KIC 009269082

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 ($S_\oplus$)
009269082-03	OBS	No	315.281777	408.381410	4207.9	16.576	18.1	10.2	0.62	5094	6.78	0.40
009269082-04	OBS	No	268.660827	377.566280	1986.6	15.921	14.4	8.2	0.62	5094	2.86	0.49
009269082-05	OBS	No	334.115585	309.759758	1914.1	3.136	15.1	7.9	0.62	5094	2.69	0.37
009269082-07	OBS	No	272.249942	335.775076	1544.2	5.000	13.8	-1.0	0.62	5094	2.42	0.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009269082-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269082-04	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269082-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
009269082-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS

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

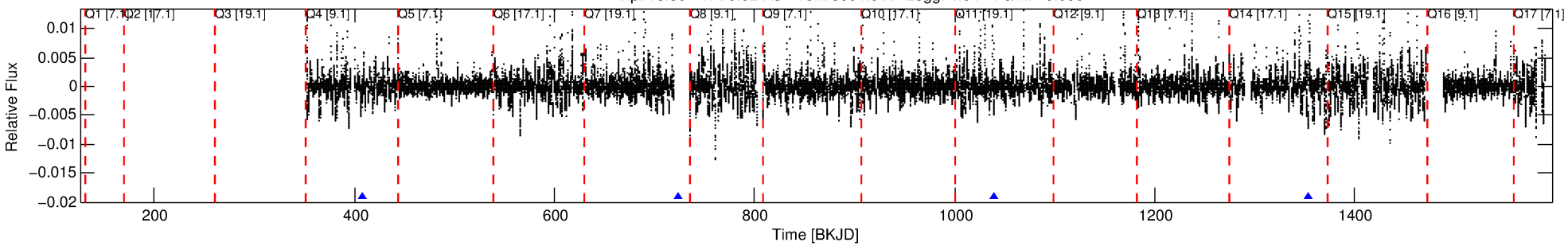
Ephemeris Match Information For 009269082-03

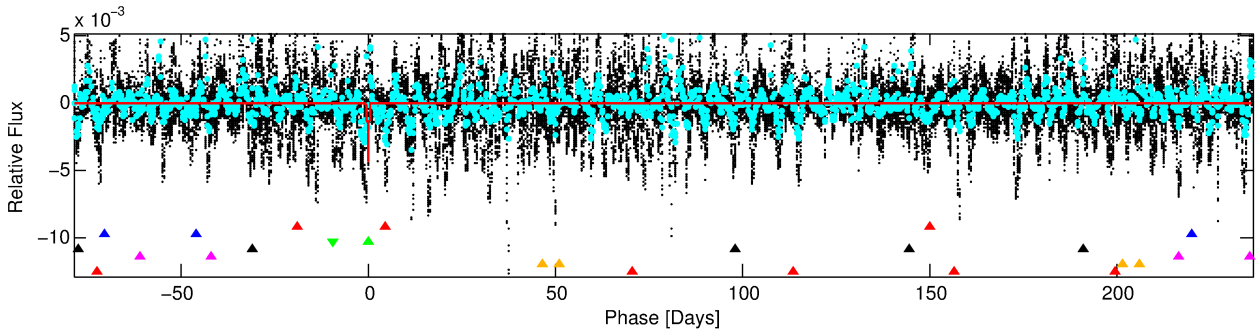
No Significant Match Found

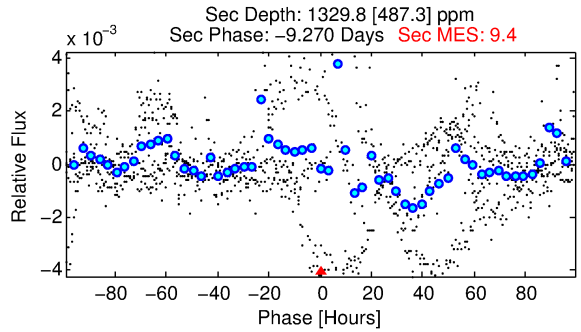
DV One-Page Summary

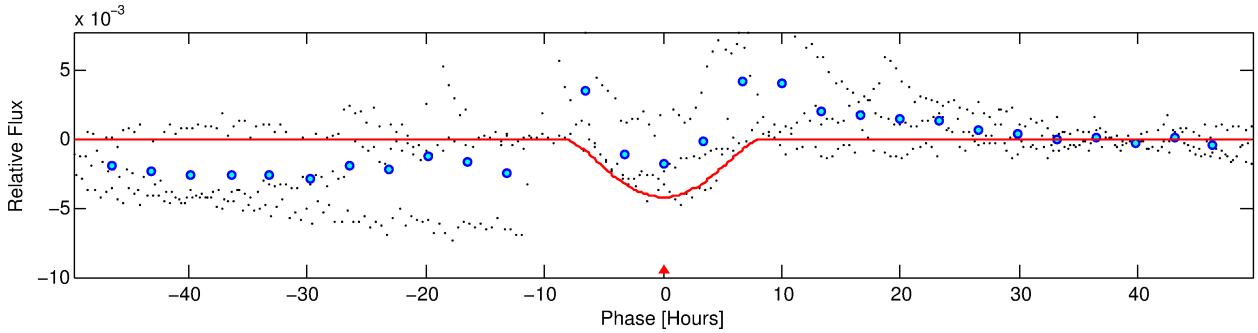
KIC: 9269082 Candidate: 3 of 7 Period: 315.282 d

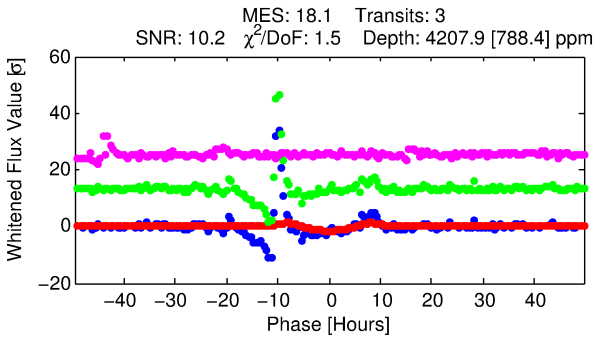
Kp: 15.50 R*: 0.62 Rs Teff: 5094.0 K Logg: 4.64 Fe/H: −0.900

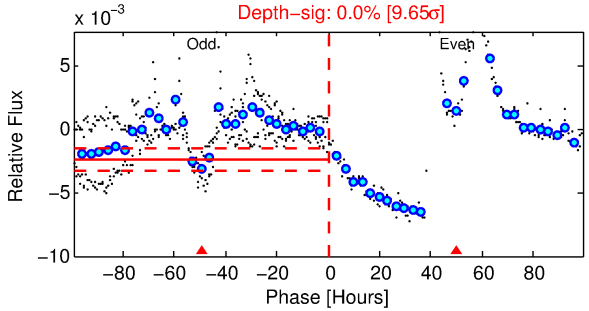


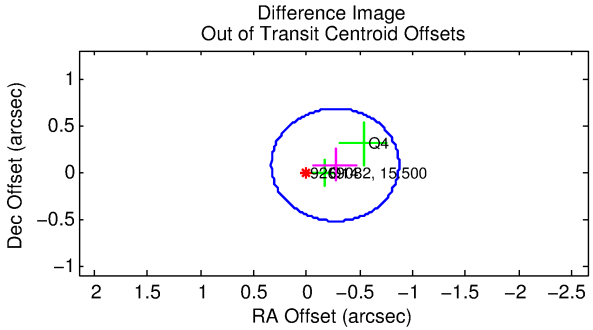












DV Fit Results:

Period = 315.28178 [0.01630] d
Epoch = 408.3814 [0.0338] BKJD
Rp/R* = 0.0994 [0.1585]
a/R* = 72.05 [26.07]
b = 0.98 [0.25]

Seff = 0.40 [0.07]
Teq = 202 [9] K
Rp = 6.78 [10.83] Re
a = 0.7722 [0.0595] AU

Ag = 9488.87 [30479.89] [0.31σ]
Teffp = 3085 [2478] K [1.16σ]

DV Diagnostic Results:

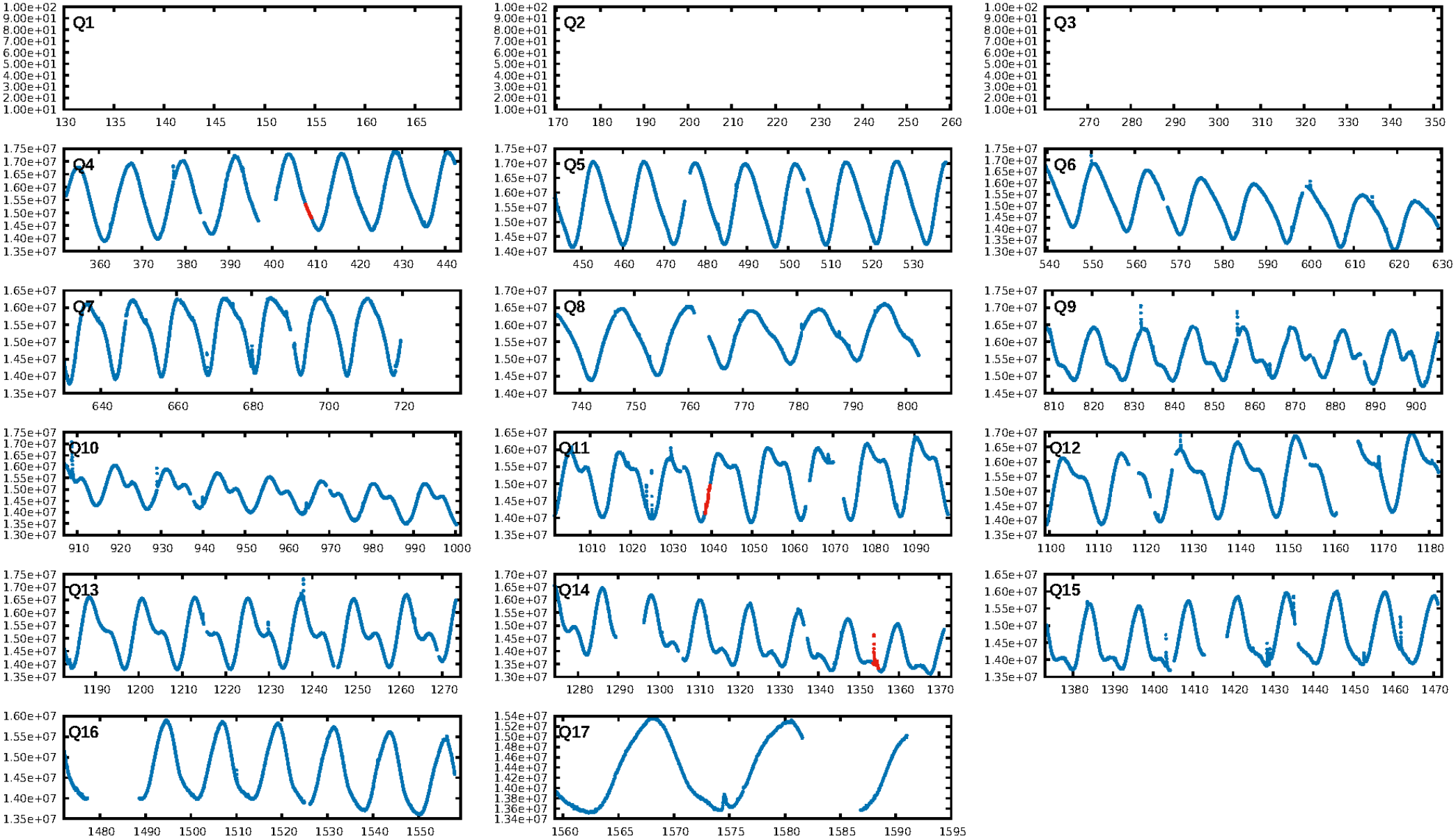
ShortPeriod−sig: 100.0% [59.65σ]
LongPeriod−sig: 100.0% [26.79σ]
ModelChiSquare2−sig: 0.0%
ModelChiSquareGof−sig: 4.3%
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: 9.349

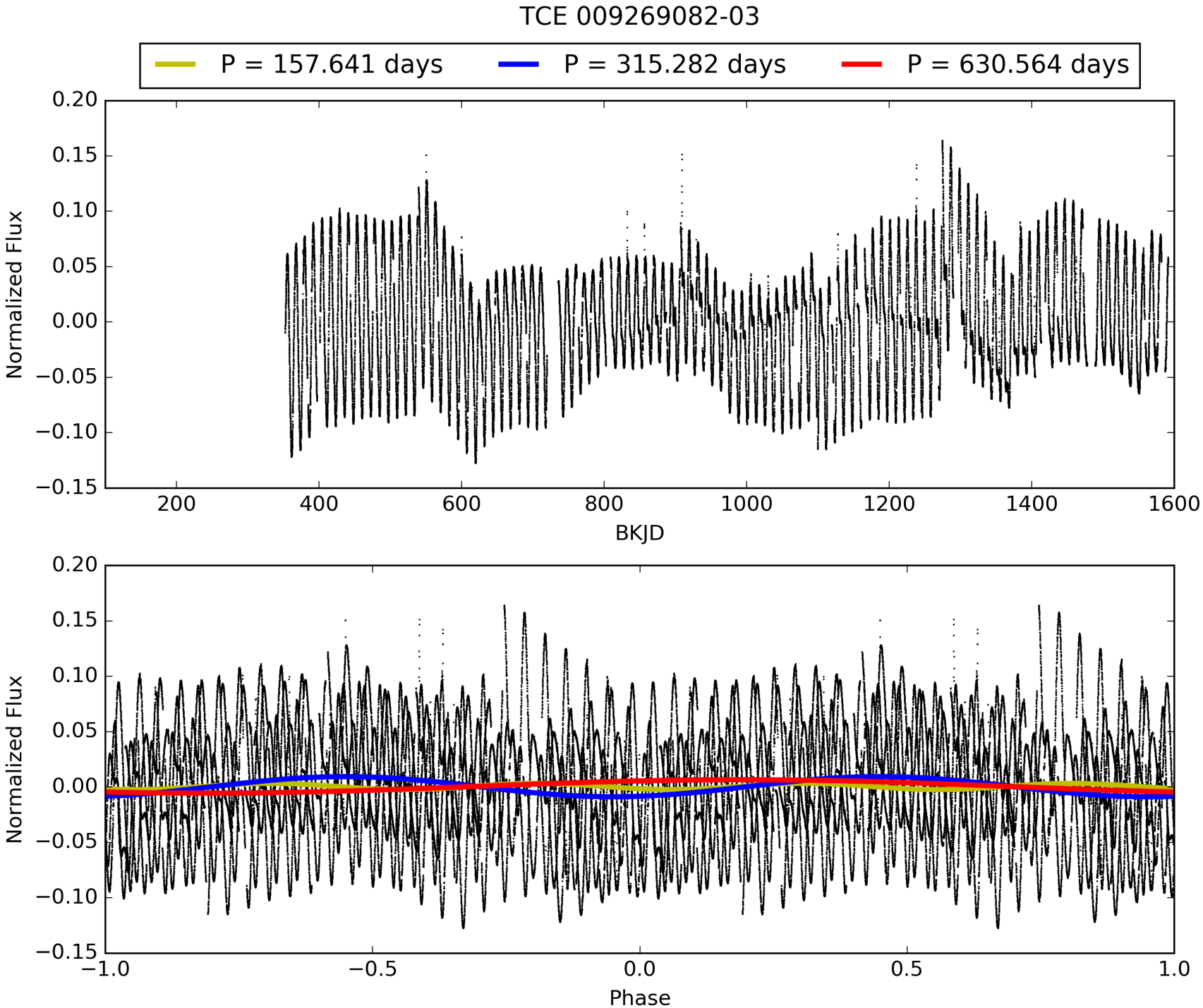
Centroid−sig: 0.0%
Centroid−so: 2.493 arcsec [1.97σ]
OotOffset−rm: 0.279 arcsec [1.39σ]
KicOffset−rm: 0.211 arcsec [0.90σ]
OotOffset−st: 1/0/1/0 [2]
KicOffset−st: 1/0/1/0 [2]
DiffImageQuality−fgm: 0.50 [1/2]
DiffImageOverlap−fno: 1.00 [2/2]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30−Jan−2016 05:54:06 Z

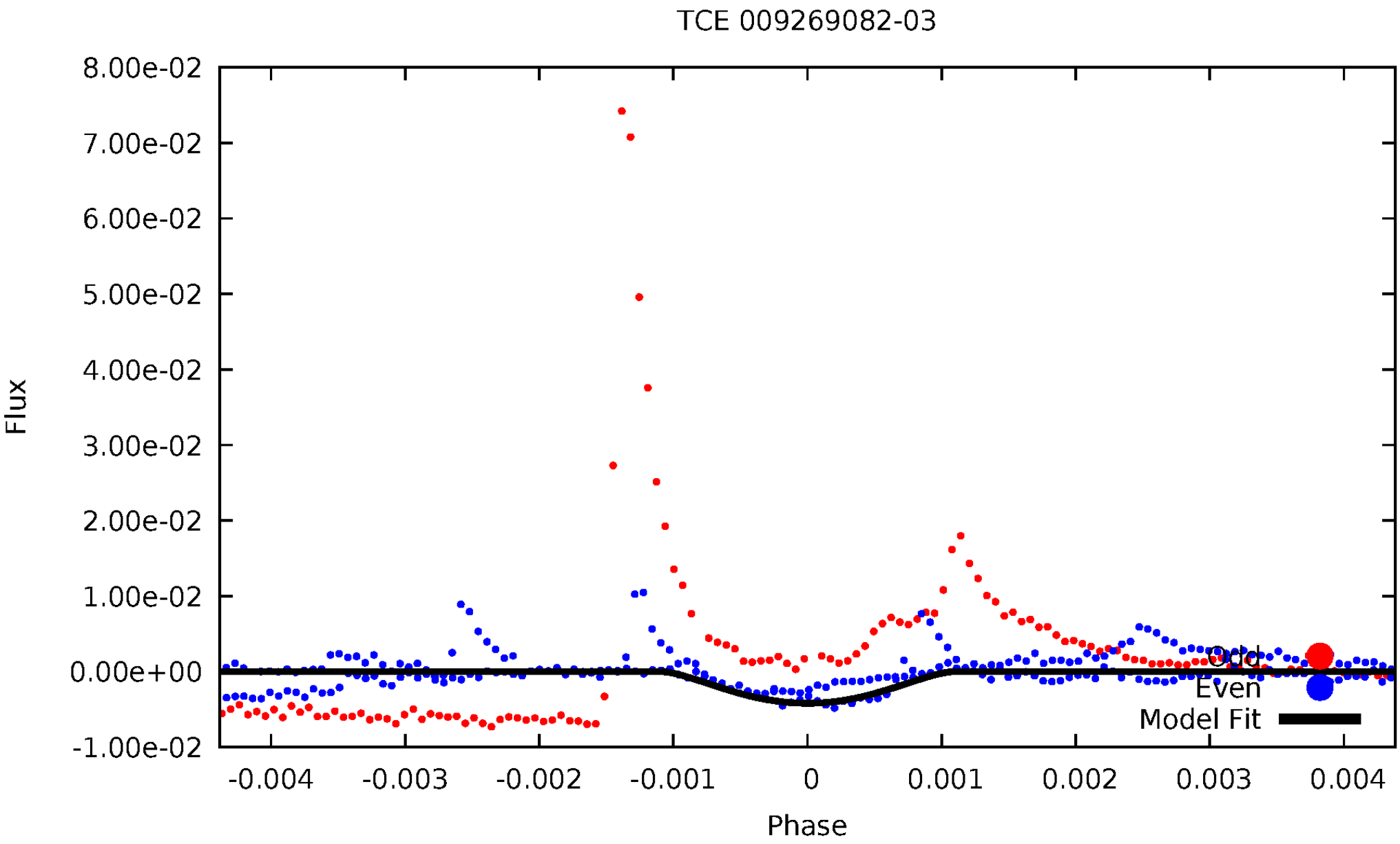
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009269082-03, PDC Light Curves




TCE 009269082-03
P = 157.641 days
P = 315.282 days
P = 630.564 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even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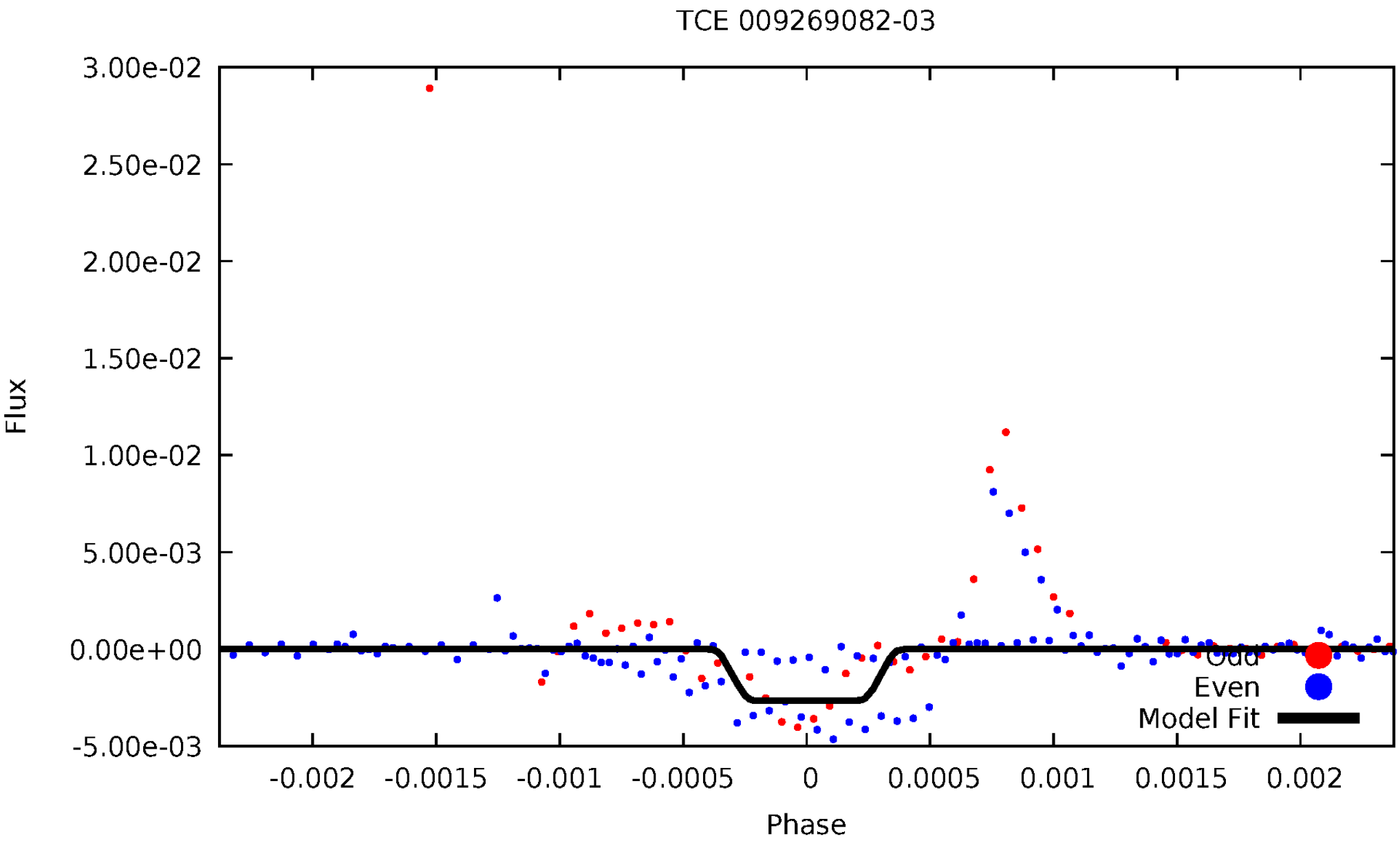
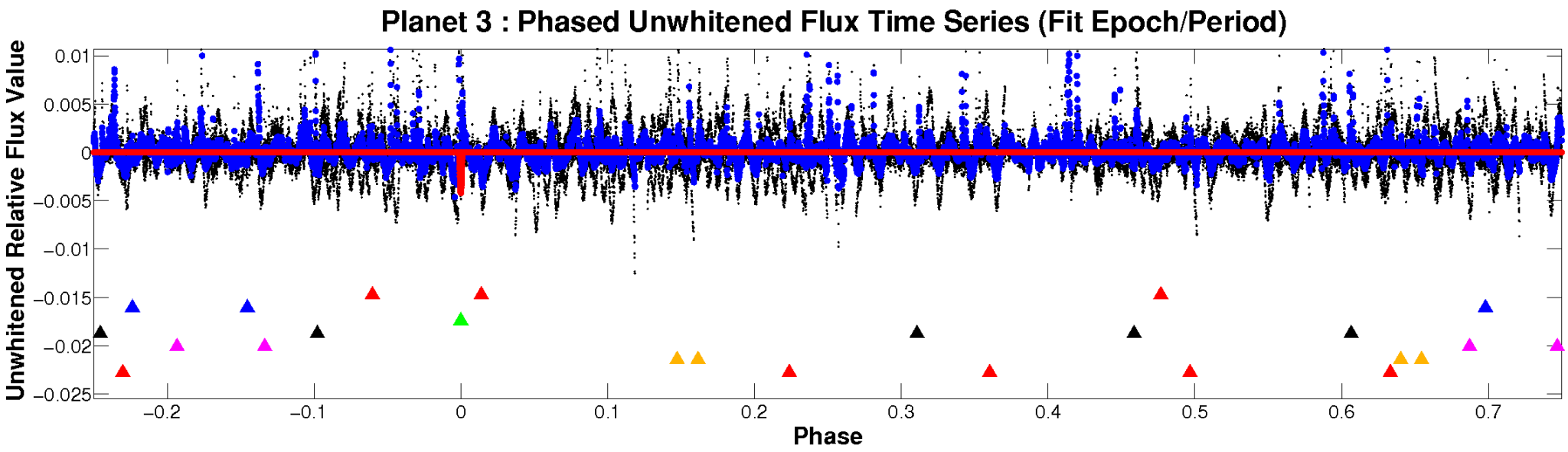
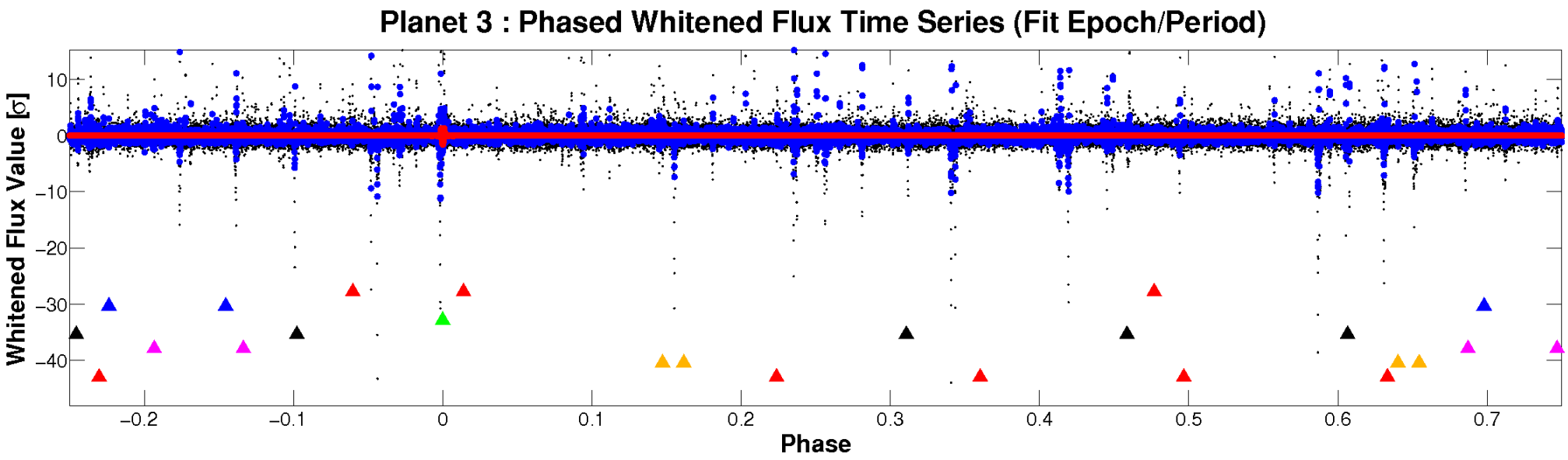
7.00e-02
6.00e-02
5.00e-02
4.00e-02
3.00e-02
2.00e-02
1.00e-02
0.00e+00
-1.00e-02
Flux
-0.004
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
0.004
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009269082-03
3.00e-02
2.50e-02
2.00e-02
1.50e-02
1.00e-02
5.00e-03
0.00e+00
-5.00e-03
Flux
-0.002
-0.0015
-0.001
-0.0005
0
0.0005
0.001
0.0015
0.002
Phase
Odd
Even
Model Fit

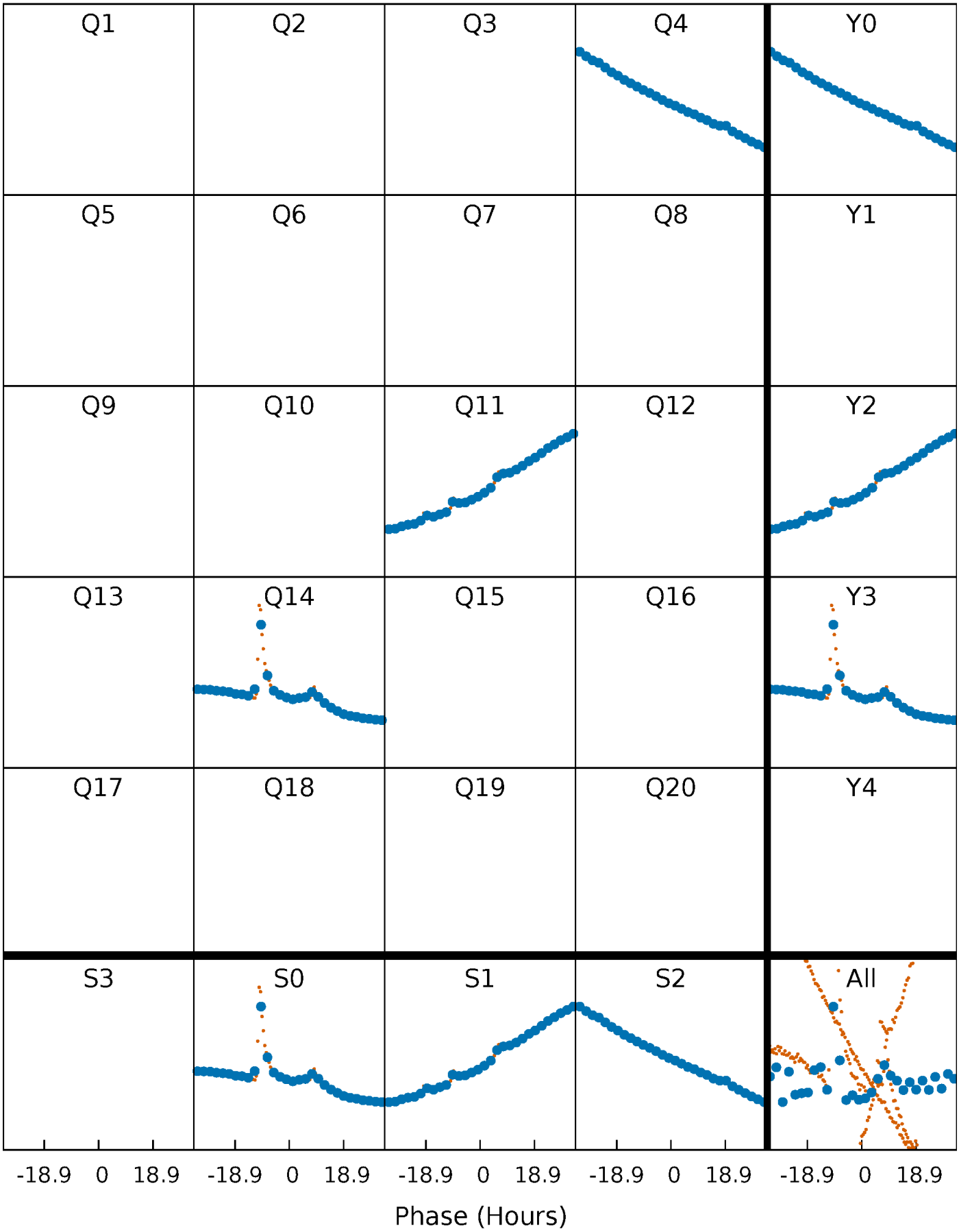
Non-Whitened Vs. Whitened Light Curve





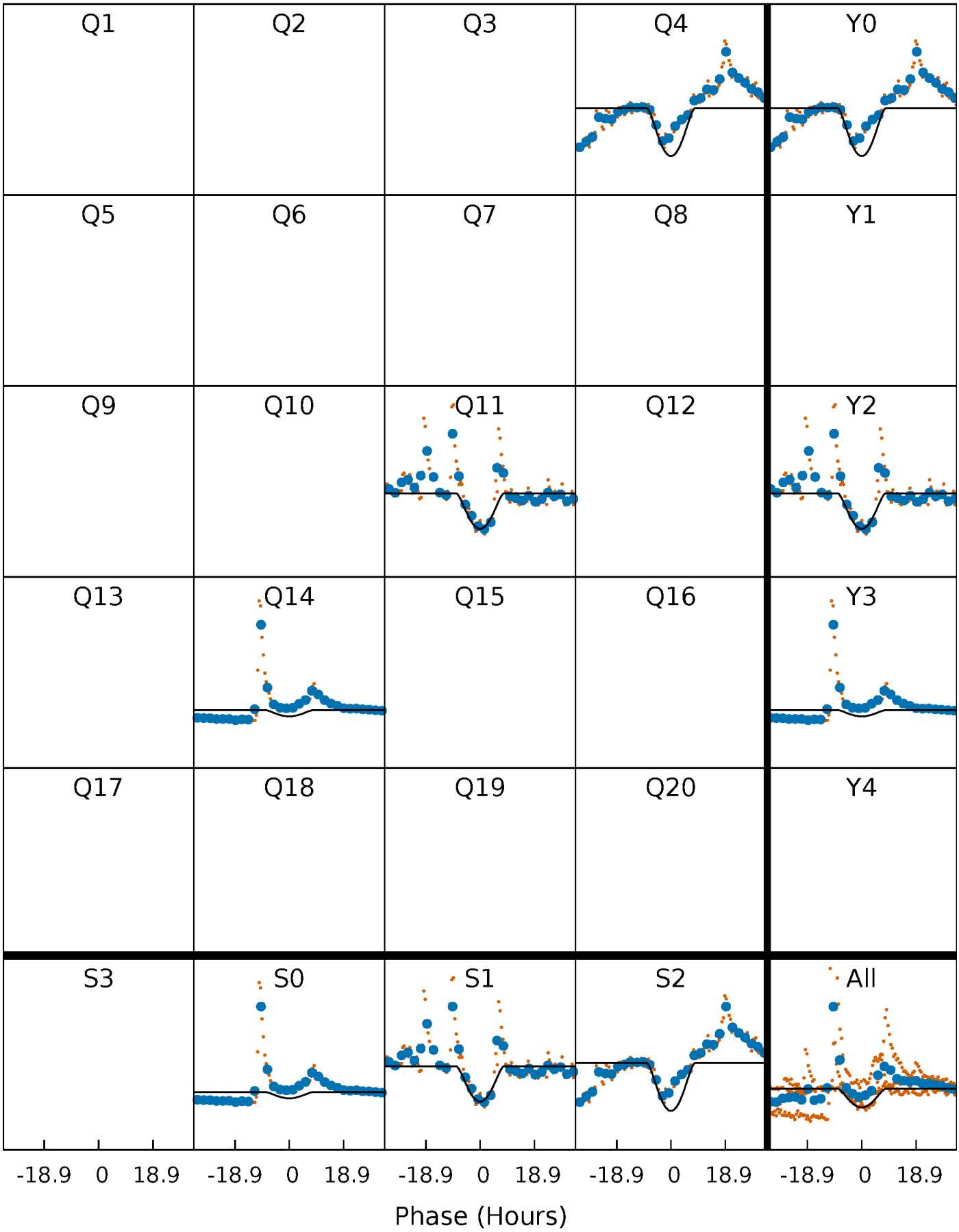
PDC Quarter-Phased Transit Curves

TCE 009269082-03 P=315.281777 Days T_0=408.381410 (BKJD)



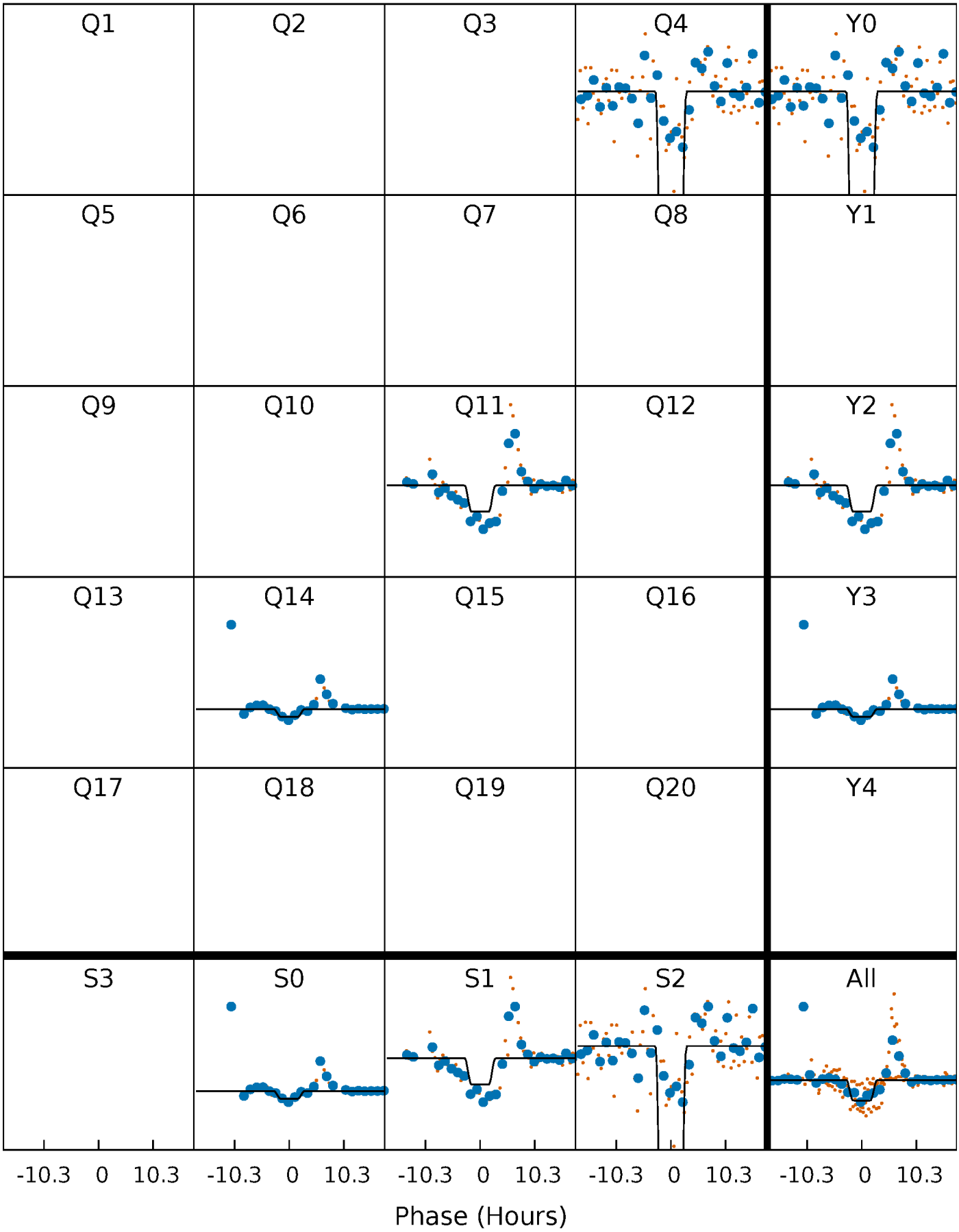
DV Quarter-Phased Transit Curves

TCE 009269082-03 P=315.281777 Days T_0=408.381410 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

