KIC 009605514

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 ($S_\oplus$)
009605514-01	OBS	0945.02	40.715653	146.361778	709.0	7.065	21.3	22.9	1.03	6297	2.90	26.38
009605514-02	OBS	0945.01	25.847595	137.176434	510.5	6.106	19.9	20.9	1.03	6297	2.58	48.35
009605514-03	OBS	0945.03	66.790329	184.459787	381.7	5.458	7.5	8.5	1.03	6297	2.57	13.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009605514-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
009605514-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
009605514-03	OBS	FP	0.14	1	0	0	0	MOD_NONUNIQ_ALT

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.

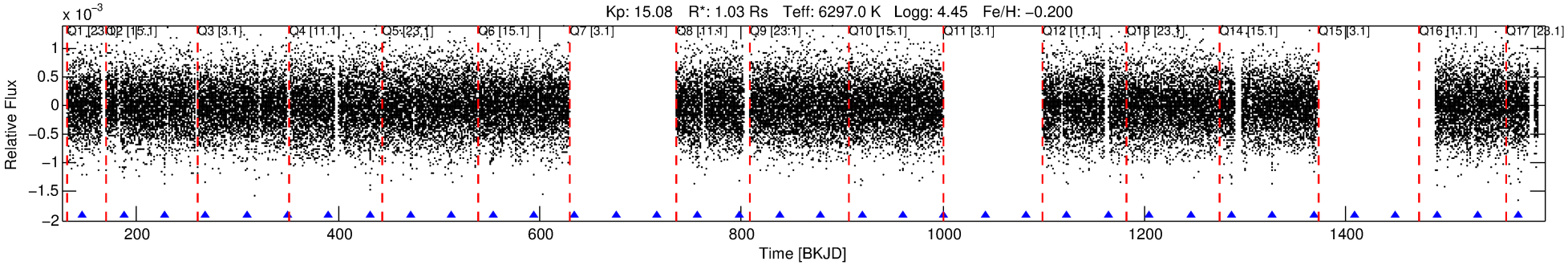
Ephemeris Match Information For 009605514-01

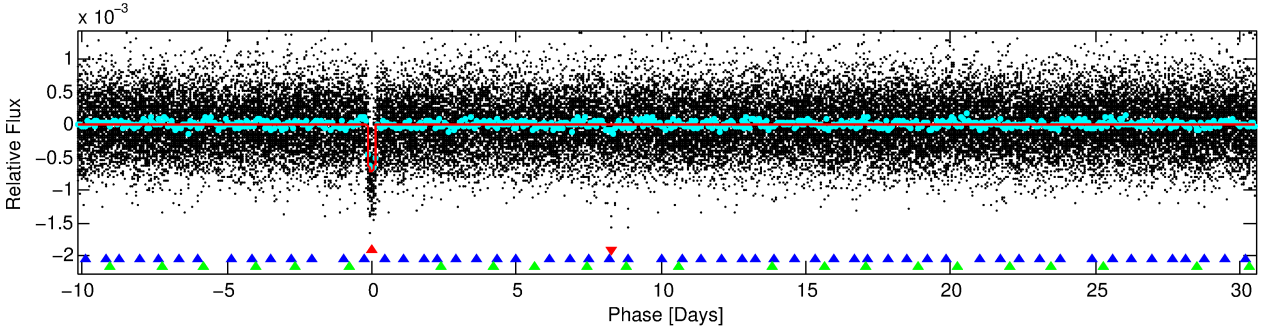
No Significant Match Found

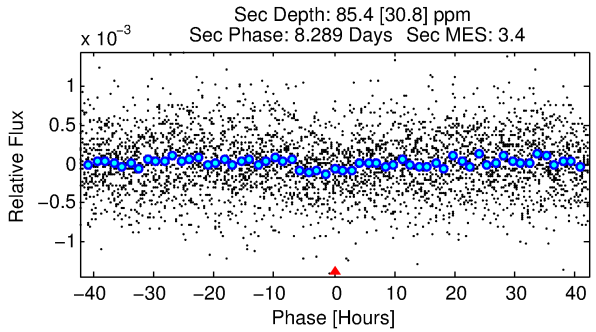
DV One-Page Summary

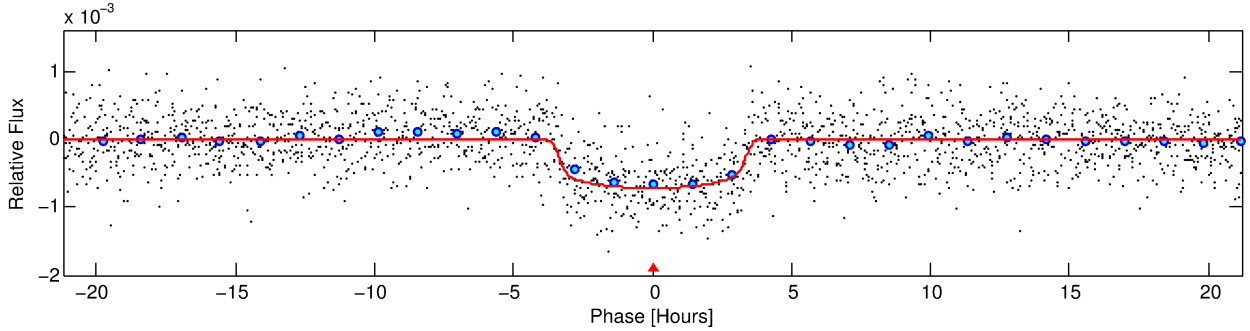
KIC: 9605514 Candidate: 1 of 3 Period: 40.716 d
KOI: K00945.02 Corr: 0.994

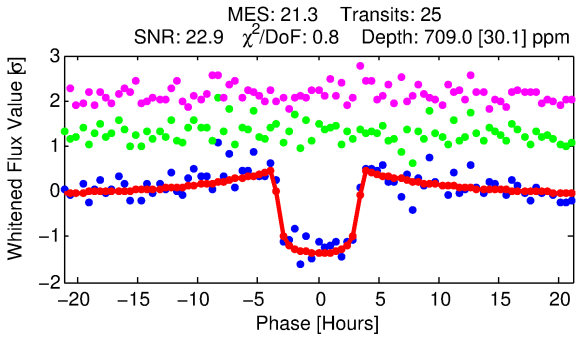
Kp: 15.08 R*: 1.03 Rs Teff: 6297.0 K Logg: 4.45 Fe/H: −0.200

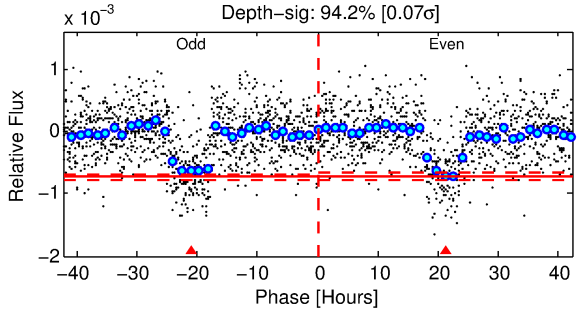


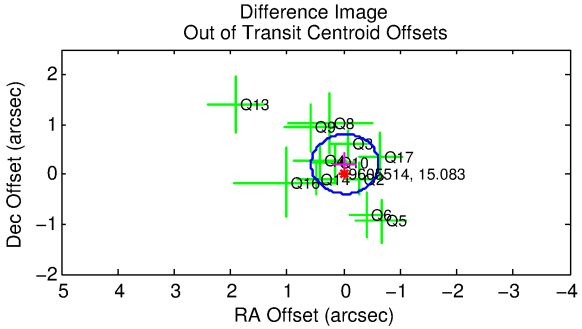












DV Fit Results:

Period = 40.71565 [0.00020] d
Epoch = 146.3618 [0.0040] BKJD
Rp/R* = 0.0257 [0.0056]
a/R* = 35.34 [39.75]
b = 0.64 [1.05]

Seff = 26.38 [10.72]
Teq = 578 [59] K
Rp = 2.89 [1.10] Re
a = 0.2383 [0.0623] AU

Ag = 318.47 [217.84] [1.46σ]
Teffp = 3774 [553] K [5.75σ]

DV Diagnostic Results:

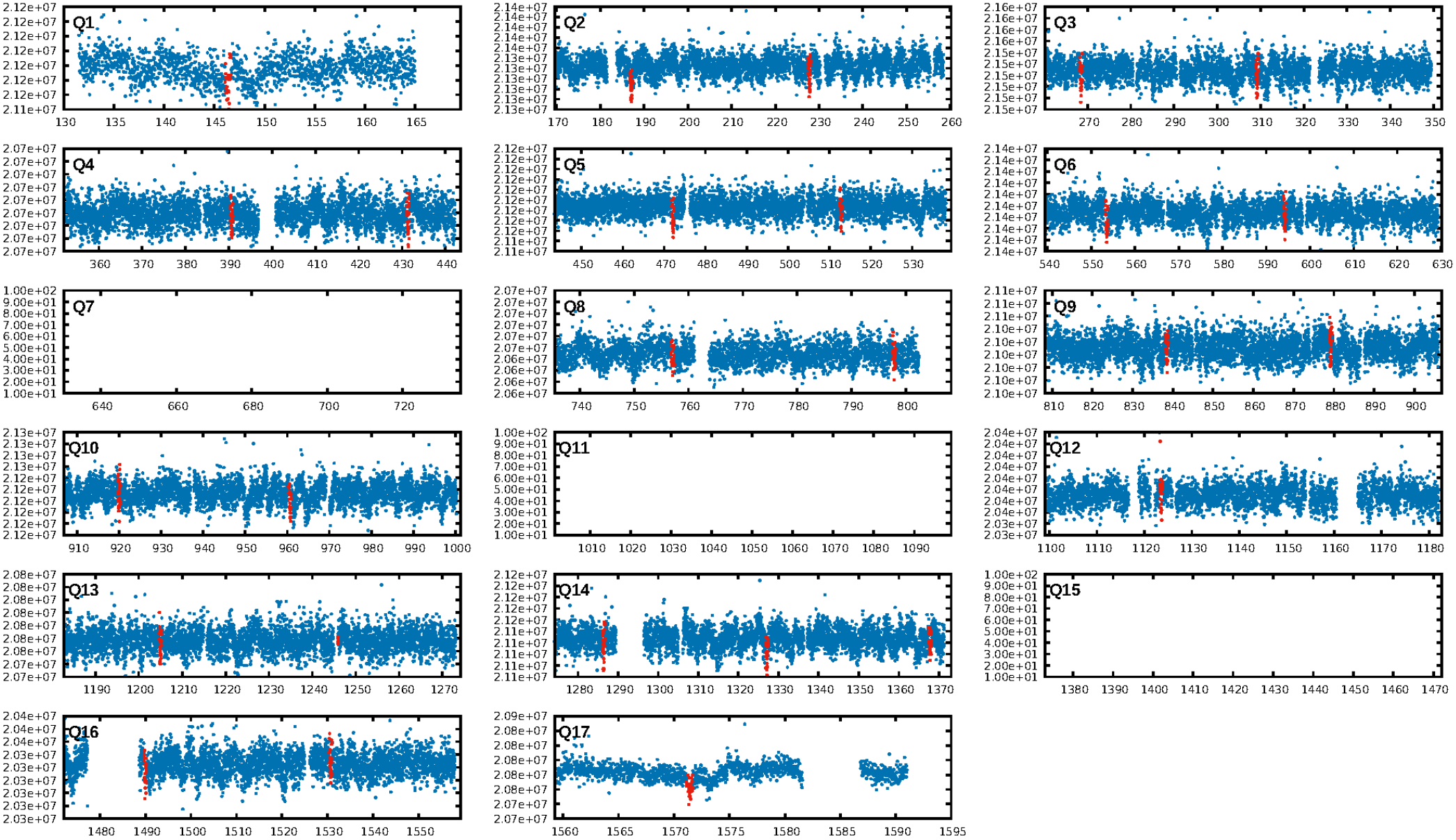
ShortPeriod−sig: 100.0% [38.21σ]
LongPeriod−sig: 100.0% [70.09σ]
ModelChiSquare2−sig: 96.8%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: 1.09e−99
RollingBand−fgt: 1.00 [23/23]
GhostDiagnostic−chr: 2.654

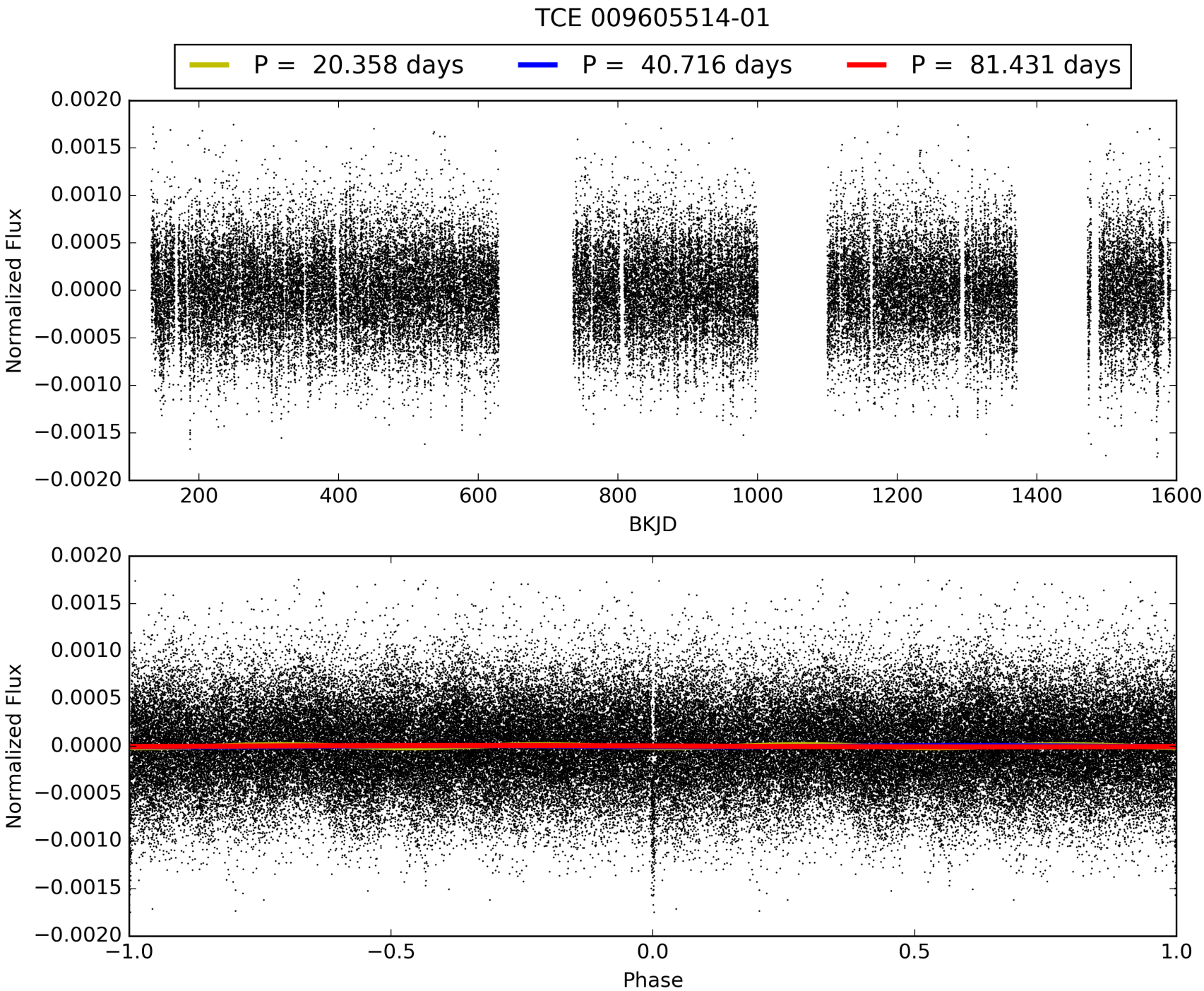
Centroid−sig: 38.8%
Centroid−so: 0.149 arcsec [0.33σ]
OotOffset−rm: 0.203 arcsec [1.03σ]
KicOffset−rm: 0.372 arcsec [1.81σ]
OotOffset−st: 4/1/3/4 [12]
KicOffset−st: 4/1/3/4 [12]
DiffImageQuality−fgm: 1.00 [12/12]
DiffImageOverlap−fno: 1.00 [13/13]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 15:13:19 Z

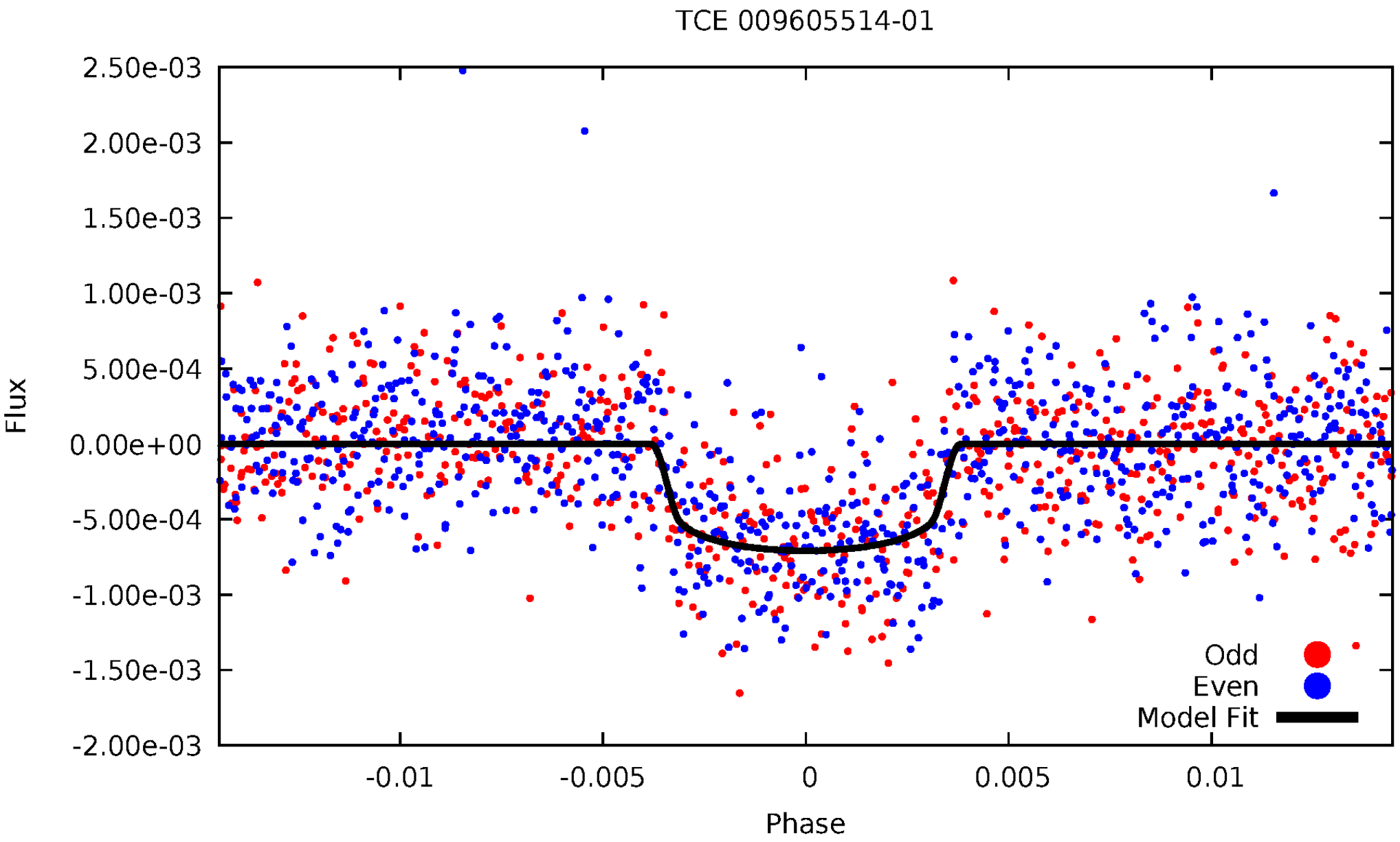
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009605514-01, PDC Light Curves

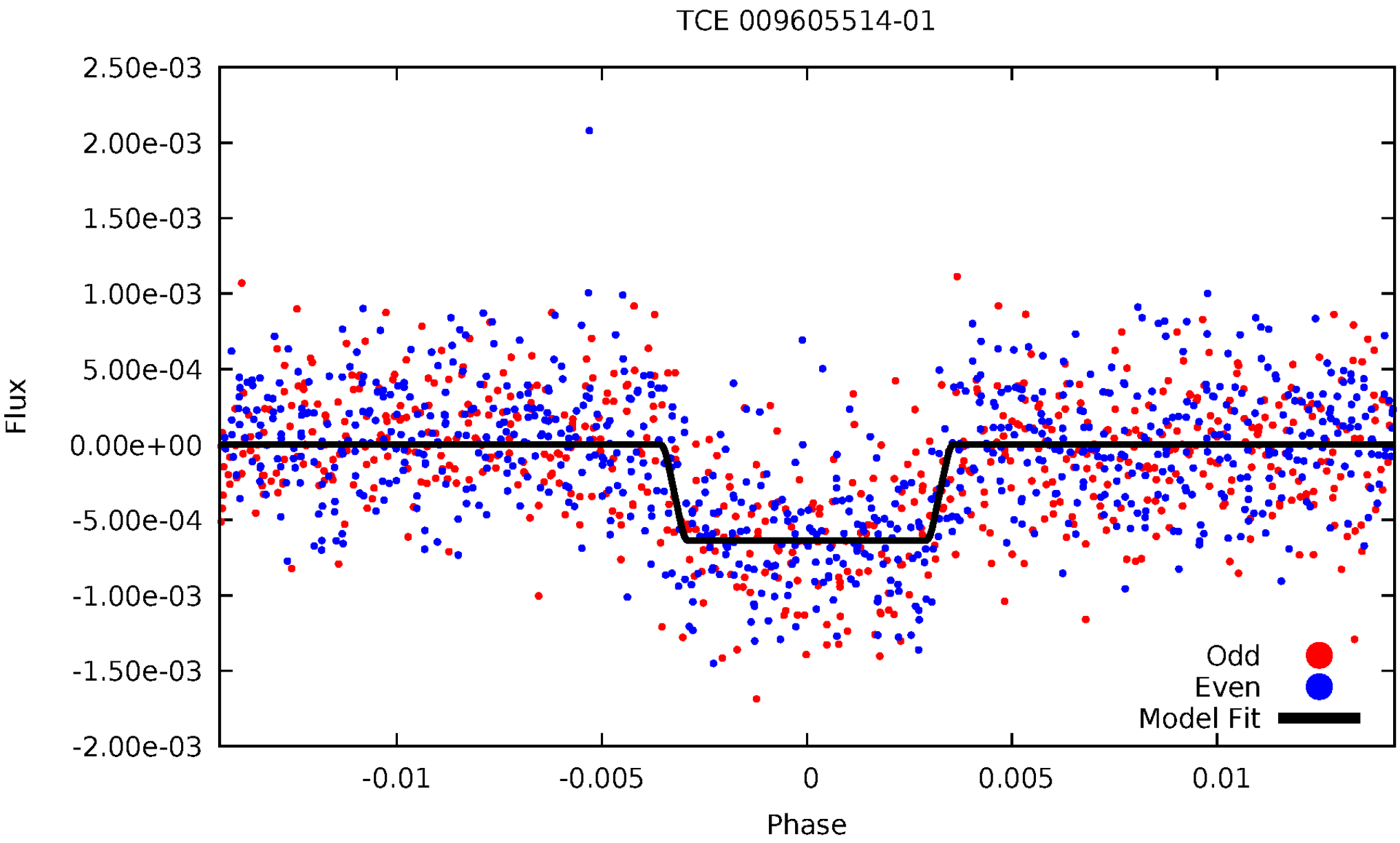



TCE 009605514-01
P = 20.358 days
P = 40.716 days
P = 81.431 days
Normalized Flux
BKJD
Normalized Flux
Phase

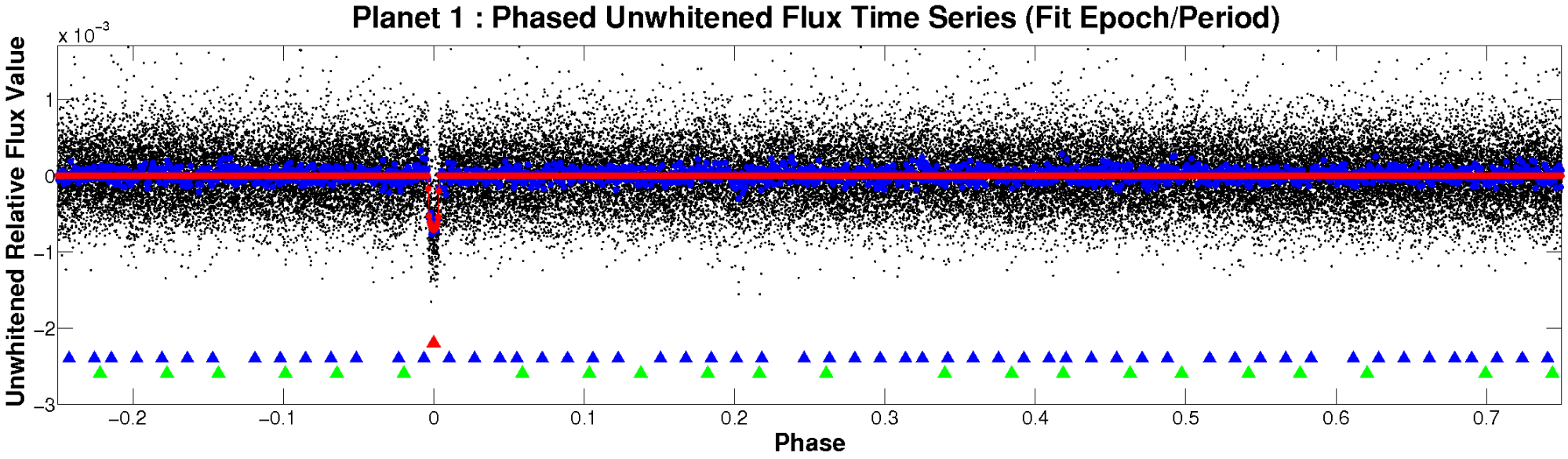
DV Odd/Even

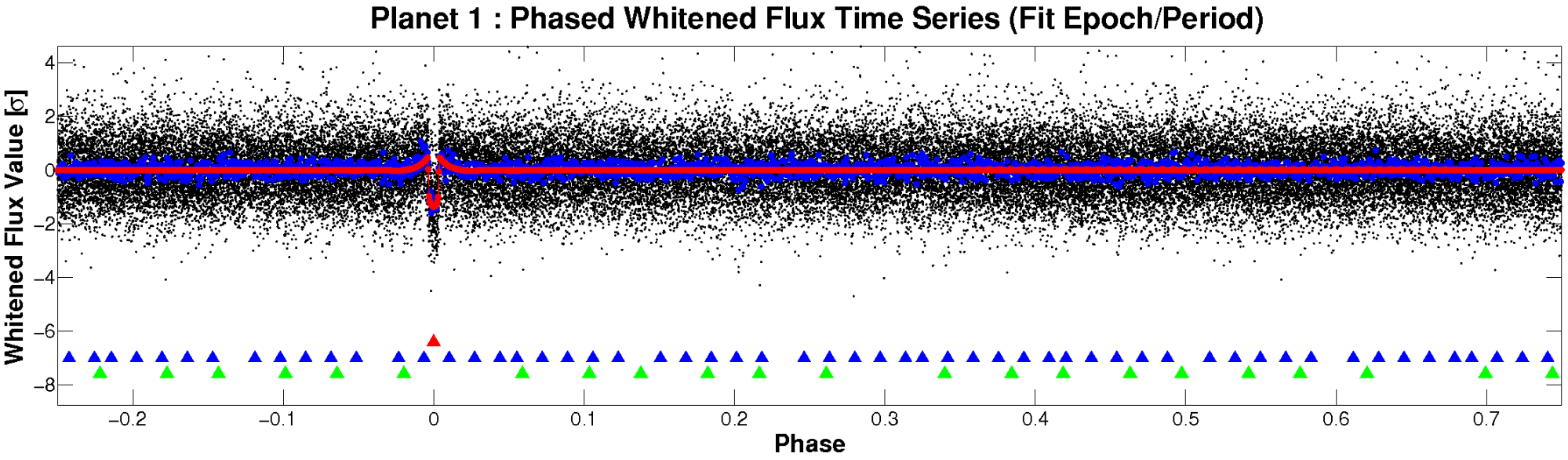

TCE 009605514-01
2.50e-03
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
Flux
-0.01
-0.005
0
0.005
0.01
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009605514-01
2.50e-03
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
Flux
-0.01
-0.005
0
0.005
0.01
Phase
Odd
Even
Model Fit

