KIC 009147229

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 ($S_\oplus$)
009147229-01	OBS	No	0.580886	132.038251	19.4	0.719	7.7	8.6	3.96	7542	1.80	0.00
009147229-02	OBS	No	0.580858	131.679052	40.1	2.128	9.4	7.8	3.96	7542	2.92	0.00
009147229-03	OBS	No	122.878226	166.927669	91.6	2.500	8.4	-1.0	3.96	7542	3.81	124.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009147229-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
009147229-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
009147229-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—TRANS_GAPPED—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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.

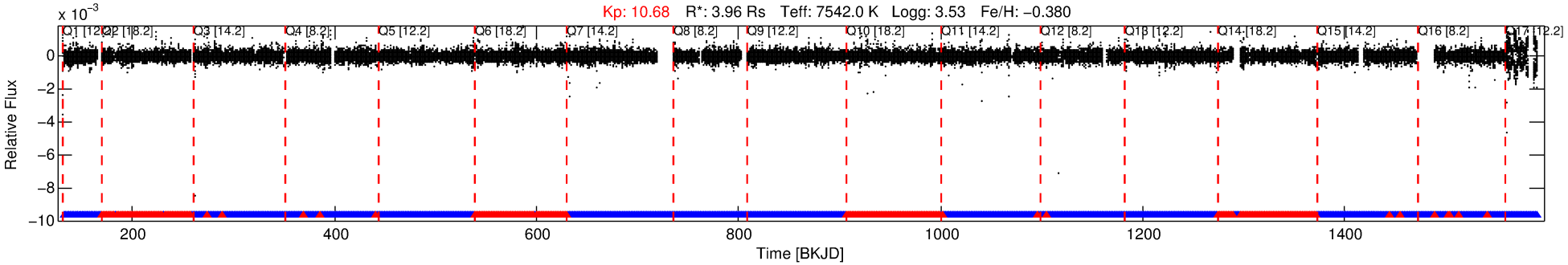
Ephemeris Match Information For 009147229-01

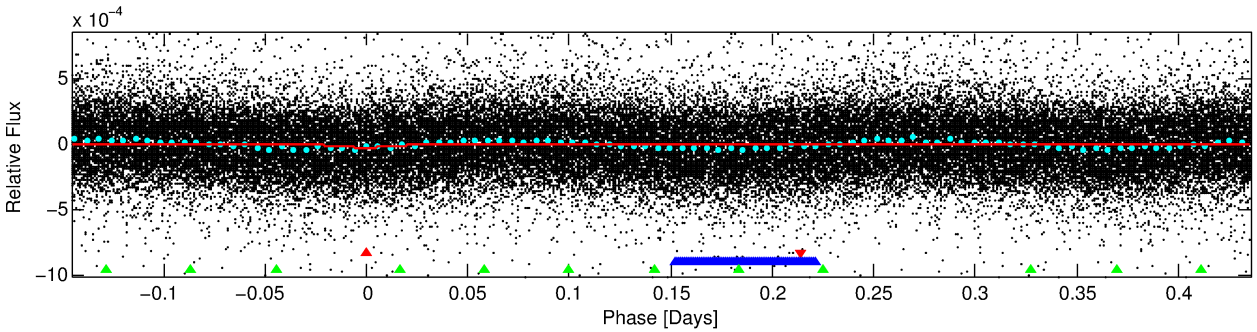
No Significant Match Found

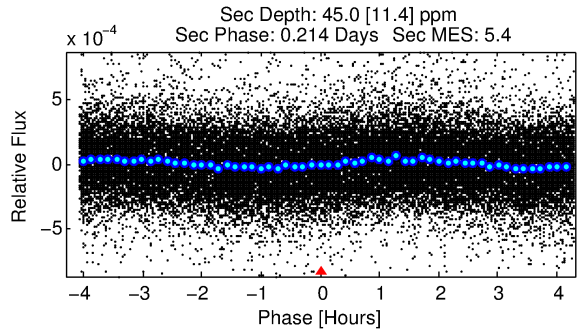
DV One-Page Summary

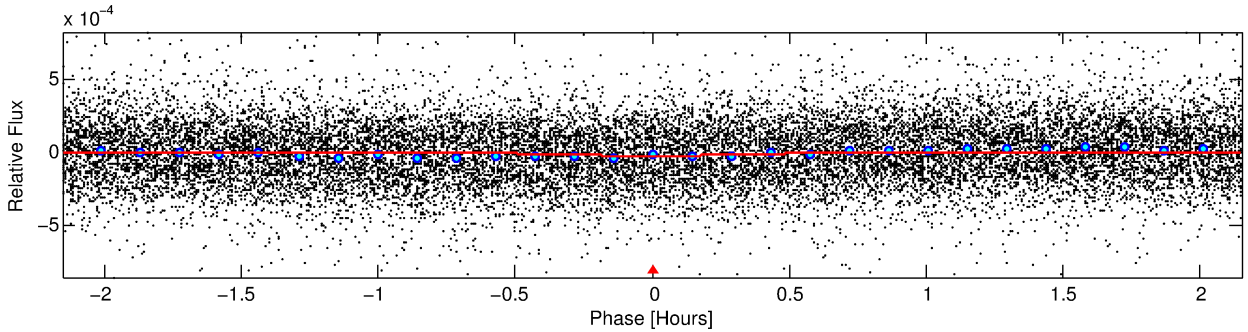
KIC: 9147229 Candidate: 1 of 3 Period: 0.581 d

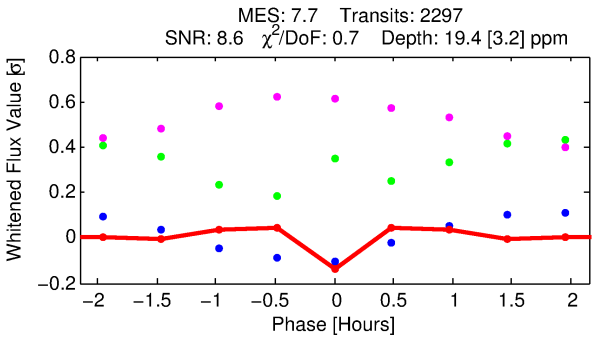
Kp: 10.68 R*: 3.96 Rs Teff: 7542.0 K Logg: 3.53 Fe/H: −0.380

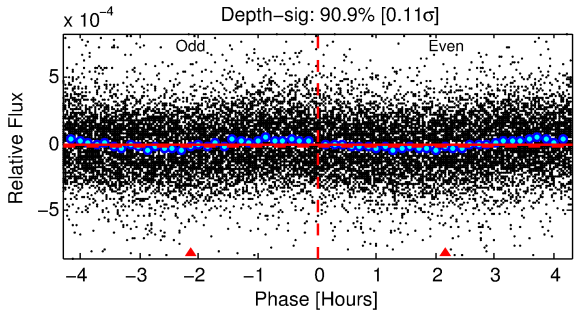


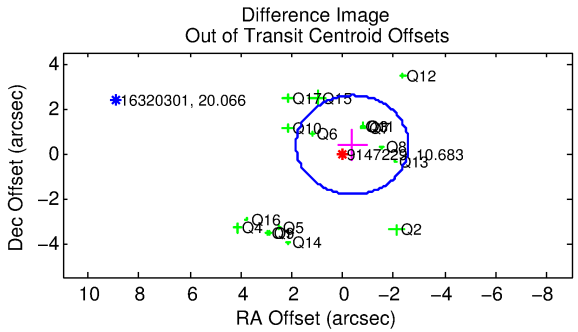












DV Fit Results:

Period = 0.58089 [0.00001] d
Epoch = 132.0383 [0.0010] BKJD
Rp/R* = 0.0042 [0.0017]
a/R* = 5.95 [12.35]
b = 0.30 [6.50]

Seff = N/A
Teq = N/A
Rp = 1.80 [1.29] Re
a = N/A

Ag = N/A
Teffp = N/A

DV Diagnostic Results:

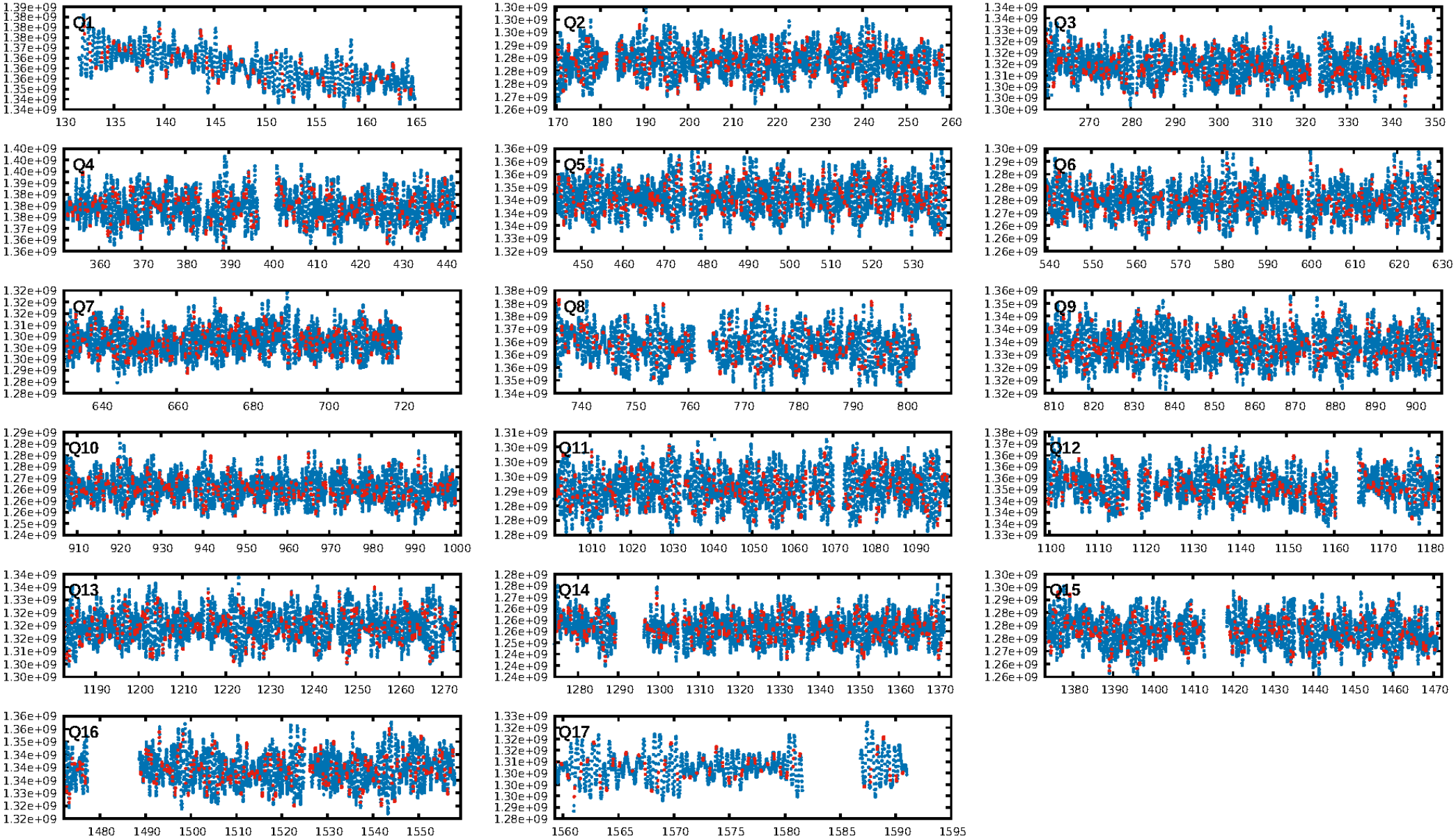
ShortPeriod−sig: 0.0% [0.00σ]
LongPeriod−sig: 100.0% [1128.35σ]
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 0.73 [1592/2194]
GhostDiagnostic−chr: 0.511

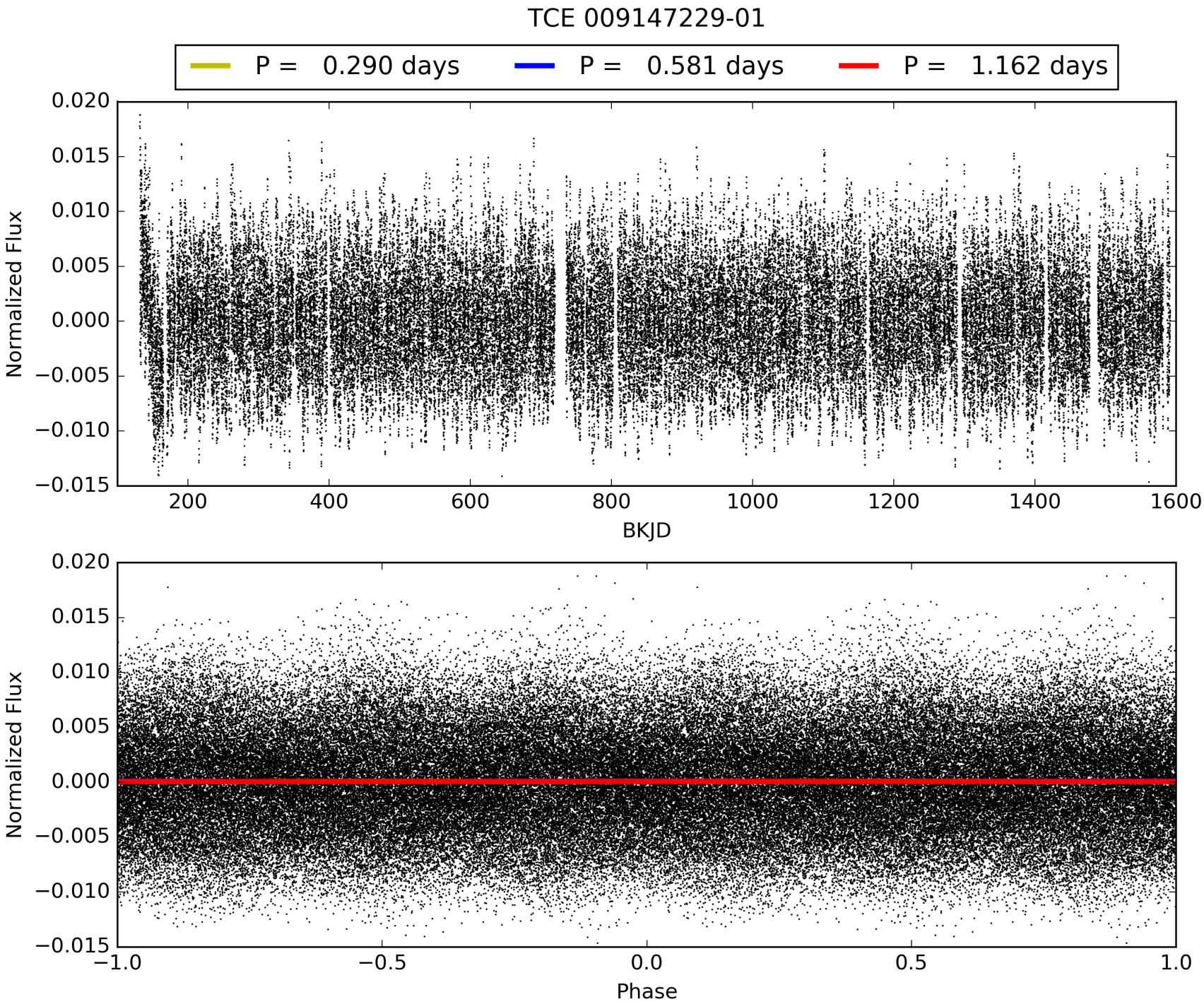
Centroid−sig: 1.3%
Centroid−so: 1.305 arcsec [1.92σ]
OotOffset−rm: 0.528 arcsec [0.72σ]
KicOffset−rm: 0.669 arcsec [1.04σ]
OotOffset−st: 4/4/4/5 [17]
KicOffset−st: 4/4/4/5 [17]
DiffImageQuality−fgm: 0.18 [3/17]
DiffImageOverlap−fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30−Jan−2016 07:29:39 Z

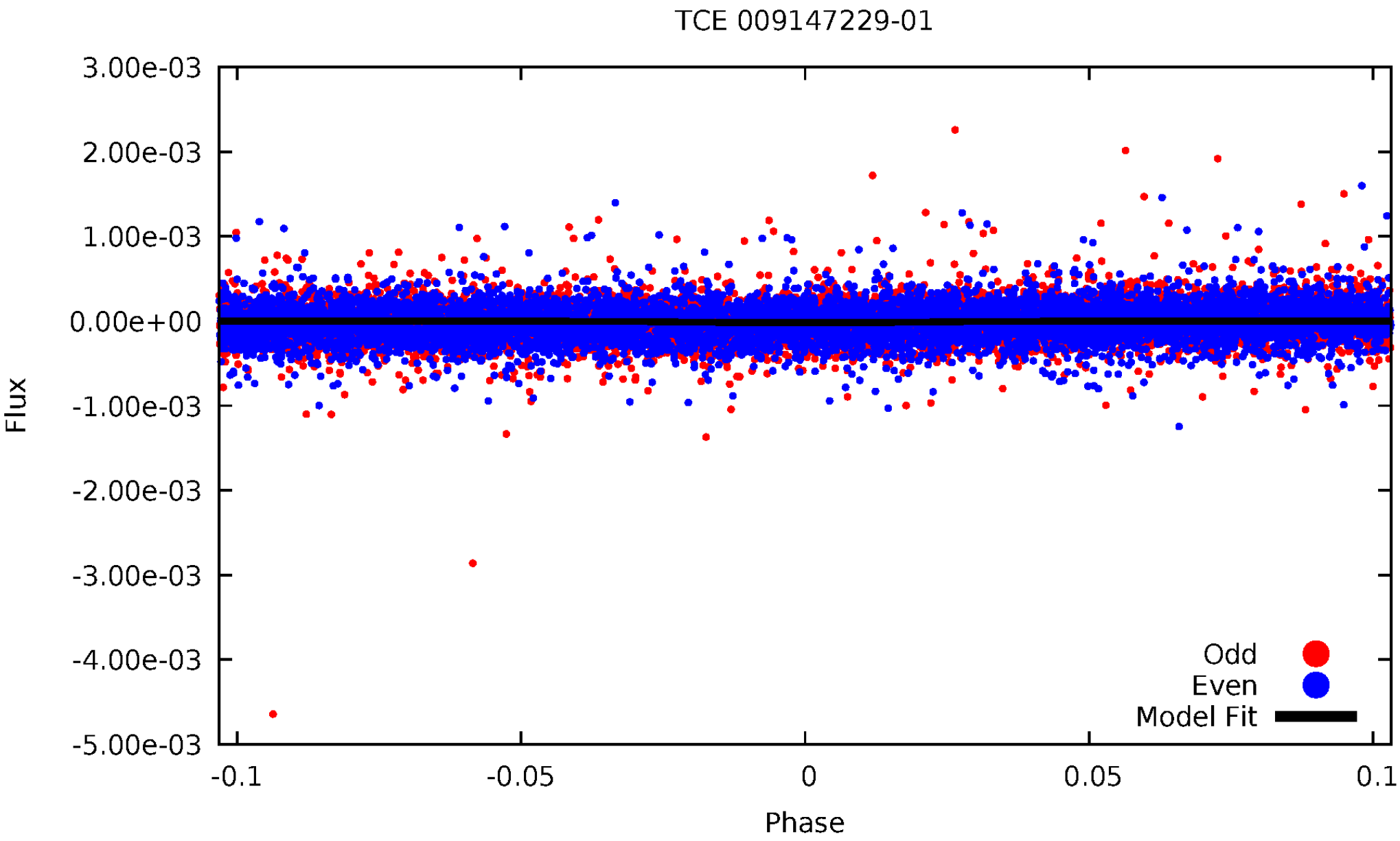
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009147229-01, PDC Light Curves




TCE 009147229-01
P = 0.290 days
P = 0.581 days
P = 1.162 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even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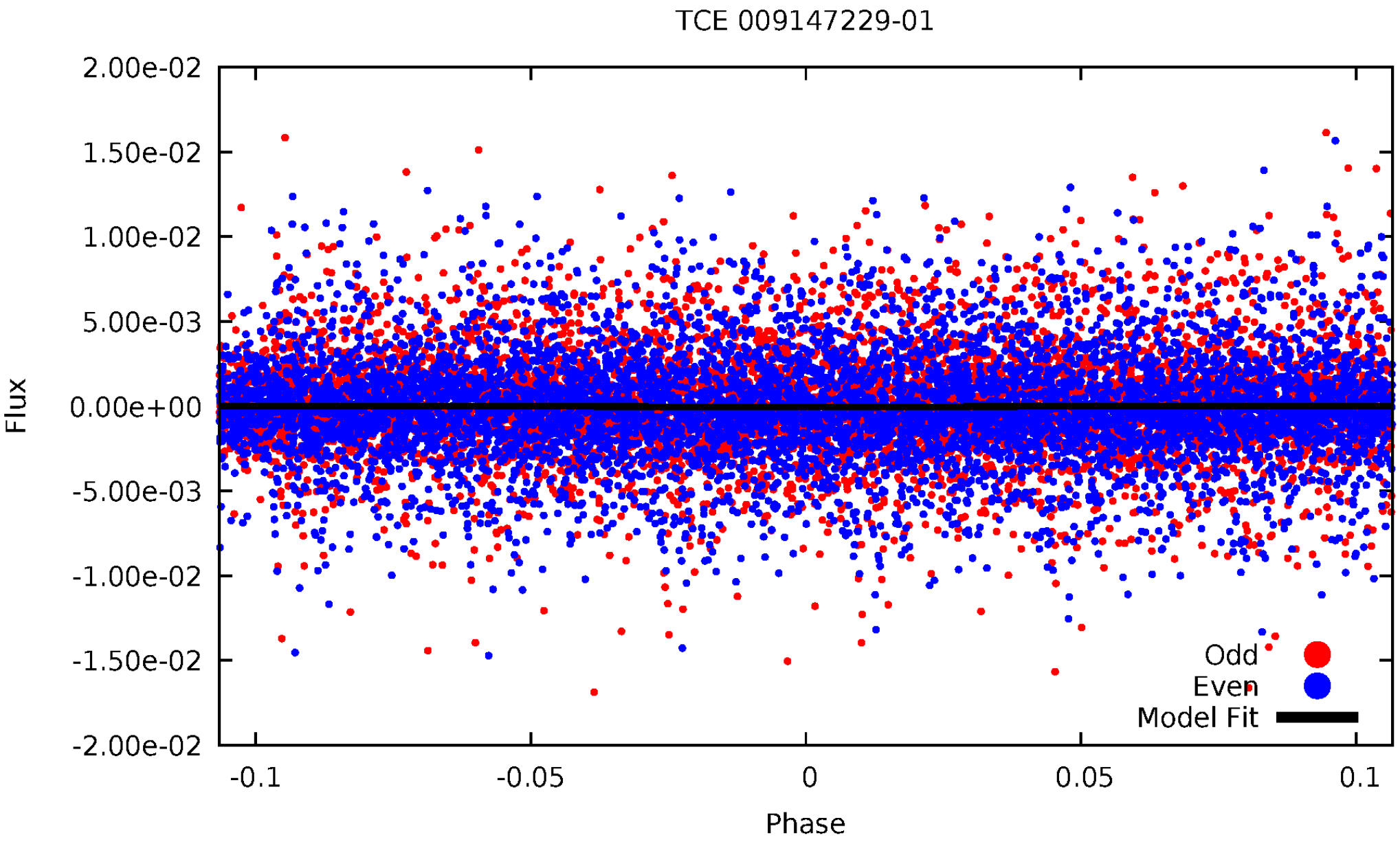
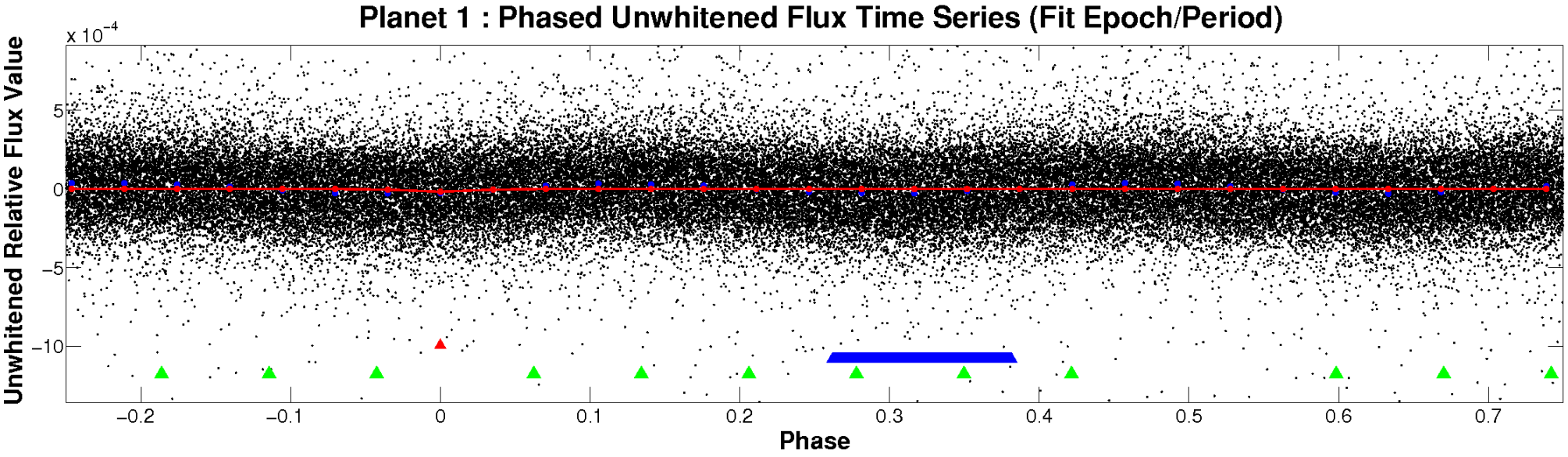
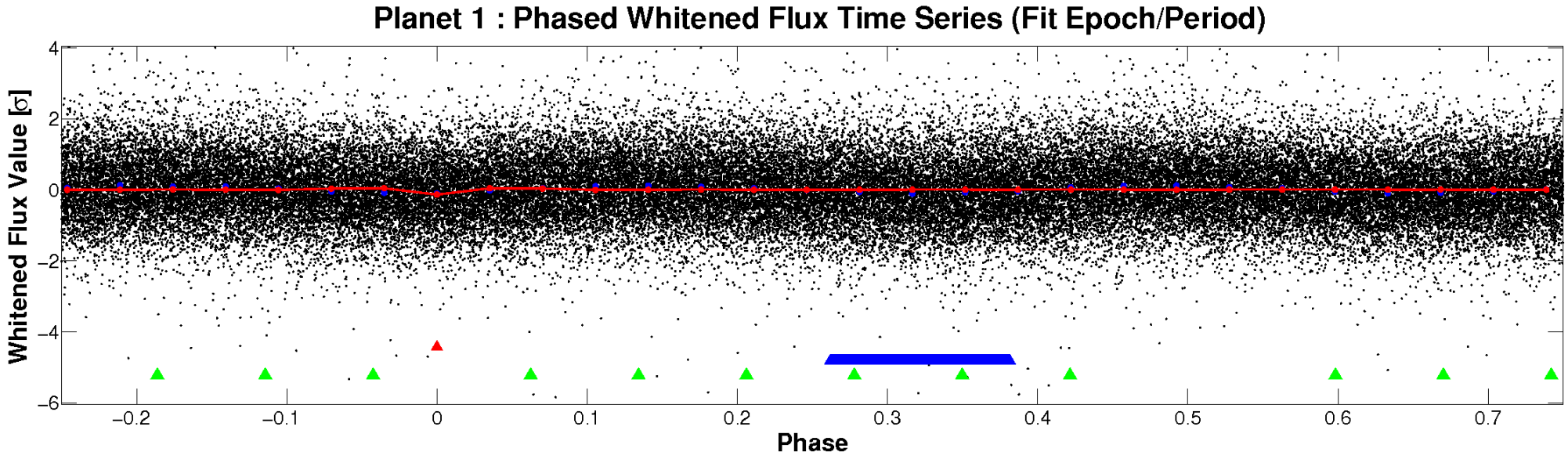
3.00e-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
-4.00e-03
-5.00e-03
Flux
-0.1
-0.05
0
0.05
0.1
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009147229-01
2.00e-02
1.50e-02
1.00e-02
5.00e-03
0.00e+00
-5.00e-03
-1.00e-02
-1.50e-02
-2.00e-02
Flux
-0.1
-0.05
0
0.05
0.1
Phase
Odd
Even
Model Fit

