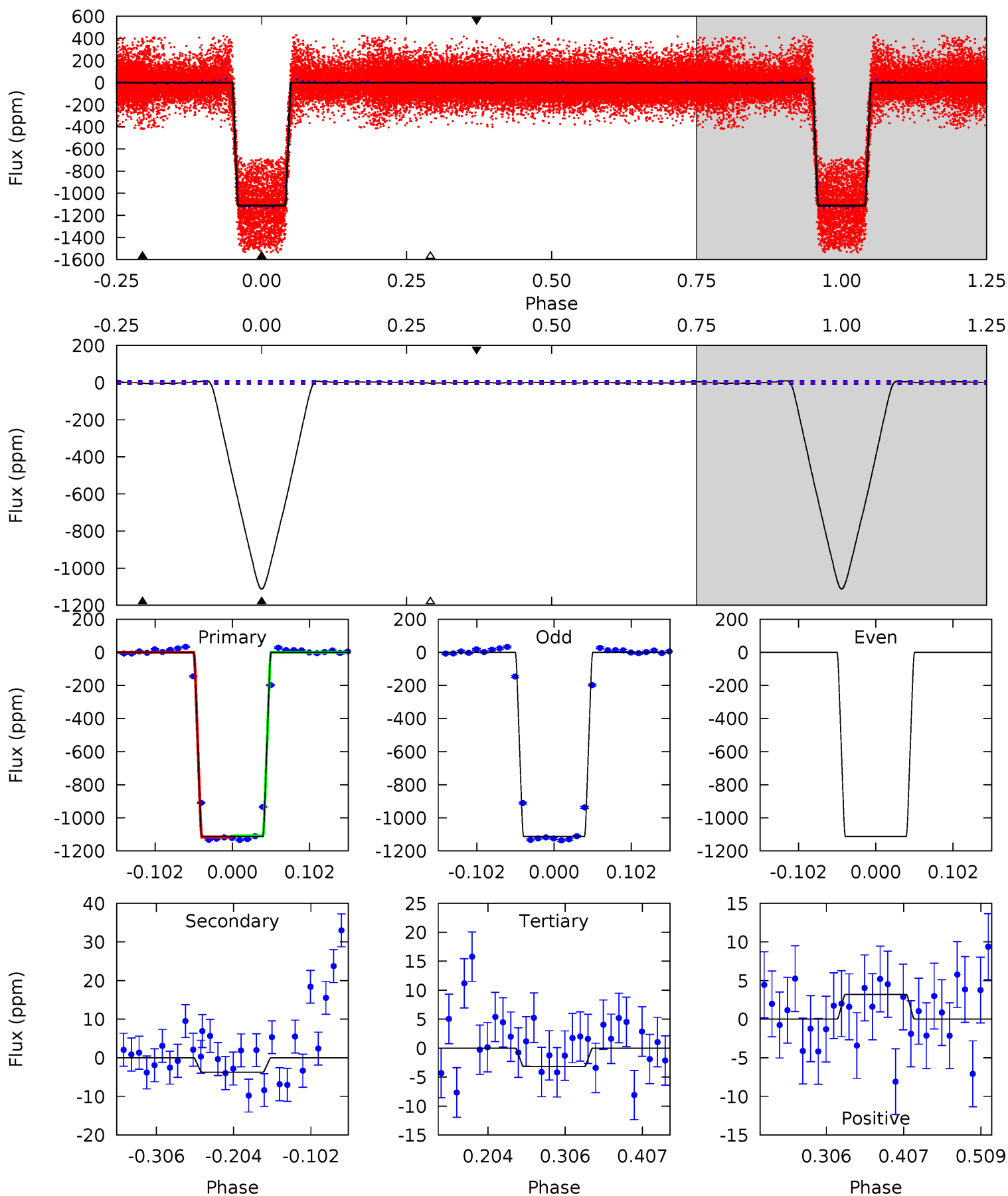
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
200.4	10.4	2.05	1.43	4.53	1.55	1.11	198.4	199.0	8.39	9.01	0	0.96	0.01	1.07



Alt Model-Shift Uniqueness Test

011673686-02, P = 2.309379 Days, E = 131.079347 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
584.2	1.97	1.67	1.68	4.56	1.64	0.95	582.5	582.5	0.30	0.29	0	0.98	0.01	1.99



Stellar Parameters For KIC 011673686

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6195^{+169}_{-187}	$3.937^{+0.472}_{-0.157}$	$-0.580^{+0.300}_{-0.300}$	$1.781^{+0.440}_{-0.816}$	$1.000^{+0.131}_{-0.146}$	$0.249^{+1.162}_{-0.112}$
	+3%/-3%	+12%/-4%	+52%/-52%	+25%/-46%	+13%/-15%	+466%/-45%
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 011673686-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-58 ± 6	$7.13^{+1.01}_{-1.74}$	2711^{+228}_{-330}	3100^{+132}_{-147}	$0.753^{+0.481}_{-0.195}$
Alt.	-4 ± 2	$6.43^{+0.86}_{-1.59}$	2694^{+212}_{-345}	-2823^{+250}_{-149}	$0.064^{+0.049}_{-0.034}$

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 $A_{obs} \gg 1.0$

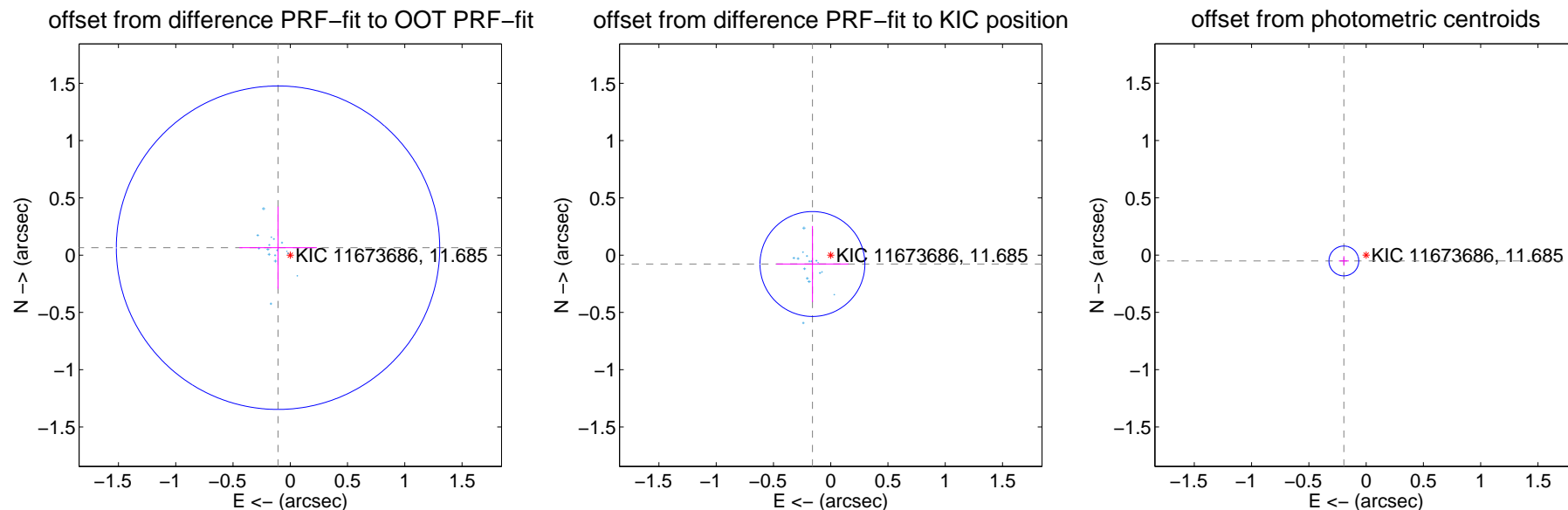
DV Centroid Data

Supplemental centroid analysis for 011673686-02. **Kepler magnitude: 11.69.** Transit SNR 139.60

There are 16 quarters with good PRF difference image offsets

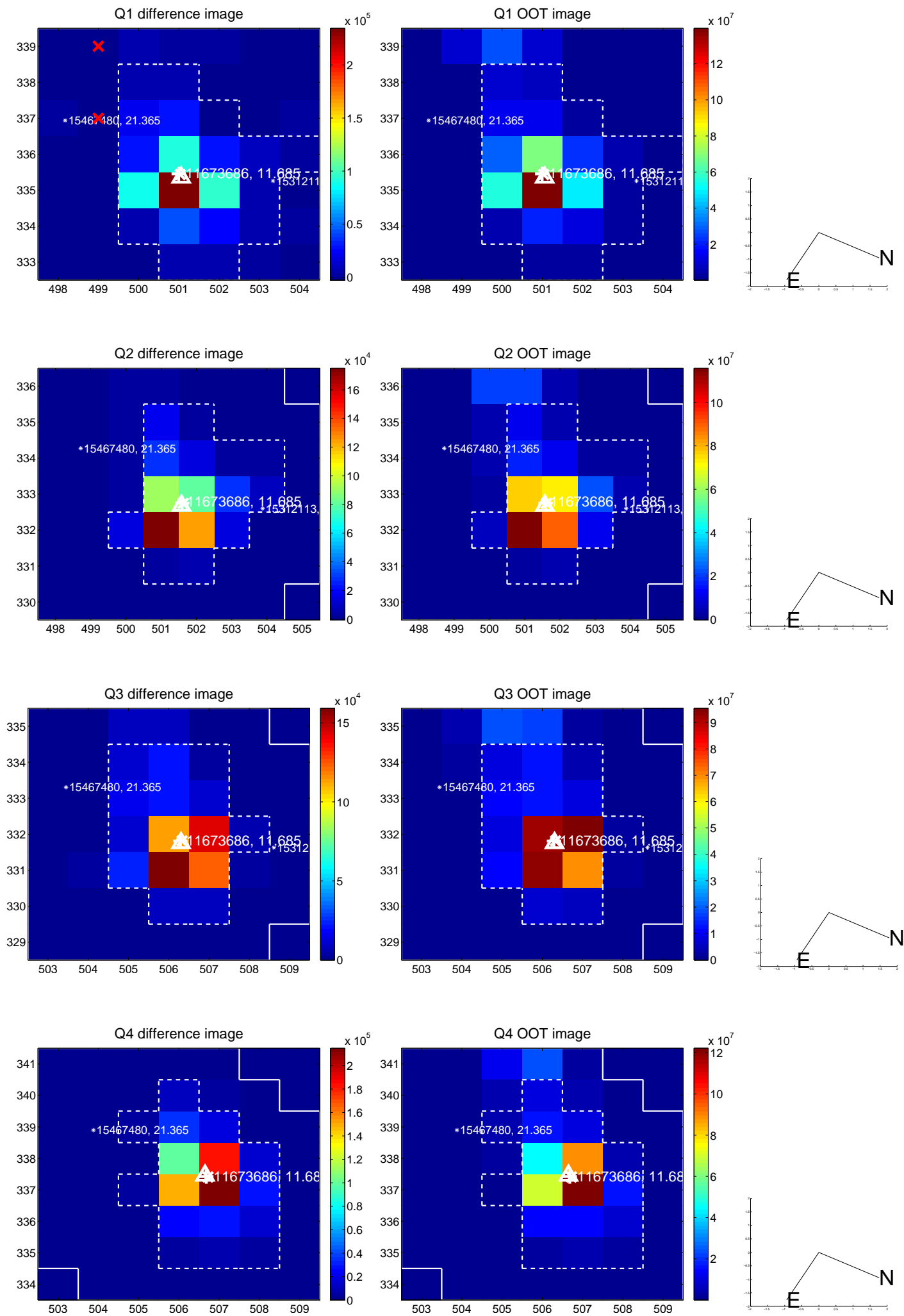
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.125 ± 0.471	0.27	0.107 ± 0.338	0.065 ± 0.359
PRF-fit source offset from KIC position	0.177 ± 0.153	1.16	0.160 ± 0.315	-0.077 ± 0.332
photometric centroid source offset	0.20 ± 0.04	4.64	0.19 ± 0.04	-0.05 ± 0.04

