KIC 011075429

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 ($S_\oplus$)
011075429-01	OBS	2198.01	23.920989	139.076752	154.5	4.970	14.5	16.3	1.97	7121	2.78	256.23
011075429-02	OBS	No	2.970207	133.255025	22.8	14.079	7.7	6.6	1.97	7121	1.85	4136.32
011075429-03	OBS	No	232.879284	220.802473	204.2	14.518	11.2	8.6	1.97	7121	3.11	12.33
011075429-05	OBS	No	113.483857	243.296868	142.3	16.305	8.7	6.8	1.97	7121	2.62	32.14
011075429-06	OBS	No	134.928395	201.311999	201.5	6.788	7.9	7.4	1.97	7121	3.20	25.52
011075429-07	OBS	No	118.726252	217.971834	152.6	5.625	8.4	9.4	1.97	7121	2.86	30.27
011075429-08	OBS	No	93.222487	139.641842	146.1	7.395	7.5	7.5	1.97	7121	2.71	41.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011075429-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
011075429-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011075429-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
011075429-07	OBS	FP	0.02	1	0	0	0	MOD_NONUNIQ_ALT—CENT_FEW_MEAS
011075429-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

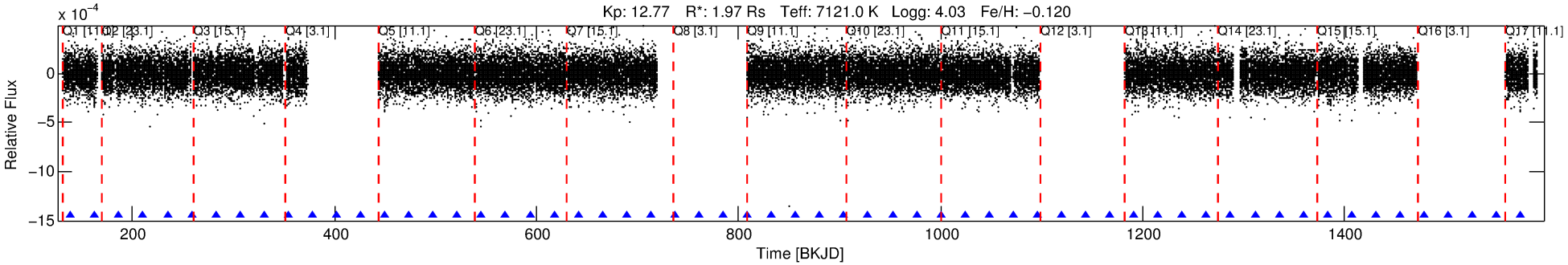
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

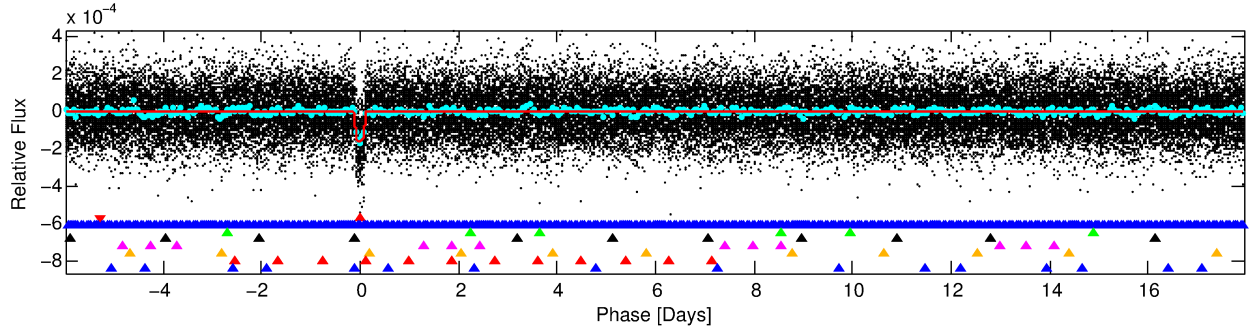
Ephemeris Match Information For 011075429-01

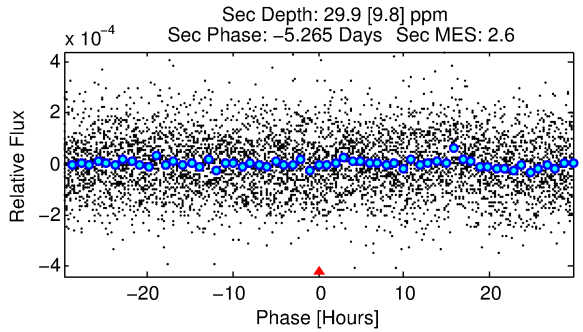
No Significant Match Found

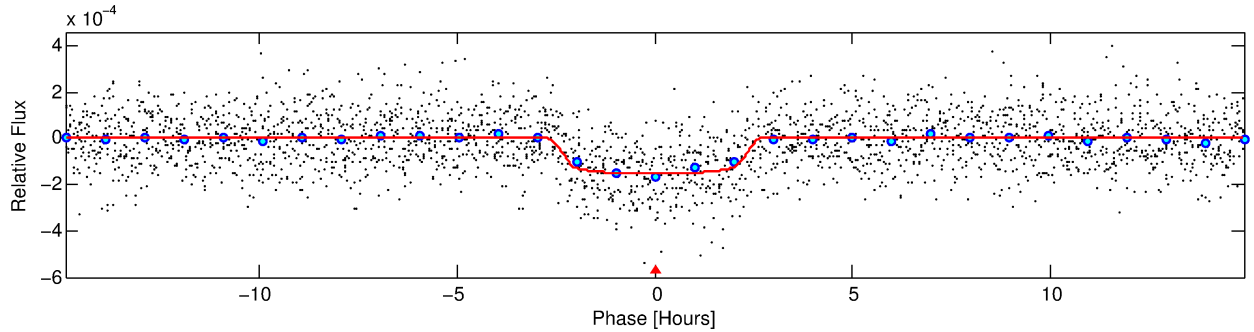
DV One-Page Summary

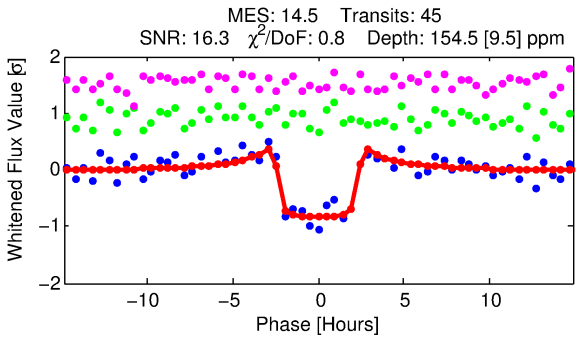
KIC: 11075429 Candidate: 1 of 8 Period: 23.921 d
KOI: K02198.01 Corr: 0.971

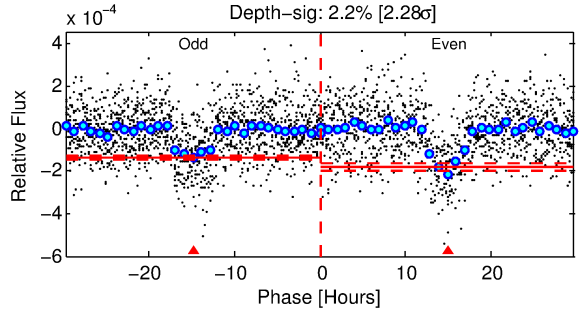


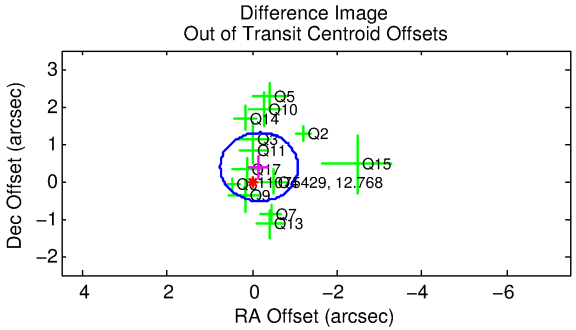












DV Fit Results:

Period = 23.92099 [0.00012] d
Epoch = 139.0768 [0.0040] BKJD
Rp/R* = 0.0129 [0.0019]
a/R* = 19.51 [17.30]
b = 0.86 [0.26]

Seff = 256.23 [93.17]
Teq = 1020 [93] K
Rp = 2.78 [0.79] Re
a = 0.1870 [0.0408] AU

Ag = 74.44 [41.46] [1.77σ]
Teffp = 4633 [540] K [6.60σ]

DV Diagnostic Results:

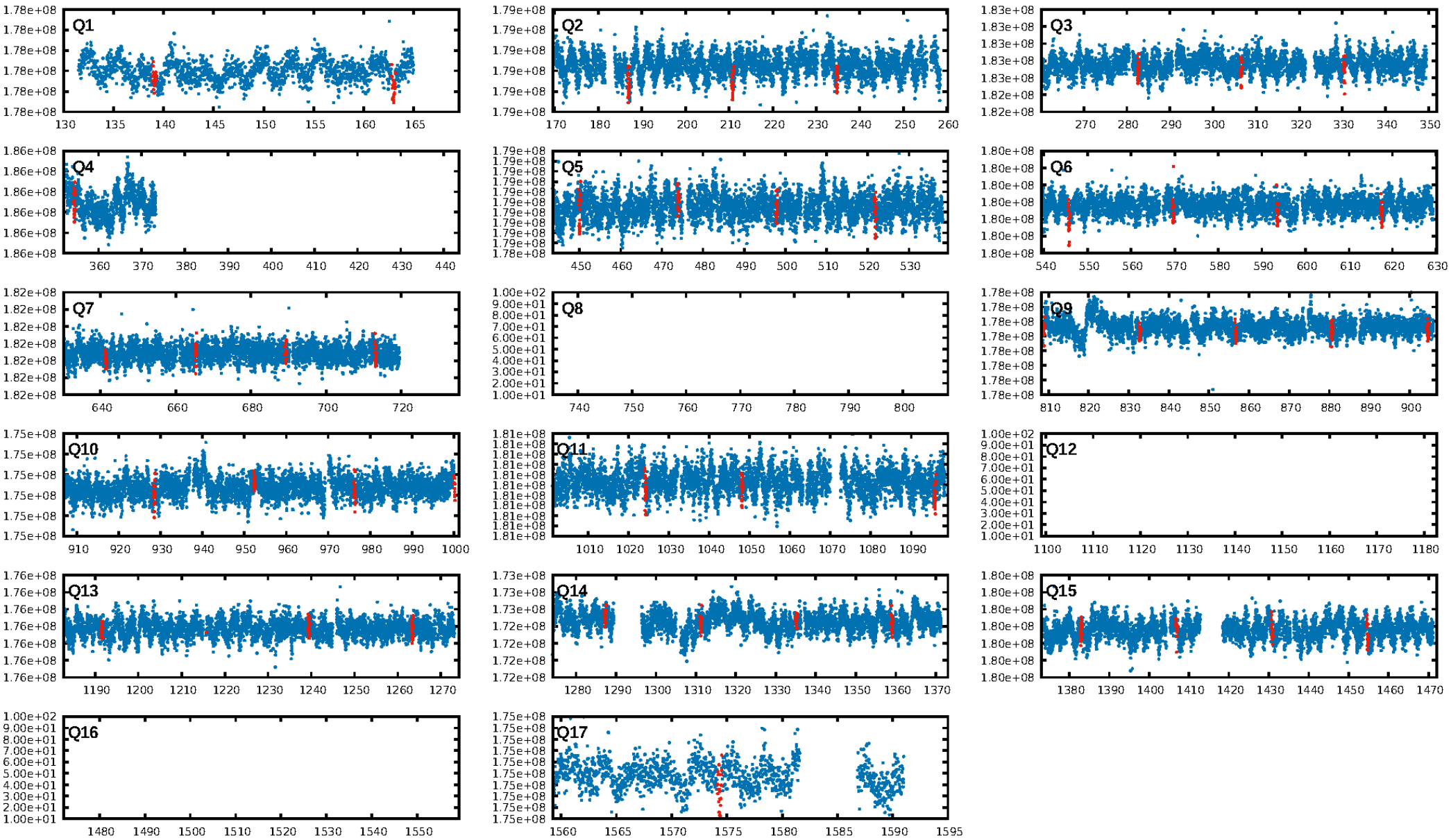
ShortPeriod−sig: 100.0% [33.68σ]
LongPeriod−sig: 100.0% [186.67σ]
ModelChiSquare2−sig: 91.4%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: 1.56e−24
RollingBand−fgt: 1.00 [41/41]
GhostDiagnostic−chr: 5.517

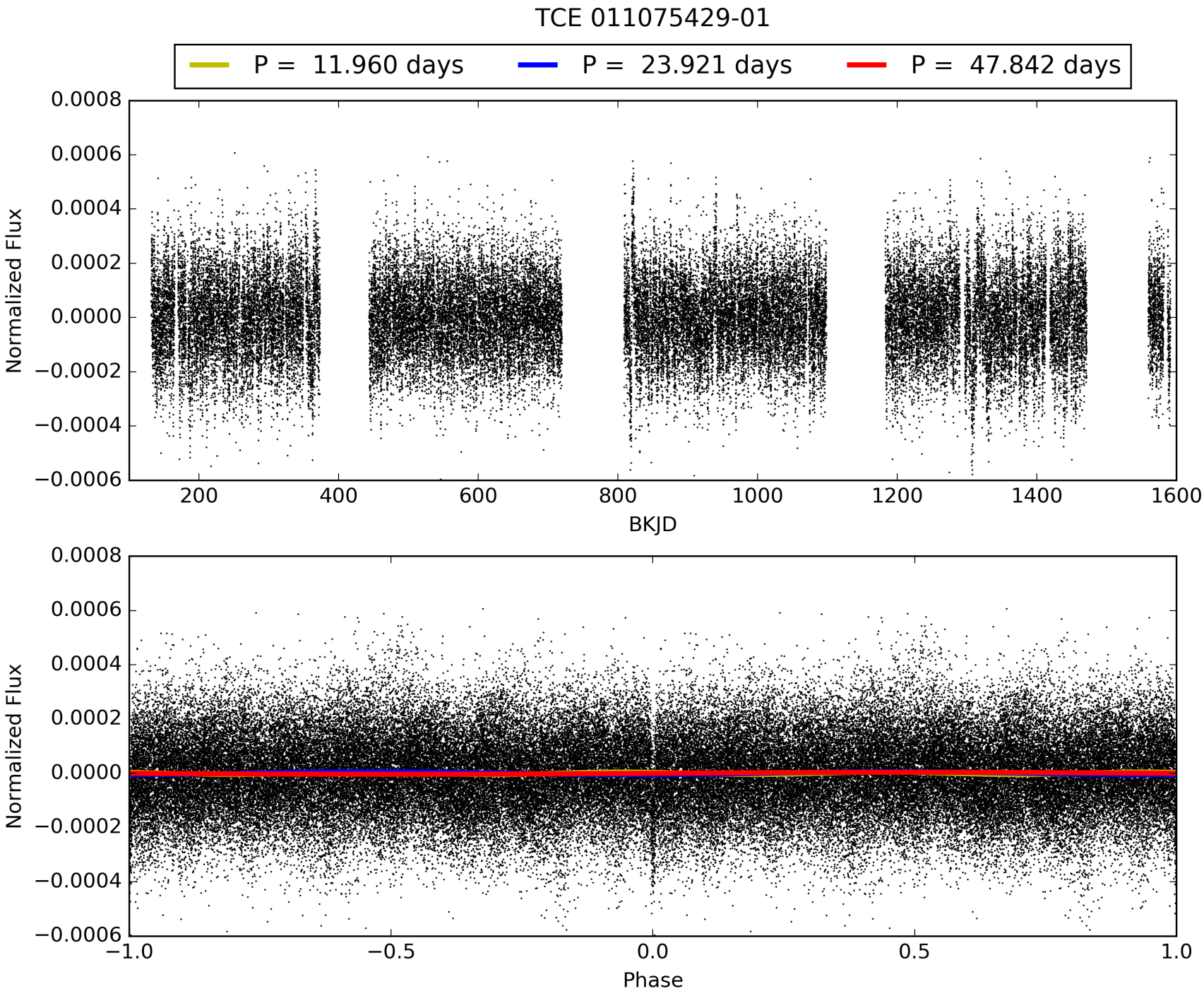
Centroid−sig: 31.4%
Centroid−so: 0.311 arcsec [0.66σ]
OotOffset−rm: 0.419 arcsec [1.38σ]
KicOffset−rm: 0.460 arcsec [1.55σ]
OotOffset−st: 4/4/1/4 [13]
KicOffset−st: 4/4/1/4 [13]
DiffImageQuality−fgm: 1.00 [13/13]
DiffImageOverlap−fno: 0.57 [8/14]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 21:21:39 Z

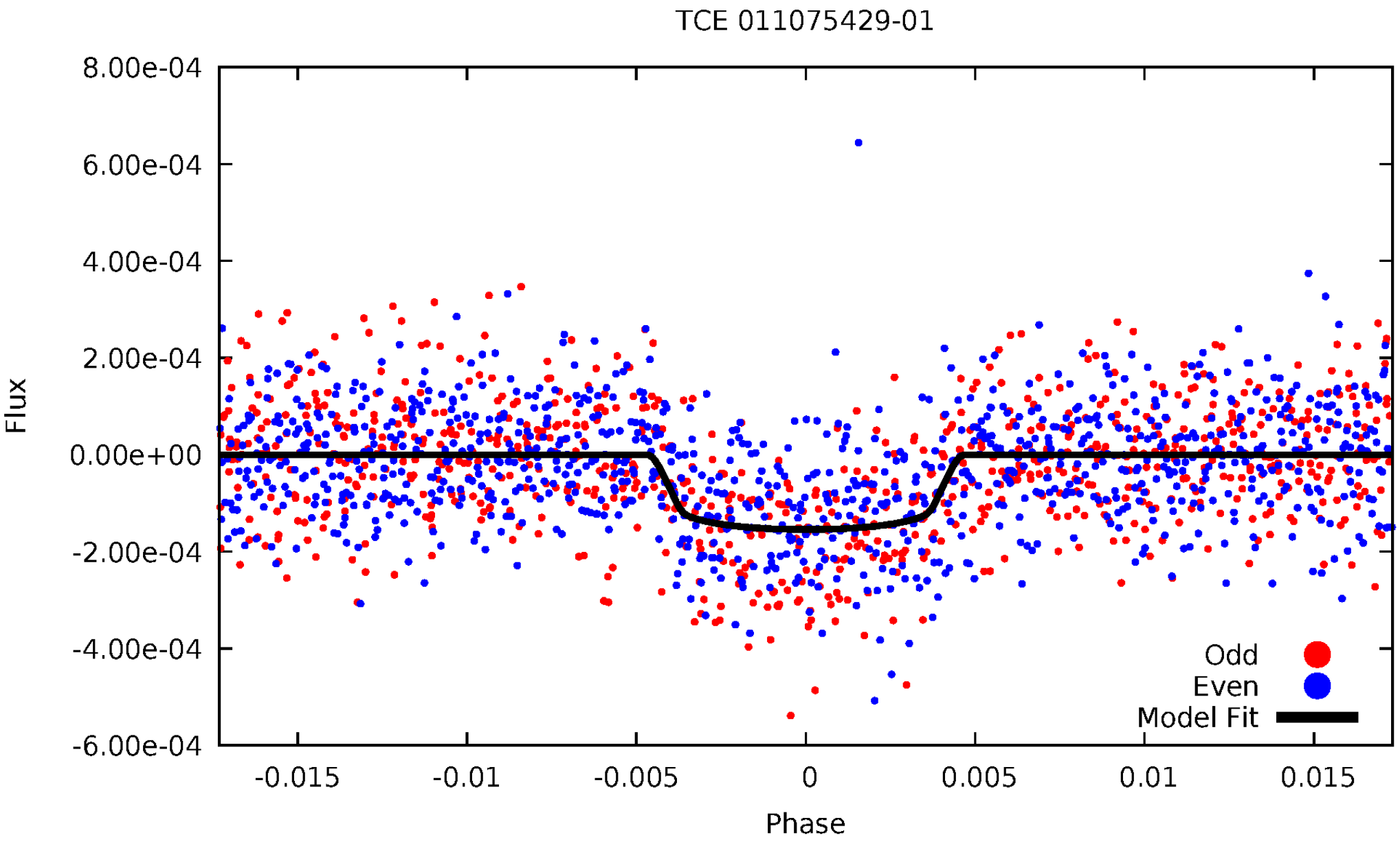
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011075429-01, PDC Light Curves




