

KIC 007281694

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})
007281694-01	OBS	7584.01	0.566810	131.772553	25.0	2.346	10.0	10.2	1.73	5018	1.06	9604.31
007281694-02	OBS	No	433.607081	242.588584	350.5	6.591	14.3	7.2	1.73	5018	3.97	1.37
007281694-03	OBS	No	396.425211	313.309186	467.8	7.428	8.3	7.2	1.73	5018	4.10	1.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007281694-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_UNRESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH
007281694-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007281694-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_POS_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 007281694-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist ($''$)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
007281694-01	7281694	RR-Lyr-pri	7198959	1:1	837.9	93	189	7.86	13.90	24932.00	Direct-PRF	0	3.54	20.80

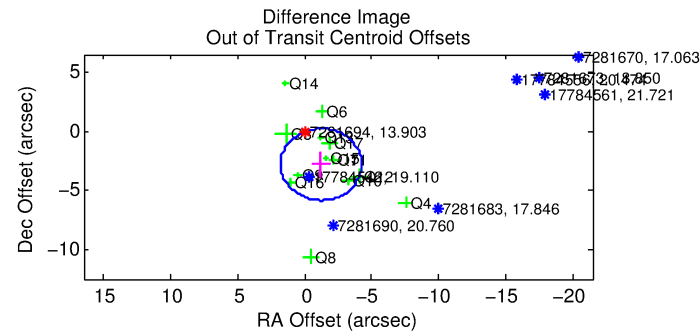
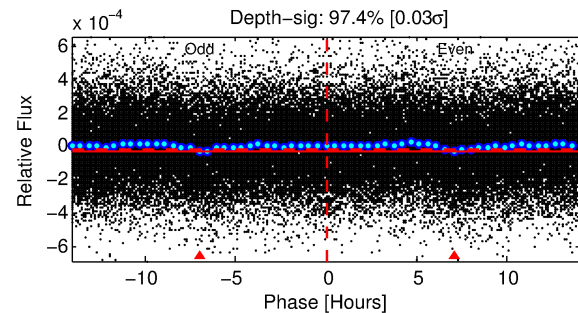
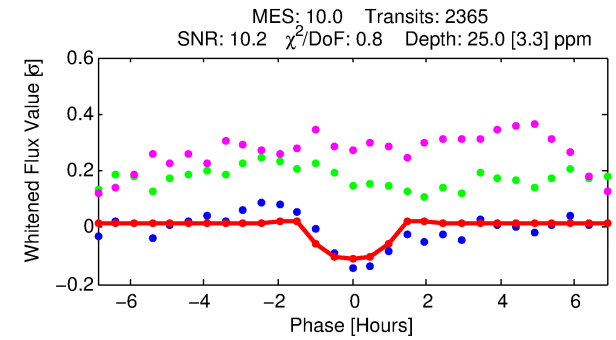
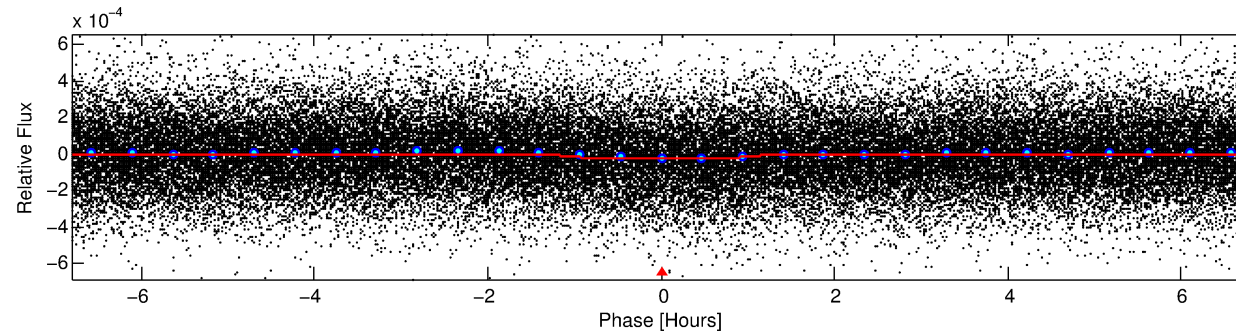
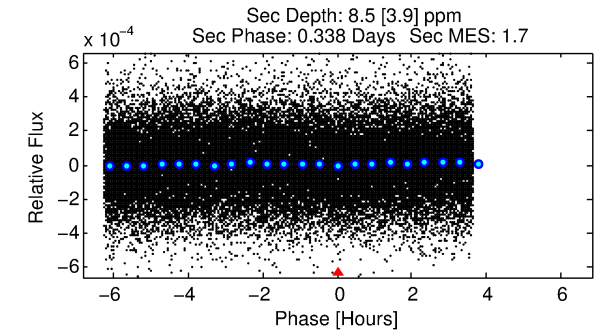
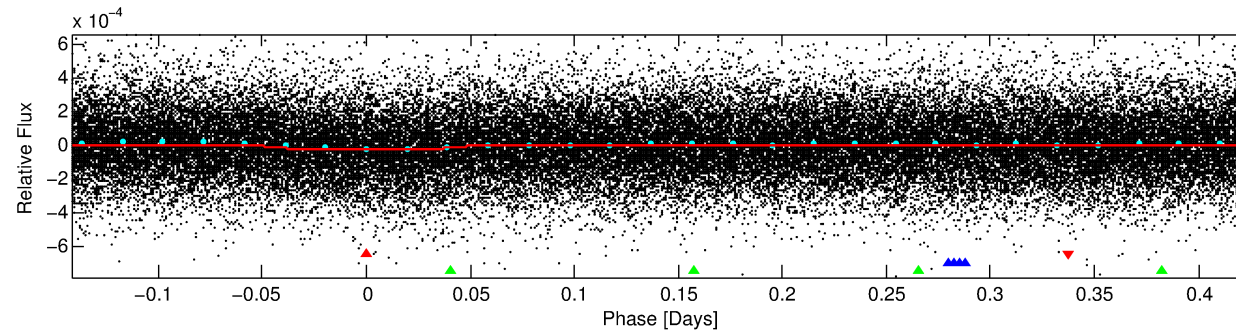
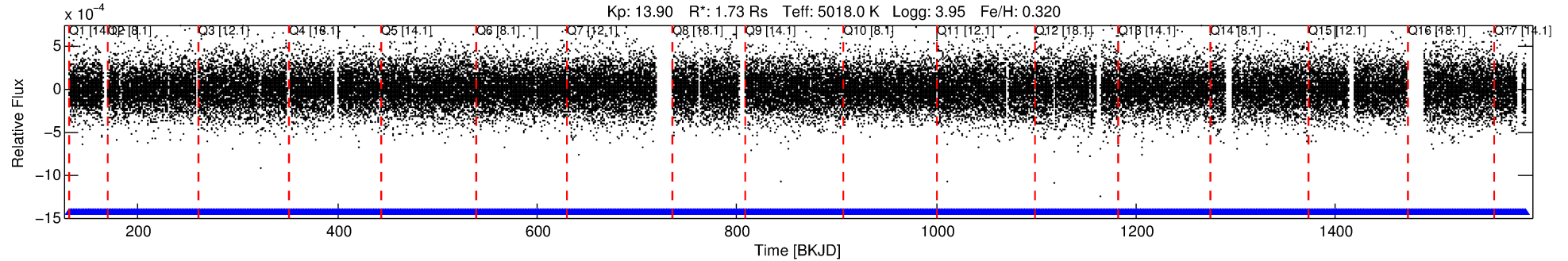
Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period 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: 7281694 Candidate: 1 of 3 Period: 0.567 d

KOI: K07584 Corr: No Ephemeris Match

Kp: 13.90 R*: 1.73 Rs Teff: 5018.0 K Logg: 3.95 Fe/H: 0.320



DV Fit Results:

Period = 0.56681 [0.00001] d
Epoch = 131.7726 [0.0026] BKJD
Rp/R* = 0.0056 [0.0031]
a/R* = 1.25 [0.97]
b = 0.90 [0.47]
Seff = 9604.31 [9598.02]
Teq = 2524 [631] K
Rp = 1.06 [0.83] Re
a = 0.0133 [0.0079] AU
Ag = 0.74 [1.14] [-0.23σ]
Teffp = 3615 [1082] K [0.87σ]

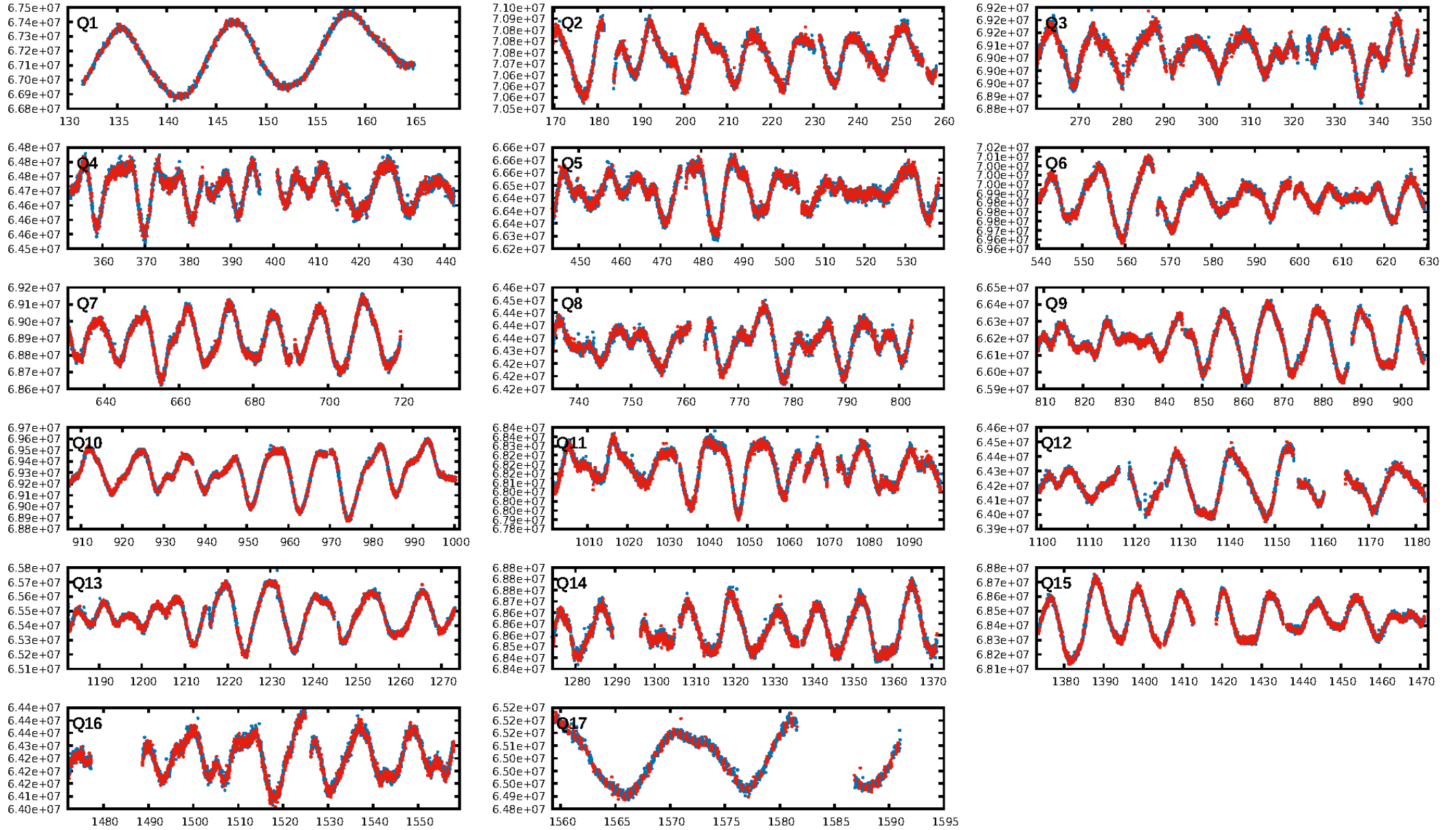
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [1219.57σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.65e-21
RollingBand-fgt: 1.00 [2259/2259]
GhostDiagnostic-chr: 0.09045
Centroid-sig: 0.0%
Centroid-so: 3.064 arcsec [3.09σ]
OotOffset-rm: 3.075 arcsec [3.04σ]
KicOffset-rm: 2.923 arcsec [3.17σ]
OotOffset-st: 3/4/4/3 [14]
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DiffImageQuality-fgm: 0.07 [1/14]
DiffImageOverlap-fno: 1.00 [17/17]

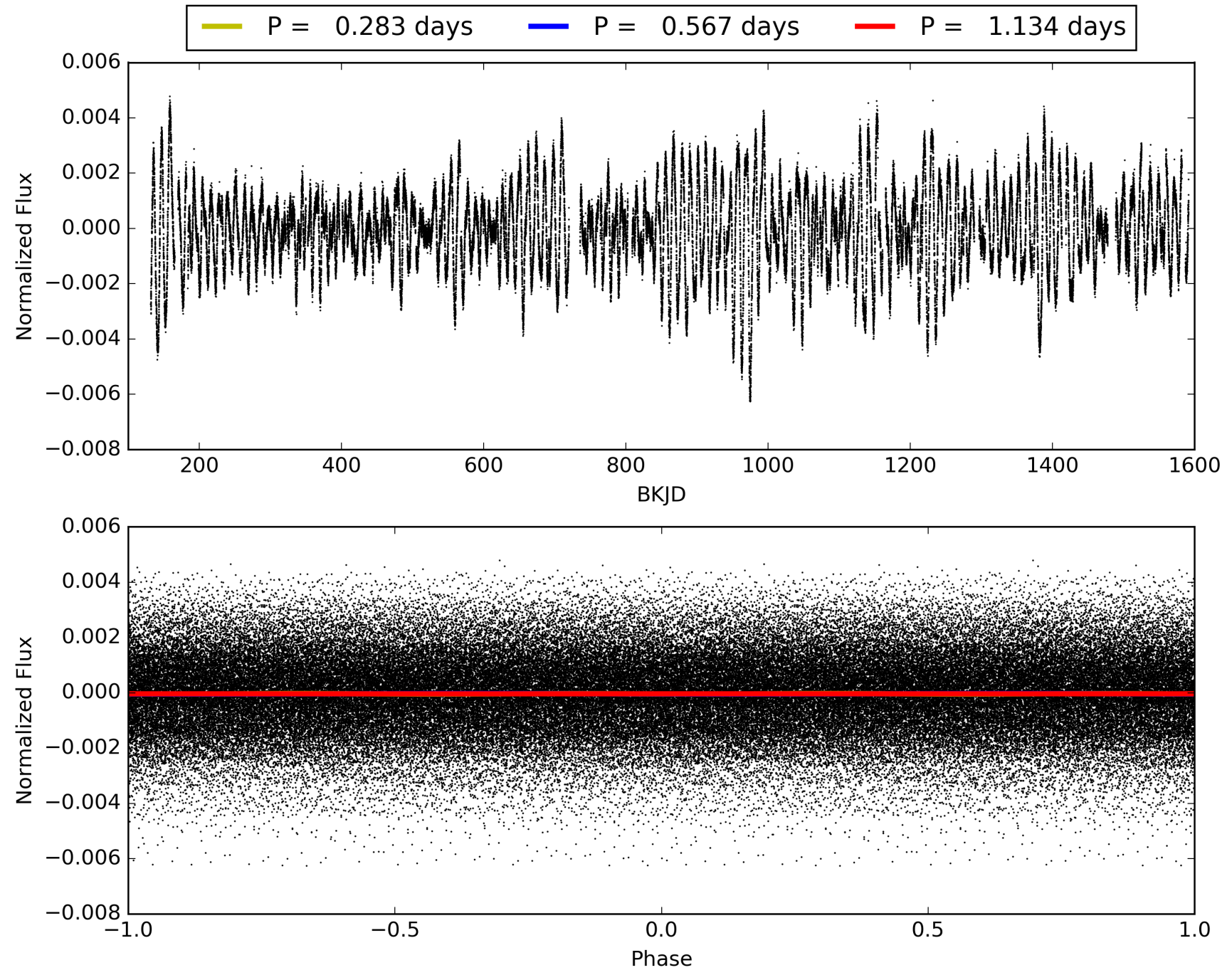
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007281694-01, PDC Light Curves

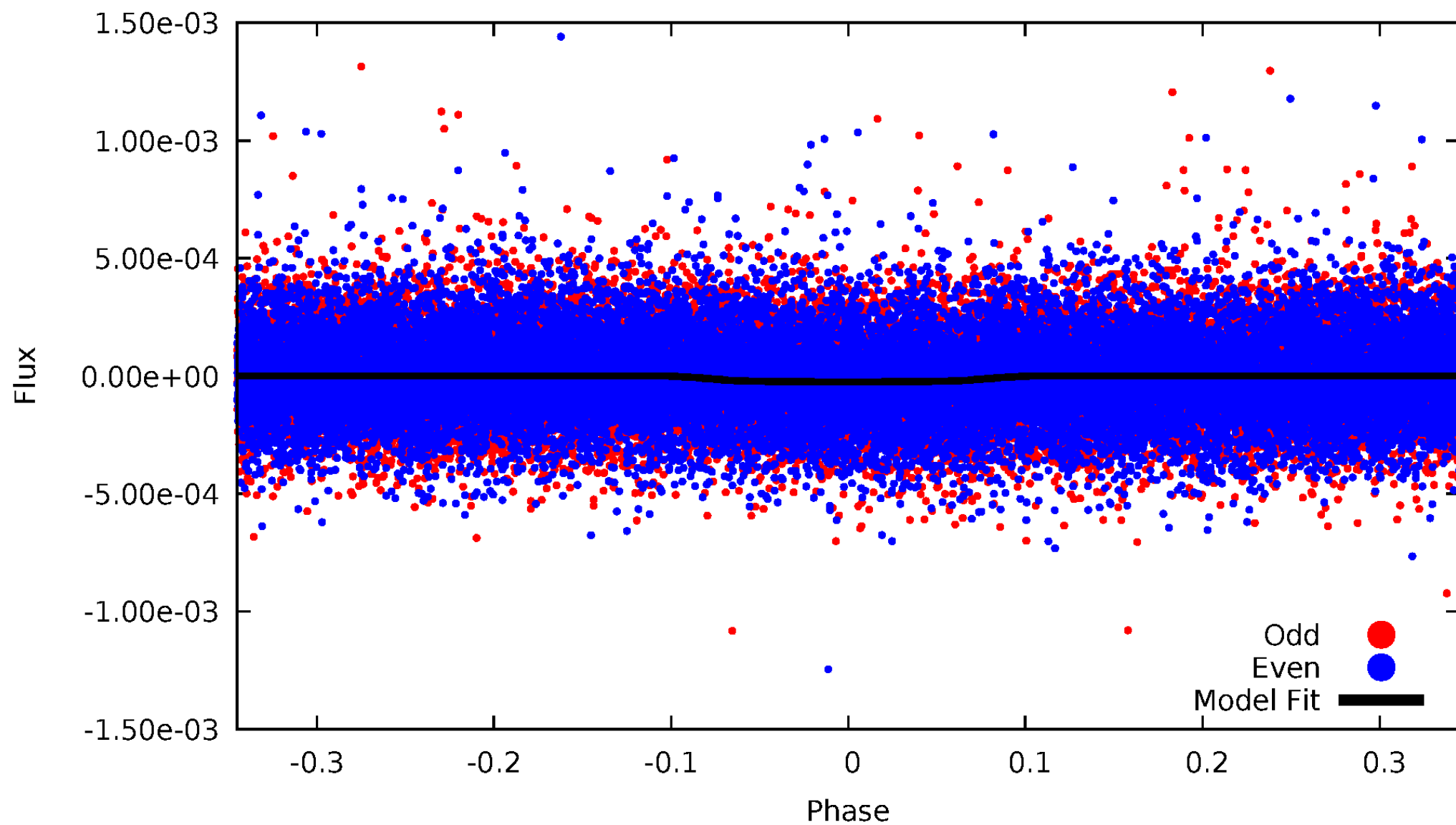


TCE 007281694-01



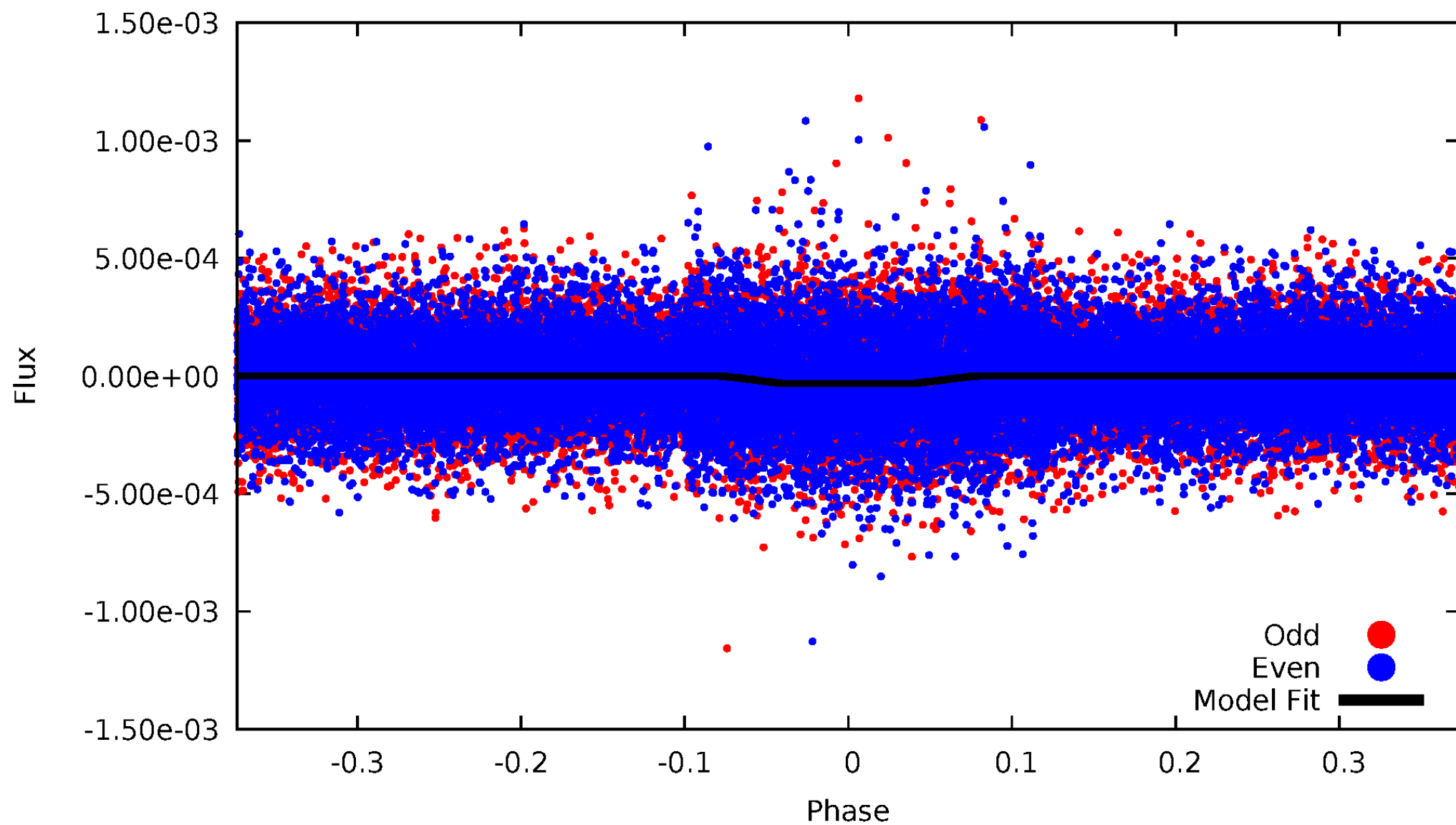
DV Odd/Even

TCE 007281694-01

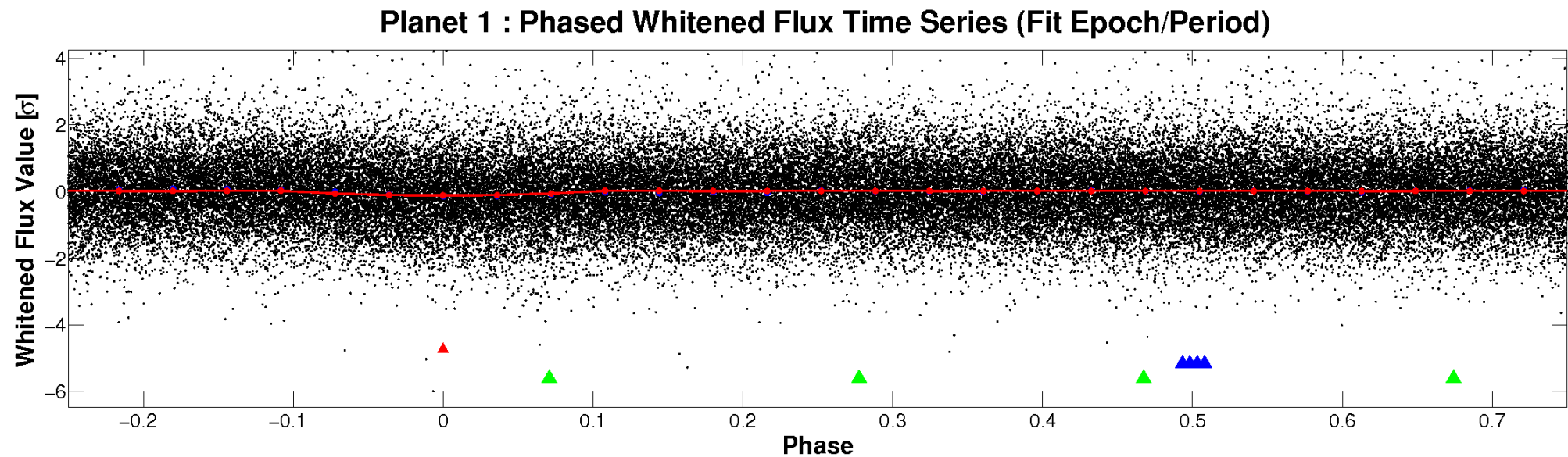
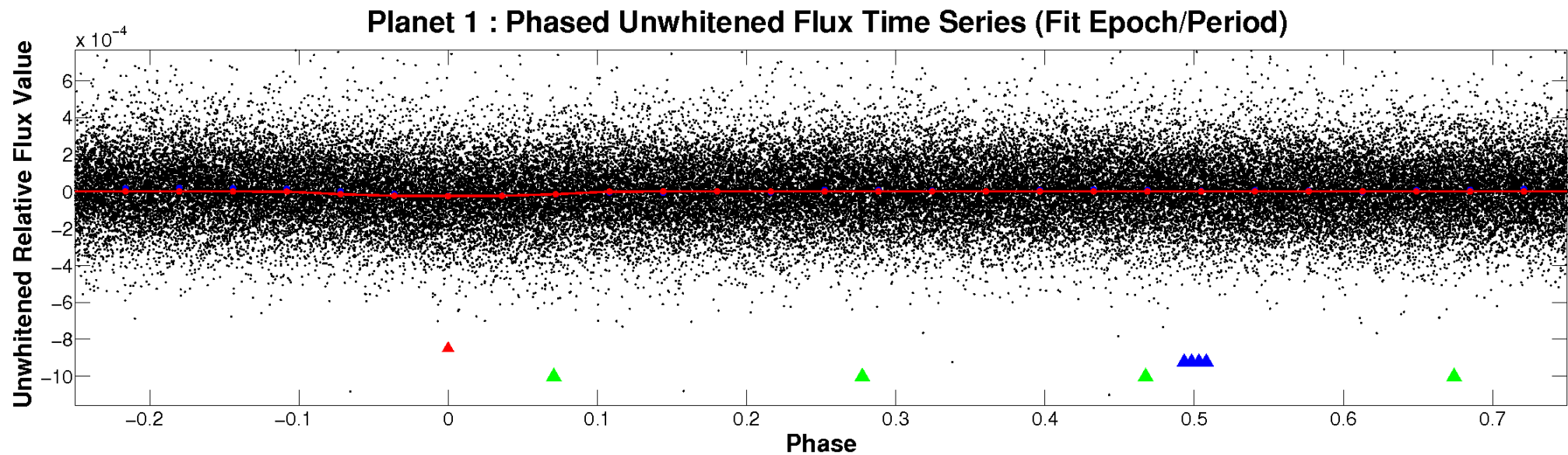


