KIC 010337323

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 ($S_\oplus$)
010337323-01	OBS	No	3.432686	132.964607	19.8	15.276	11.4	7.6	1.66	7152	0.74	2529.05
010337323-02	OBS	No	282.754965	401.425444	169.6	15.781	11.7	6.3	1.66	7152	2.32	7.06
010337323-03	OBS	No	148.807683	252.914137	174.3	12.186	8.2	6.7	1.66	7152	2.44	16.61
010337323-04	OBS	No	1.715740	131.903914	16.2	12.526	9.9	7.2	1.66	7152	0.78	6375.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010337323-01	OBS	FP	0.00	1	0	0	0	LPP_DV
010337323-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010337323-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
010337323-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV

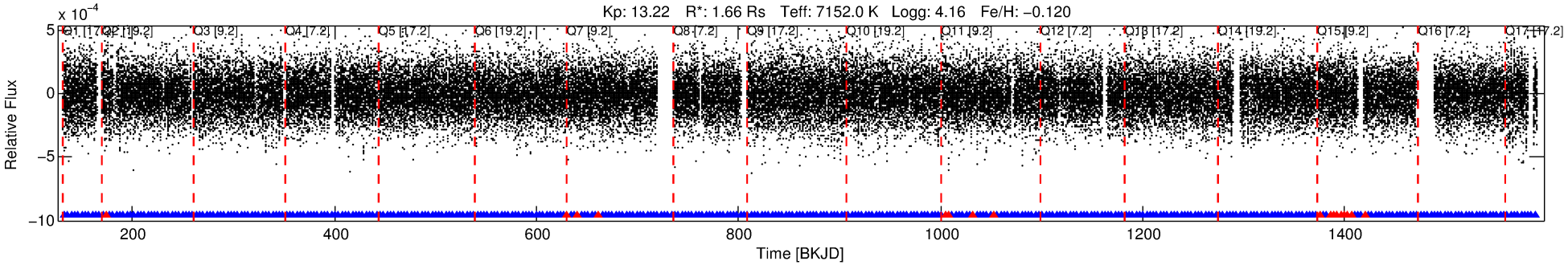
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

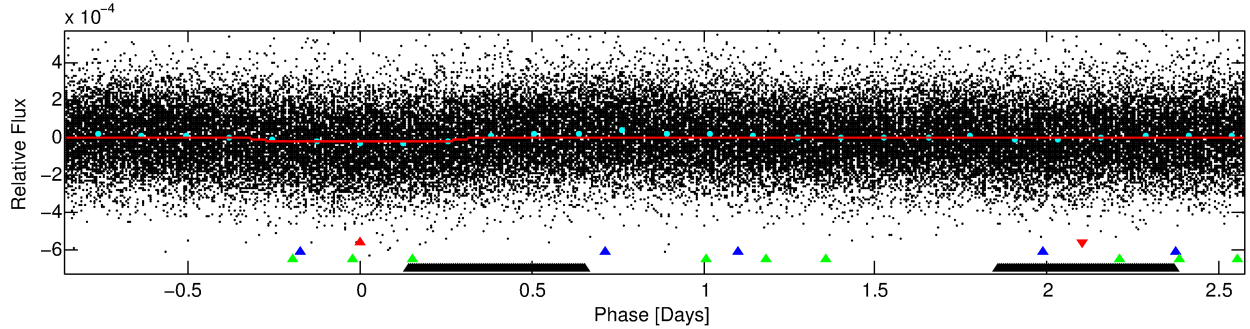
Ephemeris Match Information For 010337323-01

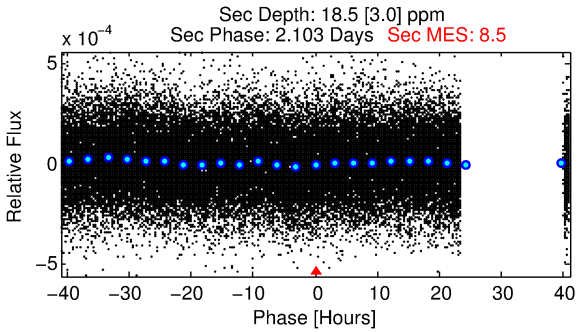
No Significant Match Found

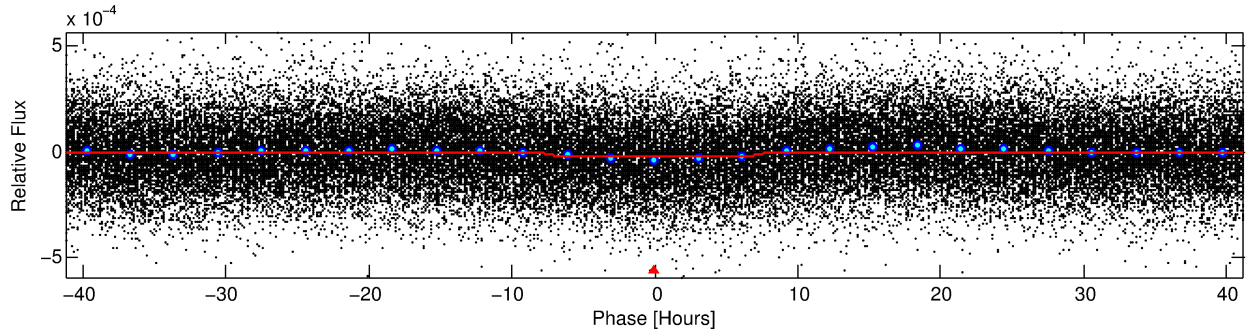
DV One-Page Summary

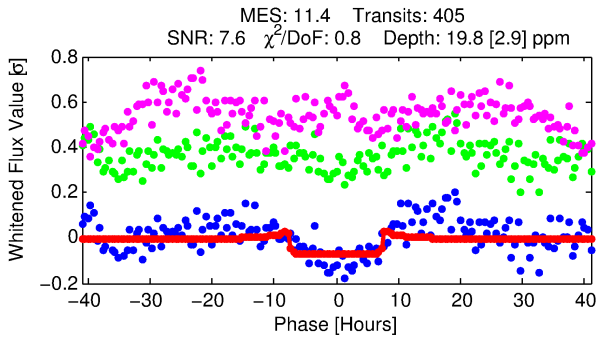
KIC: 10337323 Candidate: 1 of 4 Period: 3.433 d

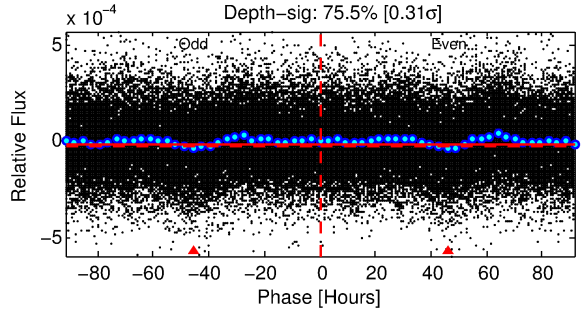


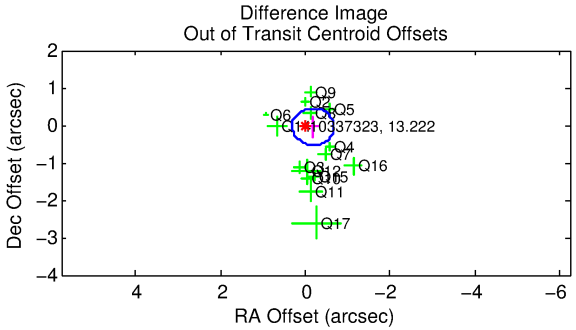












DV Fit Results:

Period = 3.43269 [0.00006] d
Epoch = 132.9646 [0.0110] BKJD
Rp/R* = 0.0041 [0.0034]
a/R* = 1.82 [6.13]
b = 0.03 [182.11]

Seff = 2529.05 [999.65]
Teq = 1808 [179] K
Rp = 0.74 [0.65] Re
a = 0.0504 [0.0126] AU

Ag = 46.49 [78.45] [0.58σ]
Teffp = 7300 [3025] K [1.81σ]

DV Diagnostic Results:

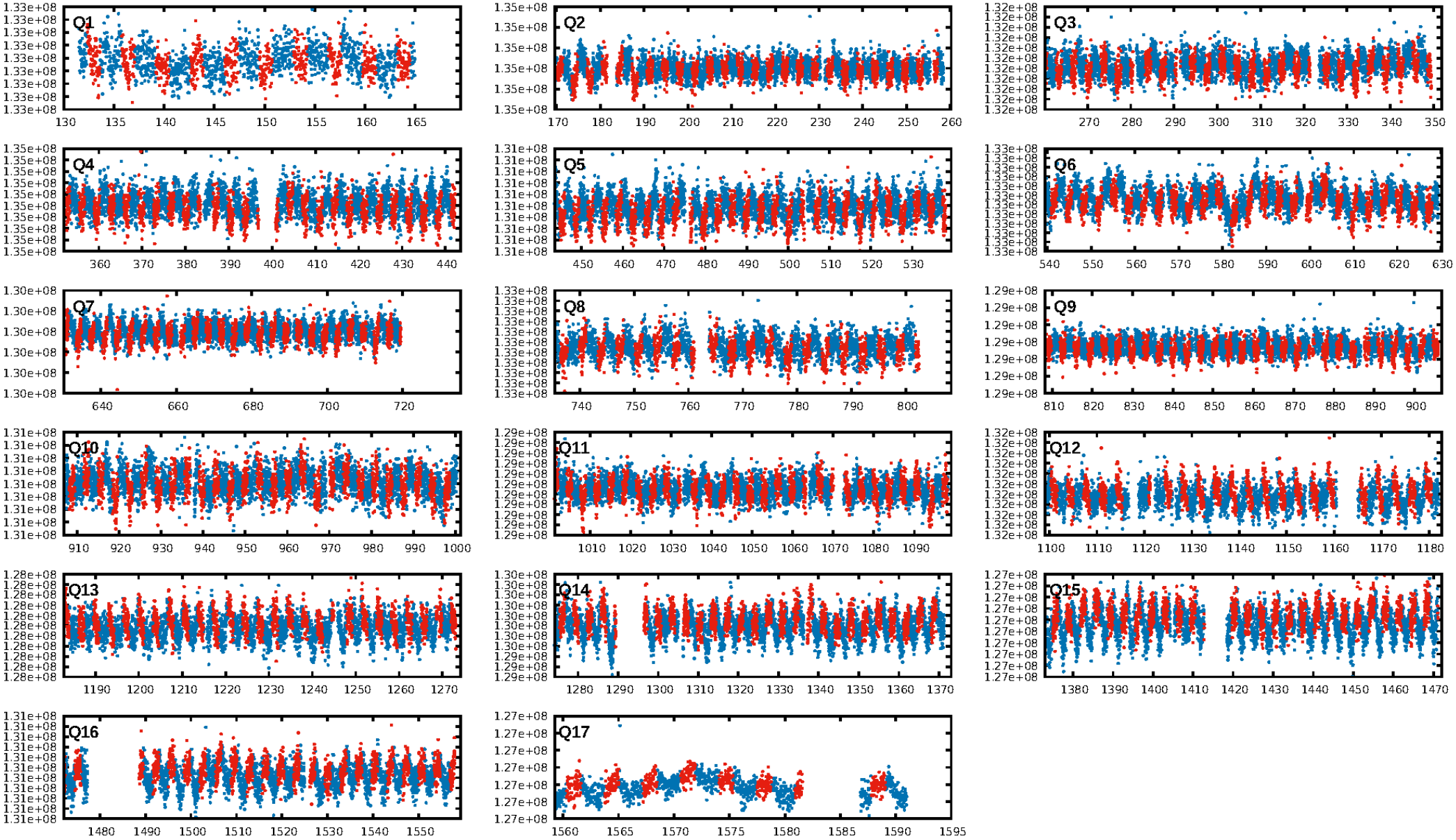
ShortPeriod−sig: 96.3% [2.09σ]
LongPeriod−sig: 100.0% [178.55σ]
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 0.96 [370/387]
GhostDiagnostic−chr: 8.861

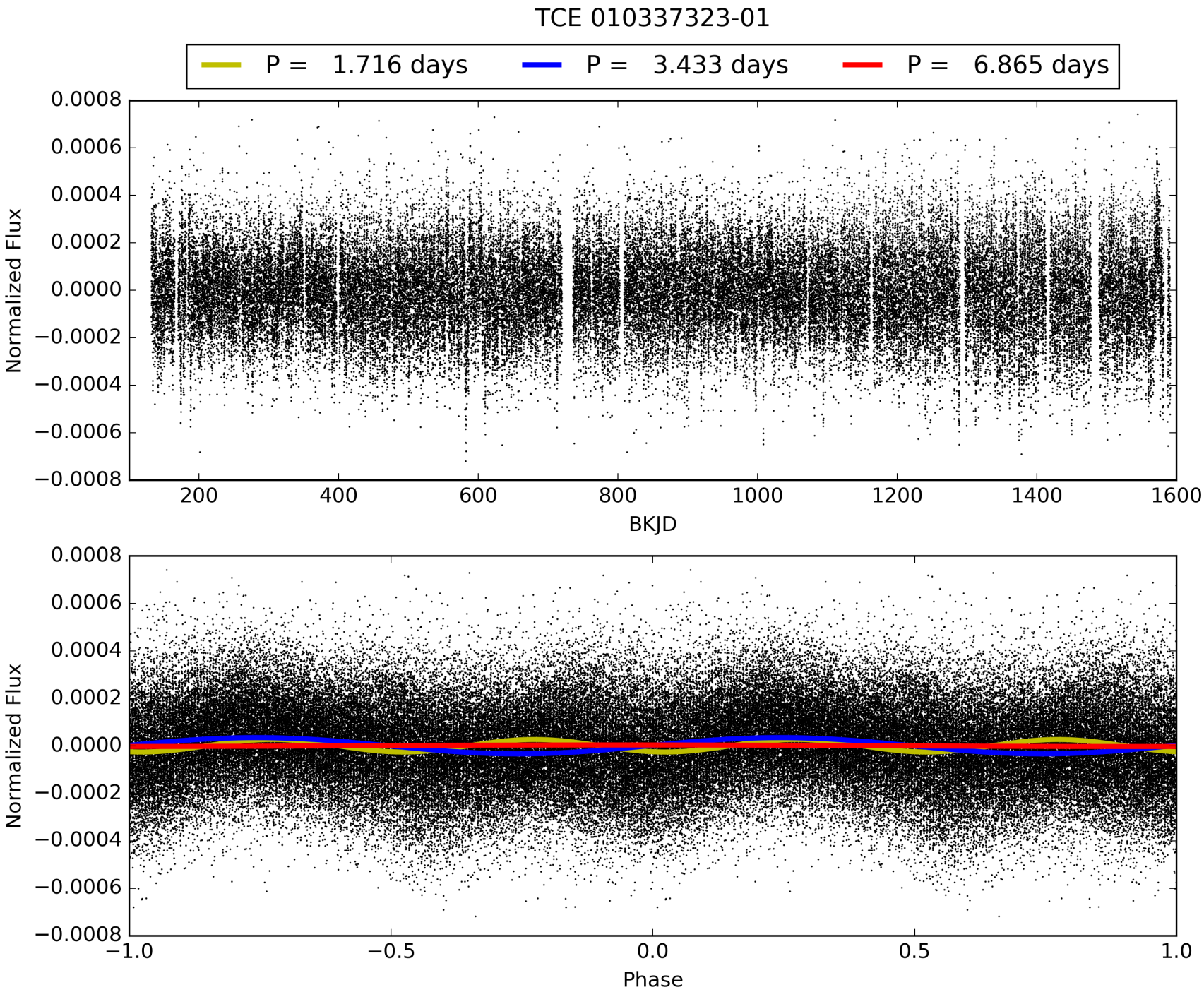
Centroid−sig: 1.0%
Centroid−so: 1.947 arcsec [1.82σ]
OotOffset−rm: 0.193 arcsec [1.18σ]
KicOffset−rm: 0.206 arcsec [1.29σ]
OotOffset−st: 4/4/4/3 [15]
KicOffset−st: 4/4/4/3 [15]
DiffImageQuality−fgm: 0.67 [10/15]
DiffImageOverlap−fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 12:32:47 Z

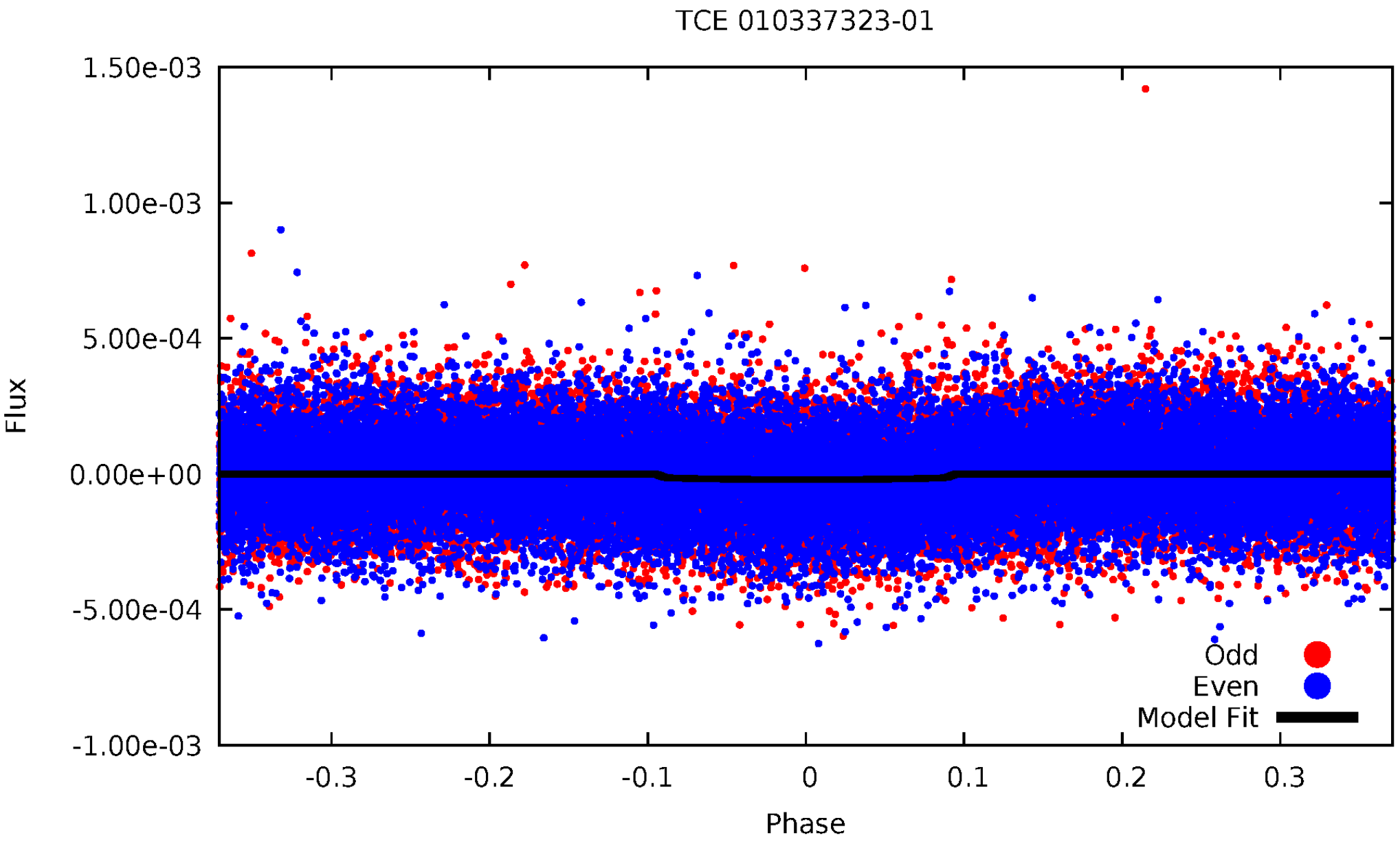
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010337323-01, PDC Light Curves

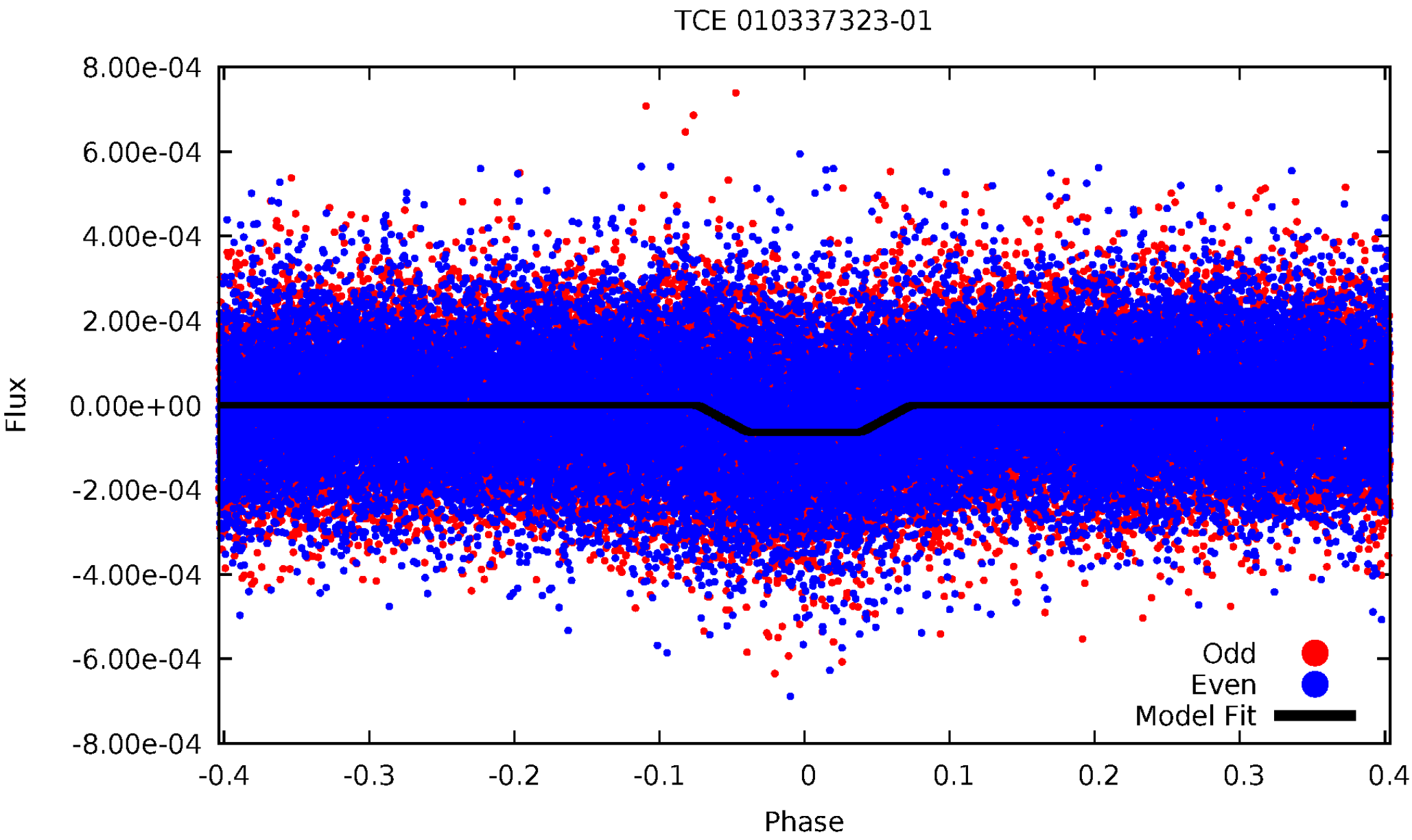



TCE 010337323-01
P = 1.716 days
P = 3.433 days
P = 6.865 days
Normalized Flux
BKJD
Normalized Flux
Phase

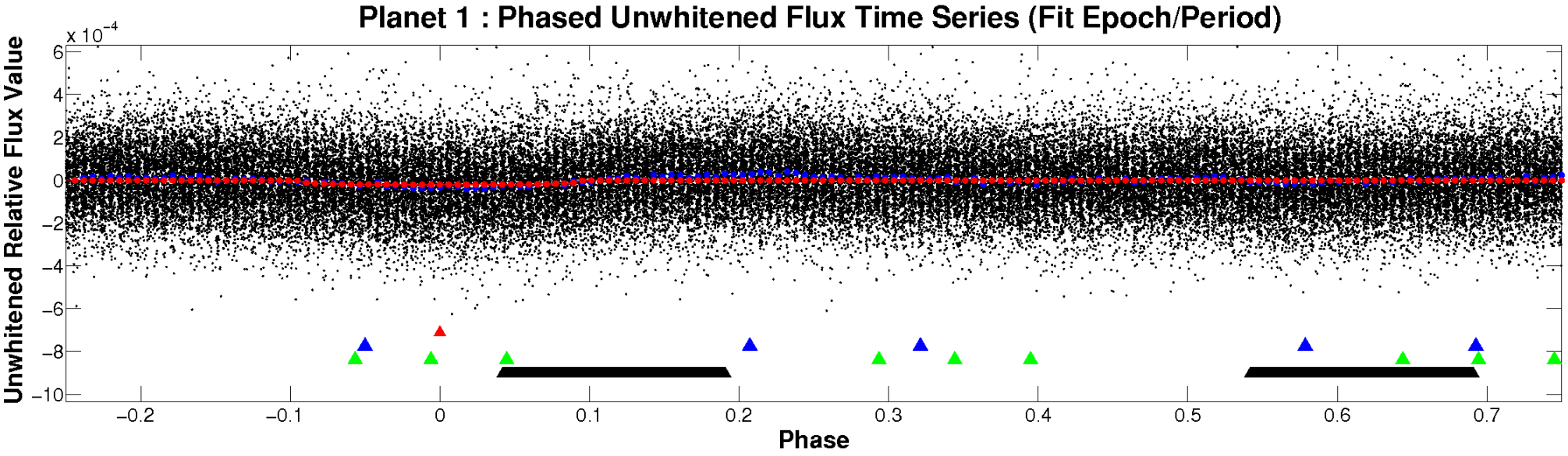
DV Odd/Even

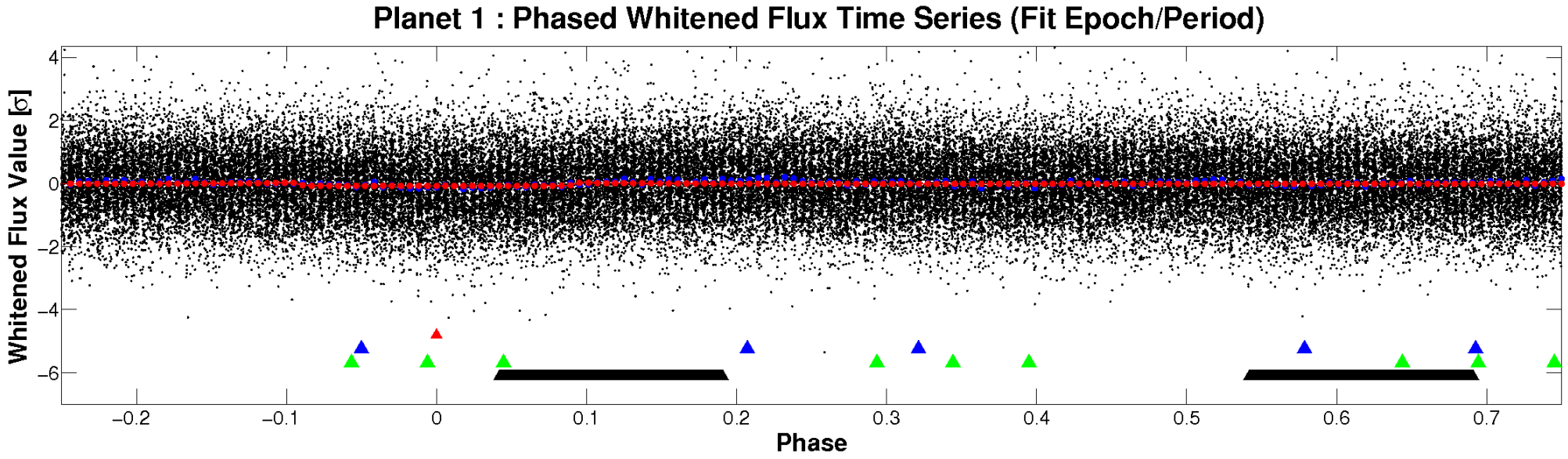

TCE 010337323-01
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
Flux
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 010337323-01
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
Flux
-0.4
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
0.4
Phase
Odd
Even
Model Fit

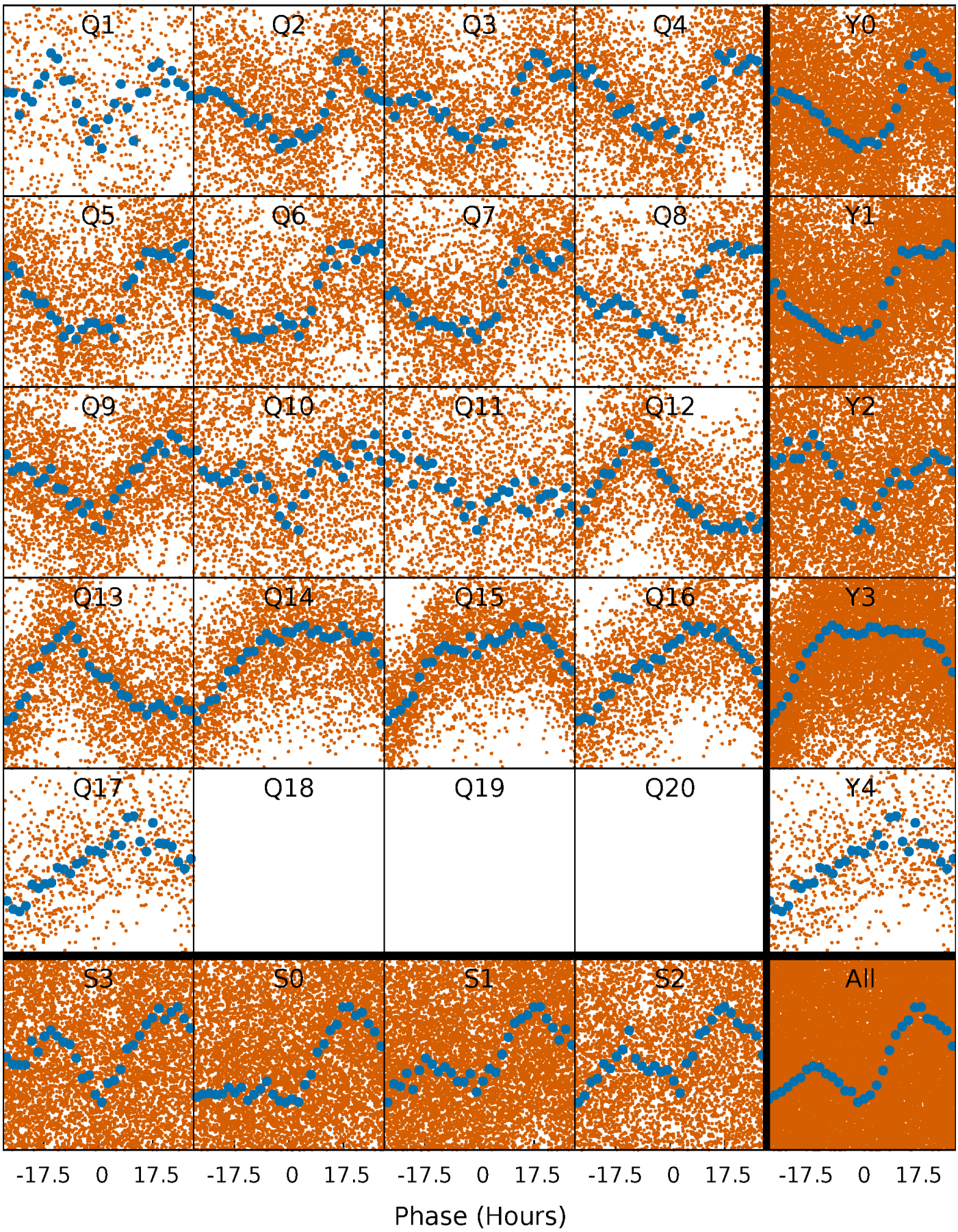
Non-Whitened Vs. Whitened Light Curve





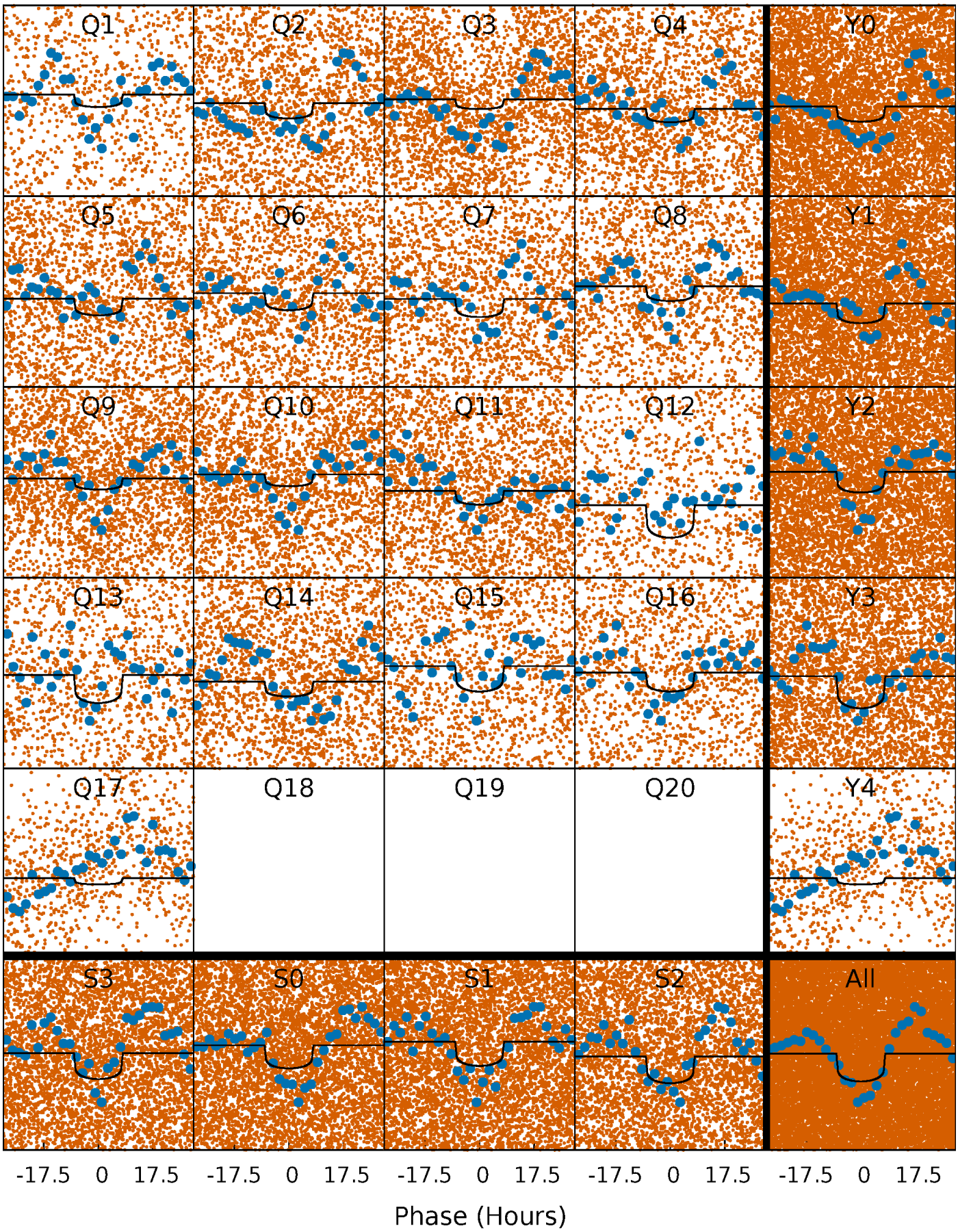
PDC Quarter-Phased Transit Curves

TCE 010337323-01 P= 3.432686 Days T_0=132.964607 (BKJD)



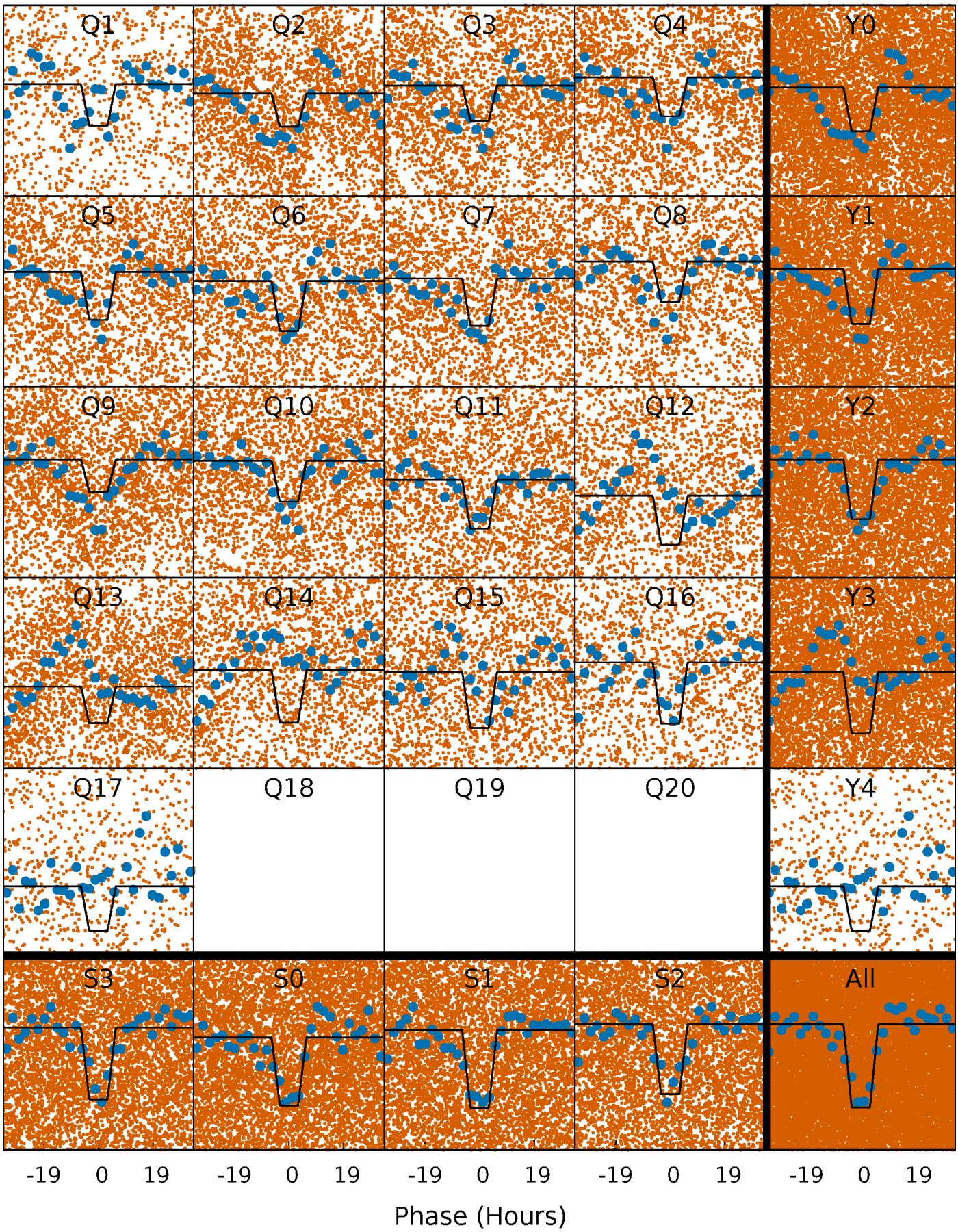
DV Quarter-Phased Transit Curves

TCE 010337323-01 P= 3.432686 Days T_0=132.964607 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

