

KIC 007281825

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})
007281825-01	OBS	No	0.566723	131.967289	0.0	3.993	8.6	0.0	1.09	6338	0.02	8792.09
007281825-02	OBS	No	15.958084	136.947772	437.7	1.245	10.8	13.2	1.09	6338	2.69	102.63
007281825-04	OBS	No	40.382400	149.728189	437.1	1.175	9.7	9.2	1.09	6338	2.37	29.76
007281825-05	OBS	No	14.981035	135.984243	295.4	1.210	9.5	9.3	1.09	6338	2.21	111.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007281825-01	OBS	FP	0.00	1	0	0	1	LPP_DV—CENT_FEW_DIFFS—EPHEM_MATCH
007281825-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
007281825-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
007281825-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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.

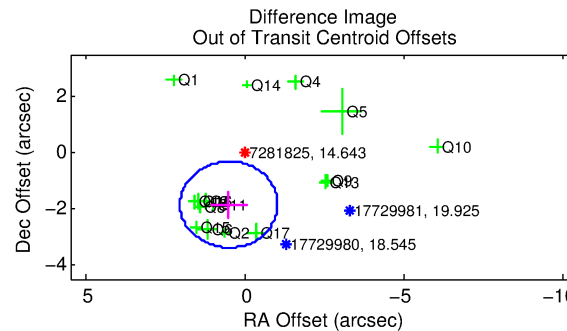
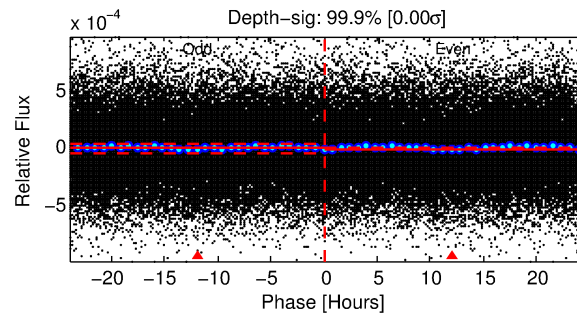
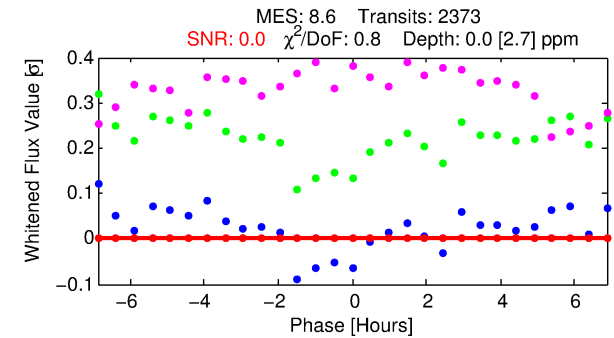
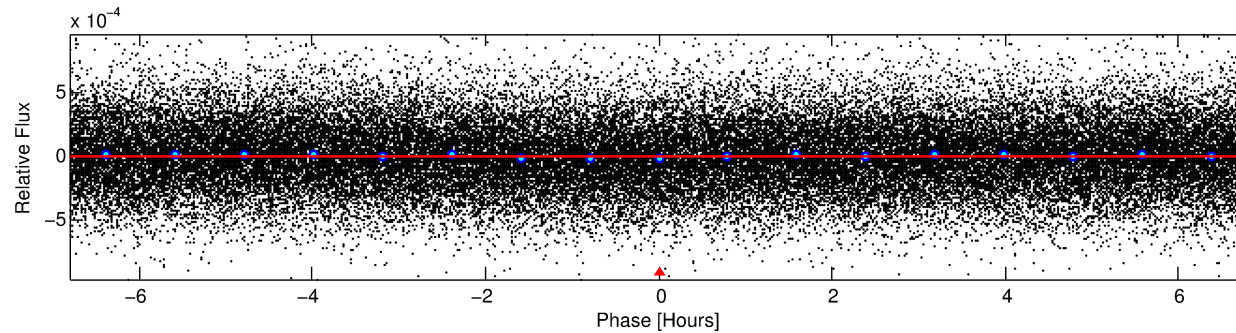
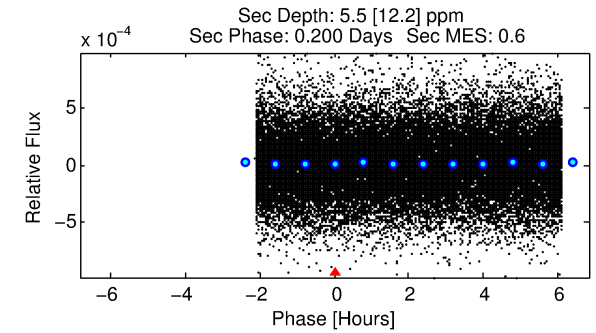
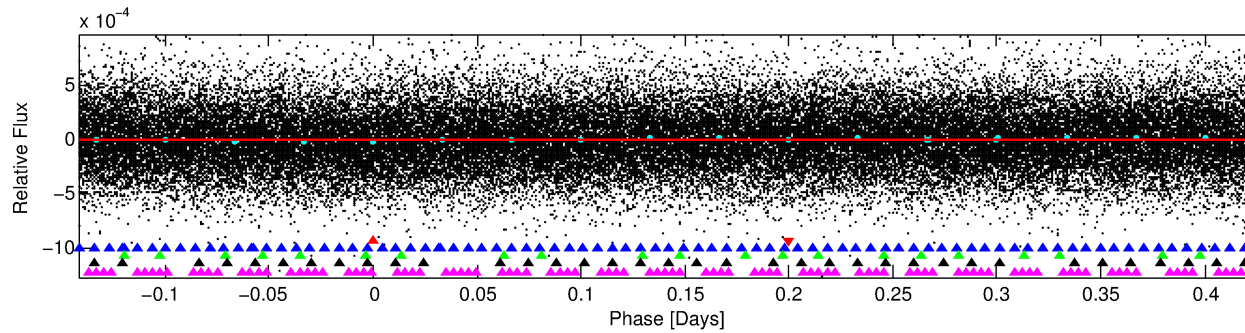
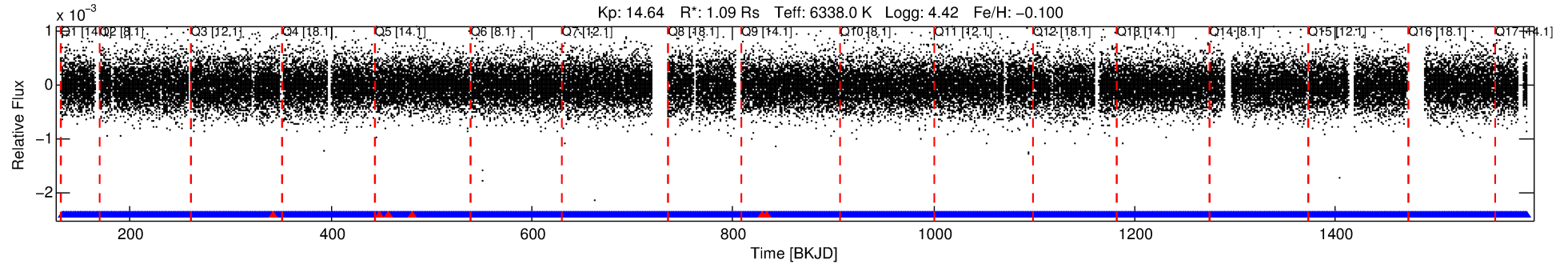
Ephemeris Match Information For 007281825-01

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
007281825-01	7281825	RR-Lyr-pri	7198959	1:1	1010.2	53	248	7.86	14.64	623300.00	Direct-PRF	0	1.03	6.43

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: 7281825 Candidate: 1 of 5 Period: 0.567 d



DV Fit Results:

Period = 0.56672 [0.00913] d
Epoch = 131.9673 [4.0638] BKJD
Rp/R* = 0.0001 [0.0115]
a/R* = 1.24 [126.65]
b = 0.26 [1055.71]
Seff = 8792.09 [3524.58]
Teq = 2469 [247] K
Rp = 0.02 [1.37] Re
a = 0.0140 [0.0037] AU
Ag = 1906.97 [297617.27] [0.01σ]
Teffp = 25228 [984360] K [0.02σ]

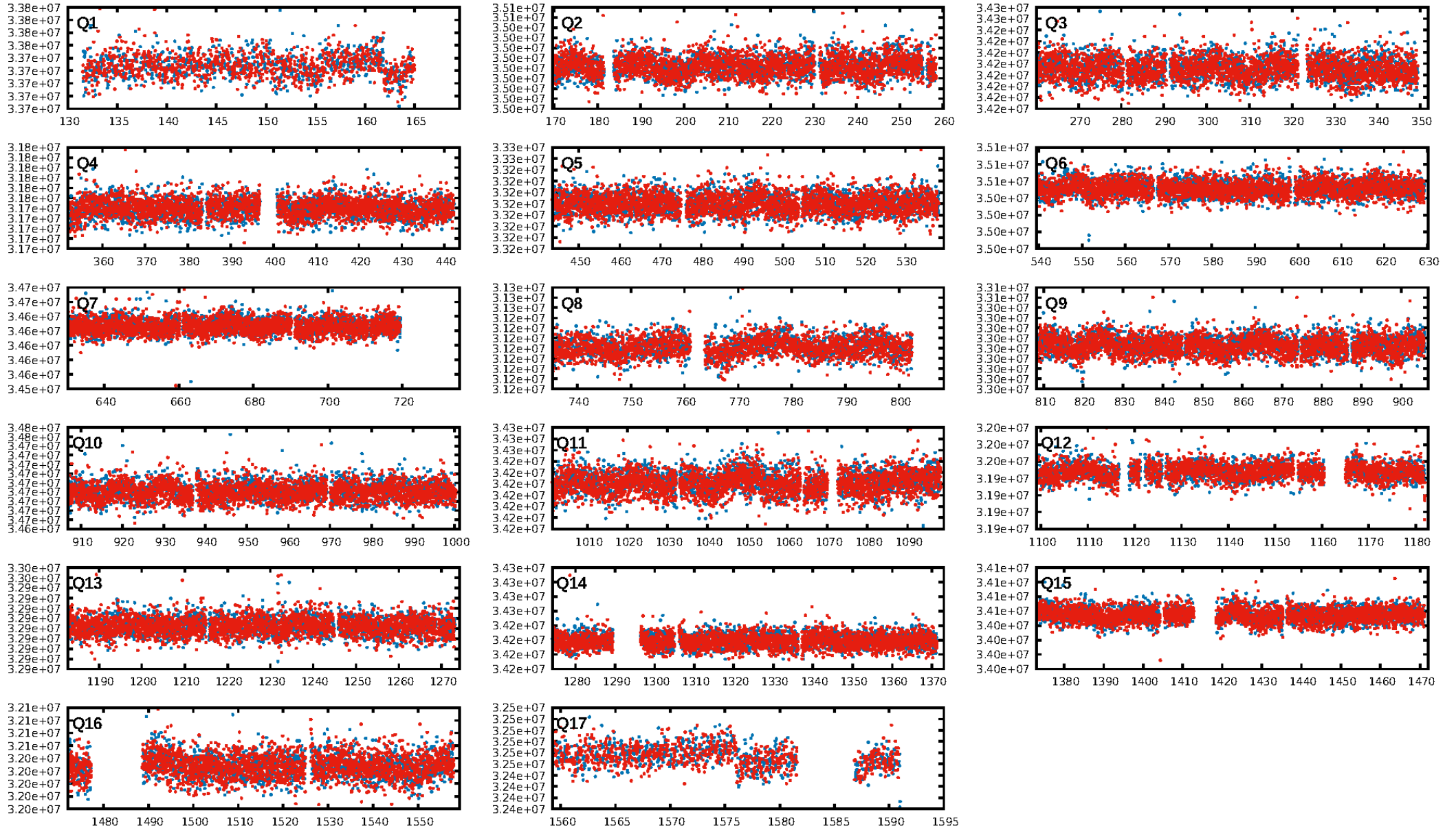
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [82.91σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.62e-12
RollingBand-fgt: 1.00 [2260/2266]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.922 arcsec [3.76σ]
KicOffset-rm: 2.012 arcsec [3.88σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.25 [4/16]
DiffImageOverlap-fno: 1.00 [17/17]

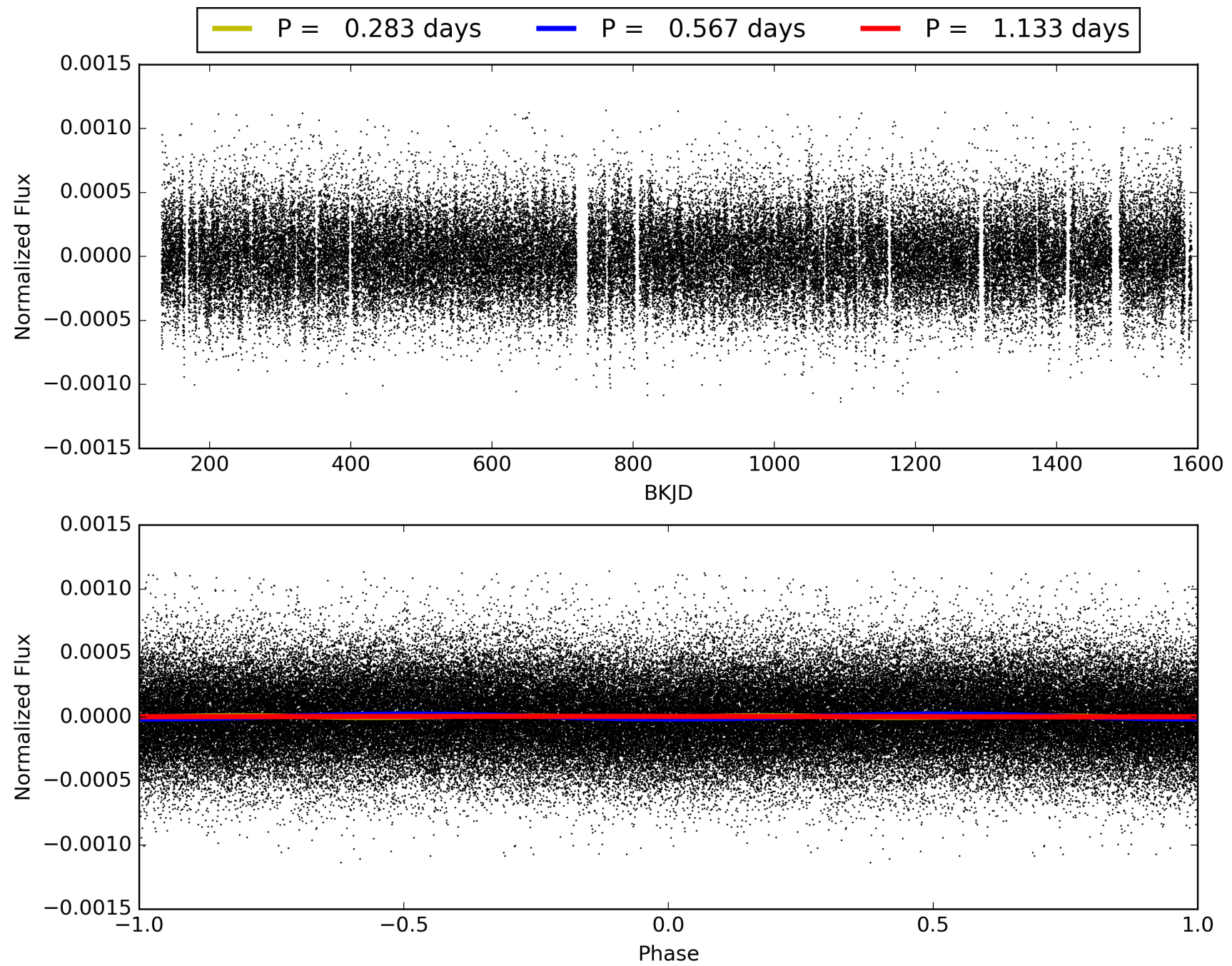
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:08:49 Z

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

TCE 007281825-01, PDC Light Curves

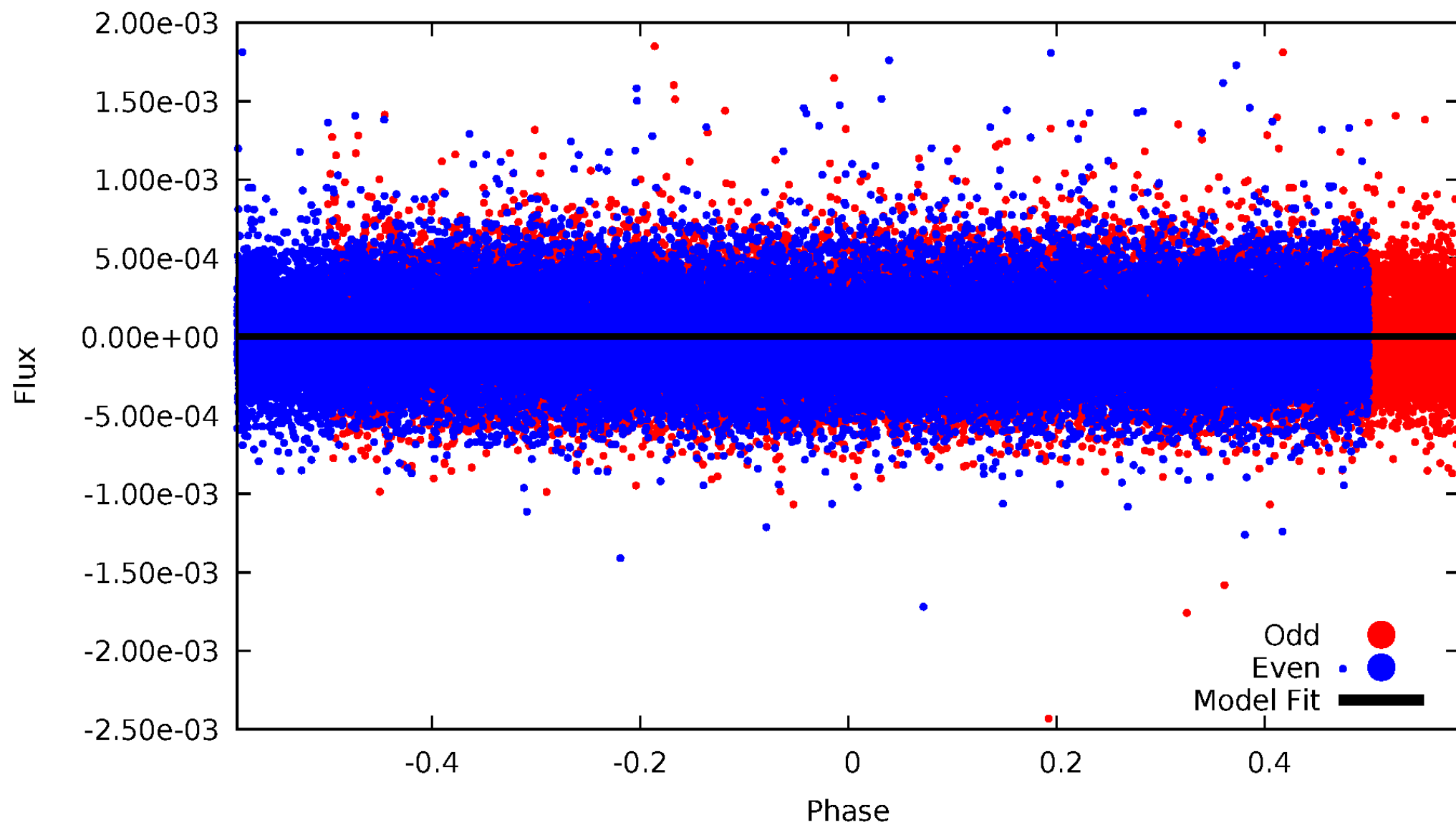


TCE 007281825-01



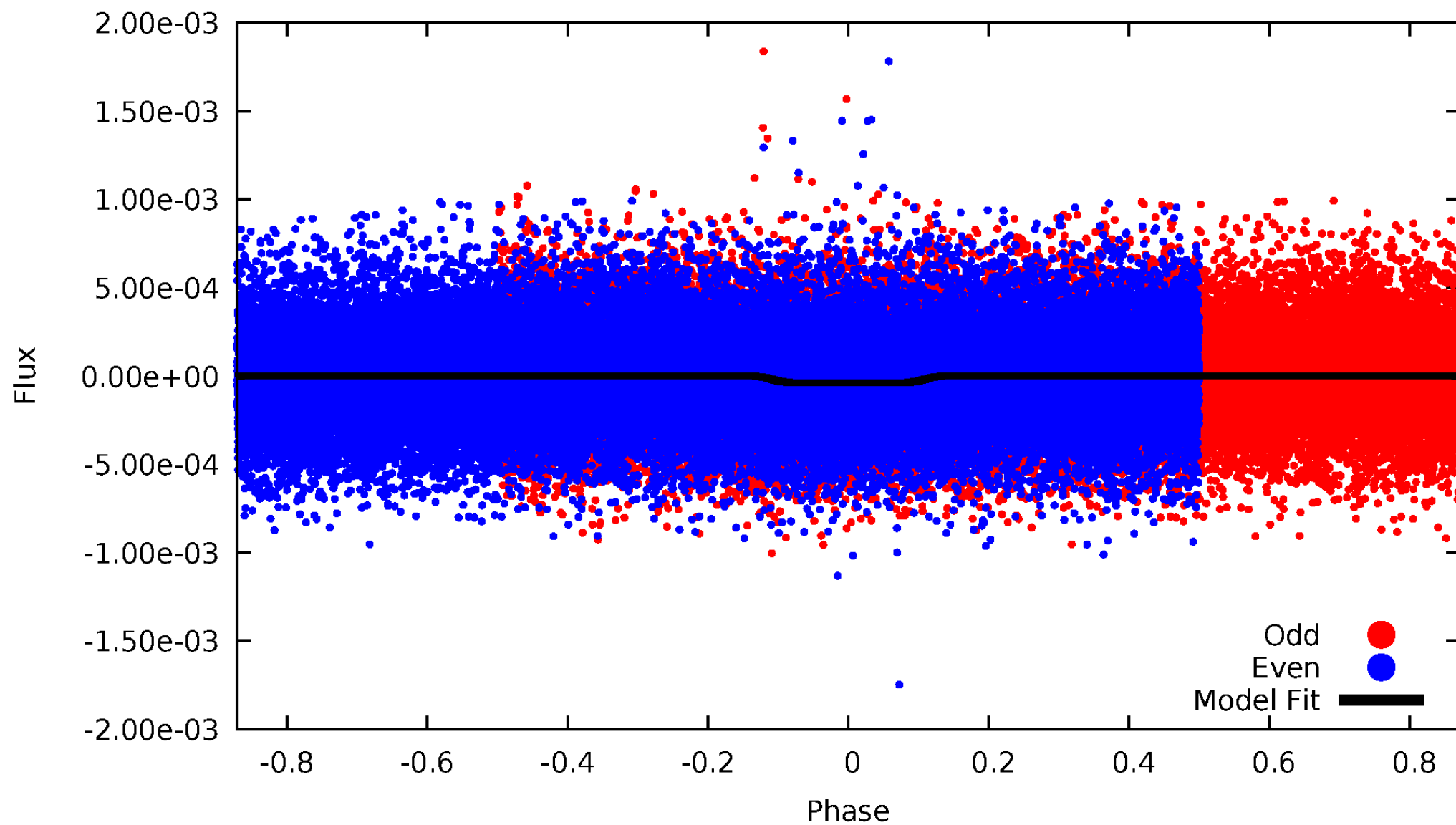
DV Odd/Even

TCE 007281825-01



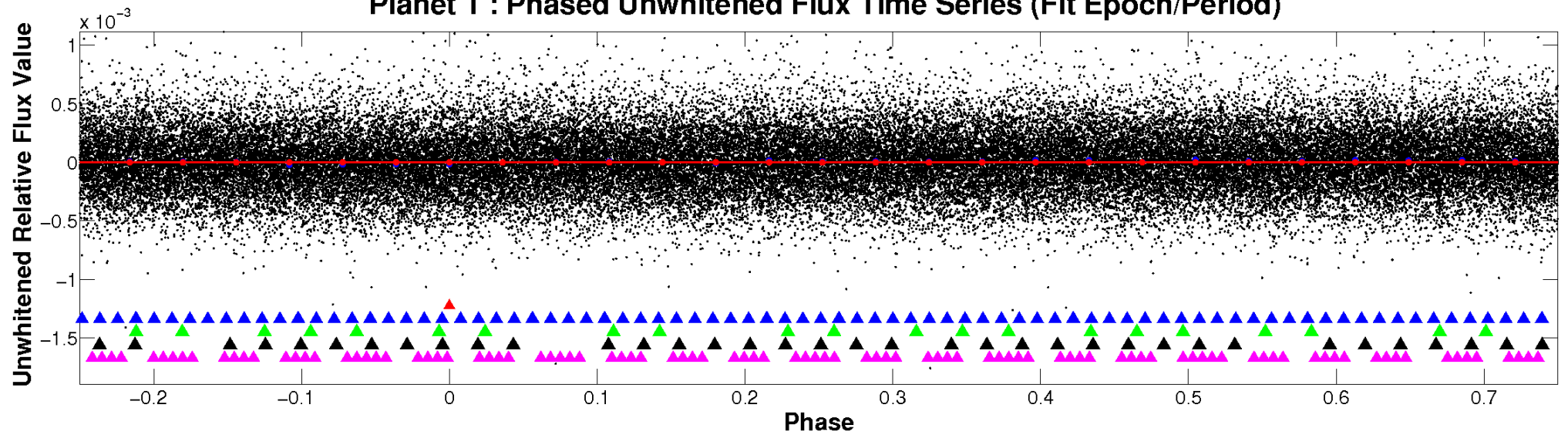
ALT Odd/Even

TCE 007281825-01

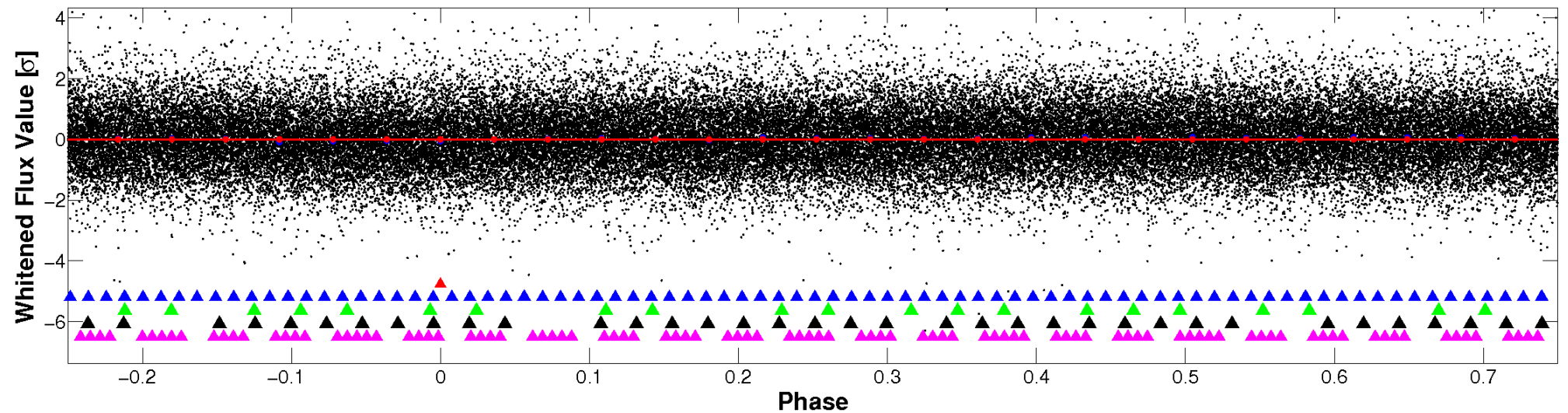


Non-Whitened Vs. Whitened Light Curve

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

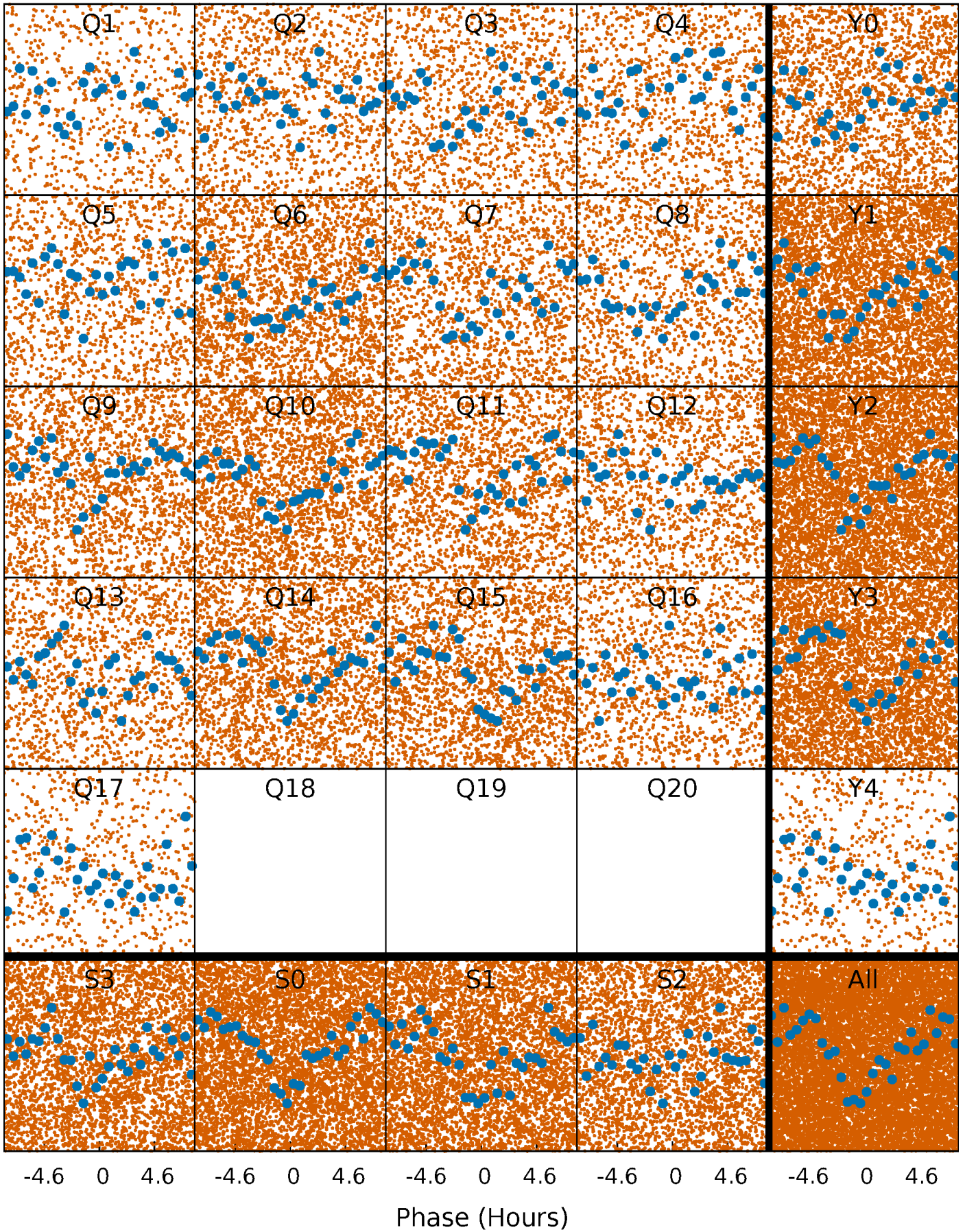


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



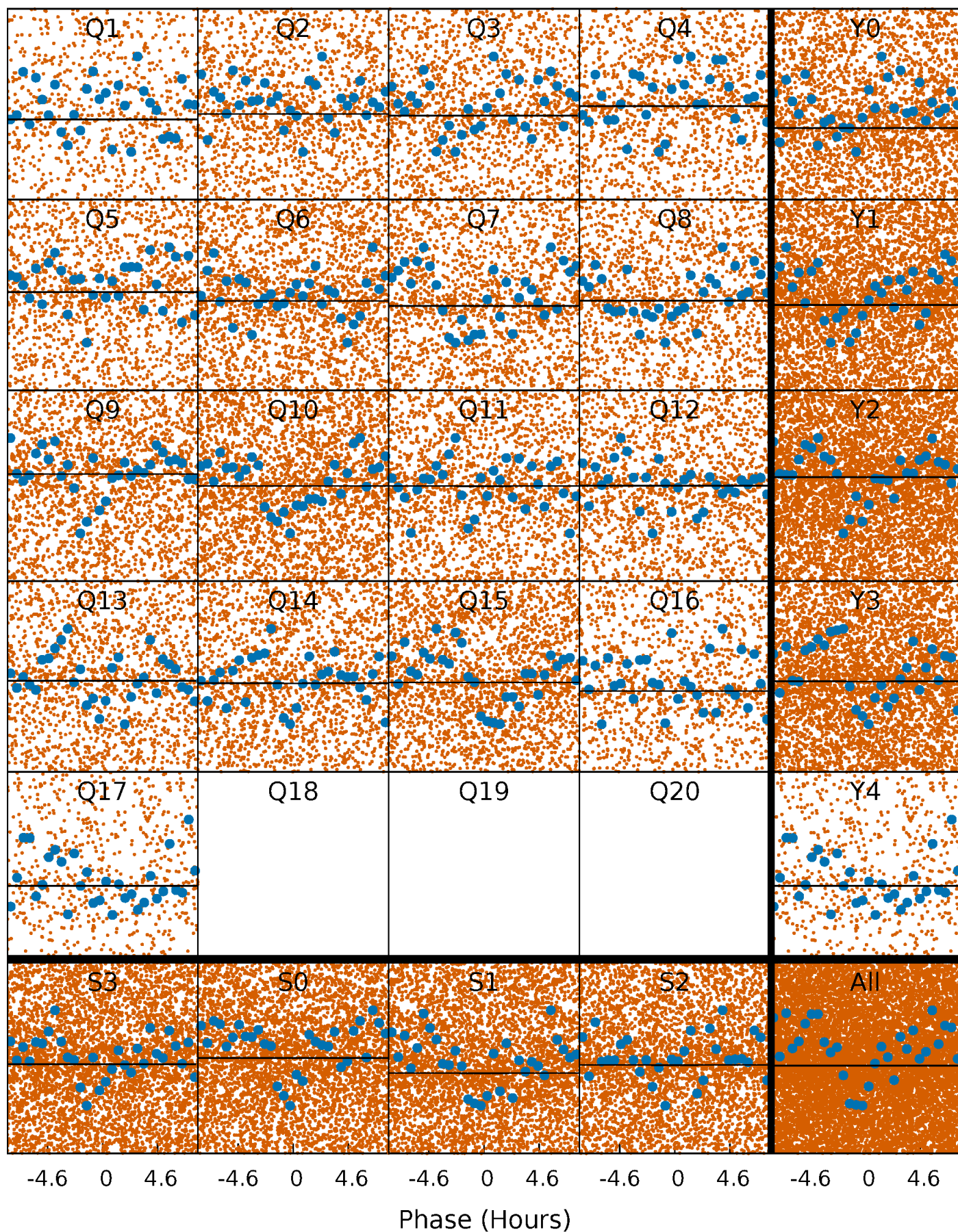
PDC Quarter-Phased Transit Curves

TCE 007281825-01 P= 0.566723 Days $T_0=131.967289$ (BKJD)



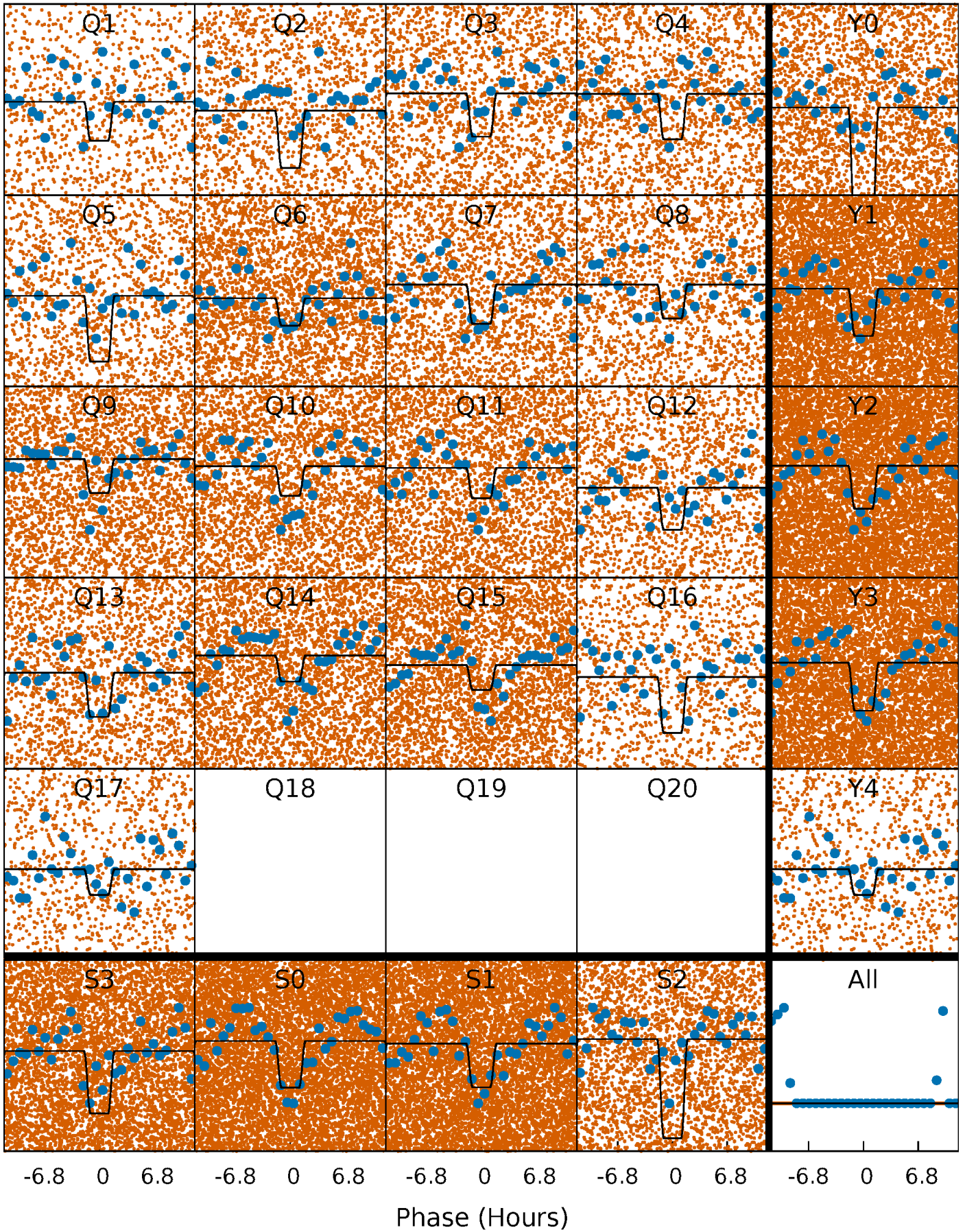
DV Quarter-Phased Transit Curves

TCE 007281825-01 P= 0.566723 Days $T_0=131.967289$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