ALT Odd/Even

TCE 007281694-01

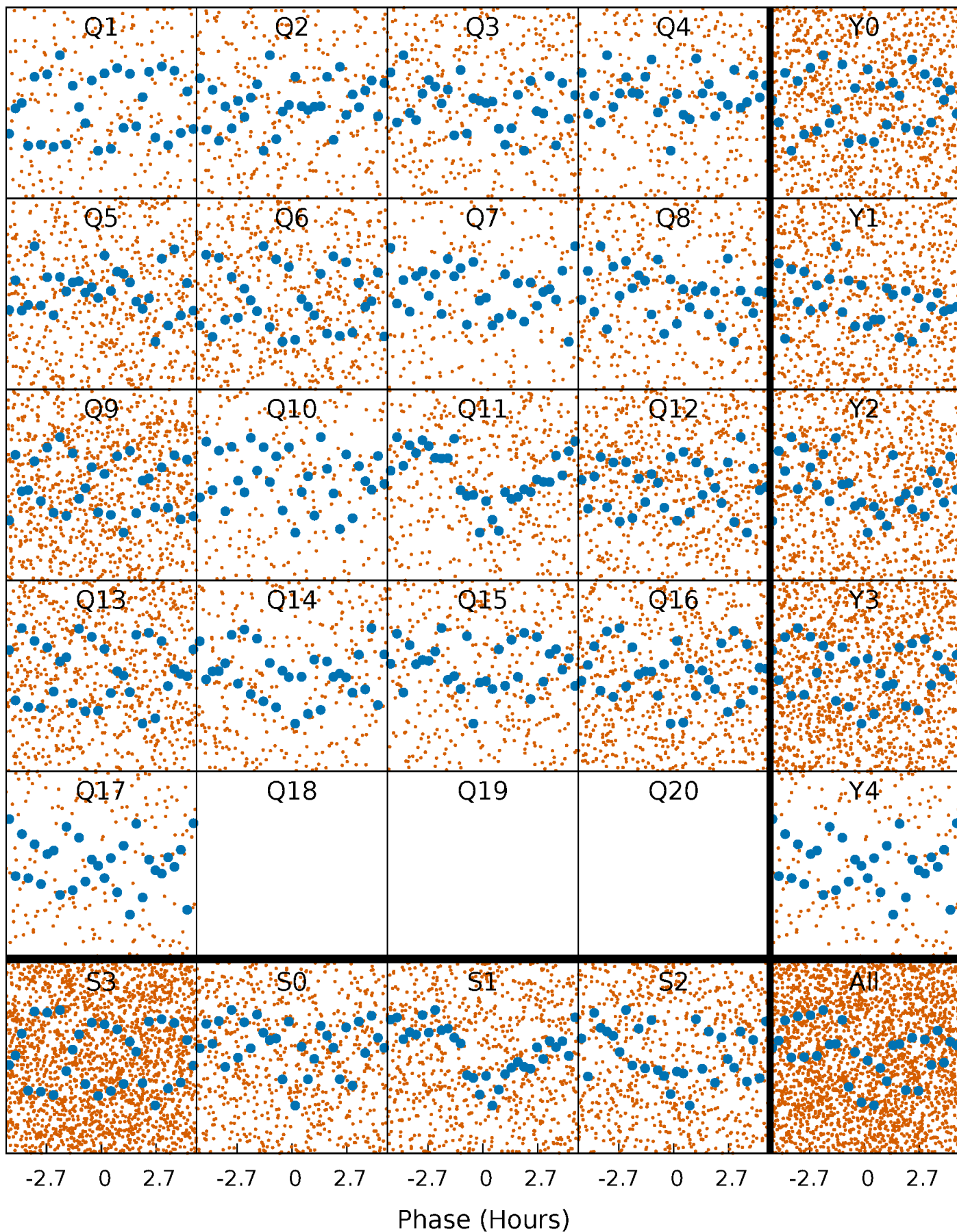


Non-Whitened Vs. Whitened Light Curve



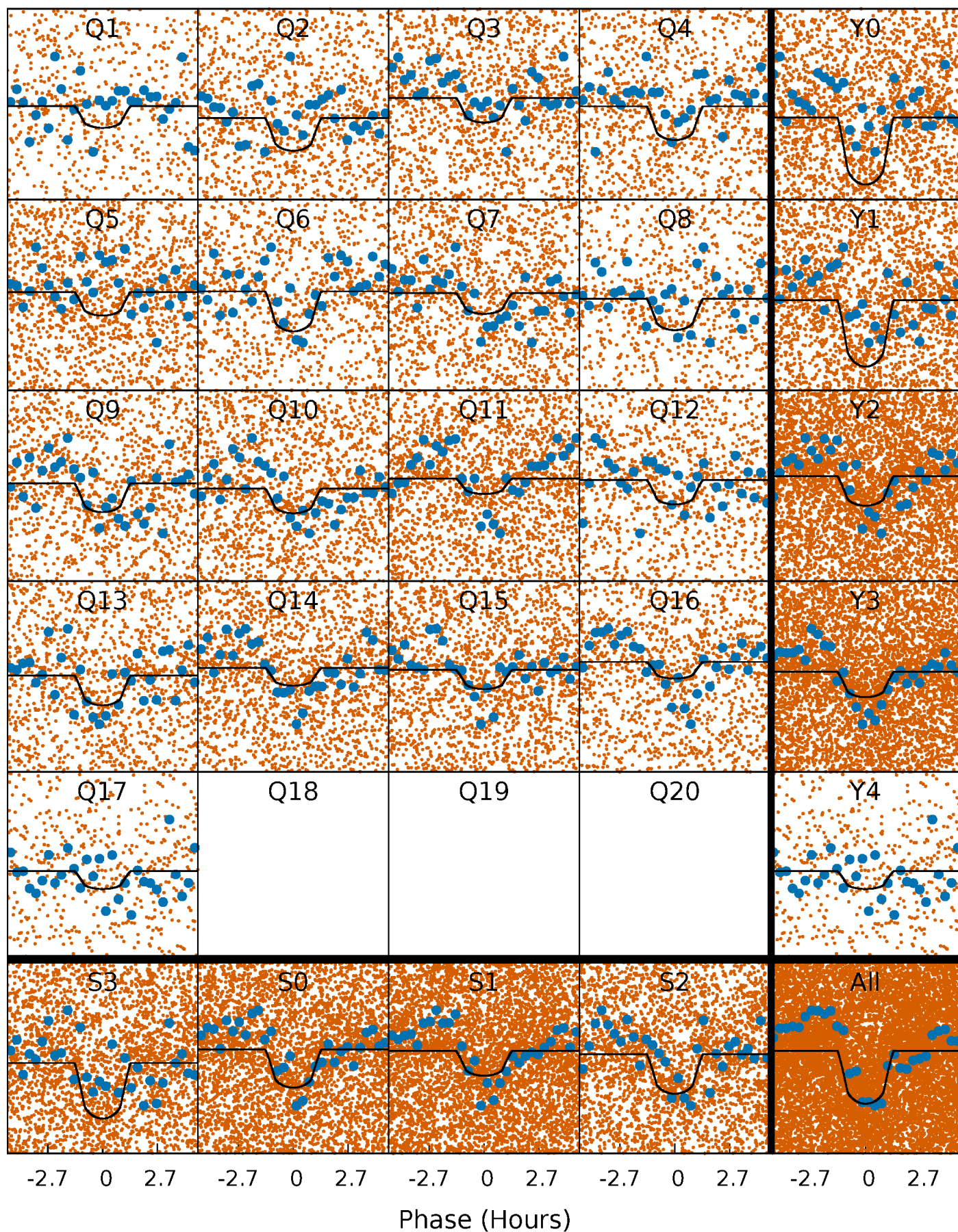
PDC Quarter-Phased Transit Curves

TCE 007281694-01 P= 0.566810 Days $T_0=131.772553$ (BKJD)



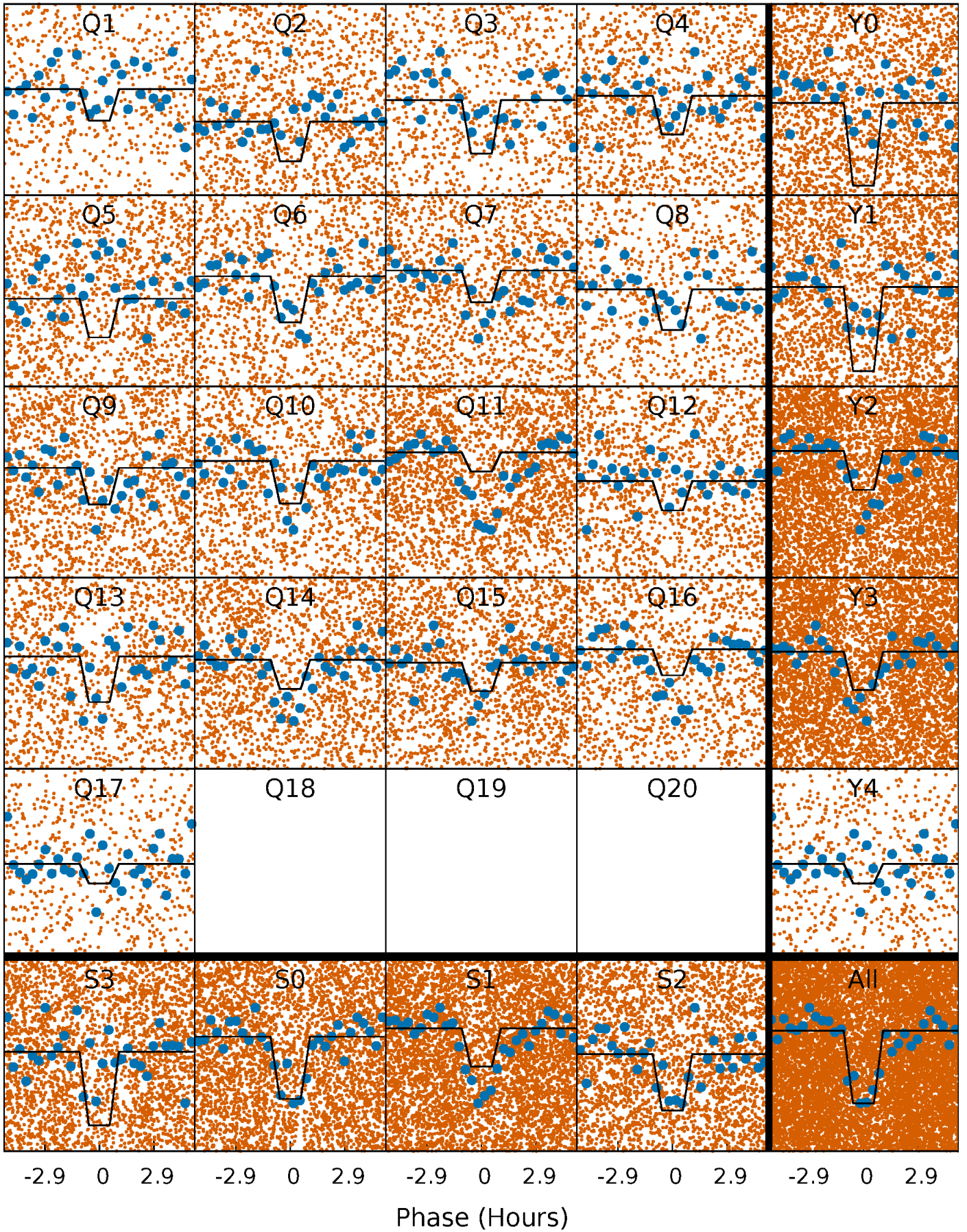
DV Quarter-Phased Transit Curves

TCE 007281694-01 P= 0.566810 Days $T_0=131.772553$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

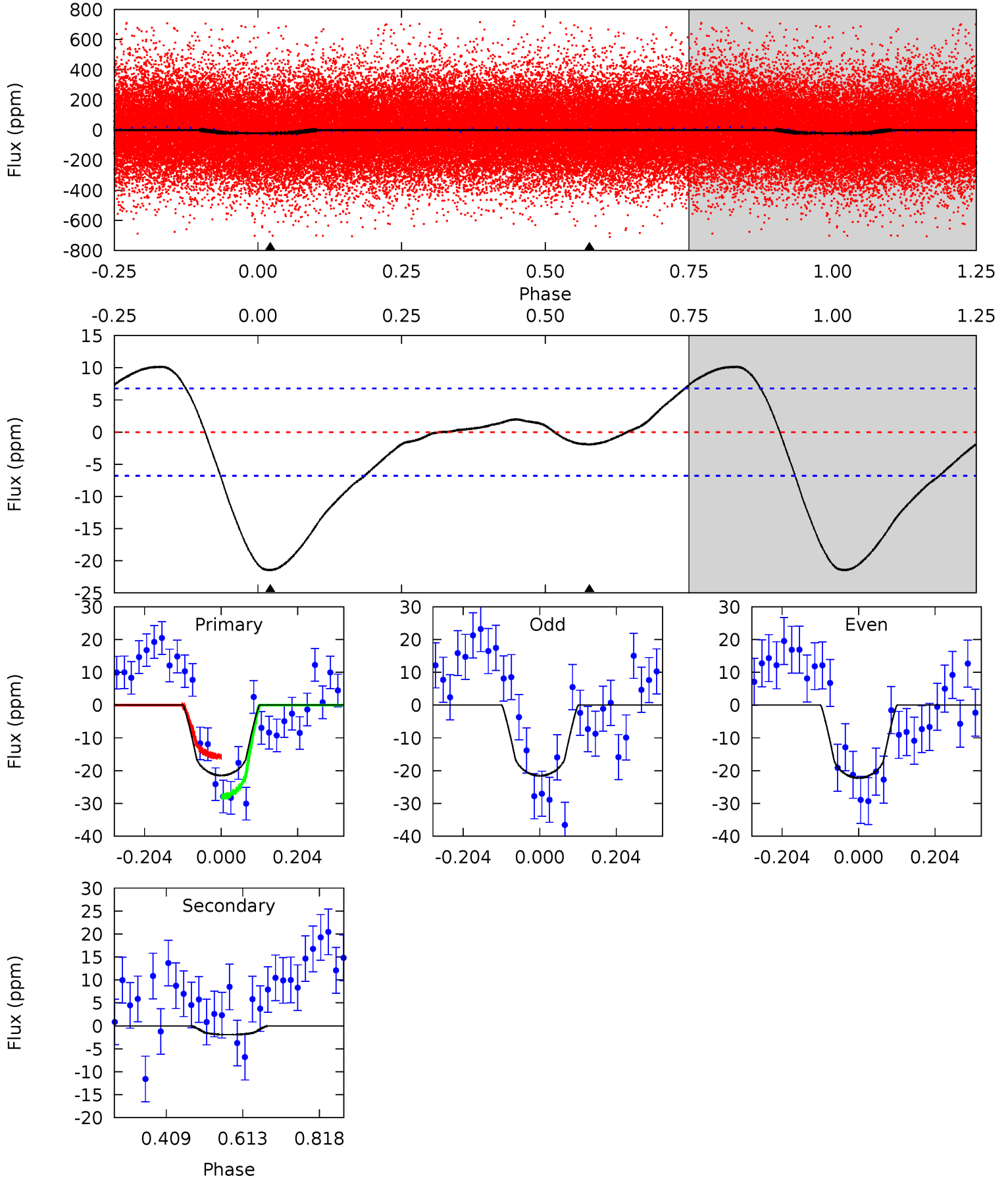
TCE 007281694-01 P= 0.566814 Days $T_0=131.771474$ (BKJD)



DV Model-Shift Uniqueness Test

007281694-01, P = 0.566810 Days, E = 131.205743 Days

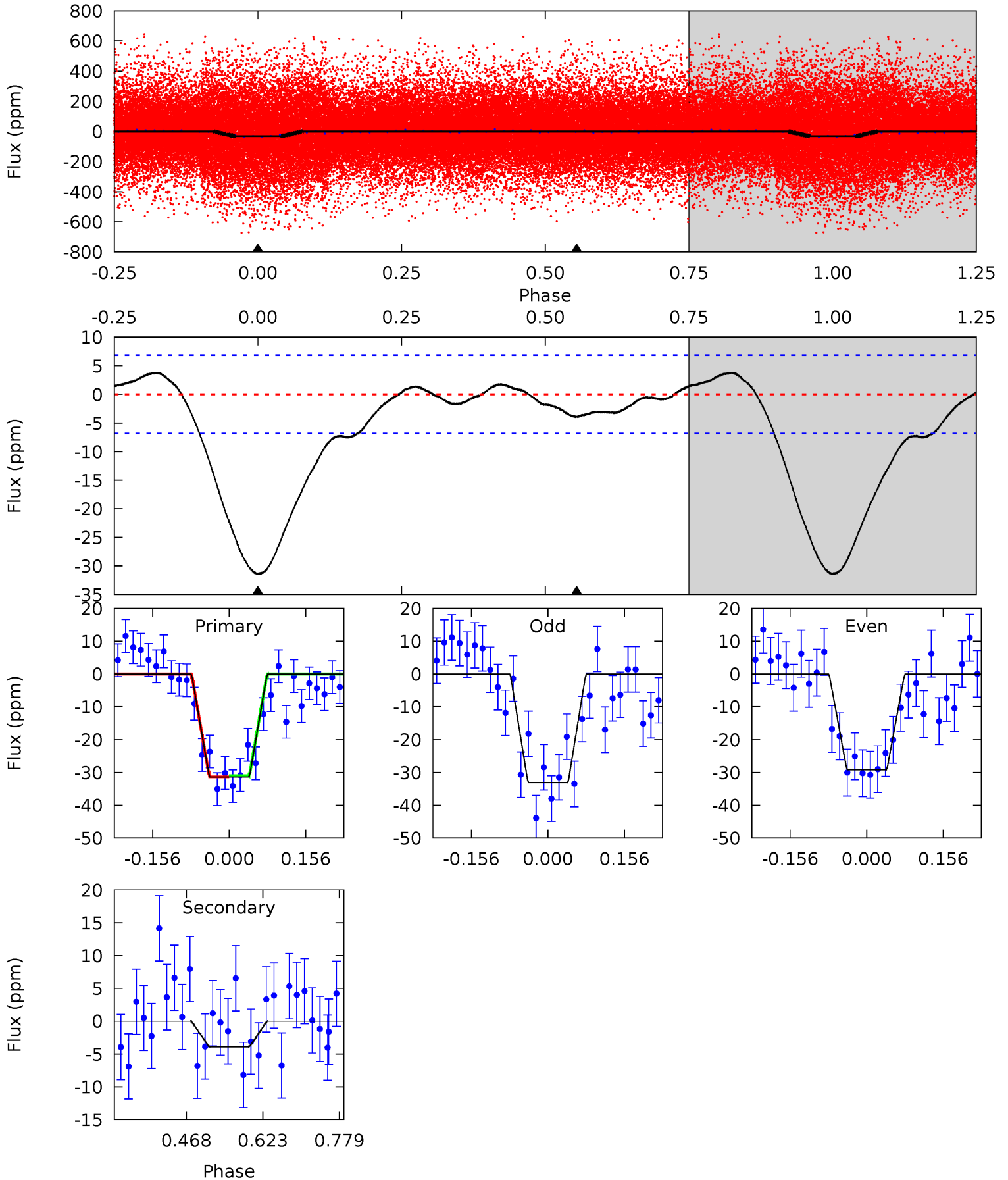
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	1.25	0	0	4.41	1.27	2.78	14.0	14.0	1.25	1.25	0.22	0.89	0.32	3.97



Alt Model-Shift Uniqueness Test

007281694-01, P = 0.566814 Days, E = 131.204660 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.5	2.56	0	0	4.47	1.42	1.79	20.5	20.5	2.56	2.56	1.30	1.14	0.11	0.12



Stellar Parameters For KIC 007281694

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5018^{+174}_{-139}	$3.953^{+0.598}_{-0.322}$	$0.320^{+0.100}_{-0.300}$	$1.734^{+0.962}_{-0.962}$	$0.985^{+0.203}_{-0.148}$	$0.266^{+2.055}_{-0.180}$
	+3%/-3%	+15%/-8%	+31%/-94%	+55%/-55%	+21%/-15%	+773%/-68%
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 007281694-01 / KOI 7584.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2 ± 2	$1.03^{+0.73}_{-0.53}$	3498^{+498}_{-535}	-2949^{+6351}_{-573}	$0.145^{+0.598}_{-0.127}$
Alt.	-4 ± 2	$1.05^{+0.66}_{-0.57}$	3490^{+479}_{-521}	2430^{+1606}_{-5667}	$0.334^{+1.215}_{-0.218}$

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 $A_{obs} \gg 1.0$

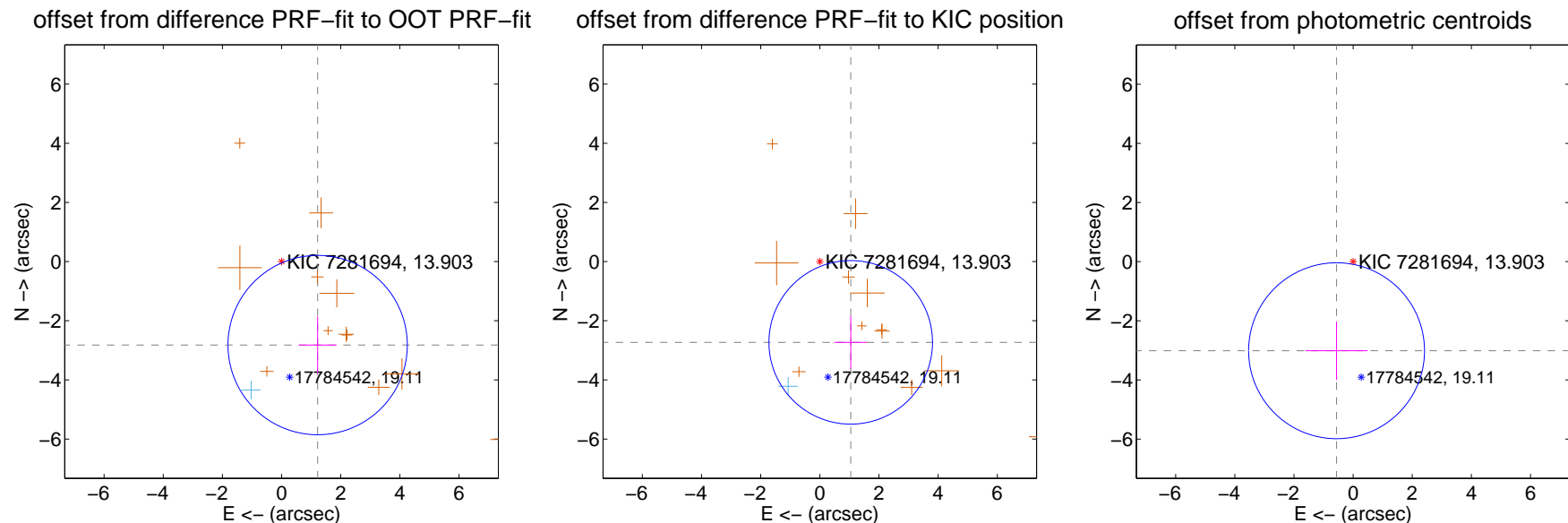
DV Centroid Data

Supplemental centroid analysis for 007281694-01. Kepler magnitude: 13.90. Transit SNR 10.19

There are 1 quarters with good PRF difference image offsets

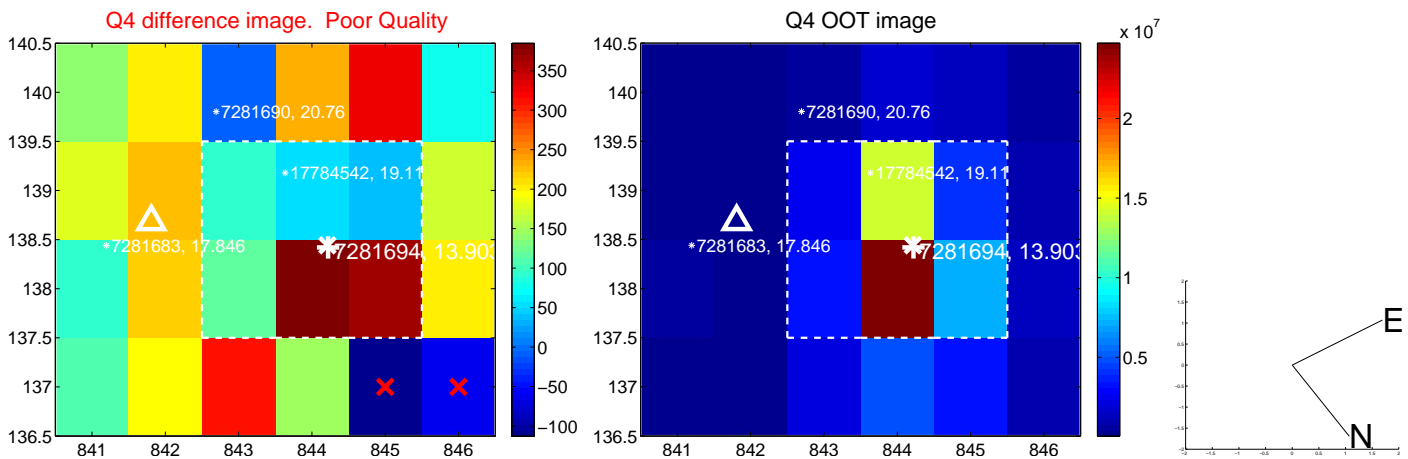
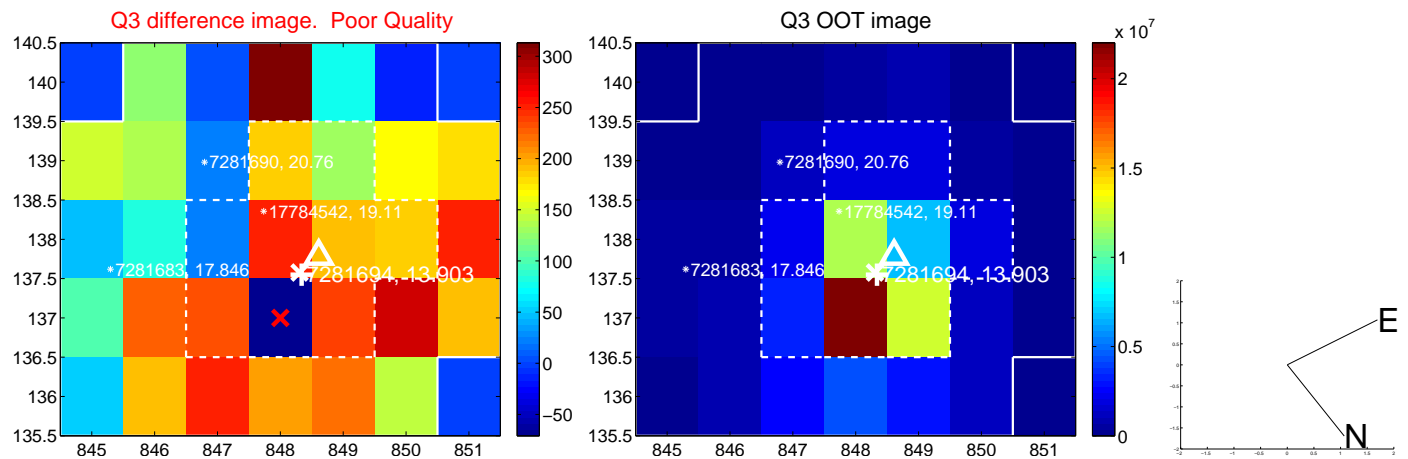
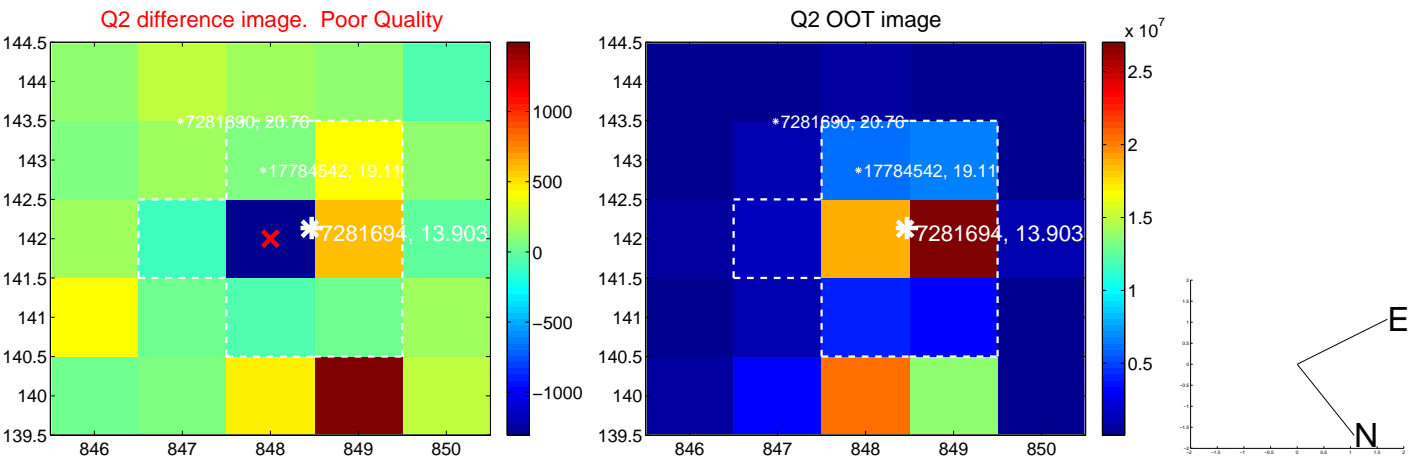
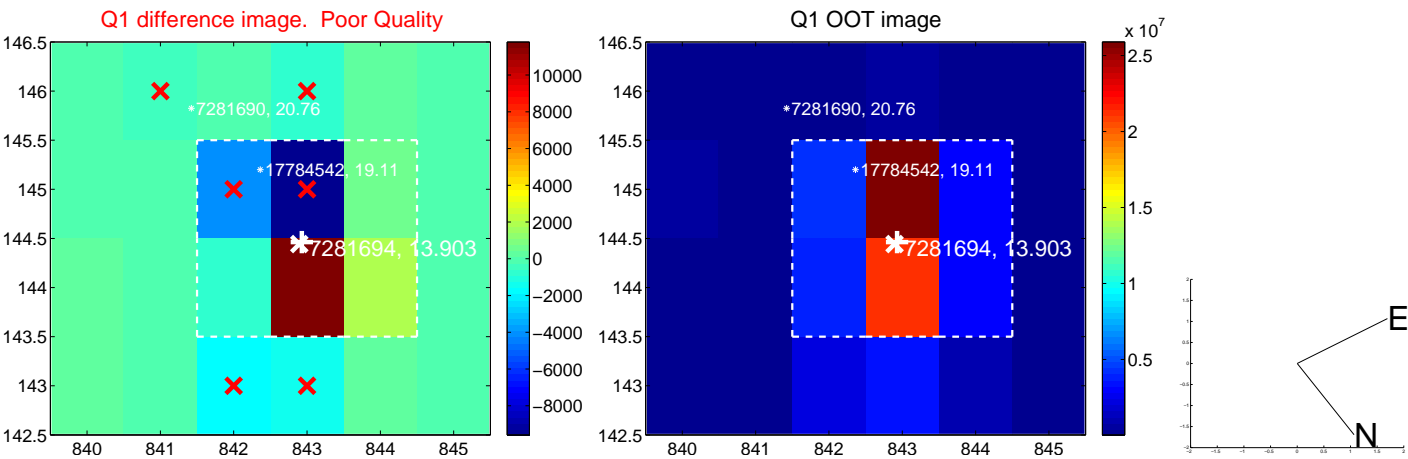
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.075 ± 1.010	3.04	-1.219 ± 0.638	-2.822 ± 0.974
PRF-fit source offset from KIC position	2.923 ± 0.922	3.17	-1.044 ± 0.556	-2.730 ± 0.899
photometric centroid source offset	3.06 ± 0.99	3.09	0.56 ± 1.05	-3.01 ± 0.99

