KIC 006594972

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 ($S_\oplus$)
006594972-01	OBS	6737.01	10.819152	132.988277	435492.6	3.000	20156.5	-1.0	0.99	5955	54.07	123.84
006594972-02	OBS	No	5.409587	132.909920	101896.4	5.041	4716.8	4421.6	0.99	5955	34.23	312.07
006594972-03	OBS	No	208.907100	228.856480	2873.6	60.690	12.1	12.4	0.99	5955	9.88	2.39
006594972-04	OBS	No	494.676265	557.210200	643.1	16.711	9.8	3.8	0.99	5955	2.62	0.76
006594972-05	OBS	No	571.237089	373.855886	1504.2	29.355	8.6	7.8	0.99	5955	5.36	0.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006594972-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
006594972-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
006594972-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006594972-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006594972-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—ALL_TRANS_CHASES—MOD_TER_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

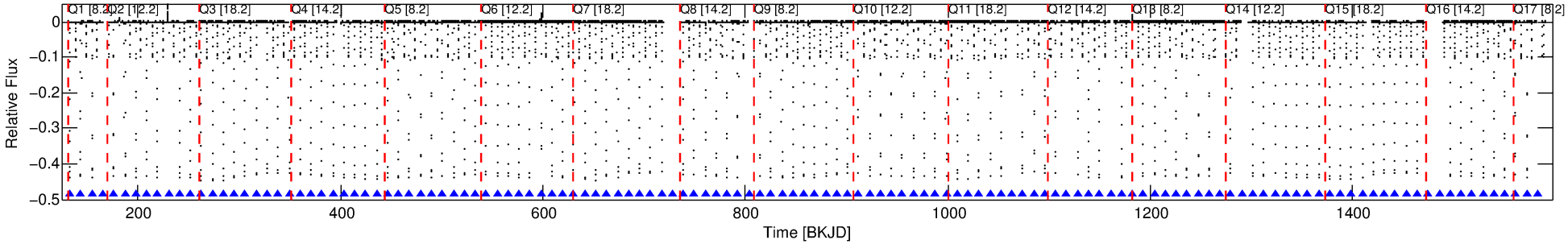
Ephemeris Match Information For 006594972-01

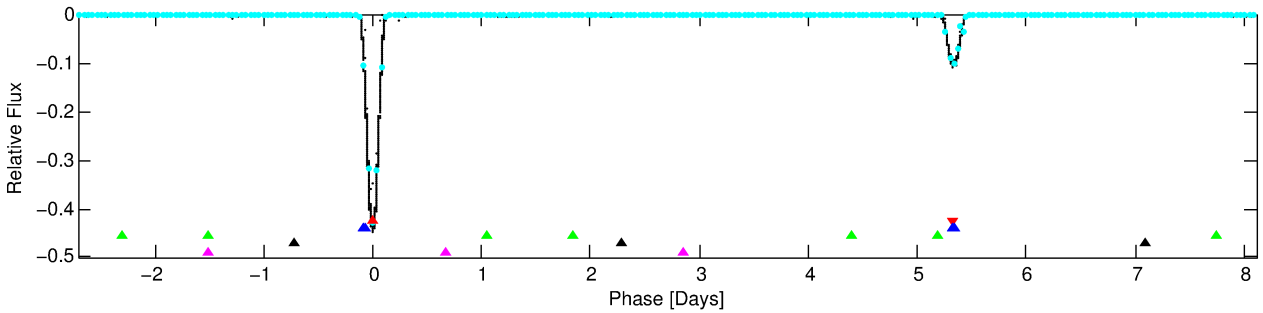
No Significant Match Found

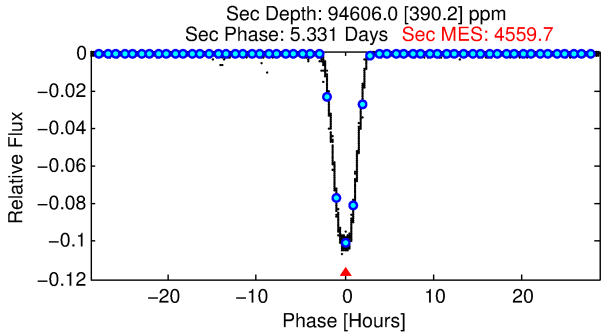
DV One-Page Summary

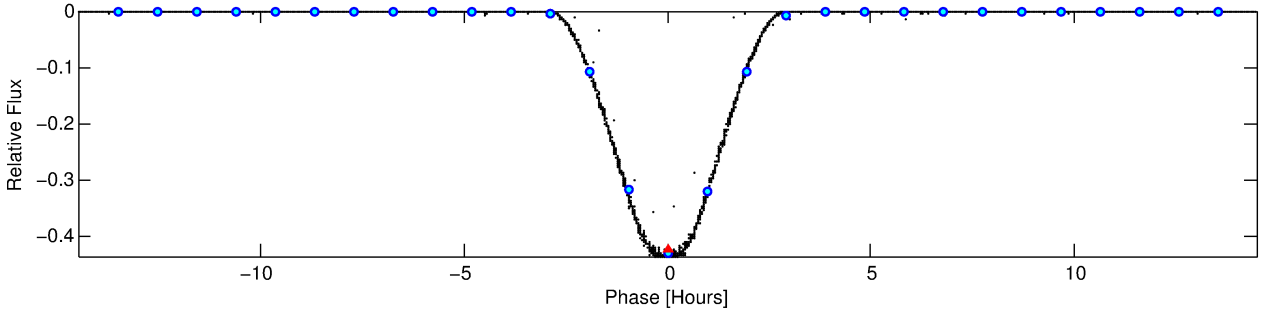
KIC: 6594972 Candidate: 1 of 5 Period: 10.819 d
KOI: K06737 Corr: No Ephemeris Match

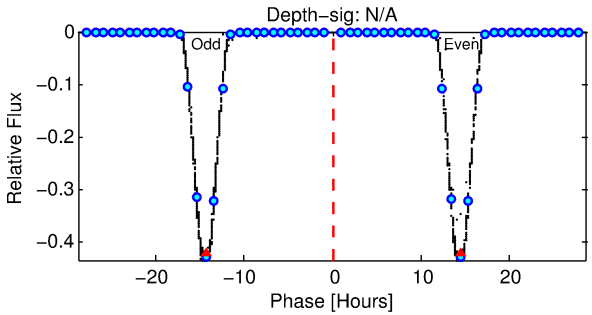
Kp: 14.34 R*: 0.99 Rs Teff: 5955.0 K Logg: 4.43 Fe/H: −0.200

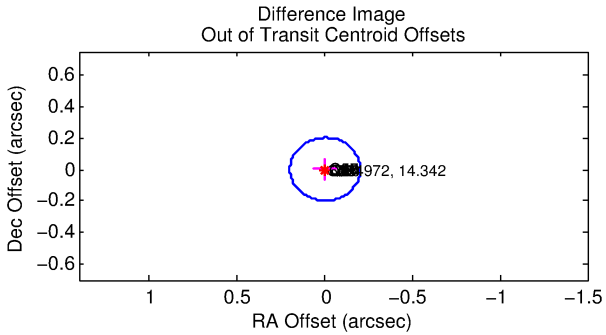












TPS TCE Results:

Period = 10.81915 d
Epoch = 132.9883 BKJD

DV fit results are unavailable

DV Diagnostic Results:

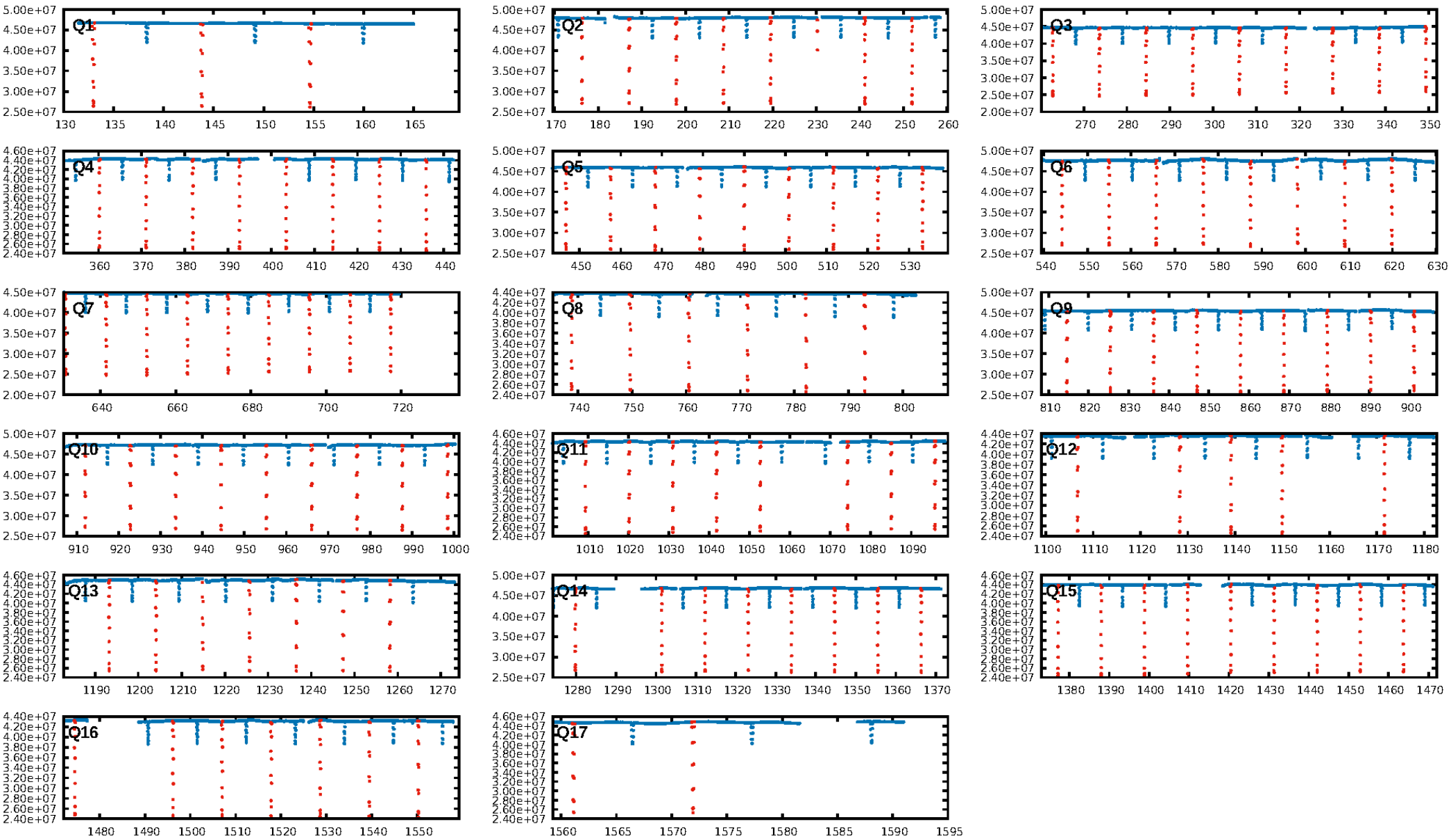
ShortPeriod−sig: 100.0% [22.13σ]
LongPeriod−sig: 100.0% [78.24σ]
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [118/118]
GhostDiagnostic−chr: 2.839

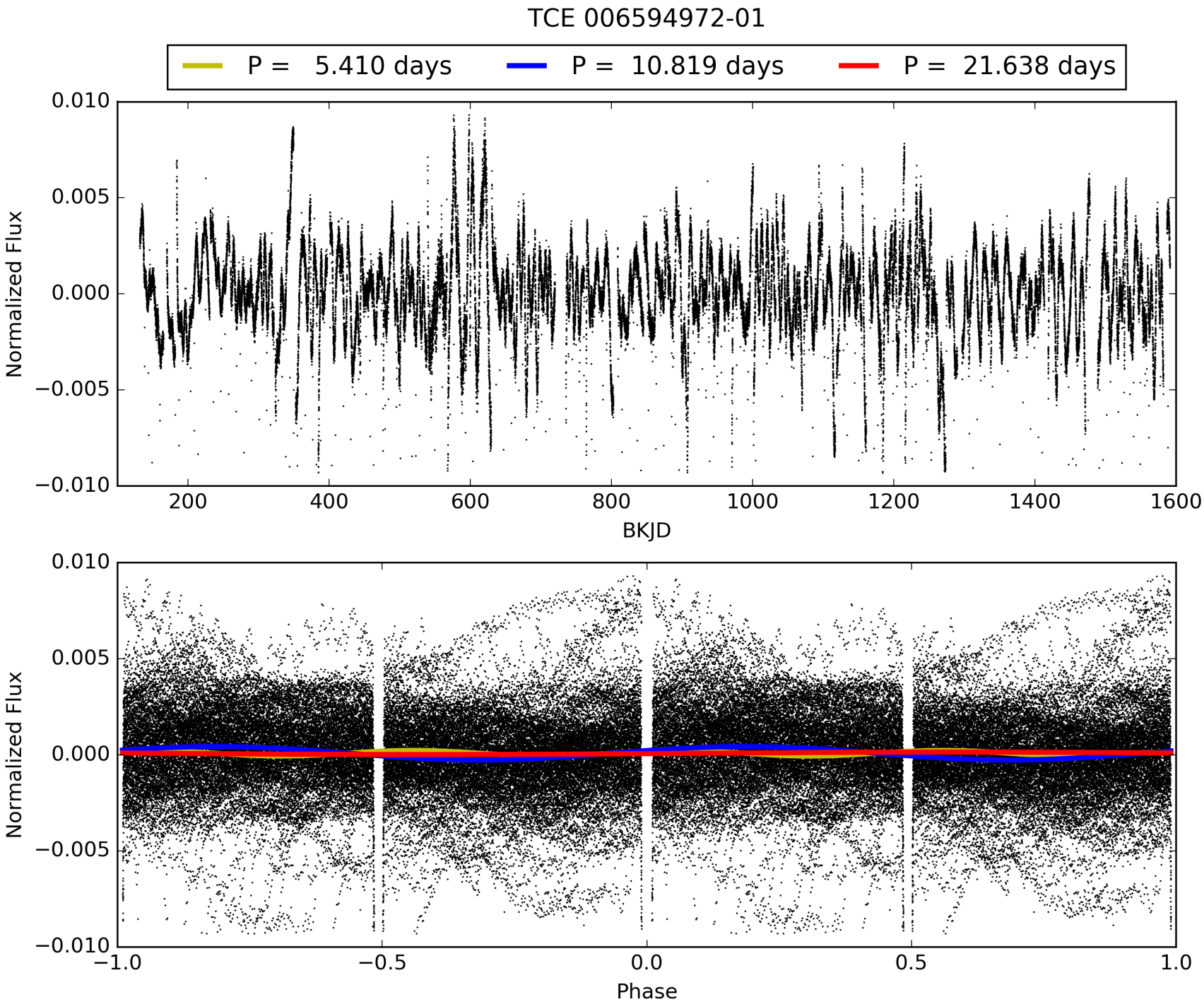
Centroid−sig: 0.0%
Centroid−so: 0.060 arcsec [148.37σ]
OotOffset−rm: 0.005 arcsec [0.07σ]
KicOffset−rm: 0.090 arcsec [1.28σ]
OotOffset−st: 4/4/4/5 [17]
KicOffset−st: 4/4/4/5 [17]
DiffImageQuality−fgm: 1.00 [17/17]
DiffImageOverlap−fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 −− Date Generated: 02−Feb−2016 01:03:46 Z

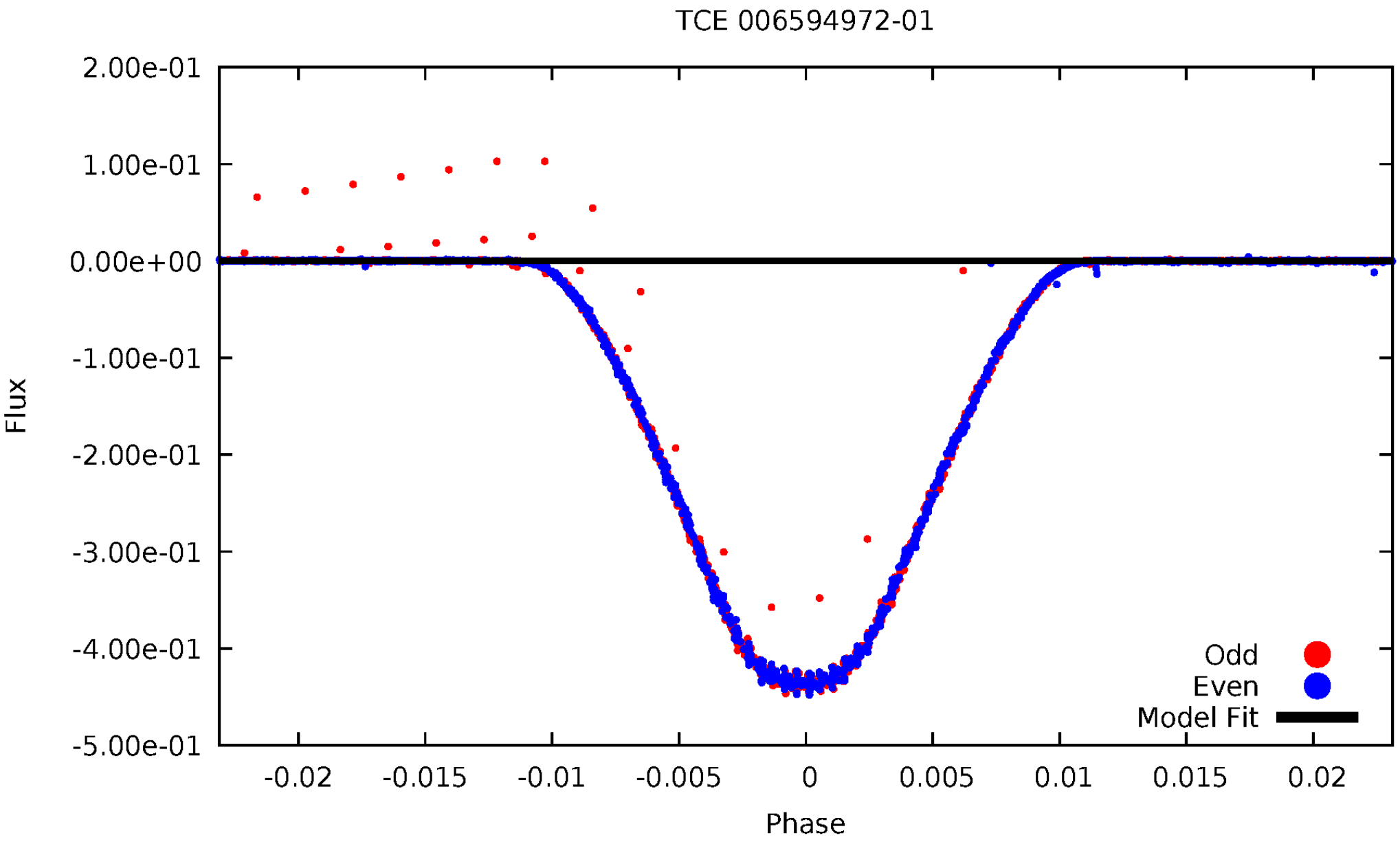
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006594972-01, PDC Light Curves




TCE 006594972-01
P = 5.410 days
P = 10.819 days
P = 21.638 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even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1.00e-01
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-1.00e-01
-2.00e-01
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-5.00e-01
Flux
-0.02
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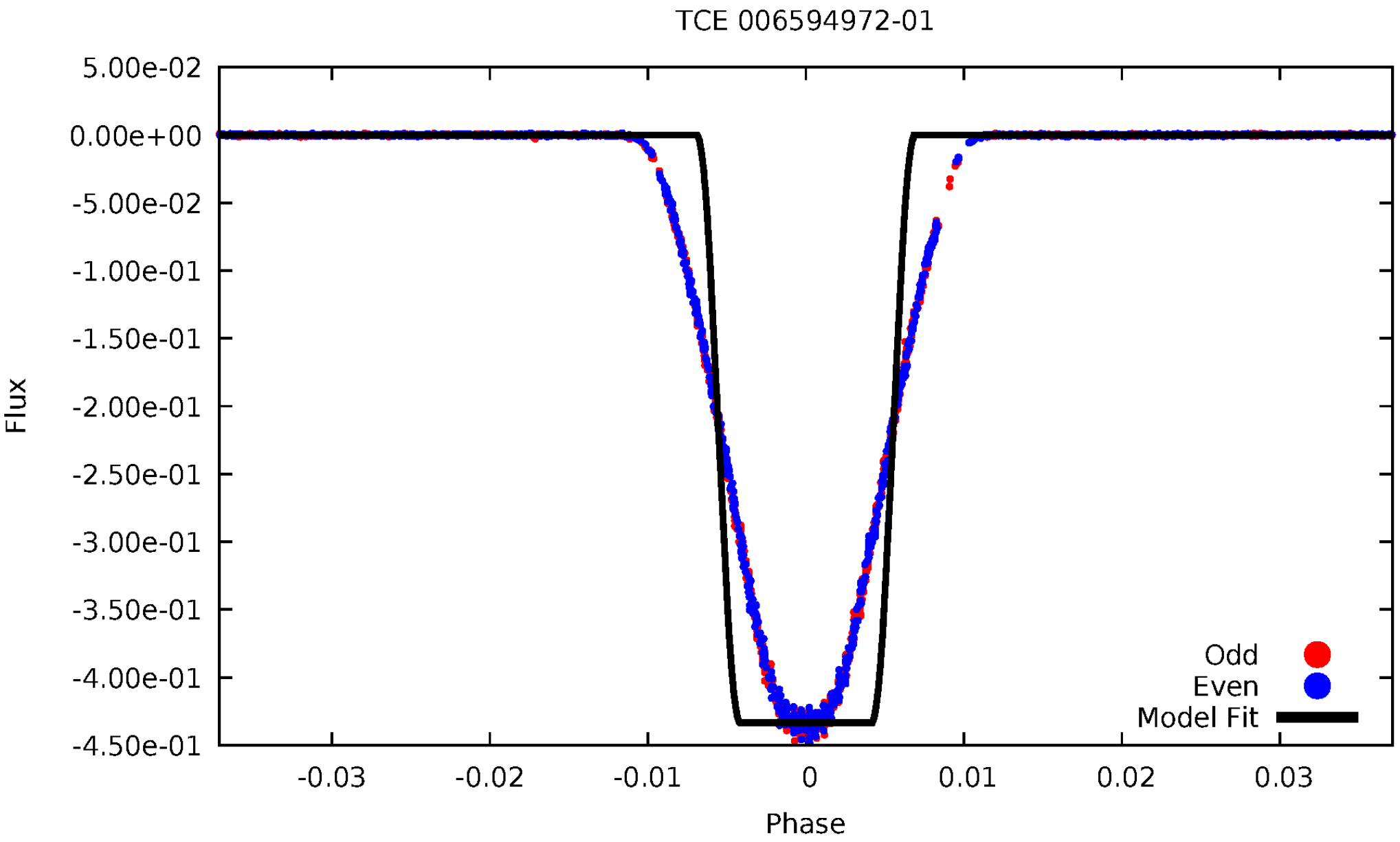
-0.005
0
0.005
0.01
0.015
0.02
Phase
Odd
Even
Model Fit

ALT Odd/Even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0.00e+00
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-1.00e-01
-1.50e-01
-2.00e-01
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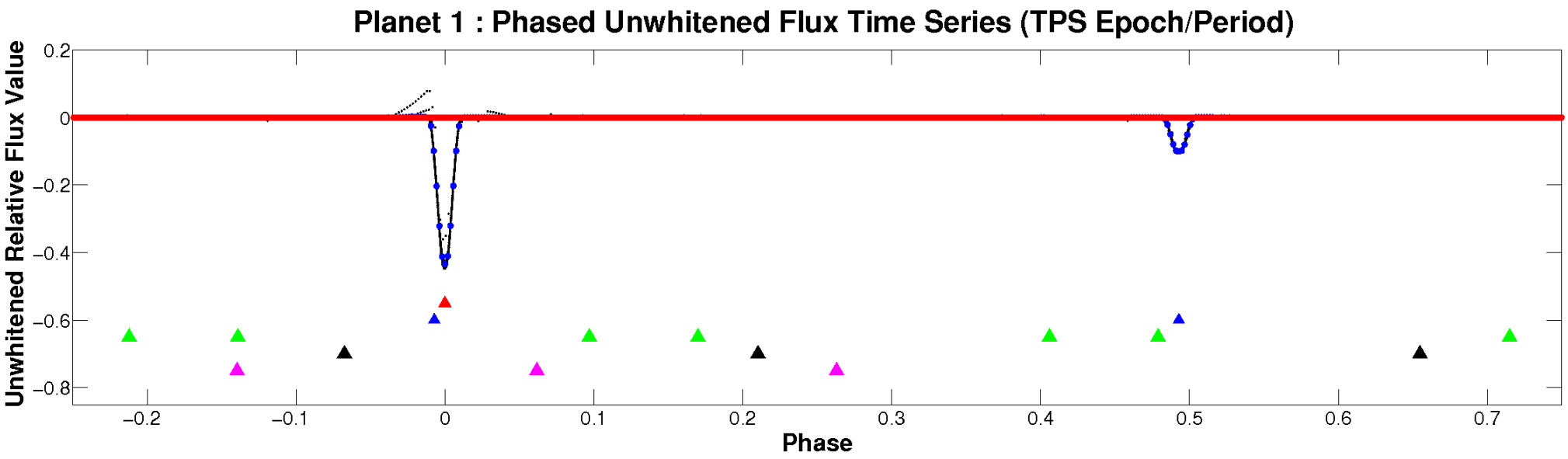
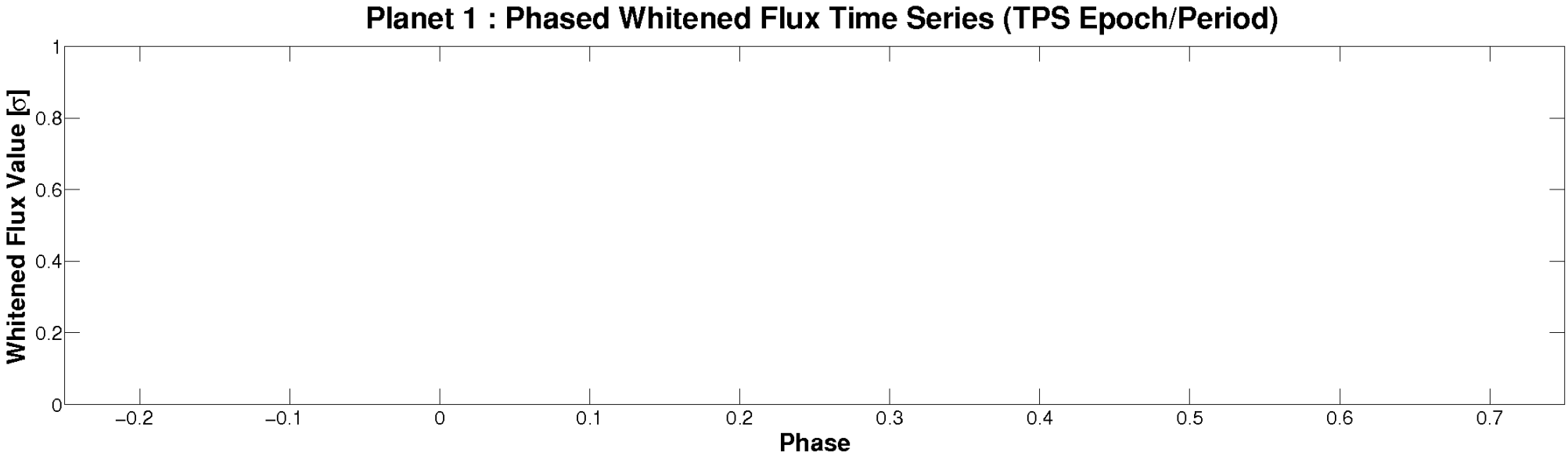
-3.00e-01
-3.50e-01
-4.00e-01
-4.50e-01
Flux
-0.03
-0.02
-0.01
0
0.01
0.02
0.03
Phase
Odd
Even
Model Fit

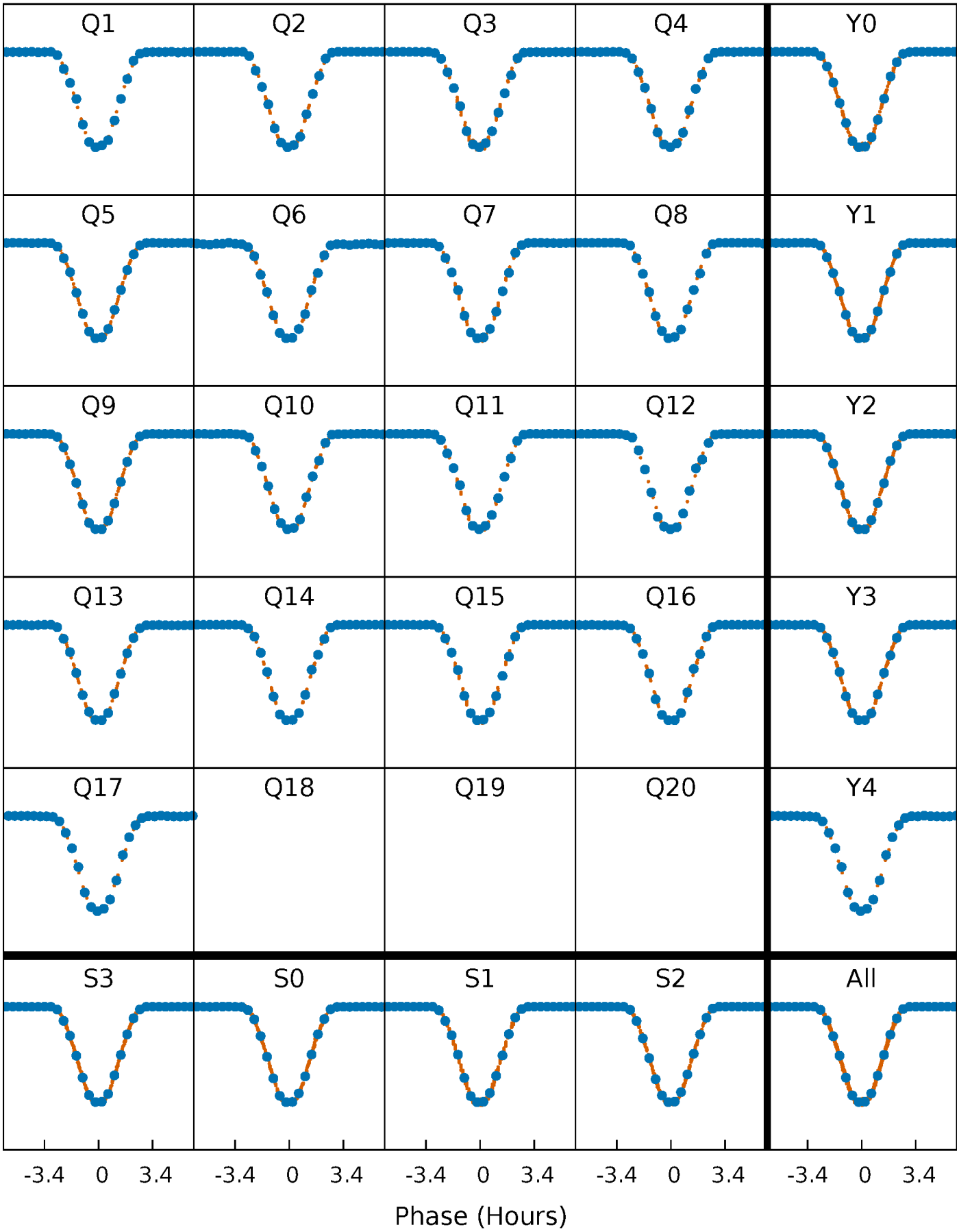
Non-Whitened Vs. Whitened Light Curve





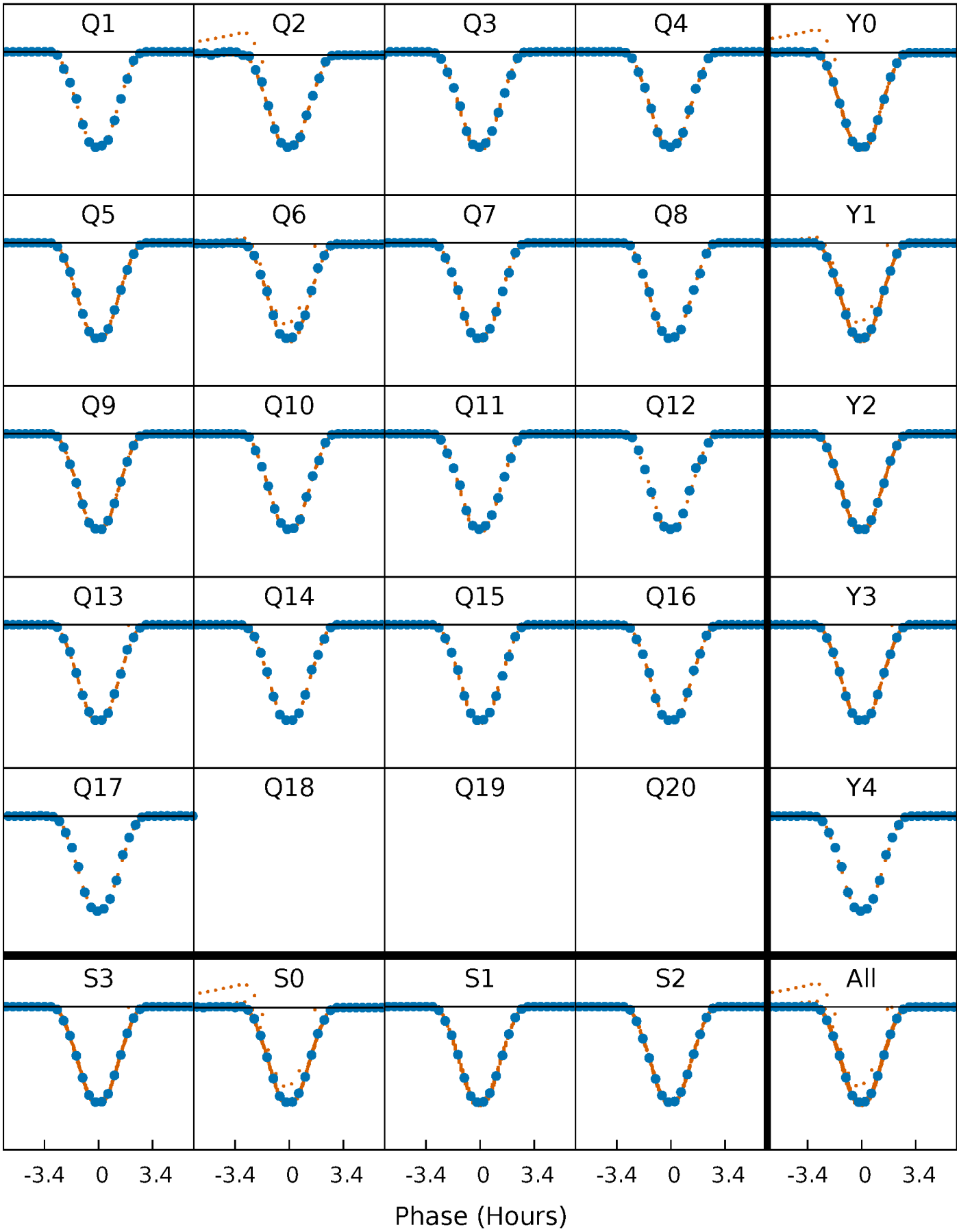
PDC Quarter-Phased Transit Curves

TCE 006594972-01 P= 10.819152 Days T_0=132.988277 (BKJD)



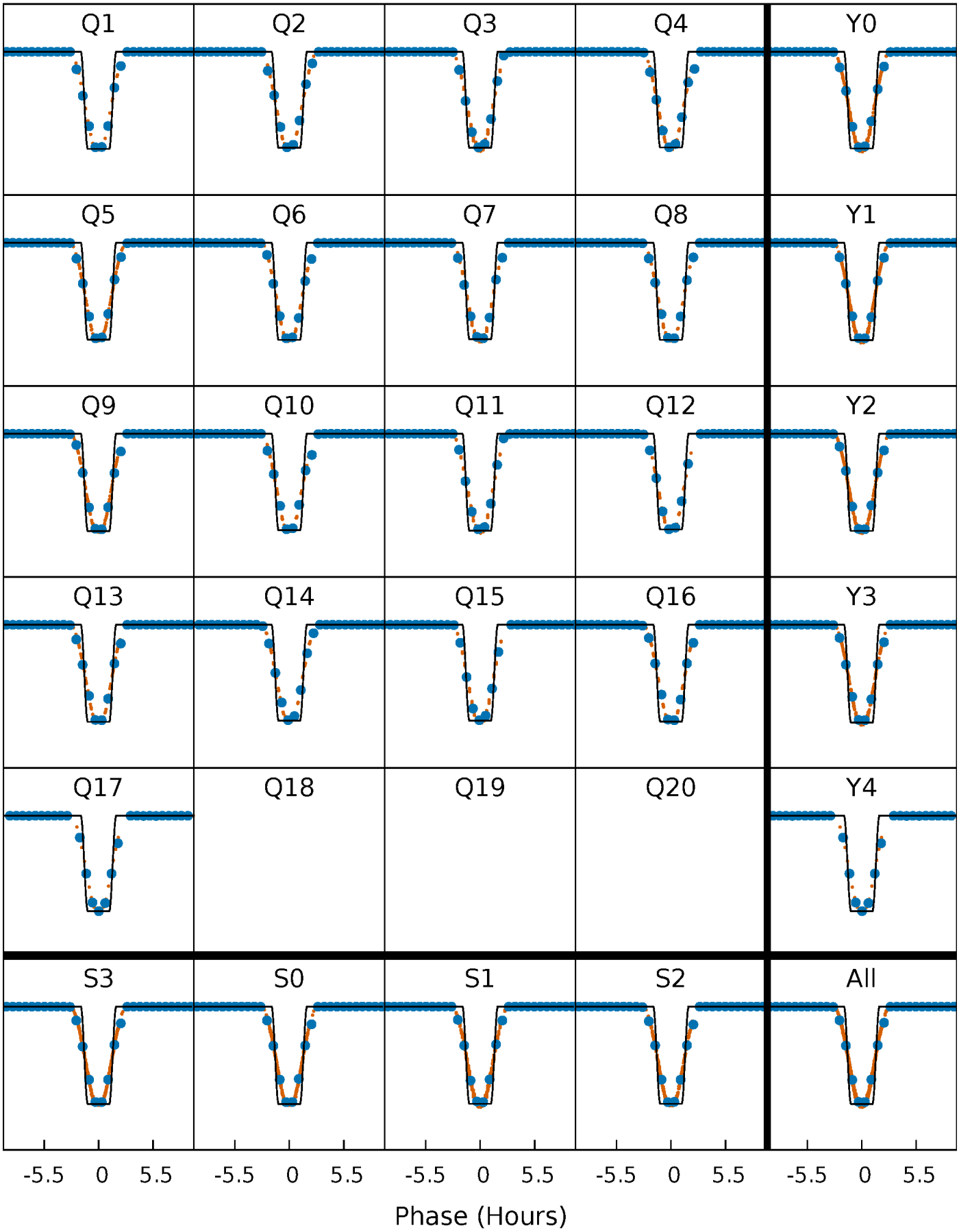
DV Quarter-Phased Transit Curves

TCE 006594972-01 P= 10.819152 Days T_0=132.988277 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

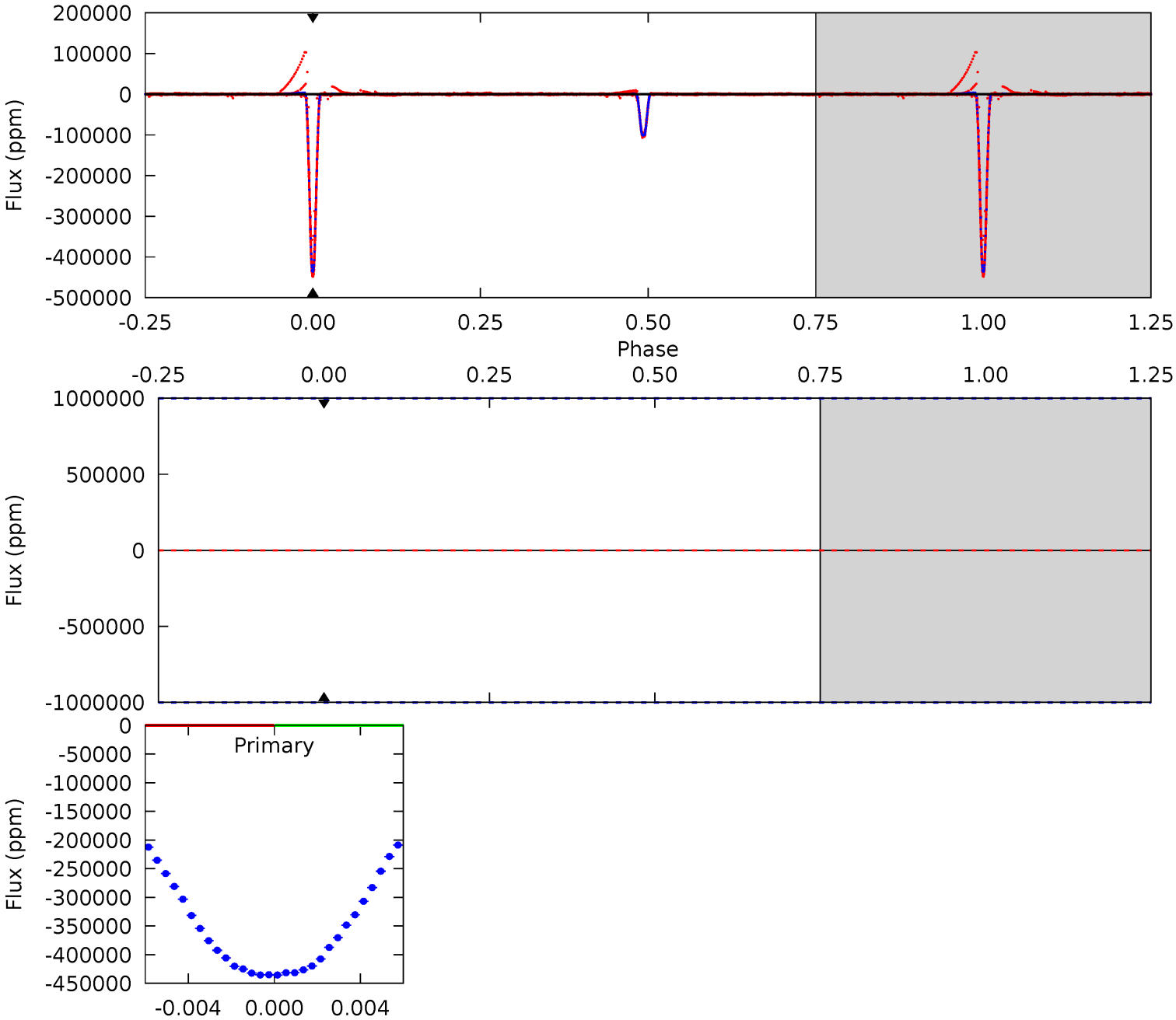
TCE 006594972-01 P= 10.819152 Days T_0=132.987410 (BKJD)



DV Model-Shift Uniqueness Test

006594972-01, P = 10.819152 Days, E = 122.169125 Days

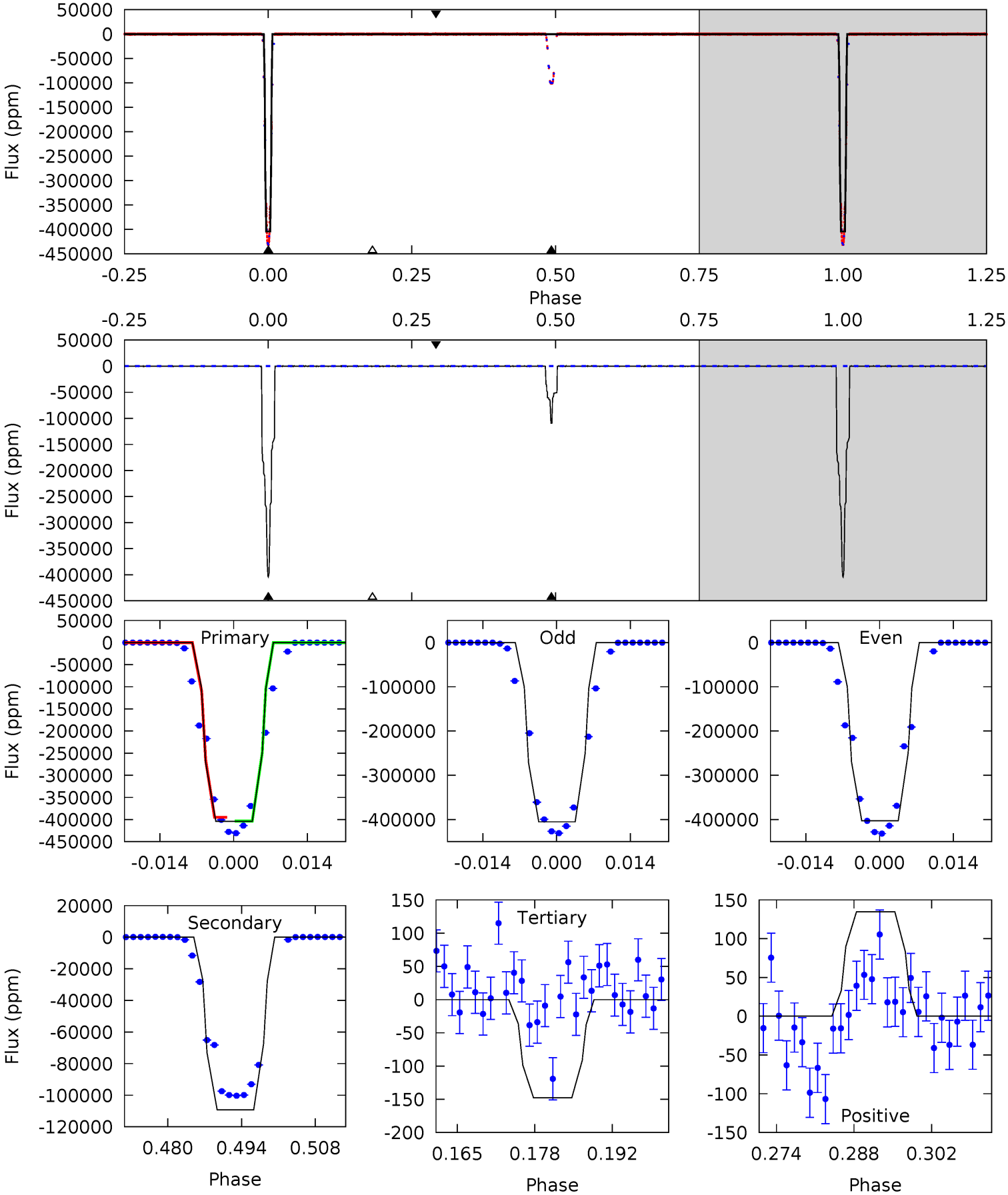
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006594972-01, P = 10.819152 Days, E = 122.168258 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12180	3294	4.45	4.06	4.97	2.46	1.32	12176	12176	3289	3290	32.1	1.00	0.00	0



Stellar Parameters For KIC 006594972

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5955^{+179}_{-179}	$4.429^{+0.087}_{-0.203}$	$-0.200^{+0.300}_{-0.300}$	$0.991^{+0.300}_{-0.128}$	$0.961^{+0.134}_{-0.109}$	$1.393^{+0.627}_{-0.695}$
	+3%/-3%	+2%/-5%	+150%/-150%	+30%/-13%	+14%/-11%	+45%/-50%
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 006594972-01 / KOI 6737.01

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0±1000000	$56.31^{+13.70}_{-12.16}$	1206^{+95}_{-65}	2118^{+2905}_{-6863}	$0.931^{+187.161}_{-139.949}$
Alt.	-109282±33	$73.27^{+16.83}_{-14.31}$	1203^{+88}_{-60}	4516^{+368}_{-257}	112^{+58}_{-38}

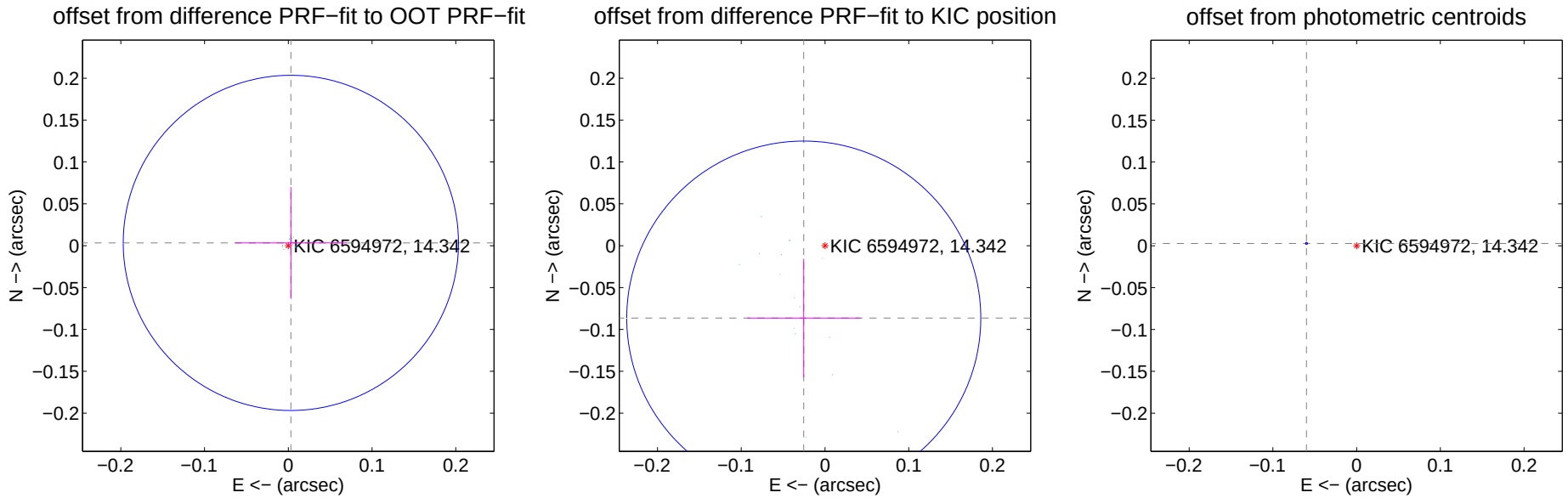
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