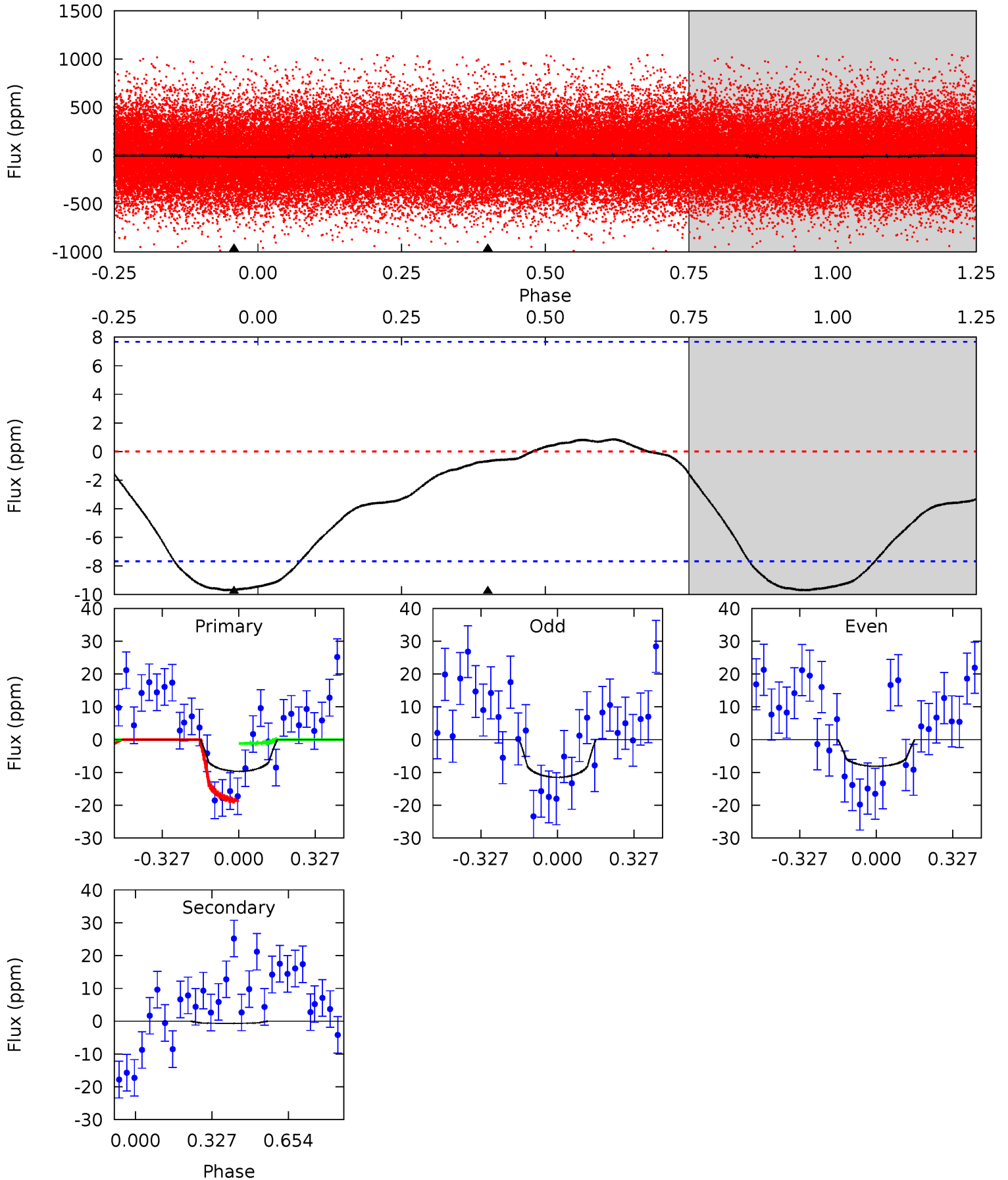
TCE 007281825-01 P= 0.566743 Days $T_0=131.921907$ (BKJD)



DV Model-Shift Uniqueness Test

007281825-01, P = 0.566723 Days, E = 131.400566 Days

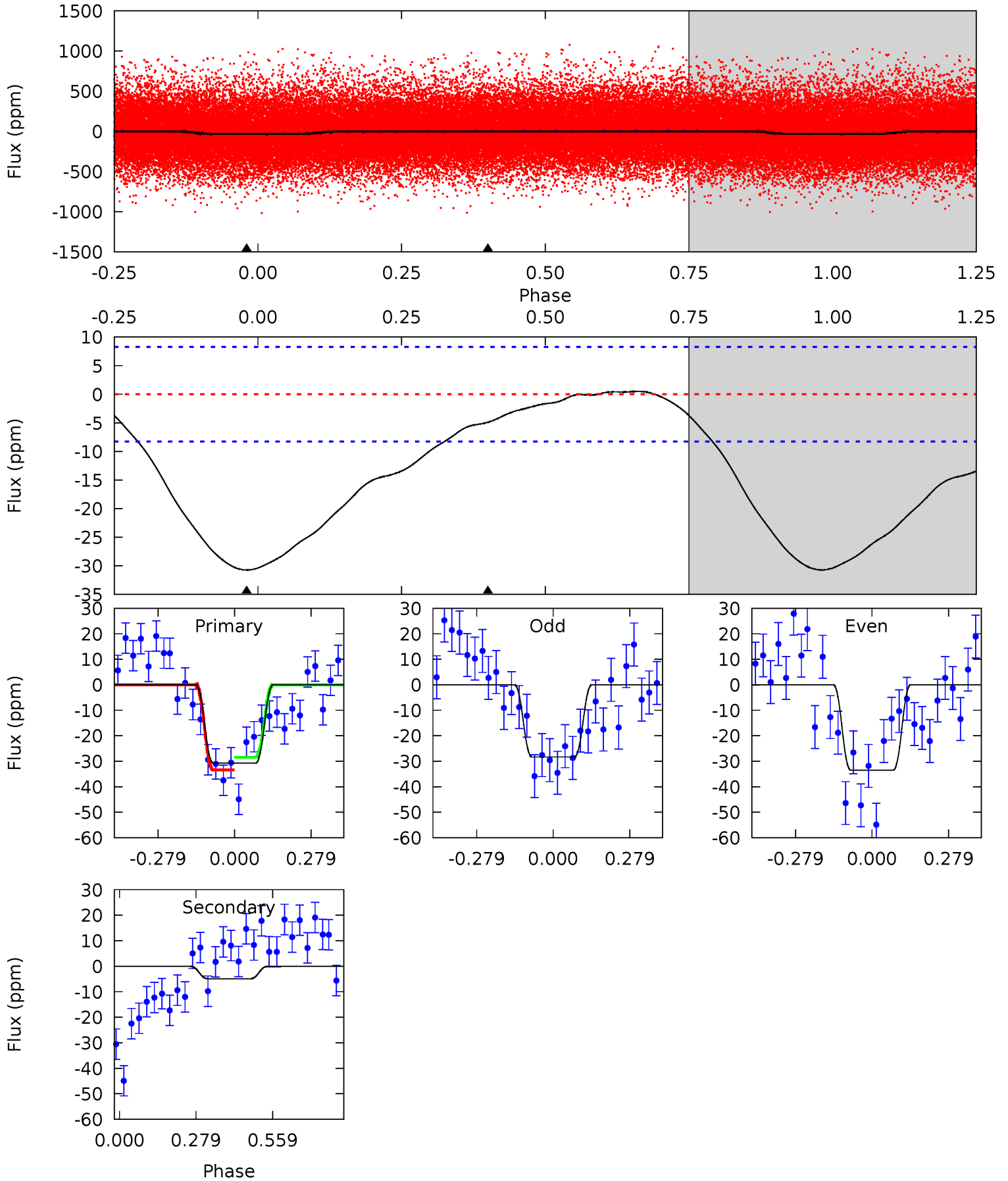
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.45	0.39	0	0	4.31	0.98	0.21	5.45	5.45	0.39	0.39	0.94	0.89	0.08	5.04



Alt Model-Shift Uniqueness Test

007281825-01, P = 0.566743 Days, E = 131.355164 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	2.58	0	0	4.34	1.08	0.54	16.1	16.1	2.58	2.58	1.35	0.93	0.02	1.30



Stellar Parameters For KIC 007281825

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6338^{+153}_{-210}	$4.418^{+0.067}_{-0.202}$	$-0.100^{+0.250}_{-0.300}$	$1.091^{+0.353}_{-0.118}$	$1.137^{+0.166}_{-0.166}$	$1.233^{+0.351}_{-0.648}$
	+2%/-3%	+2%/-5%	+250%/-300%	+32%/-11%	+15%/-15%	+28%/-53%
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 007281825-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 2	$0.90^{+1.10}_{-0.64}$	3501^{+247}_{-156}	-3271^{+7204}_{-414}	$0.048^{+0.880}_{-0.166}$
Alt.	-5 ± 2	$1.24^{+1.22}_{-0.79}$	3504^{+253}_{-176}	2377^{+2635}_{-5657}	$0.323^{+2.488}_{-0.249}$

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 $A_{obs} \gg 1.0$

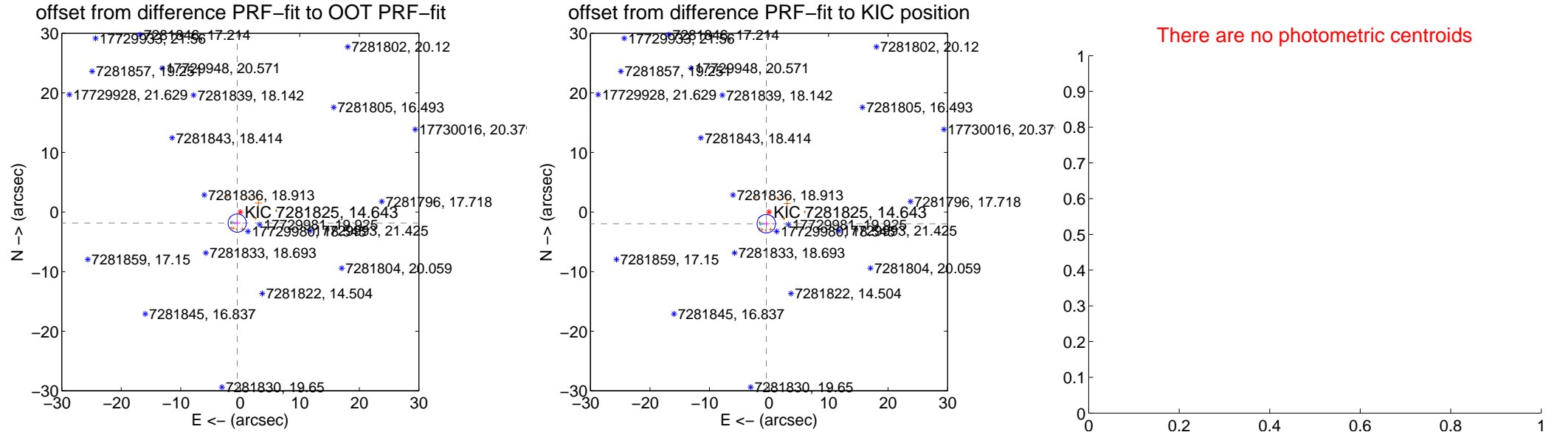
DV Centroid Data

Supplemental centroid analysis for 007281825-01. Kepler magnitude: 14.64. Transit SNR 0.01

There are 4 quarters with good PRF difference image offsets

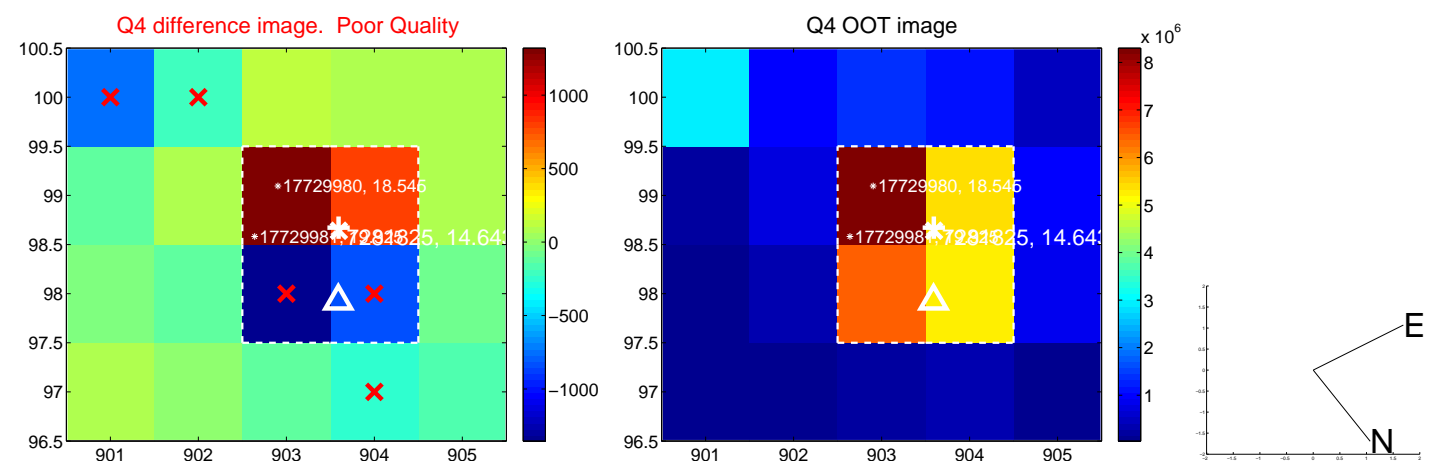
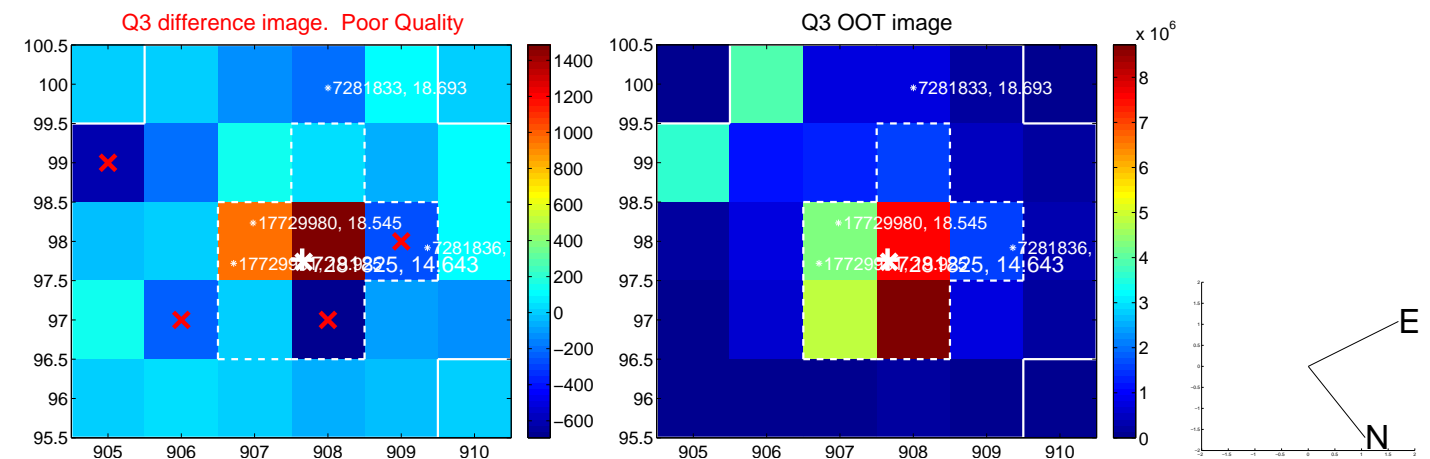
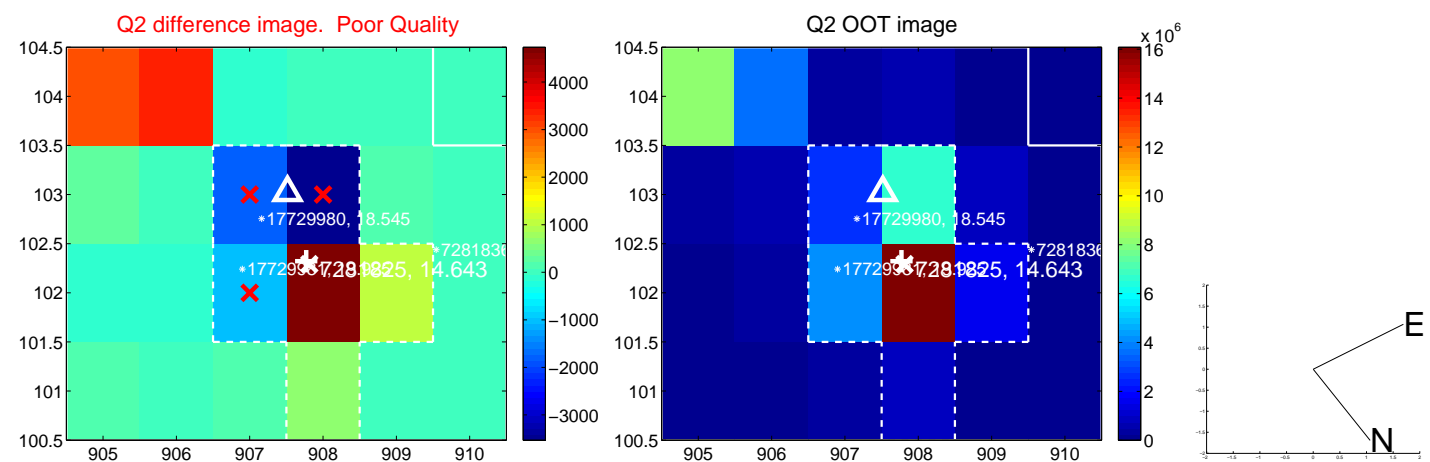
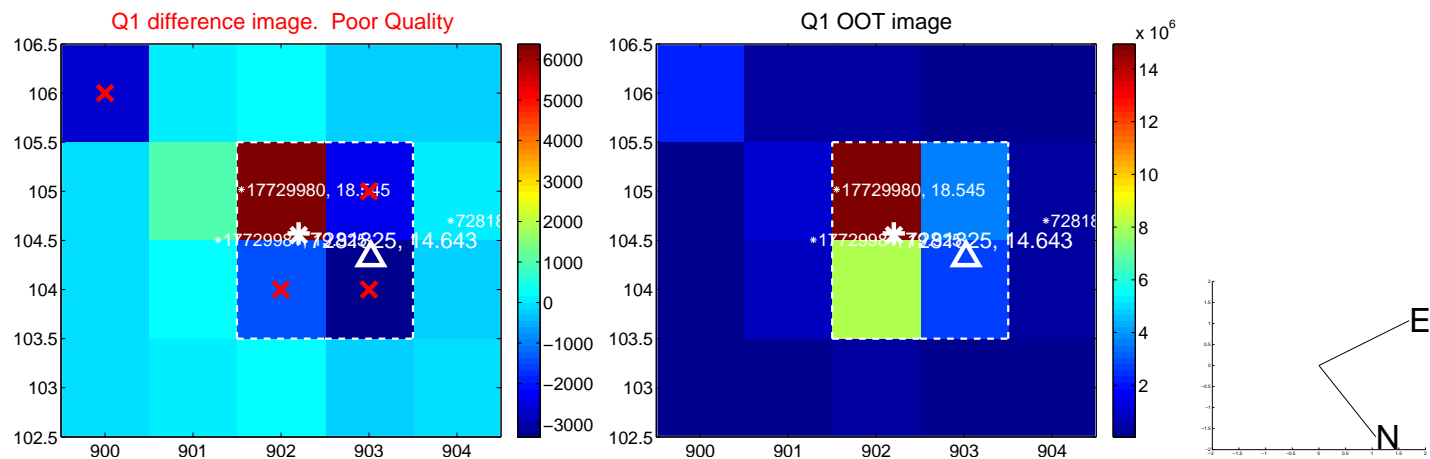
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.922 \pm 0.512	3.76	0.513 \pm 0.550	-1.852 \pm 0.465
PRF-fit source offset from KIC position	2.012 \pm 0.518	3.88	0.453 \pm 0.526	-1.960 \pm 0.486
photometric centroid source offset	—	—	—	—

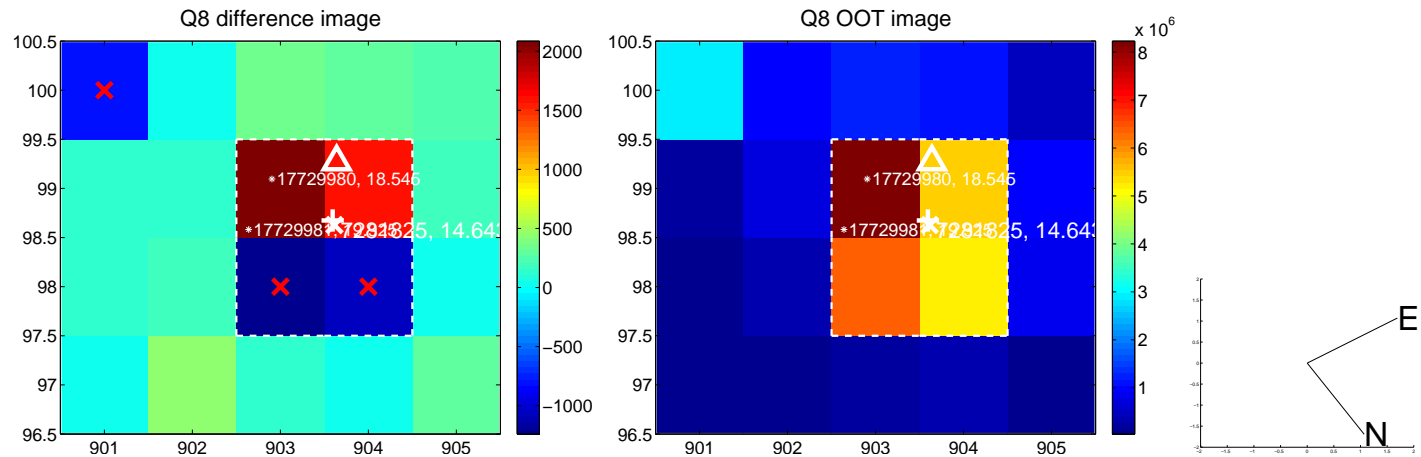
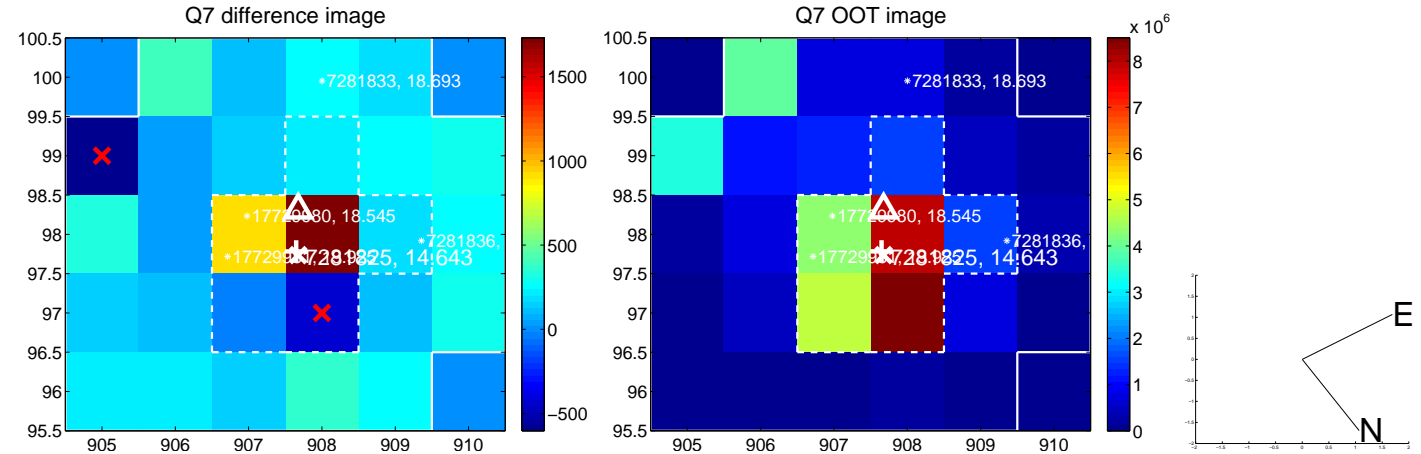
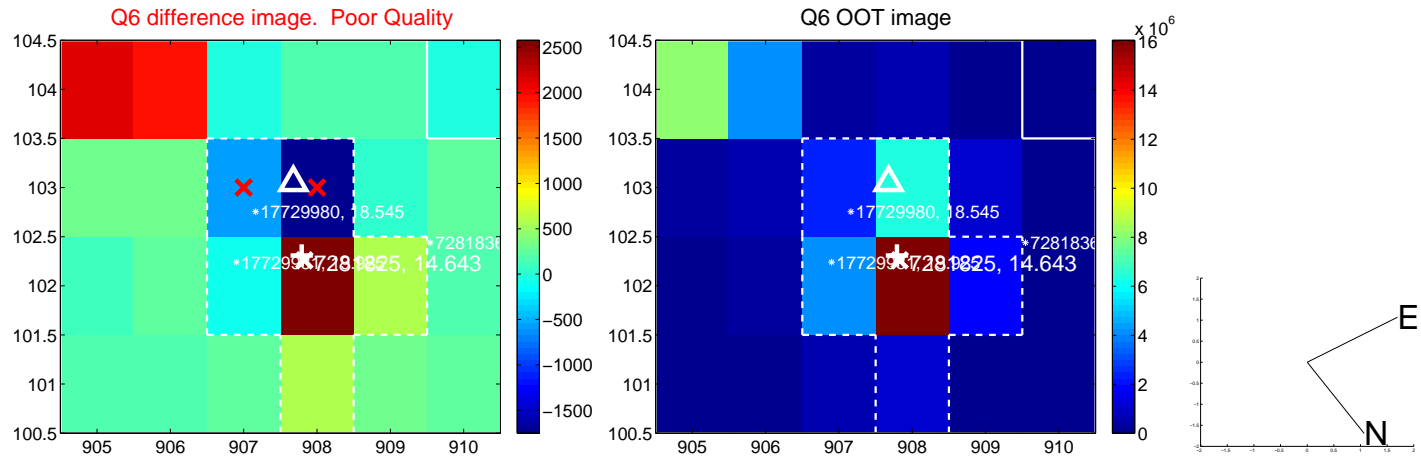
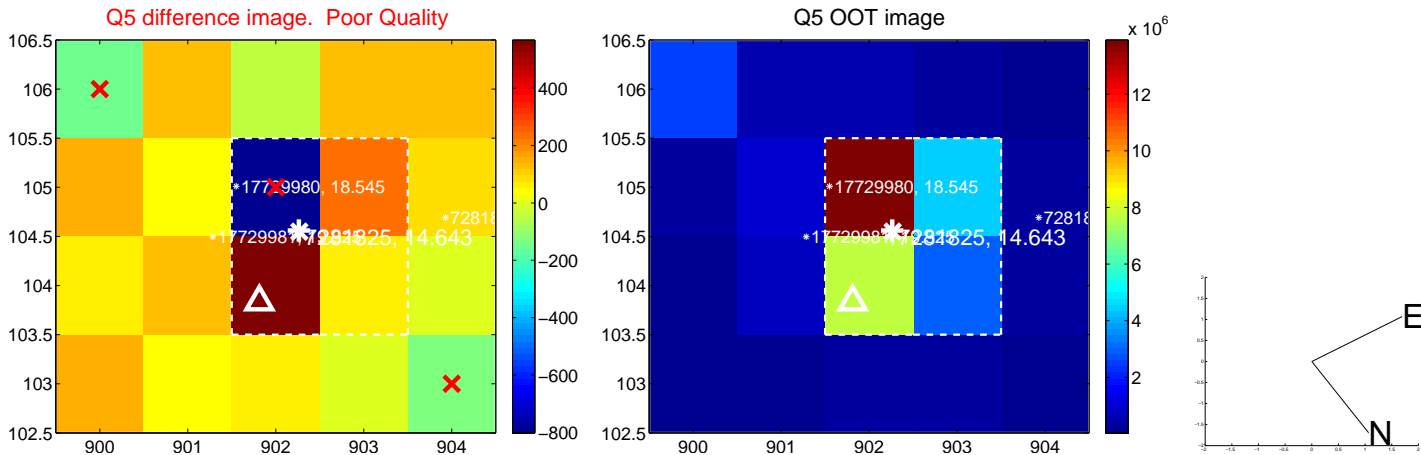


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

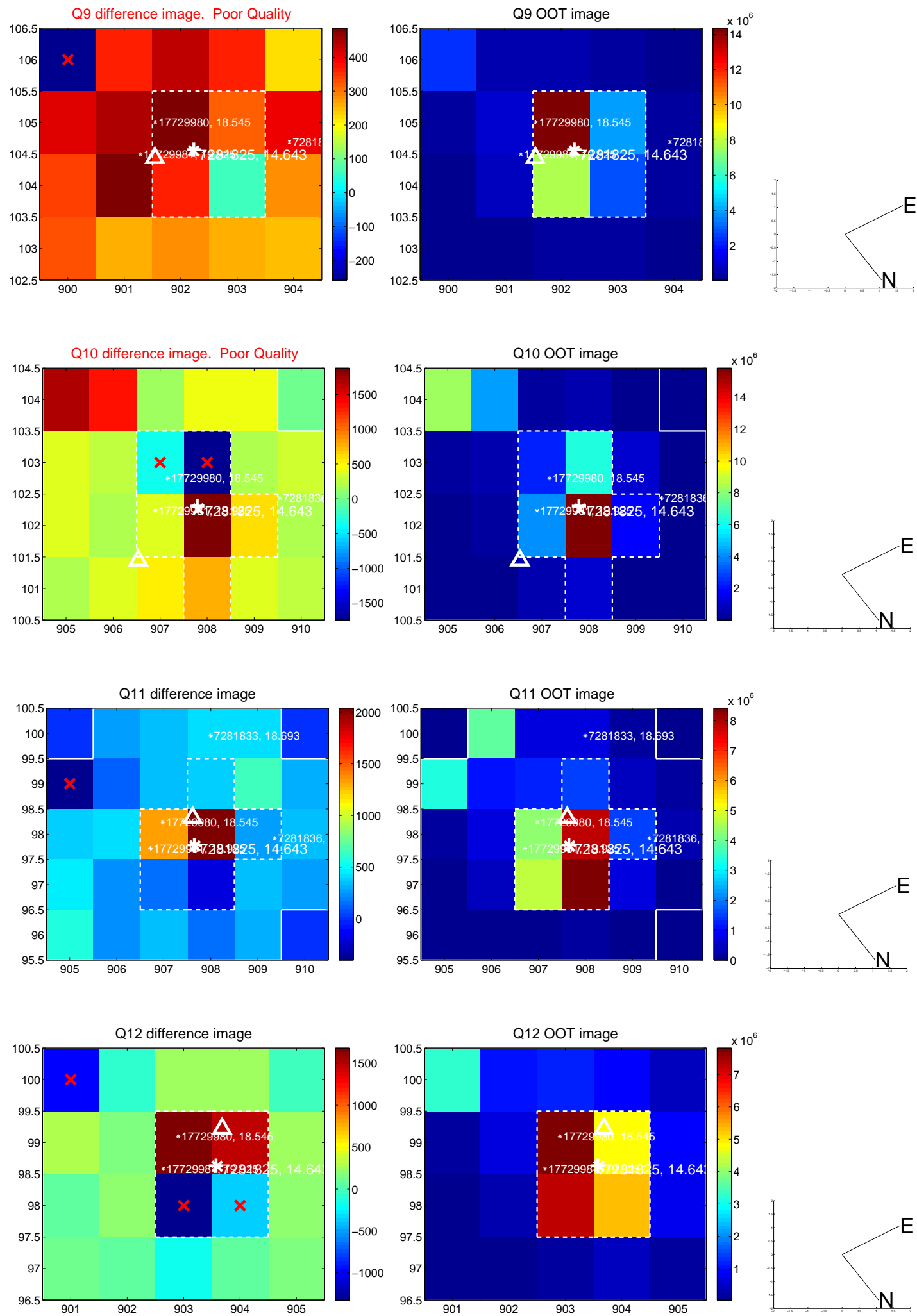
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



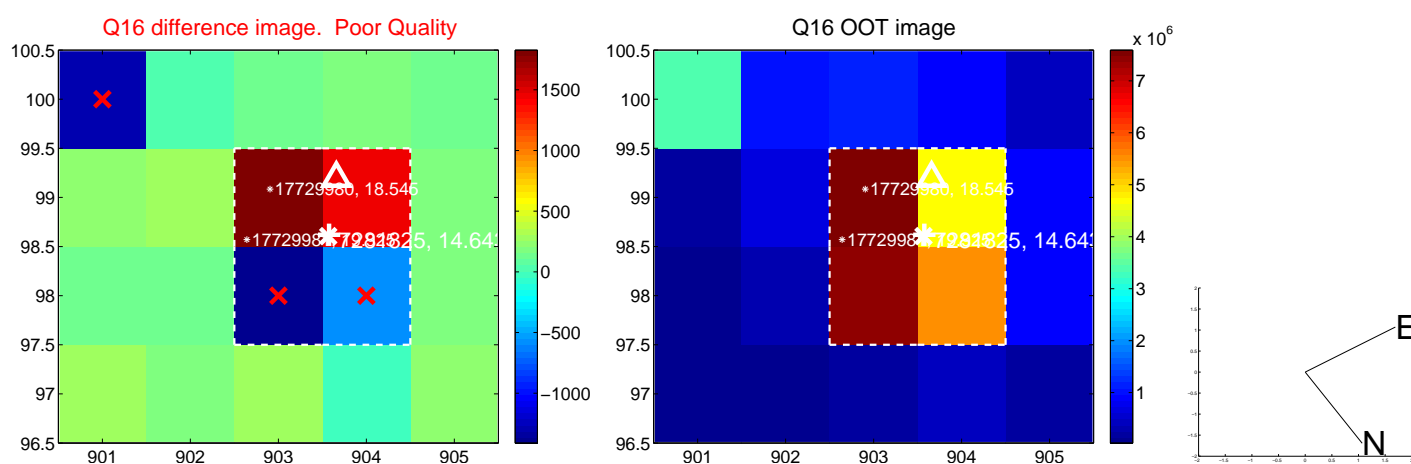
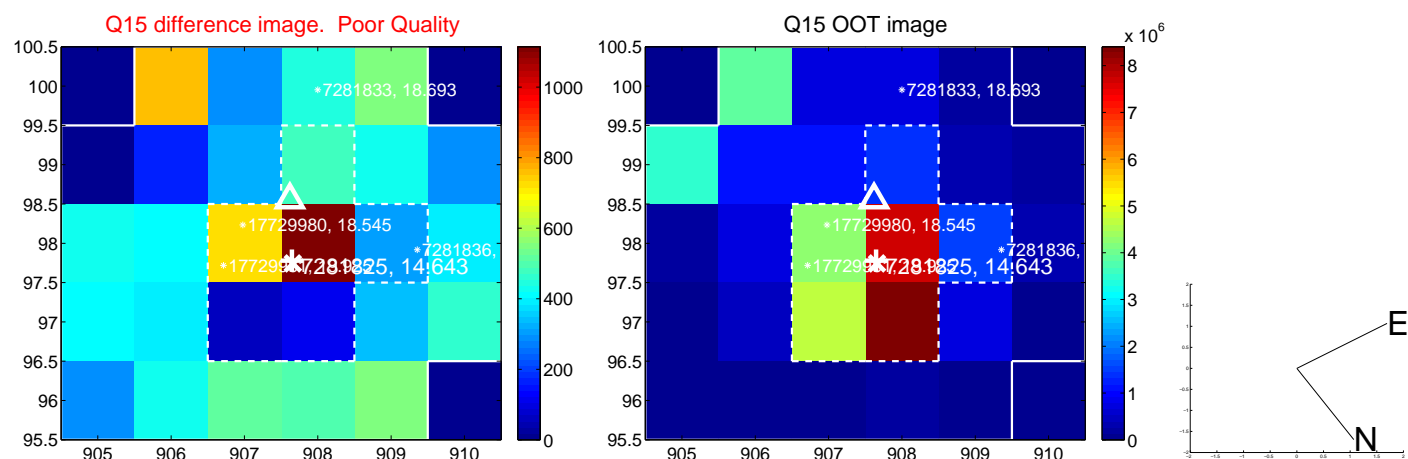
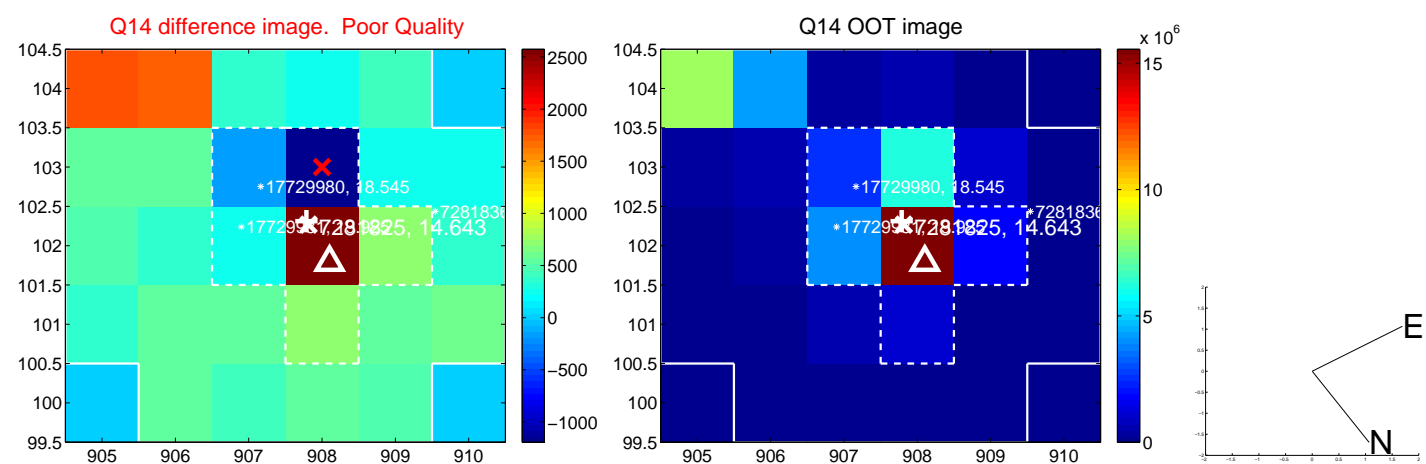
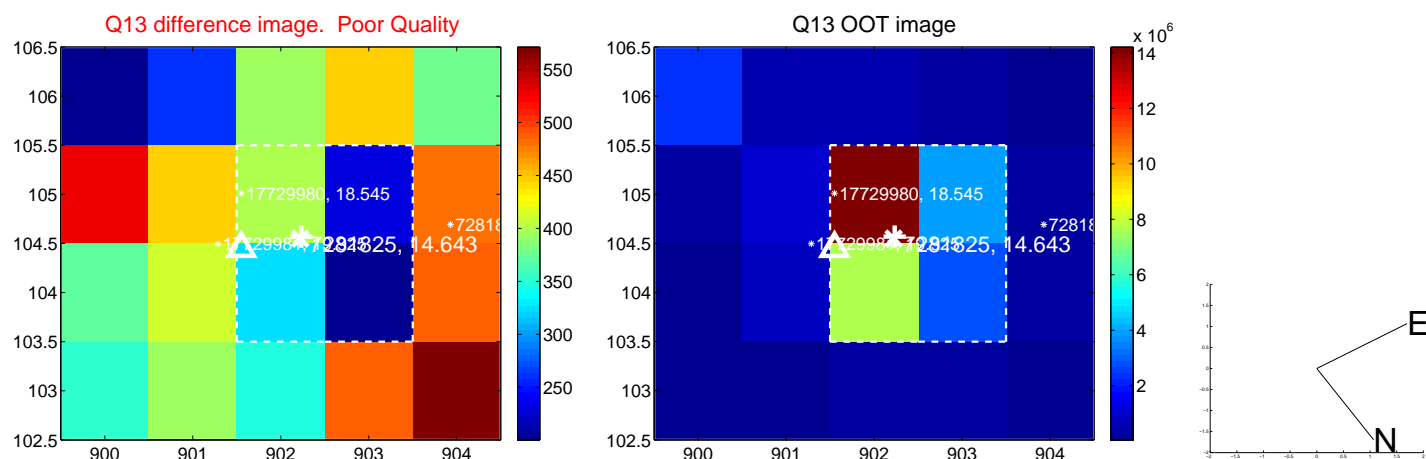
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



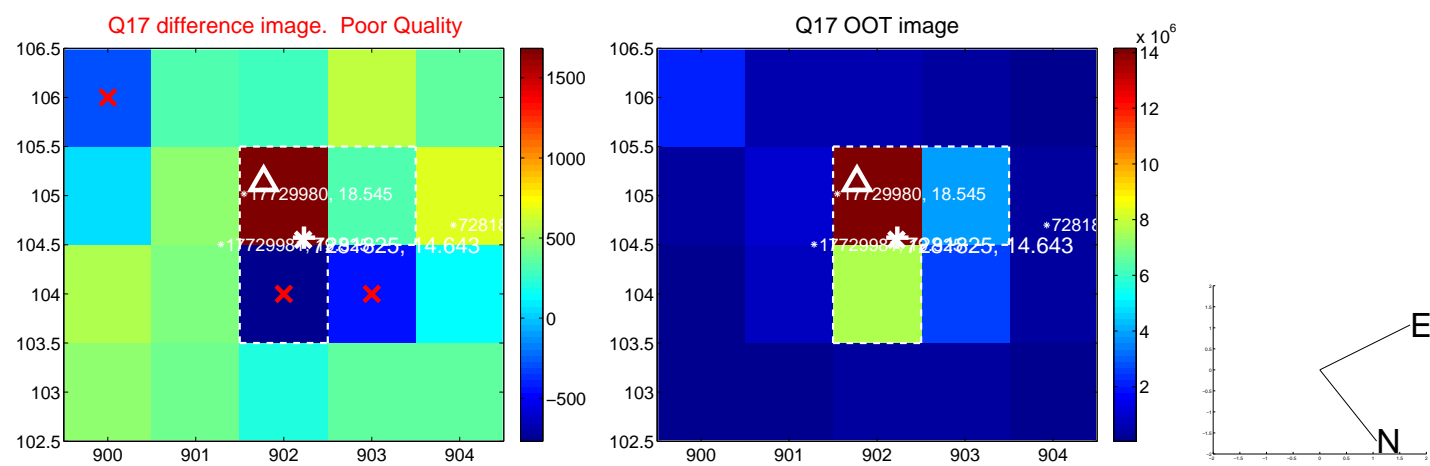
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