TCE 011075429-01
P = 11.960 days
P = 23.921 days
P = 47.842 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even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6.00e-04
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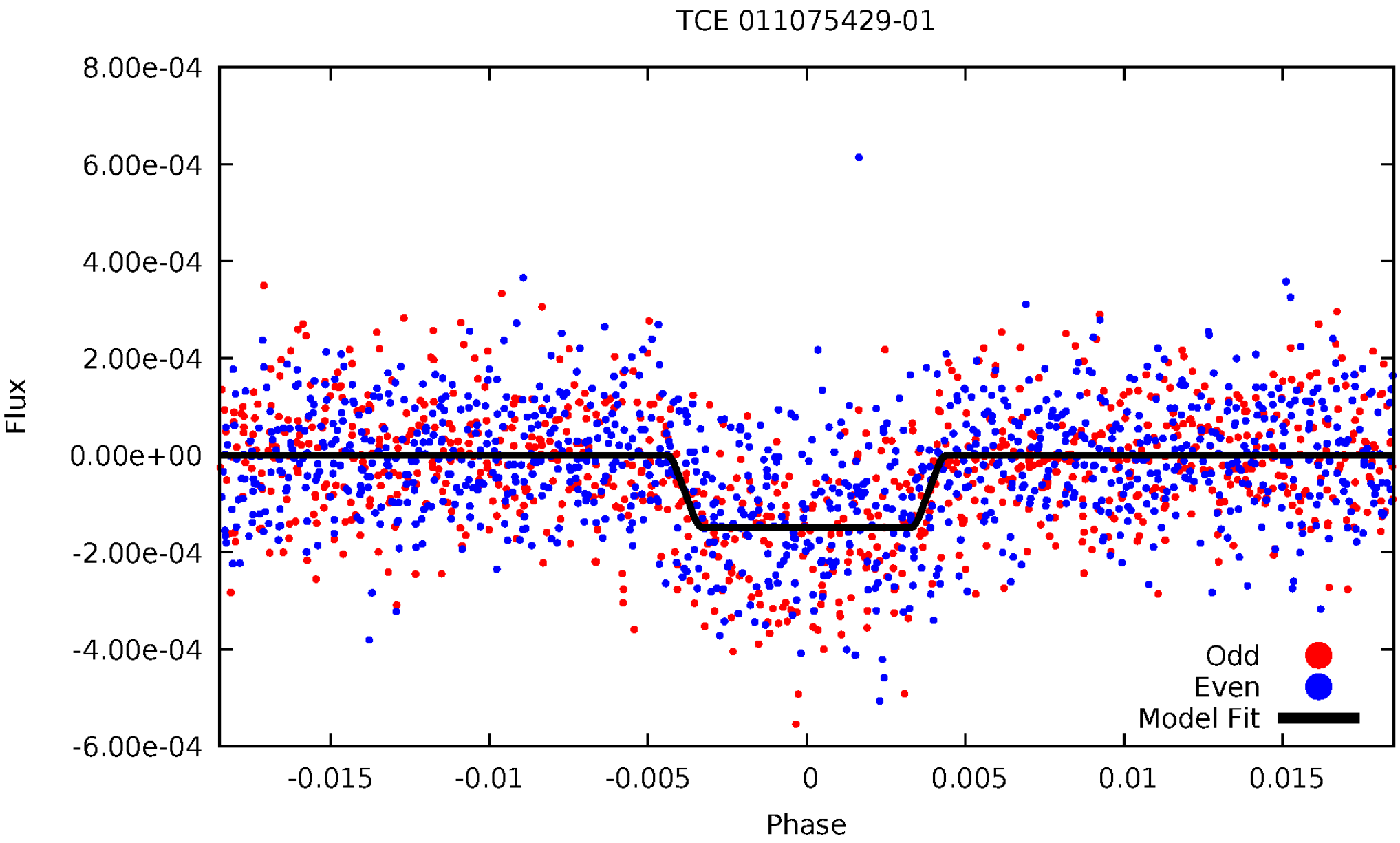
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
Flux
-0.015
-0.01
-0.005
0
0.005
0.01
0.015
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 011075429-01
8.00e-04
6.00e-04
4.00e-04
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
Flux
-0.015
-0.01
-0.005
0
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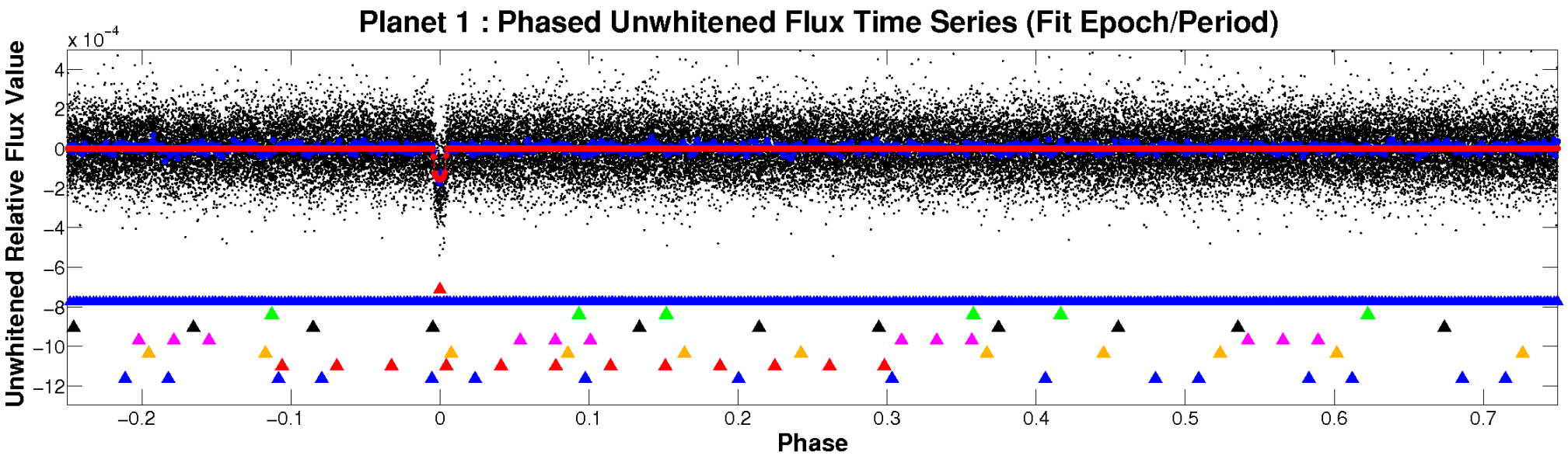
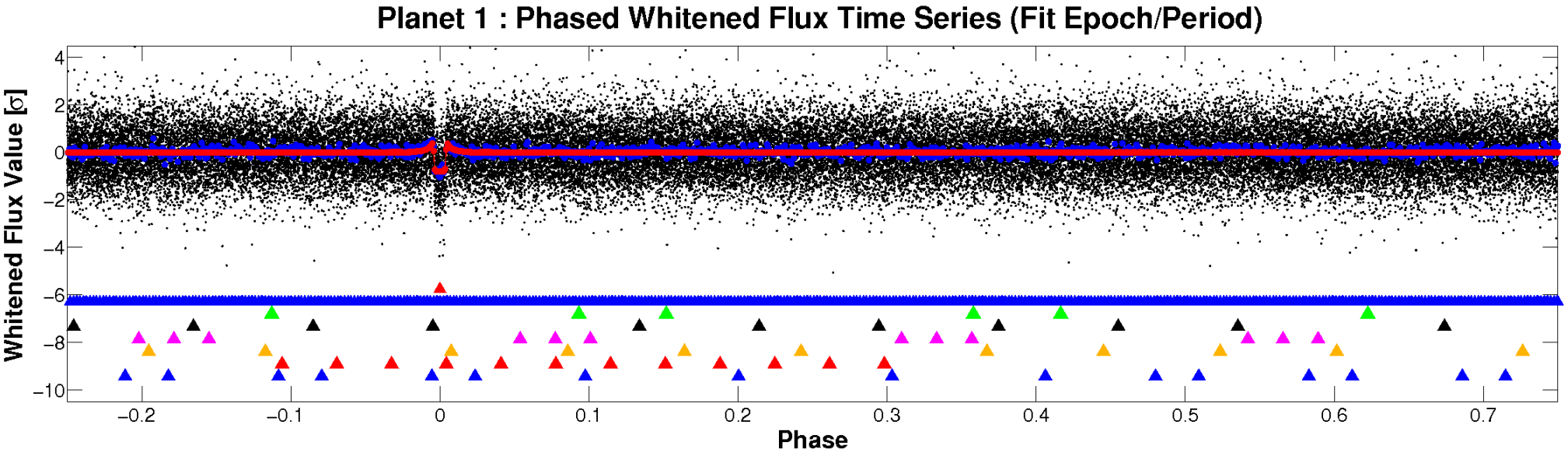
0.01
0.015
Phase
Odd
Even
Model Fit

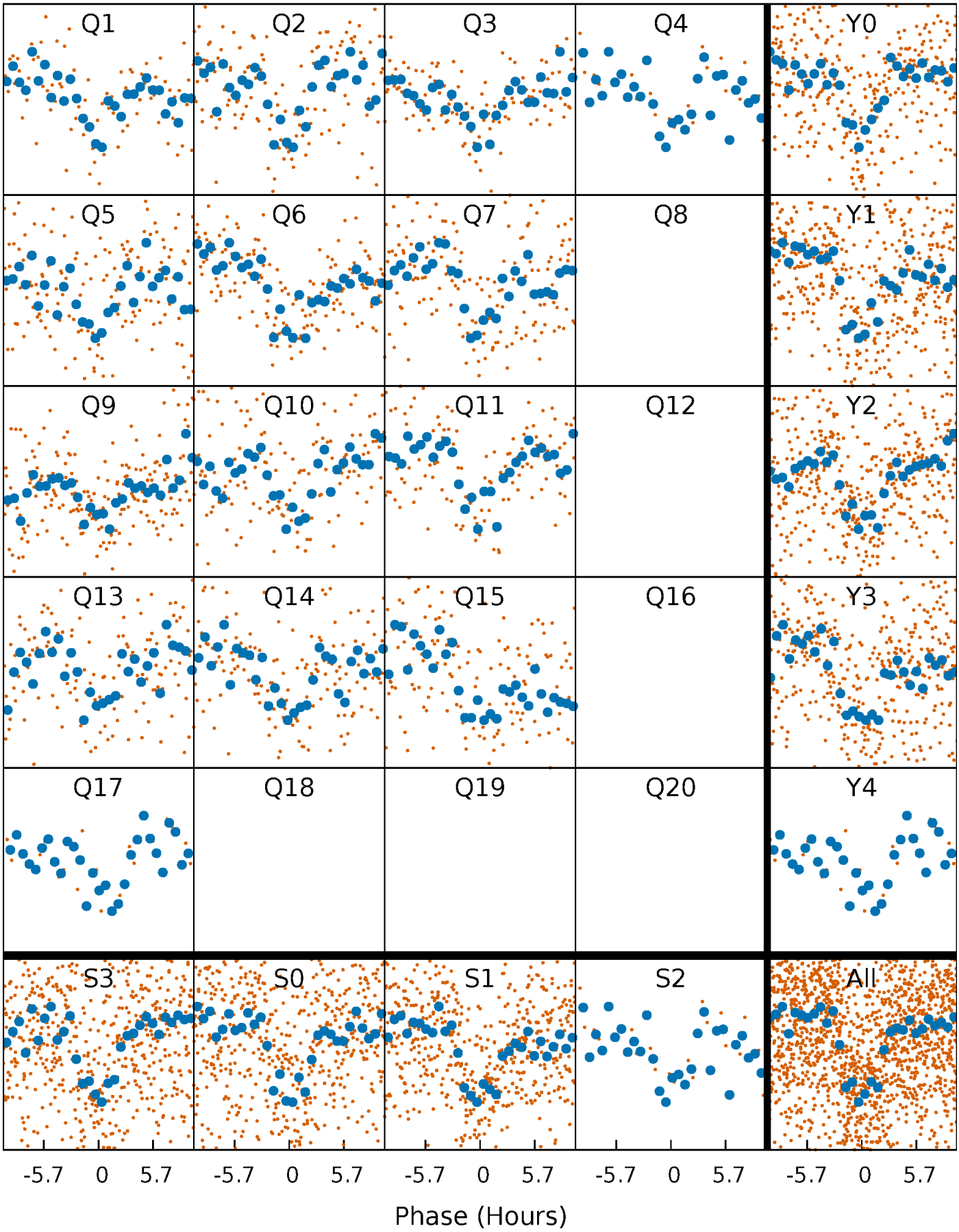
Non-Whitened Vs. Whitened Light Curve





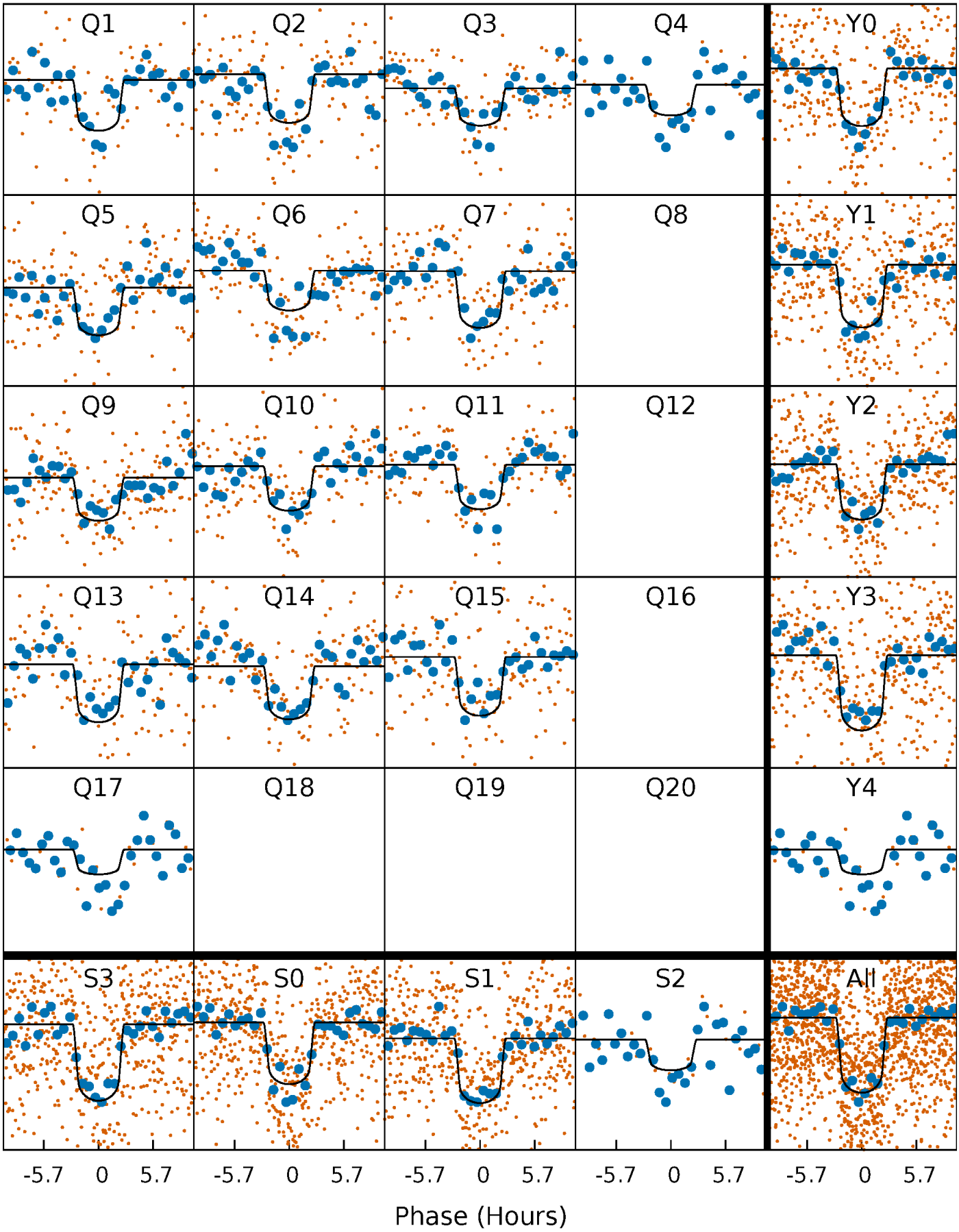
PDC Quarter-Phased Transit Curves

TCE 011075429-01 P= 23.920989 Days T_0=139.076752 (BKJD)



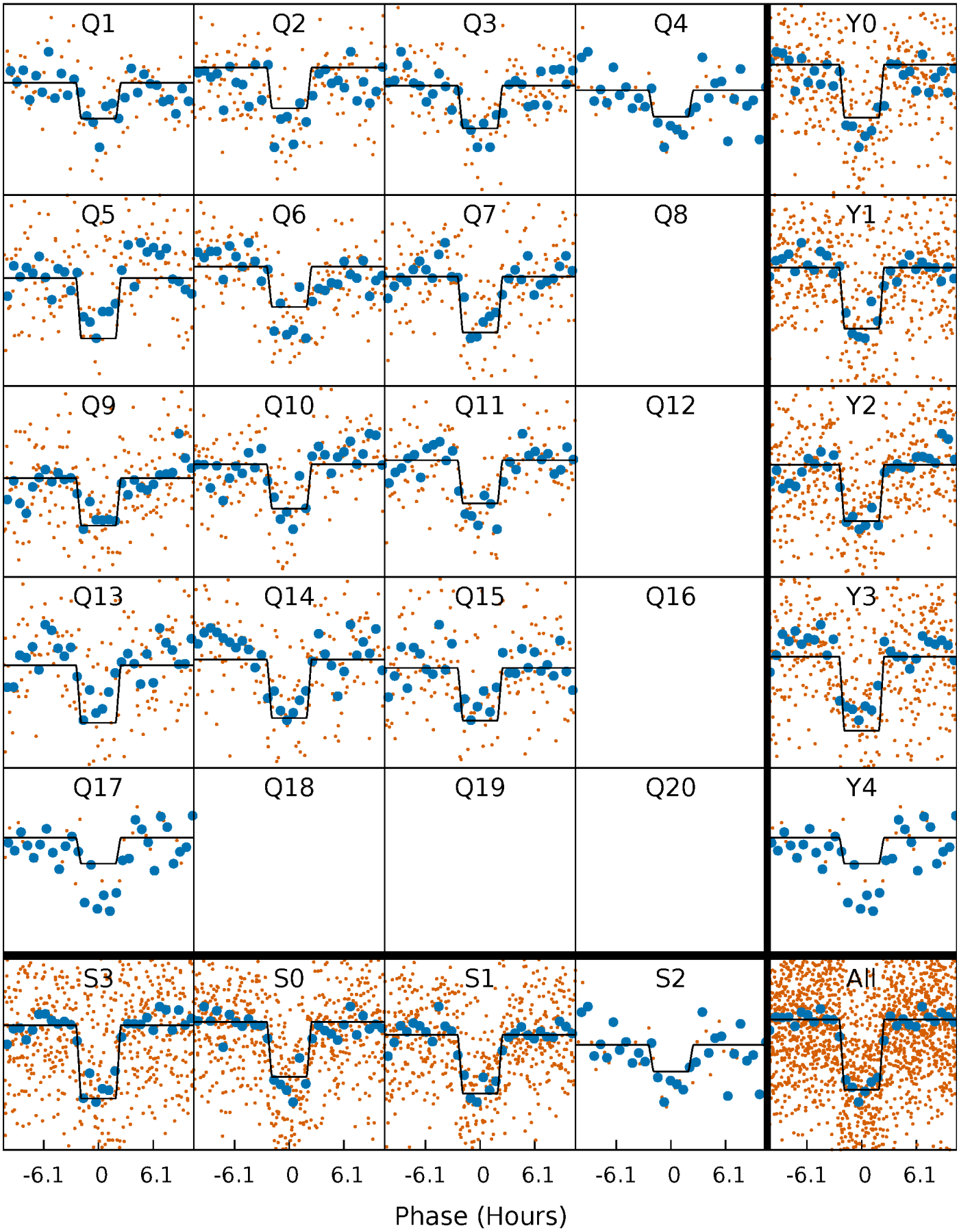
DV Quarter-Phased Transit Curves

TCE 011075429-01 P= 23.920989 Days T_0=139.076752 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