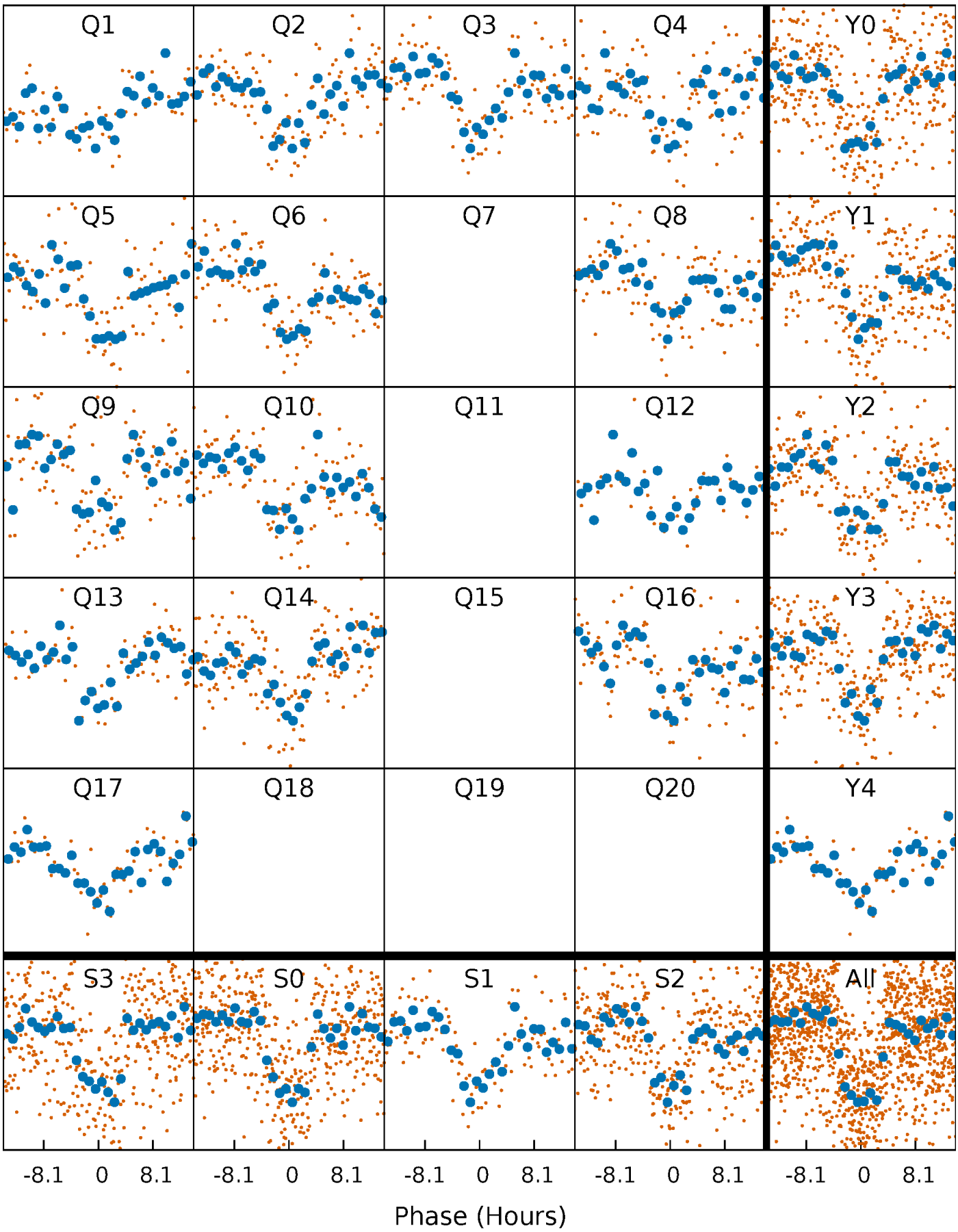
Non-Whitened Vs. Whitened Light Curve





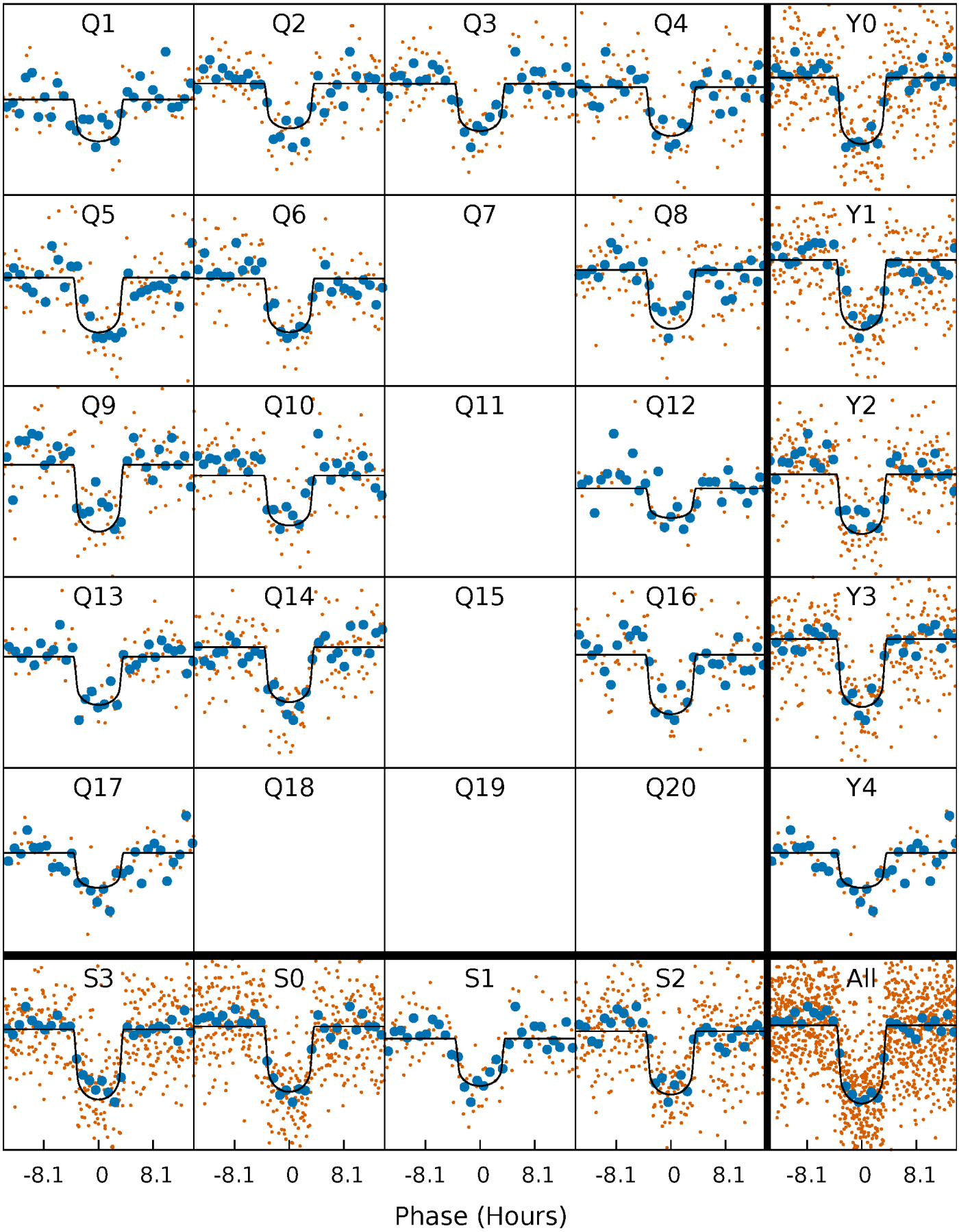
PDC Quarter-Phased Transit Curves

TCE 009605514-01 P= 40.715653 Days T_0=146.361778 (BKJD)



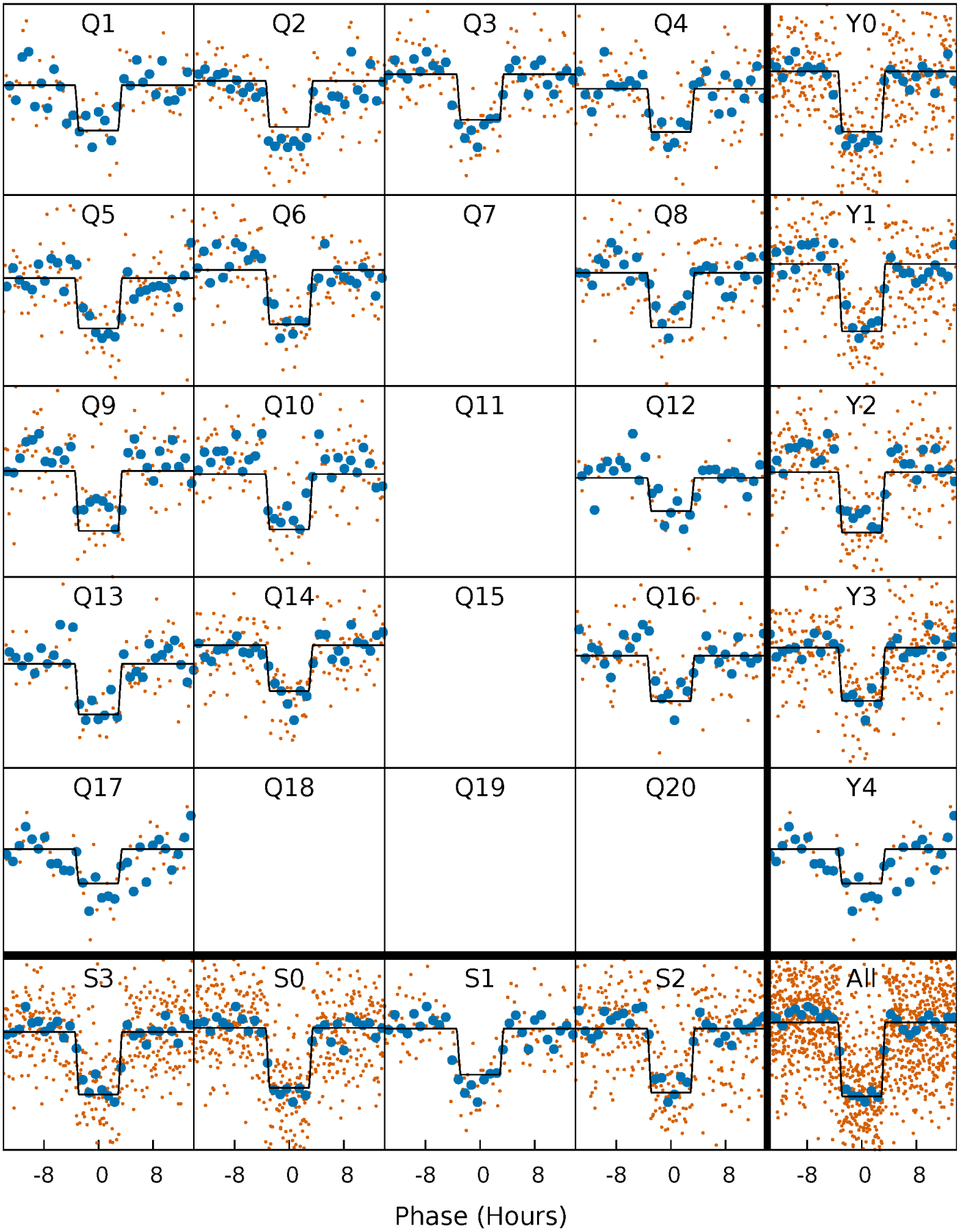
DV Quarter-Phased Transit Curves

TCE 009605514-01 P= 40.715653 Days T_0=146.361778 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

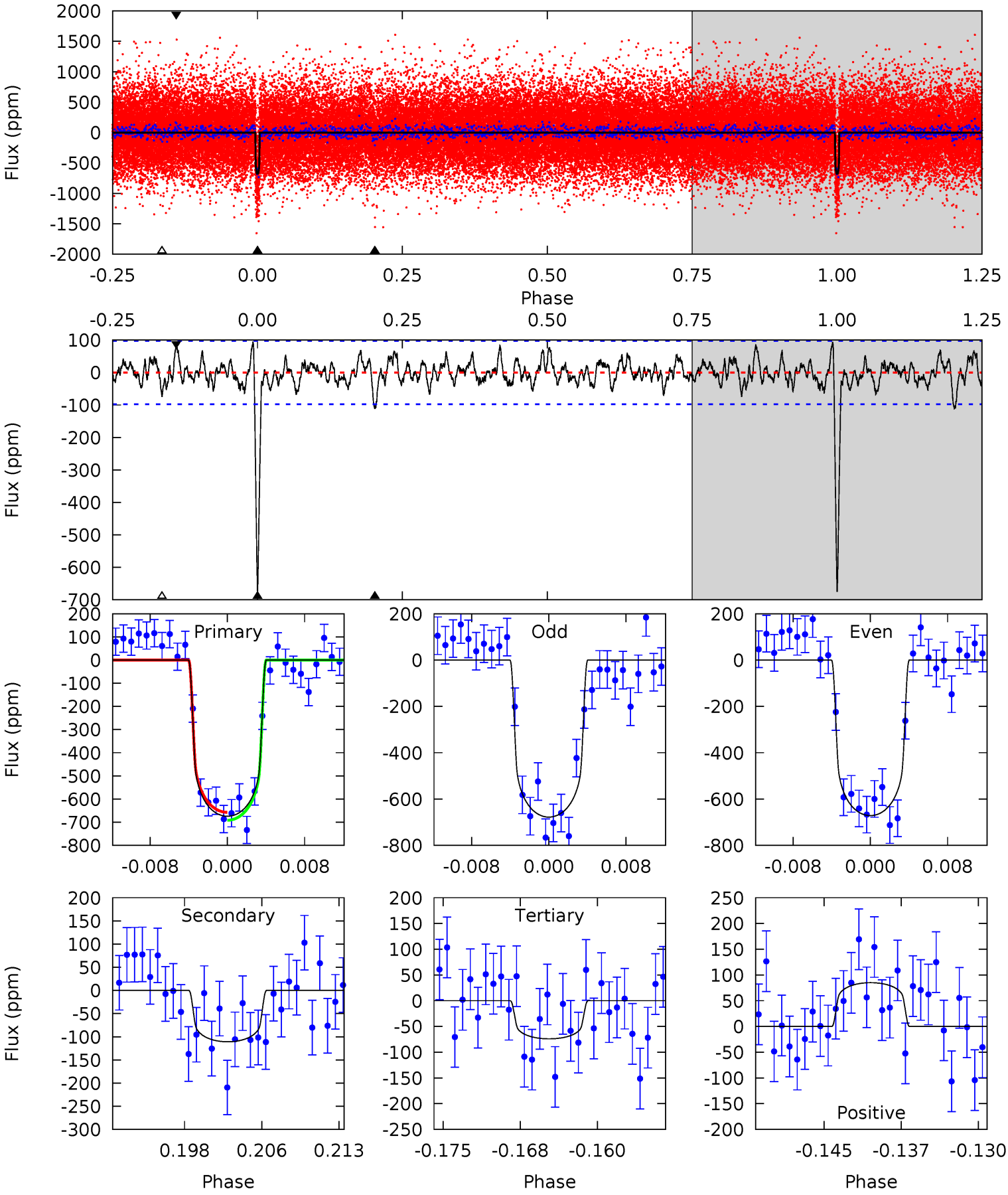
TCE 009605514-01 P= 40.714689 Days T_0=146.379199 (BKJD)



DV Model-Shift Uniqueness Test

009605514-01, P = 40.715653 Days, E = 105.646125 Days

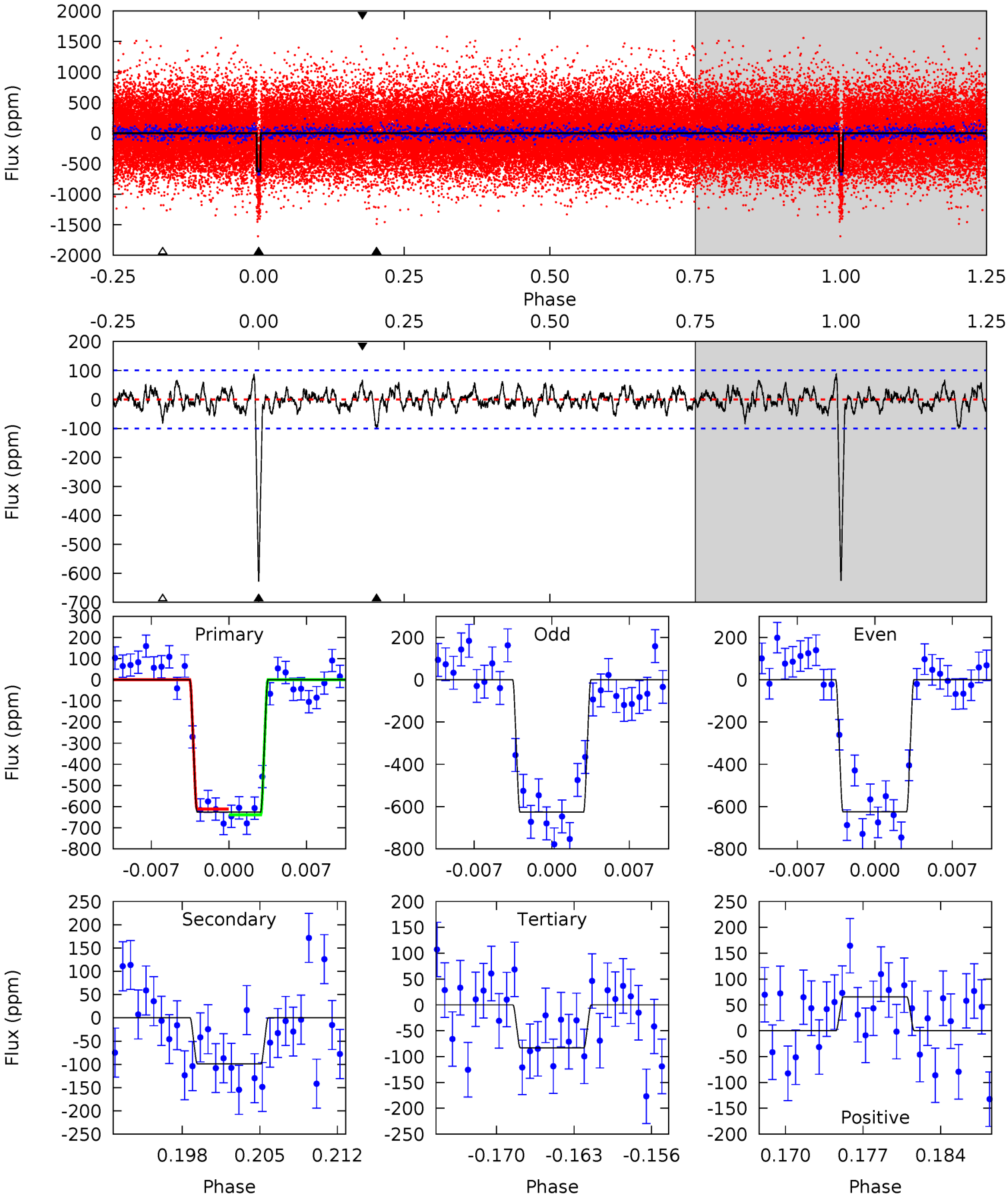
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.0	5.75	3.84	4.41	5.08	2.67	1.46	31.2	30.6	1.91	1.34	0.16	0.97	0.12	0.89



Alt Model-Shift Uniqueness Test

009605514-01, P = 40.714689 Days, E = 105.664510 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.7	5.02	4.21	3.33	5.09	2.69	1.23	27.5	28.4	0.81	1.70	0.01	1.02	0.12	0.70



Stellar Parameters For KIC 009605514

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	6297^{+169}_{-225}	$4.448^{+0.052}_{-0.208}$	$-0.200^{+0.250}_{-0.350}$	$1.031^{+0.320}_{-0.107}$	$1.084^{+0.144}_{-0.144}$	$1.393^{+0.399}_{-0.744}$
	+3%/-4%	+1%/-5%	+125%/-175%	+31%/-10%	+13%/-13%	+29%/-53%
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 009605514-01 / KOI 0945.02

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-111±19	$3.03^{+0.80}_{-0.78}$	822^{+61}_{-40}	4241^{+499}_{-326}	363^{+269}_{-138}
Alt.	-99±20	$2.98^{+0.72}_{-0.67}$	824^{+61}_{-40}	4183^{+460}_{-333}	333^{+253}_{-131}

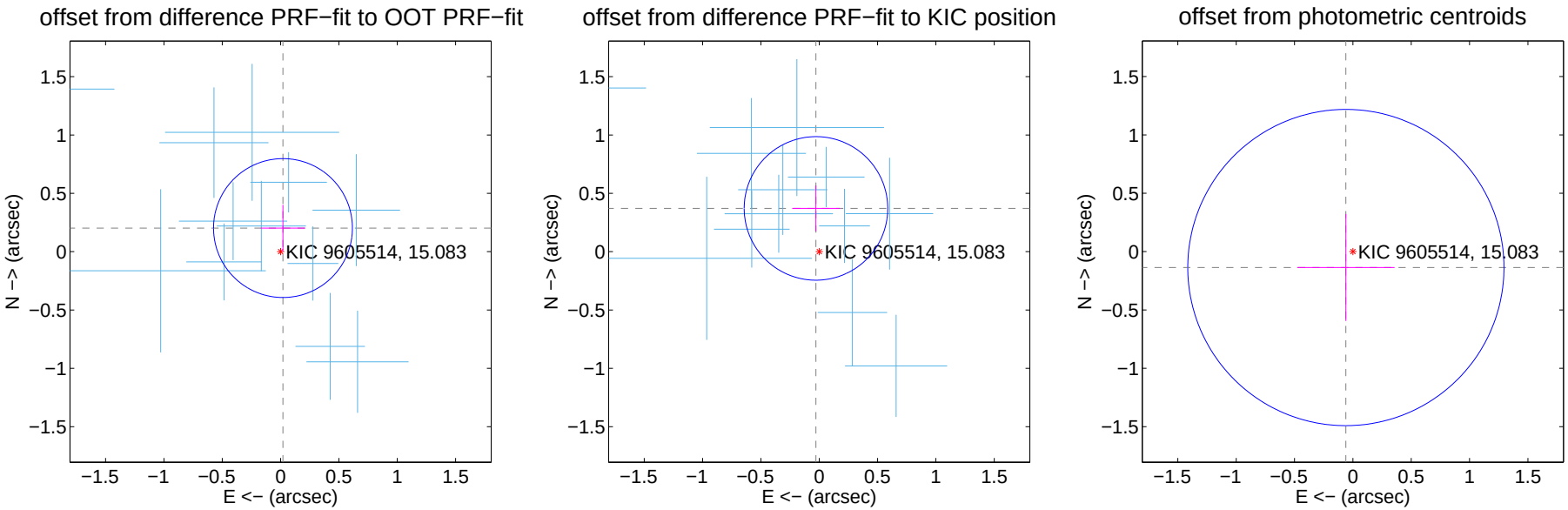
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

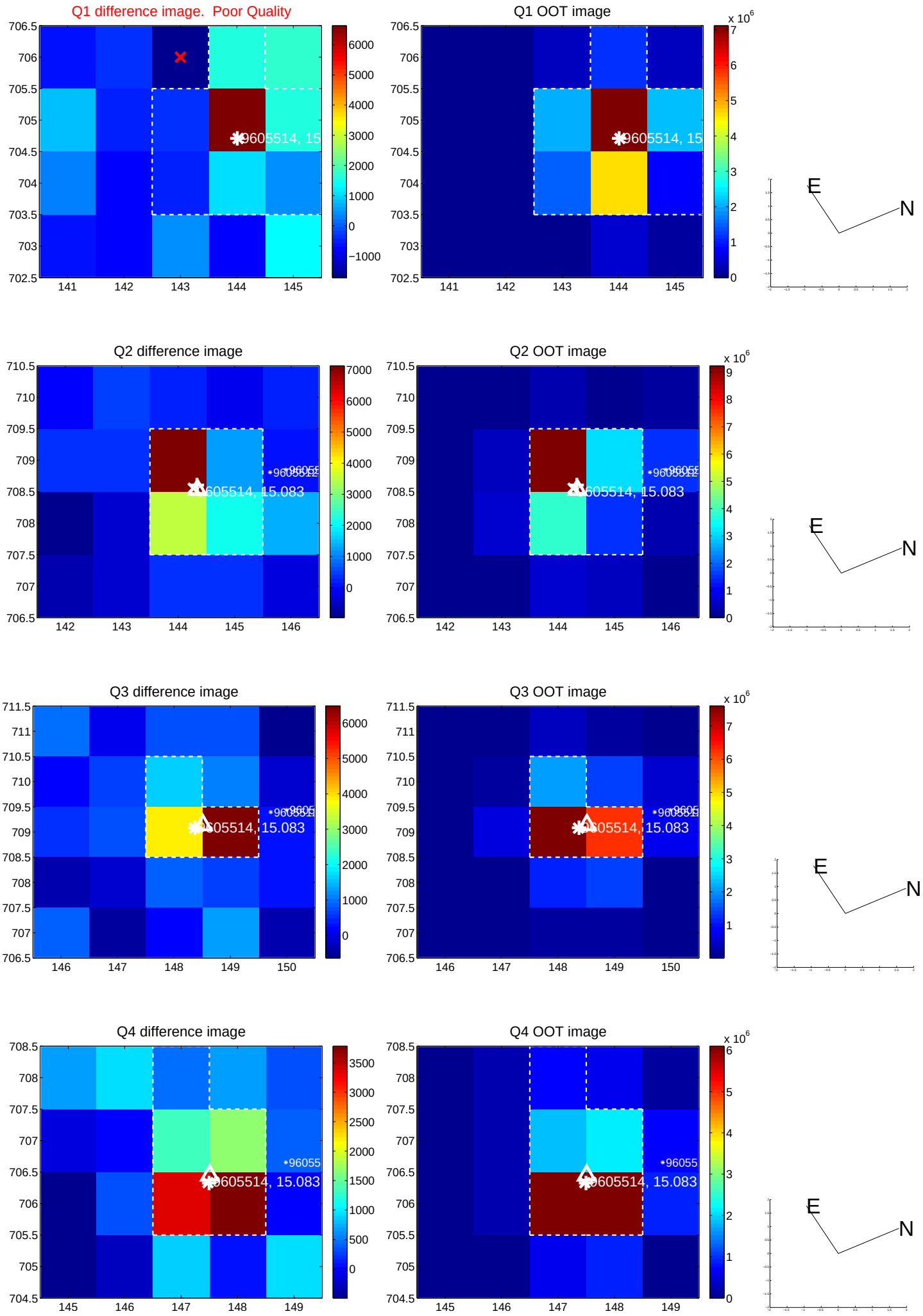
Supplemental centroid analysis for 009605514-01. Kepler magnitude: 15.08. Transit SNR 22.90
There are 12 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.203 ± 0.198	1.03	-0.020 ± 0.191	0.202 ± 0.198
PRF-fit source offset from KIC position	0.372 ± 0.205	1.81	0.028 ± 0.203	0.371 ± 0.197
photometric centroid source offset	0.15 ± 0.45	0.33	0.06 ± 0.42	-0.14 ± 0.46

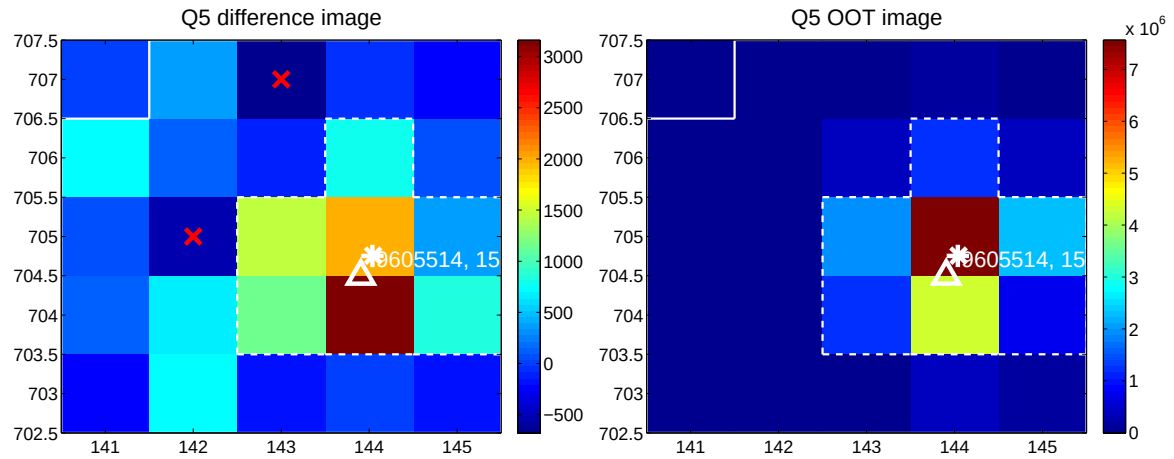


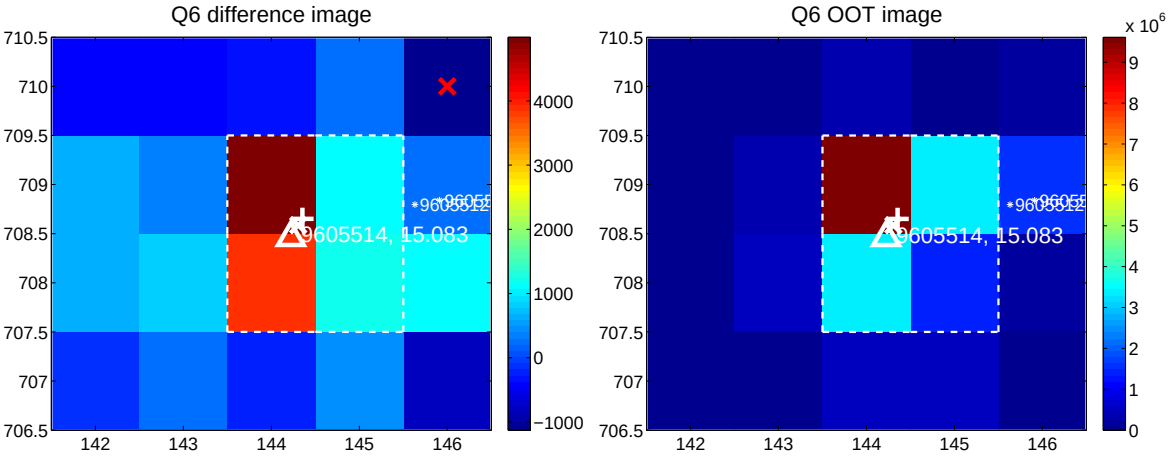
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