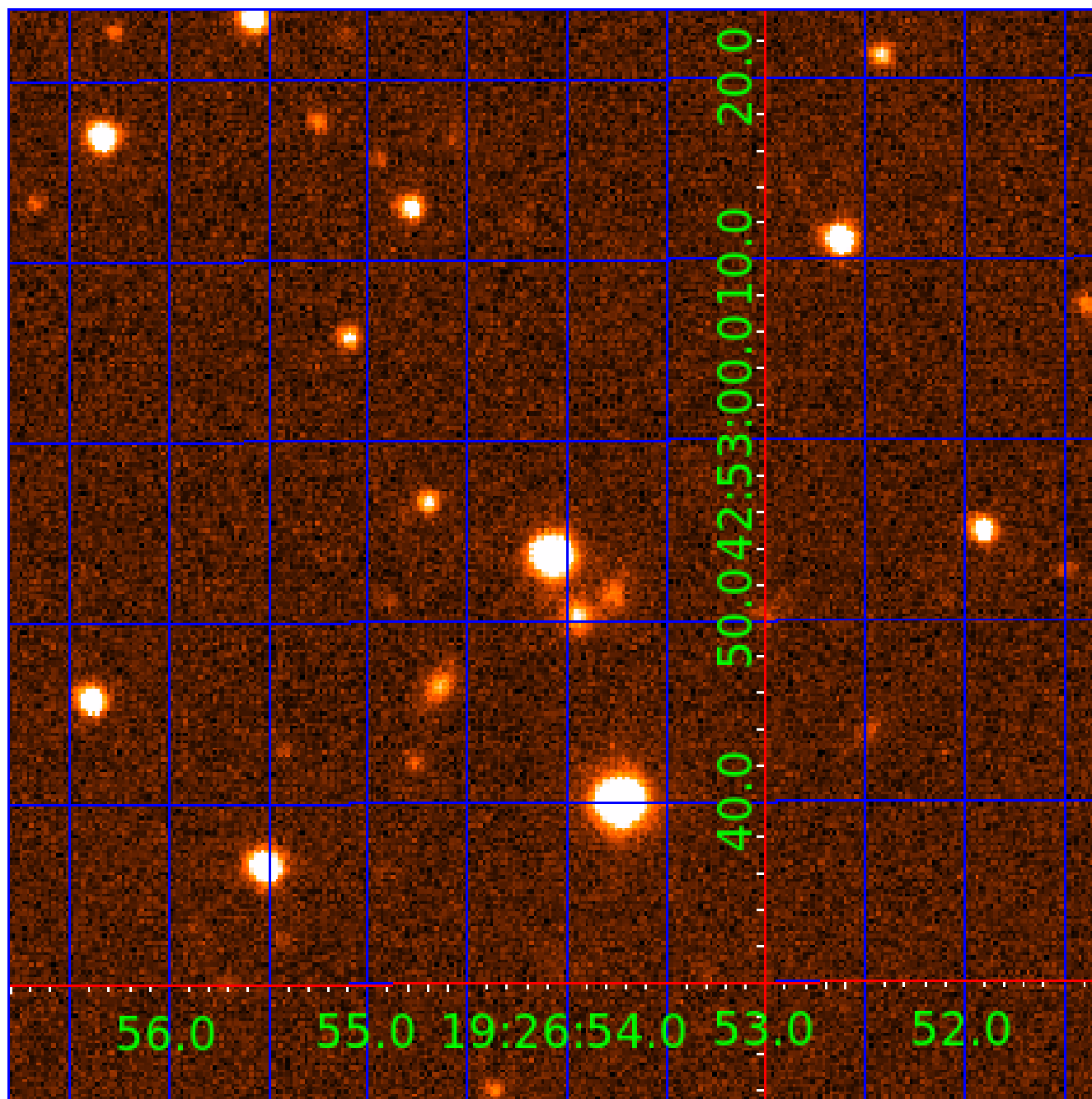
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 007281825

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

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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007281825-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
007281825-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
007281825-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

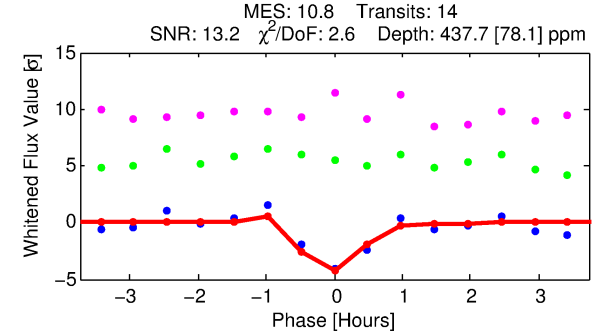
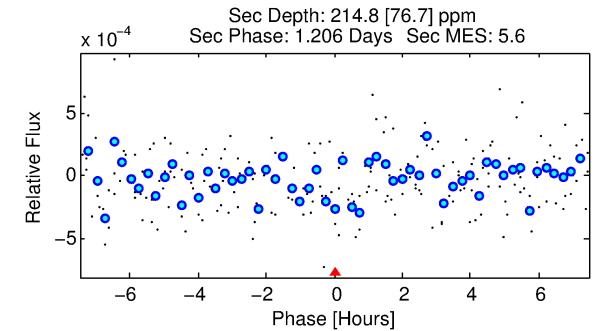
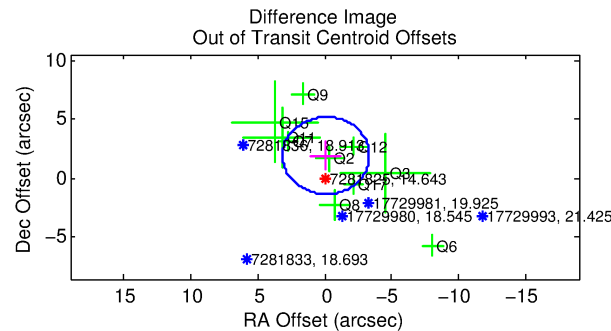
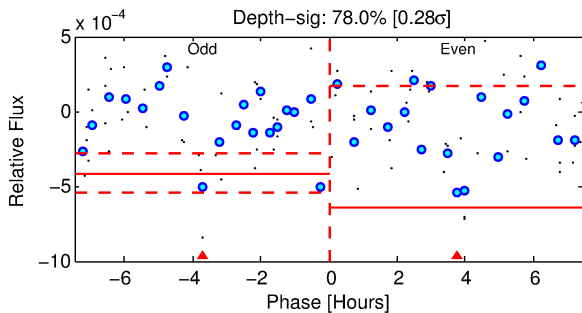
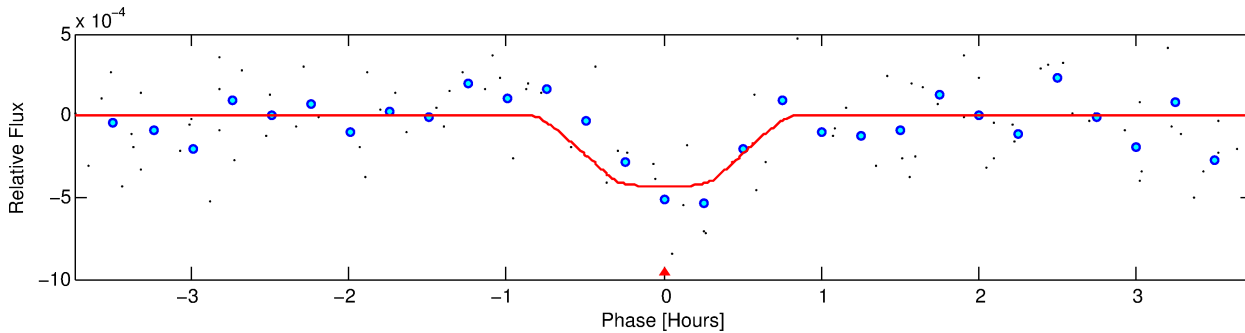
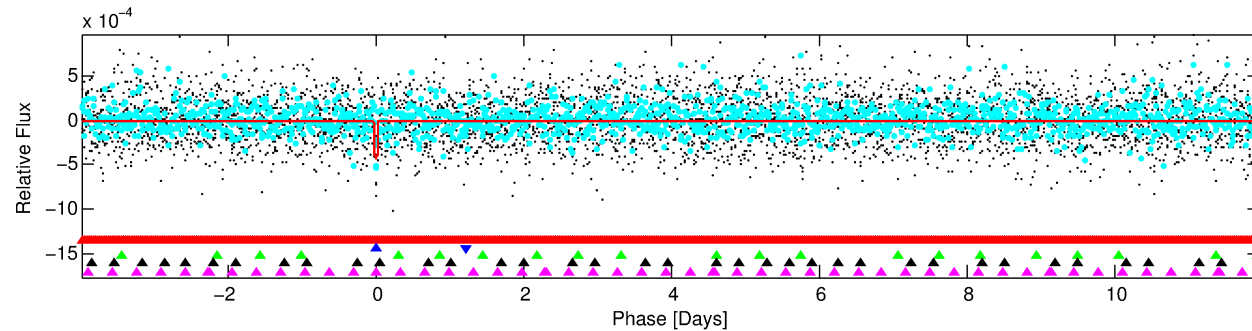
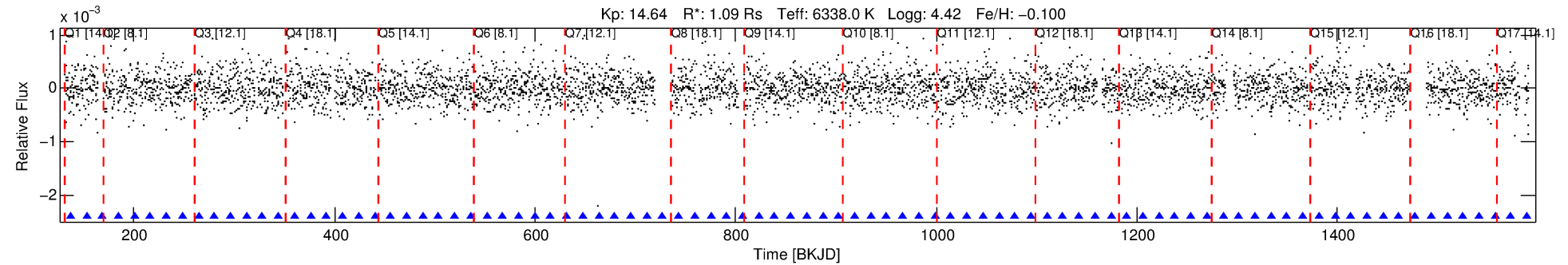
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007281825-02

No Significant Match Found

DV One-Page Summary

KIC: 7281825 Candidate: 2 of 5 Period: 15.958 d



DV Fit Results:

Period = 15.95808 [0.00013] d
Epoch = 136.9478 [0.0063] BKJD
Rp/R* = 0.0226 [0.0232]
a/R* = 47.75 [266.70]
b = 0.90 [1.21]
Seff = 102.63 [41.08]
Teq = 812 [81] K
Rp = 2.69 [2.89] Re
a = 0.1295 [0.0344] AU
Ag = 274.19 [580.65] [0.47 σ]
Teffp = 5106 [2665] K [1.61 σ]

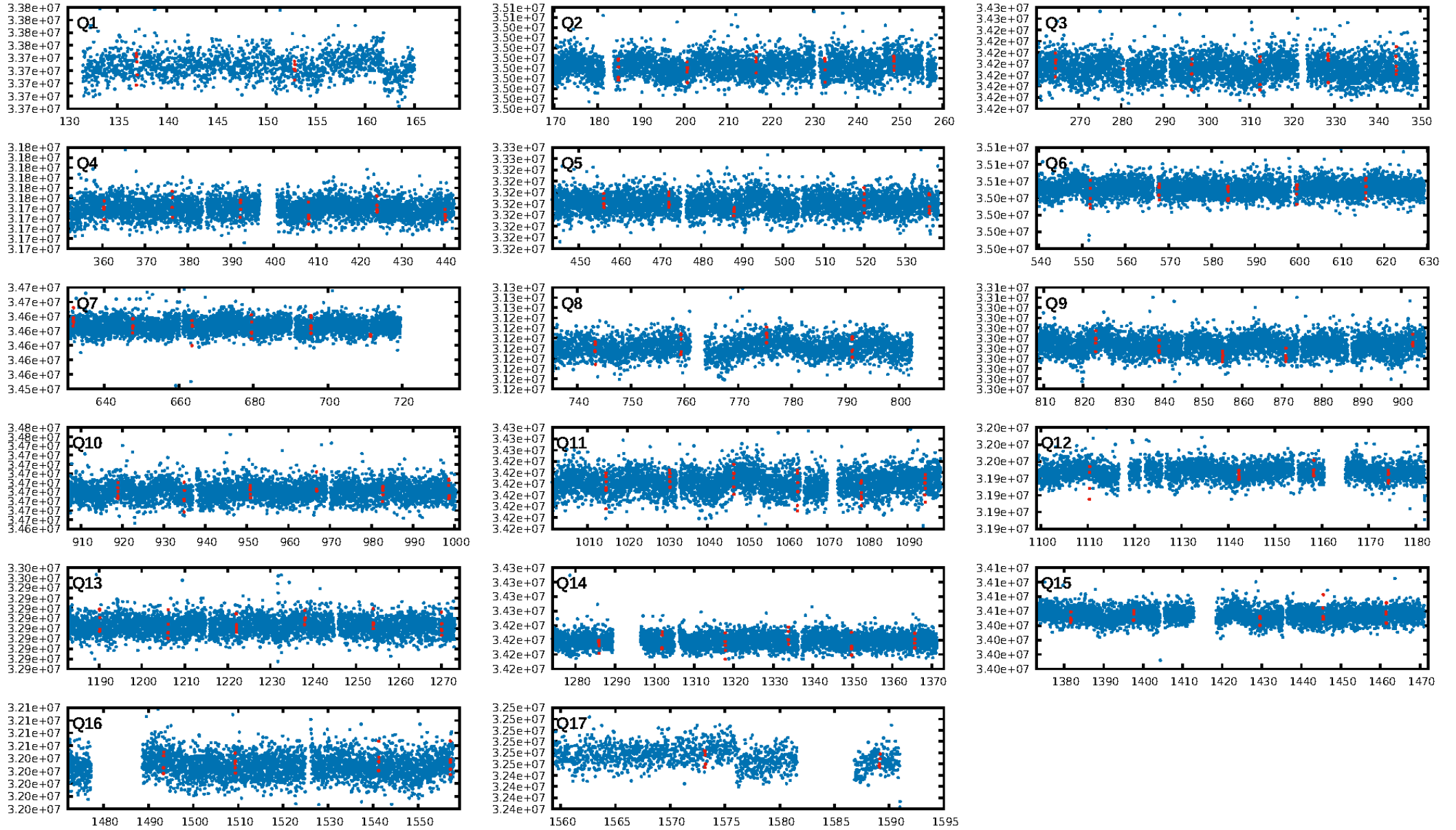
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [13.51 σ]
LongPeriod-sig: 100.0% [342.42 σ]
ModelChiSquare2-sig: 7.2%
ModelChiSquareGof-sig: 66.7%
Bootstrap-pfa: 6.30e-10
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: 1.412
Centroid-sig: 4.5%
Centroid-so: 0.776 arcsec [1.17 σ]
OotOffset-rm: 1.933 arcsec [1.78 σ]
KicOffset-rm: 1.785 arcsec [1.58 σ]
OotOffset-st: 2/4/2/2 [10]
KicOffset-st: 2/4/2/2 [10]
DiffImageQuality-fgm: 0.10 [1/10]
DiffImageOverlap-fno: 0.00 [0/17]

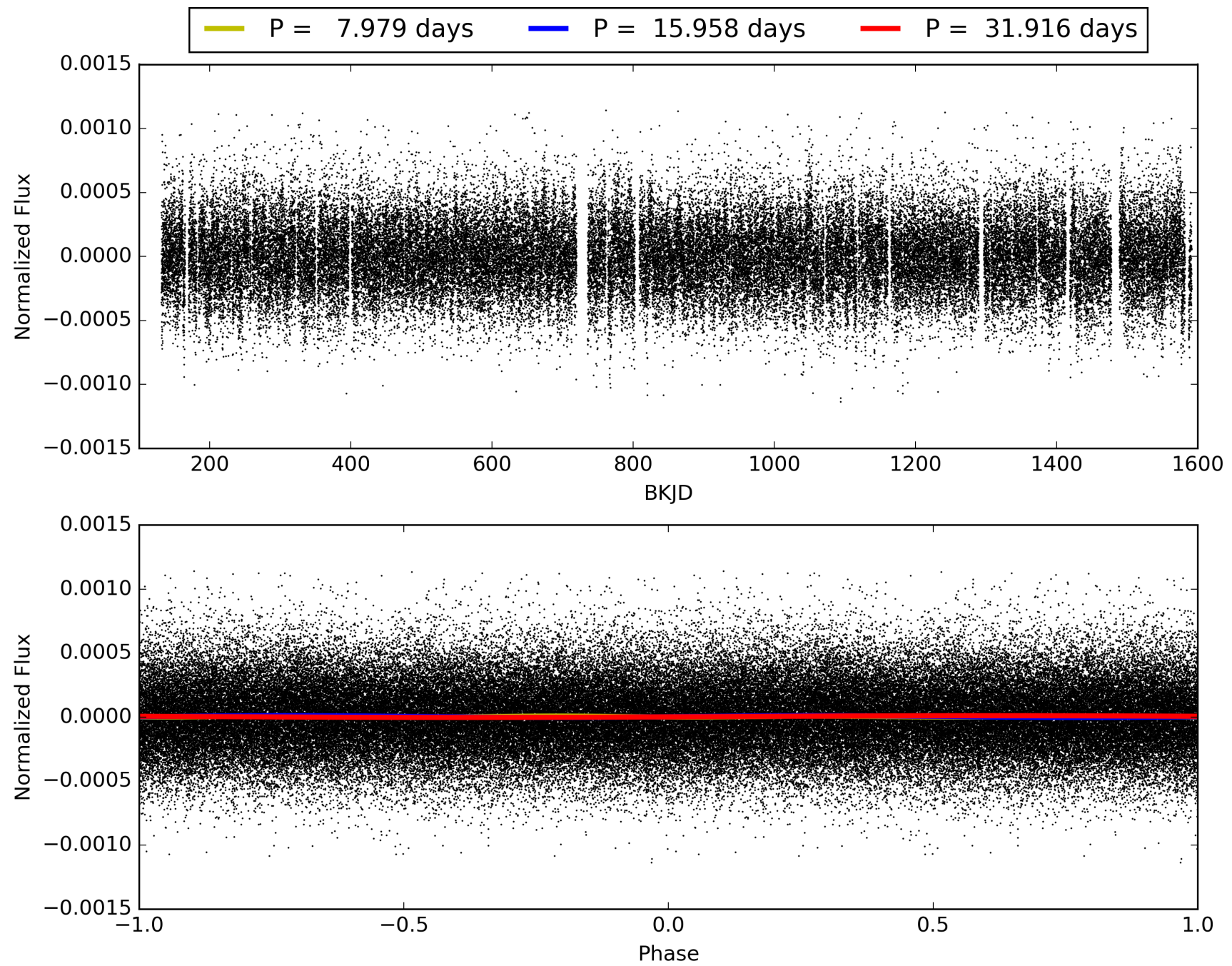
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:09:00 Z

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

TCE 007281825-02, PDC Light Curves

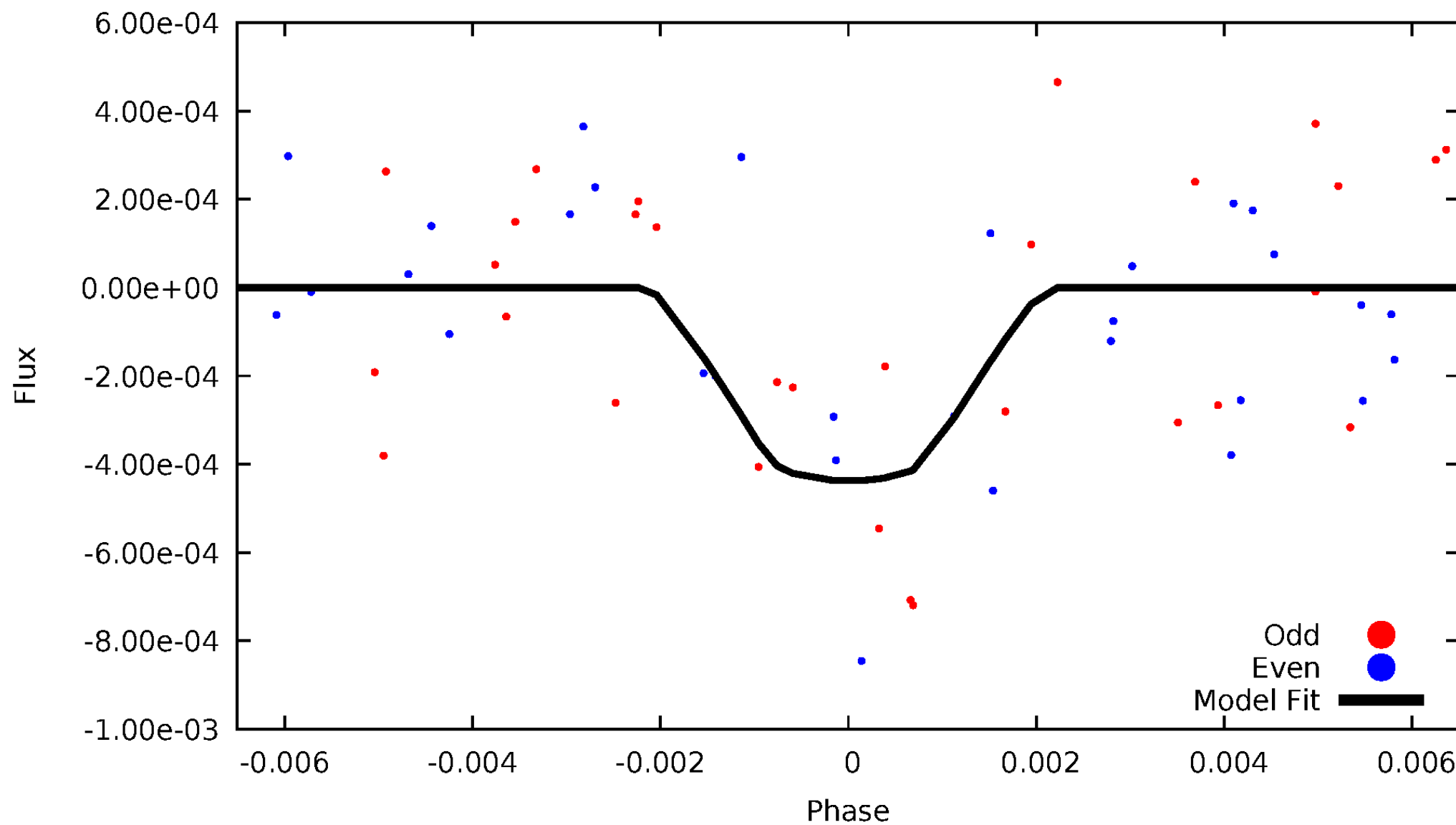


TCE 007281825-02



DV Odd/Even

TCE 007281825-02

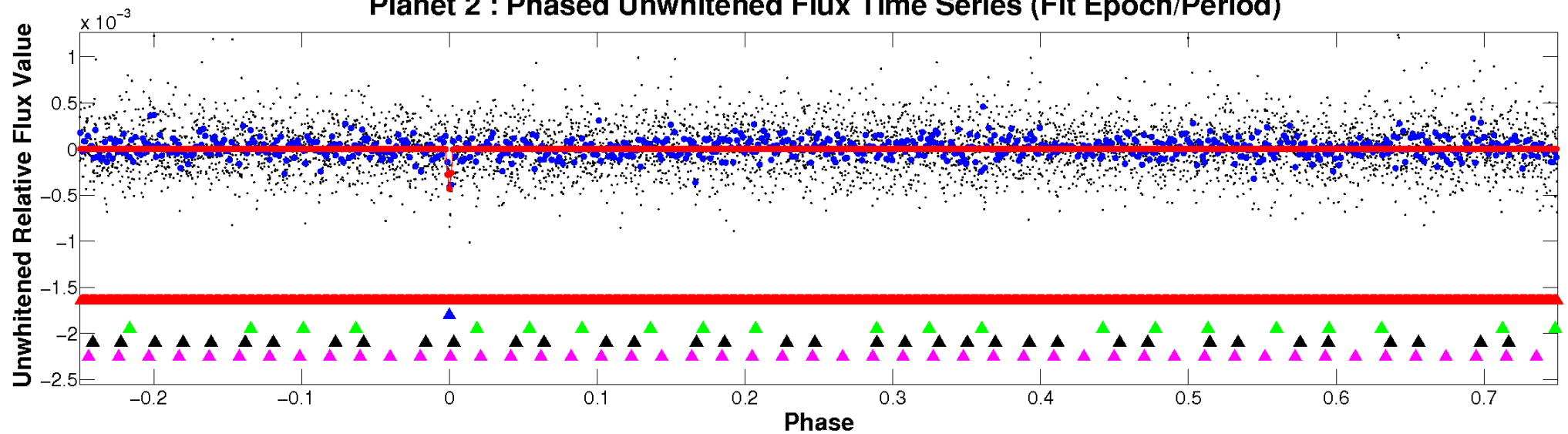


ALT Odd/Even

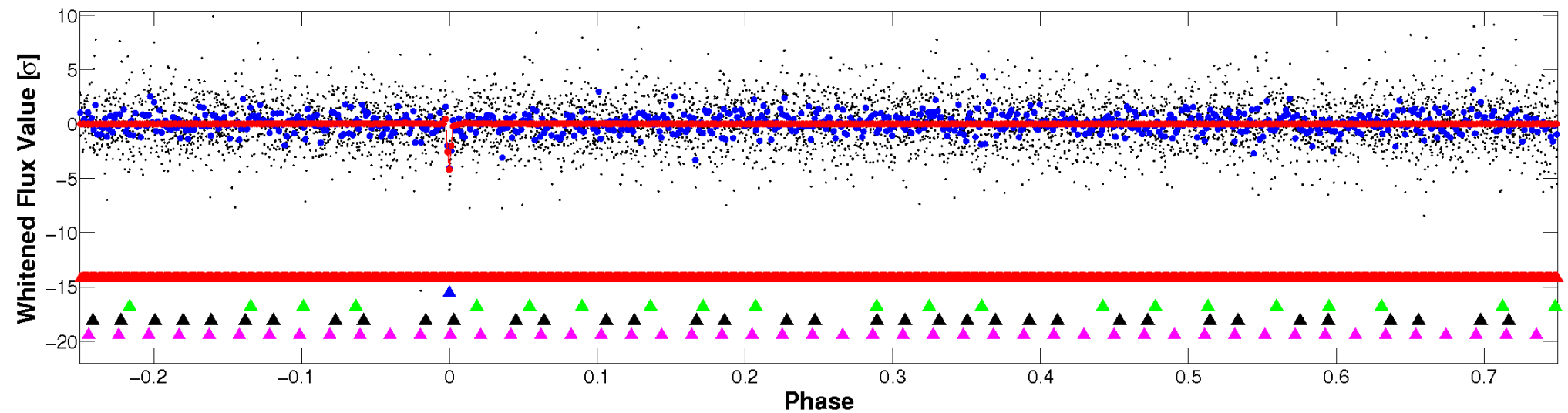
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

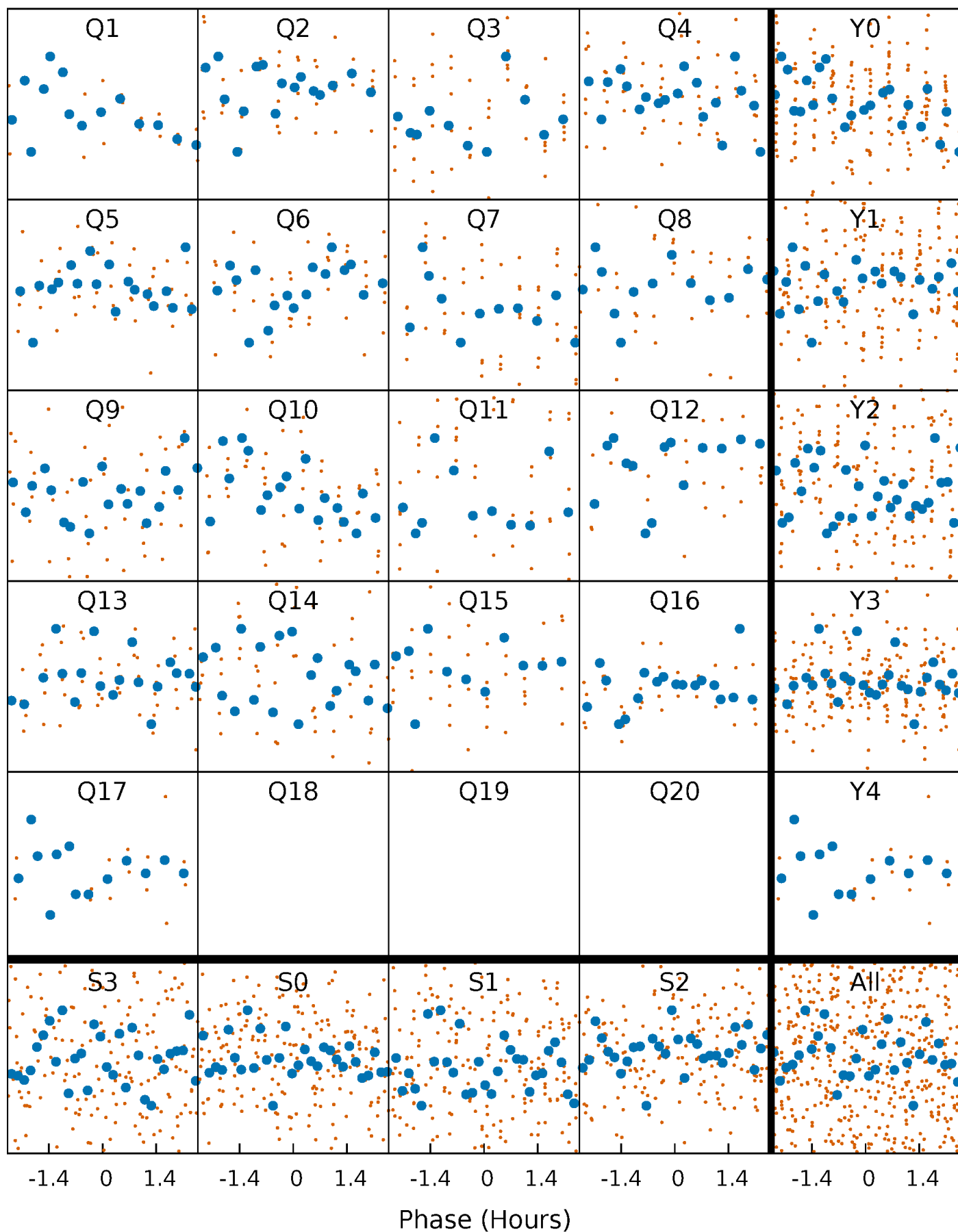


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



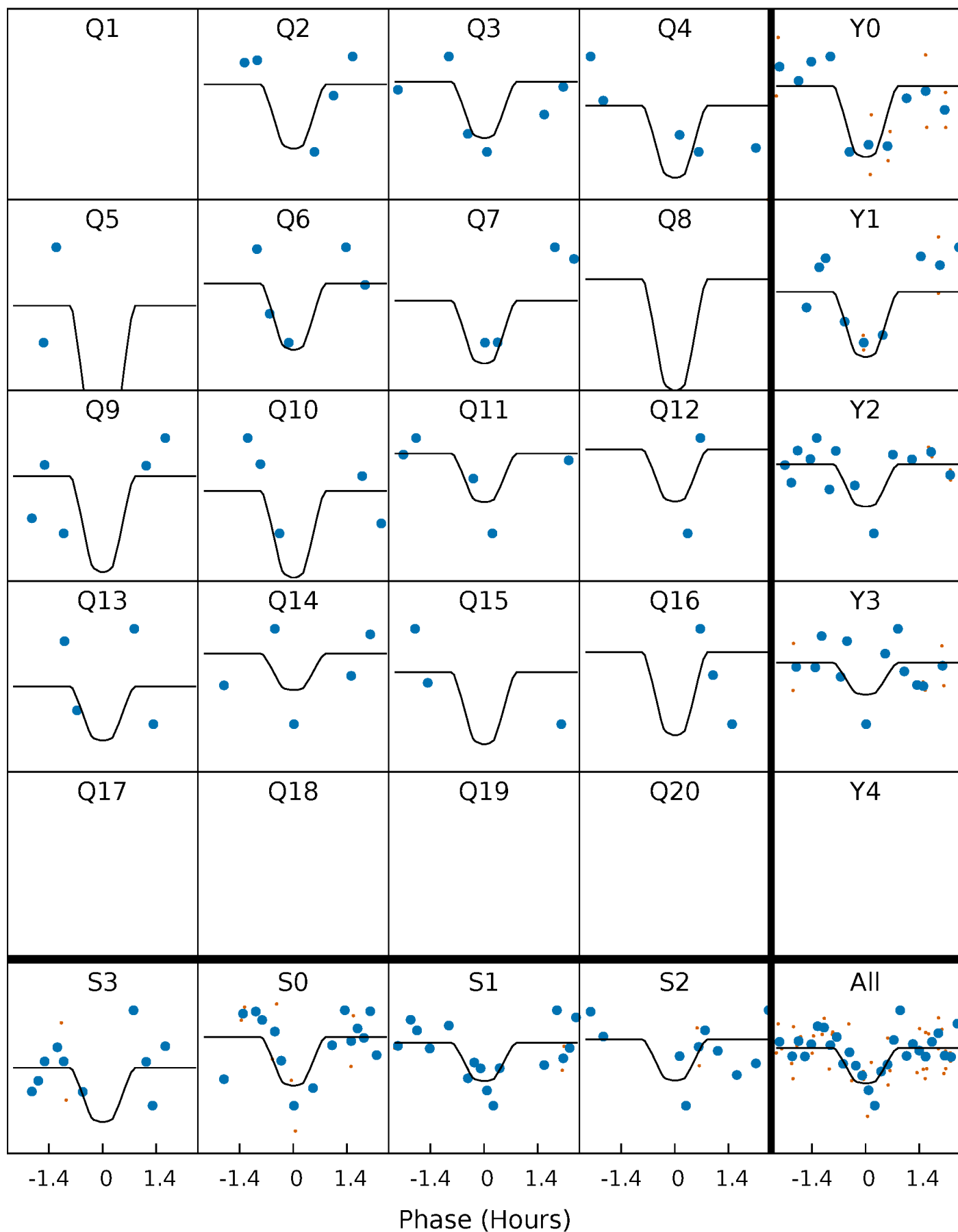
PDC Quarter-Phased Transit Curves

TCE 007281825-02 P= 15.958084 Days $T_0=136.947772$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007281825-02 P= 15.958084 Days $T_0=136.947772$ (BKJD)

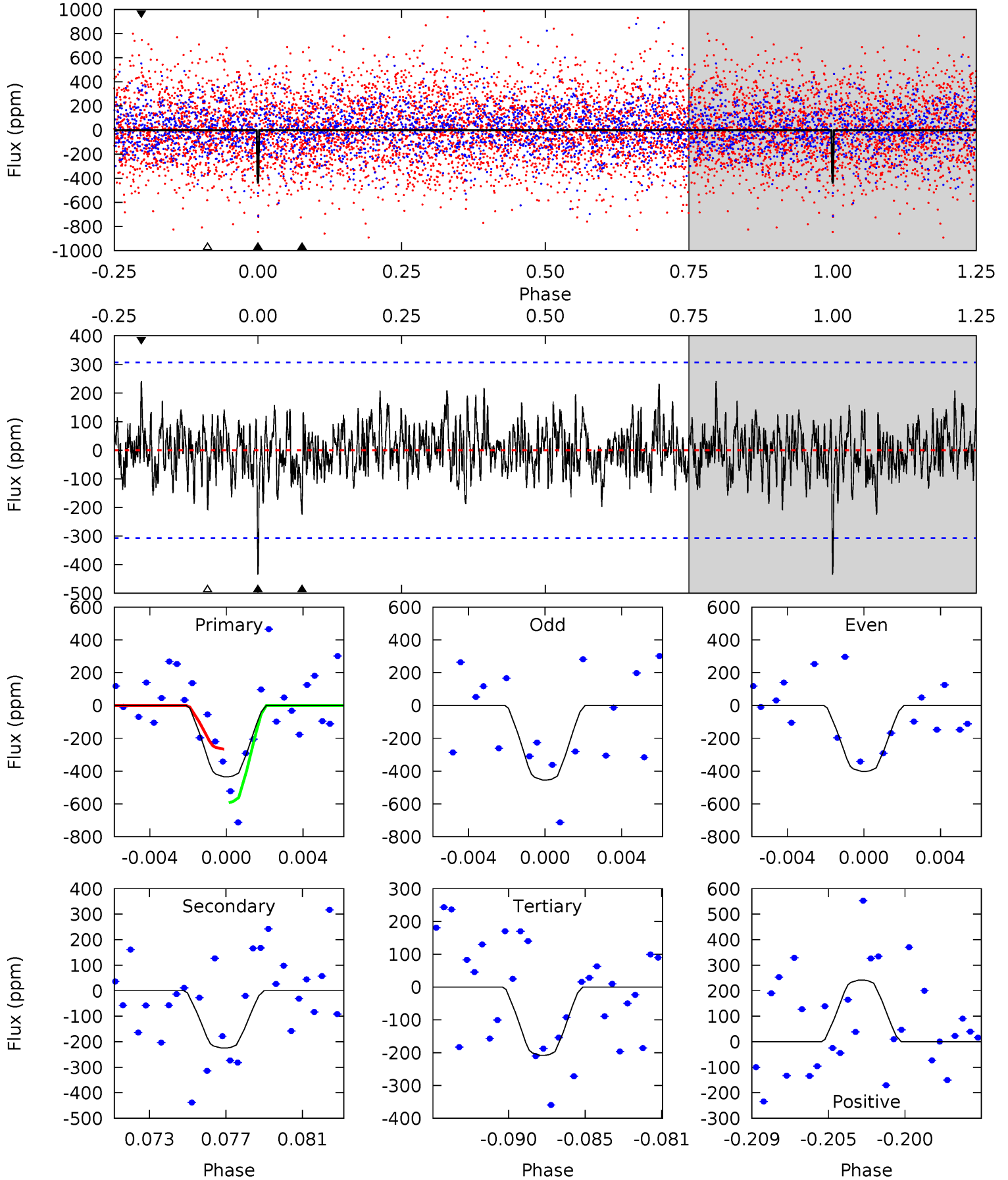


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

007281825-02, P = 15.958084 Days, E = 120.989688 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.35	3.80	3.52	4.08	5.19	2.86	1.20	3.83	3.26	0.28	-0.28	0.45	1.00	0.36	2.76



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 007281825

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6338^{+153}_{-210}	$4.418^{+0.067}_{-0.202}$	$-0.100^{+0.250}_{-0.300}$	$1.091^{+0.353}_{-0.118}$	$1.137^{+0.166}_{-0.166}$	$1.233^{+0.351}_{-0.648}$
	+2%/-3%	+2%/-5%	+250%/-300%	+32%/-11%	+15%/-15%	+28%/-53%
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 007281825-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-225 ± 59	$3.63^{+2.70}_{-2.28}$	1150^{+90}_{-56}	4664^{+2970}_{-898}	151^{+966}_{-102}
Alt.	N/A	N/A	N/A	N/A	N/A