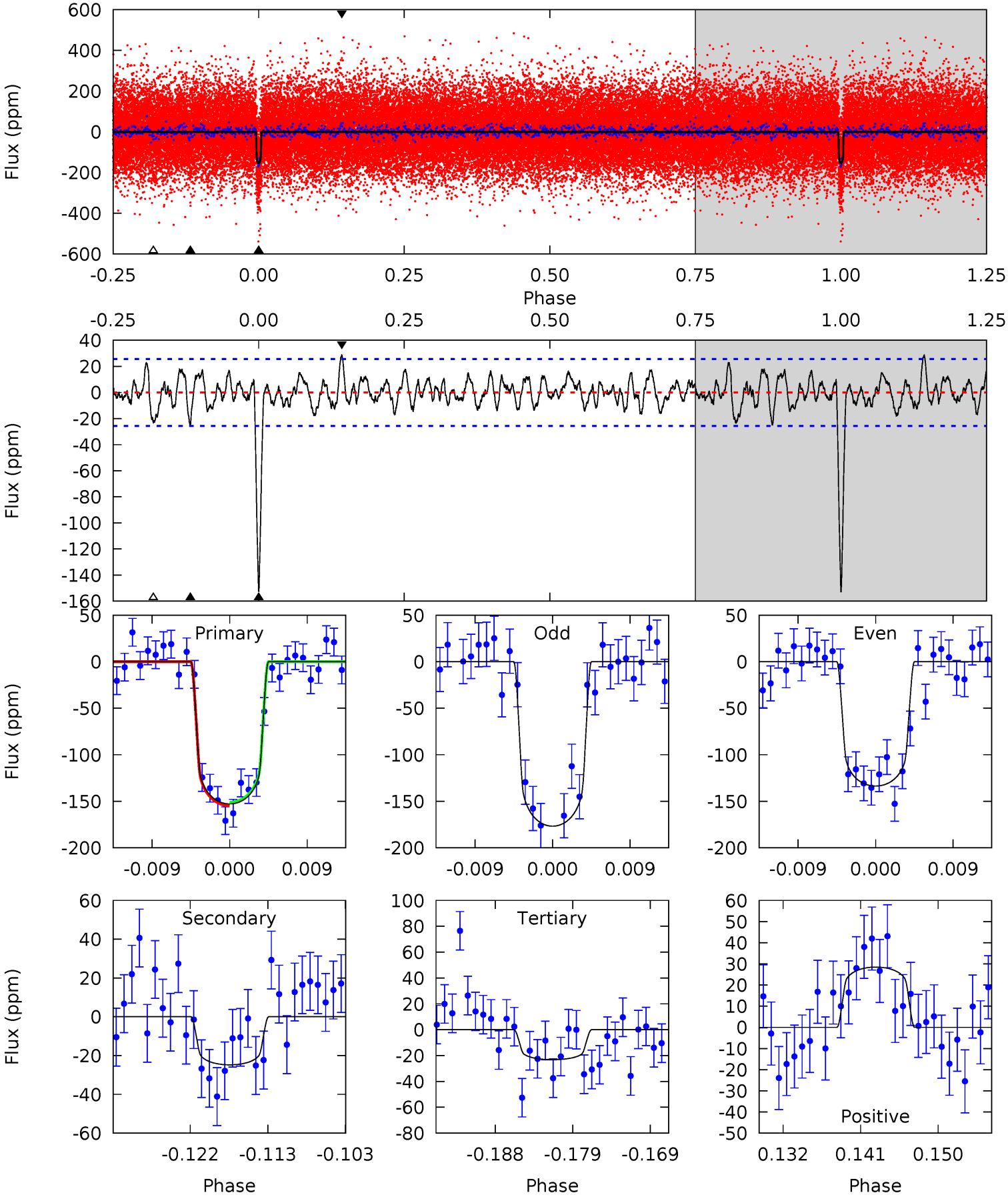
TCE 011075429-01 P= 23.921415 Days T_0=139.066977 (BKJD)



DV Model-Shift Uniqueness Test

011075429-01, P = 23.920989 Days, E = 115.155763 Days

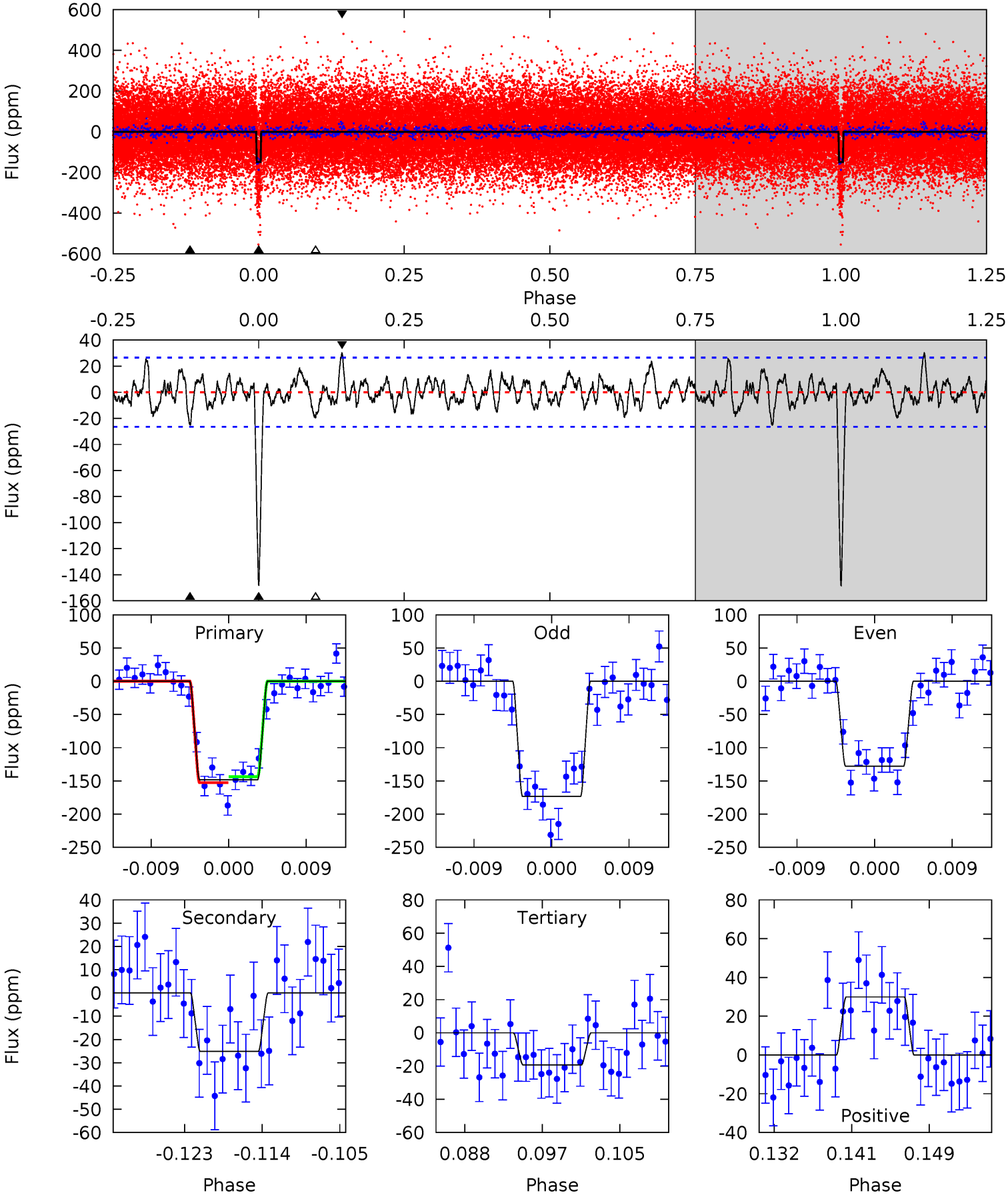
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.0	4.87	4.55	5.60	5.04	2.60	1.63	25.5	24.4	0.32	-0.73	4.22	0.99	0.16	0.35



Alt Model-Shift Uniqueness Test

011075429-01, P = 23.921415 Days, E = 115.145562 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.2	4.79	3.69	5.70	5.05	2.62	1.58	24.5	22.5	1.10	-0.91	4.31	1.00	0.17	0.84



Stellar Parameters For KIC 011075429

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	M($M_\odot$)	$p_\star$ (g·cm^{-3})
	7121^{+199}_{-249}	$4.031^{+0.192}_{-0.128}$	$-0.120^{+0.250}_{-0.350}$	$1.972^{+0.427}_{-0.475}$	$1.521^{+0.171}_{-0.278}$	$0.279^{+0.302}_{-0.109}$
	+3%/-3%	+5%/-3%	+208%/-292%	+22%/-24%	+11%/-18%	+108%/-39%
Source	PHO1	FLK73	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 011075429-01 / KOI 2198.01

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-25±5	$2.71^{+0.57}_{-0.55}$	1417^{+91}_{-94}	4557^{+358}_{-336}	63^{+40}_{-21}
Alt.	-25±5	$2.51^{+0.60}_{-0.47}$	1404^{+95}_{-91}	4666^{+423}_{-340}	75^{+45}_{-27}

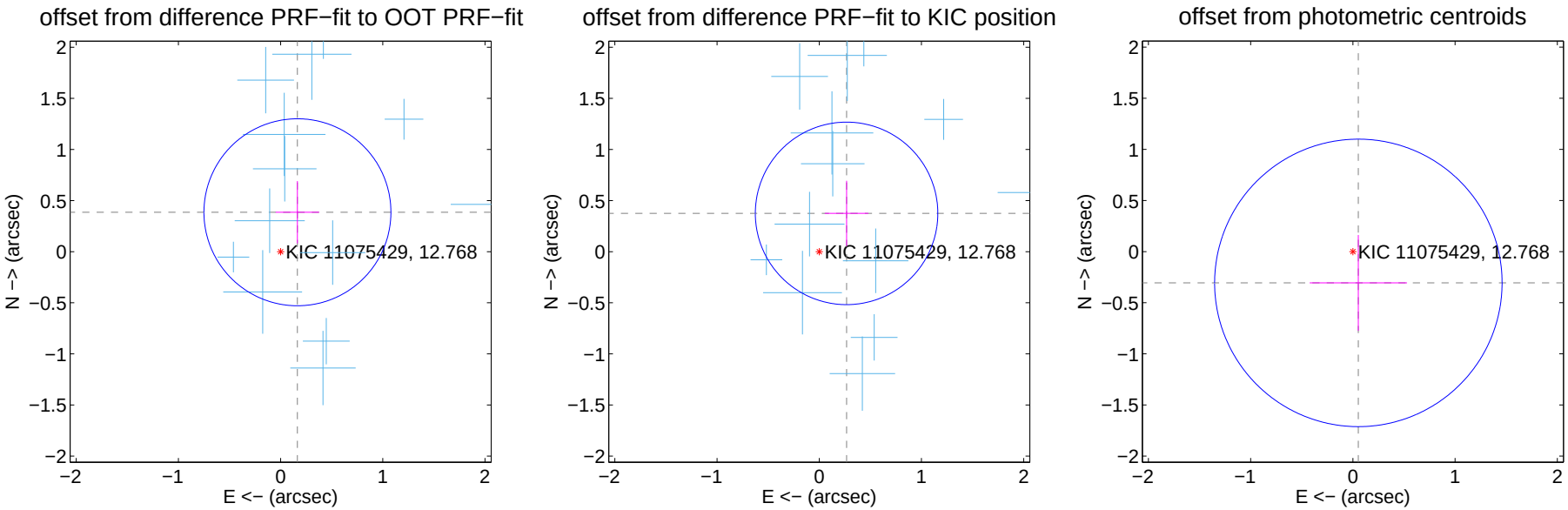
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

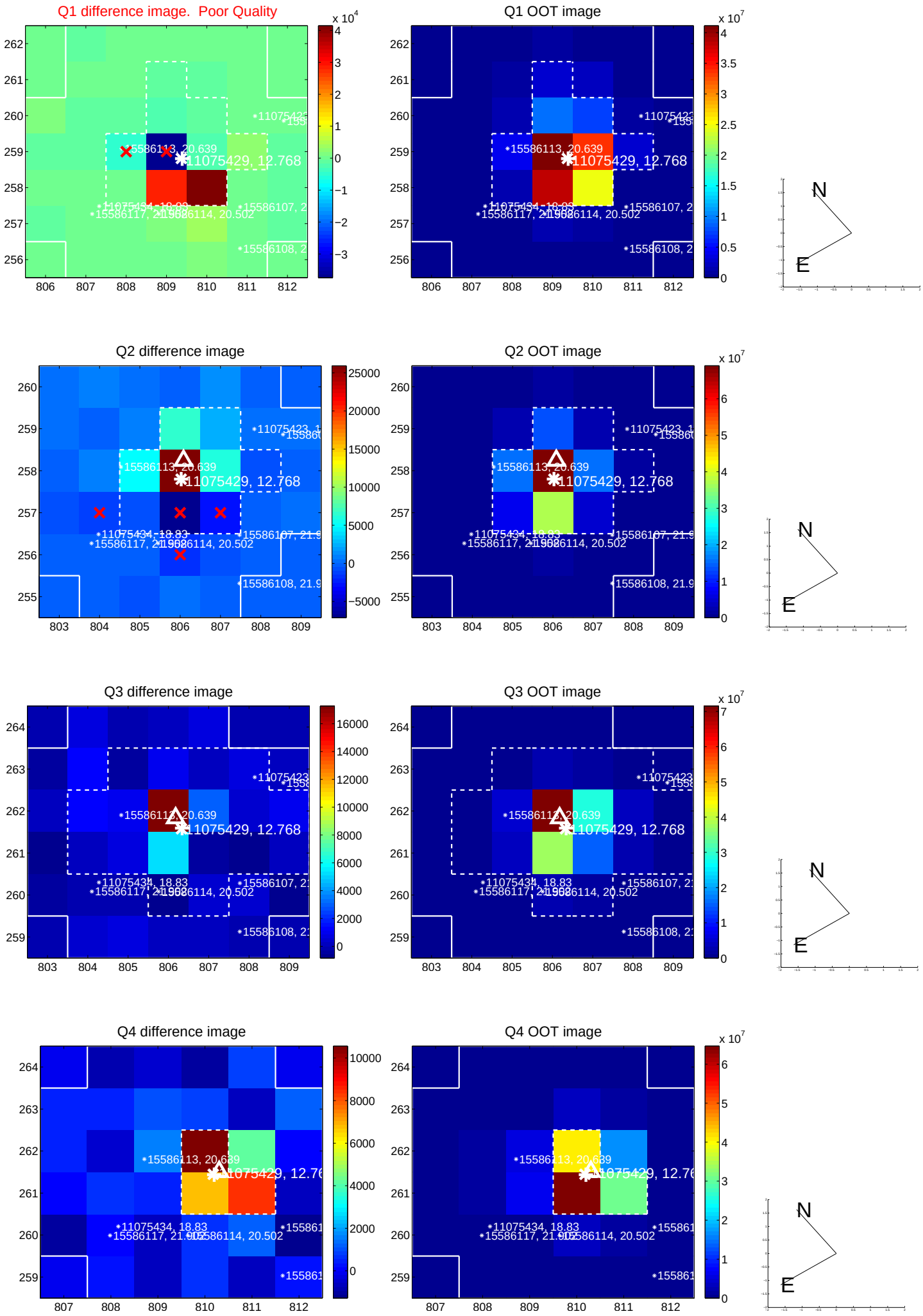
Supplemental centroid analysis for 011075429-01. Kepler magnitude: 12.77. Transit SNR 16.26
There are 13 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.419 ± 0.305	1.38	-0.165 ± 0.213	0.386 ± 0.305
PRF-fit source offset from KIC position	0.460 ± 0.298	1.55	-0.267 ± 0.213	0.375 ± 0.320
photometric centroid source offset	0.31 ± 0.47	0.66	-0.05 ± 0.48	-0.31 ± 0.47

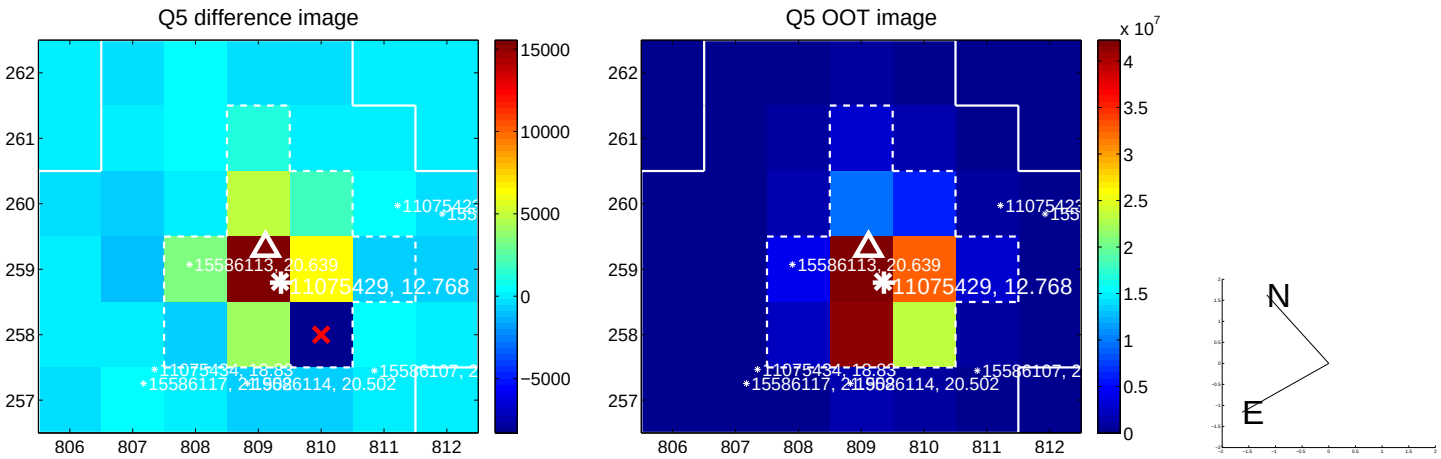


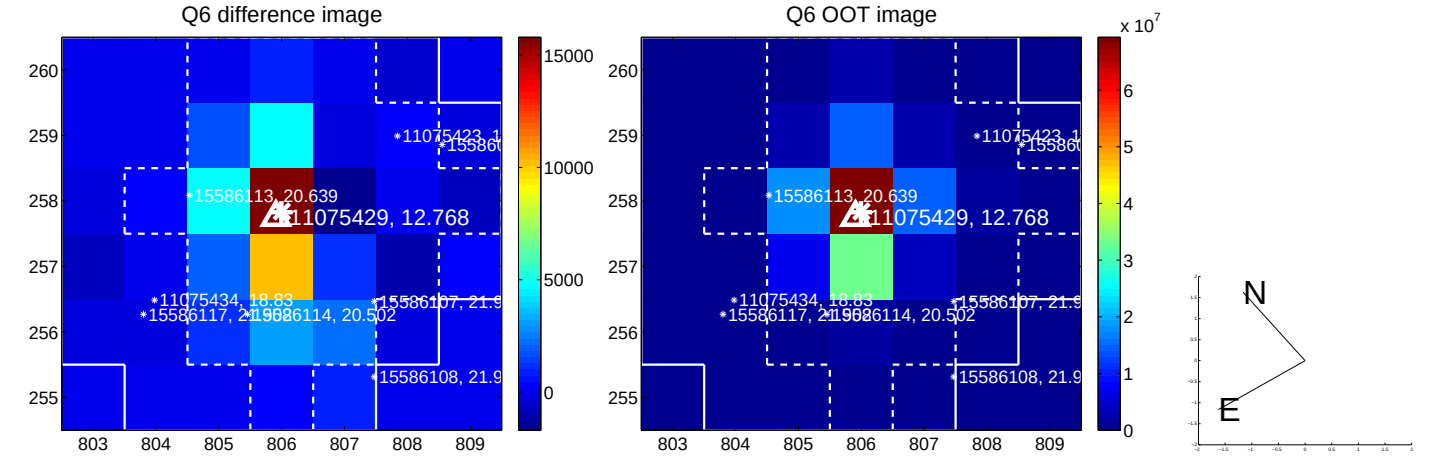
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

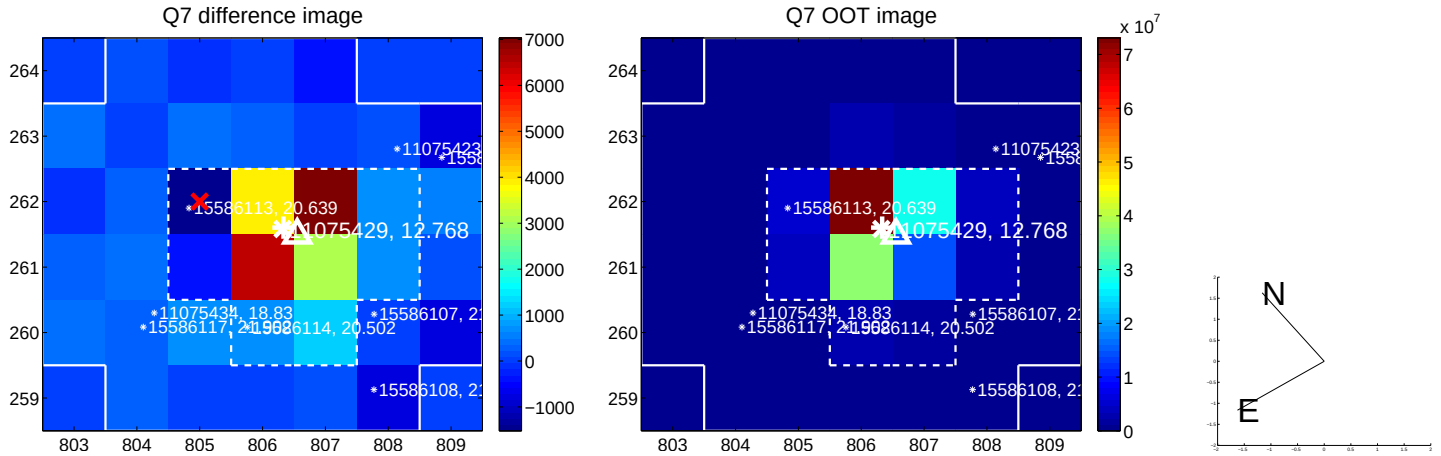
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

