

KIC 006284209

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})
006284209-01	OBS	No	1.305256	131.986253	17.6	9.950	8.2	8.5	1.64	7317	0.70	9496.16
006284209-02	OBS	No	60.034726	180.949070	289.6	1.297	13.8	14.4	1.64	7317	2.85	57.62
006284209-04	OBS	No	13.879301	142.351992	323.3	2.276	13.4	14.0	1.64	7317	3.23	406.12
006284209-05	OBS	No	9.149682	131.840616	35.8	0.892	11.8	1.3	1.64	7317	1.03	707.84
006284209-06	OBS	No	17.911618	137.060159	354.3	1.226	13.3	12.7	1.64	7317	3.17	289.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006284209-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006284209-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006284209-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006284209-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006284209-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

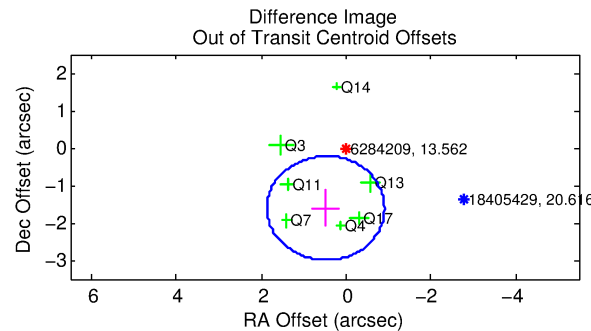
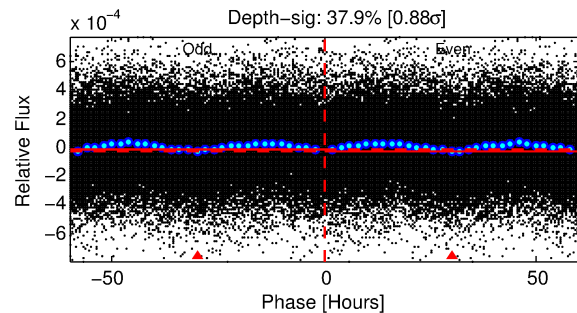
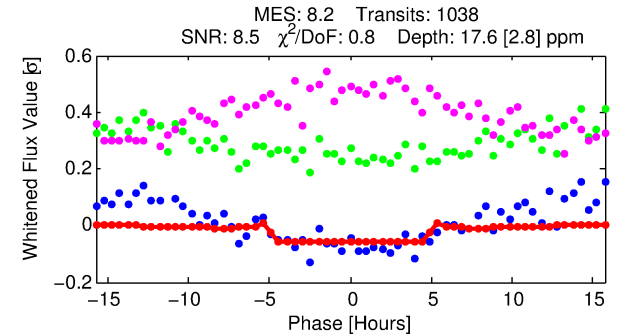
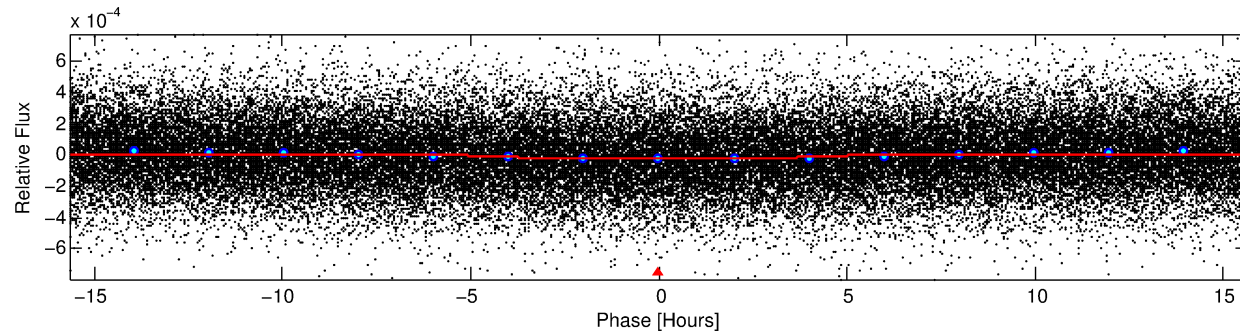
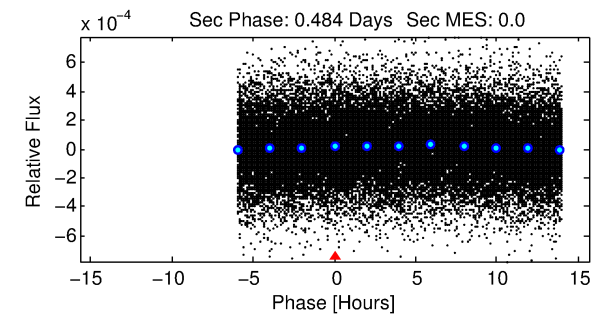
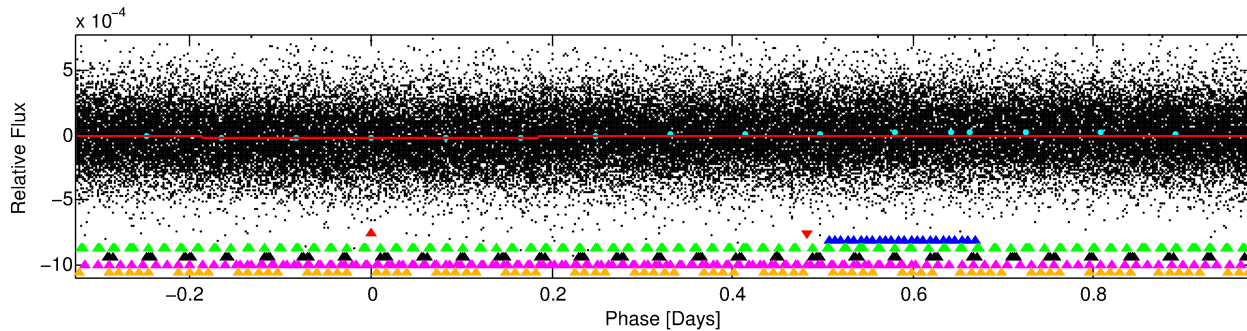
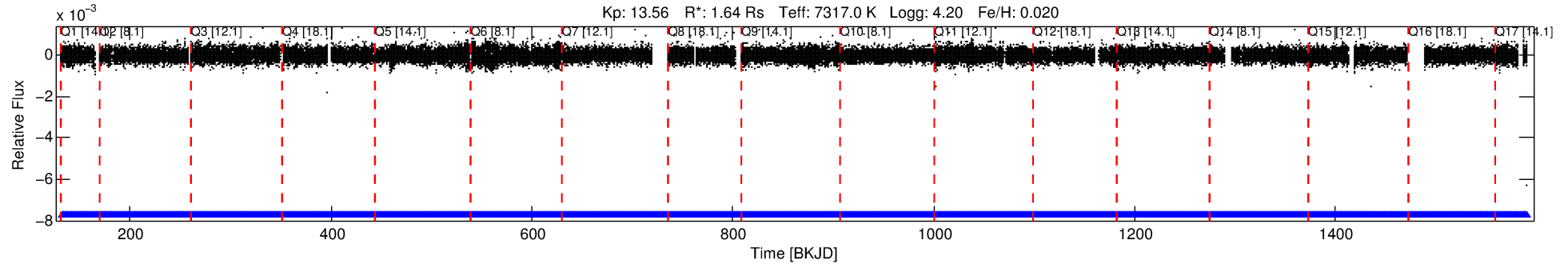
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006284209-01

No Significant Match Found

DV One-Page Summary

KIC: 6284209 Candidate: 1 of 6 Period: 1.305 d



DV Fit Results:

Period = 1.30526 [0.00003] d
Epoch = 131.9863 [0.0074] BKJD
Rp/R* = 0.0039 [0.0046]
a/R* = 1.19 [2.56]
b = 0.00 [1686.12]
Seff = 9496.16 [4138.99]
Teq = 2517 [274] K
Rp = 0.70 [0.87] Re
a = 0.0270 [0.0077] AU
Ag = N/A
Teffp = N/A

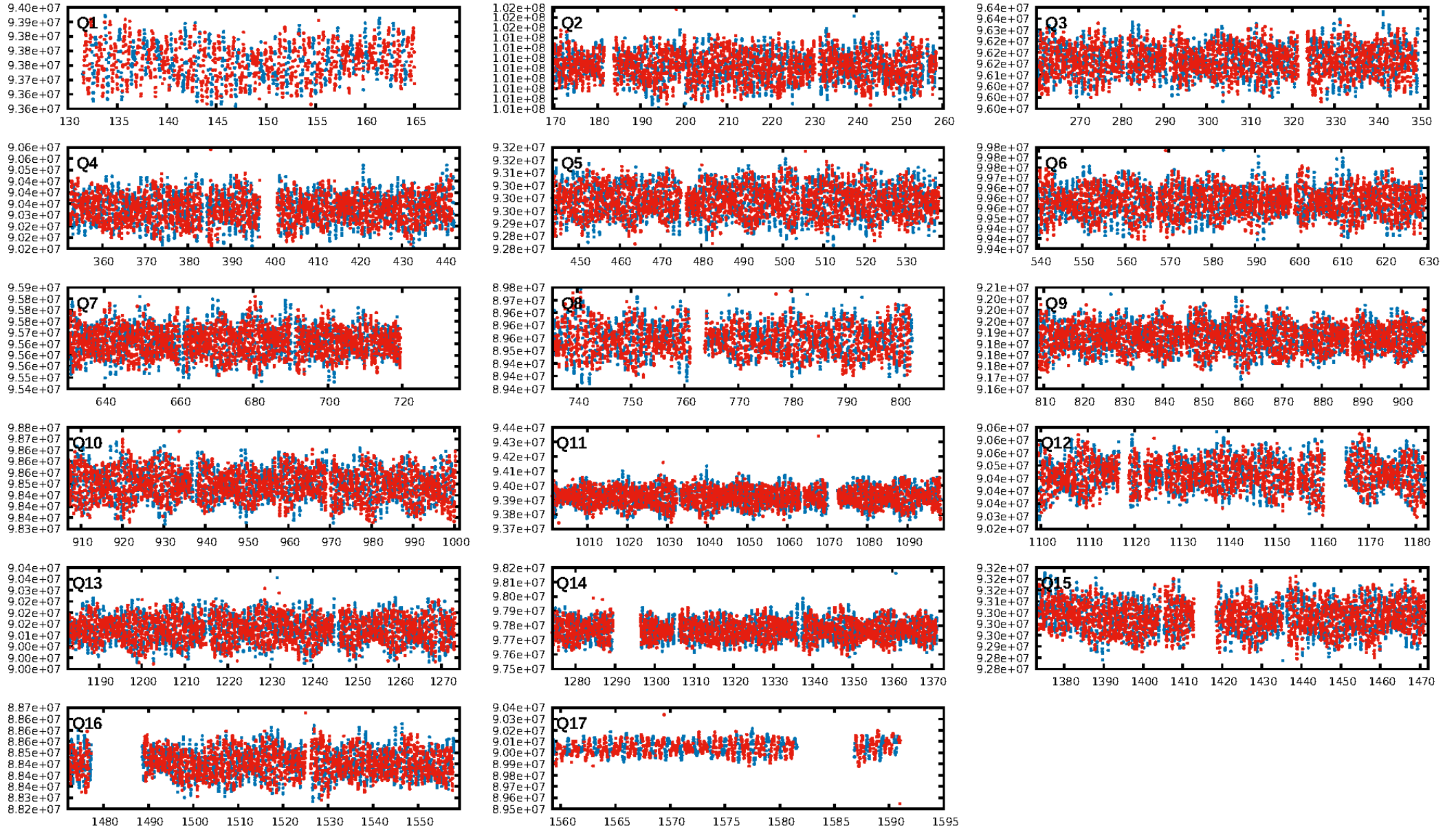
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [18.85σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.57e-91
RollingBand-fgt: 1.00 [992/992]
GhostDiagnostic-chr: 3.018
Centroid-sig: 5.0%
Centroid-so: 1.258 arcsec [1.35σ]
OotOffset-rm: 1.677 arcsec [3.62σ]
KicOffset-rm: 1.676 arcsec [3.12σ]
OotOffset-st: 1/3/1/2 [7]
KicOffset-st: 1/3/1/2 [7]
DiffImageQuality-fgm: 1.00 [7/7]
DiffImageOverlap-fno: 1.00 [17/17]

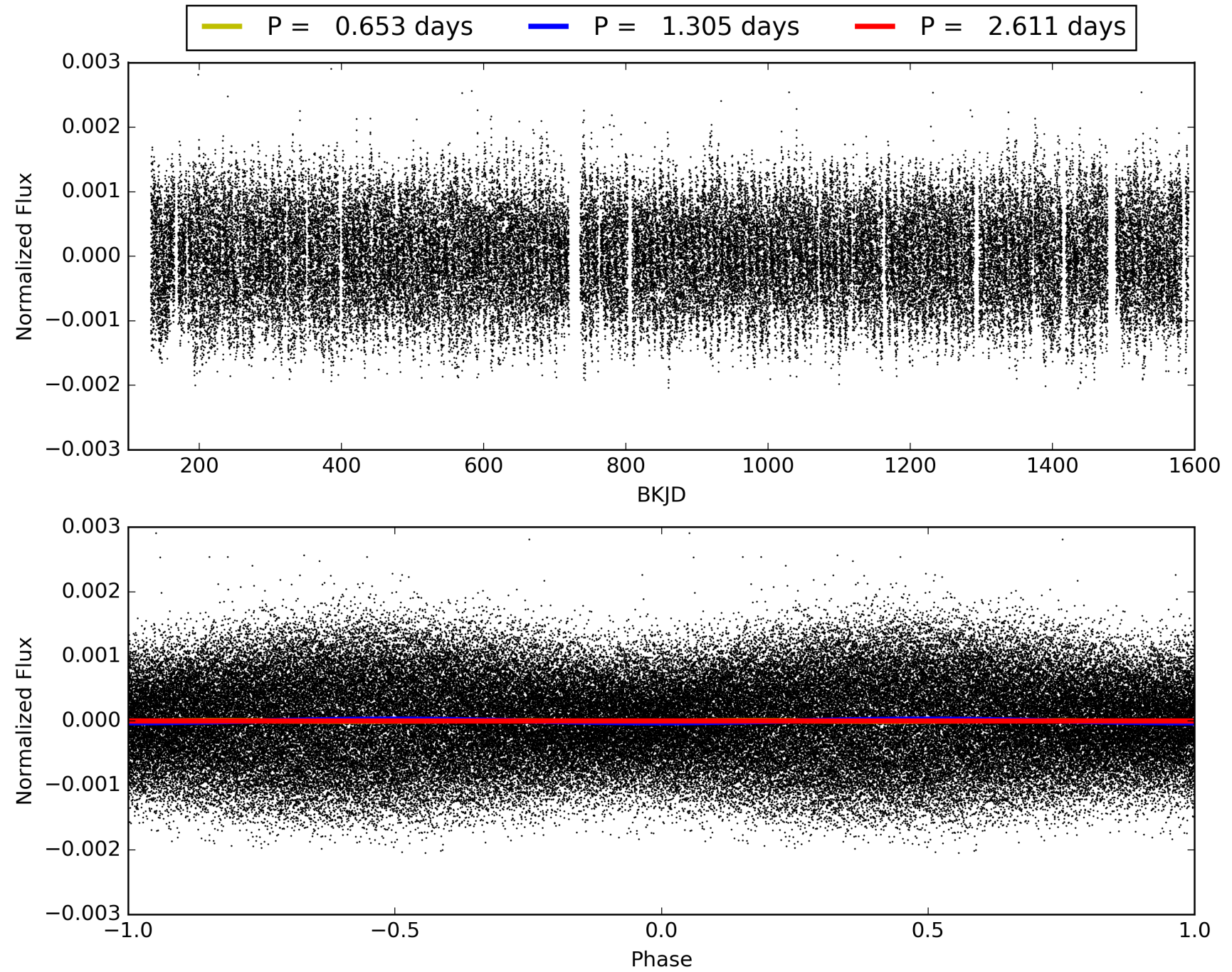
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:13:42 Z

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

TCE 006284209-01, PDC Light Curves

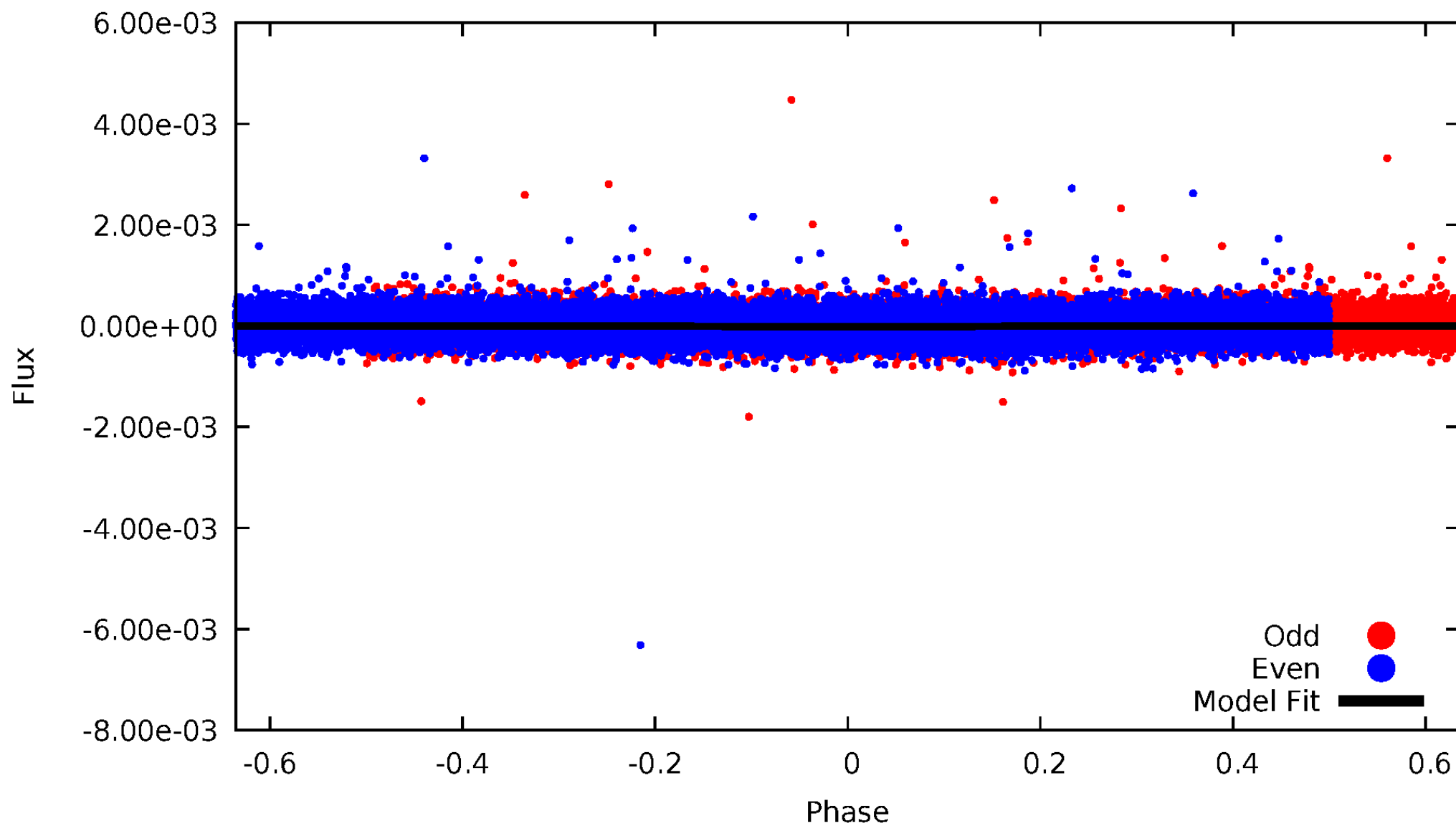


TCE 006284209-01



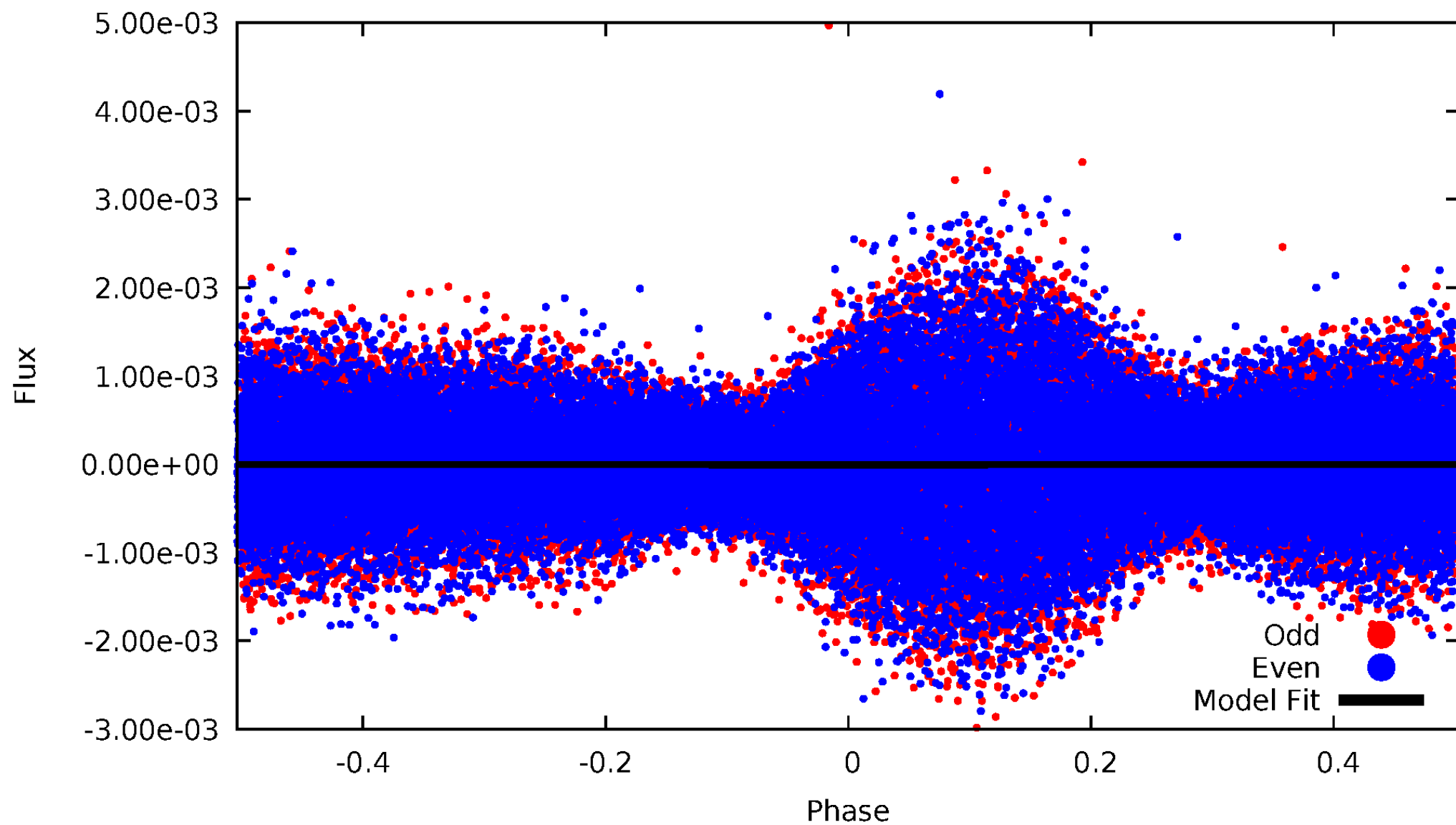
DV Odd/Even

TCE 006284209-01



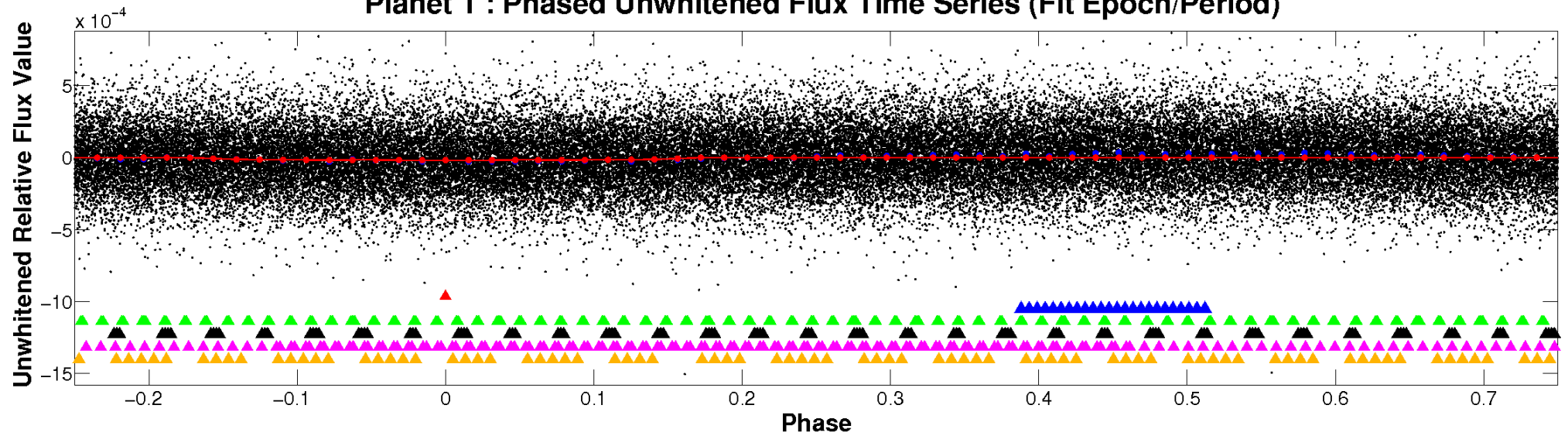
ALT Odd/Even

TCE 006284209-01

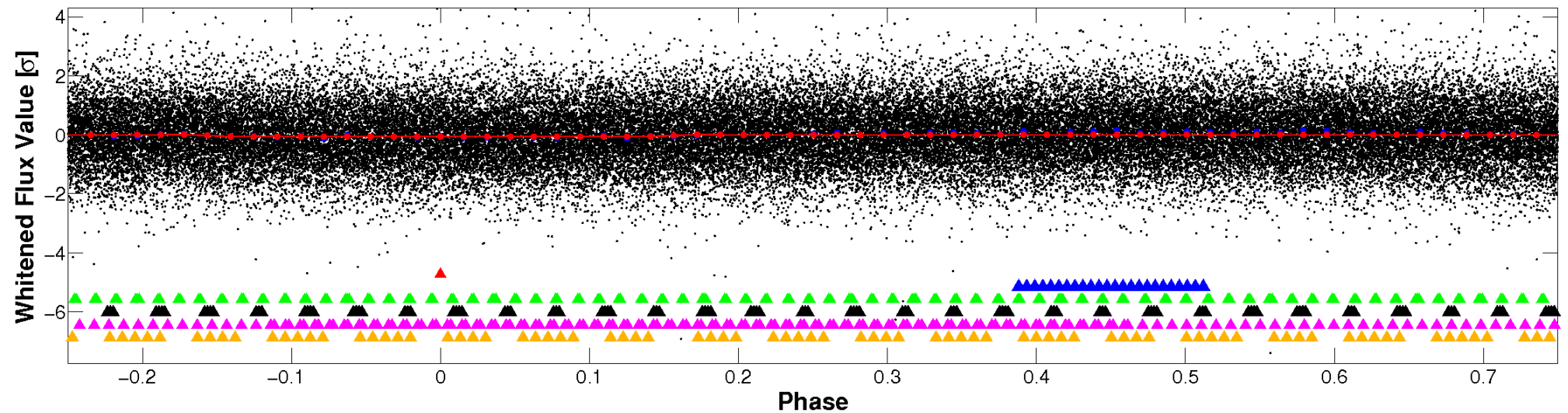


Non-Whitened Vs. Whitened Light Curve

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

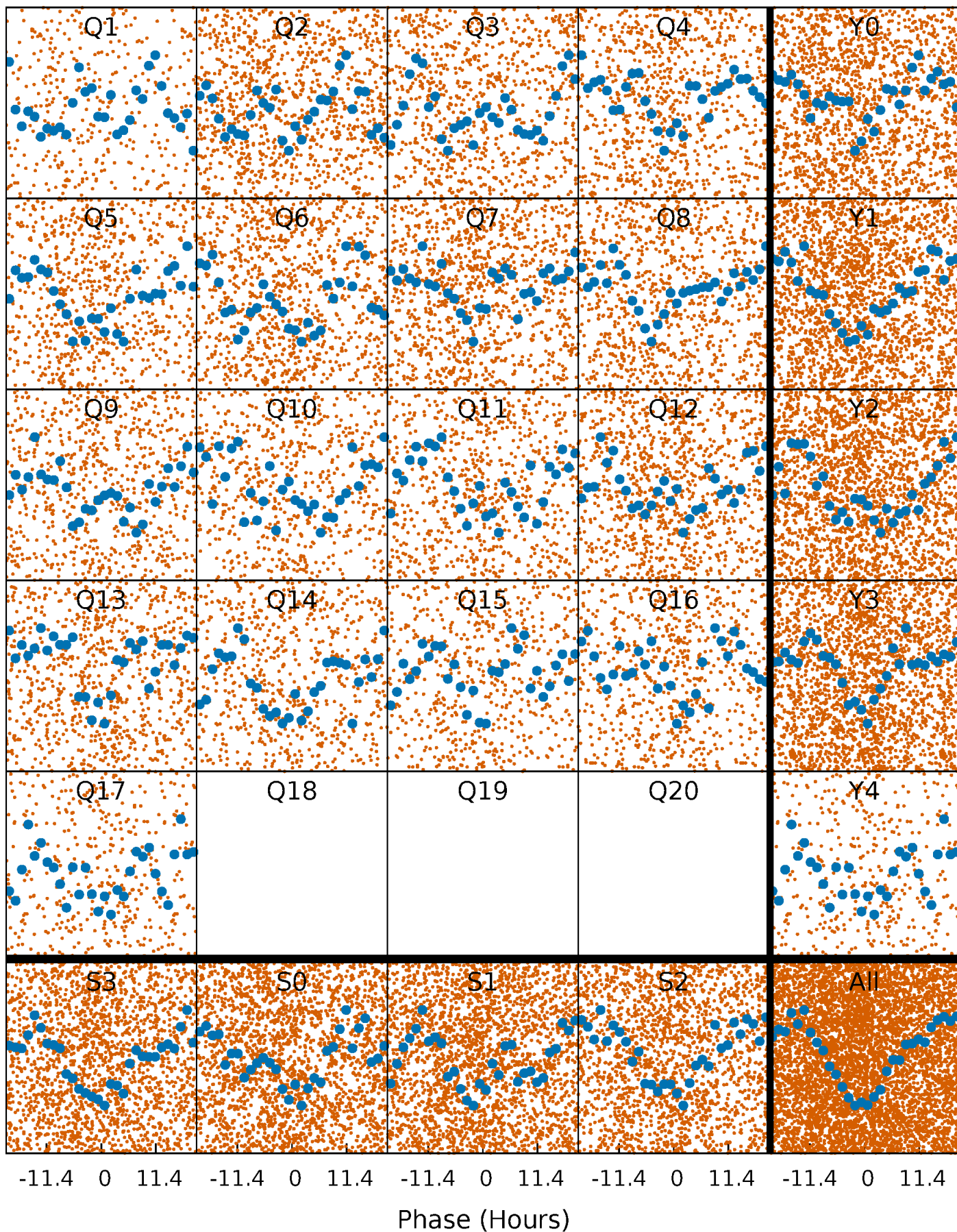


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



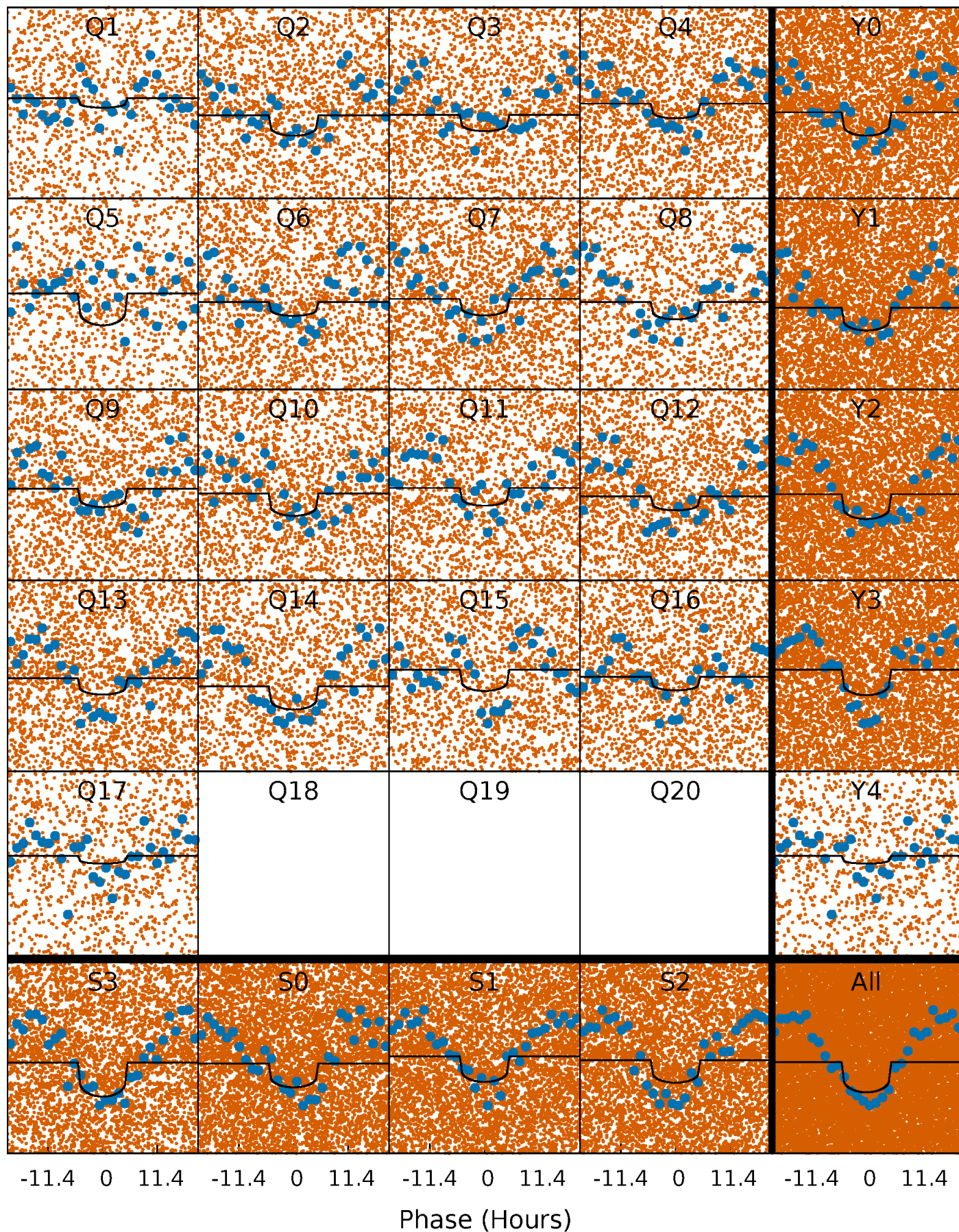
PDC Quarter-Phased Transit Curves

TCE 006284209-01 P= 1.305256 Days $T_0=131.986253$ (BKJD)



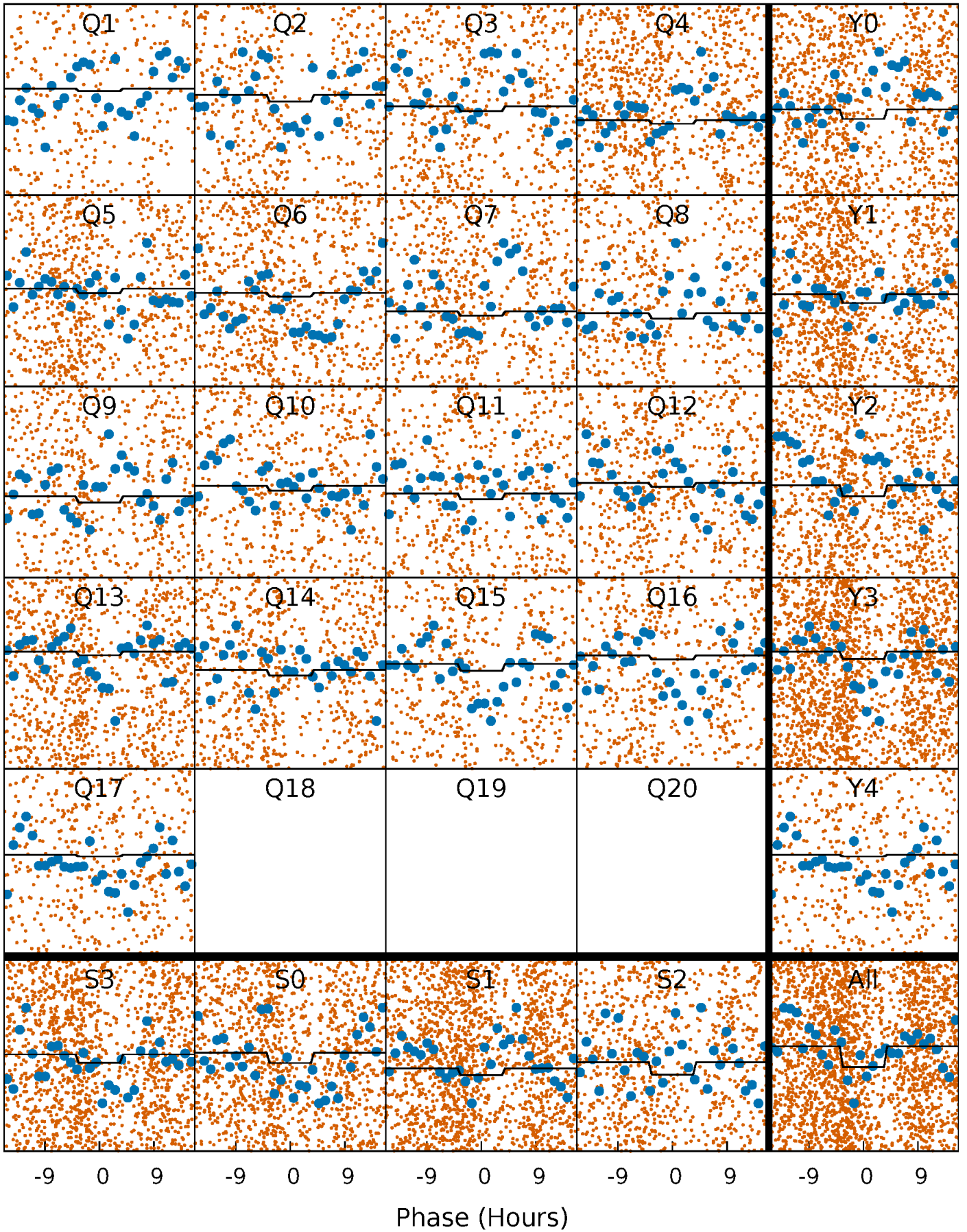
DV Quarter-Phased Transit Curves

TCE 006284209-01 P= 1.305256 Days $T_0=131.986253$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

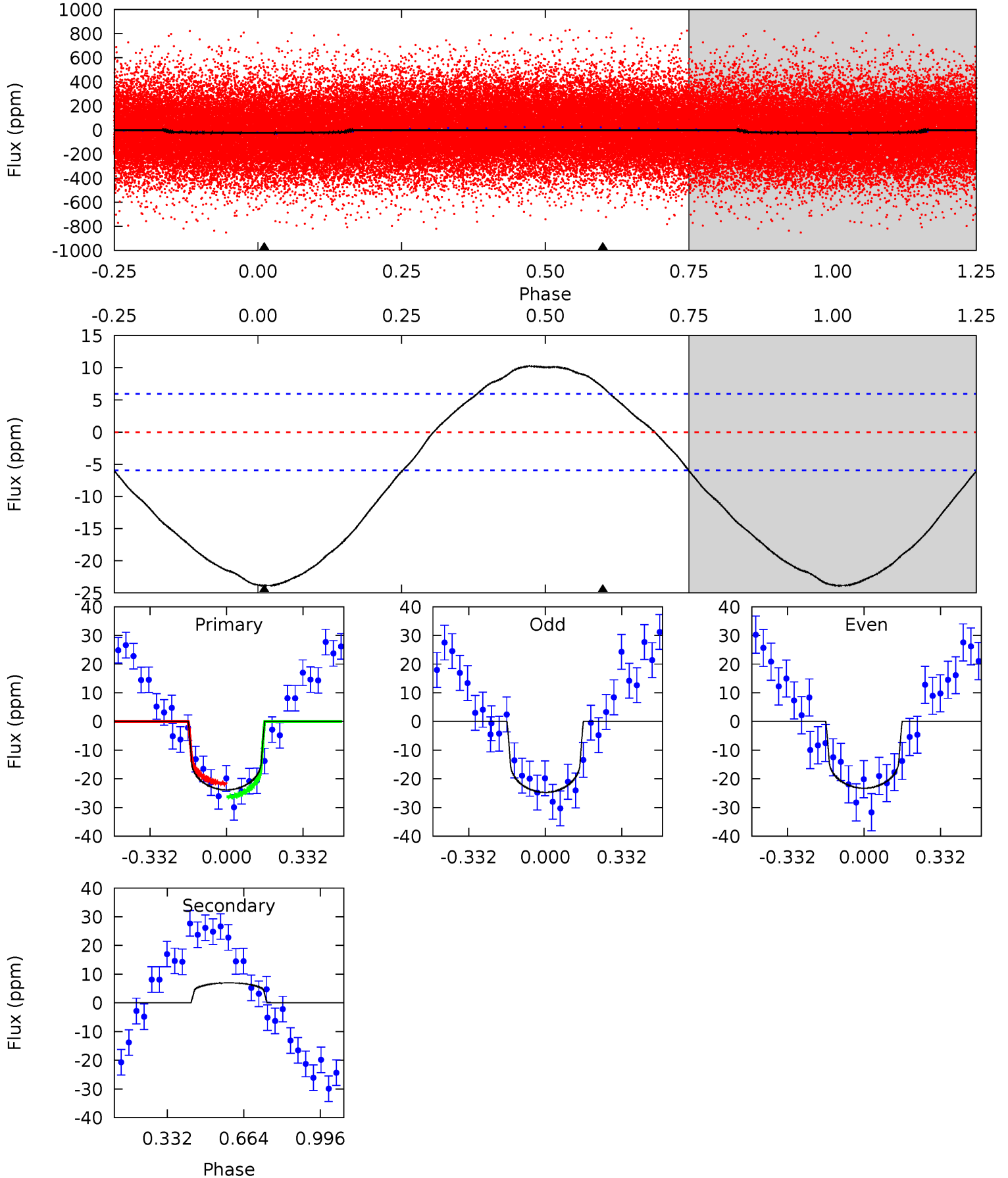
TCE 006284209-01 P= 1.305208 Days $T_0=131.965179$ (BKJD)



DV Model-Shift Uniqueness Test

006284209-01, P = 1.305256 Days, E = 130.680997 Days

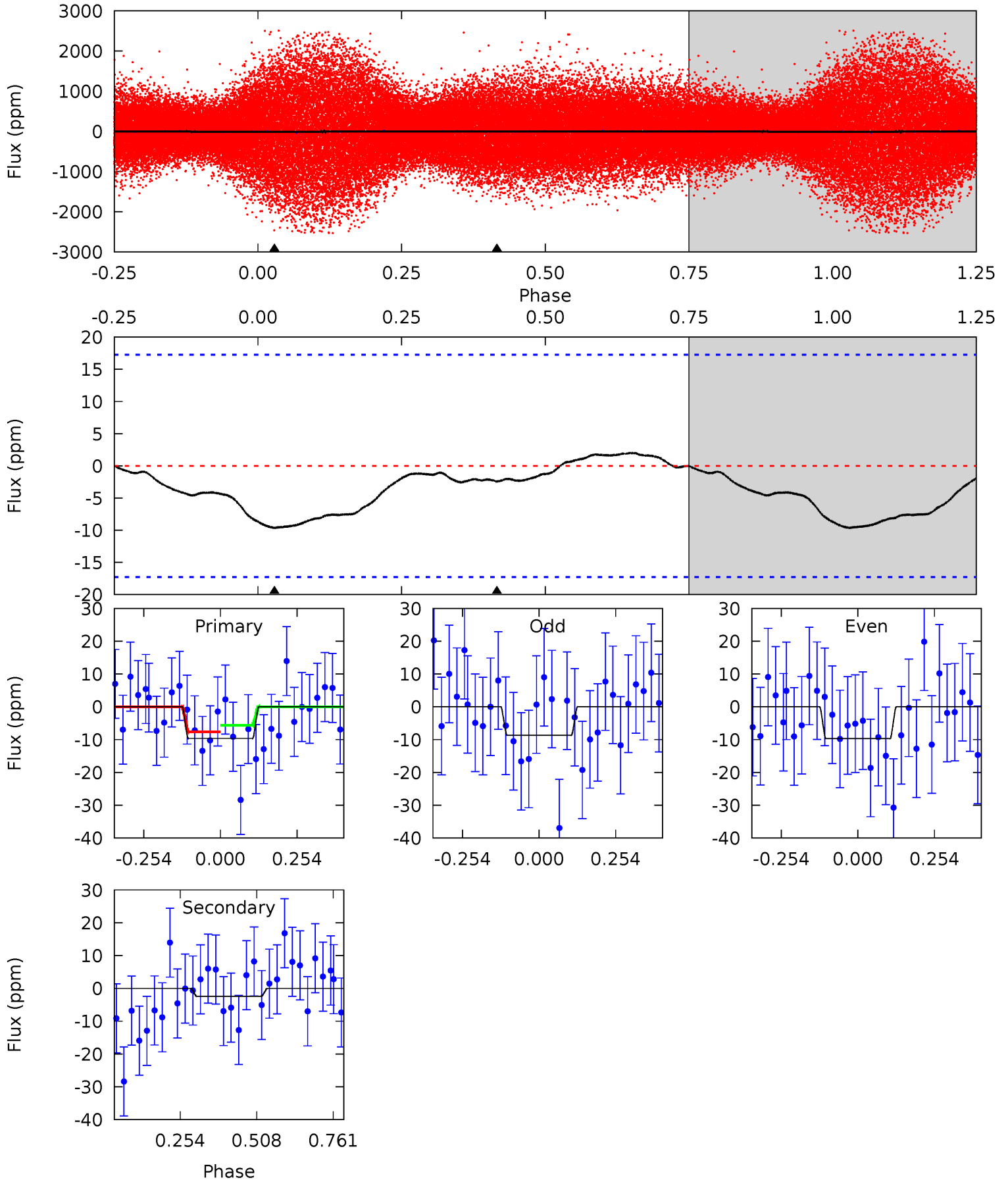
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	-5.06	0	0	4.31	0.97	2.14	17.3	17.3	-5.06	-5.06	0.53	0.99	0.30	1.66



Alt Model-Shift Uniqueness Test

006284209-01, P = 1.305208 Days, E = 130.659971 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.43	0.62	0	0	4.37	1.14	0.21	2.43	2.43	0.62	0.62	0.13	0.86	0.17	0.28



Stellar Parameters For KIC 006284209

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7317^{+232}_{-319}	$4.195^{+0.090}_{-0.210}$	$0.020^{+0.200}_{-0.350}$	$1.642^{+0.581}_{-0.249}$	$1.538^{+0.226}_{-0.226}$	$0.490^{+0.244}_{-0.259}$
	+3%/-4%	+2%/-5%	+1000%/-1750%	+35%/-15%	+15%/-15%	+50%/-53%
Source	KIC0	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 006284209-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	7 ± 1	$0.90^{+0.84}_{-0.59}$	3560^{+297}_{-208}	-5480^{+1131}_{-4289}	$-3.281^{+2.363}_{-24.807}$
Alt.	-2 ± 4	$0.80^{+0.73}_{-0.52}$	3579^{+319}_{-214}	3762^{+3048}_{-8040}	$0.833^{+7.799}_{-1.633}$

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

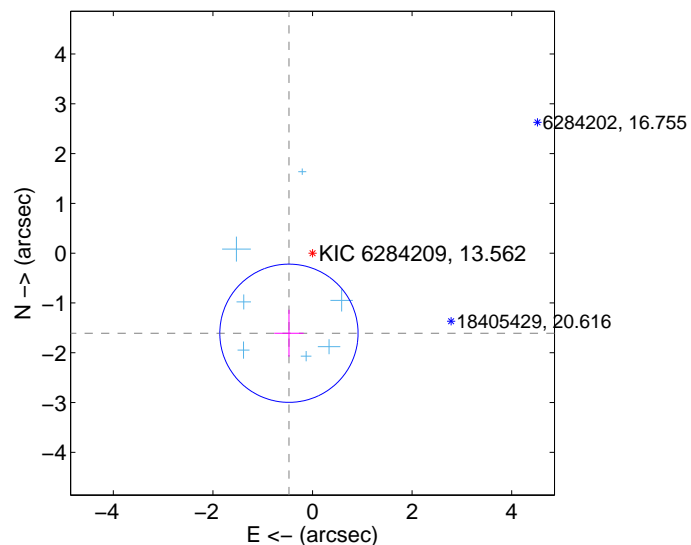
Supplemental centroid analysis for 006284209-01. Kepler magnitude: 13.56. Transit SNR 8.55