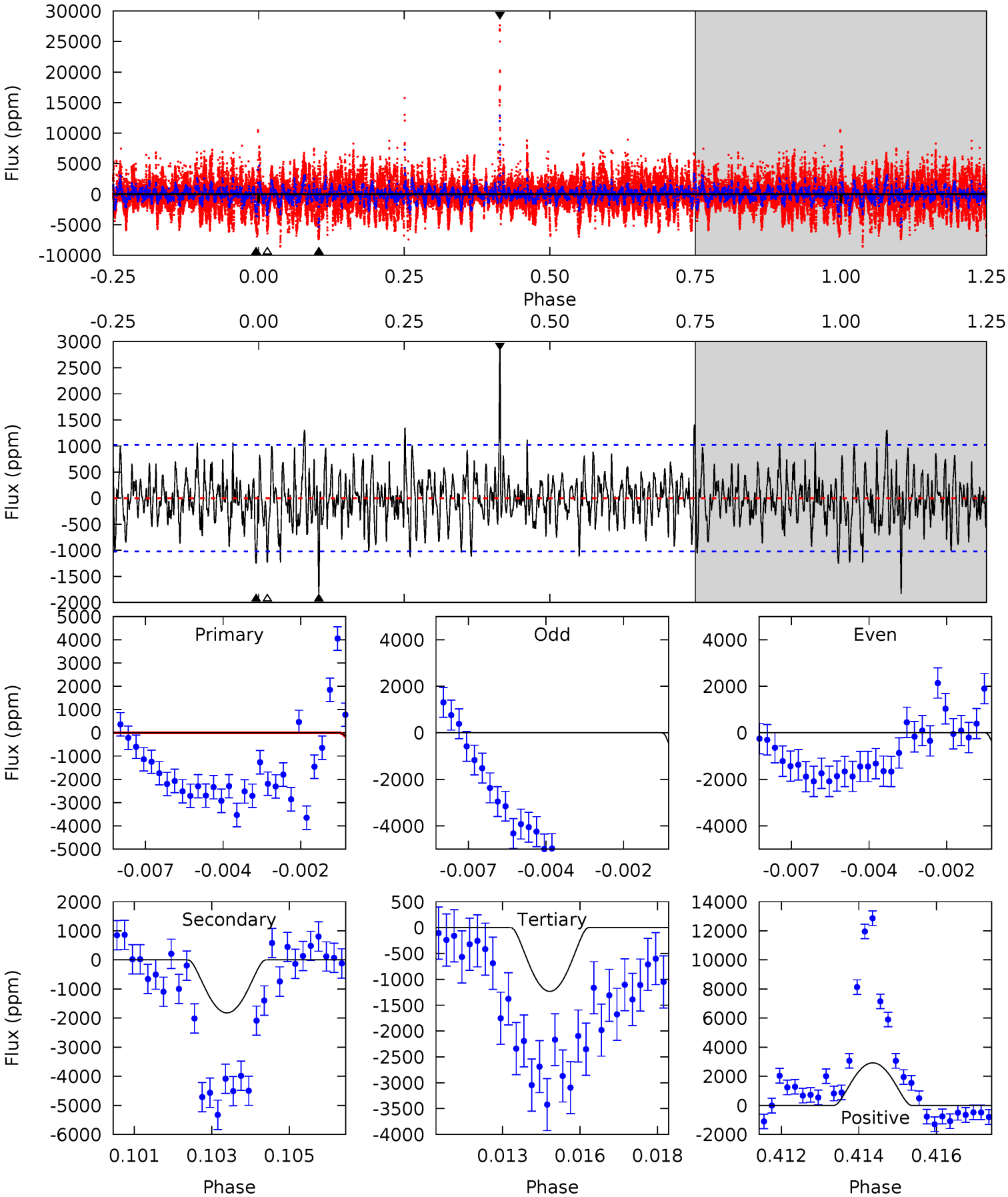
TCE 009269082-03 P=315.357943 Days T_0=408.259059 (BKJD)



DV Model-Shift Uniqueness Test

009269082-03, P = 315.281777 Days, E = 93.099633 Days

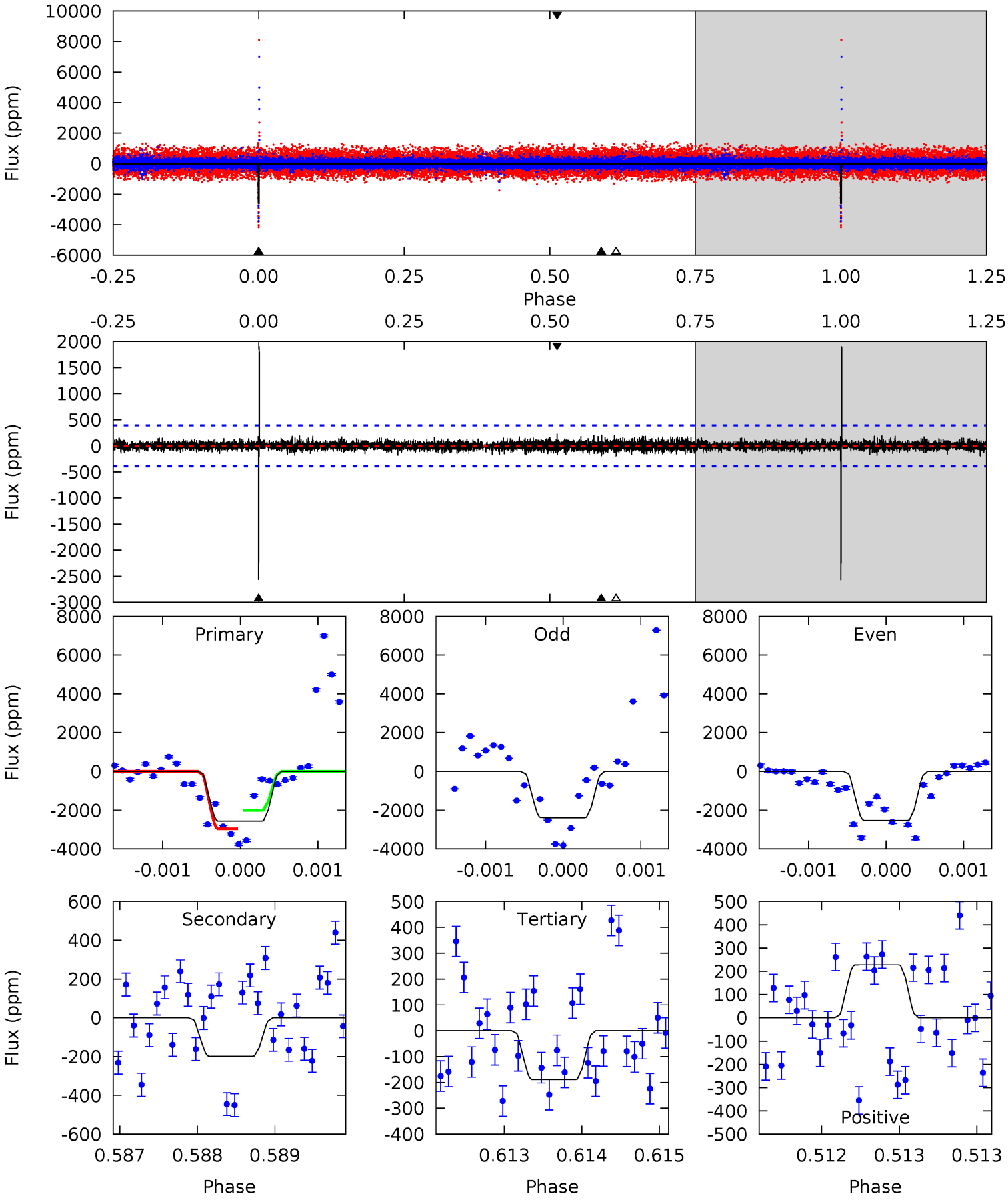
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.51	9.47	6.41	15.2	5.31	3.06	2.04	0.10	-8.70	3.06	-5.74	1.43	0.31	0.62	0.76



Alt Model-Shift Uniqueness Test

009269082-03, P = 315.357943 Days, E = 92.901116 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.9	2.77	2.64	3.19	5.50	3.37	0.77	33.3	32.8	0.13	-0.42	0.98	0.94	0.43	6.76



Stellar Parameters For KIC 009269082

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	M($M_\odot$)	$p_\star$ (g·cm^{-3})
	5094^{+183}_{-183}	$4.637^{+0.065}_{-0.040}$	$-0.900^{+0.300}_{-0.300}$	$0.625^{+0.055}_{-0.049}$	$0.616^{+0.058}_{-0.027}$	$3.562^{+0.942}_{-0.575}$
	+4%/-4%	+1%/-1%	+33%/-33%	+9%/-8%	+9%/-4%	+26%/-16%
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 009269082-03 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1822±192	$10.71^{+8.29}_{-7.42}$	281^{+12}_{-12}	3192^{+1590}_{-480}	5250^{+48392}_{-3565}
Alt.	-198±71	$8.73^{+8.42}_{-5.95}$	281^{+12}_{-12}	2487^{+933}_{-366}	793^{+6883}_{-586}

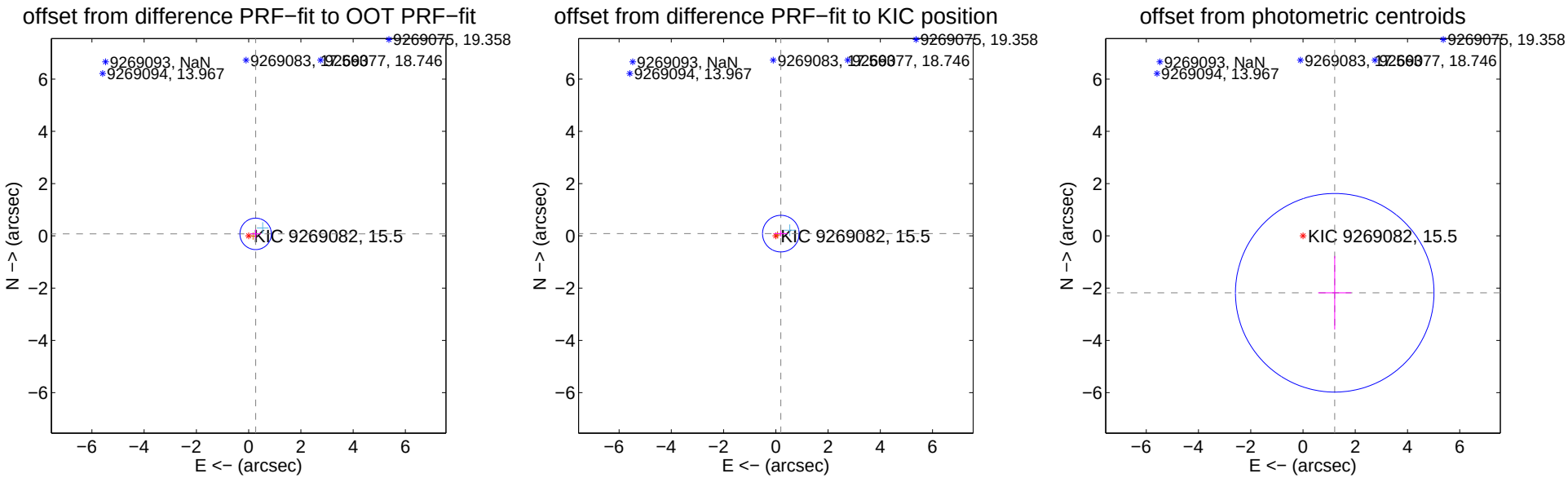
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

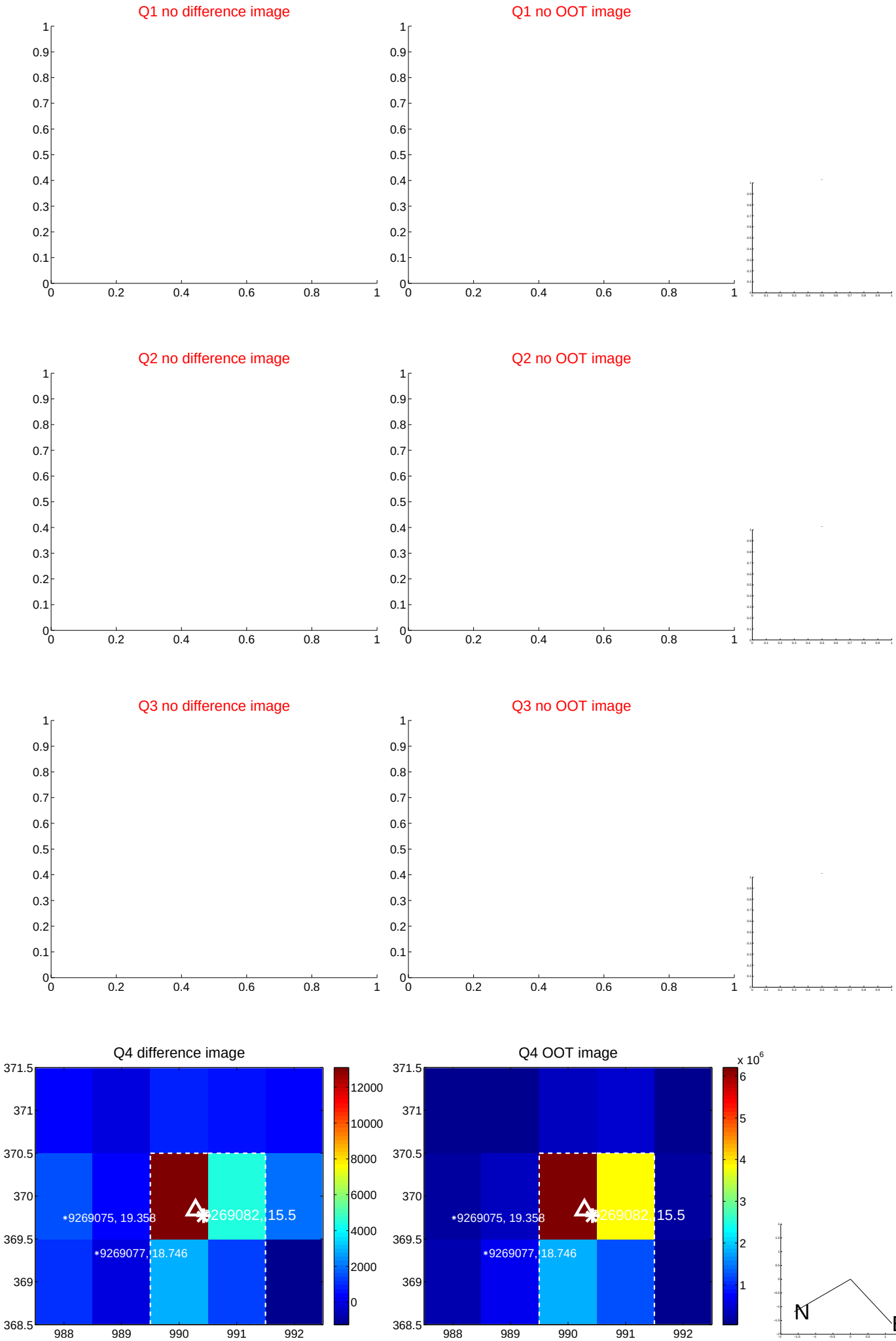
Supplemental centroid analysis for 009269082-03. Kepler magnitude: 15.50. Transit SNR 10.15
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.279 ± 0.201	1.39	-0.268 ± 0.203	0.077 ± 0.174
PRF-fit source offset from KIC position	0.211 ± 0.234	0.90	-0.192 ± 0.251	0.086 ± 0.114
photometric centroid source offset	2.49 ± 1.27	1.97	-1.21 ± 0.63	-2.18 ± 1.41

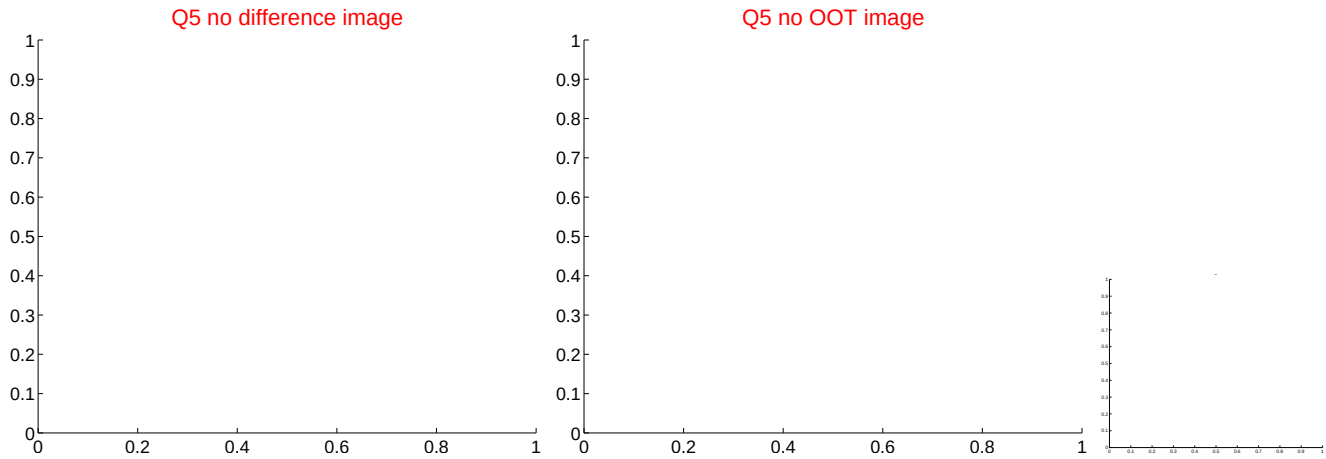


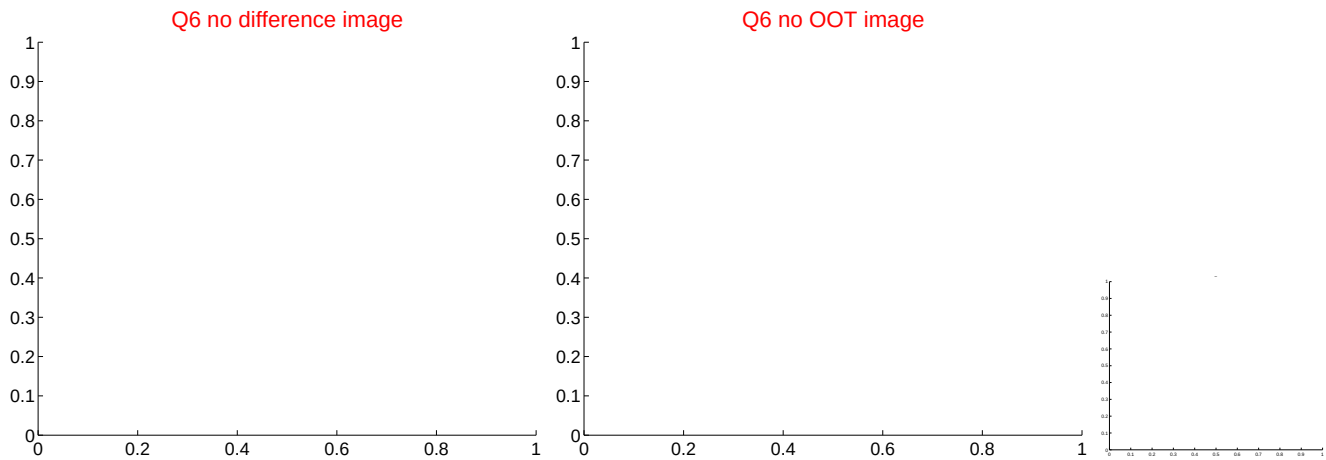
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

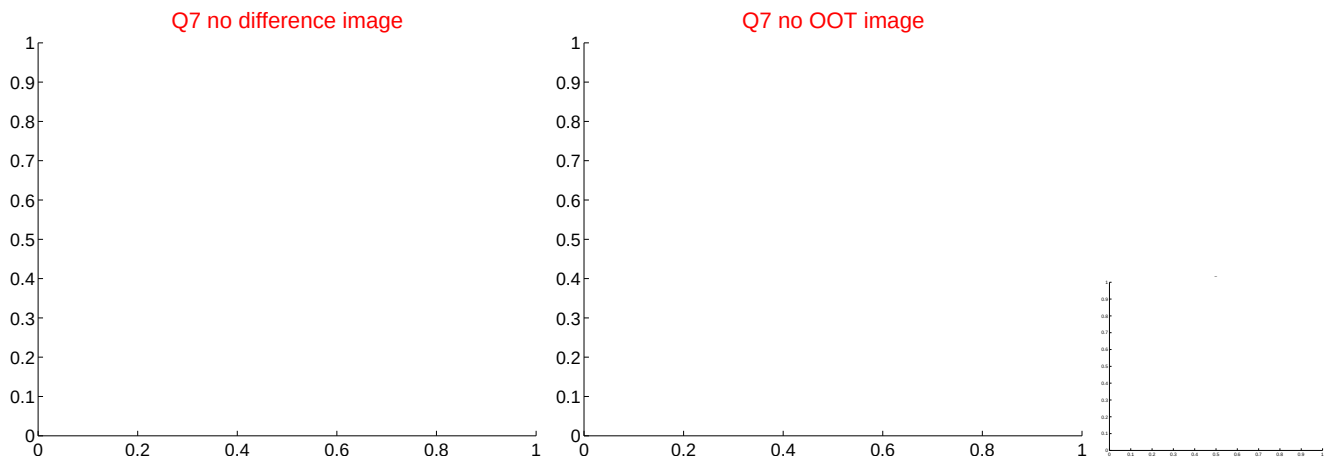
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

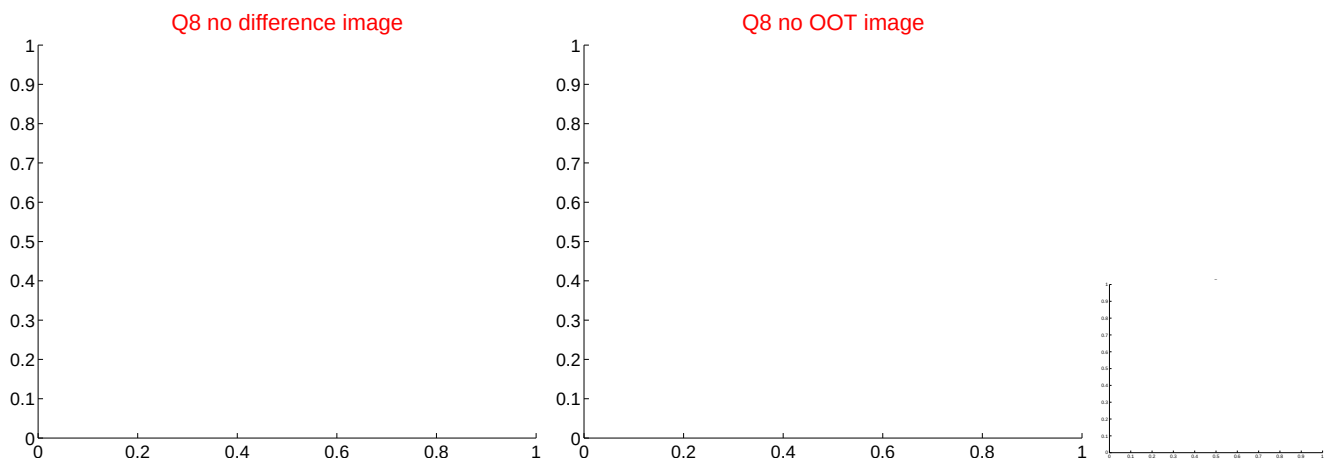


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

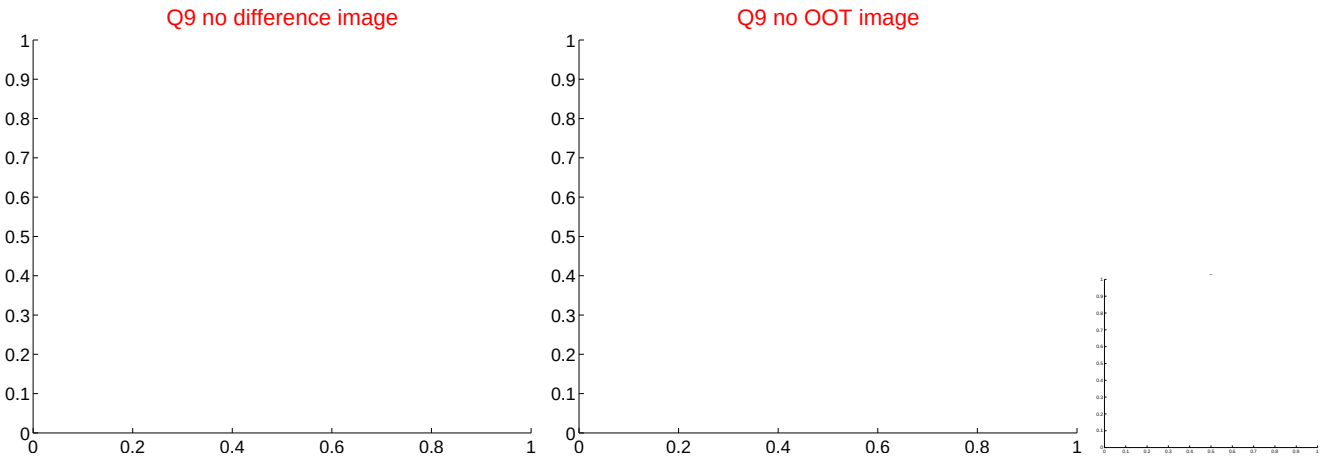


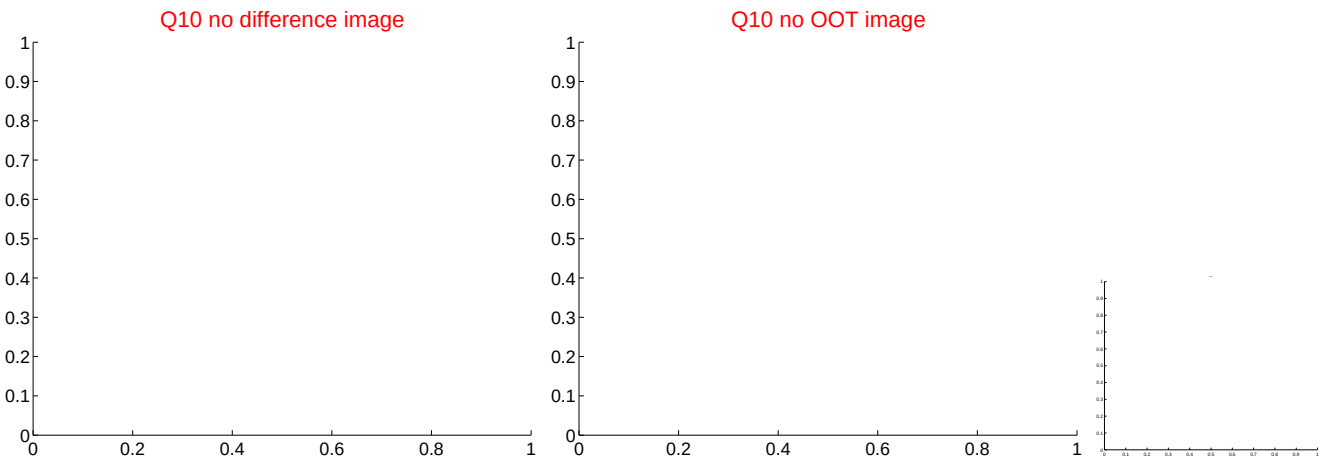


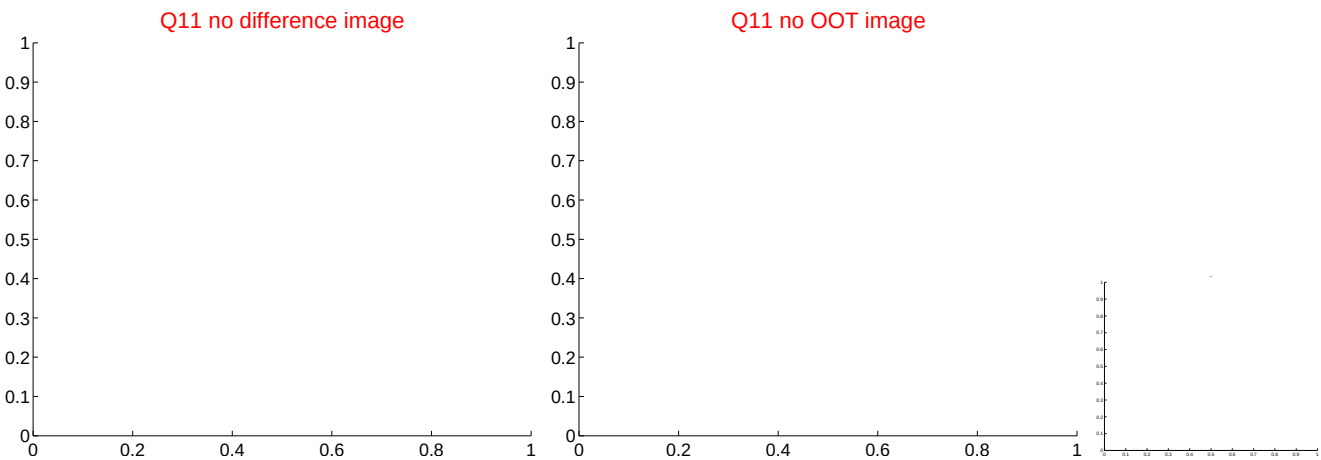


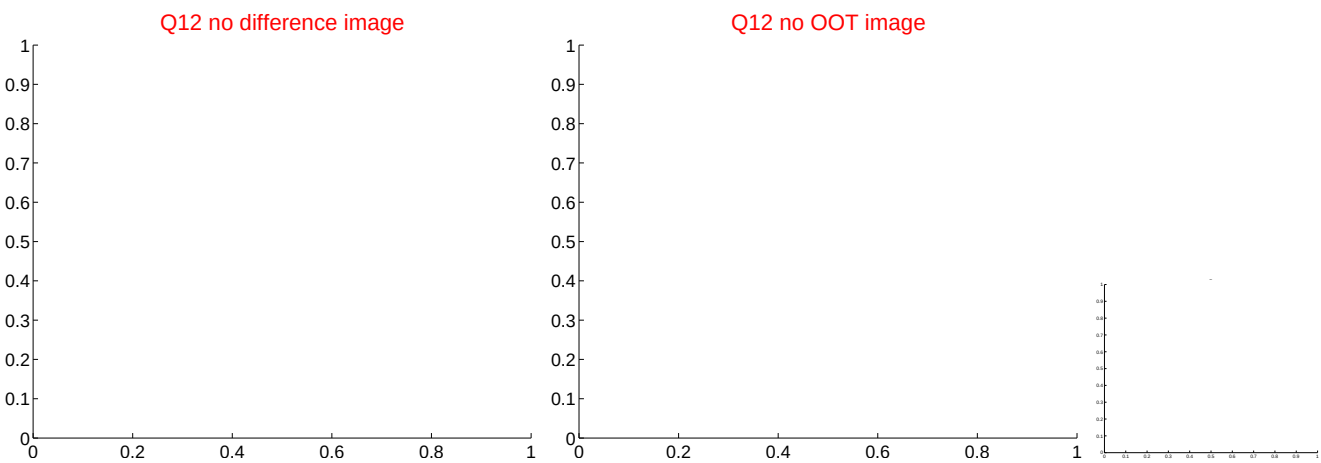


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

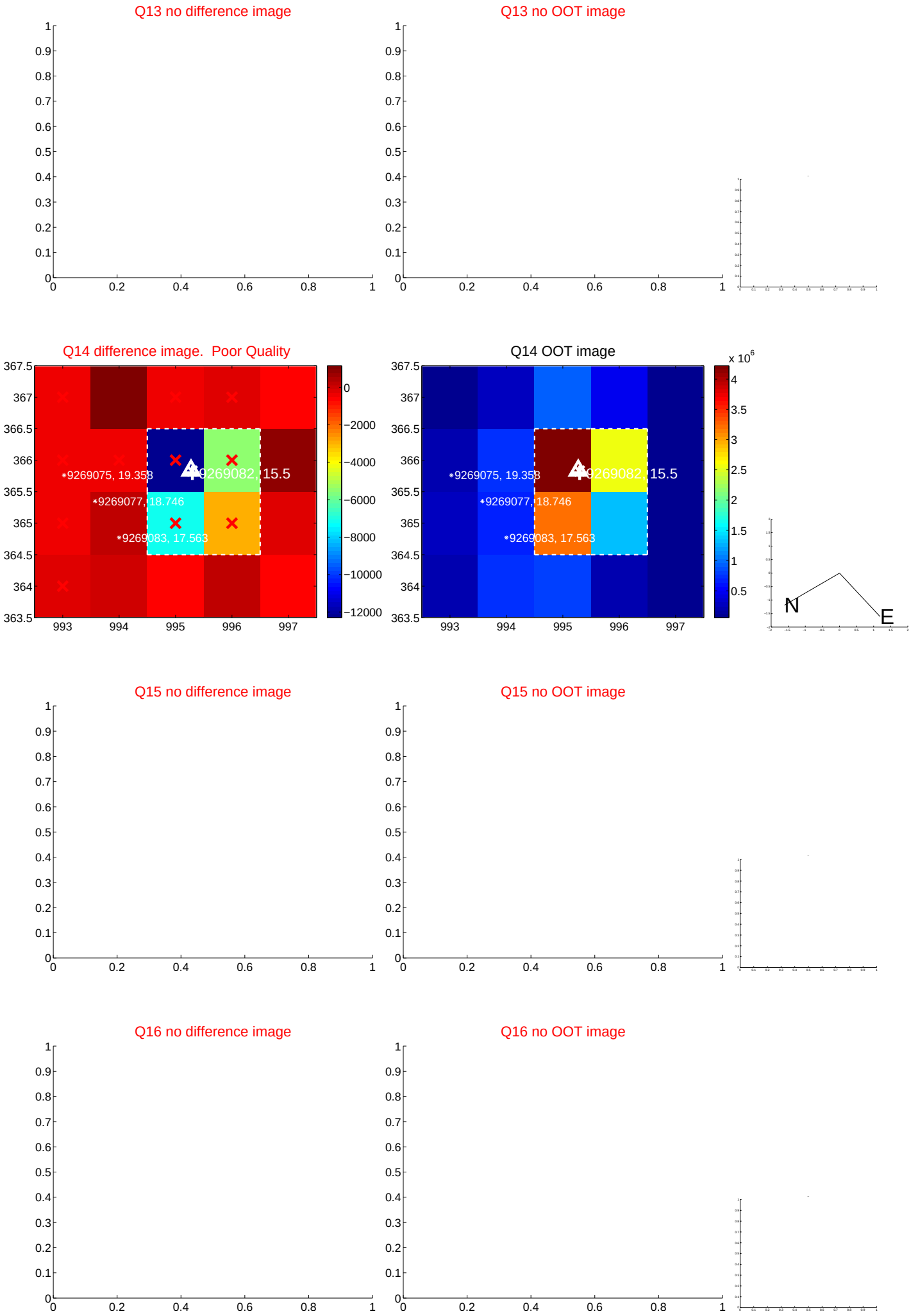




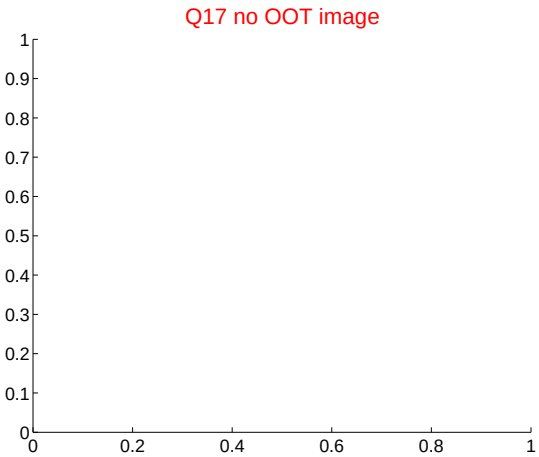


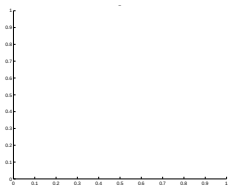


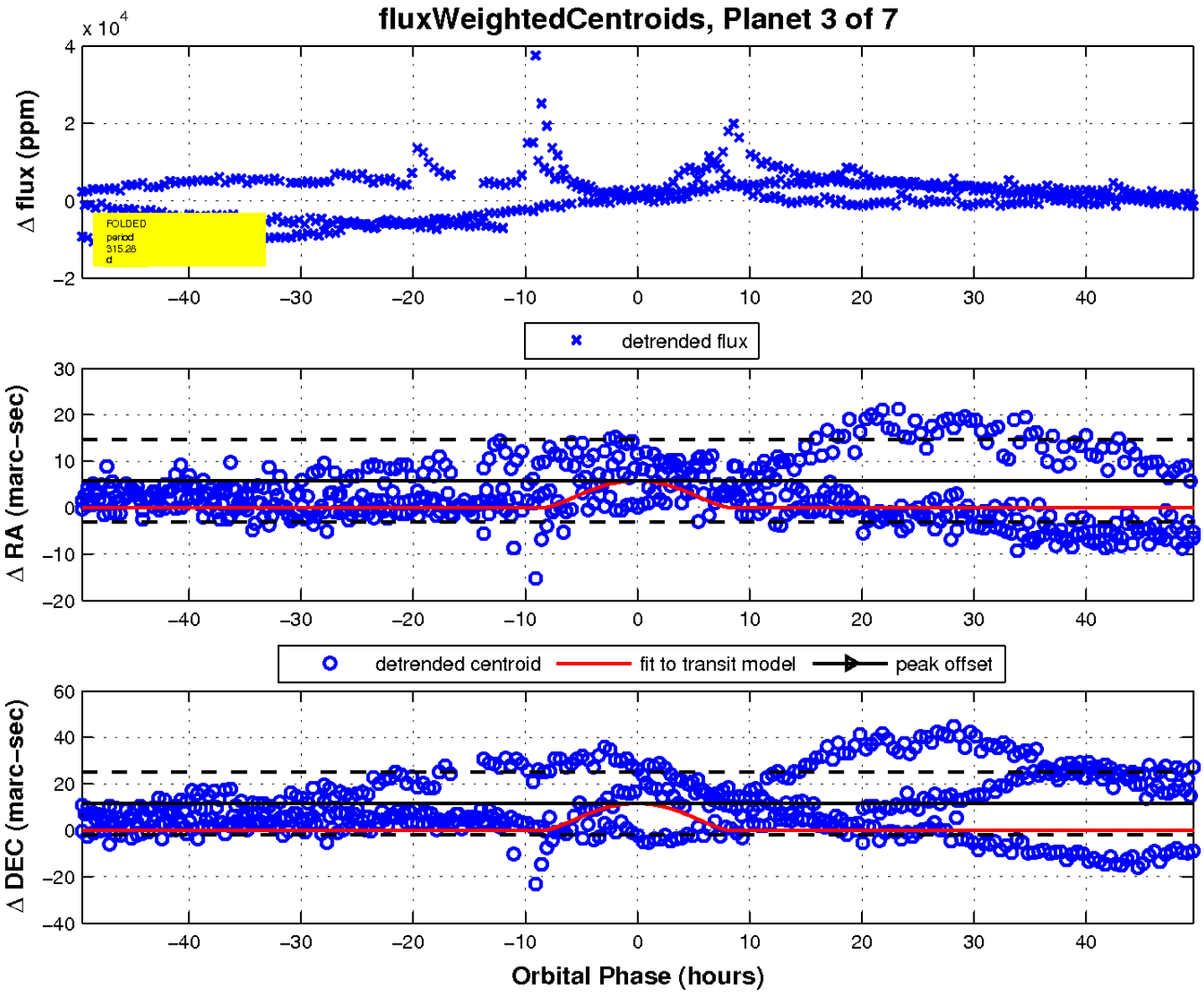
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