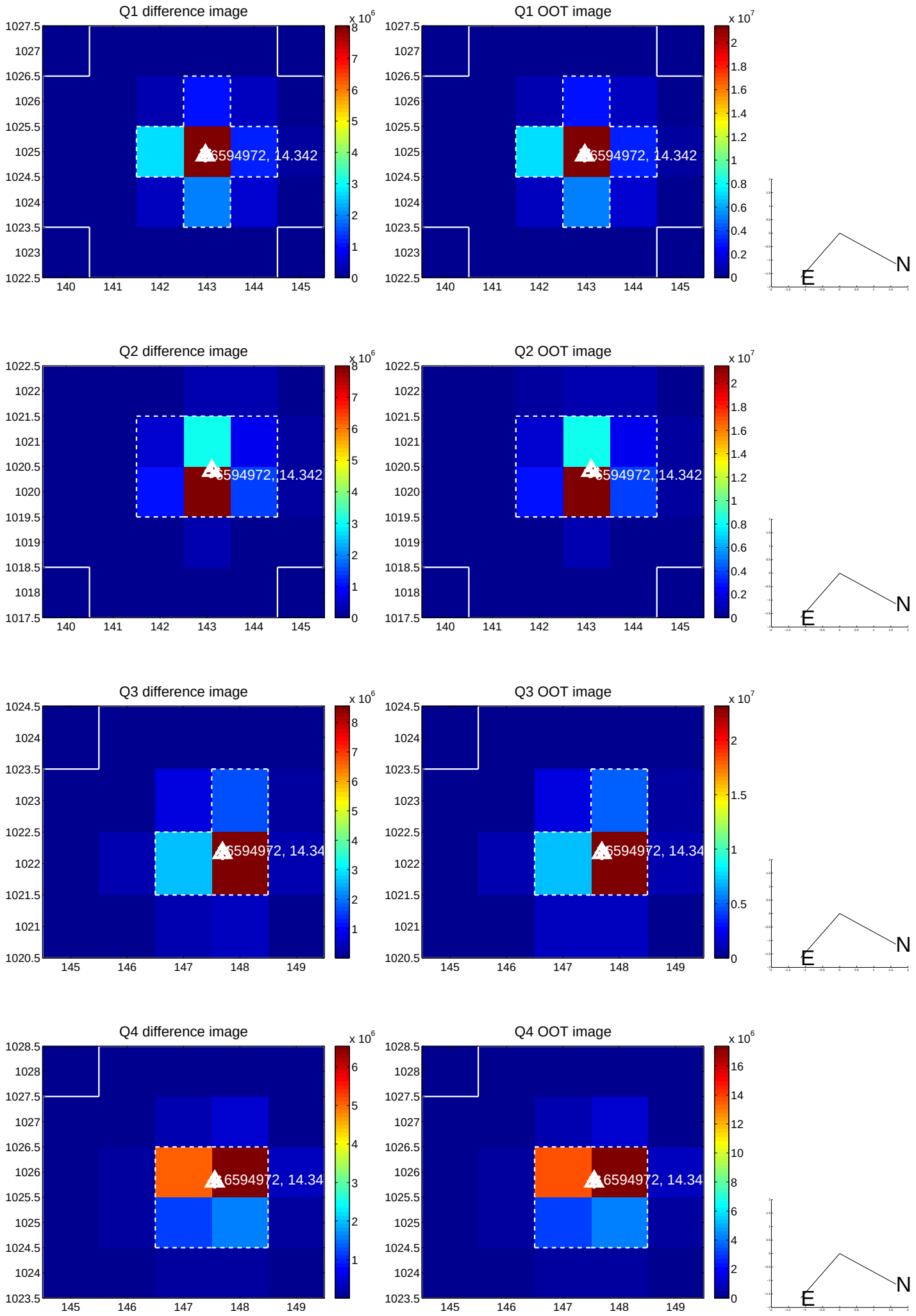
Supplemental centroid analysis for 006594972-01. Kepler magnitude: 14.34. Transit SNR -1.00
There are 17 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.005 ± 0.067	0.07	-0.003 ± 0.067	0.003 ± 0.067
PRF-fit source offset from KIC position	0.090 ± 0.070	1.28	0.025 ± 0.068	-0.086 ± 0.071
photometric centroid source offset	0.06 ± 0.00	148.37	0.06 ± 0.00	0.00 ± 0.00

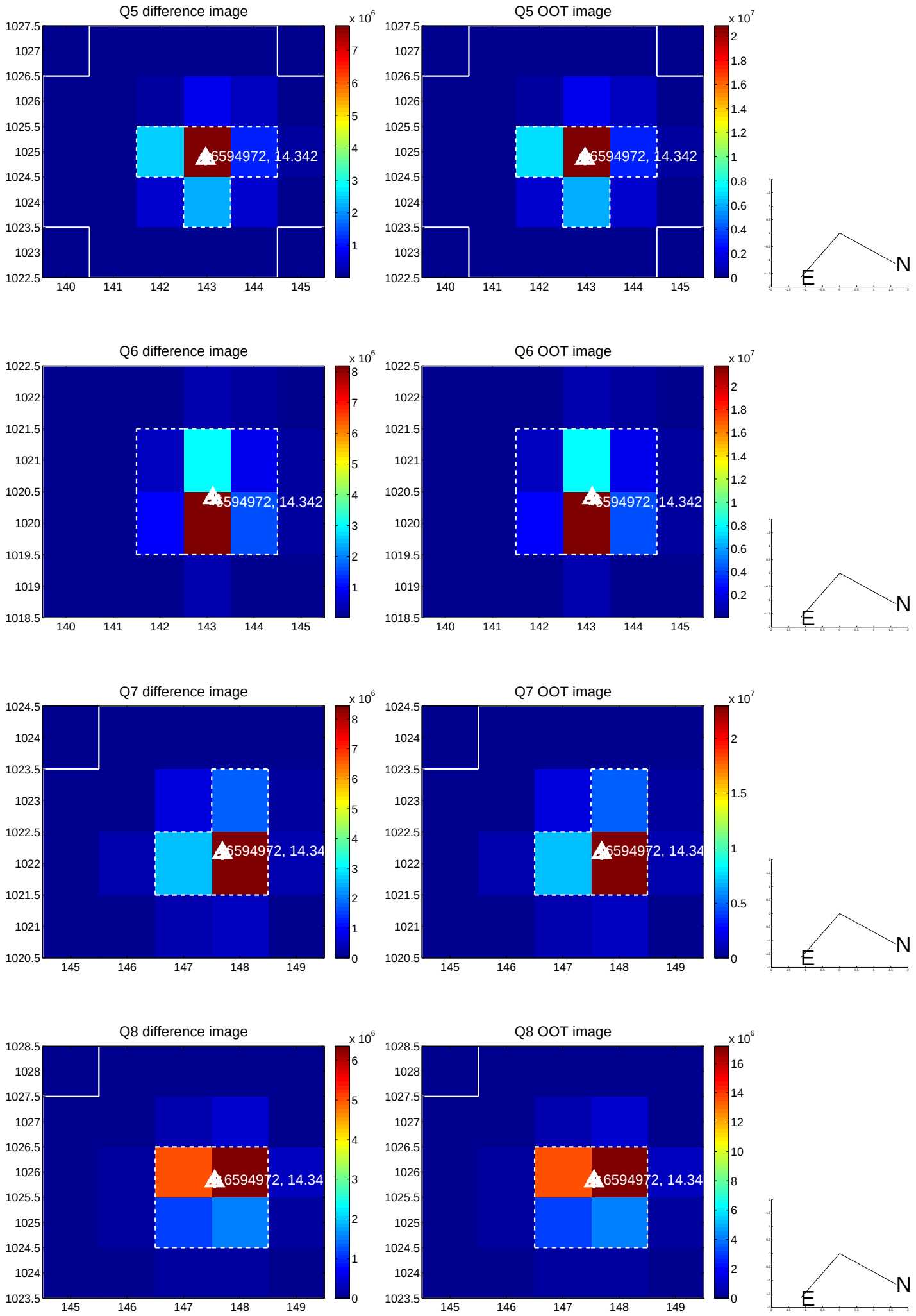


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

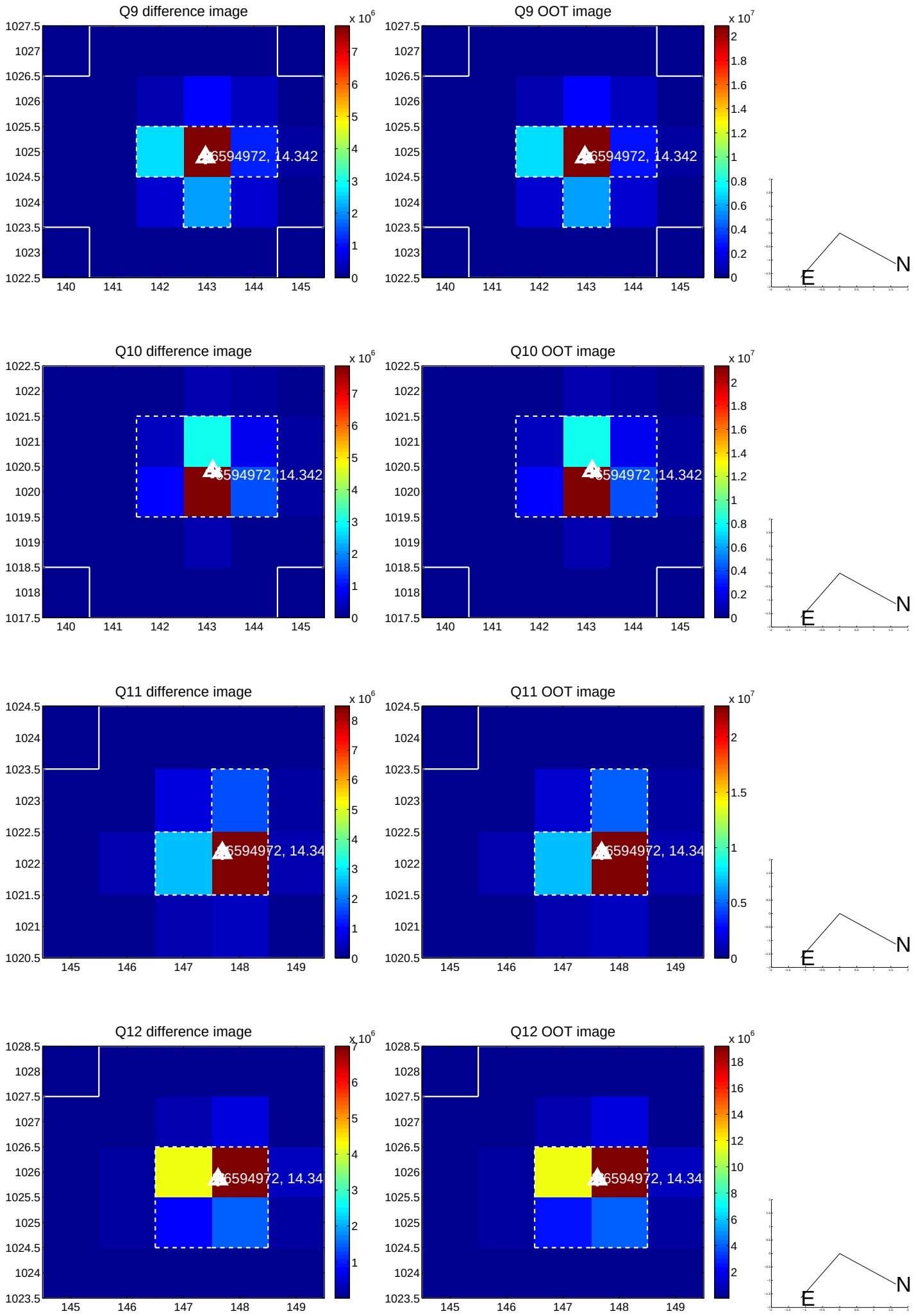
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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.



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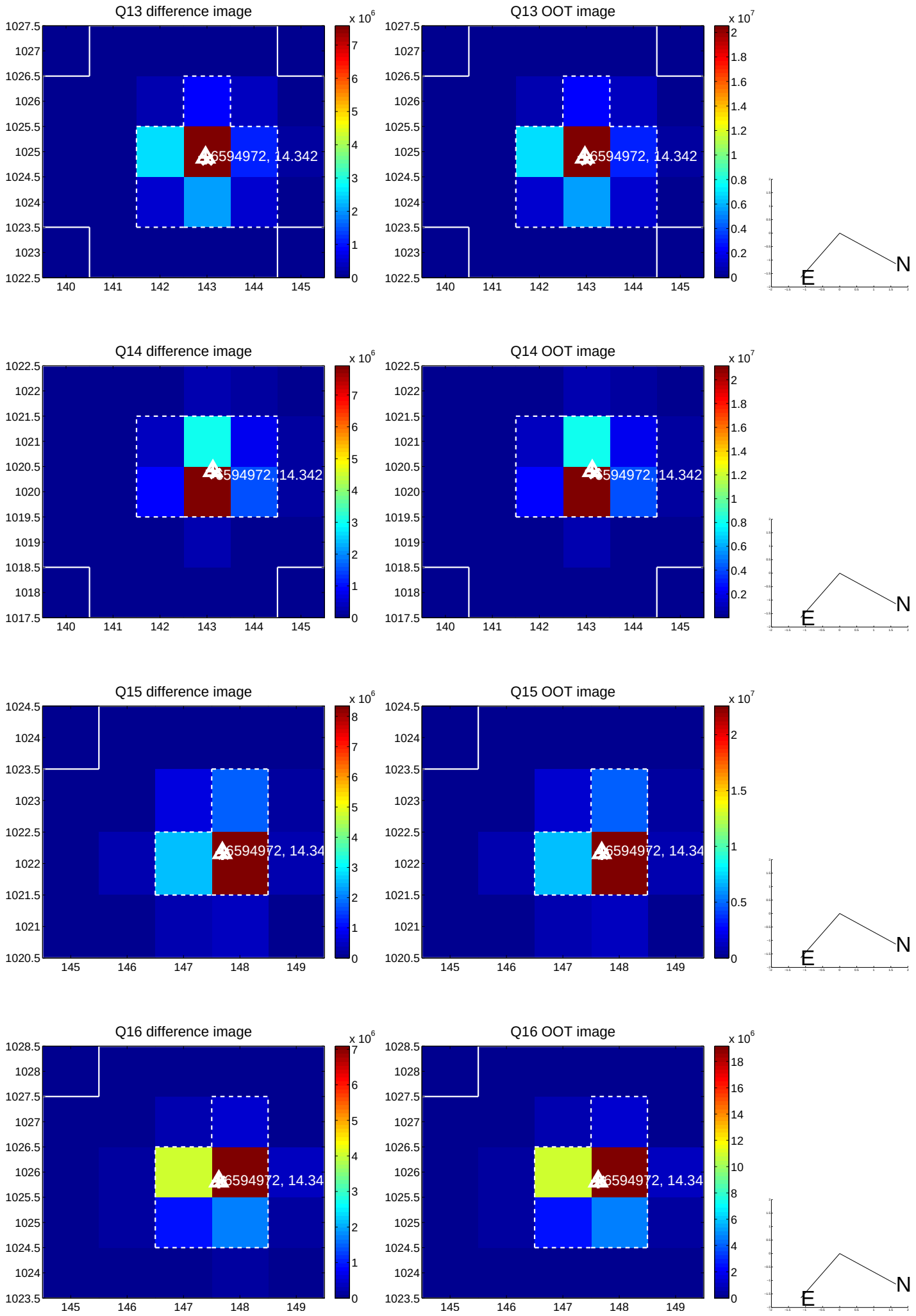
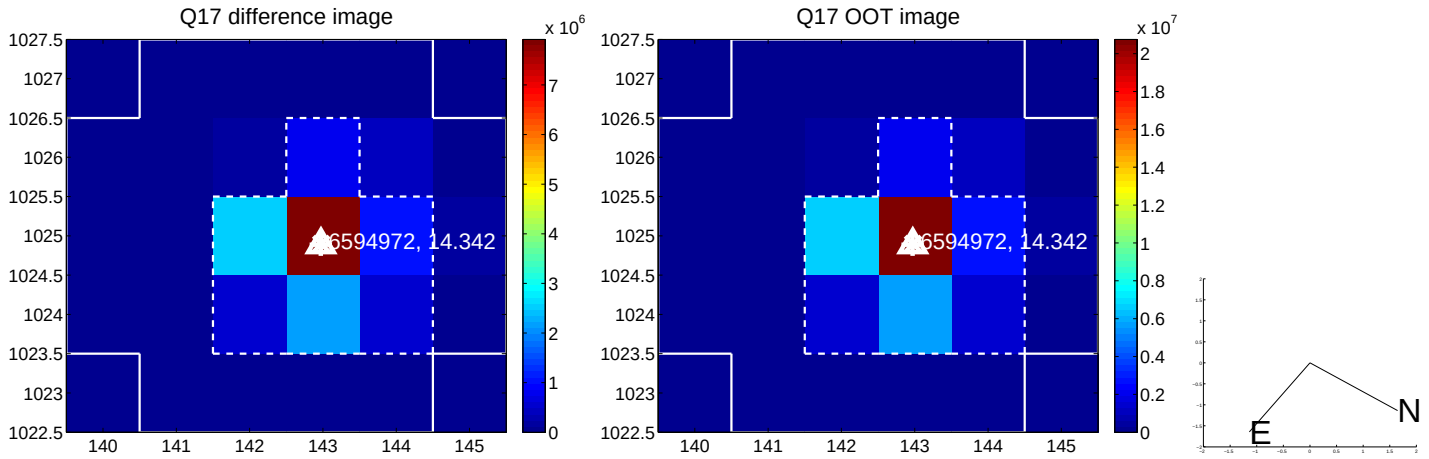
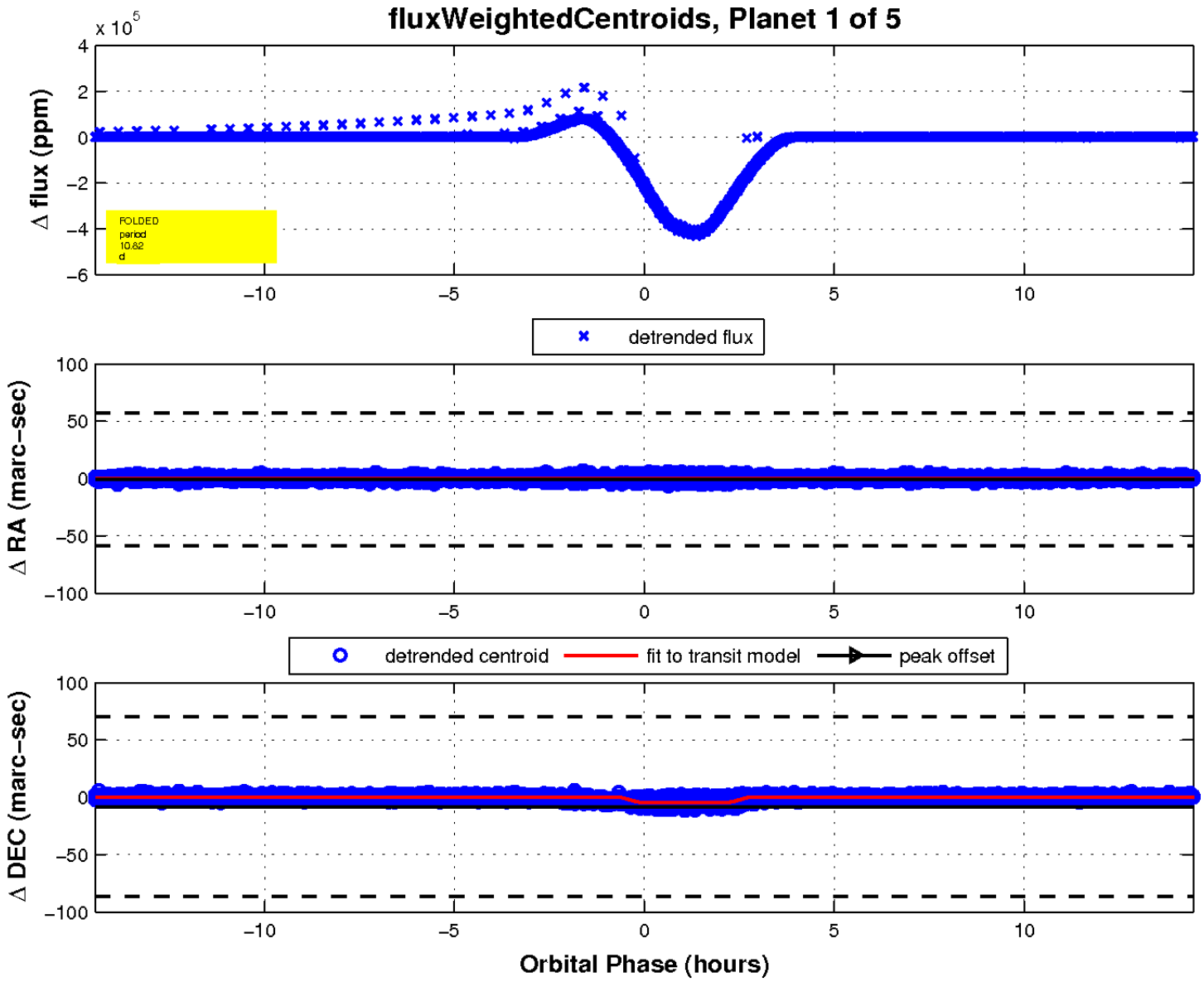
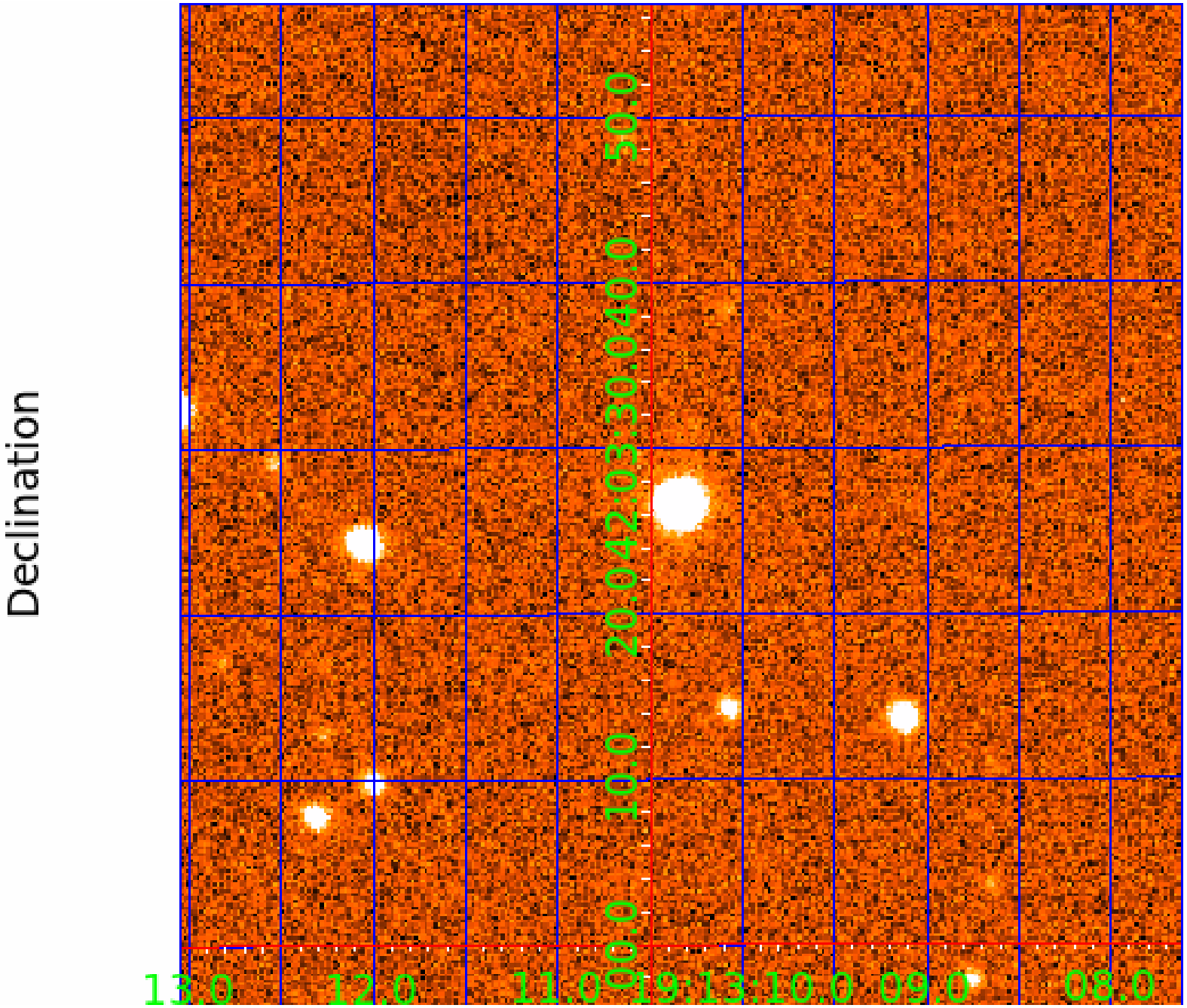


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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12.0
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19:13:10.0
09.0
08.0

KIC 006594972

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 ($S_\oplus$)
006594972-01	OBS	6737.01	10.819152	132.988277	435492.6	3.000	20156.5	-1.0	0.99	5955	54.07	123.84
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006594972-03	OBS	No	208.907100	228.856480	2873.6	60.690	12.1	12.4	0.99	5955	9.88	2.39
006594972-04	OBS	No	494.676265	557.210200	643.1	16.711	9.8	3.8	0.99	5955	2.62	0.76
006594972-05	OBS	No	571.237089	373.855886	1504.2	29.355	8.6	7.8	0.99	5955	5.36	0.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006594972-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
006594972-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
006594972-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006594972-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006594972-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—ALL_TRANS_CHASES—MOD_TER_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

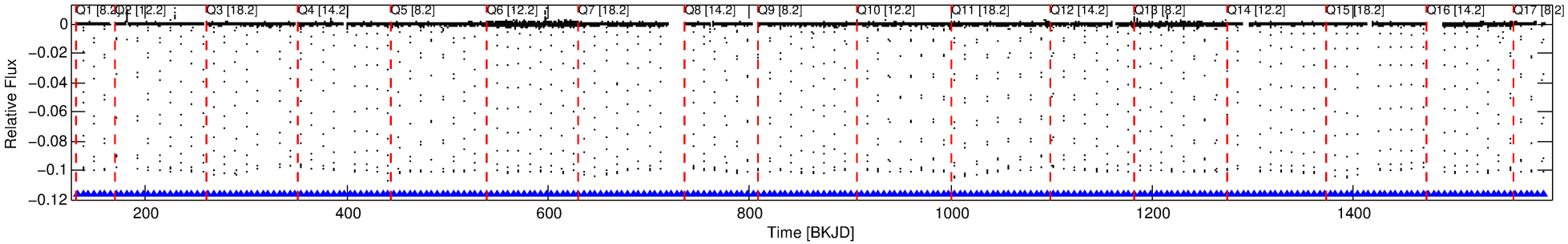
Ephemeris Match Information For 006594972-02

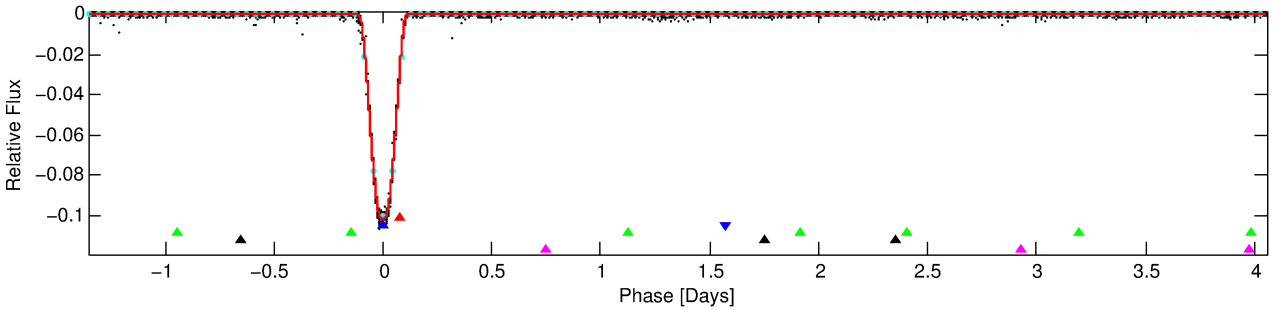
No Significant Match Found

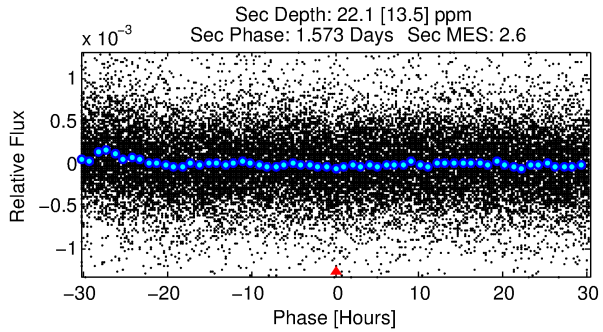
DV One-Page Summary

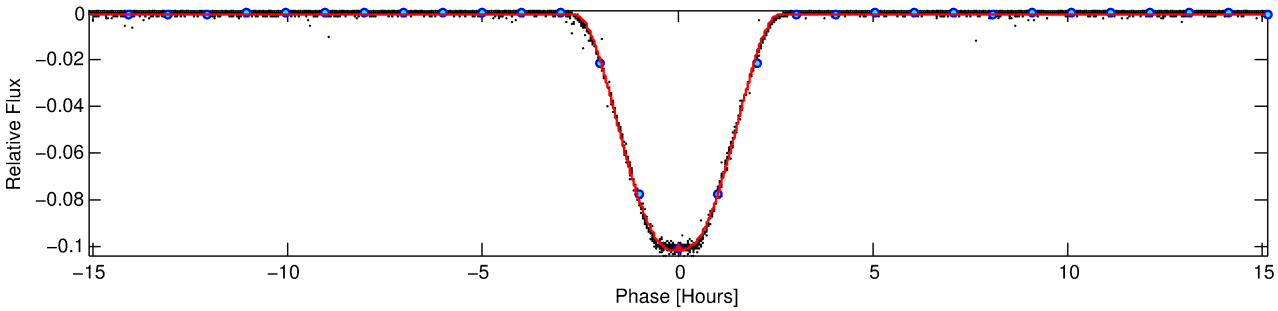
KIC: 6594972 Candidate: 2 of 5 Period: 5.410 d
KOI: K06737 Corr: No Ephemeris Match

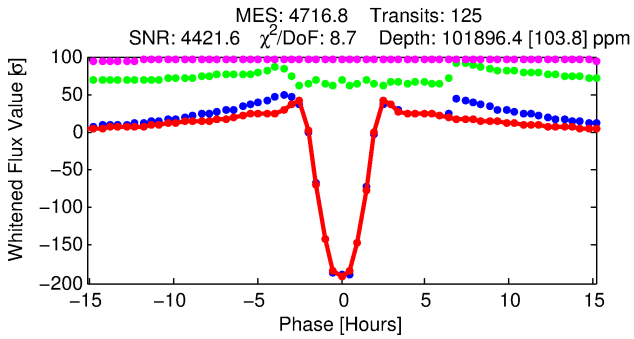
Kp: 14.34 R*: 0.99 Rs Teff: 5955.0 K Logg: 4.43 Fe/H: −0.200

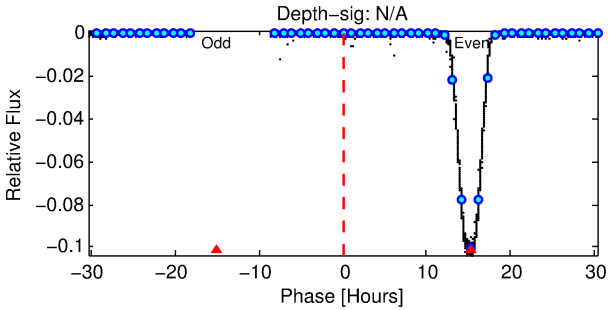


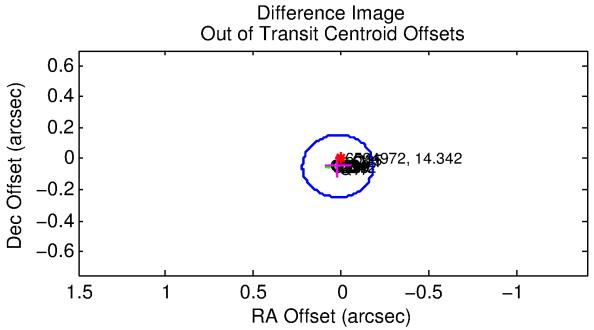












DV Fit Results:

Period = 5.40959 [0.00000] d
Epoch = 132.9099 [0.0001] BKJD
Rp/R* = 0.3165 [0.0003]
a/R* = 9.33 [0.01]
b = 0.67 [0.00]

Seff = 312.07 [121.78]
Teq = 1072 [105] K
Rp = 34.23 [10.36] Re
a = 0.0595 [0.0152] AU

Ag = 0.04 [0.03] [−36.58σ]
Teffp = 726 [113] K [−2.25σ]

DV Diagnostic Results:

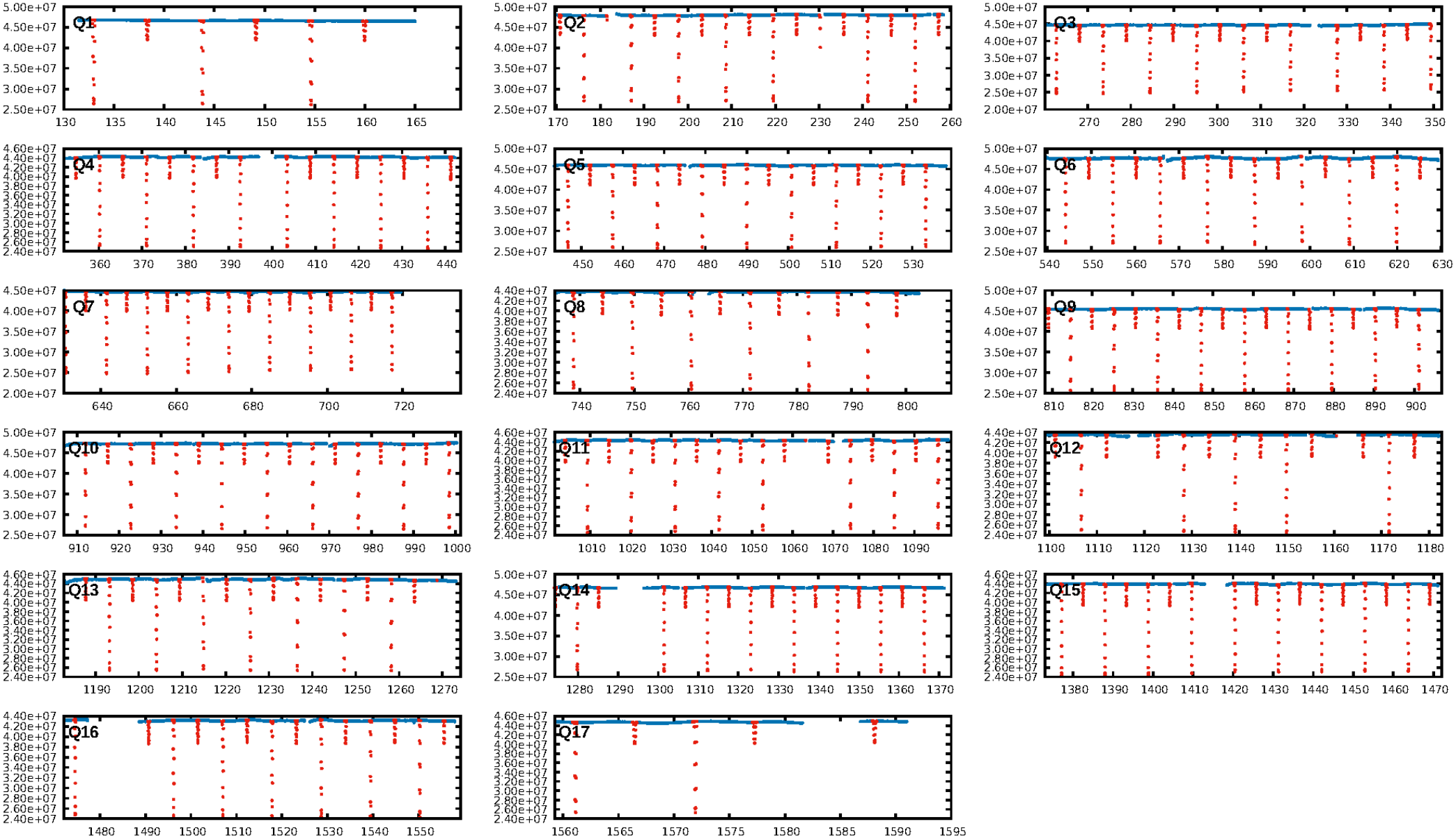
ShortPeriod−sig: N/A
LongPeriod−sig: 100.0% [22.13σ]
ModelChiSquare2−sig: 0.0%
ModelChiSquareGof−sig: 0.0%
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [119/119]
GhostDiagnostic−chr: 1.611

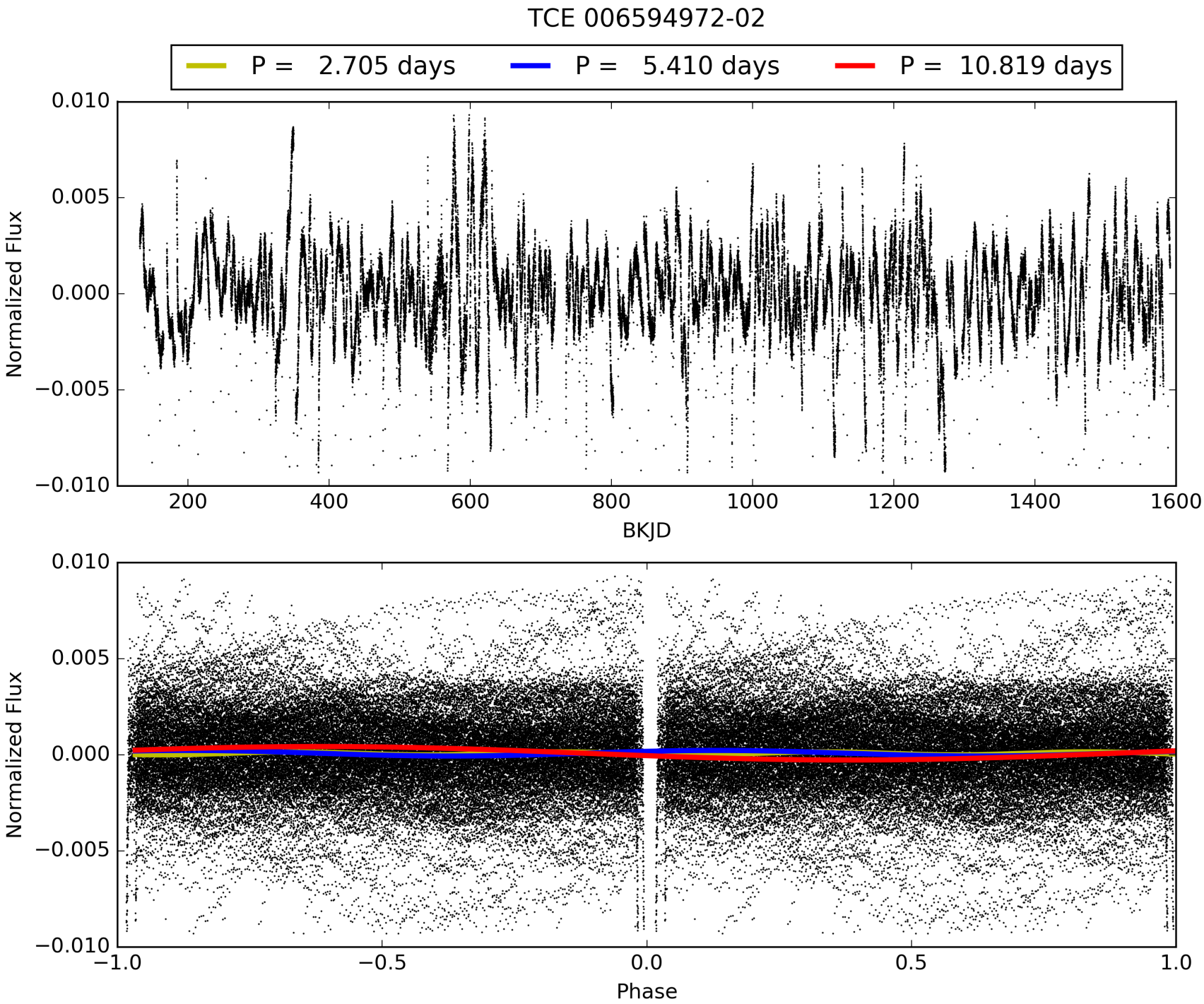
Centroid−sig: 0.0%
Centroid−so: 0.069 arcsec [67.24σ]
OotOffset−rm: 0.051 arcsec [0.76σ]
KicOffset−rm: 0.141 arcsec [1.99σ]
OotOffset−st: 4/4/4/5 [17]
KicOffset−st: 4/4/4/5 [17]
DiffImageQuality−fgm: 1.00 [17/17]
DiffImageOverlap−fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 −− Date Generated: 02−Feb−2016 01:03:50 Z

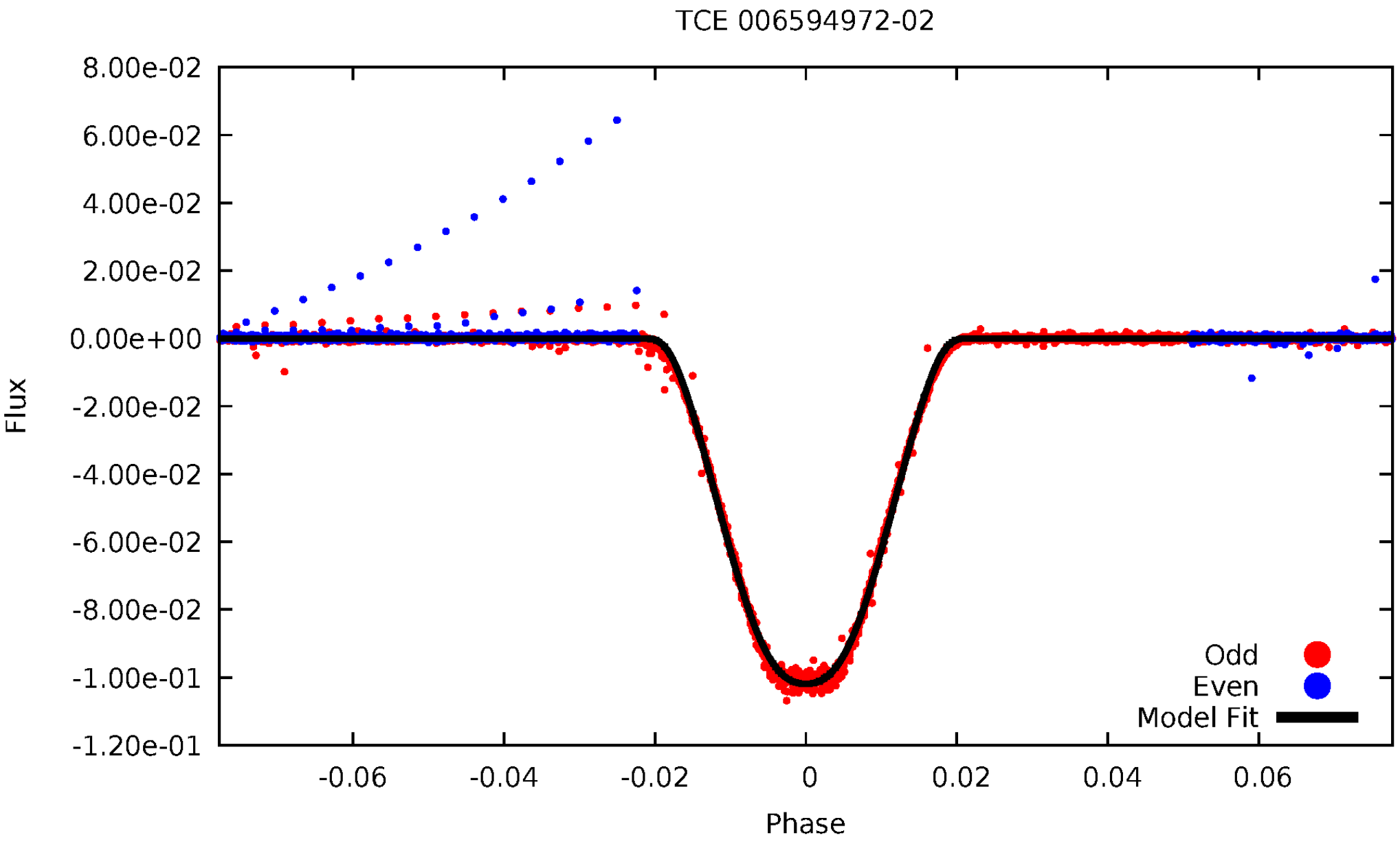
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006594972-02, PDC Light Curves

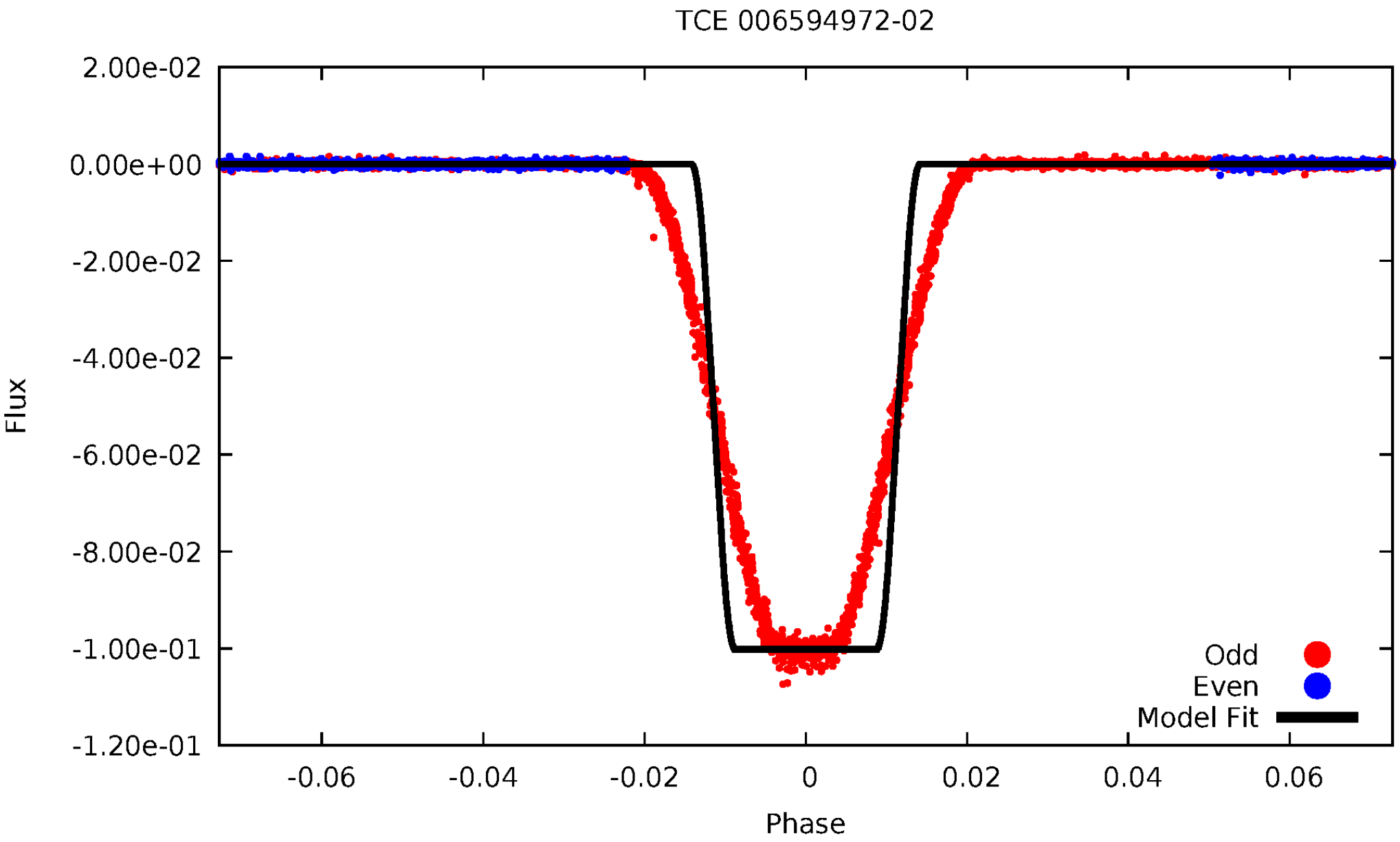



TCE 006594972-02
P = 2.705 days
P = 5.410 days
P = 10.819 days
Normalized Flux
BKJD
Normalized Flux
Phase

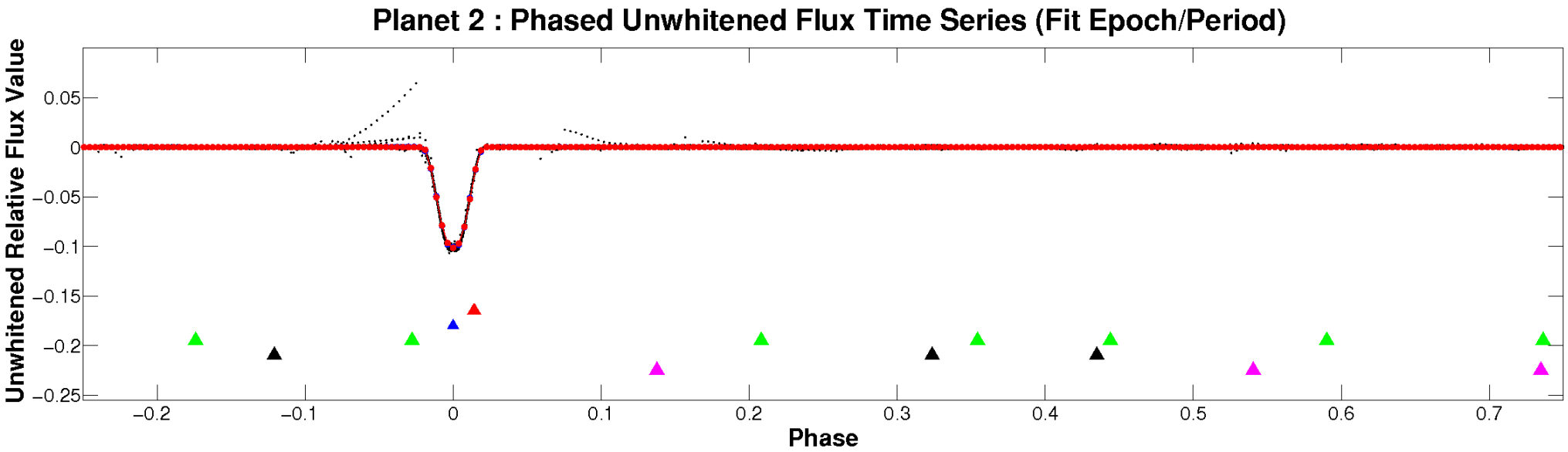
DV Odd/Even

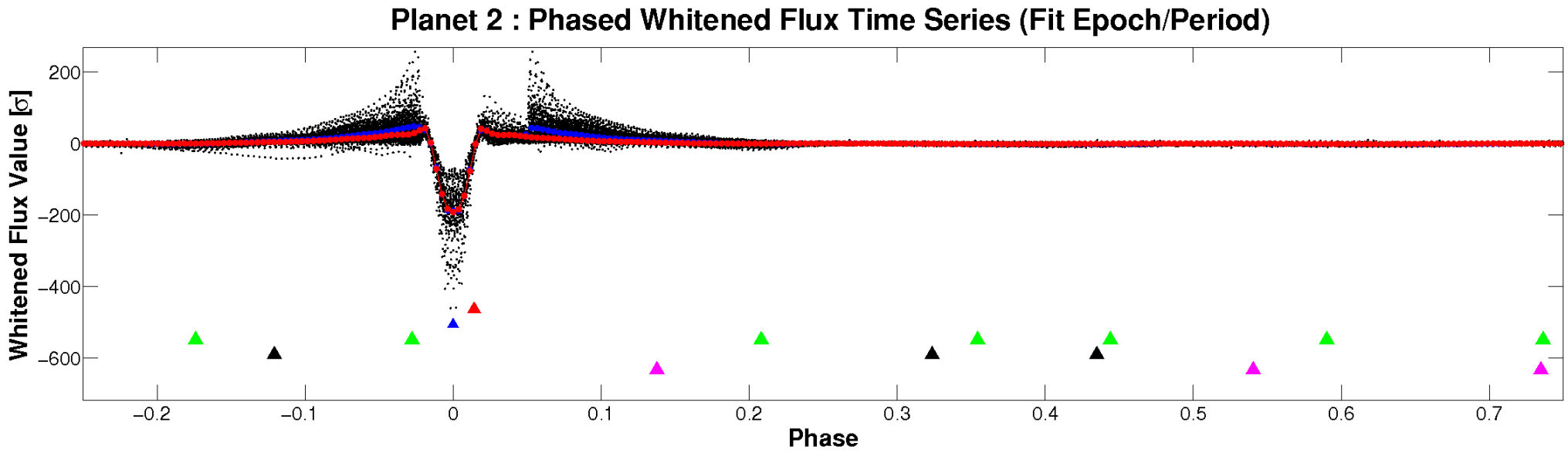

TCE 006594972-02
8.00e-02
6.00e-02
4.00e-02
2.00e-02
0.00e+00
-2.00e-02
-4.00e-02
-6.00e-02
-8.00e-02
-1.00e-01
-1.20e-01
Flux
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006594972-02
2.00e-02
0.00e+00
-2.00e-02
-4.00e-02
-6.00e-02
-8.00e-02
-1.00e-01
-1.20e-01
Flux
-0.06
-0.04
-0.02
0
0.02
0.04
0.06
Phase
Odd
Even
Model Fit

