KIC 006531496

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 ($S_\oplus$)
006531496-01	OBS	3646.01	14.323958	135.221484	65757.2	4.973	1197.8	745.2	0.90	5853	37.74	63.71
006531496-02	OBS	No	14.323951	142.372354	20258.2	4.806	351.6	323.8	0.90	5853	21.57	63.71
006531496-03	OBS	3646.02	0.512853	132.052462	289.9	0.988	10.7	15.1	0.90	5853	1.64	5398.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006531496-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_UNRESOLVED_OFFSET
006531496-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET
006531496-03	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—CENT_RESOLVED_OFFSET

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.

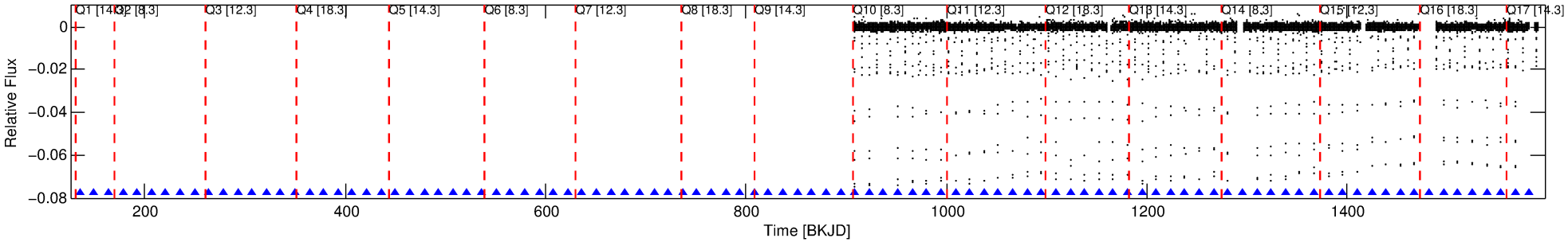
Ephemeris Match Information For 006531496-01

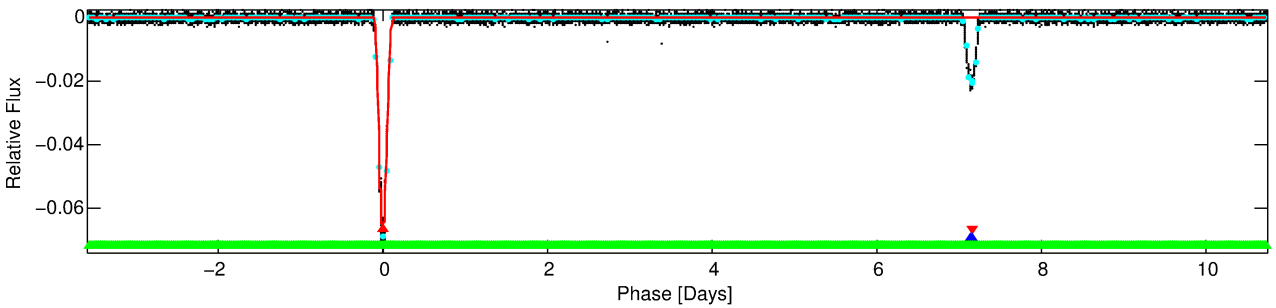
No Significant Match Found

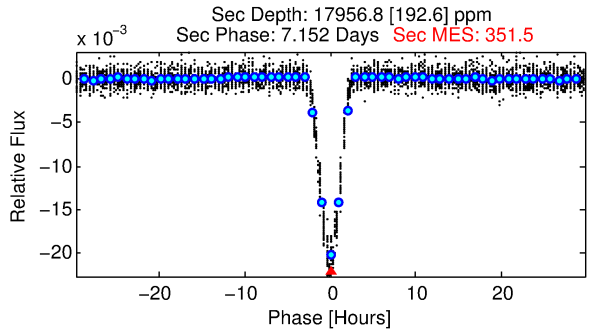
DV One-Page Summary

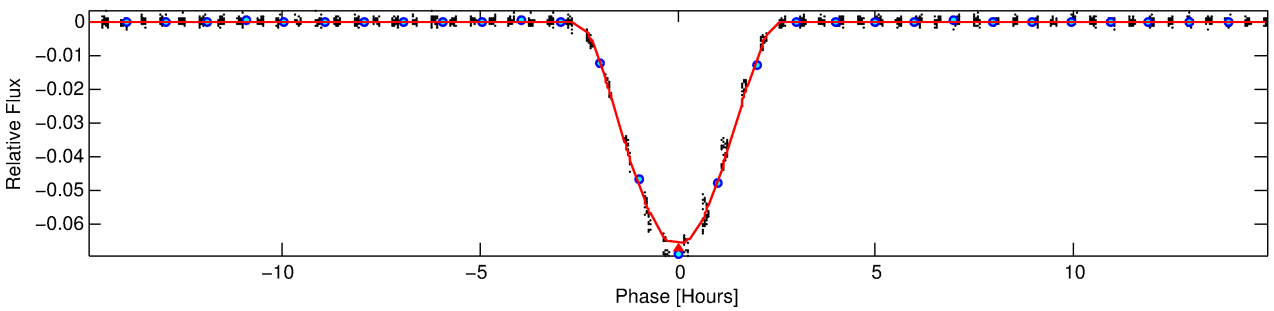
KIC: 6531496 Candidate: 1 of 3 Period: 14.324 d
KOI: K03646.01 Corr: 0.989

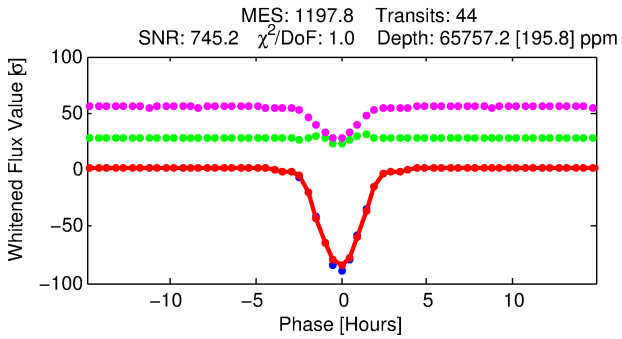
Kp: 16.09 R*: 0.90 Rs Teff: 5853.0 K Logg: 4.53 Fe/H: −0.100

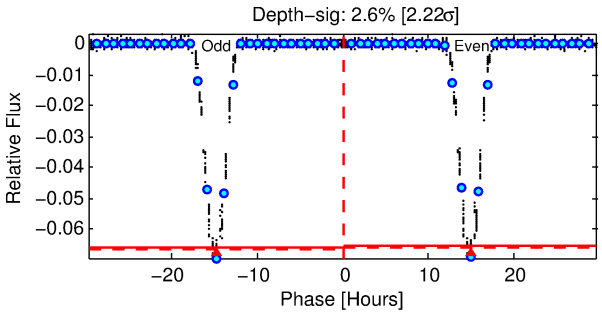


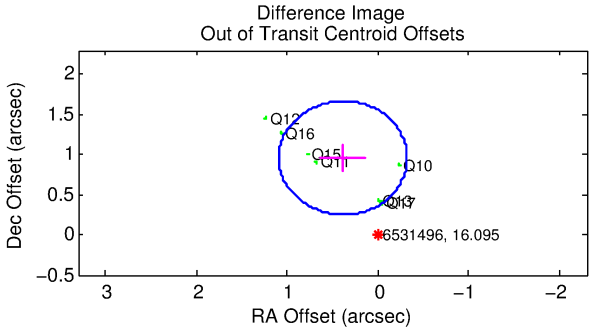












DV Fit Results:

Period = 14.32396 [0.00000] d
Epoch = 135.2215 [0.0004] BKJD
Rp/R* = 0.3864 [0.0545]
a/R* = 21.69 [0.04]
b = 0.98 [0.07]

Seff = 63.71 [25.08]
Teq = 720 [71] K
Rp = 37.74 [12.19] Re
a = 0.1150 [0.0286] AU

Ag = 91.69 [42.54] [2.13σ]
Teffp = 3447 [271] K [9.72σ]

DV Diagnostic Results:

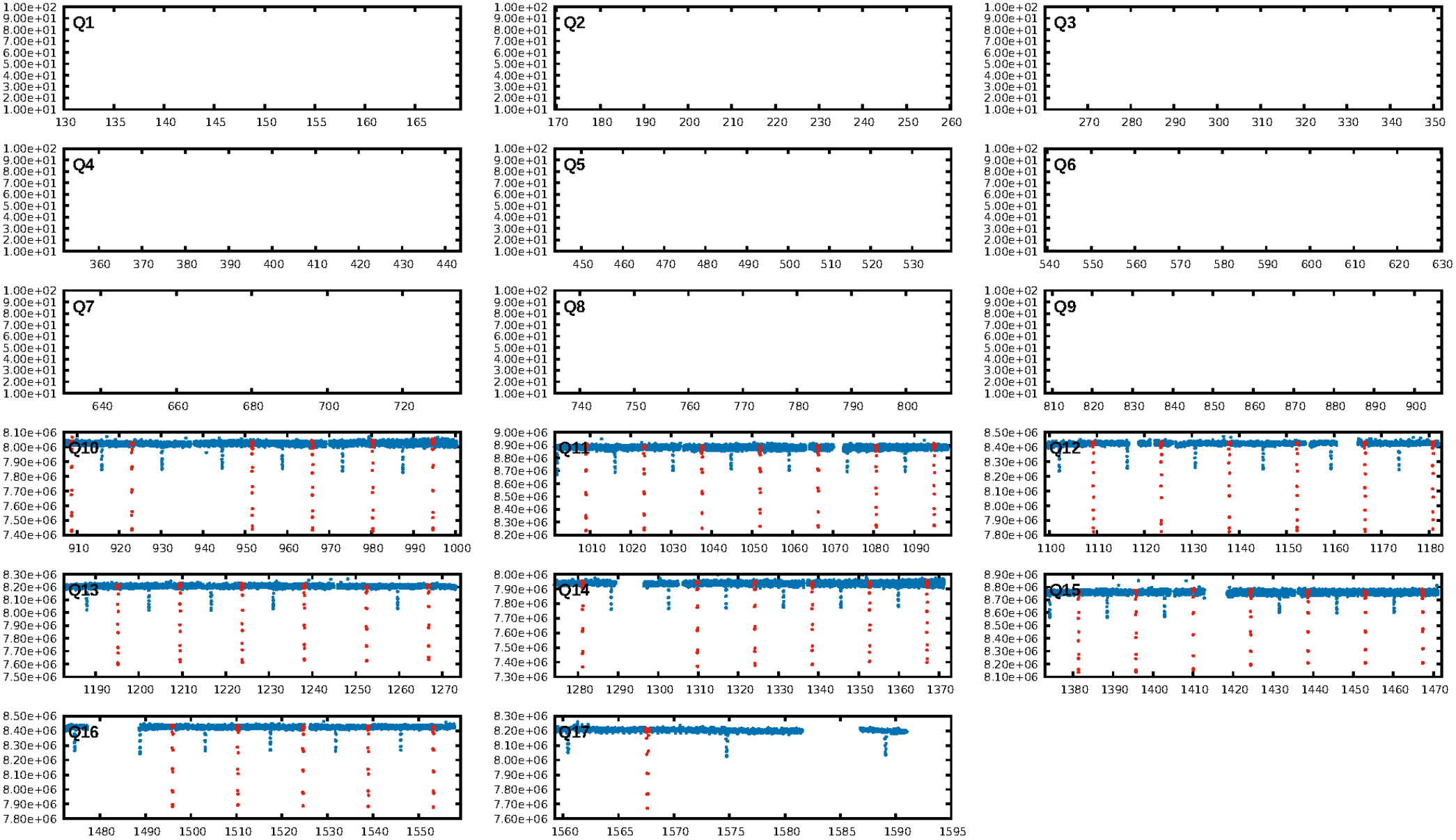
ShortPeriod−sig: 0.0% [0.00σ]
LongPeriod−sig: N/A
ModelChiSquare2−sig: 0.0%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: 0.00e+00
RollingBand−fgt: 1.00 [43/43]
GhostDiagnostic−chr: 2.997

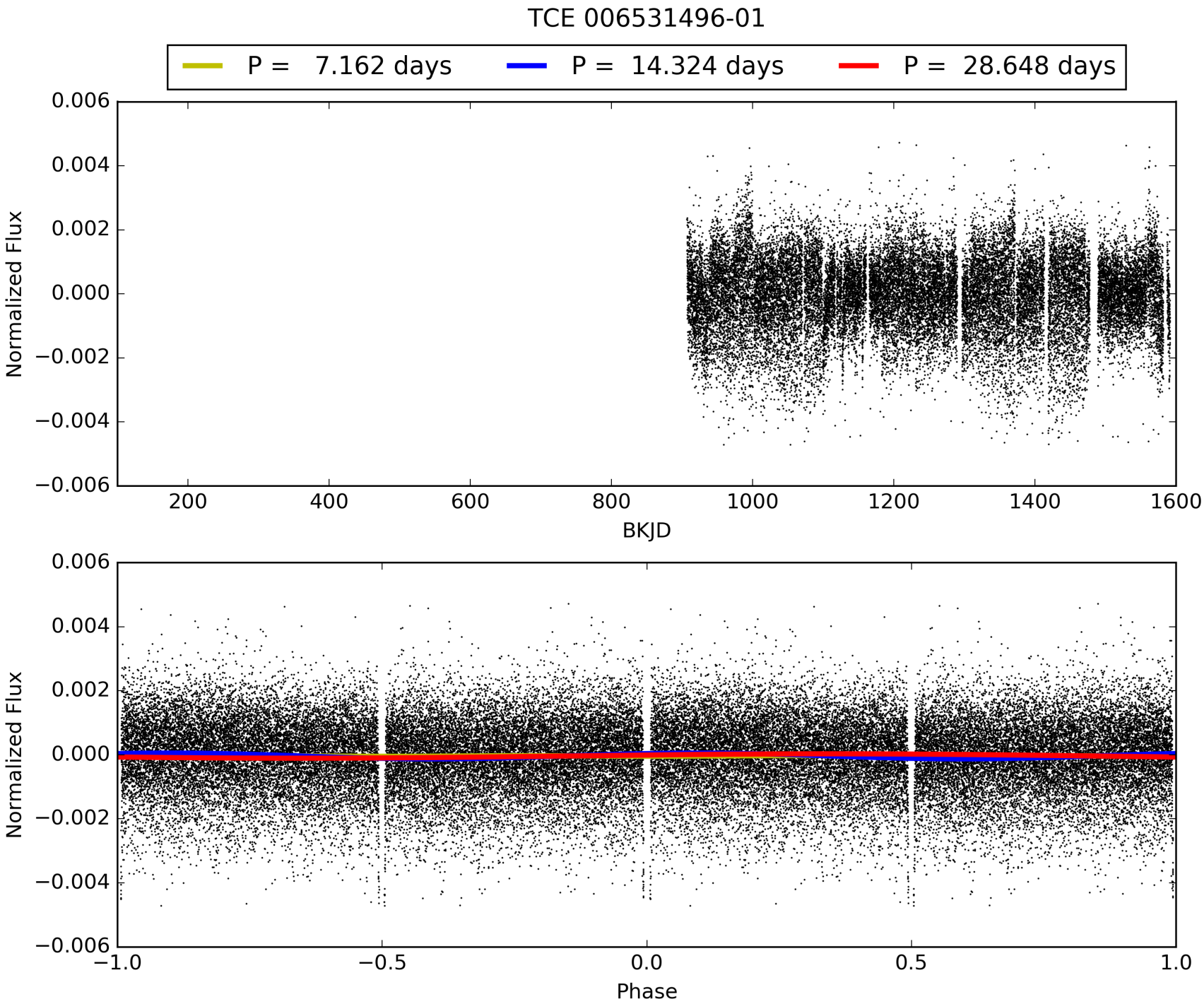
Centroid−sig: N/A
Centroid−so: 0.609 arcsec [23.64σ]
OotOffset−rm: 1.033 arcsec [4.38σ]
KicOffset−rm: 0.095 arcsec [1.32σ]
OotOffset−st: 1/2/2/2 [7]
KicOffset−st: 1/2/2/2 [7]
DiffImageQuality−fgm: 1.00 [7/7]
DiffImageOverlap−fno: 0.00 [0/8]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03−Feb−2016 01:39:49 Z

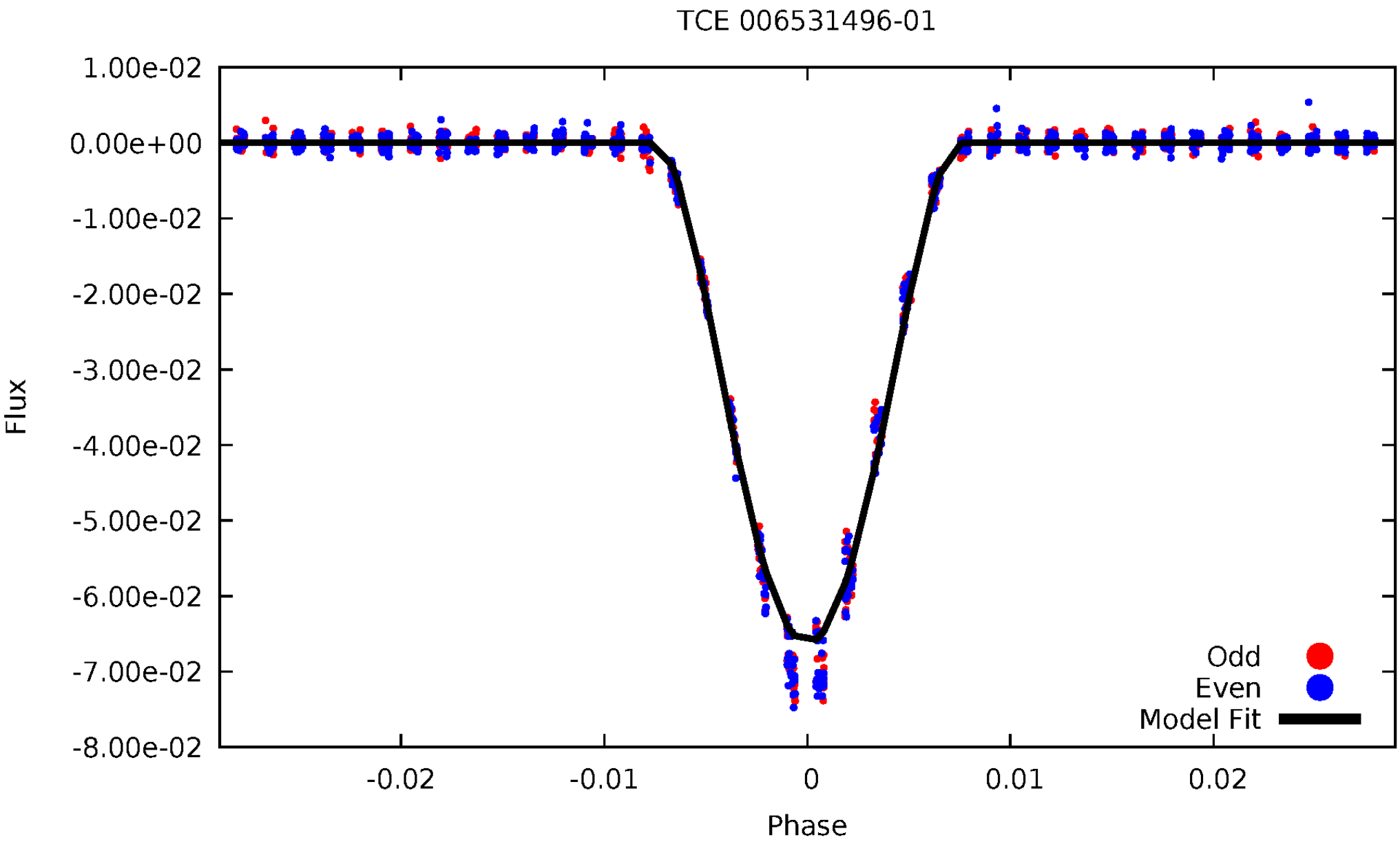
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006531496-01, PDC Light Curves




TCE 006531496-01
P = 7.162 days
P = 14.324 days
P = 28.648 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even


TCE 006531496-01
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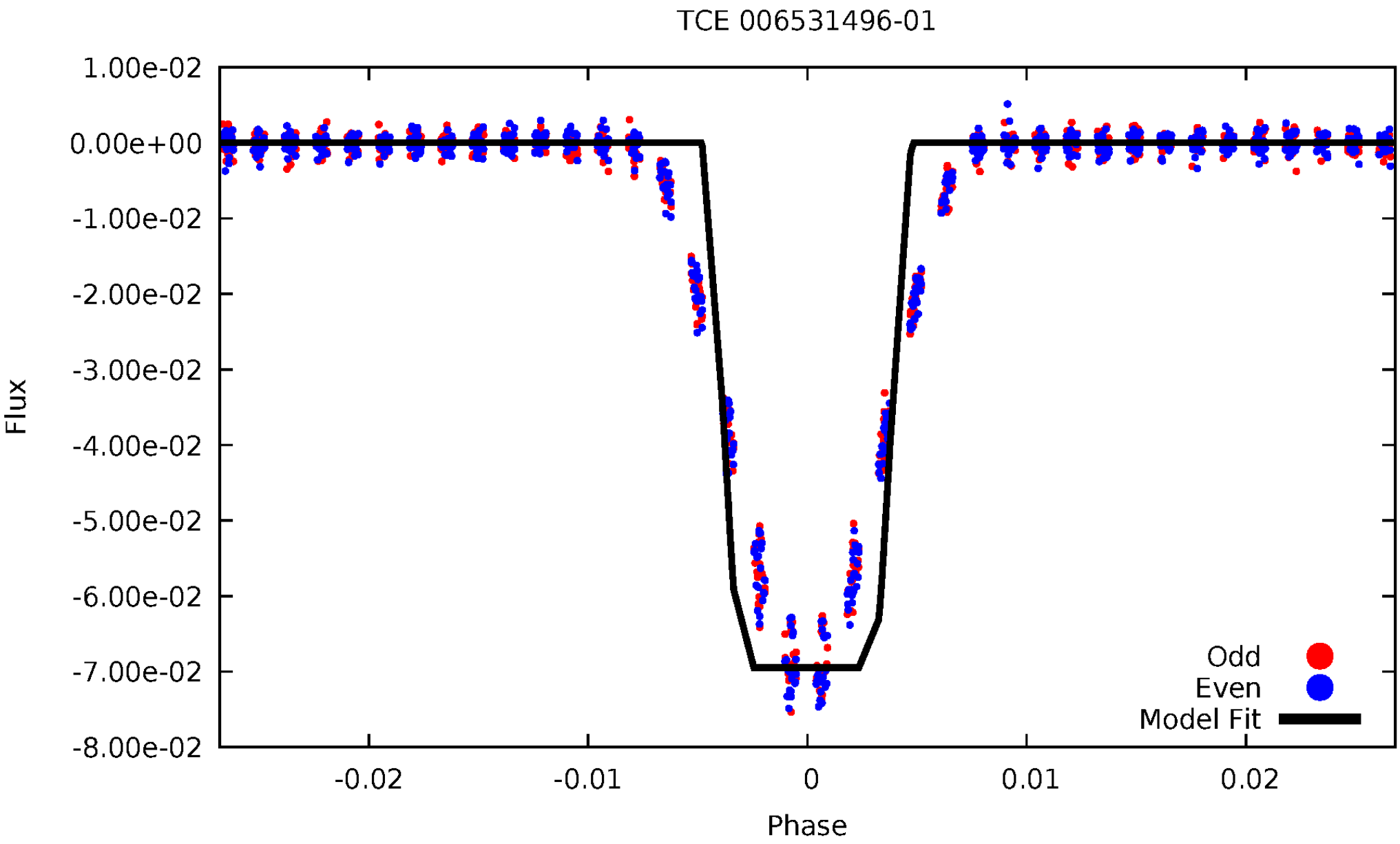
0.00e+00
-1.00e-02
-2.00e-02
-3.00e-02
-4.00e-02
-5.00e-02
-6.00e-02
-7.00e-02
-8.00e-02
Flux
-0.02
-0.01
0
0.01
0.02
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006531496-01
1.00e-02
0.00e+00
-1.00e-02
-2.00e-02
-3.00e-02
-4.00e-02
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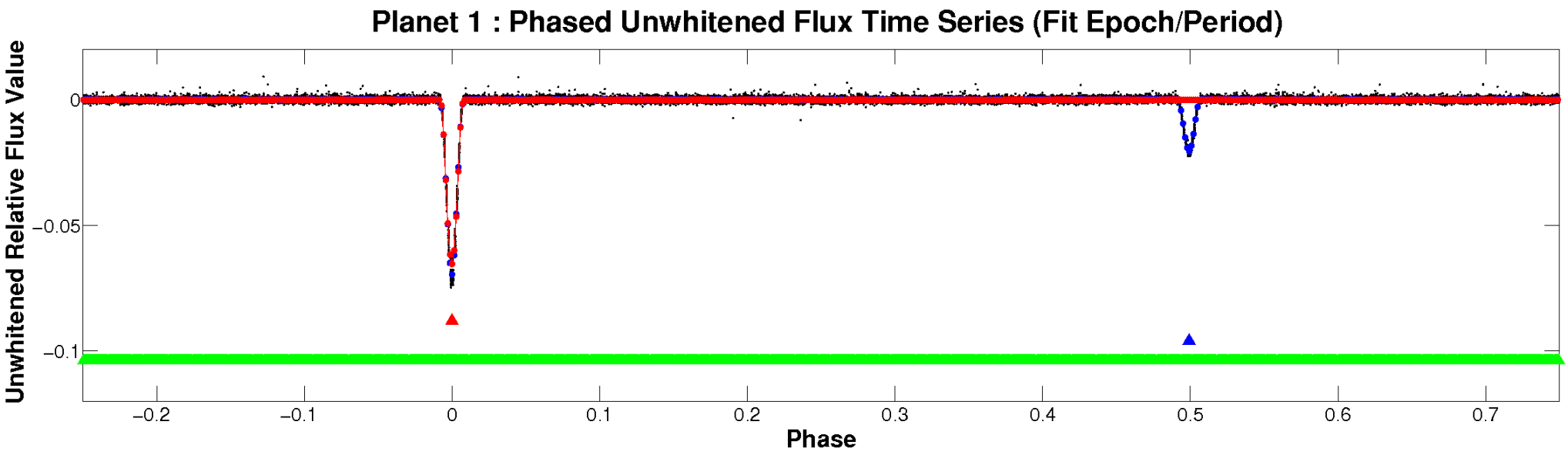
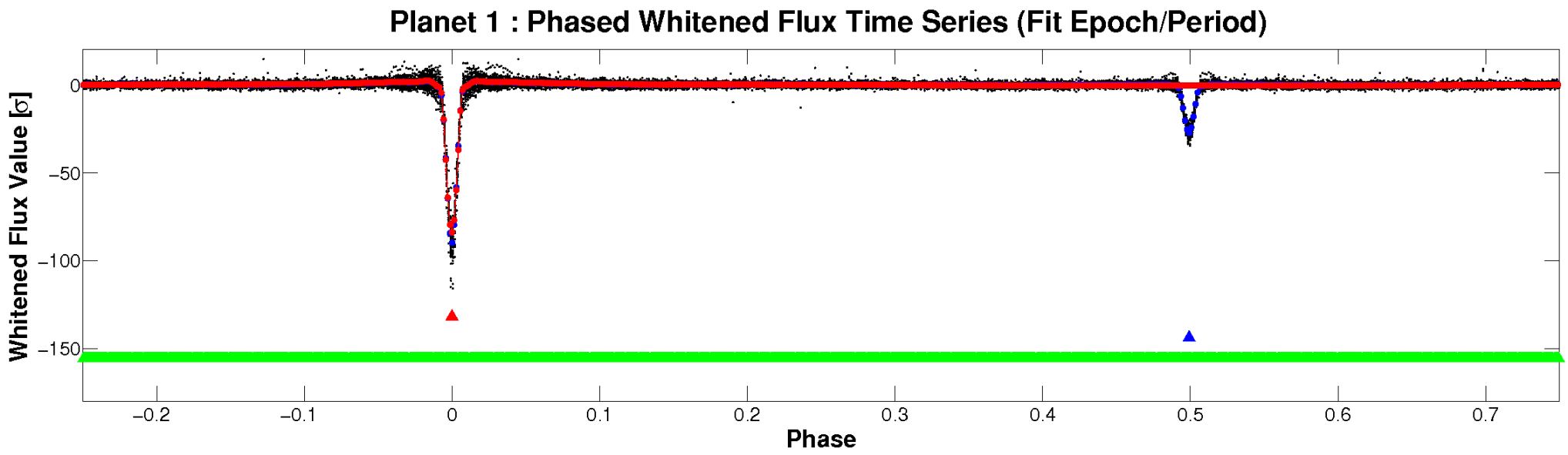
-6.00e-02
-7.00e-02
-8.00e-02
Flux
-0.02
-0.01
0
0.01
0.02
Phase
Odd
Even
Model Fit

