KIC 008125219

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 ($S_\oplus$)
008125219-01	OBS	No	1.568216	131.998589	59.3	2.560	9.0	8.9	2.78	7102	2.43	19172.40
008125219-02	OBS	No	0.951696	132.412373	44.2	4.771	9.2	9.0	2.78	7102	2.04	37315.30
008125219-03	OBS	No	1.568144	131.760574	108.0	3.424	12.6	13.6	2.78	7102	3.42	19173.58
008125219-04	OBS	No	105.152818	154.360326	742.9	5.815	11.5	11.9	2.78	7102	9.59	70.38
008125219-05	OBS	No	8.866768	133.840420	453.1	3.500	9.9	-1.0	2.78	7102	5.97	1903.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008125219-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008125219-02	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
008125219-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
008125219-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
008125219-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

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.

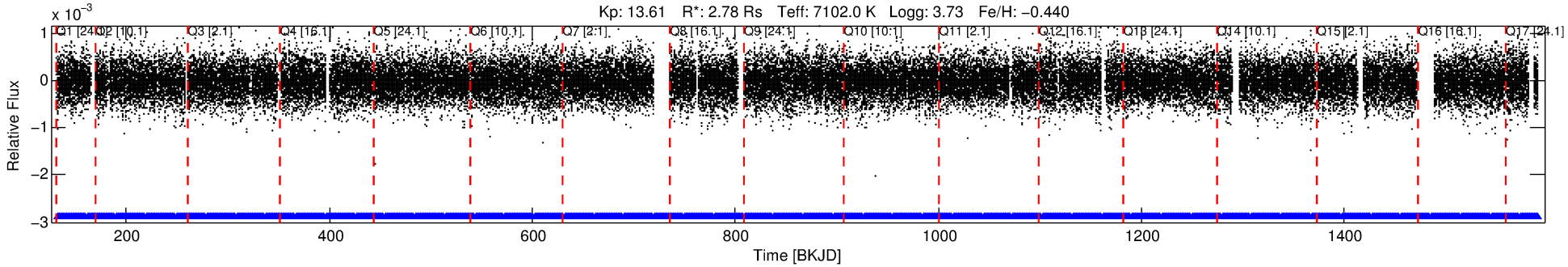
Ephemeris Match Information For 008125219-01

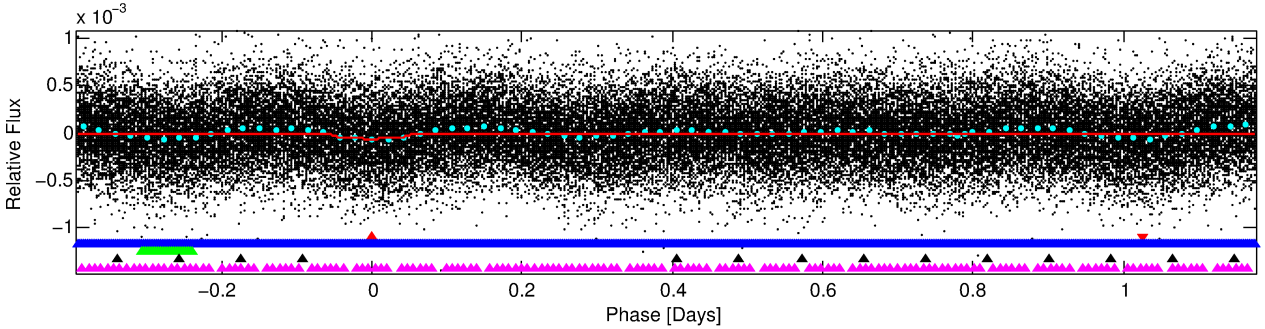
No Significant Match Found

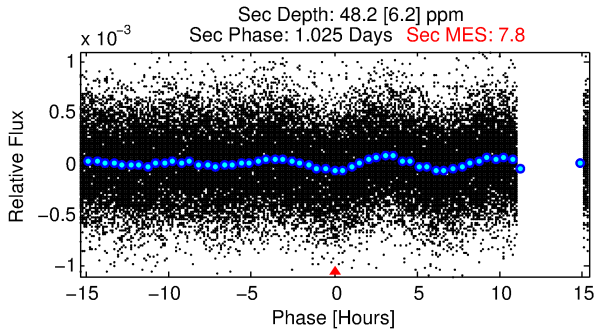
DV One-Page Summary

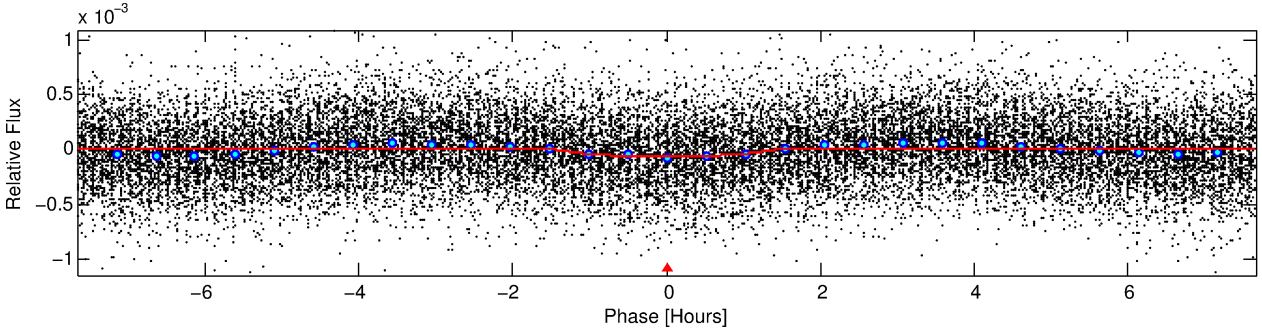
KIC: 8125219 Candidate: 1 of 5 Period: 1.568 d

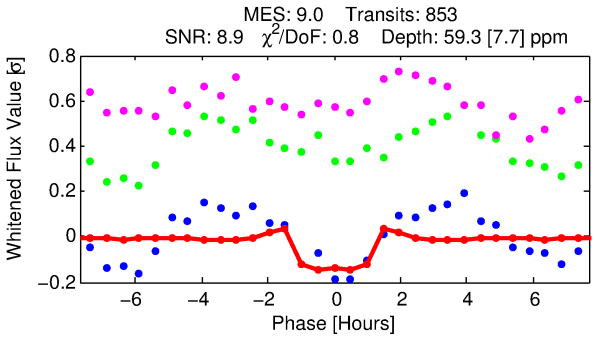
Kp: 13.61 R*: 2.78 Rs Teff: 7102.0 K Logg: 3.73 Fe/H: −0.440

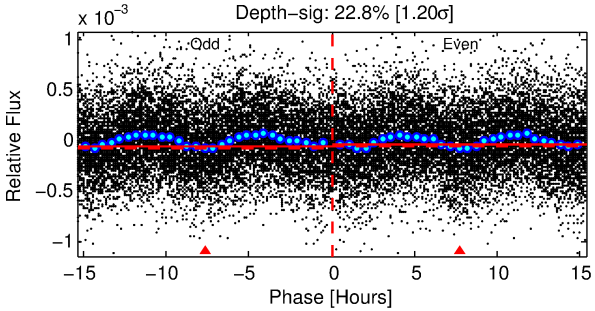


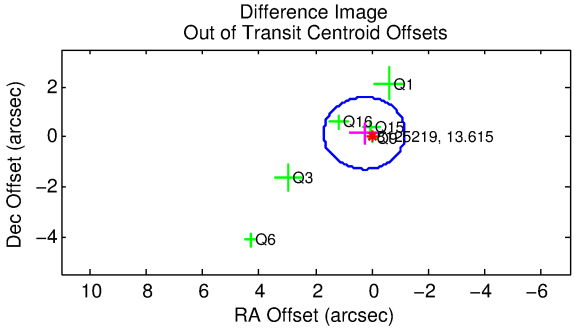












DV Fit Results:

Period = 1.56822 [0.00001] d
Epoch = 131.9986 [0.0025] BKJD
Rp/R* = 0.0080 [0.0024]
a/R* = 2.66 [3.81]
b = 0.85 [0.53]

Seff = 19172.40 [16552.52]
Teq = 3001 [648] K
Rp = 2.43 [1.41] Re
a = 0.0303 [0.0154] AU

Ag = 4.14 [4.28] [0.73σ]
Teffp = 6617 [1055] K [2.92σ]

DV Diagnostic Results:

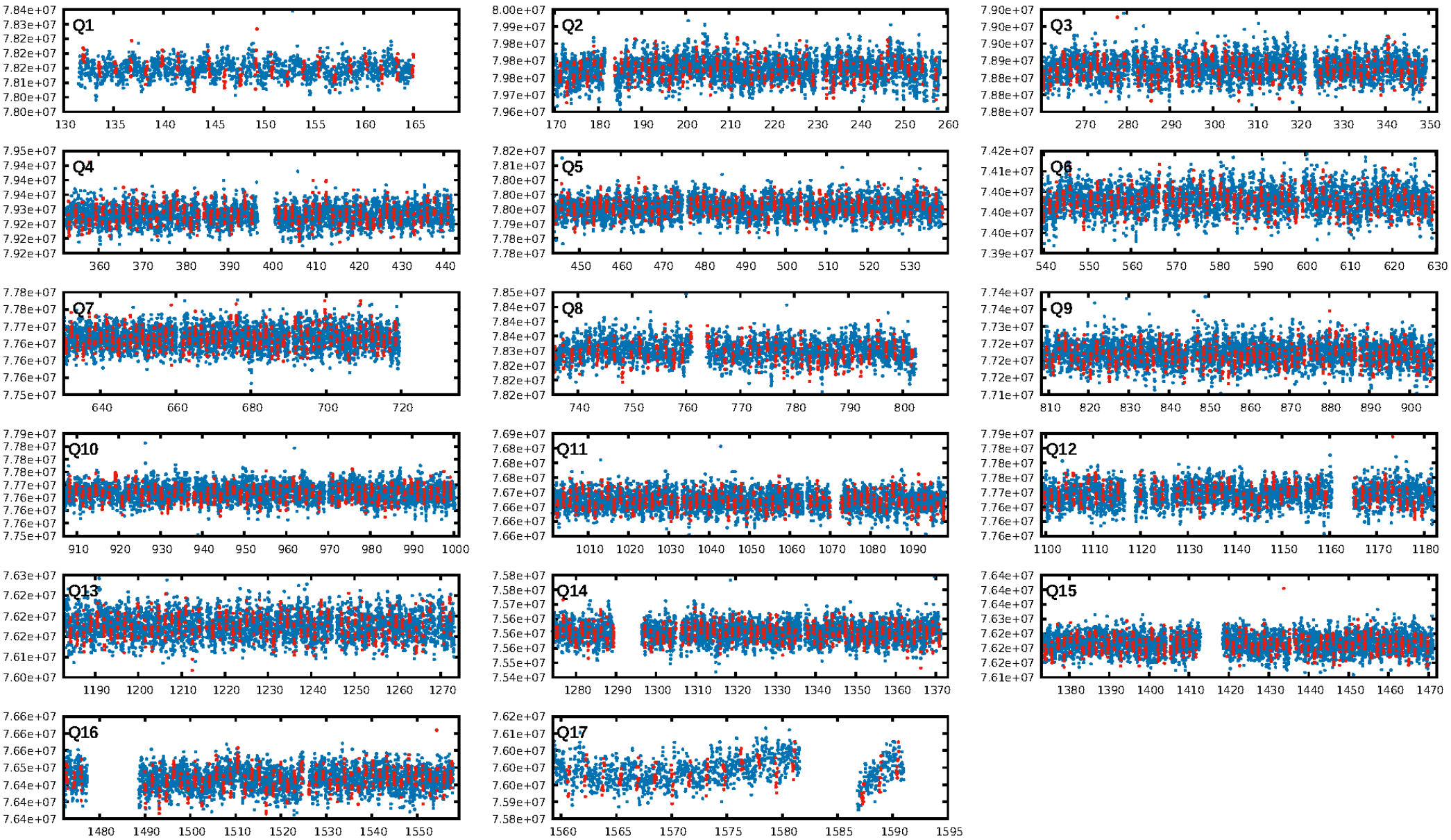
ShortPeriod−sig: 0.0% [0.00σ]
LongPeriod−sig: 100.0% [40.40σ]
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [814/814]
GhostDiagnostic−chr: 6.752

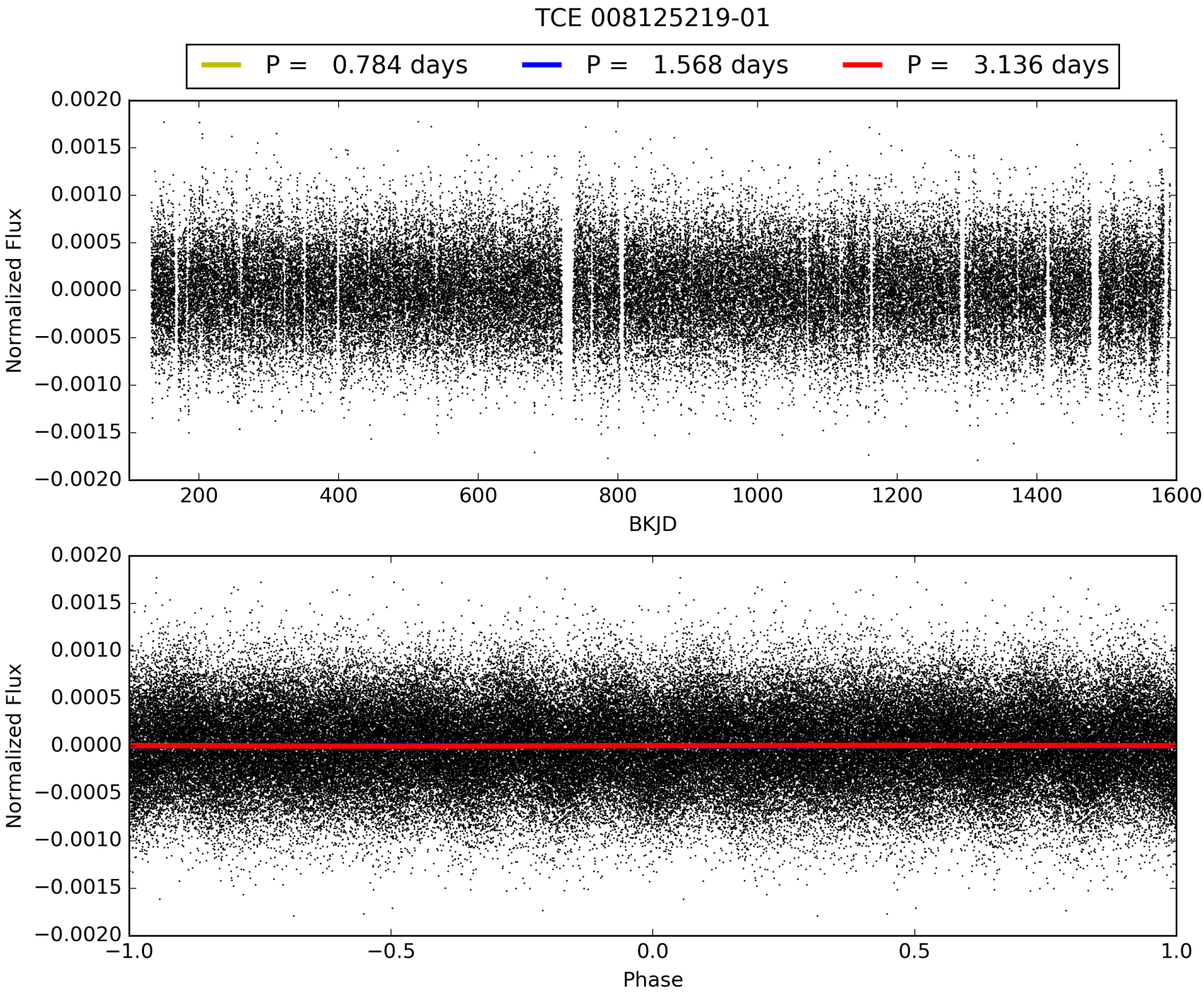
Centroid−sig: 0.1%
Centroid−so: 2.117 arcsec [2.12σ]
OotOffset−rm: 0.304 arcsec [0.63σ]
KicOffset−rm: 0.154 arcsec [0.19σ]
OotOffset−st: 1/2/1/2 [6]
KicOffset−st: 1/2/1/2 [6]
DiffImageQuality−fgm: 0.67 [4/6]
DiffImageOverlap−fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 23:48:16 Z

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

TCE 008125219-01, PDC Light Curves

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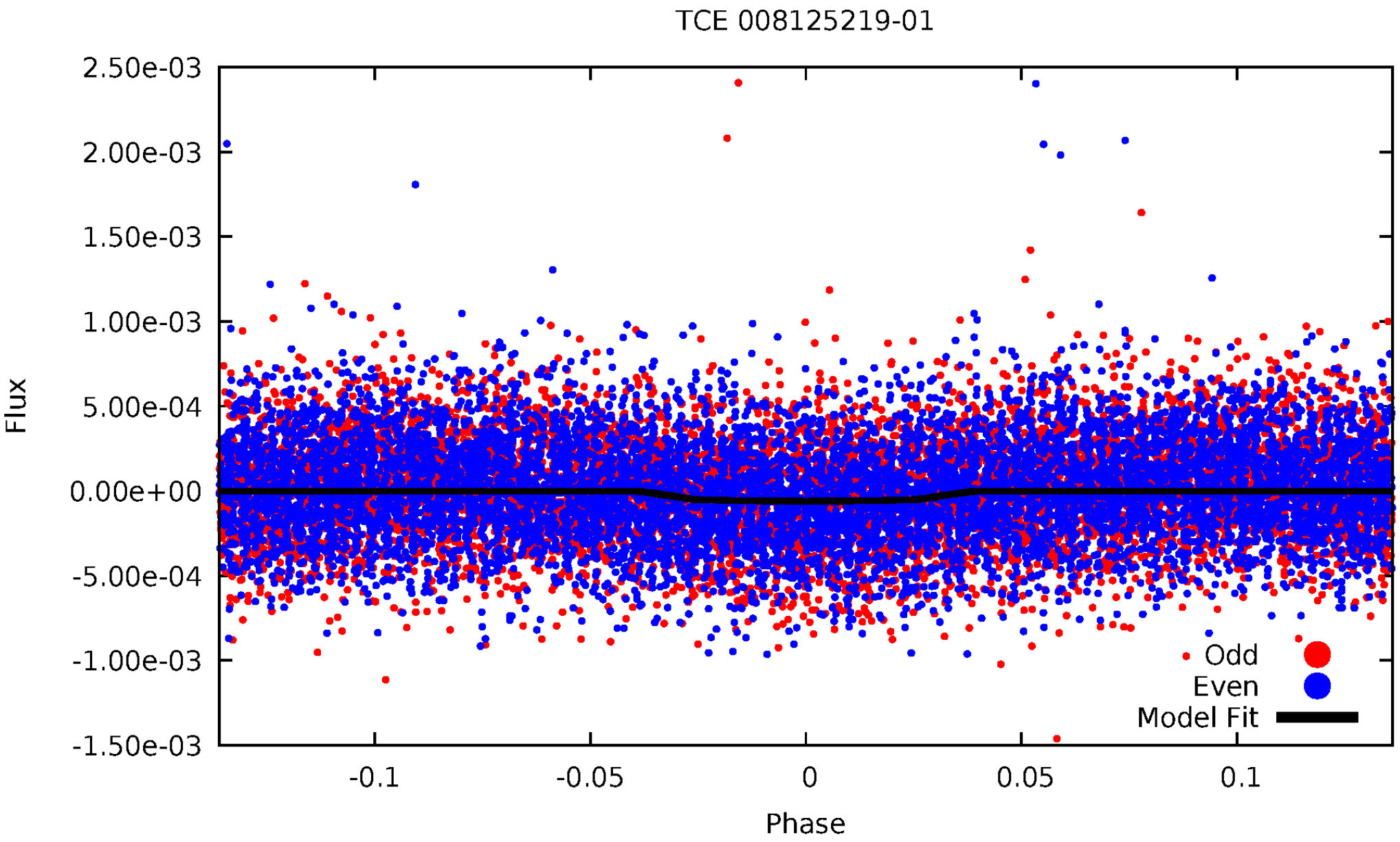
P = 0.784 days
P = 1.568 days
P = 3.136 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even


TCE 008125219-01
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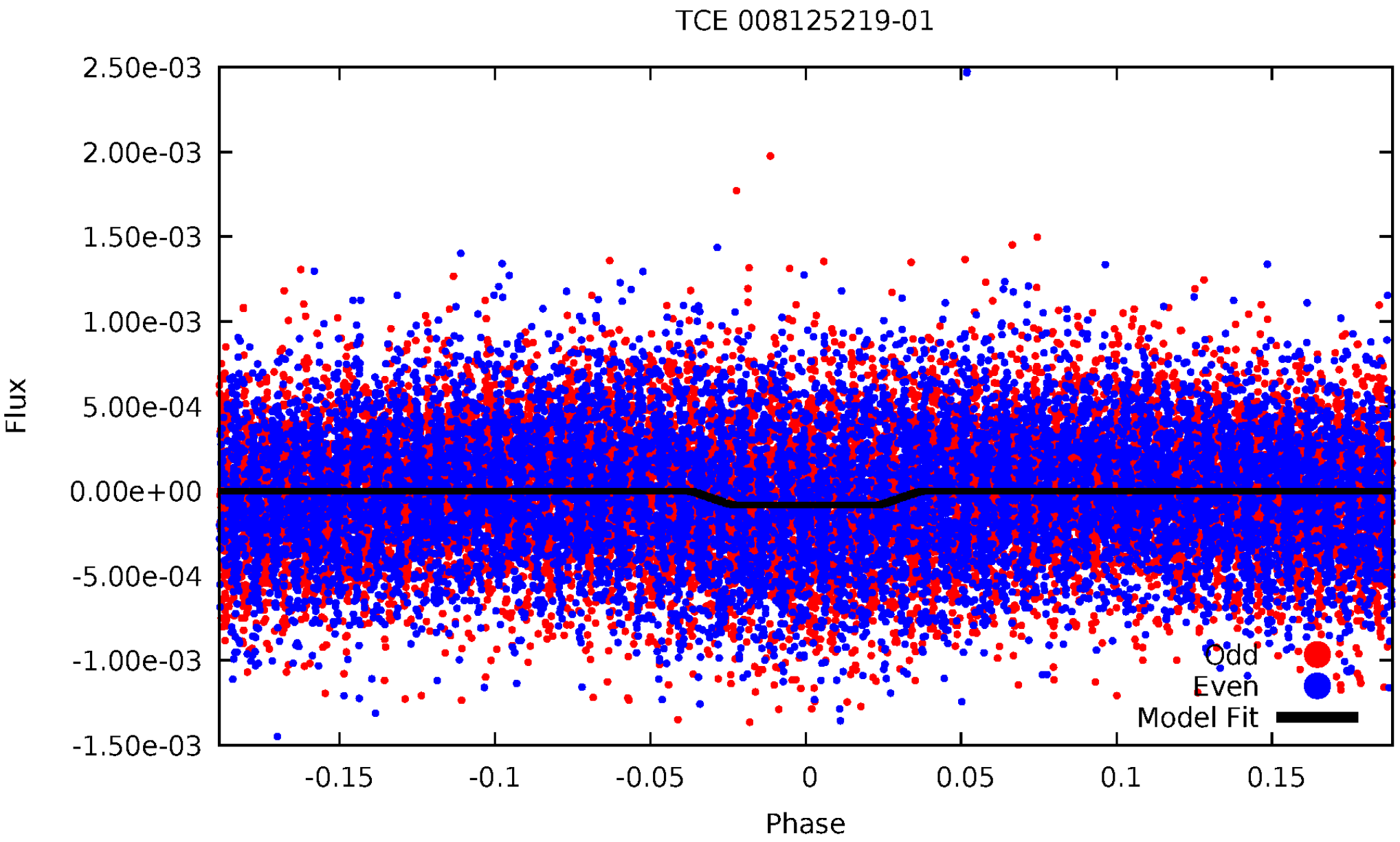
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
Flux
-0.1
-0.05
0
0.05
0.1
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 008125219-01
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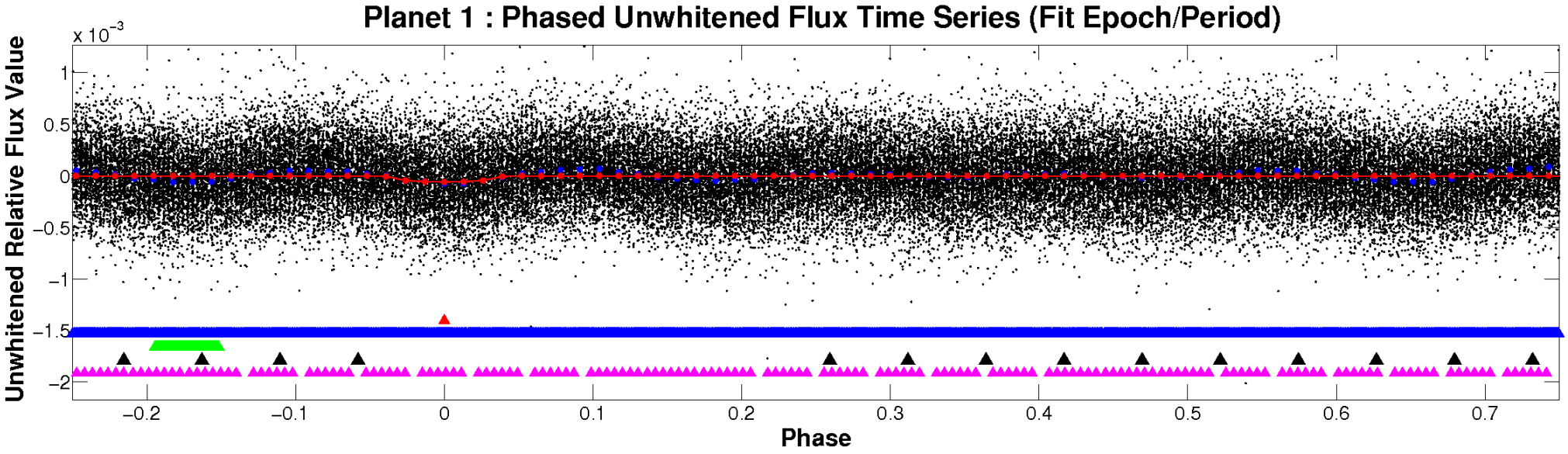
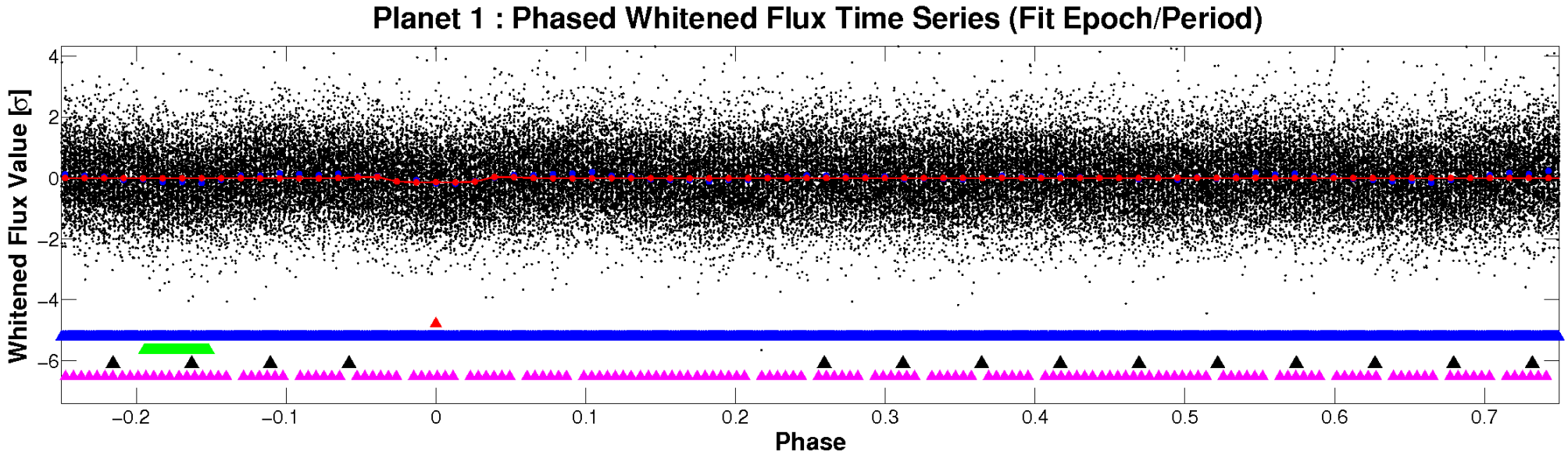
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
Flux
-0.15
-0.1
-0.05
0
0.05
0.1
0.15
Phase
Odd
Even
Model Fit

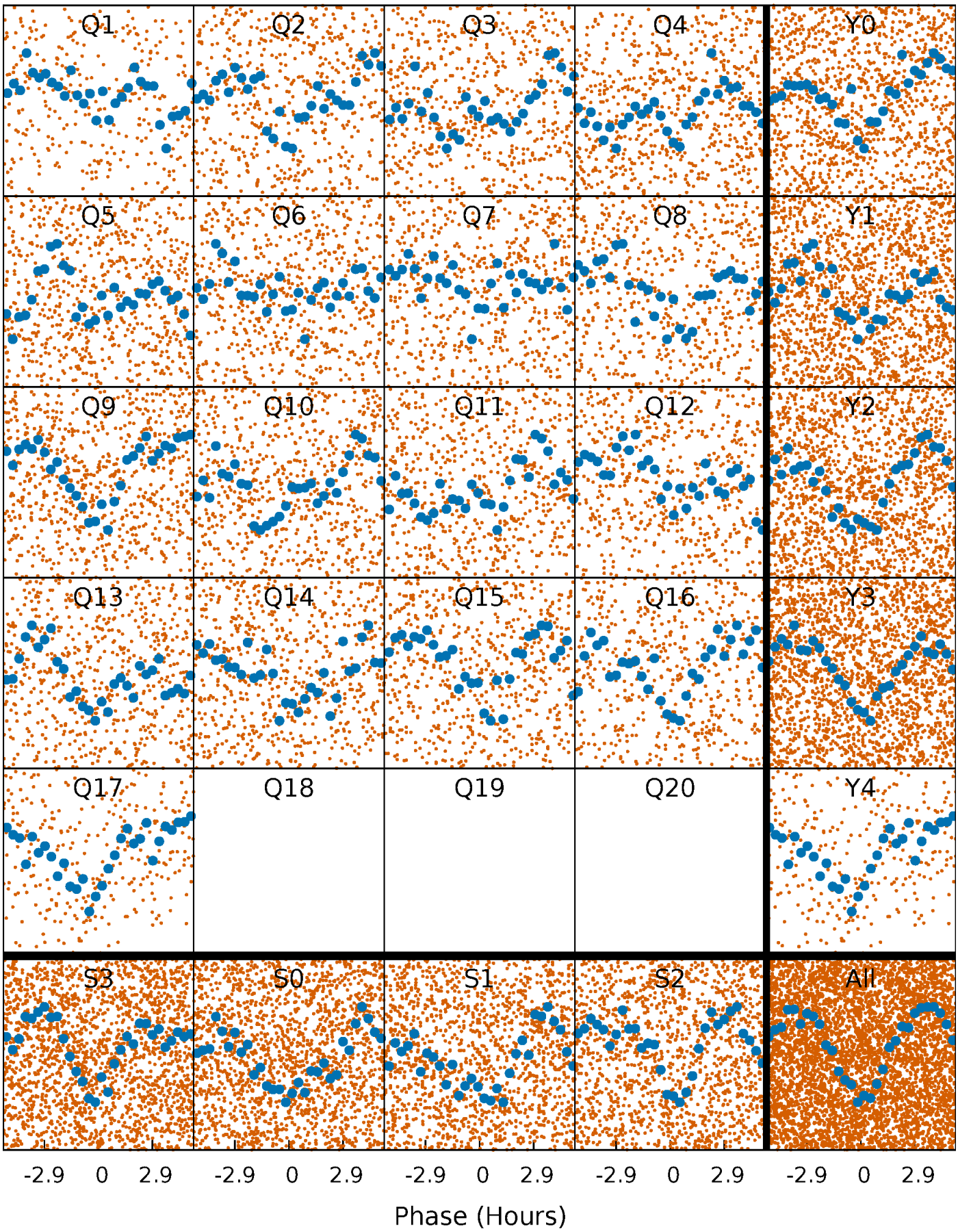
Non-Whitened Vs. Whitened Light Curve





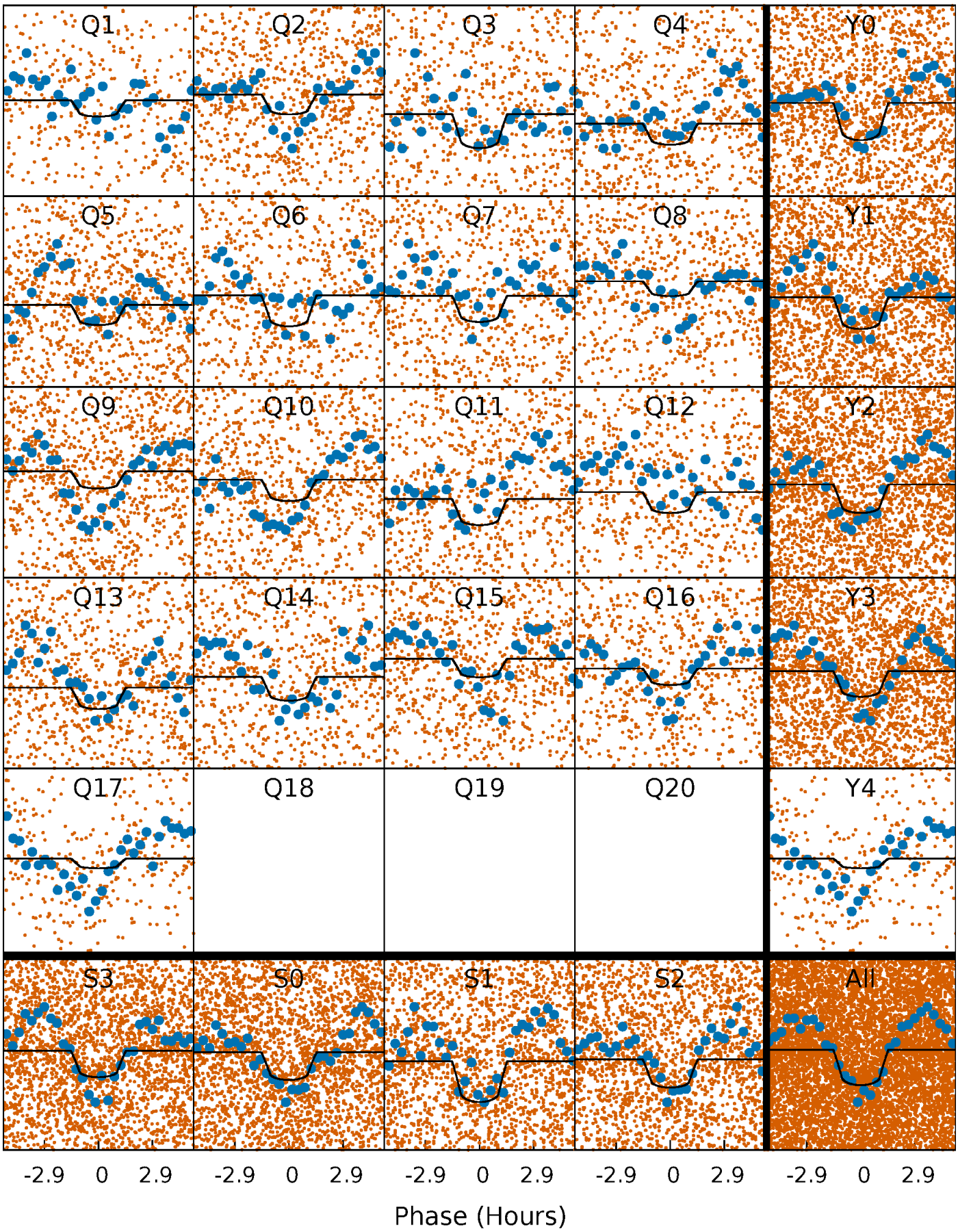
PDC Quarter-Phased Transit Curves

TCE 008125219-01 P= 1.568216 Days T_0=131.998589 (BKJD)



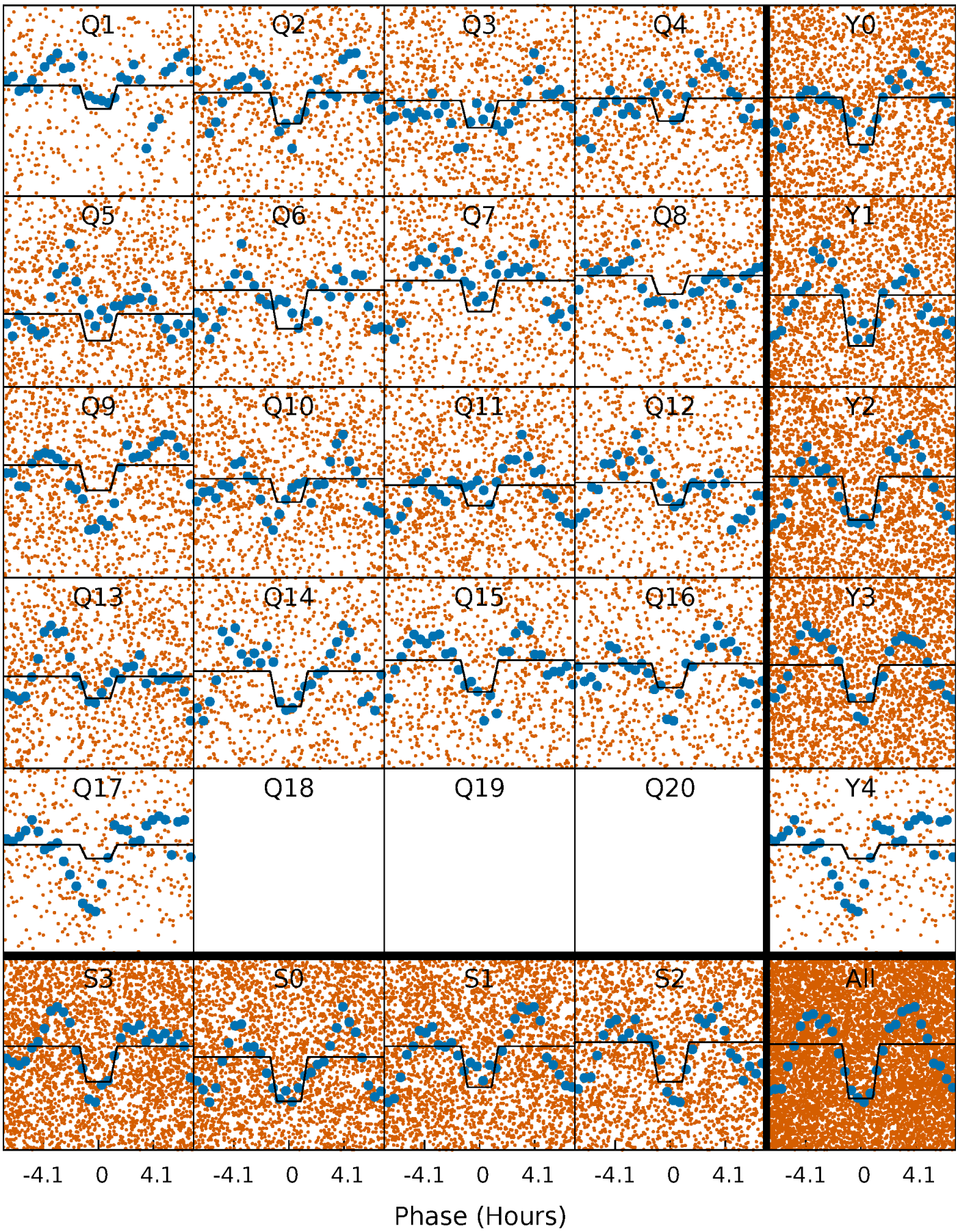
DV Quarter-Phased Transit Curves

TCE 008125219-01 P= 1.568216 Days T_0=131.998589 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

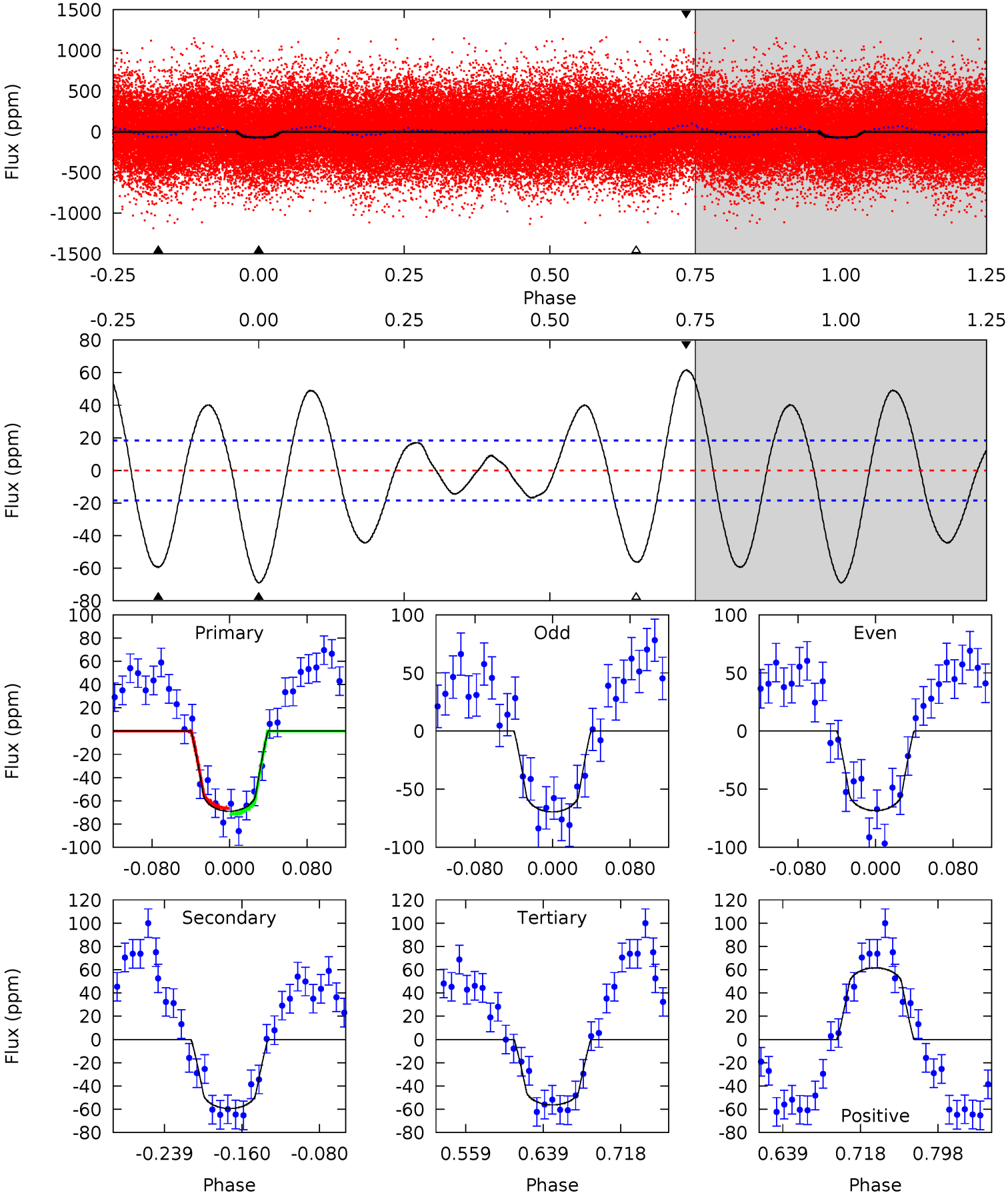
TCE 008125219-01 P= 1.568232 Days T_0=131.990470 (BKJD)



DV Model-Shift Uniqueness Test

008125219-01, P = 1.568216 Days, E = 130.430373 Days

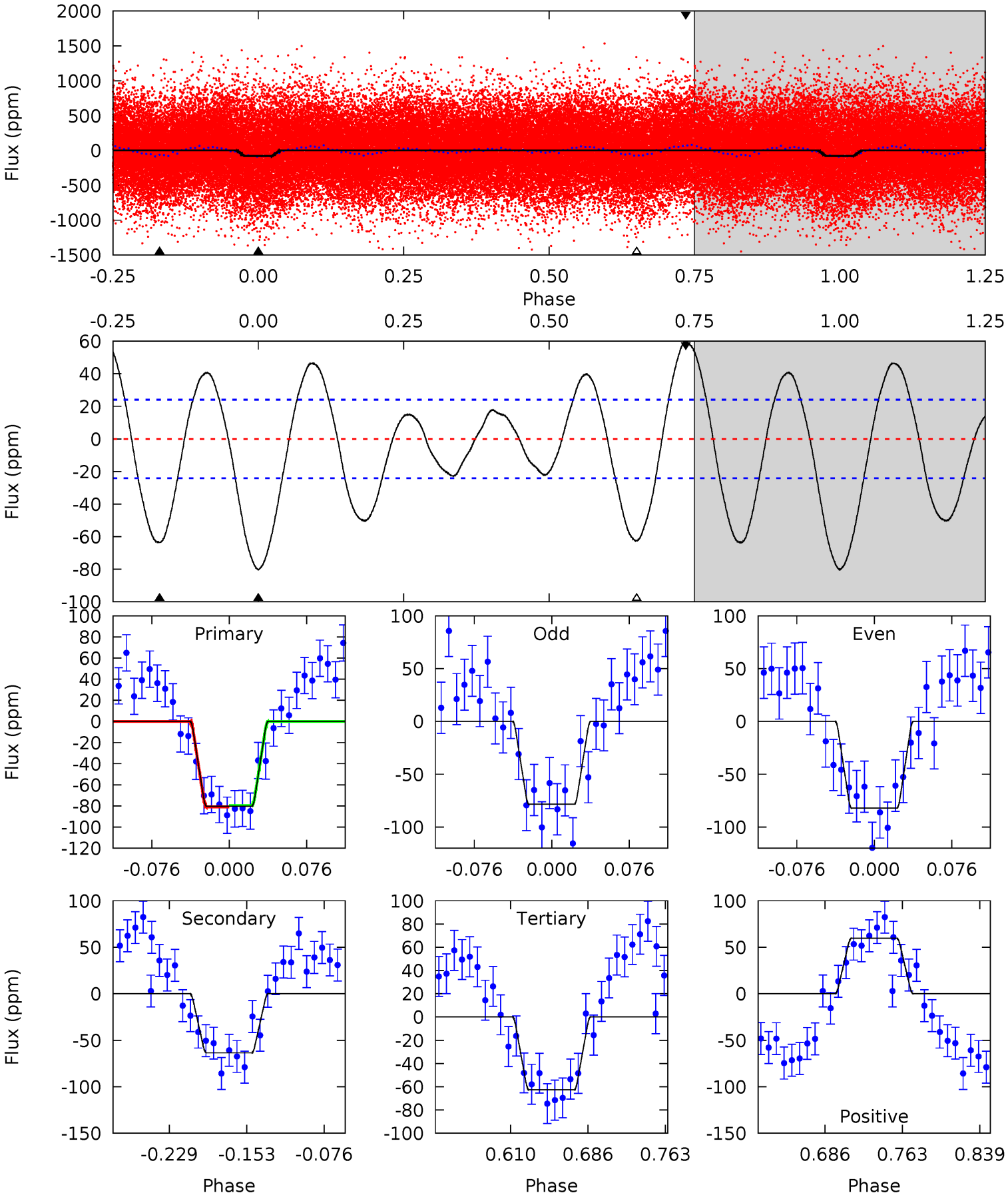
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	14.9	14.1	15.4	4.61	1.75	7.25	3.19	1.86	0.78	-0.56	0.14	1.21	0.47	0.63



Alt Model-Shift Uniqueness Test

008125219-01, P = 1.568232 Days, E = 130.422238 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	12.2	12.0	11.4	4.62	1.77	5.86	3.37	3.95	0.18	0.76	0.34	1.06	0.43	0.13



Stellar Parameters For KIC 008125219

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7102^{+245}_{-367}	$3.729^{+0.501}_{-0.088}$	$-0.440^{+0.300}_{-0.300}$	$2.781^{+0.464}_{-1.391}$	$1.512^{+0.208}_{-0.357}$	$0.099^{+0.513}_{-0.026}$
	+3%/-5%	+13%/-2%	+68%/-68%	+17%/-50%	+14%/-24%	+518%/-27%
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 008125219-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-59±4	$2.15^{+0.92}_{-0.80}$	4023^{+341}_{-500}	6812^{+1915}_{-983}	$6.487^{+9.487}_{-3.246}$
Alt.	-64±5	$2.51^{+0.83}_{-0.89}$	4047^{+306}_{-497}	6438^{+1387}_{-753}	$5.026^{+6.448}_{-2.114}$