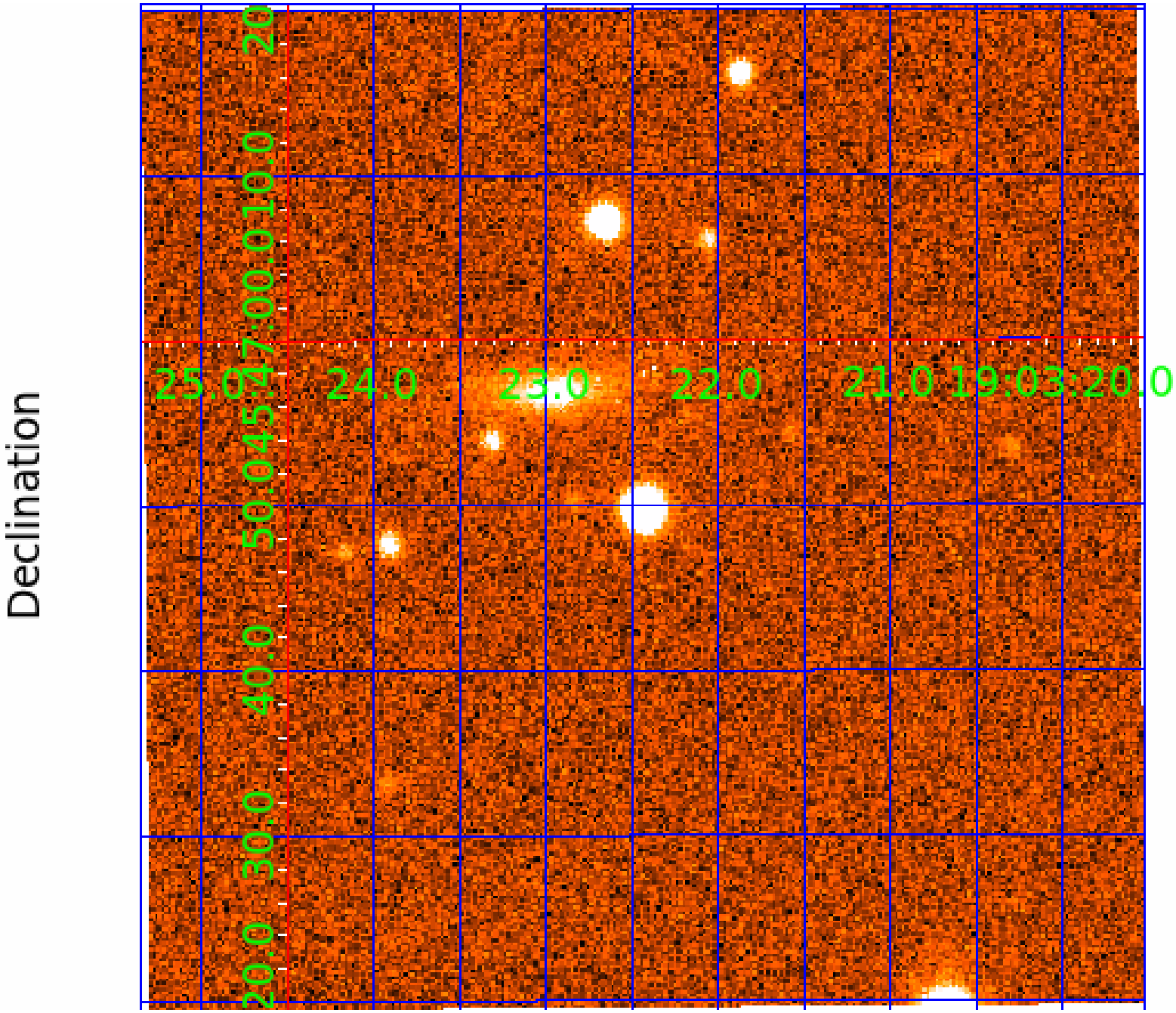
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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47:00:10.0
50:45:
40.0
30.0
20.0

KIC 009269082

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 ($S_\oplus$)
009269082-03	OBS	No	315.281777	408.381410	4207.9	16.576	18.1	10.2	0.62	5094	6.78	0.40
009269082-04	OBS	No	268.660827	377.566280	1986.6	15.921	14.4	8.2	0.62	5094	2.86	0.49
009269082-05	OBS	No	334.115585	309.759758	1914.1	3.136	15.1	7.9	0.62	5094	2.69	0.37
009269082-07	OBS	No	272.249942	335.775076	1544.2	5.000	13.8	-1.0	0.62	5094	2.42	0.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009269082-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269082-04	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269082-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
009269082-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS

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

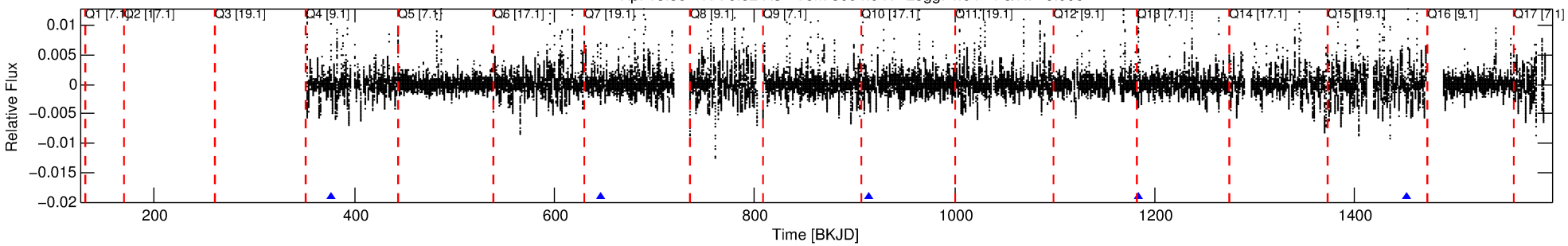
Ephemeris Match Information For 009269082-04

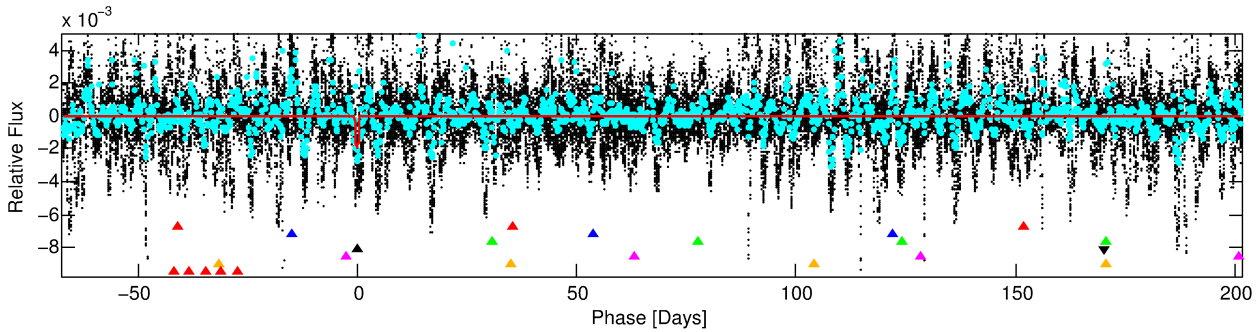
No Significant Match Found

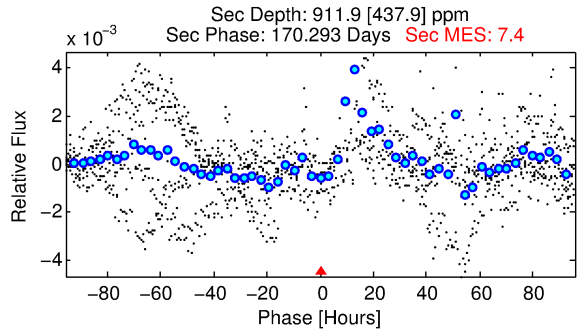
DV One-Page Summary

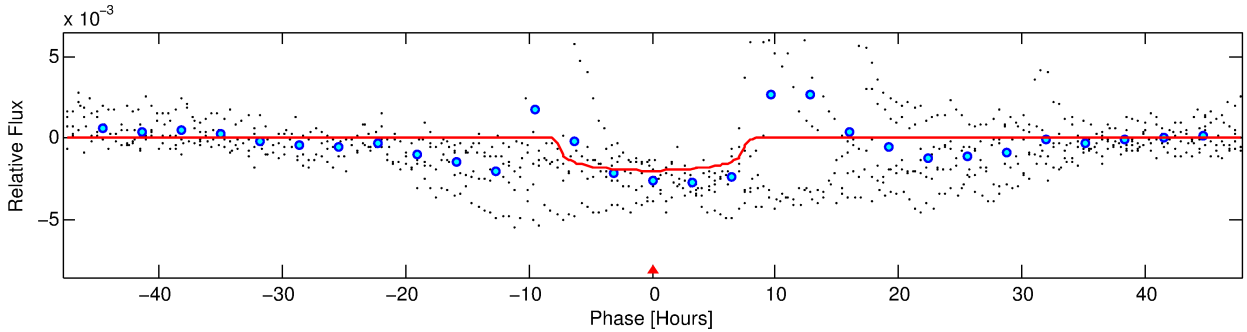
KIC: 9269082 Candidate: 4 of 7 Period: 268.661 d

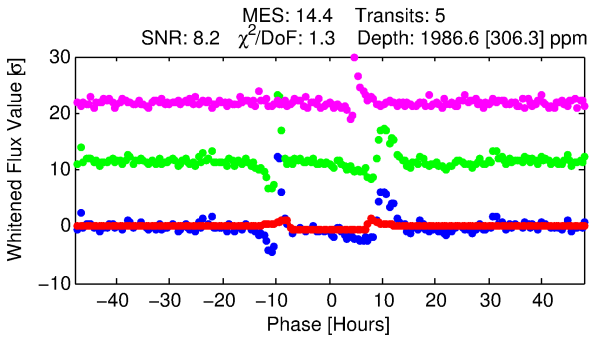
Kp: 15.50 R*: 0.62 Rs Teff: 5094.0 K Logg: 4.64 Fe/H: −0.900

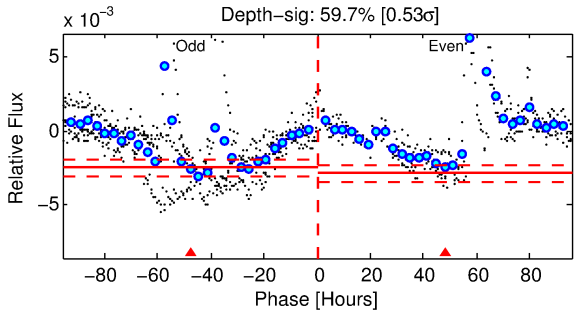


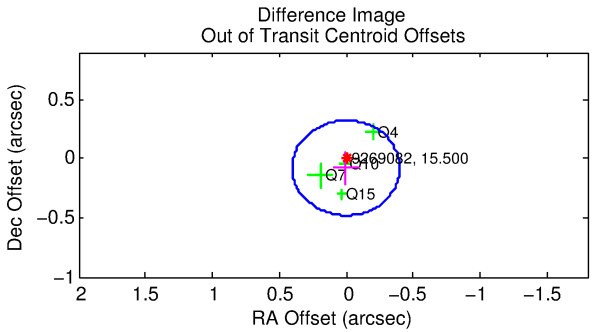












DV Fit Results:

Period = 268.66083 [0.00431] d
Epoch = 377.5663 [0.0107] BKJD
Rp/R* = 0.0419 [0.0059]
a/R* = 113.97 [47.39]
b = 0.55 [0.53]

Seff = 0.49 [0.09]
Teq = 213 [10] K
Rp = 2.86 [0.47] Re
a = 0.6941 [0.0535] AU

Ag = 29543.83 [16780.60] [1.76σ]
Teffp = 4323 [621] K [6.62σ]

DV Diagnostic Results:

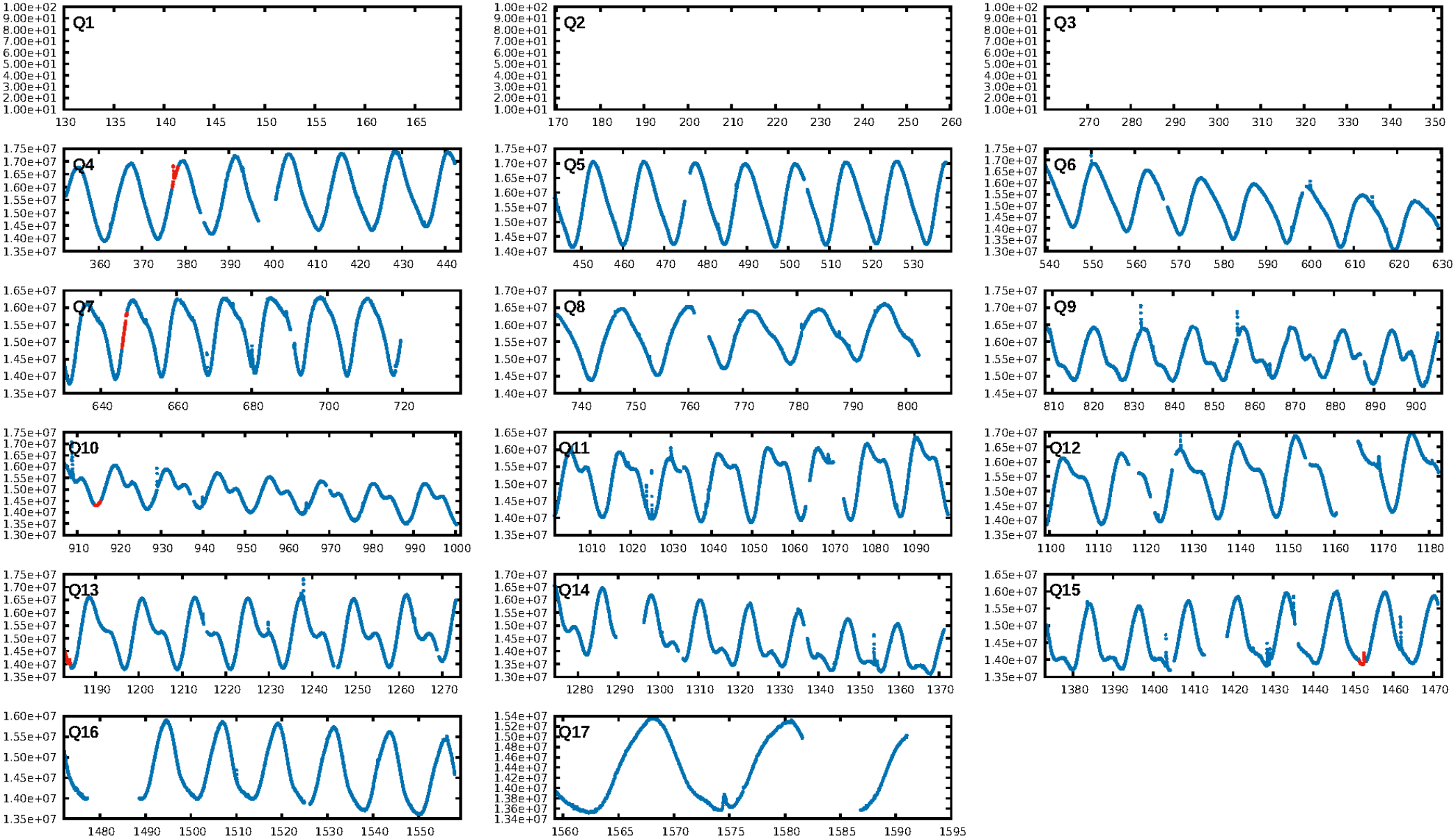
ShortPeriod−sig: N/A
LongPeriod−sig: 100.0% [5.16σ]
ModelChiSquare2−sig: 0.0%
ModelChiSquareGof−sig: 74.3%
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [5/5]
GhostDiagnostic−chr: 0.6157

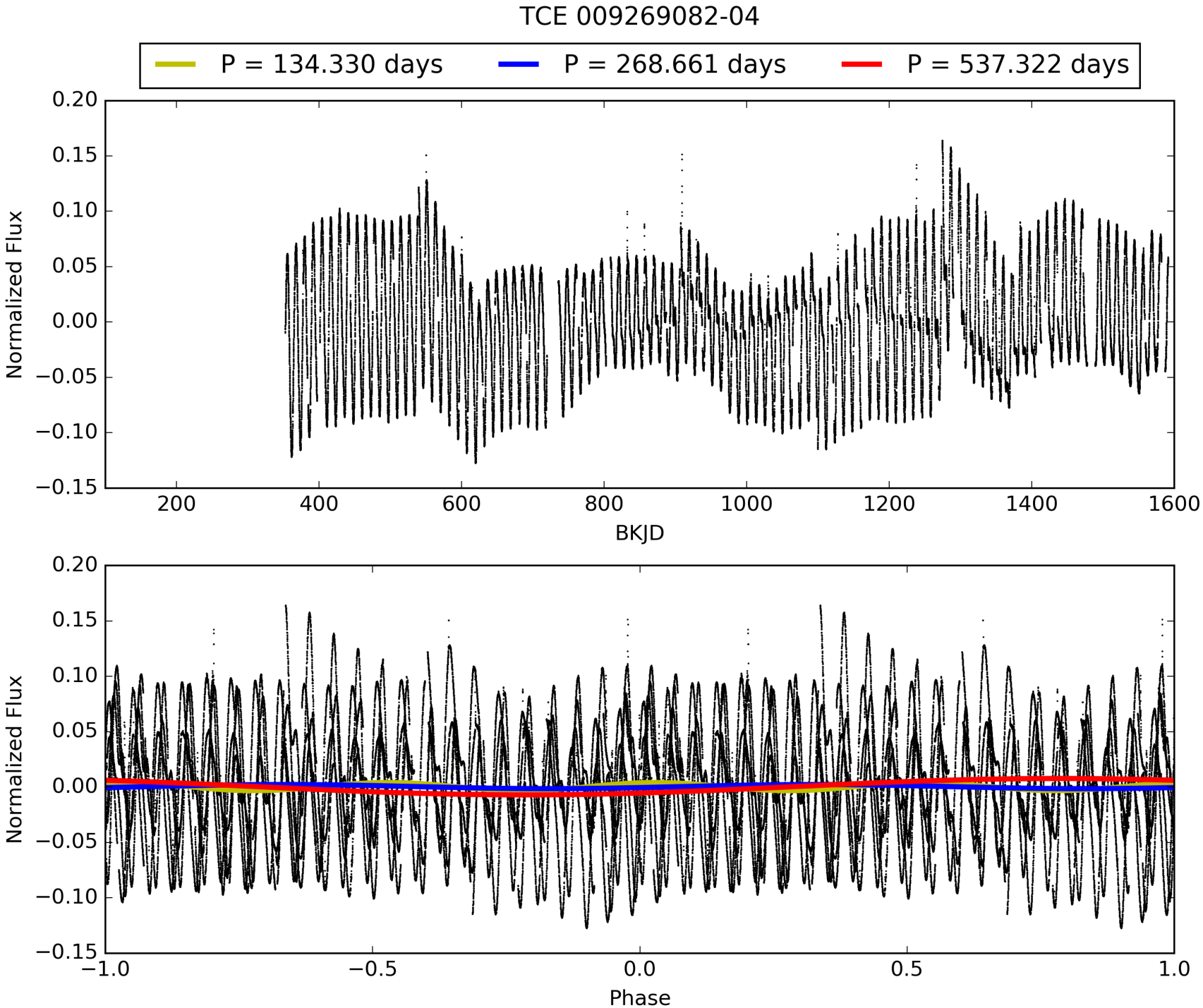
Centroid−sig: 10.9%
Centroid−so: 1.202 arcsec [1.02σ]
OotOffset−rm: 0.078 arcsec [0.58σ]
KicOffset−rm: 0.010 arcsec [0.10σ]
OotOffset−st: 1/2/1/0 [4]
KicOffset−st: 1/2/1/0 [4]
DiffImageQuality−fgm: 0.50 [2/4]
DiffImageOverlap−fno: 1.00 [4/4]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30−Jan−2016 05:54:13 Z

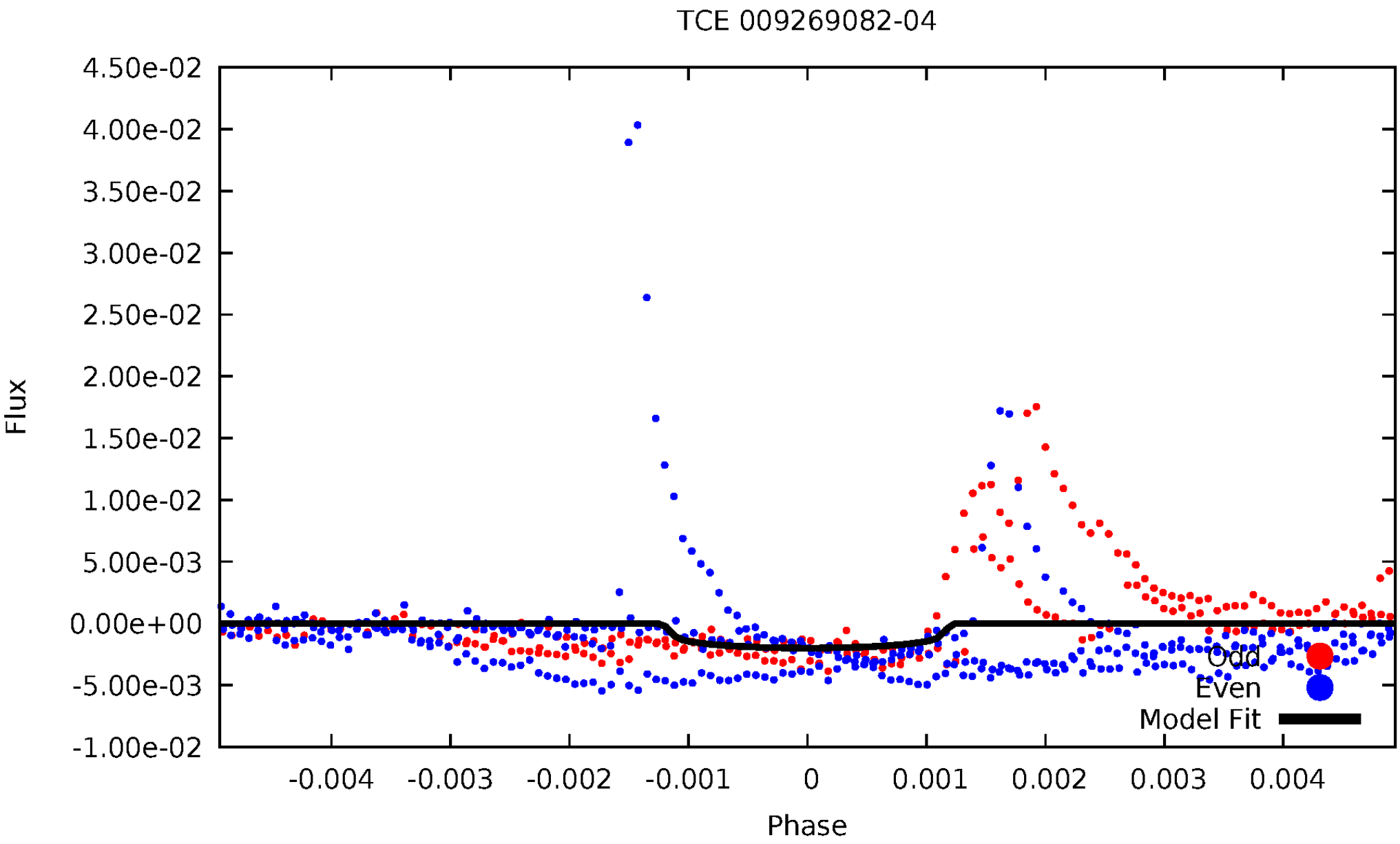
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009269082-04, PDC Light Curves

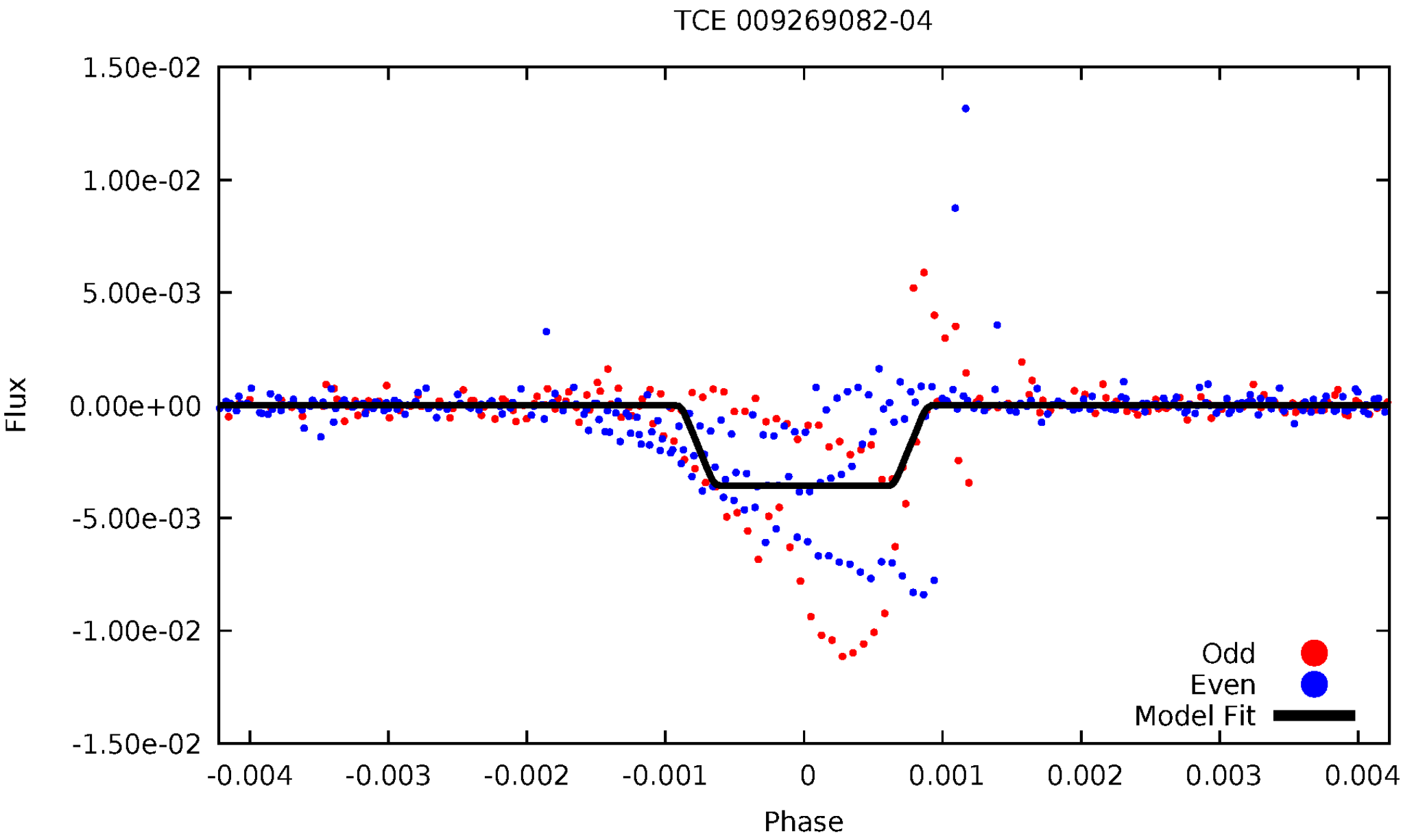



TCE 009269082-04
P = 134.330 days
P = 268.661 days
P = 537.322 days
Normalized Flux
BKJD
Normalized Flux
Phase

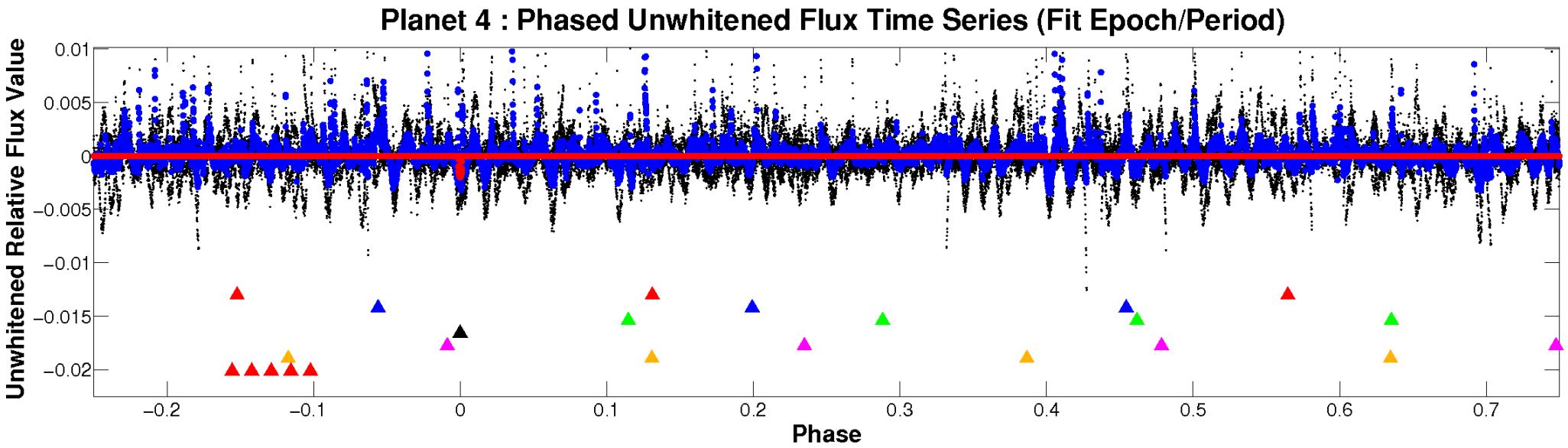
DV Odd/Even

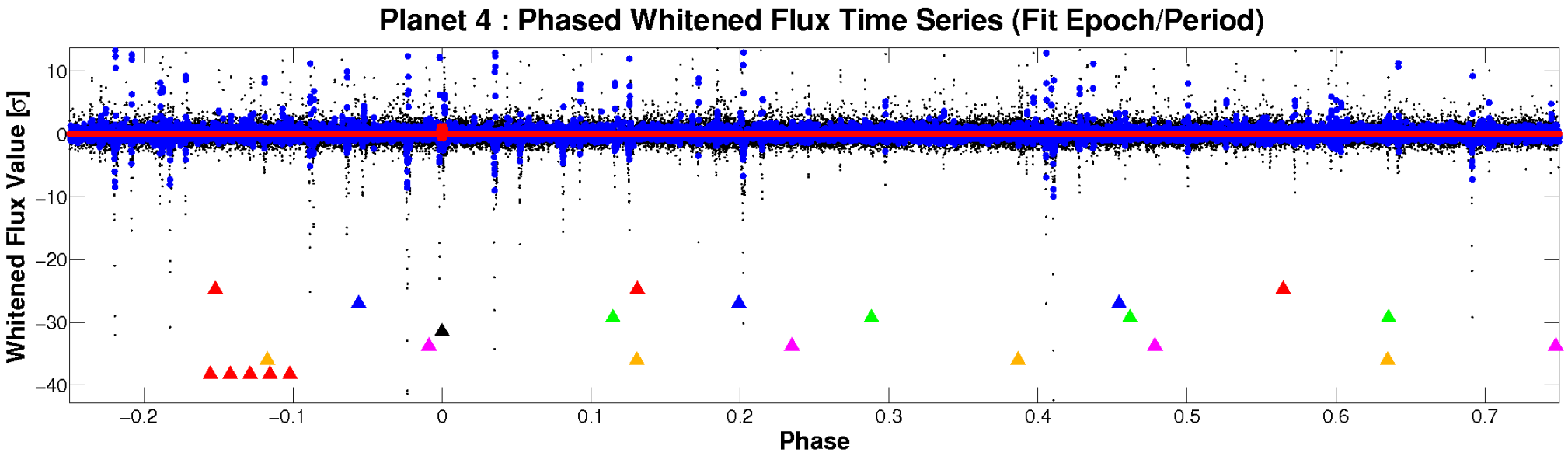

TCE 009269082-04
4.50e-02
4.00e-02
3.50e-02
3.00e-02
2.50e-02
2.00e-02
1.50e-02
1.00e-02
5.00e-03
0.00e+00
-5.00e-03
-1.00e-02
Flux
-0.004
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
0.004
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009269082-04
1.50e-02
1.00e-02
5.00e-03
0.00e+00
-5.00e-03
-1.00e-02
-1.50e-02
Flux
-0.004
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
0.004
Phase
Odd
Even
Model Fit

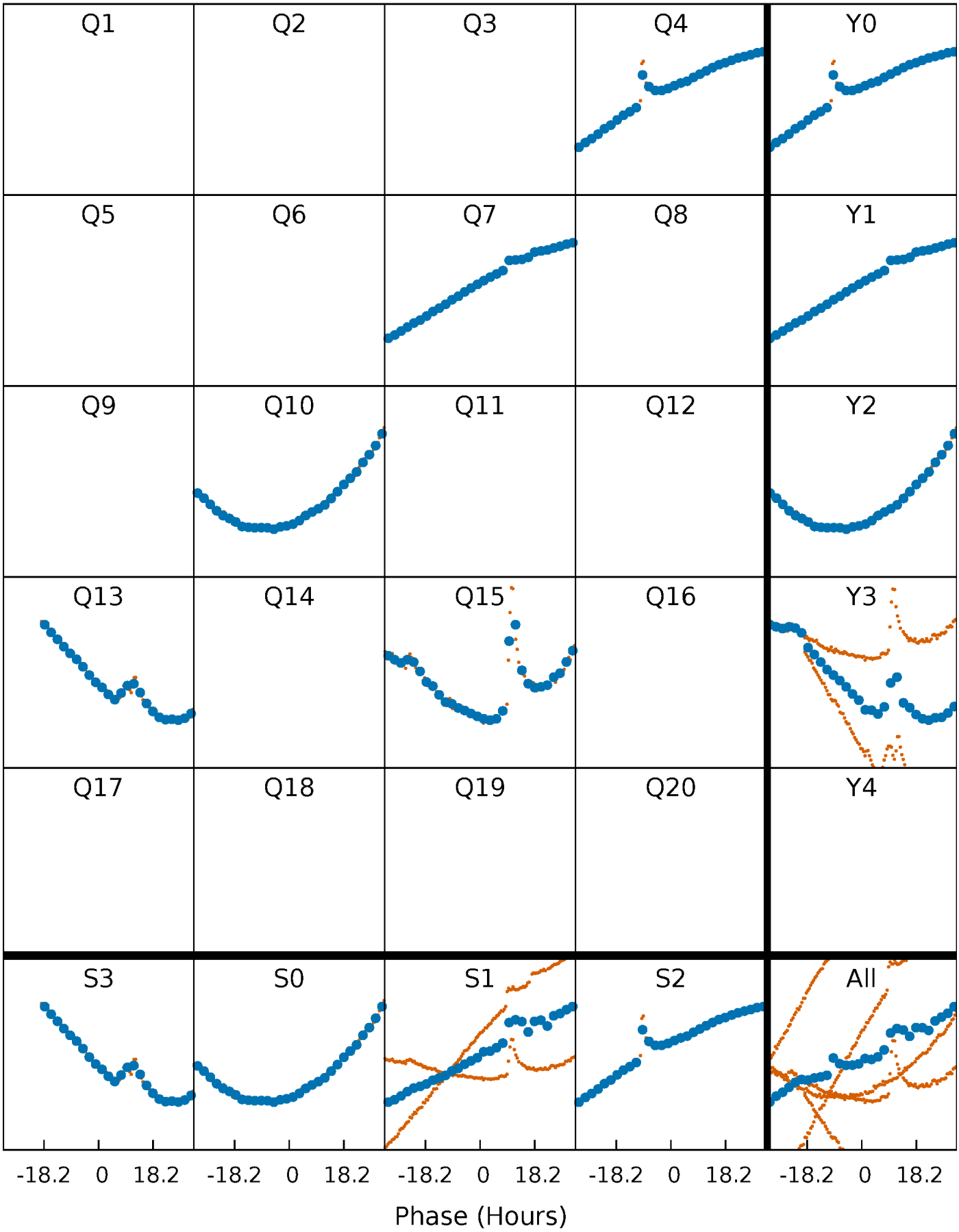
Non-Whitened Vs. Whitened Light Curve





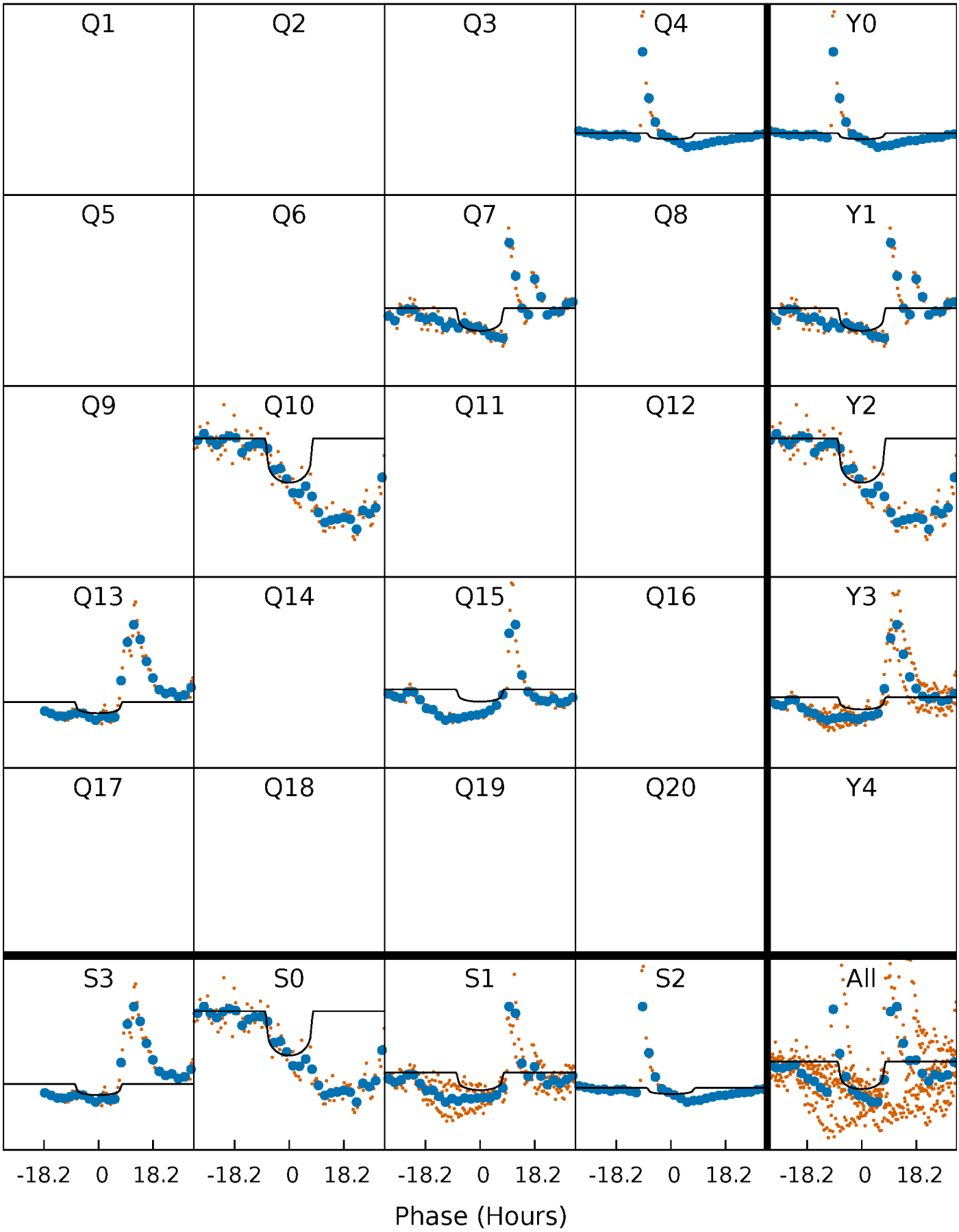
PDC Quarter-Phased Transit Curves

TCE 009269082-04 P=268.660827 Days T_0=377.566280 (BKJD)