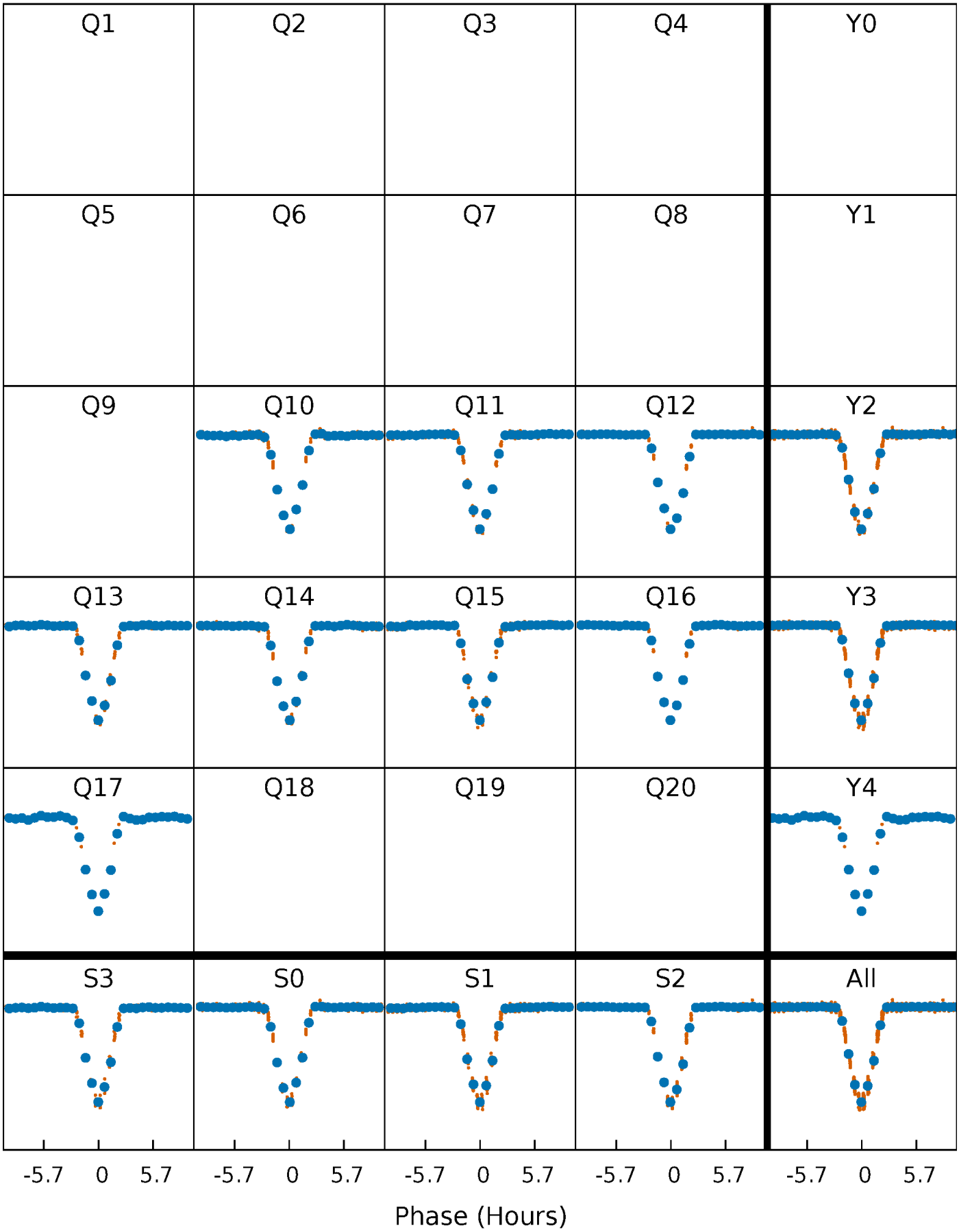
Non-Whitened Vs. Whitened Light Curve





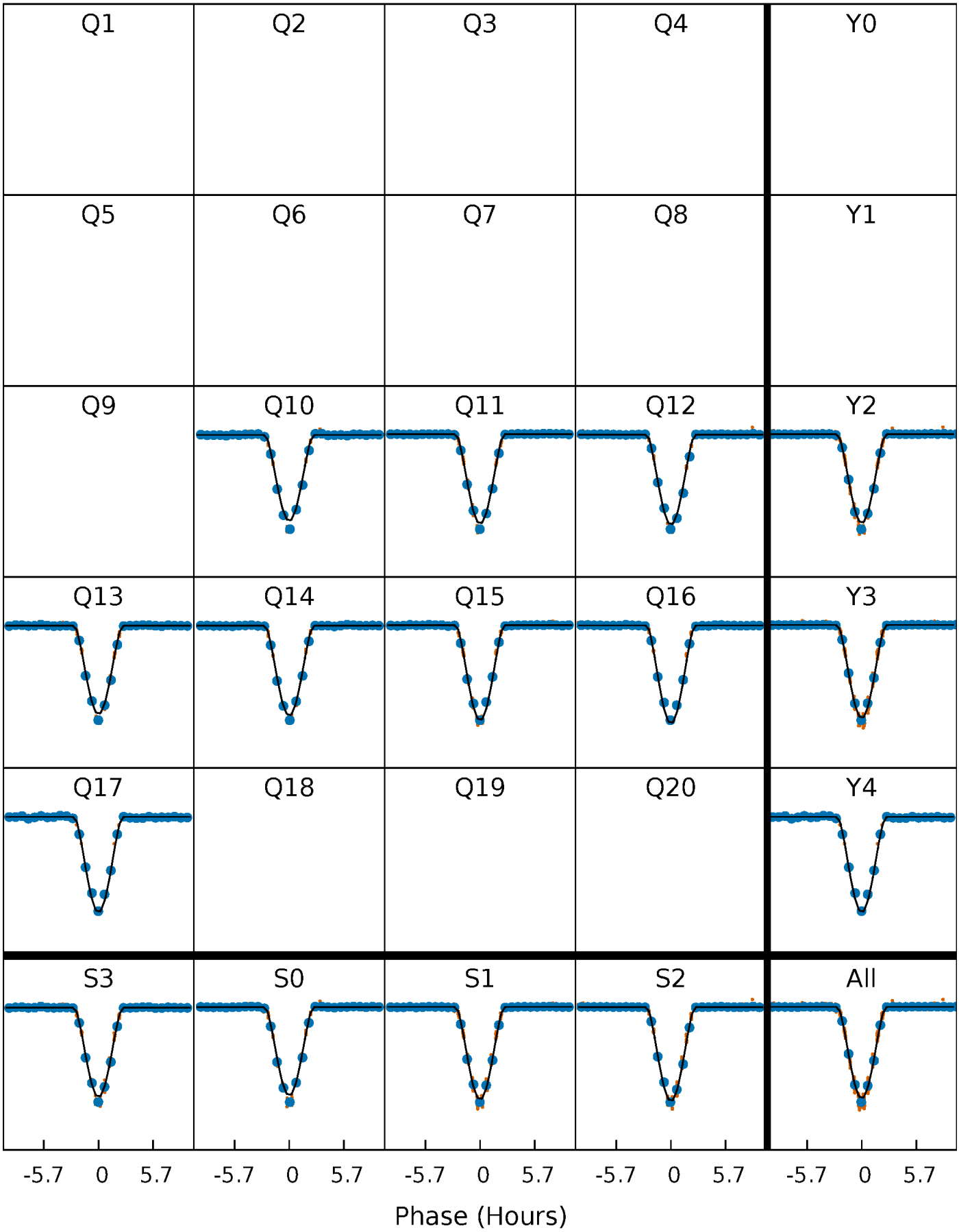
PDC Quarter-Phased Transit Curves

TCE 006531496-01 P= 14.323958 Days T_0=135.221484 (BKJD)



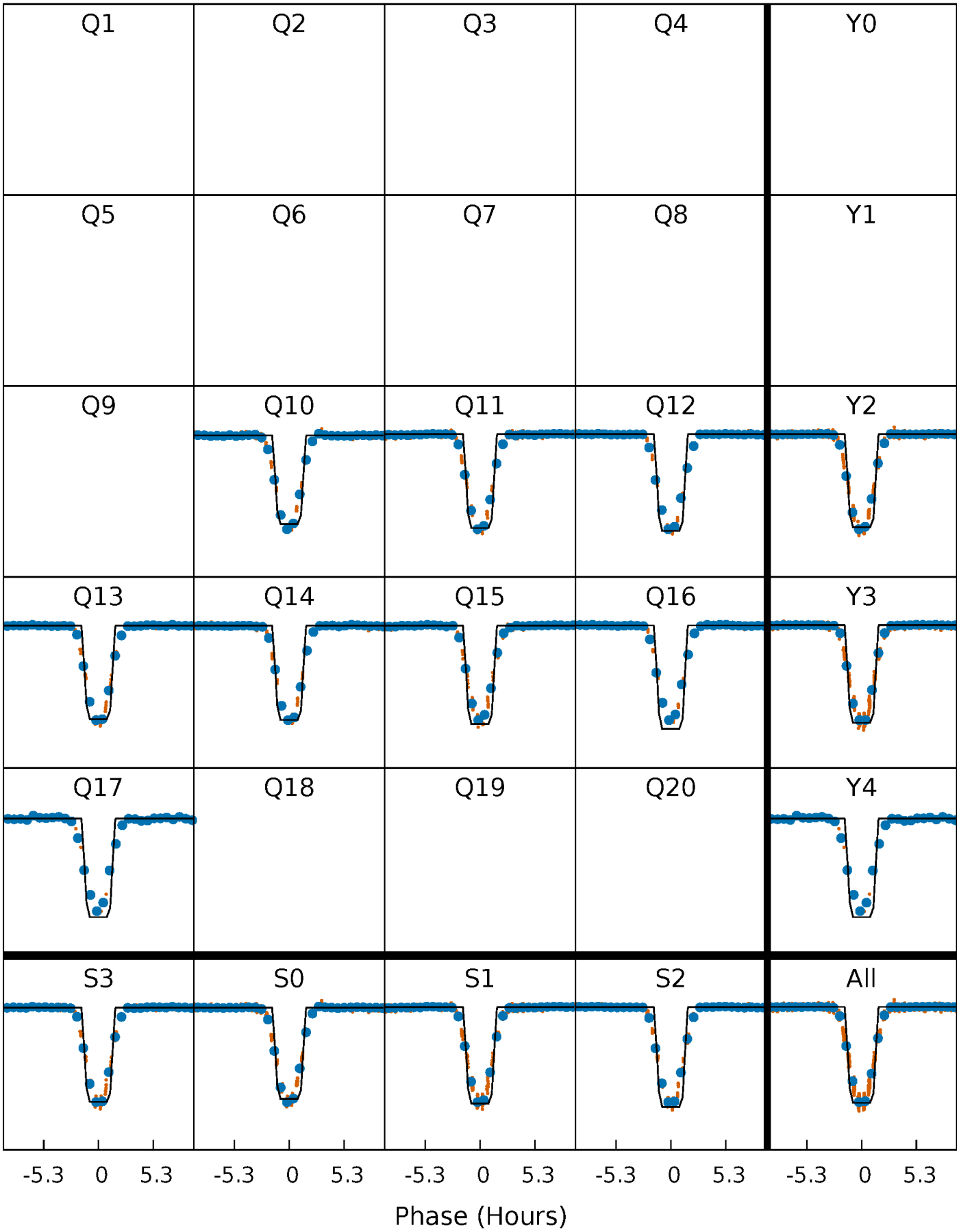
DV Quarter-Phased Transit Curves

TCE 006531496-01 P= 14.323958 Days T_0=135.221484 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

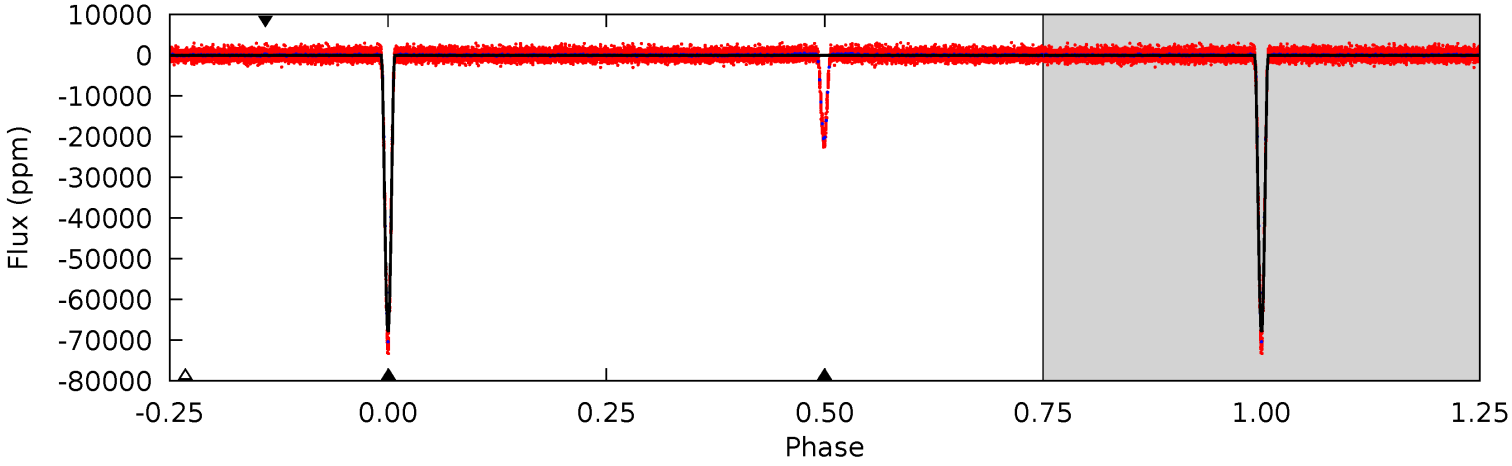
TCE 006531496-01 P= 14.323823 Days T_0=135.231283 (BKJD)

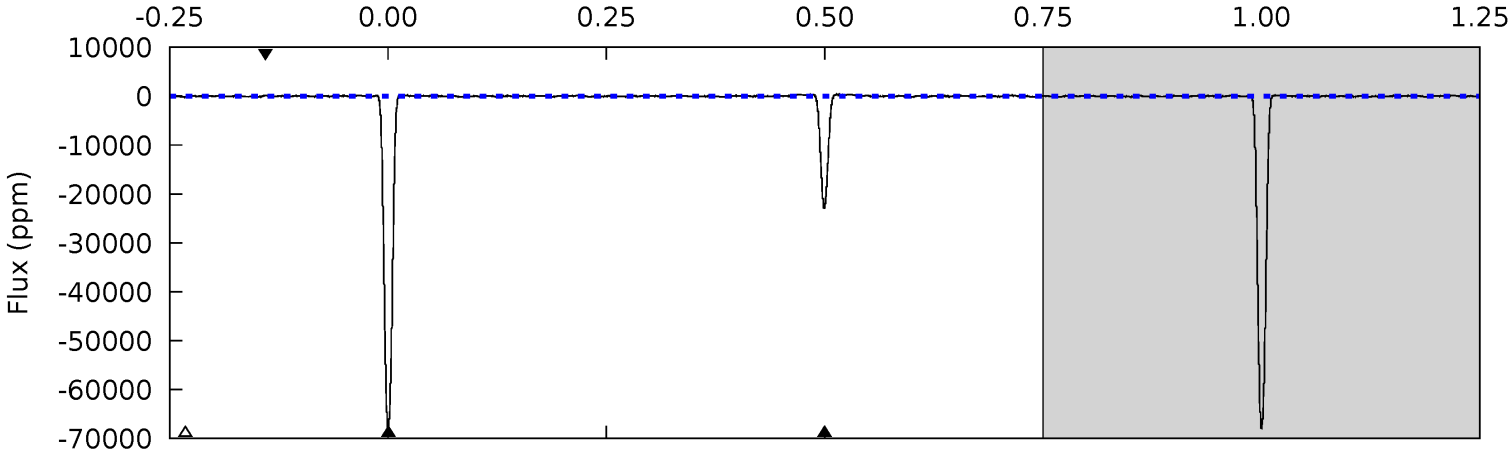


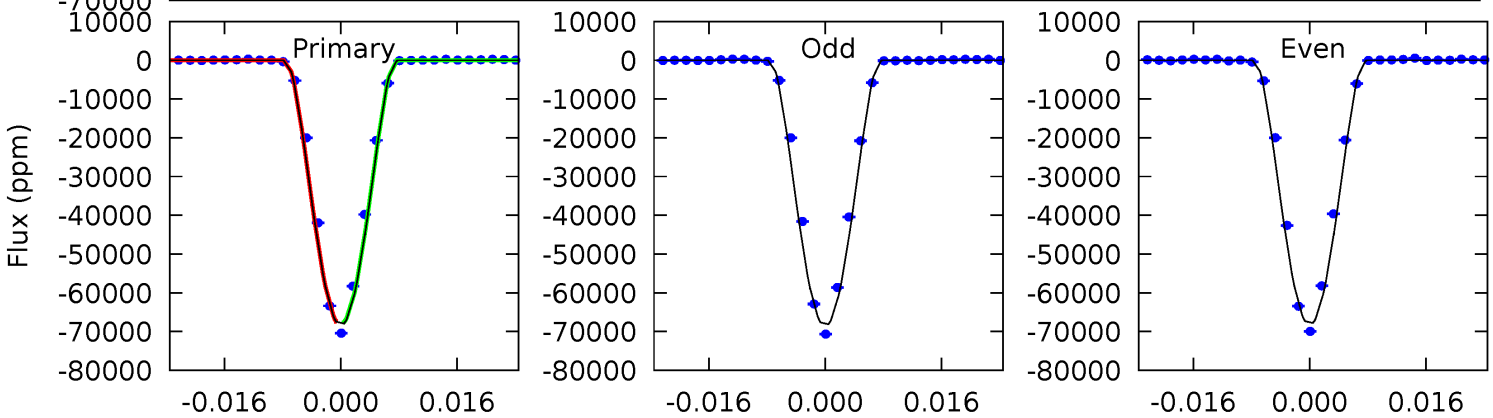
DV Model-Shift Uniqueness Test

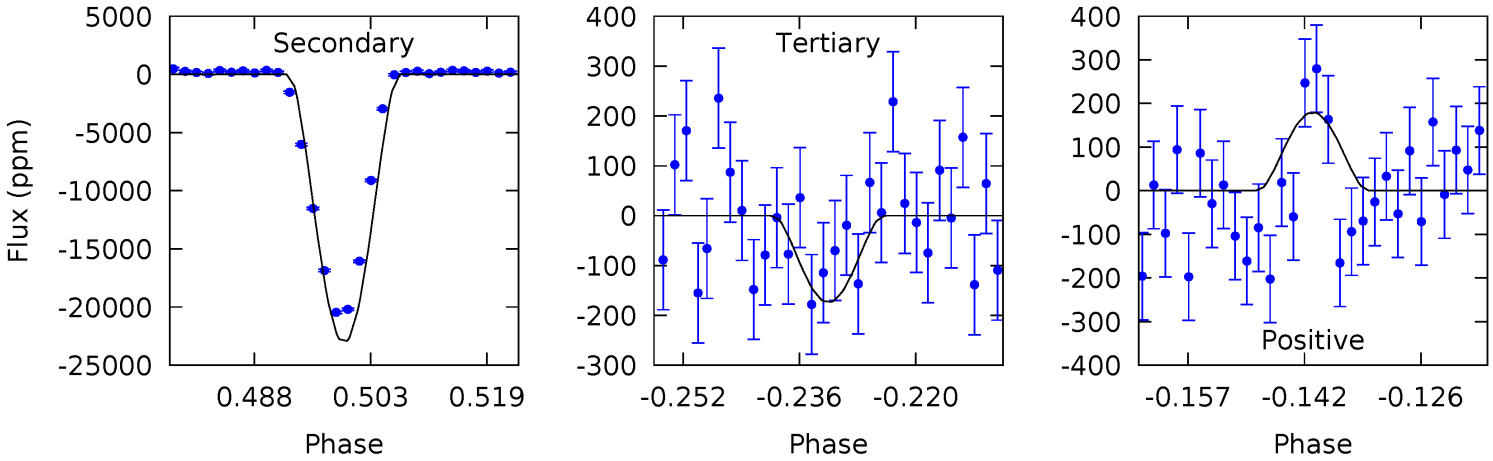
006531496-01, P = 14.323958 Days, E = 135.221484 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1869	630.6	4.75	4.92	4.94	2.42	2.22	1864	1864	625.8	625.7	4.27	0.99	0.00	2.43





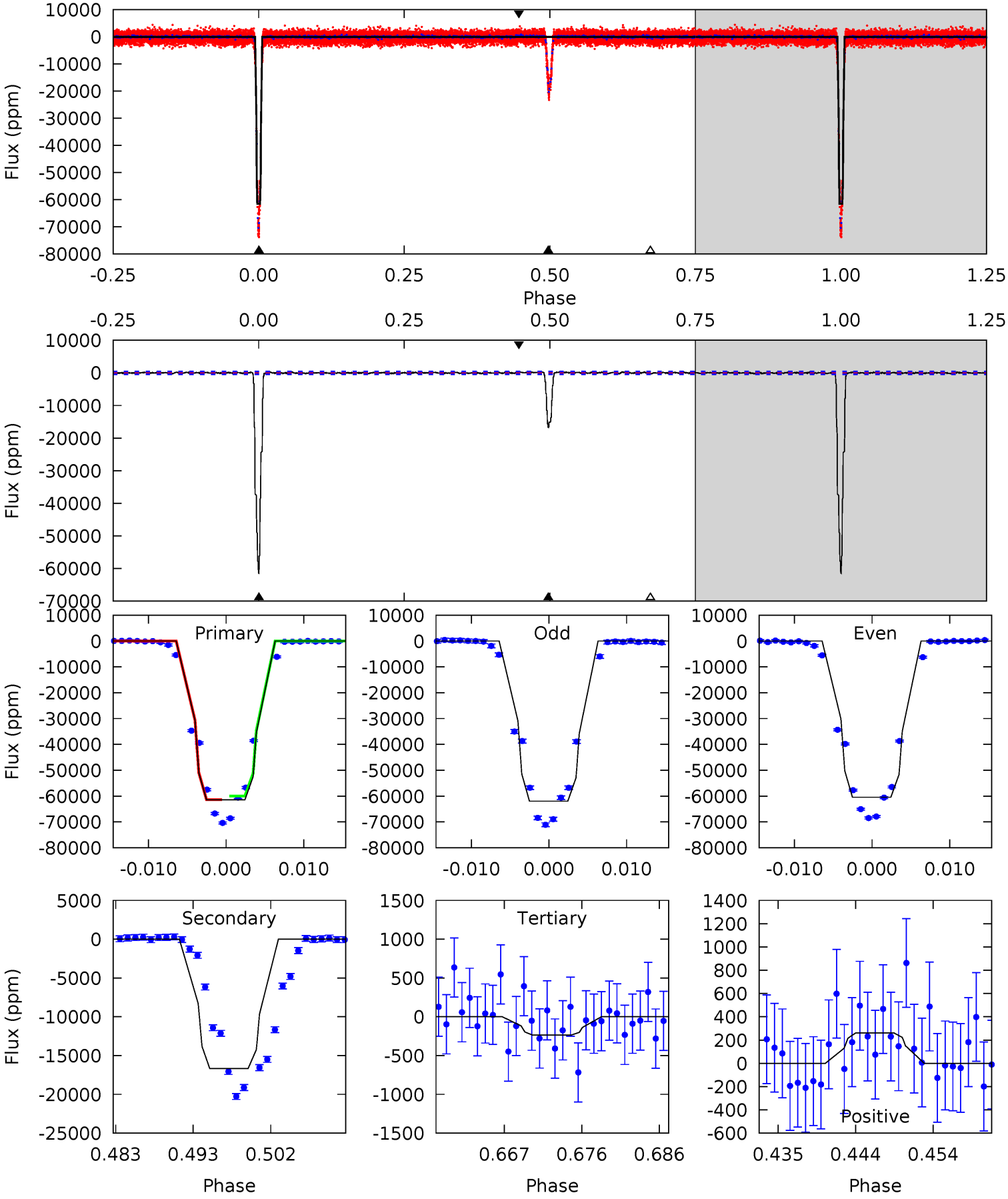




Alt Model-Shift Uniqueness Test

006531496-01, P = 14.323823 Days, E = 135.231283 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
733.6	199.2	2.83	3.12	5.03	2.59	1.13	730.8	730.5	196.3	196.1	8.50	0.99	0.00	7.71



Stellar Parameters For KIC 006531496

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5853^{+163}_{-204}	$4.529^{+0.048}_{-0.204}$	$-0.100^{+0.250}_{-0.300}$	$0.895^{+0.260}_{-0.087}$	$0.990^{+0.113}_{-0.126}$	$1.941^{+0.409}_{-1.044}$
	+3%/-3%	+1%/-5%	+250%/-300%	+29%/-10%	+11%/-13%	+21%/-54%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006531496-01 / KOI 3646.01

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-22921±36	$39.56^{+7.84}_{-6.02}$	1028^{+69}_{-49}	3990^{+234}_{-199}	109^{+40}_{-34}
Alt.	-16687±84	$26.93^{+5.94}_{-6.09}$	1025^{+71}_{-52}	4328^{+422}_{-302}	167^{+108}_{-56}

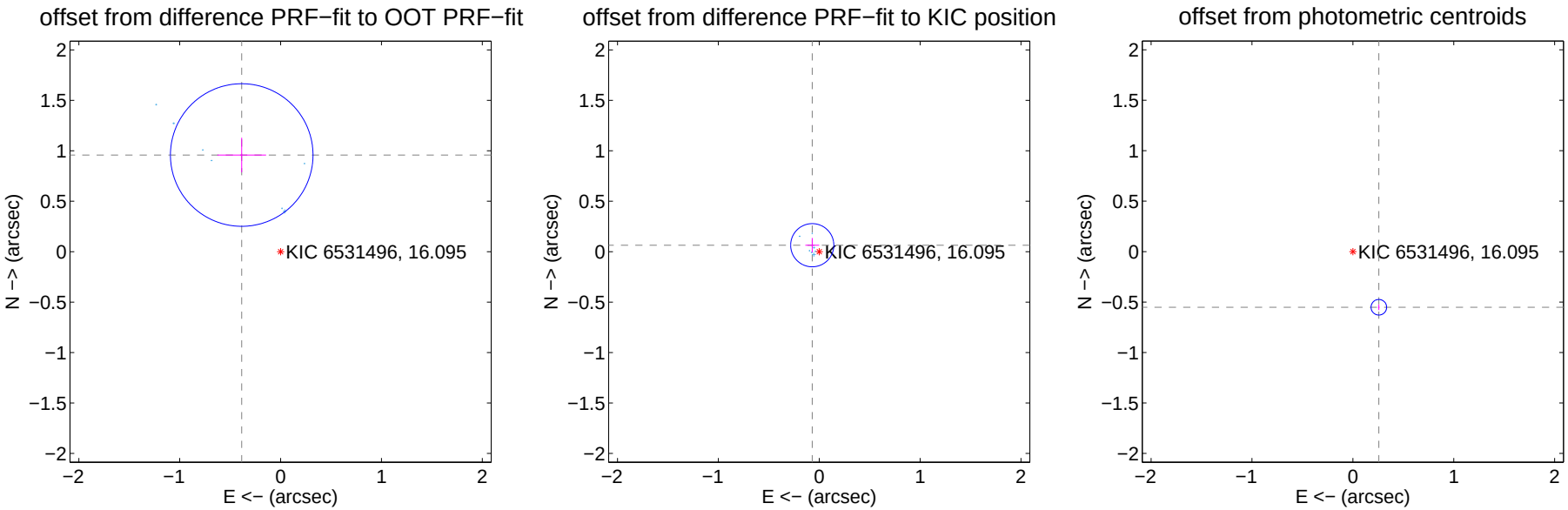
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

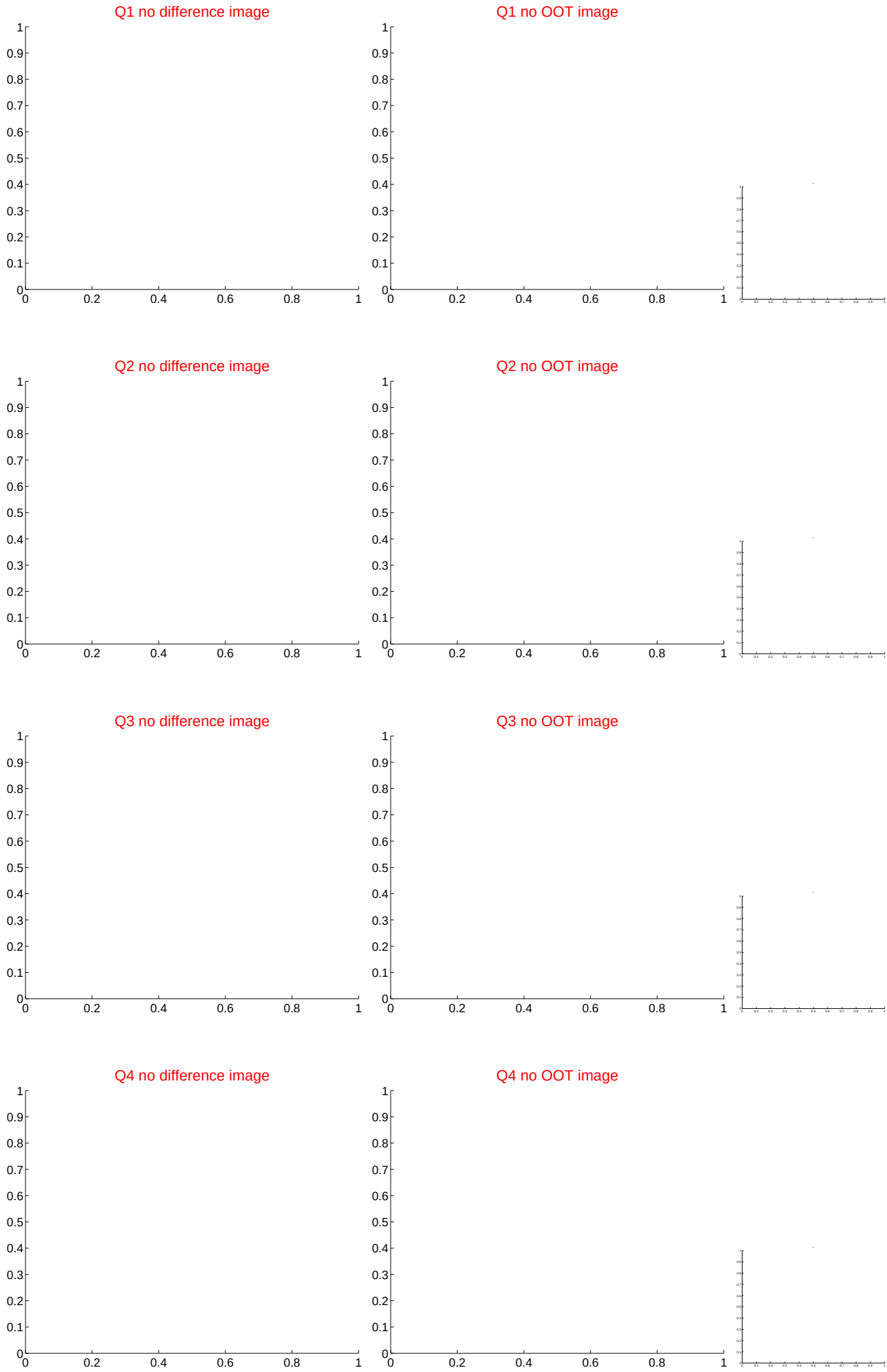
Supplemental centroid analysis for 006531496-01. Kepler magnitude: 16.09. Transit SNR 745.23
There are 7 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.033 ± 0.236	4.38	0.385 ± 0.242	0.958 ± 0.171
PRF-fit source offset from KIC position	0.095 ± 0.071	1.32	0.070 ± 0.069	0.064 ± 0.072
photometric centroid source offset	0.61 ± 0.03	23.64	-0.26 ± 0.01	-0.55 ± 0.03