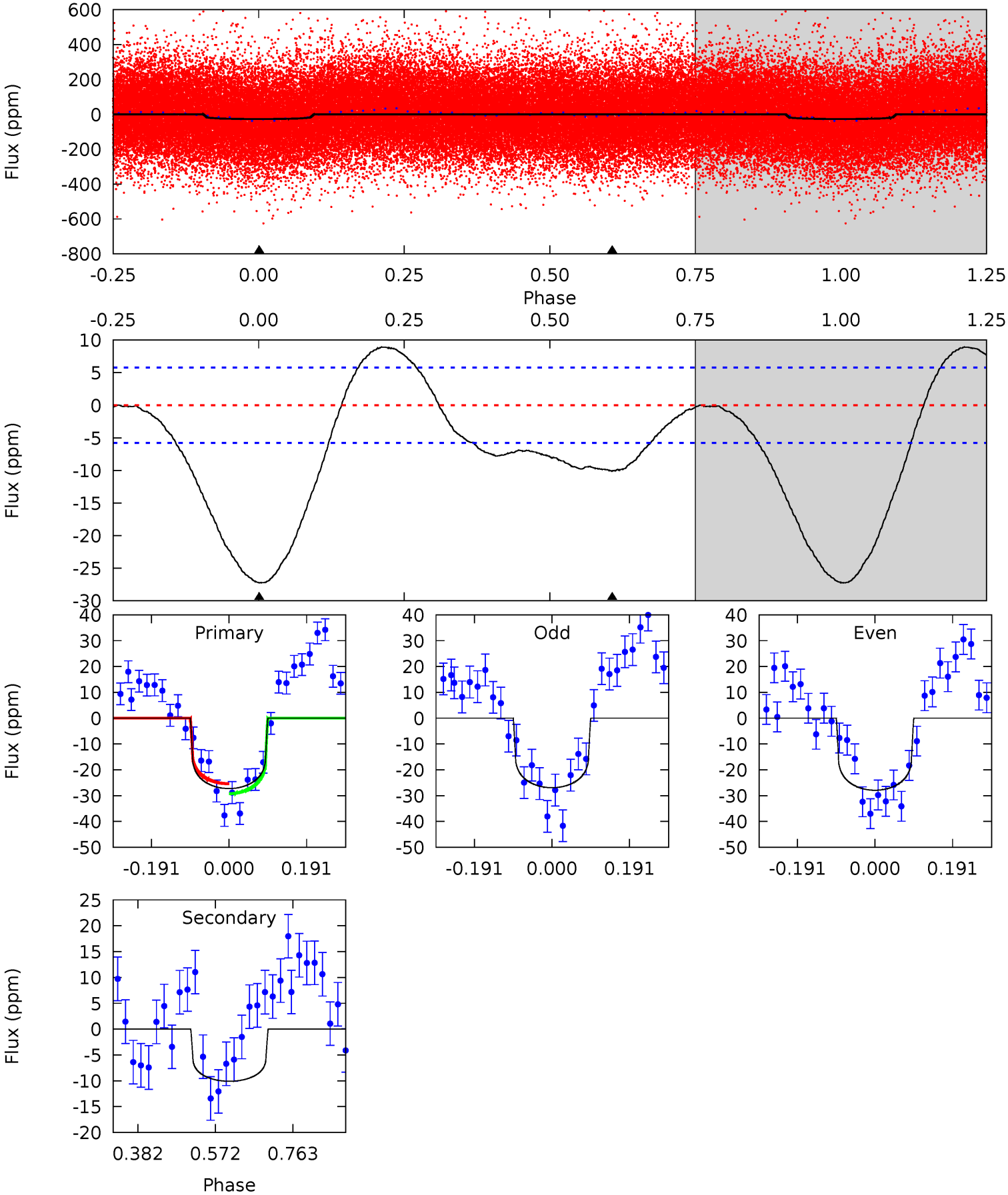
TCE 010337323-01 P= 3.431468 Days T_0=133.266983 (BKJD)



DV Model-Shift Uniqueness Test

010337323-01, P = 3.432686 Days, E = 129.531921 Days

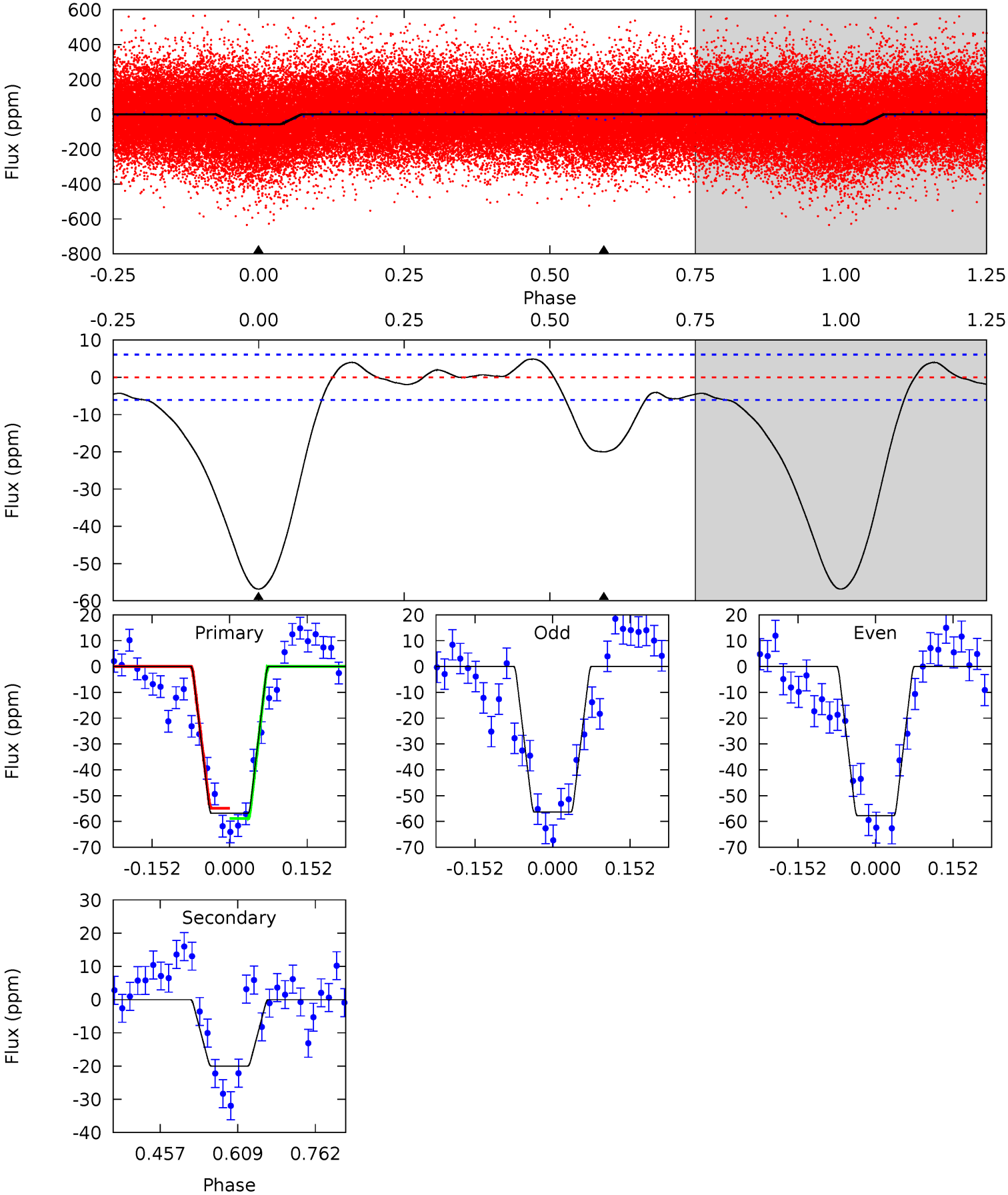
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.9	7.72	0	0	4.43	1.31	4.70	20.9	20.9	7.72	7.72	0.38	1.19	0.25	1.46



Alt Model-Shift Uniqueness Test

010337323-01, P = 3.431468 Days, E = 129.835515 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.7	14.7	0	0	4.48	1.43	2.47	41.7	41.7	14.7	14.7	0.51	0.96	0.08	1.45



Stellar Parameters For KIC 010337323

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7152^{+175}_{-300}	$4.161^{+0.128}_{-0.192}$	$-0.120^{+0.250}_{-0.350}$	$1.655^{+0.504}_{-0.336}$	$1.450^{+0.209}_{-0.232}$	$0.451^{+0.286}_{-0.236}$
	+2%/-4%	+3%/-5%	+208%/-292%	+30%/-20%	+14%/-16%	+64%/-52%
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 010337323-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10±1	$0.83^{+0.58}_{-0.49}$	2541^{+191}_{-161}	5903^{+4376}_{-1280}	20^{+95}_{-13}
Alt.	-20±1	$1.49^{+0.71}_{-0.58}$	2537^{+192}_{-160}	5229^{+1443}_{-717}	13^{+21}_{-7}

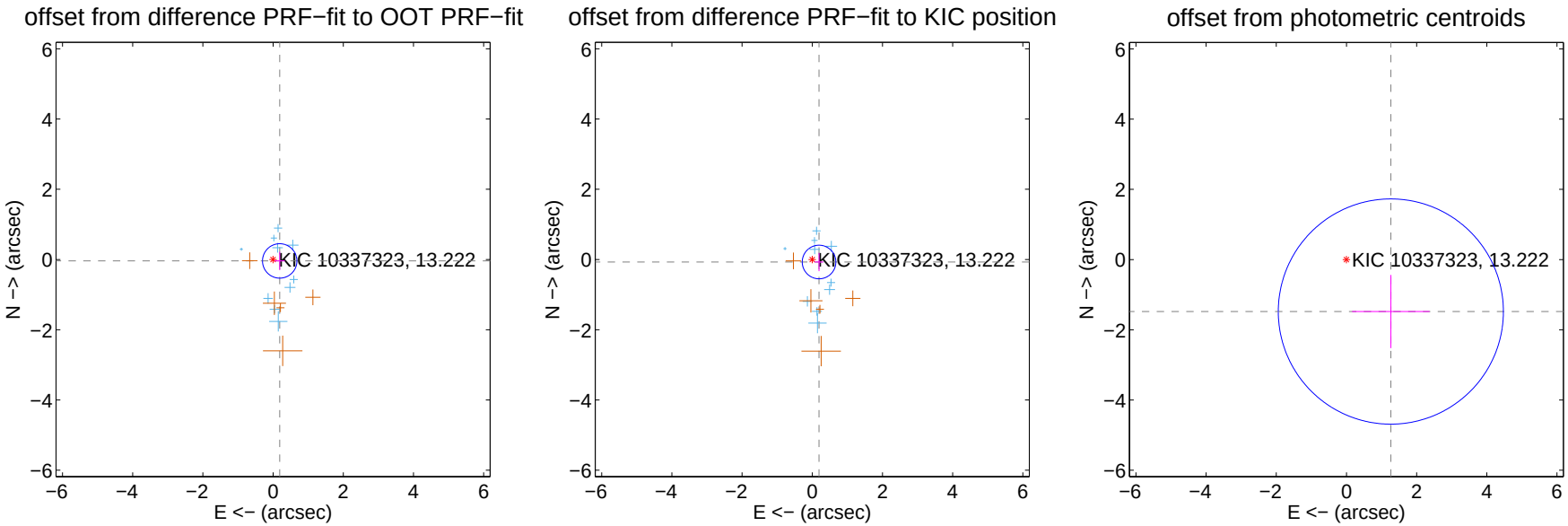
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

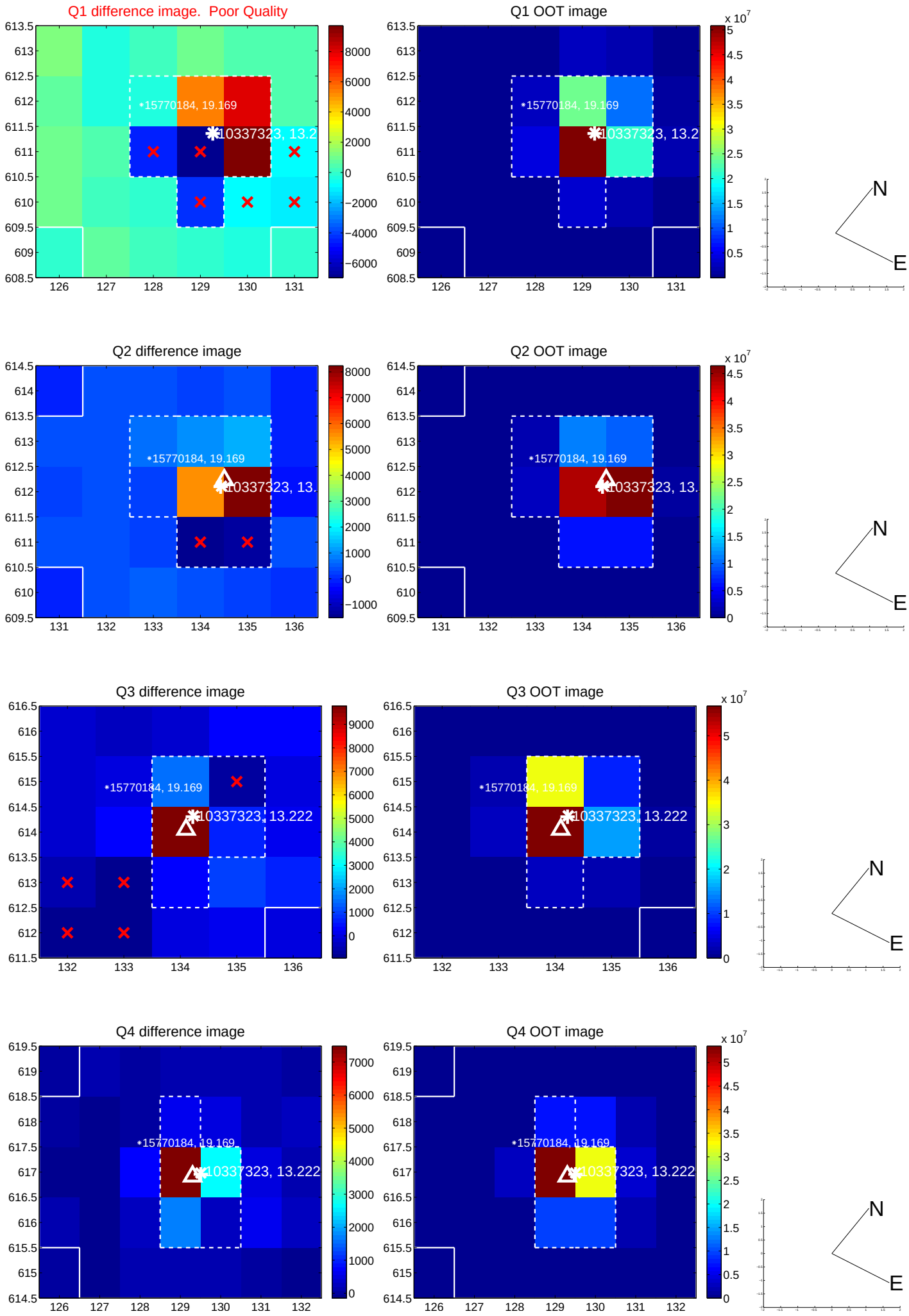
Supplemental centroid analysis for 010337323-01. Kepler magnitude: 13.22. Transit SNR 7.64
There are 10 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.193 ± 0.163	1.18	-0.189 ± 0.146	-0.041 ± 0.262
PRF-fit source offset from KIC position	0.206 ± 0.160	1.29	-0.193 ± 0.127	-0.071 ± 0.260
photometric centroid source offset	1.95 ± 1.07	1.82	-1.26 ± 1.11	-1.48 ± 1.04

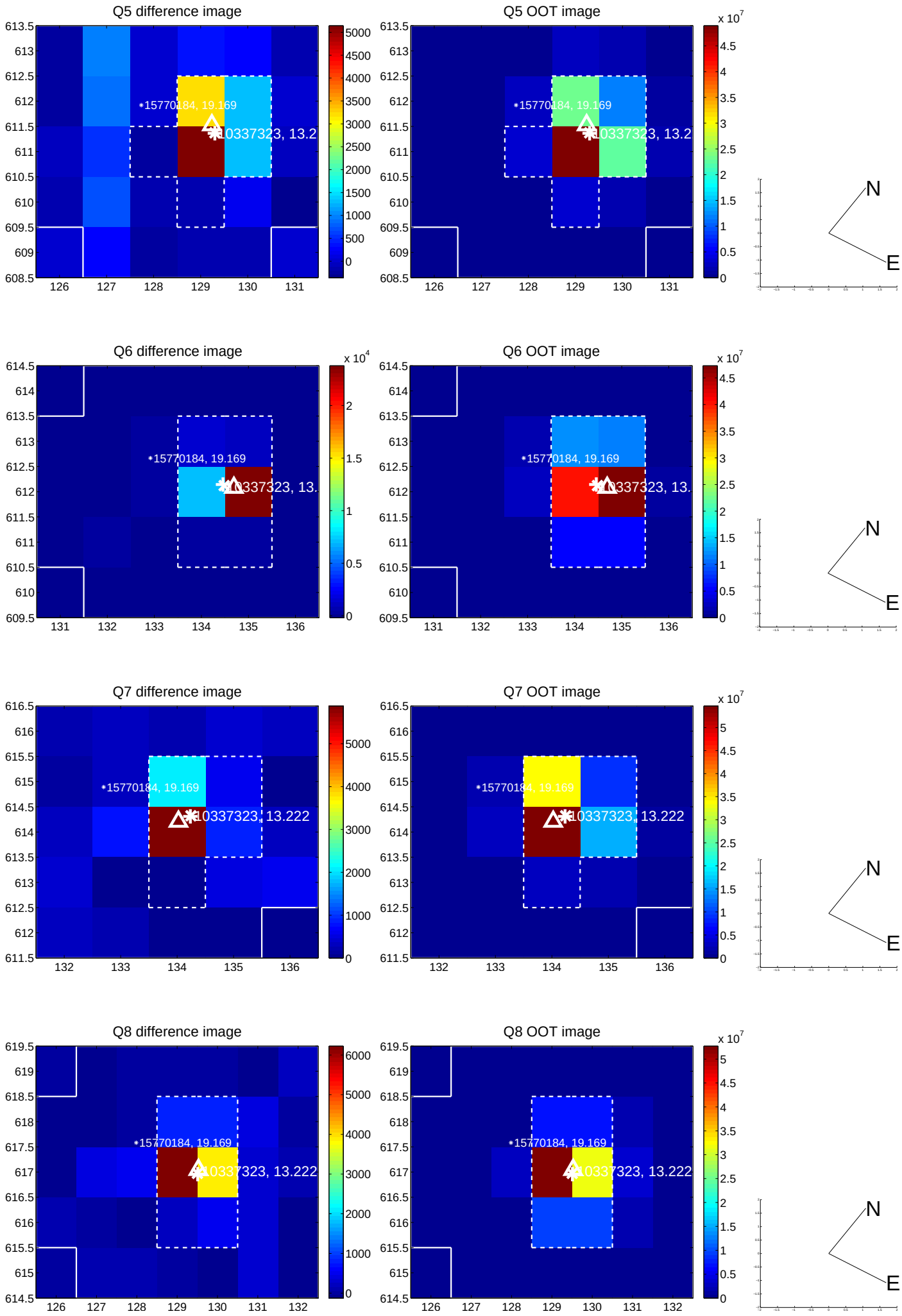


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

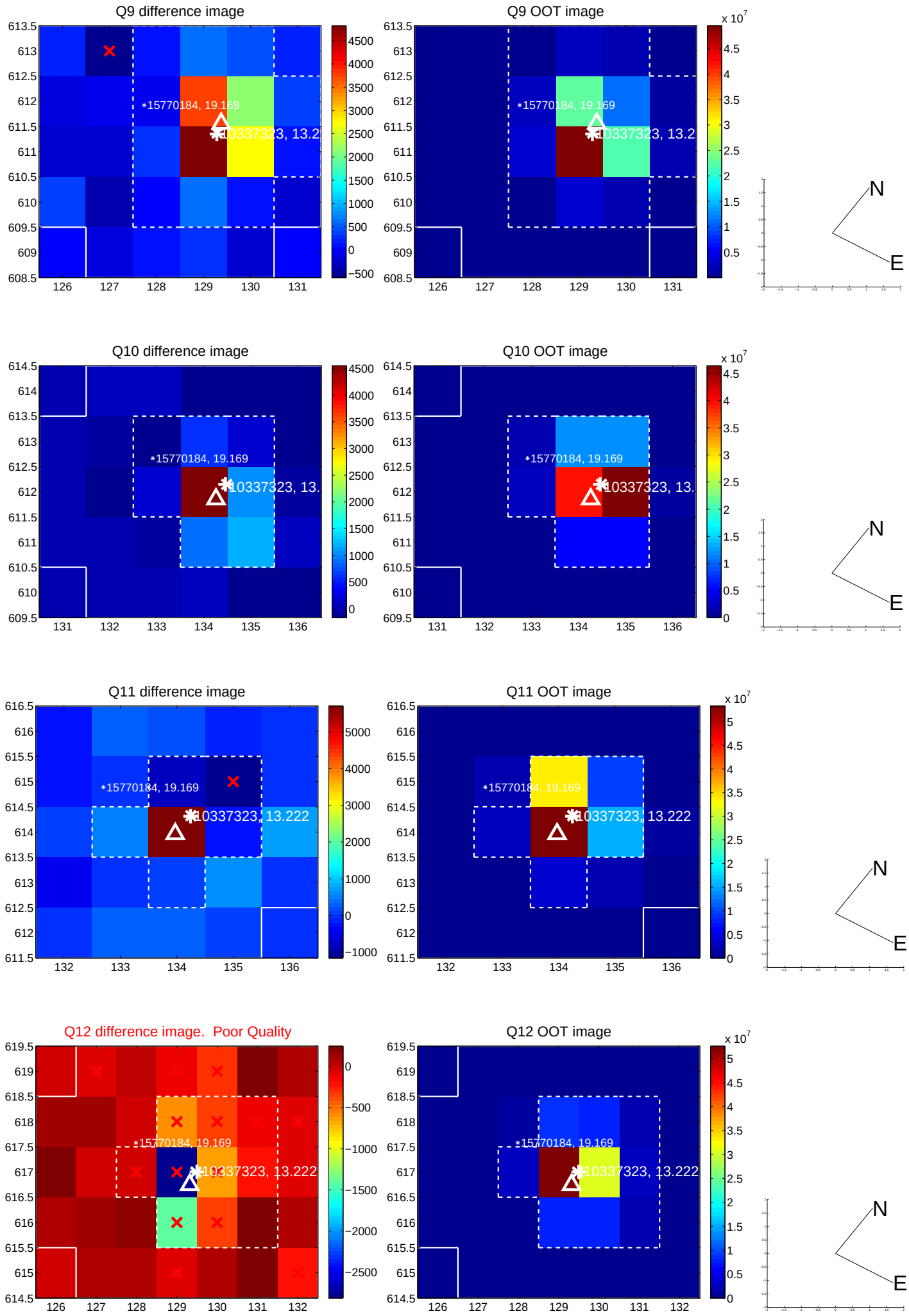
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



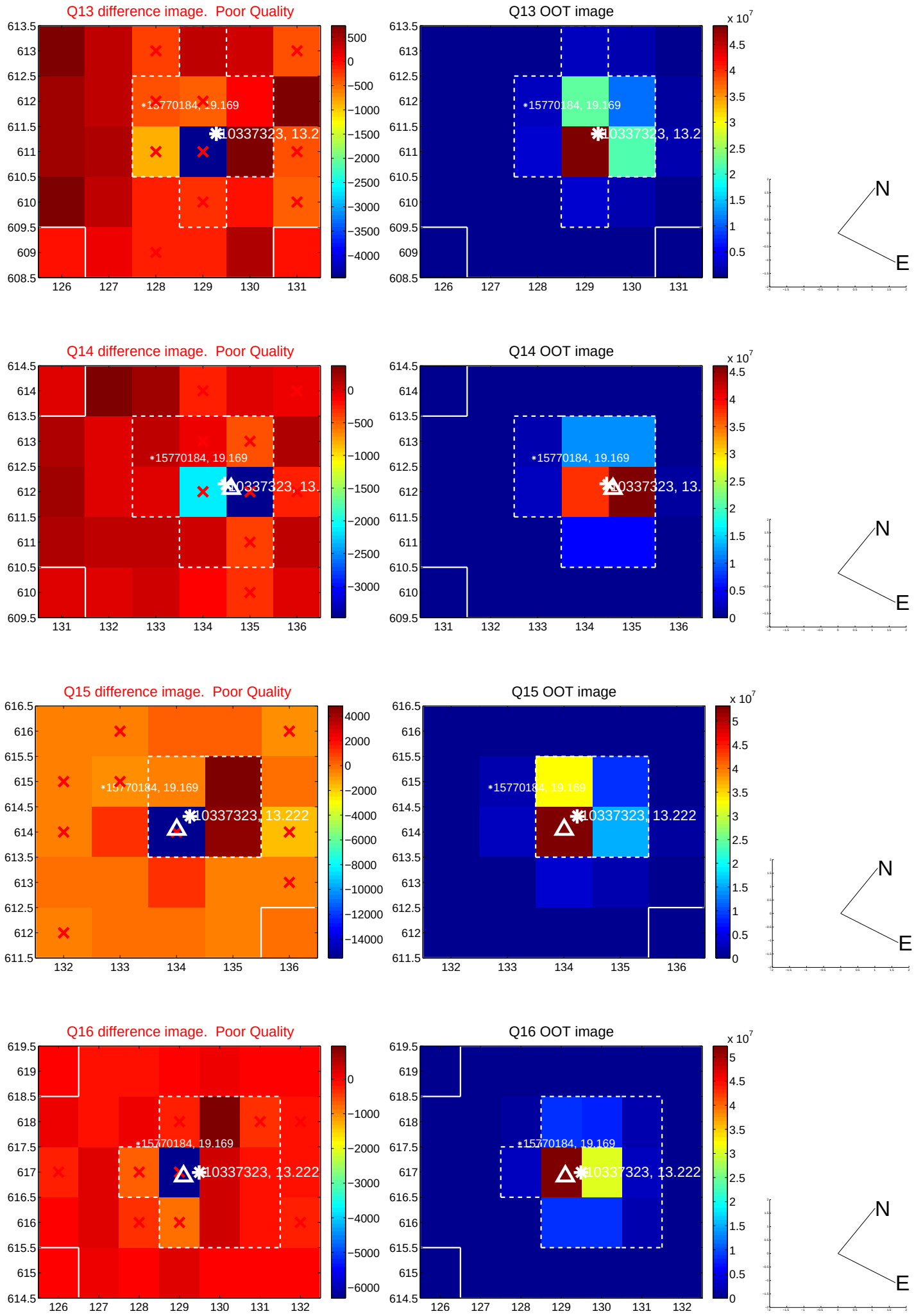
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



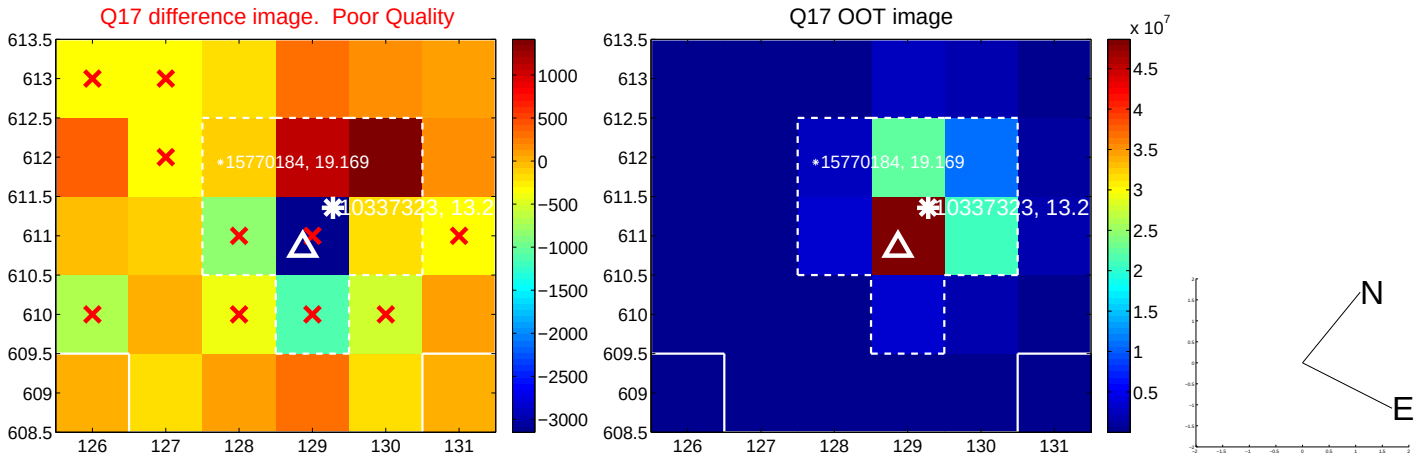
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

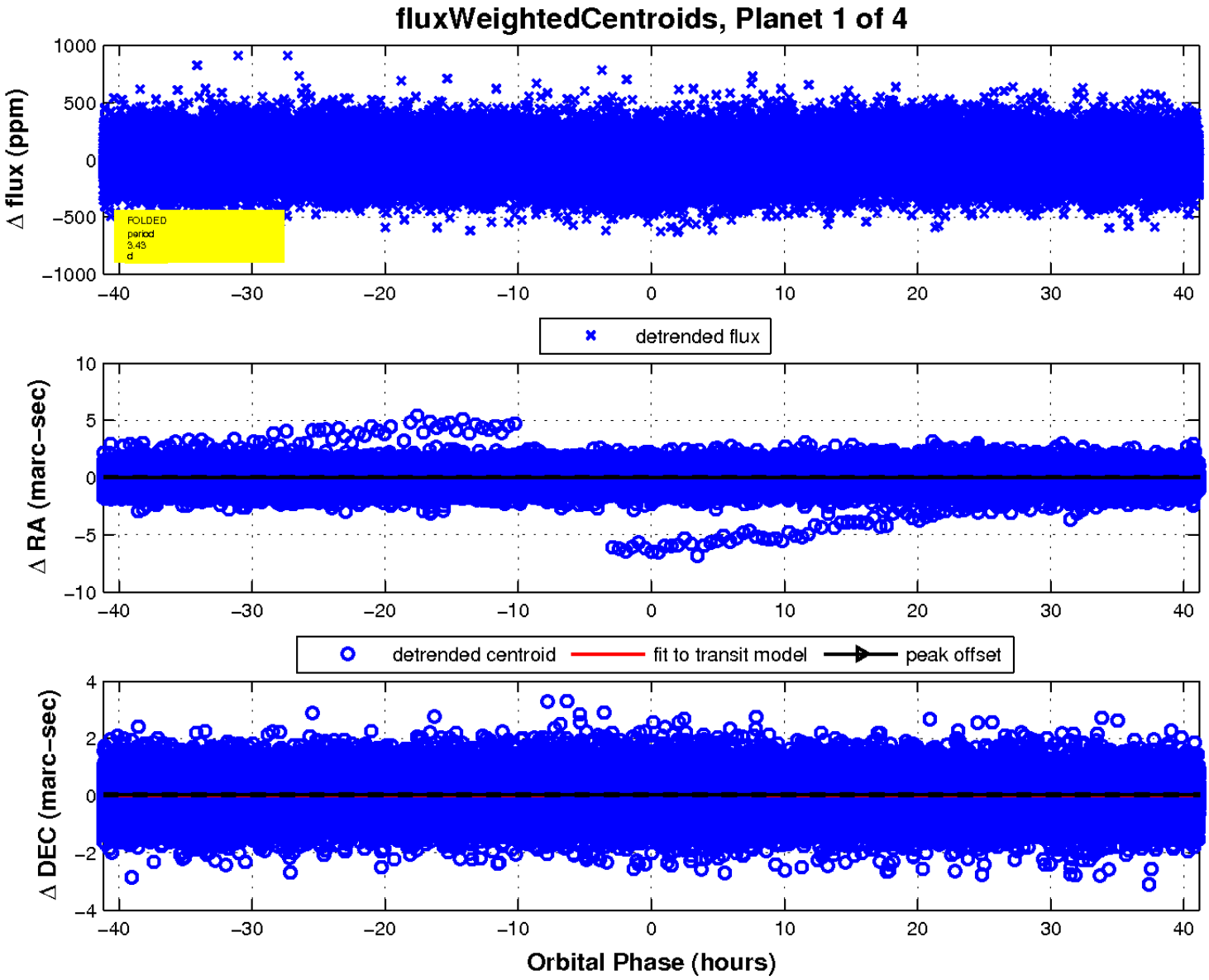


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

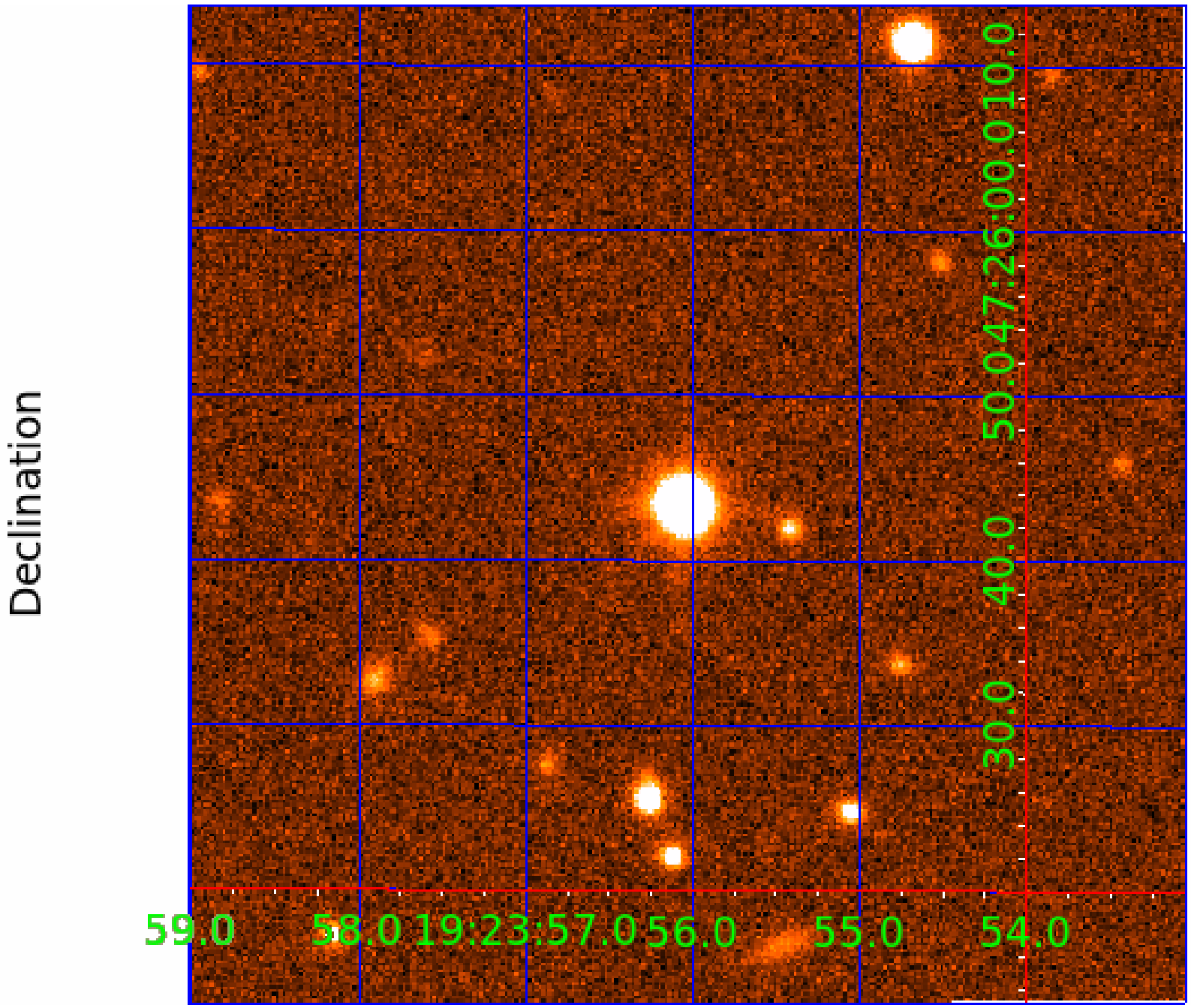


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image


Declination
59.0
58.0
19:23:57.0
56.0
55.0
54.0
30.0
40.0
50.0
47:26:00.0
10.0

KIC 010337323

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 ($S_\oplus$)
010337323-01	OBS	No	3.432686	132.964607	19.8	15.276	11.4	7.6	1.66	7152	0.74	2529.05
010337323-02	OBS	No	282.754965	401.425444	169.6	15.781	11.7	6.3	1.66	7152	2.32	7.06
010337323-03	OBS	No	148.807683	252.914137	174.3	12.186	8.2	6.7	1.66	7152	2.44	16.61
010337323-04	OBS	No	1.715740	131.903914	16.2	12.526	9.9	7.2	1.66	7152	0.78	6375.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010337323-01	OBS	FP	0.00	1	0	0	0	LPP_DV
010337323-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010337323-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
010337323-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_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.