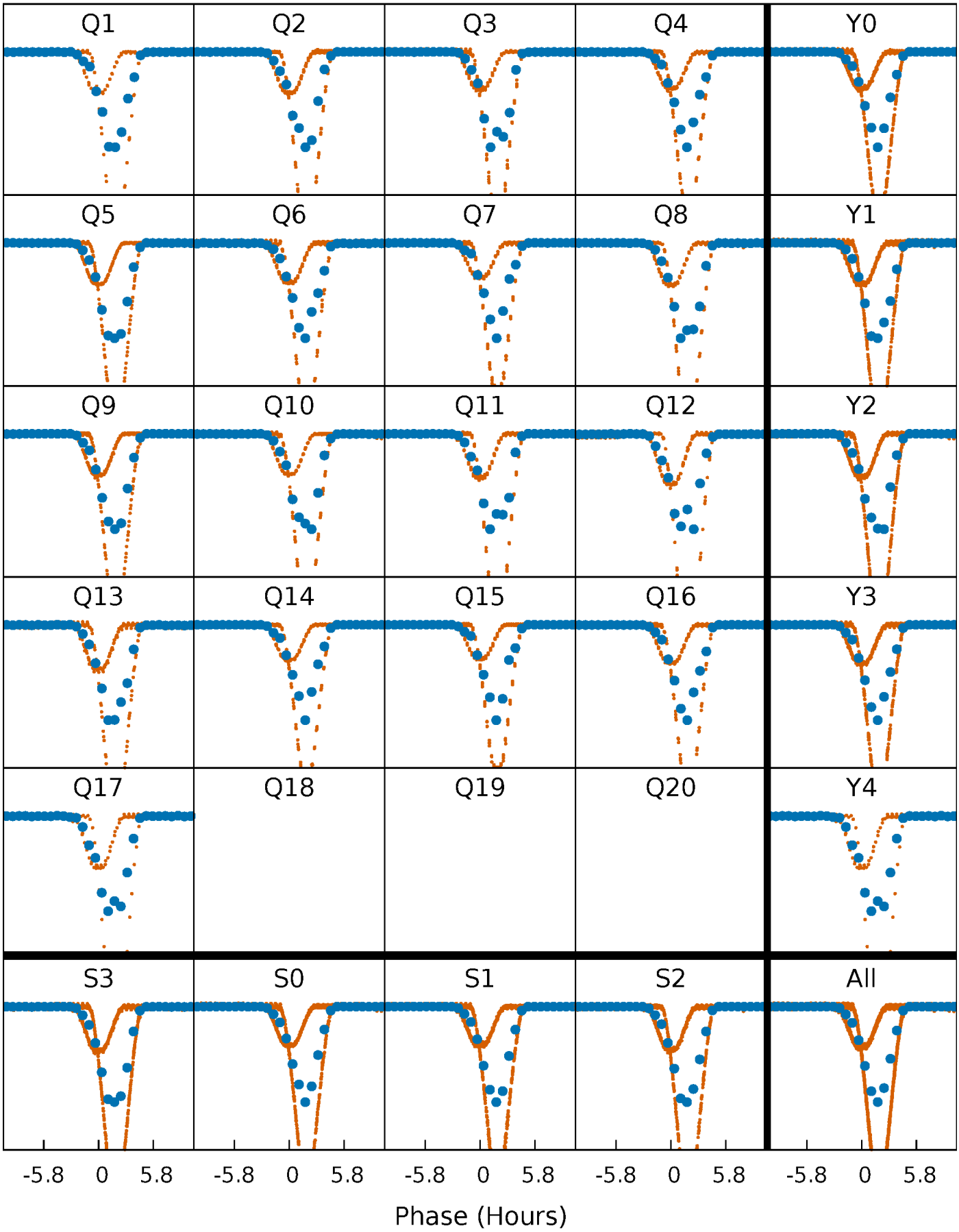
Non-Whitened Vs. Whitened Light Curve





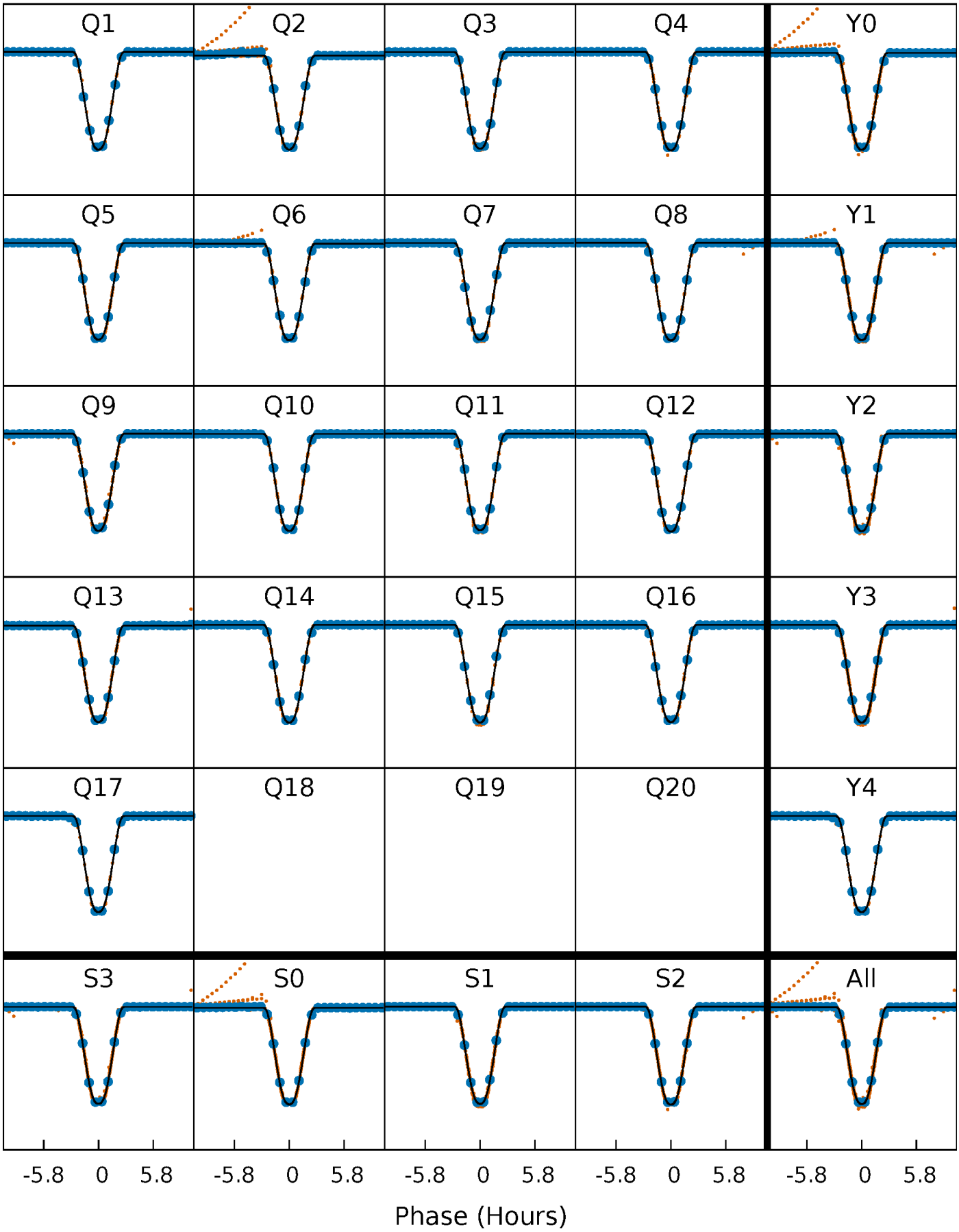
PDC Quarter-Phased Transit Curves

TCE 006594972-02 P= 5.409587 Days T_0=132.909920 (BKJD)



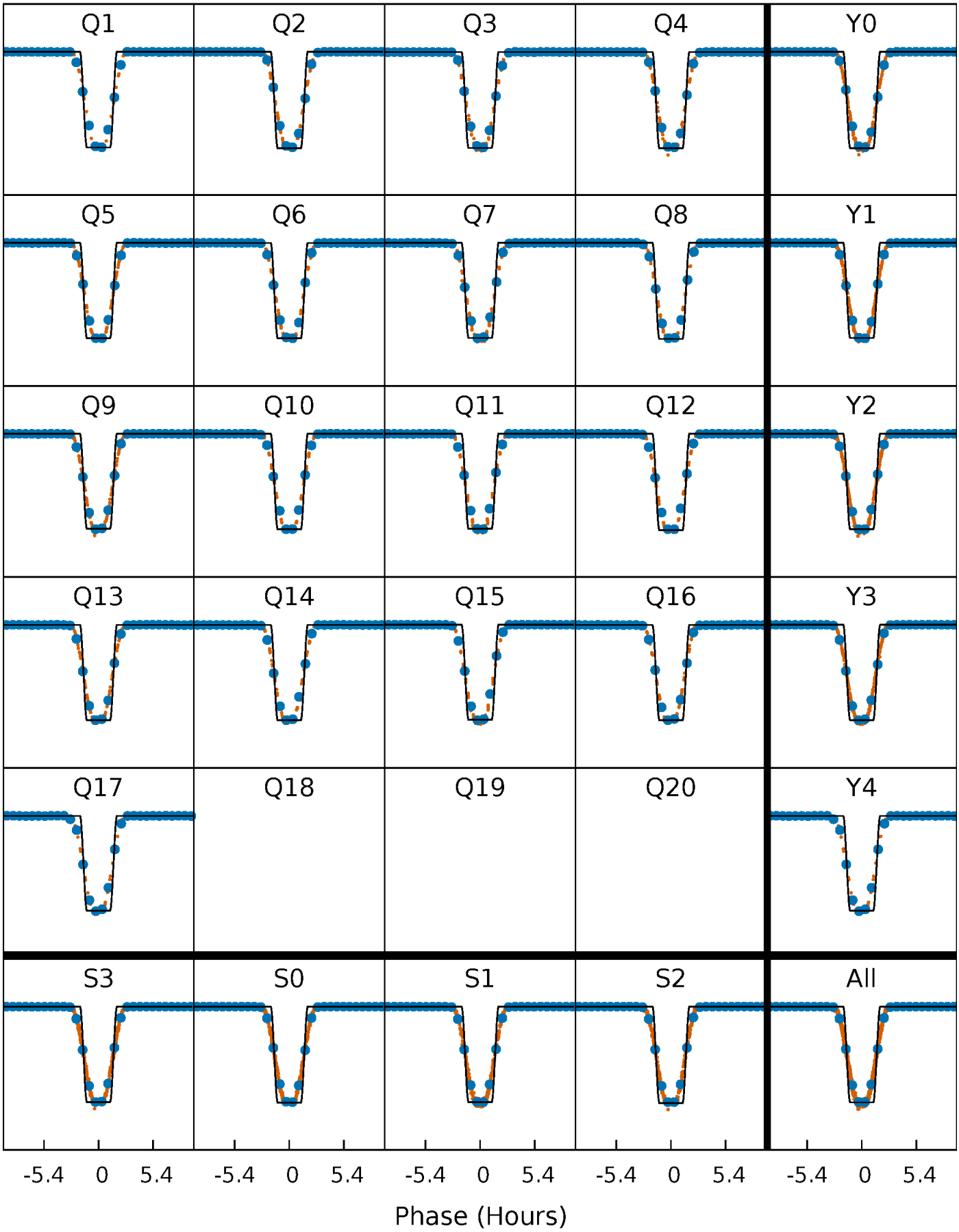
DV Quarter-Phased Transit Curves

TCE 006594972-02 P= 5.409587 Days T_0=132.909920 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

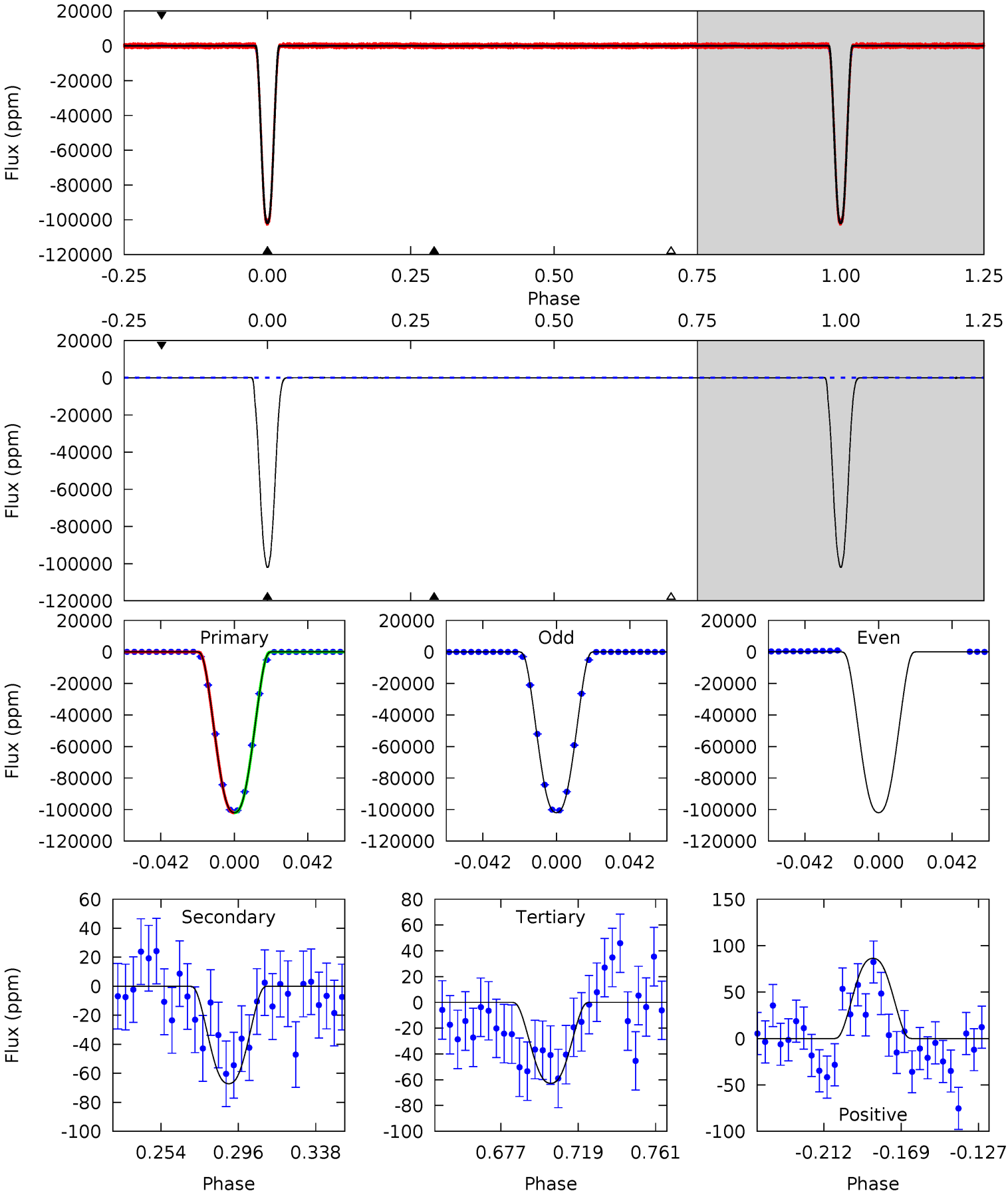
TCE 006594972-02 P= 5.409610 Days T_0=132.907121 (BKJD)



DV Model-Shift Uniqueness Test

006594972-02, P = 5.409587 Days, E = 127.500333 Days

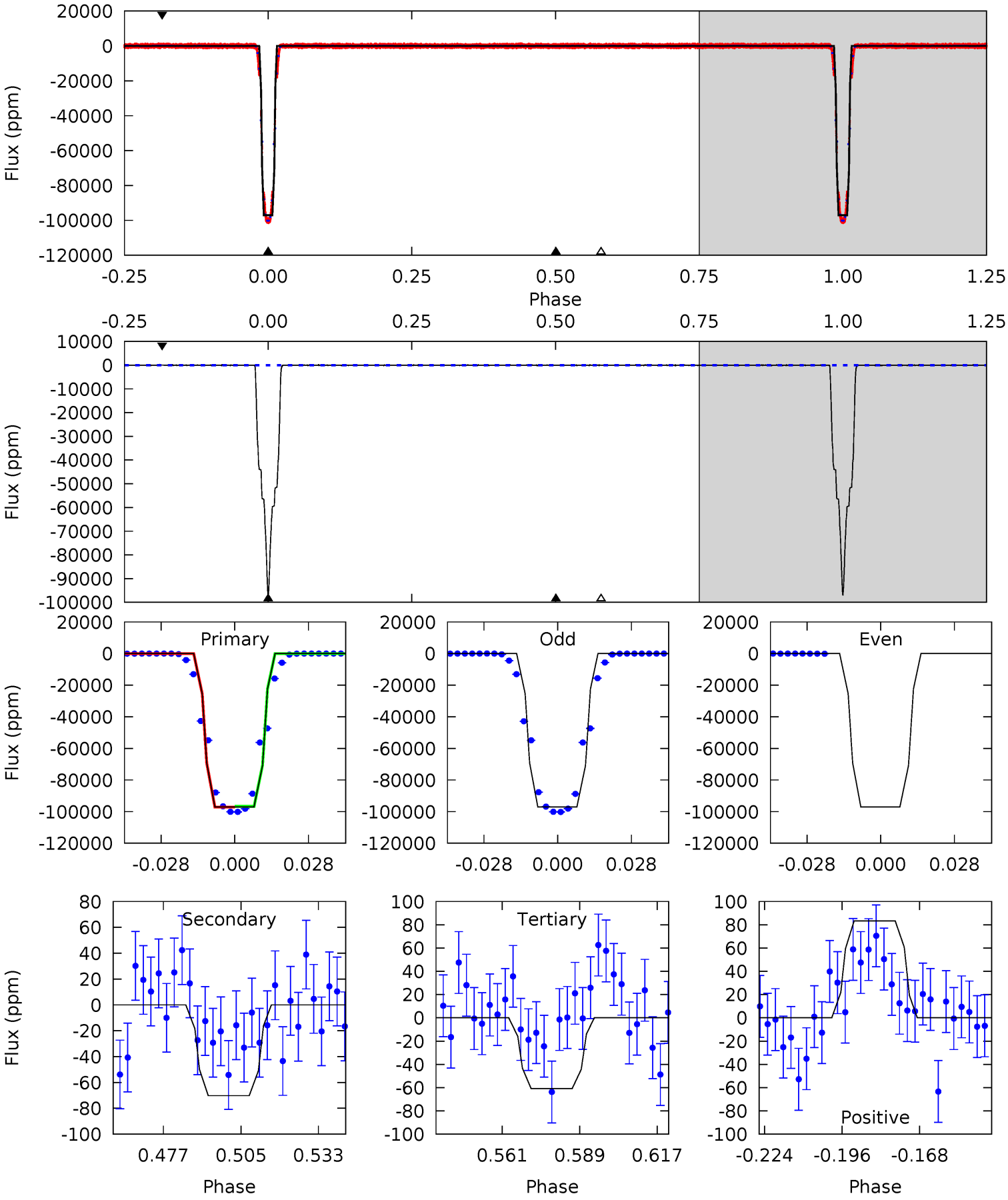
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8980	5.91	5.53	7.60	4.74	2.03	3.97	8975	8972	0.39	-1.69	0	1.00	0.00	2.16



Alt Model-Shift Uniqueness Test

006594972-02, P = 5.409610 Days, E = 127.497511 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5179	3.75	3.24	4.45	4.82	2.20	1.17	5176	5175	0.50	-0.70	0	1.00	0.00	11.5



Stellar Parameters For KIC 006594972

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5955^{+179}_{-179}	$4.429^{+0.087}_{-0.203}$	$-0.200^{+0.300}_{-0.300}$	$0.991^{+0.300}_{-0.128}$	$0.961^{+0.134}_{-0.109}$	$1.393^{+0.627}_{-0.695}$
	+3%/-3%	+2%/-5%	+150%/-150%	+30%/-13%	+14%/-11%	+45%/-50%
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 006594972-02 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-67±11	$34.83^{+5.34}_{-2.94}$	1519^{+110}_{-81}	-2096^{+72}_{-93}	$0.104^{+0.029}_{-0.029}$
Alt.	-70±19	$34.74^{+5.52}_{-2.73}$	1513^{+113}_{-77}	-2088^{+84}_{-96}	$0.109^{+0.041}_{-0.039}$

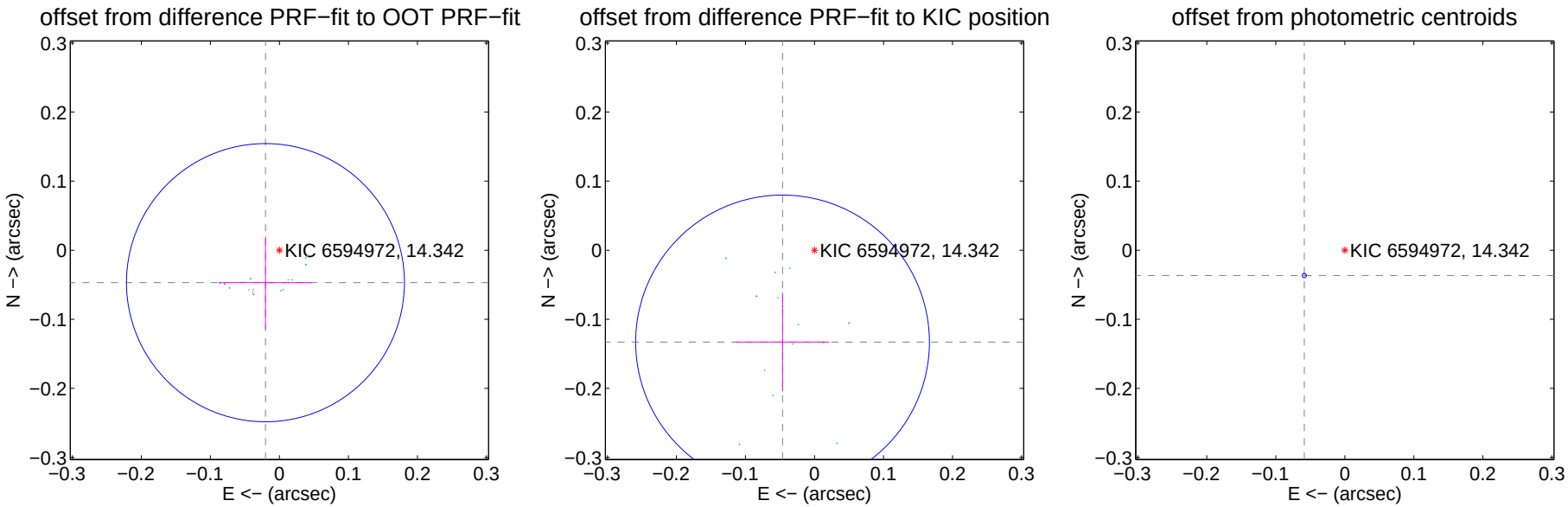
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

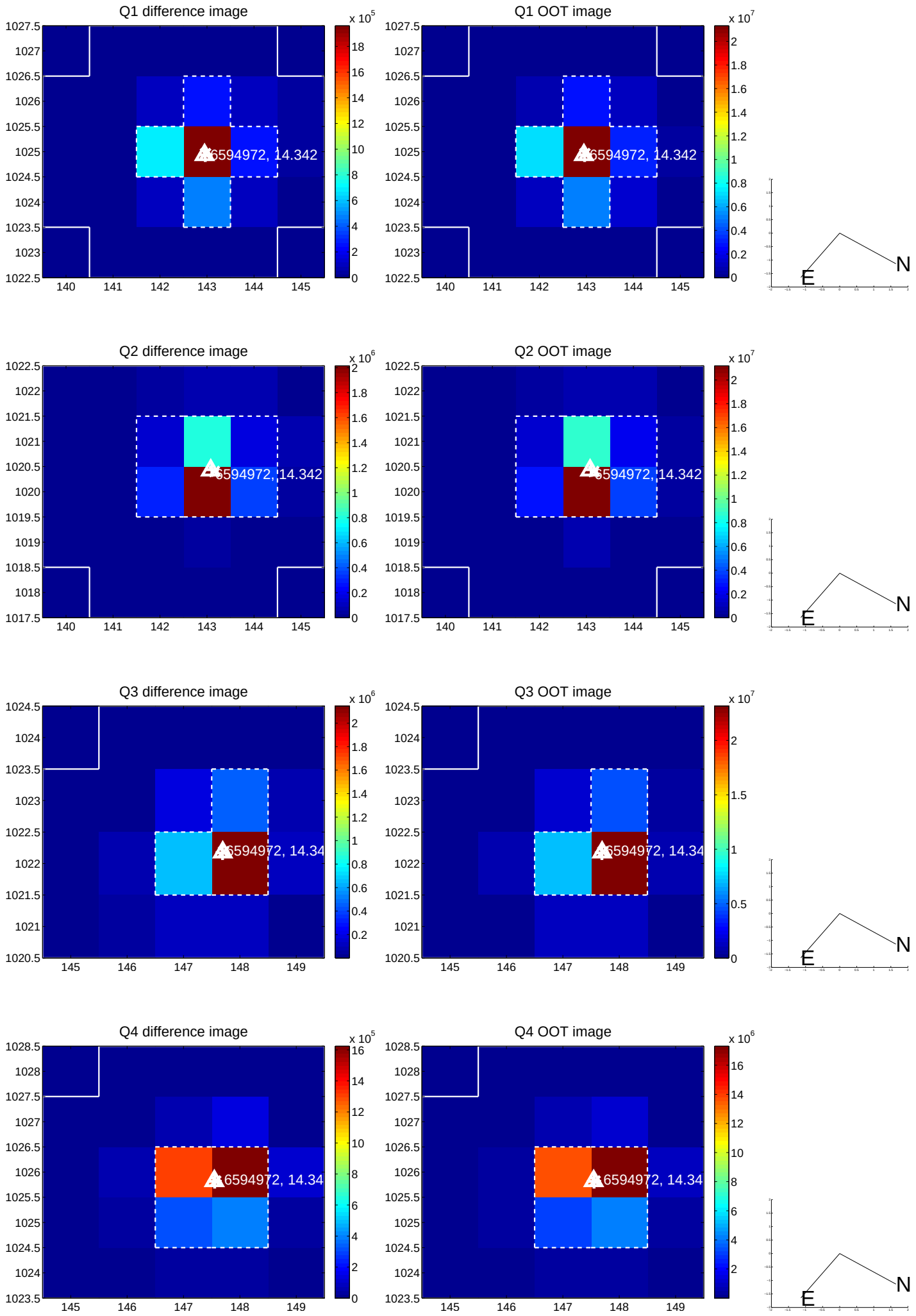
Supplemental centroid analysis for 006594972-02. Kepler magnitude: 14.34. Transit SNR 4421.55
There are 17 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.051 ± 0.067	0.76	0.020 ± 0.068	-0.047 ± 0.067
PRF-fit source offset from KIC position	0.141 ± 0.071	1.99	0.046 ± 0.068	-0.133 ± 0.071
photometric centroid source offset	0.07 ± 0.00	67.24	0.06 ± 0.00	-0.04 ± 0.00

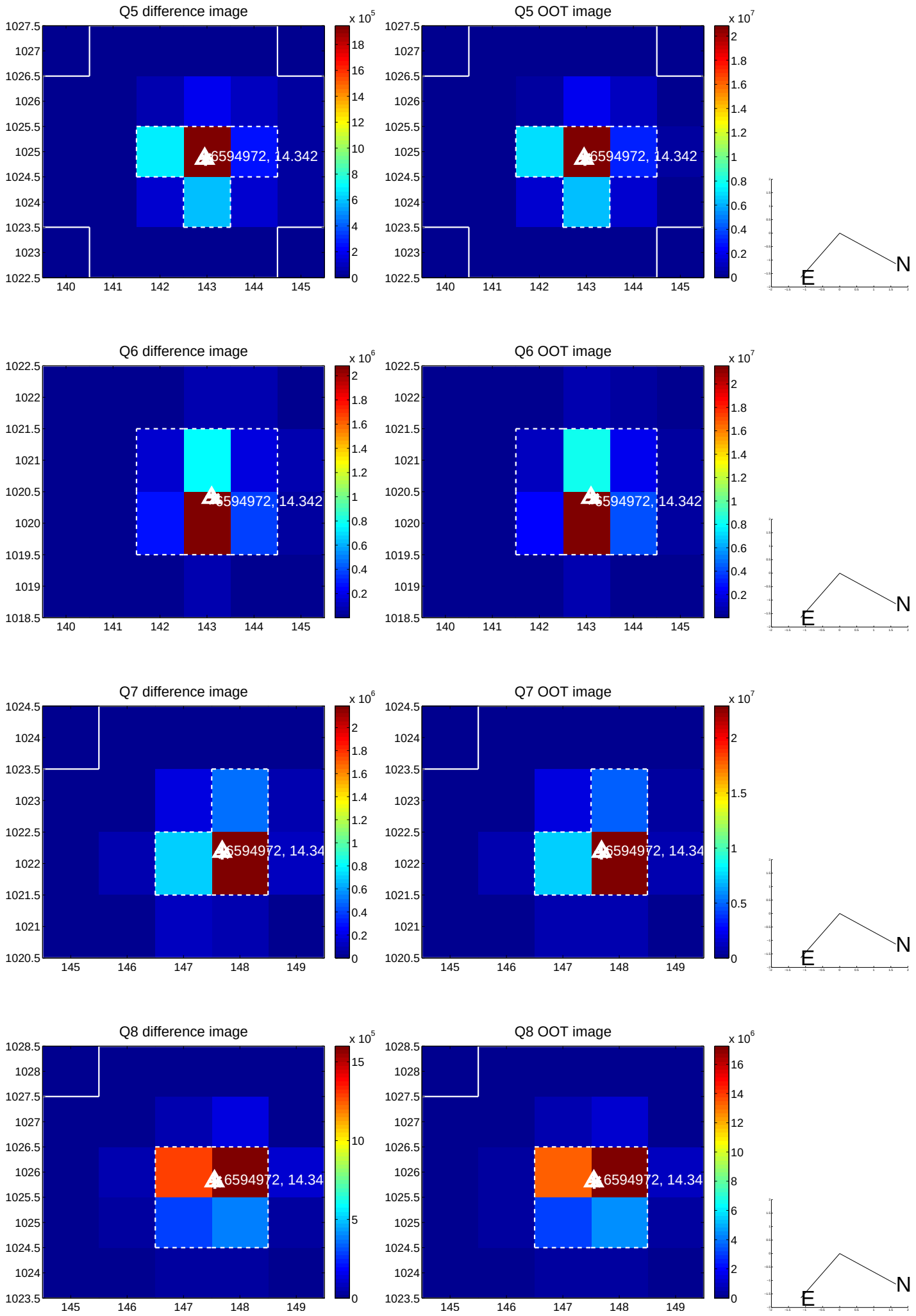


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

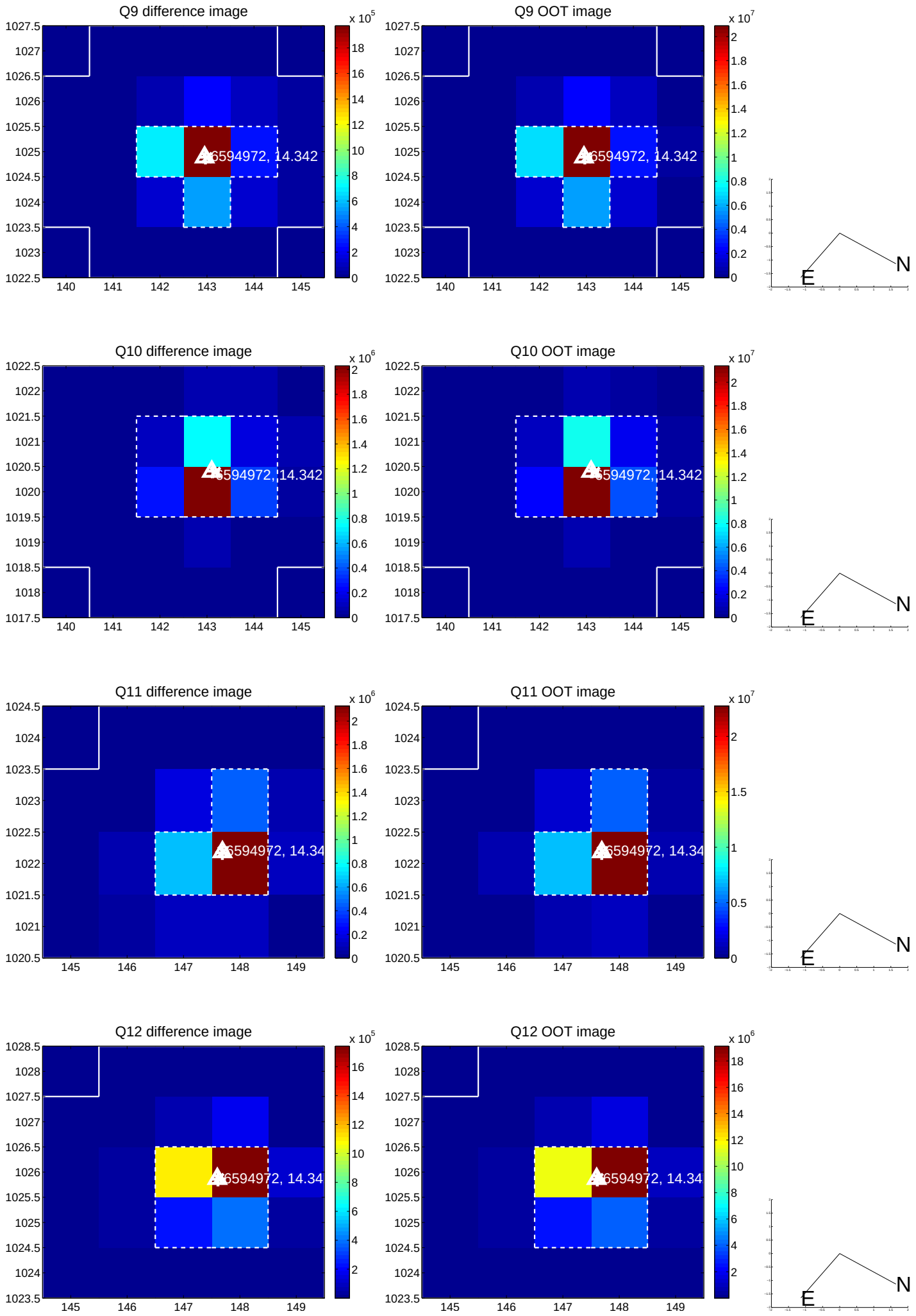
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



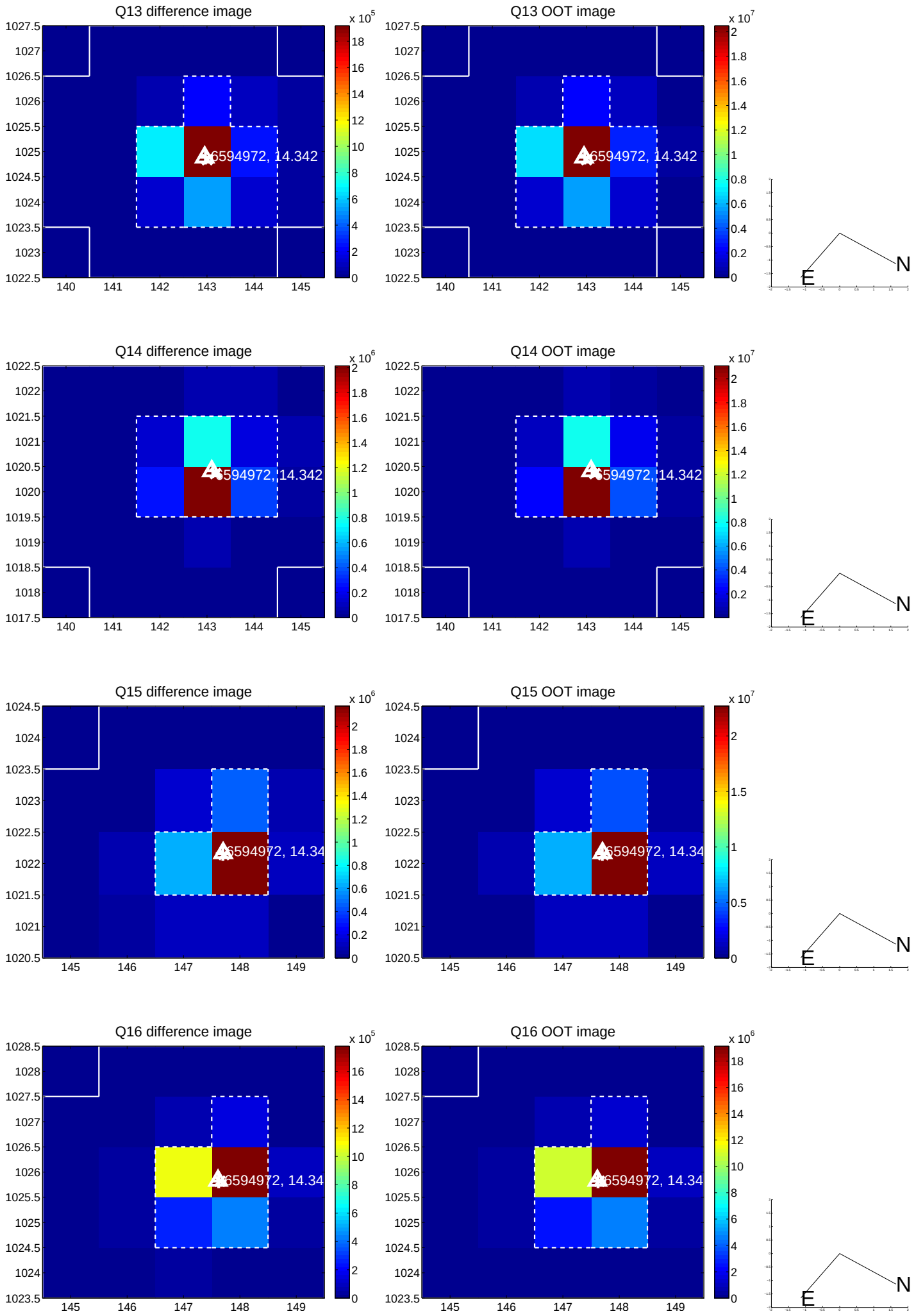
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



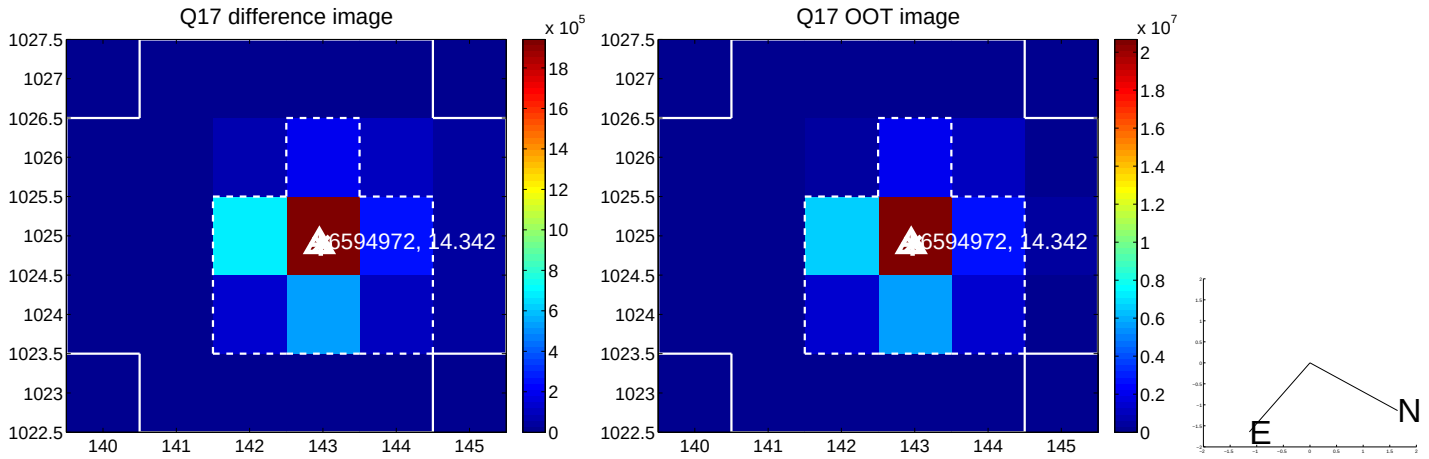
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

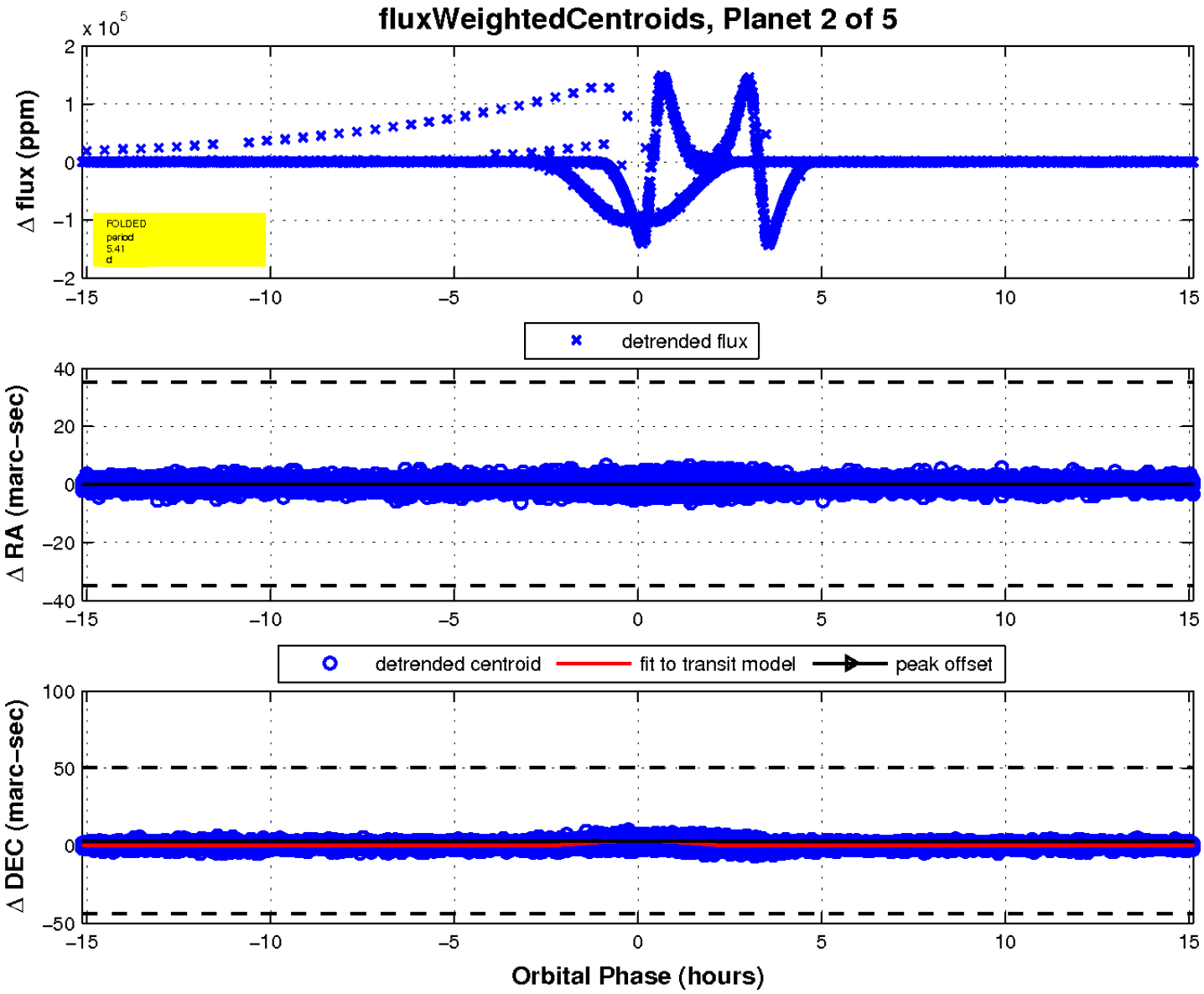


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

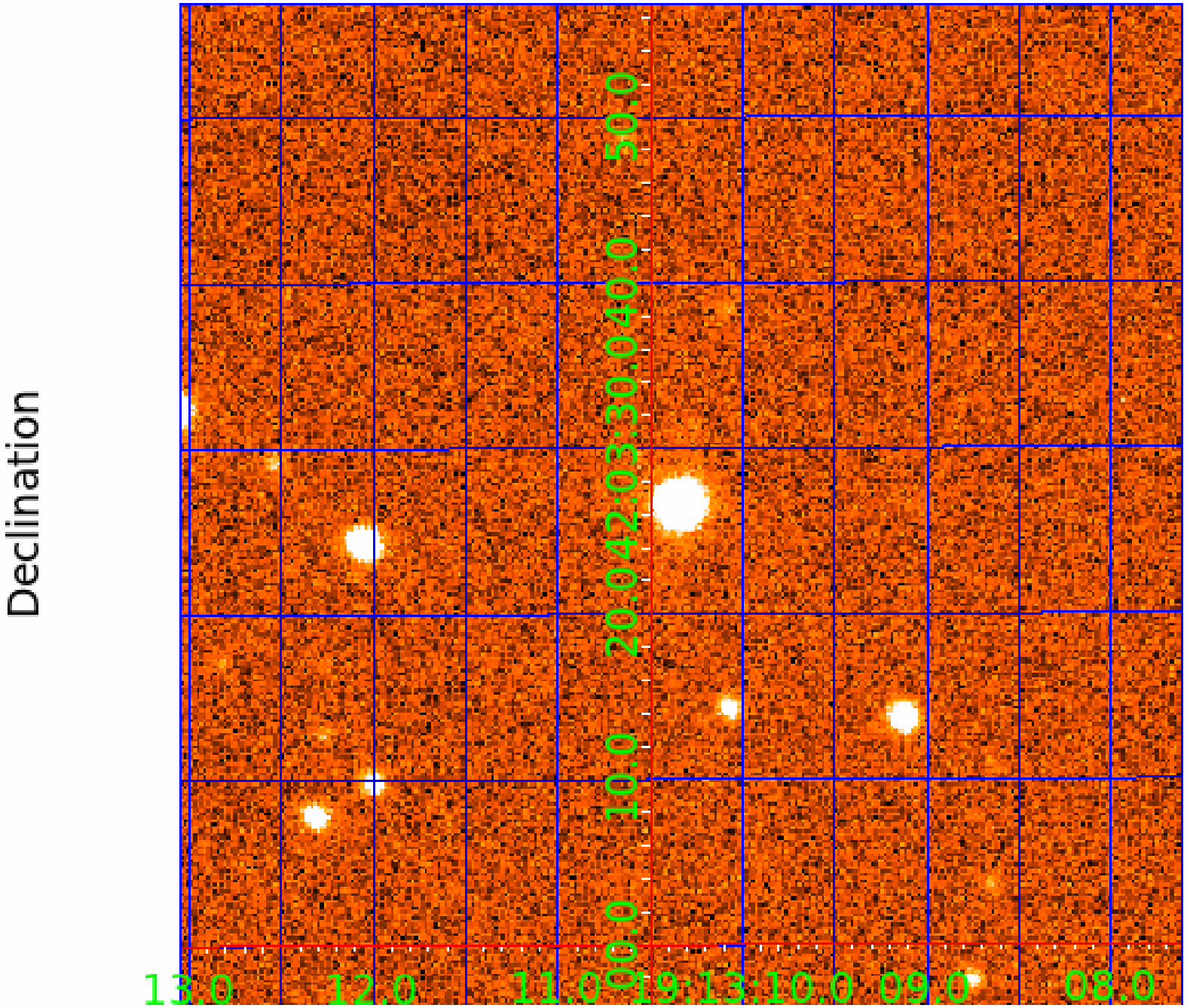


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image


Declination
00.0
10.0
20.0
42.0
03:30.0
40.0
50.0
13.0
12.0
11.0
19:13:10.0
09.0
08.0

KIC 006594972

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 ($S_\oplus$)
006594972-01	OBS	6737.01	10.819152	132.988277	435492.6	3.000	20156.5	-1.0	0.99	5955	54.07	123.84
006594972-02	OBS	No	5.409587	132.909920	101896.4	5.041	4716.8	4421.6	0.99	5955	34.23	312.07
006594972-03	OBS	No	208.907100	228.856480	2873.6	60.690	12.1	12.4	0.99	5955	9.88	2.39
006594972-04	OBS	No	494.676265	557.210200	643.1	16.711	9.8	3.8	0.99	5955	2.62	0.76
006594972-05	OBS	No	571.237089	373.855886	1504.2	29.355	8.6	7.8	0.99	5955	5.36	0.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006594972-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
006594972-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
006594972-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006594972-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006594972-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—ALL_TRANS_CHASES—MOD_TER_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