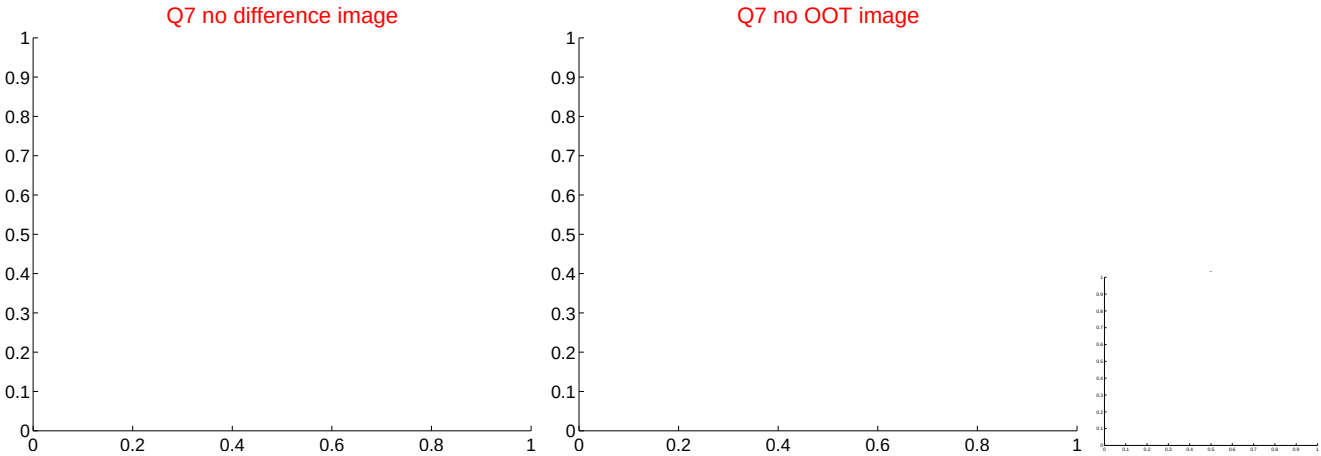
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

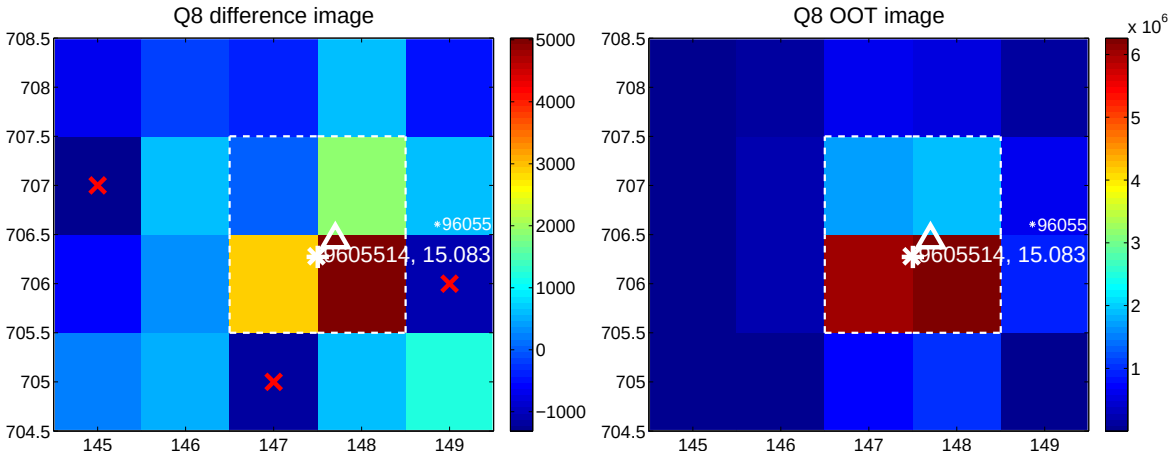


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

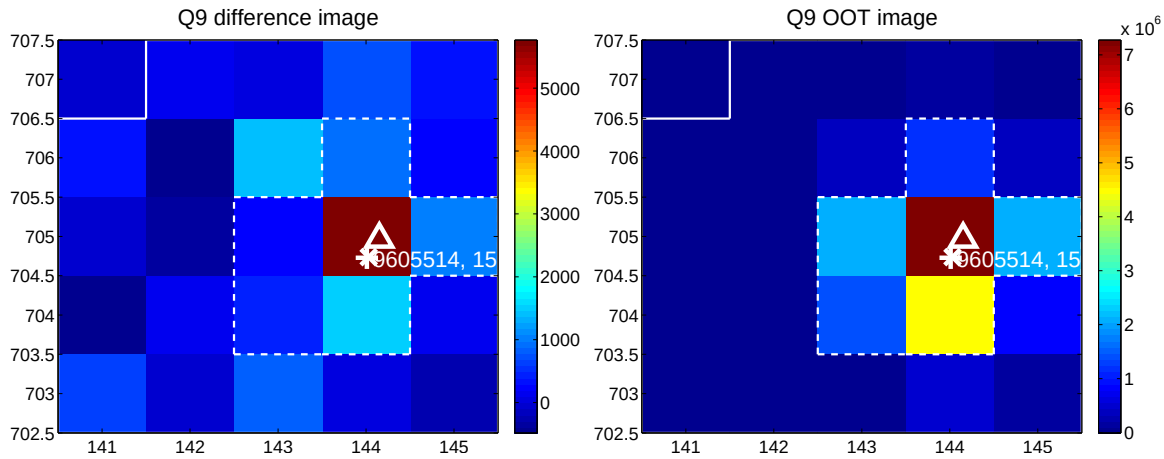


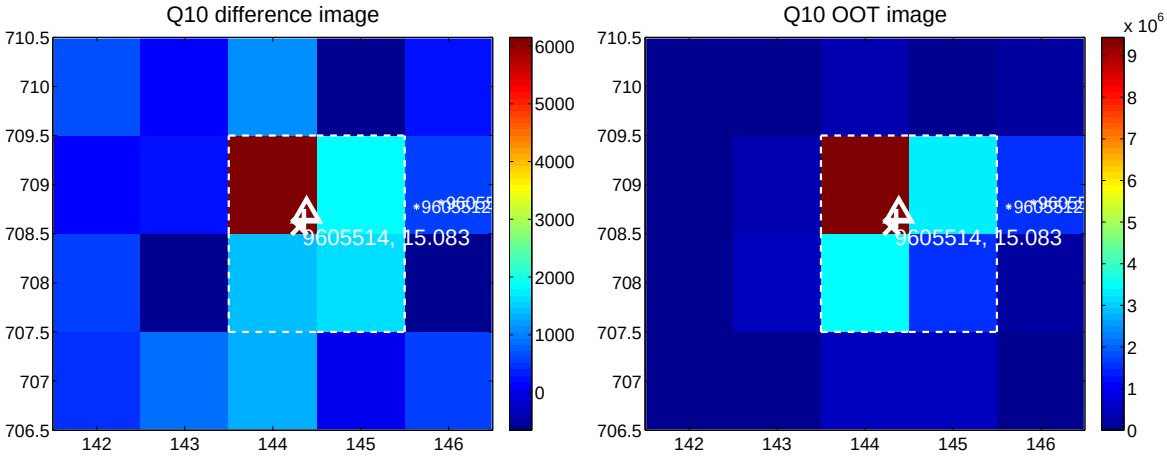


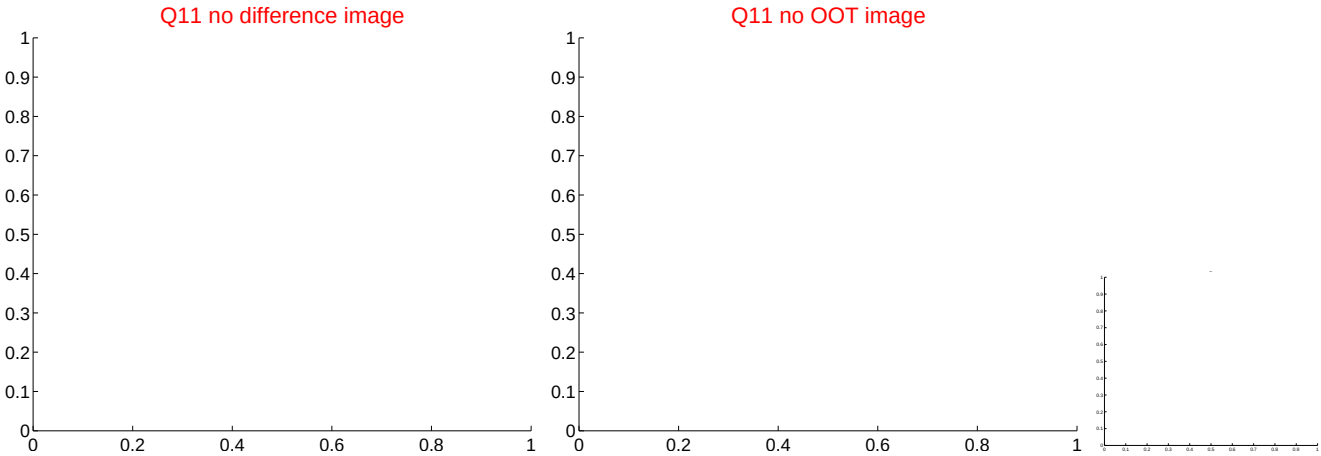


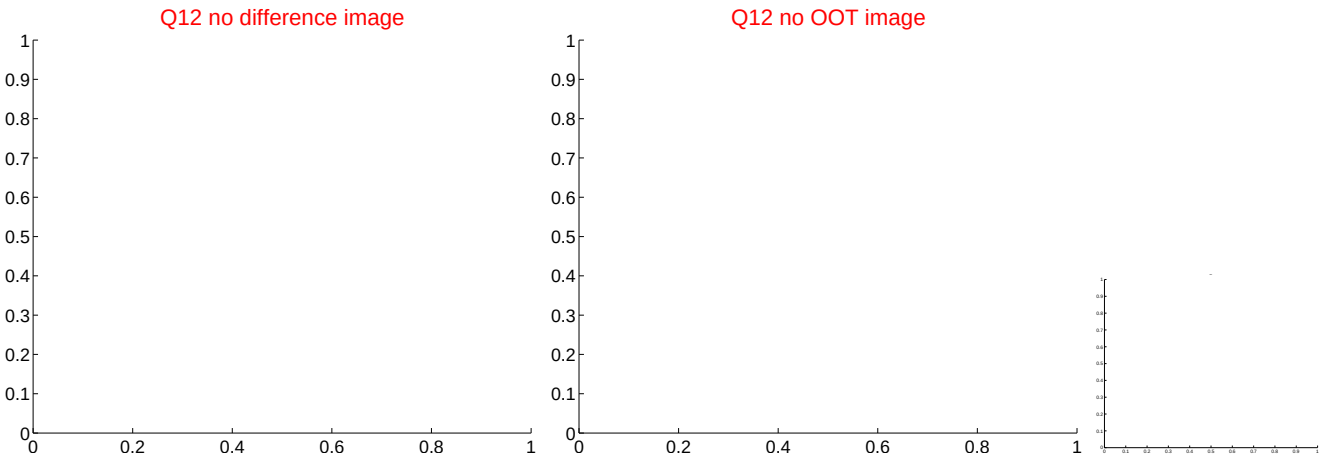


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

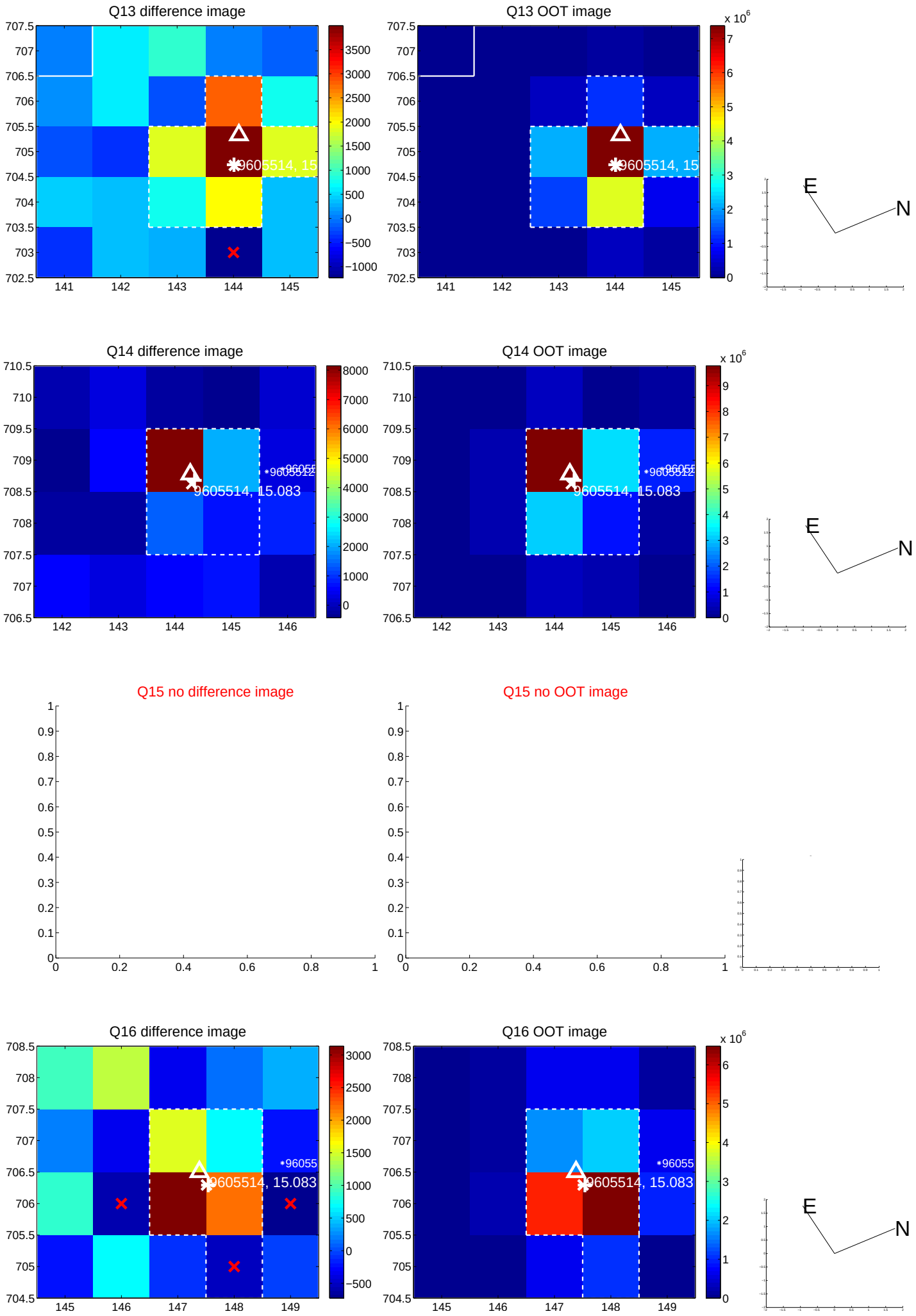




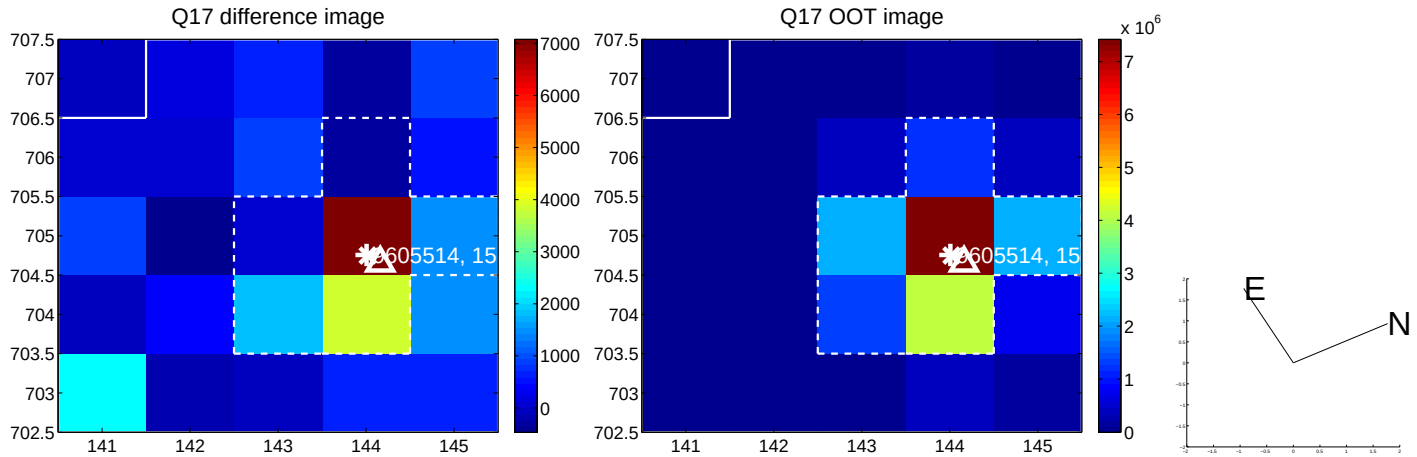


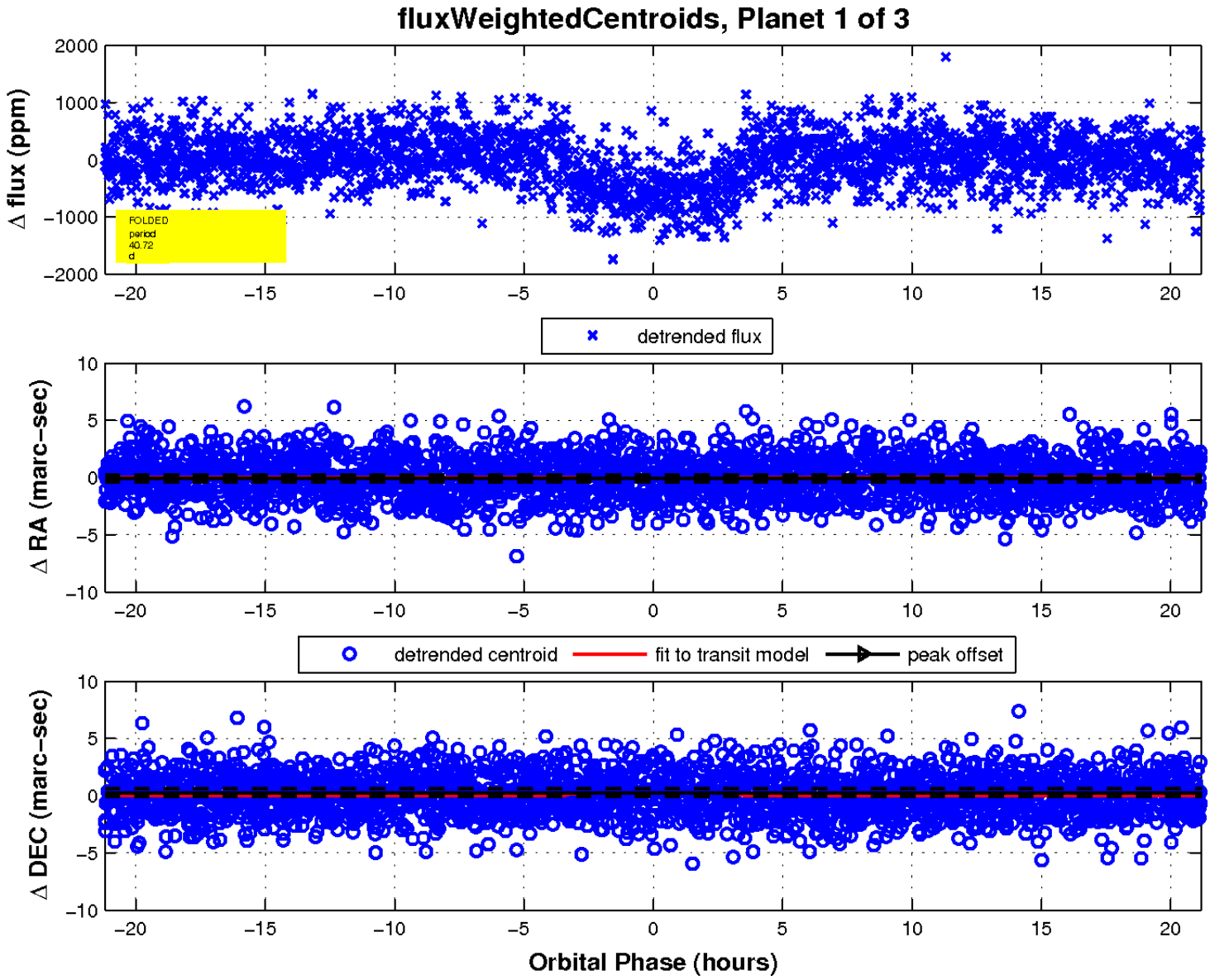


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

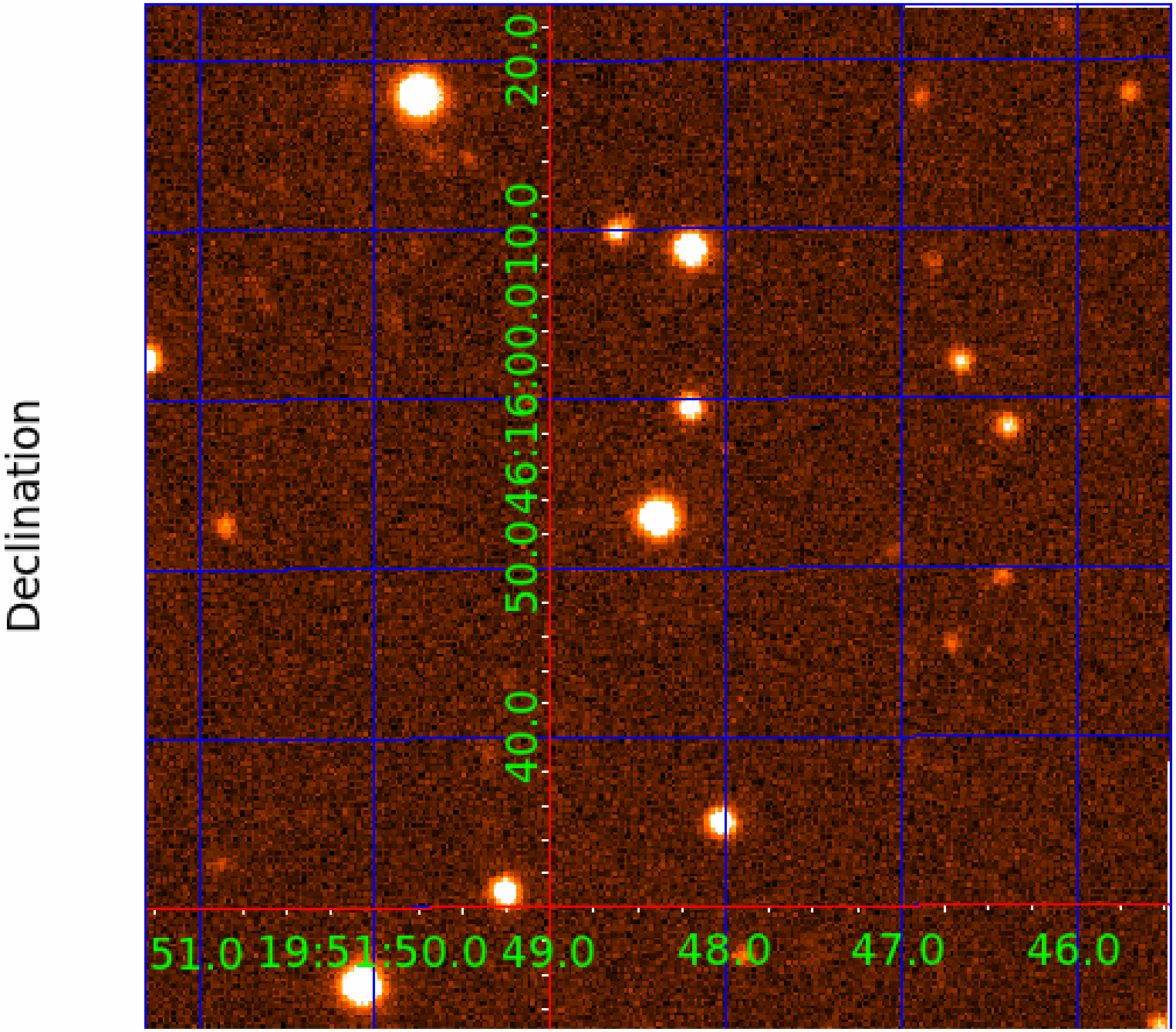


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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47.0
46.0

KIC 009605514

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 ($S_\oplus$)
009605514-01	OBS	0945.02	40.715653	146.361778	709.0	7.065	21.3	22.9	1.03	6297	2.90	26.38
009605514-02	OBS	0945.01	25.847595	137.176434	510.5	6.106	19.9	20.9	1.03	6297	2.58	48.35
009605514-03	OBS	0945.03	66.790329	184.459787	381.7	5.458	7.5	8.5	1.03	6297	2.57	13.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009605514-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
009605514-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
009605514-03	OBS	FP	0.14	1	0	0	0	MOD_NONUNIQ_ALT

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.