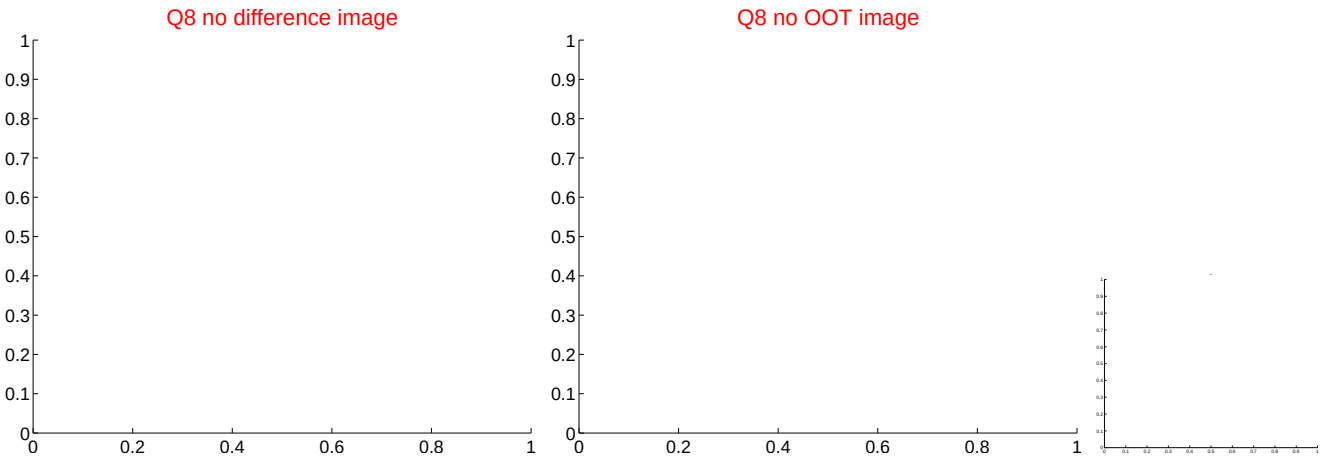


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

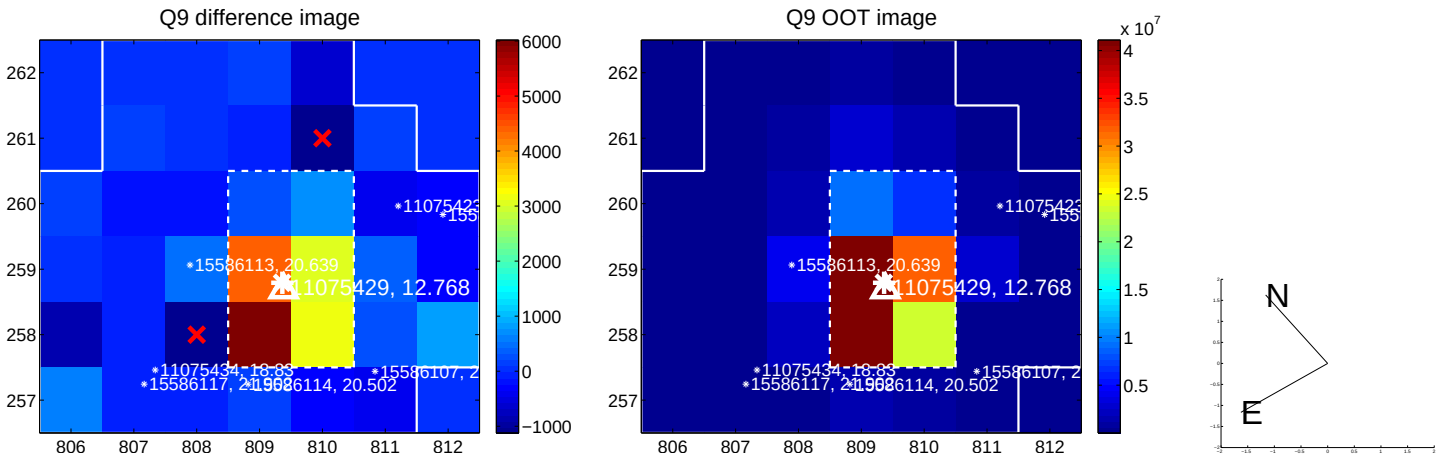


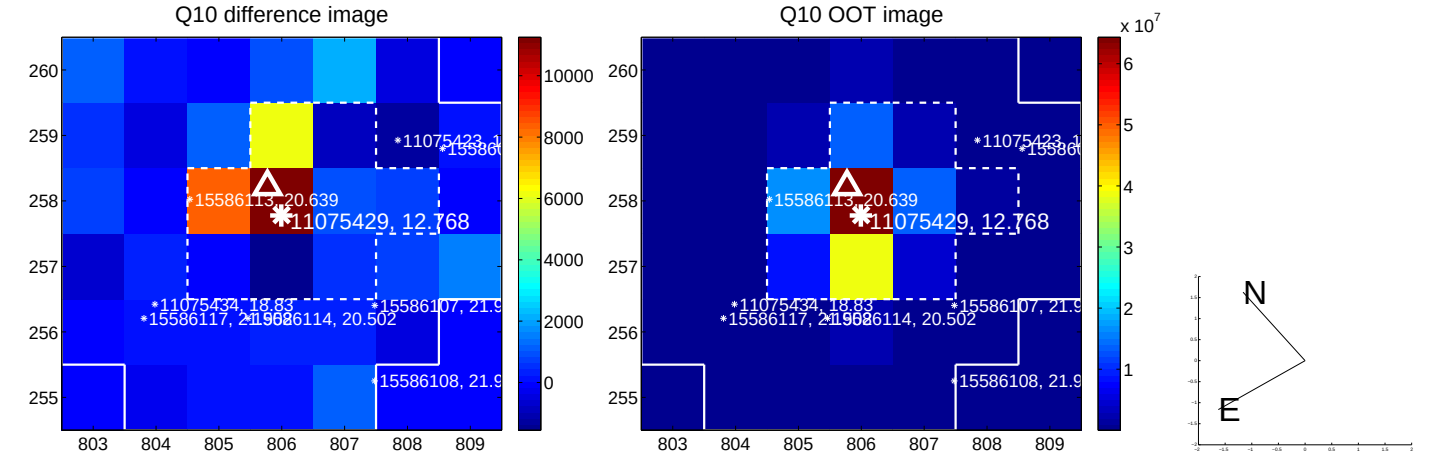


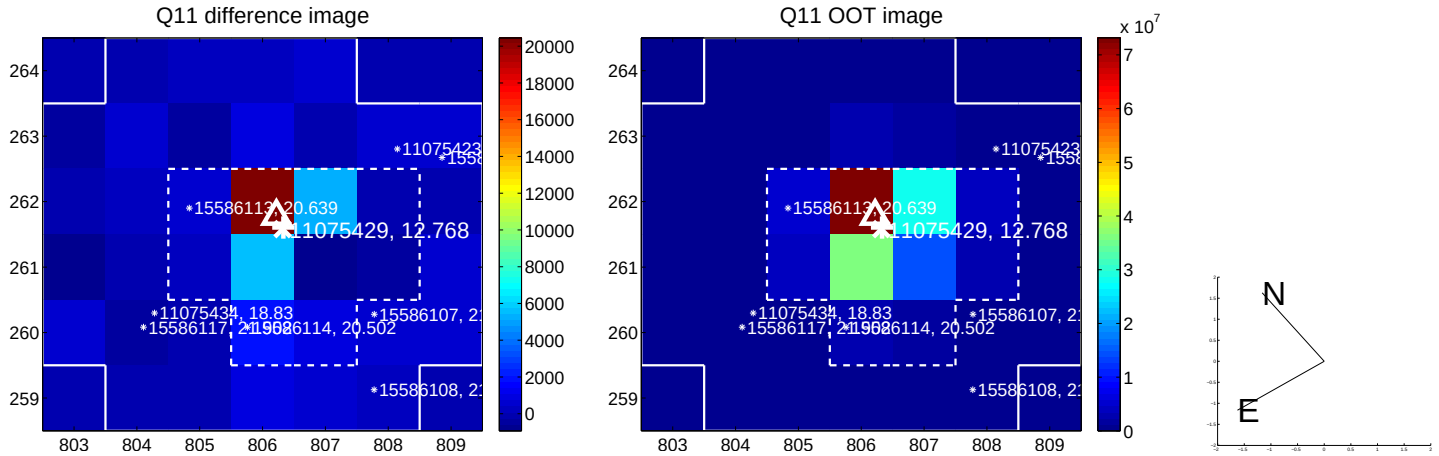


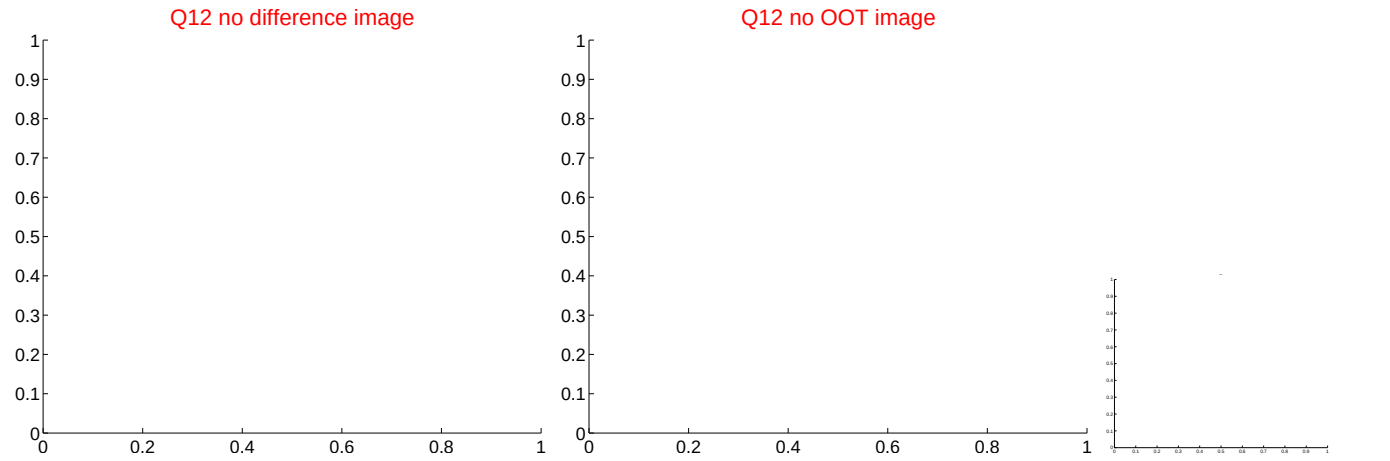


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

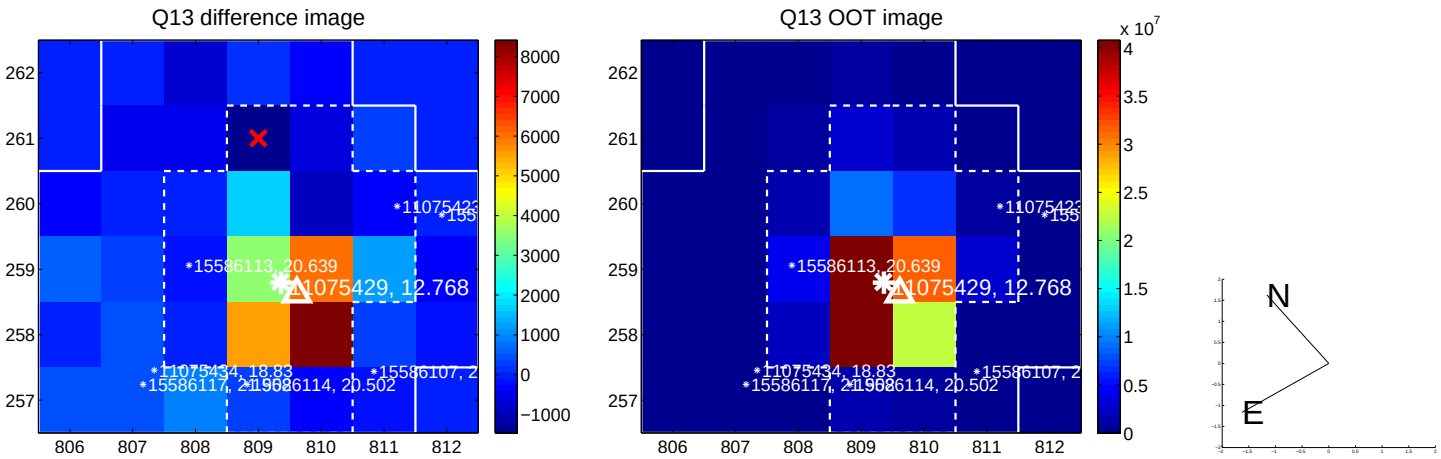


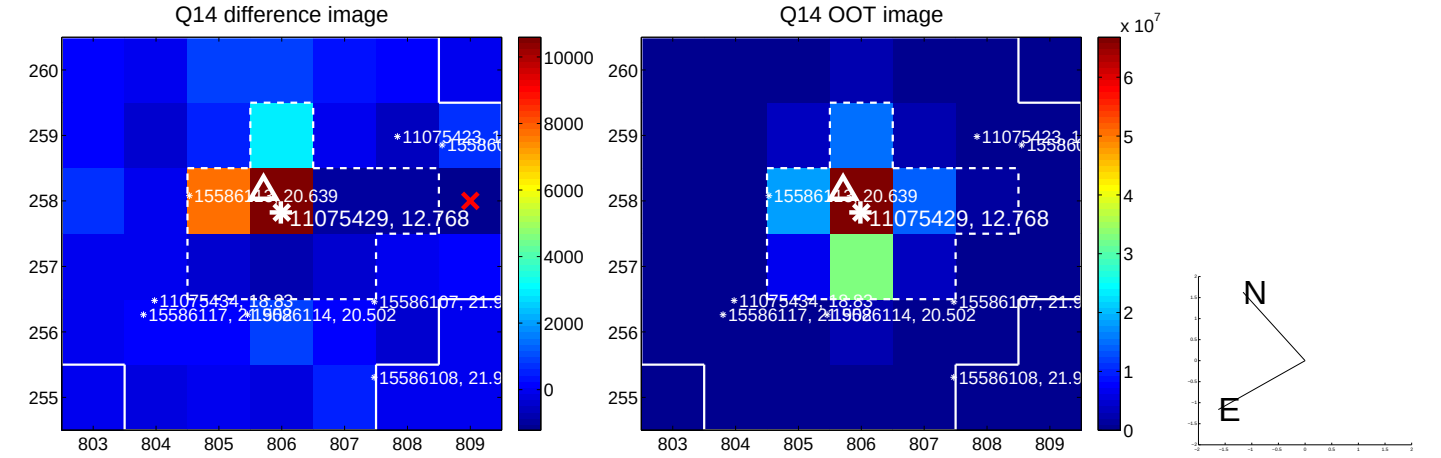


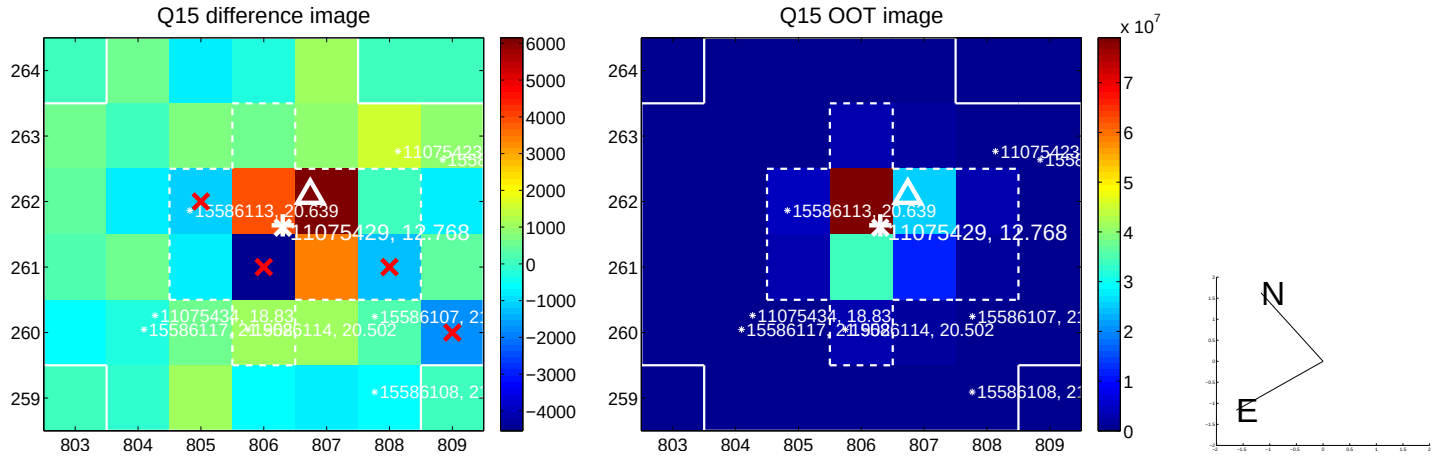


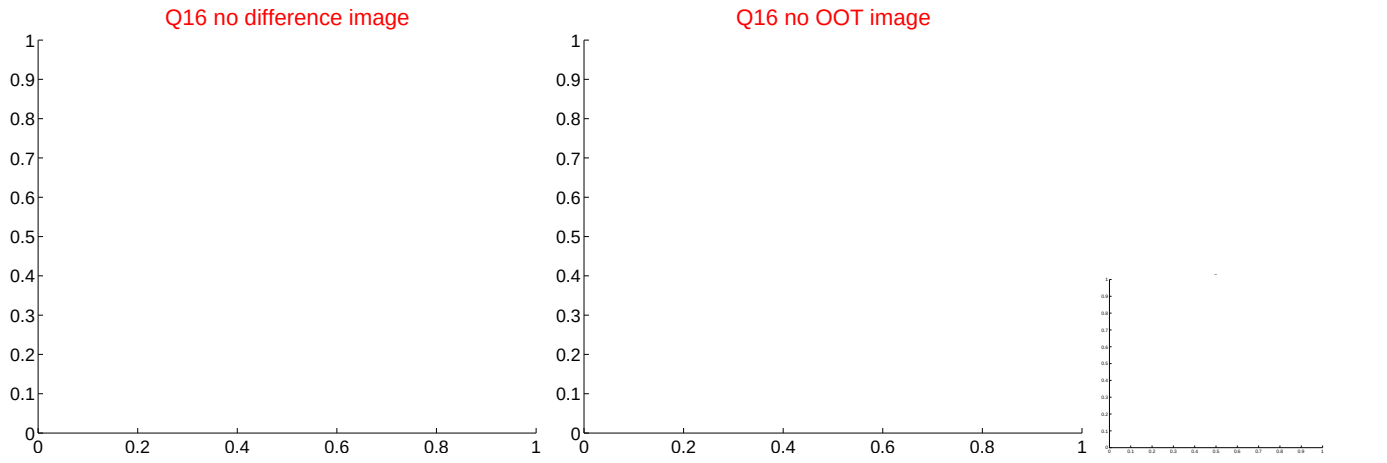


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

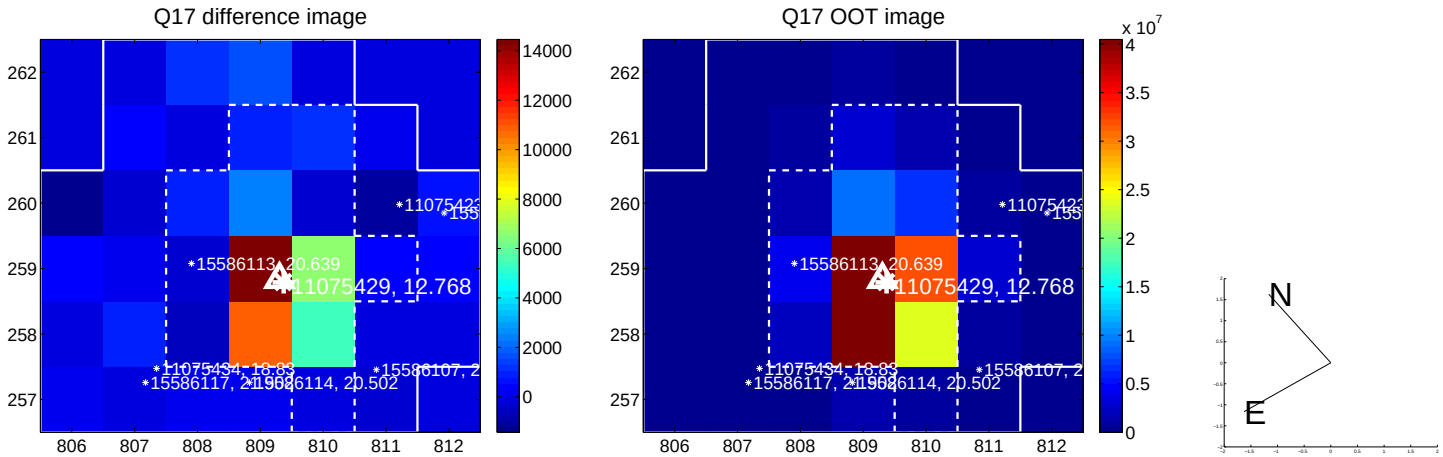


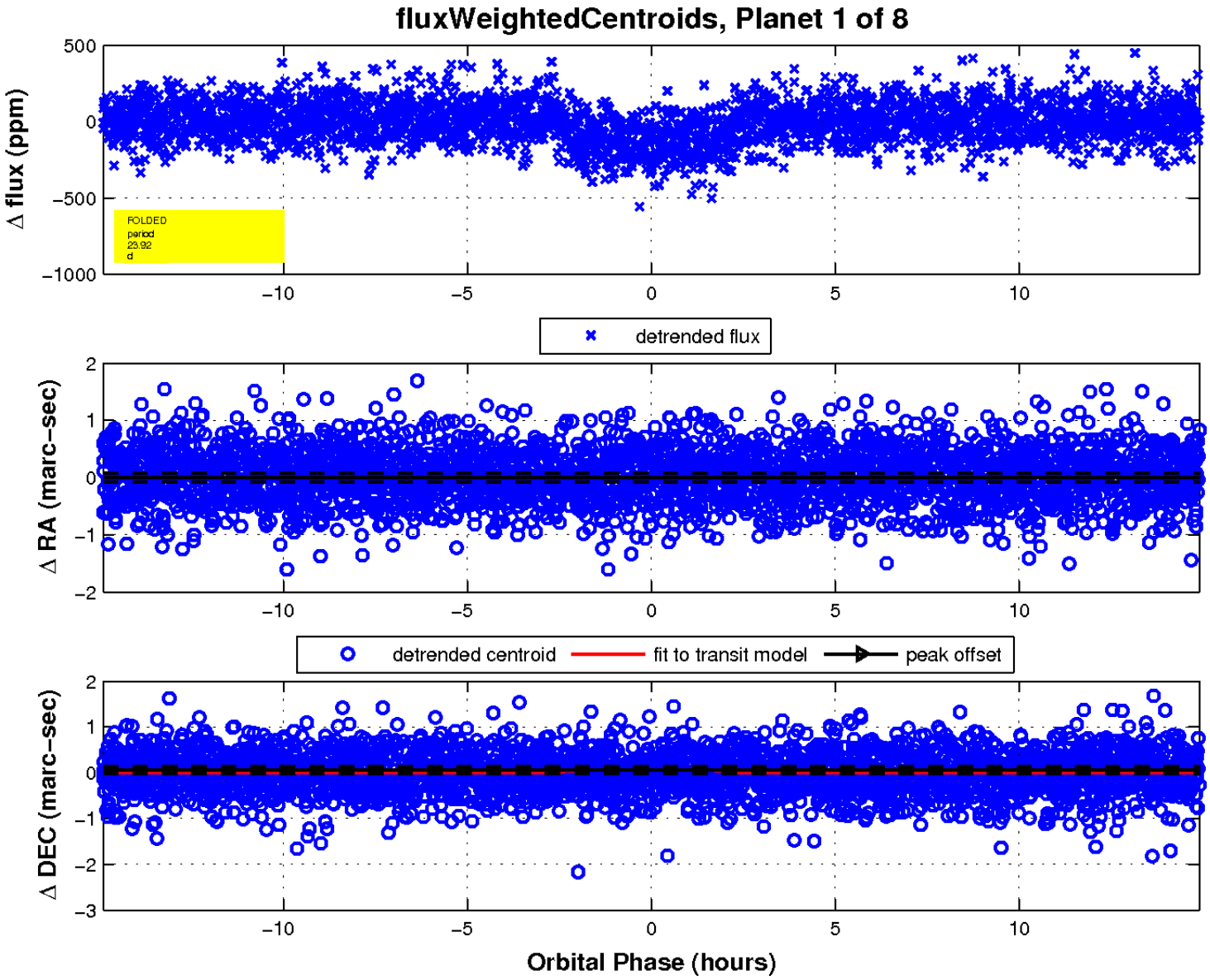




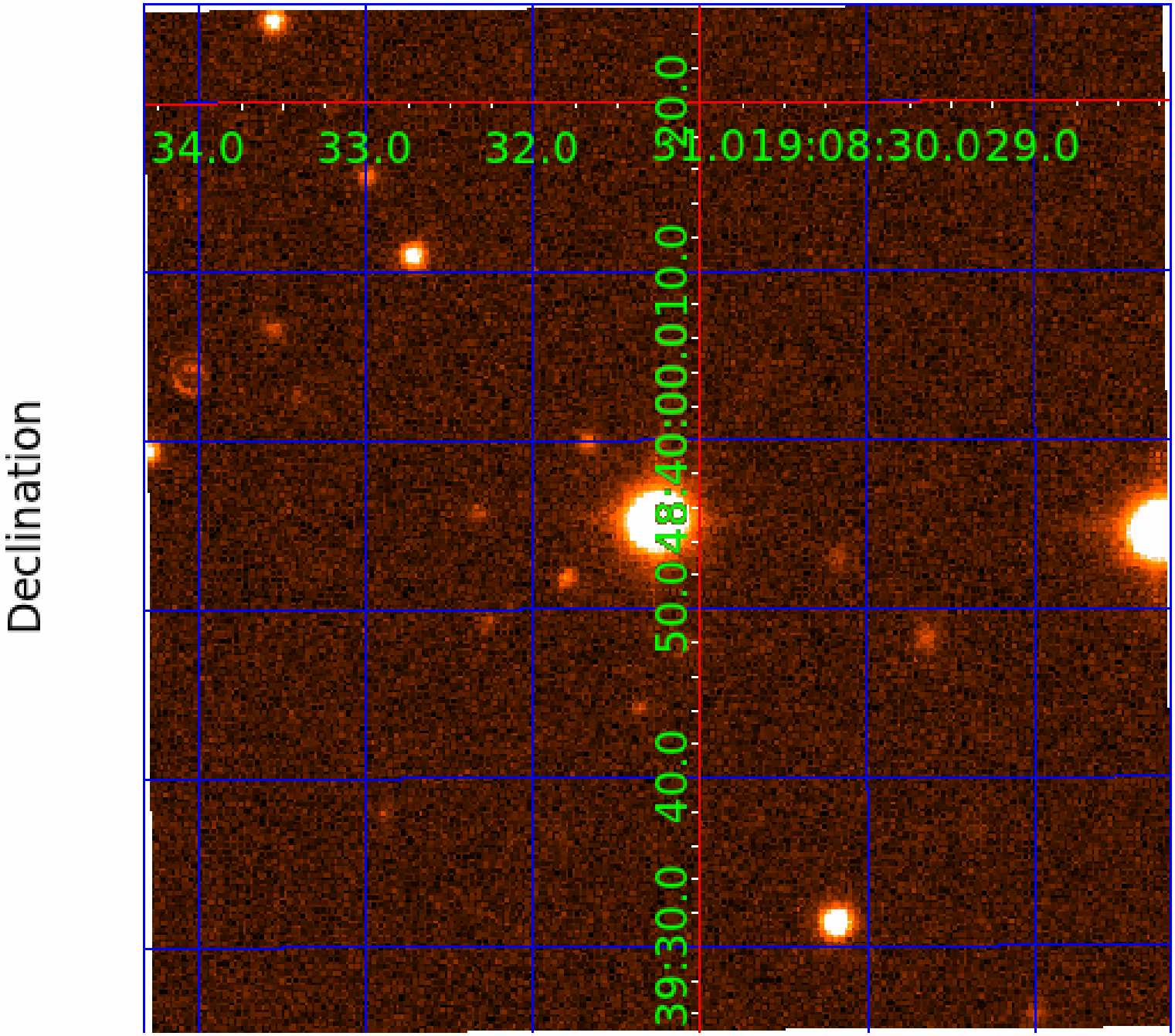


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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31.0
19:08:30.0
29.0

KIC 011075429

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 ($S_\oplus$)
011075429-01	OBS	2198.01	23.920989	139.076752	154.5	4.970	14.5	16.3	1.97	7121	2.78	256.23
011075429-02	OBS	No	2.970207	133.255025	22.8	14.079	7.7	6.6	1.97	7121	1.85	4136.32
011075429-03	OBS	No	232.879284	220.802473	204.2	14.518	11.2	8.6	1.97	7121	3.11	12.33
011075429-05	OBS	No	113.483857	243.296868	142.3	16.305	8.7	6.8	1.97	7121	2.62	32.14
011075429-06	OBS	No	134.928395	201.311999	201.5	6.788	7.9	7.4	1.97	7121	3.20	25.52
011075429-07	OBS	No	118.726252	217.971834	152.6	5.625	8.4	9.4	1.97	7121	2.86	30.27