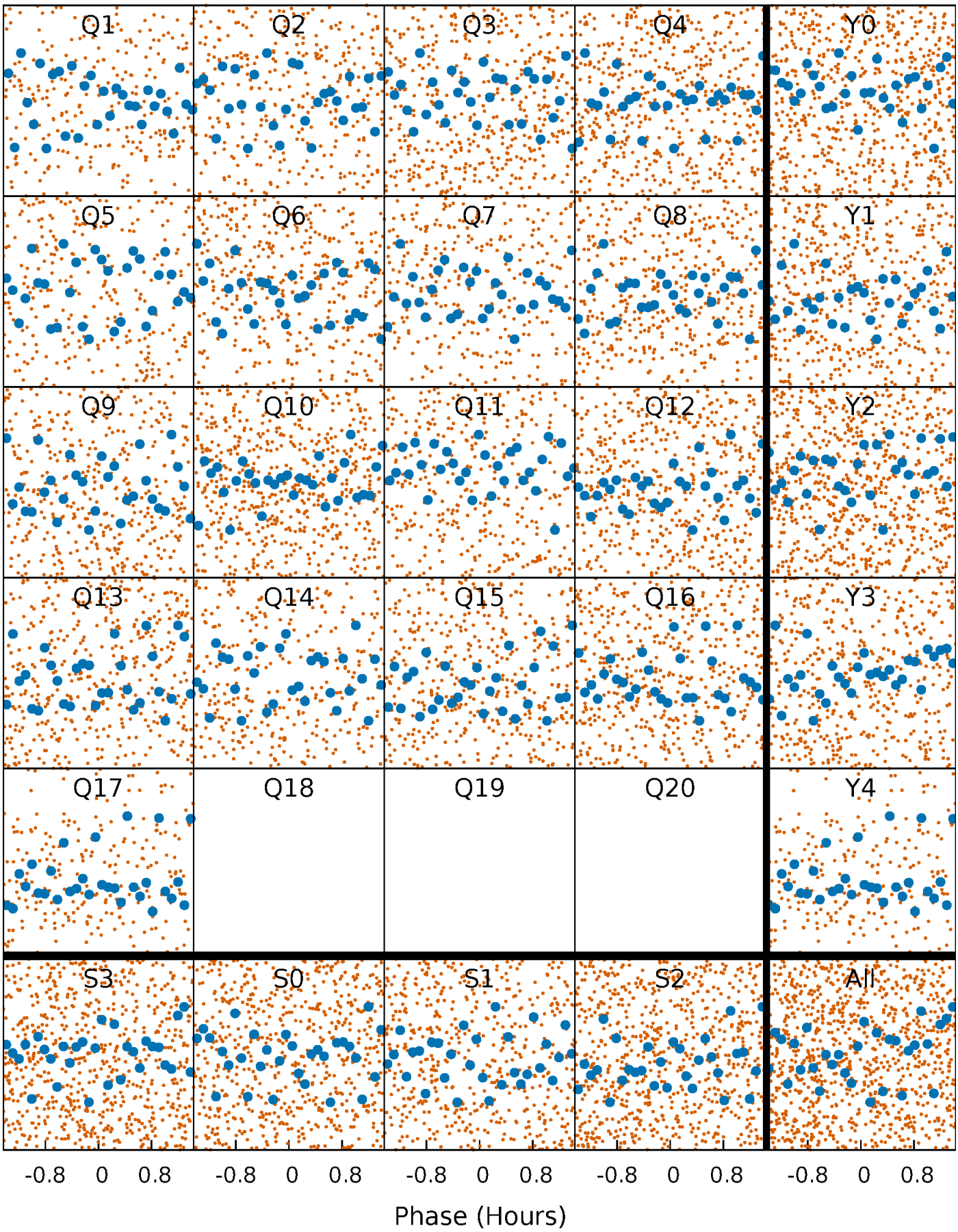
Non-Whitened Vs. Whitened Light Curve





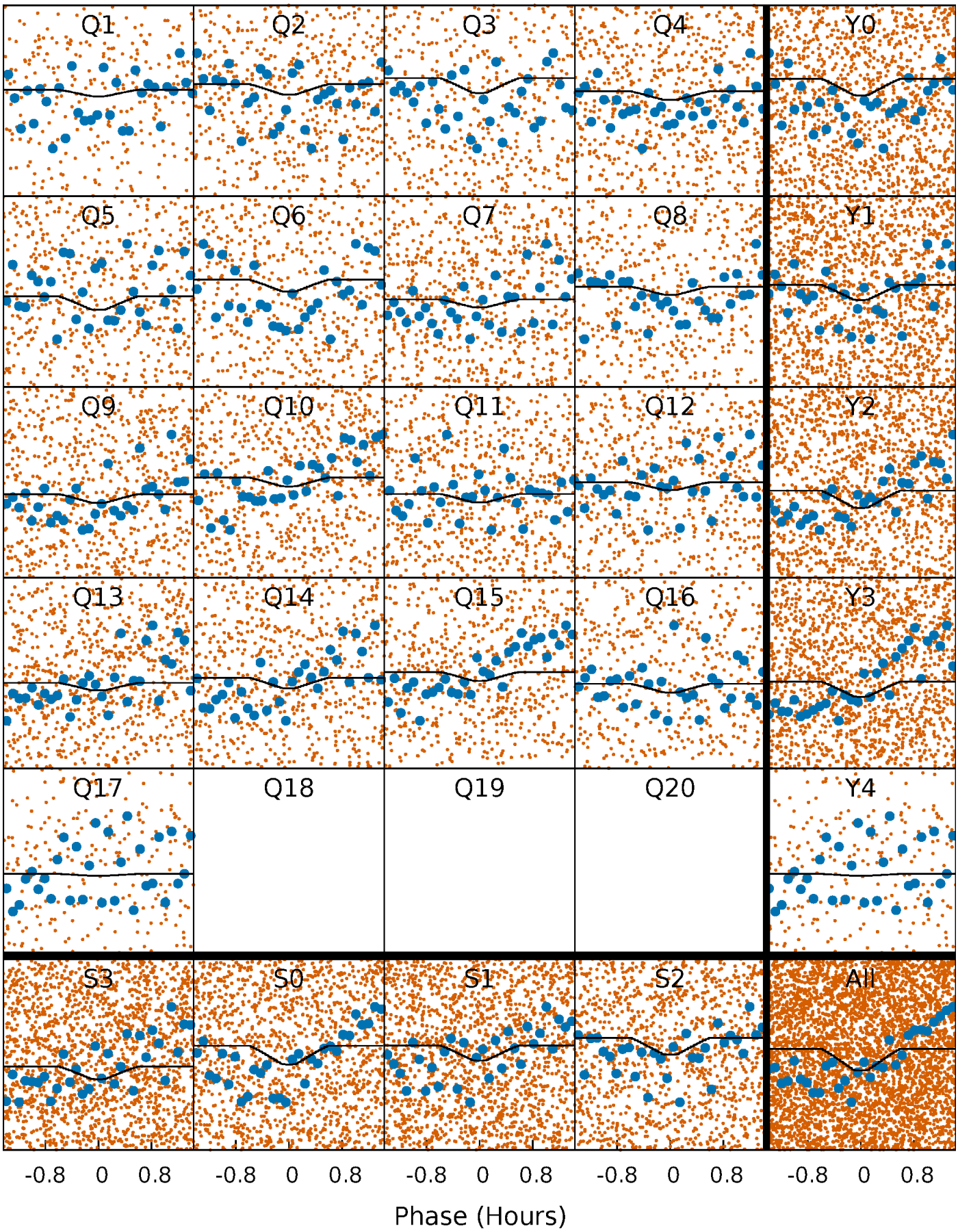
PDC Quarter-Phased Transit Curves

TCE 009147229-01 P= 0.580886 Days T_0=132.038251 (BKJD)



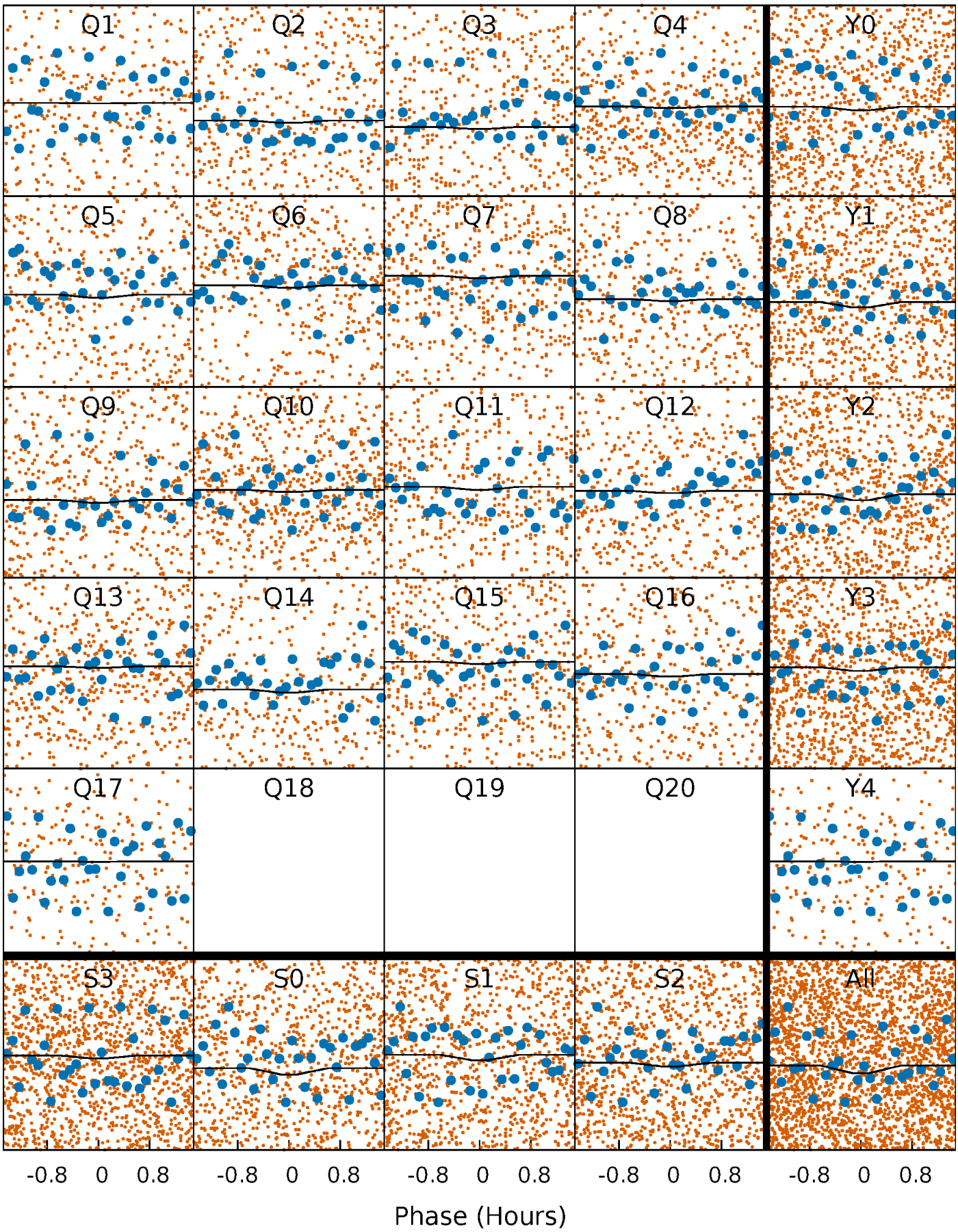
DV Quarter-Phased Transit Curves

TCE 009147229-01 P= 0.580886 Days T_0=132.038251 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

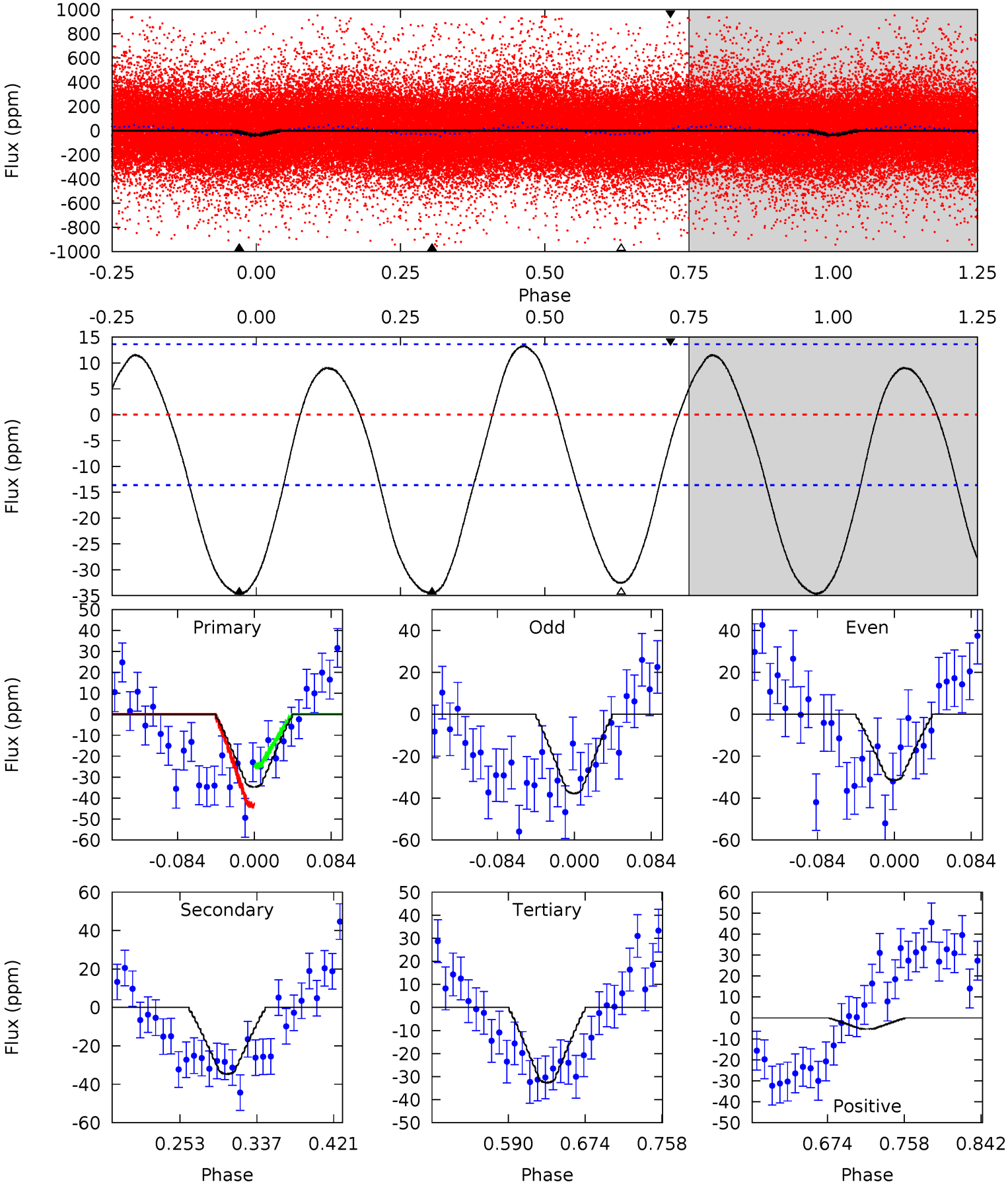
TCE 009147229-01 P= 0.580873 Days T_0=132.037377 (BKJD)



DV Model-Shift Uniqueness Test

009147229-01, P = 0.580886 Days, E = 131.457365 Days

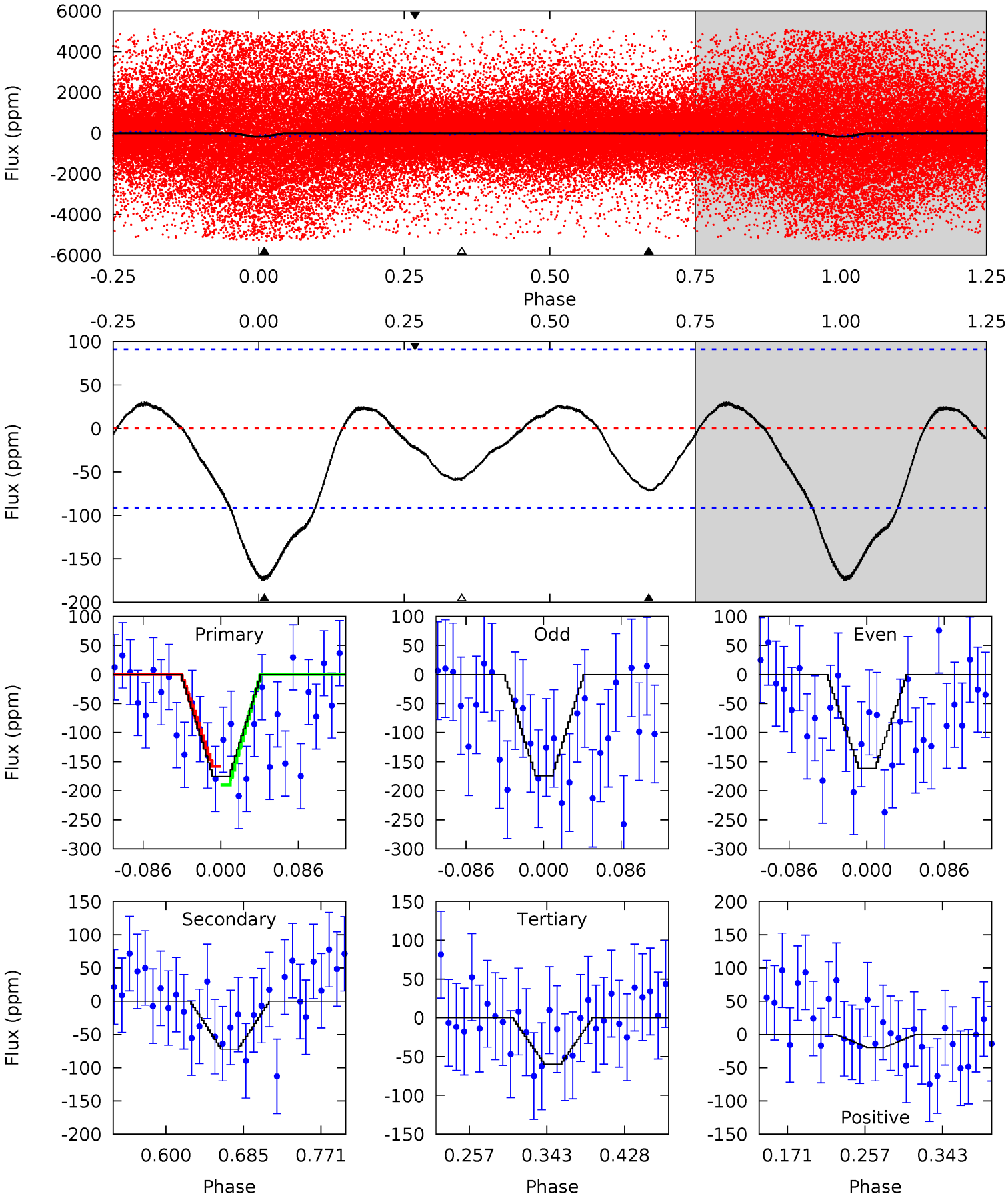
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	11.7	11.0	-1.79	4.60	1.73	4.60	0.71	13.5	0.68	13.5	1.07	0.82	0.28	3.19



Alt Model-Shift Uniqueness Test

009147229-01, P = 0.580873 Days, E = 131.456504 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.84	3.64	3.02	-1.00	4.60	1.72	1.48	5.83	9.84	0.63	4.64	0.33	0.04	0.15	0.85



Stellar Parameters For KIC 009147229

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7542^{+233}_{-311}	$3.531^{+0.639}_{-0.071}$	$-0.380^{+0.250}_{-0.300}$	$3.959^{+0.413}_{-2.338}$	$1.943^{+0.069}_{-0.618}$	$0.044^{+0.421}_{-0.010}$
	+3%/-4%	+18%/-2%	+66%/-79%	+10%/-59%	+4%/-32%	+953%/-23%
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 009147229-01 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-35±3	$1.50^{+0.79}_{-0.67}$	6849^{+469}_{-1110}	9009^{+5259}_{-2183}	$2.337^{+5.670}_{-1.337}$
Alt.	-72±20	$2.35^{+0.93}_{-0.89}$	6778^{+509}_{-975}	8484^{+2571}_{-1796}	$2.002^{+2.877}_{-1.046}$

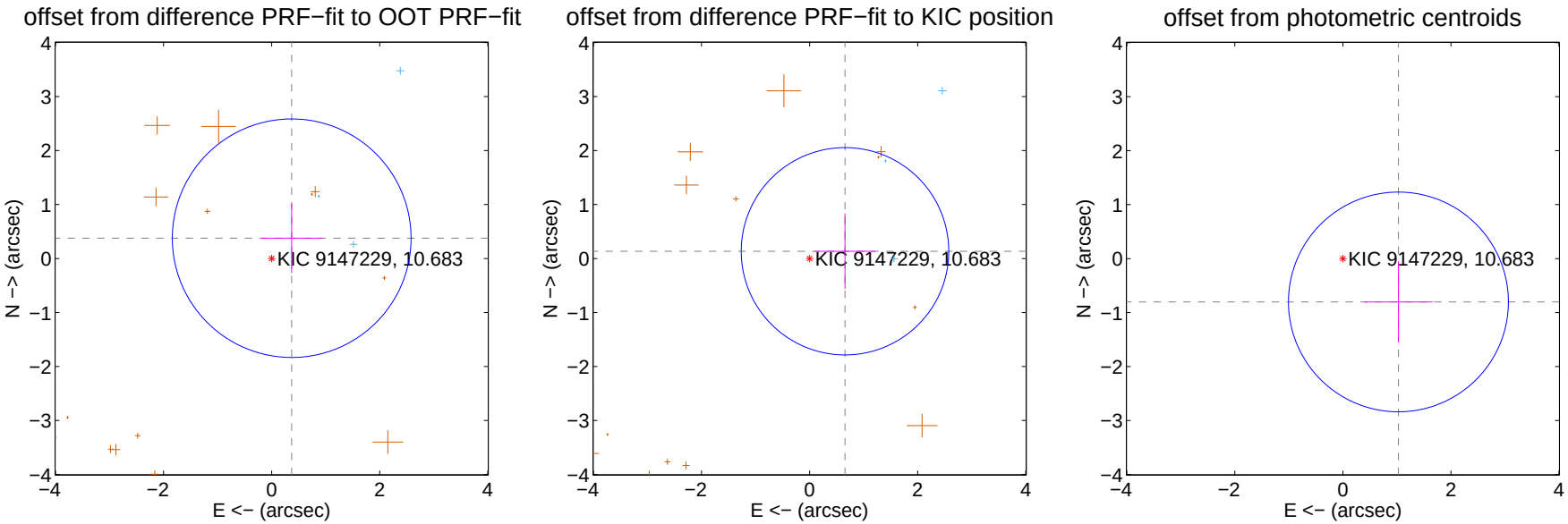
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

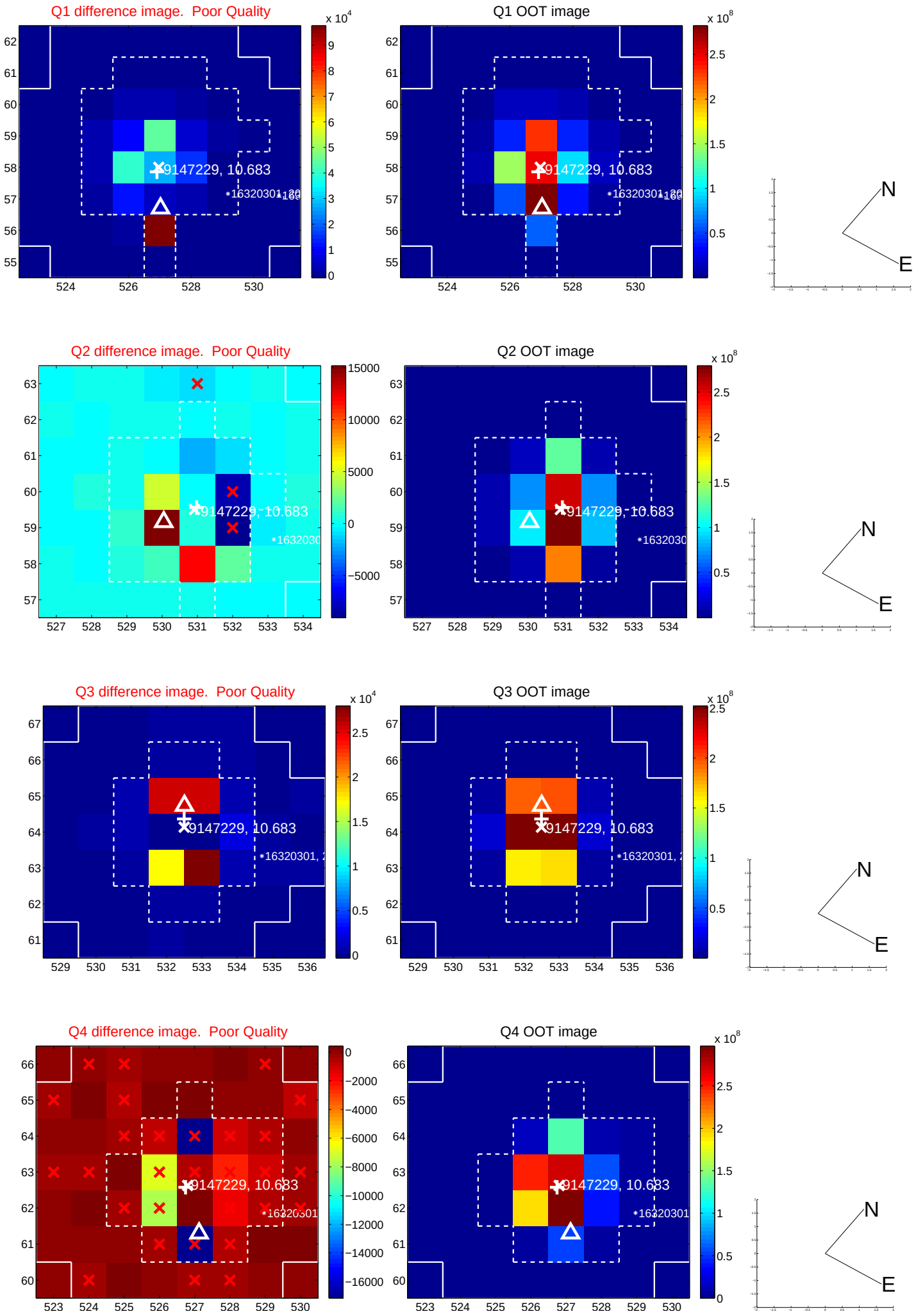
Supplemental centroid analysis for 009147229-01. Kepler magnitude: 10.68. Transit SNR 8.56
There are 3 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.50 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.528 ± 0.736	0.72	-0.371 ± 0.560	0.376 ± 0.643
PRF-fit source offset from KIC position	0.669 ± 0.640	1.04	-0.655 ± 0.564	0.134 ± 0.699
photometric centroid source offset	1.30 ± 0.68	1.92	-1.03 ± 0.63	-0.80 ± 0.75

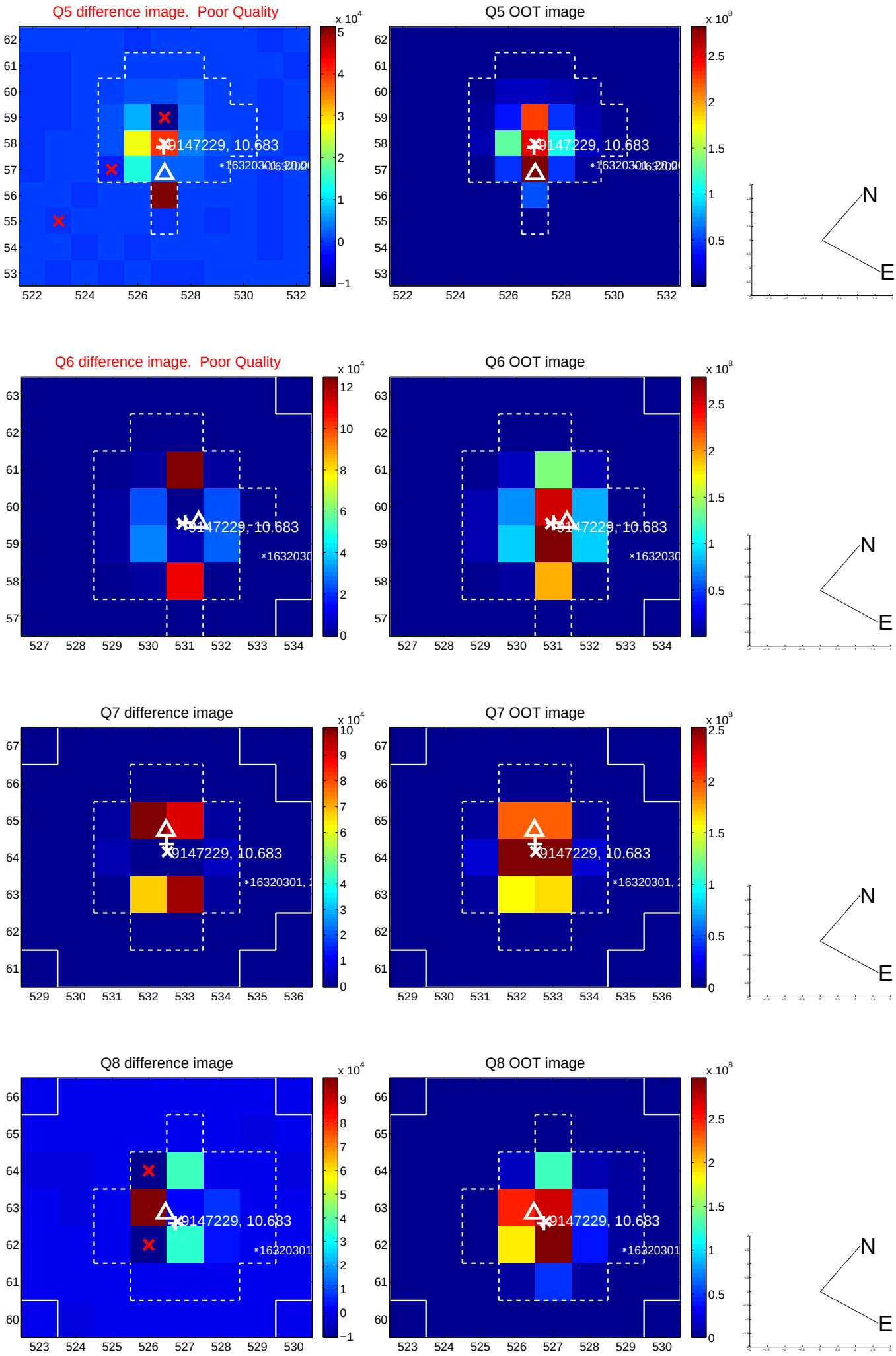


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

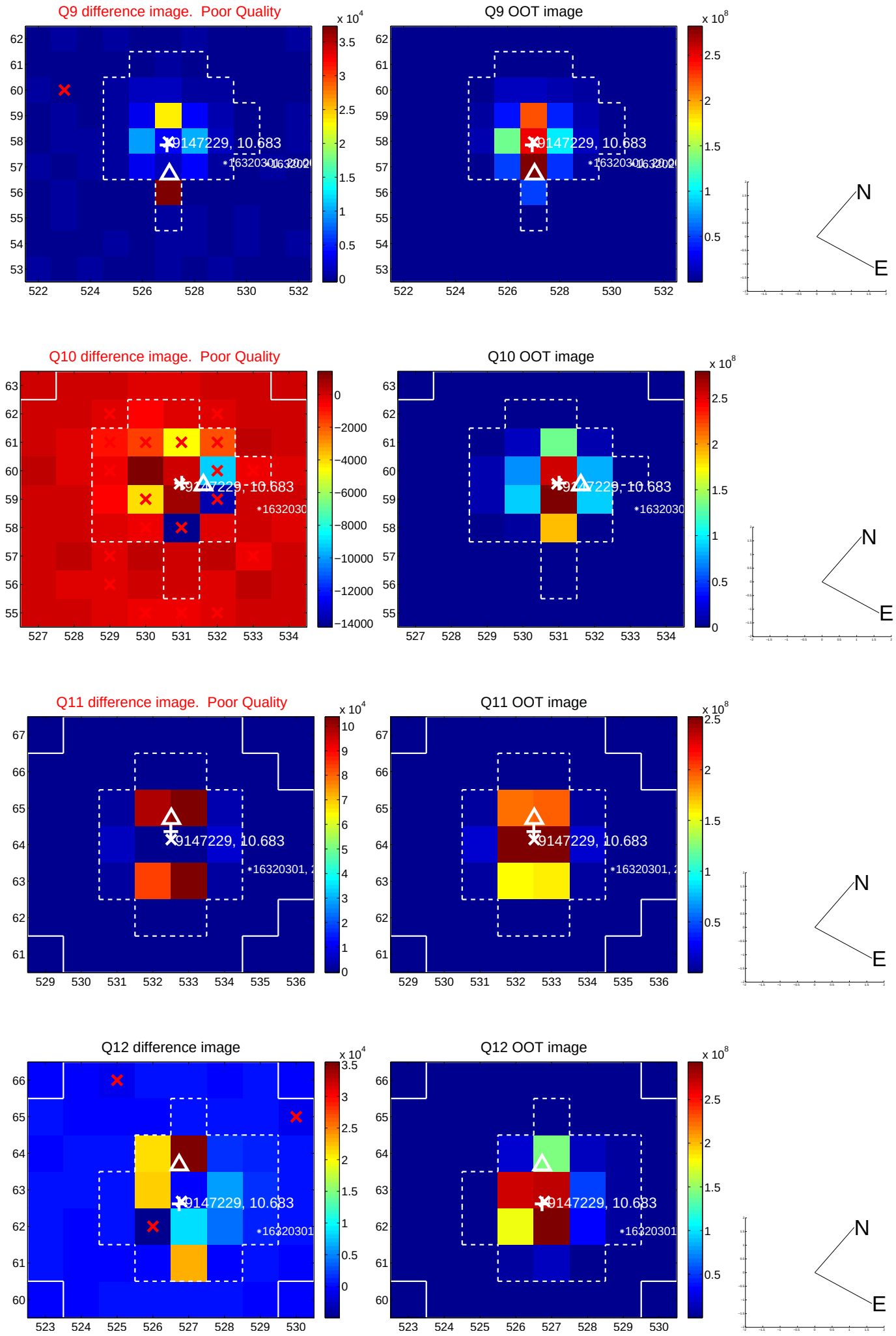
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