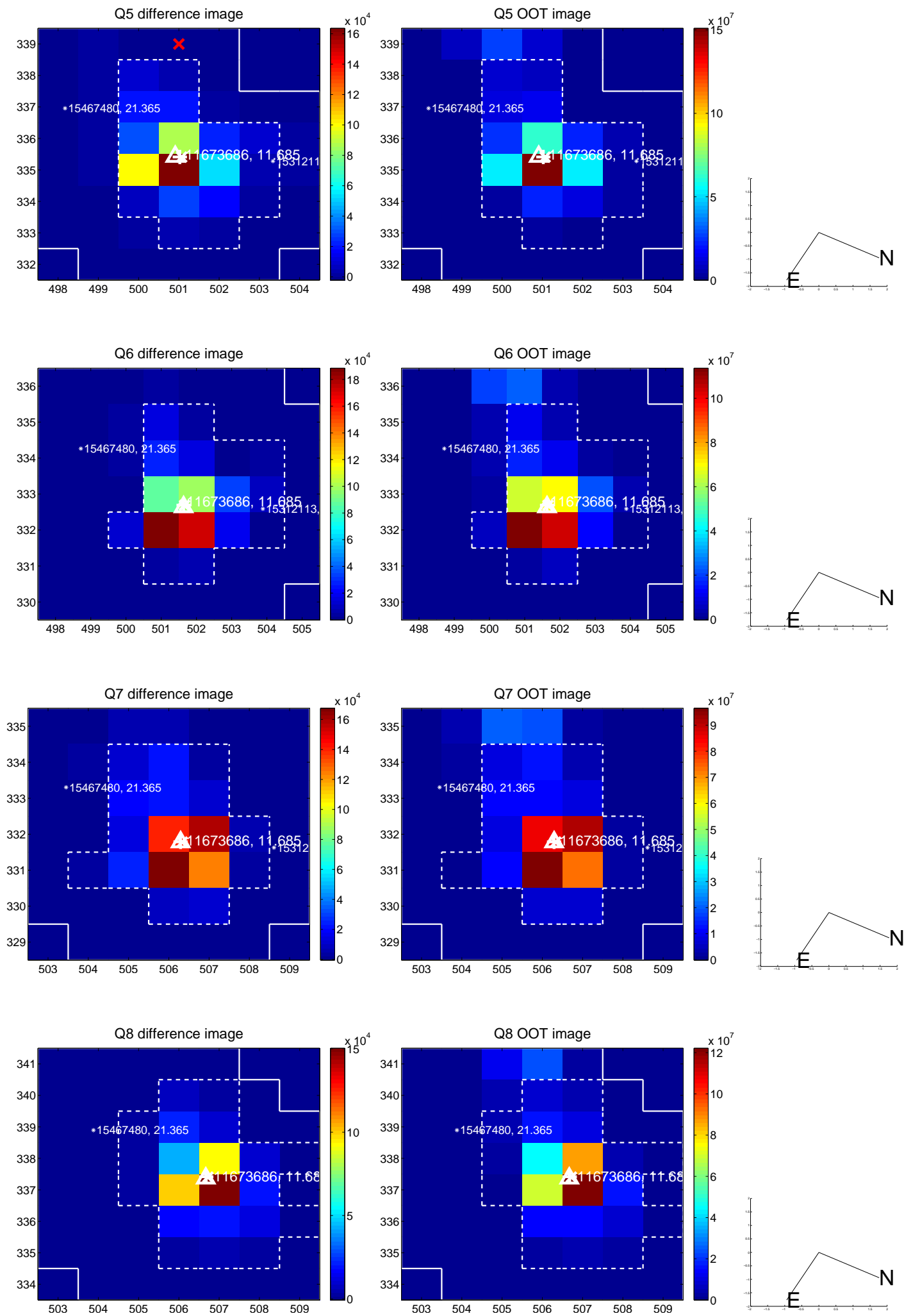


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

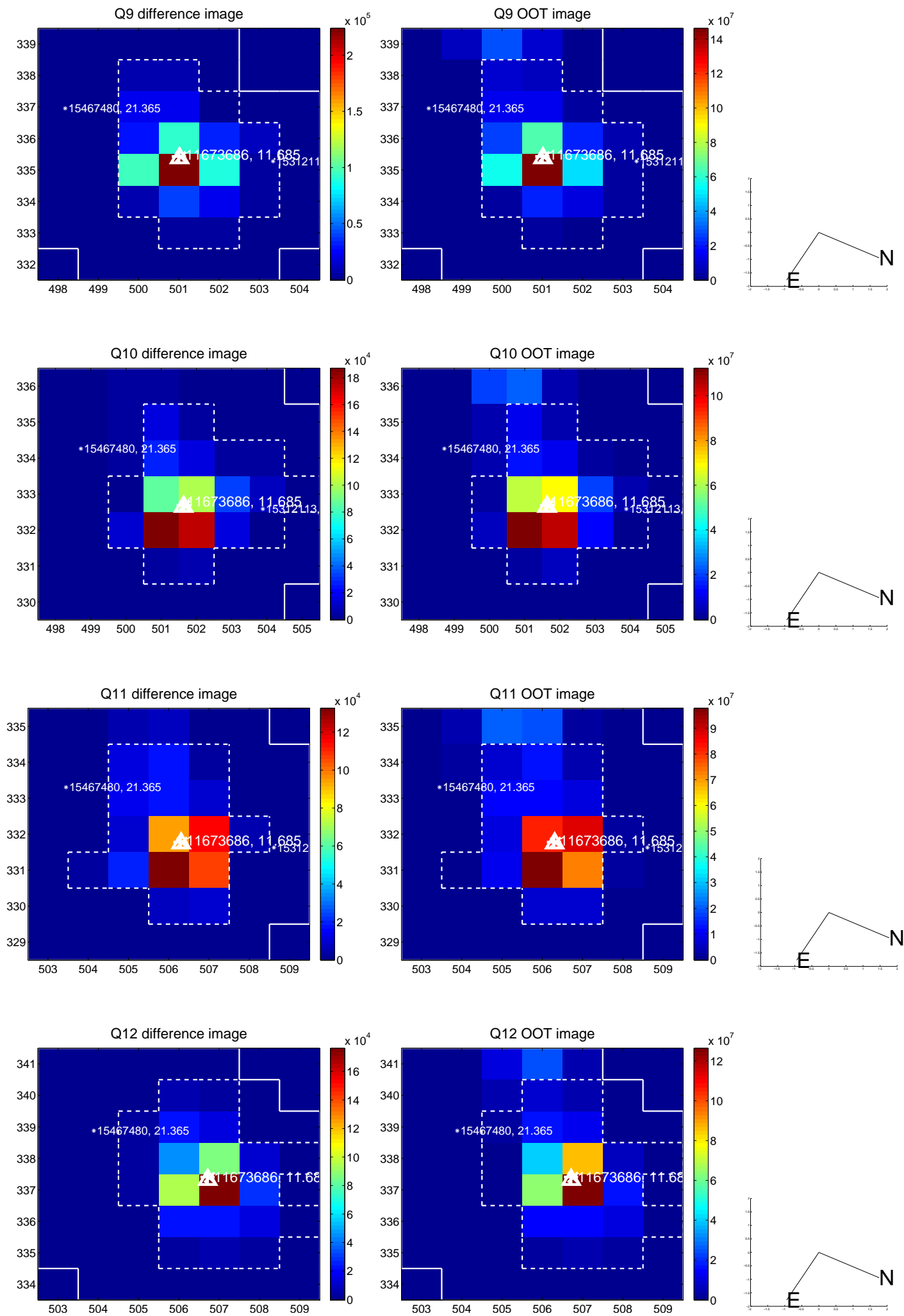
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



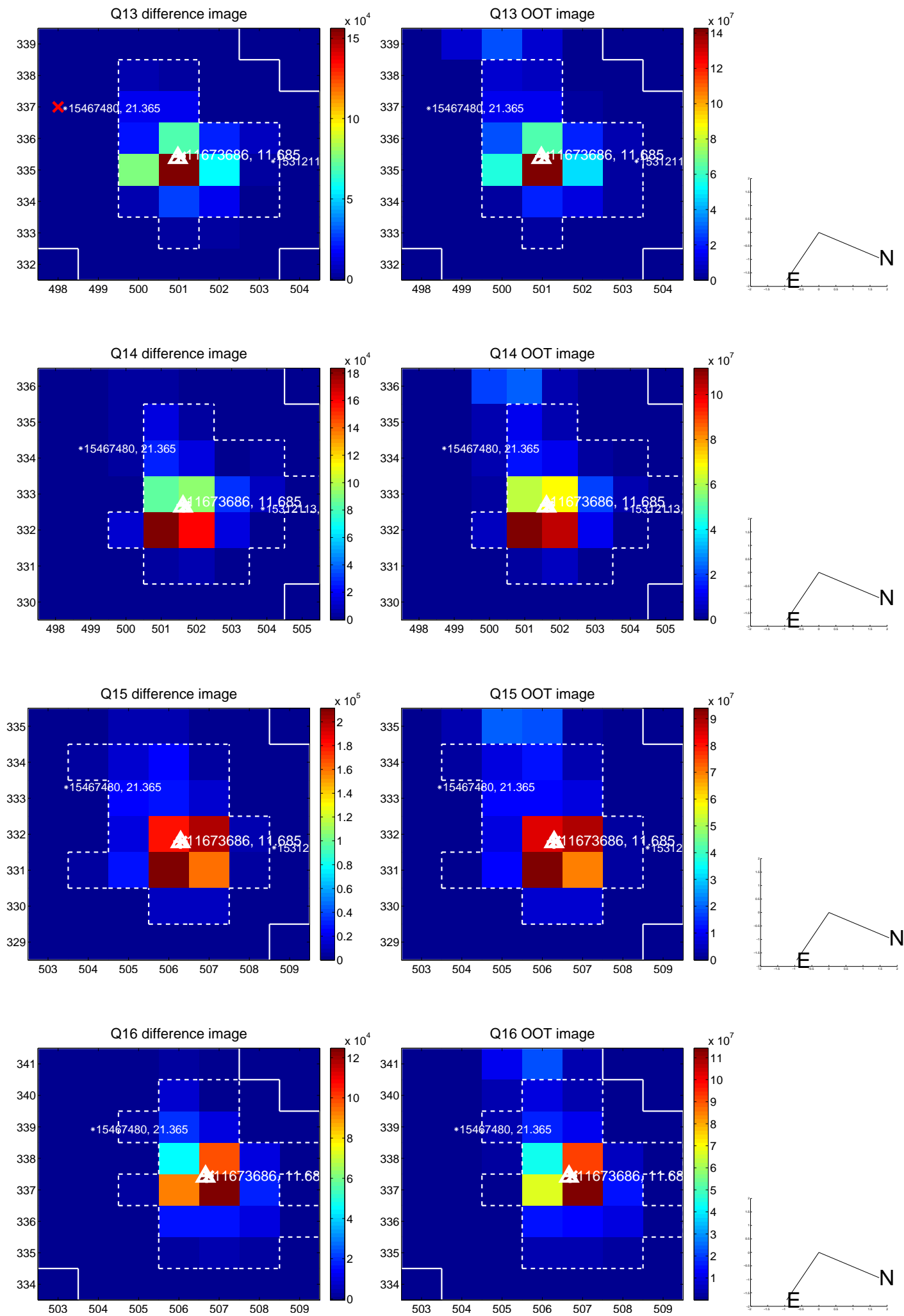
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