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

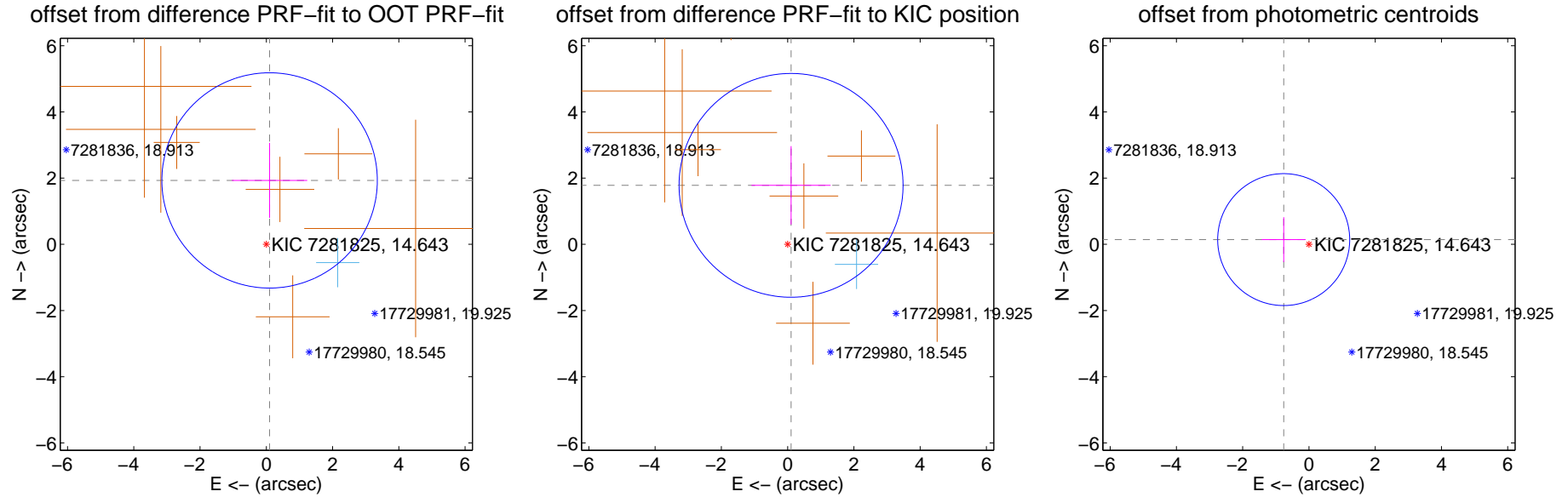
DV Centroid Data

Supplemental centroid analysis for 007281825-02. Kepler magnitude: 14.64. Transit SNR 13.19

There are 1 quarters with good PRF difference image offsets

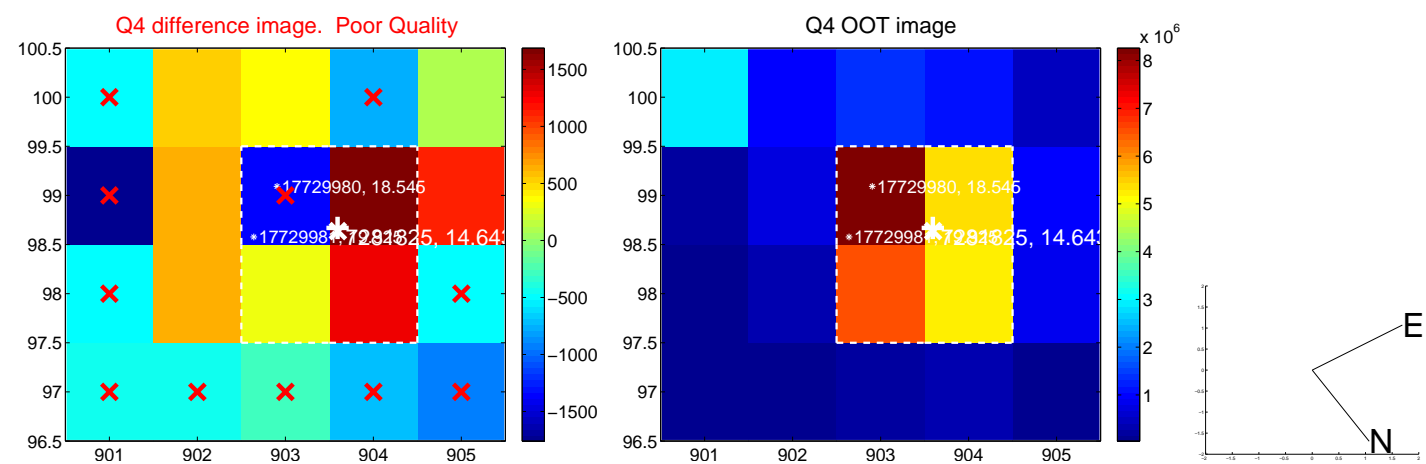
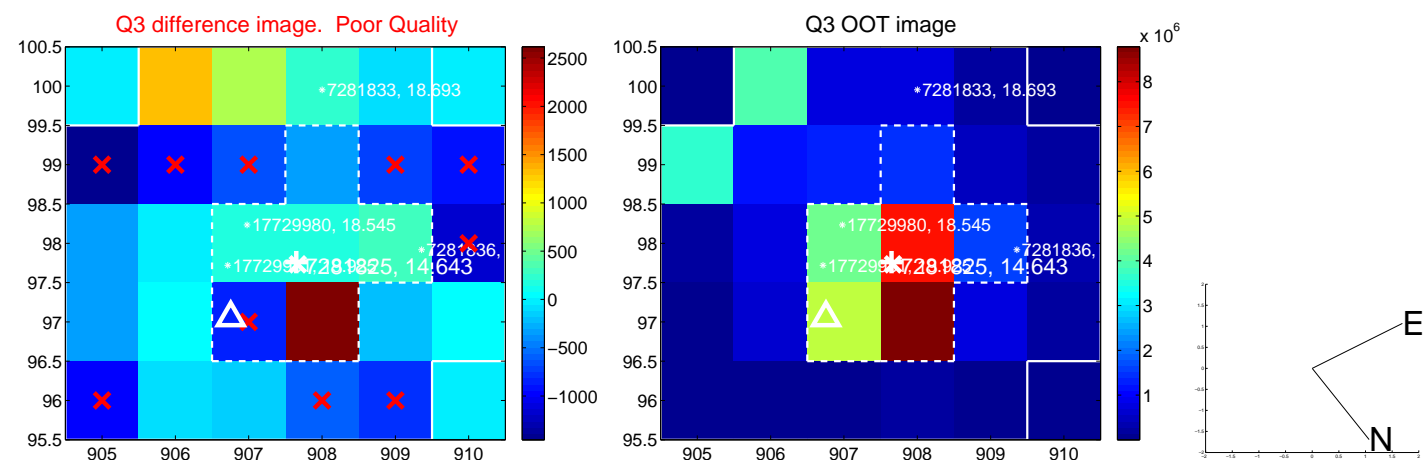
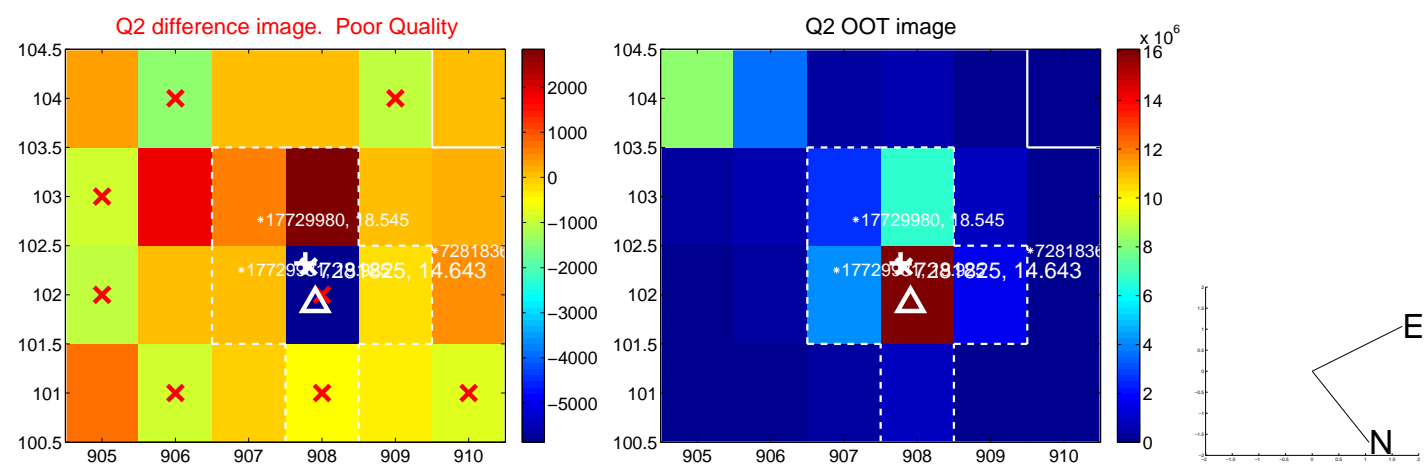
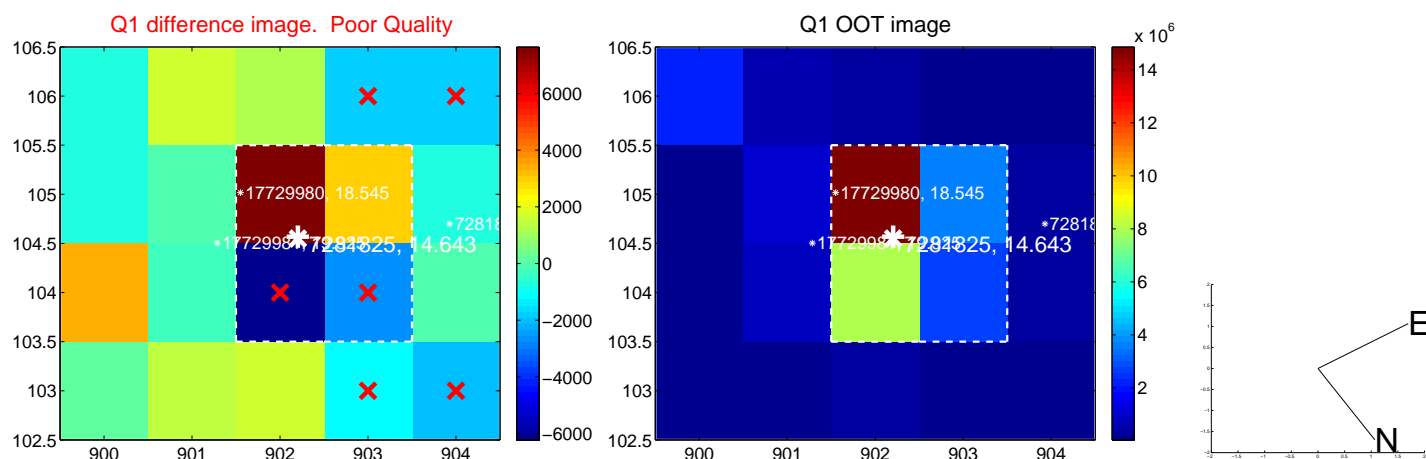
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.933 ± 1.084	1.78	-0.099 ± 1.137	1.931 ± 1.132
PRF-fit source offset from KIC position	1.785 ± 1.127	1.58	-0.103 ± 1.194	1.782 ± 1.184
photometric centroid source offset	0.78 ± 0.66	1.17	0.76 ± 0.66	0.14 ± 0.68

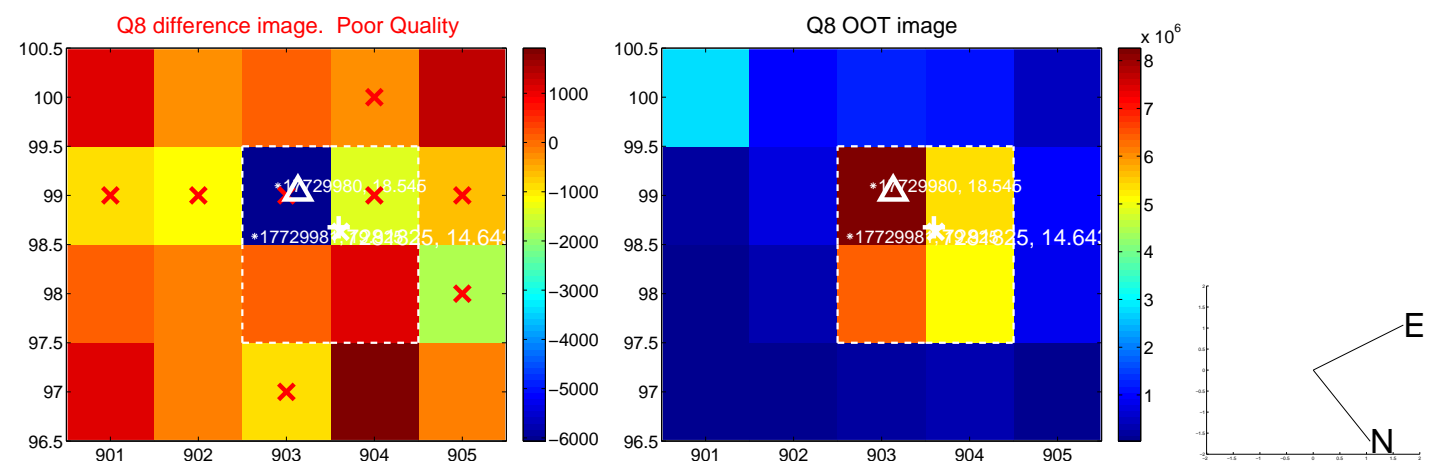
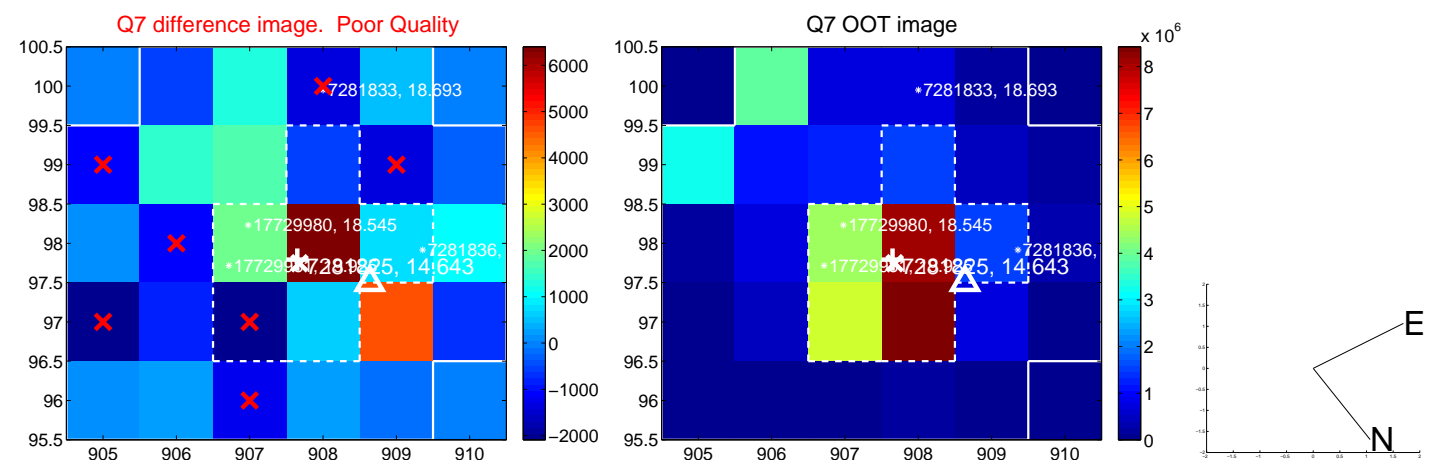
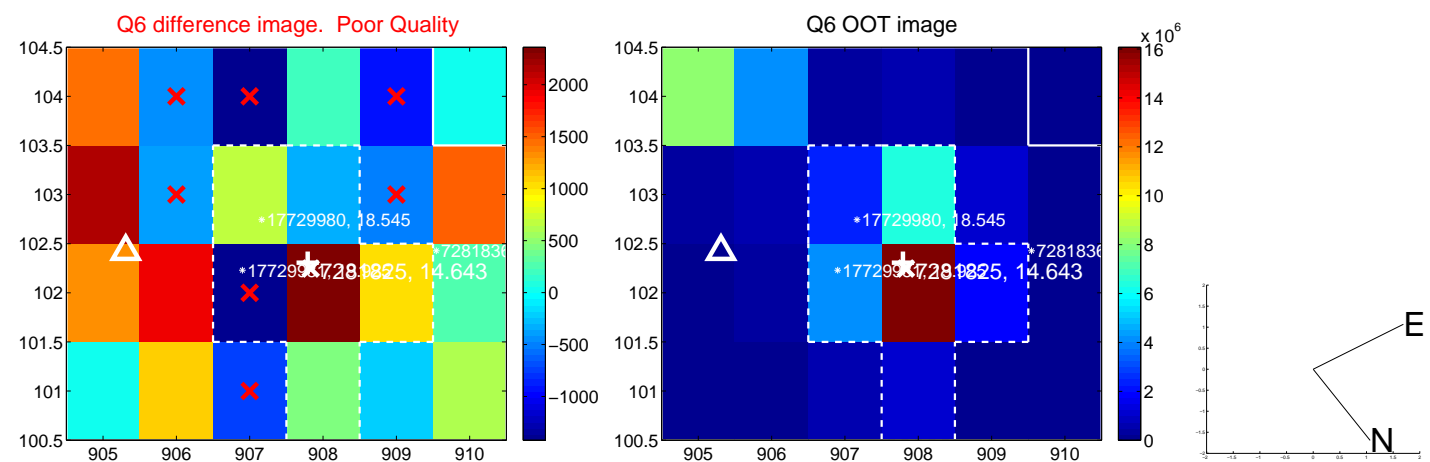
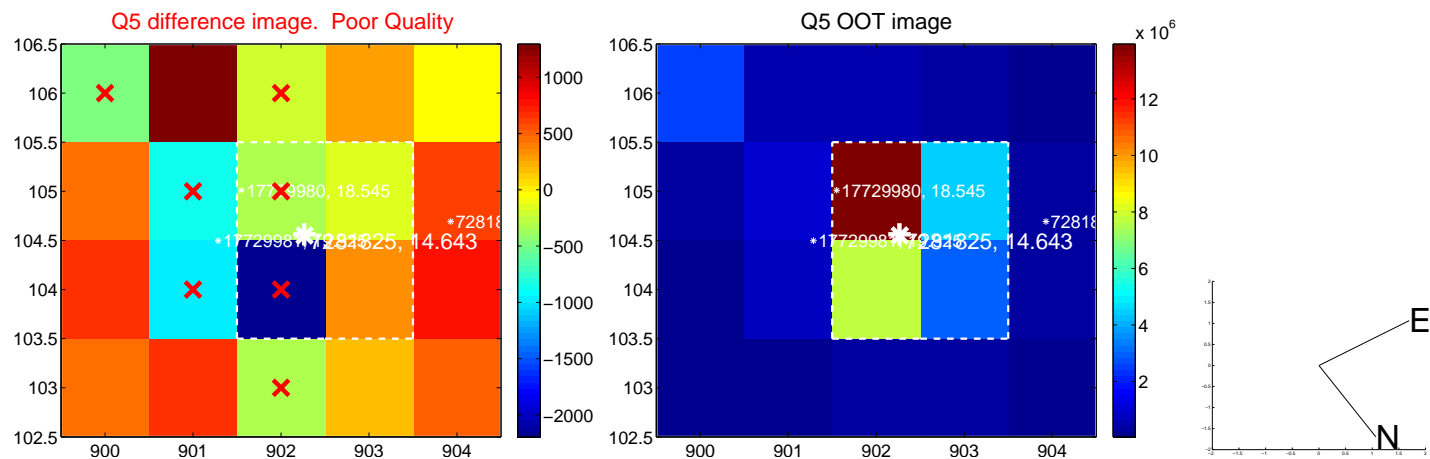


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

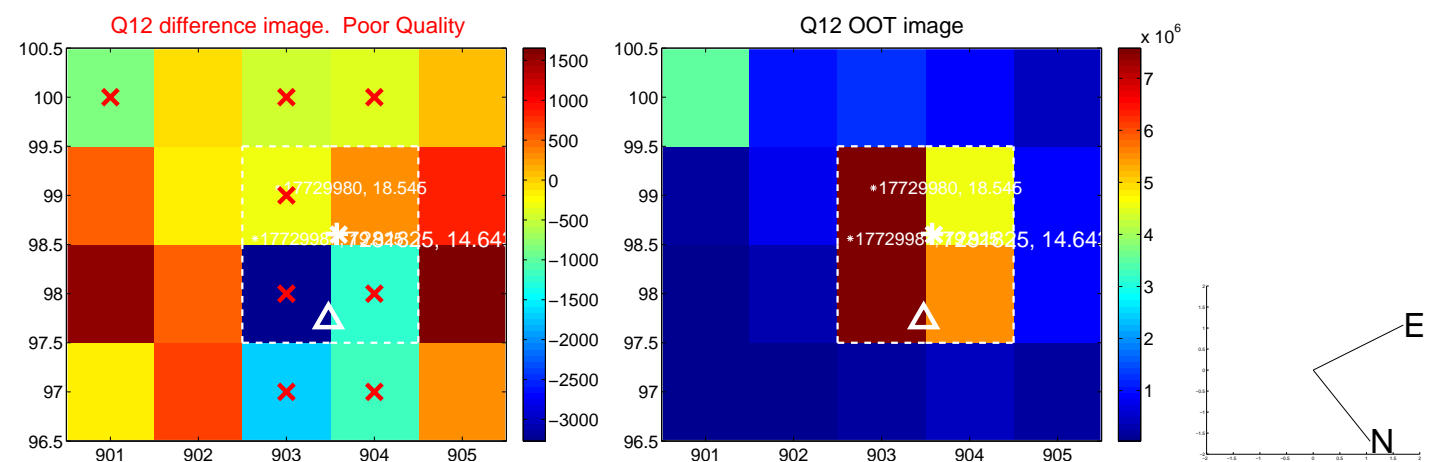
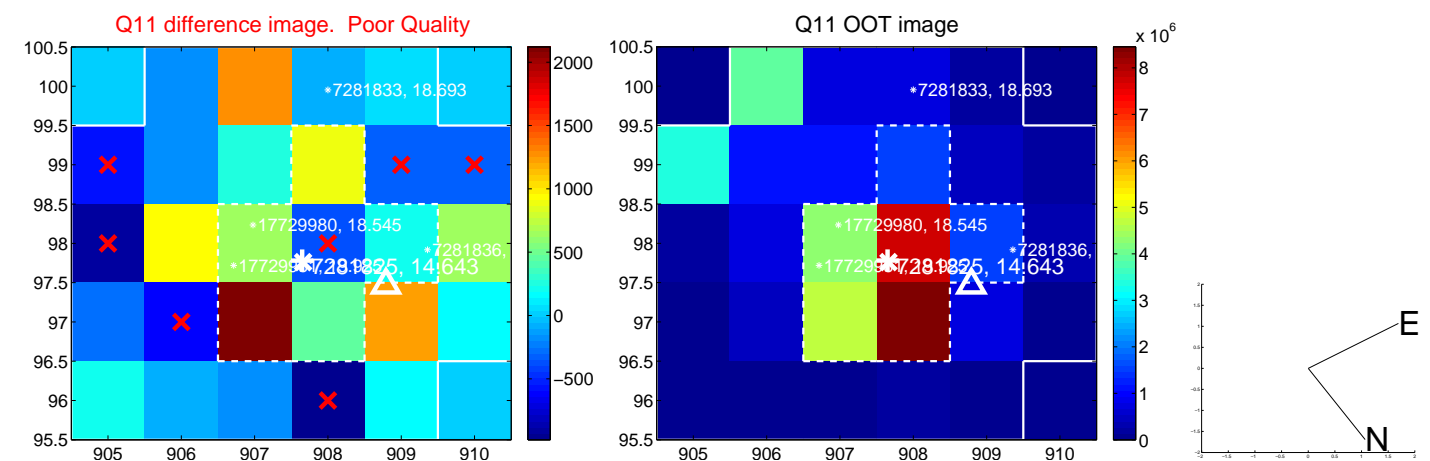
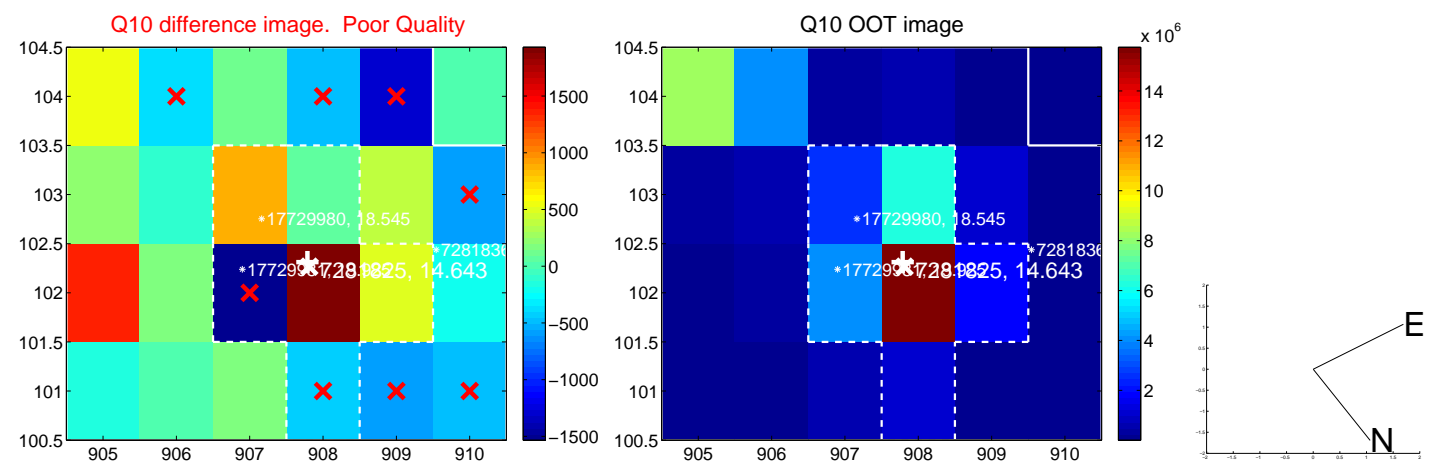
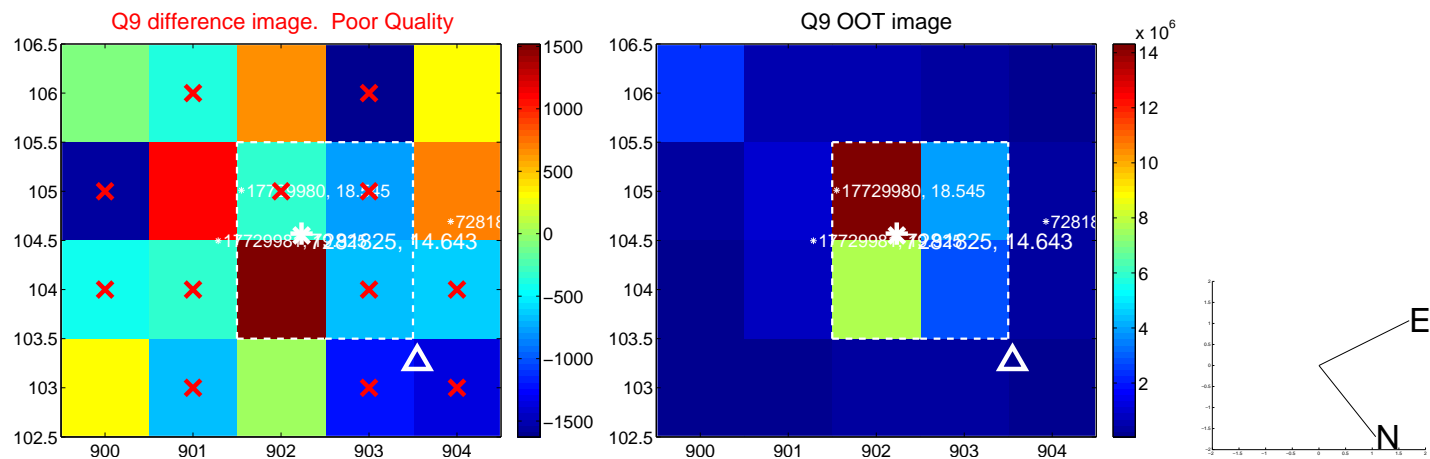
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



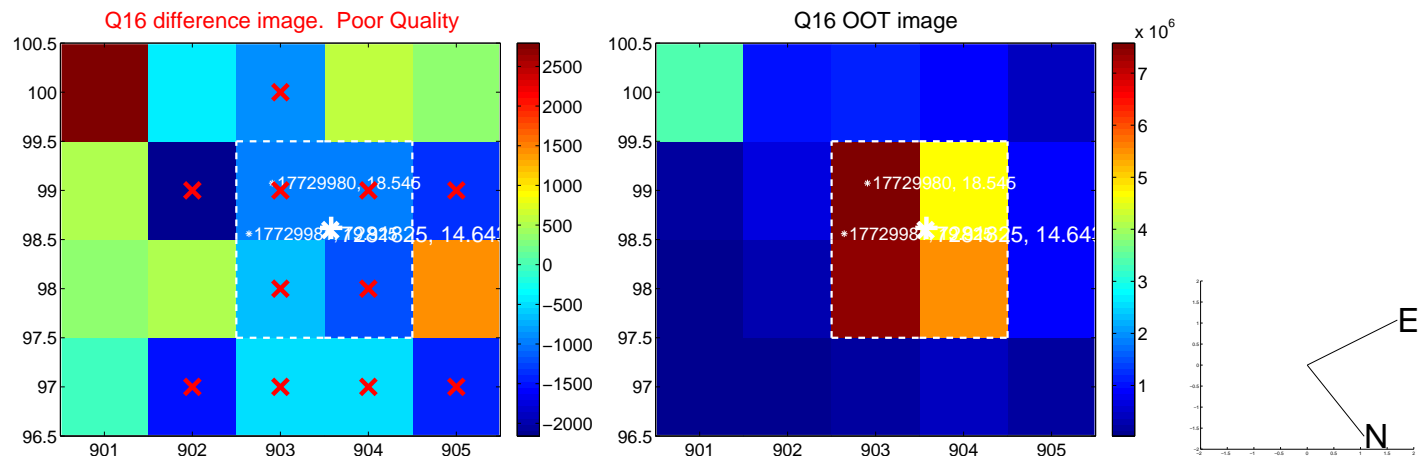
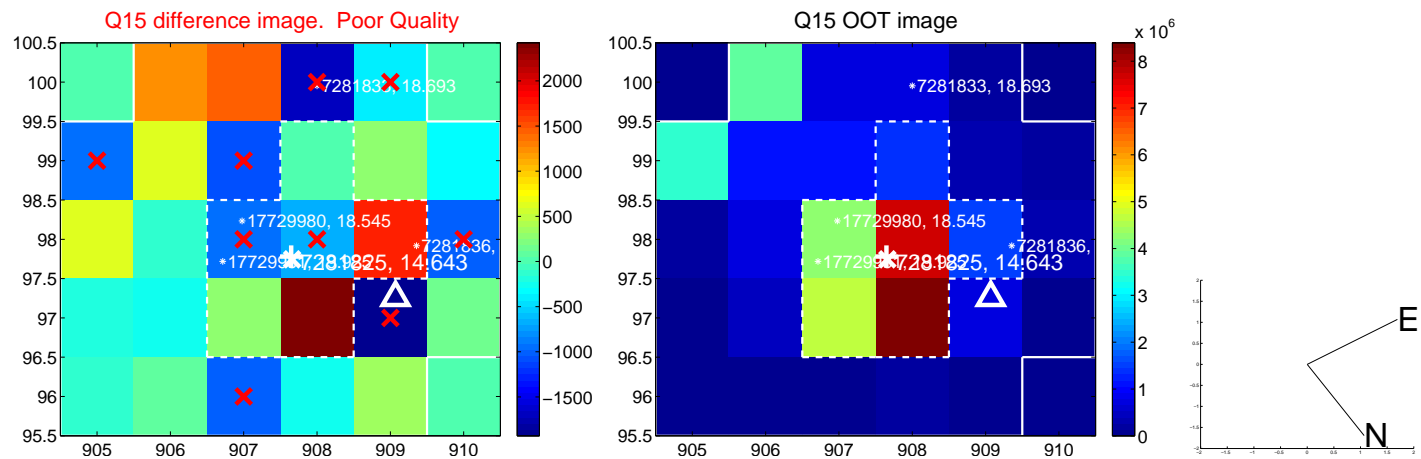
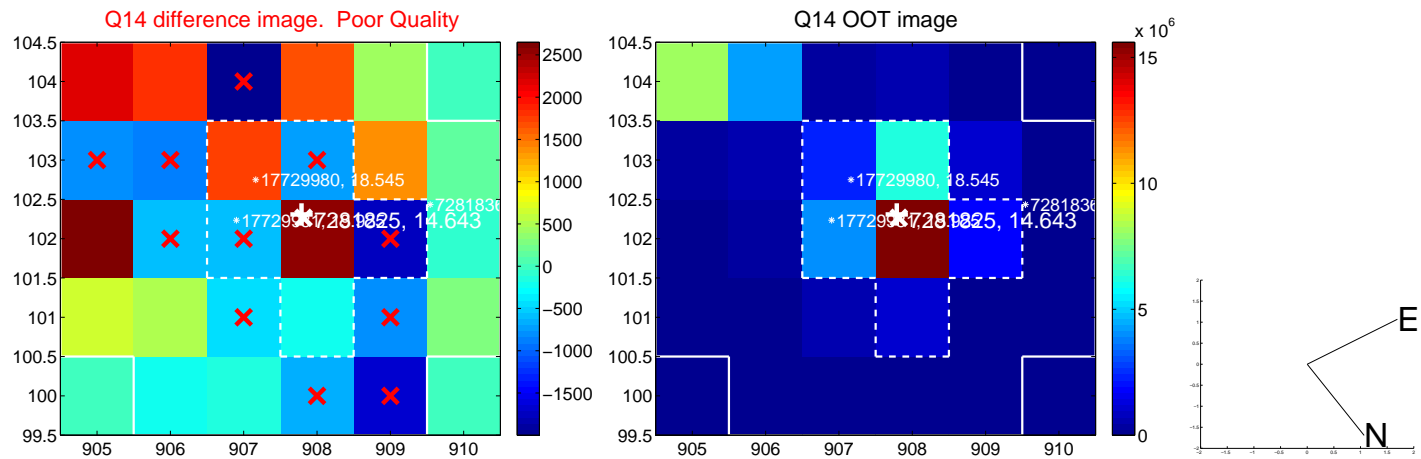
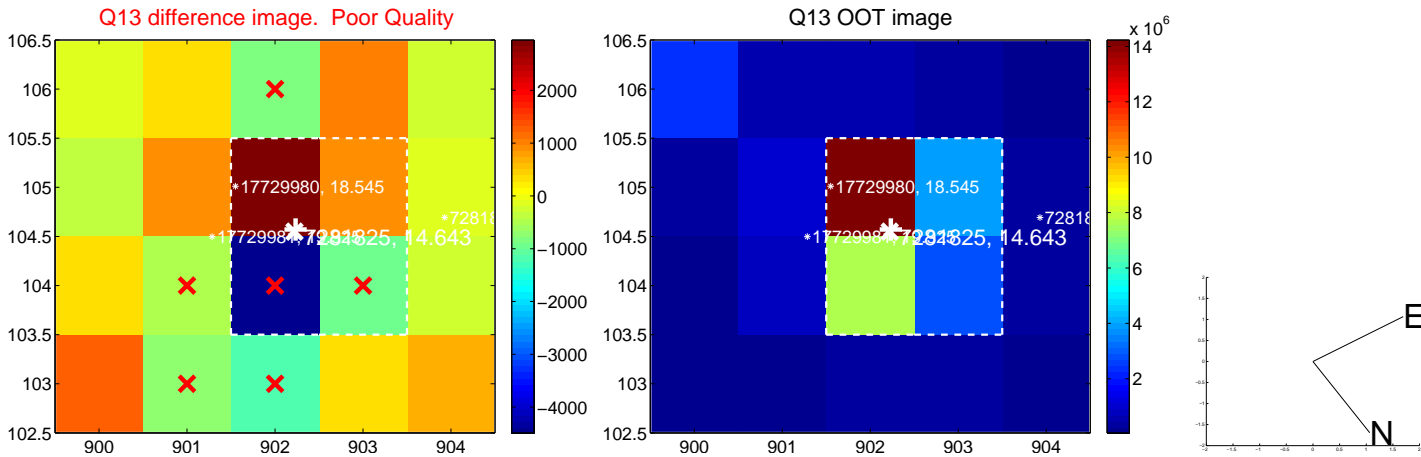
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



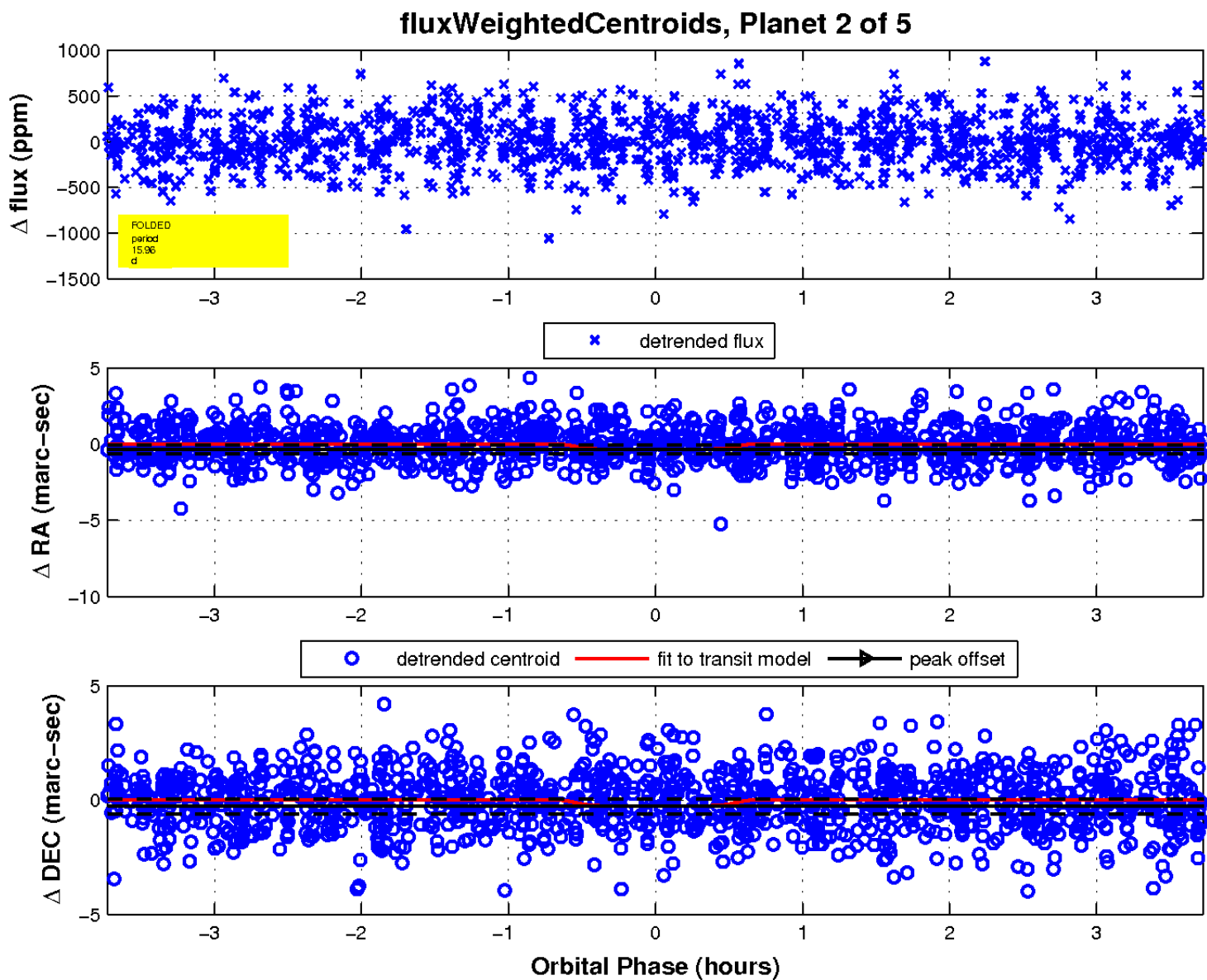
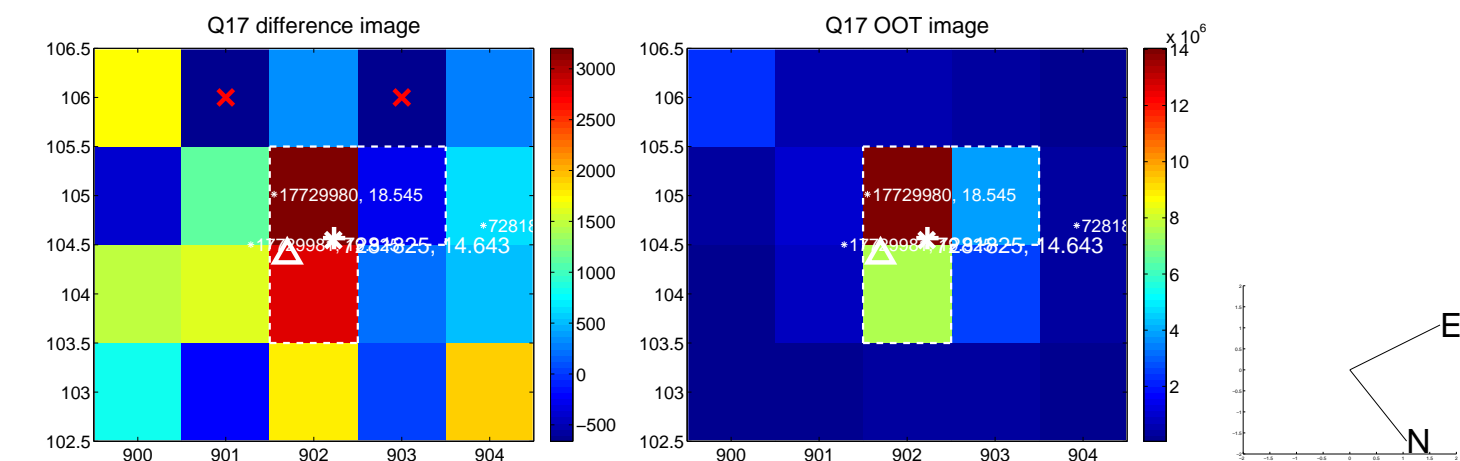
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