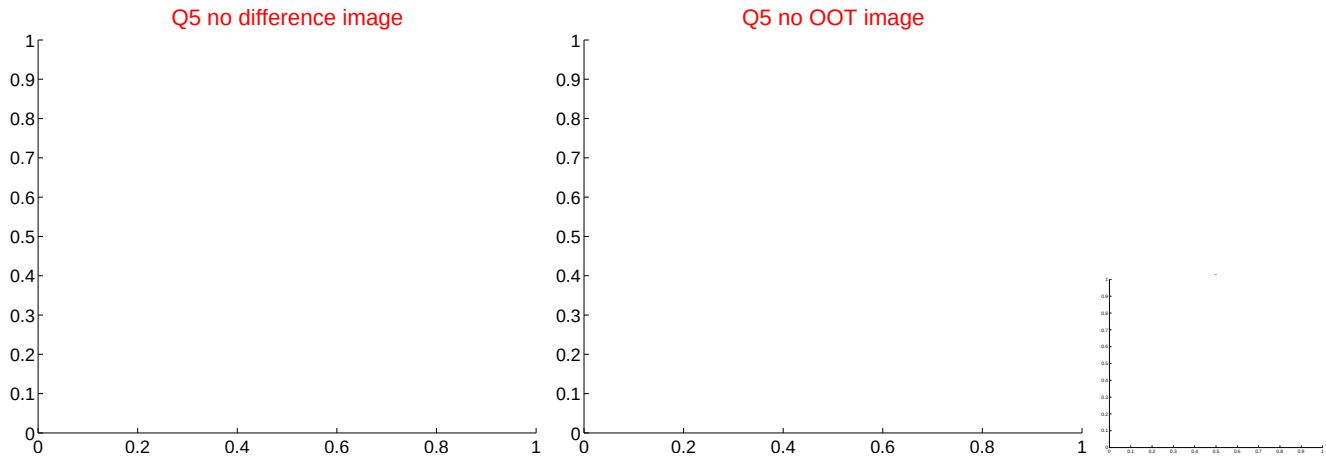


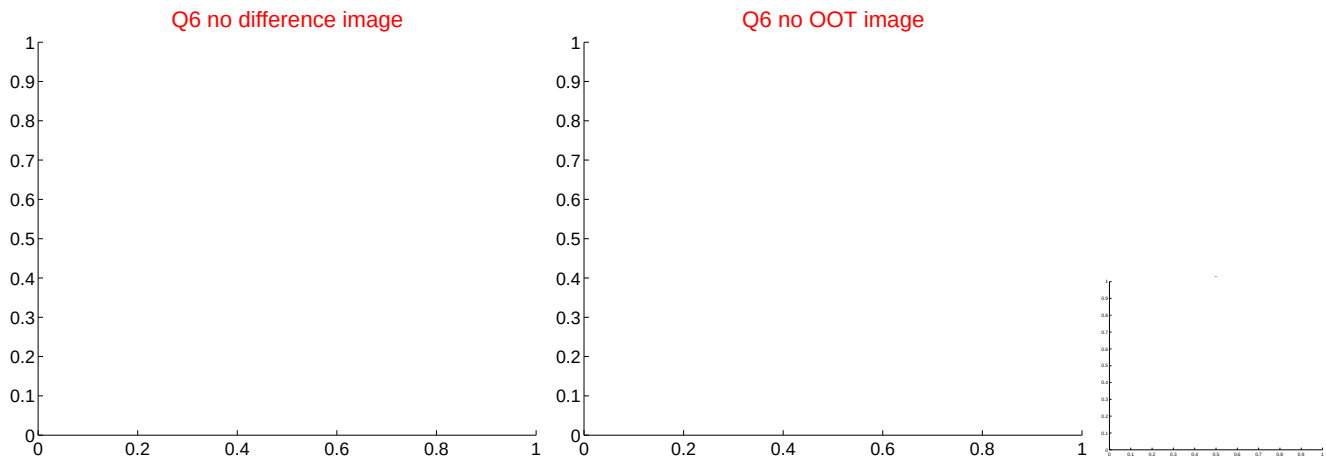
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

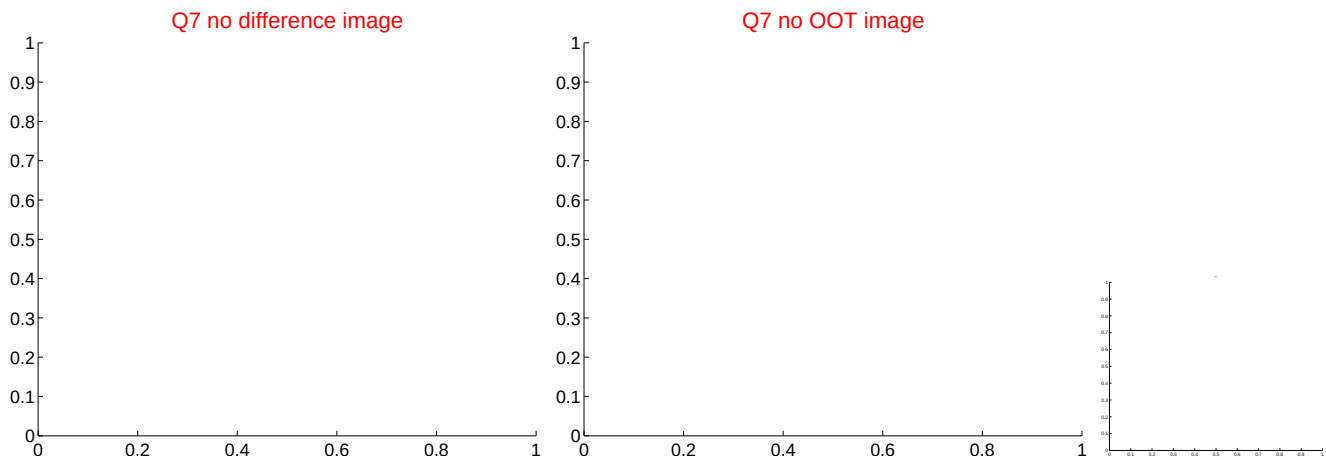
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

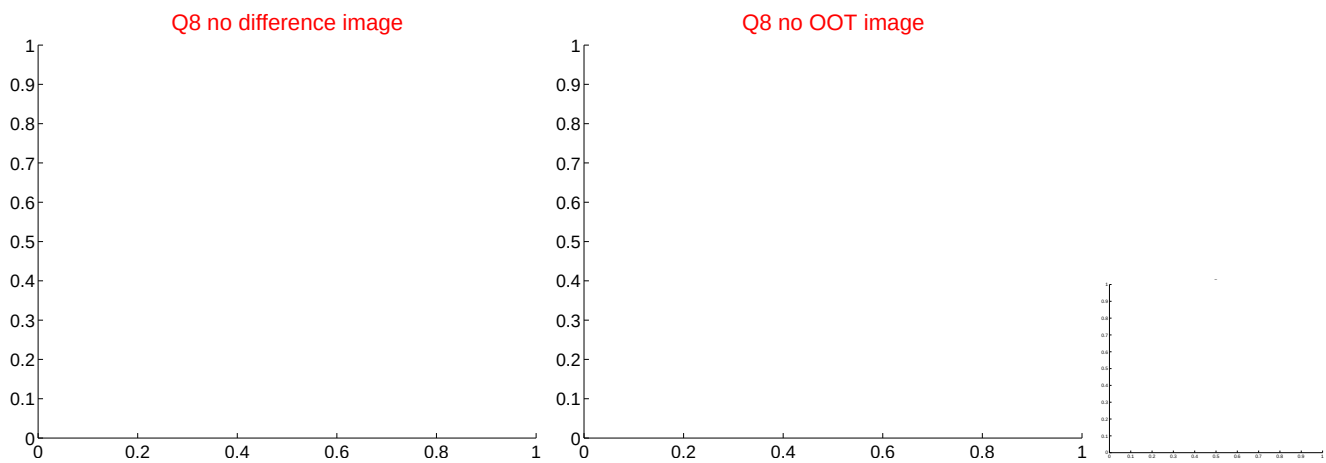


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

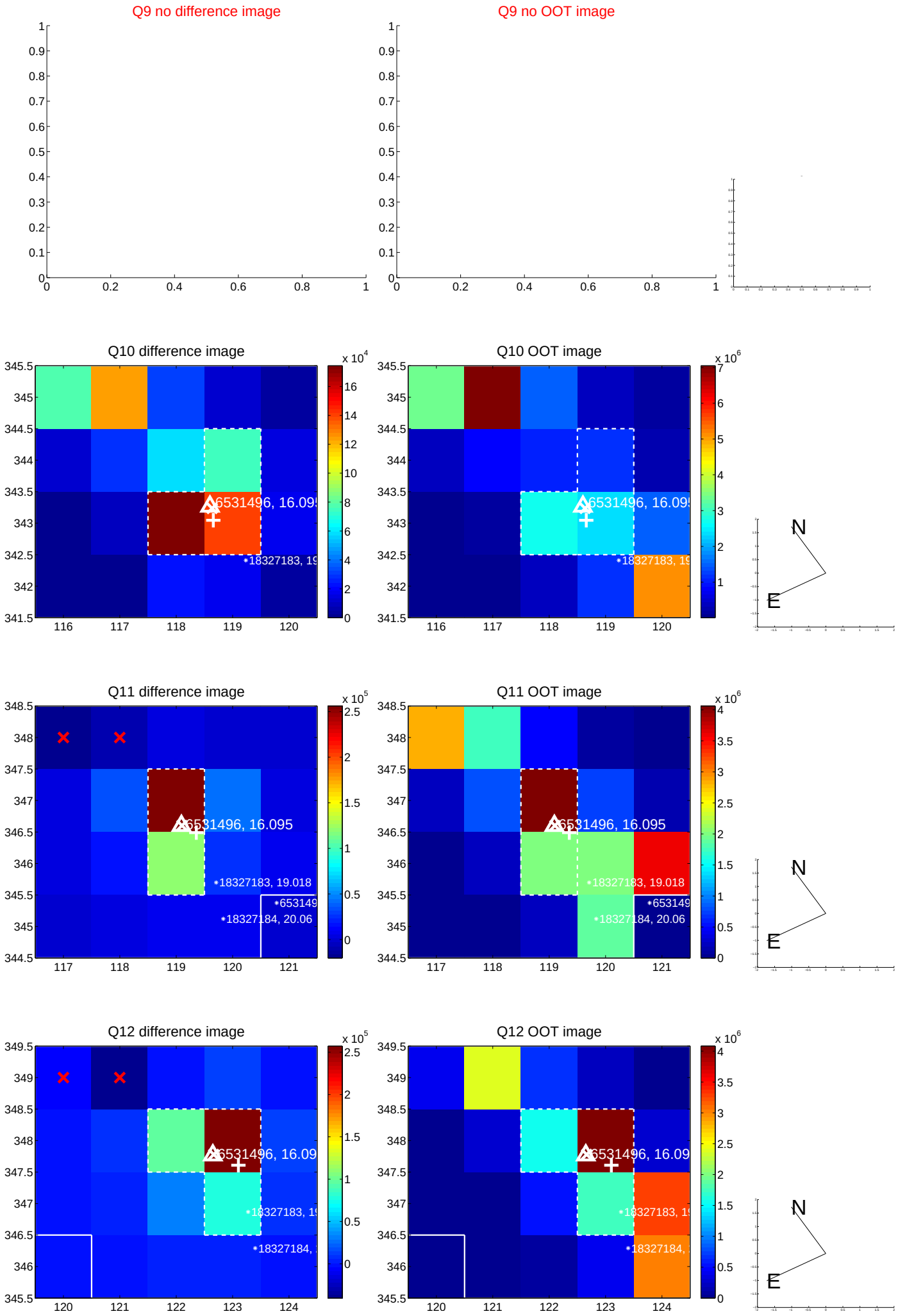




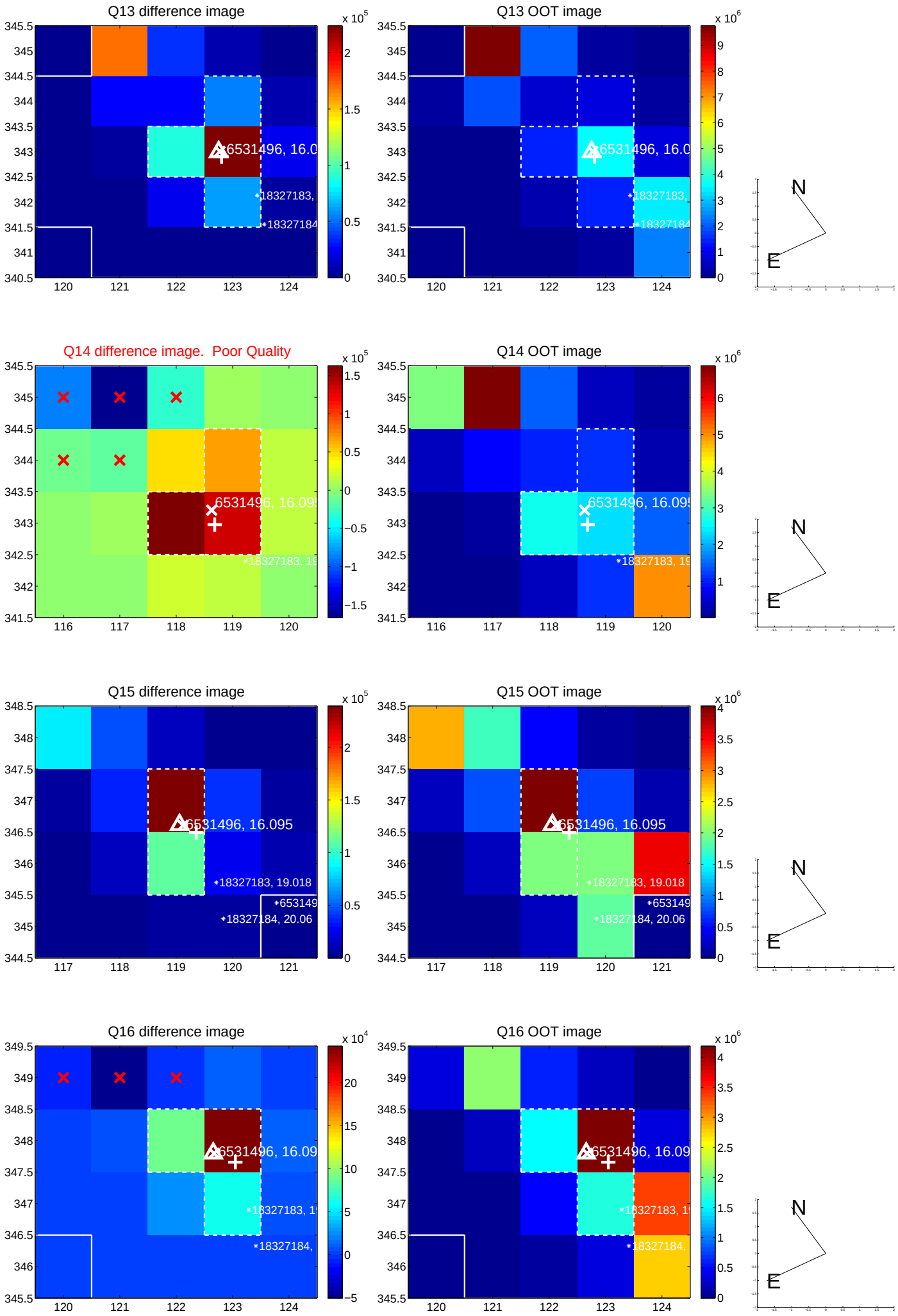




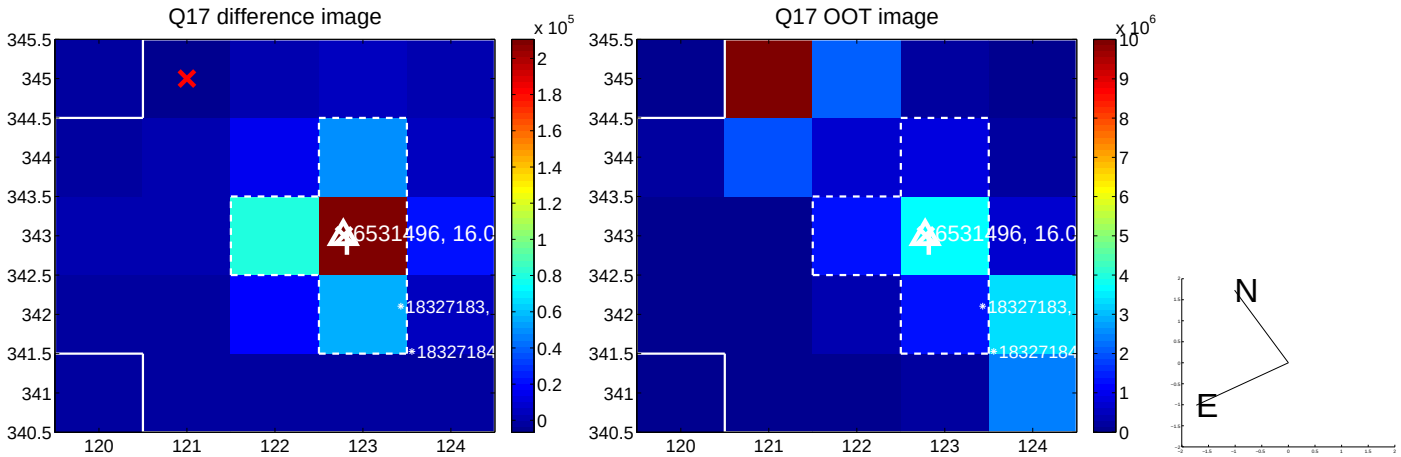
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

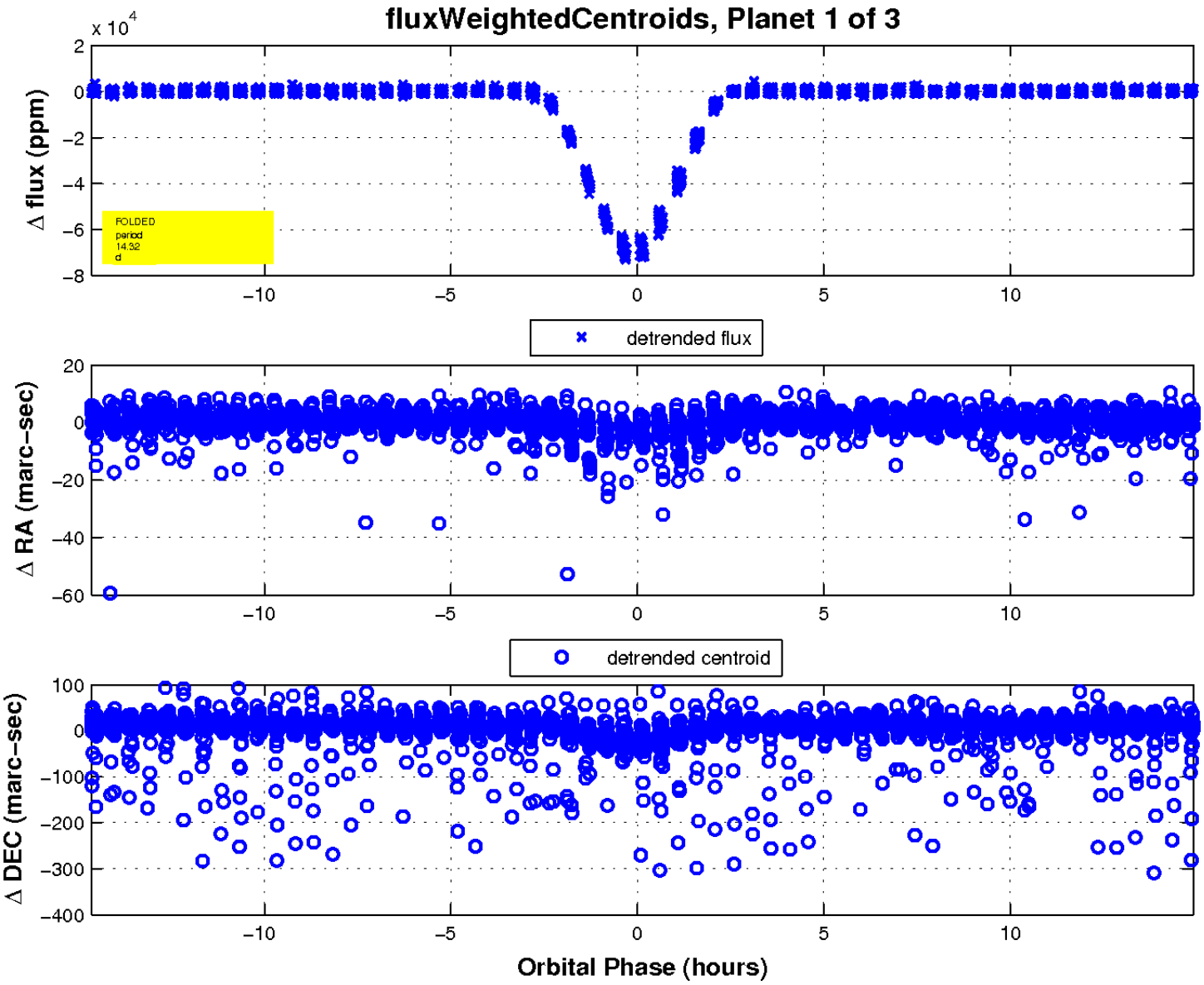


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

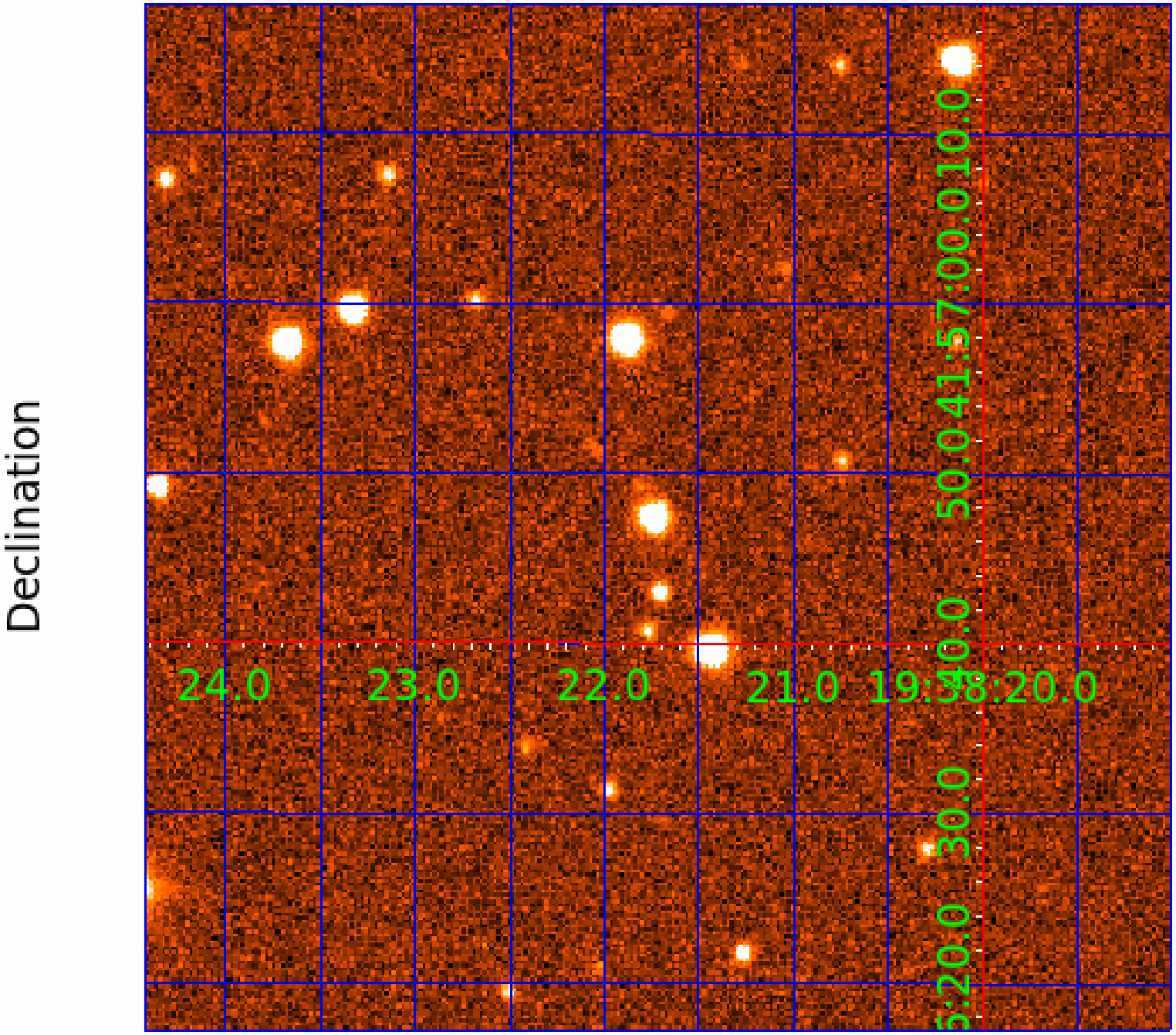


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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50.0
41:57:00.0
10.0
30.0
5:20.0

KIC 006531496

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 ($S_\oplus$)
006531496-01	OBS	3646.01	14.323958	135.221484	65757.2	4.973	1197.8	745.2	0.90	5853	37.74	63.71
006531496-02	OBS	No	14.323951	142.372354	20258.2	4.806	351.6	323.8	0.90	5853	21.57	63.71
006531496-03	OBS	3646.02	0.512853	132.052462	289.9	0.988	10.7	15.1	0.90	5853	1.64	5398.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006531496-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_UNRESOLVED_OFFSET
006531496-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET
006531496-03	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—CENT_RESOLVED_OFFSET

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.

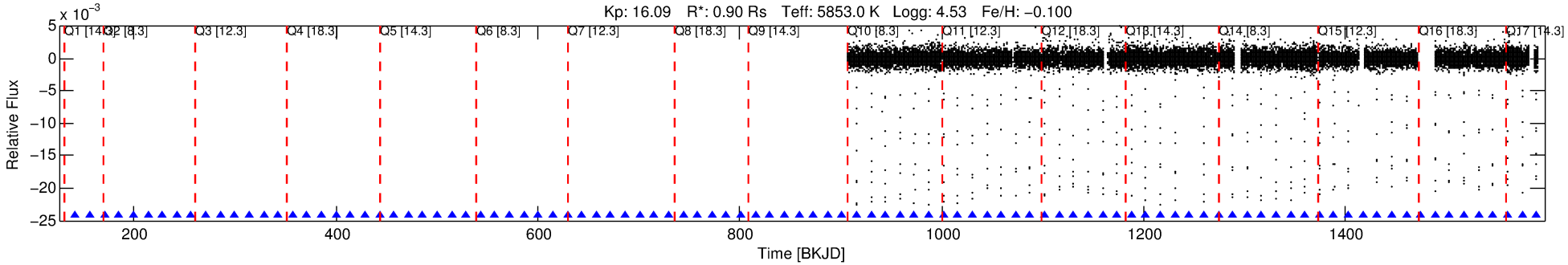
Ephemeris Match Information For 006531496-02

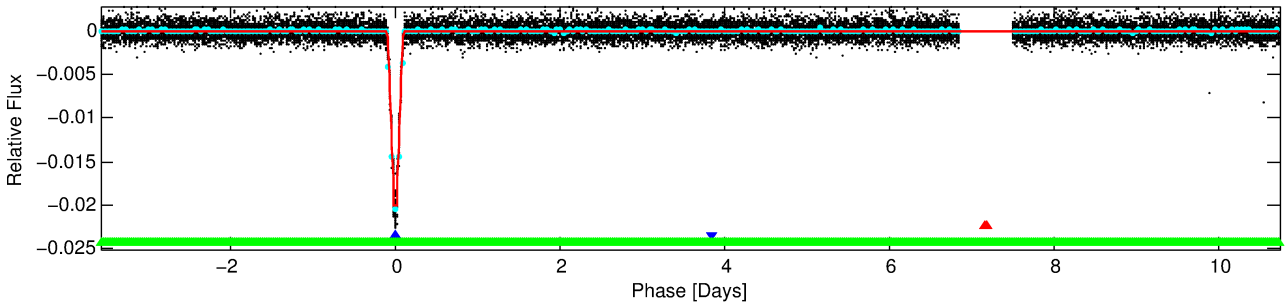
No Significant Match Found

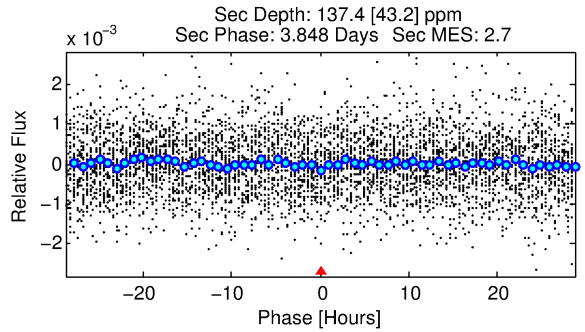
DV One-Page Summary

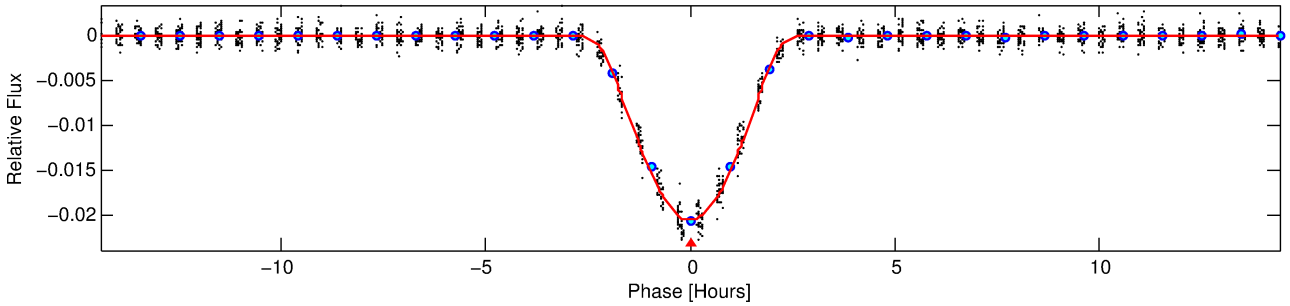
KIC: 6531496 Candidate: 2 of 3 Period: 14.324 d
KOI: K03646 Corr: No Ephemeris Match

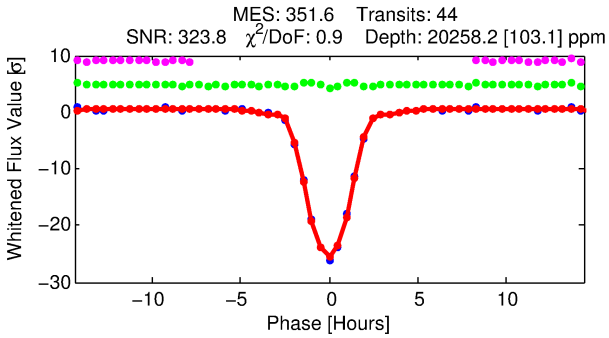
Kp: 16.09 R*: 0.90 Rs Teff: 5853.0 K Logg: 4.53 Fe/H: −0.100

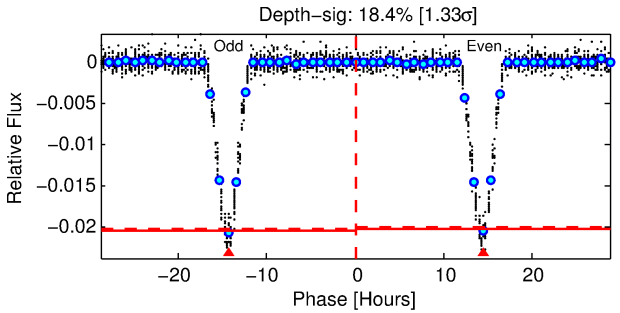


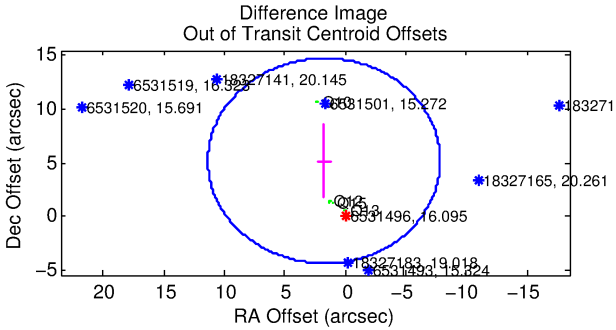












DV Fit Results:

Period = 14.32395 [0.00001] d
Epoch = 142.3724 [0.0010] BKJD
Rp/R* = 0.2209 [0.0393]
a/R* = 16.44 [0.33]
b = 0.99 [0.06]

Seff = 63.71 [25.08]
Teq = 720 [71] K
Rp = 21.57 [7.35] Re
a = 0.1150 [0.0286] AU

Ag = 2.15 [1.29] [0.89σ]
Teffp = 1348 [167] K [3.46σ]

DV Diagnostic Results:

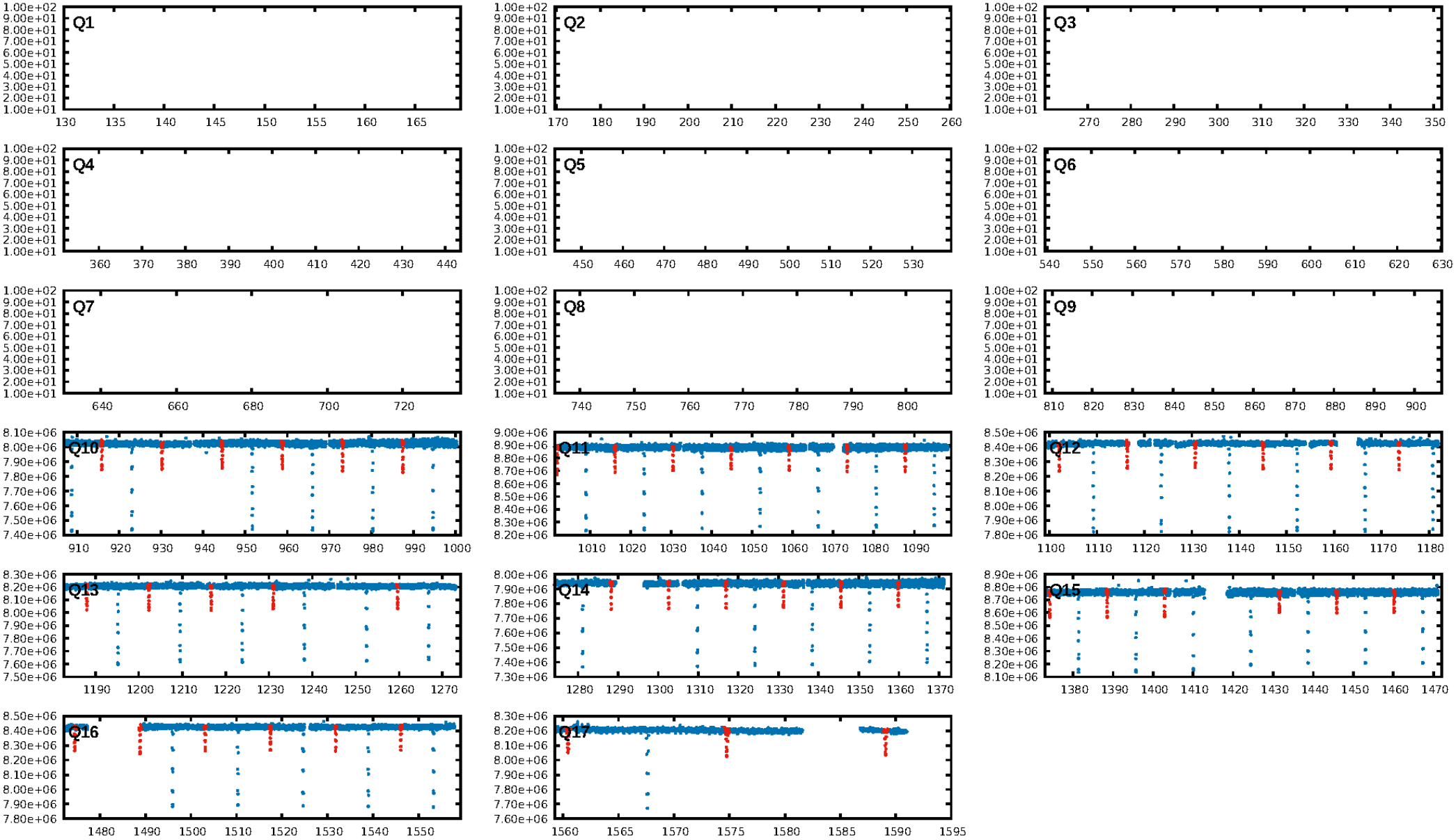
ShortPeriod−sig: 100.0% [67.56σ]
LongPeriod−sig: 0.0% [0.00σ]
ModelChiSquare2−sig: 0.0%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: 0.00e+00
RollingBand−fgt: 1.00 [41/41]
GhostDiagnostic−chr: 3.242

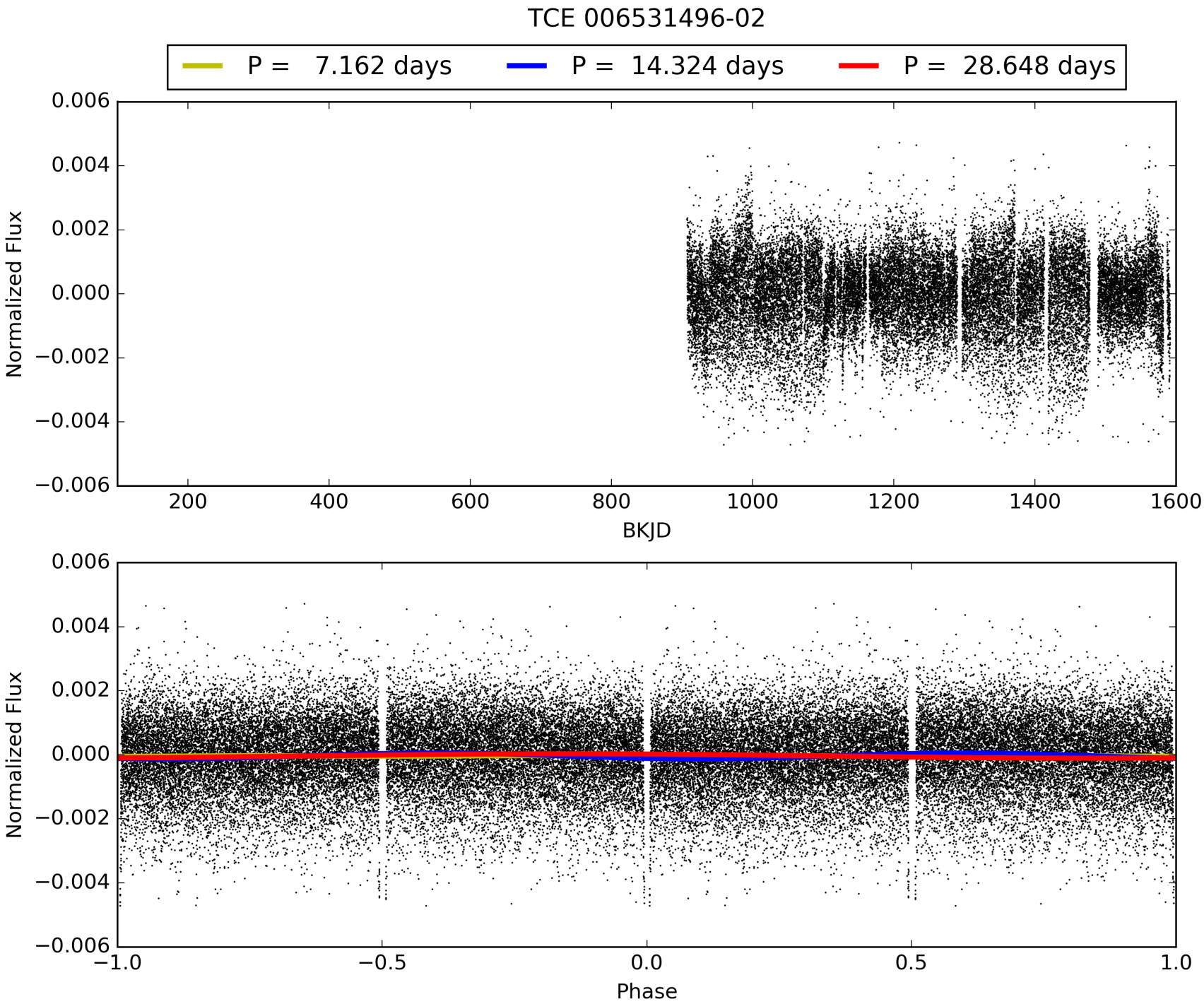
Centroid−sig: N/A
Centroid−so: 0.694 arcsec [7.77σ]
OotOffset−rm: 5.459 arcsec [1.71σ]
KicOffset−rm: 4.563 arcsec [1.46σ]
OotOffset−st: 1/1/1/1 [4]
KicOffset−st: 1/1/1/1 [4]
DiffImageQuality−fgm: 0.50 [2/4]
DiffImageOverlap−fno: 0.00 [0/8]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03−Feb−2016 01:39:54 Z

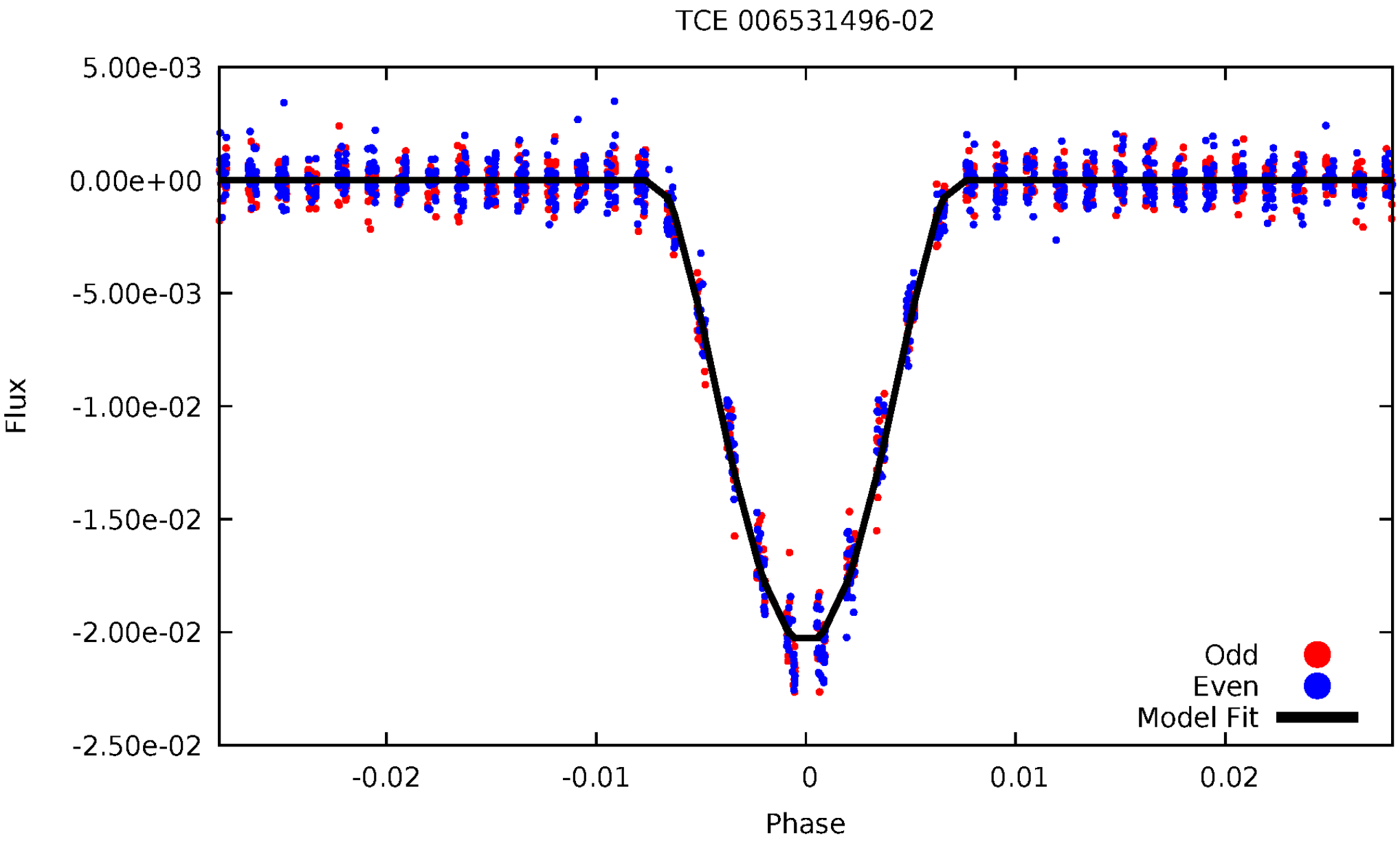
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006531496-02, PDC Light Curves

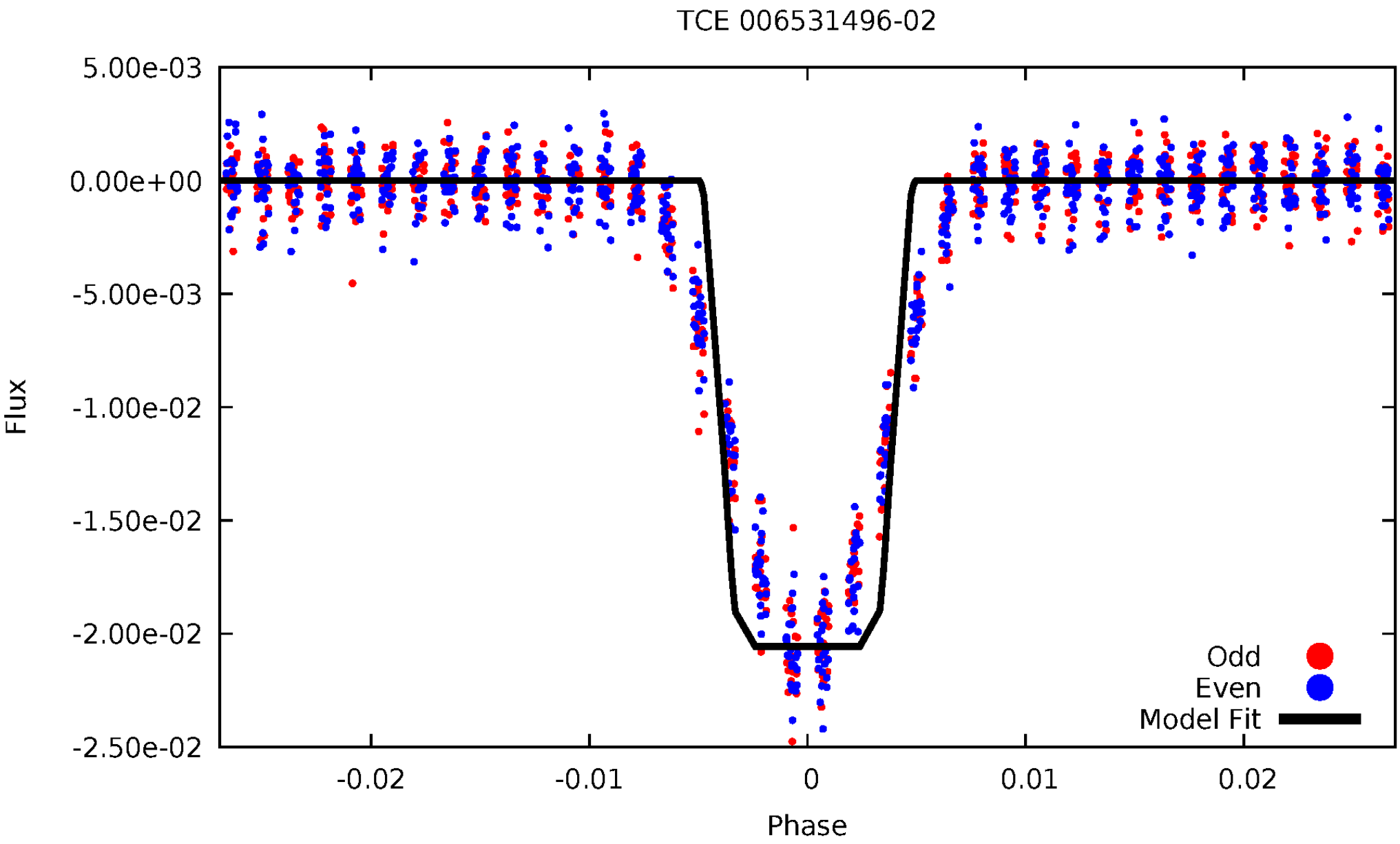



TCE 006531496-02
P = 7.162 days
P = 14.324 days
P = 28.648 days
Normalized Flux
BKJD
Normalized Flux
Phase

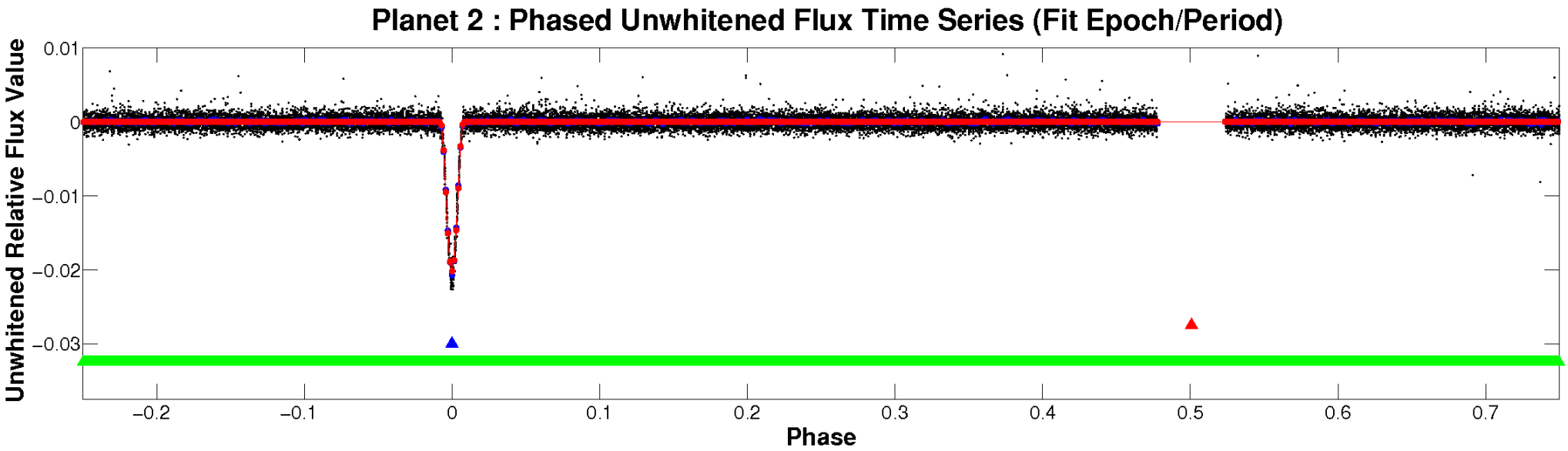
DV Odd/Even

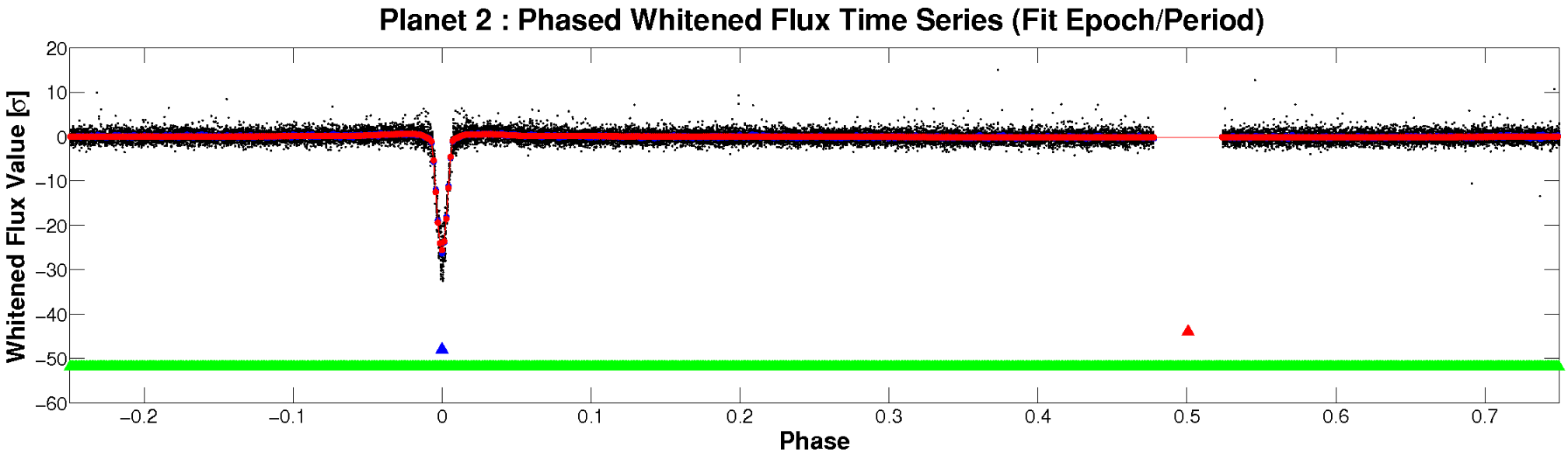

TCE 006531496-02
5.00e-03
0.00e+00
-5.00e-03
-1.00e-02
-1.50e-02
-2.00e-02
-2.50e-02
Flux
-0.02
-0.01
0
0.01
0.02
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006531496-02
5.00e-03
0.00e+00
-5.00e-03
-1.00e-02
-1.50e-02
-2.00e-02
-2.50e-02
Flux
-0.02
-0.01
0
0.01
0.02
Phase
Odd
Even
Model Fit

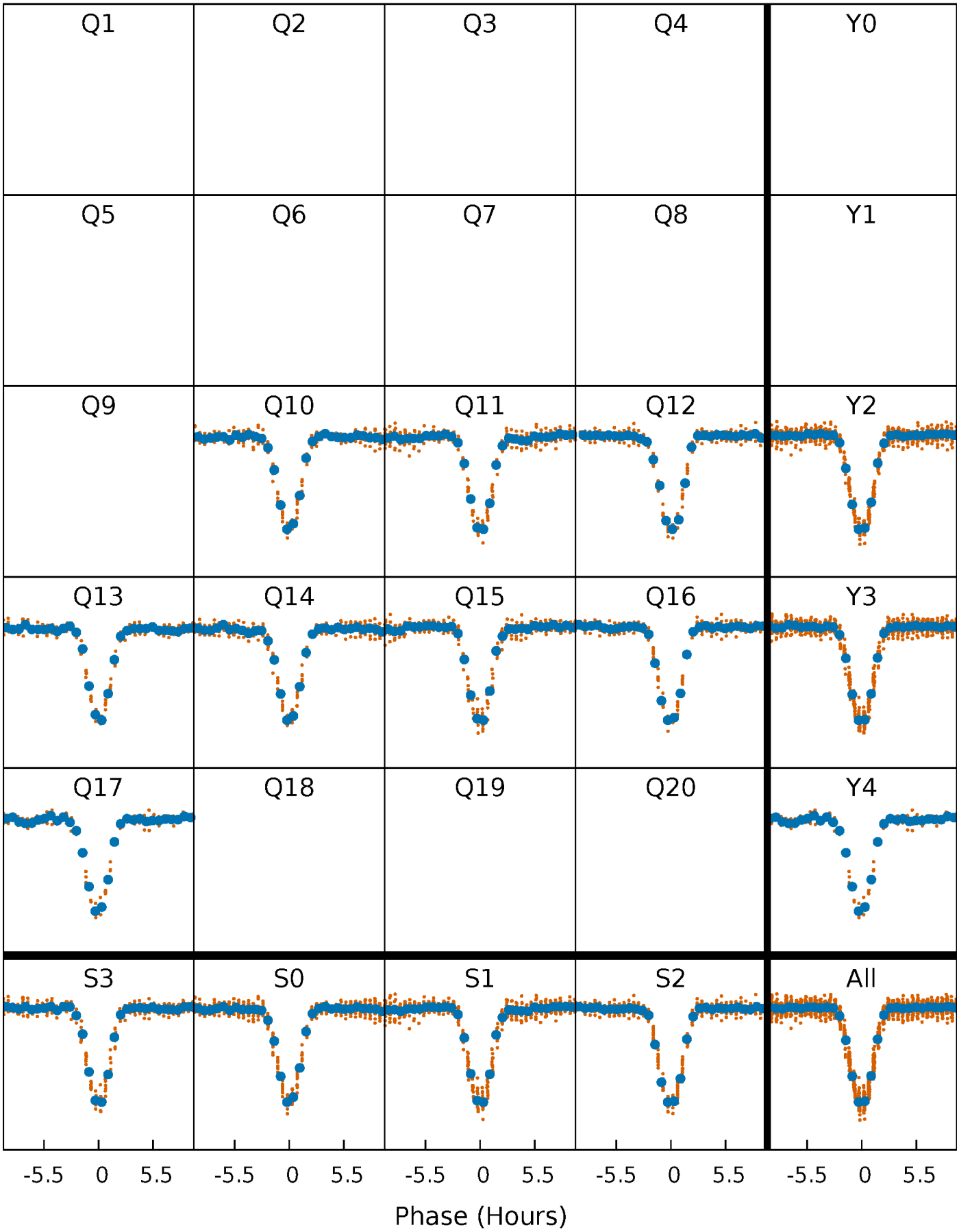
Non-Whitened Vs. Whitened Light Curve





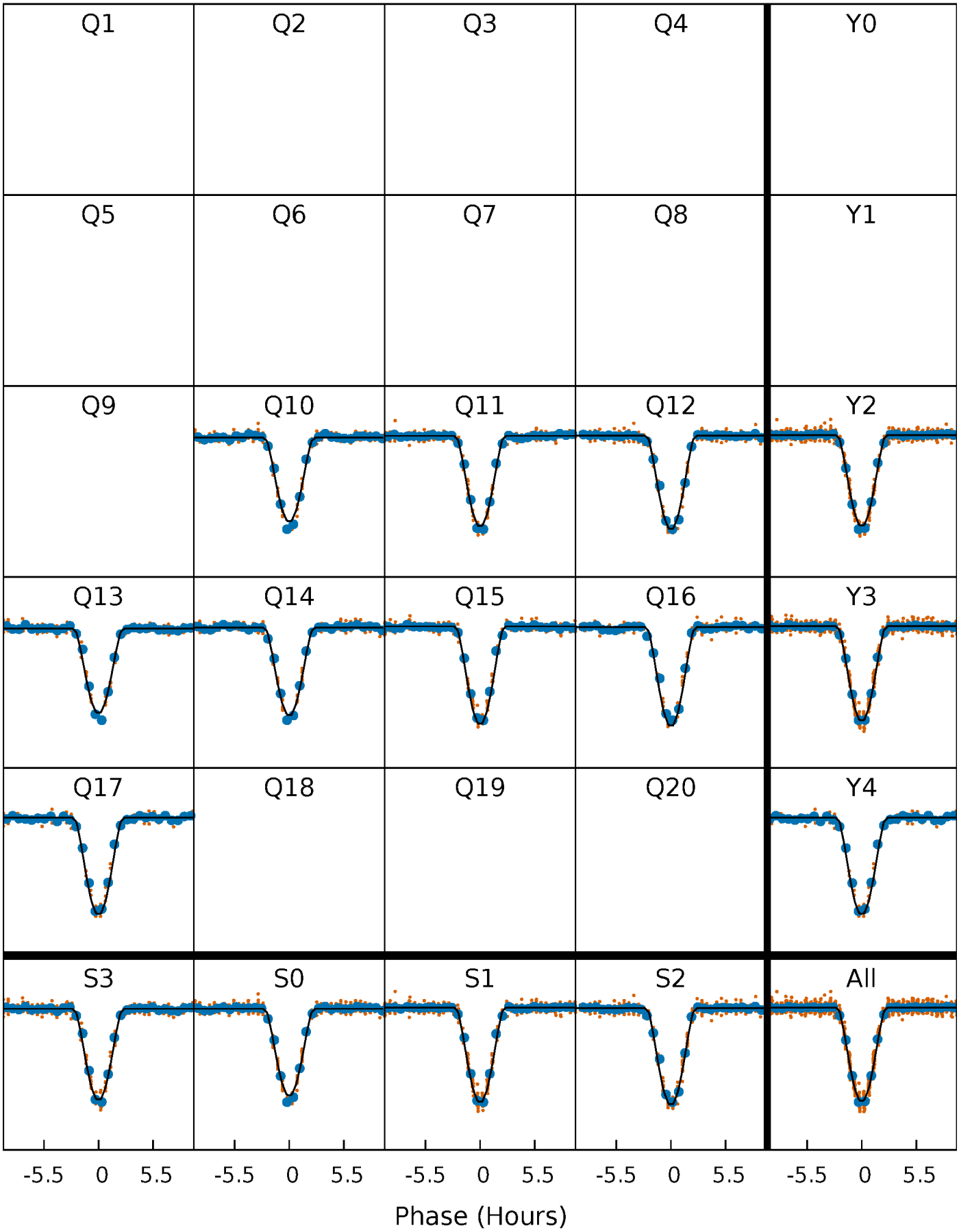
PDC Quarter-Phased Transit Curves

TCE 006531496-02 P= 14.323951 Days T_0=142.372354 (BKJD)