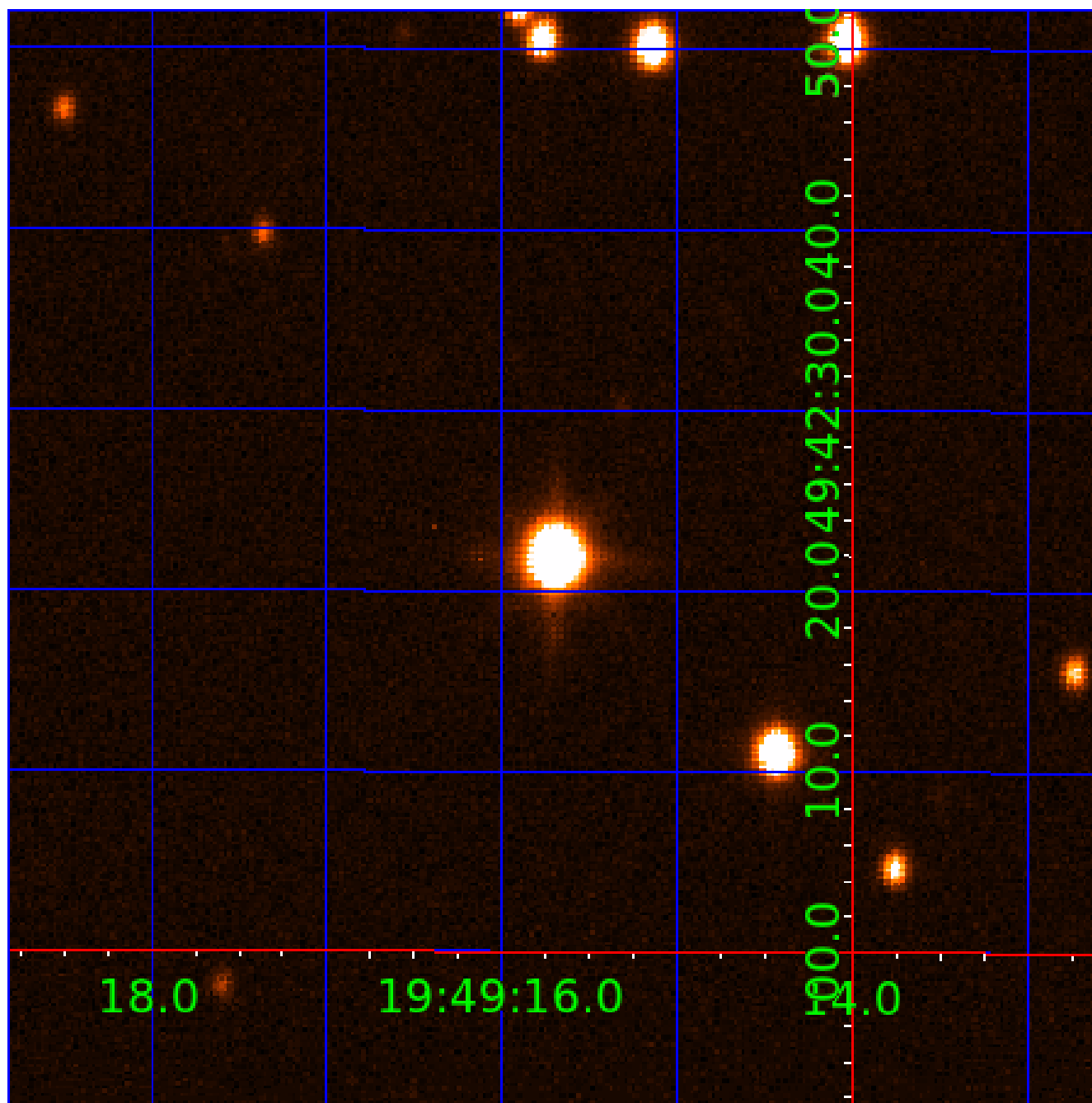


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011673686

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})
011673686-01	OBS	6243.01	4.618768	133.386740	32583.8	5.990	1726.7	3154.7	1.78	6195	32.29	1419.50
011673686-02	OBS	No	2.309368	133.389430	1204.7	6.249	148.4	139.6	1.78	6195	7.24	3576.94
011673686-03	OBS	No	133.965500	174.671203	504.9	23.089	9.4	3.2	1.78	6195	5.06	15.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011673686-01	OBS	FP	0.31	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
011673686-02	OBS	FP	0.00	1	1	0	1	IS_SEC_TCE—EPHEM_MATCH
011673686-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV

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.

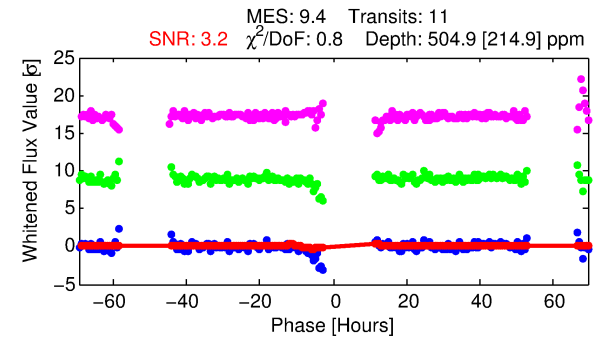
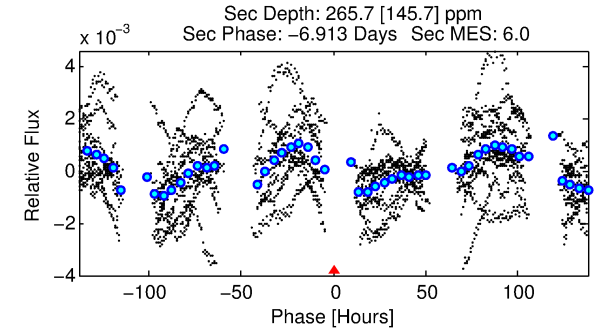
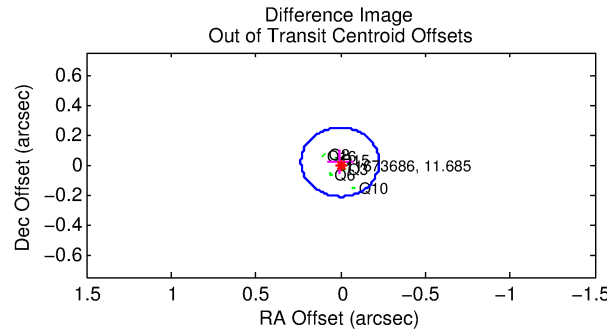
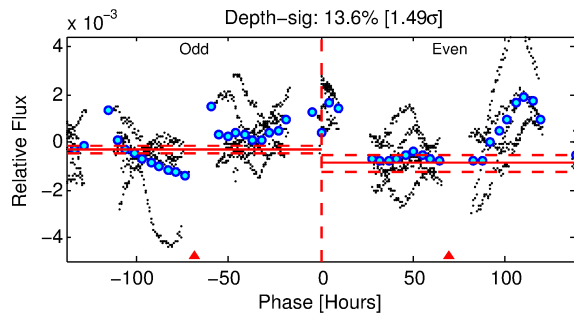
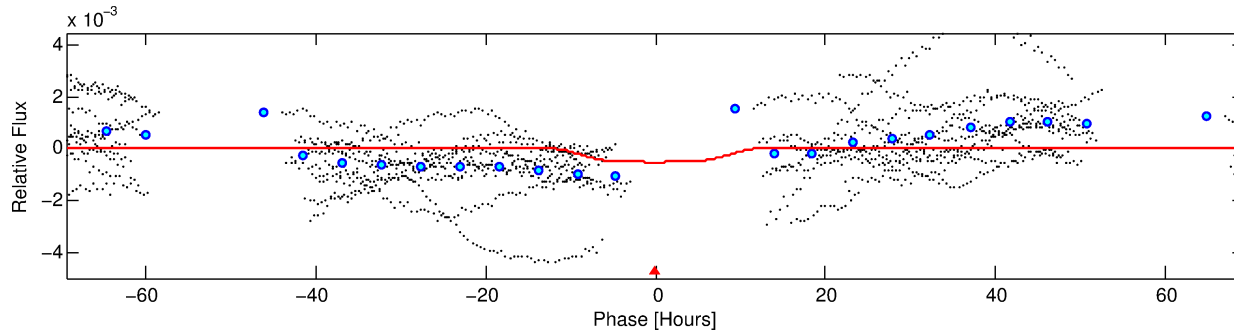
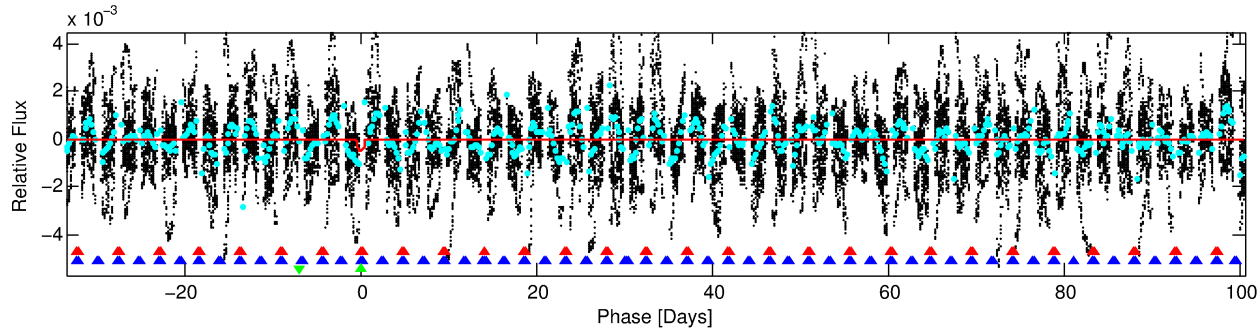
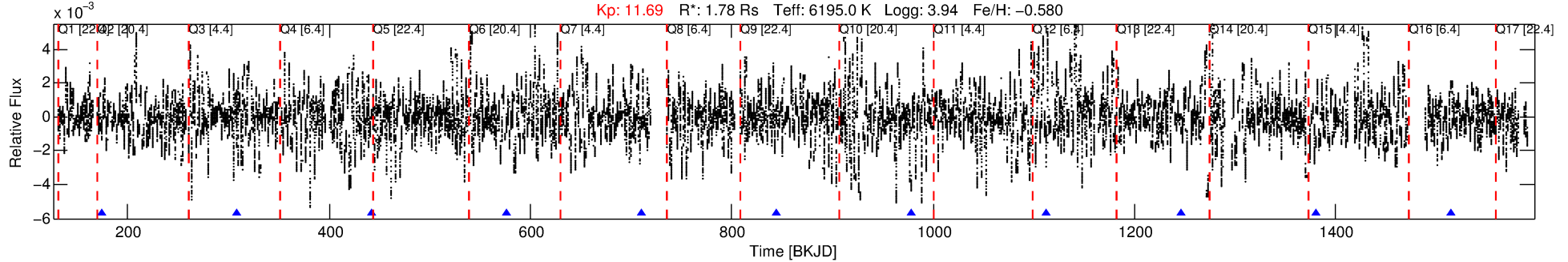
Ephemeris Match Information For 011673686-03

No Significant Match Found

DV One-Page Summary

KIC: 11673686 Candidate: 3 of 3 Period: 133.965 d
KOI: K06243 Corr: No Ephemeris Match

Kp: 11.69 R*: 1.78 Rs Teff: 6195.0 K Logg: 3.94 Fe/H: -0.580



DV Fit Results:

Period = 133.96550 [0.00625] d
Epoch = 174.6712 [0.0582] BKJD
Rp/R* = 0.0260 [0.0059]
a/R* = 16.08 [1.86]
b = 0.96 [0.01]
Seff = 15.93 [12.67]
Teff = 509 [101] K
Rp = 5.06 [2.58] Re
a = 0.5126 [0.2429] AU
Ag = 1501.75 [1590.57] [0.94σ]
Teffp = 4903 [882] K [4.95σ]