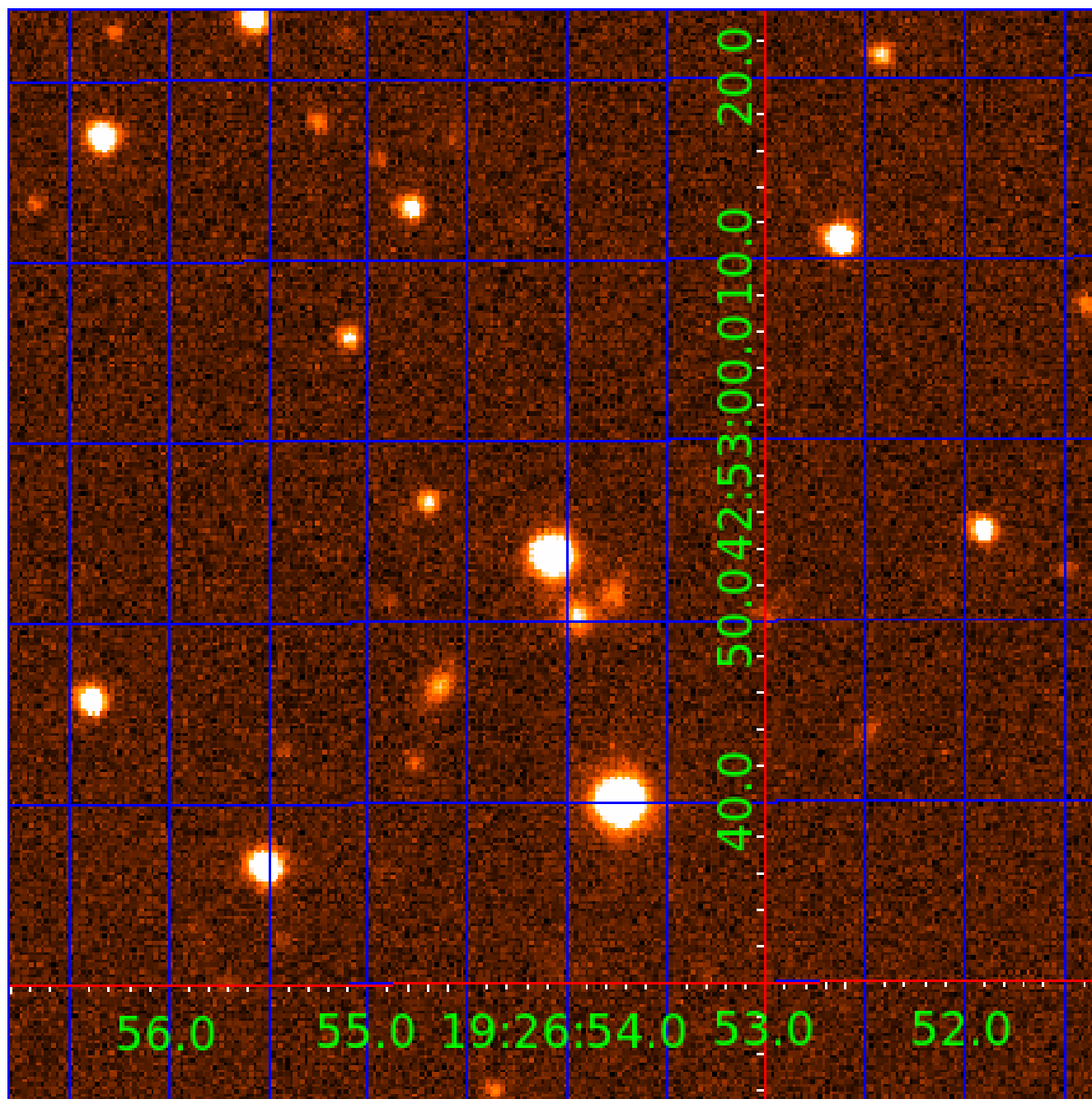


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007281825

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})
007281825-01	OBS	No	0.566723	131.967289	0.0	3.993	8.6	0.0	1.09	6338	0.02	8792.09
007281825-02	OBS	No	15.958084	136.947772	437.7	1.245	10.8	13.2	1.09	6338	2.69	102.63
007281825-04	OBS	No	40.382400	149.728189	437.1	1.175	9.7	9.2	1.09	6338	2.37	29.76
007281825-05	OBS	No	14.981035	135.984243	295.4	1.210	9.5	9.3	1.09	6338	2.21	111.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007281825-01	OBS	FP	0.00	1	0	0	1	LPP_DV—CENT_FEW_DIFFS—EPHEM_MATCH
007281825-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
007281825-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
007281825-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

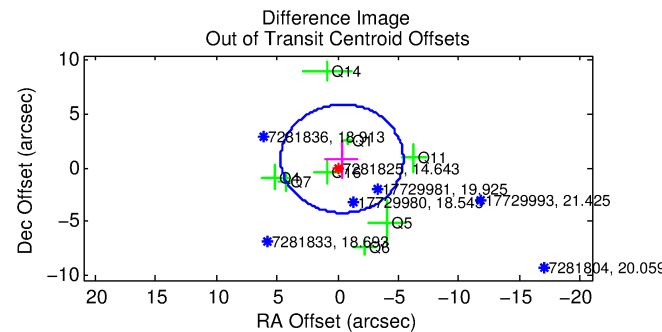
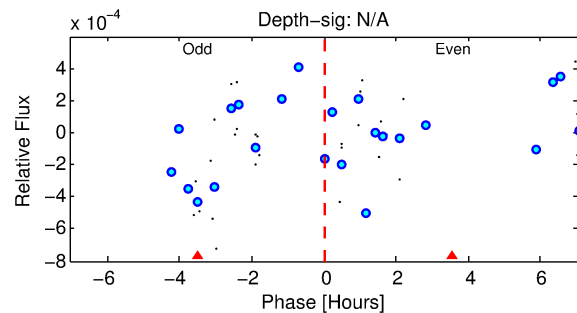
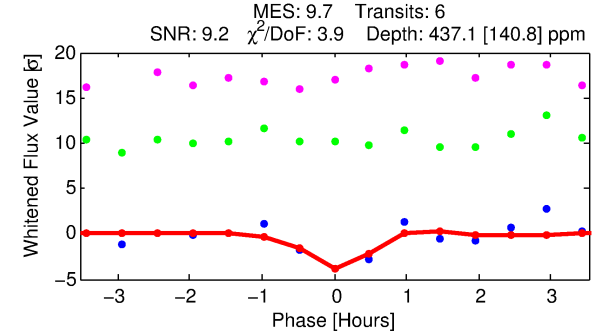
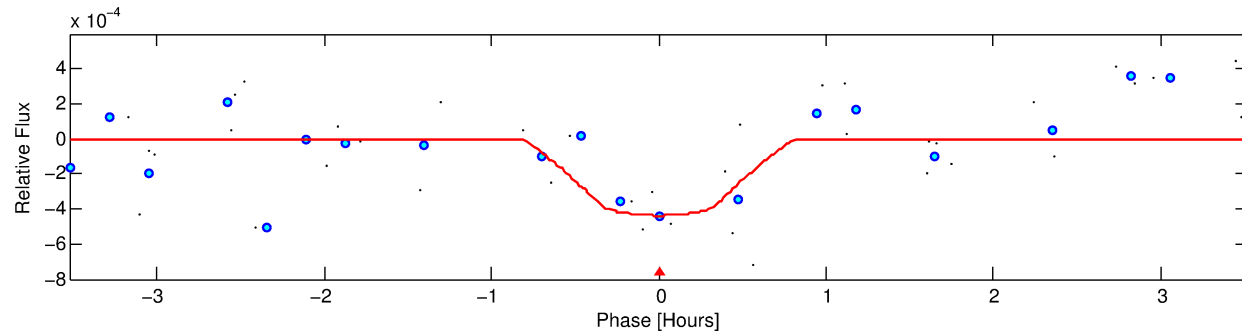
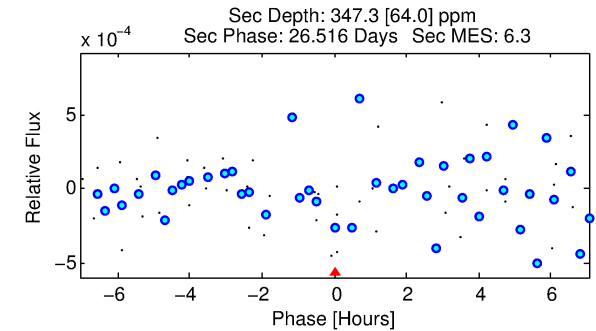
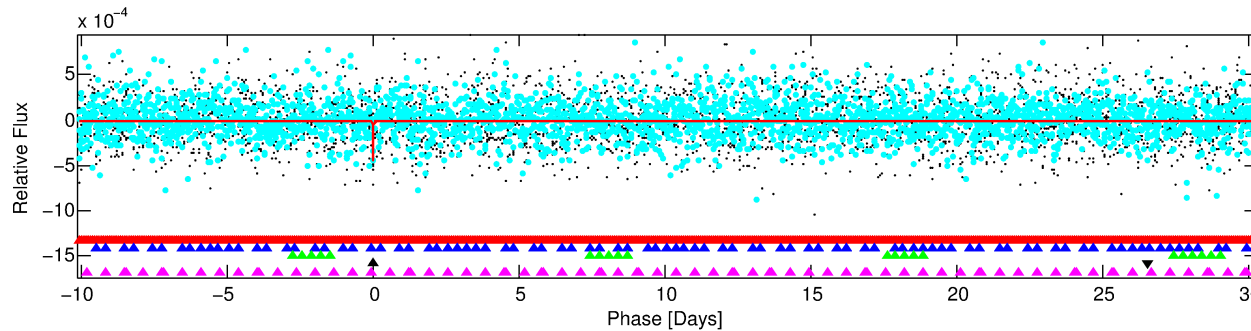
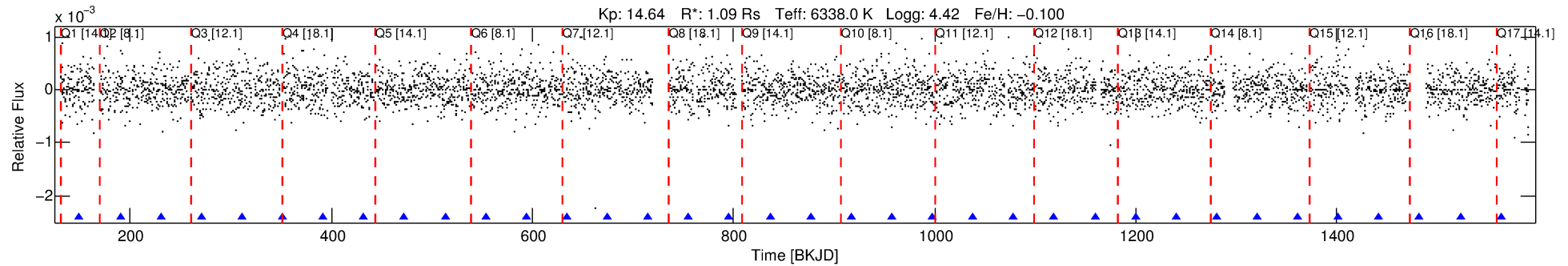
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007281825-04

No Significant Match Found

DV One-Page Summary

KIC: 7281825 Candidate: 4 of 5 Period: 40.382 d



DV Fit Results:

Period = 40.38240 [0.00083] d
Epoch = 149.7282 [0.0219] BKJD
Rp/R* = 0.0199 [0.0321]
a/R* = 233.46 [1898.36]
b = 0.50 [12.40]
Seff = 29.76 [11.91]
Teq = 596 [60] K
Rp = 2.36 [3.90] Re
a = 0.2405 [0.0639] AU
Ag = 1975.70 [6441.91] [0.31σ]
Teffp = 6139 [4975] K [1.11σ]

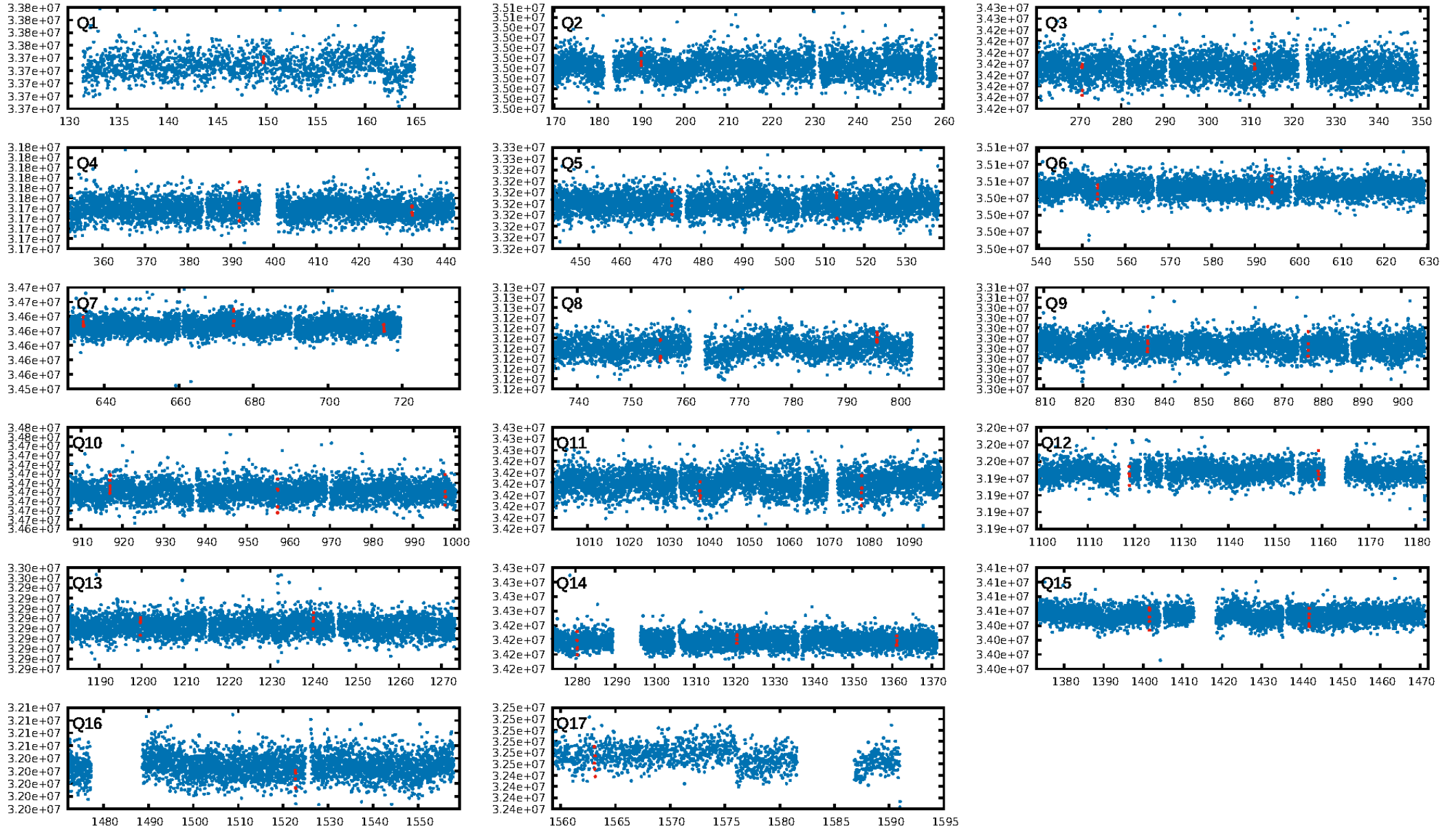
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [342.42σ]
LongPeriod-sig: 100.0% [211.47σ]
ModelChiSquare2-sig: 21.4%
ModelChiSquareGof-sig: 46.1%
Bootstrap-pfa: 4.11e-08
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -2.548
Centroid-sig: 0.9%
Centroid-so: 1.371 arcsec [1.31σ]
OotOffset-rm: 0.906 arcsec [0.54σ]
KicOffset-rm: 0.785 arcsec [0.46σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 0.00 [0/8]
DiffImageOverlap-fno: 0.00 [0/17]

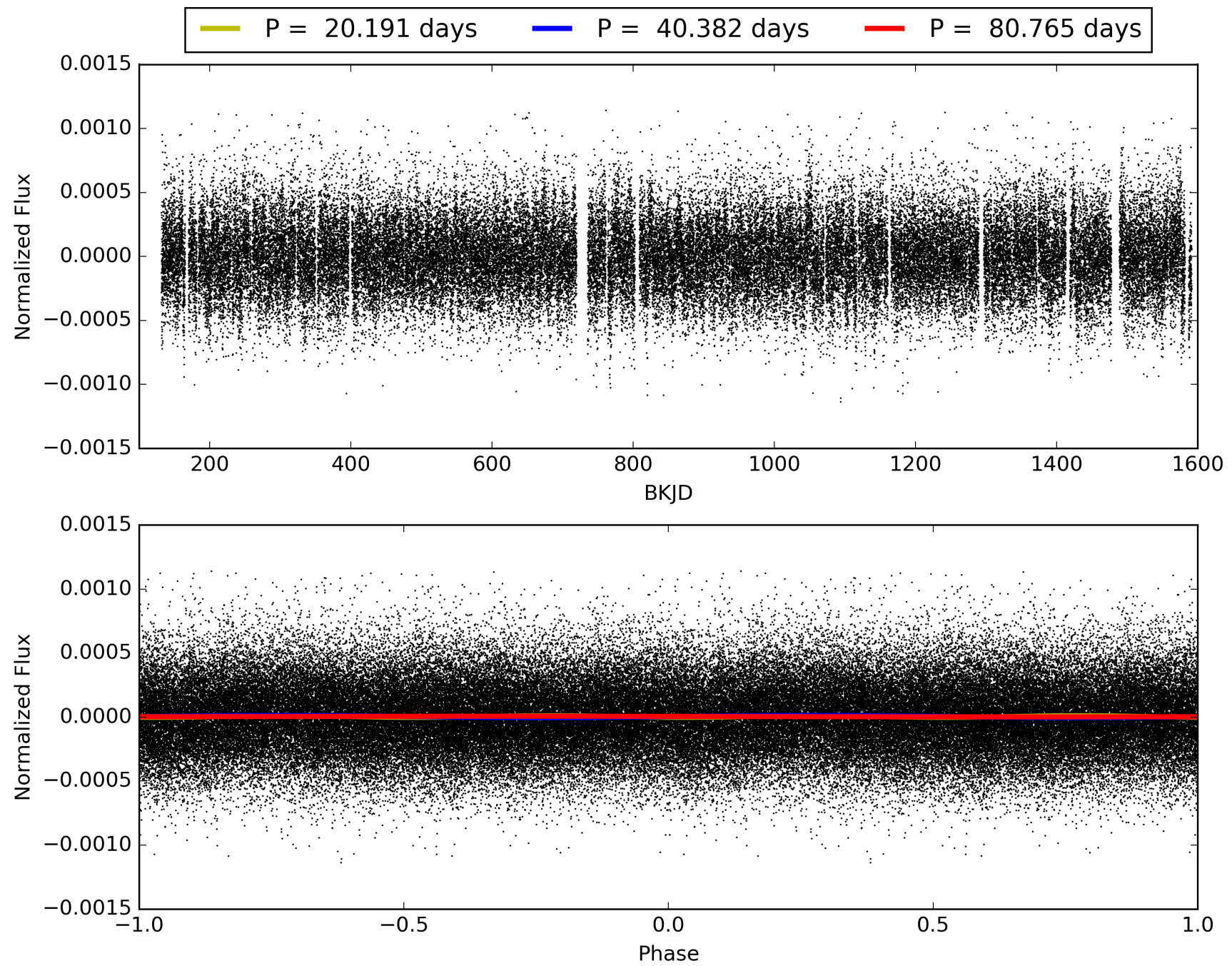
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:09:07 Z

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

TCE 007281825-04, PDC Light Curves

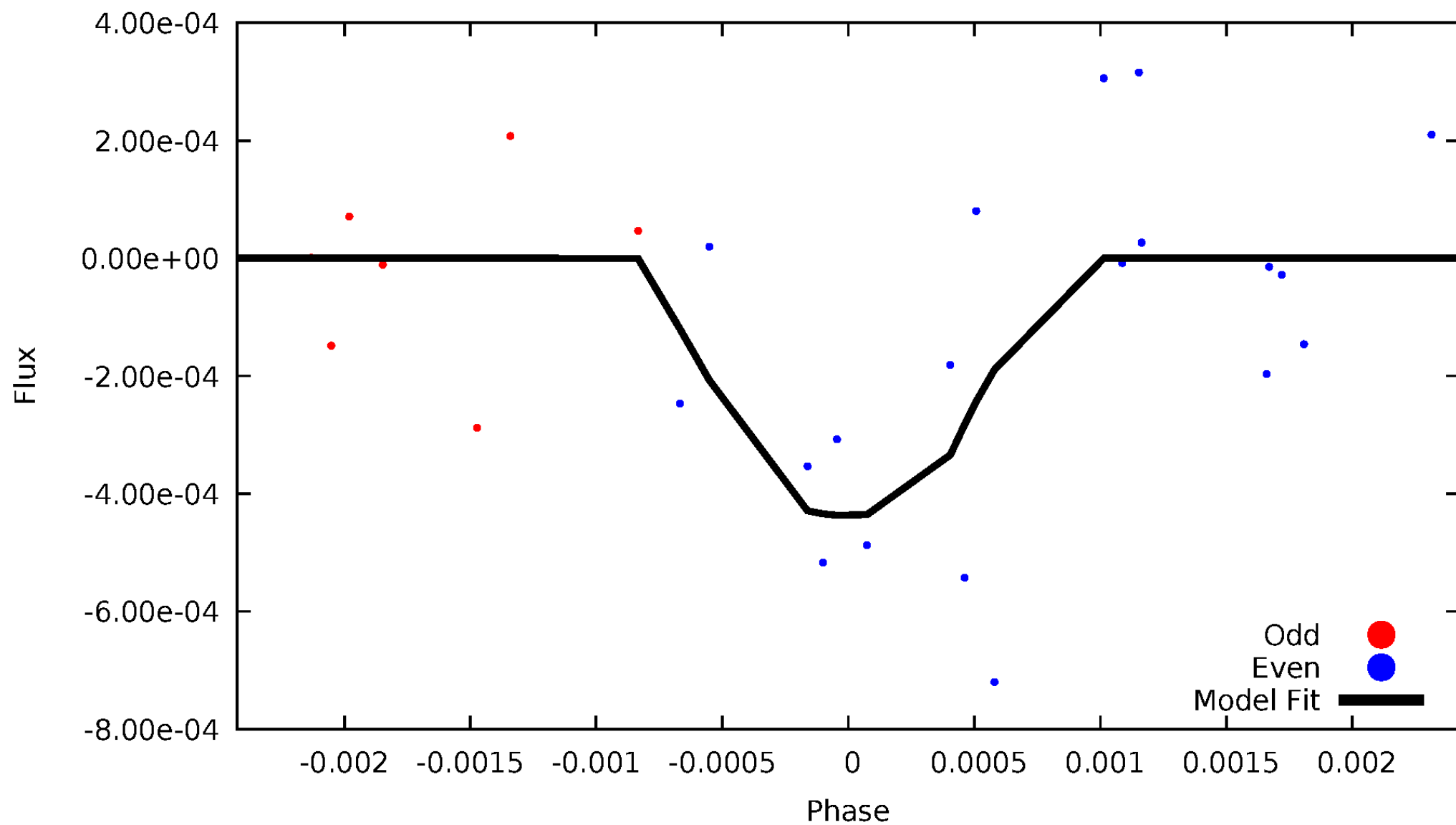


TCE 007281825-04



DV Odd/Even

TCE 007281825-04

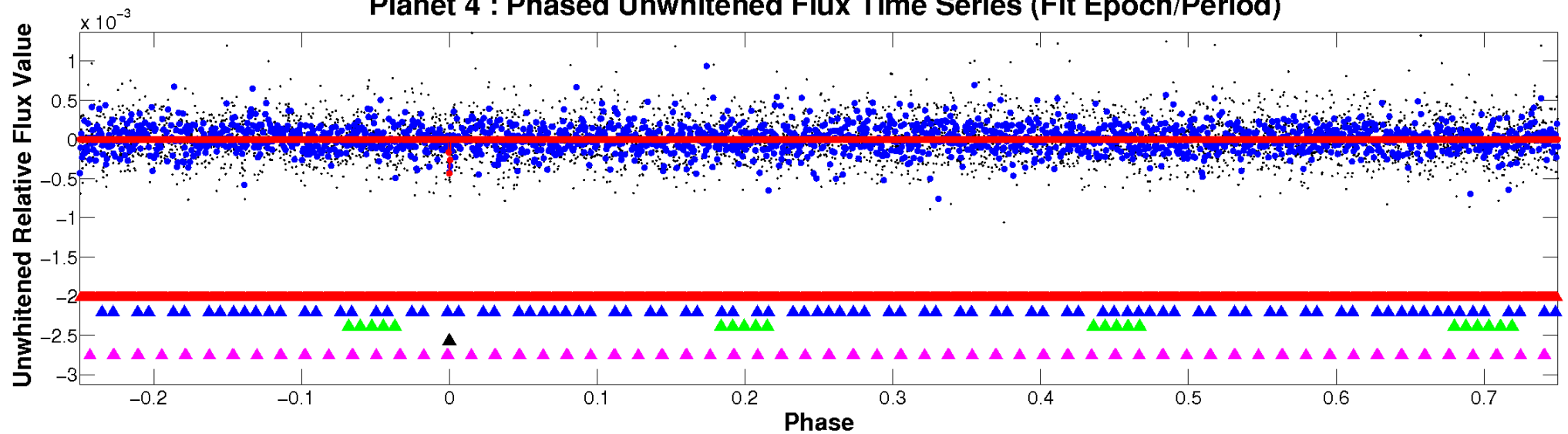


ALT Odd/Even

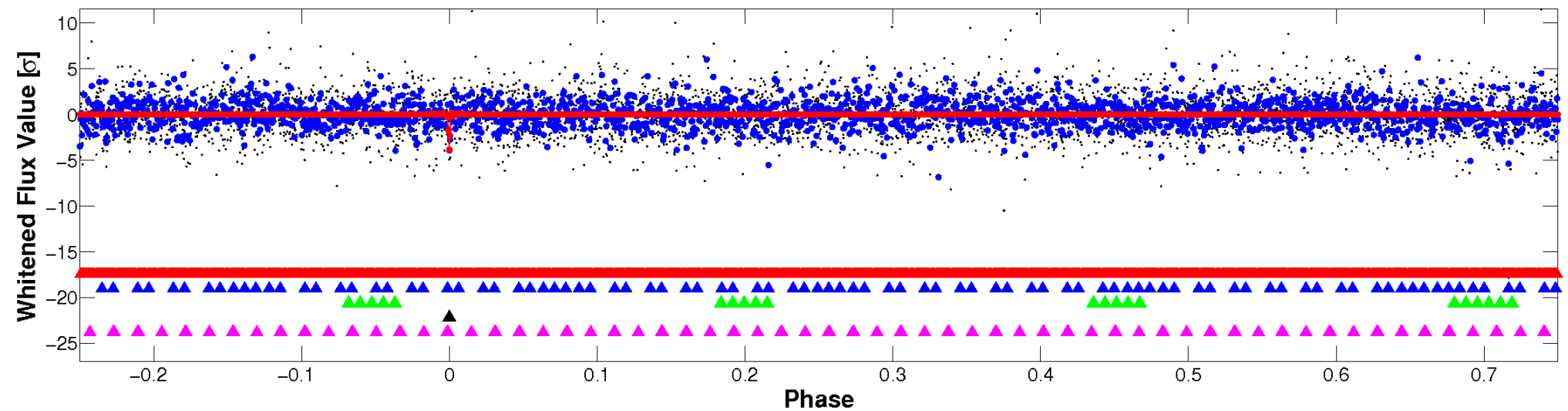
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

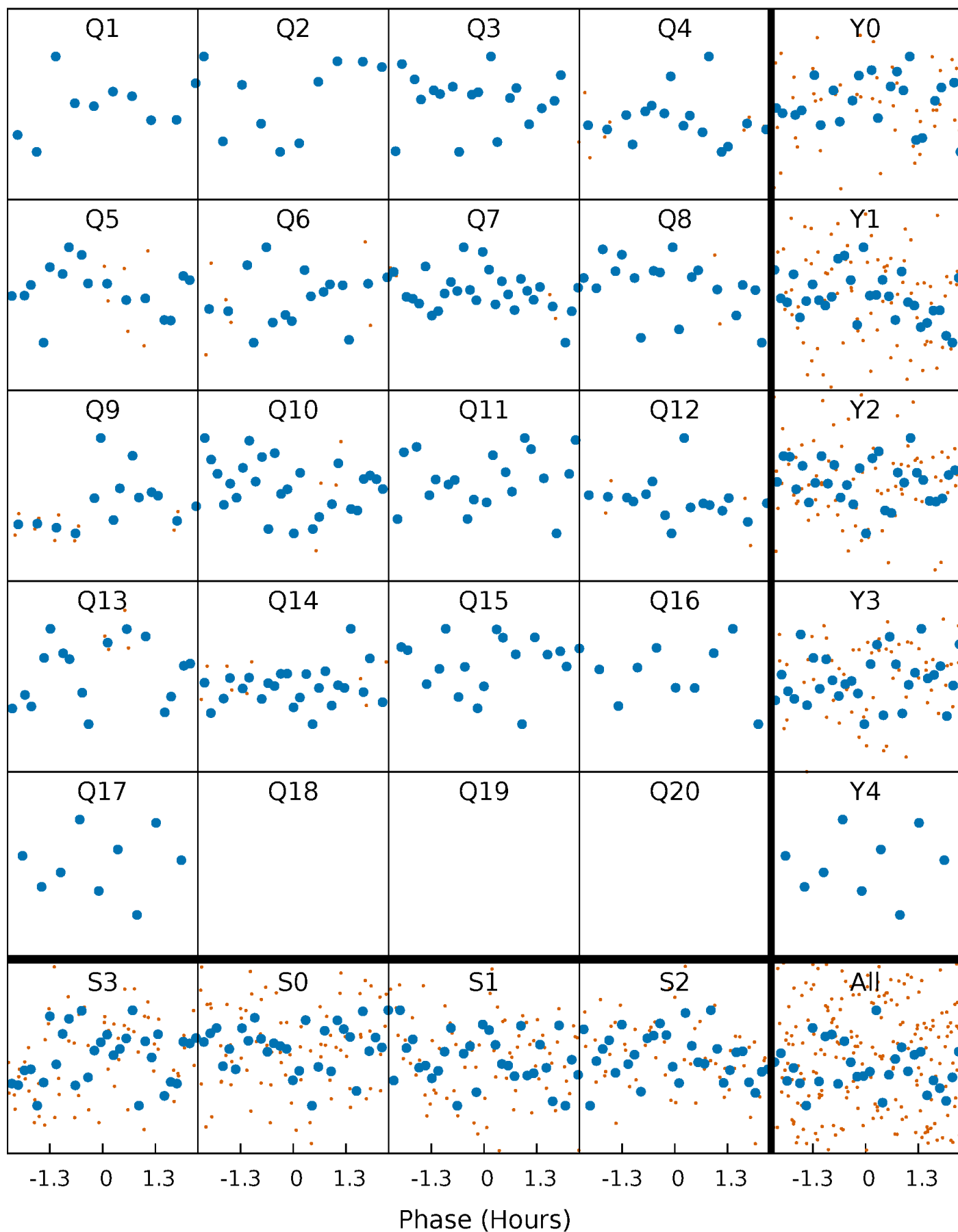


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



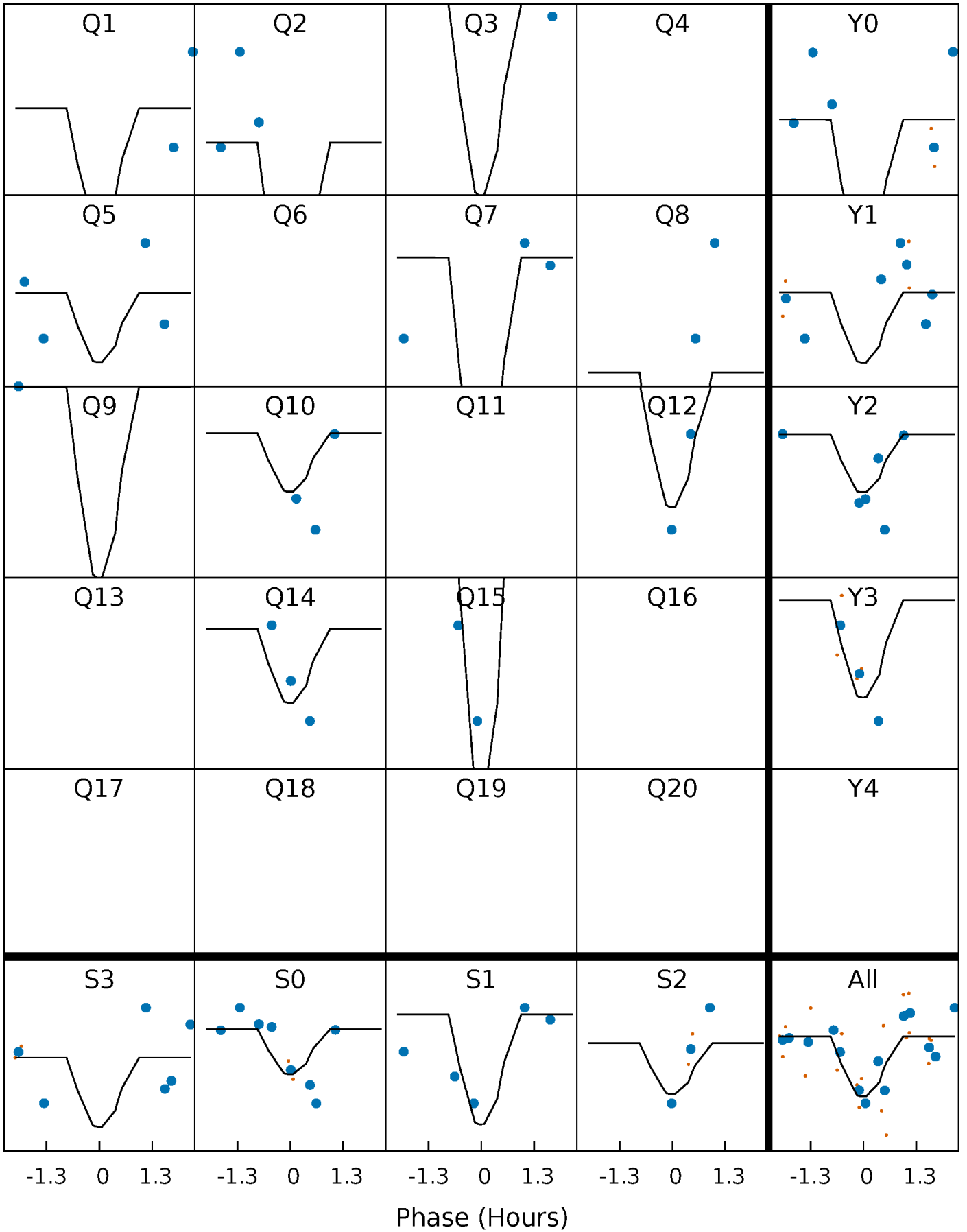
PDC Quarter-Phased Transit Curves

TCE 007281825-04 P= 40.382400 Days $T_0=149.728189$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007281825-04 $P = 40.382400$ Days $T_0 = 149.728189$ (BKJD)

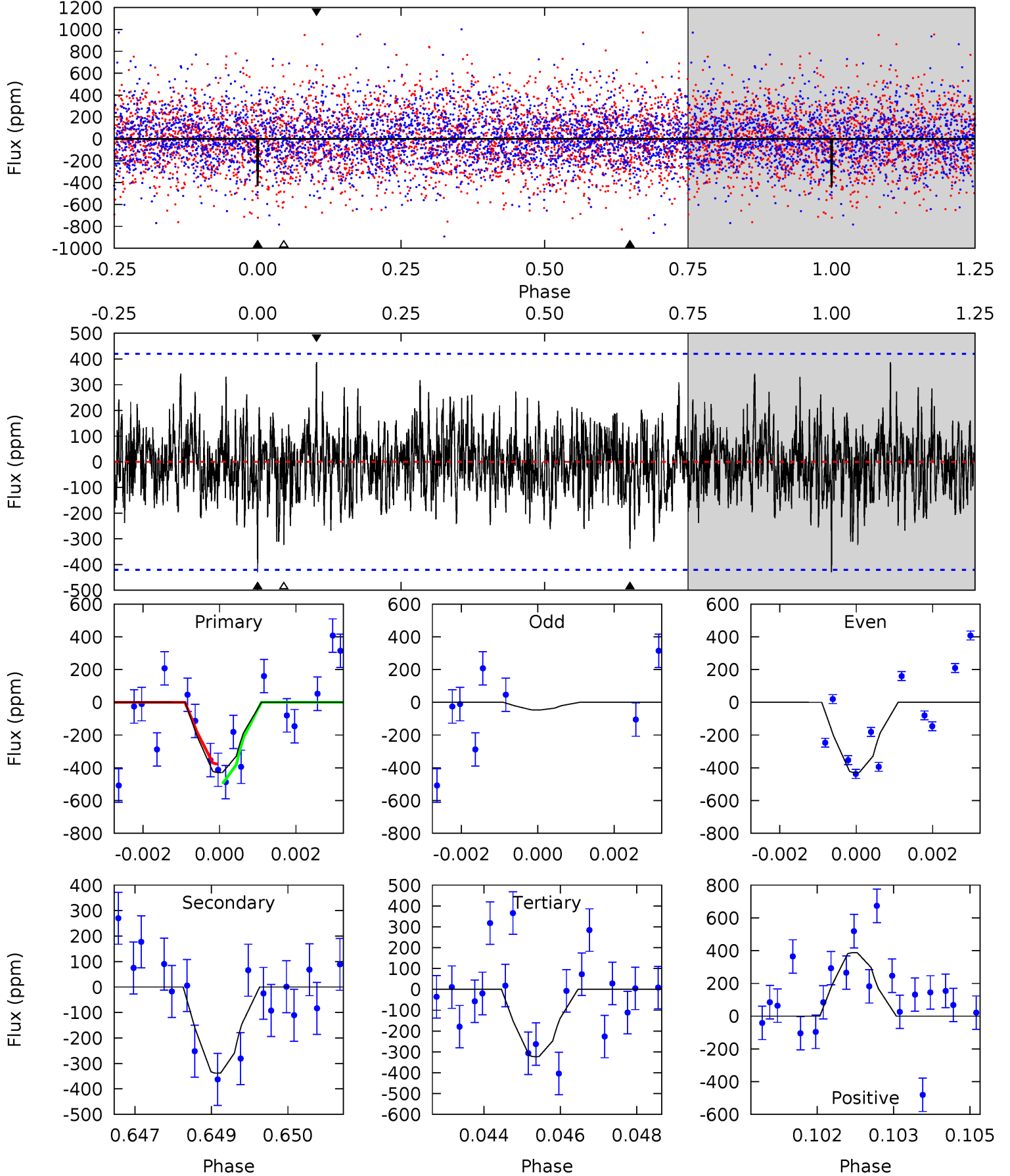


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

007281825-04, P = 40.382400 Days, E = 109.345789 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.46	4.30	4.11	4.92	5.34	3.11	1.28	1.35	0.53	0.19	-0.63	2.77	1.16	0.47	0.76



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 007281825

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6338^{+153}_{-210}	$4.418^{+0.067}_{-0.202}$	$-0.100^{+0.250}_{-0.300}$	$1.091^{+0.353}_{-0.118}$	$1.137^{+0.166}_{-0.166}$	$1.233^{+0.351}_{-0.648}$
	+2%/-3%	+2%/-5%	+250%/-300%	+32%/-11%	+15%/-15%	+28%/-53%
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 007281825-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-338 ± 79	$3.89^{+3.34}_{-2.70}$	846^{+62}_{-40}	4934^{+4248}_{-1049}	690^{+6606}_{-500}
Alt.	N/A	N/A	N/A	N/A	N/A