There are 7 quarters with good PRF difference image offsets

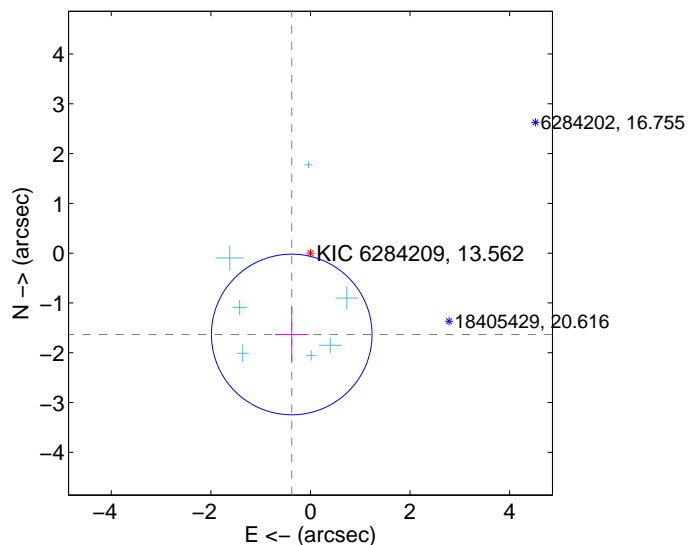
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.677 ± 0.463	3.62	0.473 ± 0.294	-1.608 ± 0.471
PRF-fit source offset from KIC position	1.676 ± 0.538	3.12	0.376 ± 0.335	-1.633 ± 0.546
photometric centroid source offset	1.26 ± 0.93	1.35	-0.78 ± 0.99	-0.99 ± 0.89

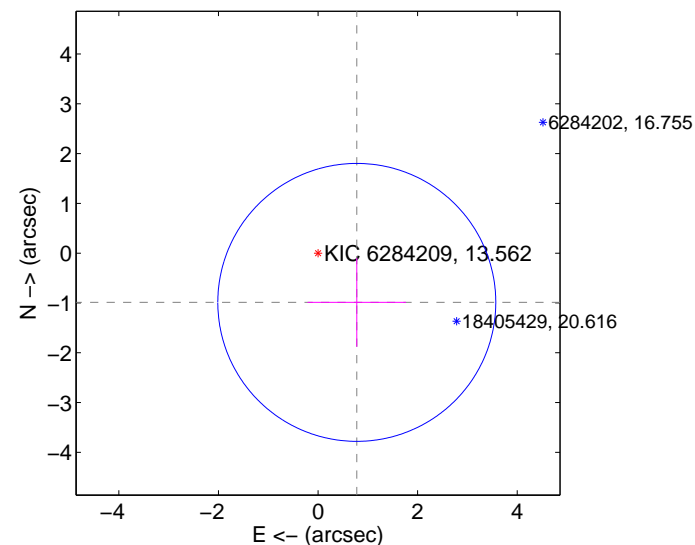
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

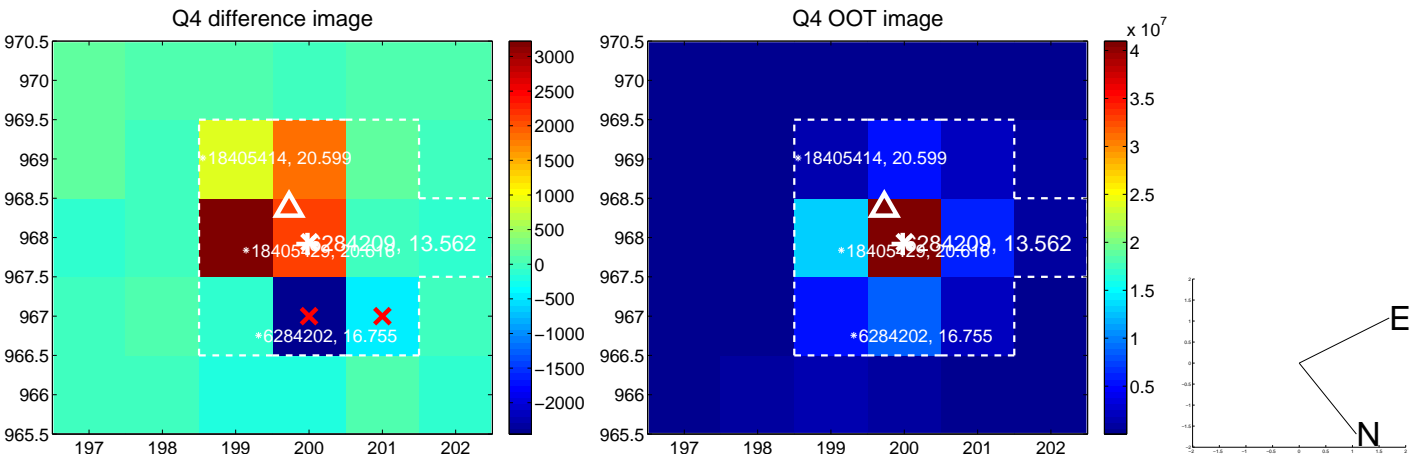
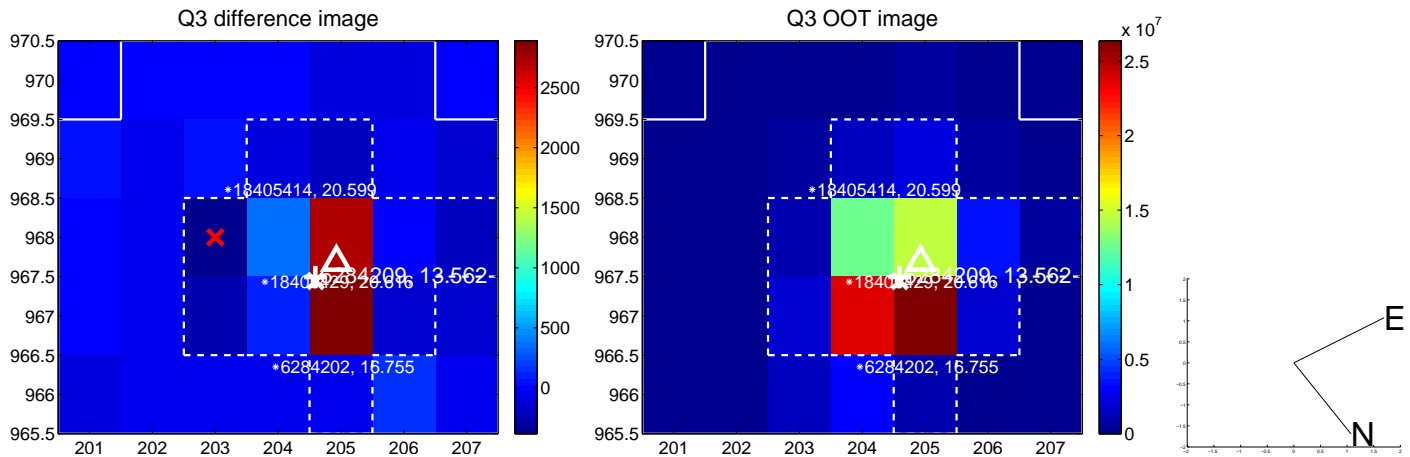
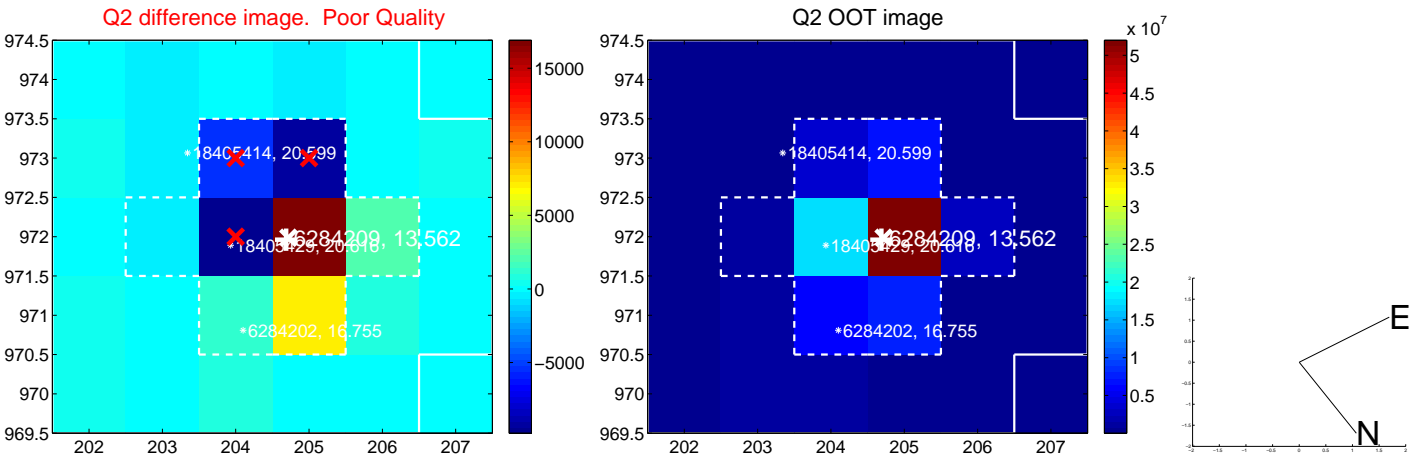
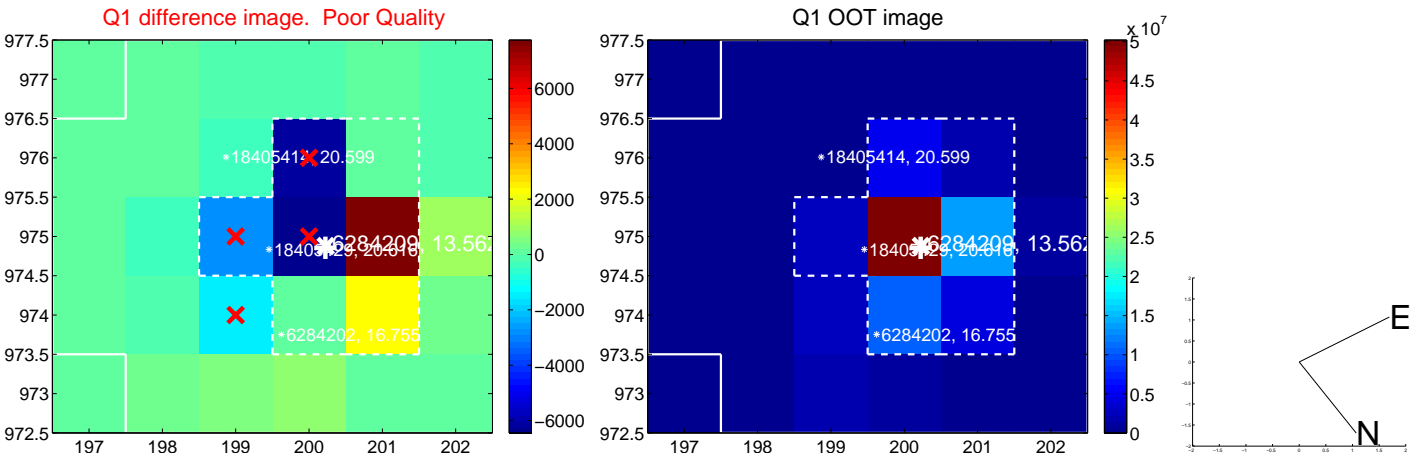


offset from photometric centroids

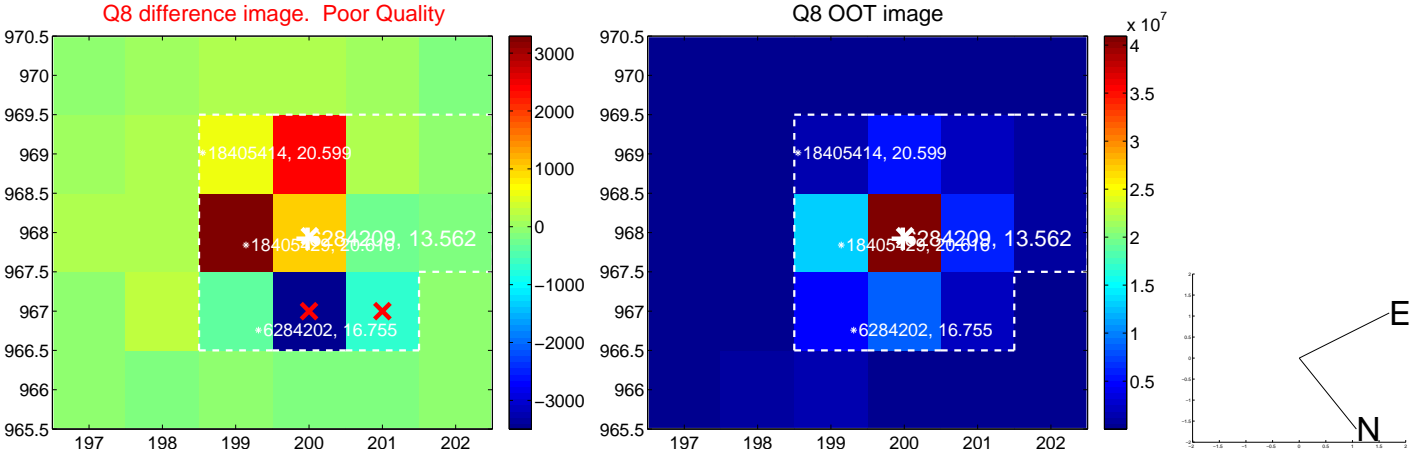
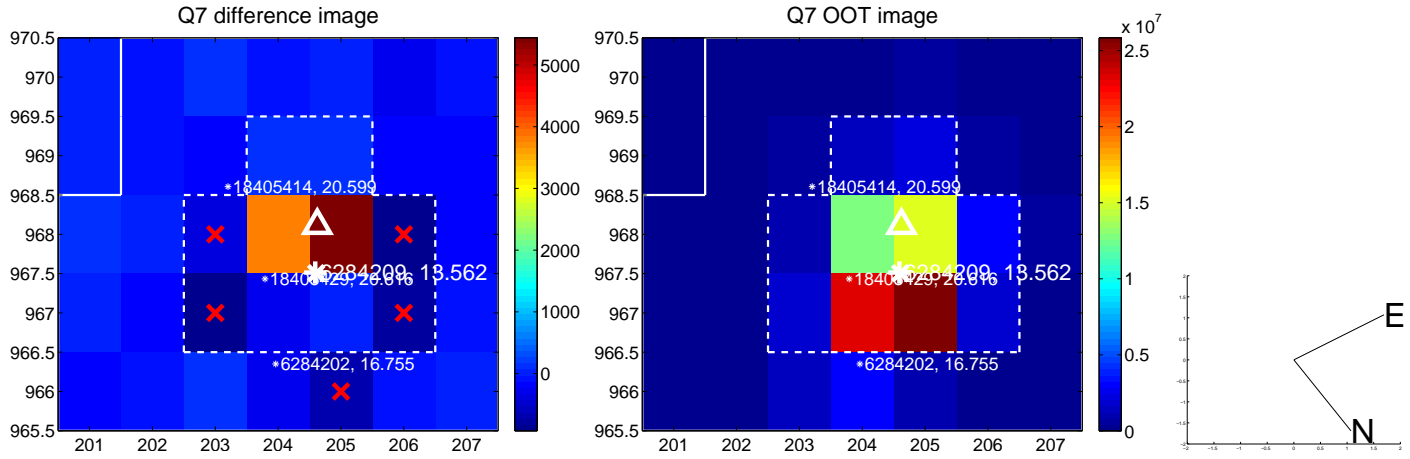
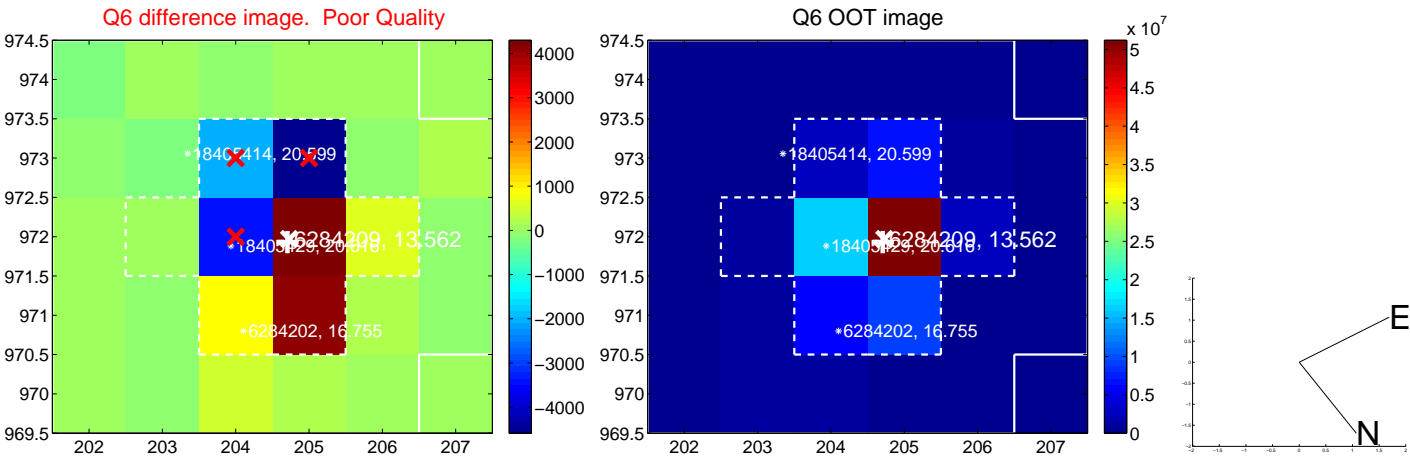
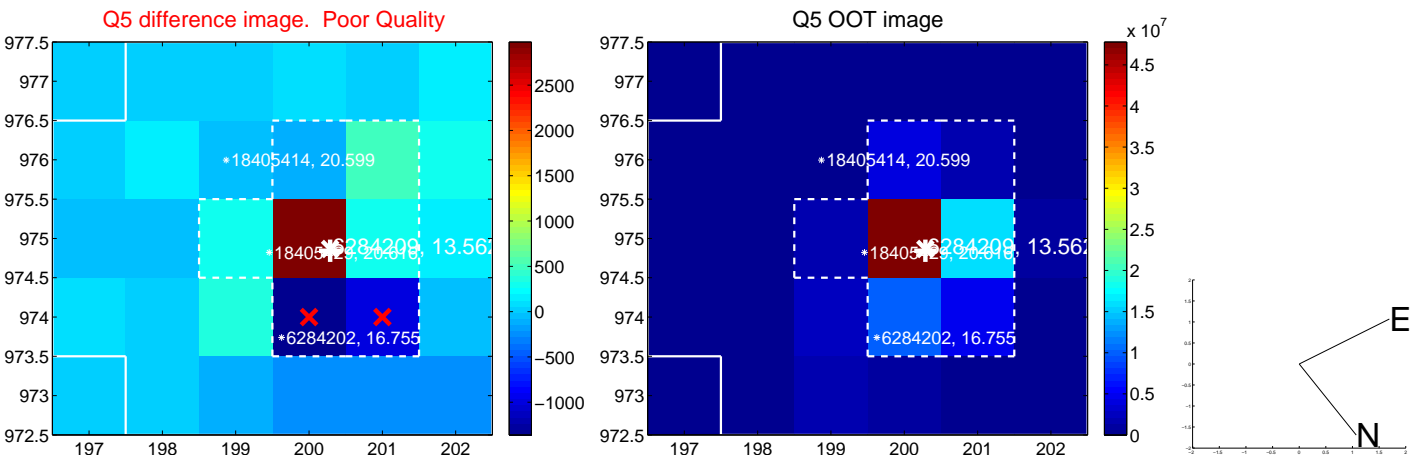


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

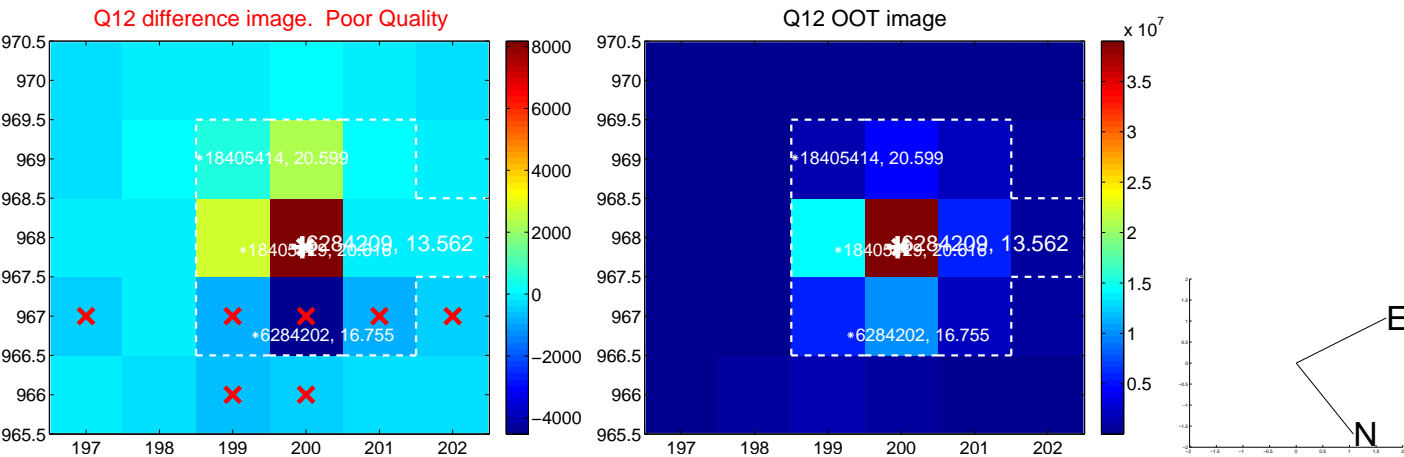
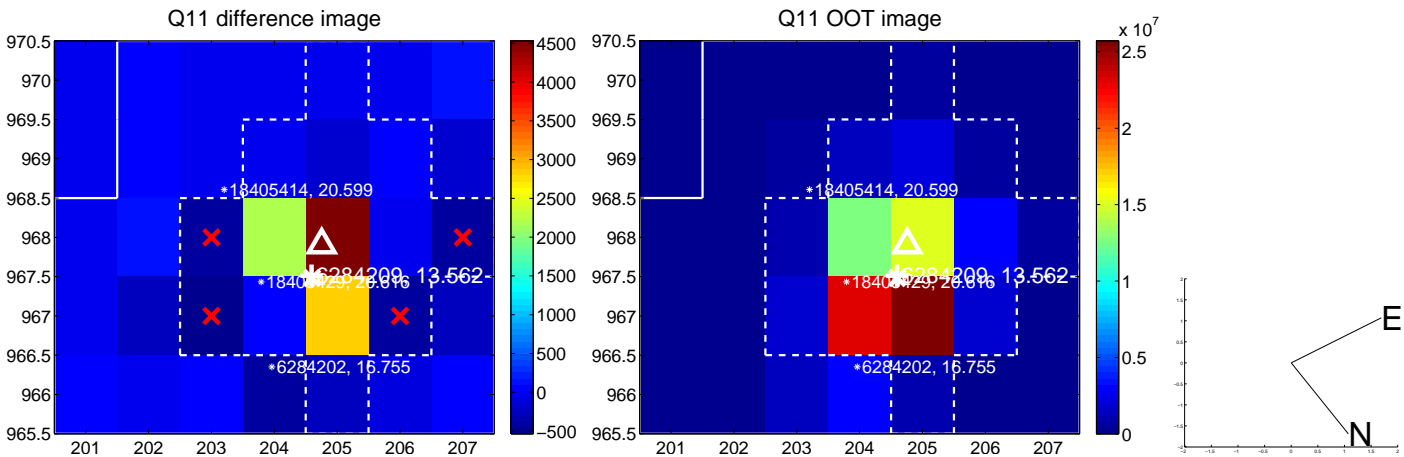
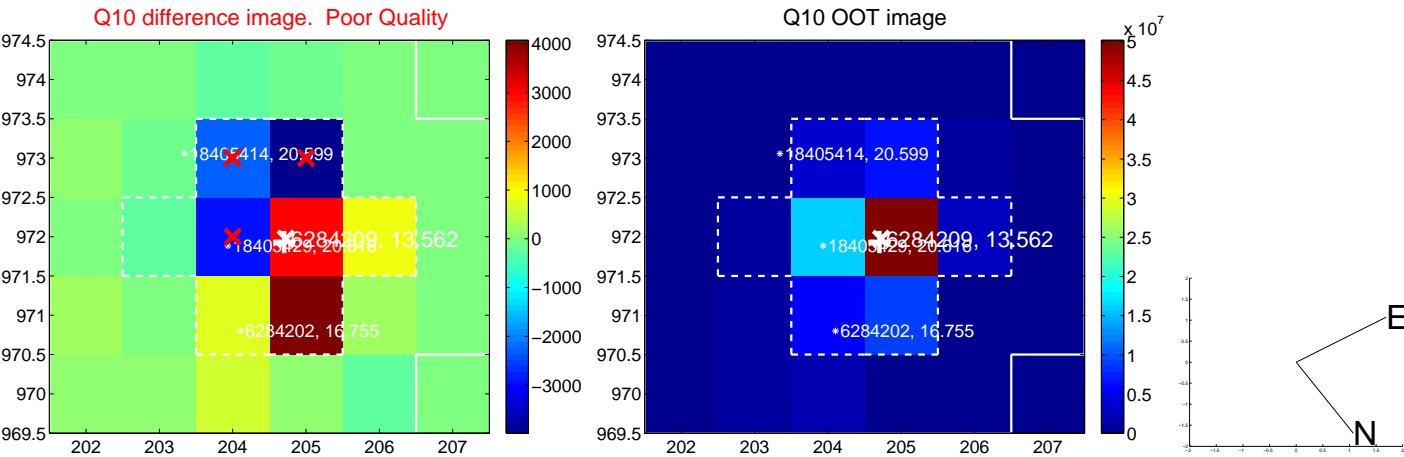
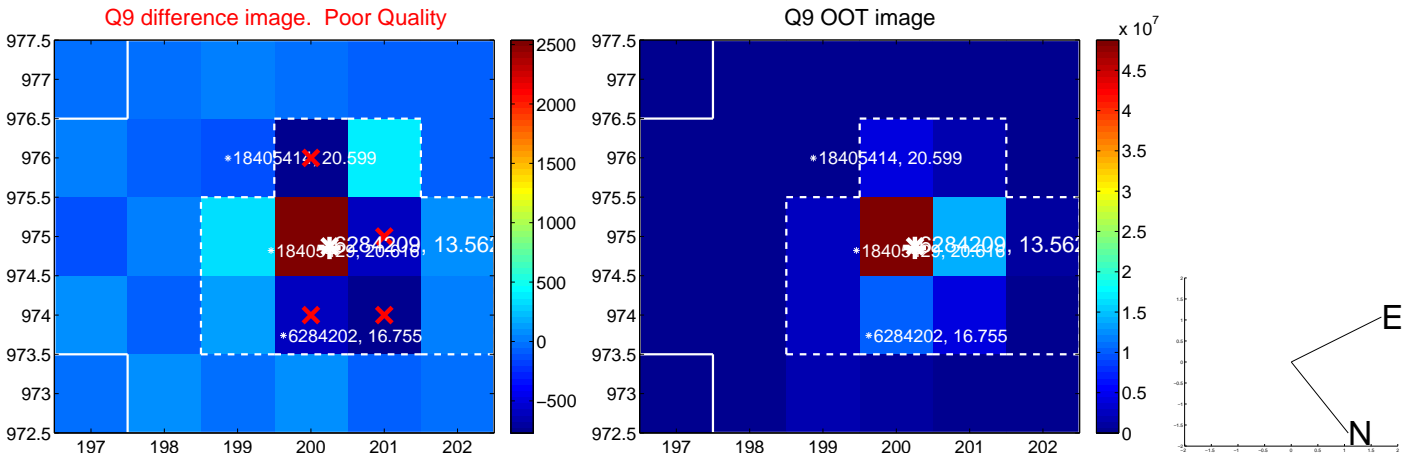
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



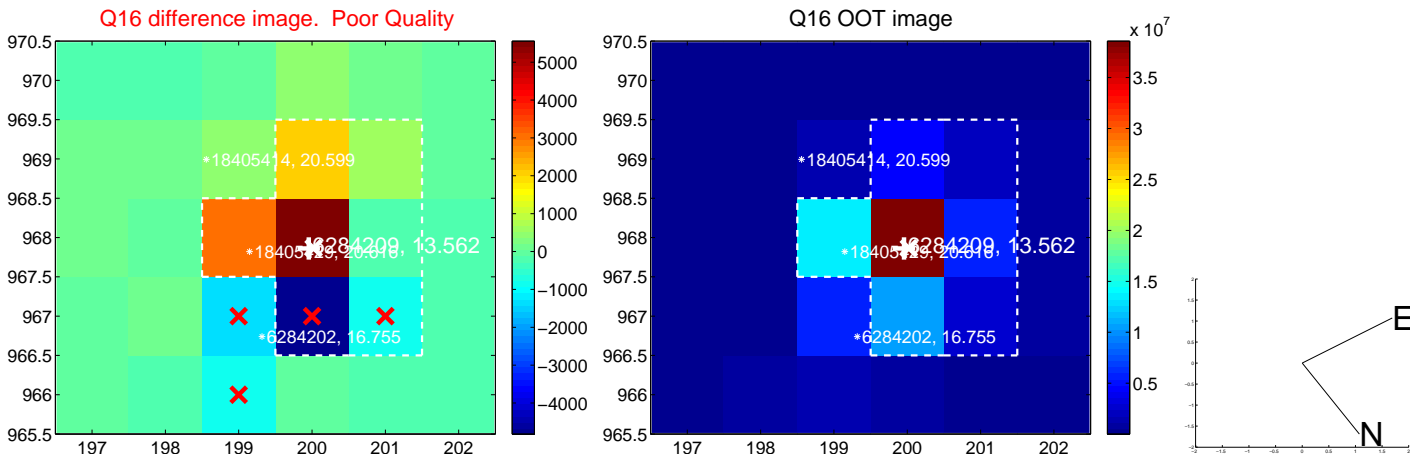
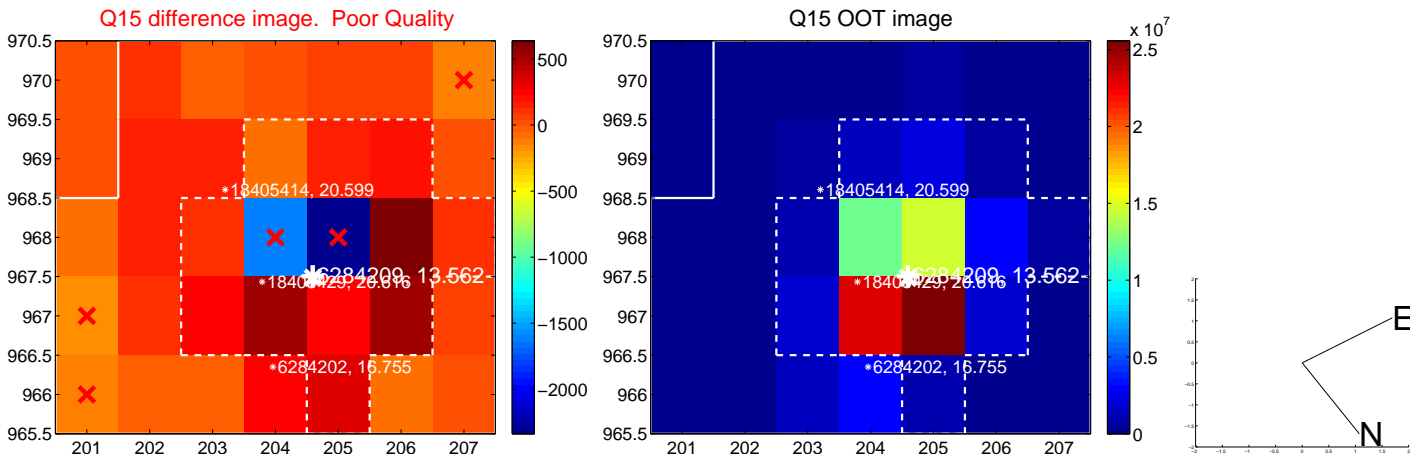
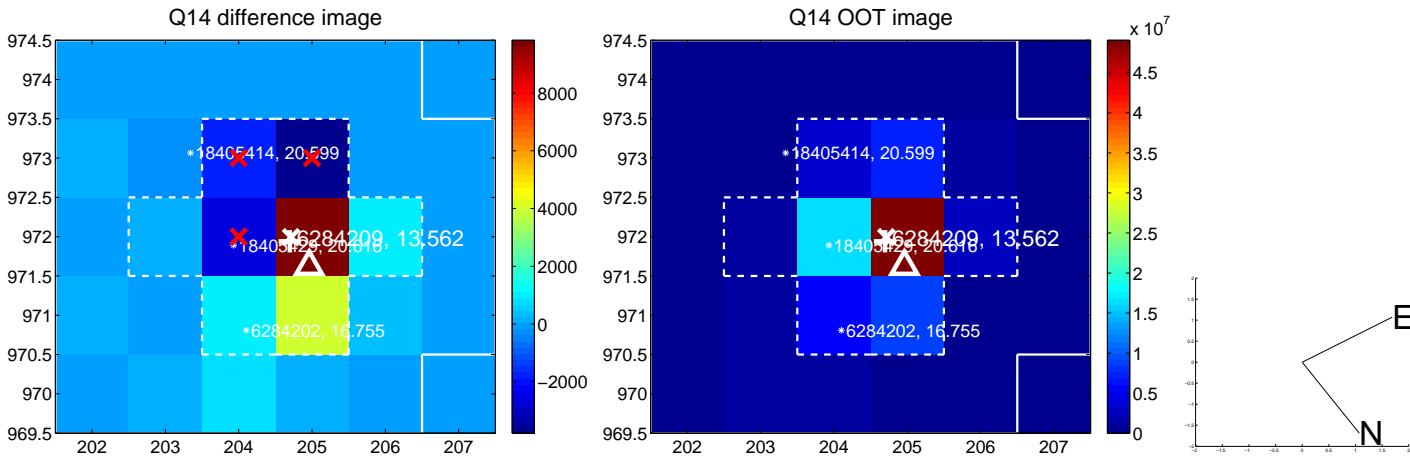
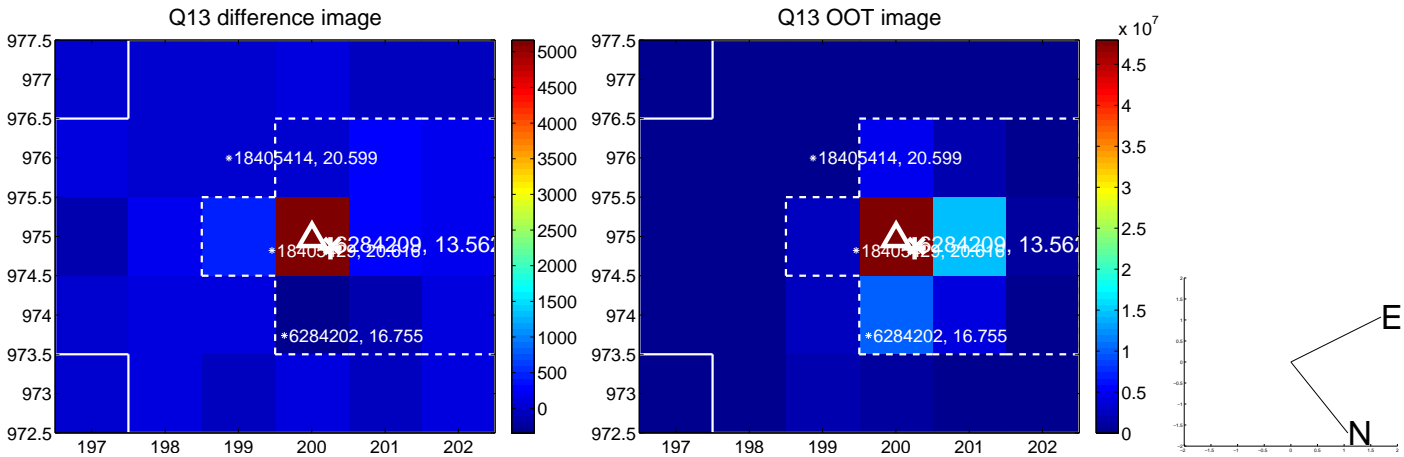
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

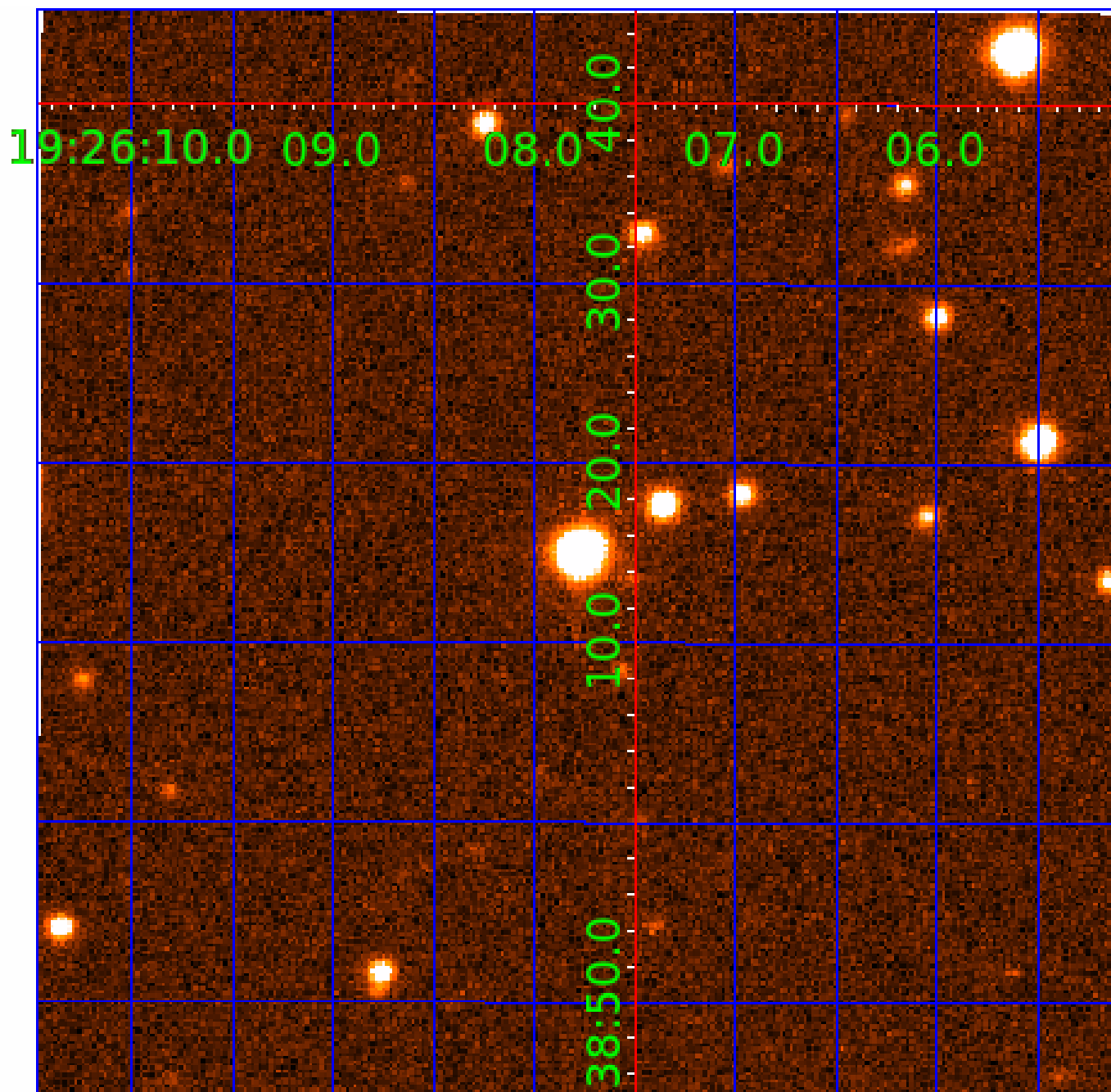


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006284209

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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006284209-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006284209-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006284209-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

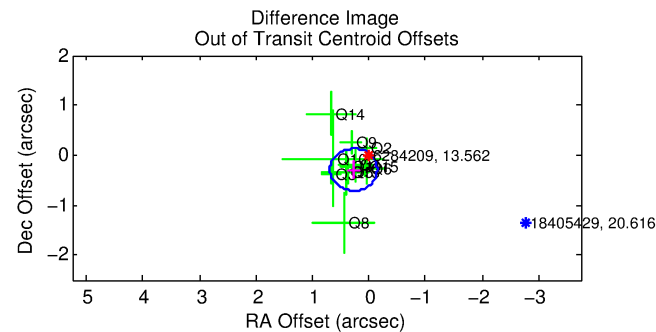
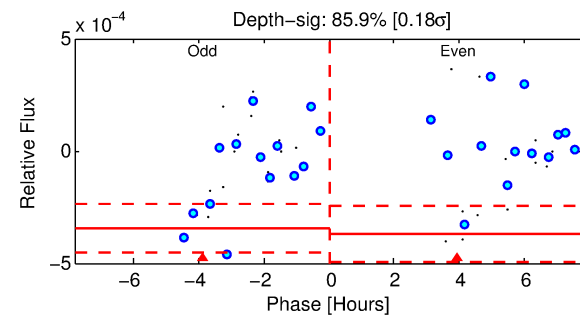
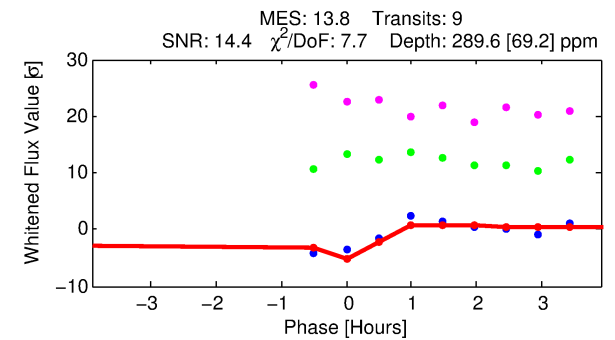
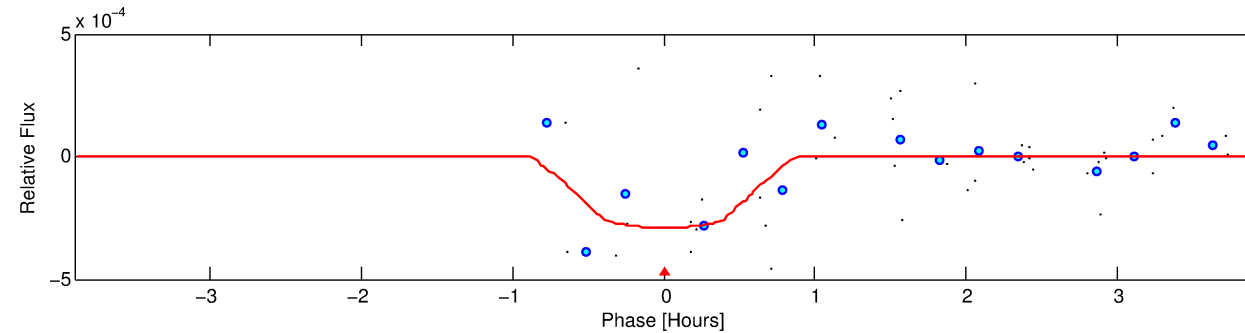
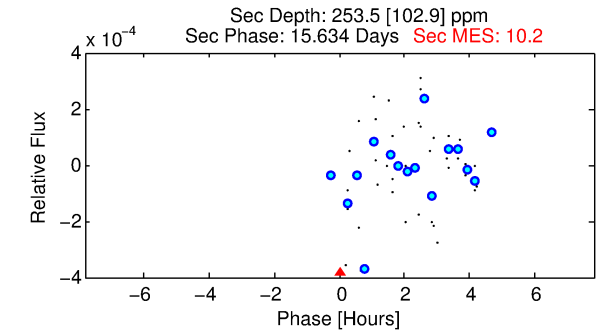
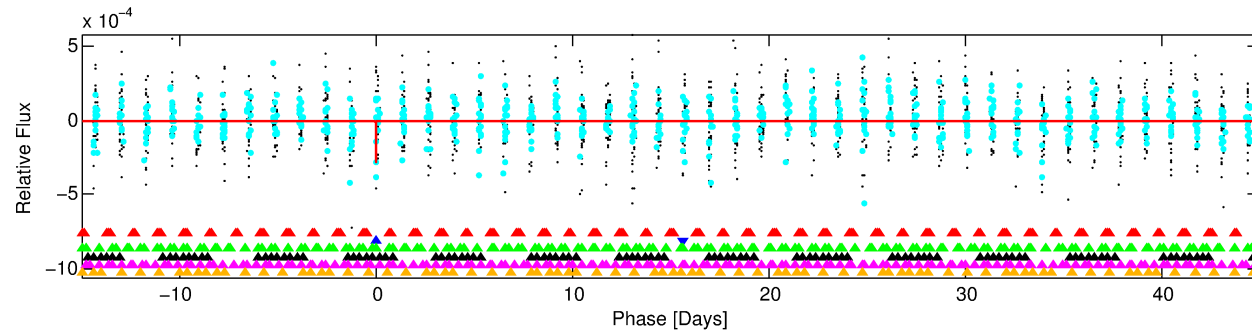
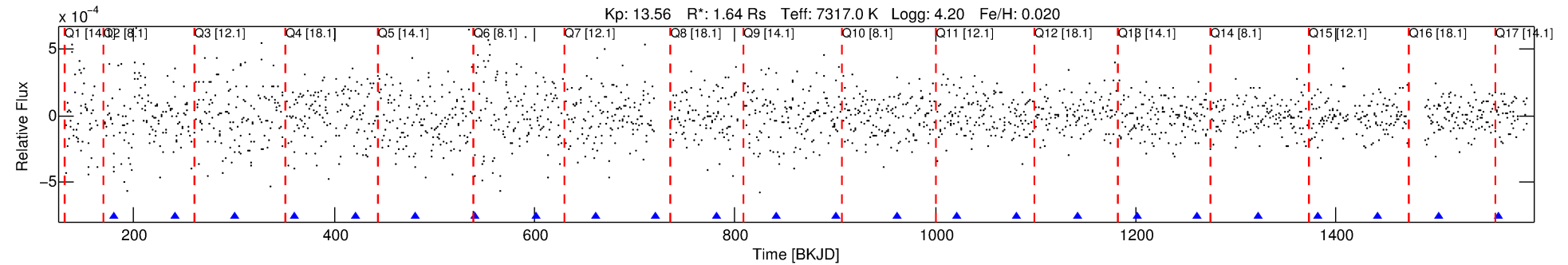
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006284209-02

No Significant Match Found

DV One-Page Summary

KIC: 6284209 Candidate: 2 of 6 Period: 60.035 d



DV Fit Results:

Period = 60.03473 [0.00343] d
Epoch = 180.9491 [0.0111] BKJD
Rp/R* = 0.0159 [0.0613]
a/R* = 357.98 [8191.00]
b = 0.08 [273.90]
Seff = 57.62 [25.12]
Teq = 703 [77] K
Rp = 2.85 [11.04] Re
a = 0.3466 [0.0990] AU
Ag = 2069.94 [16036.49] [0.13 σ]
Teffp = 7327 [14175] K [0.47 σ]

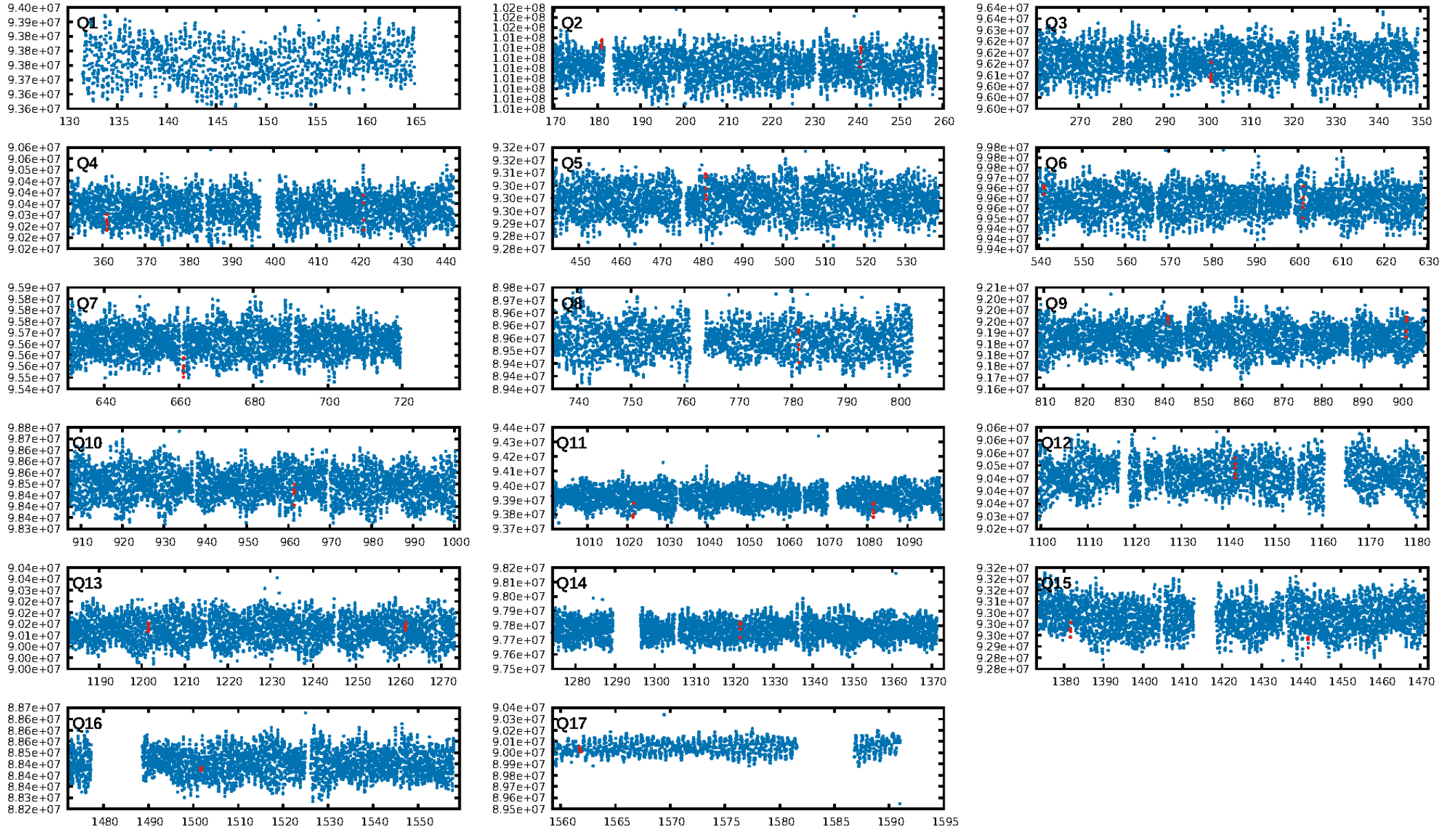
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [566.31 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 1.85e-138
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -0.5383
Centroid-sig: 14.9%
Centroid-so: 1.977 arcsec [1.88 σ]
OotOffset-rm: 0.399 arcsec [2.85 σ]
KicOffset-rm: 0.376 arcsec [2.31 σ]
OotOffset-st: 4/3/2/3 [12]
KicOffset-st: 4/3/2/3 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 0.73 [11/15]