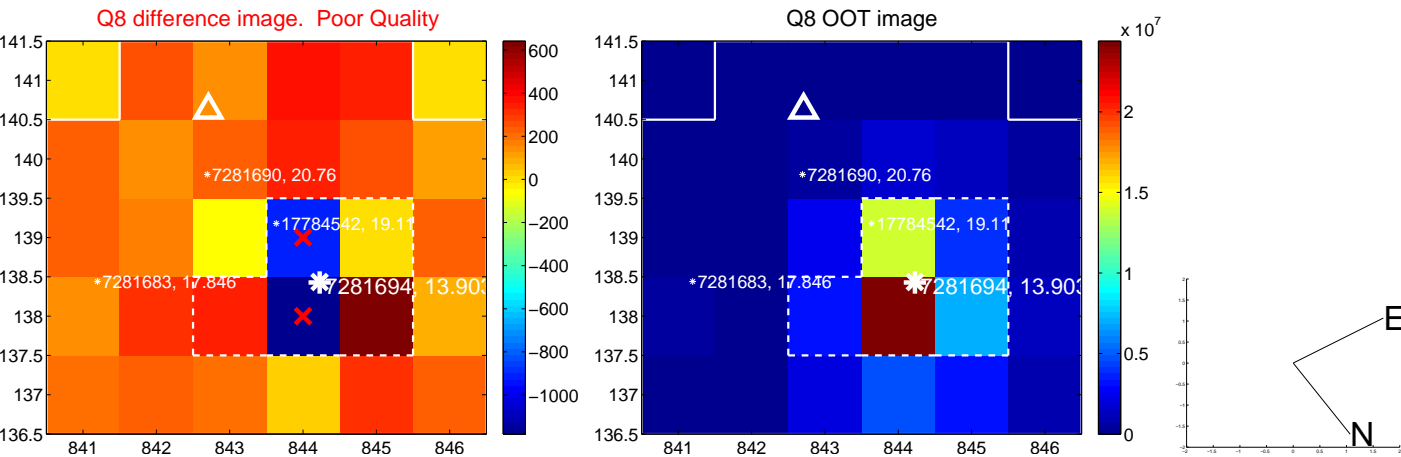
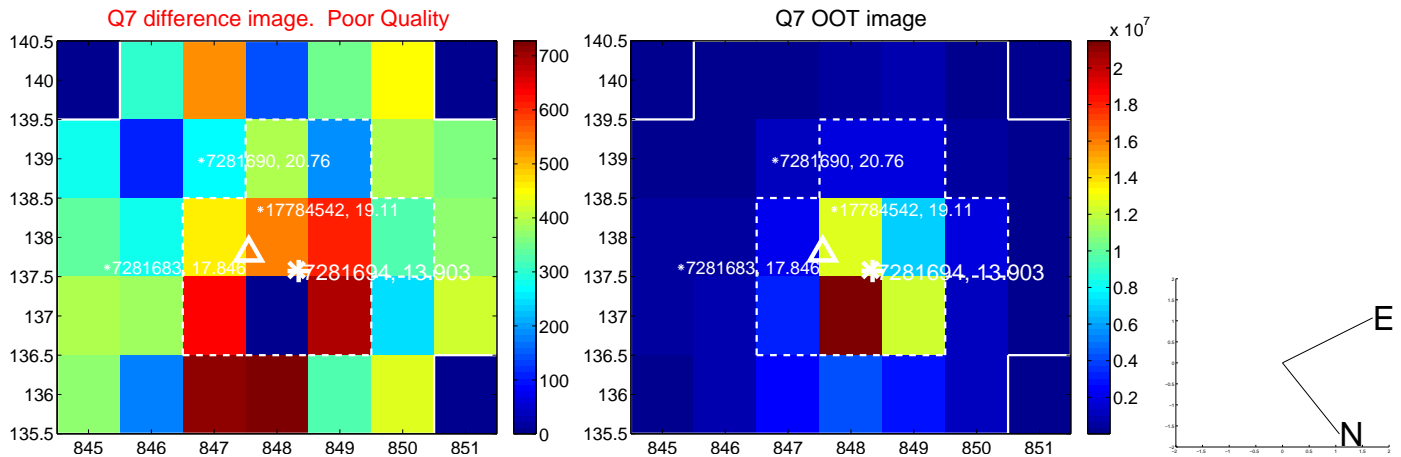
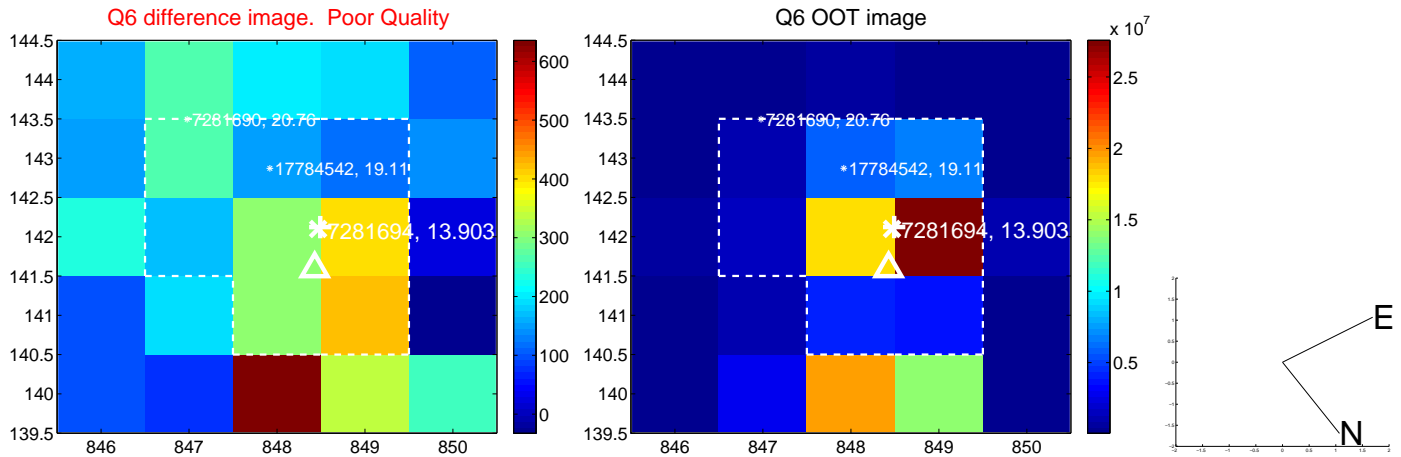
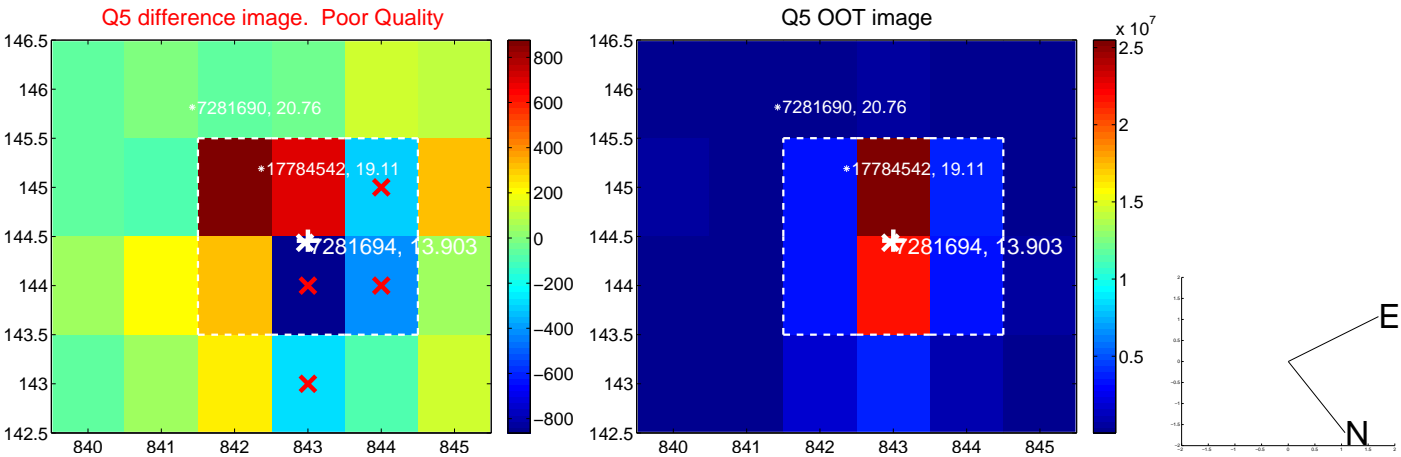


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

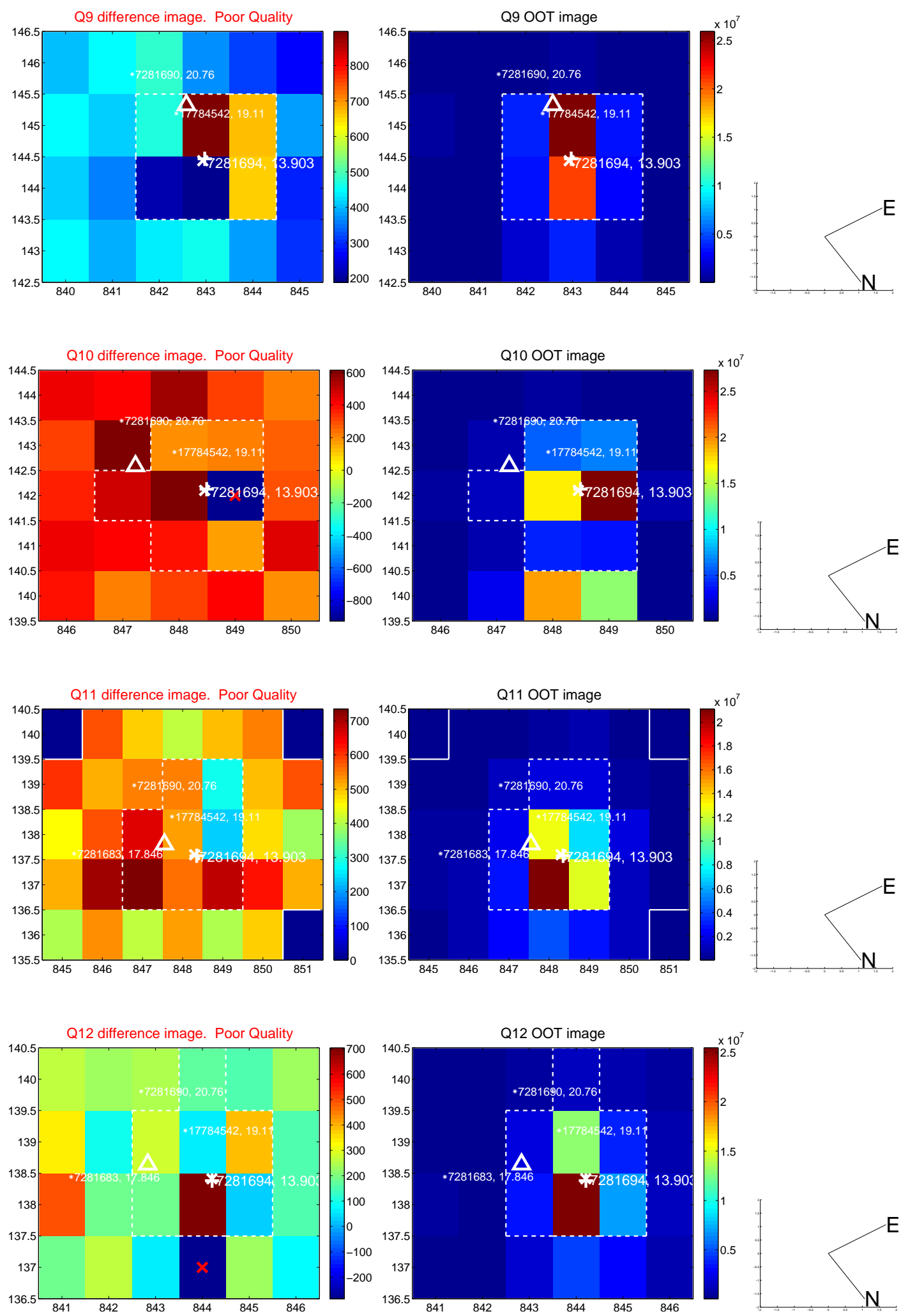
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



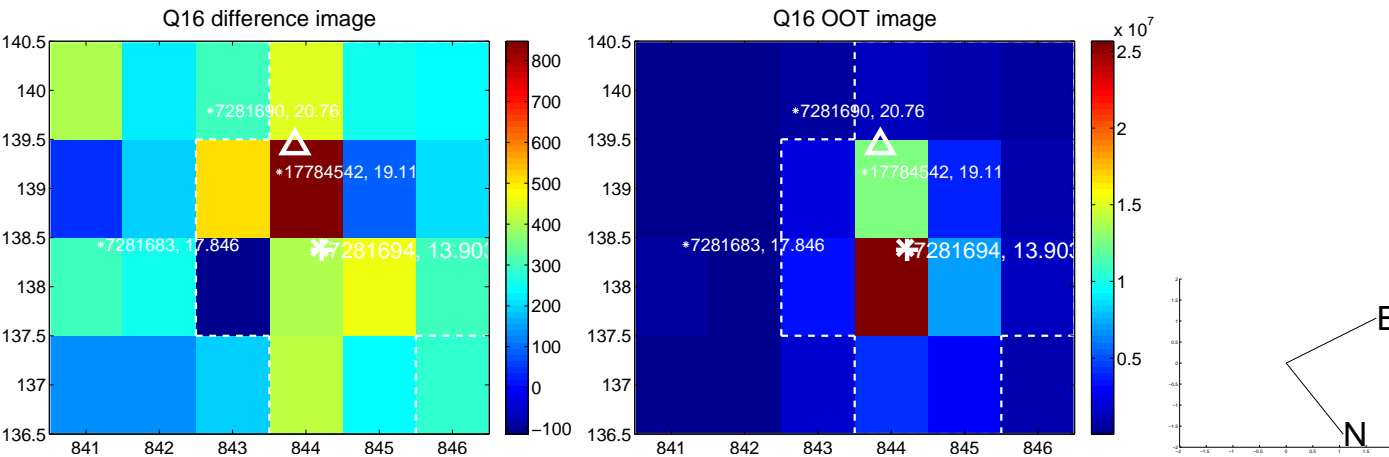
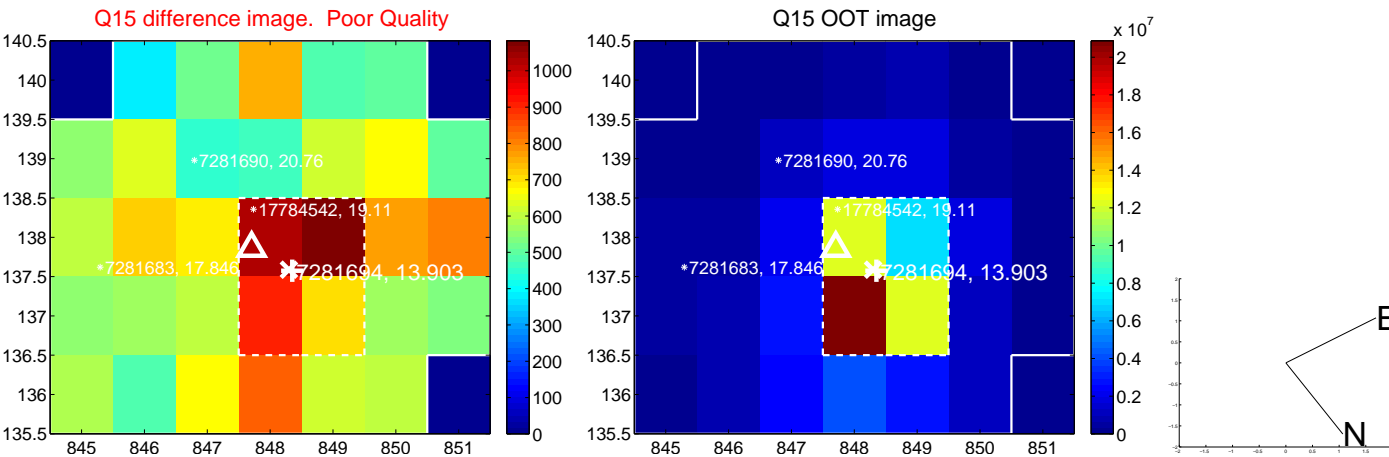
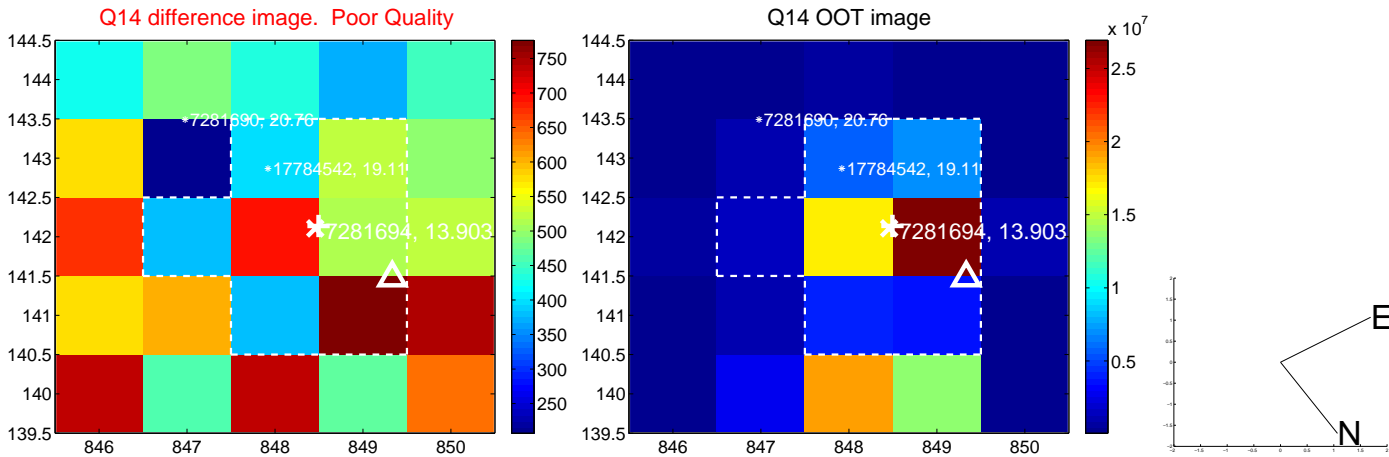
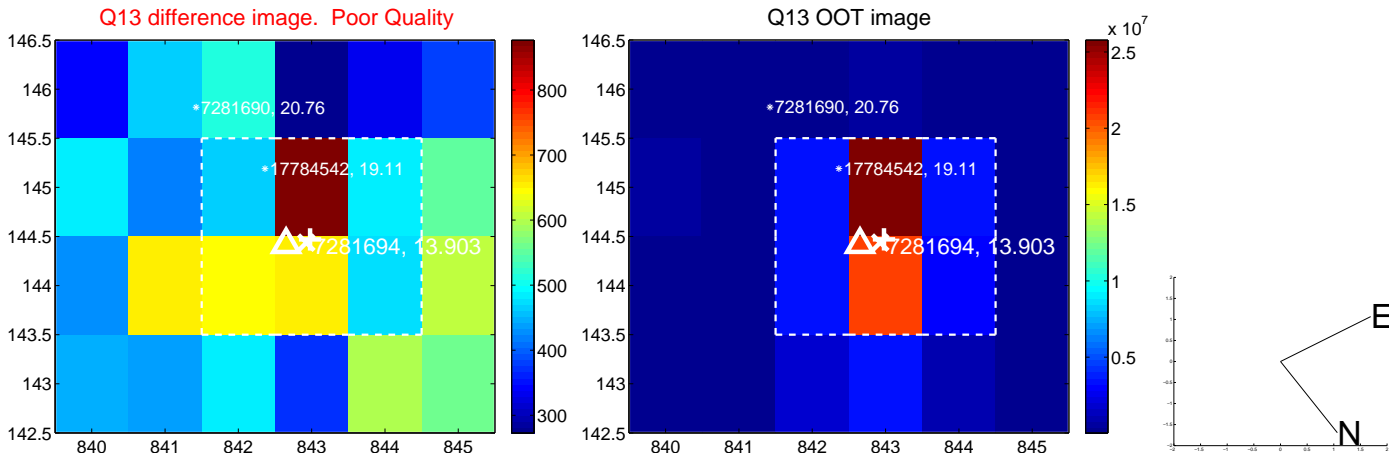
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



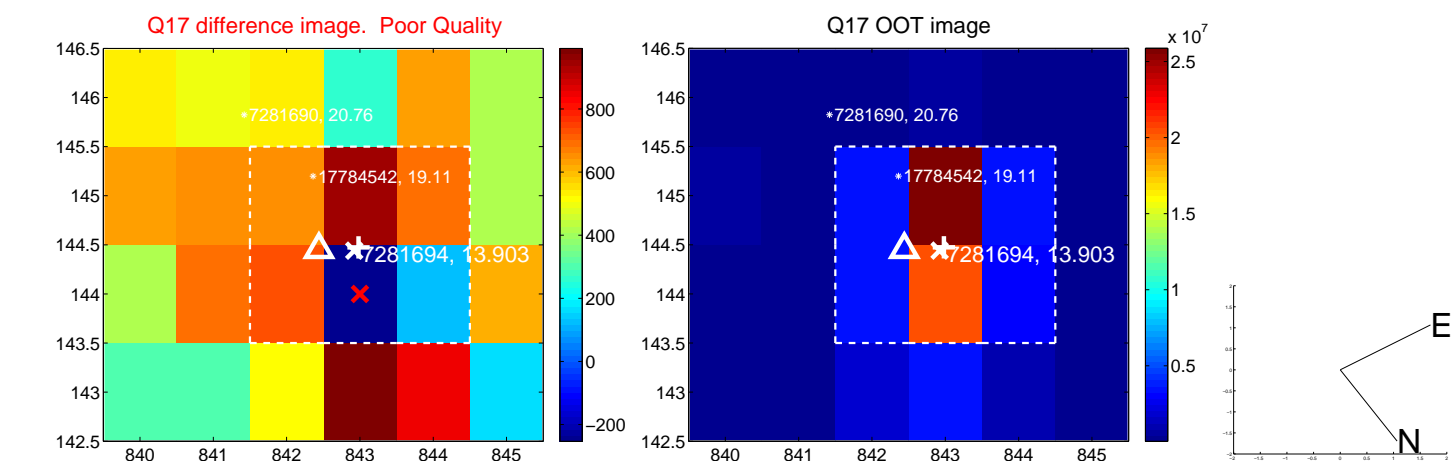
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



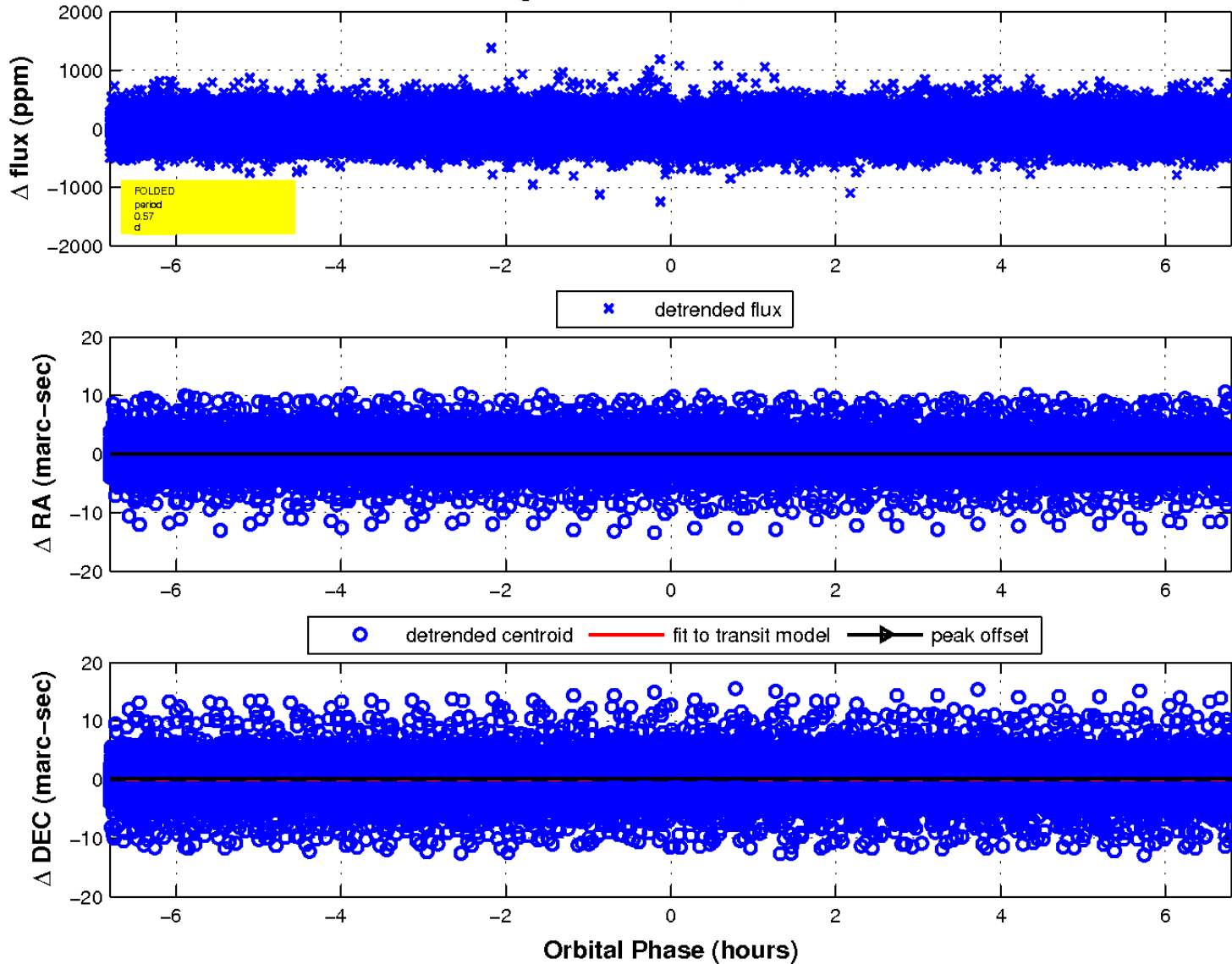
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



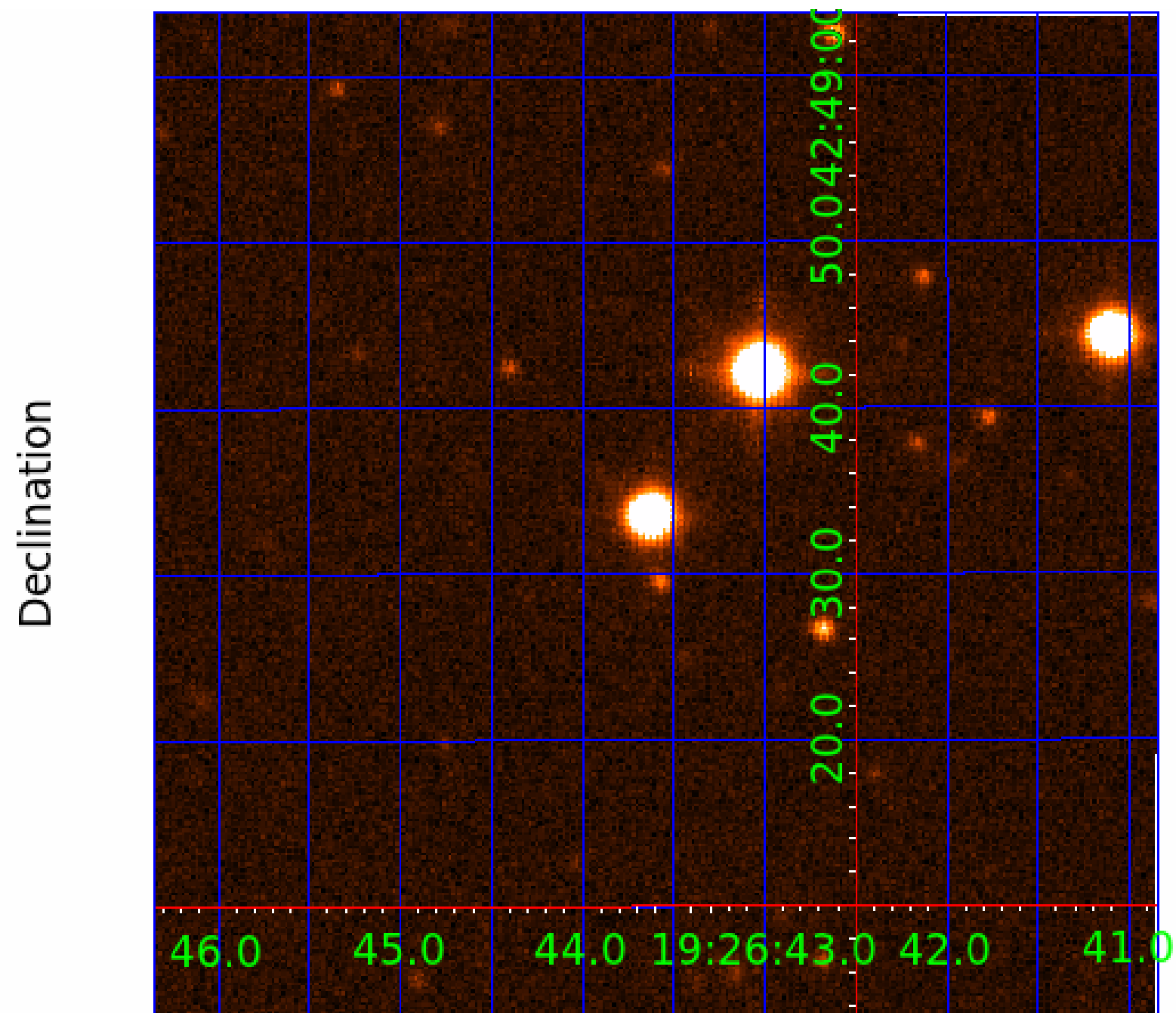
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 3



UKIRT Image



KIC 007281694

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})
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Robovetter Results

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007281694-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
007281694-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_POS_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.