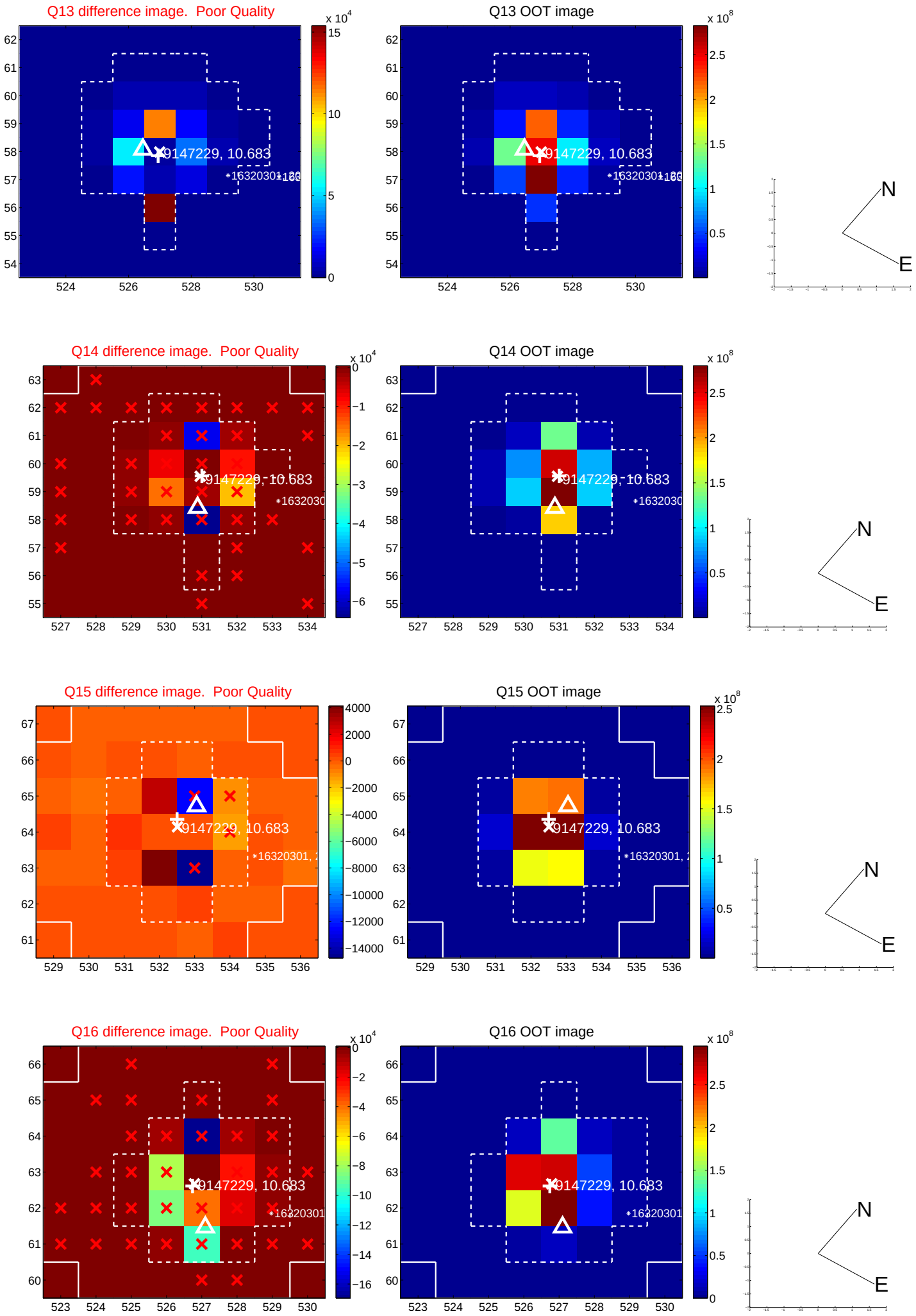
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



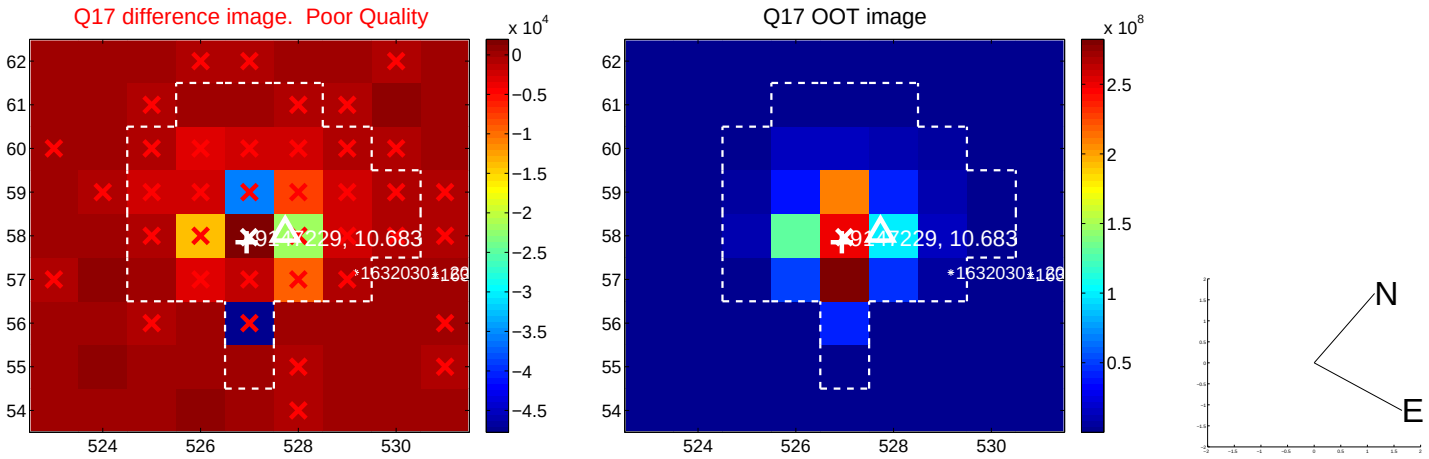
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

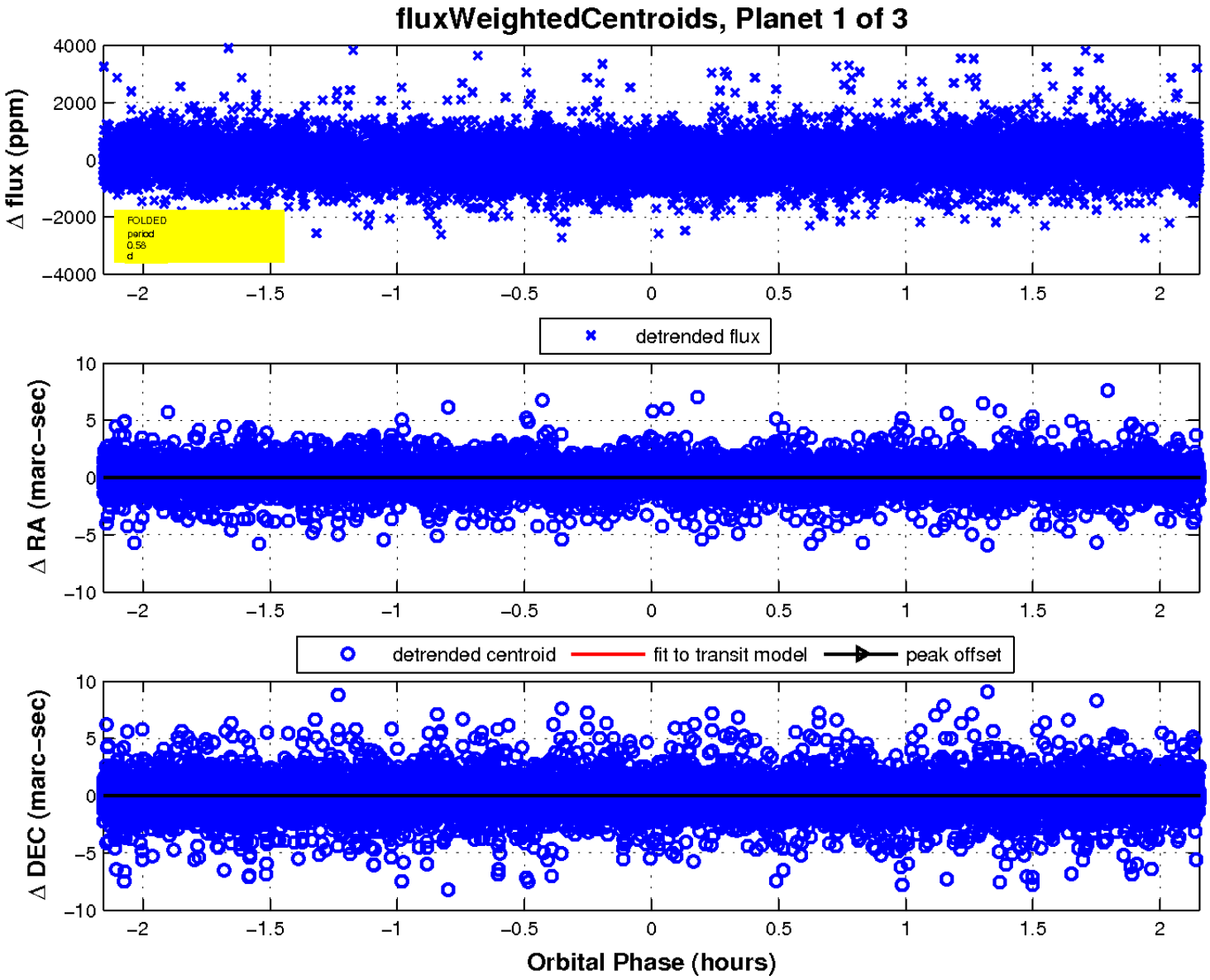


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

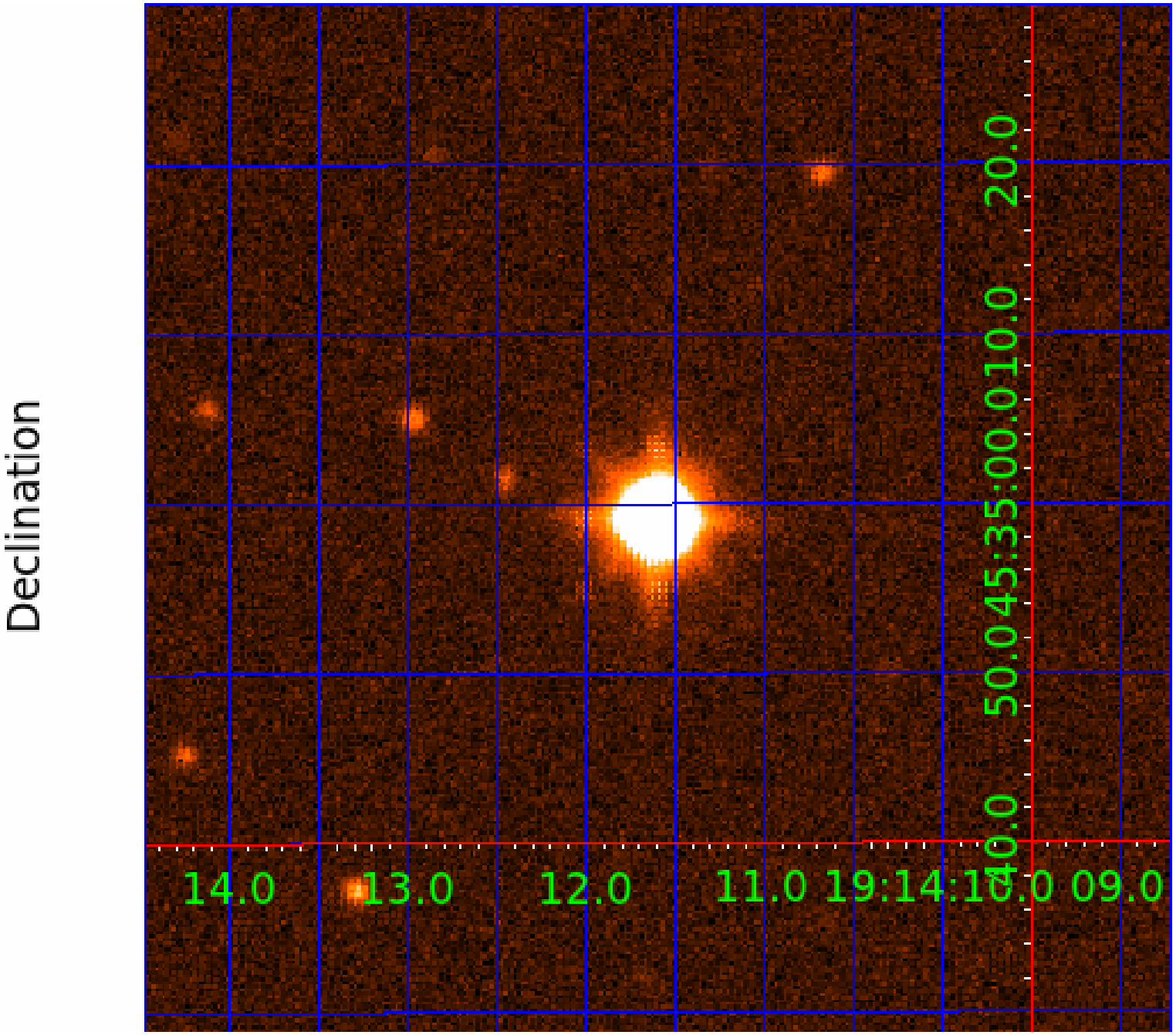


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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10.0
20.0

KIC 009147229

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 ($S_\oplus$)
009147229-01	OBS	No	0.580886	132.038251	19.4	0.719	7.7	8.6	3.96	7542	1.80	0.00
009147229-02	OBS	No	0.580858	131.679052	40.1	2.128	9.4	7.8	3.96	7542	2.92	0.00
009147229-03	OBS	No	122.878226	166.927669	91.6	2.500	8.4	-1.0	3.96	7542	3.81	124.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009147229-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
009147229-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
009147229-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—TRANS_GAPPED—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

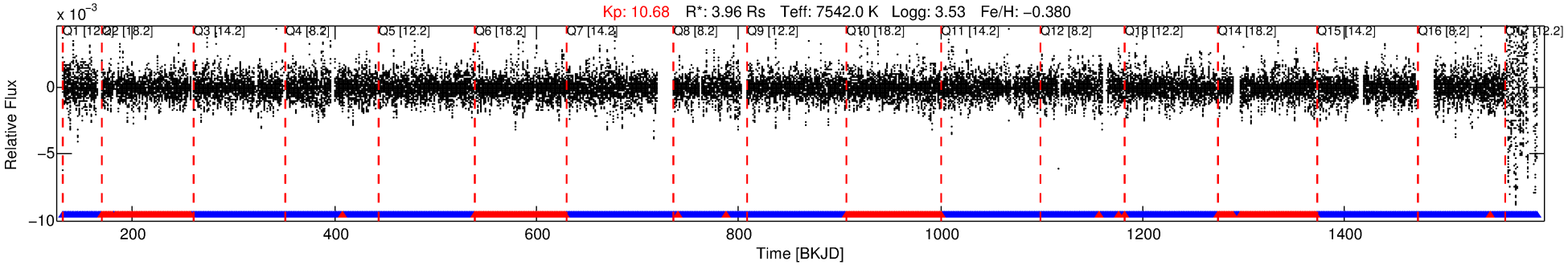
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

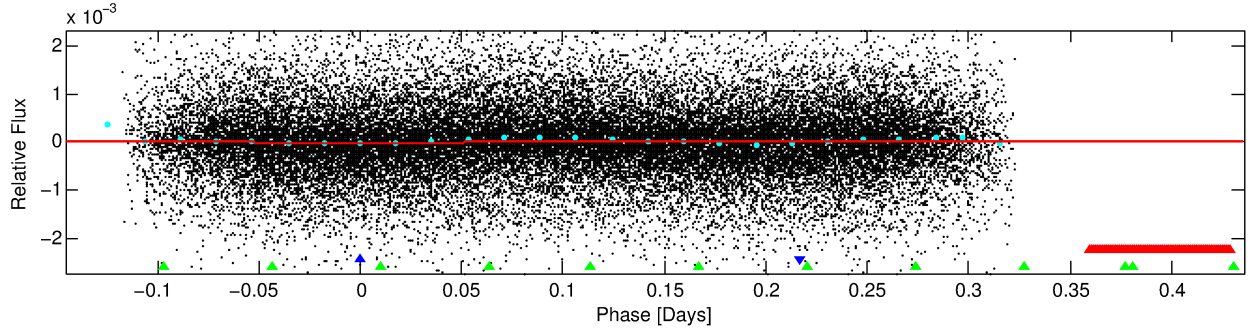
Ephemeris Match Information For 009147229-02

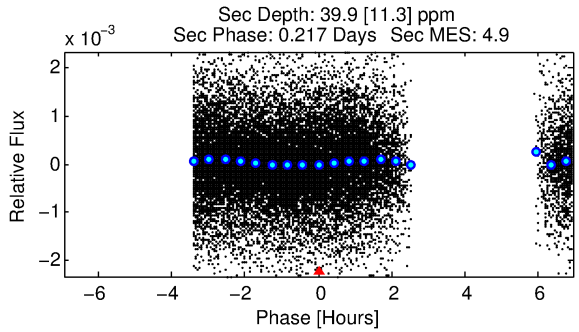
No Significant Match Found

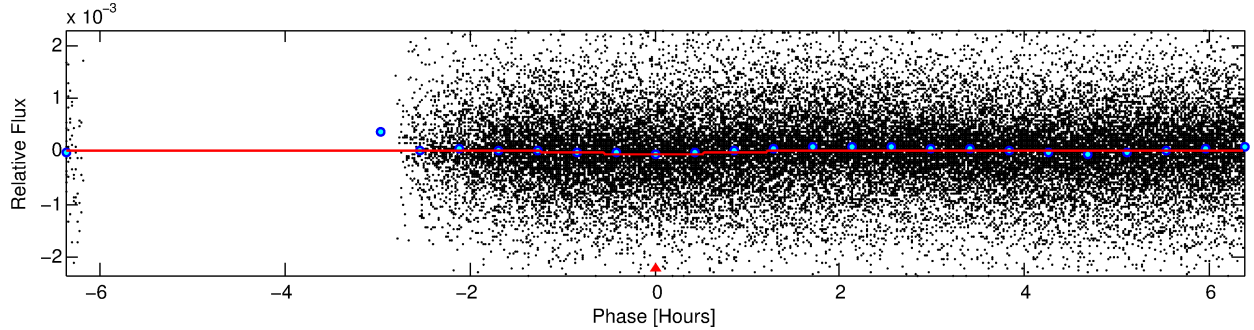
DV One-Page Summary

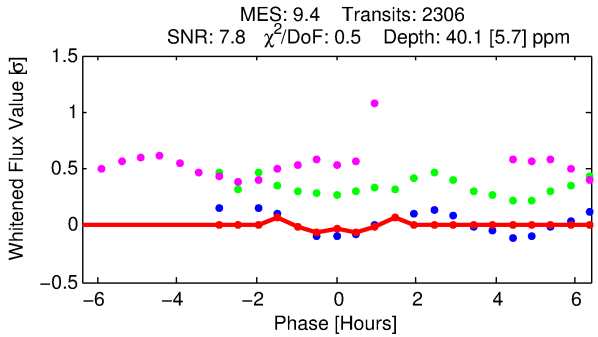
KIC: 9147229 Candidate: 2 of 3 Period: 0.581 d

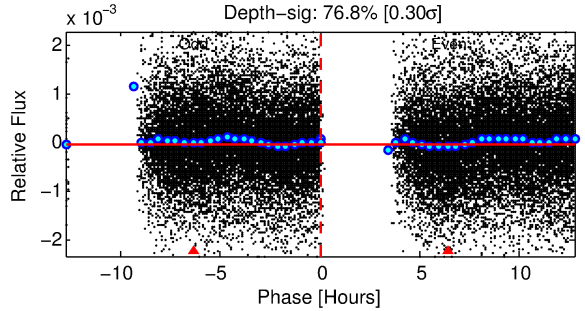


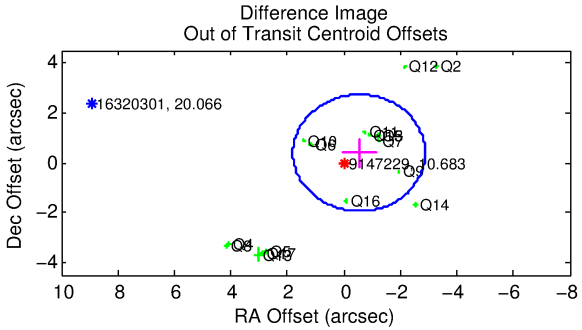












DV Fit Results:

Period = 0.58086 [0.00001] d
Epoch = 131.6791 [0.0011] BKJD
Rp/R* = 0.0068 [0.0012]
a/R* = 1.34 [0.59]
b = 0.89 [0.22]

Seff = N/A
Teq = N/A
Rp = 2.92 [1.81] Re
a = N/A

Ag = N/A
Teffp = N/A

DV Diagnostic Results:

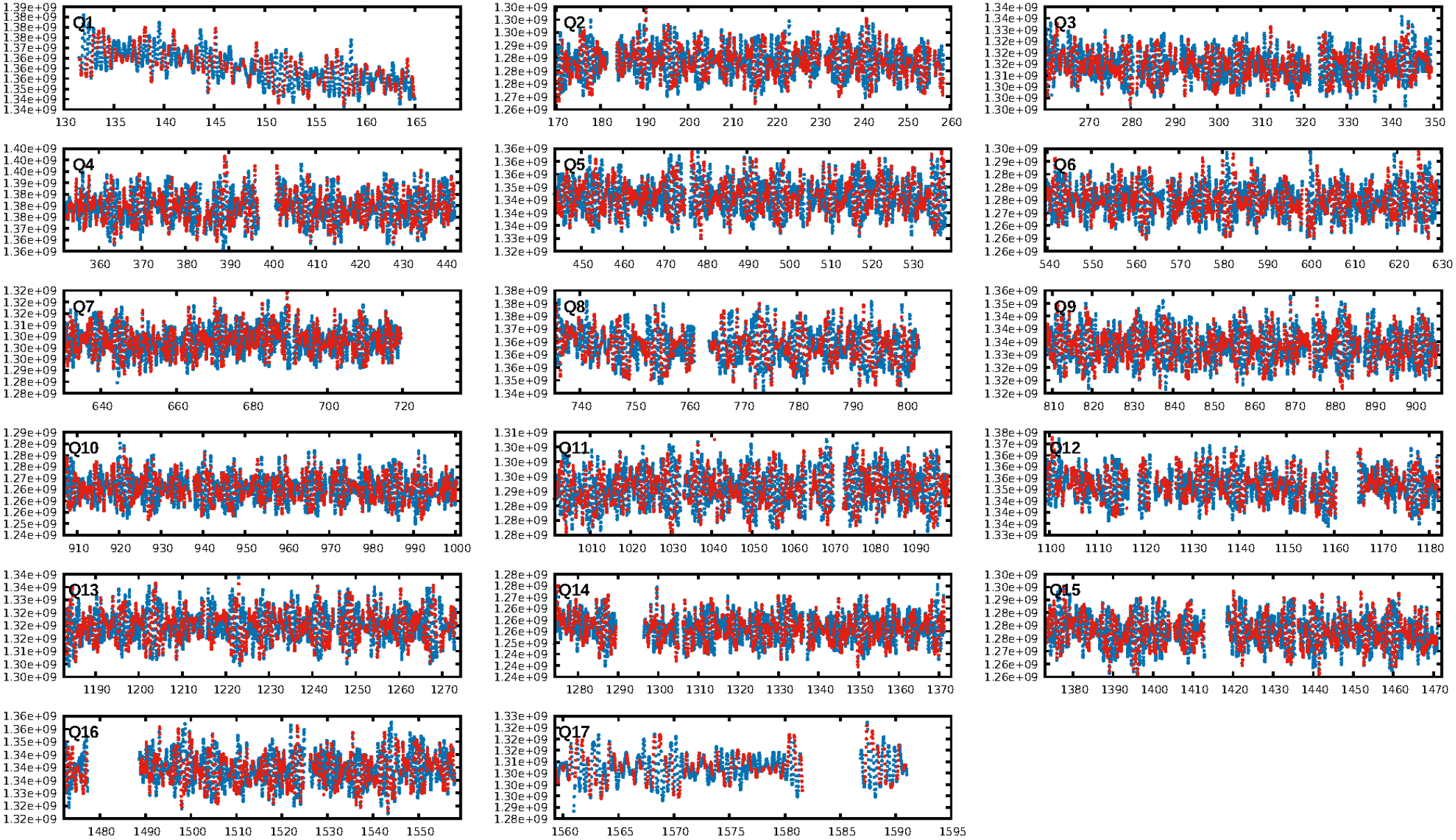
ShortPeriod−sig: N/A
LongPeriod−sig: 0.0% [0.00σ]
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 0.73 [1603/2202]
GhostDiagnostic−chr: −0.3783

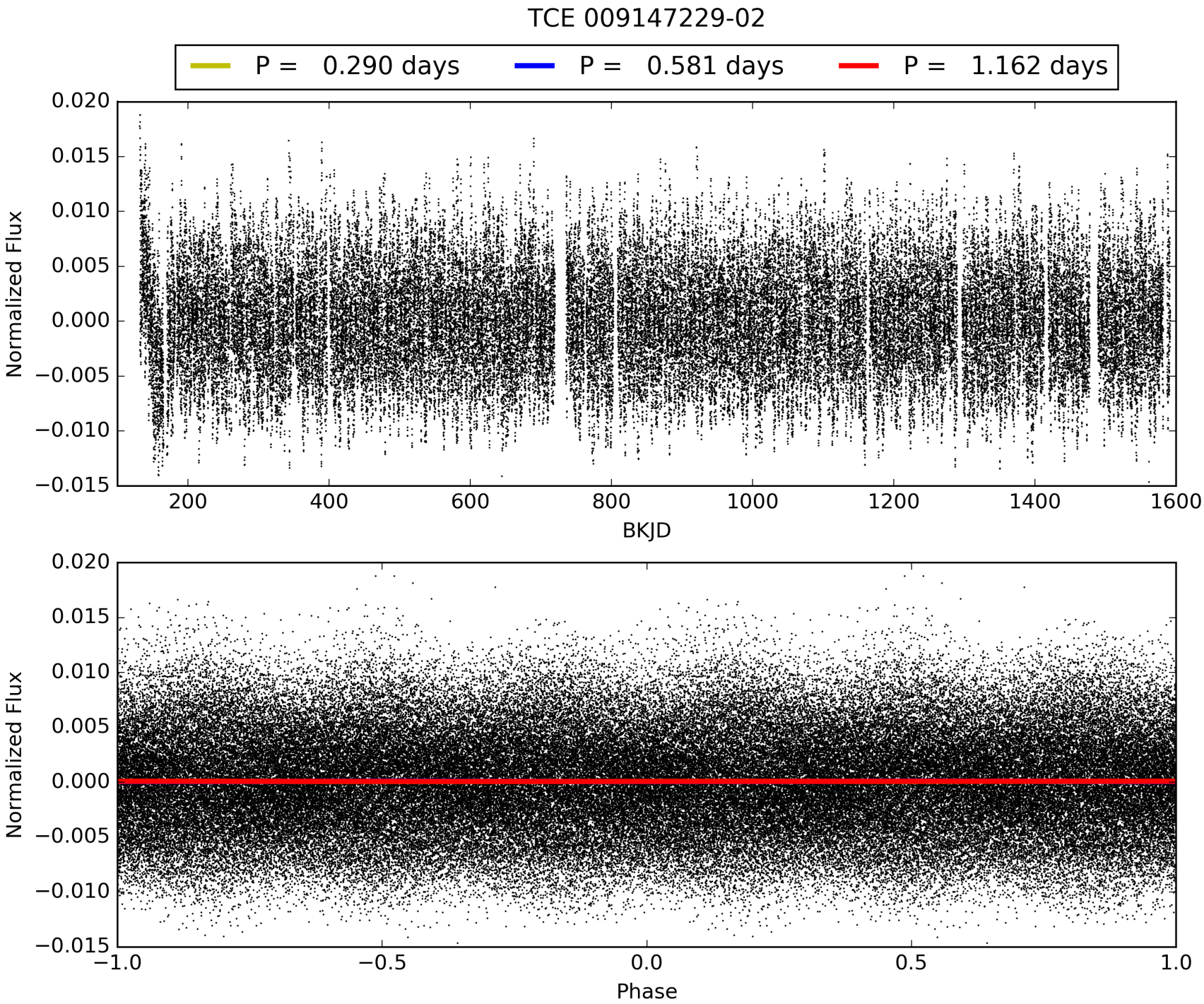
Centroid−sig: 0.1%
Centroid−so: 0.376 arcsec [1.66σ]
OotOffset−rm: 0.661 arcsec [0.85σ]
KicOffset−rm: 1.004 arcsec [1.14σ]
OotOffset−st: 4/4/4/4 [16]
KicOffset−st: 4/4/4/4 [16]
DiffImageQuality−fgm: 0.06 [1/16]
DiffImageOverlap−fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30−Jan−2016 07:29:49 Z