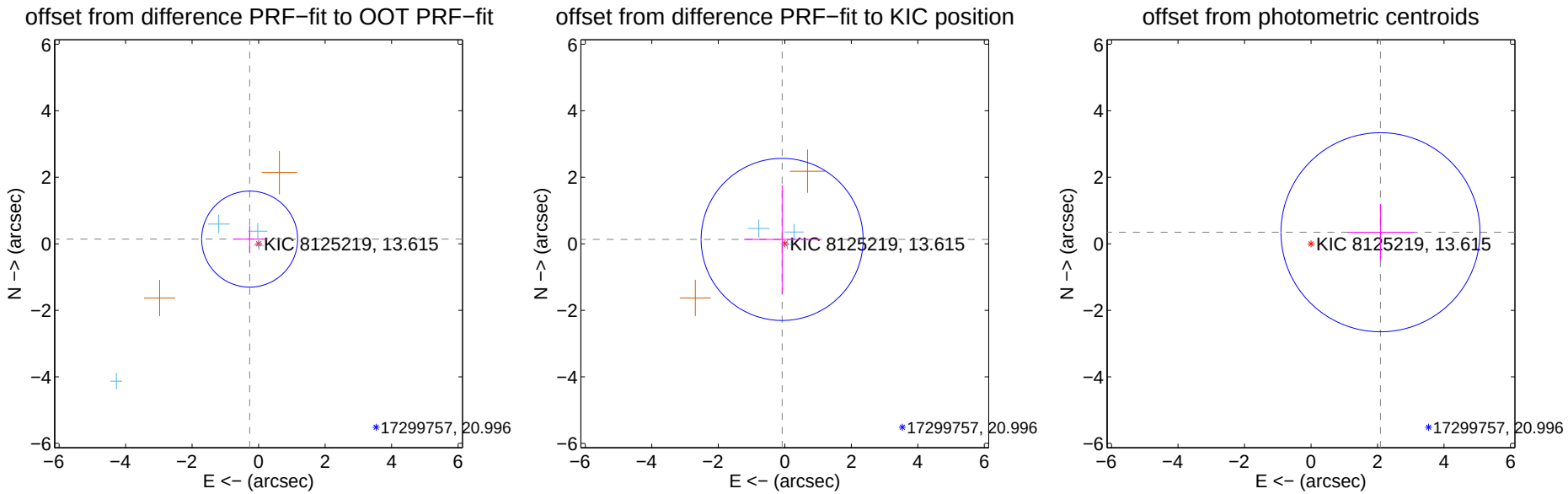
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

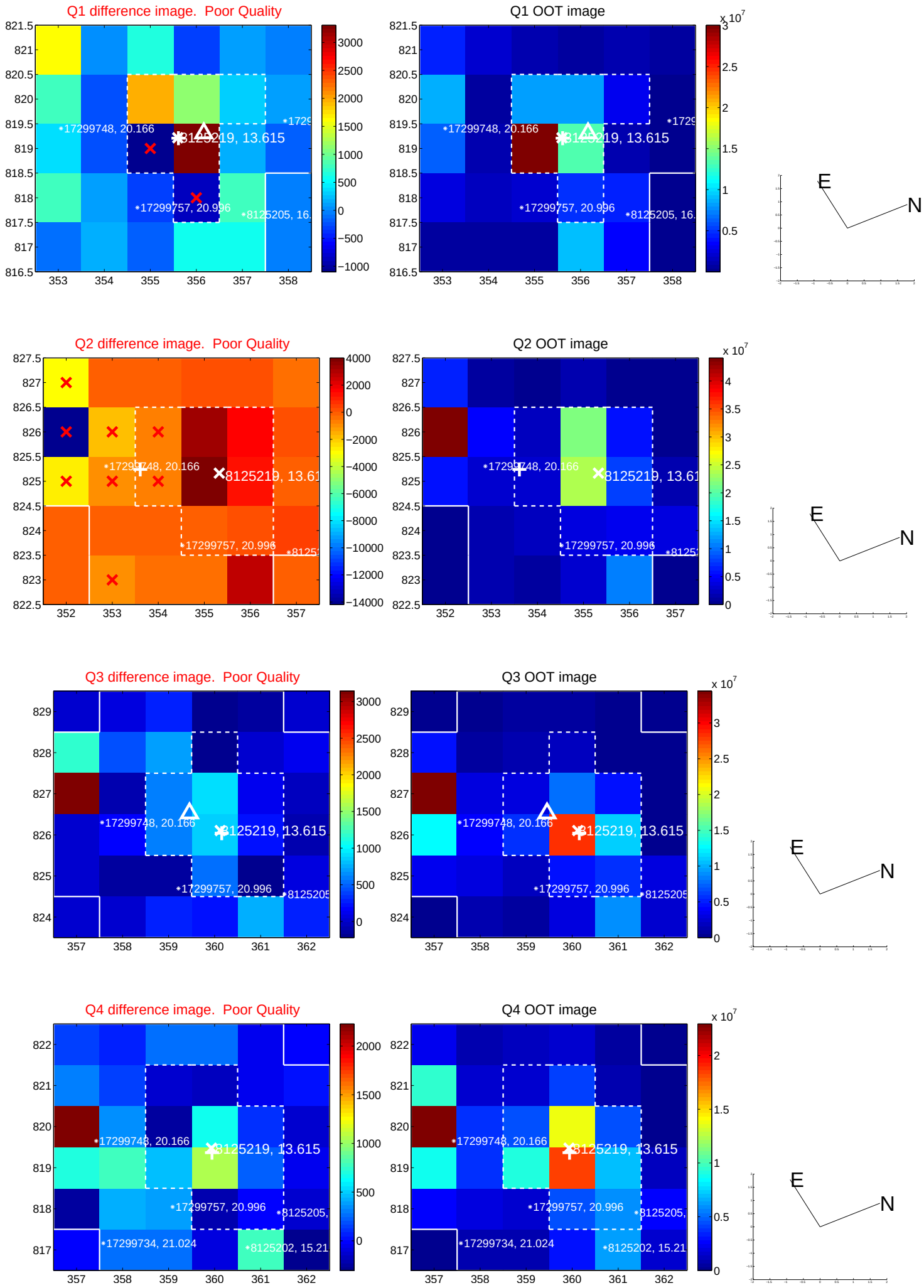
Supplemental centroid analysis for 008125219-01. Kepler magnitude: 13.62. Transit SNR 8.88
There are 4 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.304 ± 0.481	0.63	0.269 ± 0.500	0.141 ± 0.403
PRF-fit source offset from KIC position	0.154 ± 0.812	0.19	0.080 ± 1.150	0.131 ± 1.634
photometric centroid source offset	2.12 ± 1.00	2.12	-2.09 ± 1.00	0.35 ± 0.85

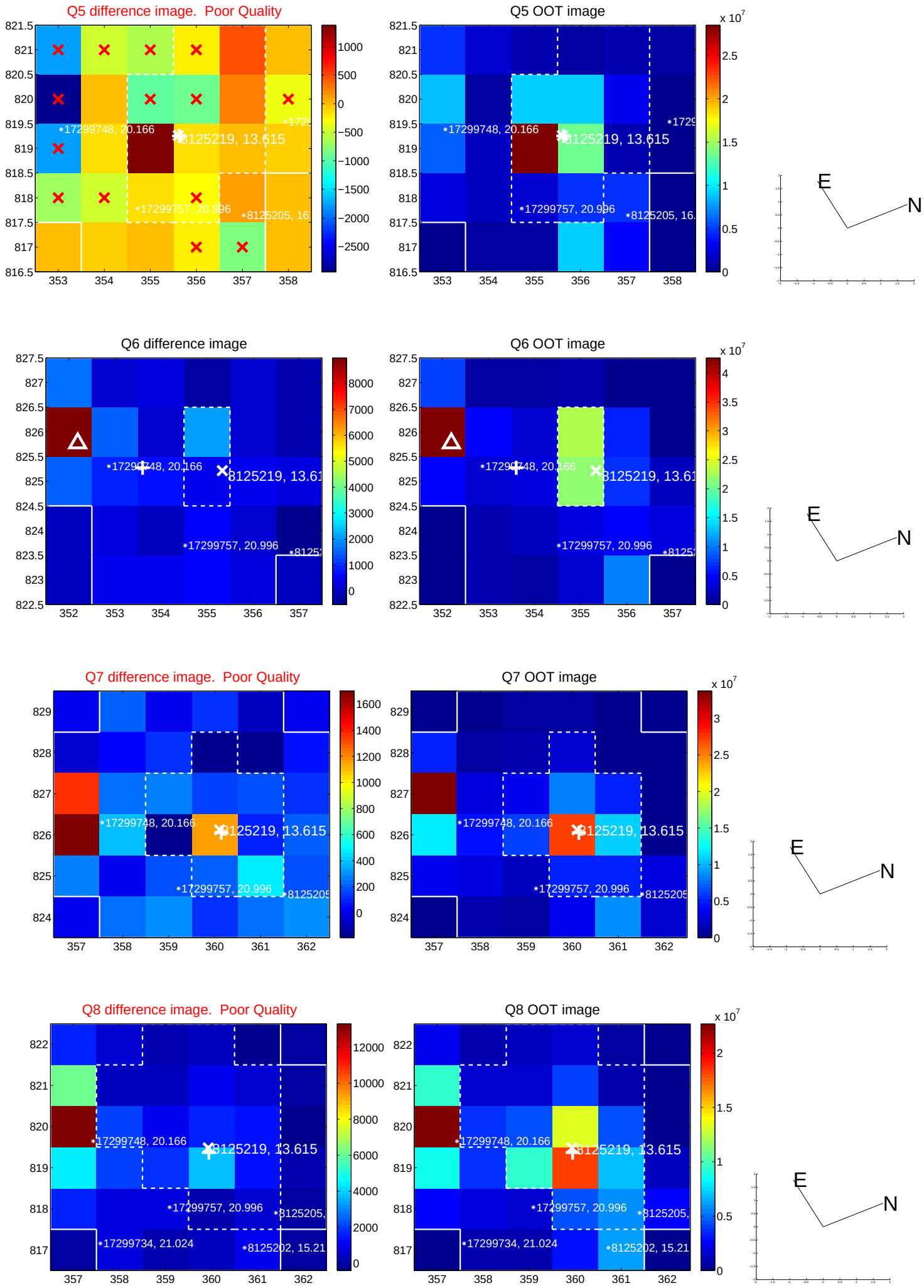


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

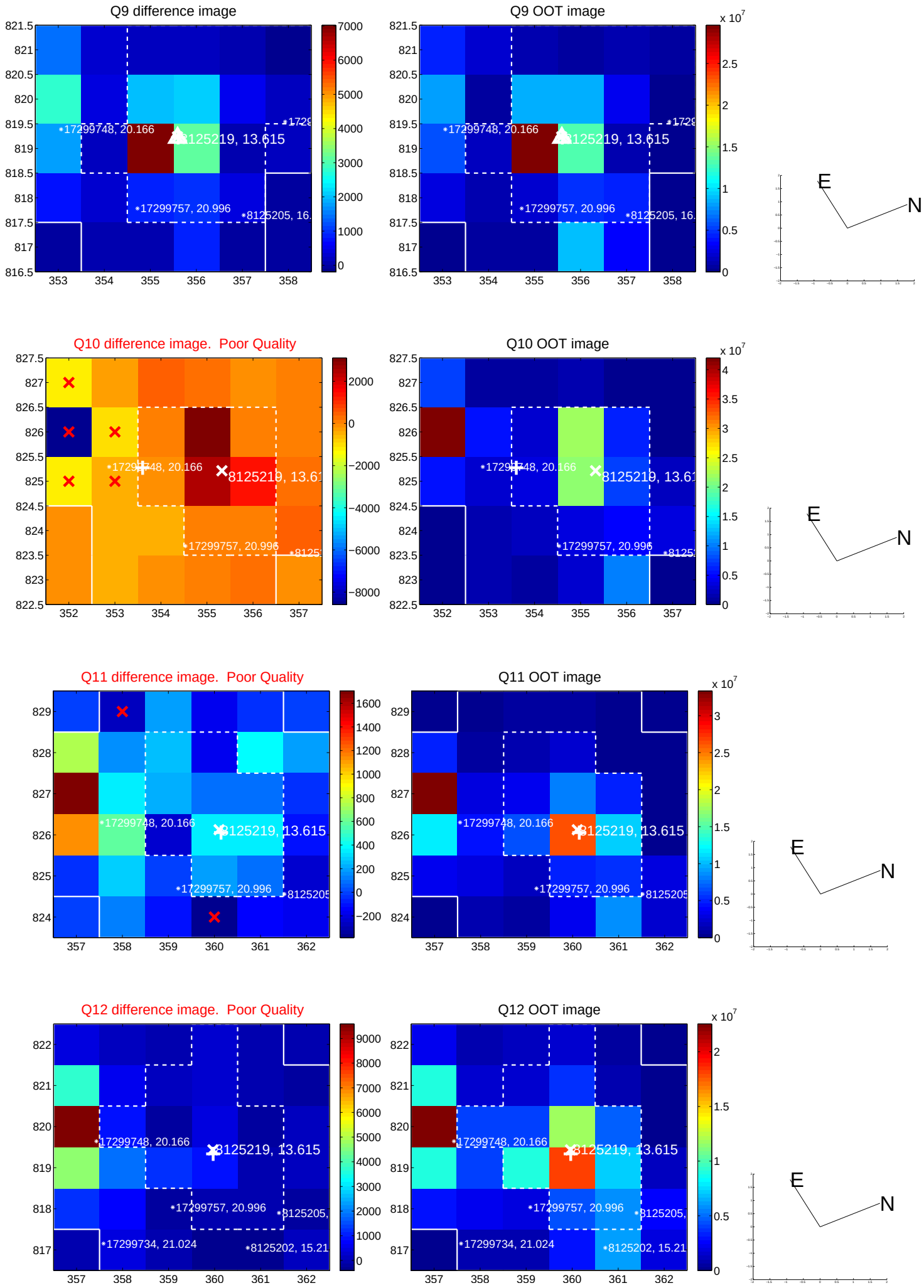
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



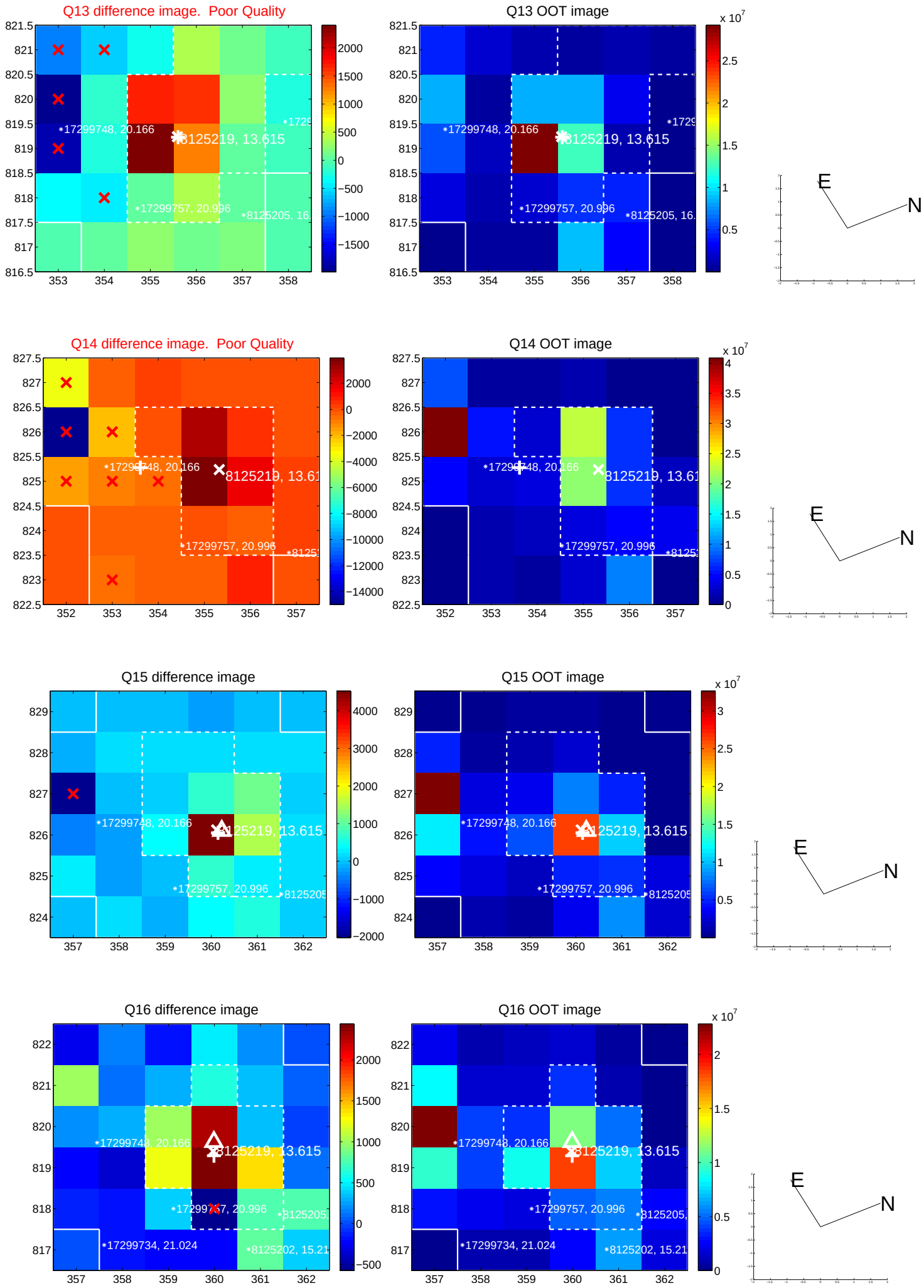
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



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



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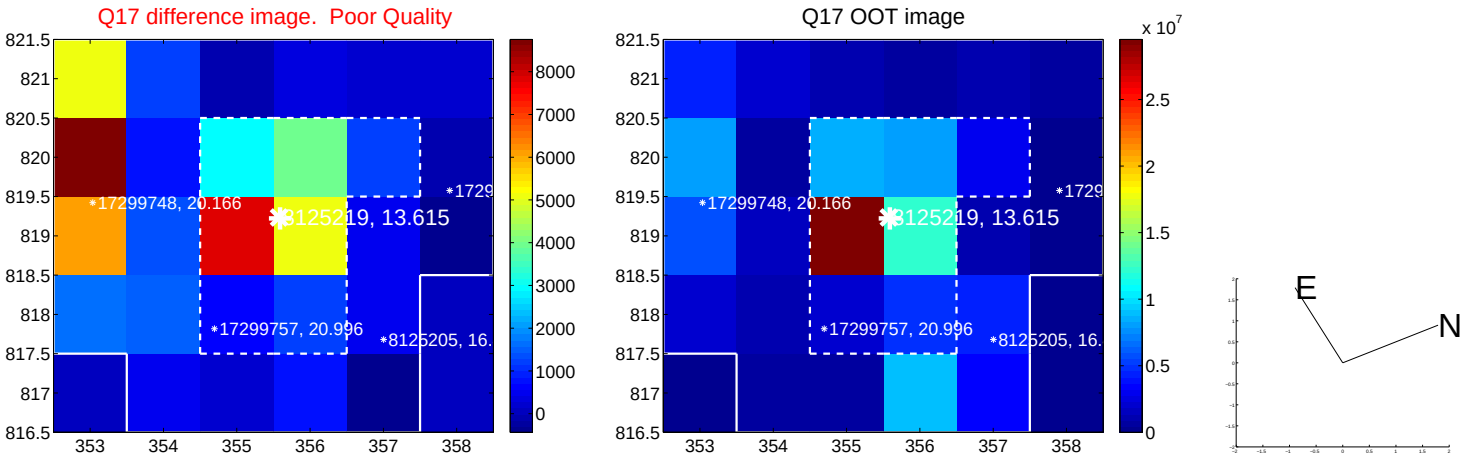
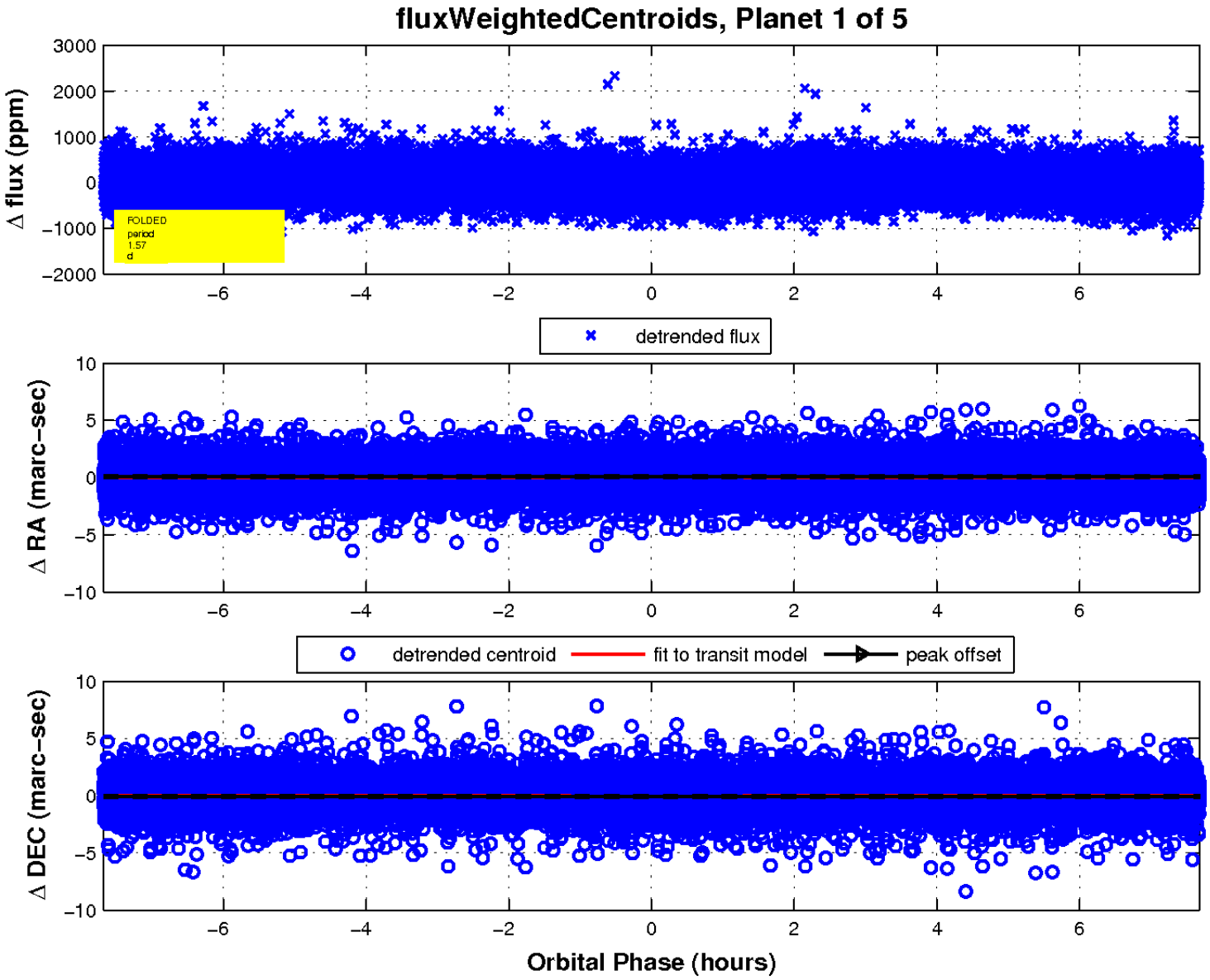
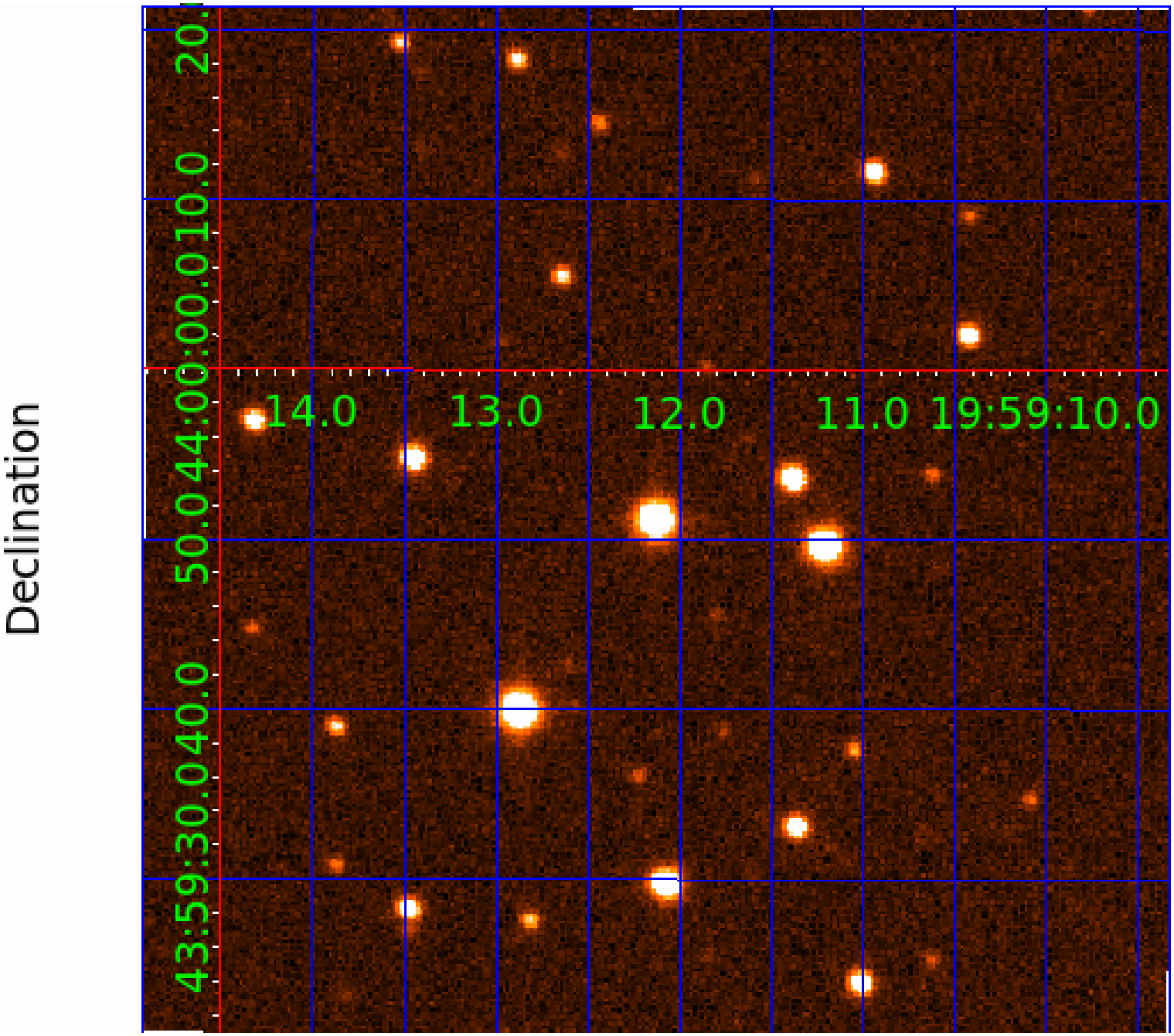




UKIRT Image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KIC 008125219

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 ($S_\oplus$)
008125219-01	OBS	No	1.568216	131.998589	59.3	2.560	9.0	8.9	2.78	7102	2.43	19172.40
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008125219-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008125219-02	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
008125219-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
008125219-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
008125219-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

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.

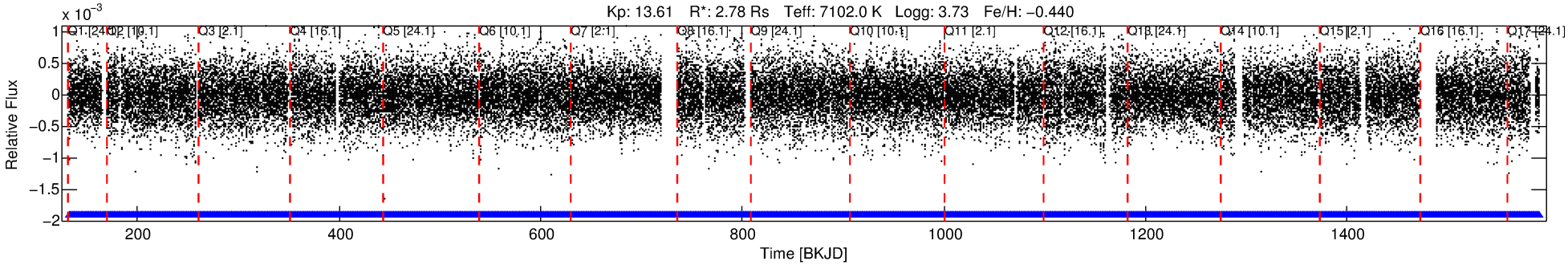
Ephemeris Match Information For 008125219-02

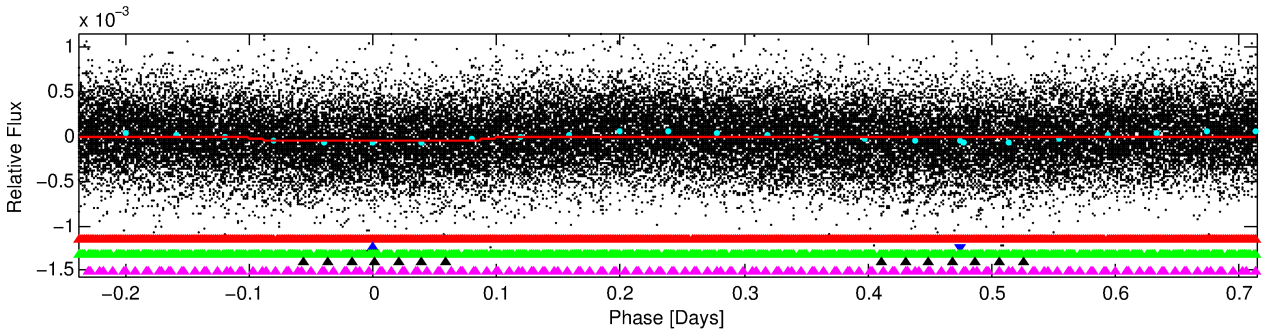
No Significant Match Found

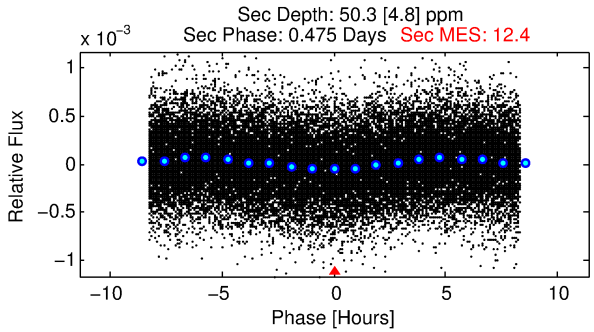
DV One-Page Summary

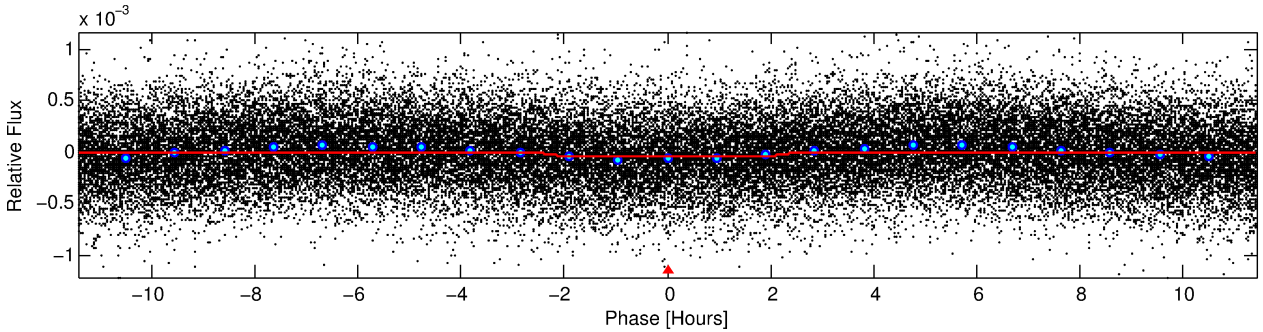
KIC: 8125219 Candidate: 2 of 5 Period: 0.952 d

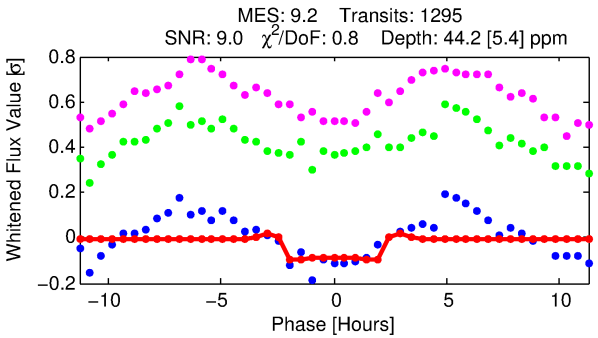
Kp: 13.61 R*: 2.78 Rs Teff: 7102.0 K Logg: 3.73 Fe/H: −0.440

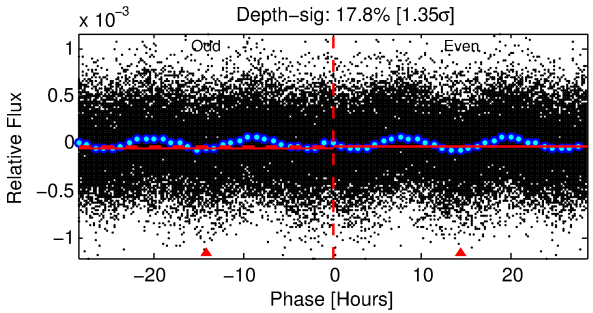


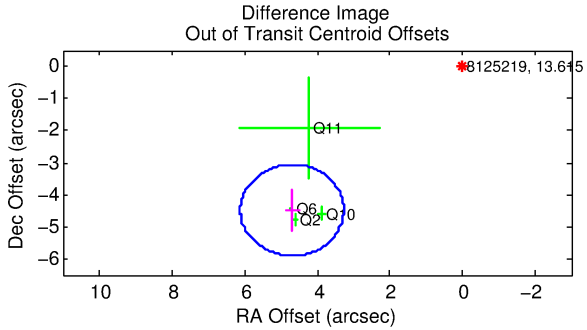












DV Fit Results:

Period = 0.95170 [0.00001] d
Epoch = 132.4124 [0.0033] BKJD
Rp/R* = 0.0067 [0.0027]
a/R* = 1.29 [1.21]
b = 0.79 [1.11]

Seff = 37315.30 [32216.22]
Teq = 3544 [765] K
Rp = 2.04 [1.32] Re
a = 0.0217 [0.0111] AU

Ag = 3.16 [3.71] [0.58σ]
Teffp = 7304 [1551] K [2.17σ]

DV Diagnostic Results:

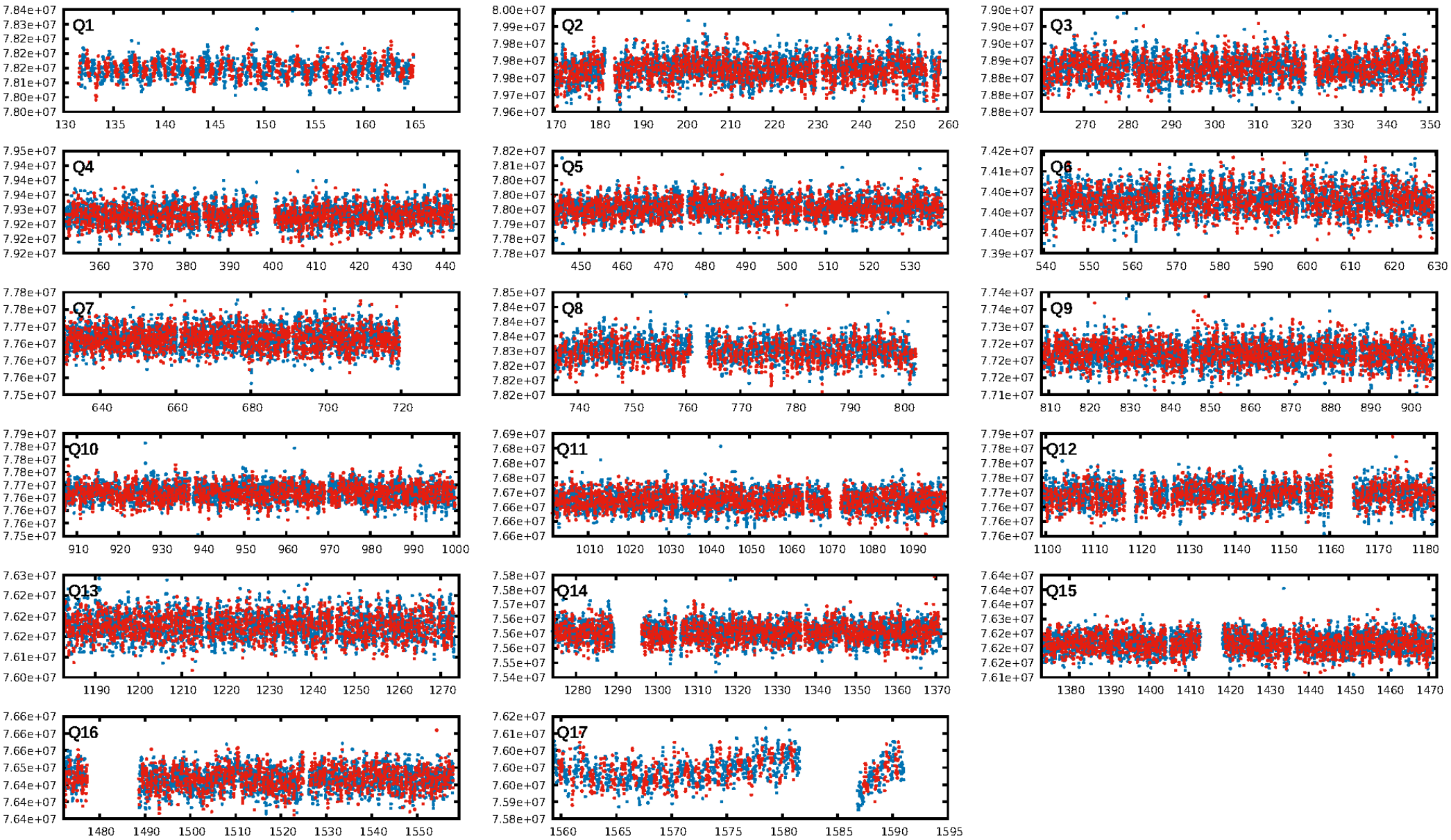
ShortPeriod−sig: N/A
LongPeriod−sig: 98.8% [2.52σ]
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [1238/1238]
GhostDiagnostic−chr: 3.145

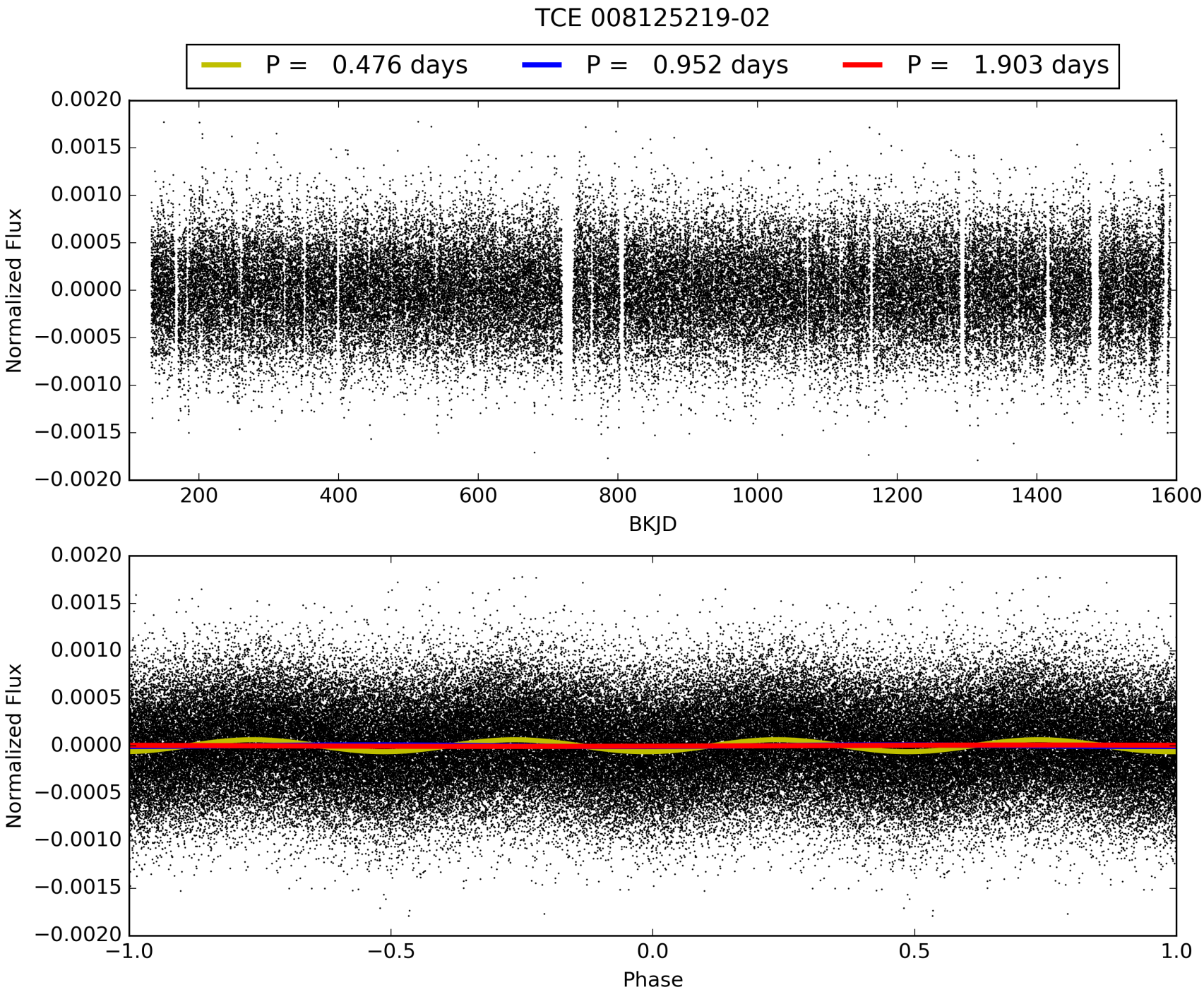
Centroid−sig: 0.0%
Centroid−so: 1.610 arcsec [2.13σ]
OotOffset−rm: 6.489 arcsec [13.68σ]
KicOffset−rm: 13.165 arcsec [4.90σ]
OotOffset−st: 3/1/0/0 [4]
KicOffset−st: 3/1/0/0 [4]
DiffImageQuality−fgm: 0.75 [3/4]
DiffImageOverlap−fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 −− Date Generated: 31−Jan−2016 23:48:28 Z

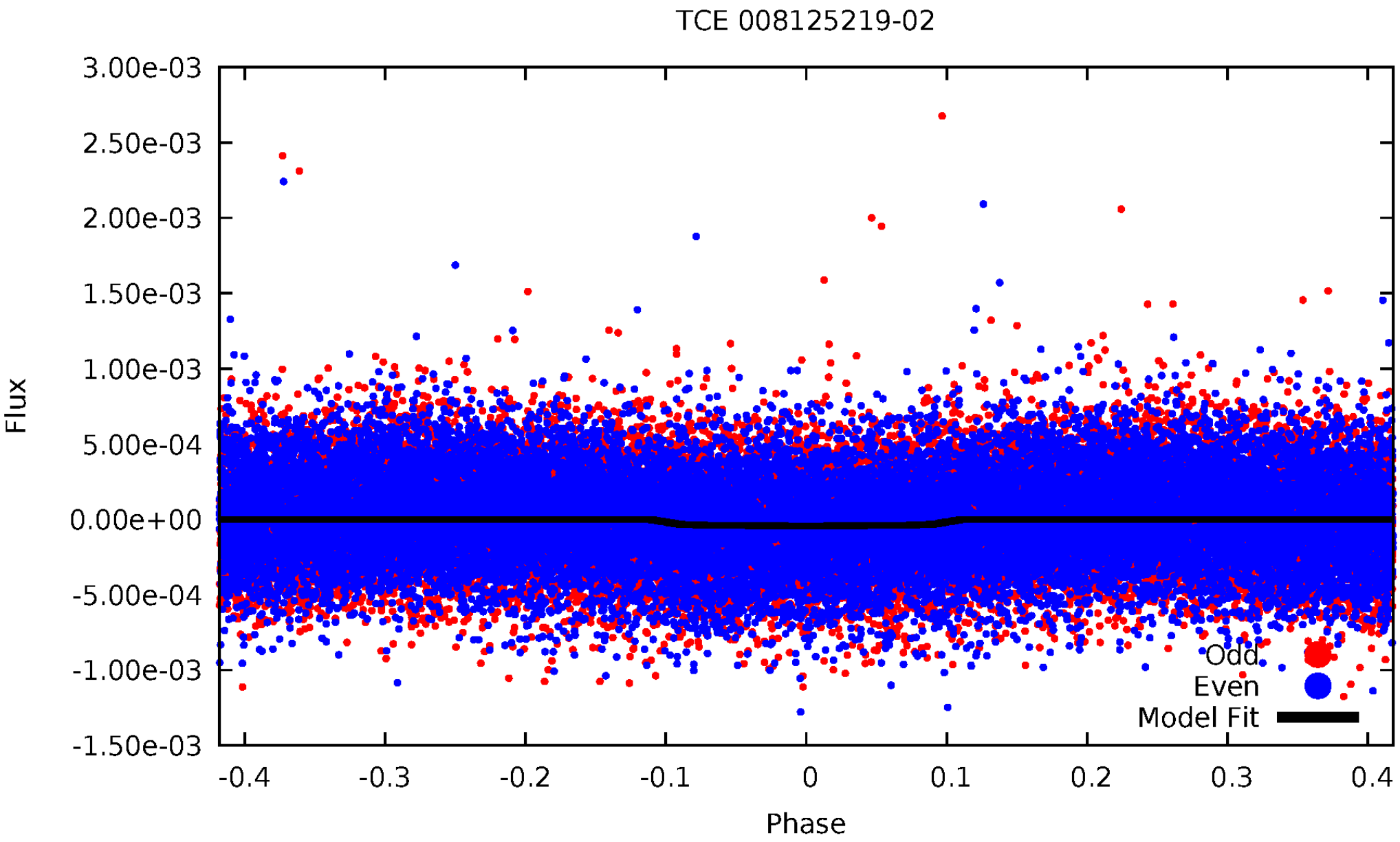
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008125219-02, PDC Light Curves