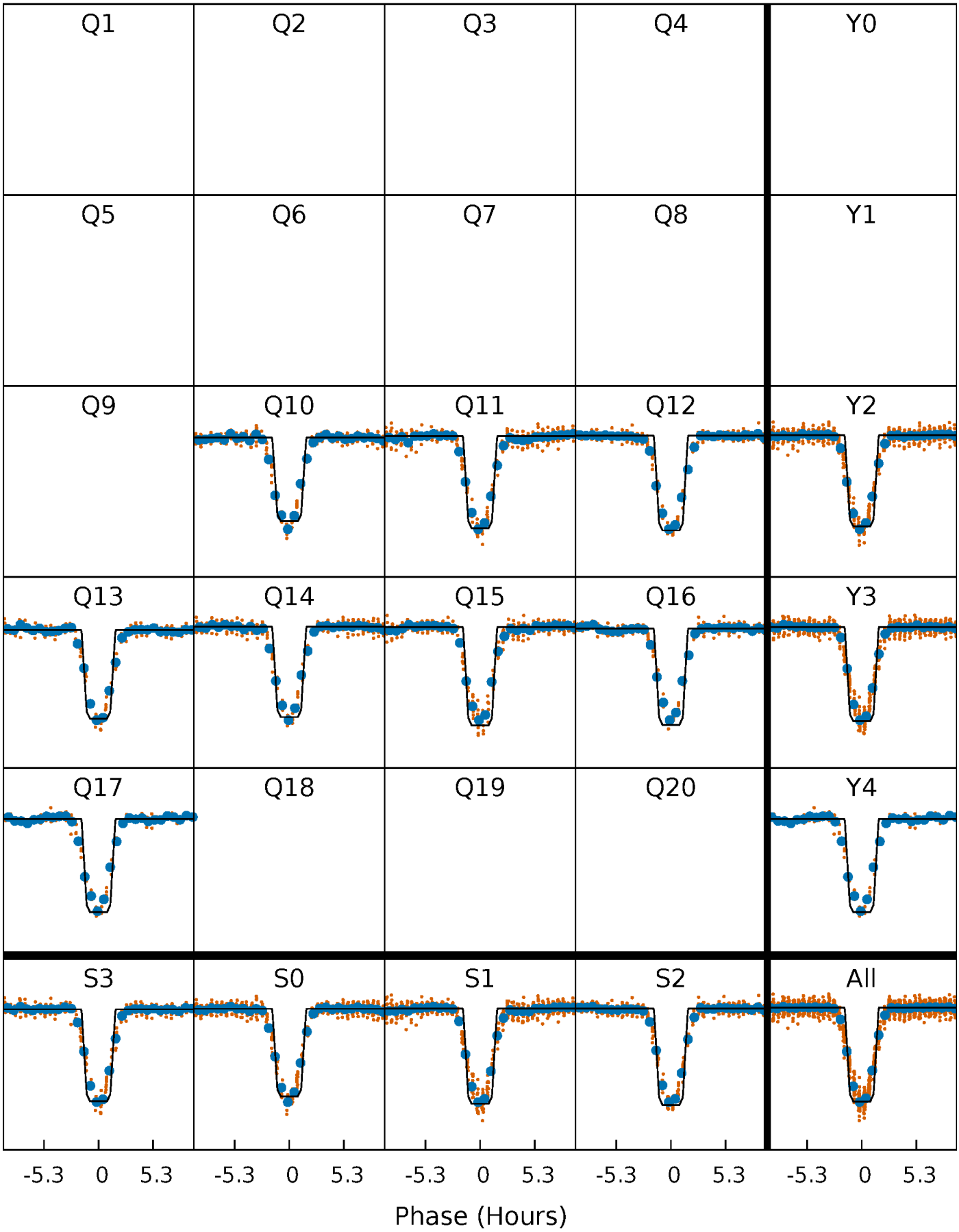
DV Quarter-Phased Transit Curves

TCE 006531496-02 P= 14.323951 Days T_0=142.372354 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

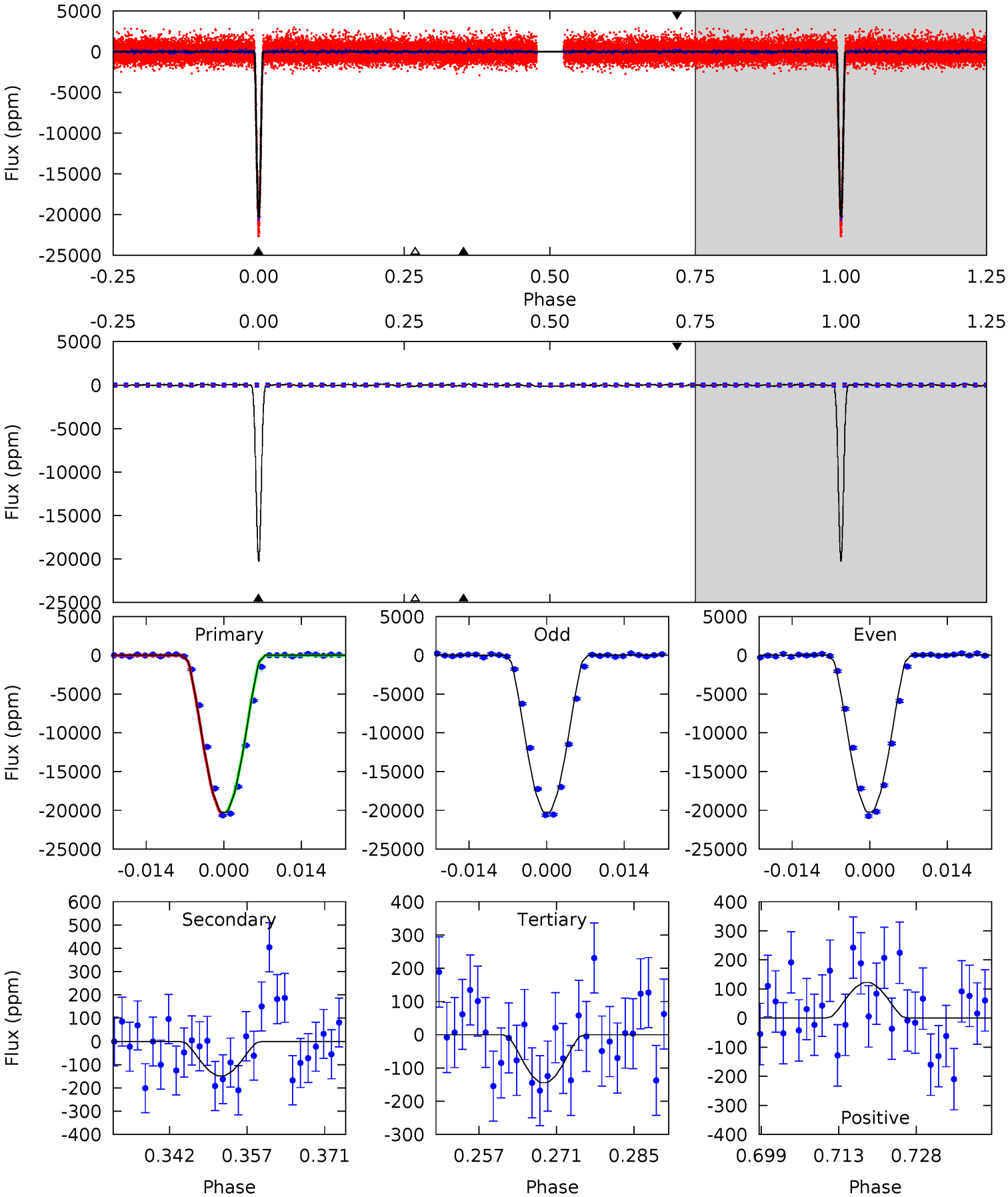
TCE 006531496-02 P= 14.323823 Days T_0=142.382154 (BKJD)



DV Model-Shift Uniqueness Test

006531496-02, P = 14.323951 Days, E = 142.372354 Days

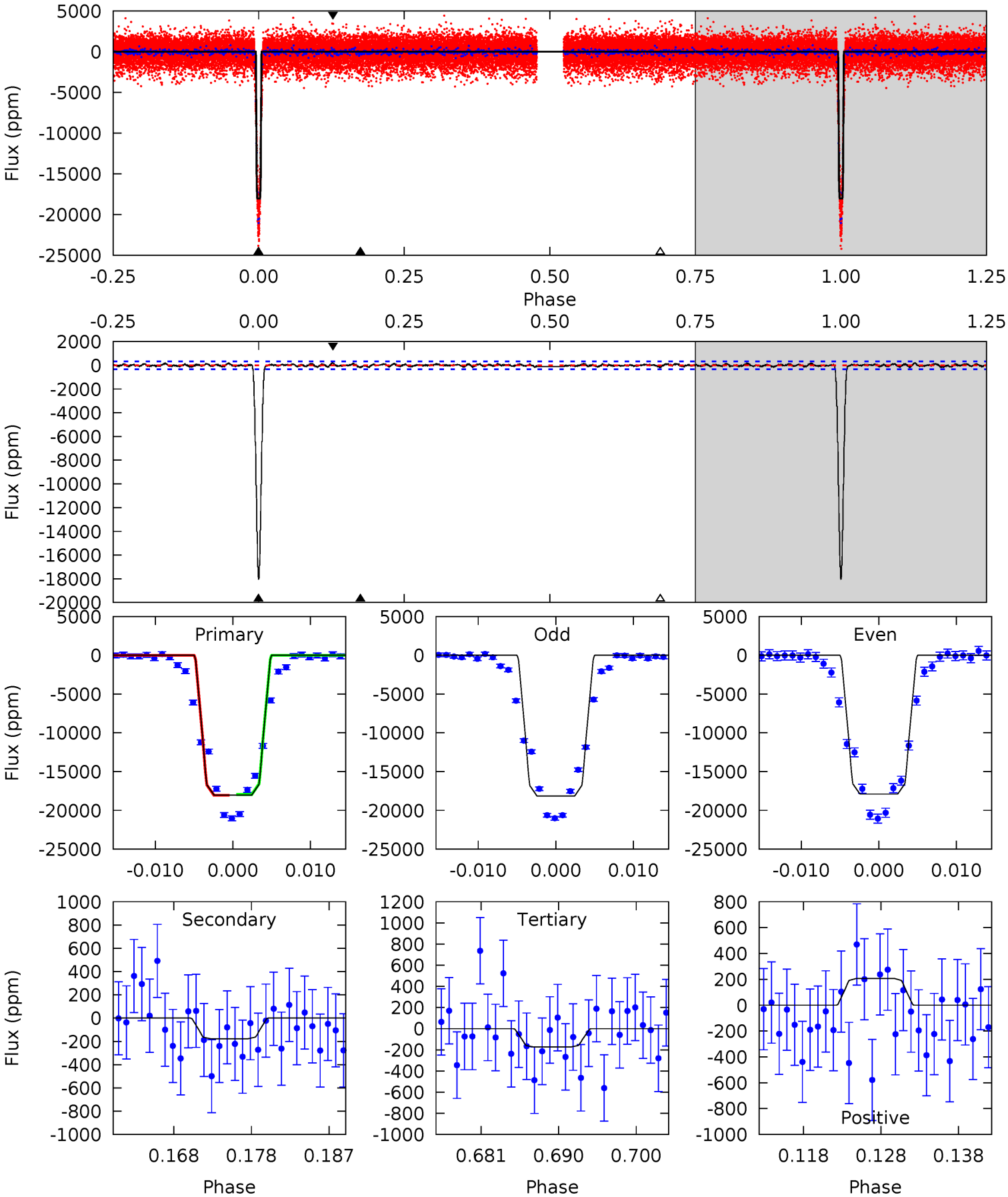
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
571.6	4.18	4.07	3.45	4.96	2.45	1.32	567.5	568.2	0.11	0.74	0.78	0.98	0.01	2.10



Alt Model-Shift Uniqueness Test

006531496-02, P = 14.323823 Days, E = 142.382154 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
275.4	2.71	2.63	3.17	5.03	2.58	0.93	272.8	272.2	0.07	-0.46	1.83	0.99	0.01	0.80



Stellar Parameters For KIC 006531496

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5853^{+163}_{-204}	$4.529^{+0.048}_{-0.204}$	$-0.100^{+0.250}_{-0.300}$	$0.895^{+0.260}_{-0.087}$	$0.990^{+0.113}_{-0.126}$	$1.941^{+0.409}_{-1.044}$
	+3%/-3%	+1%/-5%	+250%/-300%	+29%/-10%	+11%/-13%	+21%/-54%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006531496-02 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-148±35	$22.87^{+5.32}_{-4.49}$	1030^{+66}_{-50}	2244^{+142}_{-135}	$2.016^{+1.170}_{-0.803}$
Alt.	-177±65	$14.51^{+4.25}_{-4.40}$	1027^{+68}_{-51}	2565^{+296}_{-218}	$5.616^{+7.213}_{-2.825}$

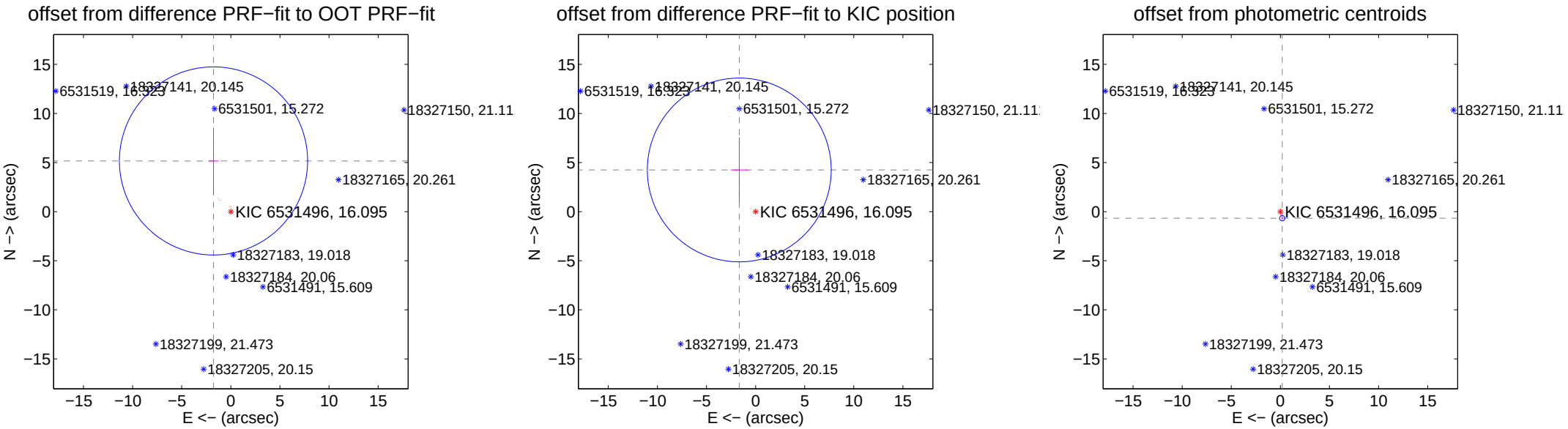
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

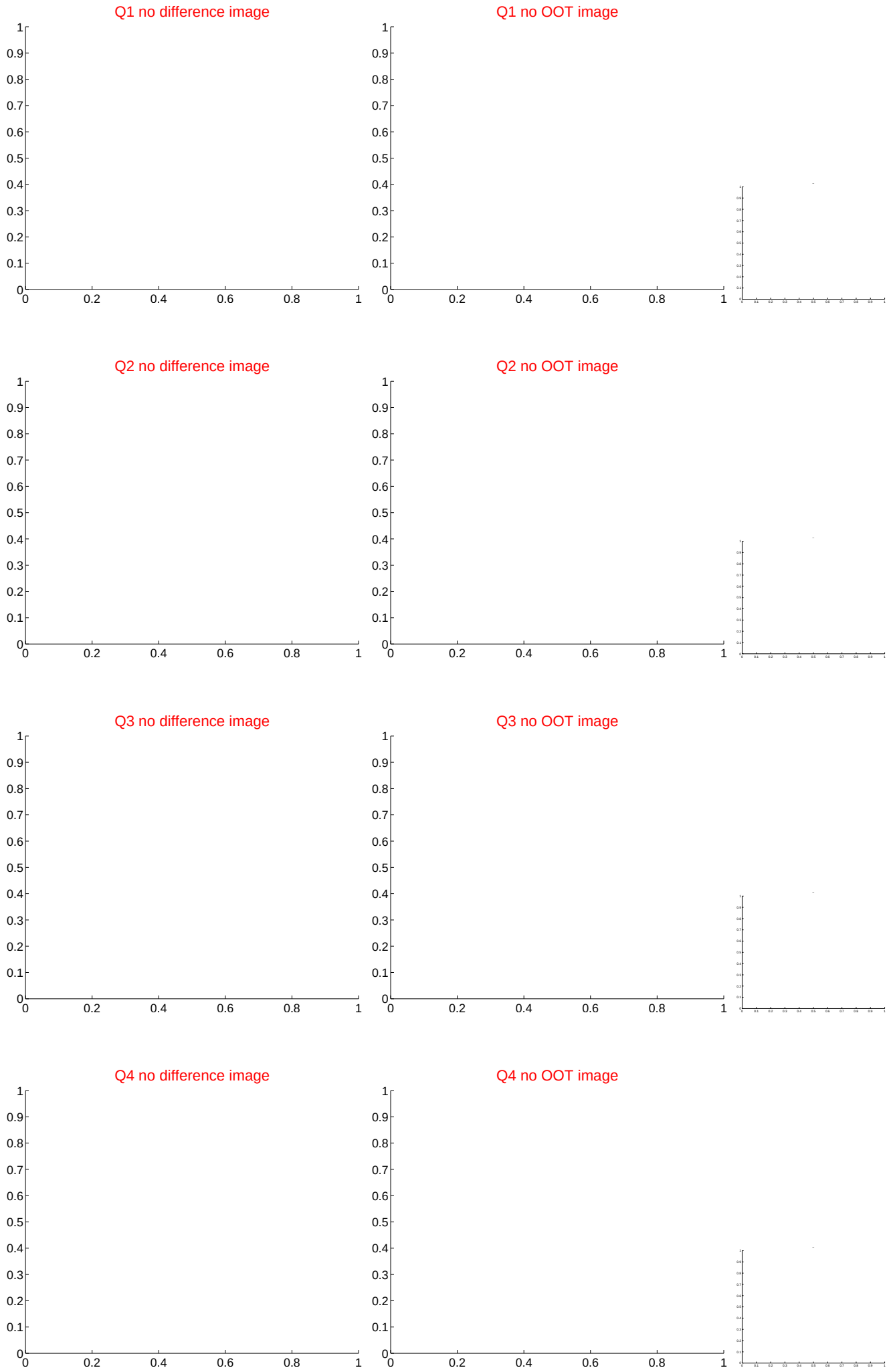
Supplemental centroid analysis for 006531496-02. Kepler magnitude: 16.09. Transit SNR 323.80
There are 2 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 1.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.459 ± 3.194	1.71	1.765 ± 0.525	5.166 ± 3.370
PRF-fit source offset from KIC position	4.563 ± 3.121	1.46	1.665 ± 0.850	4.248 ± 3.335
photometric centroid source offset	0.69 ± 0.09	7.77	-0.19 ± 0.02	-0.67 ± 0.09

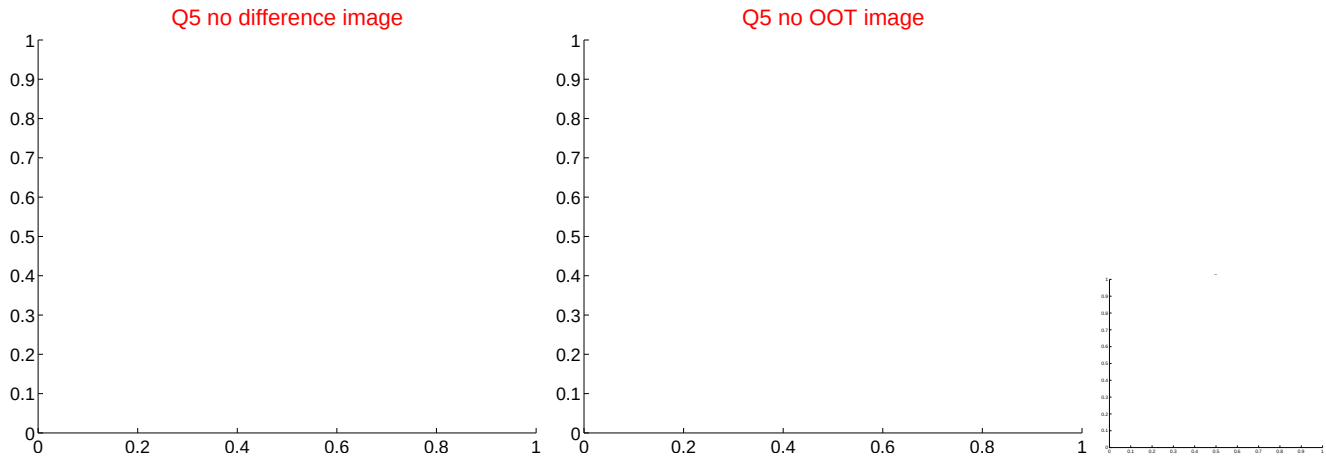


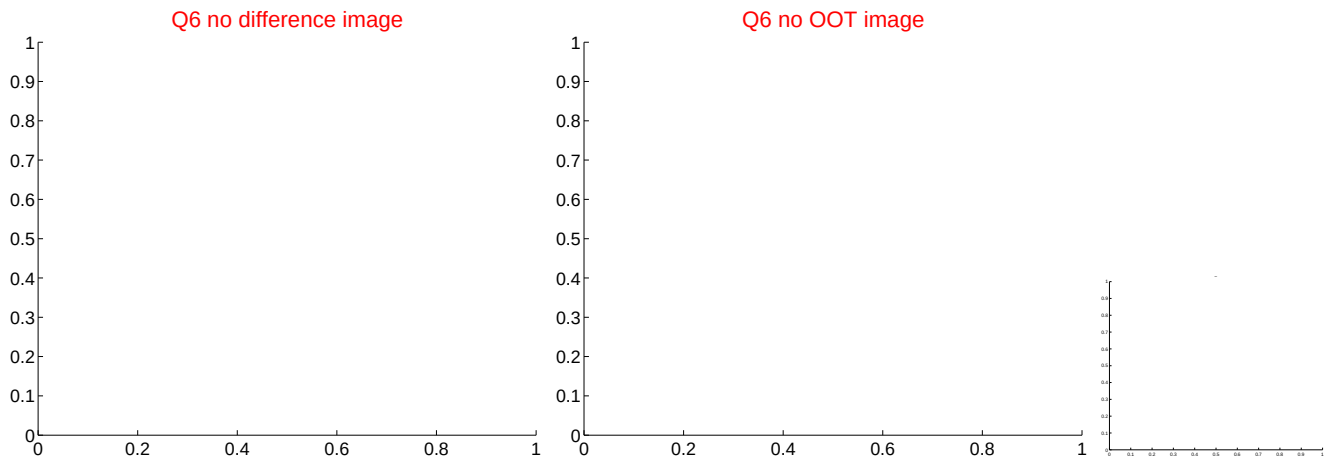
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

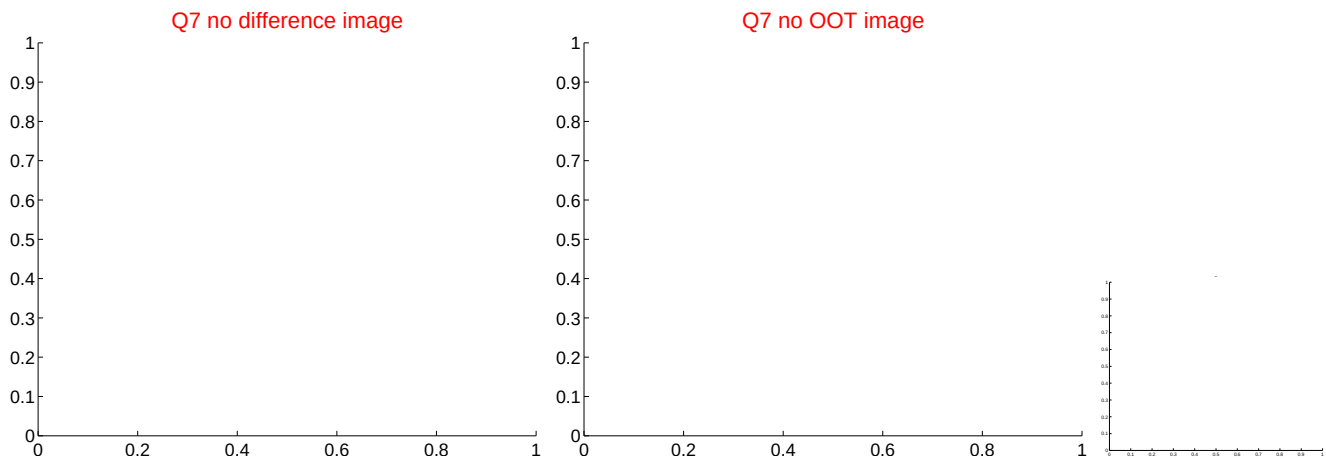
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

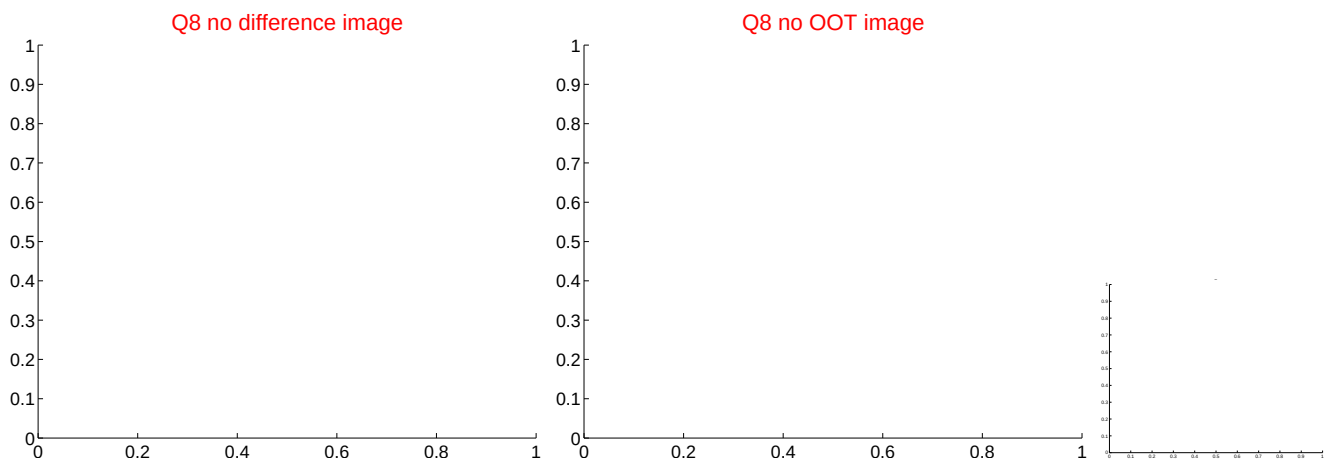


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

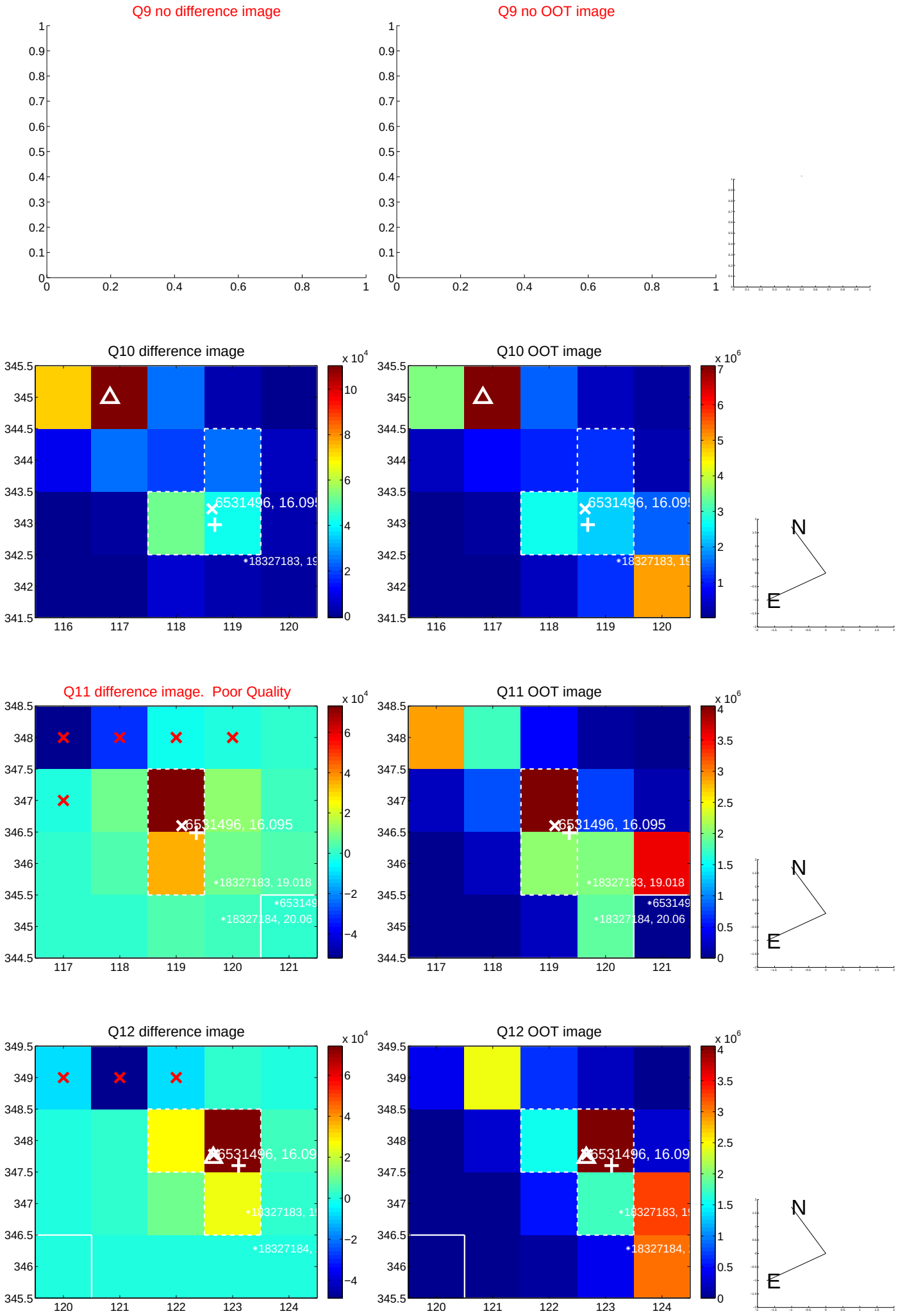




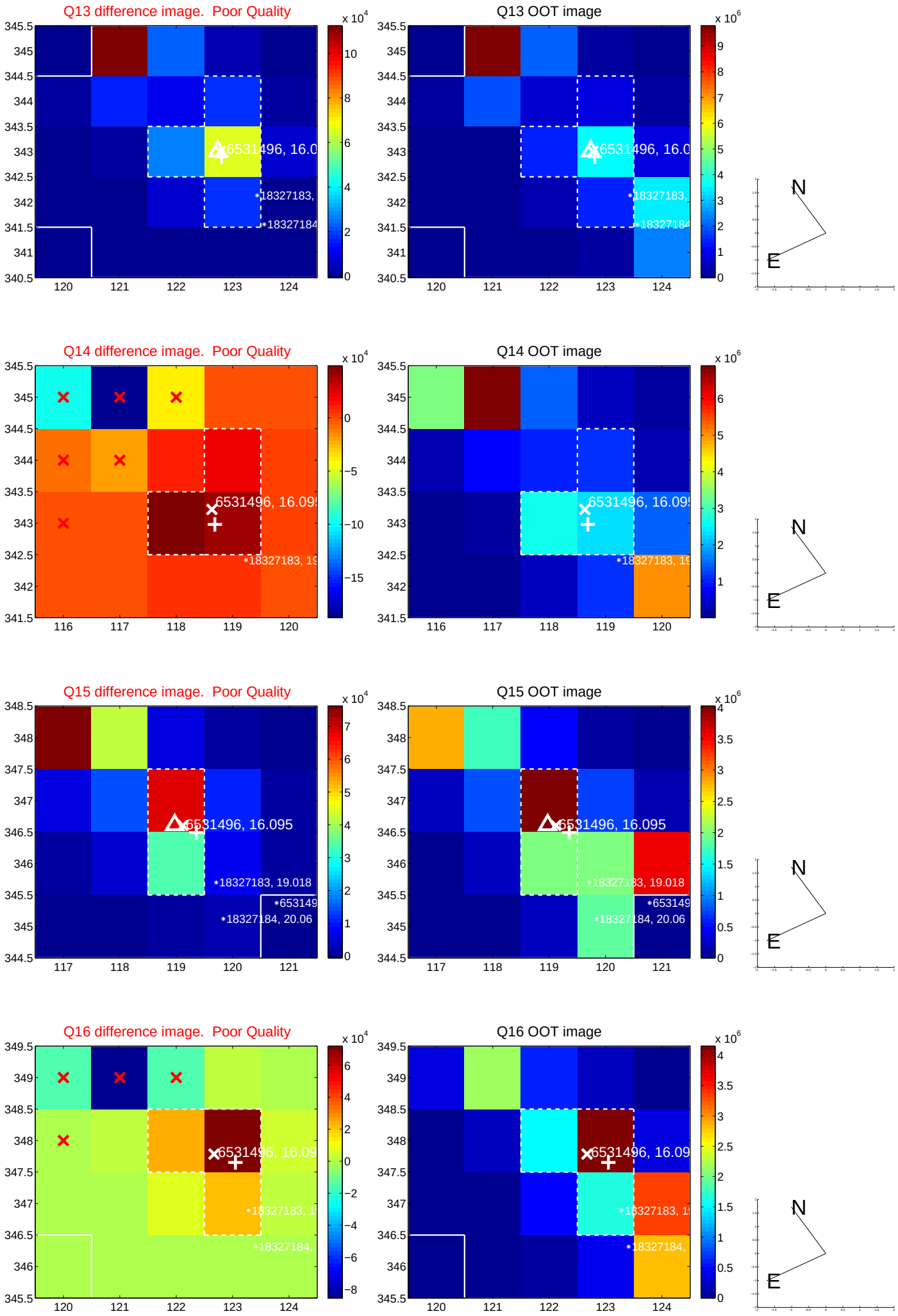




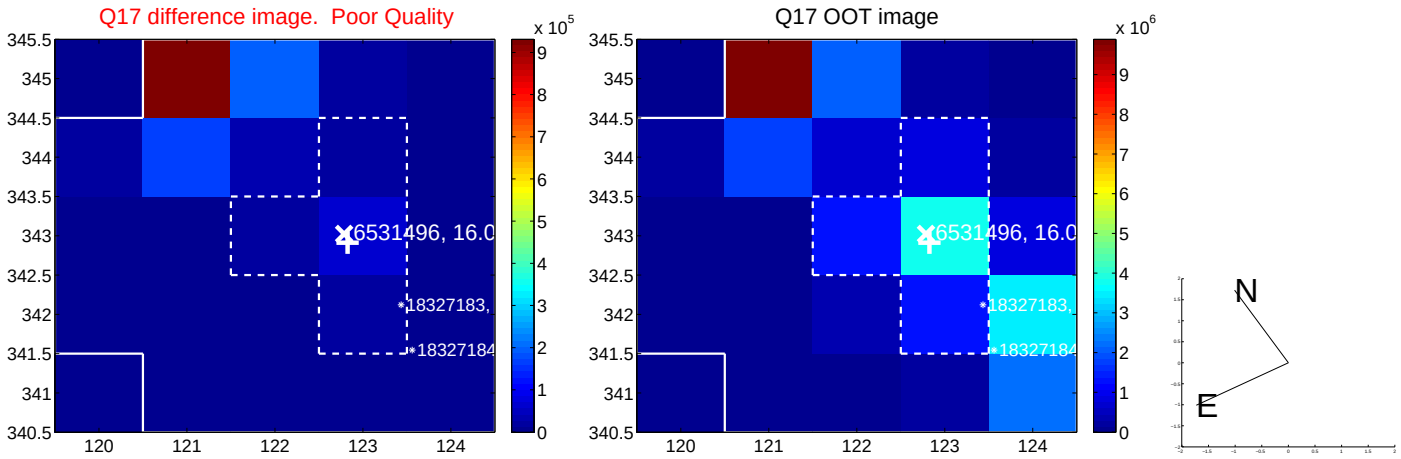
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