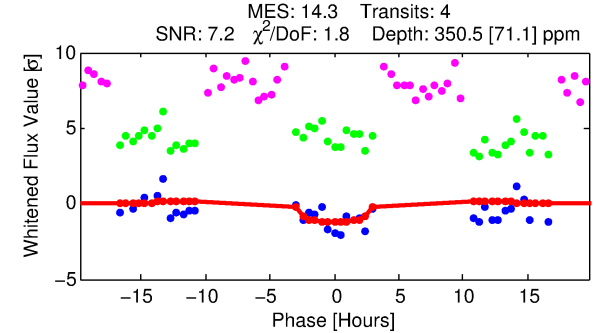
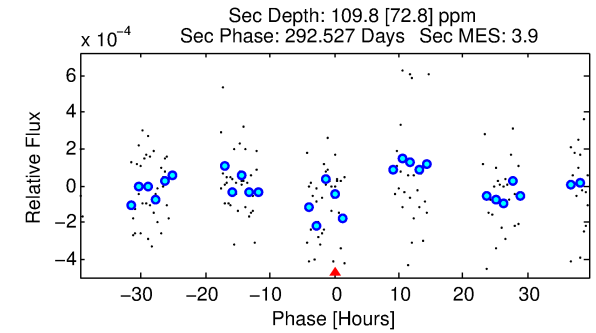
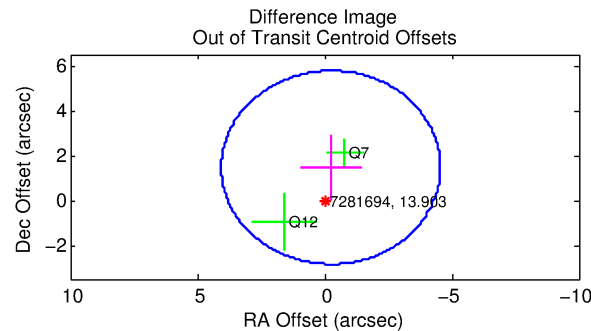
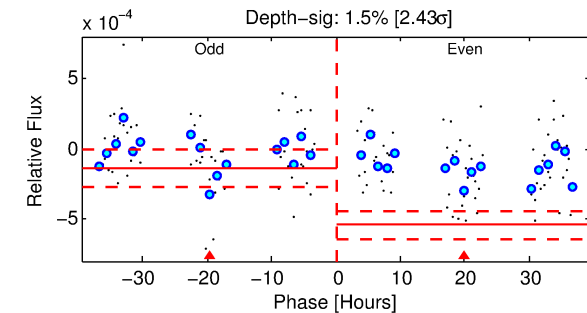
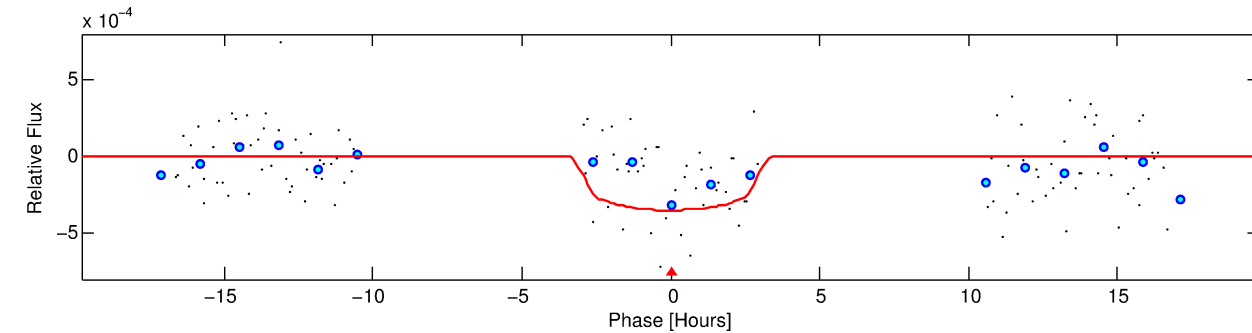
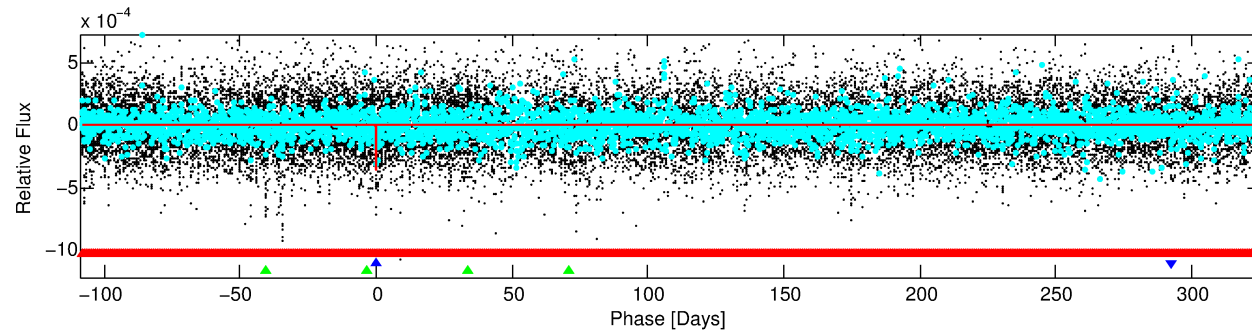
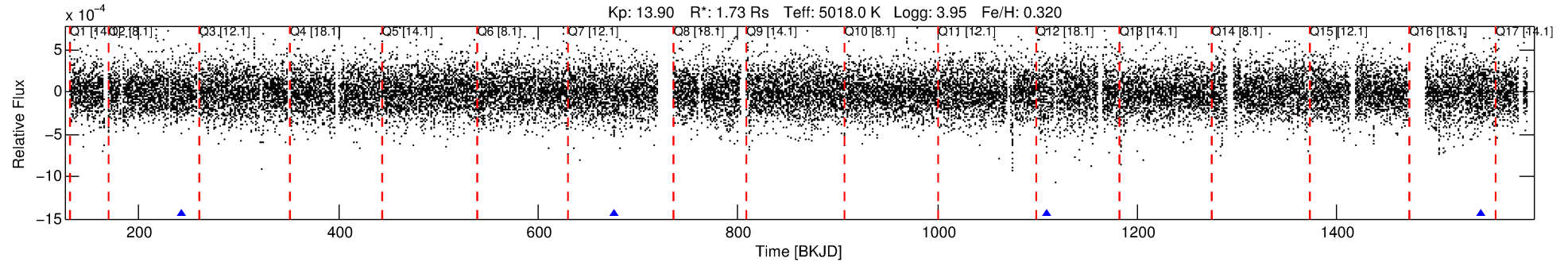
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007281694-02

No Significant Match Found

DV One-Page Summary

KIC: 7281694 Candidate: 2 of 3 Period: 433.607 d
KOI: K07584 Corr: No Ephemeris Match



DV Fit Results:

Period = 433.60708 [0.00939] d
Epoch = 242.5886 [0.0195] BKJD
Rp/R* = 0.0210 [0.0143]
a/R* = 241.07 [646.64]
b = 0.90 [0.55]
Seff = 1.37 [1.37]
Teq = 276 [69] K
Rp = 3.97 [3.48] Re
a = 1.1155 [0.6575] AU
Ag = 4772.36 [8630.15] [0.55σ]
Teffp = 3547 [1348] K [2.42σ]

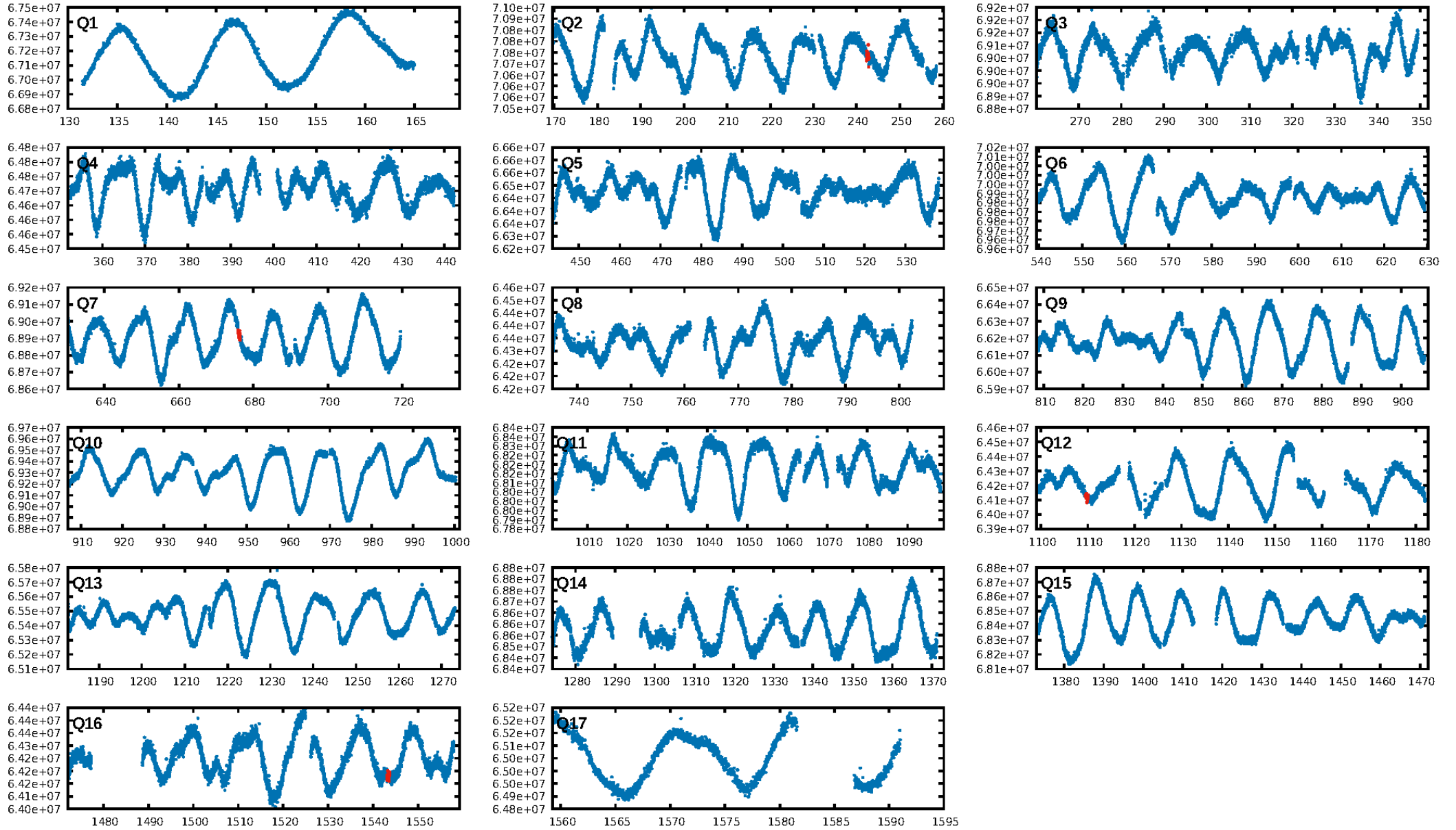
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [89.86σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 18.5%
Bootstrap-pfa: 5.74e-23
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.309
Centroid-sig: 2.9%
Centroid-so: 3.668 arcsec [2.43σ]
OotOffset-rm: 1.483 arcsec [1.03σ]
KicOffset-rm: 1.582 arcsec [1.09σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/4]

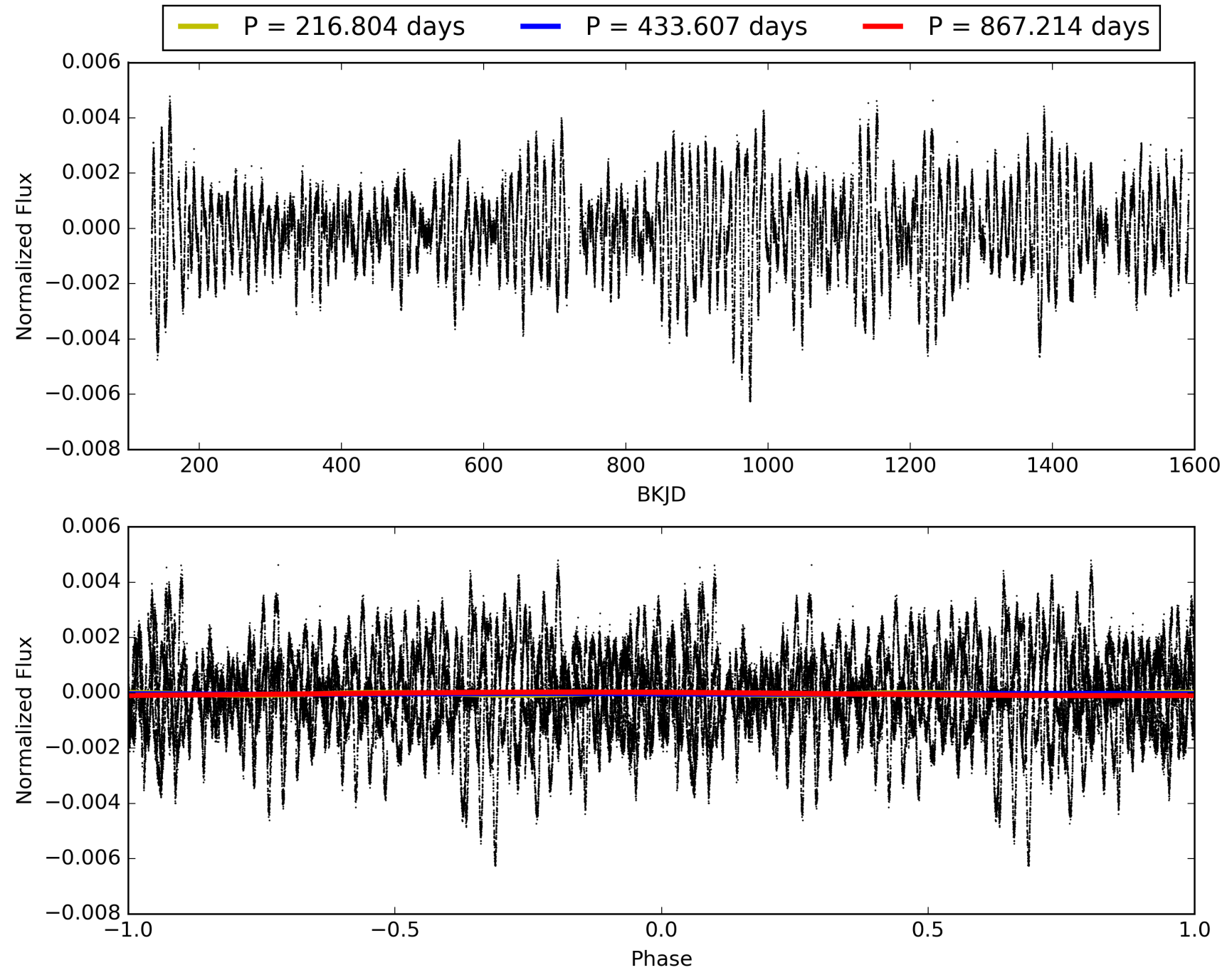
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:37:29 Z