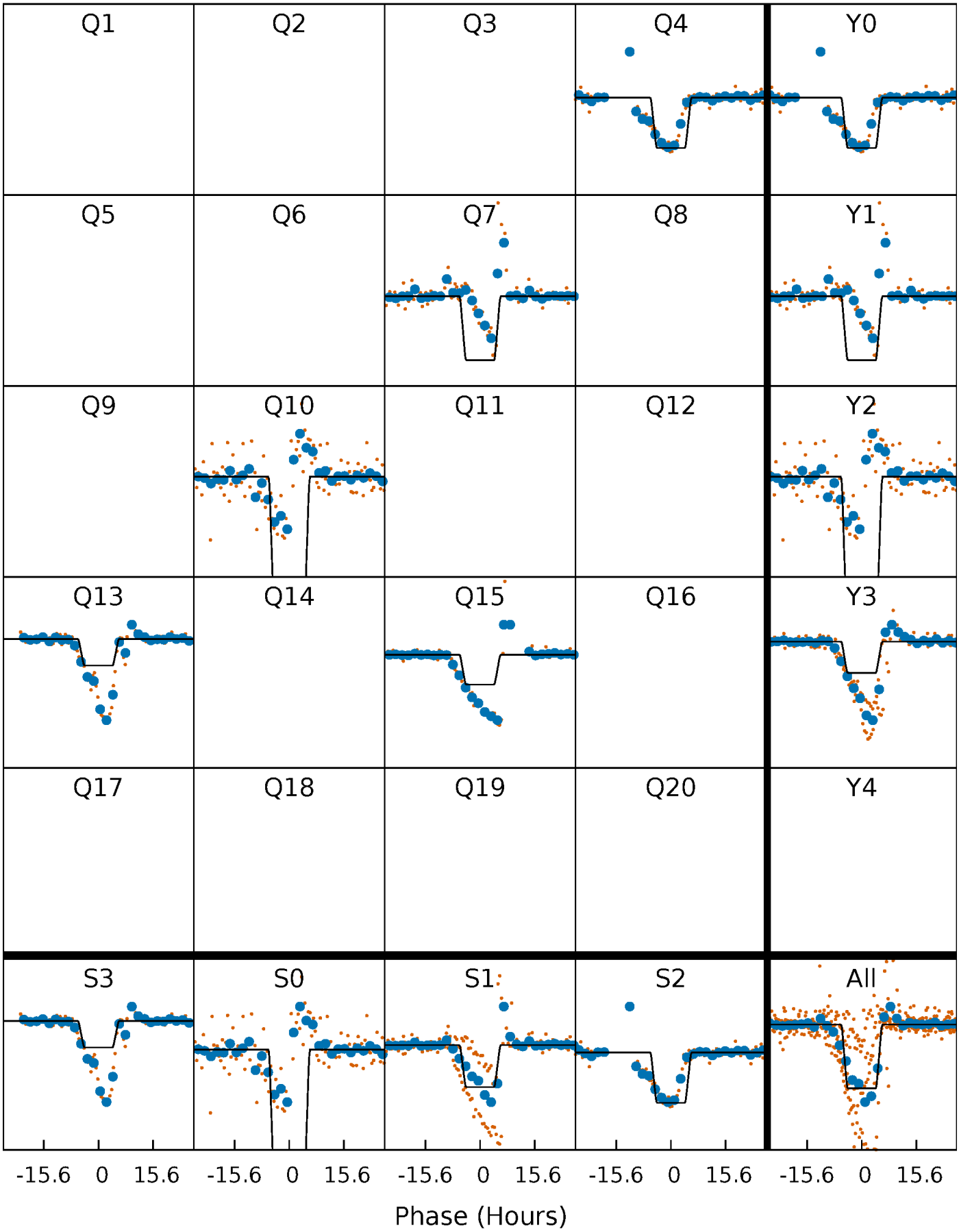
DV Quarter-Phased Transit Curves

TCE 009269082-04 P=268.660827 Days T_0=377.566280 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

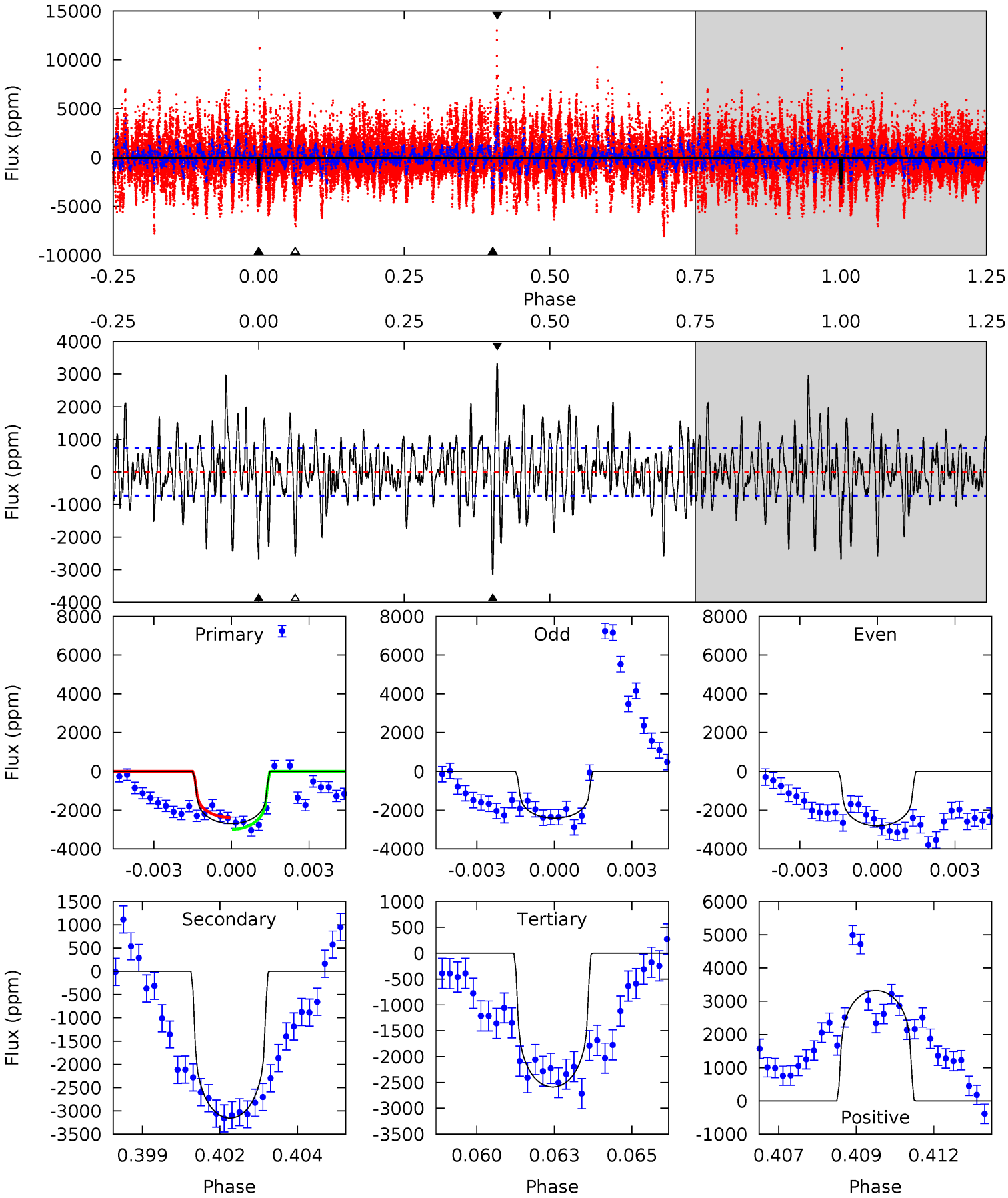
TCE 009269082-04 P=268.646824 Days T_0=377.743746 (BKJD)



DV Model-Shift Uniqueness Test

009269082-04, P = 268.660827 Days, E = 108.905453 Days

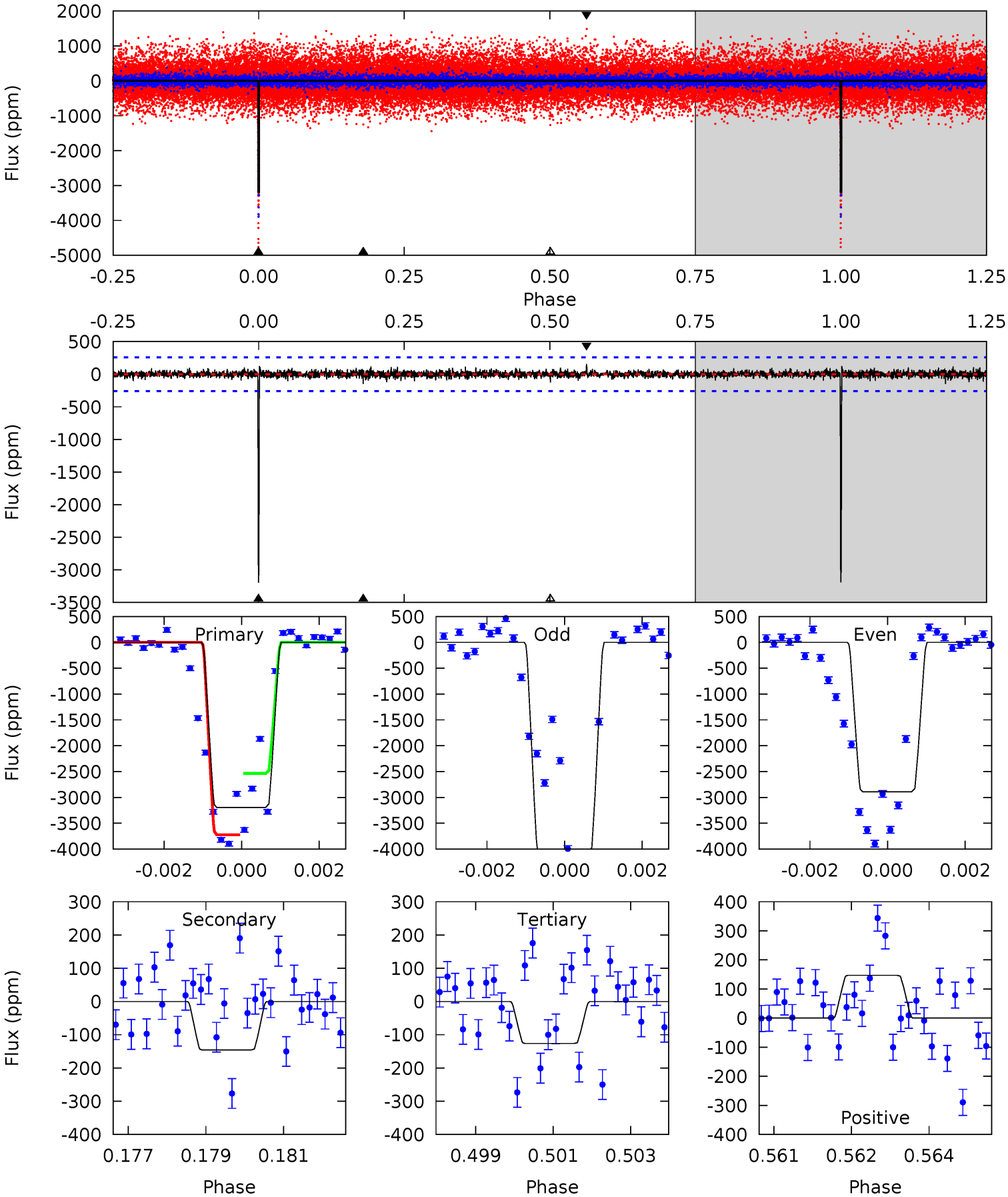
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	22.9	18.8	24.1	5.29	3.02	5.85	0.77	-4.56	4.12	-1.21	1.29	1.15	0.51	2.24



Alt Model-Shift Uniqueness Test

009269082-04, P = 268.646824 Days, E = 109.096922 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.7	3.00	2.60	3.03	5.34	3.12	0.56	63.1	62.7	0.40	-0.03	15.1	1.30	0.04	0



Stellar Parameters For KIC 009269082

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5094^{+183}_{-183}	$4.637^{+0.065}_{-0.040}$	$-0.900^{+0.300}_{-0.300}$	$0.625^{+0.055}_{-0.049}$	$0.616^{+0.058}_{-0.027}$	$3.562^{+0.942}_{-0.575}$
	+4%/-4%	+1%/-1%	+33%/-33%	+9%/-8%	+9%/-4%	+26%/-16%
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 009269082-04 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3155±138	$2.83^{+0.42}_{-0.44}$	296^{+12}_{-12}	5842^{+518}_{-425}	106271^{+42687}_{-25681}
Alt.	-146±49	$4.08^{+0.46}_{-0.46}$	297^{+11}_{-13}	2947^{+169}_{-179}	2354^{+1063}_{-884}

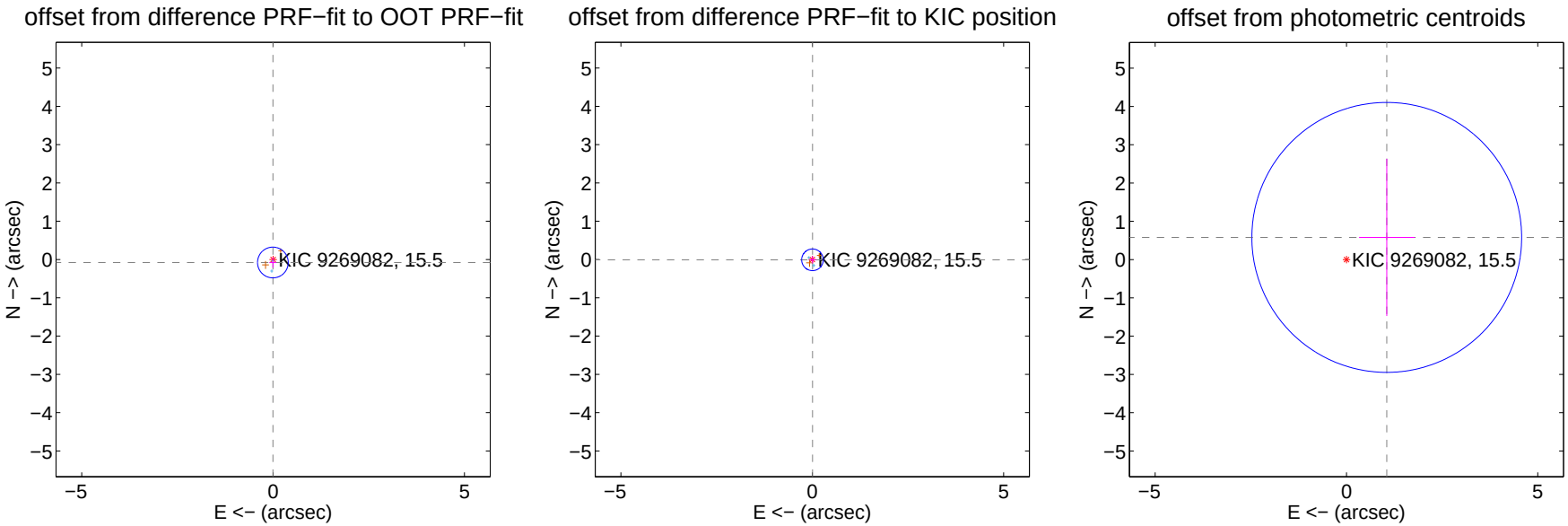
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

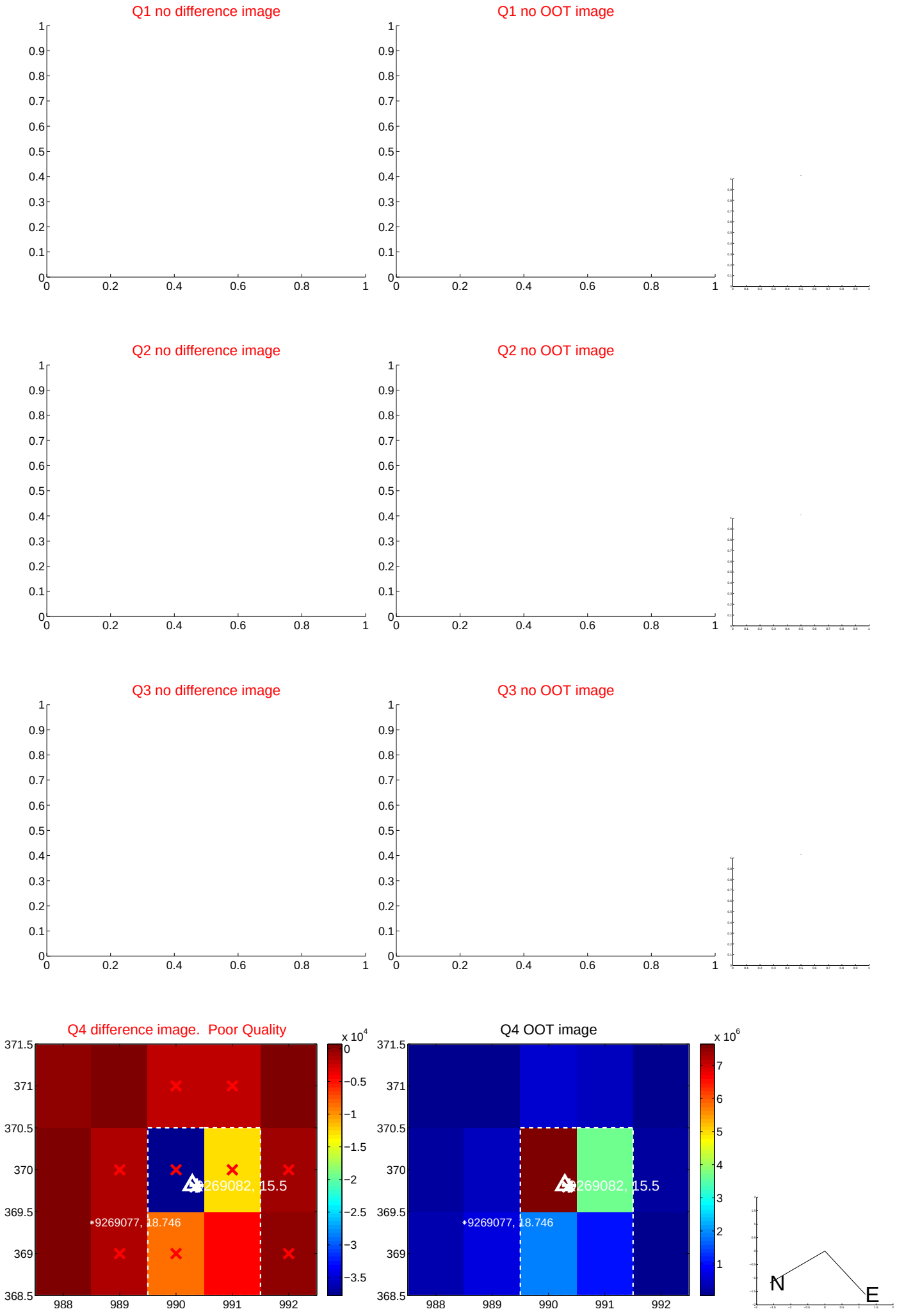
Supplemental centroid analysis for 009269082-04. Kepler magnitude: 15.50. Transit SNR 8.22
There are 2 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.078 ± 0.134	0.58	0.005 ± 0.092	-0.078 ± 0.134
PRF-fit source offset from KIC position	0.010 ± 0.094	0.10	-0.006 ± 0.091	-0.008 ± 0.096
photometric centroid source offset	1.20 ± 1.18	1.02	-1.05 ± 0.72	0.58 ± 2.05

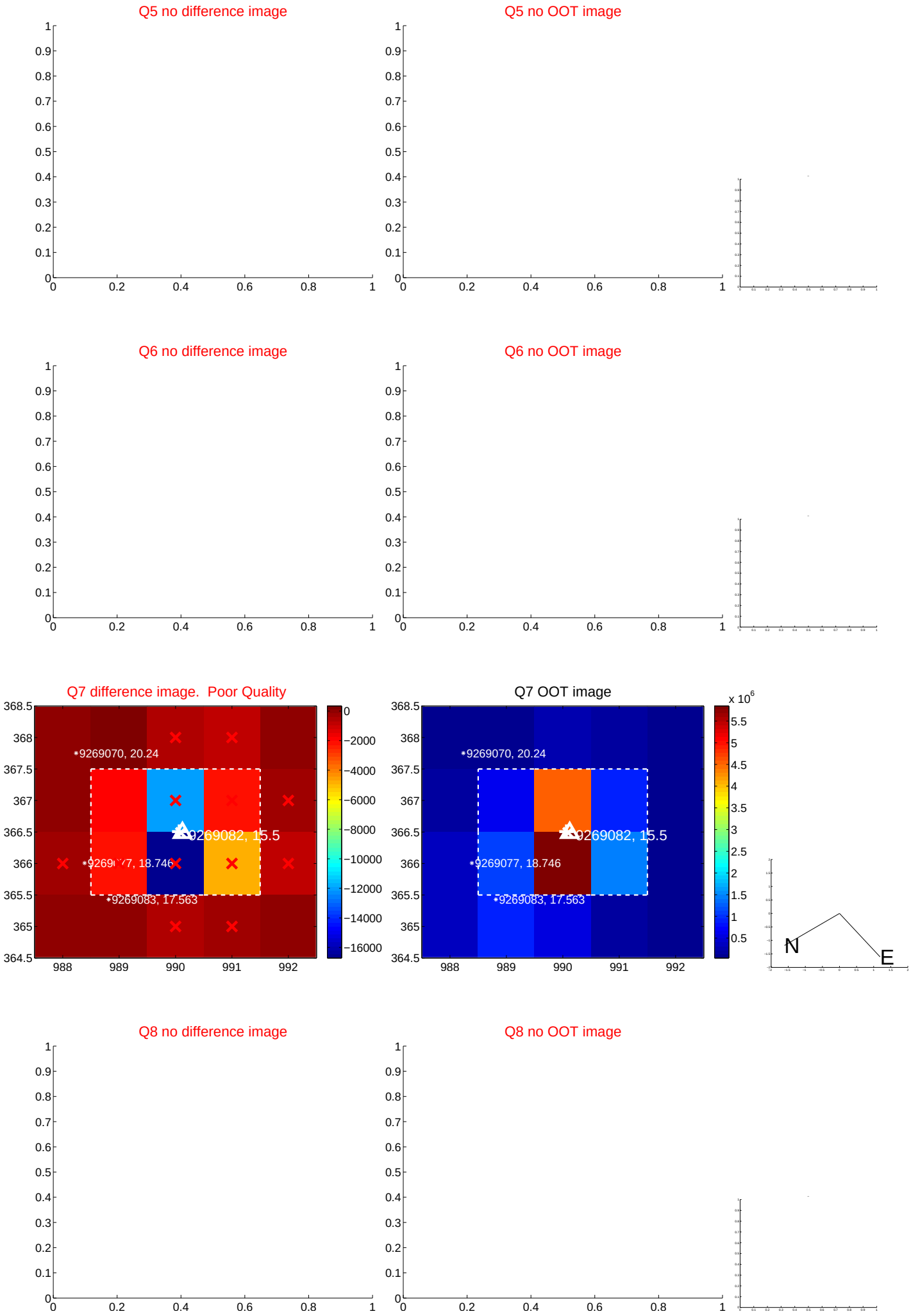


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

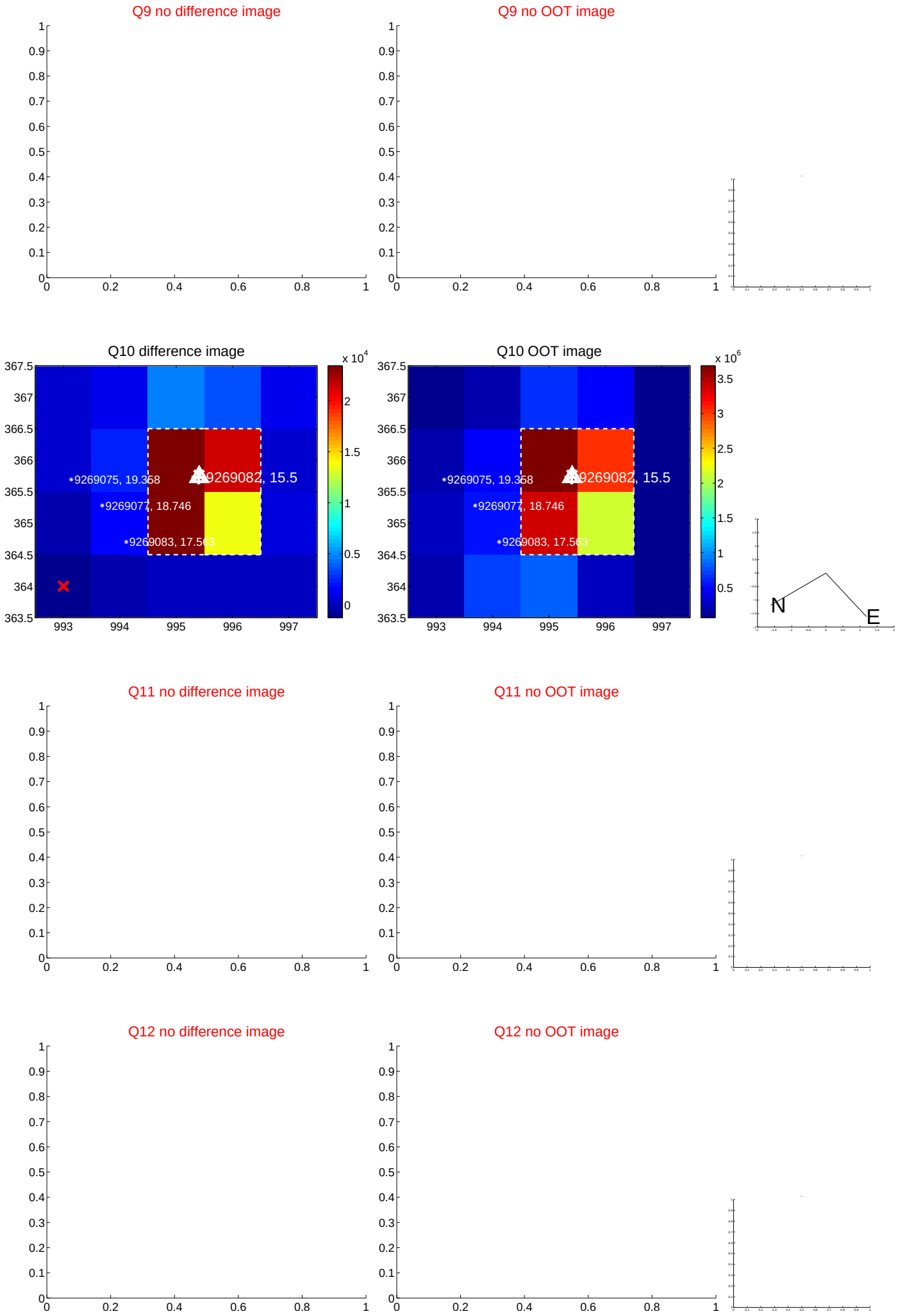
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



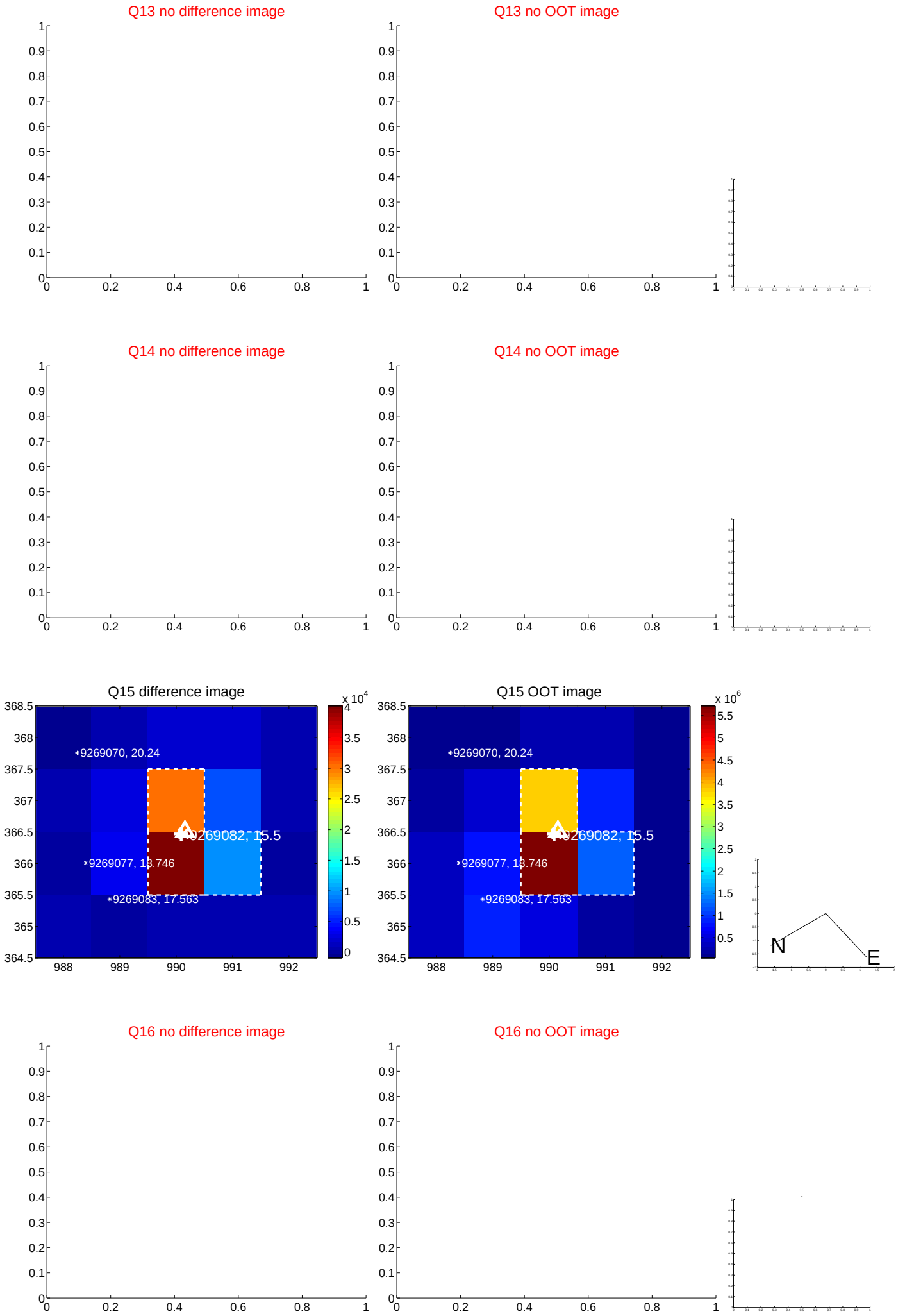
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



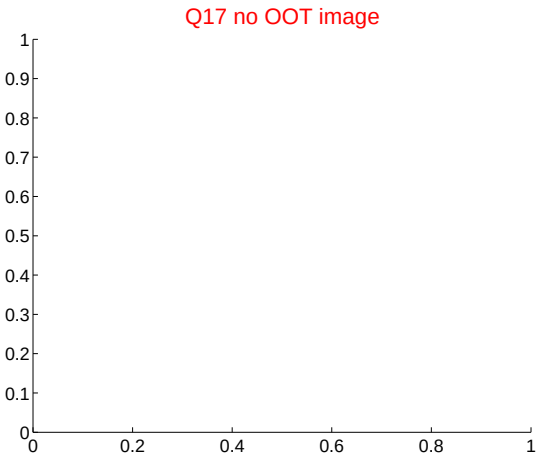
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

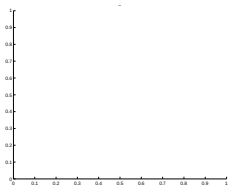


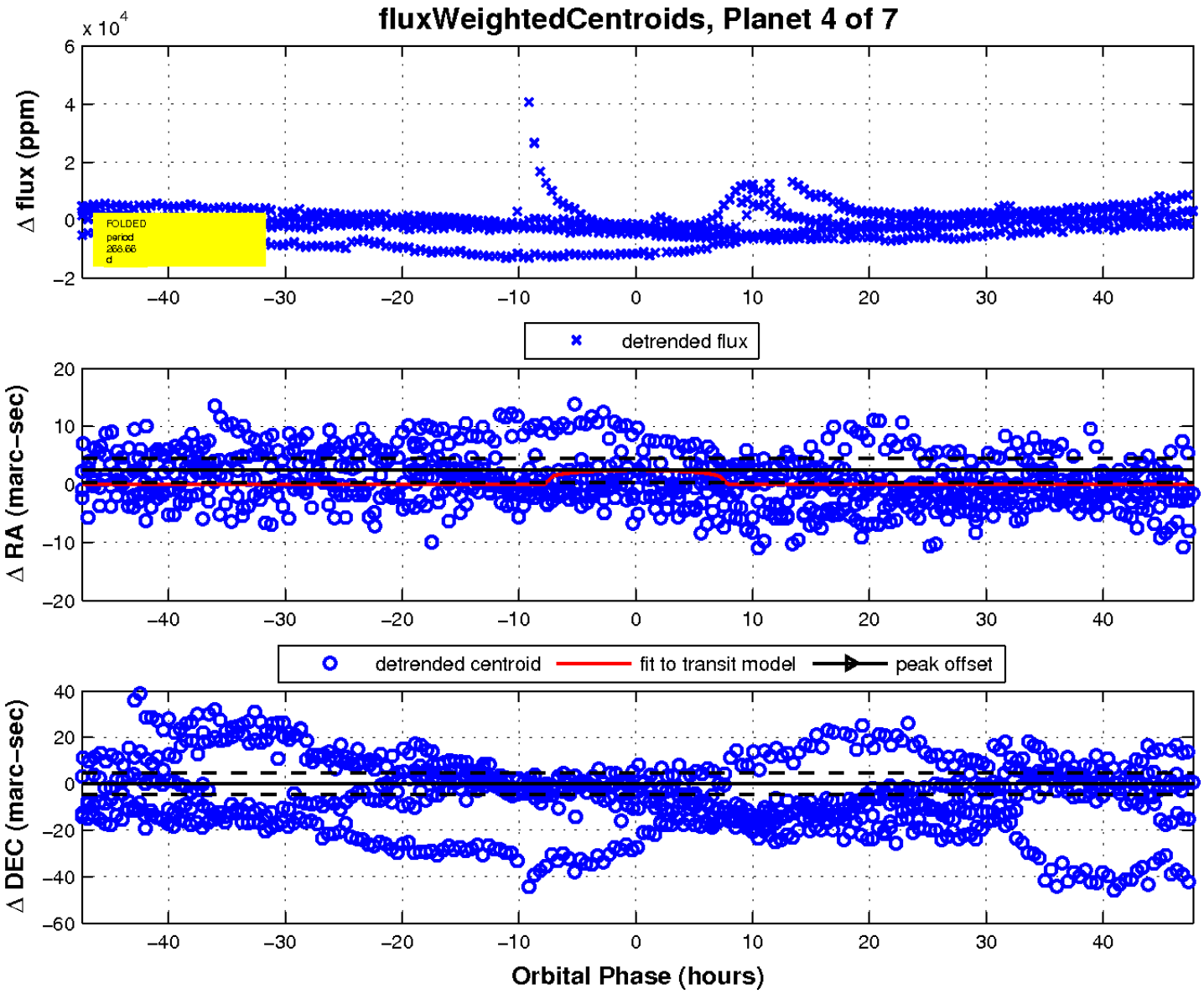
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