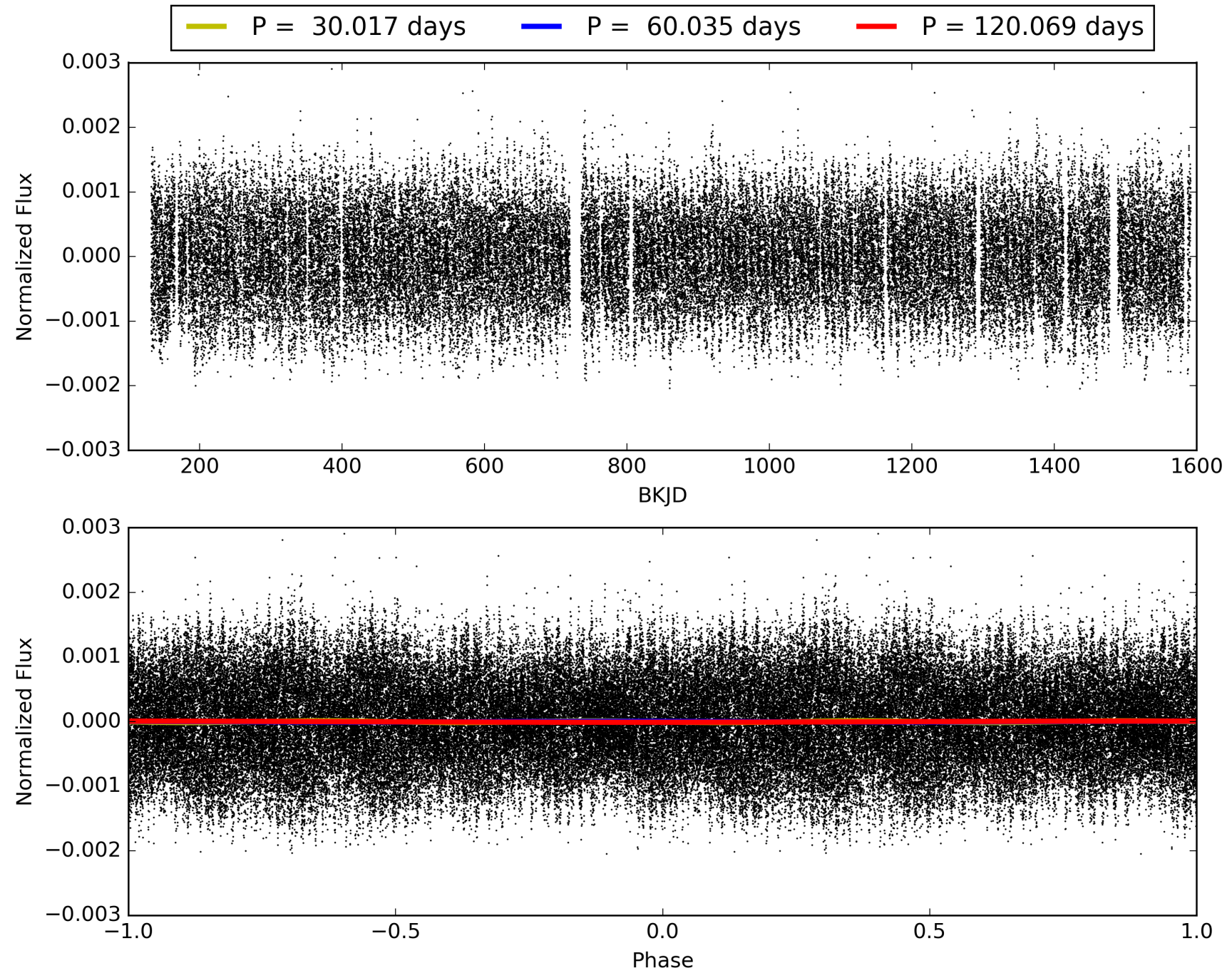
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:13:53 Z

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

TCE 006284209-02, PDC Light Curves

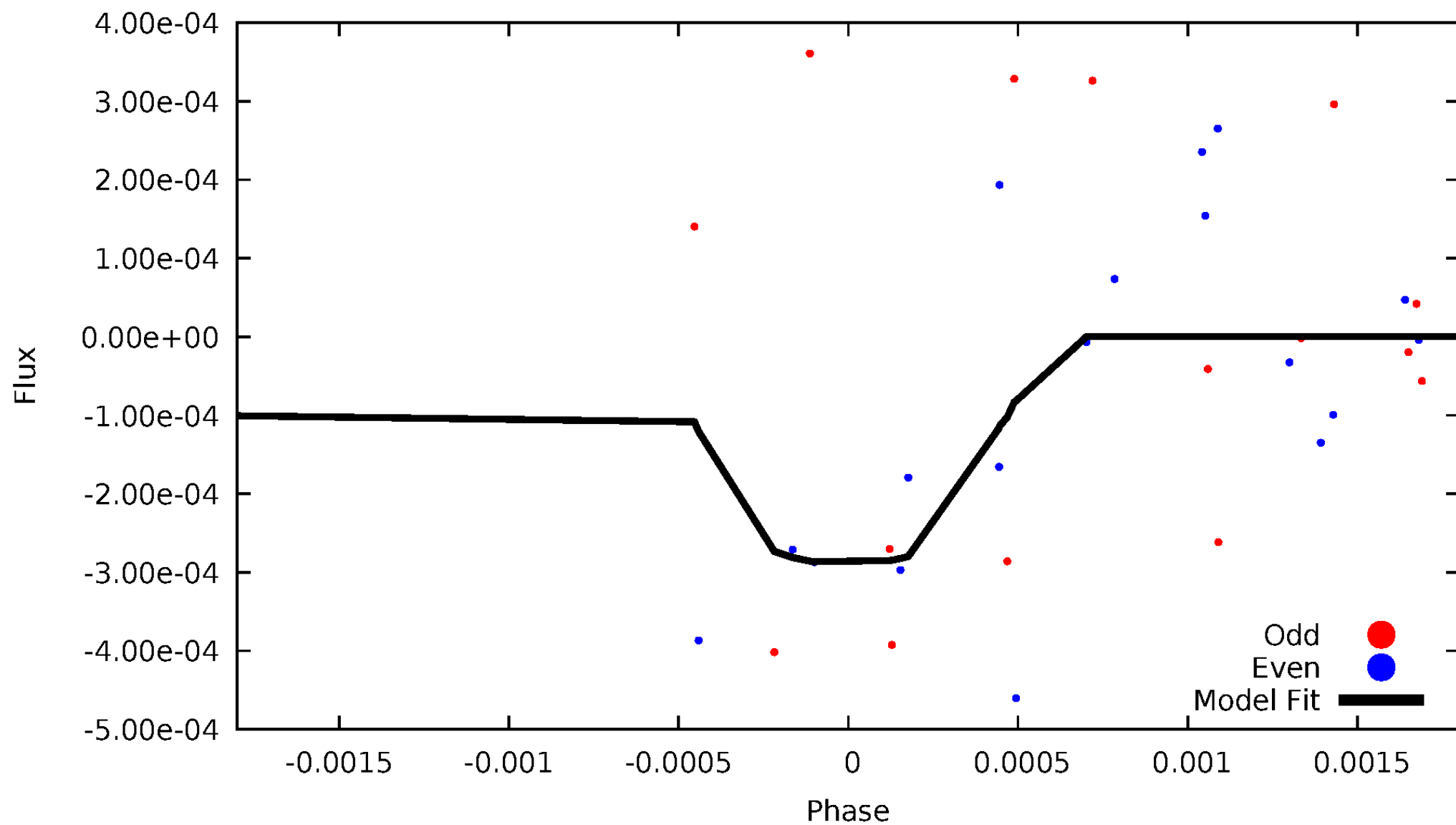


TCE 006284209-02



DV Odd/Even

TCE 006284209-02

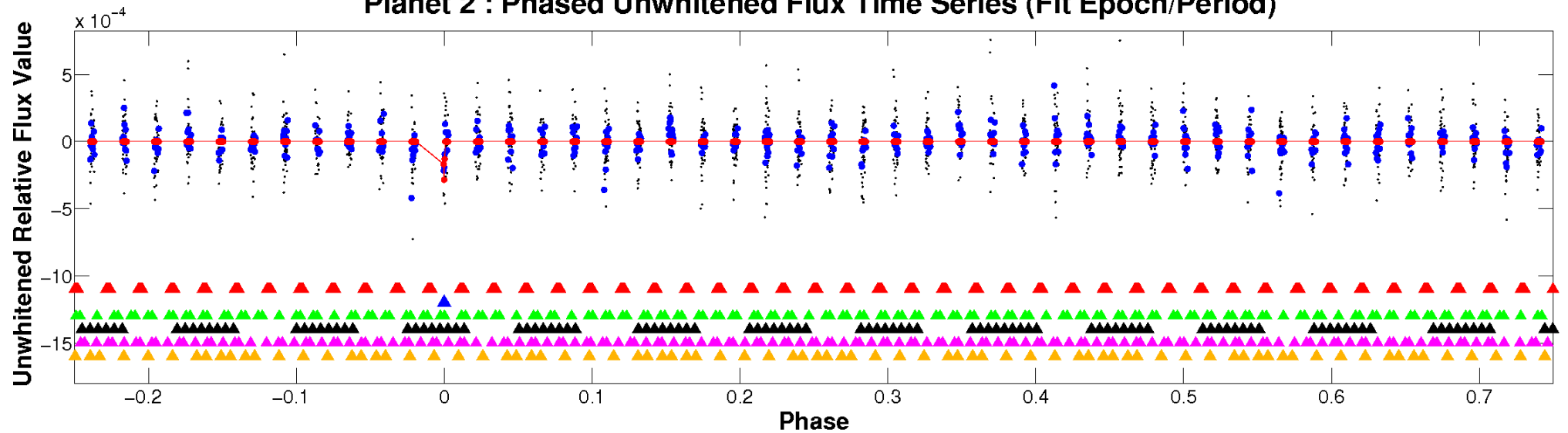


ALT Odd/Even

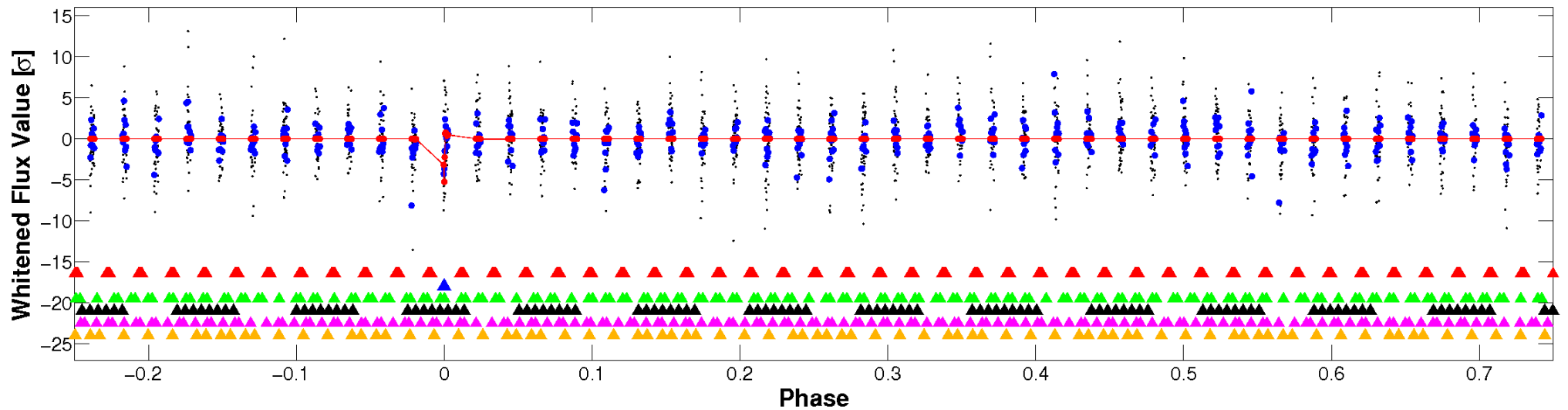
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

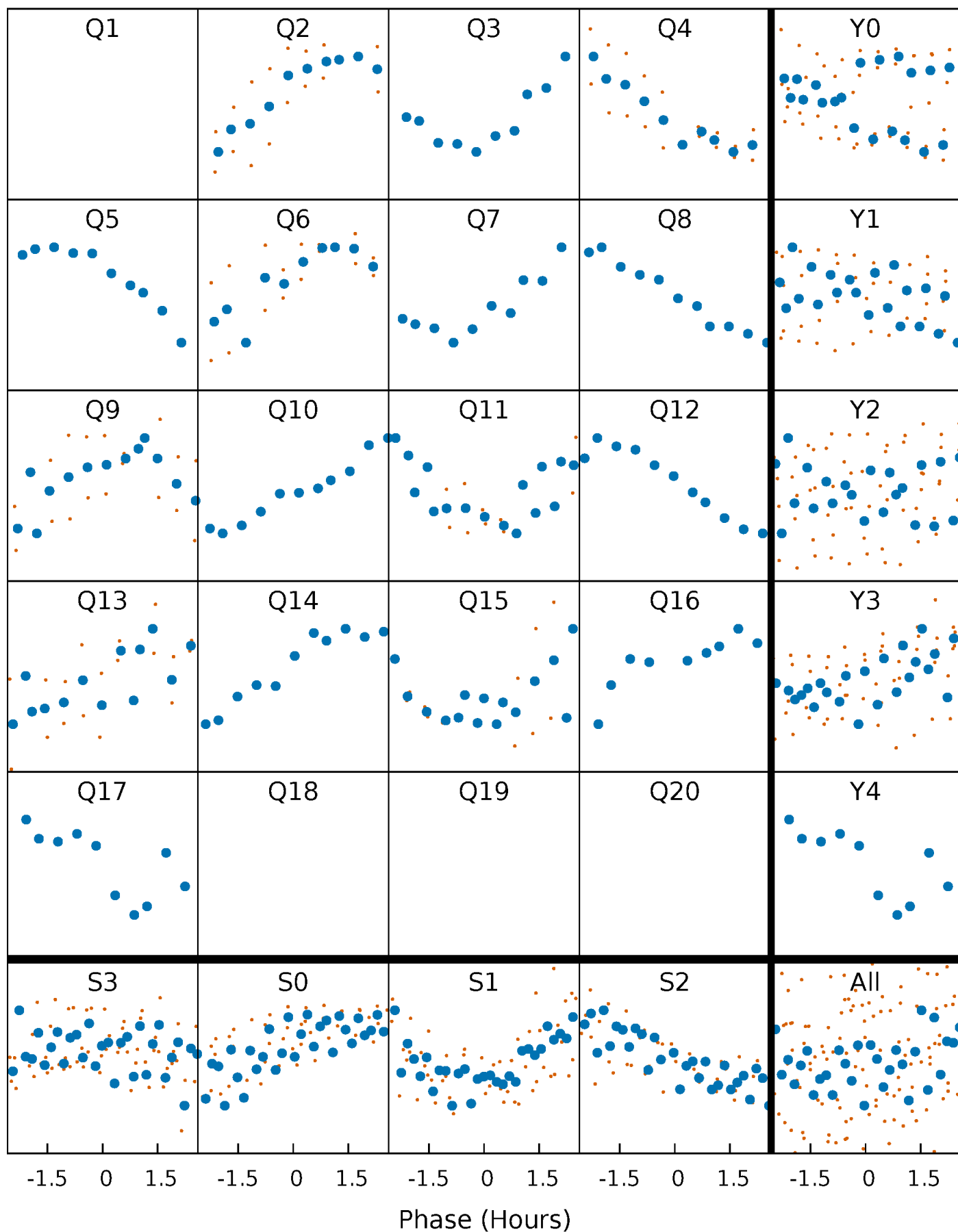


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



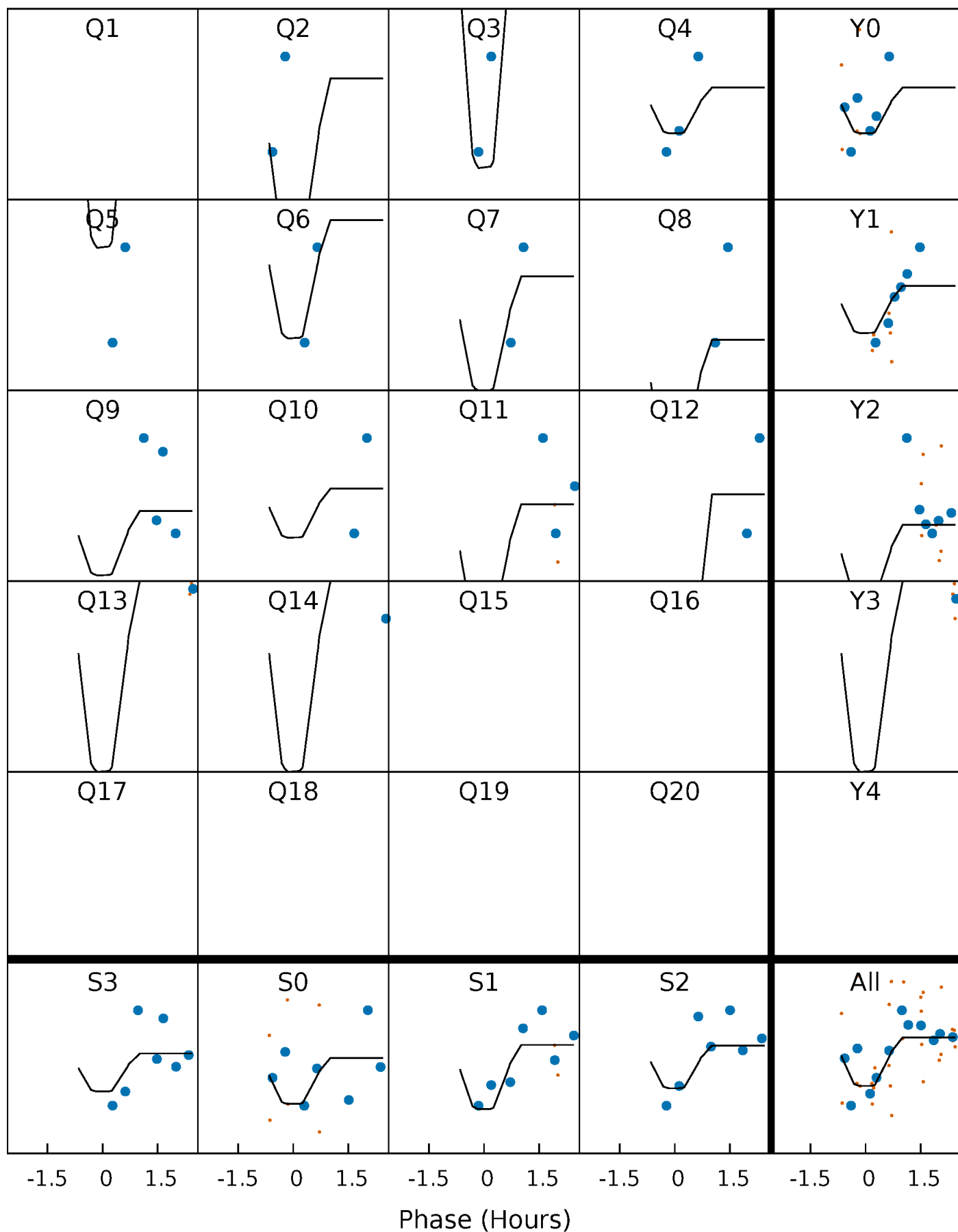
PDC Quarter-Phased Transit Curves

TCE 006284209-02 P= 60.034726 Days $T_0=180.949070$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006284209-02 $P = 60.034726$ Days $T_0 = 180.949070$ (BKJD)

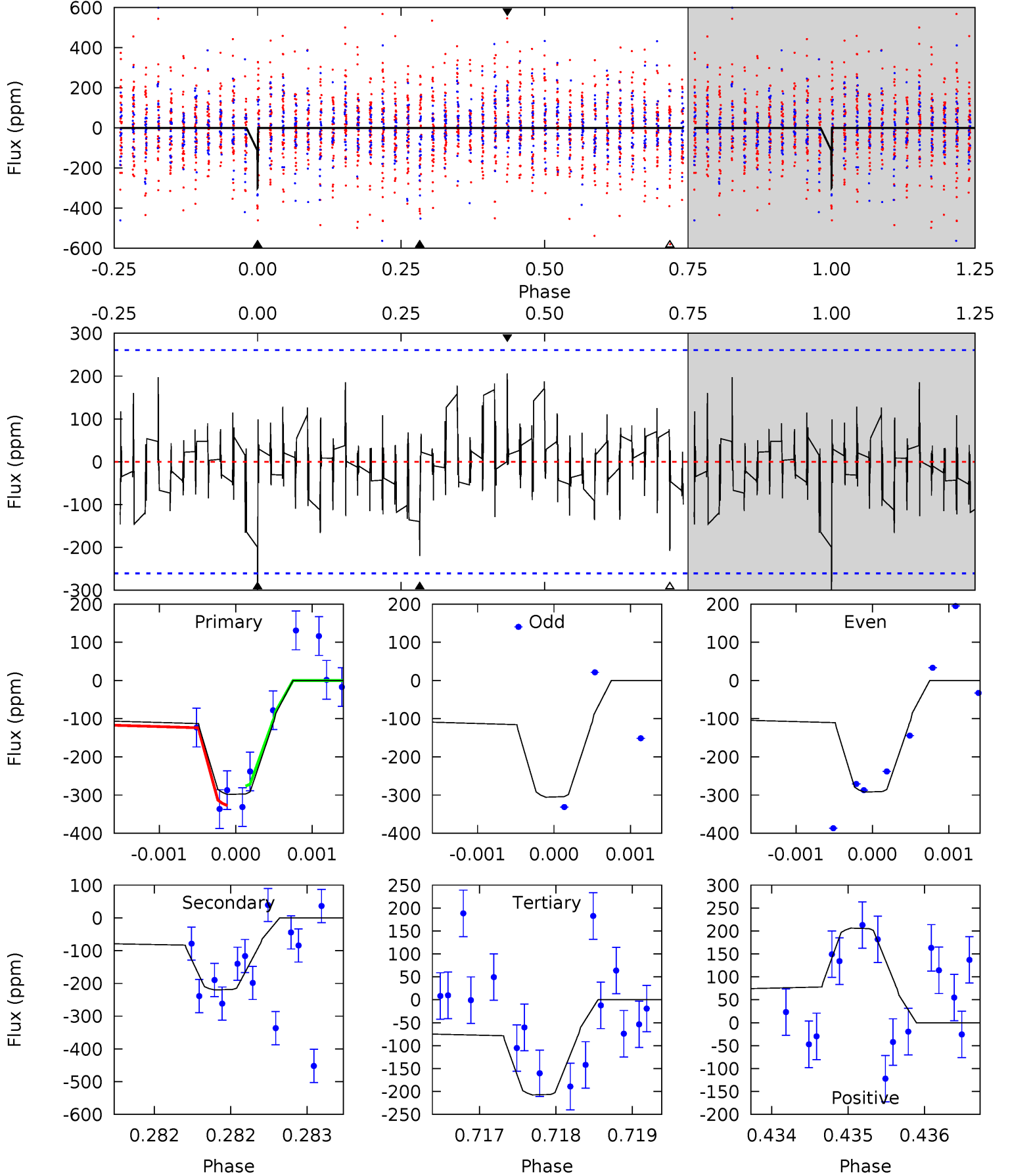


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006284209-02, P = 60.034726 Days, E = 120.914344 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.26	4.61	4.35	4.32	5.46	3.31	1.25	1.91	1.94	0.26	0.29	0.14	0.66	0.41	0.49



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006284209

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7317^{+232}_{-319}	$4.195^{+0.090}_{-0.210}$	$0.020^{+0.200}_{-0.350}$	$1.642^{+0.581}_{-0.249}$	$1.538^{+0.226}_{-0.226}$	$0.490^{+0.244}_{-0.259}$
	+3%/-4%	+2%/-5%	+1000%/-1750%	+35%/-15%	+15%/-15%	+50%/-53%
Source	KIC0	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 006284209-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-220 ± 48	$8.79^{+9.75}_{-6.08}$	993^{+77}_{-57}	4283^{+3008}_{-970}	191^{+1690}_{-151}
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 $A_{obs} \gg 1.0$

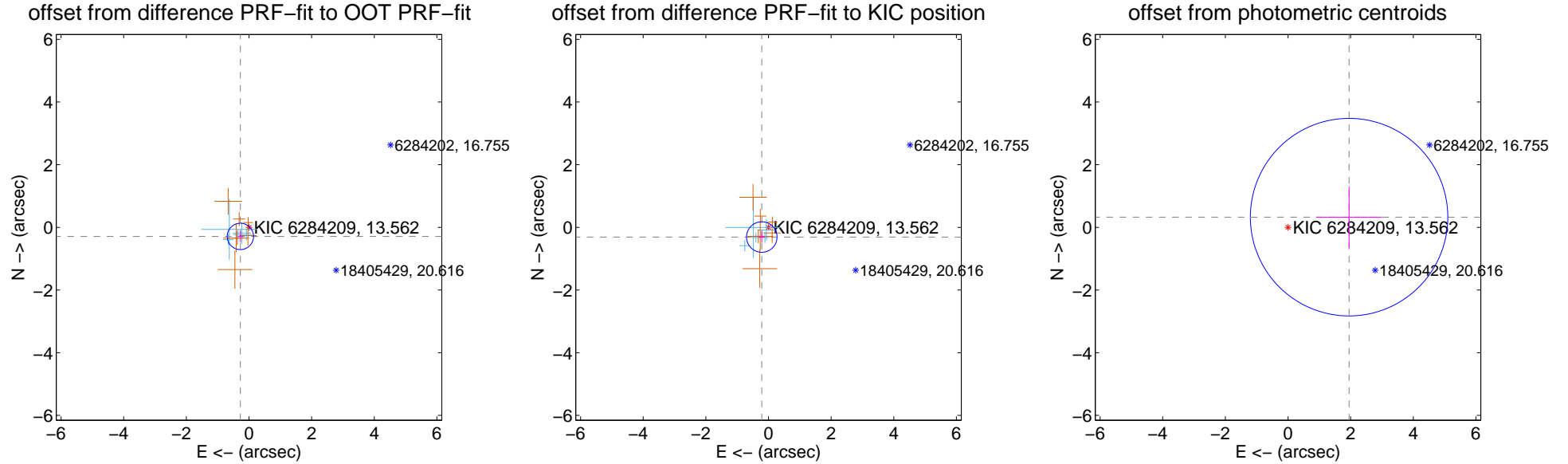
DV Centroid Data

Supplemental centroid analysis for 006284209-02. Kepler magnitude: 13.56. Transit SNR 14.45

There are 5 quarters with good PRF difference image offsets

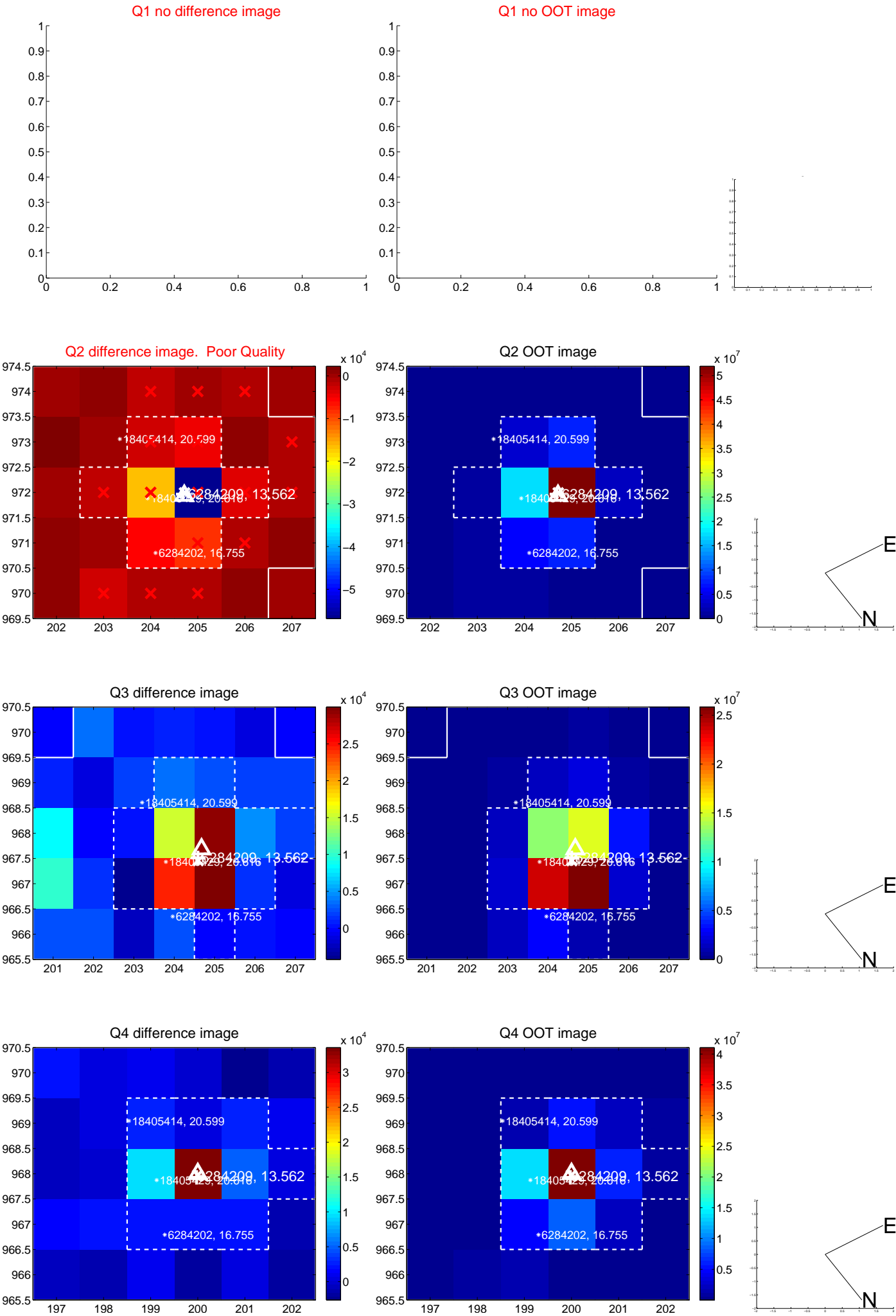
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.399 ± 0.140	2.85	0.275 ± 0.089	-0.289 ± 0.177
PRF-fit source offset from KIC position	0.376 ± 0.162	2.31	0.214 ± 0.098	-0.309 ± 0.177
photometric centroid source offset	1.98 ± 1.05	1.88	-1.95 ± 1.05	0.33 ± 0.98

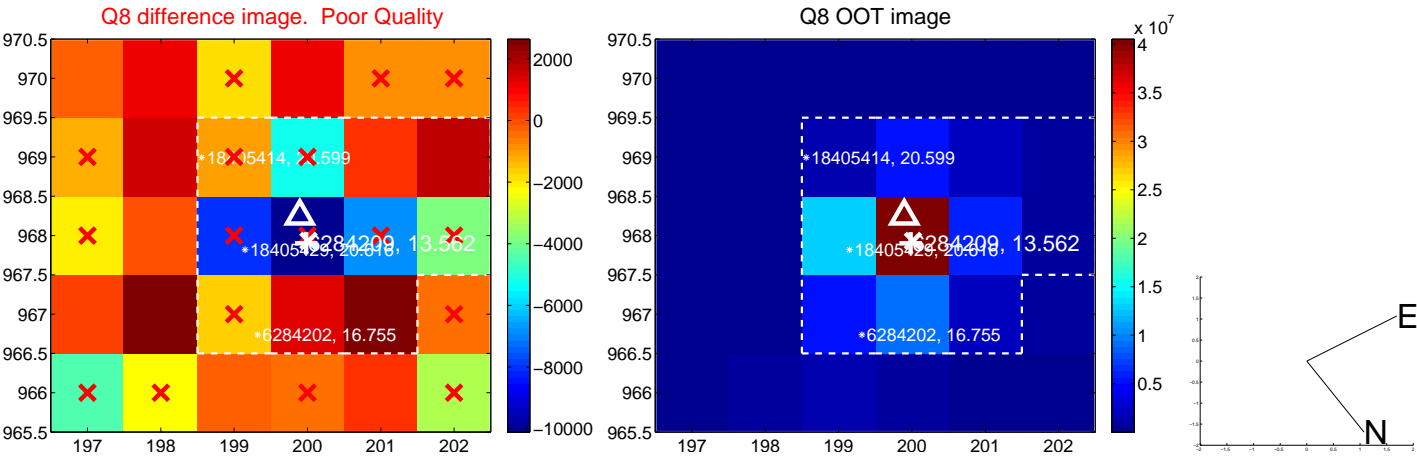
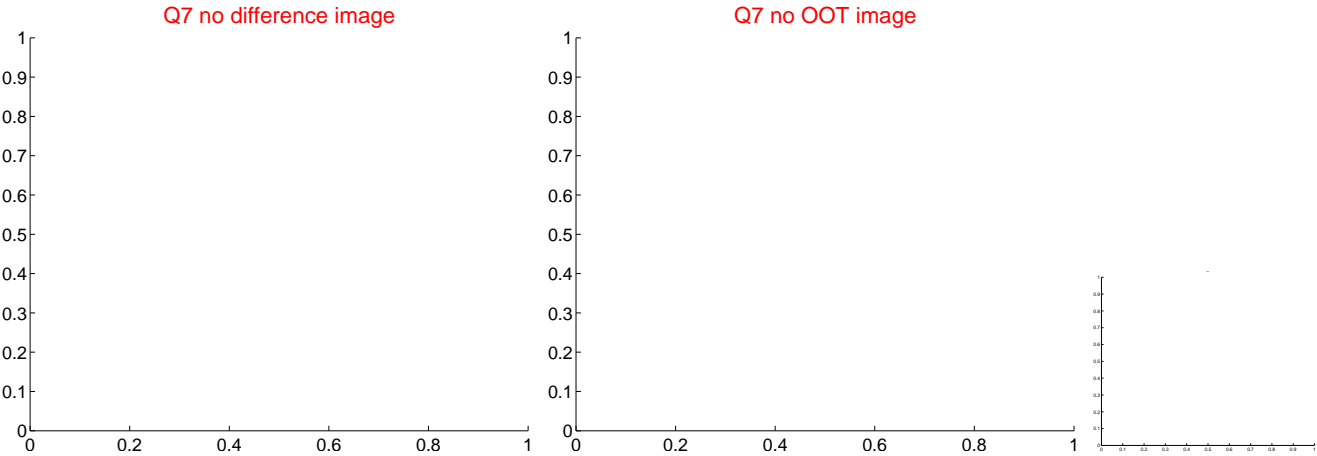
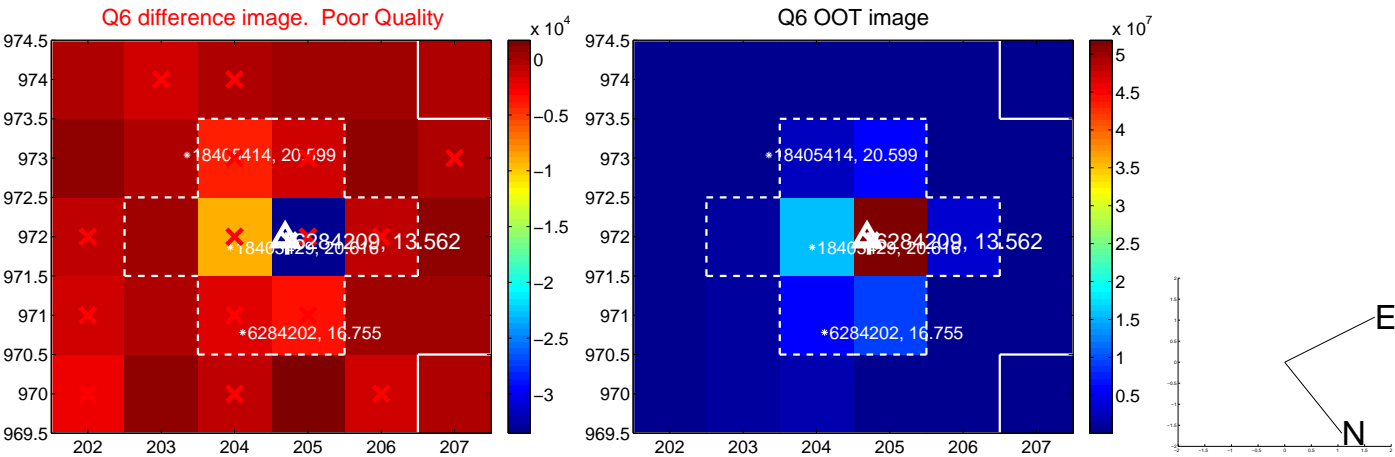
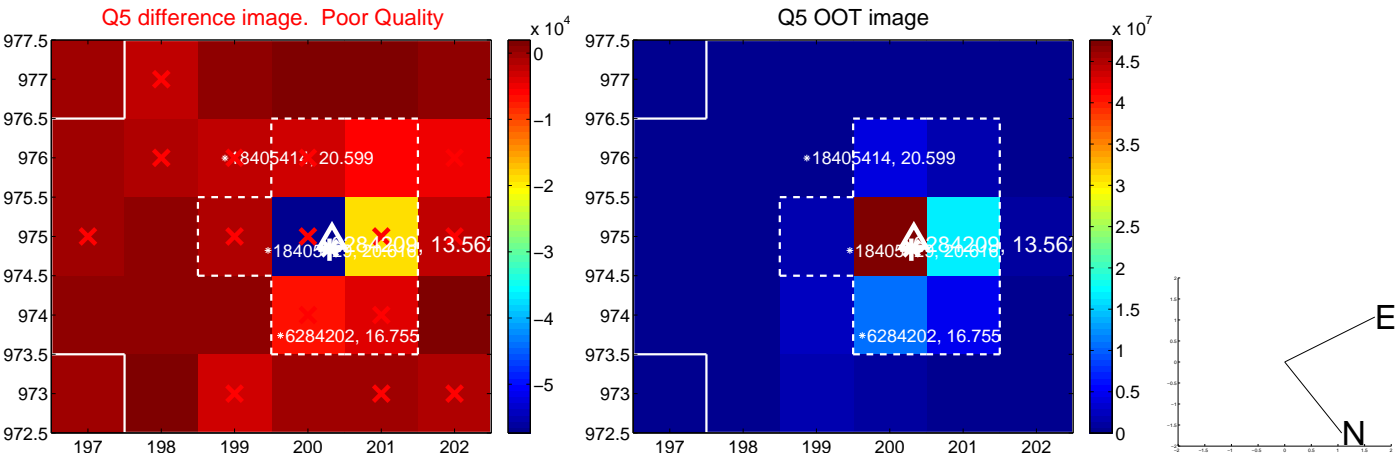


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

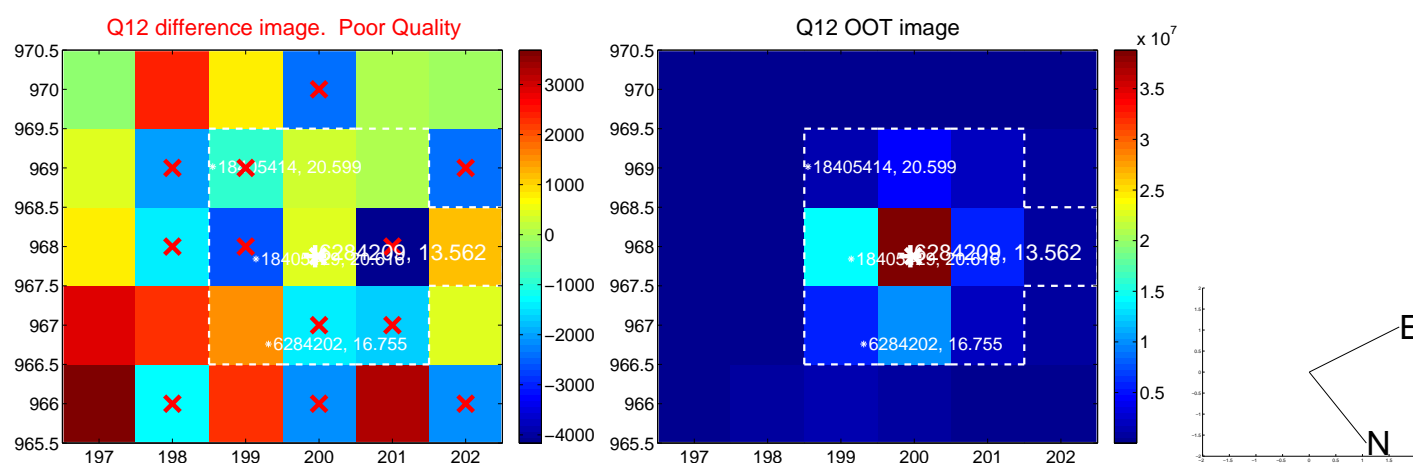
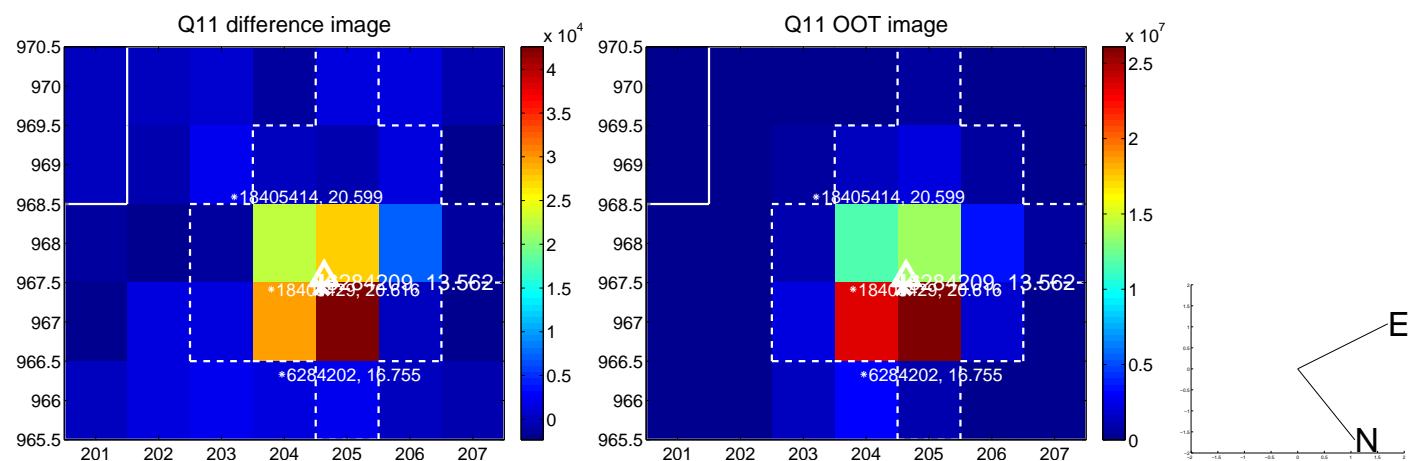
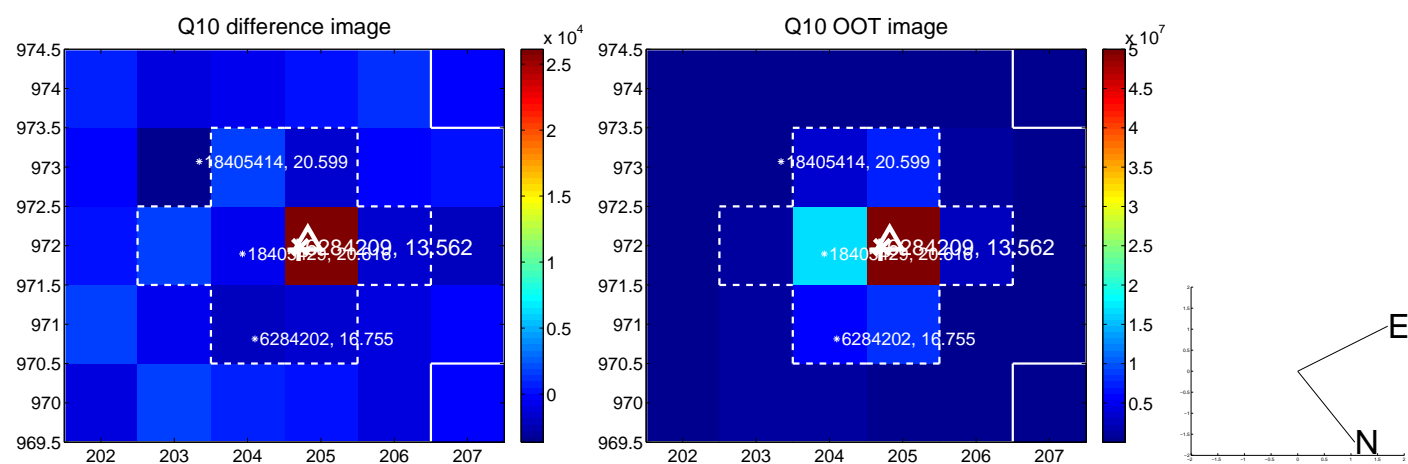
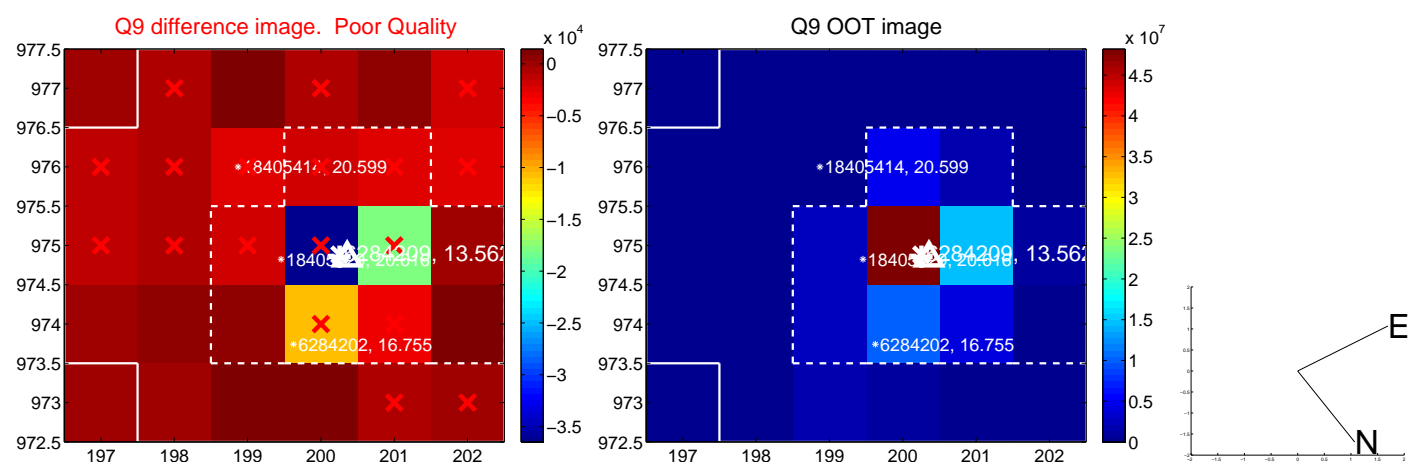
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