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

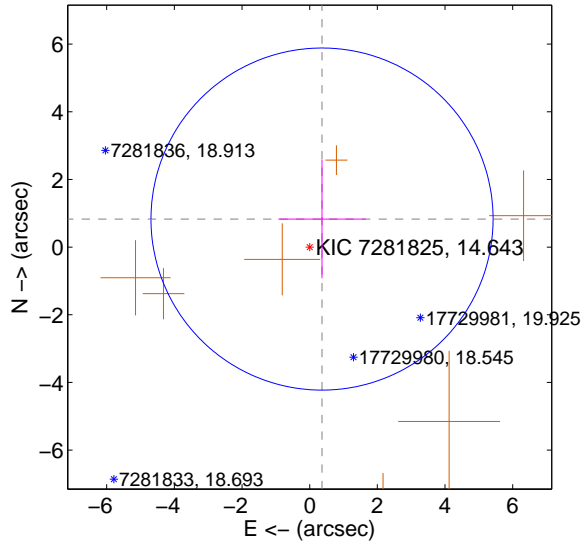
Supplemental centroid analysis for 007281825-04. Kepler magnitude: 14.64. Transit SNR 9.16

There are 0 quarters with good PRF difference image offsets

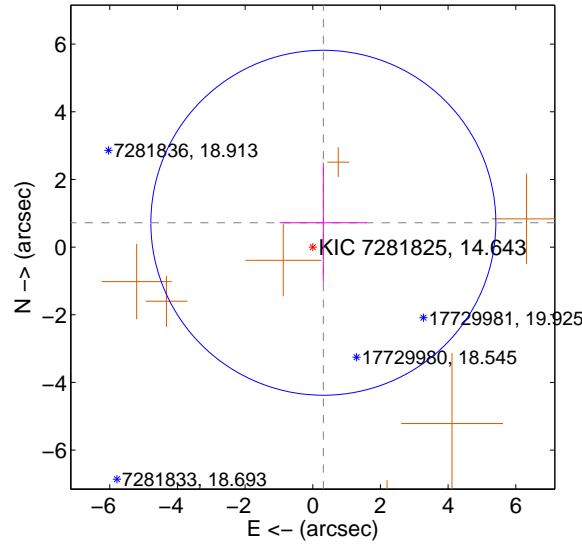
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.906 ± 1.686	0.54	-0.365 ± 1.293	0.829 ± 1.752
PRF-fit source offset from KIC position	0.785 ± 1.700	0.46	-0.313 ± 1.288	0.720 ± 1.767
photometric centroid source offset	1.37 ± 1.05	1.31	0.92 ± 1.06	1.01 ± 1.04

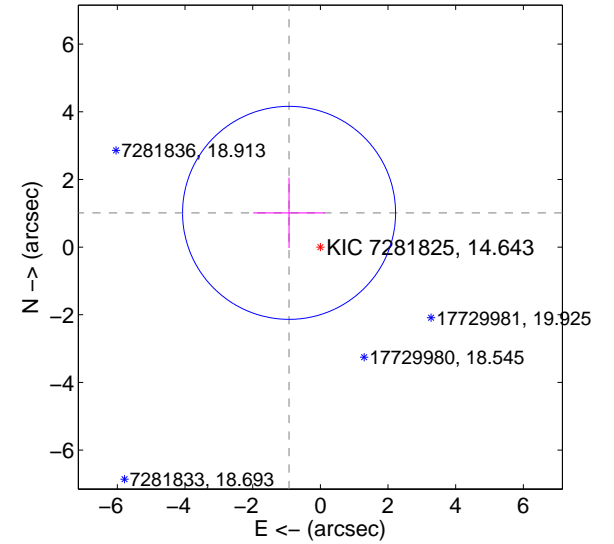
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

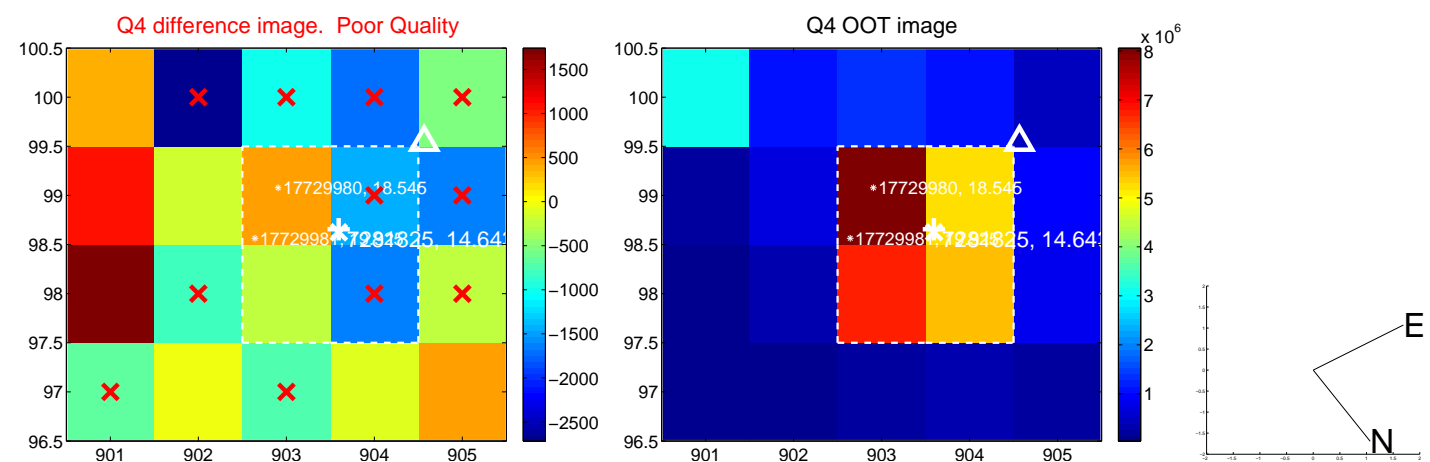
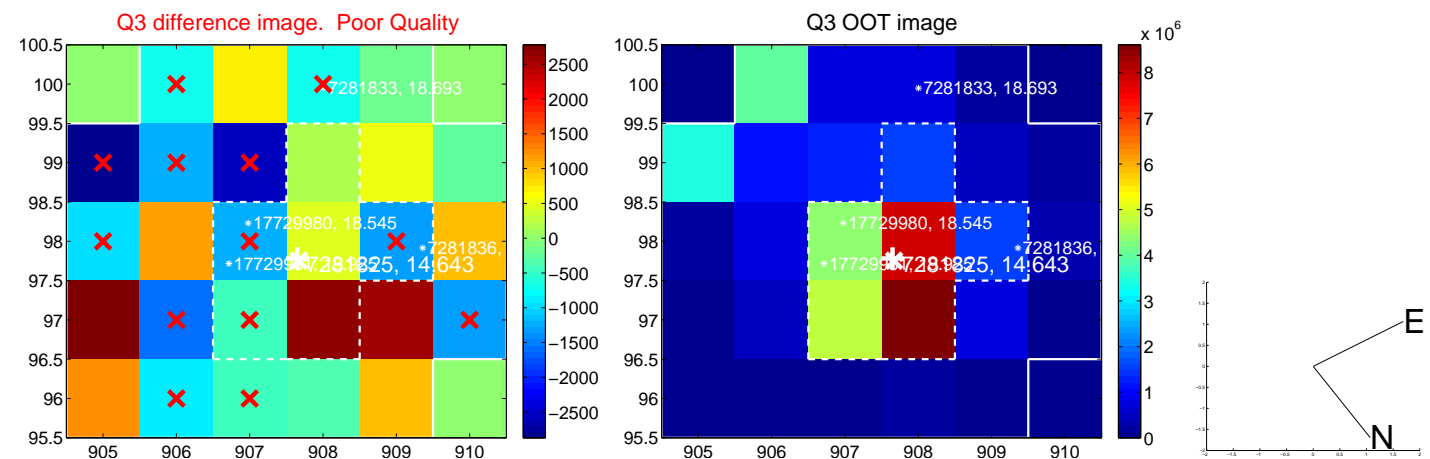
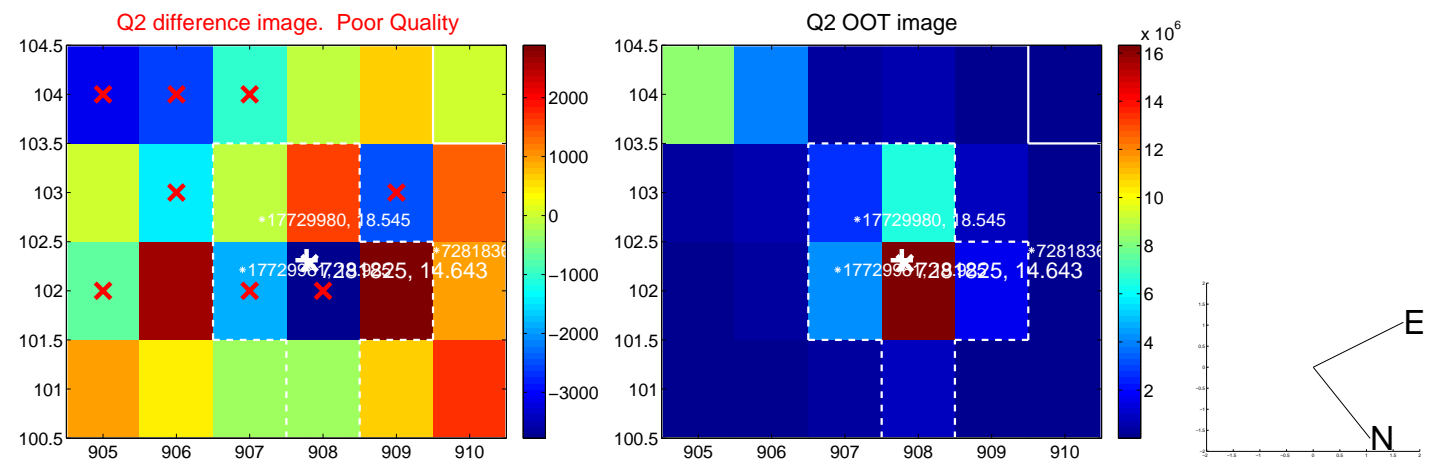
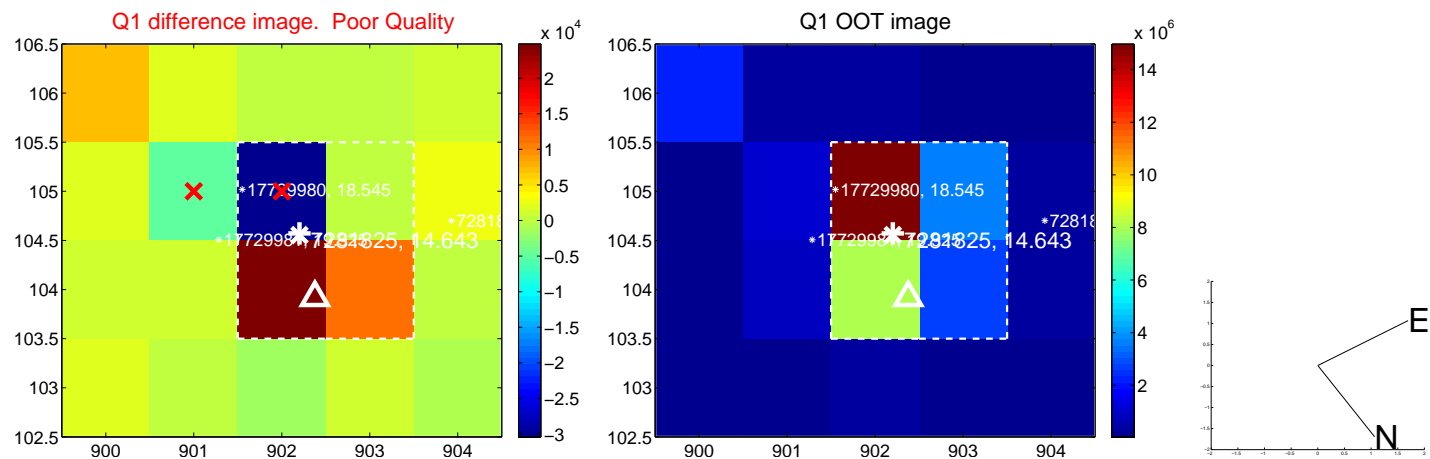


offset from photometric centroids

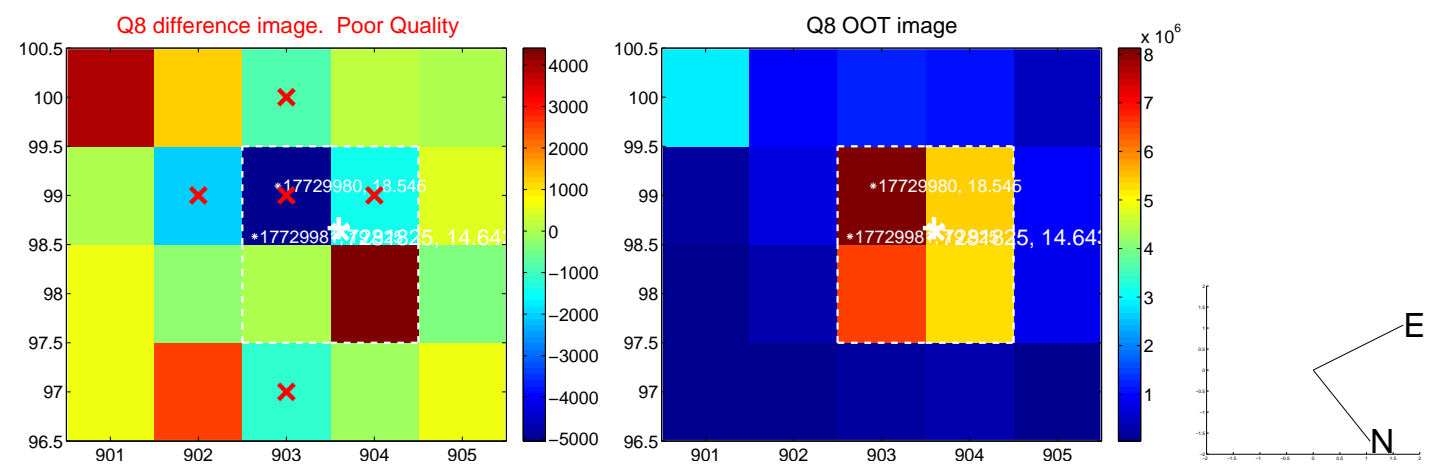
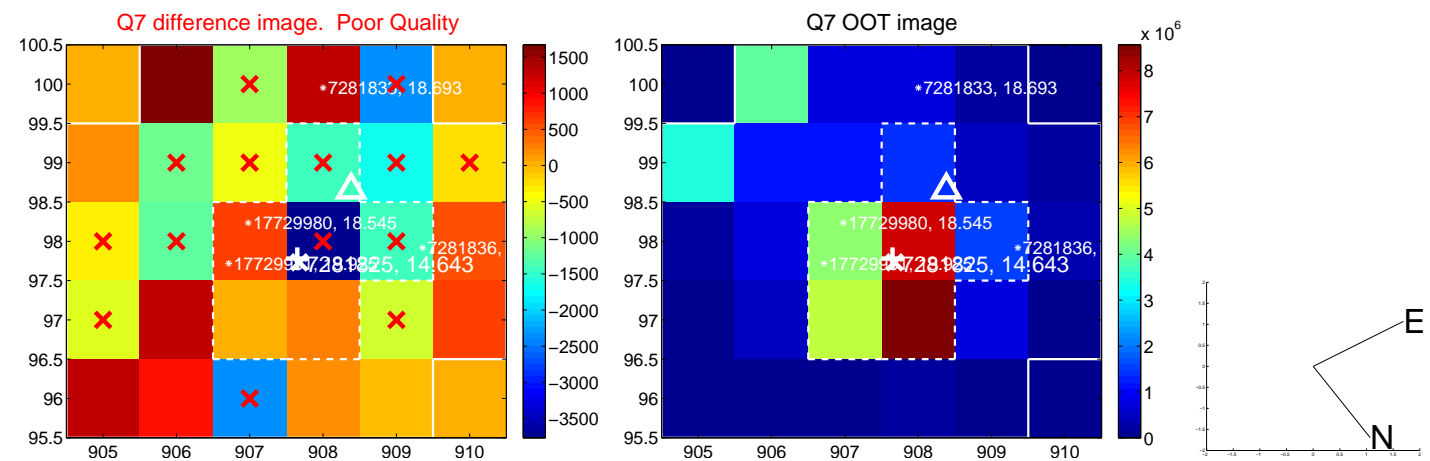
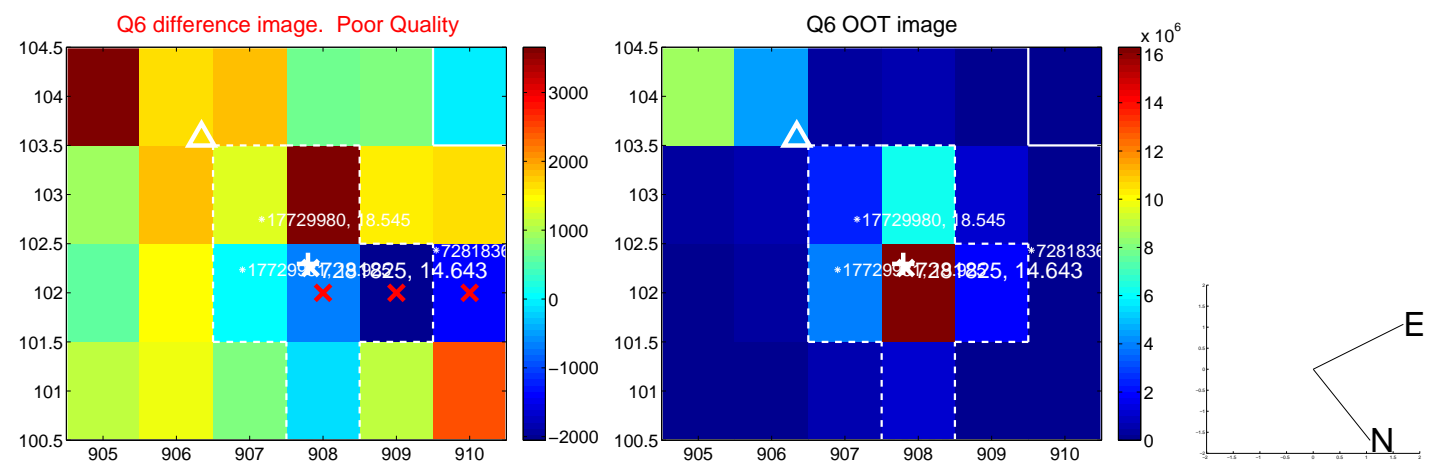
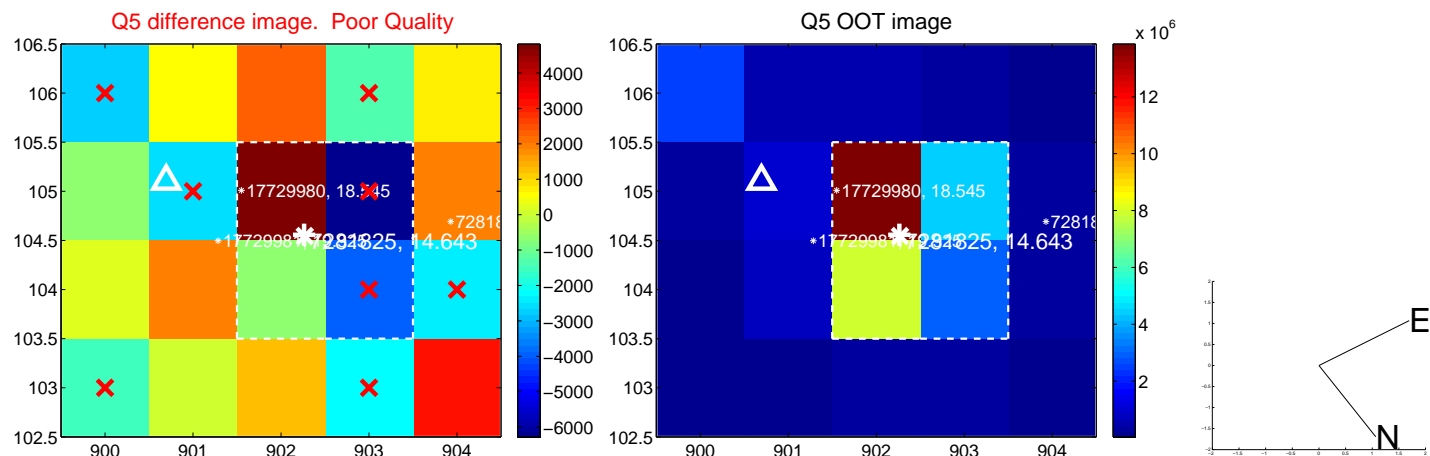


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

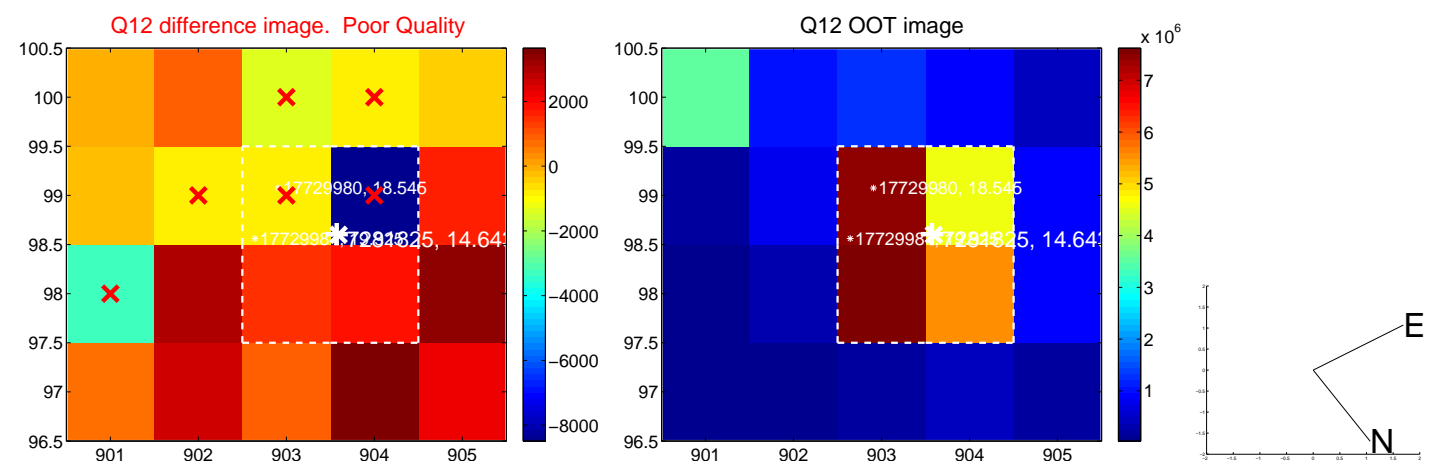
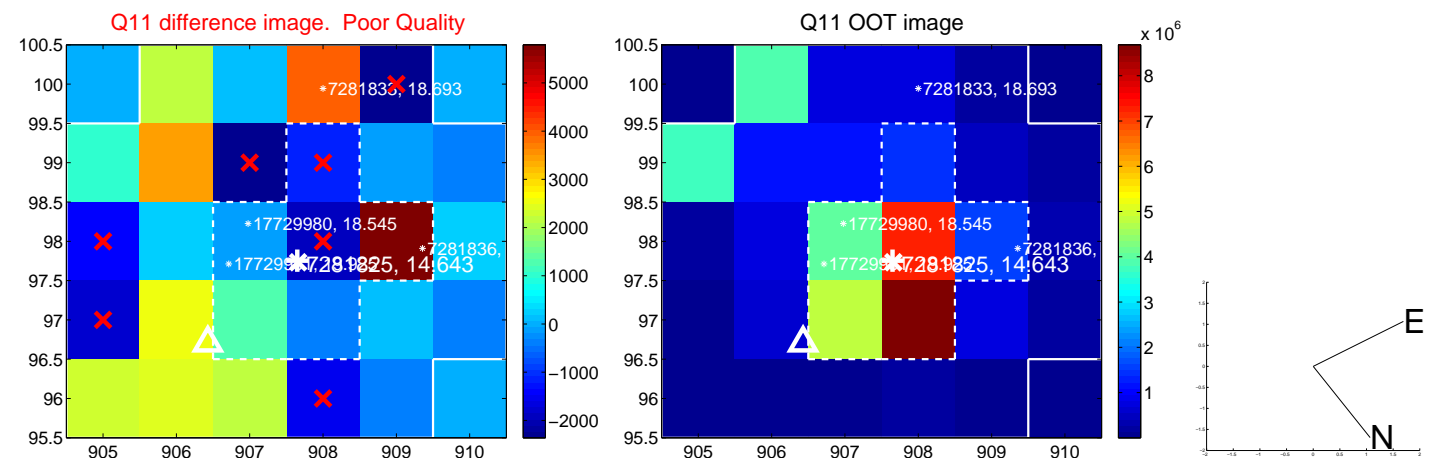
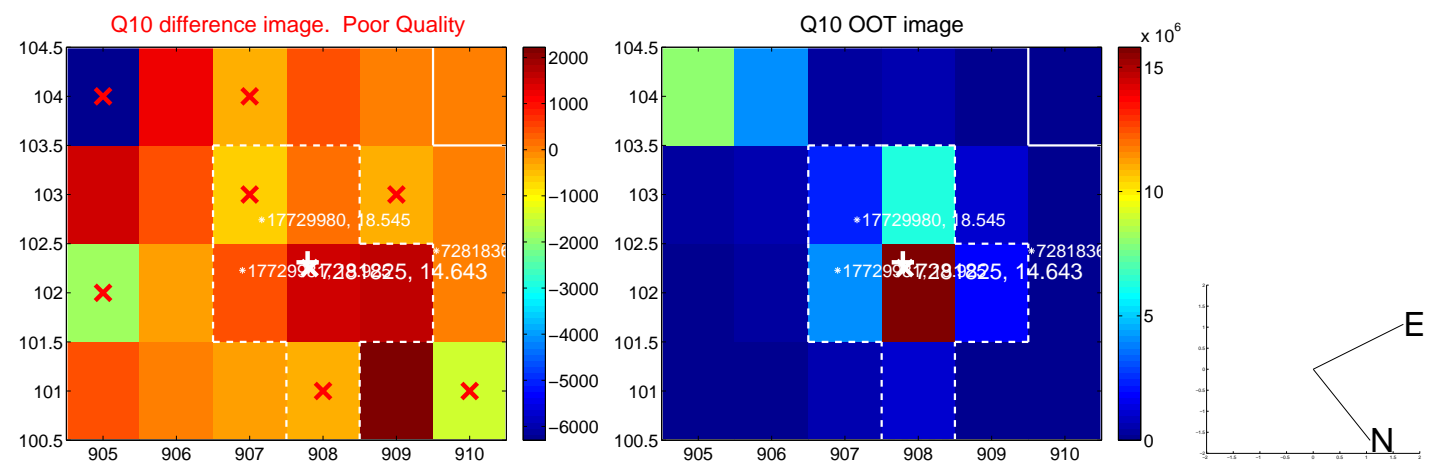
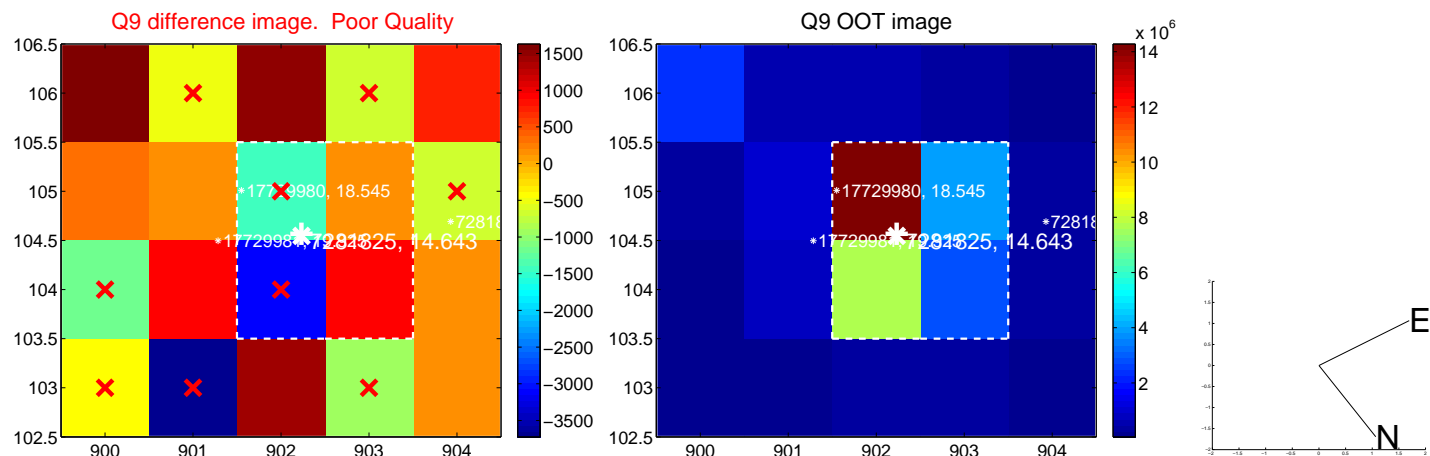
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



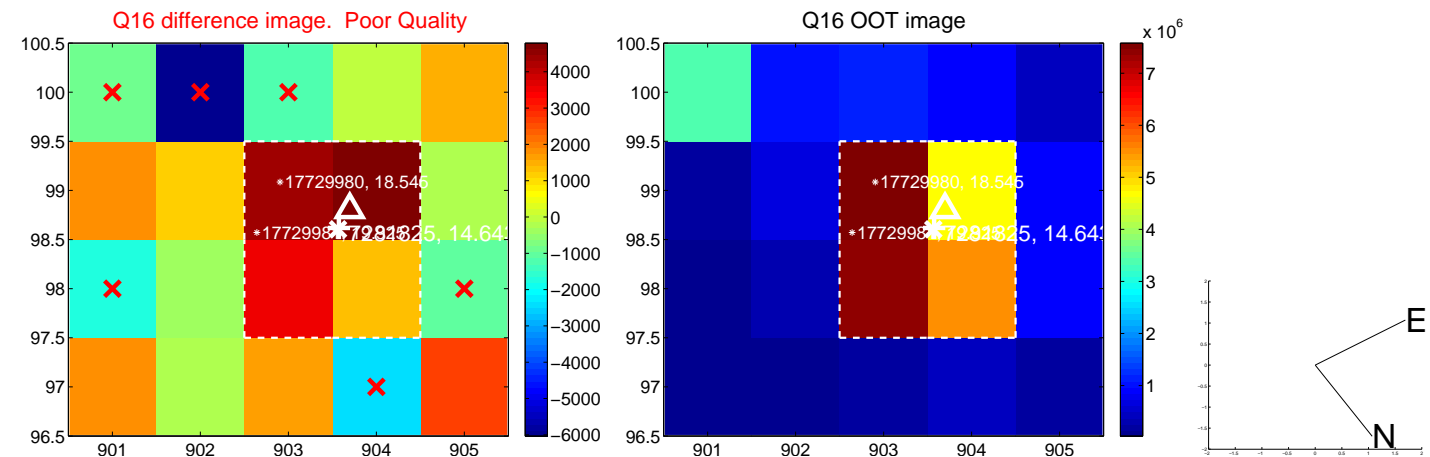
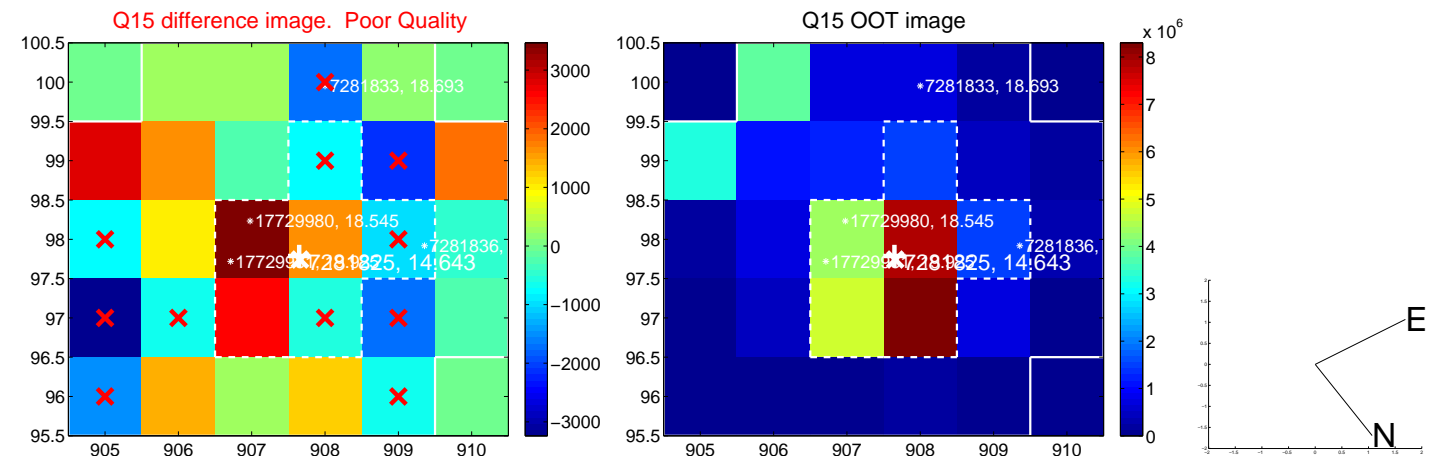
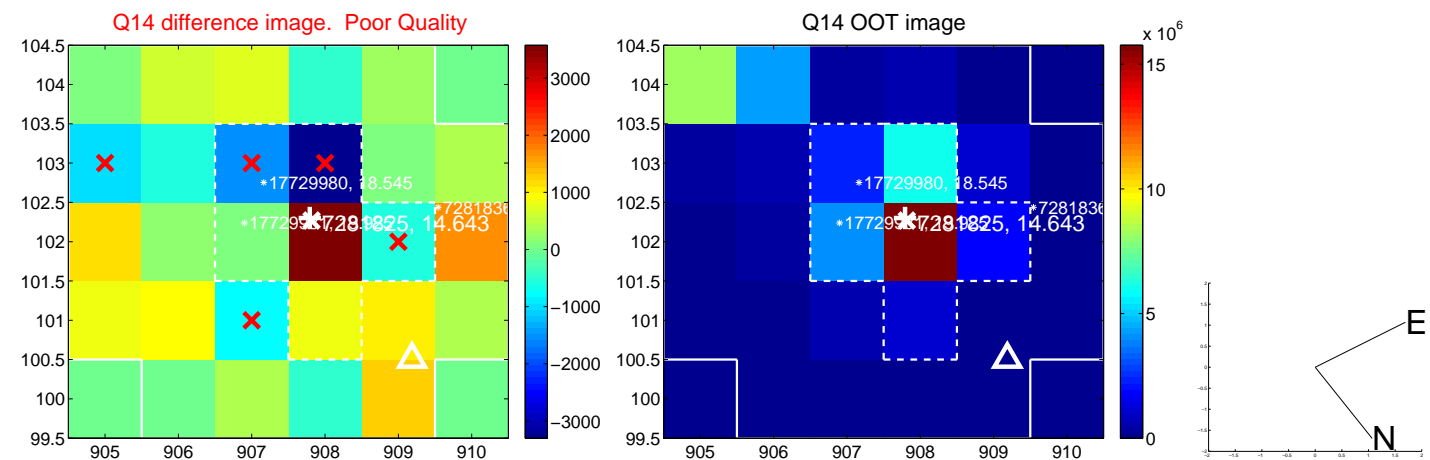
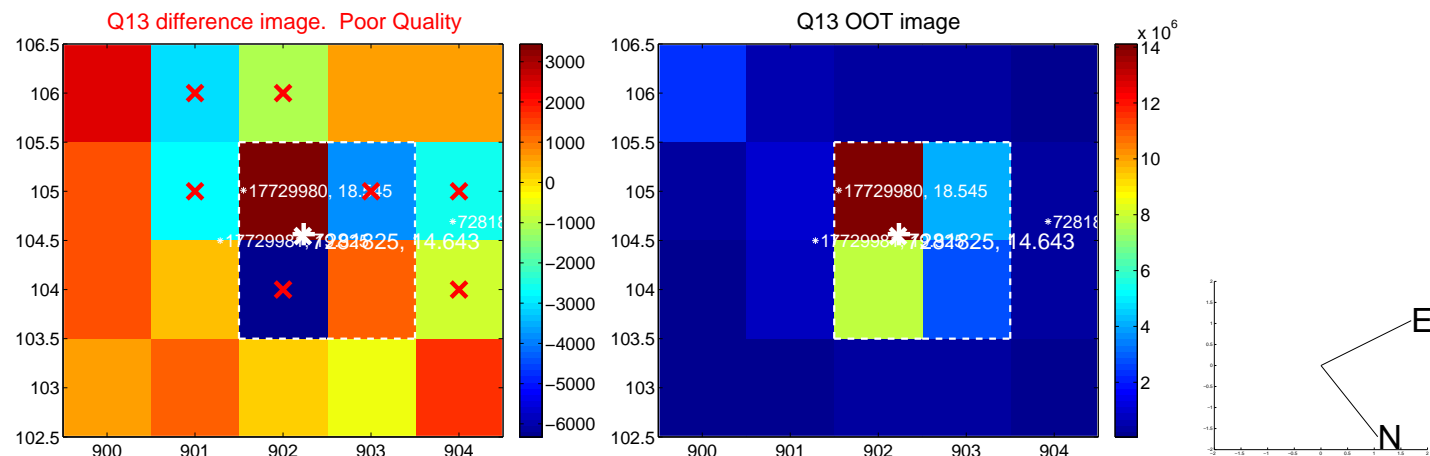
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



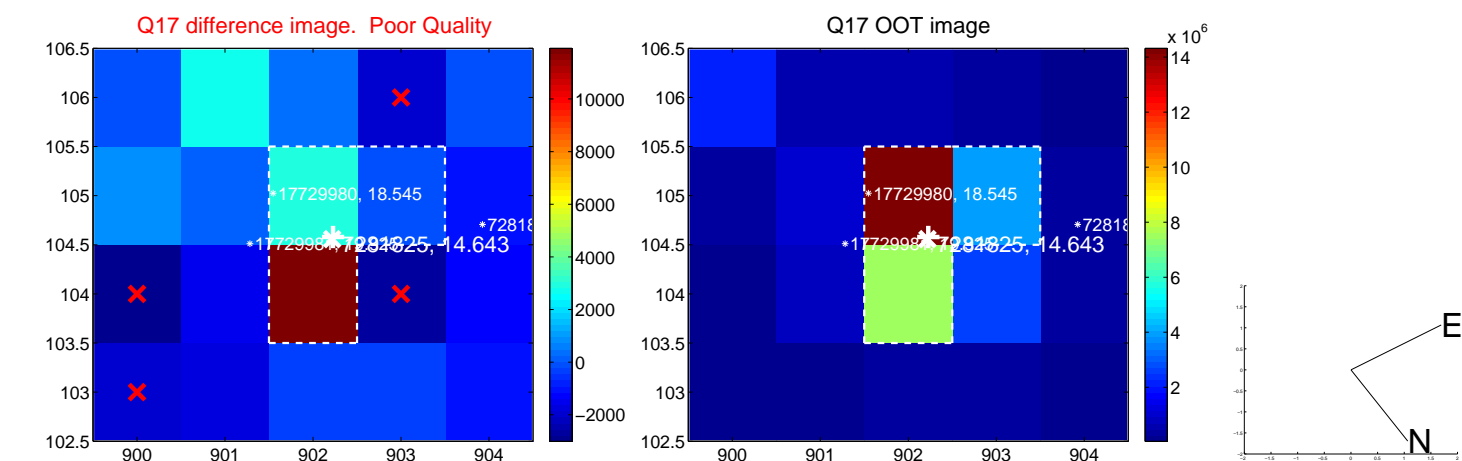
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