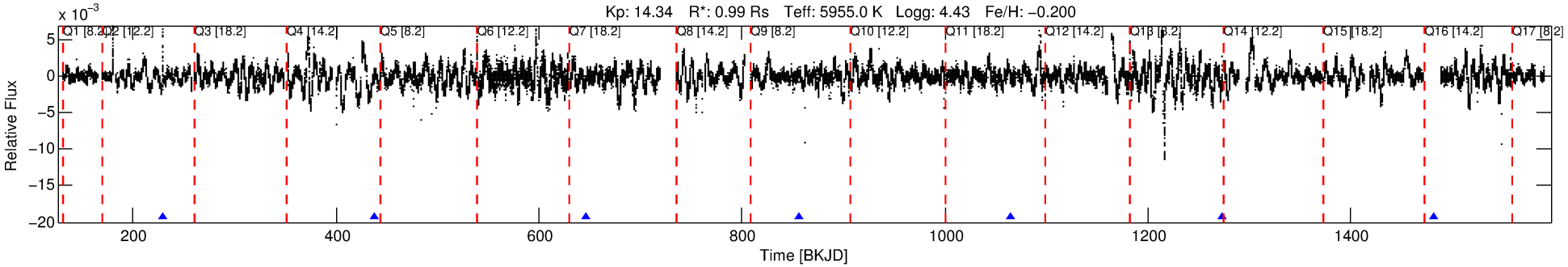
Ephemeris Match Information For 006594972-03

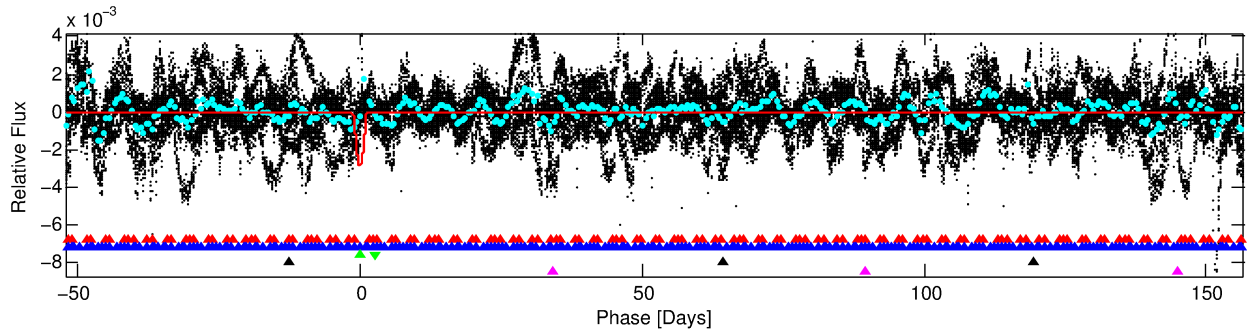
No Significant Match Found

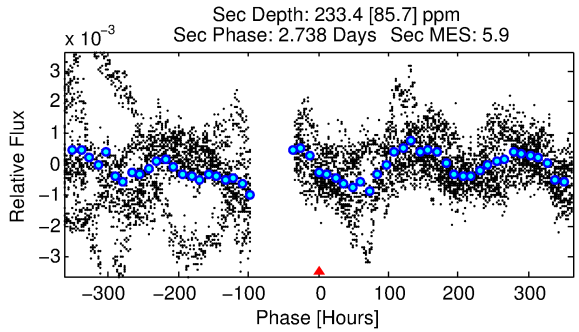
DV One-Page Summary

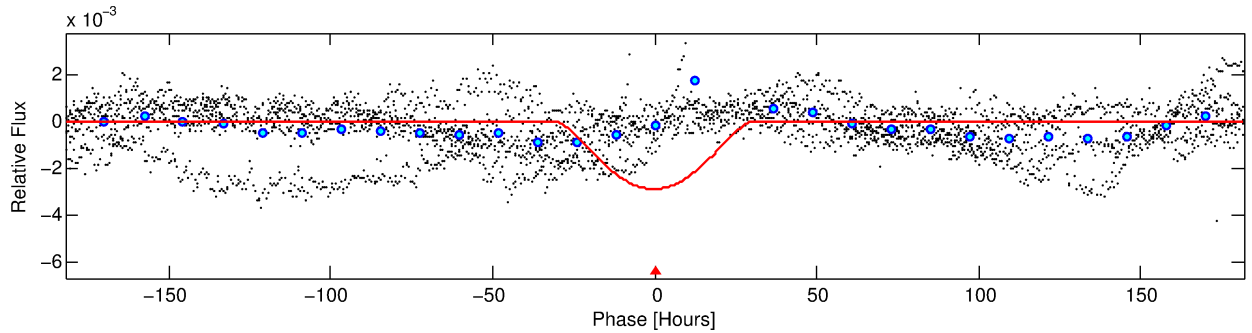
KIC: 6594972 Candidate: 3 of 5 Period: 208.907 d
KOI: K06737 Corr: No Ephemeris Match

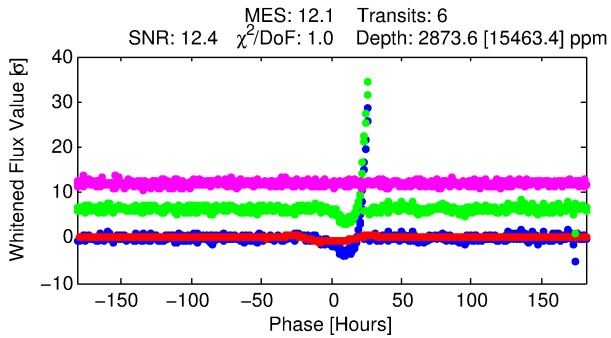
Kp: 14.34 R*: 0.99 Rs Teff: 5955.0 K Logg: 4.43 Fe/H: −0.200

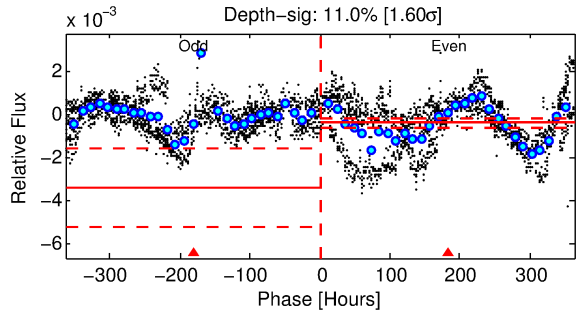


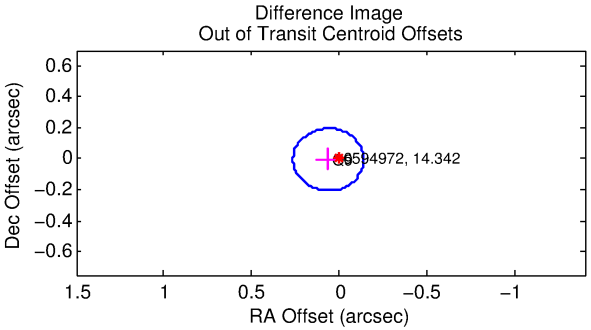












DV Fit Results:

Period = 208.90710 [0.01950] d
Epoch = 228.8565 [0.0423] BKJD
Rp/R* = 0.0914 [0.0650]
a/R* = 11.54 [1.58]
b = 1.00 [0.24]

Seff = 2.39 [0.93]
Teq = 317 [31] K
Rp = 9.89 [7.64] Re
a = 0.6803 [0.1735] AU

Ag = 608.10 [921.16] [0.66σ]
Teffp = 2434 [897] K [2.36σ]

DV Diagnostic Results:

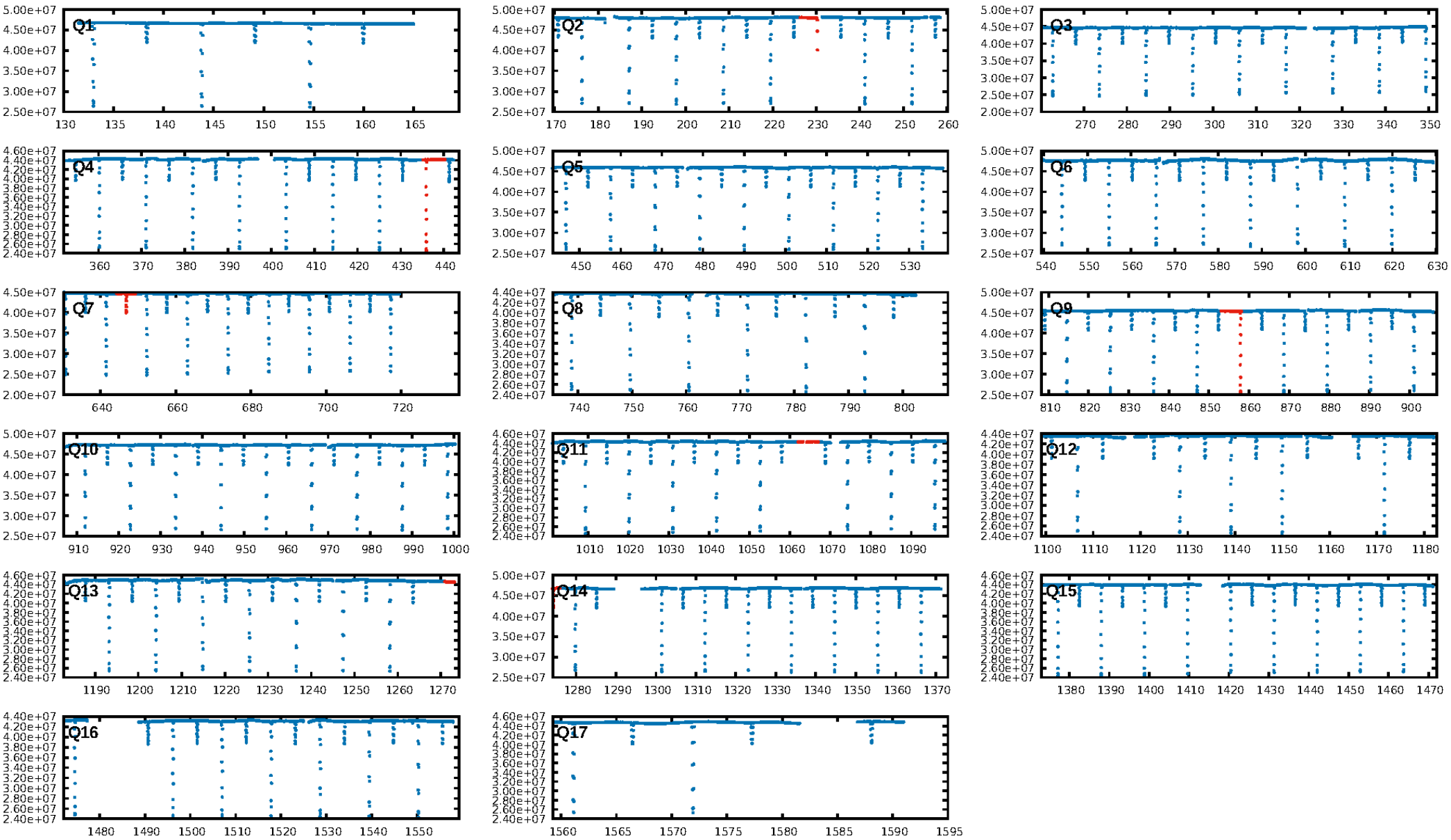
ShortPeriod−sig: 100.0% [78.24σ]
LongPeriod−sig: 100.0% [108.95σ]
ModelChiSquare2−sig: 0.0%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [6/6]
GhostDiagnostic−chr: 2.216

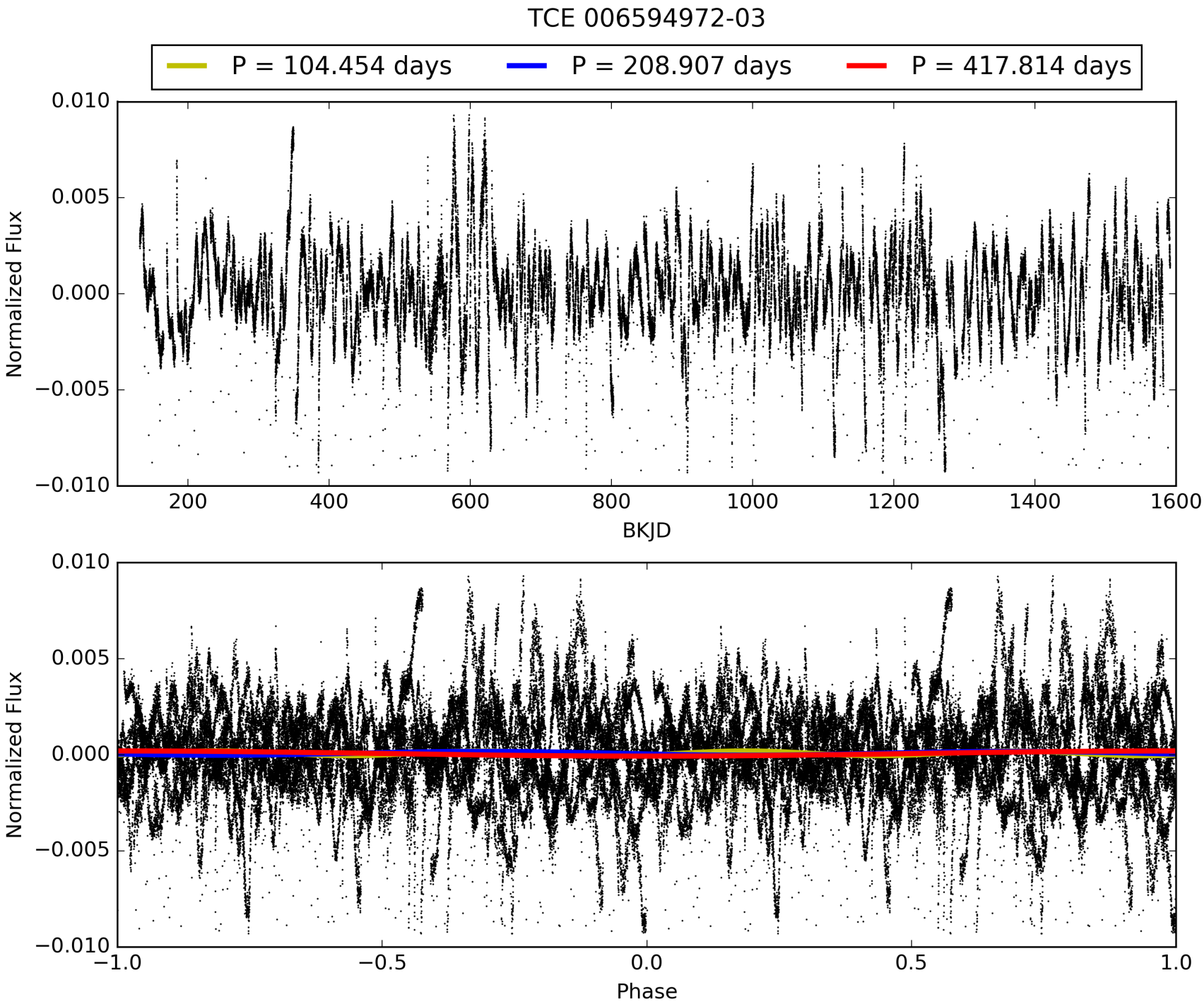
Centroid−sig: 86.0%
Centroid−so: 0.088 arcsec [1.03σ]
OotOffset−rm: 0.064 arcsec [0.95σ]
KicOffset−rm: 0.153 arcsec [2.29σ]
OotOffset−st: 0/0/0/1 [1]
KicOffset−st: 0/0/0/1 [1]
DiffImageQuality−fgm: 0.00 [0/1]
DiffImageOverlap−fno: 0.00 [0/1]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02−Feb−2016 01:03:57 Z

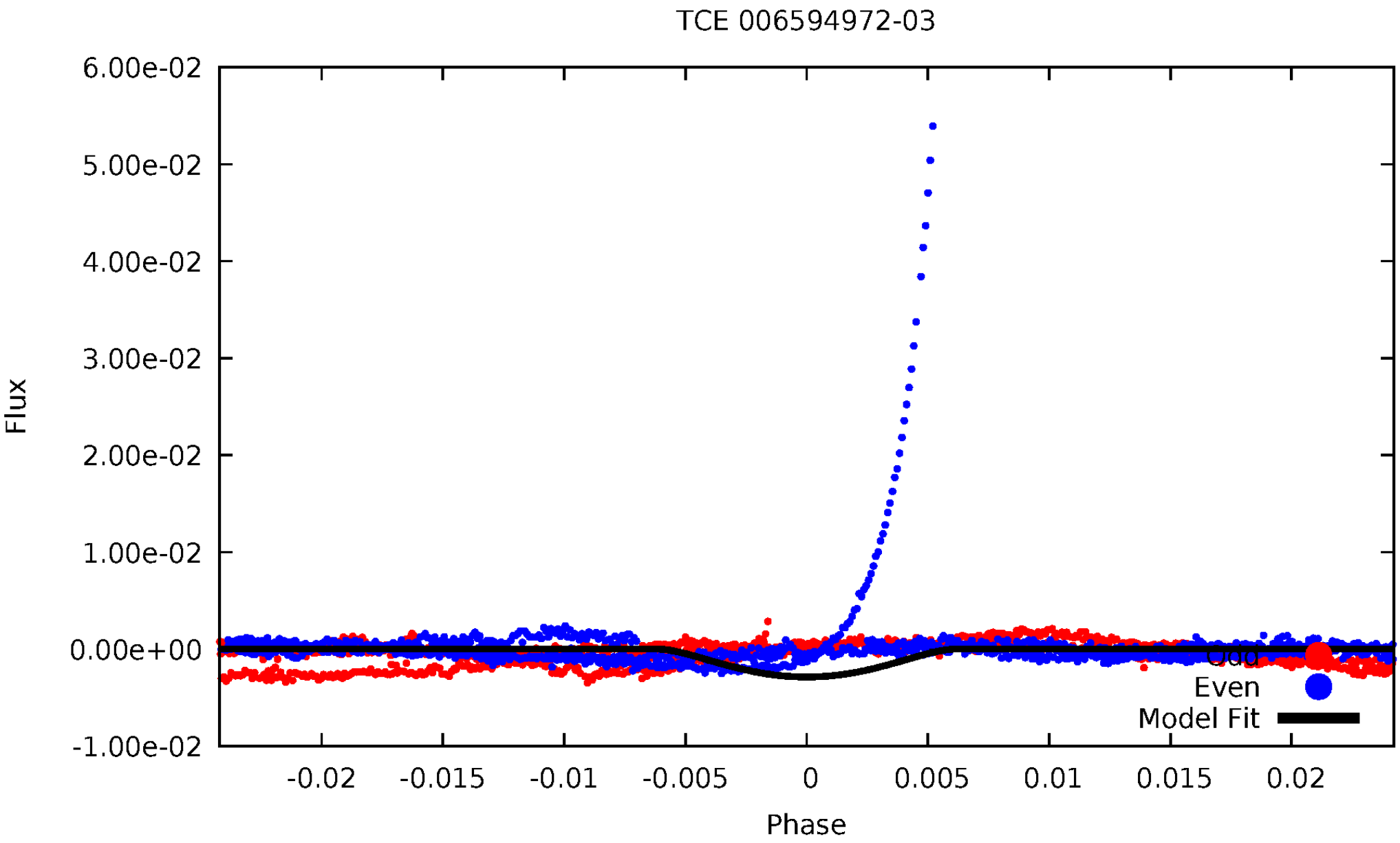
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006594972-03, PDC Light Curves

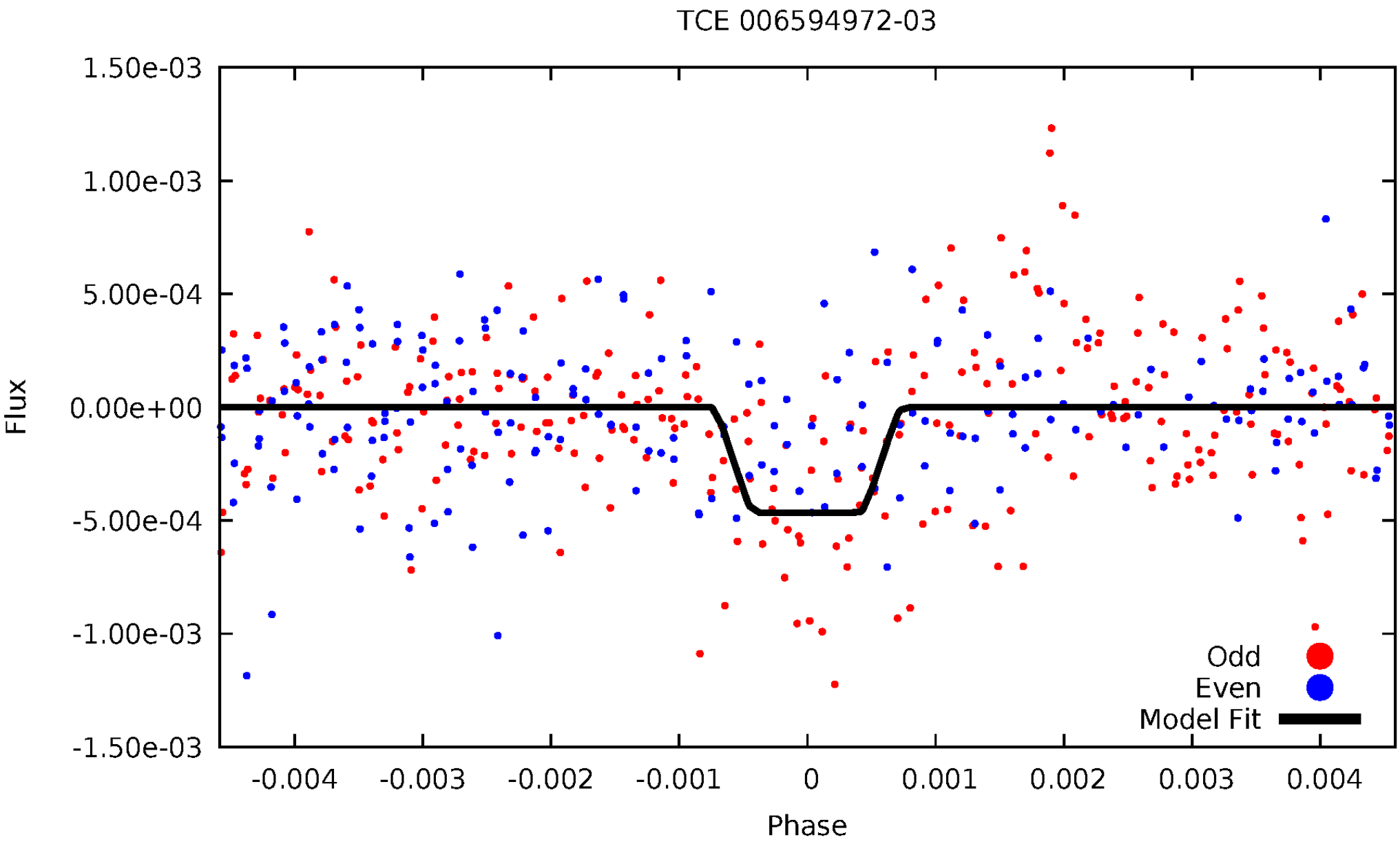



TCE 006594972-03
P = 104.454 days
P = 208.907 days
P = 417.814 days
Normalized Flux
BKJD
Normalized Flux
Phase

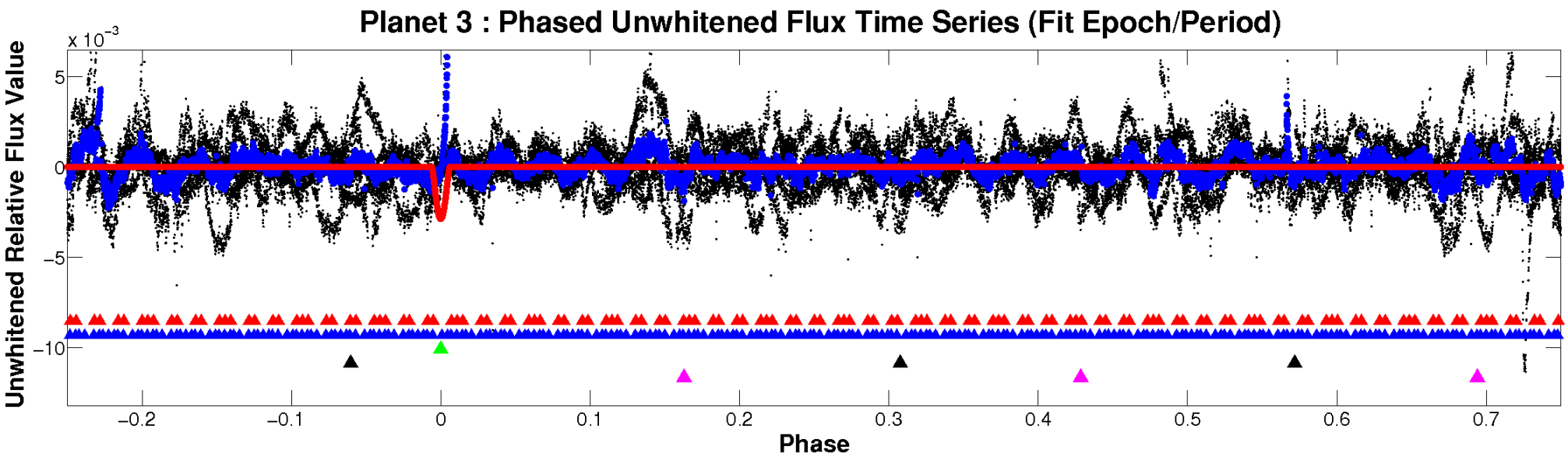
DV Odd/Even

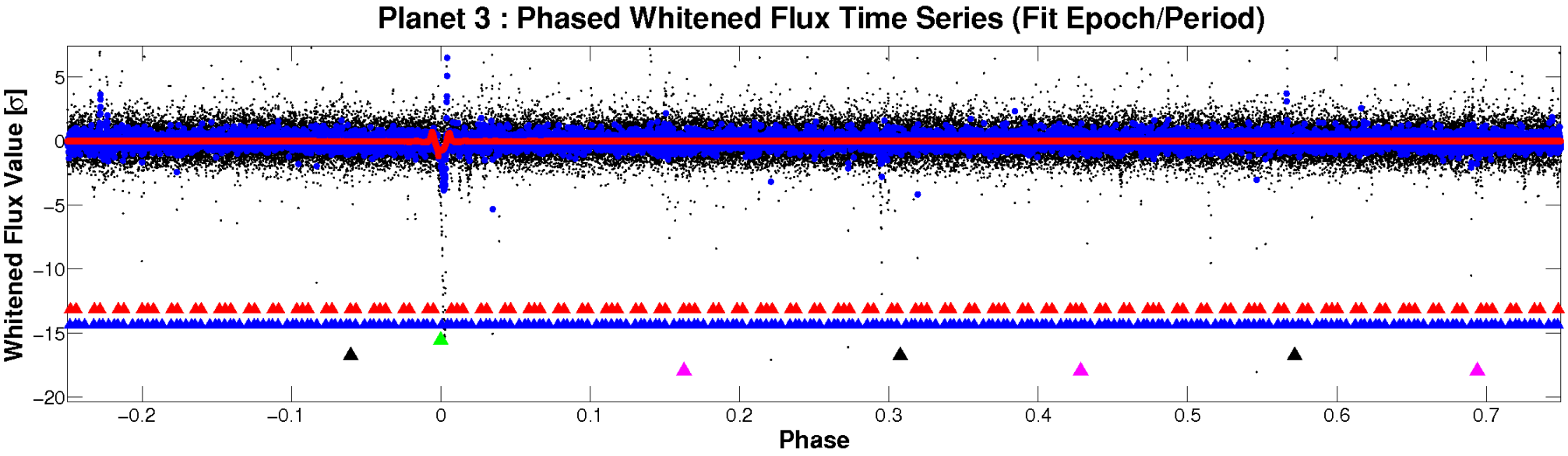

TCE 006594972-03
6.00e-02
5.00e-02
4.00e-02
3.00e-02
2.00e-02
1.00e-02
0.00e+00
-1.00e-02
Flux
-0.02
-0.015
-0.01
-0.005
0
0.005
0.01
0.015
0.02
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006594972-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
Flux
-0.004
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
0.004
Phase
Odd
Even
Model Fit

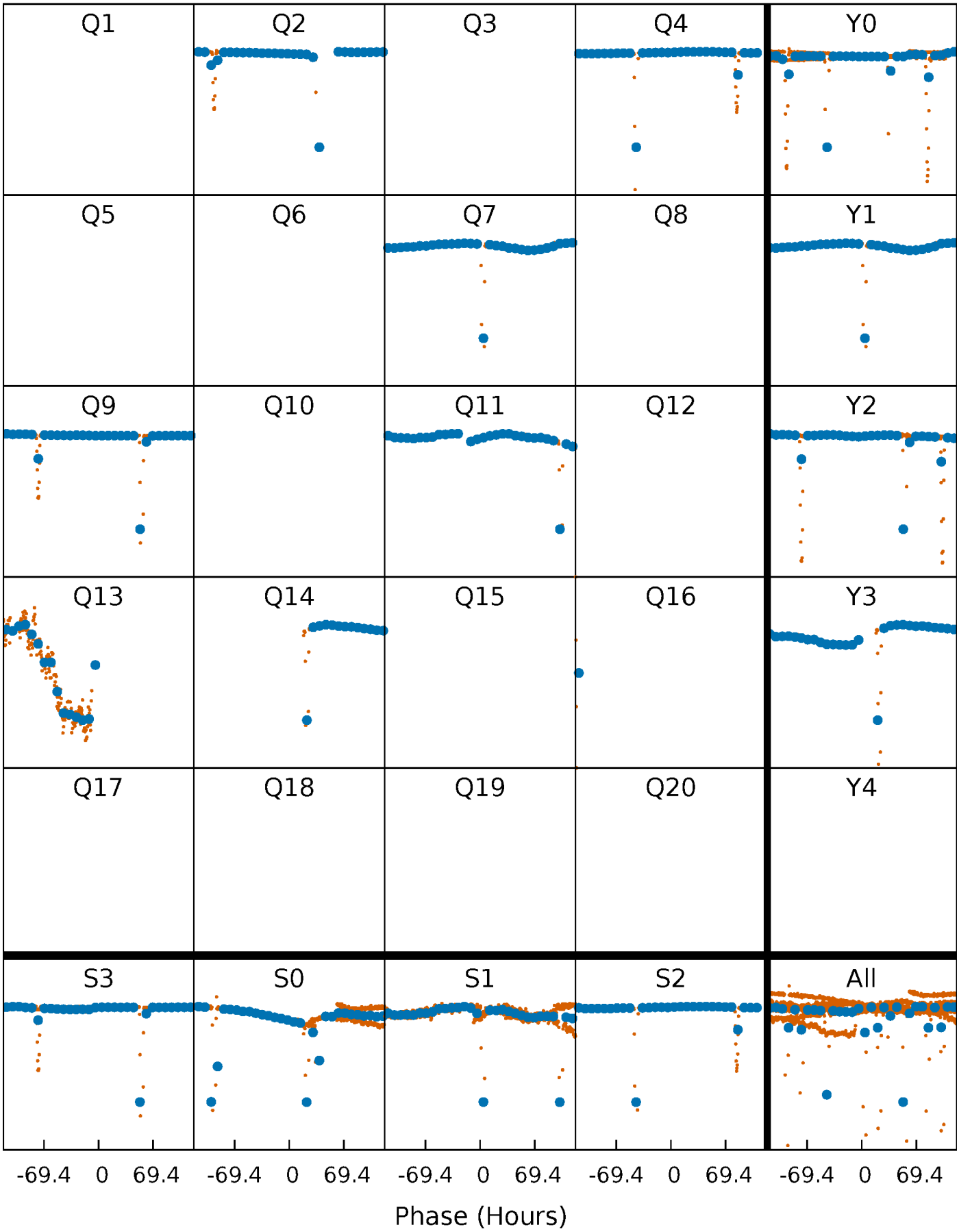
Non-Whitened Vs. Whitened Light Curve





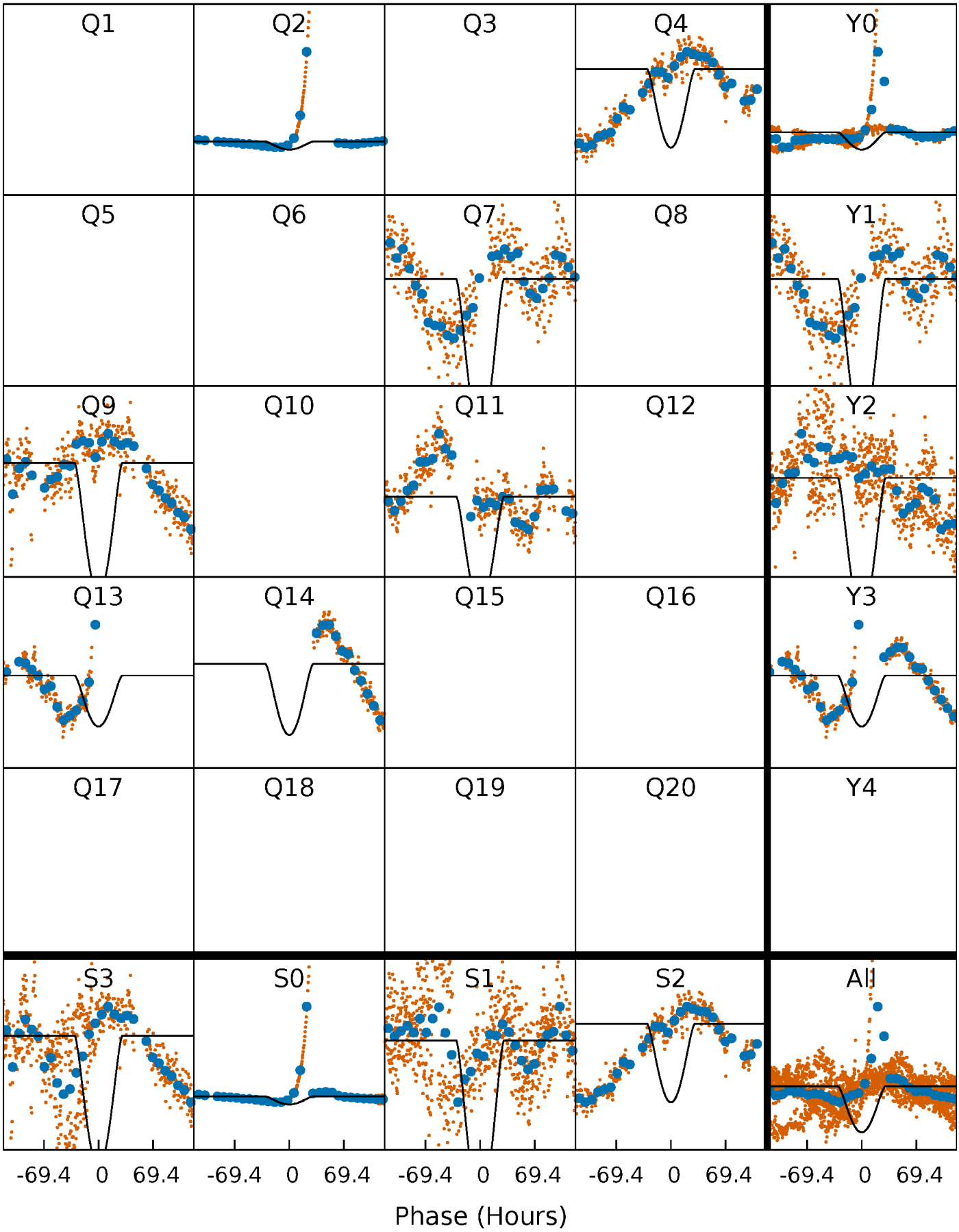
PDC Quarter-Phased Transit Curves

TCE 006594972-03 P=208.907100 Days T_0=228.856480 (BKJD)



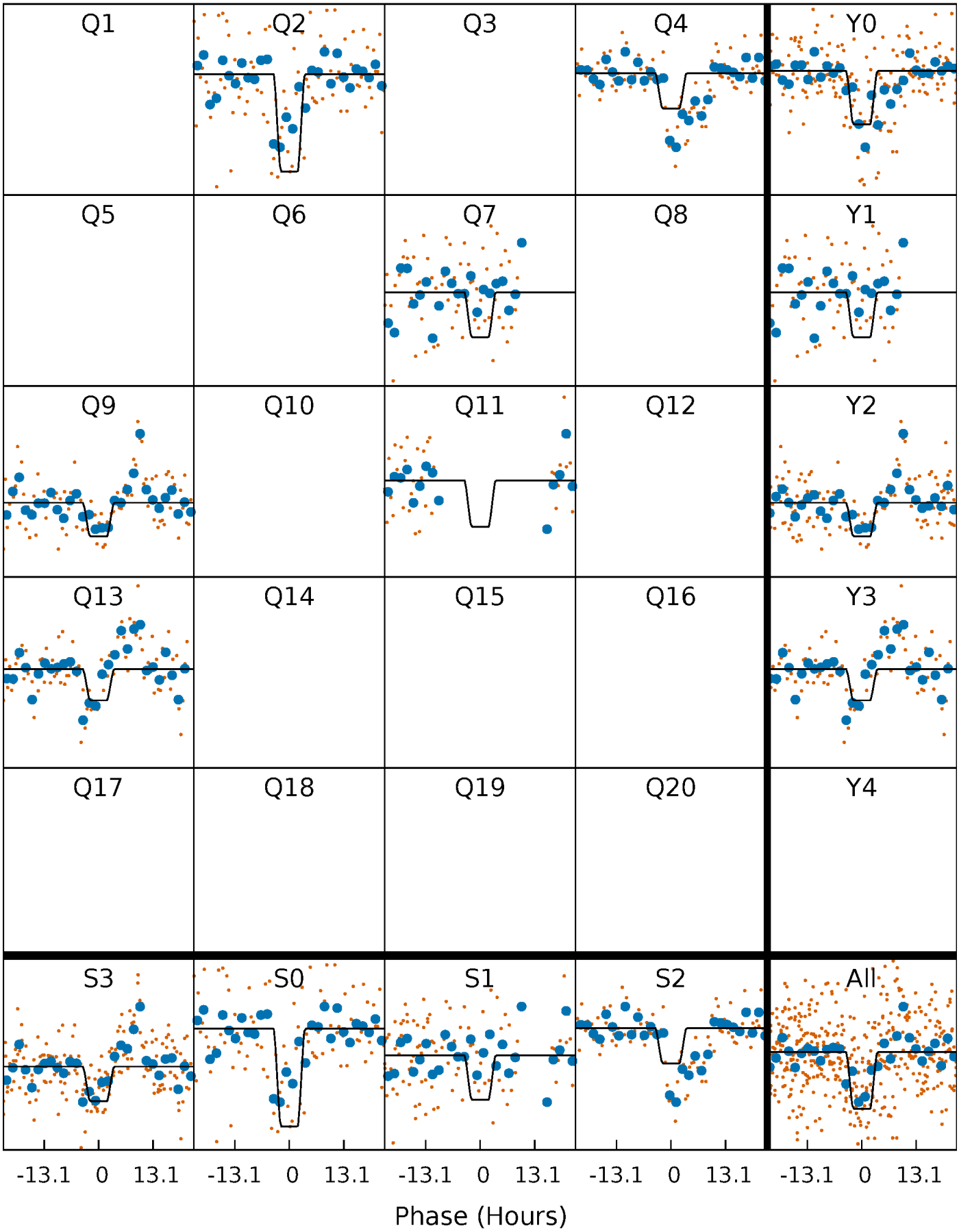
DV Quarter-Phased Transit Curves

TCE 006594972-03 P=208.907100 Days T_0=228.856480 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

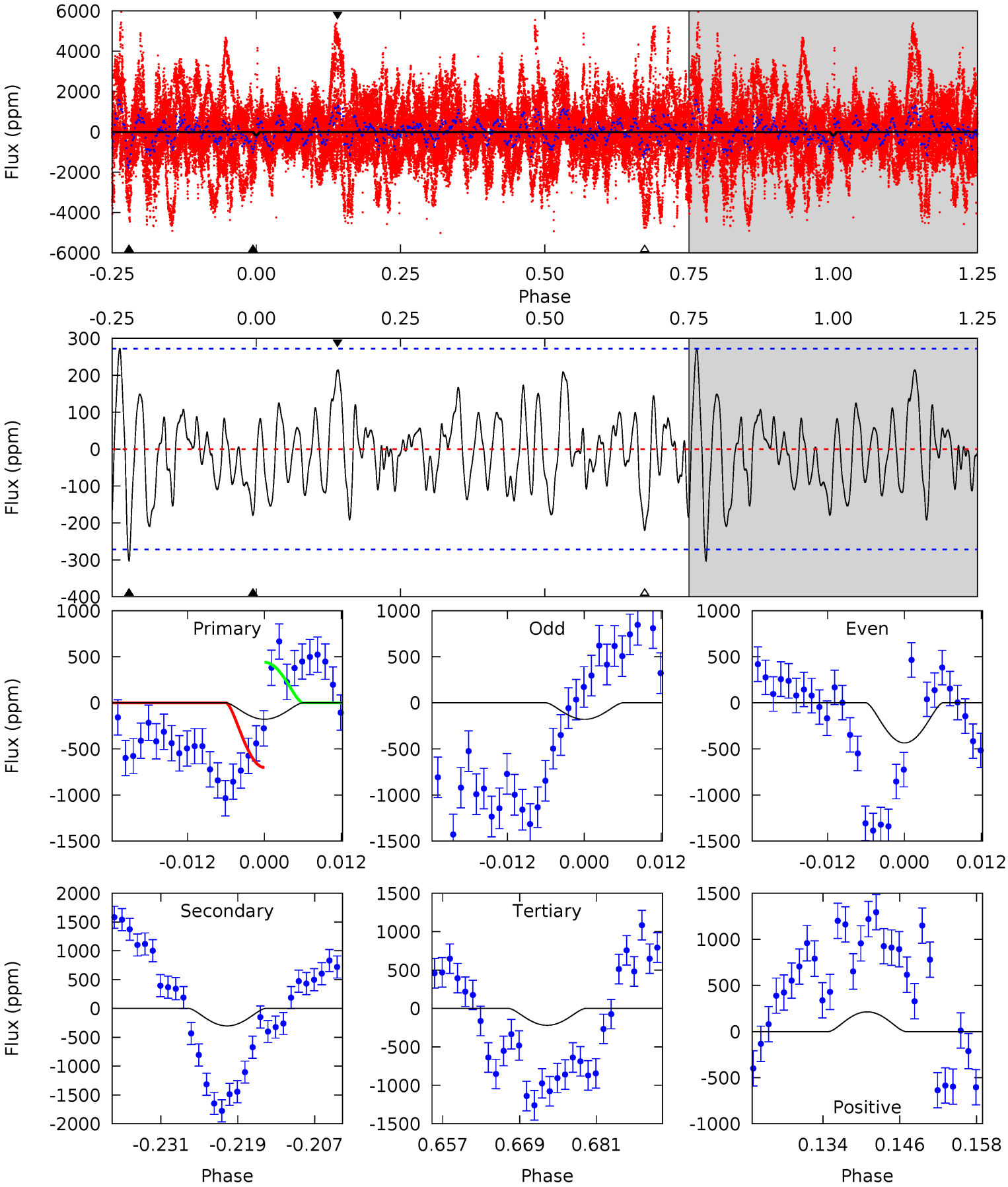
TCE 006594972-03 P=208.687948 Days T_0=228.709378 (BKJD)



DV Model-Shift Uniqueness Test

006594972-03, P = 208.907100 Days, E = 19.949380 Days

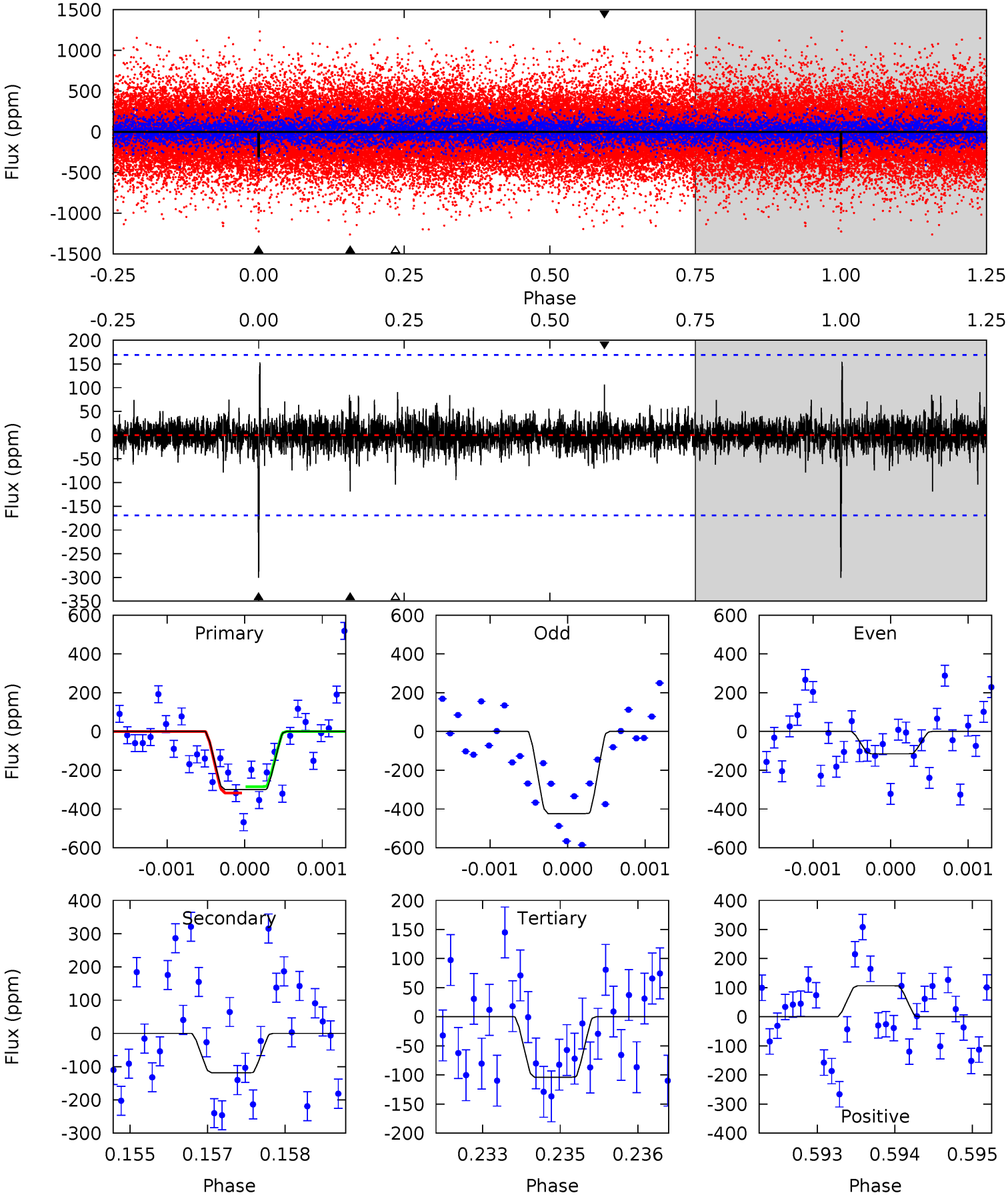
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.27	5.55	4.02	3.92	4.99	2.51	1.61	-0.75	-0.65	1.53	1.63	2.35	-5.27	0.47	2.45



Alt Model-Shift Uniqueness Test

006594972-03, P = 208.687948 Days, E = 20.021430 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.55	3.77	3.30	3.39	5.38	3.18	0.68	6.25	6.16	0.46	0.37	4.80	0.97	0.34	0.51



Stellar Parameters For KIC 006594972

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5955^{+179}_{-179}	$4.429^{+0.087}_{-0.203}$	$-0.200^{+0.300}_{-0.300}$	$0.991^{+0.300}_{-0.128}$	$0.961^{+0.134}_{-0.109}$	$1.393^{+0.627}_{-0.695}$
	+3%/-3%	+2%/-5%	+150%/-150%	+30%/-13%	+14%/-11%	+45%/-50%
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 006594972-03 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-303±55	$11.01^{+7.52}_{-6.11}$	449^{+33}_{-24}	3142^{+891}_{-432}	643^{+2466}_{-424}
Alt.	-118±31	$6.04^{+6.07}_{-4.18}$	451^{+30}_{-25}	3238^{+1719}_{-589}	775^{+7998}_{-583}

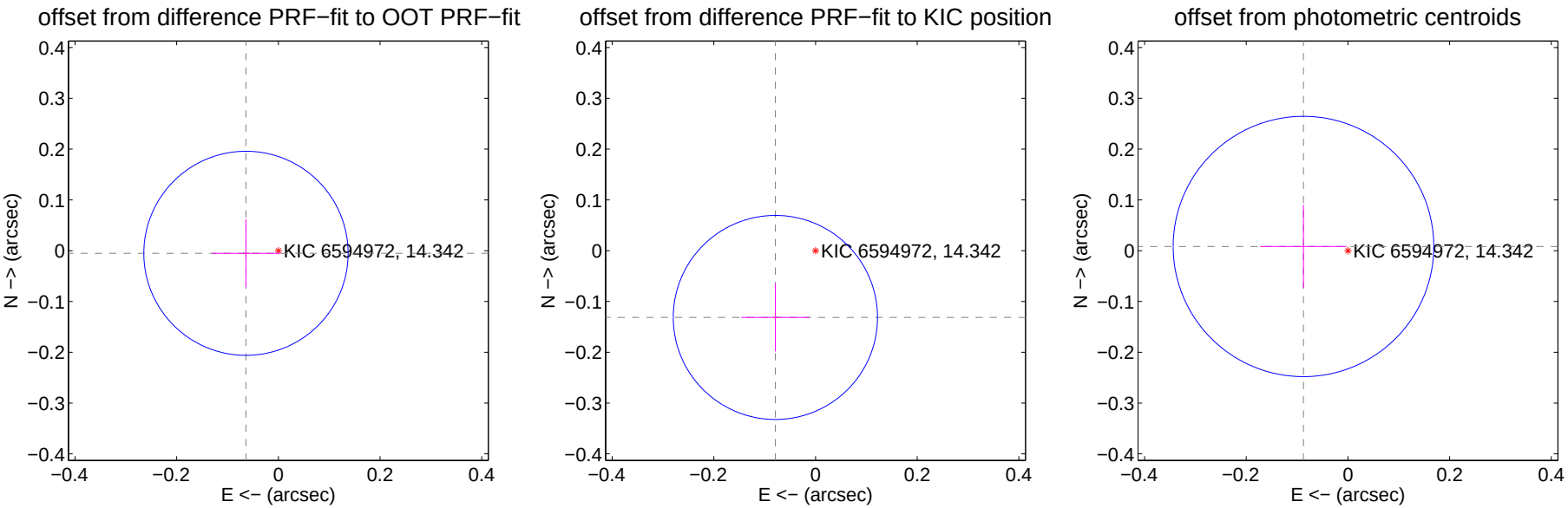
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