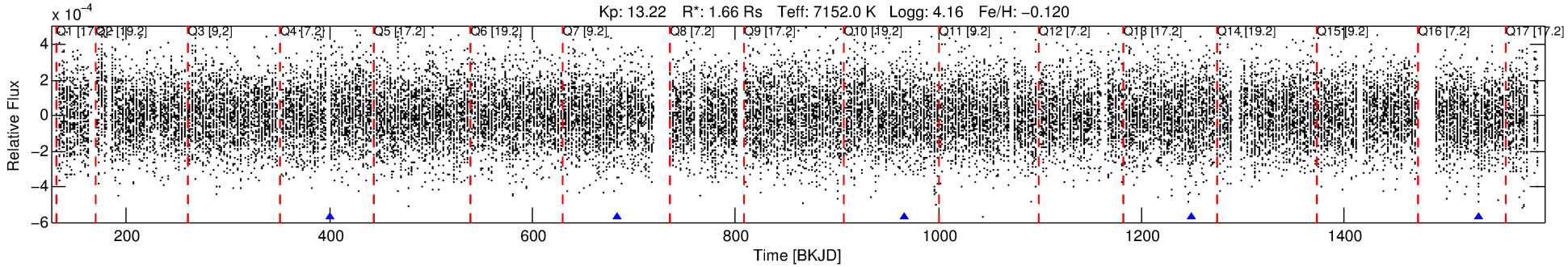
Ephemeris Match Information For 010337323-02

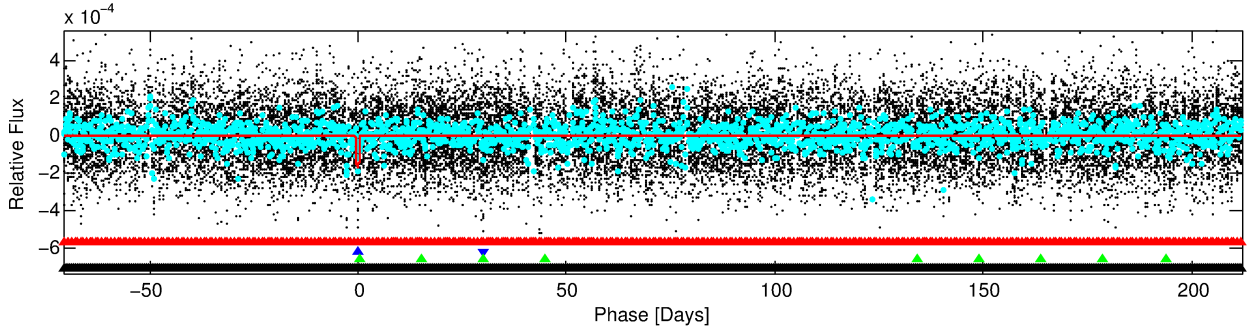
No Significant Match Found

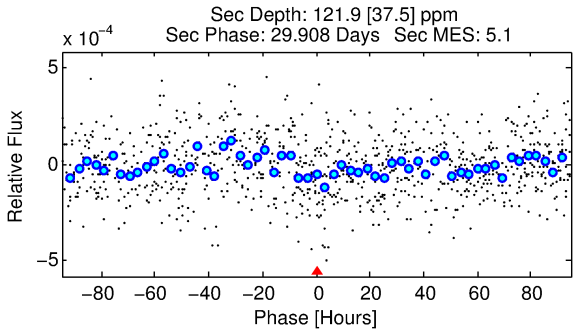
DV One-Page Summary

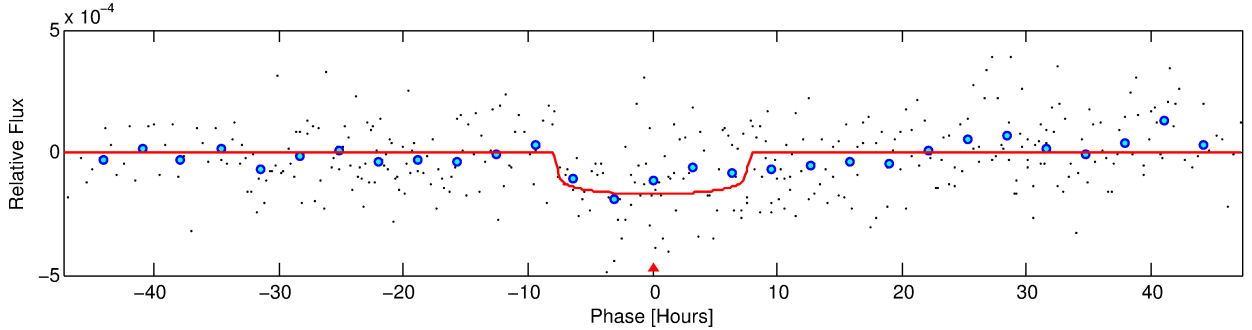
KIC: 10337323 Candidate: 2 of 4 Period: 282.755 d

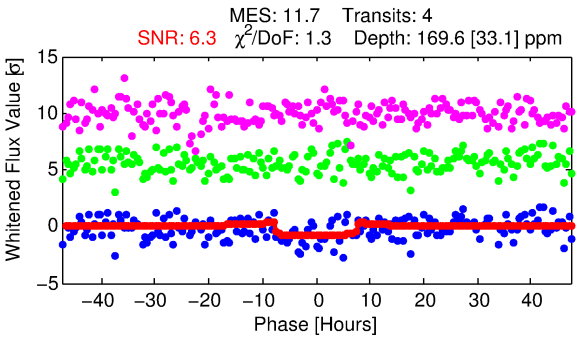
Kp: 13.22 R*: 1.66 Rs Teff: 7152.0 K Logg: 4.16 Fe/H: −0.120

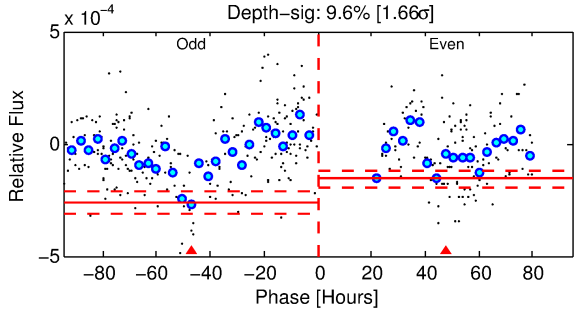


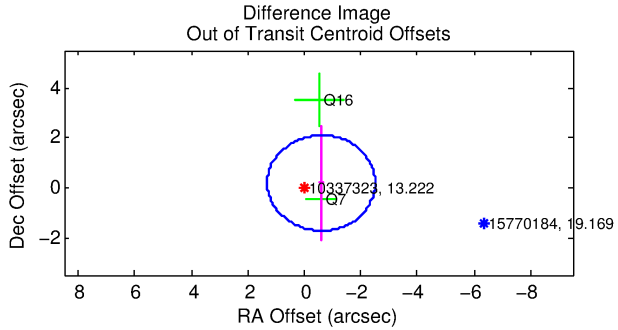












DV Fit Results:

Period = 282.75496 [0.00974] d
Epoch = 401.4254 [0.0243] BKJD
Rp/R* = 0.0128 [0.0045]
a/R* = 97.56 [194.04]
b = 0.72 [1.34]

Seff = 7.06 [2.79]
Teq = 416 [41] K
Rp = 2.32 [1.08] Re
a = 0.9539 [0.2393] AU

Ag = 11340.19 [9582.30] [1.18σ]
Teffp = 6631 [1299] K [4.78σ]

DV Diagnostic Results:

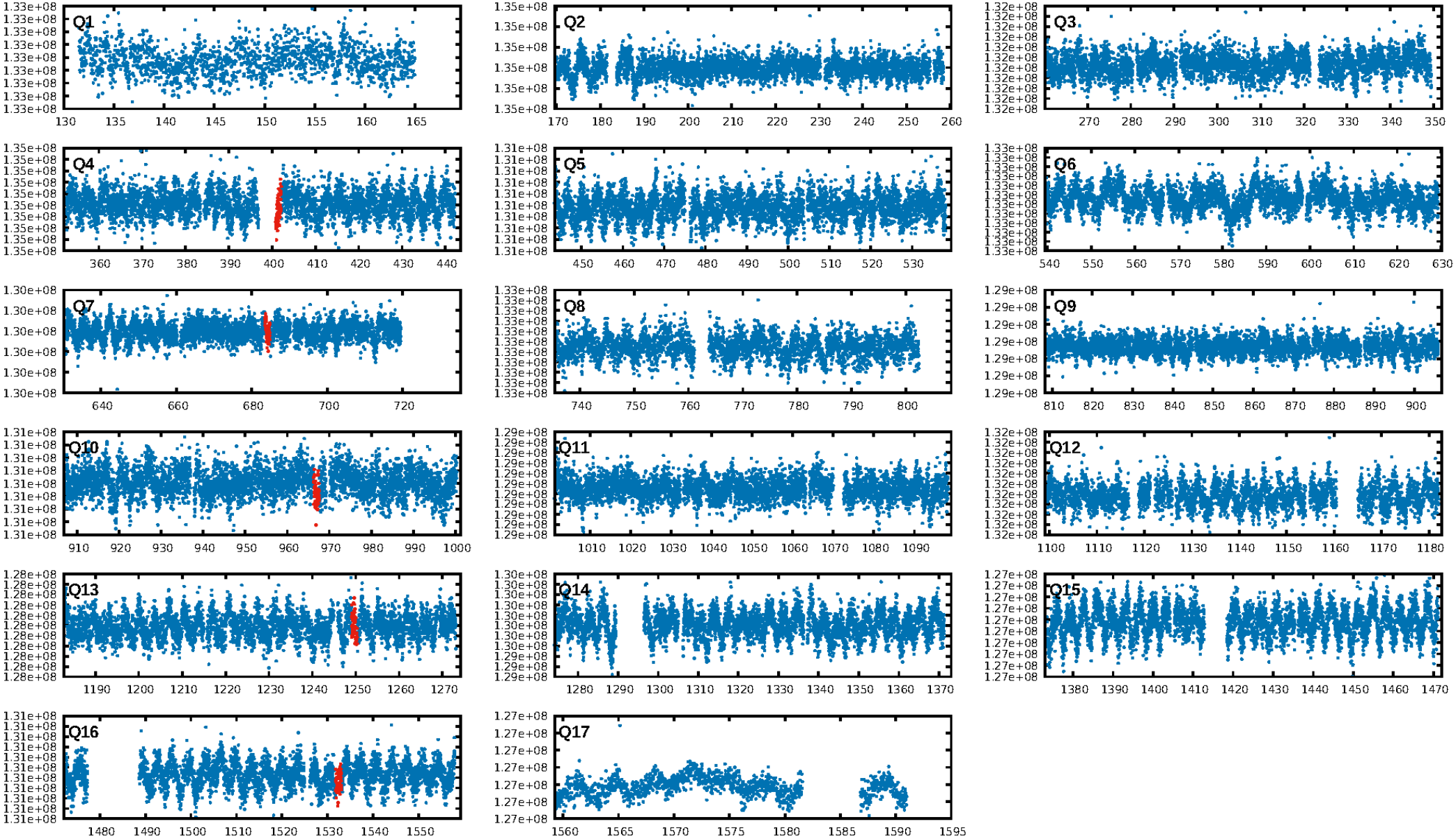
ShortPeriod−sig: 100.0% [161.24σ]
LongPeriod−sig: N/A
ModelChiSquare2−sig: 1.1%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [4/4]
GhostDiagnostic−chr: 0.9755

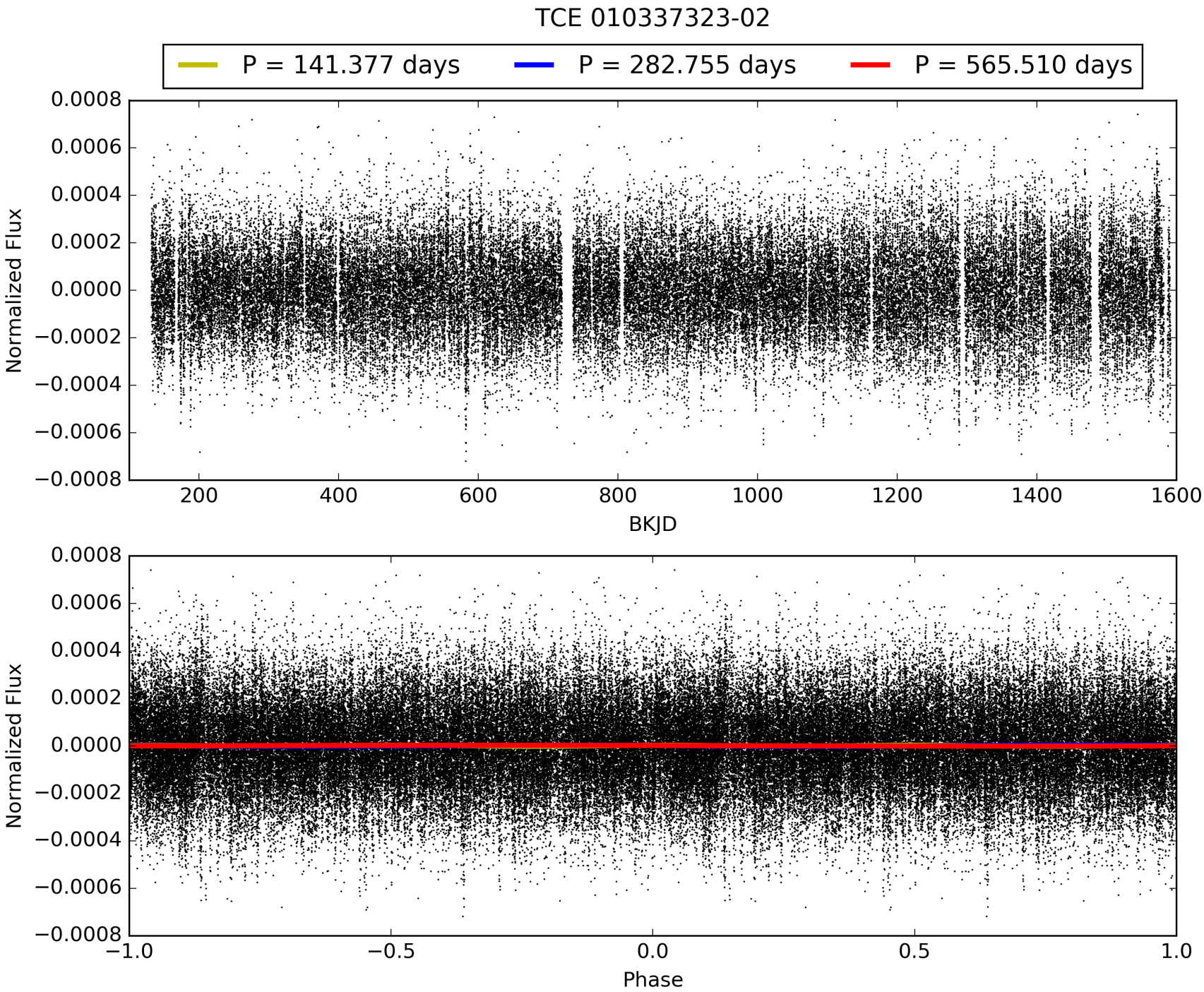
Centroid−sig: 1.3%
Centroid−so: 1.657 arcsec [1.72σ]
OotOffset−rm: 0.621 arcsec [0.98σ]
KicOffset−rm: 0.624 arcsec [1.21σ]
OotOffset−st: 0/1/1/0 [2]
KicOffset−st: 0/1/1/0 [2]
DiffImageQuality−fgm: 0.50 [1/2]
DiffImageOverlap−fno: 0.00 [0/3]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 12:32:59 Z

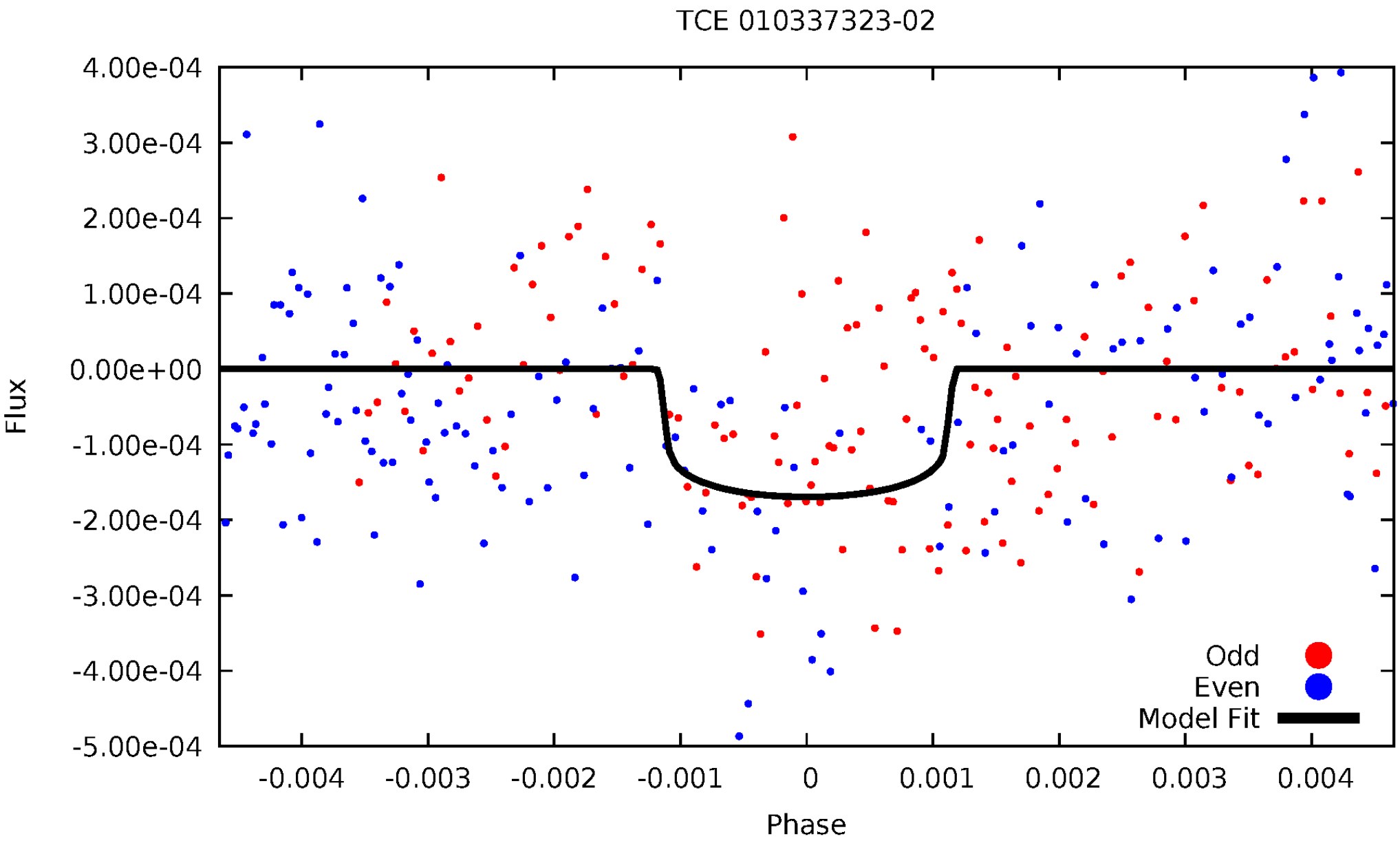
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010337323-02, PDC Light Curves

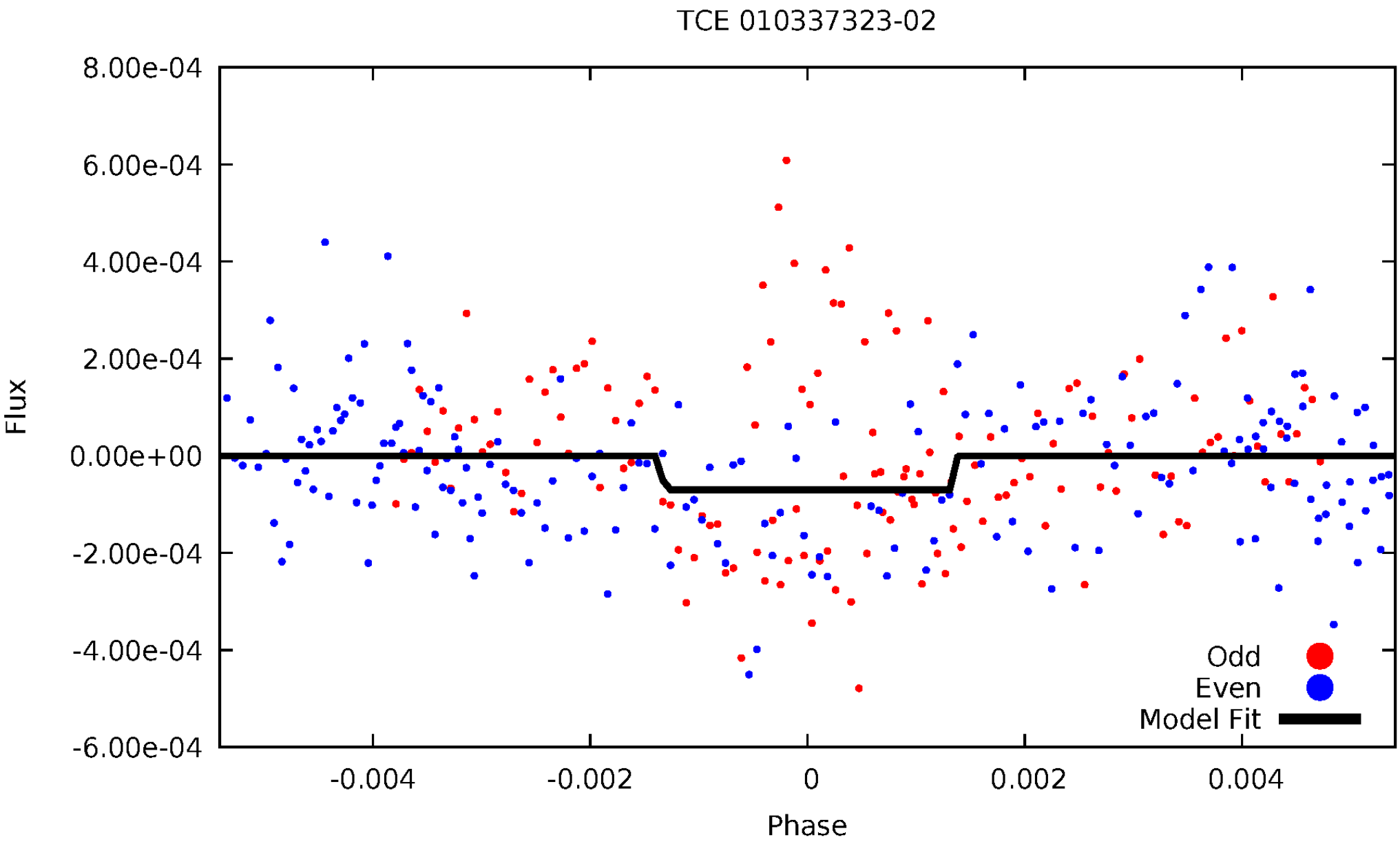



TCE 010337323-02
P = 141.377 days
P = 282.755 days
P = 565.510 days
Normalized Flux
BKJD
Normalized Flux
Phase

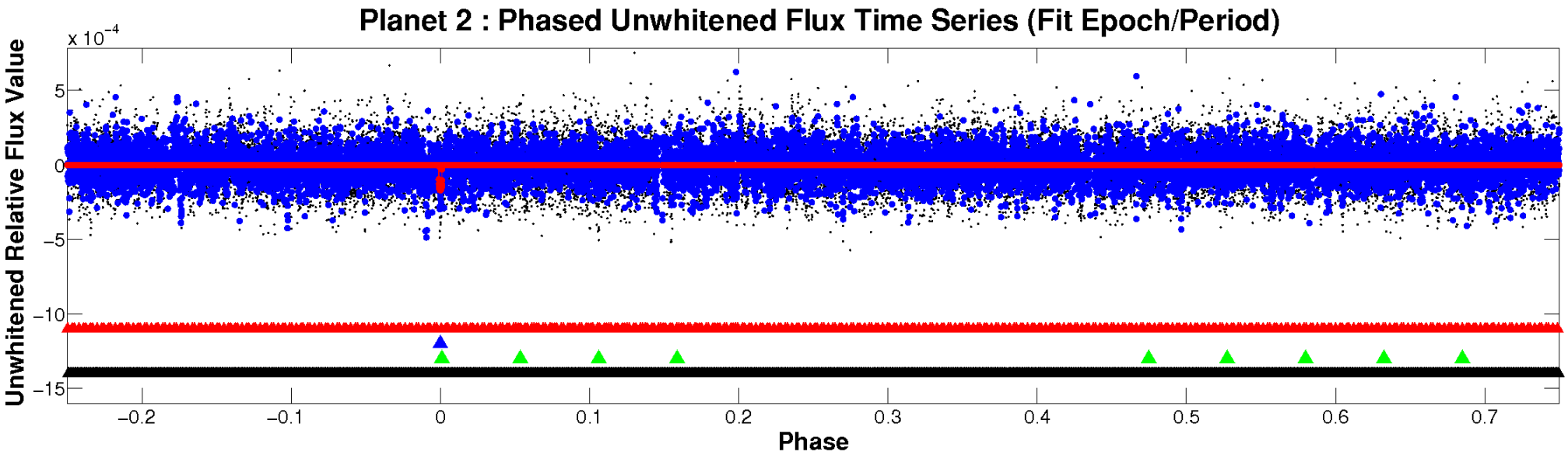
DV Odd/Even

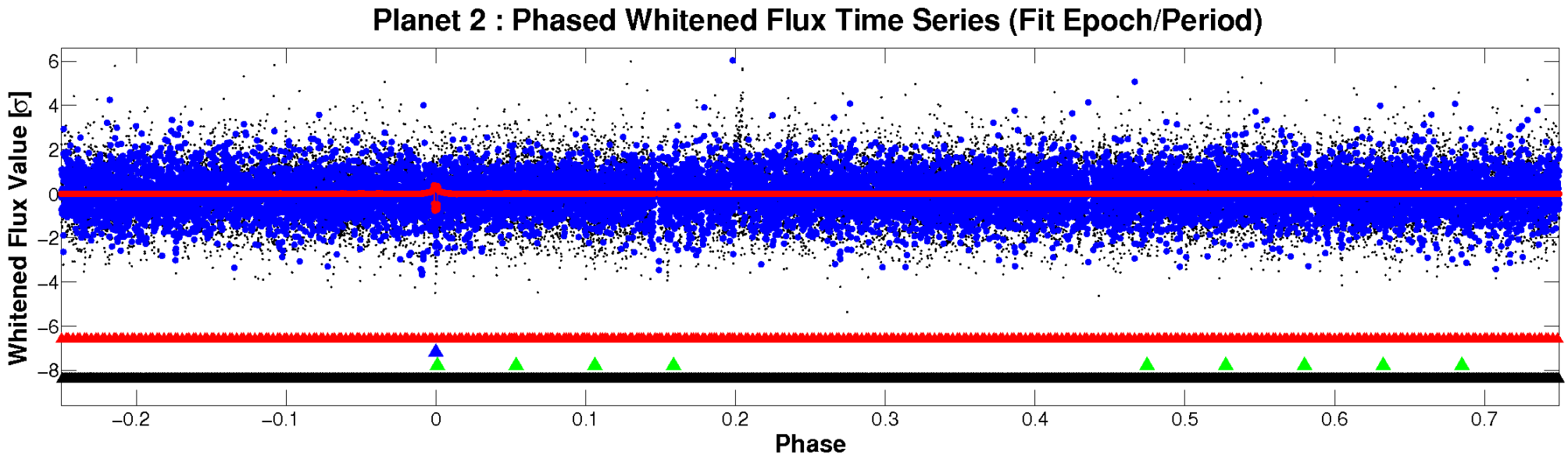

TCE 010337323-02
4.00e-04
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
-5.00e-04
Flux
-0.004
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
0.004
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 010337323-02
8.00e-04
6.00e-04
4.00e-04
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
Flux
-0.004
-0.002
0
0.002
0.004
Phase
Odd
Even
Model Fit

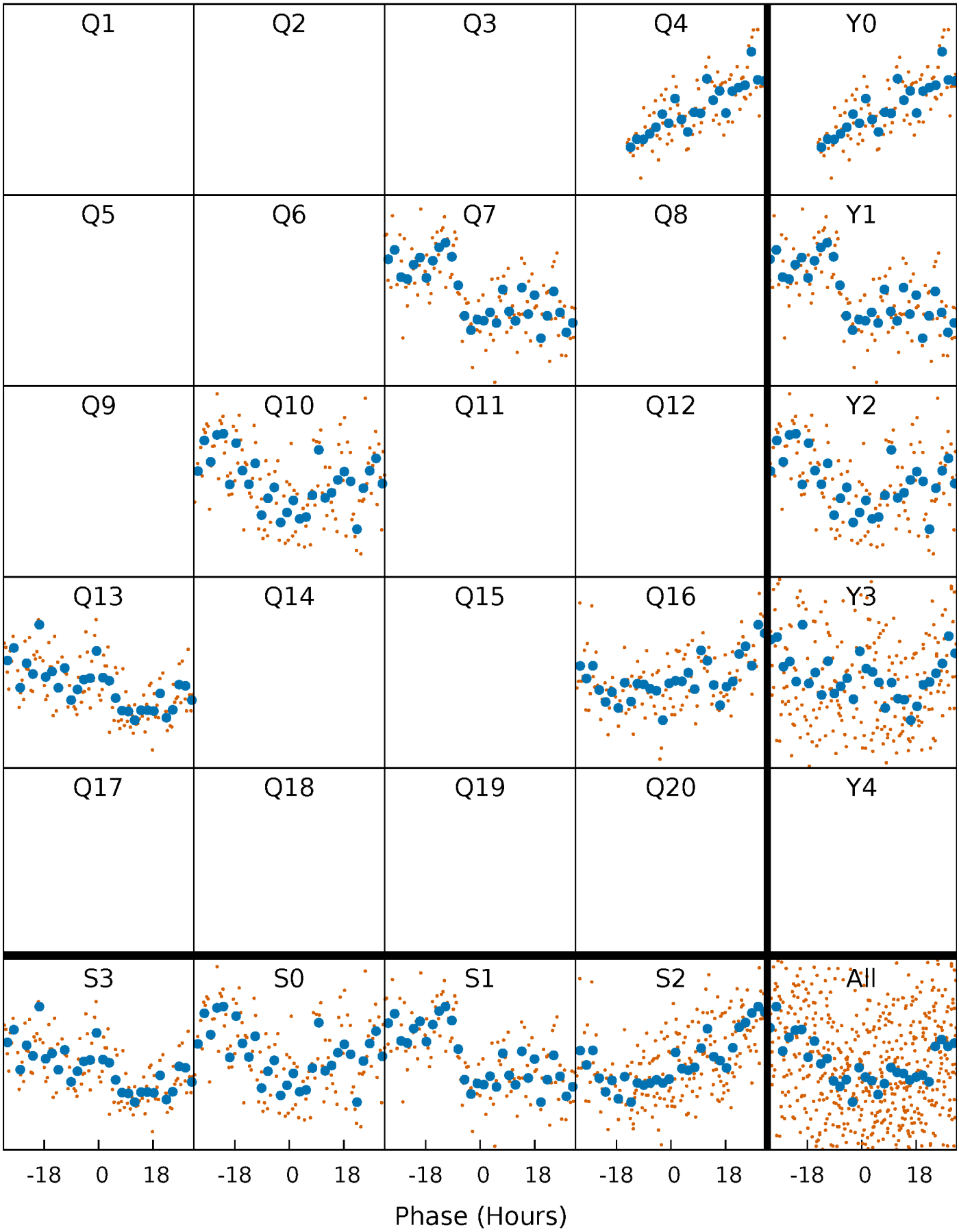
Non-Whitened Vs. Whitened Light Curve





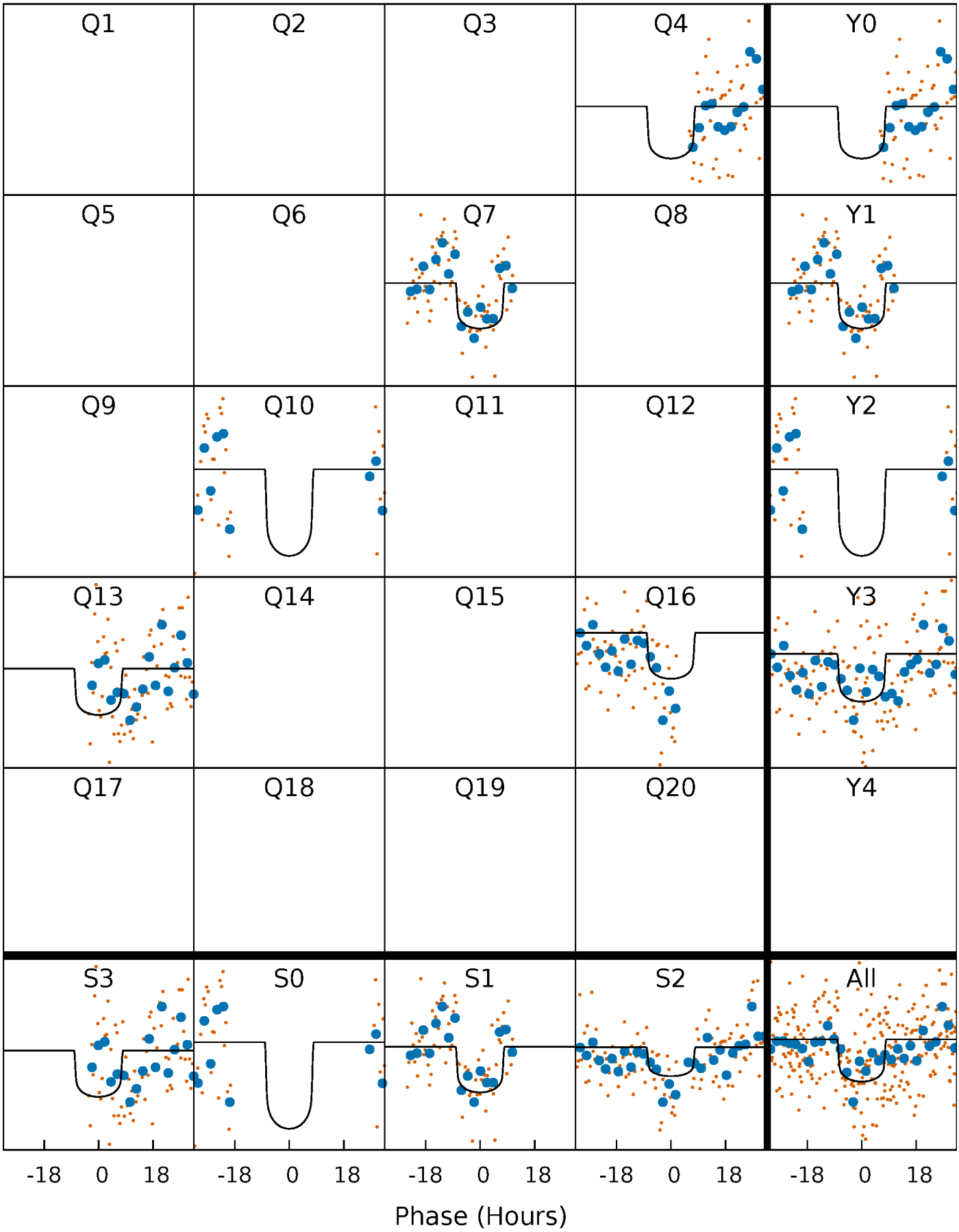
PDC Quarter-Phased Transit Curves

TCE 010337323-02 P=282.754965 Days T_0=401.425444 (BKJD)



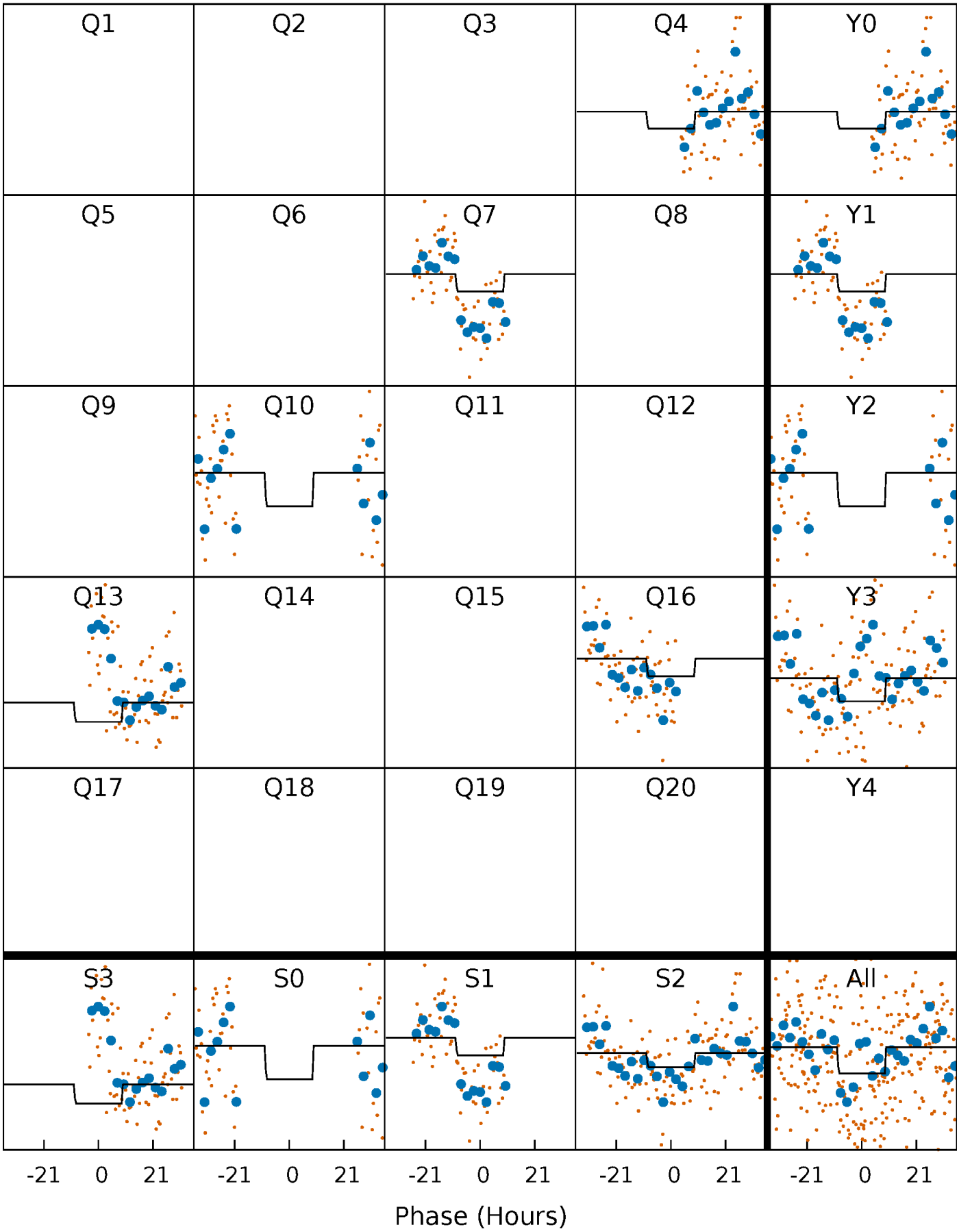
DV Quarter-Phased Transit Curves

TCE 010337323-02 P=282.754965 Days T_0=401.425444 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

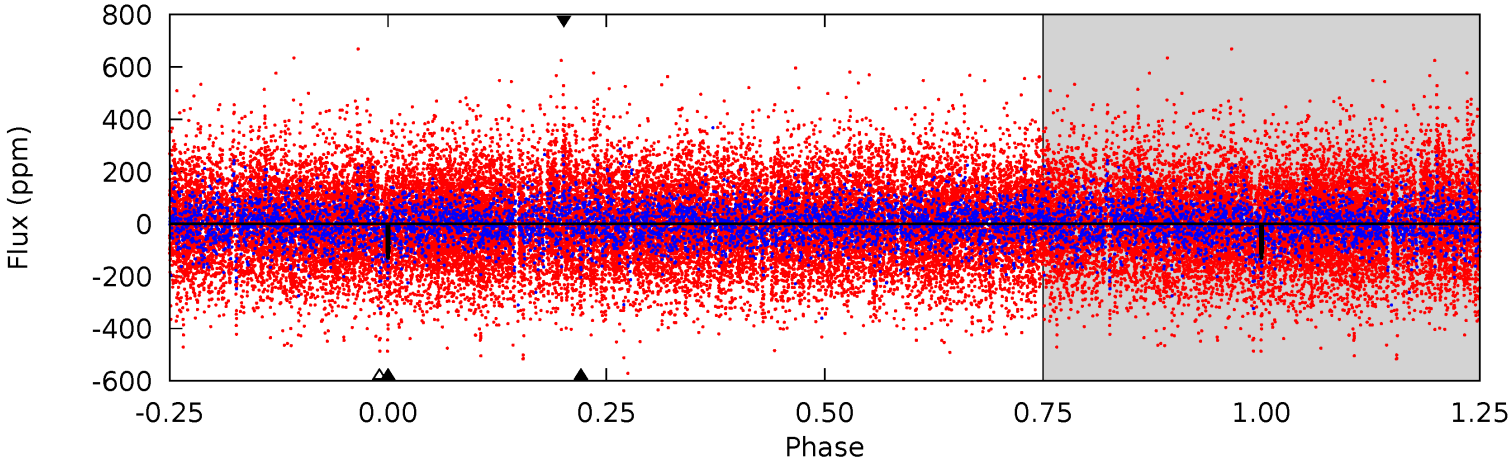
TCE 010337323-02 P=282.732358 Days T_0=401.516844 (BKJD)