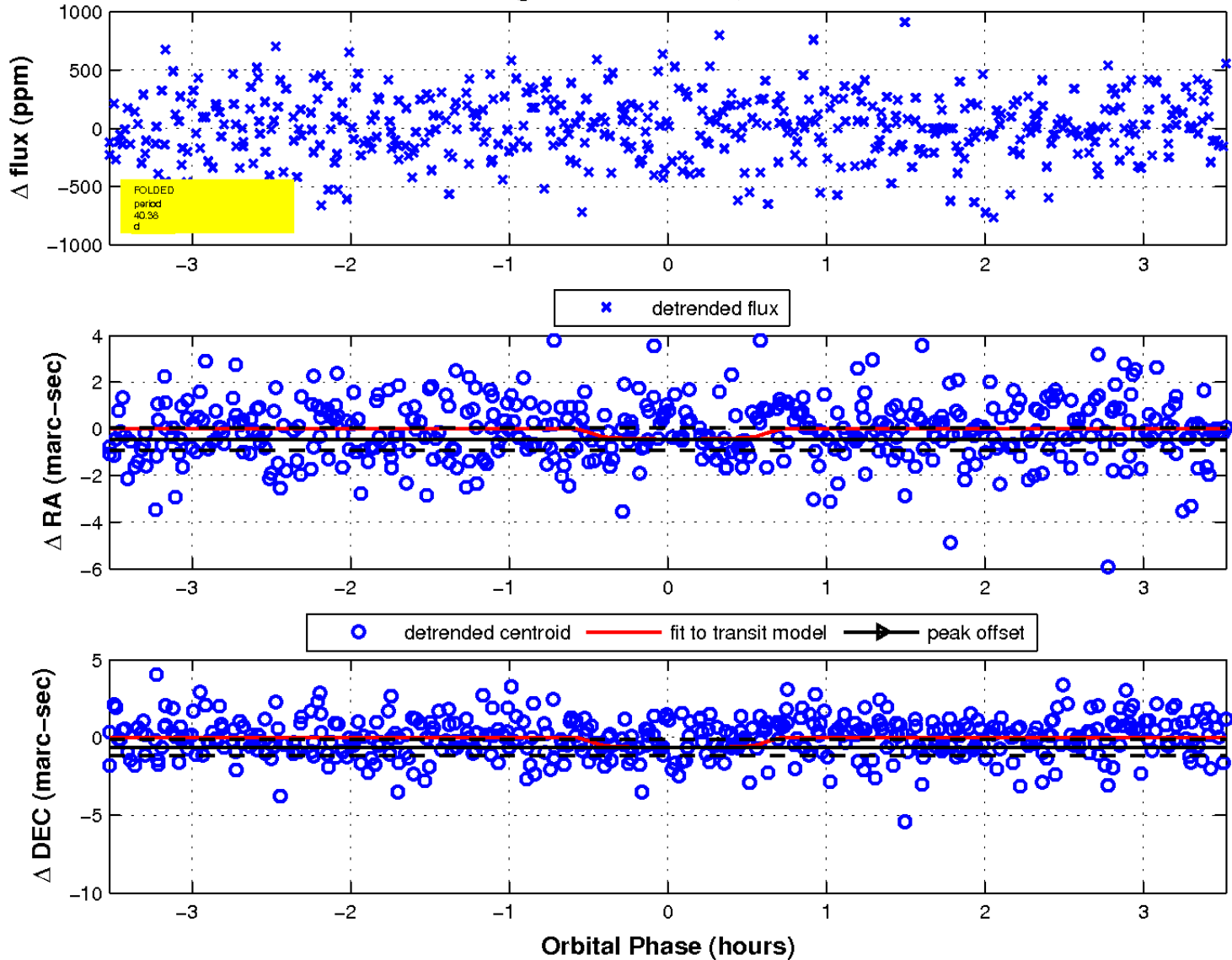
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

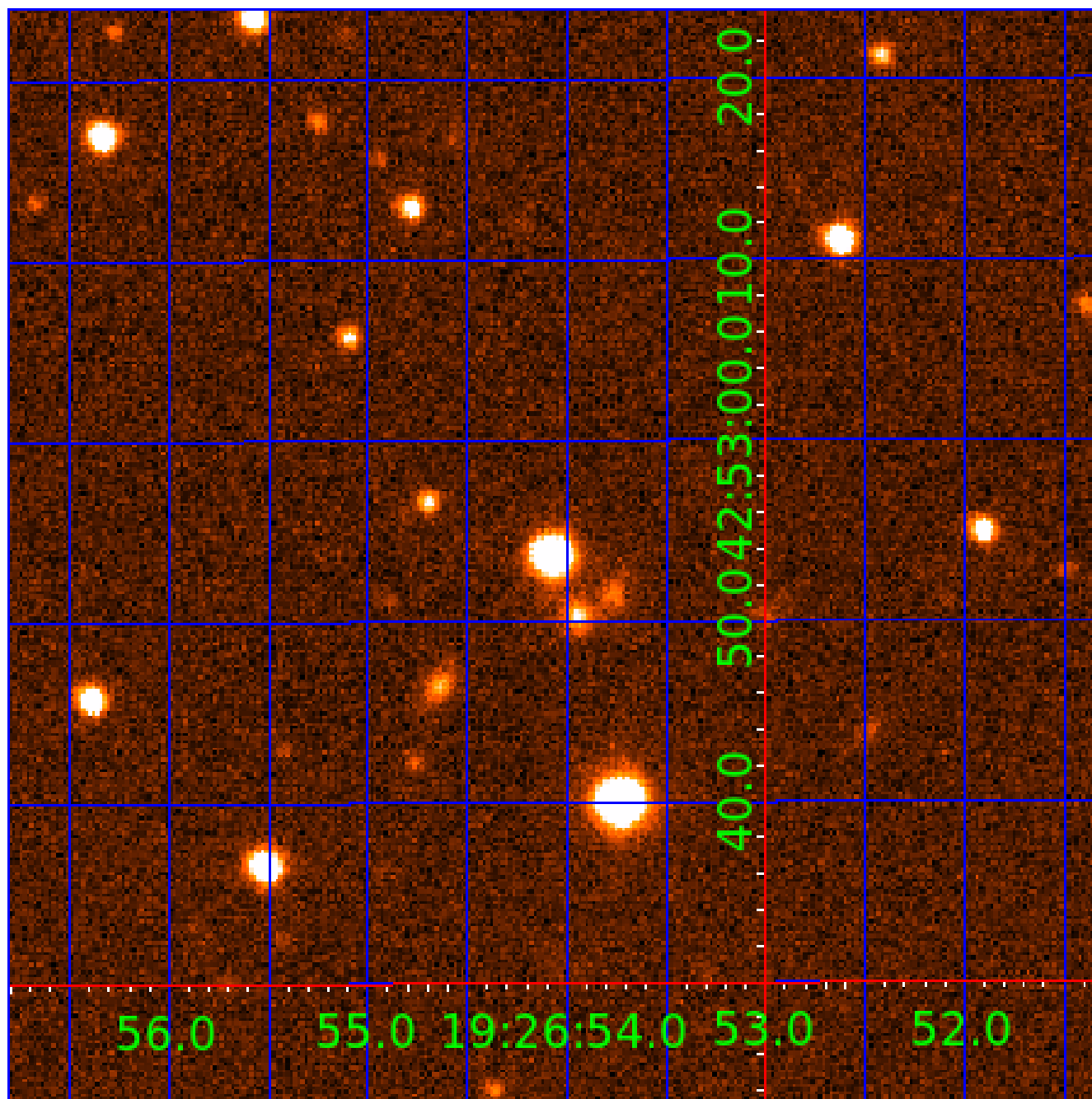


fluxWeightedCentroids, Planet 4 of 5



UKIRT Image

Declination



KIC 007281825

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})
007281825-01	OBS	No	0.566723	131.967289	0.0	3.993	8.6	0.0	1.09	6338	0.02	8792.09
007281825-02	OBS	No	15.958084	136.947772	437.7	1.245	10.8	13.2	1.09	6338	2.69	102.63
007281825-04	OBS	No	40.382400	149.728189	437.1	1.175	9.7	9.2	1.09	6338	2.37	29.76
007281825-05	OBS	No	14.981035	135.984243	295.4	1.210	9.5	9.3	1.09	6338	2.21	111.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007281825-01	OBS	FP	0.00	1	0	0	1	LPP_DV—CENT_FEW_DIFFS—EPHEM_MATCH
007281825-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
007281825-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
007281825-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

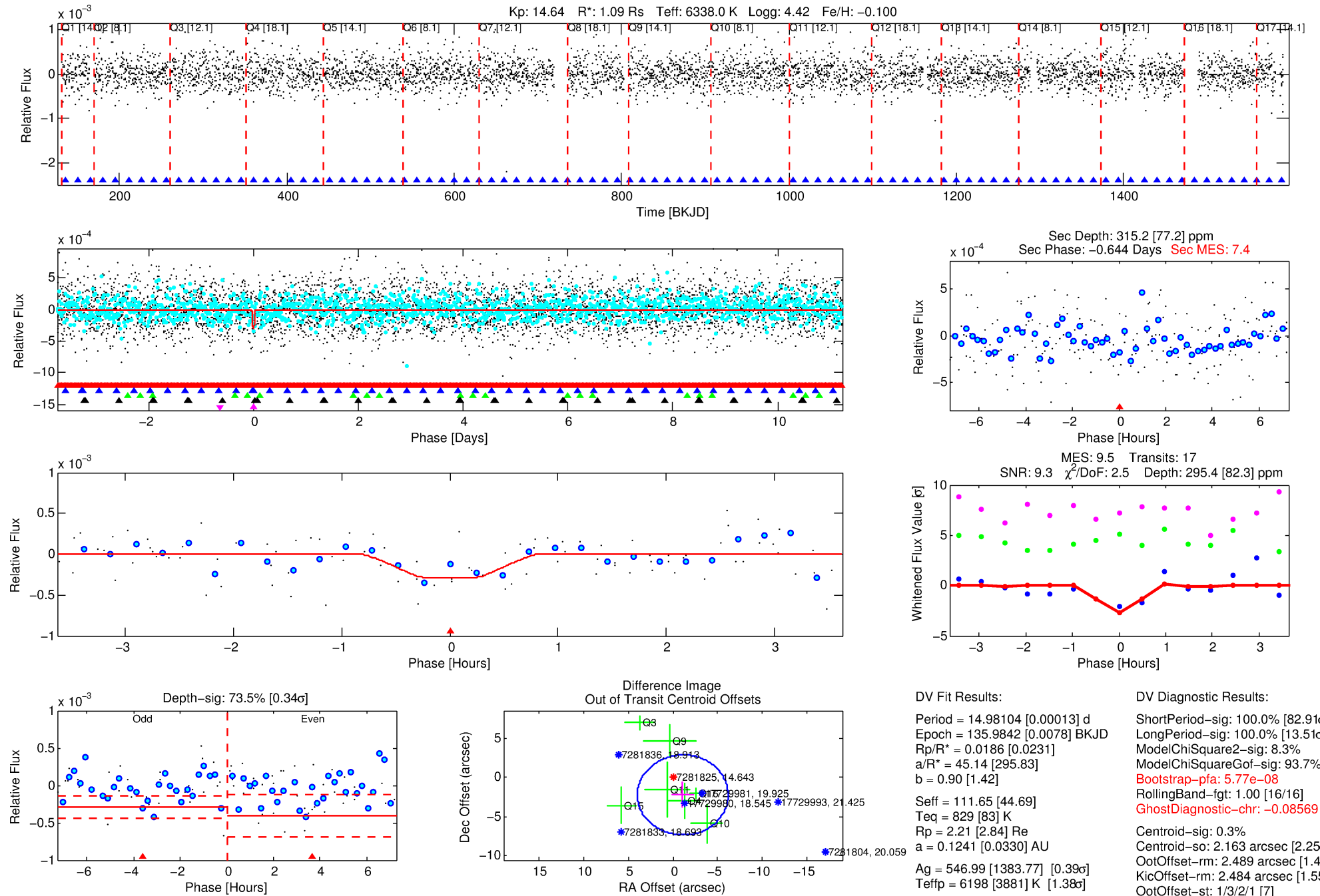
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007281825-05

No Significant Match Found

DV One-Page Summary

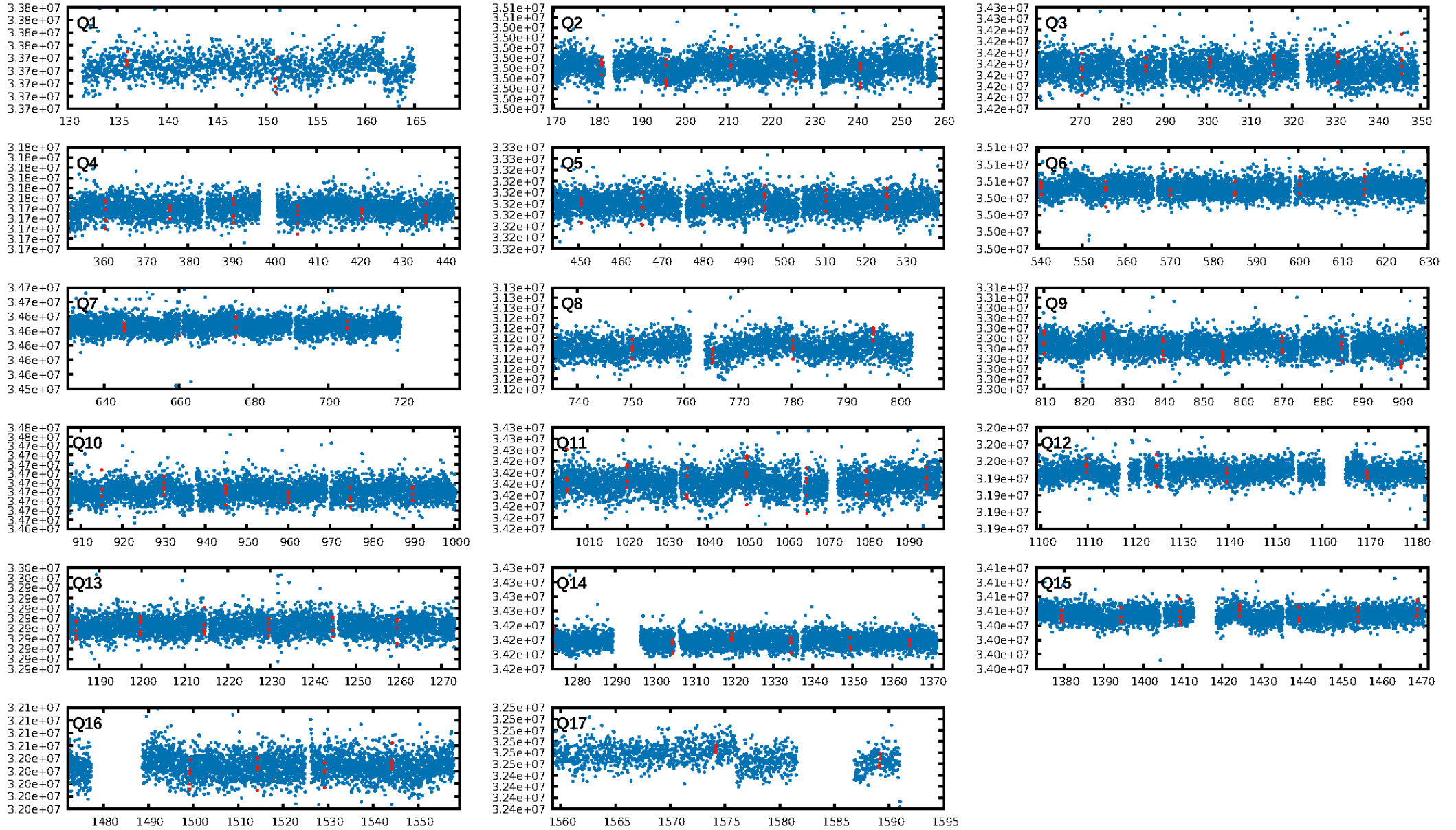
KIC: 7281825 Candidate: 5 of 5 Period: 14.981 d



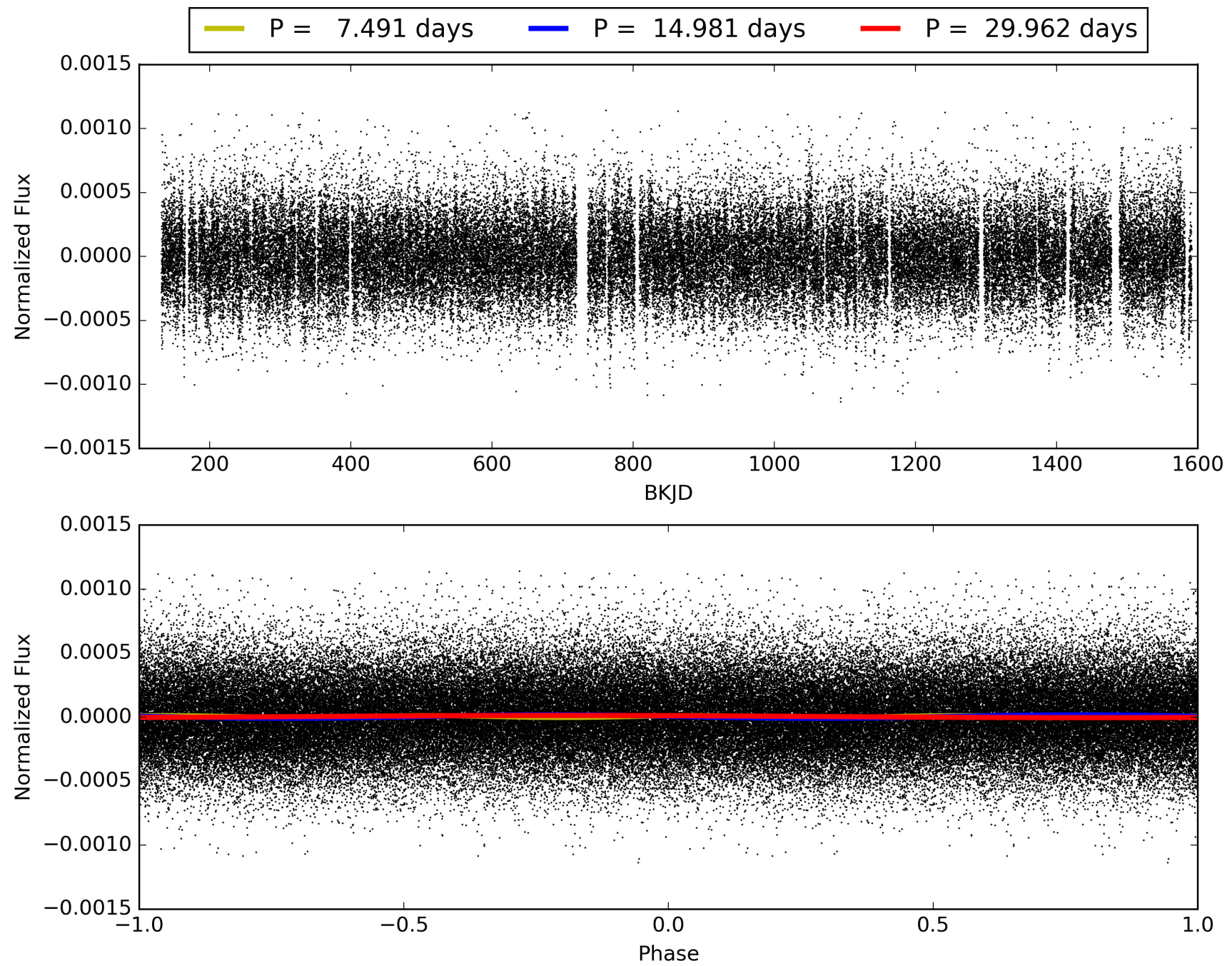
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:09:10 Z

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

TCE 007281825-05, PDC Light Curves

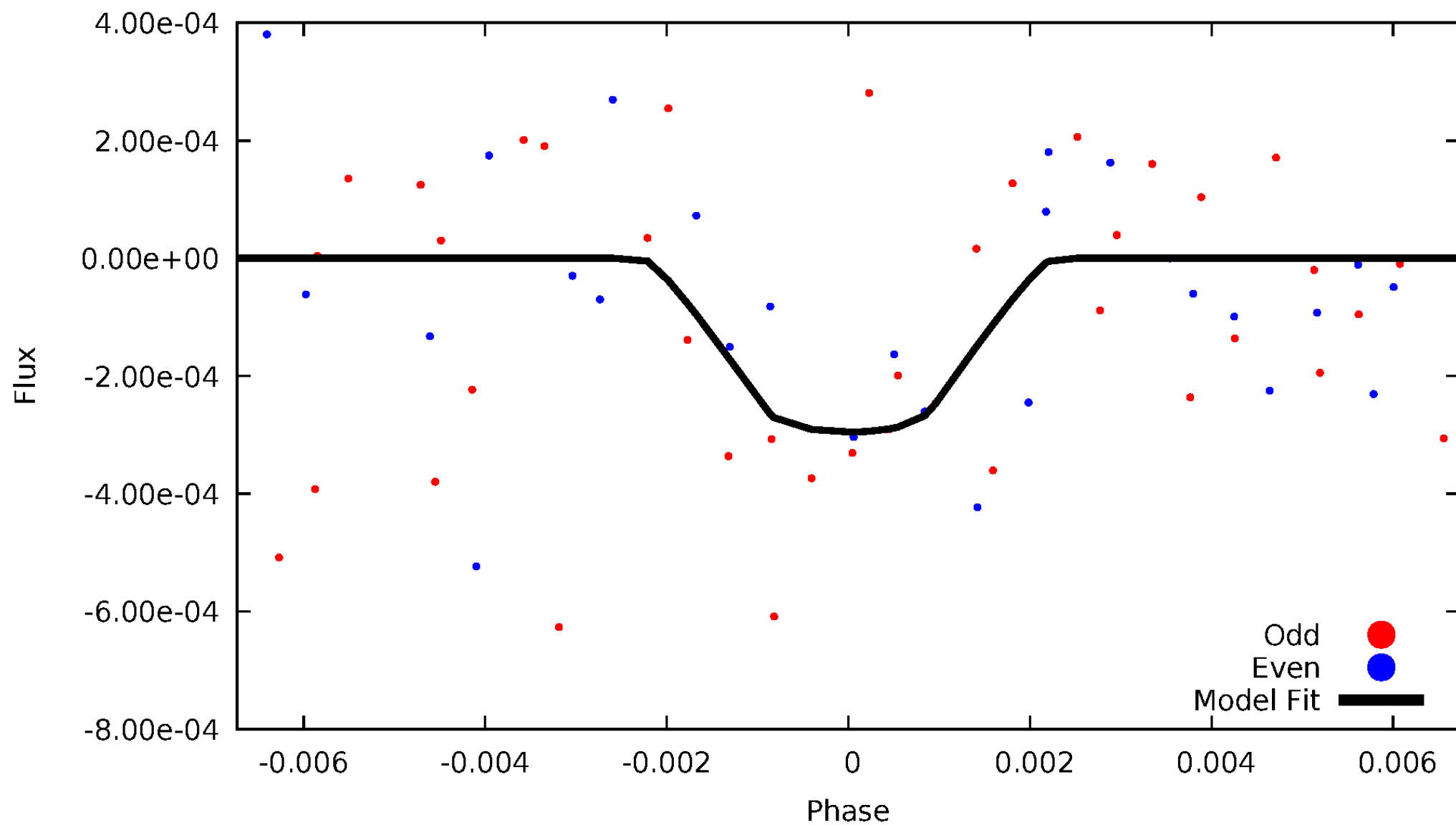


TCE 007281825-05



DV Odd/Even

TCE 007281825-05

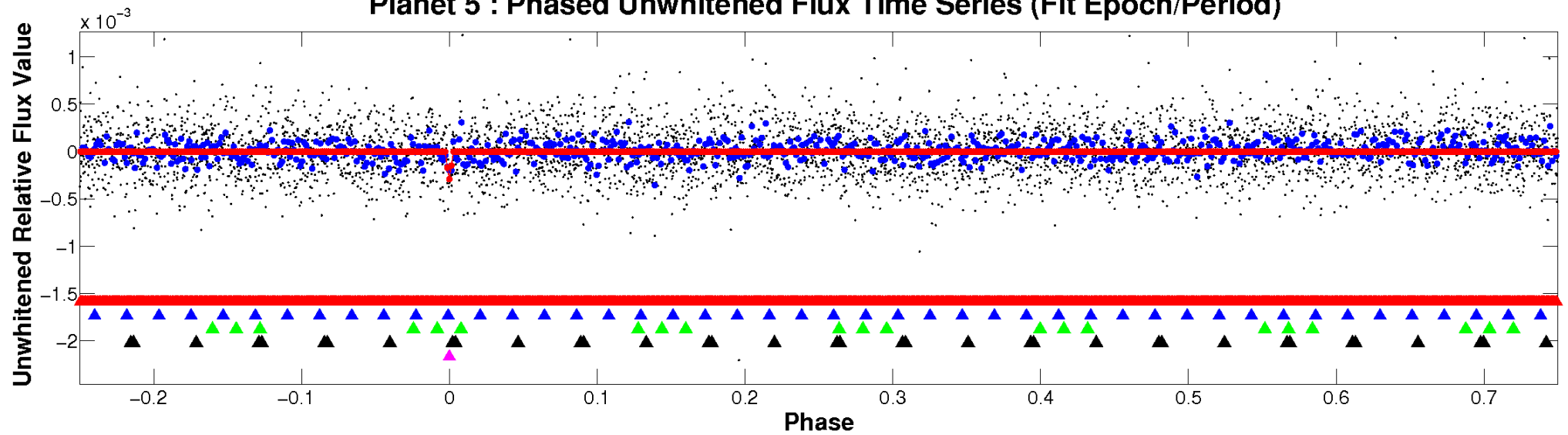


ALT Odd/Even

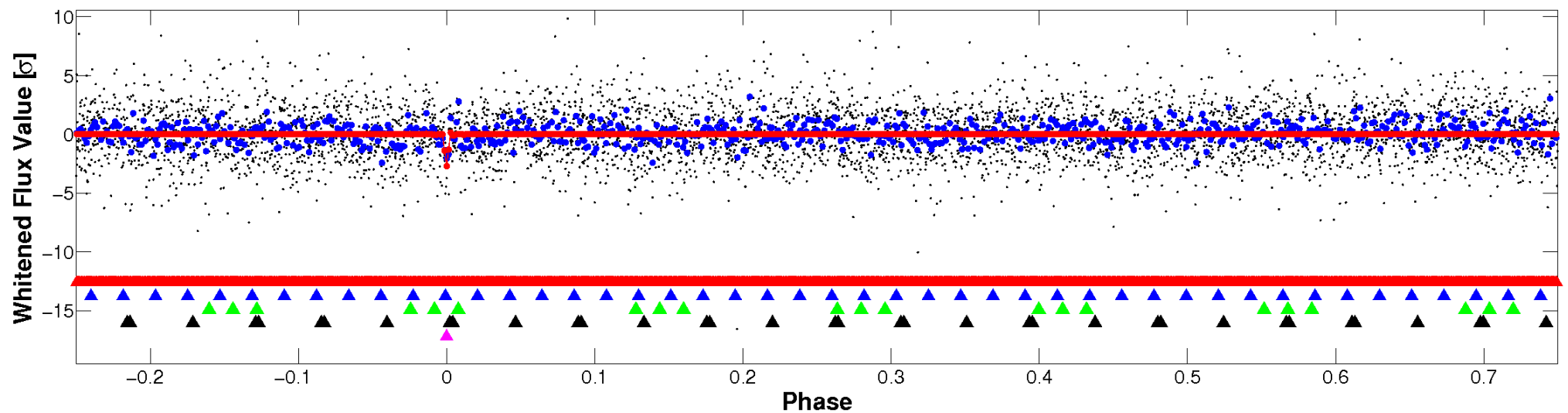
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

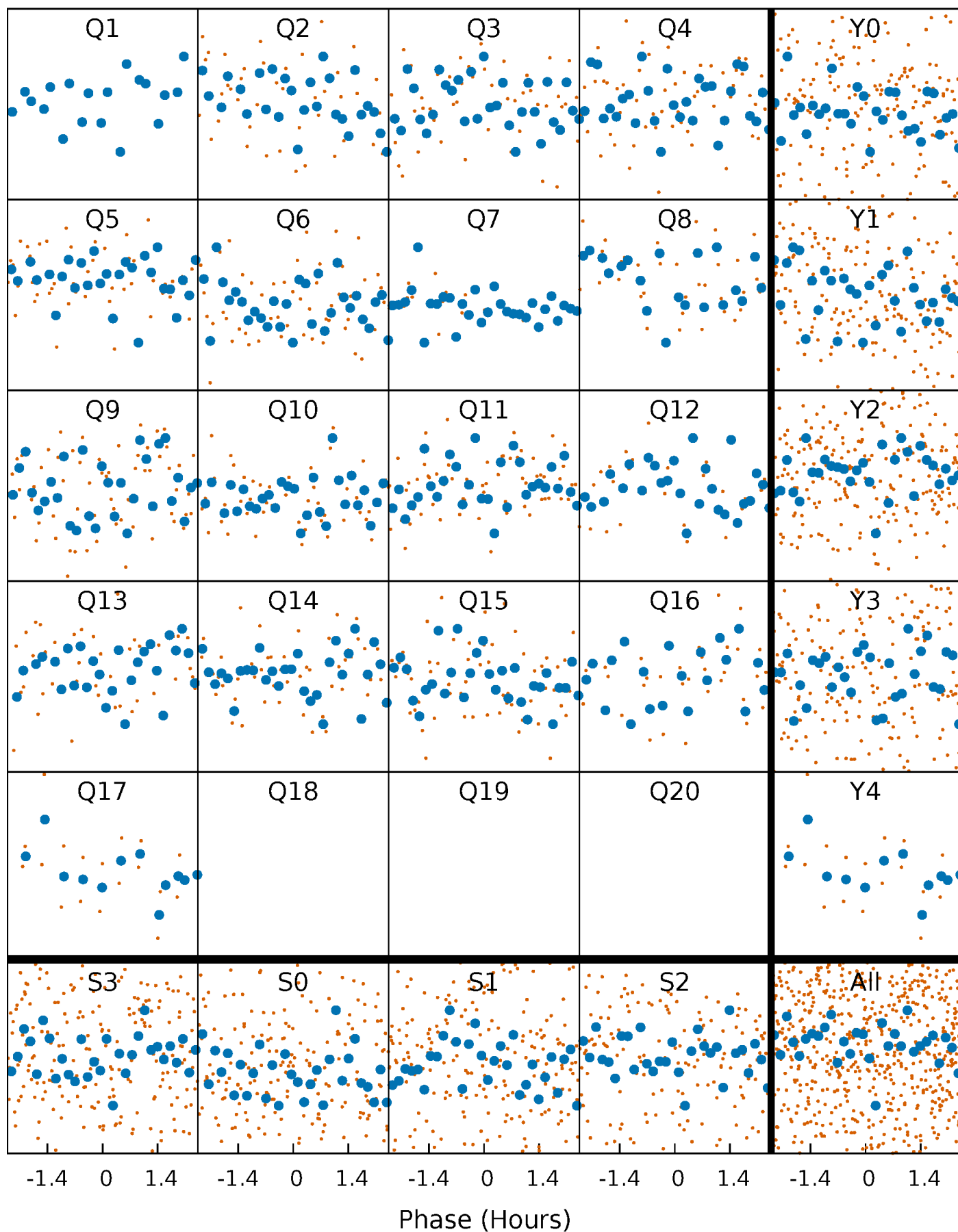


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



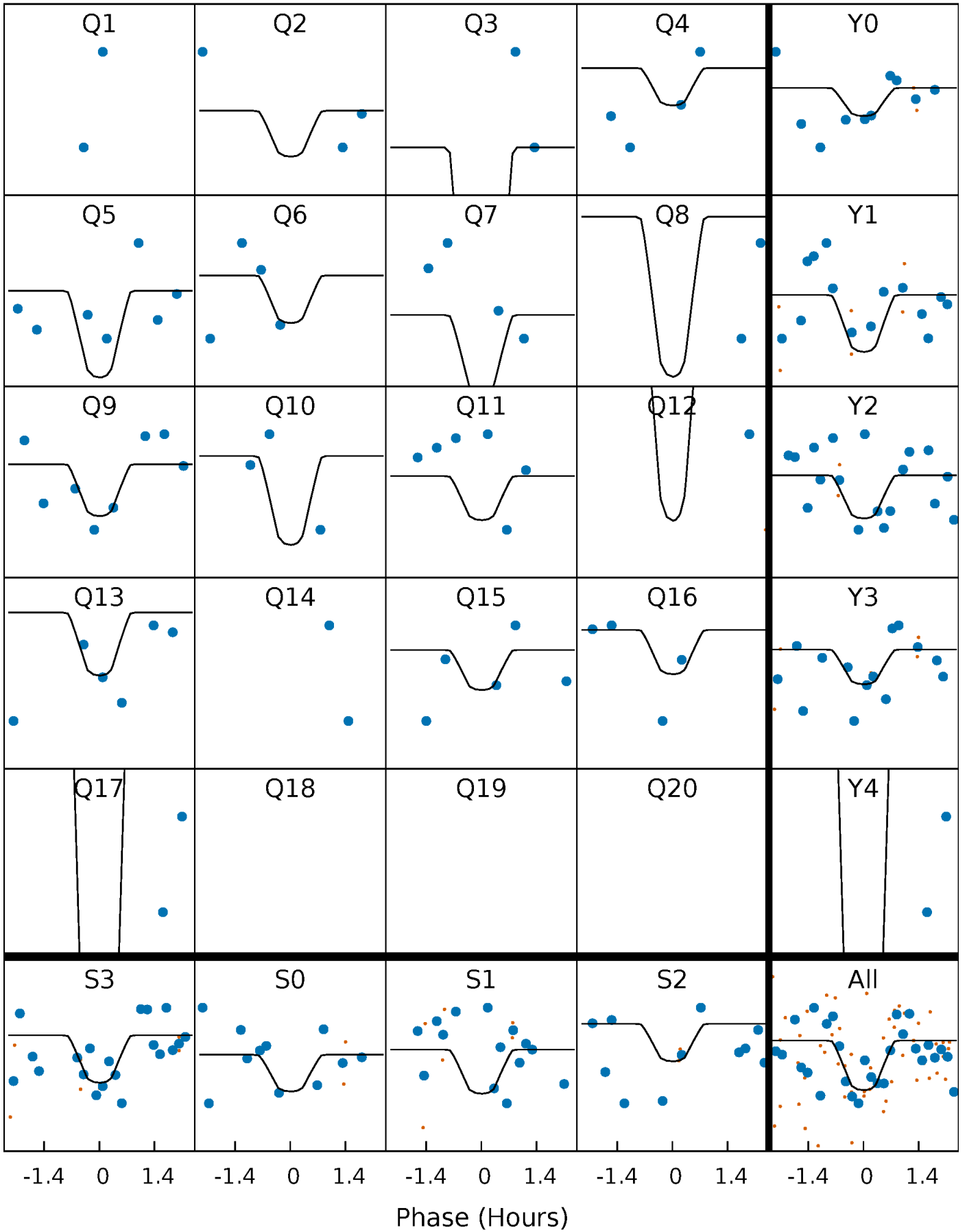
PDC Quarter-Phased Transit Curves

TCE 007281825-05 $P = 14.981035$ Days $T_0 = 135.984243$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007281825-05 P= 14.981035 Days $T_0=135.984243$ (BKJD)

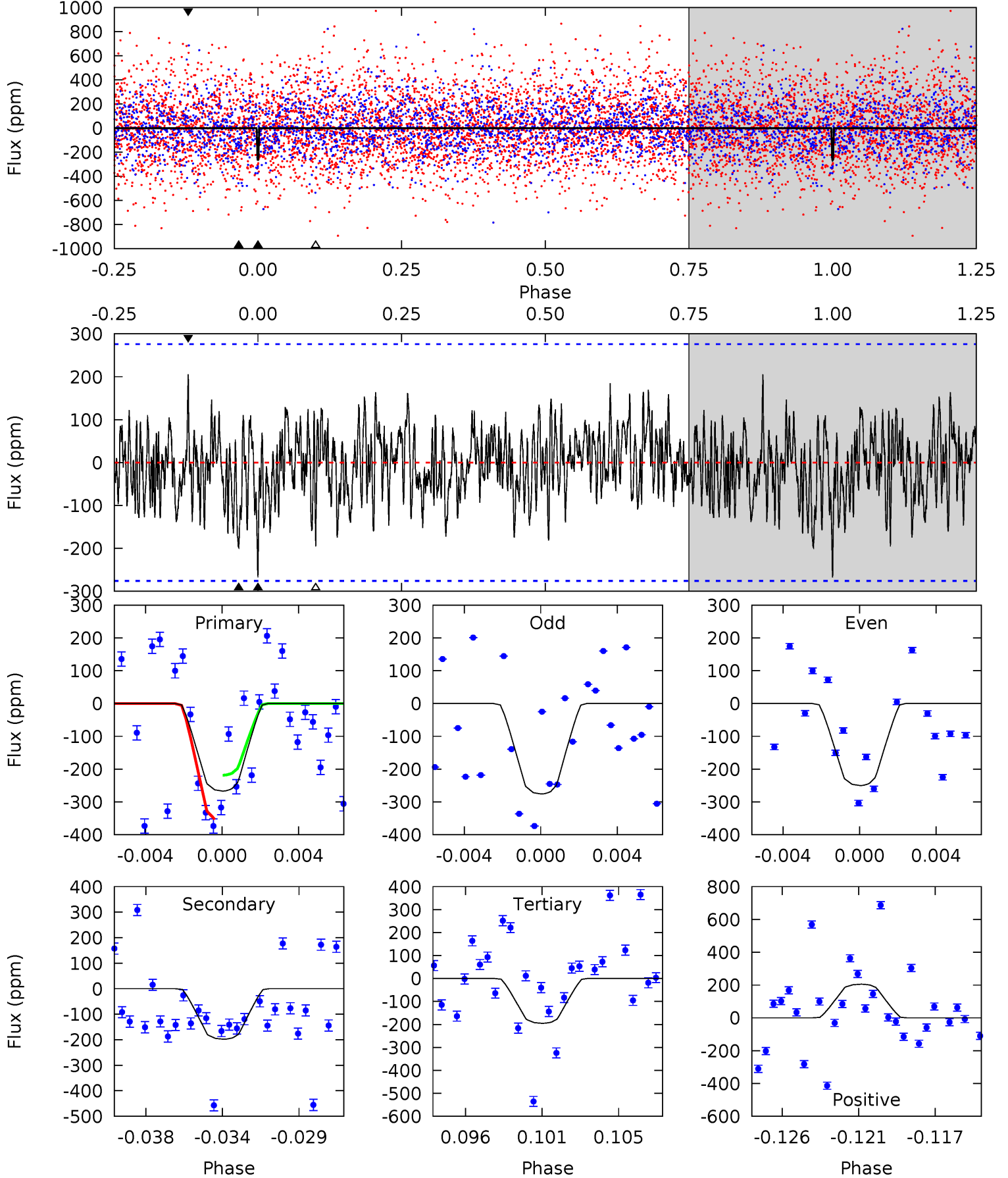


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

007281825-05, P = 14.981035 Days, E = 121.003208 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.03	3.72	3.67	3.86	5.19	2.86	1.26	1.35	1.17	0.05	-0.13	0.24	0.79	0.43	1.22



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 007281825

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6338^{+153}_{-210}	$4.418^{+0.067}_{-0.202}$	$-0.100^{+0.250}_{-0.300}$	$1.091^{+0.353}_{-0.118}$	$1.137^{+0.166}_{-0.166}$	$1.233^{+0.351}_{-0.648}$
	+2%/-3%	+2%/-5%	+250%/-300%	+32%/-11%	+15%/-15%	+28%/-53%
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 007281825-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-198 ± 53	$3.13^{+2.64}_{-2.02}$	1177^{+81}_{-60}	4783^{+3426}_{-982}	163^{+1185}_{-116}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

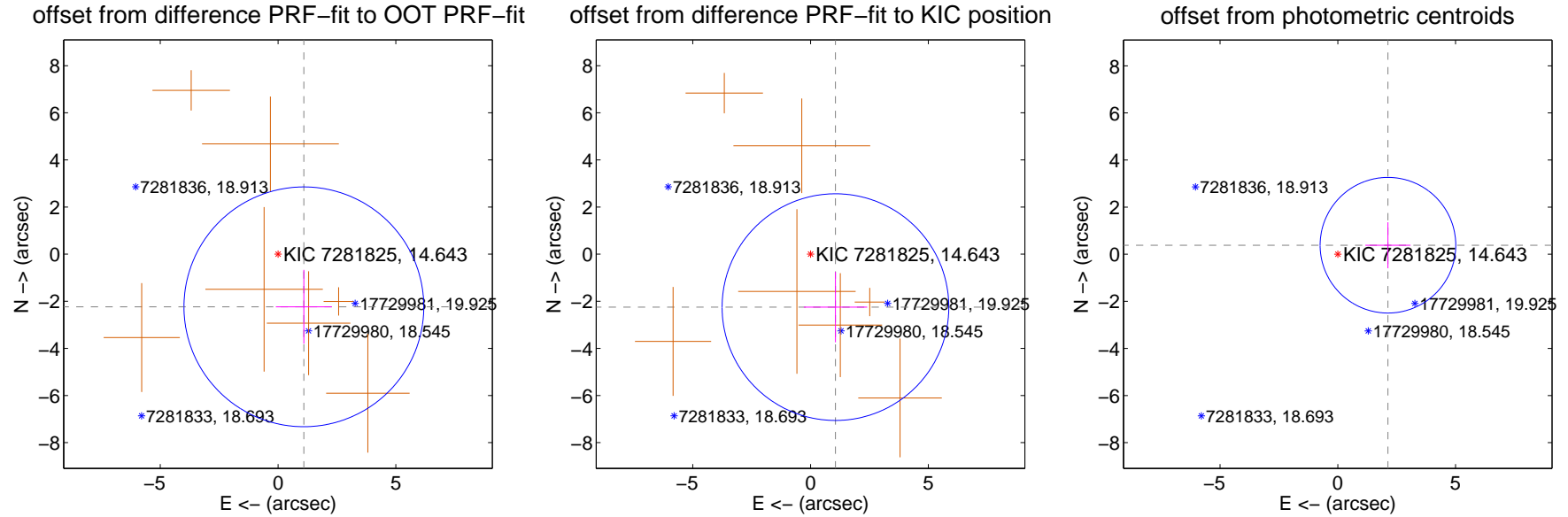
DV Centroid Data

Supplemental centroid analysis for 007281825-05. Kepler magnitude: 14.64. Transit SNR 9.34

