

KIC 005699171

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})
005699171-01	OBS	No	478.234936	423.230752	1132.5	2.870	11.5	3.6	0.73	4491	2.85	0.17
005699171-02	OBS	No	318.599966	423.142935	2705.2	12.290	8.7	8.6	0.73	4491	3.80	0.28
005699171-03	OBS	No	384.072474	370.480510	1845.3	3.430	9.8	6.7	0.73	4491	3.08	0.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005699171-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005699171-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_POS_ALT
005699171-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—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.

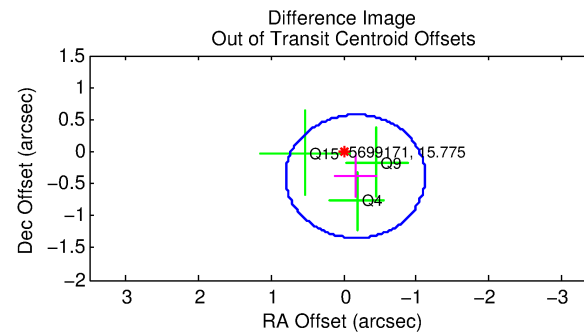
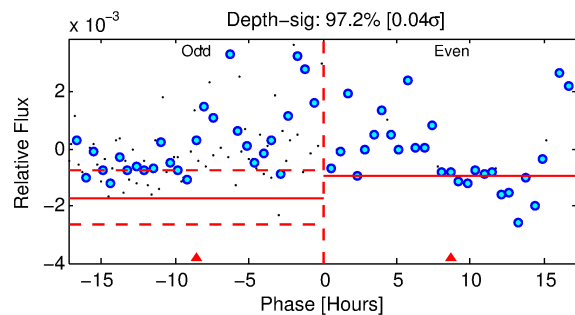
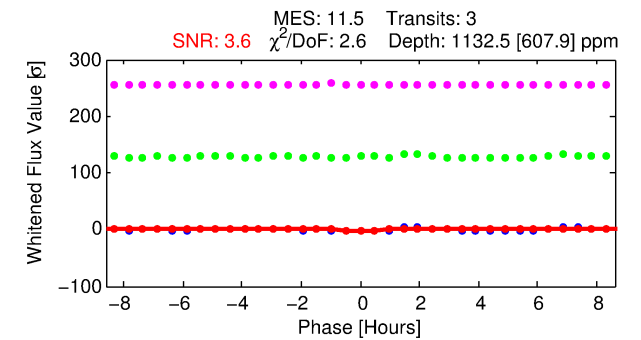
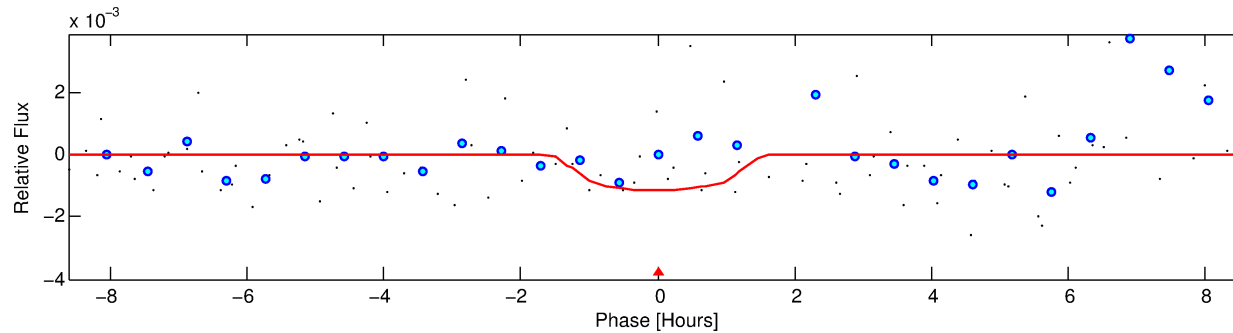
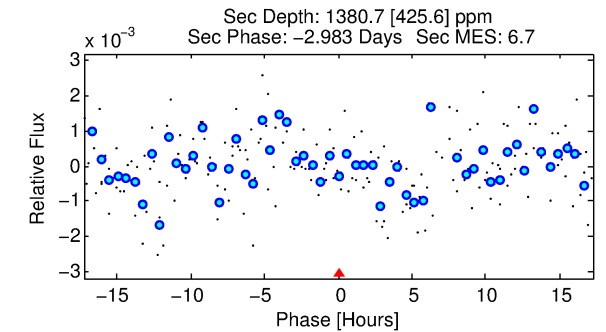
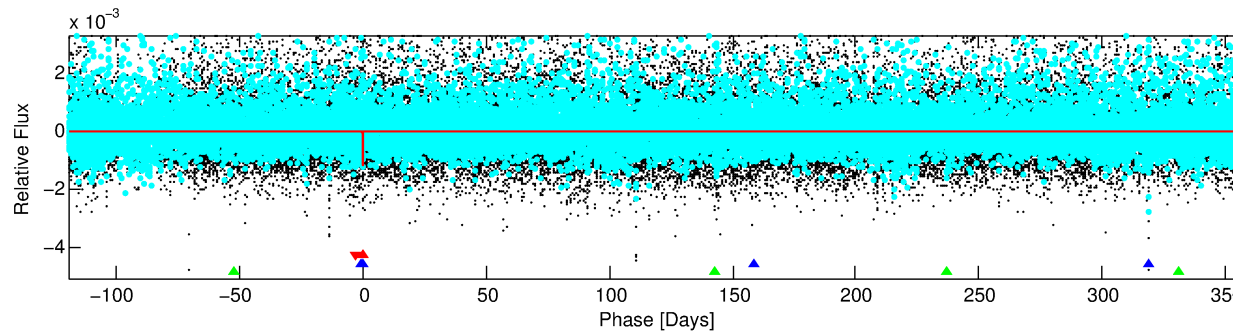
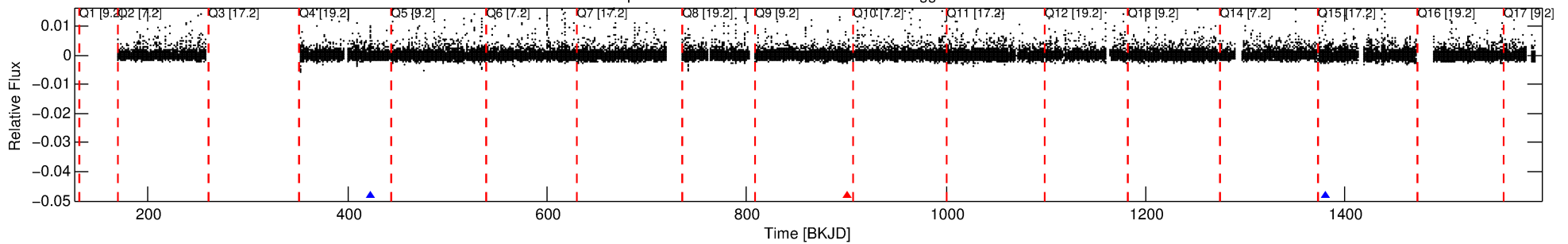
Ephemeris Match Information For 005699171-01

No Significant Match Found

DV One-Page Summary

KIC: 5699171 Candidate: 1 of 3 Period: 478.235 d

Kp: 15.77 R*: 0.73 Rs Teff: 4491.0 K Logg: 4.58 Fe/H: 0.360



DV Fit Results:

Period = 478.23494 [0.01840] d
Epoch = 423.2308 [0.0198] BKJD
Rp/R* = 0.0357 [0.1194]
a/R* = 785.81 [8312.02]
b = 0.83 [4.08]
Seff = 0.16 [0.03]
Teq = 162 [8] K
Rp = 2.85 [9.52] Re
a = 1.0874 [0.0691] AU
Ag = 110670.38 [740629.34] [0.15σ]
Teffp = 4581 [7666] K [0.58σ]

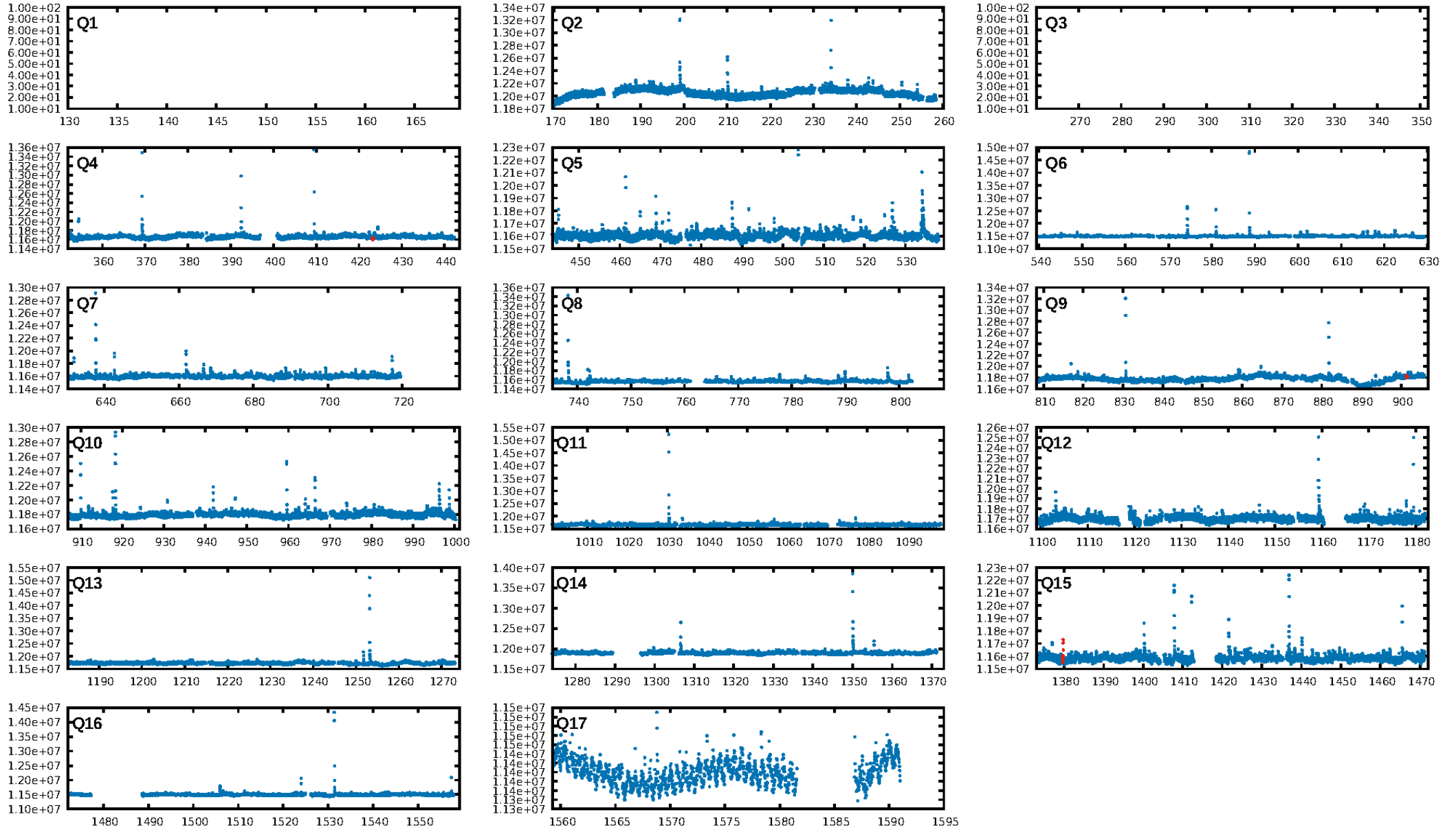
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [505.38σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 10.7%
ModelChiSquareGof-sig: 68.6%
Bootstrap-pfa: 1.52e-10
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 4.64
Centroid-sig: 5.8%
Centroid-so: 4.180 arcsec [1.54σ]
OotOffset-rm: 0.420 arcsec [1.31σ]
KicOffset-rm: 0.332 arcsec [1.03σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.67 [2/3]

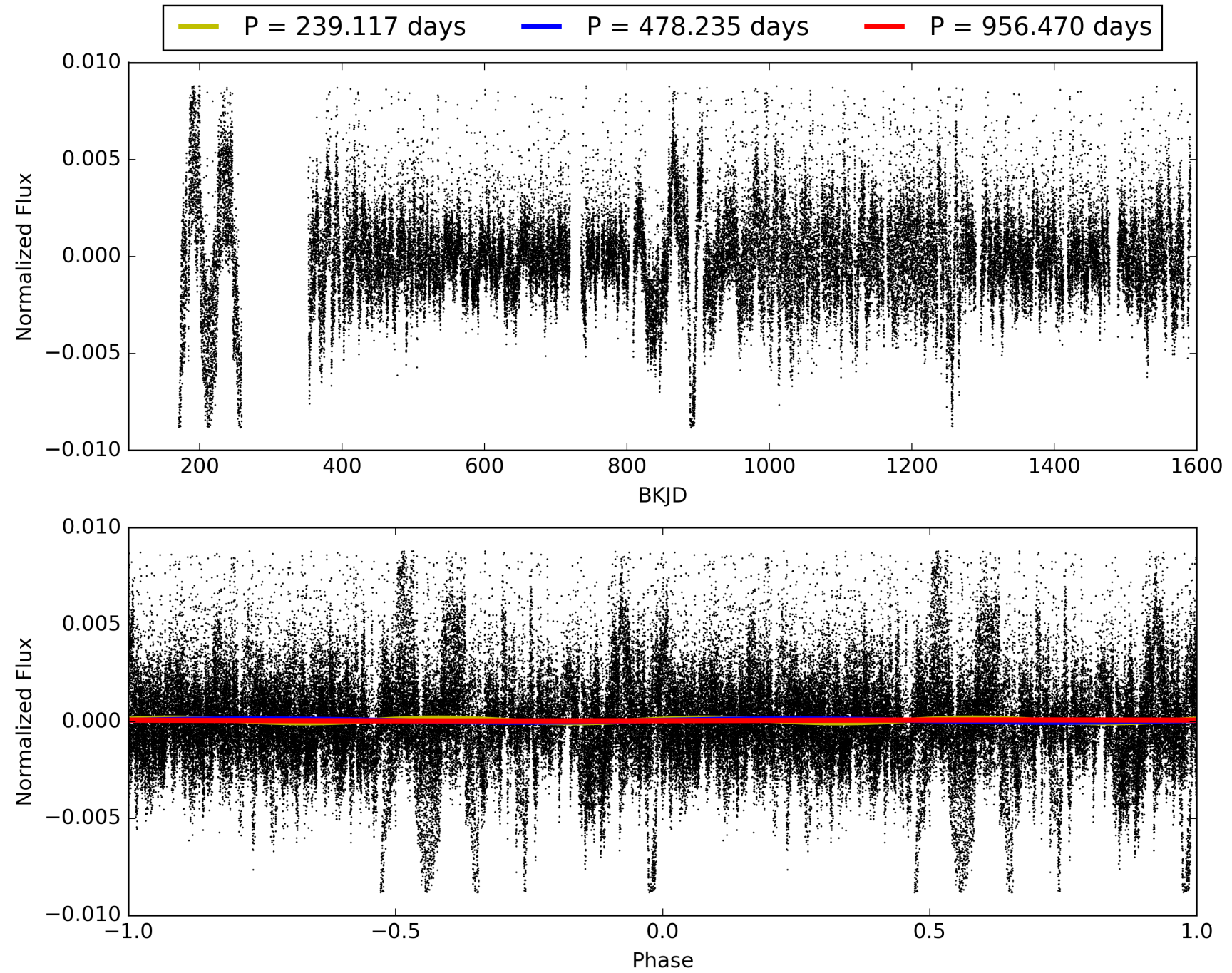
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:31:48 Z