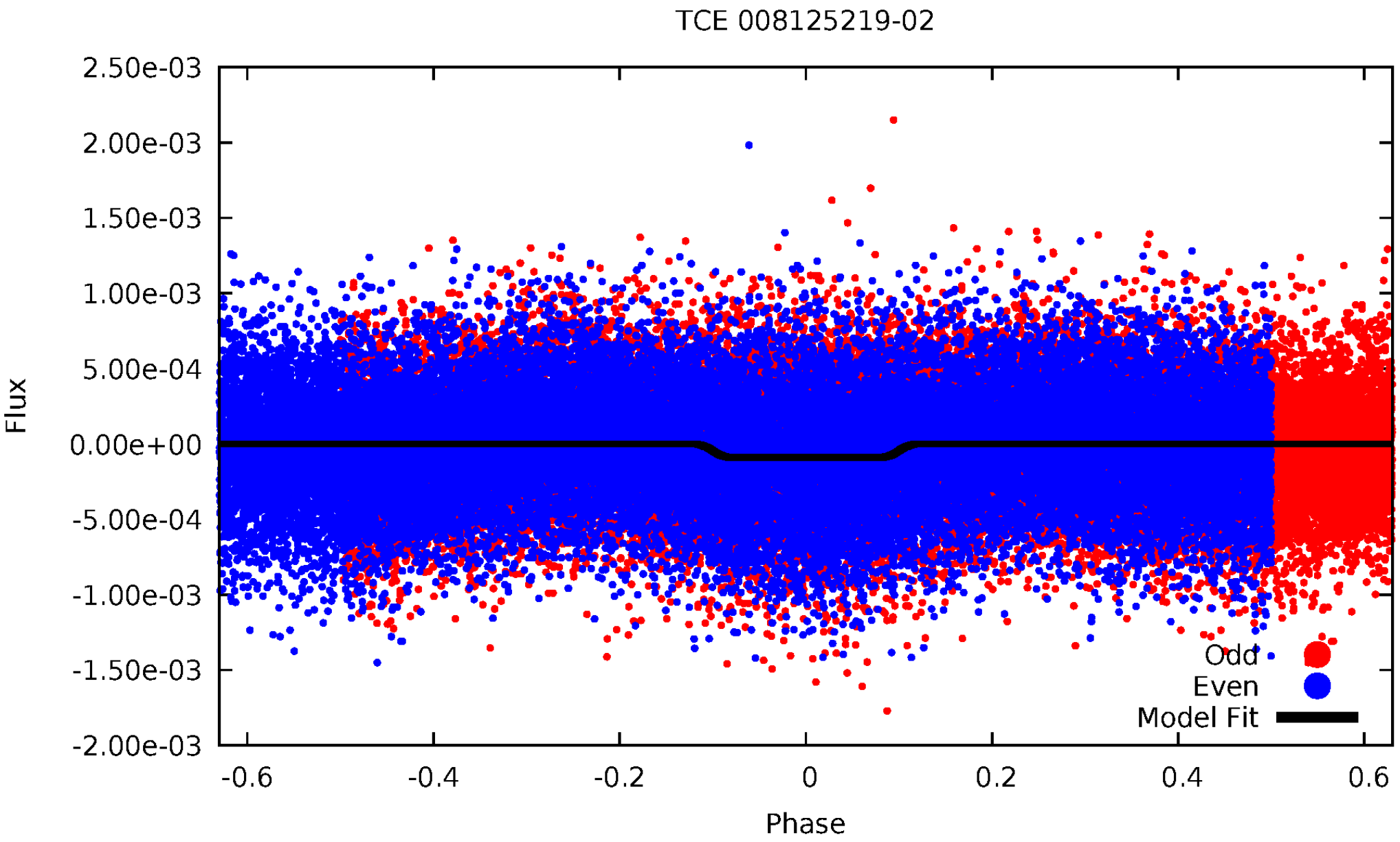



TCE 008125219-02
P = 0.476 days
P = 0.952 days
P = 1.903 days
Normalized Flux
BKJD
Normalized Flux
Phase

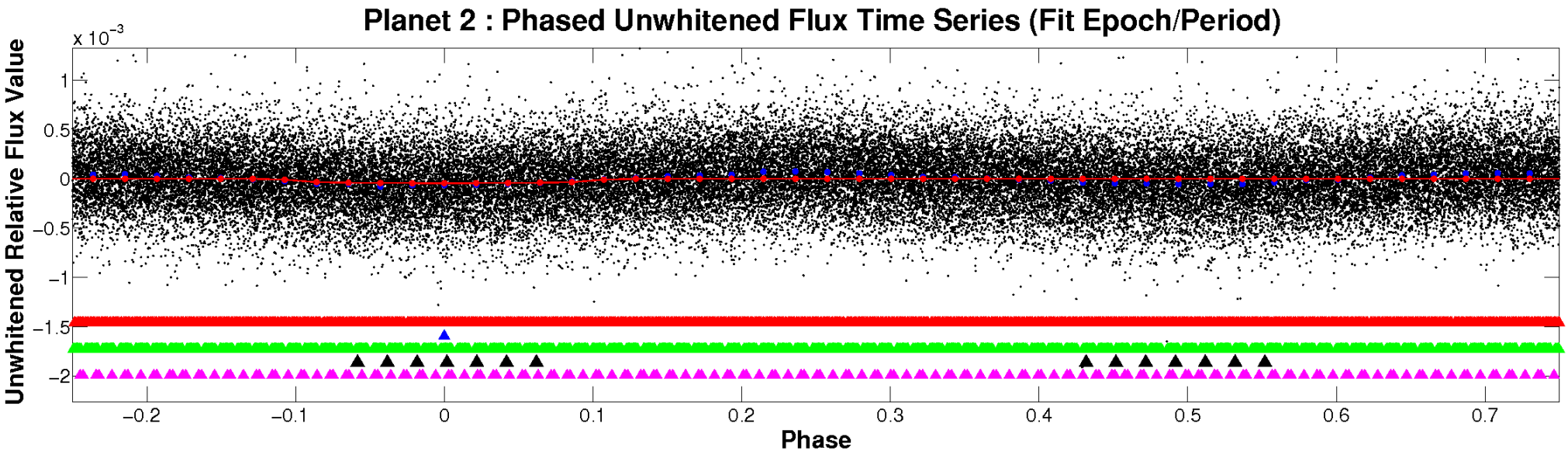
DV Odd/Even

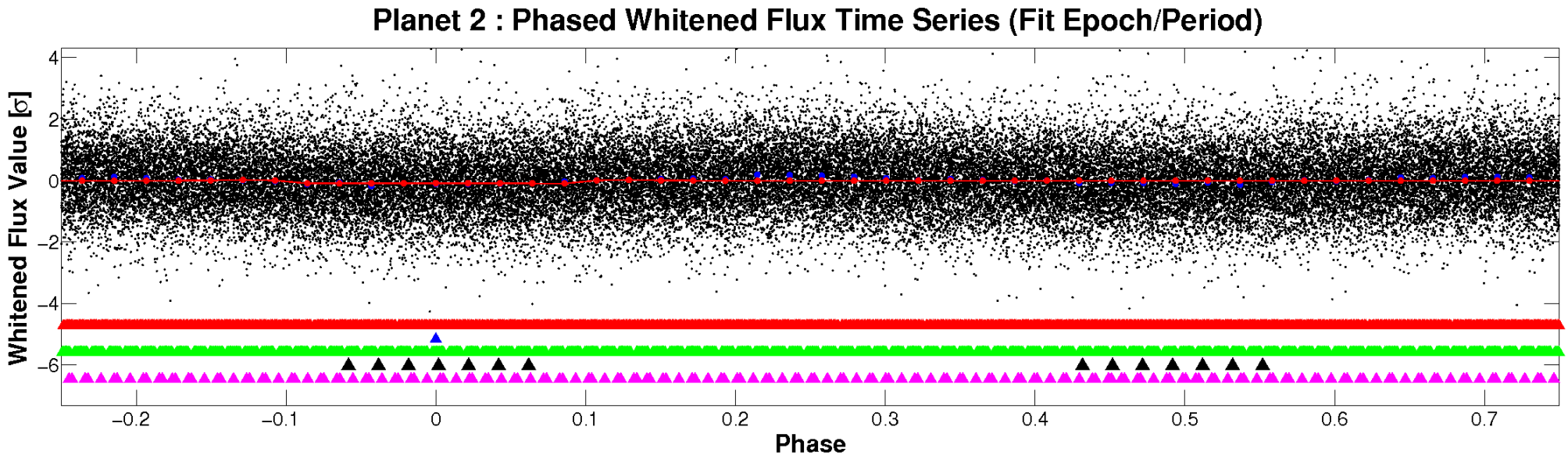

TCE 008125219-02
3.00e-03
2.50e-03
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
Flux
-0.4
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
0.4
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 008125219-02
2.50e-03
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
Flux
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
Phase
Odd
Even
Model Fit

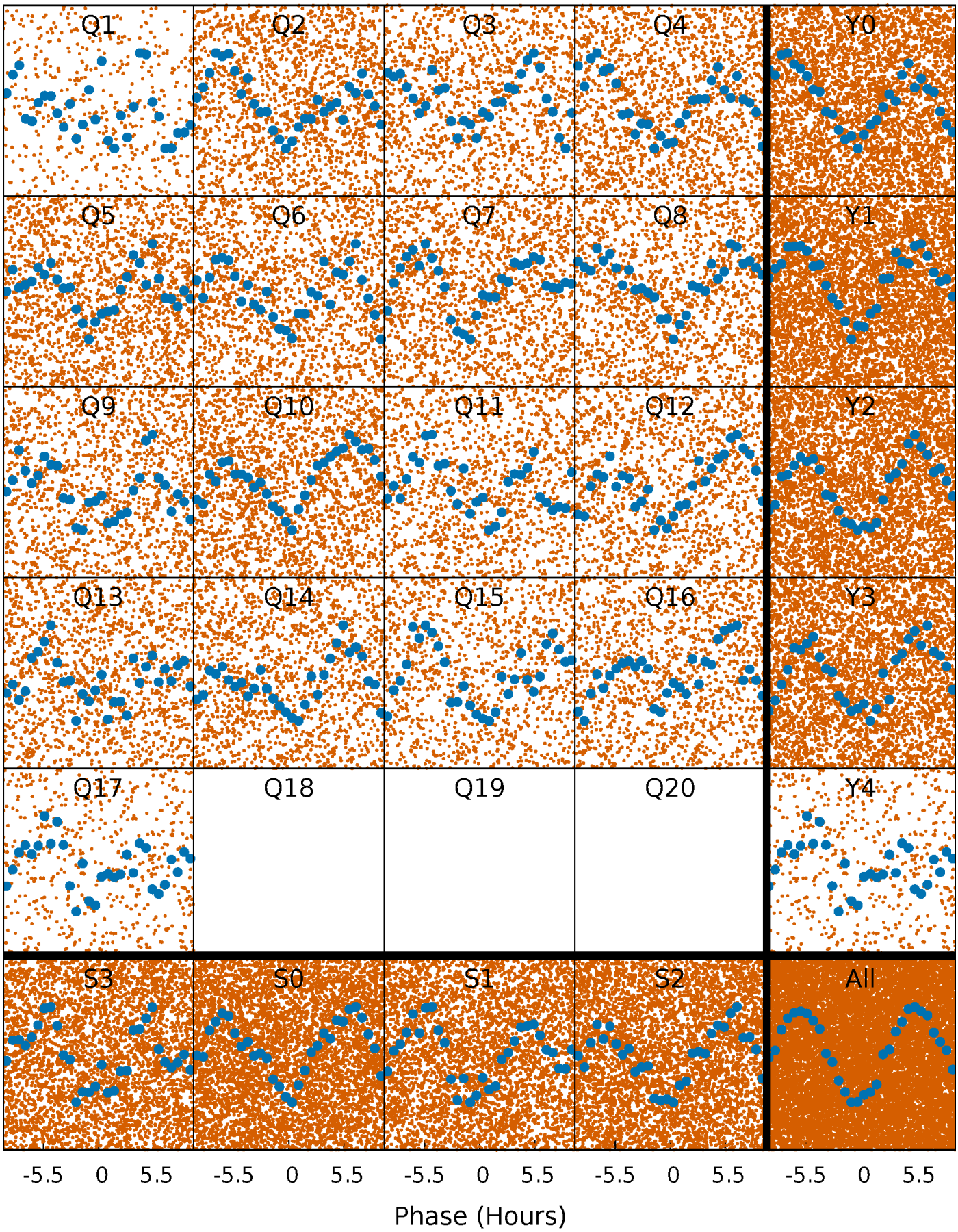
Non-Whitened Vs. Whitened Light Curve





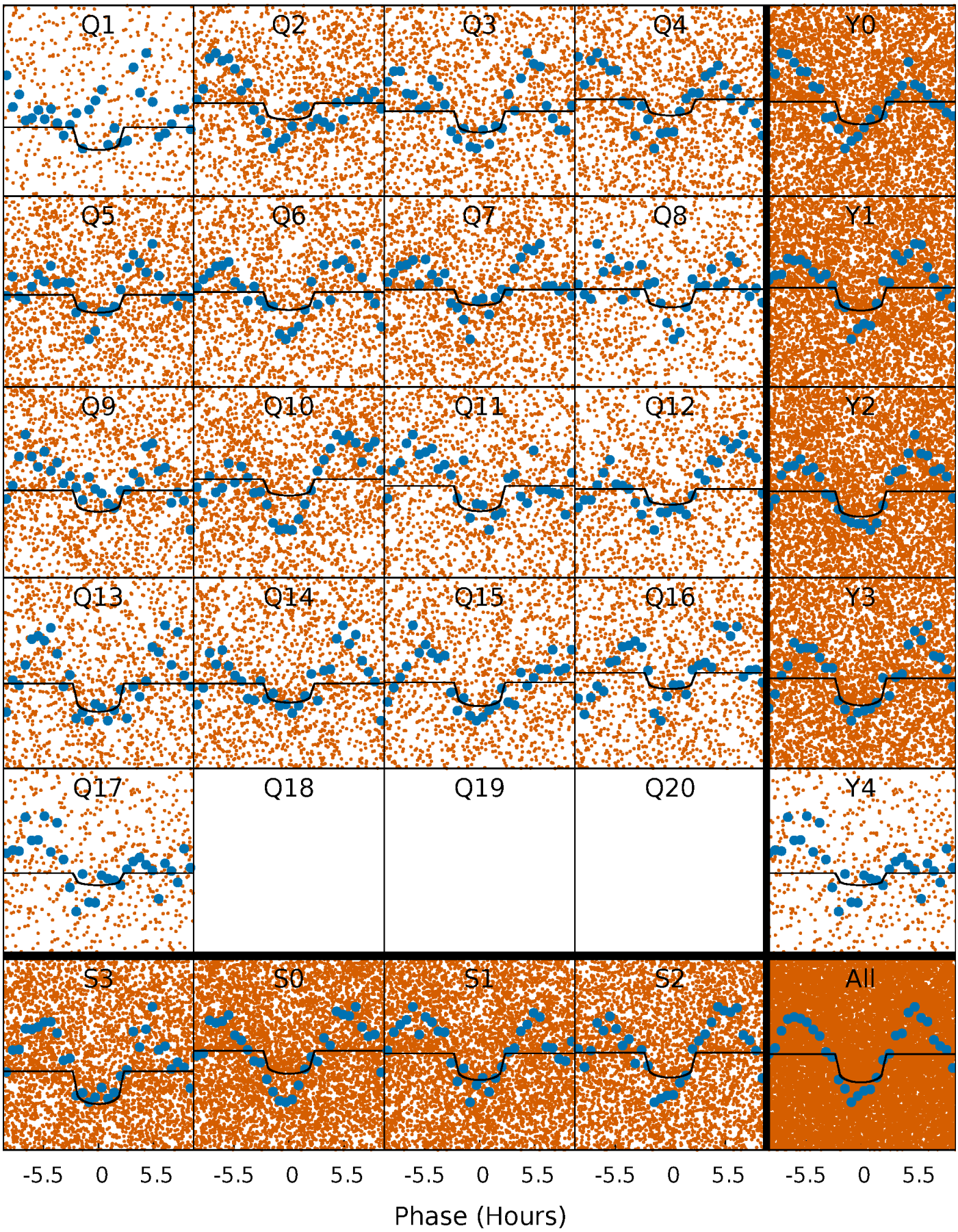
PDC Quarter-Phased Transit Curves

TCE 008125219-02 P= 0.951696 Days T_0=132.412373 (BKJD)



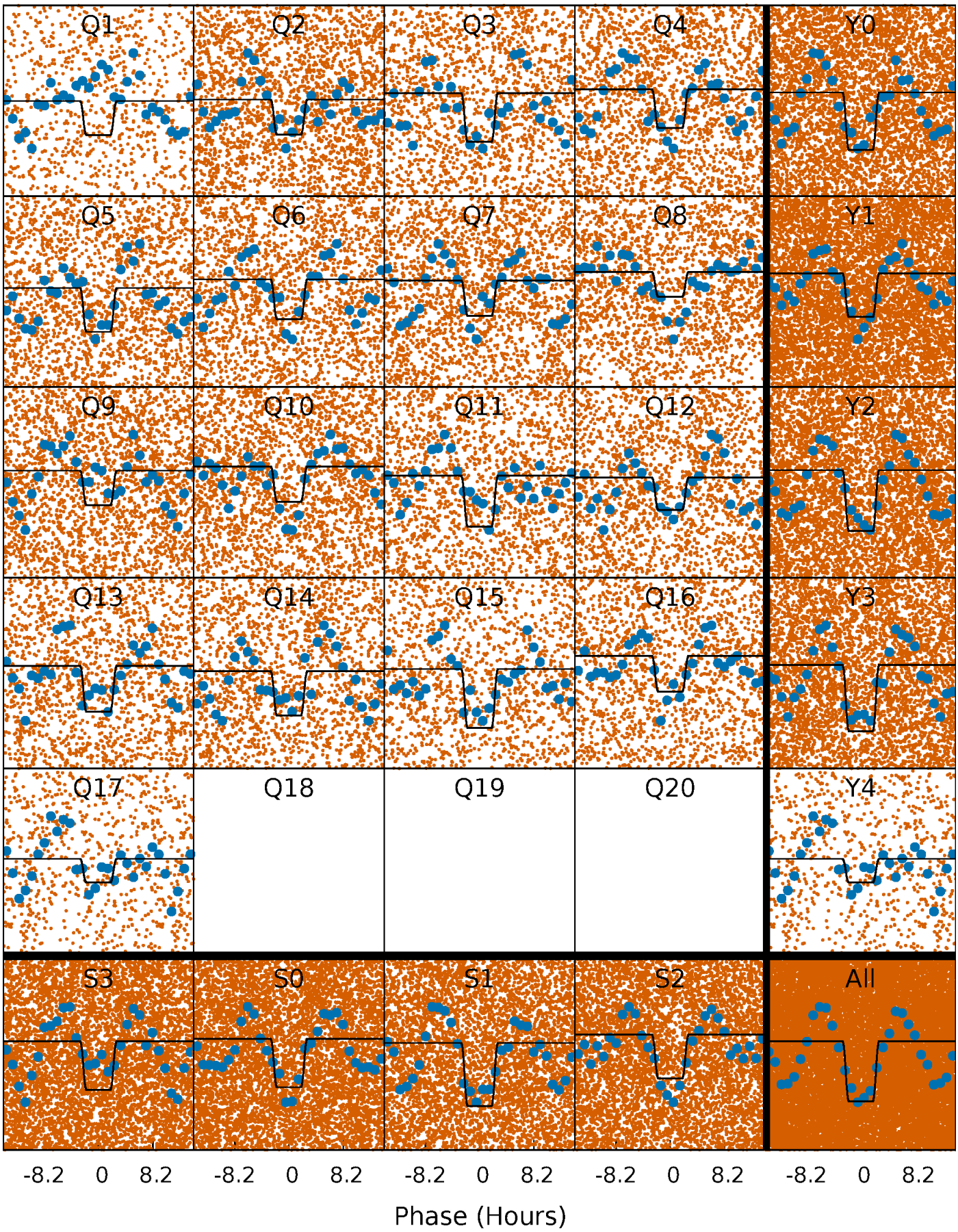
DV Quarter-Phased Transit Curves

TCE 008125219-02 P= 0.951696 Days T_0=132.412373 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

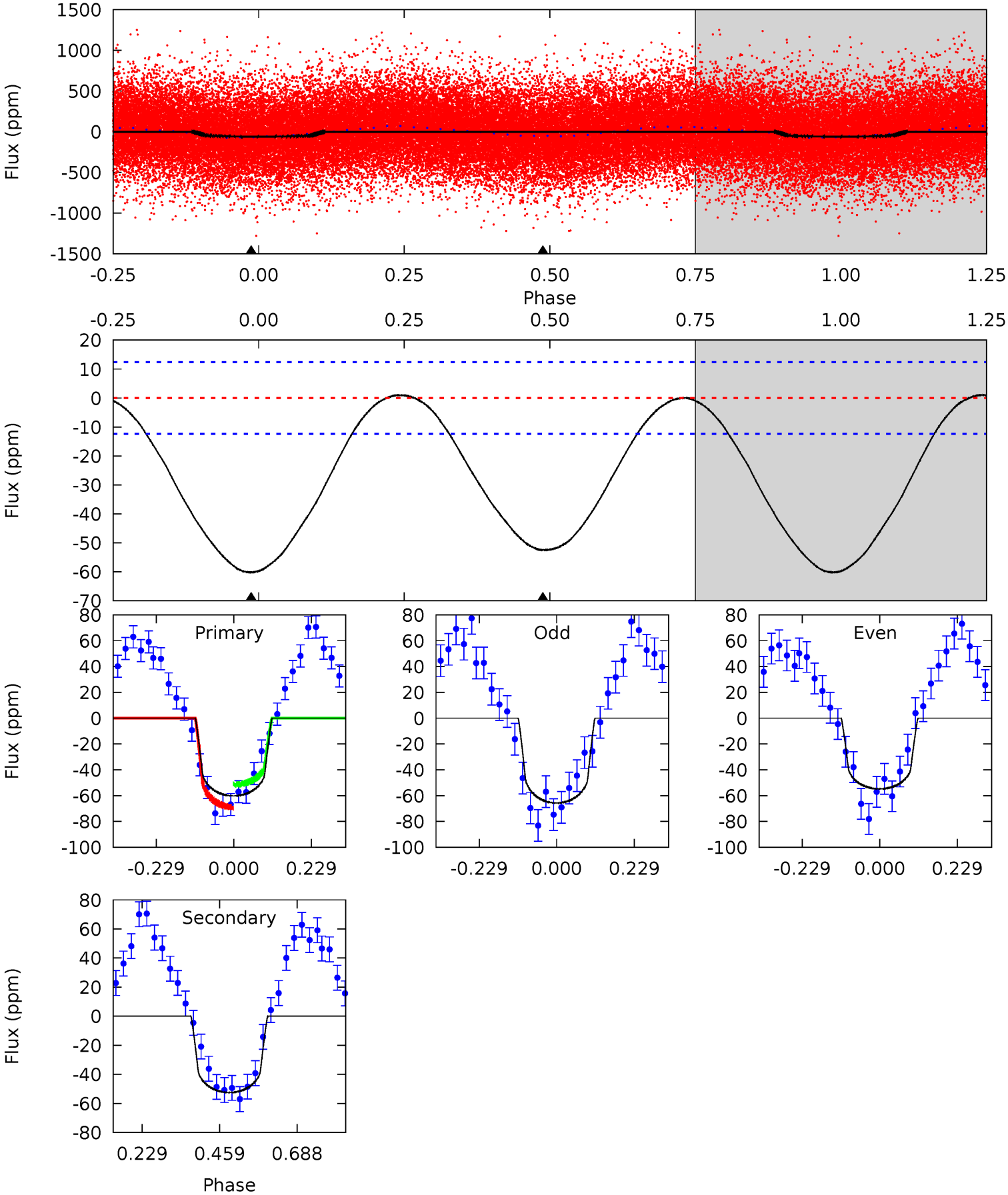
TCE 008125219-02 P= 0.951726 Days T_0=132.375309 (BKJD)



DV Model-Shift Uniqueness Test

008125219-02, P = 0.951696 Days, E = 131.460677 Days

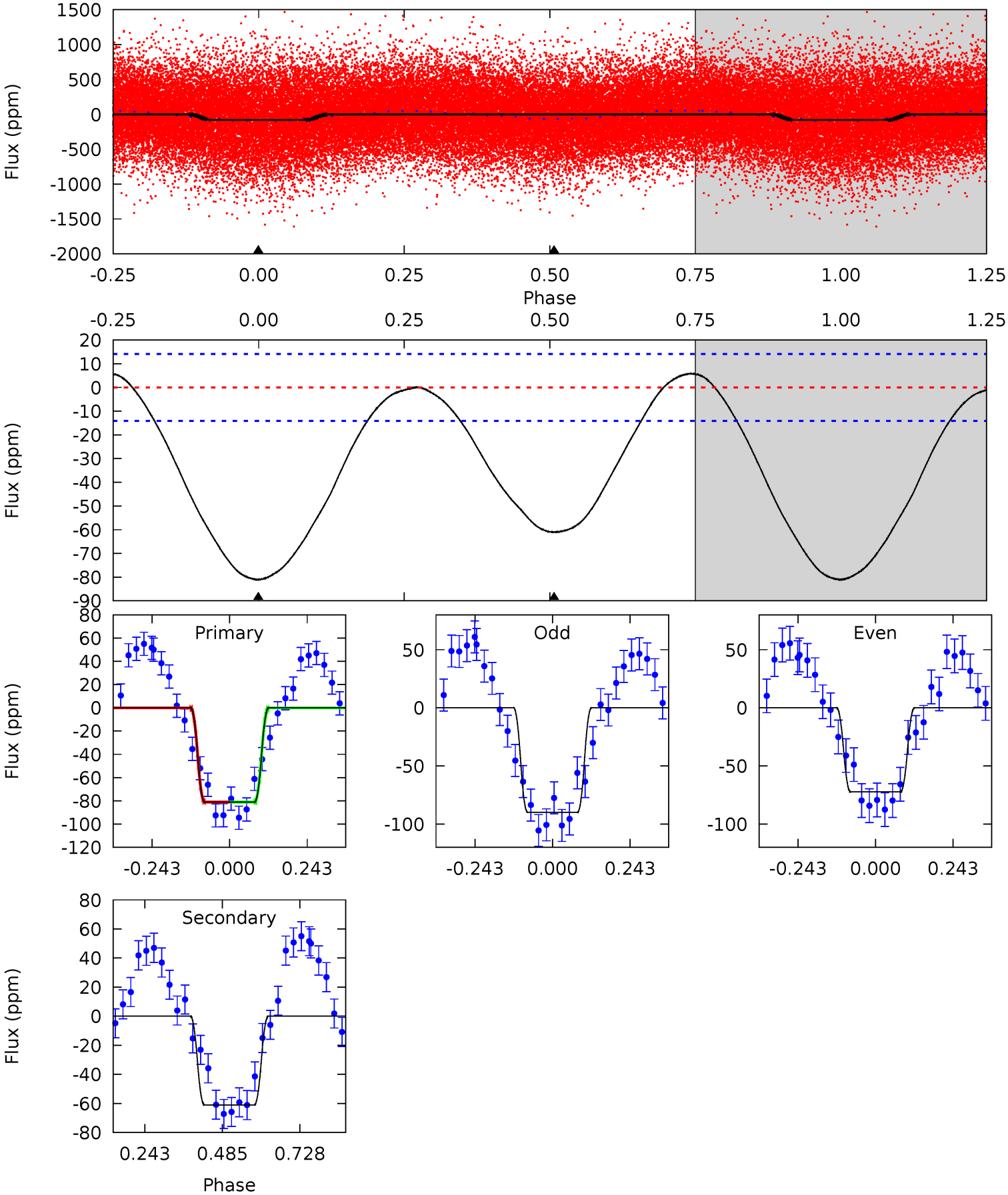
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.3	18.6	0	0	4.39	1.20	0.28	21.3	21.3	18.6	18.6	1.94	1.01	0.02	3.13



Alt Model-Shift Uniqueness Test

008125219-02, P = 0.951726 Days, E = 131.423583 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.1	18.9	0	0	4.38	1.17	1.00	25.1	25.1	18.9	18.9	2.71	0.84	0.07	0.01



Stellar Parameters For KIC 008125219

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7102^{+245}_{-367}	$3.729^{+0.501}_{-0.088}$	$-0.440^{+0.300}_{-0.300}$	$2.781^{+0.464}_{-1.391}$	$1.512^{+0.208}_{-0.357}$	$0.099^{+0.513}_{-0.026}$
	+3%/-5%	+13%/-2%	+68%/-68%	+17%/-50%	+14%/-24%	+518%/-27%
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 008125219-02 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-53±3	$1.85^{+0.93}_{-0.84}$	4765^{+395}_{-629}	7052^{+3103}_{-1301}	$3.866^{+9.066}_{-2.056}$
Alt.	-61±3	$2.55^{+1.06}_{-0.95}$	4725^{+392}_{-669}	6093^{+1375}_{-844}	$2.434^{+3.563}_{-1.206}$

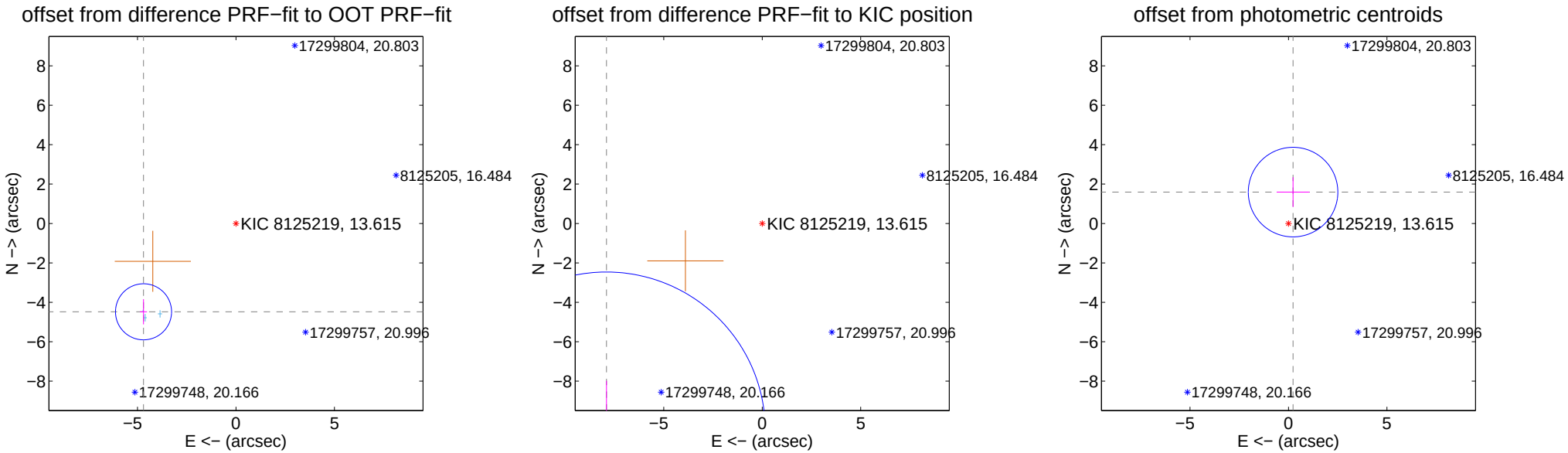
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

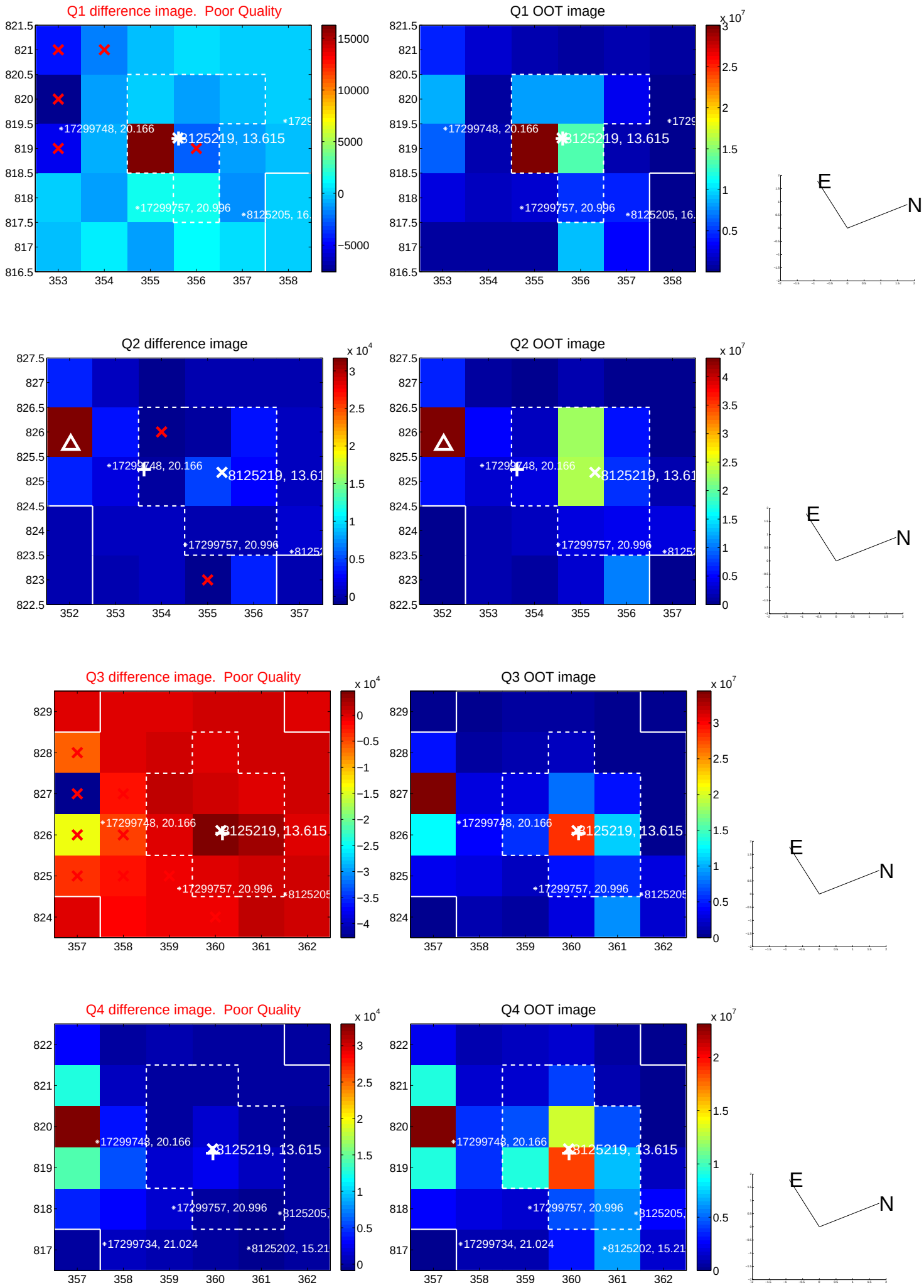
Supplemental centroid analysis for 008125219-02. Kepler magnitude: 13.62. Transit SNR 9.03
There are 3 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.489 ± 0.474	13.68	4.692 ± 0.181	-4.482 ± 0.640
PRF-fit source offset from KIC position	13.165 ± 2.688	4.90	7.906 ± 1.101	-10.527 ± 2.543
photometric centroid source offset	1.61 ± 0.76	2.13	-0.23 ± 0.83	1.59 ± 0.76

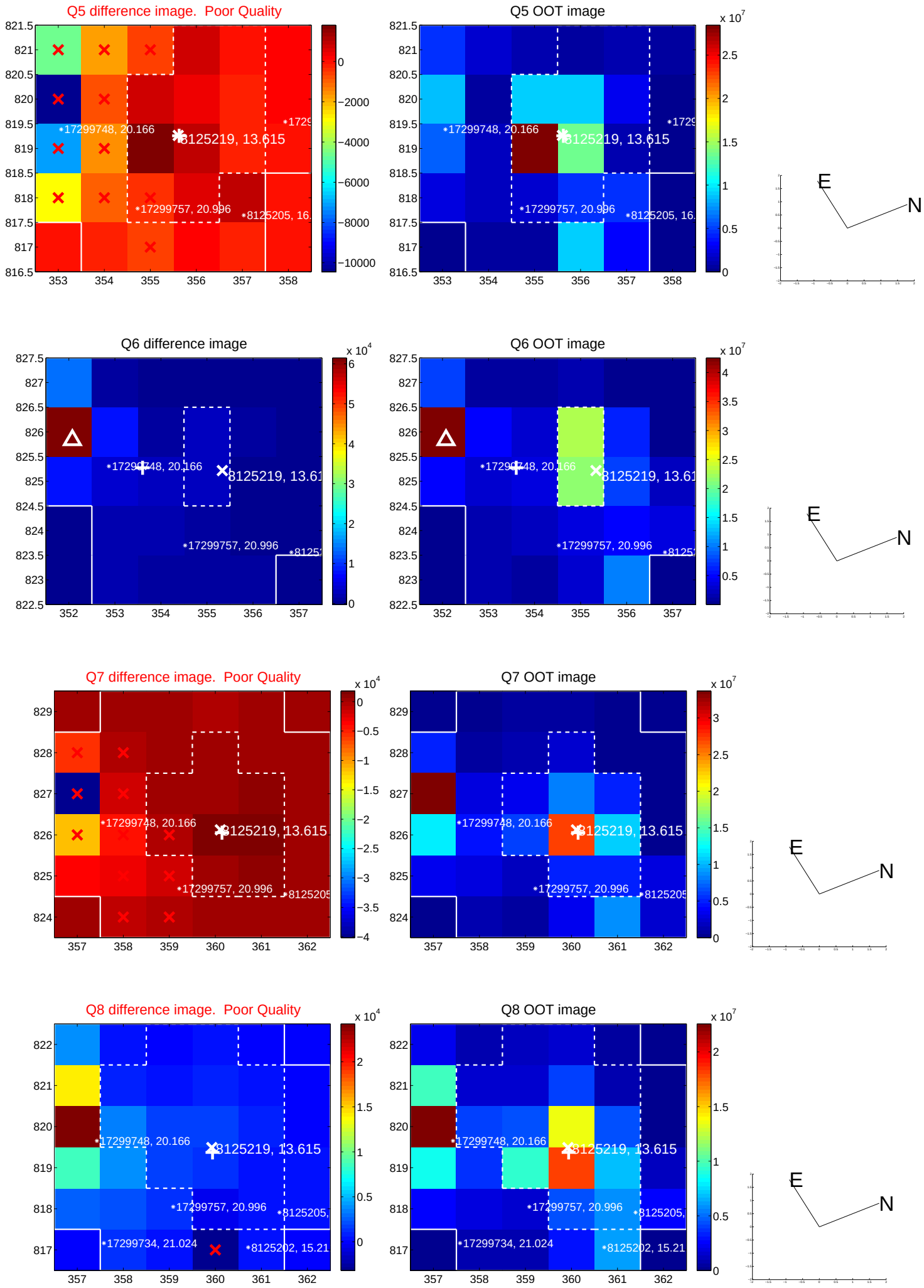


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

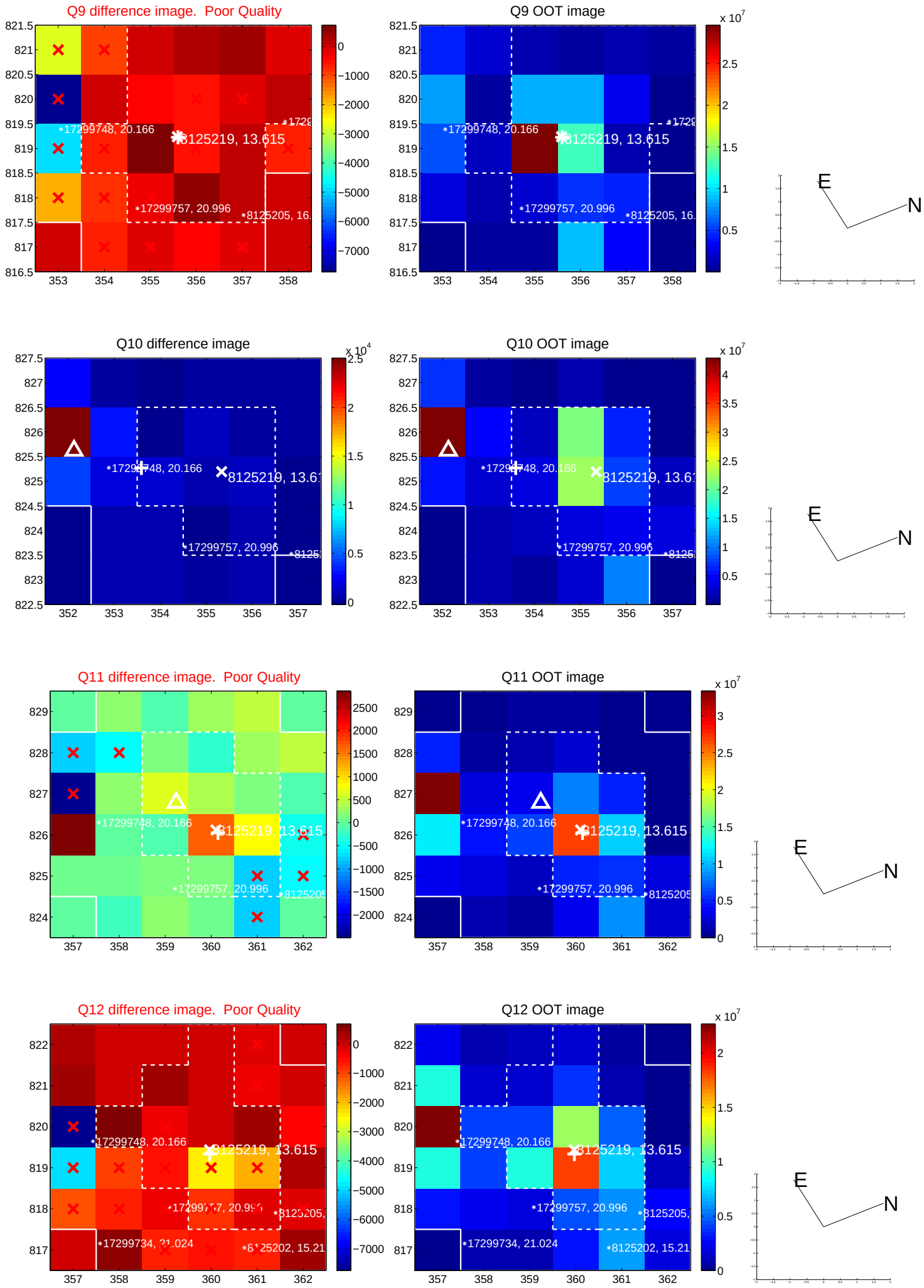
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



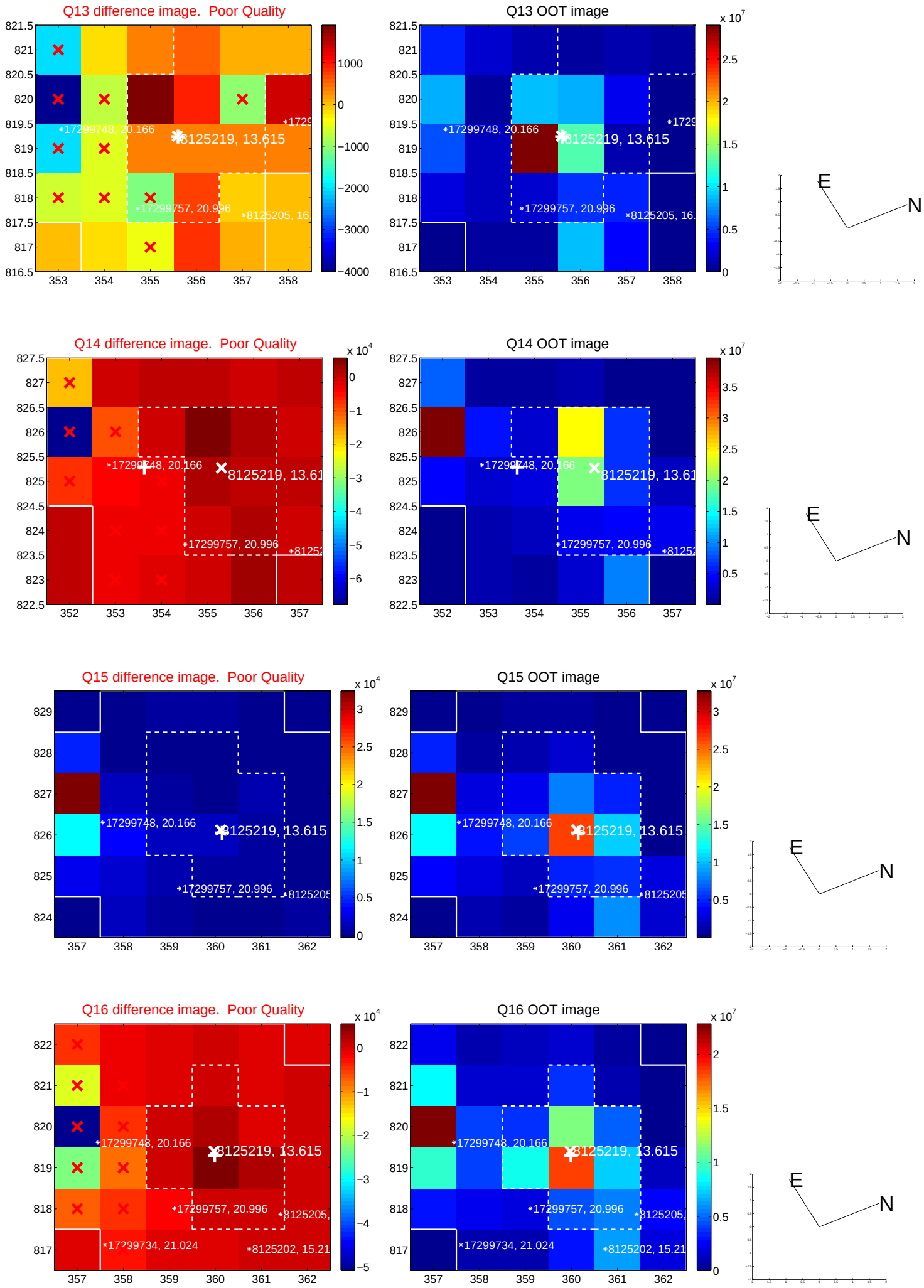
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



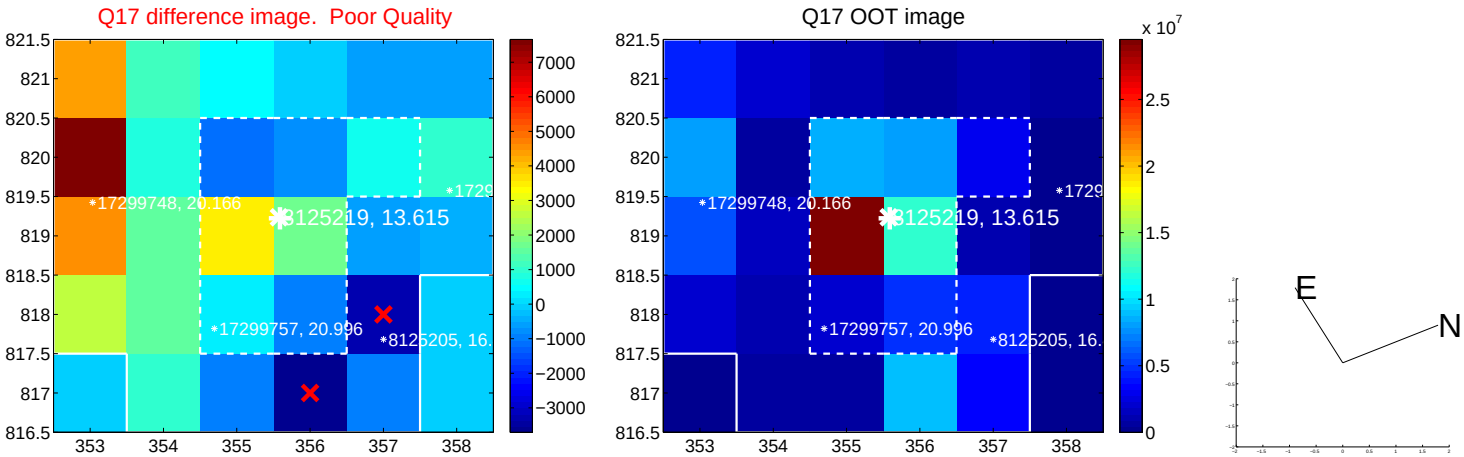
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