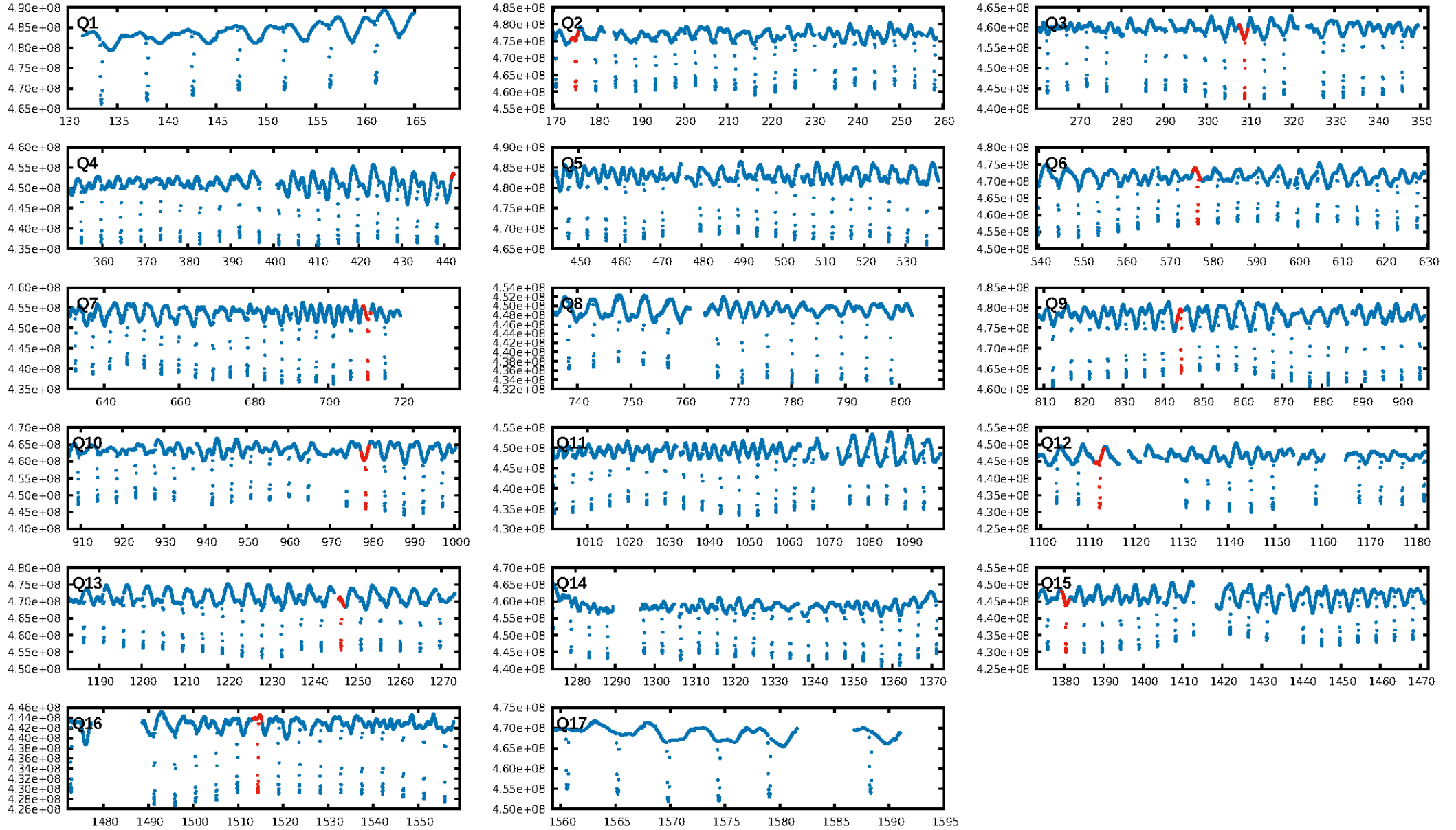
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [130.14σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.77e-10
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: 0.4683
Centroid-sig: 0.1%
Centroid-so: 4.538 arcsec [4.58σ]
OotOffset-rm: 0.018 arcsec [0.23σ]
KicOffset-rm: 0.156 arcsec [2.04σ]
OotOffset-st: 3/2/1/0 [6]
KicOffset-st: 3/2/1/0 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 0.00 [0/6]

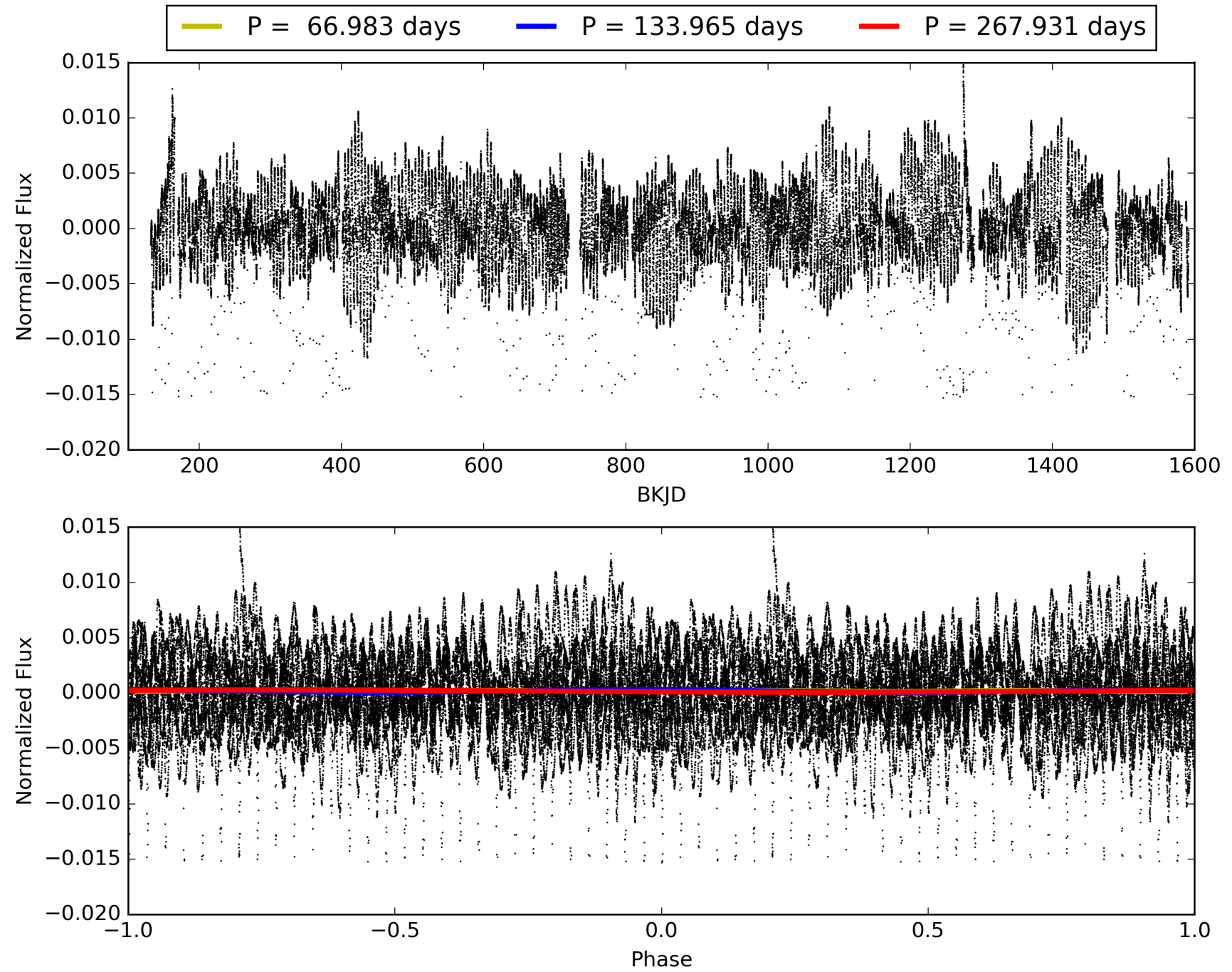
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:29:52 Z