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

TCE 007281694-02, PDC Light Curves

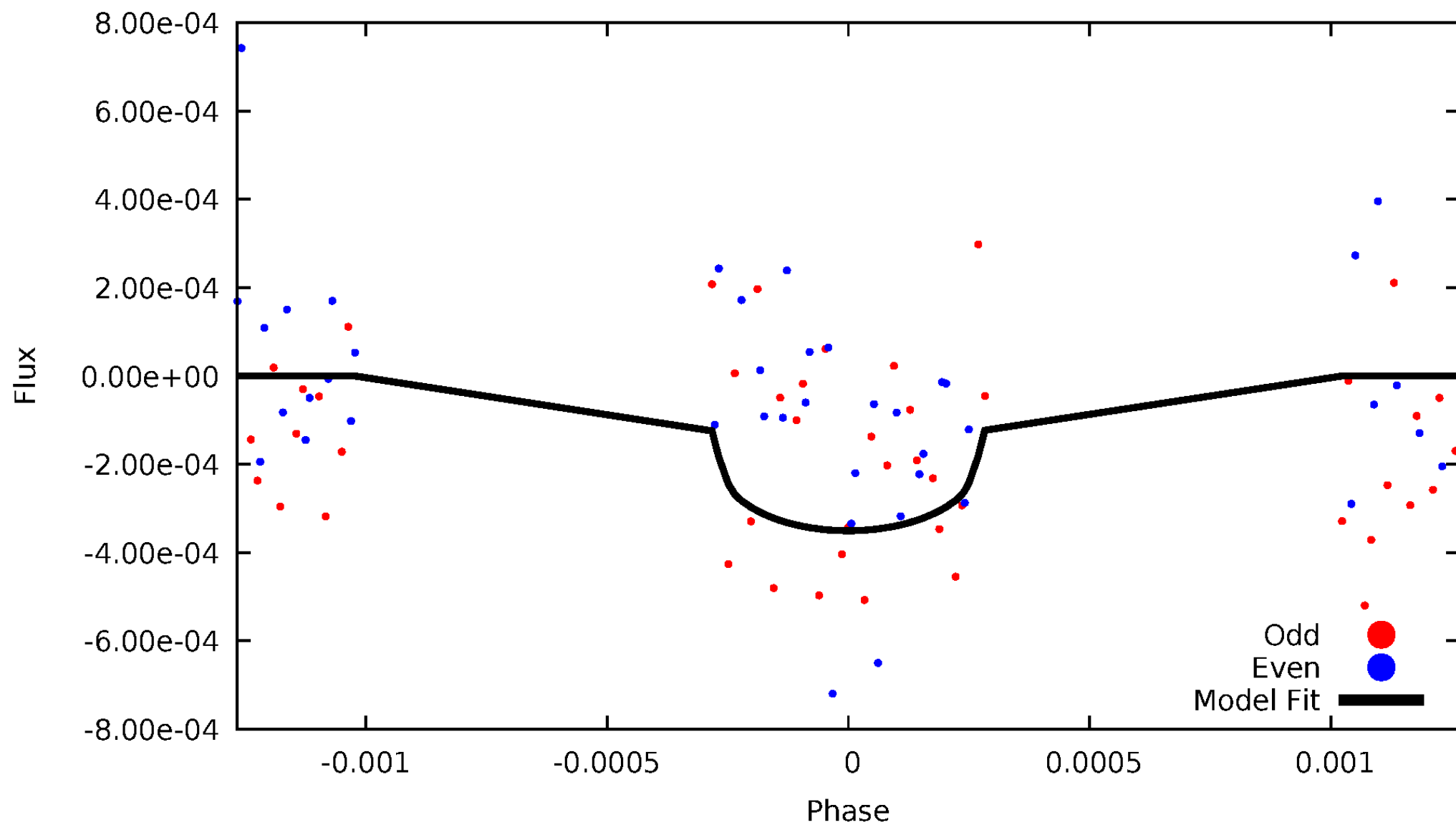


TCE 007281694-02



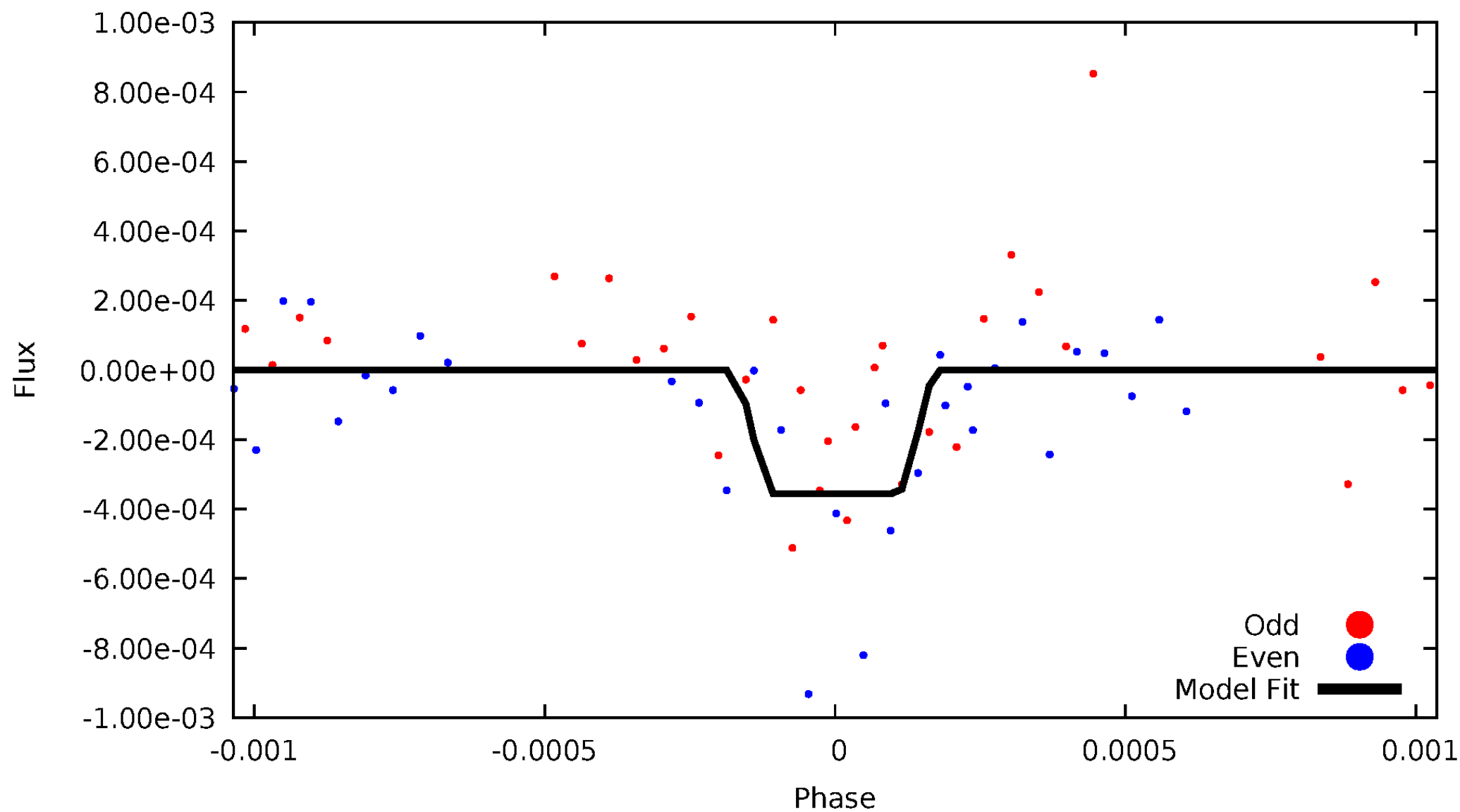
DV Odd/Even

TCE 007281694-02



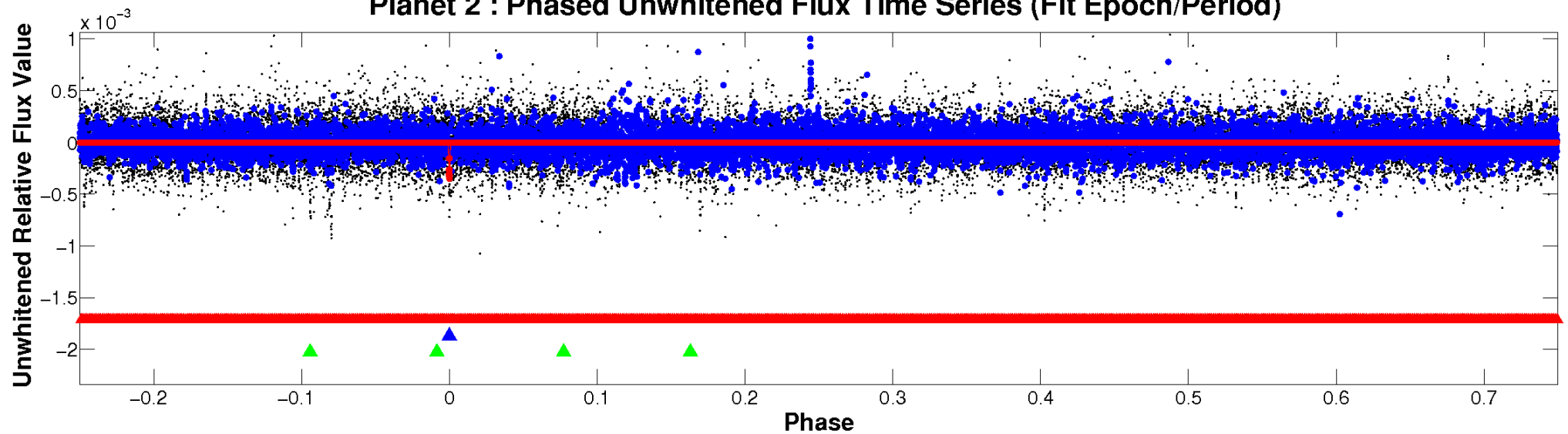
ALT Odd/Even

TCE 007281694-02

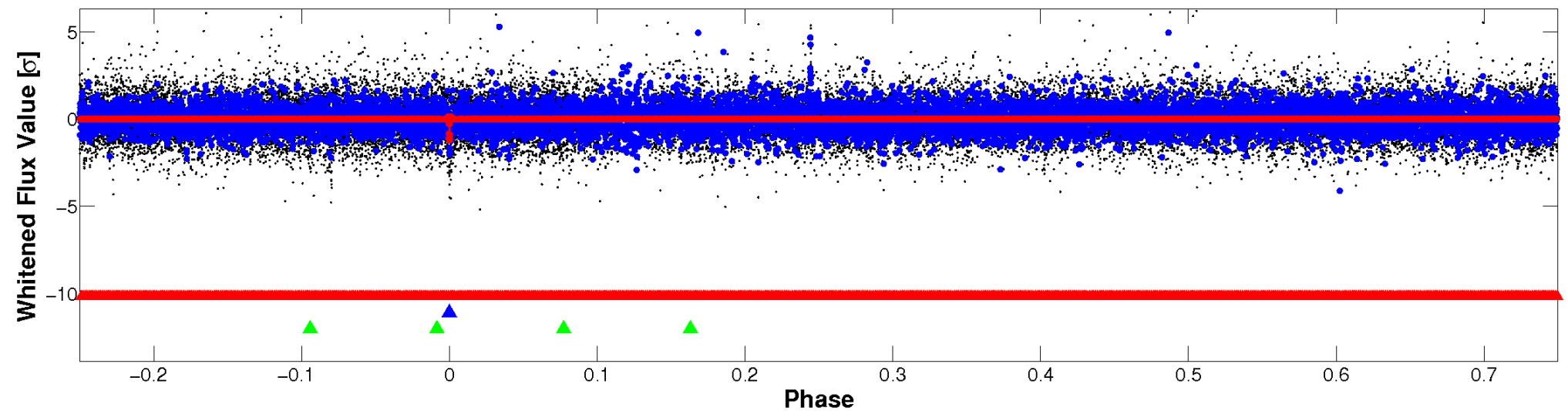


Non-Whitened Vs. Whitened Light Curve

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

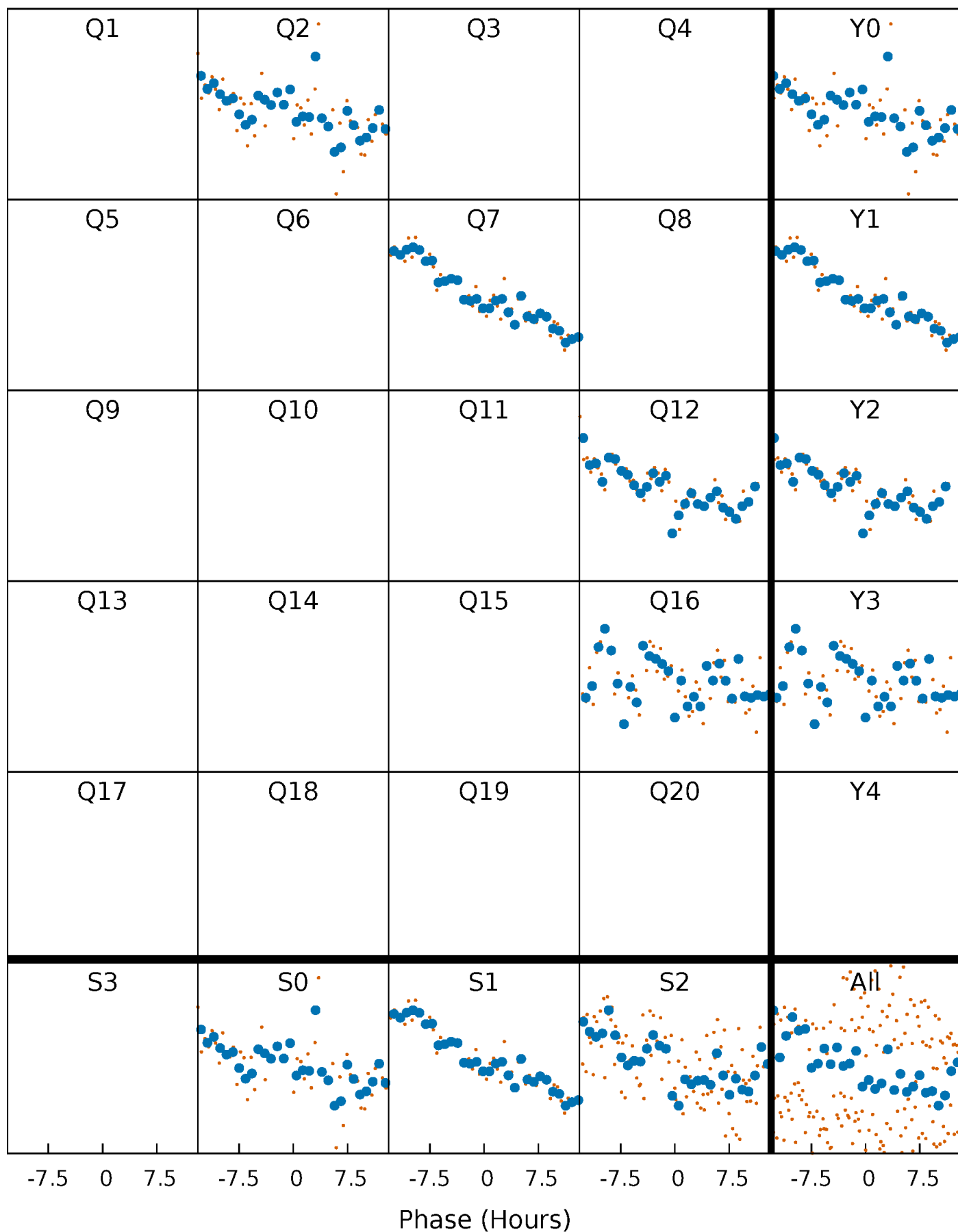


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



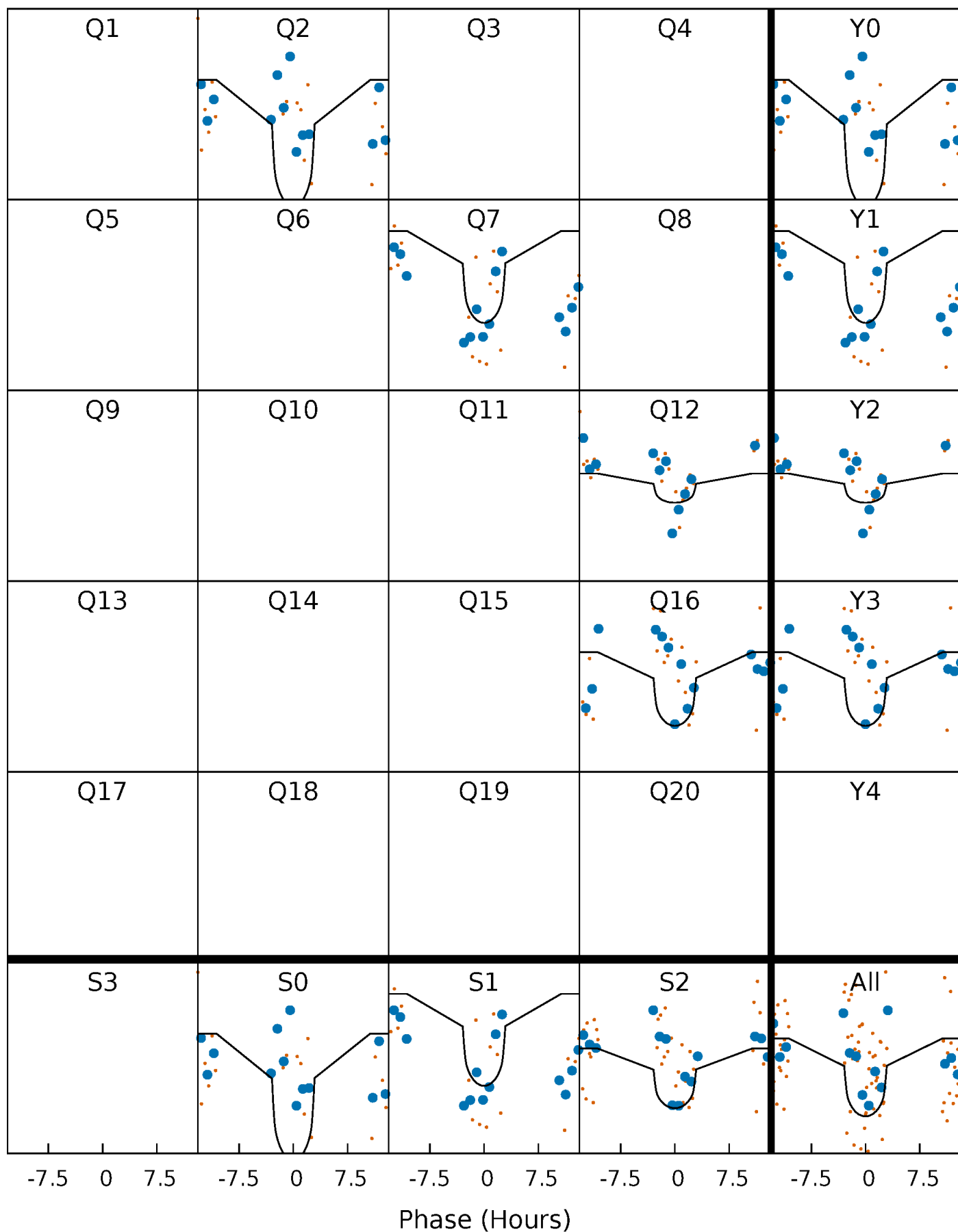
PDC Quarter-Phased Transit Curves

TCE 007281694-02 P=433.607081 Days $T_0=242.588583$ (BKJD)



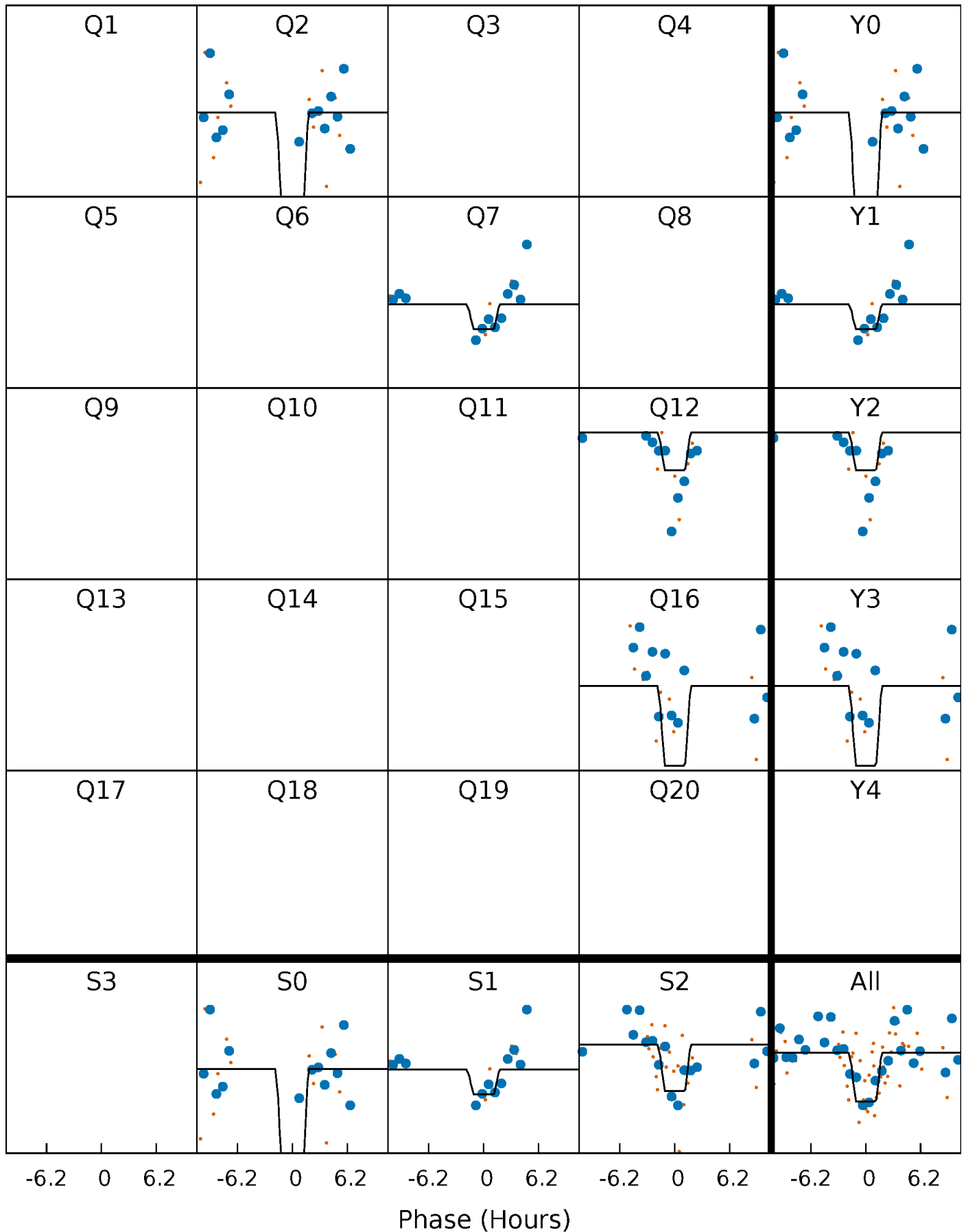
DV Quarter-Phased Transit Curves

TCE 007281694-02 P=433.607081 Days $T_0=242.588583$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

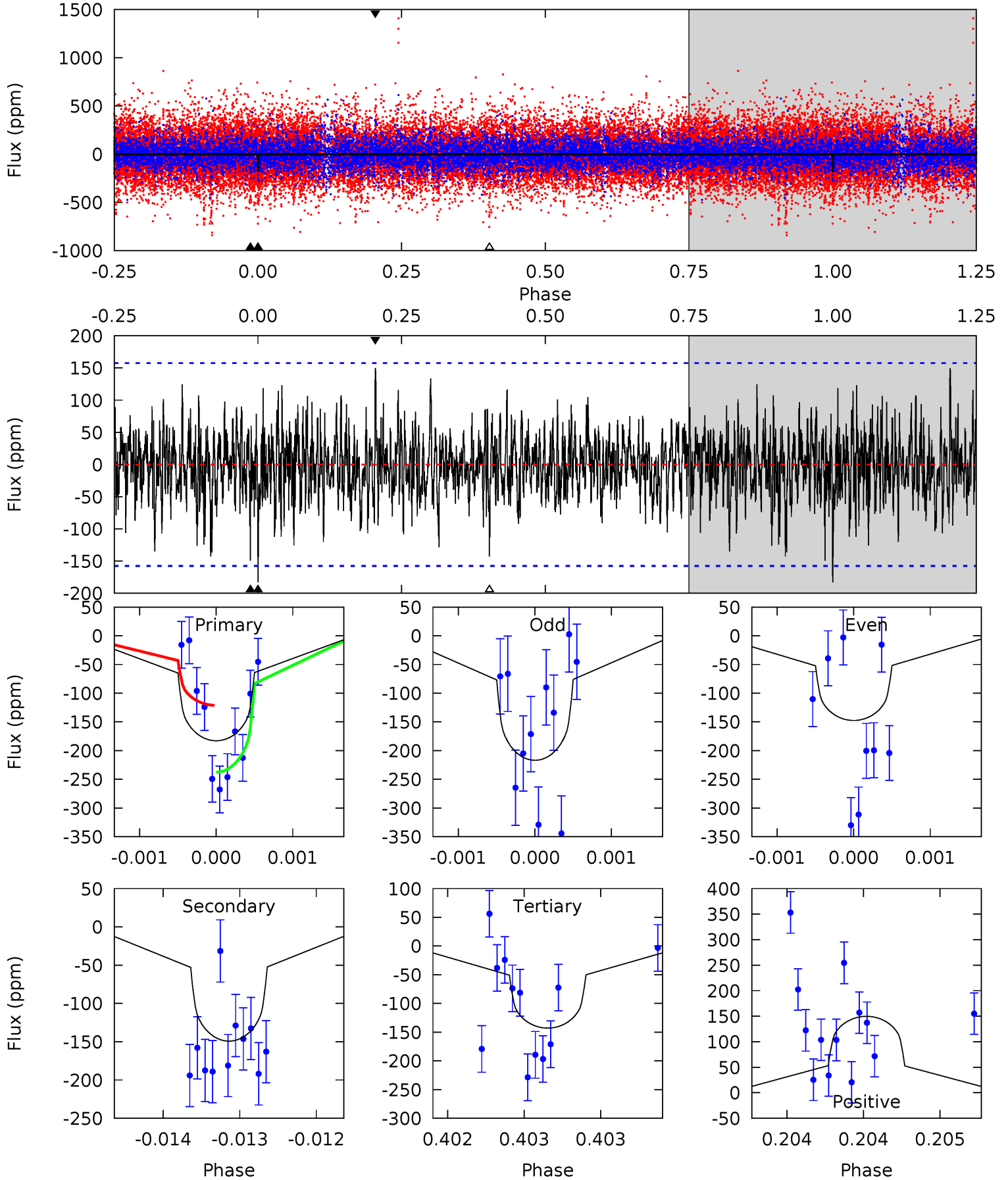
TCE 007281694-02 P=433.688689 Days $T_0=242.430843$ (BKJD)



DV Model-Shift Uniqueness Test

007281694-02, P = 433.607081 Days, E = 242.588583 Days

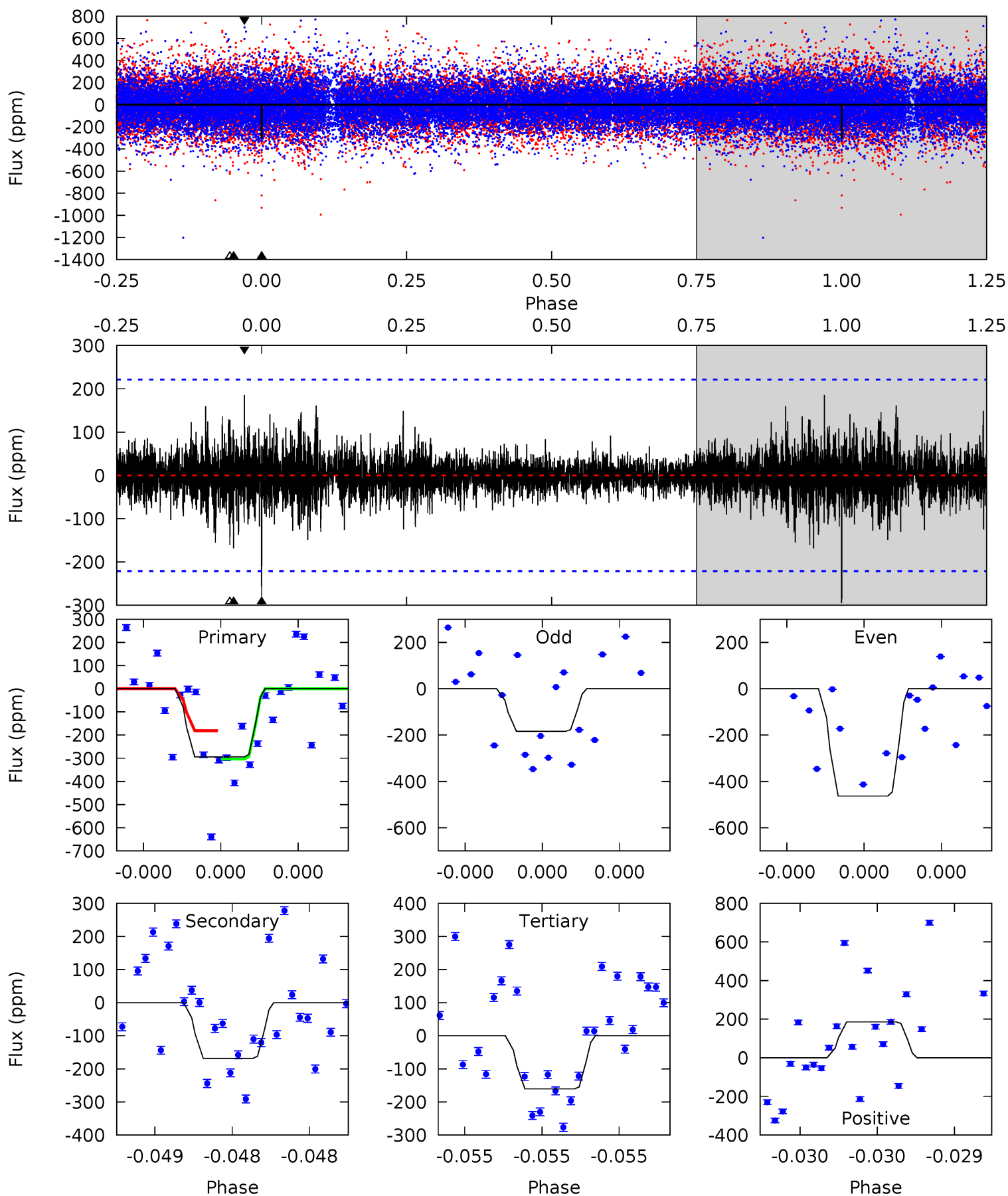
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.44	5.26	5.04	5.28	5.55	3.45	1.45	1.41	1.17	0.22	-0.02	1.21	1.24	0.45	2.05



Alt Model-Shift Uniqueness Test

007281694-02, P = 433.688689 Days, E = 242.430843 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.52	4.30	4.10	4.74	5.65	3.60	0.85	3.42	2.78	0.20	-0.44	3.55	0.91	0.39	1.51



Stellar Parameters For KIC 007281694

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5018^{+174}_{-139}	$3.953^{+0.598}_{-0.322}$	$0.320^{+0.100}_{-0.300}$	$1.734^{+0.962}_{-0.962}$	$0.985^{+0.203}_{-0.148}$	$0.266^{+2.055}_{-0.180}$
	+3%/-3%	+15%/-8%	+31%/-94%	+55%/-55%	+21%/-15%	+773%/-68%
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 007281694-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-149 ± 28	$4.02^{+3.05}_{-2.28}$	386^{+50}_{-52}	3970^{+1416}_{-571}	6208^{+26757}_{-4202}
Alt.	-168 ± 39	$3.58^{+3.24}_{-2.18}$	386^{+53}_{-62}	4213^{+2090}_{-698}	9371^{+47532}_{-6849}

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 $A_{obs} \gg 1.0$

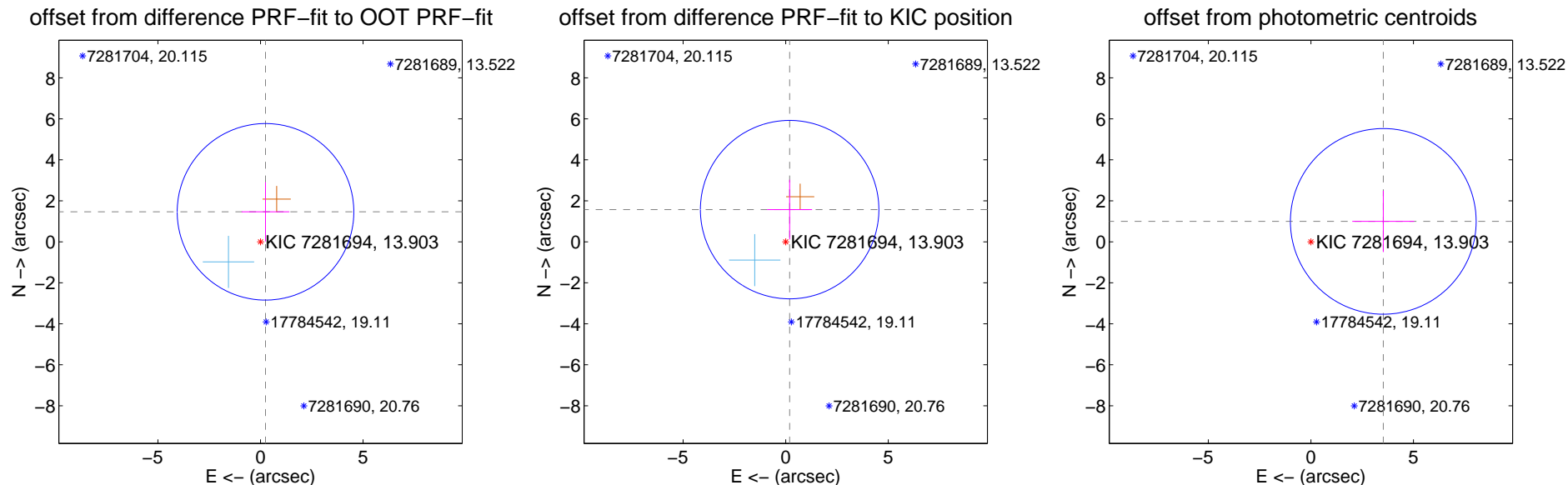
DV Centroid Data

Supplemental centroid analysis for 007281694-02. Kepler magnitude: 13.90. Transit SNR 7.20

There are 1 quarters with good PRF difference image offsets

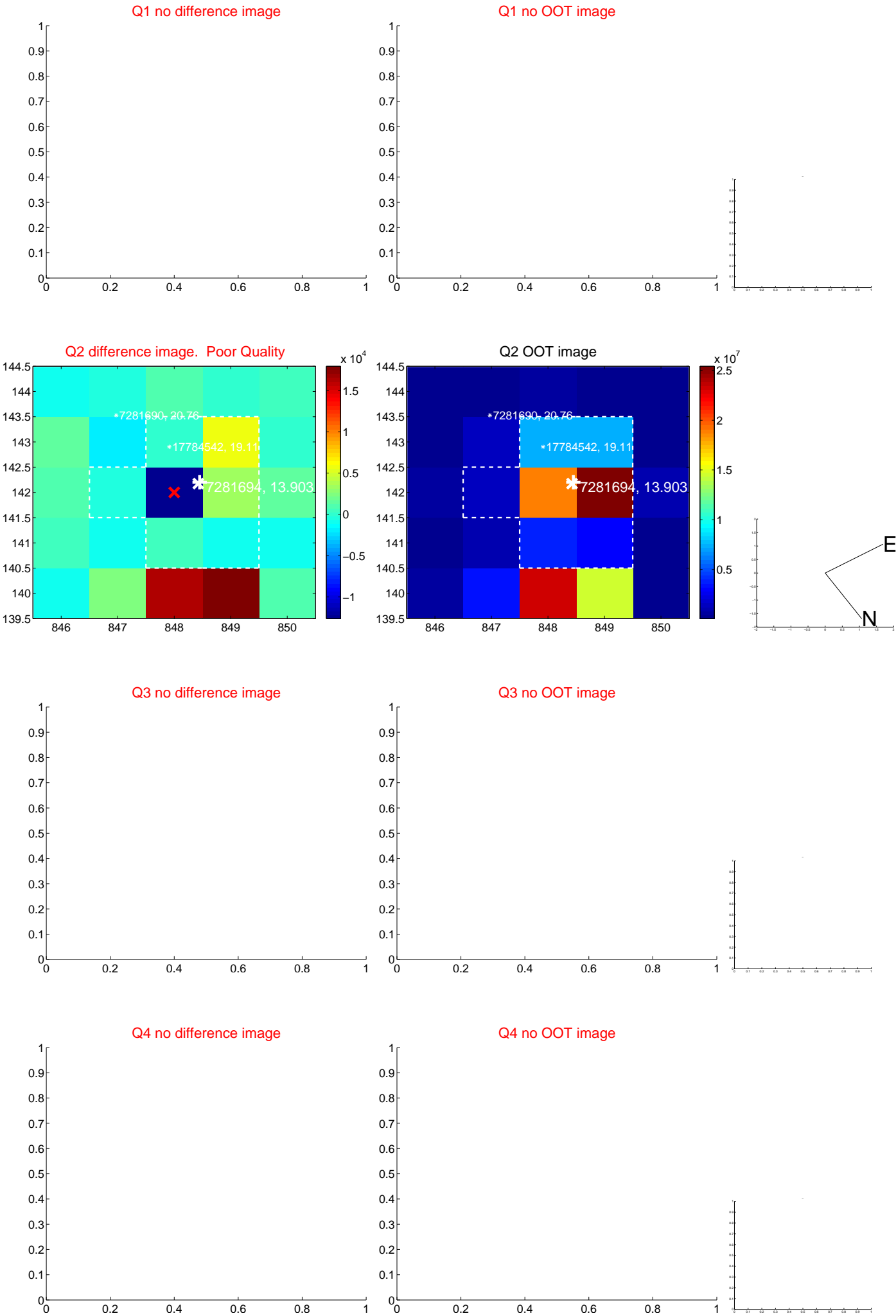
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.483 ± 1.435	1.03	-0.245 ± 1.162	1.463 ± 1.442
PRF-fit source offset from KIC position	1.582 ± 1.451	1.09	-0.192 ± 1.097	1.571 ± 1.455
photometric centroid source offset	3.67 ± 1.51	2.43	-3.53 ± 1.51	1.00 ± 1.50



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.