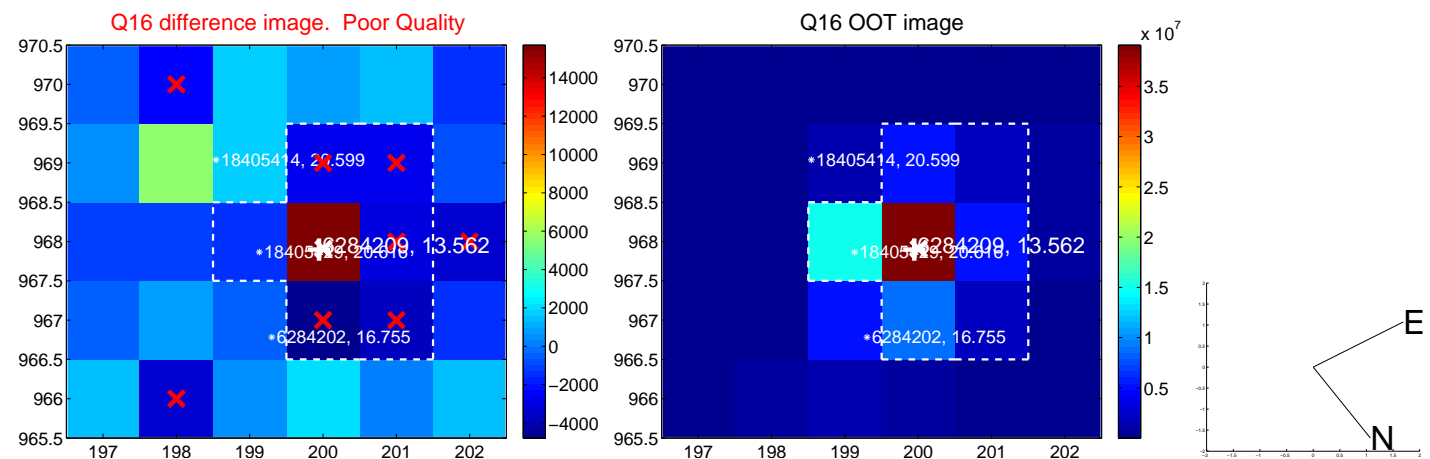
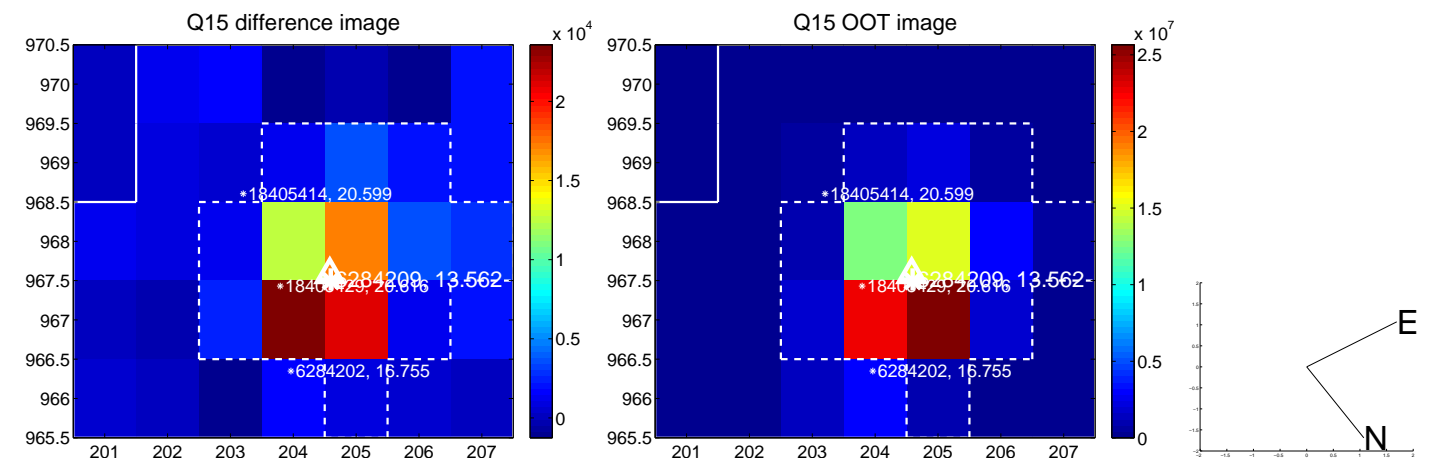
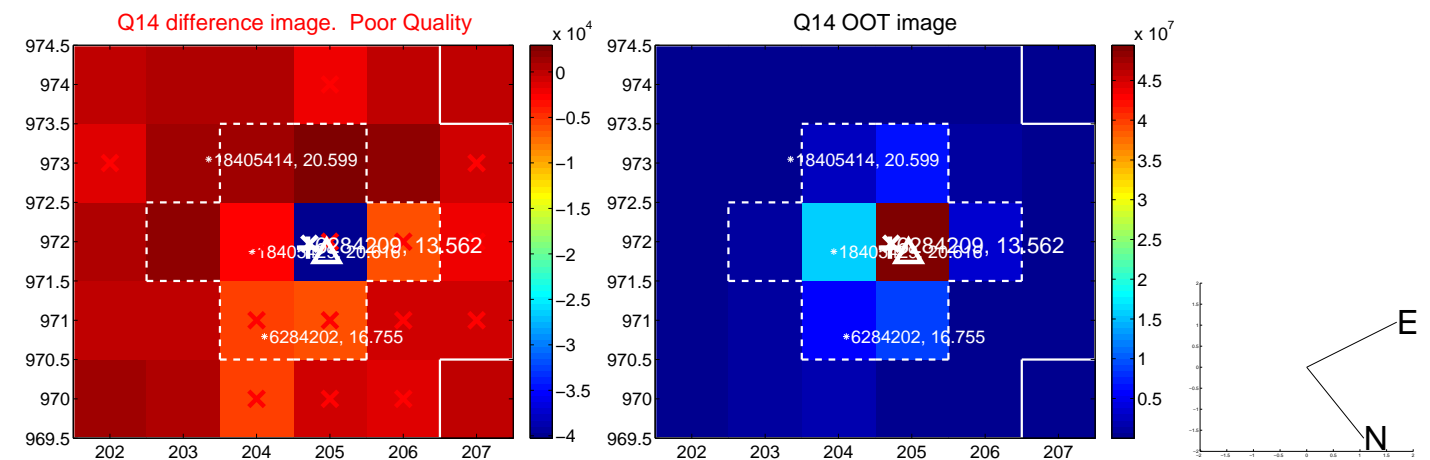
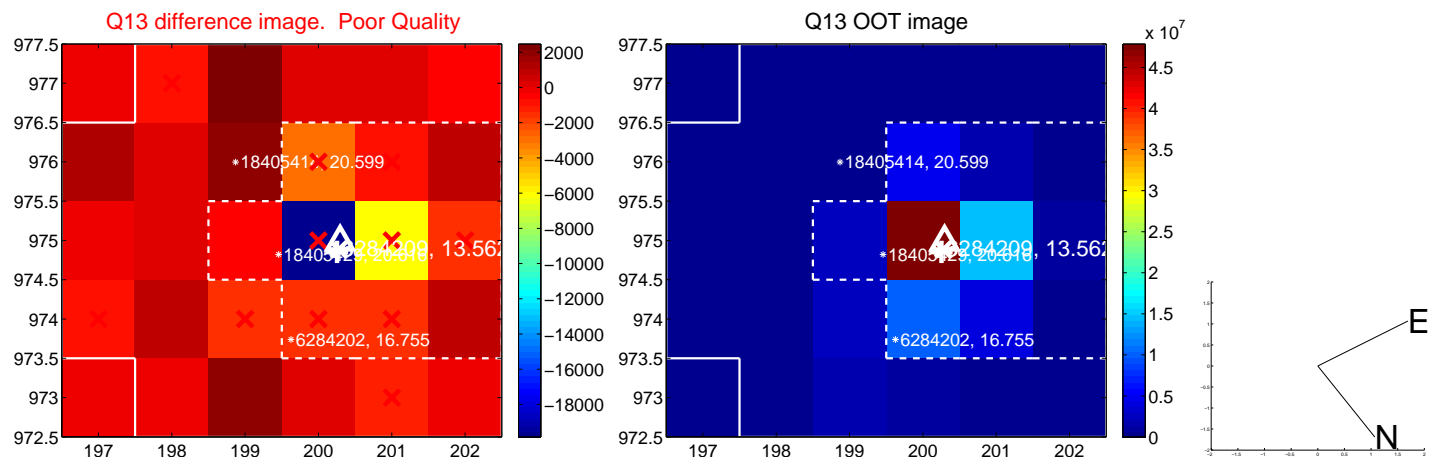
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



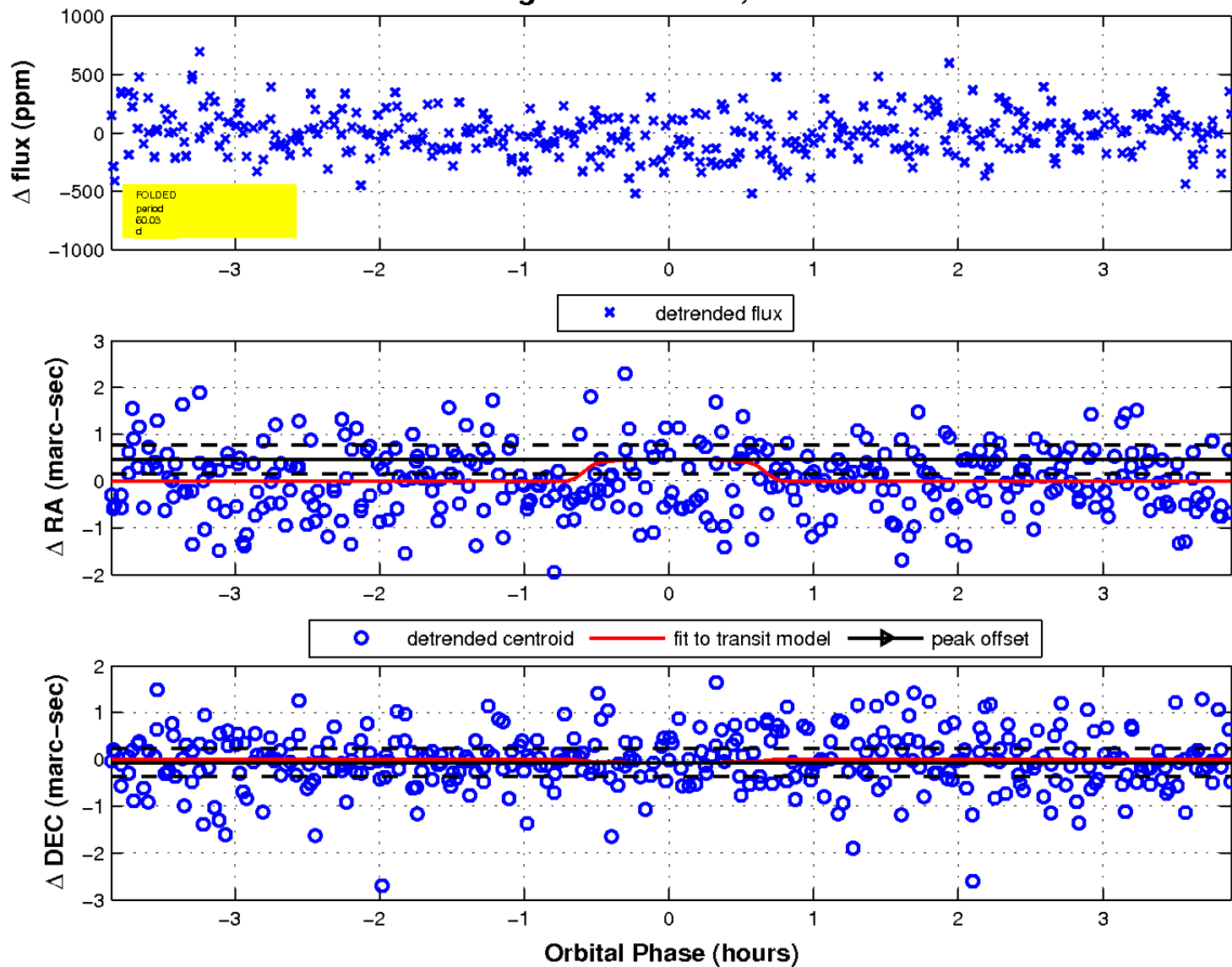
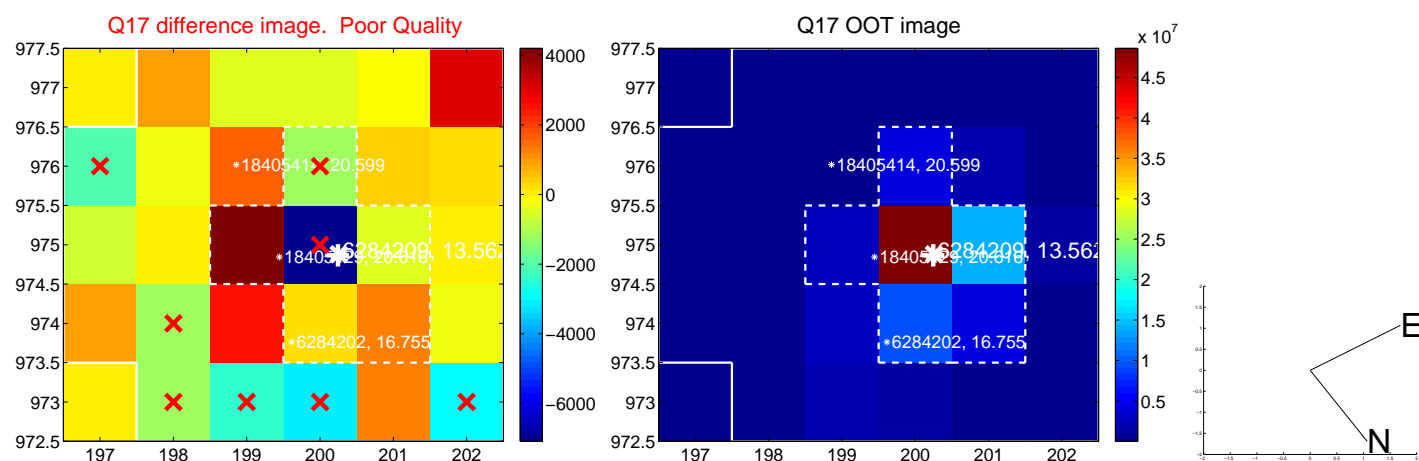
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

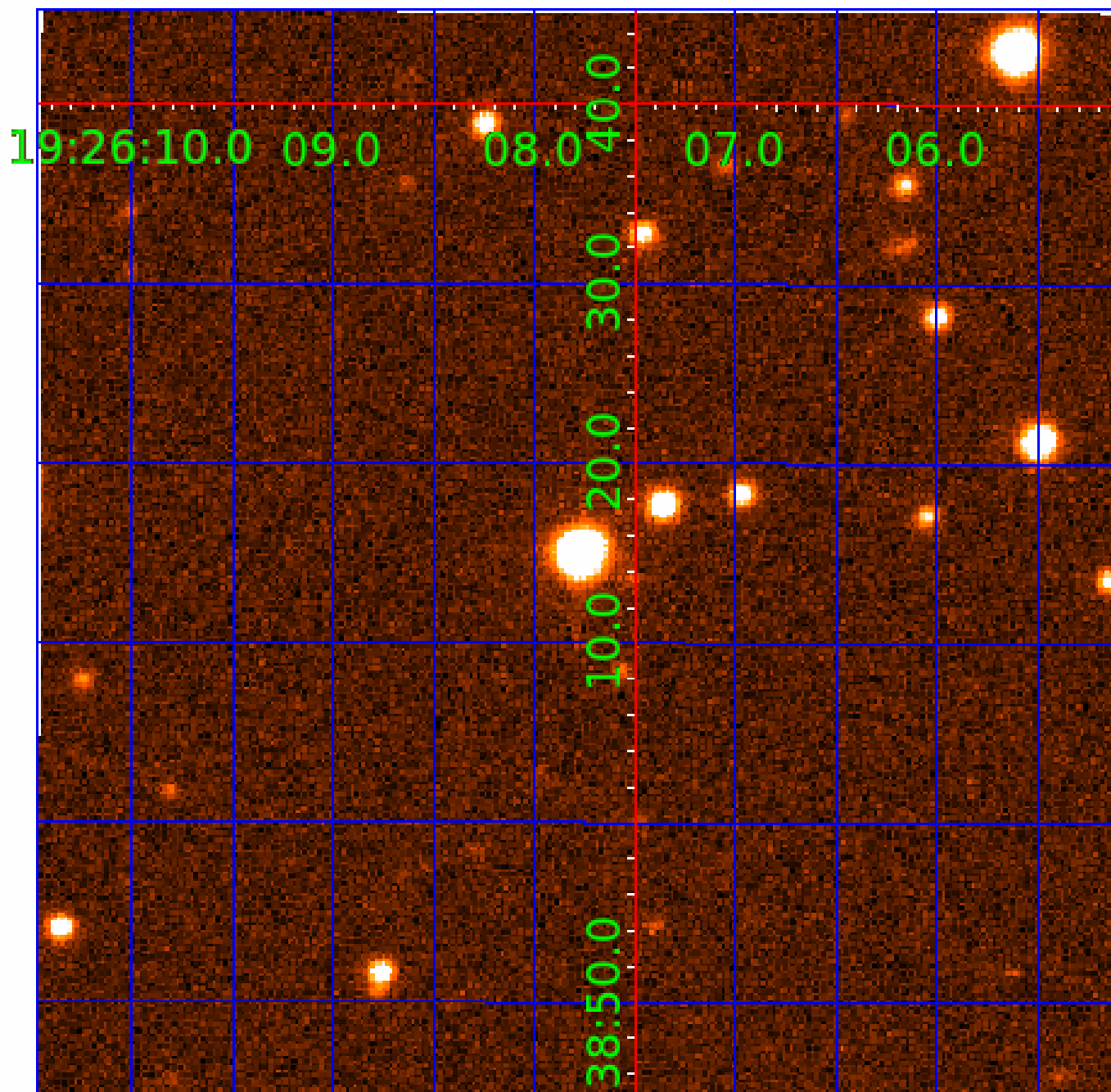


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006284209

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})
006284209-01	OBS	No	1.305256	131.986253	17.6	9.950	8.2	8.5	1.64	7317	0.70	9496.16
006284209-02	OBS	No	60.034726	180.949070	289.6	1.297	13.8	14.4	1.64	7317	2.85	57.62
006284209-04	OBS	No	13.879301	142.351992	323.3	2.276	13.4	14.0	1.64	7317	3.23	406.12
006284209-05	OBS	No	9.149682	131.840616	35.8	0.892	11.8	1.3	1.64	7317	1.03	707.84
006284209-06	OBS	No	17.911618	137.060159	354.3	1.226	13.3	12.7	1.64	7317	3.17	289.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006284209-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006284209-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006284209-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006284209-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006284209-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

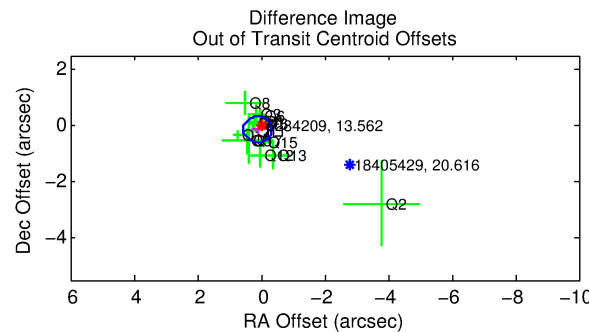
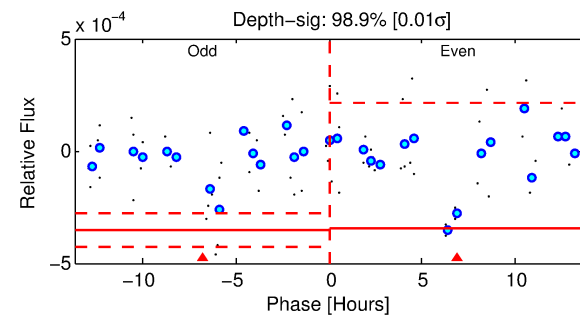
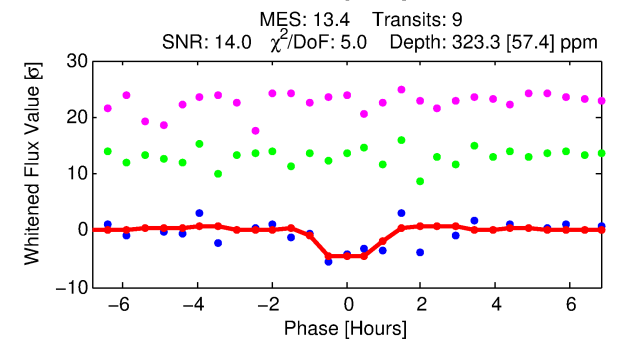
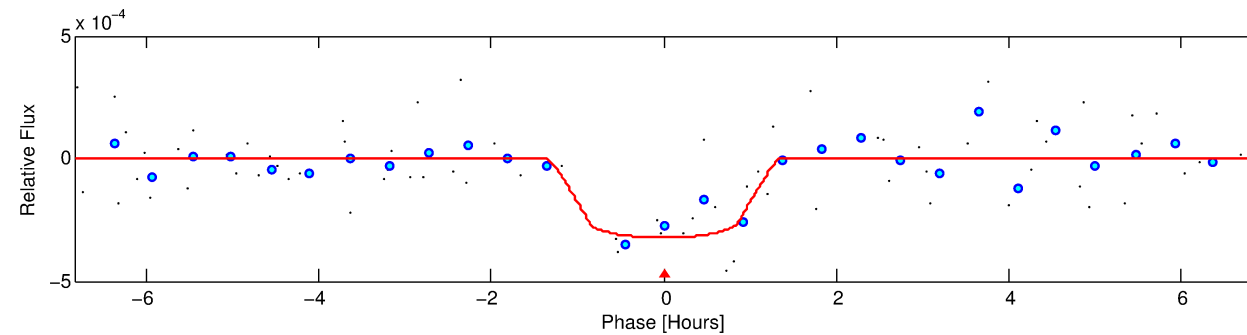
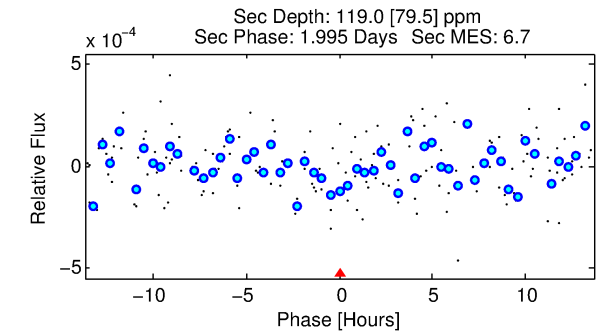
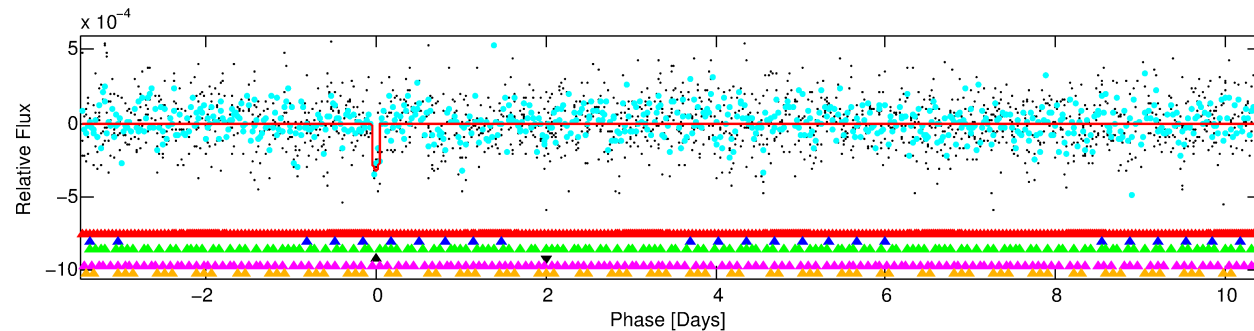
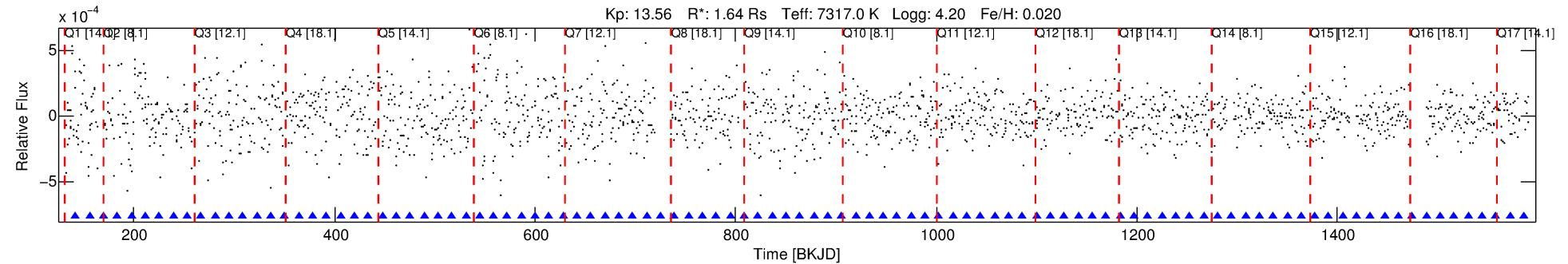
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006284209-04

No Significant Match Found

DV One-Page Summary

KIC: 6284209 Candidate: 4 of 6 Period: 13.879 d



DV Fit Results:

Period = 13.87930 [0.00053] d
Epoch = 142.3520 [0.0244] BKJD
Rp/R* = 0.0180 [0.0286]
a/R* = 30.72 [307.34]
b = 0.78 [5.10]
Seff = 406.12 [177.01]
Teq = 1145 [125] K
Rp = 3.23 [5.25] Re
a = 0.1306 [0.0373] AU
Ag = 106.94 [349.42] [0.30 σ]
Teffp = 5691 [4621] K [0.98 σ]

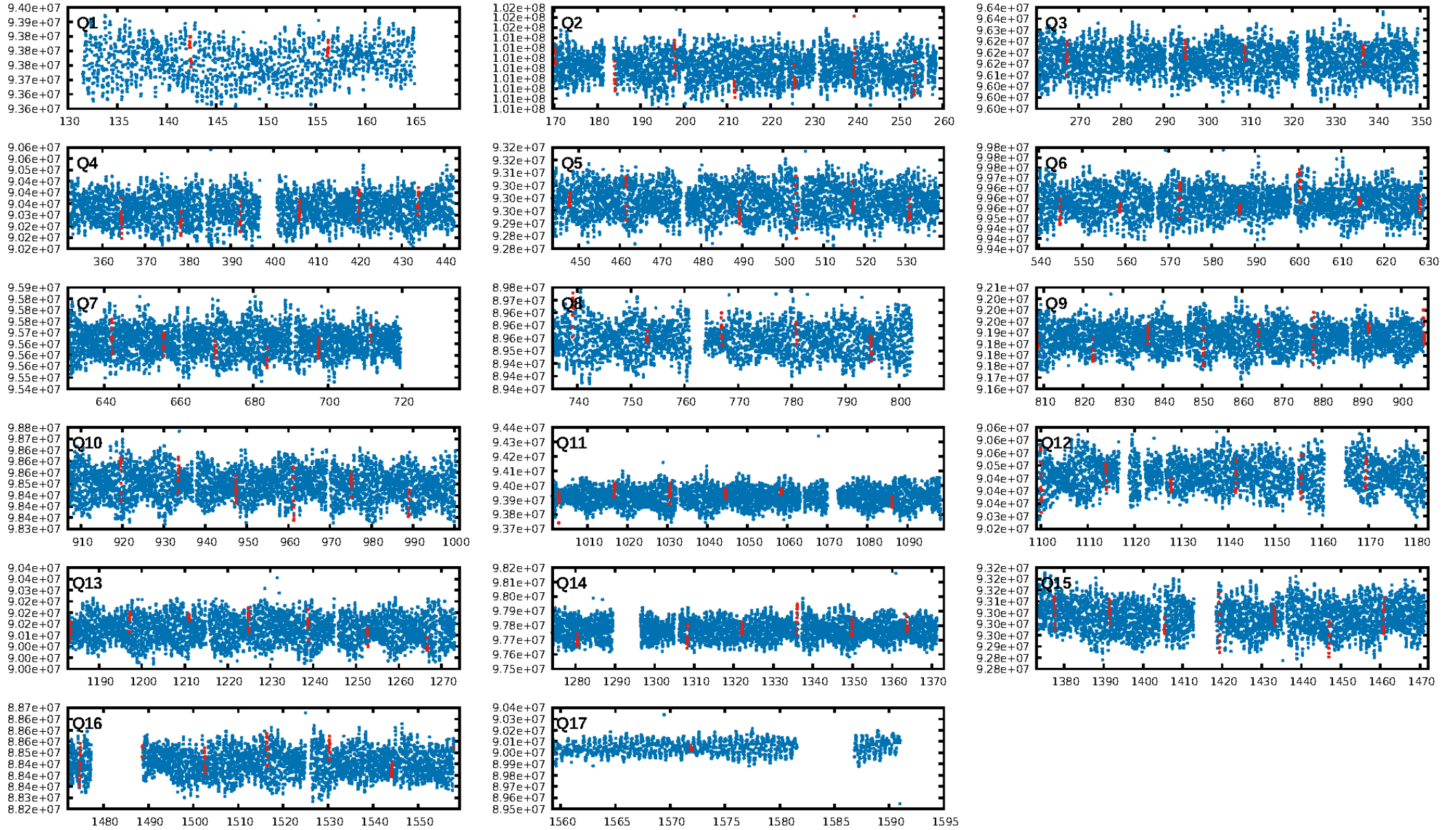
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [35.94 σ]
LongPeriod-sig: 100.0% [37.44 σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGoF-sig: 99.3%
Bootstrap-pfa: 2.91e-140
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 1.019
Centroid-sig: 9.6%
Centroid-so: 0.281 arcsec [0.82 σ]
OotOffset-rm: 0.174 arcsec [1.15 σ]
KicOffset-rm: 0.162 arcsec [0.93 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.29 [4/14]
DiffImageOverlap-fno: 0.82 [14/17]

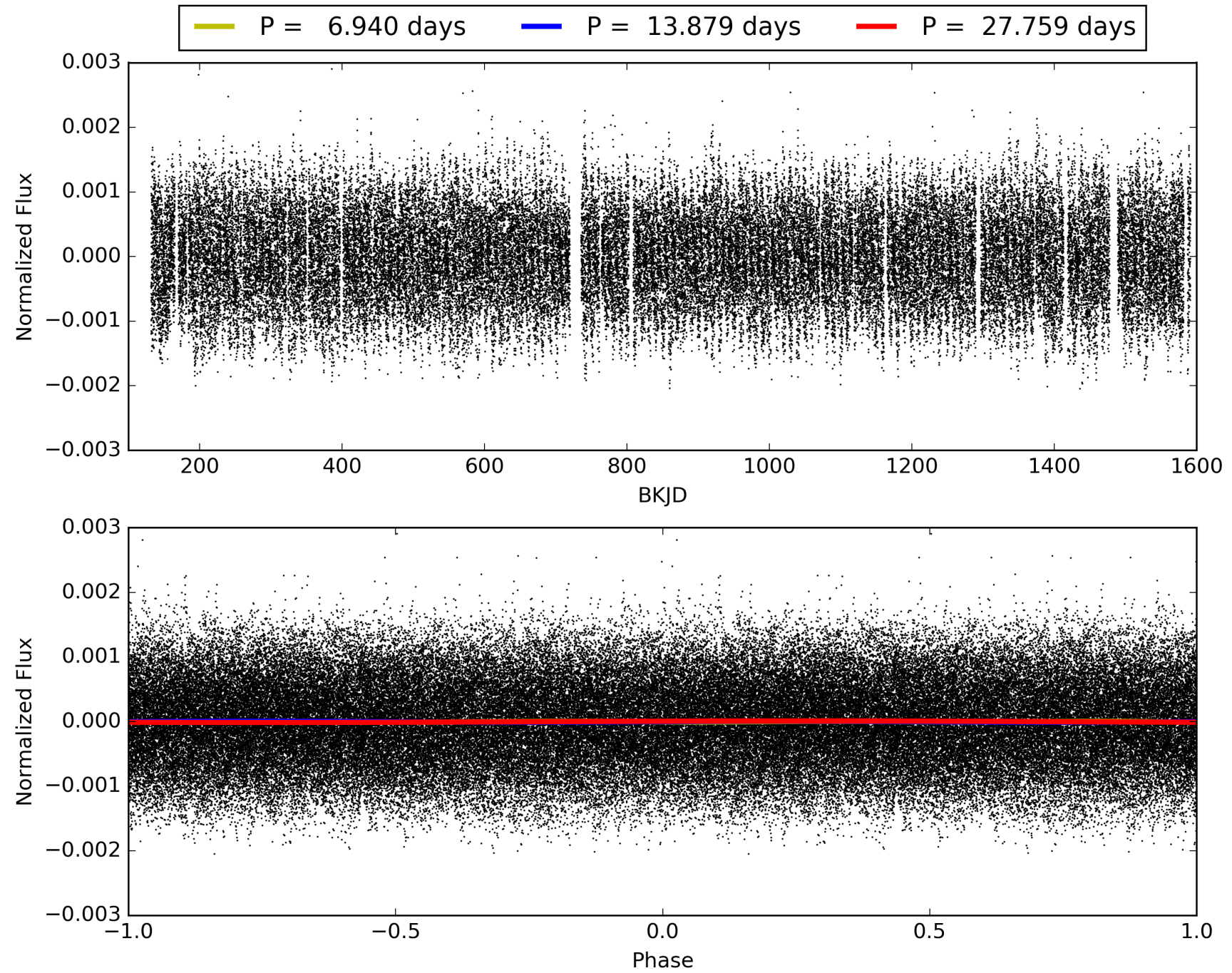
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:13:59 Z

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

TCE 006284209-04, PDC Light Curves

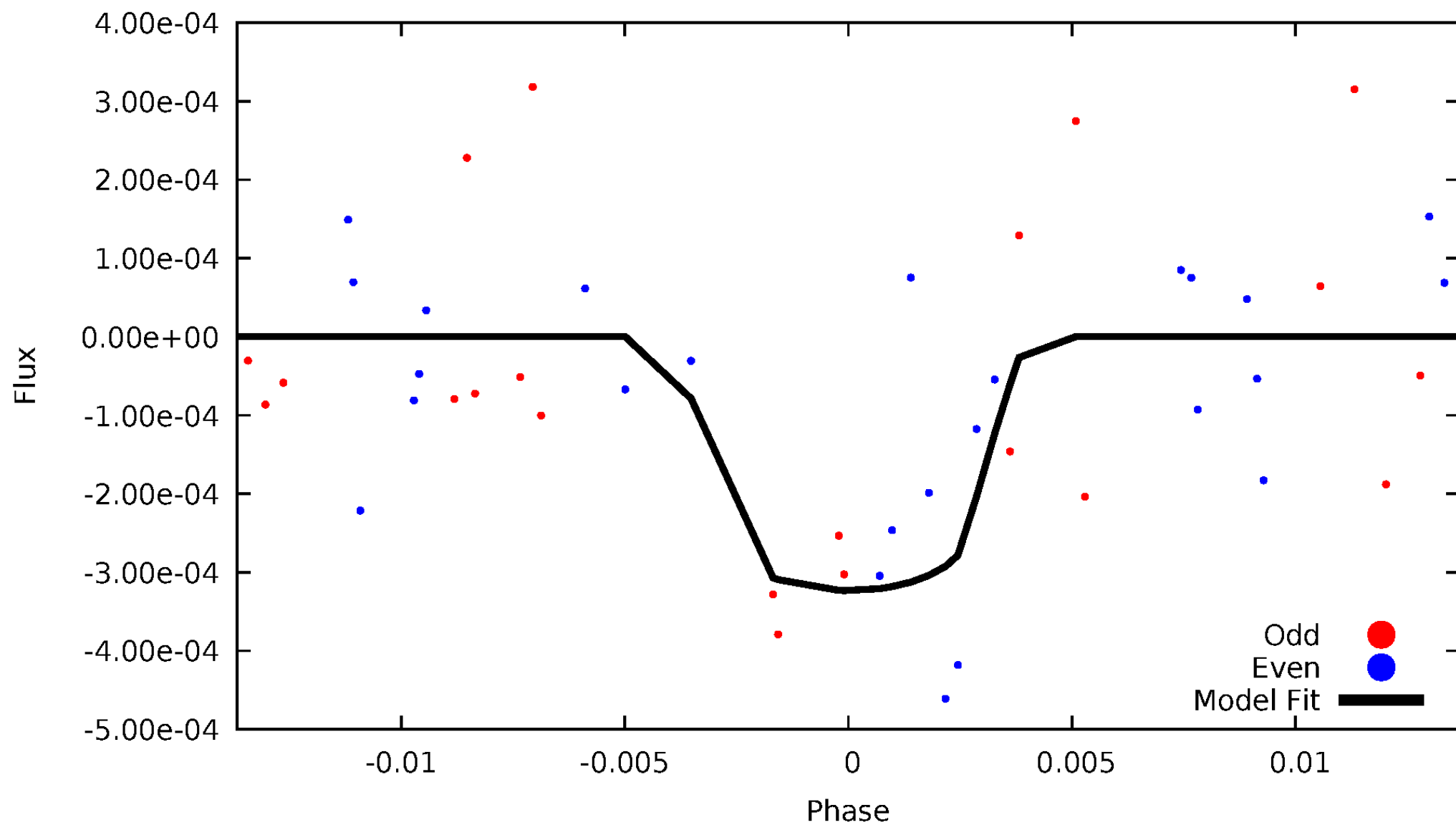


TCE 006284209-04



DV Odd/Even

TCE 006284209-04

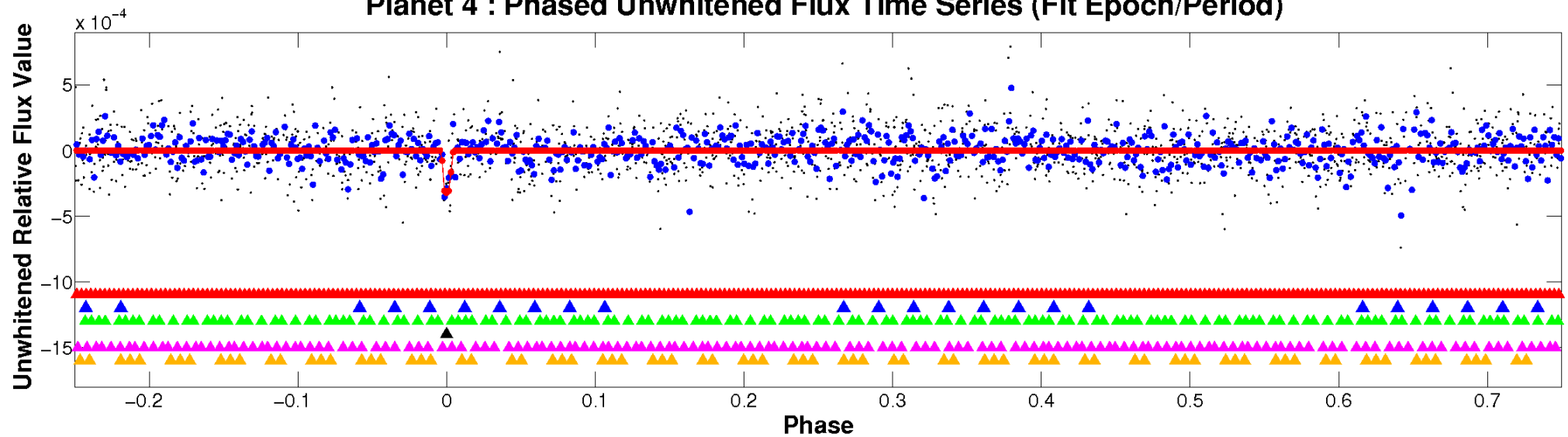


ALT Odd/Even

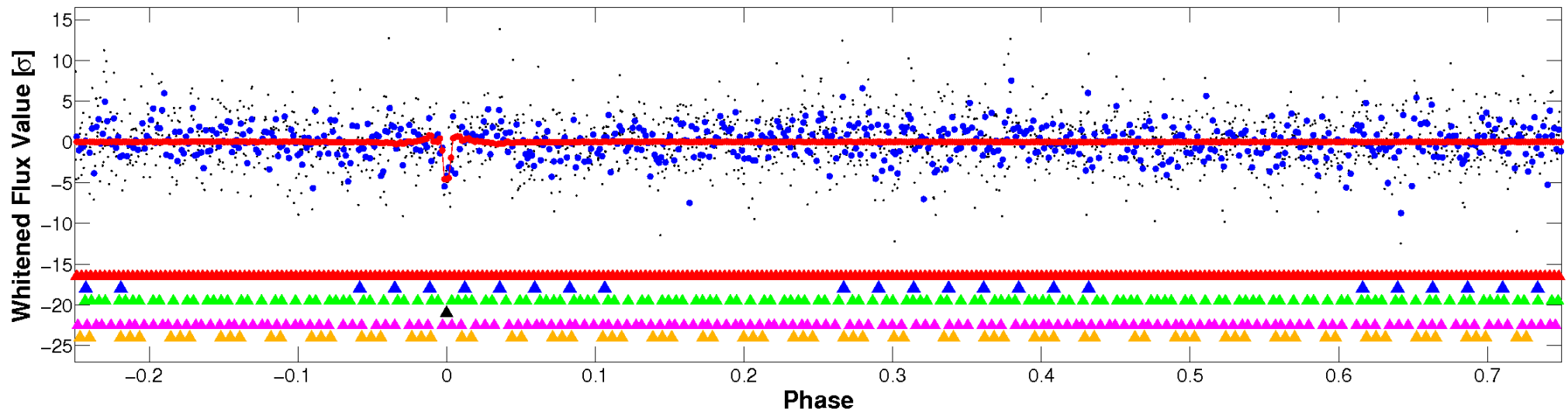
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

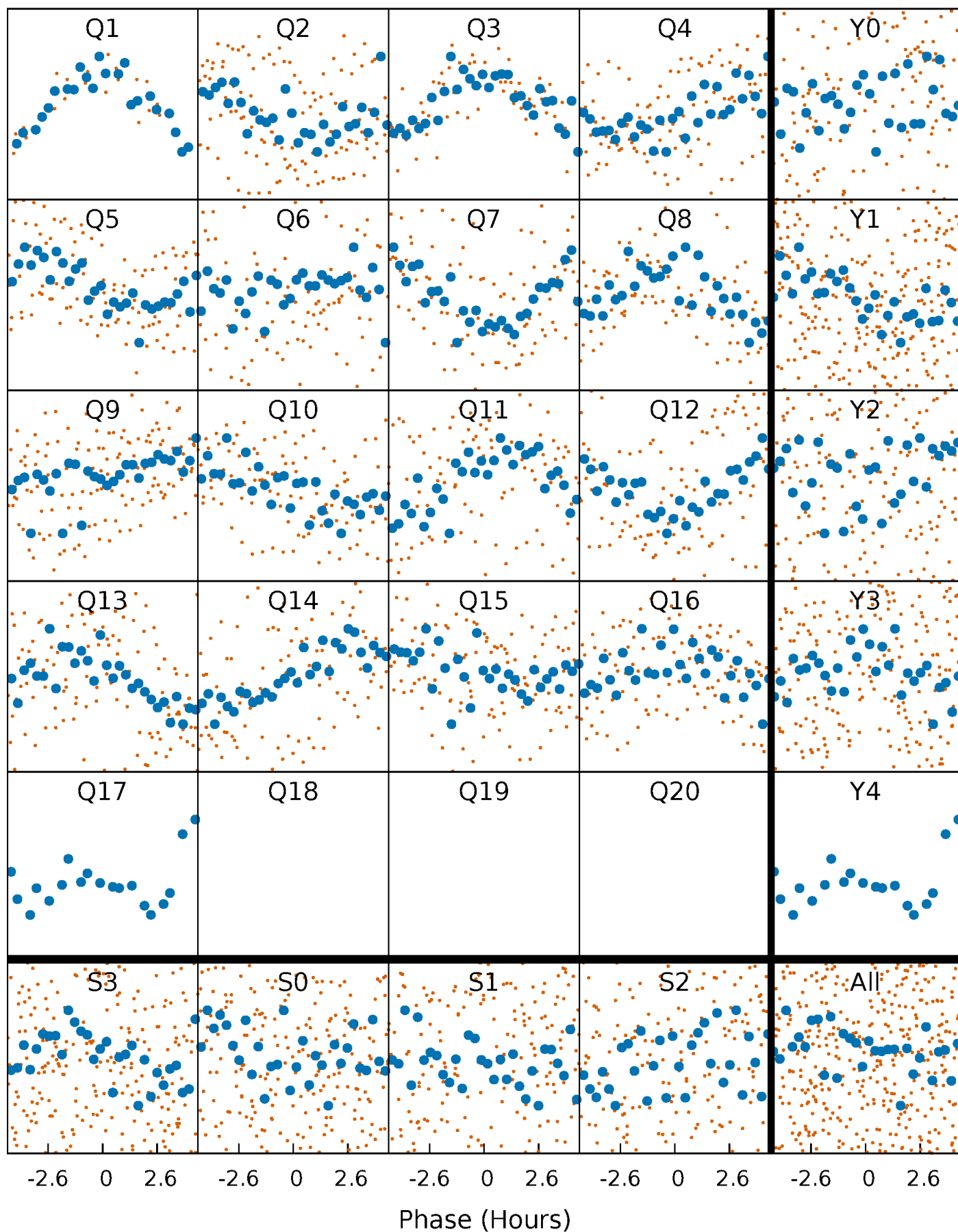


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



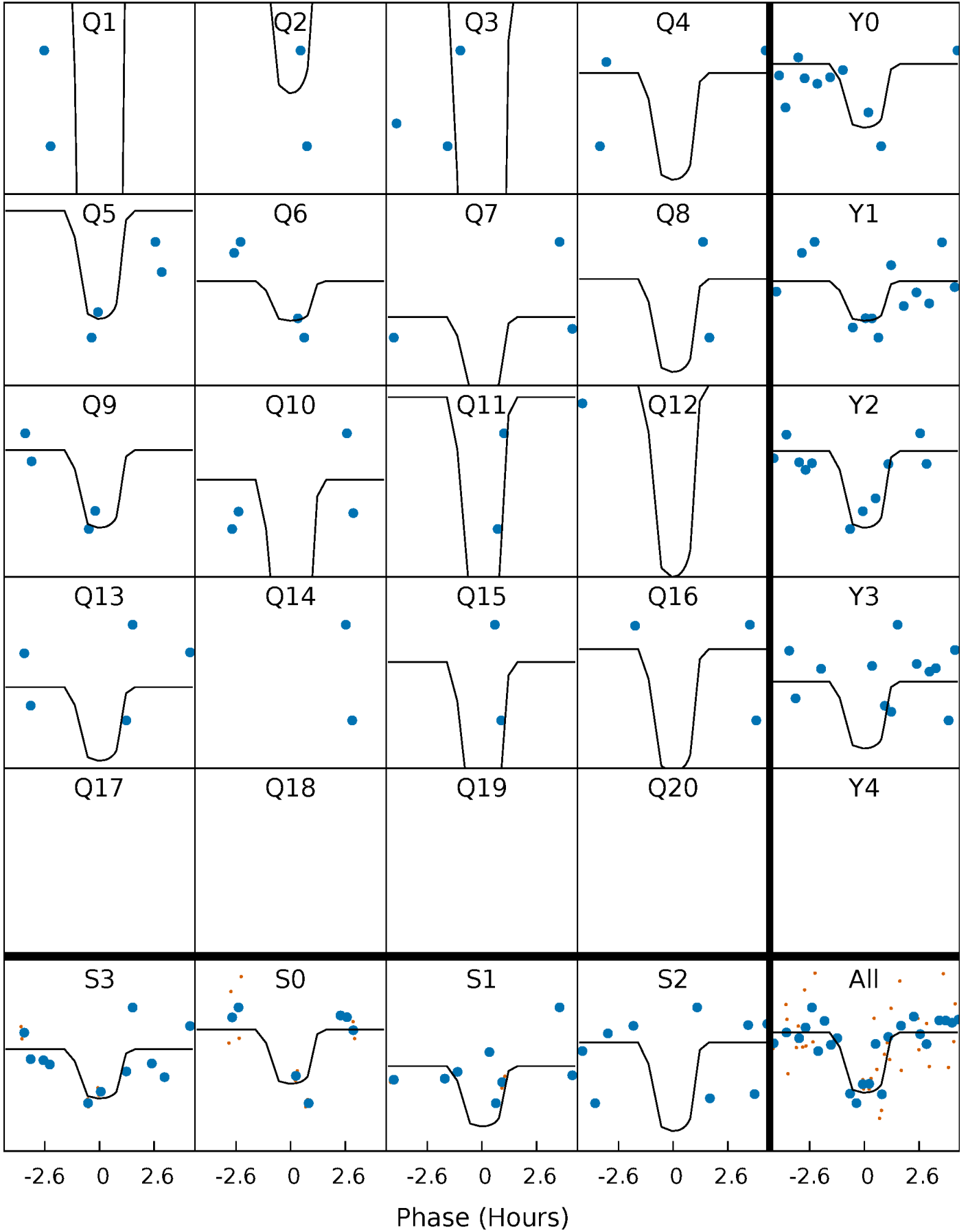
PDC Quarter-Phased Transit Curves

TCE 006284209-04 P= 13.879301 Days $T_0=142.351992$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006284209-04 P= 13.879301 Days $T_0=142.351992$ (BKJD)

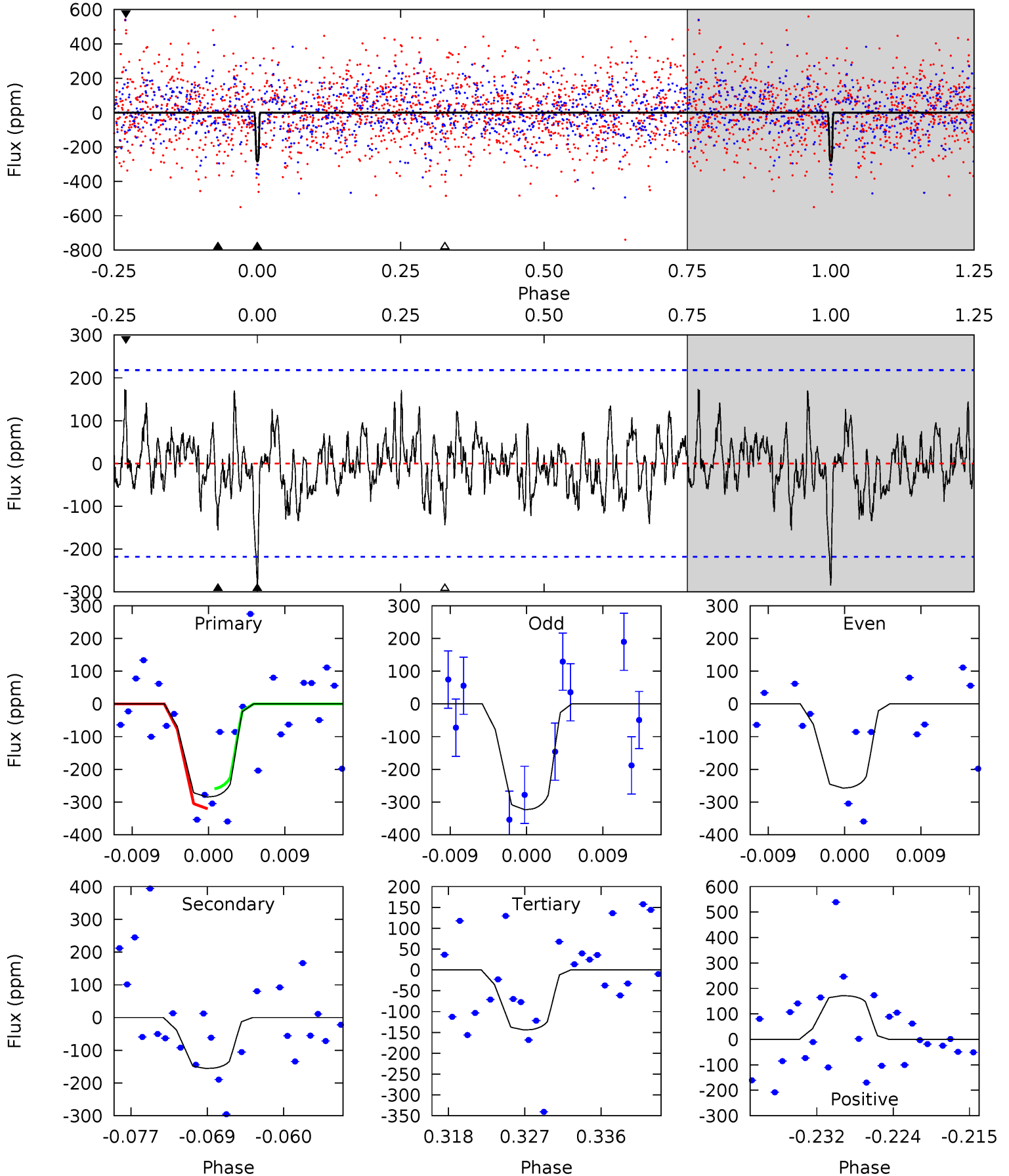


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006284209-04, P = 13.879301 Days, E = 128.472691 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.60	3.61	3.34	3.98	5.06	2.63	1.27	3.26	2.62	0.27	-0.37	0.77	0.83	0.38	0.63