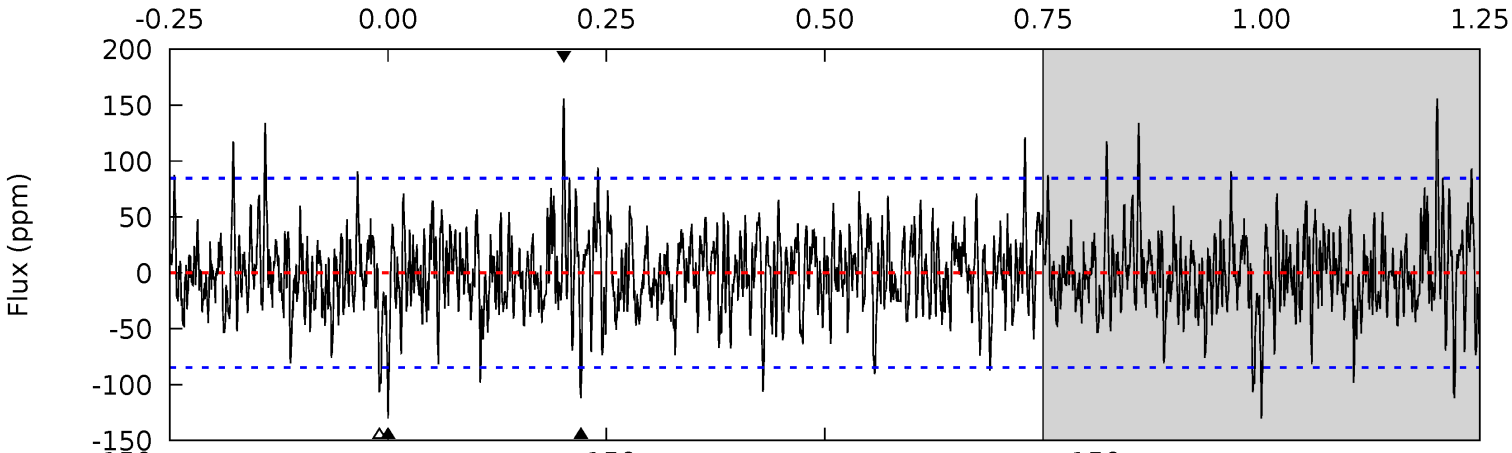


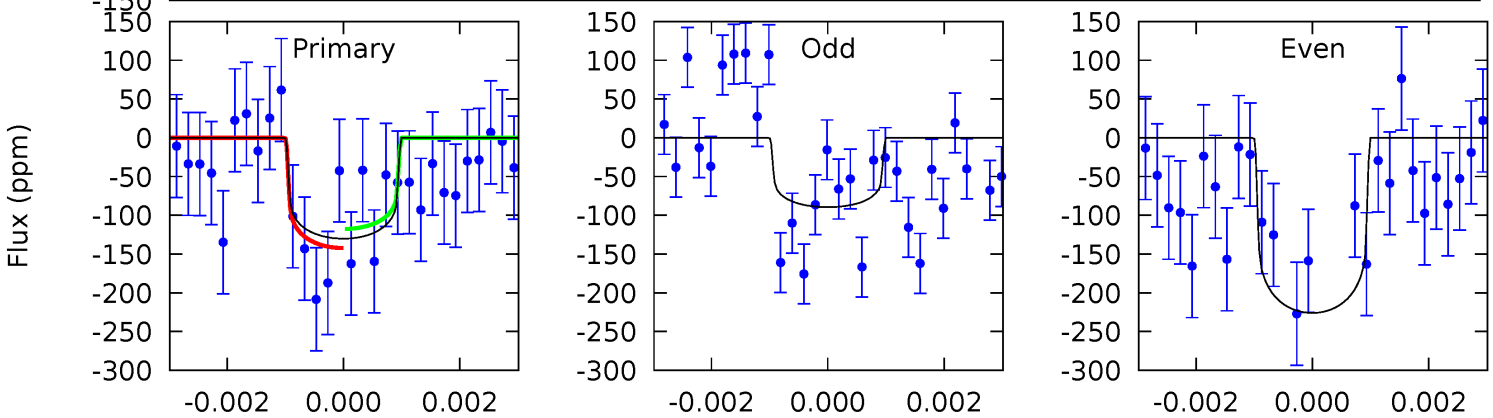
DV Model-Shift Uniqueness Test

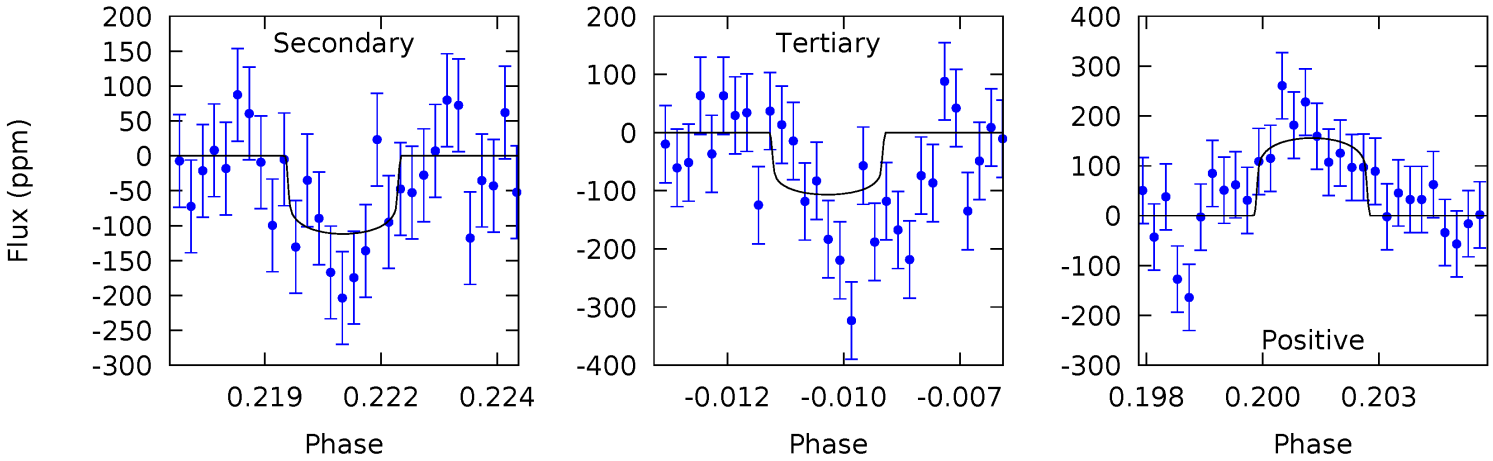
010337323-02, P = 282.754965 Days, E = 118.670479 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.14	6.99	6.67	9.74	5.29	3.04	1.99	1.47	-1.60	0.32	-2.74	3.91	0.95	0.54	0.77





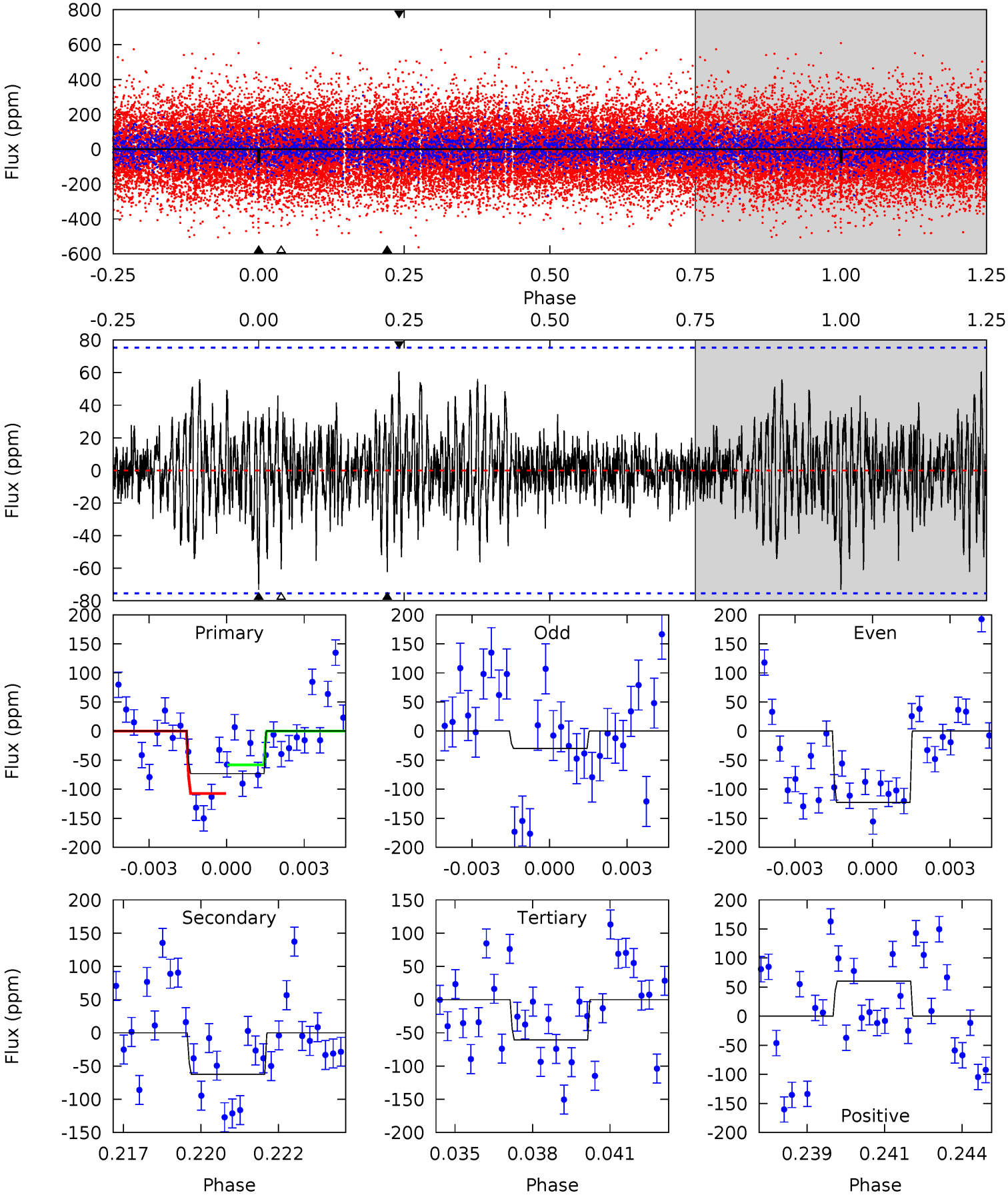




Alt Model-Shift Uniqueness Test

010337323-02, P = 282.732358 Days, E = 118.784486 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.12	4.35	4.24	4.22	5.27	3.00	1.16	0.87	0.90	0.11	0.13	3.12	0.51	0.45	1.70



Stellar Parameters For KIC 010337323

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7152^{+175}_{-300}	$4.161^{+0.128}_{-0.192}$	$-0.120^{+0.250}_{-0.350}$	$1.655^{+0.504}_{-0.336}$	$1.450^{+0.209}_{-0.232}$	$0.451^{+0.286}_{-0.236}$
	+2%/-4%	+3%/-5%	+208%/-292%	+30%/-20%	+14%/-16%	+64%/-52%
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 010337323-02 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-112±16	$2.39^{+0.93}_{-0.90}$	583^{+47}_{-35}	6356^{+1855}_{-880}	9825^{+13902}_{-4739}
Alt.	-62±14	$1.52^{+0.94}_{-0.76}$	581^{+48}_{-37}	6788^{+4049}_{-1320}	12784^{+41473}_{-8040}

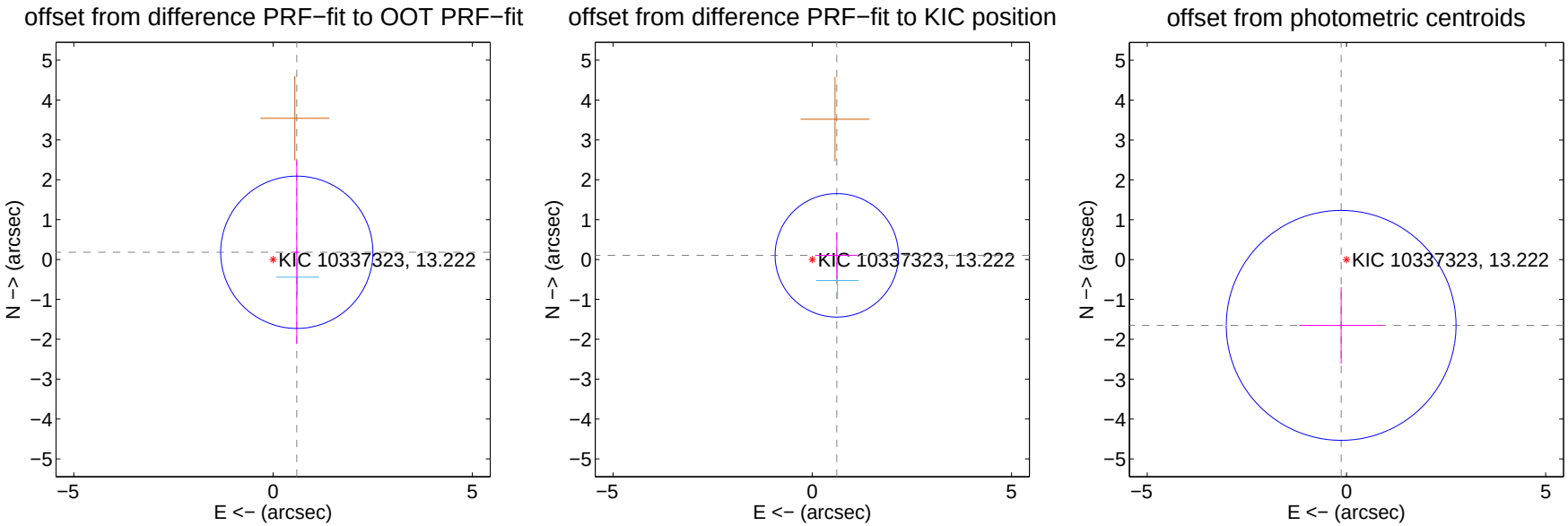
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

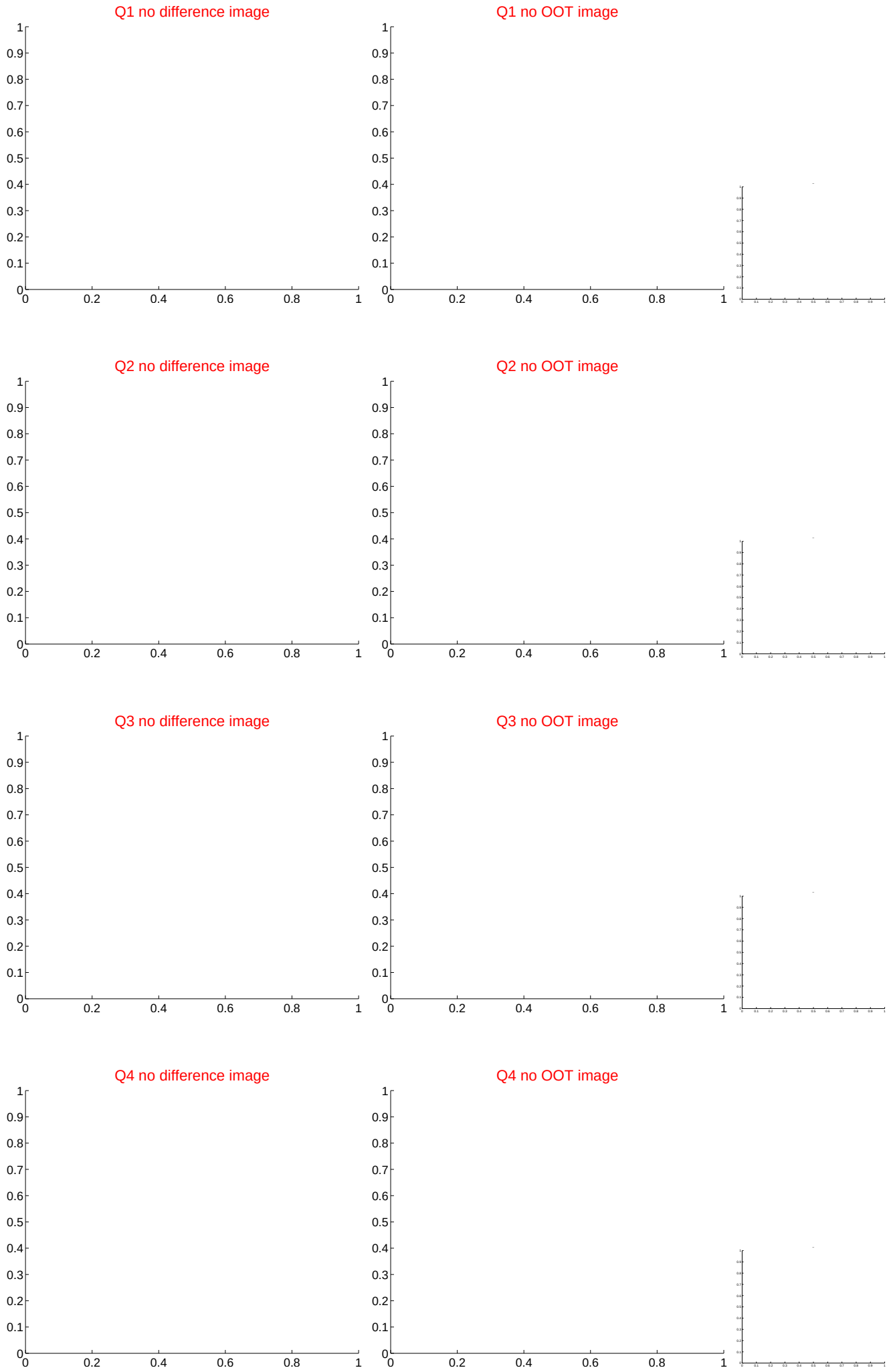
Supplemental centroid analysis for 010337323-02. Kepler magnitude: 13.22. Transit SNR 6.26
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.621 ± 0.637	0.98	-0.594 ± 0.077	0.181 ± 2.301
PRF-fit source offset from KIC position	0.624 ± 0.516	1.21	-0.616 ± 0.514	0.104 ± 0.579
photometric centroid source offset	1.66 ± 0.96	1.72	0.13 ± 1.05	-1.65 ± 0.96

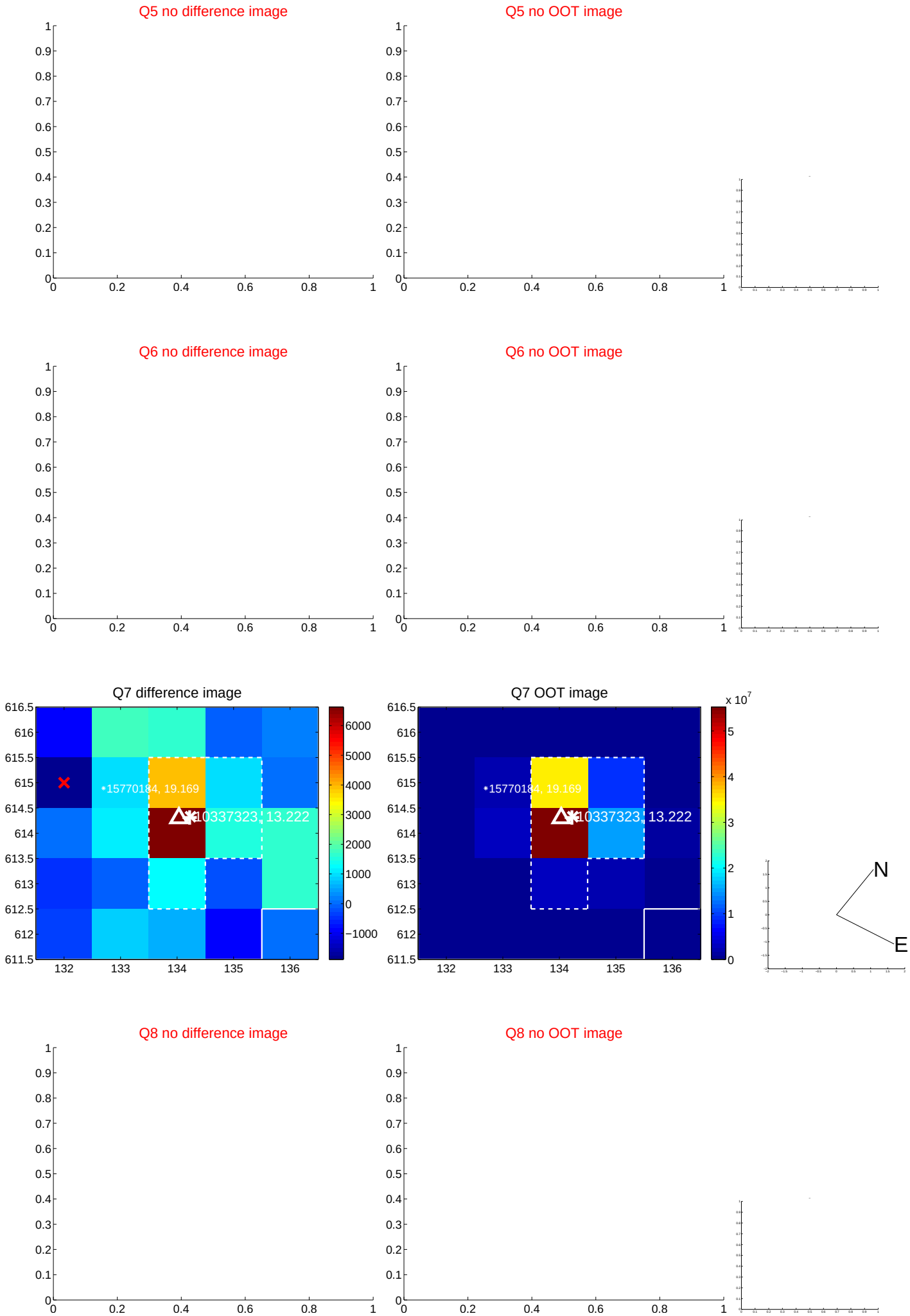


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

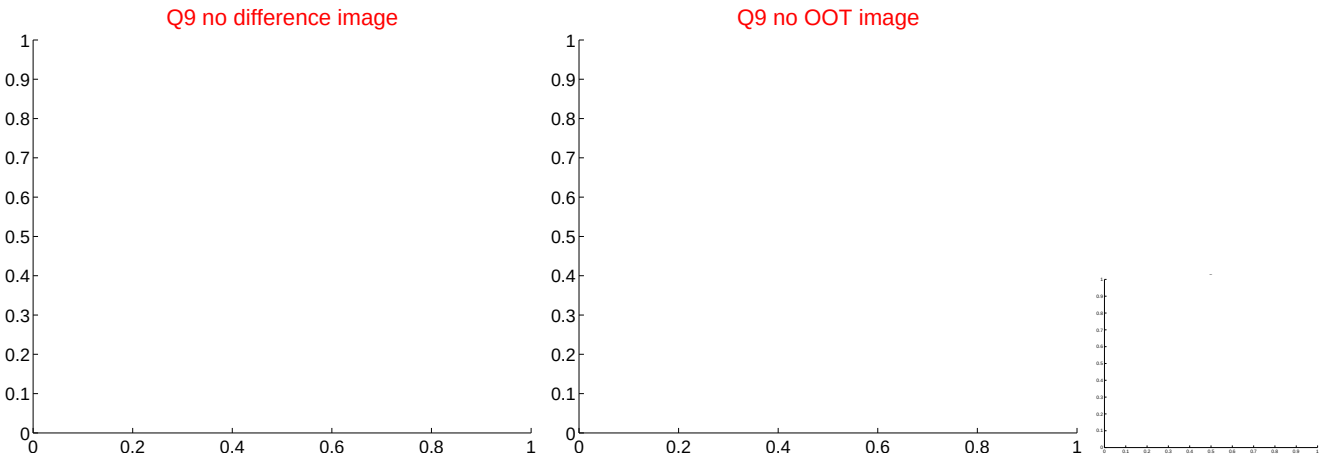
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

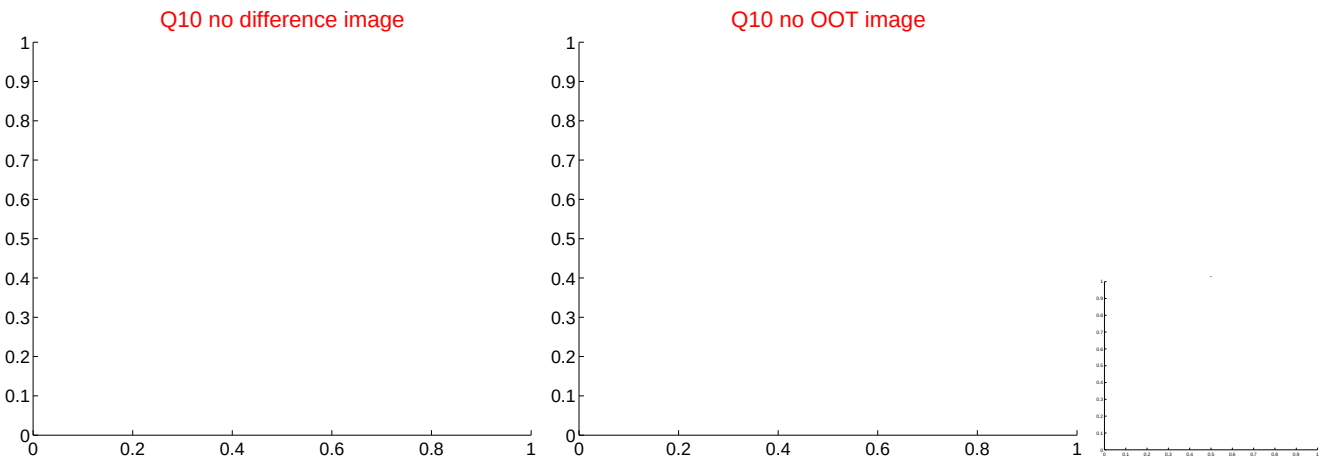


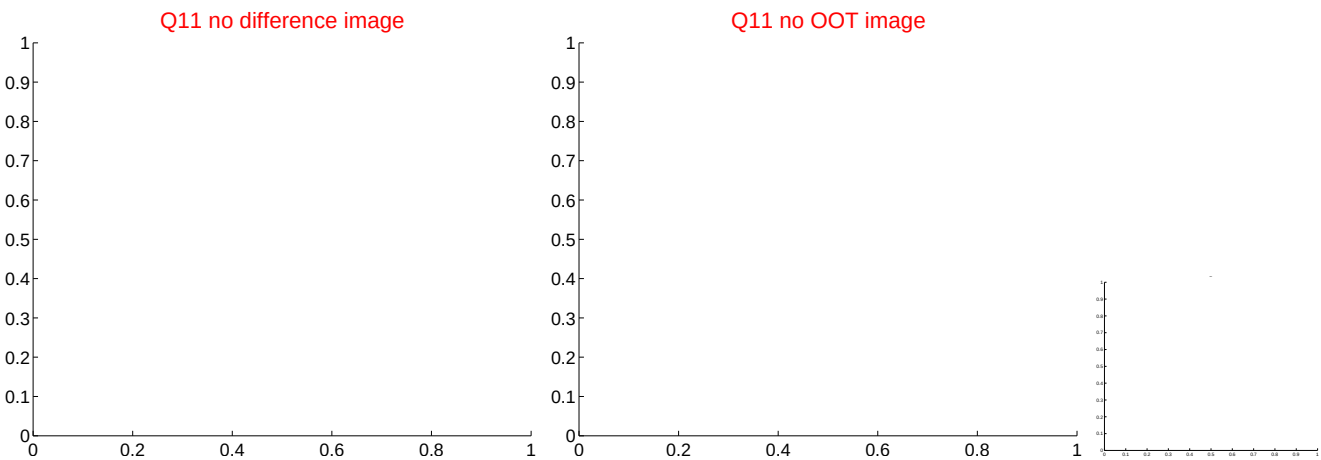
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