011075429-08	OBS	No	93.222487	139.641842	146.1	7.395	7.5	7.5	1.97	7121	2.71	41.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011075429-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
011075429-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011075429-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
011075429-07	OBS	FP	0.02	1	0	0	0	MOD_NONUNIQ_ALT—CENT_FEW_MEAS
011075429-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

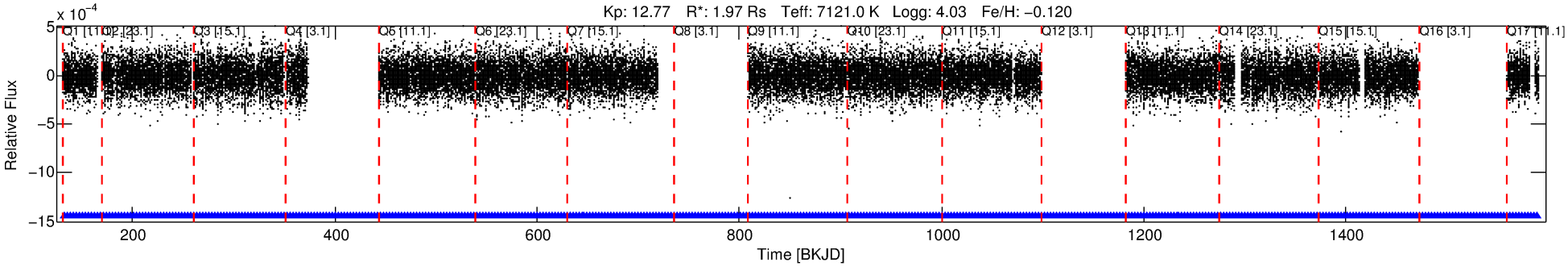
Ephemeris Match Information For 011075429-02

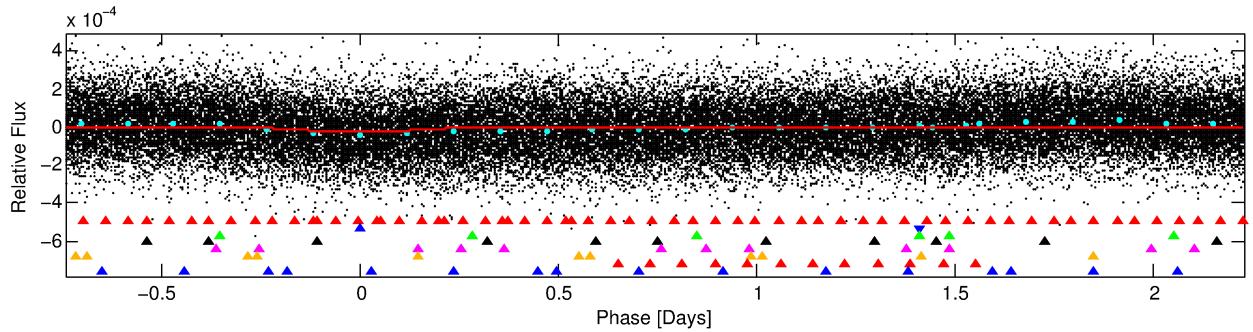
No Significant Match Found

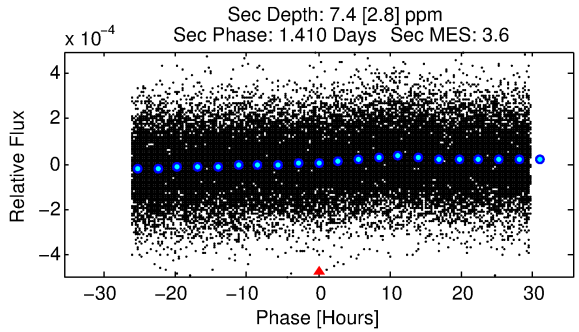
DV One-Page Summary

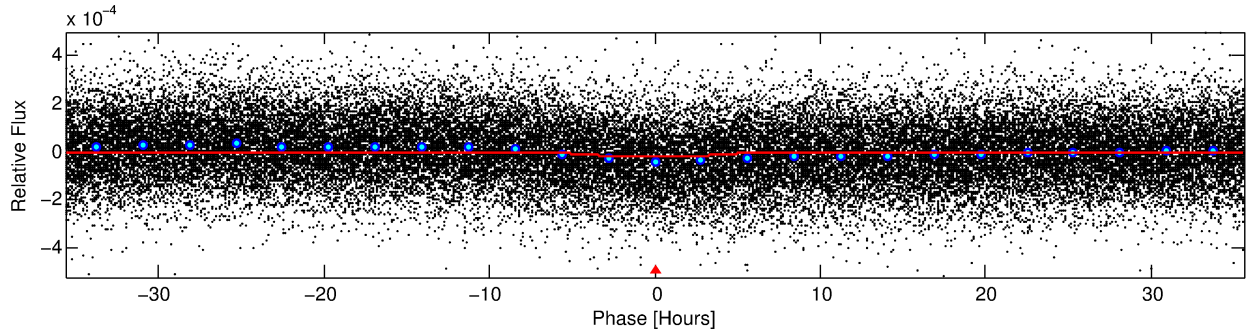
KIC: 11075429 Candidate: 2 of 8 Period: 2.970 d
KOI: K02198 Corr: No Ephemeris Match

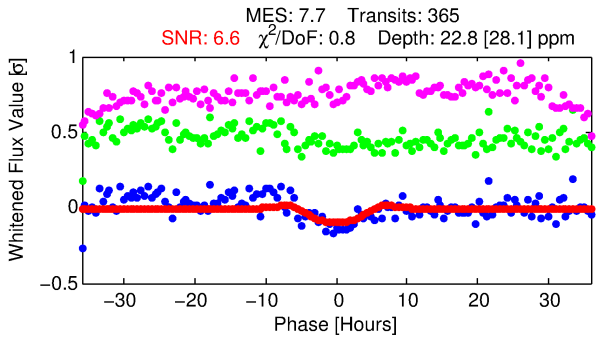
Kp: 12.77 R*: 1.97 Rs Teff: 7121.0 K Logg: 4.03 Fe/H: −0.120

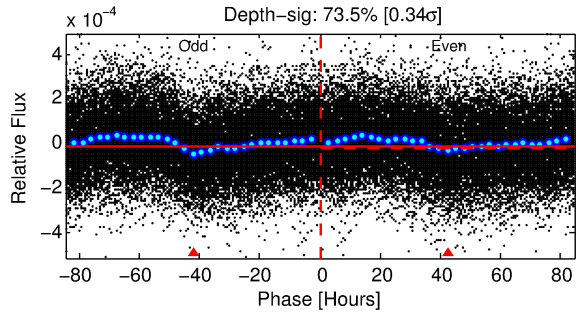


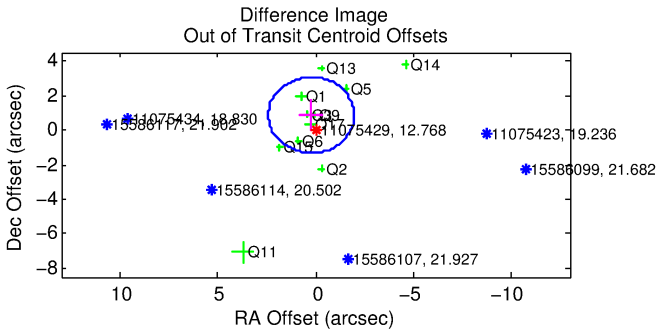












DV Fit Results:

Period = 2.97021 [0.00015] d
Epoch = 133.2550 [0.0393] BKJD
Rp/R* = 0.0086 [0.0189]
a/R* = 1.03 [0.01]
b = 1.00 [0.03]

Seff = 4136.32 [1504.03]
Teq = 2045 [186] K
Rp = 1.85 [4.08] Re
a = 0.0465 [0.0101] AU

Ag = 2.59 [11.48] [0.14σ]
Teffp = 4012 [4429] K [0.44σ]

DV Diagnostic Results:

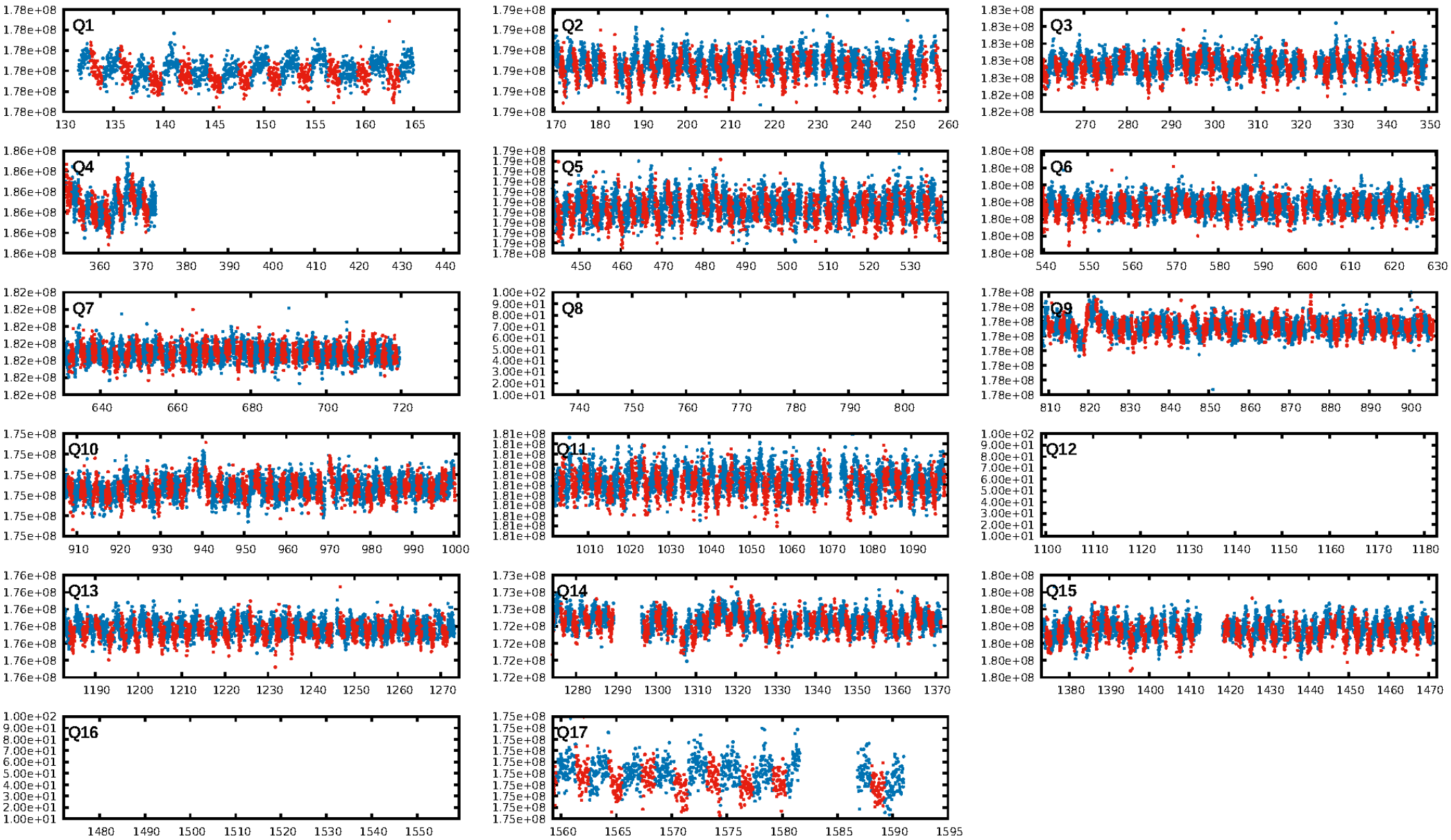
ShortPeriod−sig: N/A
LongPeriod−sig: 100.0% [33.68σ]
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: 8.19e−09
RollingBand−fgt: 1.00 [338/338]
GhostDiagnostic−chr: 1.785