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

TCE 005699171-01, PDC Light Curves

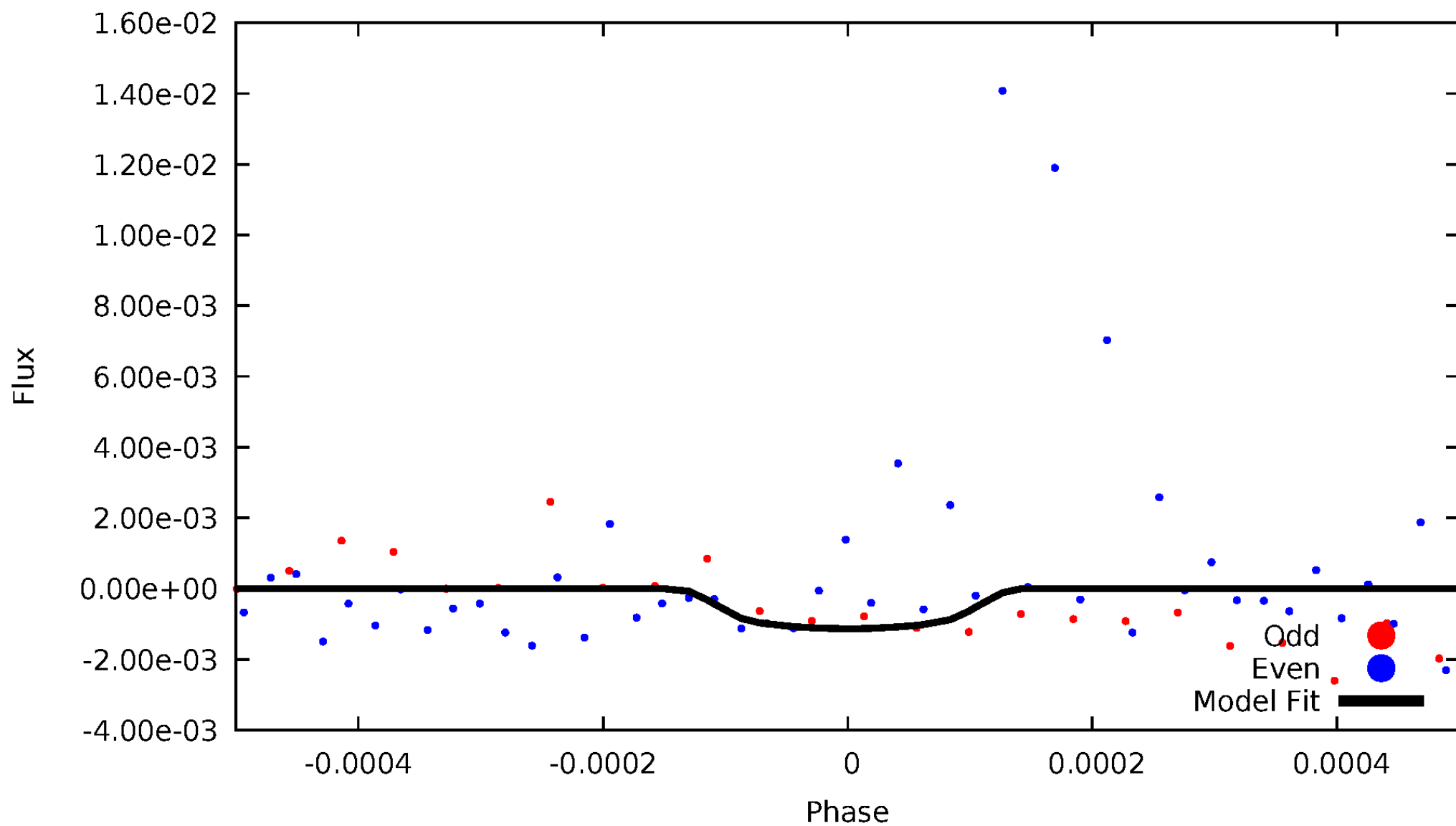


TCE 005699171-01



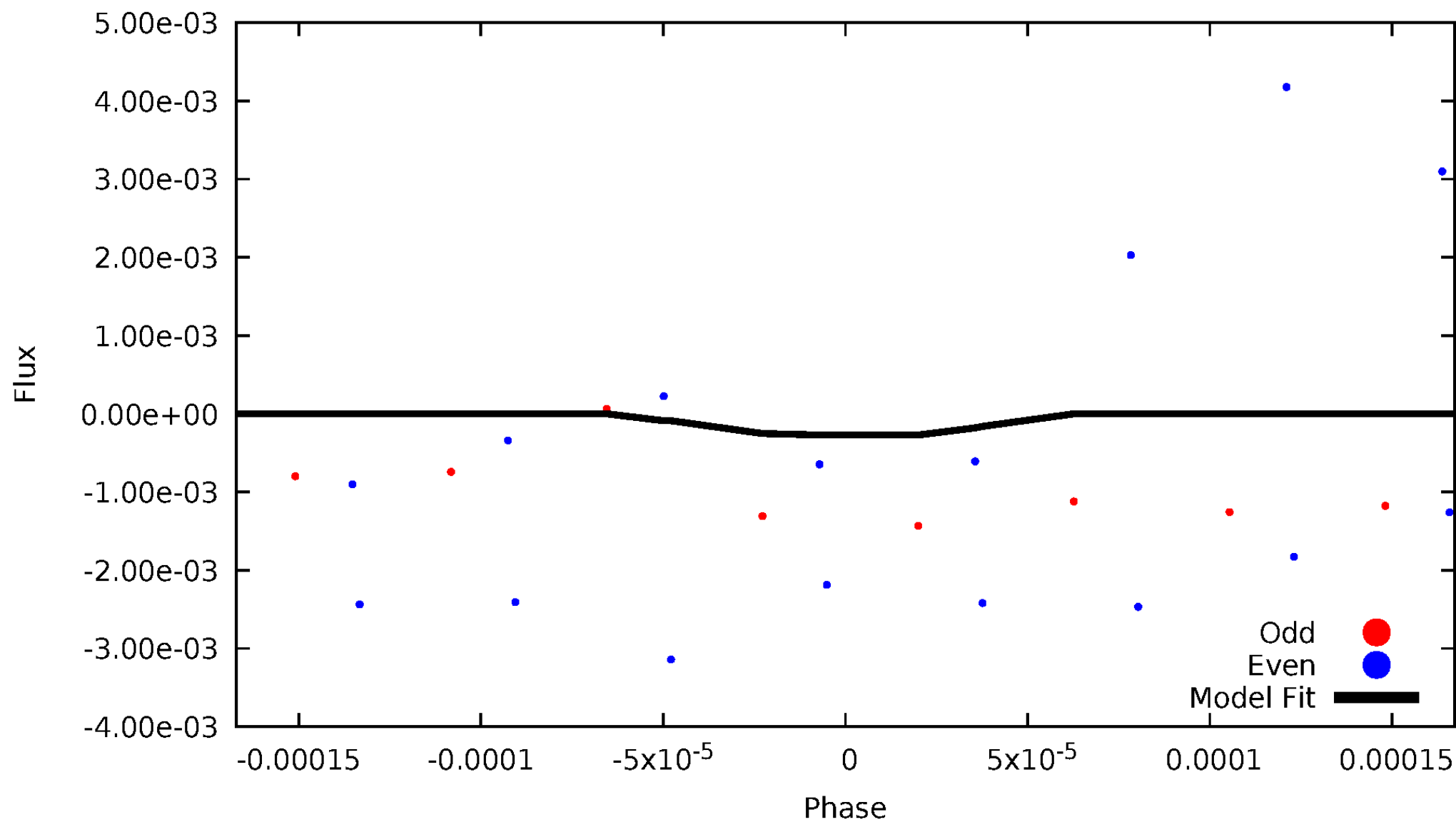
DV Odd/Even

TCE 005699171-01



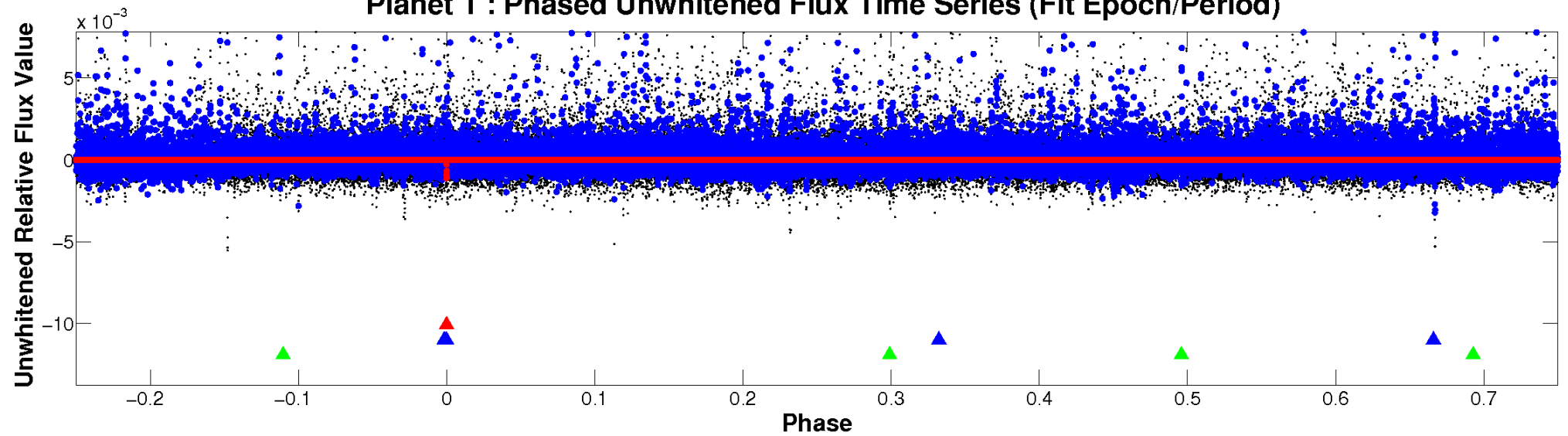
ALT Odd/Even

TCE 005699171-01

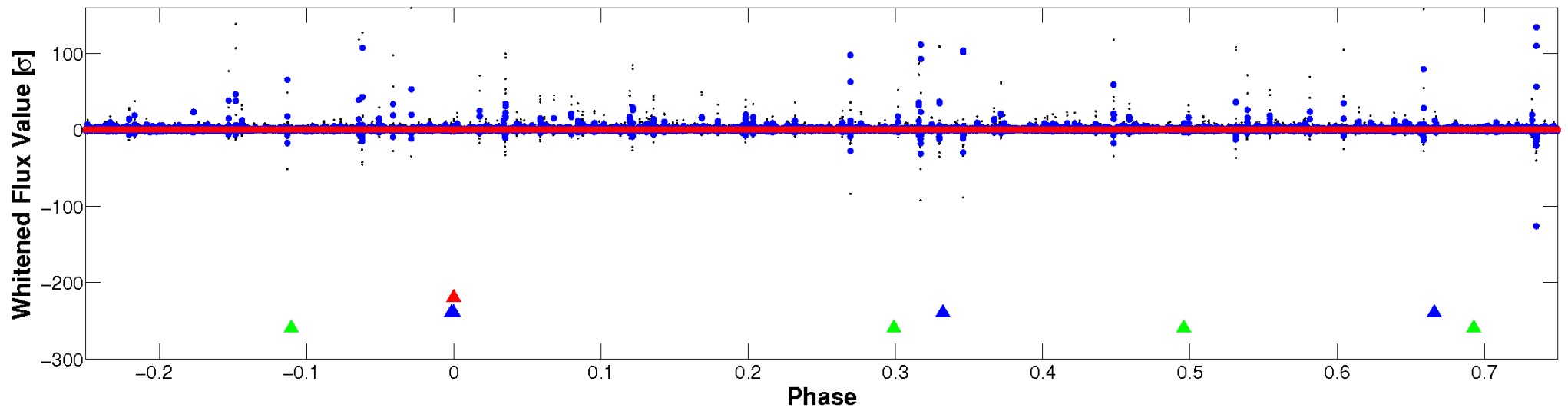


Non-Whitened Vs. Whitened Light Curve

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

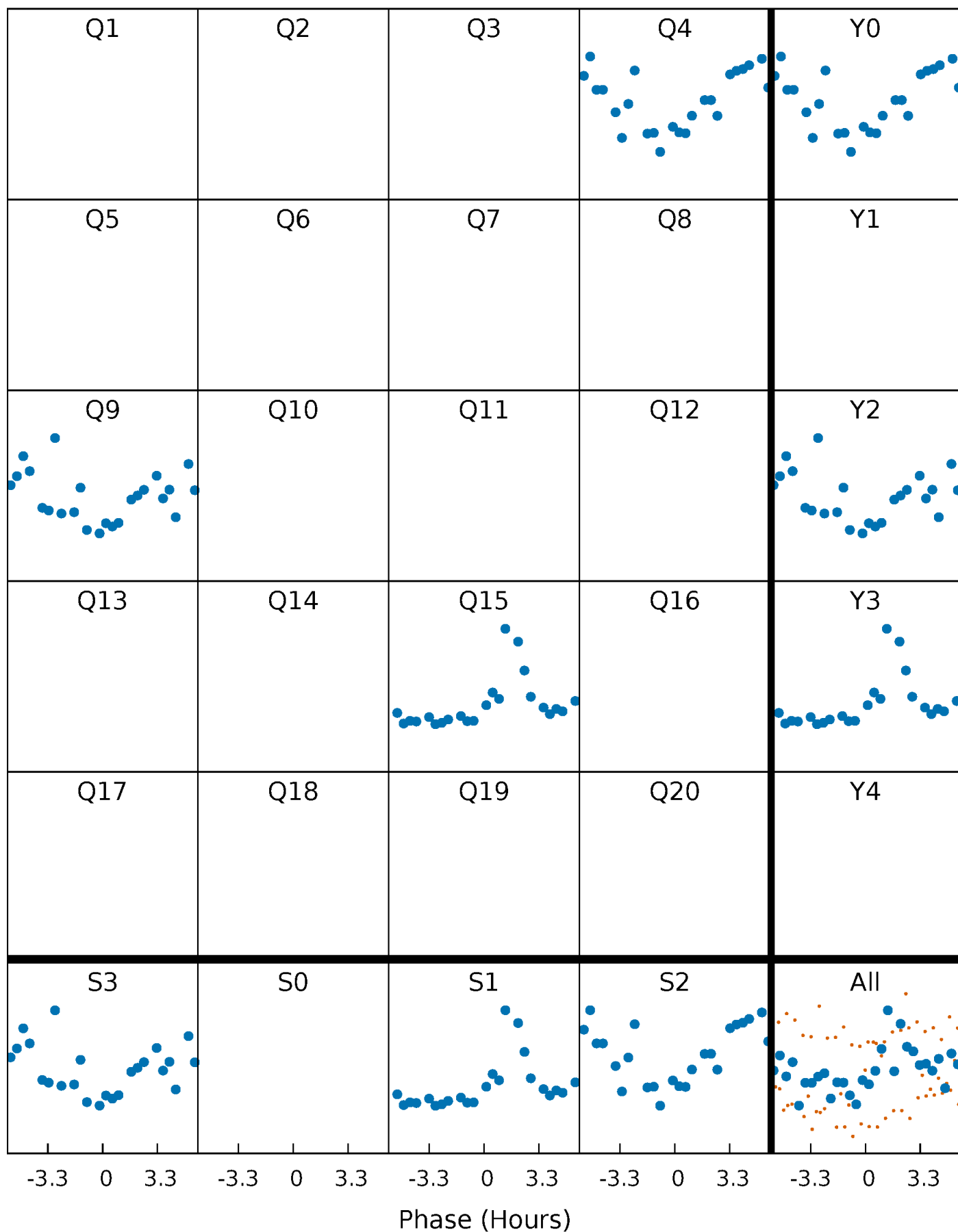


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



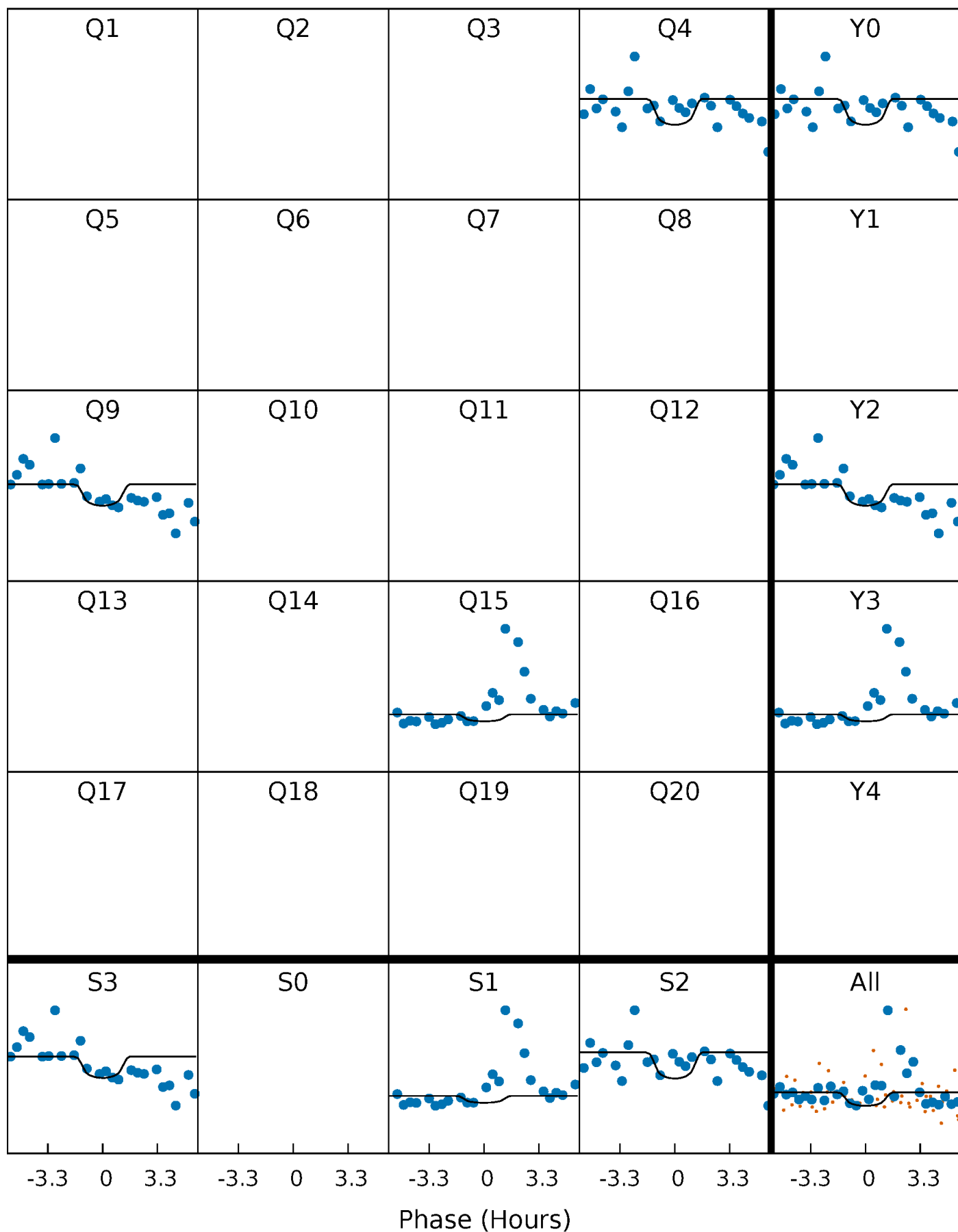
PDC Quarter-Phased Transit Curves

TCE 005699171-01 P=478.234936 Days $T_0=423.230752$ (BKJD)



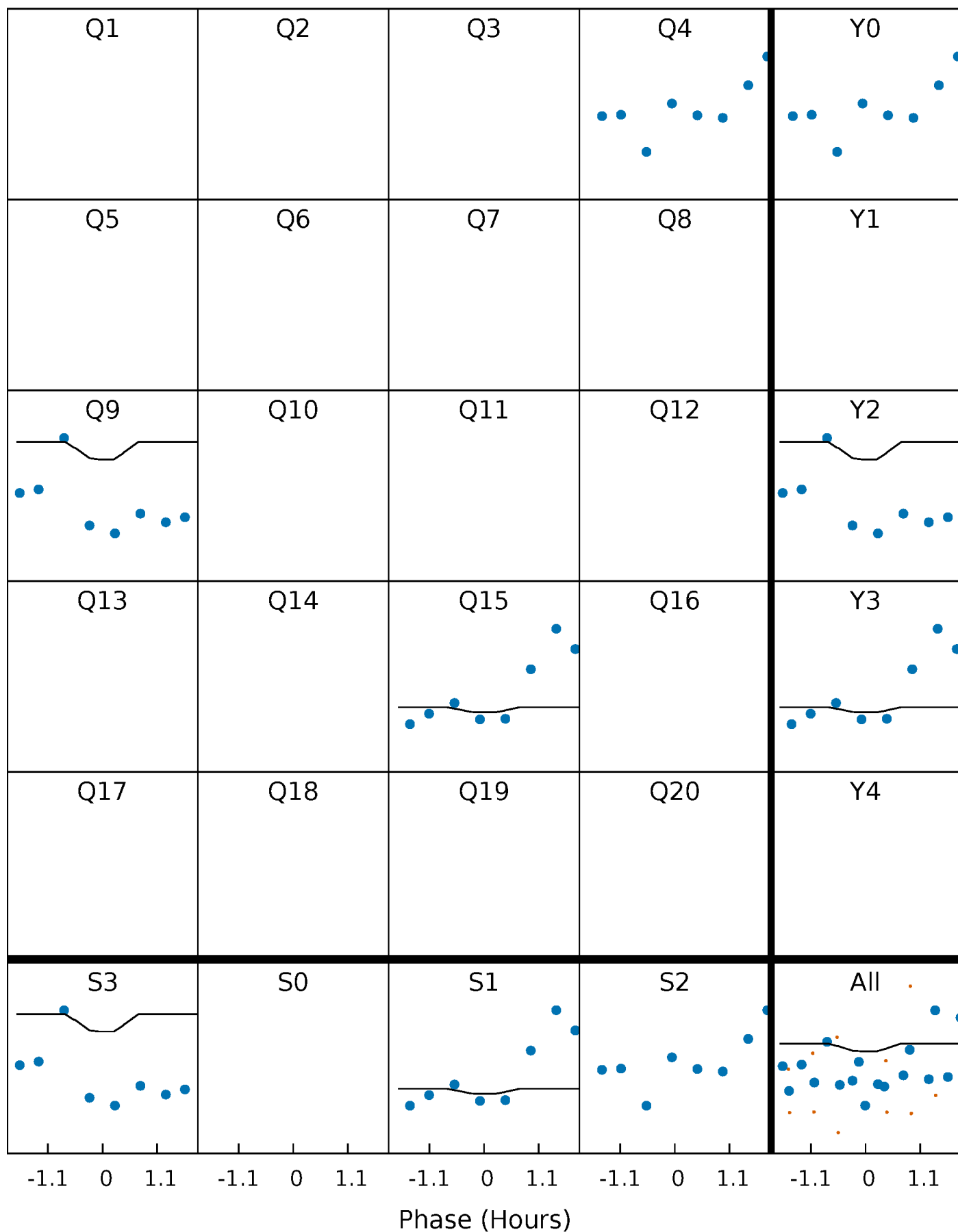
DV Quarter-Phased Transit Curves

TCE 005699171-01 $P=478.234936$ Days $T_0=423.230752$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

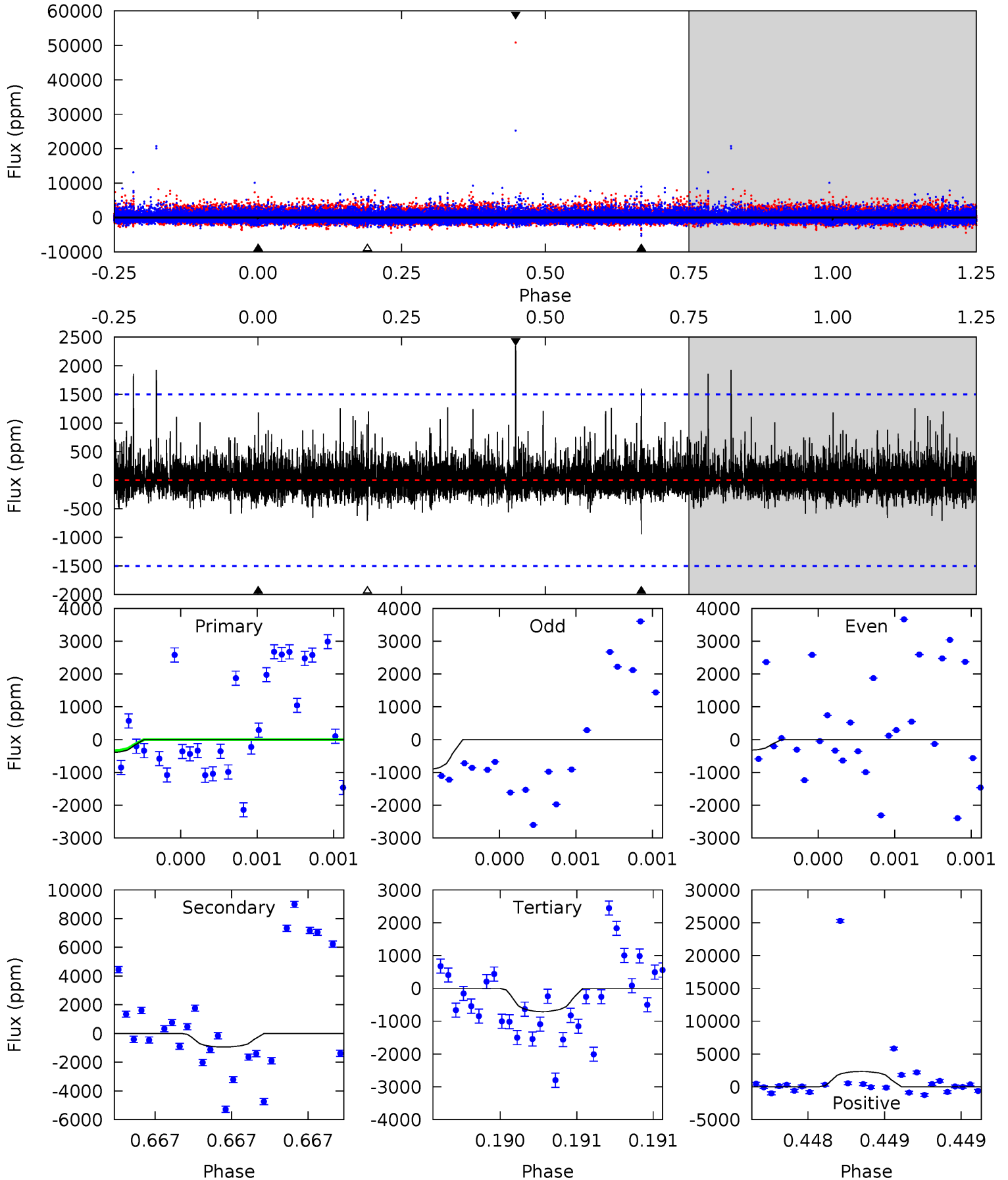
TCE 005699171-01 P=478.220227 Days $T_0=423.221920$ (BKJD)



DV Model-Shift Uniqueness Test

005699171-01, P = 478.234936 Days, E = 423.230752 Days

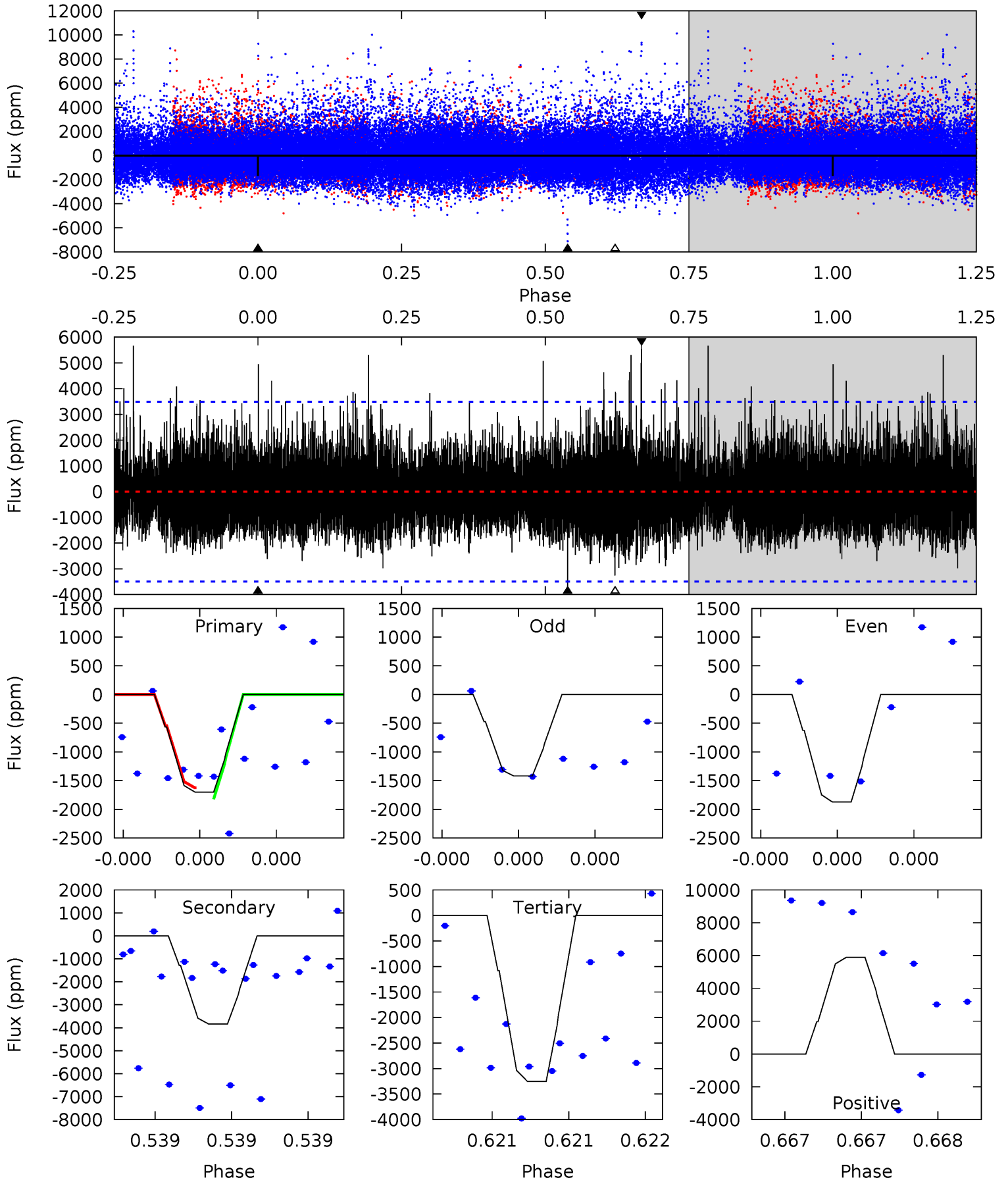
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.55	3.57	2.69	8.87	5.68	3.64	0.80	-1.14	-7.32	0.88	-5.30	0.48	-0.04	0.71	0.20



Alt Model-Shift Uniqueness Test

005699171-01, P = 478.220227 Days, E = 423.221920 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.84	6.41	5.43	9.83	5.83	3.87	1.75	-2.59	-6.99	0.98	-3.42	0.35	1.23	0.61	0.17



Stellar Parameters For KIC 005699171

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4491^{+176}_{-193}	$4.585^{+0.044}_{-0.028}$	$0.360^{+0.100}_{-0.300}$	$0.731^{+0.034}_{-0.059}$	$0.750^{+0.043}_{-0.059}$	$2.704^{+0.581}_{-0.269}$
	+4%/-4%	+1%/-1%	+28%/-83%	+5%/-8%	+6%/-8%	+21%/-10%
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 005699171-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-943 ± 264	$7.91^{+7.46}_{-5.66}$	228^{+9}_{-11}	3021^{+1628}_{-477}	$9385^{+113171}_{-6728}$
Alt.	-3840 ± 599	$6.59^{+7.80}_{-4.37}$	226^{+10}_{-10}	3992^{+2432}_{-874}	$56037^{+467799}_{-44516}$

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 $A_{obs} \gg 1.0$

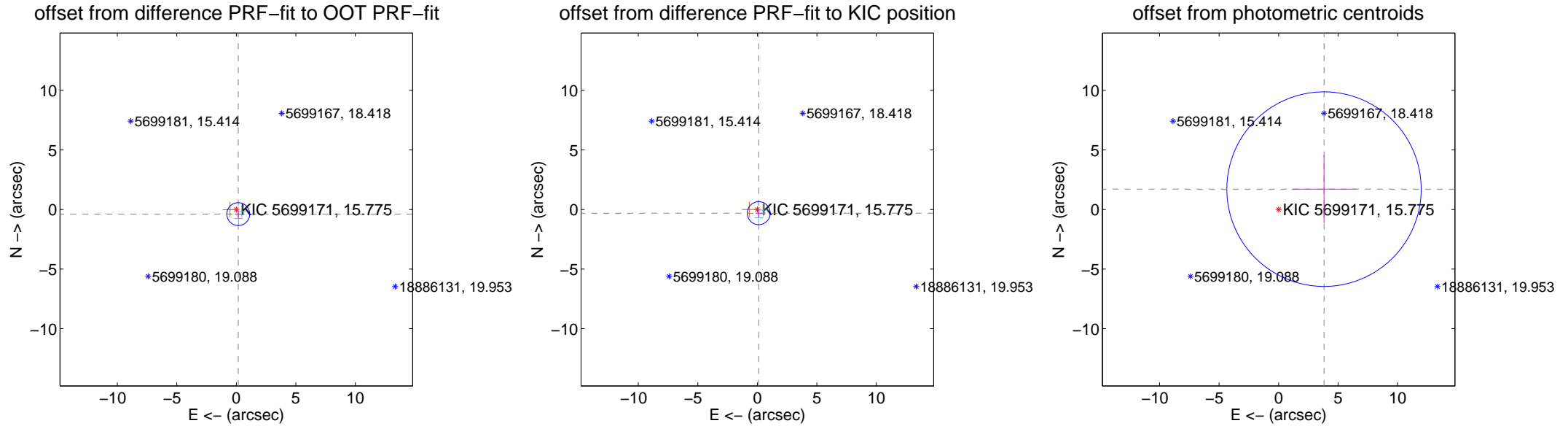
DV Centroid Data

Supplemental centroid analysis for 005699171-01. Kepler magnitude: 15.78. Transit SNR 3.62

There are 2 quarters with good PRF difference image offsets

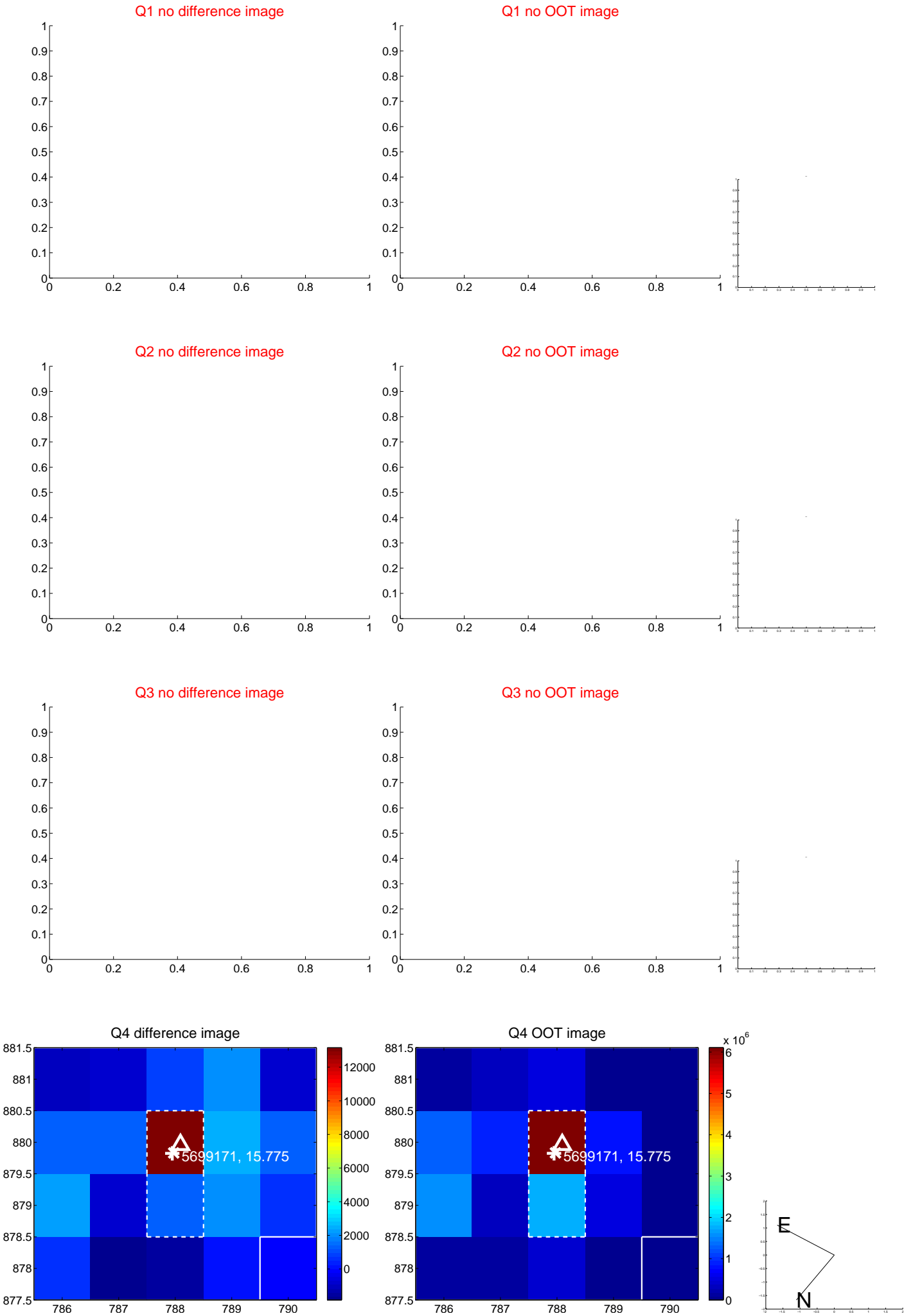
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.420 ± 0.320	1.31	-0.164 ± 0.286	-0.386 ± 0.326
PRF-fit source offset from KIC position	0.332 ± 0.321	1.03	-0.119 ± 0.286	-0.310 ± 0.326
photometric centroid source offset	4.18 ± 2.72	1.54	-3.82 ± 2.69	1.71 ± 2.86