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006284209

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7317^{+232}_{-319}	$4.195^{+0.090}_{-0.210}$	$0.020^{+0.200}_{-0.350}$	$1.642^{+0.581}_{-0.249}$	$1.538^{+0.226}_{-0.226}$	$0.490^{+0.244}_{-0.259}$
	+3%/-4%	+2%/-5%	+1000%/-1750%	+35%/-15%	+15%/-15%	+50%/-53%
Source	KIC0	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 006284209-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-156 ± 43	$5.21^{+4.46}_{-3.34}$	1617^{+133}_{-92}	4863^{+3496}_{-1055}	50^{+352}_{-36}
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 $A_{obs} \gg 1.0$

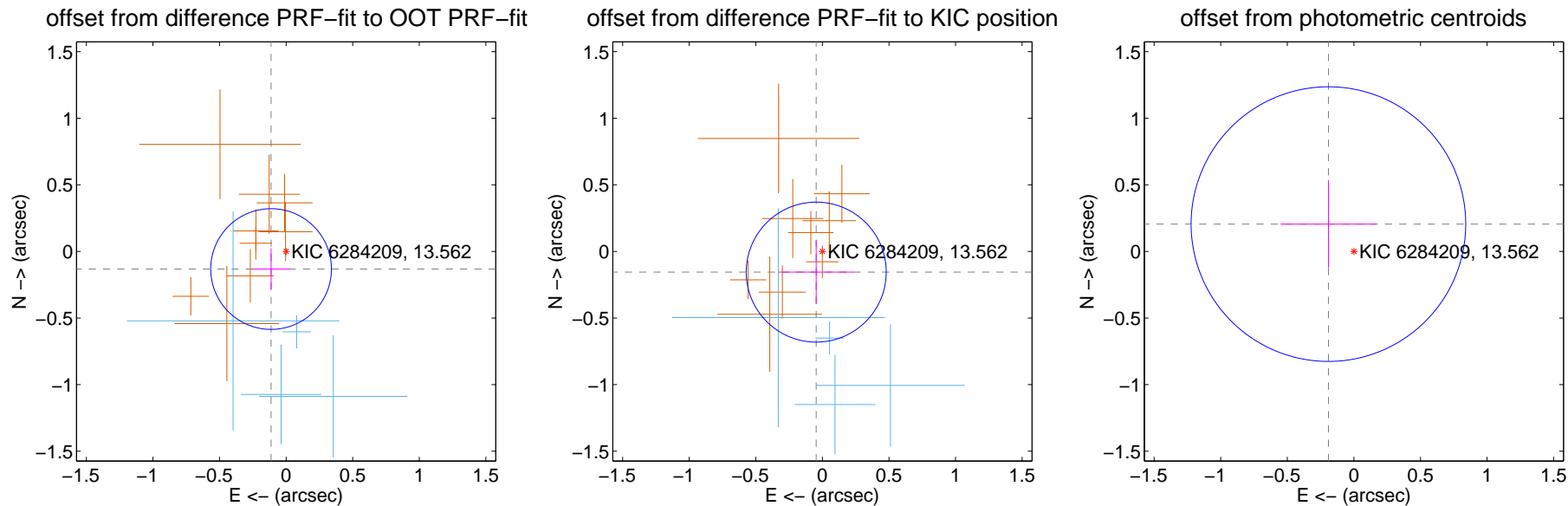
DV Centroid Data

Supplemental centroid analysis for 006284209-04. Kepler magnitude: 13.56. Transit SNR 13.99

There are 4 quarters with good PRF difference image offsets

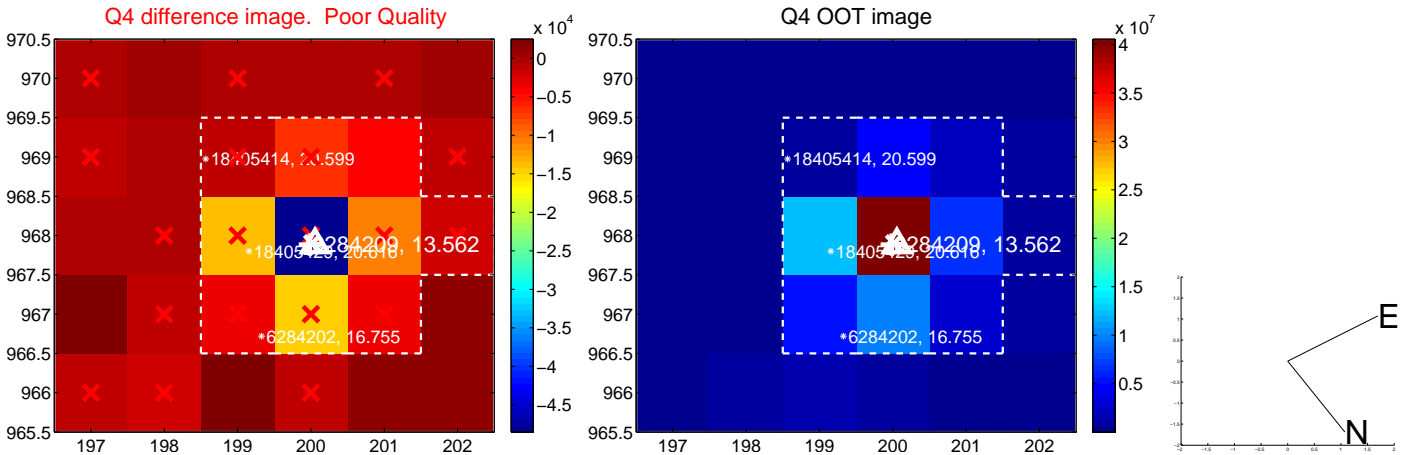
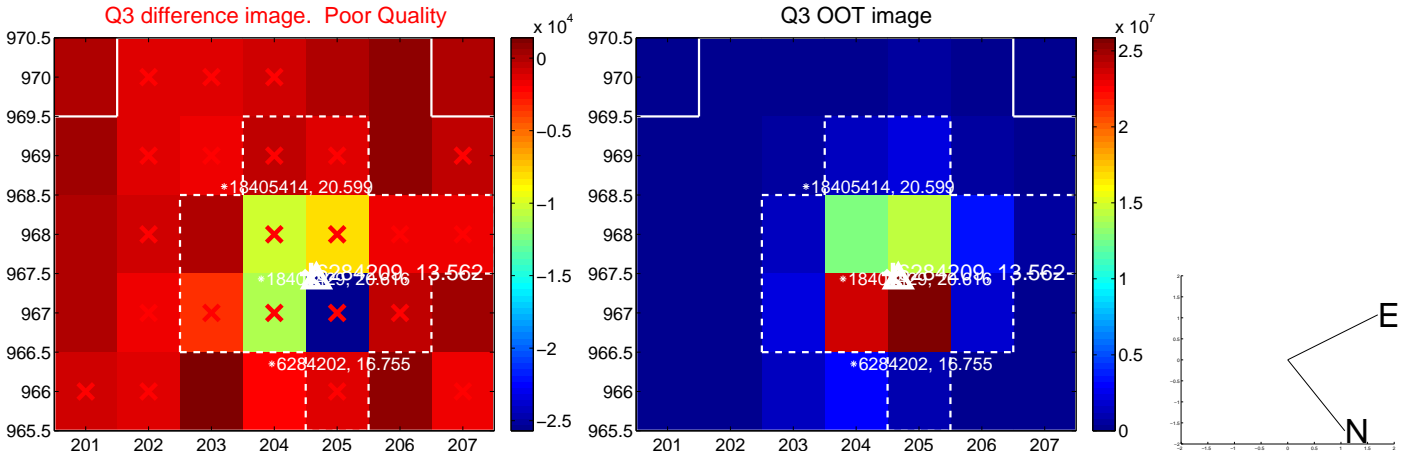
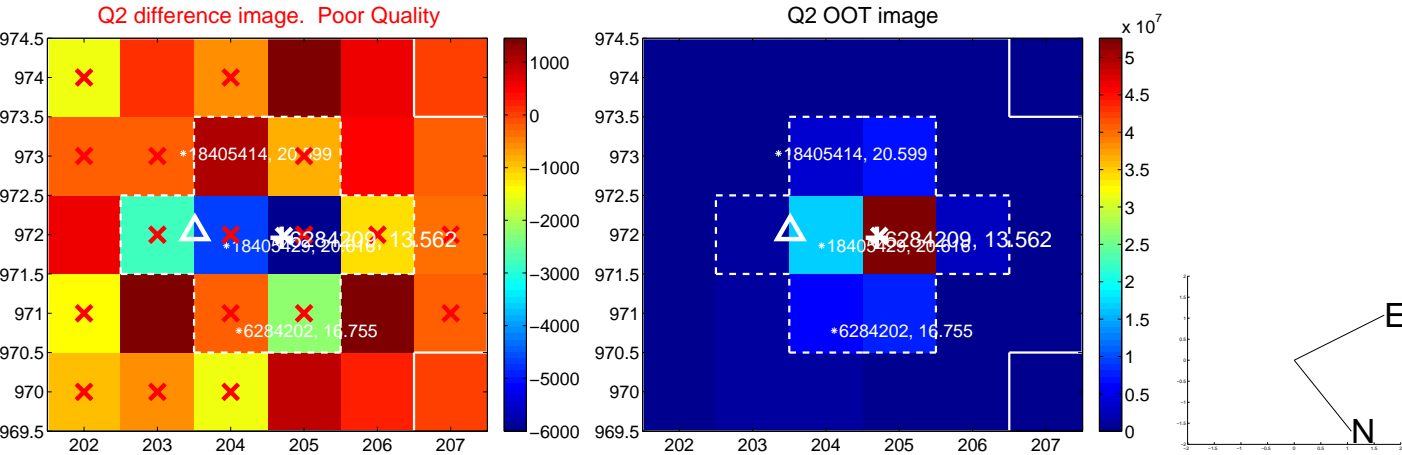
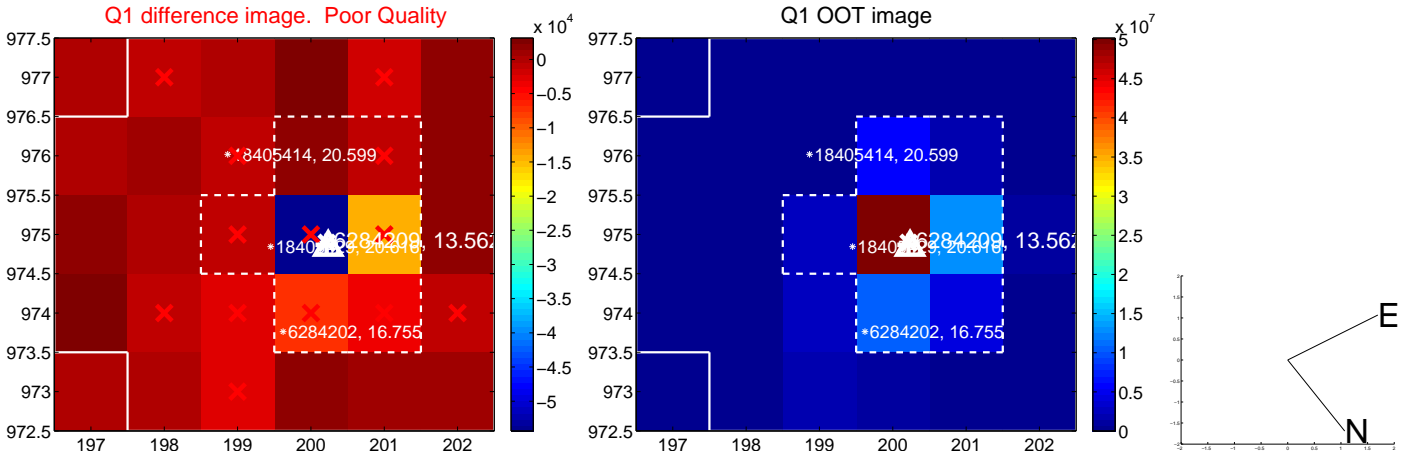
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.174 ± 0.151	1.15	0.113 ± 0.144	-0.132 ± 0.156
PRF-fit source offset from KIC position	0.162 ± 0.175	0.93	0.046 ± 0.284	-0.155 ± 0.239
photometric centroid source offset	0.28 ± 0.34	0.82	0.19 ± 0.36	0.21 ± 0.33

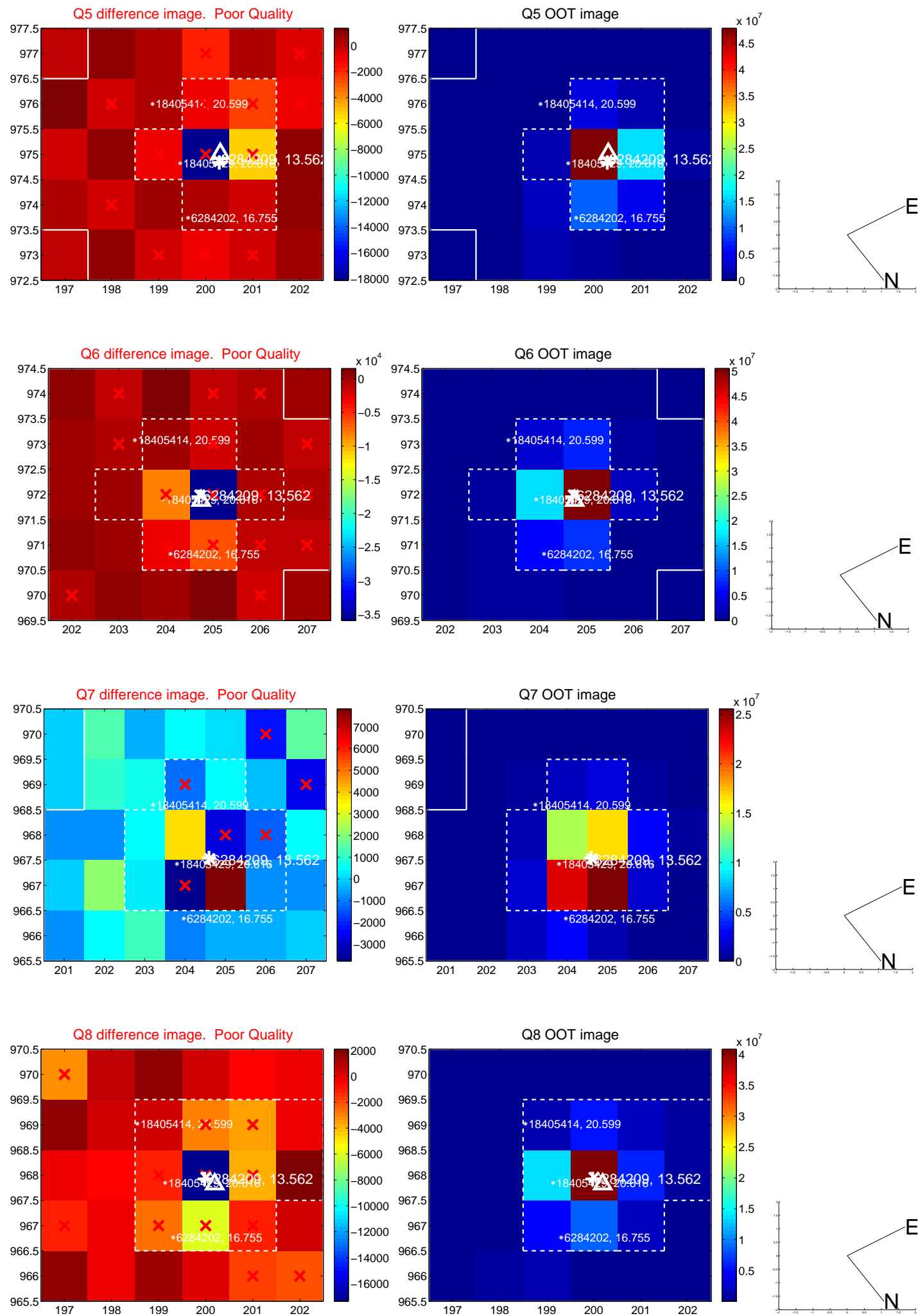


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

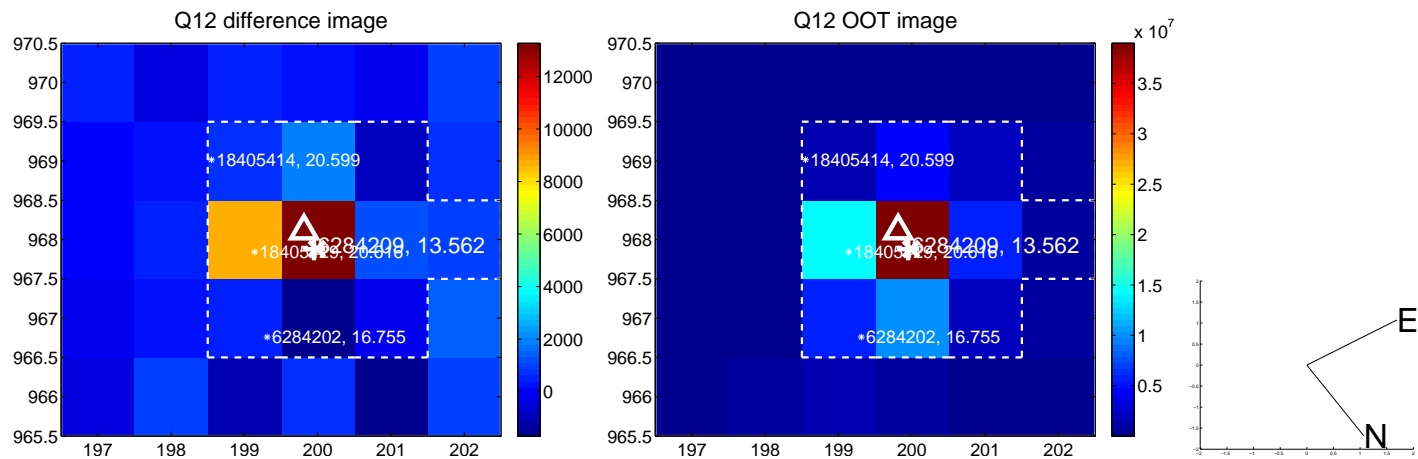
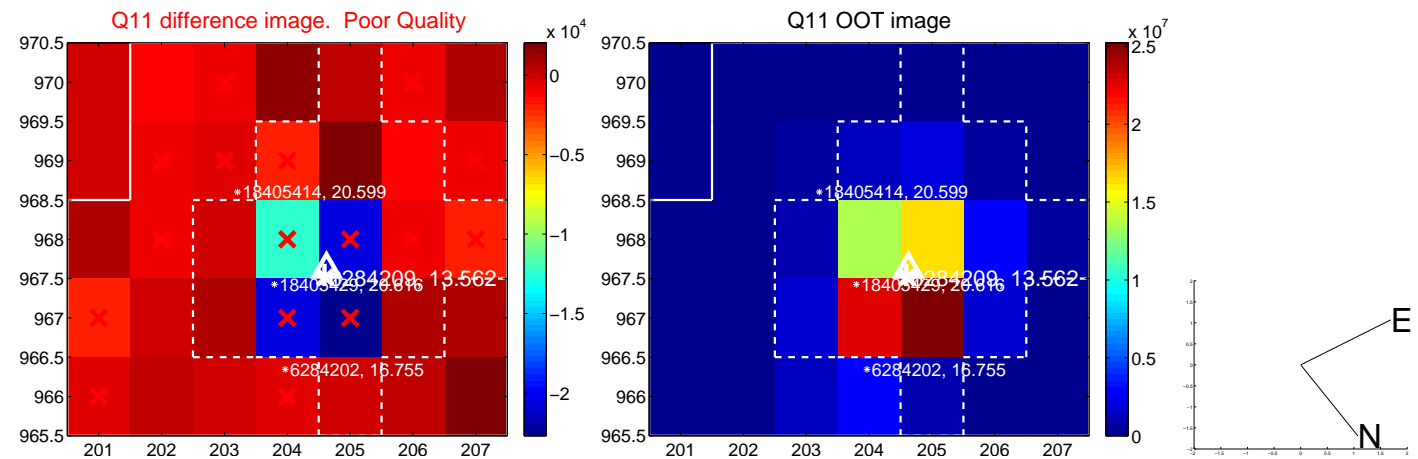
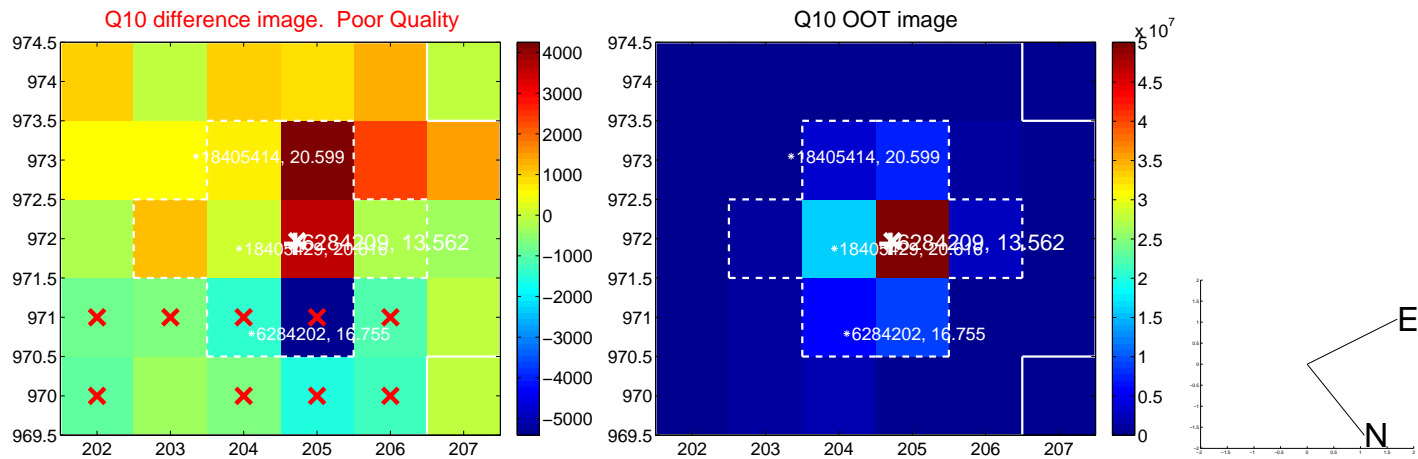
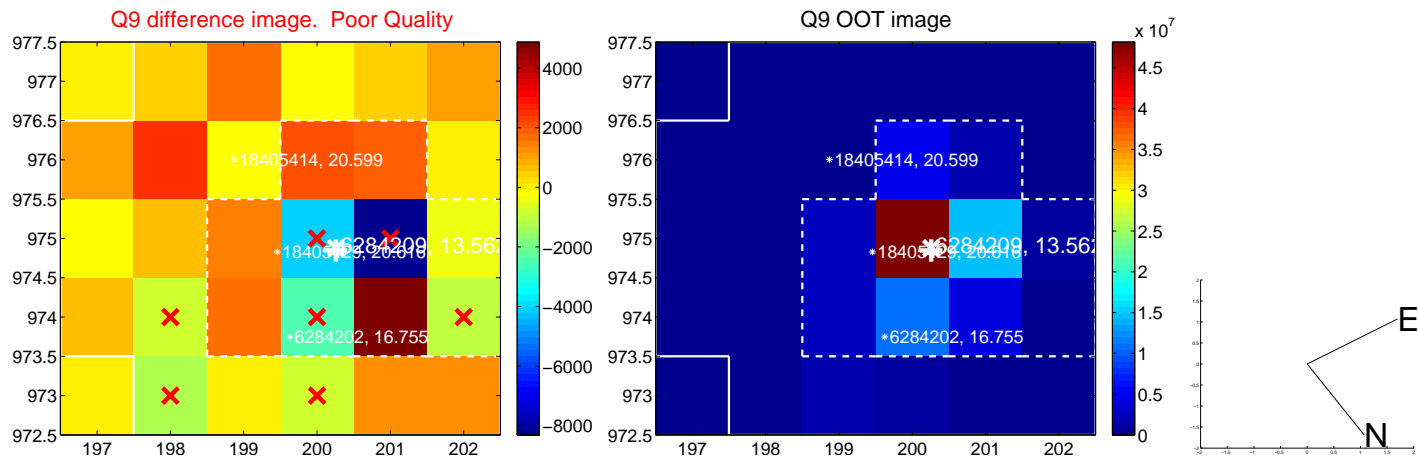
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



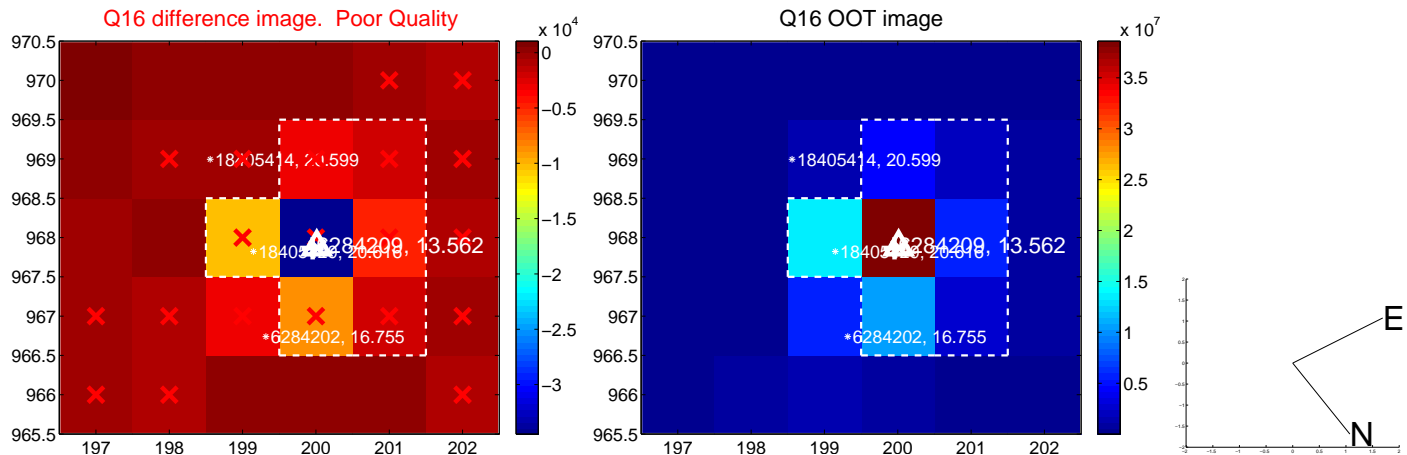
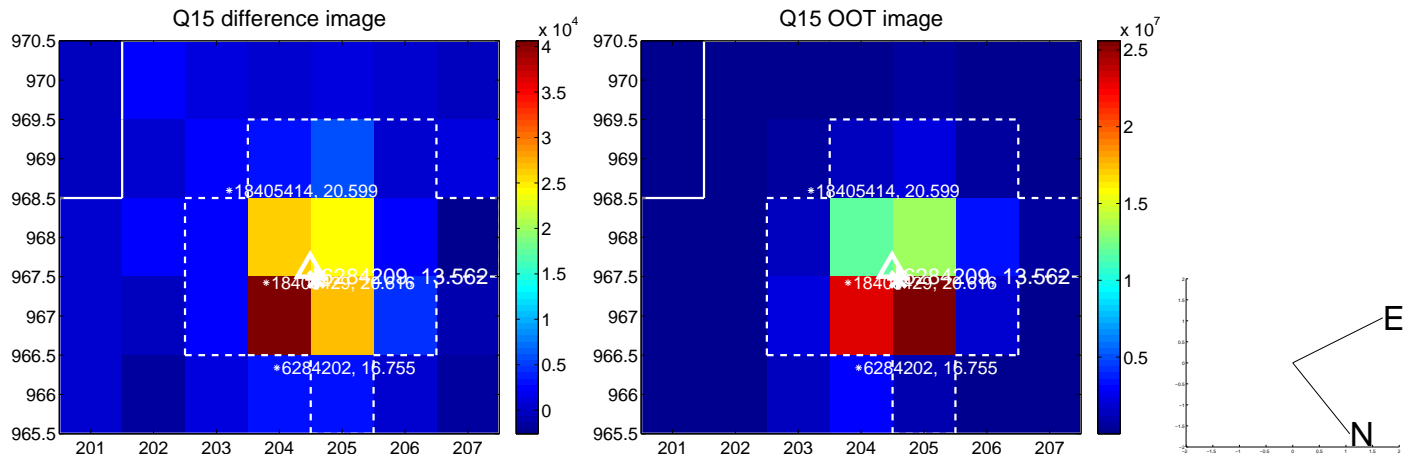
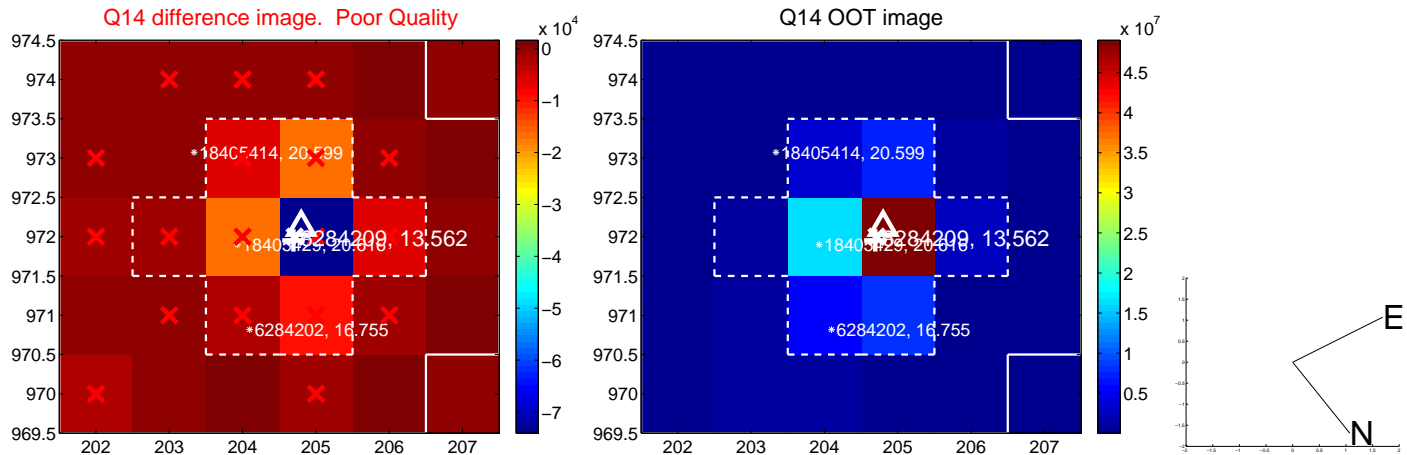
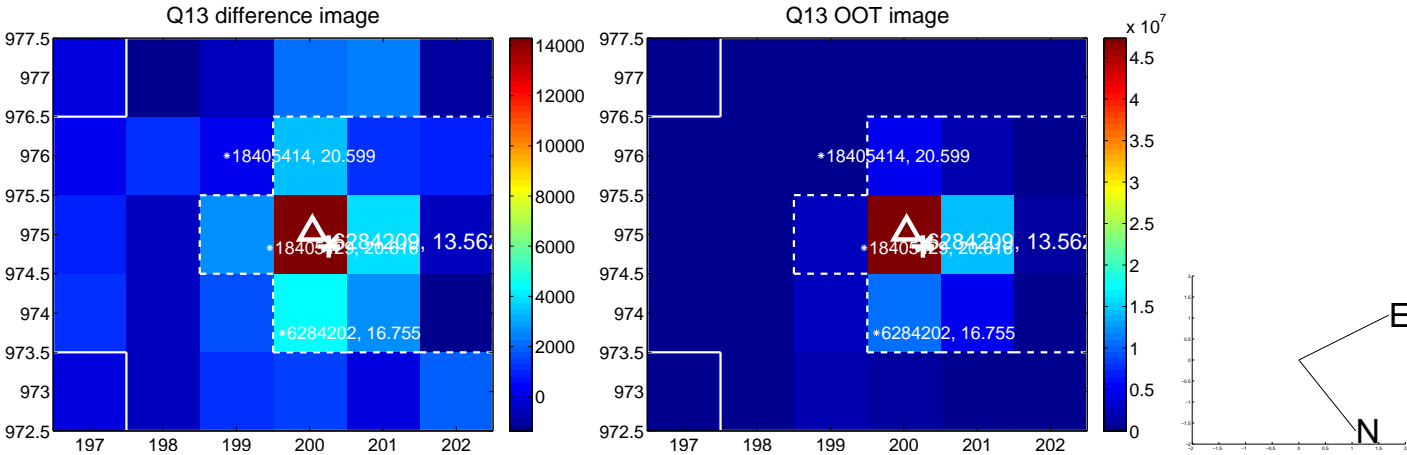
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



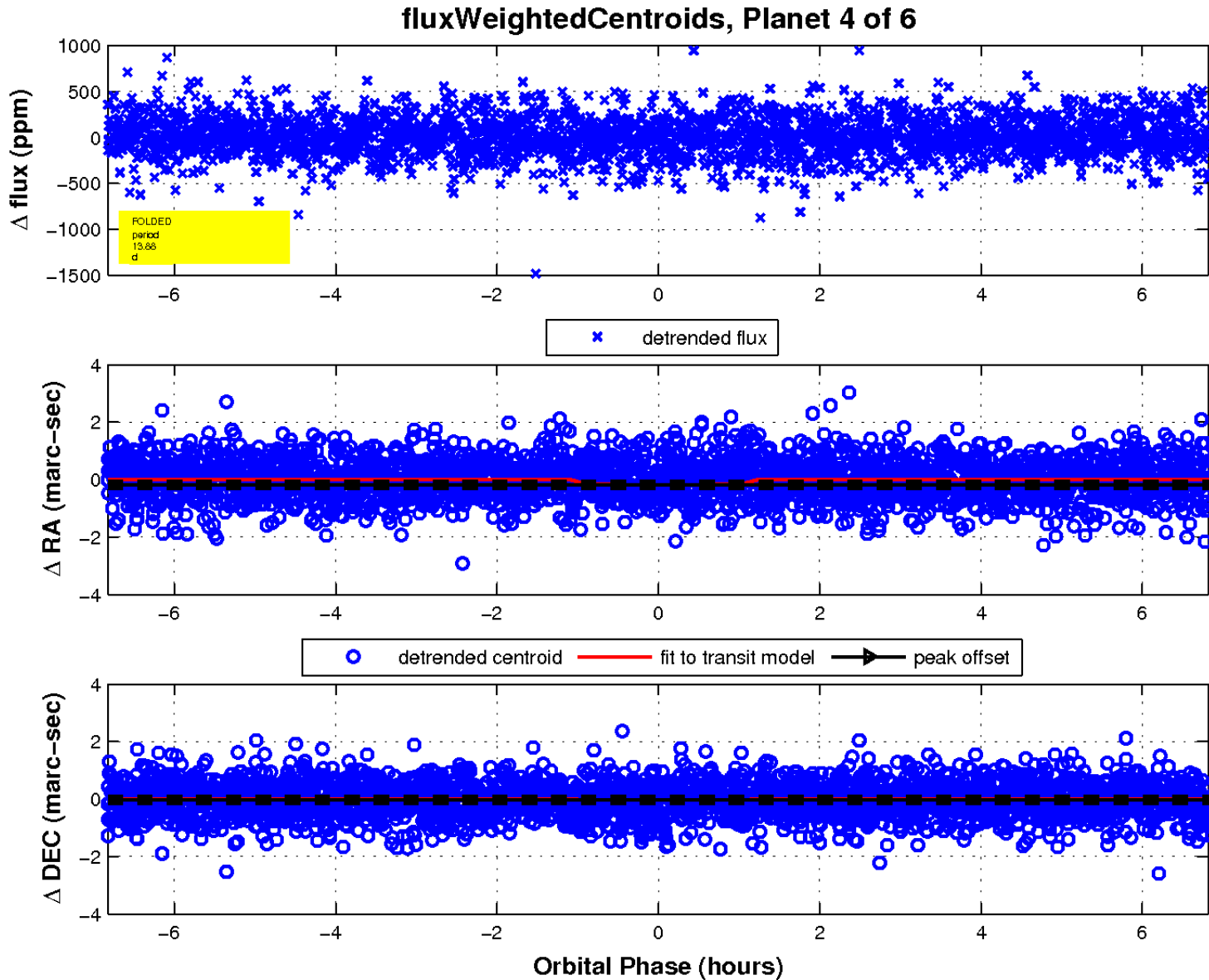
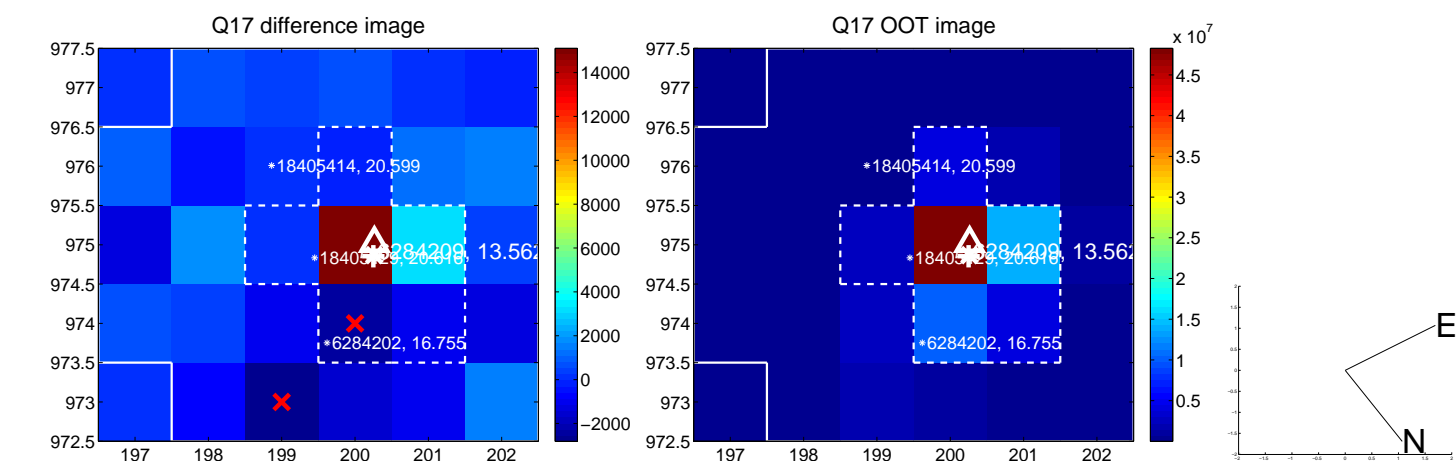
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

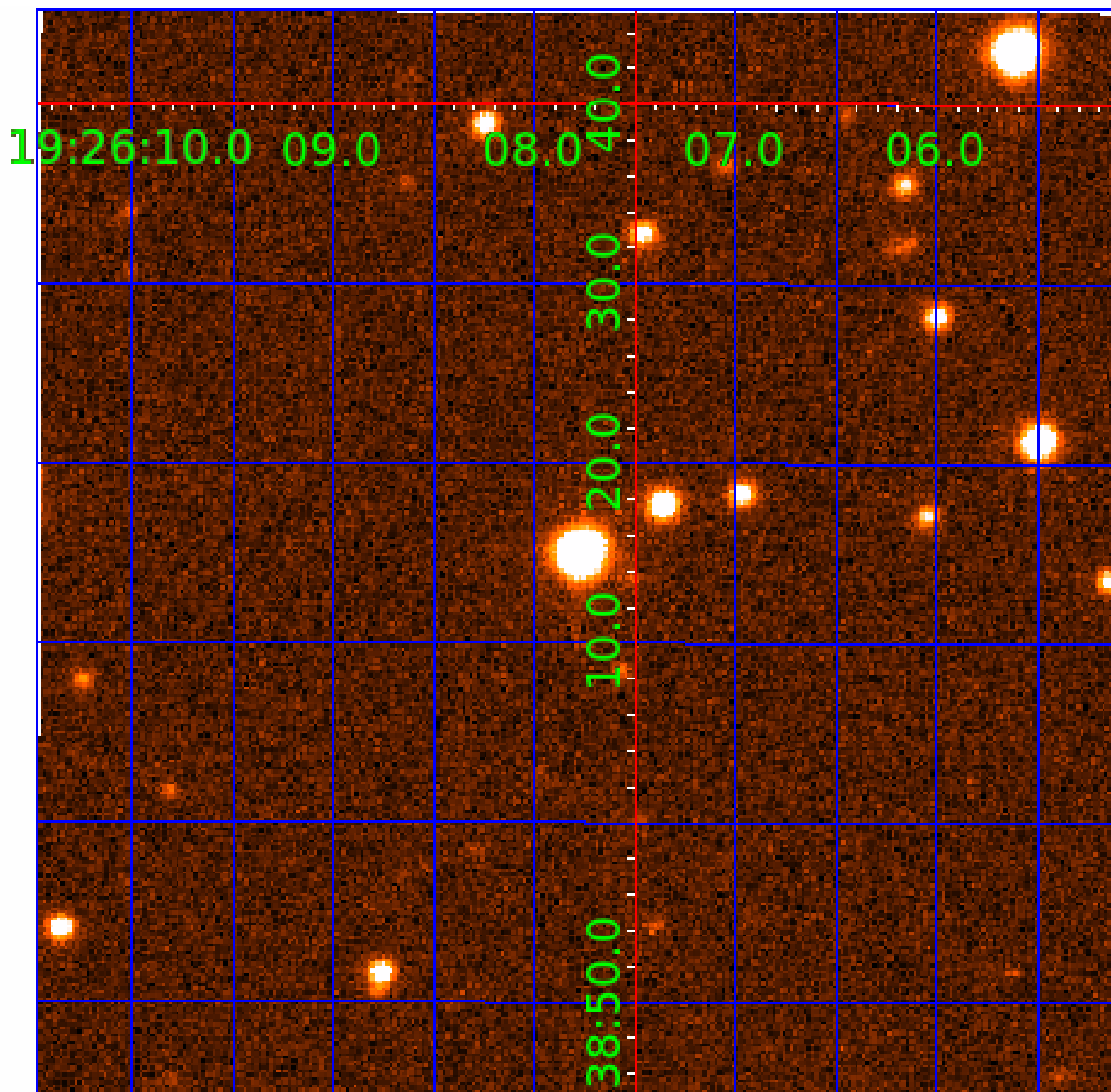


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006284209

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})
006284209-01	OBS	No	1.305256	131.986253	17.6	9.950	8.2	8.5	1.64	7317	0.70	9496.16
006284209-02	OBS	No	60.034726	180.949070	289.6	1.297	13.8	14.4	1.64	7317	2.85	57.62
006284209-04	OBS	No	13.879301	142.351992	323.3	2.276	13.4	14.0	1.64	7317	3.23	406.12
006284209-05	OBS	No	9.149682	131.840616	35.8	0.892	11.8	1.3	1.64	7317	1.03	707.84
006284209-06	OBS	No	17.911618	137.060159	354.3	1.226	13.3	12.7	1.64	7317	3.17	289.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006284209-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006284209-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006284209-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006284209-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006284209-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

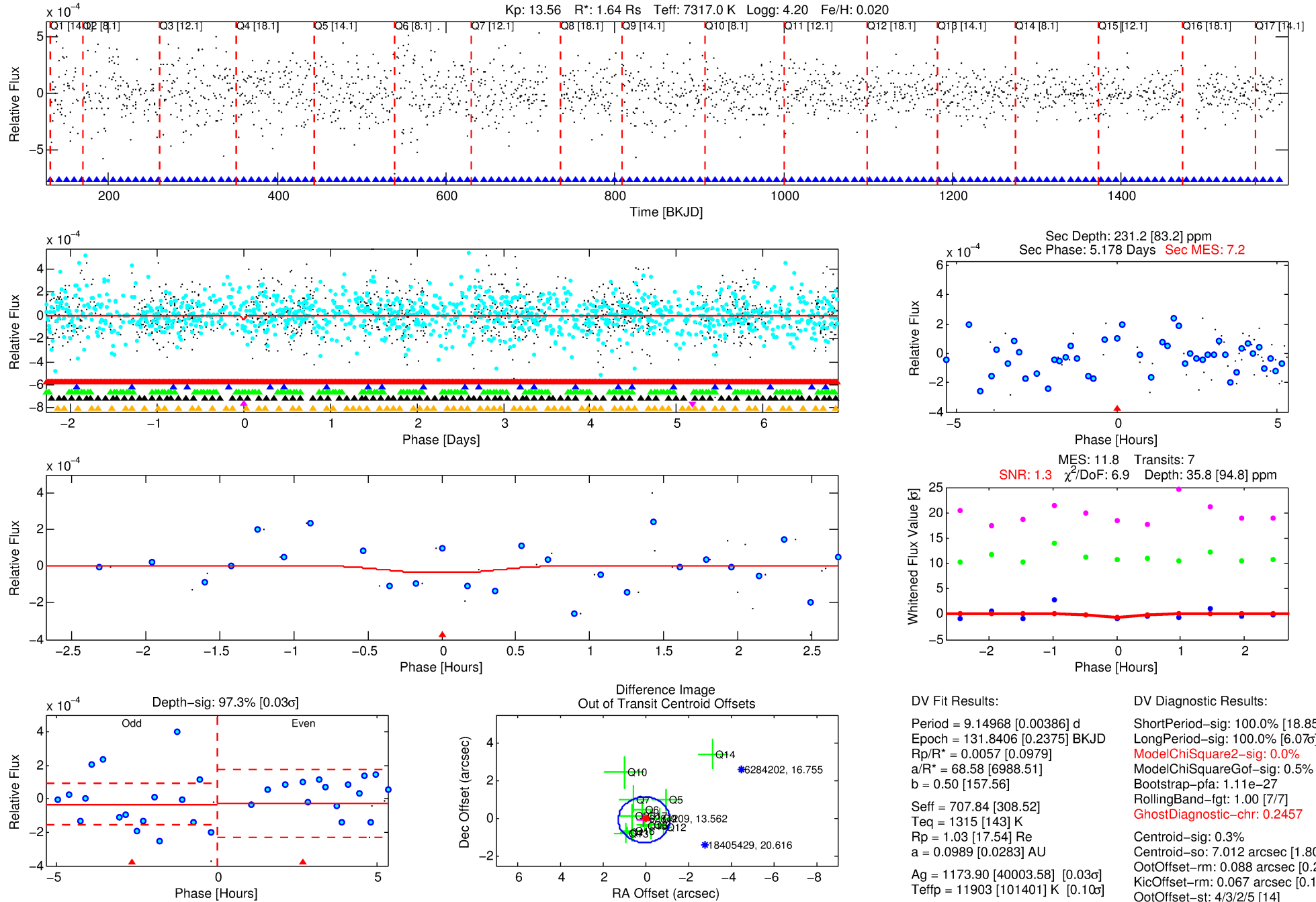
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006284209-05