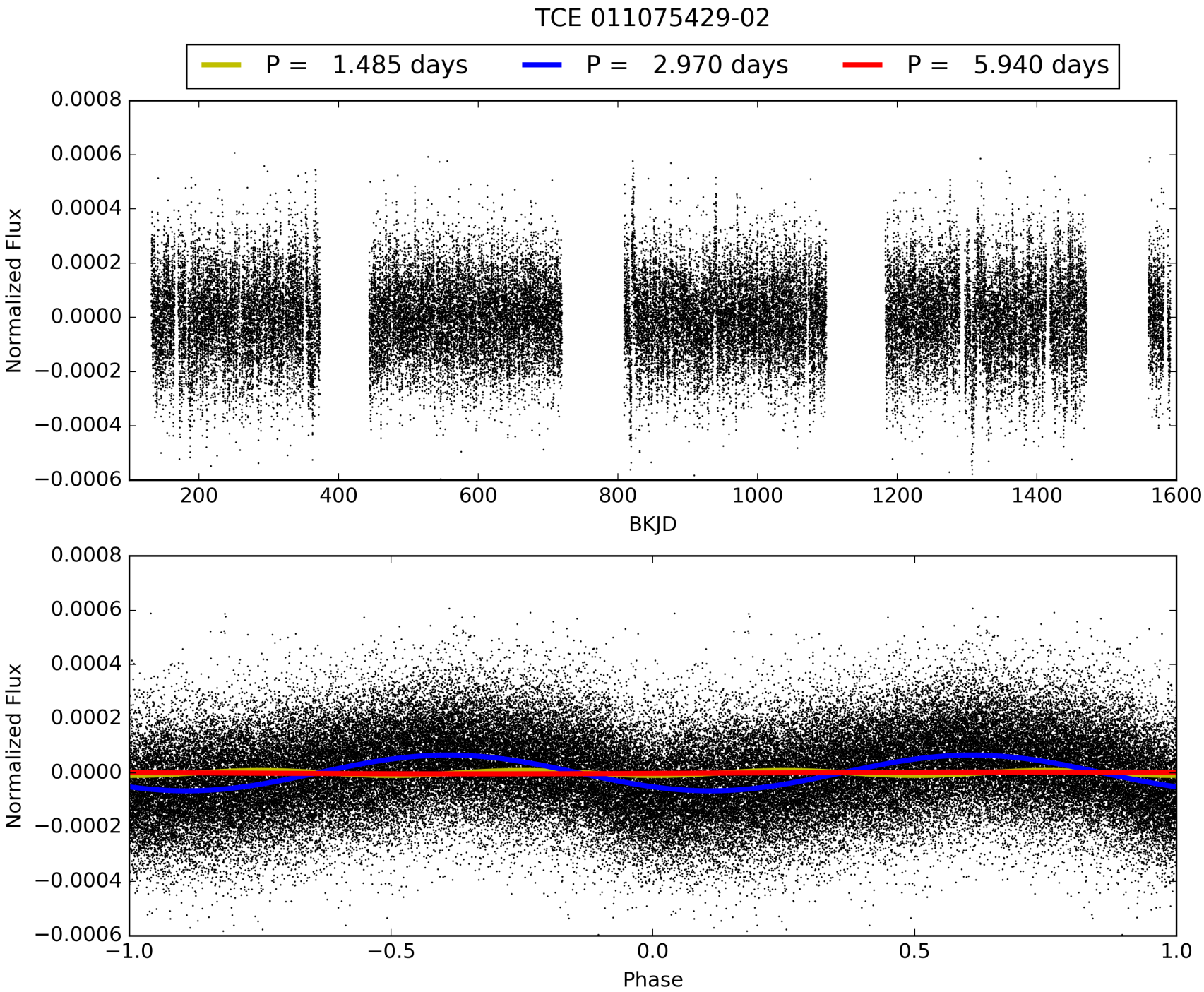
Centroid−sig: 47.5%
Centroid−so: 0.954 arcsec [0.97σ]
OotOffset−rm: 0.897 arcsec [1.23σ]
KicOffset−rm: 0.882 arcsec [1.18σ]
OotOffset−st: 3/3/0/5 [11]
KicOffset−st: 3/3/0/5 [11]
DiffImageQuality−fgm: 0.82 [9/11]
DiffImageOverlap−fno: 1.00 [14/14]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 21:21:47 Z

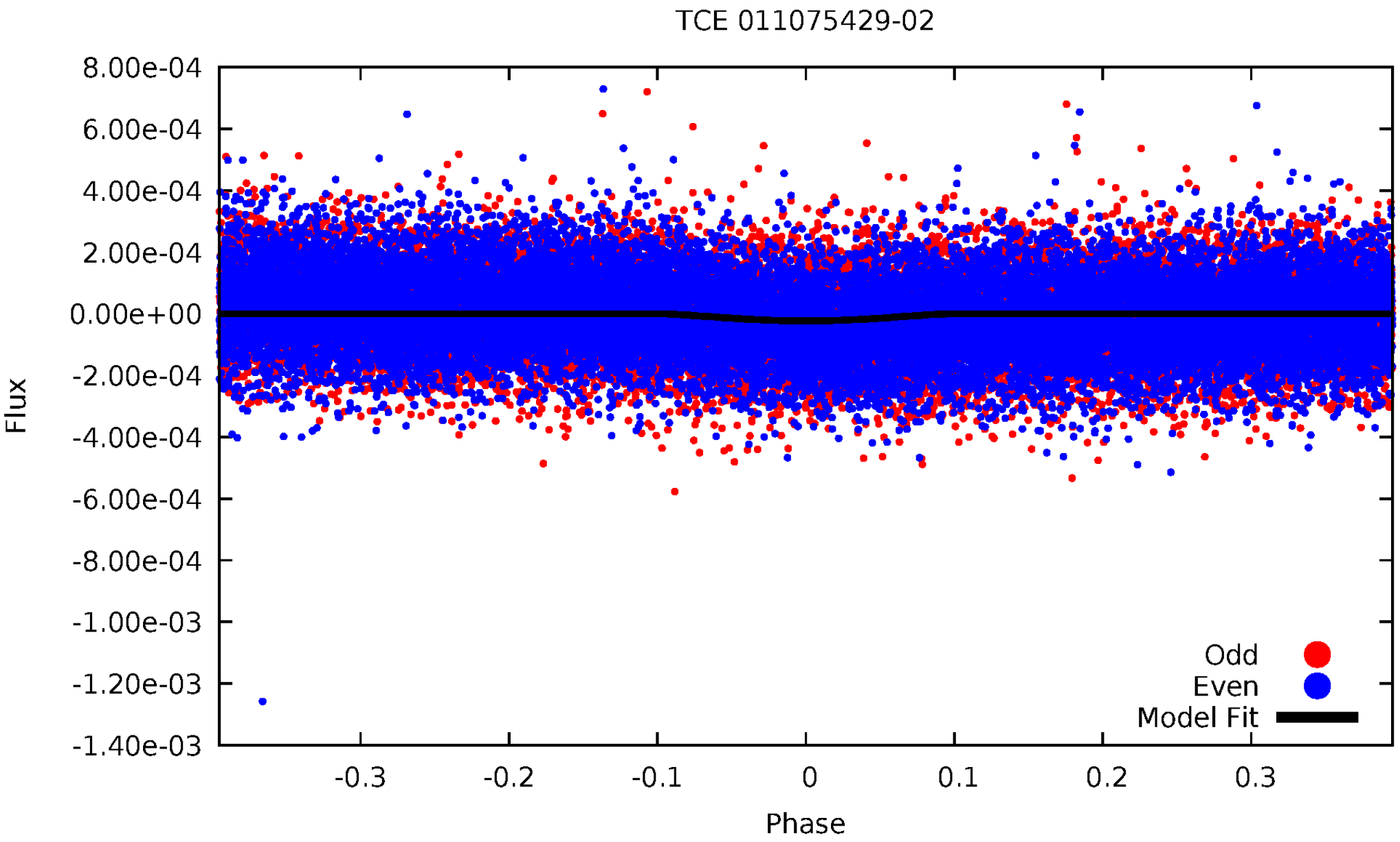
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011075429-02, PDC Light Curves




TCE 011075429-02
P = 1.485 days
P = 2.970 days
P = 5.940 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even


TCE 011075429-02
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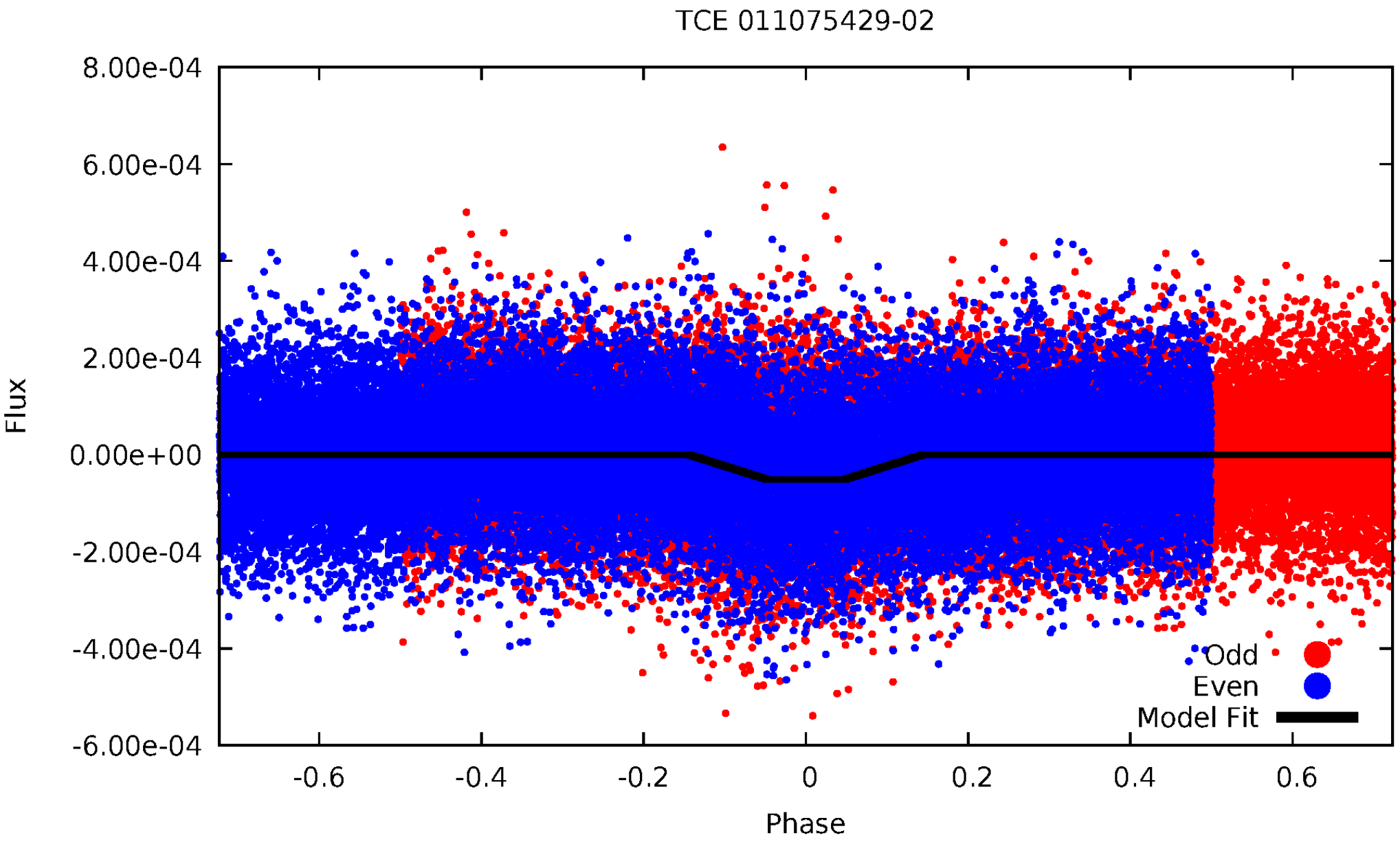
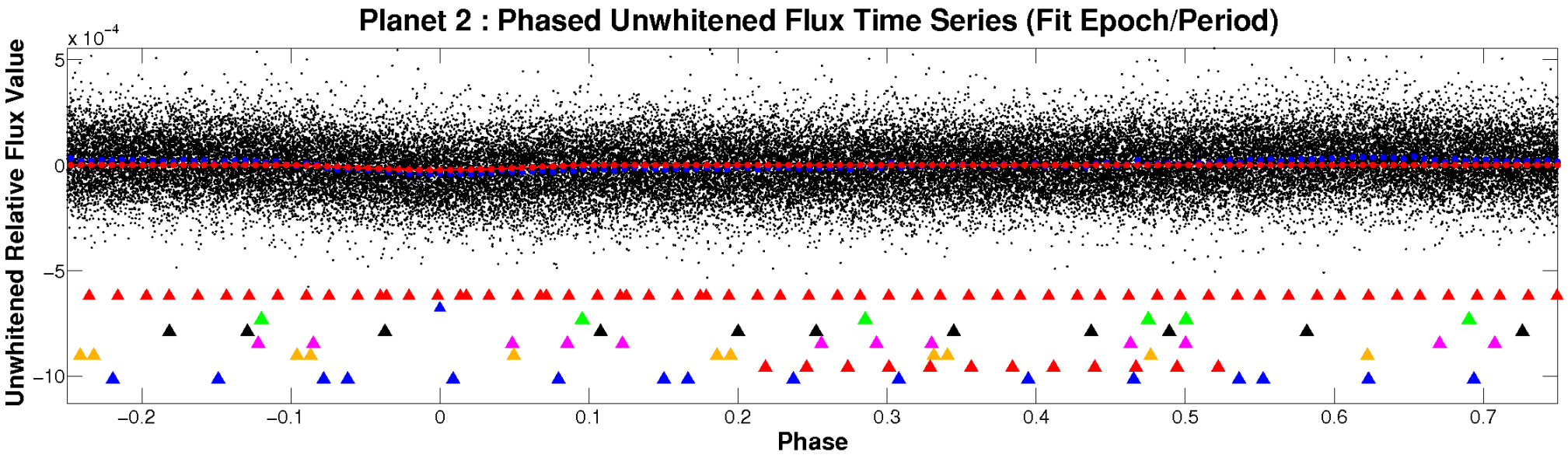
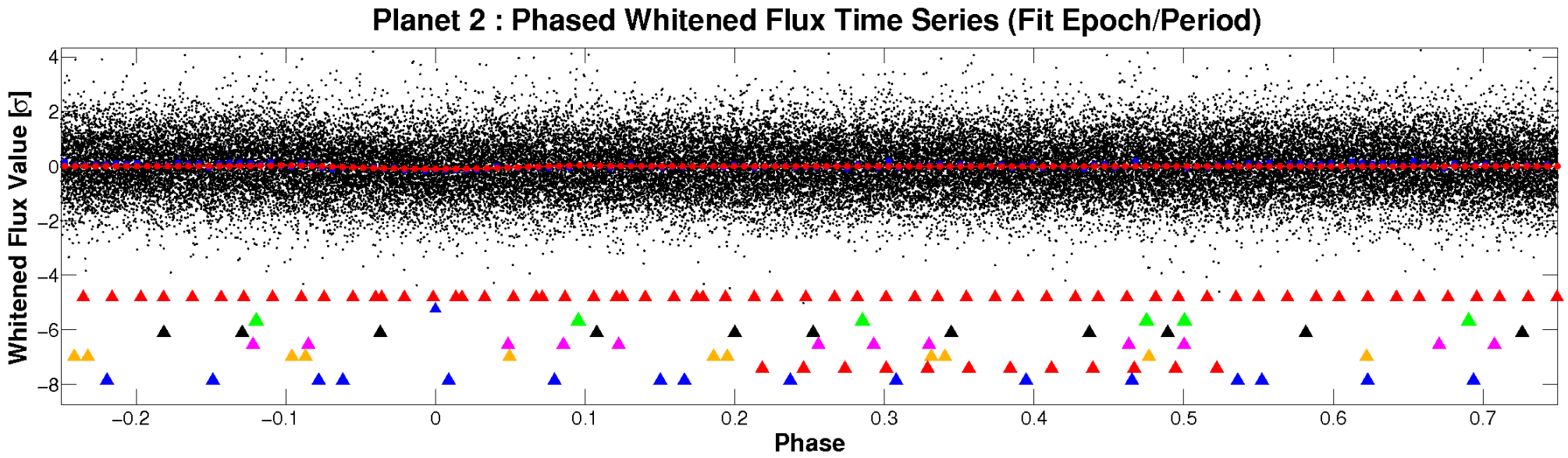
6.00e-04
4.00e-04
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
-8.00e-04
-1.00e-03
-1.20e-03
-1.40e-03
Flux
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 011075429-02
8.00e-04
6.00e-04
4.00e-04
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
Flux
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
Phase
Odd
Even
Model Fit

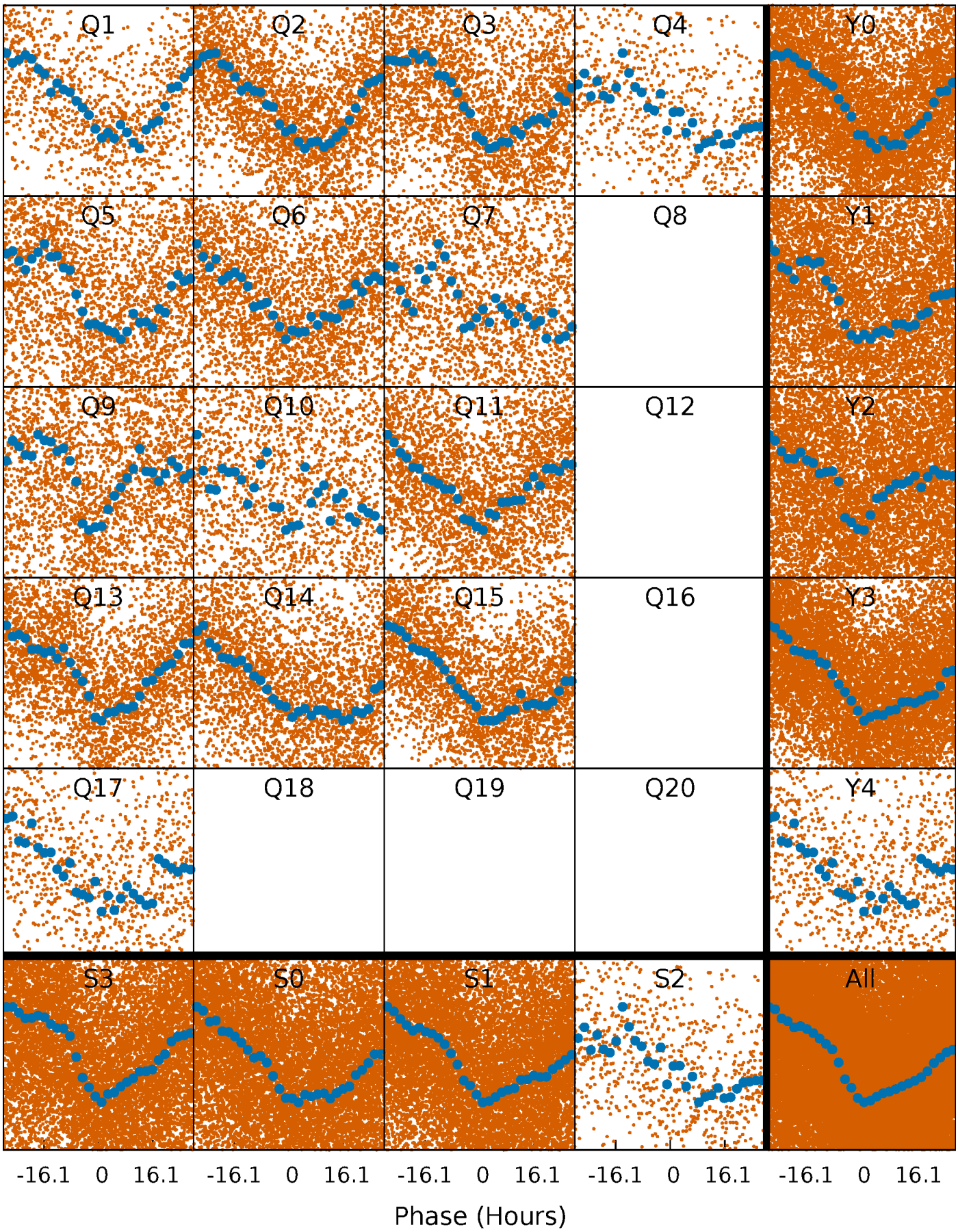
Non-Whitened Vs. Whitened Light Curve





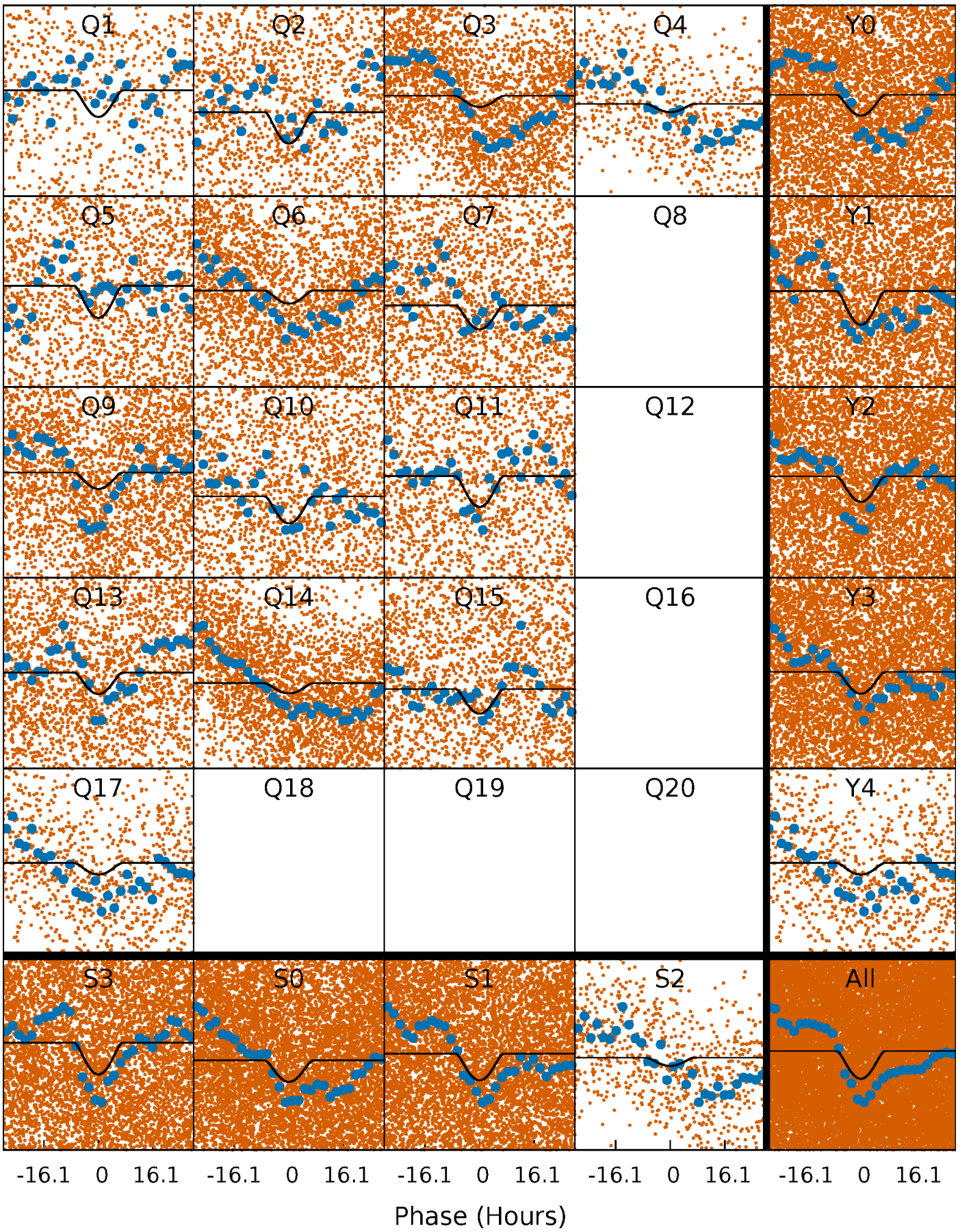
PDC Quarter-Phased Transit Curves

TCE 011075429-02 P= 2.970207 Days T_0=133.255025 (BKJD)