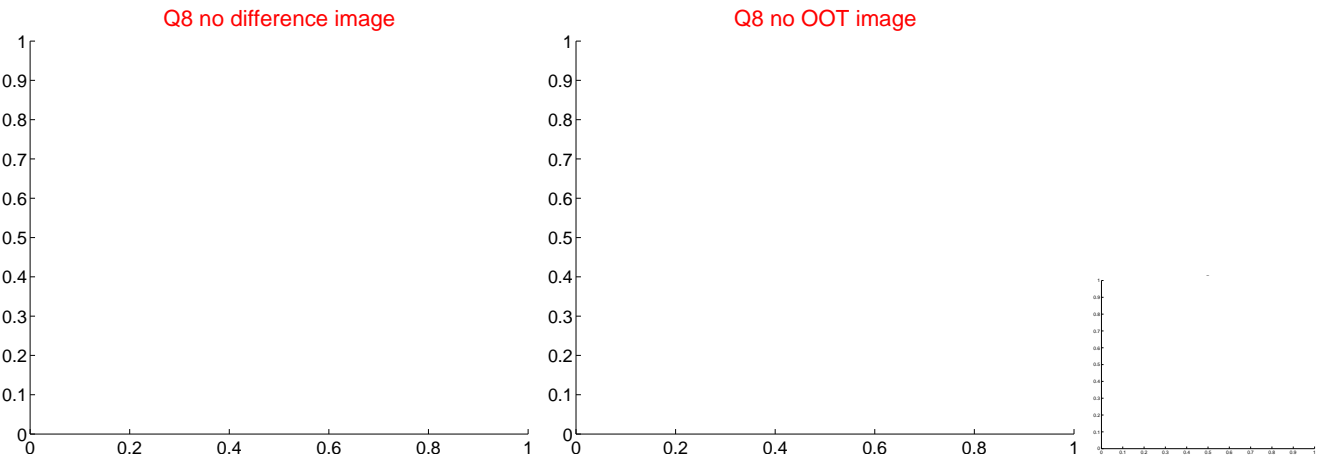


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

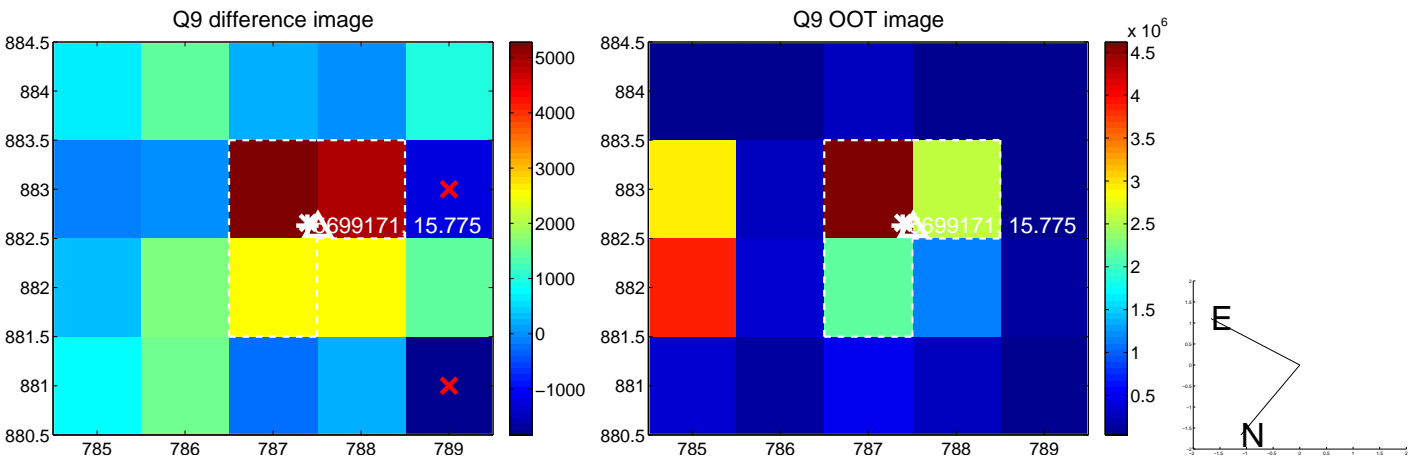
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



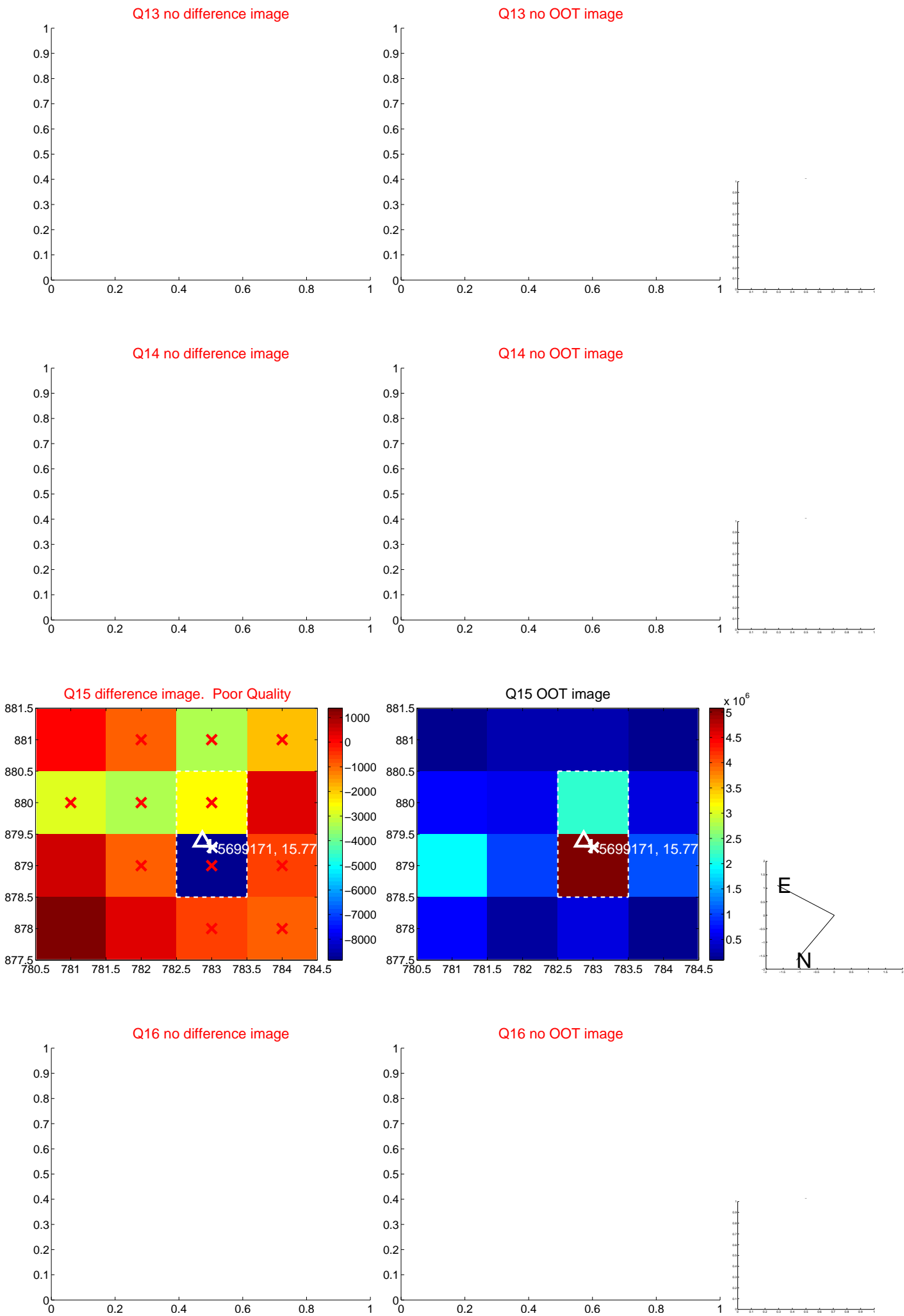
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



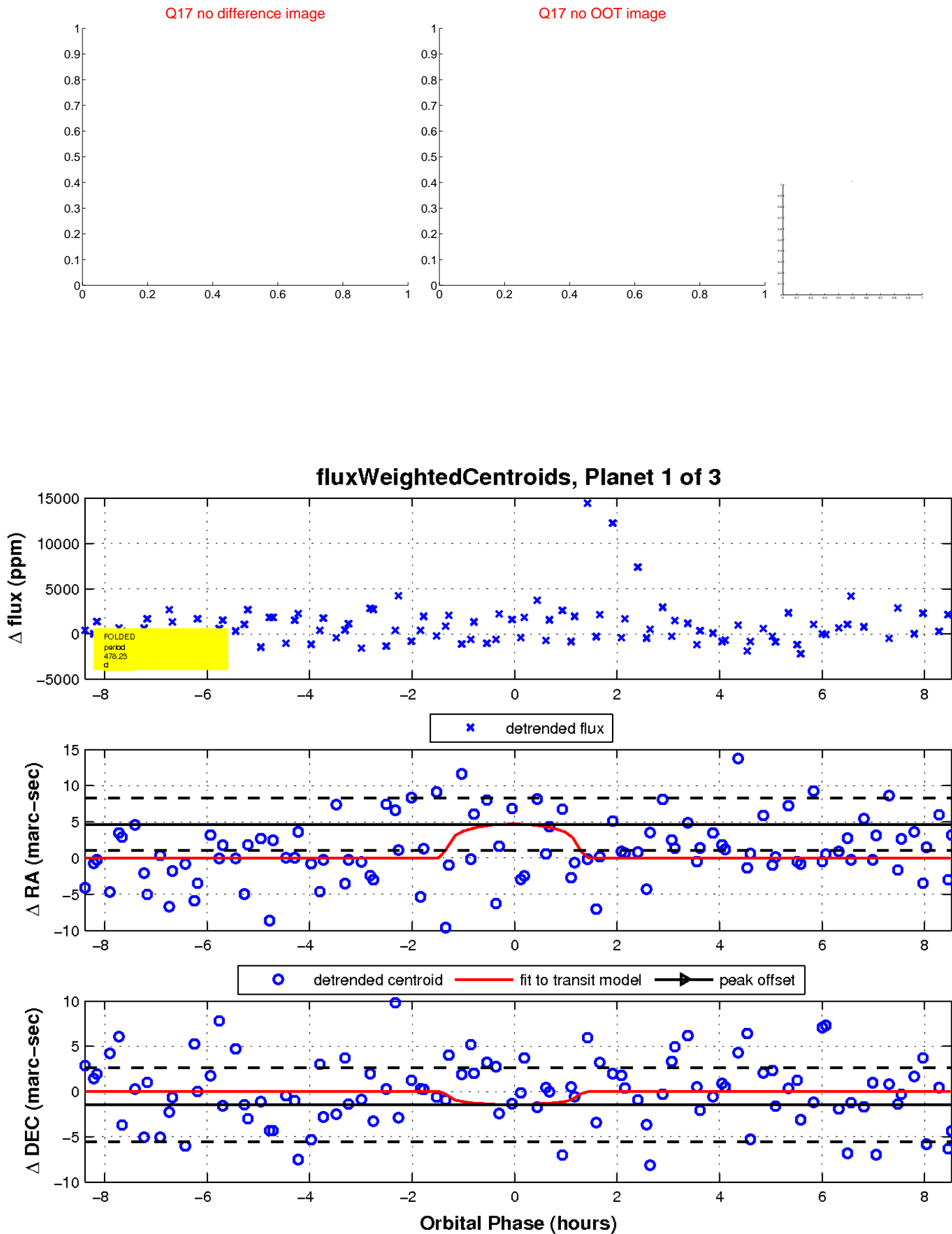
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

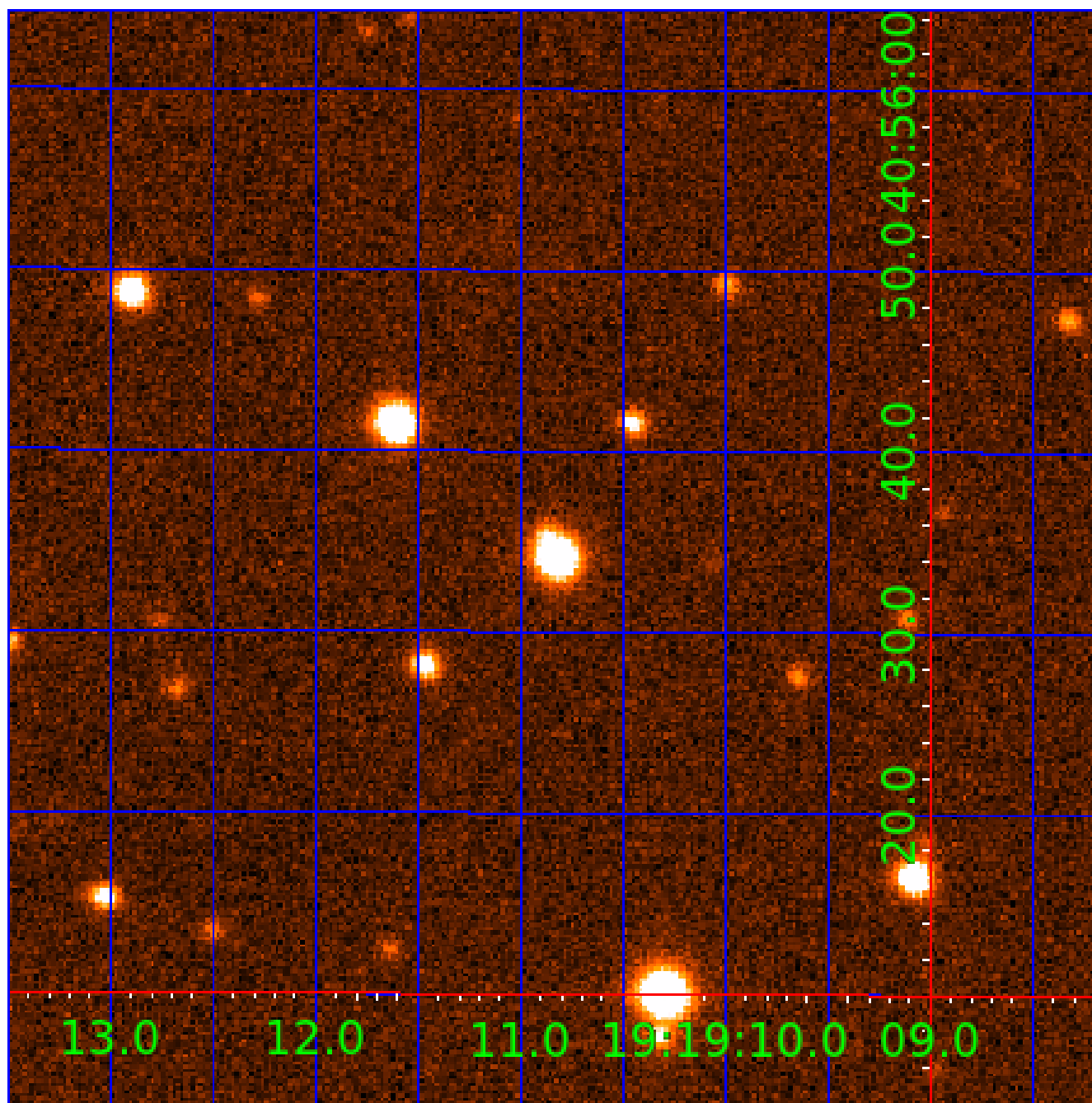


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005699171

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})
005699171-01	OBS	No	478.234936	423.230752	1132.5	2.870	11.5	3.6	0.73	4491	2.85	0.17
005699171-02	OBS	No	318.599966	423.142935	2705.2	12.290	8.7	8.6	0.73	4491	3.80	0.28
005699171-03	OBS	No	384.072474	370.480510	1845.3	3.430	9.8	6.7	0.73	4491	3.08	0.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005699171-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005699171-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_POS_ALT
005699171-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

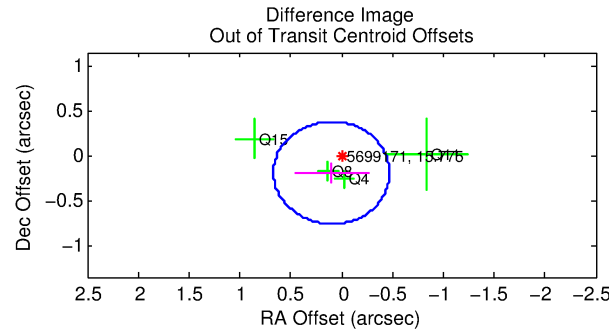
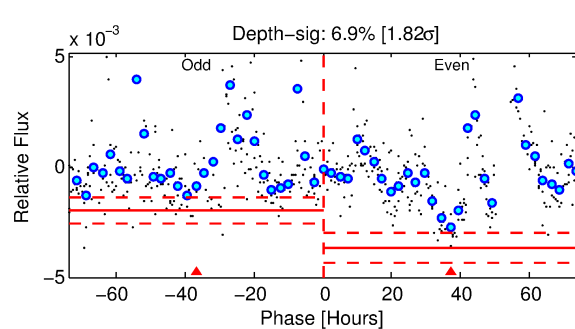
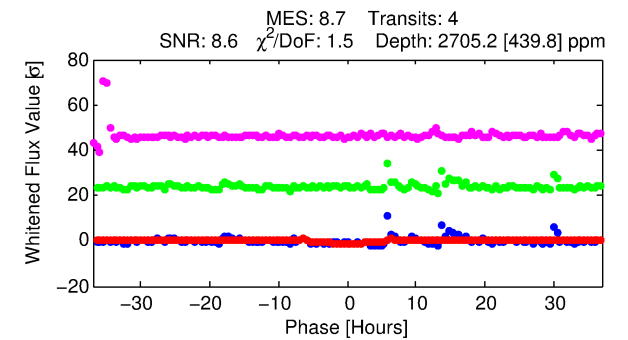
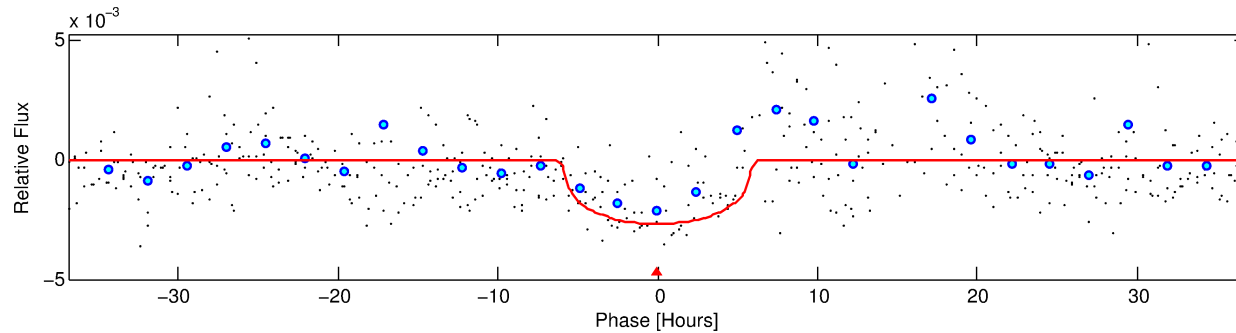
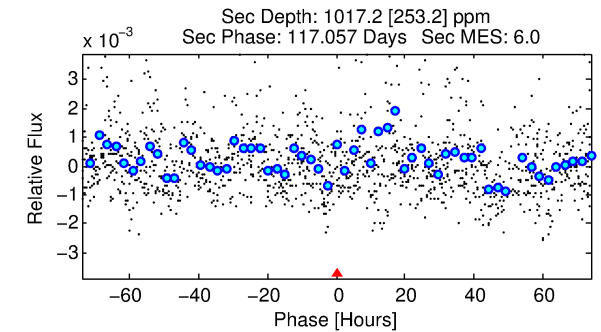
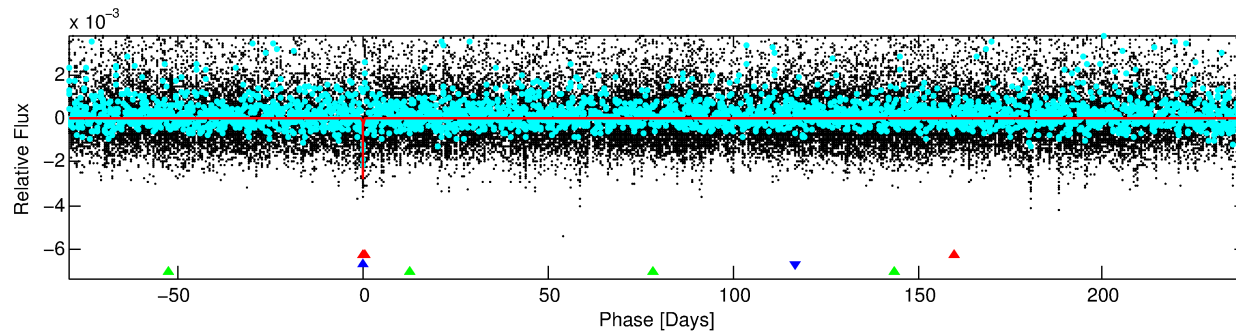
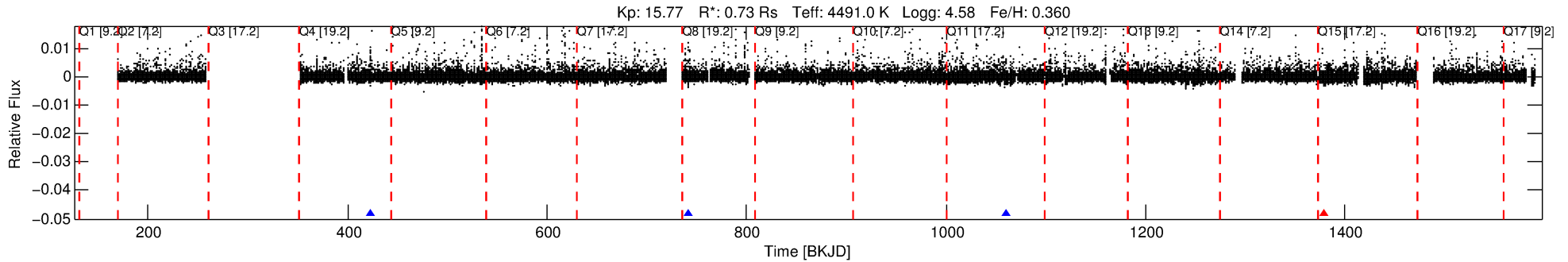
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005699171-02

No Significant Match Found

DV One-Page Summary

KIC: 5699171 Candidate: 2 of 3 Period: 318.600 d



DV Fit Results:

Period = 318.59997 [0.00914] d
Epoch = 423.1429 [0.0191] BKJD
Rp/R* = 0.0477 [0.0161]
a/R* = 181.68 [166.74]
b = 0.51 [1.39]
Seff = 0.28 [0.05]
Teq = 186 [9] K
Rp = 3.80 [1.32] Re
a = 0.8295 [0.0527] AU
Ag = 26609.12 [19241.14] [1.38σ]
Teffp = 3673 [678] K [5.14σ]

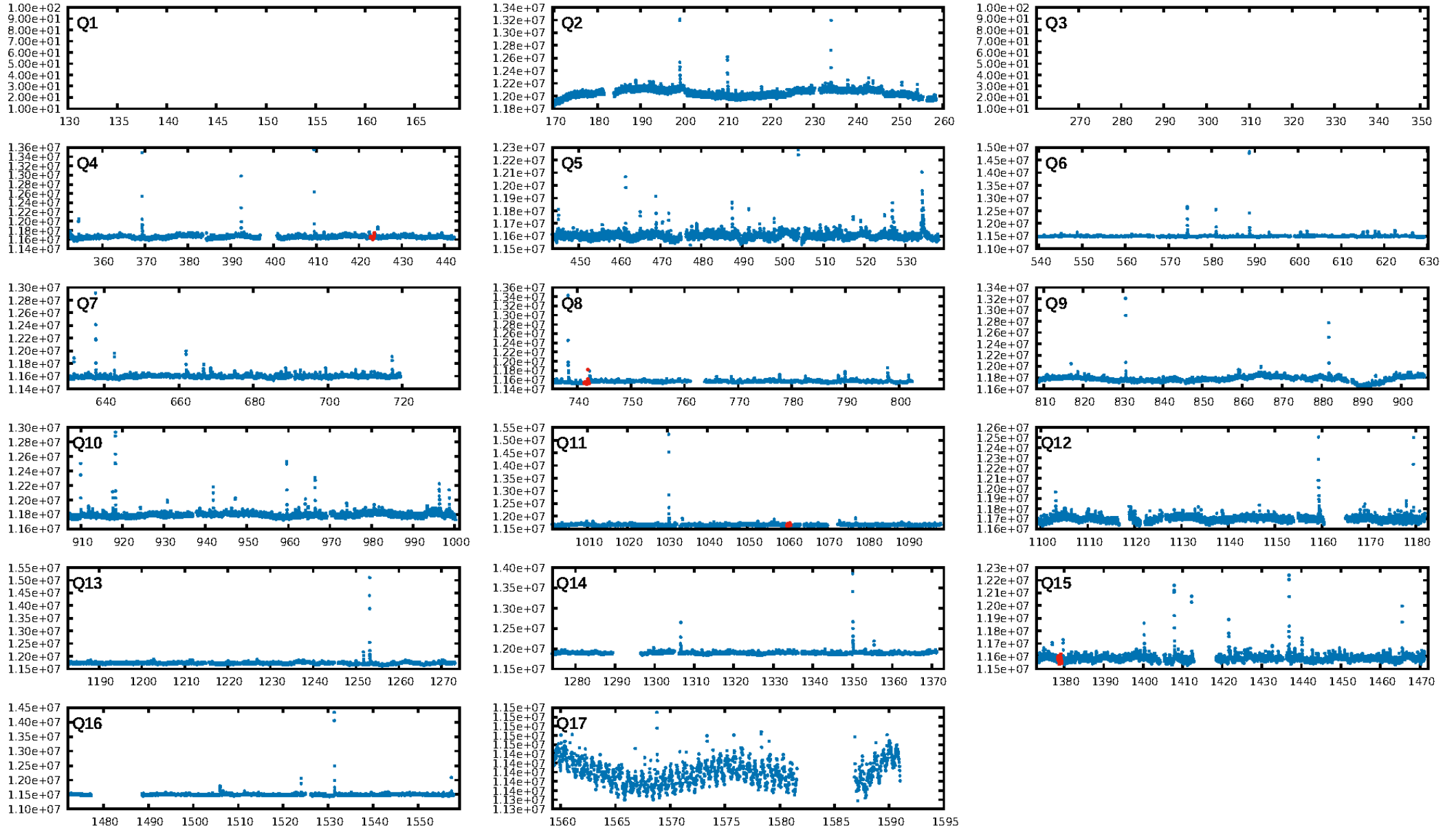
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [123.15σ]
ModelChiSquare2-sig: 11.9%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.37e-08
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 1.837
Centroid-sig: 0.0%
Centroid-so: 1.205 arcsec [2.10σ]
OotOffset-rm: 0.215 arcsec [1.13σ]
KicOffset-rm: 0.179 arcsec [0.97σ]
OotOffset-st: 0/2/2/0 [4]
KicOffset-st: 0/2/2/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.50 [2/4]