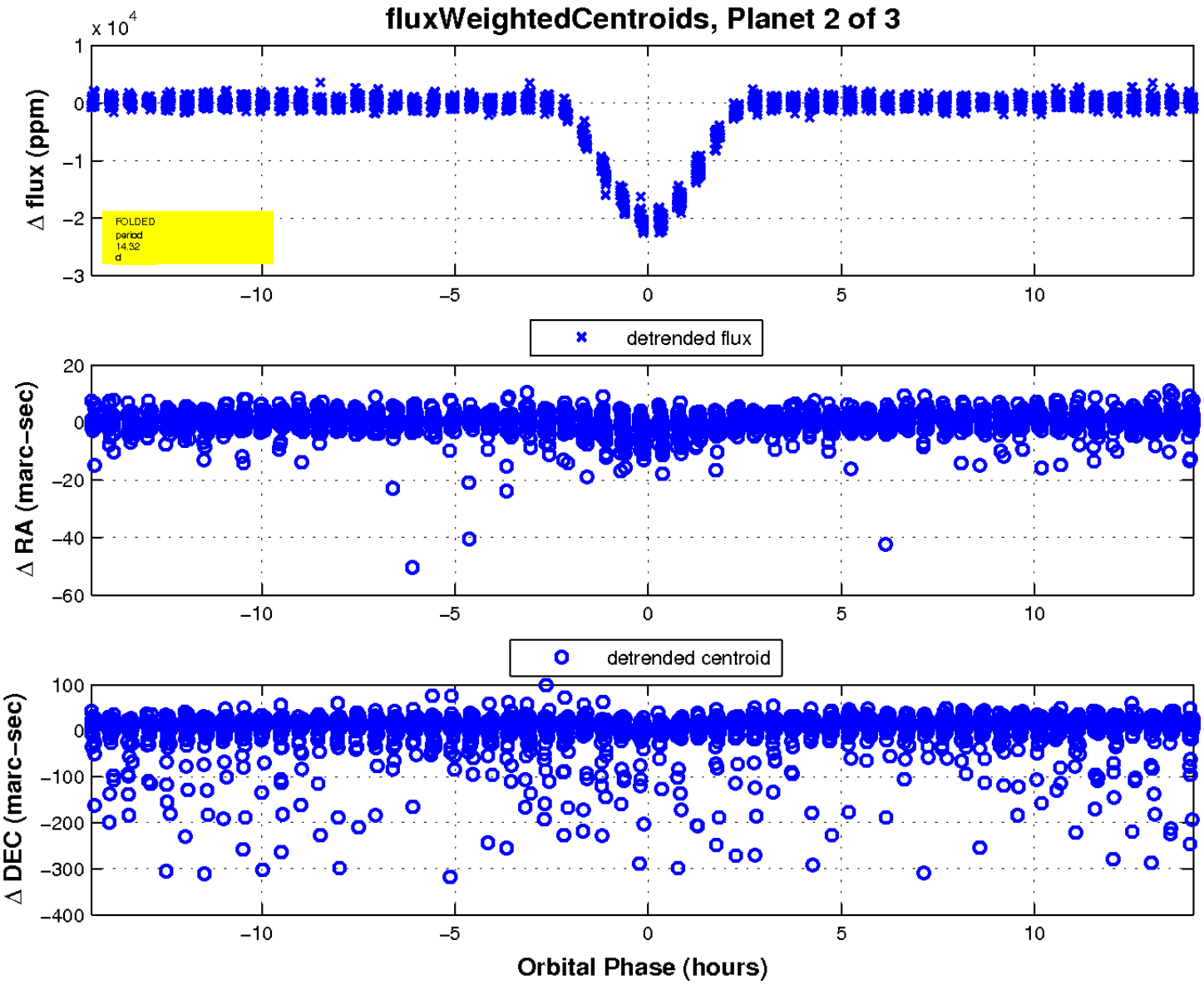


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

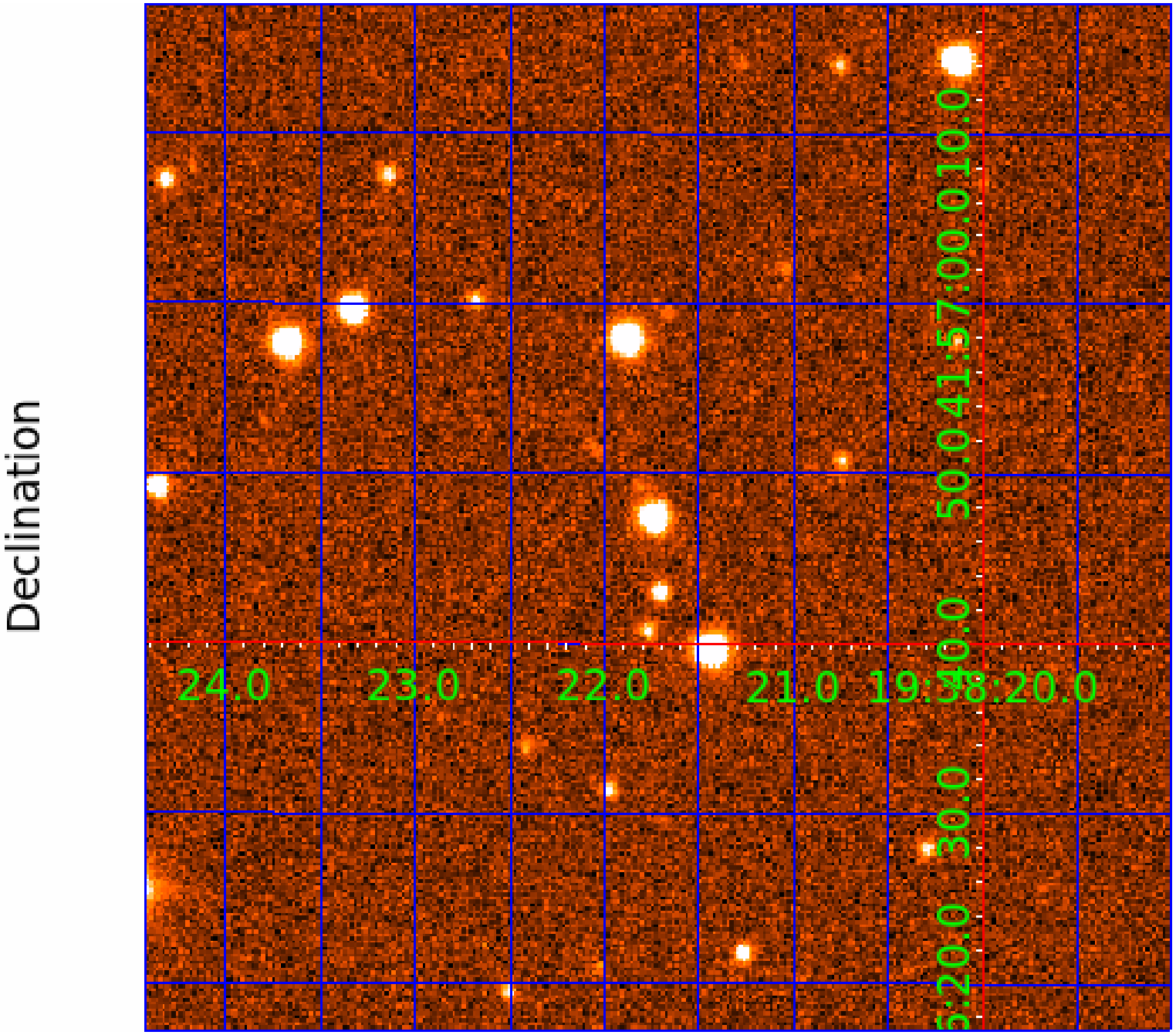


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image


Declination
24.0
23.0
22.0
21.0
19:38:20.0
40.0
50.0
41:57:00.0
10.0
30.0
5:20.0

KIC 006531496

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 ($S_\oplus$)
006531496-01	OBS	3646.01	14.323958	135.221484	65757.2	4.973	1197.8	745.2	0.90	5853	37.74	63.71
006531496-02	OBS	No	14.323951	142.372354	20258.2	4.806	351.6	323.8	0.90	5853	21.57	63.71
006531496-03	OBS	3646.02	0.512853	132.052462	289.9	0.988	10.7	15.1	0.90	5853	1.64	5398.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006531496-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_UNRESOLVED_OFFSET
006531496-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET
006531496-03	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—CENT_RESOLVED_OFFSET

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.

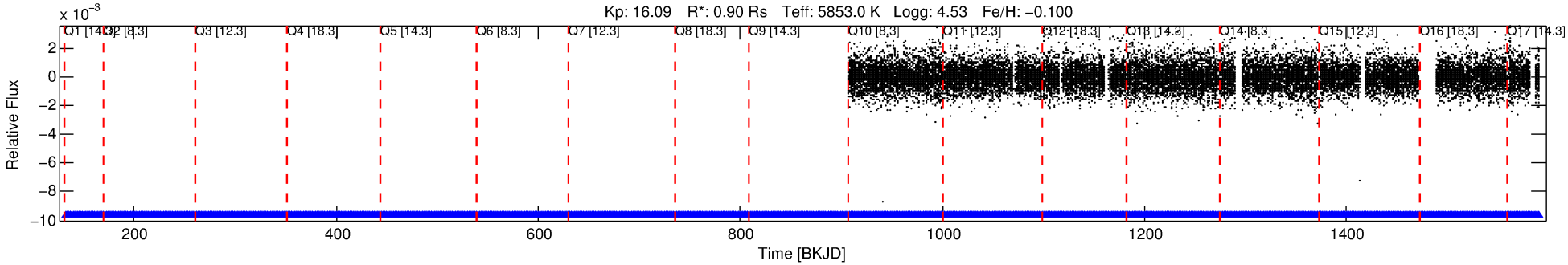
Ephemeris Match Information For 006531496-03

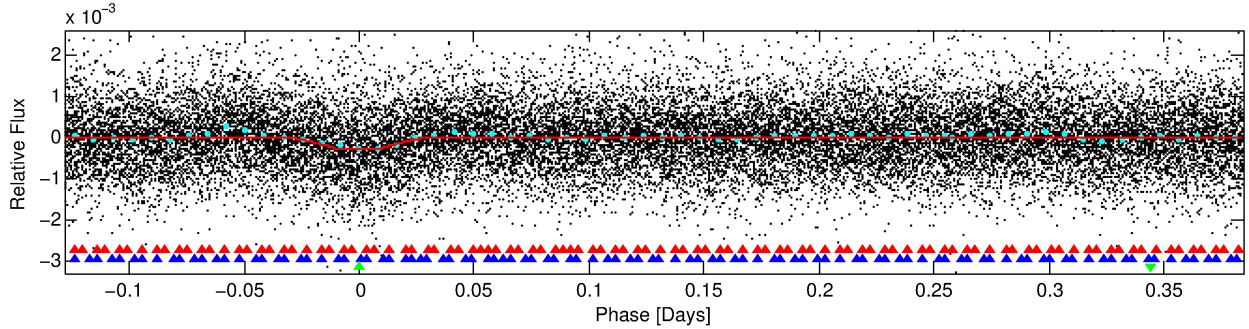
No Significant Match Found

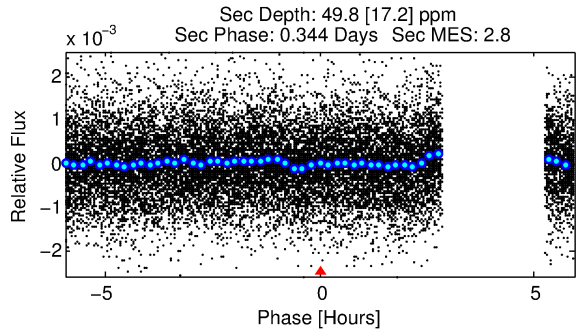
DV One-Page Summary

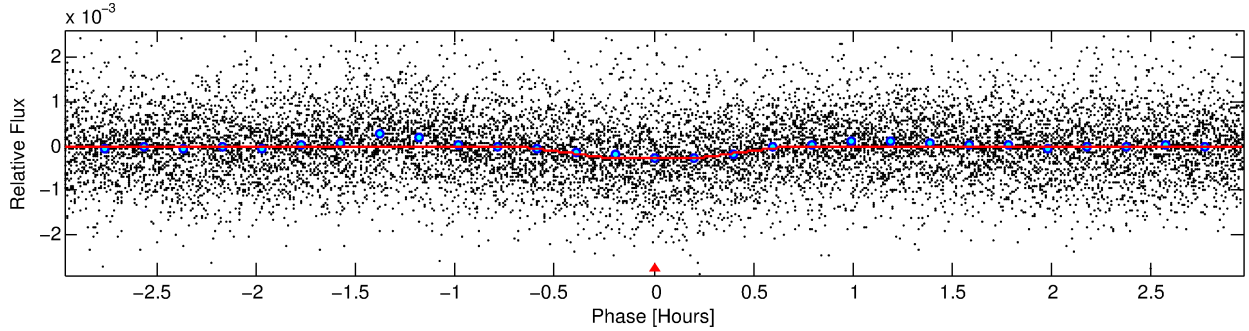
KIC: 6531496 Candidate: 3 of 3 Period: 0.513 d
KOI: K03646 Corr: No Ephemeris Match

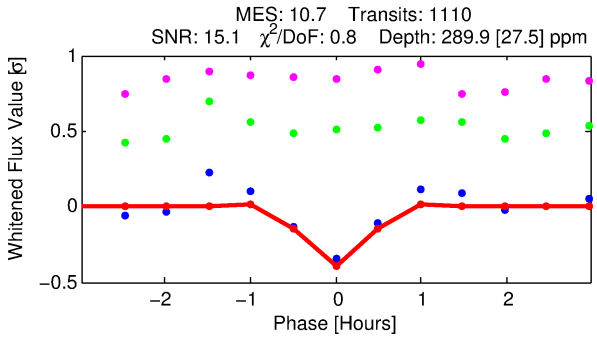
Kp: 16.09 R*: 0.90 Rs Teff: 5853.0 K Logg: 4.53 Fe/H: −0.100

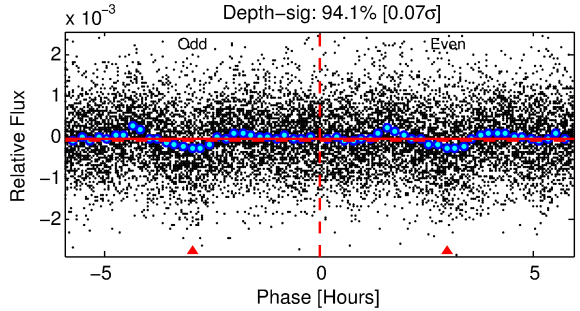












DV Fit Results:

Period = 0.51285 [0.00001] d
Epoch = 132.0525 [0.0011] BKJD
Rp/R* = 0.0168 [0.0065]
a/R* = 3.04 [4.73]
b = 0.70 [1.29]

Seff = 5398.83 [2125.58]
Teq = 2186 [215] K
Rp = 1.64 [0.79] Re
a = 0.0125 [0.0031] AU

Ag = 1.58 [1.45] [0.40σ]
Teffp = 3788 [808] K [1.92σ]

DV Diagnostic Results:

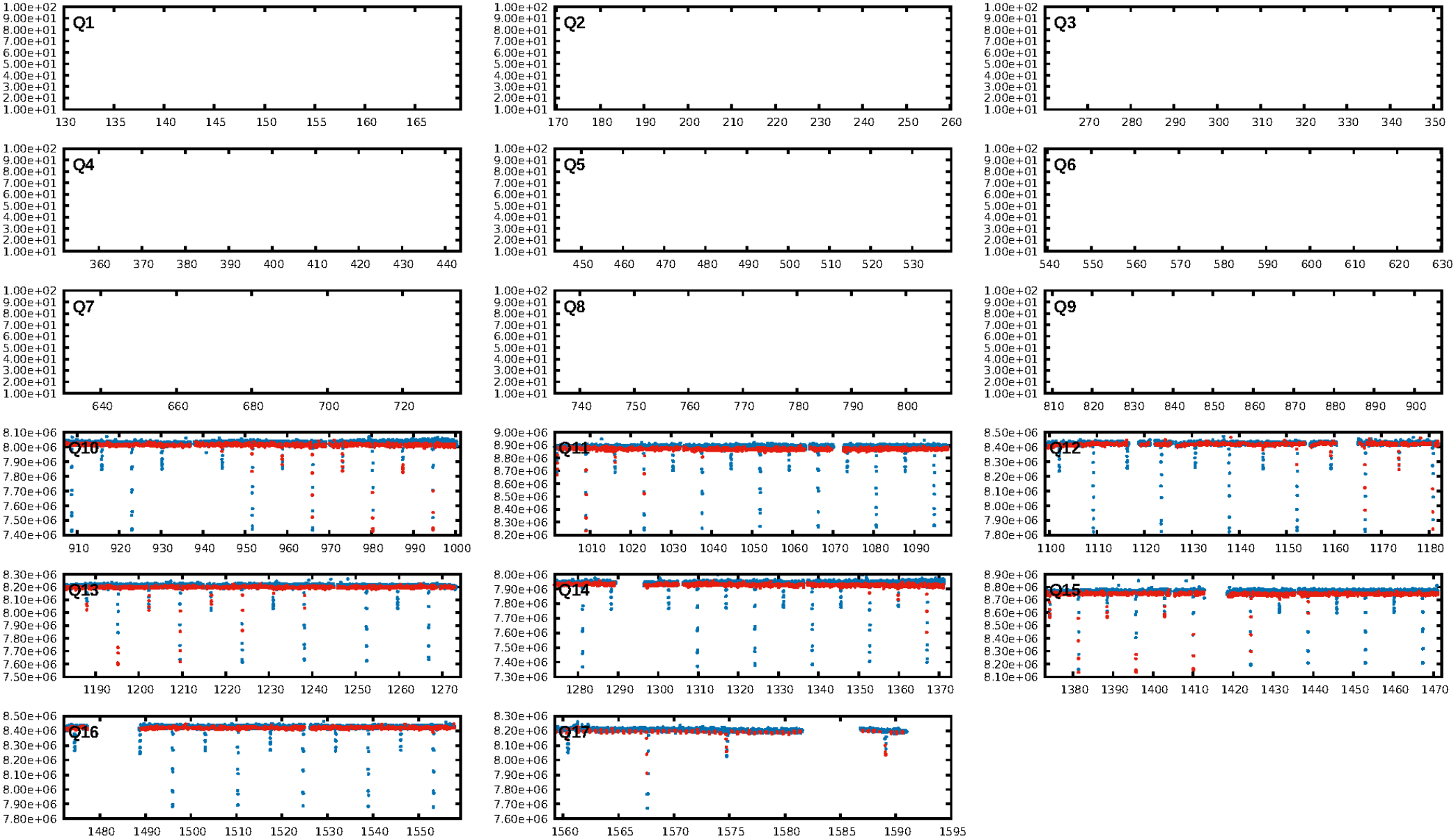
ShortPeriod−sig: N/A
LongPeriod−sig: 100.0% [67.56σ]
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: 1.09e−25
RollingBand−fgt: 1.00 [1062/1062]
GhostDiagnostic−chr: −0.4577

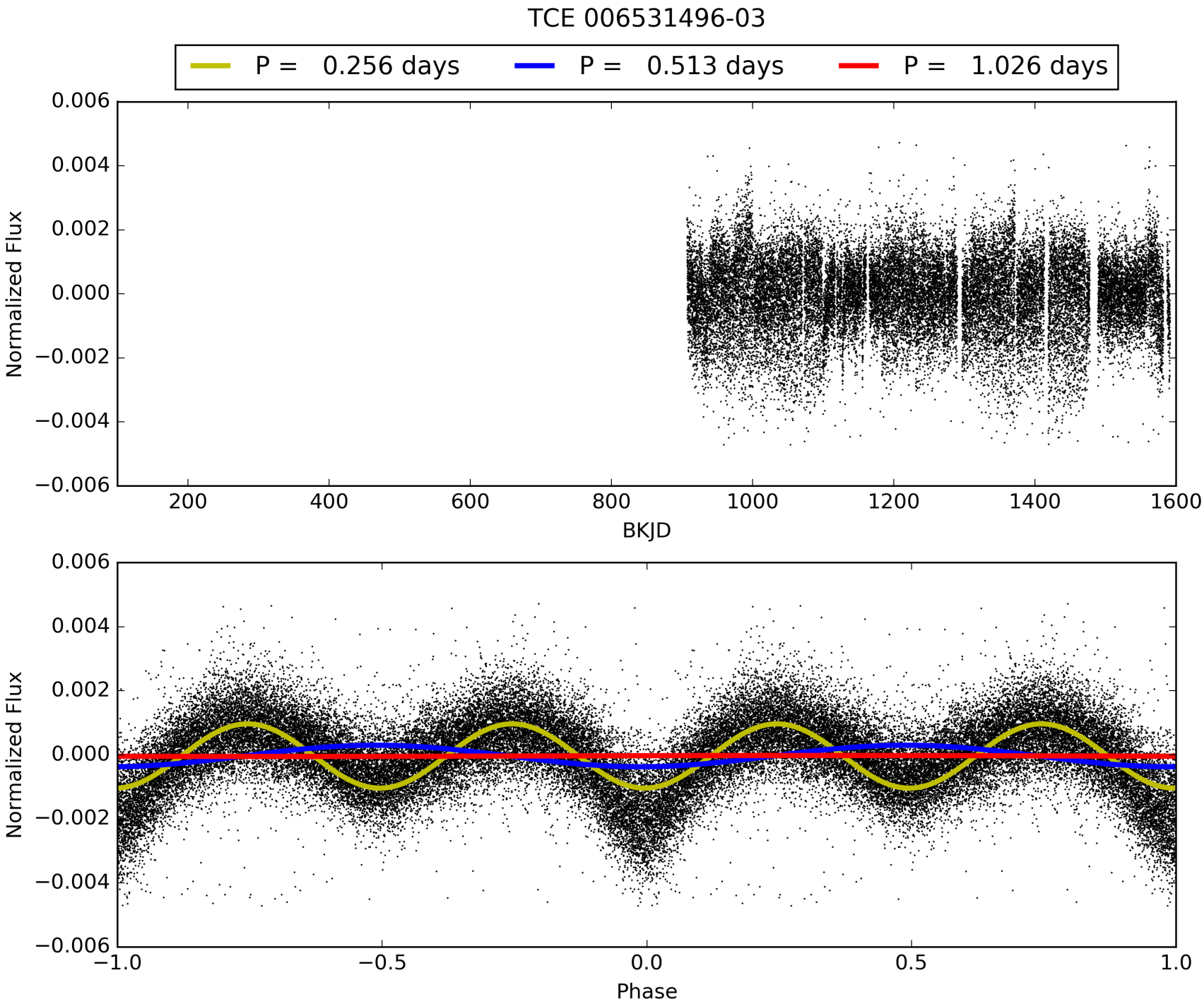
Centroid−sig: N/A
Centroid−so: N/A
OotOffset−rm: N/A
KicOffset−rm: N/A
OotOffset−st: 0/0/0/0 [0]
KicOffset−st: 0/0/0/0 [0]
DiffImageQuality−fgm: N/A
DiffImageOverlap−fno: 1.00 [8/8]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03−Feb−2016 01:39:59 Z

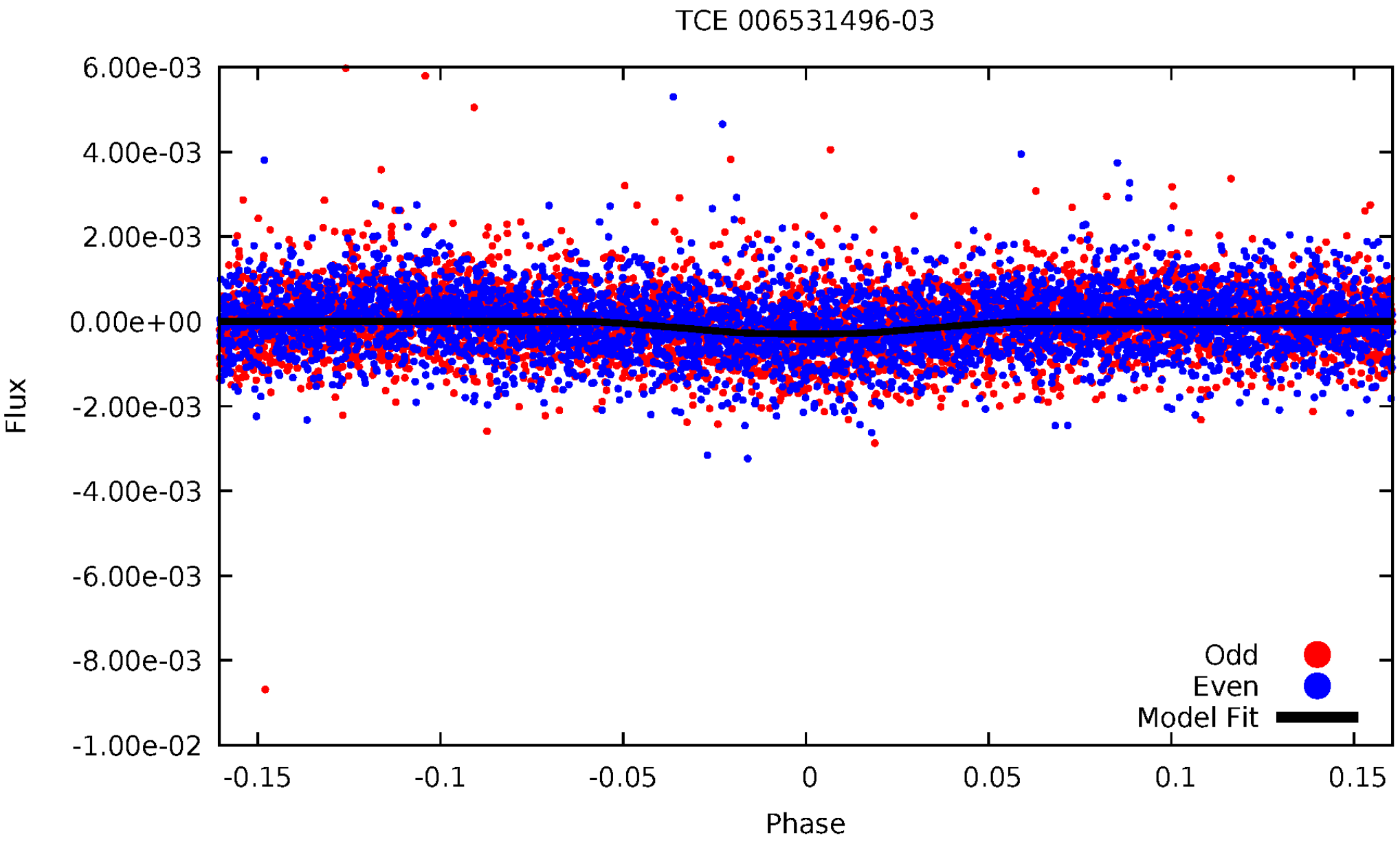
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006531496-03, PDC Light Curves