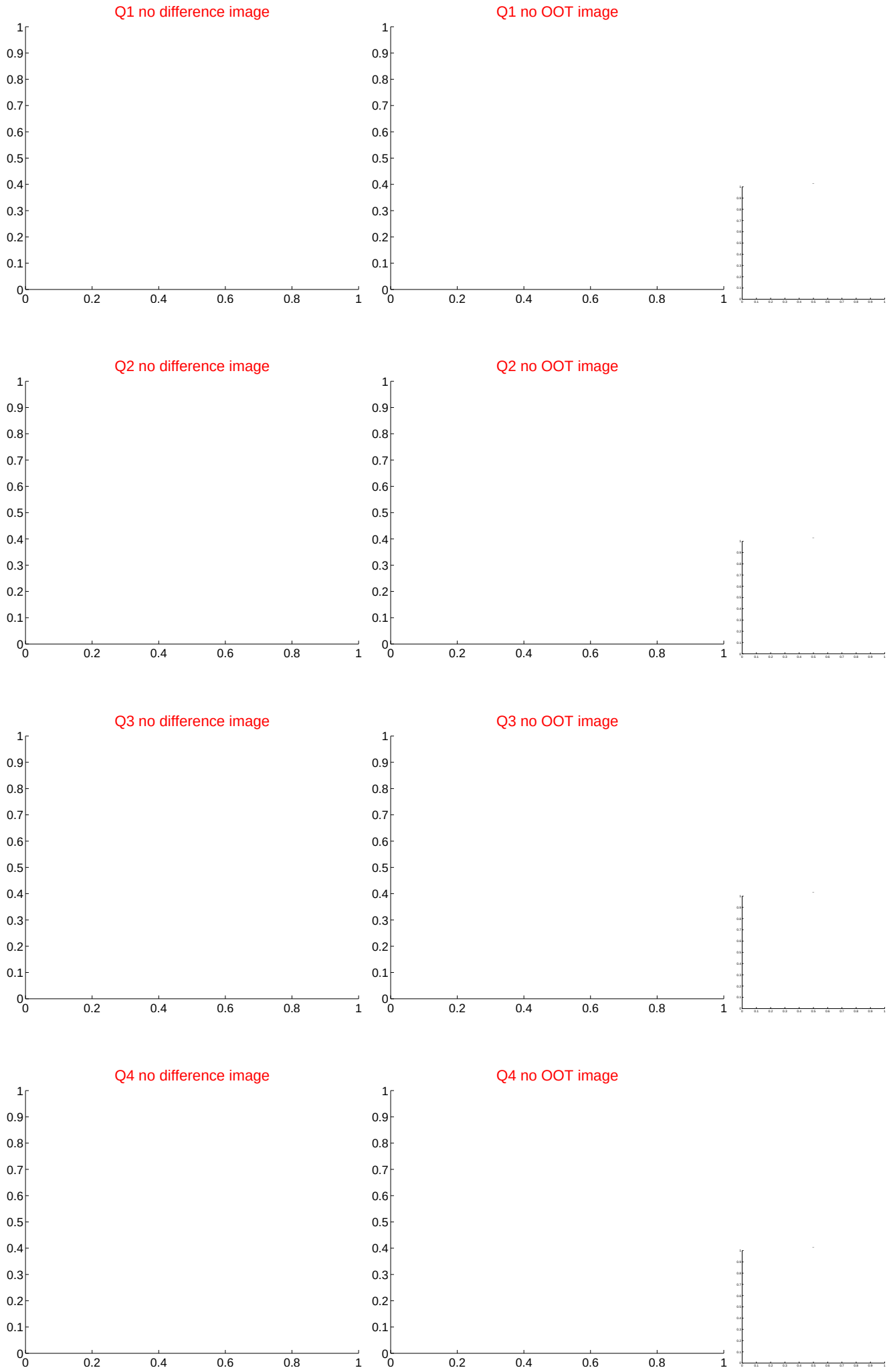
Supplemental centroid analysis for 006594972-03. Kepler magnitude: 14.34. Transit SNR 12.37
There are 0 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.064 ± 0.067	0.95	0.064 ± 0.067	-0.005 ± 0.067
PRF-fit source offset from KIC position	0.153 ± 0.067	2.29	0.079 ± 0.067	-0.131 ± 0.067
photometric centroid source offset	0.09 ± 0.09	1.03	0.09 ± 0.09	0.01 ± 0.08

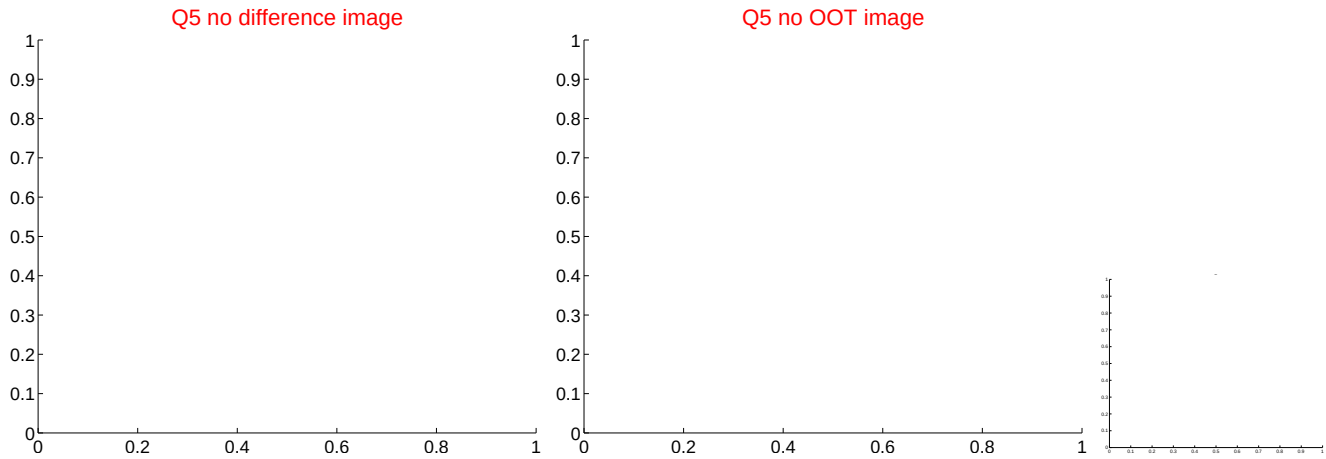


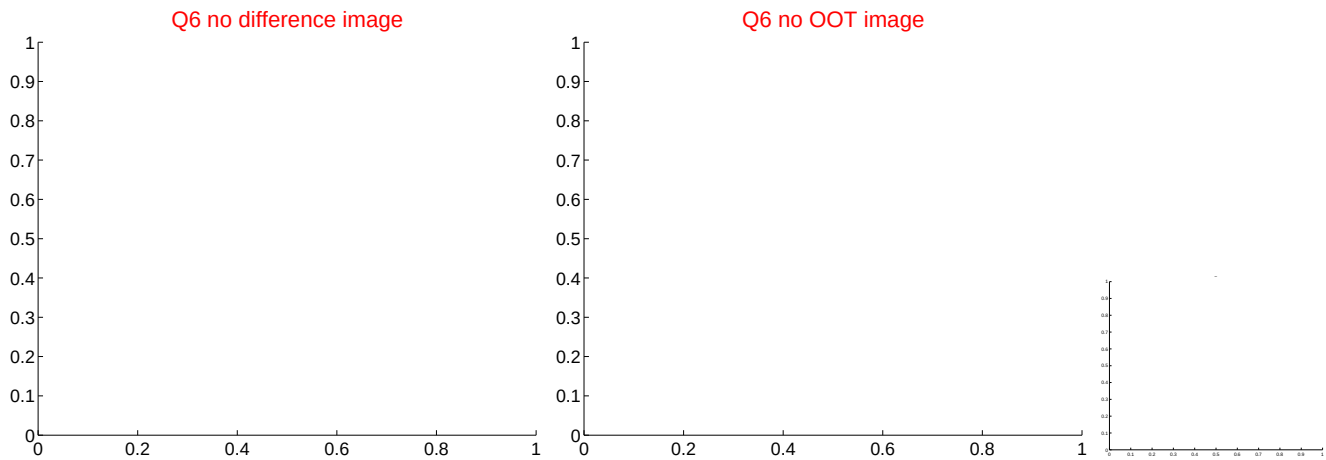
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

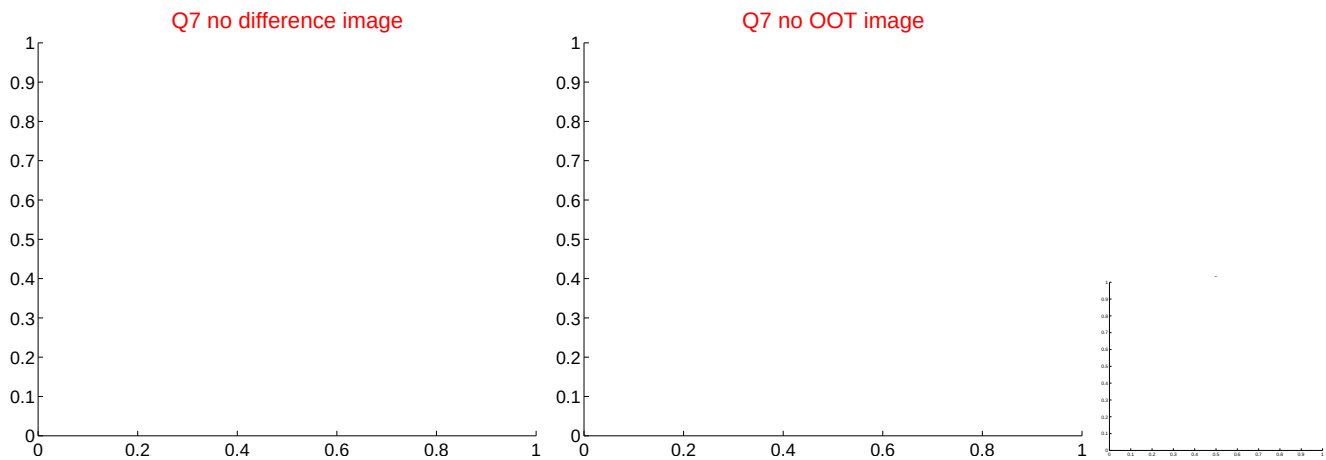
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

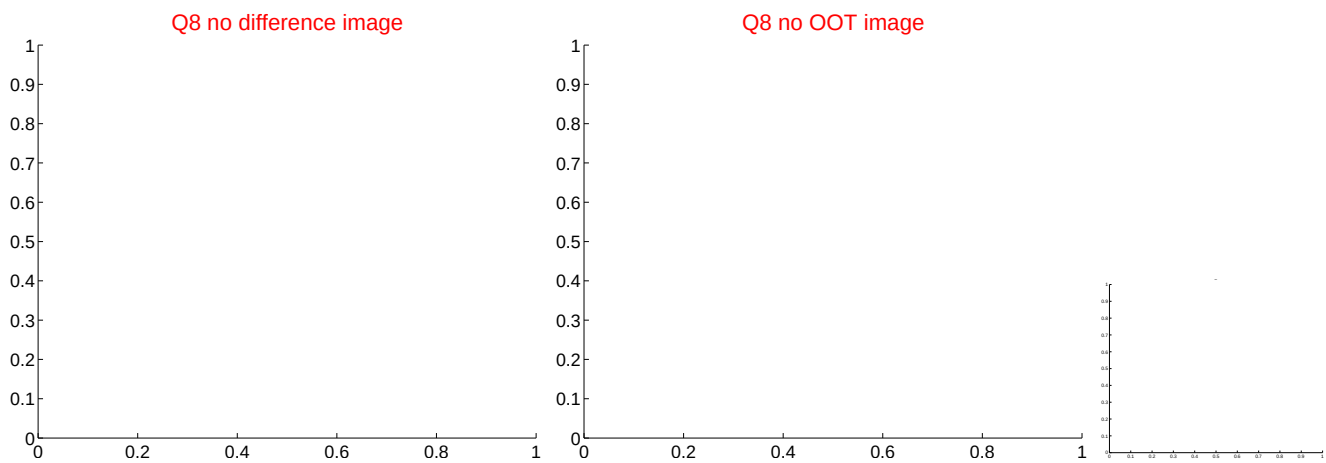


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

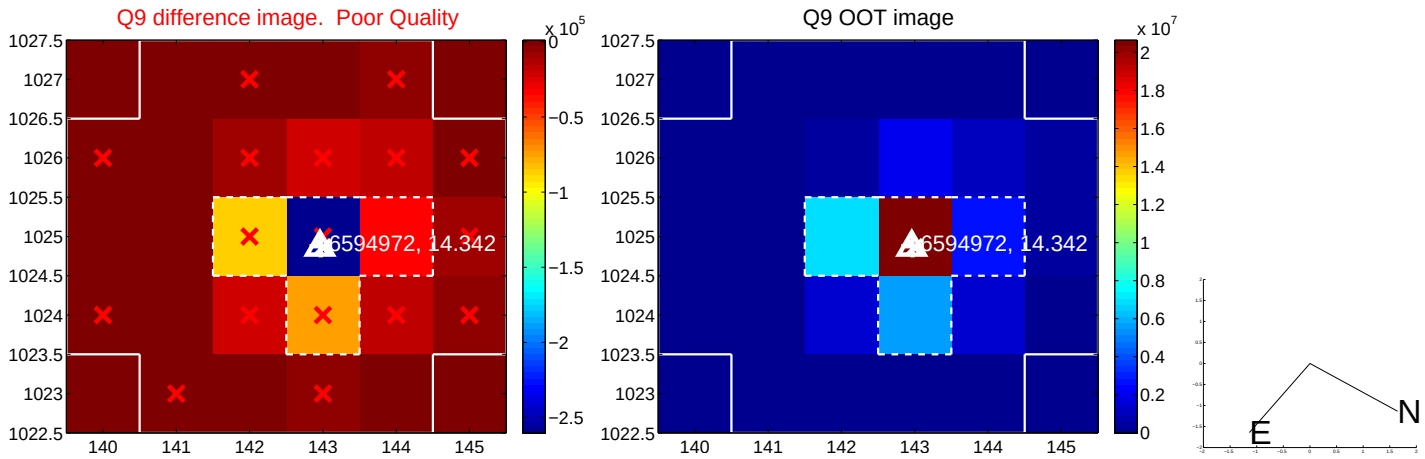


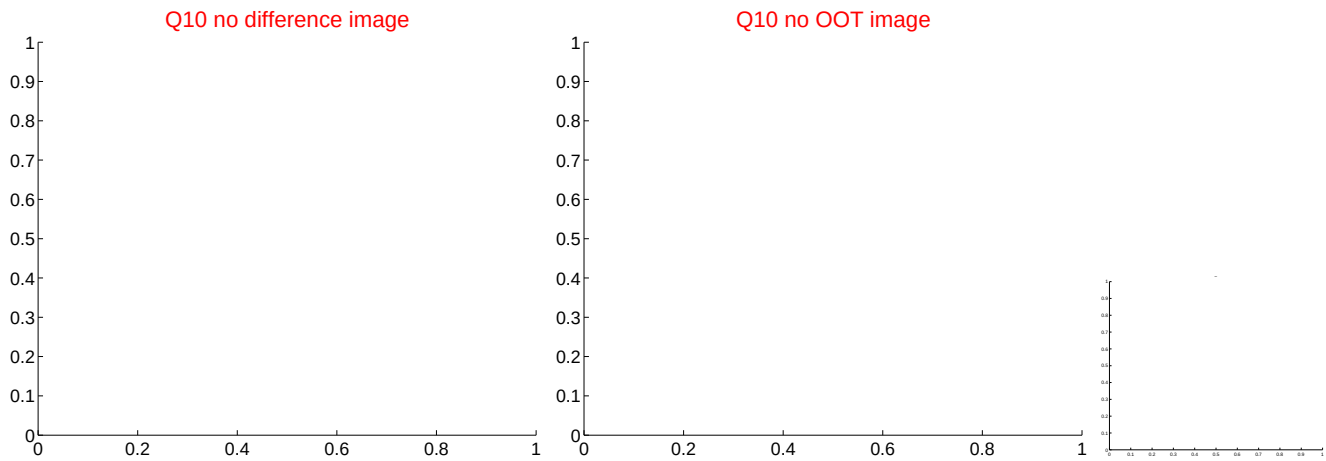


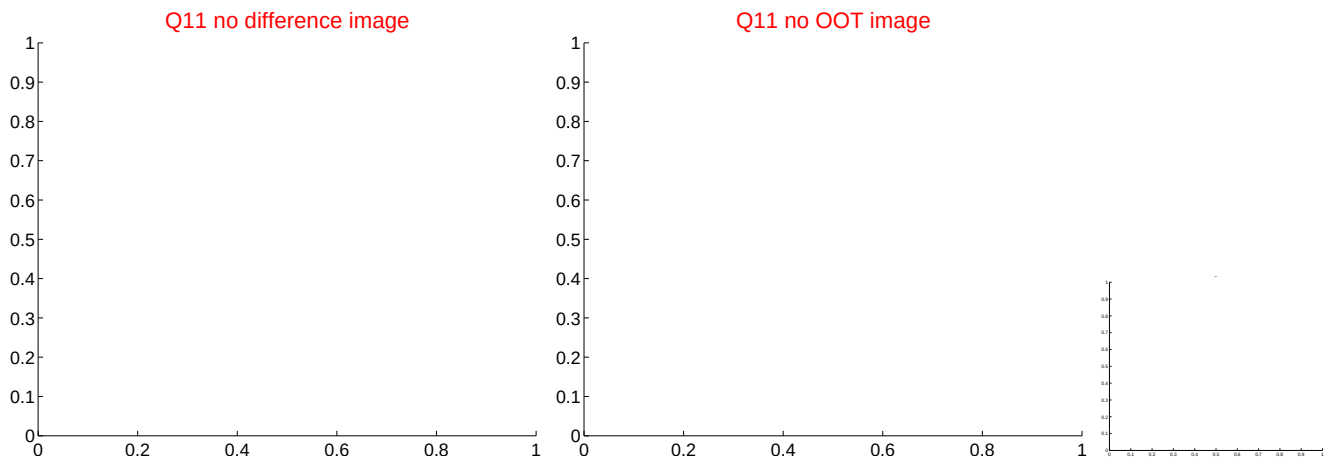


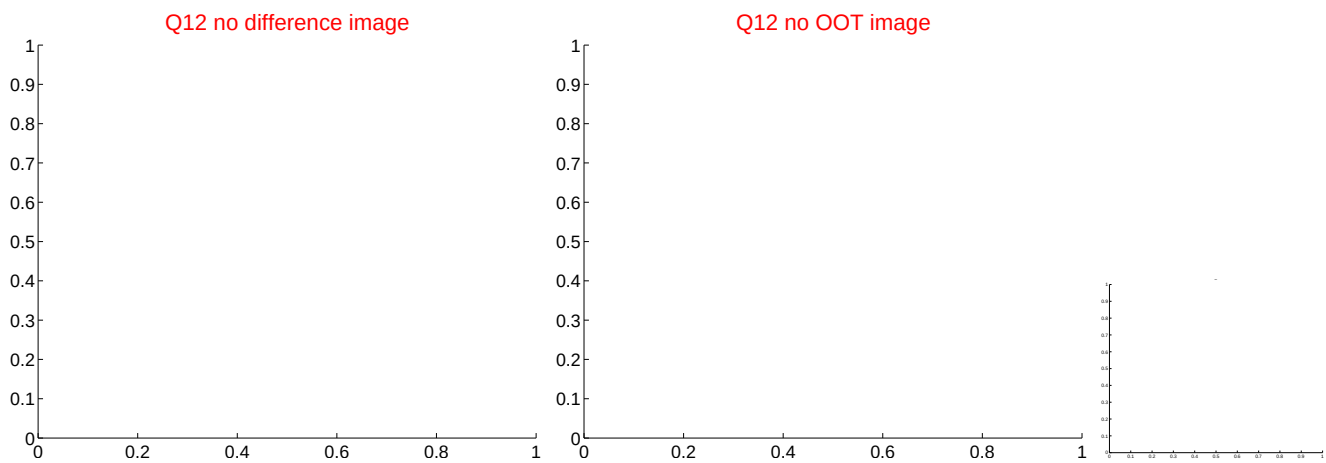


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

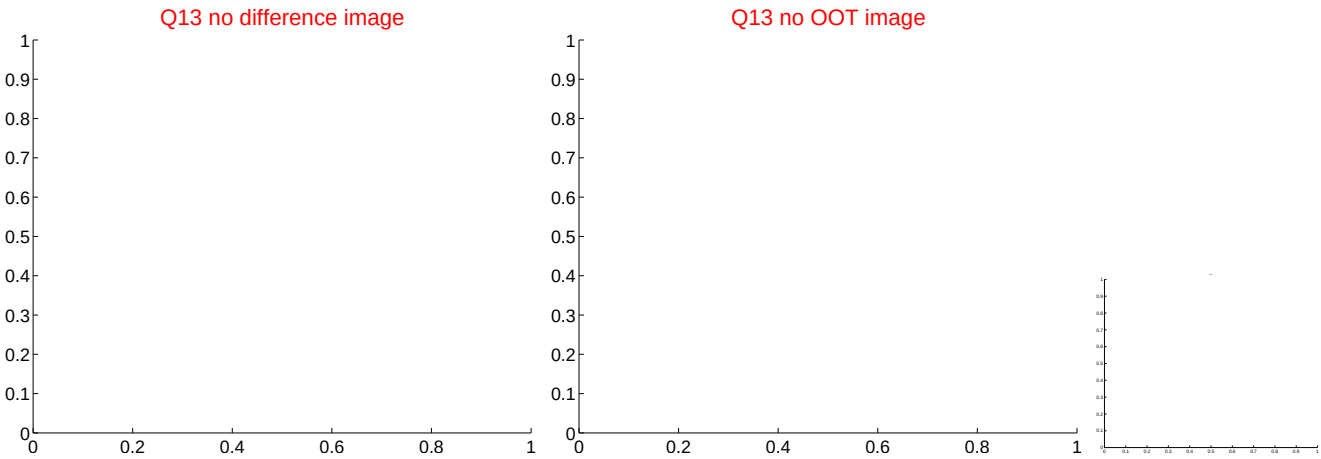


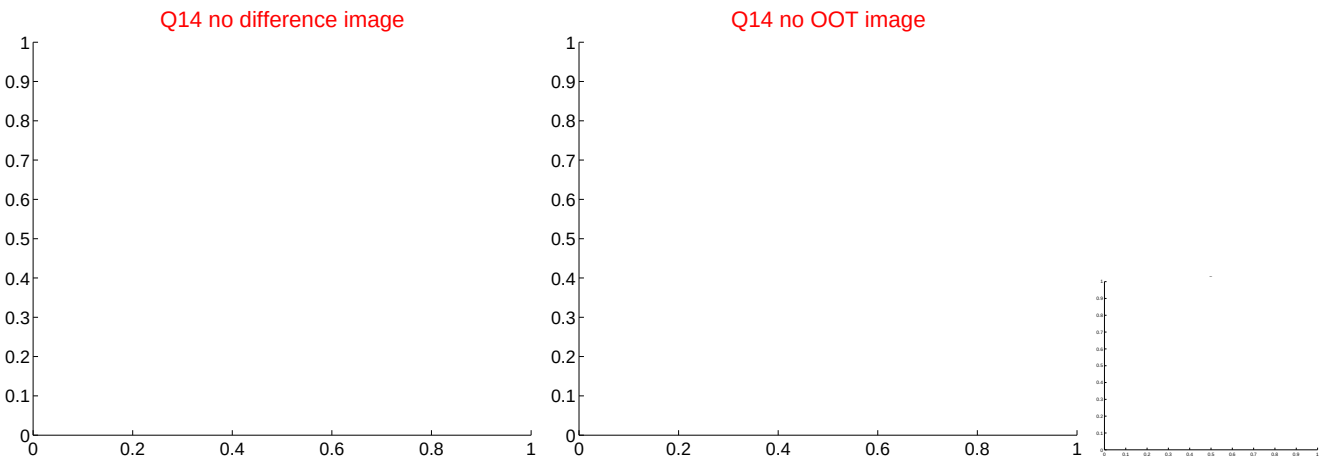


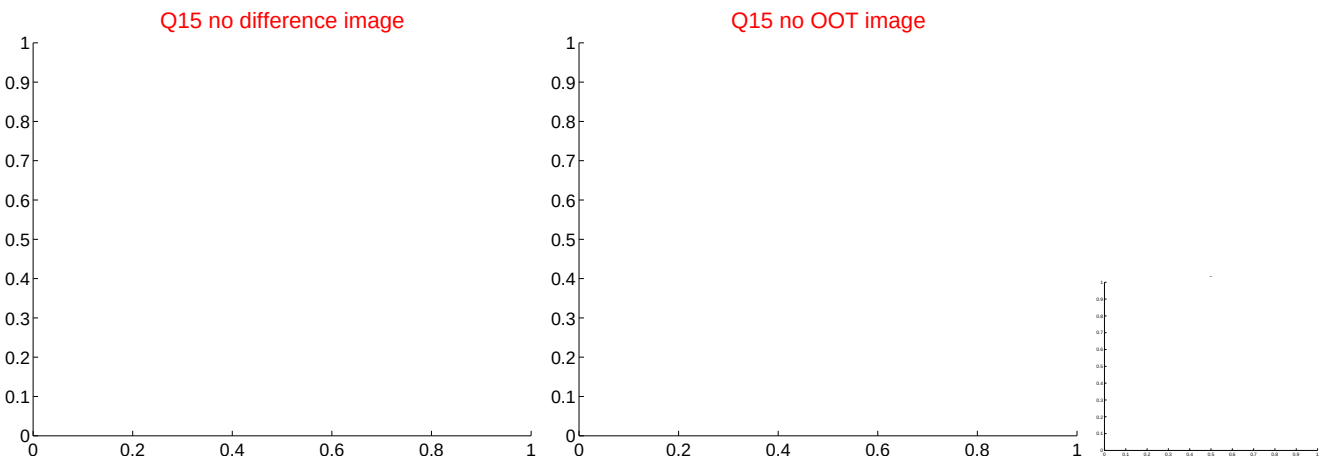


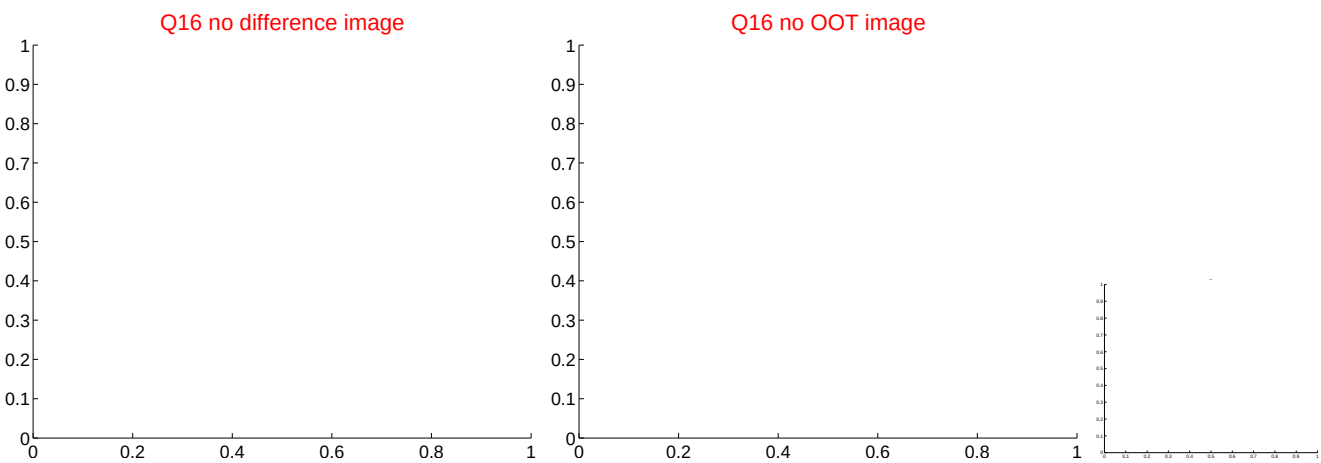


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

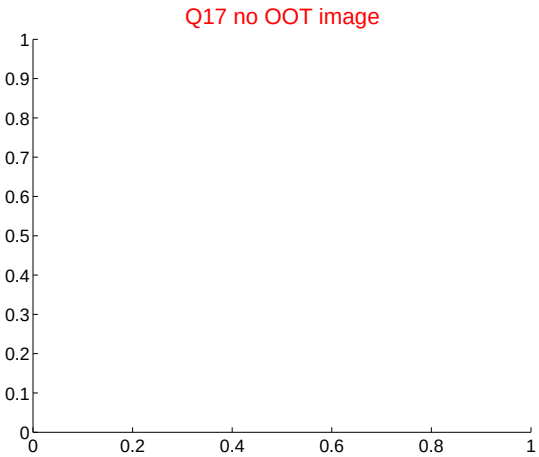


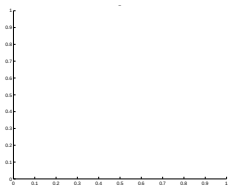


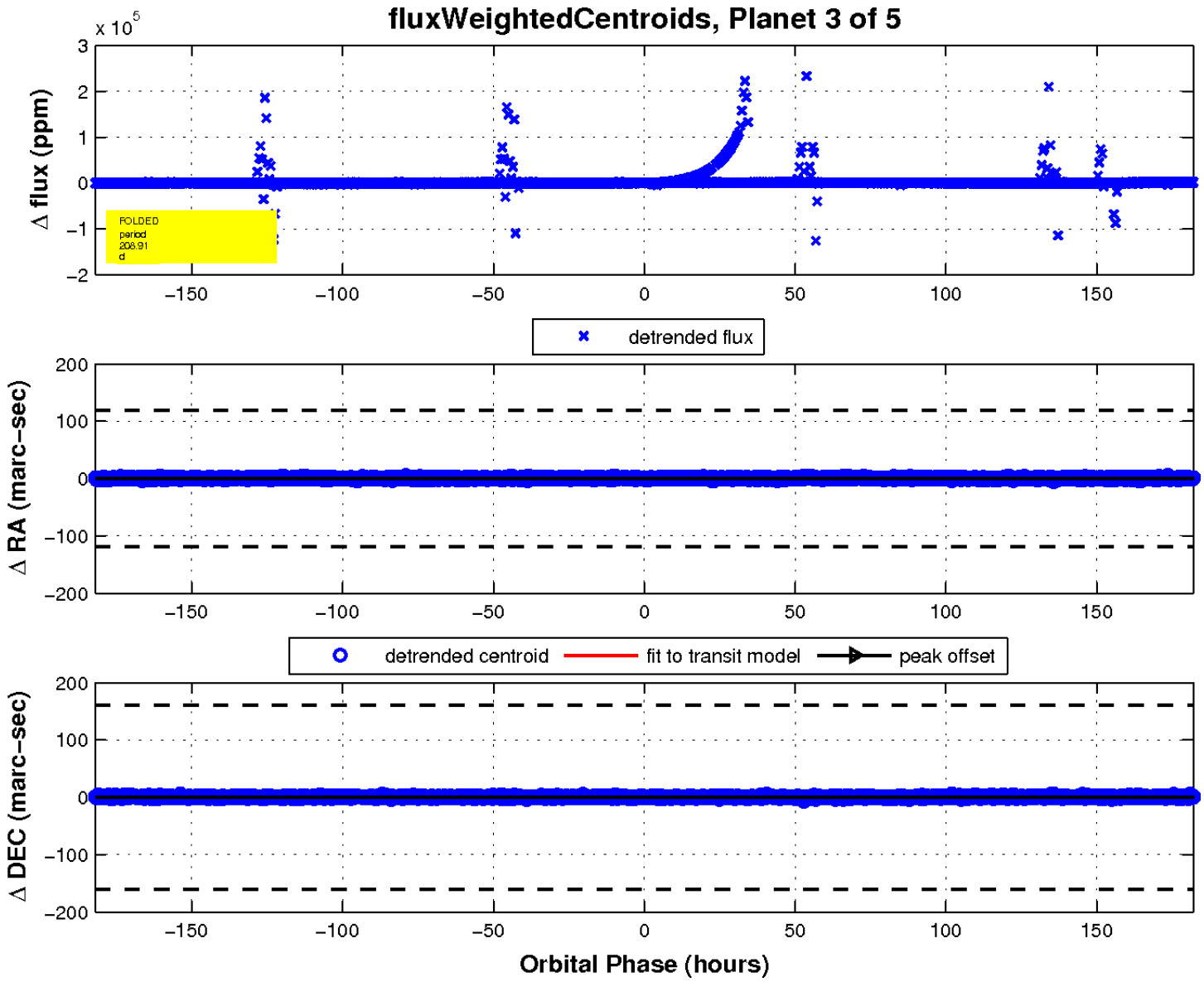




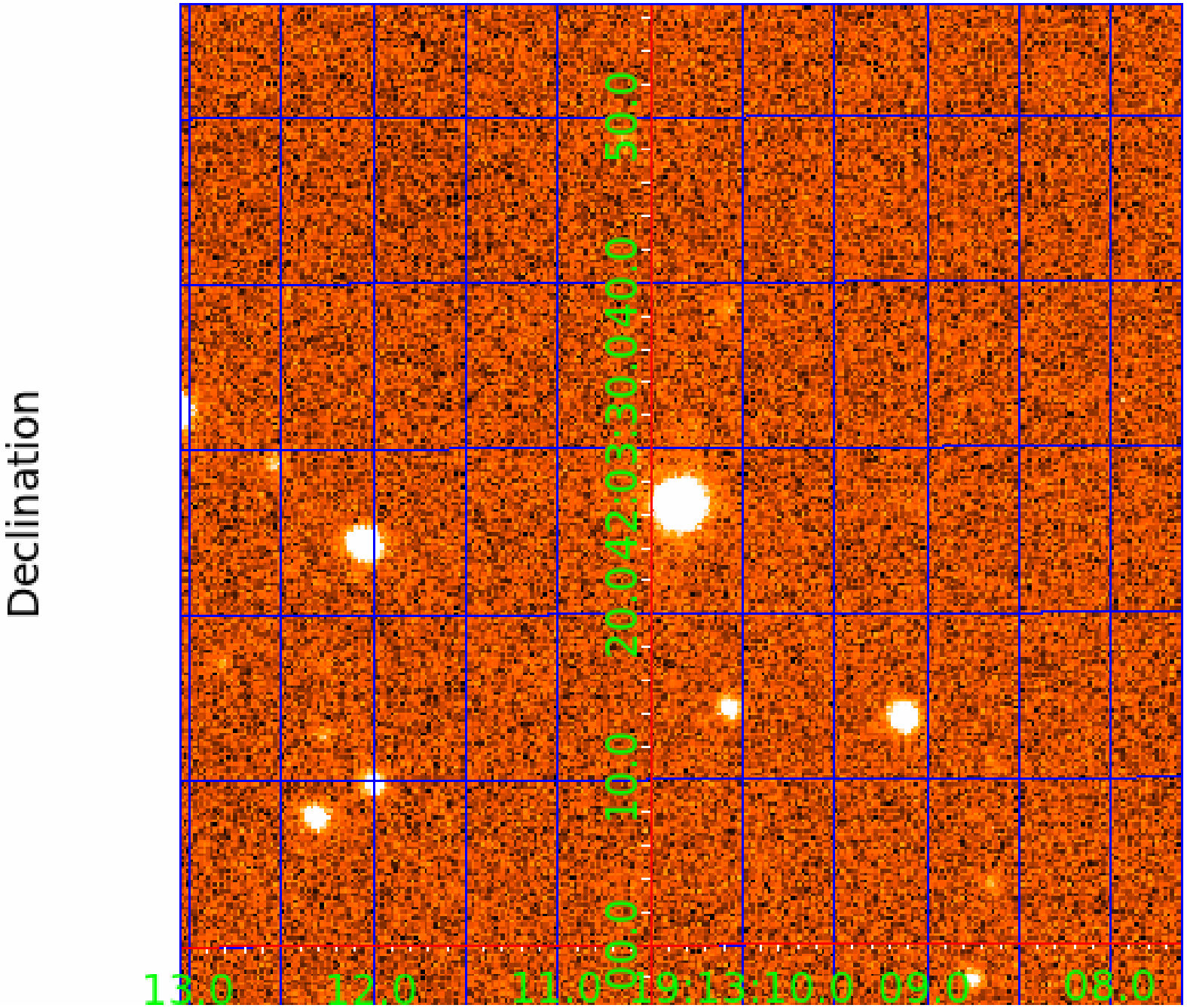
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image


Declination
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12.0
11.0
19:13:10.0
09.0
08.0

KIC 006594972

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 ($S_\oplus$)
006594972-01	OBS	6737.01	10.819152	132.988277	435492.6	3.000	20156.5	-1.0	0.99	5955	54.07	123.84
006594972-02	OBS	No	5.409587	132.909920	101896.4	5.041	4716.8	4421.6	0.99	5955	34.23	312.07
006594972-03	OBS	No	208.907100	228.856480	2873.6	60.690	12.1	12.4	0.99	5955	9.88	2.39
006594972-04	OBS	No	494.676265	557.210200	643.1	16.711	9.8	3.8	0.99	5955	2.62	0.76
006594972-05	OBS	No	571.237089	373.855886	1504.2	29.355	8.6	7.8	0.99	5955	5.36	0.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006594972-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
006594972-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
006594972-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006594972-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006594972-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—ALL_TRANS_CHASES—MOD_TER_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

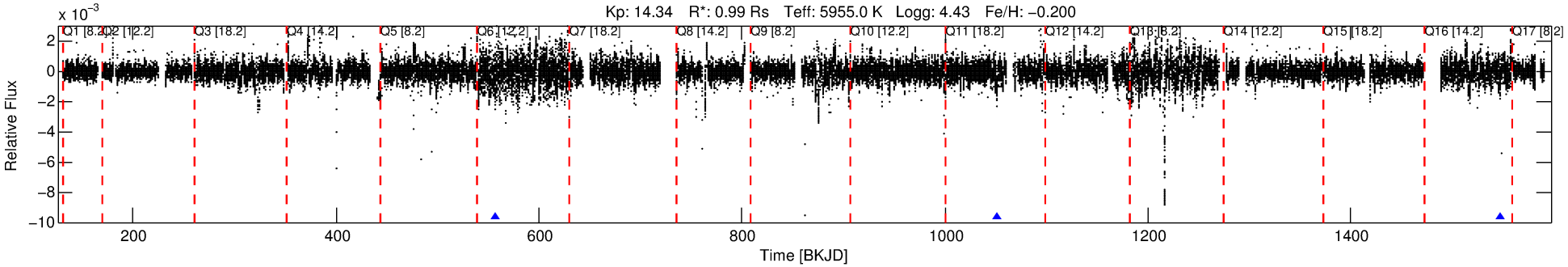
Ephemeris Match Information For 006594972-04

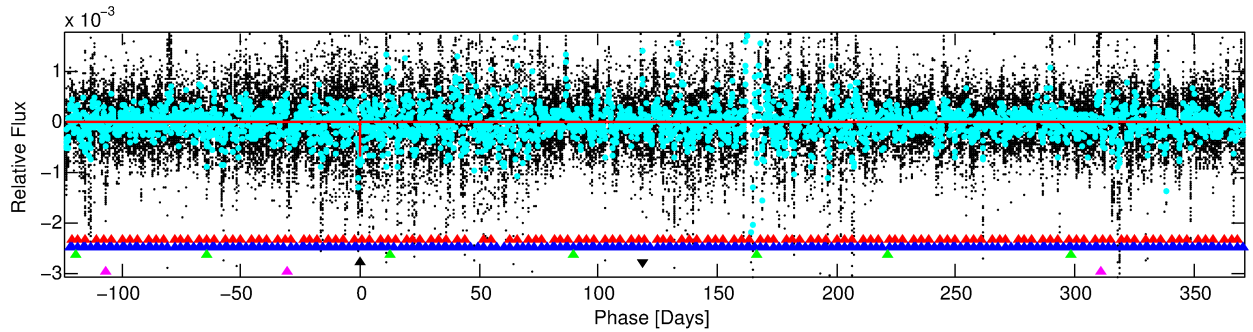
No Significant Match Found

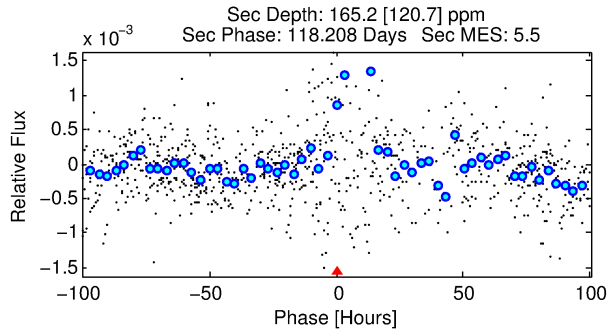
DV One-Page Summary

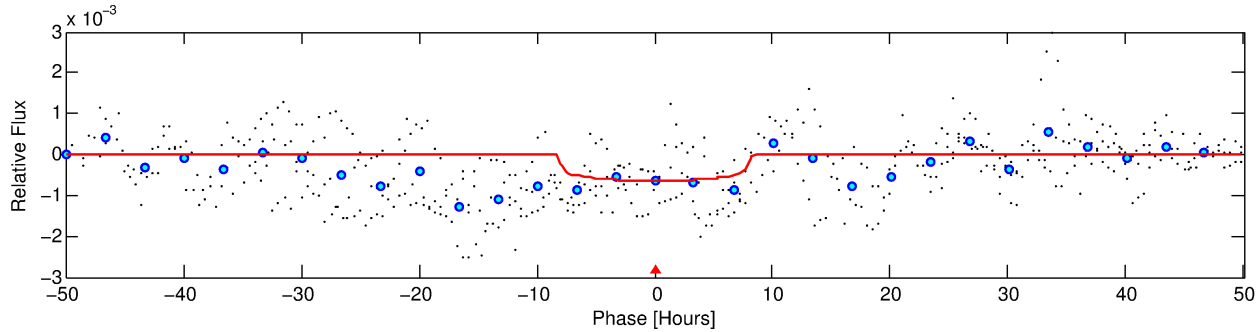
KIC: 6594972 Candidate: 4 of 5 Period: 494.676 d
KOI: K06737 Corr: No Ephemeris Match

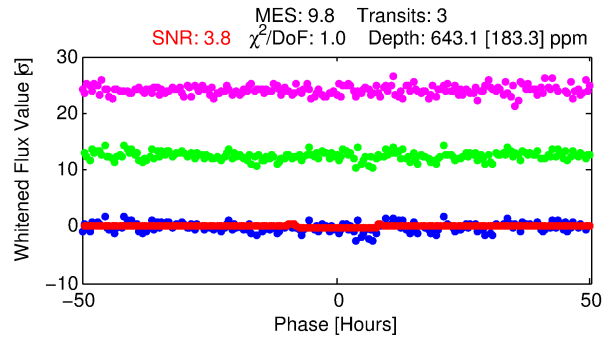
Kp: 14.34 R*: 0.99 Rs Teff: 5955.0 K Logg: 4.43 Fe/H: −0.200

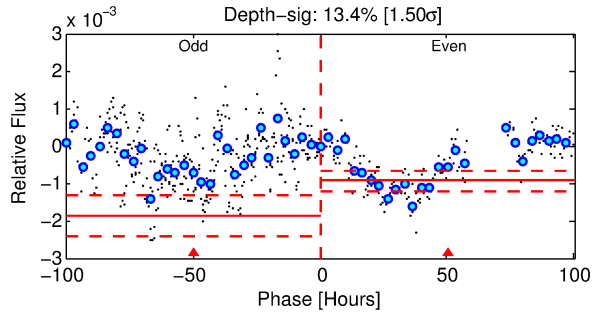


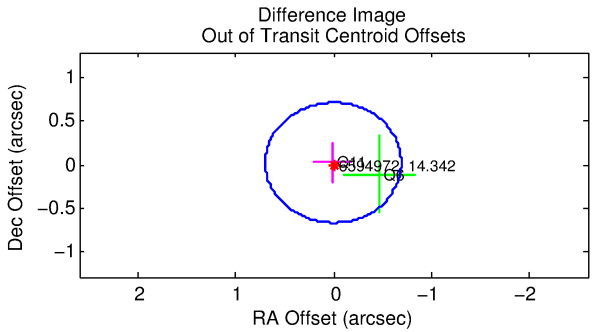












DV Fit Results:

Period = 494.67627 [0.01426] d
Epoch = 557.2102 [0.0202] BKJD
Rp/R* = 0.0242 [0.0078]
a/R* = 189.36 [242.24]
b = 0.59 [1.41]

Seff = 0.76 [0.30]
Teq = 238 [23] K
Rp = 2.62 [1.16] Re
a = 1.2086 [0.3082] AU

Ag = 19386.90 [20201.23] [0.96σ]
Teffp = 4340 [1064] K [3.85σ]

DV Diagnostic Results:

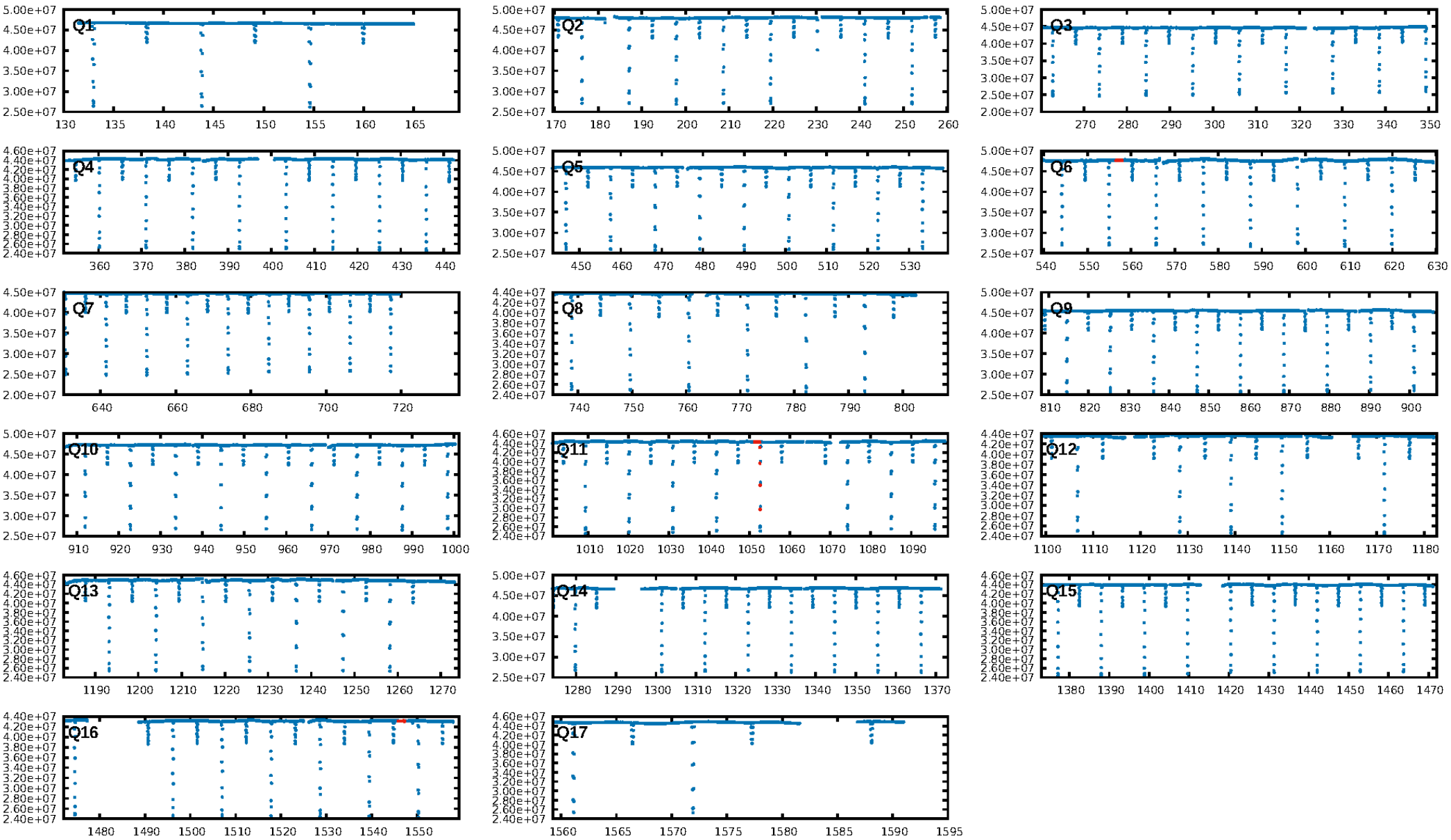
ShortPeriod−sig: 100.0% [108.95σ]
LongPeriod−sig: 100.0% [54.40σ]
ModelChiSquare2−sig: 15.3%
ModelChiSquareGof−sig: 99.7%
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: 0.3109

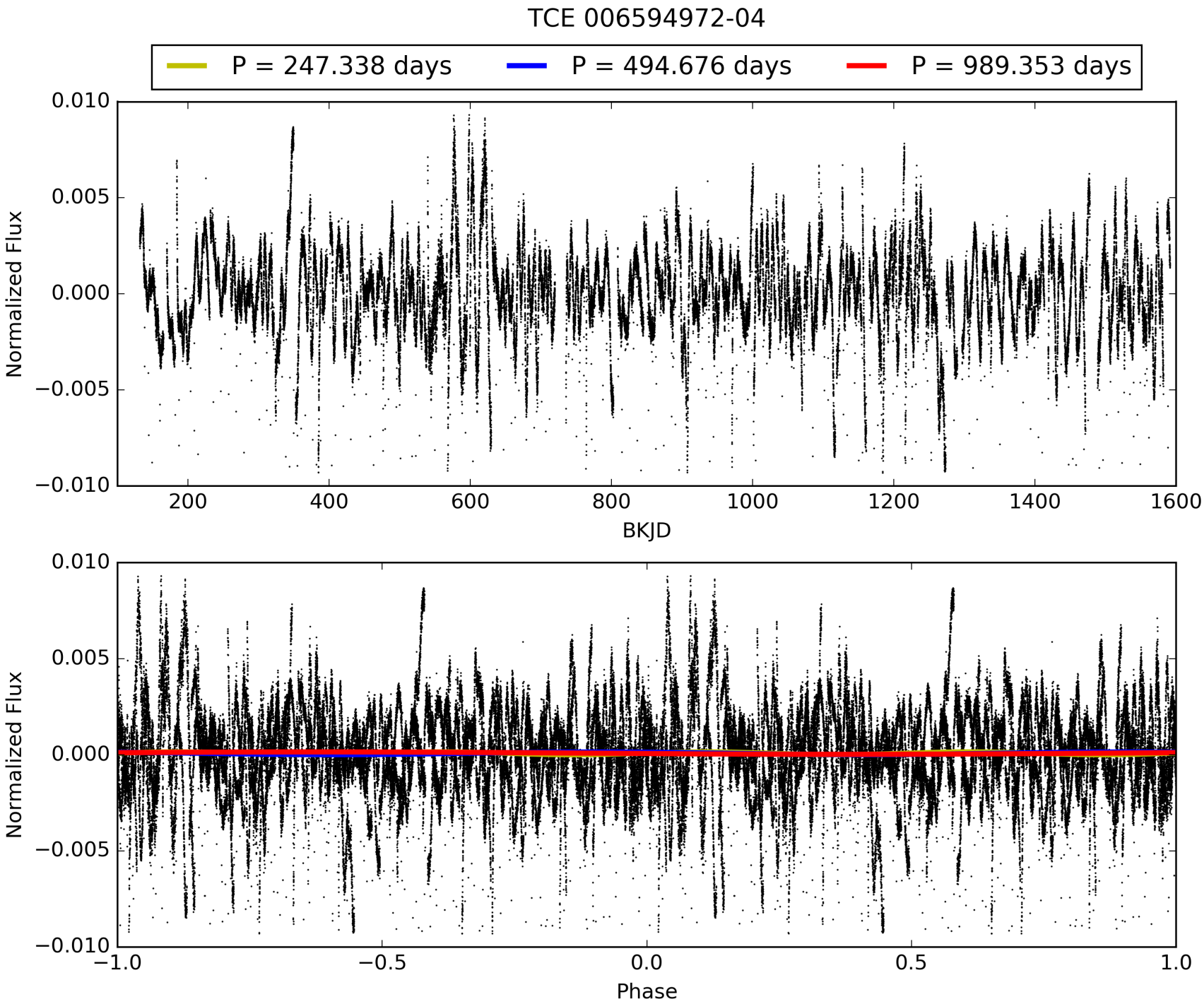
Centroid−sig: 61.4%
Centroid−so: 0.452 arcsec [0.74σ]
OotOffset−rm: 0.023 arcsec [0.10σ]
KicOffset−rm: 0.090 arcsec [0.46σ]
OotOffset−st: 1/1/0/0 [2]
KicOffset−st: 1/1/0/0 [2]
DiffImageQuality−fgm: 0.50 [1/2]
DiffImageOverlap−fno: 0.50 [1/2]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02−Feb−2016 01:04:06 Z