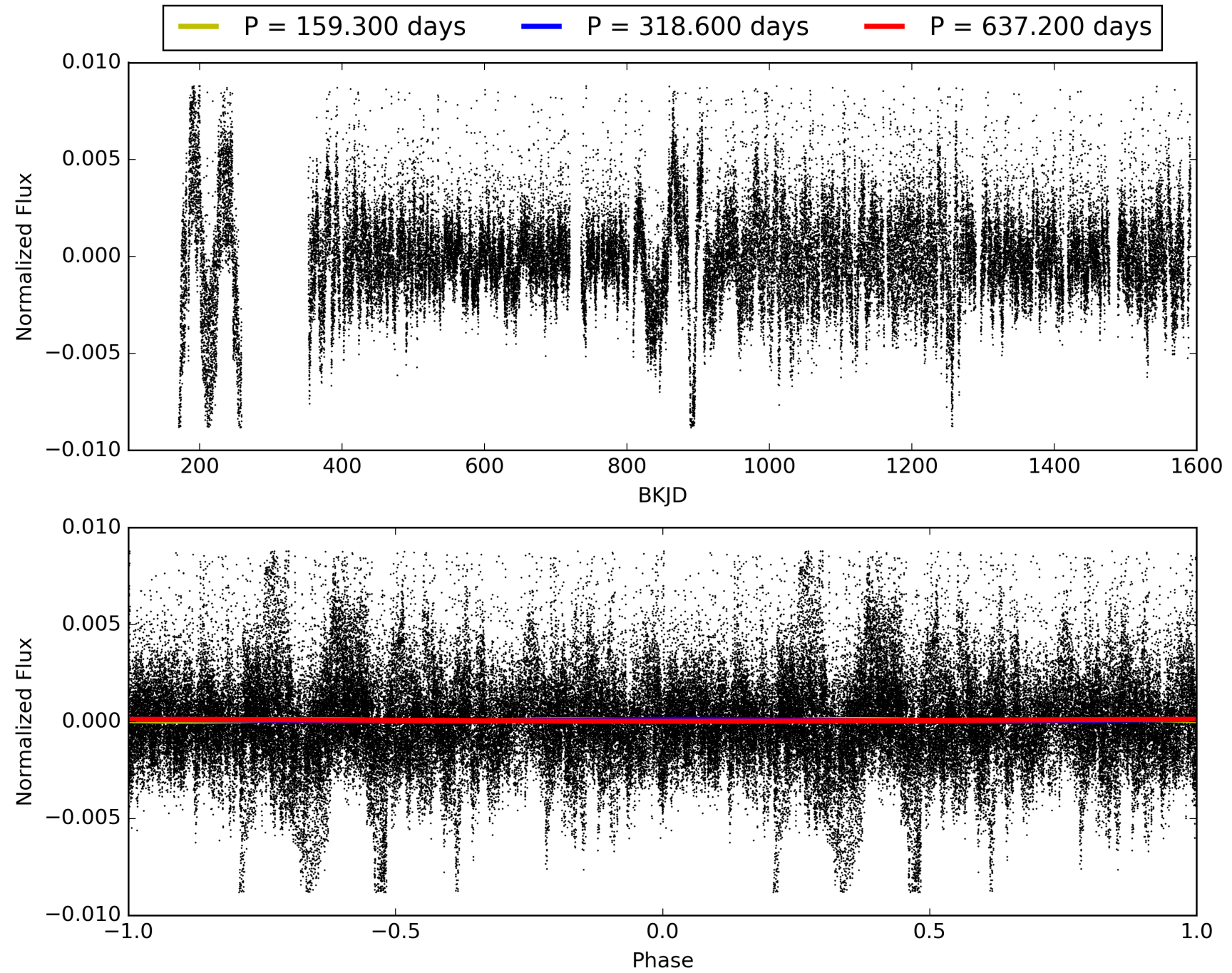
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:32:01 Z

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

TCE 005699171-02, PDC Light Curves

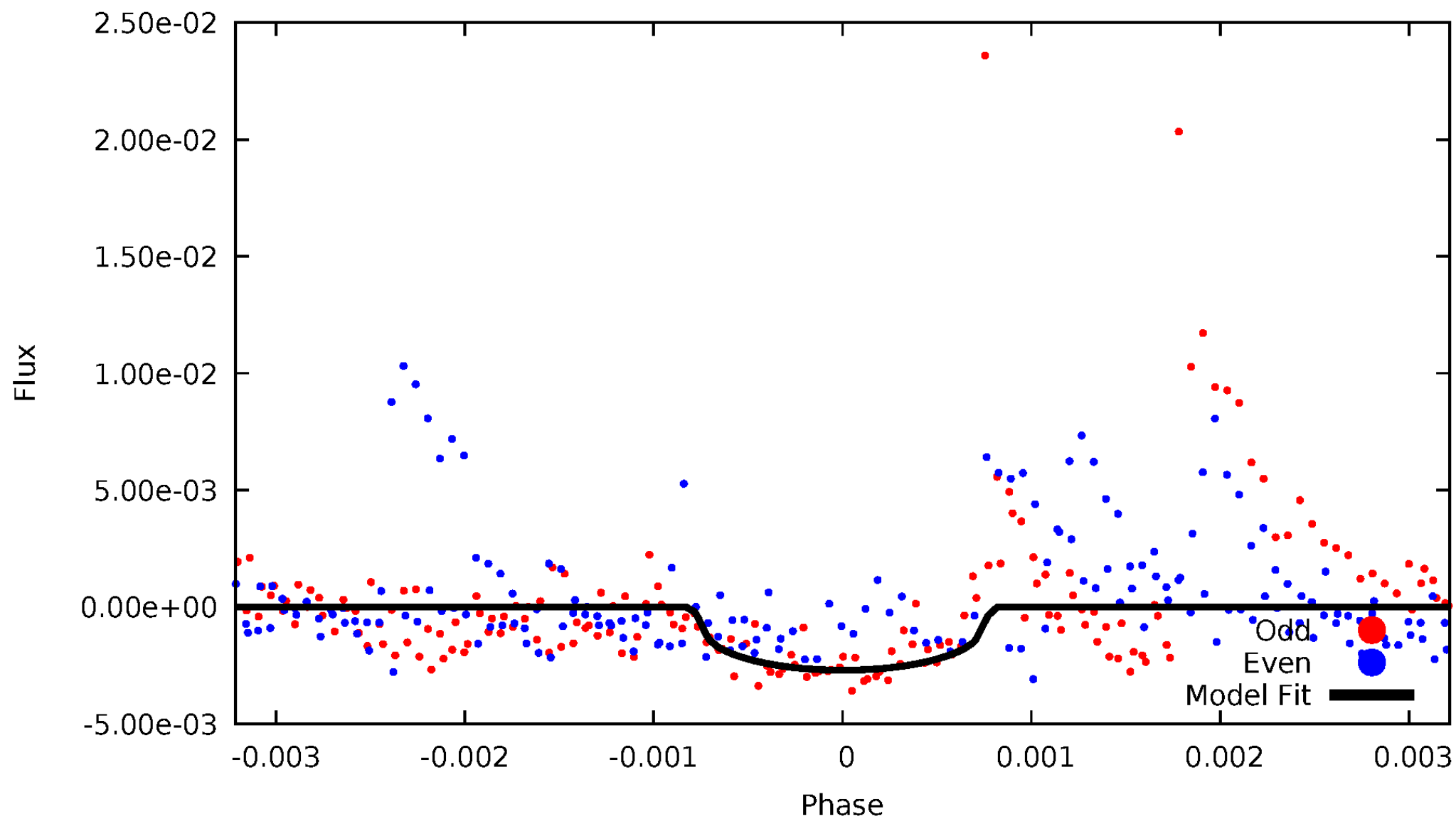


TCE 005699171-02



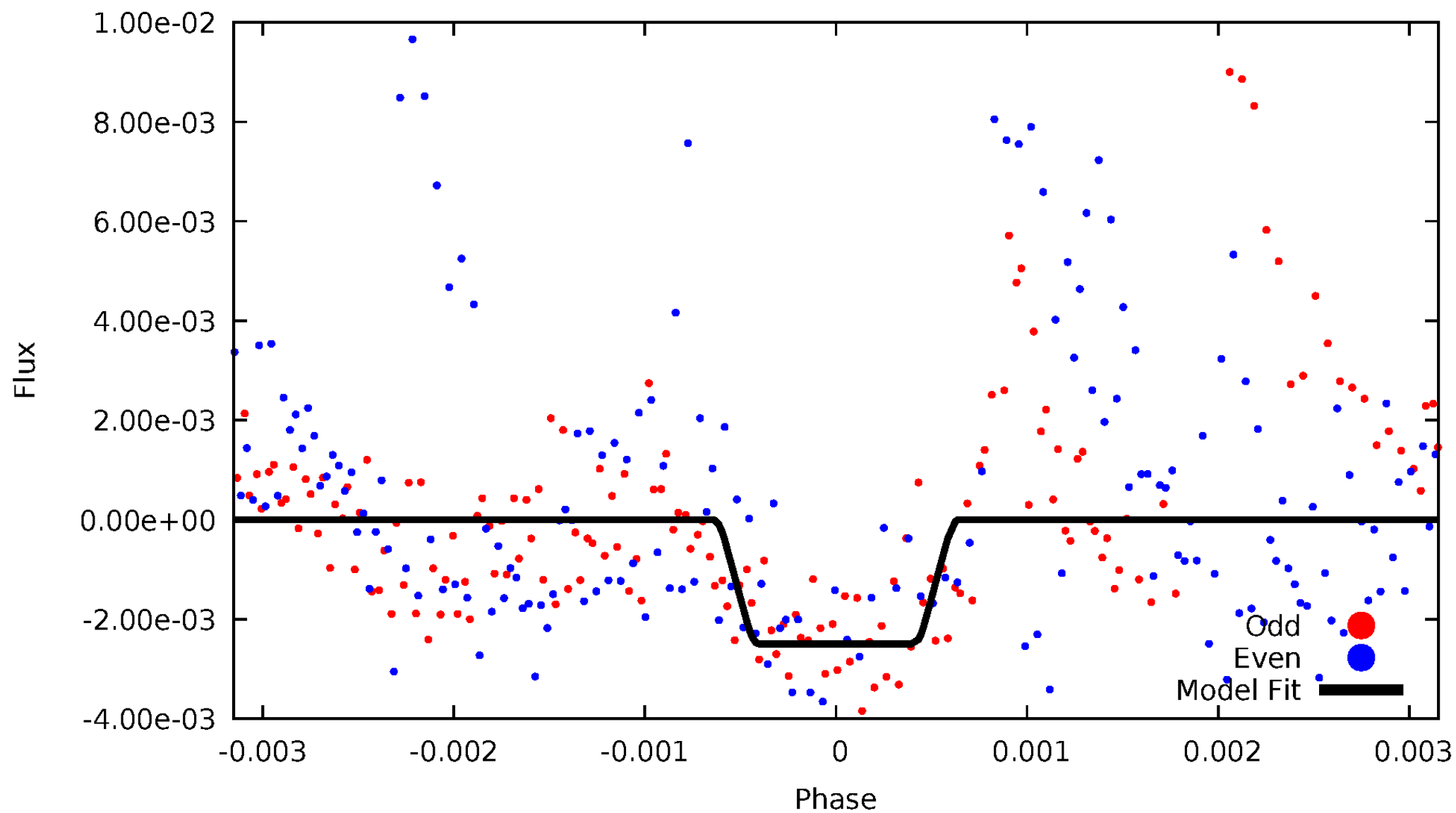
DV Odd/Even

TCE 005699171-02



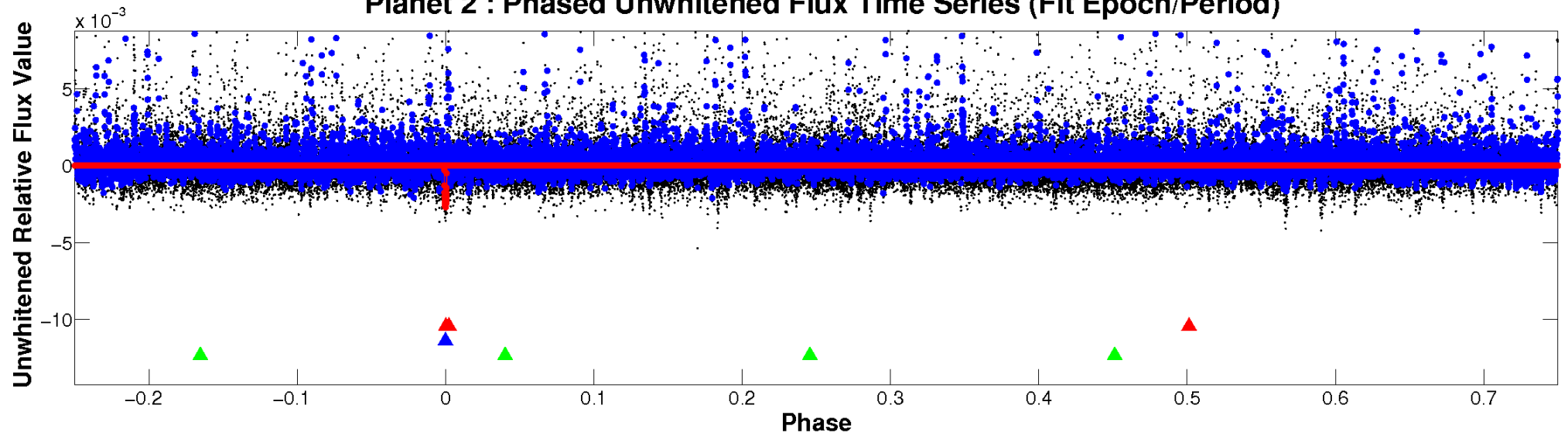
ALT Odd/Even

TCE 005699171-02

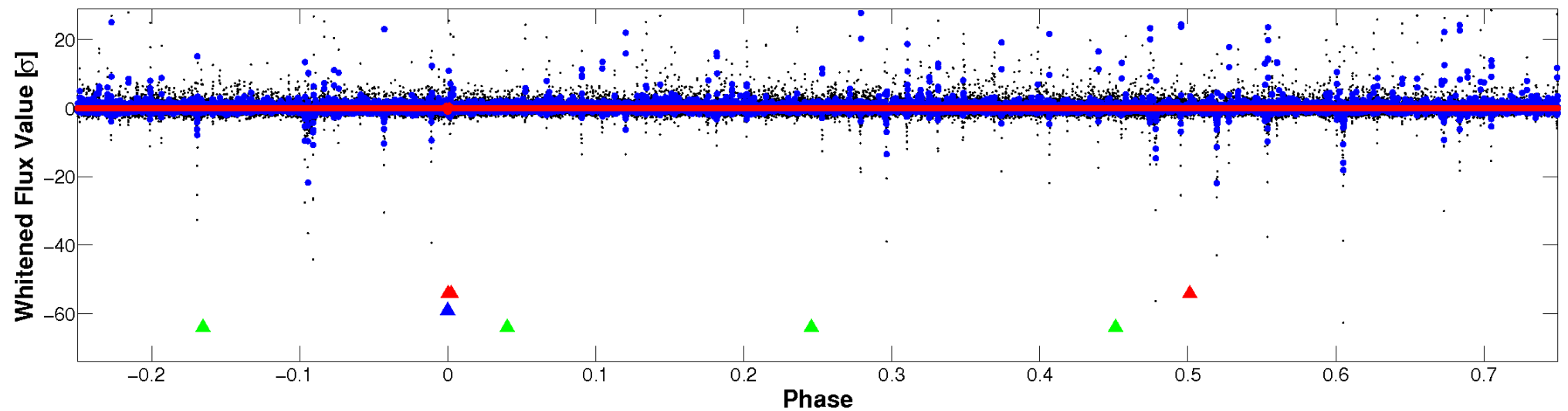


Non-Whitened Vs. Whitened Light Curve

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

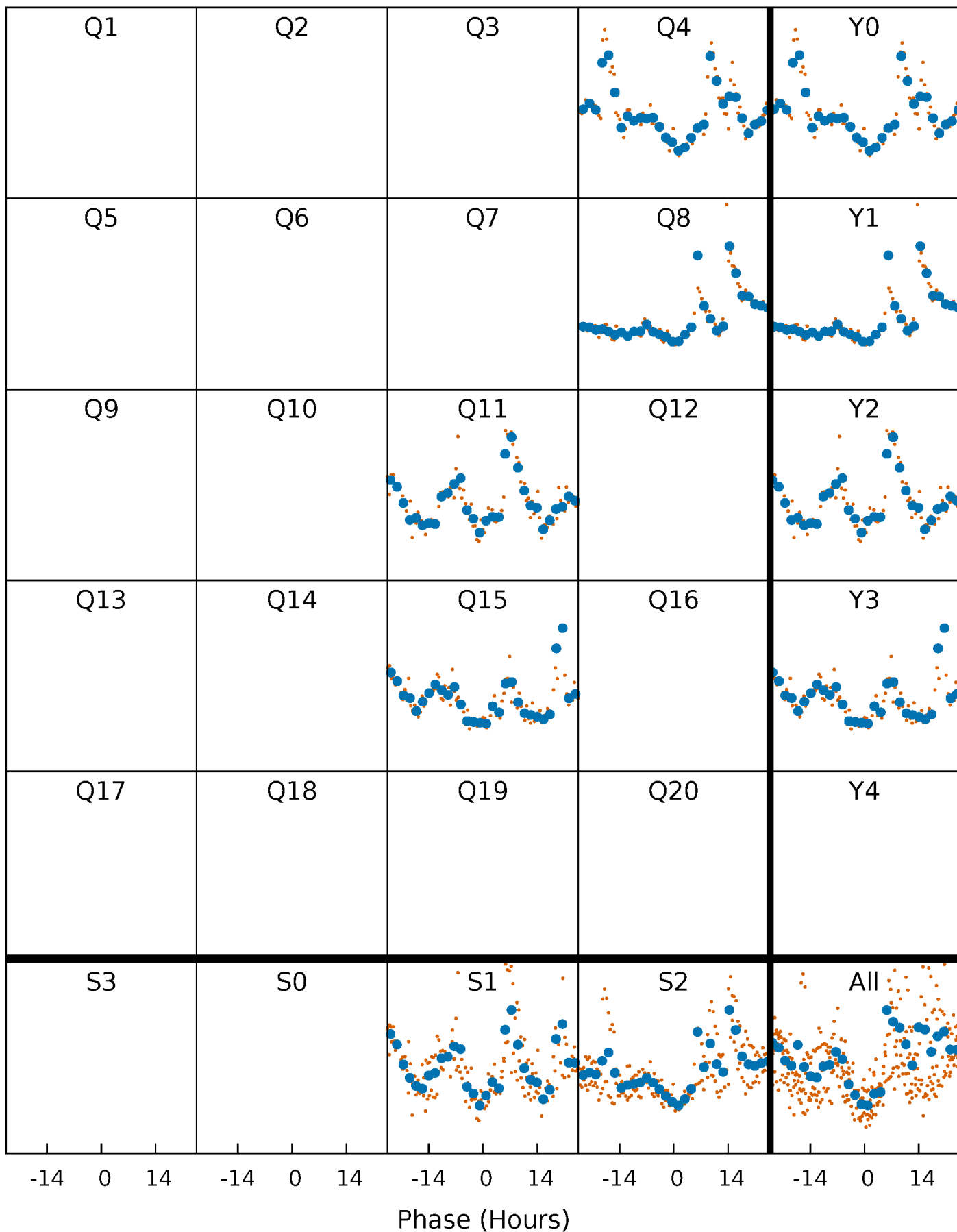


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



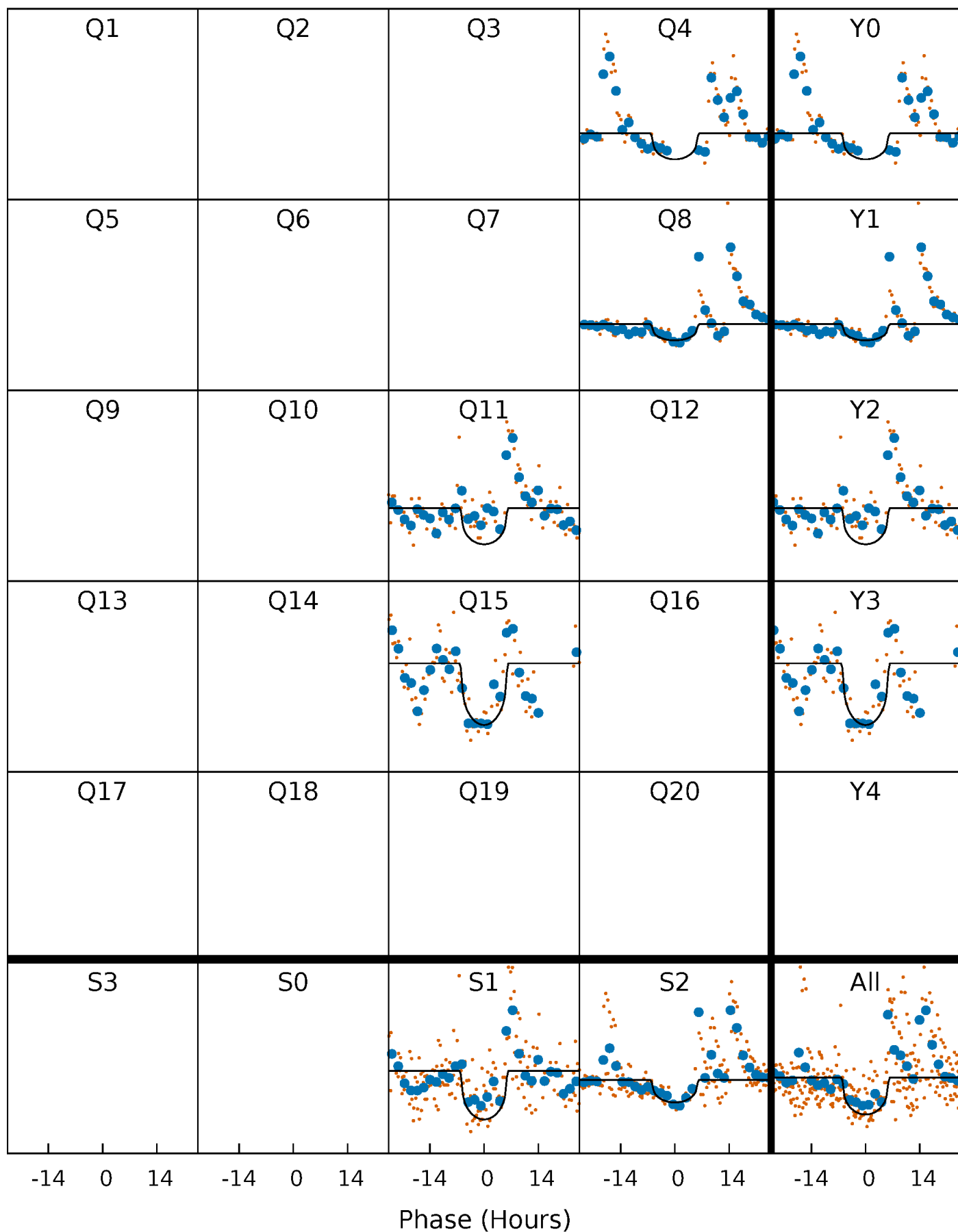
PDC Quarter-Phased Transit Curves

TCE 005699171-02 P=318.599966 Days $T_0=423.142935$ (BKJD)



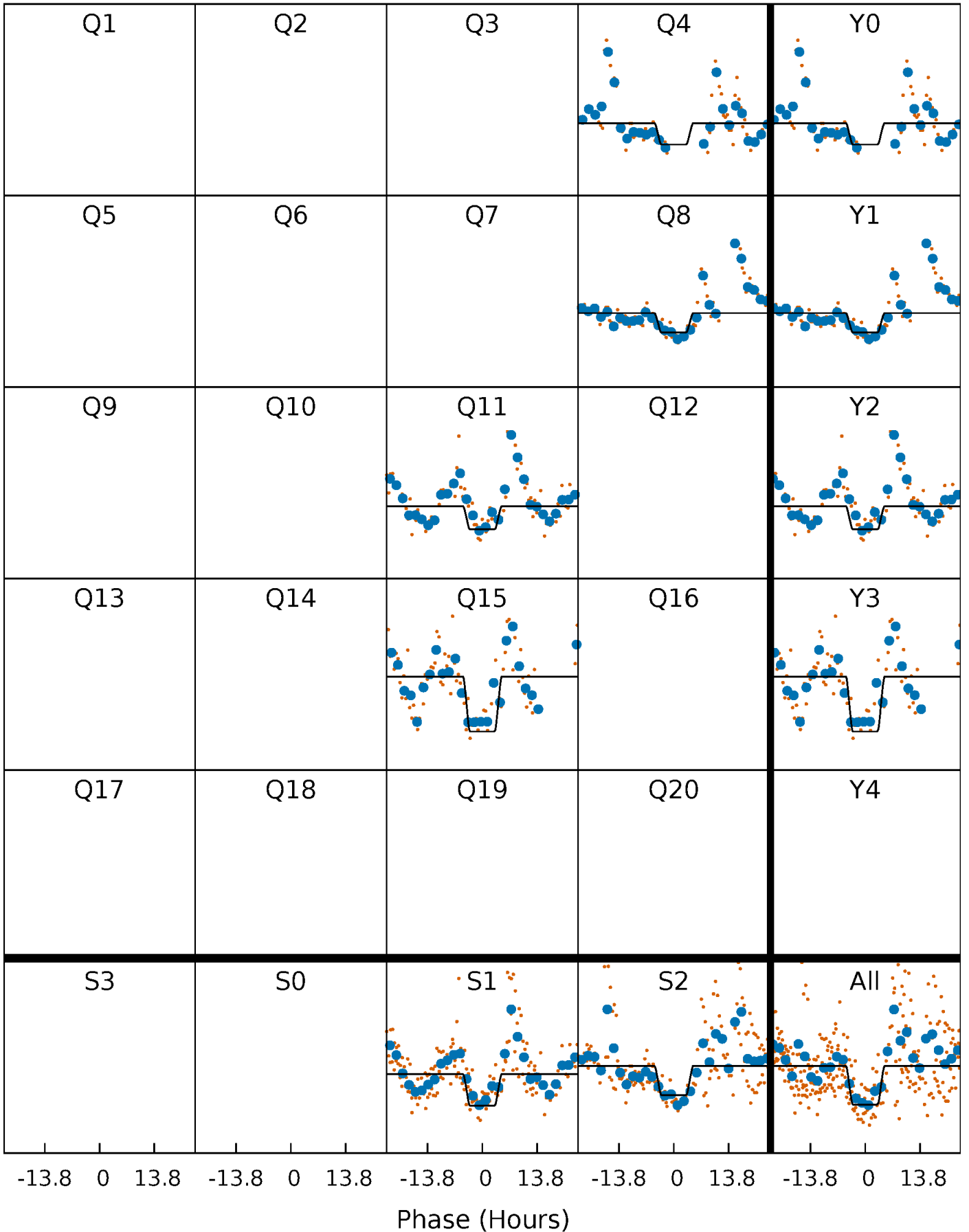
DV Quarter-Phased Transit Curves

TCE 005699171-02 $P=318.599966$ Days $T_0=423.142935$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