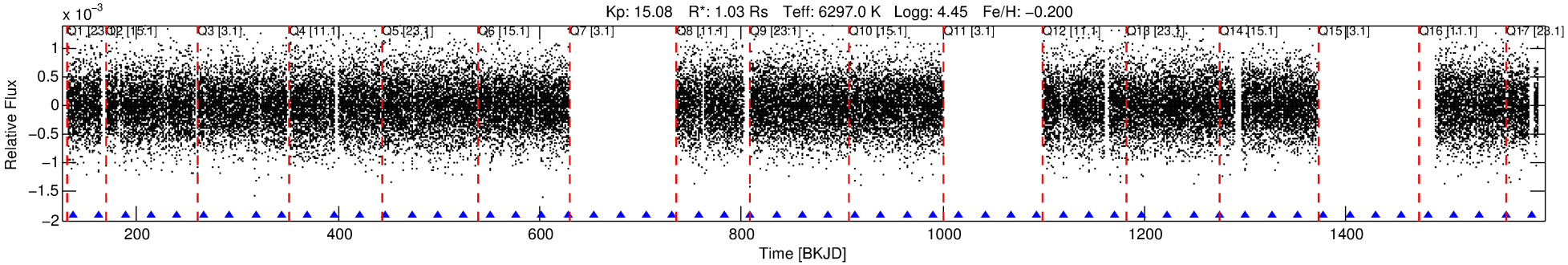
Ephemeris Match Information For 009605514-02

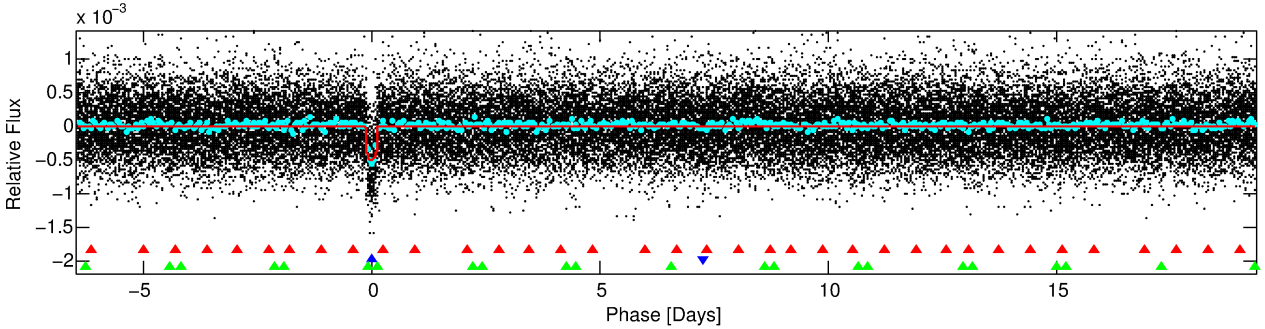
No Significant Match Found

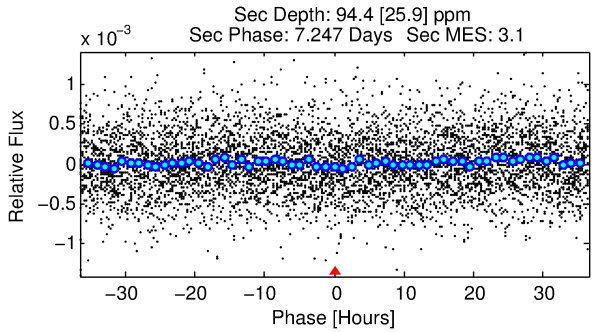
DV One-Page Summary

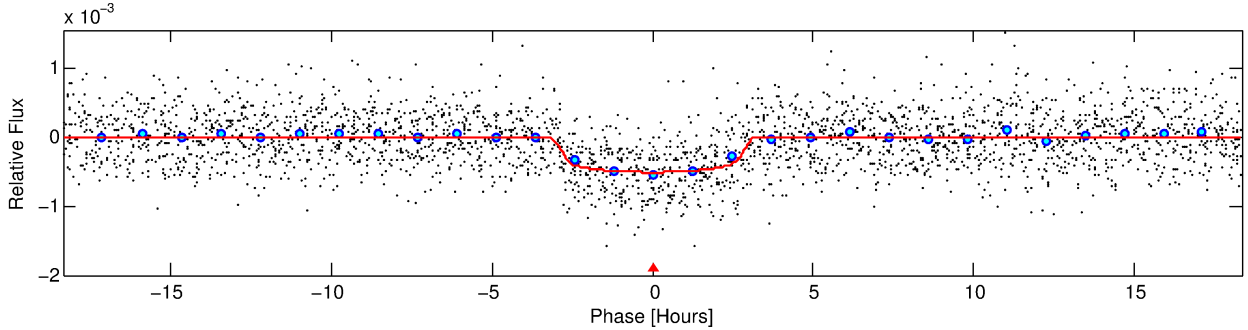
KIC: 9605514 Candidate: 2 of 3 Period: 25.848 d
KOI: K00945.01 Corr: 0.989

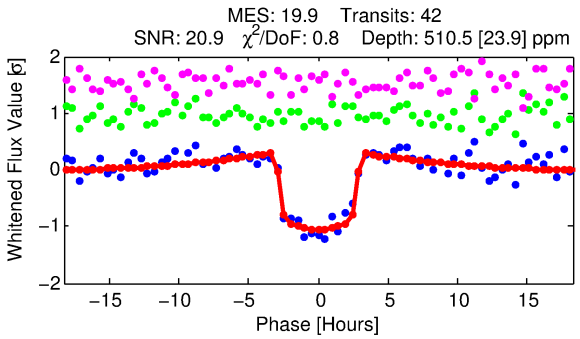
Kp: 15.08 R*: 1.03 Rs Teff: 6297.0 K Logg: 4.45 Fe/H: −0.200

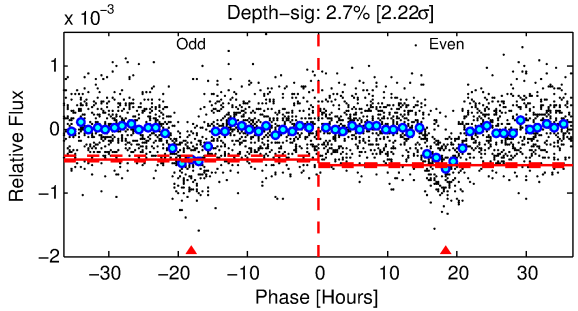


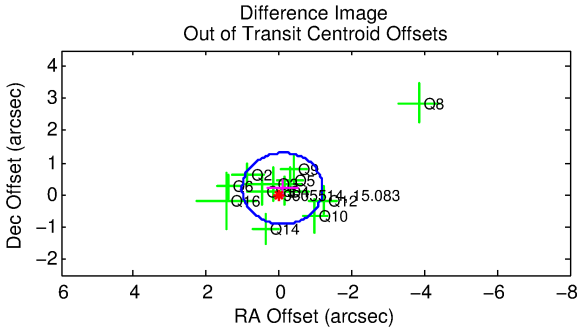












DV Fit Results:

Period = 25.84760 [0.00015] d
Epoch = 137.1764 [0.0042] BKJD
Rp/R* = 0.0229 [0.0036]
a/R* = 20.49 [16.46]
b = 0.80 [0.36]

Seff = 48.35 [19.65]
Teq = 672 [68] K
Rp = 2.58 [0.90] Re
a = 0.1760 [0.0460] AU

Ag = 241.87 [136.32] [1.77σ]
Teffp = 4100 [451] K [7.52σ]

DV Diagnostic Results:

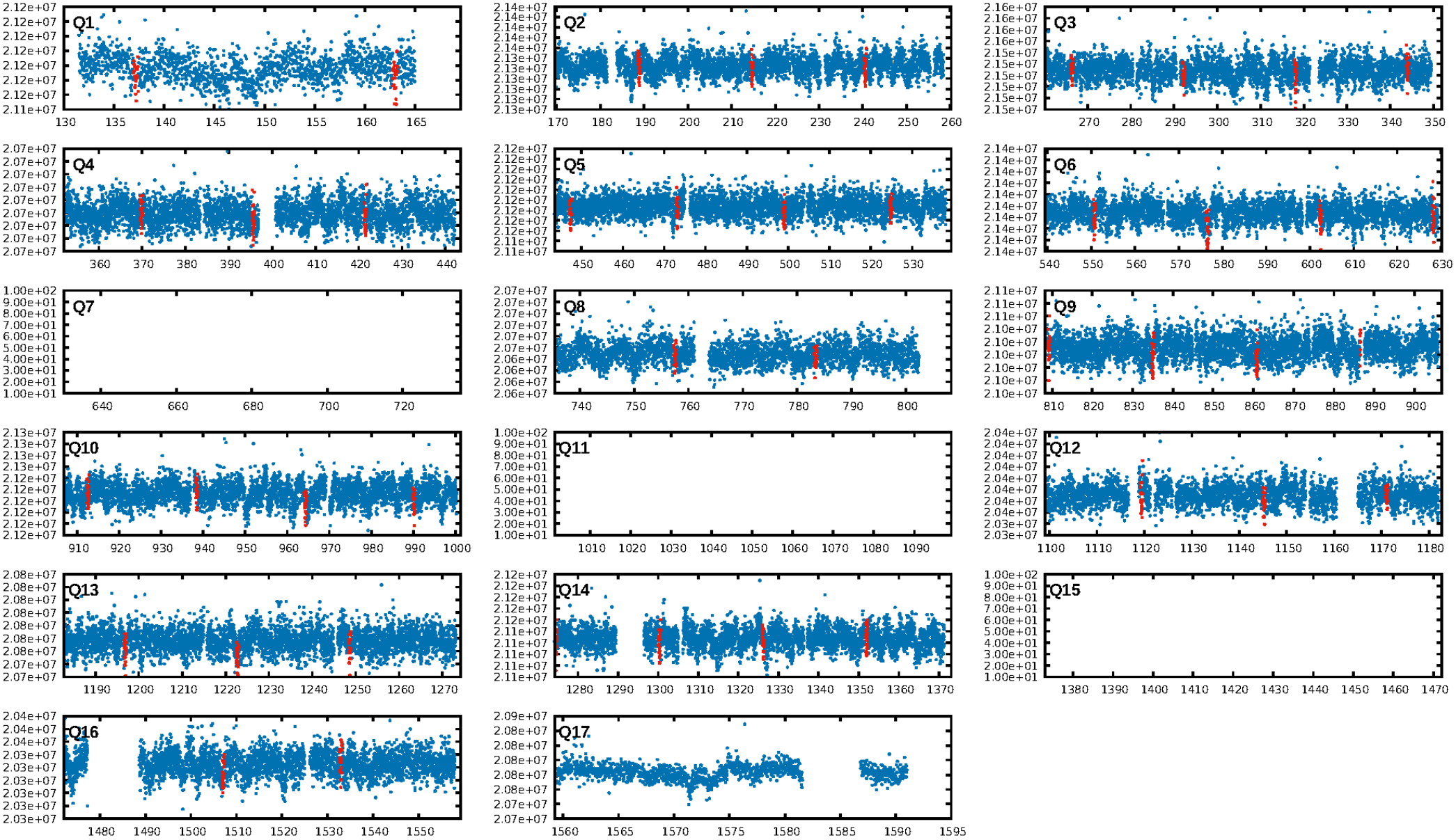
ShortPeriod−sig: N/A
LongPeriod−sig: 100.0% [38.21σ]
ModelChiSquare2−sig: 94.6%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: 6.33e−88
RollingBand−fgt: 1.00 [40/40]
GhostDiagnostic−chr: 63.56

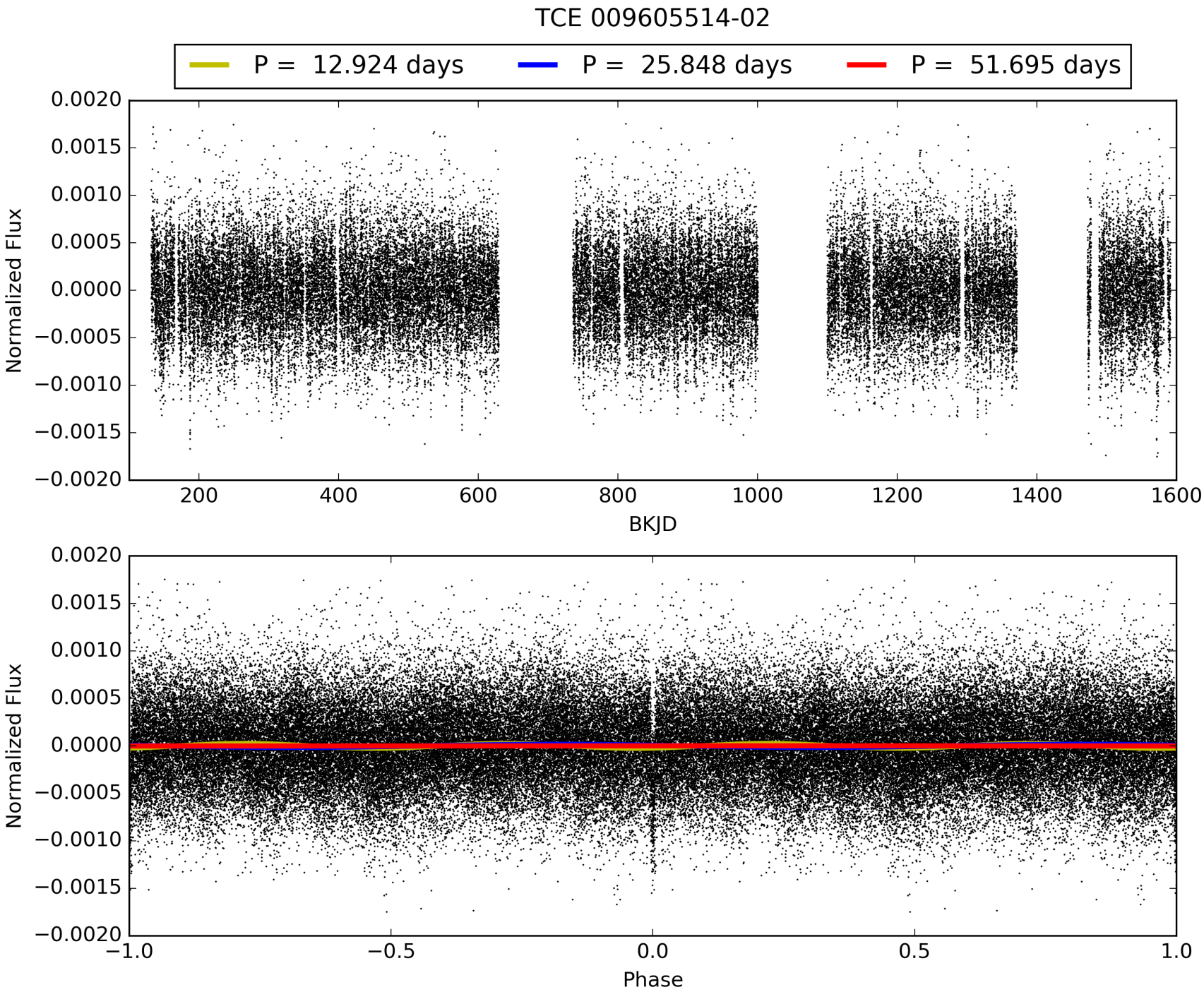
Centroid−sig: 56.2%
Centroid−so: 0.100 arcsec [0.19σ]
OotOffset−rm: 0.212 arcsec [0.57σ]
KicOffset−rm: 0.308 arcsec [1.00σ]
OotOffset−st: 4/1/4/3 [12]
KicOffset−st: 4/1/4/3 [12]
DiffImageQuality−fgm: 0.83 [10/12]
DiffImageOverlap−fno: 1.00 [13/13]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 15:13:25 Z

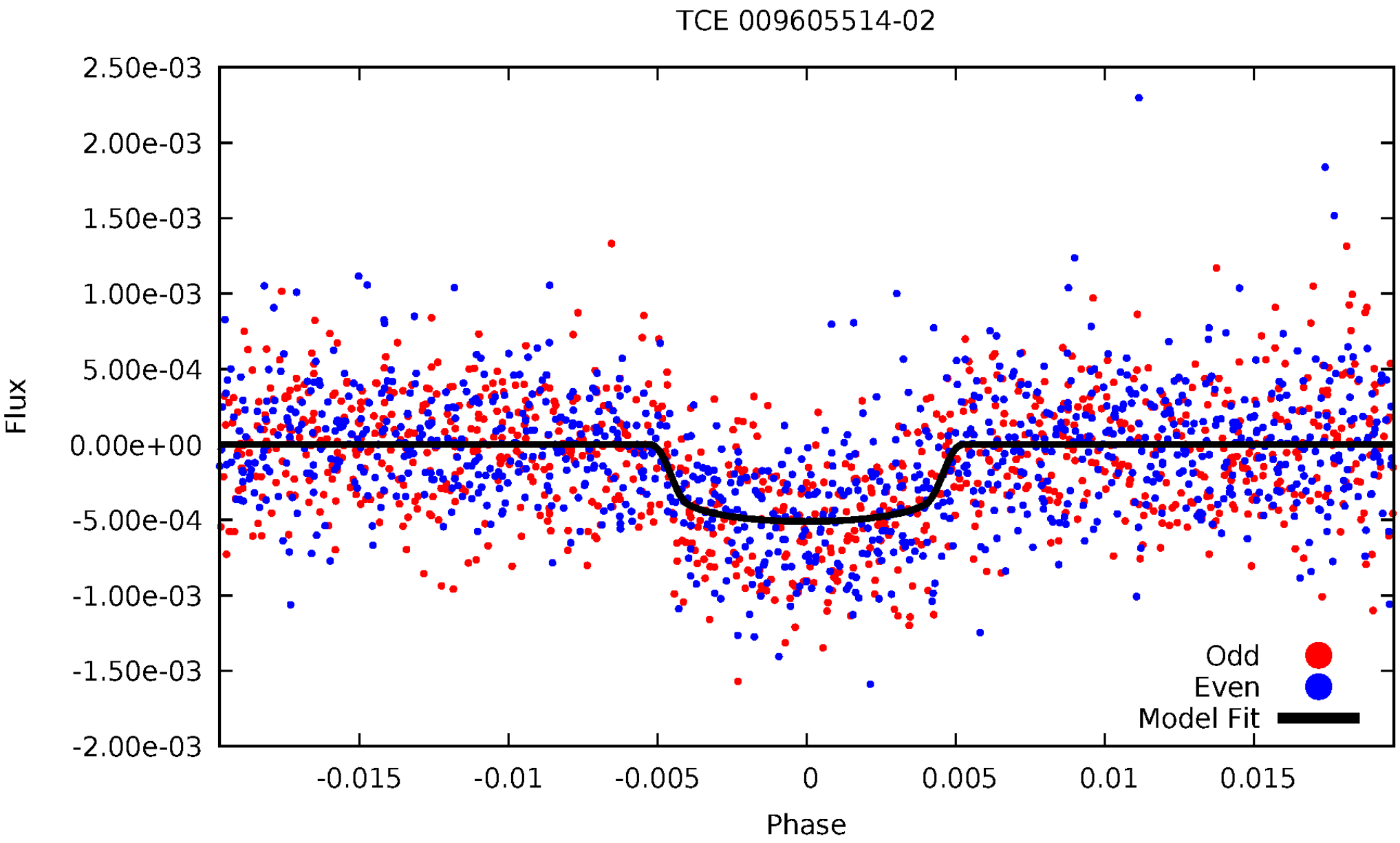
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009605514-02, PDC Light Curves

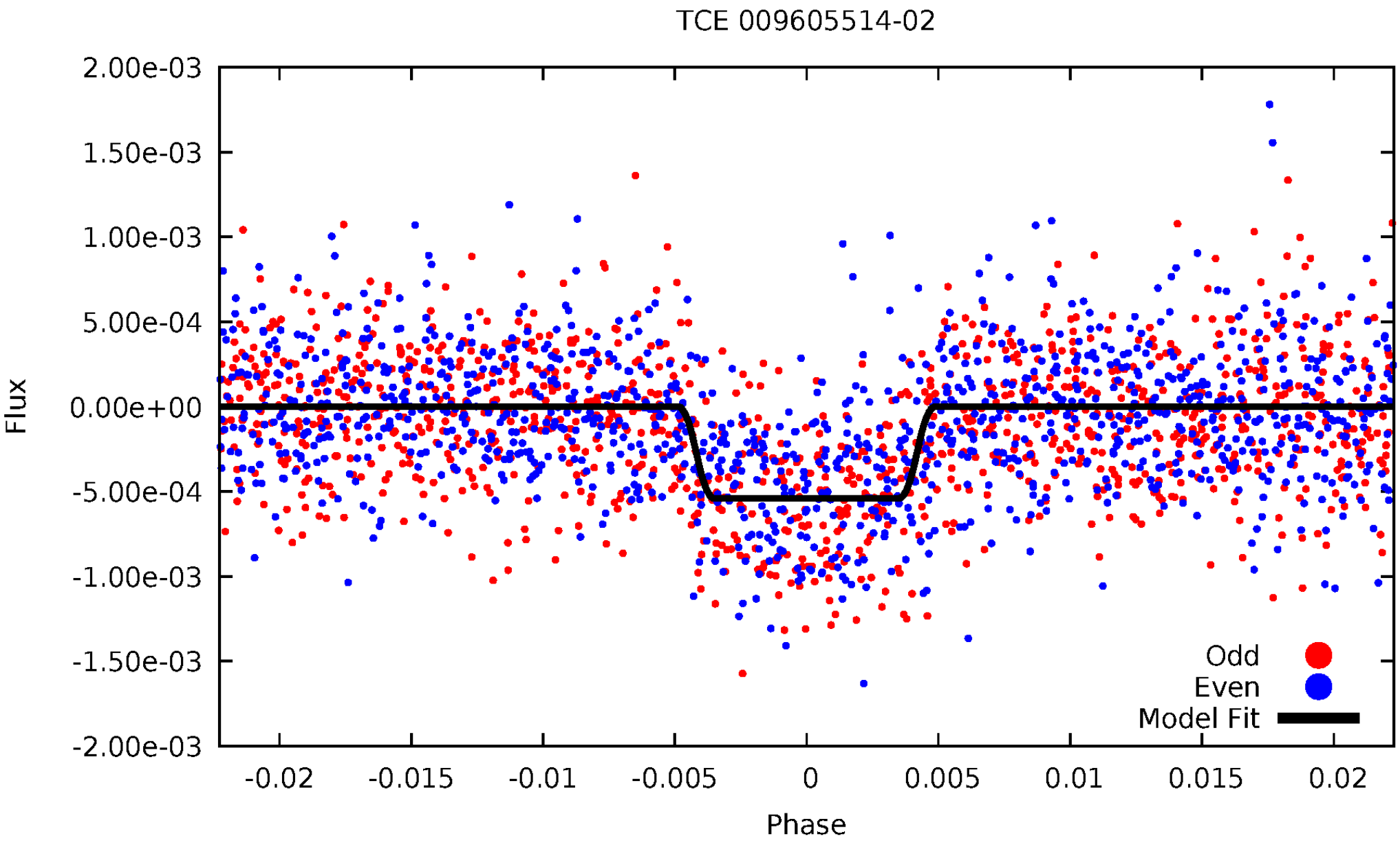



TCE 009605514-02
P = 12.924 days
P = 25.848 days
P = 51.695 days
Normalized Flux
BKJD
Normalized Flux
Phase

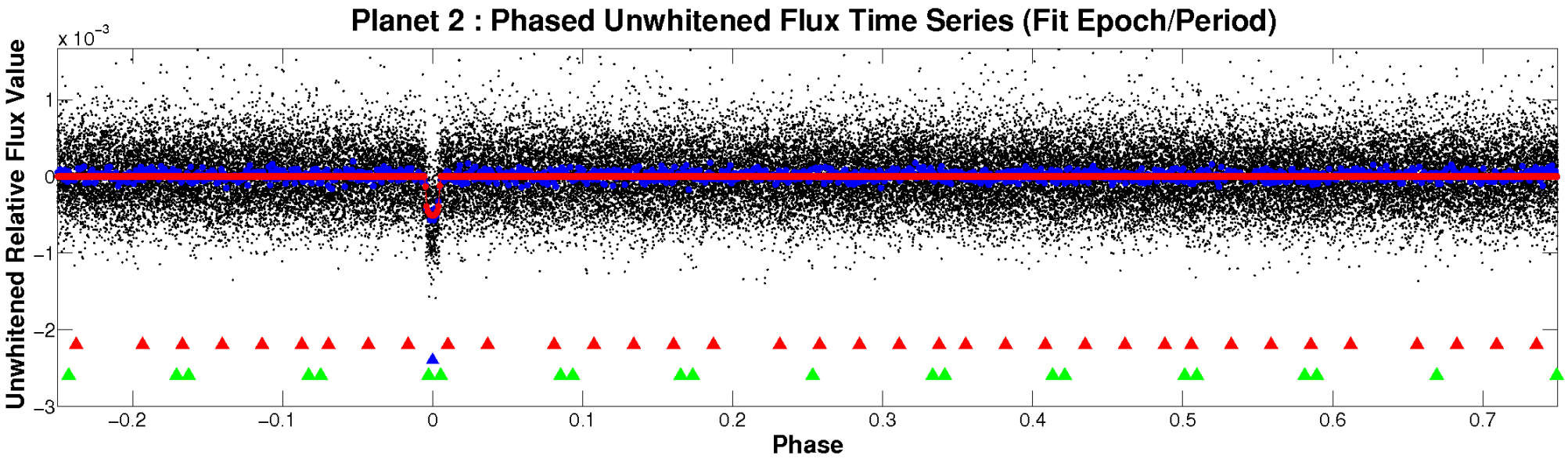
DV Odd/Even

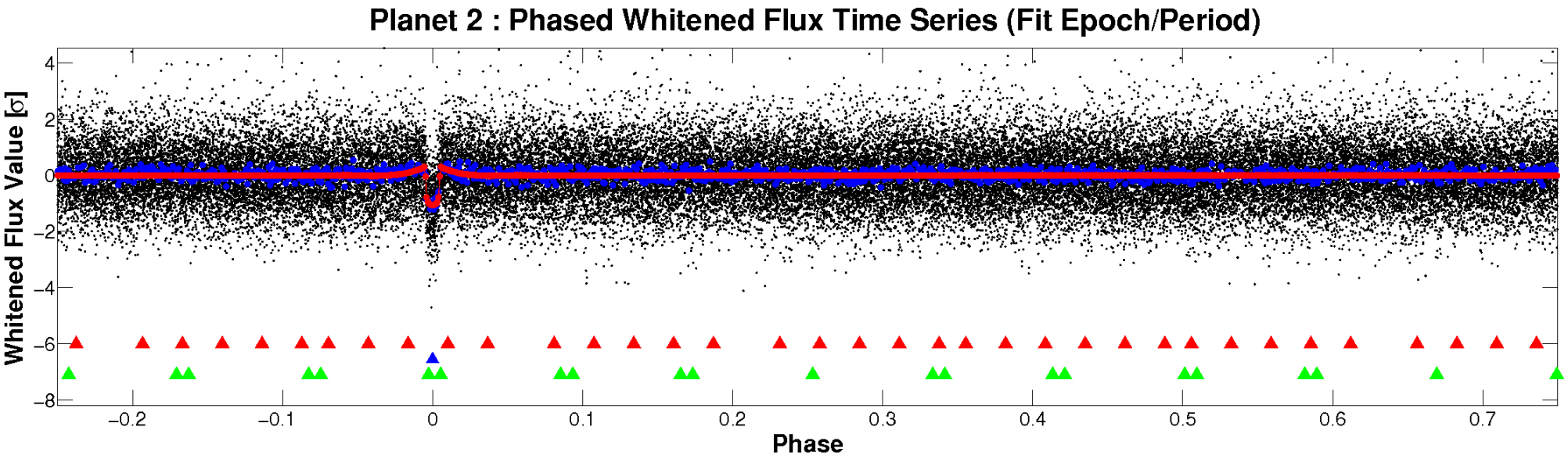

TCE 009605514-02
2.50e-03
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
Flux
-0.015
-0.01
-0.005
0
0.005
0.01
0.015
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009605514-02
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
-2.00e-03
Flux
-0.02
-0.015
-0.01
-0.005
0
0.005
0.01
0.015
0.02
Phase
Odd
Even
Model Fit

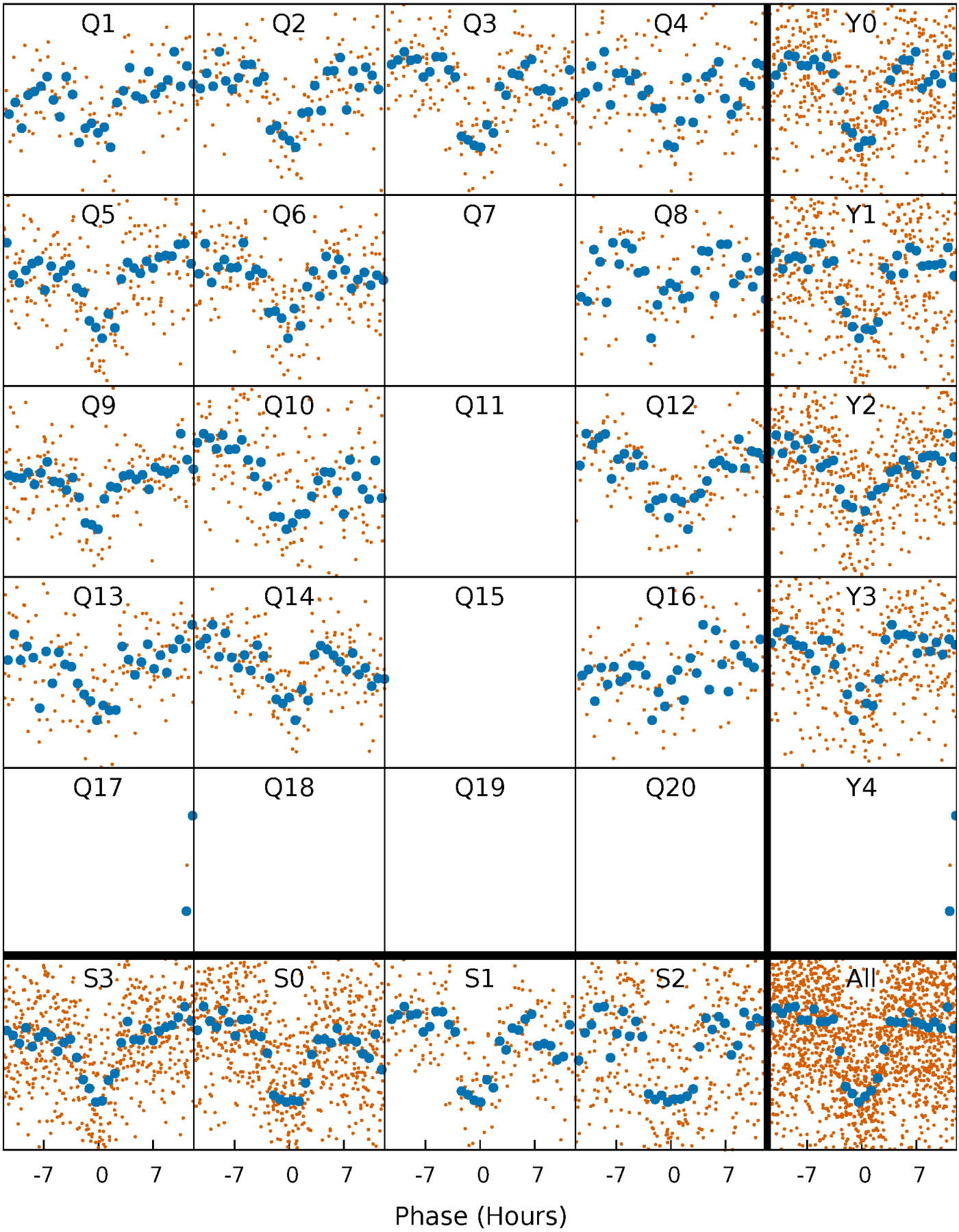
Non-Whitened Vs. Whitened Light Curve





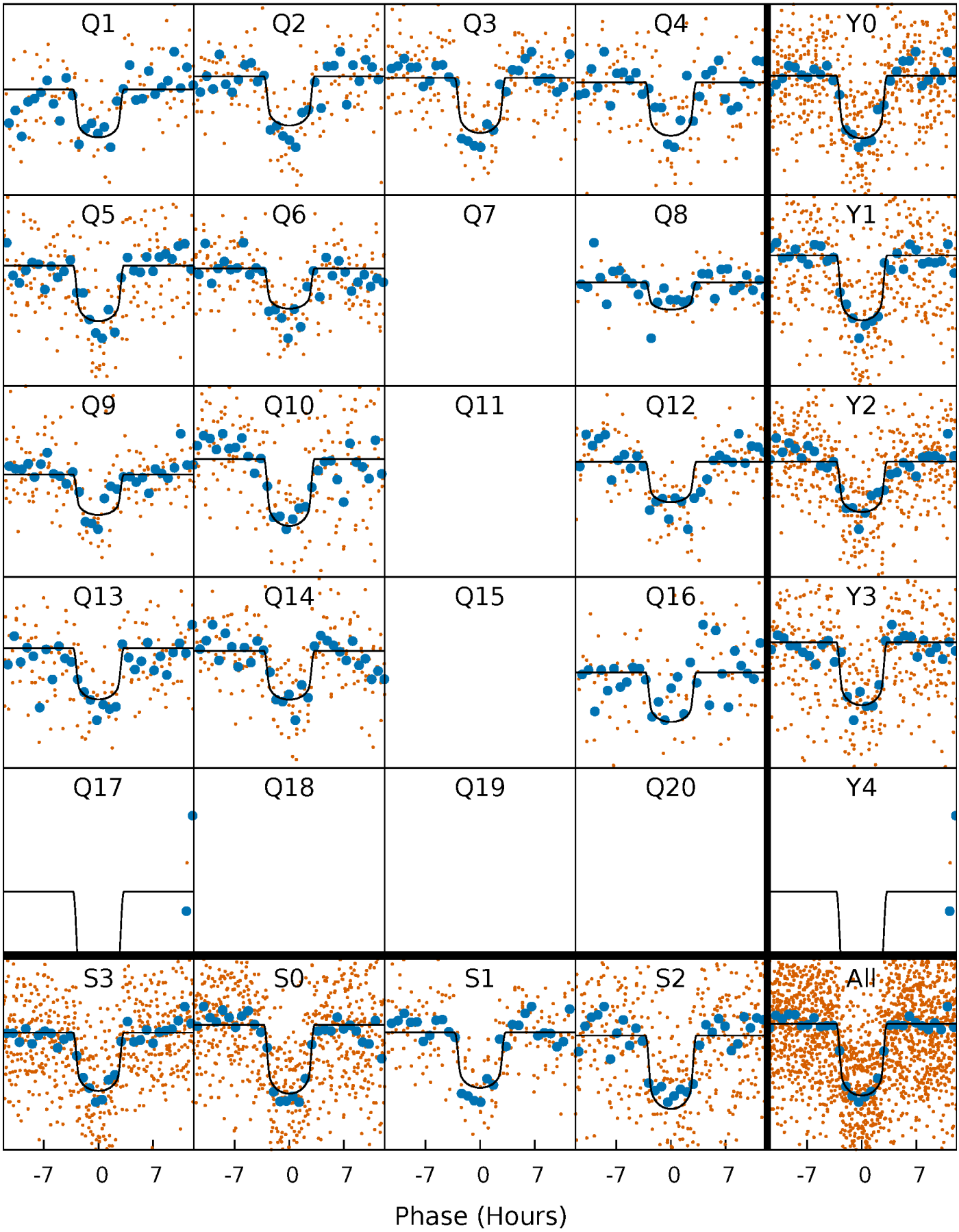
PDC Quarter-Phased Transit Curves

TCE 009605514-02 P= 25.847595 Days T_0=137.176434 (BKJD)