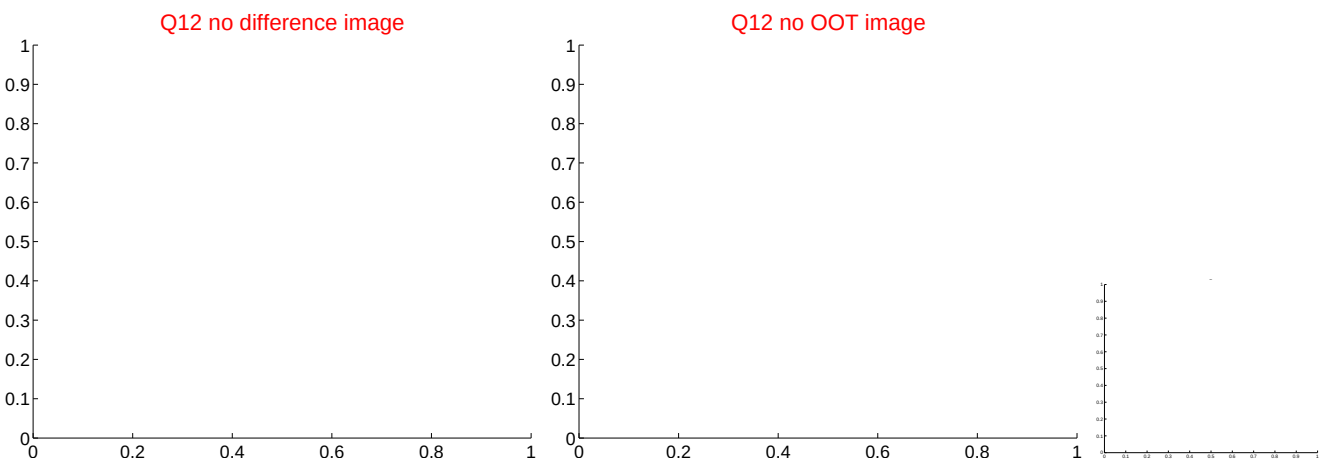


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

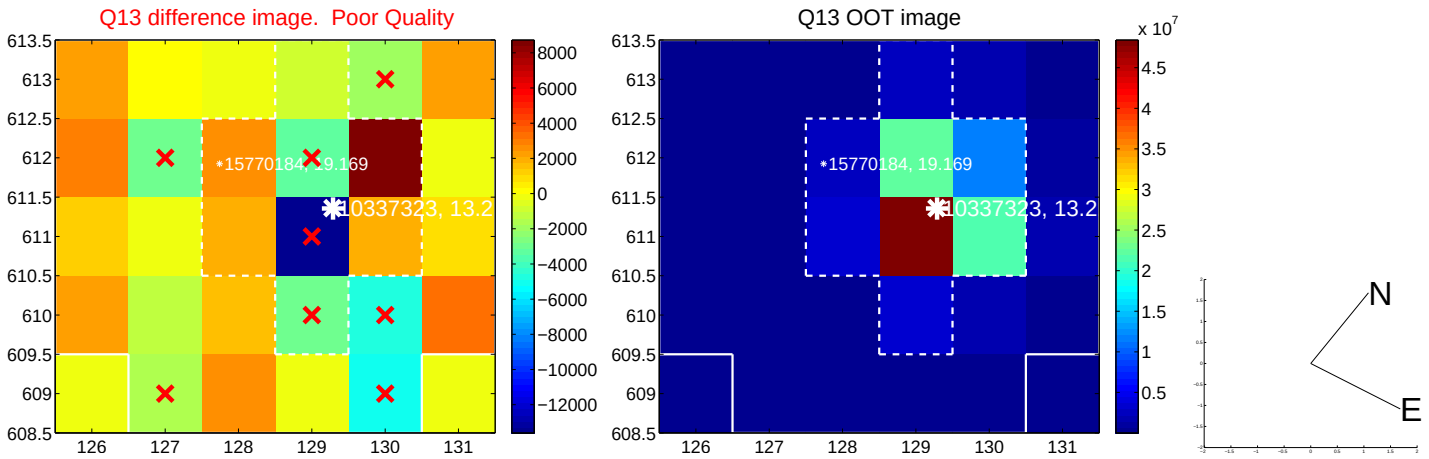


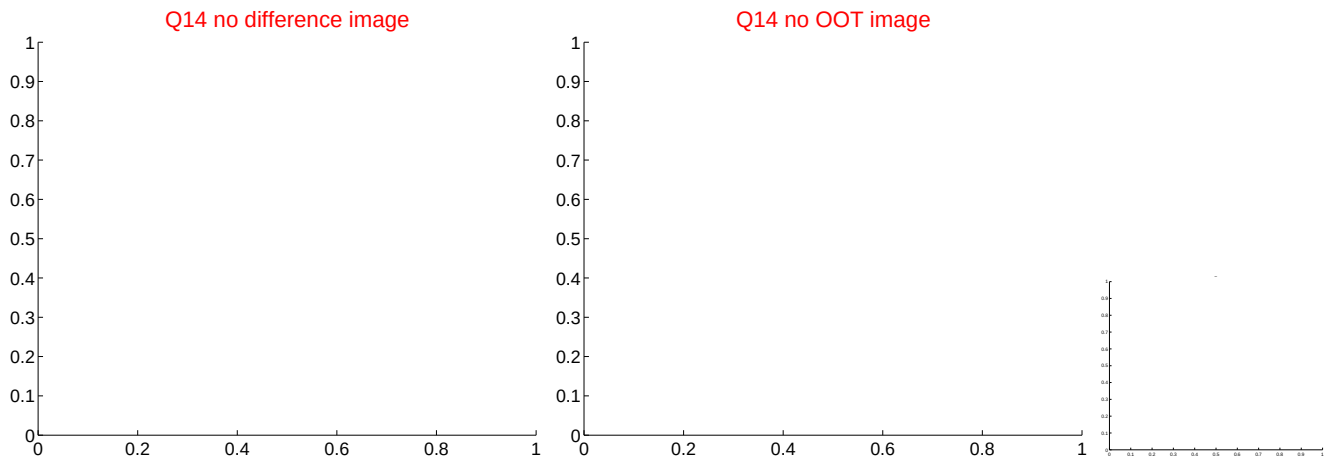


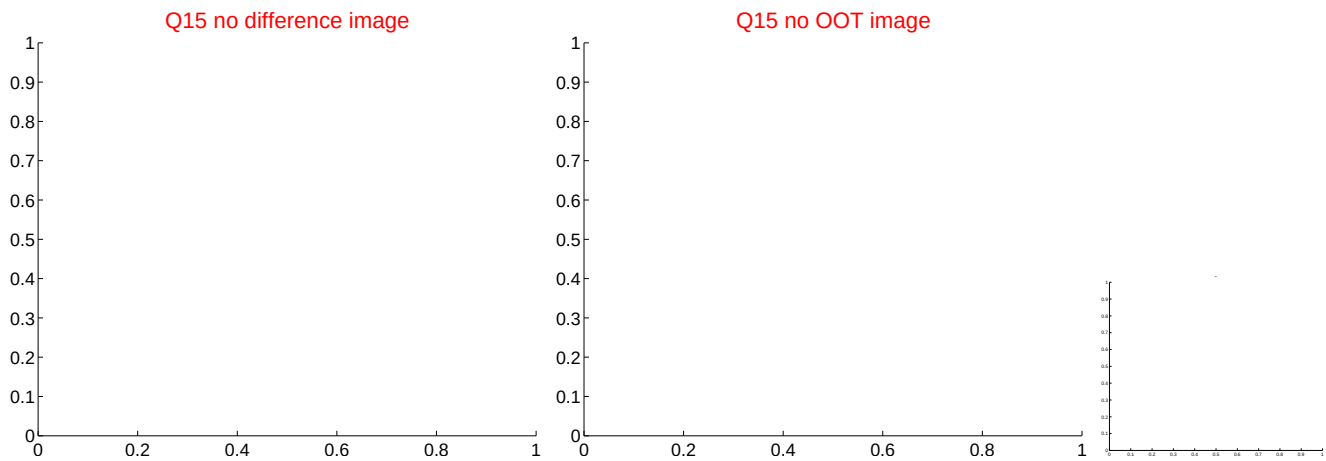


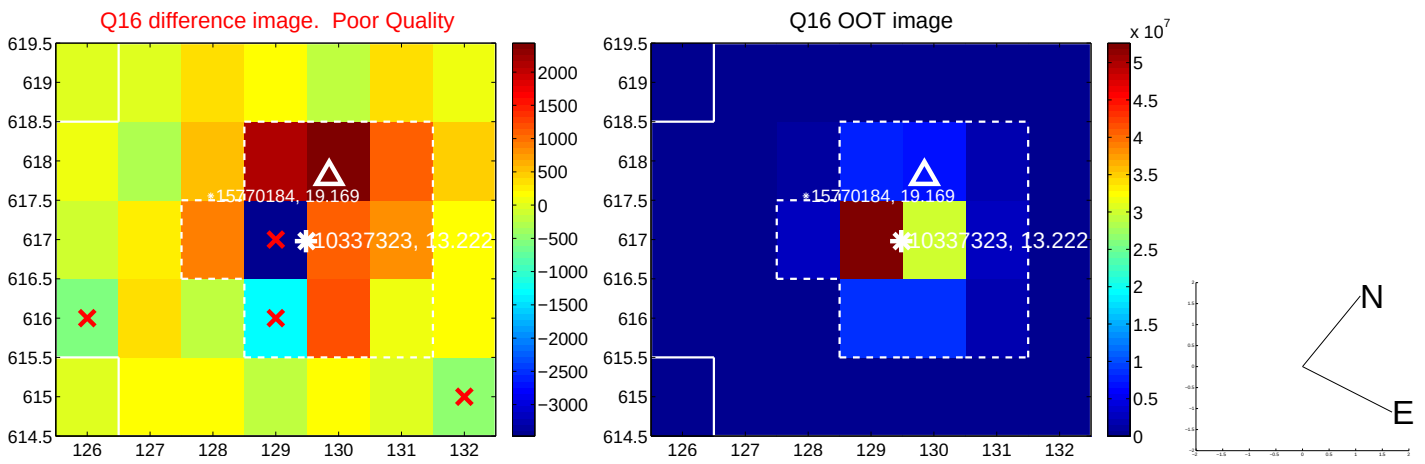


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

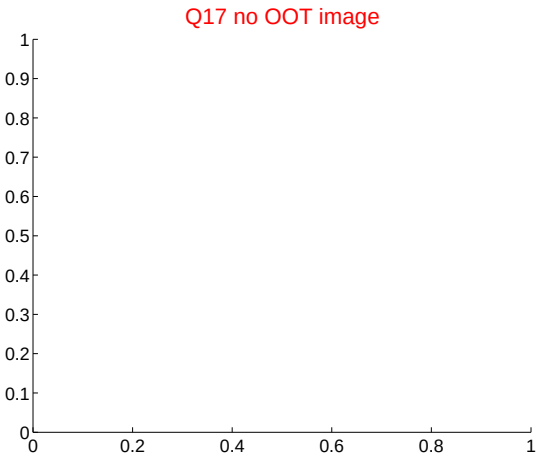


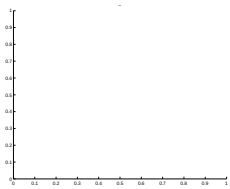


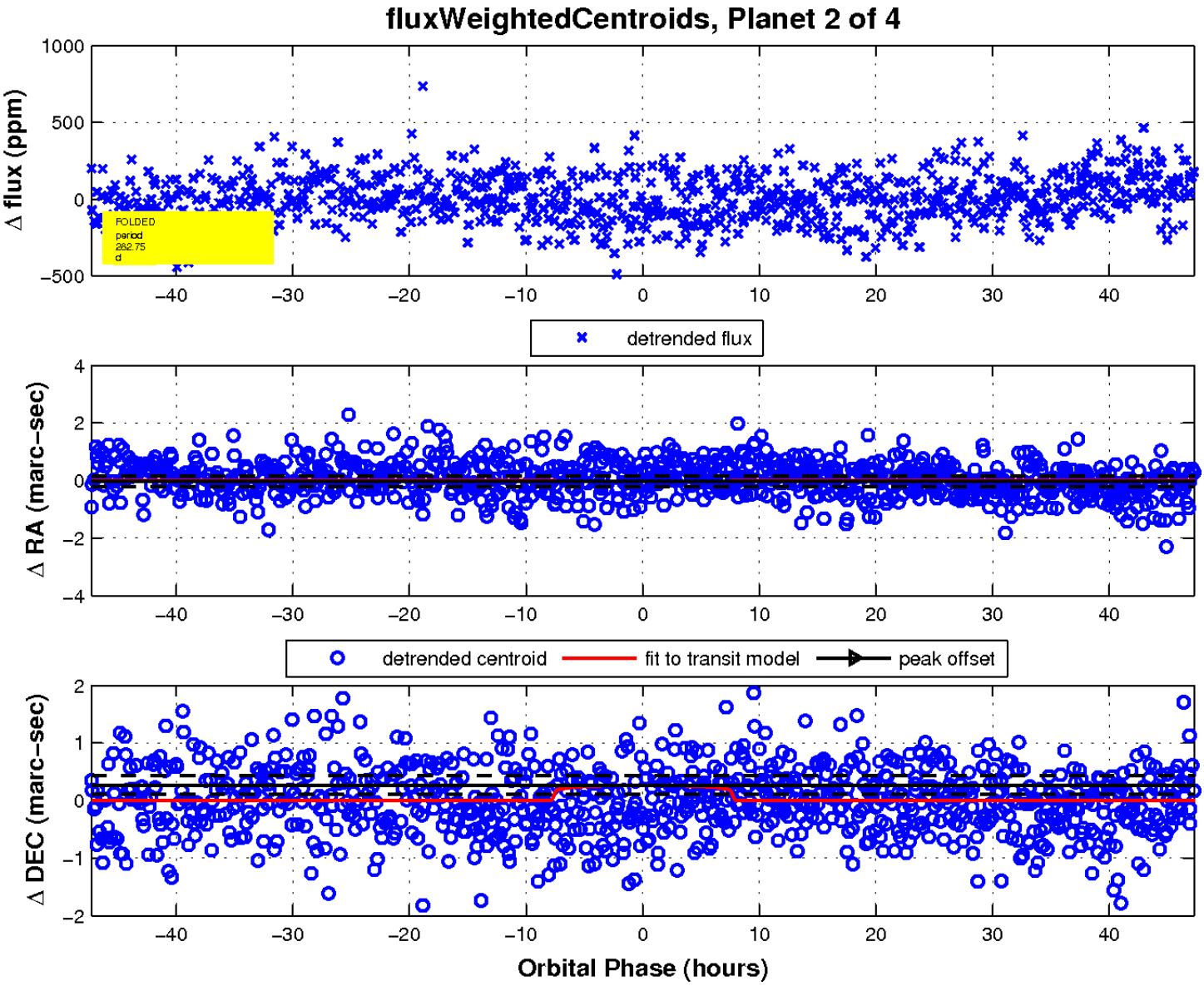




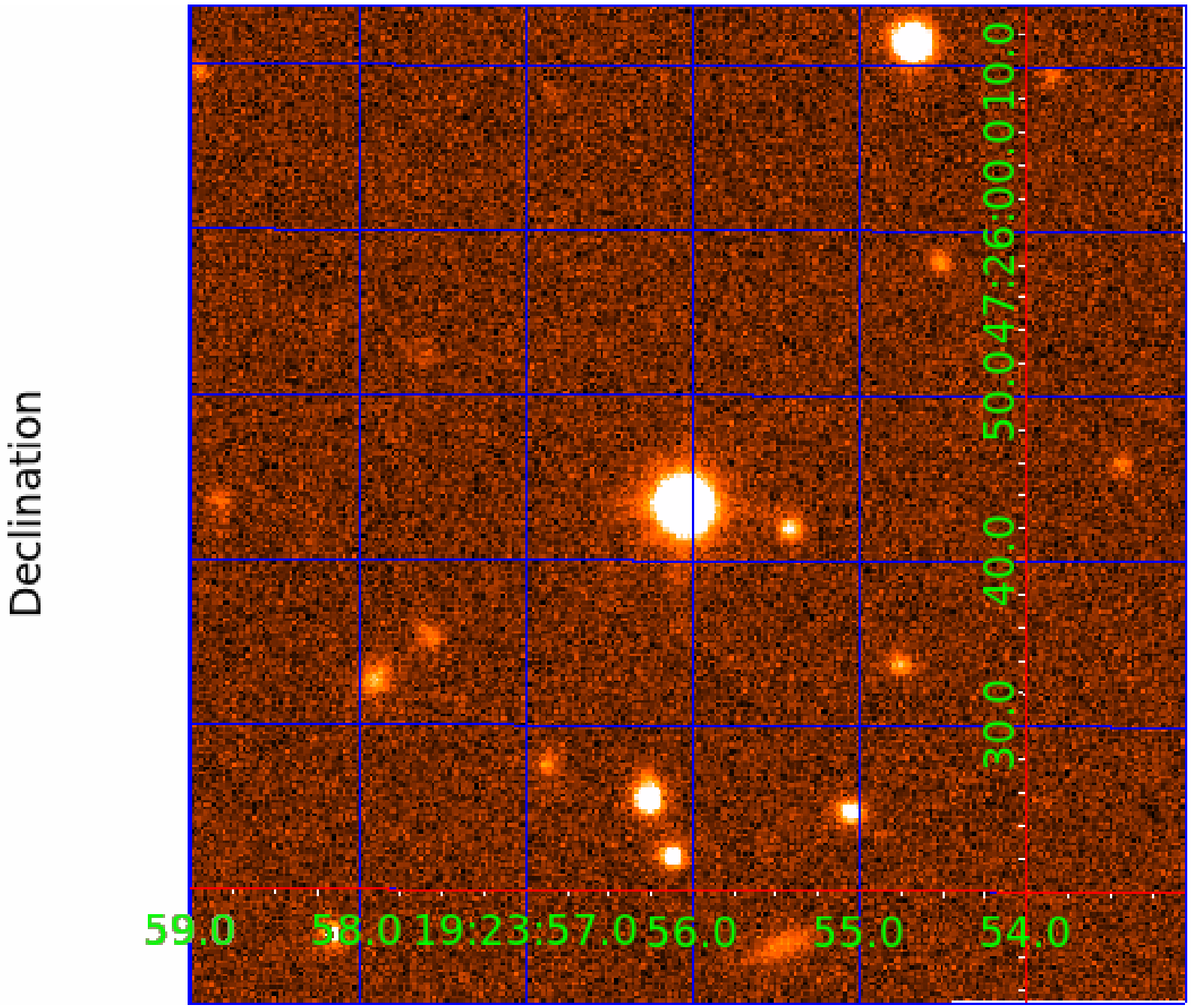
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image


Declination
59.0
58.0
19:23:57.0
56.0
55.0
54.0
30.0
40.0
50.0
47:26:00.0
10.0

KIC 010337323

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 ($S_\oplus$)
010337323-01	OBS	No	3.432686	132.964607	19.8	15.276	11.4	7.6	1.66	7152	0.74	2529.05
010337323-02	OBS	No	282.754965	401.425444	169.6	15.781	11.7	6.3	1.66	7152	2.32	7.06
010337323-03	OBS	No	148.807683	252.914137	174.3	12.186	8.2	6.7	1.66	7152	2.44	16.61
010337323-04	OBS	No	1.715740	131.903914	16.2	12.526	9.9	7.2	1.66	7152	0.78	6375.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010337323-01	OBS	FP	0.00	1	0	0	0	LPP_DV
010337323-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010337323-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
010337323-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_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.

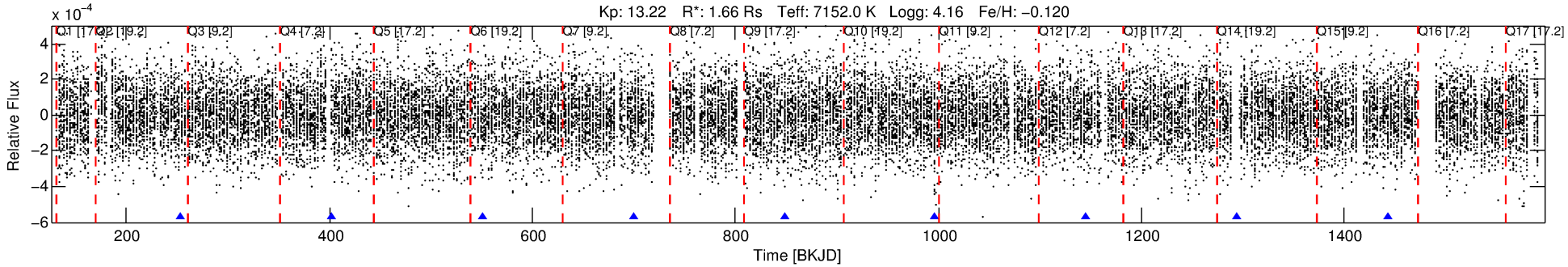
Ephemeris Match Information For 010337323-03

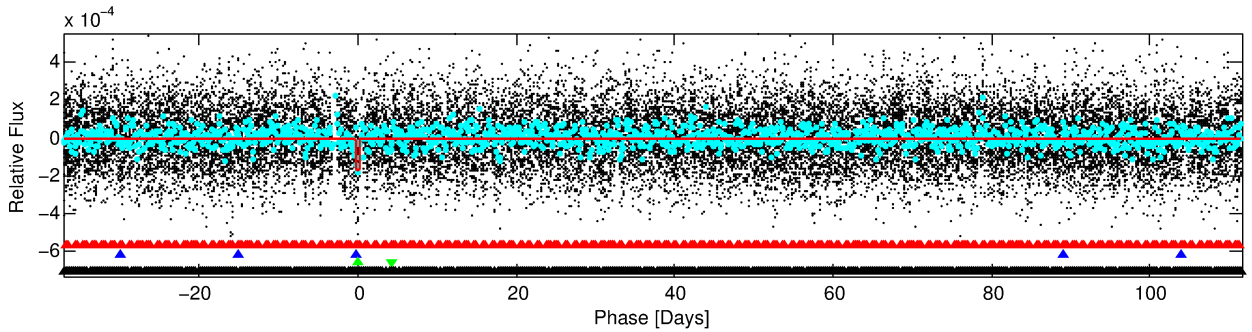
No Significant Match Found

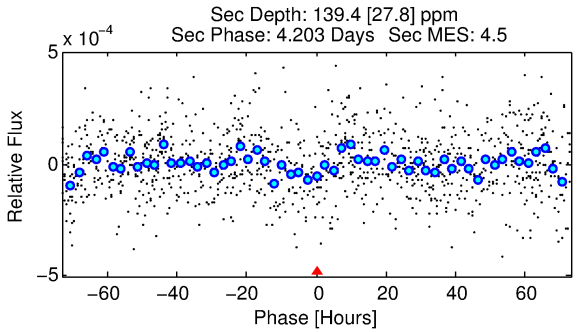
DV One-Page Summary

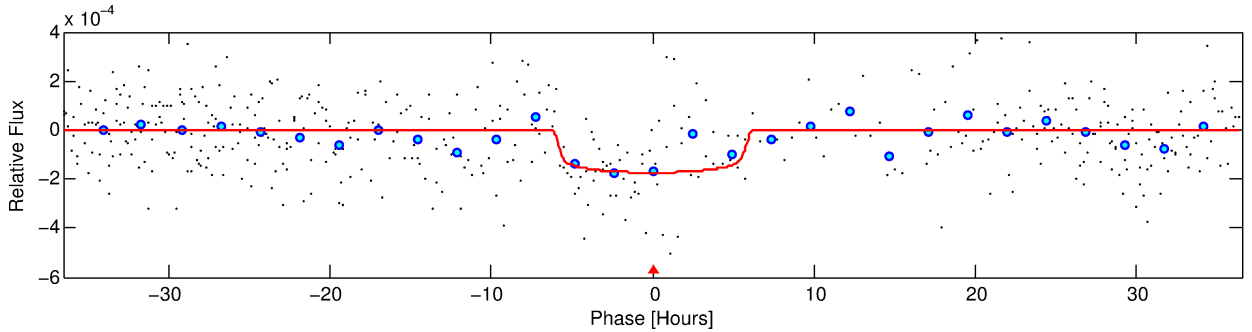
KIC: 10337323 Candidate: 3 of 4 Period: 148.808 d

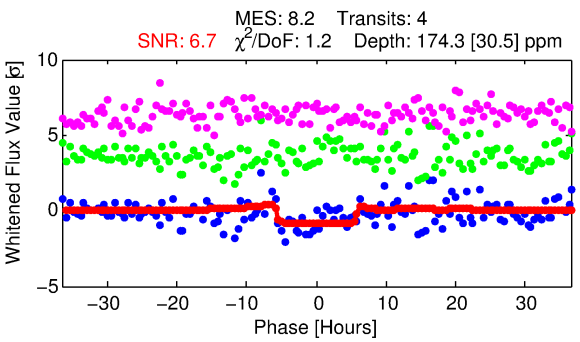
Kp: 13.22 R*: 1.66 Rs Teff: 7152.0 K Logg: 4.16 Fe/H: −0.120

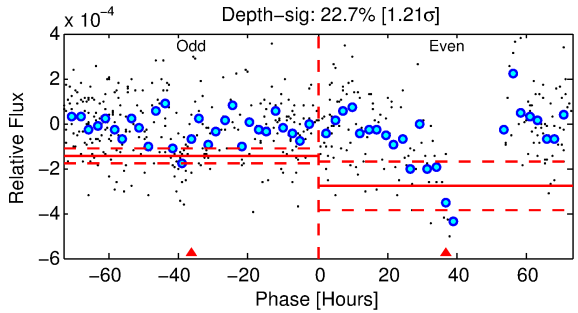


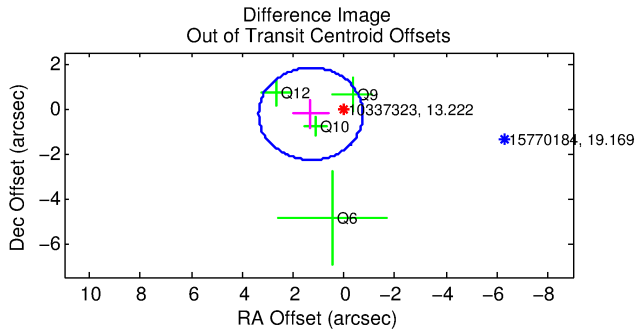












DV Fit Results:

Period = 148.80768 [0.00629] d
Epoch = 252.9141 [0.0269] BKJD
Rp/R* = 0.0135 [0.0035]
a/R* = 53.59 [79.44]
b = 0.84 [0.54]

Seff = 16.61 [6.56]
Teq = 515 [51] K
Rp = 2.44 [0.98] Re
a = 0.6218 [0.1560] AU

Ag = 4969.91 [3291.52] [1.51σ]
Teffp = 6682 [972] K [6.33σ]

DV Diagnostic Results:

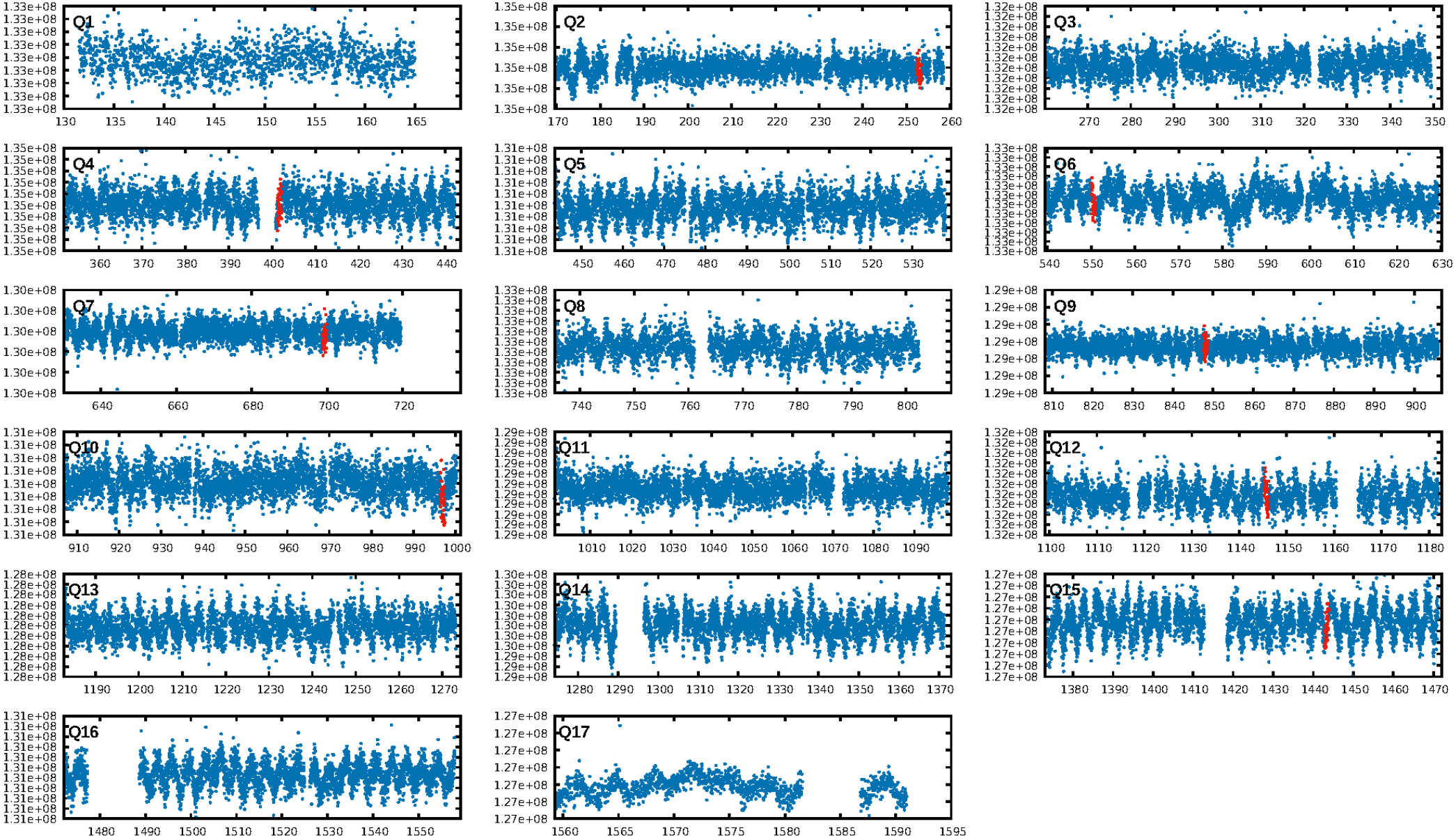
ShortPeriod−sig: 100.0% [178.55σ]
LongPeriod−sig: 100.0% [161.24σ]
ModelChiSquare2−sig: 11.5%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [4/4]
GhostDiagnostic−chr: −0.442

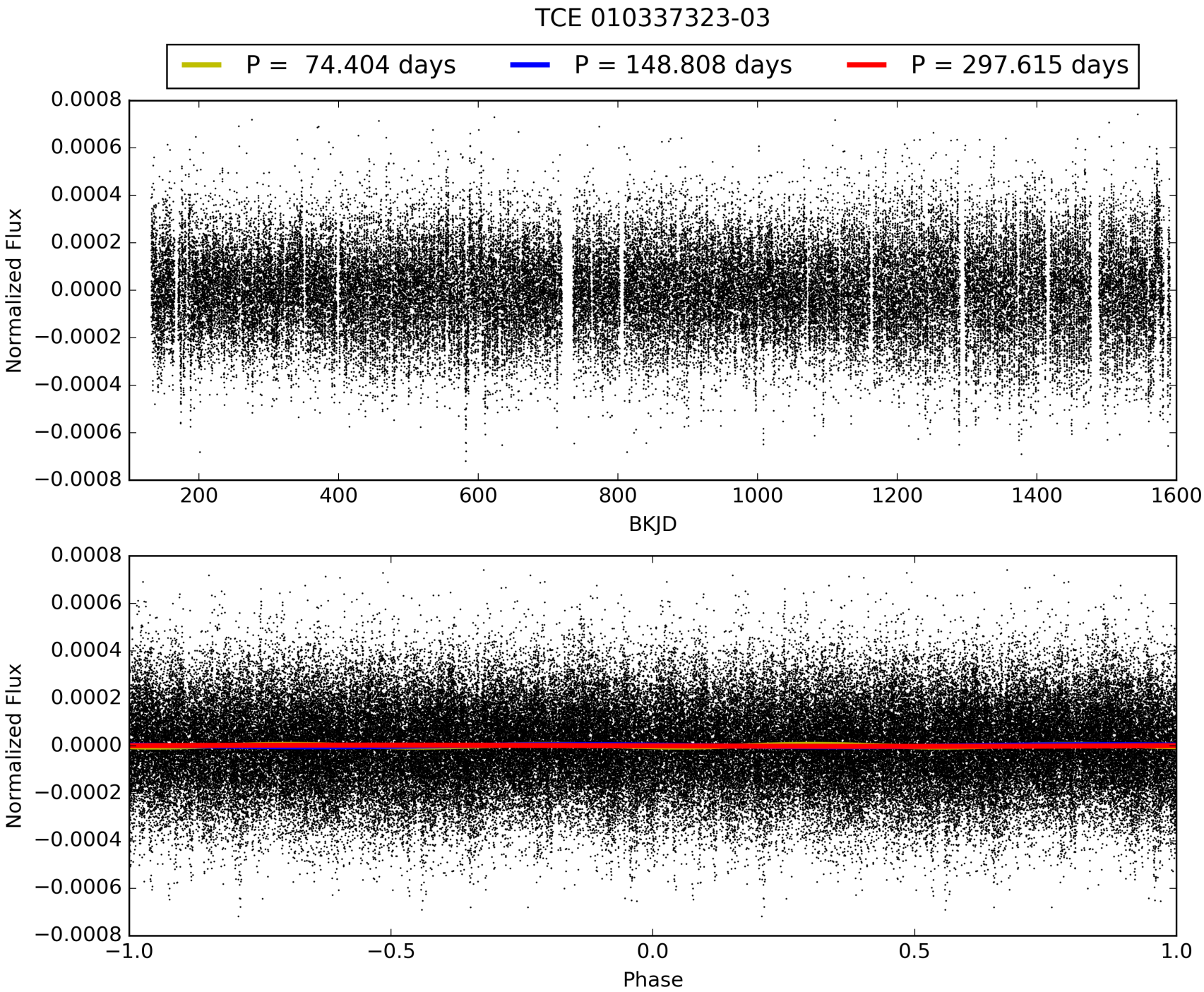
Centroid−sig: 46.8%
Centroid−so: 0.852 arcsec [0.84σ]
OotOffset−rm: 1.323 arcsec [1.93σ]
KicOffset−rm: 1.270 arcsec [1.78σ]
OotOffset−st: 2/0/1/1 [4]
KicOffset−st: 2/0/1/1 [4]
DiffImageQuality−fgm: 0.25 [1/4]
DiffImageOverlap−fno: 0.00 [0/7]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 12:33:04 Z

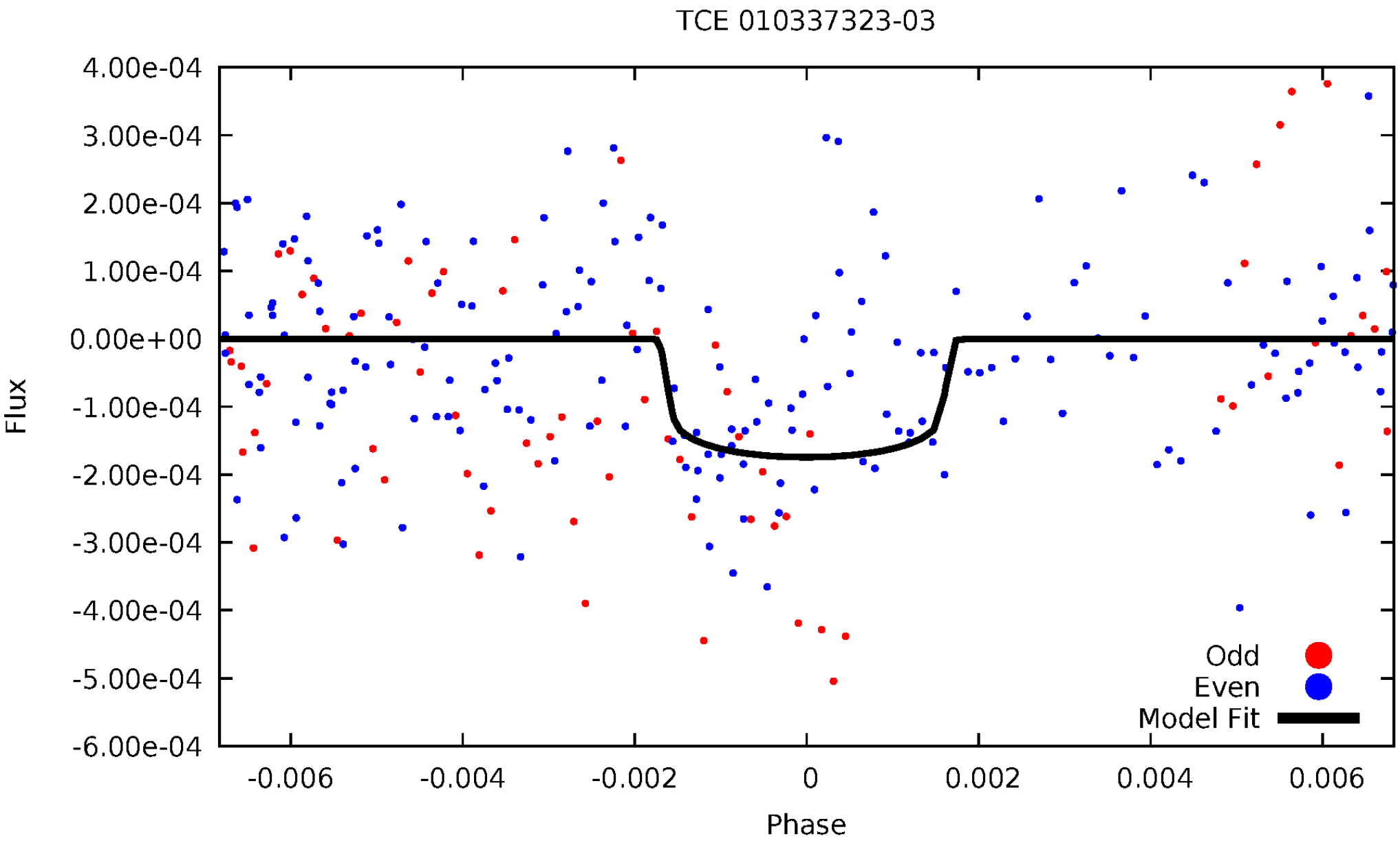
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010337323-03, PDC Light Curves

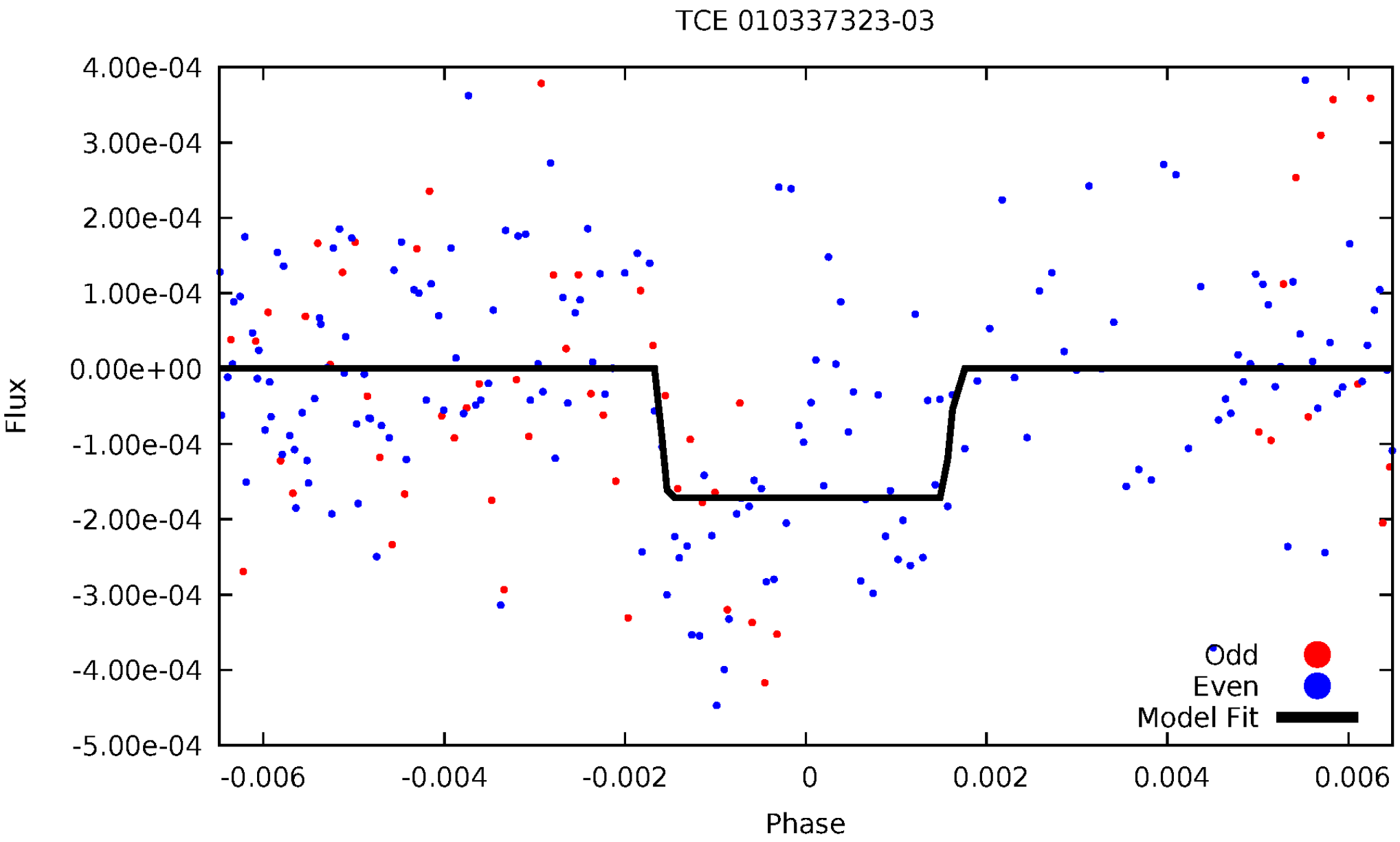



TCE 010337323-03
P = 74.404 days
P = 148.808 days
P = 297.615 days
Normalized Flux
BKJD
Normalized Flux
Phase

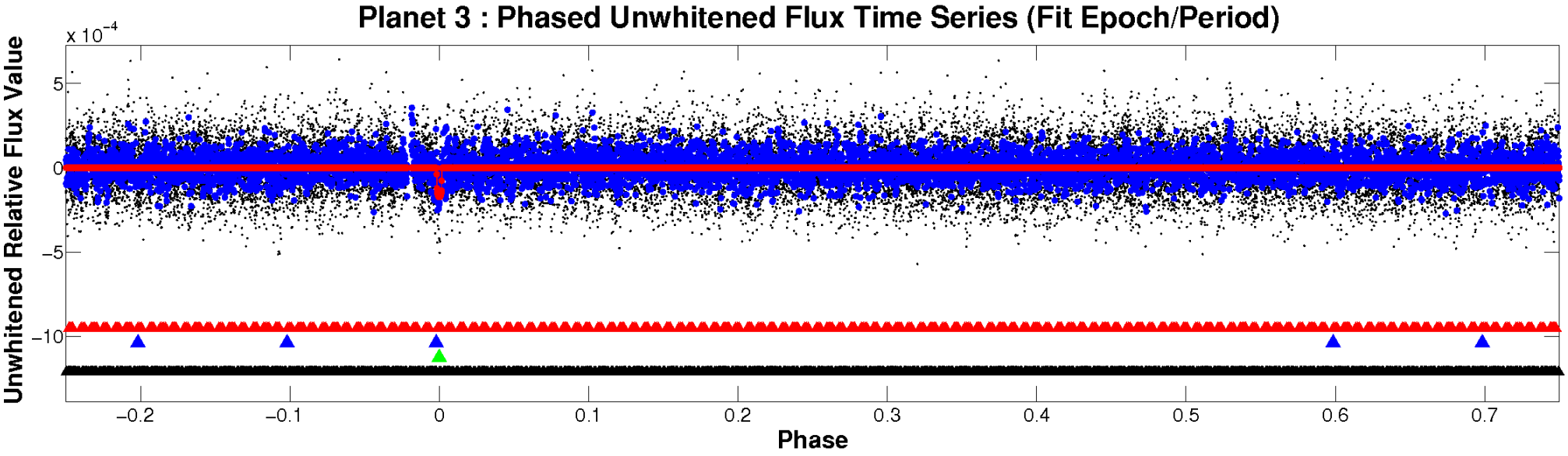
DV Odd/Even

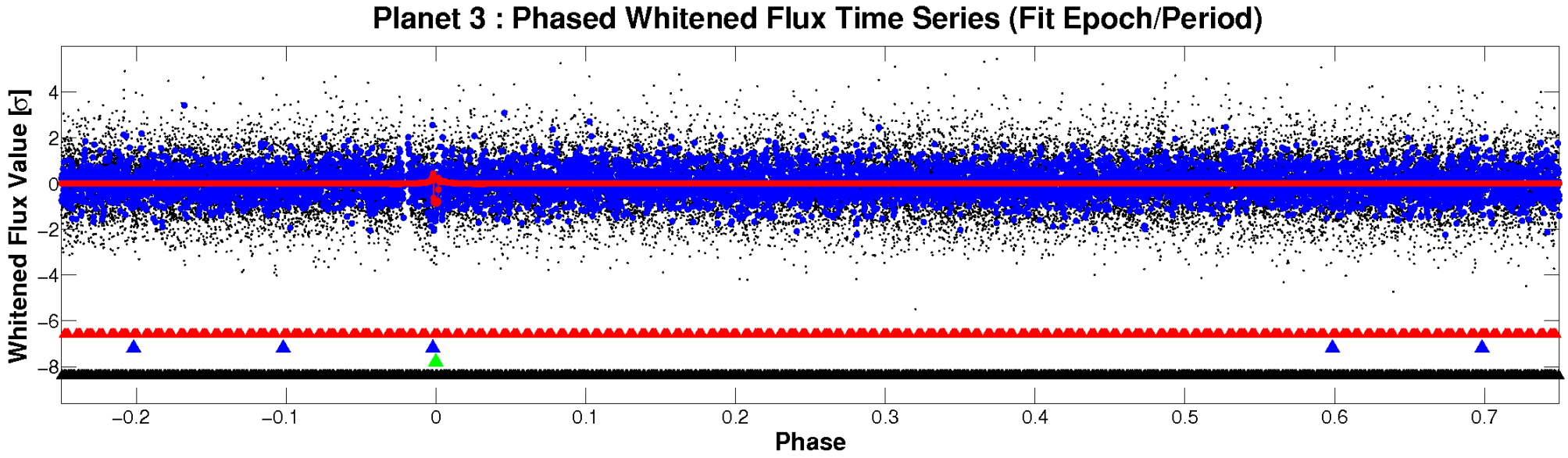

TCE 010337323-03
4.00e-04
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
-5.00e-04
-6.00e-04
Flux
-0.006
-0.004
-0.002
0
0.002
0.004
0.006
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 010337323-03
4.00e-04
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
-5.00e-04
Flux
-0.006
-0.004
-0.002
0
0.002
0.004
0.006
Phase
Odd
Even
Model Fit

Non-Whitened Vs. Whitened Light Curve



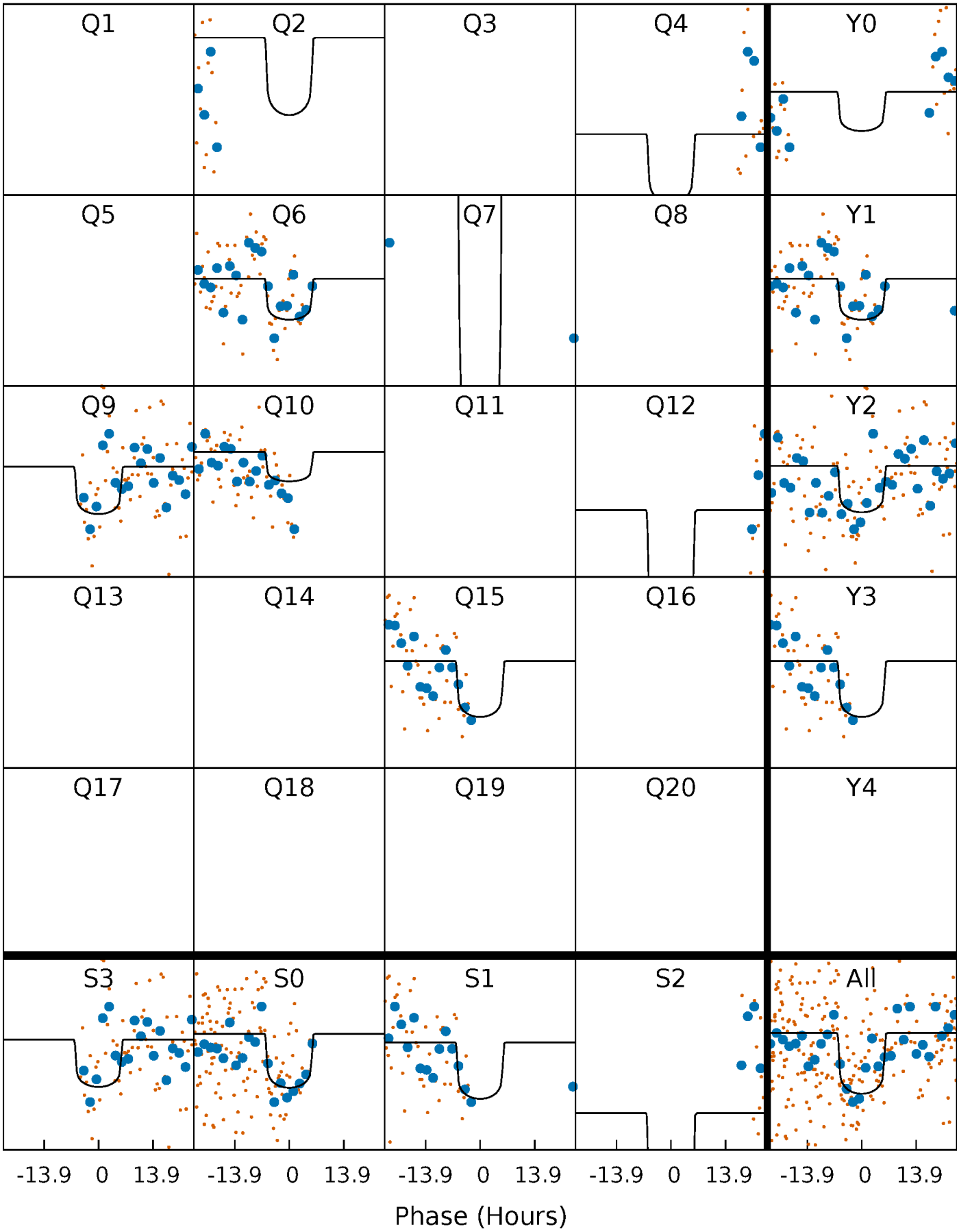


PDC Quarter-Phased Transit Curves

TCE 010337323-03 P=148.807683 Days T_0=252.914138 (BKJD)