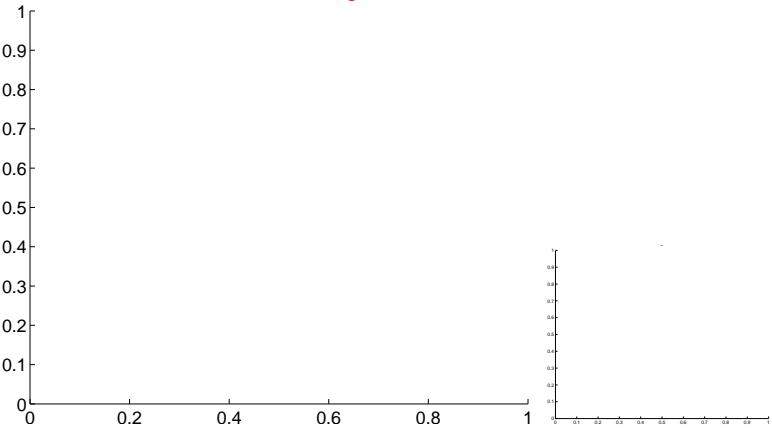


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q5 no difference image



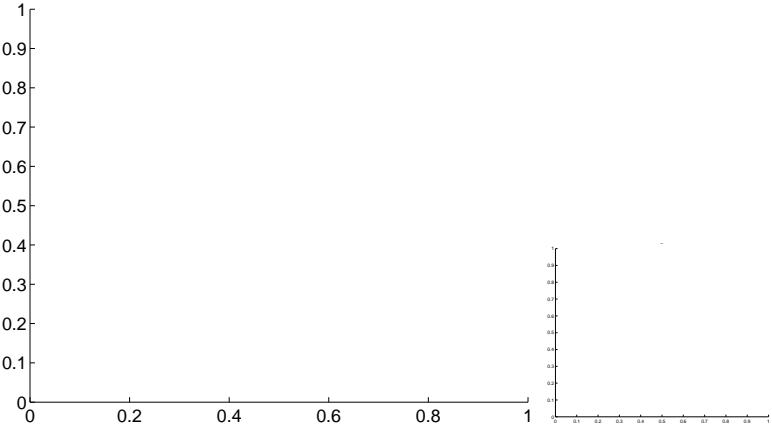
Q5 no OOT image



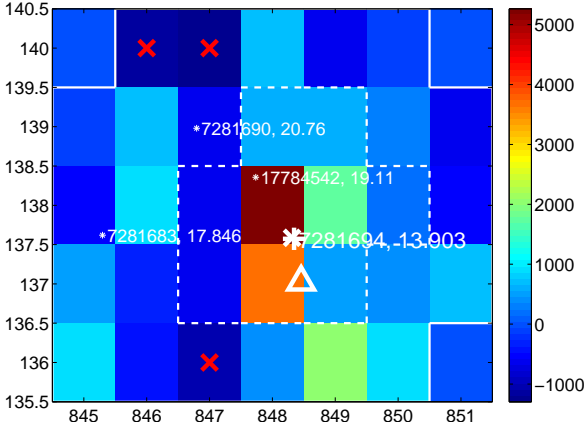
Q6 no difference image



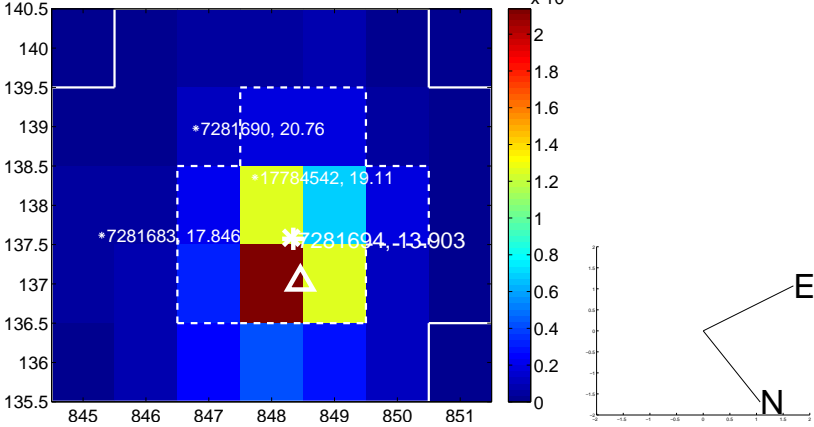
Q6 no OOT image



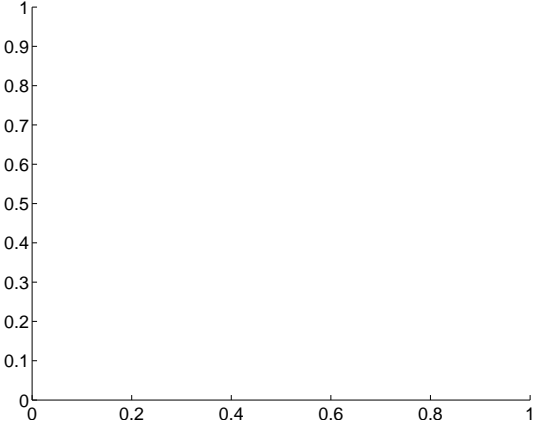
Q7 difference image. Poor Quality



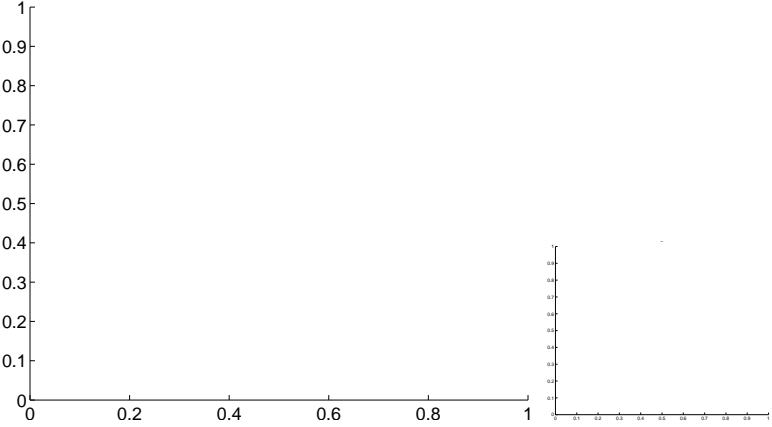
Q7 OOT image



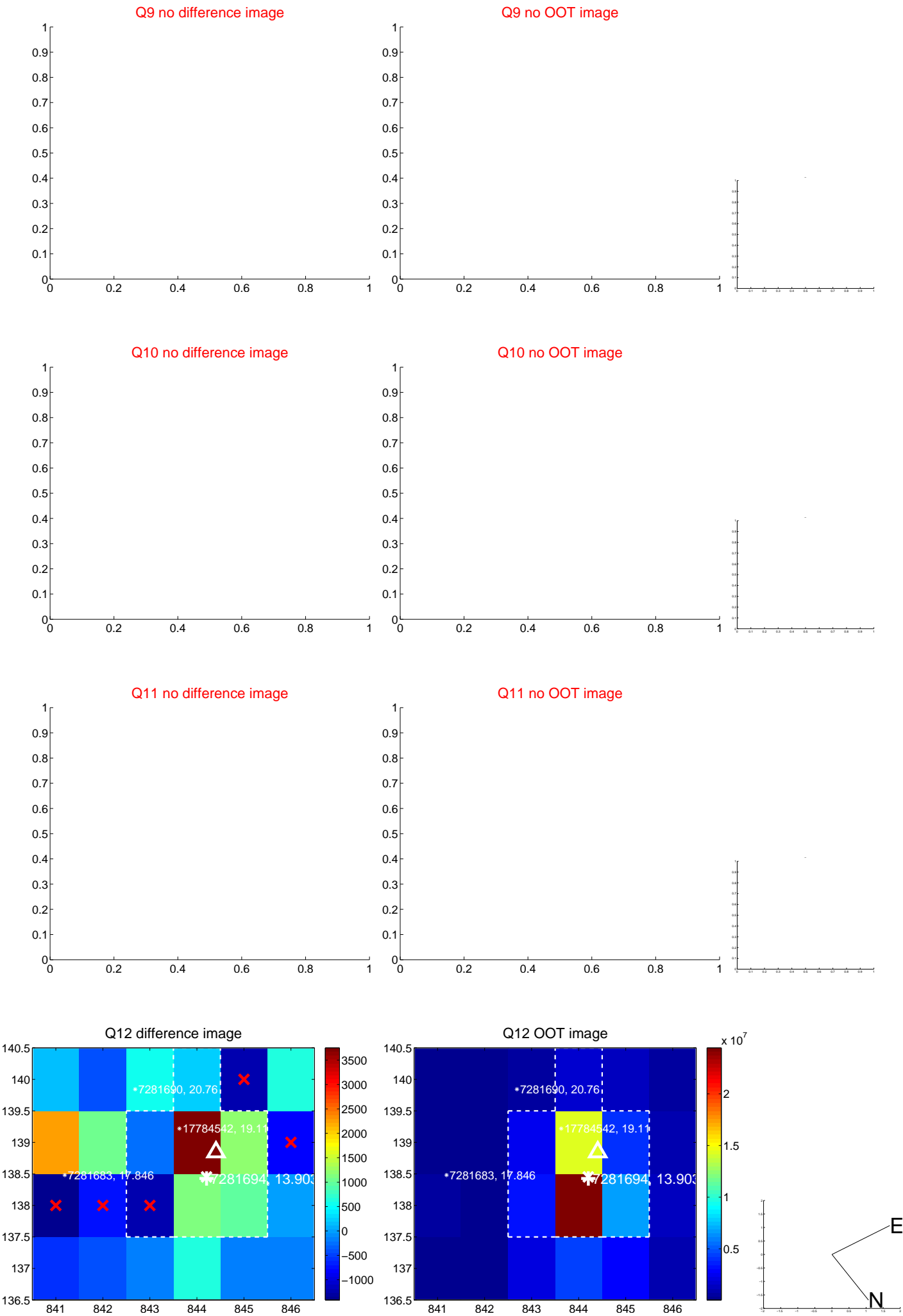
Q8 no difference image



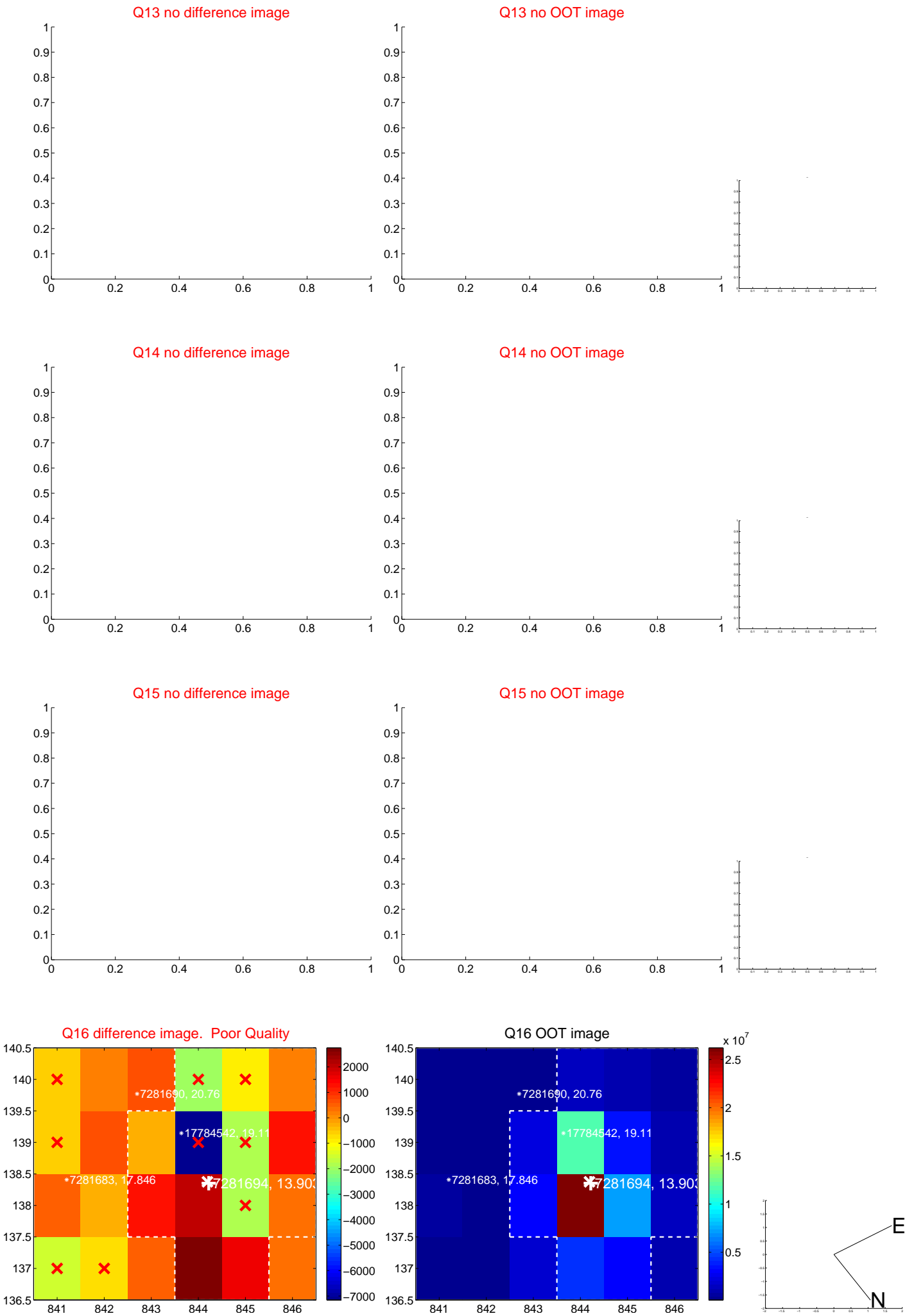
Q8 no OOT image



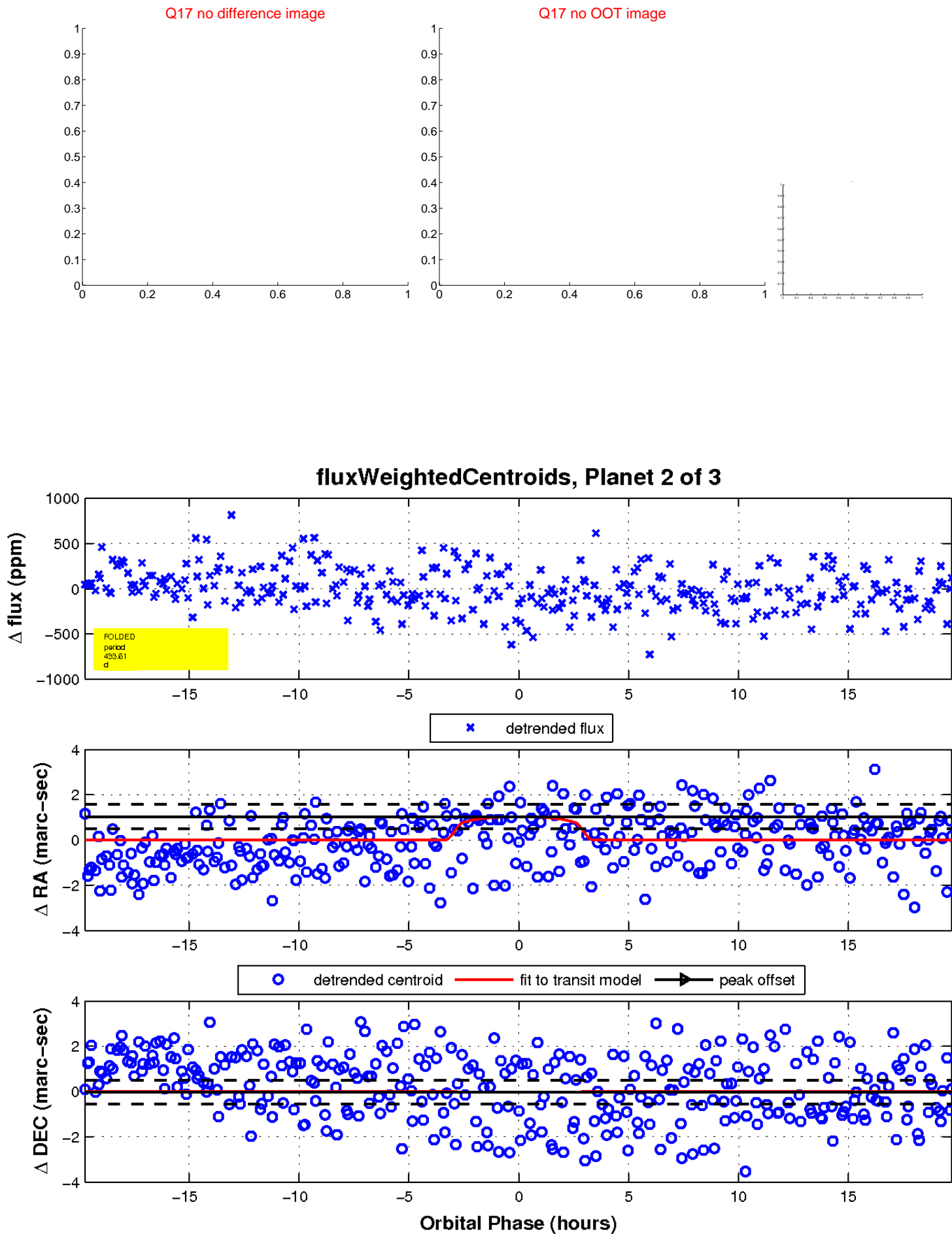
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

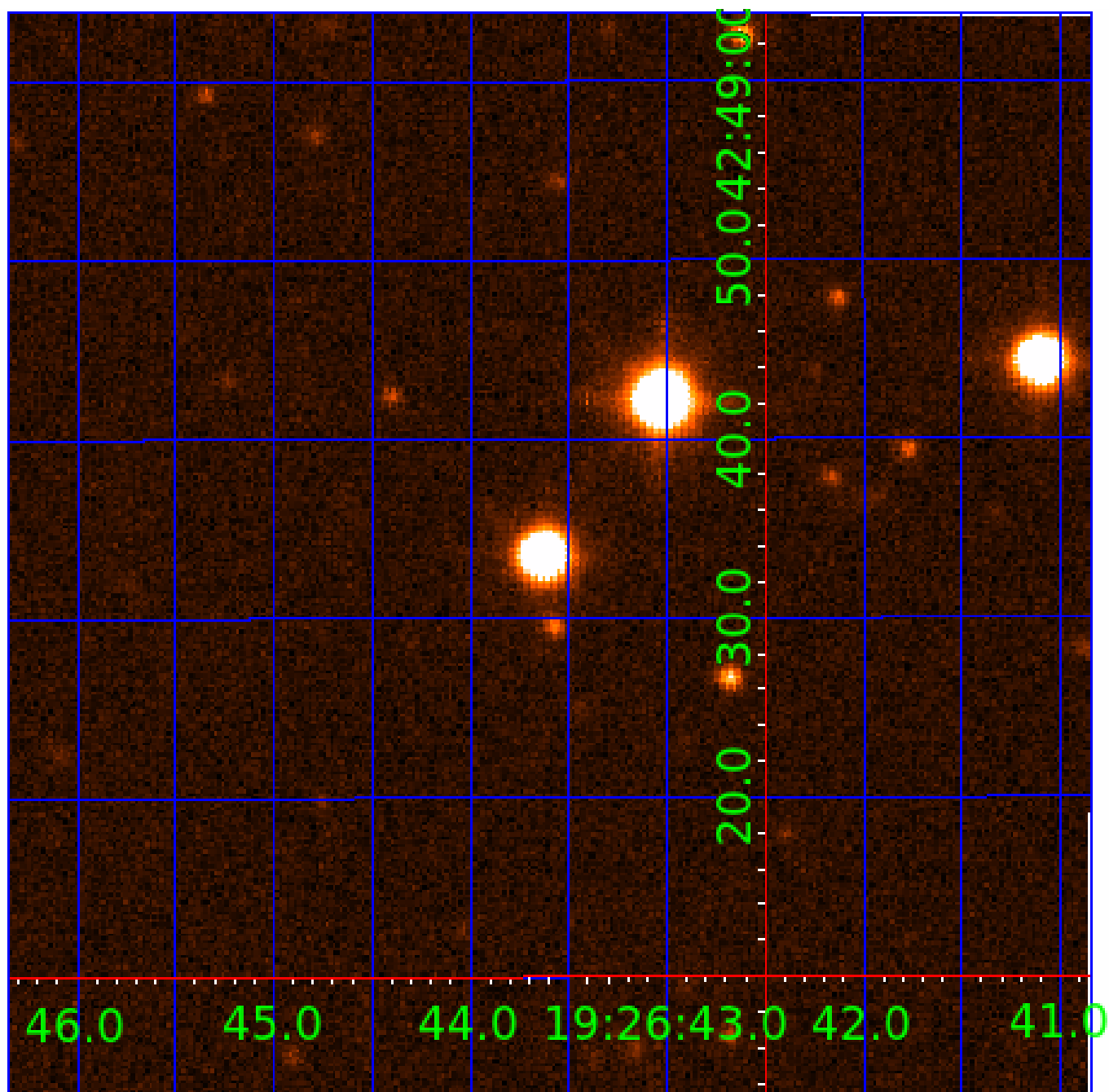


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007281694

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})
007281694-01	OBS	7584.01	0.566810	131.772553	25.0	2.346	10.0	10.2	1.73	5018	1.06	9604.31
007281694-02	OBS	No	433.607081	242.588584	350.5	6.591	14.3	7.2	1.73	5018	3.97	1.37
007281694-03	OBS	No	396.425211	313.309186	467.8	7.428	8.3	7.2	1.73	5018	4.10	1.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007281694-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_UNRESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH
007281694-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007281694-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_POS_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 007281694-03

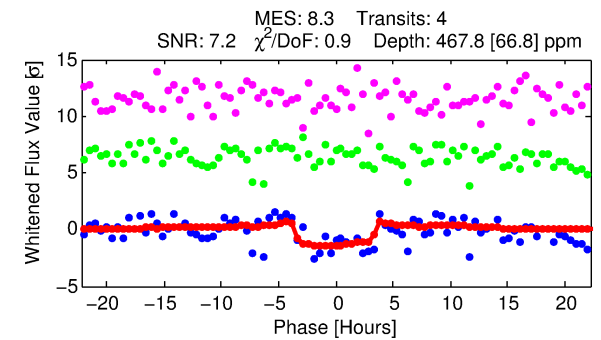
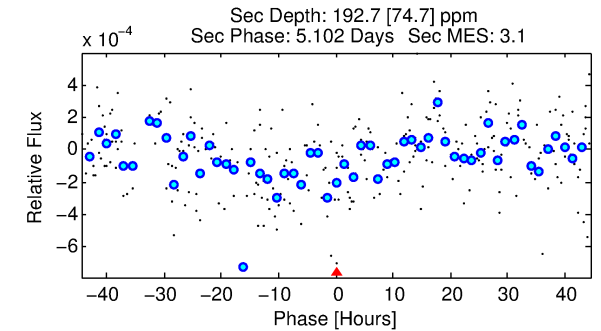
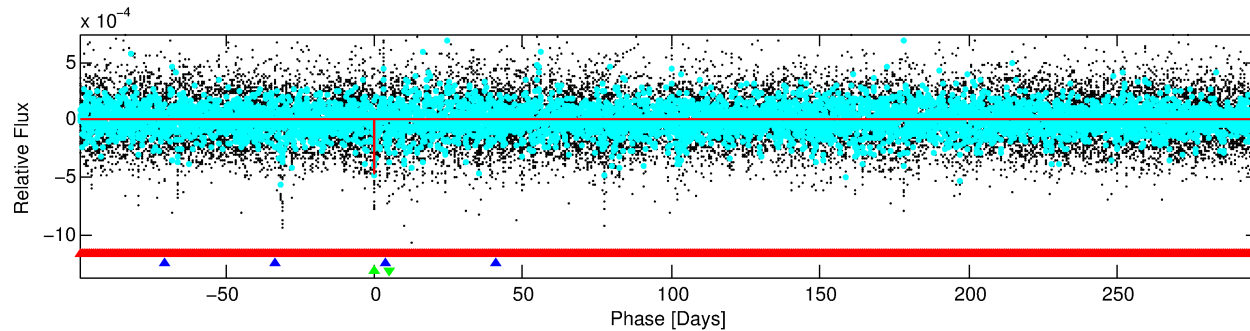
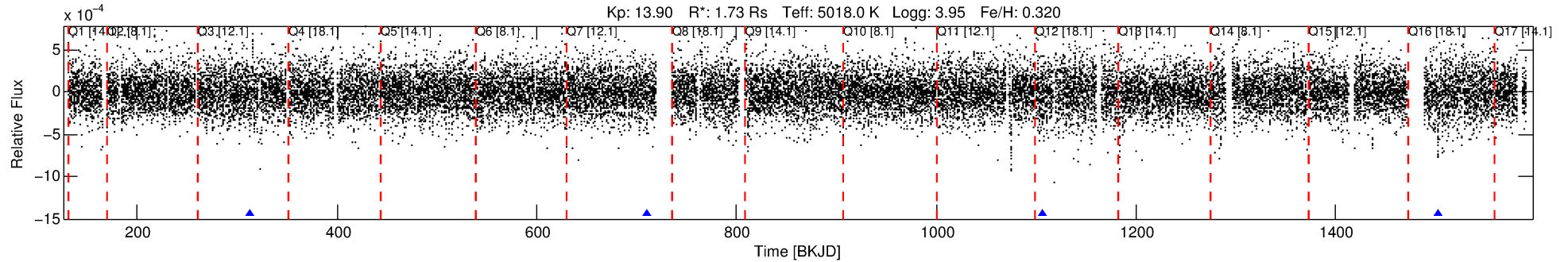
No Significant Match Found

DV One-Page Summary

KIC: 7281694 Candidate: 3 of 3 Period: 396.425 d

KOI: K07584 Corr: No Ephemeris Match

Kp: 13.90 R*: 1.73 Rs Teff: 5018.0 K Logg: 3.95 Fe/H: 0.320

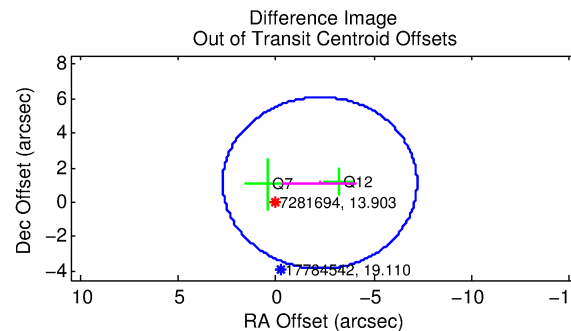
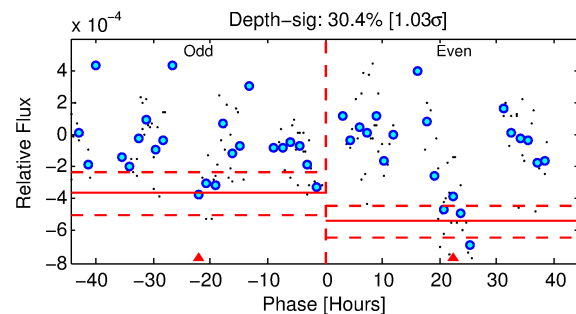
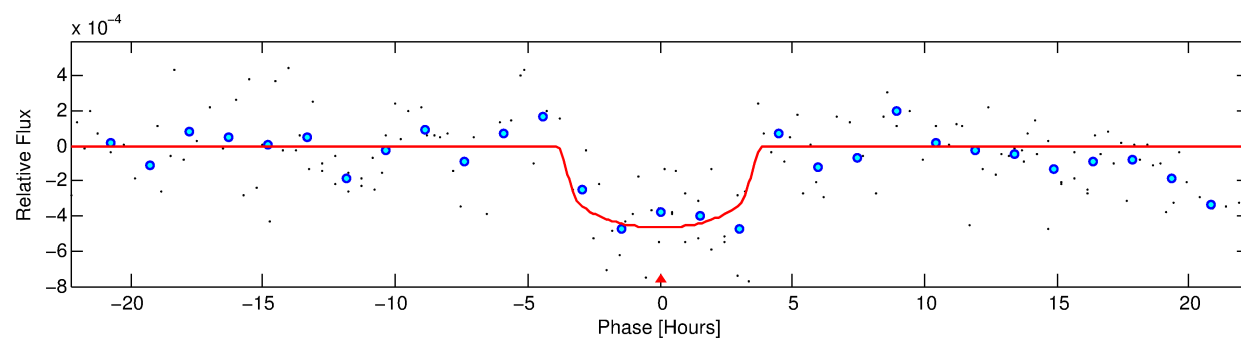


DV Fit Results:

Period = 396.42521 [0.00619] d
Epoch = 313.3092 [0.0117] BKJD
Rp/R* = 0.0217 [0.0138]
a/R* = 279.97 [616.33]
b = 0.76 [1.26]
Seff = 1.55 [1.55]
Teq = 284 [71] K
Rp = 4.10 [3.47] Re
a = 1.0508 [0.6194] AU
Ag = 6956.72 [11553.63] [0.60σ]
Teffp = 4016 [1346] K [2.77σ]

DV Diagnostic Results:

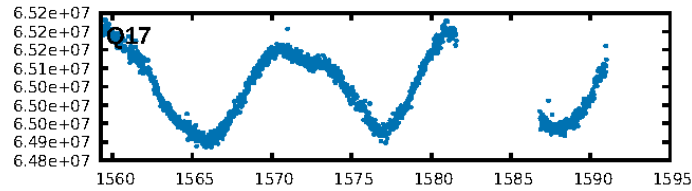
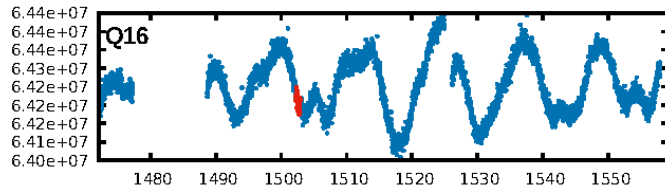
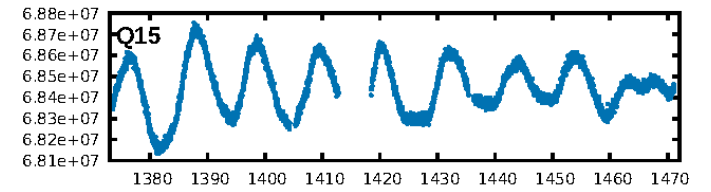
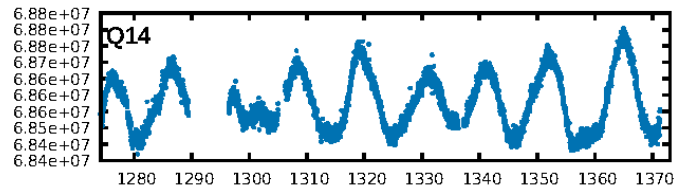
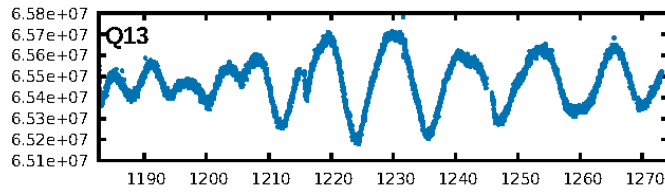
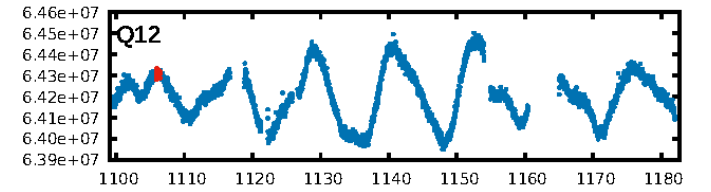
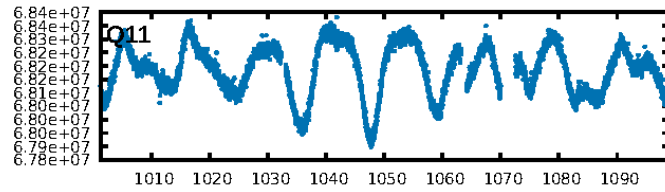
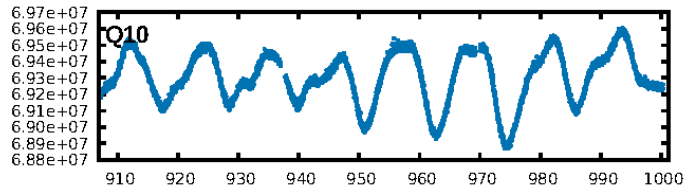
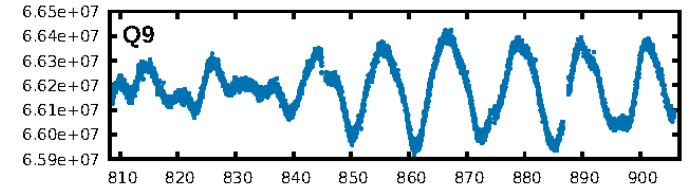
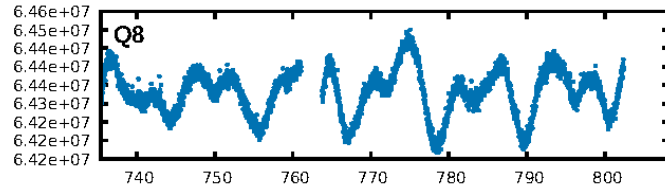
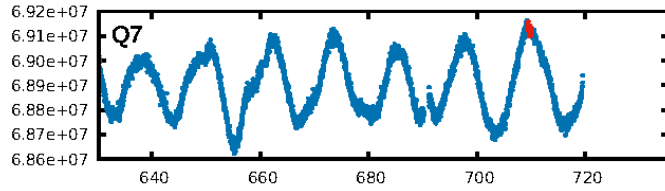
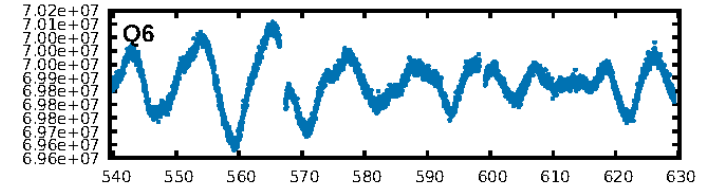
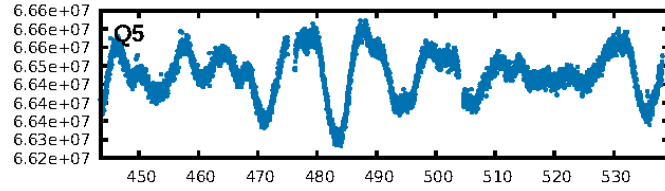
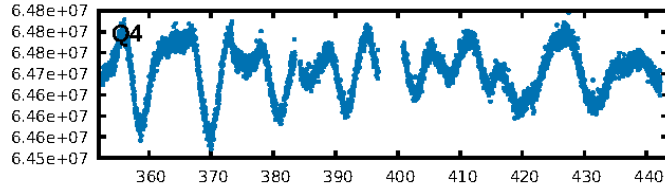
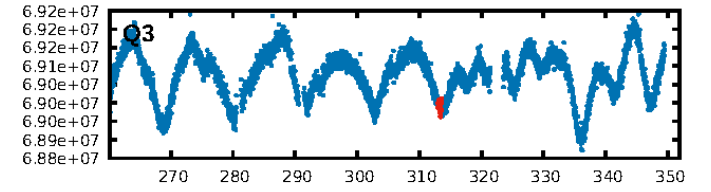
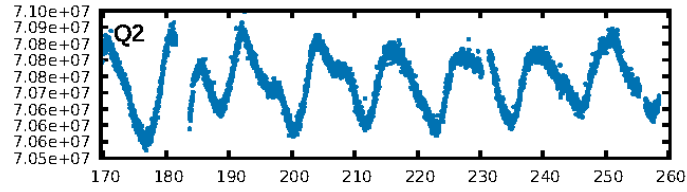
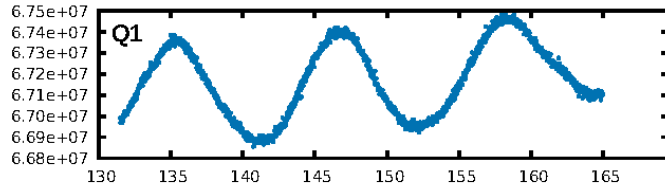
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ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.39e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.7423
Centroid-sig: 1.0%
Centroid-so: 1.809 arcsec [1.61σ]
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OotOffset-st: 0/1/1/0 [2]
KicOffset-rm: 2.572 arcsec [1.54σ]
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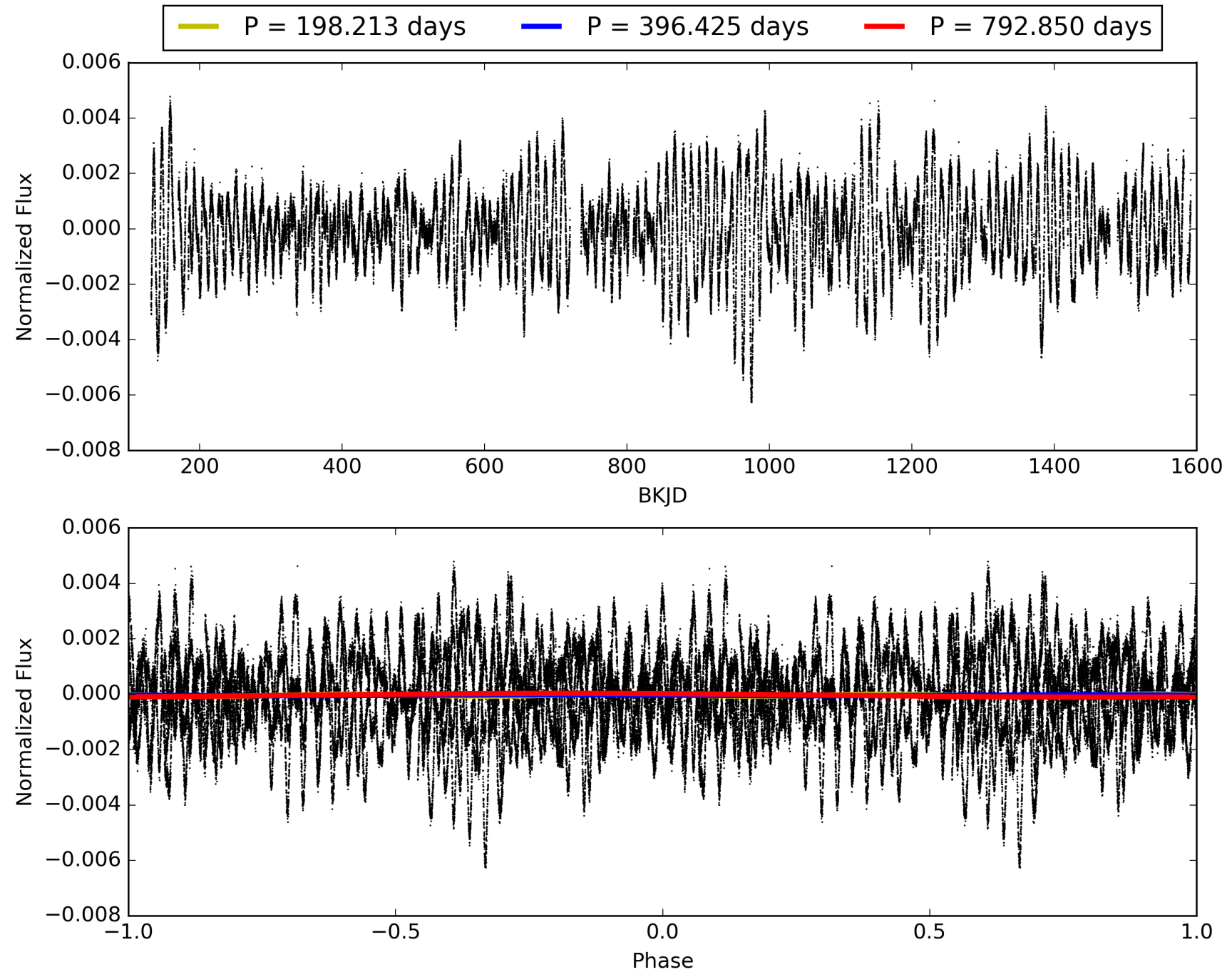
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:37:36 Z

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

TCE 007281694-03, PDC Light Curves

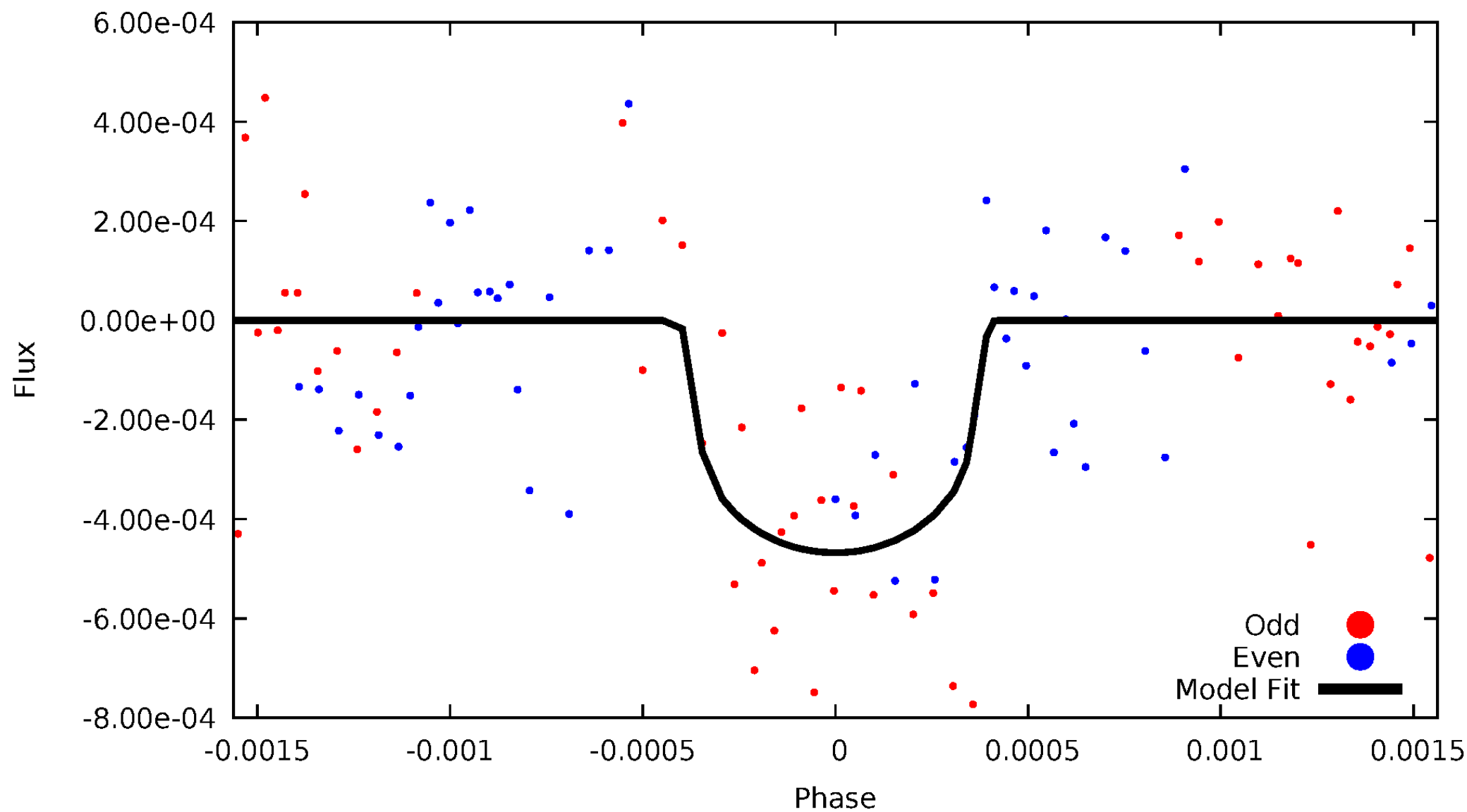


TCE 007281694-03



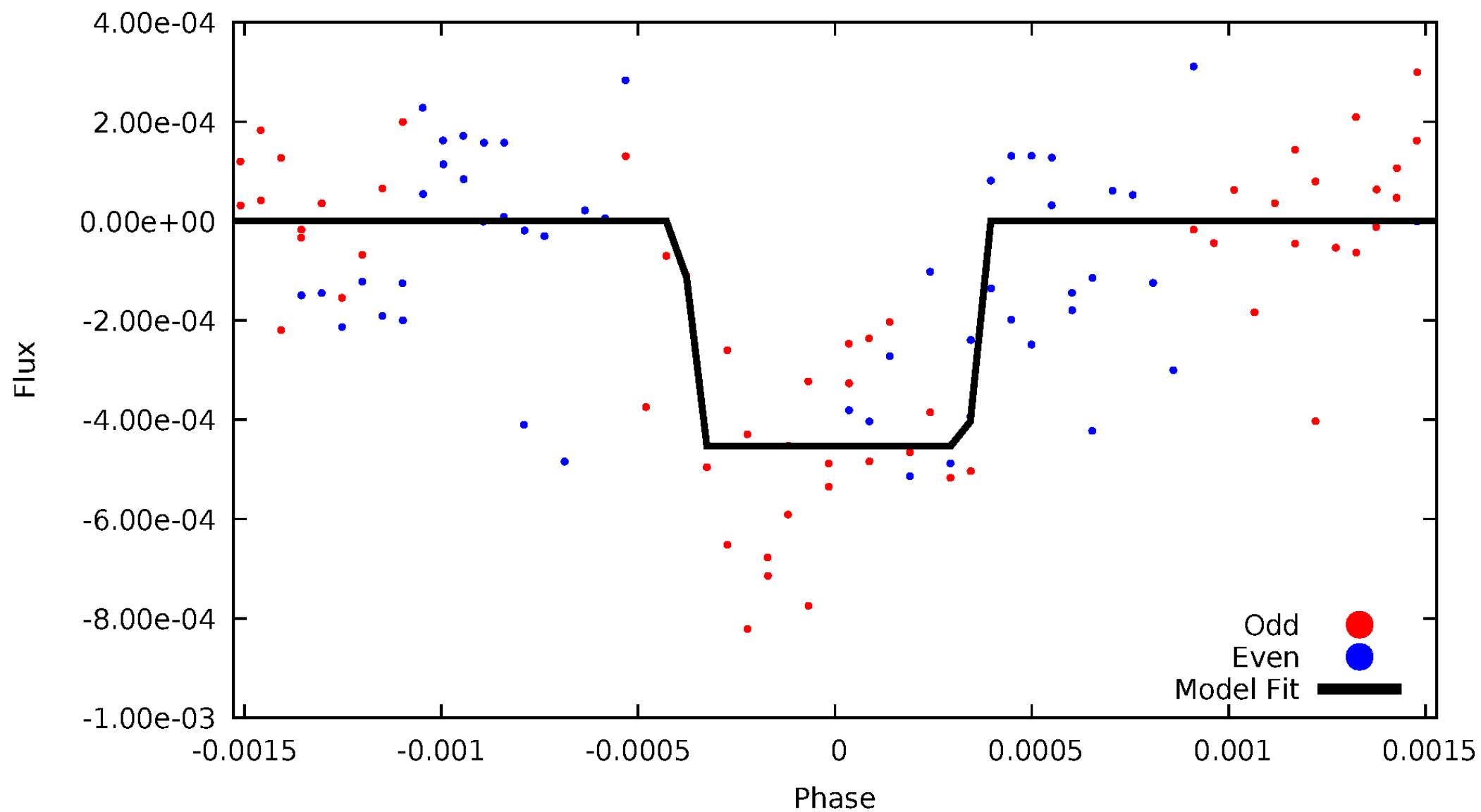
DV Odd/Even

TCE 007281694-03

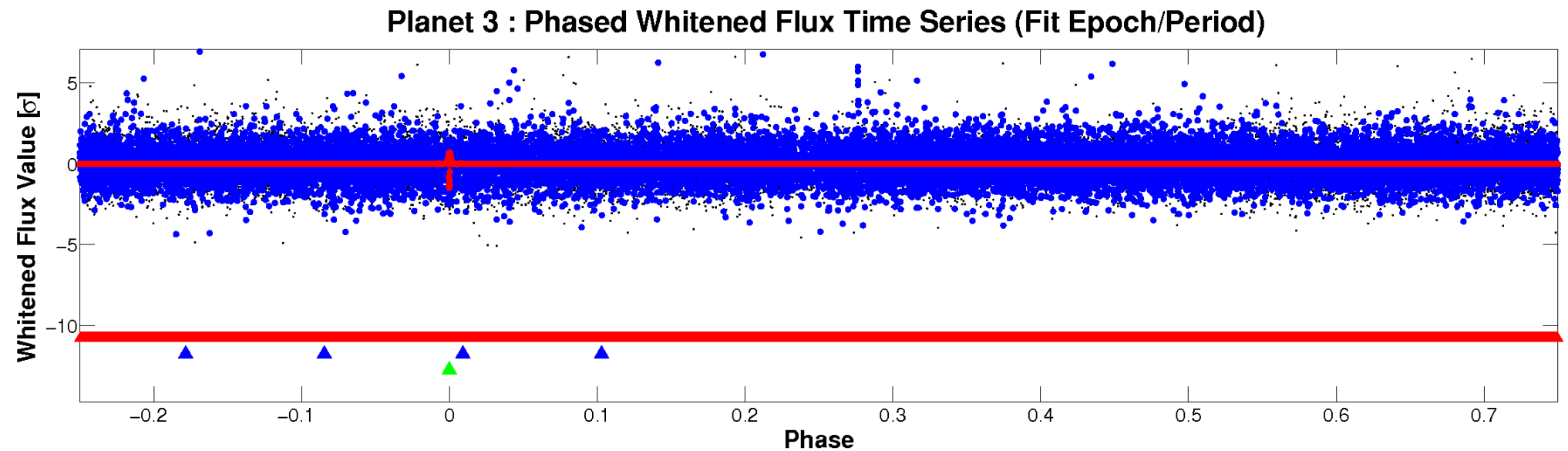
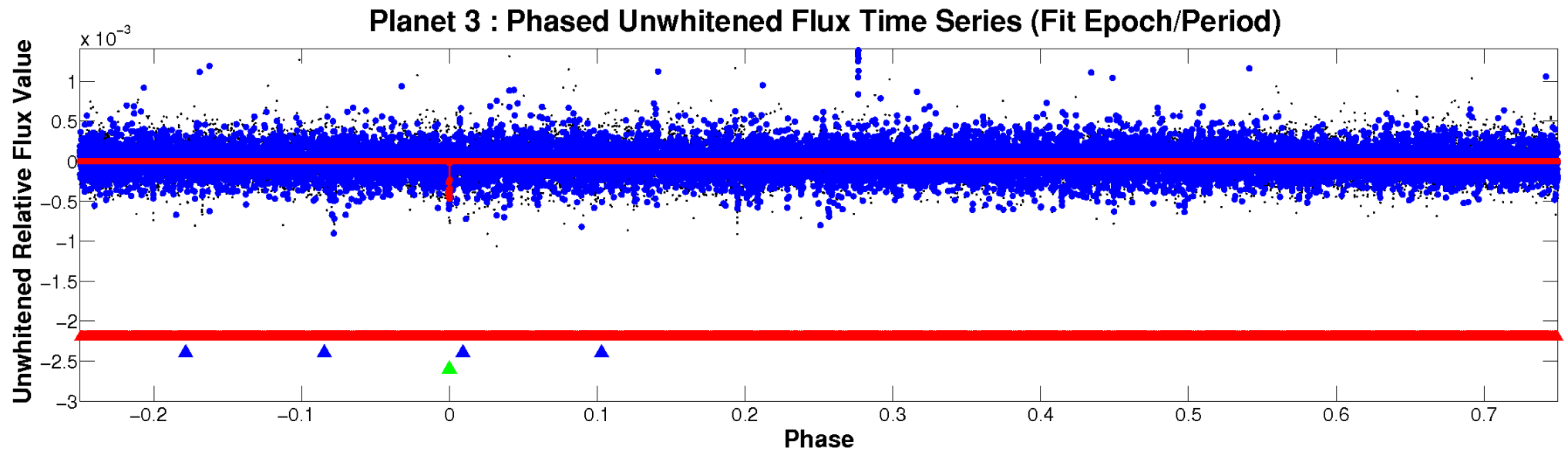


ALT Odd/Even

TCE 007281694-03

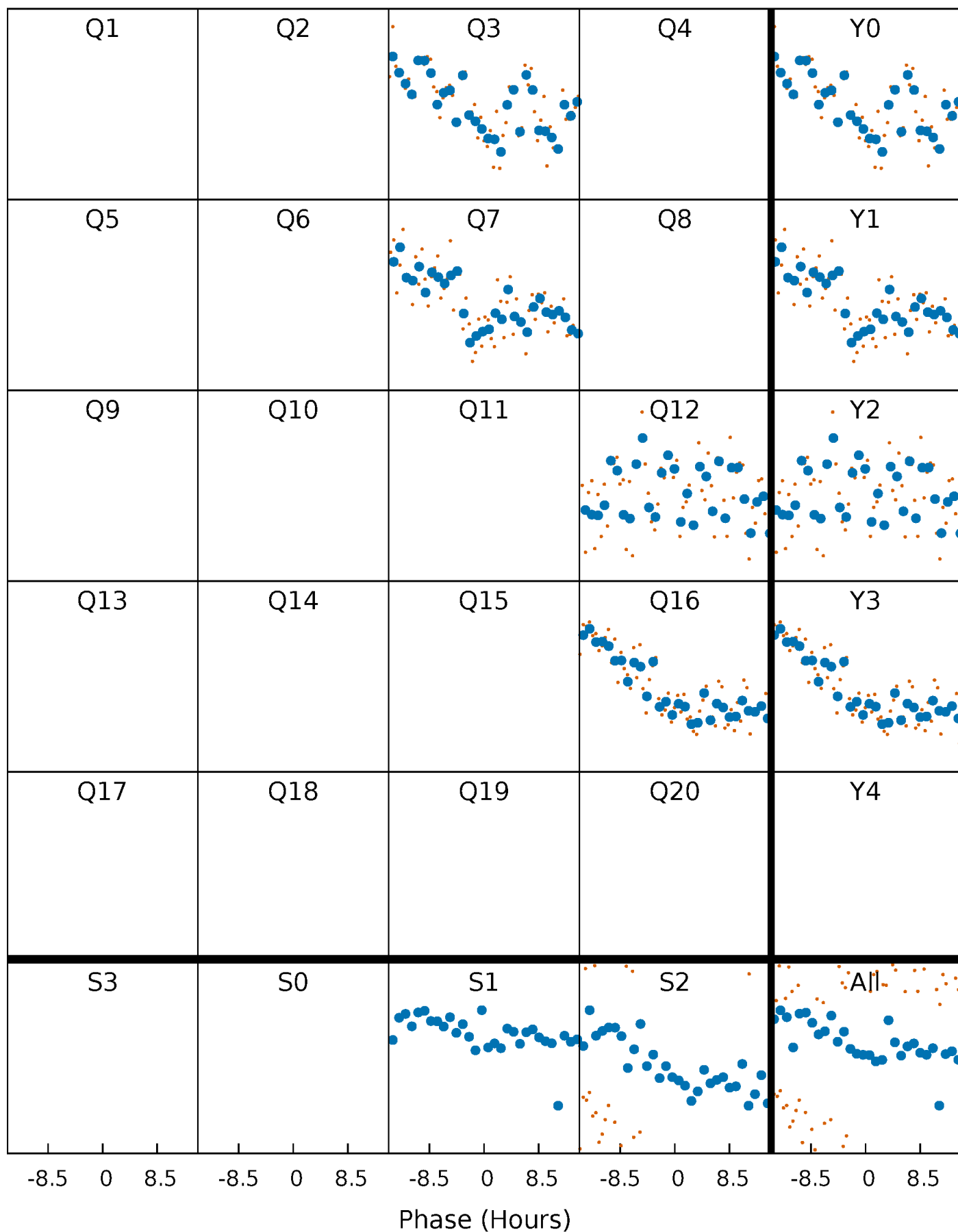


Non-Whitened Vs. Whitened Light Curve



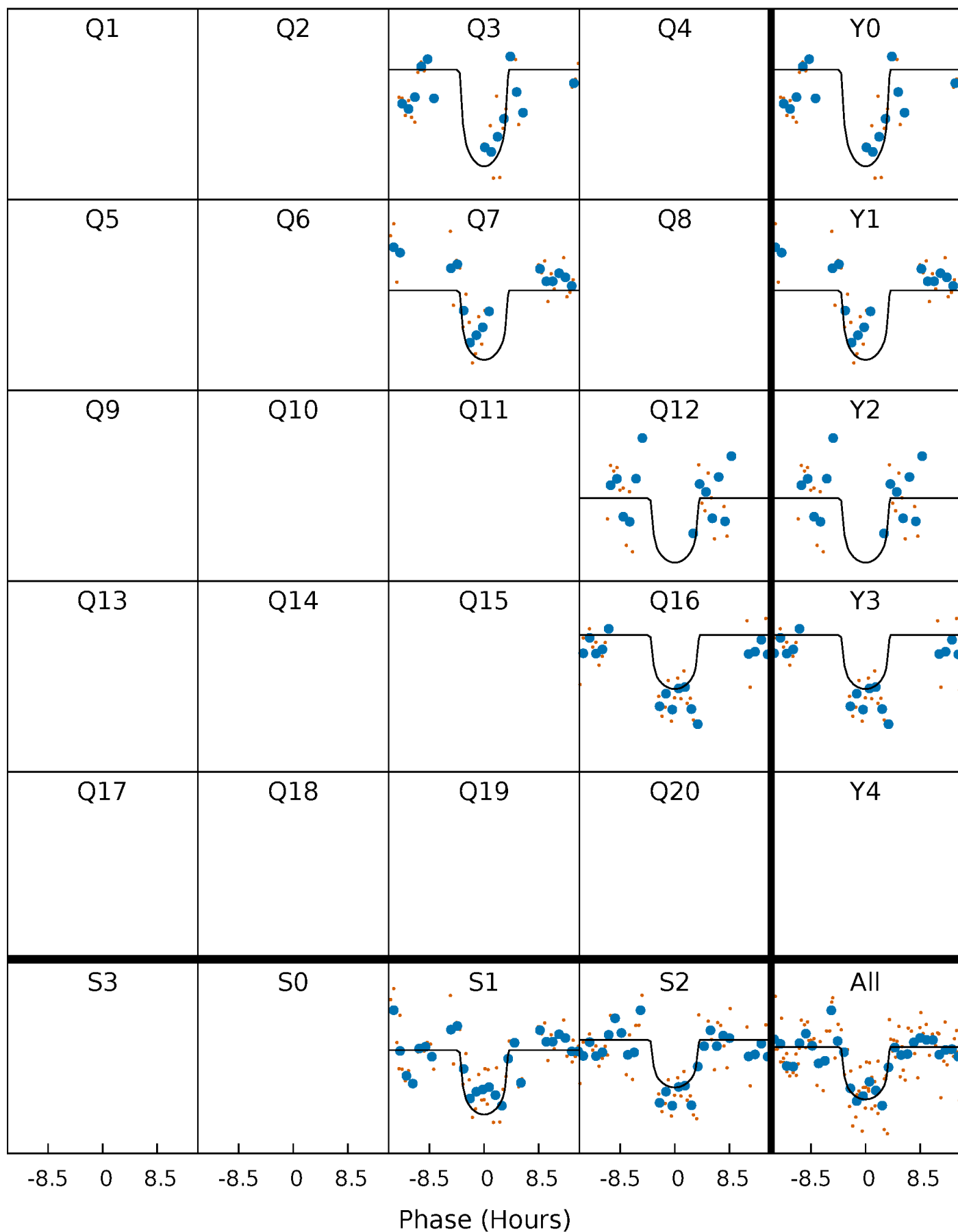
PDC Quarter-Phased Transit Curves

TCE 007281694-03 $P=396.425211$ Days $T_0=313.309186$ (BKJD)