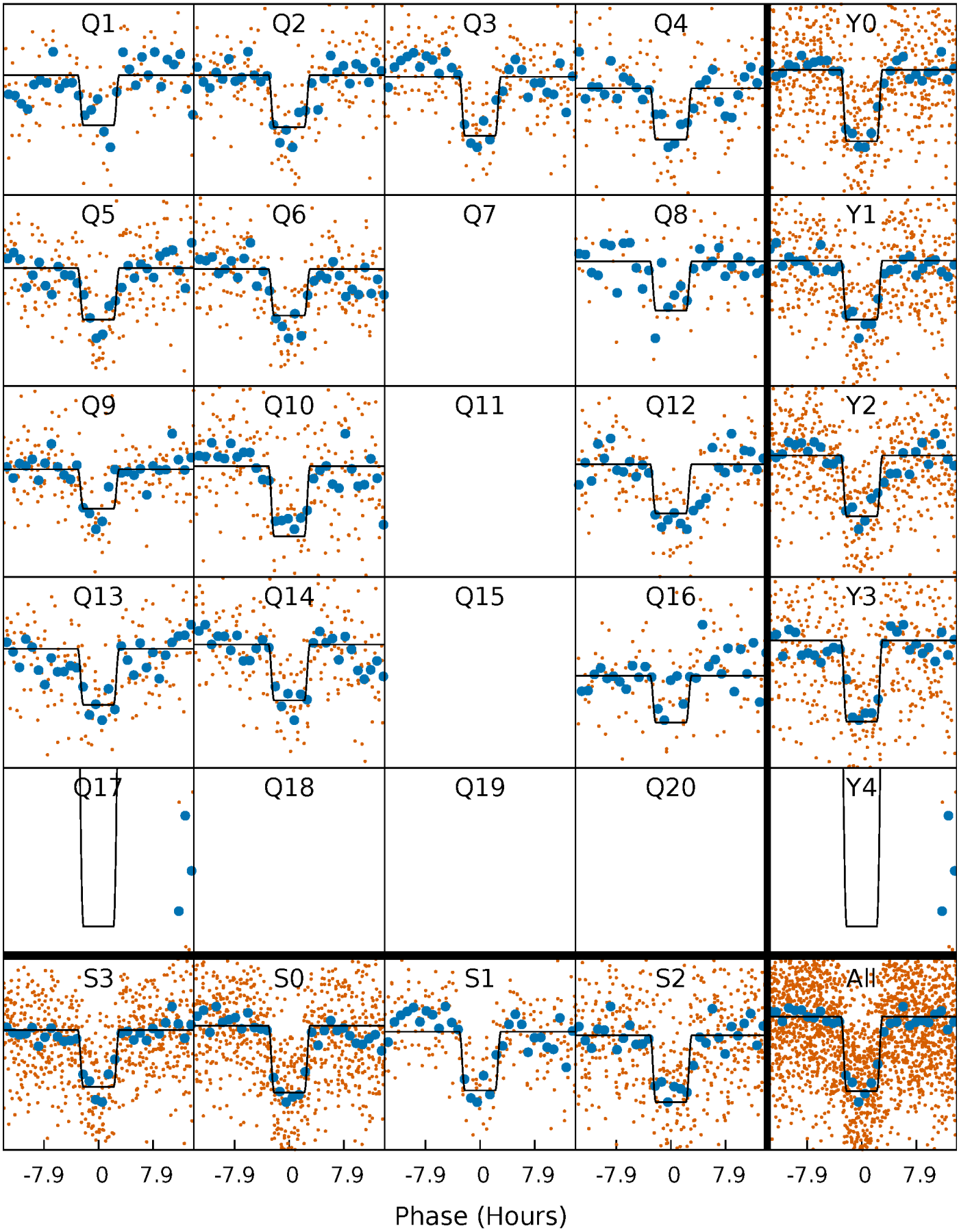
DV Quarter-Phased Transit Curves

TCE 009605514-02 P= 25.847595 Days T_0=137.176434 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

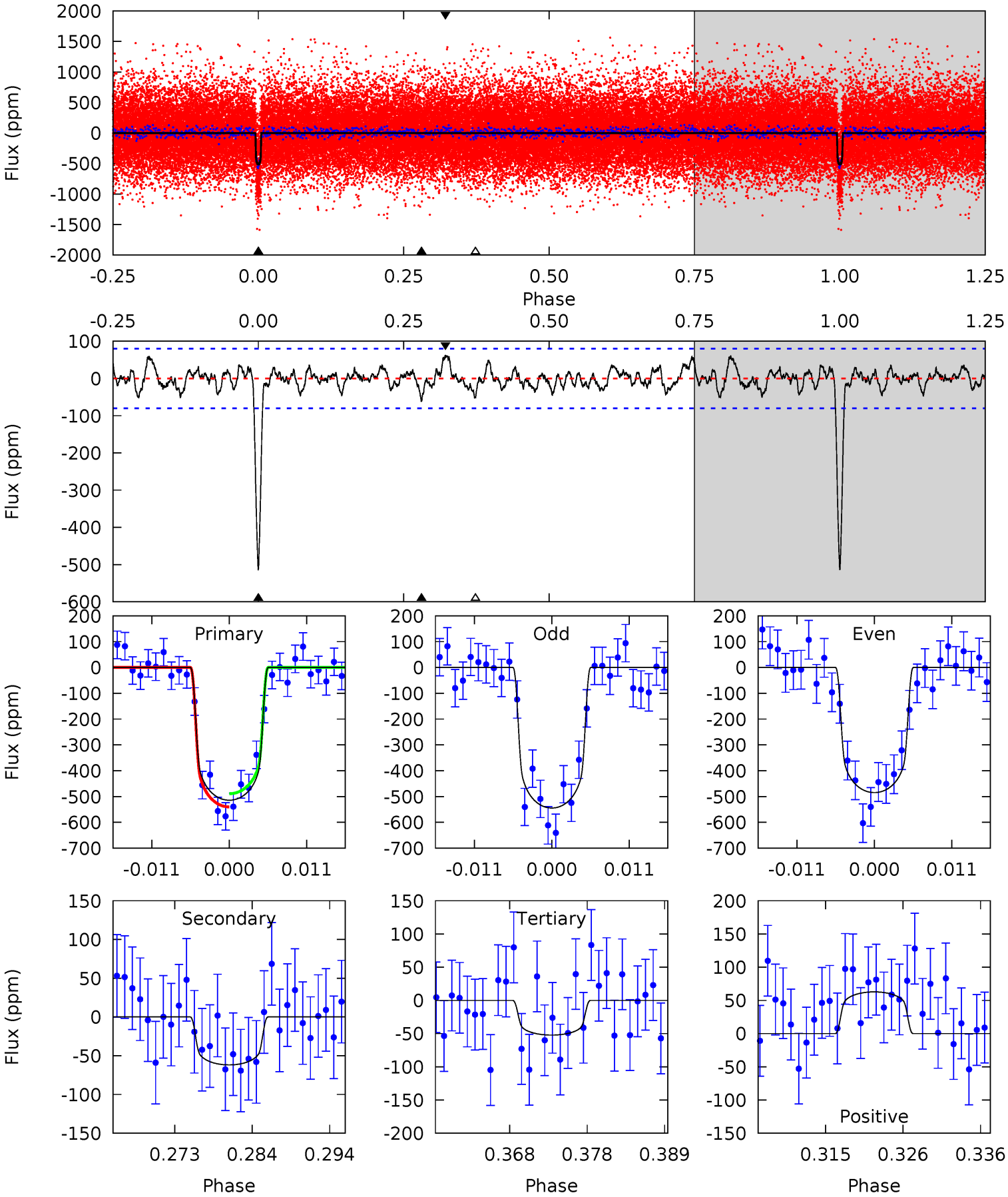
TCE 009605514-02 P= 25.847231 Days T_0=137.182232 (BKJD)



DV Model-Shift Uniqueness Test

009605514-02, P = 25.847595 Days, E = 111.328839 Days

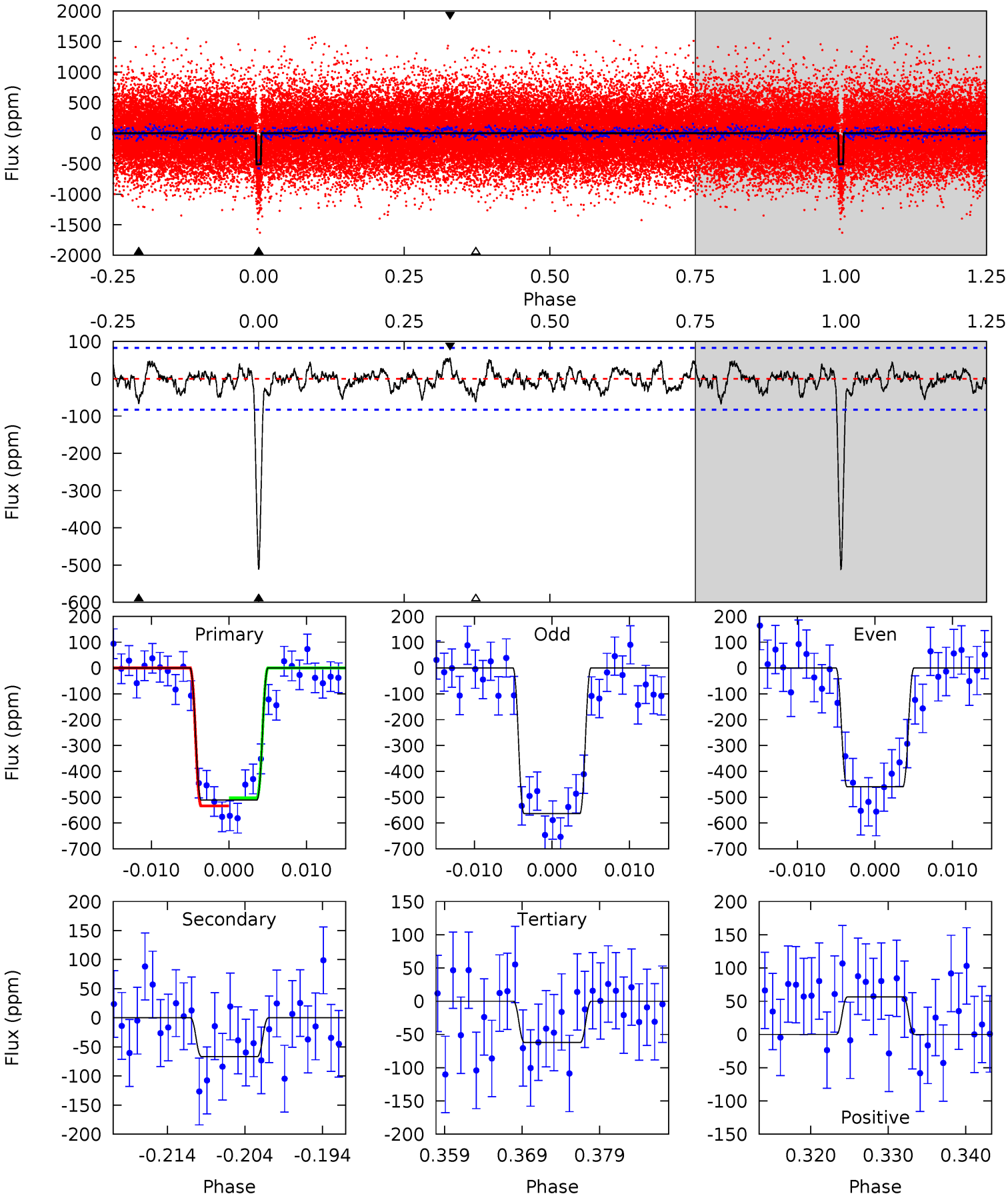
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.3	3.88	3.28	3.94	5.02	2.56	1.32	29.0	28.3	0.60	-0.06	1.88	0.98	0.11	1.61



Alt Model-Shift Uniqueness Test

009605514-02, P = 25.847231 Days, E = 111.335001 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.0	4.05	3.77	3.42	5.03	2.59	1.25	27.2	27.6	0.28	0.63	3.15	1.02	0.10	0.93



Stellar Parameters For KIC 009605514

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	6297^{+169}_{-225}	$4.448^{+0.052}_{-0.208}$	$-0.200^{+0.250}_{-0.350}$	$1.031^{+0.320}_{-0.107}$	$1.084^{+0.144}_{-0.144}$	$1.393^{+0.399}_{-0.744}$
	+3%/-4%	+1%/-5%	+125%/-175%	+31%/-10%	+13%/-13%	+29%/-53%
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 009605514-02 / KOI 0945.01

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-62±16	$2.70^{+0.62}_{-0.51}$	959^{+70}_{-47}	3978^{+341}_{-285}	137^{+82}_{-53}
Alt.	-67±16	$2.75^{+0.58}_{-0.48}$	957^{+67}_{-47}	4003^{+324}_{-284}	143^{+81}_{-52}

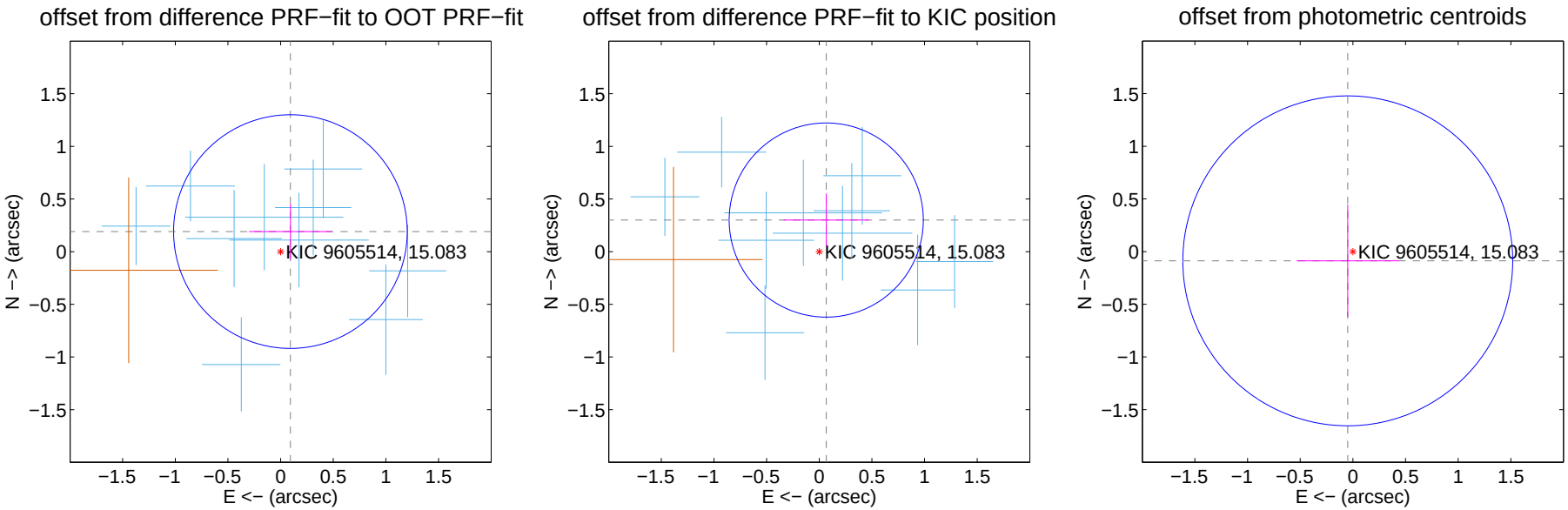
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

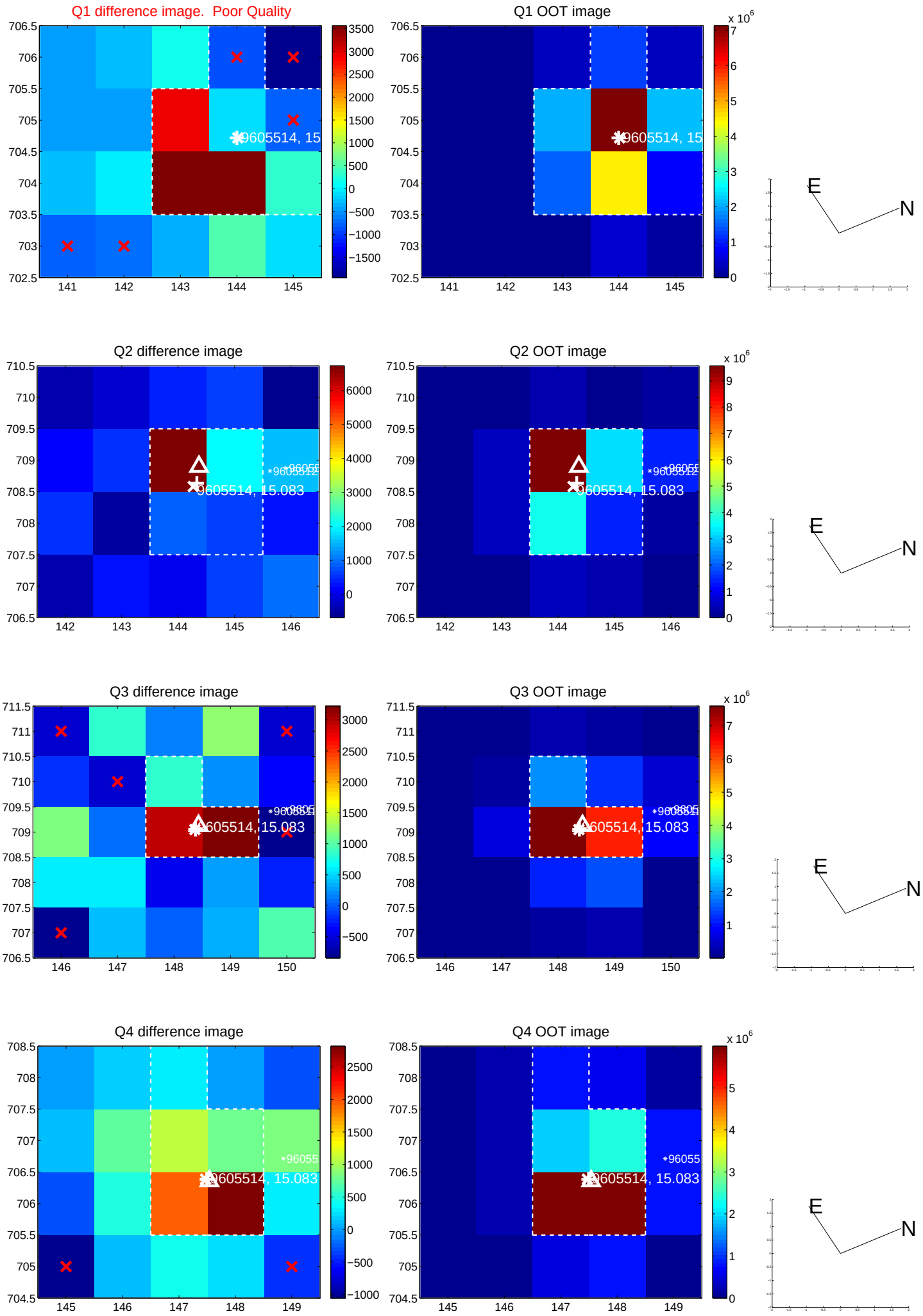
Supplemental centroid analysis for 009605514-02. Kepler magnitude: 15.08. Transit SNR 20.90
There are 10 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.212 ± 0.370	0.57	-0.093 ± 0.394	0.191 ± 0.263
PRF-fit source offset from KIC position	0.308 ± 0.307	1.00	-0.066 ± 0.407	0.300 ± 0.253
photometric centroid source offset	0.10 ± 0.52	0.19	0.05 ± 0.49	-0.09 ± 0.53

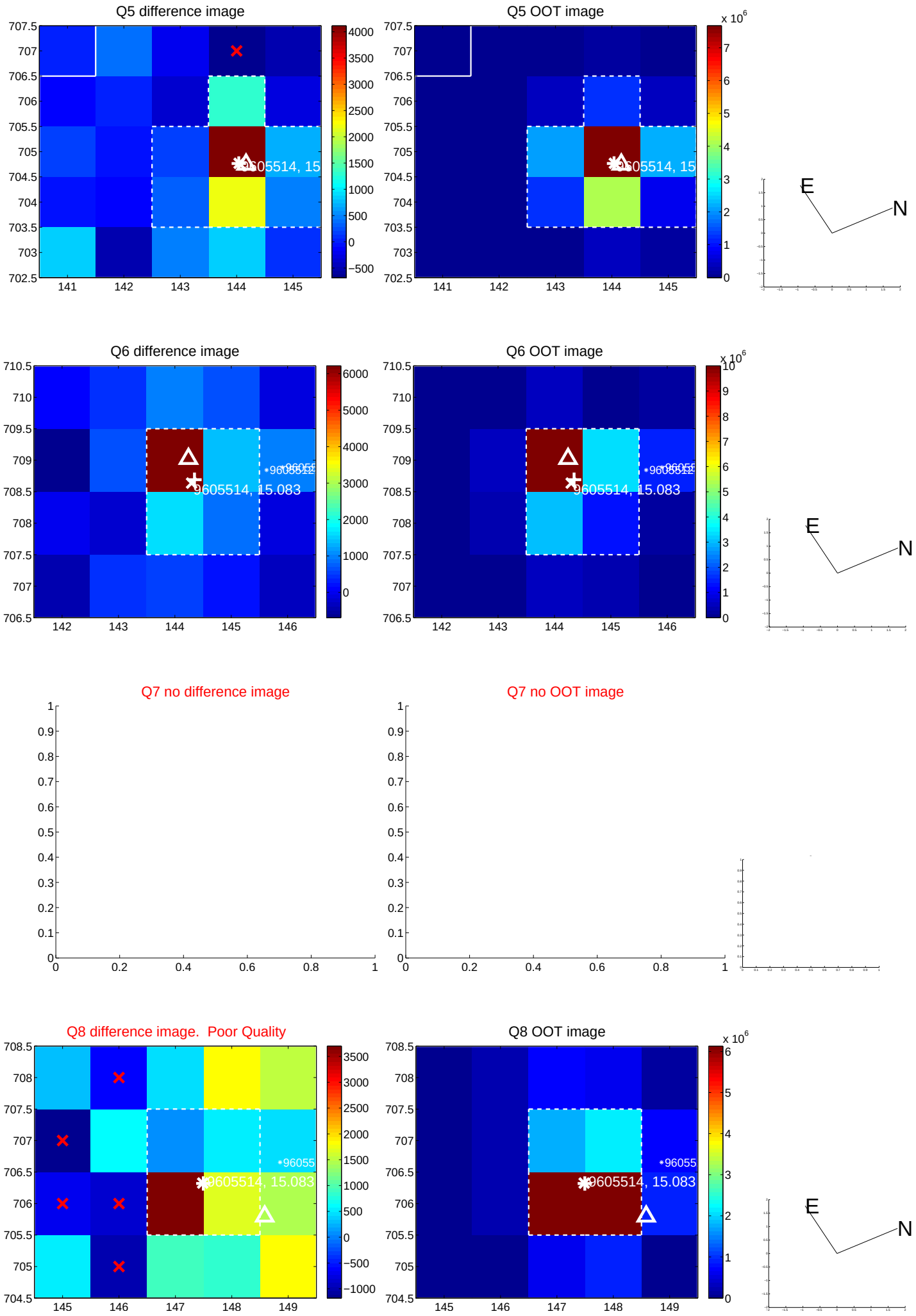


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

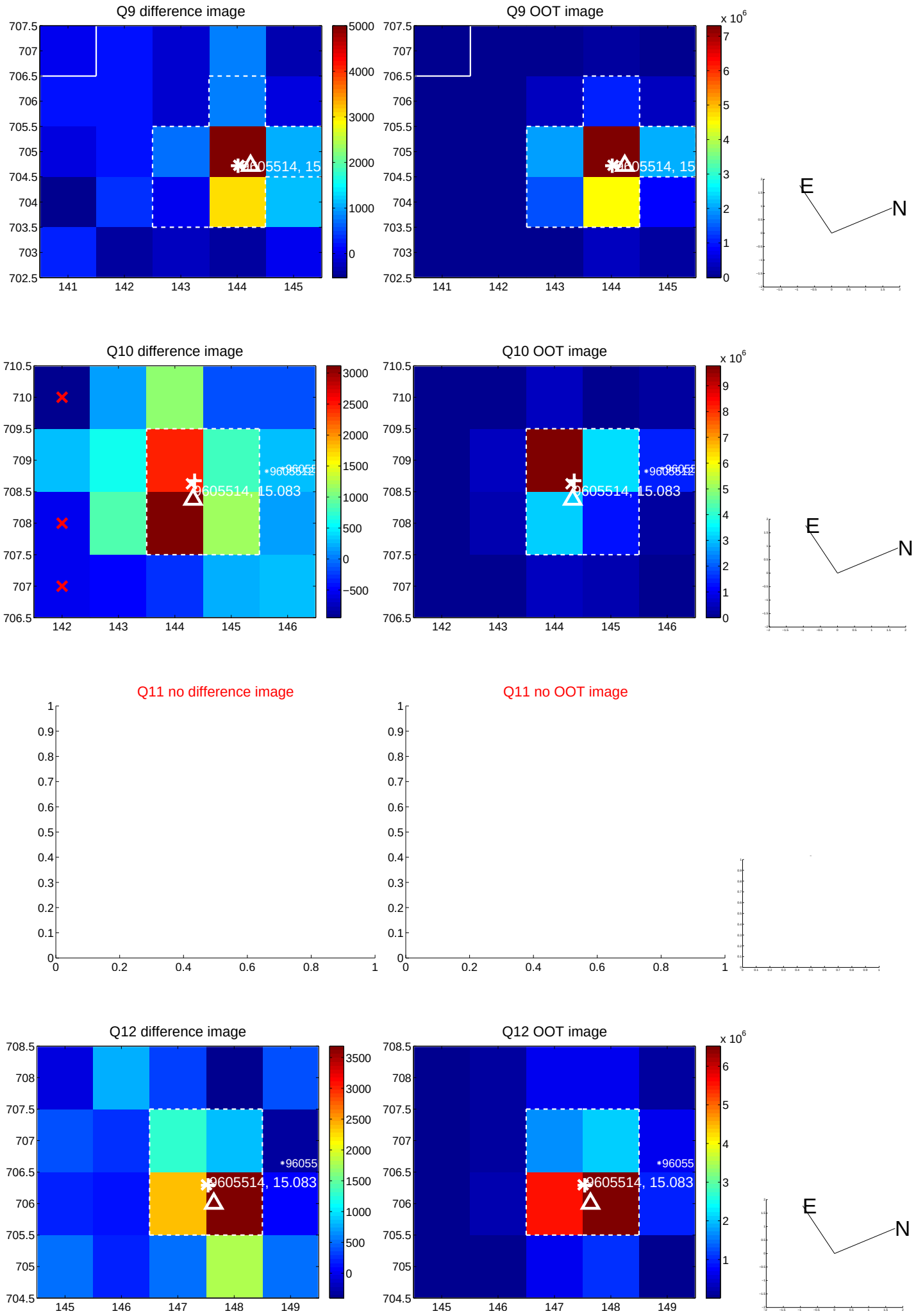
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