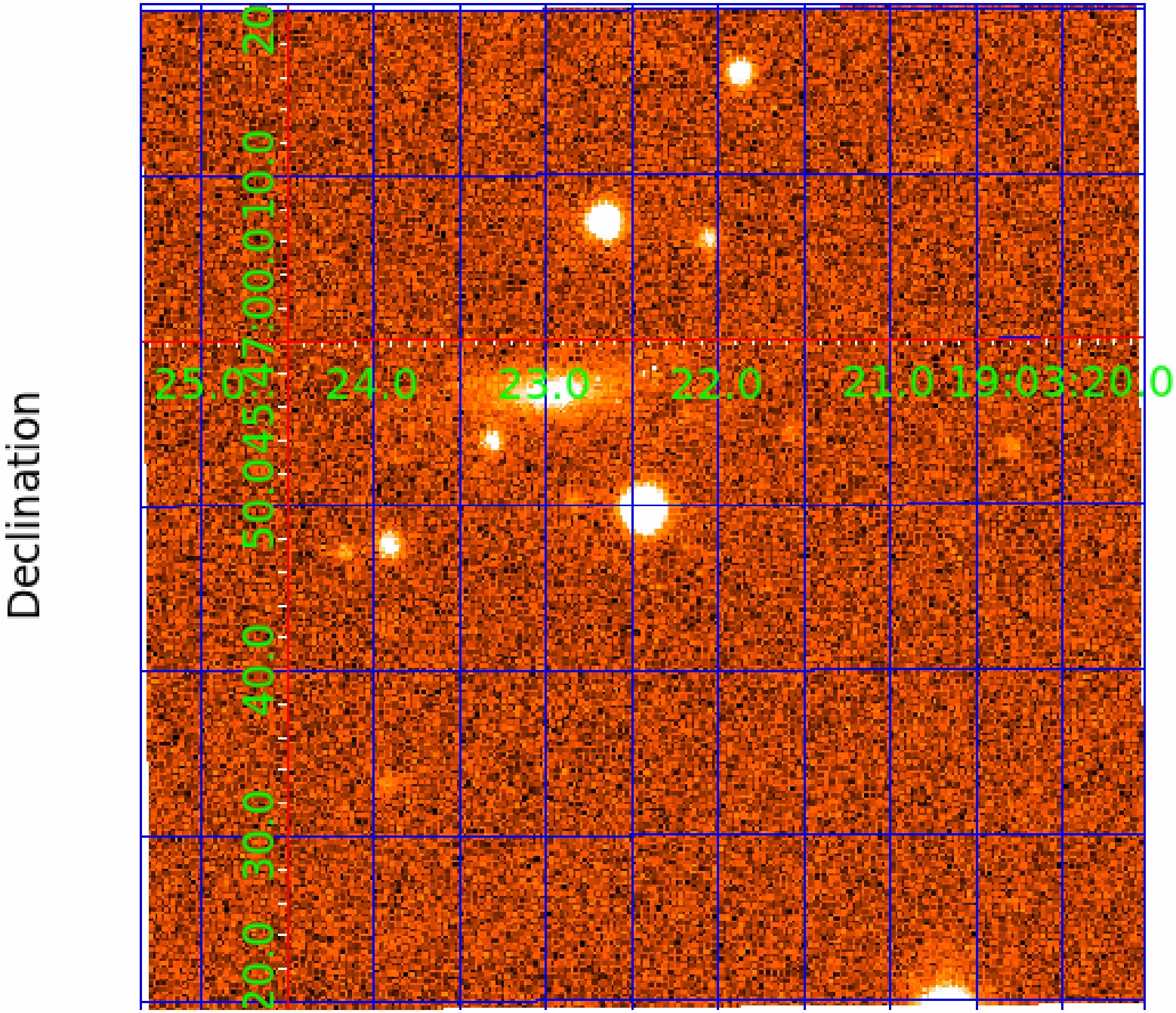
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image


Declination
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24.0
23.0
22.0
21.0
19:03:20.0
47:00:10.0
50:45:
40.0
30.0
20.0

KIC 009269082

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 ($S_\oplus$)
009269082-03	OBS	No	315.281777	408.381410	4207.9	16.576	18.1	10.2	0.62	5094	6.78	0.40
009269082-04	OBS	No	268.660827	377.566280	1986.6	15.921	14.4	8.2	0.62	5094	2.86	0.49
009269082-05	OBS	No	334.115585	309.759758	1914.1	3.136	15.1	7.9	0.62	5094	2.69	0.37
009269082-07	OBS	No	272.249942	335.775076	1544.2	5.000	13.8	-1.0	0.62	5094	2.42	0.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009269082-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269082-04	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269082-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
009269082-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS

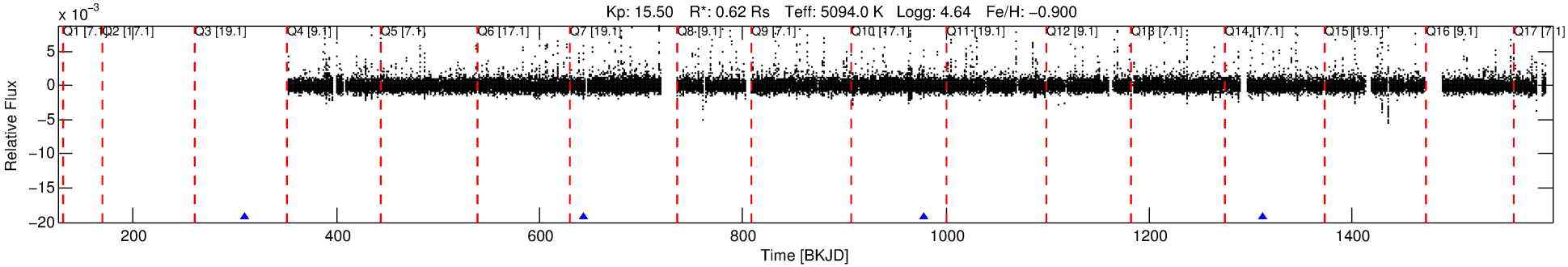
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

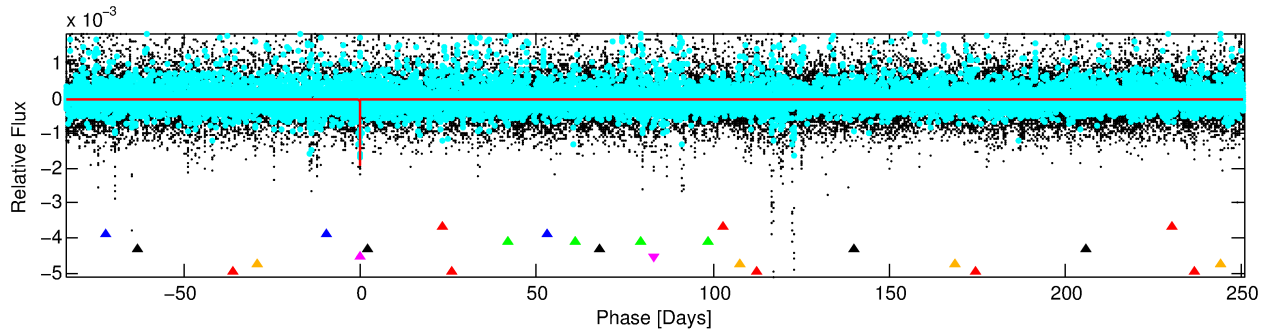
Ephemeris Match Information For 009269082-05

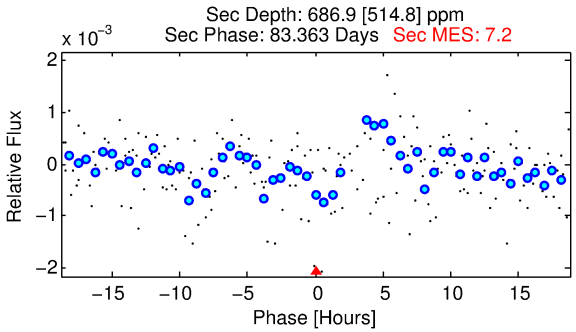
No Significant Match Found

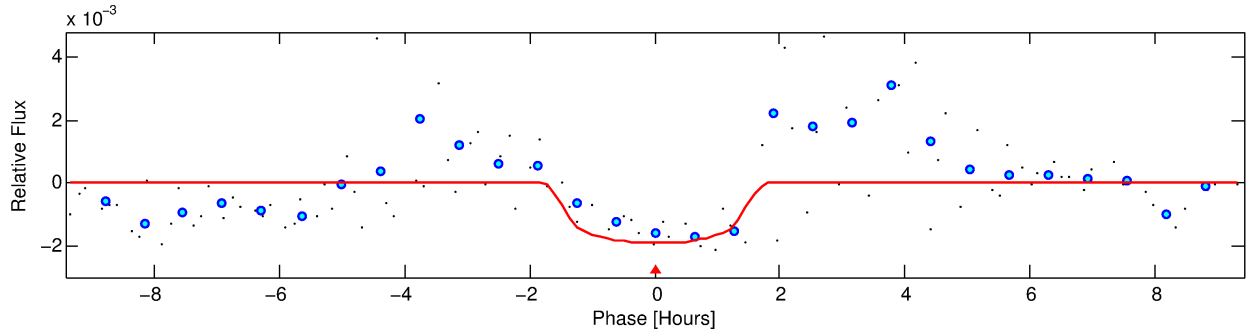
DV One-Page Summary

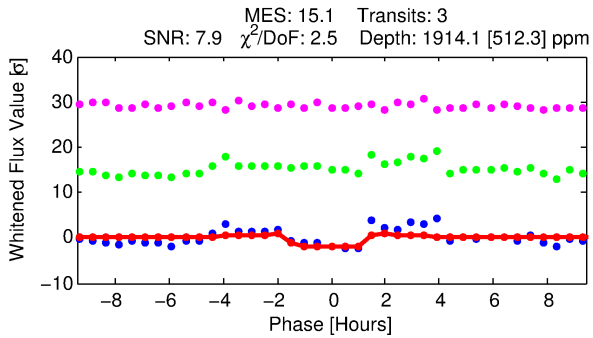
KIC: 9269082 Candidate: 5 of 7 Period: 334.116 d

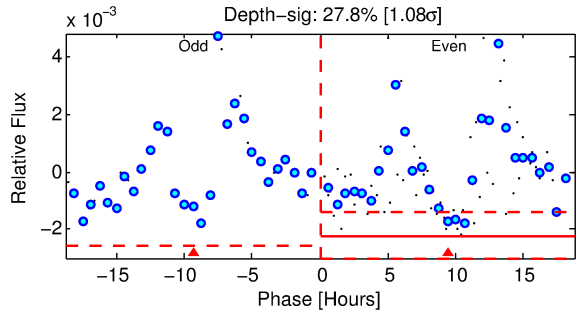


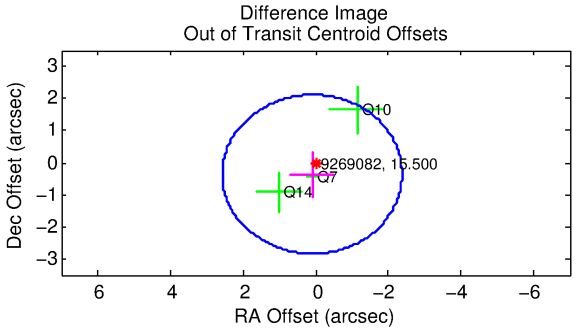












DV Fit Results:

Period = 334.11559 [0.00747] d
Epoch = 309.7598 [0.0180] BKJD
Rp/R* = 0.0394 [0.1328]
a/R* = 846.00 [11681.63]
b = 0.01 [2510.96]

Seff = 0.37 [0.07]
Teq = 198 [9] K
Rp = 2.69 [9.06] Re
a = 0.8027 [0.0618] AU

Ag = 33644.58 [227961.27] [0.15σ]
Teffp = 4152 [7034] K [0.56σ]

DV Diagnostic Results:

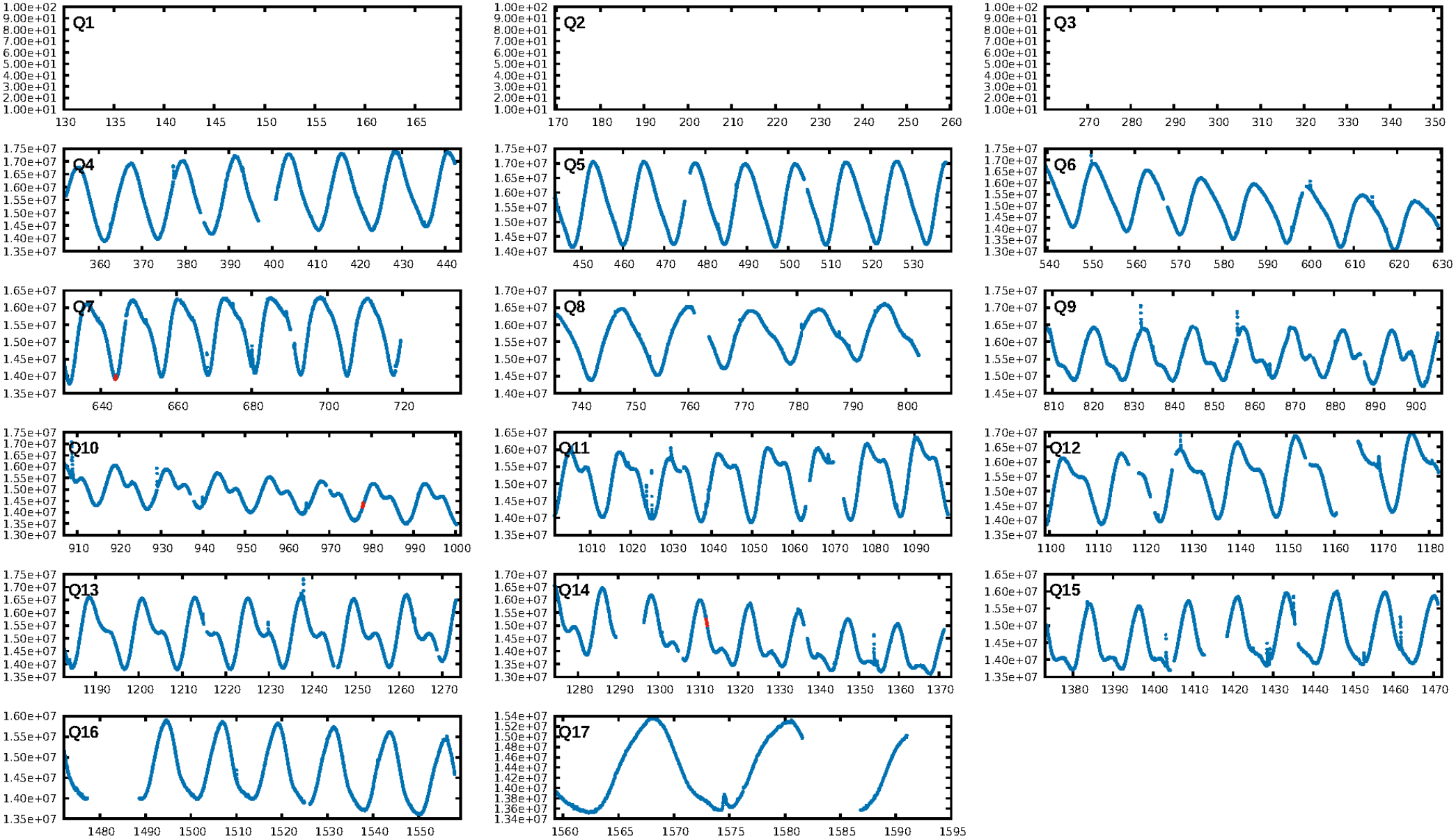
ShortPeriod−sig: 100.0% [26.79σ]
LongPeriod−sig: 100.0% [304.39σ]
ModelChiSquare2−sig: 0.9%
ModelChiSquareGof−sig: 54.4%
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: 1.252

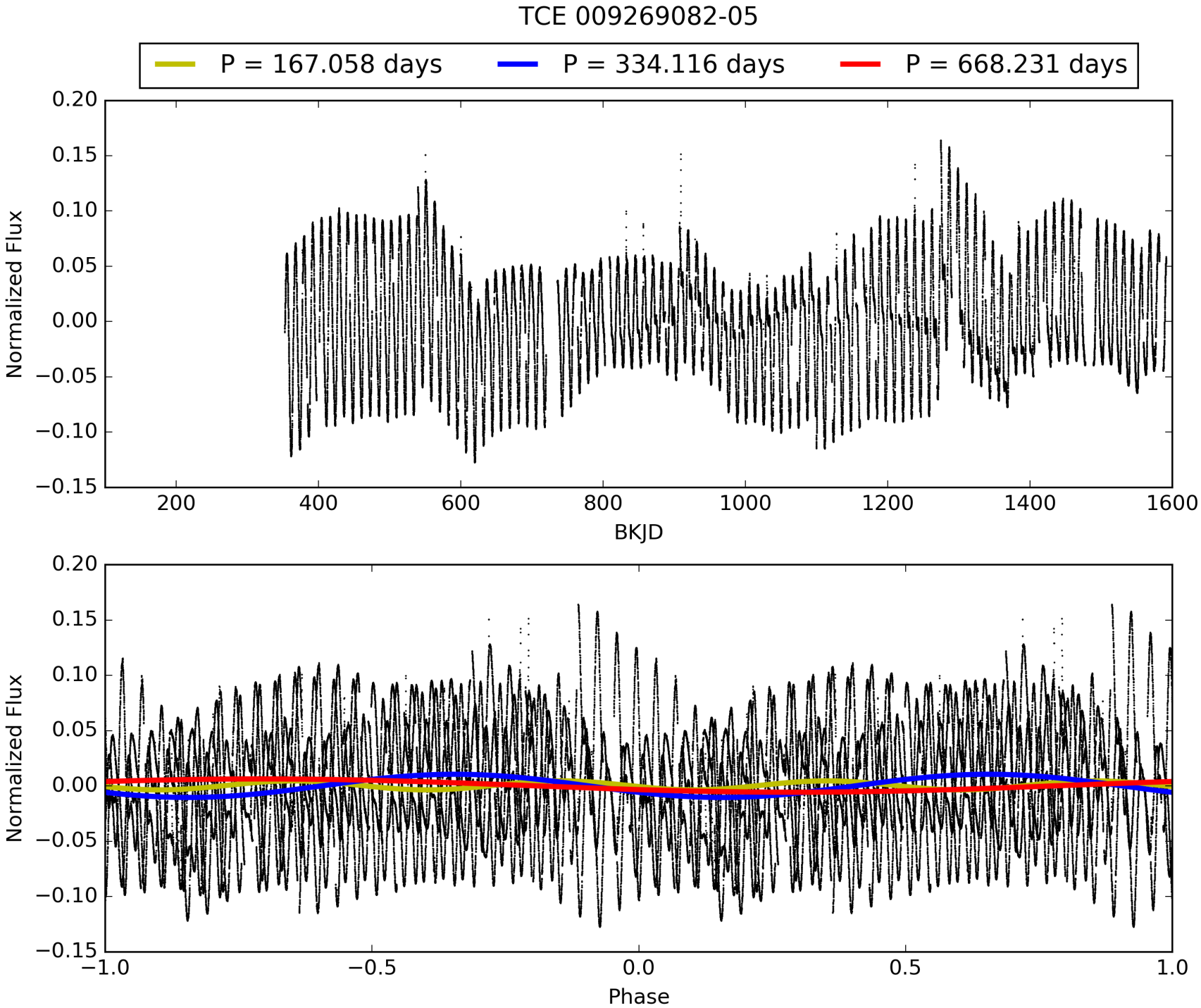
Centroid−sig: 32.5%
Centroid−so: 2.088 arcsec [1.58σ]
OotOffset−rm: 0.374 arcsec [0.45σ]
KicOffset−rm: 0.295 arcsec [0.52σ]
OotOffset−st: 2/1/0/0 [3]
KicOffset−st: 2/1/0/0 [3]
DiffImageQuality−fgm: 0.33 [1/3]
DiffImageOverlap−fno: 1.00 [3/3]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30−Jan−2016 05:54:27 Z

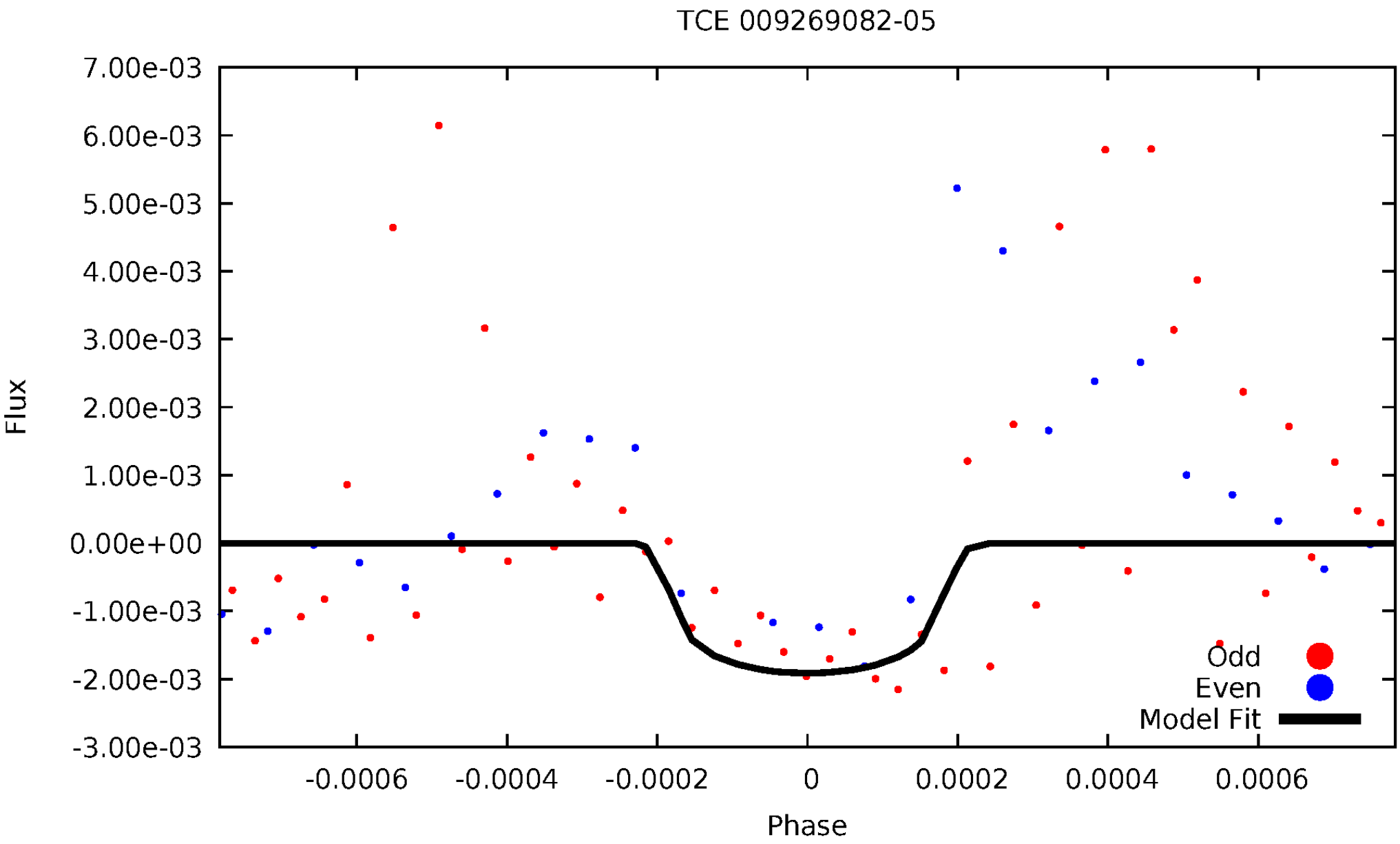
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009269082-05, PDC Light Curves

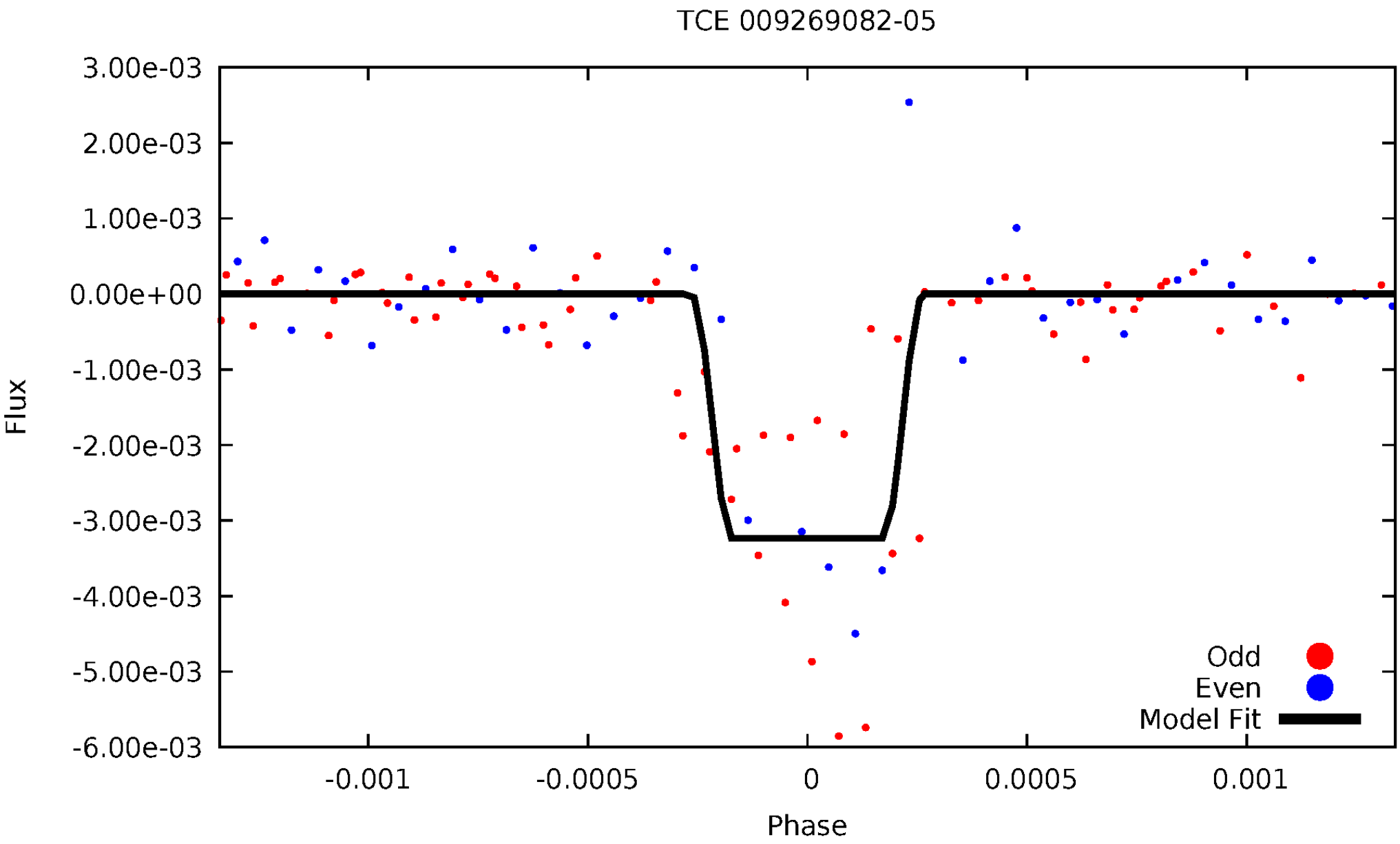



TCE 009269082-05
P = 167.058 days
P = 334.116 days
P = 668.231 days
Normalized Flux
BKJD
Normalized Flux
Phase

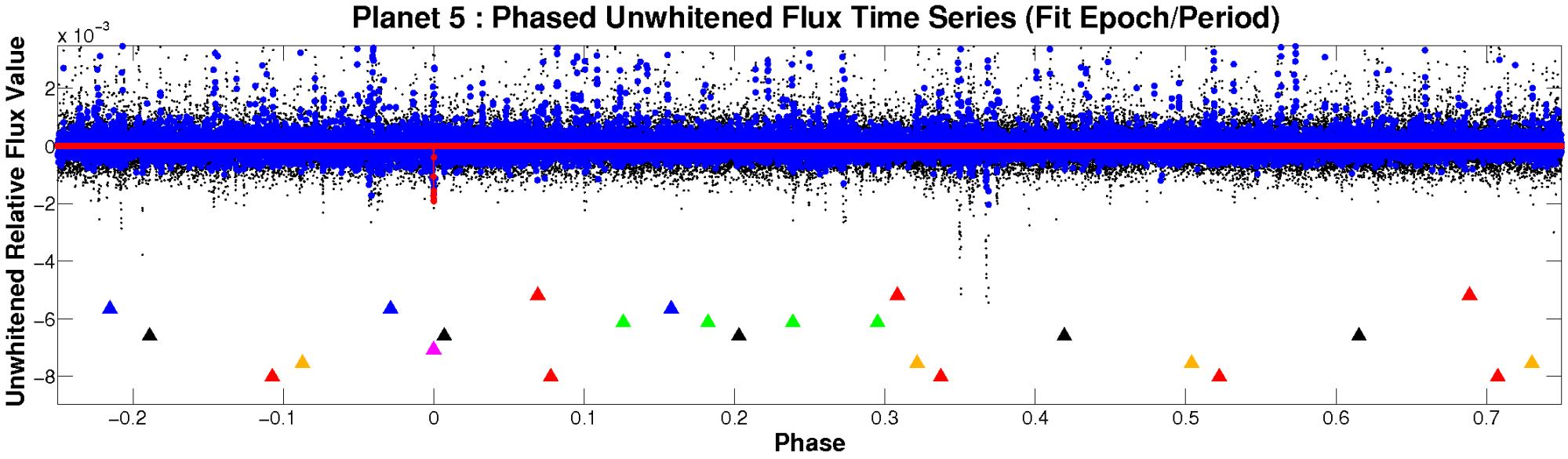
DV Odd/Even

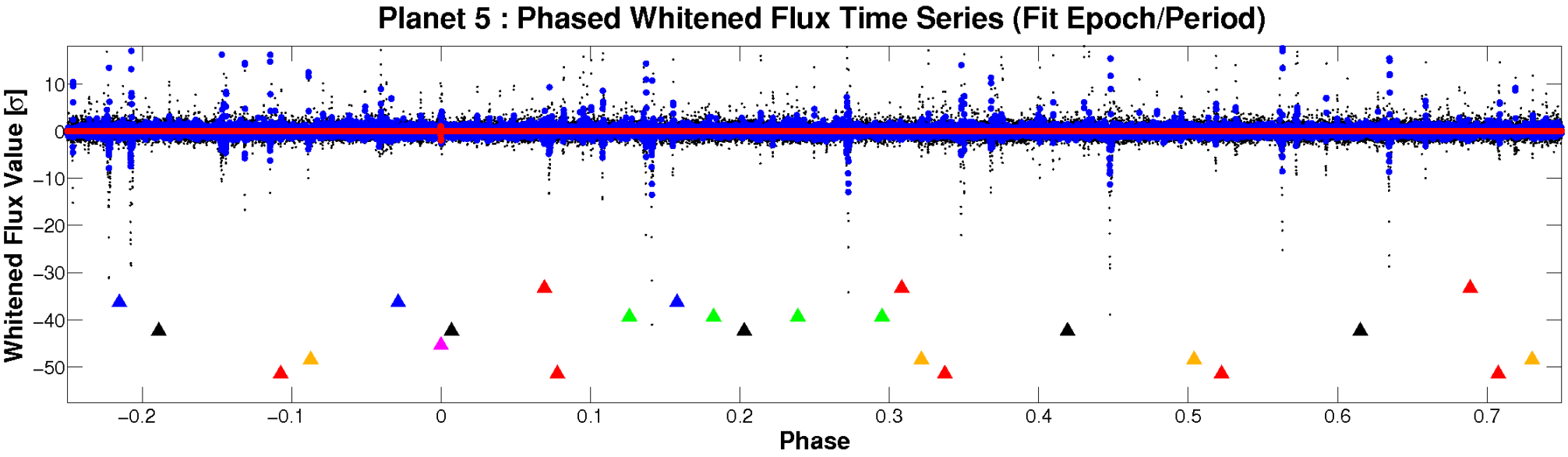

TCE 009269082-05
7.00e-03
6.00e-03
5.00e-03
4.00e-03
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
Flux
-0.0006
-0.0004
-0.0002
0
0.0002
0.0004
0.0006
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009269082-05
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
-4.00e-03
-5.00e-03
-6.00e-03
Flux
-0.001
-0.0005
0
0.0005
0.001
Phase
Odd
Even
Model Fit

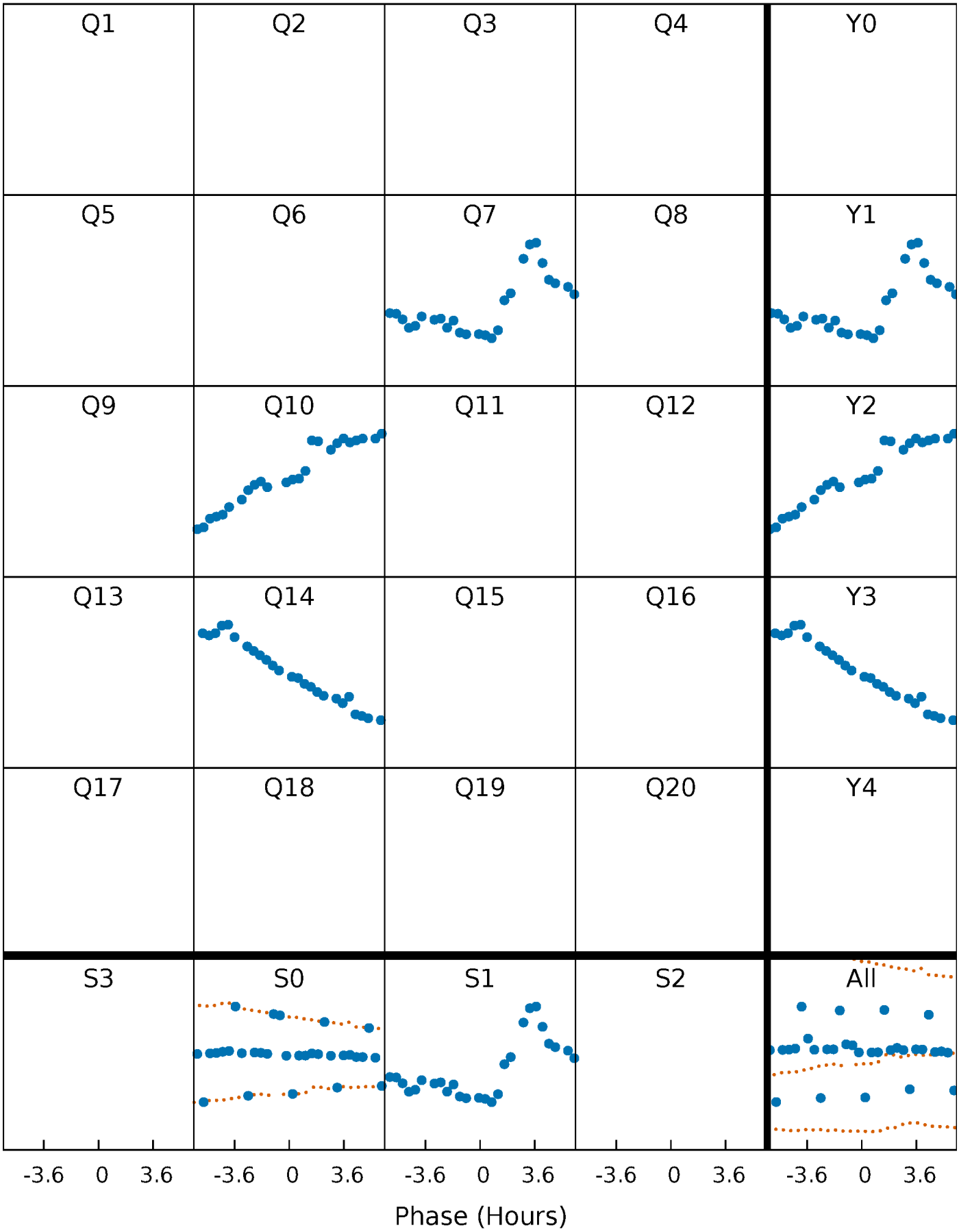
Non-Whitened Vs. Whitened Light Curve





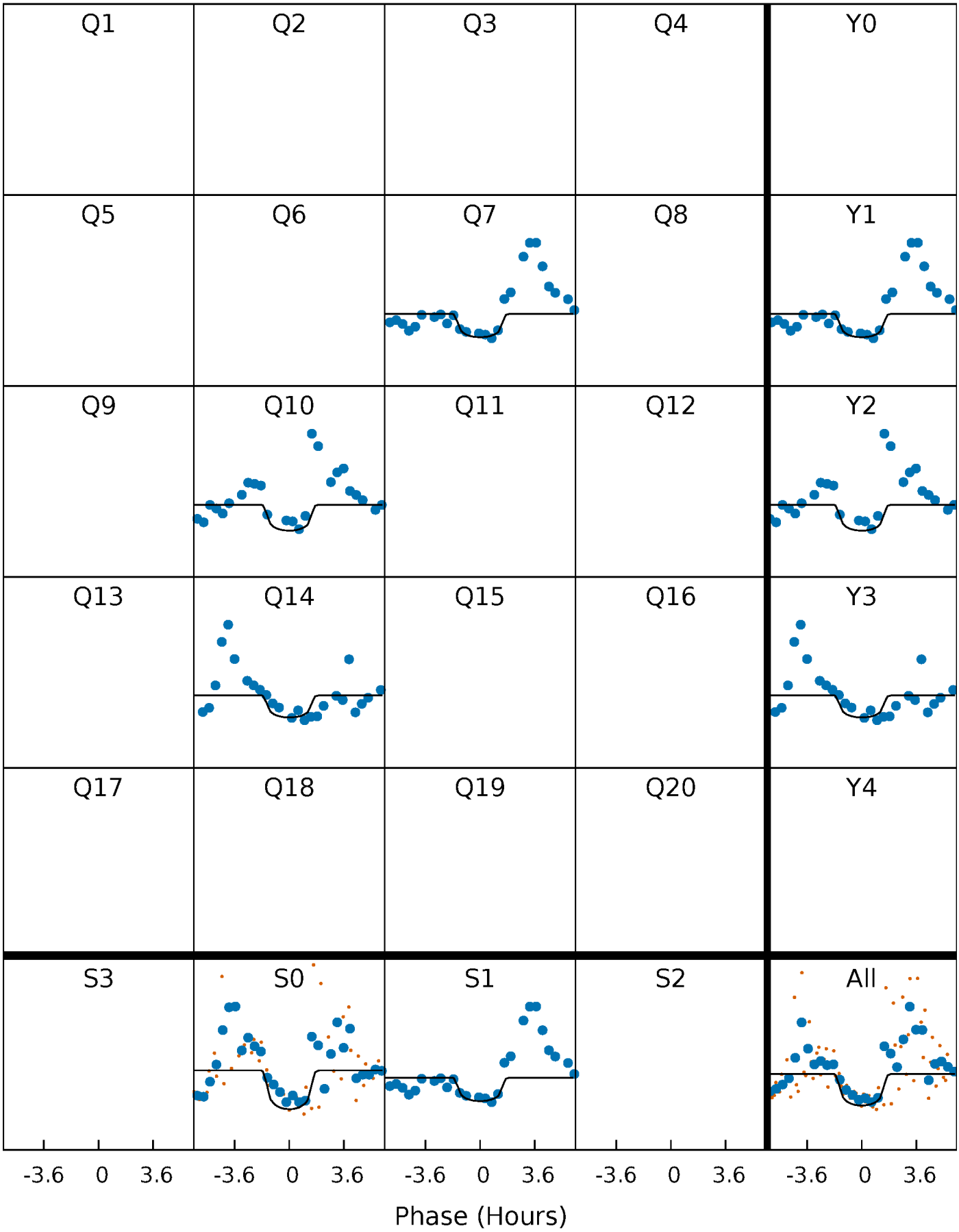
PDC Quarter-Phased Transit Curves

TCE 009269082-05 P=334.115585 Days T_0=309.759758 (BKJD)