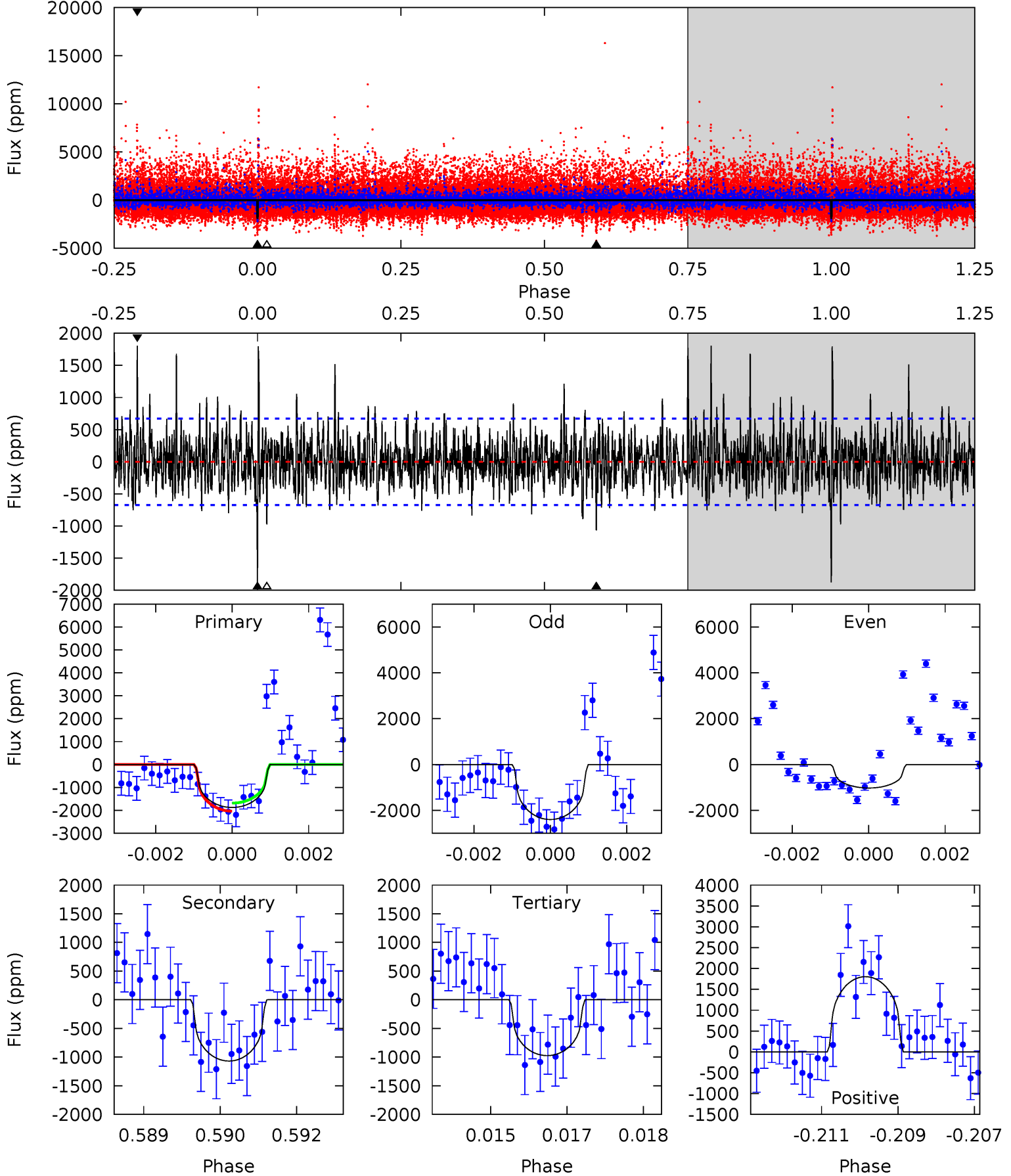
TCE 005699171-02 $P=318.606879$ Days $T_0=423.108346$ (BKJD)



DV Model-Shift Uniqueness Test

005699171-02, P = 318.599966 Days, E = 104.542969 Days

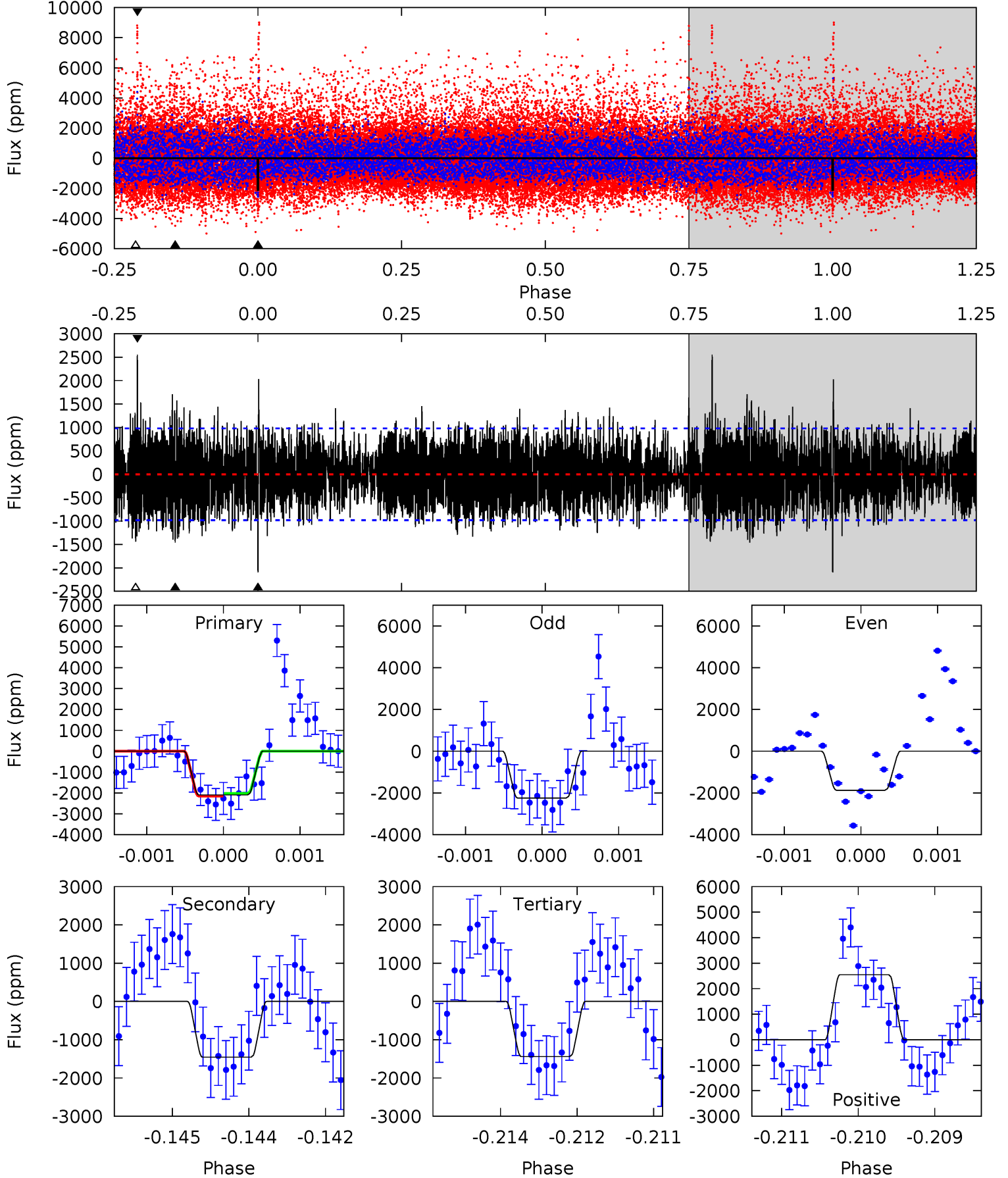
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	8.51	7.76	14.4	5.36	3.15	2.54	7.16	0.56	0.75	-5.85	4.13	0.87	0.49	1.40



Alt Model-Shift Uniqueness Test

005699171-02, P = 318.606879 Days, E = 104.501467 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	8.03	7.93	14.1	5.41	3.23	3.18	3.62	-2.52	0.10	-6.03	0.98	0.99	0.55	0.32



Stellar Parameters For KIC 005699171

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4491^{+176}_{-193}	$4.585^{+0.044}_{-0.028}$	$0.360^{+0.100}_{-0.300}$	$0.731^{+0.034}_{-0.059}$	$0.750^{+0.043}_{-0.059}$	$2.704^{+0.581}_{-0.269}$
	+4%/-4%	+1%/-1%	+28%/-83%	+5%/-8%	+6%/-8%	+21%/-10%
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 005699171-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1069 ± 126	$3.71^{+1.32}_{-1.25}$	258^{+12}_{-11}	3928^{+698}_{-417}	29182^{+39645}_{-13392}
Alt.	-1456 ± 181	$3.95^{+1.35}_{-1.35}$	259^{+11}_{-12}	4050^{+728}_{-414}	35642^{+46951}_{-16124}

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

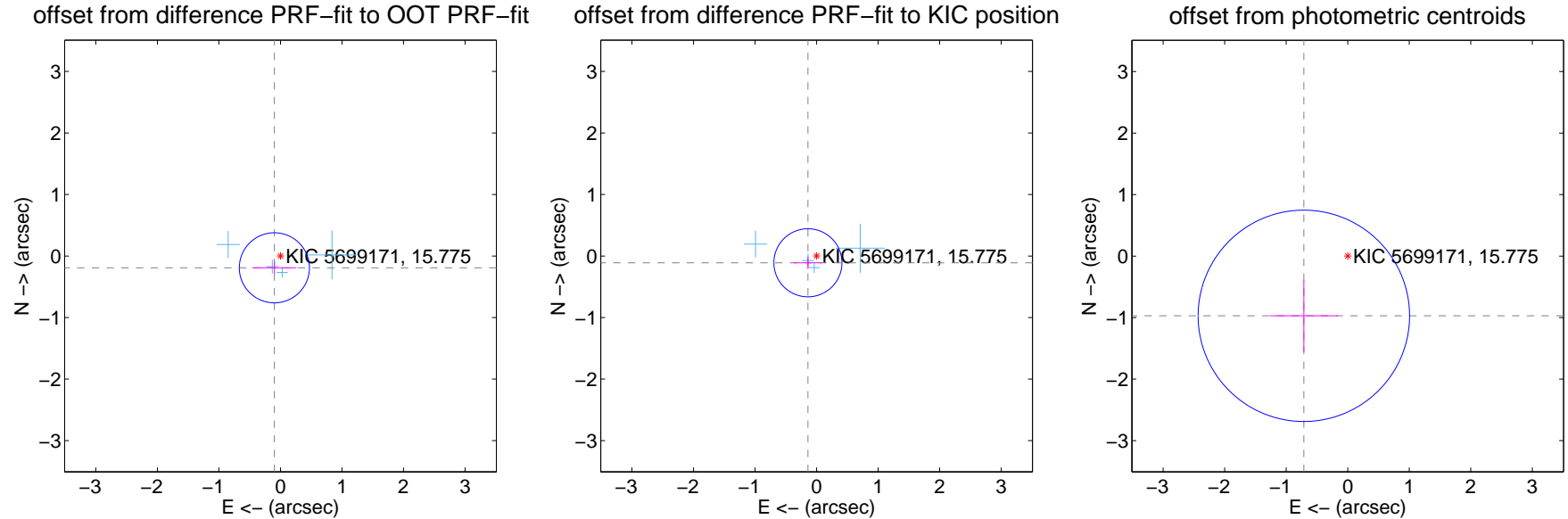
DV Centroid Data

Supplemental centroid analysis for 005699171-02. Kepler magnitude: 15.78. Transit SNR 8.64

There are 4 quarters with good PRF difference image offsets

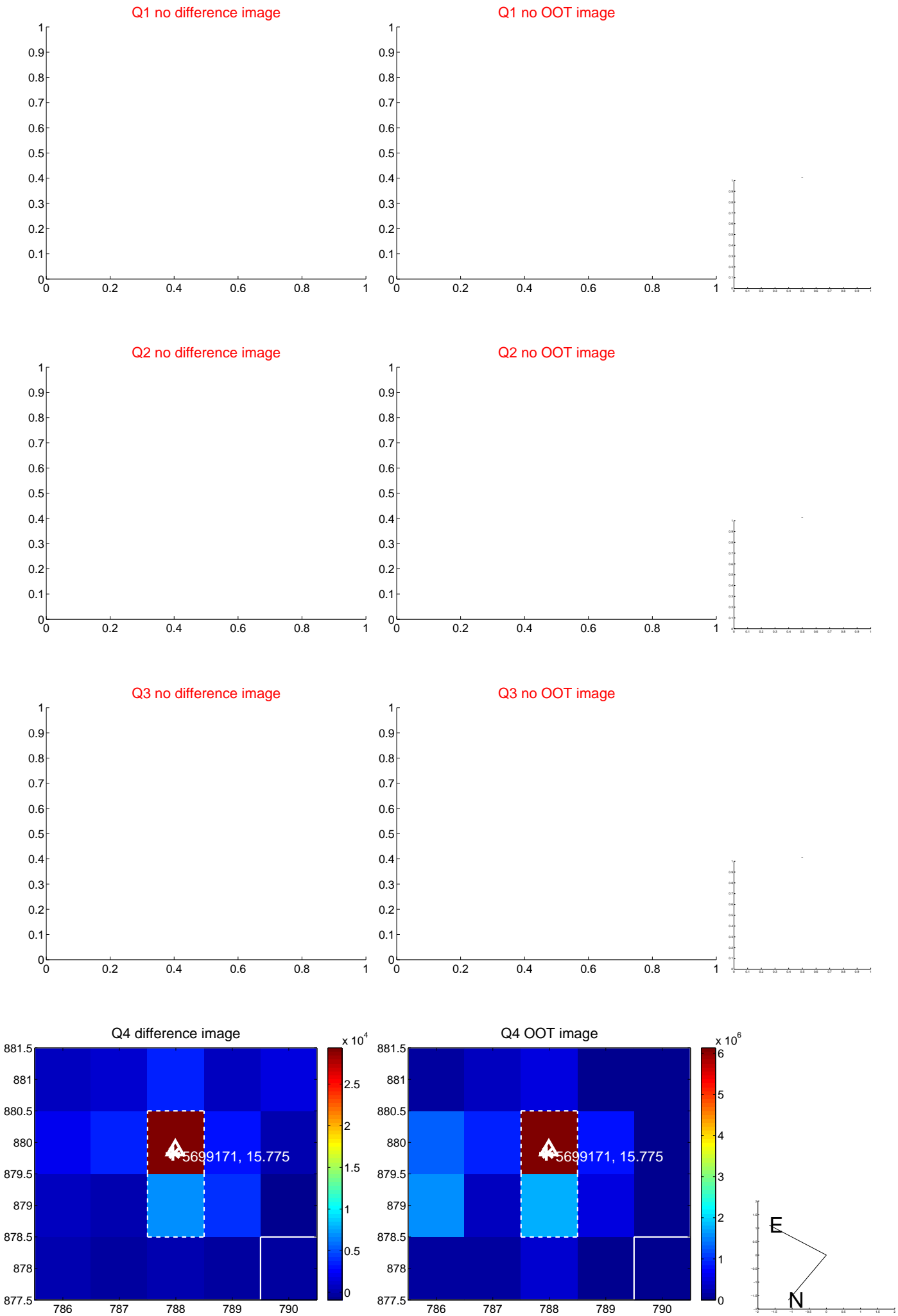
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.215 ± 0.190	1.13	0.099 ± 0.359	-0.191 ± 0.103
PRF-fit source offset from KIC position	0.179 ± 0.184	0.97	0.141 ± 0.233	-0.110 ± 0.102
photometric centroid source offset	1.20 ± 0.57	2.10	0.71 ± 0.55	-0.97 ± 0.58

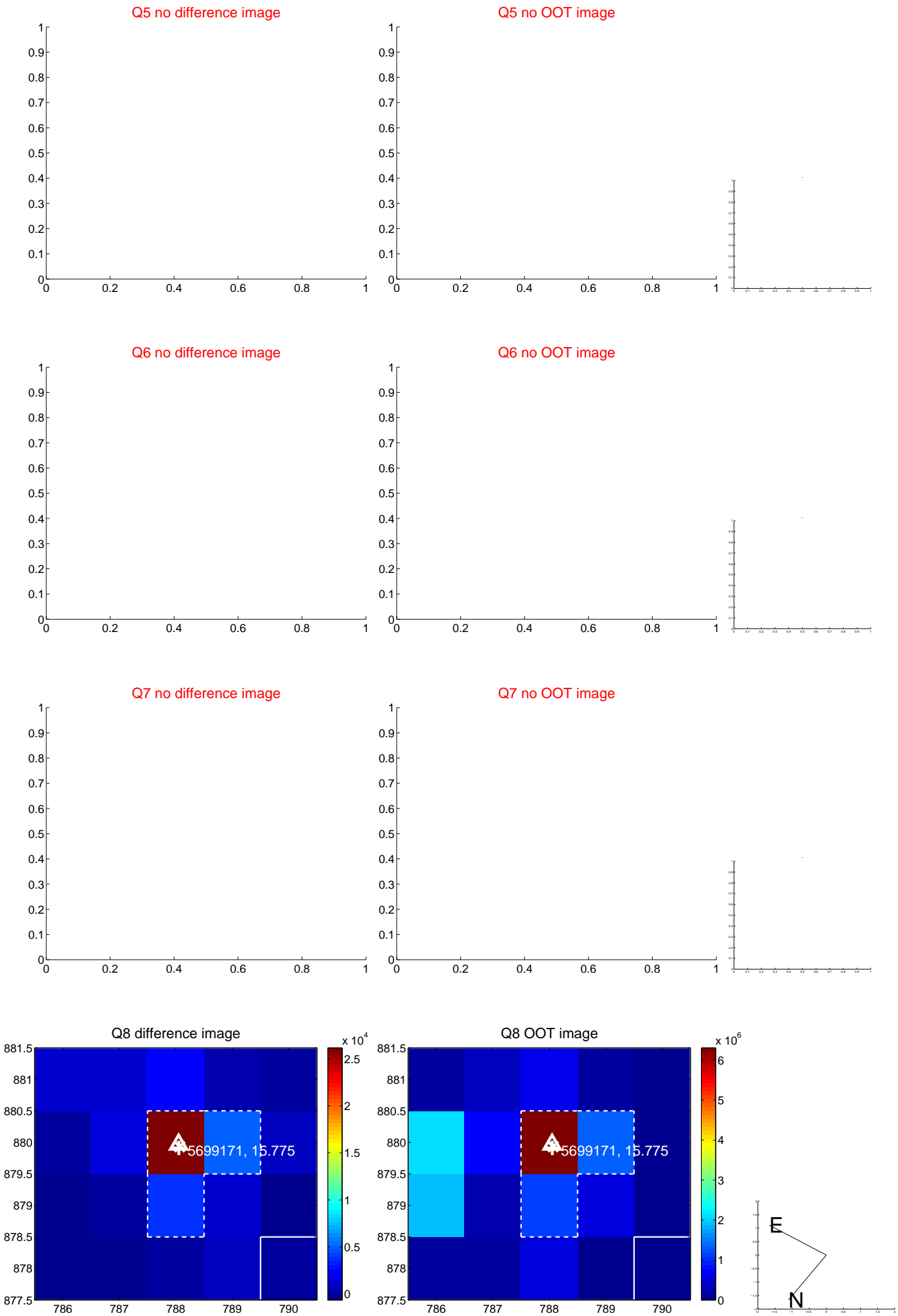


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

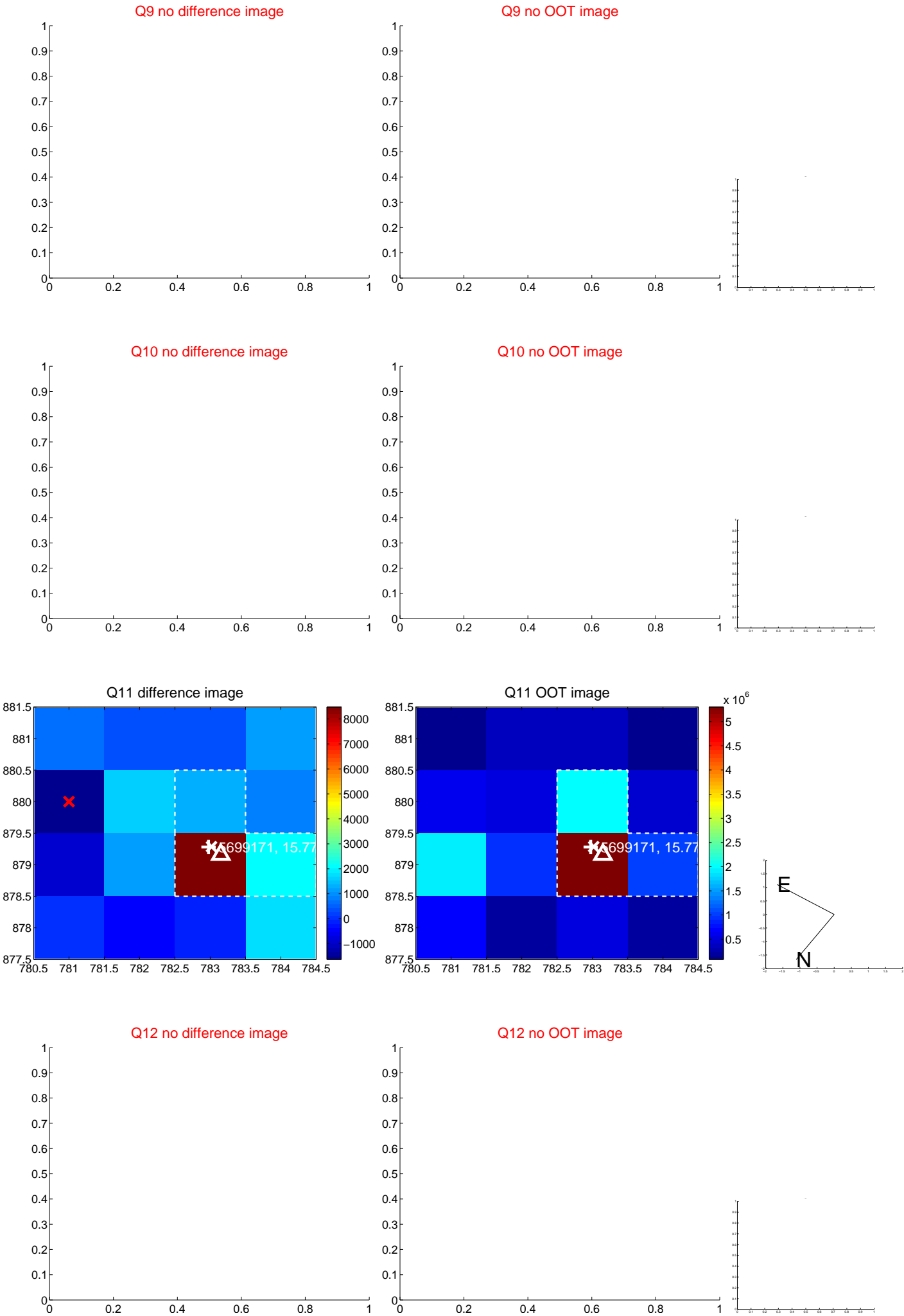
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



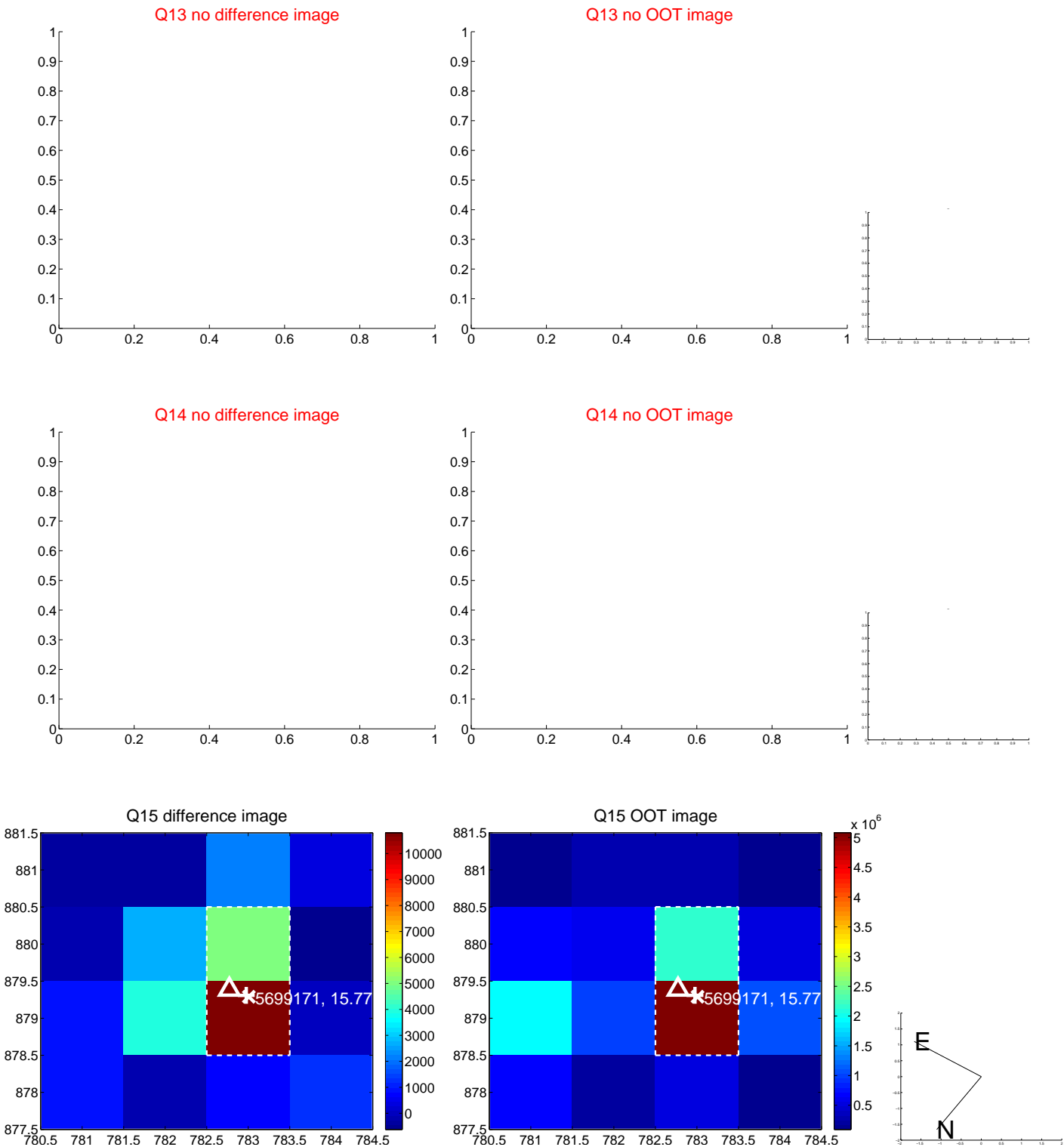
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