There are 0 quarters with good PRF difference image offsets

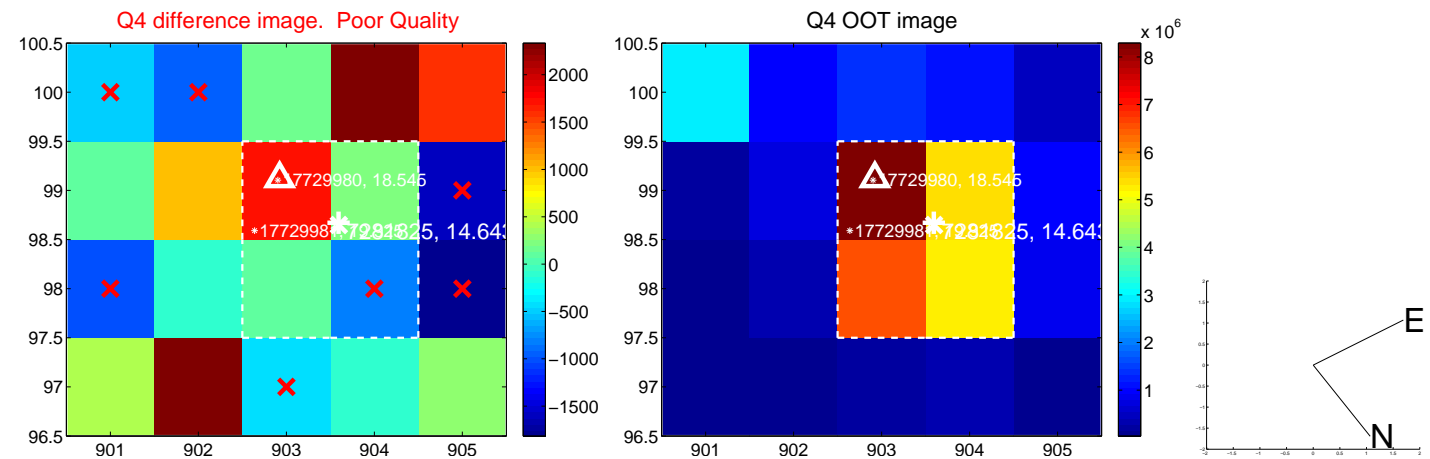
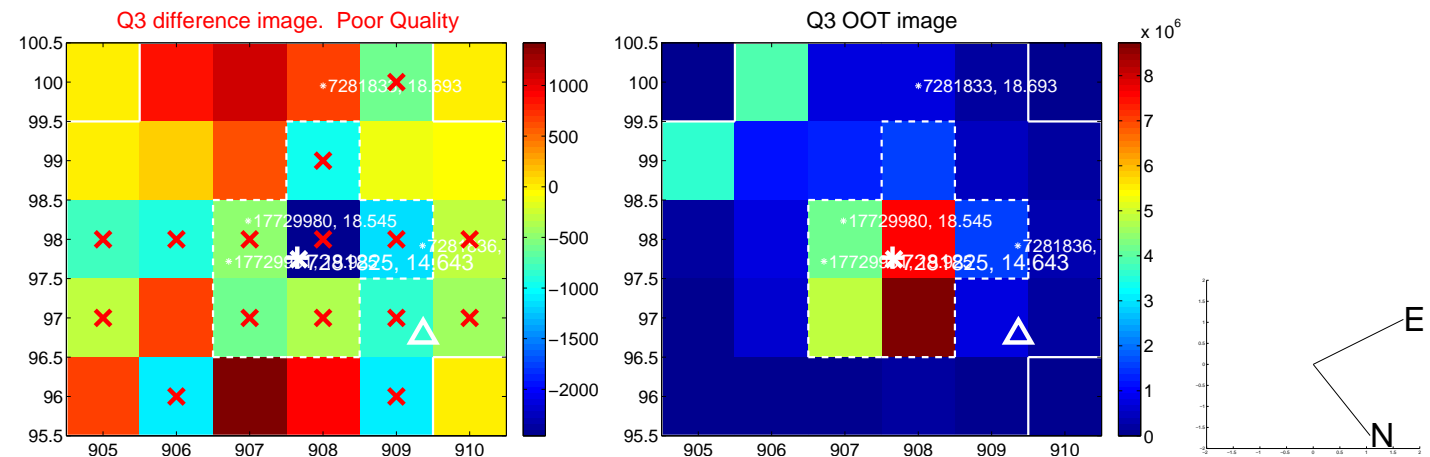
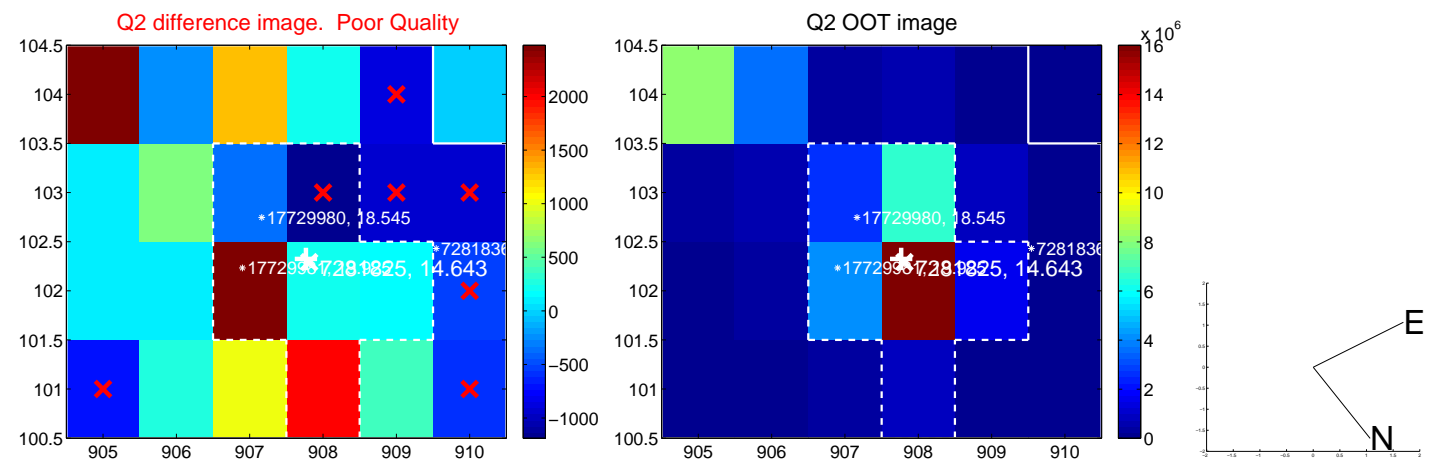
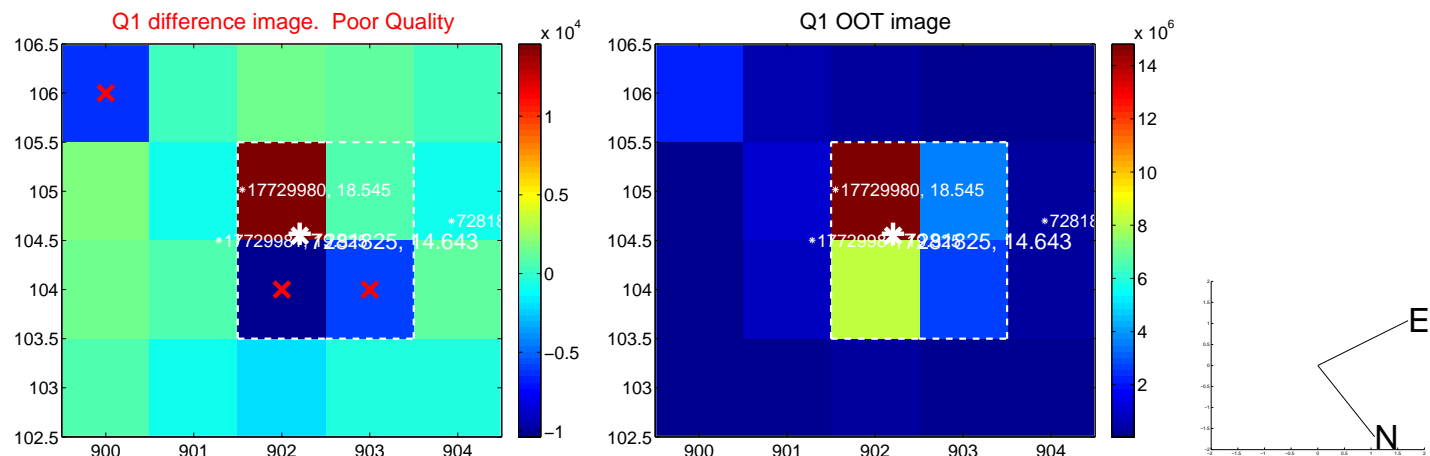
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.489 ± 1.696	1.47	-1.096 ± 1.187	-2.235 ± 1.568
PRF-fit source offset from KIC position	2.484 ± 1.604	1.55	-1.057 ± 1.345	-2.248 ± 1.494
photometric centroid source offset	2.16 ± 0.96	2.25	-2.13 ± 0.96	0.38 ± 0.98

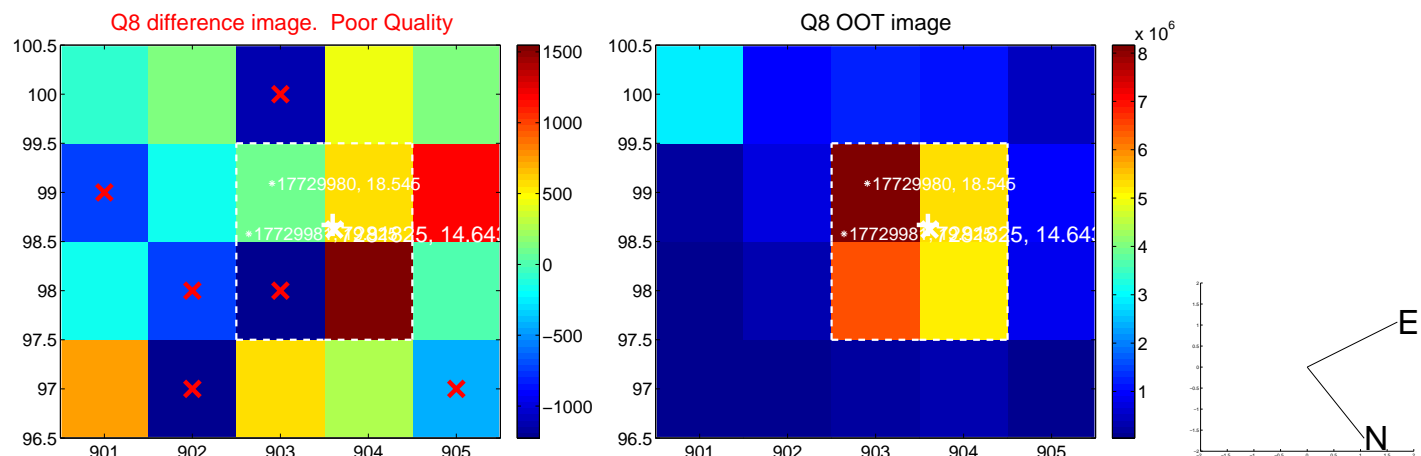
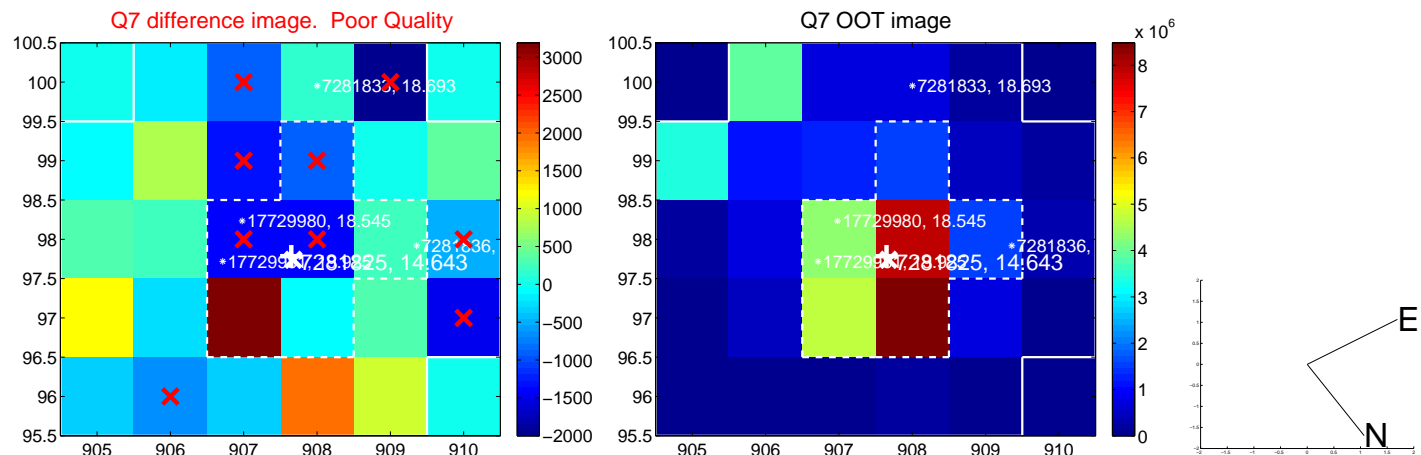
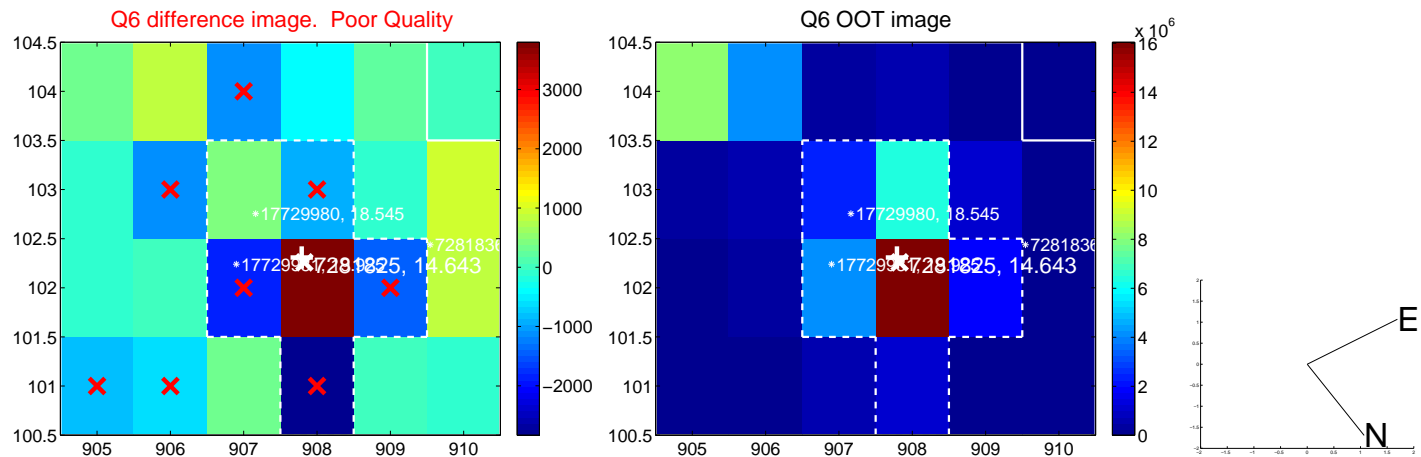
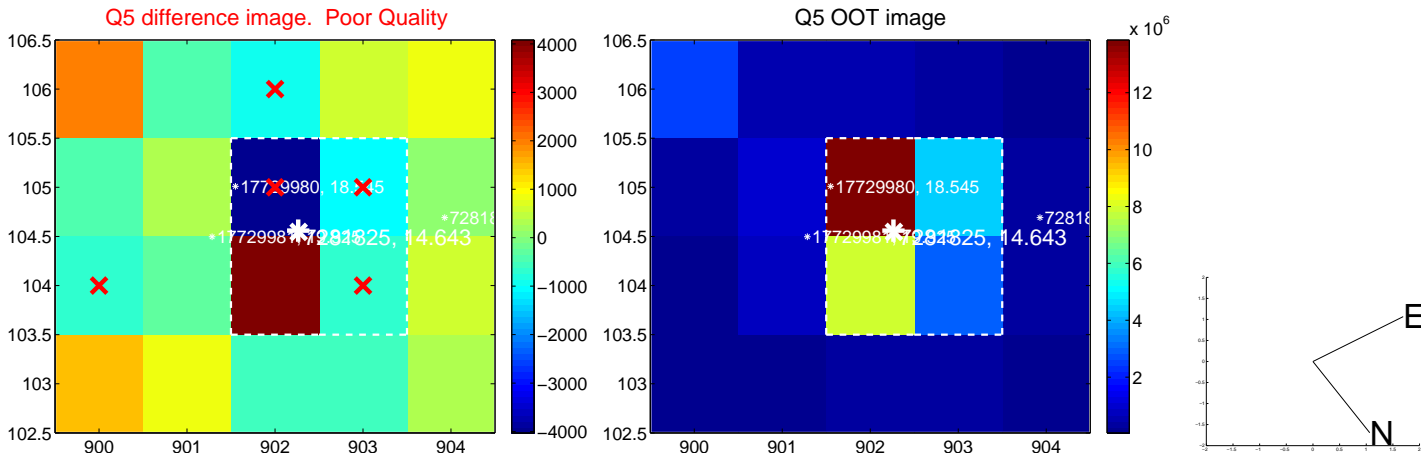


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

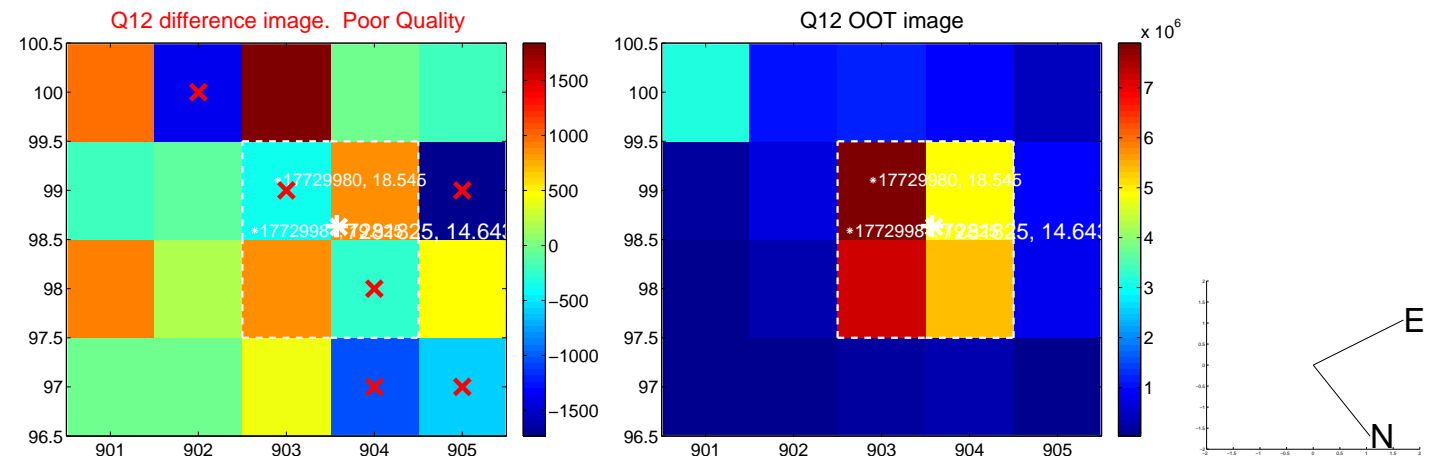
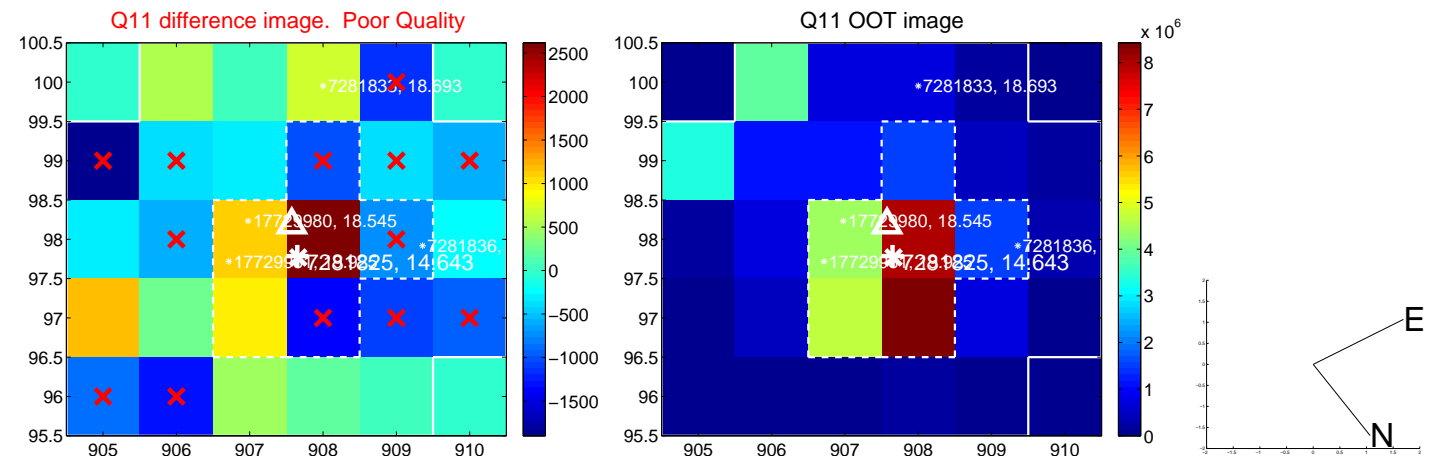
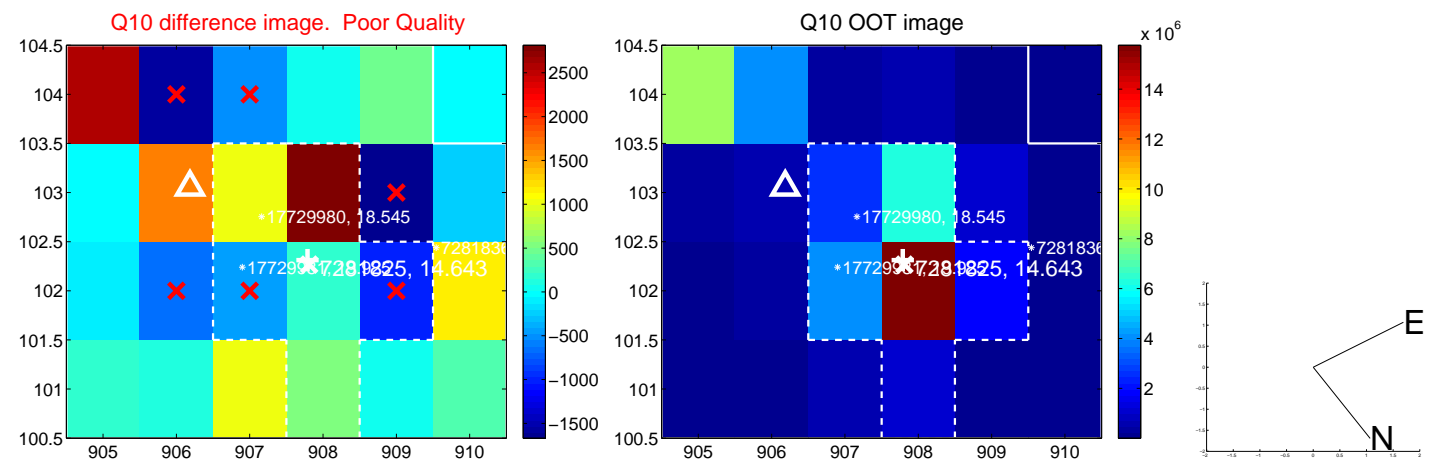
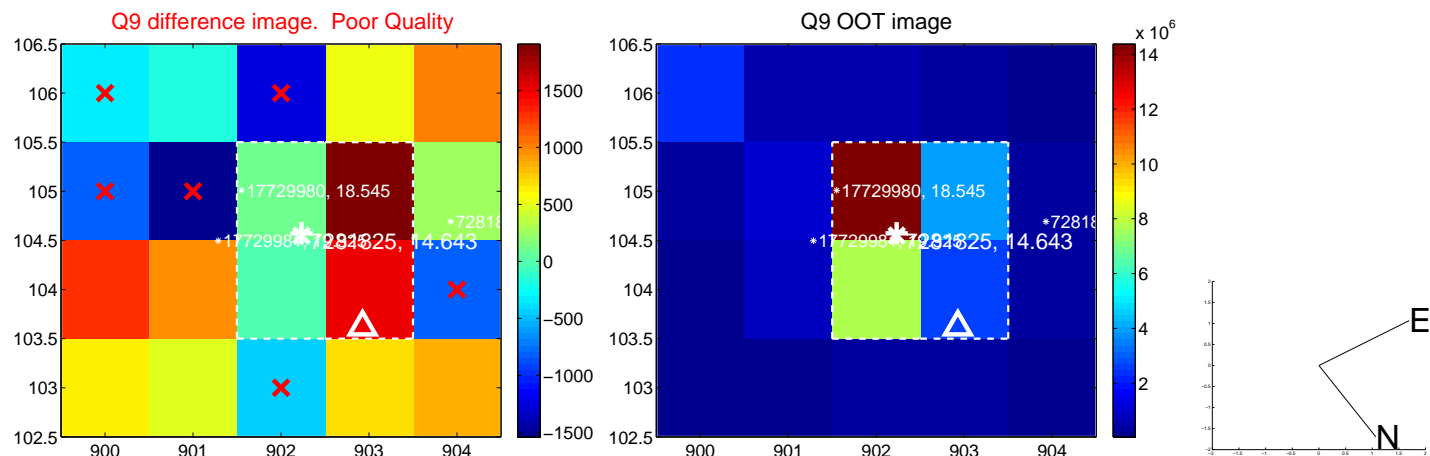
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



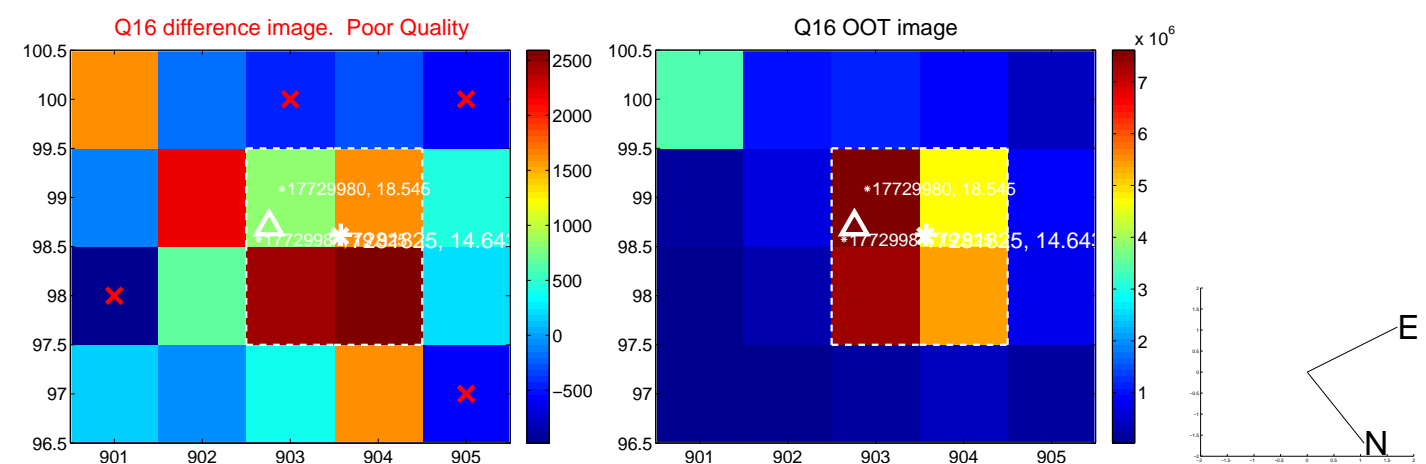
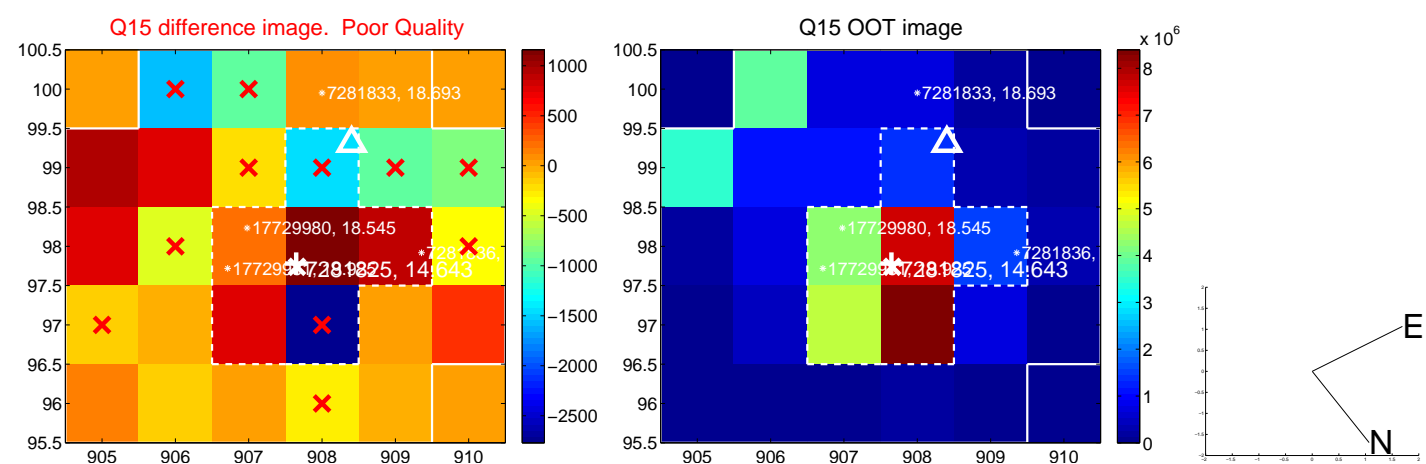
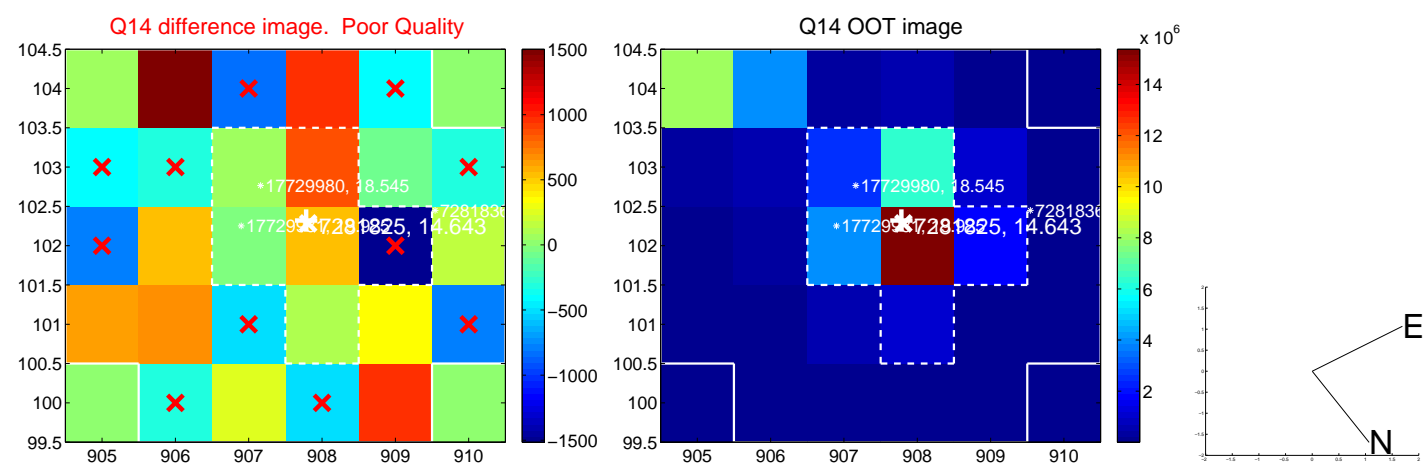
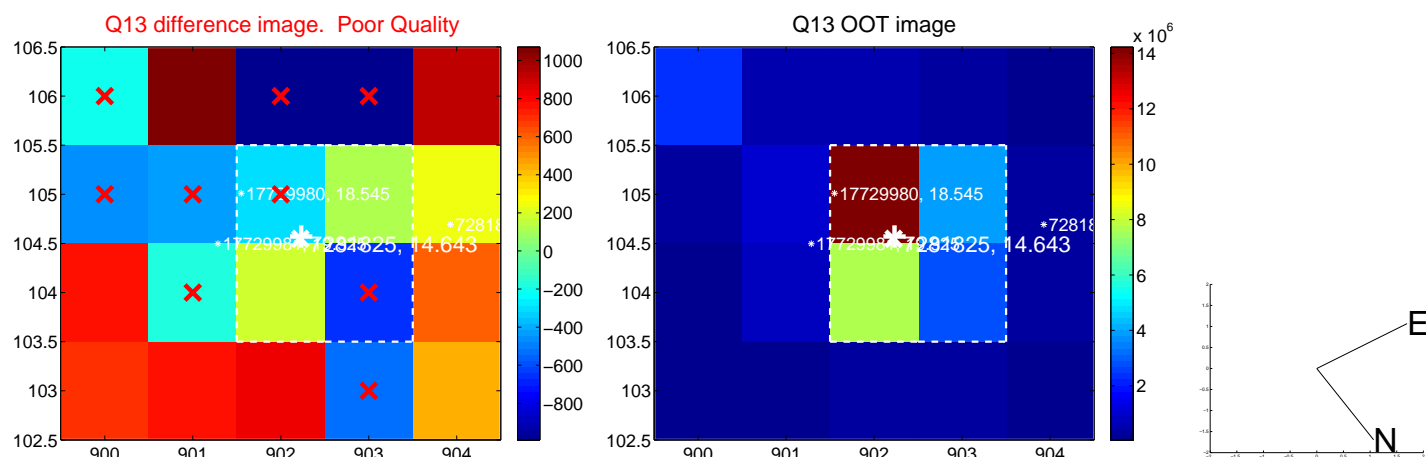
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



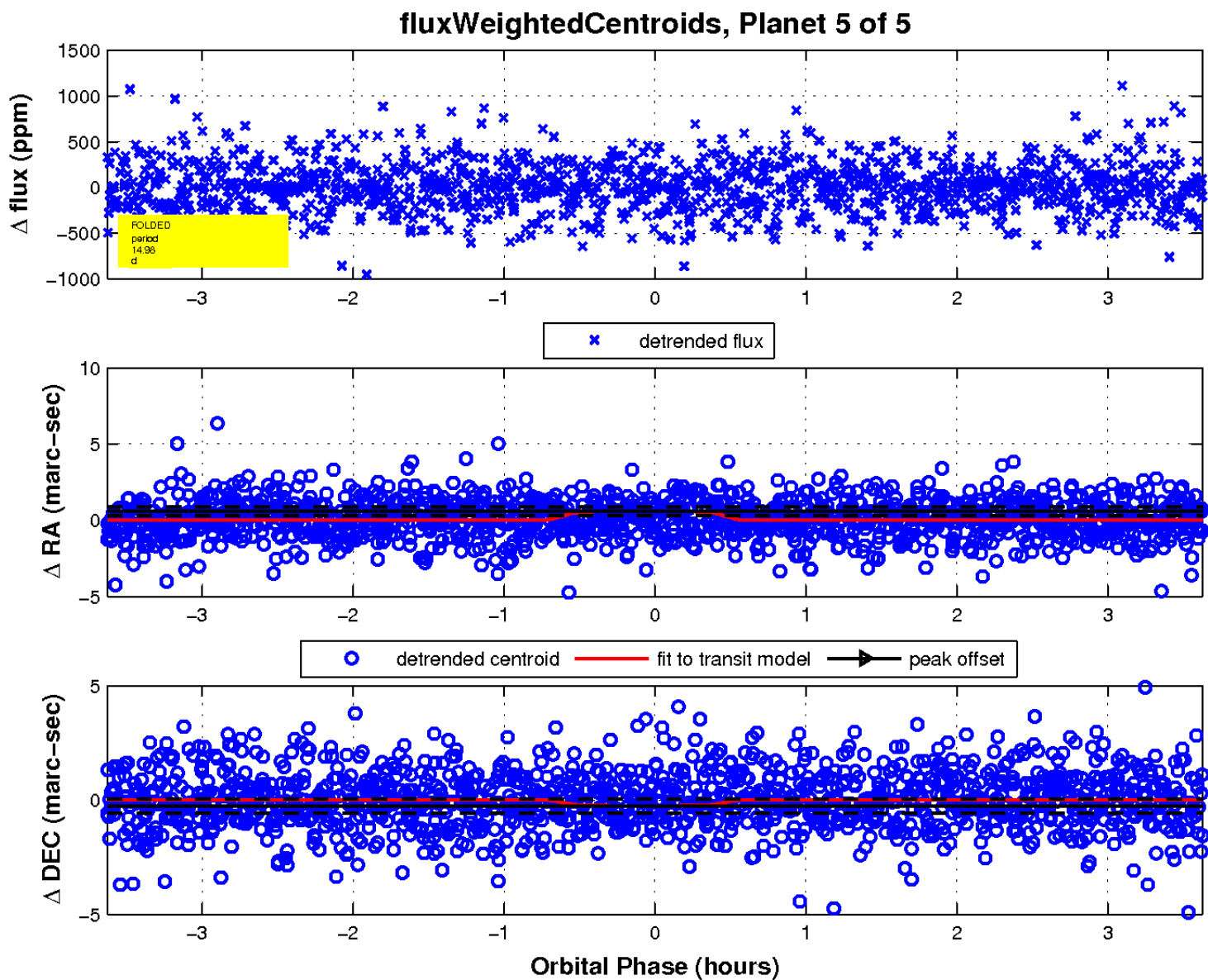
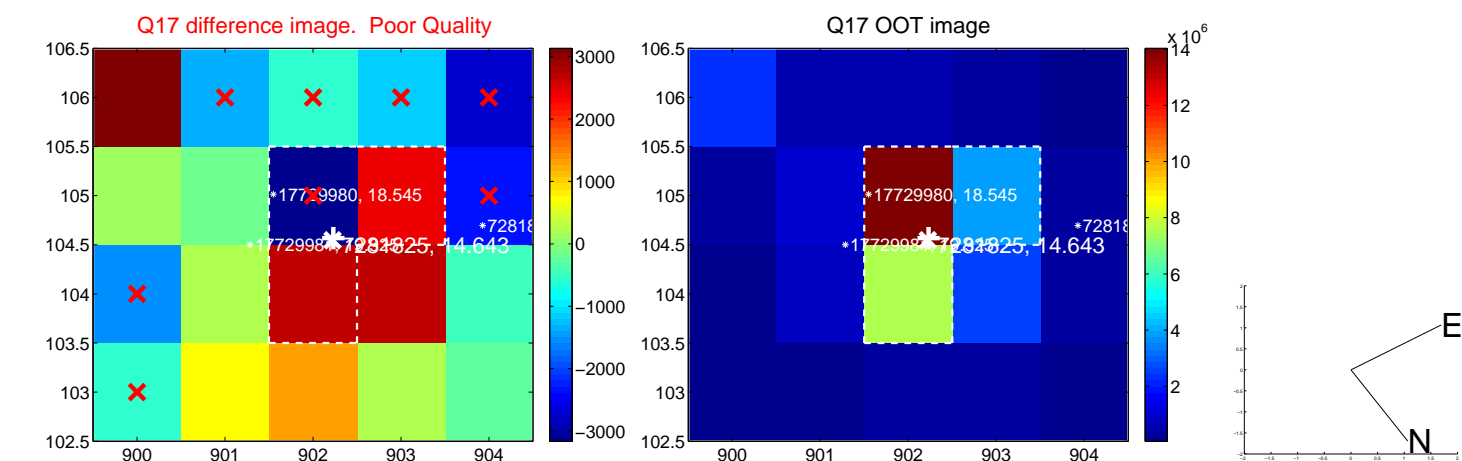
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