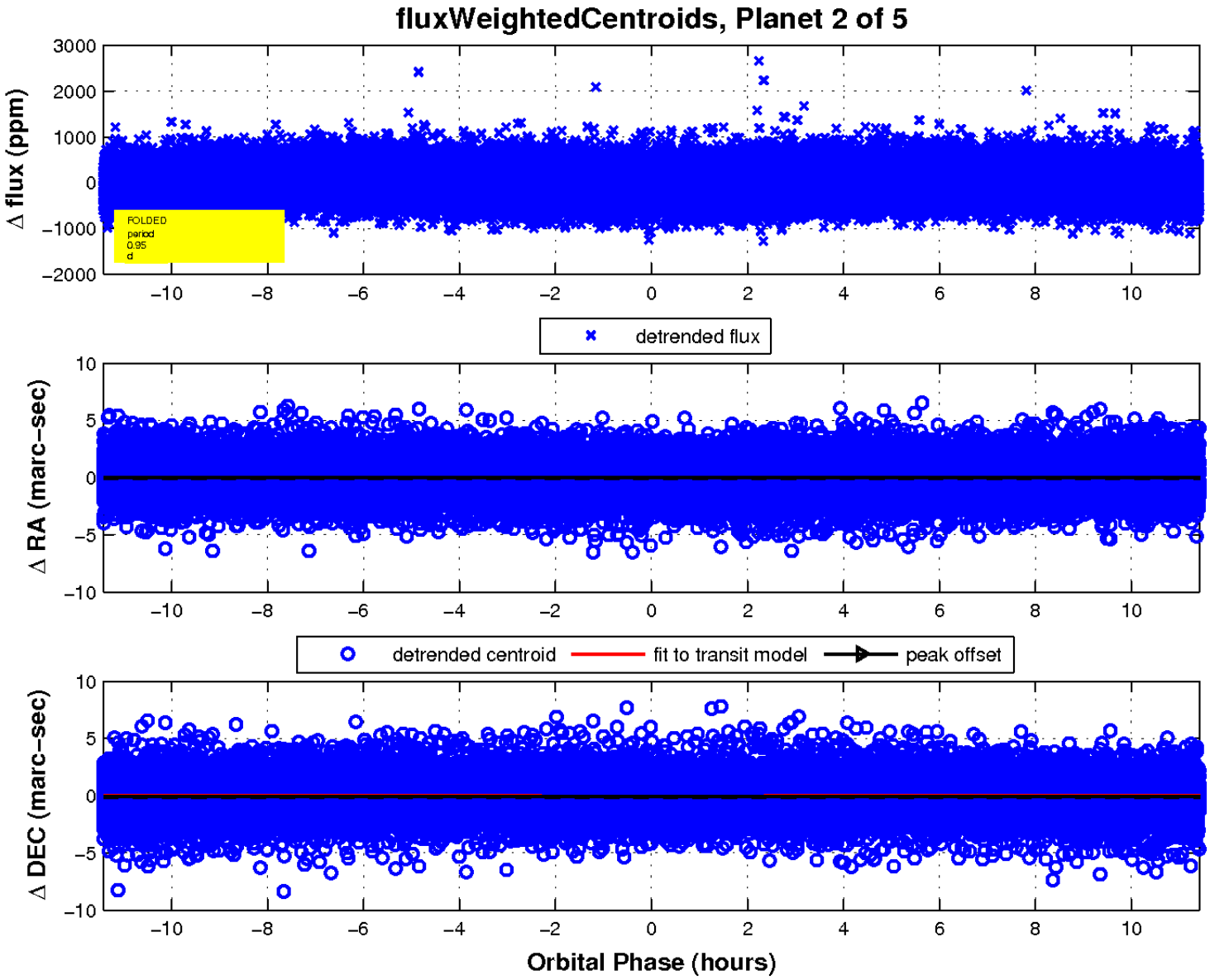


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

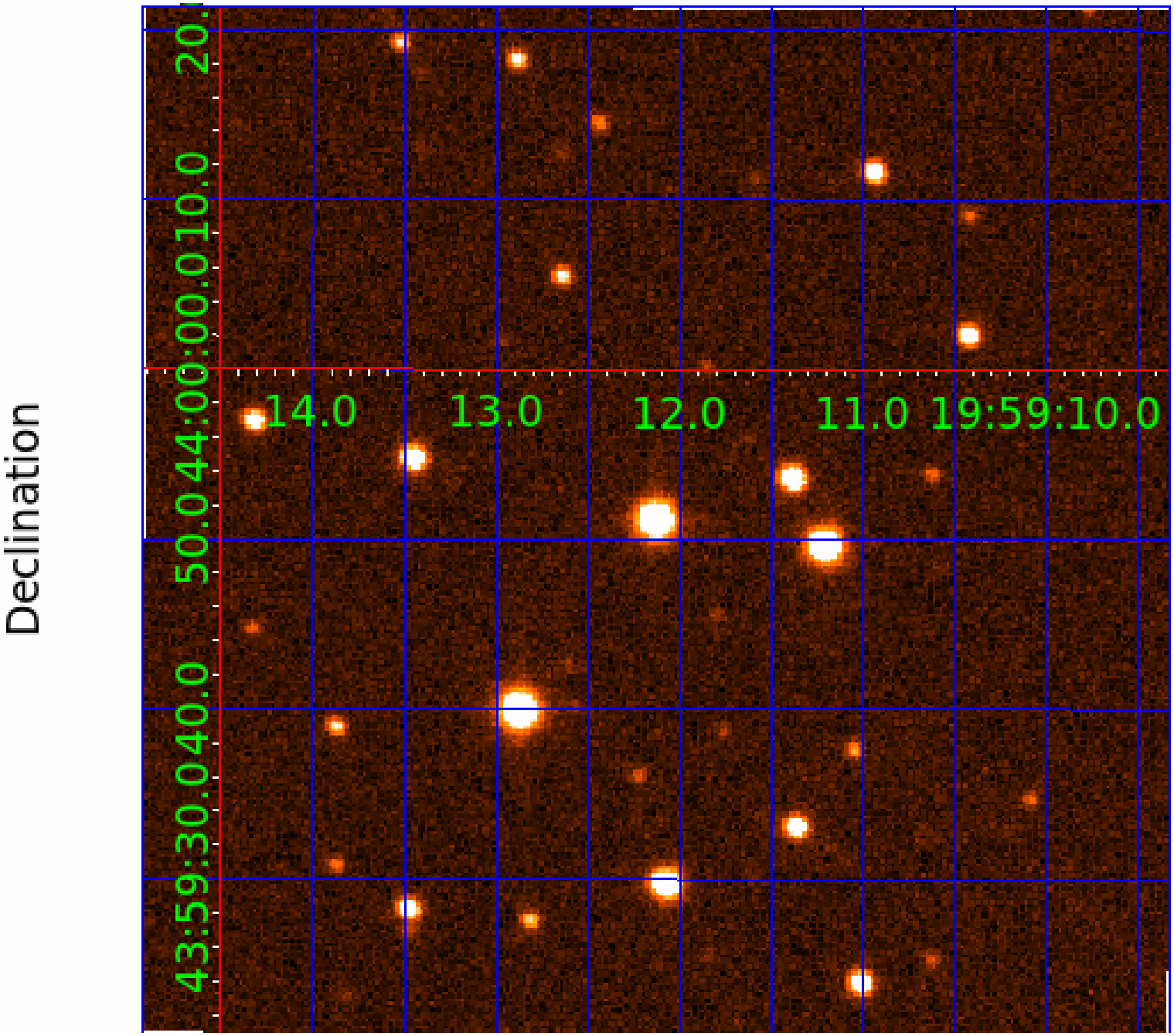


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image


Declination
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20.
14.0
13.0
12.0
11.0
19:59:10.0

KIC 008125219

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 ($S_\oplus$)
008125219-01	OBS	No	1.568216	131.998589	59.3	2.560	9.0	8.9	2.78	7102	2.43	19172.40
008125219-02	OBS	No	0.951696	132.412373	44.2	4.771	9.2	9.0	2.78	7102	2.04	37315.30
008125219-03	OBS	No	1.568144	131.760574	108.0	3.424	12.6	13.6	2.78	7102	3.42	19173.58
008125219-04	OBS	No	105.152818	154.360326	742.9	5.815	11.5	11.9	2.78	7102	9.59	70.38
008125219-05	OBS	No	8.866768	133.840420	453.1	3.500	9.9	-1.0	2.78	7102	5.97	1903.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008125219-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008125219-02	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
008125219-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
008125219-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
008125219-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

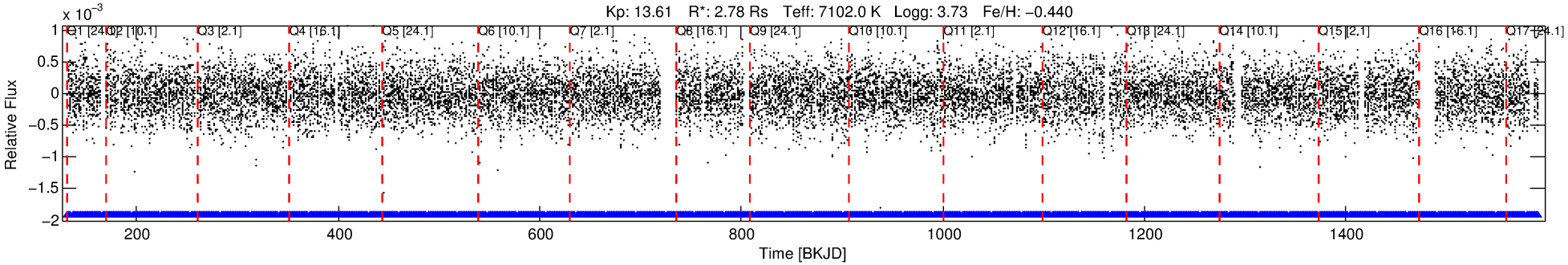
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

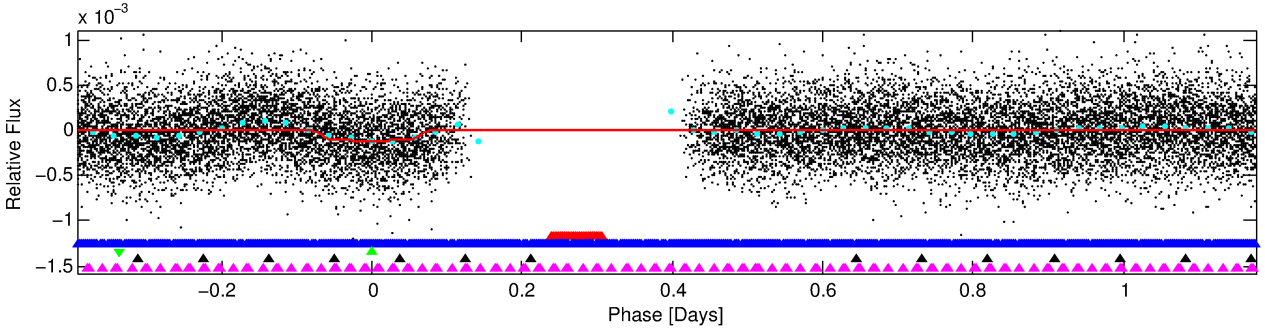
Ephemeris Match Information For 008125219-03

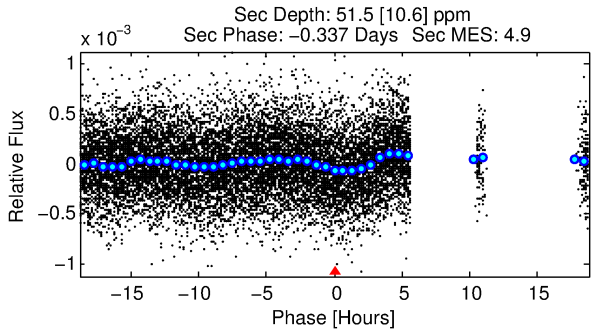
No Significant Match Found

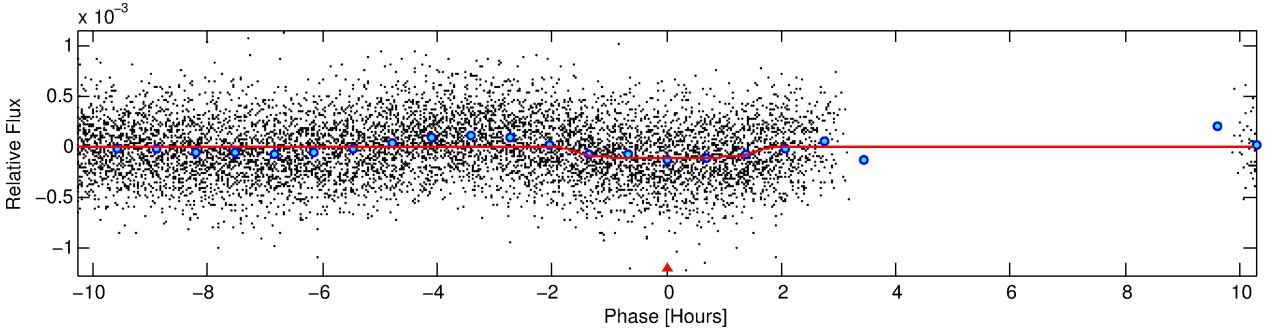
DV One-Page Summary

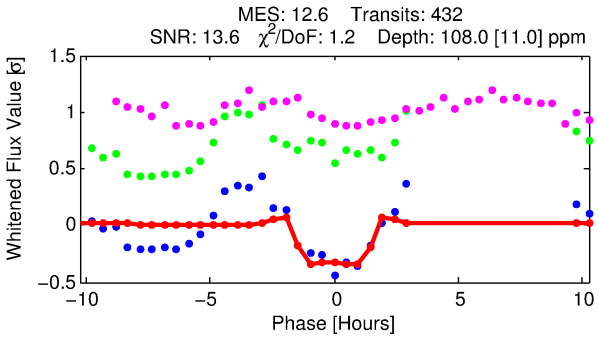
KIC: 8125219 Candidate: 3 of 5 Period: 1.568 d

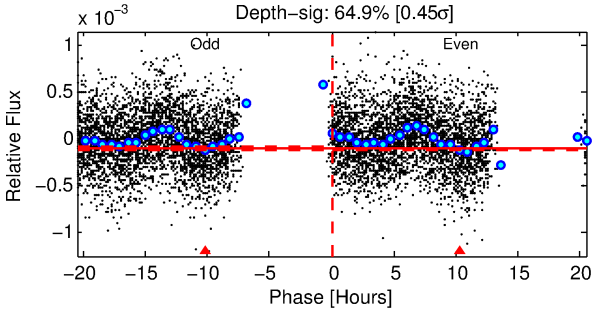


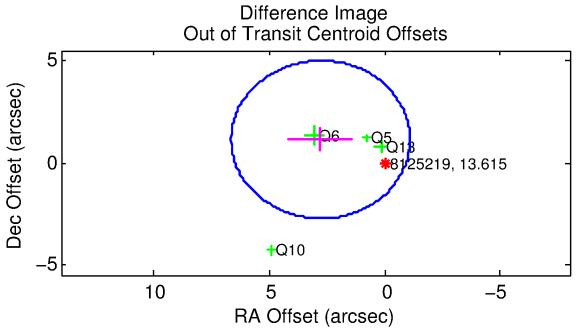












DV Fit Results:

Period = 1.56814 [0.00001] d
Epoch = 131.7606 [0.0029] BKJD
Rp/R* = 0.0113 [0.0027]
a/R* = 1.77 [1.69]
b = 0.92 [0.25]

Seff = 19173.58 [16553.53]
Teq = 3001 [648] K
Rp = 3.42 [1.89] Re
a = 0.0303 [0.0154] AU

Ag = 2.23 [2.19] [0.56σ]
Teffp = 5667 [789] K [2.61σ]

DV Diagnostic Results:

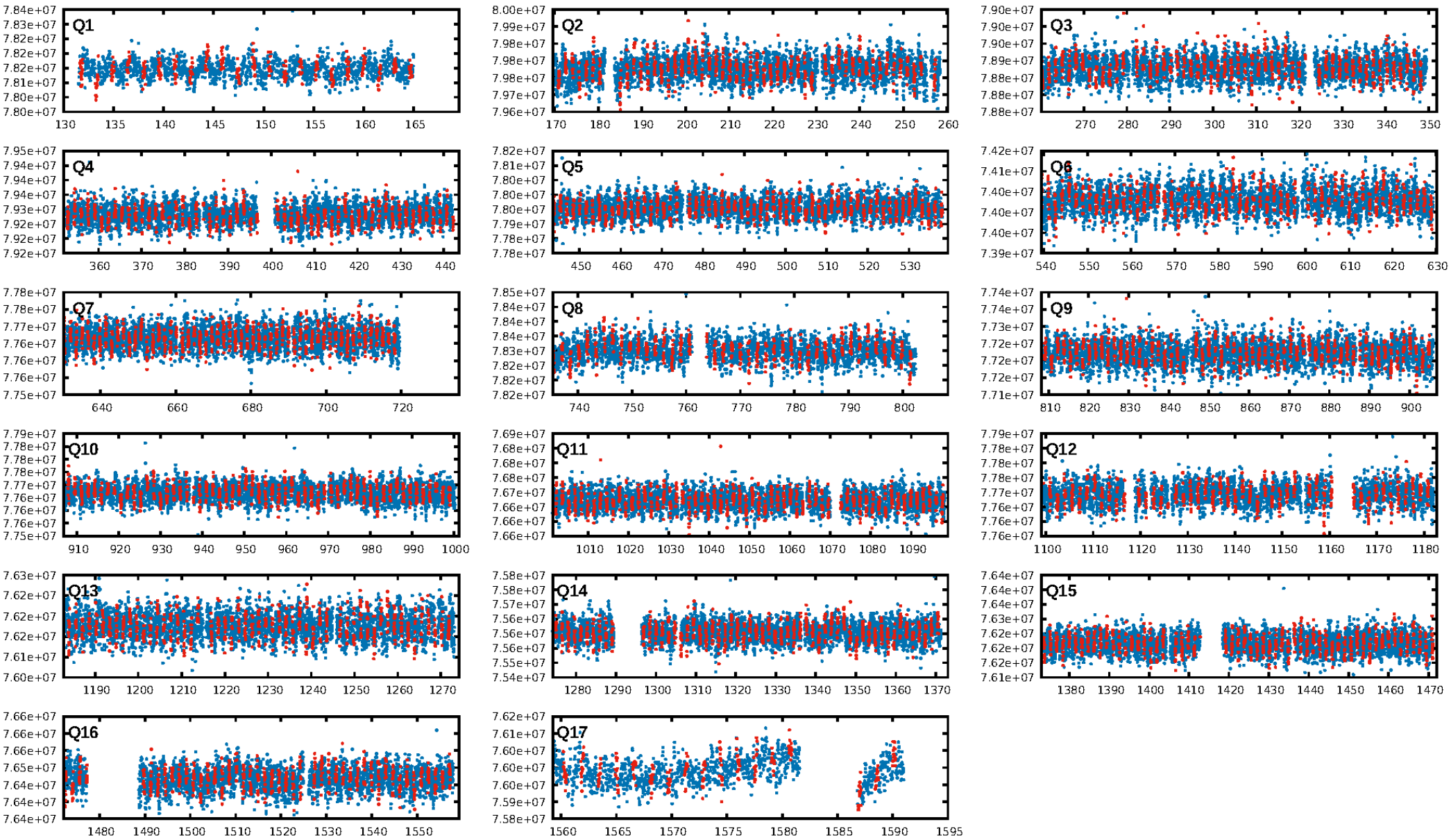
ShortPeriod−sig: 98.8% [2.52σ]
LongPeriod−sig: 0.0% [0.00σ]
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [412/412]
GhostDiagnostic−chr: 1.406

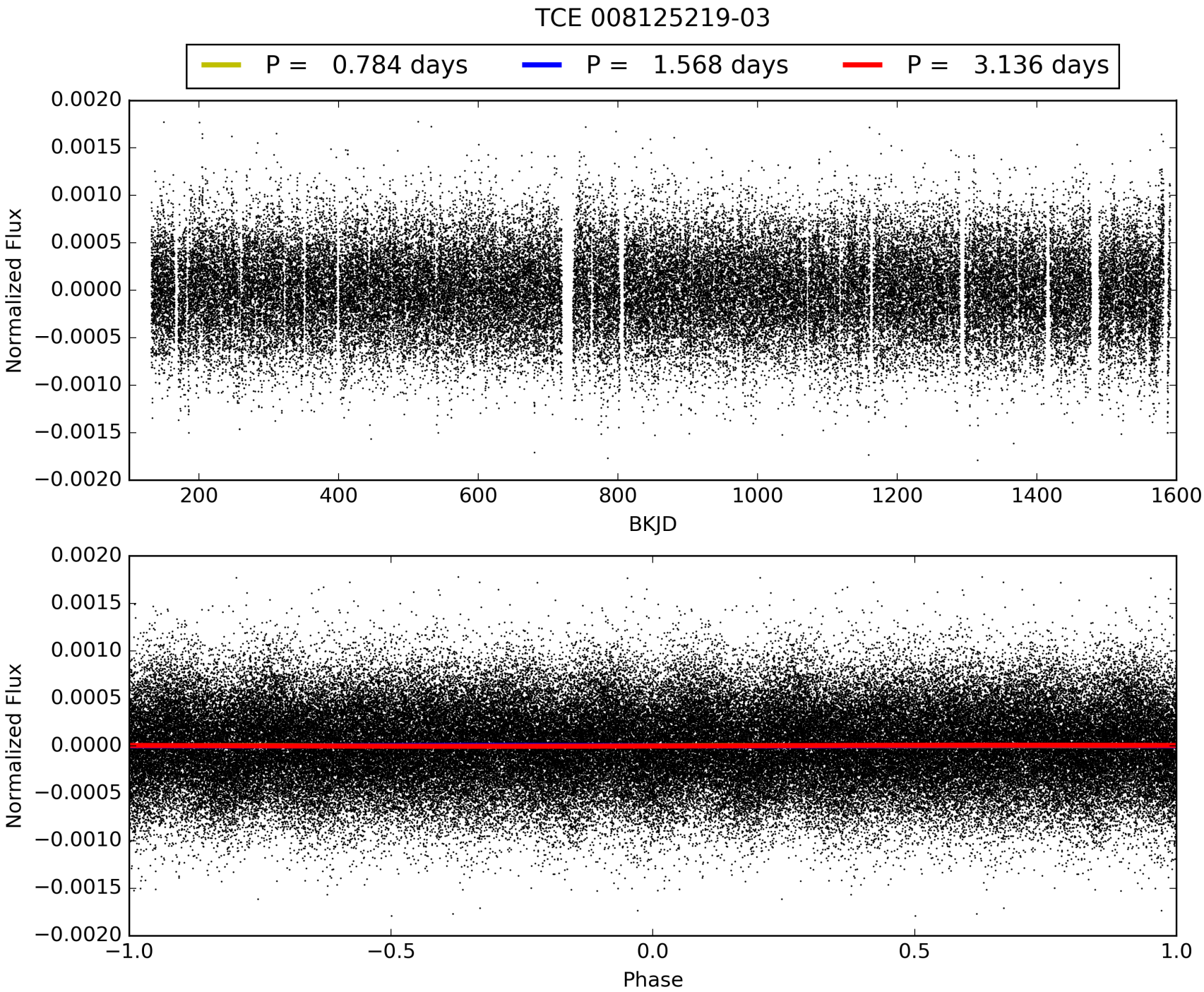
Centroid−sig: 42.4%
Centroid−so: 1.044 arcsec [2.20σ]
OotOffset−rm: 2.997 arcsec [2.33σ]
KicOffset−rm: 4.584 arcsec [1.85σ]
OotOffset−st: 2/0/0/2 [4]
KicOffset−st: 2/0/0/2 [4]
DiffImageQuality−fgm: 0.25 [1/4]
DiffImageOverlap−fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 23:48:38 Z

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

TCE 008125219-03, PDC Light Curves

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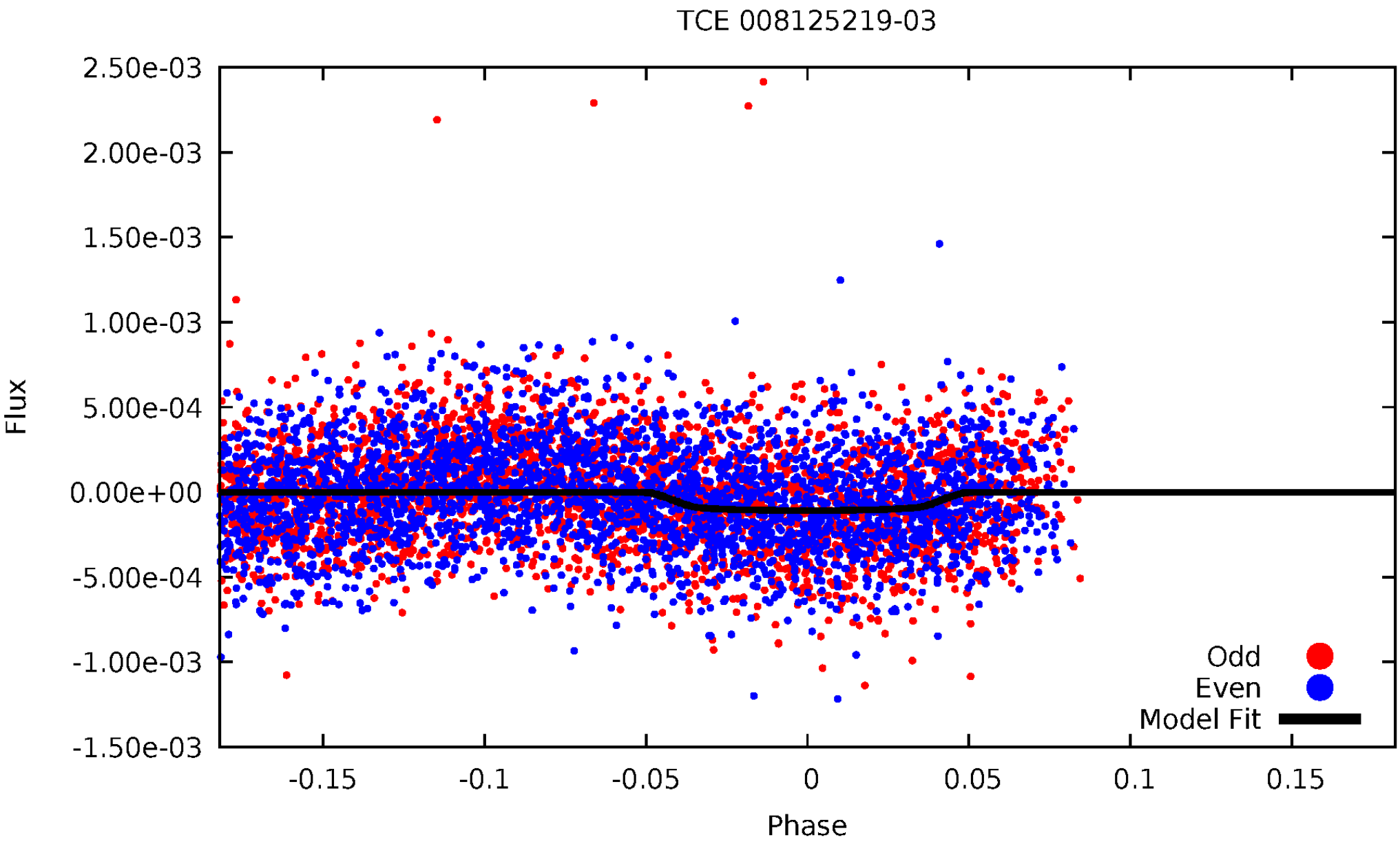
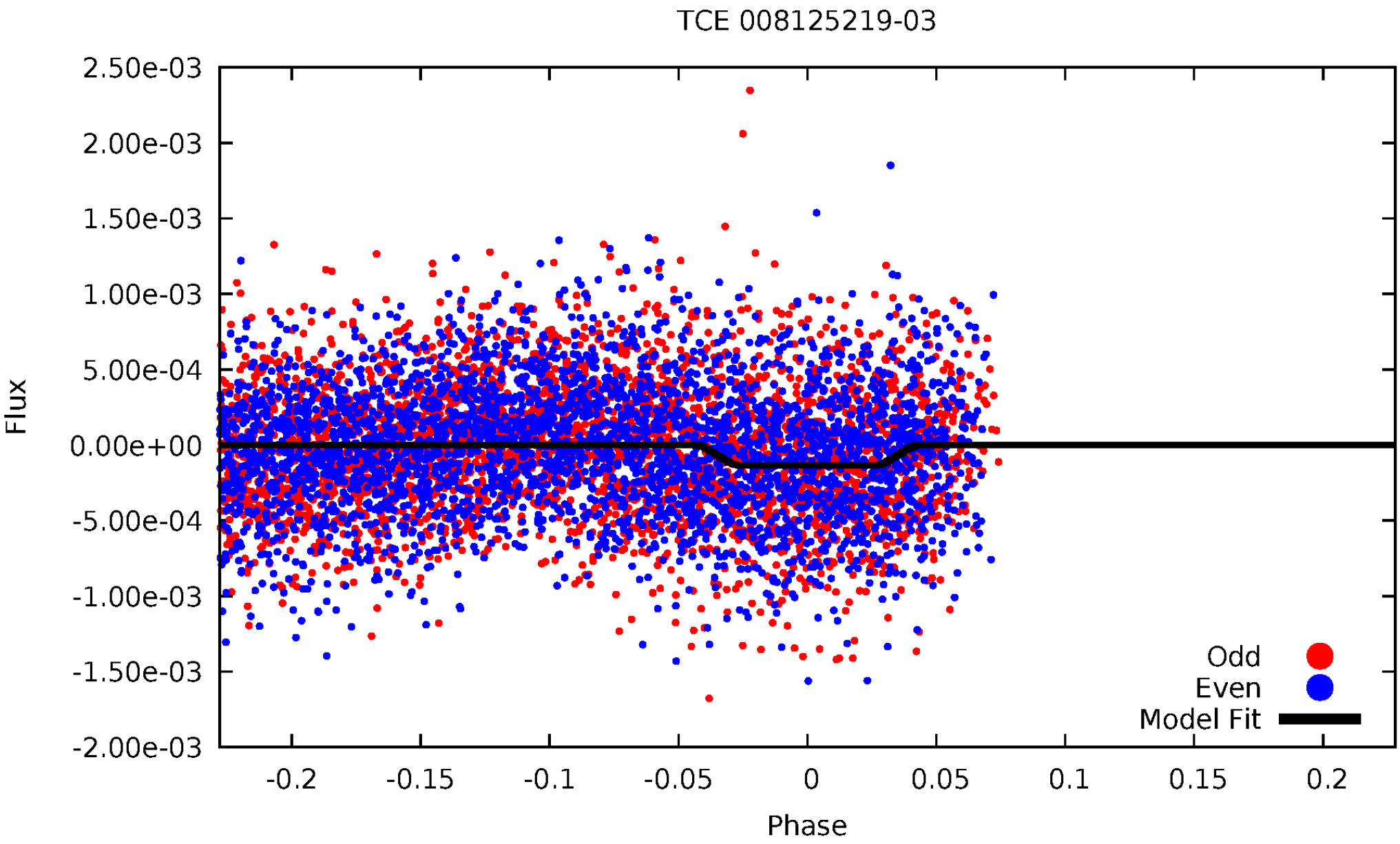
P = 0.784 days
P = 1.568 days
P = 3.136 days
Normalized Flux
BKJD
Normalized Flux
Phase

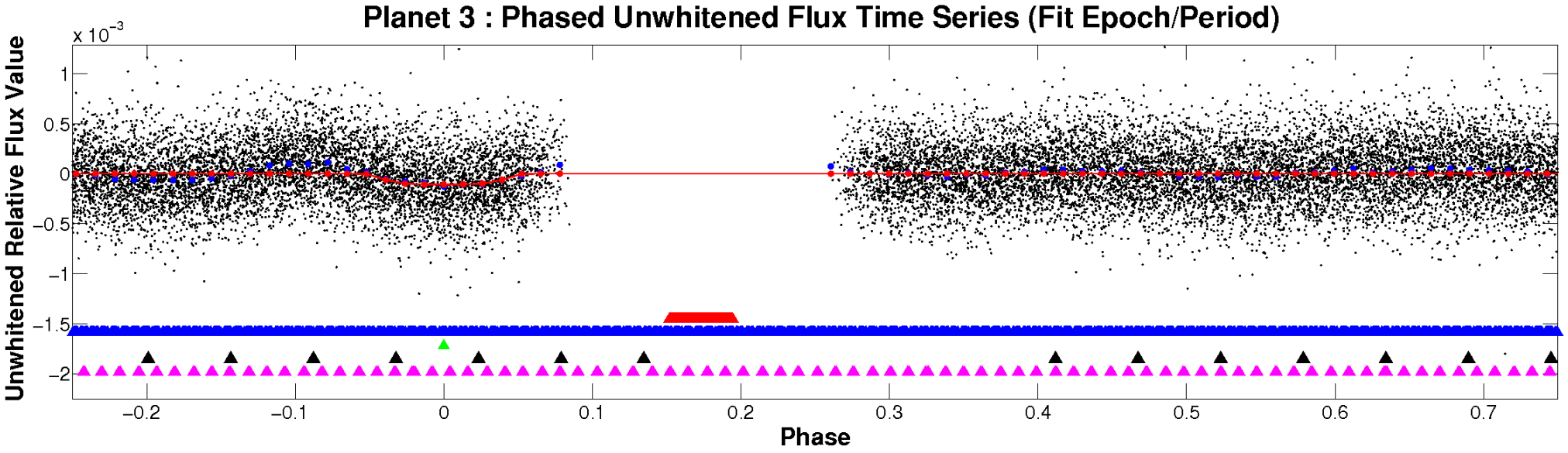
DV Odd/Even

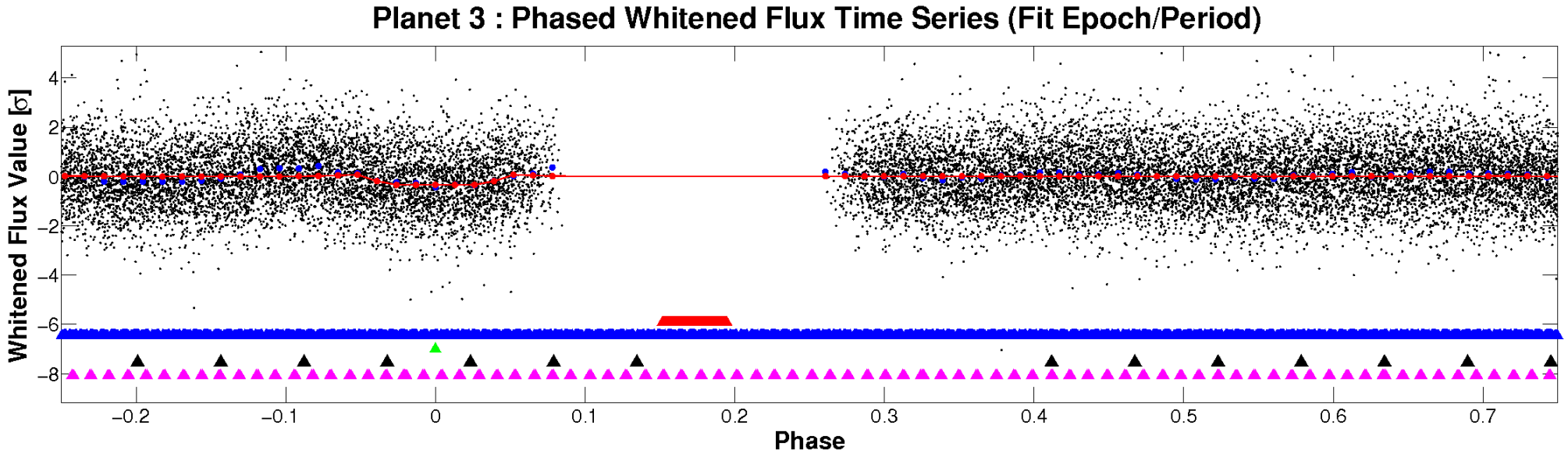

TCE 008125219-03
2.50e-03
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
Flux
-0.15
-0.1
-0.05
0
0.05
0.1
0.15
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 008125219-03
2.50e-03
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
Flux
-0.2
-0.15
-0.1
-0.05
0
0.05
0.1
0.15
0.2
Phase
Odd
Even
Model Fit

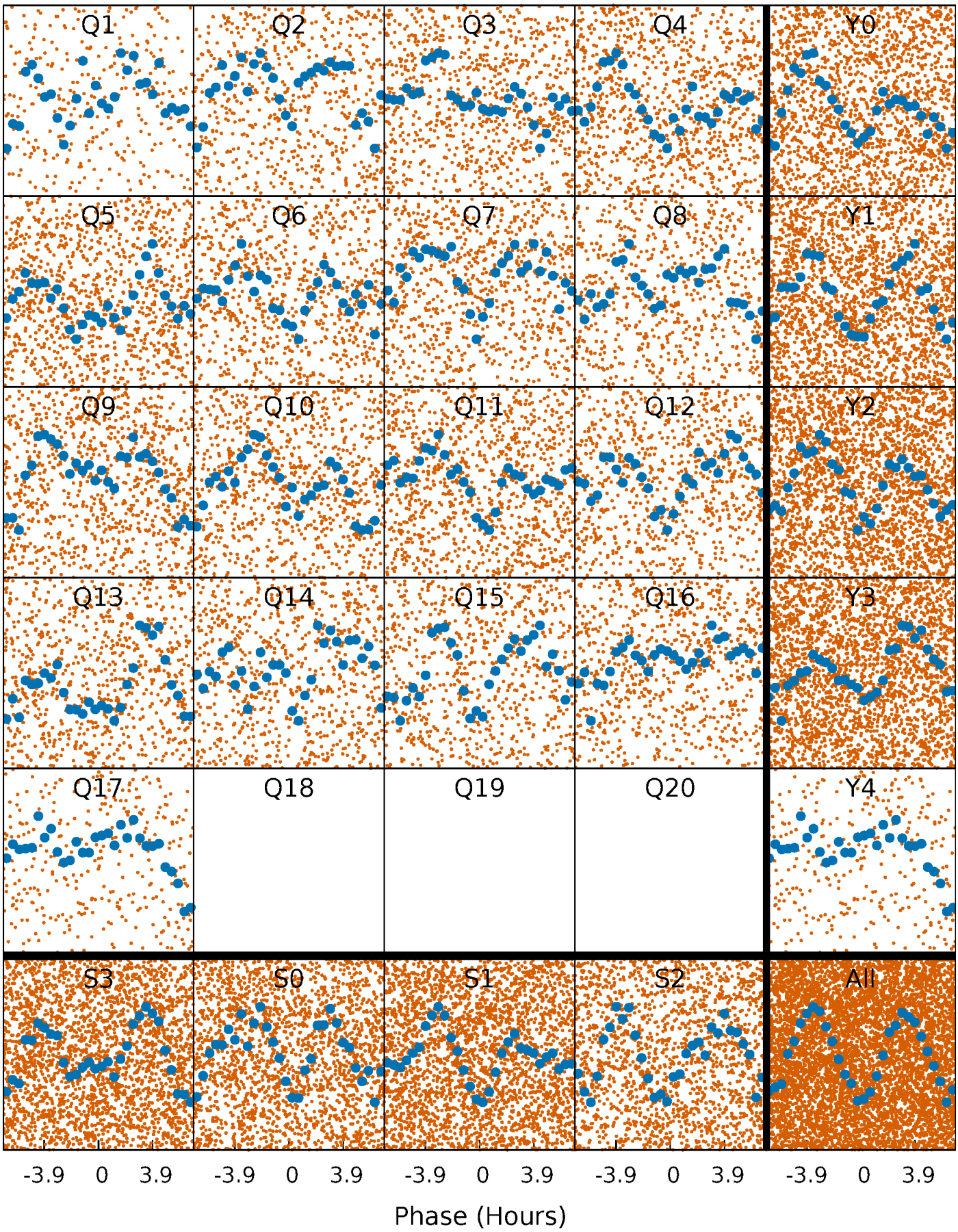
Non-Whitened Vs. Whitened Light Curve





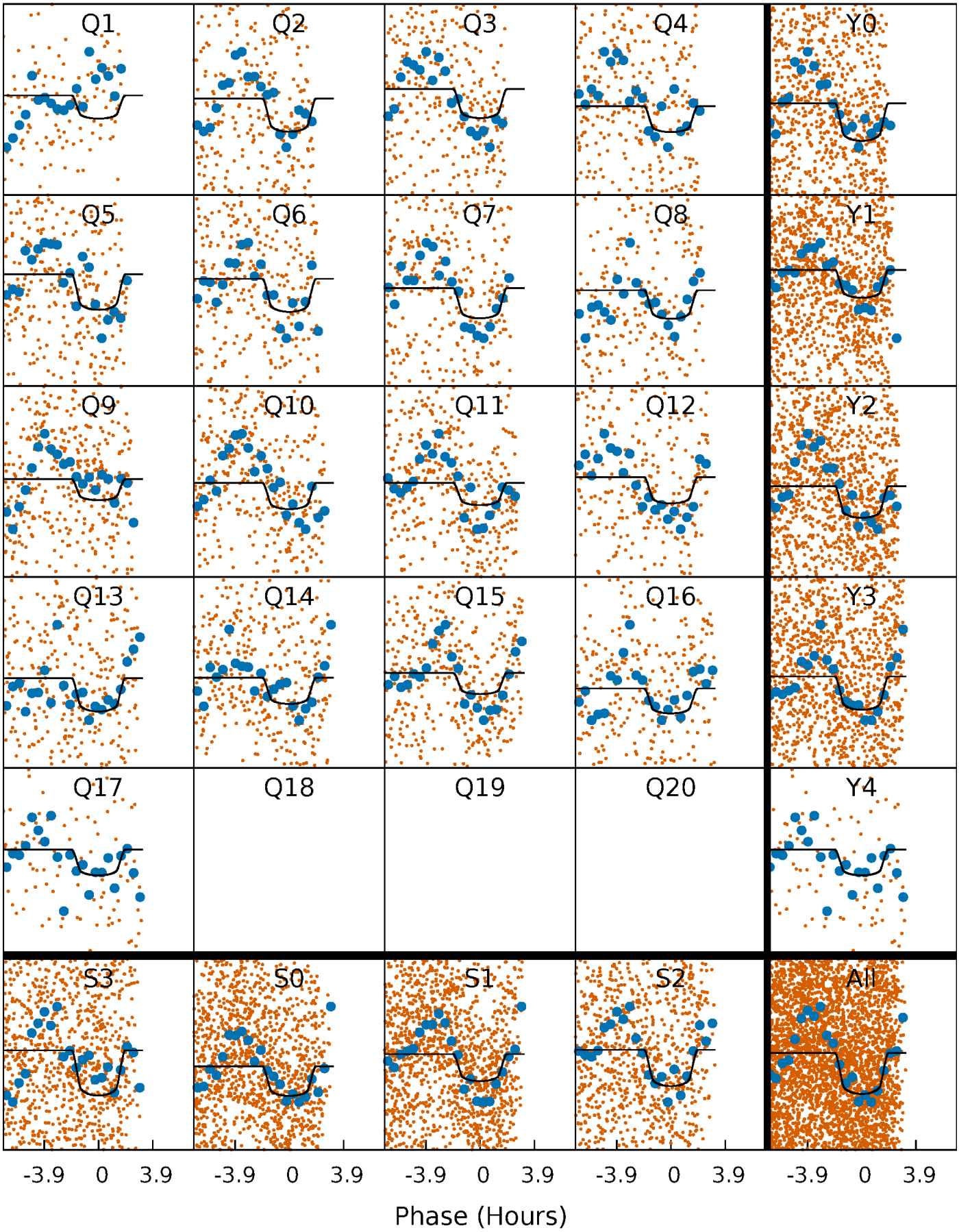
PDC Quarter-Phased Transit Curves

TCE 008125219-03 P= 1.568144 Days T_0=131.760574 (BKJD)



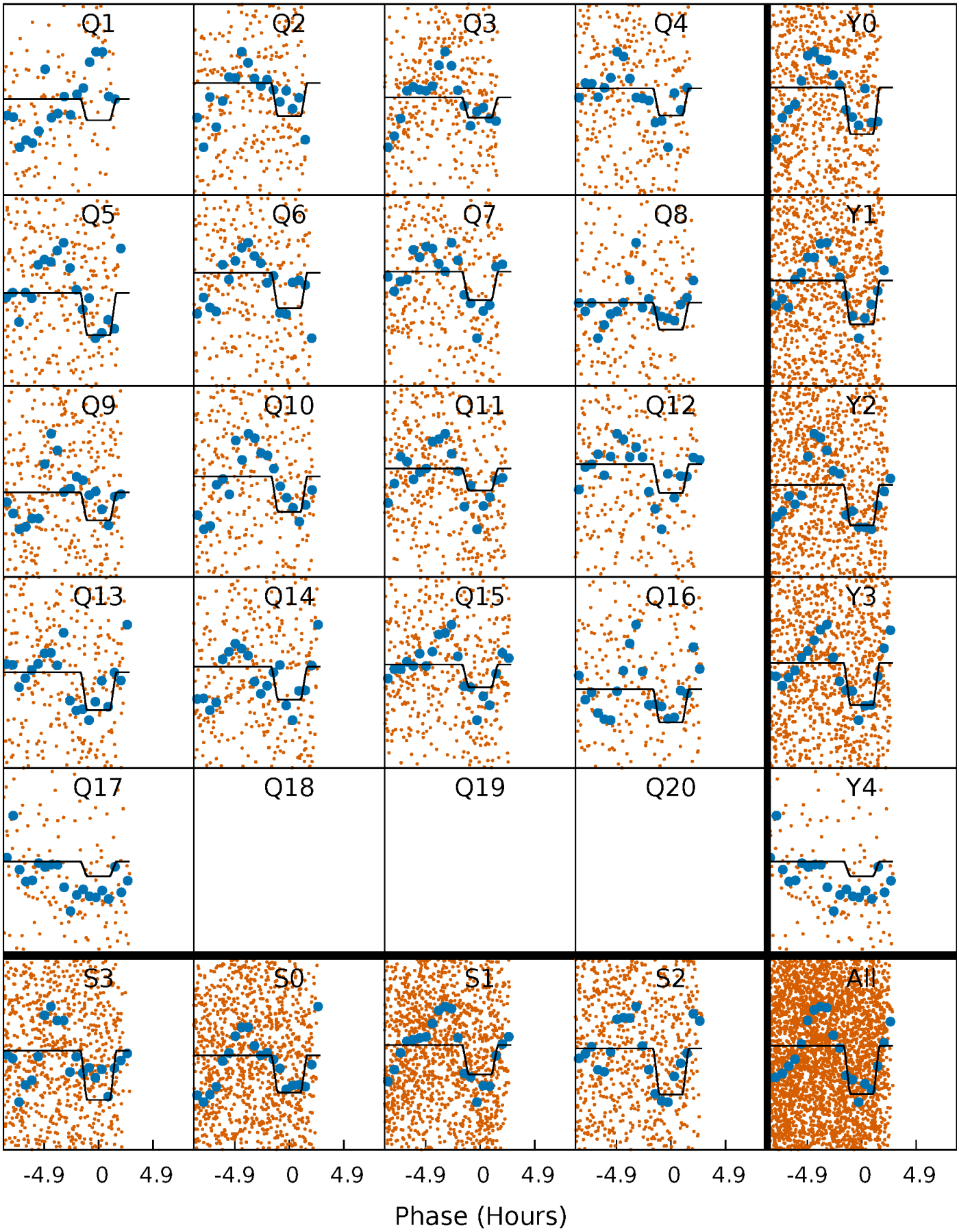
DV Quarter-Phased Transit Curves

TCE 008125219-03 P= 1.568144 Days T_0=131.760574 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

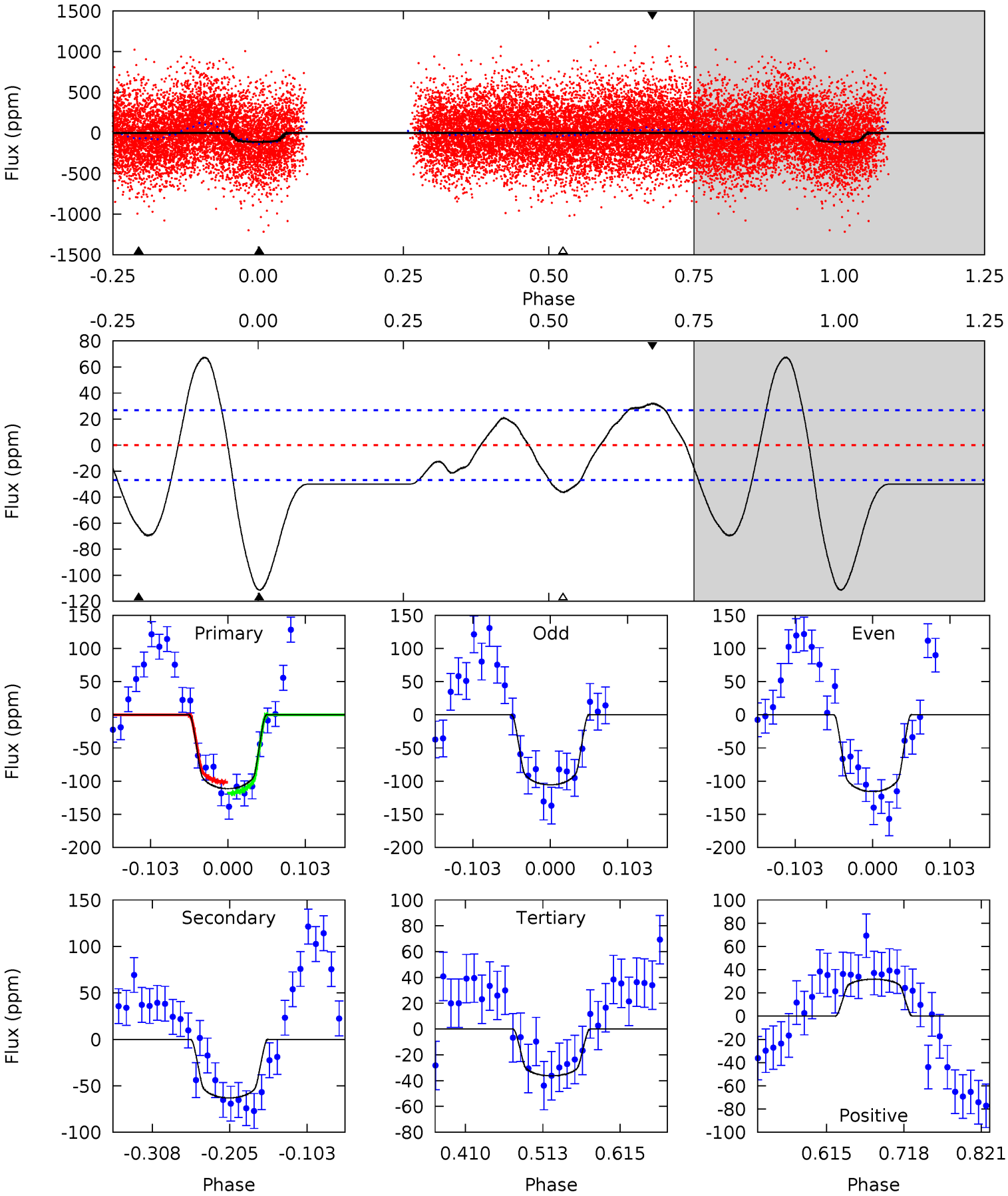
TCE 008125219-03 P= 1.568151 Days T_0=131.769834 (BKJD)