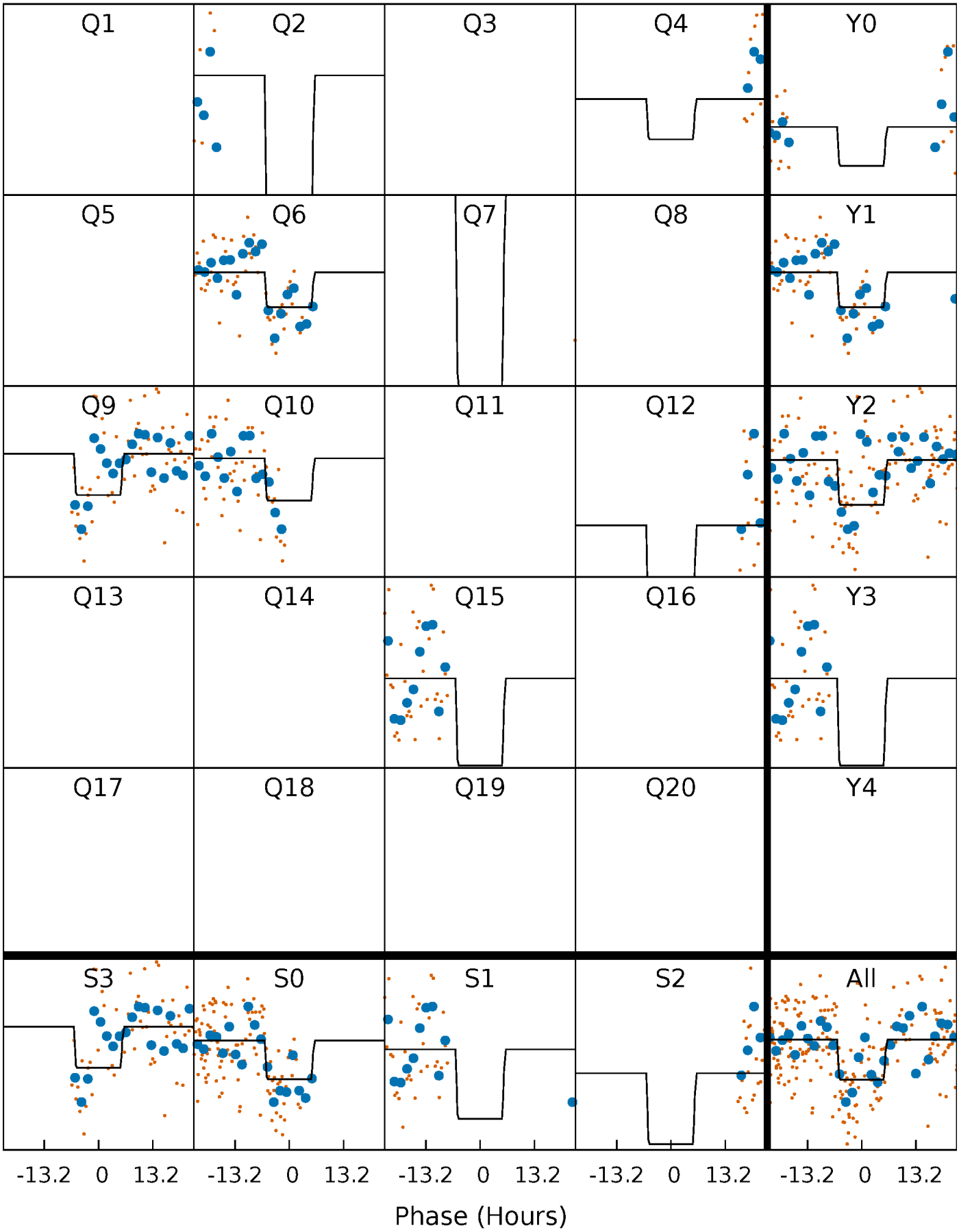
DV Quarter-Phased Transit Curves

TCE 010337323-03 P=148.807683 Days T_0=252.914138 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

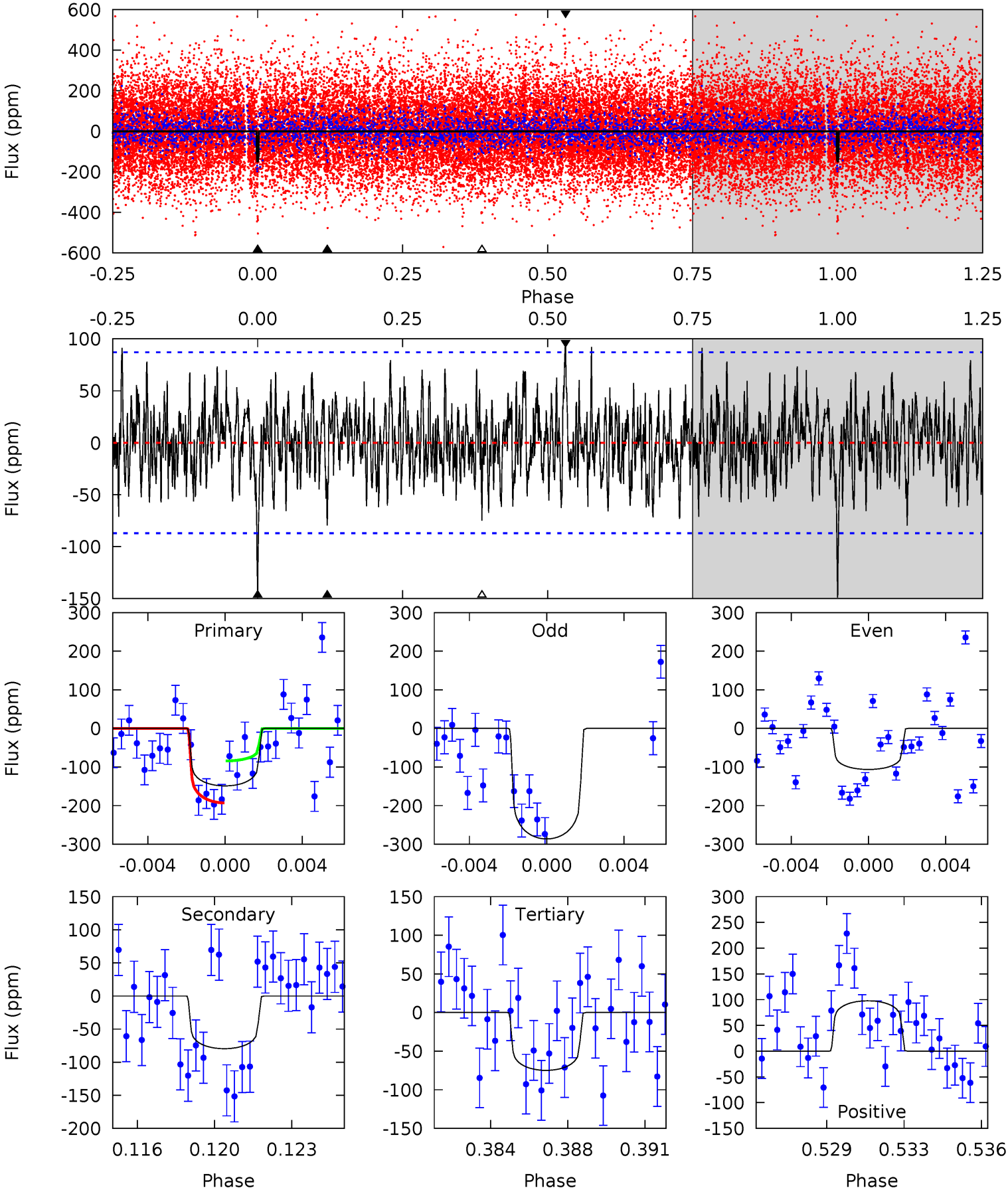
TCE 010337323-03 P=148.843409 Days T_0=252.849863 (BKJD)



DV Model-Shift Uniqueness Test

010337323-03, P = 148.807683 Days, E = 104.106455 Days

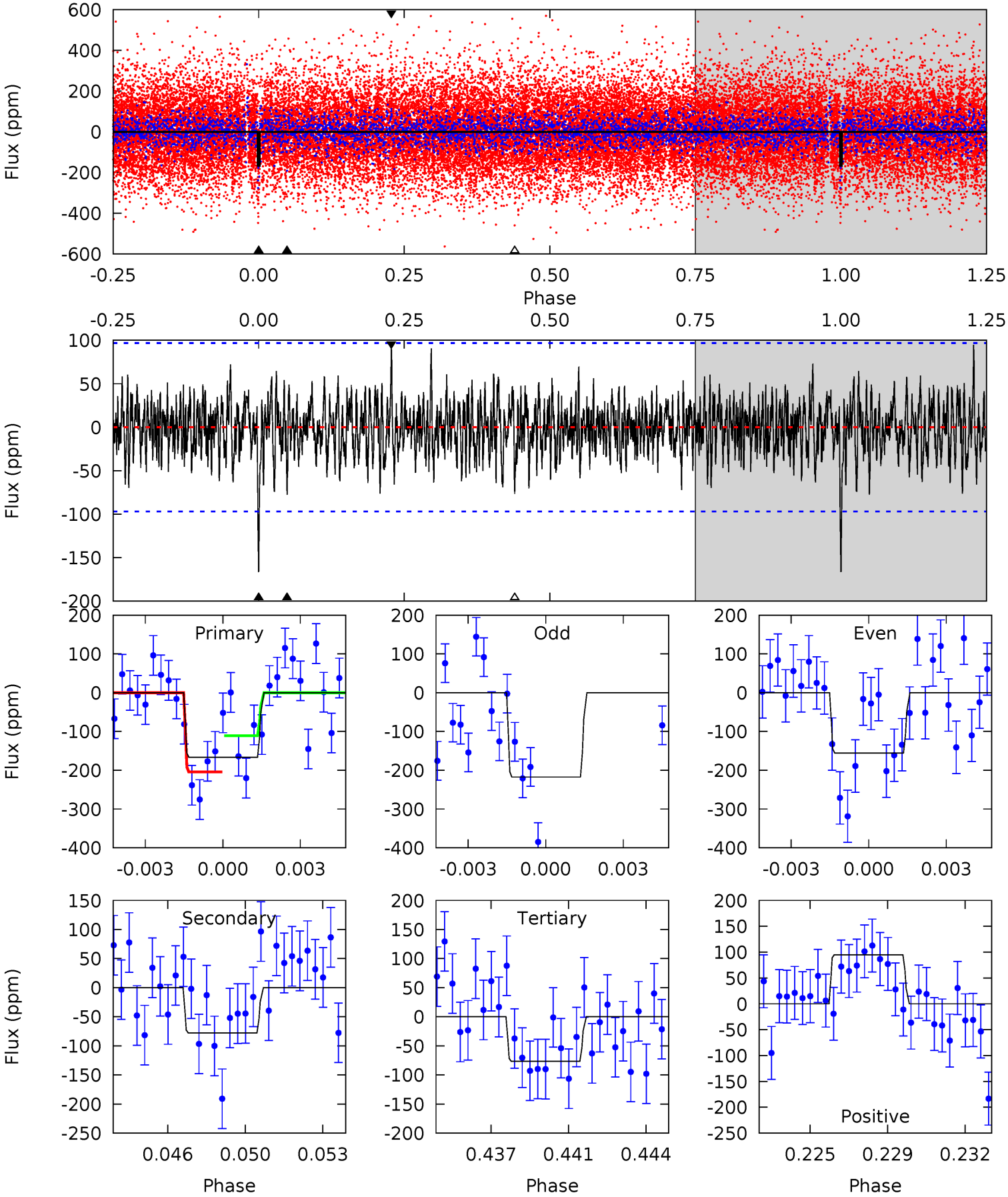
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.92	4.77	4.49	5.86	5.22	2.91	1.66	4.44	3.06	0.28	-1.09	4.47	1.09	0.40	3.20



Alt Model-Shift Uniqueness Test

010337323-03, P = 148.843409 Days, E = 104.006454 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.00	4.20	4.13	5.12	5.23	2.94	1.34	4.86	3.87	0.07	-0.92	1.21	0.85	0.36	2.50



Stellar Parameters For KIC 010337323

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7152^{+175}_{-300}	$4.161^{+0.128}_{-0.192}$	$-0.120^{+0.250}_{-0.350}$	$1.655^{+0.504}_{-0.336}$	$1.450^{+0.209}_{-0.232}$	$0.451^{+0.286}_{-0.236}$
	+2%/-4%	+3%/-5%	+208%/-292%	+30%/-20%	+14%/-16%	+64%/-52%
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 010337323-03 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-80±17	$2.44^{+0.83}_{-0.65}$	722^{+52}_{-46}	5715^{+1020}_{-613}	2759^{+2524}_{-1235}
Alt.	-78±18	$2.42^{+0.75}_{-0.71}$	724^{+58}_{-48}	5776^{+1083}_{-693}	2789^{+2852}_{-1259}

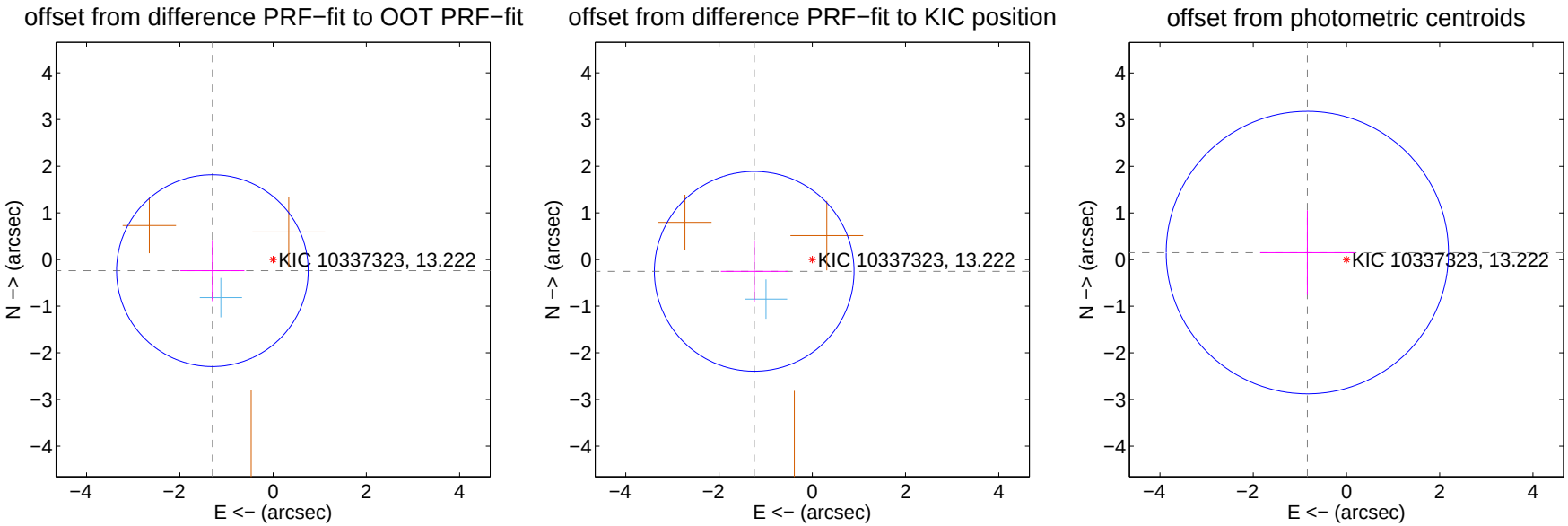
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

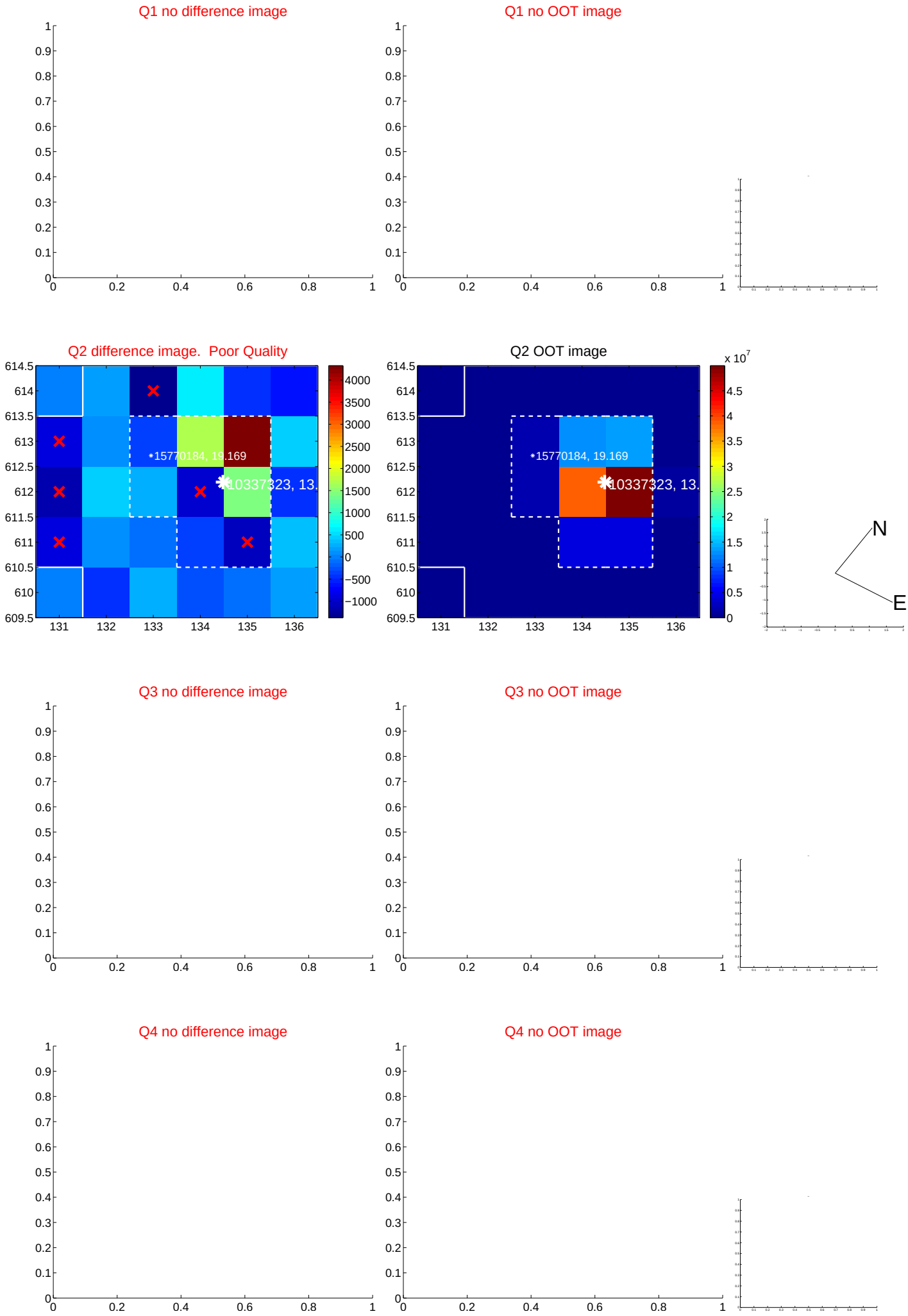
Supplemental centroid analysis for 010337323-03. Kepler magnitude: 13.22. Transit SNR 6.69
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.323 ± 0.685	1.93	1.301 ± 0.686	-0.239 ± 0.654
PRF-fit source offset from KIC position	1.270 ± 0.713	1.78	1.245 ± 0.715	-0.253 ± 0.662
photometric centroid source offset	0.85 ± 1.01	0.84	0.84 ± 1.01	0.15 ± 0.90

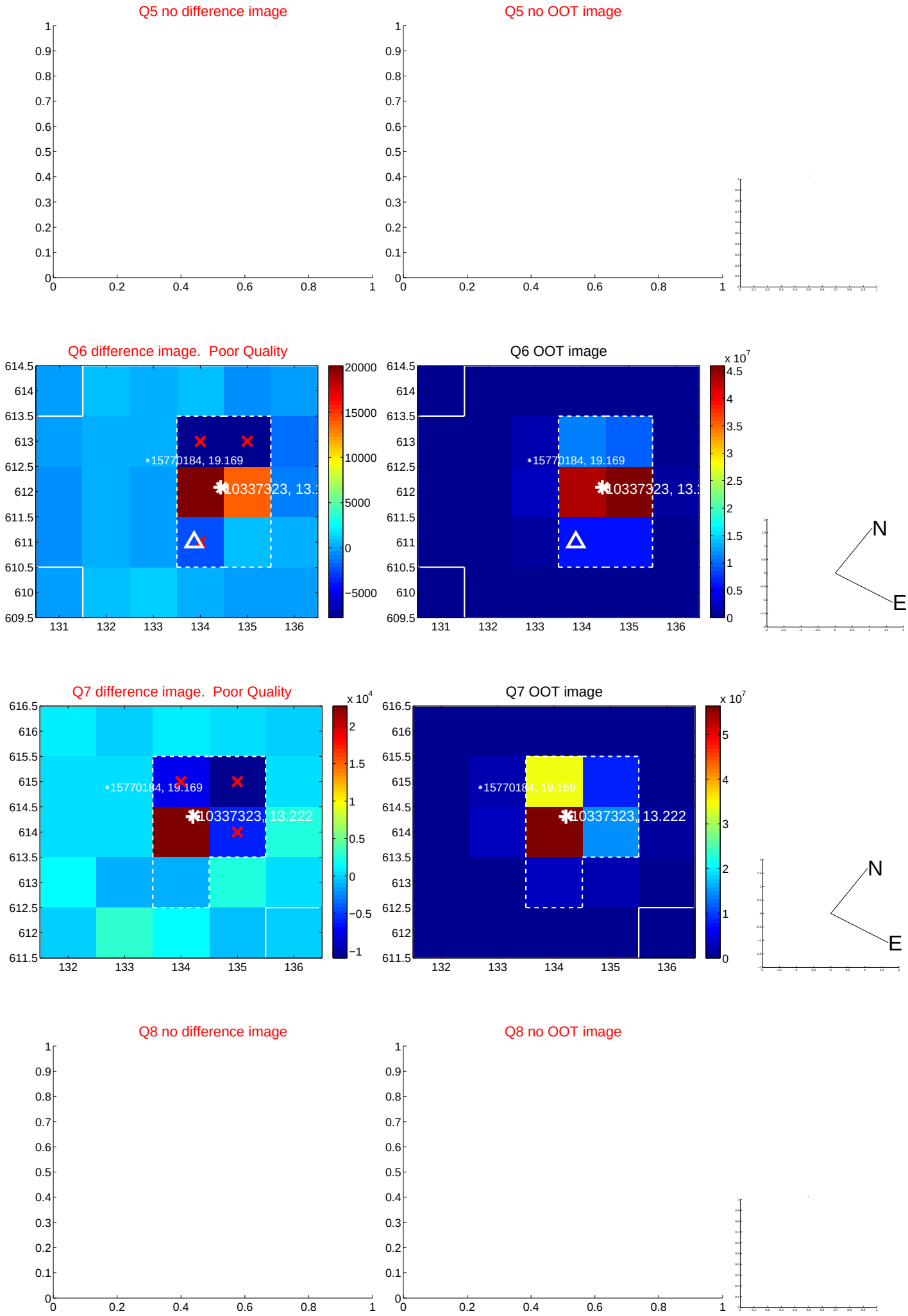


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

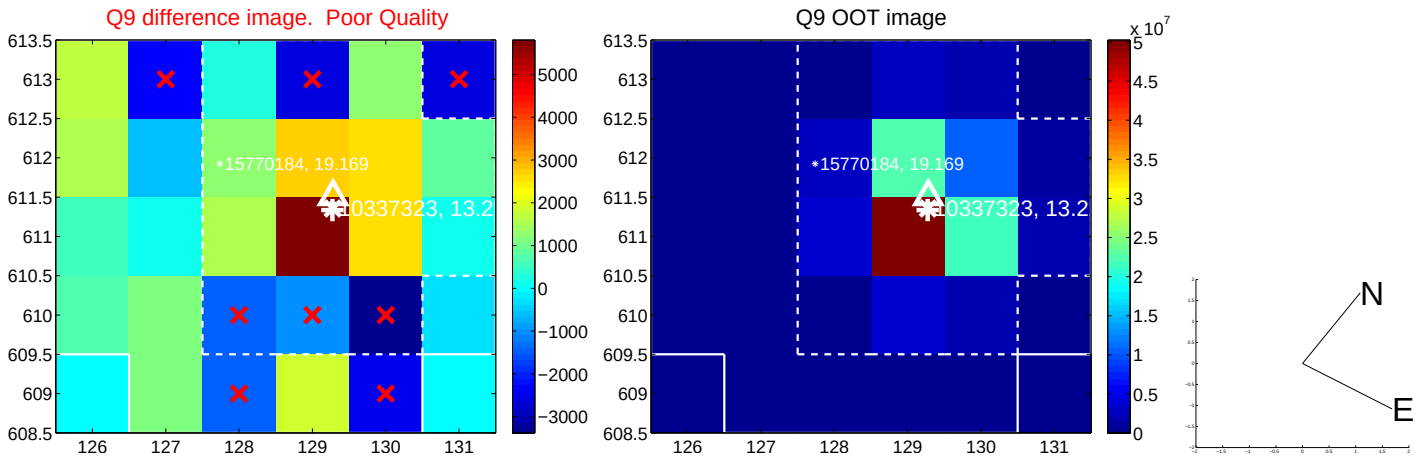
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

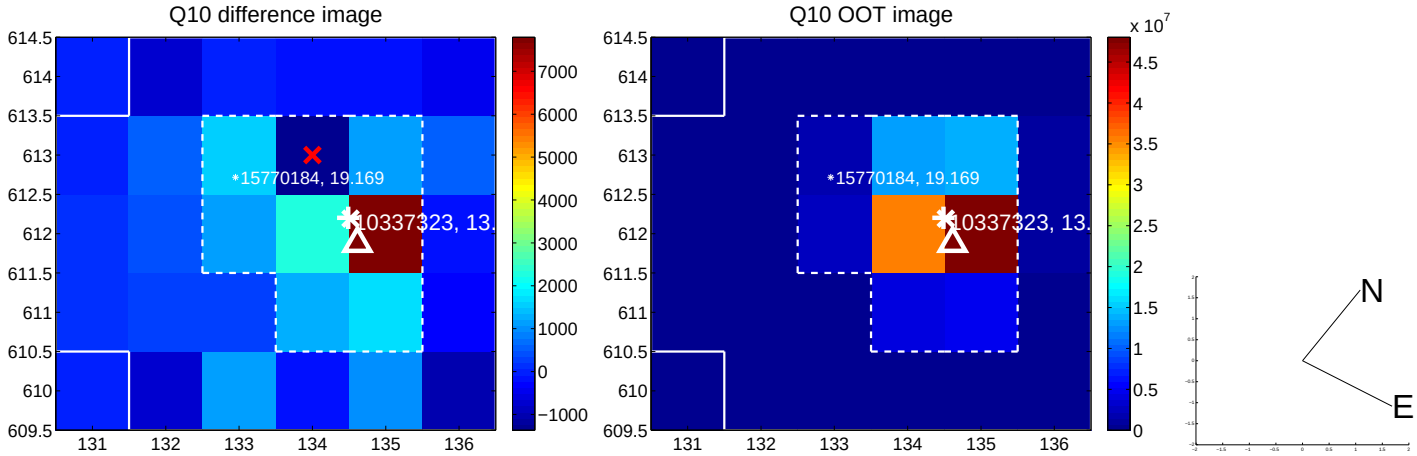


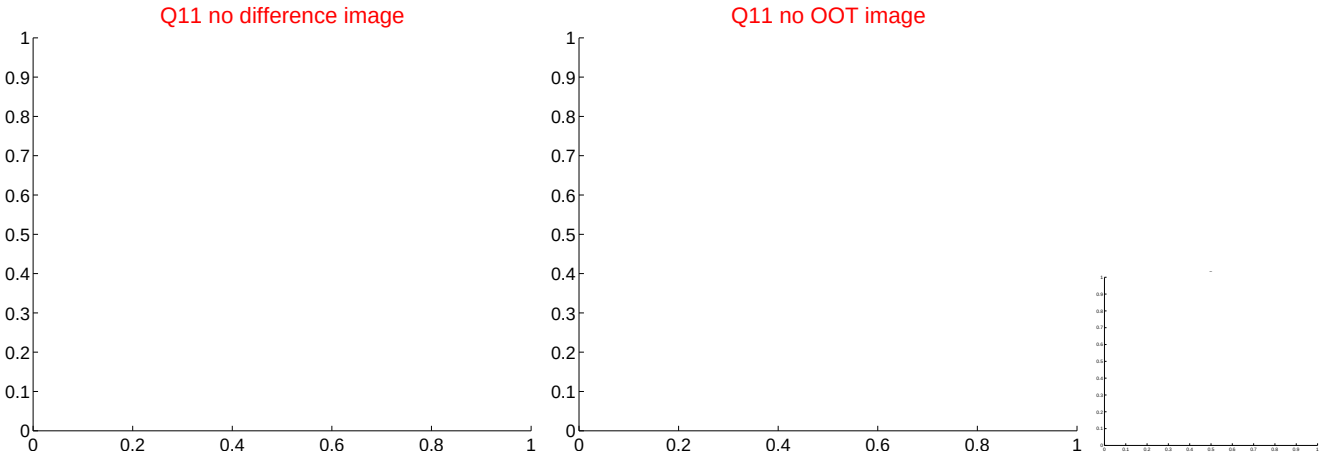
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

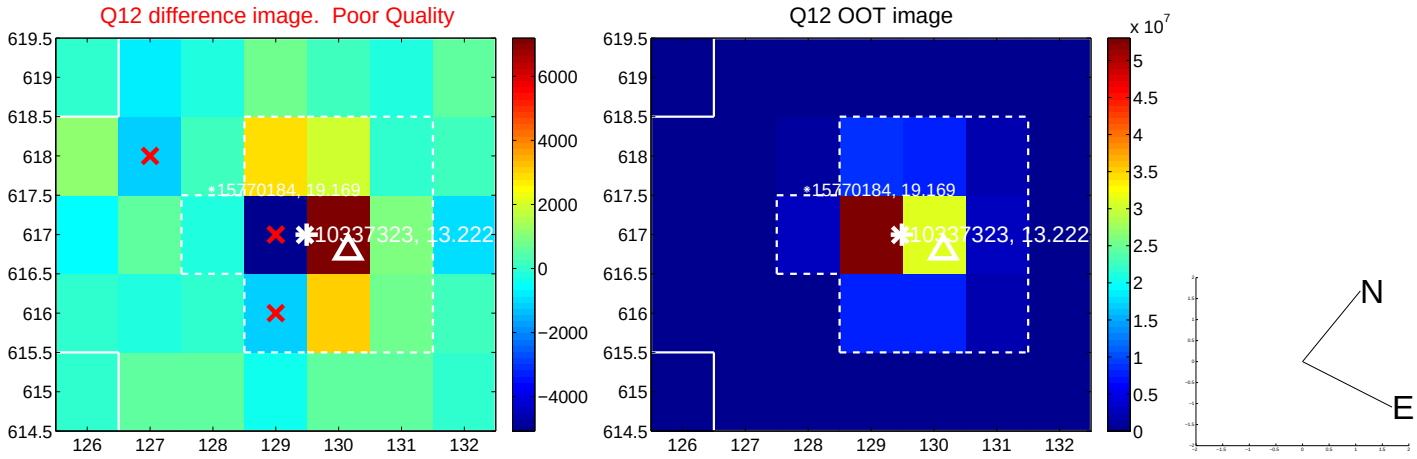


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

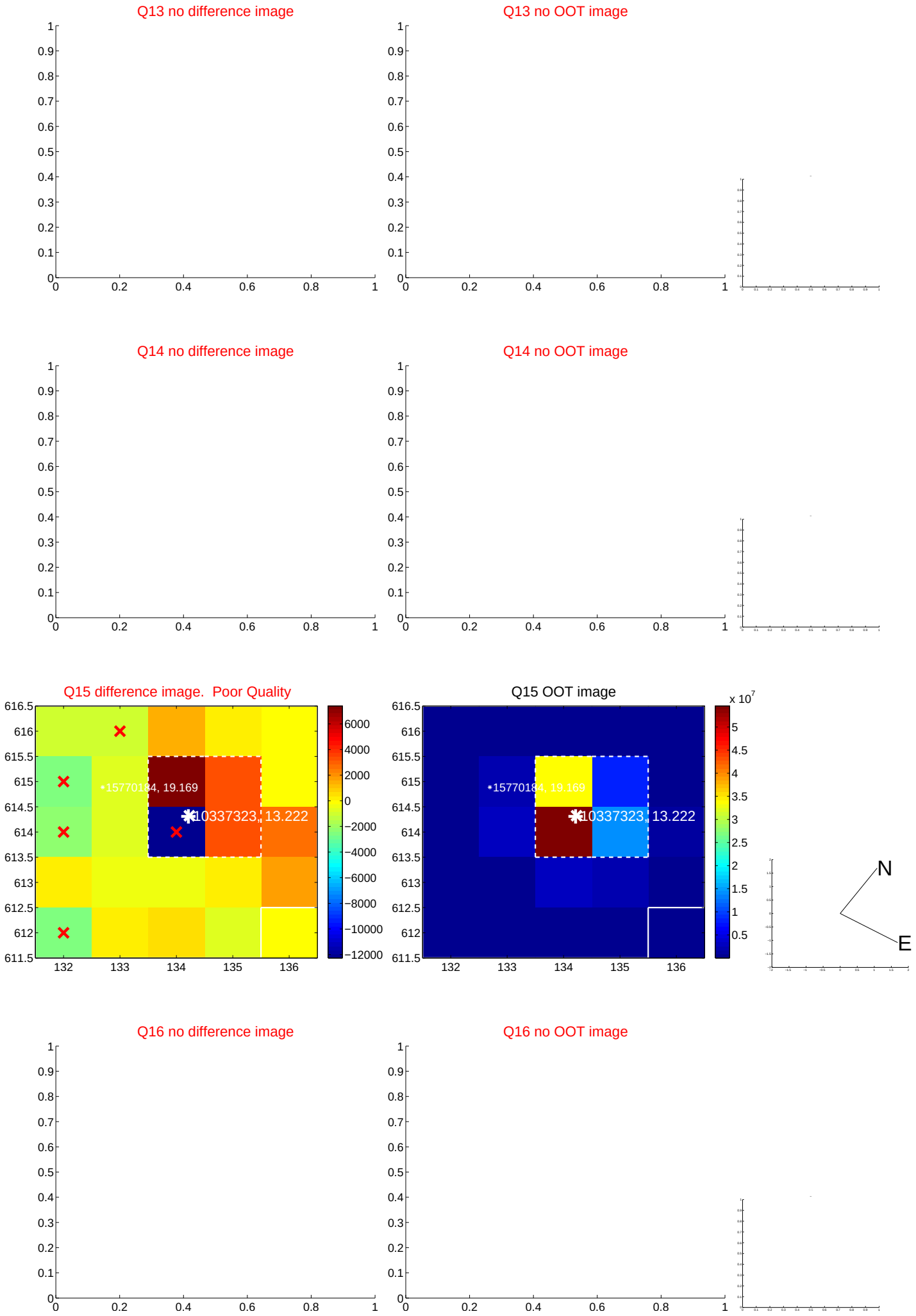




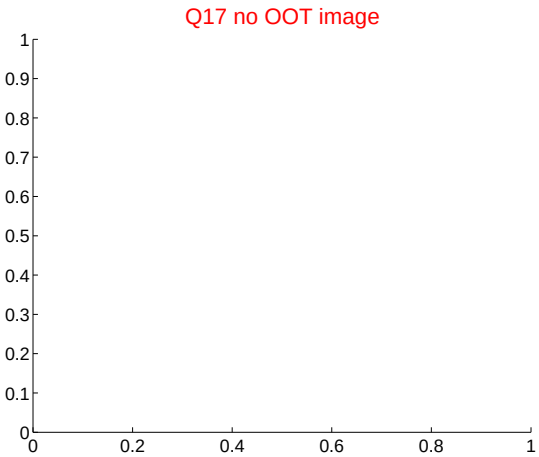


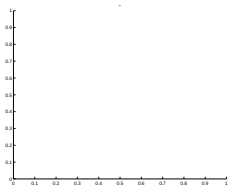


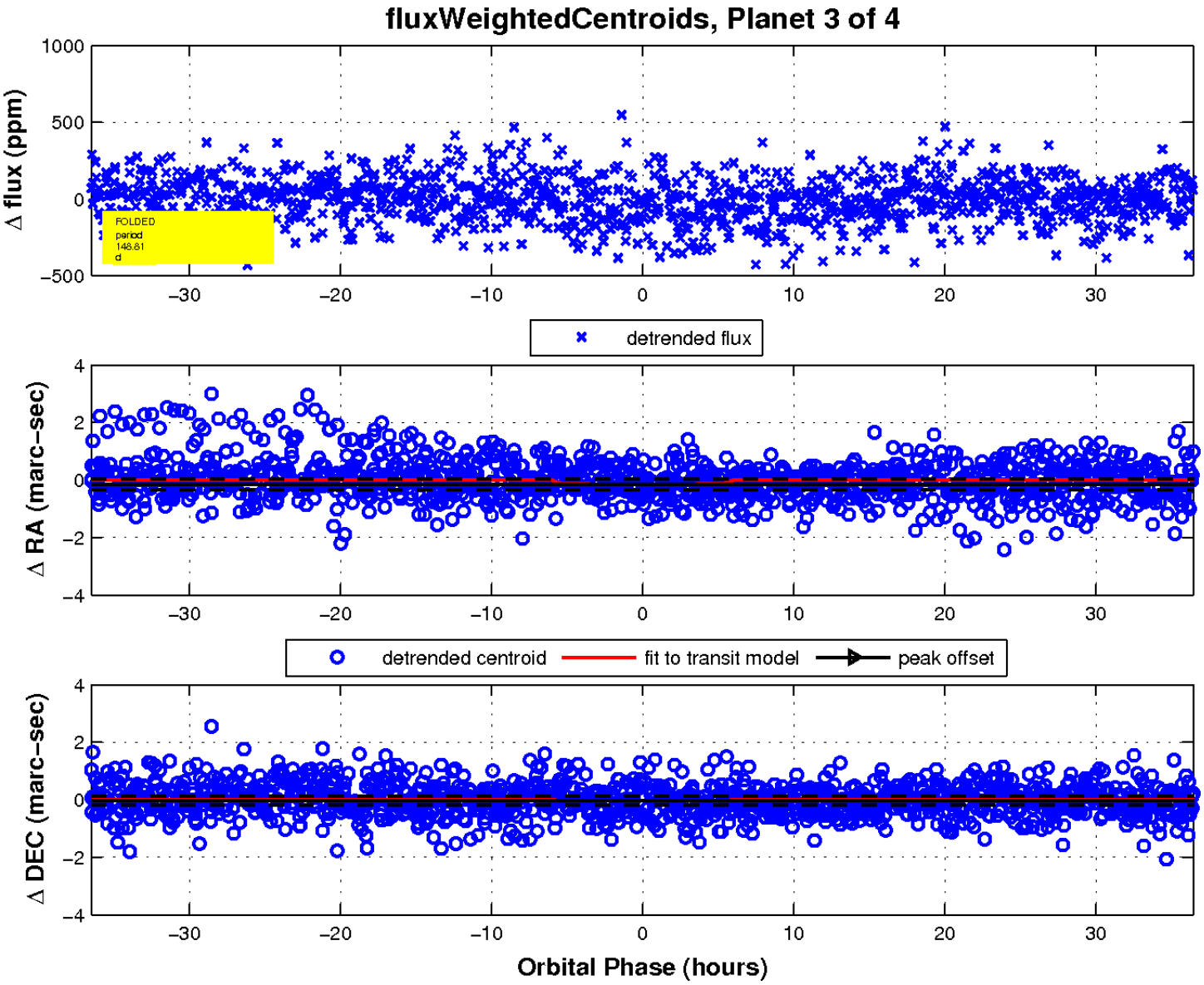
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



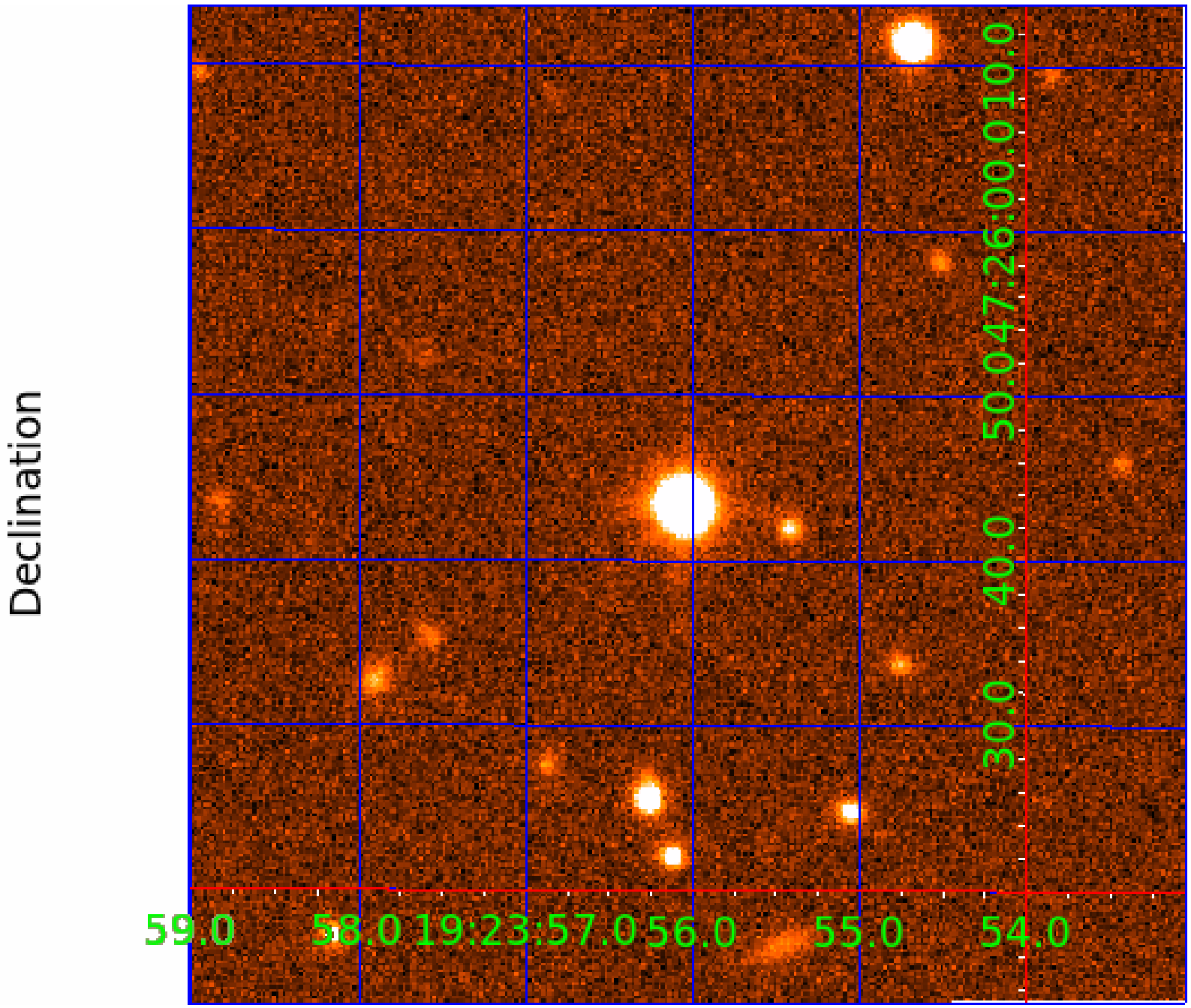
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image


Declination
59.0
58.0
19:23:57.0
56.0
55.0
54.0
30.0
40.0
50.0
47:26:00.0
10.0

KIC 010337323

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 ($S_\oplus$)
010337323-01	OBS	No	3.432686	132.964607	19.8	15.276	11.4	7.6	1.66	7152	0.74	2529.05
010337323-02	OBS	No	282.754965	401.425444	169.6	15.781	11.7	6.3	1.66	7152	2.32	7.06
010337323-03	OBS	No	148.807683	252.914137	174.3	12.186	8.2	6.7	1.66	7152	2.44	16.61
010337323-04	OBS	No	1.715740	131.903914	16.2	12.526	9.9	7.2	1.66	7152	0.78	6375.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010337323-01	OBS	FP	0.00	1	0	0	0	LPP_DV
010337323-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010337323-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
010337323-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_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.