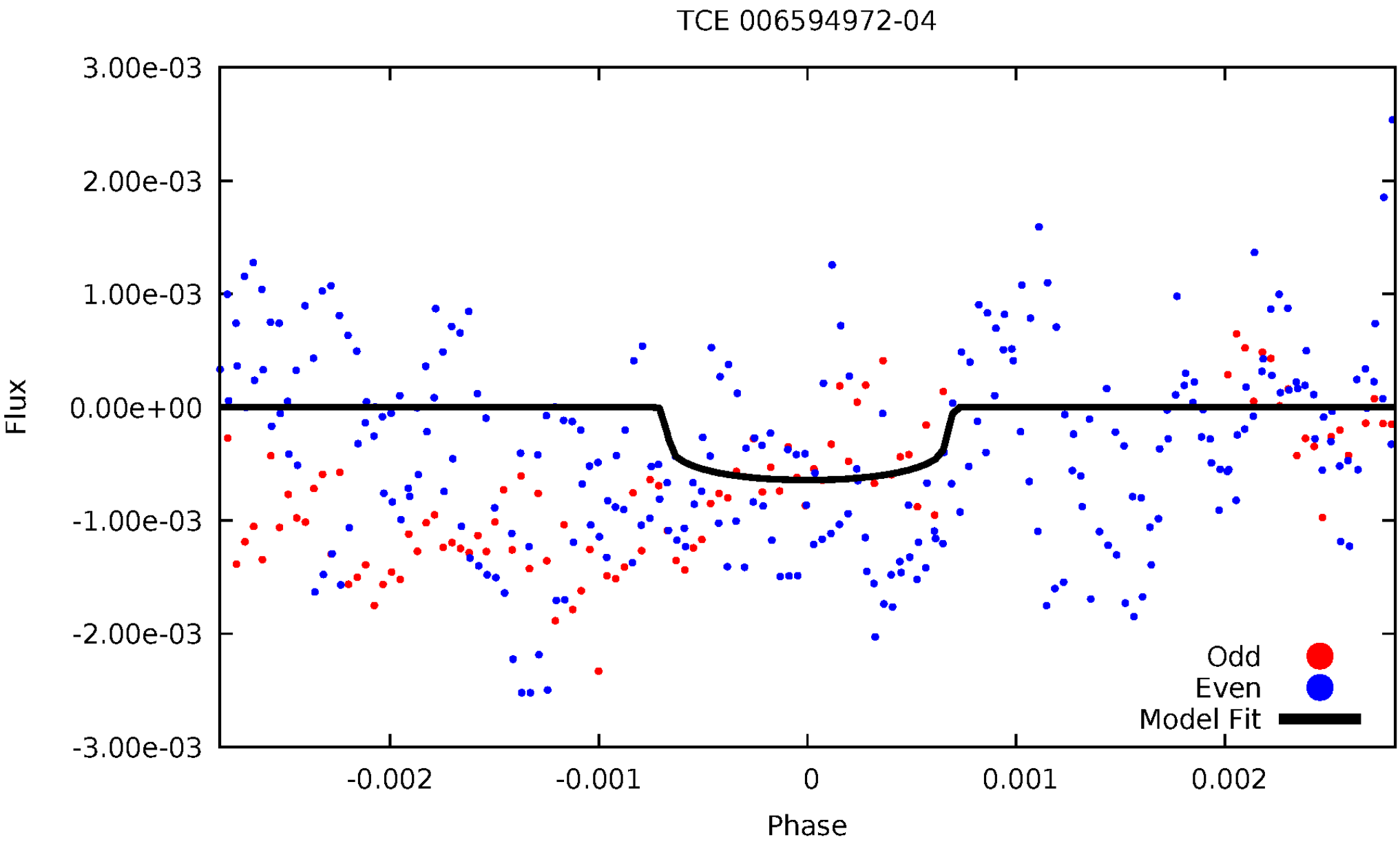
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006594972-04, PDC Light Curves

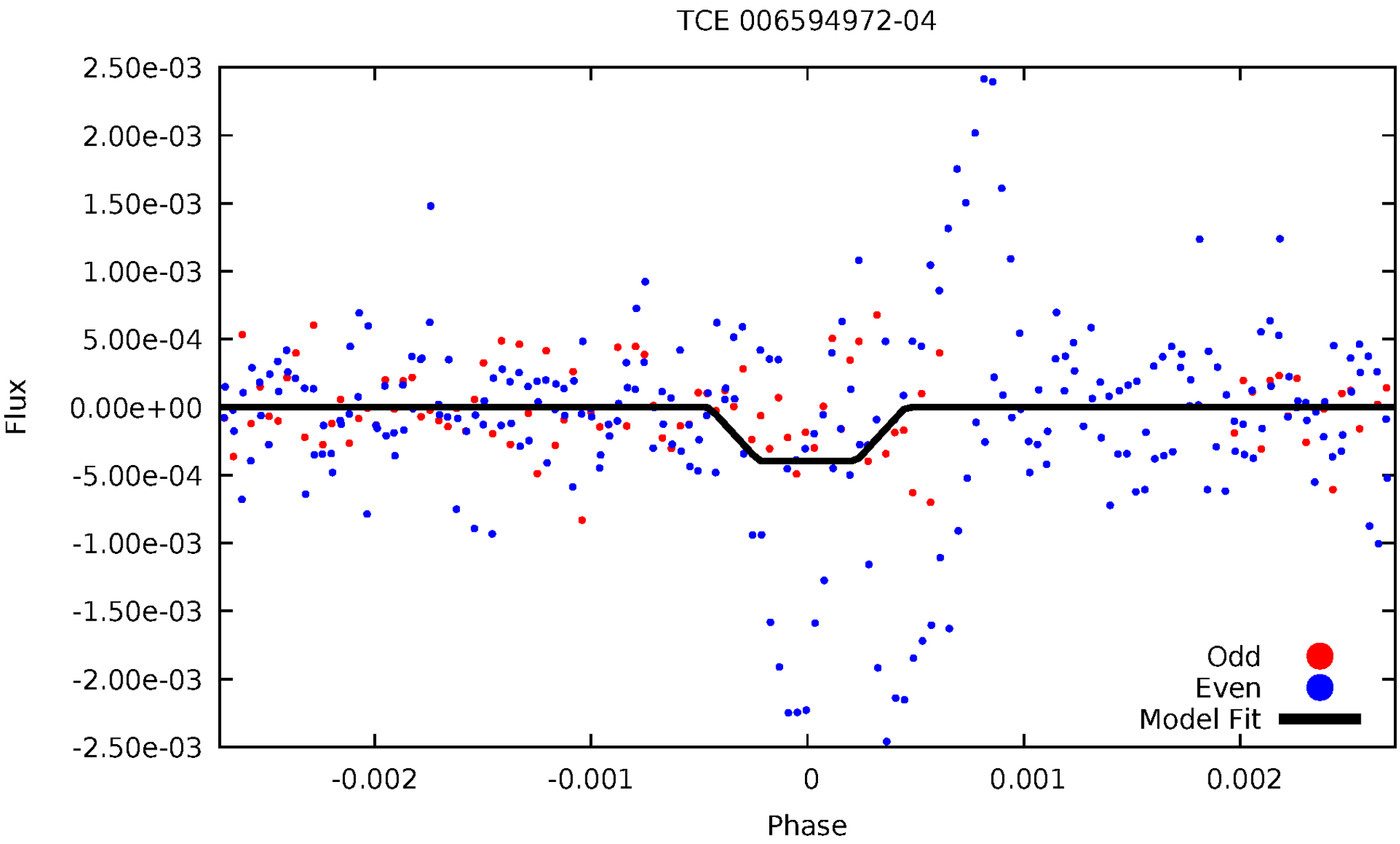



TCE 006594972-04
P = 247.338 days
P = 494.676 days
P = 989.353 days
Normalized Flux
BKJD
Phase

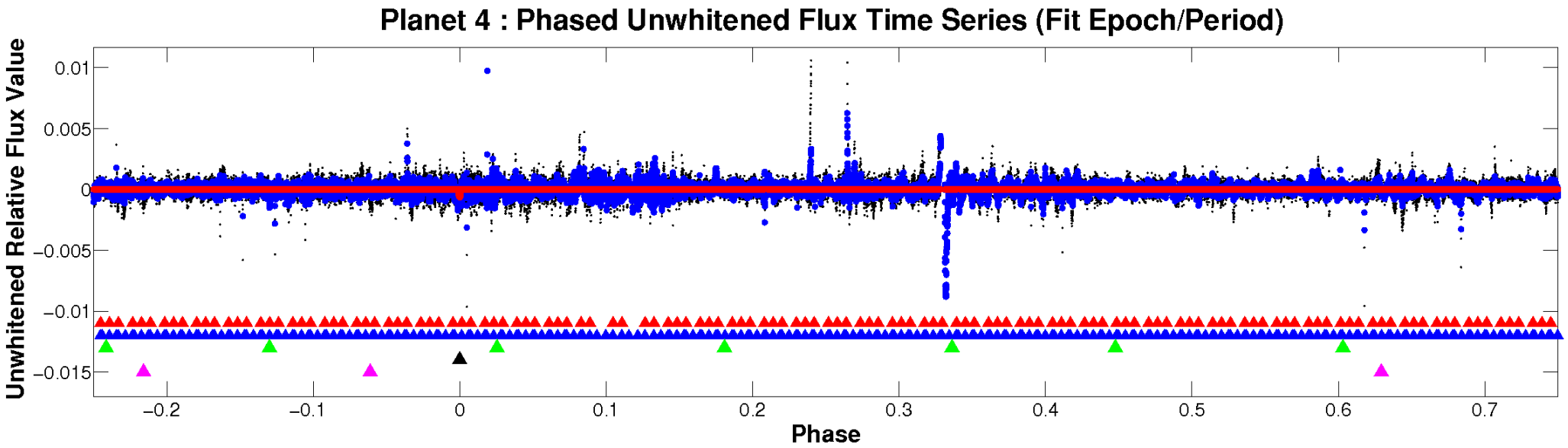
DV Odd/Even

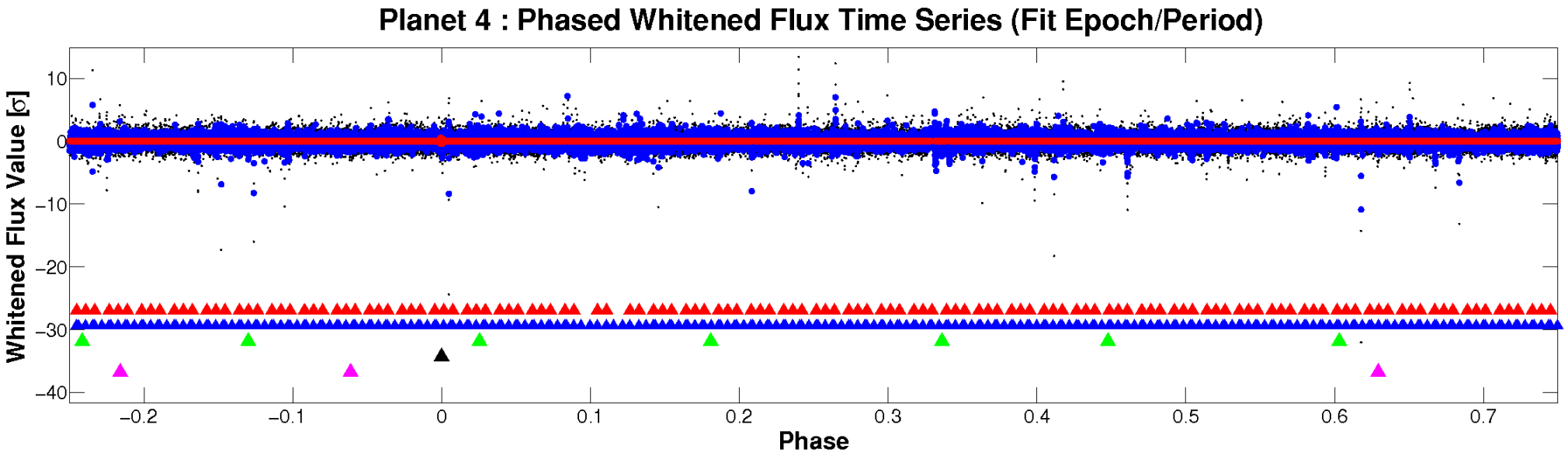

TCE 006594972-04
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
Flux
-0.002
-0.001
0
0.001
0.002
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006594972-04
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
-2.50e-03
Flux
-0.002
-0.001
0
0.001
0.002
Phase
Odd
Even
Model Fit

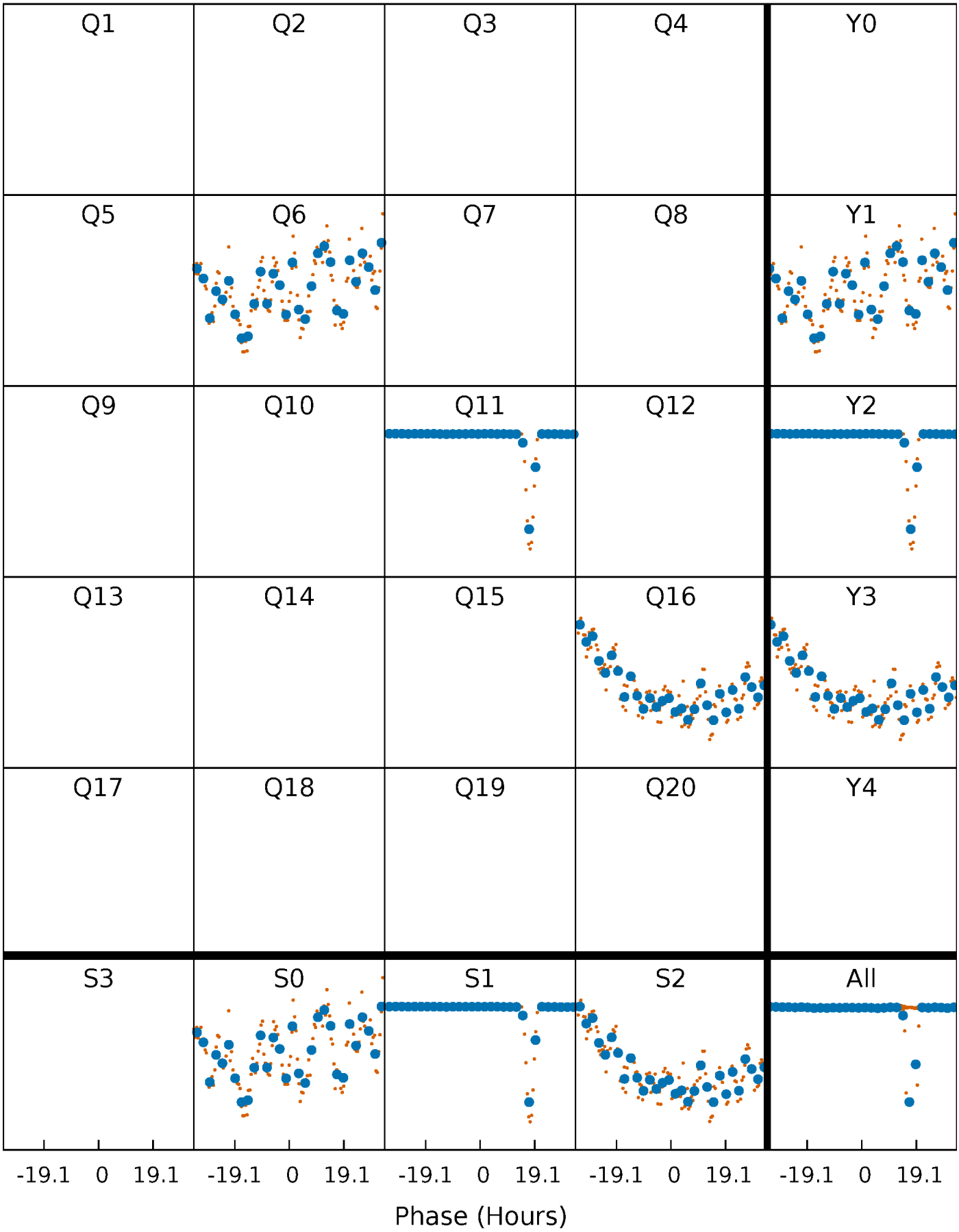
Non-Whitened Vs. Whitened Light Curve





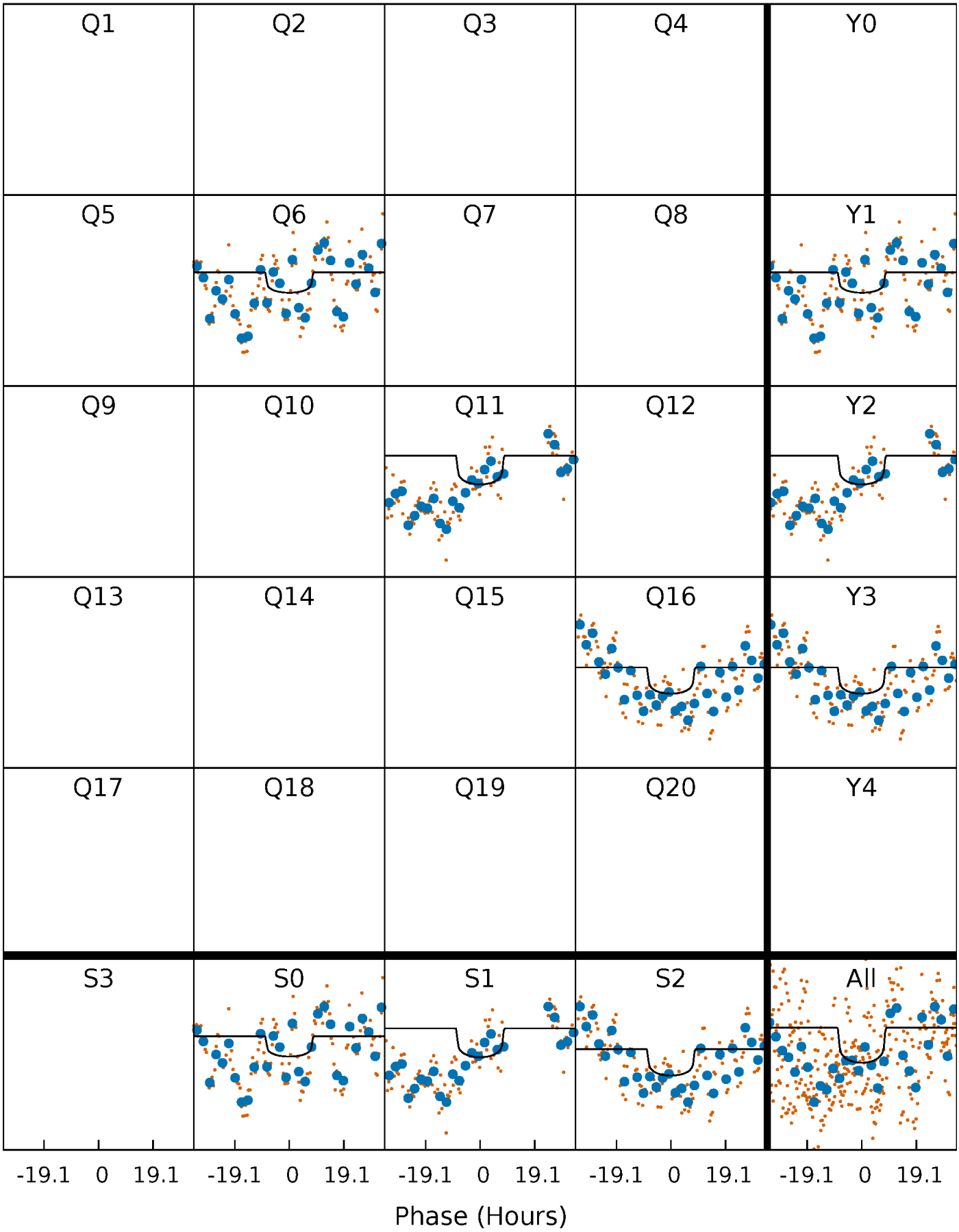
PDC Quarter-Phased Transit Curves

TCE 006594972-04 P=494.676265 Days T_0=557.210200 (BKJD)



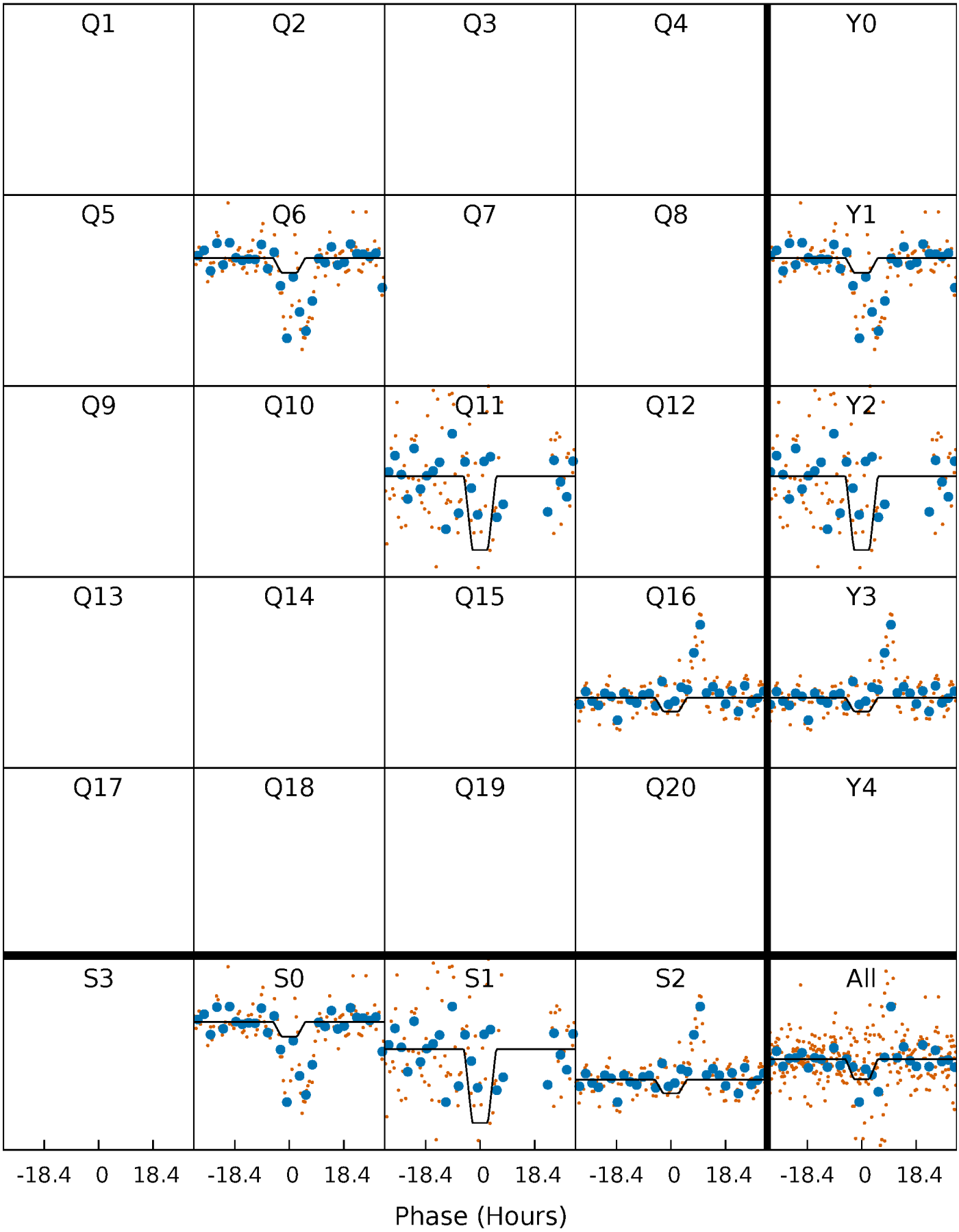
DV Quarter-Phased Transit Curves

TCE 006594972-04 P=494.676265 Days T_0=557.210200 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

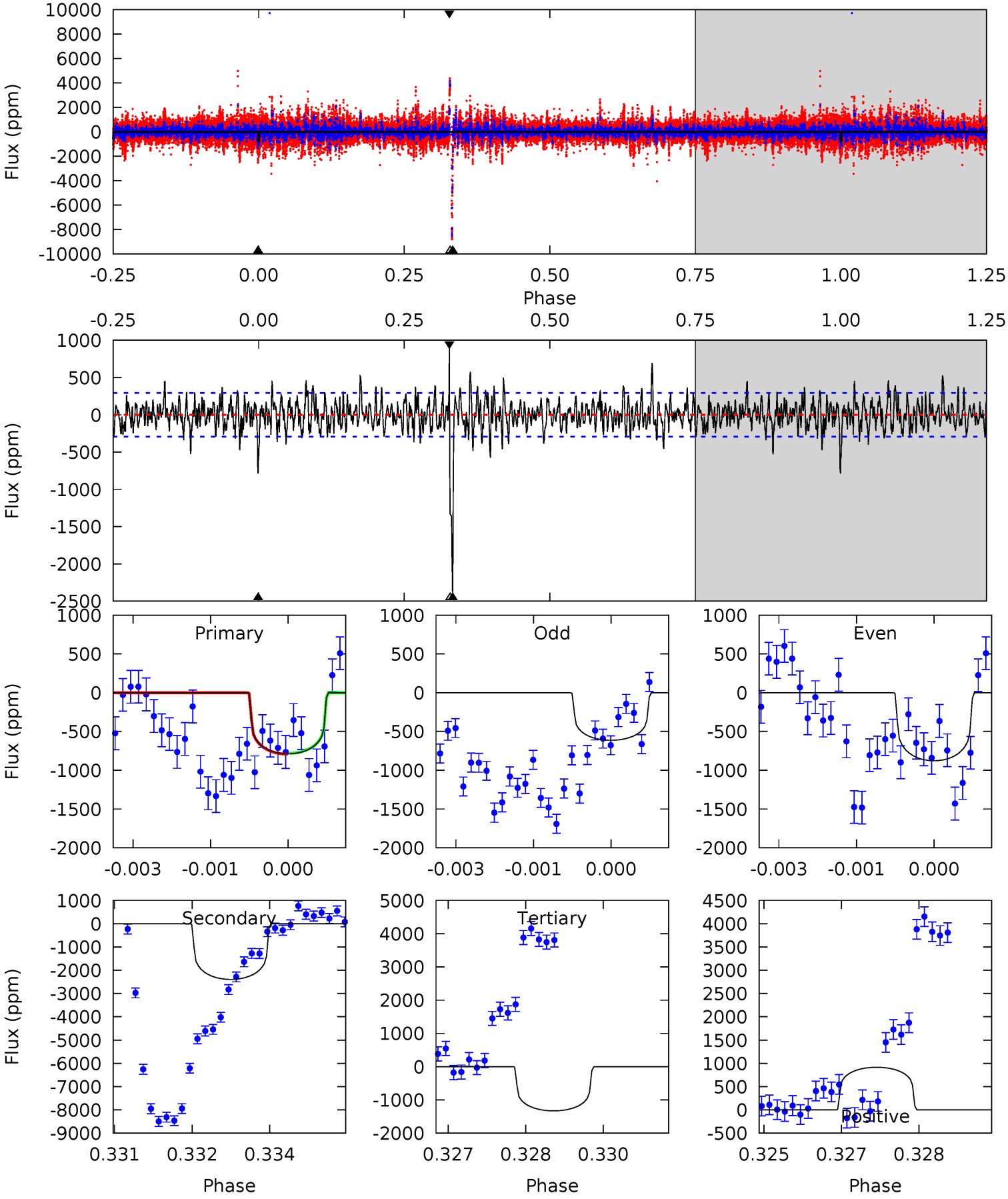
TCE 006594972-04 P=494.716921 Days T_0=557.189696 (BKJD)



DV Model-Shift Uniqueness Test

006594972-04, P = 494.676265 Days, E = 62.533935 Days

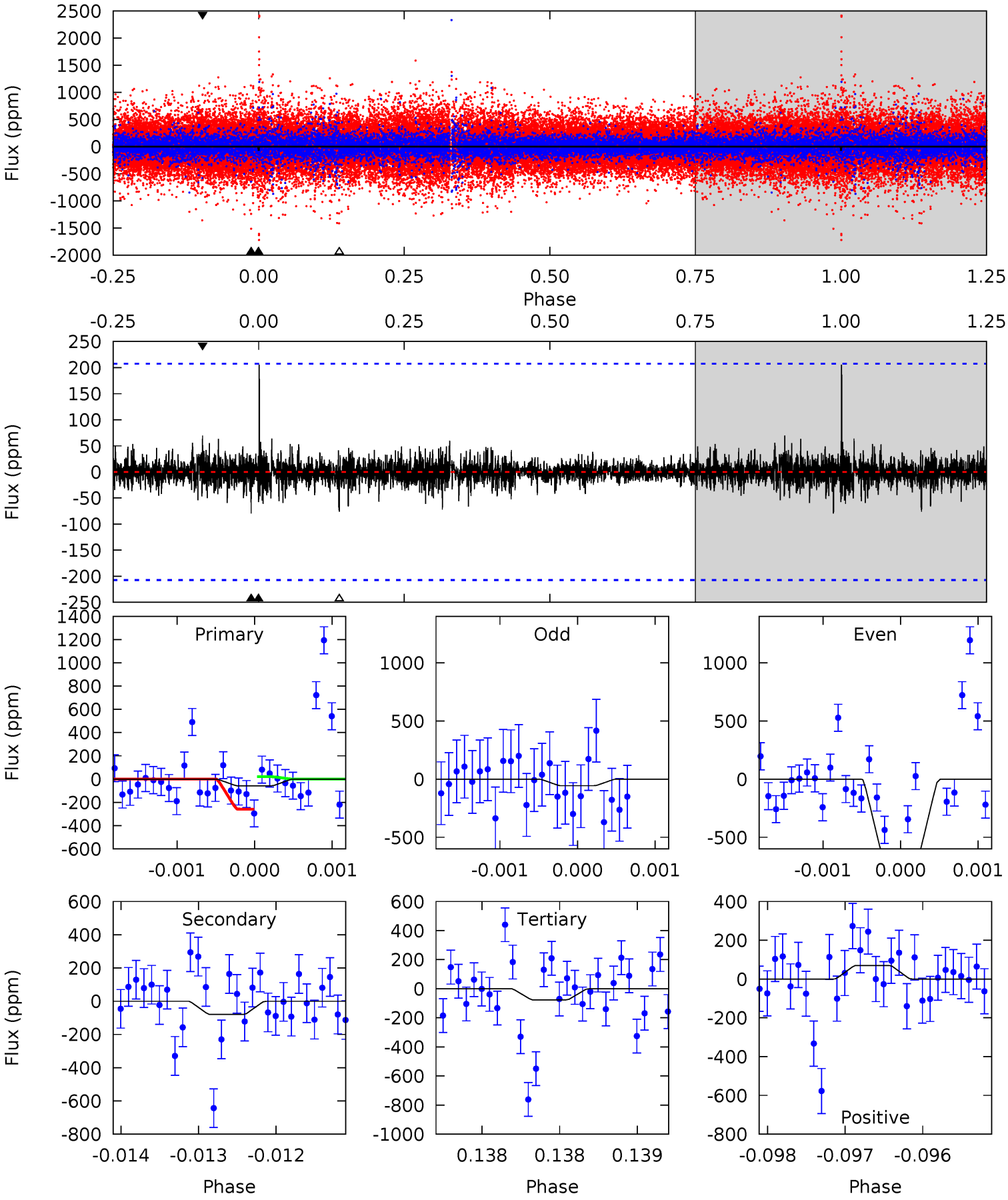
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	44.0	24.4	16.8	5.39	3.19	2.98	-9.95	-2.33	19.6	27.2	2.10	1.05	0.28	0.10



Alt Model-Shift Uniqueness Test

006594972-04, P = 494.716921 Days, E = 62.472775 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.51	2.10	2.00	1.84	5.46	3.31	0.39	-0.49	-0.32	0.09	0.26	8.22	14.3	0.72	3.15



Stellar Parameters For KIC 006594972

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5955^{+179}_{-179}	$4.429^{+0.087}_{-0.203}$	$-0.200^{+0.300}_{-0.300}$	$0.991^{+0.300}_{-0.128}$	$0.961^{+0.134}_{-0.109}$	$1.393^{+0.627}_{-0.695}$
	+3%/-3%	+2%/-5%	+150%/-150%	+30%/-13%	+14%/-11%	+45%/-50%
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 006594972-04 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2395±54	$2.67^{+0.96}_{-0.90}$	337^{+24}_{-18}	8938^{+3413}_{-1495}	$268489^{+347631}_{-120649}$
Alt.	-80±38	$2.24^{+0.88}_{-0.88}$	337^{+26}_{-18}	4193^{+1054}_{-588}	11893^{+23117}_{-7252}

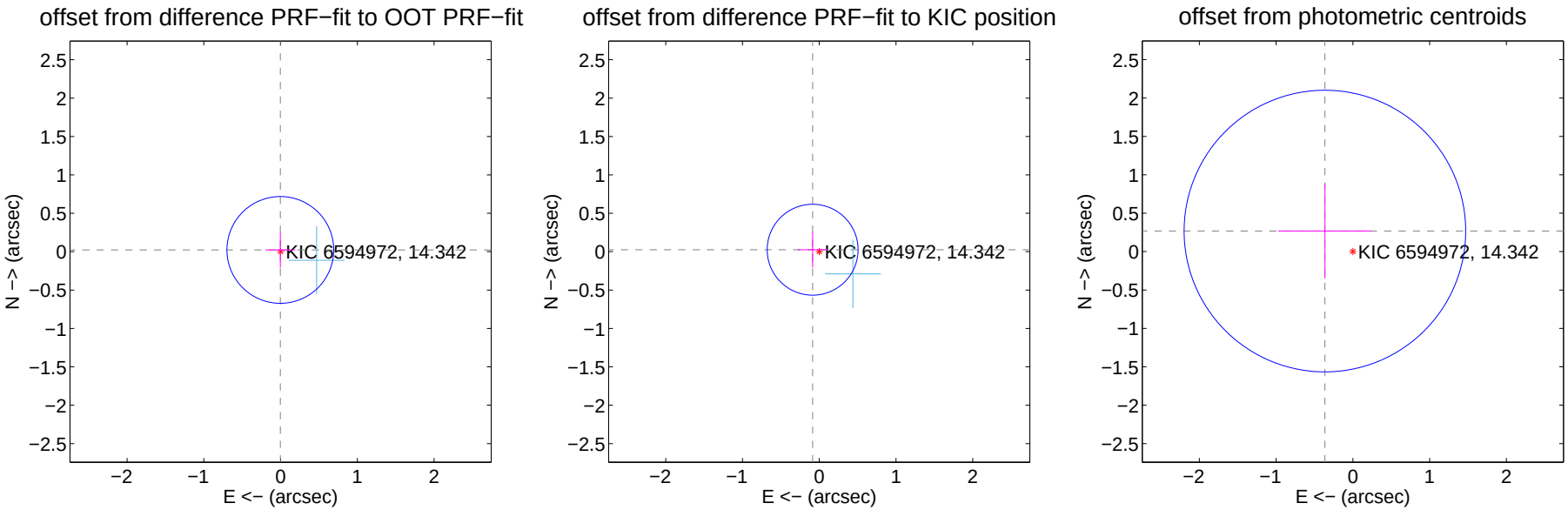
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

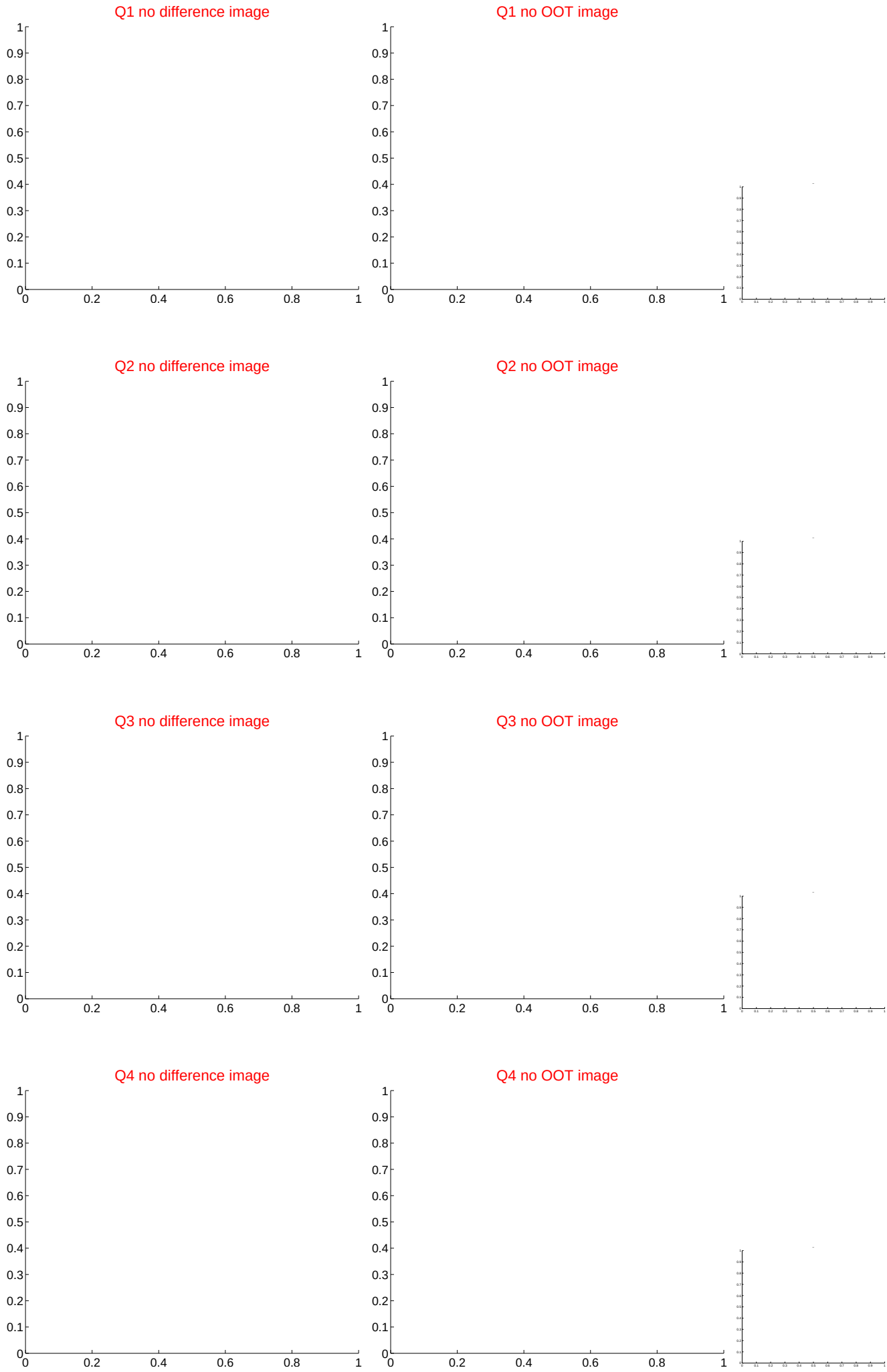
Supplemental centroid analysis for 006594972-04. Kepler magnitude: 14.34. Transit SNR 3.83
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.023 ± 0.232	0.10	0.003 ± 0.194	0.023 ± 0.233
PRF-fit source offset from KIC position	0.090 ± 0.197	0.46	0.086 ± 0.194	0.025 ± 0.233
photometric centroid source offset	0.45 ± 0.61	0.74	0.36 ± 0.61	0.27 ± 0.62

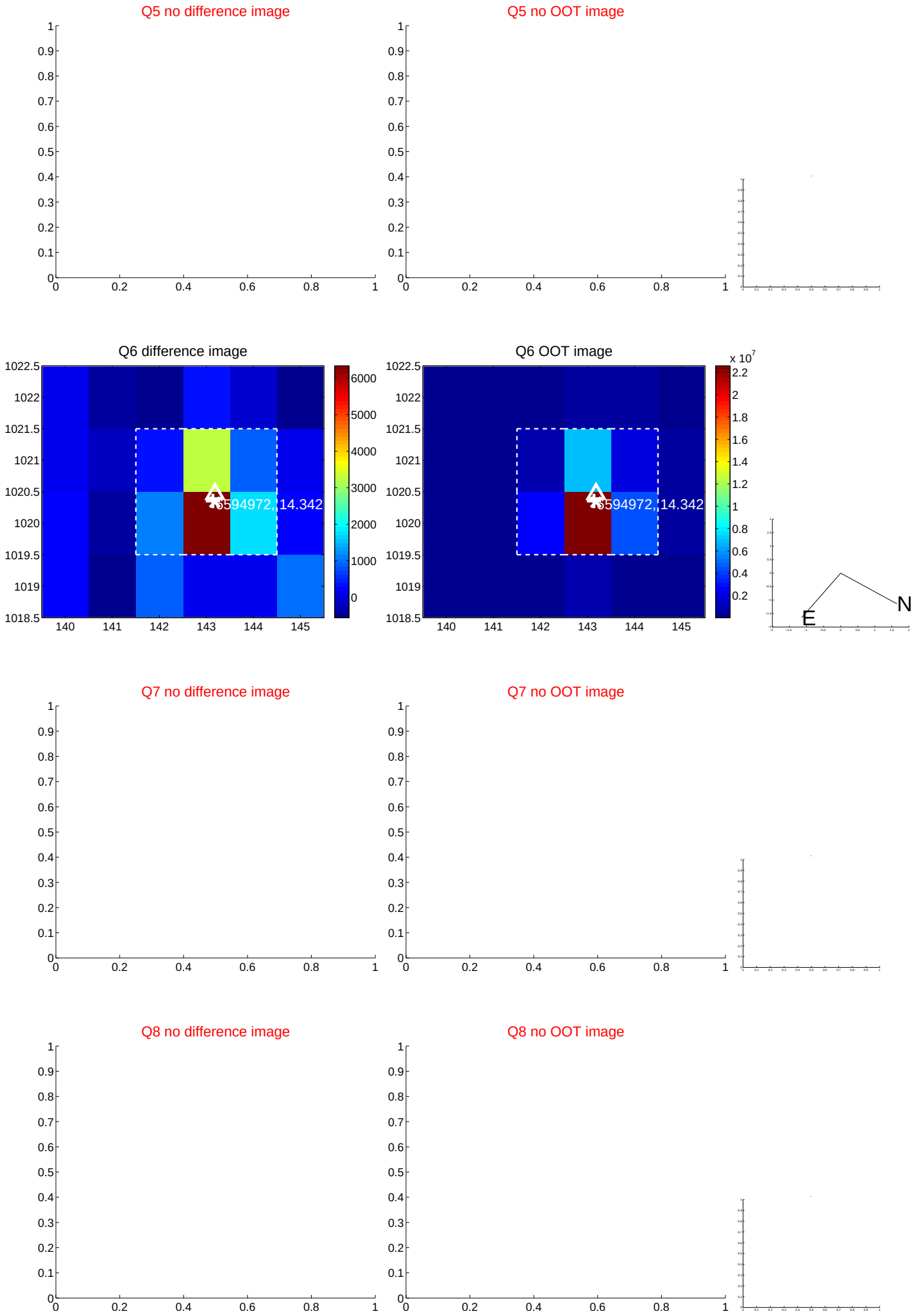


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

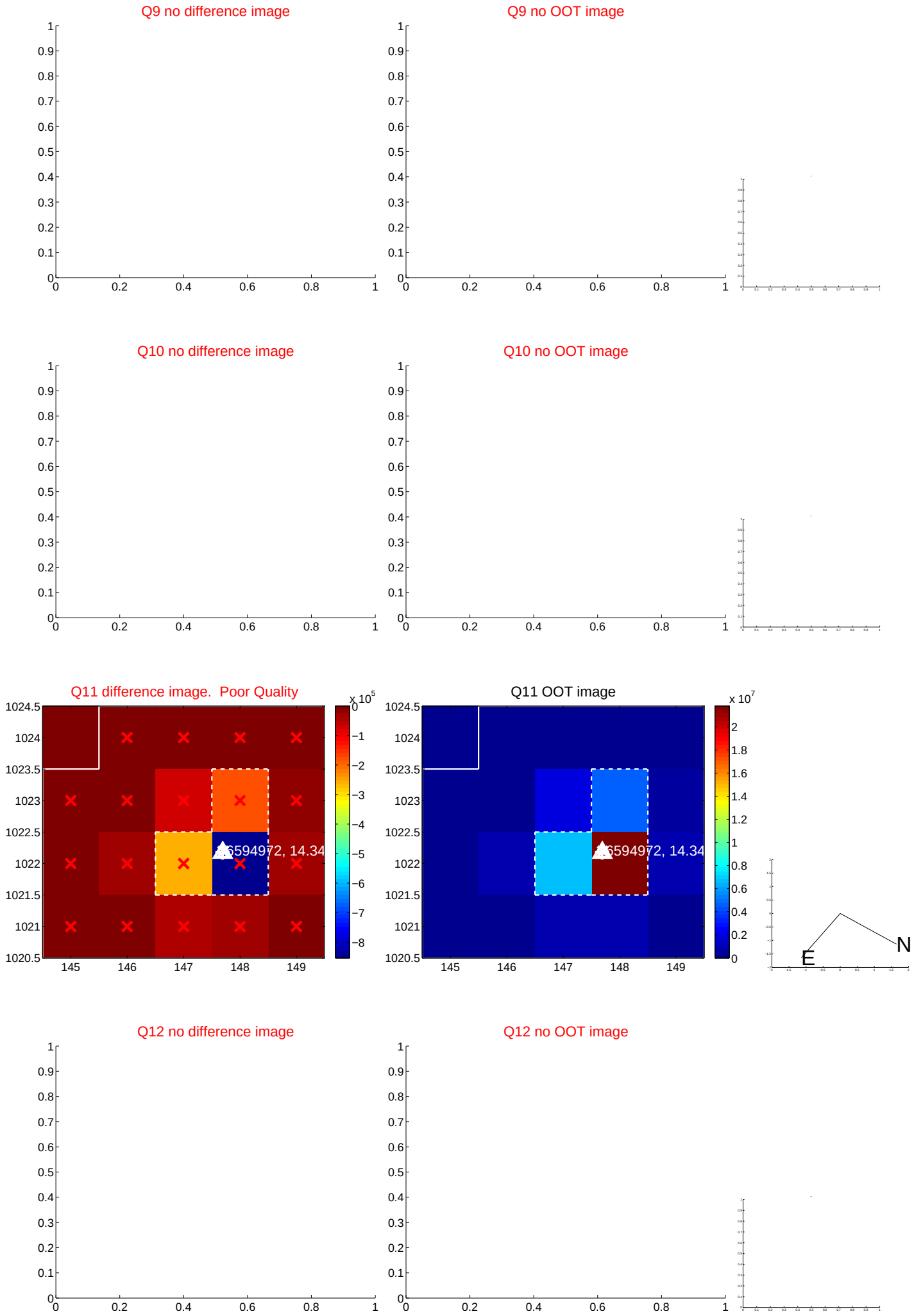
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



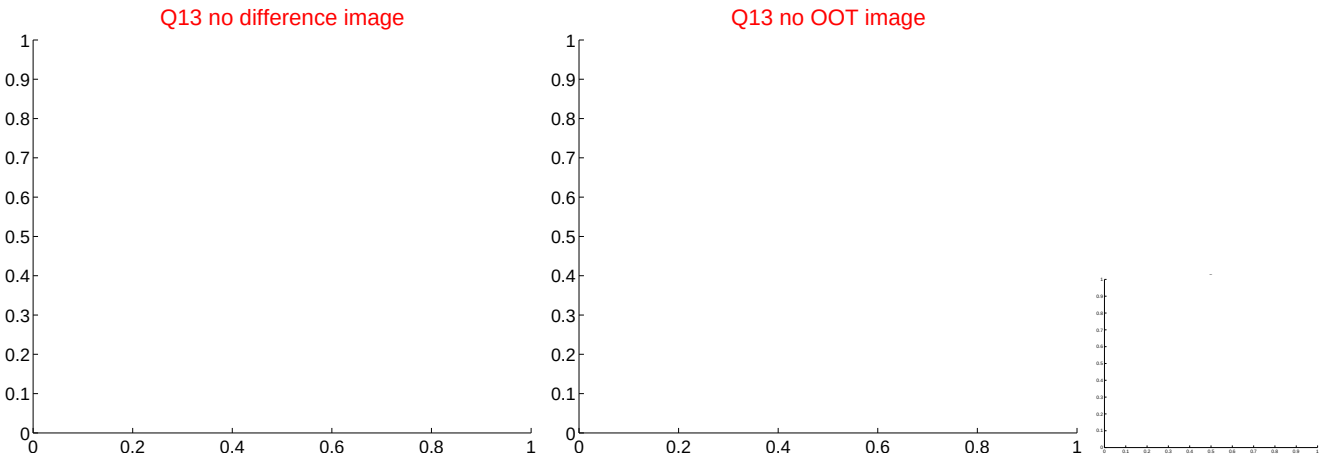
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