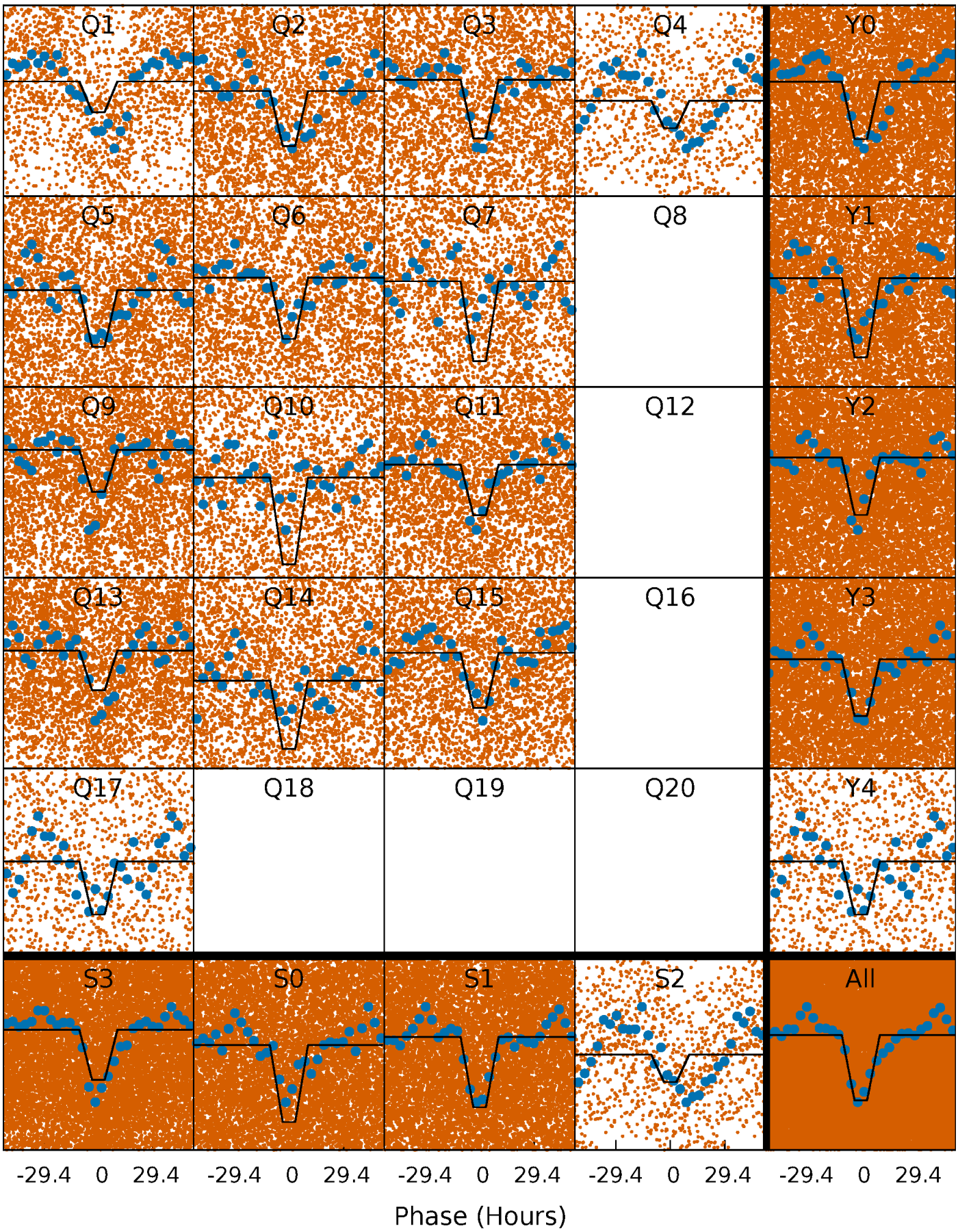
DV Quarter-Phased Transit Curves

TCE 011075429-02 P= 2.970207 Days T_0=133.255025 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

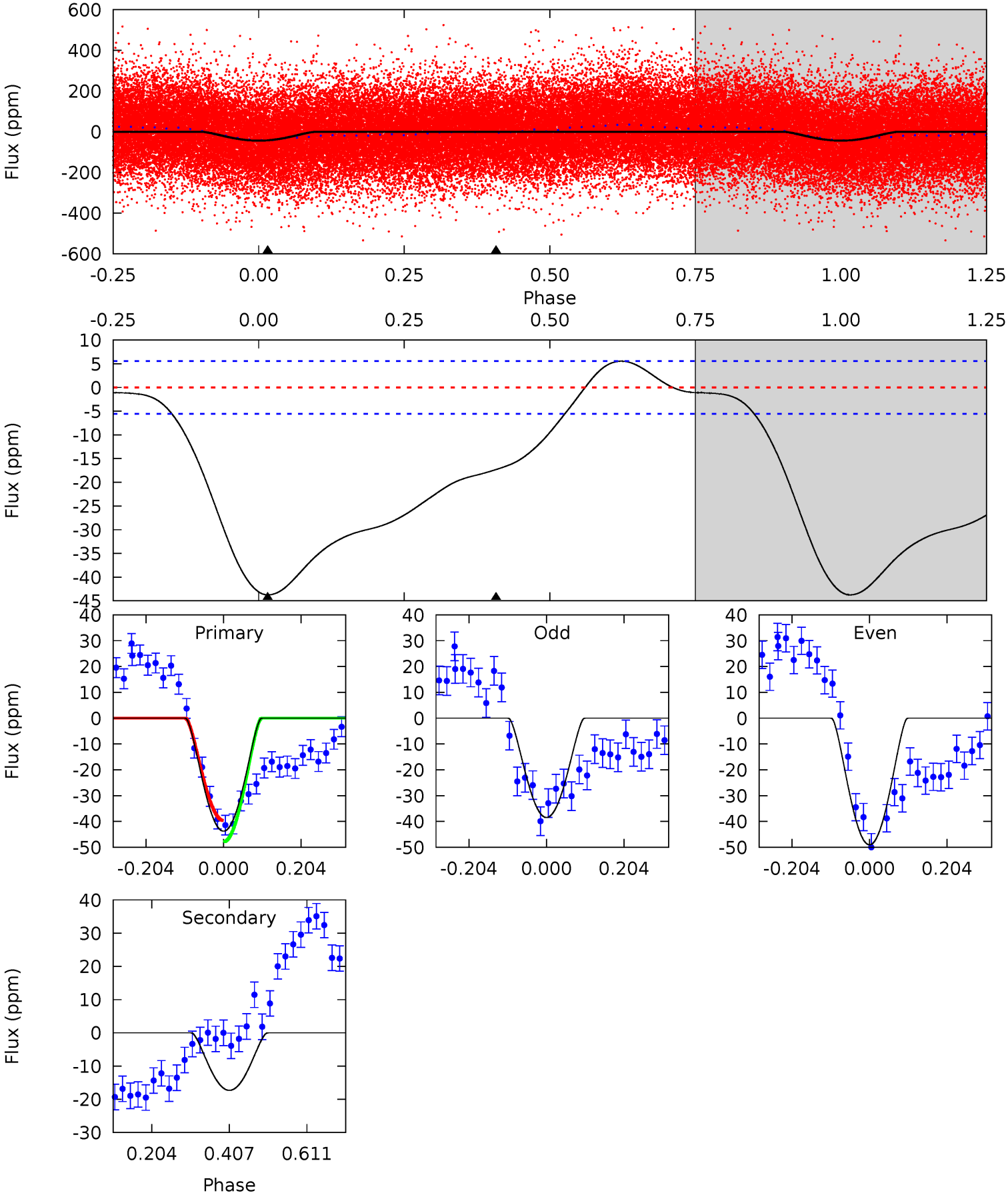
TCE 011075429-02 P= 2.970056 Days T_0=133.350282 (BKJD)



DV Model-Shift Uniqueness Test

011075429-02, P = 2.970207 Days, E = 130.284818 Days

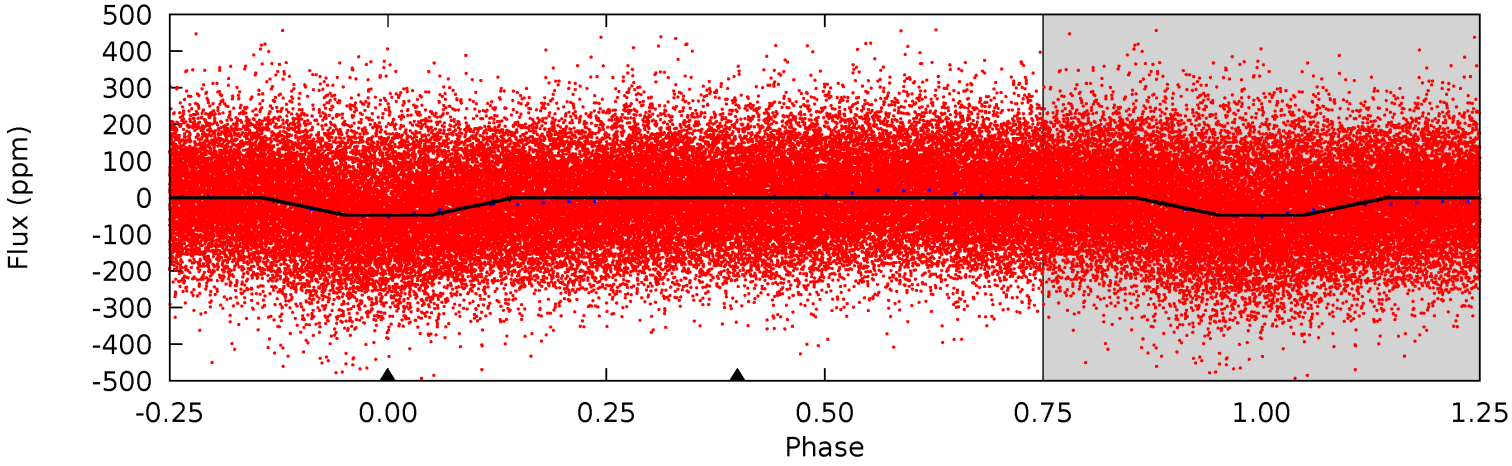
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.7	13.7	0	0	4.41	1.27	2.08	34.7	34.7	13.7	13.7	4.20	1.01	0.11	3.29

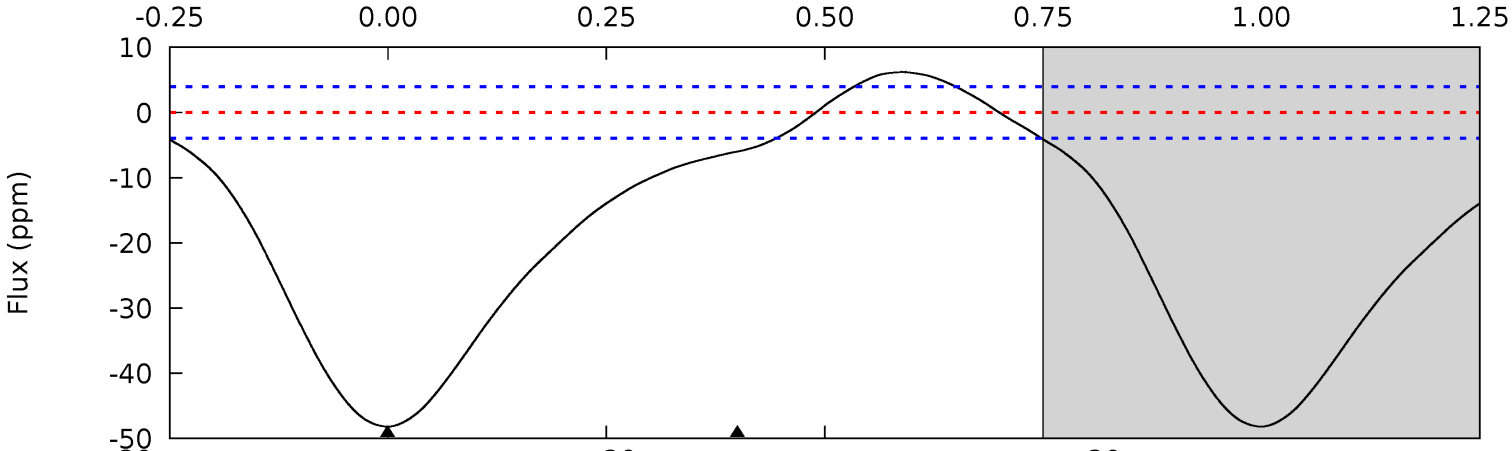


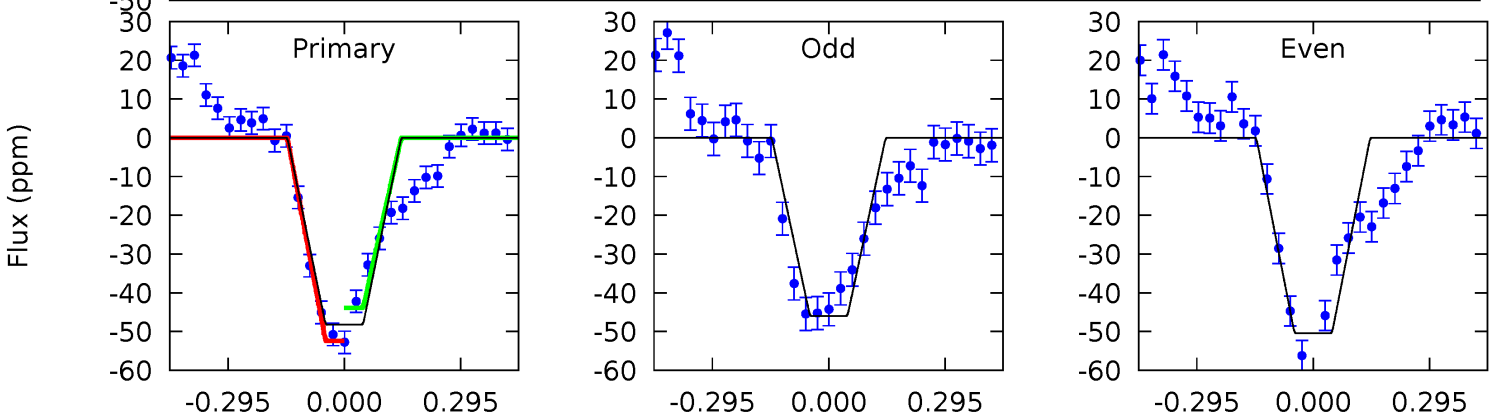
Alt Model-Shift Uniqueness Test

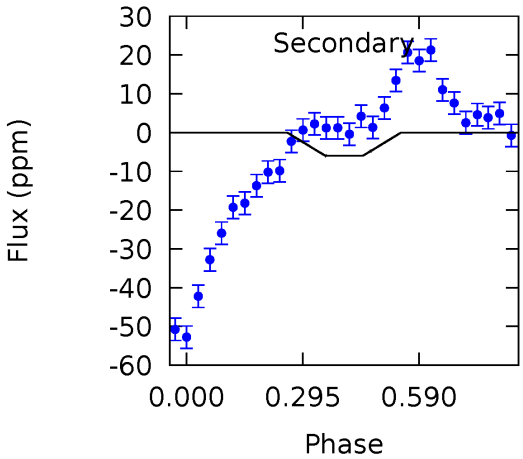
011075429-02, P = 2.970056 Days, E = 130.380226 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.5	6.53	0	0	4.33	1.05	2.61	52.5	52.5	6.53	6.53	2.41	0.95	0.11	4.44









Stellar Parameters For KIC 011075429

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	M($M_\odot$)	$p_\star$ (g·cm^{-3})
	7121^{+199}_{-249}	$4.031^{+0.192}_{-0.128}$	$-0.120^{+0.250}_{-0.350}$	$1.972^{+0.427}_{-0.475}$	$1.521^{+0.171}_{-0.278}$	$0.279^{+0.302}_{-0.109}$
	+3%/-3%	+5%/-3%	+208%/-292%	+22%/-24%	+11%/-18%	+108%/-39%
Source	PHO1	FLK73	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 011075429-02 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-17±1	$3.41^{+3.36}_{-2.31}$	2831^{+181}_{-186}	3786^{+2504}_{-1111}	$1.765^{+15.145}_{-1.330}$
Alt.	-6±1	$3.17^{+3.50}_{-2.15}$	2824^{+194}_{-213}	3083^{+2040}_{-5768}	$0.718^{+6.503}_{-0.558}$

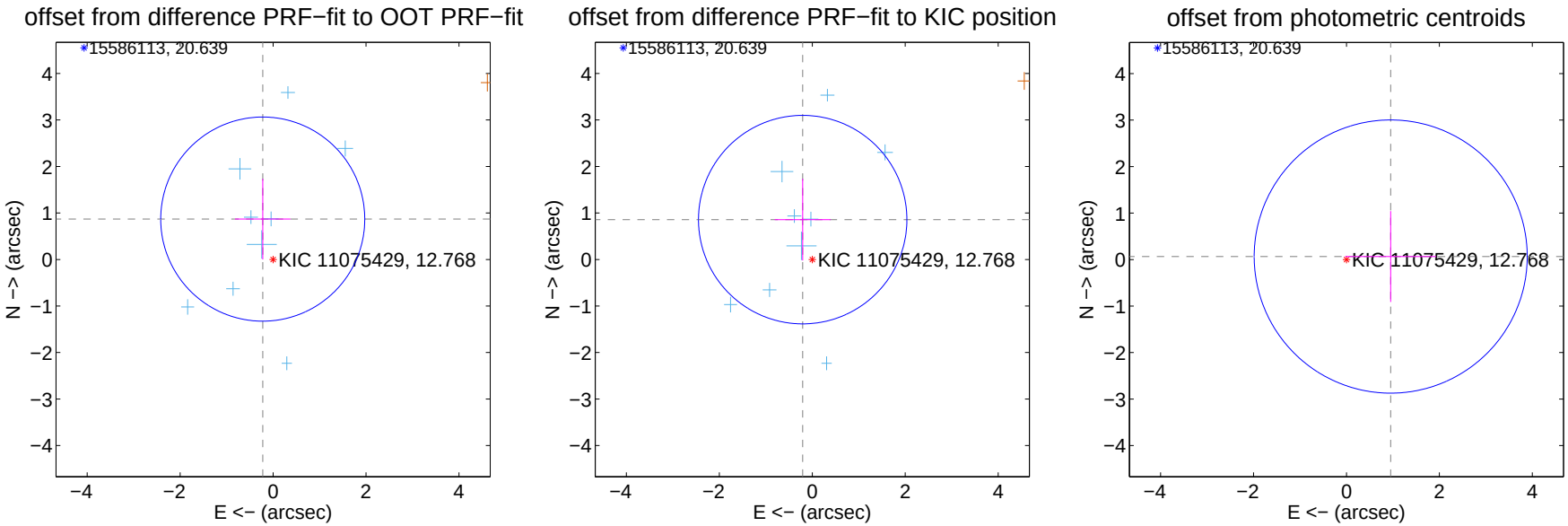
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