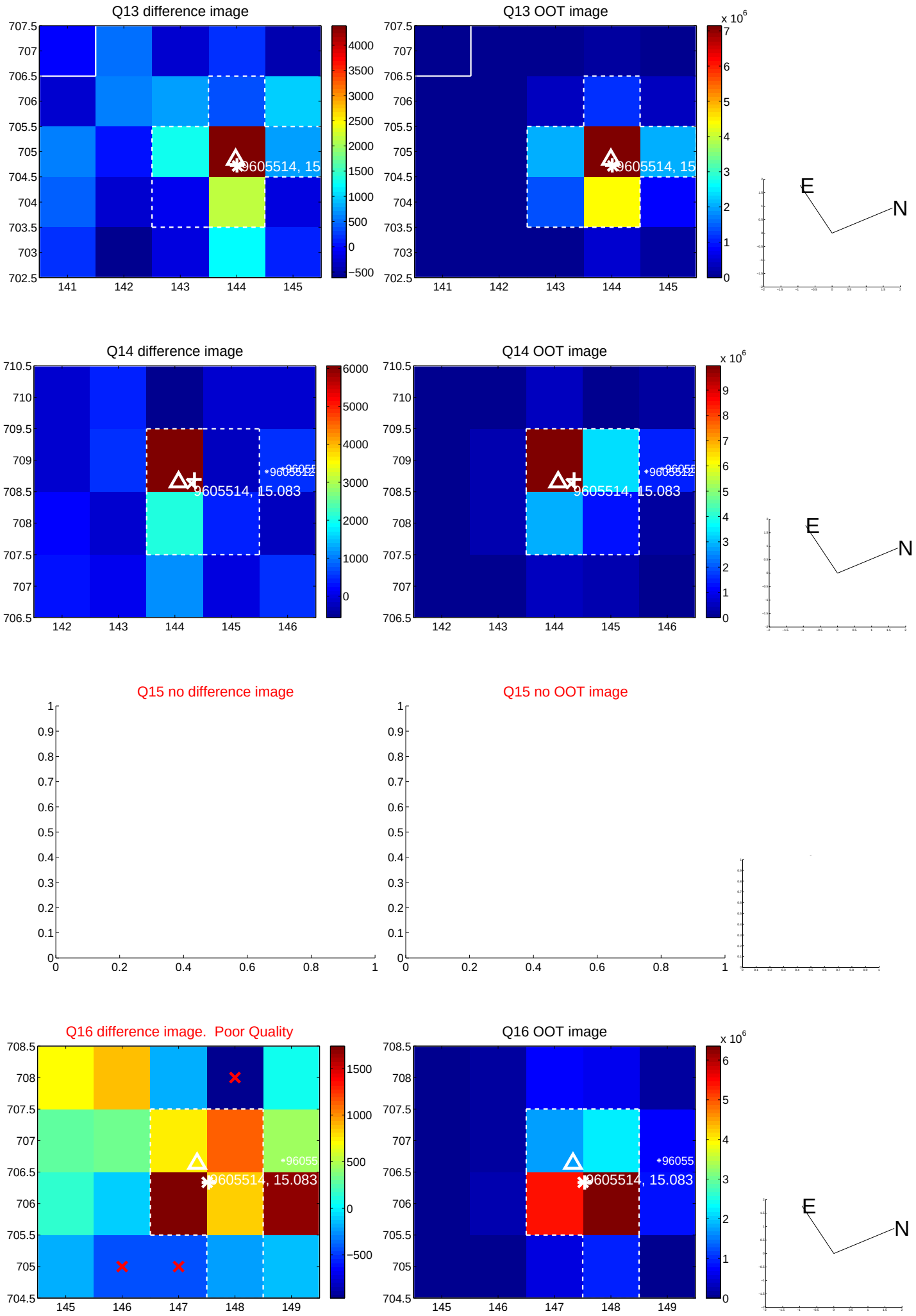
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



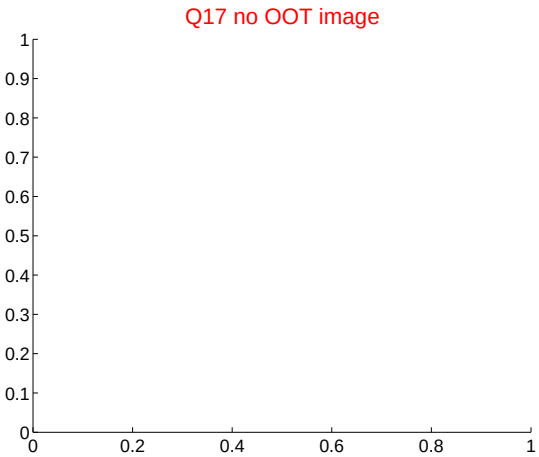
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

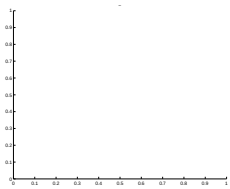


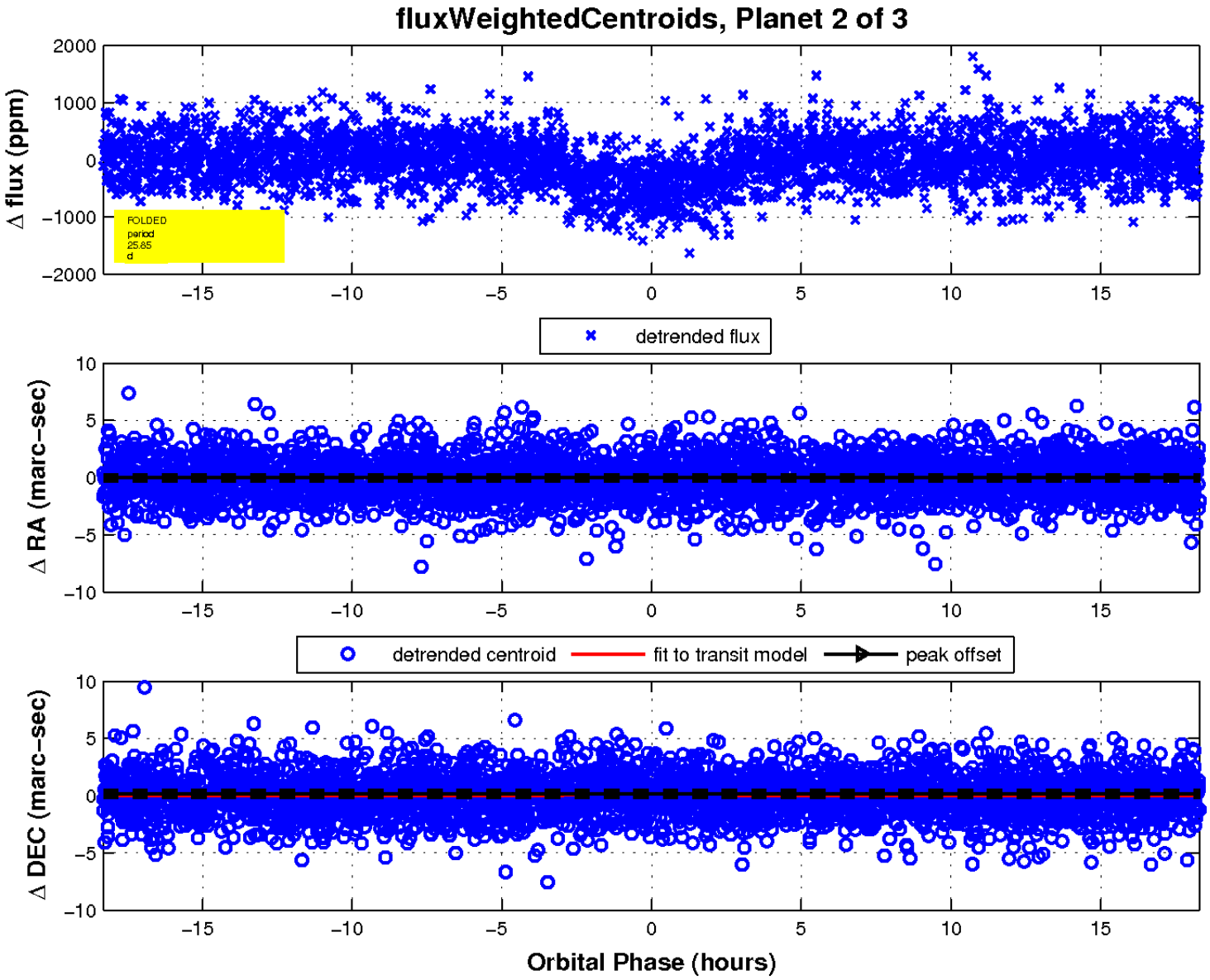
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



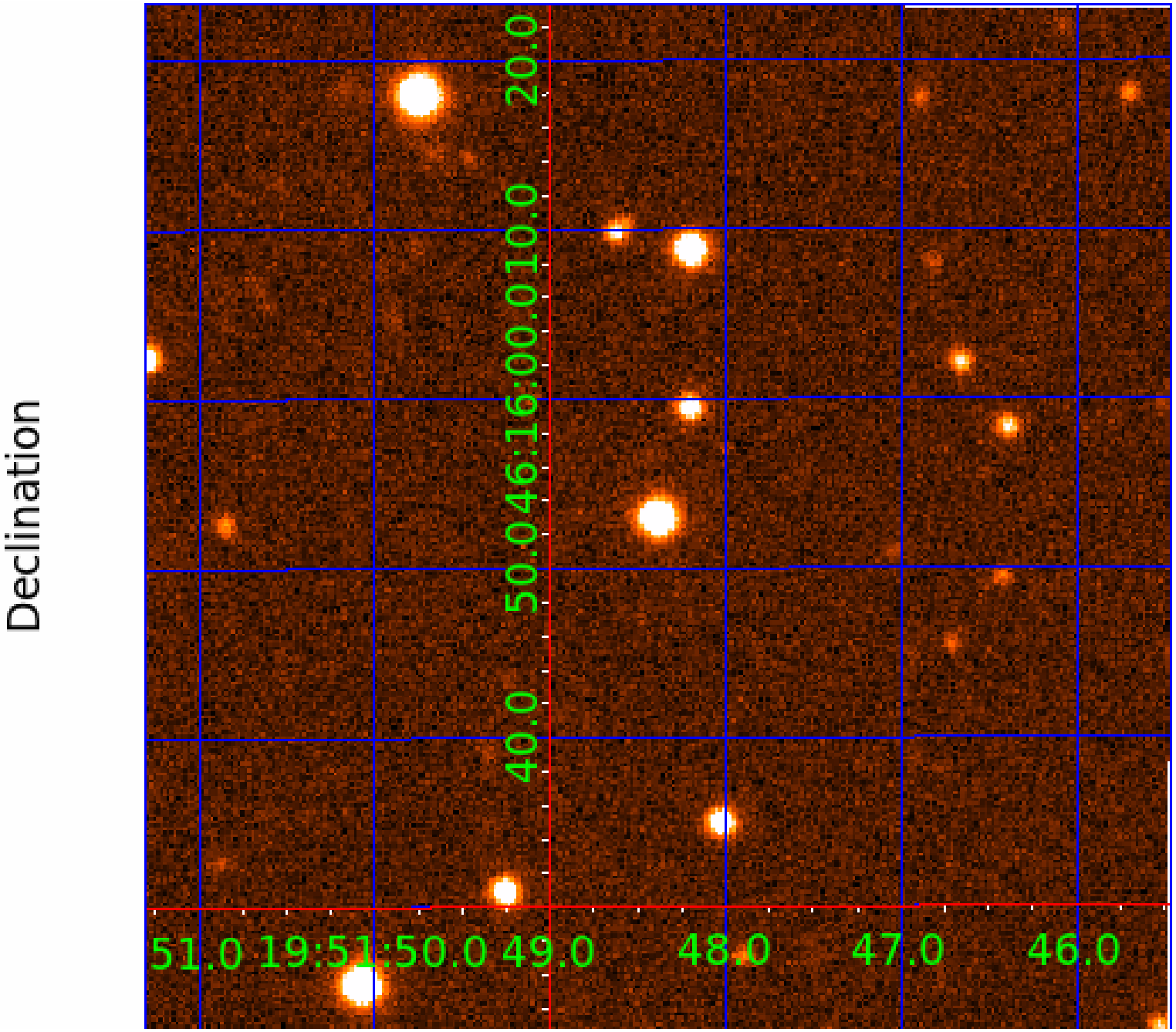
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image


Declination
20.0
10.0
46:00.0
50.0
40.0
51.0
19:51:50.0
49.0
48.0
47.0
46.0

KIC 009605514

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 ($S_\oplus$)
009605514-01	OBS	0945.02	40.715653	146.361778	709.0	7.065	21.3	22.9	1.03	6297	2.90	26.38
009605514-02	OBS	0945.01	25.847595	137.176434	510.5	6.106	19.9	20.9	1.03	6297	2.58	48.35
009605514-03	OBS	0945.03	66.790329	184.459787	381.7	5.458	7.5	8.5	1.03	6297	2.57	13.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009605514-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
009605514-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
009605514-03	OBS	FP	0.14	1	0	0	0	MOD_NONUNIQ_ALT

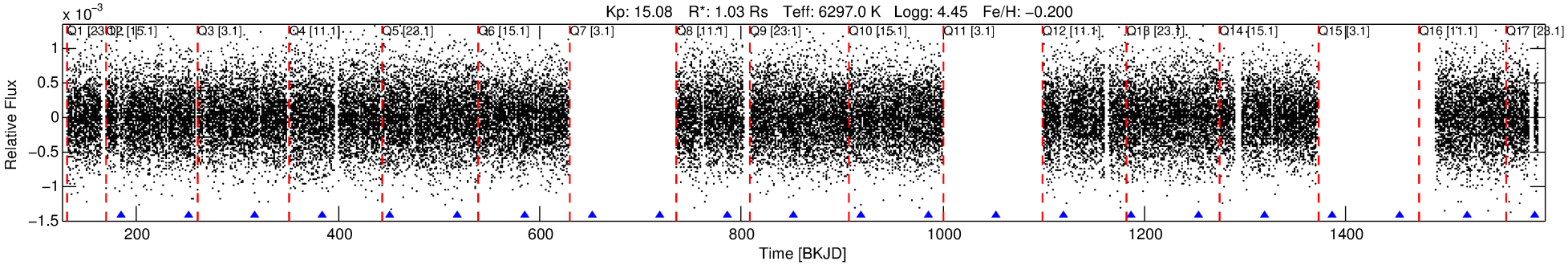
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

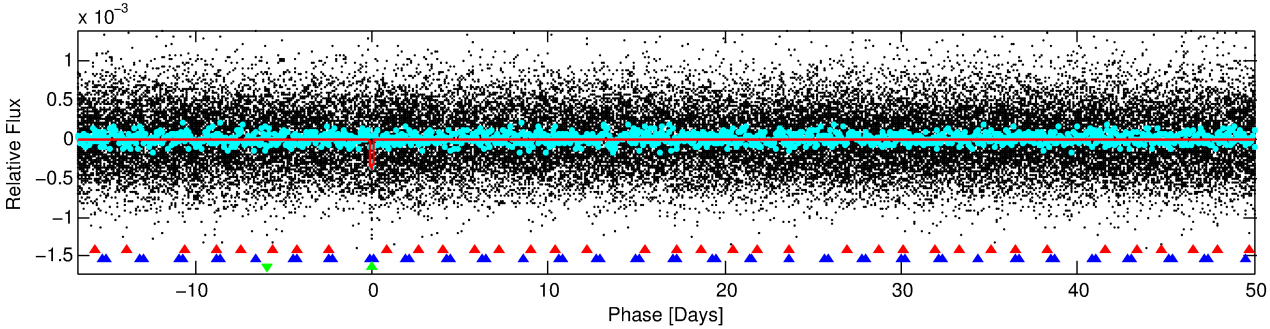
Ephemeris Match Information For 009605514-03

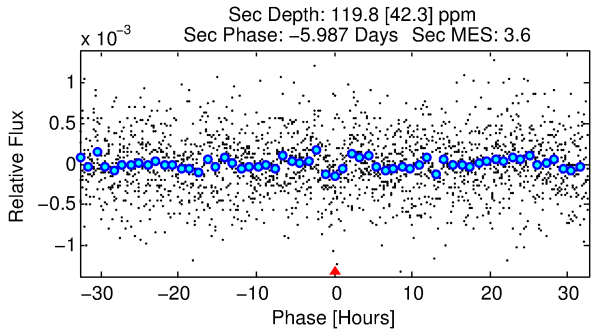
No Significant Match Found

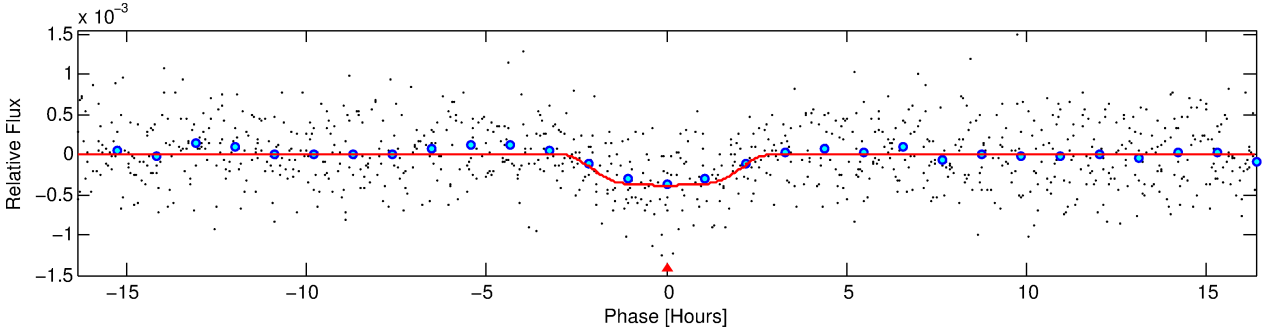
DV One-Page Summary

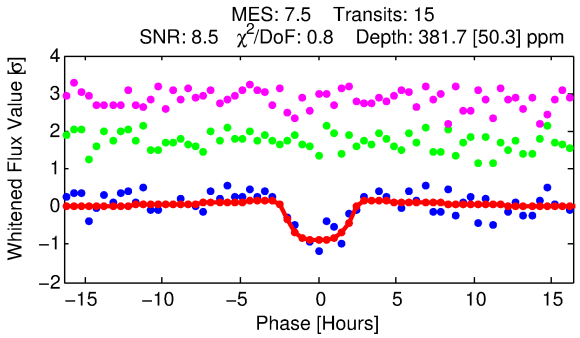
KIC: 9605514 Candidate: 3 of 3 Period: 66.790 d
KOI: K00945.03 Corr: 0.867

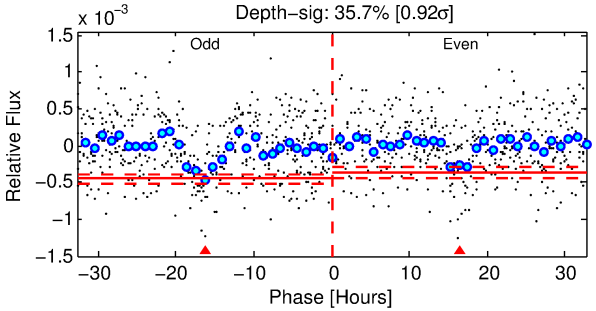


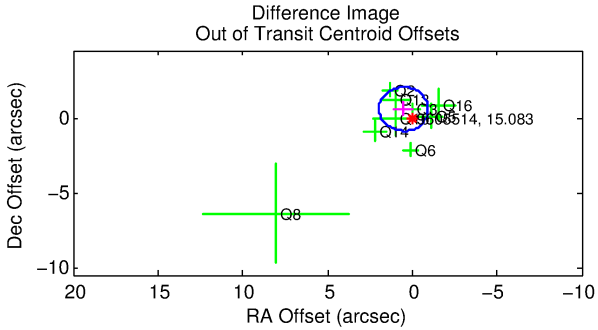












DV Fit Results:

Period = 66.79033 [0.00104] d
Epoch = 184.4598 [0.0125] BKJD
Rp/R* = 0.0228 [0.0023]
a/R* = 32.11 [9.87]
b = 0.96 [0.02]

Seff = 13.63 [5.54]
Teq = 490 [50] K
Rp = 2.57 [0.84] Re
a = 0.3314 [0.0866] AU

Ag = 1095.55 [609.08] [1.80σ]
Teffp = 4358 [468] K [8.21σ]

DV Diagnostic Results:

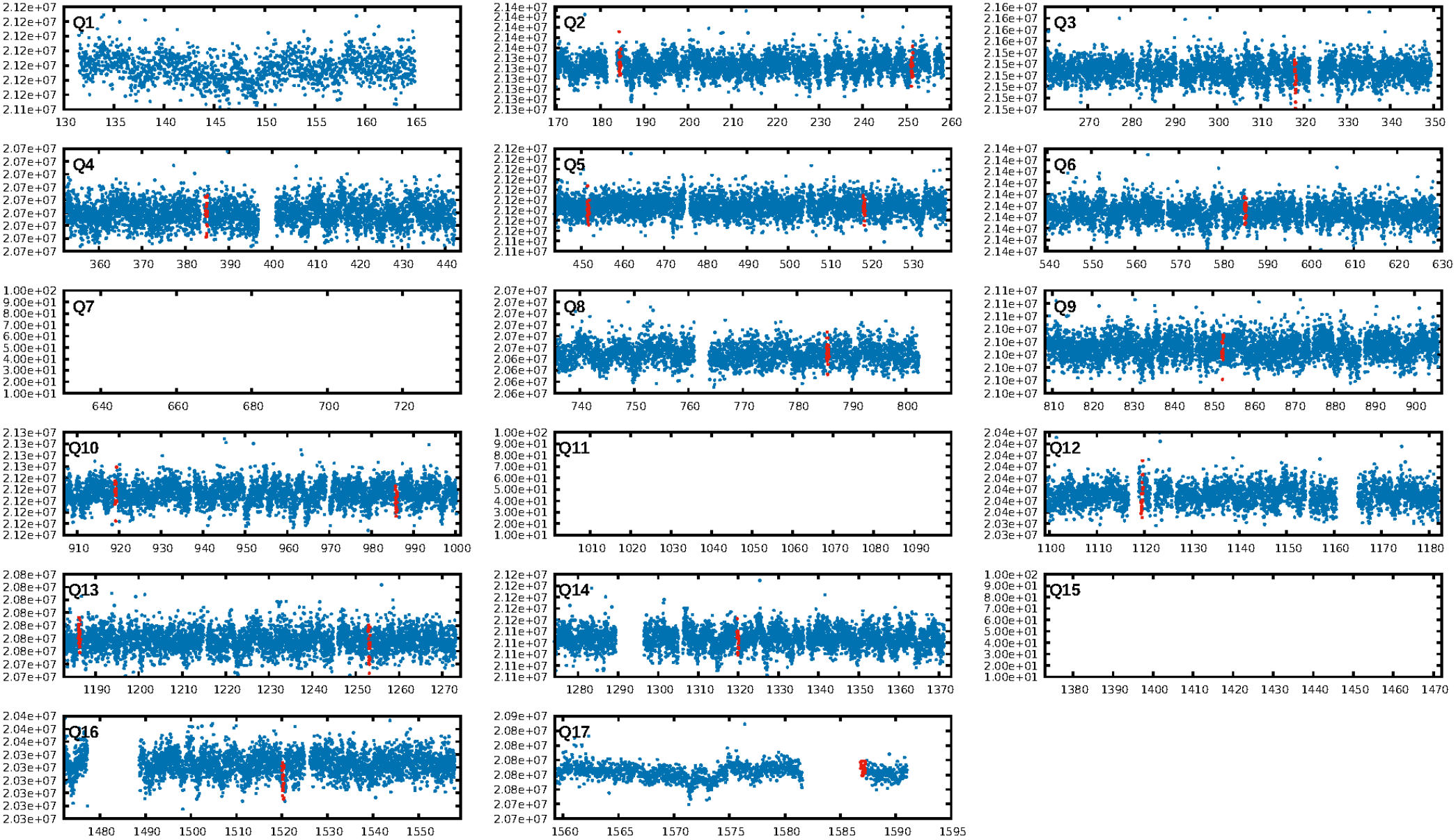
ShortPeriod−sig: 100.0% [70.09σ]
LongPeriod−sig: N/A
ModelChiSquare2−sig: 84.3%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: 2.53e−14
RollingBand−fgt: 1.00 [14/14]
GhostDiagnostic−chr: −12.32

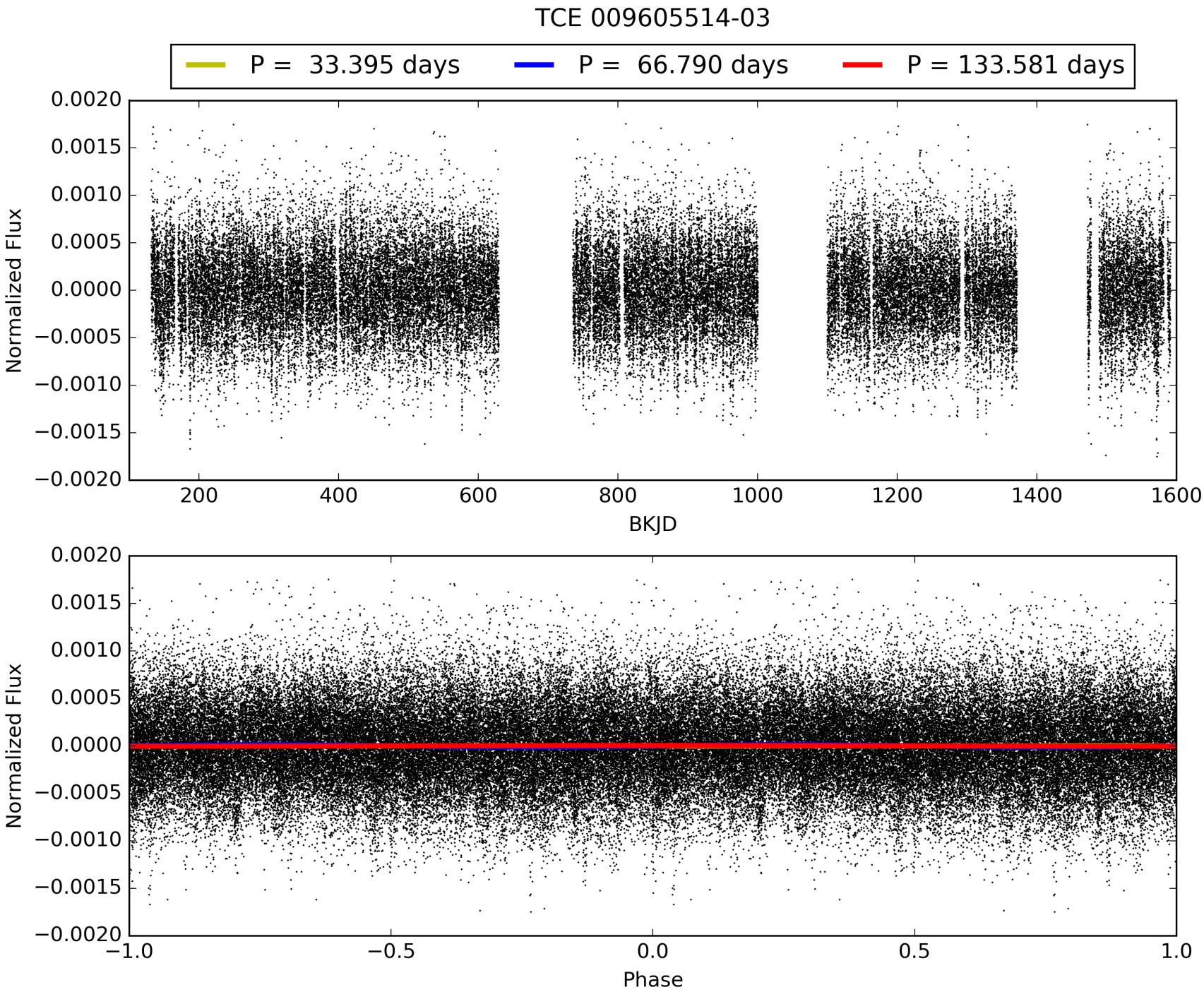
Centroid−sig: 80.9%
Centroid−so: 0.723 arcsec [0.56σ]
OotOffset−rm: 0.772 arcsec [1.59σ]
KicOffset−rm: 0.796 arcsec [1.61σ]
OotOffset−st: 4/1/2/2 [9]
KicOffset−st: 4/1/2/2 [9]
DiffImageQuality−fgm: 0.78 [7/9]
DiffImageOverlap−fno: 0.82 [9/11]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31−Jan−2016 15:13:32 Z