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

TCE 011673686-03, PDC Light Curves

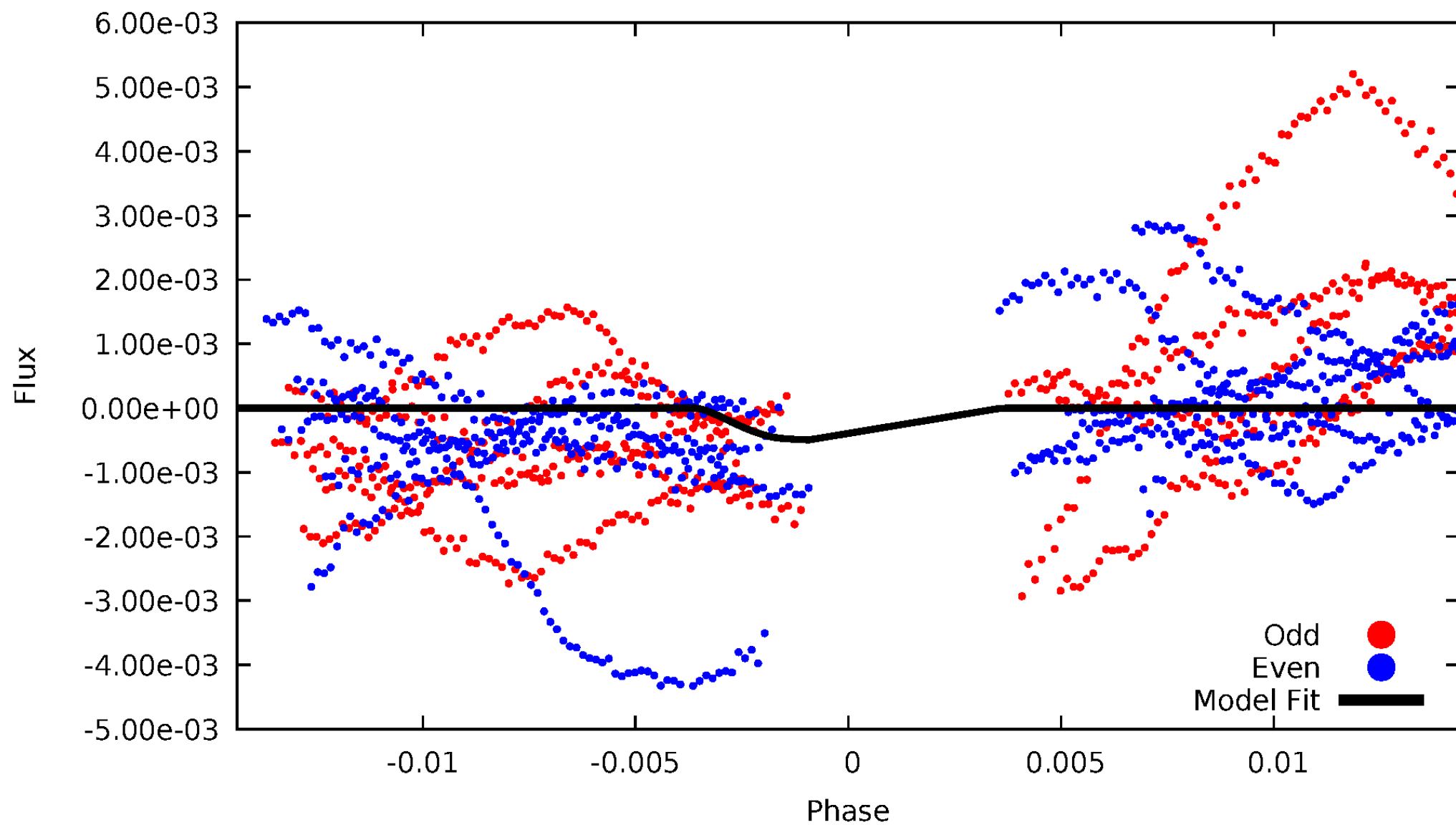


TCE 011673686-03



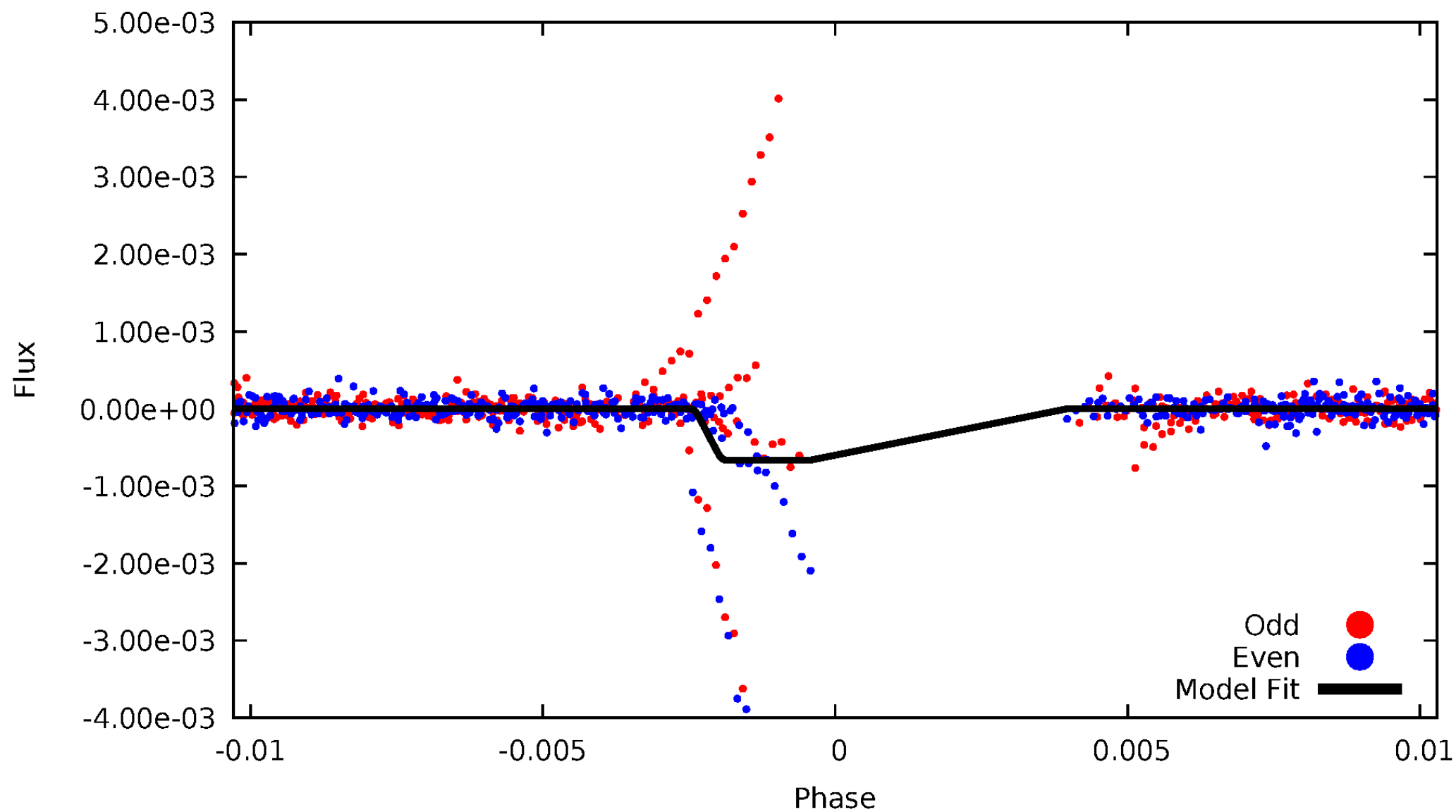
DV Odd/Even

TCE 011673686-03

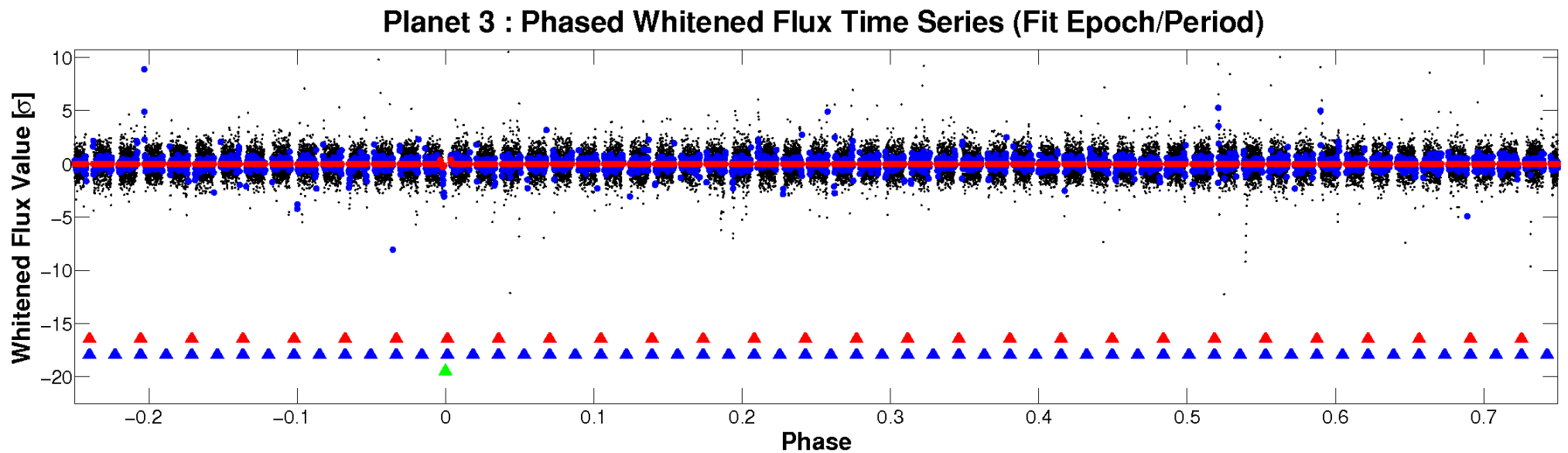
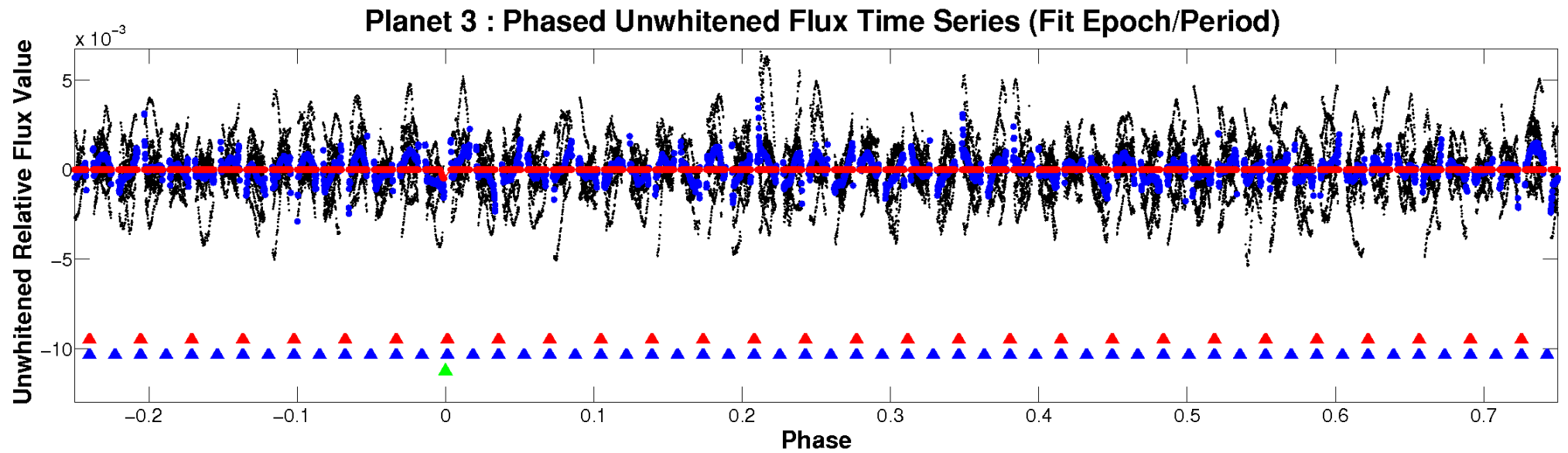


ALT Odd/Even

TCE 011673686-03

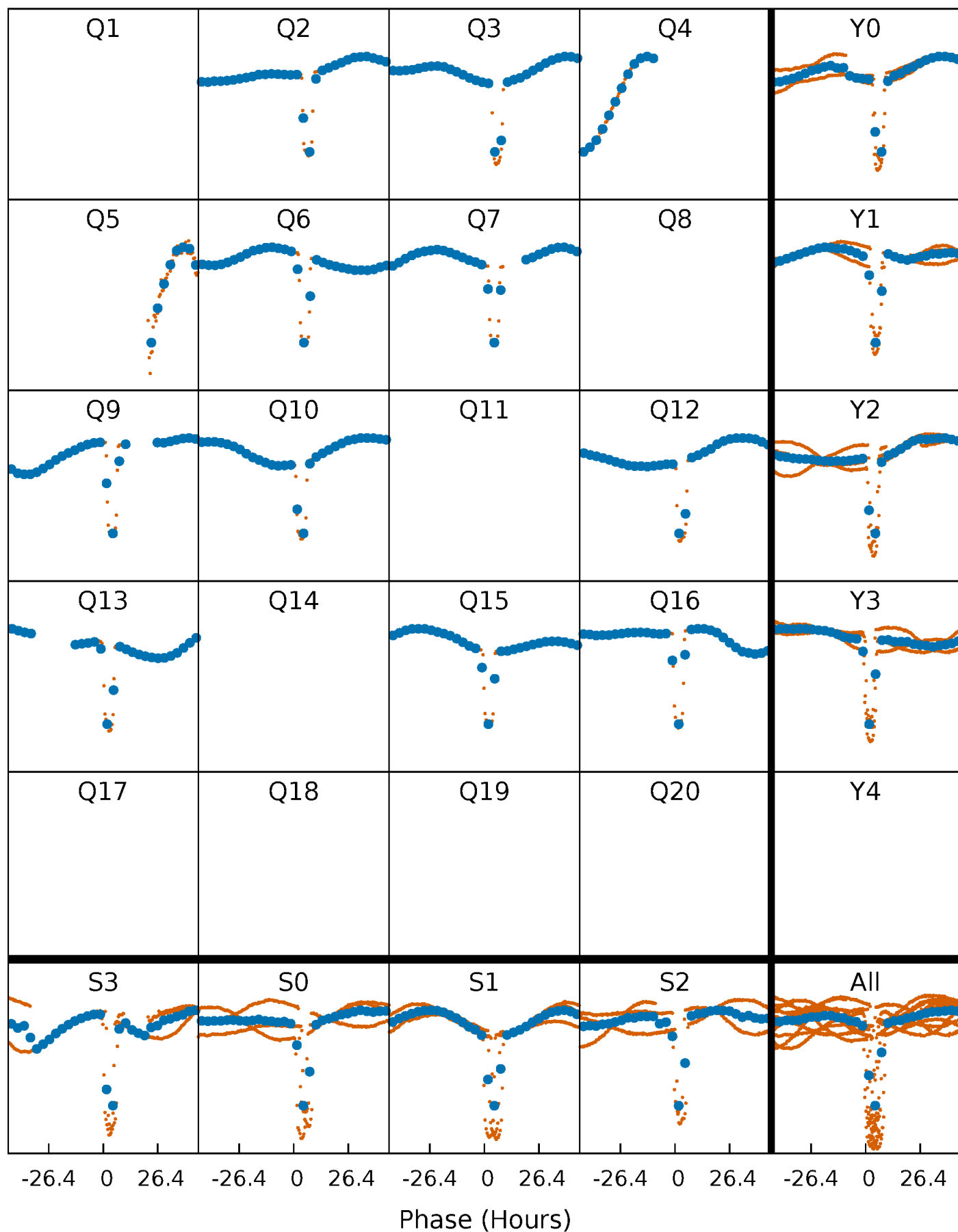


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 011673686-03 P=133.965500 Days $T_0=174.671202$ (BKJD)