No Significant Match Found

DV One-Page Summary

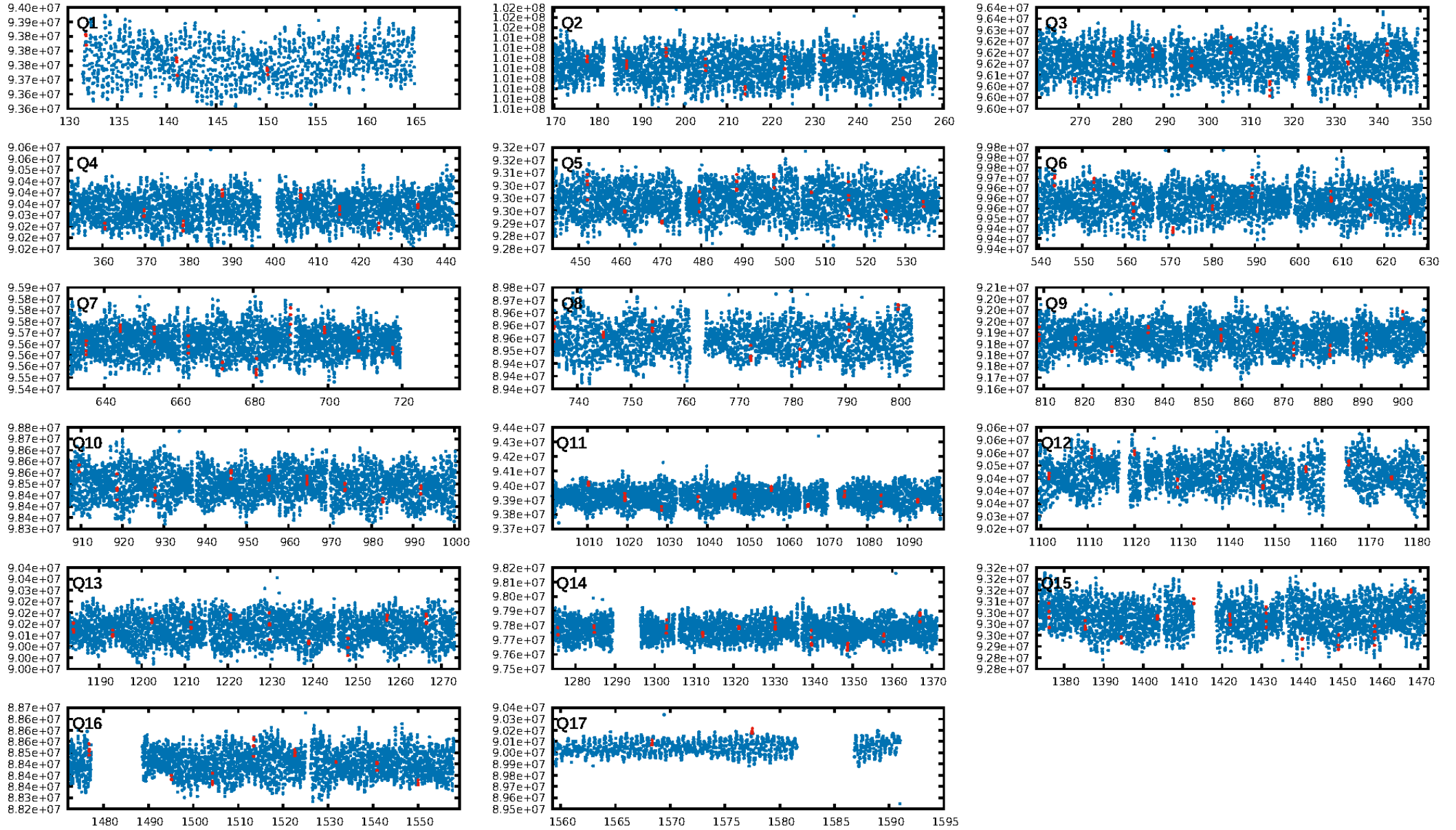
KIC: 6284209 Candidate: 5 of 6 Period: 9.150 d



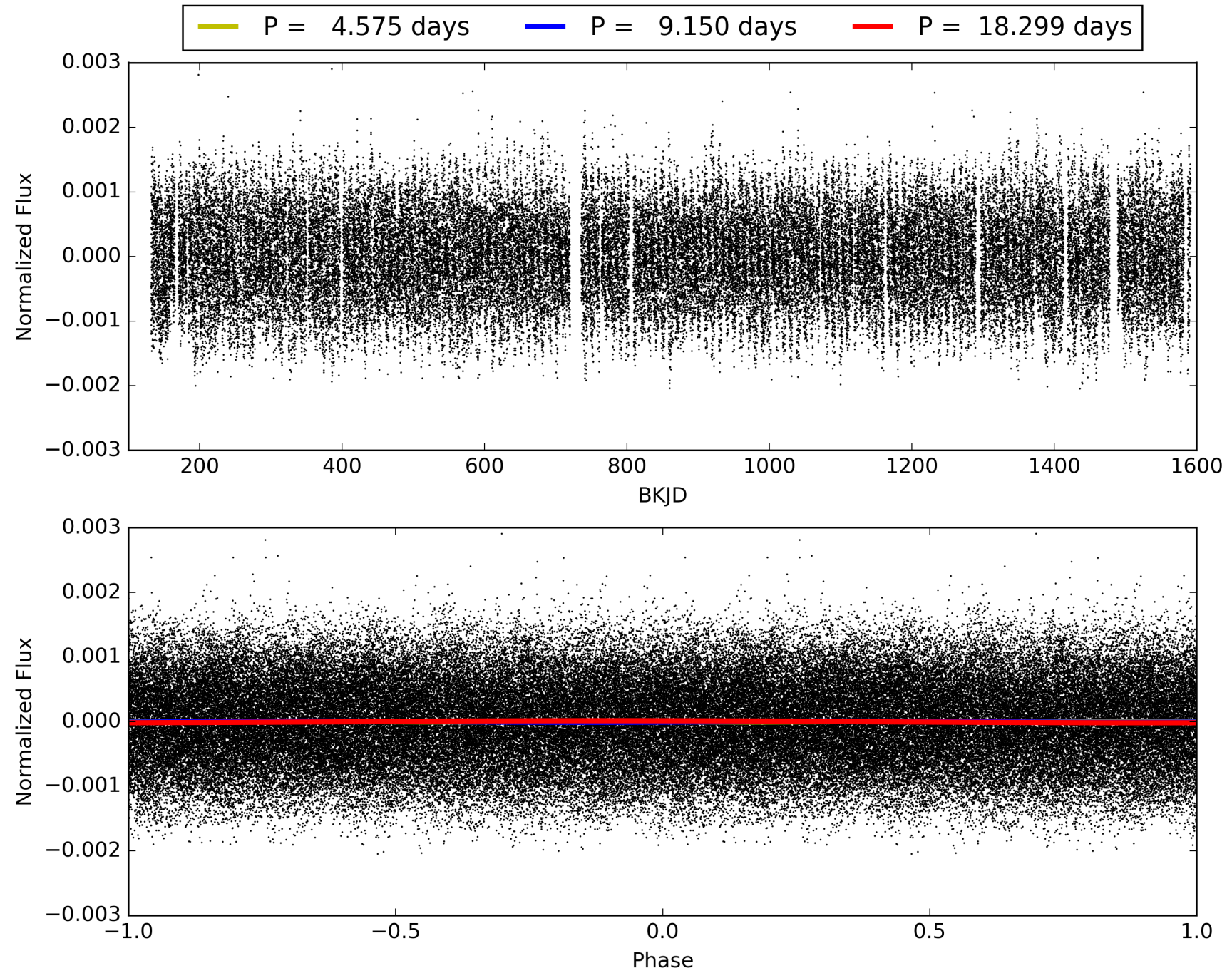
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:14:02 Z

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

TCE 006284209-05, PDC Light Curves

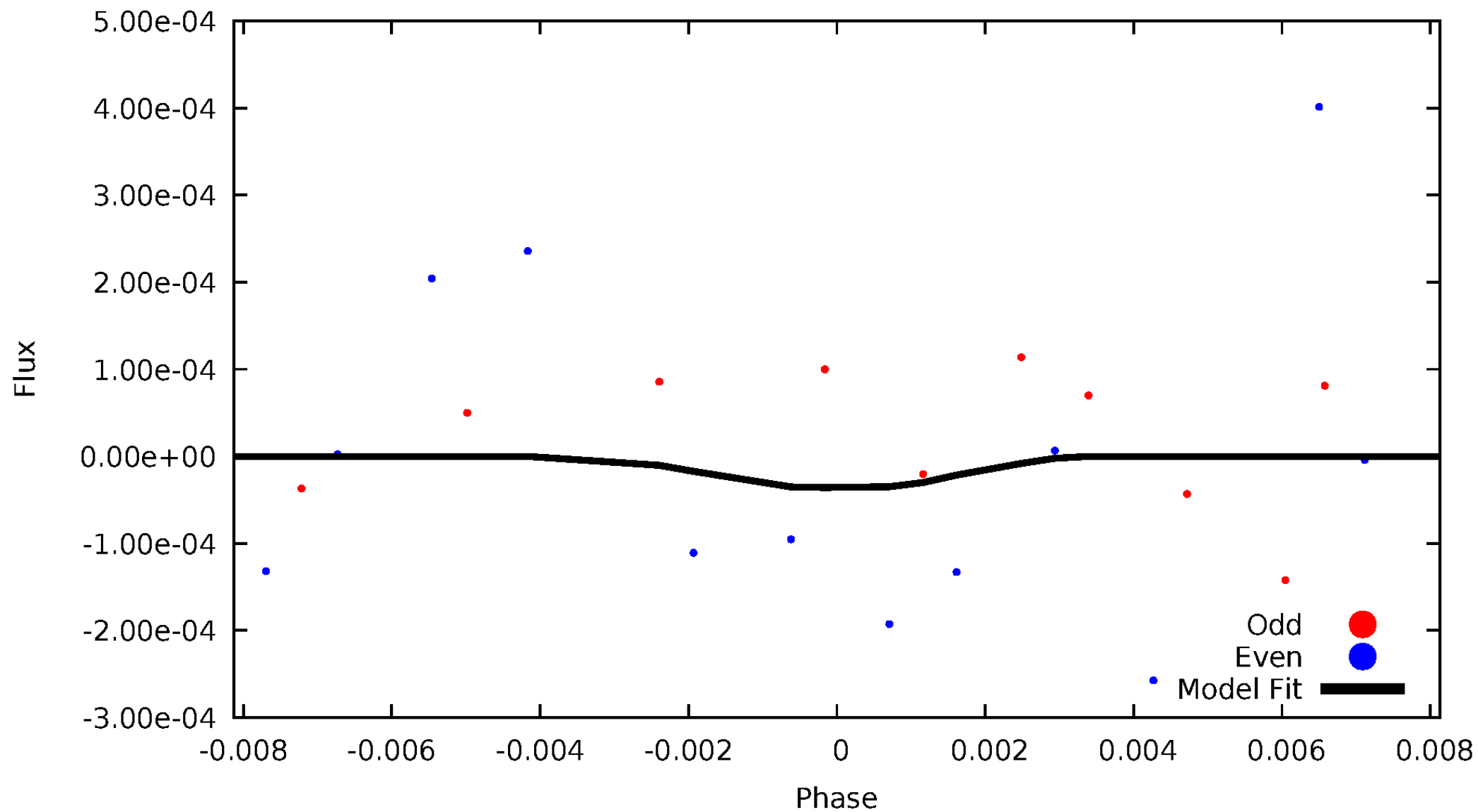


TCE 006284209-05



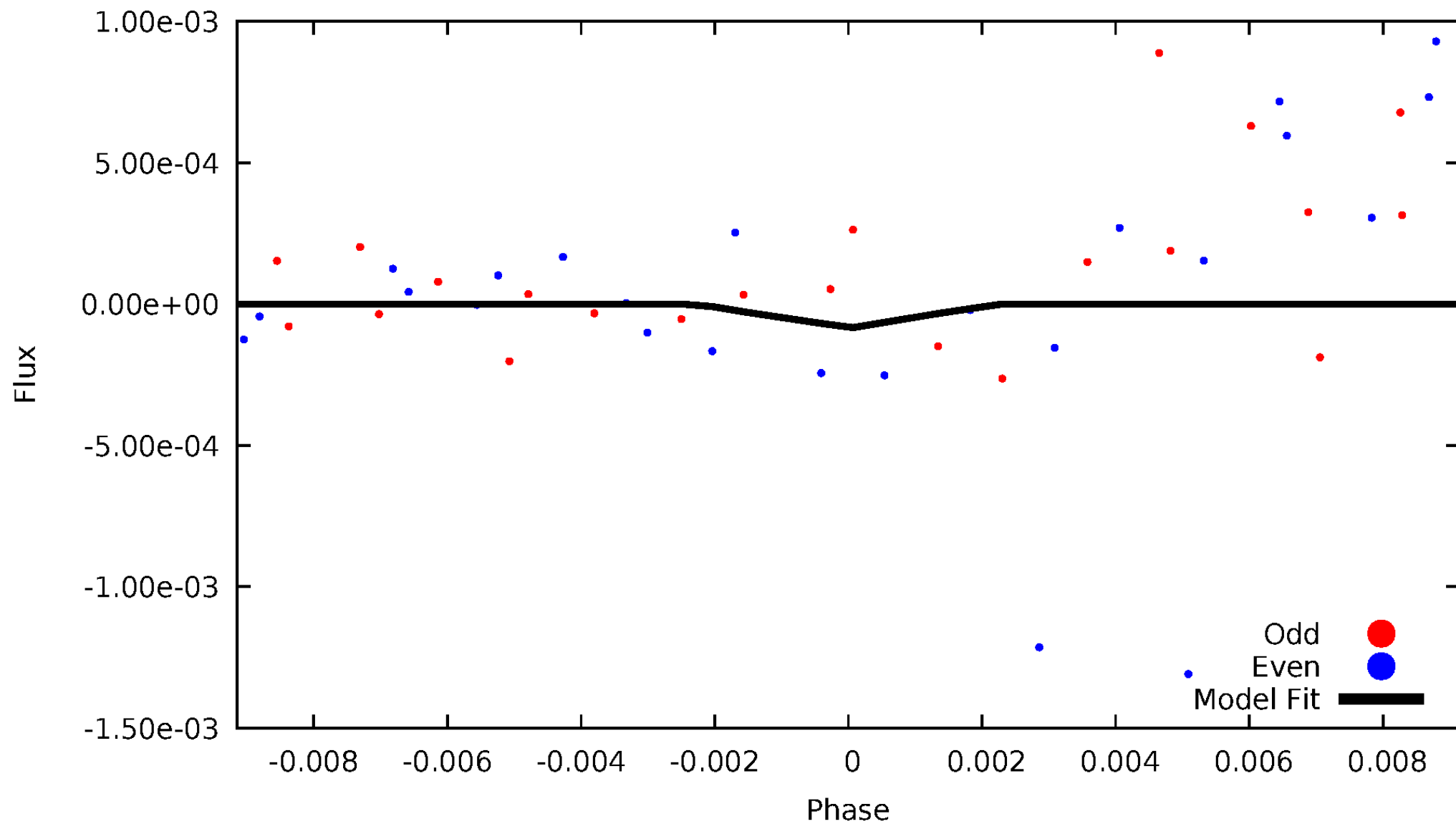
DV Odd/Even

TCE 006284209-05



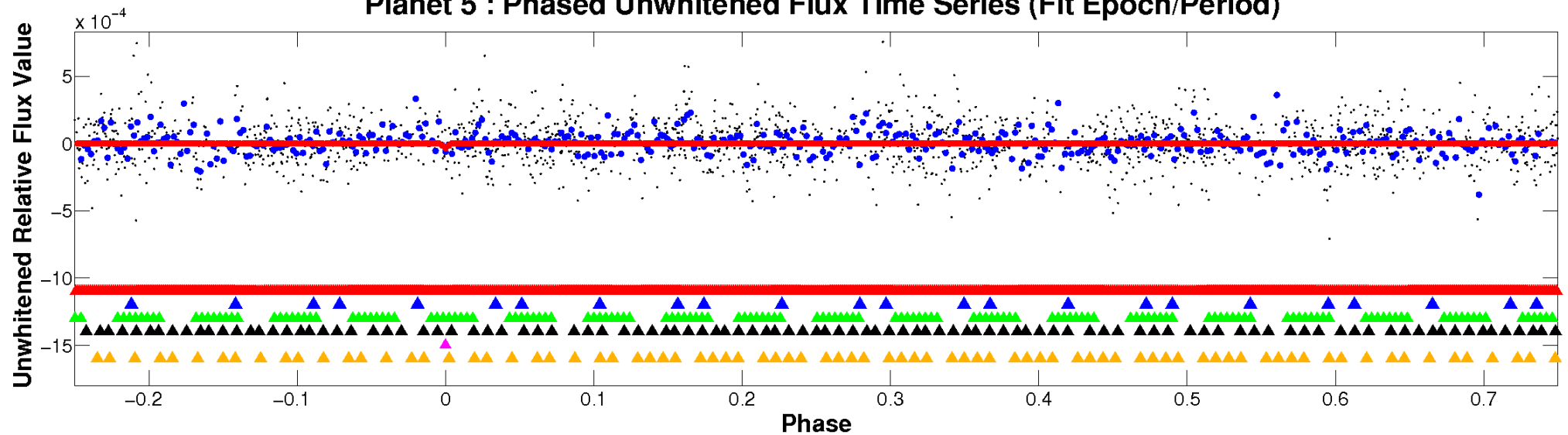
ALT Odd/Even

TCE 006284209-05

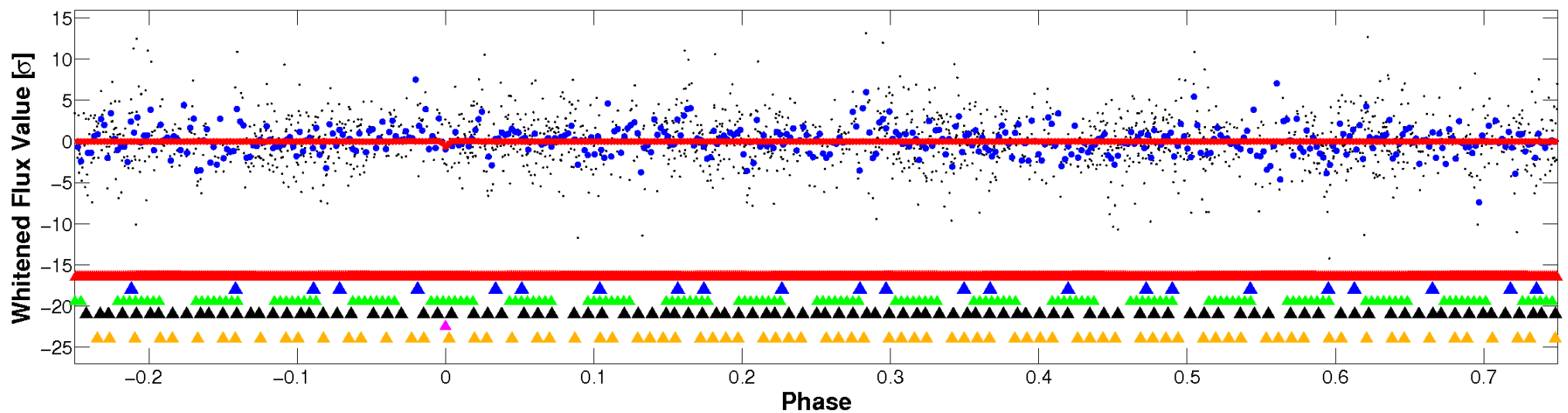


Non-Whitened Vs. Whitened Light Curve

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

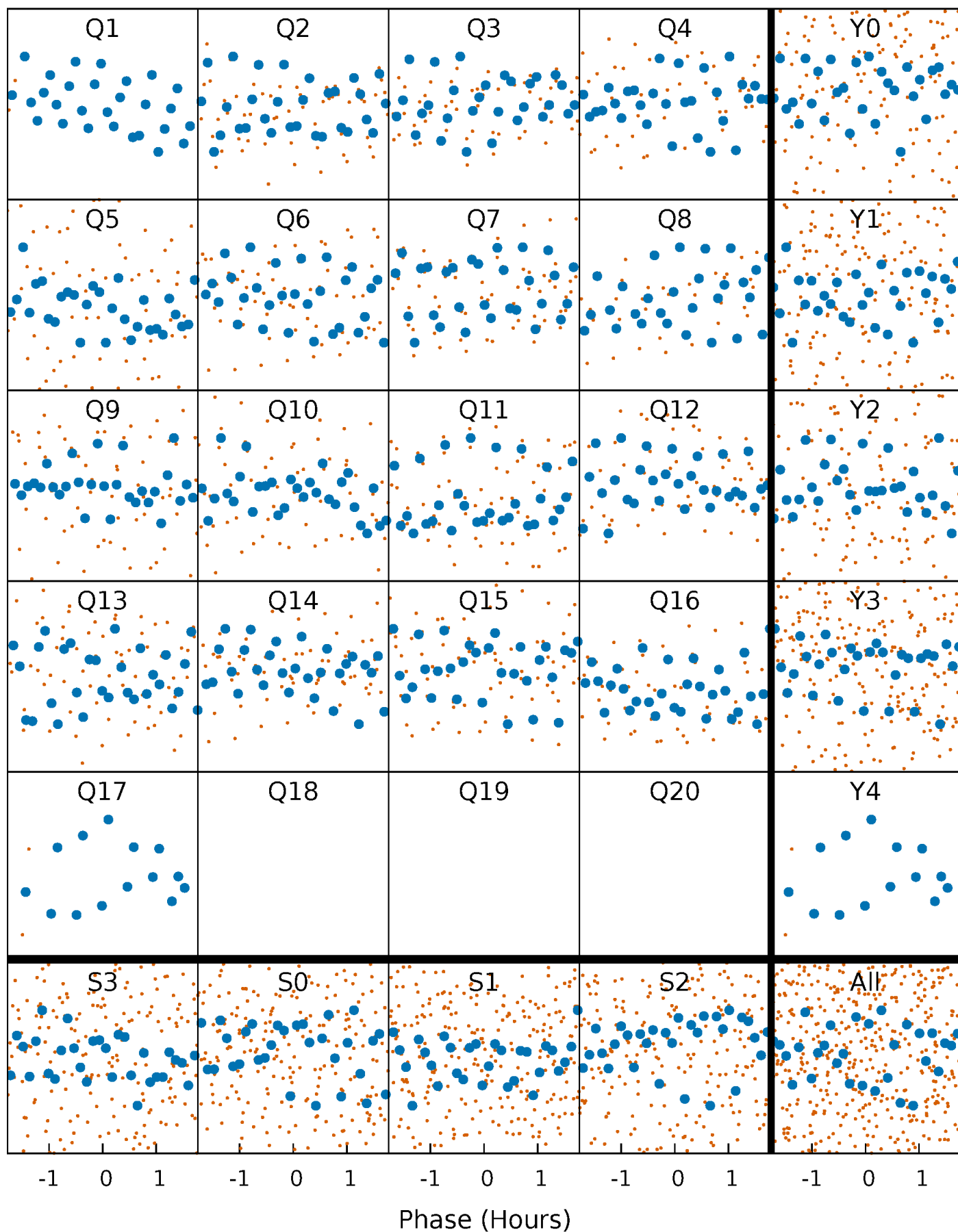


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



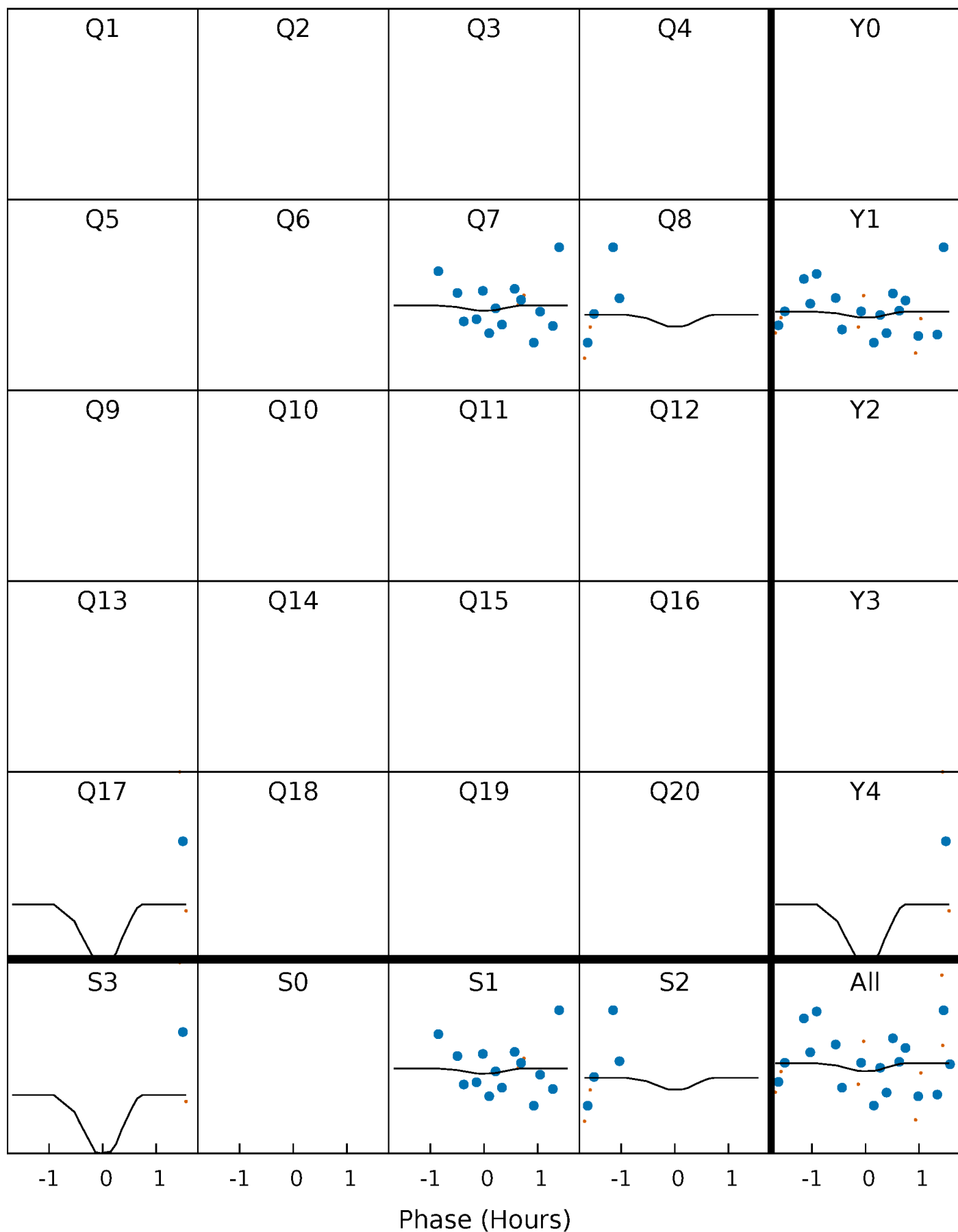
PDC Quarter-Phased Transit Curves

TCE 006284209-05 P= 9.149682 Days $T_0=131.840616$ (BKJD)



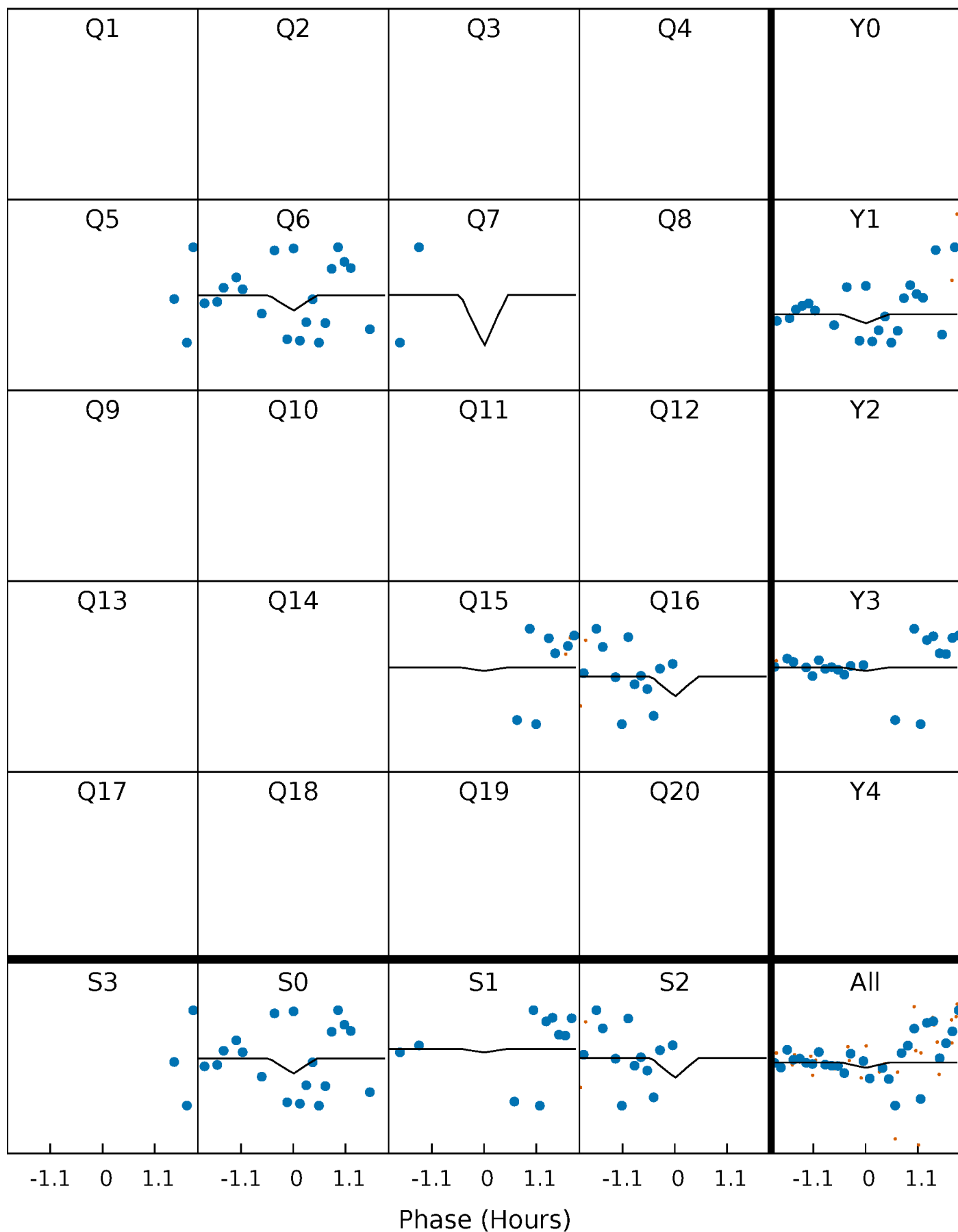
DV Quarter-Phased Transit Curves

TCE 006284209-05 P= 9.149682 Days $T_0=131.840616$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

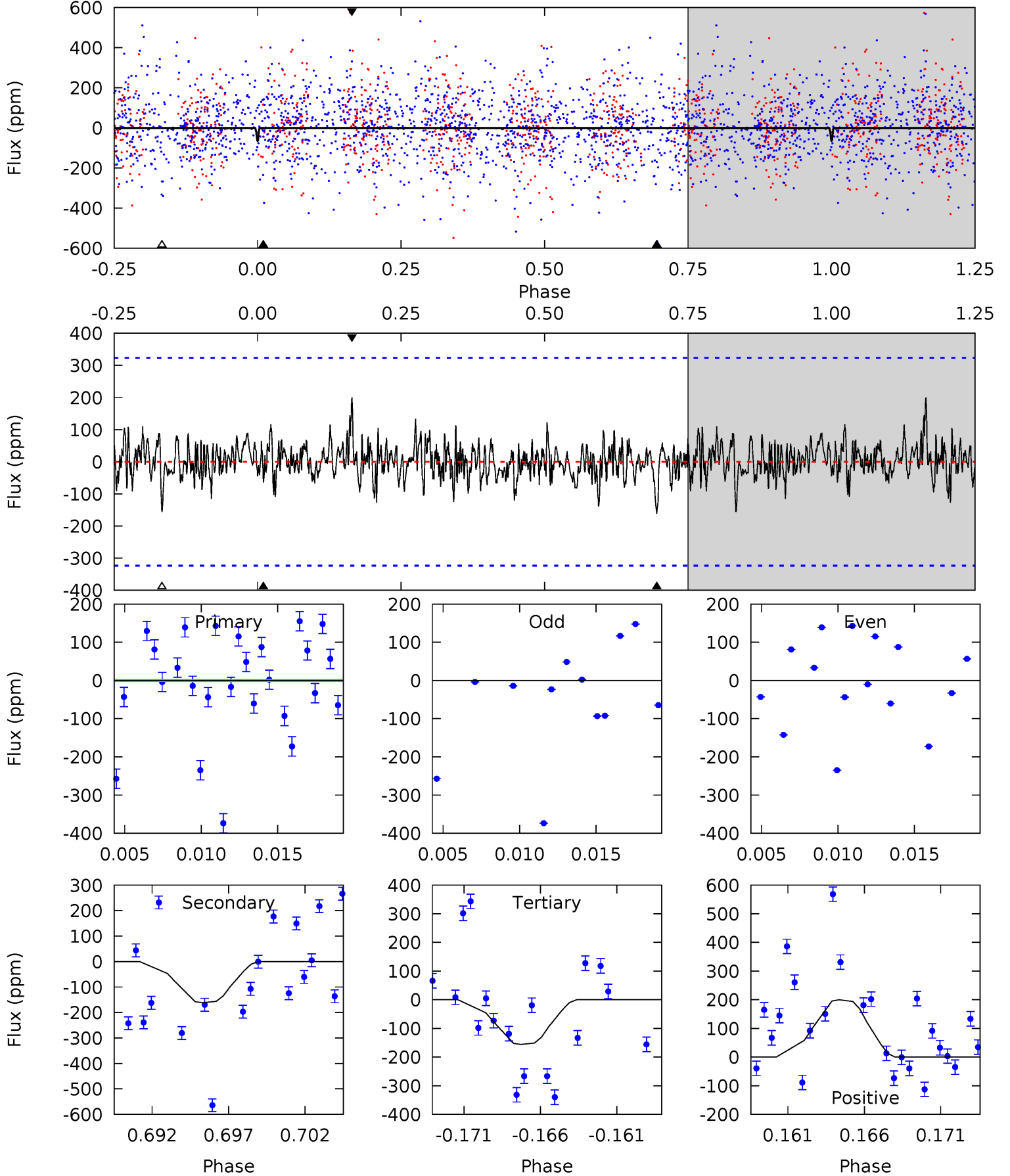
TCE 006284209-05 $P = 9.149939$ Days $T_0 = 131.990868$ (BKJD)



DV Model-Shift Uniqueness Test

006284209-05, P = 9.149682 Days, E = 131.840616 Days

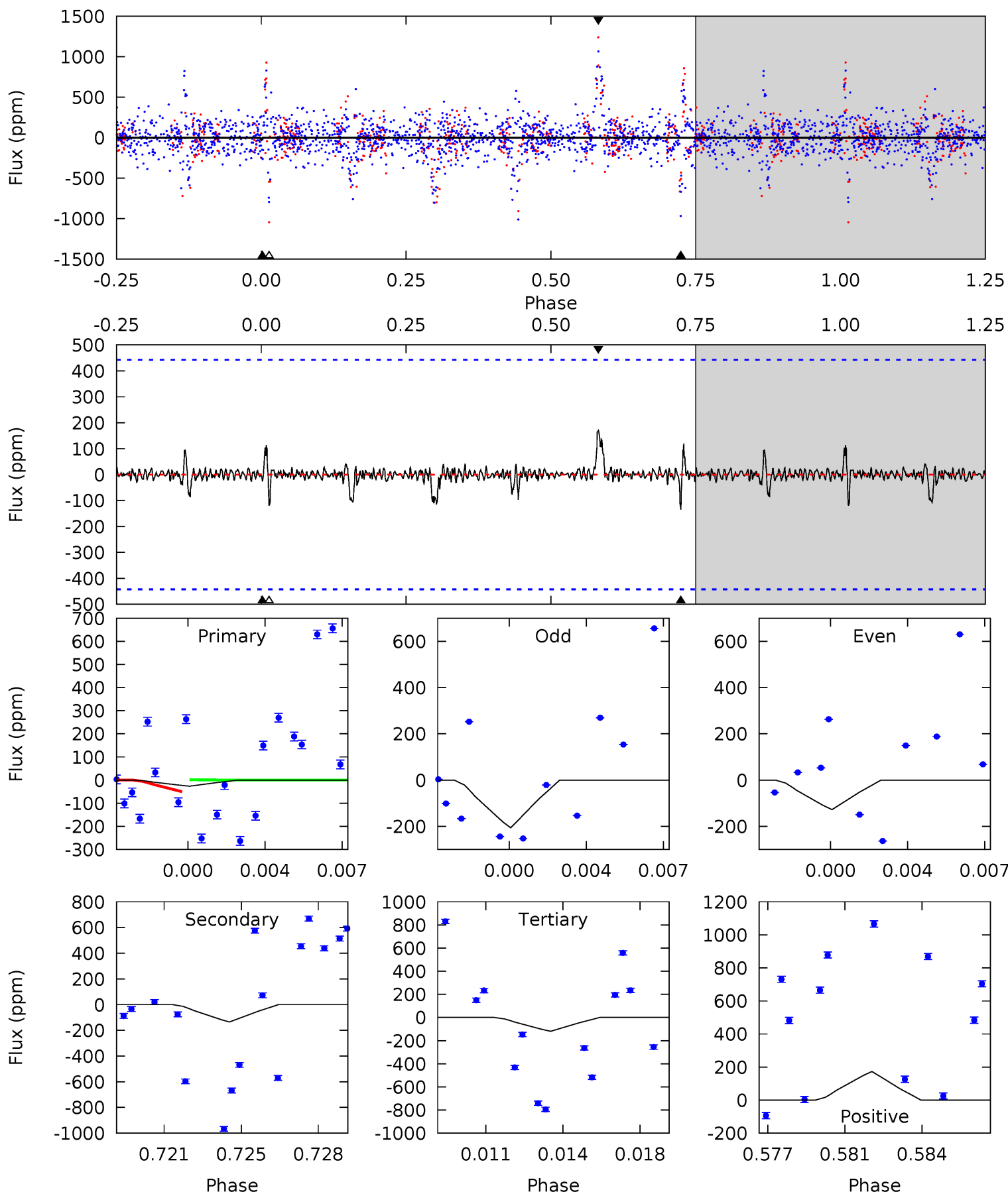
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.03	2.58	2.49	3.19	5.16	2.82	0.72	-1.46	-2.16	0.09	-0.61	0.70	0.54	0.55	0.86



Alt Model-Shift Uniqueness Test

006284209-05, P = 9.149939 Days, E = 131.990868 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.31	1.59	1.41	2.04	5.22	2.92	0.32	-1.10	-1.73	0.18	-0.45	0.42	1.00	0.56	0.29



Stellar Parameters For KIC 006284209

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7317^{+232}_{-319}	$4.195^{+0.090}_{-0.210}$	$0.020^{+0.200}_{-0.350}$	$1.642^{+0.581}_{-0.249}$	$1.538^{+0.226}_{-0.226}$	$0.490^{+0.244}_{-0.259}$
	+3%/-4%	+2%/-5%	+1000%/-1750%	+35%/-15%	+15%/-15%	+50%/-53%
Source	KIC0	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 006284209-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-161 ± 63	$12.47^{+14.79}_{-8.36}$	1865^{+134}_{-106}	3520^{+1922}_{-850}	$4.981^{+44.717}_{-3.968}$
Alt.	-135 ± 85	$13.38^{+13.82}_{-9.83}$	1854^{+162}_{-106}	3225^{+2205}_{-951}	$3.218^{+44.809}_{-2.719}$

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

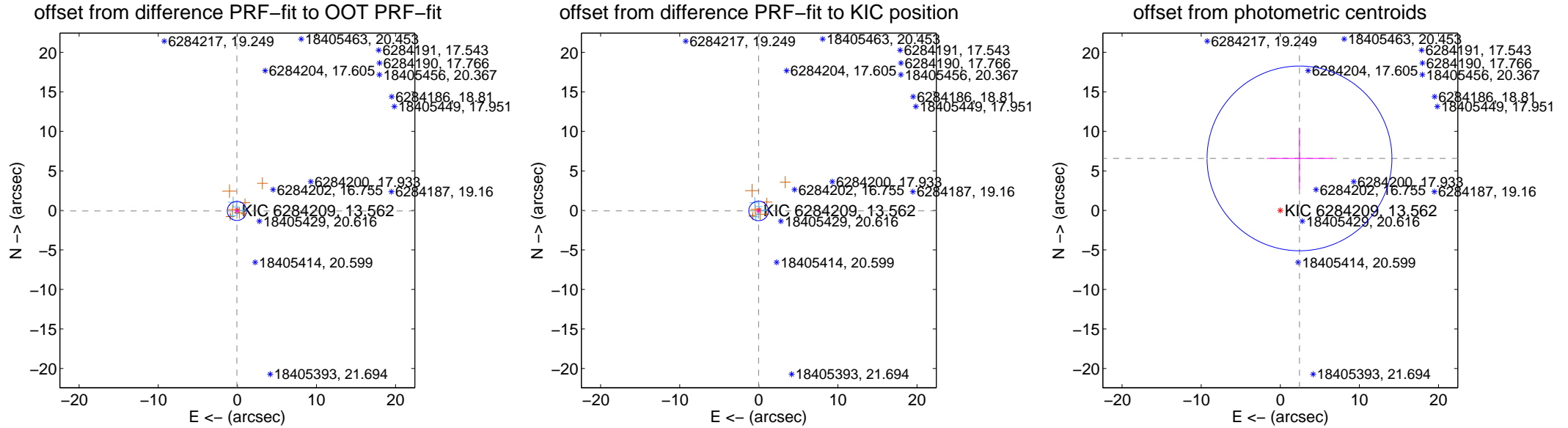
DV Centroid Data

Supplemental centroid analysis for 006284209-05. Kepler magnitude: 13.56. Transit SNR 1.33

There are 5 quarters with good PRF difference image offsets

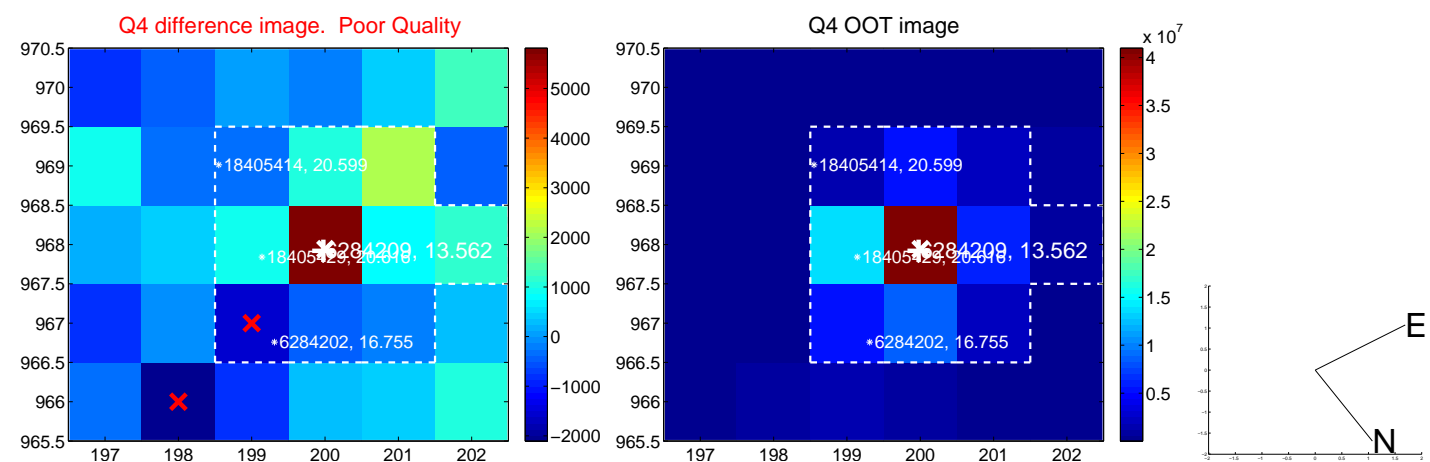
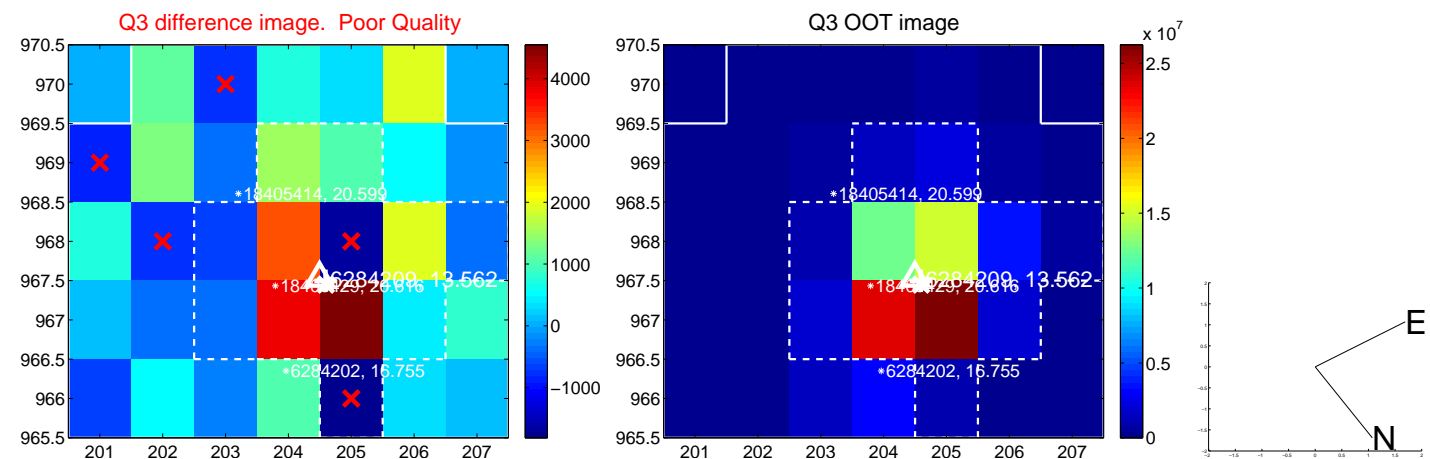
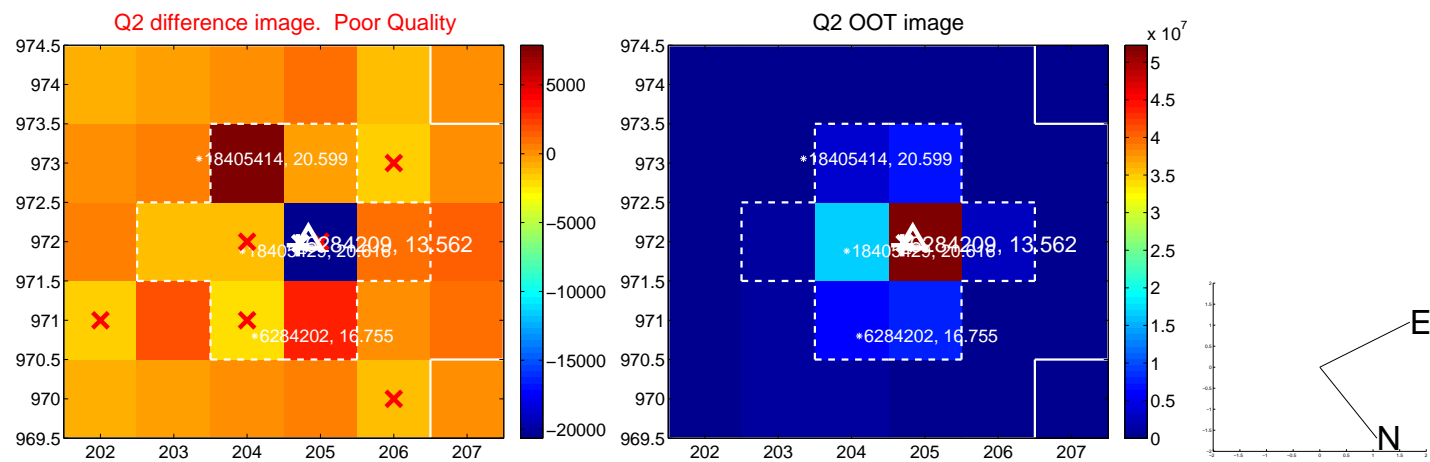
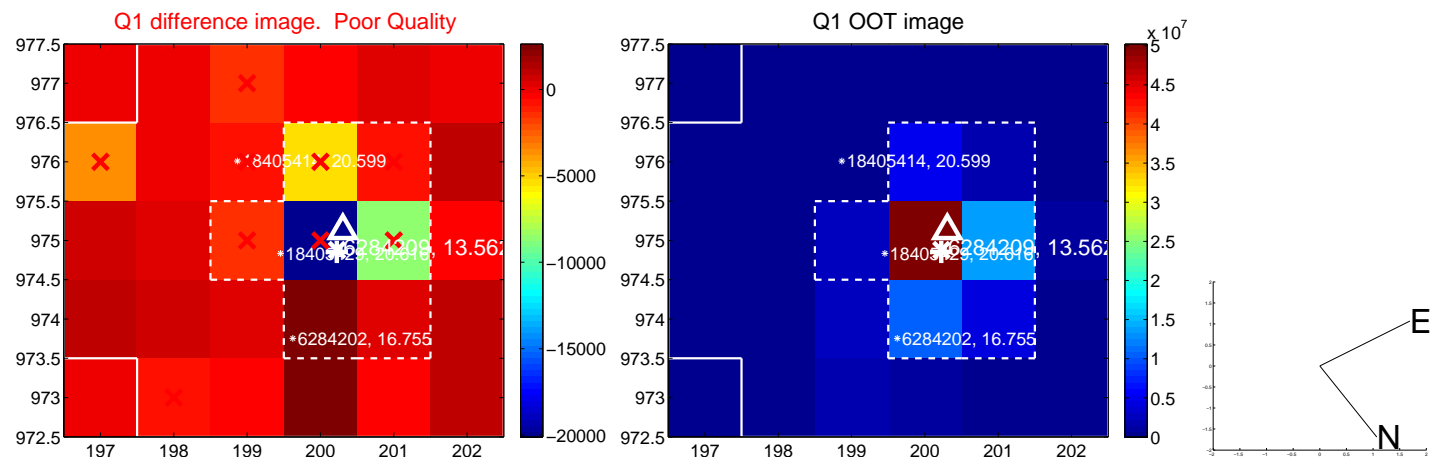
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.088 ± 0.403	0.22	0.061 ± 0.298	-0.064 ± 0.358
PRF-fit source offset from KIC position	0.067 ± 0.413	0.16	0.028 ± 0.290	-0.061 ± 0.372
photometric centroid source offset	7.01 ± 3.89	1.80	-2.43 ± 4.15	6.58 ± 3.86