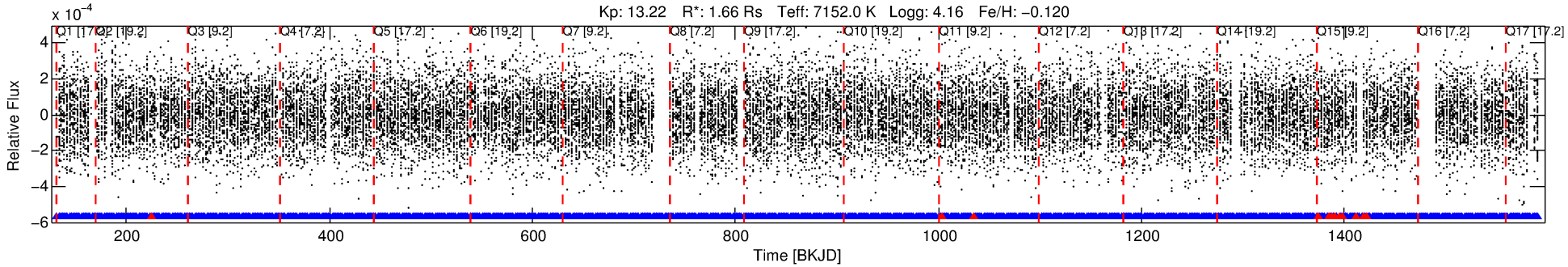
Ephemeris Match Information For 010337323-04

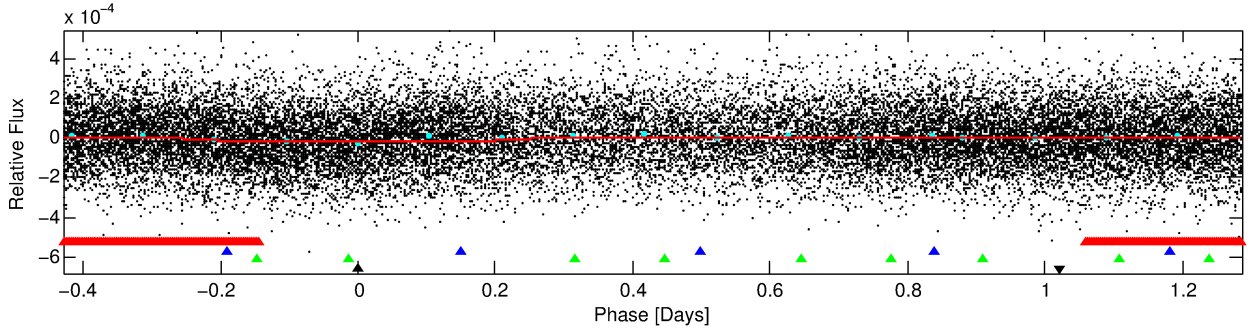
No Significant Match Found

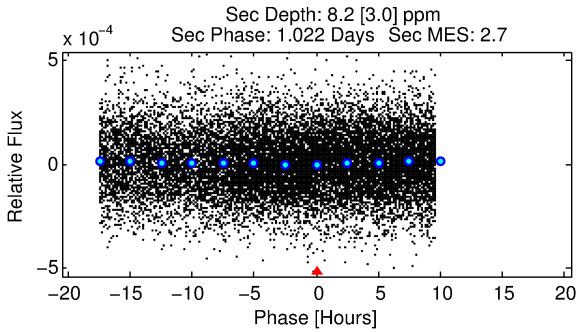
DV One-Page Summary

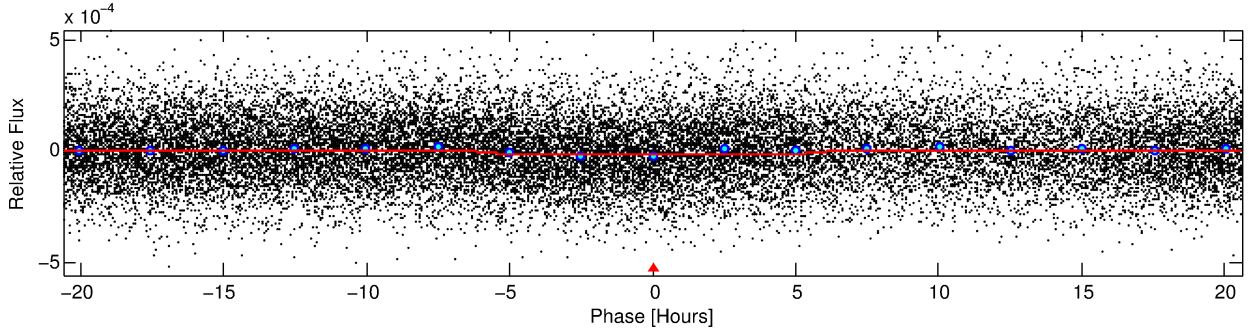
KIC: 10337323 Candidate: 4 of 4 Period: 1.716 d

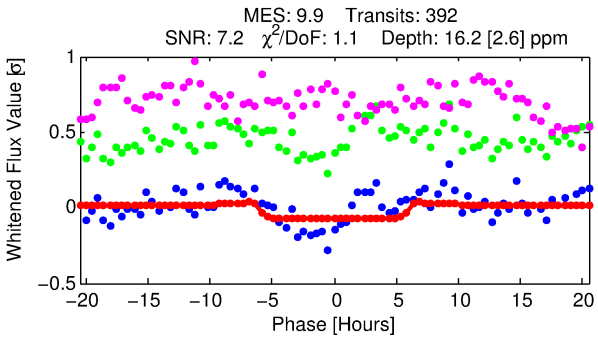
Kp: 13.22 R*: 1.66 Rs Teff: 7152.0 K Logg: 4.16 Fe/H: −0.120

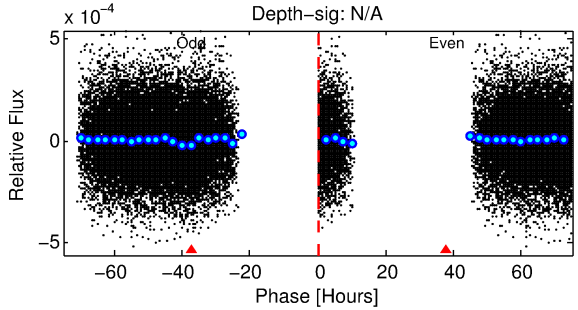


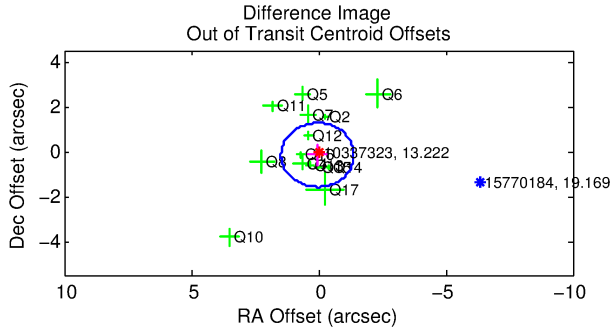












DV Fit Results:

Period = 1.71574 [0.00004] d
Epoch = 131.9039 [0.0133] BKJD
Rp/R* = 0.0043 [0.0017]
a/R* = 1.05 [0.24]
b = 0.90 [0.50]

Seff = 6375.80 [2520.14]
Teq = 2279 [225] K
Rp = 0.77 [0.38] Re
a = 0.0317 [0.0080] AU

Ag = 7.53 [7.04] [0.93σ]
Teffp = 5835 [1285] K [2.73σ]

DV Diagnostic Results:

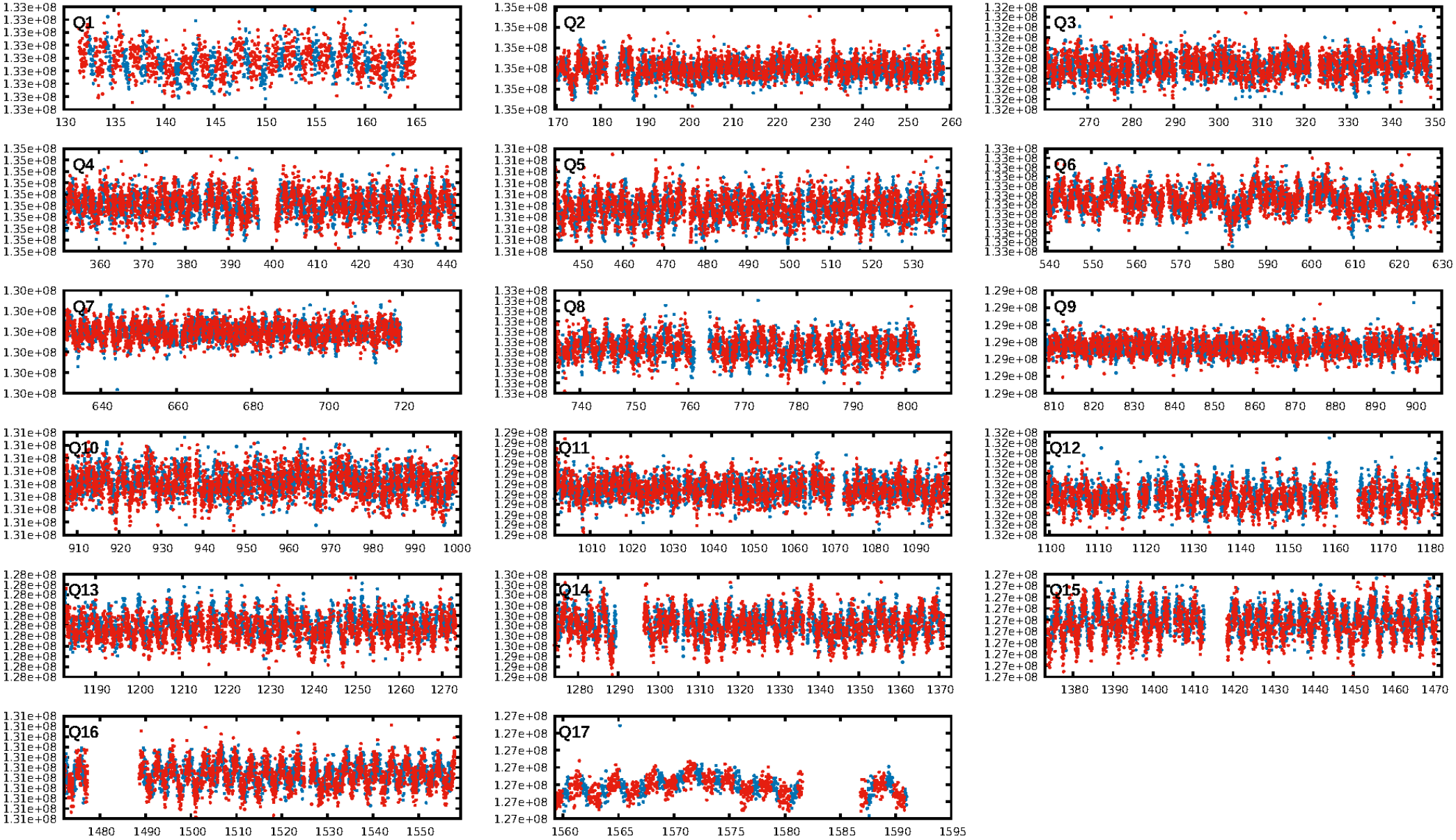
ShortPeriod−sig: N/A
LongPeriod−sig: 96.3% [2.09σ]
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 0.97 [361/373]
GhostDiagnostic−chr: 2.717

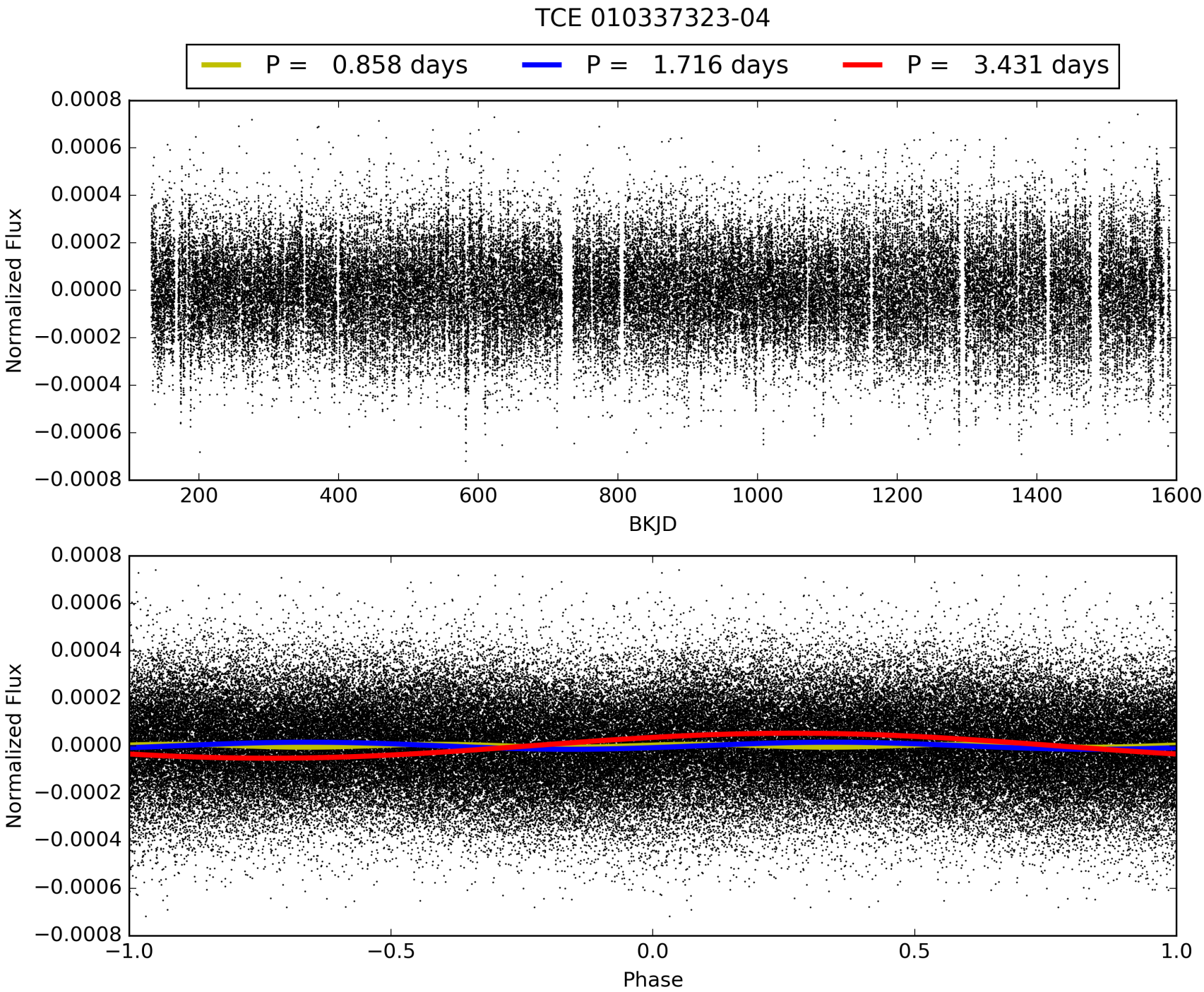
Centroid−sig: 34.3%
Centroid−so: 0.775 arcsec [0.84σ]
OotOffset−rm: 0.164 arcsec [0.34σ]
KicOffset−rm: 0.174 arcsec [0.33σ]
OotOffset−st: 4/3/4/3 [14]
KicOffset−st: 4/3/4/3 [14]
DiffImageQuality−fgm: 0.57 [8/14]
DiffImageOverlap−fno: 0.65 [11/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 12:33:13 Z

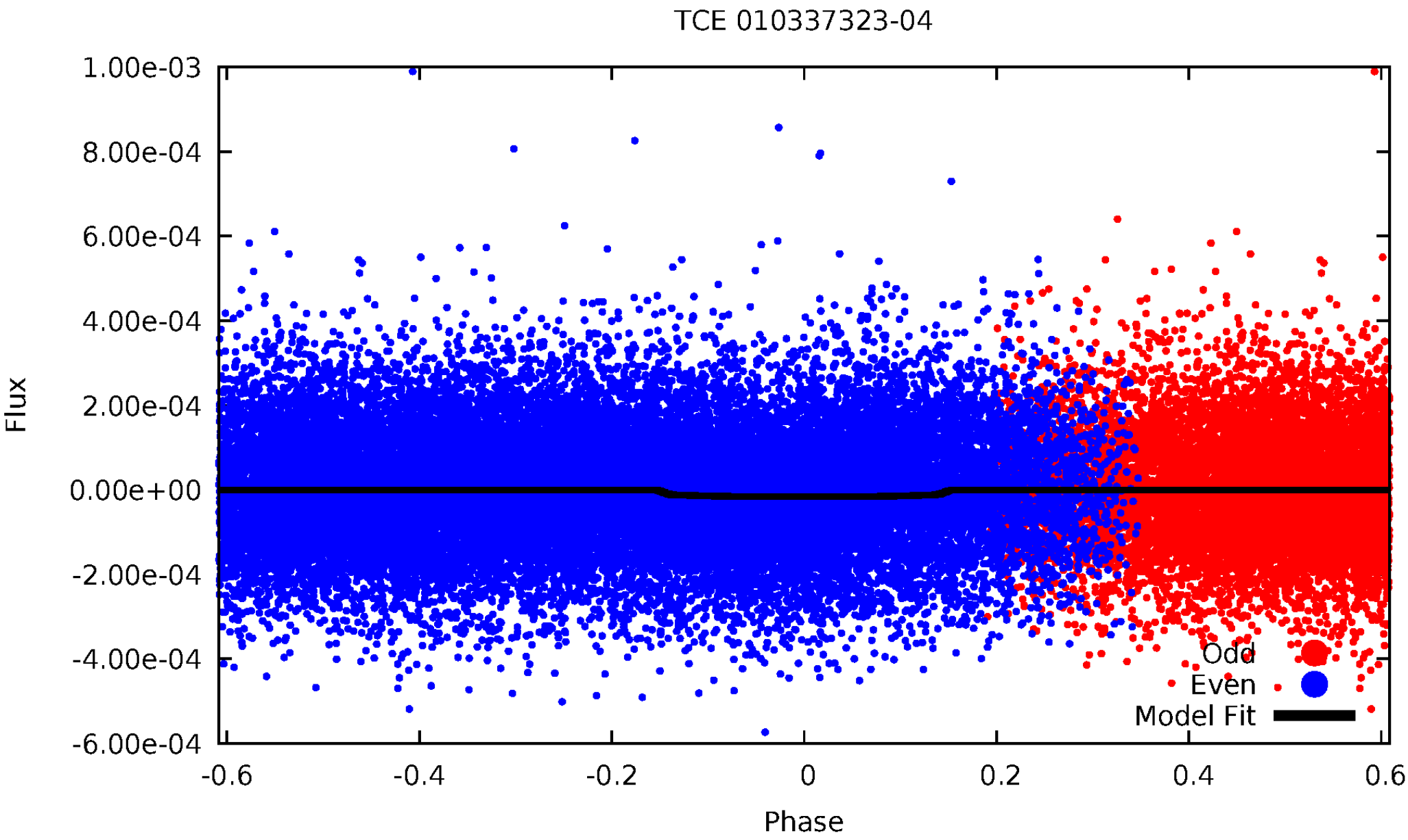
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010337323-04, PDC Light Curves

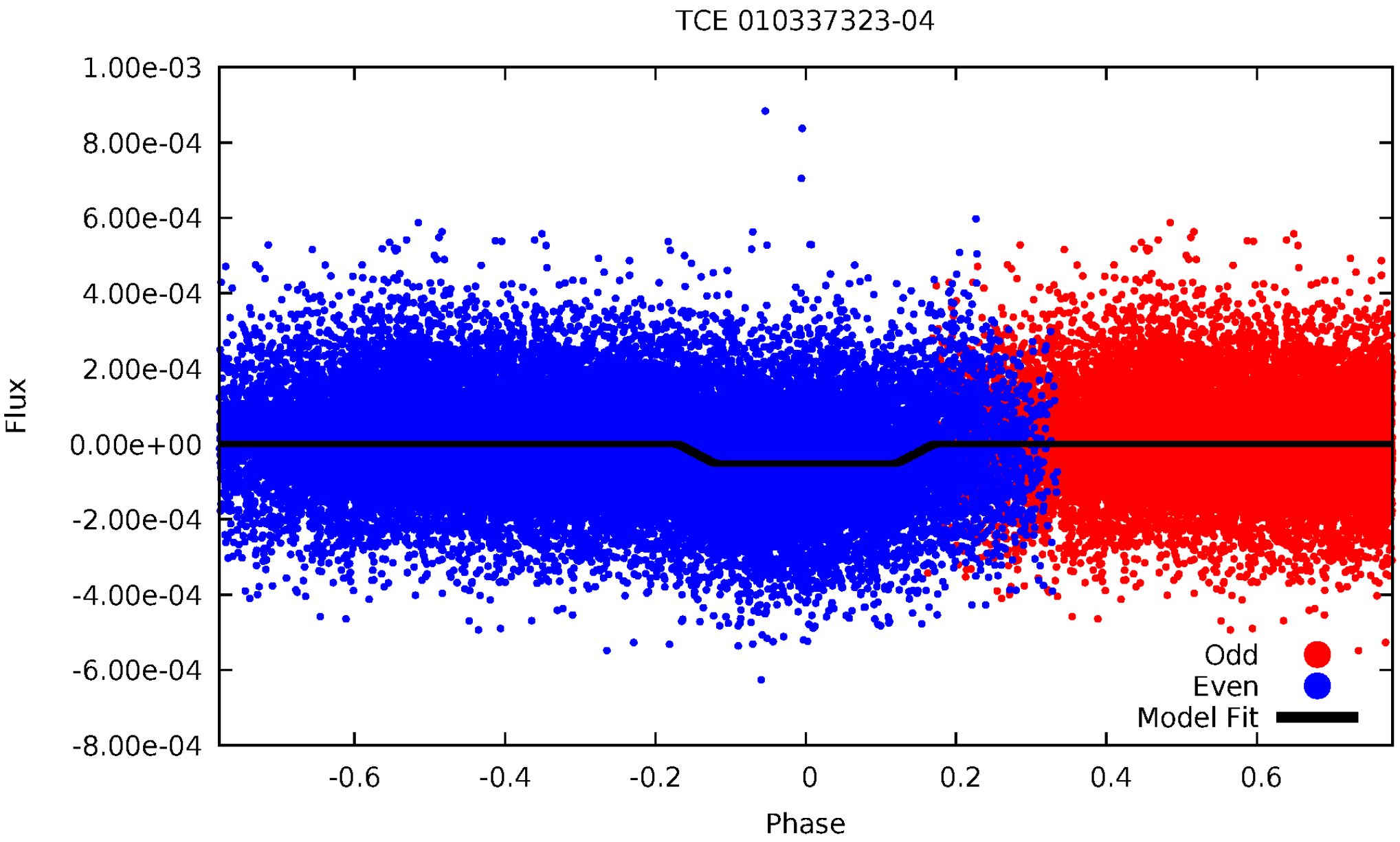



TCE 010337323-04
P = 0.858 days
P = 1.716 days
P = 3.431 days
Normalized Flux
BKJD
Normalized Flux
Phase

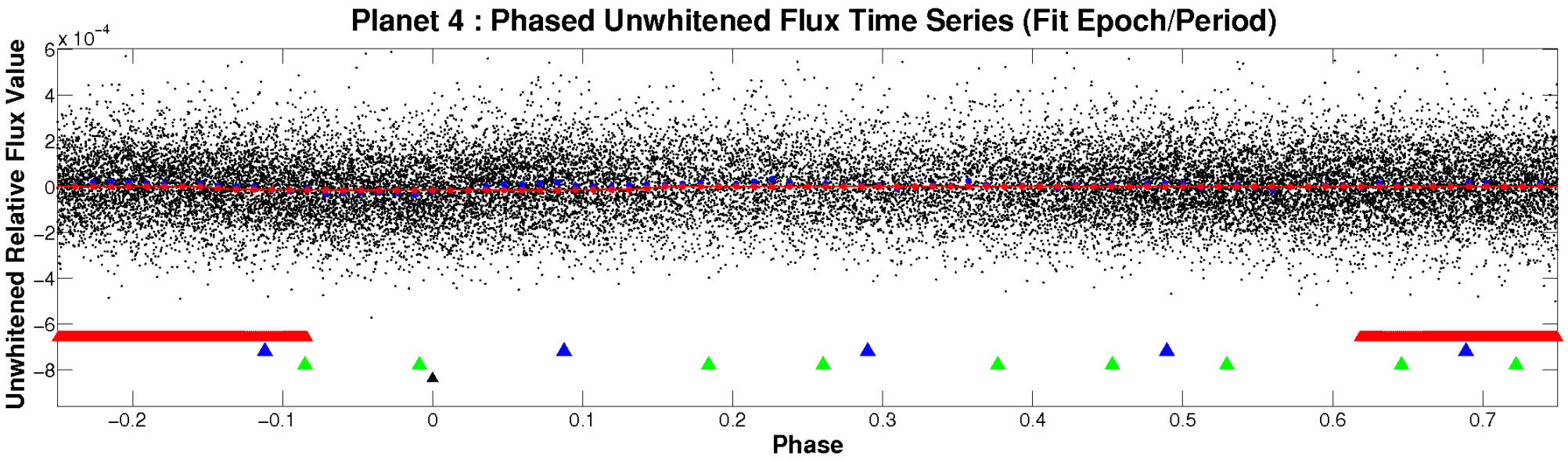
DV Odd/Even

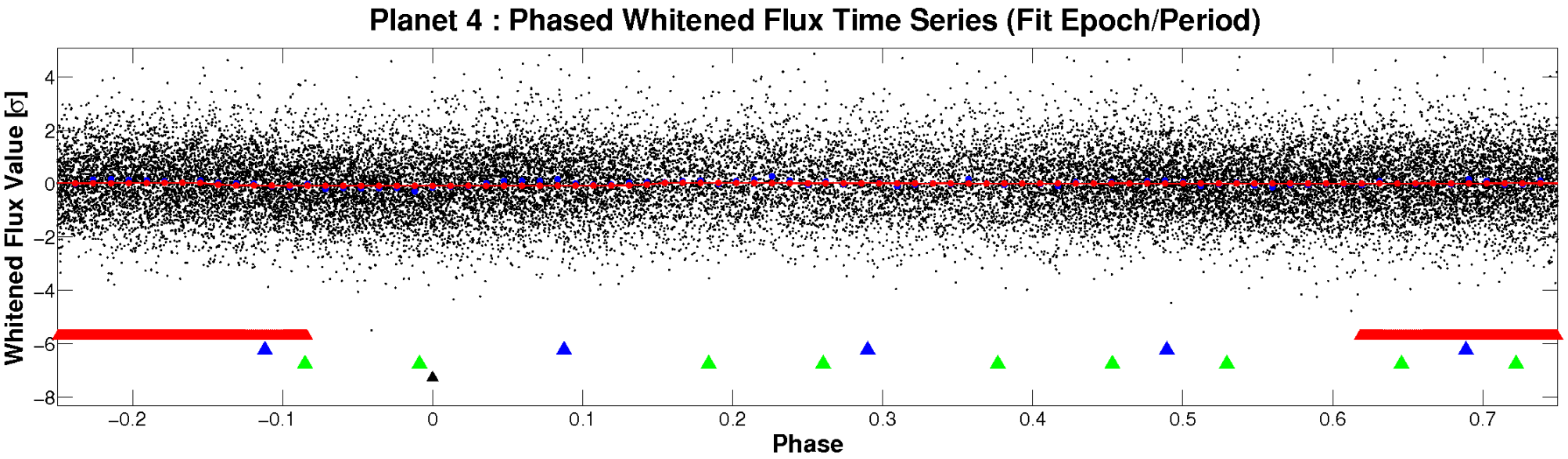

TCE 010337323-04
1.00e-03
8.00e-04
6.00e-04
4.00e-04
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
Flux
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 010337323-04
1.00e-03
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
Flux
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
Phase
Odd
Even
Model Fit

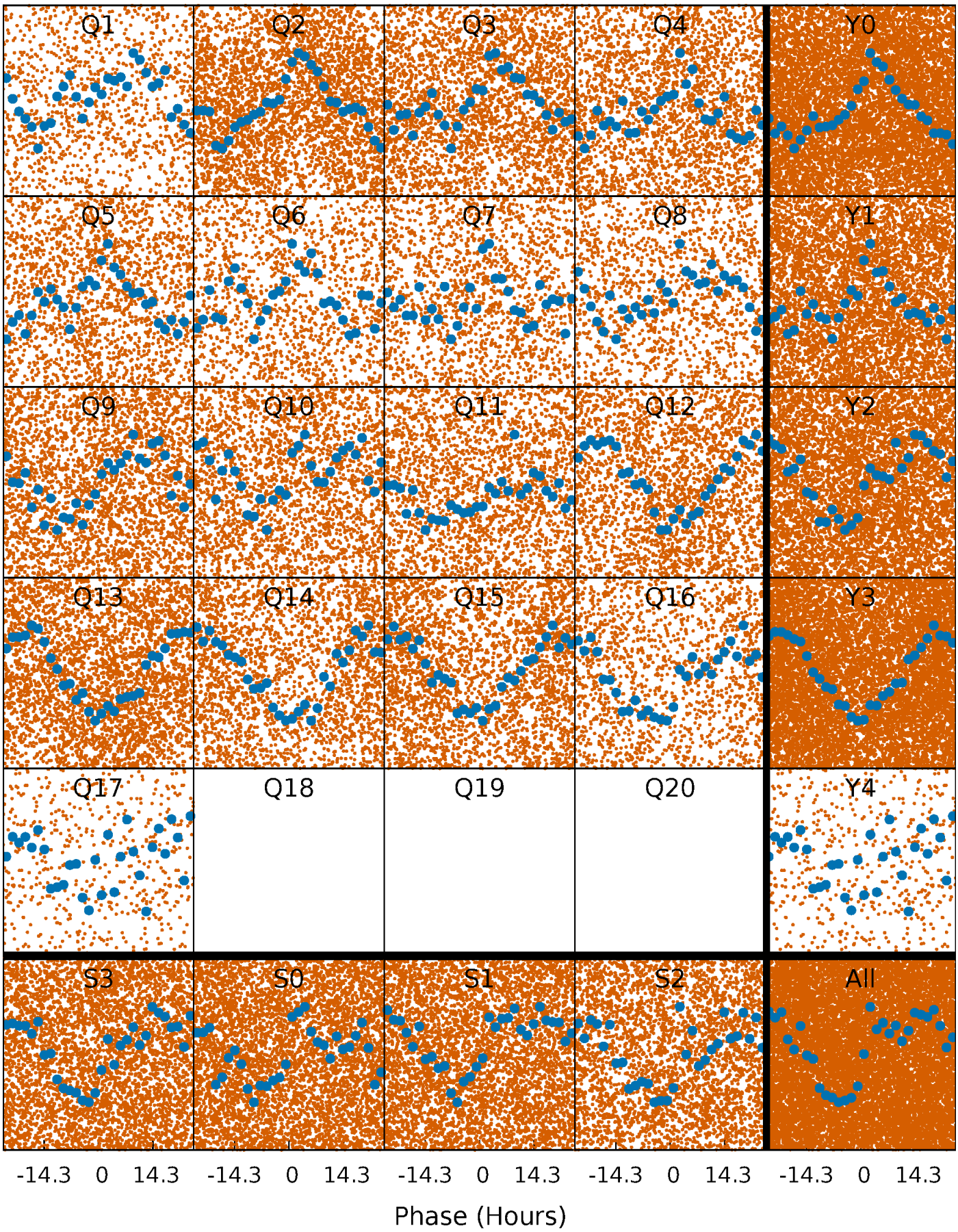
Non-Whitened Vs. Whitened Light Curve





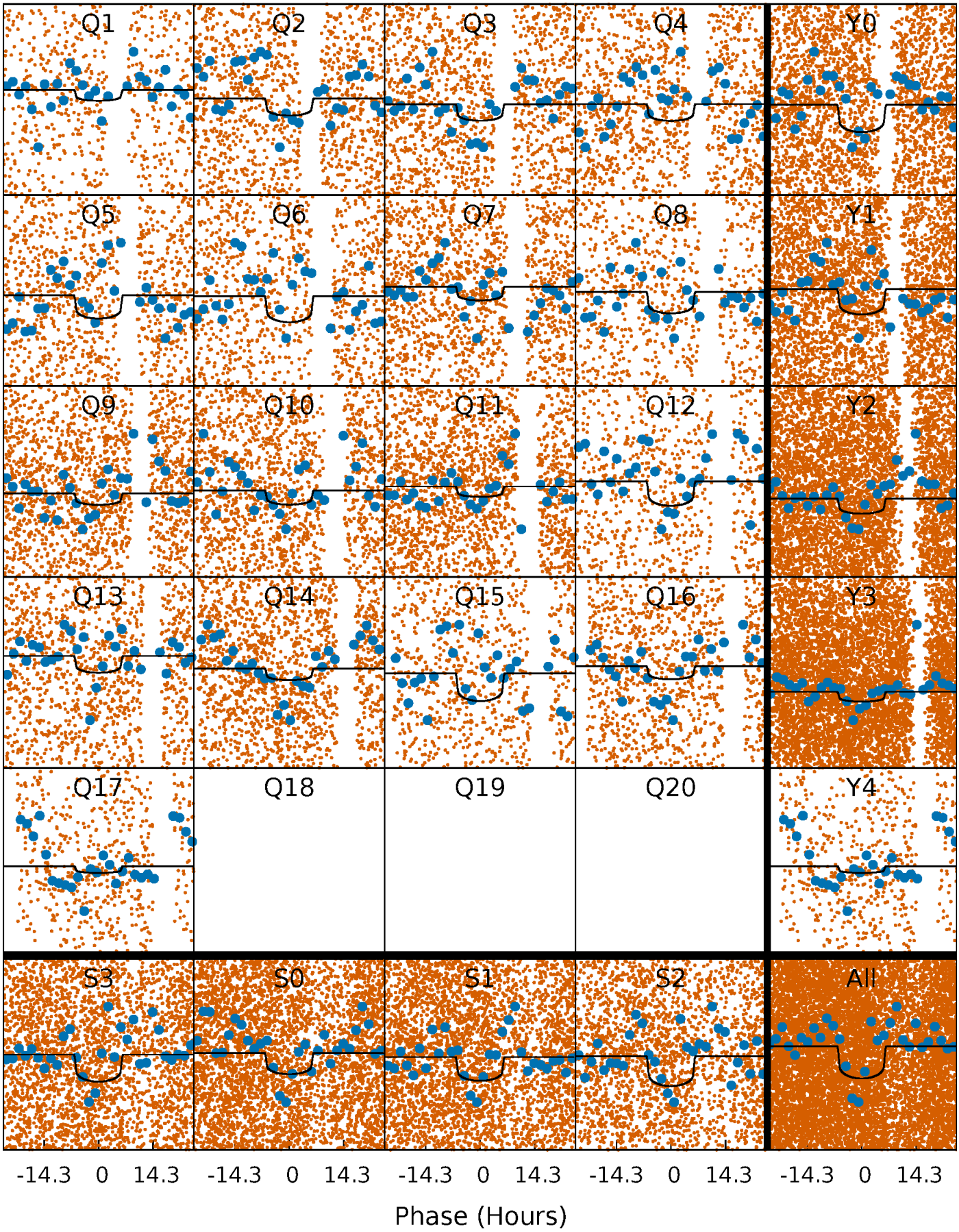
PDC Quarter-Phased Transit Curves

TCE 010337323-04 P= 1.715740 Days T_0=131.903914 (BKJD)