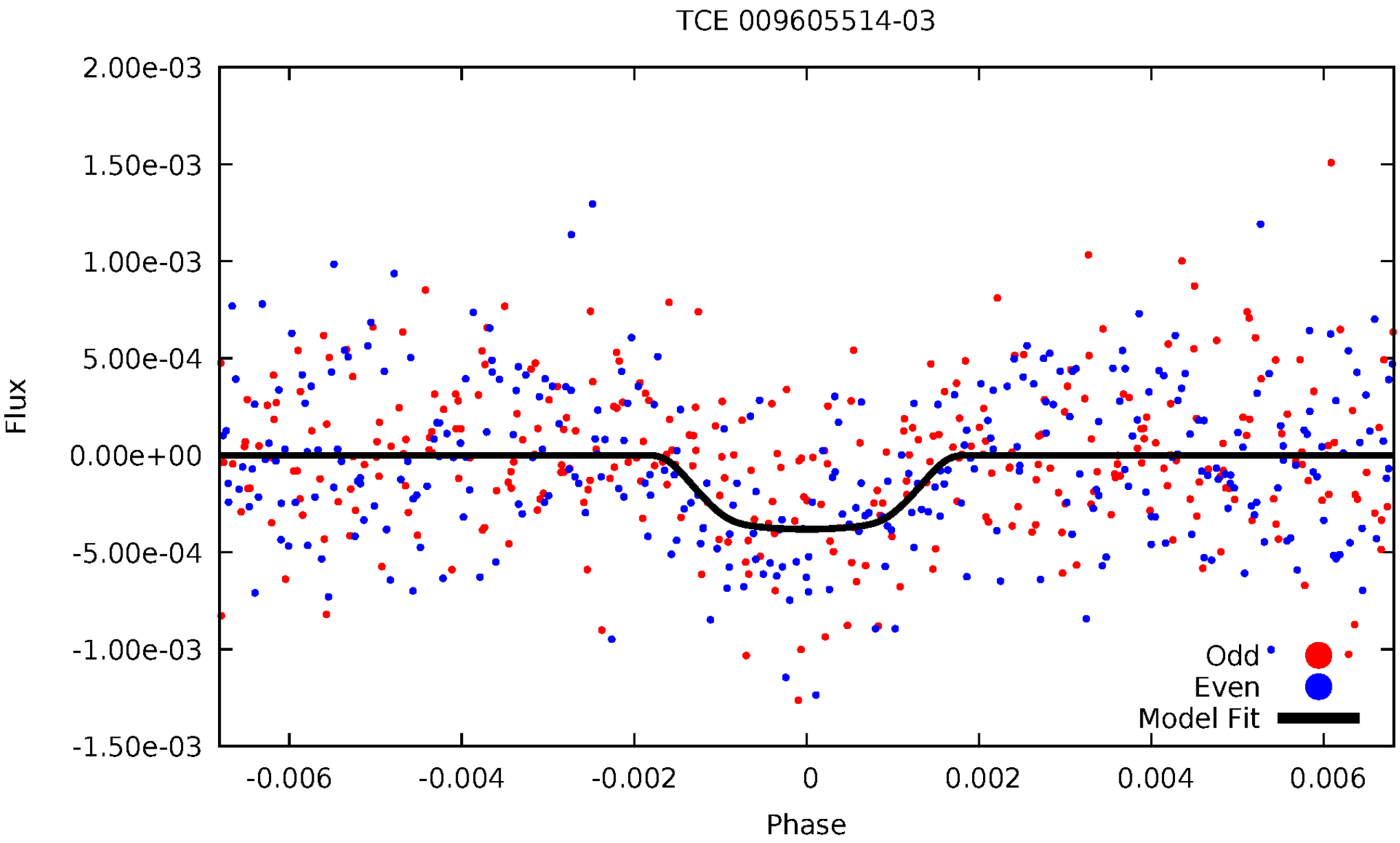
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009605514-03, PDC Light Curves




TCE 009605514-03
P = 33.395 days
P = 66.790 days
P = 133.581 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even


TCE 009605514-03
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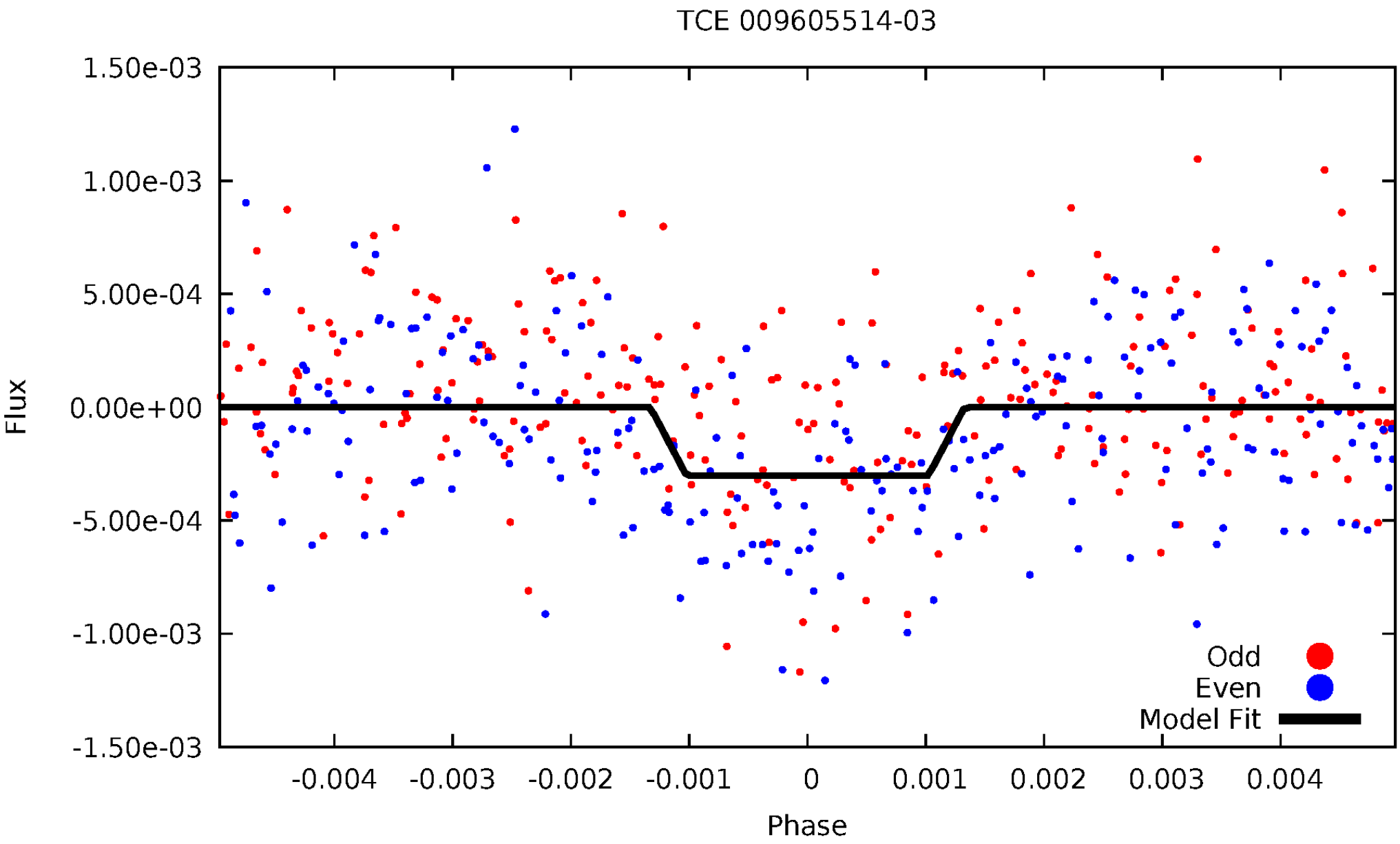
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
Flux
-0.006
-0.004
-0.002
0
0.002
0.004
0.006
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009605514-03
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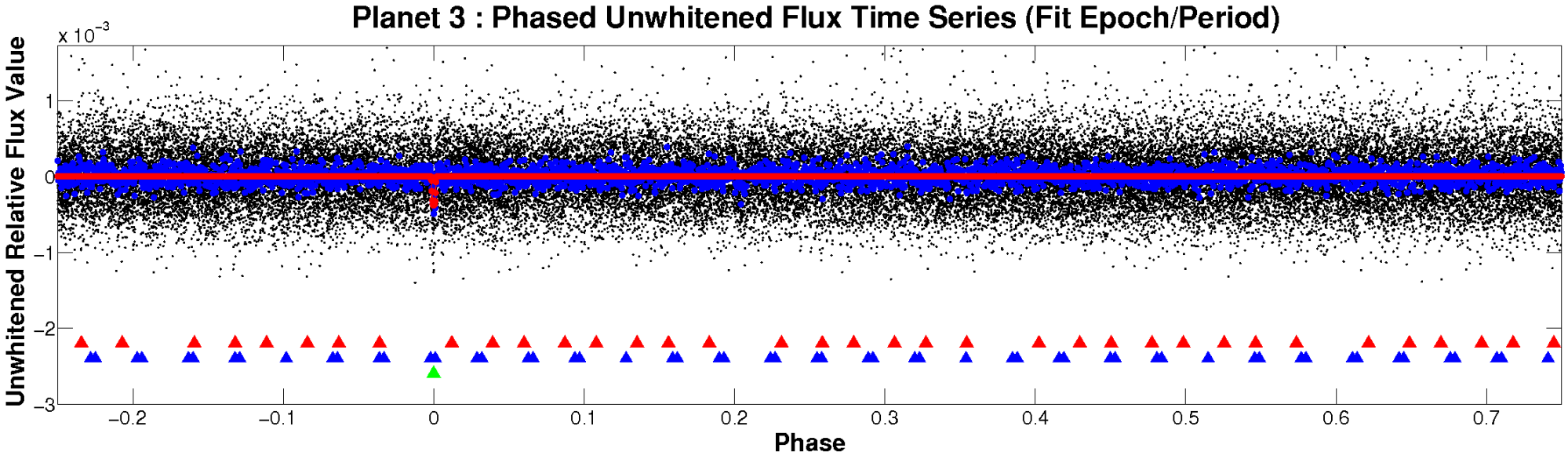
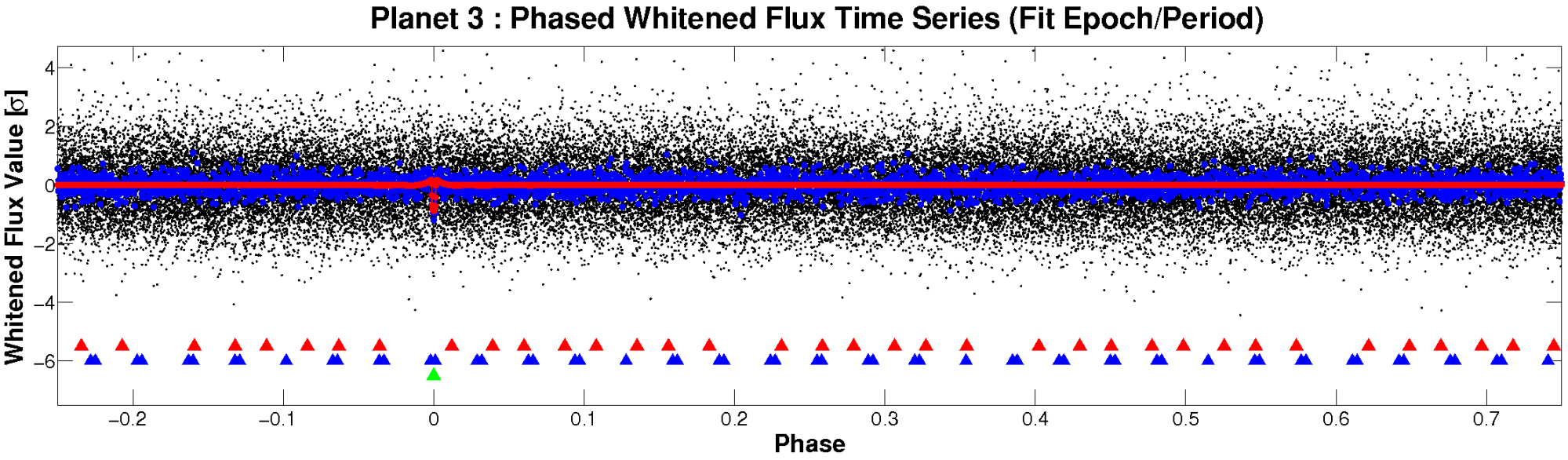
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
-1.50e-03
Flux
-0.004
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
0.004
Phase
Odd
Even
Model Fit

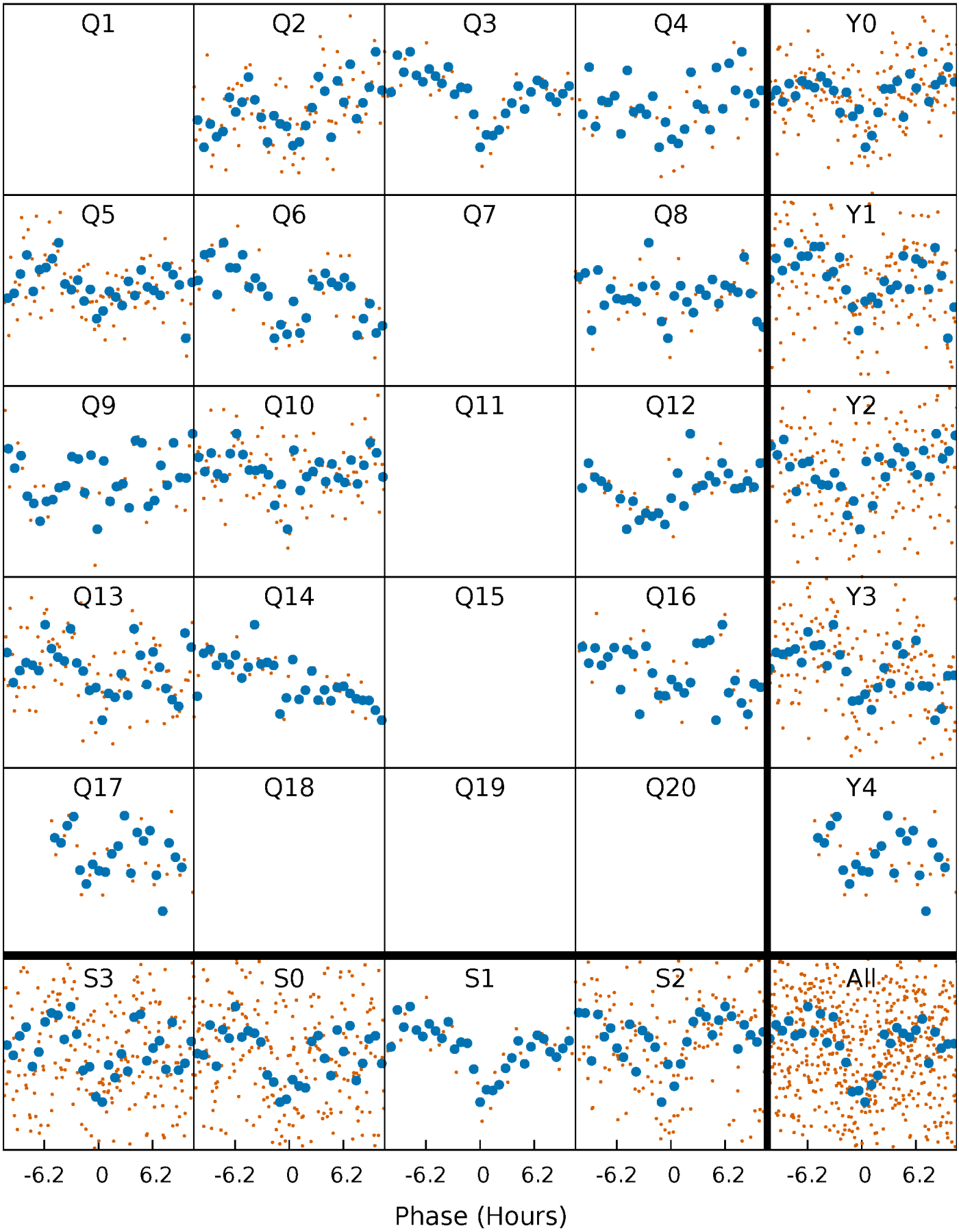
Non-Whitened Vs. Whitened Light Curve





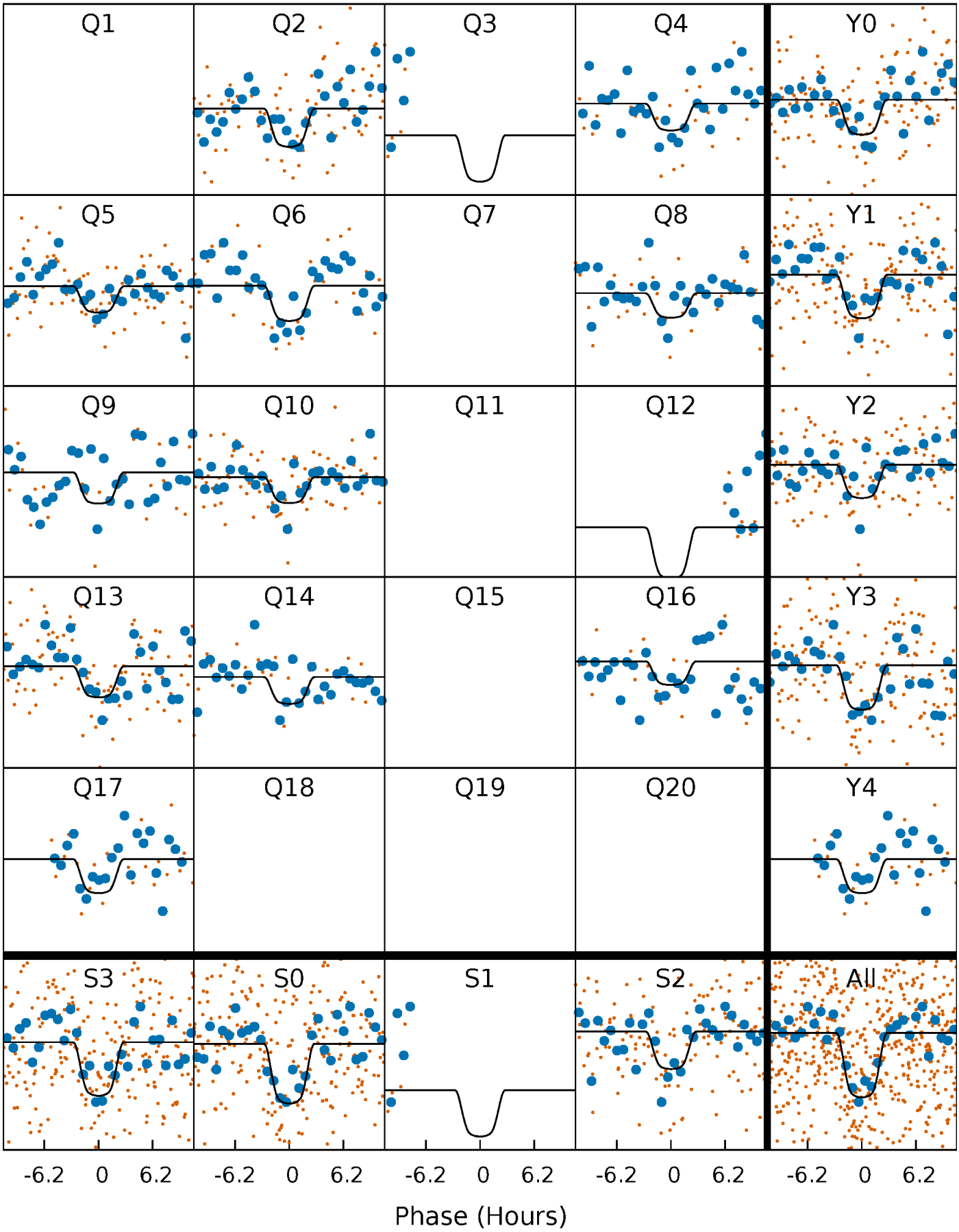
PDC Quarter-Phased Transit Curves

TCE 009605514-03 P= 66.790329 Days T_0=184.459787 (BKJD)



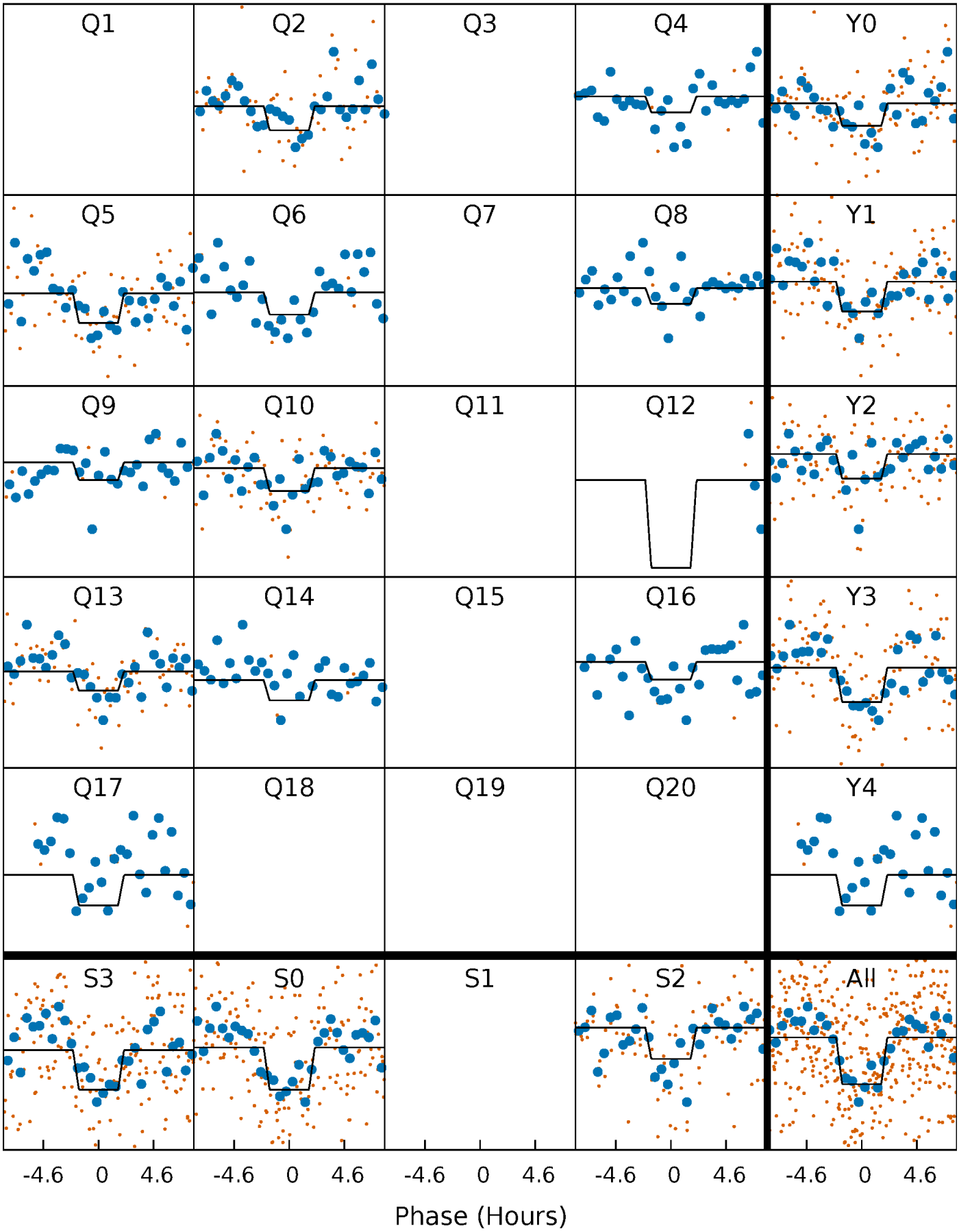
DV Quarter-Phased Transit Curves

TCE 009605514-03 P= 66.790329 Days T_0=184.459787 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

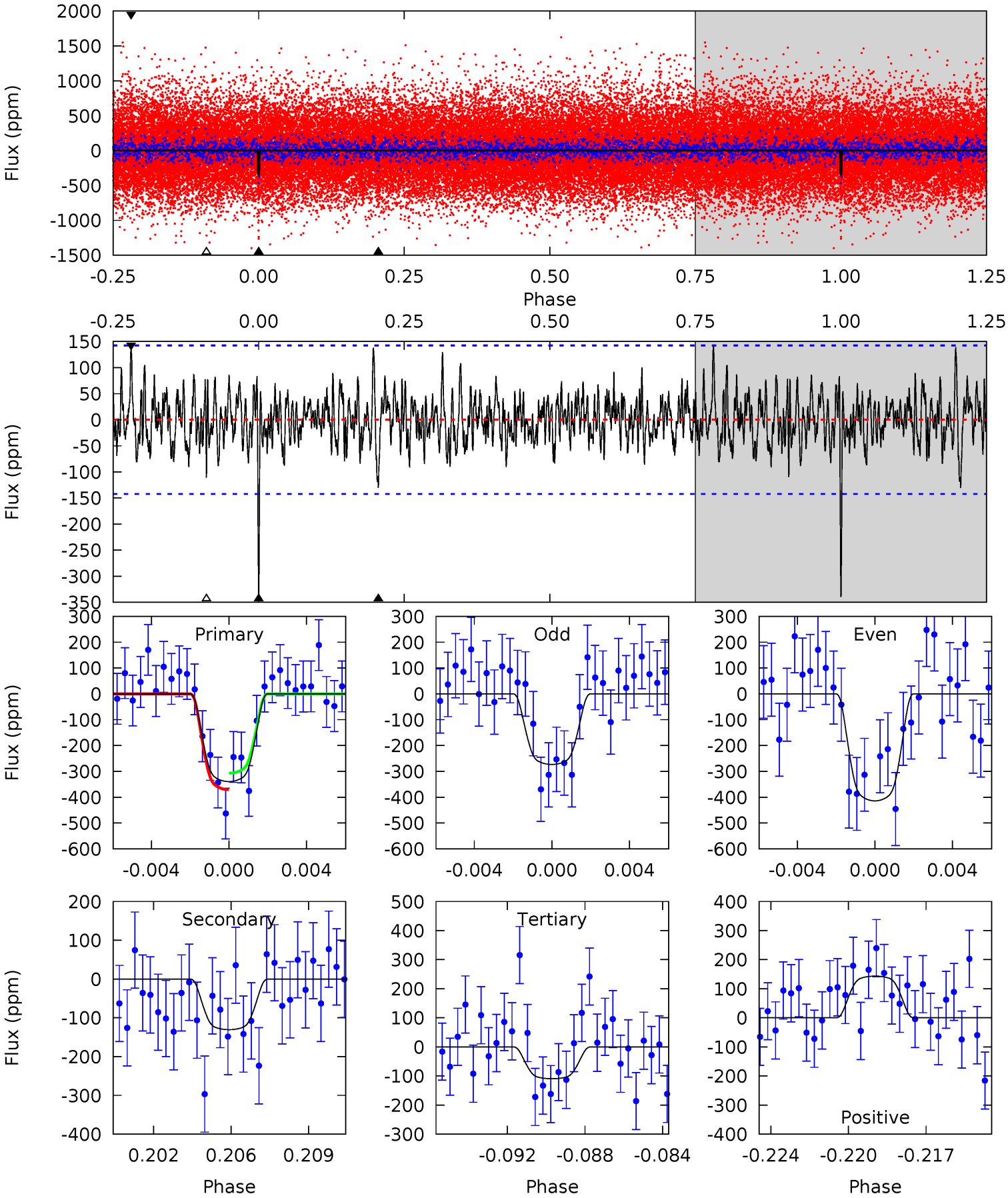
TCE 009605514-03 P= 66.790222 Days T_0=184.458841 (BKJD)



DV Model-Shift Uniqueness Test

009605514-03, P = 66.790329 Days, E = 117.669458 Days

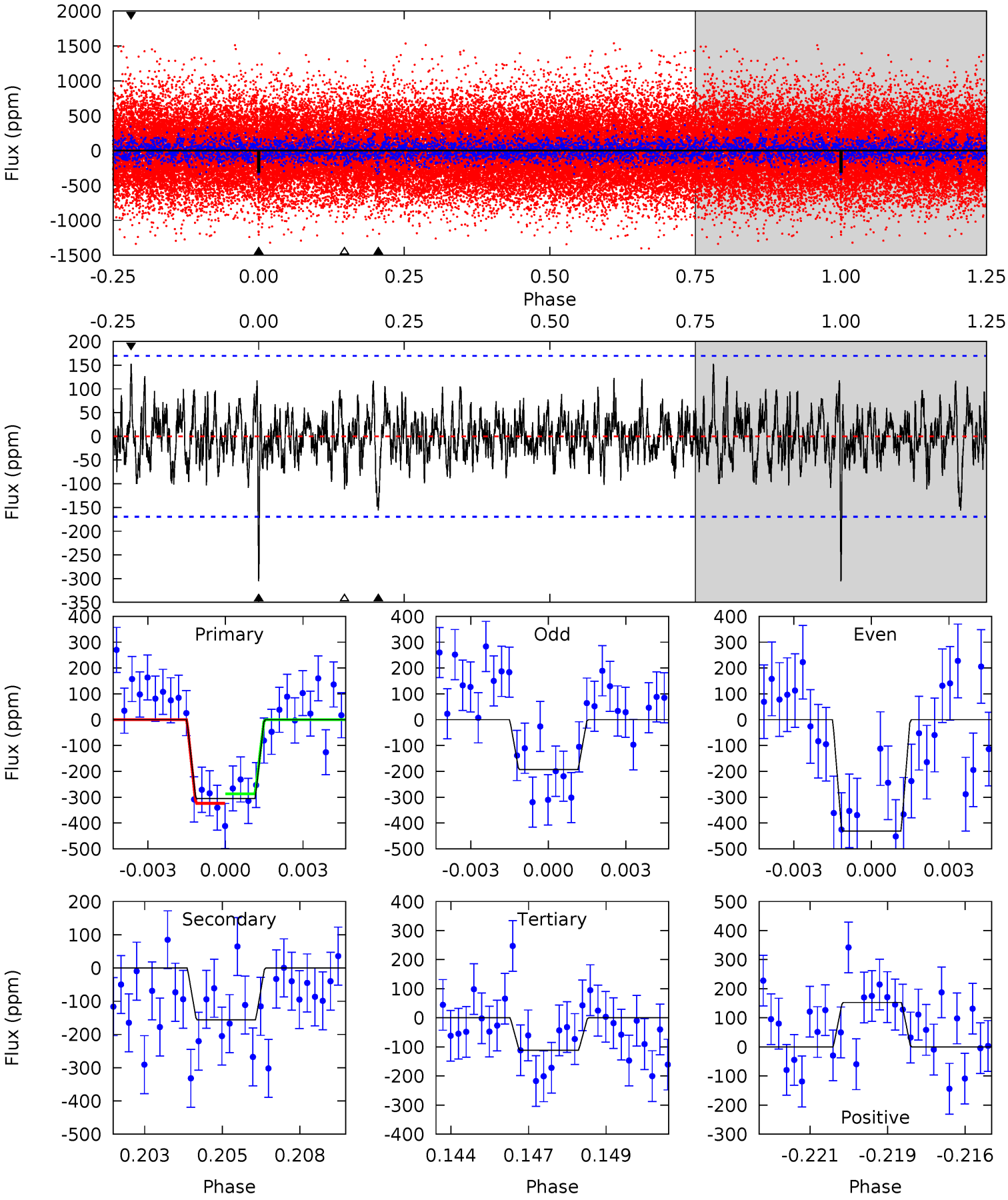
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	4.78	4.01	5.25	5.22	2.91	1.40	8.43	7.18	0.78	-0.47	2.58	1.23	0.30	1.17