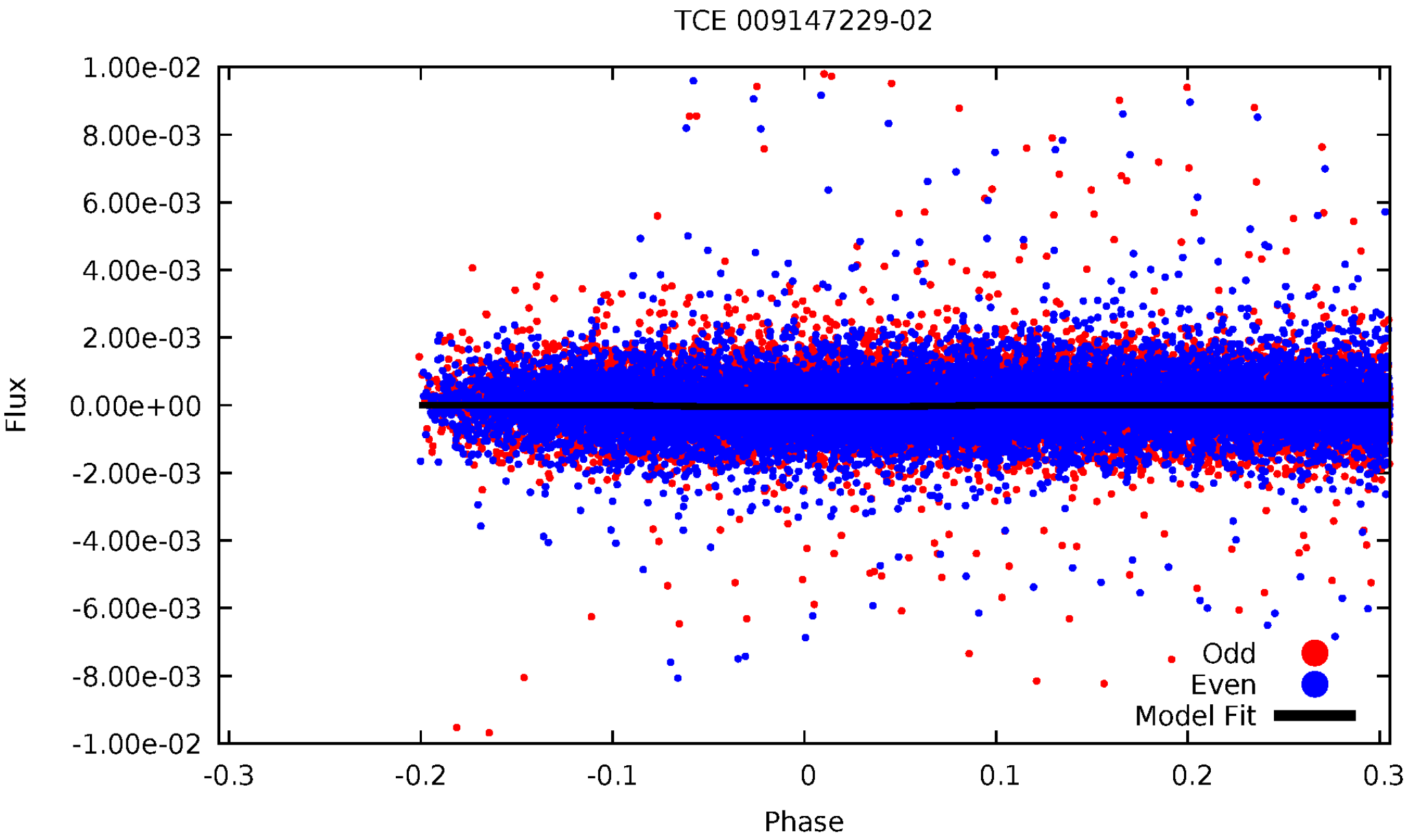
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009147229-02, PDC Light Curves

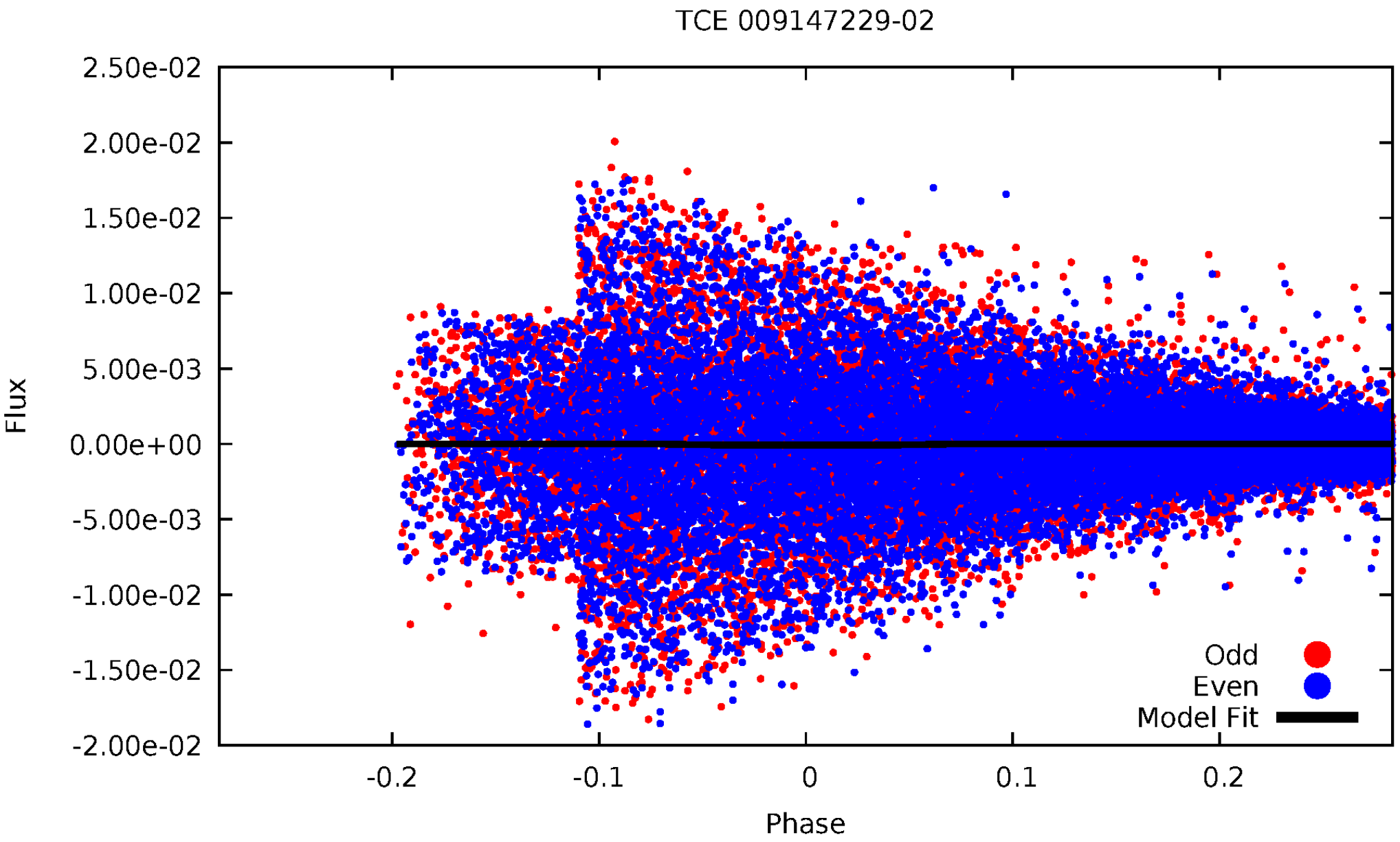



TCE 009147229-02
P = 0.290 days
P = 0.581 days
P = 1.162 days
Normalized Flux
BKJD
Normalized Flux
Phase

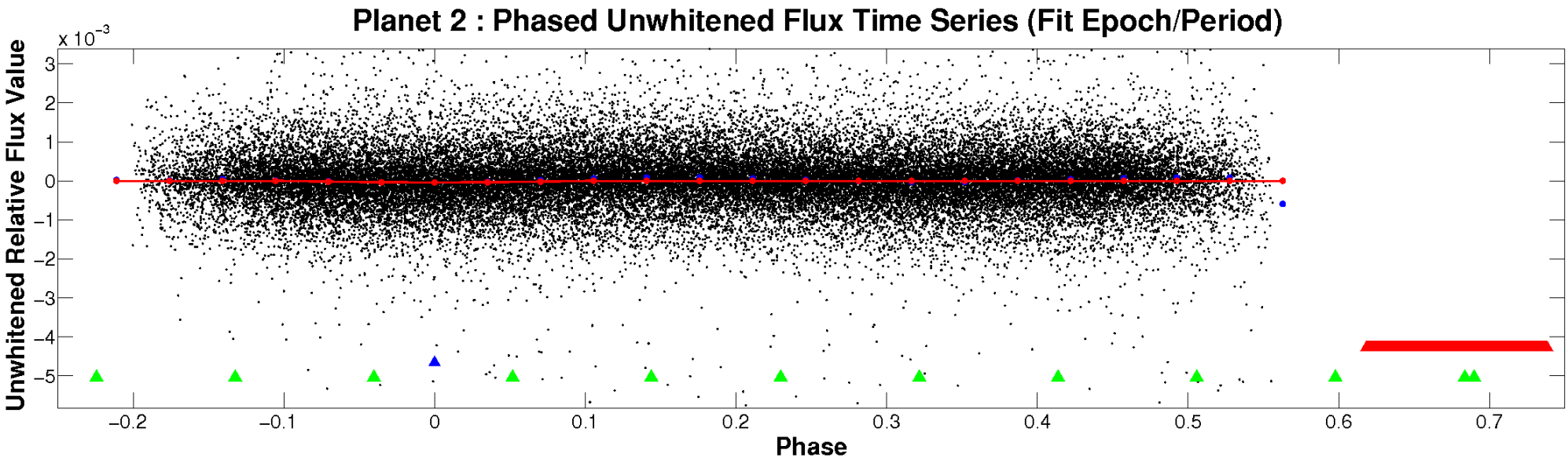
DV Odd/Even

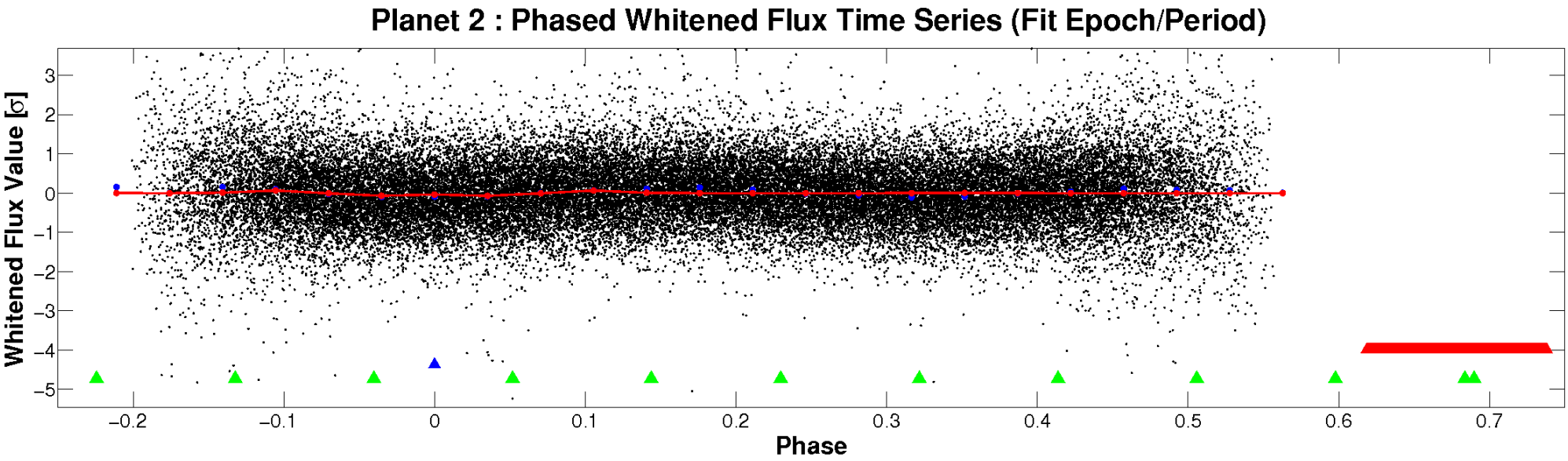

TCE 009147229-02
1.00e-02
8.00e-03
6.00e-03
4.00e-03
2.00e-03
0.00e+00
-2.00e-03
-4.00e-03
-6.00e-03
-8.00e-03
-1.00e-02
Flux
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009147229-02
2.50e-02
2.00e-02
1.50e-02
1.00e-02
5.00e-03
0.00e+00
-5.00e-03
-1.00e-02
-1.50e-02
-2.00e-02
Flux
-0.2
-0.1
0
0.1
0.2
Phase
Odd
Even
Model Fit

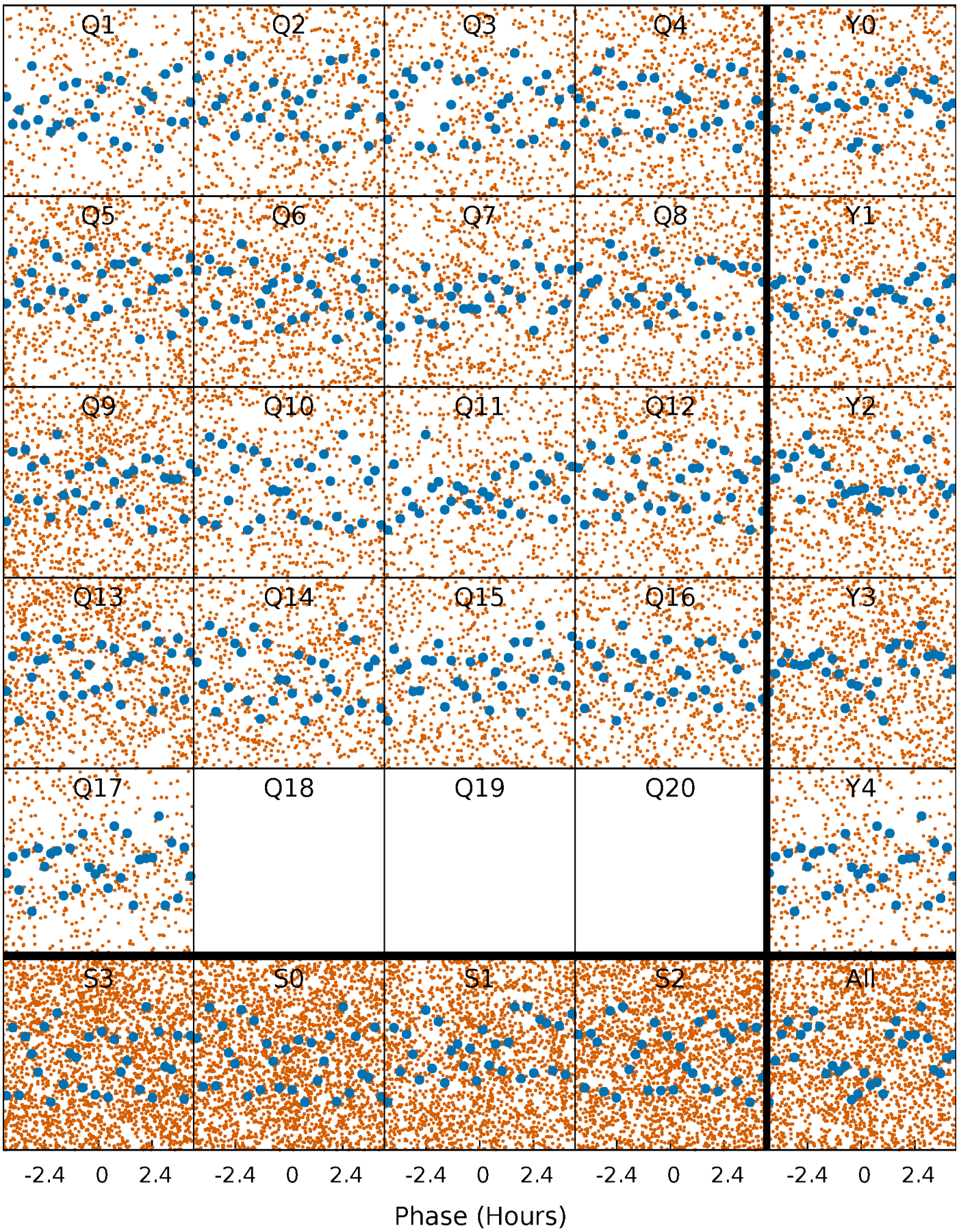
Non-Whitened Vs. Whitened Light Curve





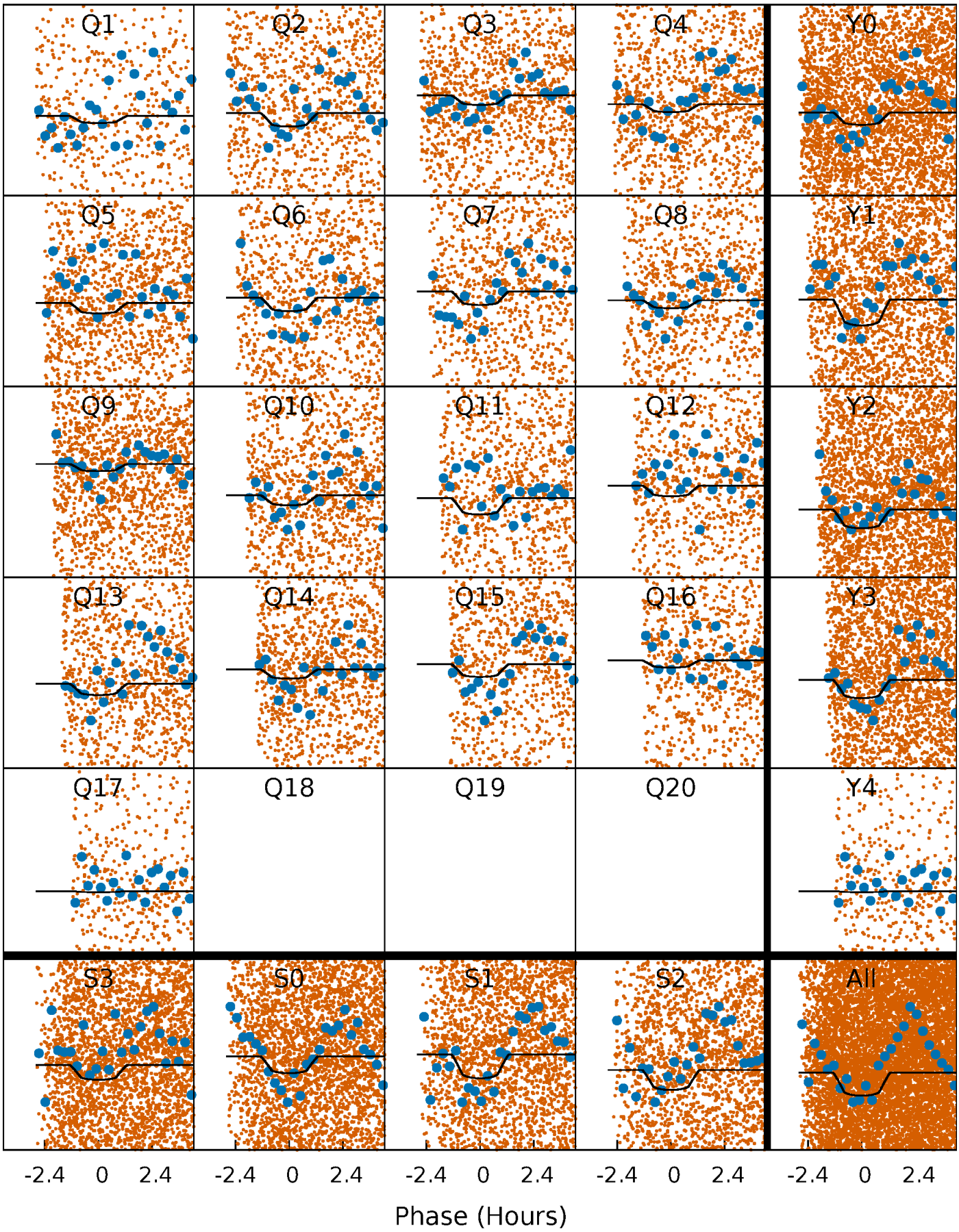
PDC Quarter-Phased Transit Curves

TCE 009147229-02 P= 0.580858 Days T_0=131.679052 (BKJD)



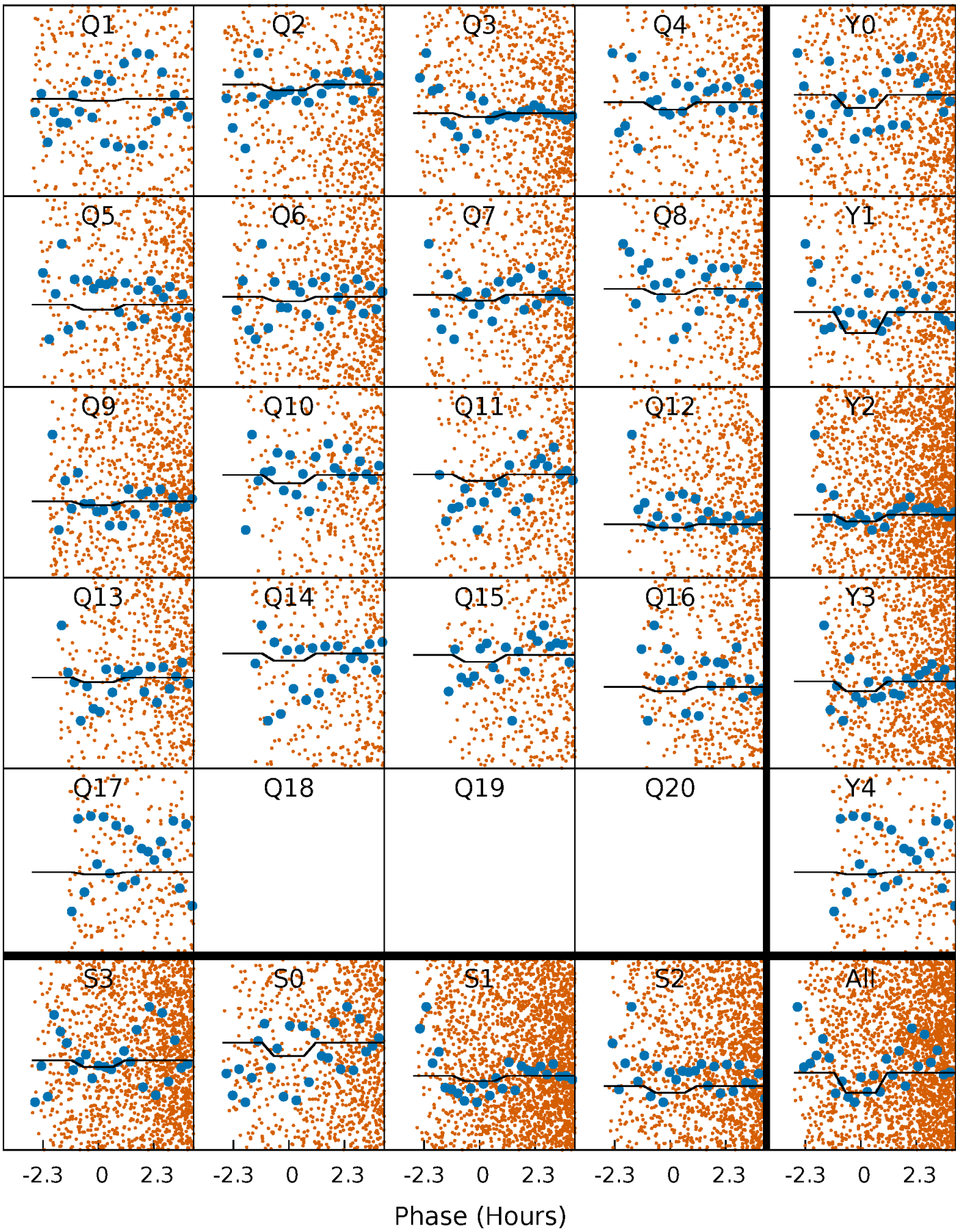
DV Quarter-Phased Transit Curves

TCE 009147229-02 P= 0.580858 Days T_0=131.679052 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

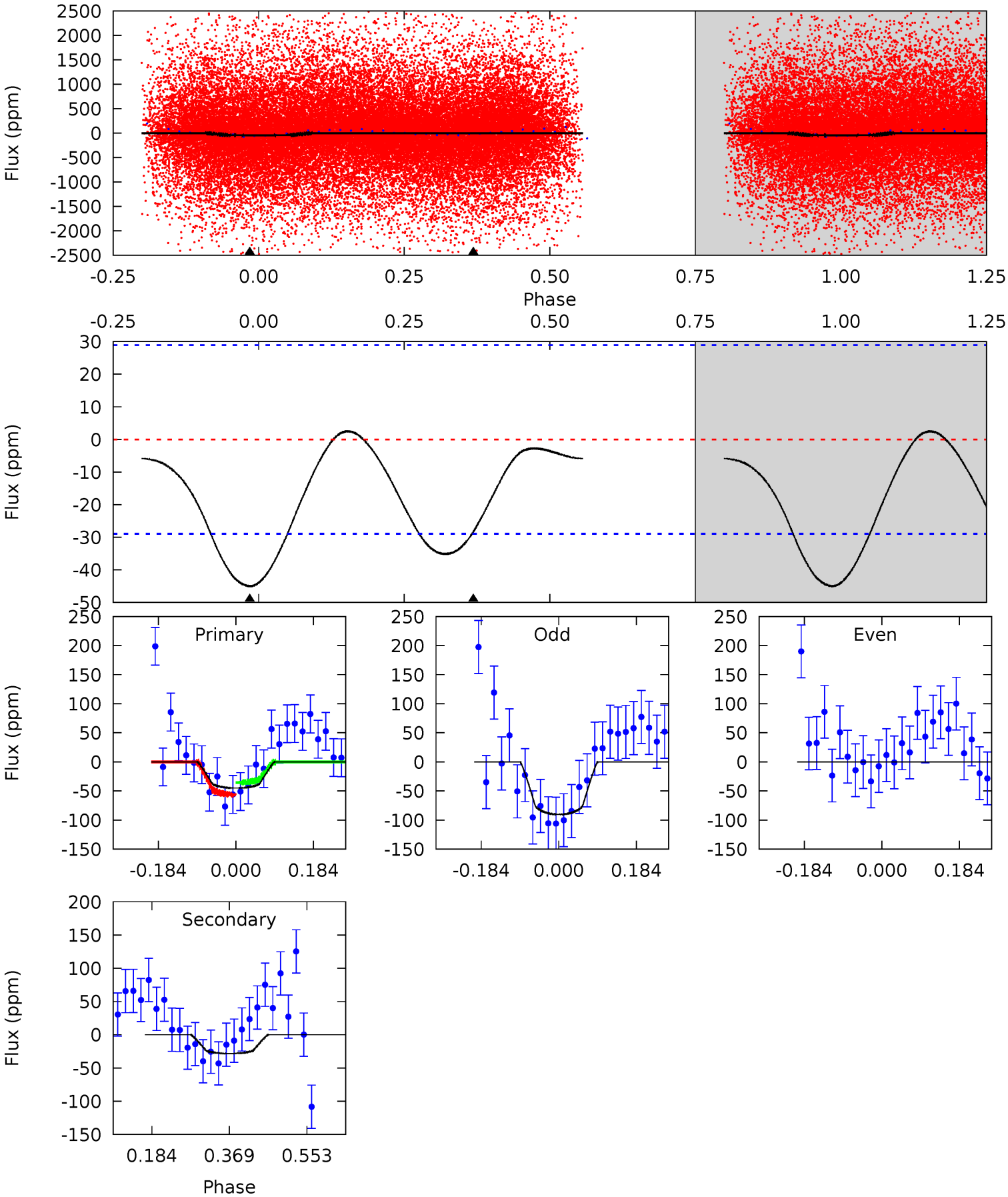
TCE 009147229-02 P= 0.580860 Days T_0=131.677316 (BKJD)