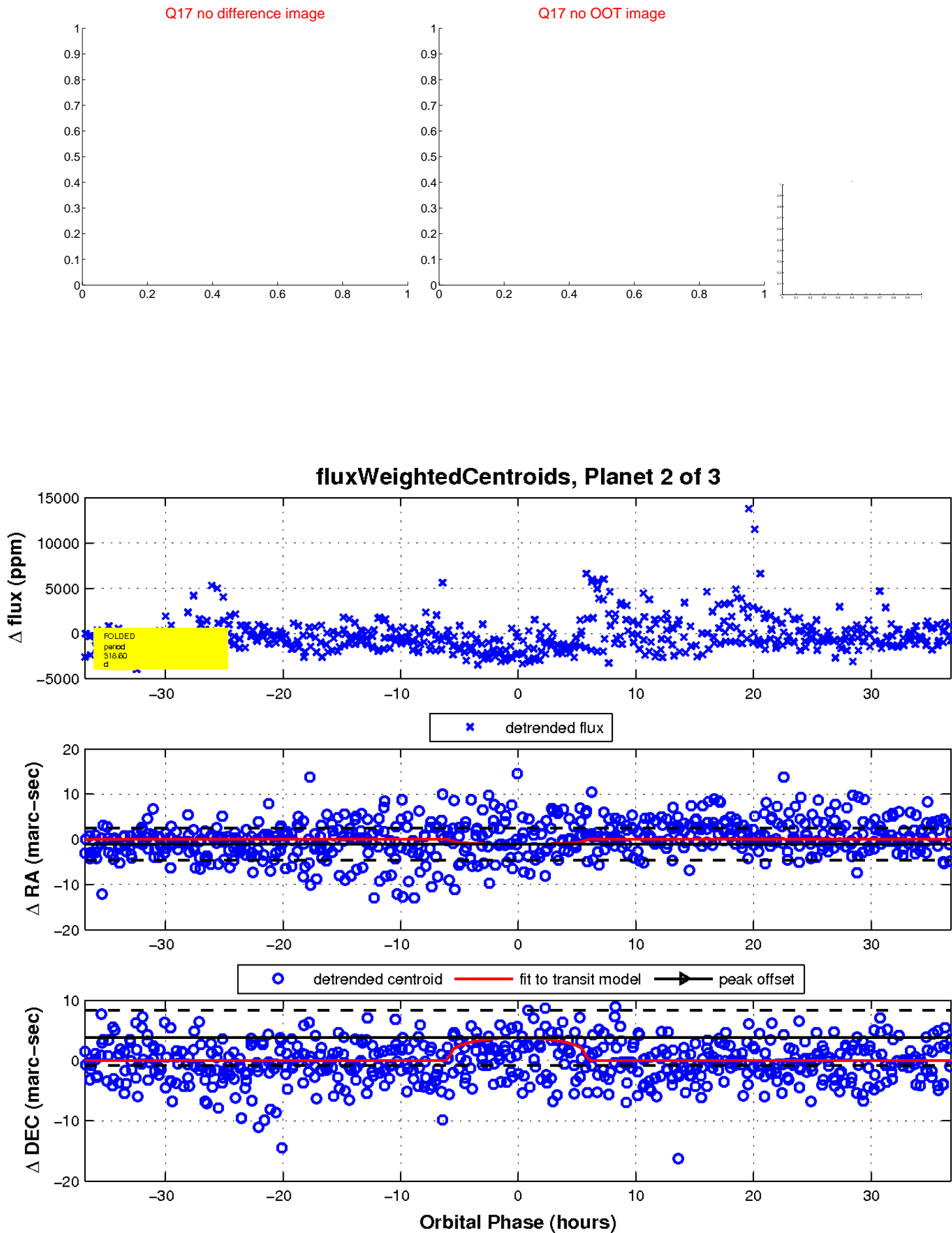
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

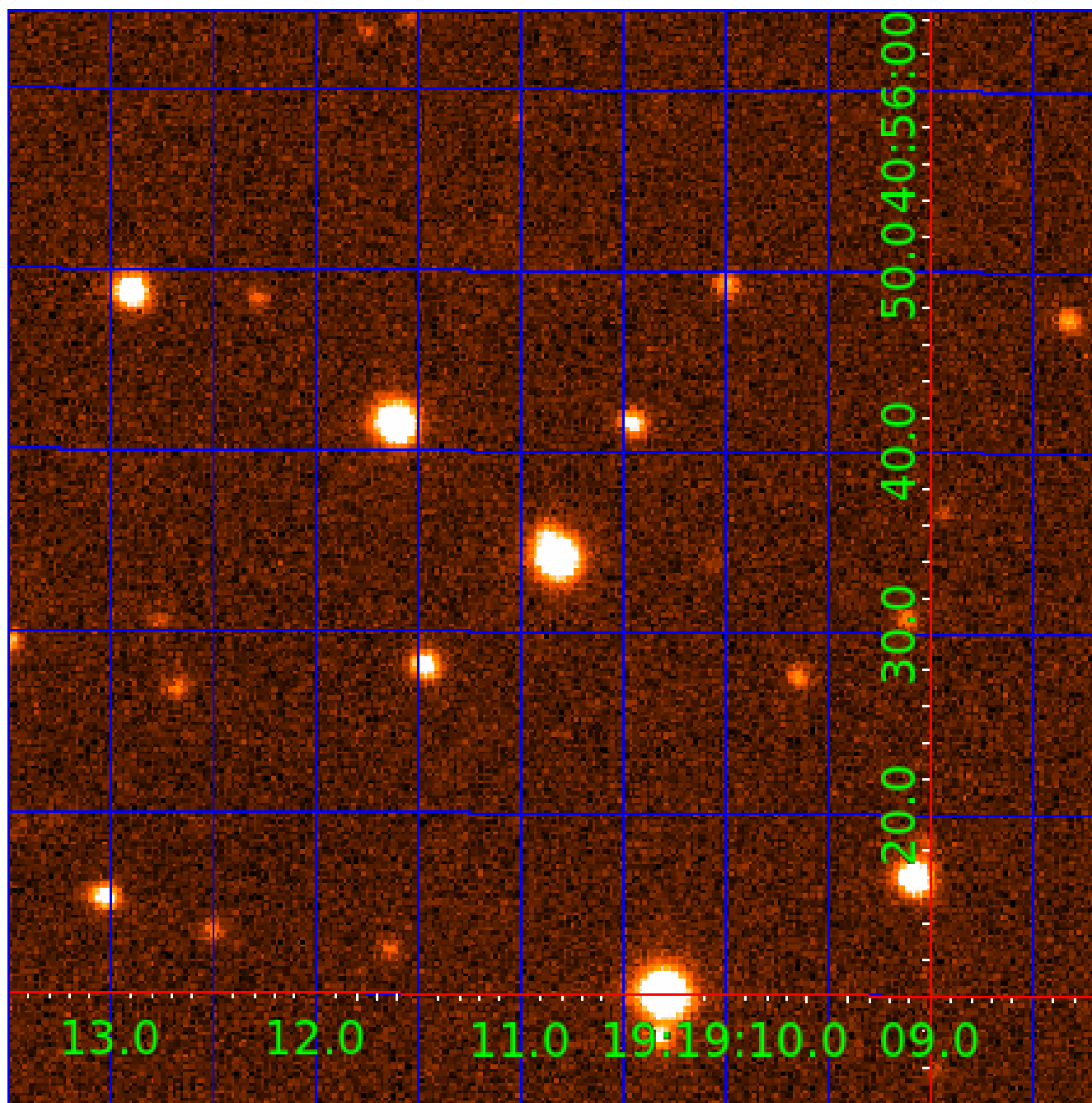


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005699171

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})
005699171-01	OBS	No	478.234936	423.230752	1132.5	2.870	11.5	3.6	0.73	4491	2.85	0.17
005699171-02	OBS	No	318.599966	423.142935	2705.2	12.290	8.7	8.6	0.73	4491	3.80	0.28
005699171-03	OBS	No	384.072474	370.480510	1845.3	3.430	9.8	6.7	0.73	4491	3.08	0.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005699171-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005699171-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_POS_ALT
005699171-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

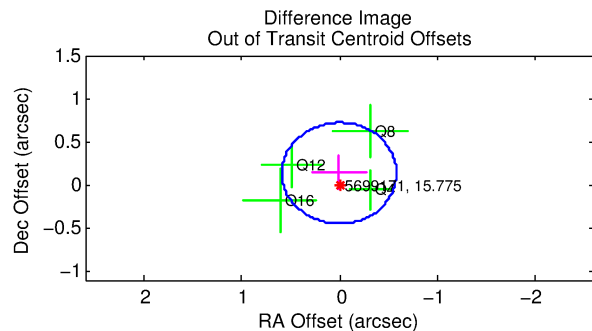
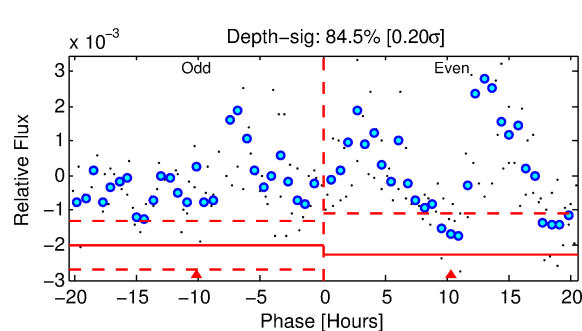
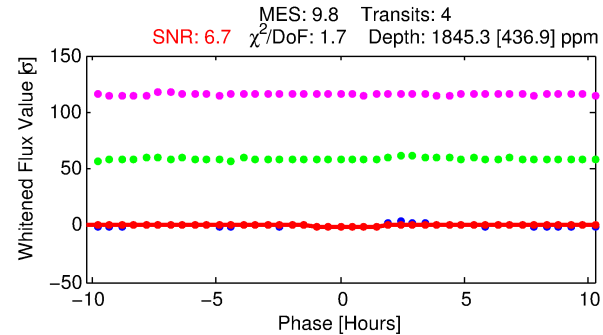
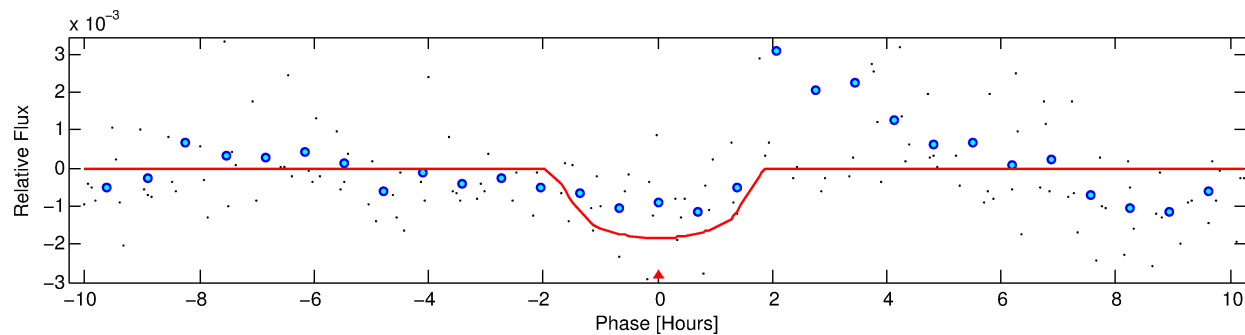
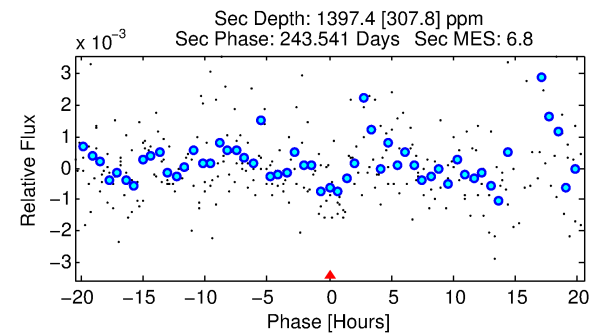
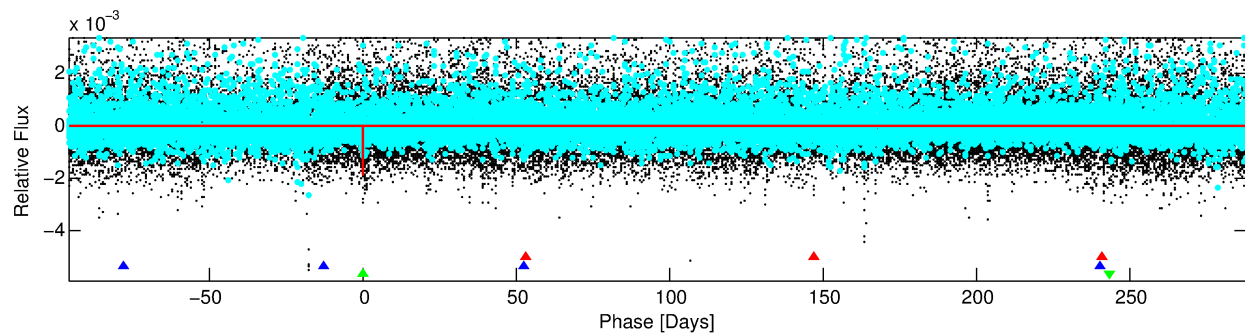
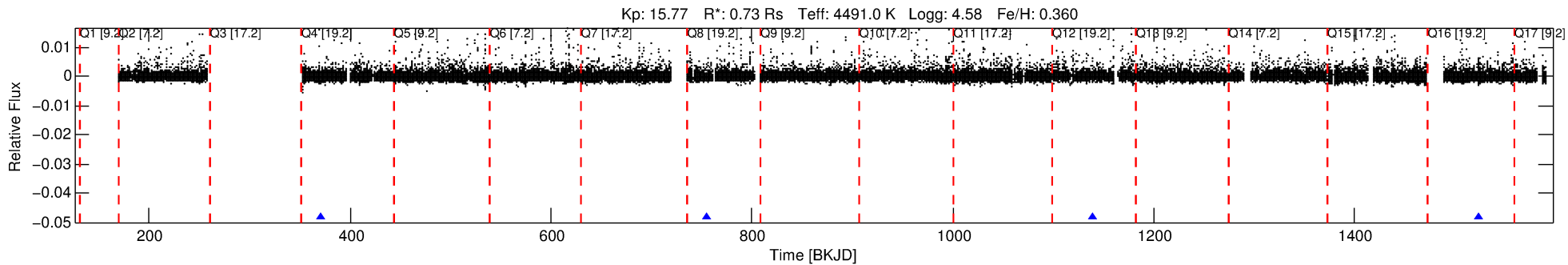
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005699171-03

No Significant Match Found

DV One-Page Summary

KIC: 5699171 Candidate: 3 of 3 Period: 384.072 d



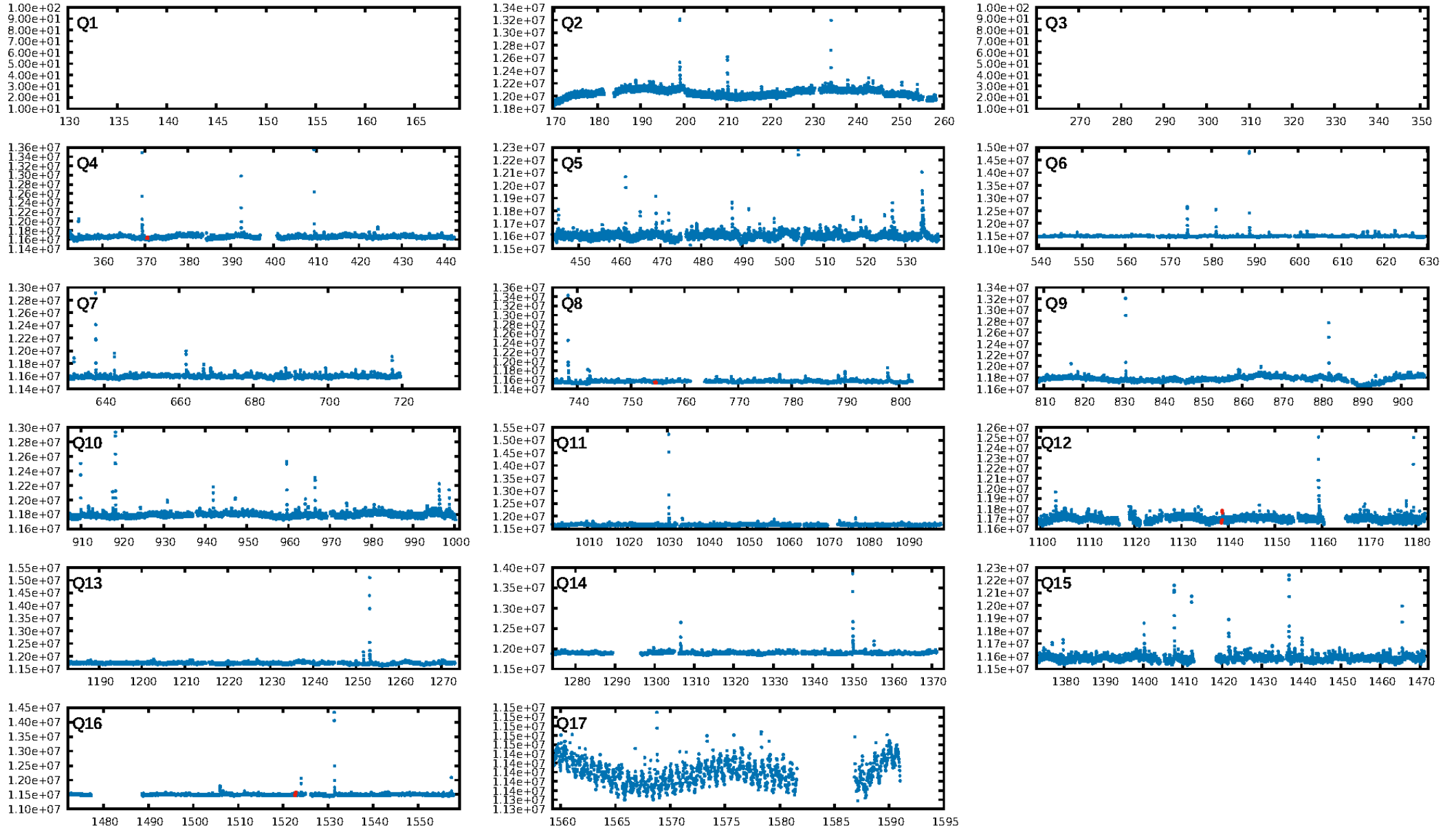
DV Fit Results:

Period = 384.07247 [0.00637] d
Epoch = 370.4805 [0.0123] BKJD
Rp/R* = 0.0386 [0.0906]
a/R* = 821.07 [5384.02]
b = 0.40 [14.36]
Seff = 0.22 [0.04]
Teq = 175 [8] K
Rp = 3.08 [7.23] Re
a = 0.9395 [0.0597] AU
Ag = 71674.24 [337175.78] [0.21σ]
Teffp = 4421 [5202] K [0.82σ]

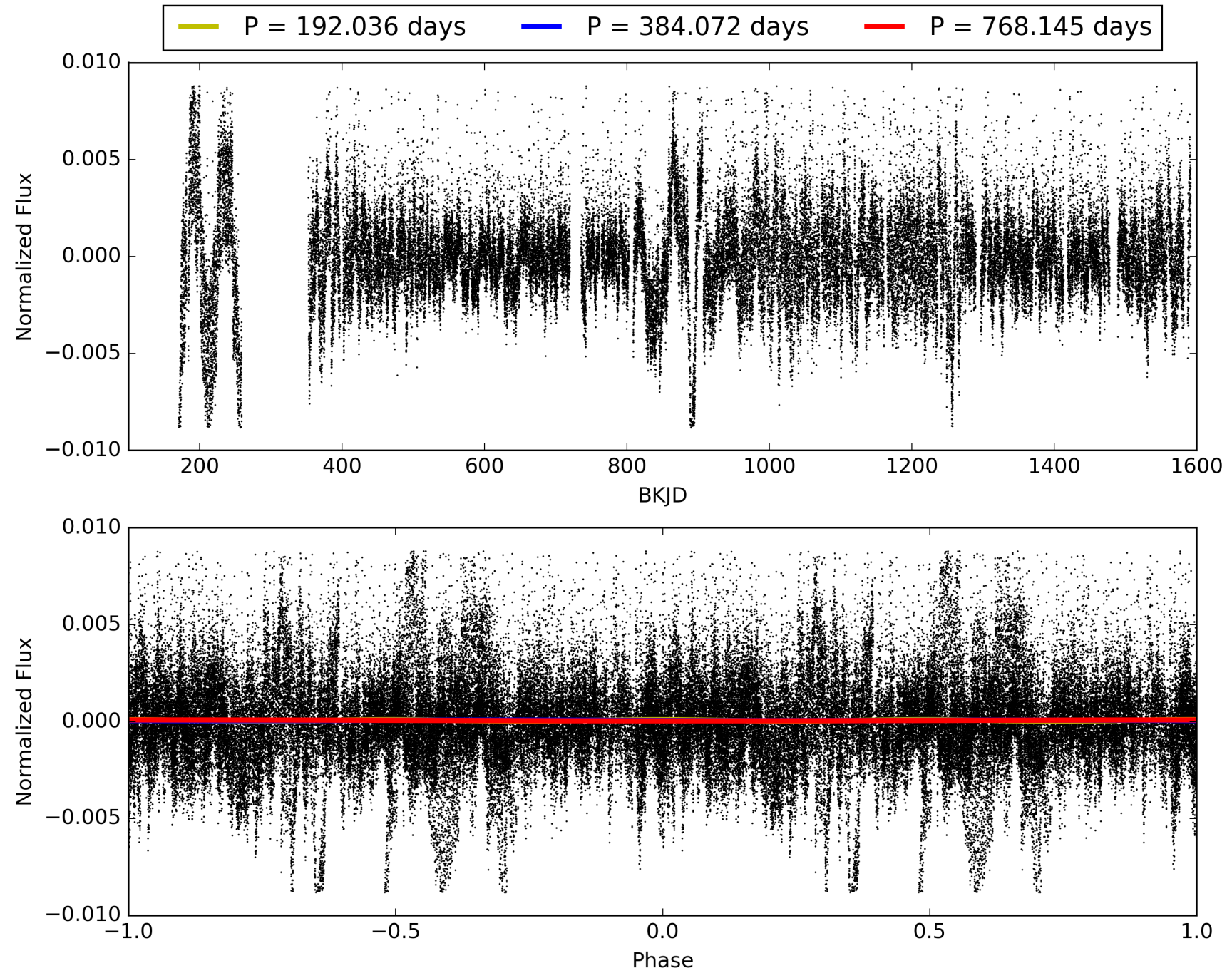
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [123.15σ]
LongPeriod-sig: 100.0% [505.38σ]
ModelChiSquare2-sig: 44.2%
ModelChiSquareGof-sig: 50.5%
Bootstrap-pfa: 1.38e-08
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.532
Centroid-sig: 0.6%
Centroid-so: 1.834 arcsec [1.63σ]
OotOffset-rm: 0.136 arcsec [0.69σ]
KicOffset-rm: 0.216 arcsec [1.07σ]
OotOffset-st: 0/0/4/0 [4]
KicOffset-st: 0/0/4/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 005699171-03, PDC Light Curves