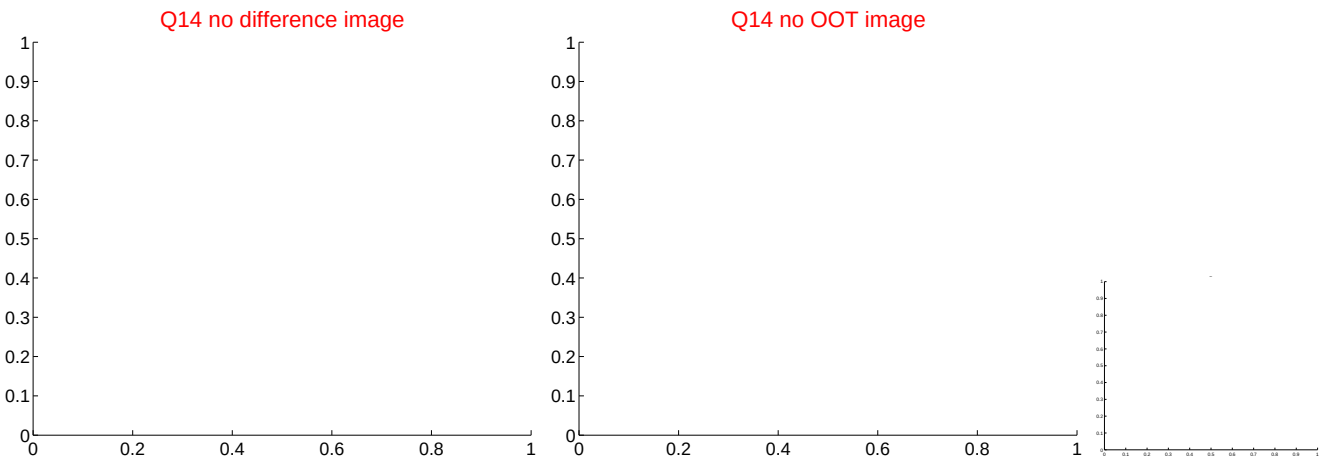


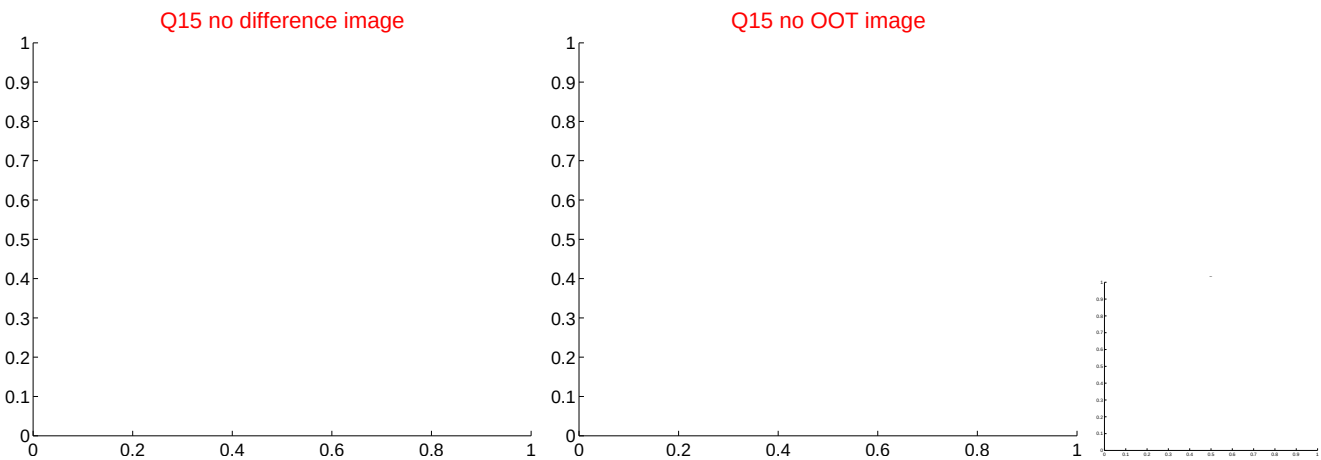
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

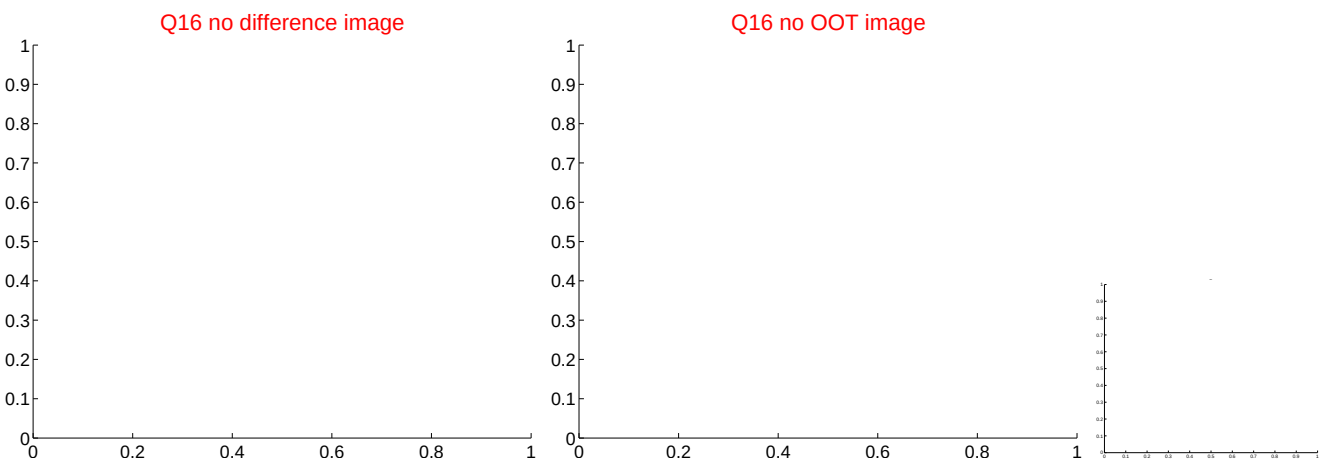


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

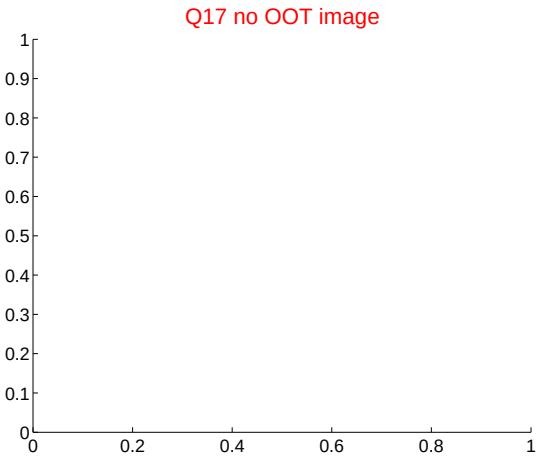


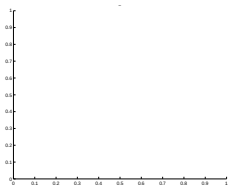


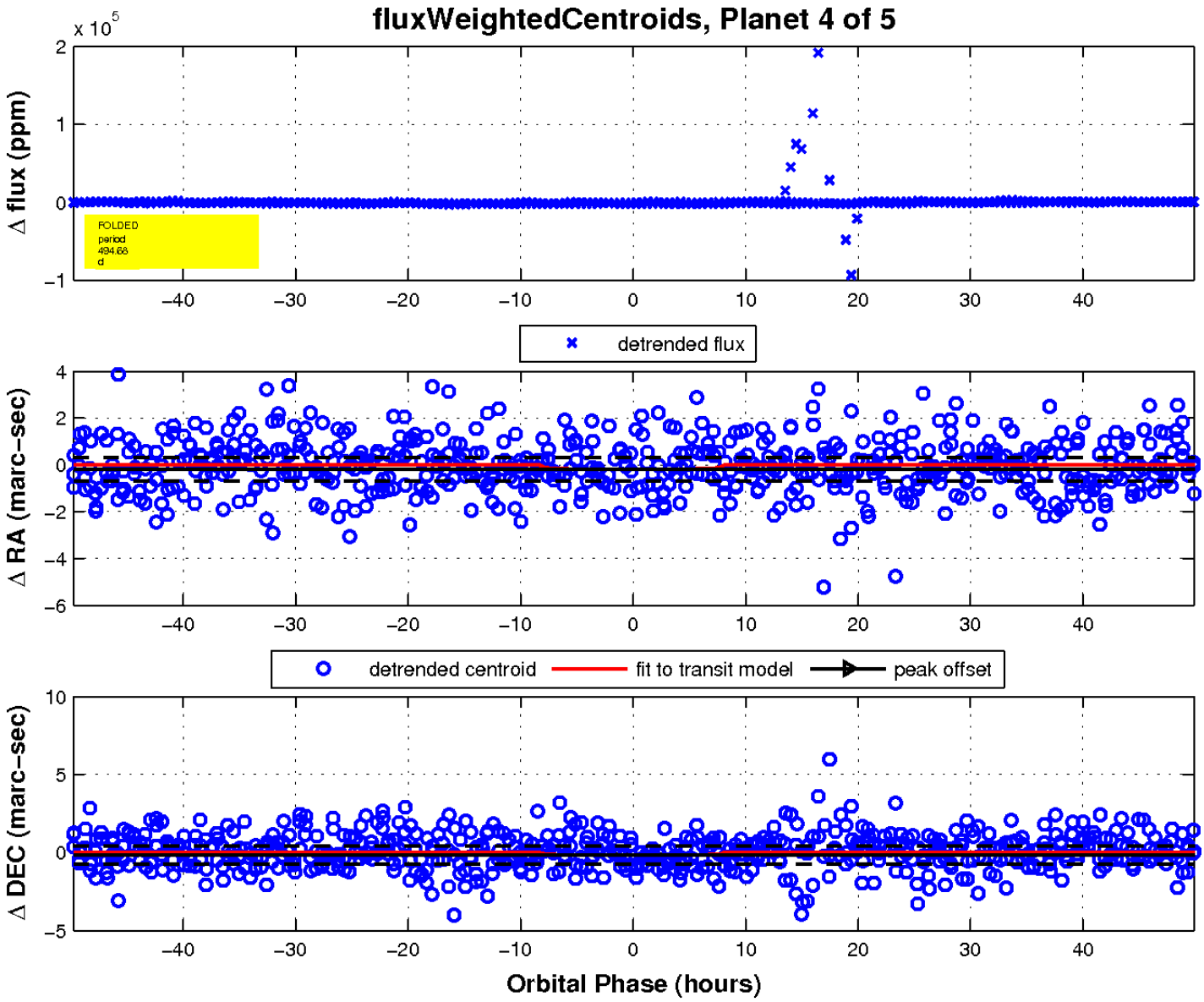




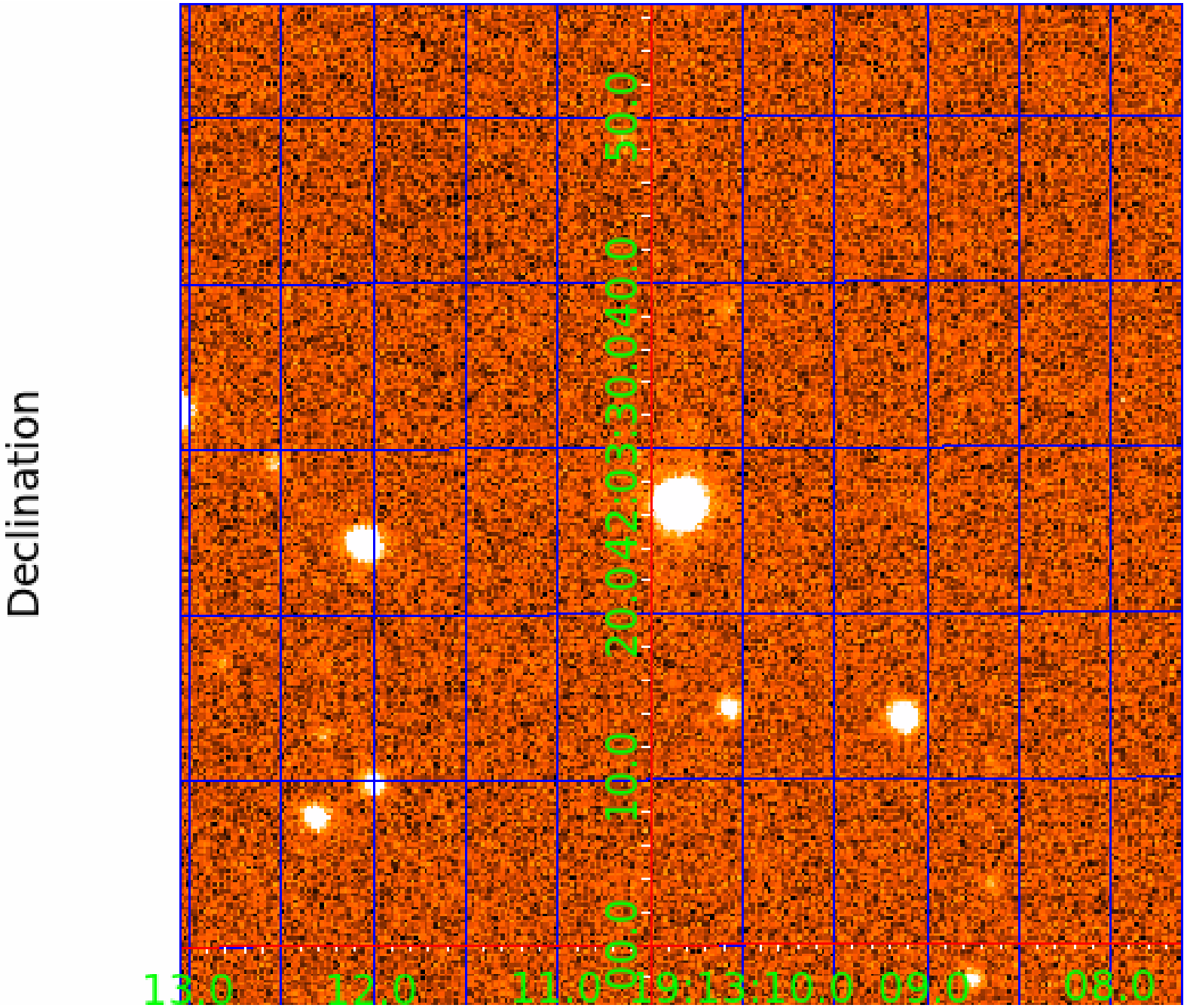
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image


Declination
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20.0
42.0
03:30.0
40.0
50.0
13.0
12.0
11.0
19:13:10.0
09.0
08.0

KIC 006594972

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 ($S_\oplus$)
006594972-01	OBS	6737.01	10.819152	132.988277	435492.6	3.000	20156.5	-1.0	0.99	5955	54.07	123.84
006594972-02	OBS	No	5.409587	132.909920	101896.4	5.041	4716.8	4421.6	0.99	5955	34.23	312.07
006594972-03	OBS	No	208.907100	228.856480	2873.6	60.690	12.1	12.4	0.99	5955	9.88	2.39
006594972-04	OBS	No	494.676265	557.210200	643.1	16.711	9.8	3.8	0.99	5955	2.62	0.76
006594972-05	OBS	No	571.237089	373.855886	1504.2	29.355	8.6	7.8	0.99	5955	5.36	0.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006594972-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
006594972-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
006594972-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006594972-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006594972-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—ALL_TRANS_CHASES—MOD_TER_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

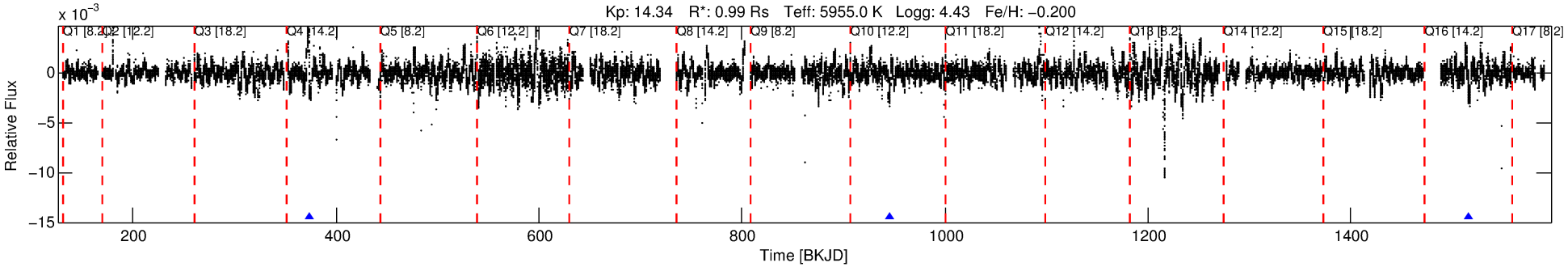
Ephemeris Match Information For 006594972-05

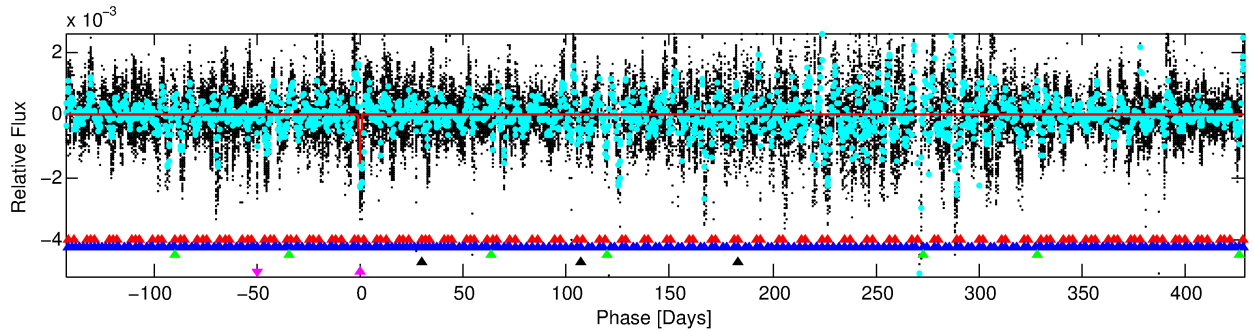
No Significant Match Found

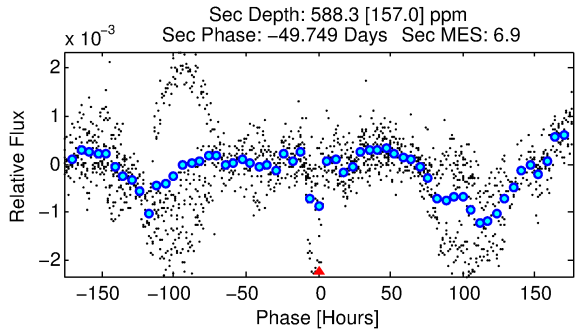
DV One-Page Summary

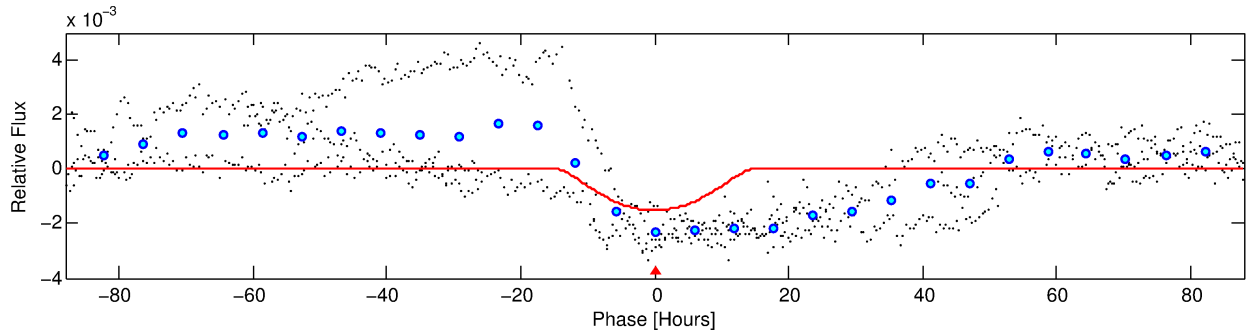
KIC: 6594972 Candidate: 5 of 5 Period: 571.237 d
KOI: K06737 Corr: No Ephemeris Match

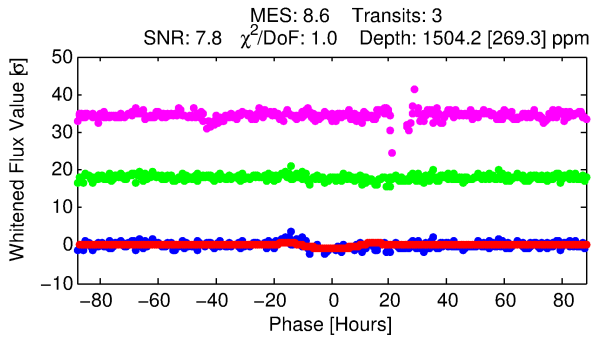
Kp: 14.34 R*: 0.99 Rs Teff: 5955.0 K Logg: 4.43 Fe/H: −0.200

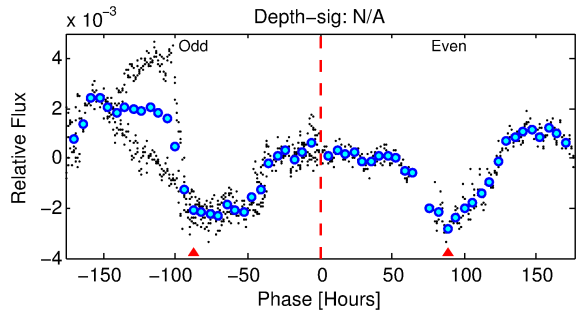


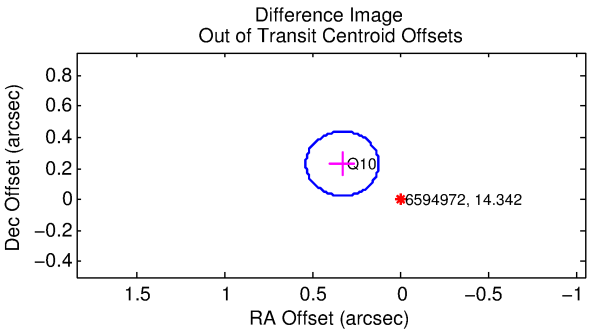












DV Fit Results:

Period = 571.23709 [0.03483] d
Epoch = 373.8559 [0.0396] BKJD
Rp/R* = 0.0495 [0.0233]
a/R* = 60.23 [14.11]
b = 0.97 [0.05]

Seff = 0.63 [0.24]
Teq = 227 [22] K
Rp = 5.36 [3.00] Re
a = 1.3303 [0.3392] AU

Ag = 19969.58 [20915.55] [0.95σ]
Teffp = 4167 [1028] K [3.83σ]

DV Diagnostic Results:

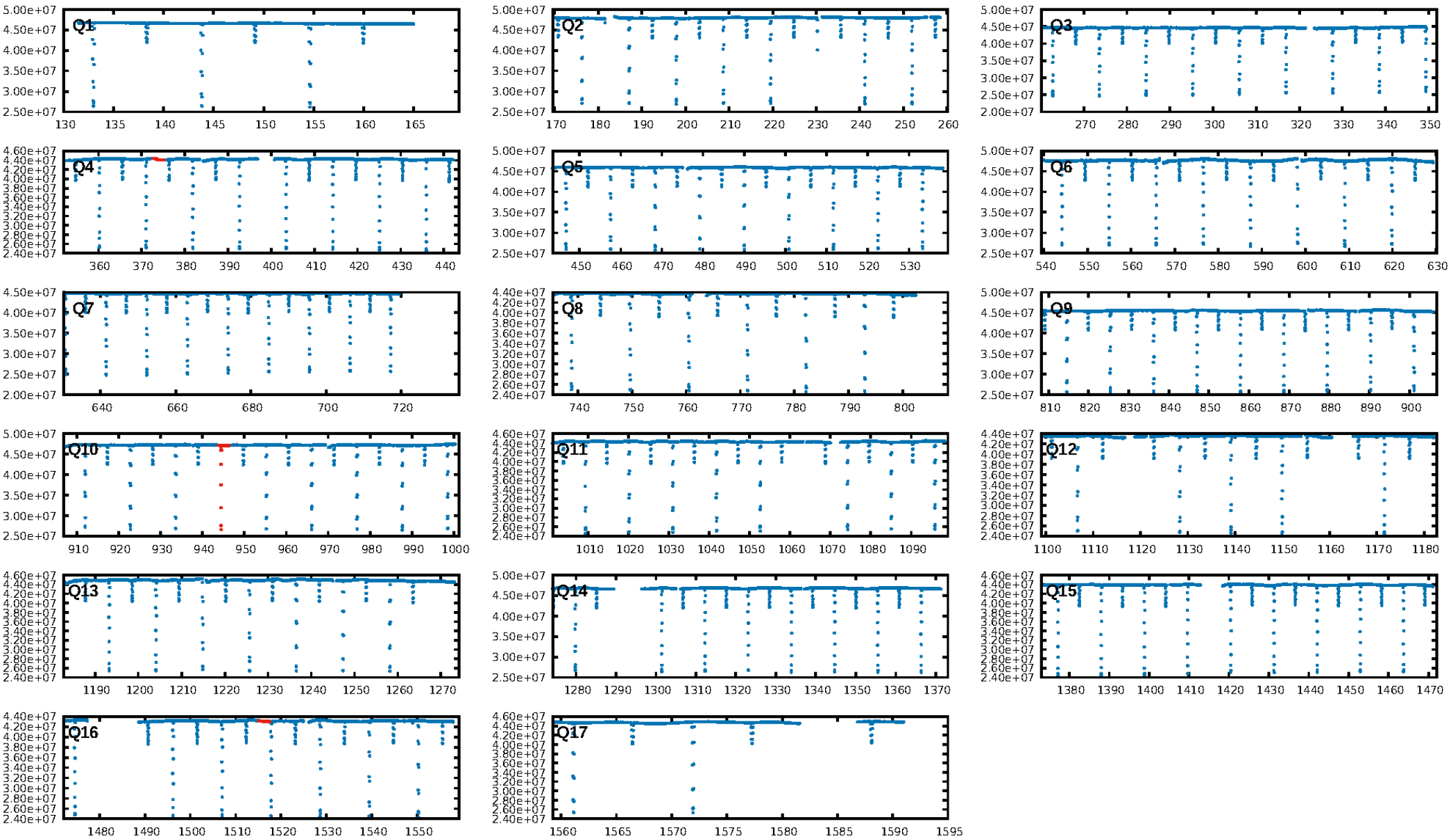
ShortPeriod−sig: 100.0% [54.40σ]
LongPeriod−sig: N/A
ModelChiSquare2−sig: 1.5%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: 2.277

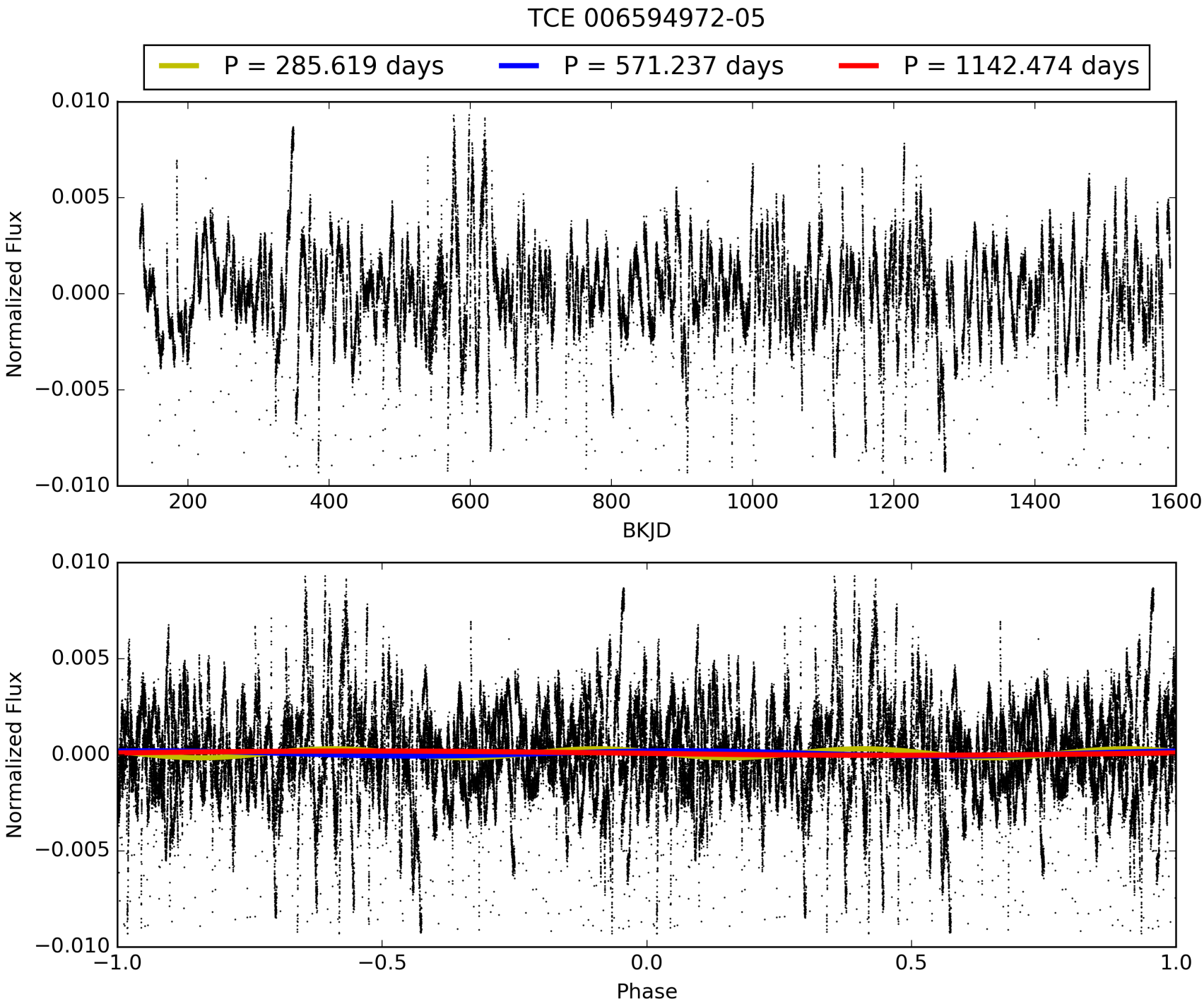
Centroid−sig: 6.1%
Centroid−so: 0.346 arcsec [1.52σ]
OotOffset−rm: 0.406 arcsec [5.87σ]
KicOffset−rm: 0.364 arcsec [5.28σ]
OotOffset−st: 1/0/0/0 [1]
KicOffset−st: 1/0/0/0 [1]
DiffImageQuality−fgm: 0.00 [0/1]
DiffImageOverlap−fno: 0.00 [0/1]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 −− Date Generated: 02−Feb−2016 01:04:13 Z

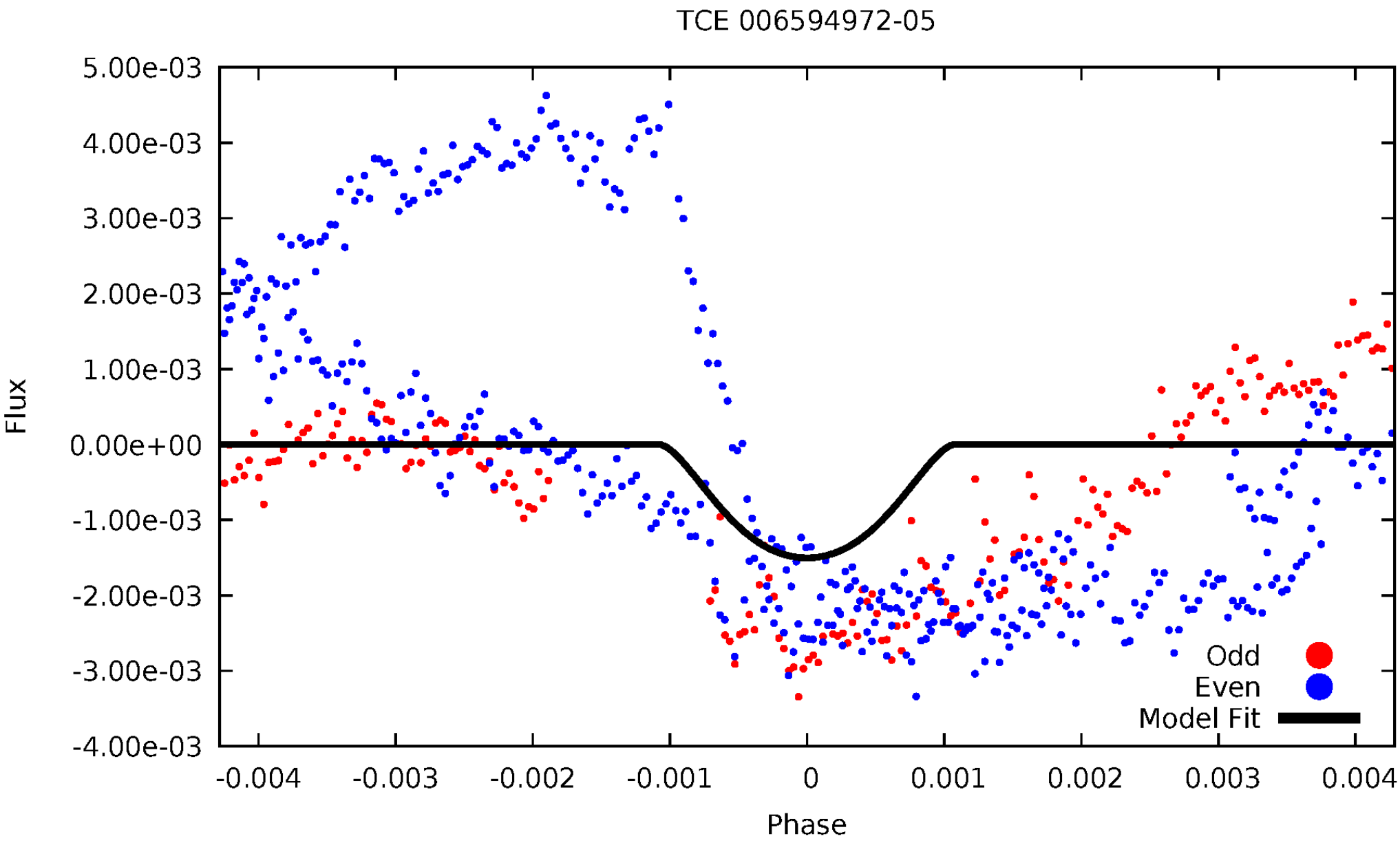
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006594972-05, PDC Light Curves

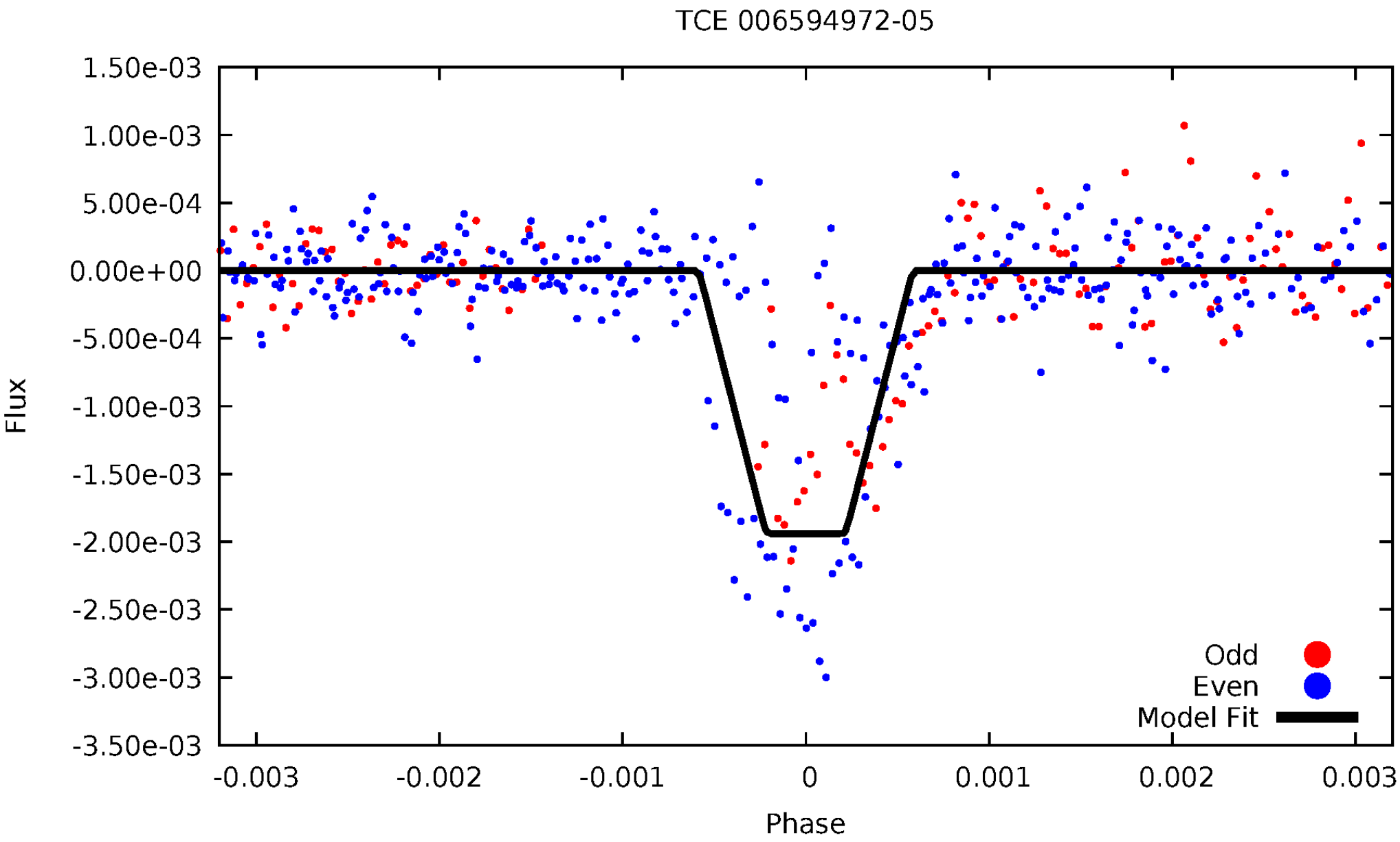



TCE 006594972-05
P = 285.619 days
P = 571.237 days
P = 1142.474 days
Normalized Flux
BKJD
Phase
0.010
0.005
0.000
−0.005
−0.010
200
400
600
800
1000
1200
1400
1600
−1.0
−0.5
0.0
0.5
1.0

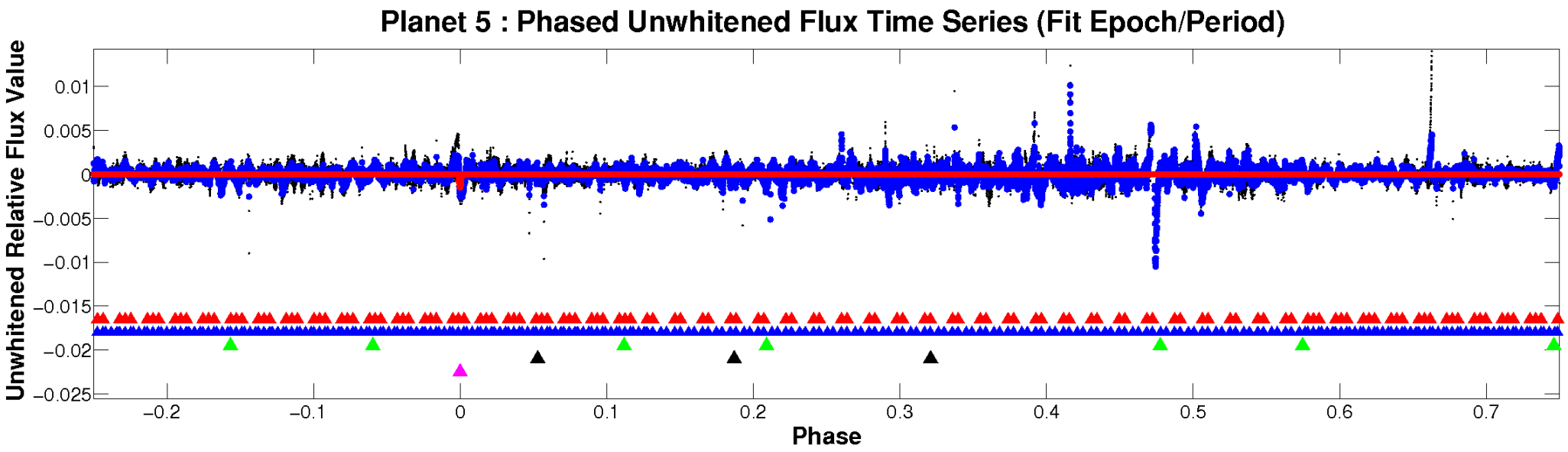
DV Odd/Even

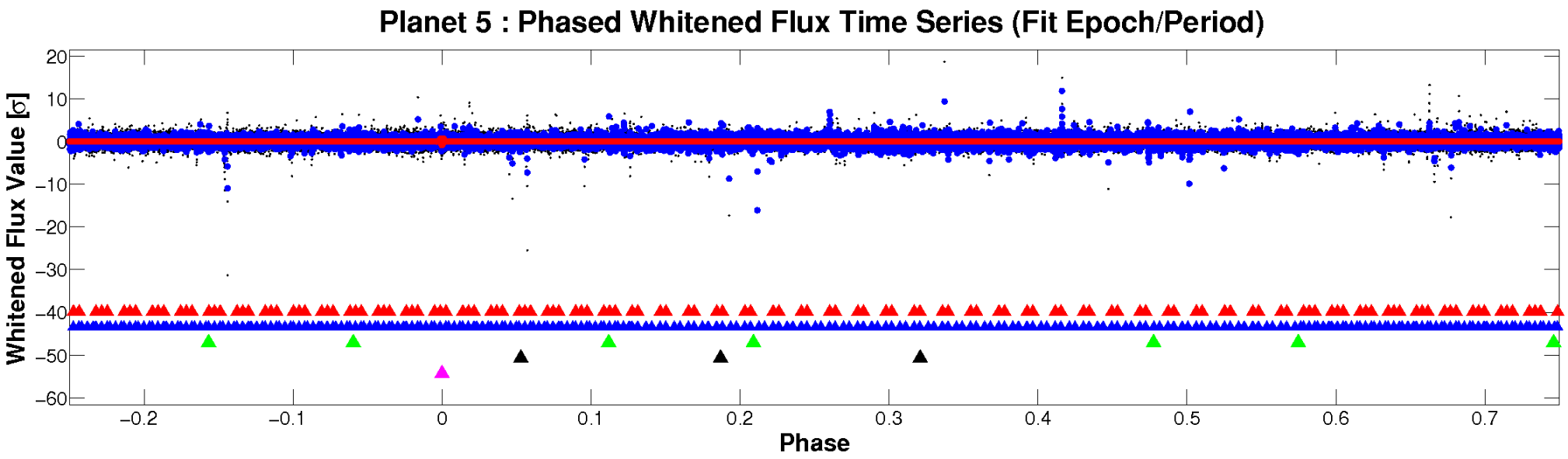

TCE 006594972-05
5.00e-03
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
-4.00e-03
Flux
-0.004
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
0.004
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006594972-05
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
-2.50e-03
-3.00e-03
-3.50e-03
Flux
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
Phase
Odd
Even
Model Fit

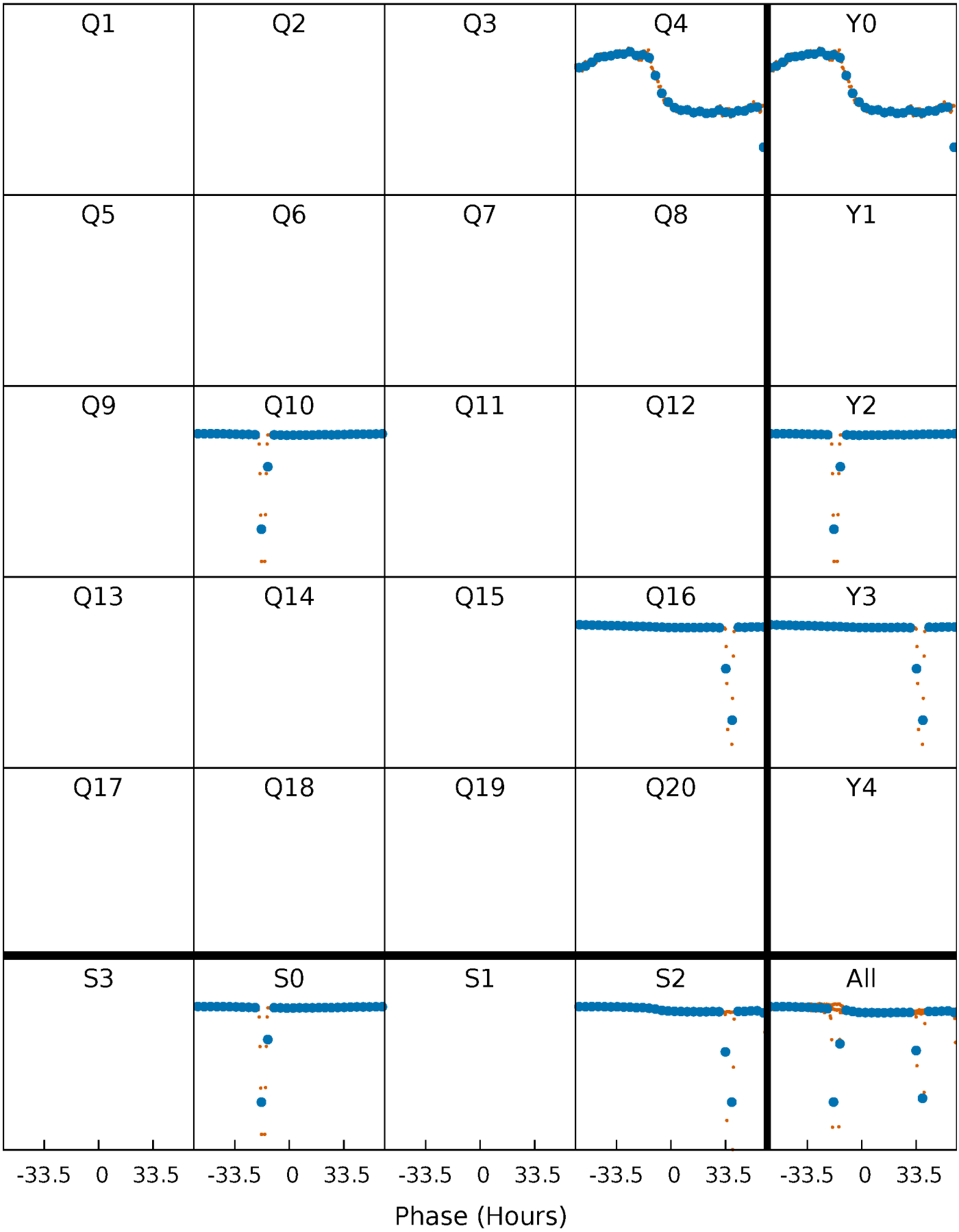
Non-Whitened Vs. Whitened Light Curve





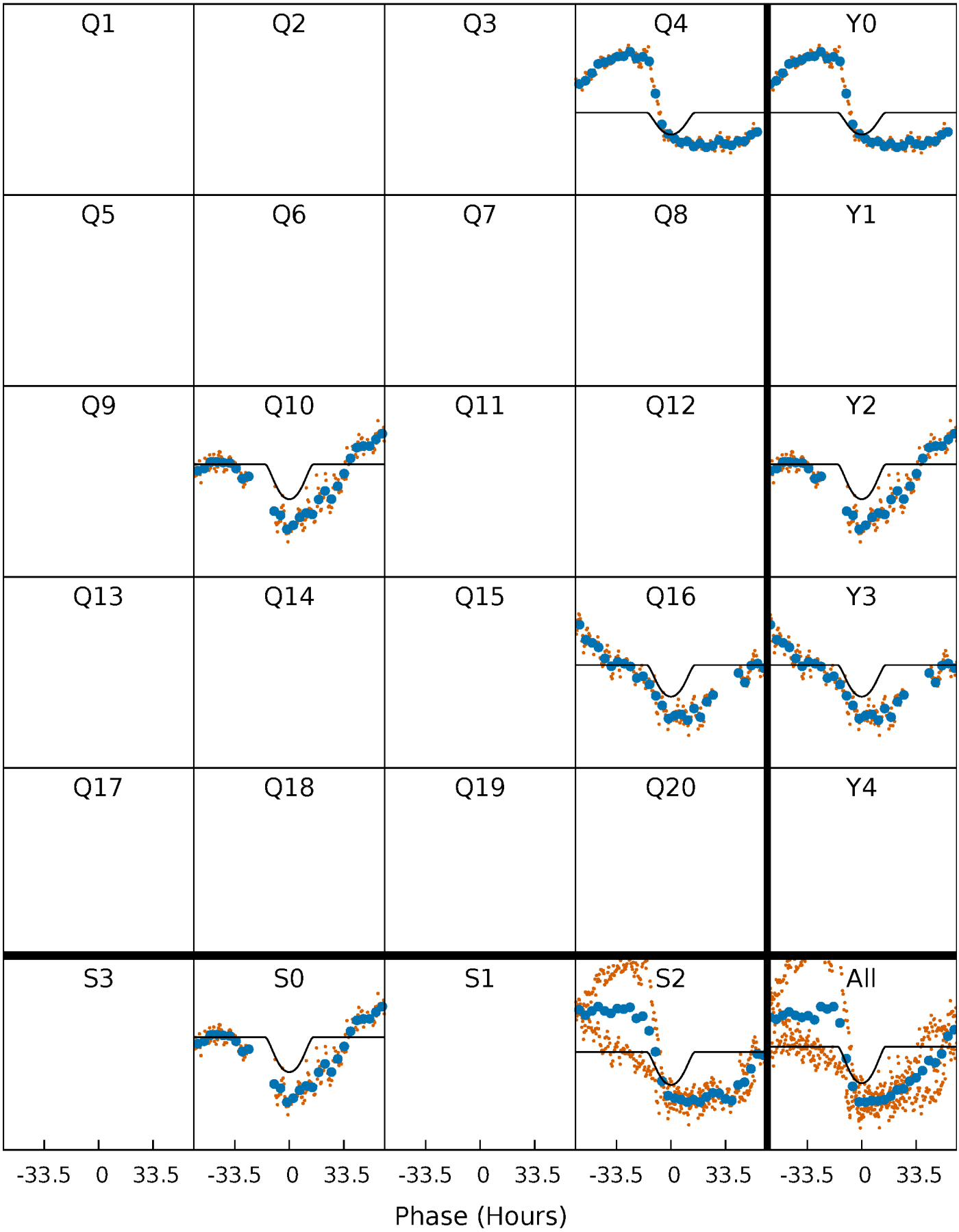
PDC Quarter-Phased Transit Curves

TCE 006594972-05 P=571.237089 Days T_0=373.855886 (BKJD)