DV Model-Shift Uniqueness Test

008125219-03, P = 1.568144 Days, E = 131.760574 Days

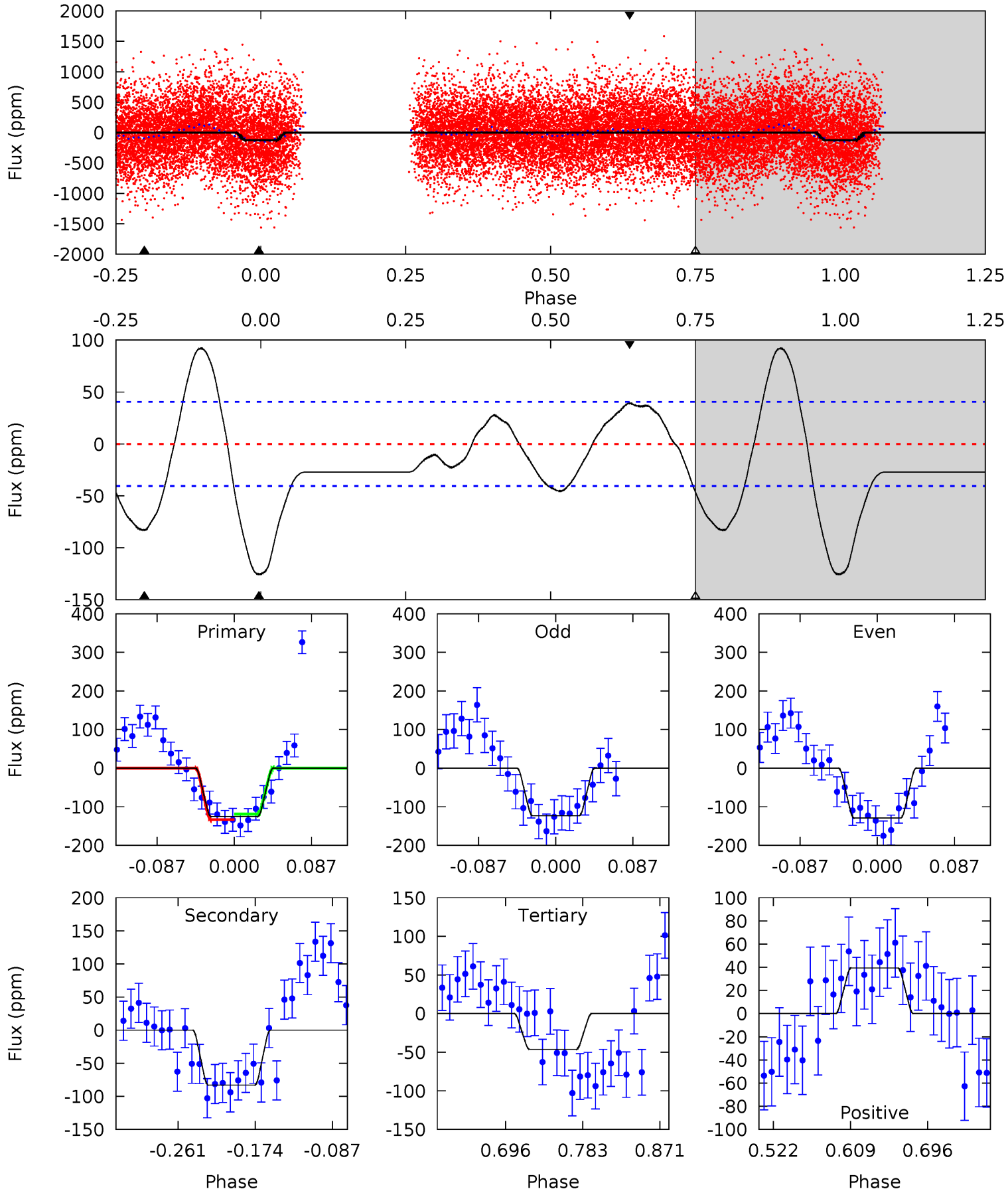
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.9	10.7	6.16	5.40	4.56	1.63	3.57	12.8	13.5	4.54	5.30	0.87	0.90	0.38	1.43



Alt Model-Shift Uniqueness Test

008125219-03, P = 1.568151 Days, E = 131.769834 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	9.41	5.26	4.47	4.59	1.71	3.58	8.96	9.76	4.15	4.94	0.33	1.00	0.42	0.82



Stellar Parameters For KIC 008125219

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7102^{+245}_{-367}	$3.729^{+0.501}_{-0.088}$	$-0.440^{+0.300}_{-0.300}$	$2.781^{+0.464}_{-1.391}$	$1.512^{+0.208}_{-0.357}$	$0.099^{+0.513}_{-0.026}$
	+3%/-5%	+13%/-2%	+68%/-68%	+17%/-50%	+14%/-24%	+518%/-27%
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 008125219-03 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-63±6	$3.10^{+1.06}_{-0.98}$	4019^{+312}_{-517}	5724^{+990}_{-654}	$3.377^{+3.483}_{-1.502}$
Alt.	-83±9	$3.16^{+1.08}_{-0.97}$	4005^{+347}_{-501}	6005^{+1036}_{-637}	$4.091^{+4.222}_{-1.744}$

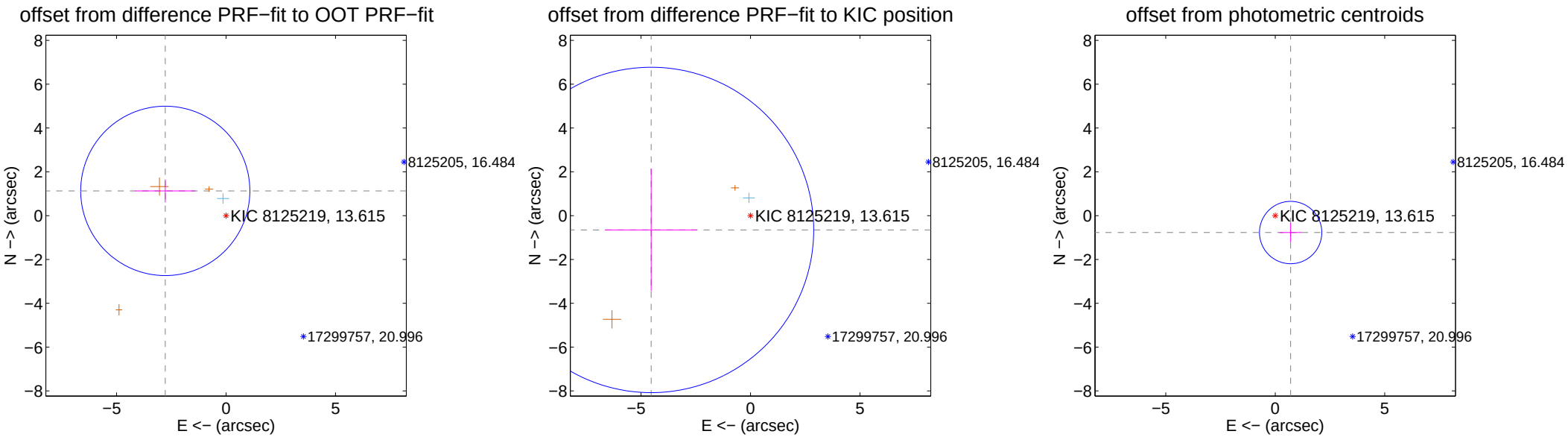
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

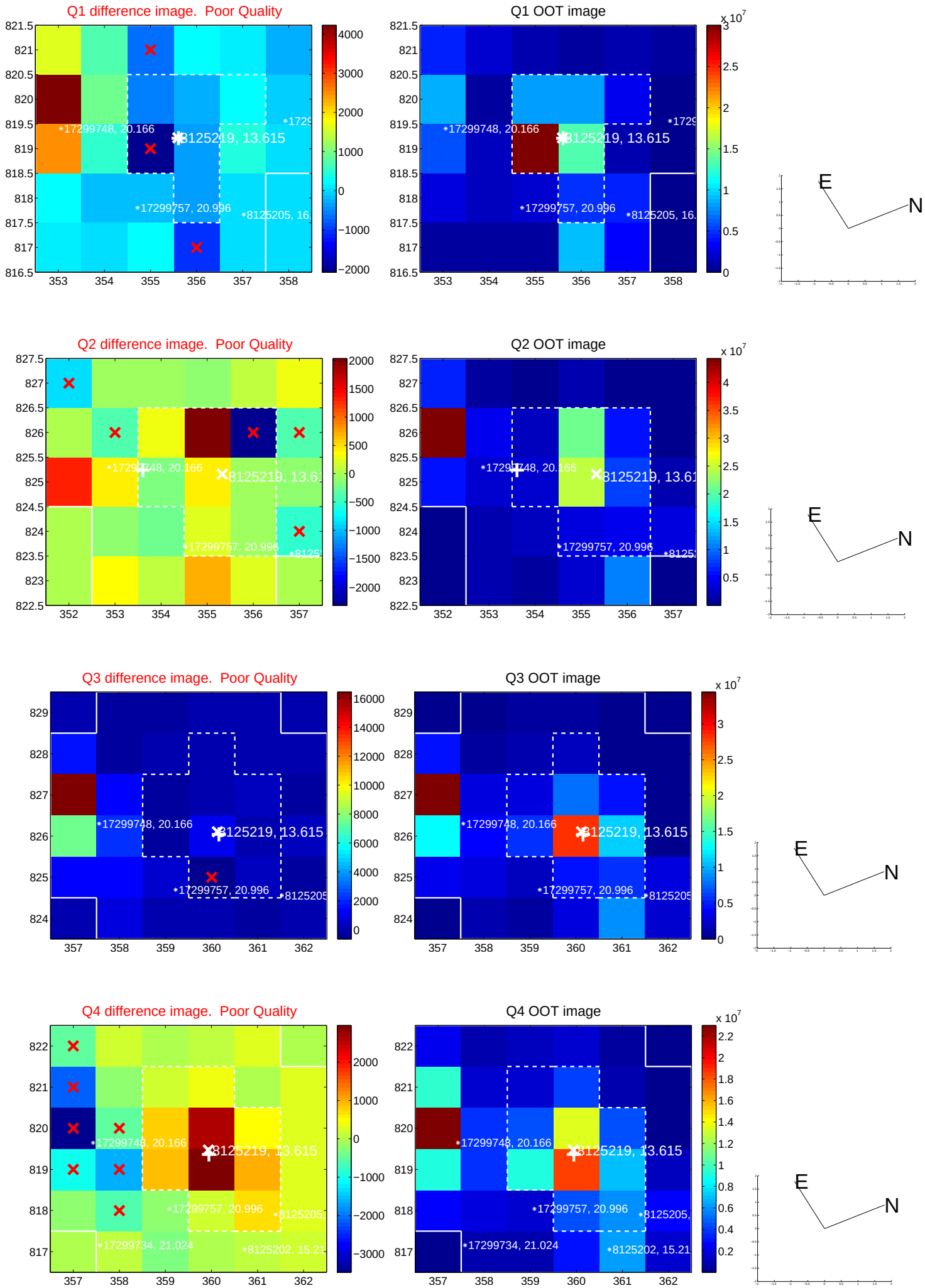
Supplemental centroid analysis for 008125219-03. Kepler magnitude: 13.62. Transit SNR 13.62
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.997 ± 1.288	2.33	2.776 ± 1.374	1.130 ± 0.522
PRF-fit source offset from KIC position	4.584 ± 2.475	1.85	4.537 ± 2.109	-0.653 ± 2.795
photometric centroid source offset	1.04 ± 0.47	2.20	-0.70 ± 0.51	-0.77 ± 0.44

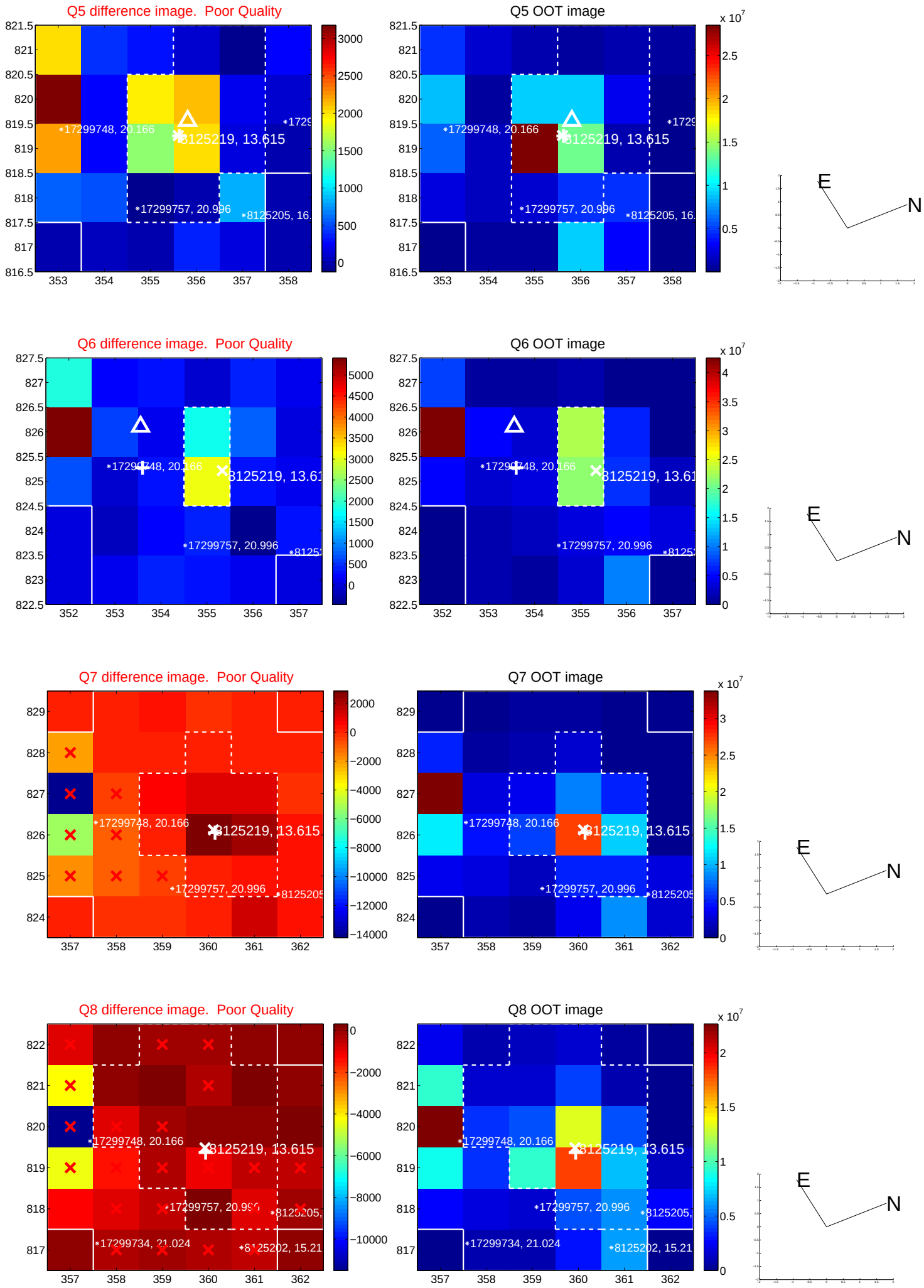


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

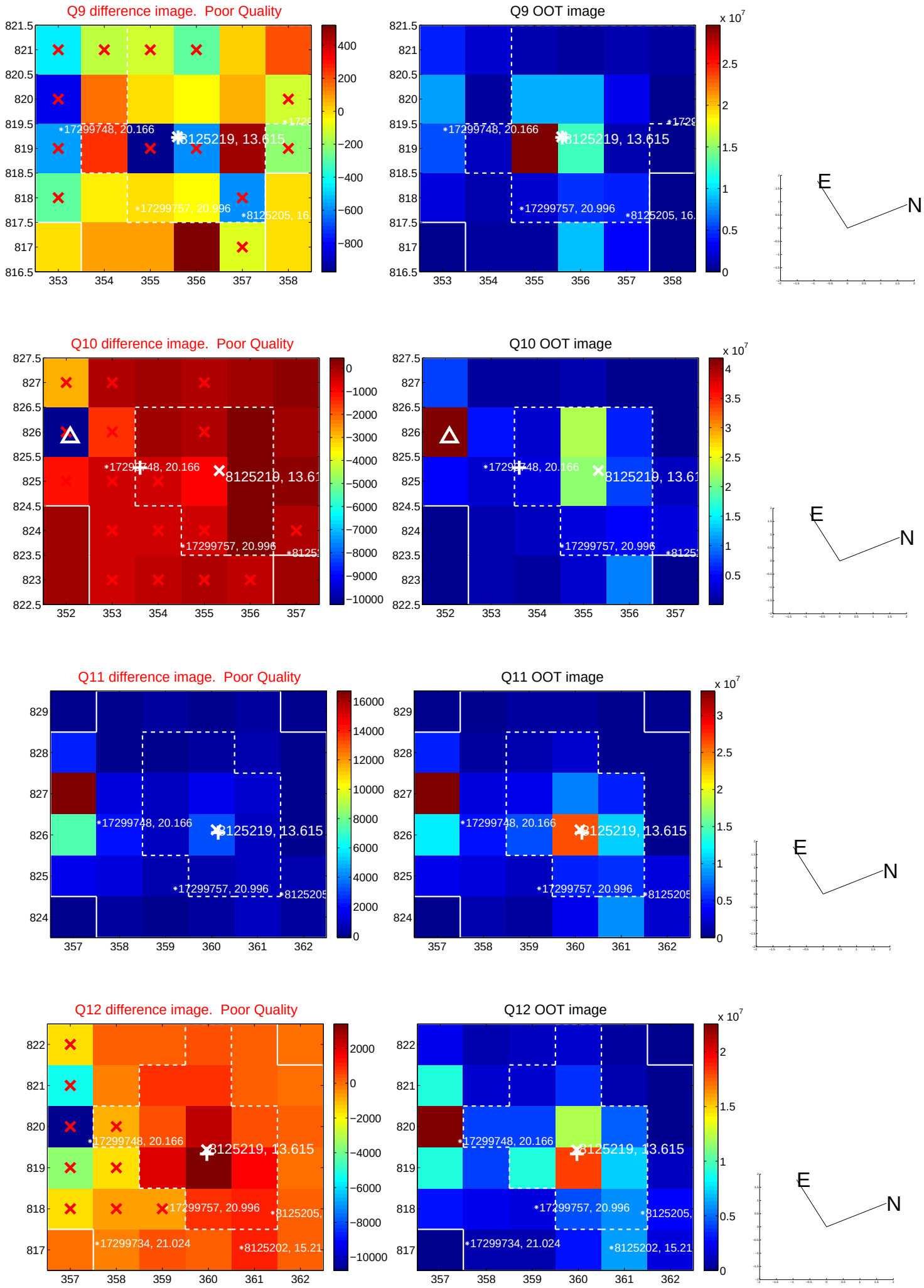
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



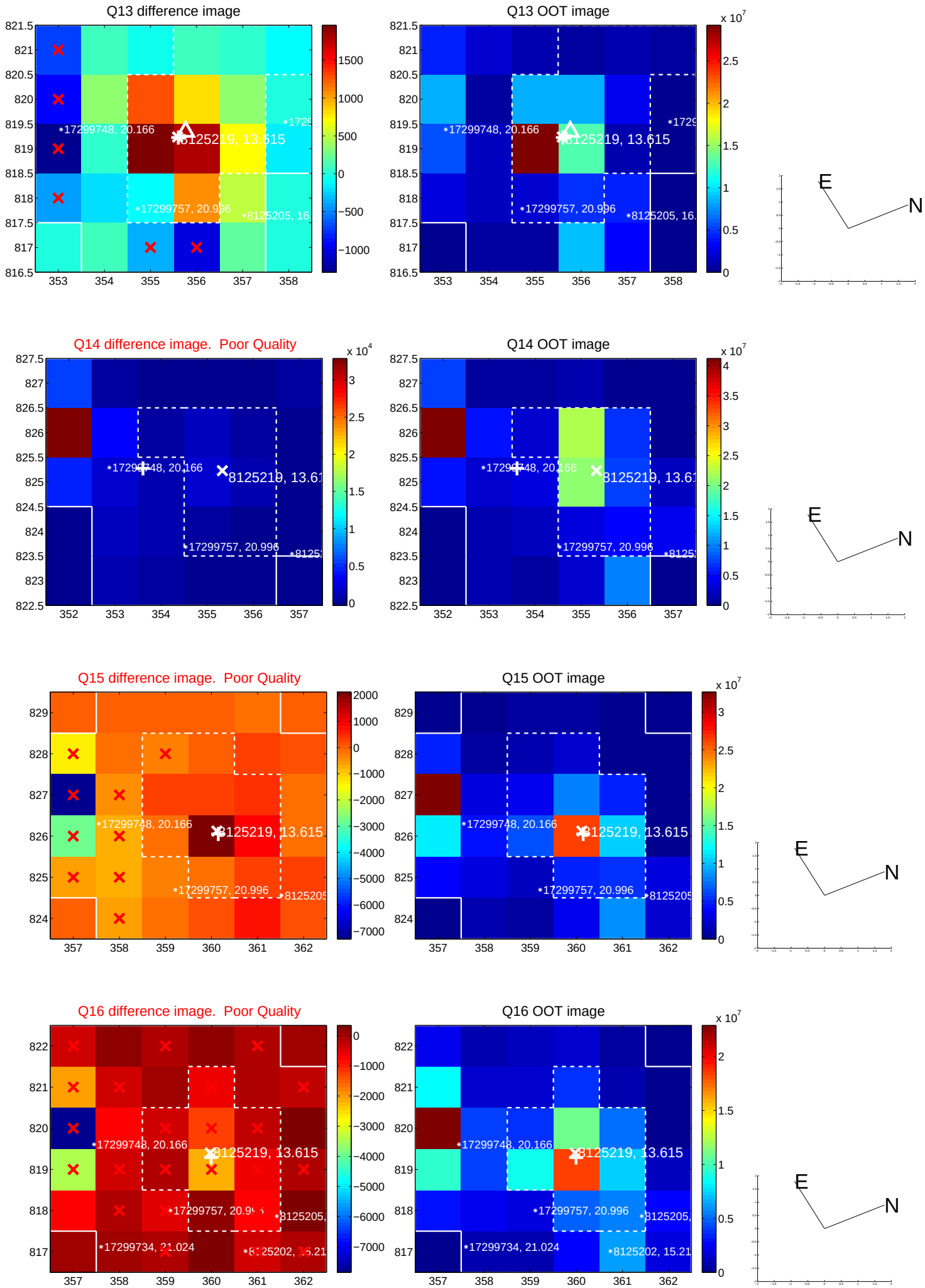
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



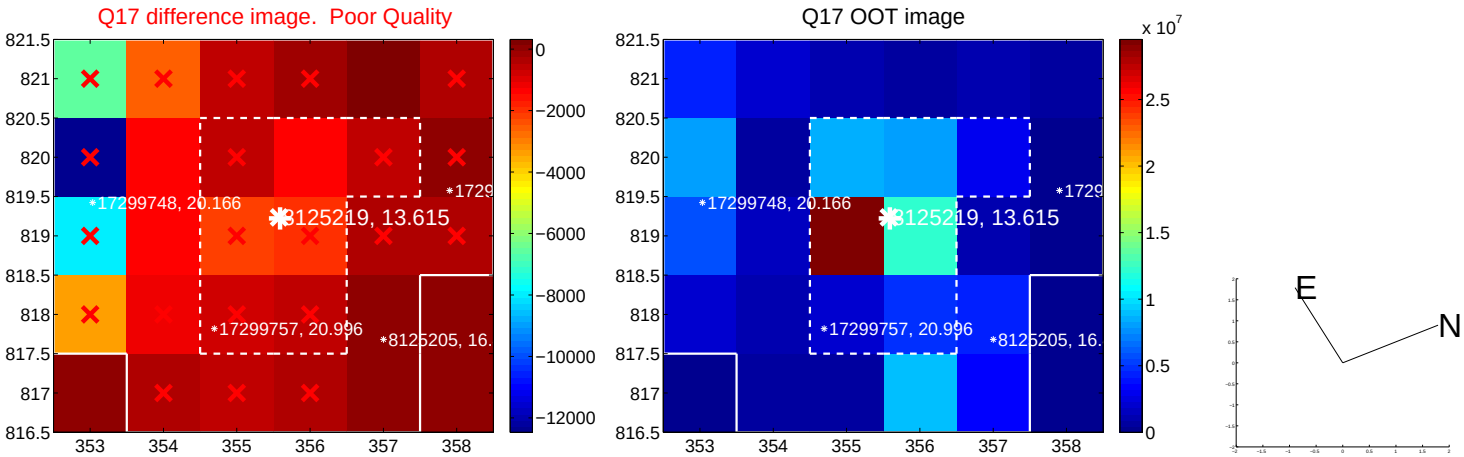
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

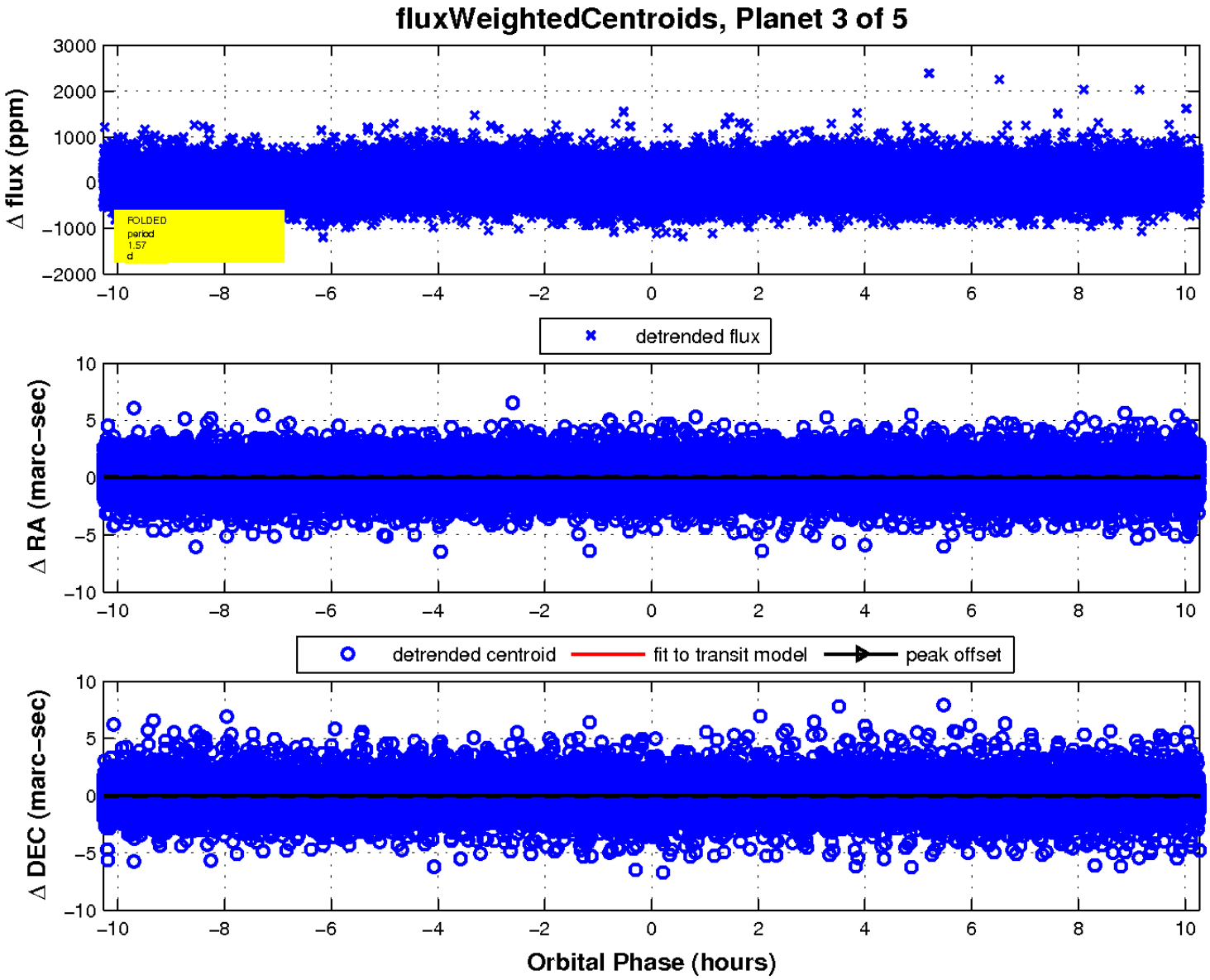


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

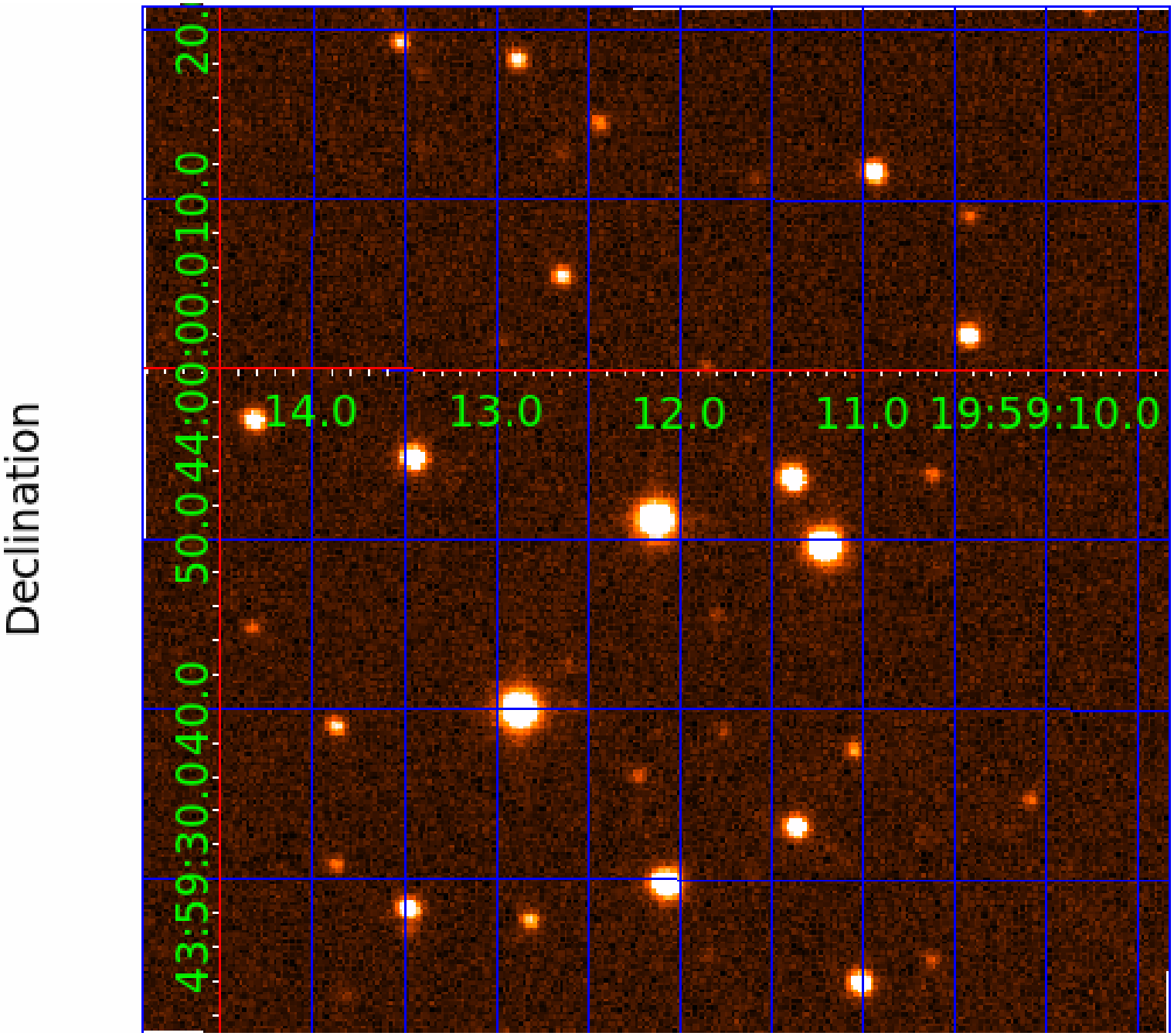


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image


Declination
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40.0
50.0
44:00:00.0
10.0
20.
14.0
13.0
12.0
11.0
19:59:10.0

KIC 008125219

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 ($S_\oplus$)
008125219-01	OBS	No	1.568216	131.998589	59.3	2.560	9.0	8.9	2.78	7102	2.43	19172.40
008125219-02	OBS	No	0.951696	132.412373	44.2	4.771	9.2	9.0	2.78	7102	2.04	37315.30
008125219-03	OBS	No	1.568144	131.760574	108.0	3.424	12.6	13.6	2.78	7102	3.42	19173.58
008125219-04	OBS	No	105.152818	154.360326	742.9	5.815	11.5	11.9	2.78	7102	9.59	70.38
008125219-05	OBS	No	8.866768	133.840420	453.1	3.500	9.9	-1.0	2.78	7102	5.97	1903.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008125219-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008125219-02	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
008125219-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
008125219-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
008125219-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

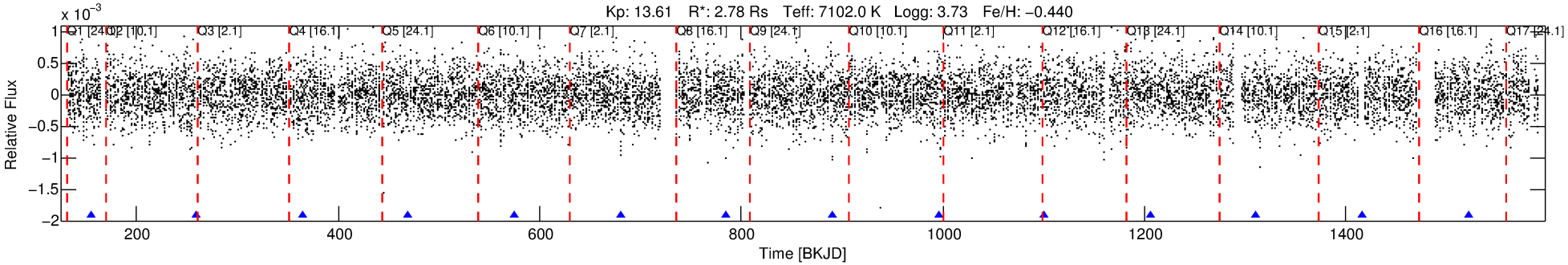
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

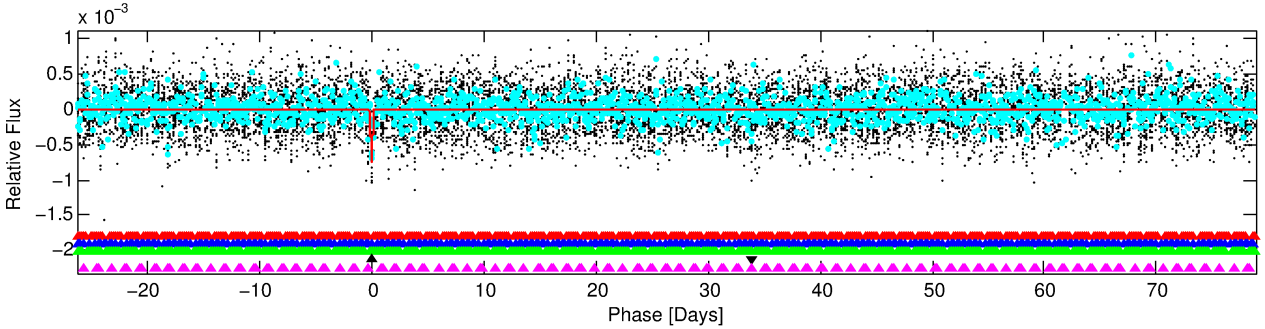
Ephemeris Match Information For 008125219-04

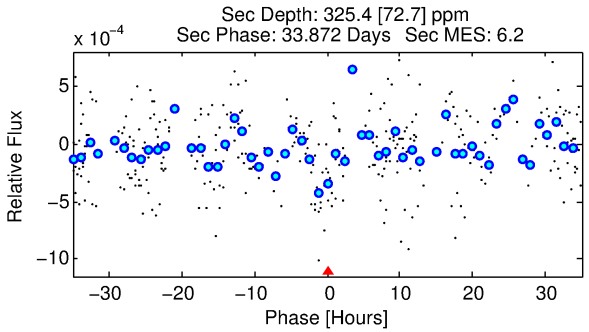
No Significant Match Found

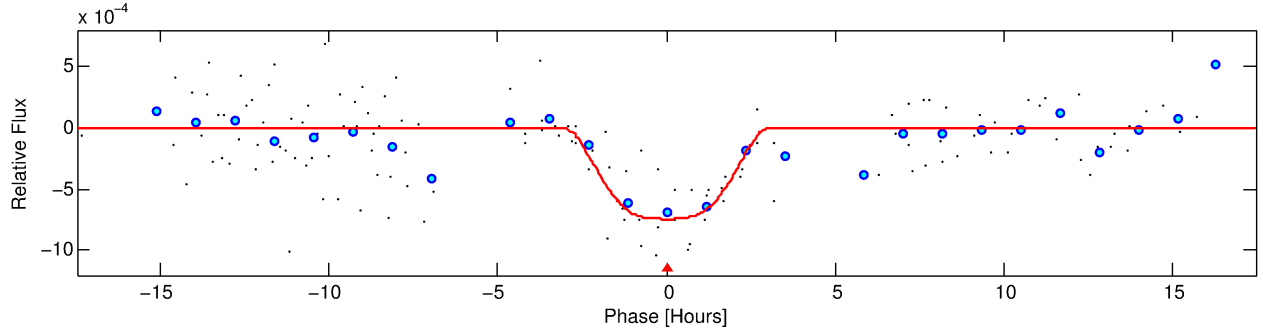
DV One-Page Summary

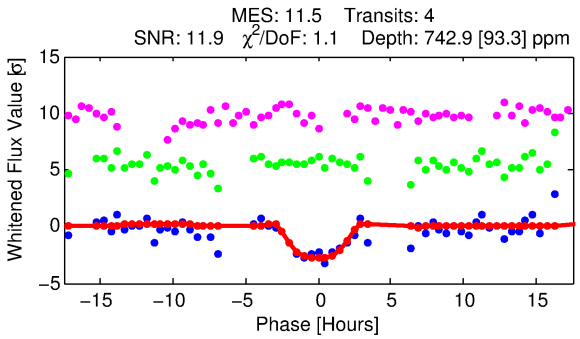
KIC: 8125219 Candidate: 4 of 5 Period: 105.153 d

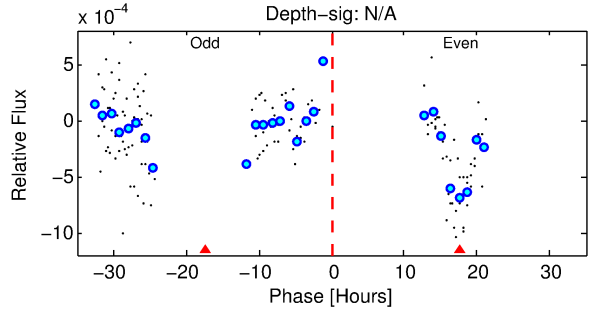


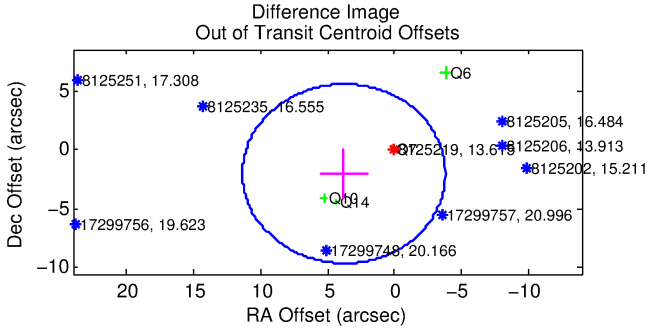












DV Fit Results:

Period = 105.15282 [0.00424] d
Epoch = 154.3603 [0.0223] BKJD
Rp/R* = 0.0316 [0.0028]
a/R* = 51.16 [10.20]
b = 0.96 [0.02]

Seff = 70.38 [60.76]
Teq = 739 [159] K
Rp = 9.59 [4.87] Re
a = 0.5005 [0.2547] AU

Ag = 487.96 [431.89] [1.13σ]
Teffp = 5367 [471] K [9.30σ]

DV Diagnostic Results:

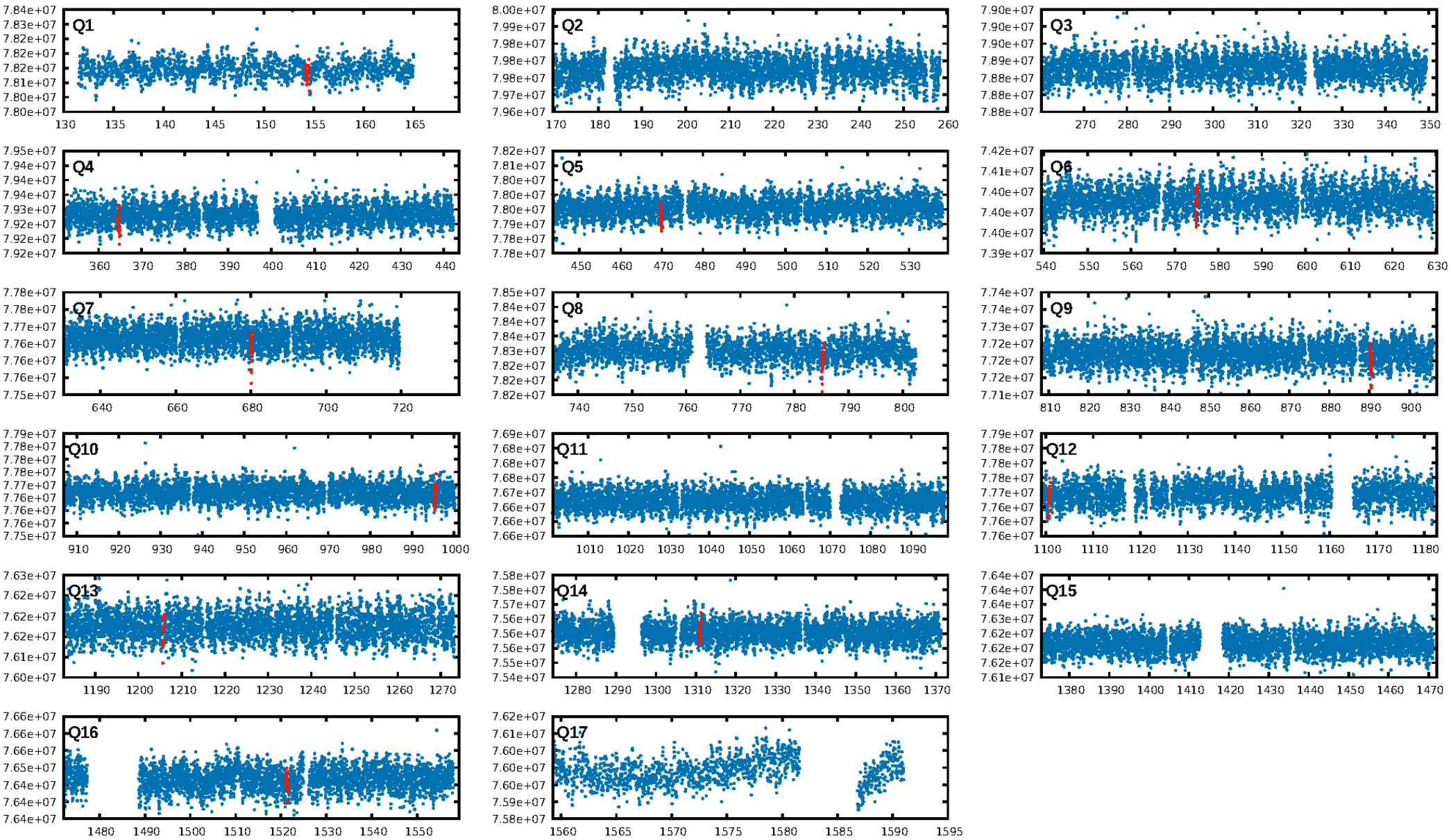
ShortPeriod−sig: 100.0% [340.50σ]
LongPeriod−sig: N/A
ModelChiSquare2−sig: 2.7%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [4/4]
GhostDiagnostic−chr: 6.681

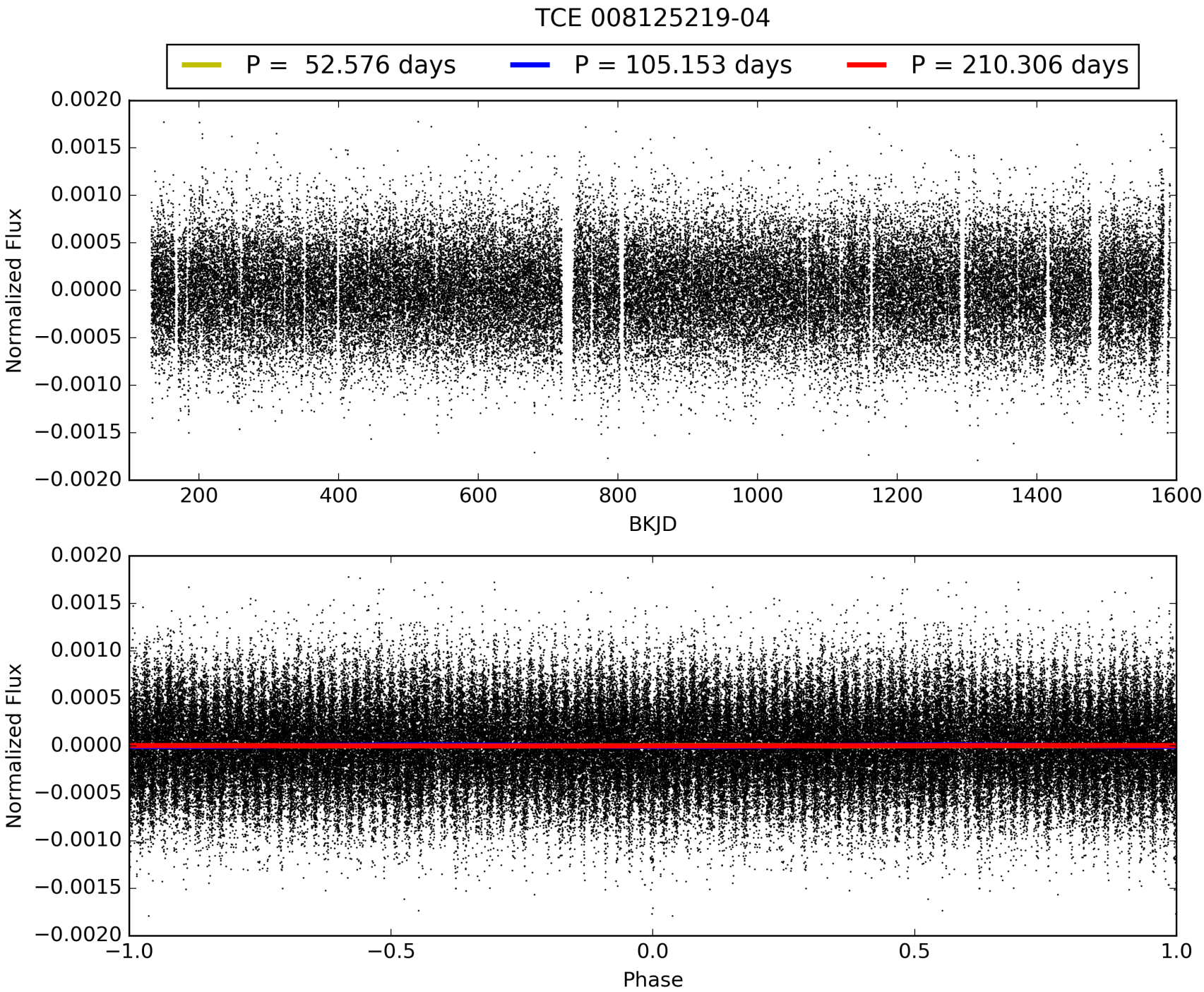
Centroid−sig: 0.1%
Centroid−so: 0.315 arcsec [0.49σ]
OotOffset−rm: 4.271 arcsec [1.69σ]
KicOffset−rm: 8.876 arcsec [2.32σ]
OotOffset−st: 3/1/0/0 [4]
KicOffset−st: 3/1/0/0 [4]
DiffImageQuality−fgm: 0.50 [2/4]
DiffImageOverlap−fno: 0.00 [0/10]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 23:48:43 Z