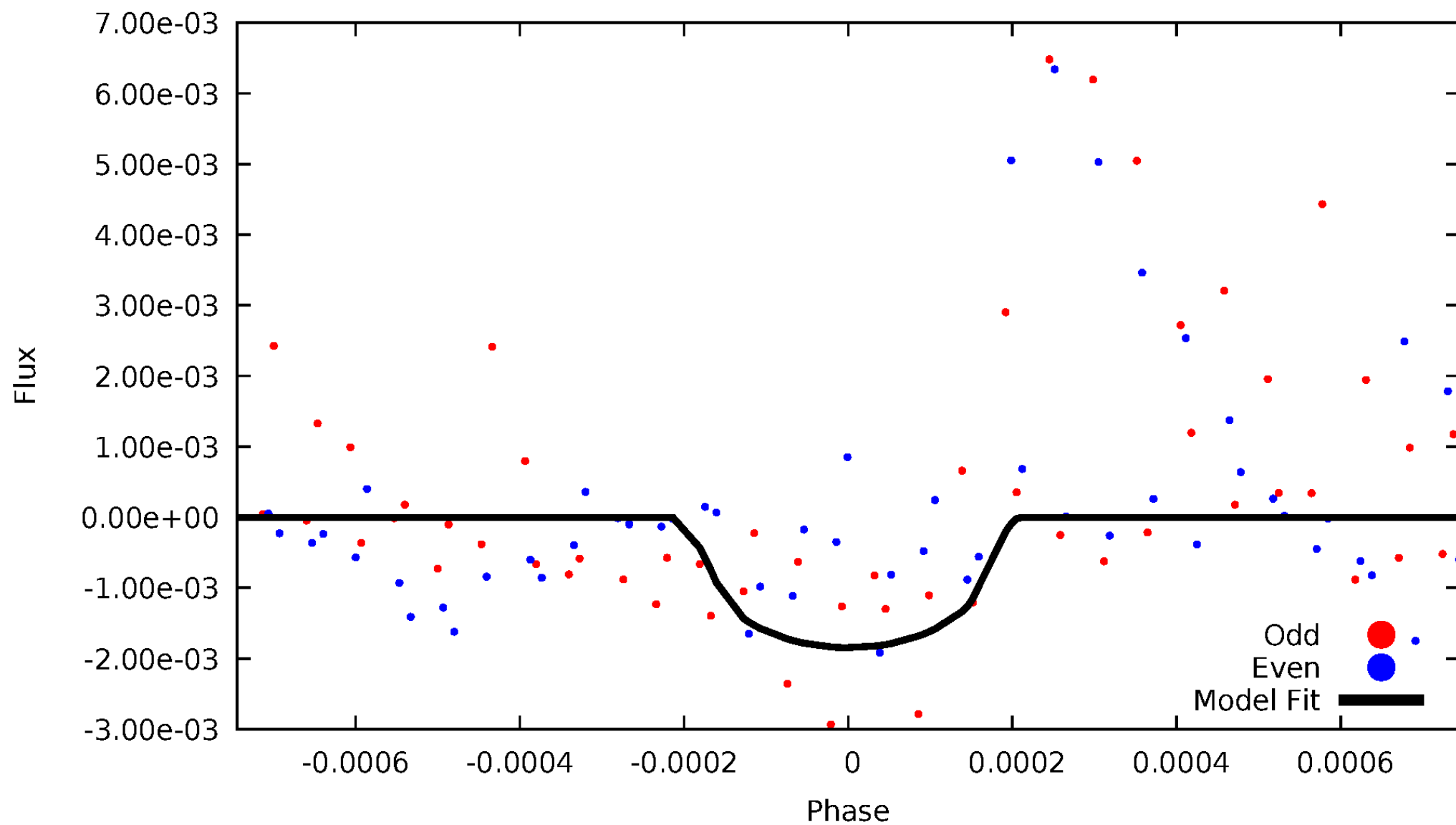


TCE 005699171-03



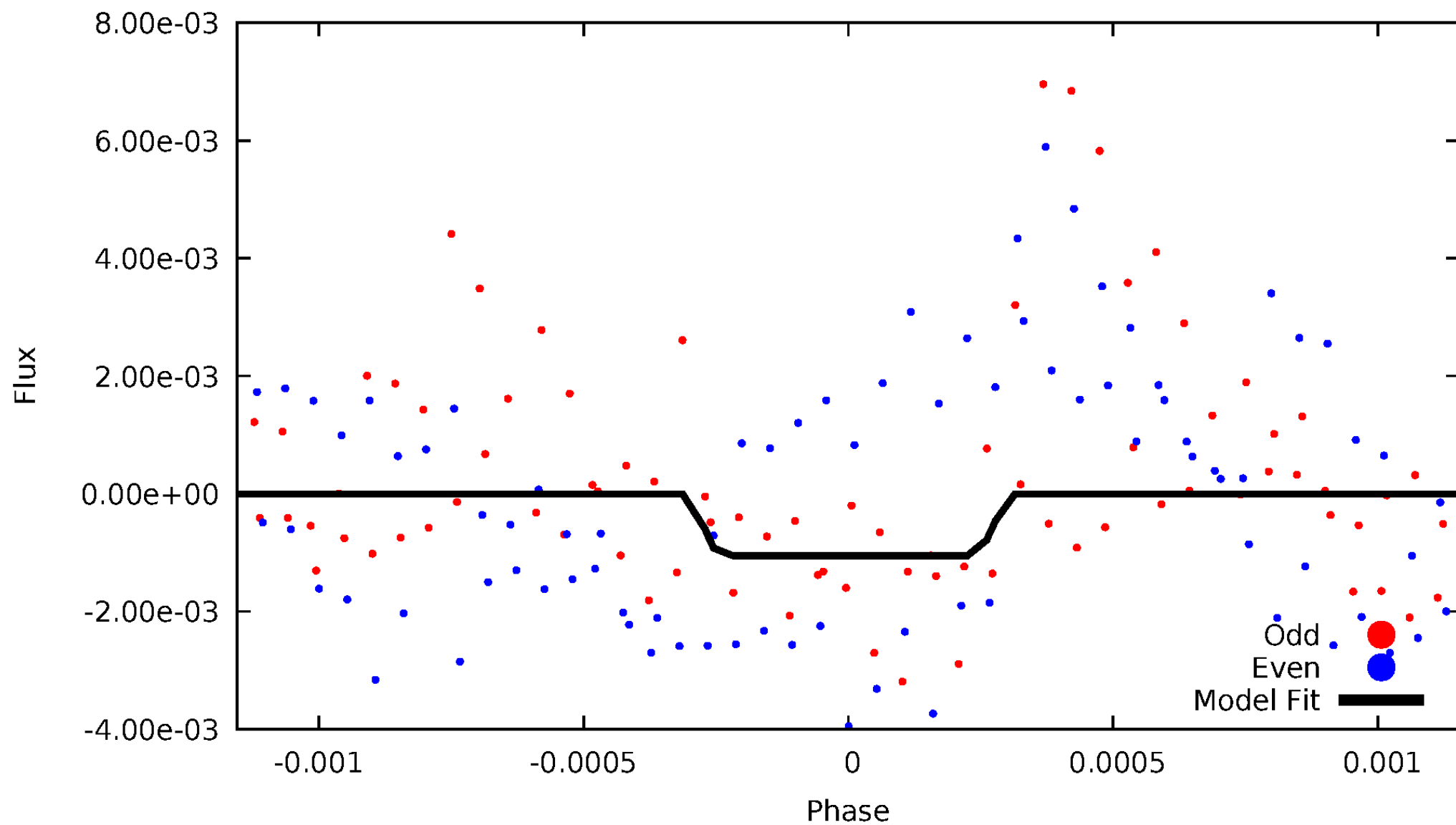
DV Odd/Even

TCE 005699171-03



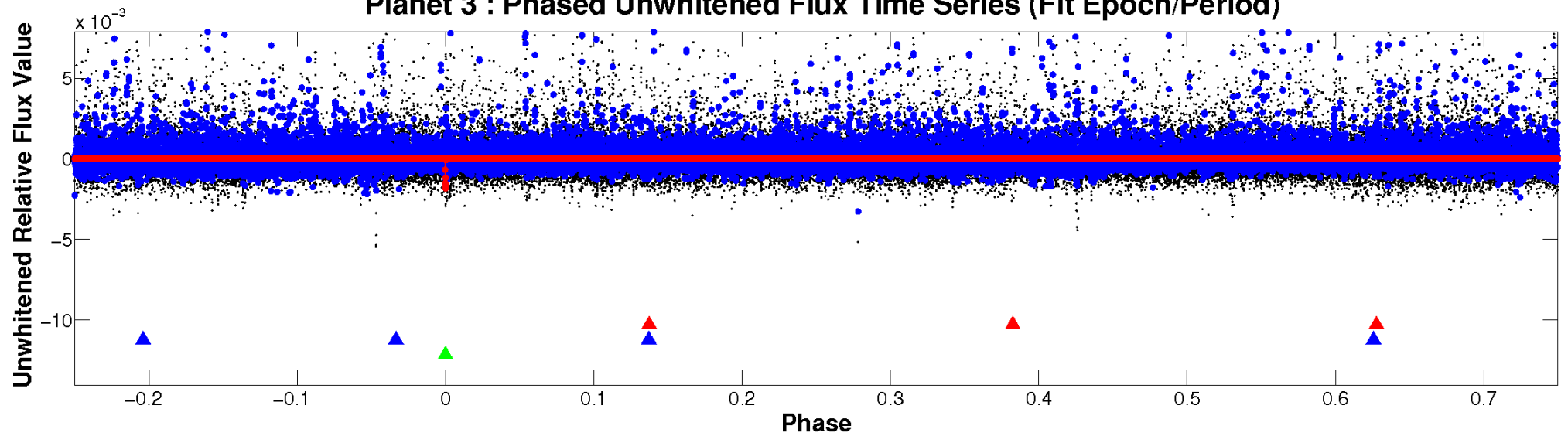
ALT Odd/Even

TCE 005699171-03

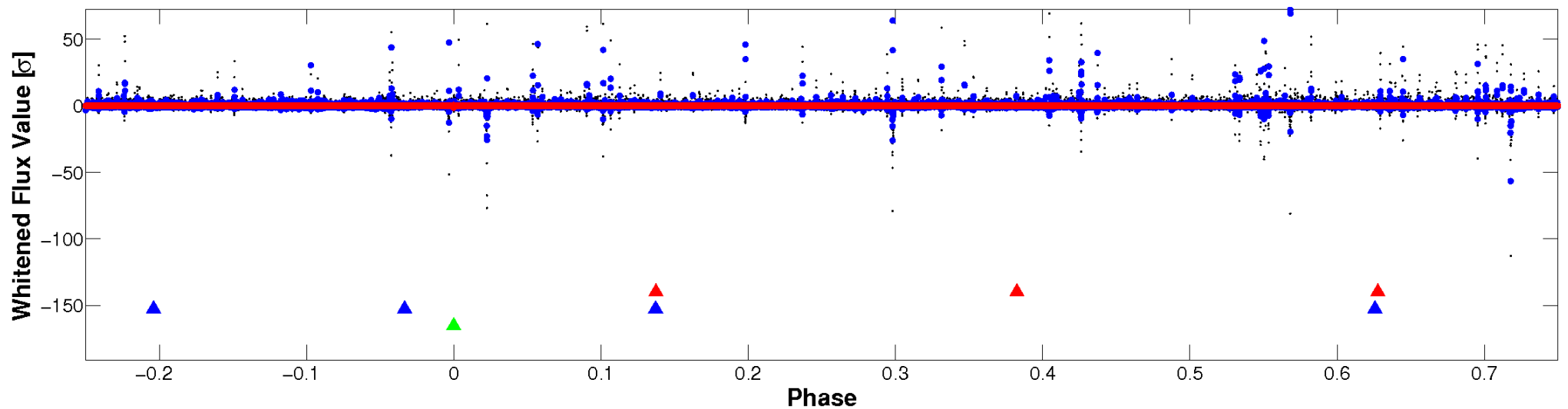


Non-Whitened Vs. Whitened Light Curve

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

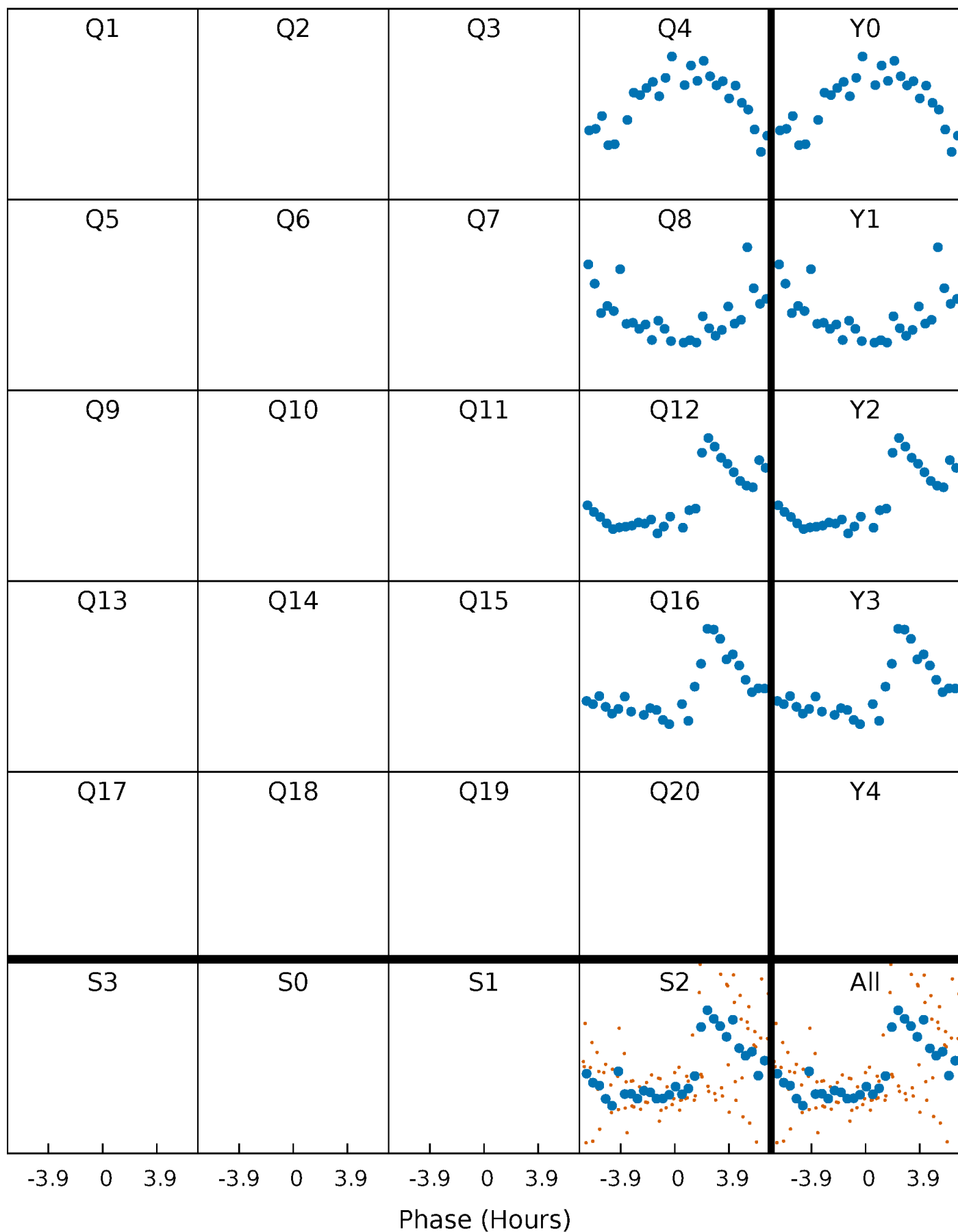


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



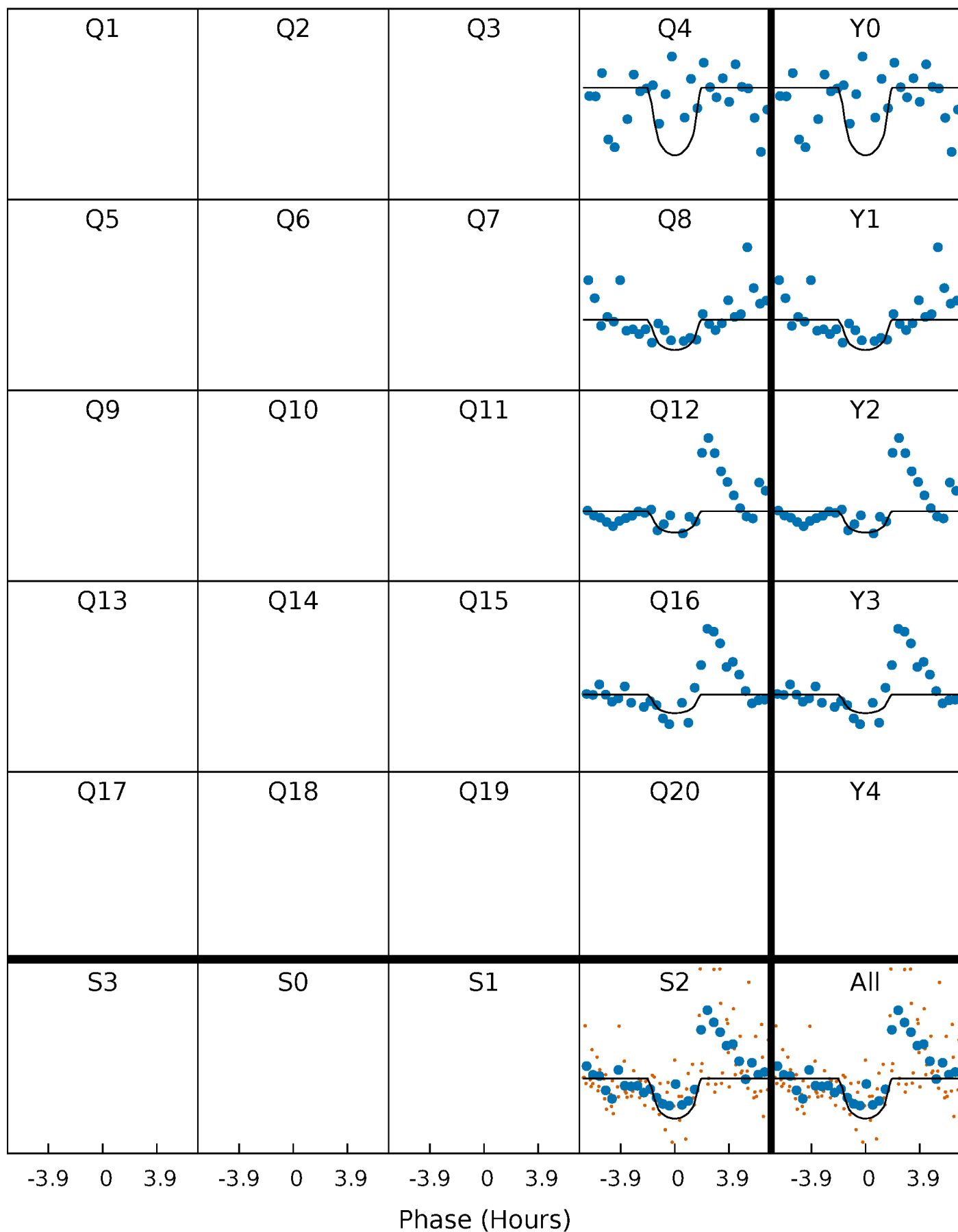
PDC Quarter-Phased Transit Curves

TCE 005699171-03 $P=384.072474$ Days $T_0=370.480510$ (BKJD)



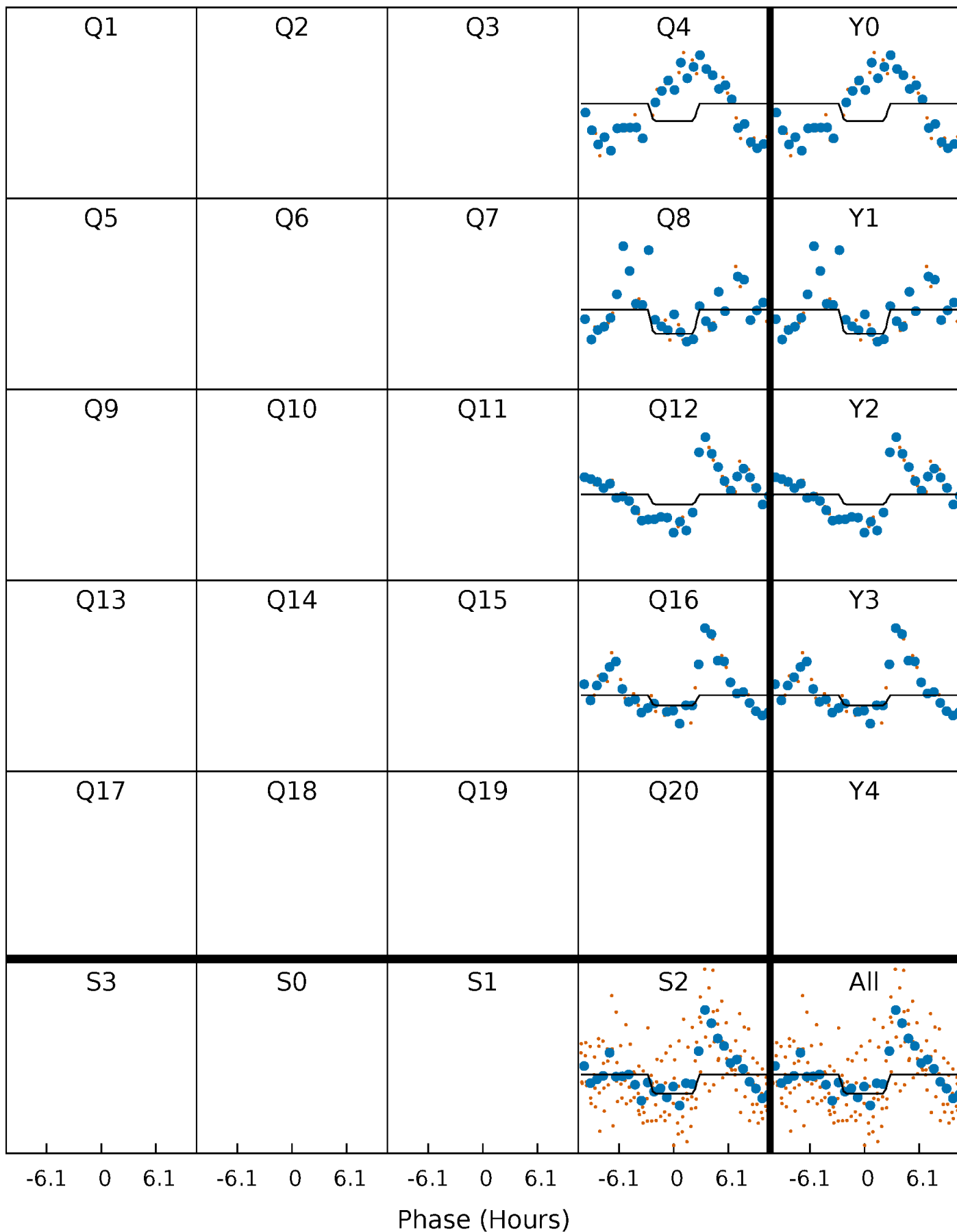
DV Quarter-Phased Transit Curves

TCE 005699171-03 $P=384.072474$ Days $T_0=370.480510$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

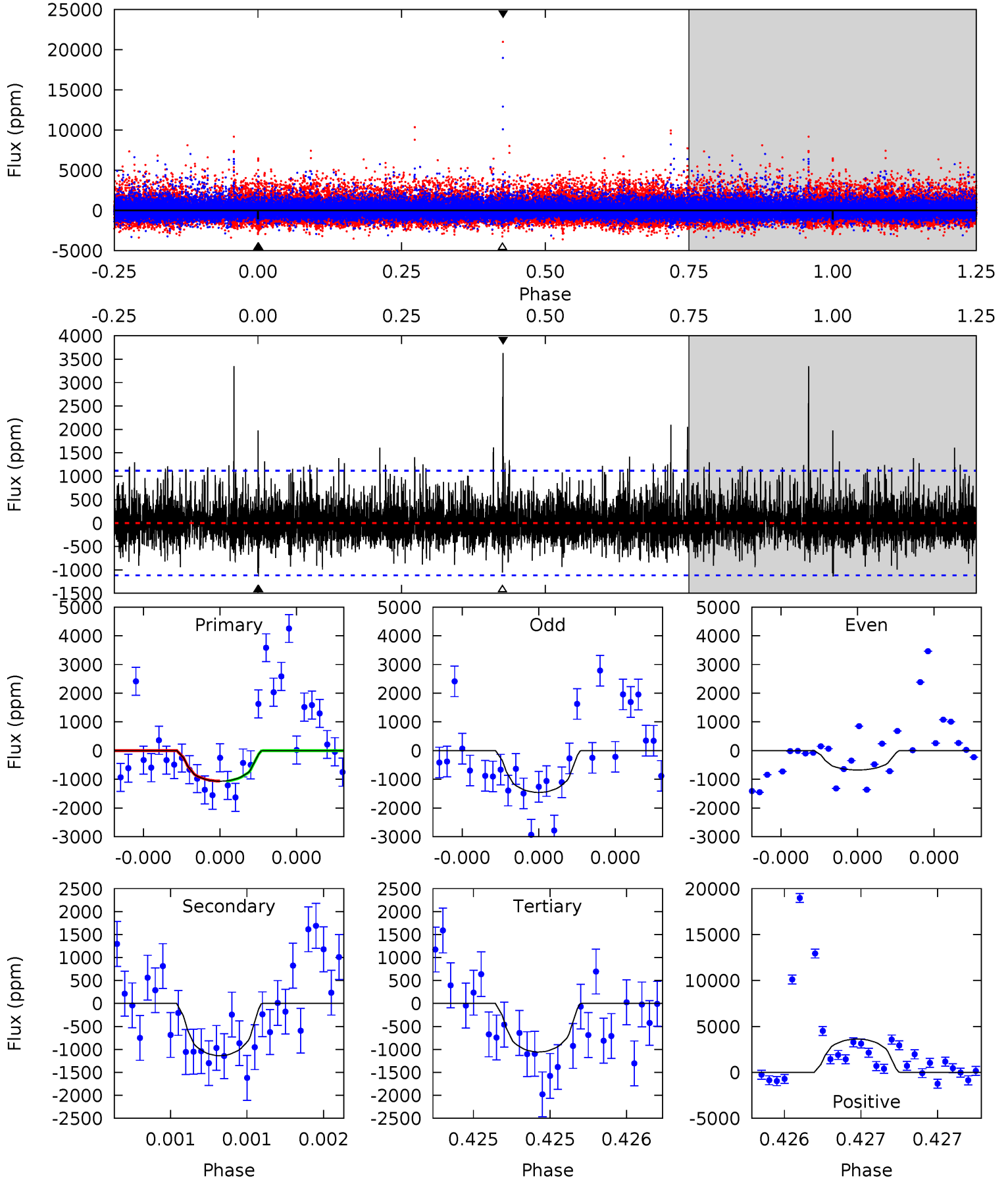
TCE 005699171-03 P=384.071941 Days $T_0=370.434840$ (BKJD)



DV Model-Shift Uniqueness Test

005699171-03, P = 384.072474 Days, E = 370.480510 Days

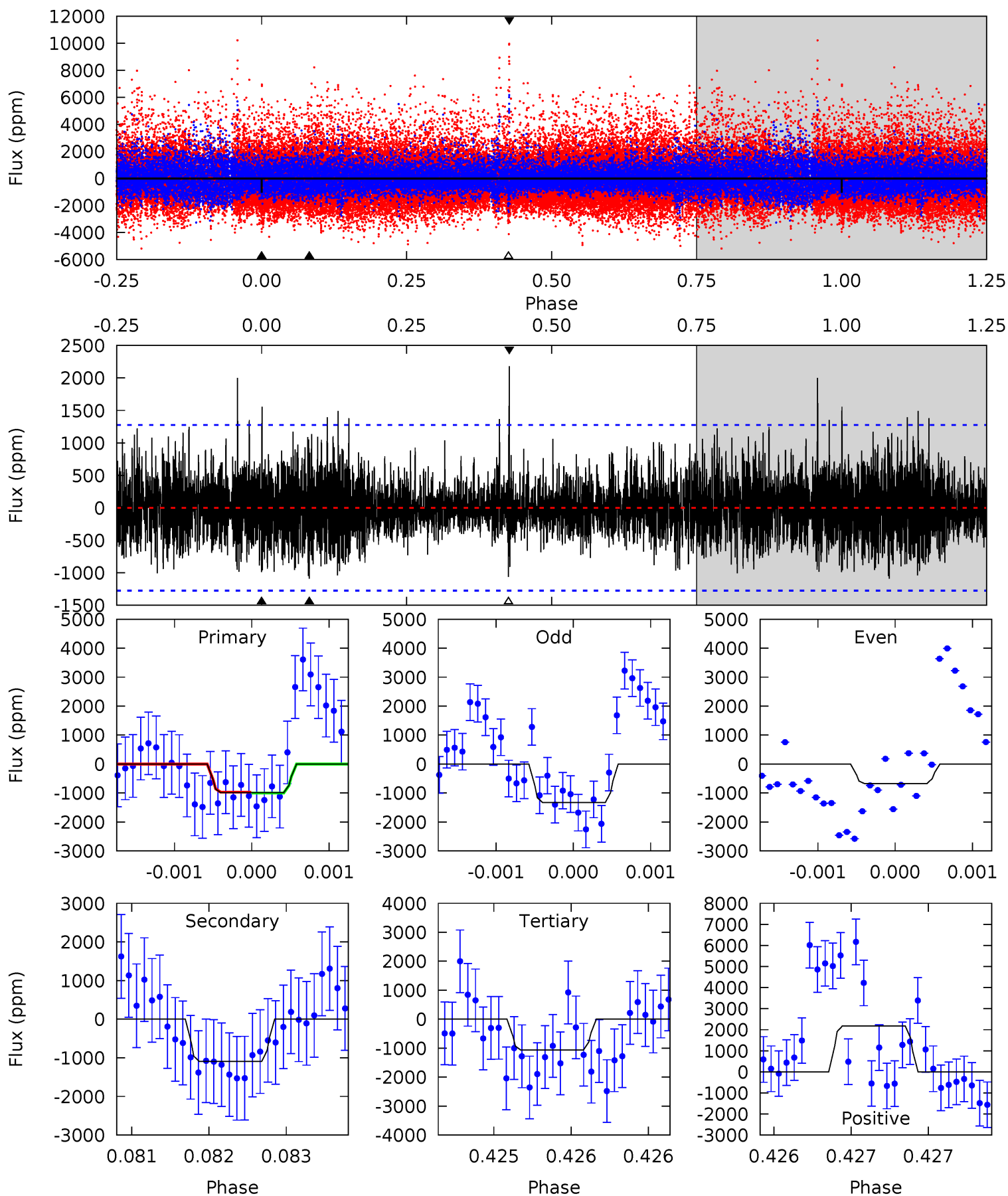
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.38	5.73	5.33	18.3	5.62	3.55	1.76	0.05	-12.9	0.40	-12.5	0.94	0.94	0.76	0.01



Alt Model-Shift Uniqueness Test

005699171-03, P = 384.071941 Days, E = 370.434840 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.31	4.76	4.63	9.50	5.56	3.46	1.59	-0.32	-5.19	0.13	-4.75	1.36	0.75	0.67	0.06