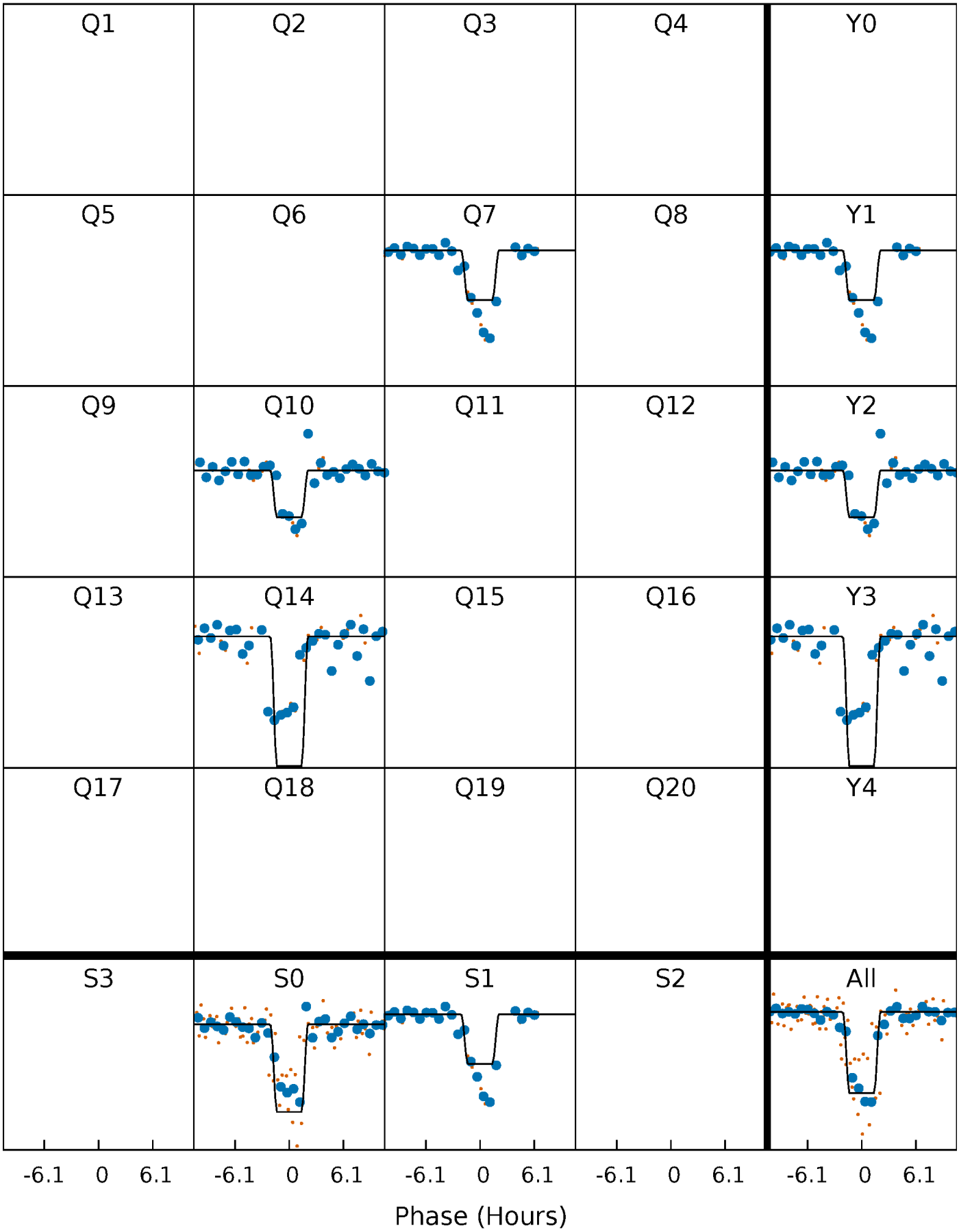
DV Quarter-Phased Transit Curves

TCE 009269082-05 P=334.115585 Days T_0=309.759758 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

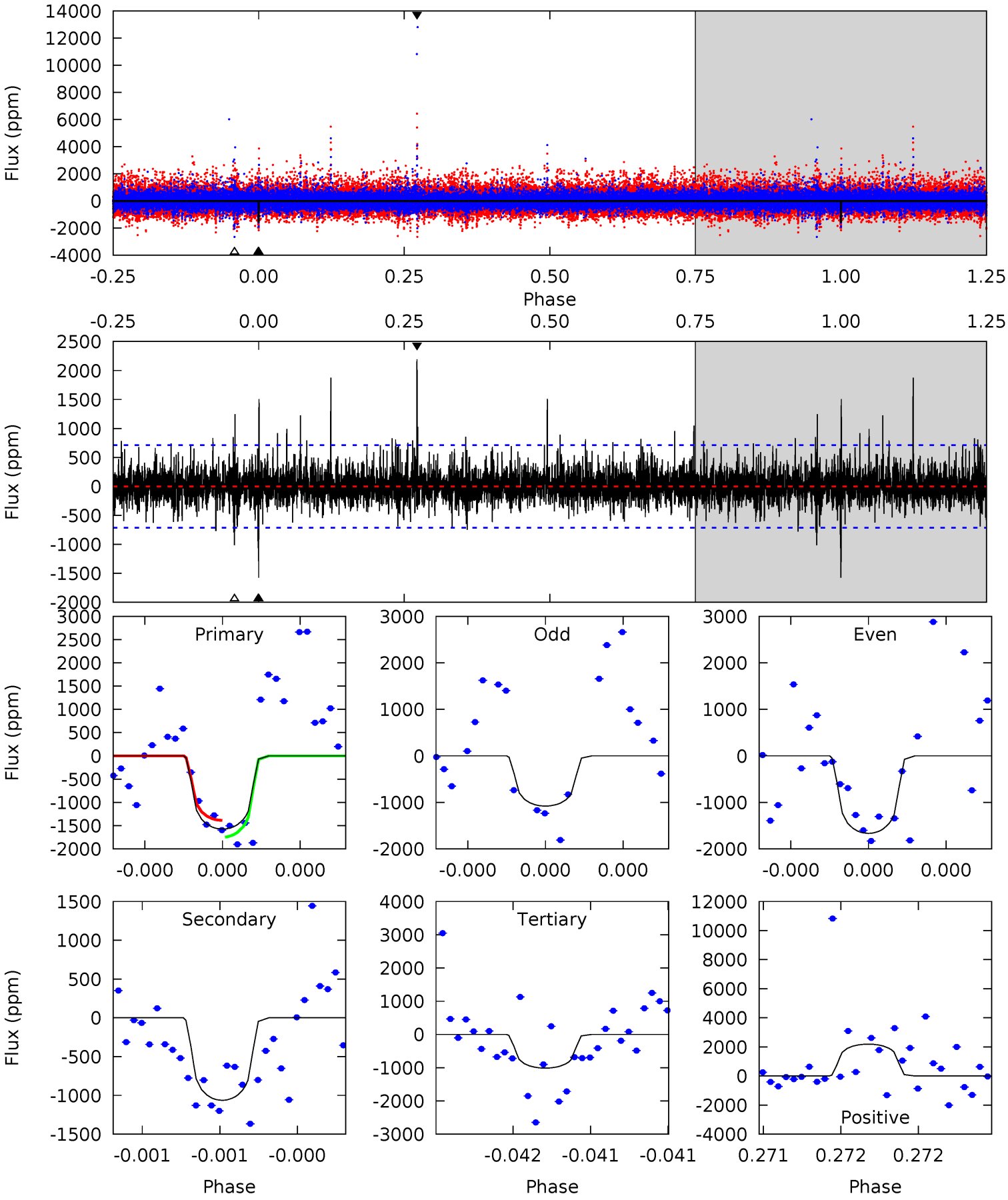
TCE 009269082-05 P=334.098180 Days T_0=309.783598 (BKJD)



DV Model-Shift Uniqueness Test

009269082-05, P = 334.115585 Days, E = 309.759758 Days

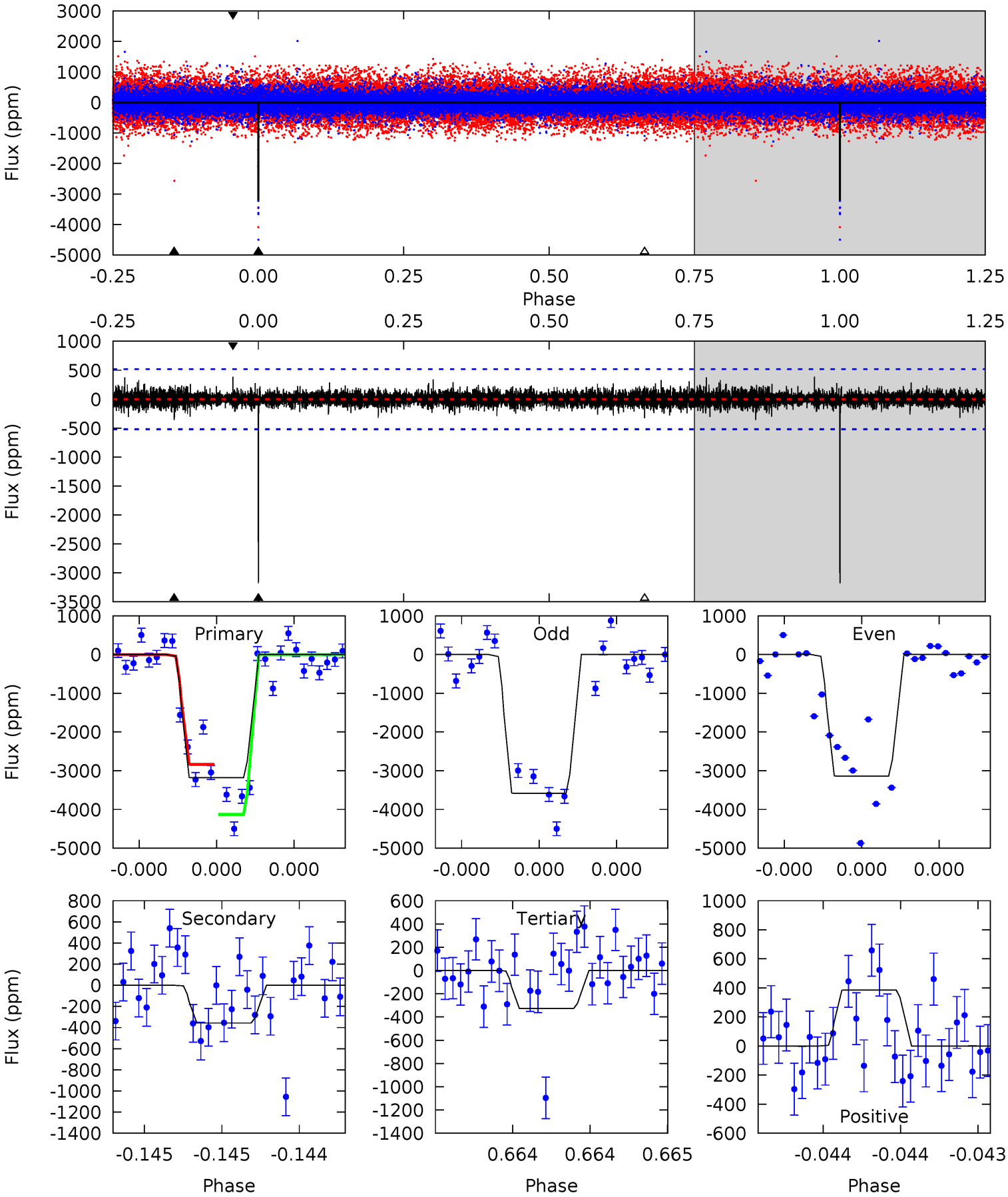
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	8.34	7.94	17.2	5.59	3.50	1.66	4.39	-4.85	0.40	-8.85	1.36	0.92	0.58	1.42



Alt Model-Shift Uniqueness Test

009269082-05, P = 334.098180 Days, E = 309.783598 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.2	3.84	3.51	4.14	5.58	3.49	0.73	30.7	30.1	0.33	-0.30	2.41	1.00	0.11	6.99



Stellar Parameters For KIC 009269082

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5094^{+183}_{-183}	$4.637^{+0.065}_{-0.040}$	$-0.900^{+0.300}_{-0.300}$	$0.625^{+0.055}_{-0.049}$	$0.616^{+0.058}_{-0.027}$	$3.562^{+0.942}_{-0.575}$
	+4%/-4%	+1%/-1%	+33%/-33%	+9%/-8%	+9%/-4%	+26%/-16%
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 009269082-05 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1064±128	$7.19^{+7.39}_{-4.89}$	276^{+11}_{-12}	3328^{+1660}_{-589}	7470^{+63660}_{-5663}
Alt.	-357±93	$7.63^{+7.69}_{-5.05}$	276^{+10}_{-12}	2812^{+1119}_{-479}	2173^{+17837}_{-1642}

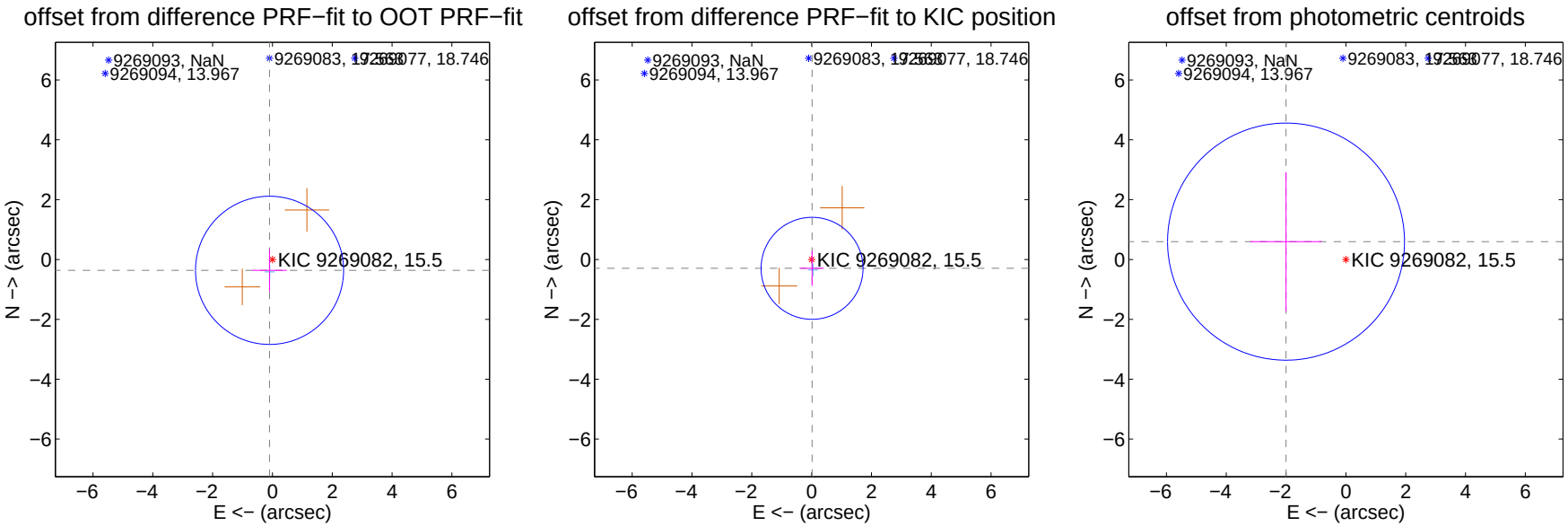
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

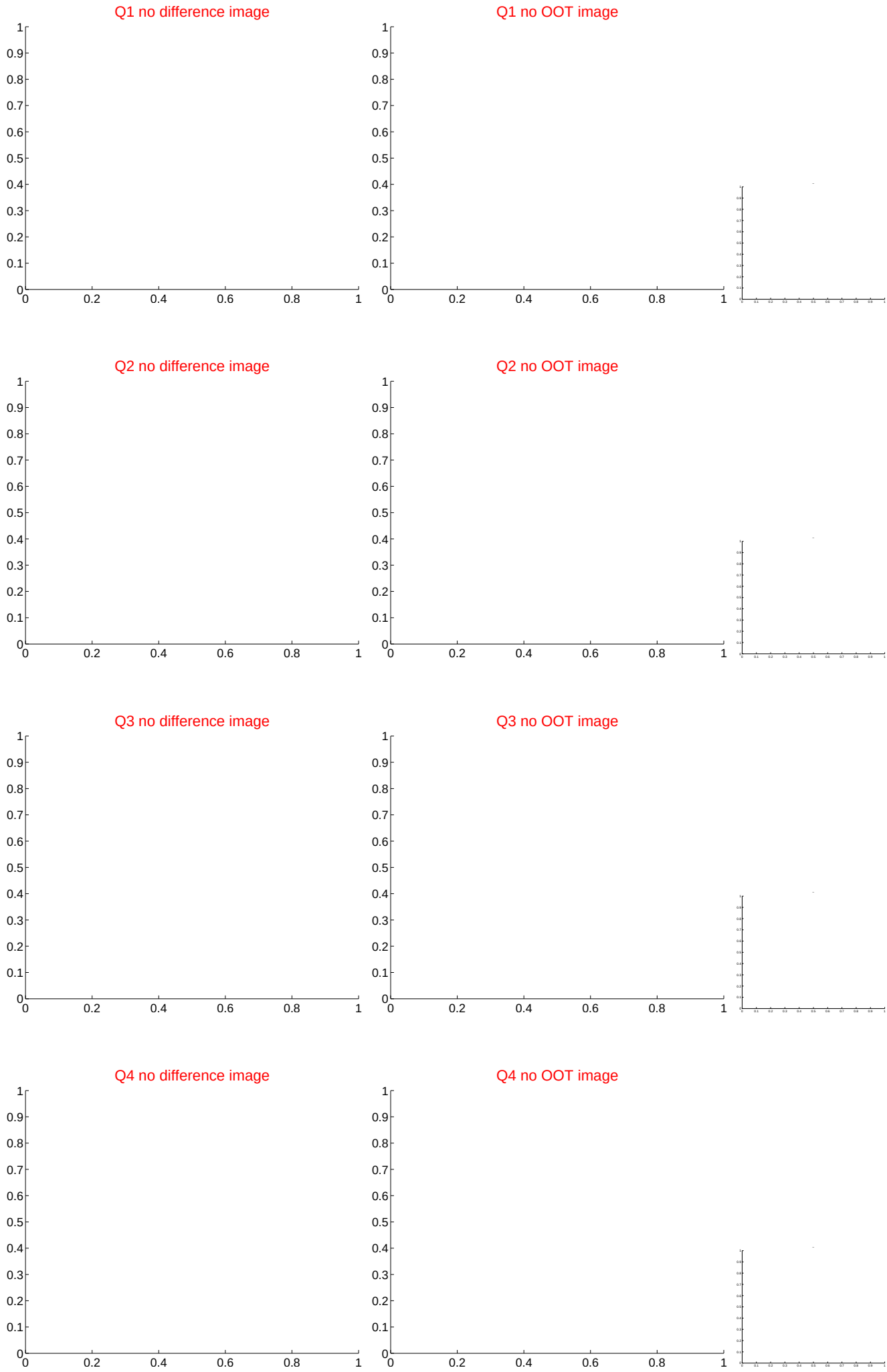
Supplemental centroid analysis for 009269082-05. Kepler magnitude: 15.50. Transit SNR 7.88
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.374 ± 0.825	0.45	0.096 ± 0.574	-0.362 ± 0.705
PRF-fit source offset from KIC position	0.295 ± 0.568	0.52	-0.014 ± 0.393	-0.295 ± 0.586
photometric centroid source offset	2.09 ± 1.32	1.58	2.00 ± 1.19	0.60 ± 2.32

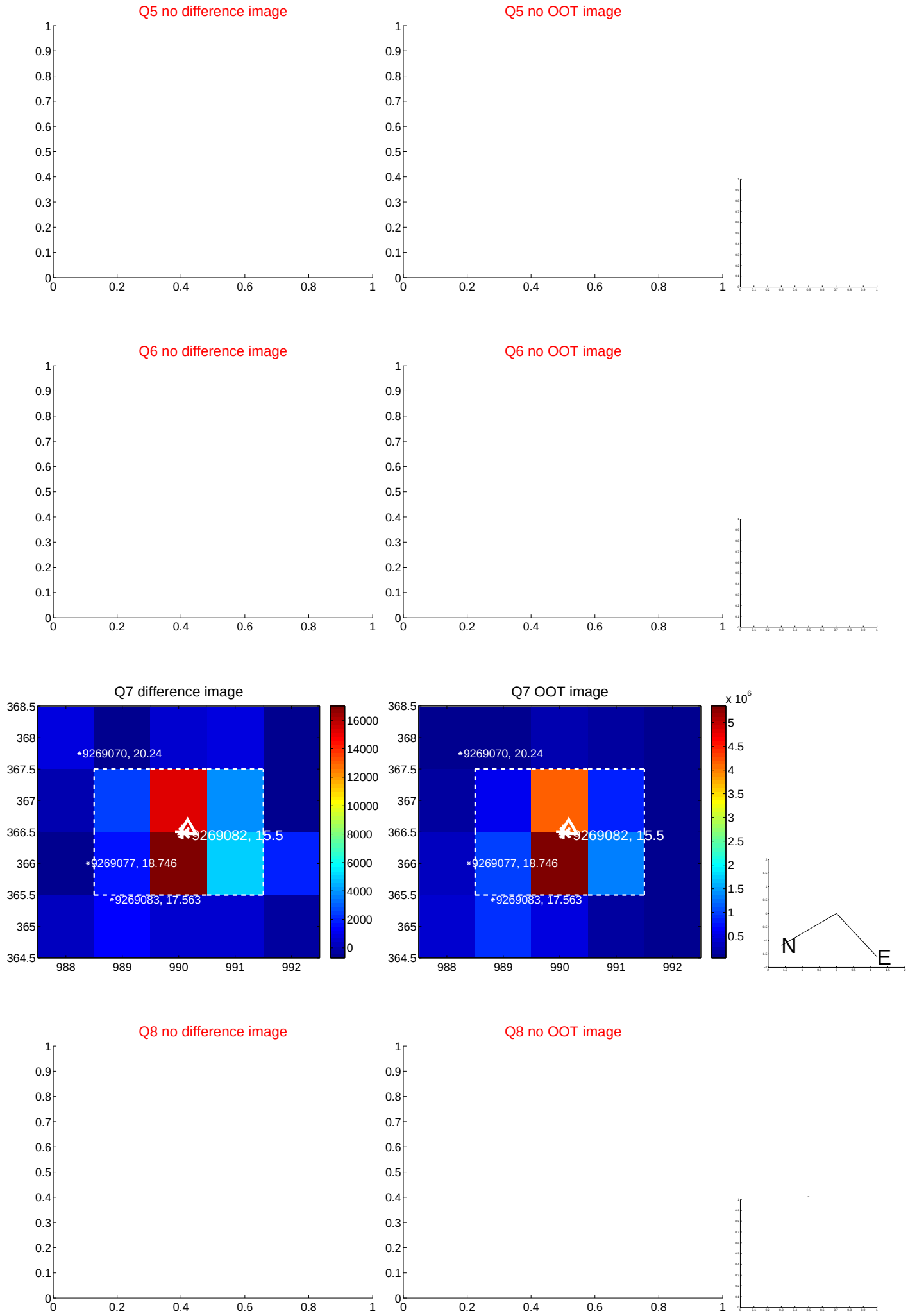


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

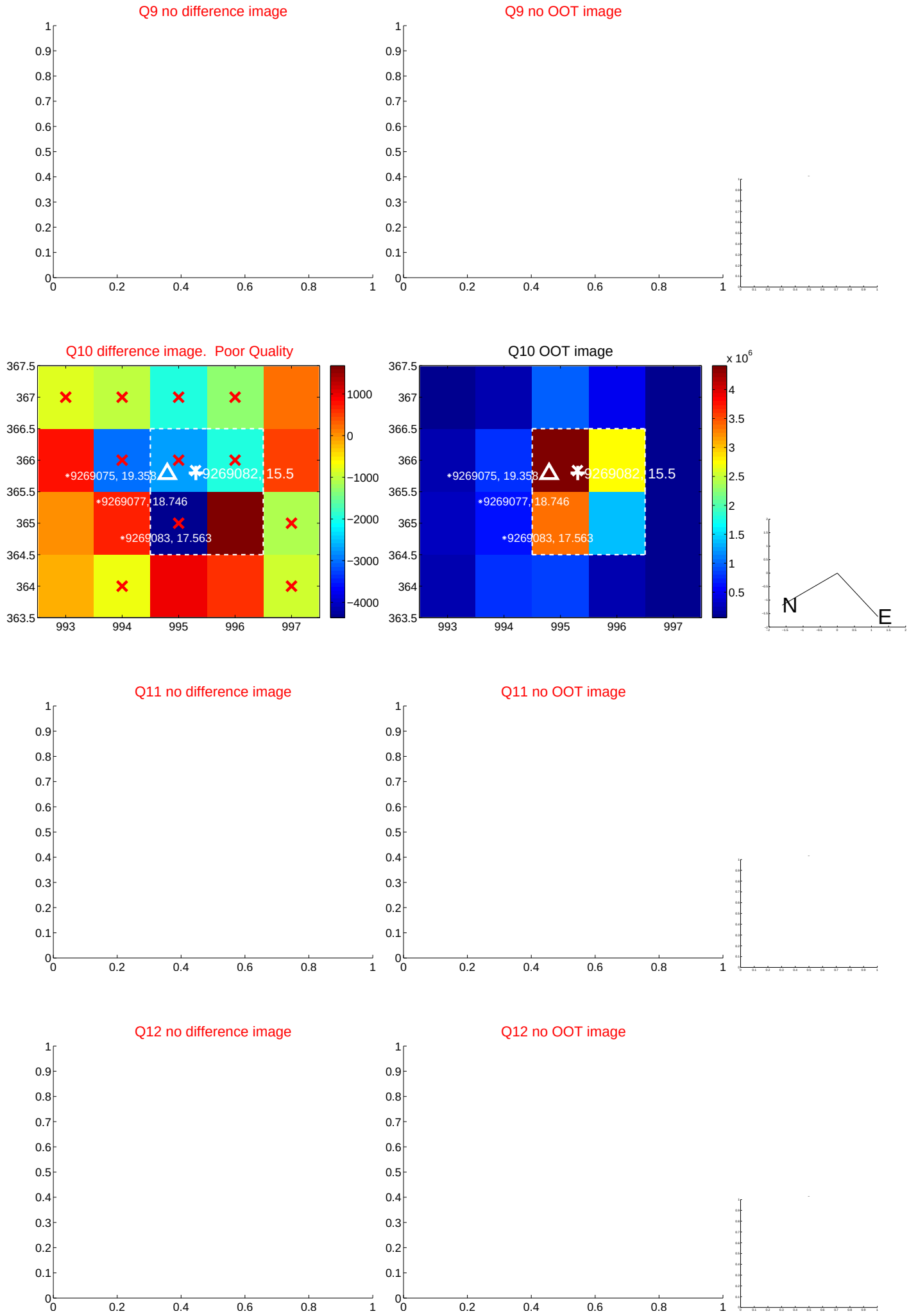
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



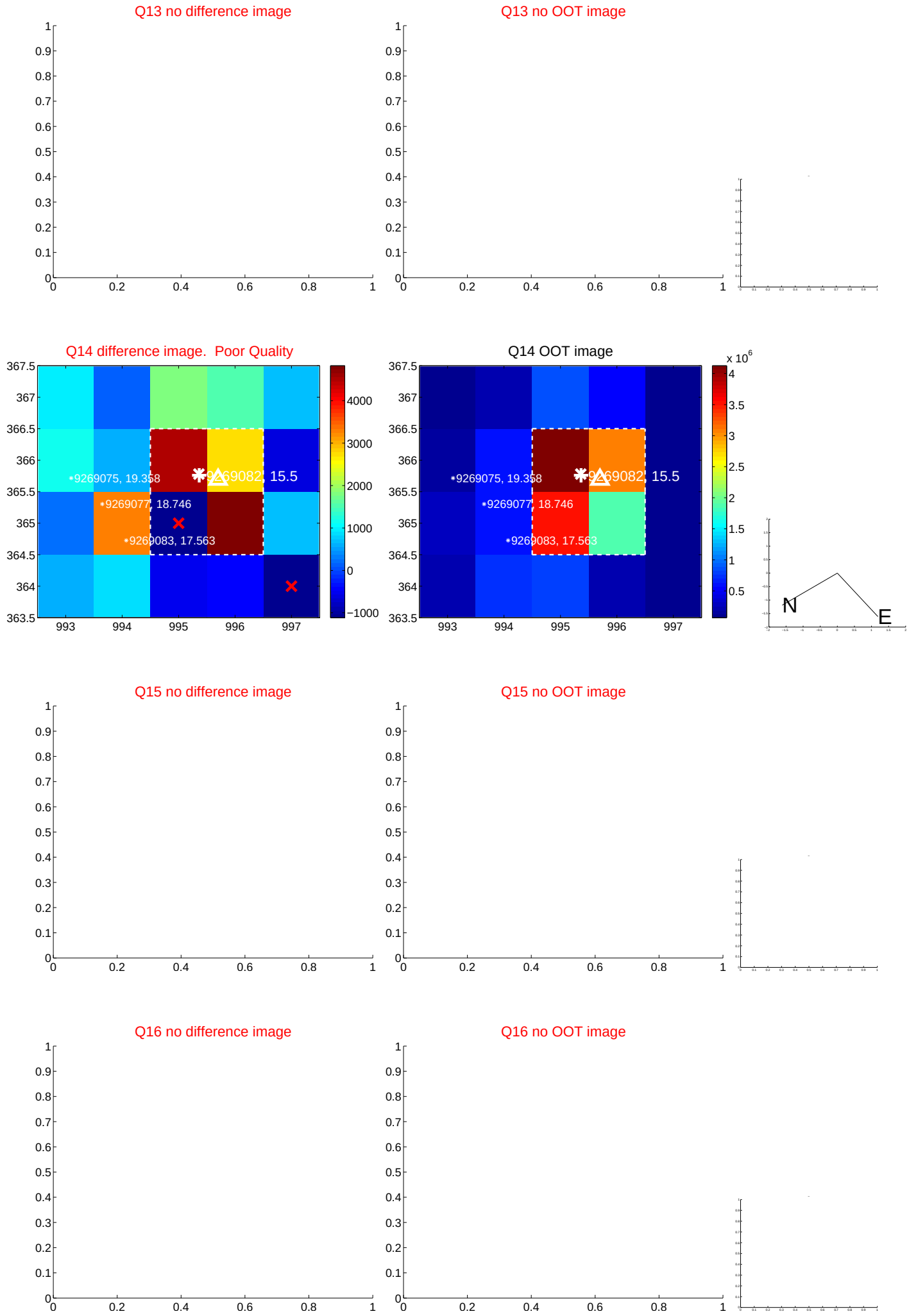
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



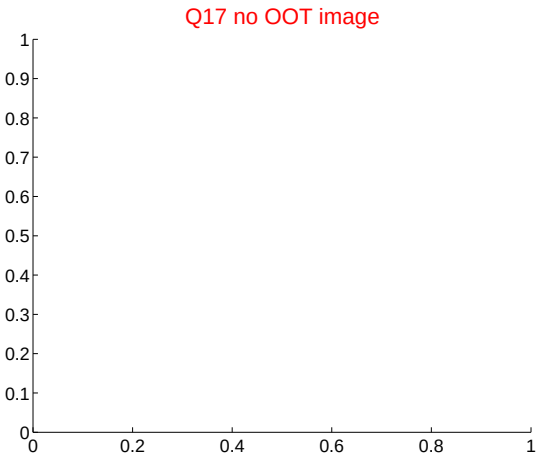
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

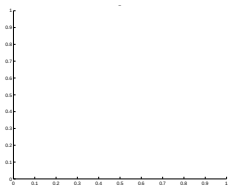


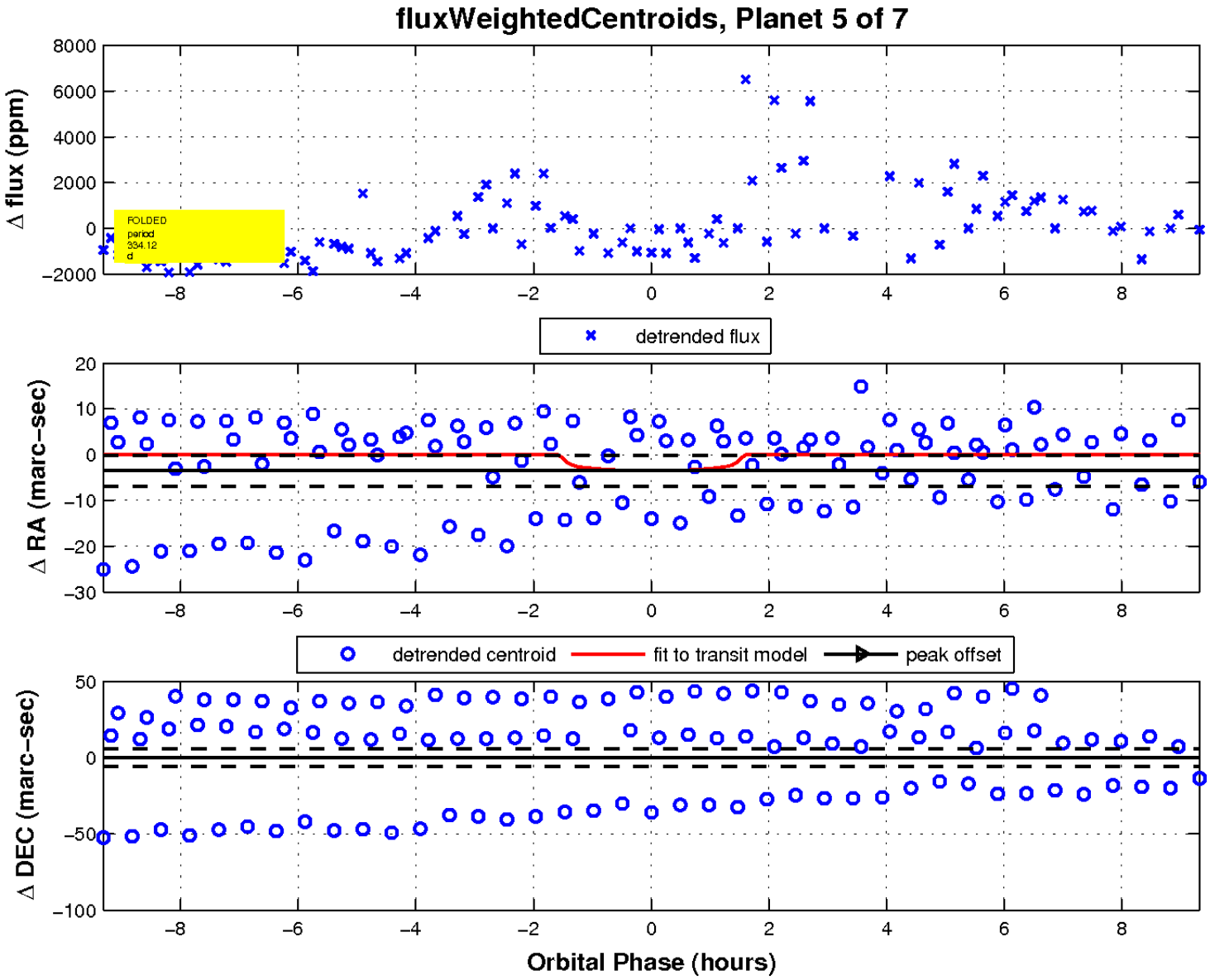
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



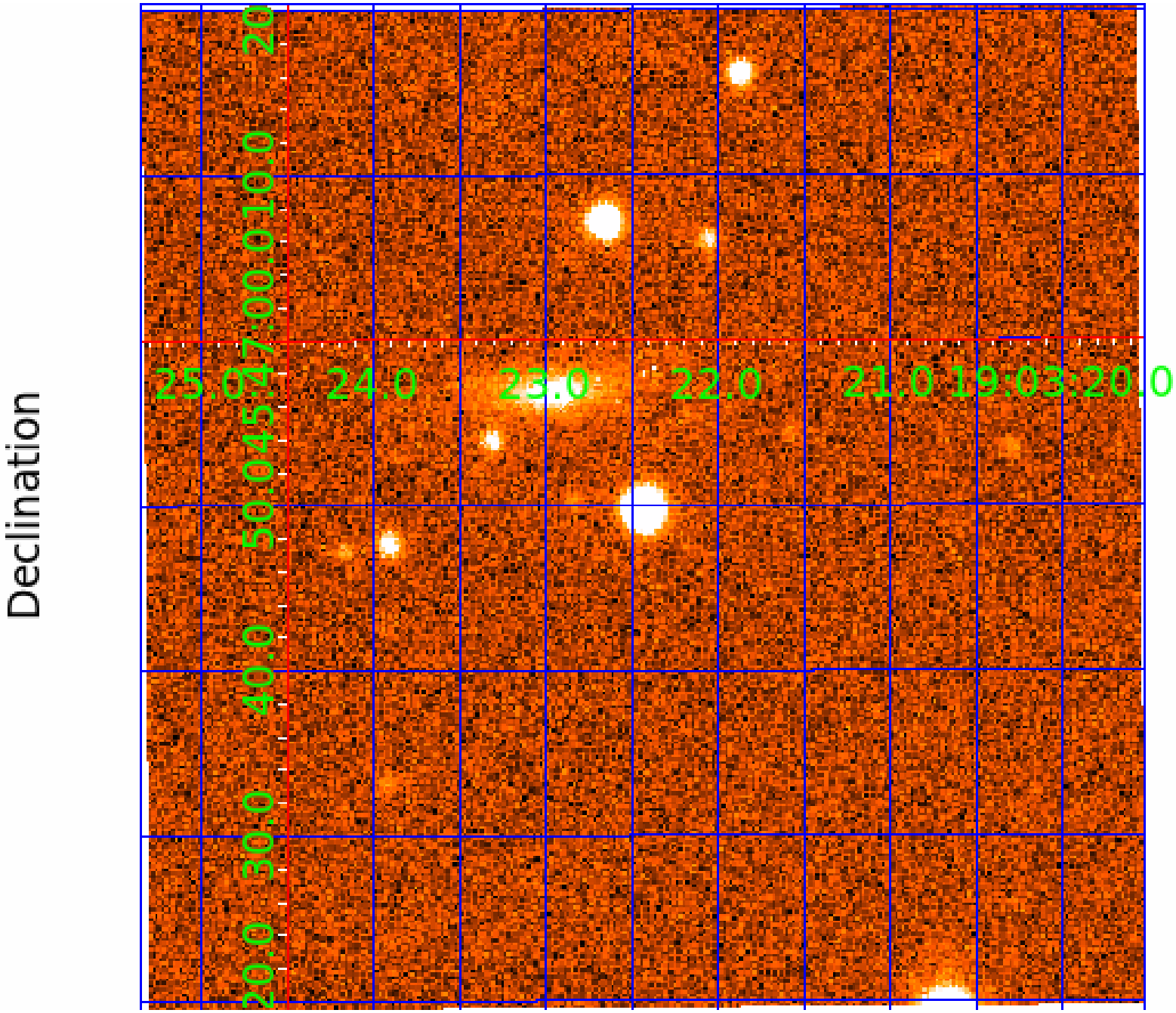
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image


Declination
25.0
24.0
23.0
22.0
21.0
19:03:20.0
47:00:10.0
50:45:
40.0
30.0
20.0

KIC 009269082

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 ($S_\oplus$)
009269082-03	OBS	No	315.281777	408.381410	4207.9	16.576	18.1	10.2	0.62	5094	6.78	0.40
009269082-04	OBS	No	268.660827	377.566280	1986.6	15.921	14.4	8.2	0.62	5094	2.86	0.49
009269082-05	OBS	No	334.115585	309.759758	1914.1	3.136	15.1	7.9	0.62	5094	2.69	0.37
009269082-07	OBS	No	272.249942	335.775076	1544.2	5.000	13.8	-1.0	0.62	5094	2.42	0.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009269082-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269082-04	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009269082-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
009269082-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS