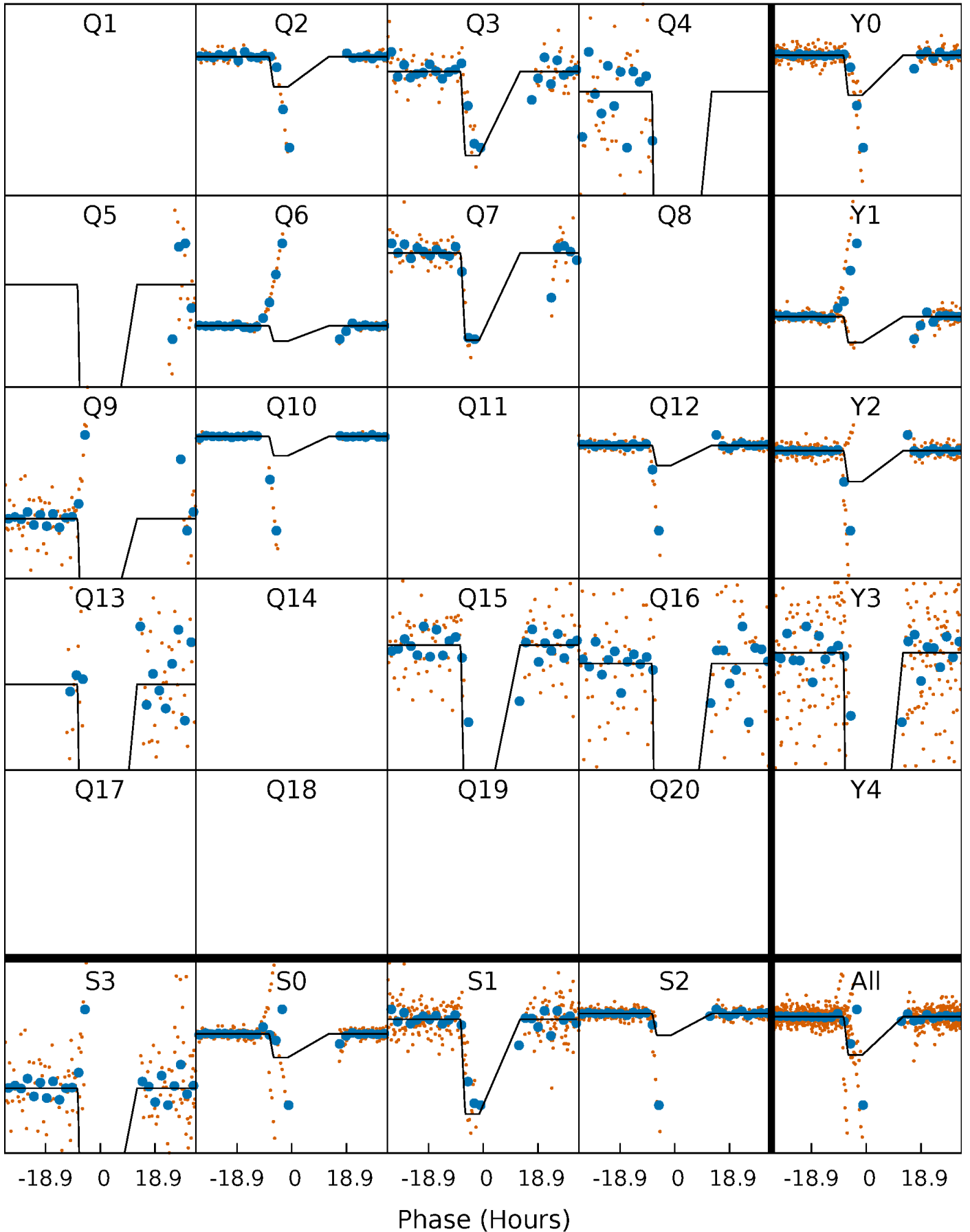
DV Quarter-Phased Transit Curves

TCE 011673686-03 $P=133.965500$ Days $T_0=174.671202$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

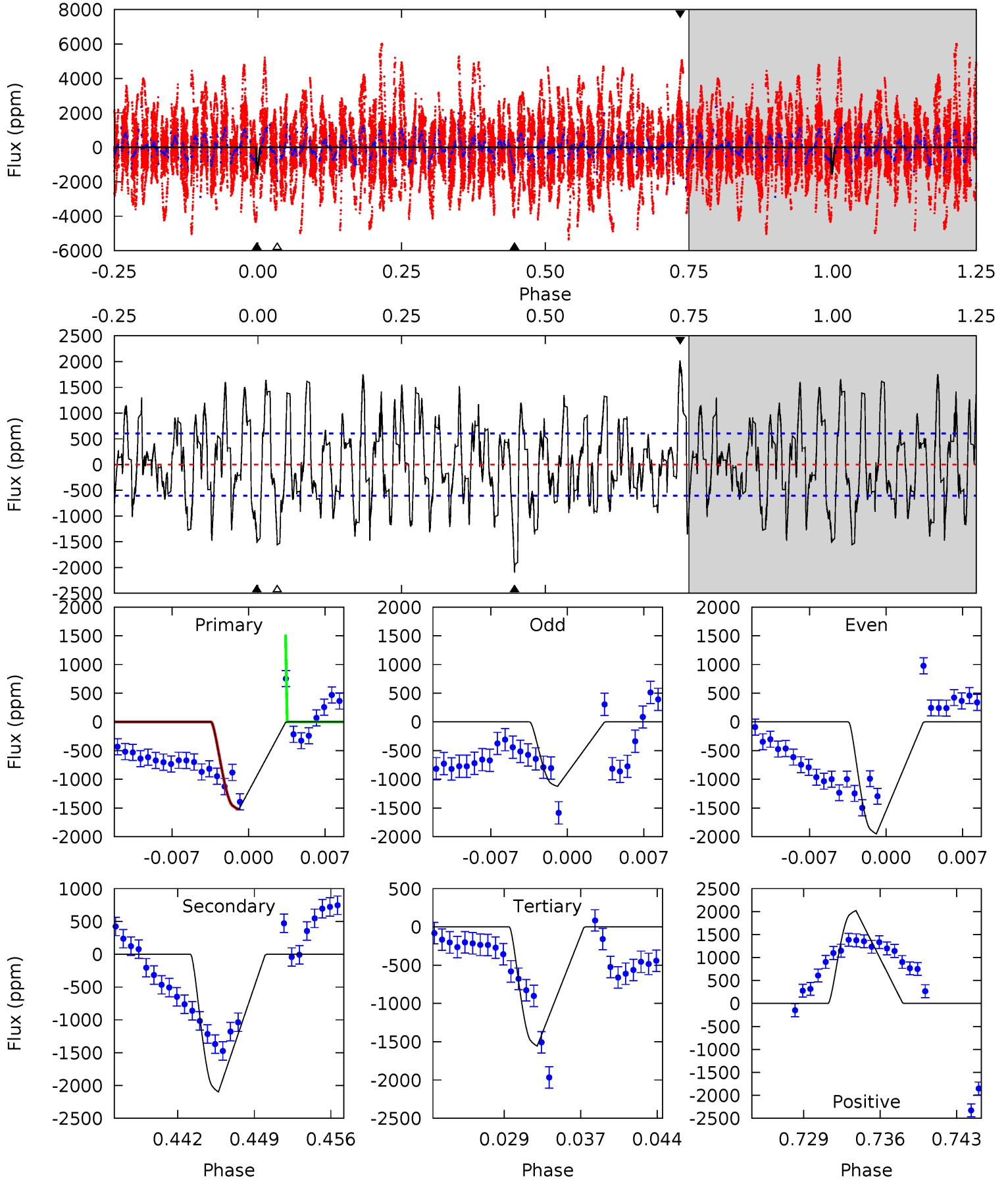
TCE 011673686-03 P=133.966890 Days $T_0=174.602862$ (BKJD)



DV Model-Shift Uniqueness Test

011673686-03, P = 133.965500 Days, E = 40.705702 Days

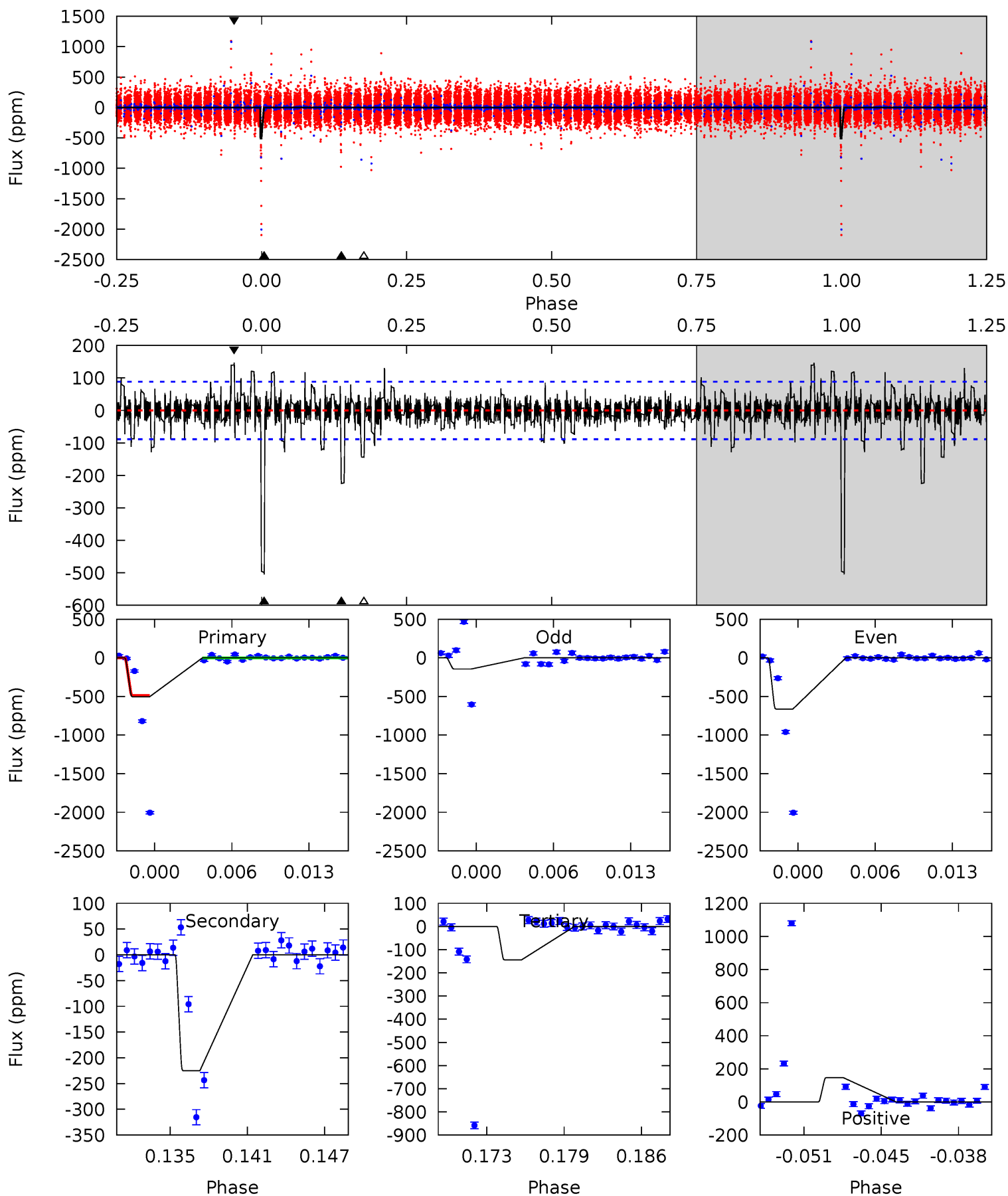
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	17.7	13.1	17.0	5.08	2.68	5.68	-0.28	-4.18	4.55	0.65	3.50	1.06	0.49	0.01