DV Model-Shift Uniqueness Test

009147229-02, P = 0.580858 Days, E = 131.098194 Days

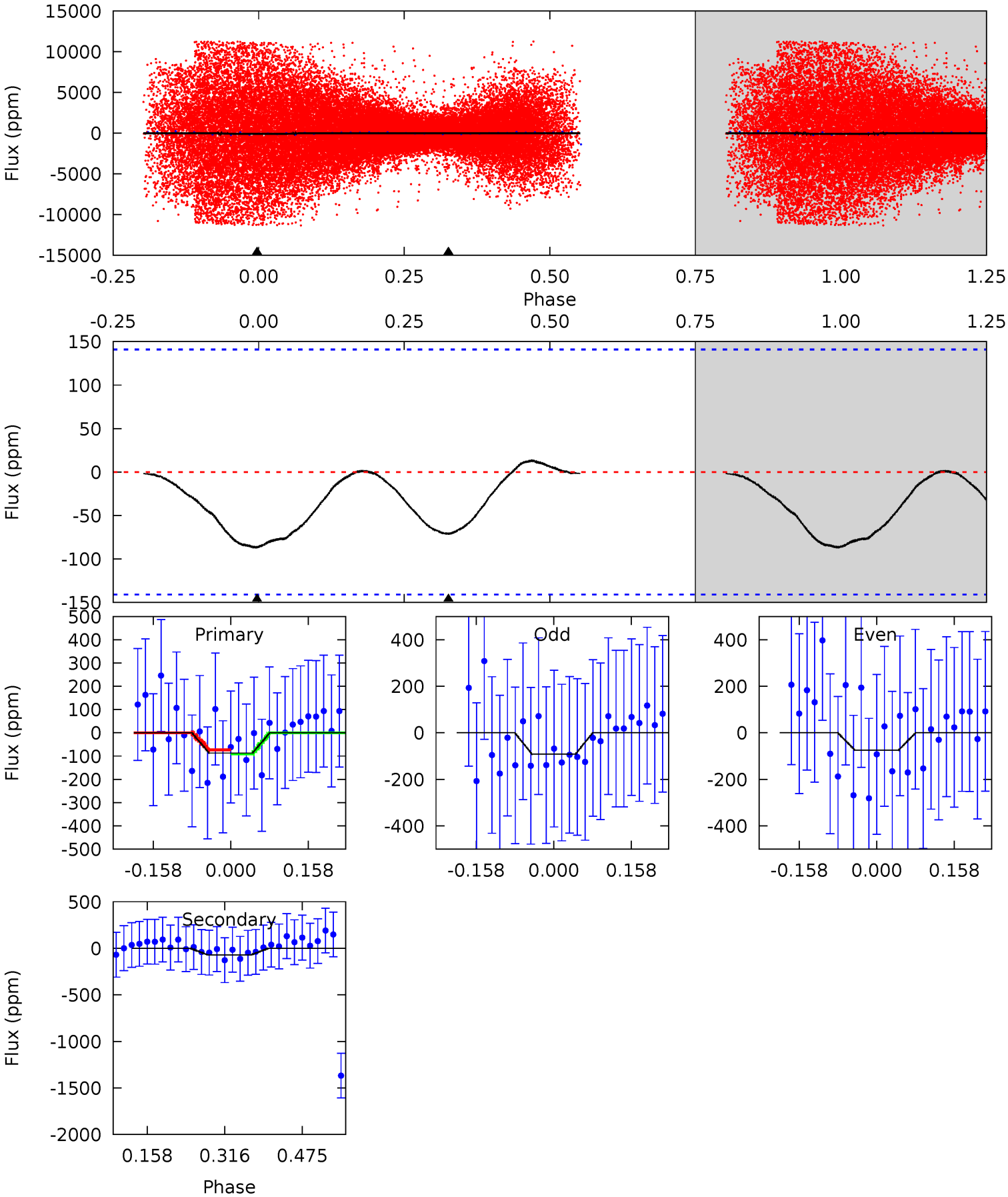
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.91	4.35	0	0	4.43	1.33	0.46	6.91	6.91	4.35	4.35	6.96	0.72	0.05	1.60



Alt Model-Shift Uniqueness Test

009147229-02, P = 0.580860 Days, E = 131.096456 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.75	2.25	0	0	4.47	1.41	0.19	2.75	2.75	2.25	2.25	0.26	0.72	0.14	0.27



Stellar Parameters For KIC 009147229

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7542^{+233}_{-311}	$3.531^{+0.639}_{-0.071}$	$-0.380^{+0.250}_{-0.300}$	$3.959^{+0.413}_{-2.338}$	$1.943^{+0.069}_{-0.618}$	$0.044^{+0.421}_{-0.010}$
	+3%/-4%	+18%/-2%	+66%/-79%	+10%/-59%	+4%/-32%	+953%/-23%
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 009147229-02 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-28±7	$2.58^{+0.74}_{-0.80}$	6853^{+499}_{-961}	5612^{+1118}_{-1363}	$0.653^{+0.629}_{-0.283}$
Alt.	-71±32	$3.20^{+0.78}_{-1.01}$	6828^{+514}_{-1081}	6903^{+1401}_{-1738}	$1.085^{+1.284}_{-0.571}$

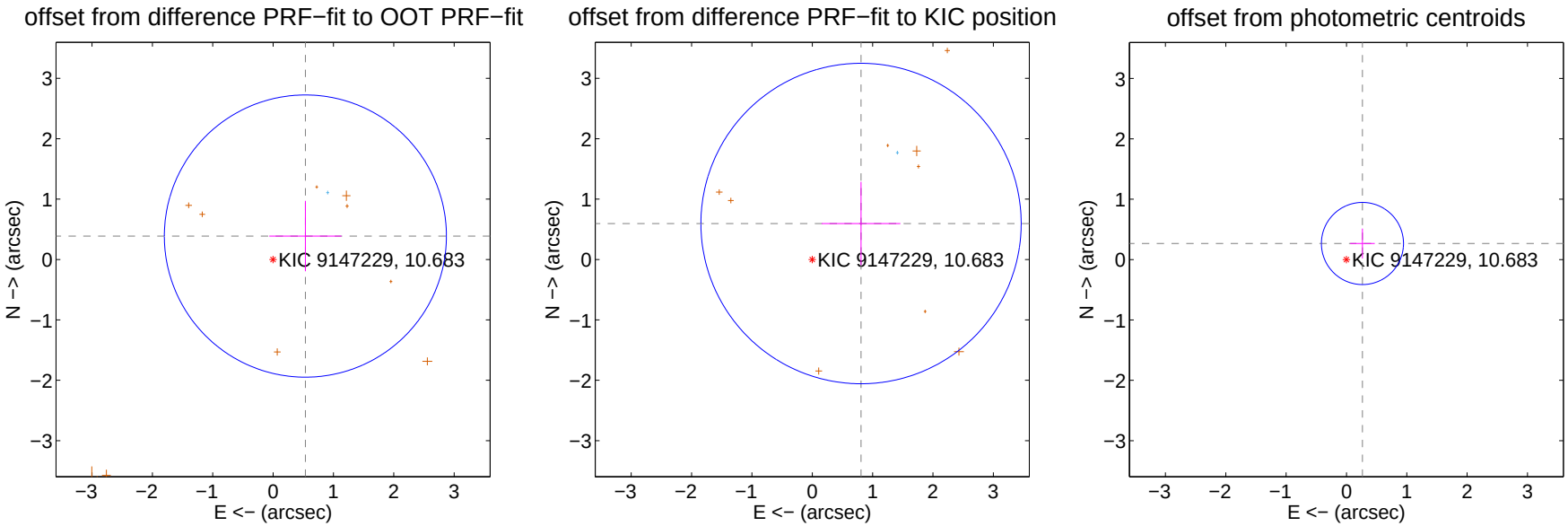
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

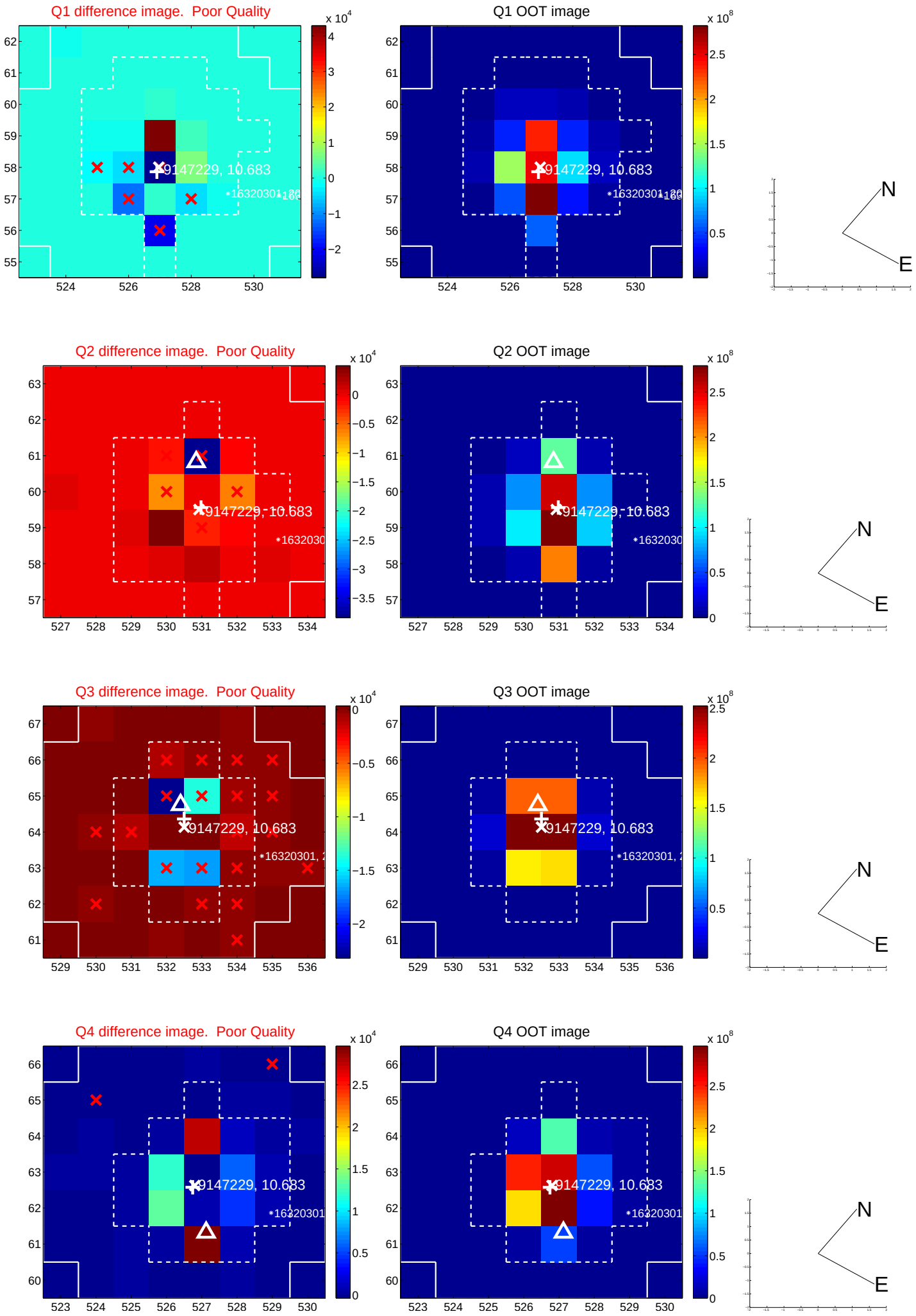
Supplemental centroid analysis for 009147229-02. Kepler magnitude: 10.68. Transit SNR 7.78
There are 1 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.50 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.661 ± 0.779	0.85	-0.535 ± 0.599	0.388 ± 0.584
PRF-fit source offset from KIC position	1.004 ± 0.885	1.14	-0.808 ± 0.652	0.596 ± 0.690
photometric centroid source offset	0.38 ± 0.23	1.66	-0.27 ± 0.20	0.27 ± 0.25

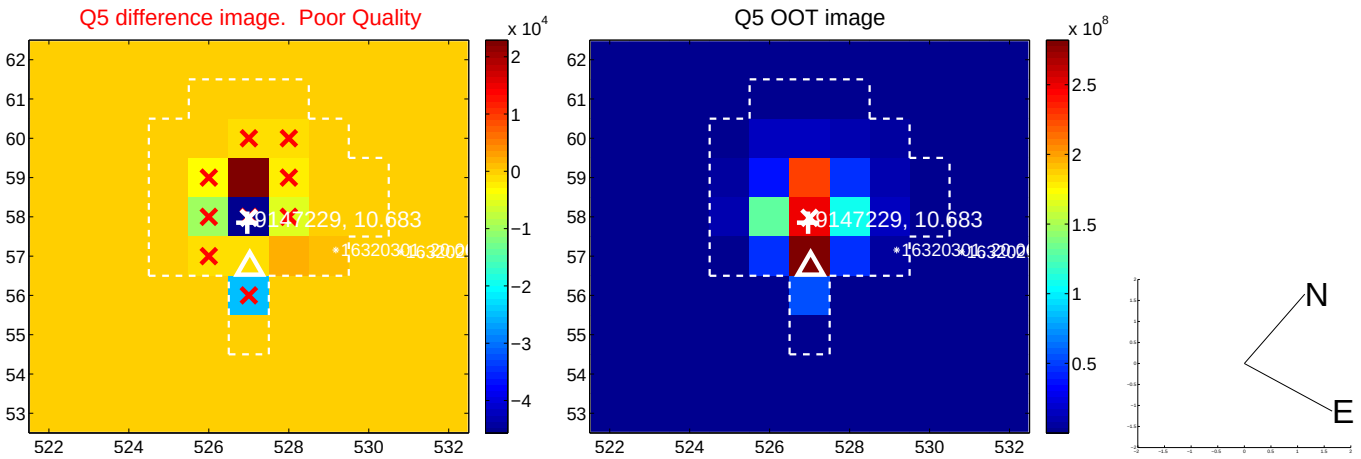


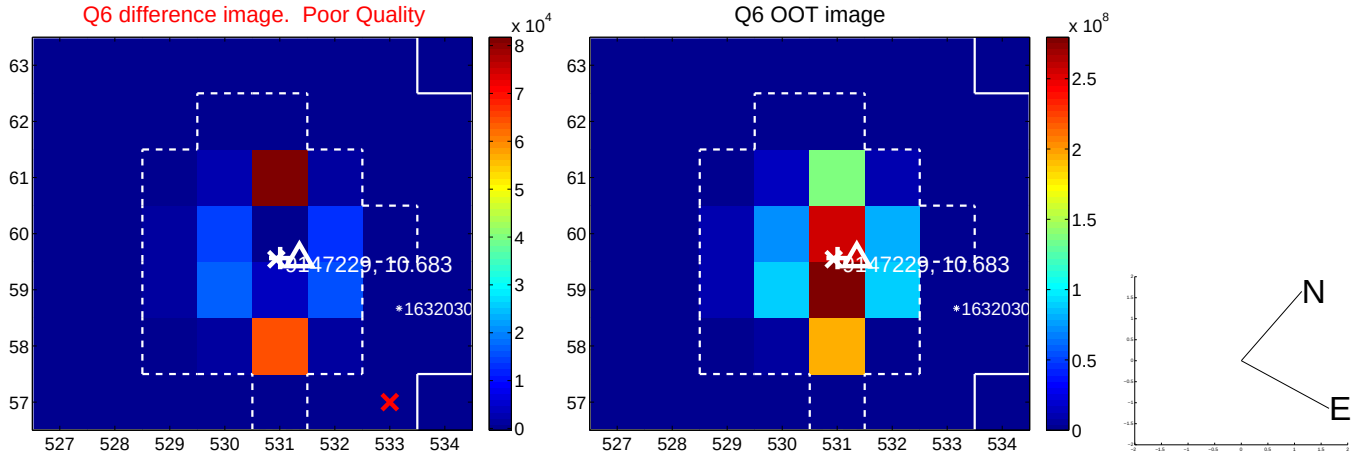
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

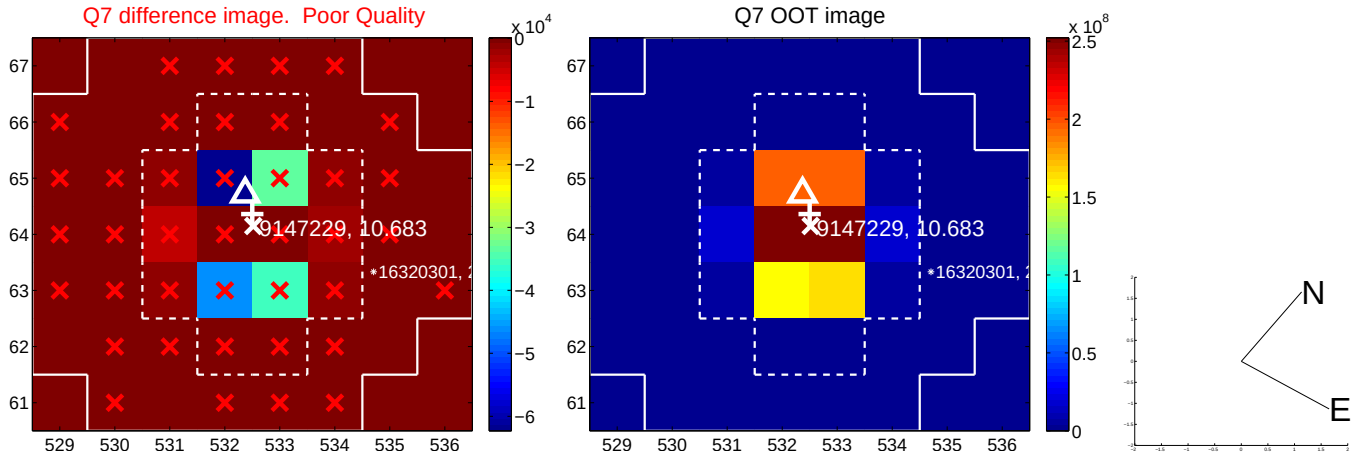
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

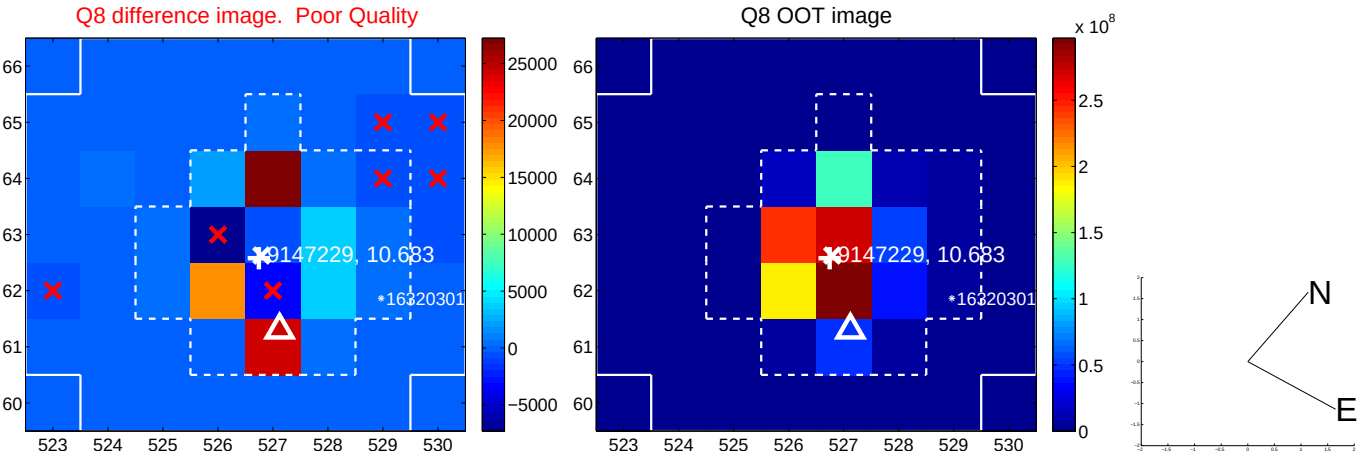


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

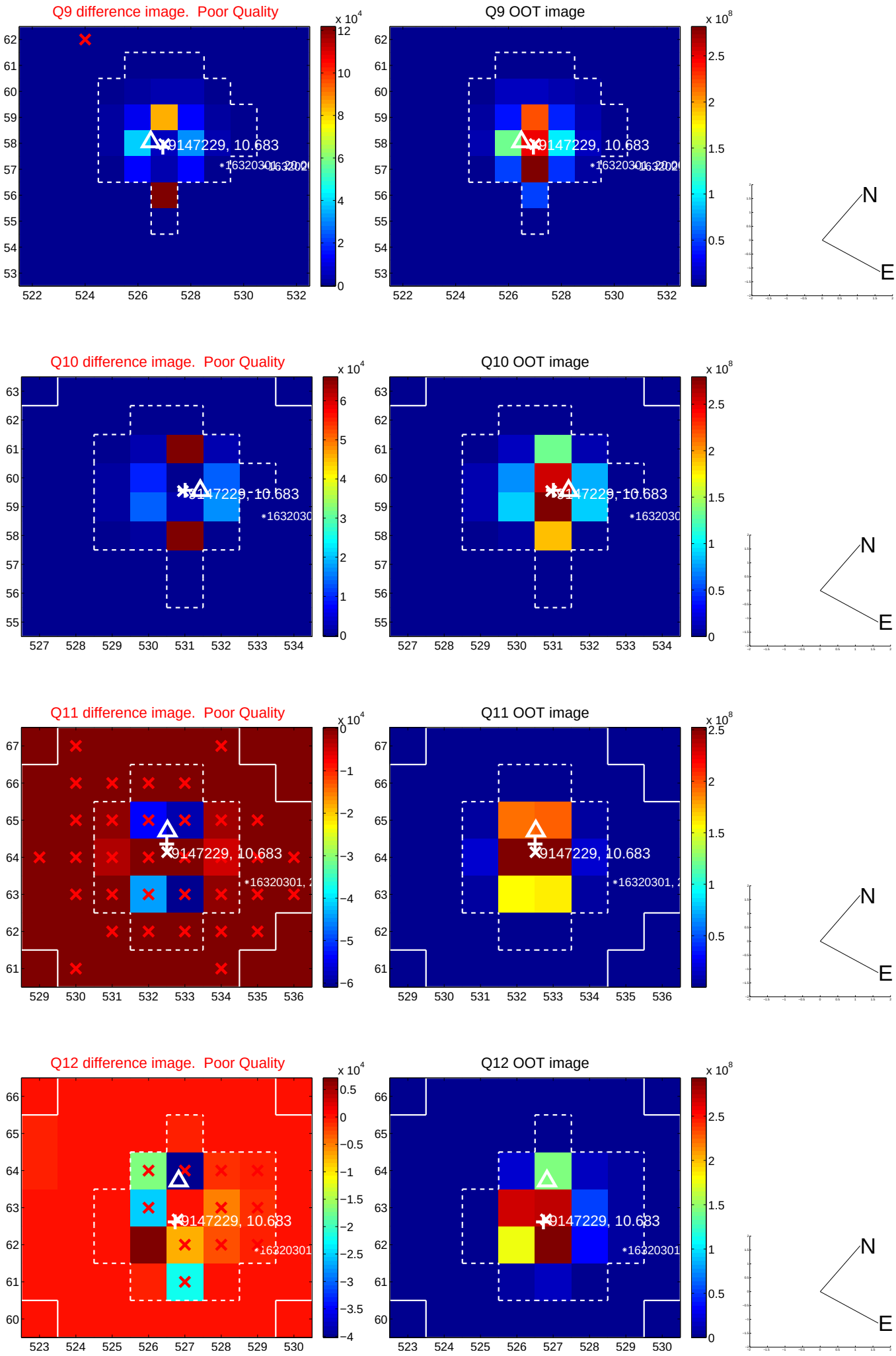




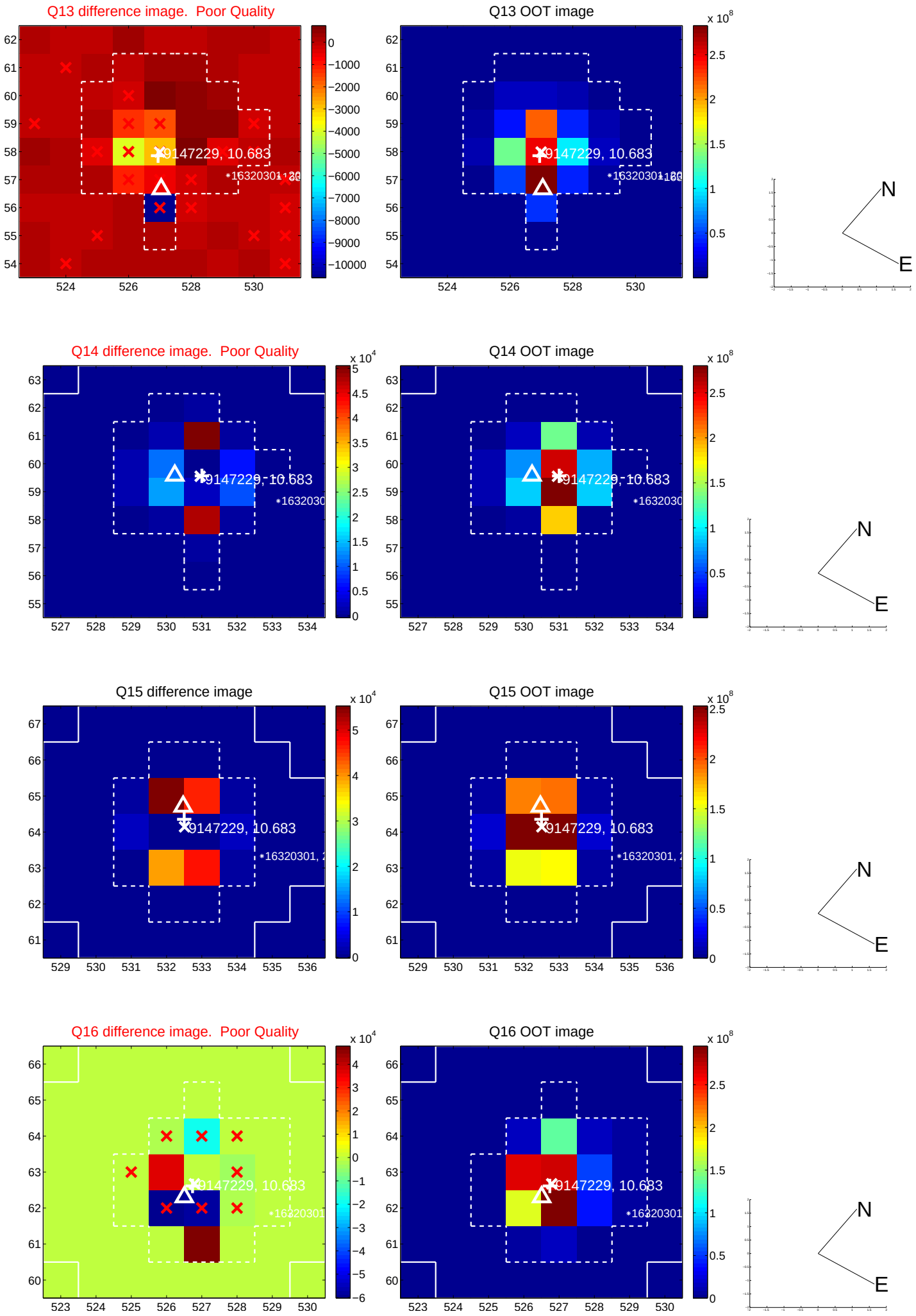




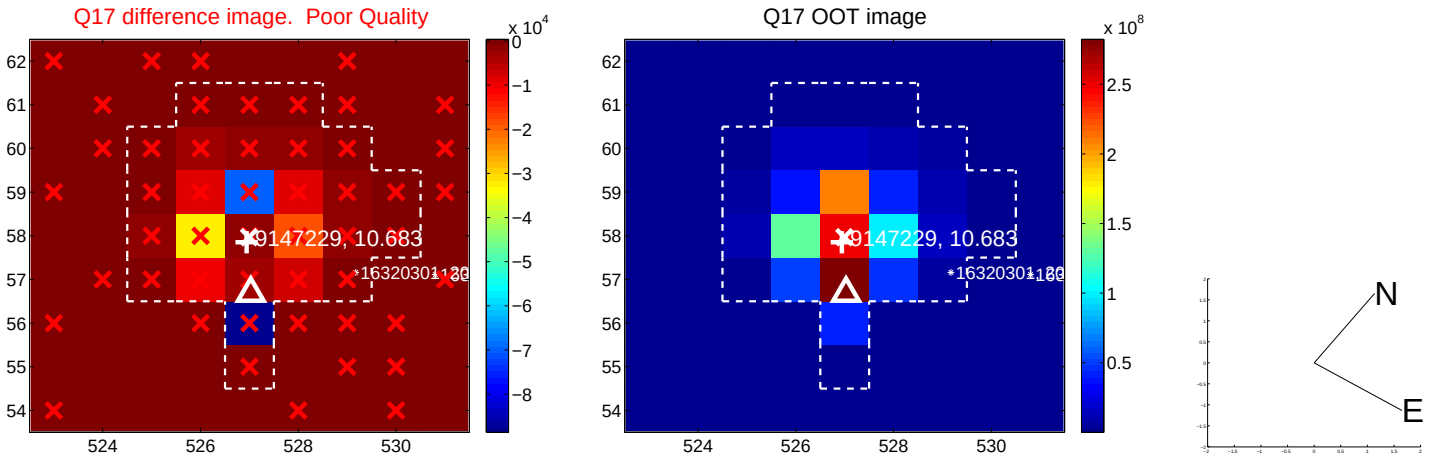
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