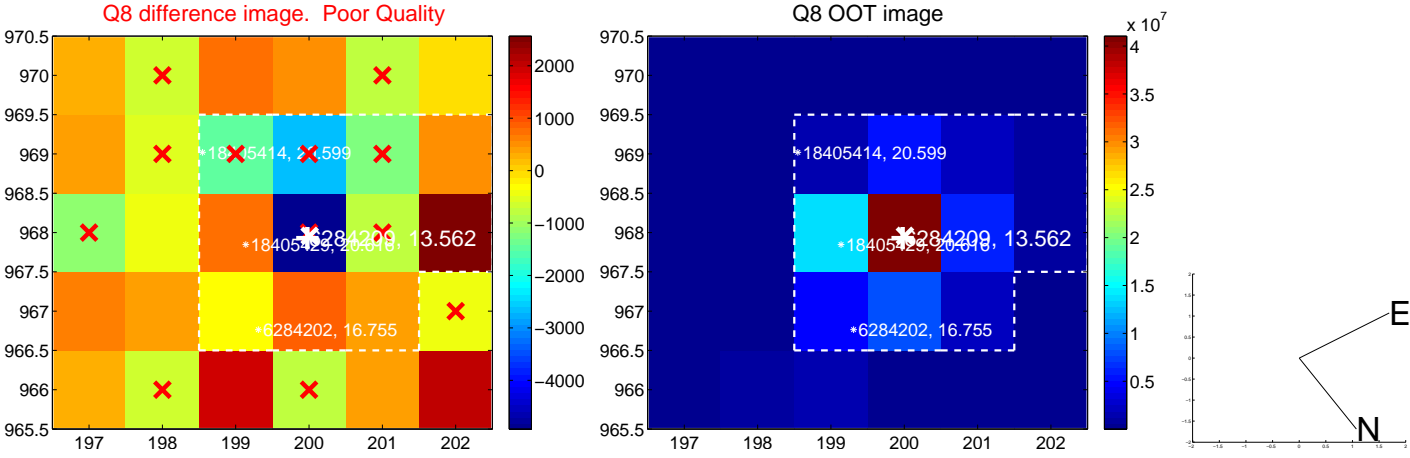
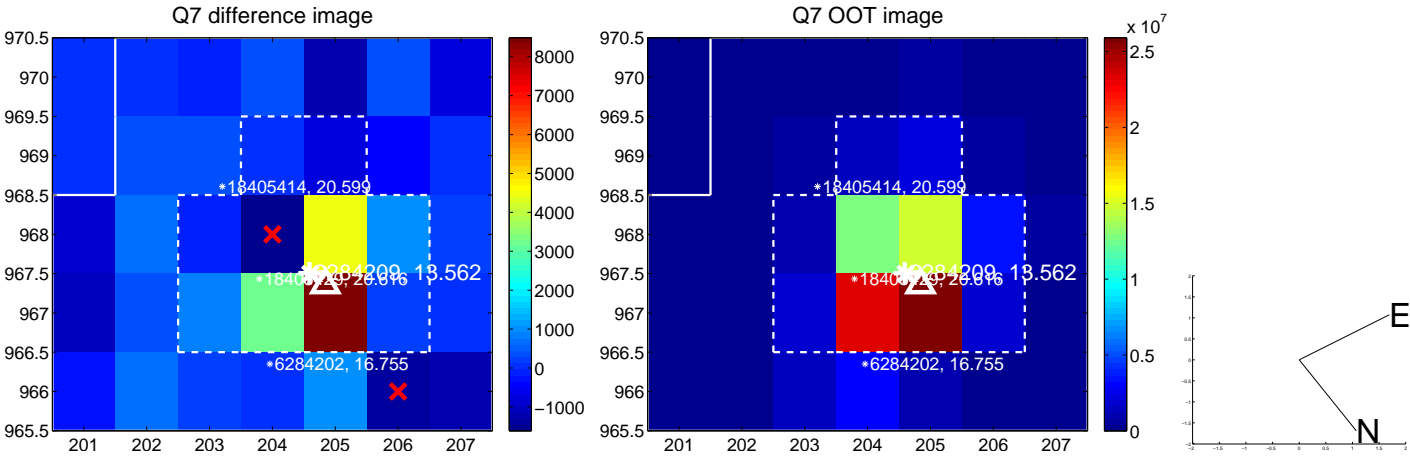
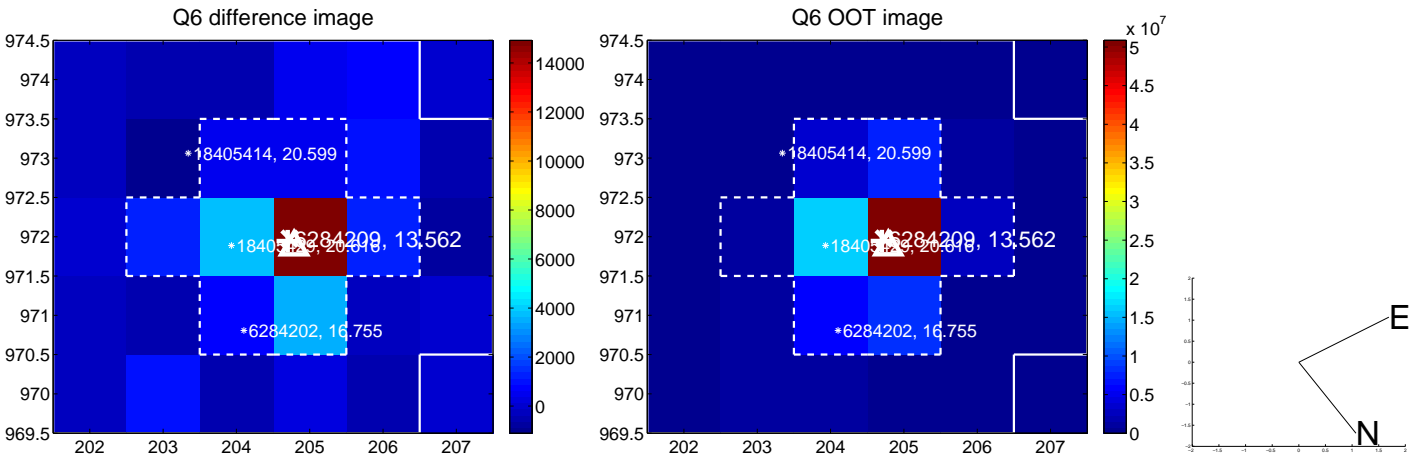
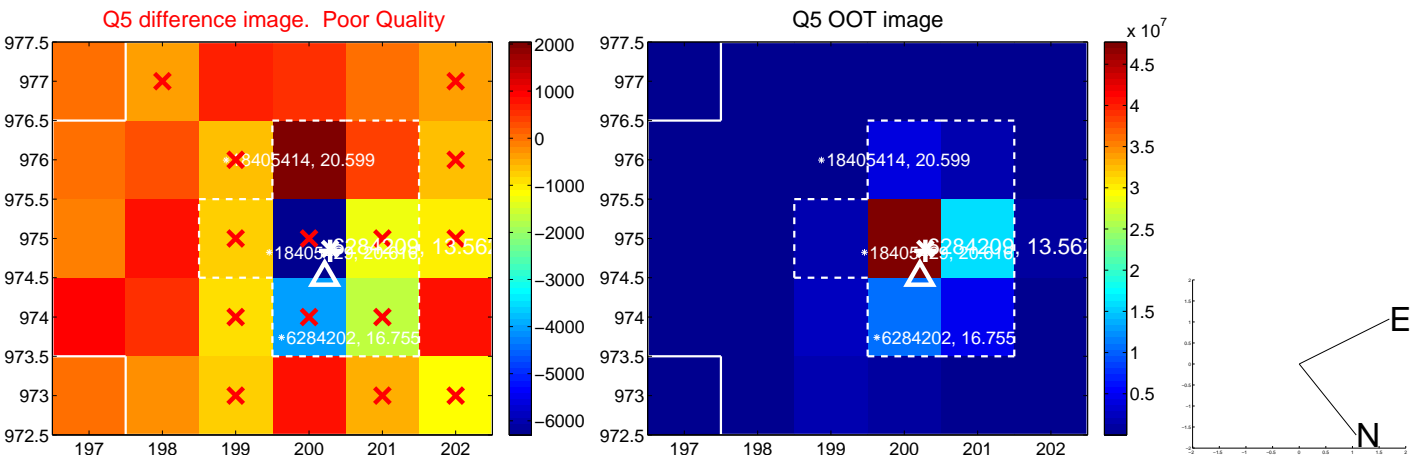


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

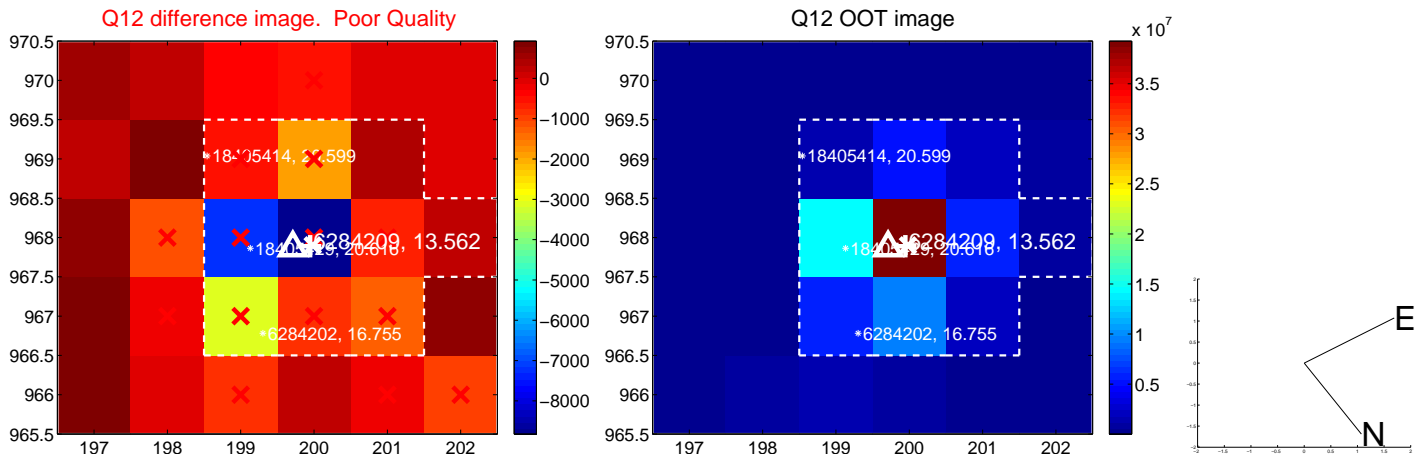
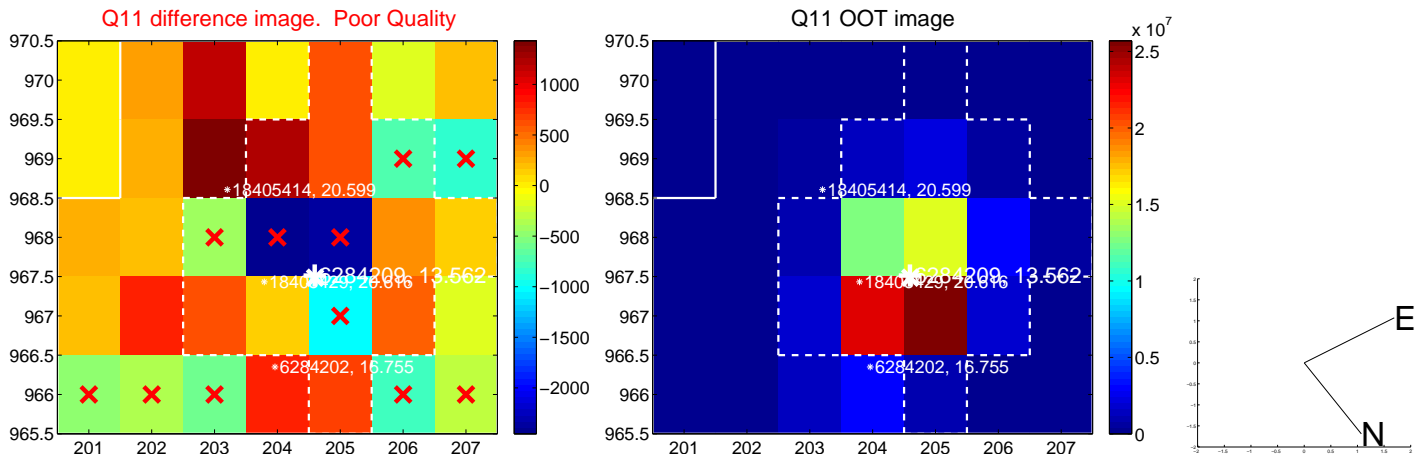
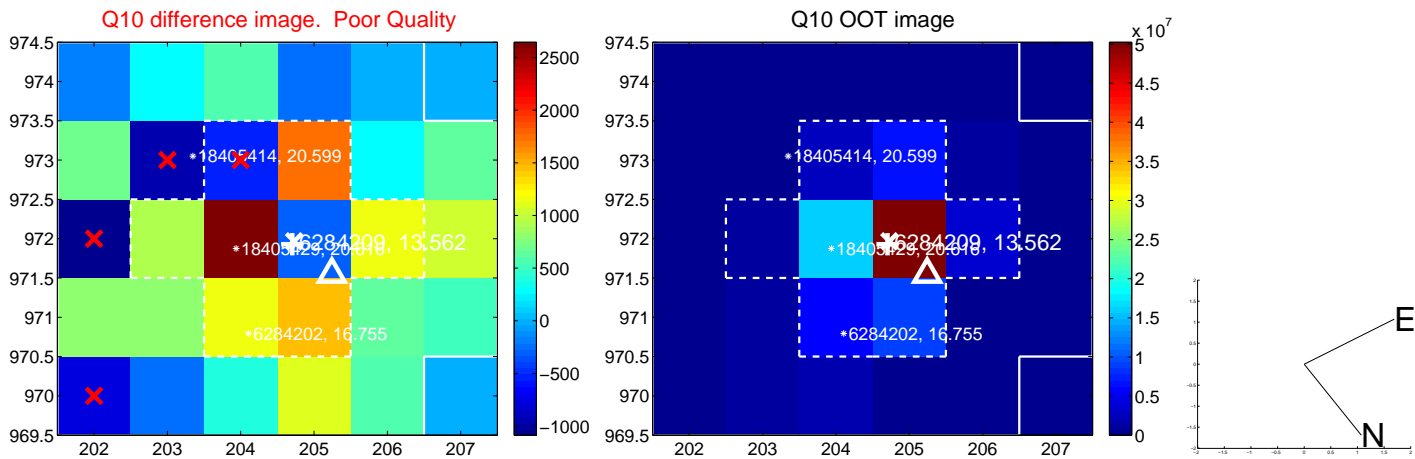
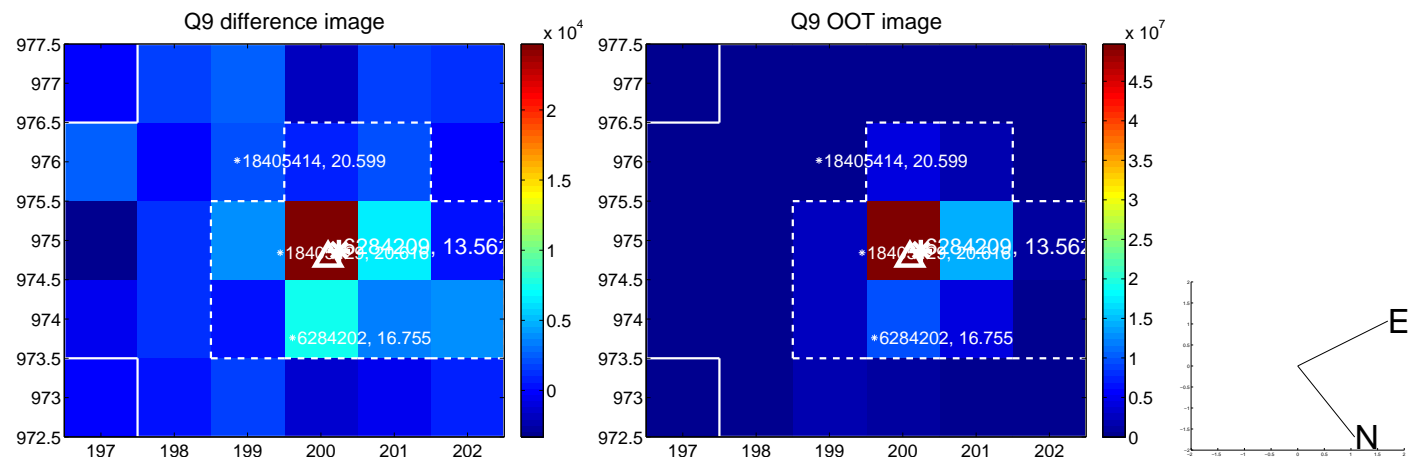
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



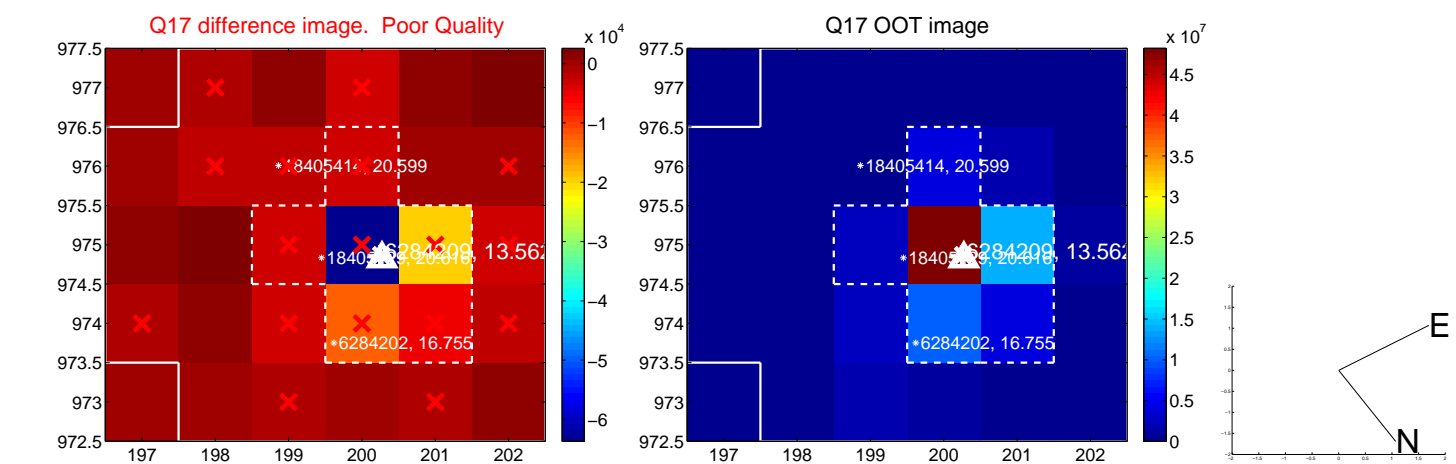
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



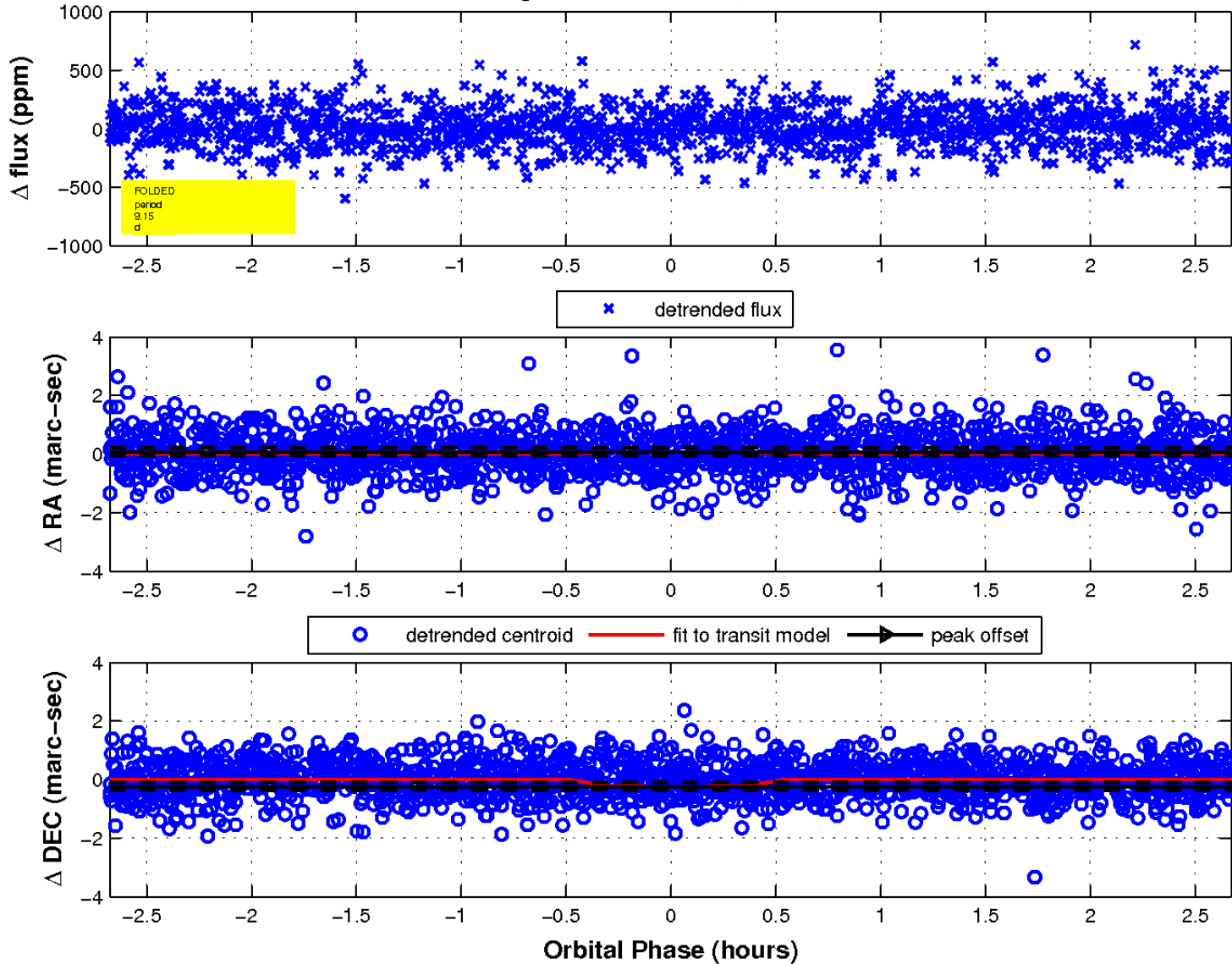
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

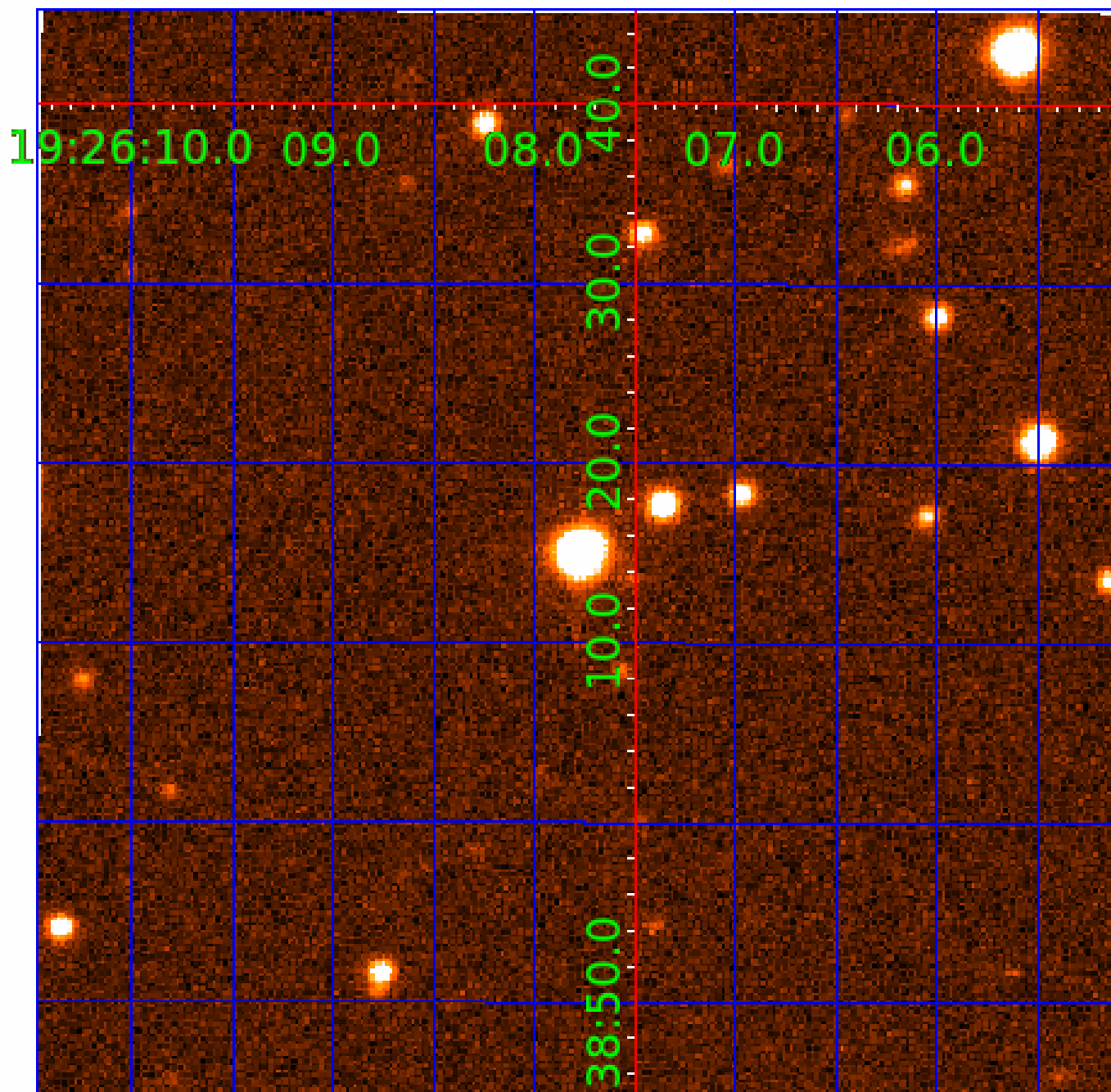


fluxWeightedCentroids, Planet 5 of 6



UKIRT Image

Declination



KIC 006284209

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})
006284209-01	OBS	No	1.305256	131.986253	17.6	9.950	8.2	8.5	1.64	7317	0.70	9496.16
006284209-02	OBS	No	60.034726	180.949070	289.6	1.297	13.8	14.4	1.64	7317	2.85	57.62
006284209-04	OBS	No	13.879301	142.351992	323.3	2.276	13.4	14.0	1.64	7317	3.23	406.12
006284209-05	OBS	No	9.149682	131.840616	35.8	0.892	11.8	1.3	1.64	7317	1.03	707.84
006284209-06	OBS	No	17.911618	137.060159	354.3	1.226	13.3	12.7	1.64	7317	3.17	289.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006284209-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006284209-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006284209-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006284209-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006284209-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

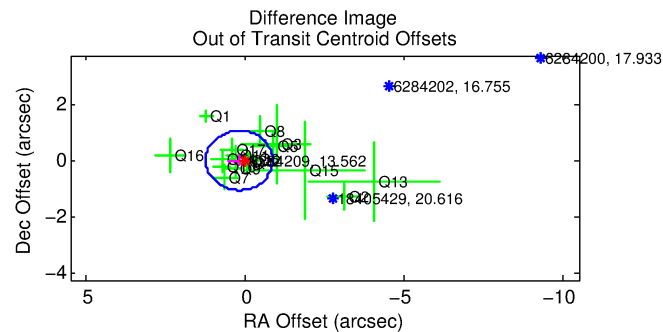
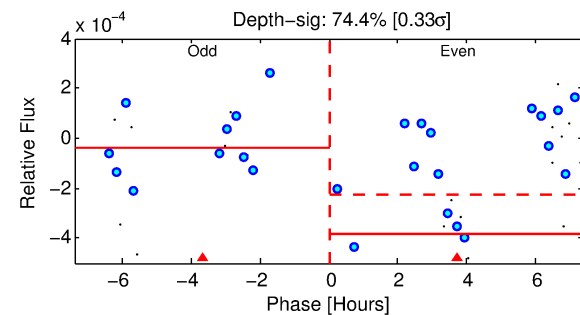
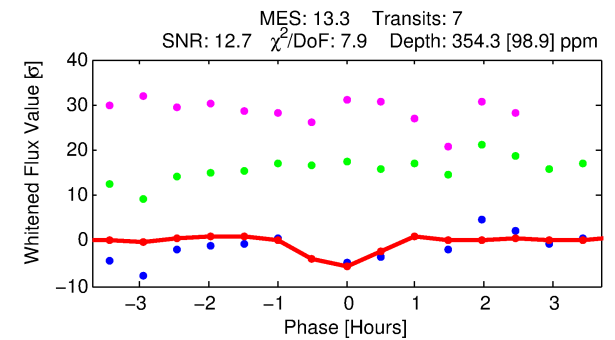
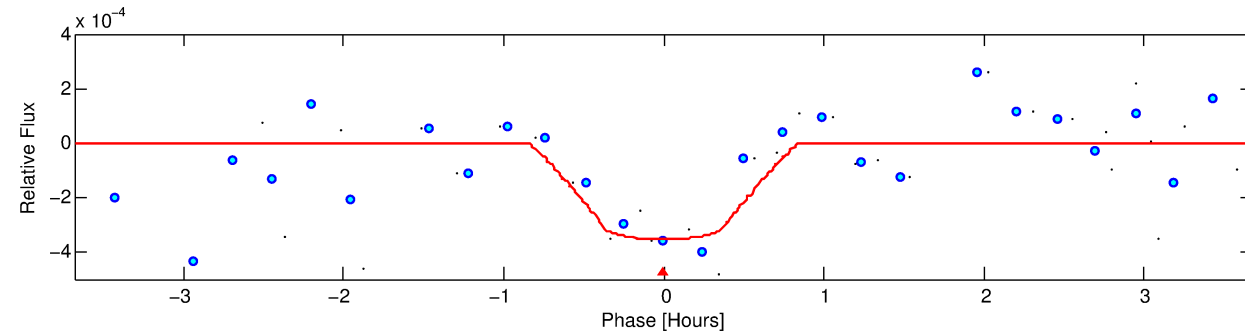
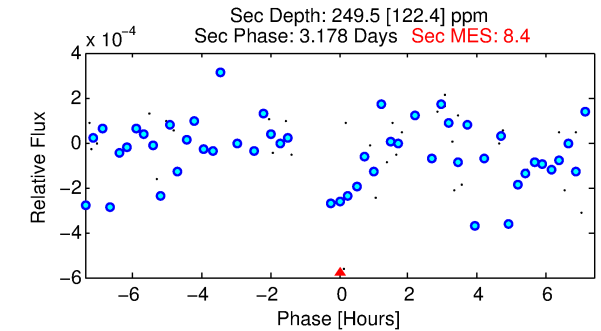
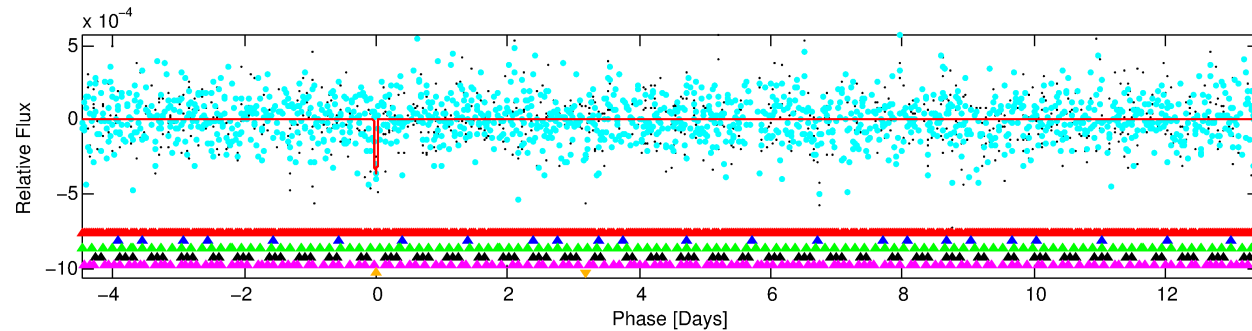
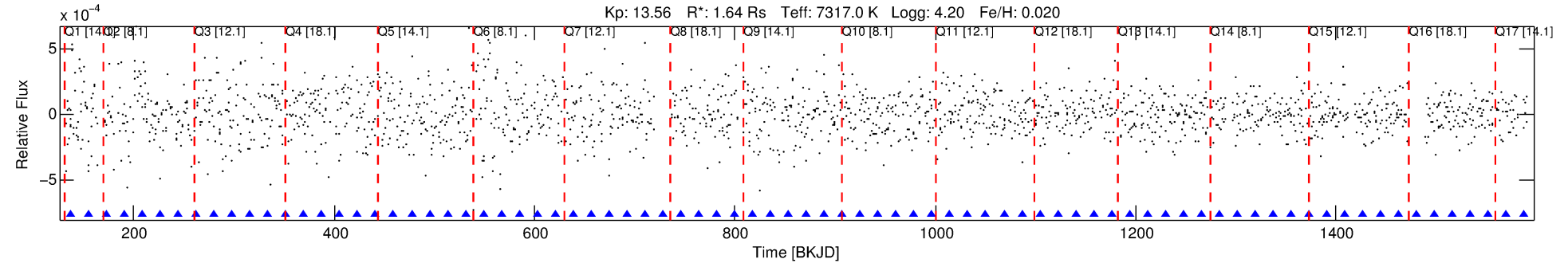
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006284209-06

No Significant Match Found

DV One-Page Summary

KIC: 6284209 Candidate: 6 of 6 Period: 17.912 d



DV Fit Results:

Period = 17.91162 [0.00041] d
Epoch = 137.0602 [0.0173] BKJD
Rp/R* = 0.0177 [0.1103]
a/R* = 108.72 [3900.64]
b = 0.29 [115.25]
Seff = 289.04 [125.98]
Teq = 1051 [115] K
Rp = 3.17 [19.79] Re
a = 0.1548 [0.0442] AU
Ag = 326.98 [4080.41] [0.08 σ]
Teffp = 6913 [21556] K [0.27 σ]

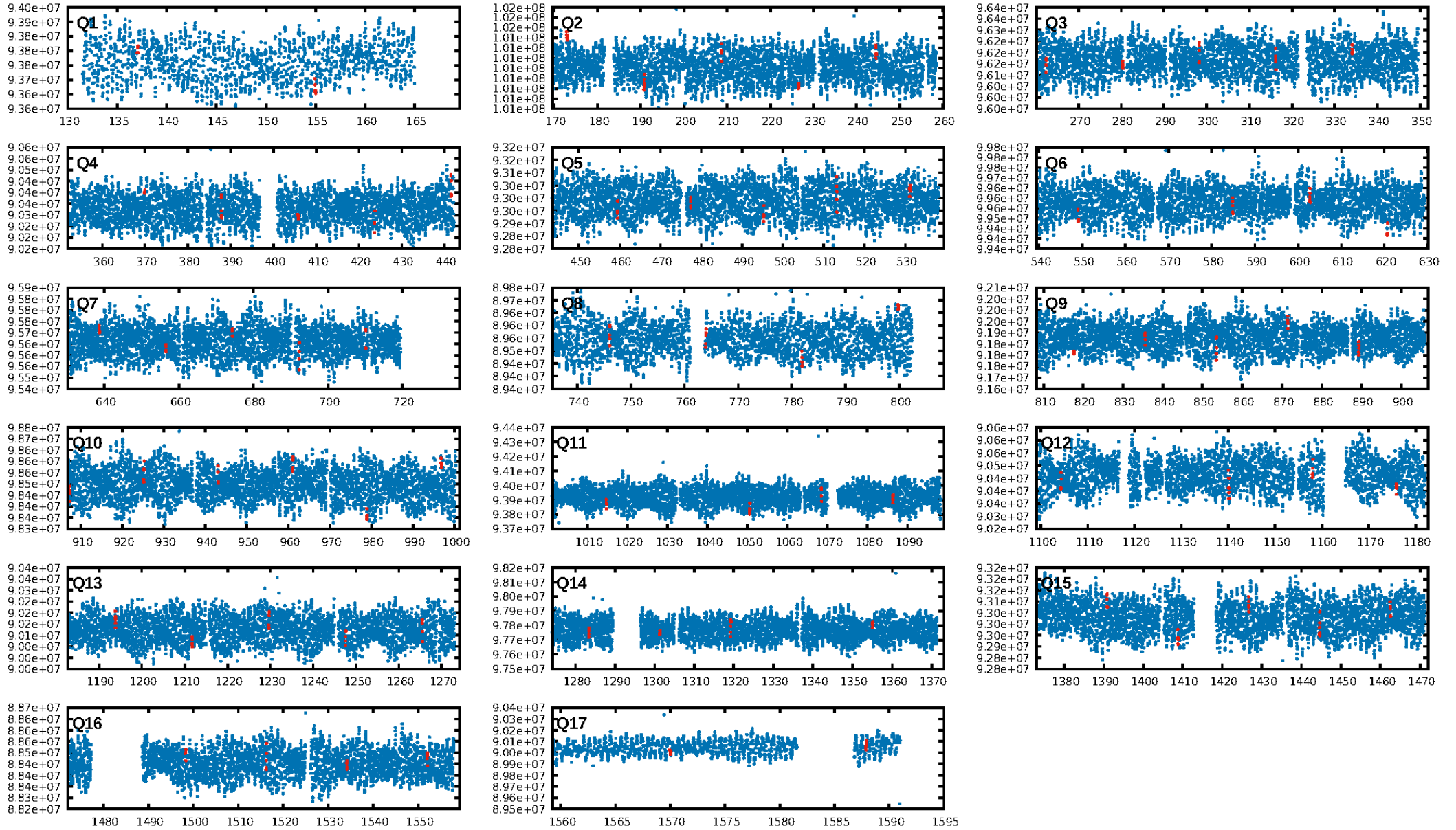
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [37.44 σ]
LongPeriod-sig: 100.0% [566.31 σ]
ModelChiSquare2-sig: 80.1%
ModelChiSquareGof-sig: 93.1%
Bootstrap-pfa: 2.09e-32
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -1.246
Centroid-sig: 37.6%
Centroid-so: 0.468 arcsec [1.01 σ]
OotOffset-rm: 0.193 arcsec [0.55 σ]
KicOffset-rm: 0.180 arcsec [0.48 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.35 [6/17]
DiffImageOverlap-fno: 0.88 [15/17]

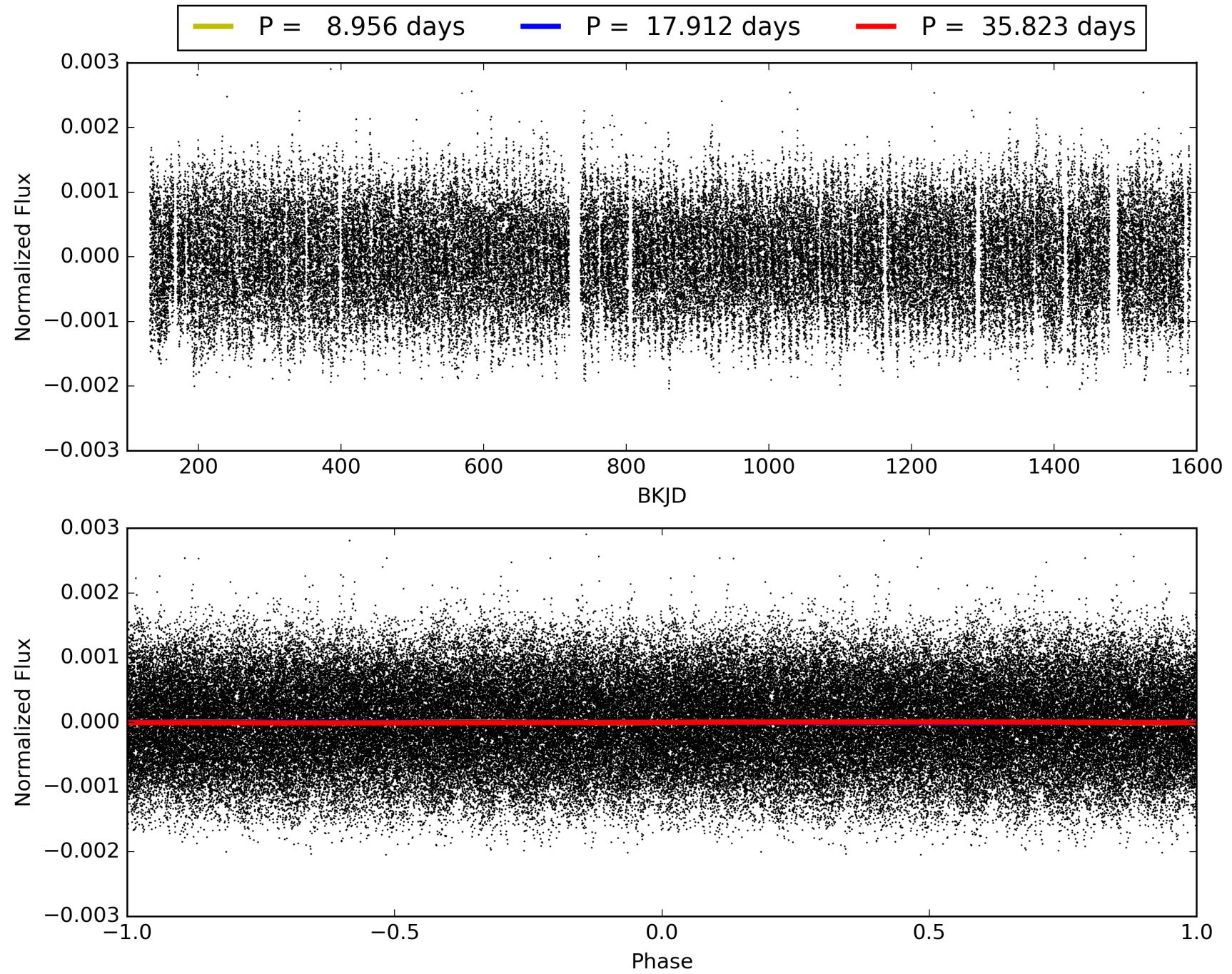
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:14:05 Z

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

TCE 006284209-06, PDC Light Curves

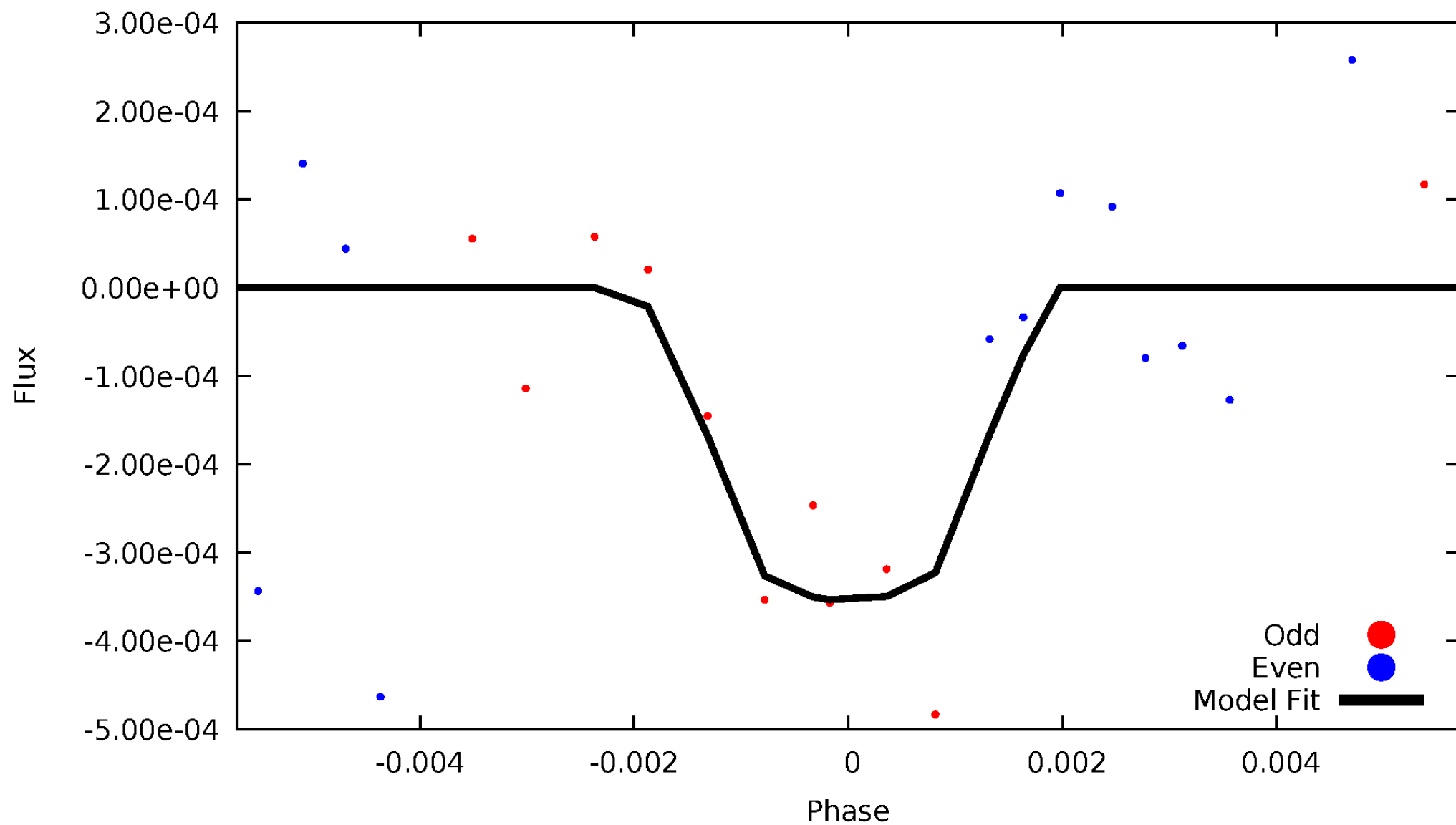


TCE 006284209-06



DV Odd/Even

TCE 006284209-06

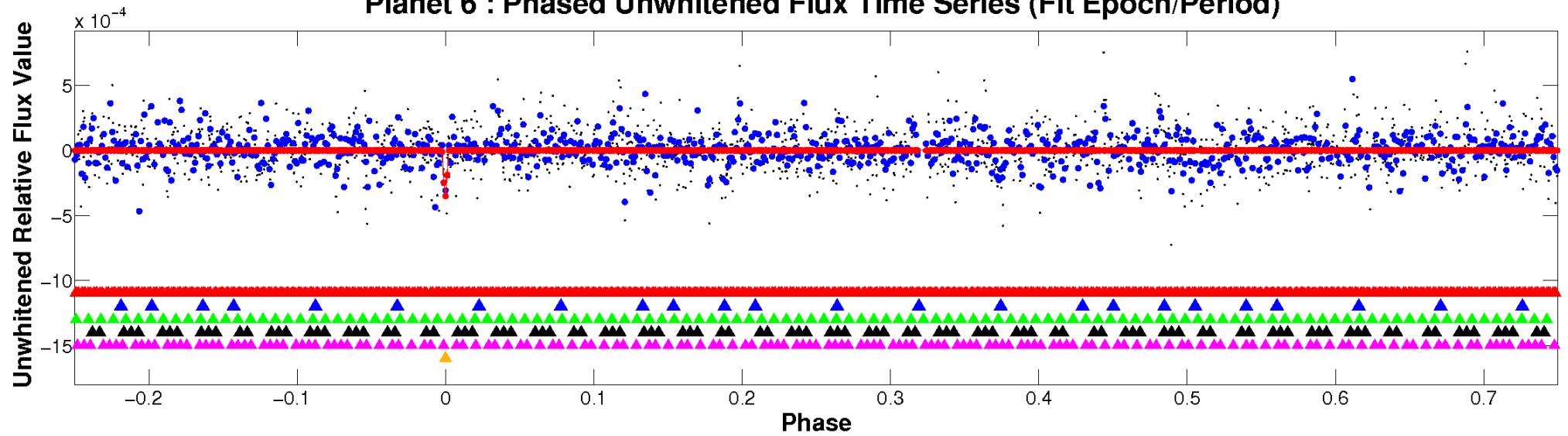


ALT Odd/Even

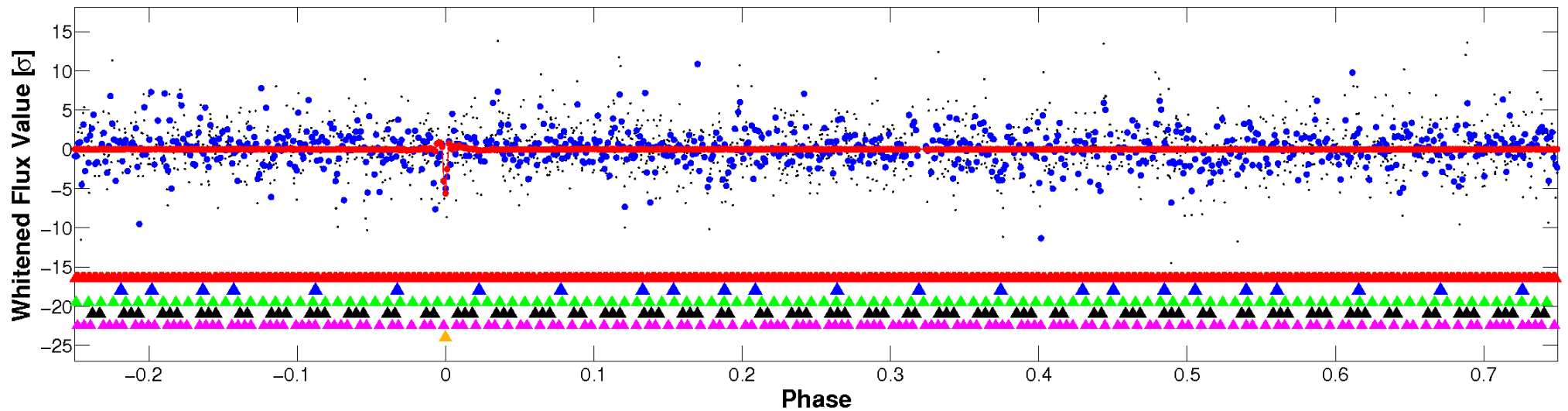
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