TCE 006531496-03
P = 0.256 days
P = 0.513 days
P = 1.026 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even


TCE 006531496-03
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
-6.00e-03
-8.00e-03
-1.00e-02
Flux
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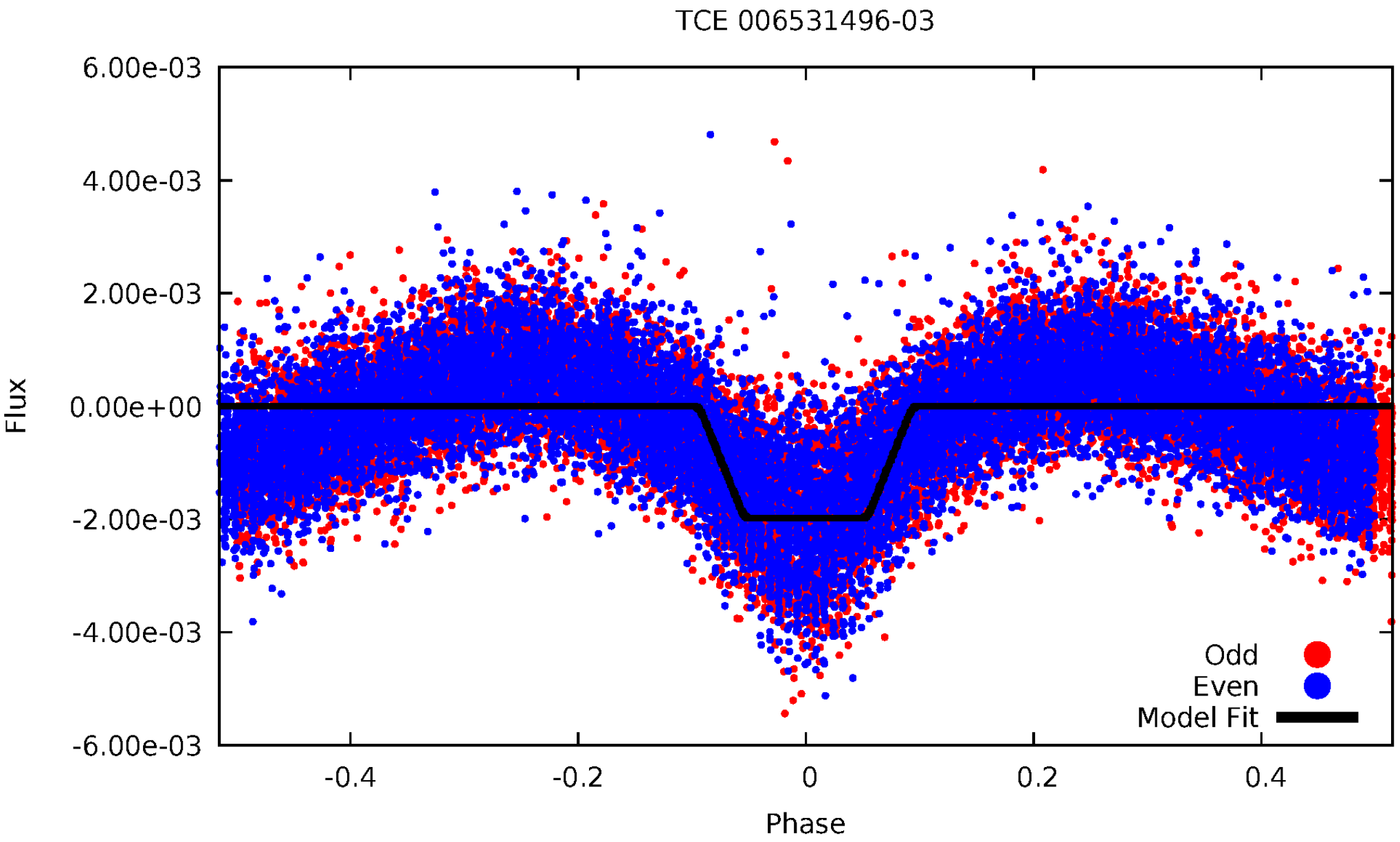
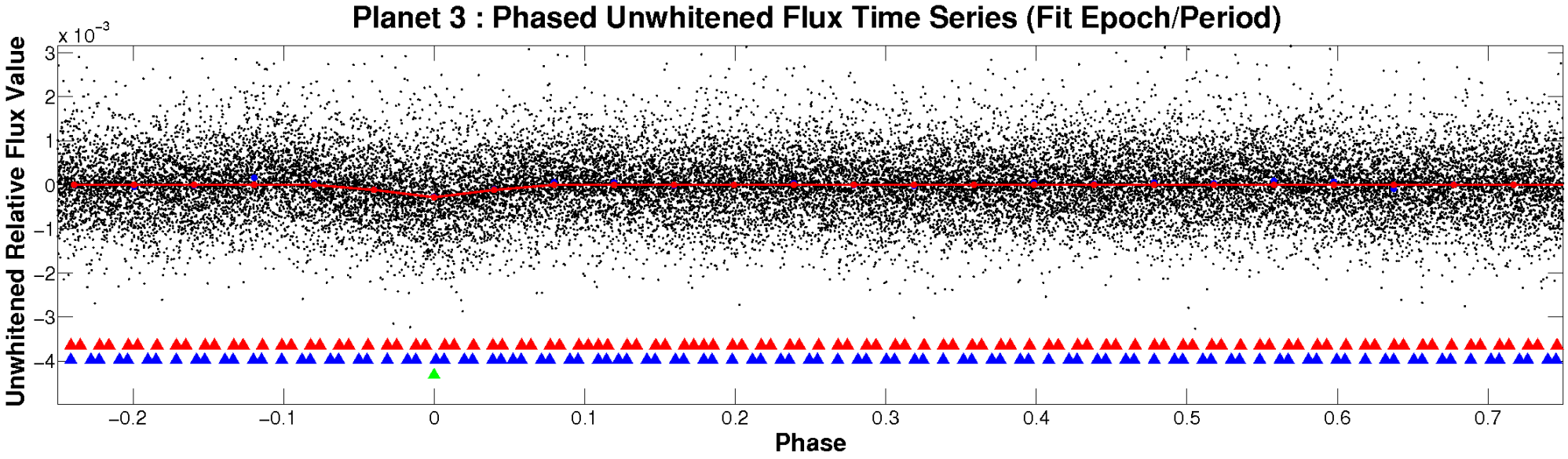
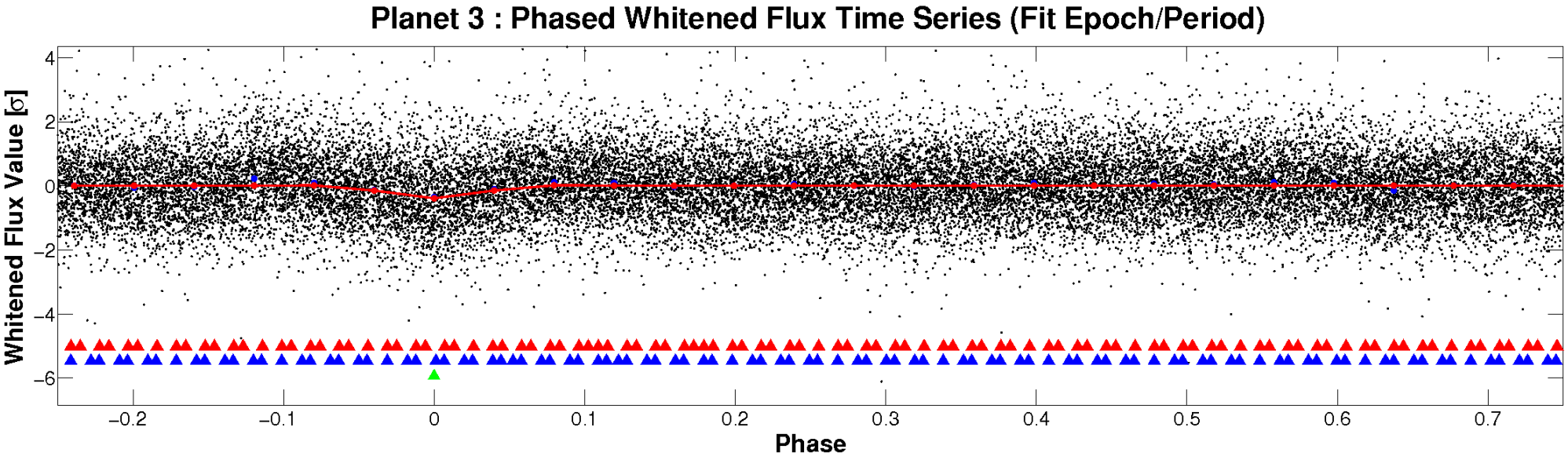
-0.1
-0.05
0
0.05
0.1
0.15
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 006531496-03
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
-6.00e-03
Flux
-0.4
-0.2
0
0.2
0.4
Phase
Odd
Even
Model Fit

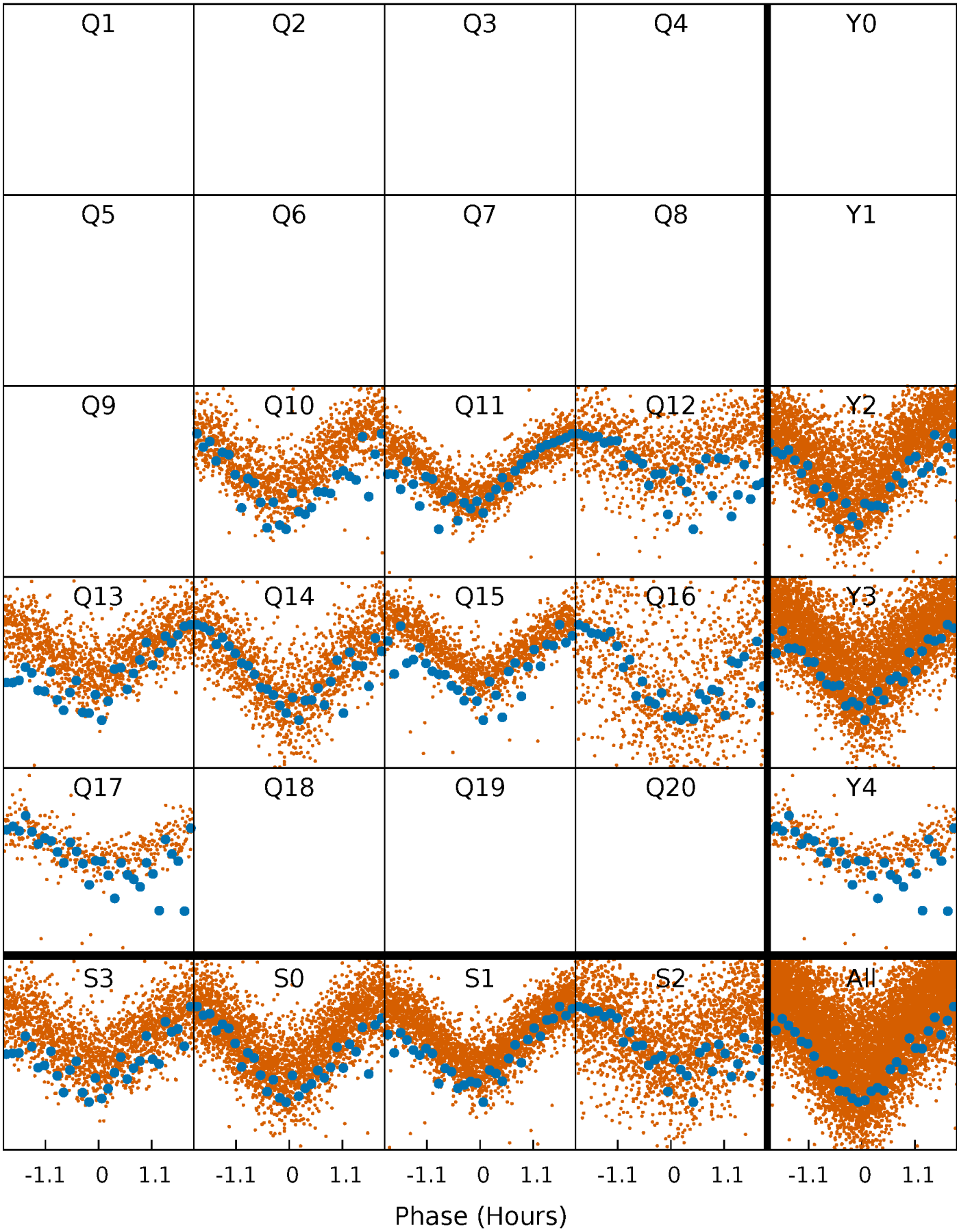
Non-Whitened Vs. Whitened Light Curve





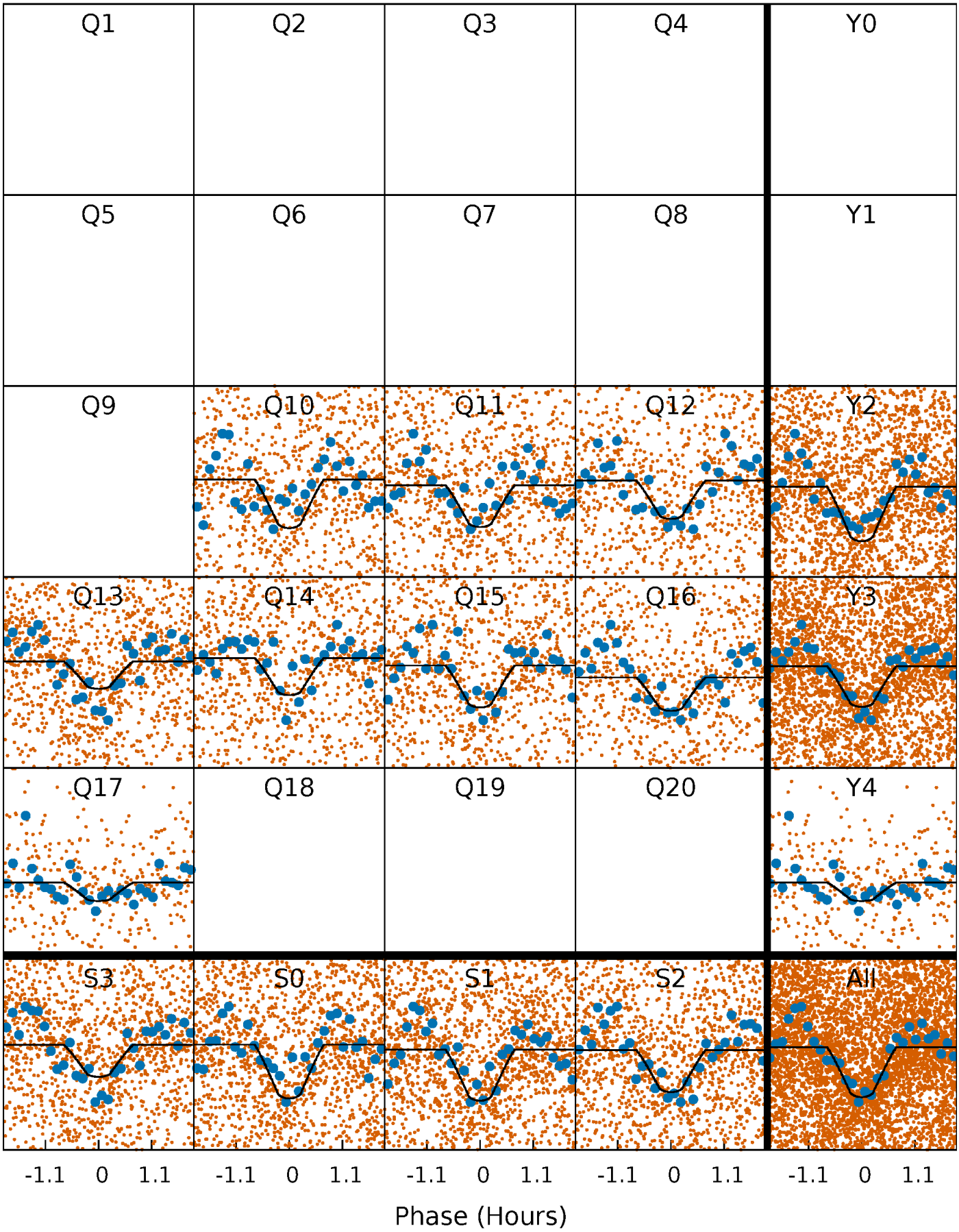
PDC Quarter-Phased Transit Curves

TCE 006531496-03 P= 0.512853 Days T_0=132.052462 (BKJD)



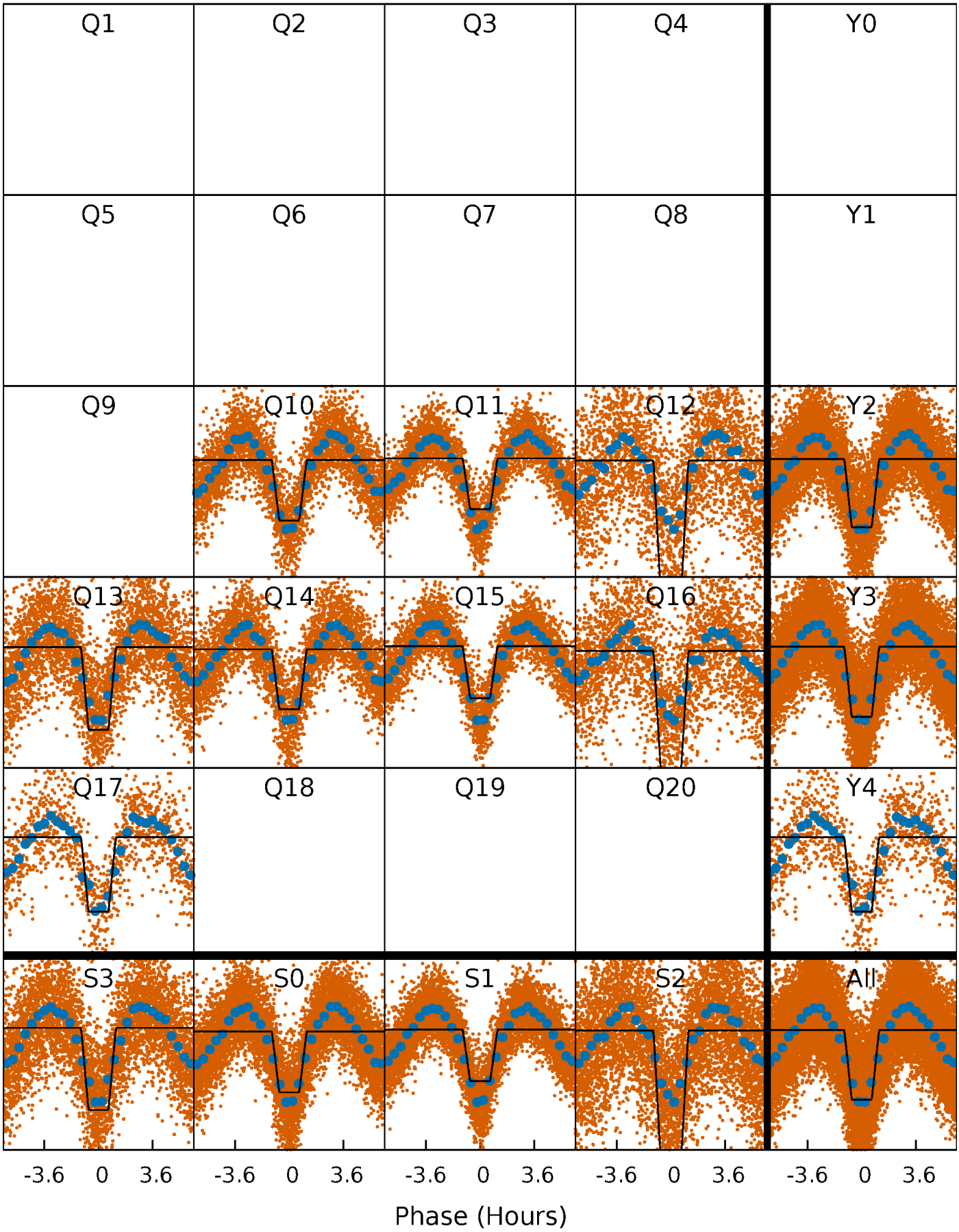
DV Quarter-Phased Transit Curves

TCE 006531496-03 P= 0.512853 Days T_0=132.052462 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

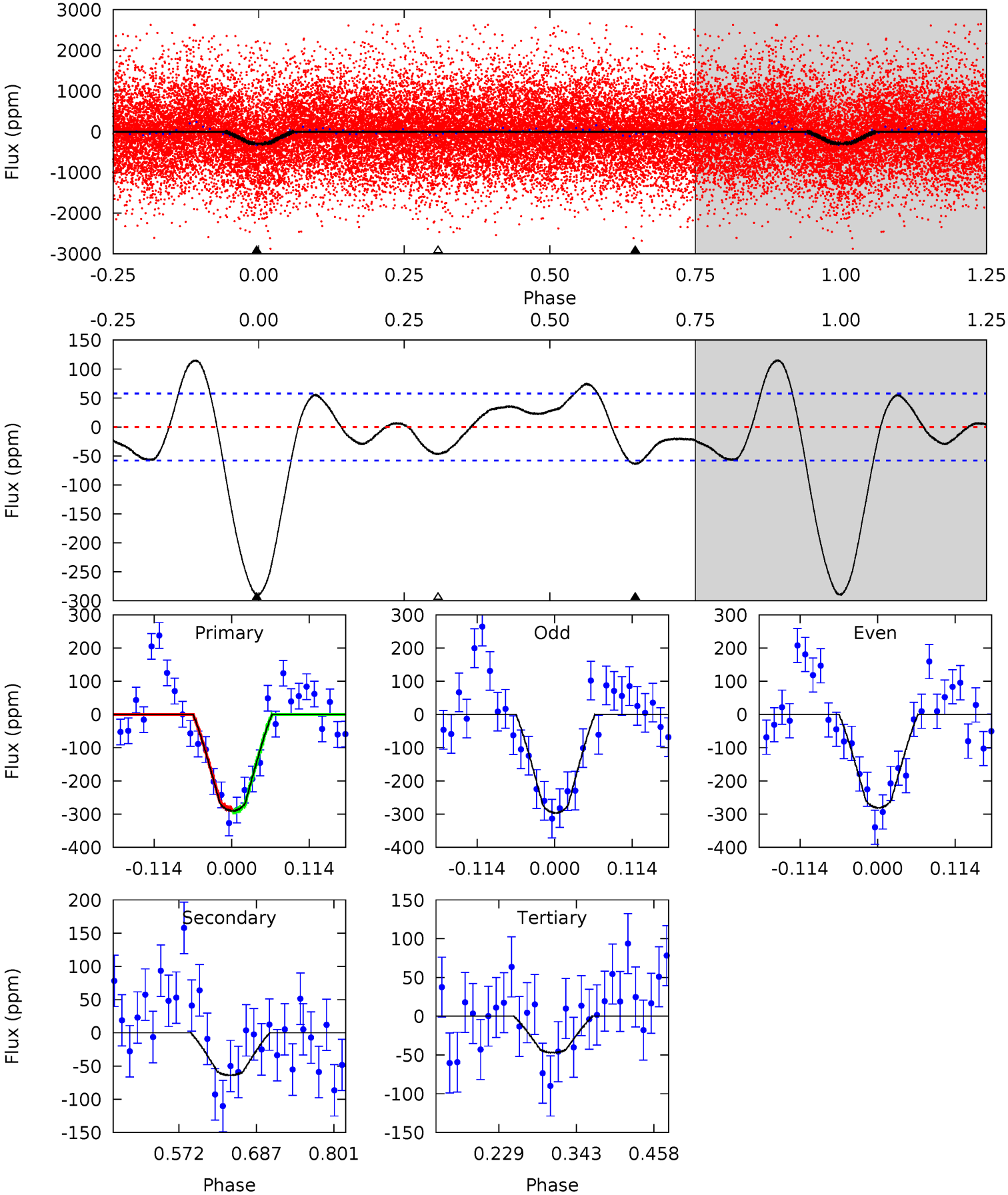
TCE 006531496-03 P= 0.512866 Days T_0=132.023067 (BKJD)



DV Model-Shift Uniqueness Test

006531496-03, P = 0.512853 Days, E = 132.052462 Days

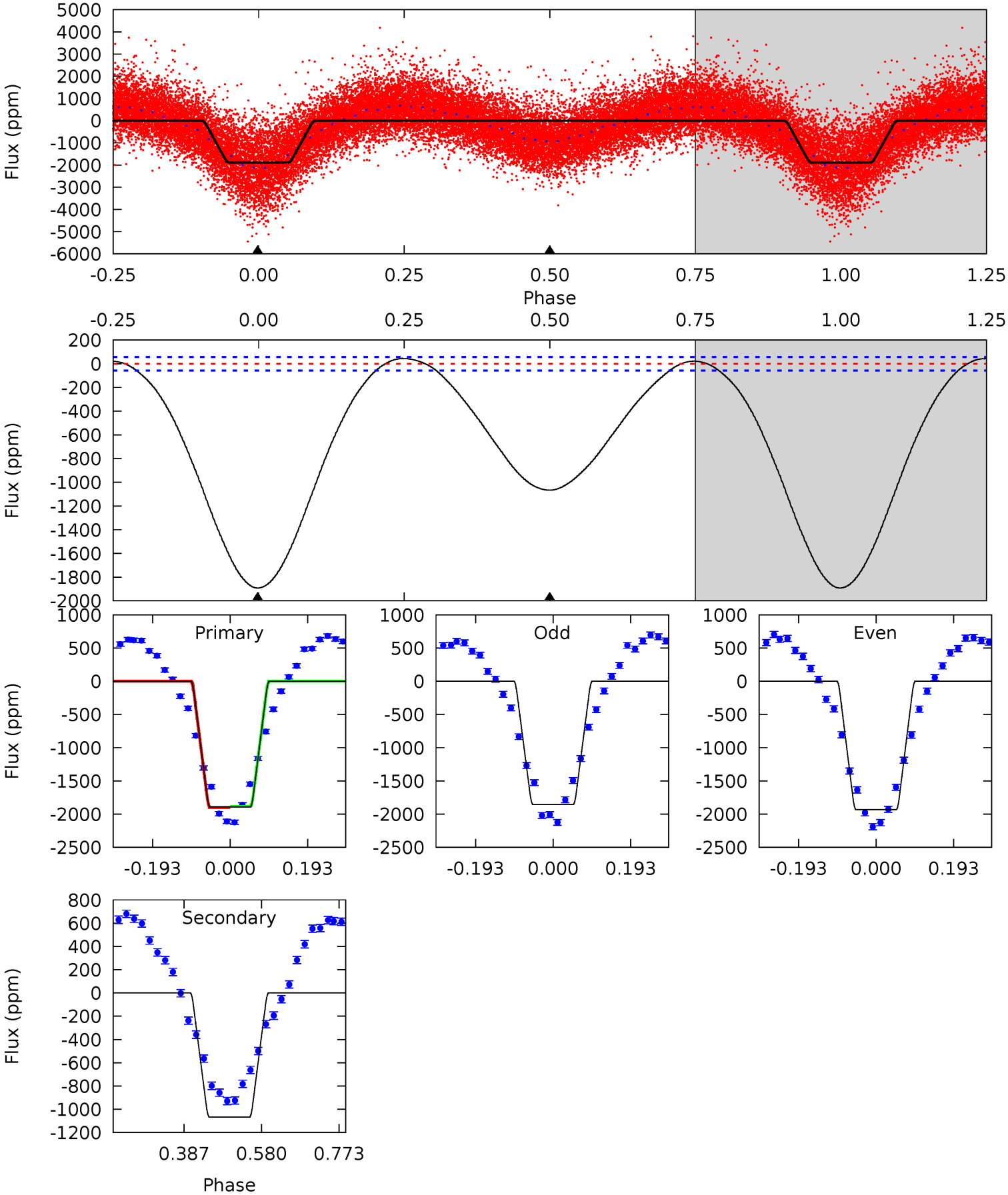
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.7	4.98	3.67	0	4.54	1.58	2.70	19.0	22.7	1.31	4.98	0.60	0.93	0.28	0.27



Alt Model-Shift Uniqueness Test

006531496-03, P = 0.512866 Days, E = 132.023067 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
146.5	82.6	0	0	4.42	1.30	3.26	146.5	146.5	82.6	82.6	3.02	1.01	0.02	0.64



Stellar Parameters For KIC 006531496

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5853^{+163}_{-204}	$4.529^{+0.048}_{-0.204}$	$-0.100^{+0.250}_{-0.300}$	$0.895^{+0.260}_{-0.087}$	$0.990^{+0.113}_{-0.126}$	$1.941^{+0.409}_{-1.044}$
	+3%/-3%	+1%/-5%	+250%/-300%	+29%/-10%	+11%/-13%	+21%/-54%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006531496-03 / KOI 3646.02

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-64±13	$1.73^{+0.70}_{-0.65}$	3119^{+202}_{-159}	4107^{+982}_{-597}	$1.789^{+2.845}_{-0.912}$
Alt.	-1067±13	$4.49^{+0.95}_{-0.78}$	3121^{+221}_{-162}	5021^{+419}_{-346}	$4.443^{+1.968}_{-1.372}$

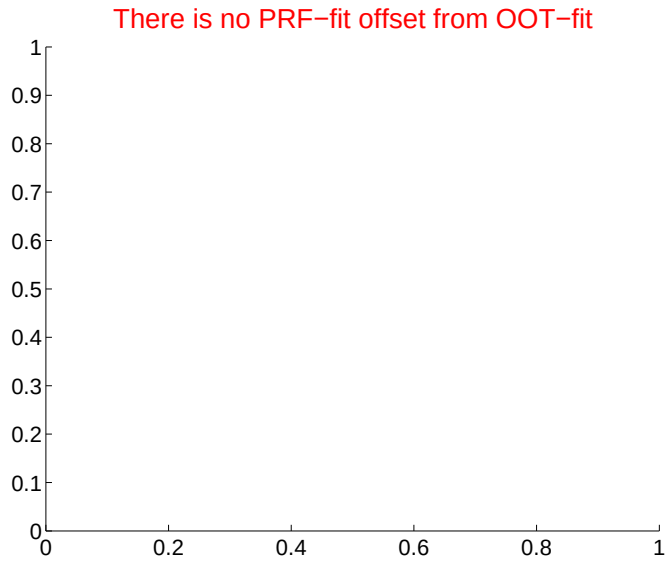
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