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

TCE 008125219-04, PDC Light Curves




TCE 008125219-04
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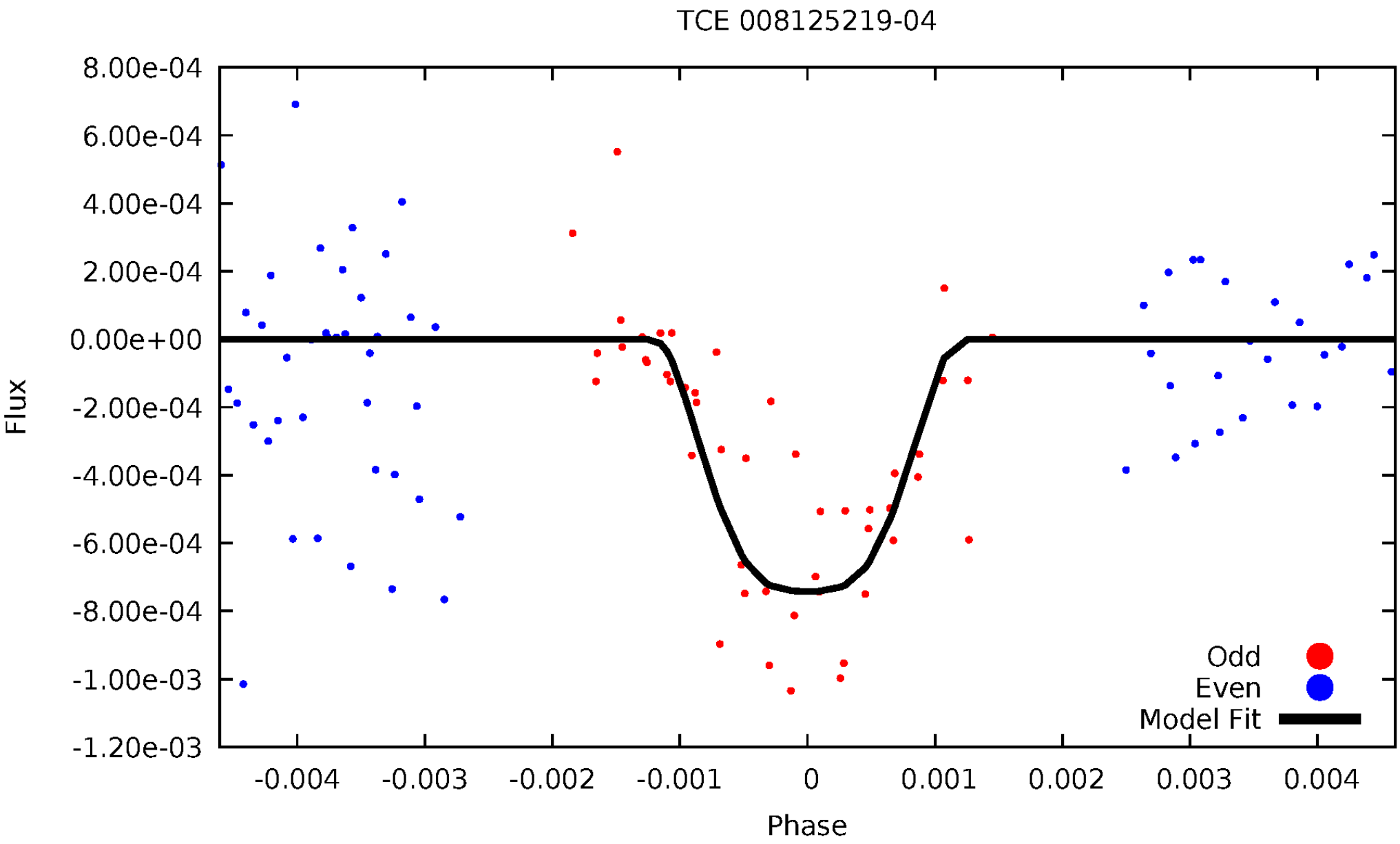
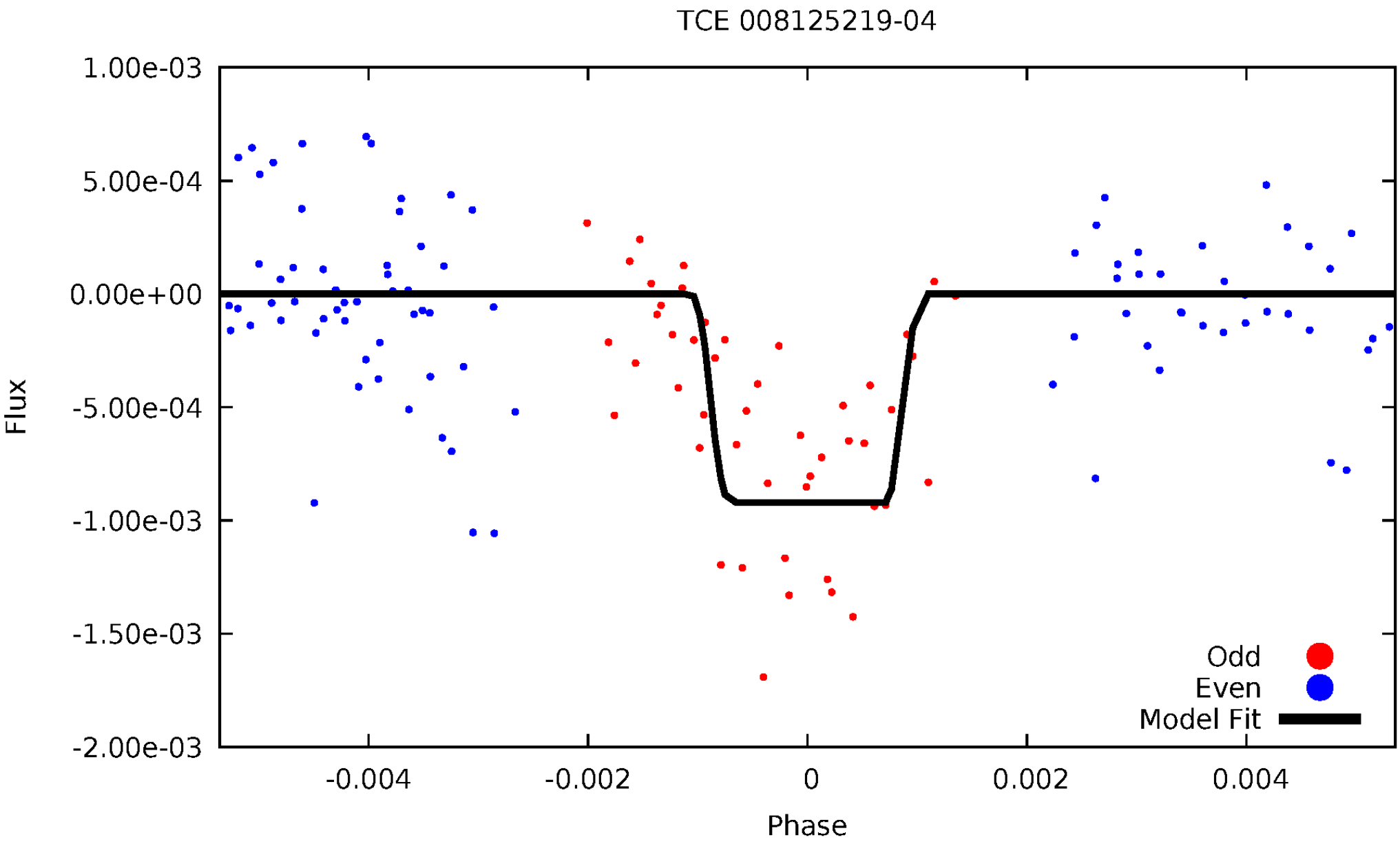
P = 105.153 days
P = 210.306 days
Normalized Flux
BKJD
Normalized Flux
Phase

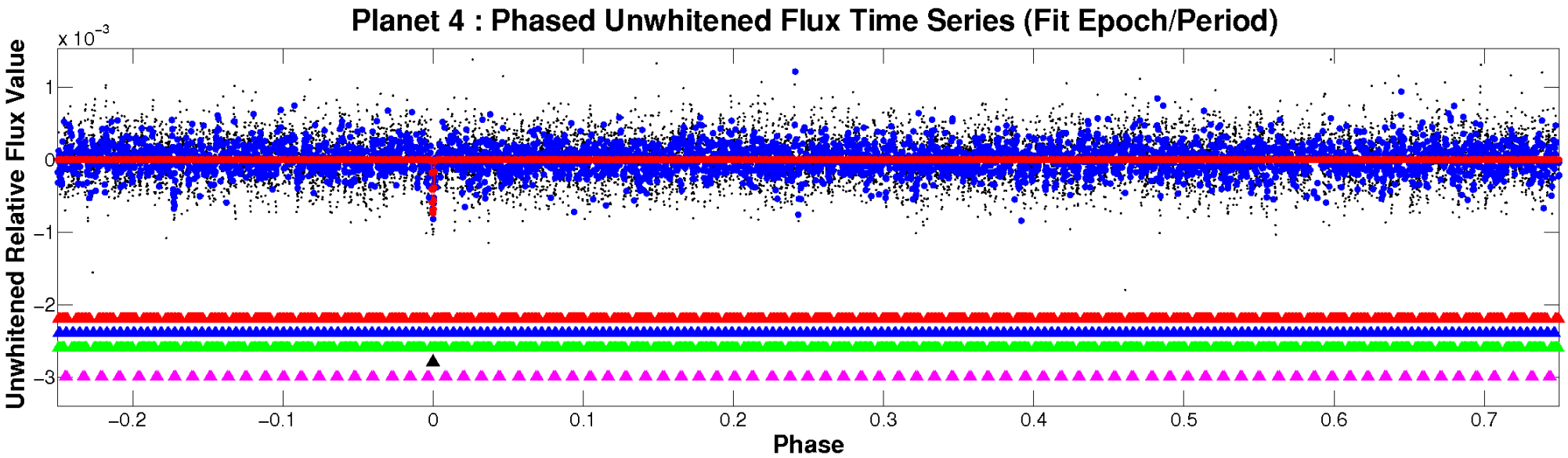
DV Odd/Even

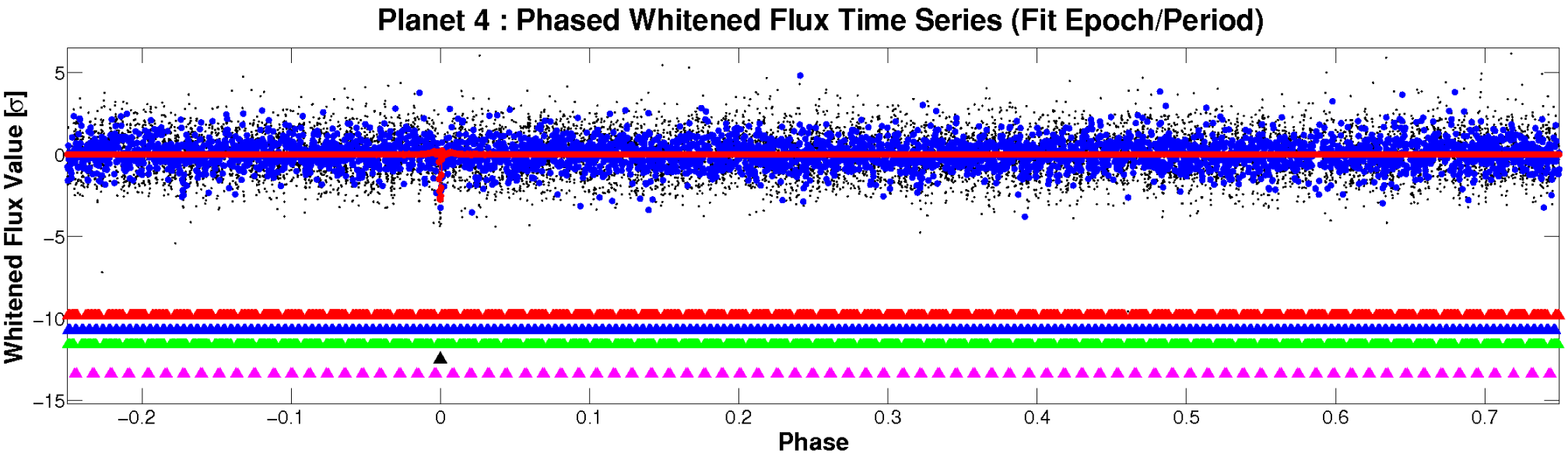

TCE 008125219-04
8.00e-04
6.00e-04
4.00e-04
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
-8.00e-04
-1.00e-03
-1.20e-03
Flux
-0.004
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
0.004
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 008125219-04
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
Flux
-0.004
-0.002
0
0.002
0.004
Phase
Odd
Even
Model Fit

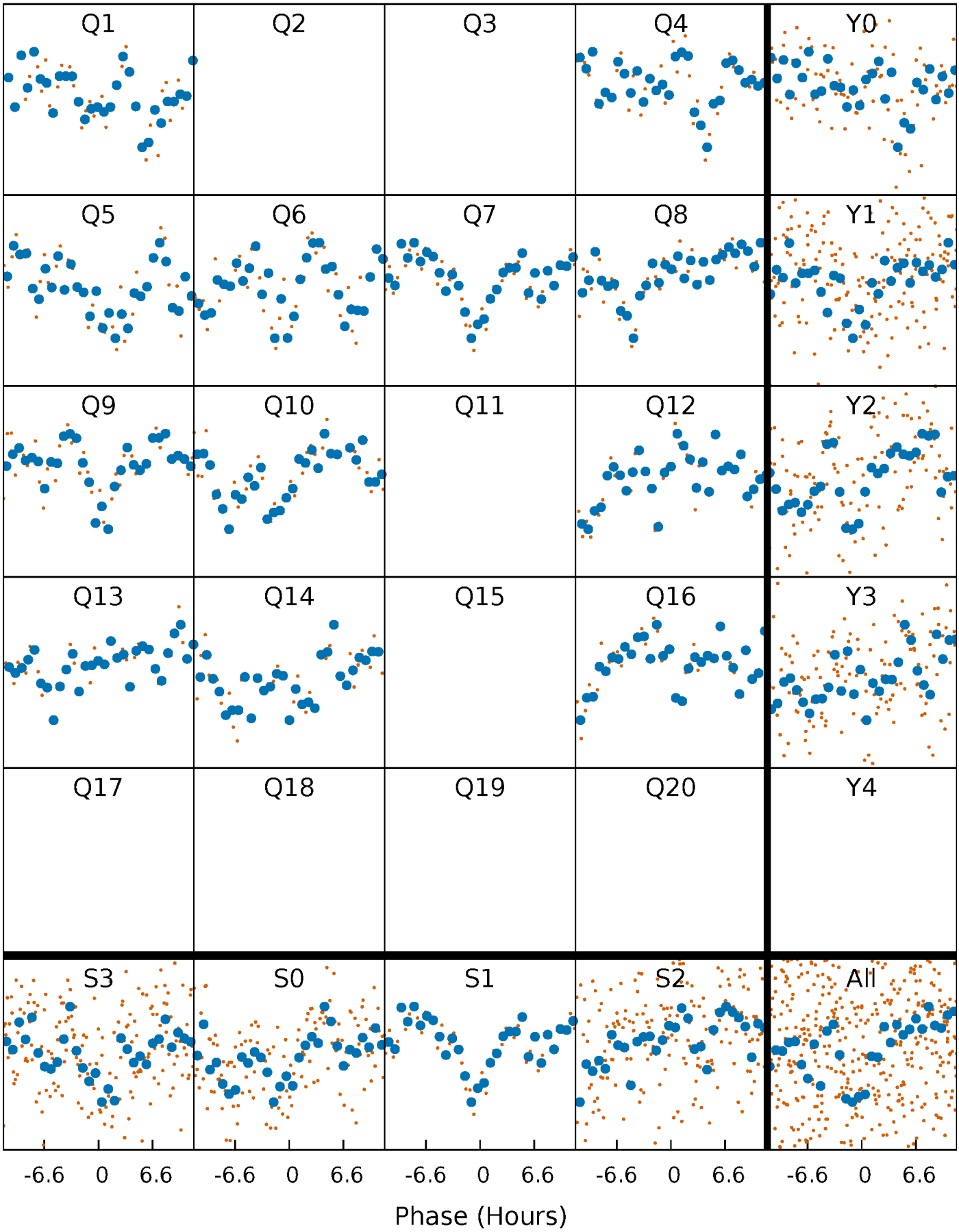
Non-Whitened Vs. Whitened Light Curve





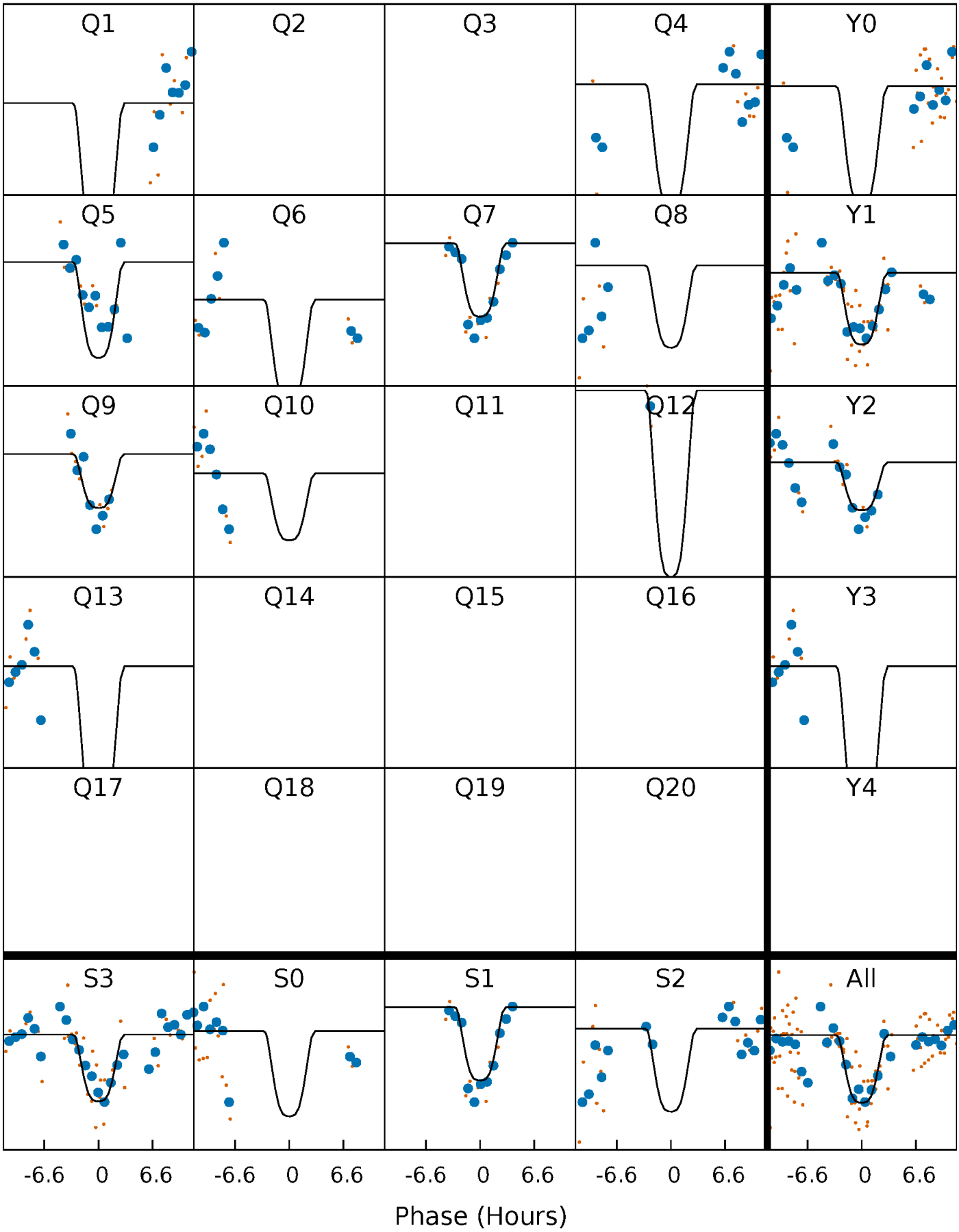
PDC Quarter-Phased Transit Curves

TCE 008125219-04 P=105.152818 Days T_0=154.360326 (BKJD)



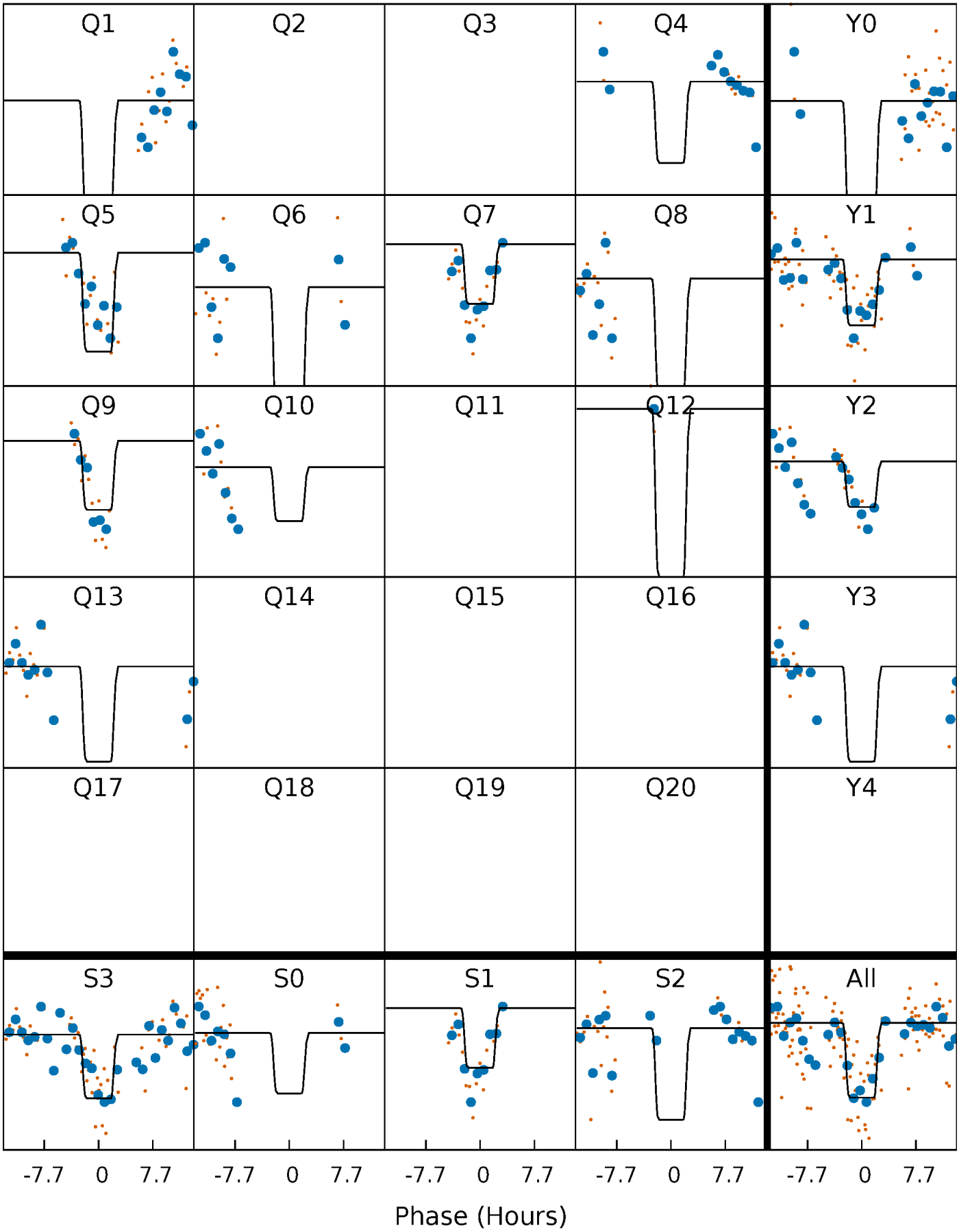
DV Quarter-Phased Transit Curves

TCE 008125219-04 P=105.152818 Days T_0=154.360326 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

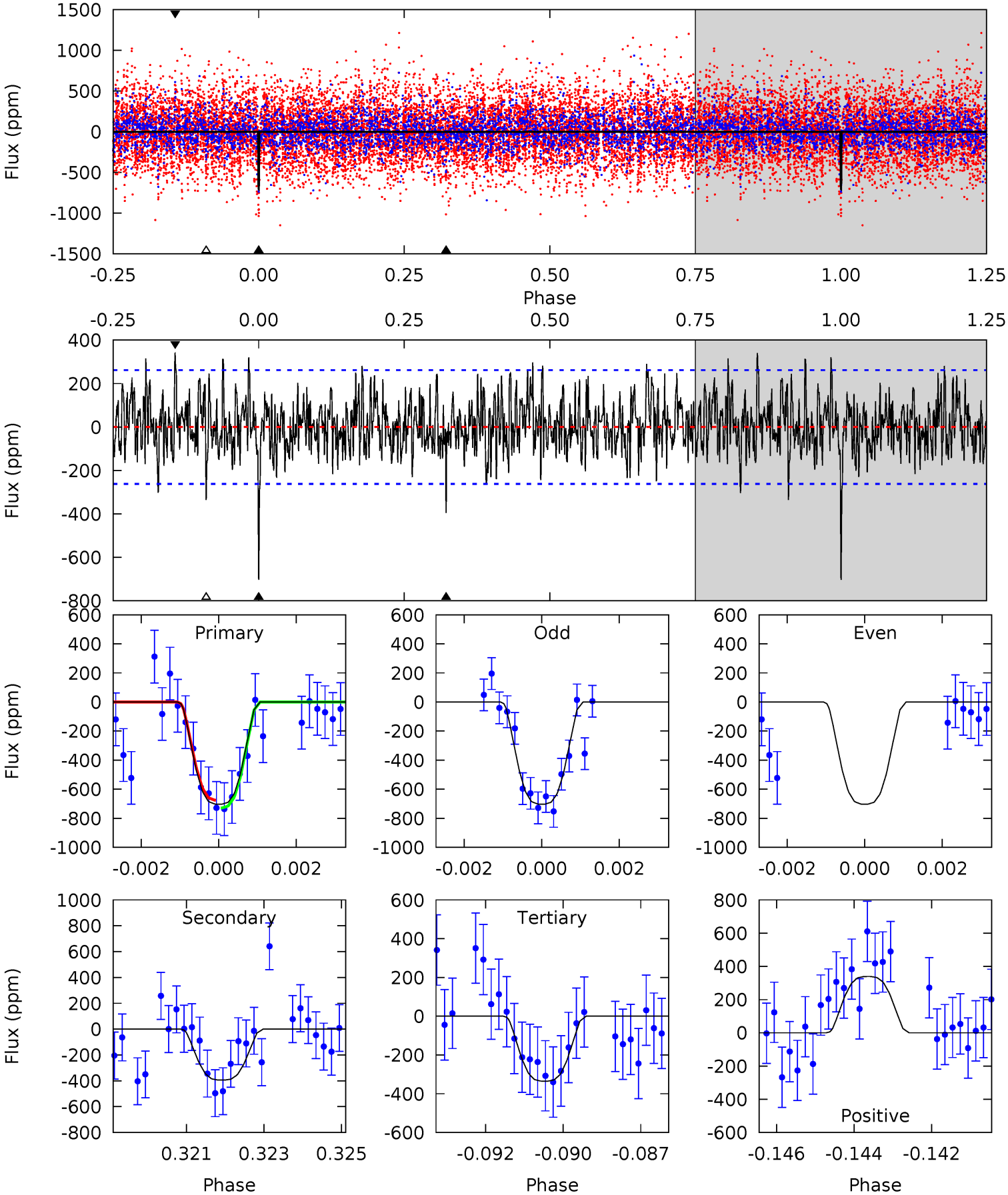
TCE 008125219-04 P=105.149444 Days T_0=154.387915 (BKJD)



DV Model-Shift Uniqueness Test

008125219-04, P = 105.152818 Days, E = 49.207508 Days

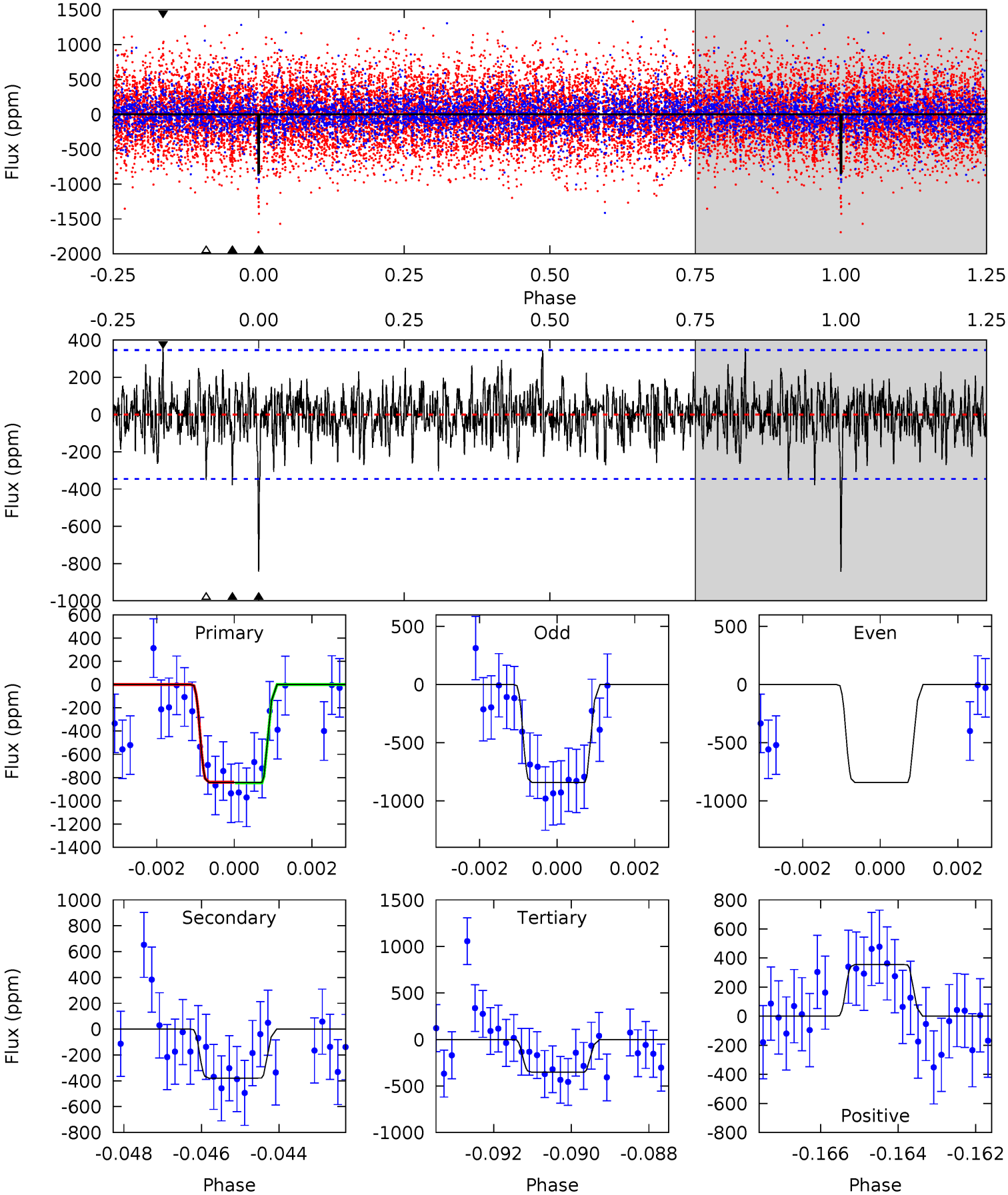
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	7.98	6.78	6.86	5.30	3.04	2.03	7.45	7.37	1.20	1.12	0	0.97	0.33	0.54



Alt Model-Shift Uniqueness Test

008125219-04, P = 105.149444 Days, E = 49.238471 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	5.83	5.40	5.46	5.33	3.09	1.48	7.57	7.52	0.43	0.37	0	0.90	0.30	0.05



Stellar Parameters For KIC 008125219

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7102^{+245}_{-367}	$3.729^{+0.501}_{-0.088}$	$-0.440^{+0.300}_{-0.300}$	$2.781^{+0.464}_{-1.391}$	$1.512^{+0.208}_{-0.357}$	$0.099^{+0.513}_{-0.026}$
	+3%/-5%	+13%/-2%	+68%/-68%	+17%/-50%	+14%/-24%	+518%/-27%
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 008125219-04 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-395±49	$9.01^{+1.66}_{-2.32}$	993^{+78}_{-130}	5566^{+355}_{-328}	669^{+506}_{-186}
Alt.	-379±65	$8.57^{+1.60}_{-2.19}$	995^{+78}_{-136}	5640^{+422}_{-364}	723^{+531}_{-218}

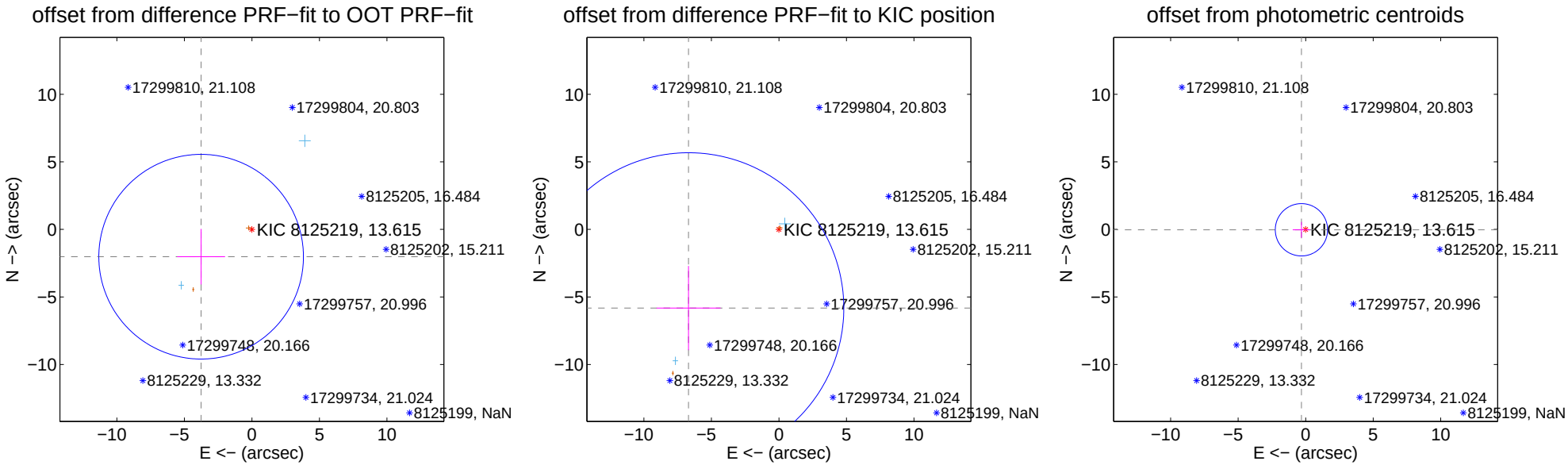
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

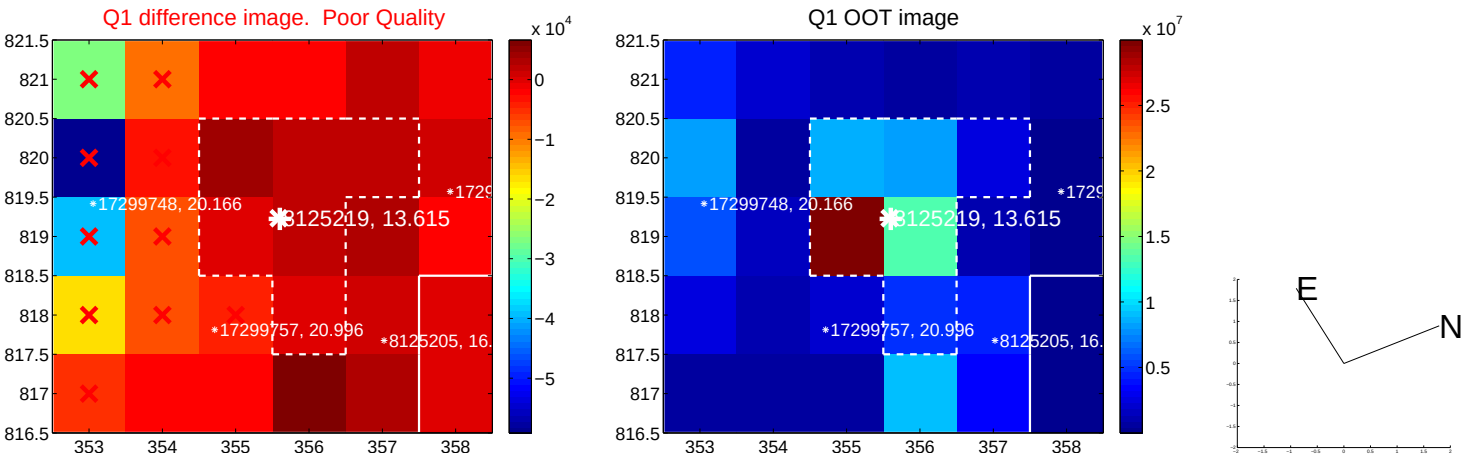
Supplemental centroid analysis for 008125219-04. Kepler magnitude: 13.62. Transit SNR 11.95
There are 2 quarters with good PRF difference image offsets
The OOT PRF centroid is offset from the target star catalog position by about 7.12 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

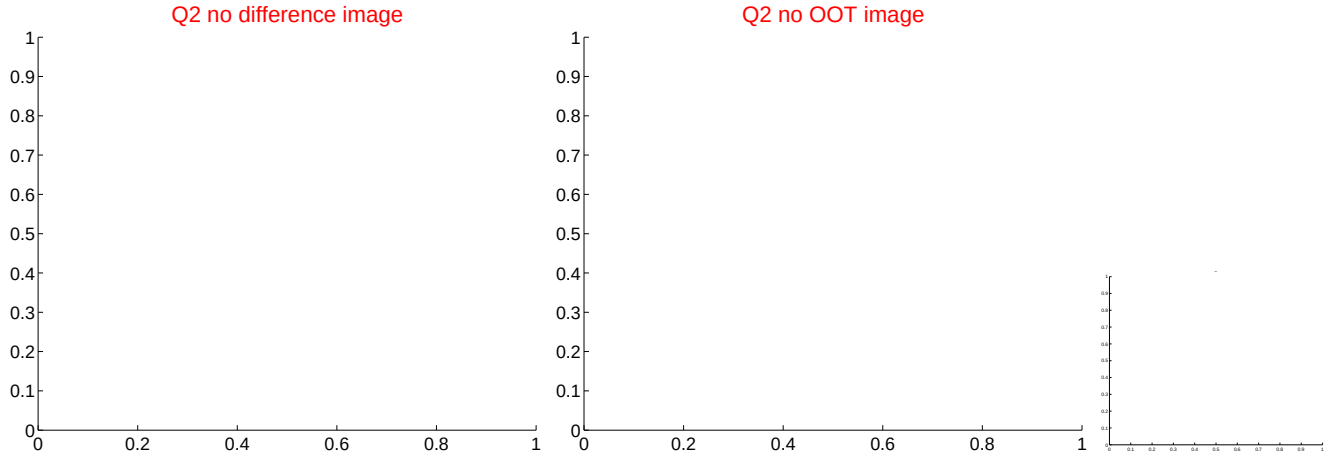
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.271 ± 2.526	1.69	3.763 ± 1.772	-2.022 ± 2.056
PRF-fit source offset from KIC position	8.876 ± 3.834	2.32	6.696 ± 2.372	-5.825 ± 3.117
photometric centroid source offset	0.31 ± 0.65	0.49	0.31 ± 0.65	-0.03 ± 0.58

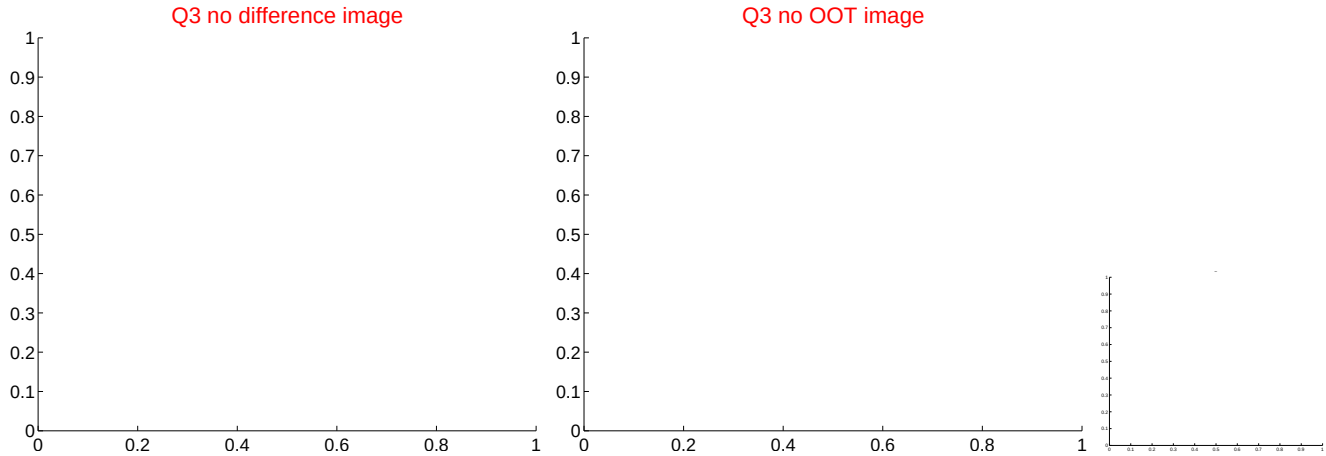


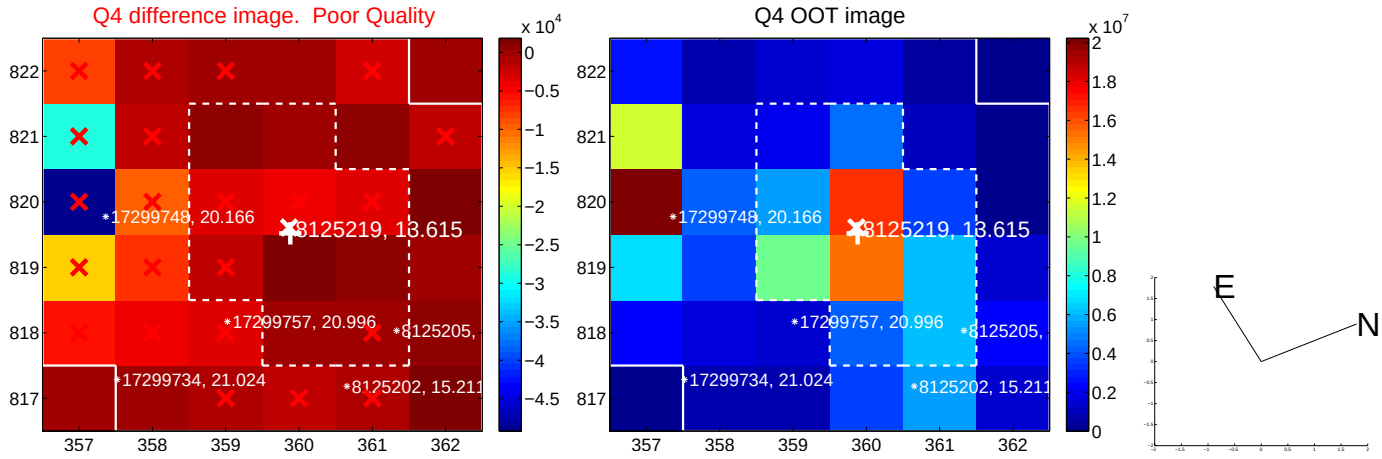
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