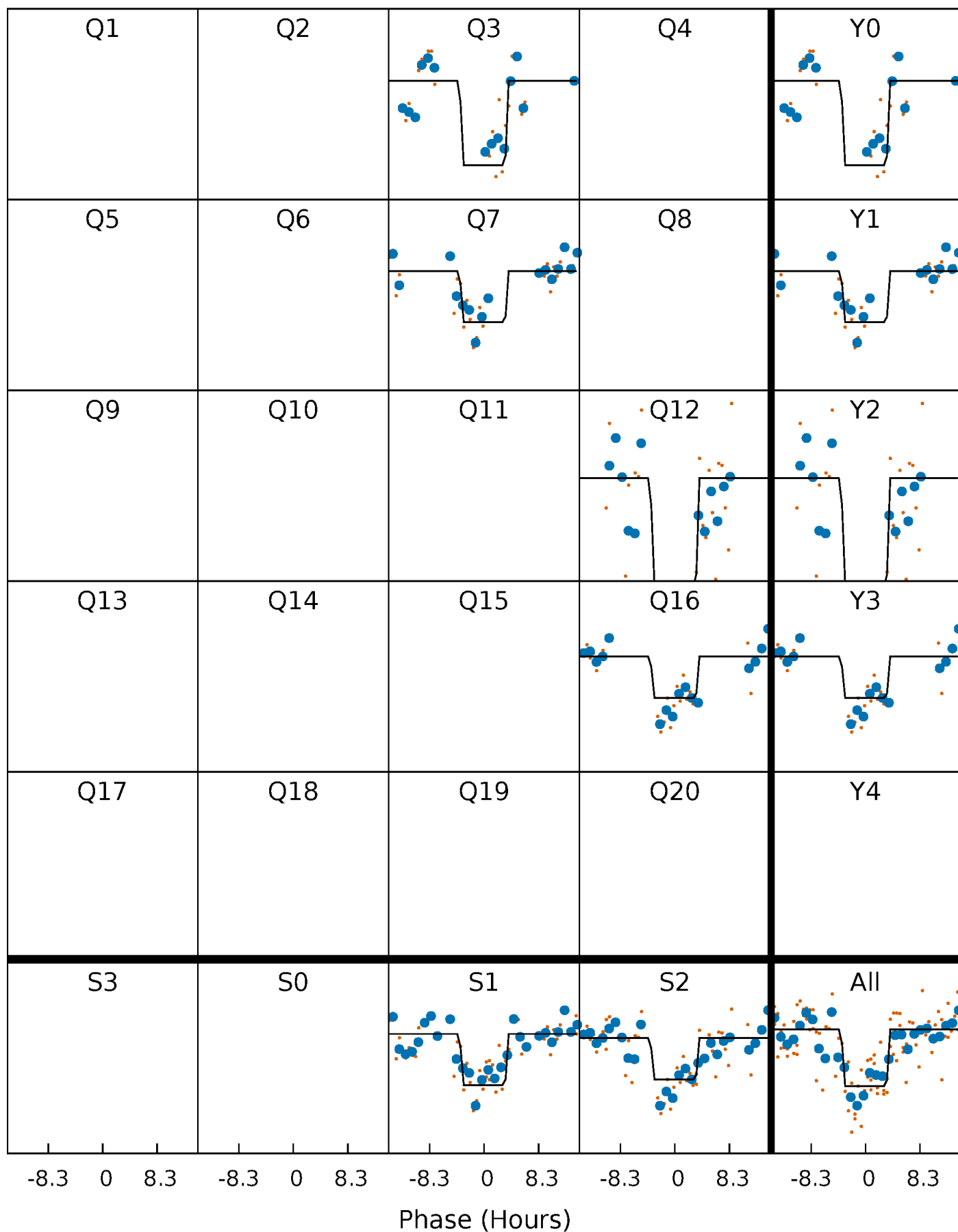
DV Quarter-Phased Transit Curves

TCE 007281694-03 $P=396.425211$ Days $T_0=313.309186$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

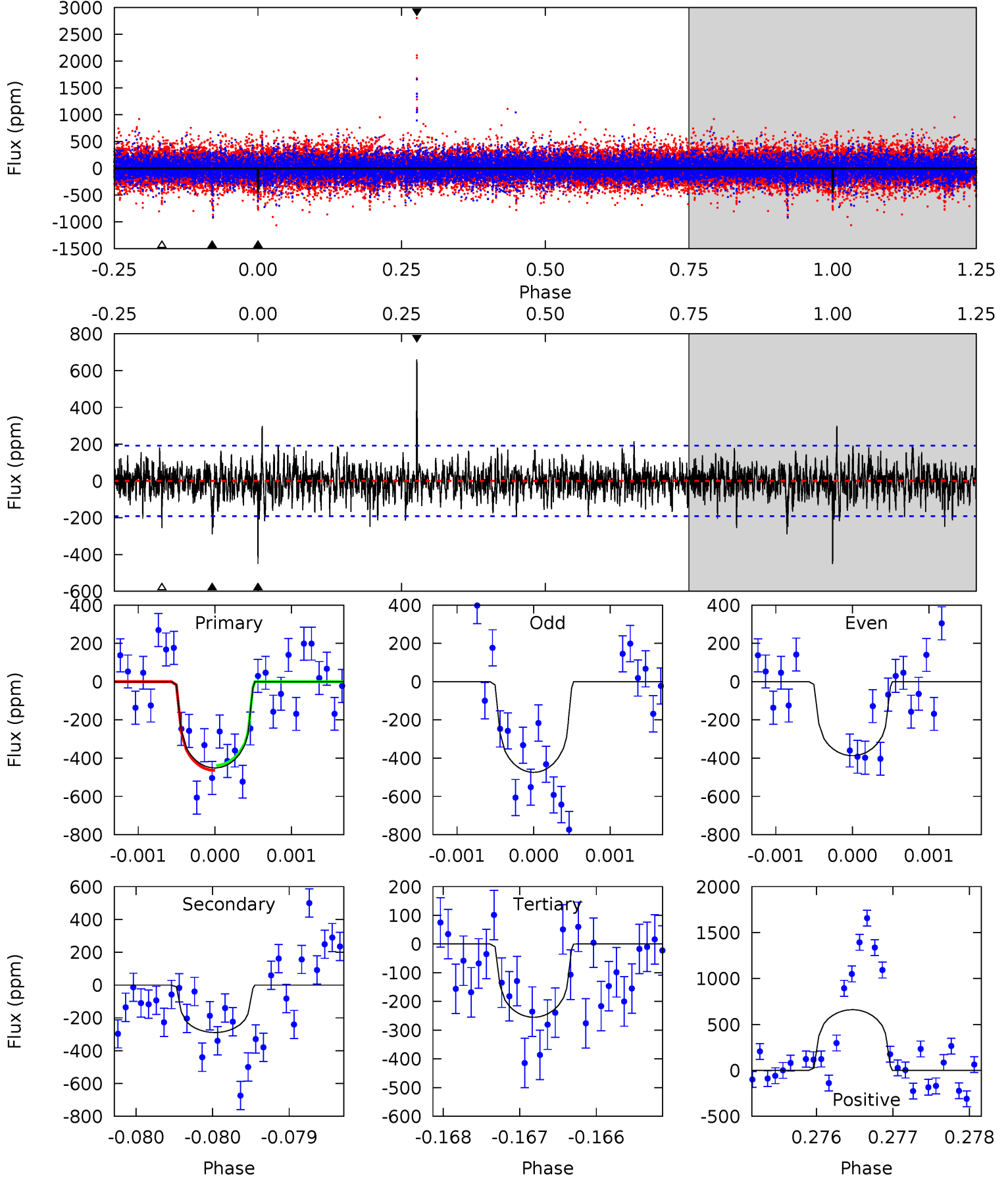
TCE 007281694-03 $P=396.431497$ Days $T_0=313.294952$ (BKJD)



DV Model-Shift Uniqueness Test

007281694-03, P = 396.425211 Days, E = 313.309186 Days

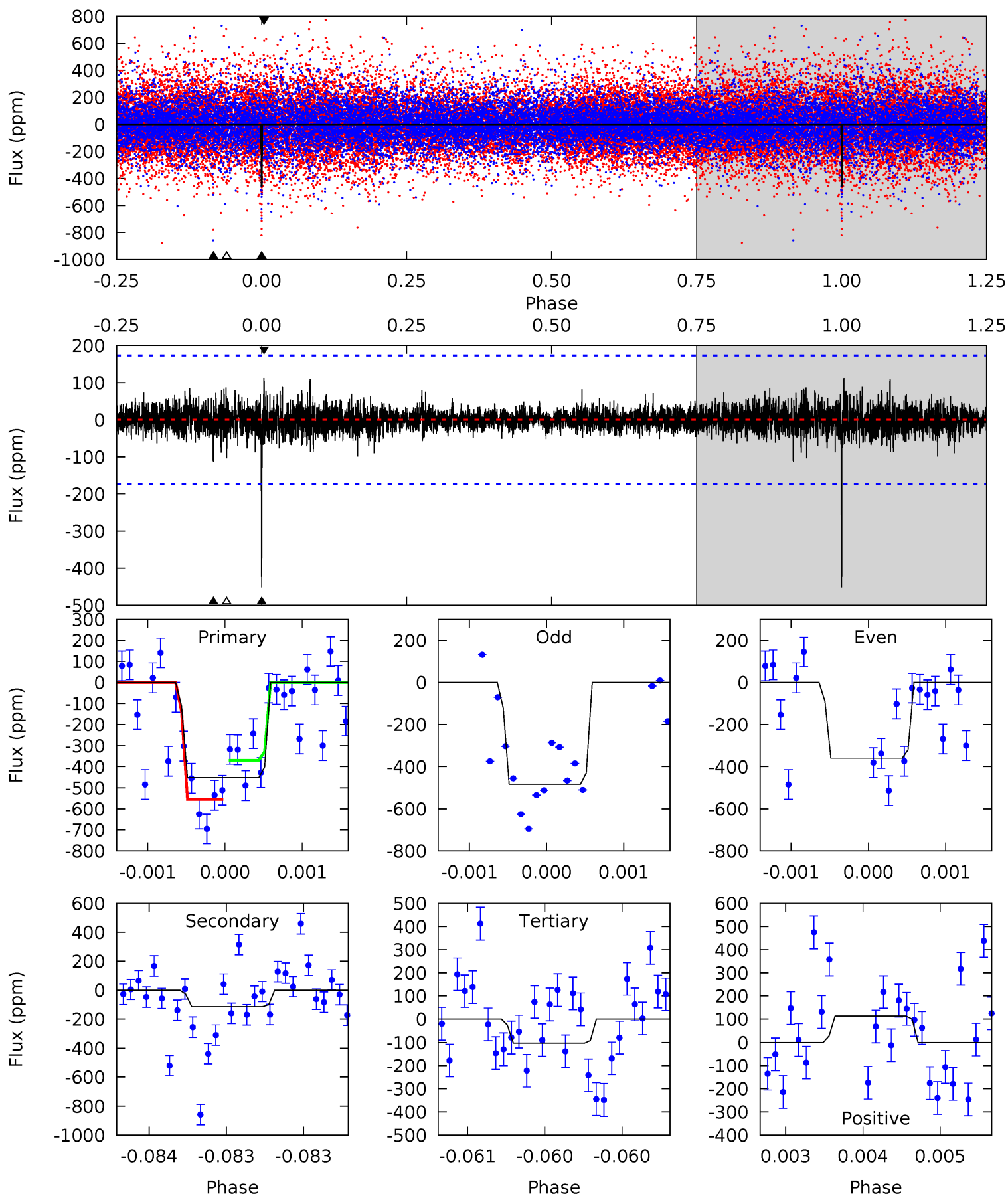
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	8.30	7.31	18.9	5.49	3.36	1.83	5.62	-6.00	0.99	-10.6	1.22	1.09	0.59	0.36



Alt Model-Shift Uniqueness Test

007281694-03, P = 396.431497 Days, E = 313.294952 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	3.61	3.30	3.60	5.52	3.40	0.68	11.1	10.8	0.32	0.01	1.68	1.04	0.20	2.93



Stellar Parameters For KIC 007281694

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5018^{+174}_{-139}	$3.953^{+0.598}_{-0.322}$	$0.320^{+0.100}_{-0.300}$	$1.734^{+0.962}_{-0.962}$	$0.985^{+0.203}_{-0.148}$	$0.266^{+2.055}_{-0.180}$
	+3%/-3%	+15%/-8%	+31%/-94%	+55%/-55%	+21%/-15%	+773%/-68%
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 007281694-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-289 ± 35	$4.14^{+3.08}_{-2.49}$	393^{+61}_{-54}	4469^{+2089}_{-668}	10553^{+57666}_{-6959}
Alt.	-113 ± 31	$4.07^{+3.24}_{-2.28}$	394^{+59}_{-62}	3742^{+1188}_{-526}	4030^{+15769}_{-2767}

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 $A_{obs} \gg 1.0$

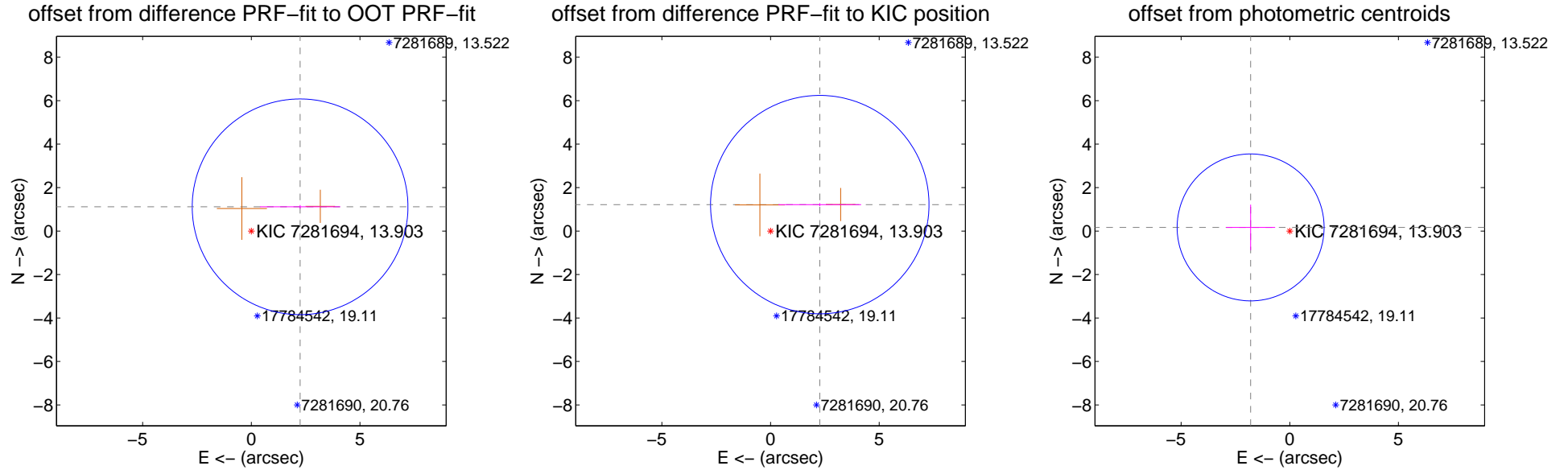
DV Centroid Data

Supplemental centroid analysis for 007281694-03. Kepler magnitude: 13.90. Transit SNR 7.19

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.506 ± 1.654	1.52	-2.244 ± 1.847	1.116 ± 0.083
PRF-fit source offset from KIC position	2.572 ± 1.675	1.54	-2.265 ± 1.901	1.217 ± 0.067
photometric centroid source offset	1.81 ± 1.13	1.61	1.80 ± 1.13	0.17 ± 1.05



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

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

Q1 no difference image



Q1 no OOT image



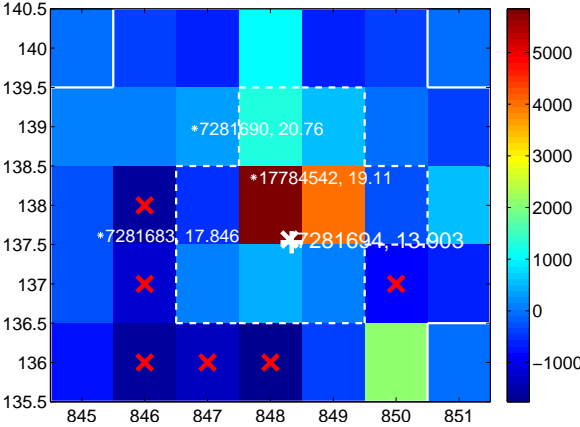
Q2 no difference image



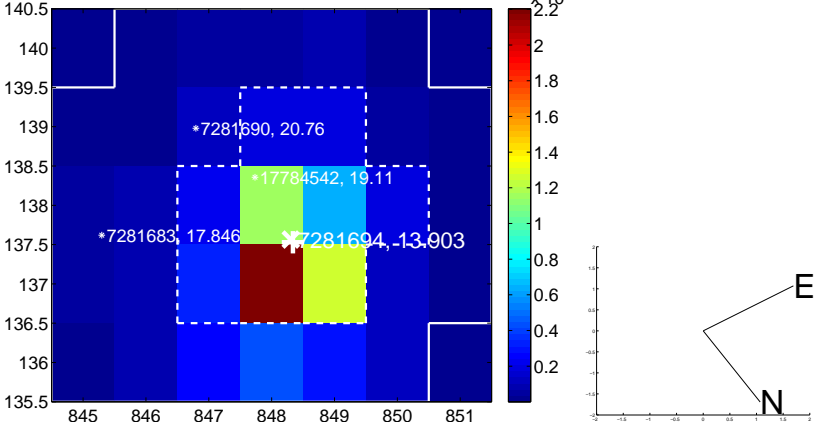
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



Q4 no difference image



Q4 no OOT image



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

Q5 no difference image



Q5 no OOT image



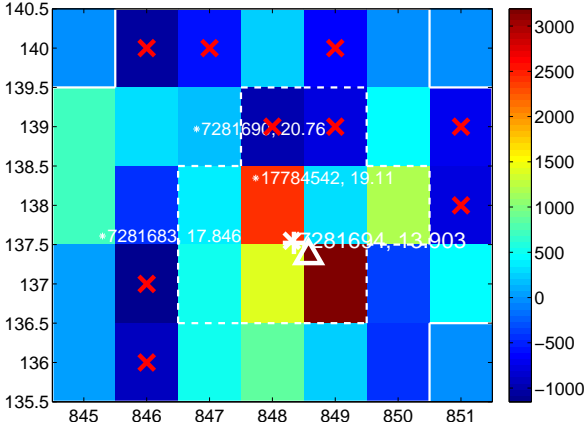
Q6 no difference image



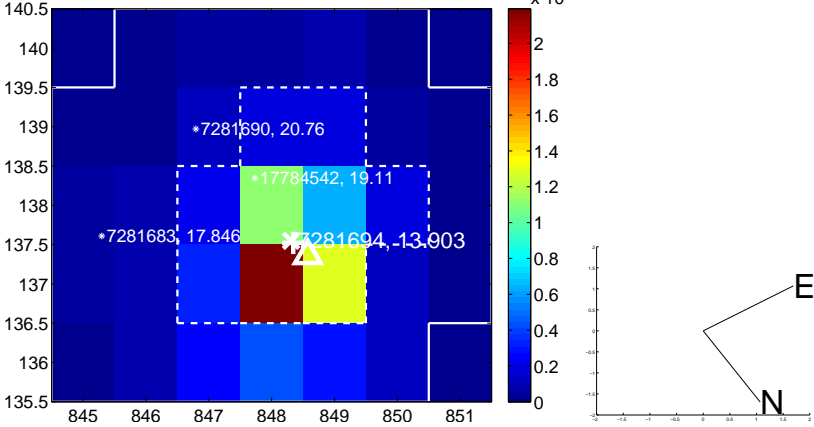
Q6 no OOT image



Q7 difference image. Poor Quality



Q7 OOT image



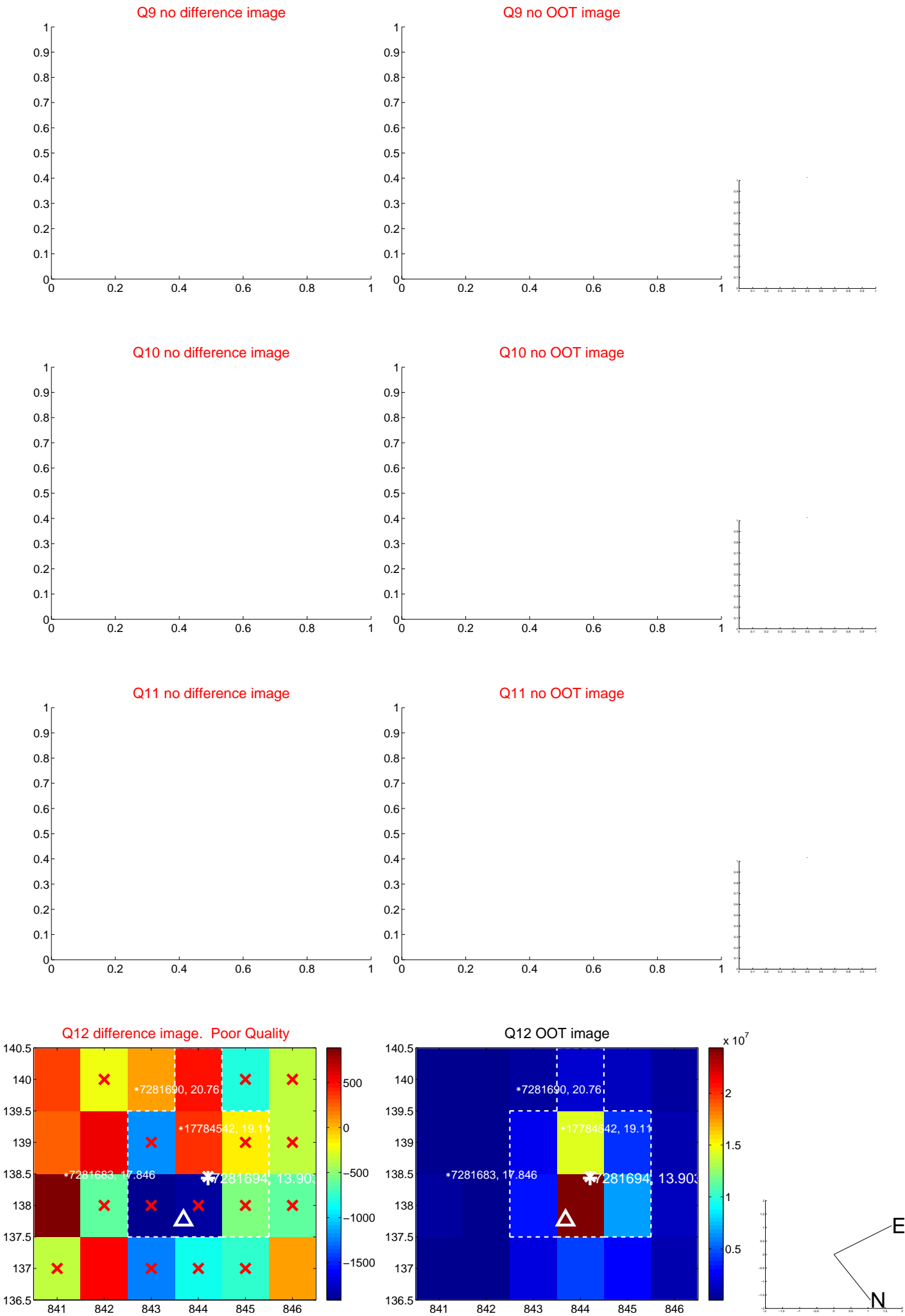
Q8 no difference image



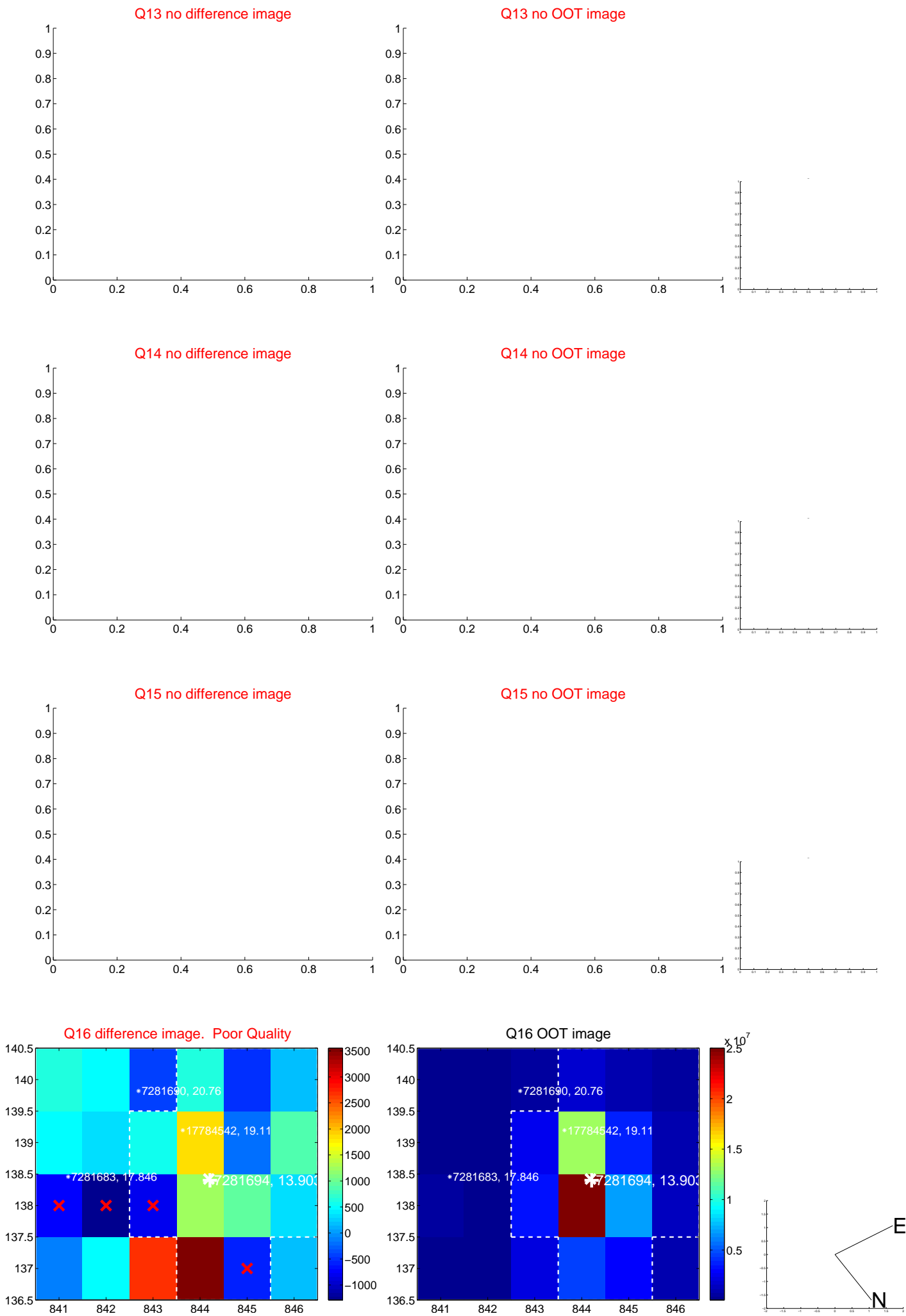
Q8 no OOT image



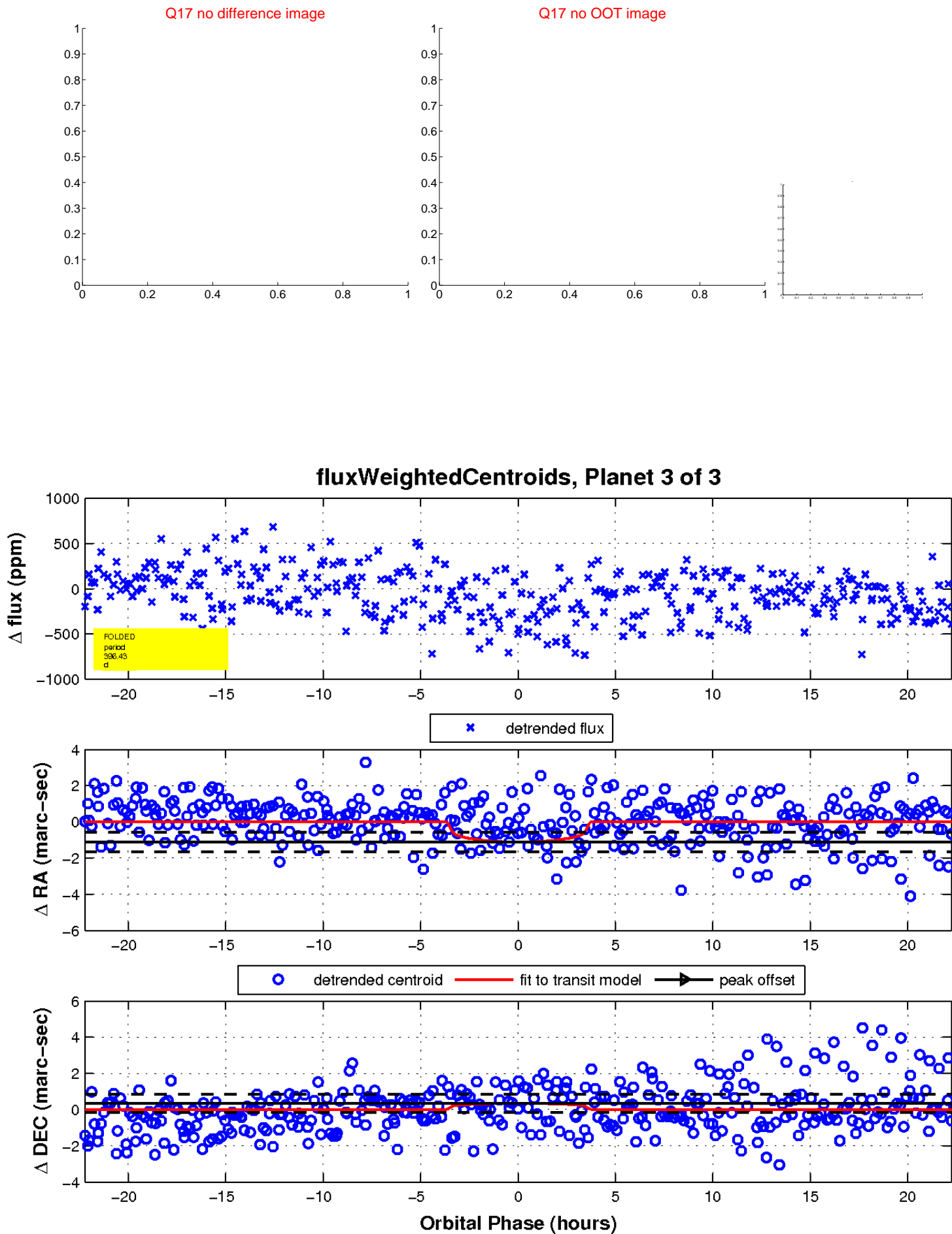
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