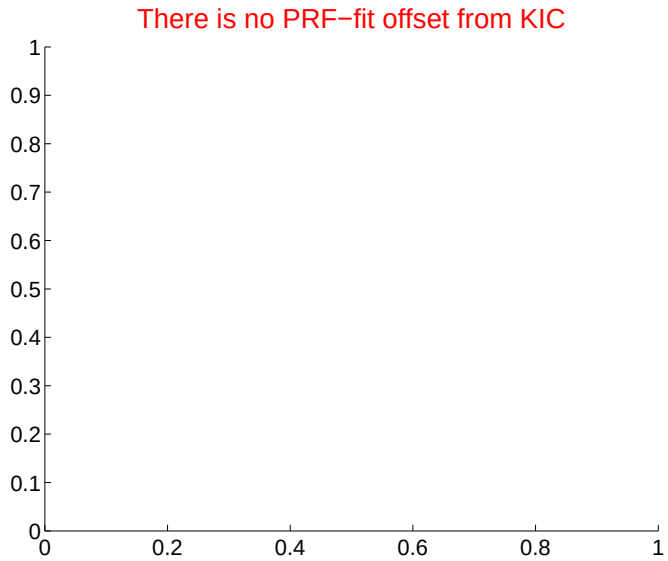
If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

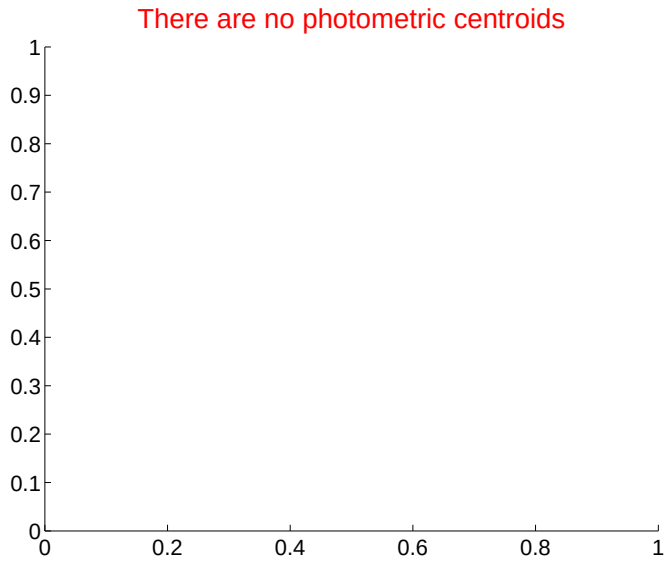
DV Centroid Data

Supplemental centroid analysis for 006531496-03. Kepler magnitude: 16.09. Transit SNR 15.08
There are 0 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—

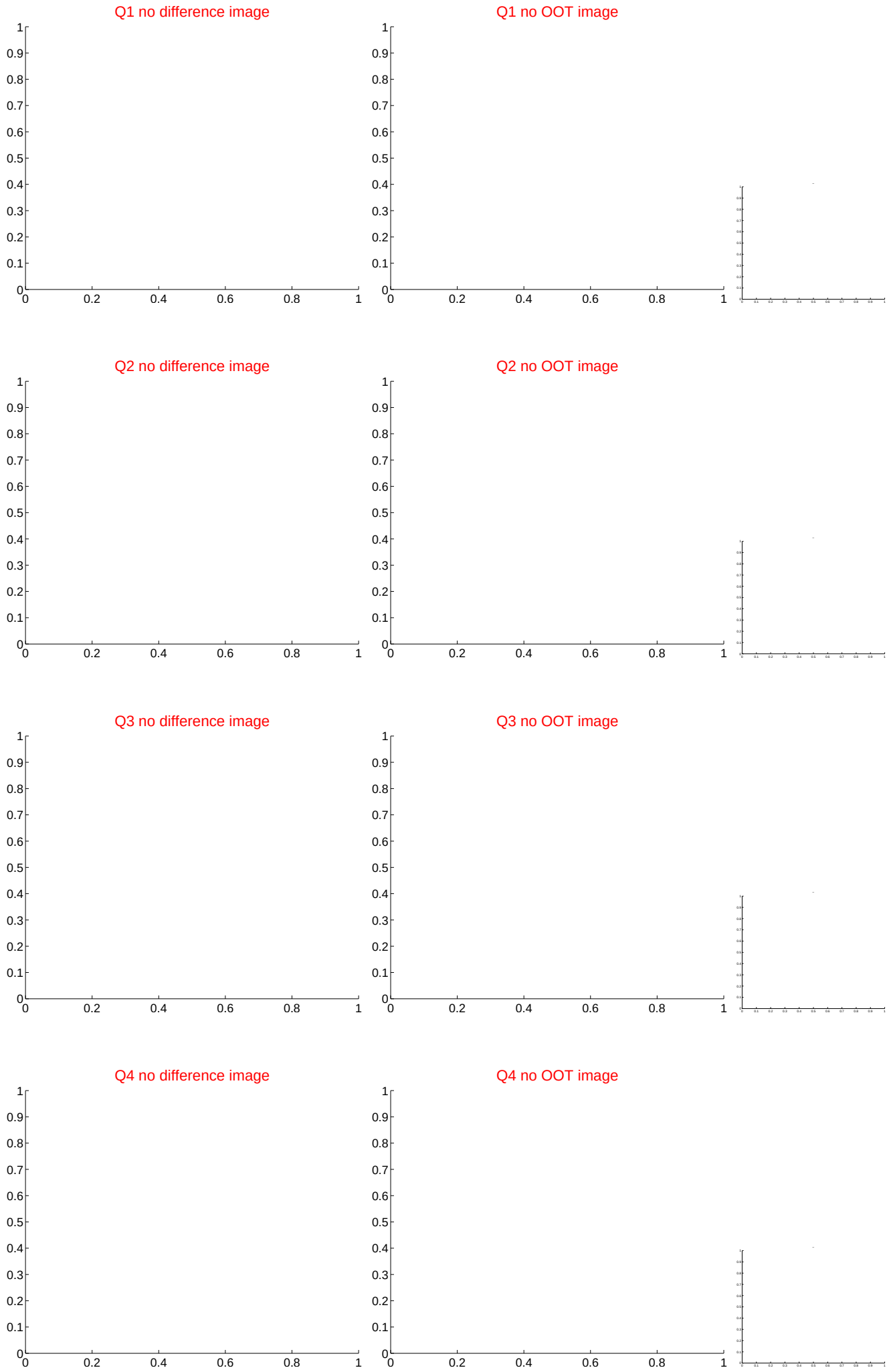




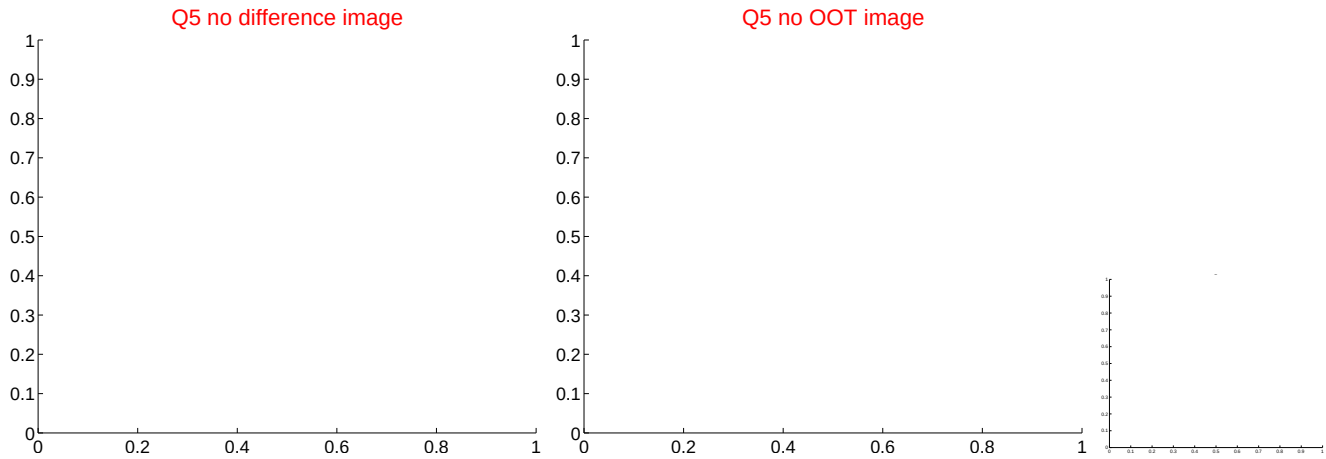


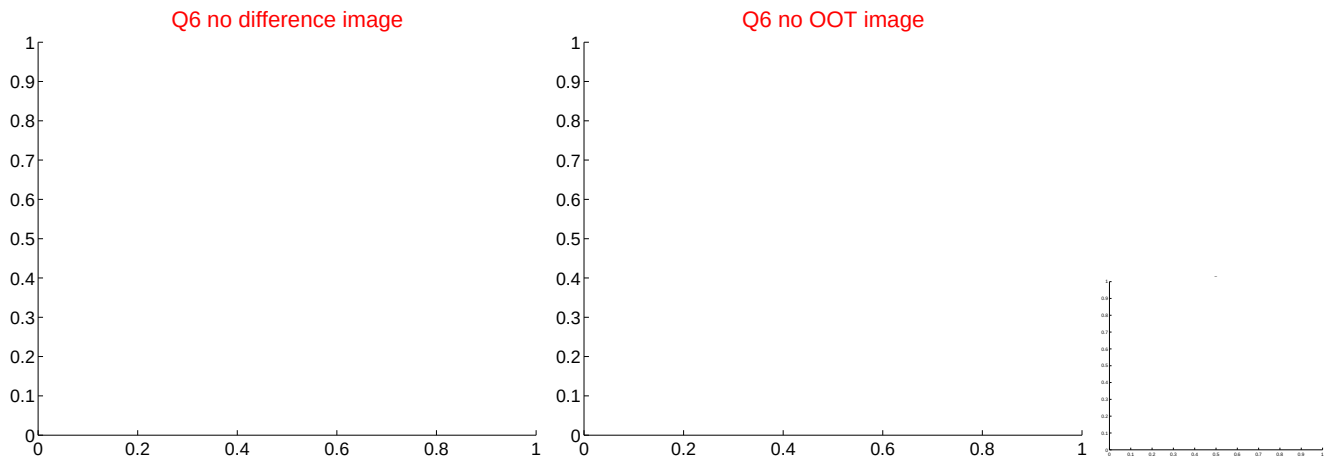
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

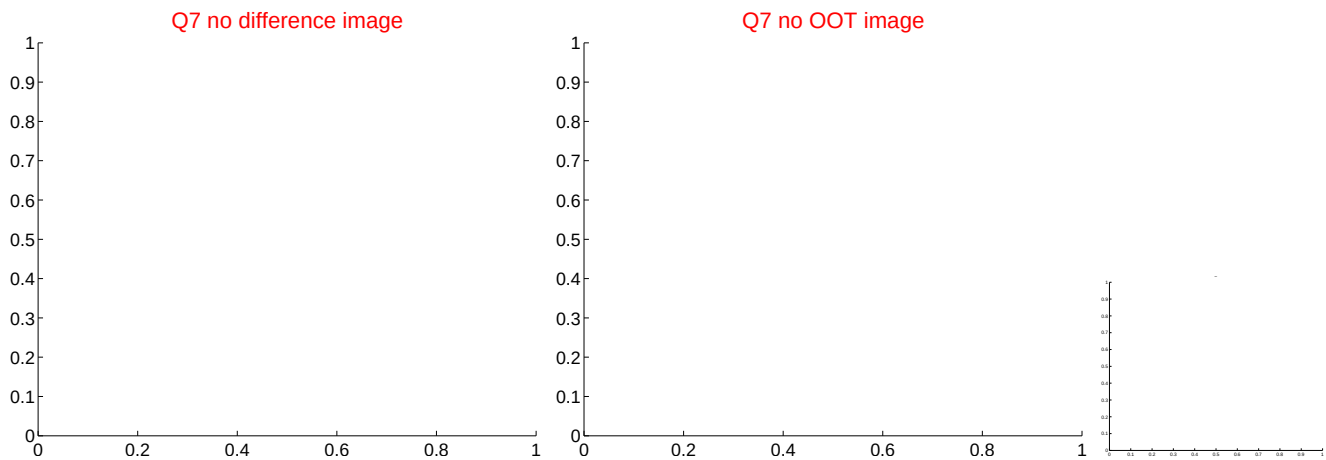
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

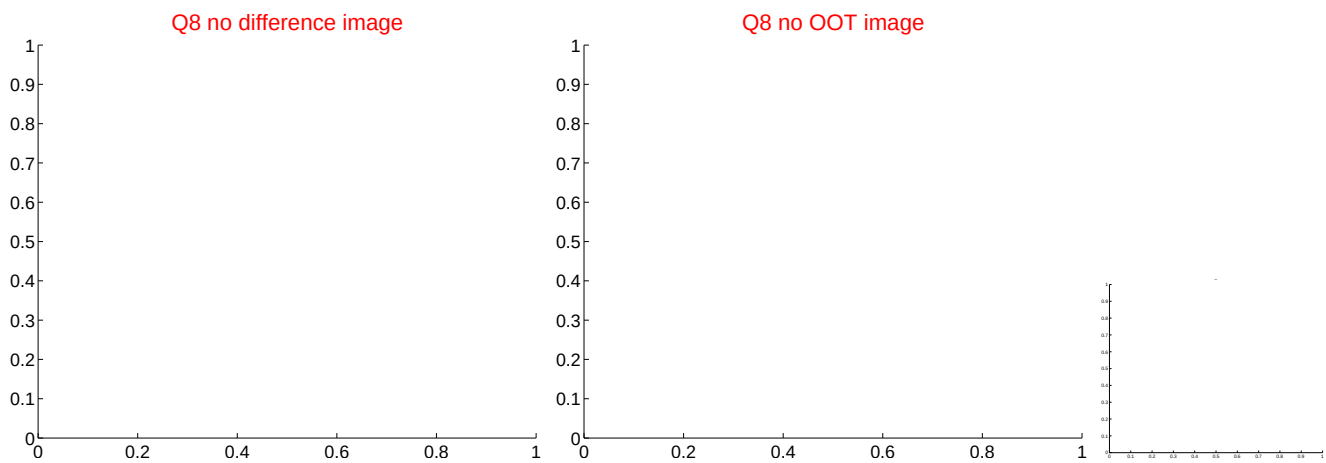


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

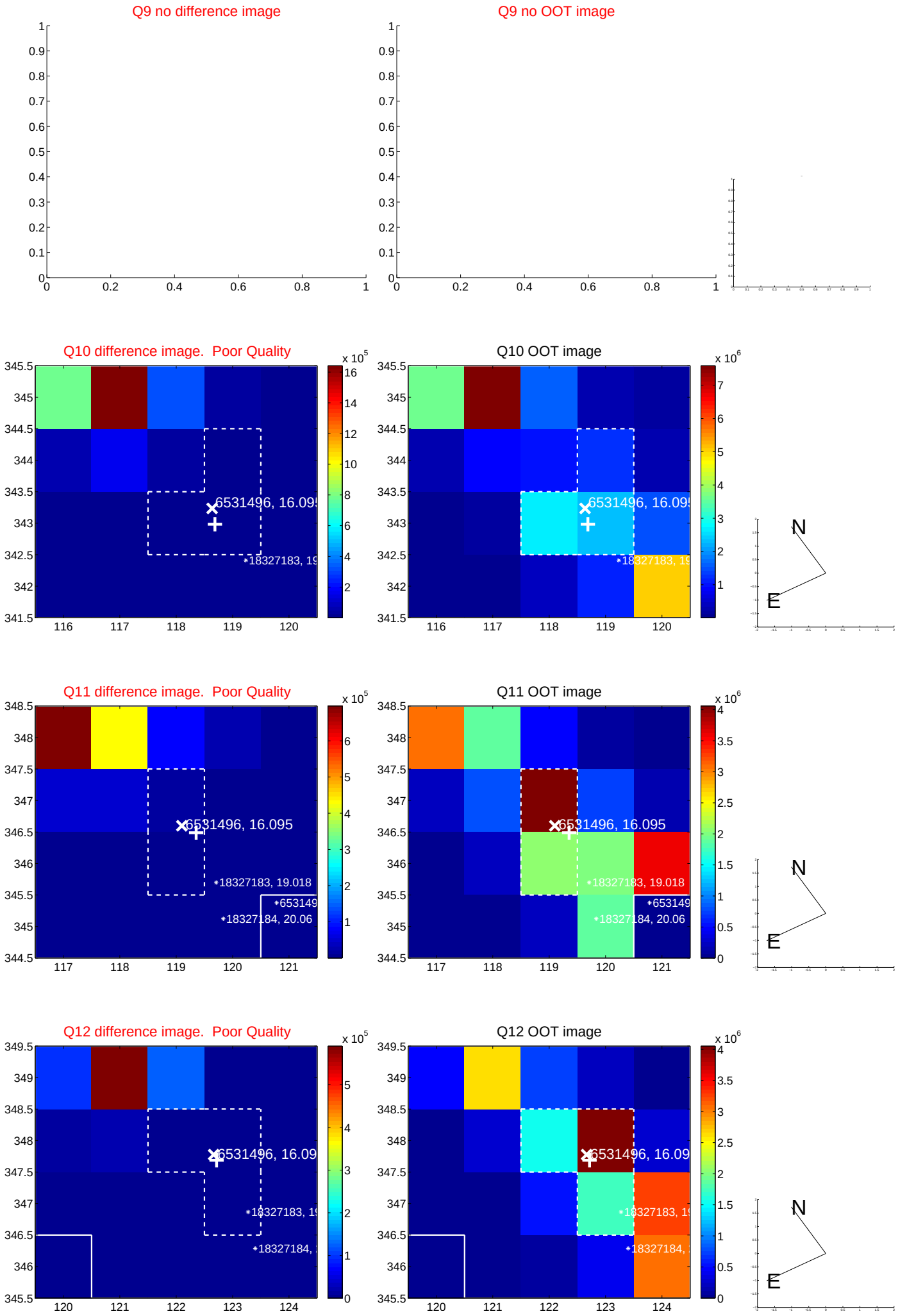




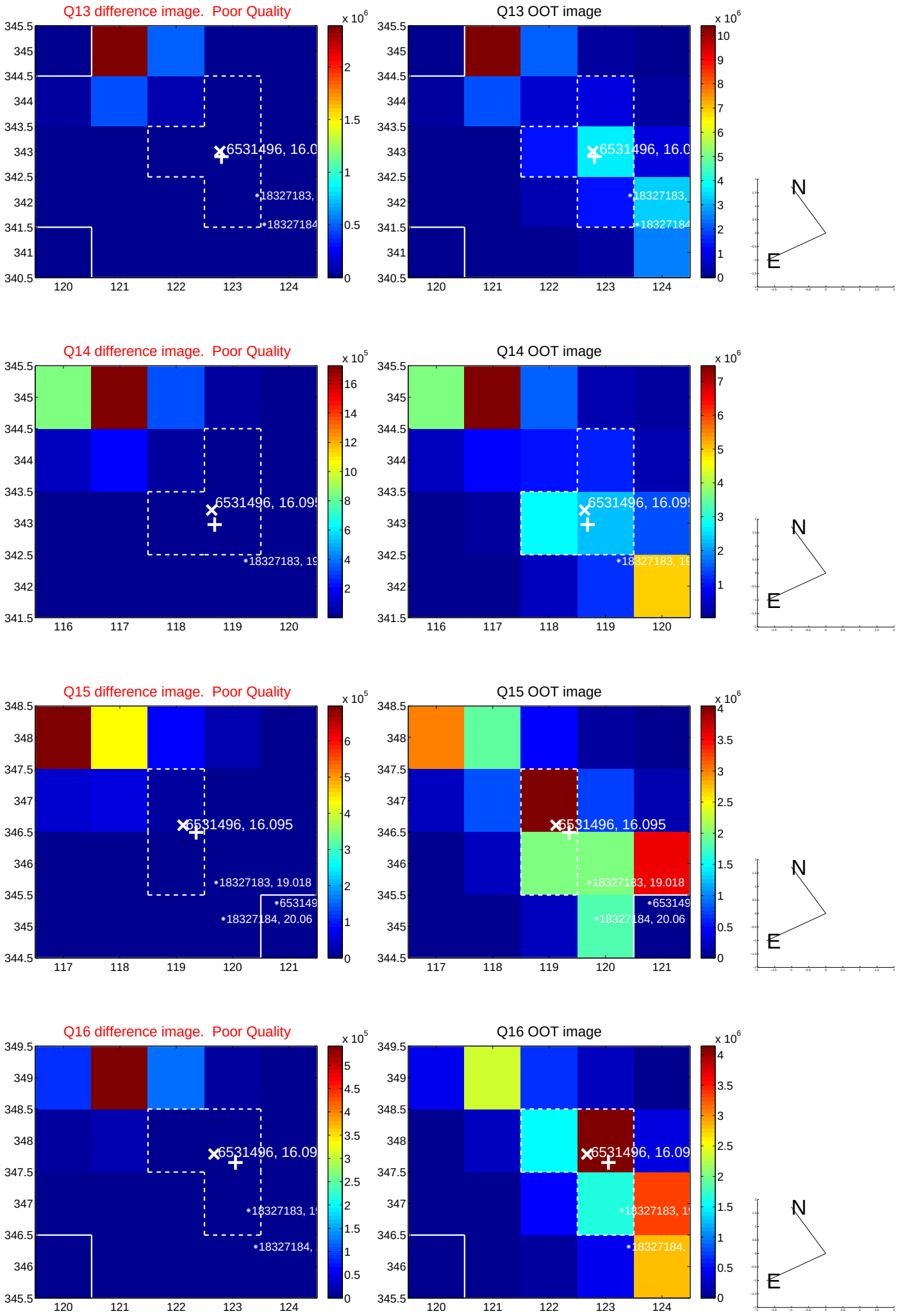




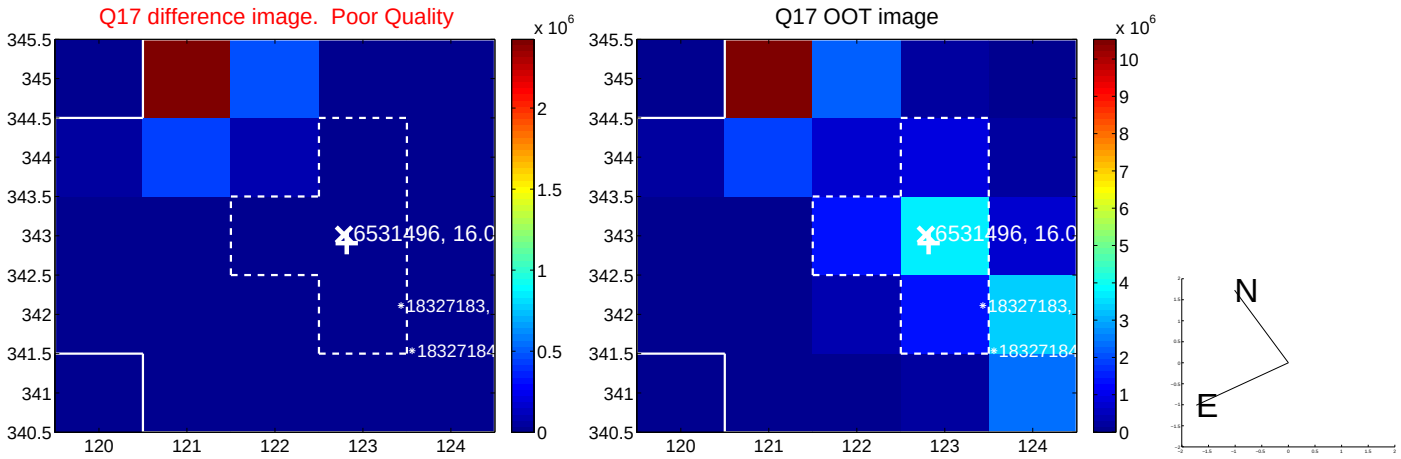
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

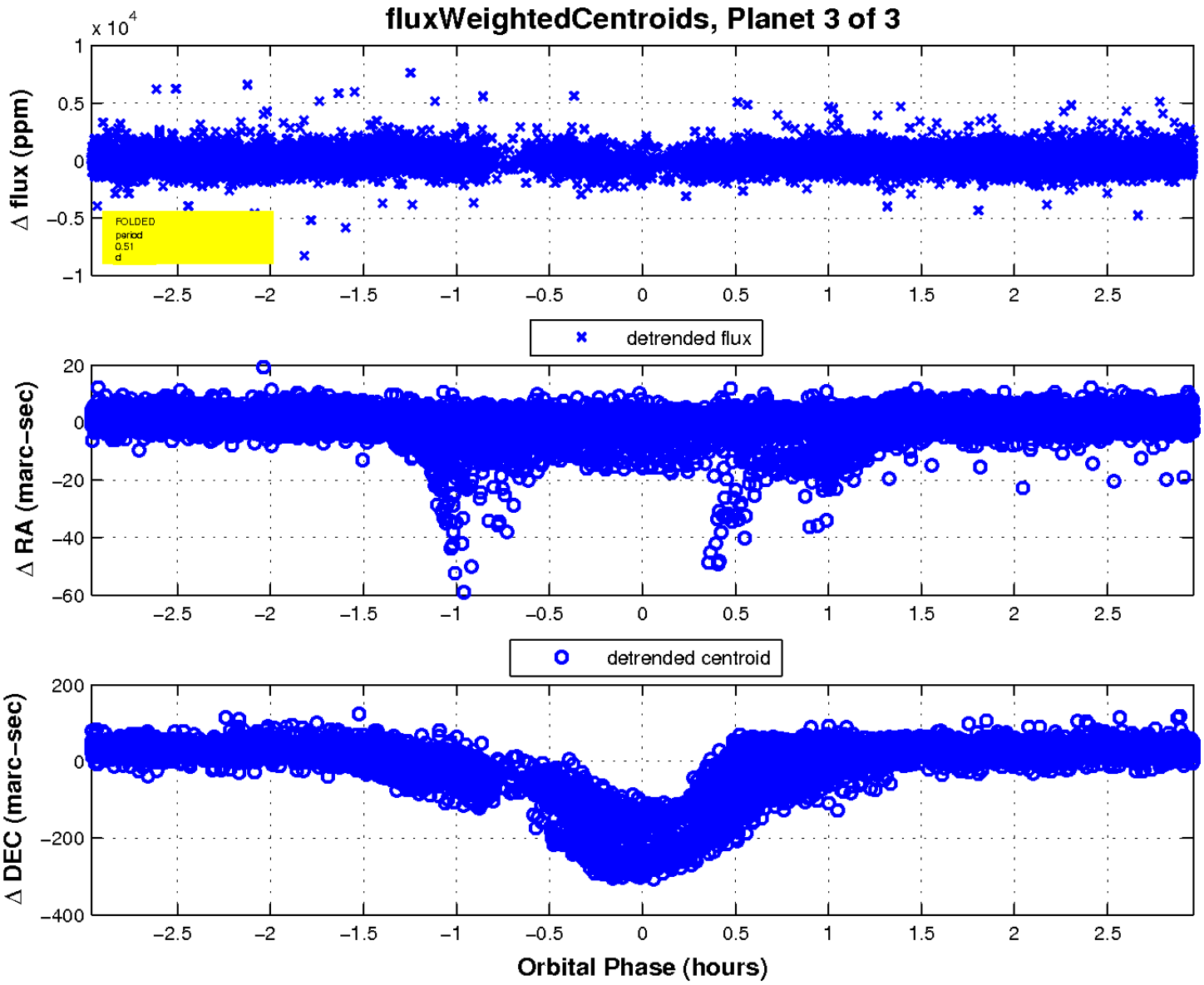


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

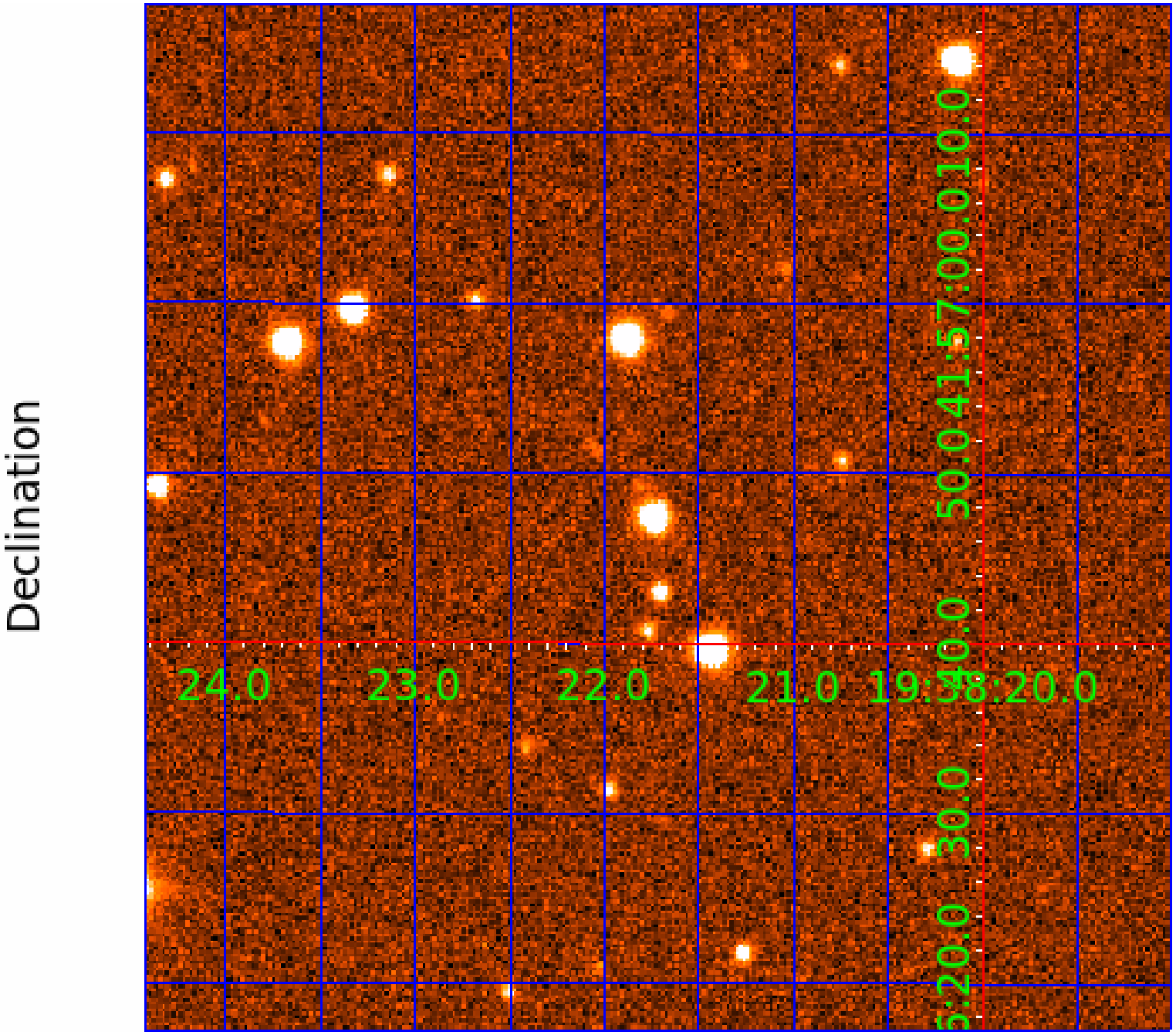


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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