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

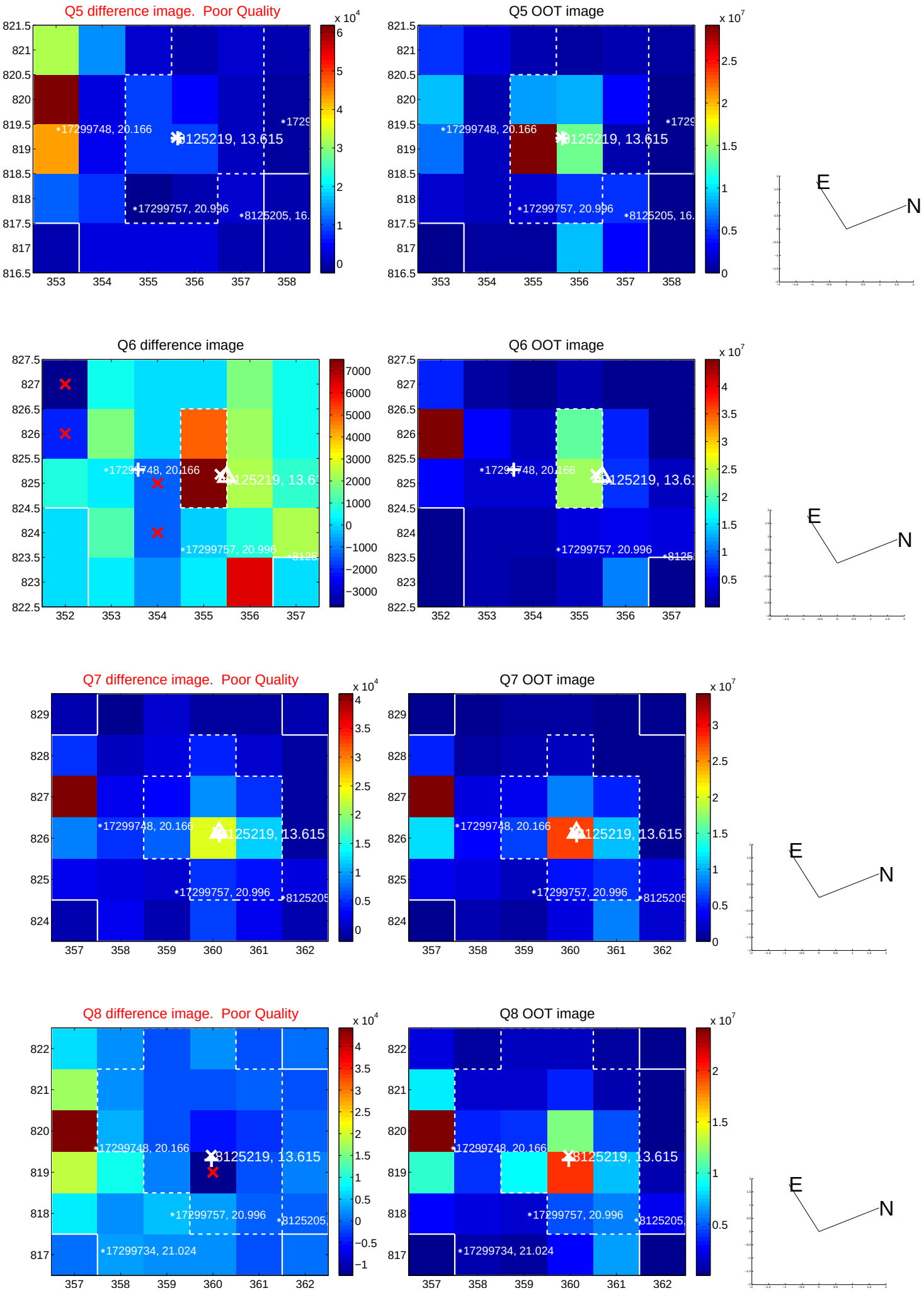




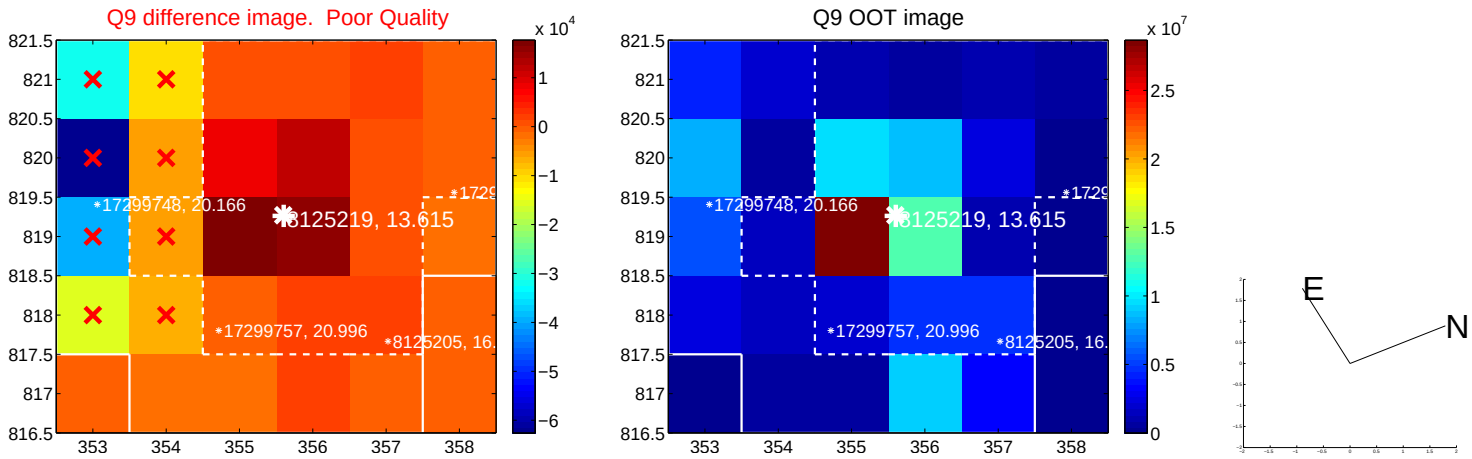


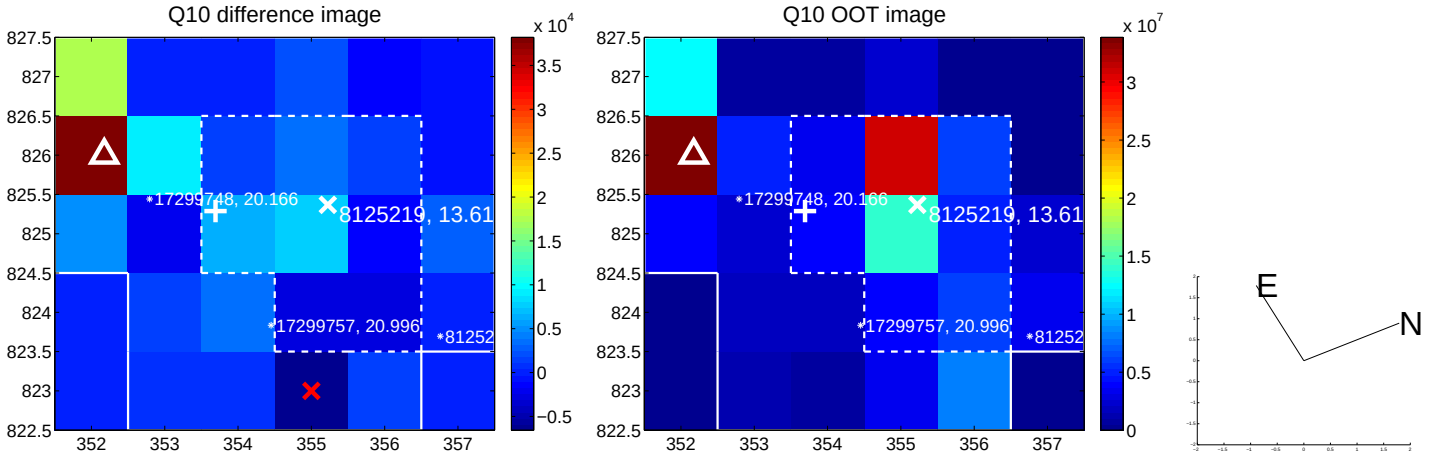


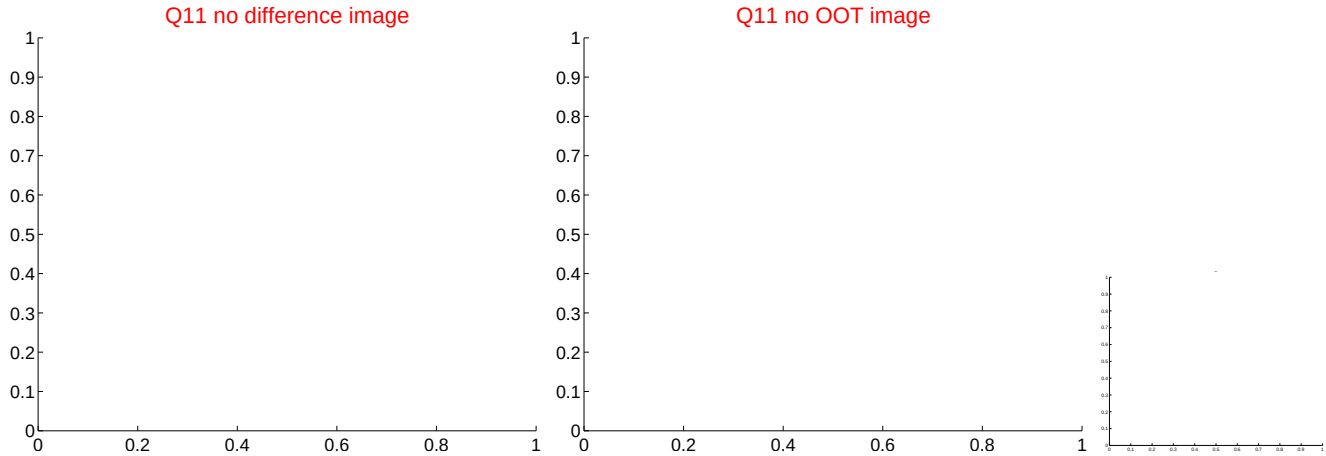
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

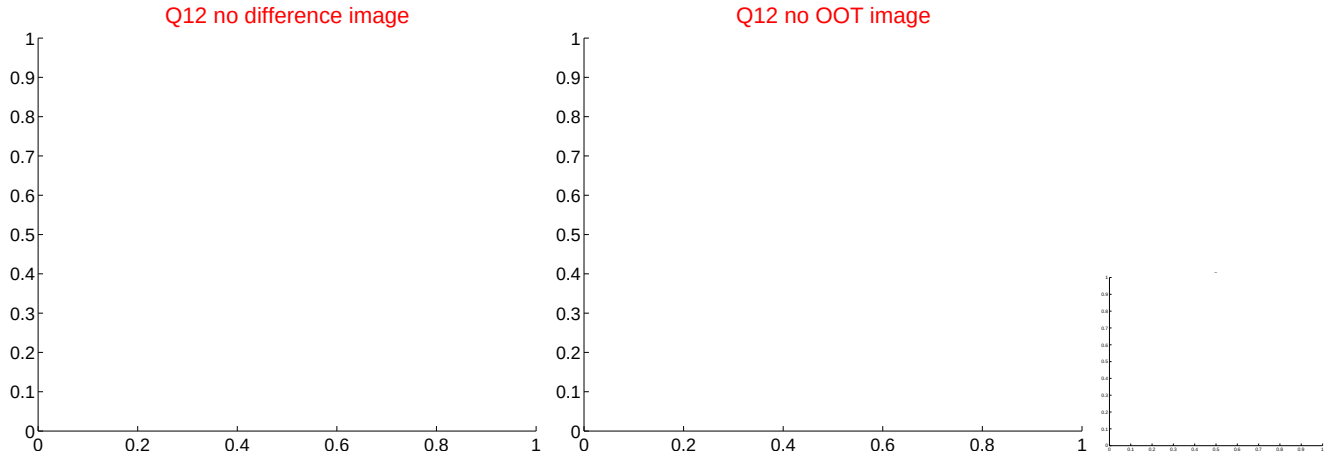


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

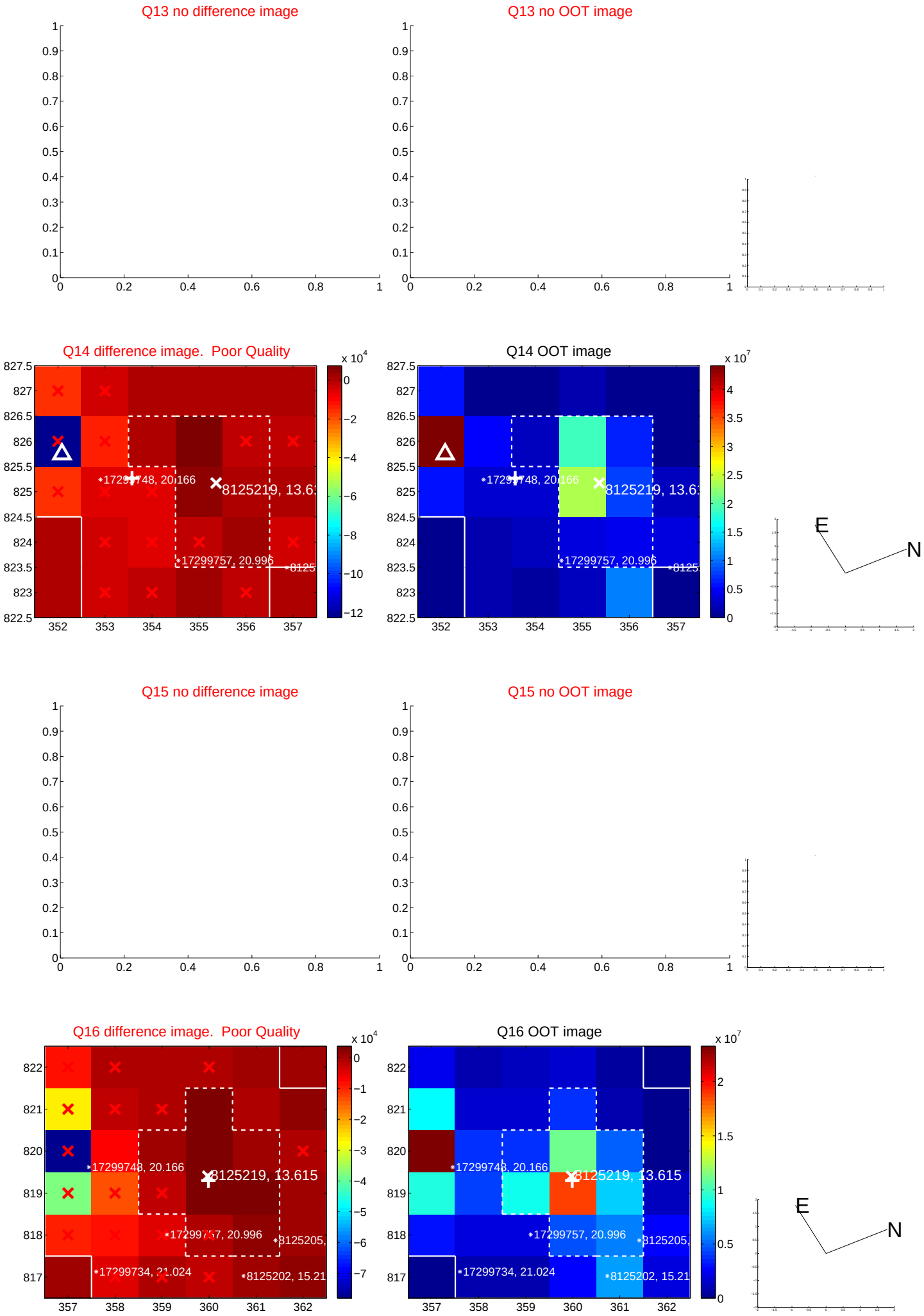




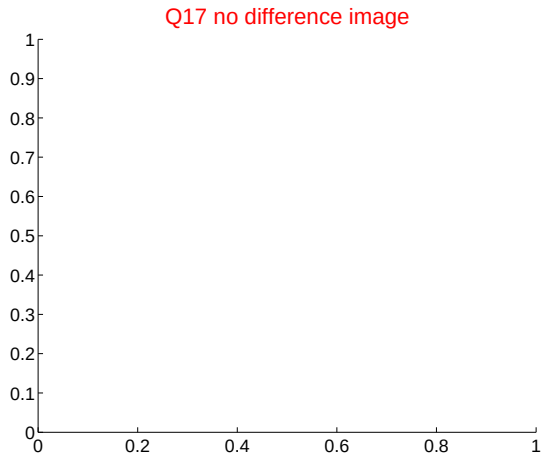


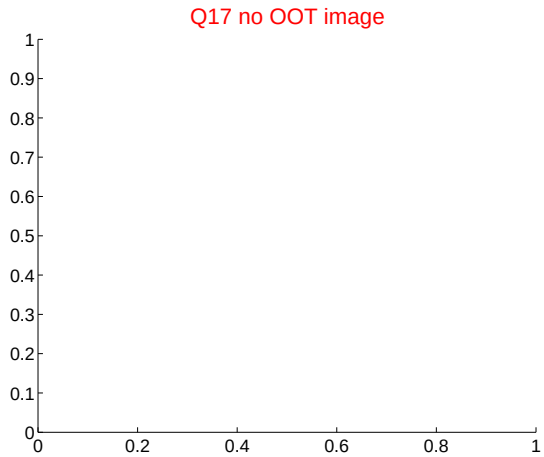


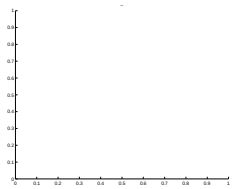
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

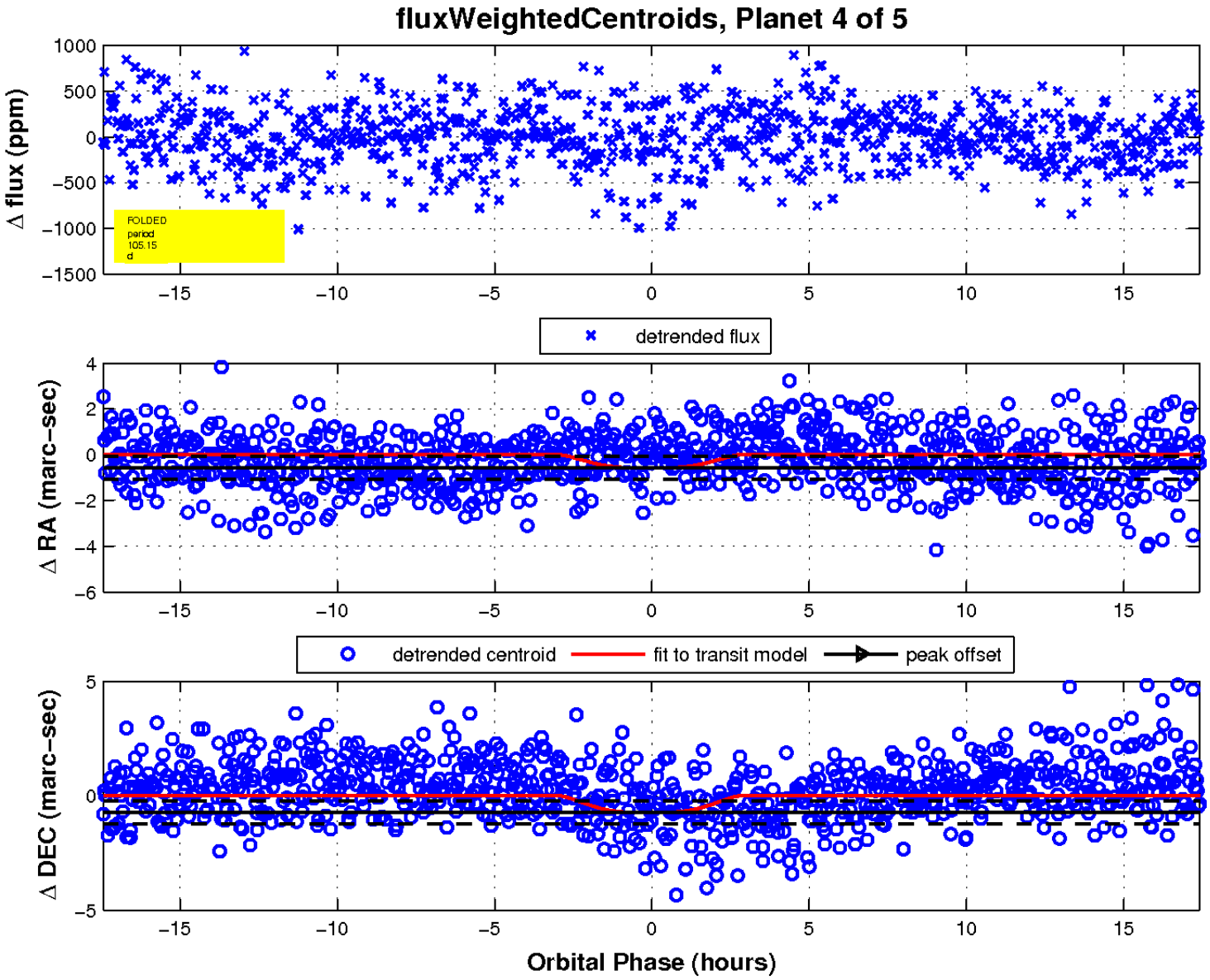


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

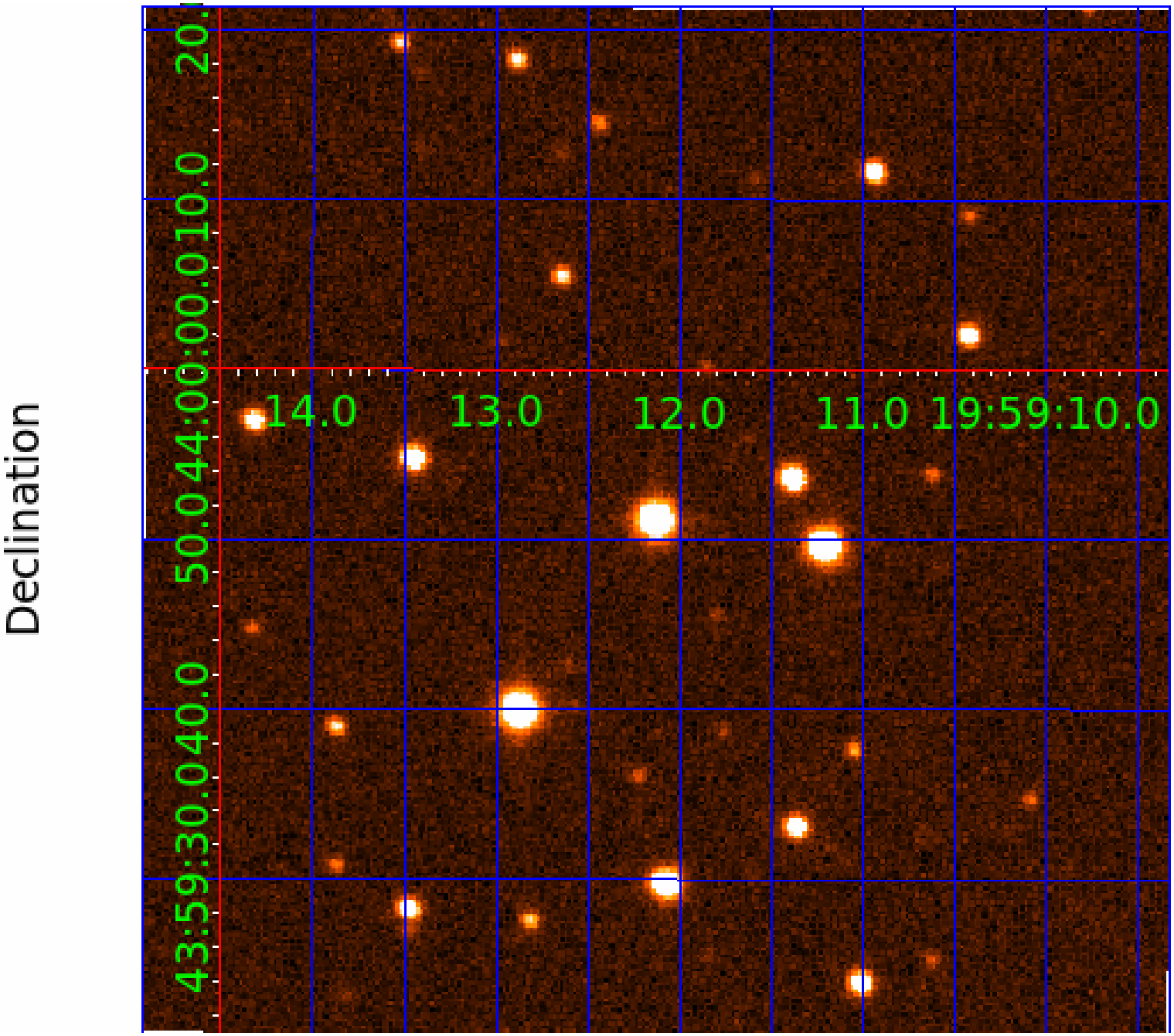








UKIRT Image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KIC 008125219

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 ($S_\oplus$)
008125219-01	OBS	No	1.568216	131.998589	59.3	2.560	9.0	8.9	2.78	7102	2.43	19172.40
008125219-02	OBS	No	0.951696	132.412373	44.2	4.771	9.2	9.0	2.78	7102	2.04	37315.30
008125219-03	OBS	No	1.568144	131.760574	108.0	3.424	12.6	13.6	2.78	7102	3.42	19173.58
008125219-04	OBS	No	105.152818	154.360326	742.9	5.815	11.5	11.9	2.78	7102	9.59	70.38
008125219-05	OBS	No	8.866768	133.840420	453.1	3.500	9.9	-1.0	2.78	7102	5.97	1903.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008125219-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008125219-02	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
008125219-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
008125219-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
008125219-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

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.

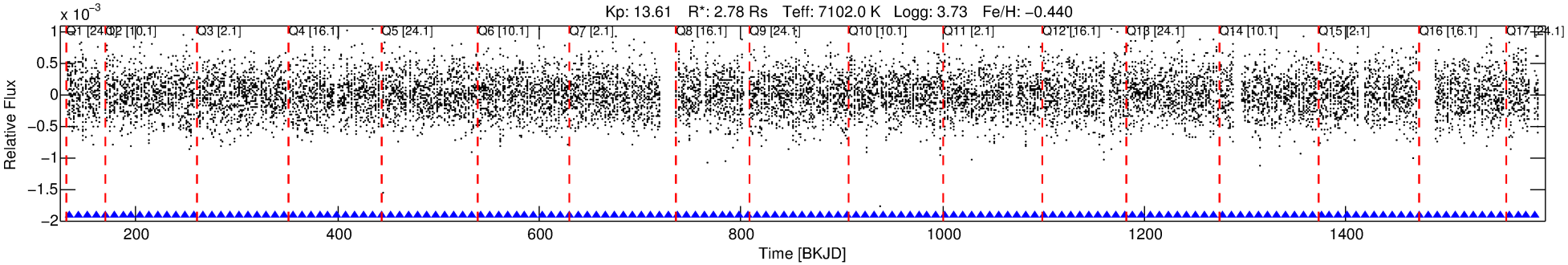
Ephemeris Match Information For 008125219-05

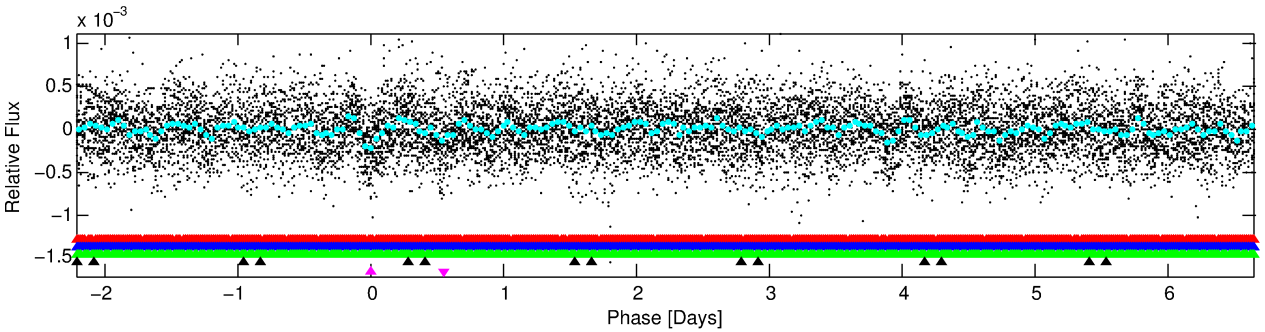
No Significant Match Found

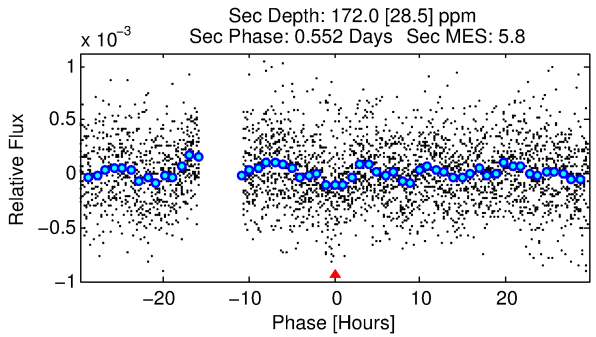
DV One-Page Summary

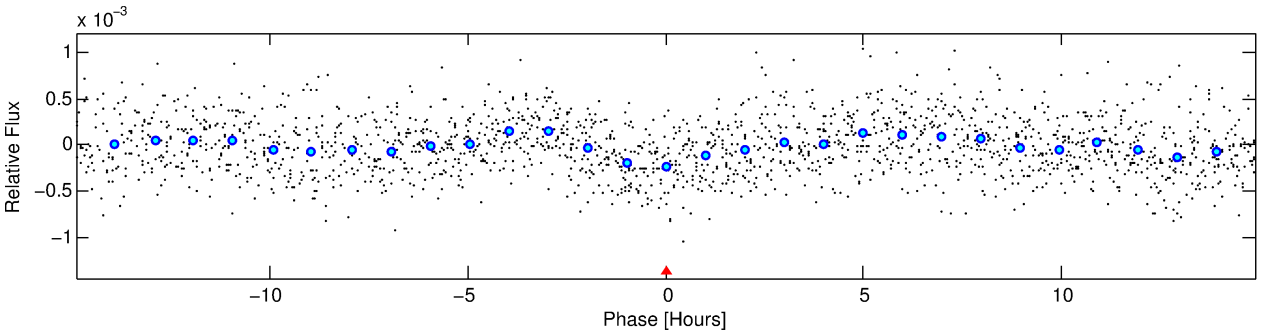
KIC: 8125219 Candidate: 5 of 5 Period: 8.867 d

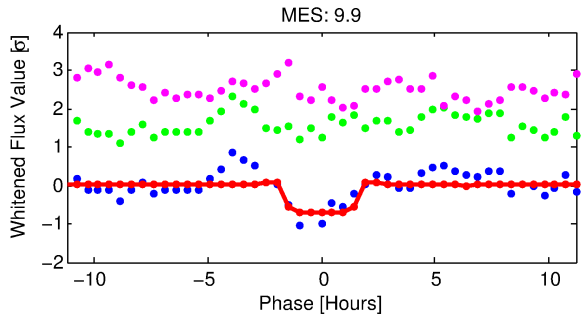
Kp: 13.61 R*: 2.78 Rs Teff: 7102.0 K Logg: 3.73 Fe/H: −0.440

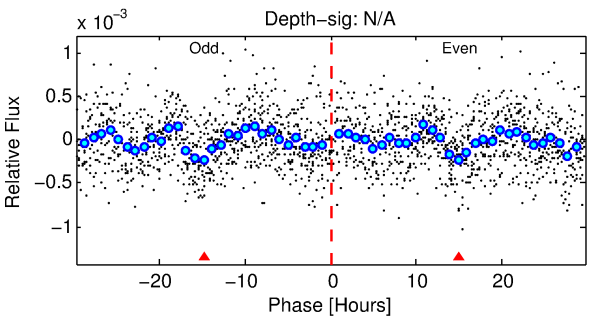


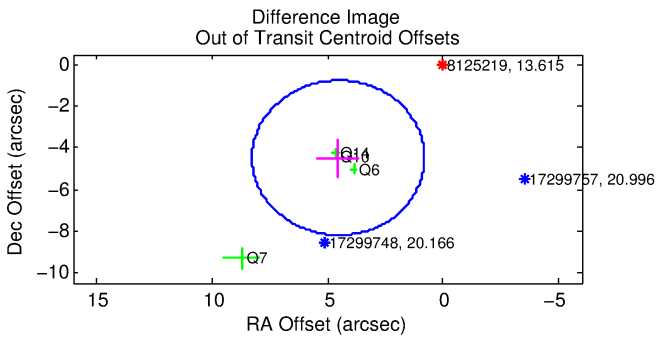












TPS TCE Results:

Period = 8.86677 d
Epoch = 133.8404 BKJD

DV fit results are unavailable

DV Diagnostic Results:

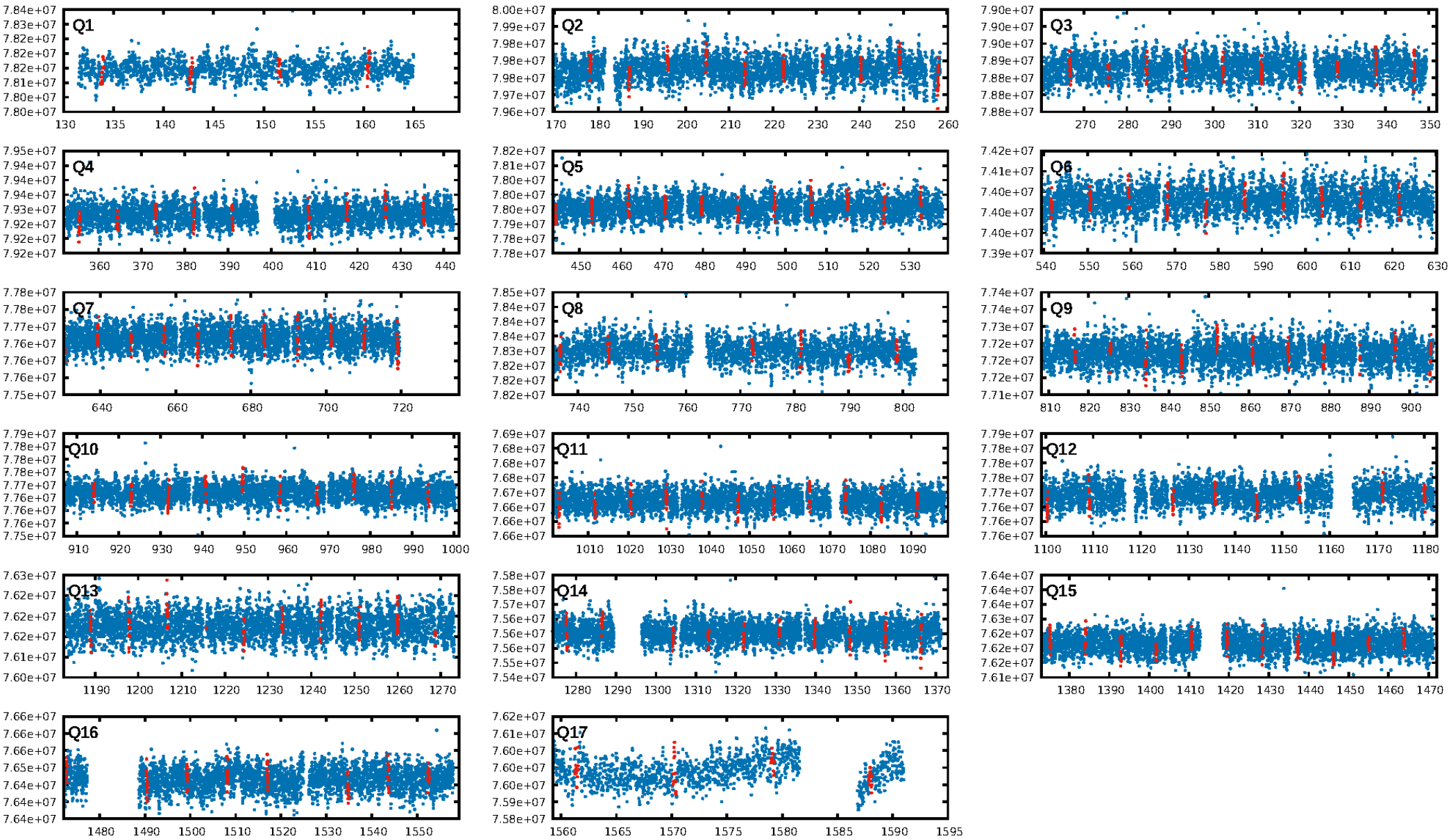
ShortPeriod−sig: 100.0% [40.40σ]
LongPeriod−sig: 100.0% [340.50σ]
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [58/58]
GhostDiagnostic−chr: 2.713

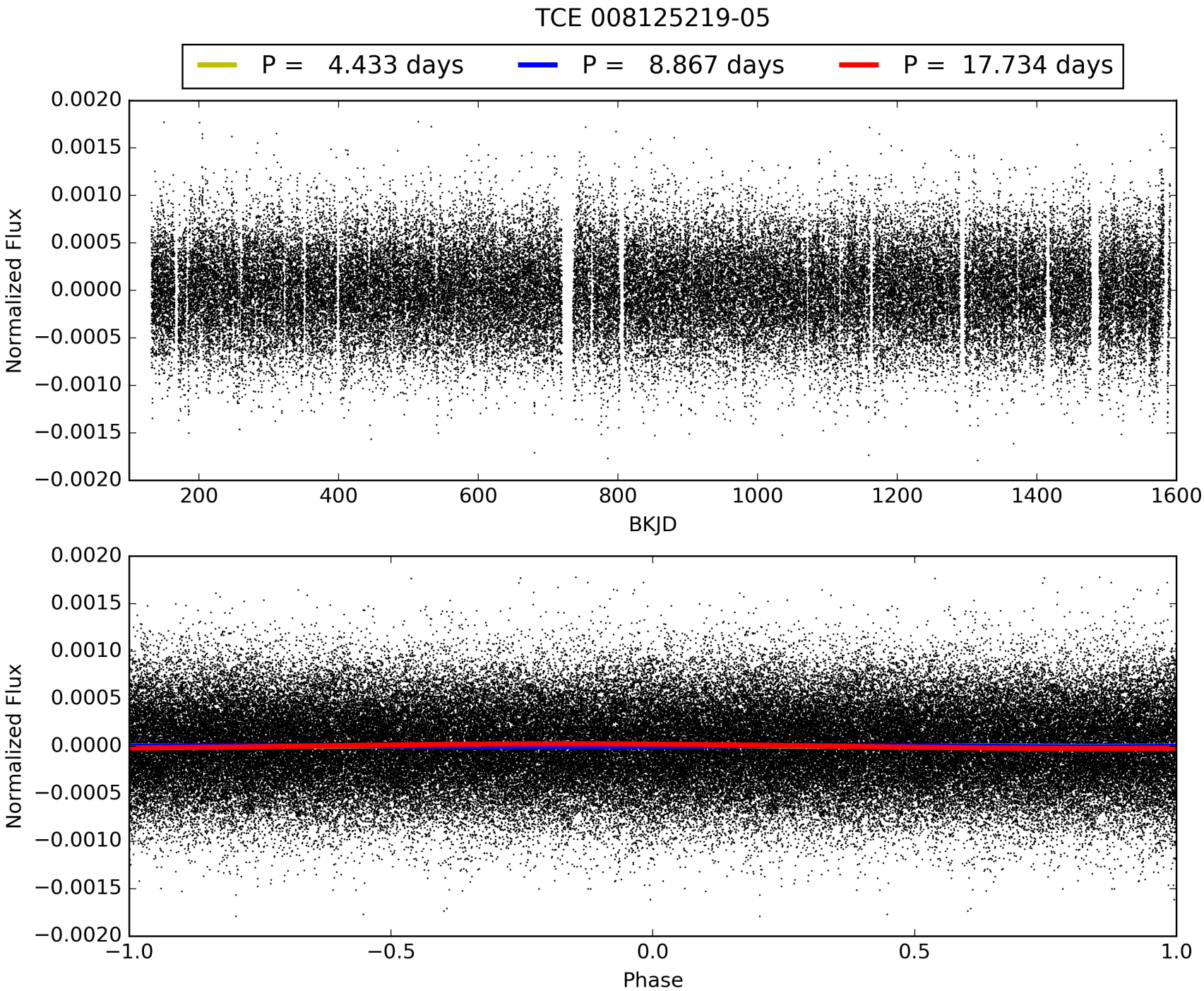
Centroid−sig: 80.9%
Centroid−so: 1.248 arcsec [2.48σ]
OotOffset−rm: 6.367 arcsec [5.13σ]
KicOffset−rm: 13.055 arcsec [68.35σ]
OotOffset−st: 3/1/0/0 [4]
KicOffset−st: 3/1/0/0 [4]
DiffImageQuality−fgm: 0.75 [3/4]
DiffImageOverlap−fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 23:48:47 Z

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

TCE 008125219-05, PDC Light Curves

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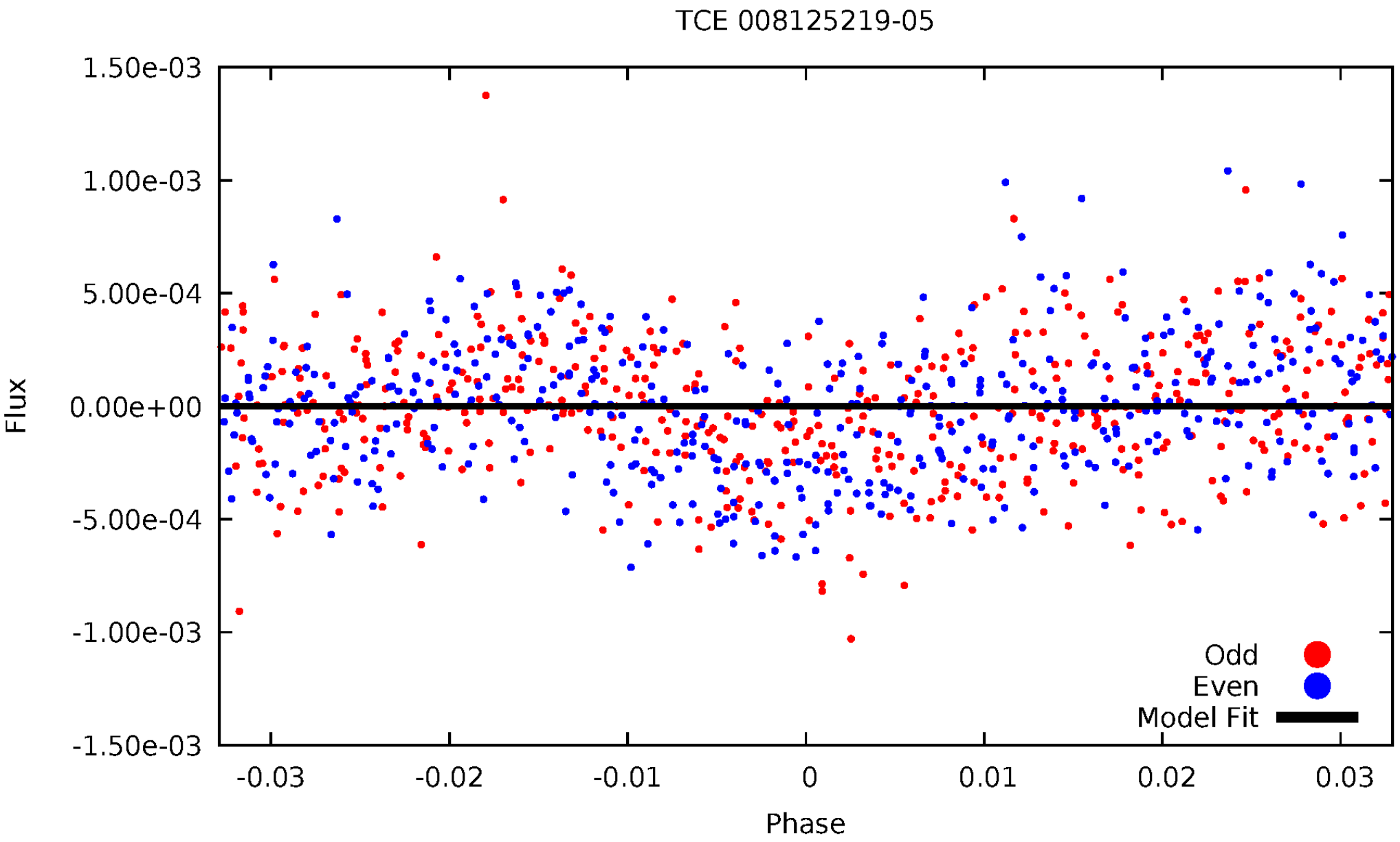
P = 4.433 days
P = 8.867 days
P = 17.734 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even


TCE 008125219-05
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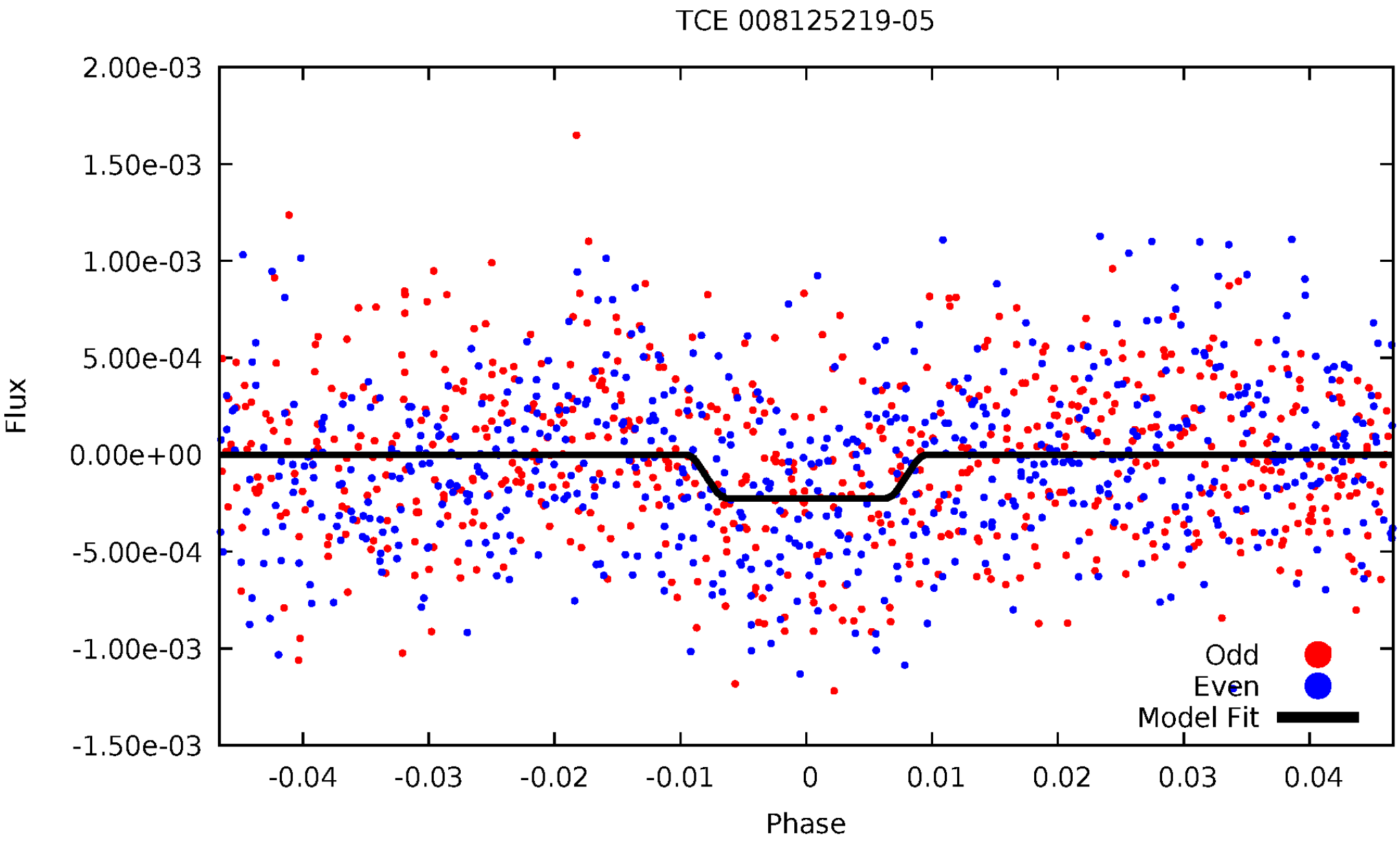
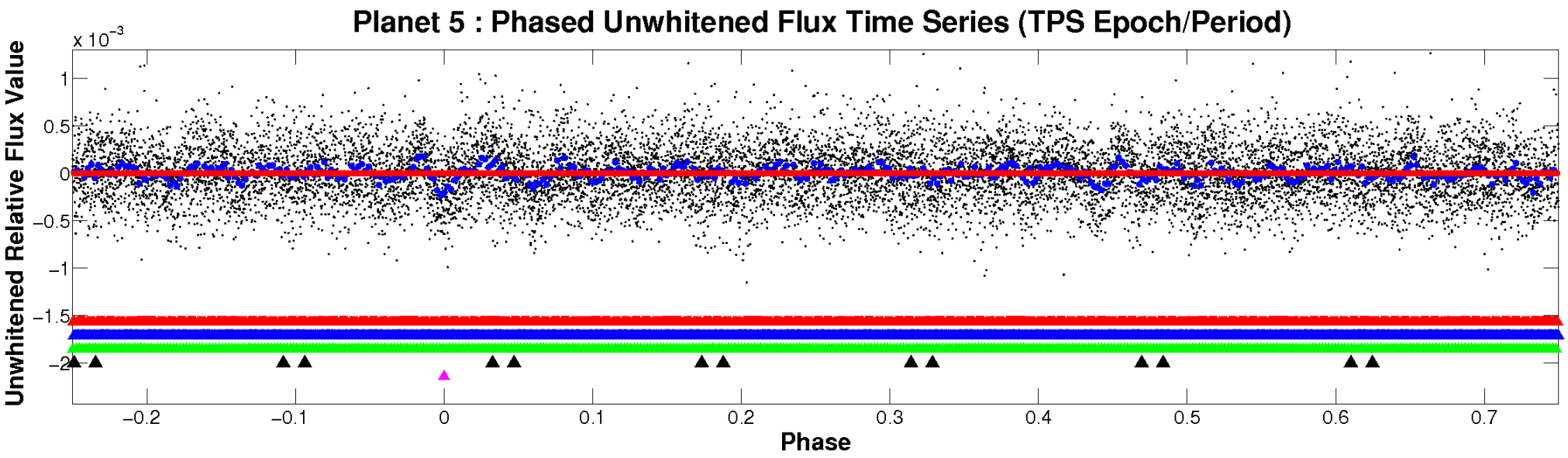
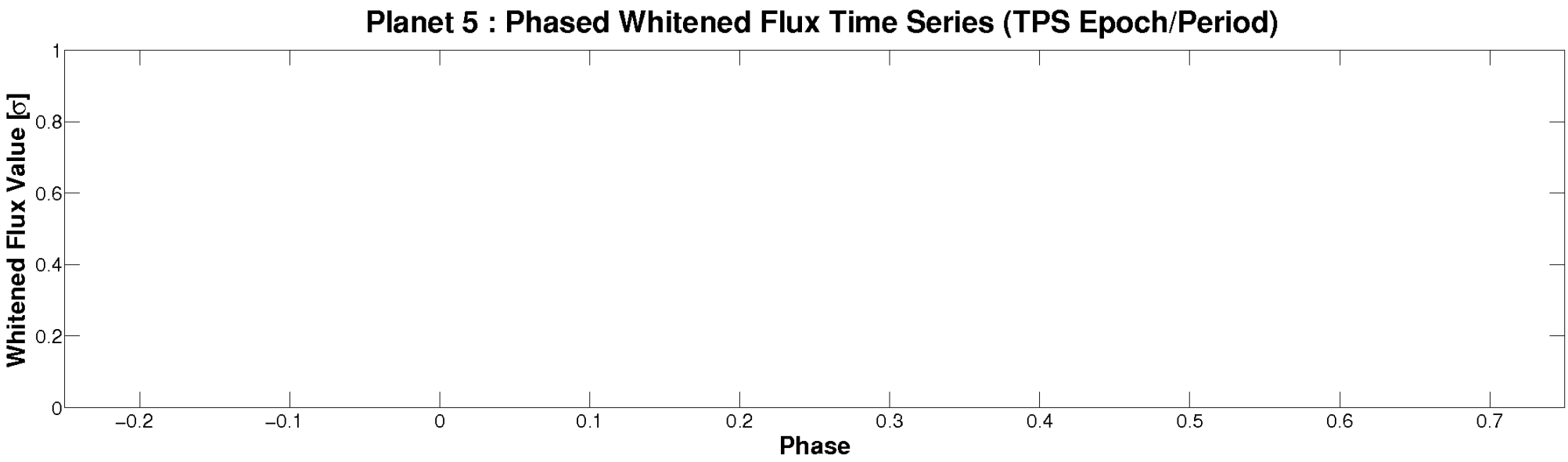
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
Flux
-0.03
-0.02
-0.01
0
0.01
0.02
0.03
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 008125219-05
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
Flux
-0.04
-0.03
-0.02
-0.01
0
0.01
0.02
0.03
0.04
Phase
Odd
Even
Model Fit