Alt Model-Shift Uniqueness Test

009605514-03, P = 66.790222 Days, E = 117.668619 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.49	4.85	3.48	4.75	5.27	3.00	1.24	6.02	4.75	1.38	0.11	3.71	1.11	0.33	0.58



Stellar Parameters For KIC 009605514

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	6297^{+169}_{-225}	$4.448^{+0.052}_{-0.208}$	$-0.200^{+0.250}_{-0.350}$	$1.031^{+0.320}_{-0.107}$	$1.084^{+0.144}_{-0.144}$	$1.393^{+0.399}_{-0.744}$
	+3%/-4%	+1%/-5%	+125%/-175%	+31%/-10%	+13%/-13%	+29%/-53%
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 009605514-03 / KOI 0945.03

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-131±27	$2.68^{+0.49}_{-0.35}$	697^{+51}_{-34}	4598^{+287}_{-284}	1046^{+430}_{-328}
Alt.	-156±32	$2.04^{+0.44}_{-0.33}$	700^{+52}_{-34}	5351^{+447}_{-407}	2194^{+1025}_{-806}

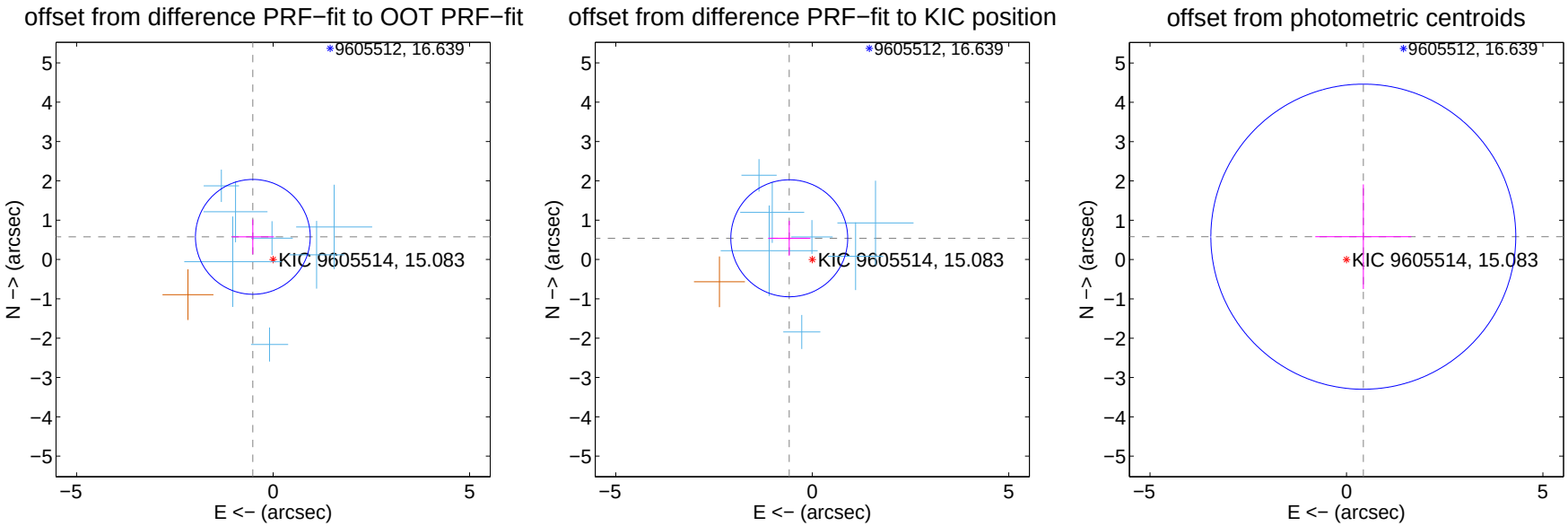
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

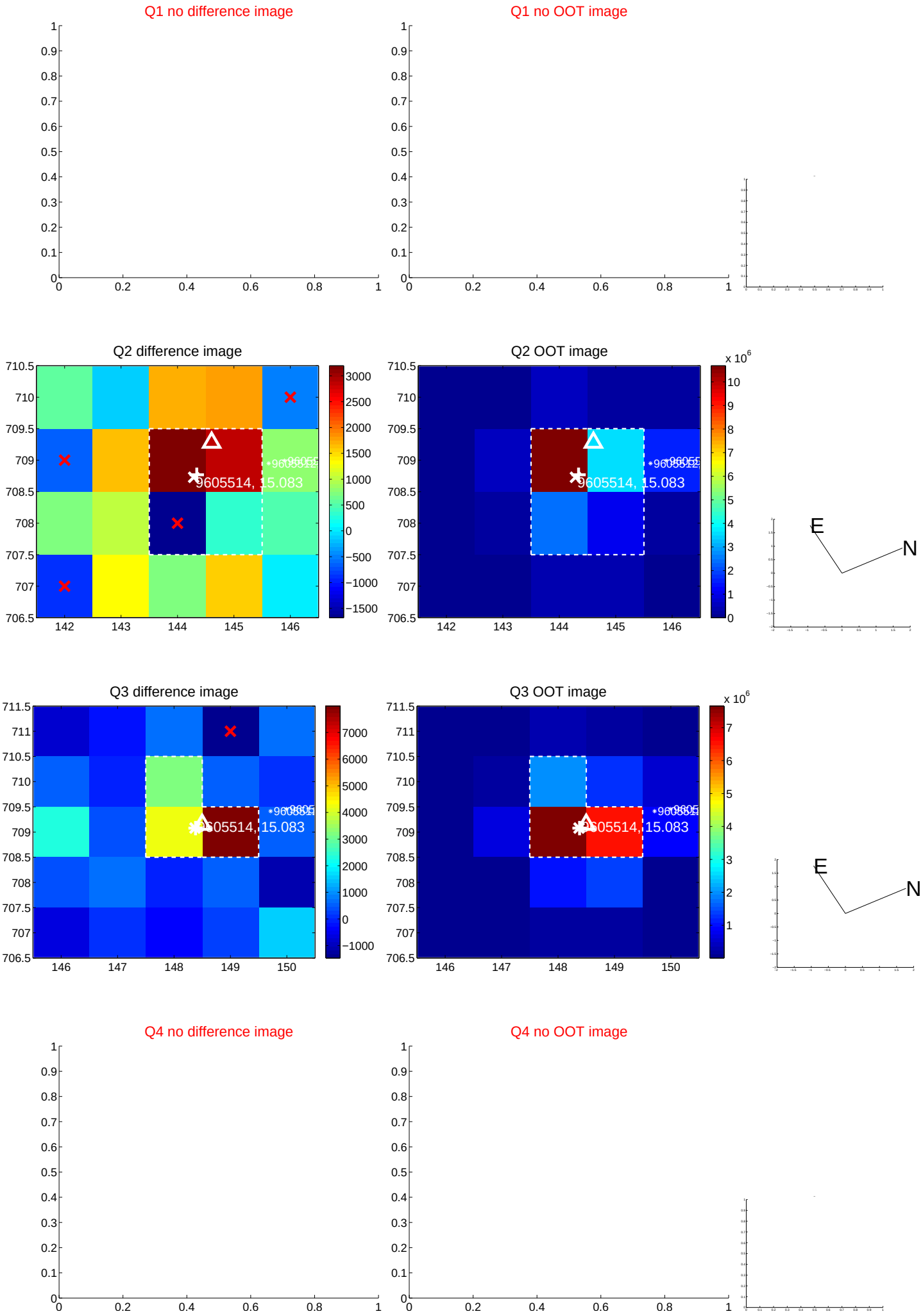
Supplemental centroid analysis for 009605514-03. Kepler magnitude: 15.08. Transit SNR 8.52
There are 7 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.772 ± 0.487	1.59	0.515 ± 0.536	0.576 ± 0.443
PRF-fit source offset from KIC position	0.796 ± 0.496	1.61	0.586 ± 0.536	0.539 ± 0.443
photometric centroid source offset	0.72 ± 1.29	0.56	-0.43 ± 1.22	0.58 ± 1.33

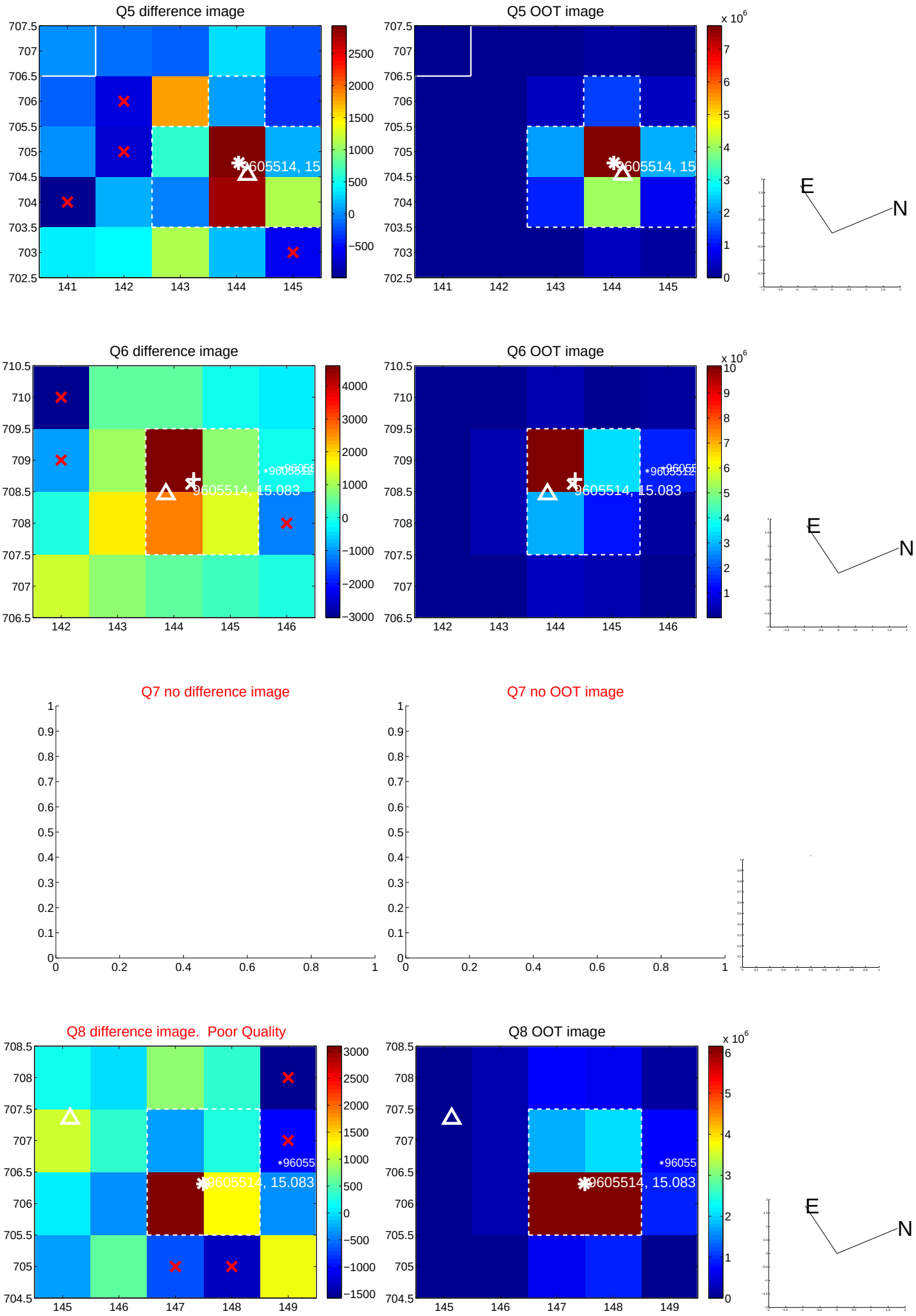


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

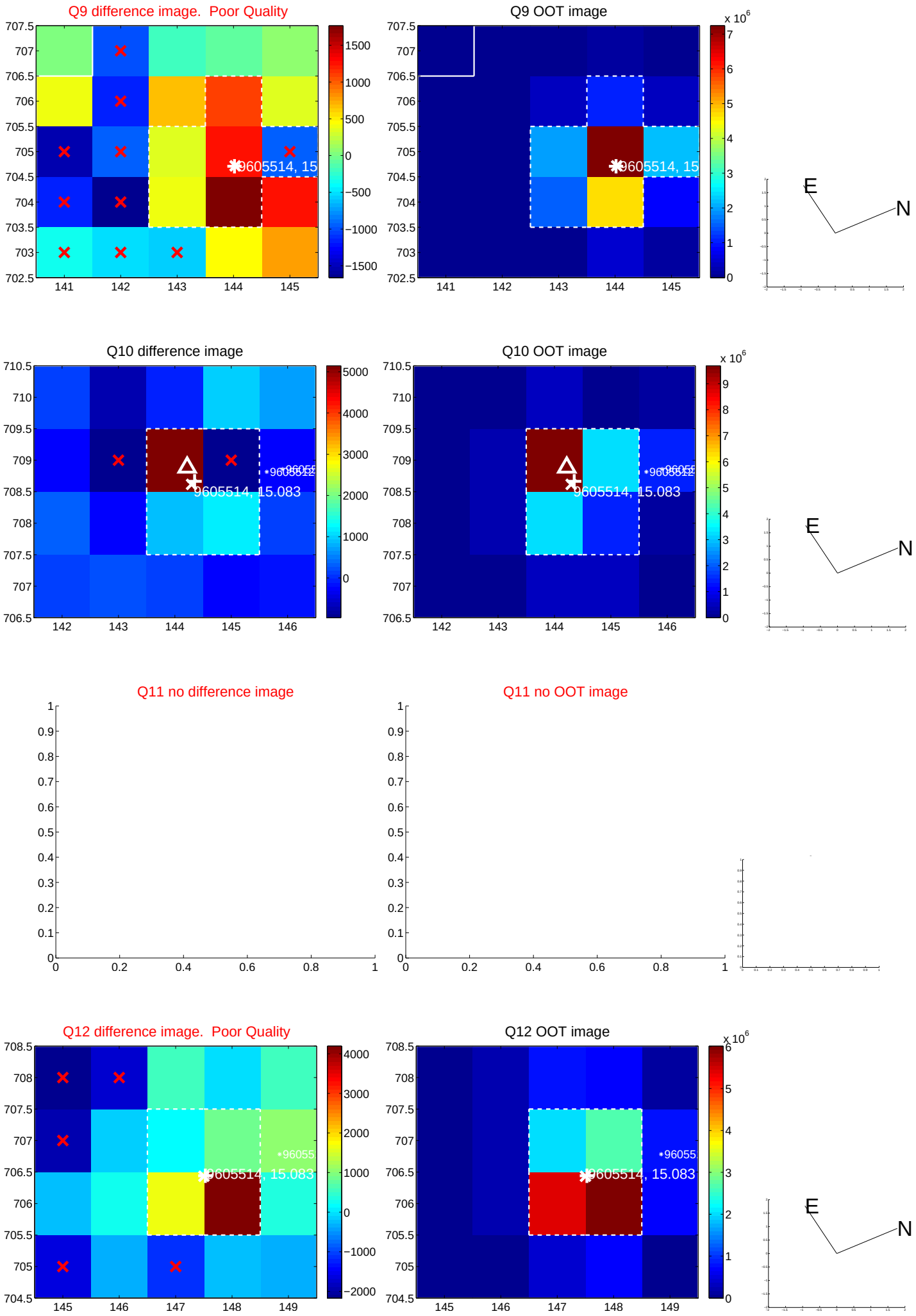
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



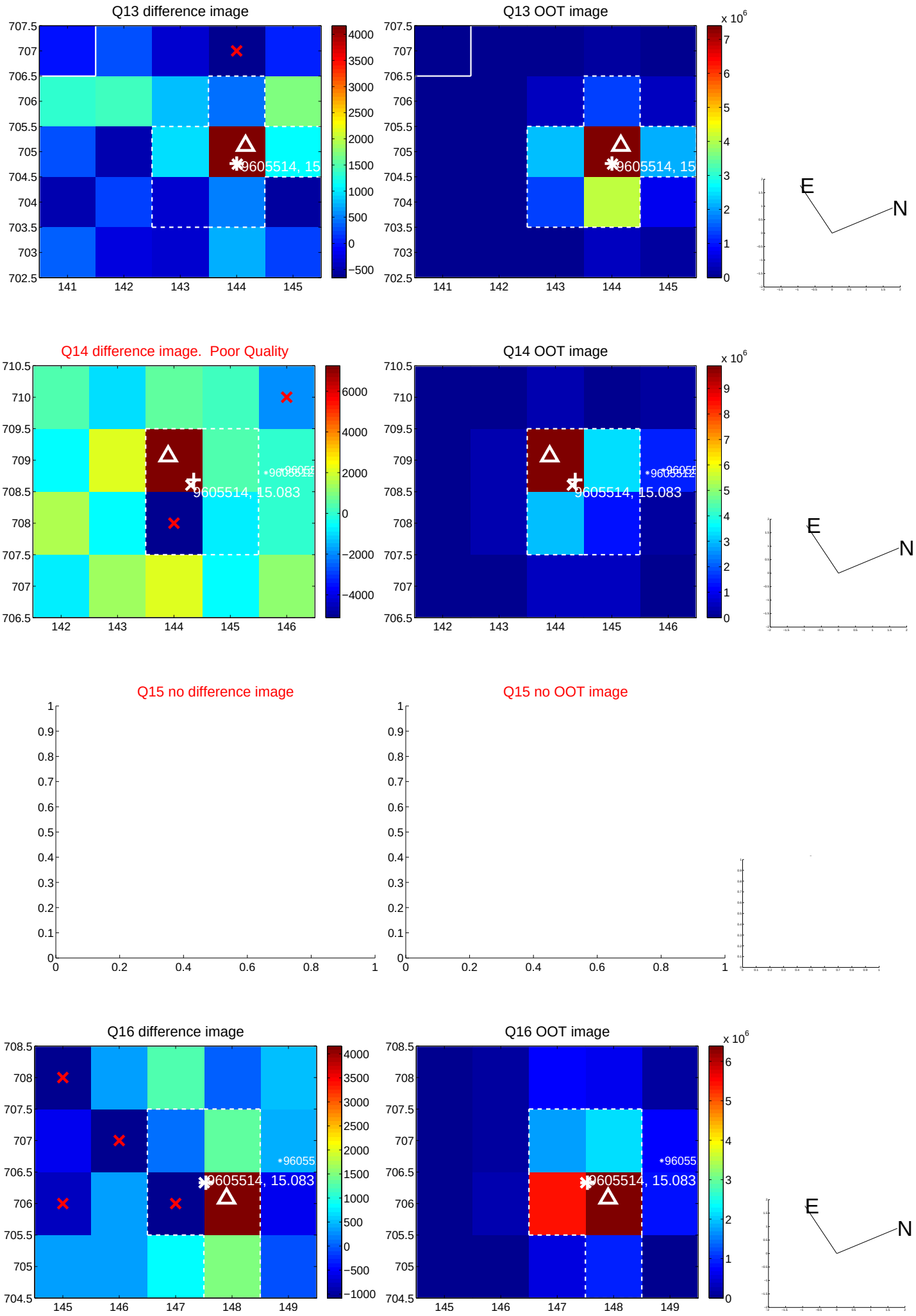
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



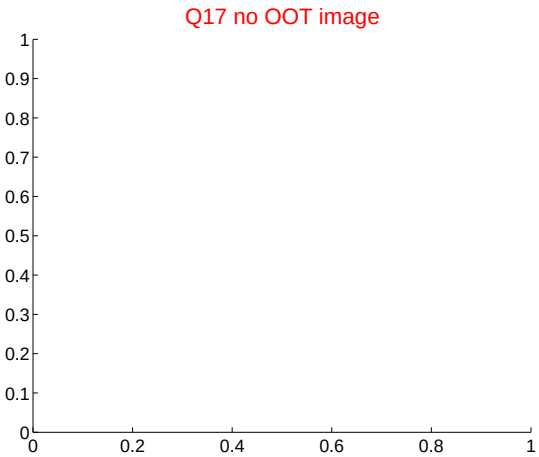
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

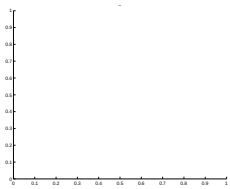


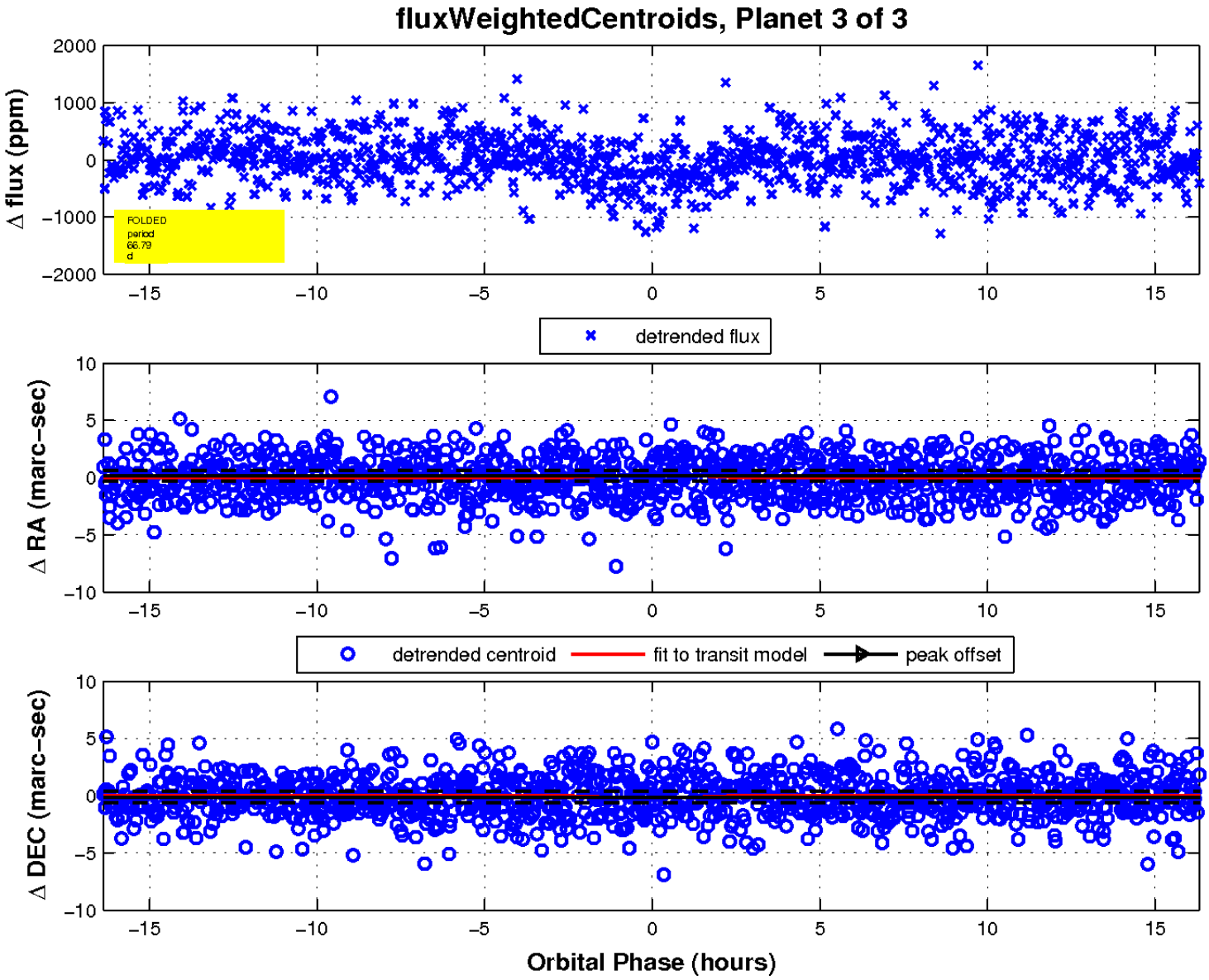
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



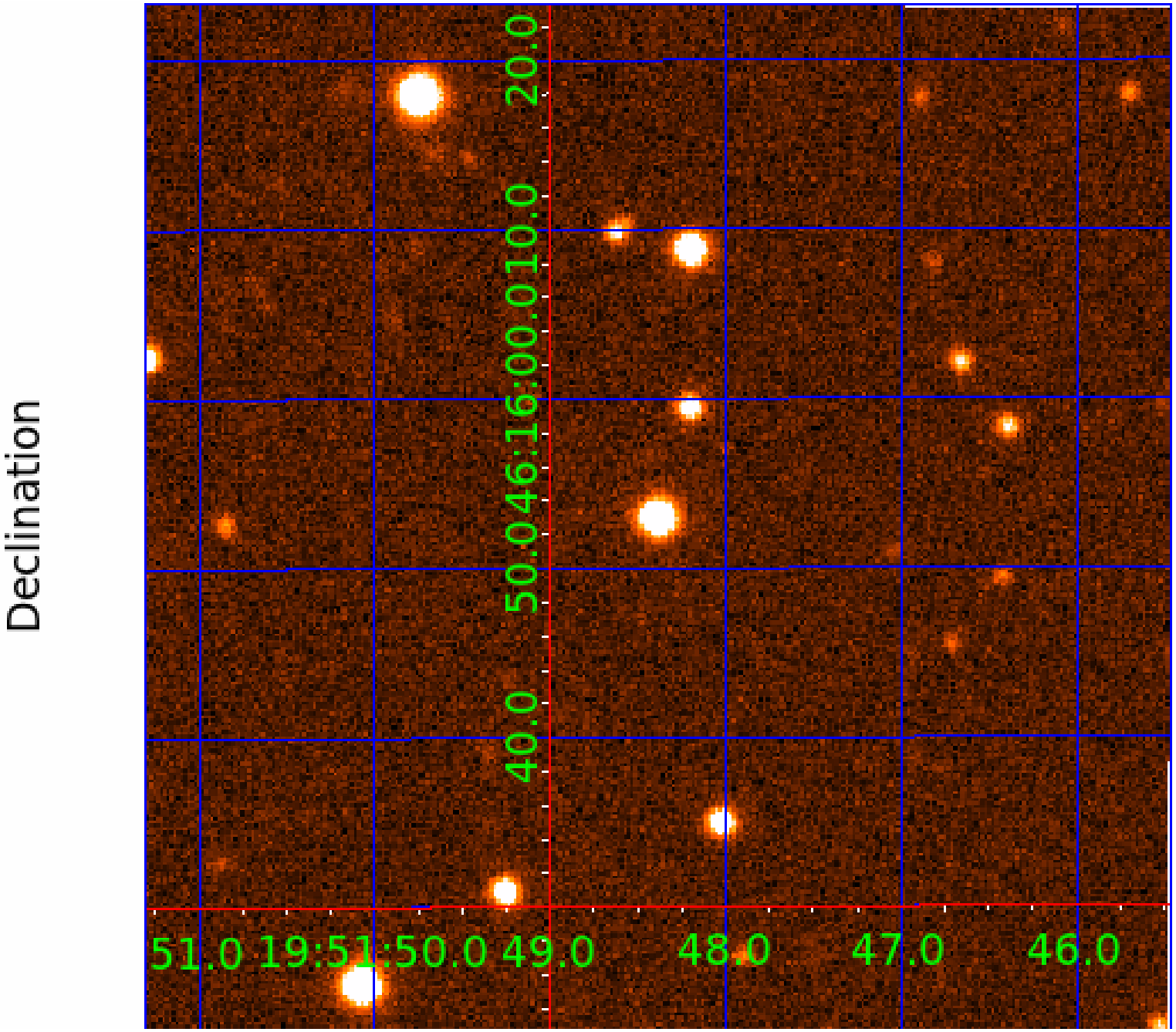
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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