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

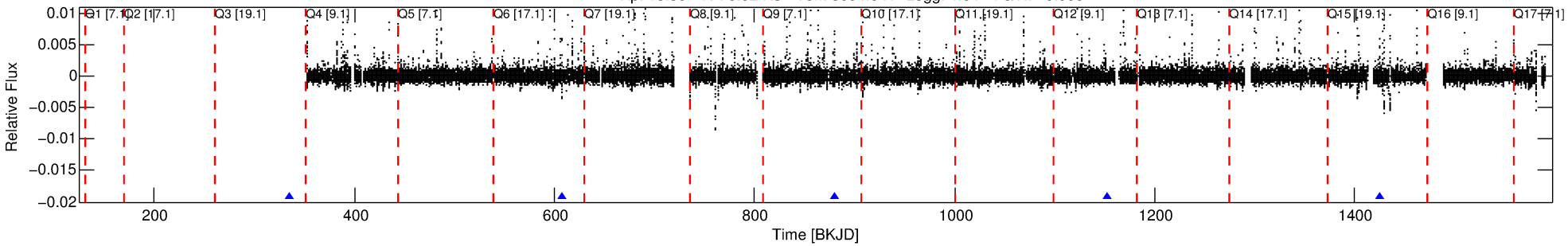
Ephemeris Match Information For 009269082-07

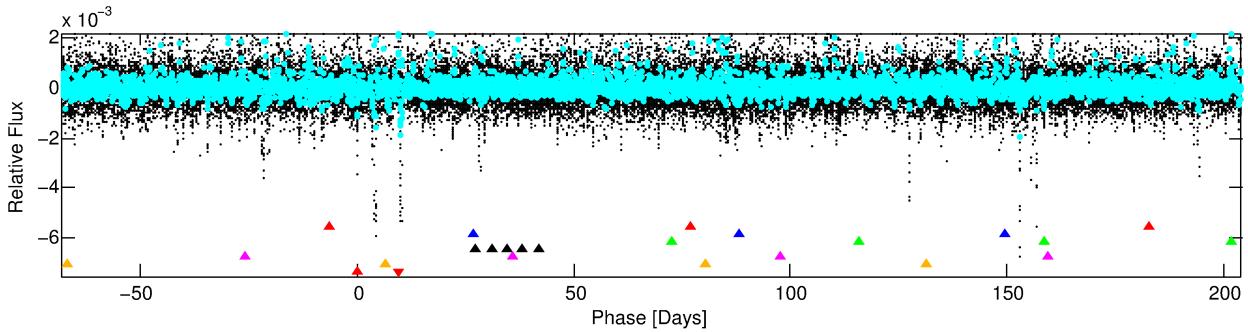
No Significant Match Found

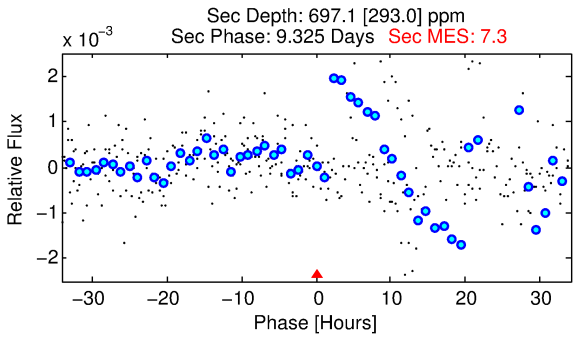
DV One-Page Summary

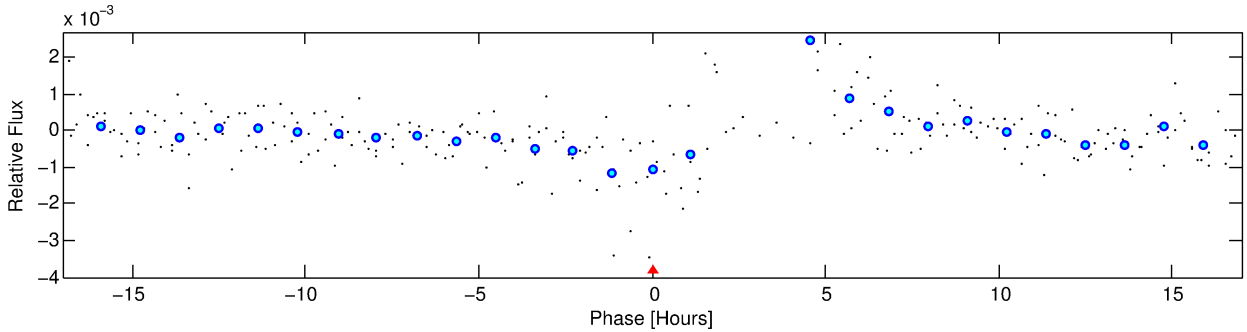
KIC: 9269082 Candidate: 7 of 7 Period: 272.250 d

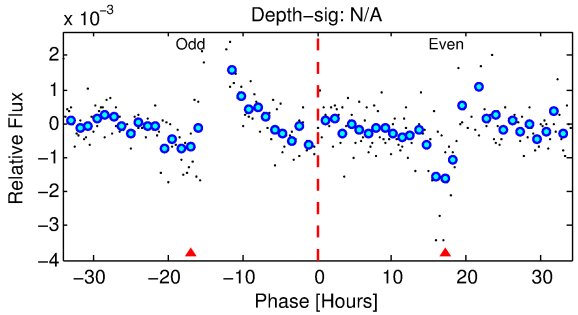
Kp: 15.50 R*: 0.62 Rs Teff: 5094.0 K Logg: 4.64 Fe/H: −0.900

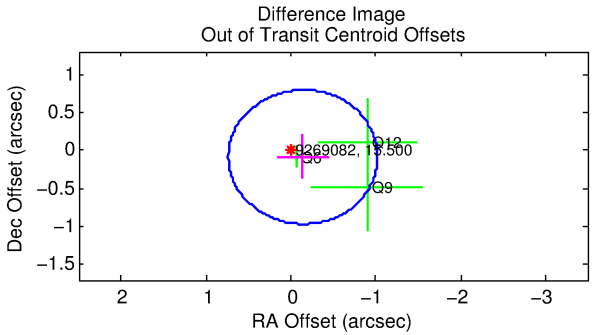












TPS TCE Results:

Period = 272.24994 d
Epoch = 335.7751 BKJD

DV fit results are unavailable

DV Diagnostic Results:

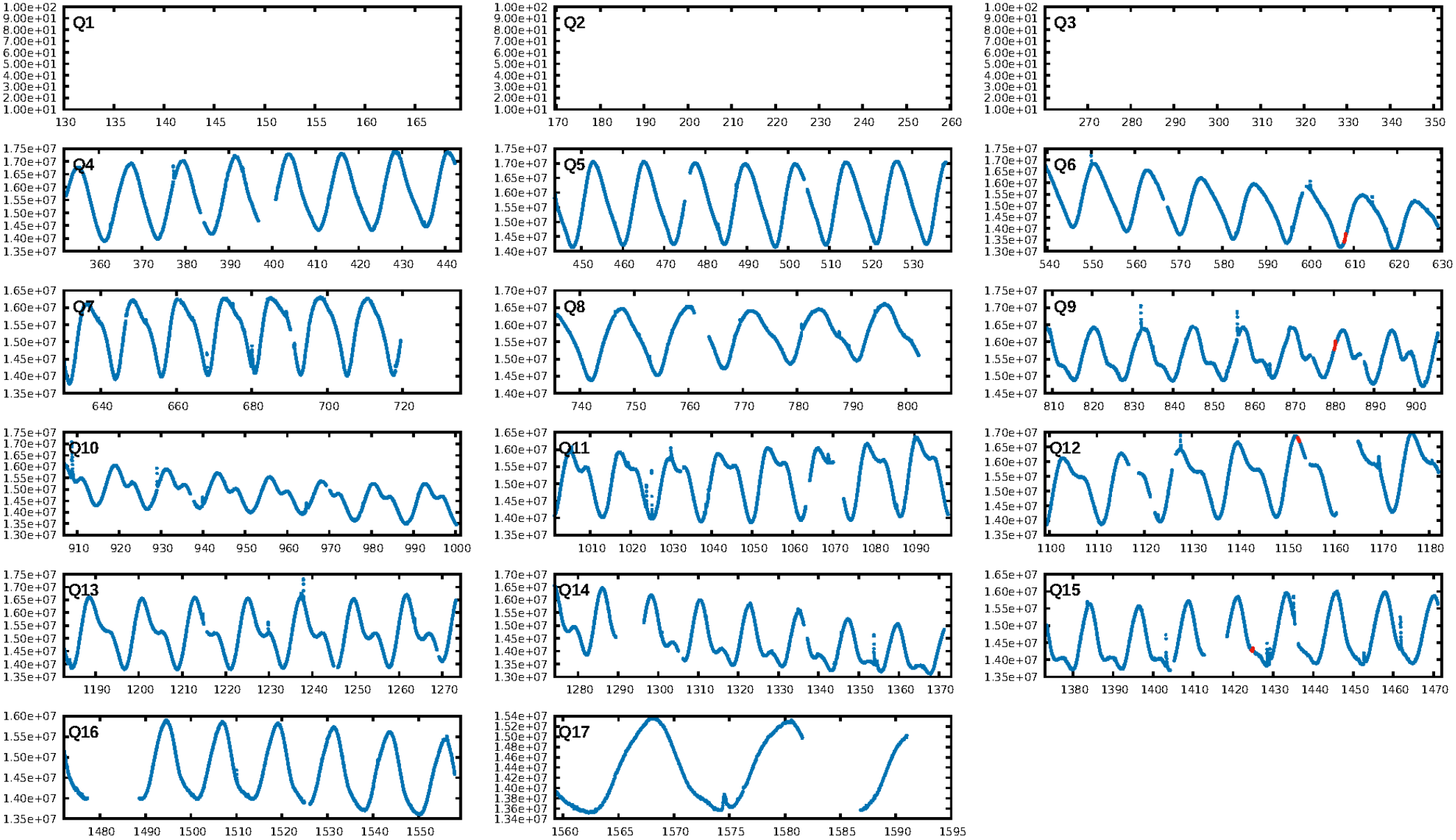
ShortPeriod−sig: 100.0% [5.16σ]
LongPeriod−sig: 100.0% [59.65σ]
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [4/4]
GhostDiagnostic−chr: 0.4329

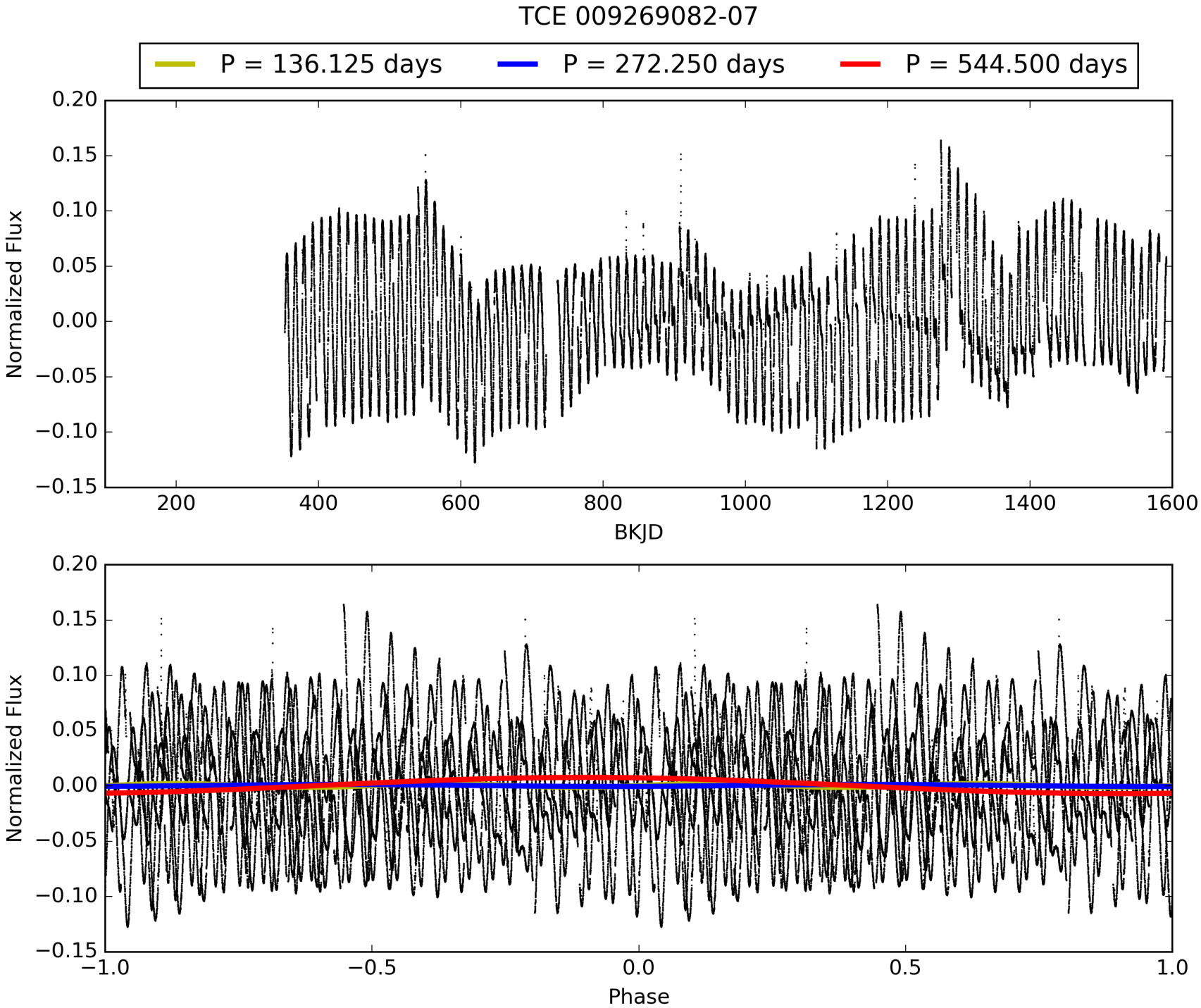
Centroid−sig: 98.6%
Centroid−so: 0.565 arcsec [0.80σ]
OotOffset−rm: 0.167 arcsec [0.57σ]
KicOffset−rm: 0.004 arcsec [0.01σ]
OotOffset−st: 1/0/1/1 [3]
KicOffset−st: 1/0/1/1 [3]
DiffImageQuality−fgm: 0.67 [2/3]
DiffImageOverlap−fno: 1.00 [4/4]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30−Jan−2016 05:54:48 Z

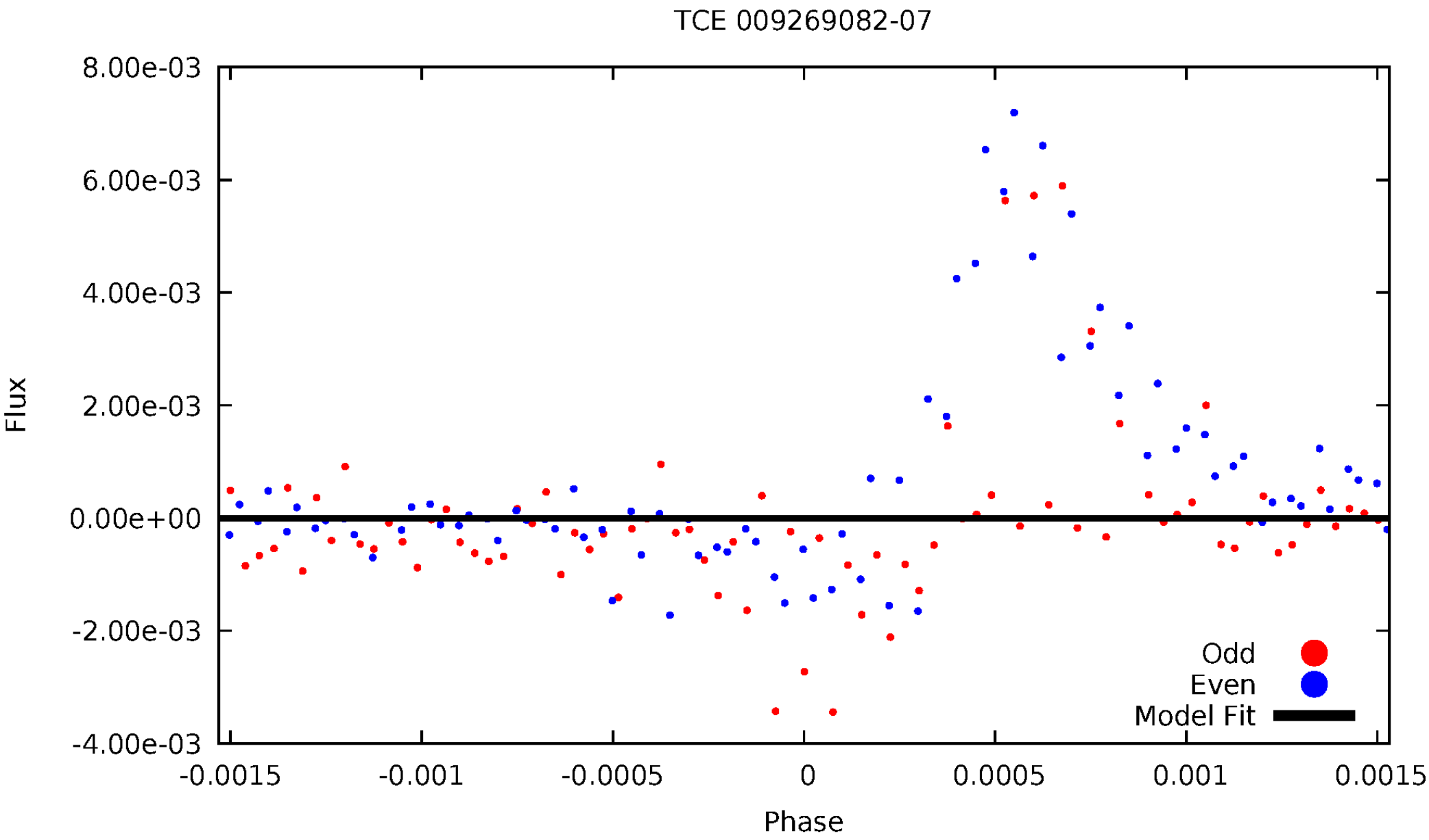
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009269082-07, PDC Light Curves




TCE 009269082-07
P = 136.125 days
P = 272.250 days
P = 544.500 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even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6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
Flux
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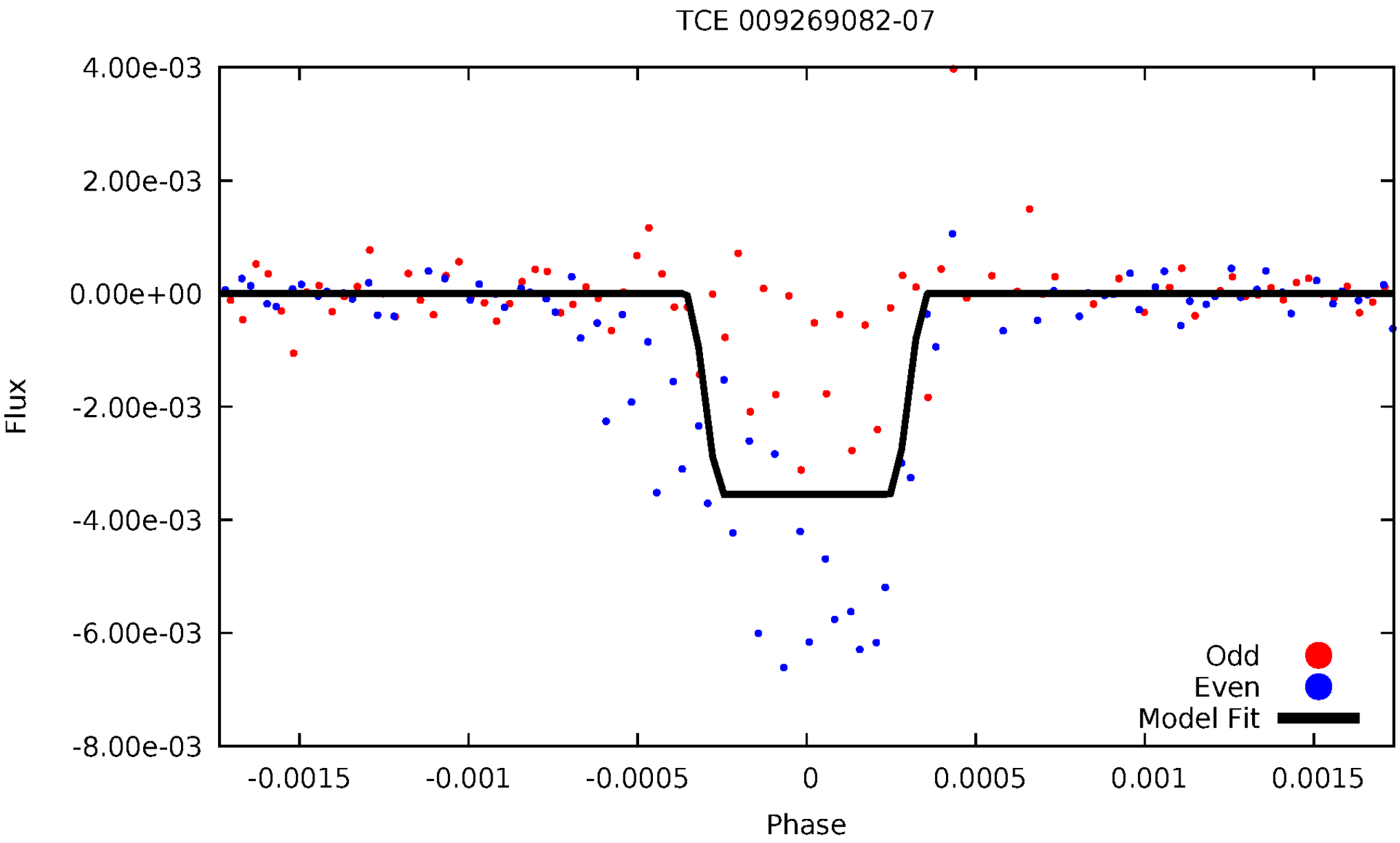
-0.001
-0.0005
0
0.0005
0.001
0.0015
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009269082-07
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2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
-6.00e-03
-8.00e-03
Flux
-0.0015
-0.001
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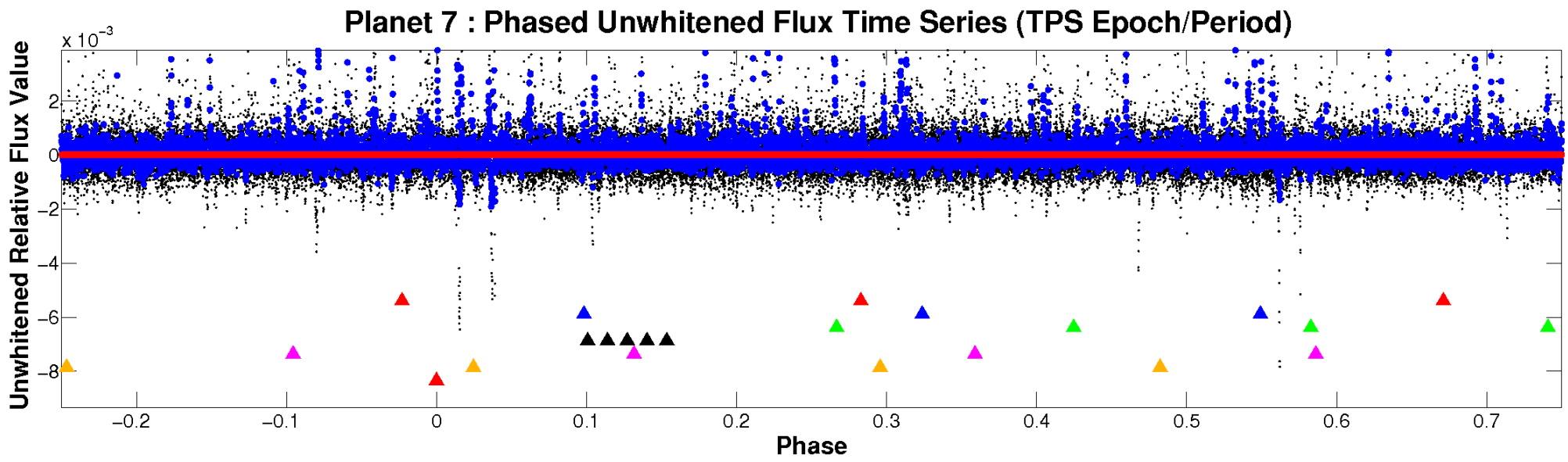
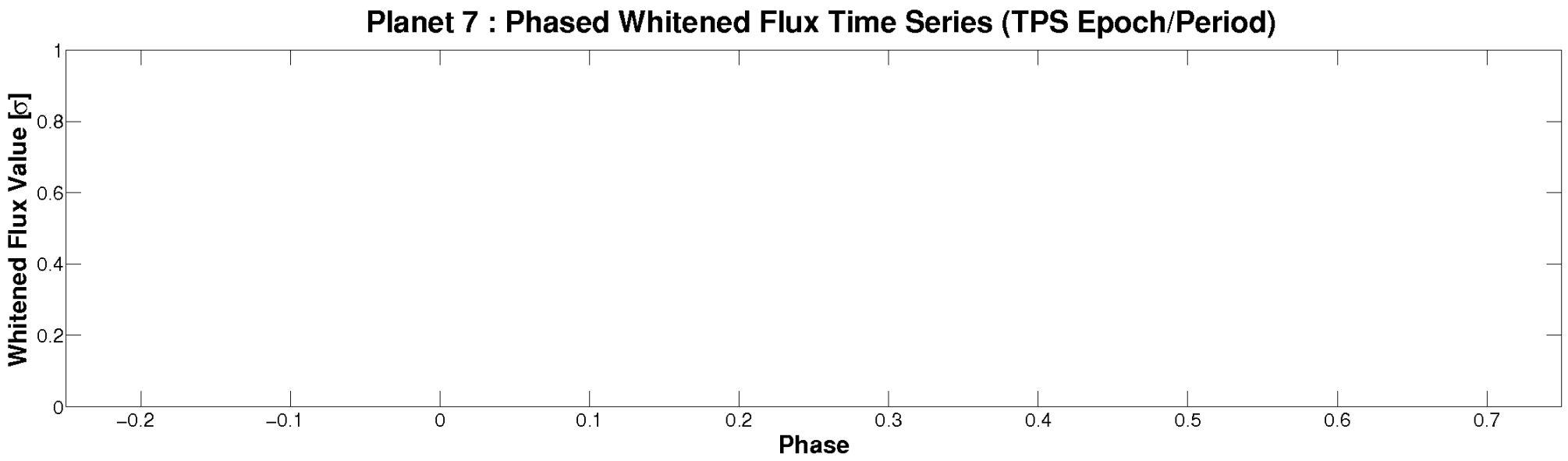
0
0.0005
0.001
0.0015
Phase
Odd
Even
Model Fit

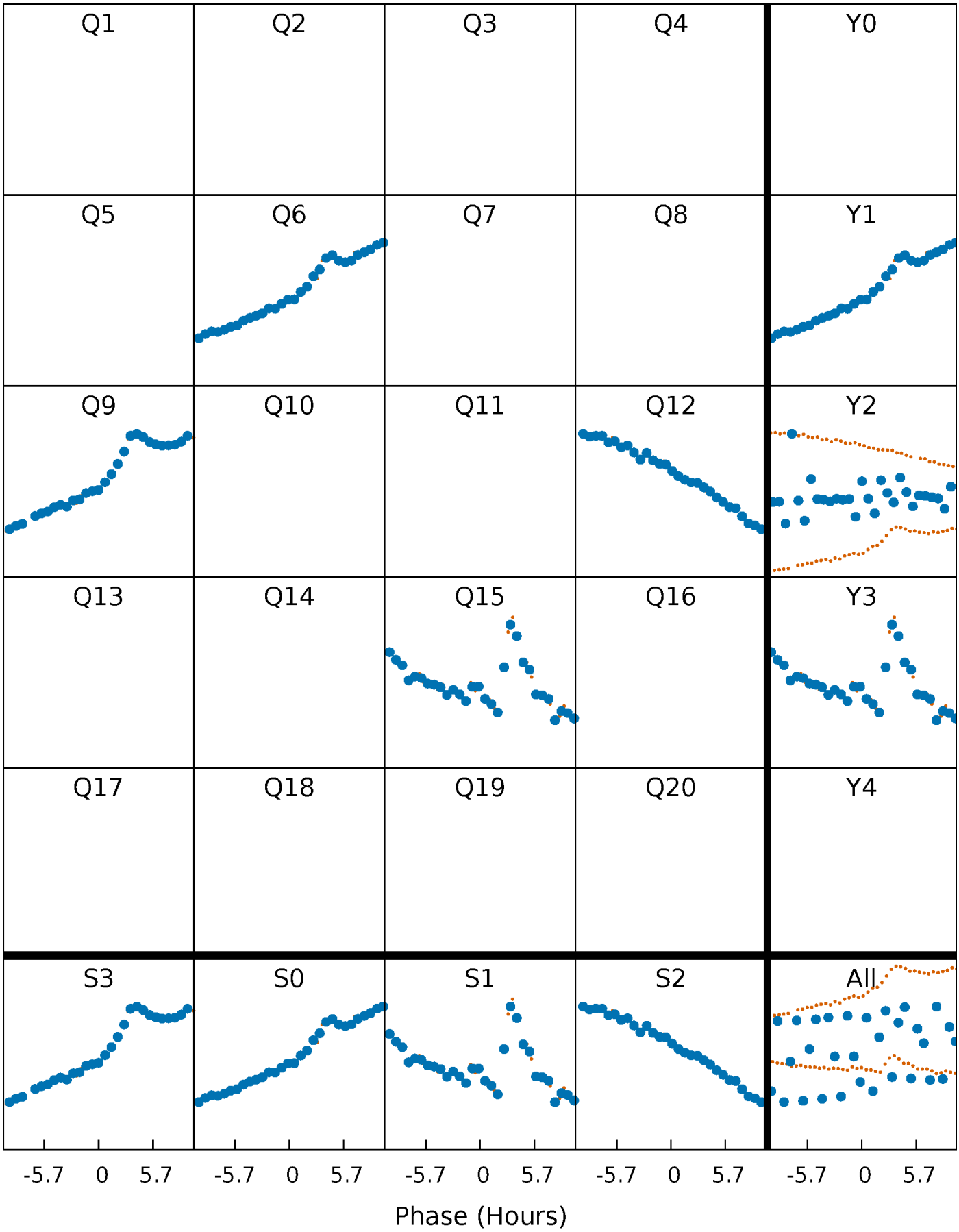
Non-Whitened Vs. Whitened Light Curve





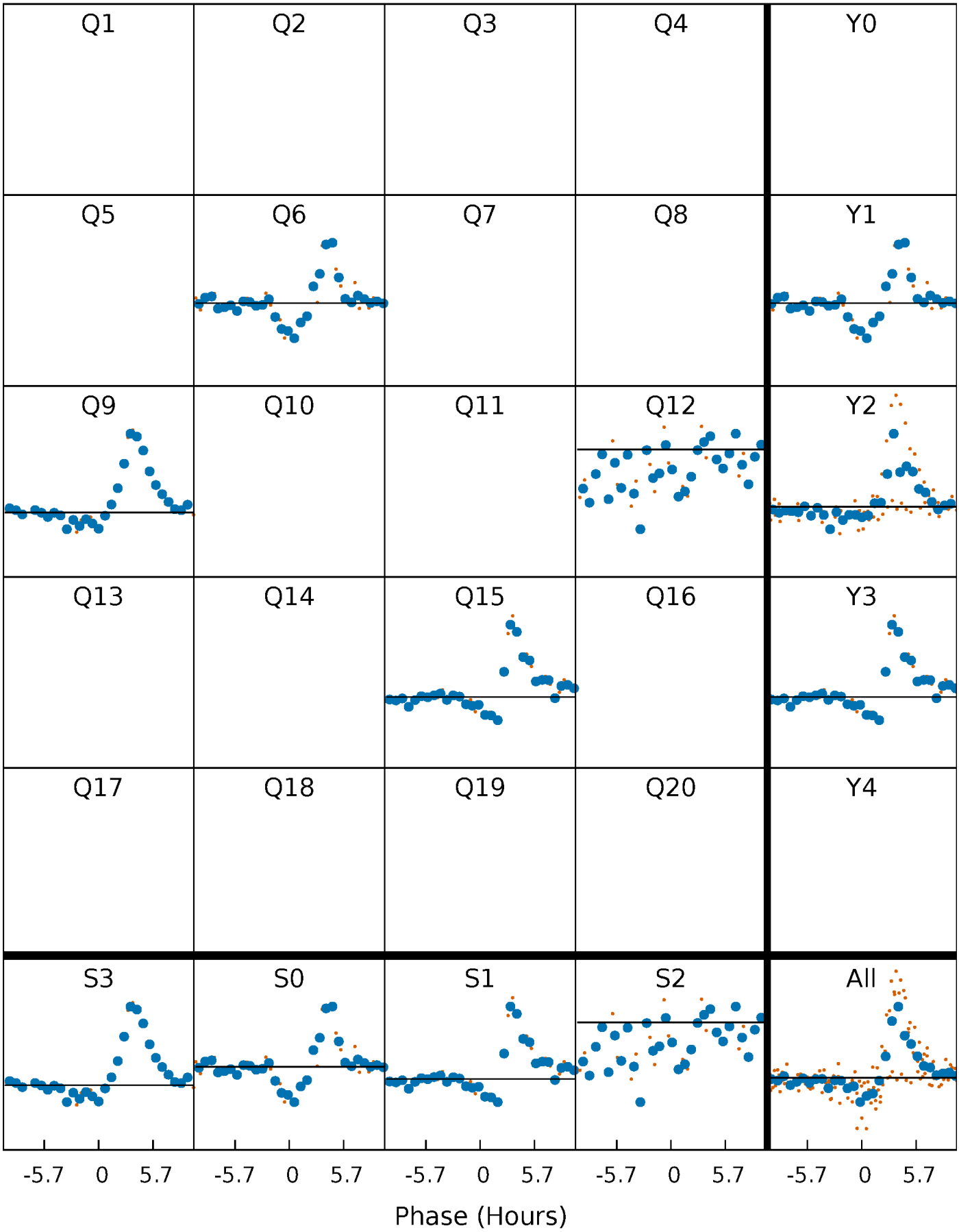
PDC Quarter-Phased Transit Curves

TCE 009269082-07 P=272.249942 Days T_0=335.775076 (BKJD)



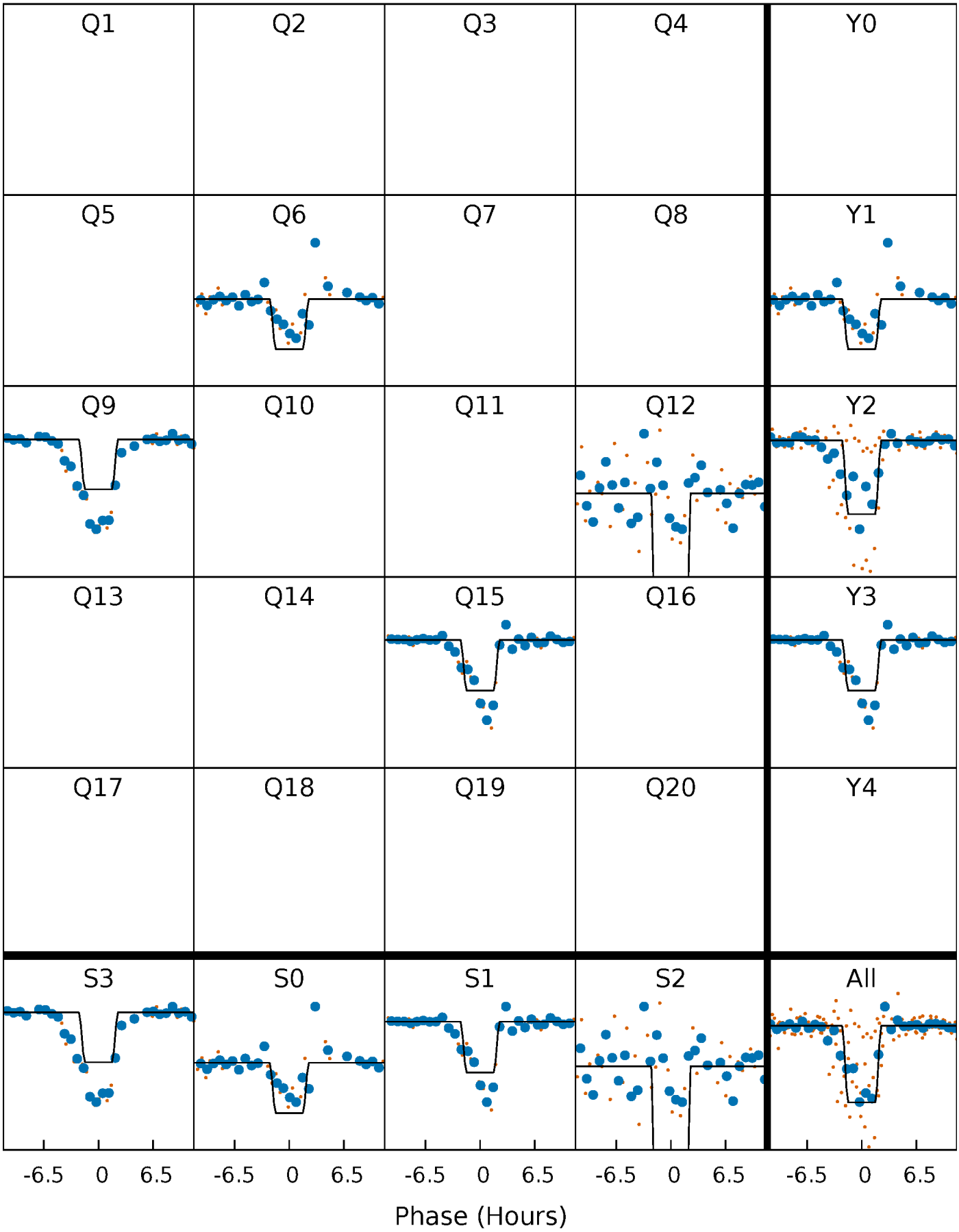
DV Quarter-Phased Transit Curves

TCE 009269082-07 P=272.249942 Days T_0=335.775076 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