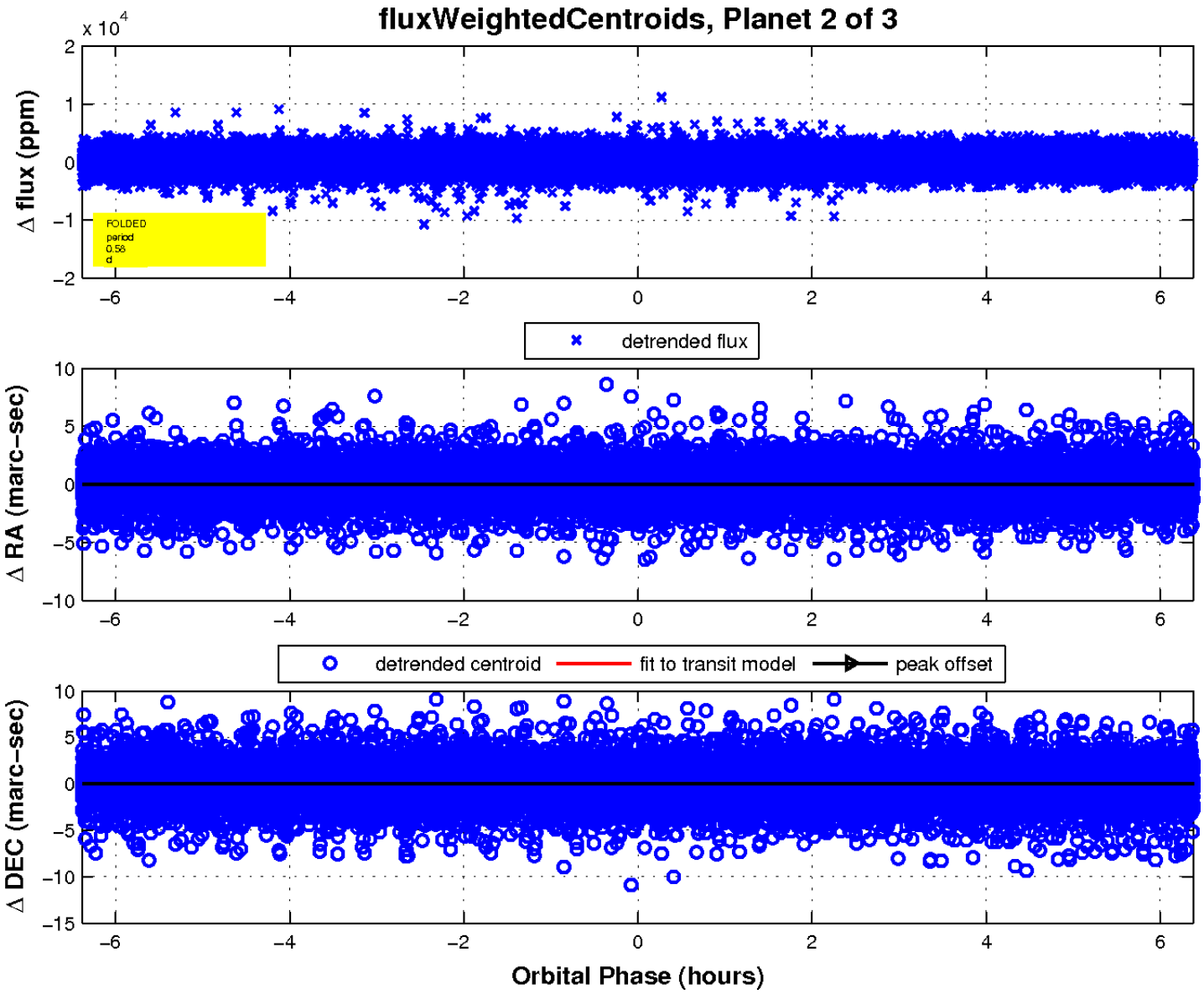


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

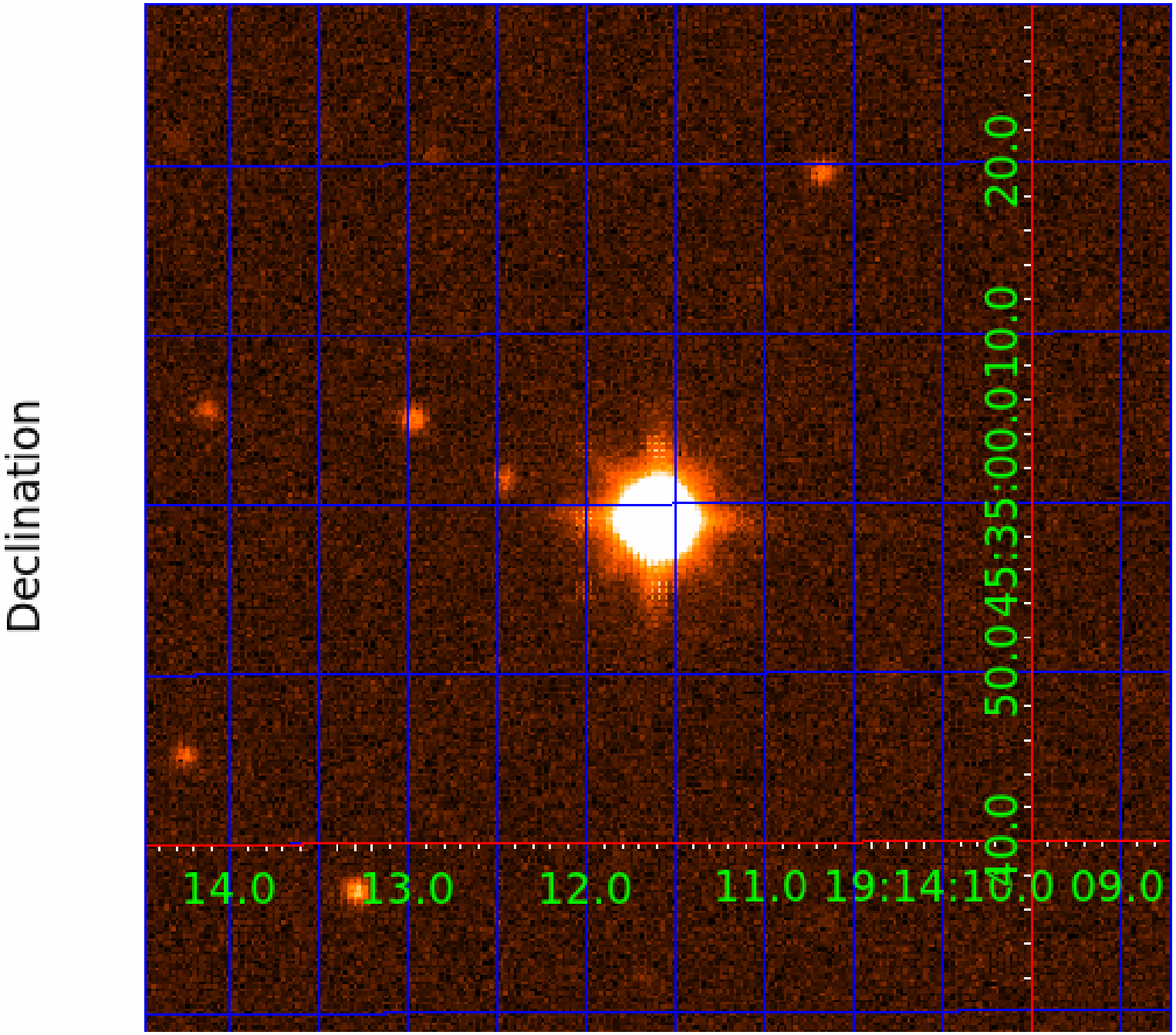


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image


Declination
14.0
13.0
12.0
11.0
19:14:10.0
09.0
40.0
50.0
45:35:00.0
10.0
20.0

KIC 009147229

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 ($S_\oplus$)
009147229-01	OBS	No	0.580886	132.038251	19.4	0.719	7.7	8.6	3.96	7542	1.80	0.00
009147229-02	OBS	No	0.580858	131.679052	40.1	2.128	9.4	7.8	3.96	7542	2.92	0.00
009147229-03	OBS	No	122.878226	166.927669	91.6	2.500	8.4	-1.0	3.96	7542	3.81	124.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009147229-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
009147229-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
009147229-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—TRANS_GAPPED—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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.

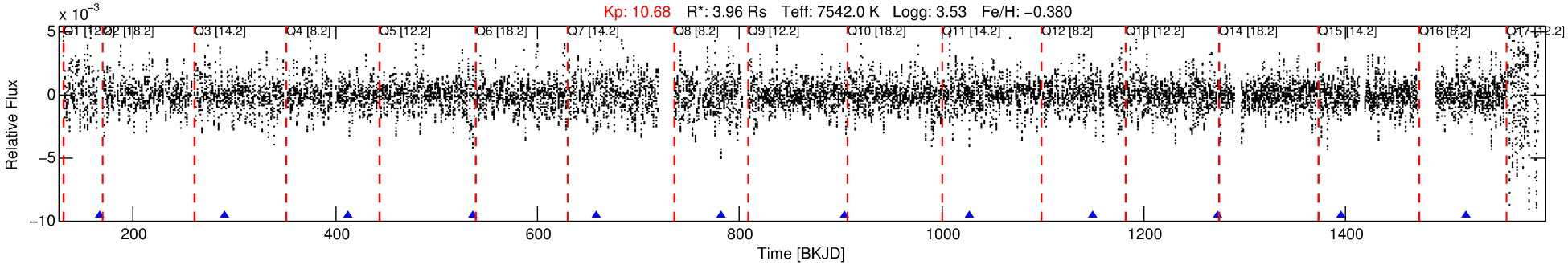
Ephemeris Match Information For 009147229-03

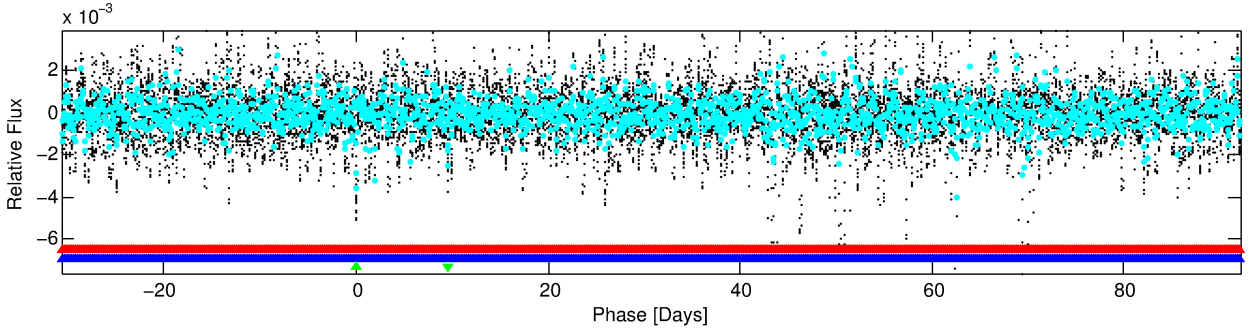
No Significant Match Found

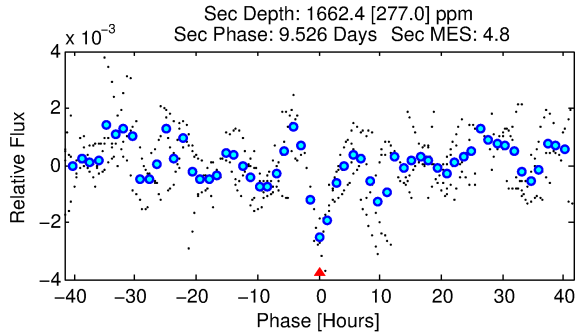
DV One-Page Summary

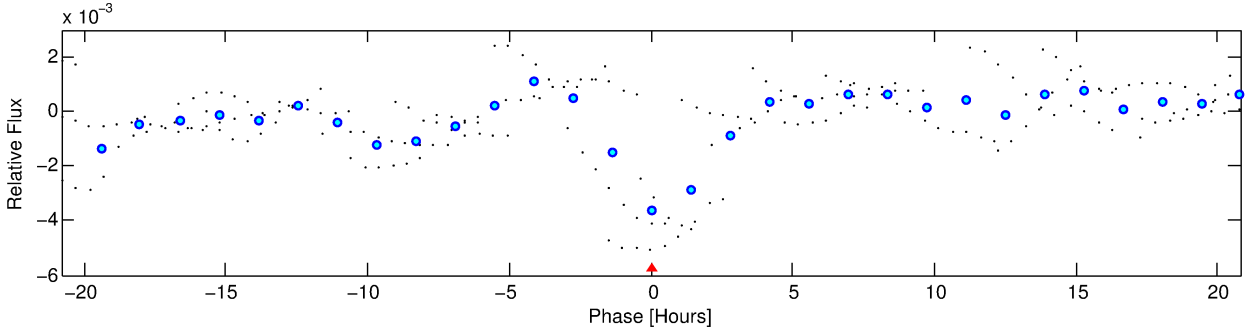
KIC: 9147229 Candidate: 3 of 3 Period: 122.878 d

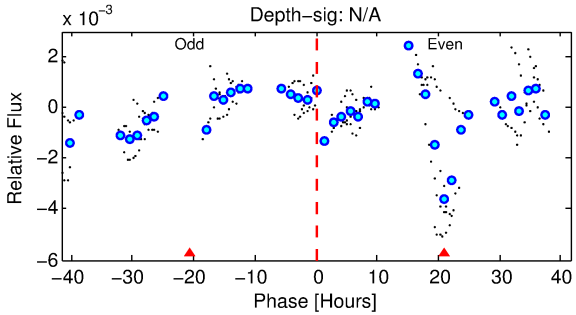
Kp: 10.68 R*: 3.96 Rs Teff: 7542.0 K Logg: 3.53 Fe/H: −0.380

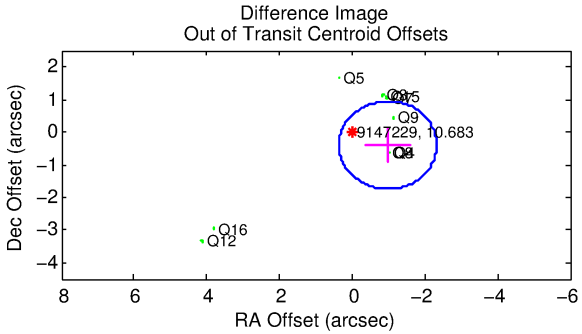












TPS TCE Results:

Period = 122.87823 d
Epoch = 166.9277 BKJD

DV fit results are unavailable

DV Diagnostic Results:

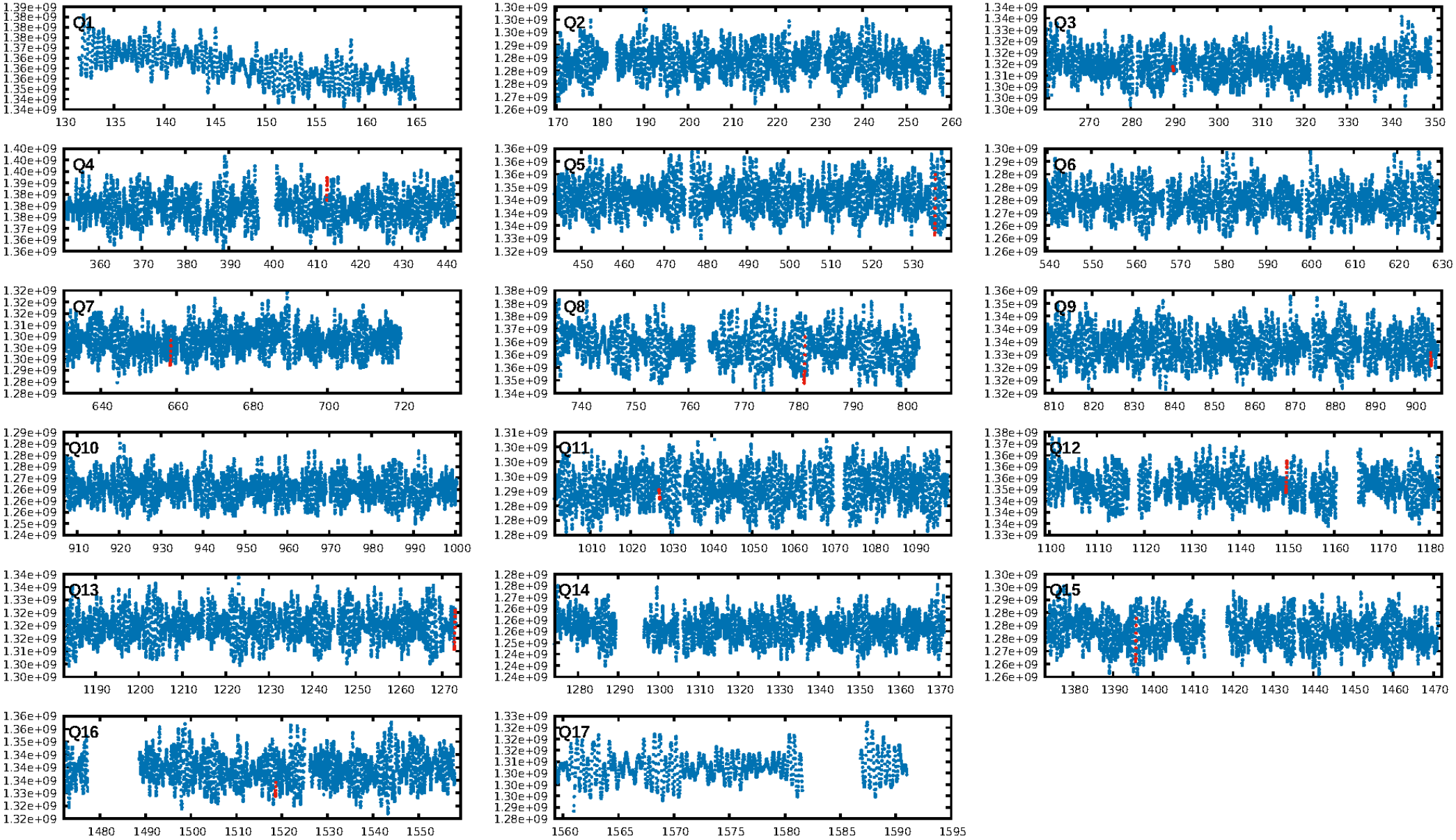
ShortPeriod−sig: 100.0% [1128.35σ]
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: N/A
RollingBand−fgt: 1.00 [8/8]
GhostDiagnostic−chr: −27.6

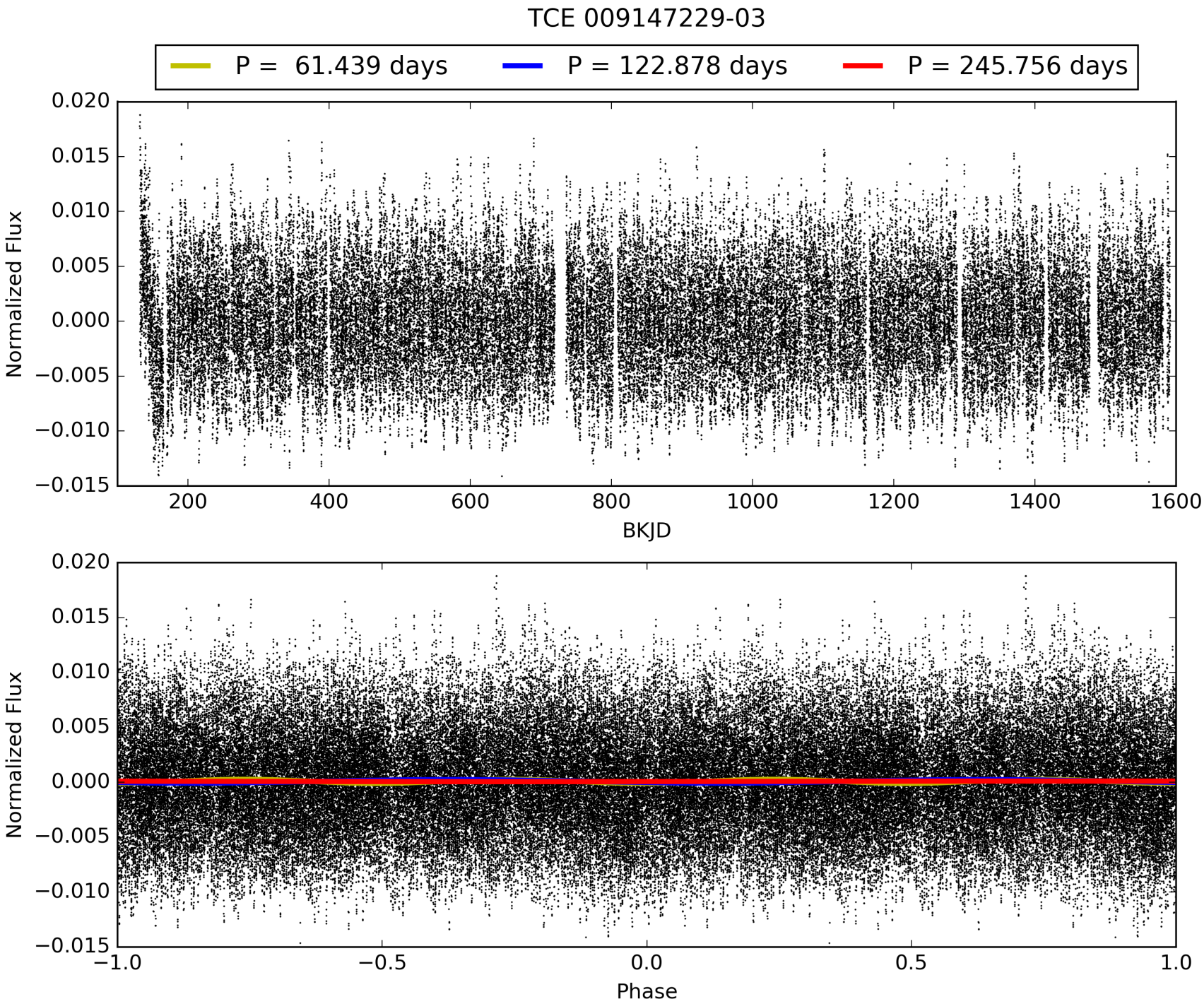
Centroid−sig: 34.9%
Centroid−so: 0.190 arcsec [6.11σ]
OotOffset−rm: 1.053 arcsec [2.35σ]
KicOffset−rm: 1.324 arcsec [2.48σ]
OotOffset−st: 0/3/4/2 [9]
KicOffset−st: 0/3/4/2 [9]
DiffImageQuality−fgm: 0.33 [3/9]
DiffImageOverlap−fno: 0.00 [0/9]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 −− Date Generated: 30−Jan−2016 07:29:57 Z

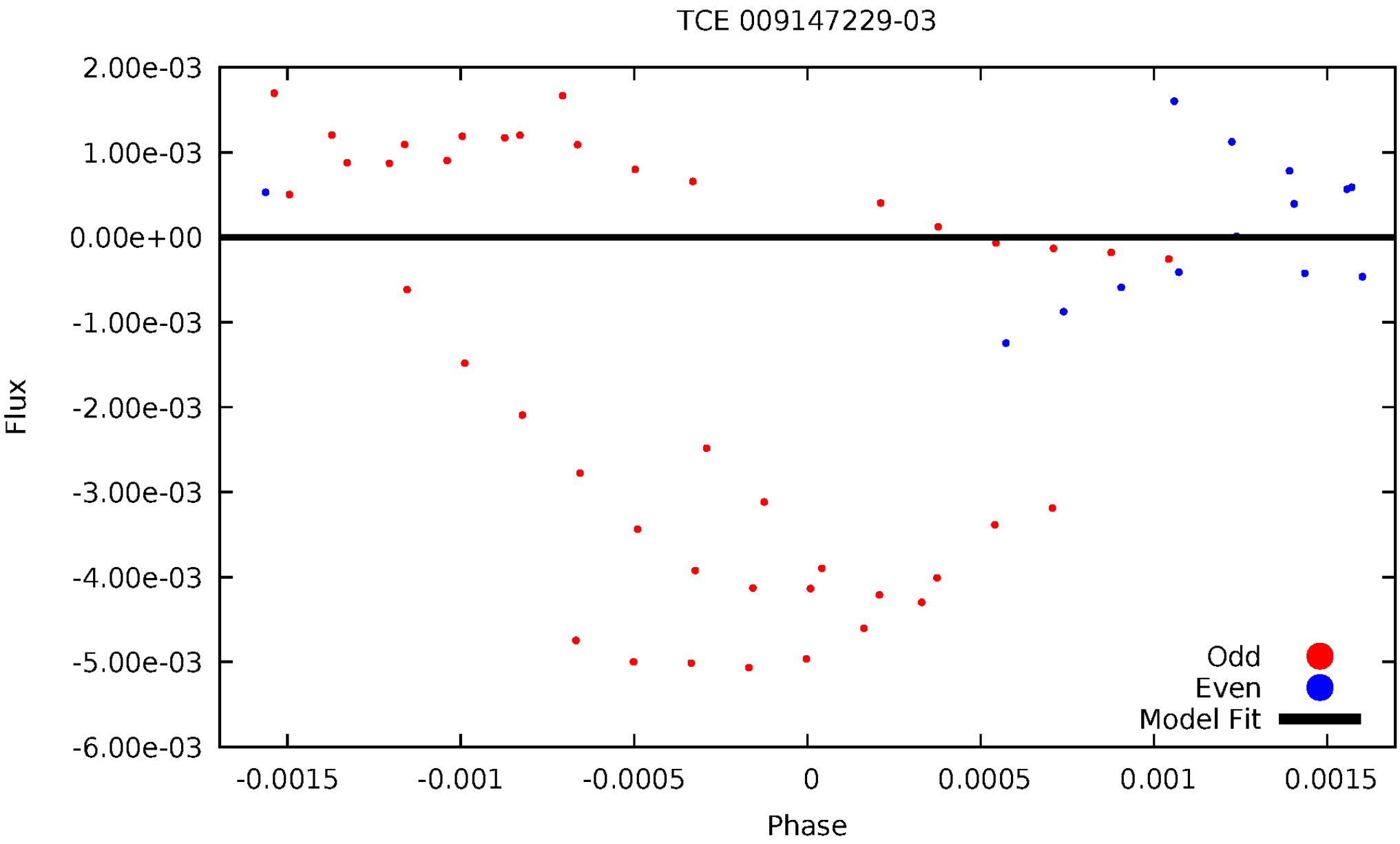
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 009147229-03, PDC Light Curves

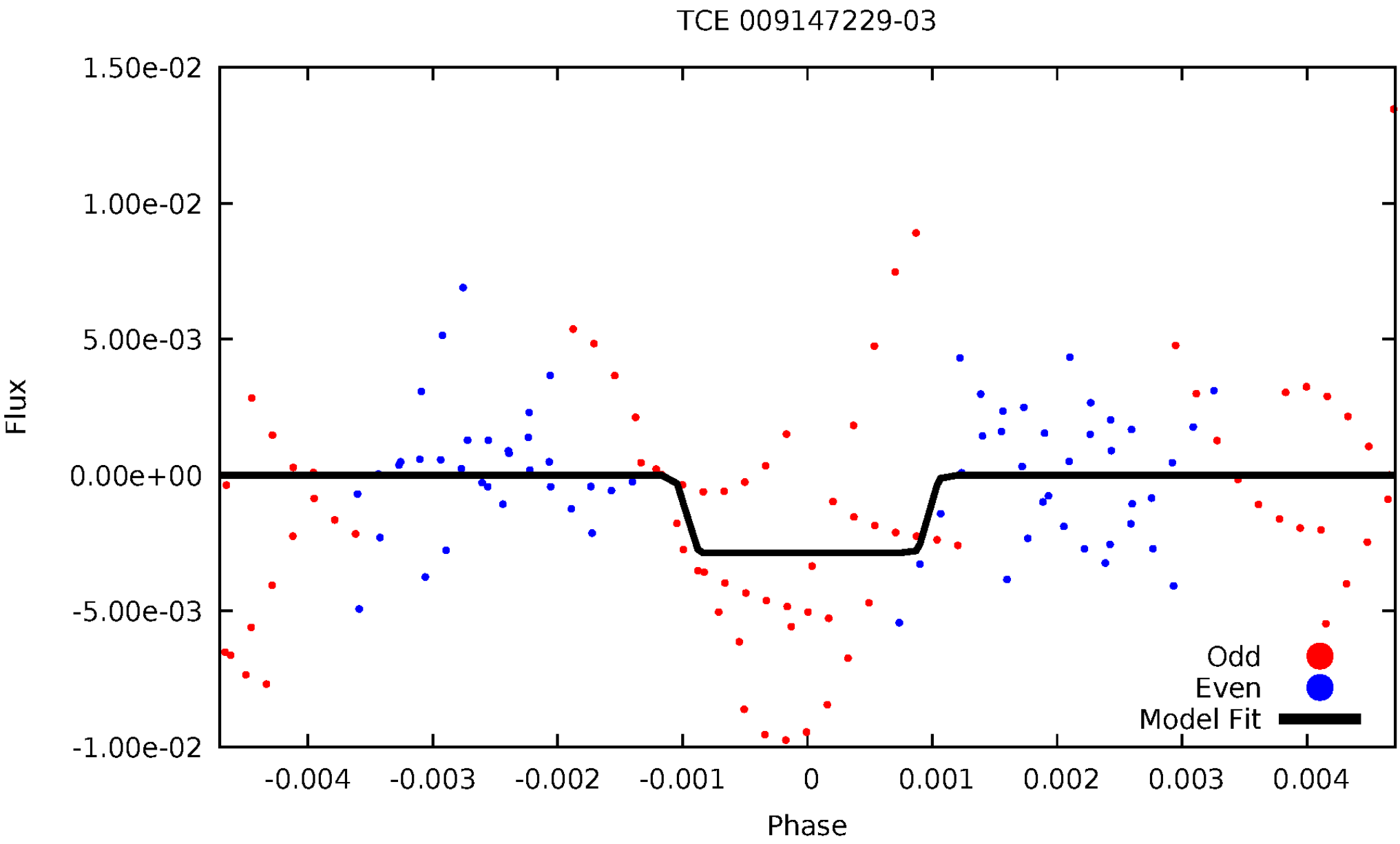



TCE 009147229-03
P = 61.439 days
P = 122.878 days
P = 245.756 days
Normalized Flux
BKJD
Normalized Flux
Phase