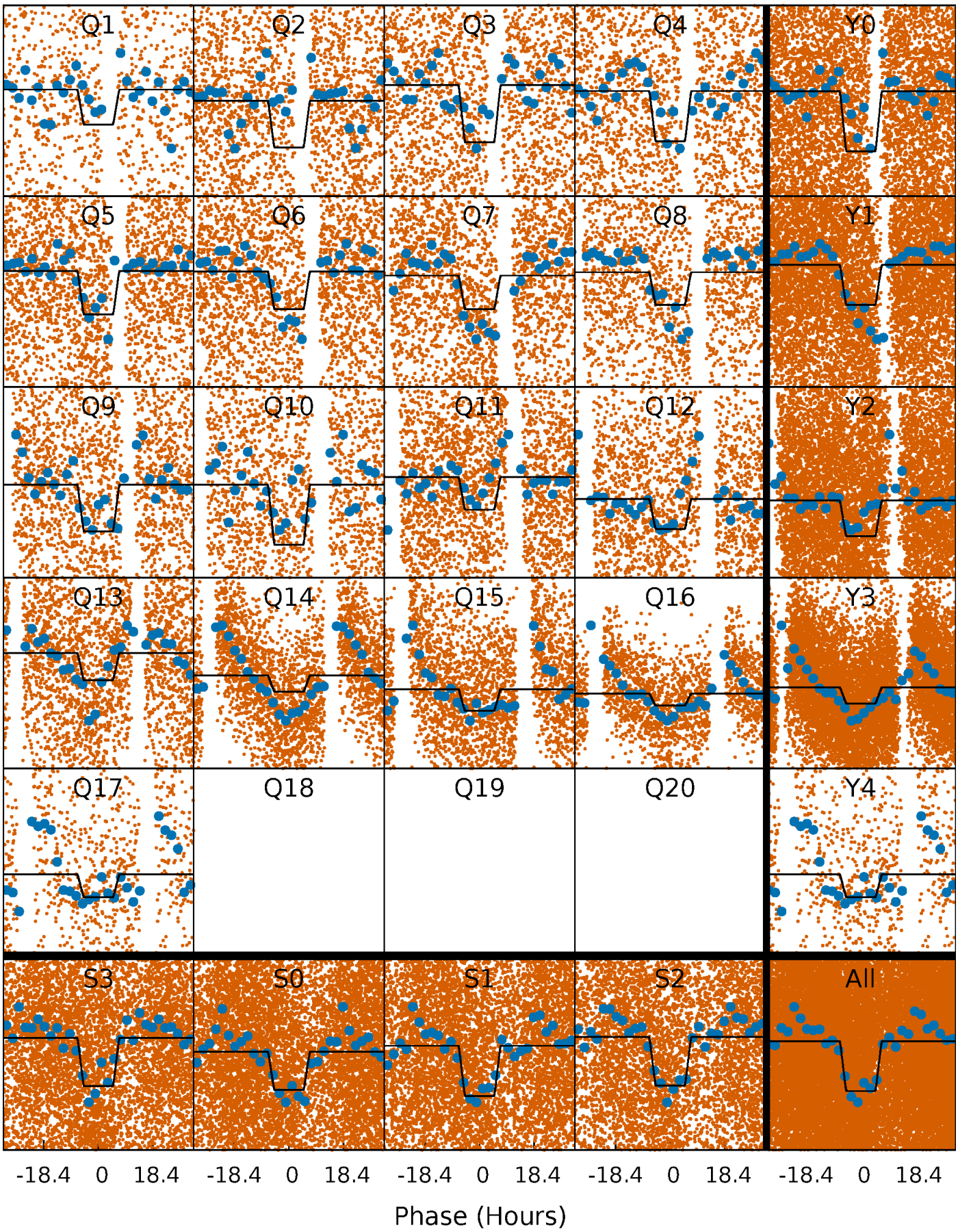
DV Quarter-Phased Transit Curves

TCE 010337323-04 P= 1.715740 Days T_0=131.903914 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

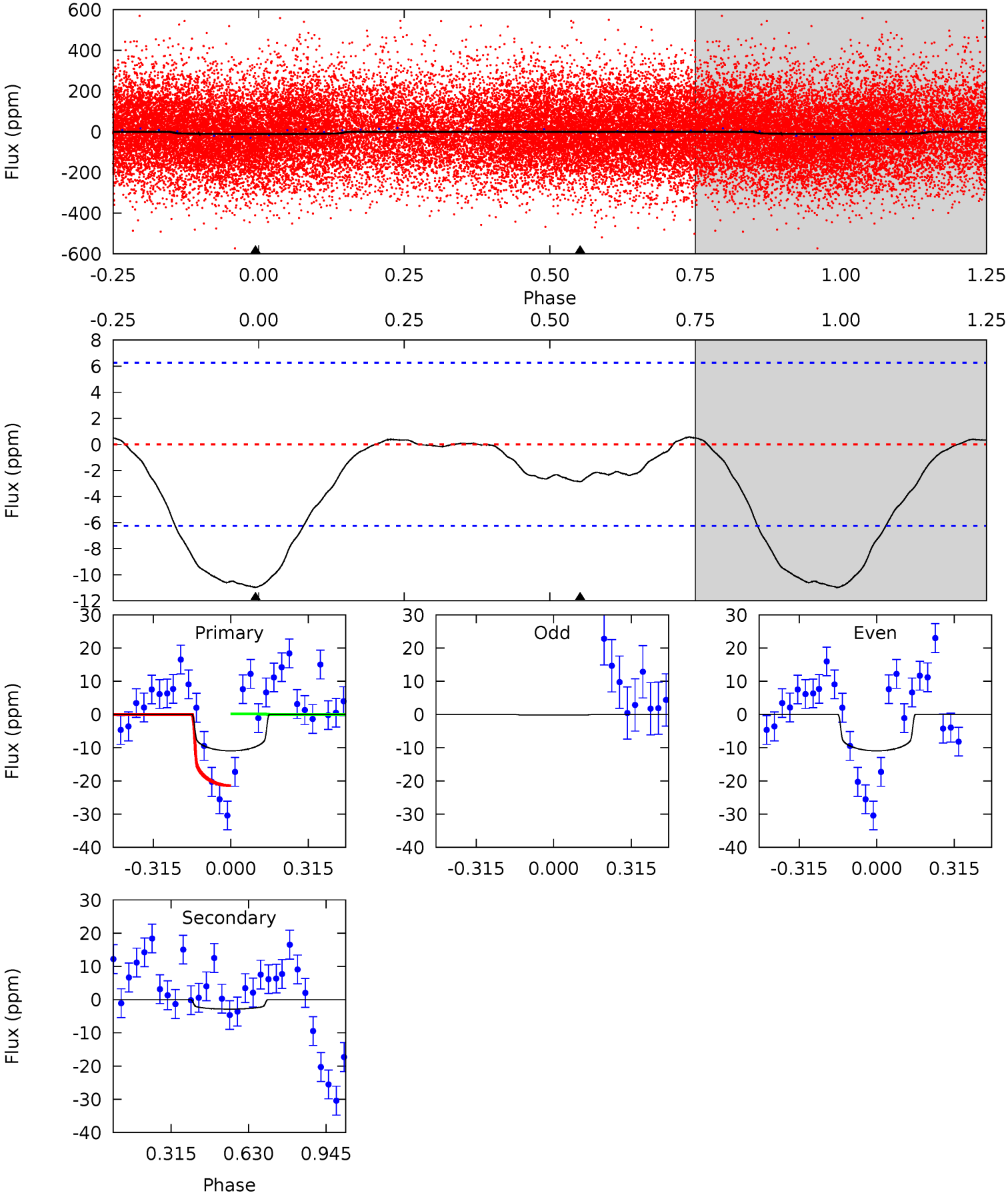
TCE 010337323-04 P= 1.715709 Days T_0=131.952731 (BKJD)



DV Model-Shift Uniqueness Test

010337323-04, P = 1.715740 Days, E = 130.188174 Days

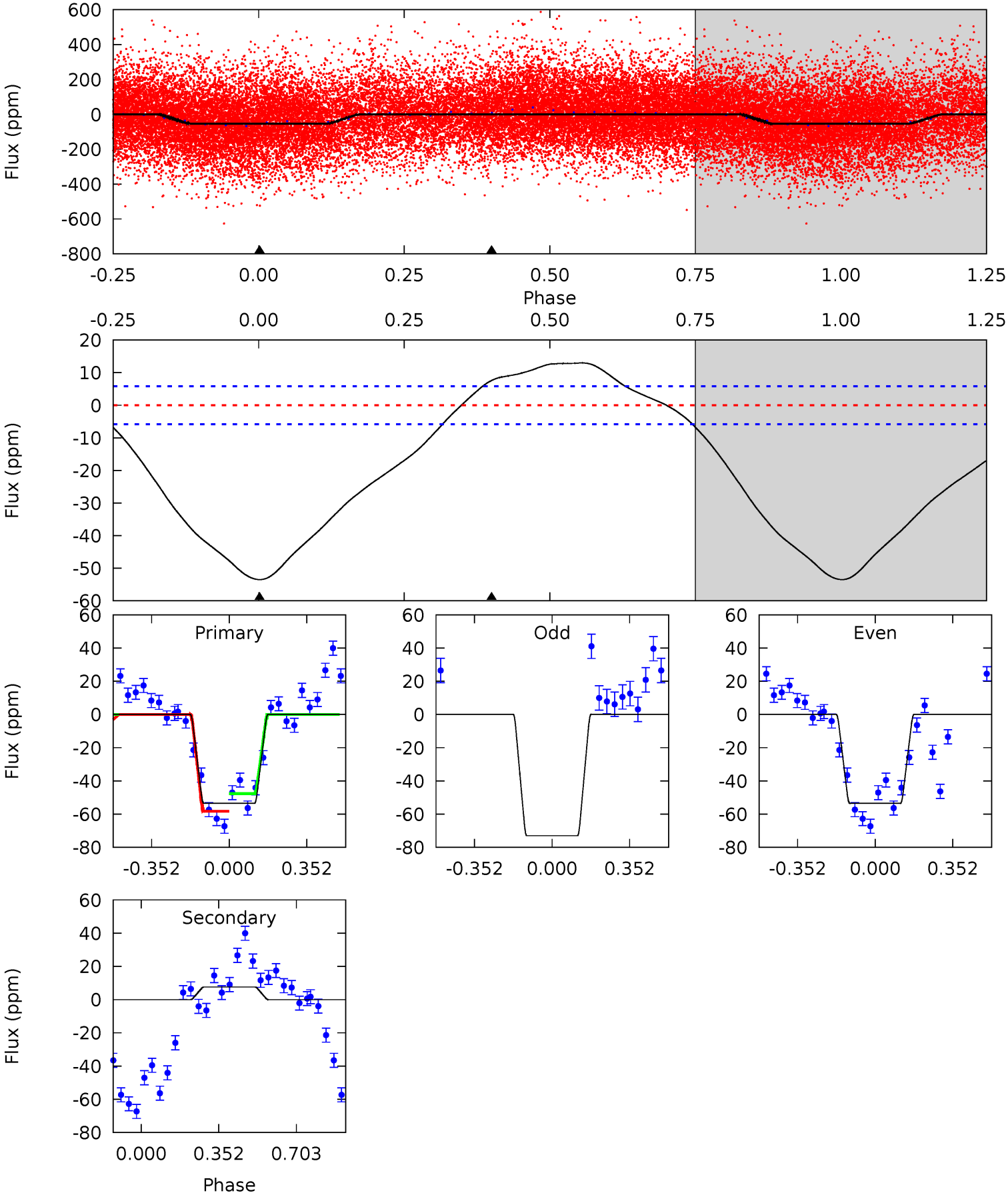
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.56	1.97	0	0	4.32	1.00	0.15	7.56	7.56	1.97	1.97	4.16	0.89	0.05	7.31



Alt Model-Shift Uniqueness Test

010337323-04, P = 1.715709 Days, E = 130.237022 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.5	-5.61	0	0	4.29	0.93	1.89	39.5	39.5	-5.61	-5.61	0.66	1.09	0.20	3.69



Stellar Parameters For KIC 010337323

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7152^{+175}_{-300}	$4.161^{+0.128}_{-0.192}$	$-0.120^{+0.250}_{-0.350}$	$1.655^{+0.504}_{-0.336}$	$1.450^{+0.209}_{-0.232}$	$0.451^{+0.286}_{-0.236}$
	+2%/-4%	+3%/-5%	+208%/-292%	+30%/-20%	+14%/-16%	+64%/-52%
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 010337323-04 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3±1	$0.80^{+0.34}_{-0.31}$	3198^{+237}_{-220}	4365^{+1189}_{-844}	$2.223^{+4.270}_{-1.399}$
Alt.	8±1	$1.36^{+0.38}_{-0.34}$	3205^{+248}_{-203}	-4617^{+366}_{-540}	$-2.306^{+0.998}_{-1.764}$

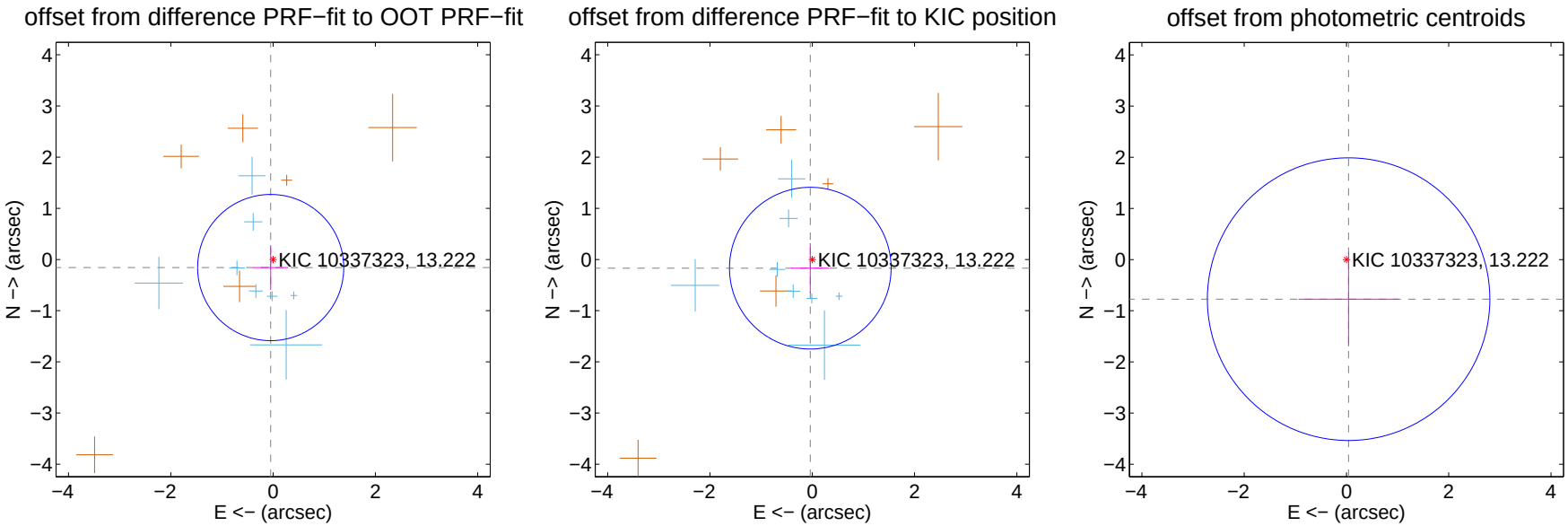
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

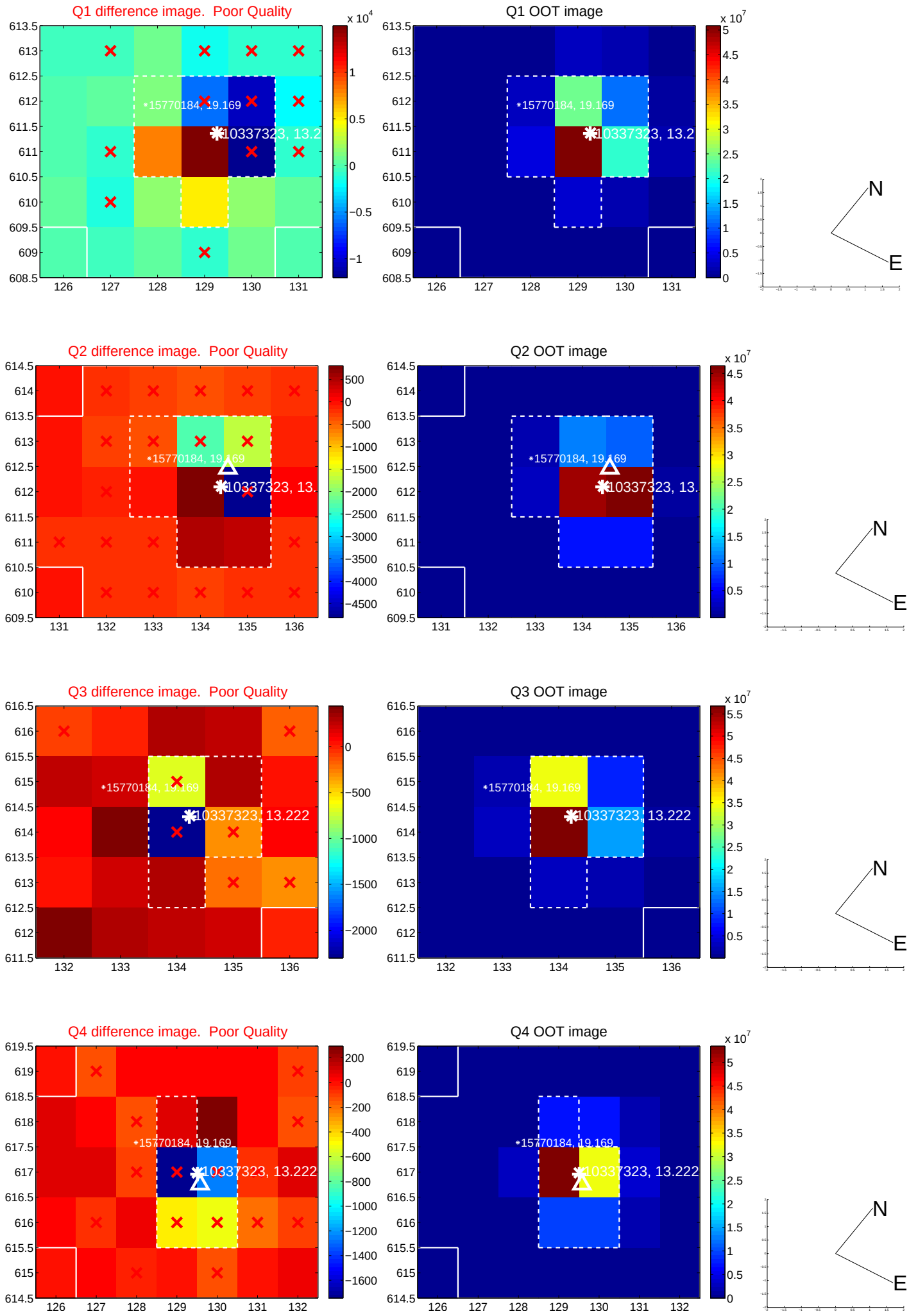
Supplemental centroid analysis for 010337323-04. Kepler magnitude: 13.22. Transit SNR 7.23
There are 8 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.164 ± 0.476	0.34	0.047 ± 0.345	-0.157 ± 0.438
PRF-fit source offset from KIC position	0.174 ± 0.527	0.33	0.039 ± 0.373	-0.169 ± 0.488
photometric centroid source offset	0.77 ± 0.92	0.84	-0.04 ± 0.98	-0.77 ± 0.92

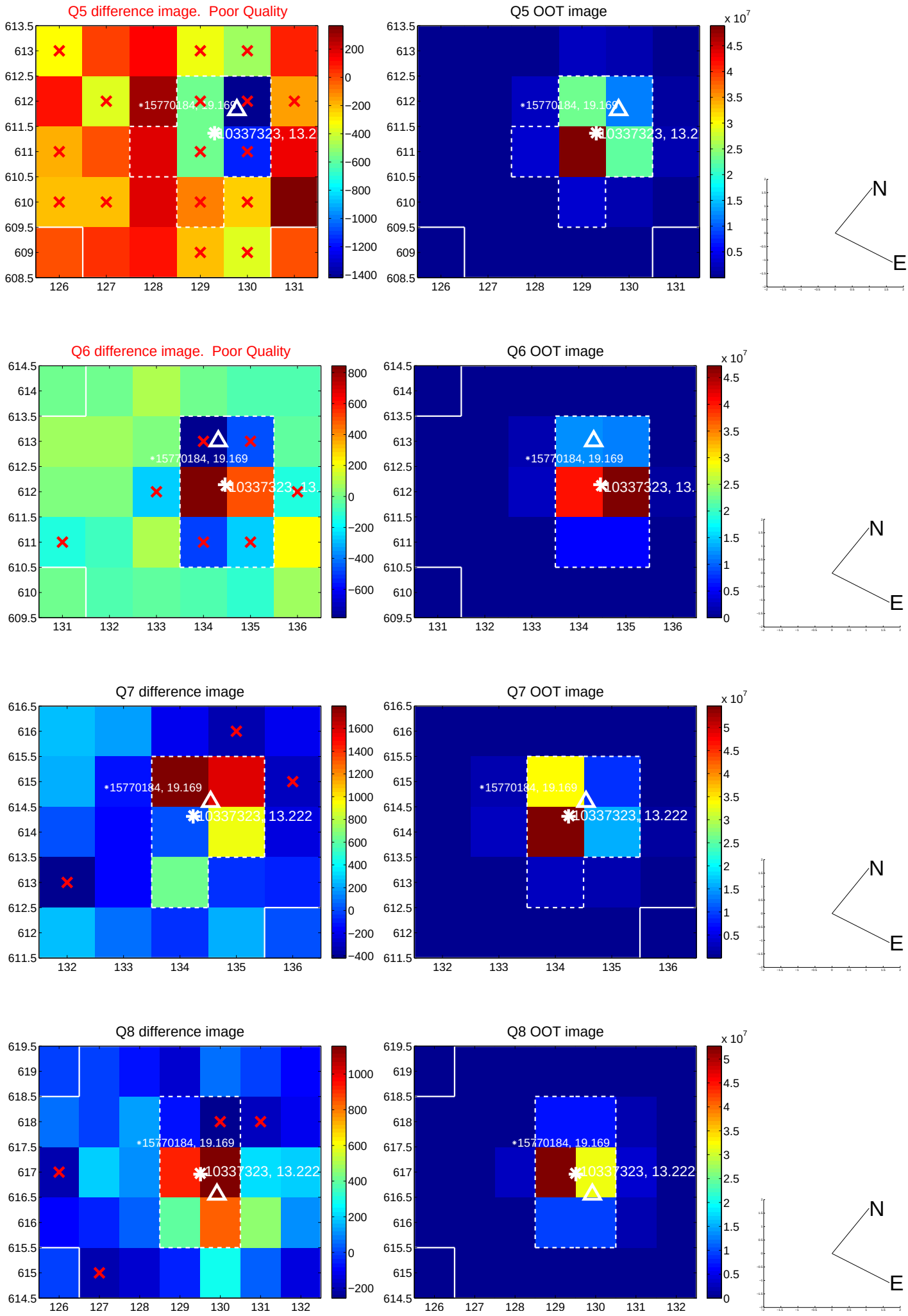


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

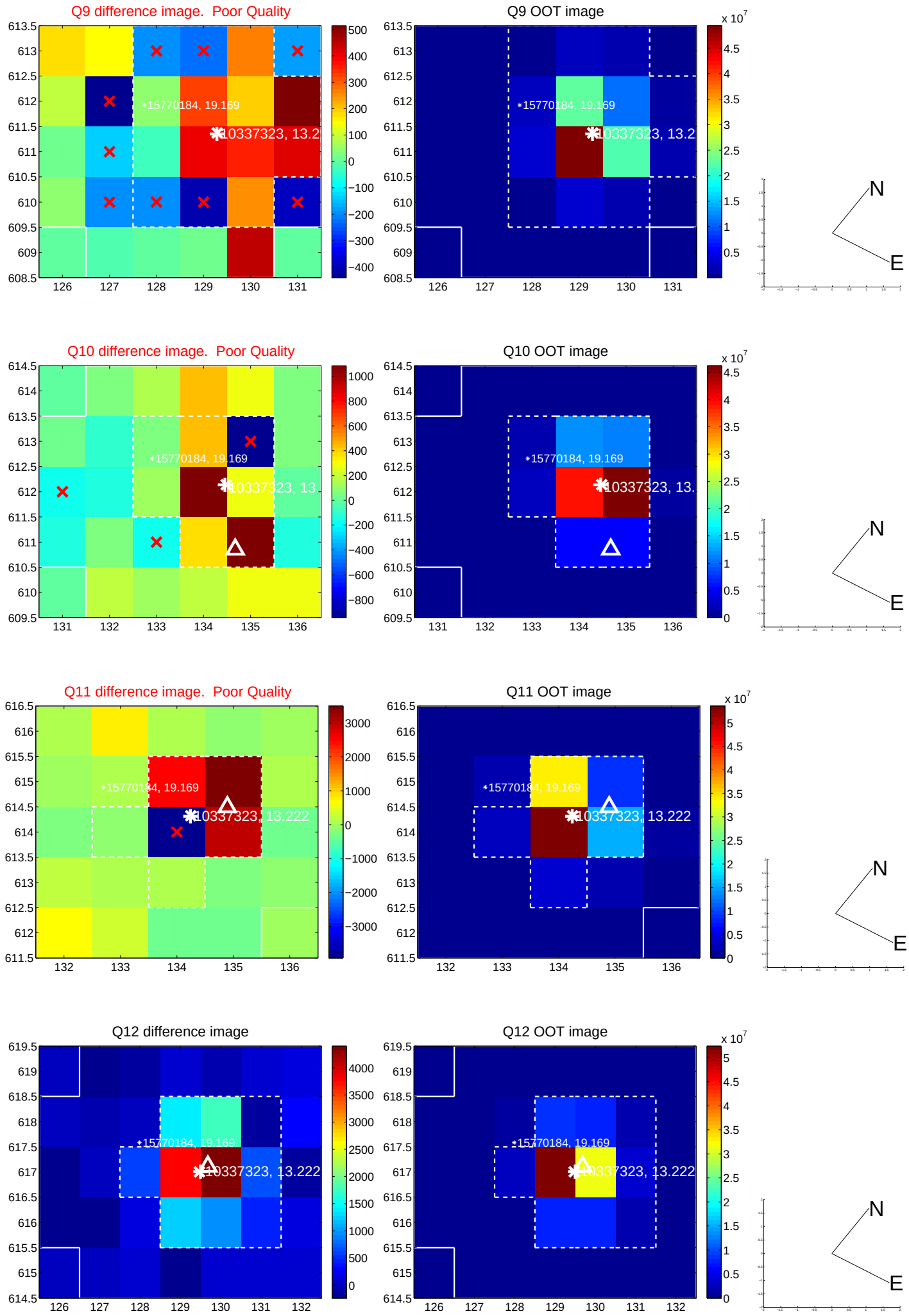
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



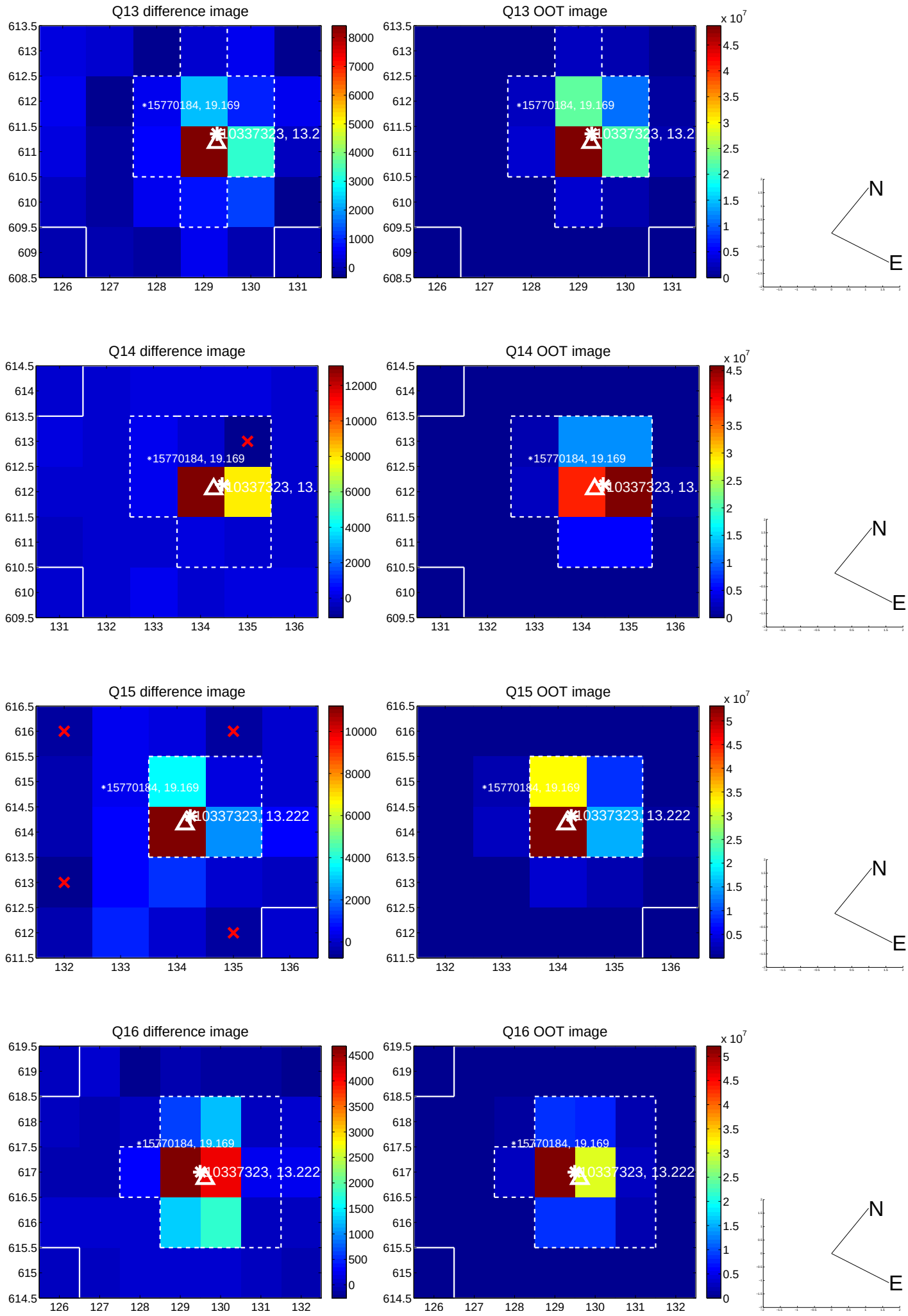
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



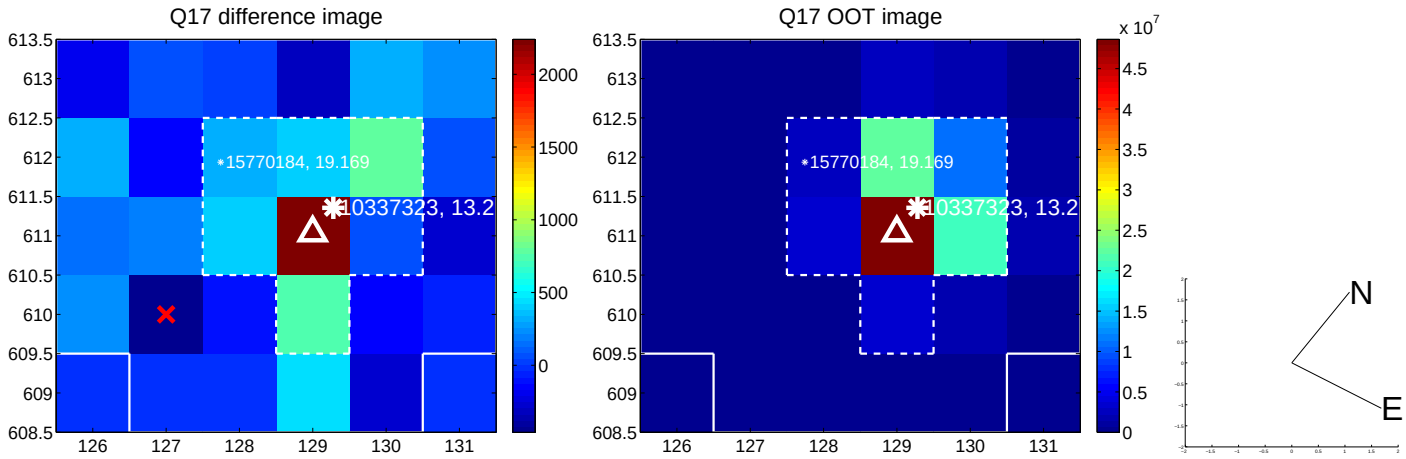
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

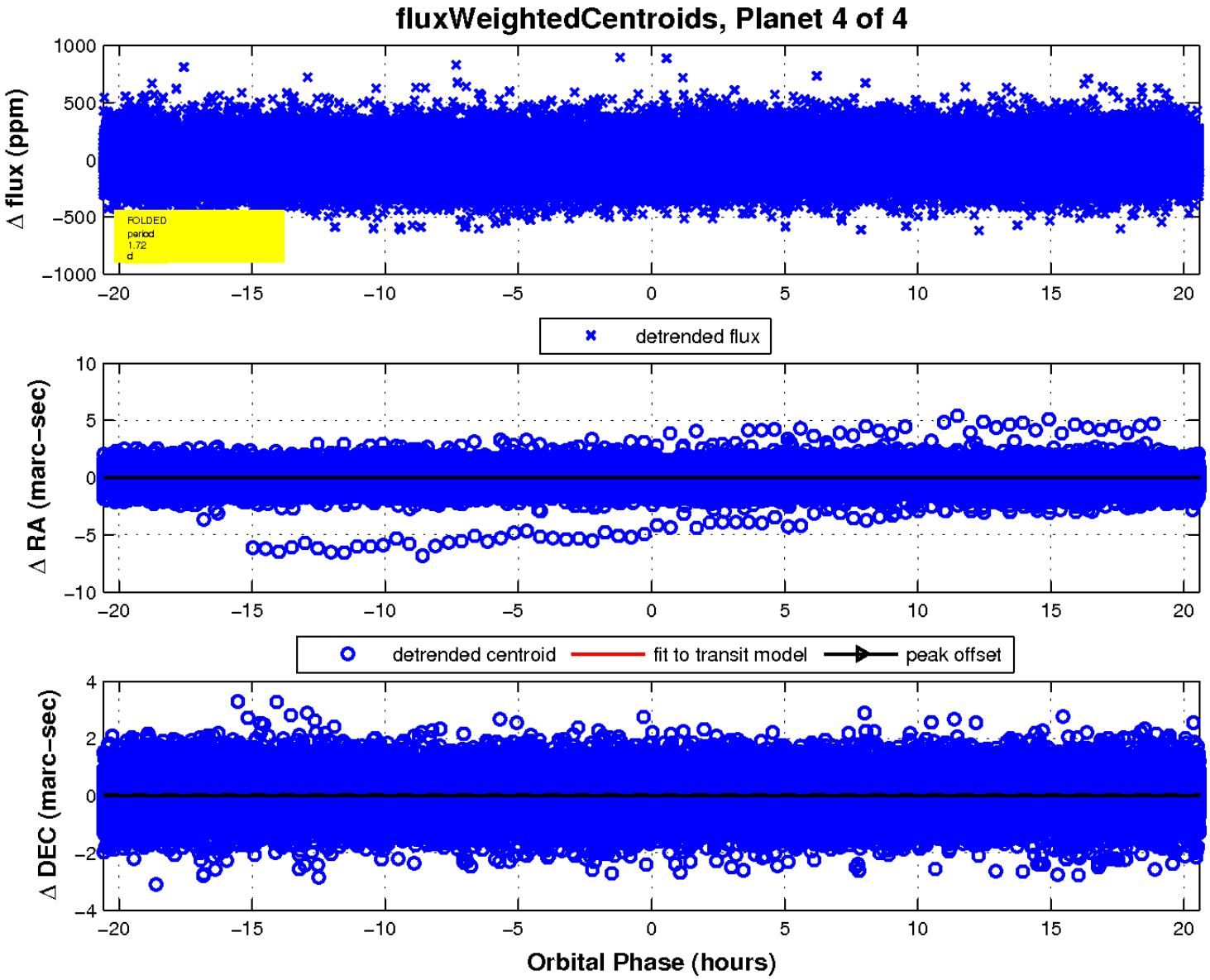


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

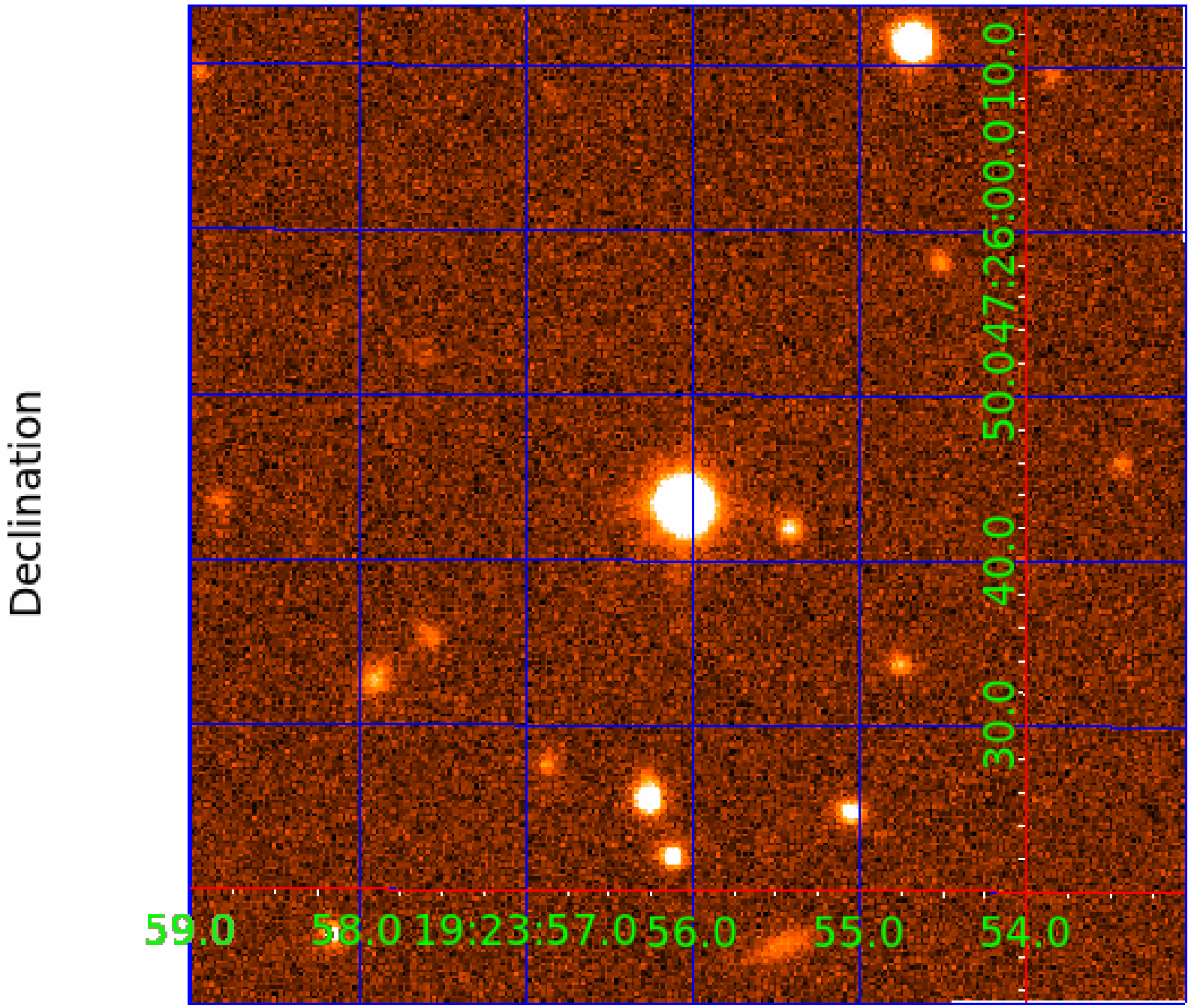


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image


Declination
59.0
58.0
19:23:57.0
56.0
55.0
54.0
30.0
40.0
50.0
47:26:00.0
10.0