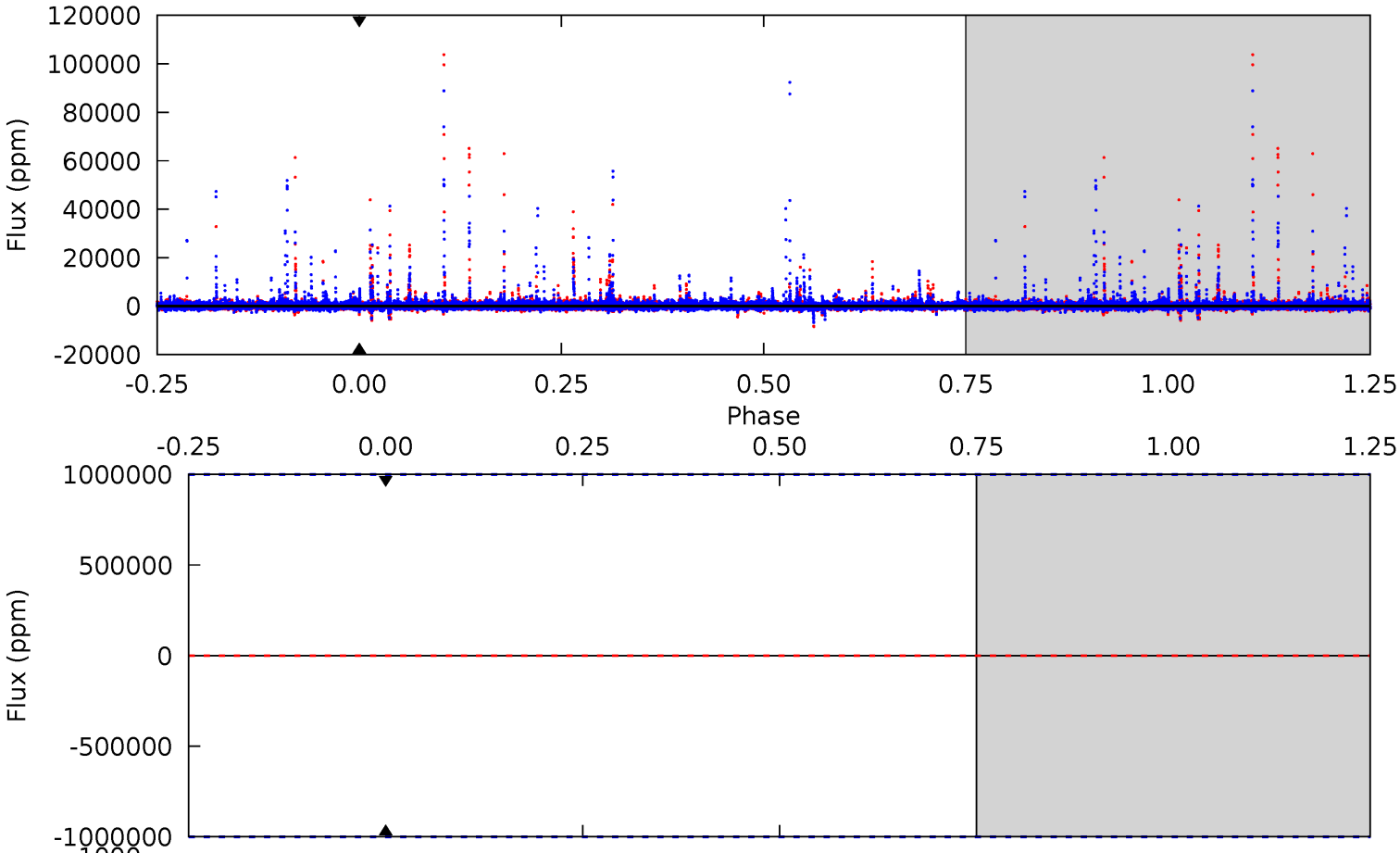
TCE 009269082-07 P=272.249942 Days T_0=335.800172 (BKJD)

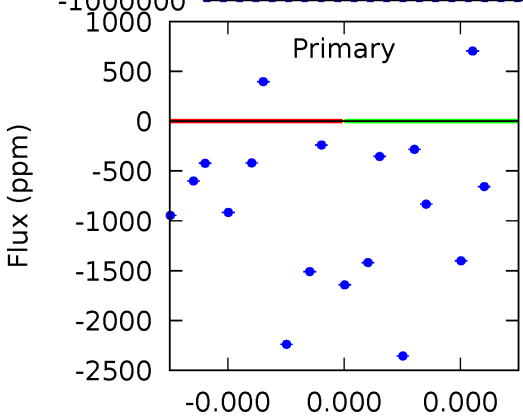


DV Model-Shift Uniqueness Test

009269082-07, P = 272.249942 Days, E = 335.775076 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

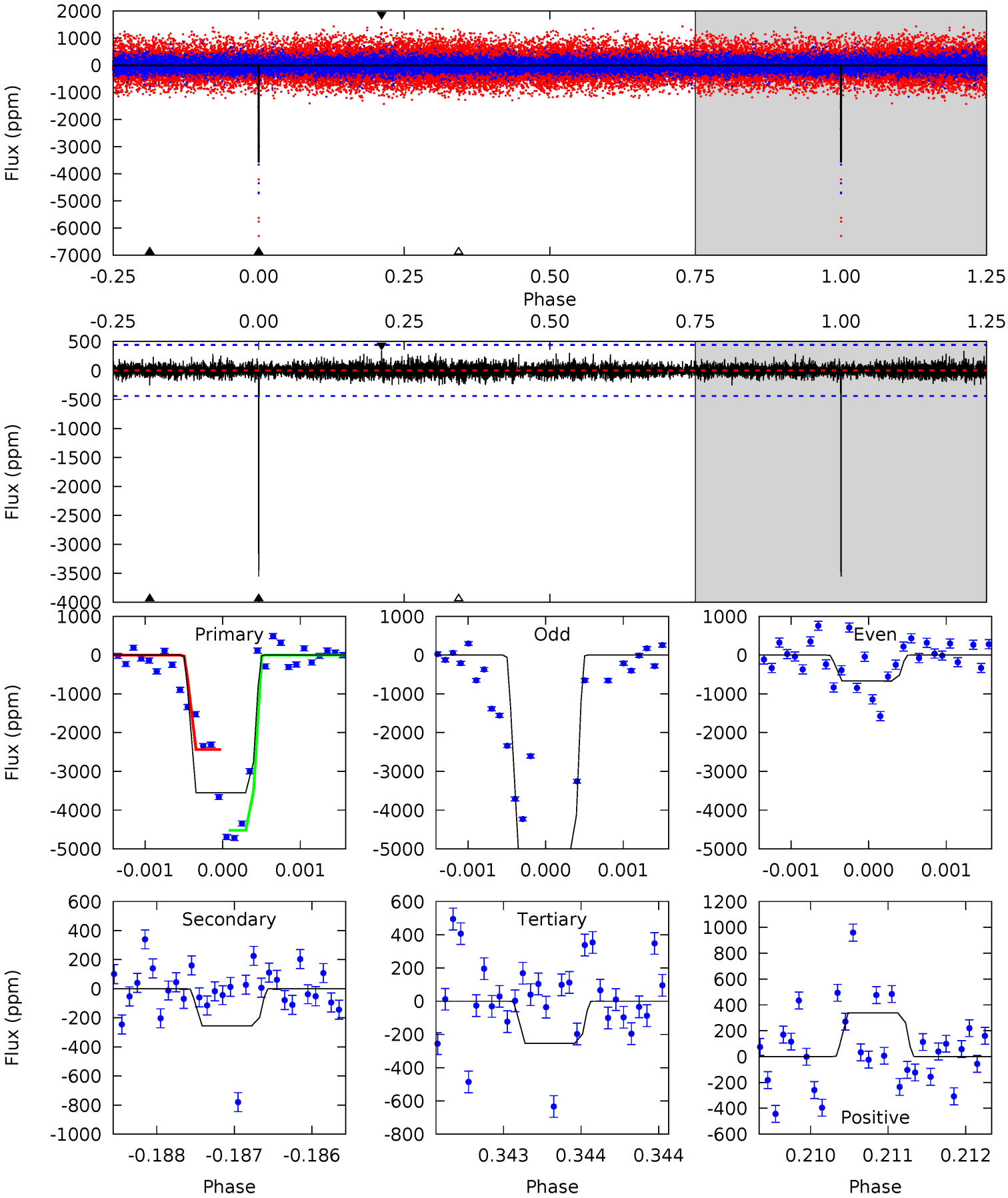




Alt Model-Shift Uniqueness Test

009269082-07, P = 272.249942 Days, E = 335.800172 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.3	3.18	3.17	4.23	5.51	3.39	0.79	41.2	40.1	0.01	-1.05	37.7	1.00	0.09	12.3



Stellar Parameters For KIC 009269082

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	M($M_\odot$)	$p_\star$ (g·cm^{-3})
	5094^{+183}_{-183}	$4.637^{+0.065}_{-0.040}$	$-0.900^{+0.300}_{-0.300}$	$0.625^{+0.055}_{-0.049}$	$0.616^{+0.058}_{-0.027}$	$3.562^{+0.942}_{-0.575}$
	+4%/-4%	+1%/-1%	+33%/-33%	+9%/-8%	+9%/-4%	+26%/-16%
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 009269082-07 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0±1000000	$5.58^{+6.16}_{-3.69}$	295^{+13}_{-13}	3573^{+10575}_{-17030}	$9477^{+1504991}_{-1330696}$
Alt.	-255±80	$6.40^{+5.10}_{-4.16}$	295^{+13}_{-12}	2804^{+1087}_{-419}	1714^{+11689}_{-1253}

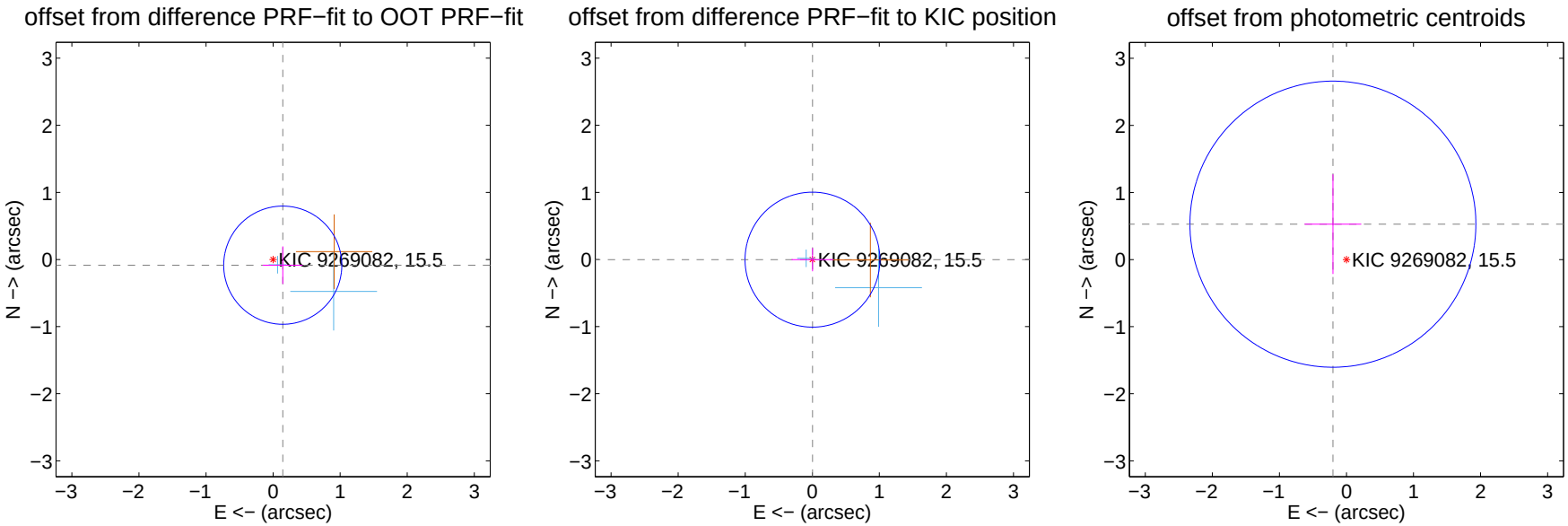
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

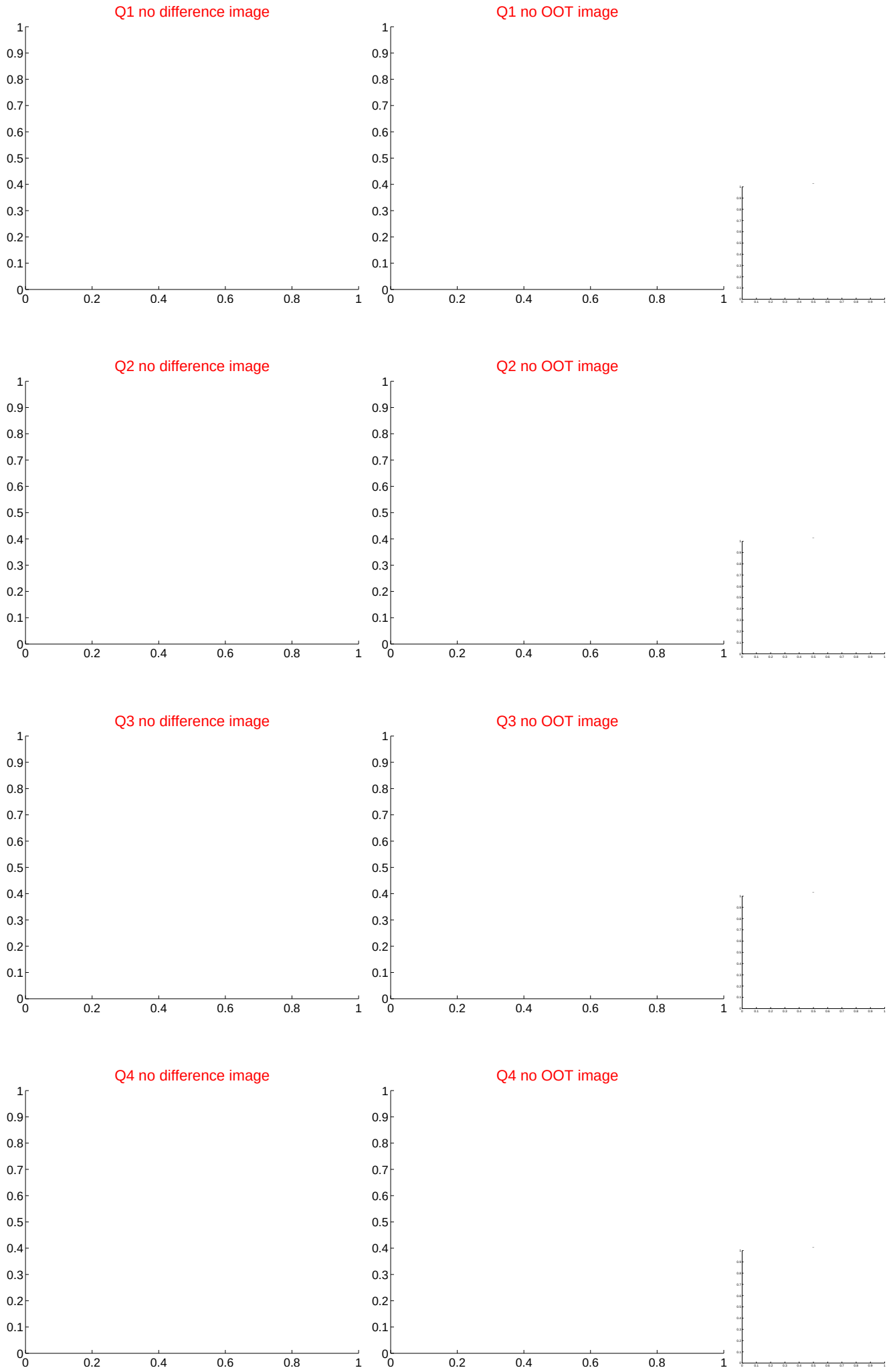
Supplemental centroid analysis for 009269082-07. Kepler magnitude: 15.50. Transit SNR -1.00
There are 2 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.167 ± 0.293	0.57	-0.144 ± 0.298	-0.085 ± 0.280
PRF-fit source offset from KIC position	0.004 ± 0.335	0.01	-0.003 ± 0.311	-0.002 ± 0.173
photometric centroid source offset	0.56 ± 0.71	0.80	0.20 ± 0.42	0.53 ± 0.74

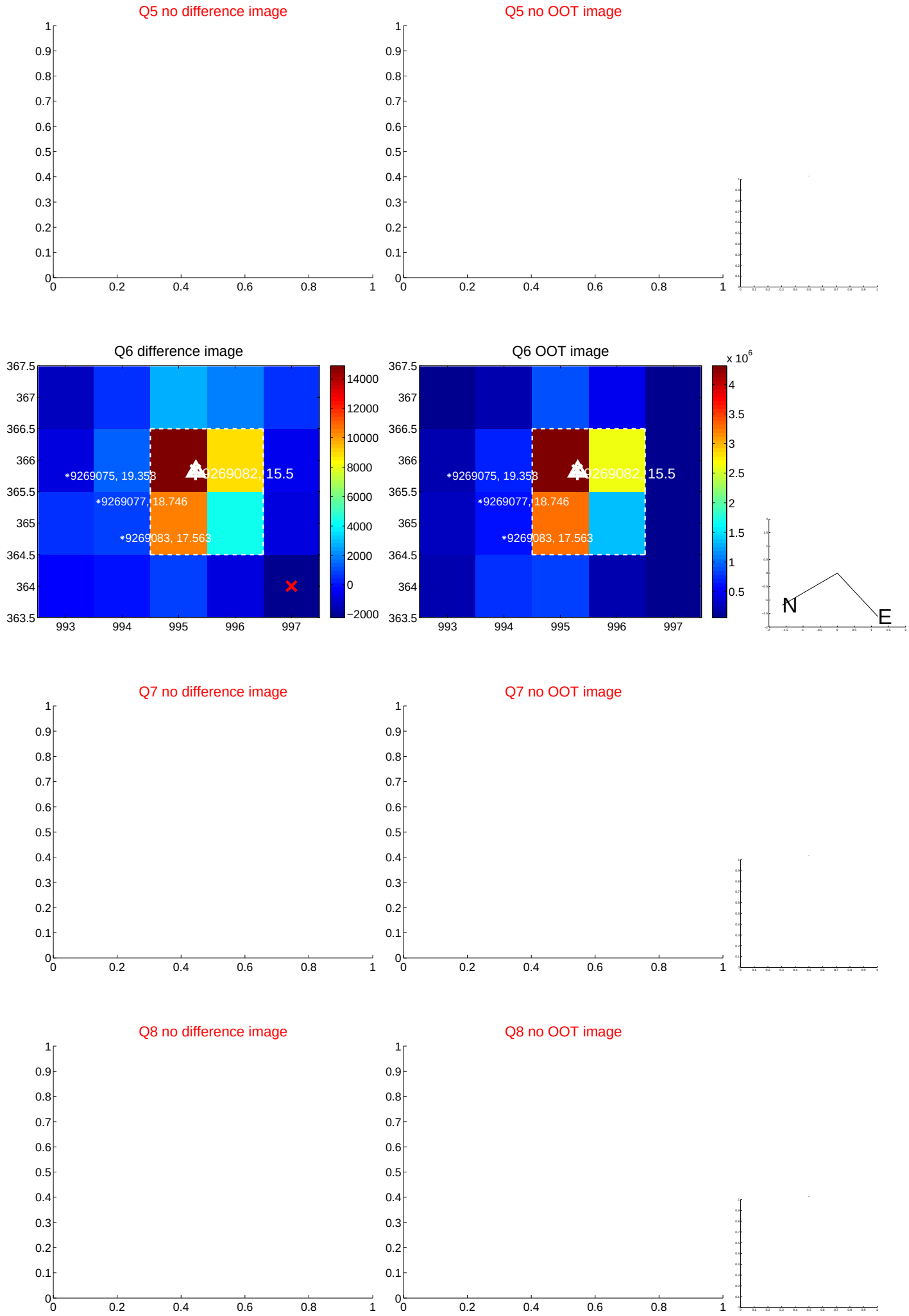


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

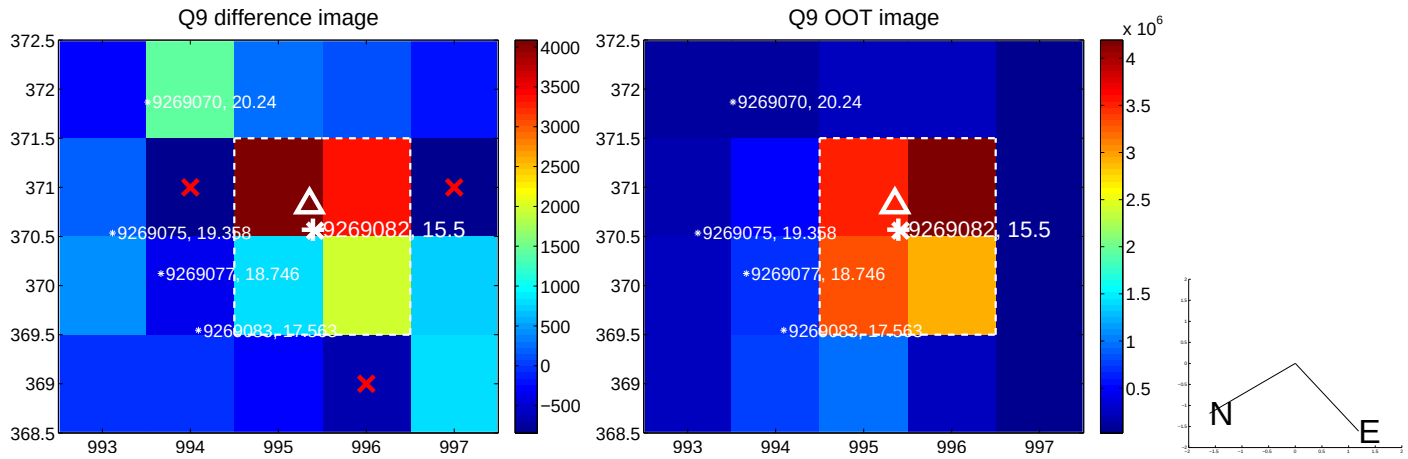
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

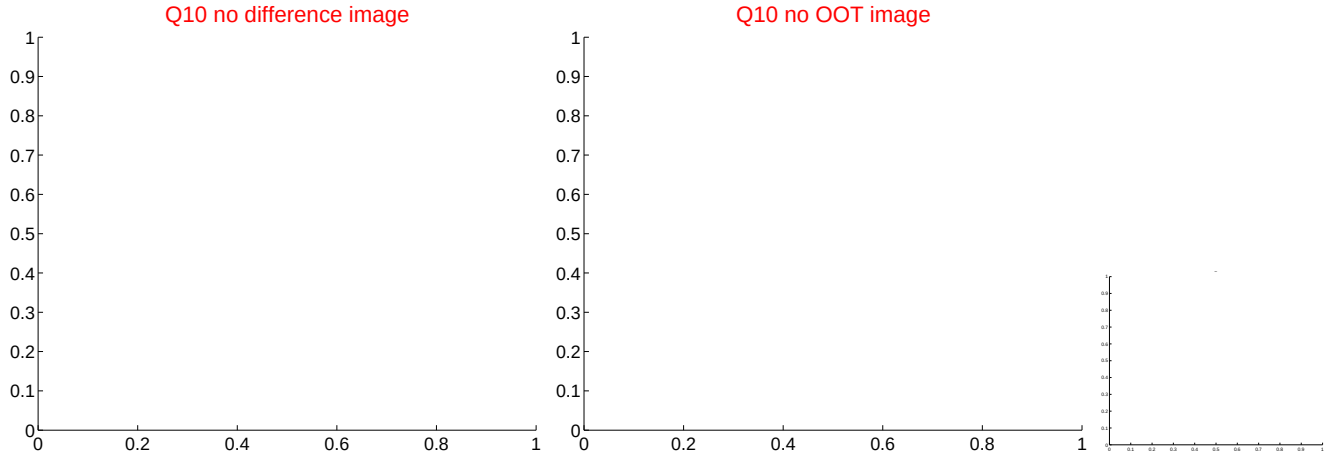


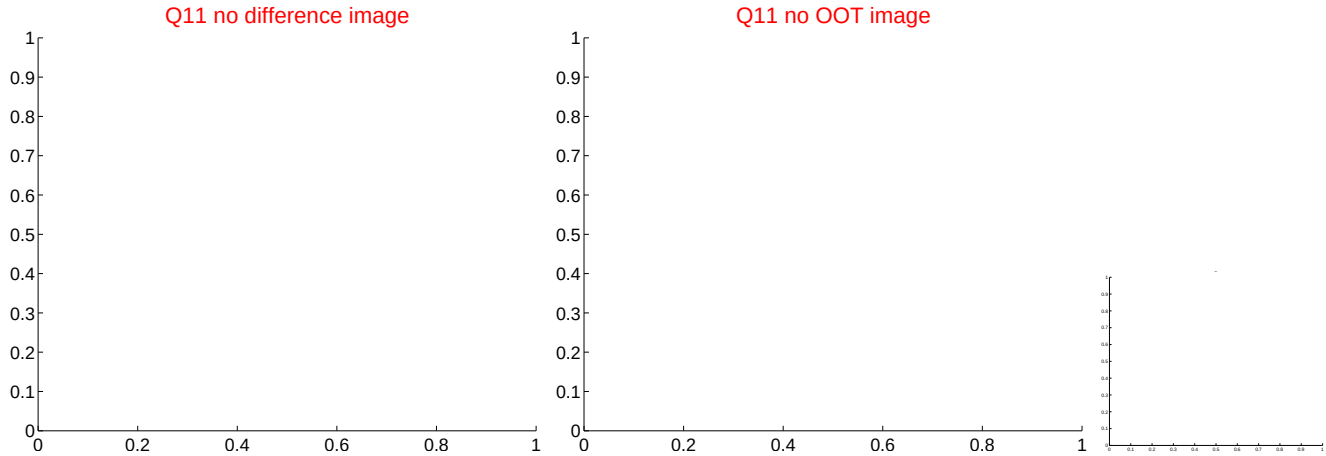
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

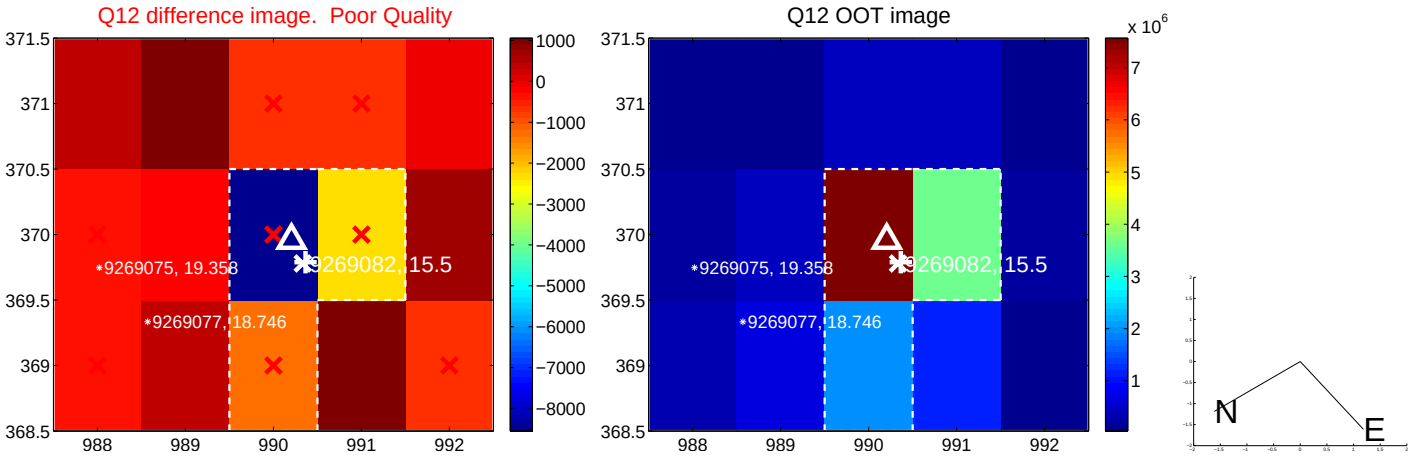


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

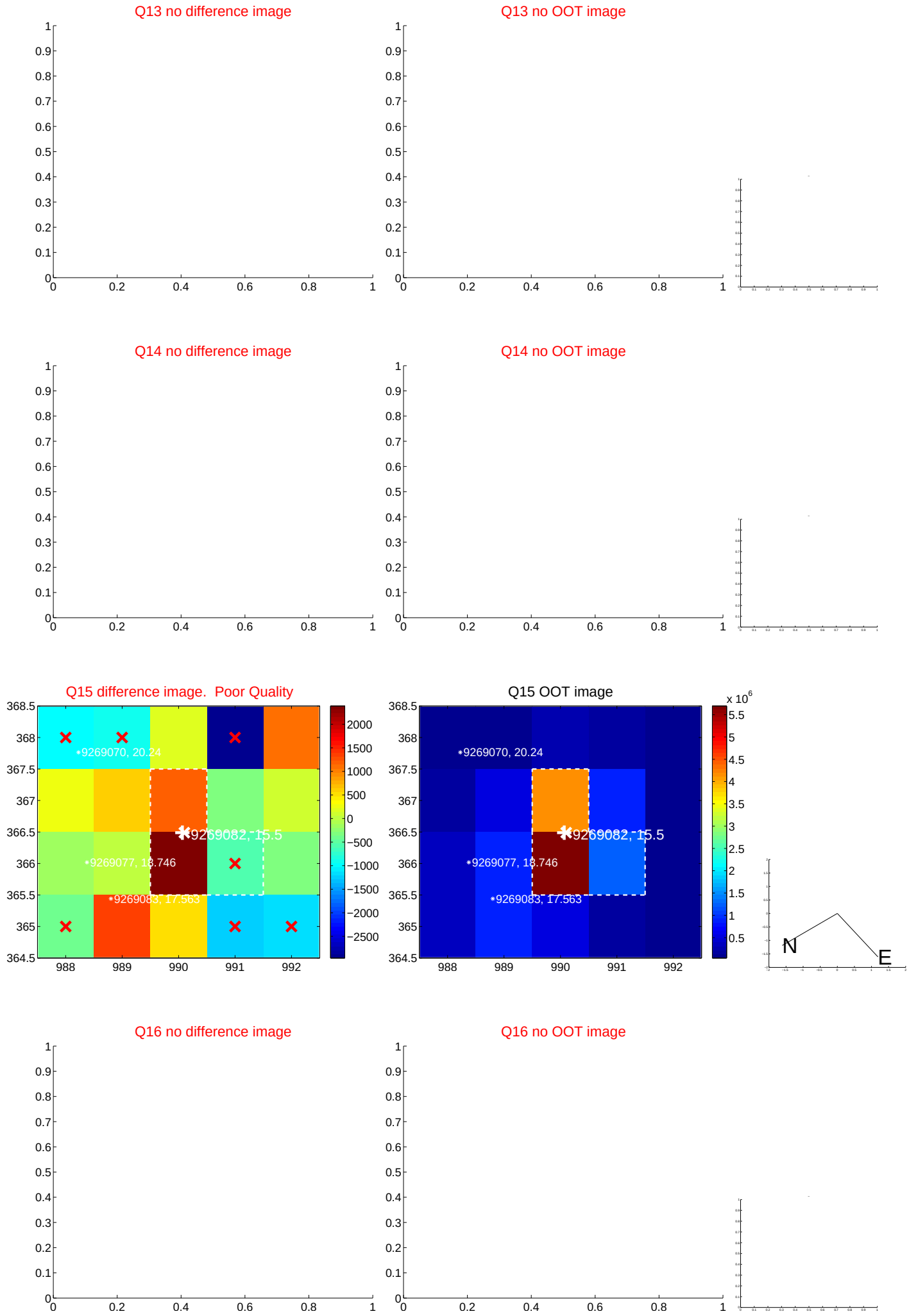




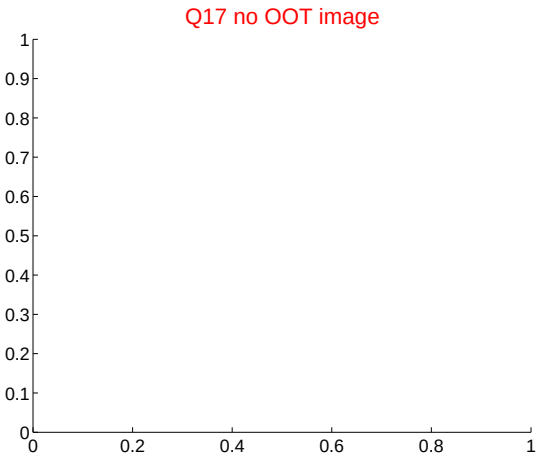


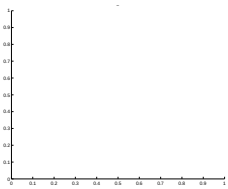


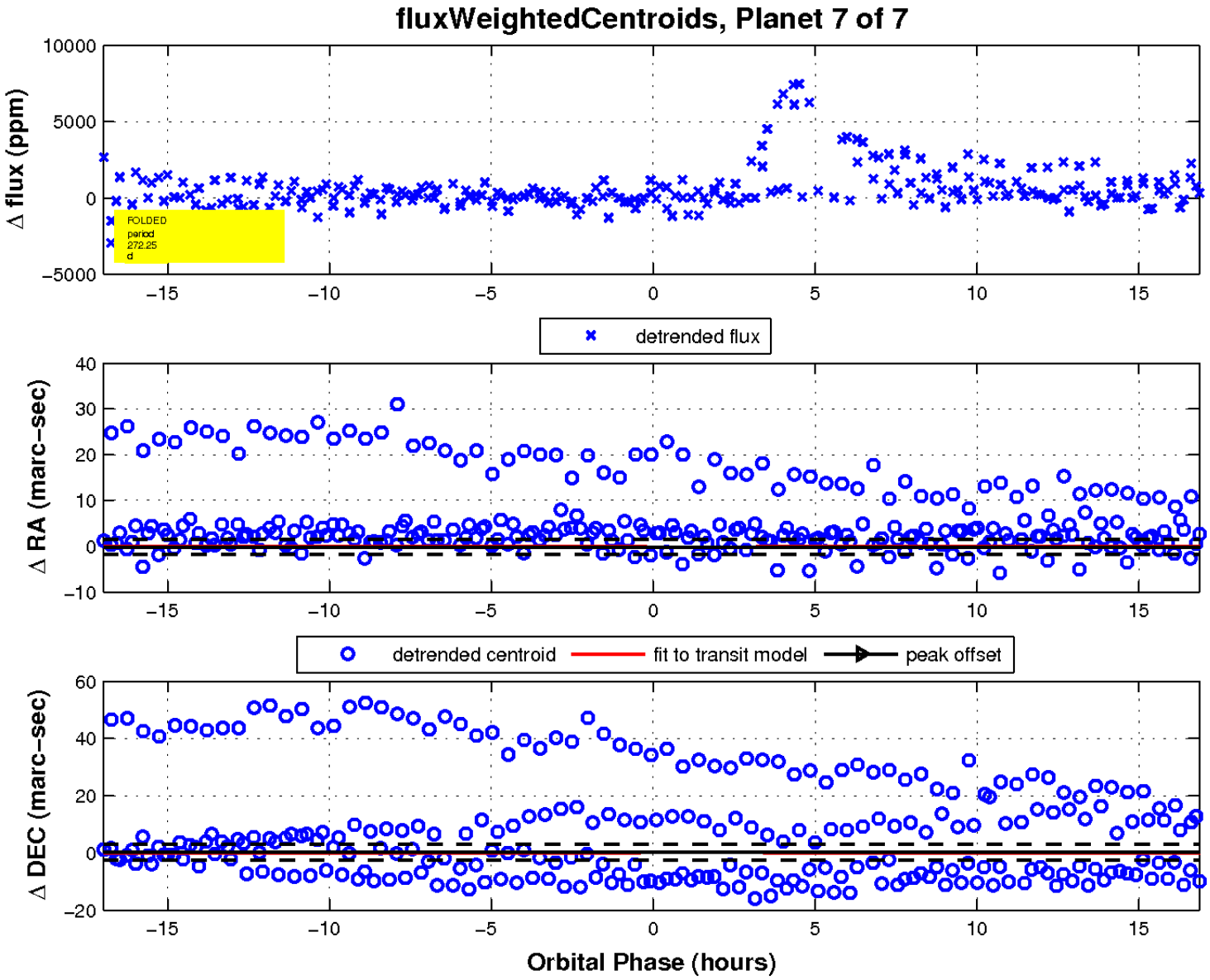
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



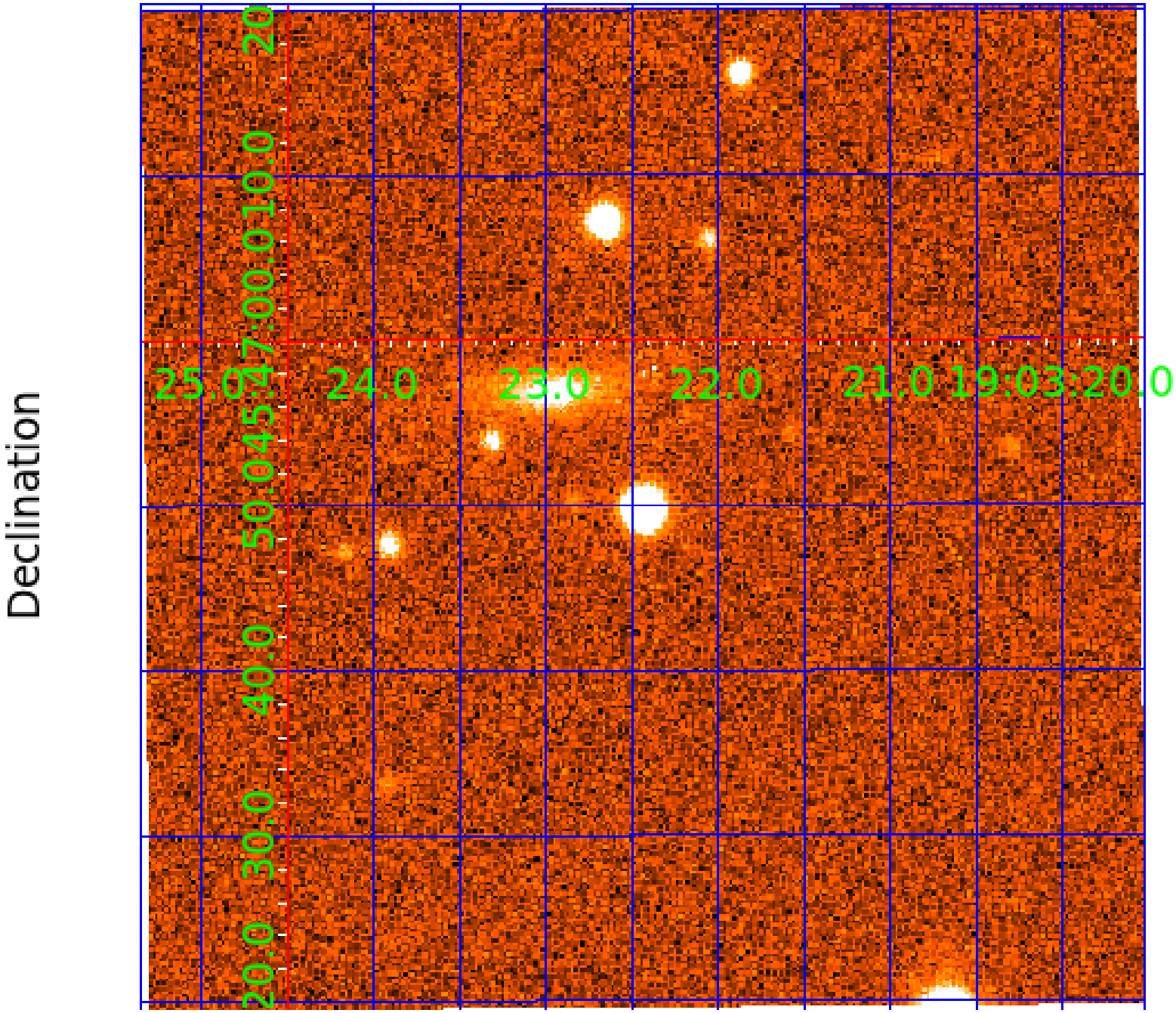
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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