Alt Model-Shift Uniqueness Test

011673686-03, P = 133.966890 Days, E = 40.635972 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.2	13.0	8.33	8.48	5.11	2.73	1.33	20.8	20.7	4.66	4.52	13.9	0	0.23	0



Stellar Parameters For KIC 011673686

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6195^{+169}_{-187}	$3.937^{+0.472}_{-0.157}$	$-0.580^{+0.300}_{-0.300}$	$1.781^{+0.440}_{-0.816}$	$1.000^{+0.131}_{-0.146}$	$0.249^{+1.162}_{-0.112}$
	+3%/-3%	+12%/-4%	+52%/-52%	+25%/-46%	+13%/-15%	+466%/-45%
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 011673686-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2098 ± 119	$4.75^{+1.59}_{-1.30}$	701^{+58}_{-85}	8496^{+1755}_{-1076}	13294^{+12108}_{-5755}
Alt.	-225 ± 17	$4.70^{+1.49}_{-1.46}$	696^{+60}_{-89}	4800^{+610}_{-376}	1464^{+1568}_{-608}

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 $A_{obs} \gg 1.0$

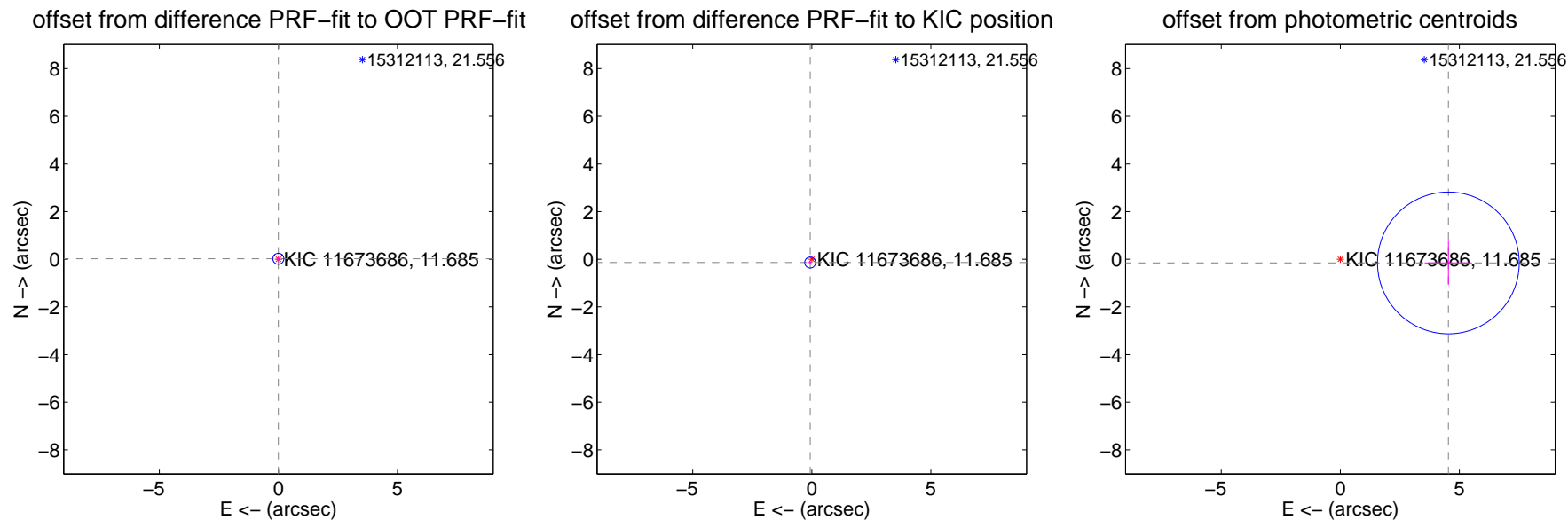
DV Centroid Data

Supplemental centroid analysis for 011673686-03. **Kepler magnitude: 11.69.** Transit SNR 3.21

There are 6 quarters with good PRF difference image offsets

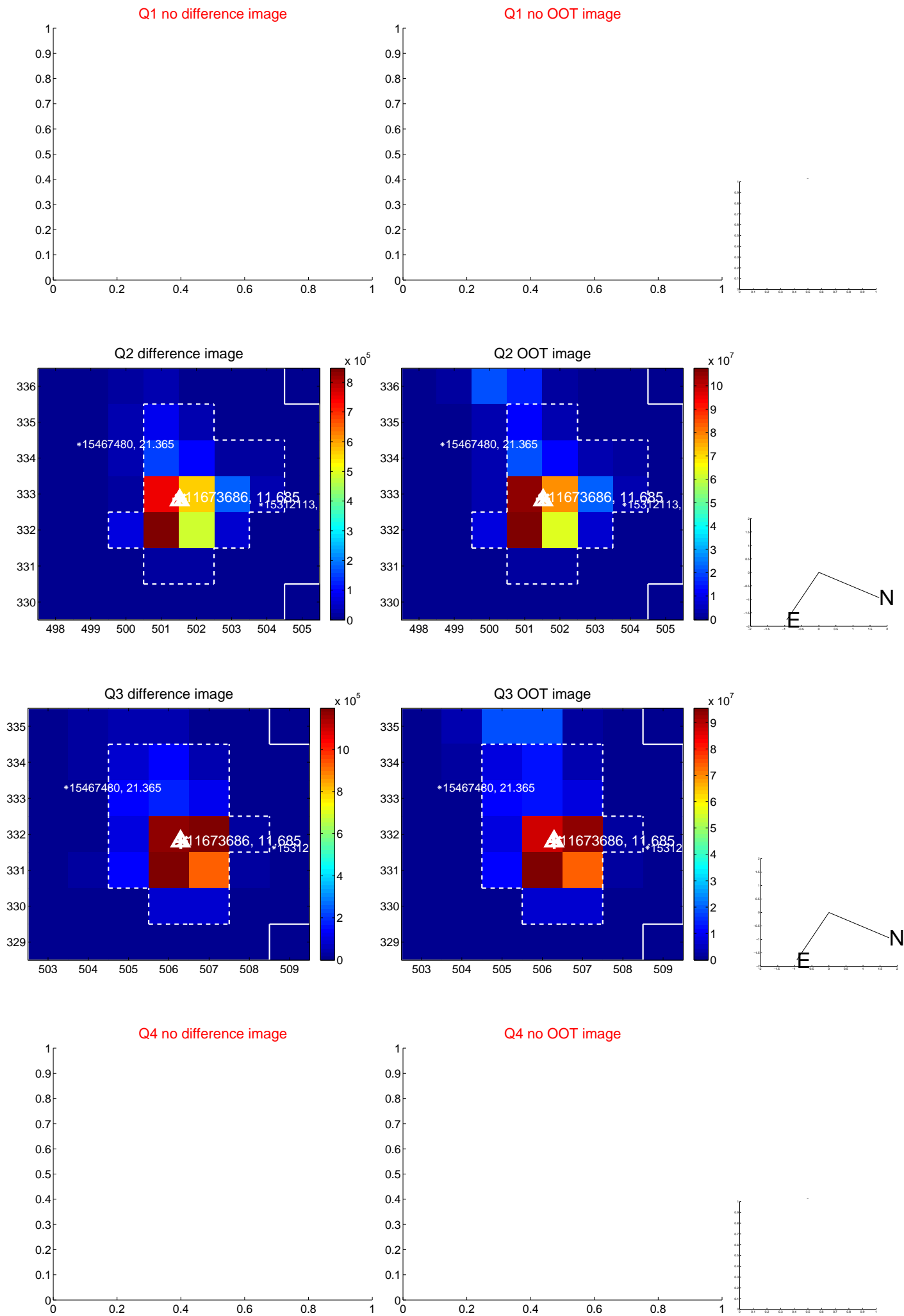
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.018 ± 0.077	0.23	0.003 ± 0.074	0.018 ± 0.075
PRF-fit source offset from KIC position	0.156 ± 0.076	2.04	0.068 ± 0.070	-0.140 ± 0.078
photometric centroid source offset	4.54 ± 0.99	4.58	-4.54 ± 0.99	-0.16 ± 0.93