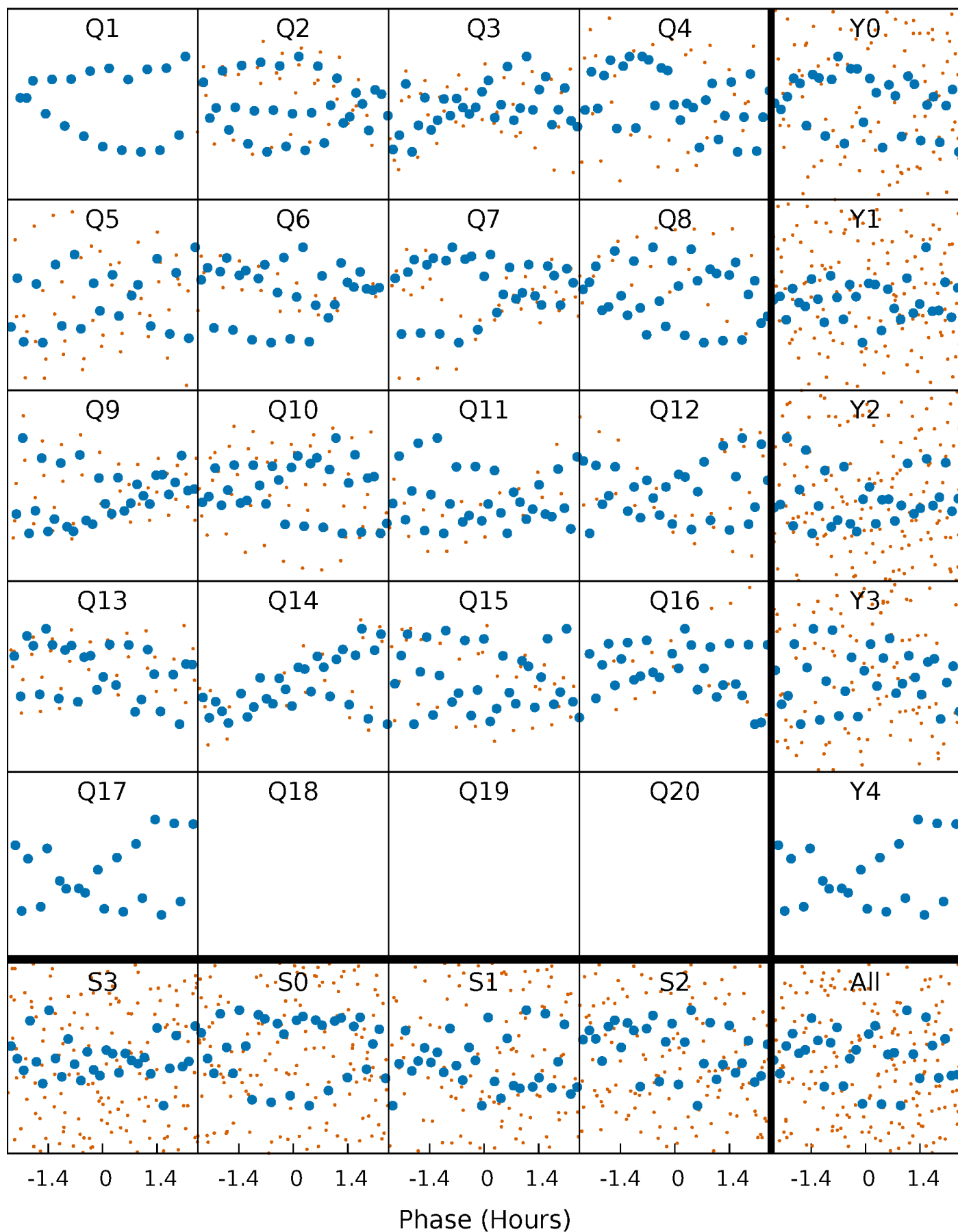


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



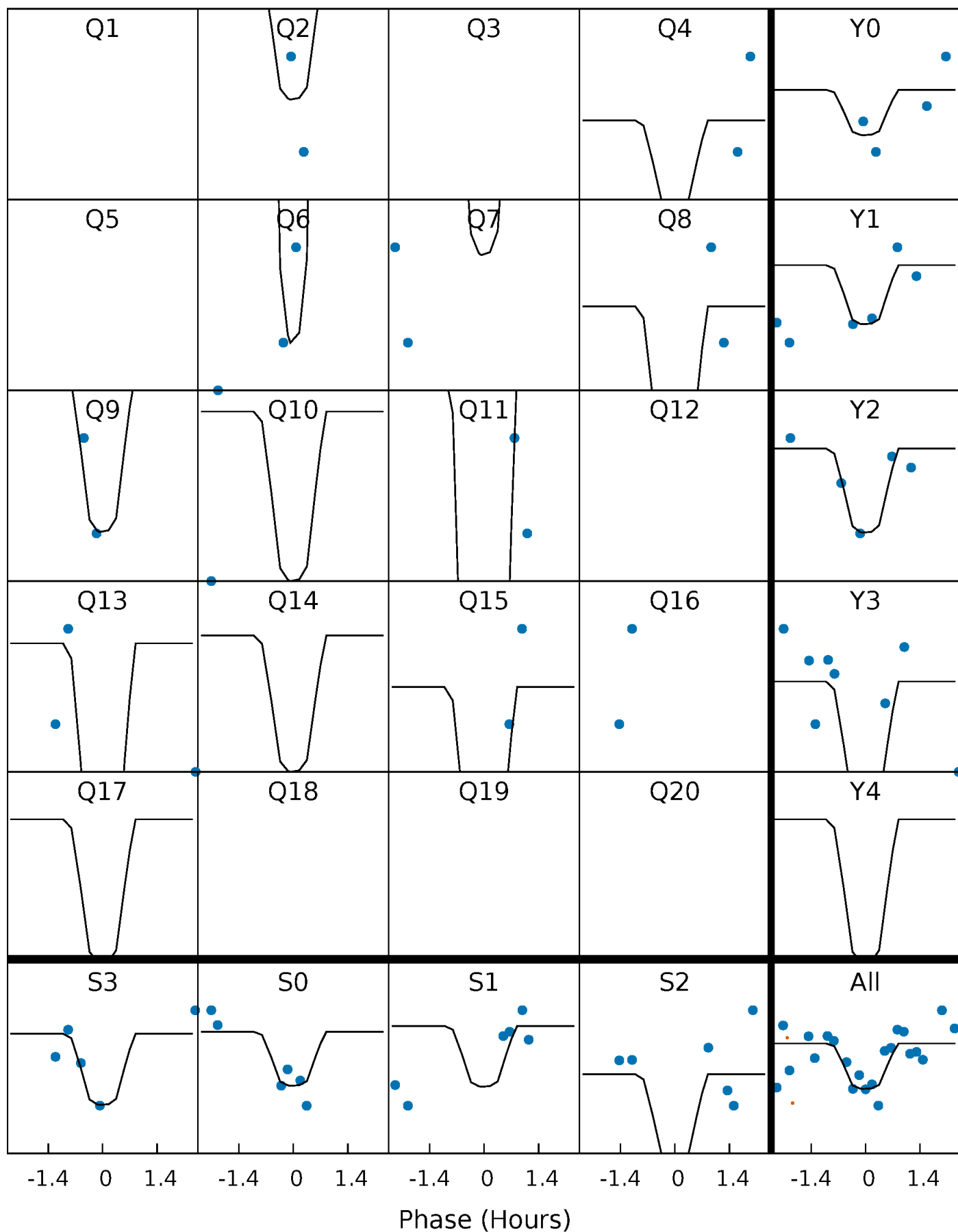
PDC Quarter-Phased Transit Curves

TCE 006284209-06 P= 17.911618 Days $T_0=137.060159$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006284209-06 P= 17.911618 Days $T_0=137.060159$ (BKJD)

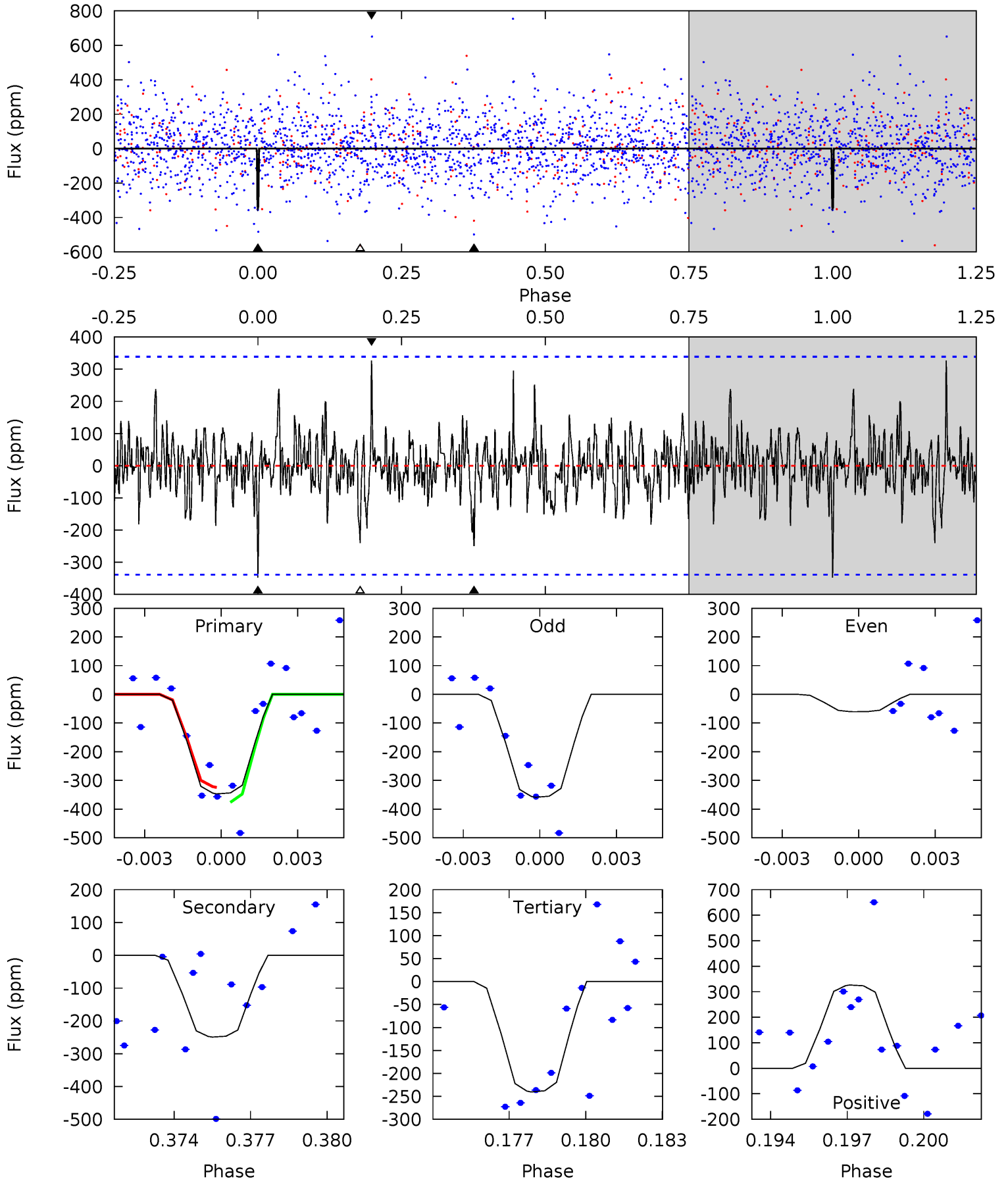


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006284209-06, P = 17.911618 Days, E = 119.148541 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.39	3.87	3.73	5.07	5.26	2.97	1.10	1.66	0.32	0.14	-1.20	1.72	1.02	0.48	0.41



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006284209

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7317^{+232}_{-319}	$4.195^{+0.090}_{-0.210}$	$0.020^{+0.200}_{-0.350}$	$1.642^{+0.581}_{-0.249}$	$1.538^{+0.226}_{-0.226}$	$0.490^{+0.244}_{-0.259}$
	+3%/-4%	+2%/-5%	+1000%/-1750%	+35%/-15%	+15%/-15%	+50%/-53%
Source	KIC0	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 006284209-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-249 ± 64	$15.77^{+15.54}_{-10.93}$	1488^{+126}_{-98}	3559^{+2039}_{-718}	12^{+126}_{-9}
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 $A_{obs} \gg 1.0$

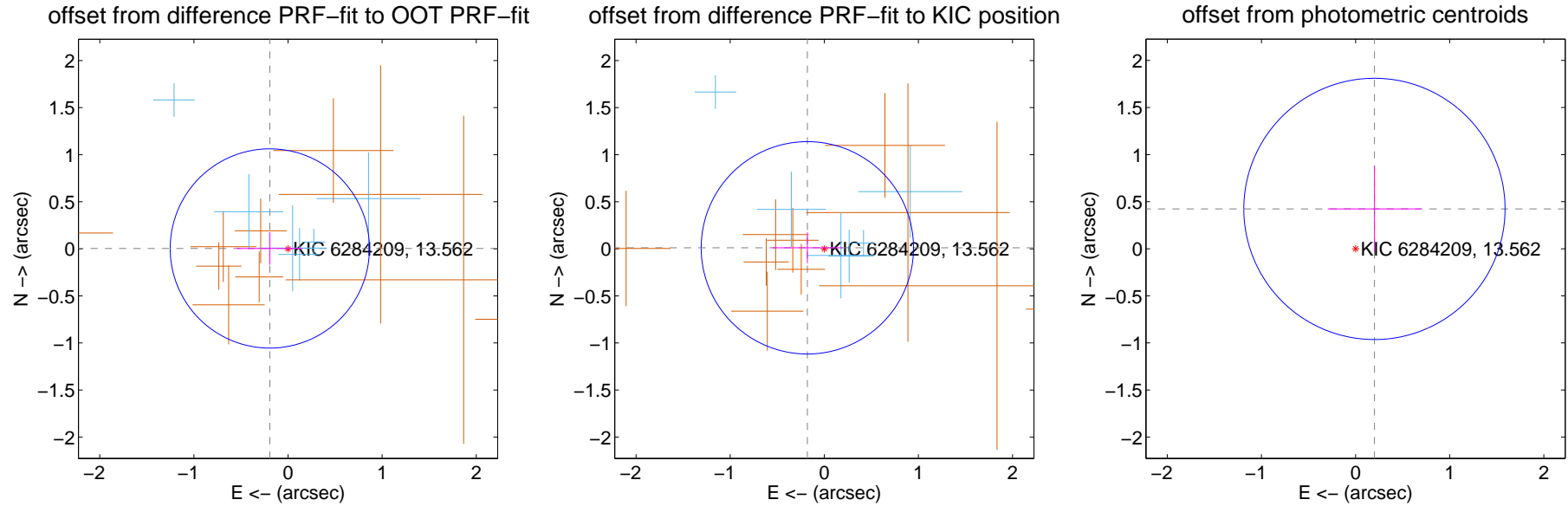
DV Centroid Data

Supplemental centroid analysis for 006284209-06. Kepler magnitude: 13.56. Transit SNR 12.75

There are 6 quarters with good PRF difference image offsets

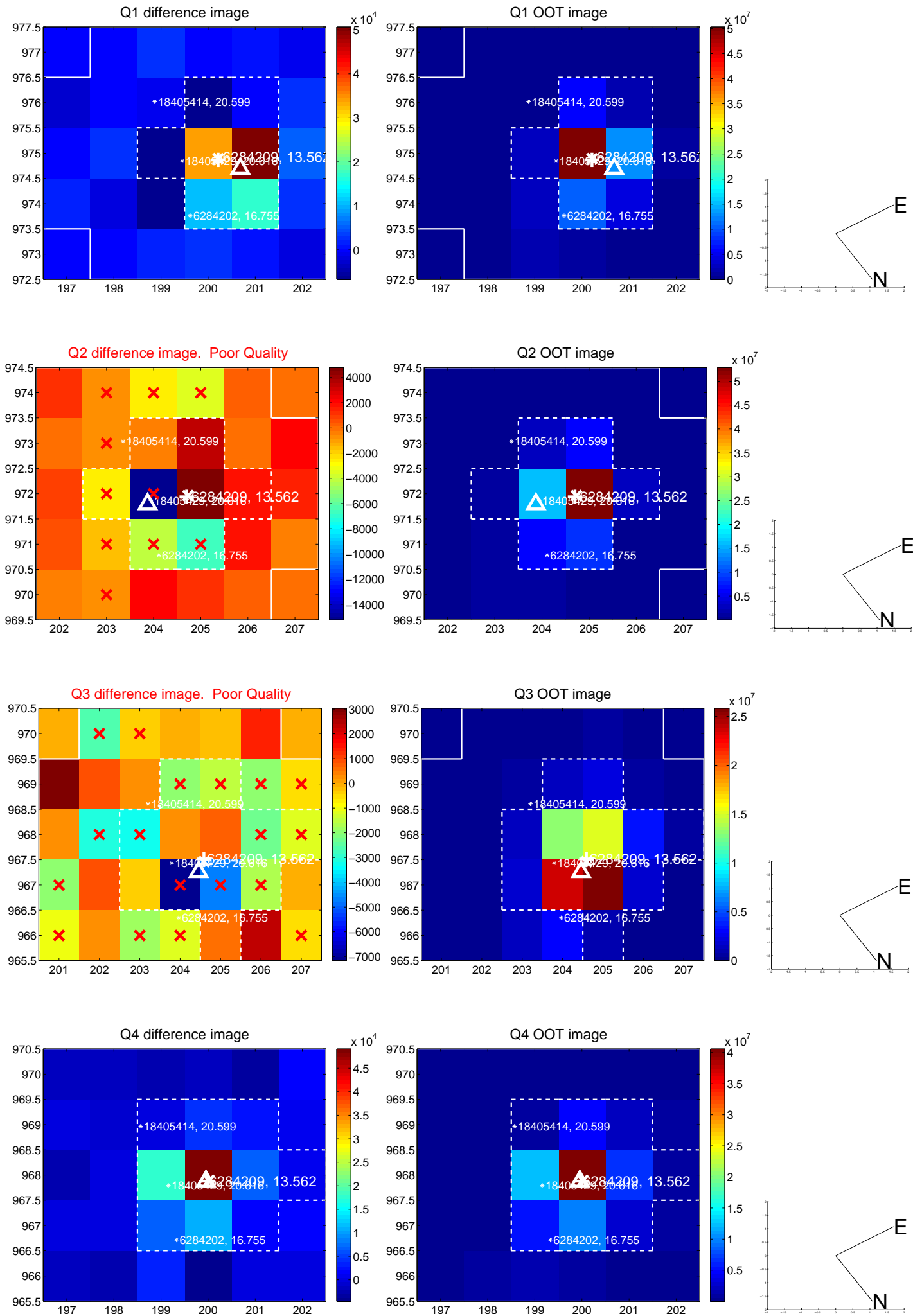
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.193 ± 0.353	0.55	0.193 ± 0.351	0.004 ± 0.173
PRF-fit source offset from KIC position	0.180 ± 0.376	0.48	0.180 ± 0.374	0.011 ± 0.163
photometric centroid source offset	0.47 ± 0.46	1.01	-0.20 ± 0.50	0.42 ± 0.45

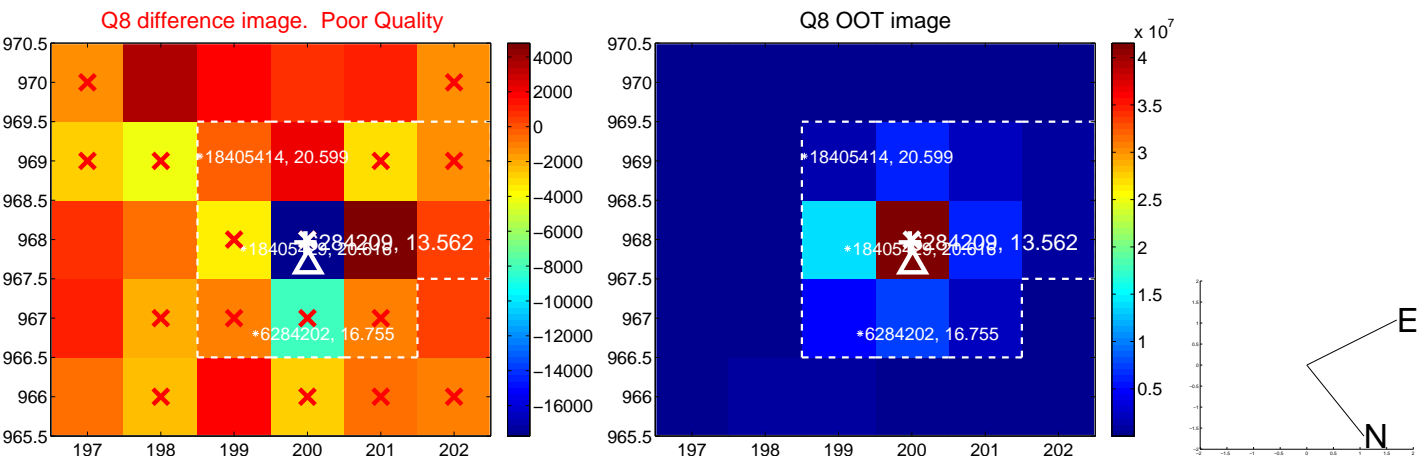
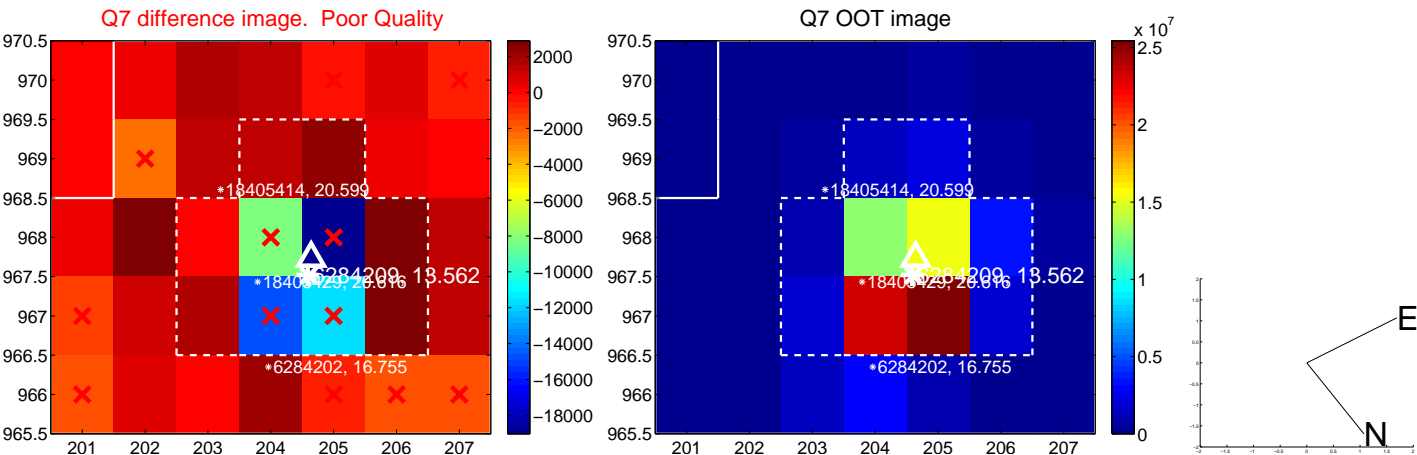
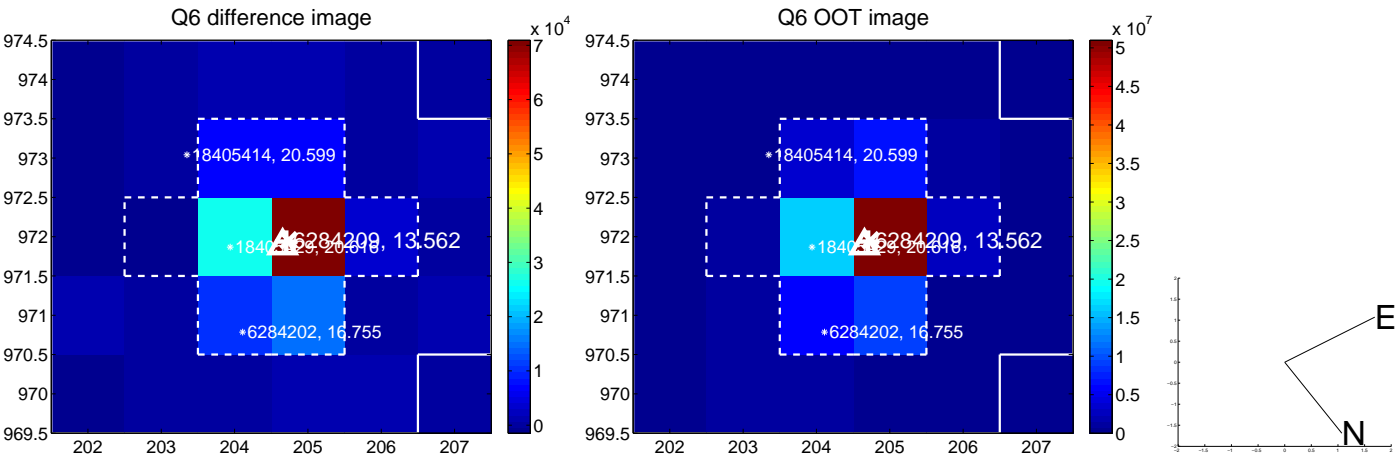
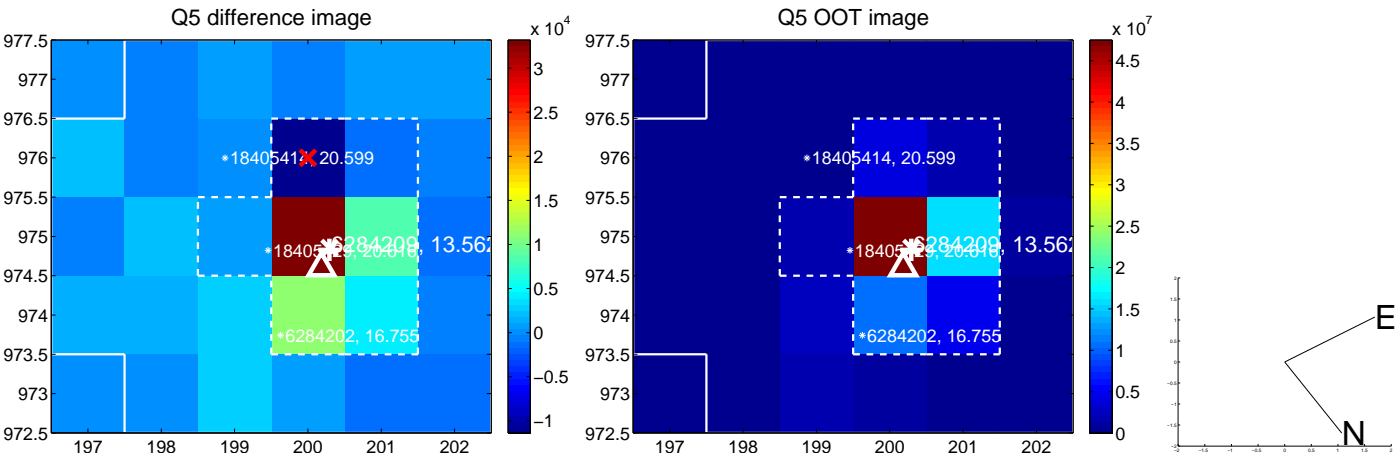


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

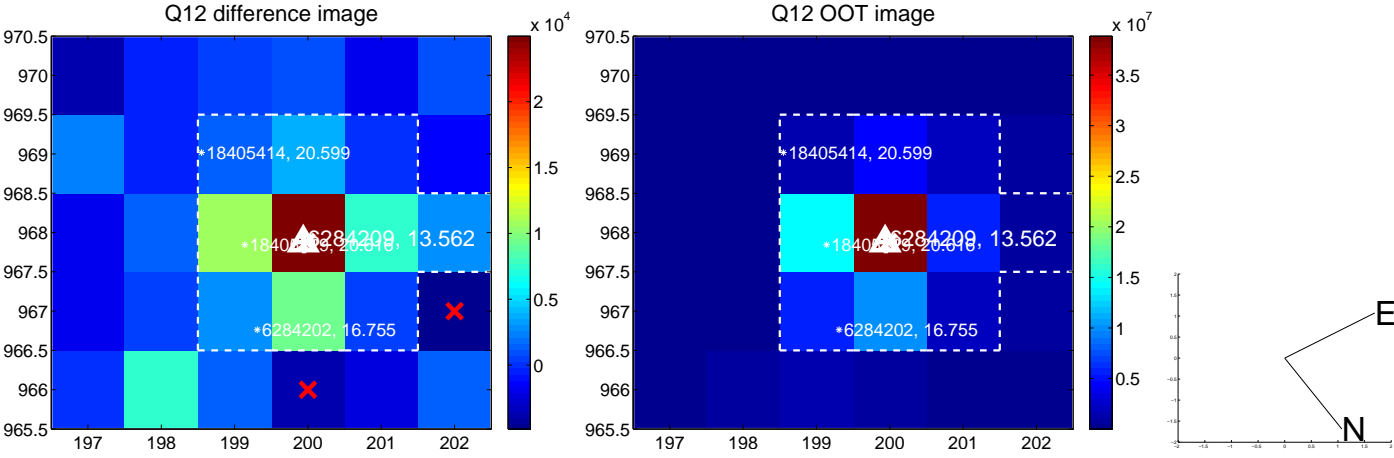
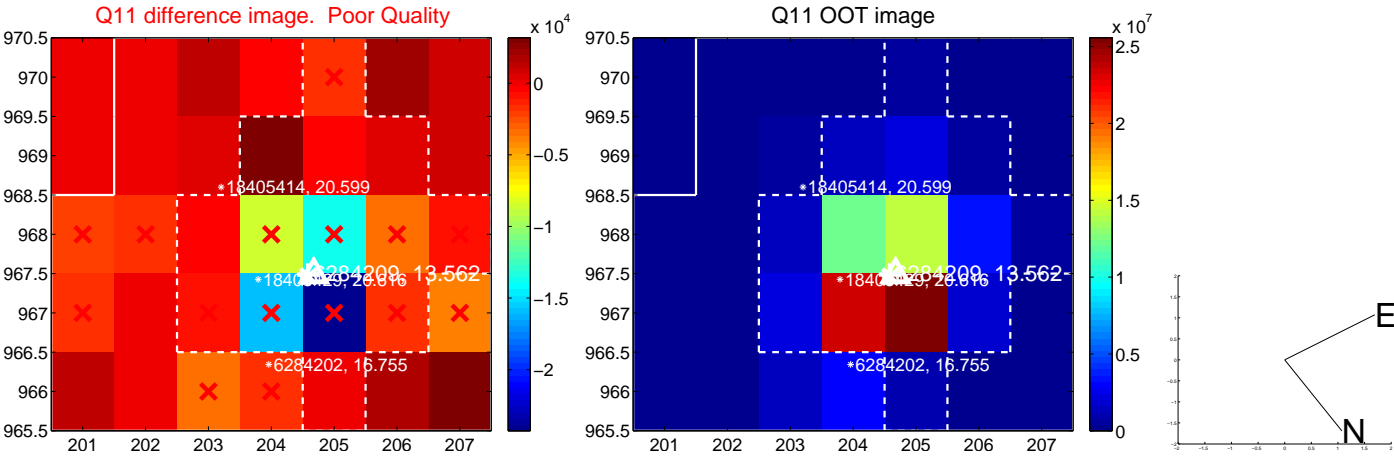
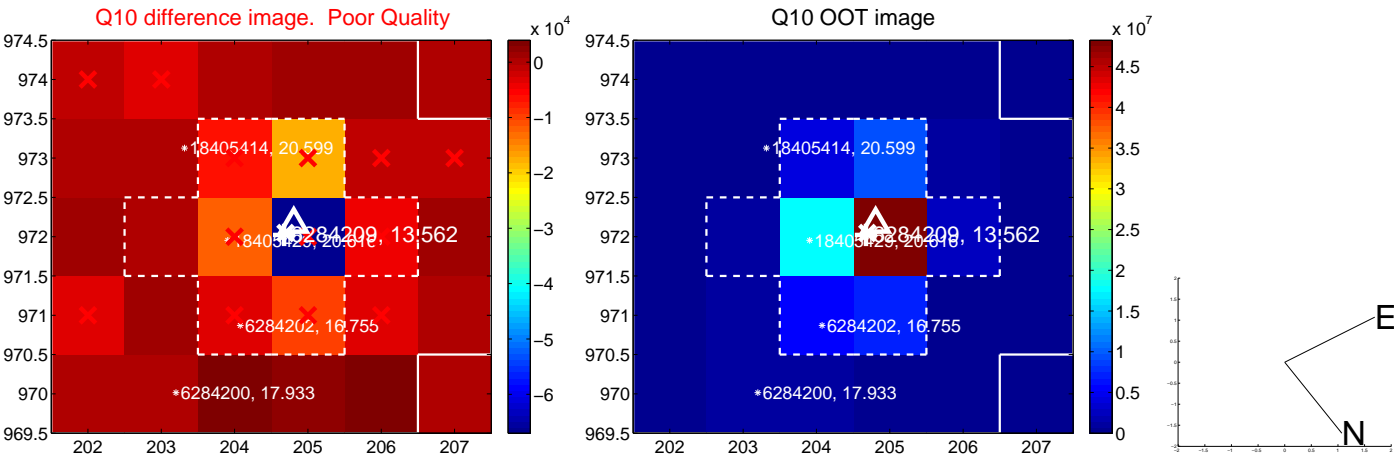
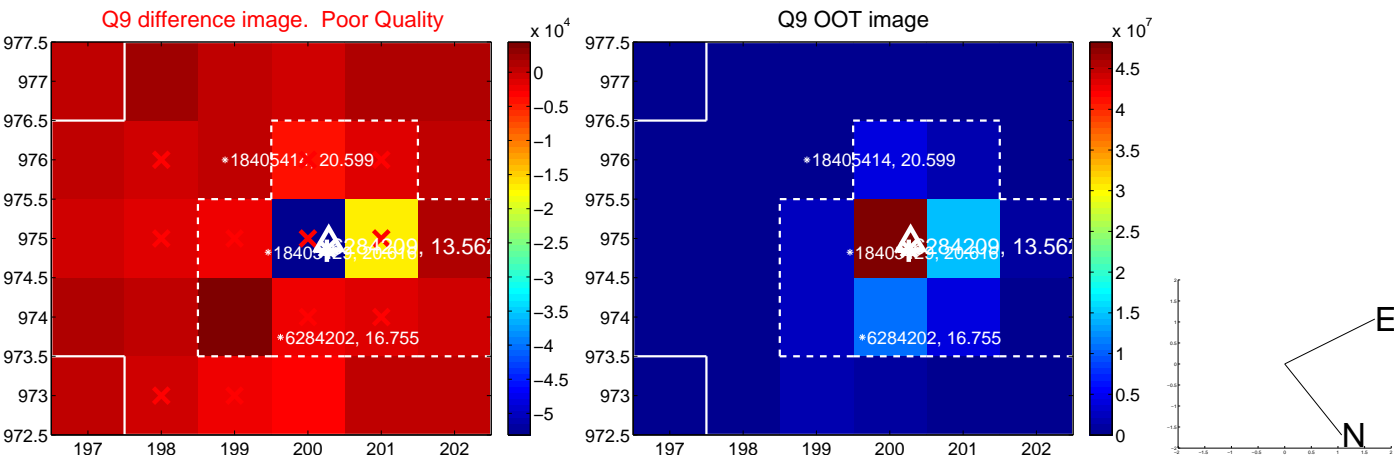
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



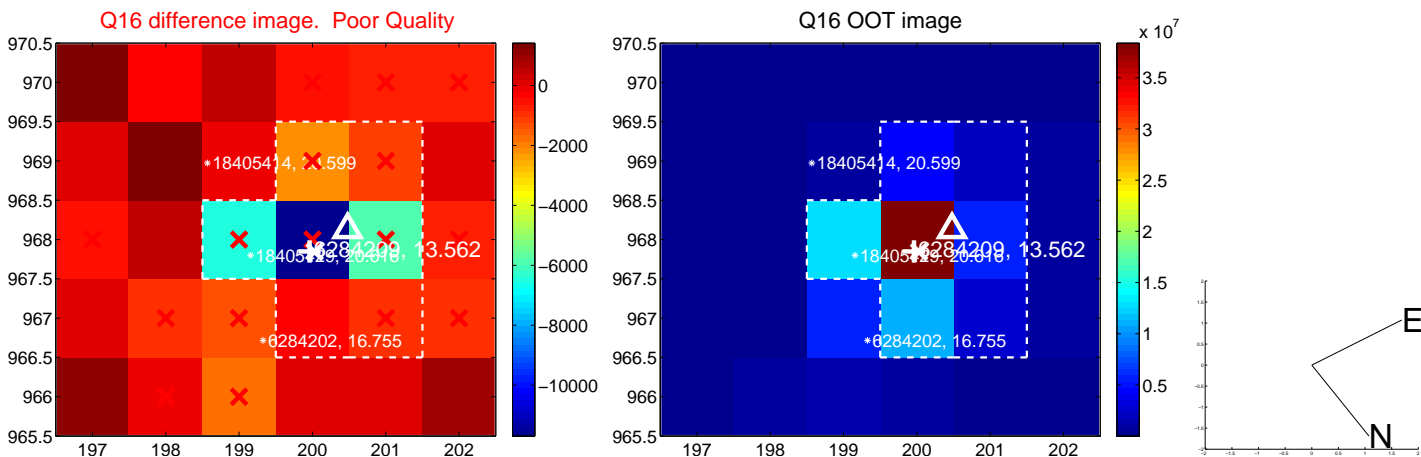
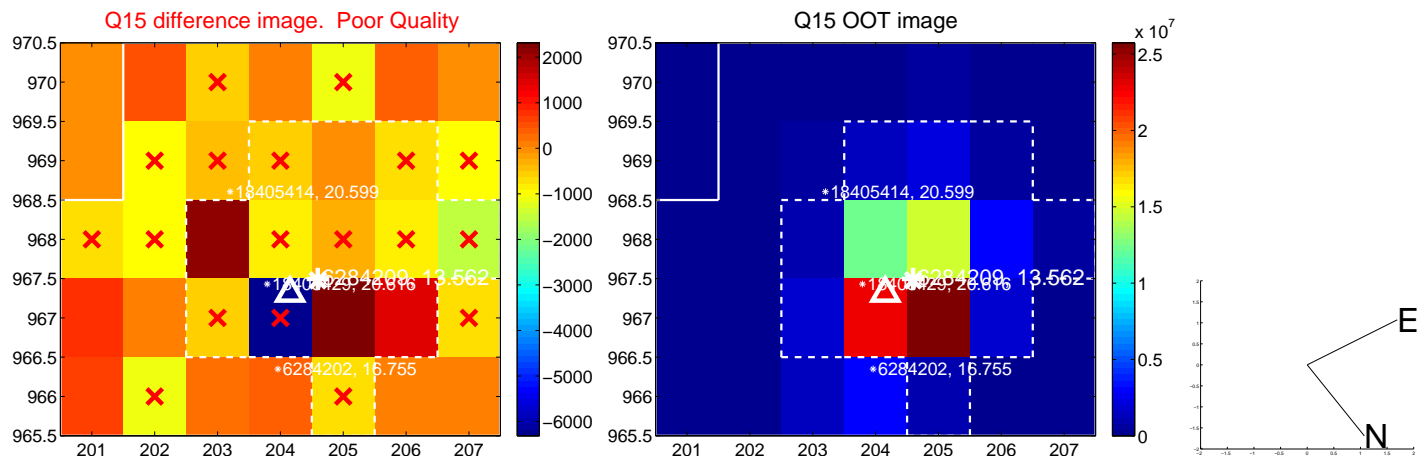
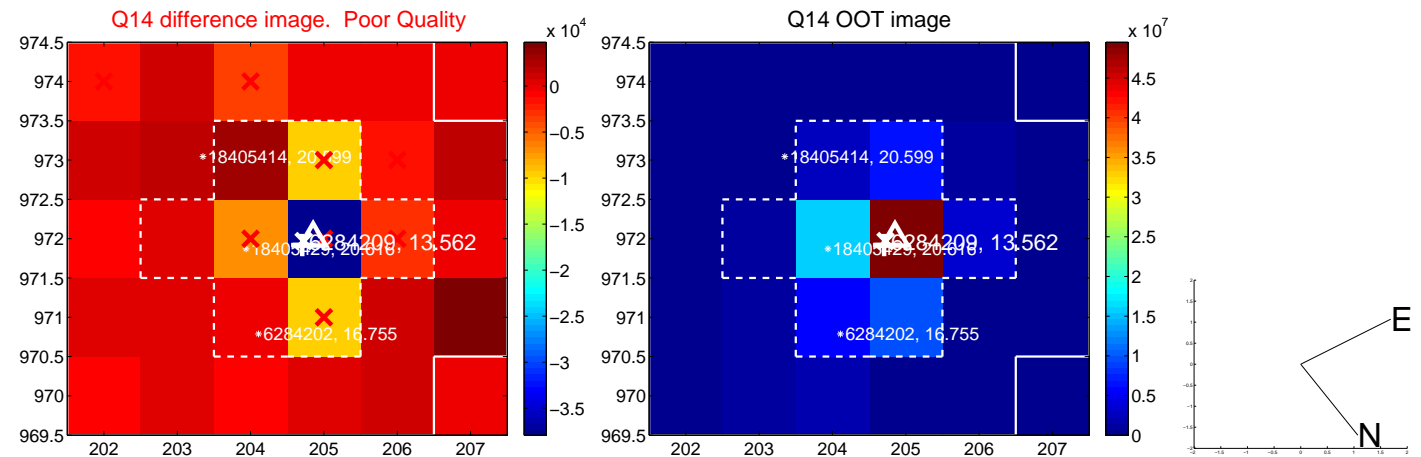
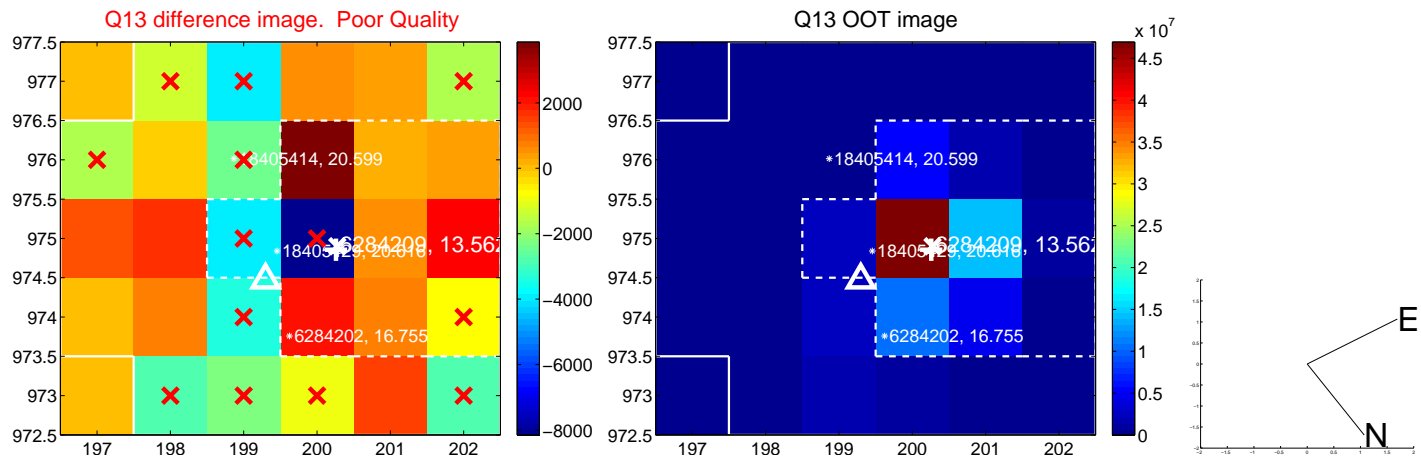
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



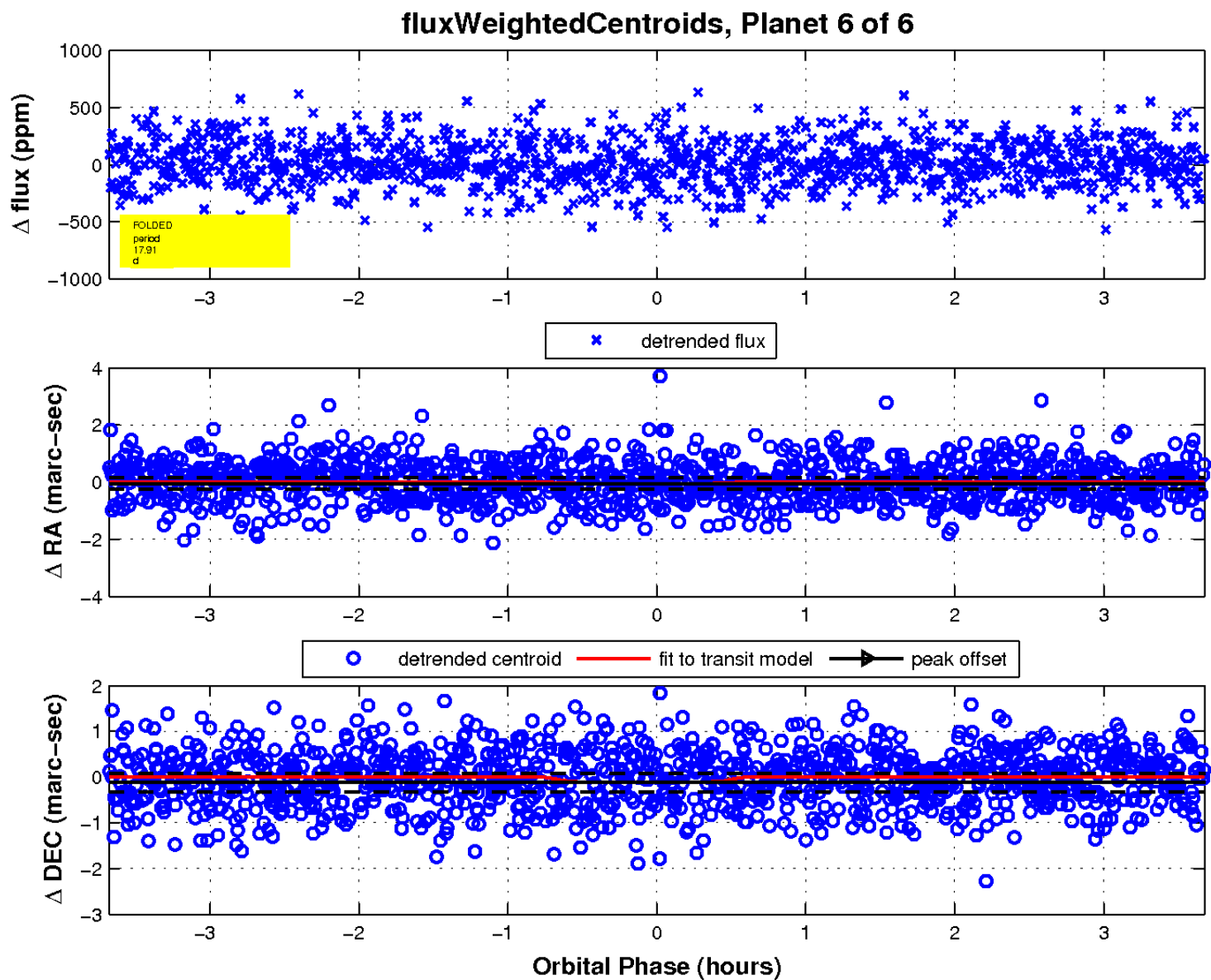
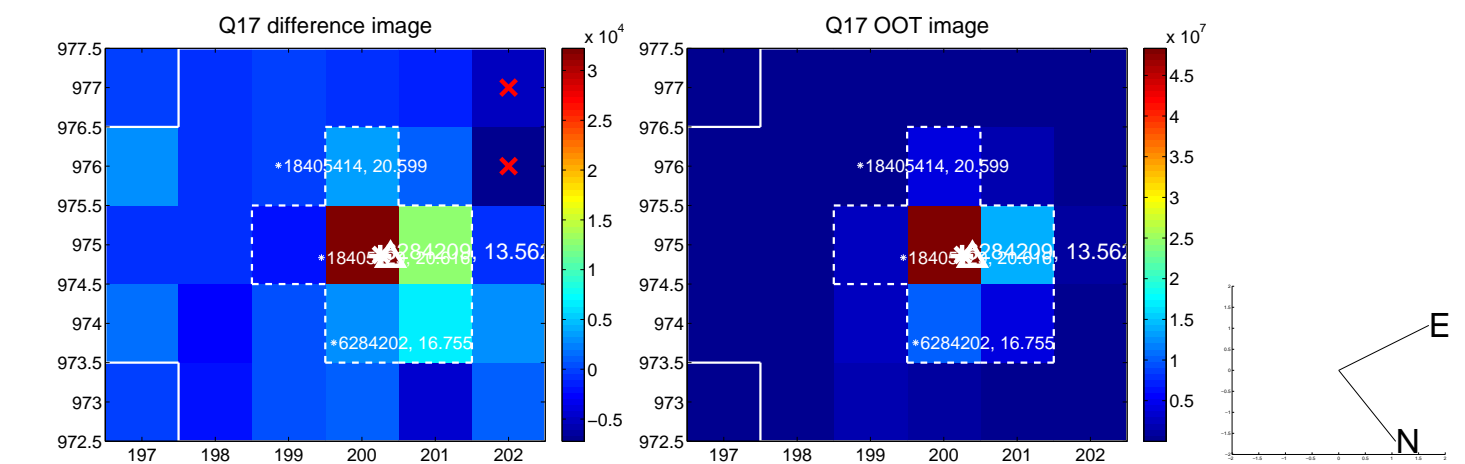
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UKIRT Image

Declination