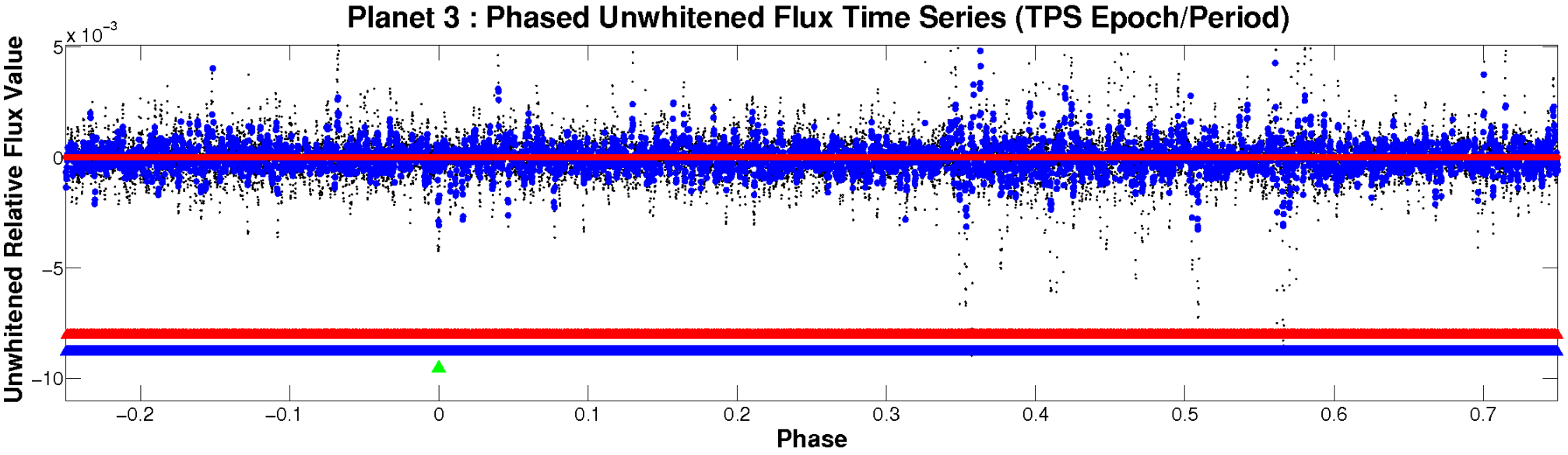
DV Odd/Even

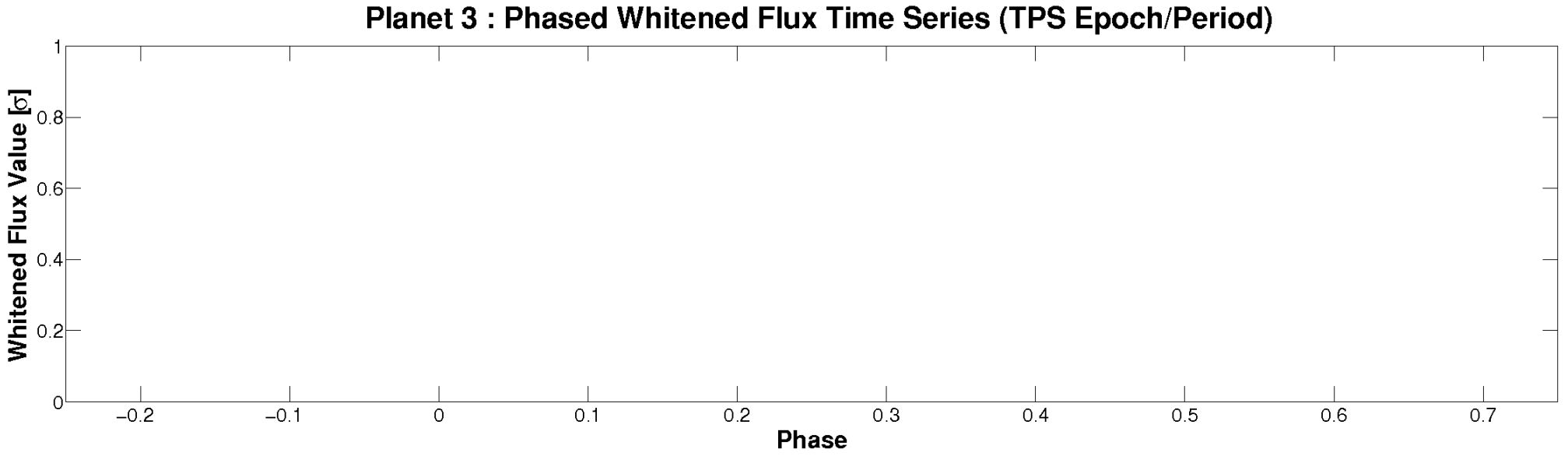

TCE 009147229-03
2.00e-03
1.00e-03
0.00e+00
-1.00e-03
-2.00e-03
-3.00e-03
-4.00e-03
-5.00e-03
-6.00e-03
Flux
-0.0015
-0.001
-0.0005
0
0.0005
0.001
0.0015
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 009147229-03
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

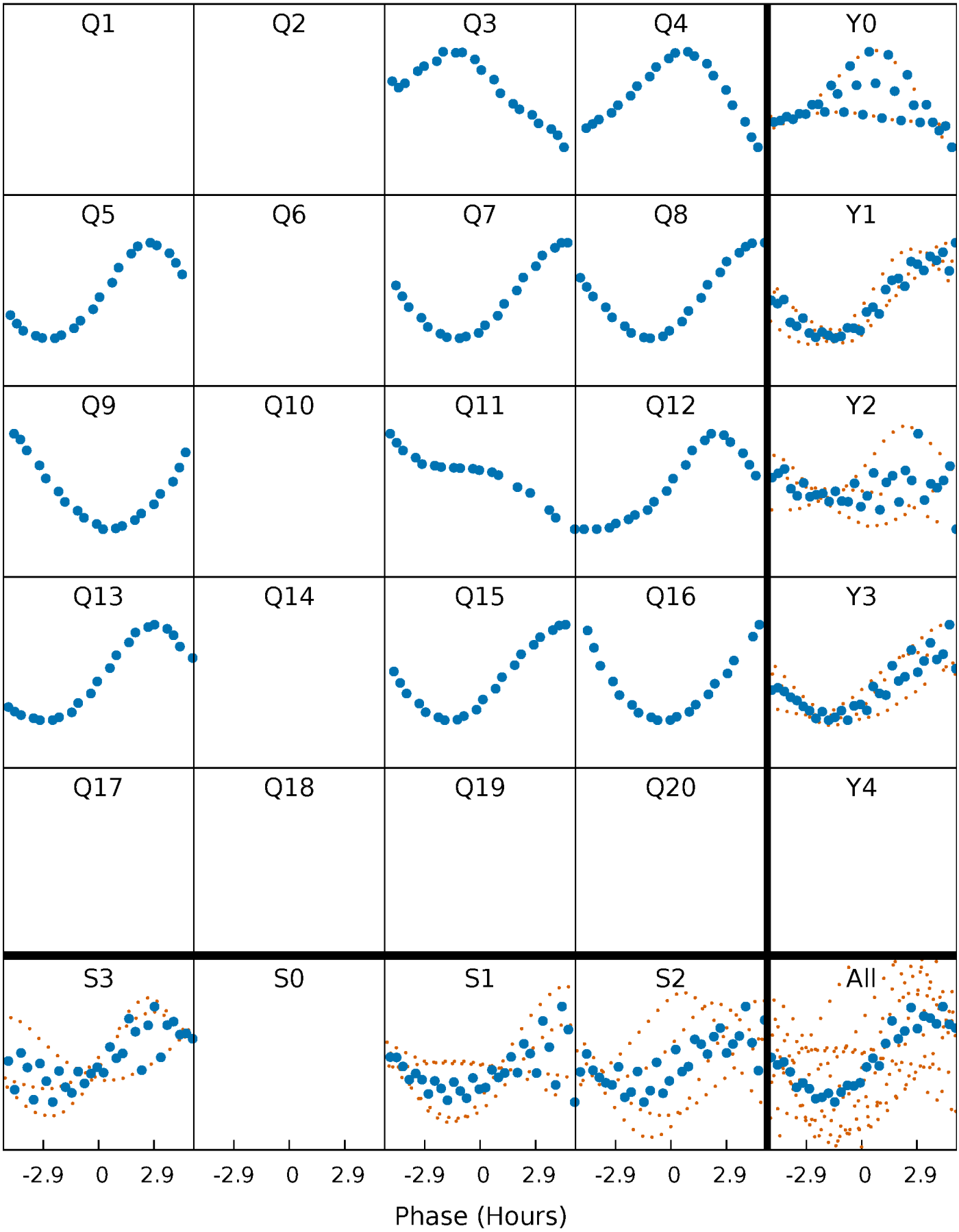
Non-Whitened Vs. Whitened Light Curve





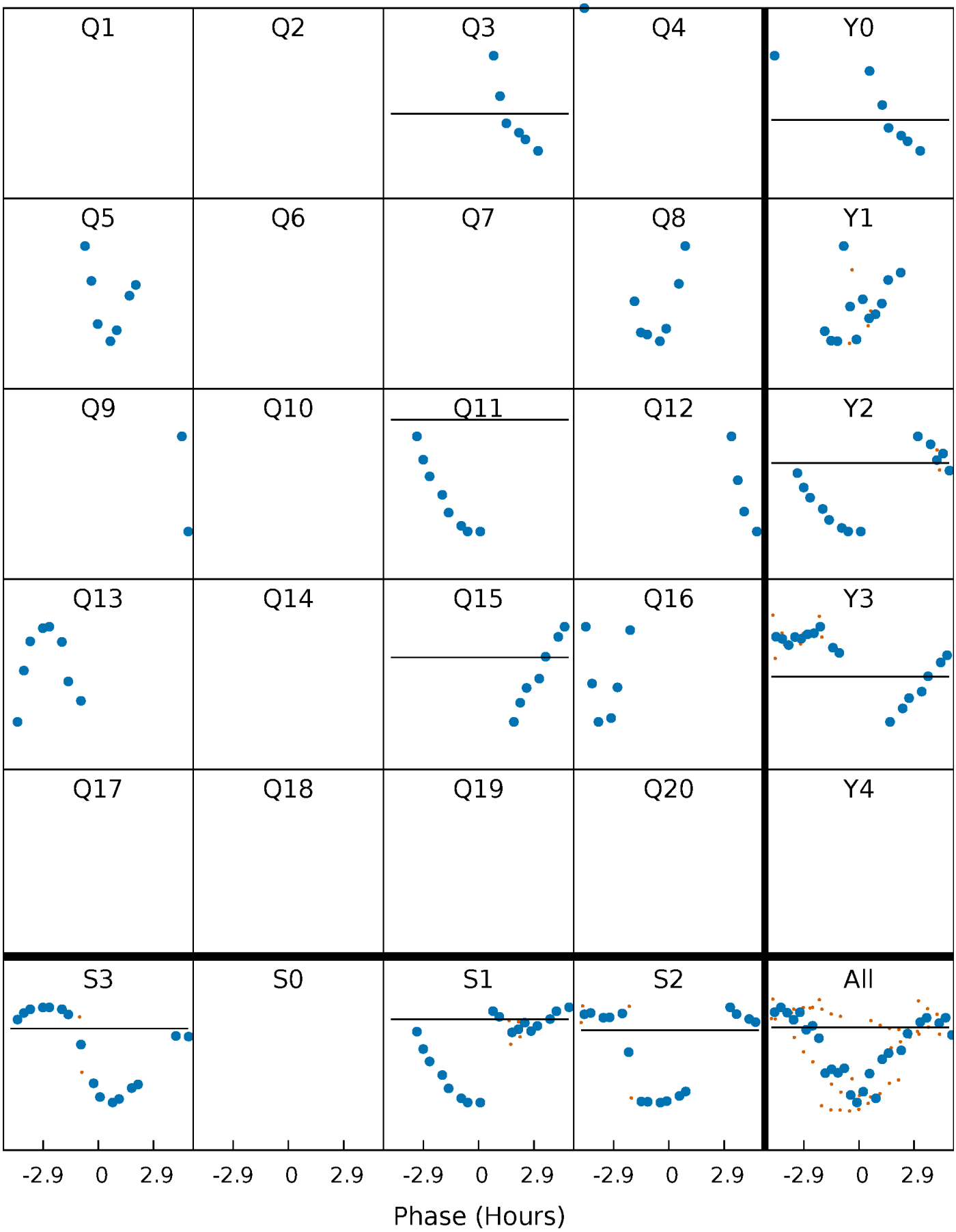
PDC Quarter-Phased Transit Curves

TCE 009147229-03 P=122.878226 Days T_0=166.927669 (BKJD)



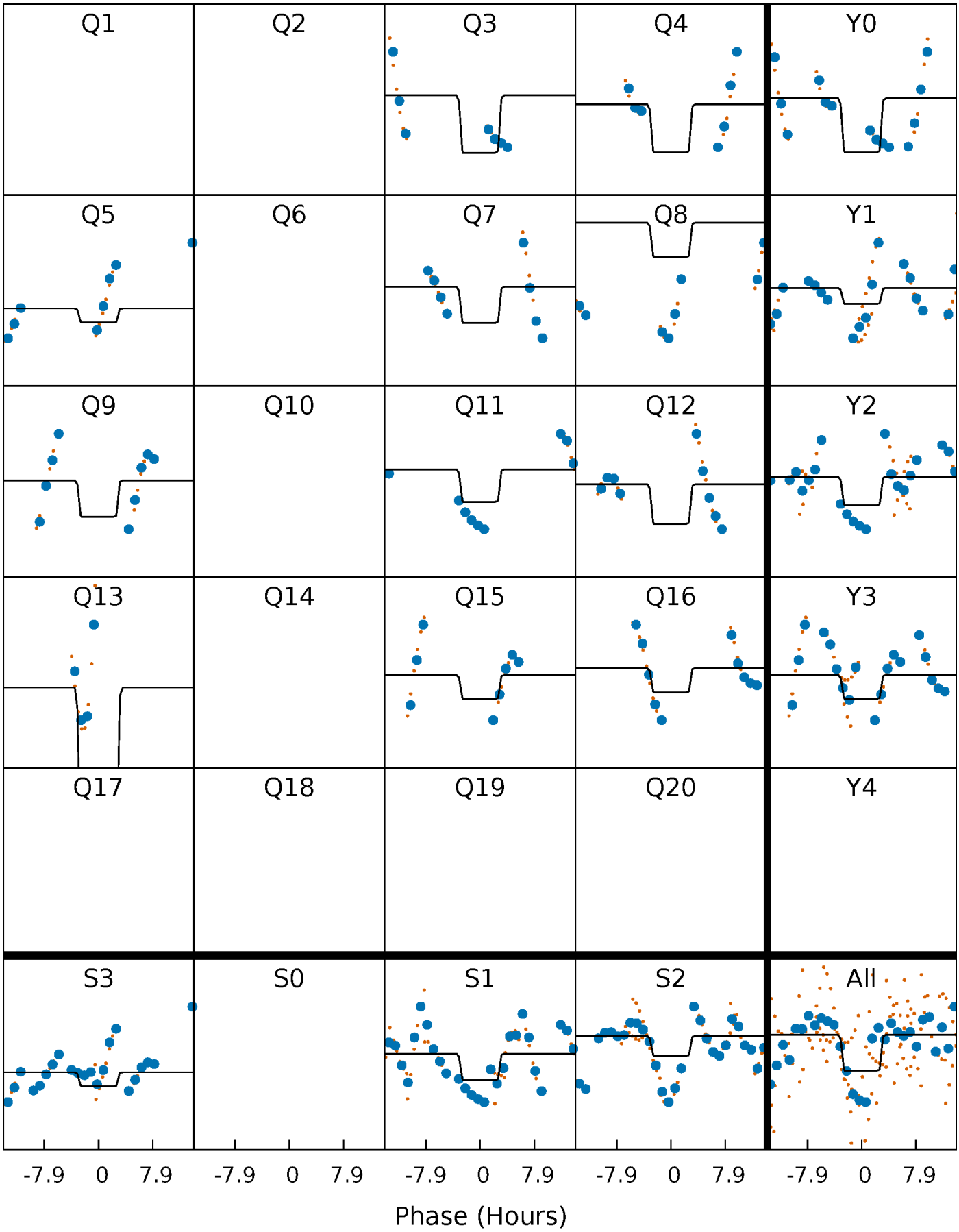
DV Quarter-Phased Transit Curves

TCE 009147229-03 P=122.878226 Days T_0=166.927669 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

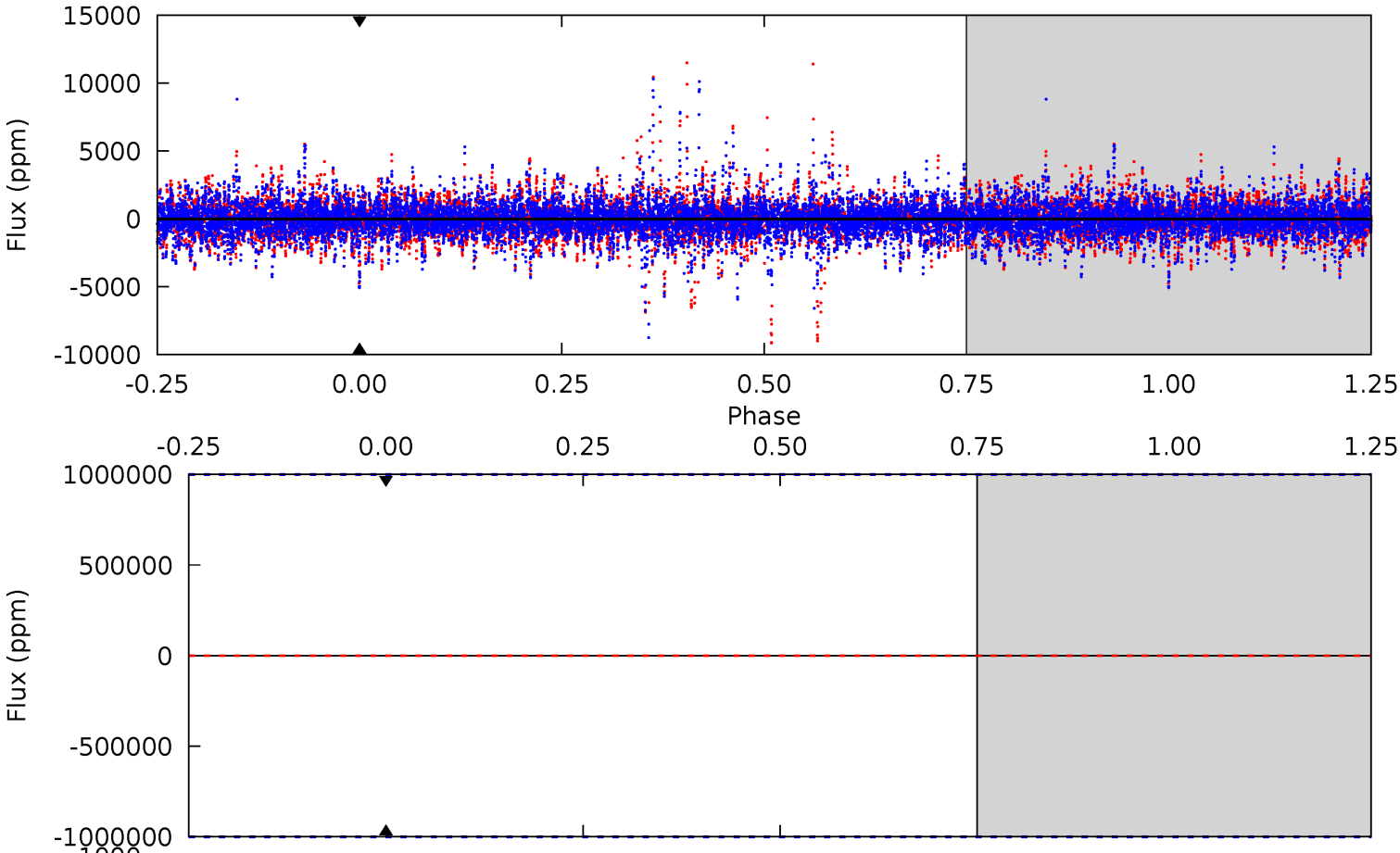
TCE 009147229-03 P=122.878226 Days T_0=166.907777 (BKJD)

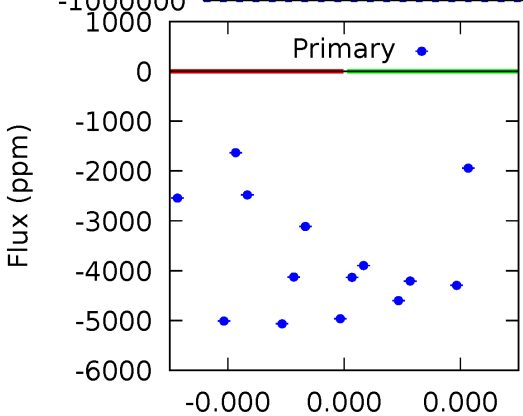


DV Model-Shift Uniqueness Test

009147229-03, P = 122.878226 Days, E = 44.049443 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

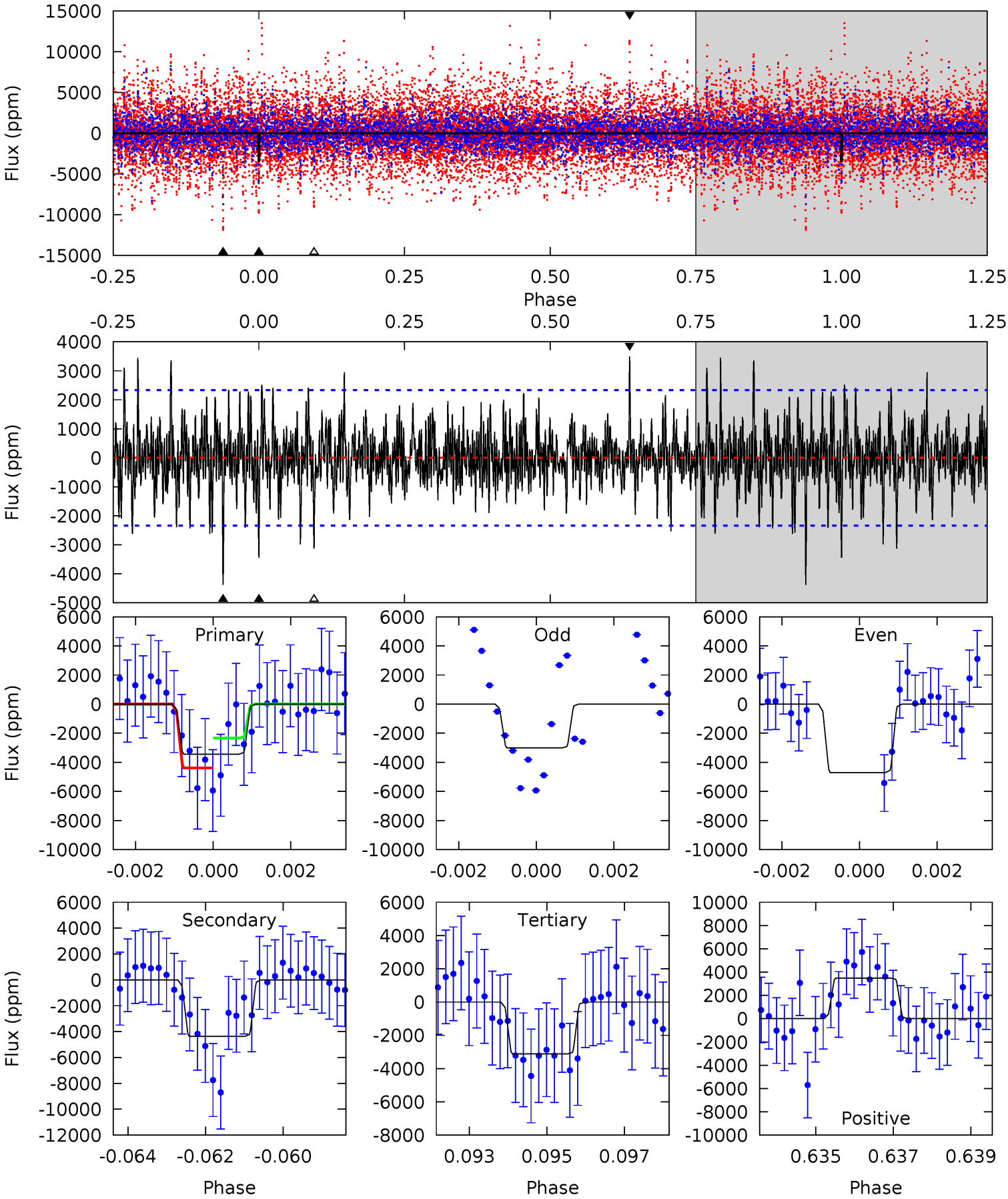




Alt Model-Shift Uniqueness Test

009147229-03, P = 122.878226 Days, E = 44.029551 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.81	9.94	7.10	7.93	5.31	3.06	1.92	0.71	-0.12	2.84	2.00	1.18	0.71	0.44	2.34



Stellar Parameters For KIC 009147229

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	7542^{+233}_{-311}	$3.531^{+0.639}_{-0.071}$	$-0.380^{+0.250}_{-0.300}$	$3.959^{+0.413}_{-2.338}$	$1.943^{+0.069}_{-0.618}$	$0.044^{+0.421}_{-0.010}$
	+3%/-4%	+18%/-2%	+66%/-79%	+10%/-59%	+4%/-32%	+953%/-23%
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 009147229-03 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0±1000000	$25.83^{+31.18}_{-18.56}$	1137^{+92}_{-179}	4095^{+40610}_{-43310}	106^{+56362}_{-47143}
Alt.	-4372±440	$31.98^{+35.34}_{-20.67}$	1141^{+90}_{-175}	6248^{+6538}_{-1532}	825^{+5739}_{-637}

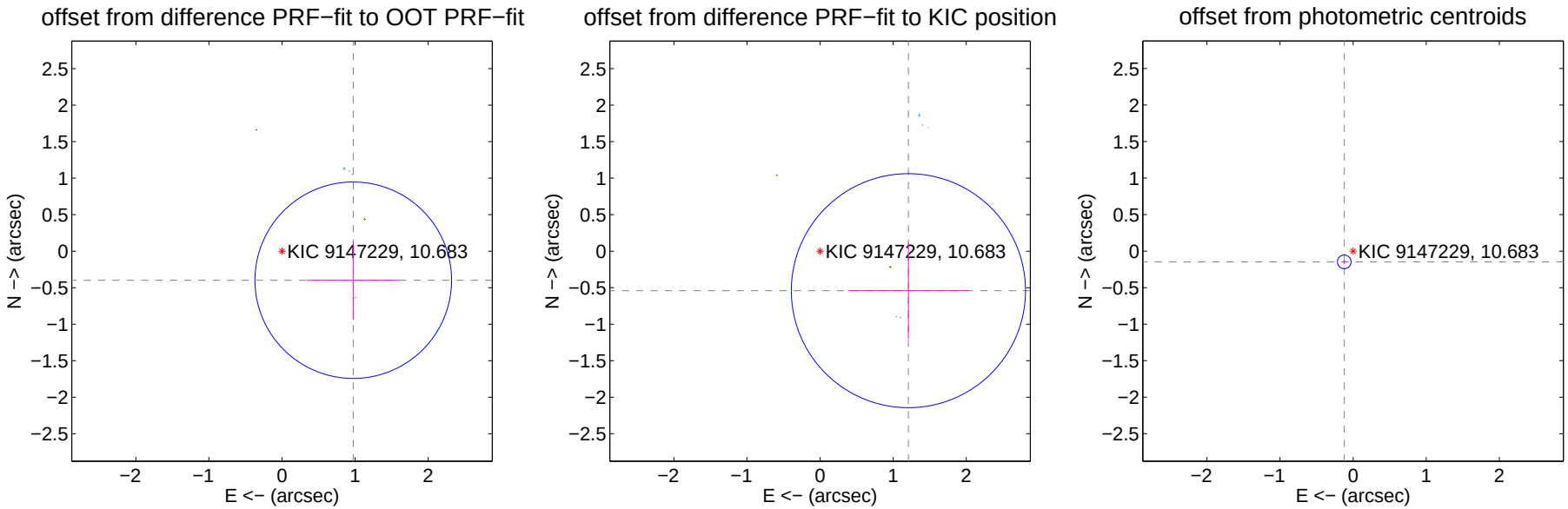
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

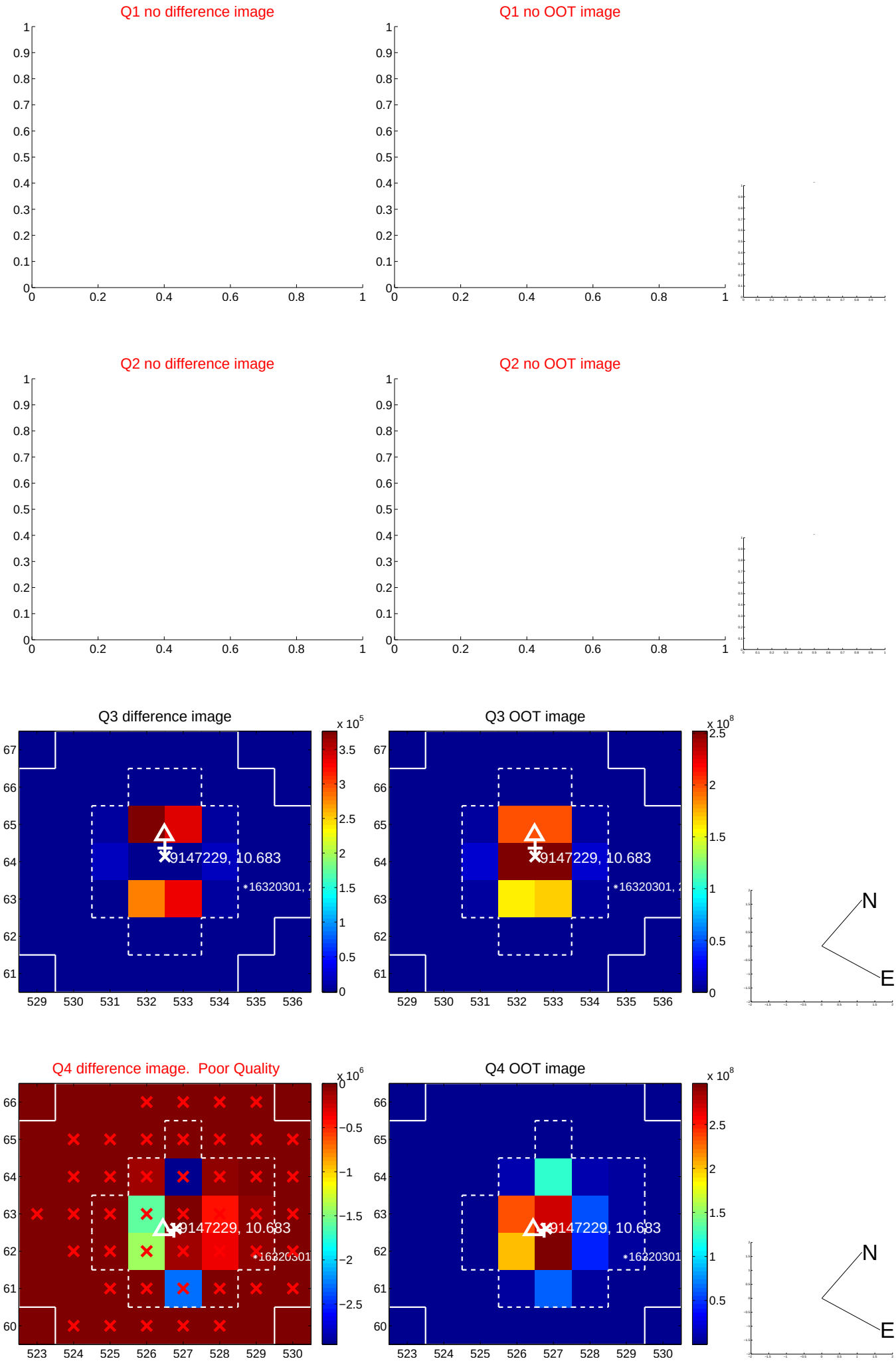
Supplemental centroid analysis for 009147229-03. Kepler magnitude: 10.68. Transit SNR -1.00
There are 3 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.053 ± 0.448	2.35	-0.975 ± 0.632	-0.398 ± 0.542
PRF-fit source offset from KIC position	1.324 ± 0.534	2.48	-1.209 ± 0.818	-0.541 ± 0.656
photometric centroid source offset	0.19 ± 0.03	6.11	0.12 ± 0.03	-0.15 ± 0.03