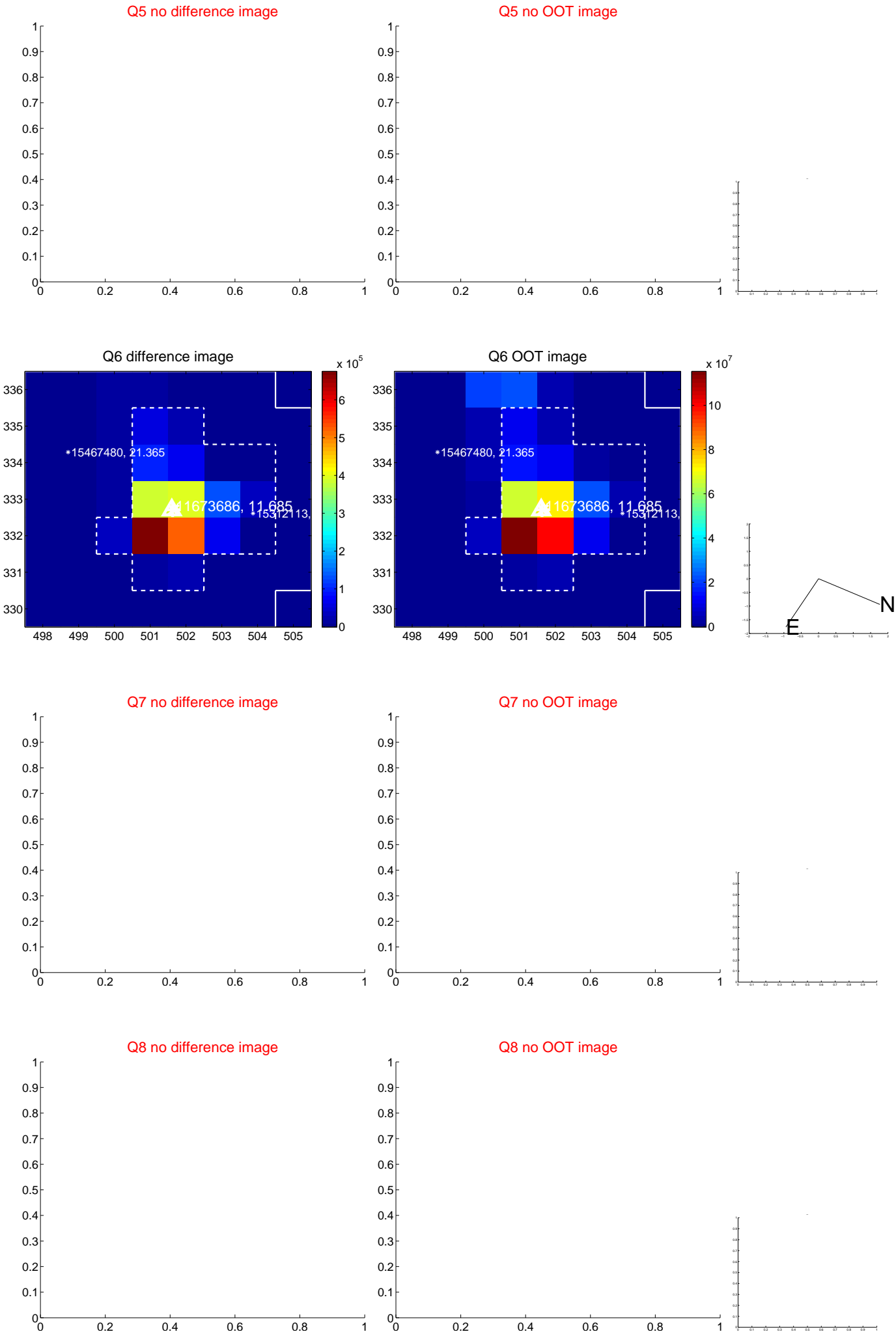


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

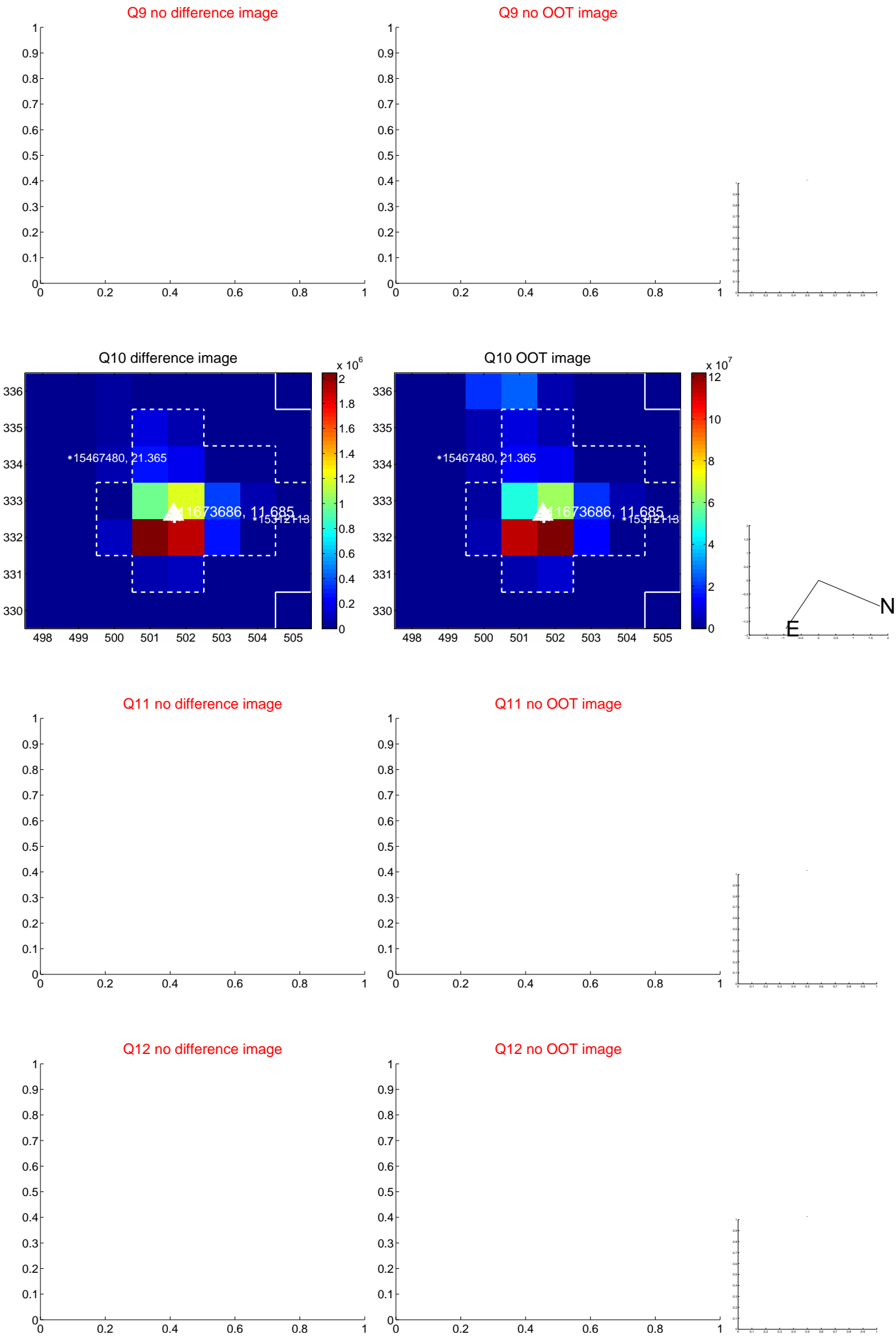
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



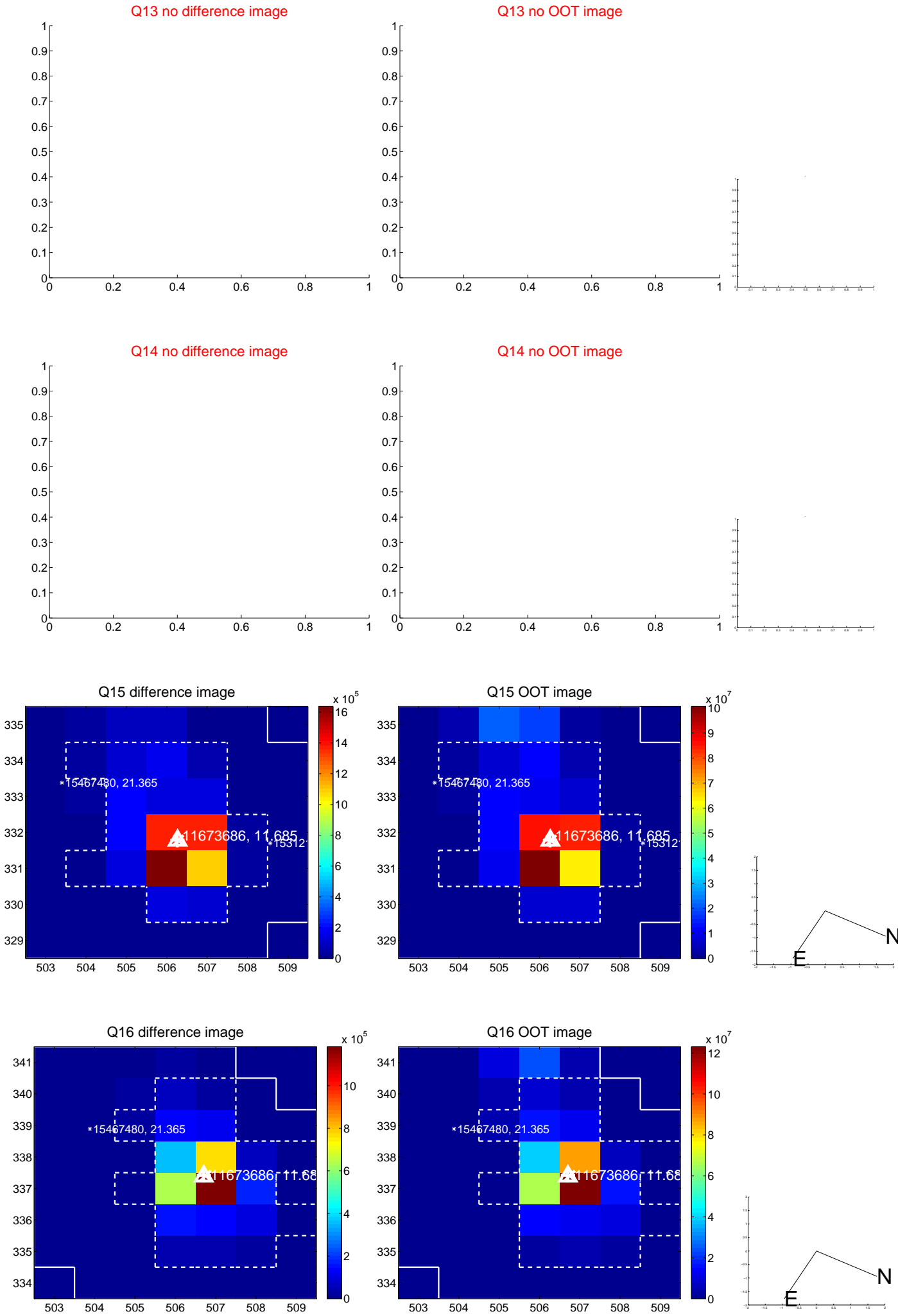
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



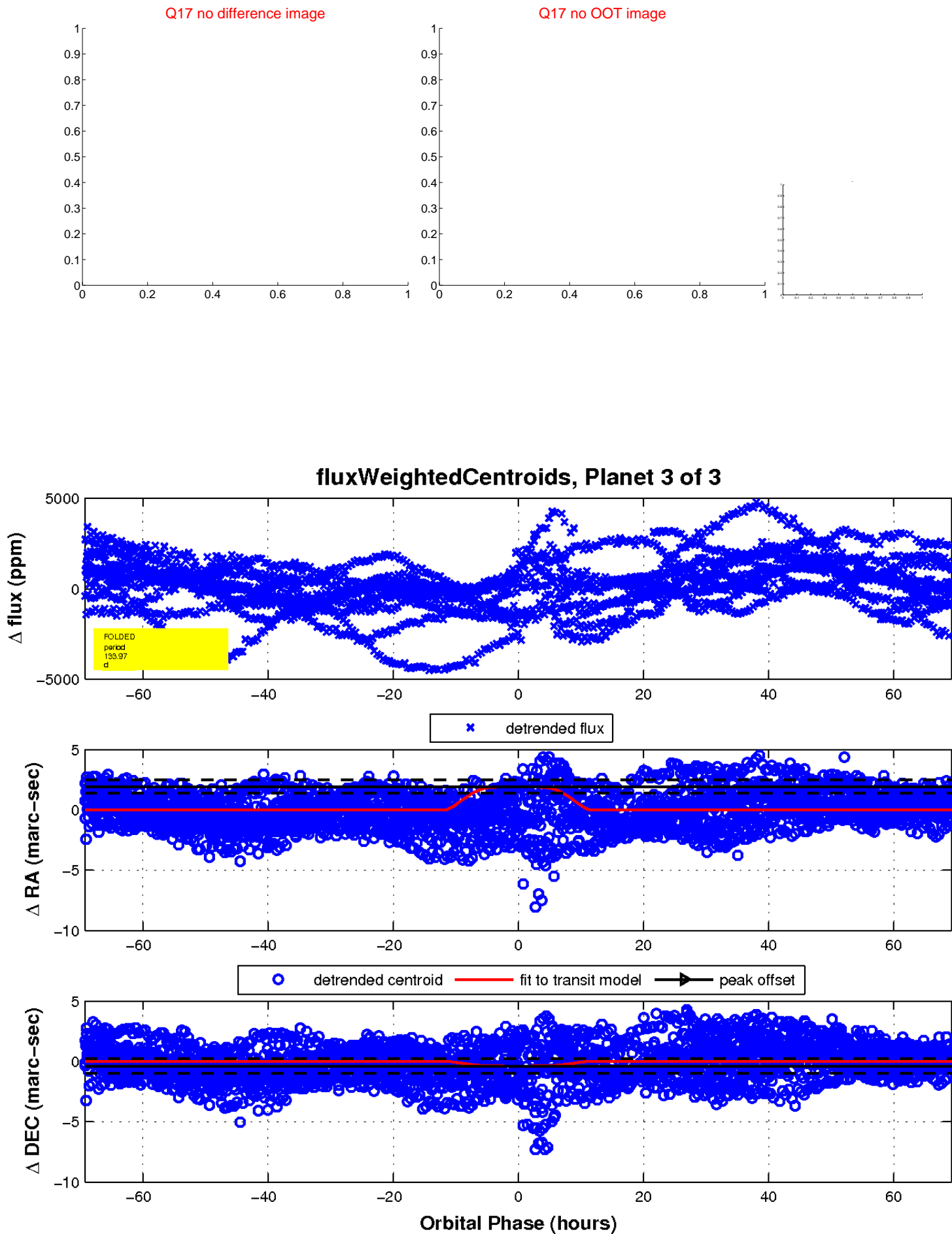
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