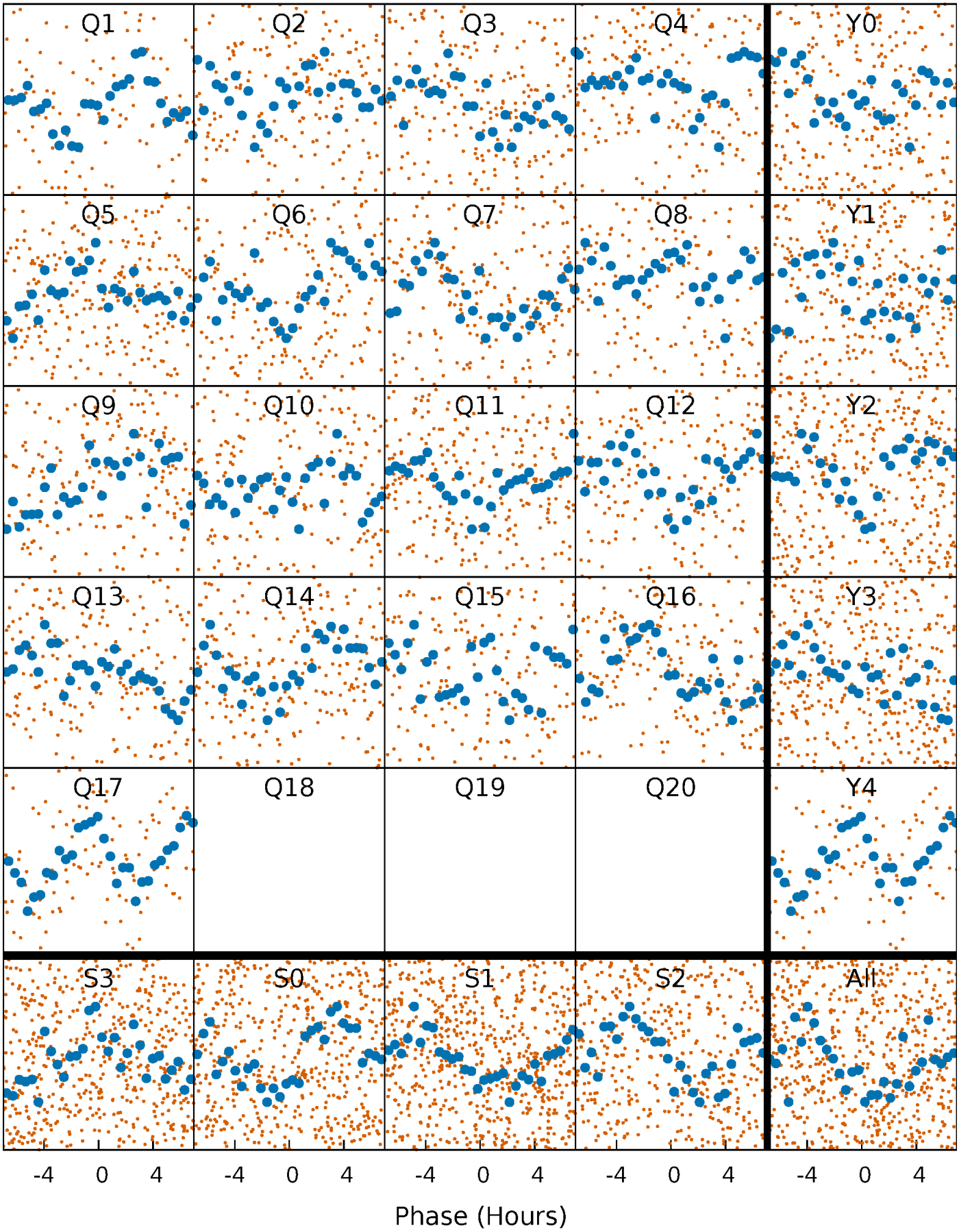
Non-Whitened Vs. Whitened Light Curve





PDC Quarter-Phased Transit Curves

TCE 008125219-05 P= 8.866768 Days T_0=133.840420 (BKJD)



DV Quarter-Phased Transit Curves

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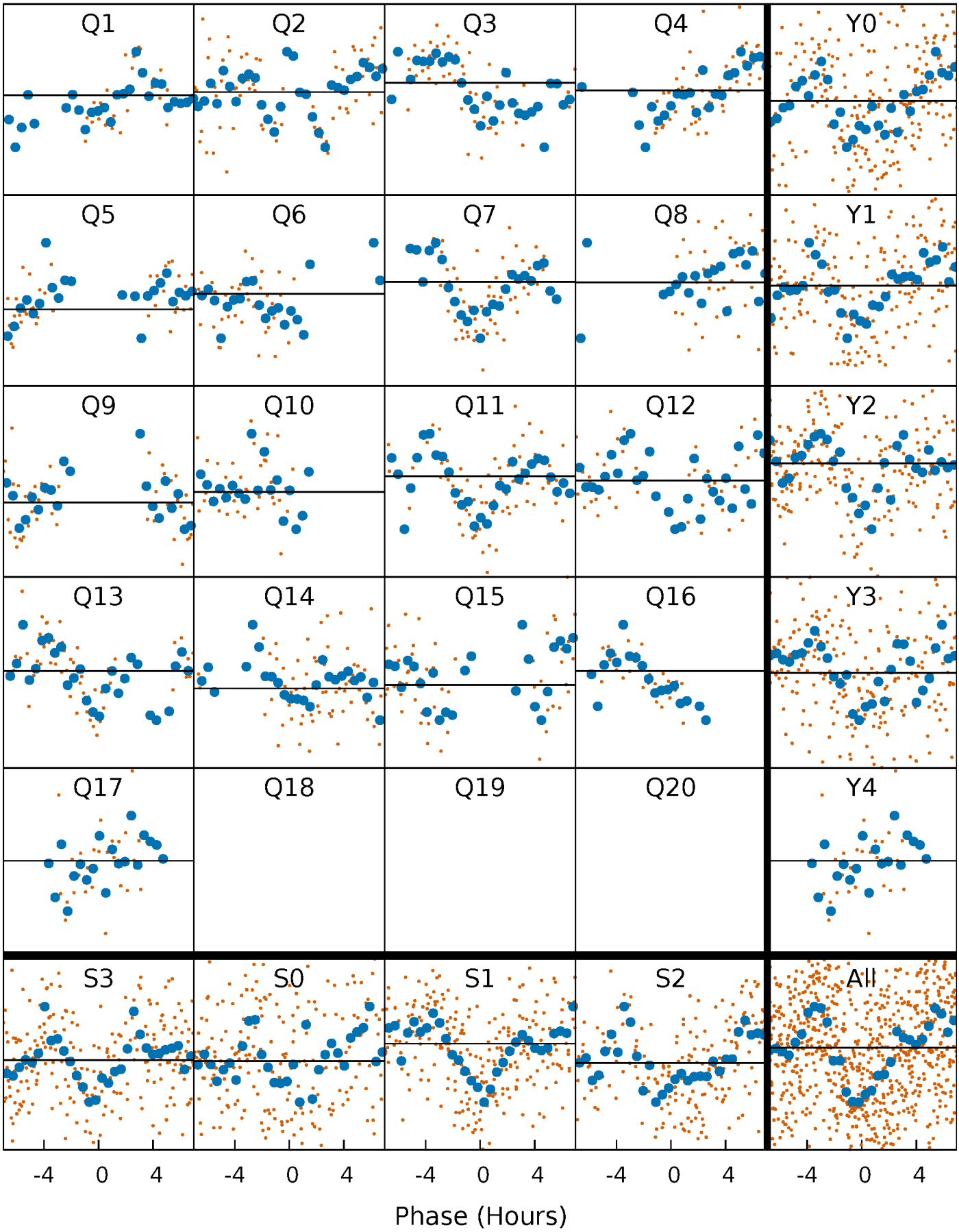

Alt. Detrend Quarter-Phased Transit Curves

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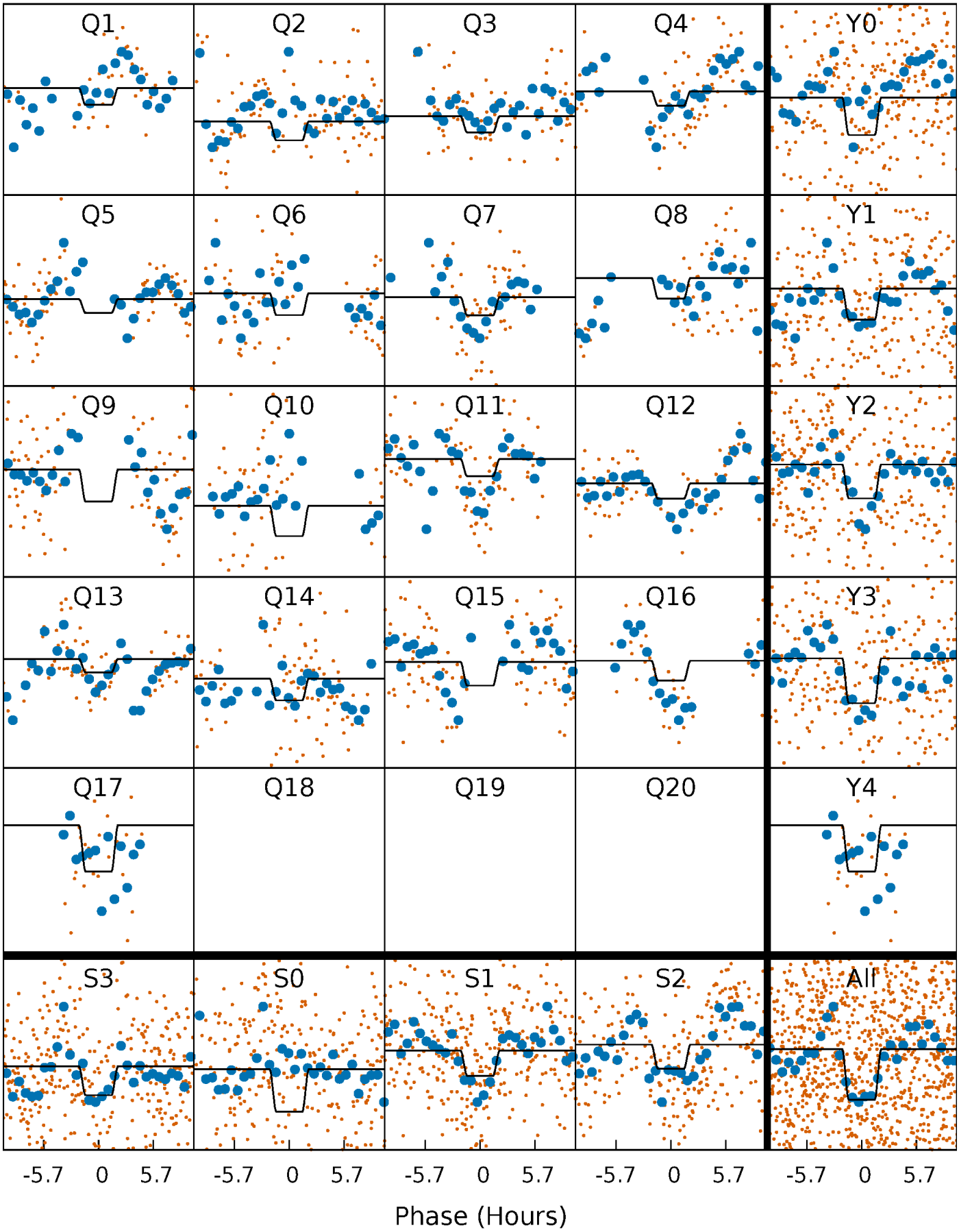
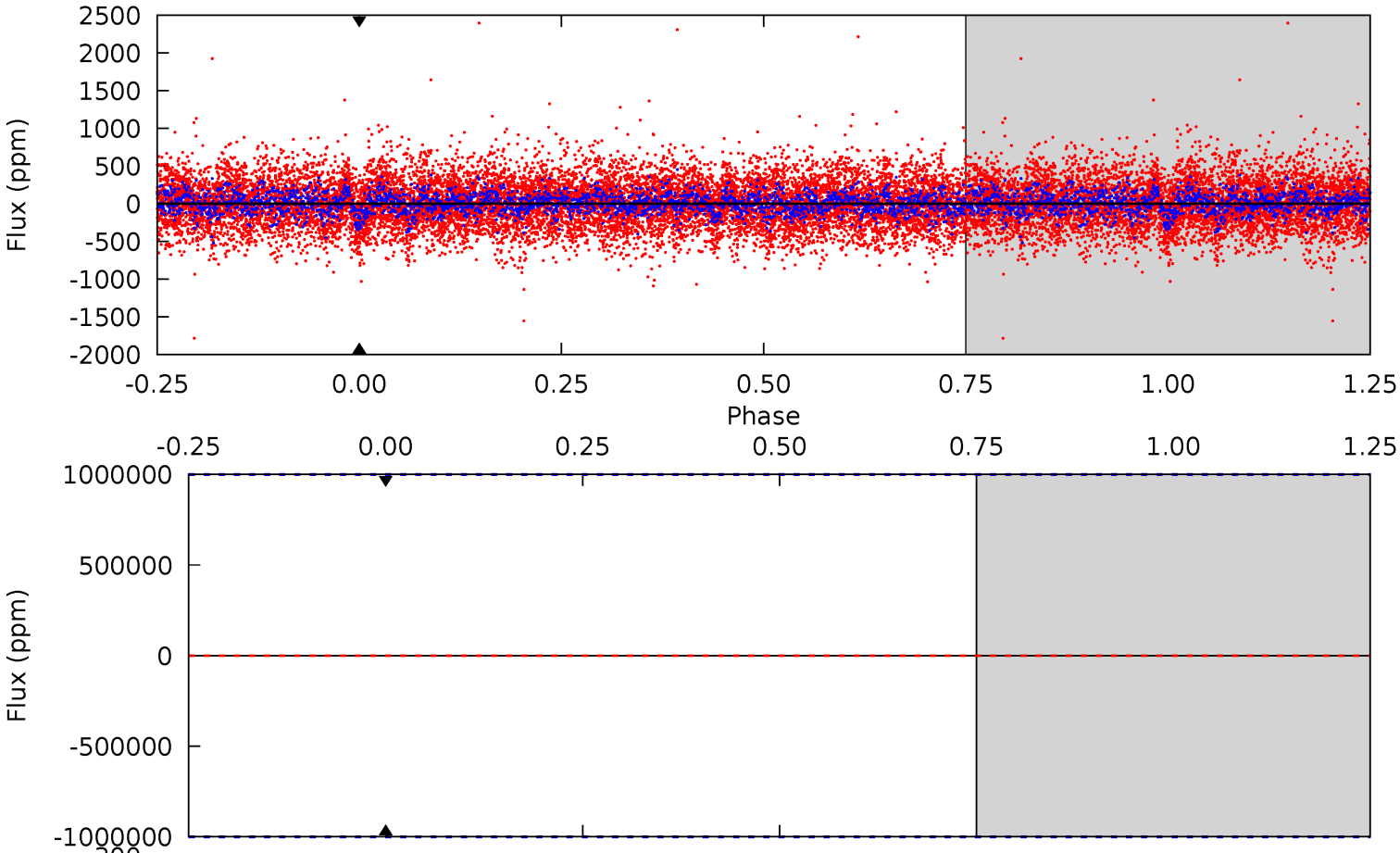
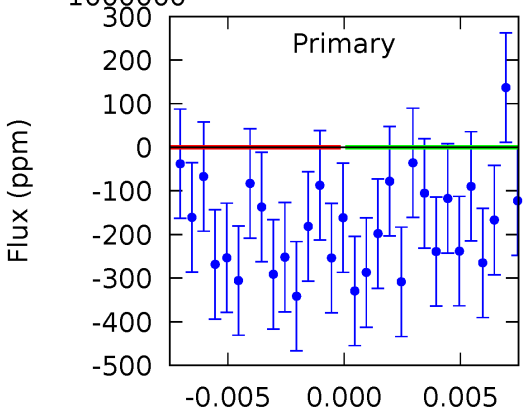


DV Model-Shift Uniqueness Test

008125219-05, P = 8.866768 Days, E = 124.973652 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	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0

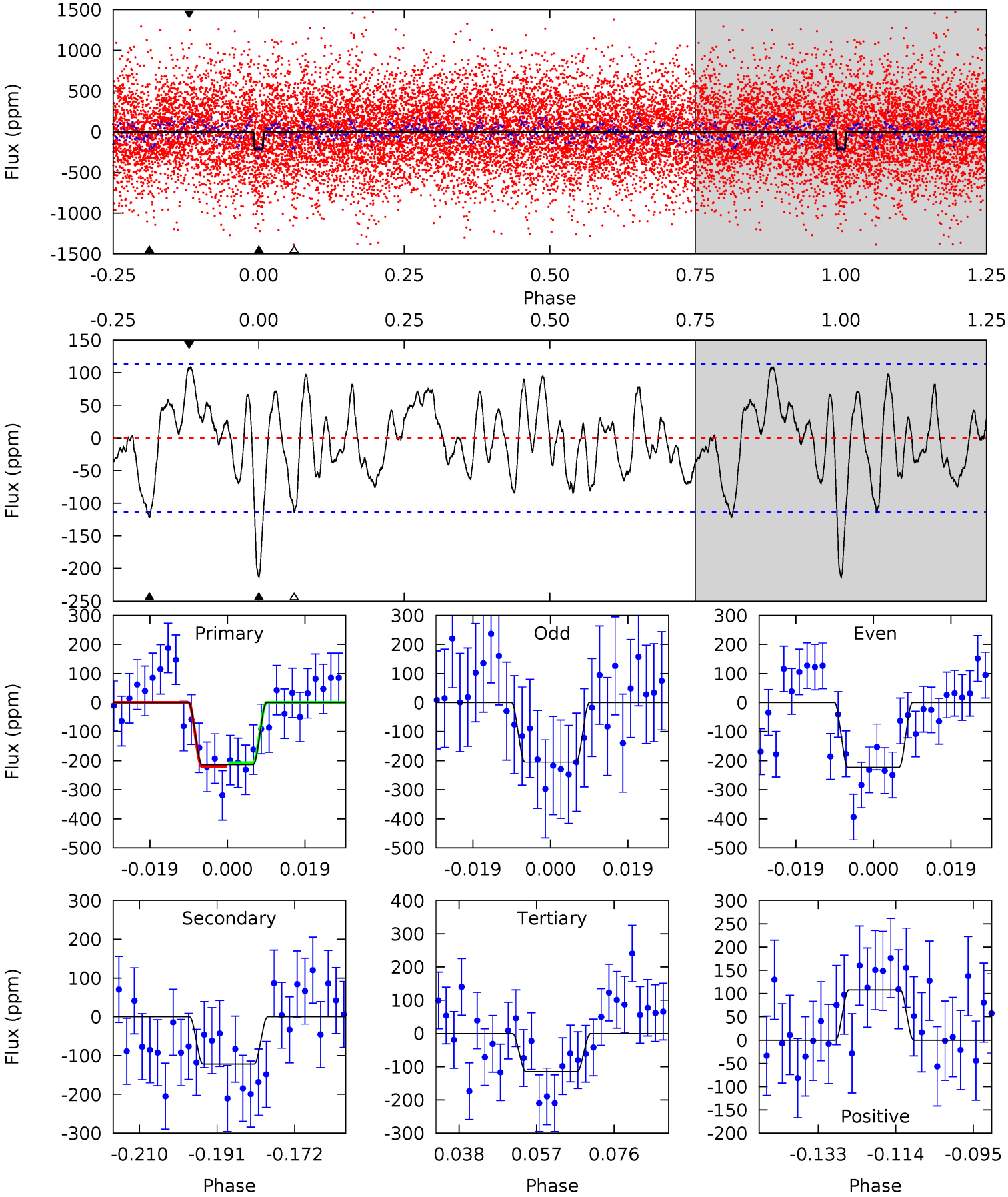




Alt Model-Shift Uniqueness Test

008125219-05, P = 8.866768 Days, E = 124.976527 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.23	5.25	4.96	4.67	4.90	2.34	1.99	4.27	4.56	0.29	0.58	0.39	0.86	0.34	0.28



Stellar Parameters For KIC 008125219

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7102^{+245}_{-367}	$3.729^{+0.501}_{-0.088}$	$-0.440^{+0.300}_{-0.300}$	$2.781^{+0.464}_{-1.391}$	$1.512^{+0.208}_{-0.357}$	$0.099^{+0.513}_{-0.026}$
	+3%/-5%	+13%/-2%	+68%/-68%	+17%/-50%	+14%/-24%	+518%/-27%
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 008125219-05 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0±1000000	$21.18^{+22.62}_{-14.84}$	2265^{+177}_{-280}	-4651^{+46950}_{-23676}	$-13.493^{+2646.760}_{-1812.854}$
Alt.	-122±23	$19.62^{+23.24}_{-14.57}$	2252^{+189}_{-283}	3132^{+2208}_{-1189}	$1.646^{+23.363}_{-1.327}$

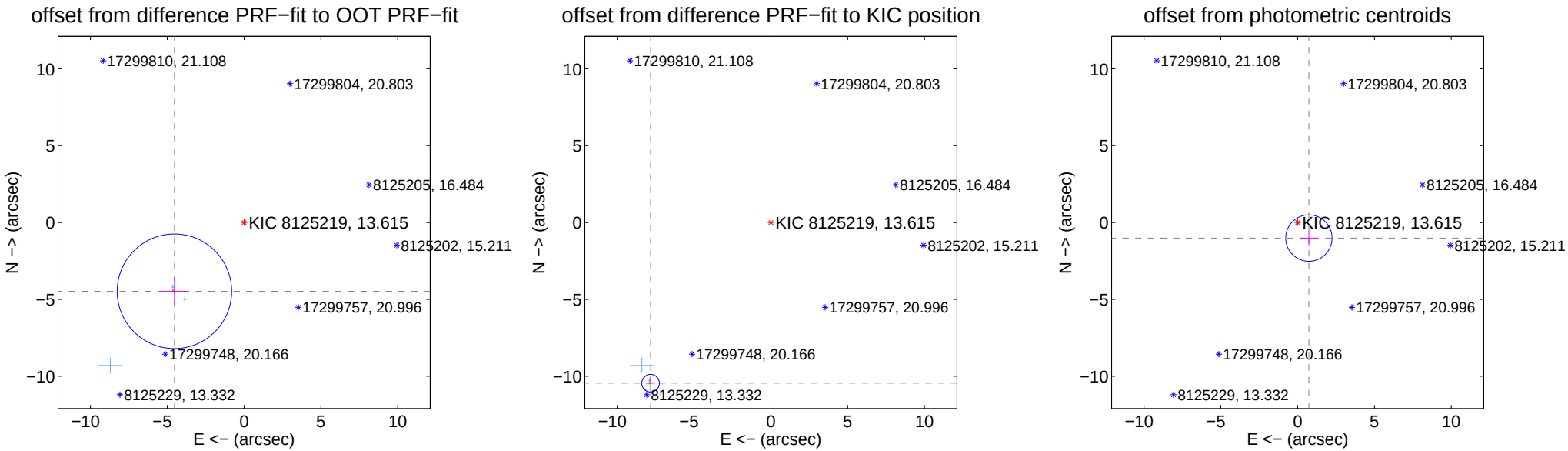
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

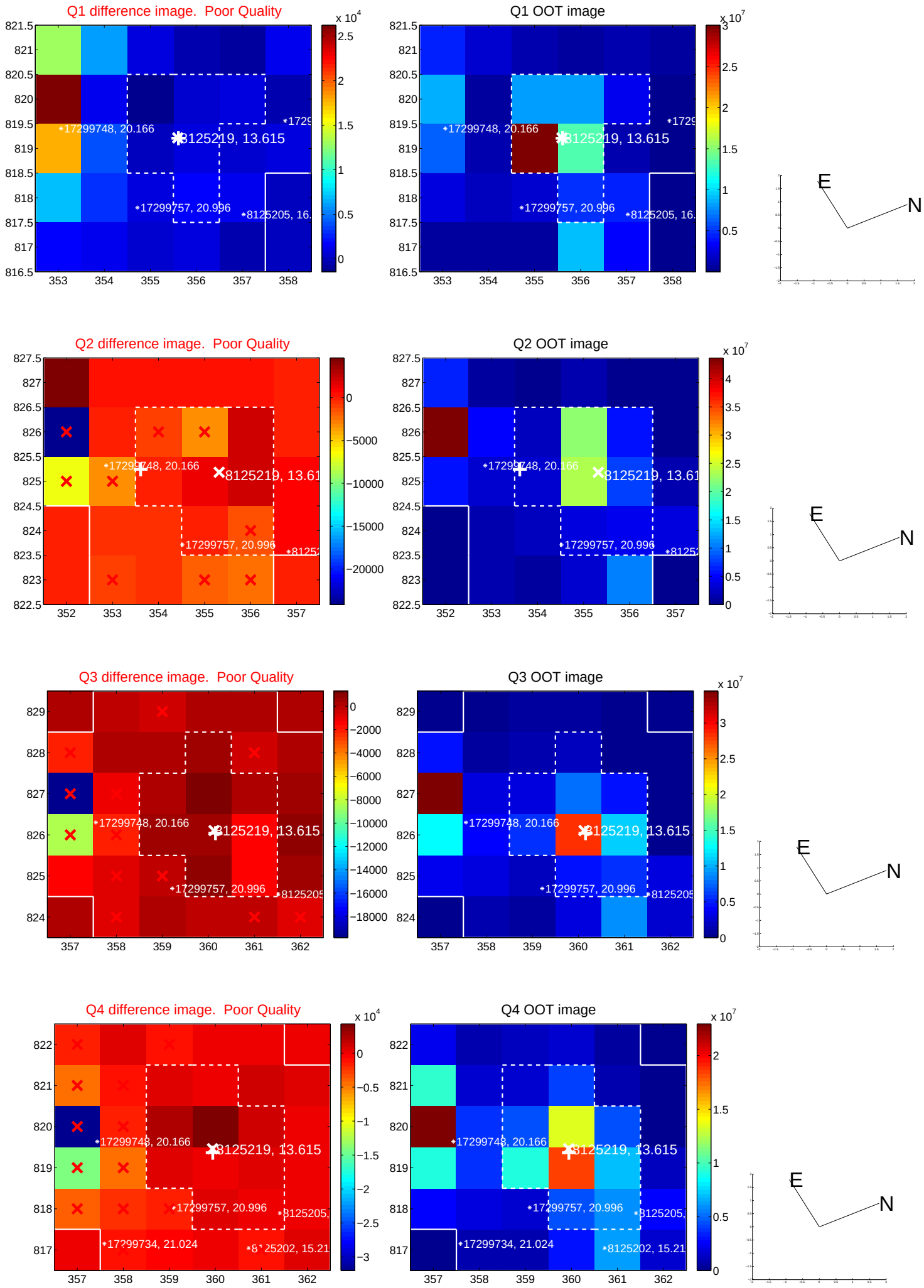
Supplemental centroid analysis for 008125219-05. Kepler magnitude: 13.62. Transit SNR -1.00
There are 3 quarters with good PRF difference image offsets
The OOT PRF centroid is offset from the target star catalog position by about 6.90 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.367 ± 1.242	5.13	4.533 ± 0.889	-4.471 ± 0.899
PRF-fit source offset from KIC position	13.055 ± 0.191	68.35	7.828 ± 0.310	-10.448 ± 0.445
photometric centroid source offset	1.25 ± 0.50	2.48	-0.73 ± 0.56	-1.01 ± 0.47

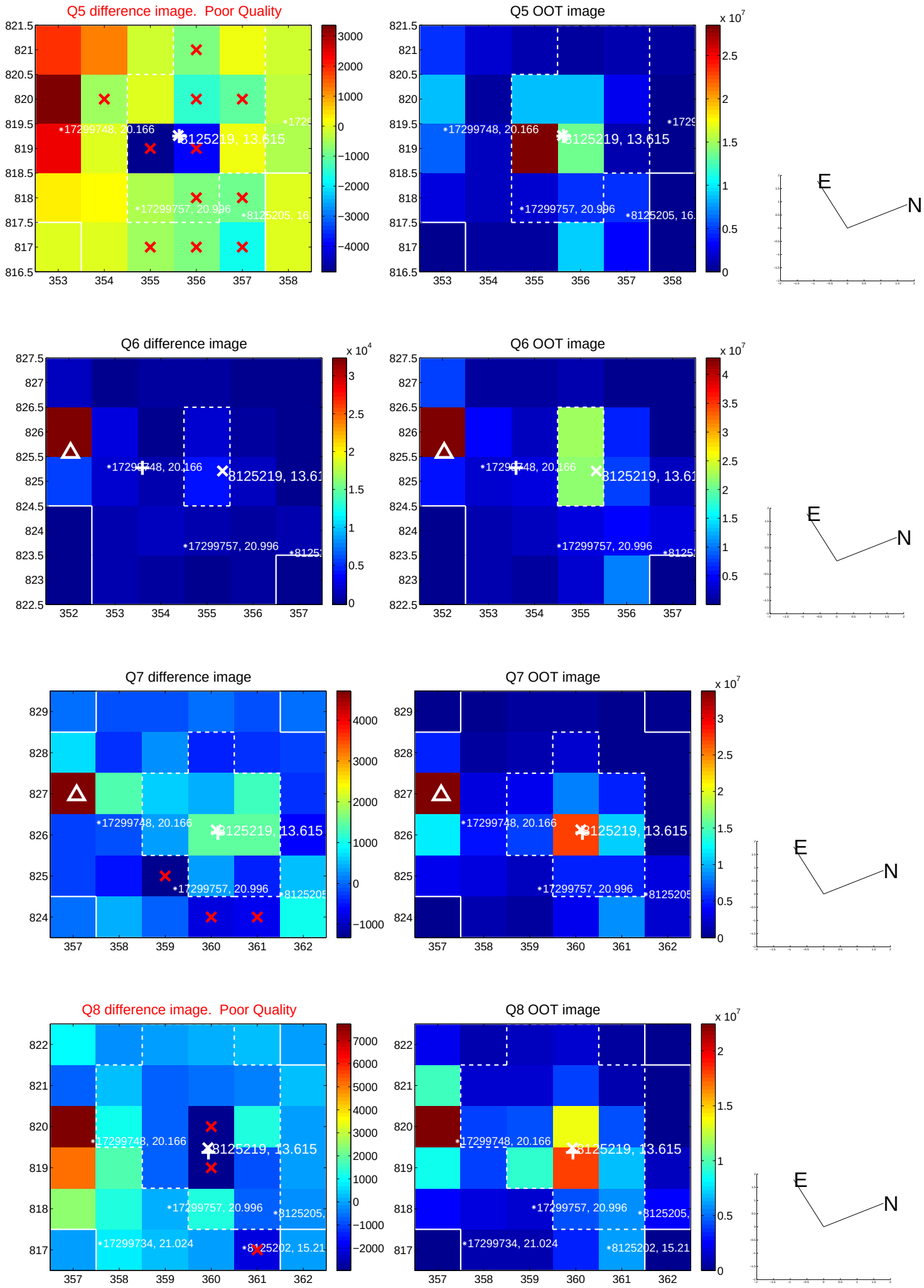


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

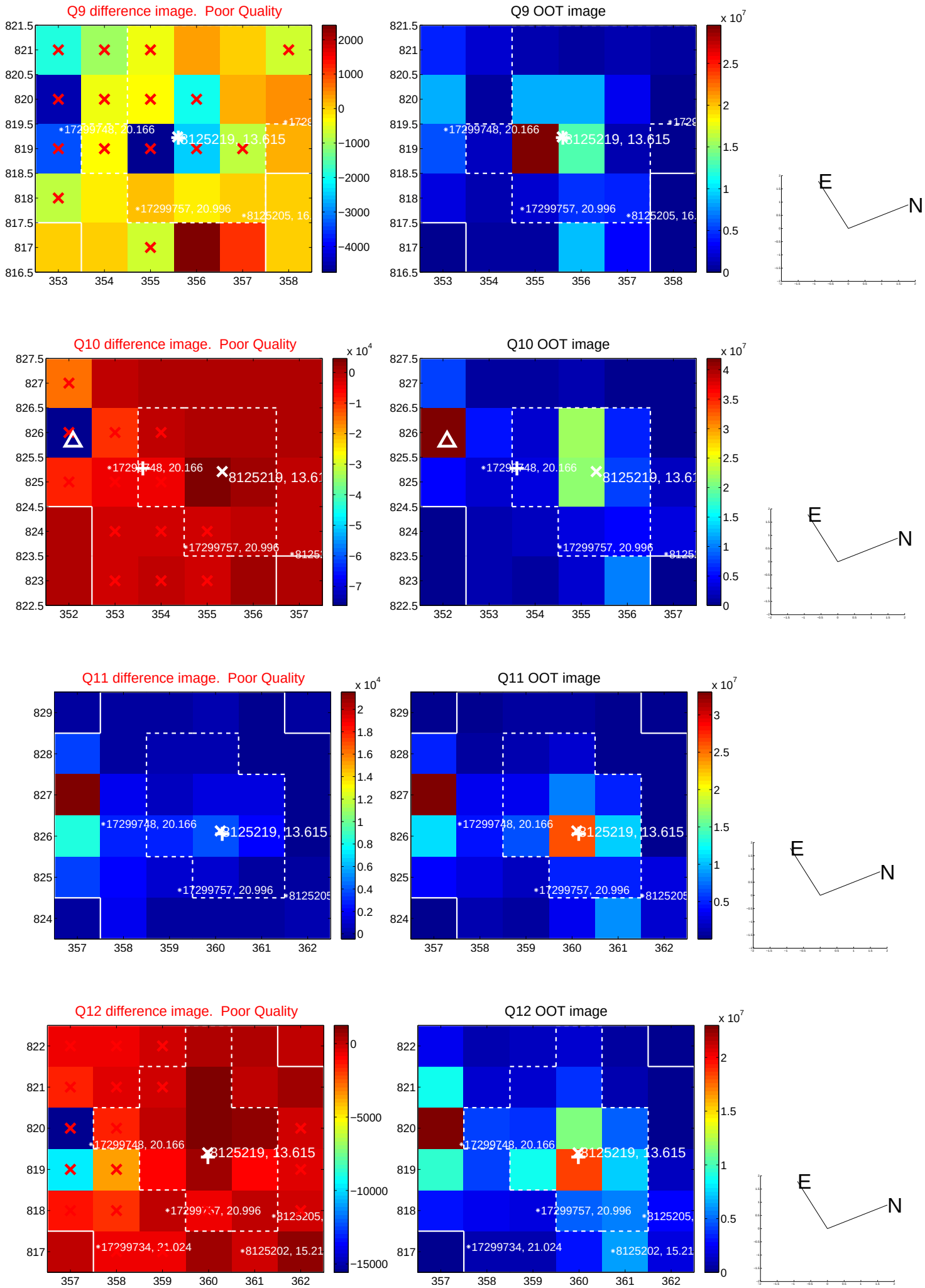
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



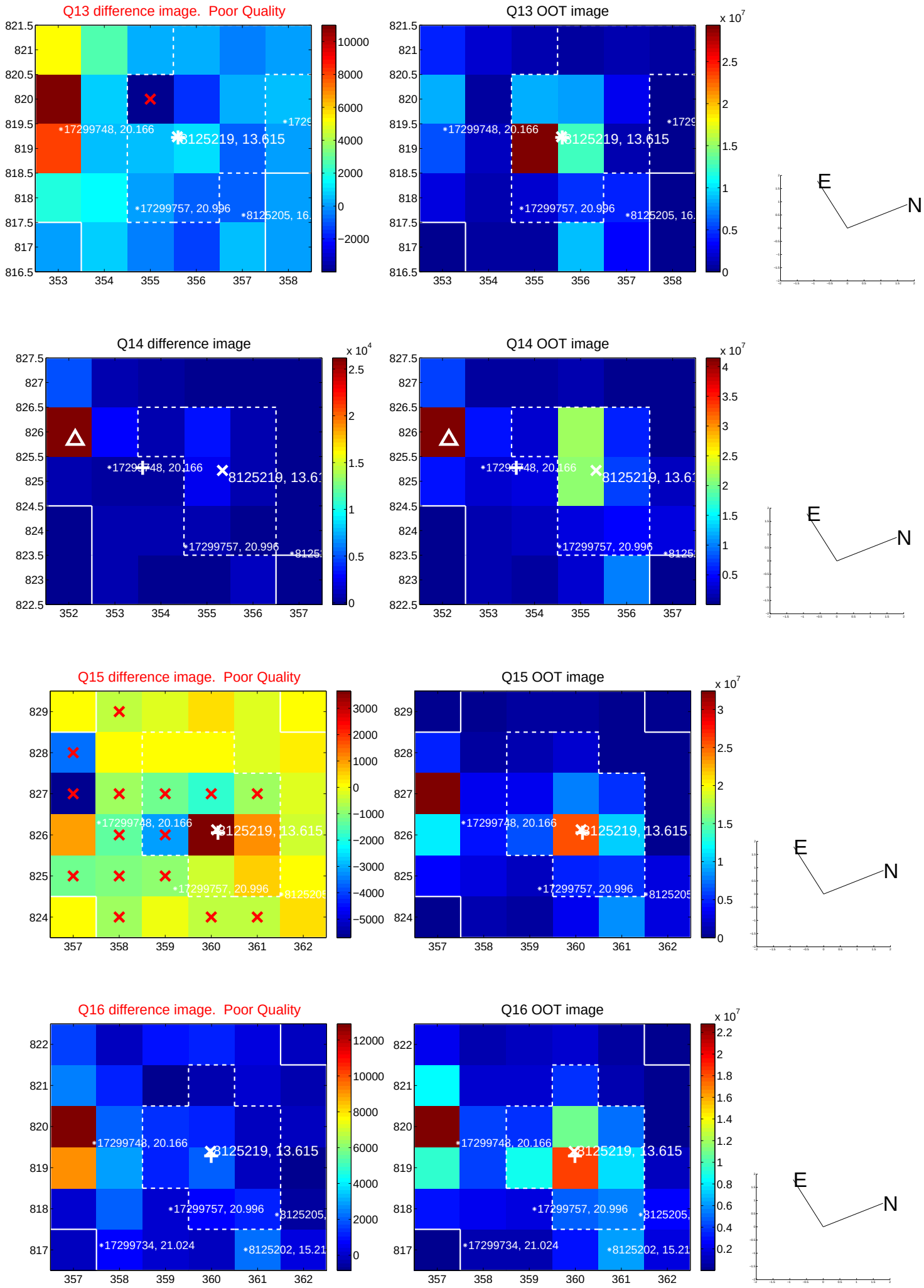
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



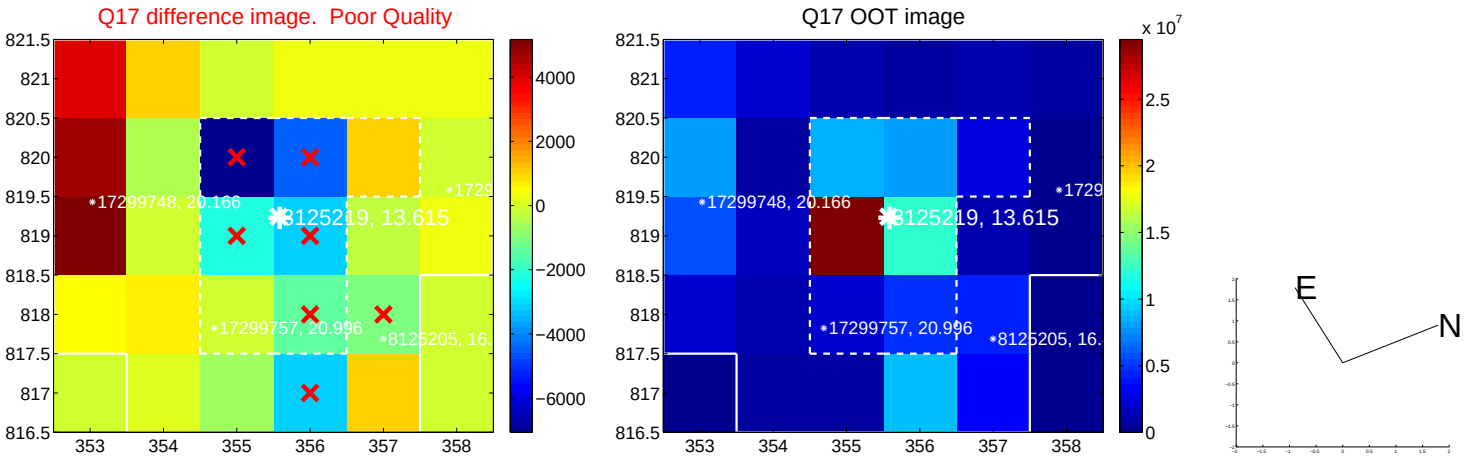
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

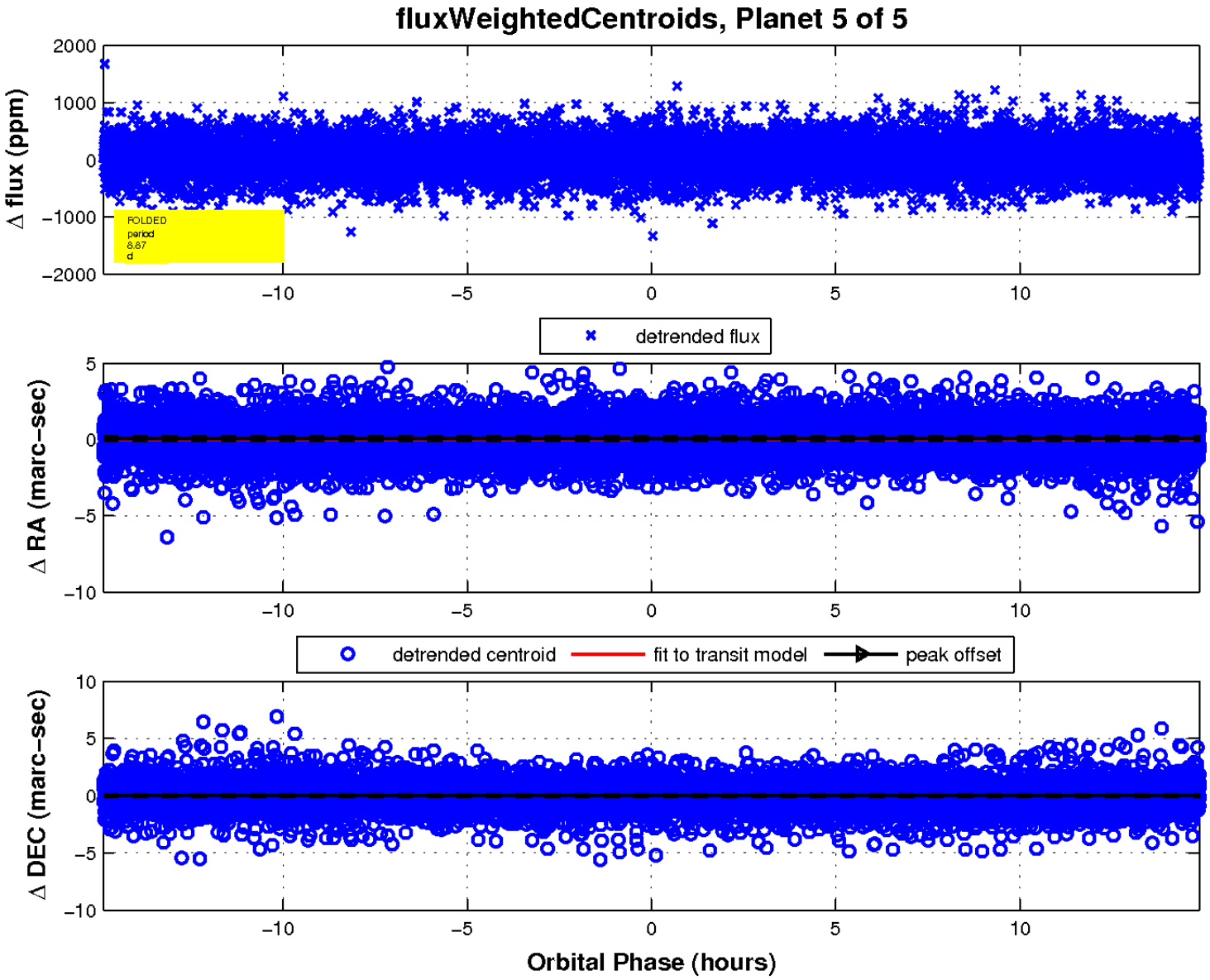


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

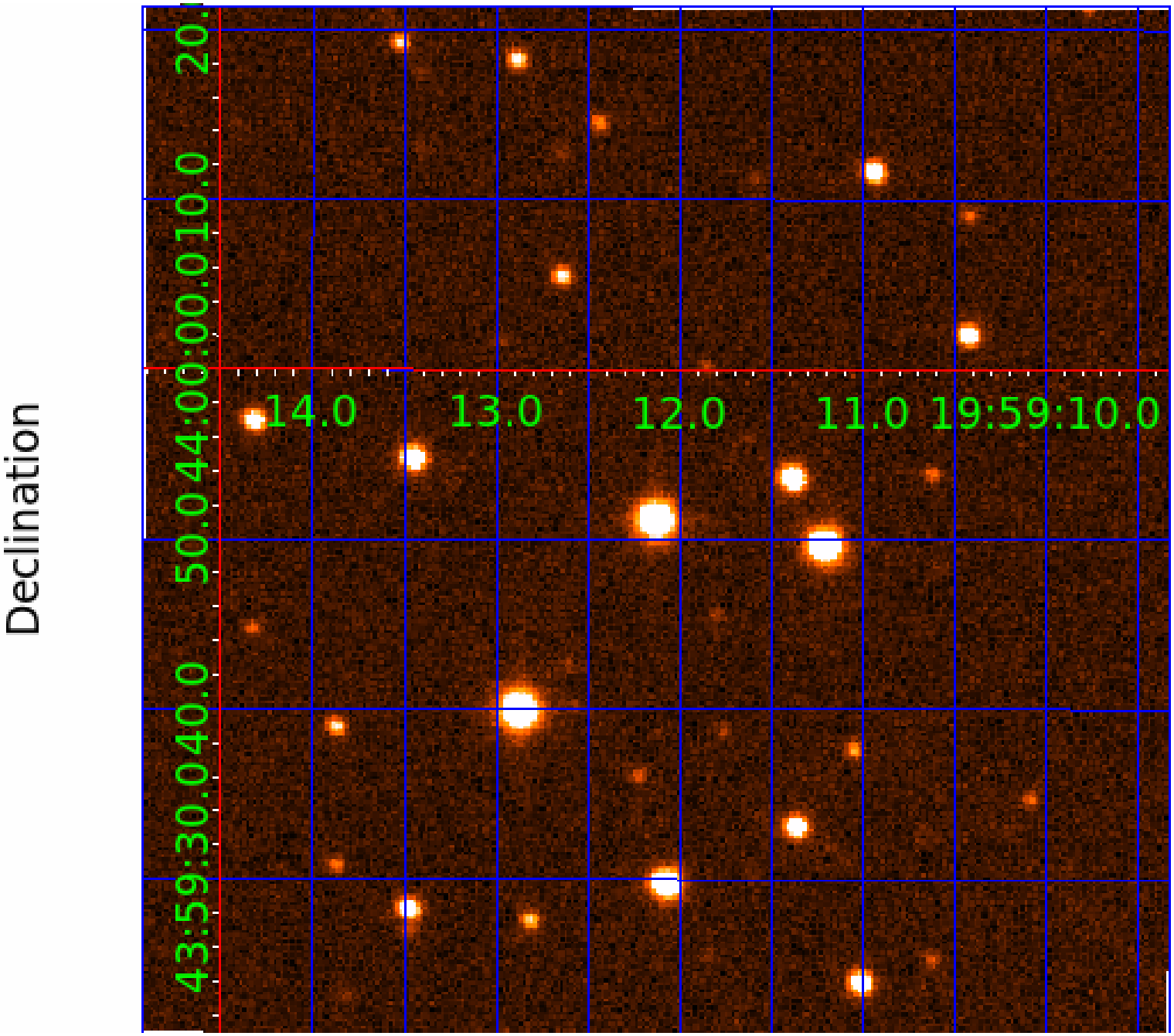


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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