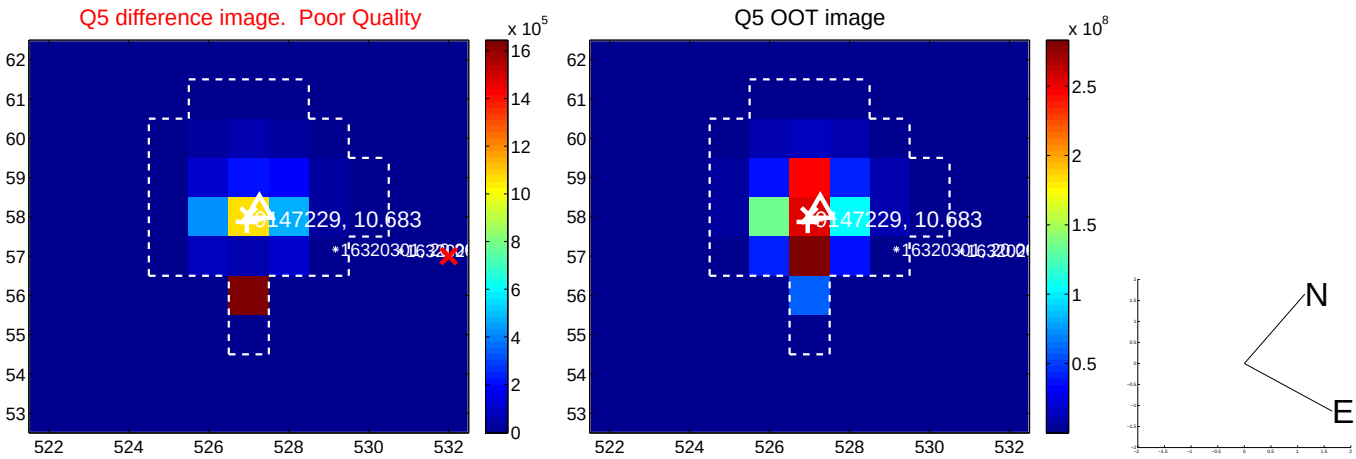


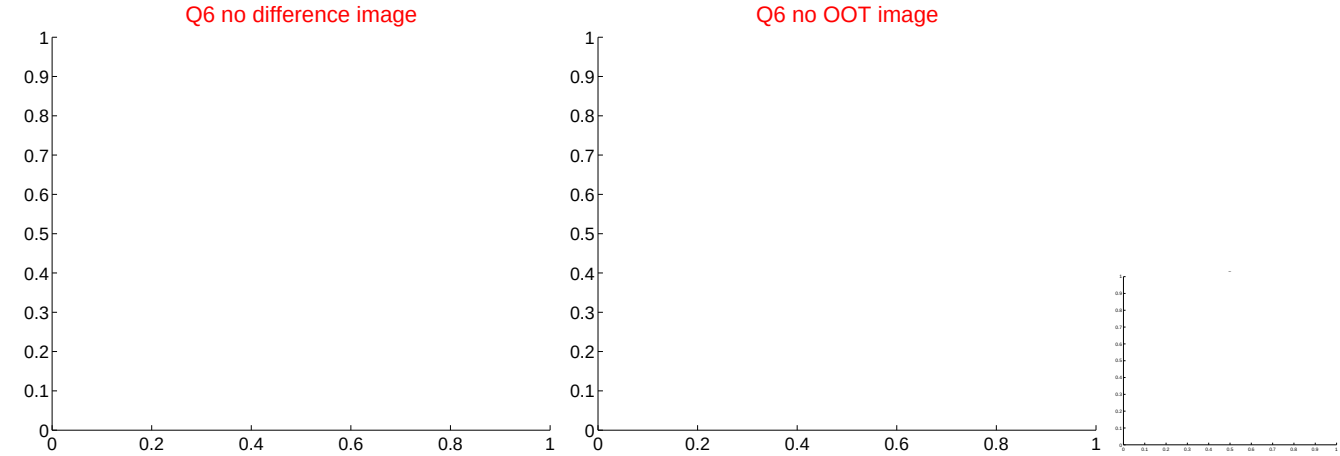
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

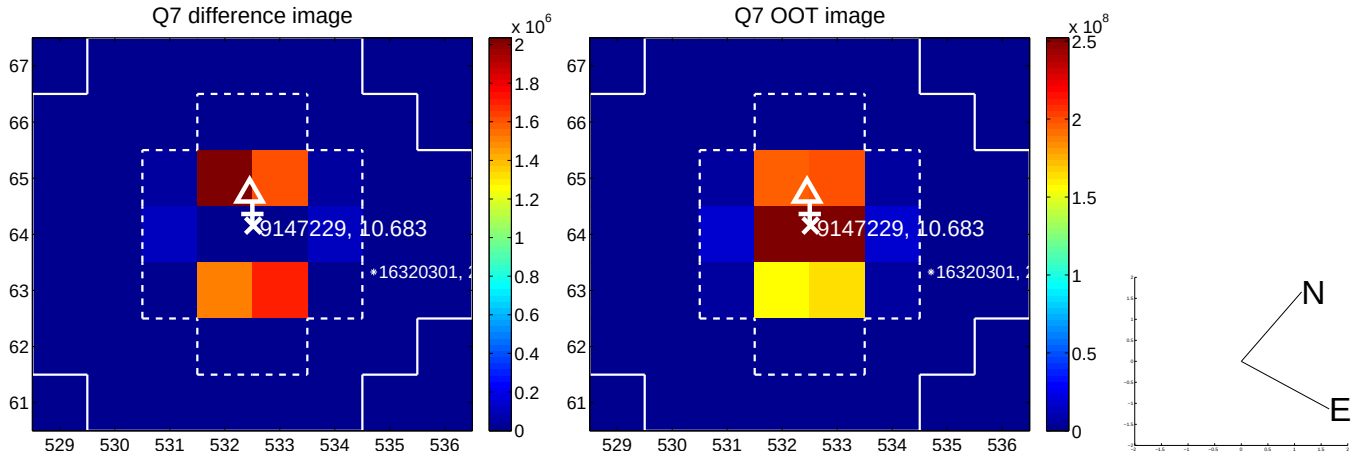
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

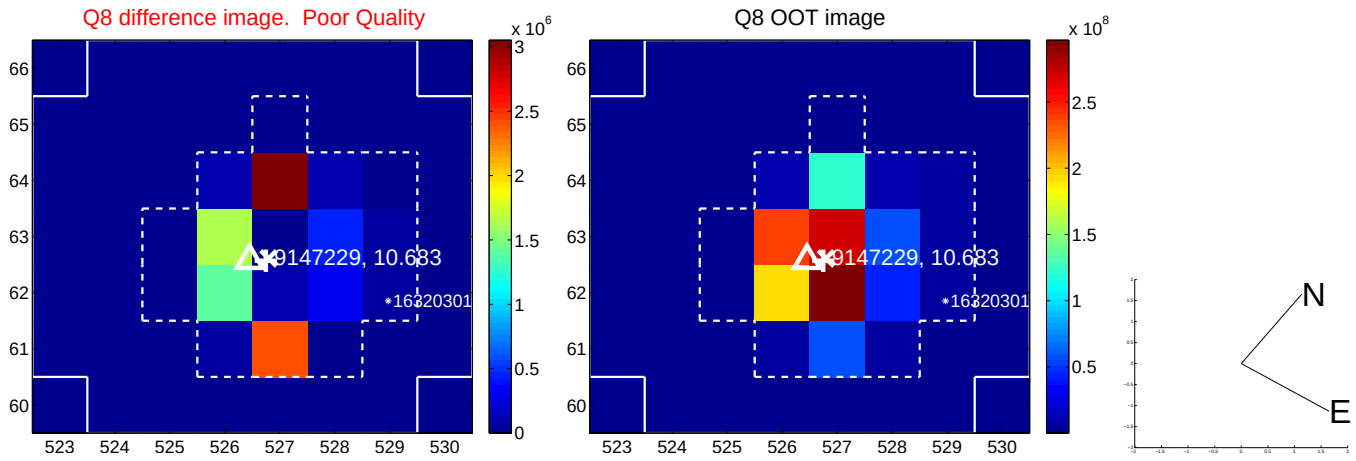


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

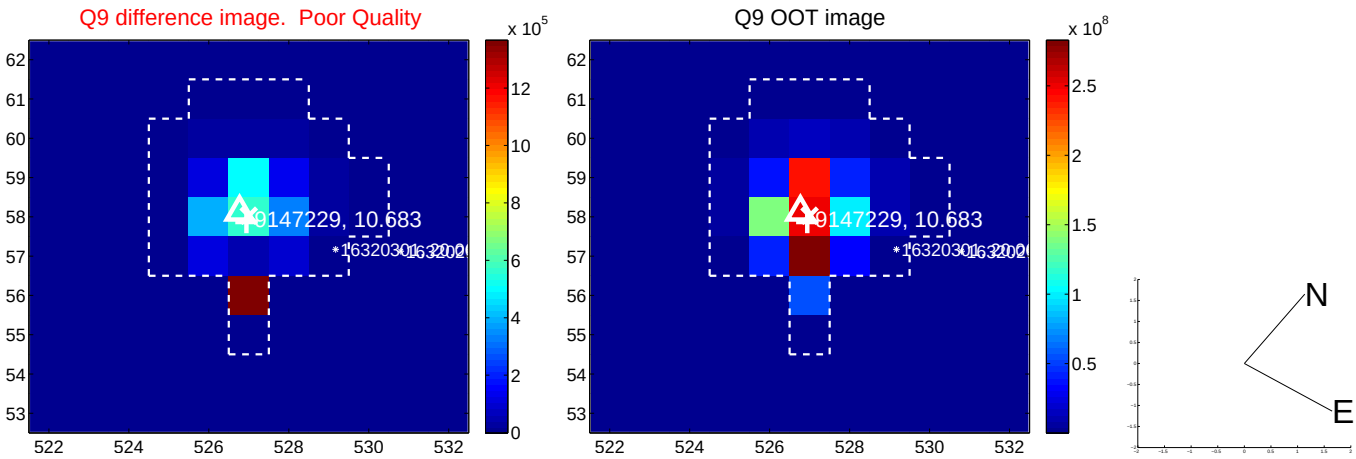


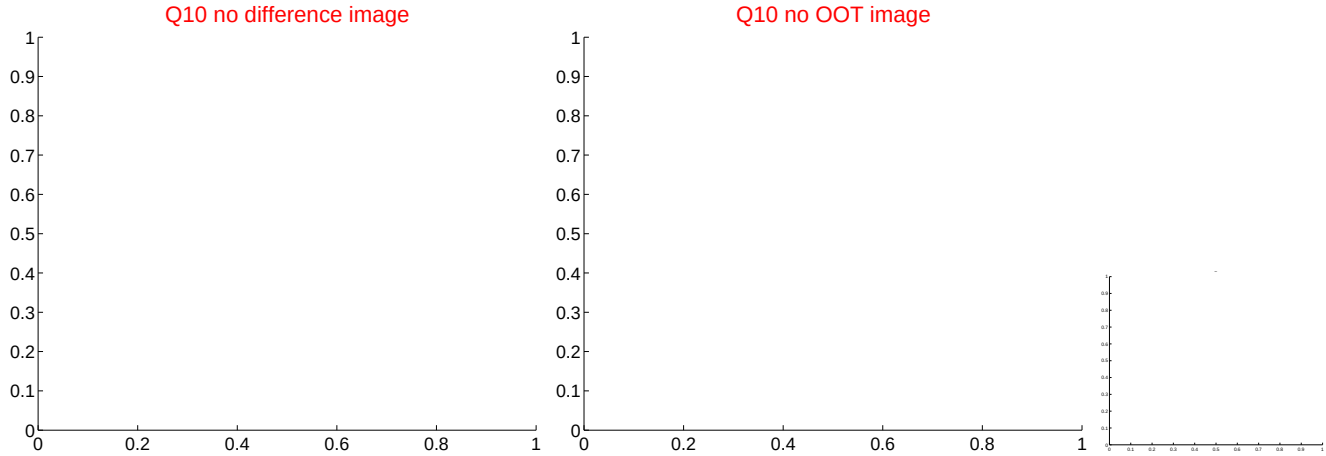


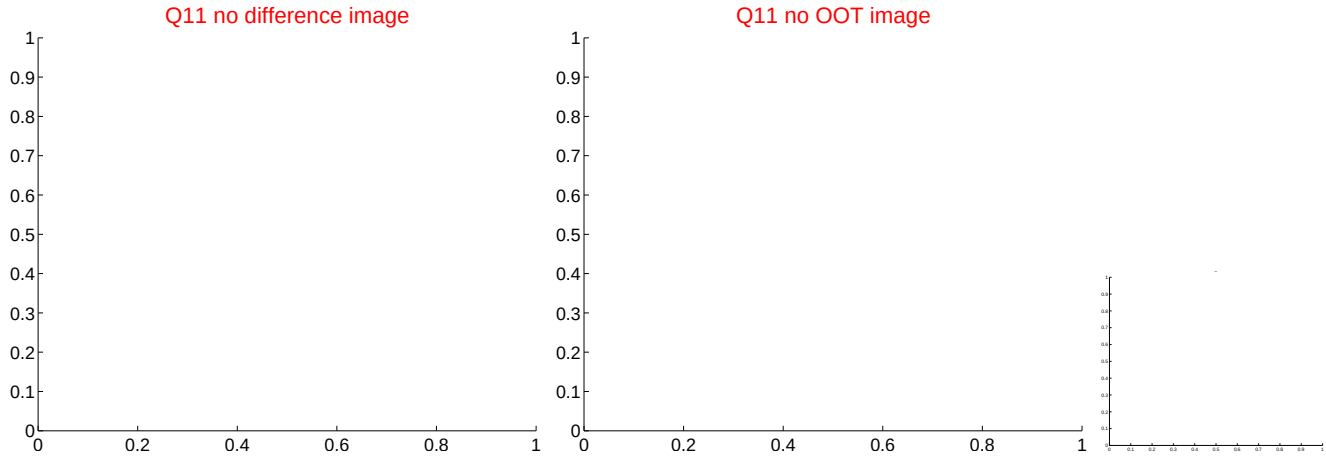


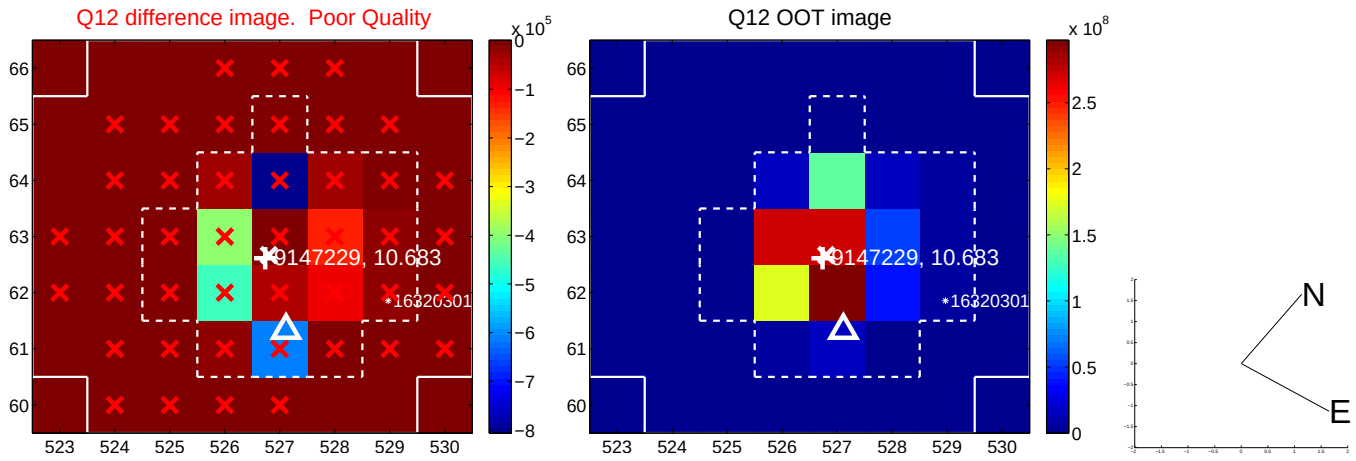


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

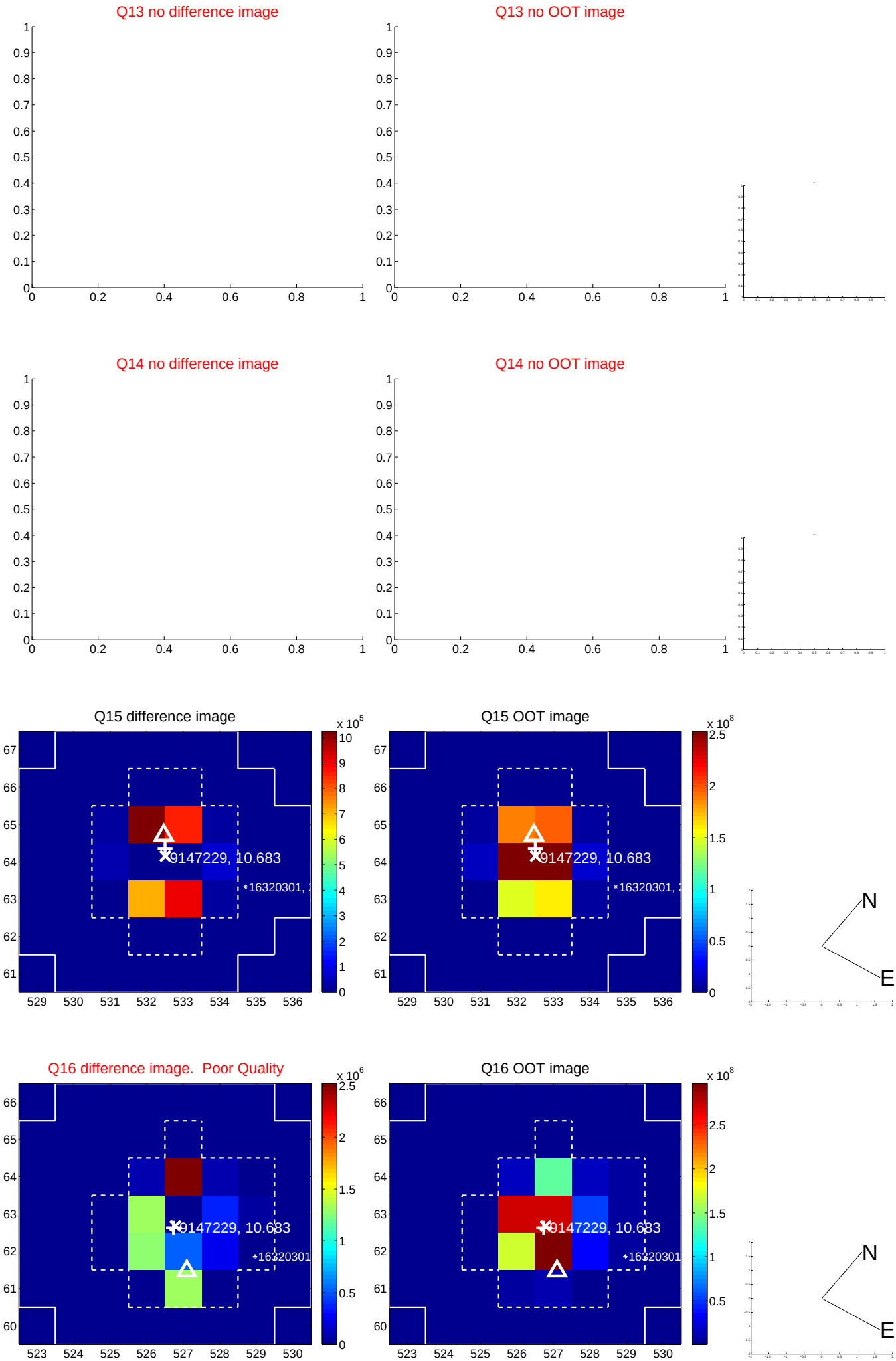




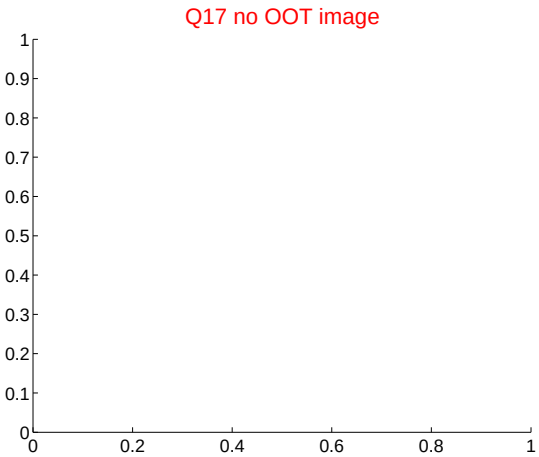


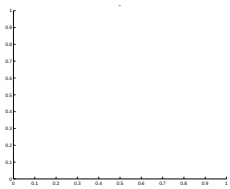


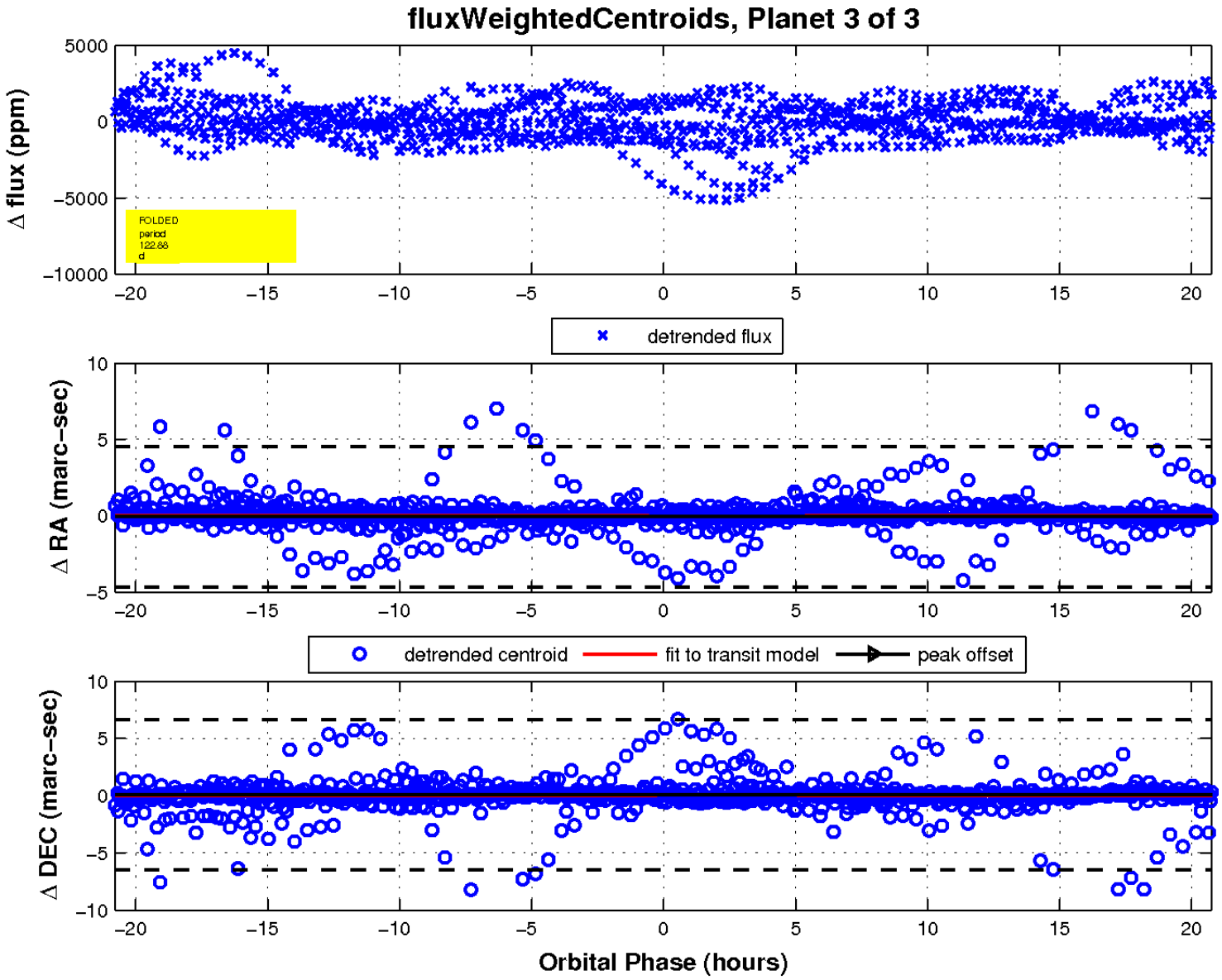
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



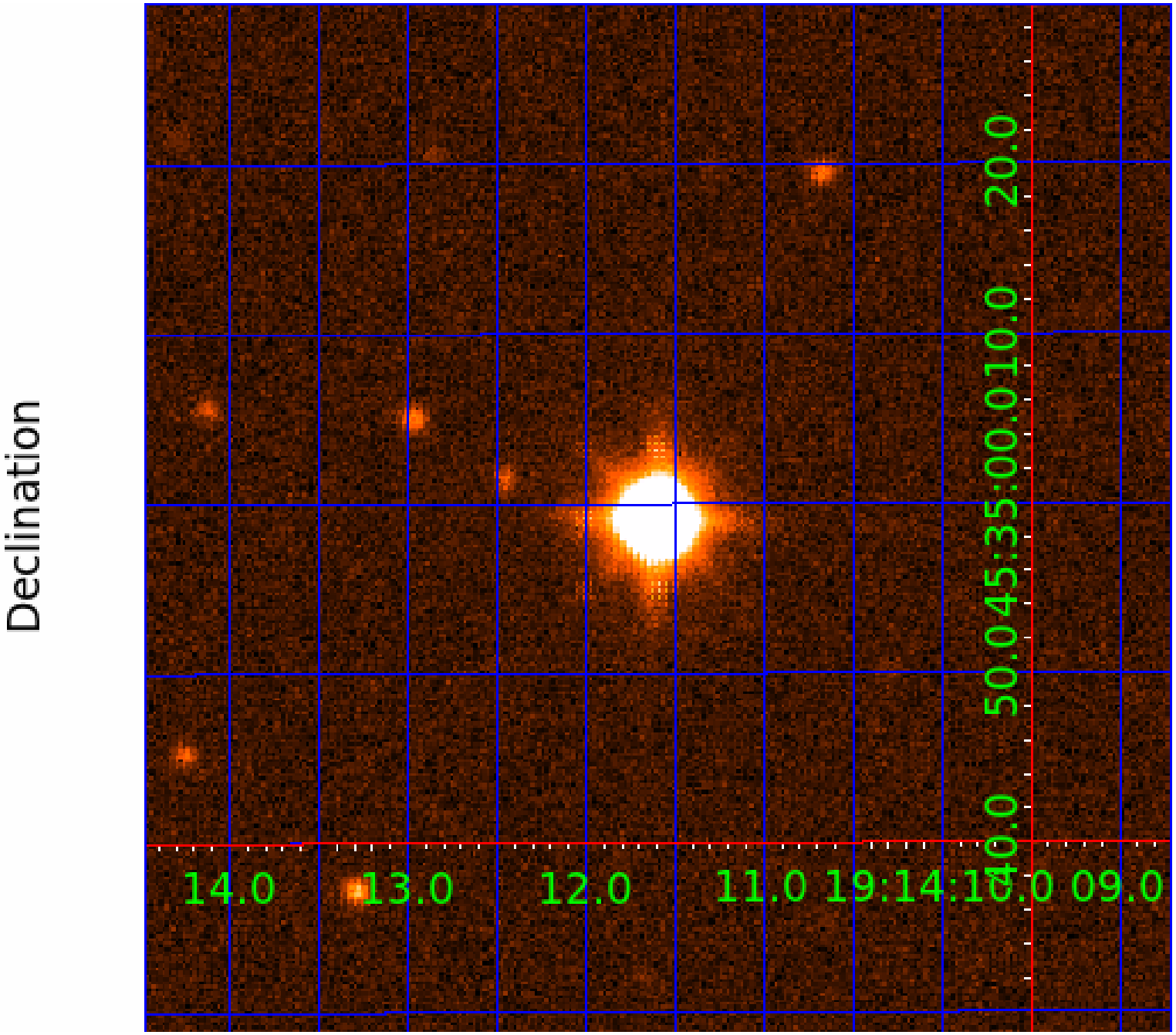
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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