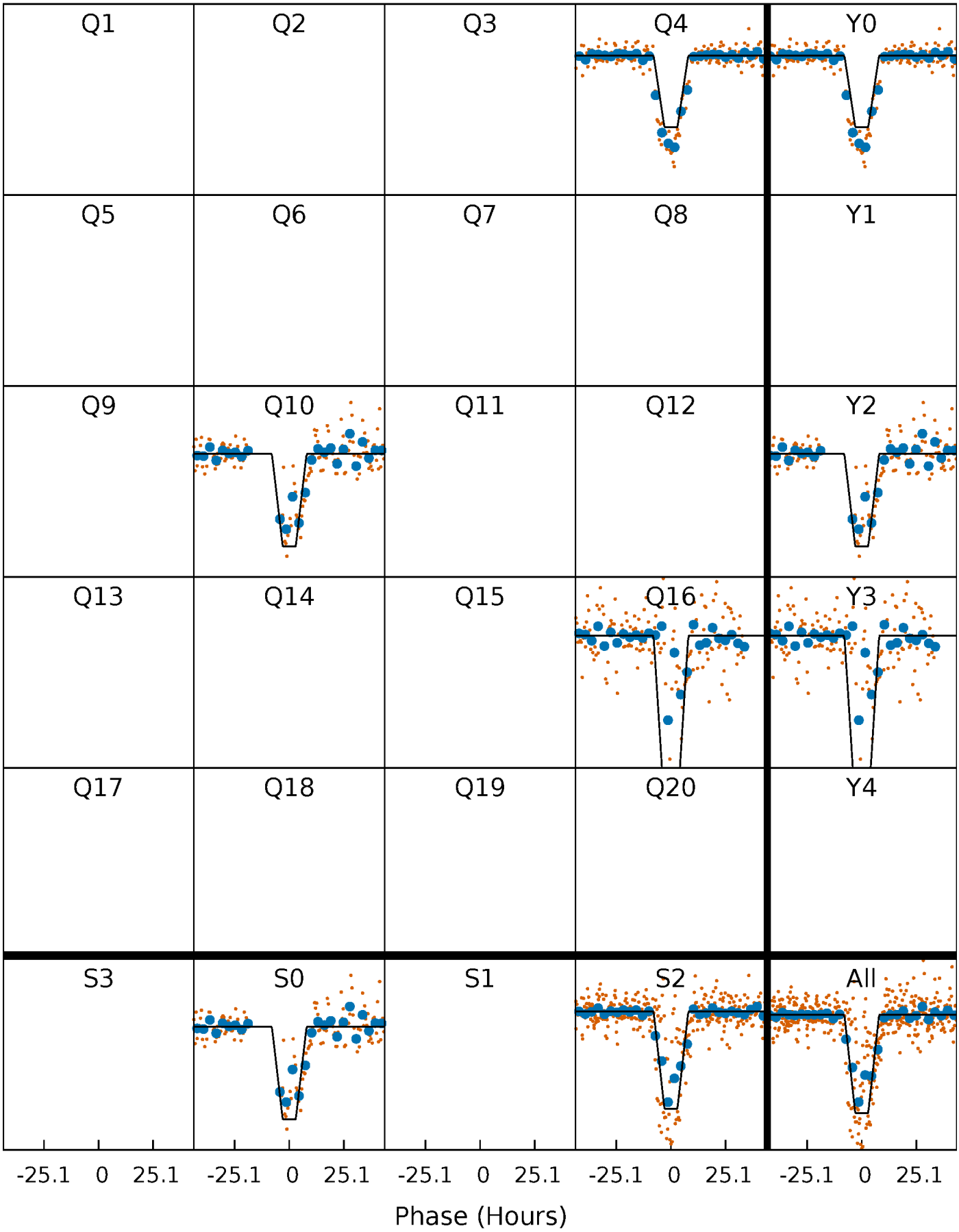
DV Quarter-Phased Transit Curves

TCE 006594972-05 P=571.237089 Days T_0=373.855886 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

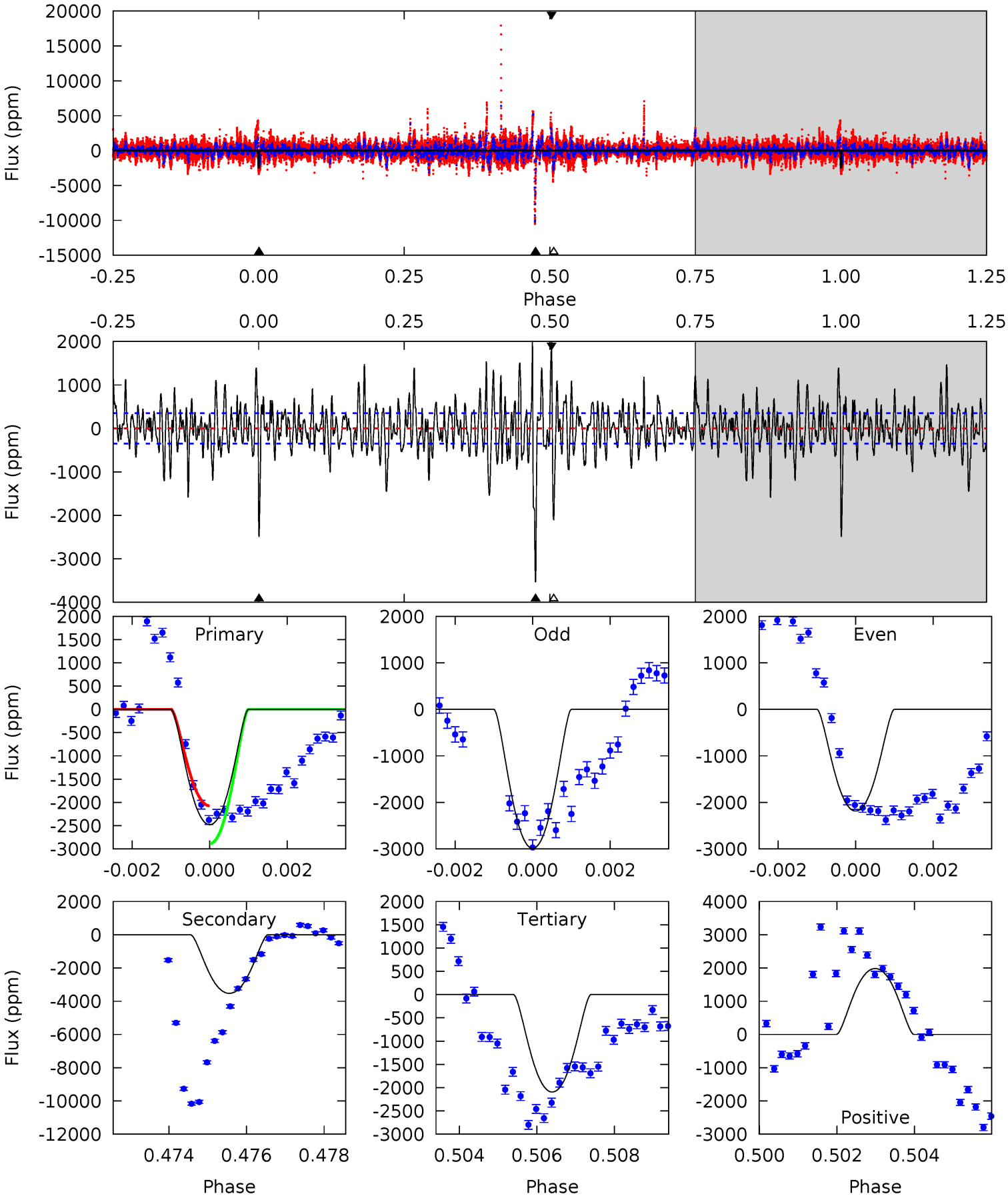
TCE 006594972-05 P=571.213359 Days T_0=373.625391 (BKJD)



DV Model-Shift Uniqueness Test

006594972-05, P = 571.237089 Days, E = 373.855886 Days

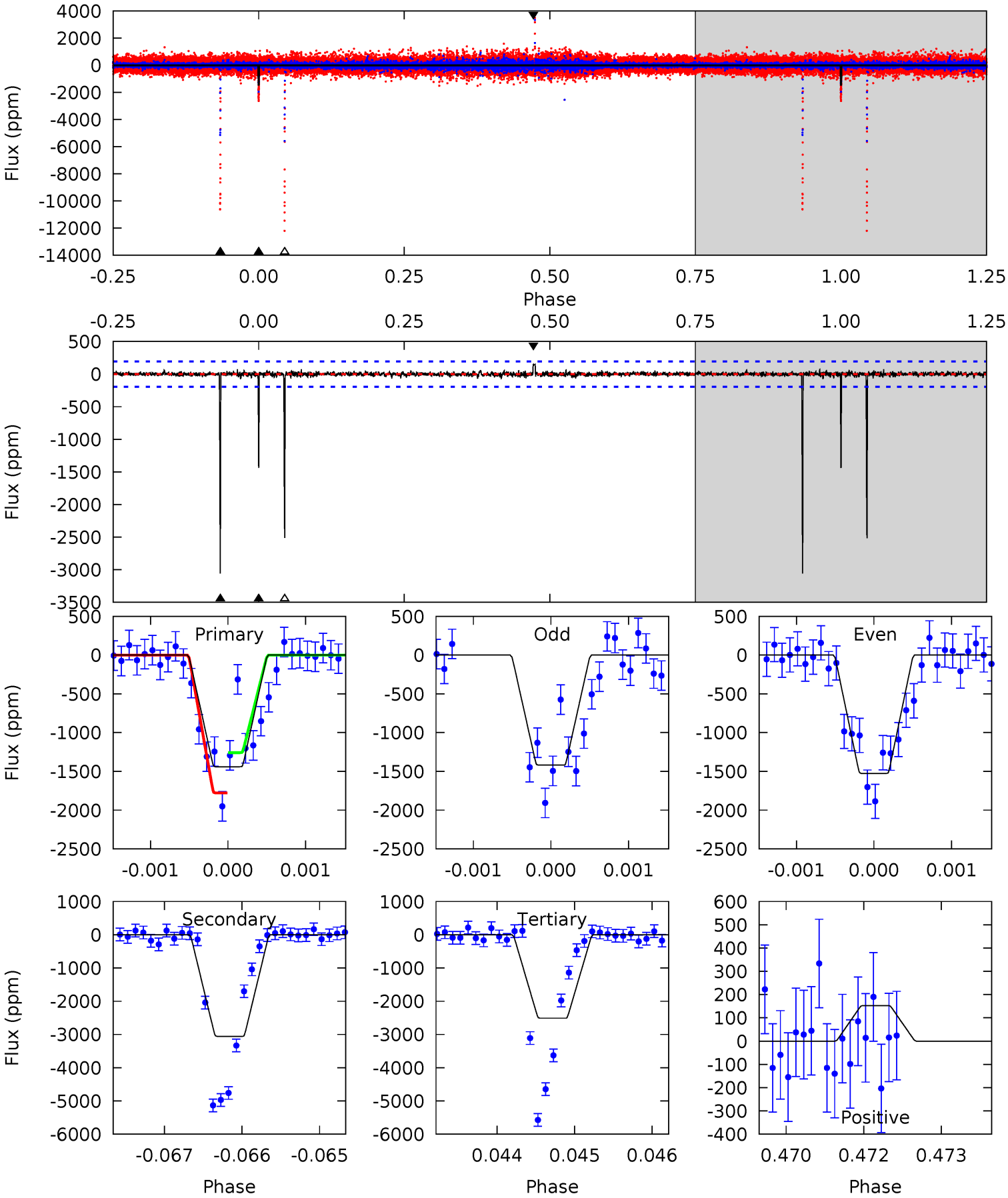
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.6	53.5	31.7	30.1	5.31	3.07	6.93	5.84	7.53	21.7	23.4	5.41	0.87	0.36	6.20



Alt Model-Shift Uniqueness Test

006594972-05, P = 571.213359 Days, E = 373.625391 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.3	85.6	70.3	4.26	5.43	3.25	2.02	-30.0	36.1	15.3	81.4	1.25	1.02	0.05	8.03



Stellar Parameters For KIC 006594972

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5955^{+179}_{-179}	$4.429^{+0.087}_{-0.203}$	$-0.200^{+0.300}_{-0.300}$	$0.991^{+0.300}_{-0.128}$	$0.961^{+0.134}_{-0.109}$	$1.393^{+0.627}_{-0.695}$
	+3%/-3%	+2%/-5%	+150%/-150%	+30%/-13%	+14%/-11%	+45%/-50%
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 006594972-05 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3527±66	$5.46^{+2.79}_{-2.43}$	321^{+25}_{-17}	6625^{+2566}_{-1197}	$117235^{+250734}_{-68042}$
Alt.	-3057±36	$4.96^{+2.69}_{-2.23}$	321^{+24}_{-17}	6662^{+3160}_{-1214}	$117813^{+270933}_{-66971}$

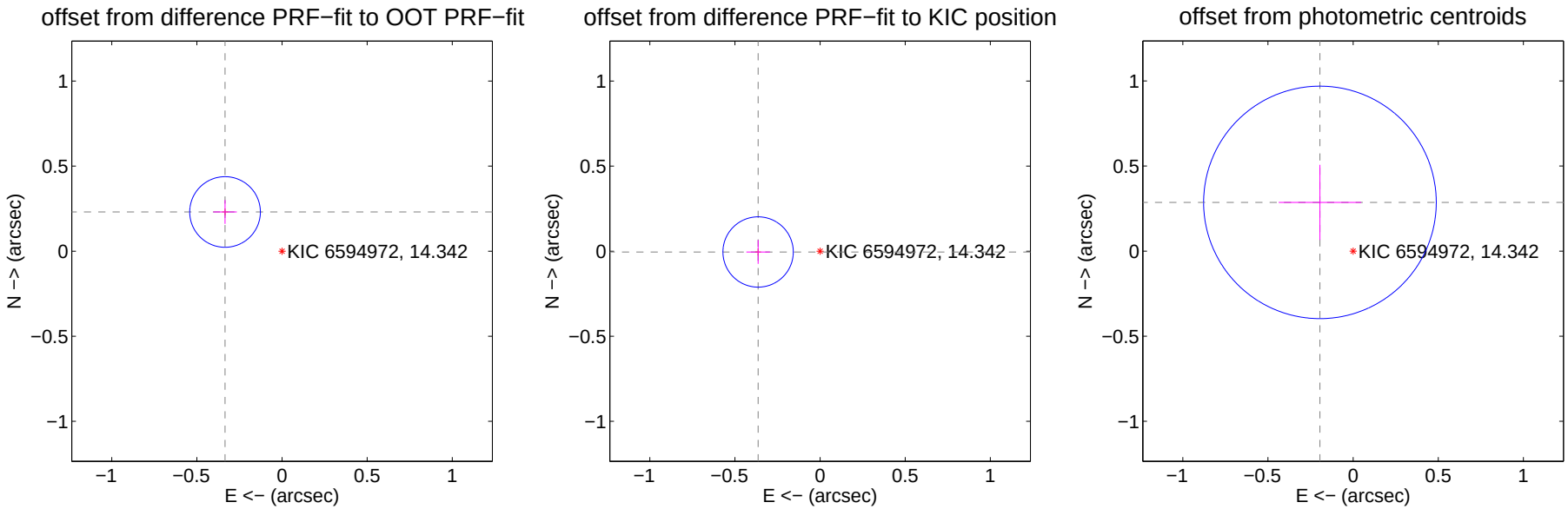
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

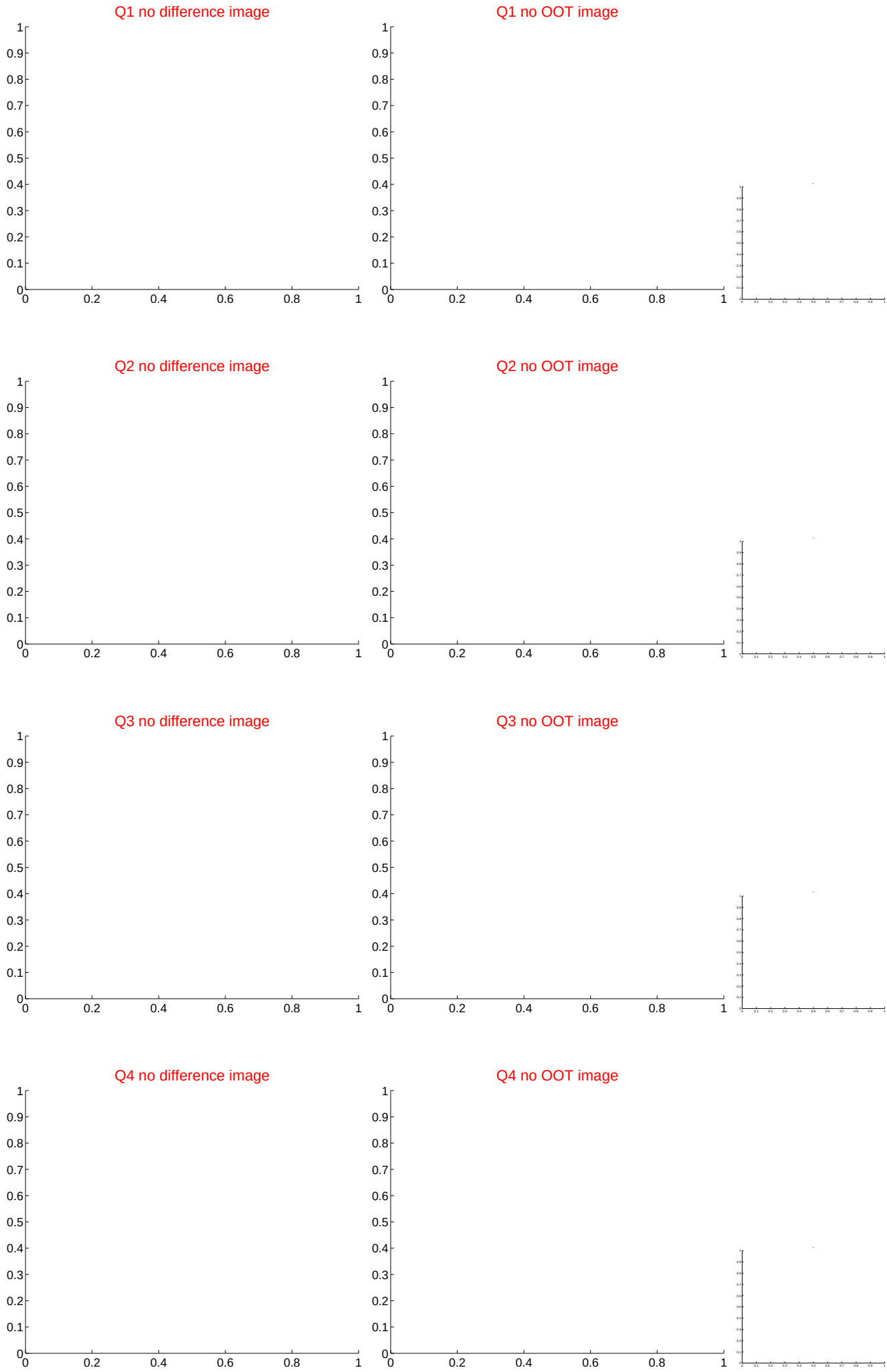
Supplemental centroid analysis for 006594972-05. Kepler magnitude: 14.34. Transit SNR 7.84
There are 0 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.406 ± 0.069	5.87	0.335 ± 0.069	0.230 ± 0.070
PRF-fit source offset from KIC position	0.364 ± 0.069	5.28	0.364 ± 0.069	-0.005 ± 0.070
photometric centroid source offset	0.35 ± 0.23	1.52	0.19 ± 0.24	0.29 ± 0.22

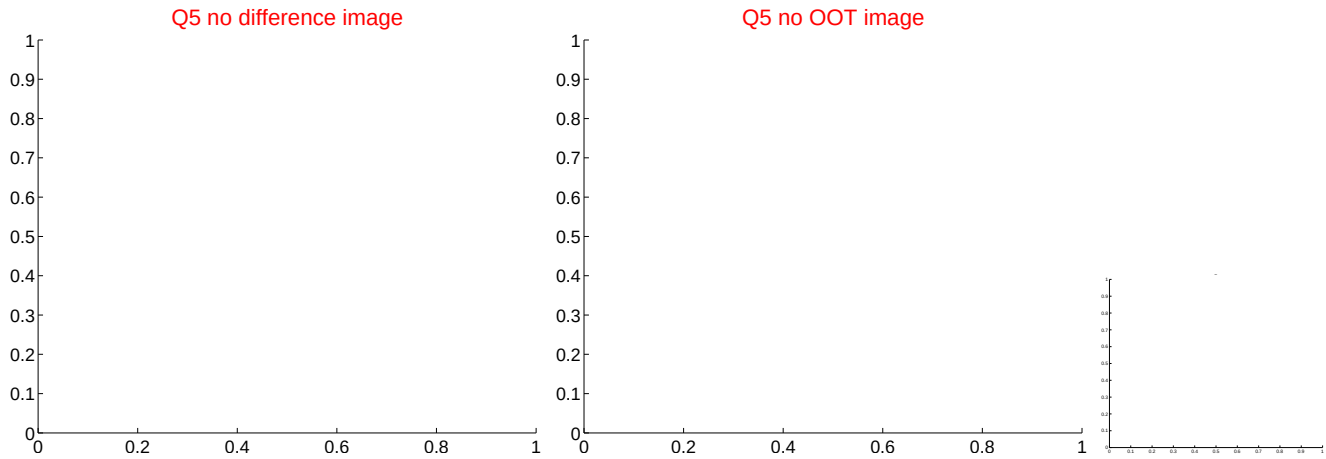


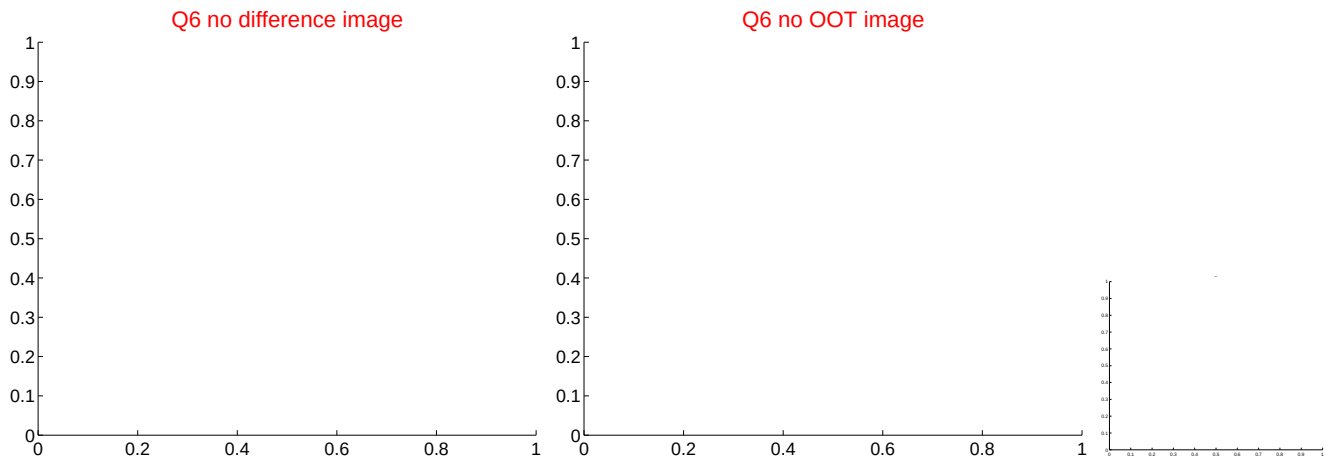
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

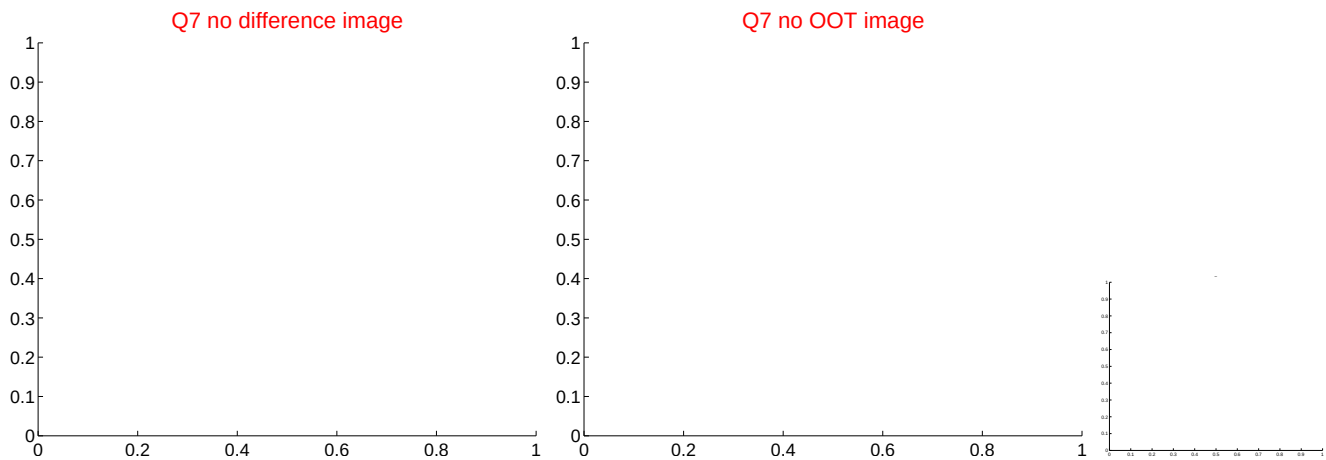
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

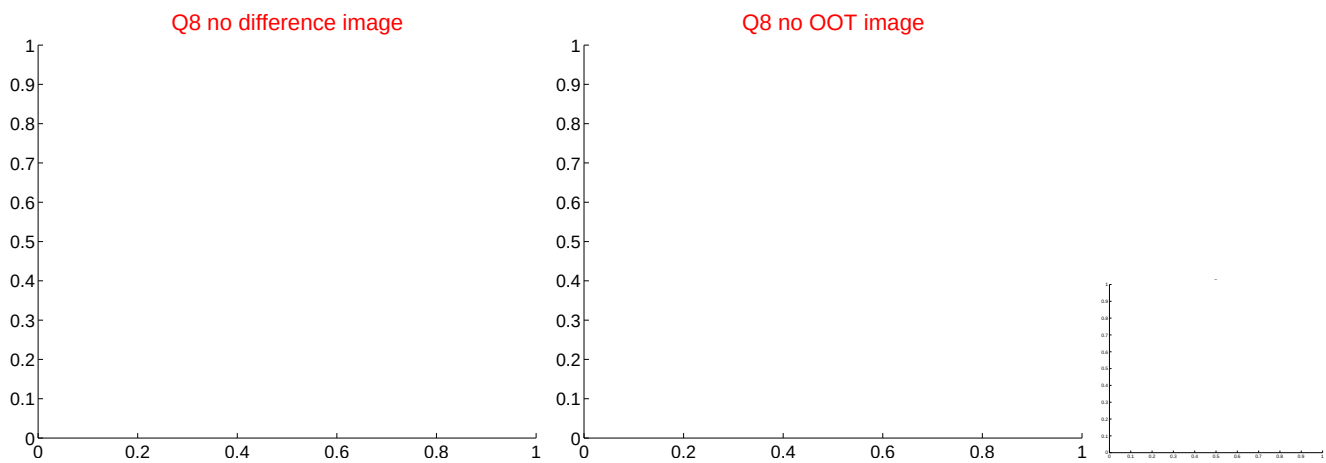


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

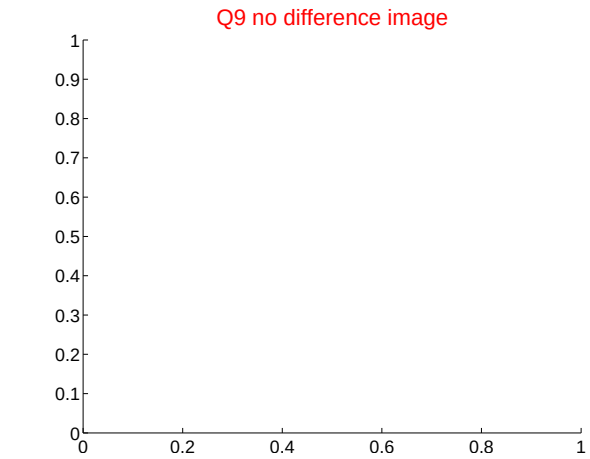


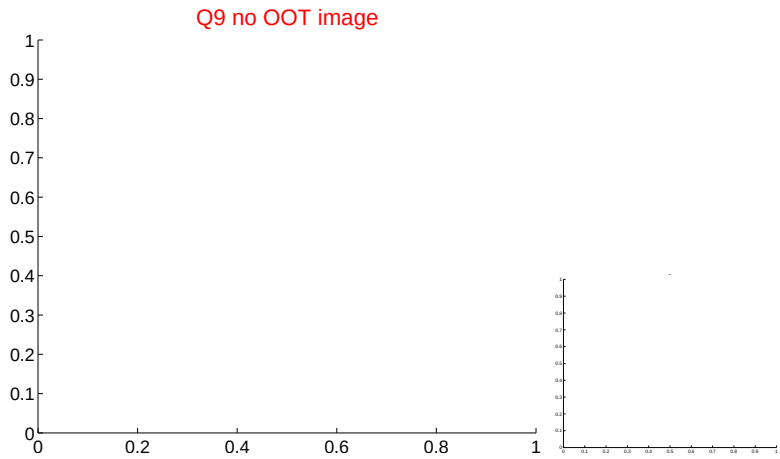


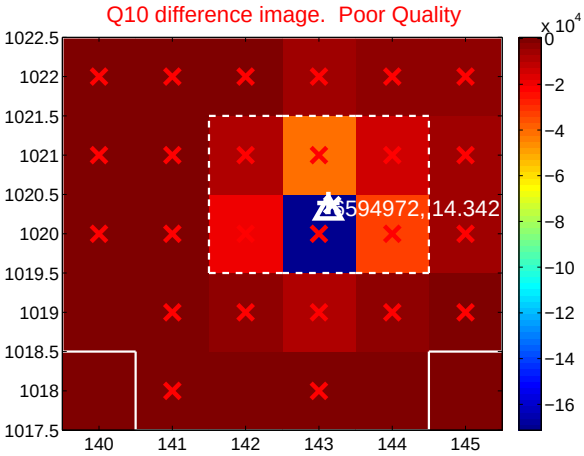


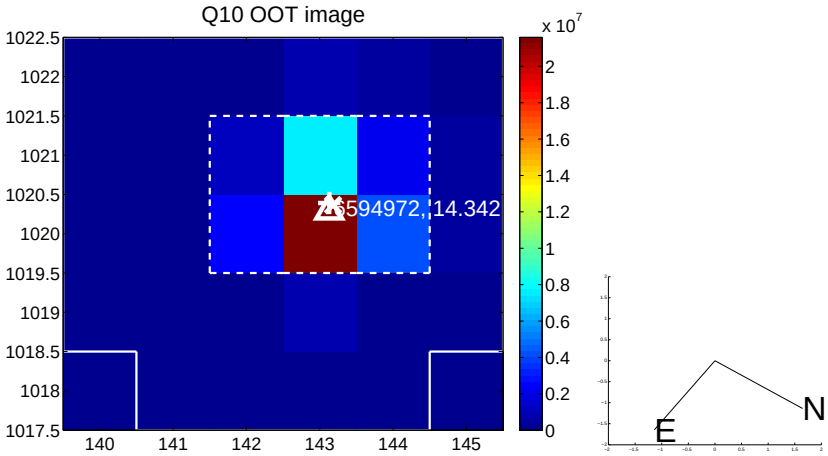


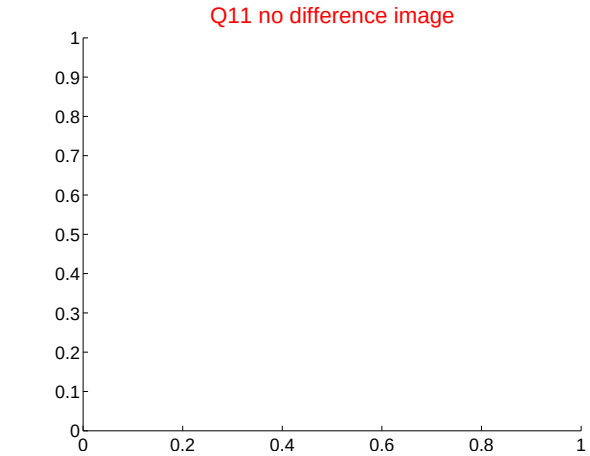
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

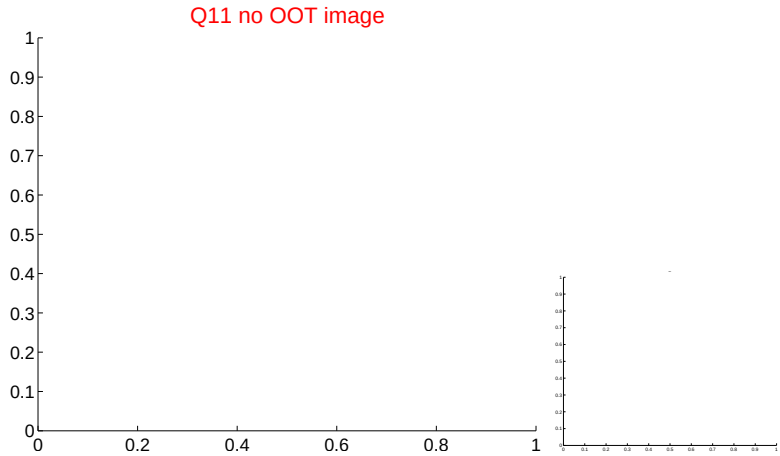


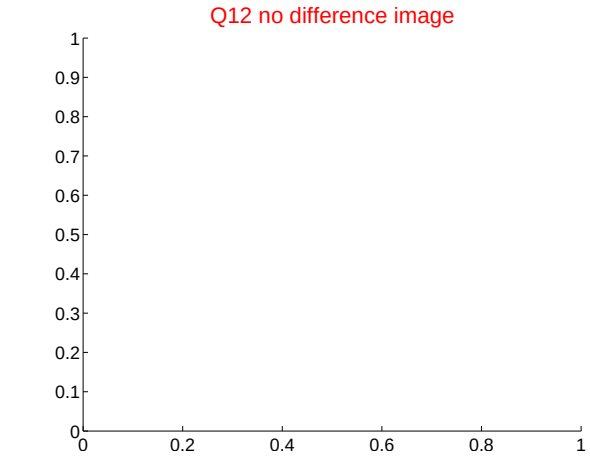


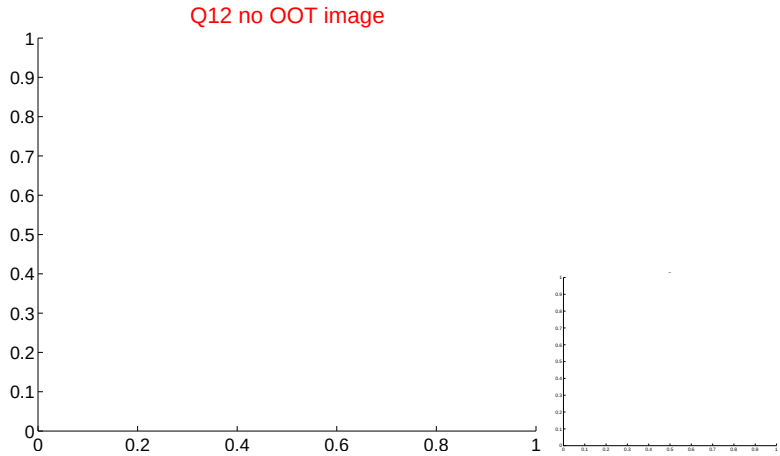




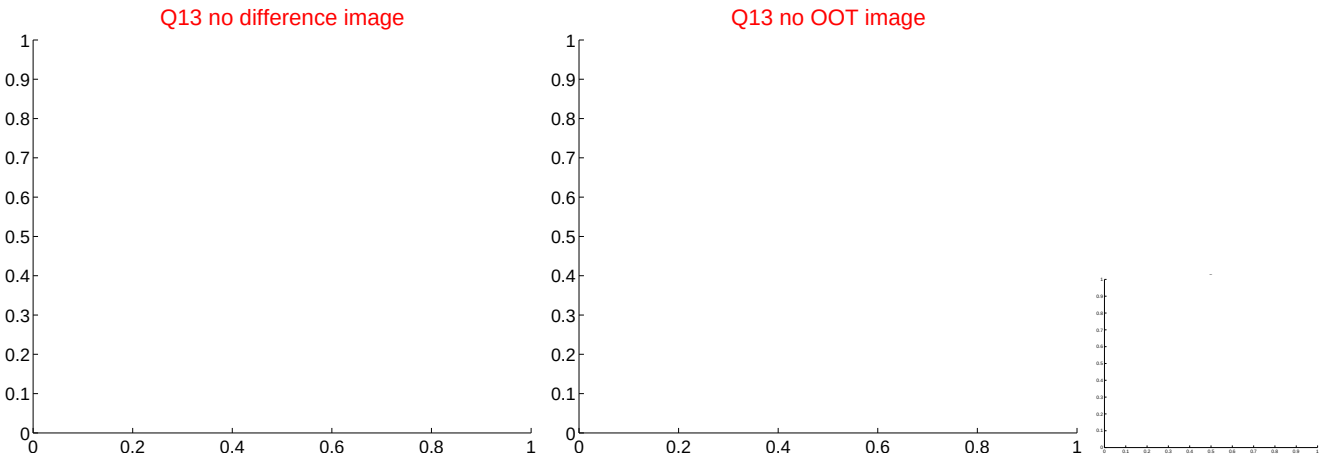


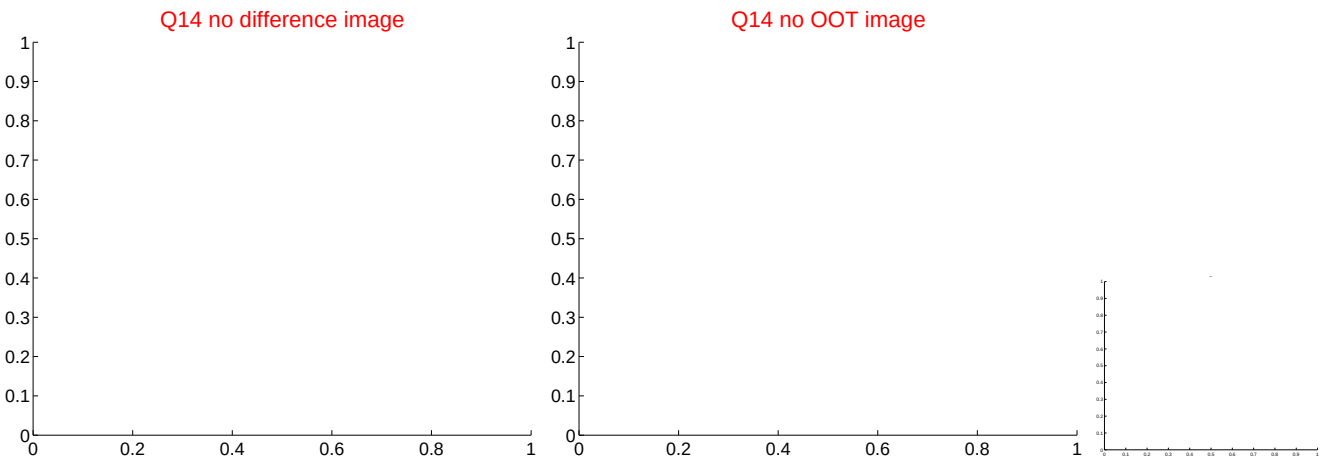


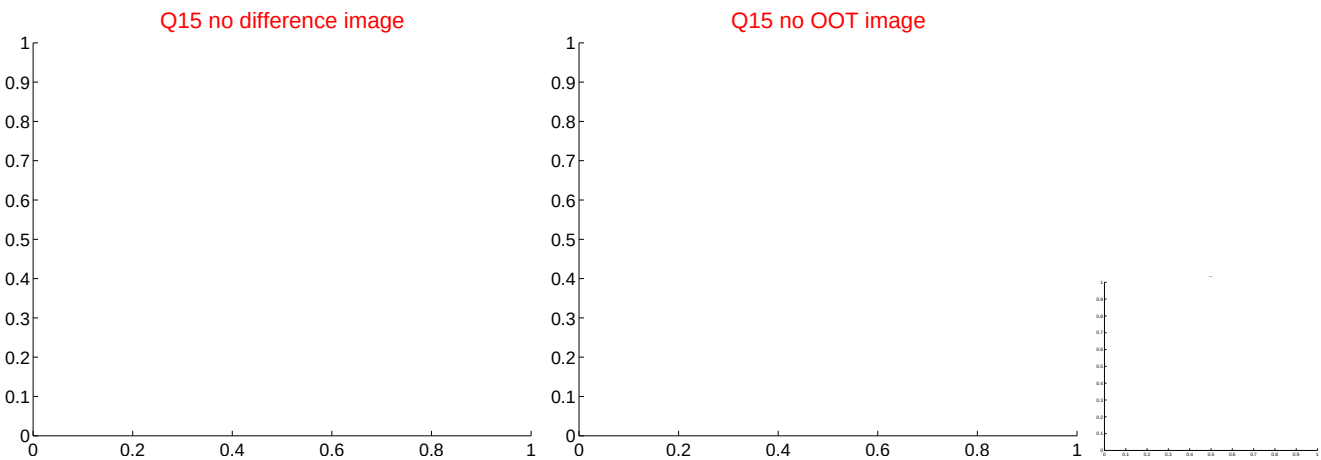


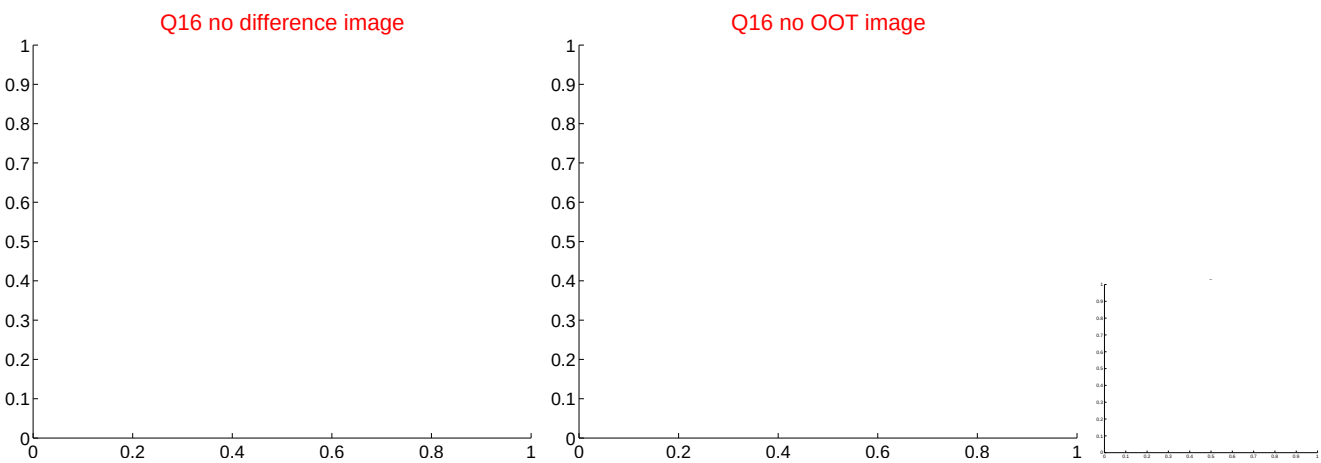


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

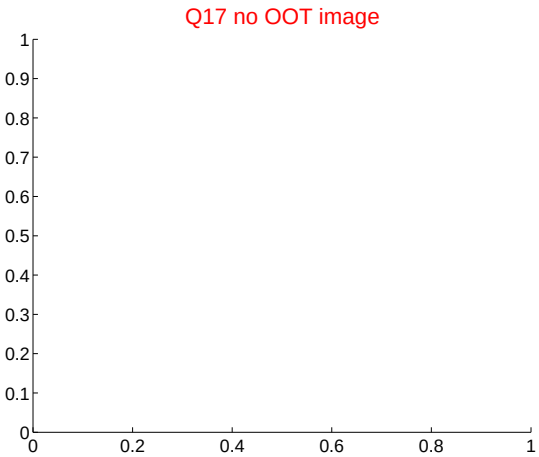


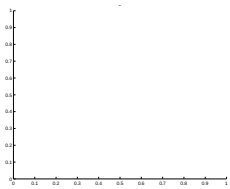


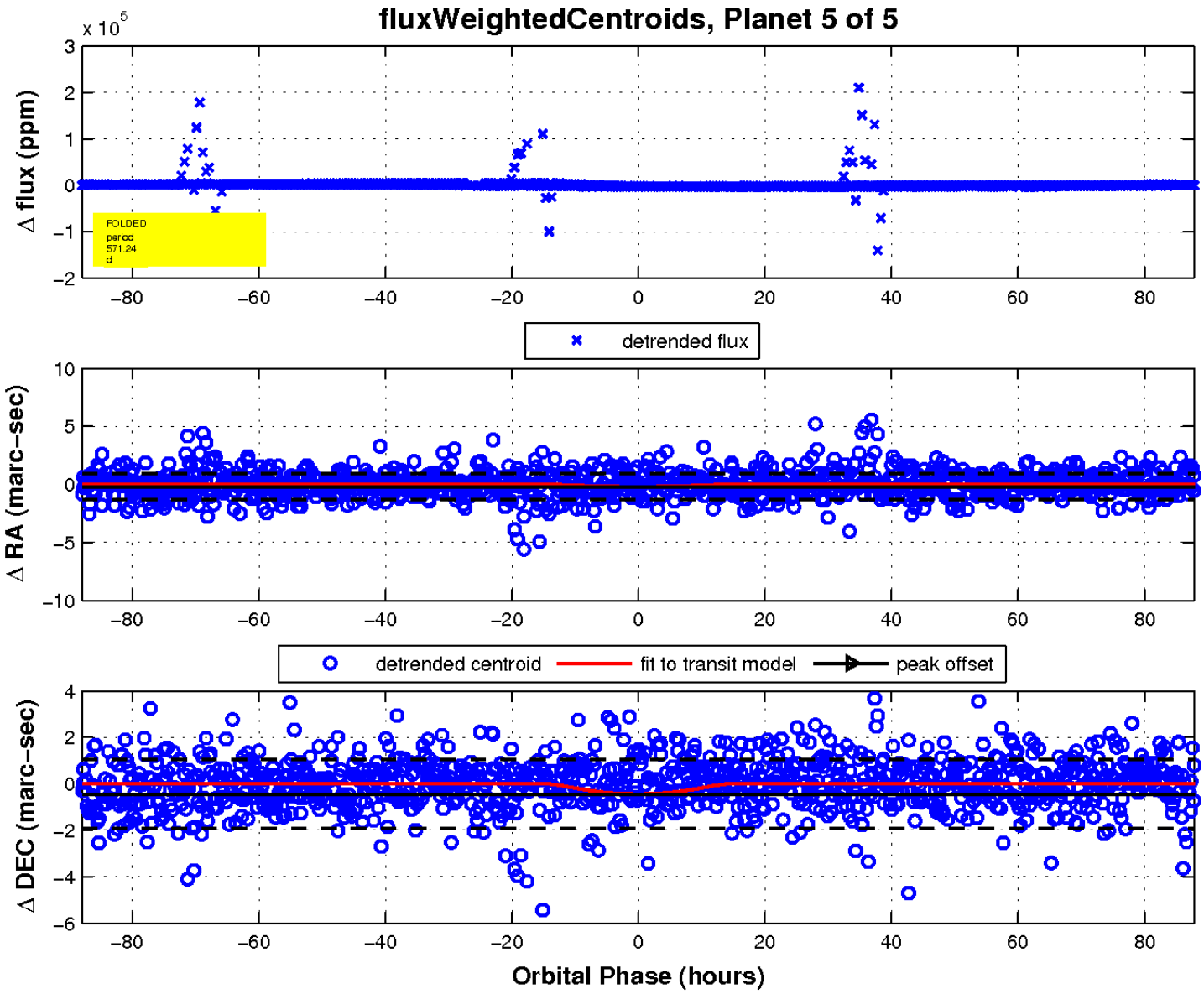




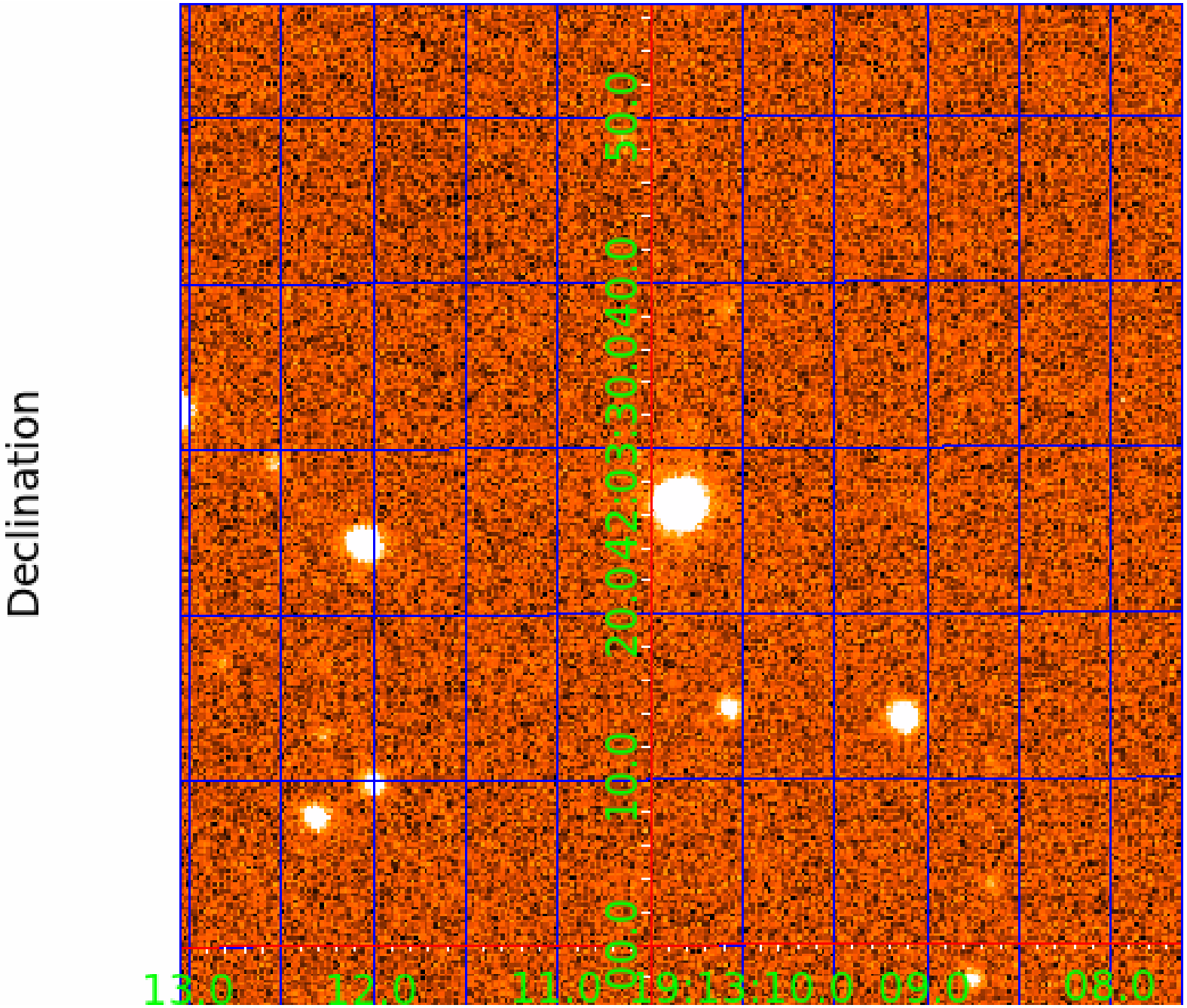
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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