Stellar Parameters For KIC 005699171

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4491^{+176}_{-193}	$4.585^{+0.044}_{-0.028}$	$0.360^{+0.100}_{-0.300}$	$0.731^{+0.034}_{-0.059}$	$0.750^{+0.043}_{-0.059}$	$2.704^{+0.581}_{-0.269}$
	+4%/-4%	+1%/-1%	+28%/-83%	+5%/-8%	+6%/-8%	+21%/-10%
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 005699171-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1138 ± 199	$6.47^{+5.31}_{-4.46}$	243^{+10}_{-11}	3305^{+1667}_{-546}	$13441^{+126338}_{-9641}$
Alt.	-1092 ± 230	$5.95^{+5.69}_{-4.05}$	243^{+11}_{-11}	3405^{+1768}_{-608}	$15398^{+131950}_{-11433}$

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

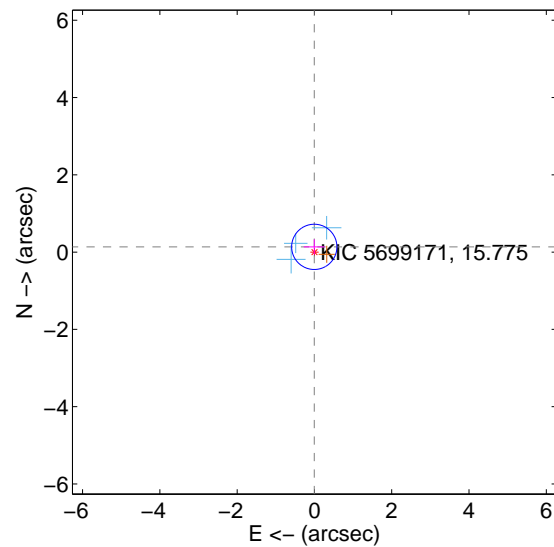
Supplemental centroid analysis for 005699171-03. Kepler magnitude: 15.78. Transit SNR 6.72

There are 3 quarters with good PRF difference image offsets

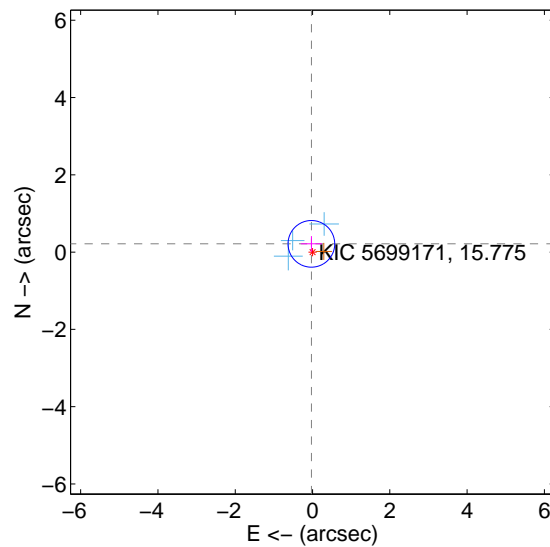
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.136 ± 0.195	0.69	0.004 ± 0.274	0.136 ± 0.195
PRF-fit source offset from KIC position	0.216 ± 0.201	1.07	0.029 ± 0.275	0.214 ± 0.200
photometric centroid source offset	1.83 ± 1.13	1.63	1.07 ± 1.05	-1.49 ± 1.17

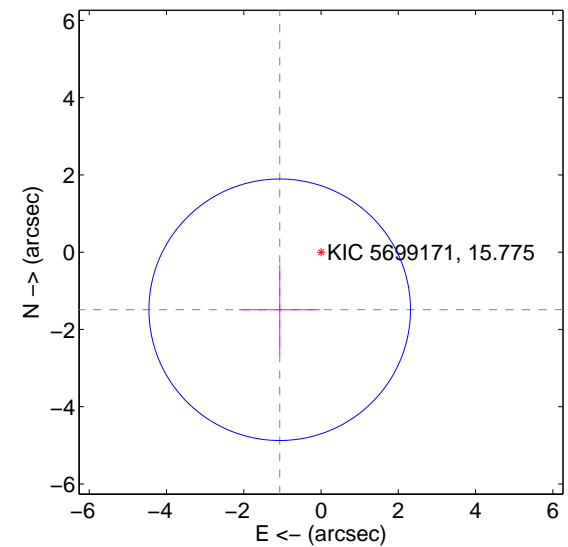
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

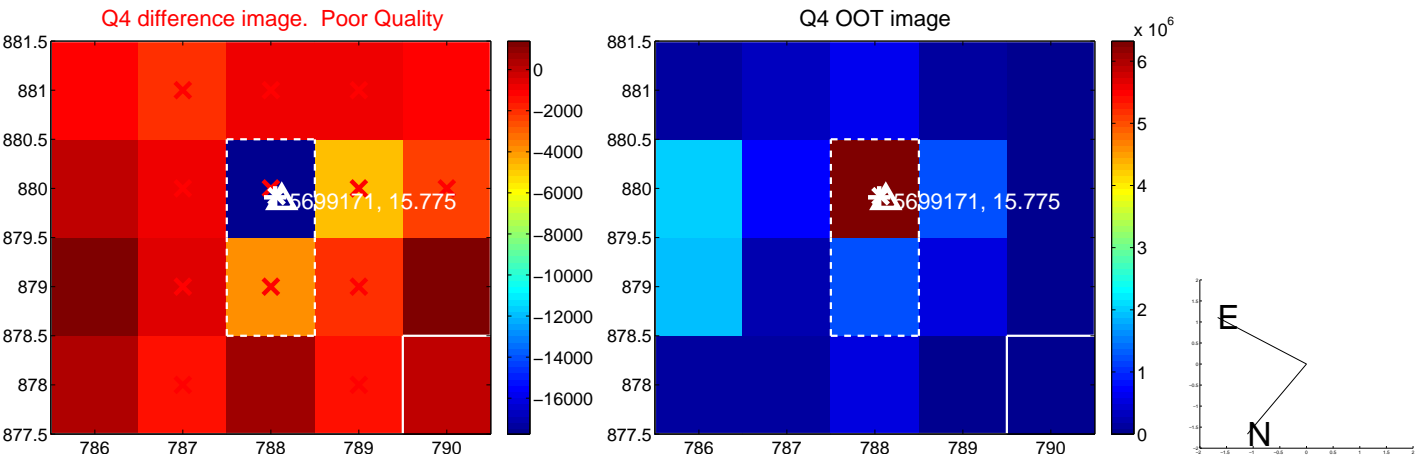
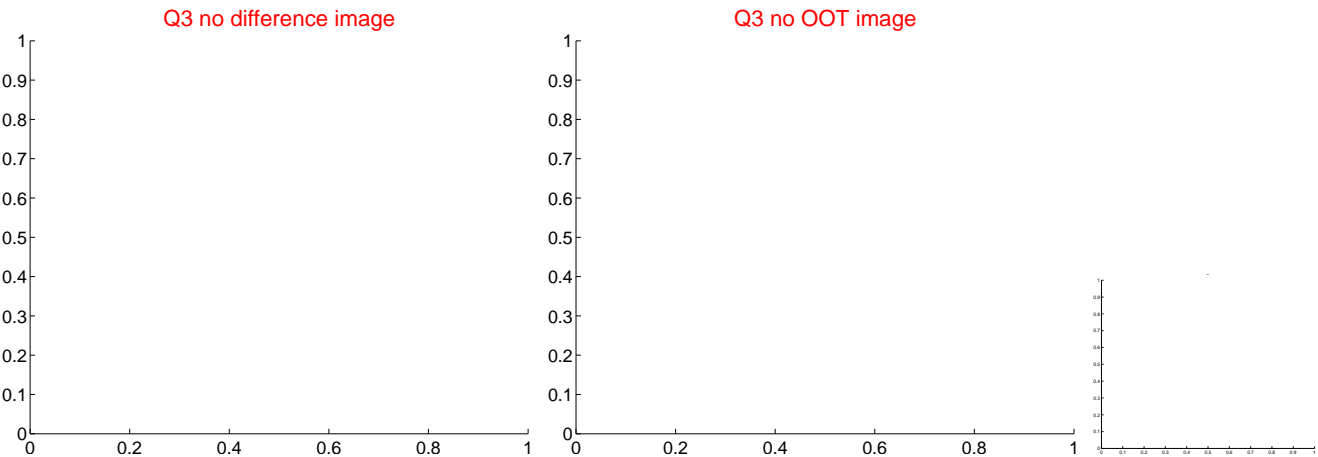
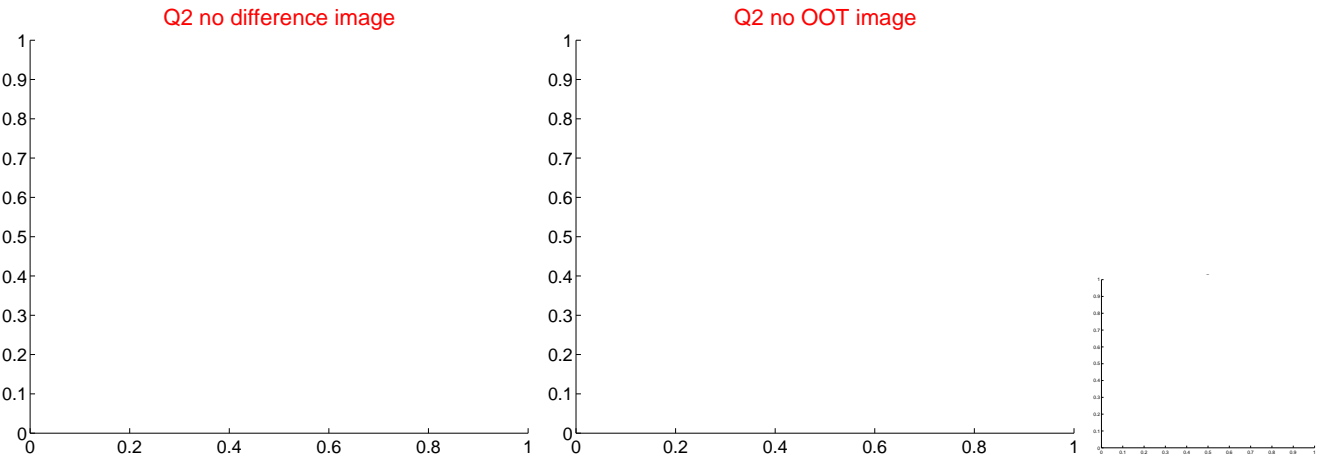
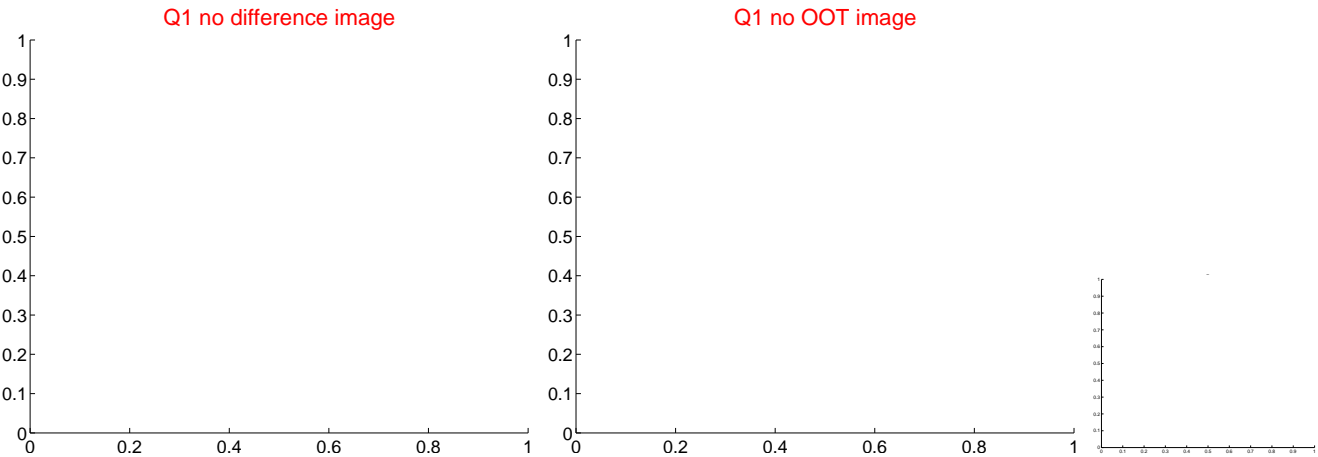


offset from photometric centroids

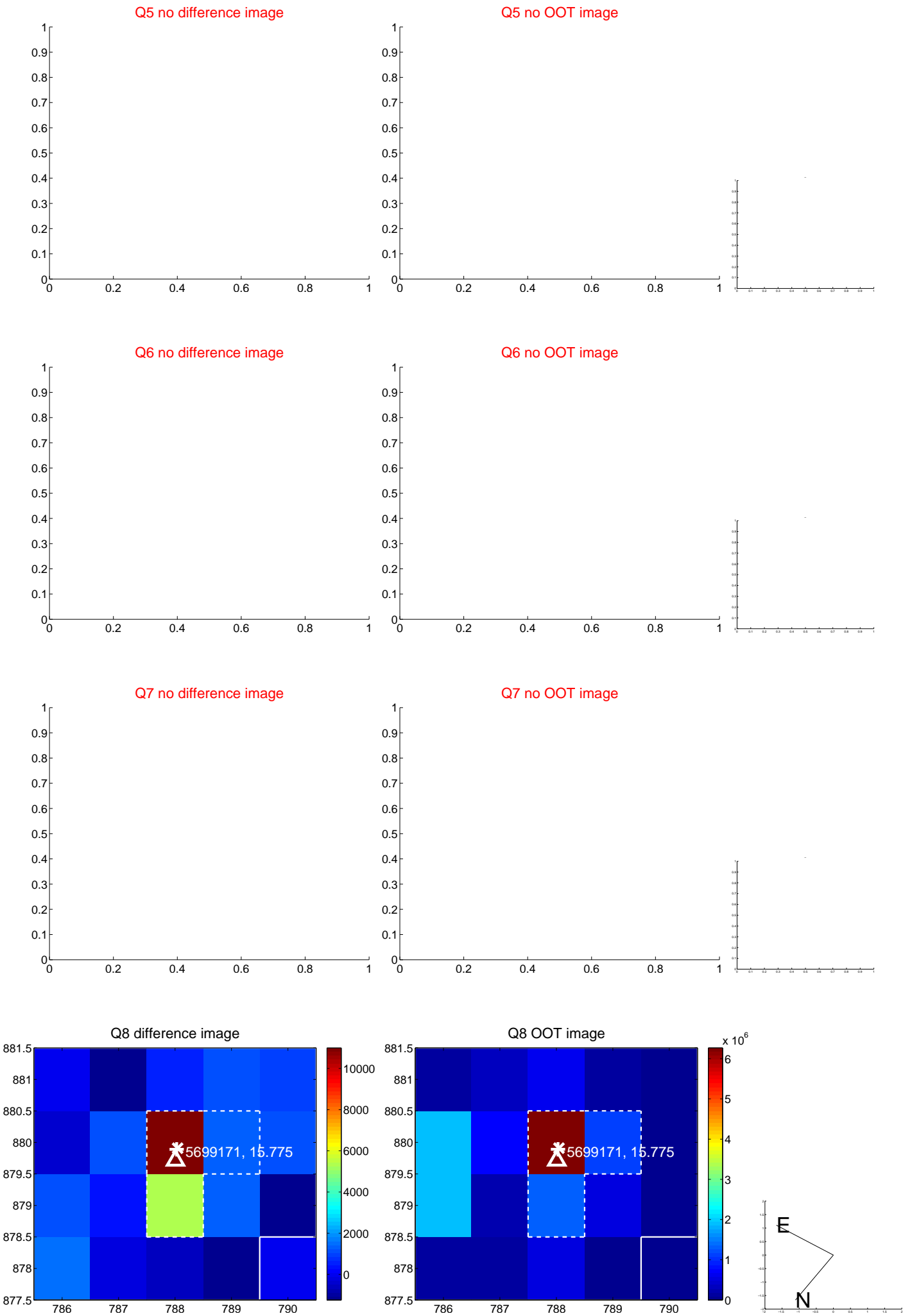


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

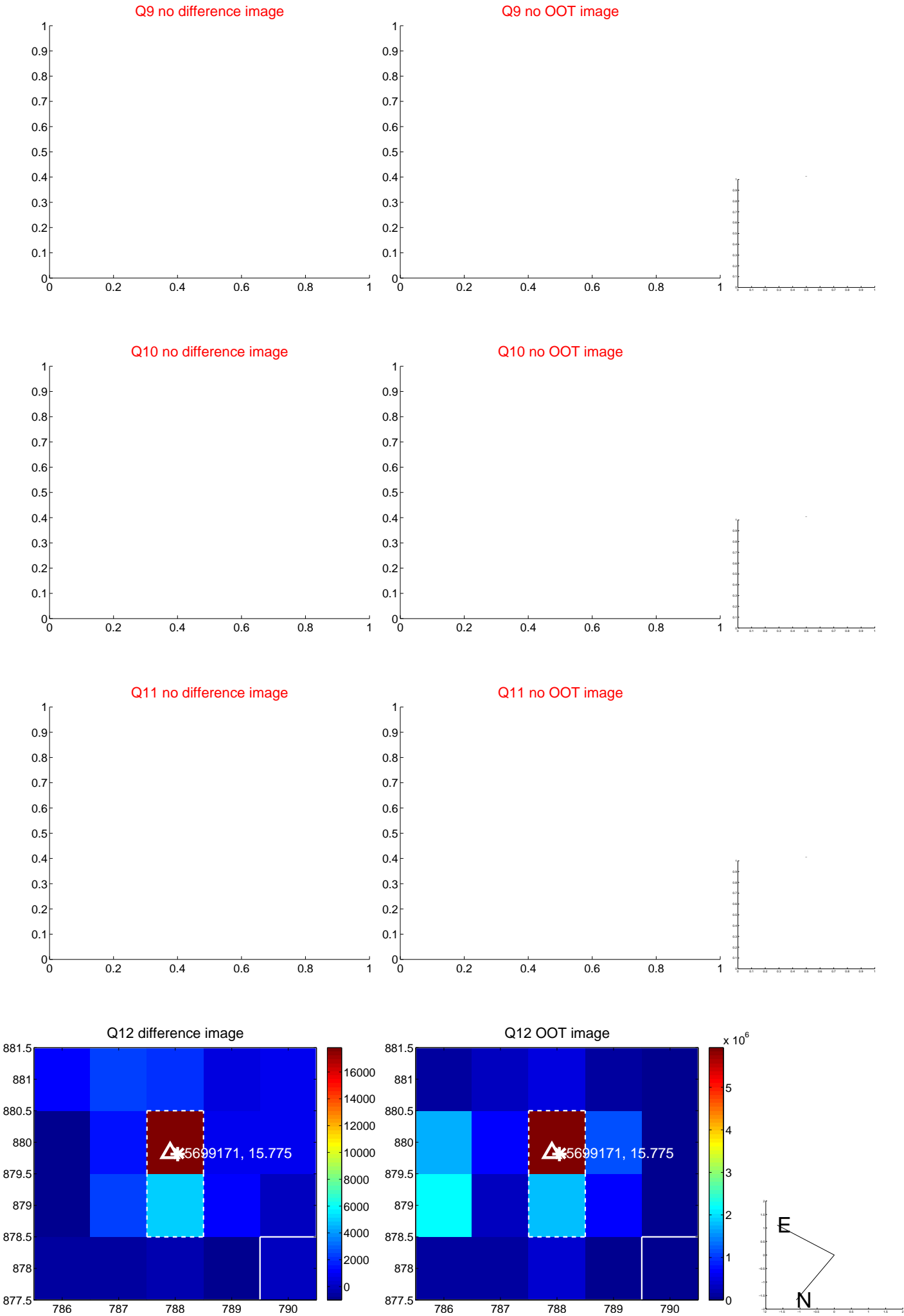
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



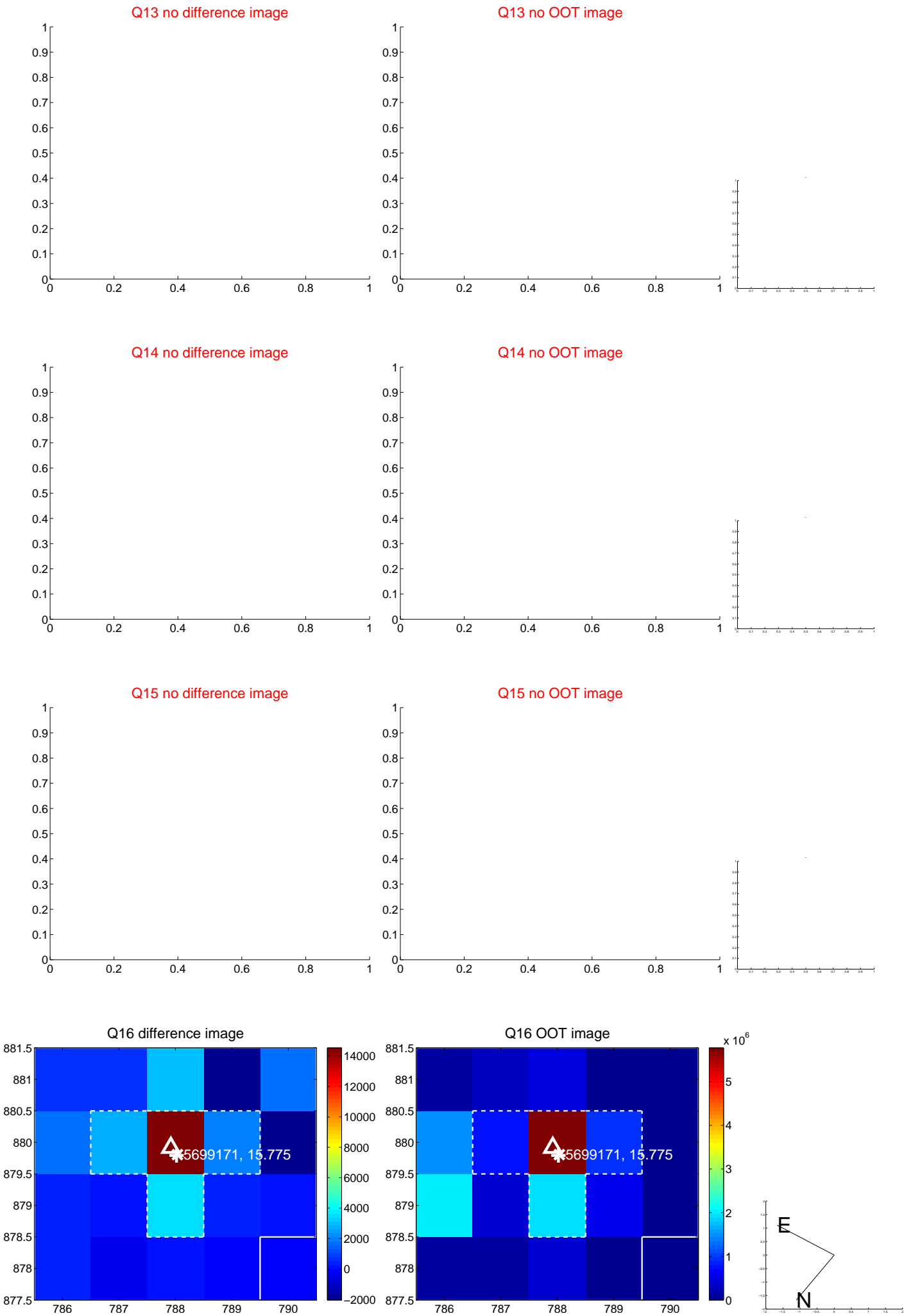
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



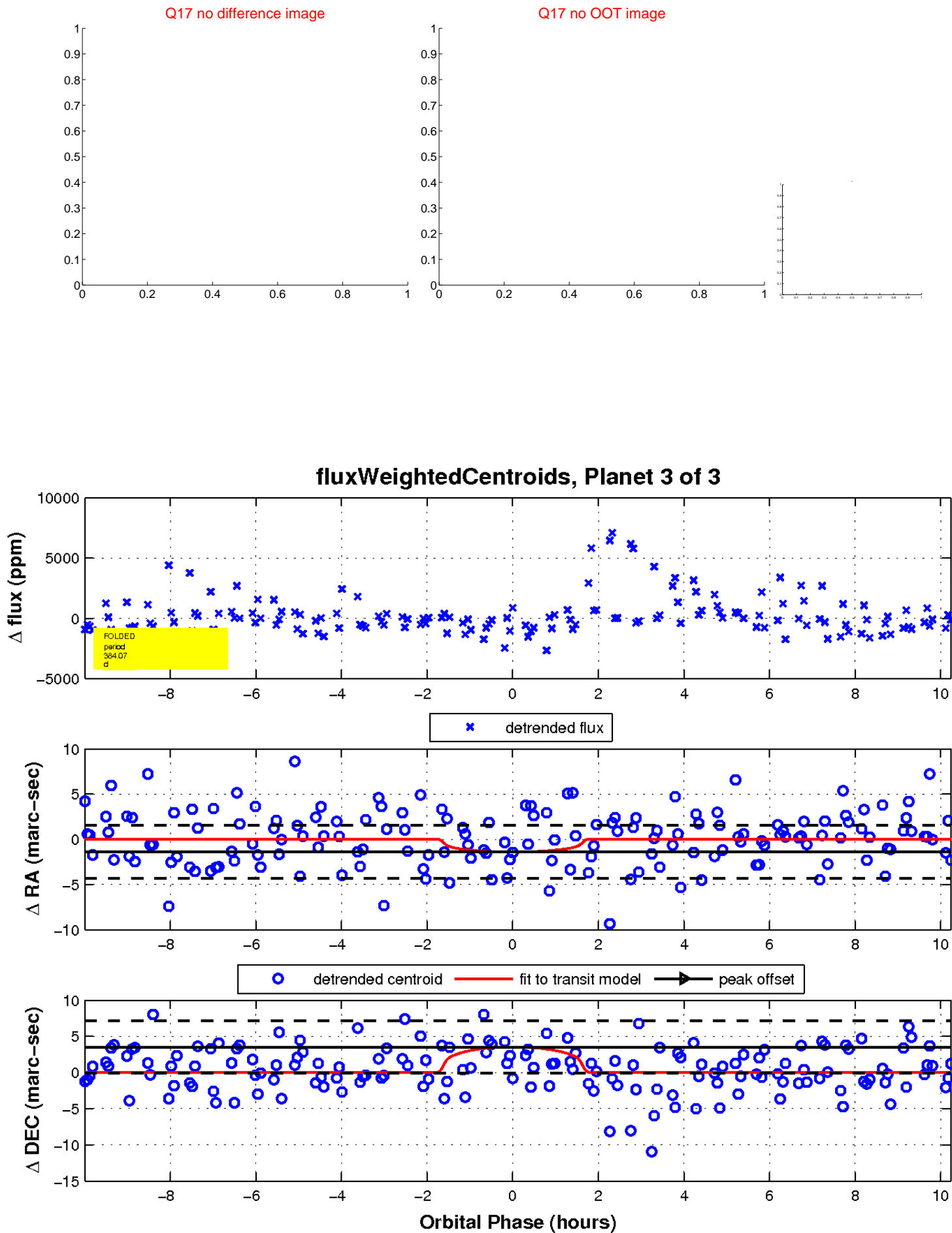
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