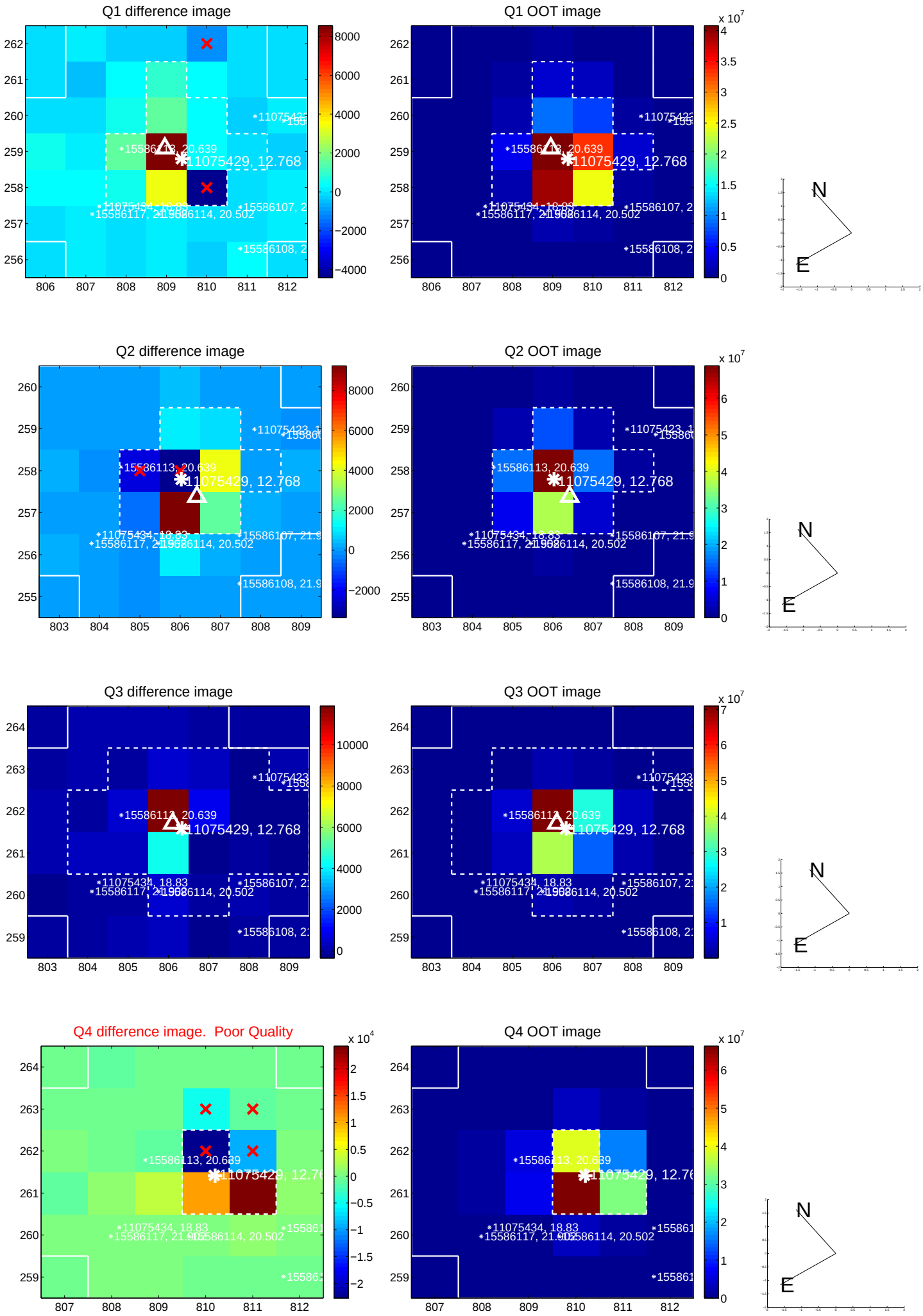
Supplemental centroid analysis for 011075429-02. Kepler magnitude: 12.77. Transit SNR 6.56
There are 9 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.897 ± 0.731	1.23	0.223 ± 0.597	0.869 ± 0.868
PRF-fit source offset from KIC position	0.882 ± 0.747	1.18	0.206 ± 0.602	0.857 ± 0.878
photometric centroid source offset	0.95 ± 0.98	0.97	-0.95 ± 0.98	0.07 ± 0.98

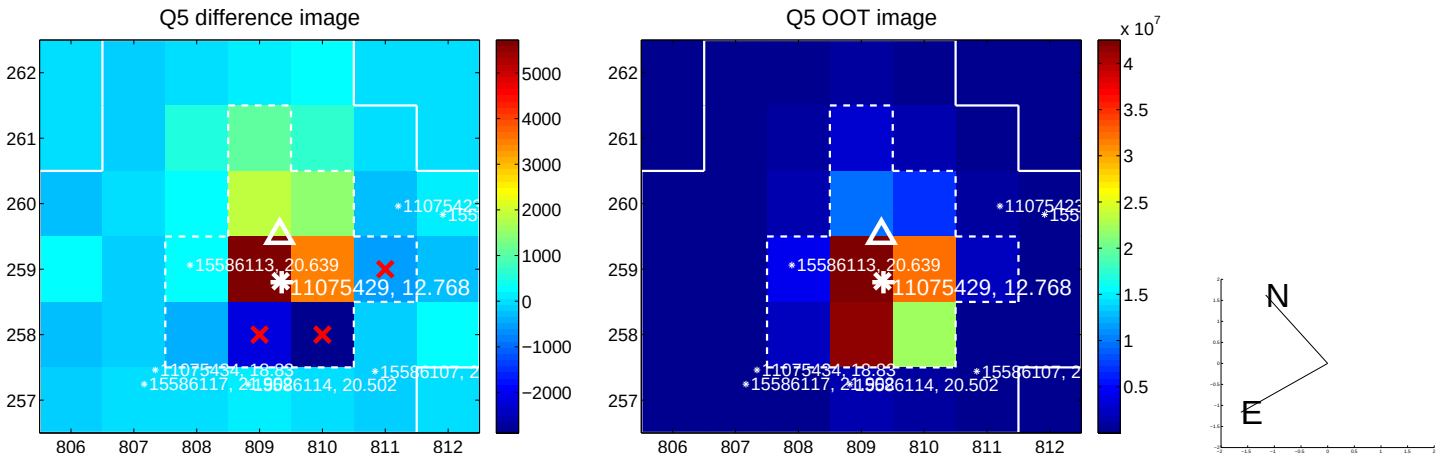


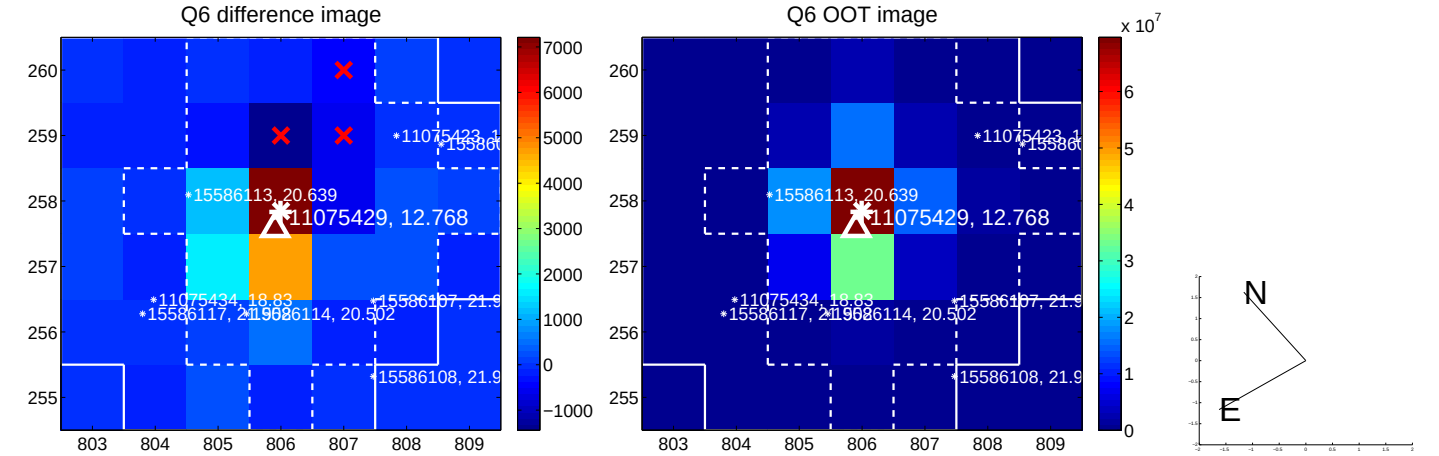
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

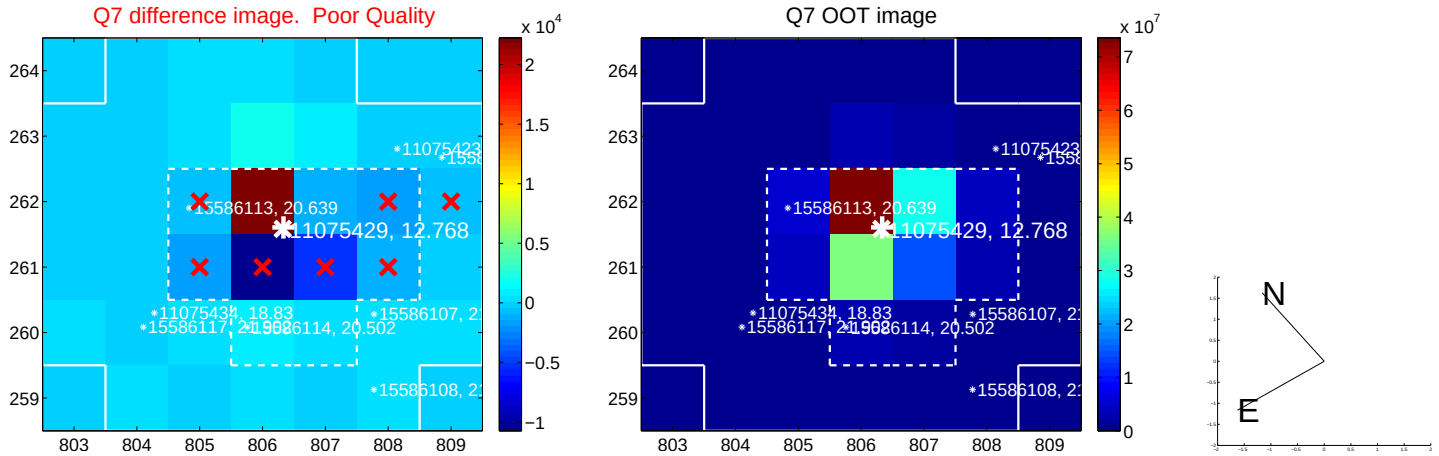
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

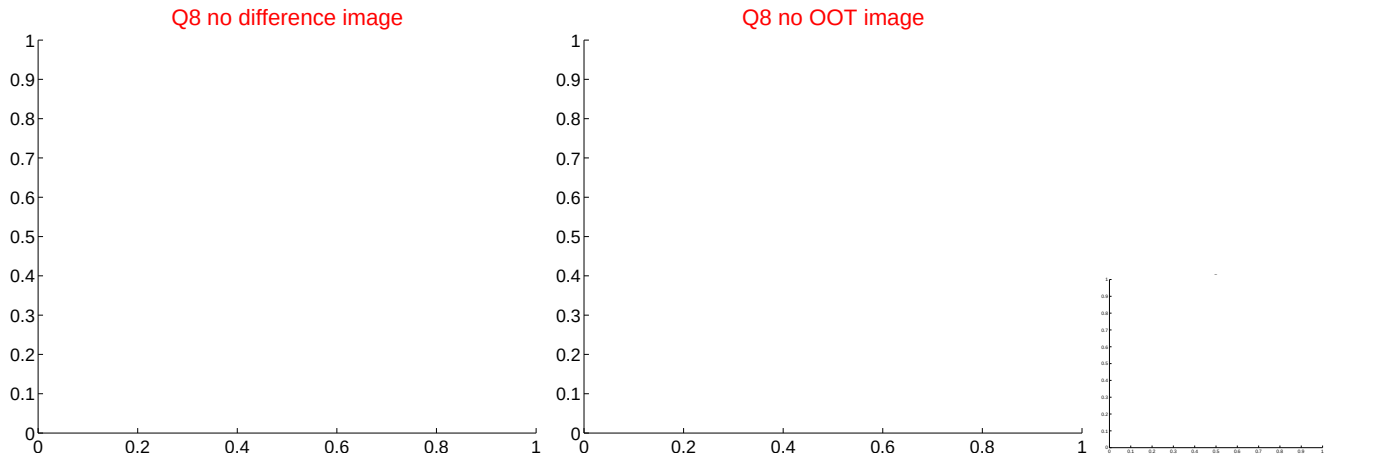


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

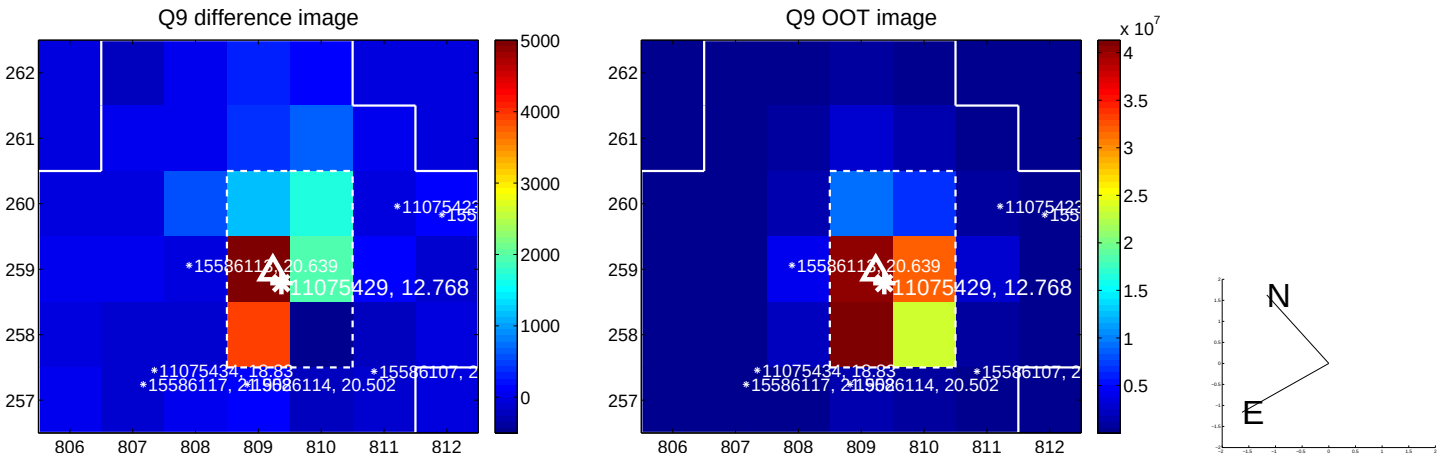


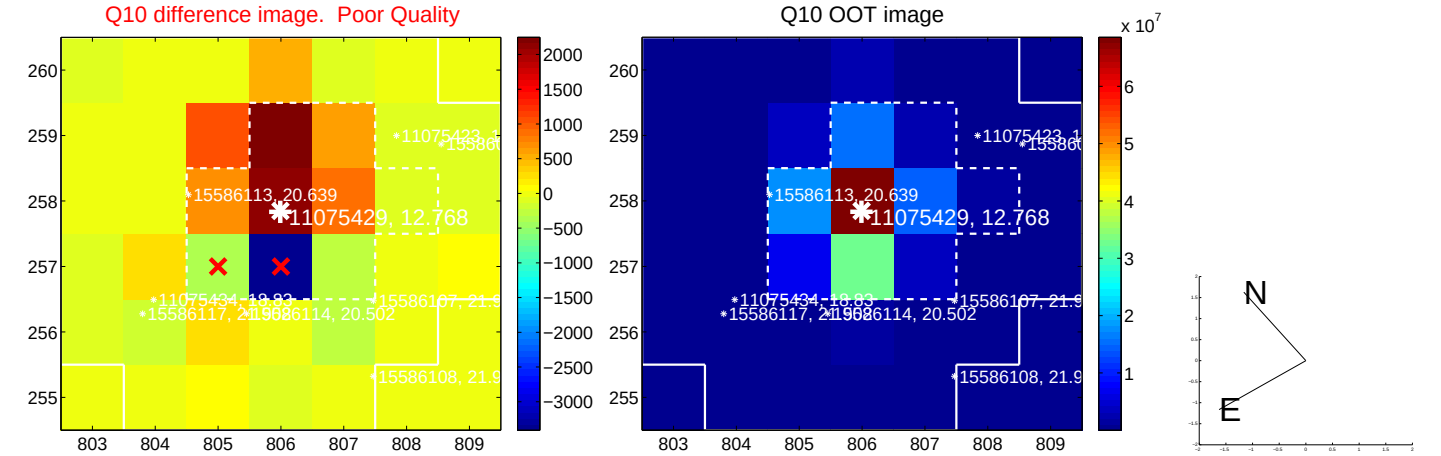


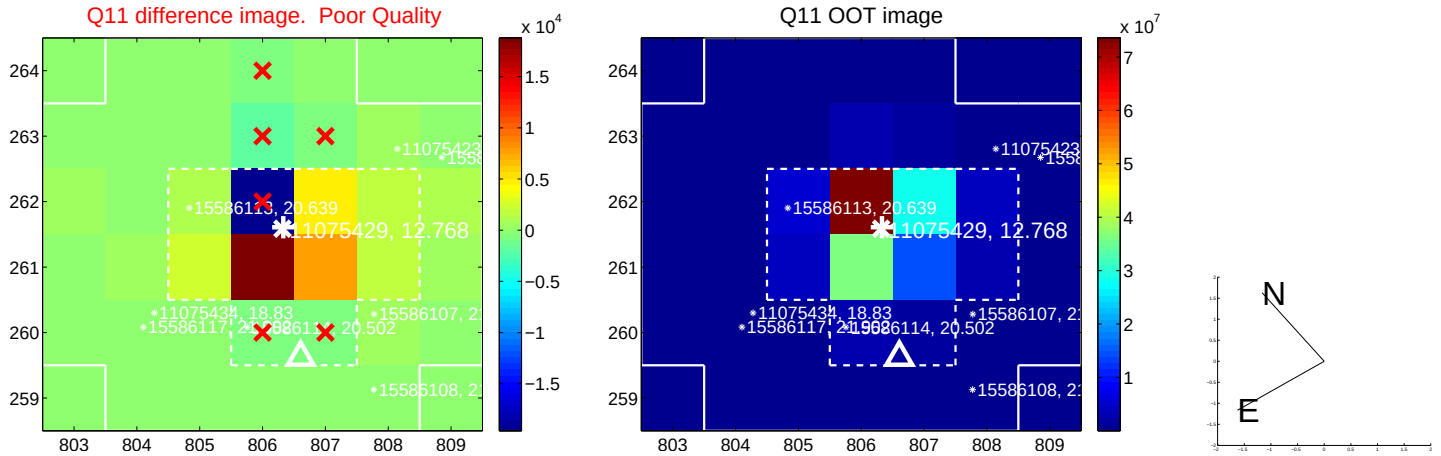


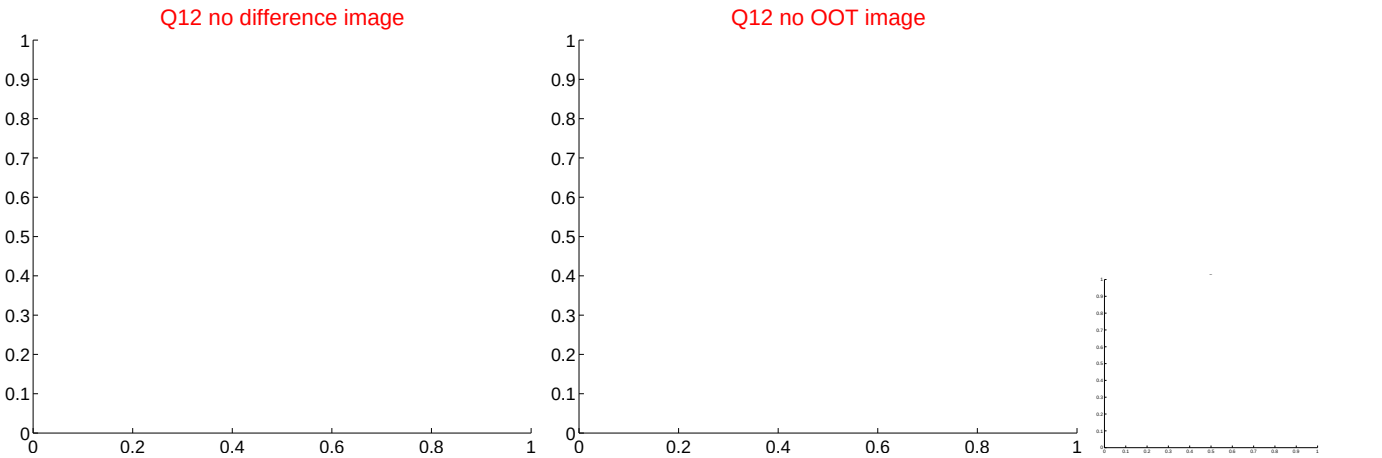


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

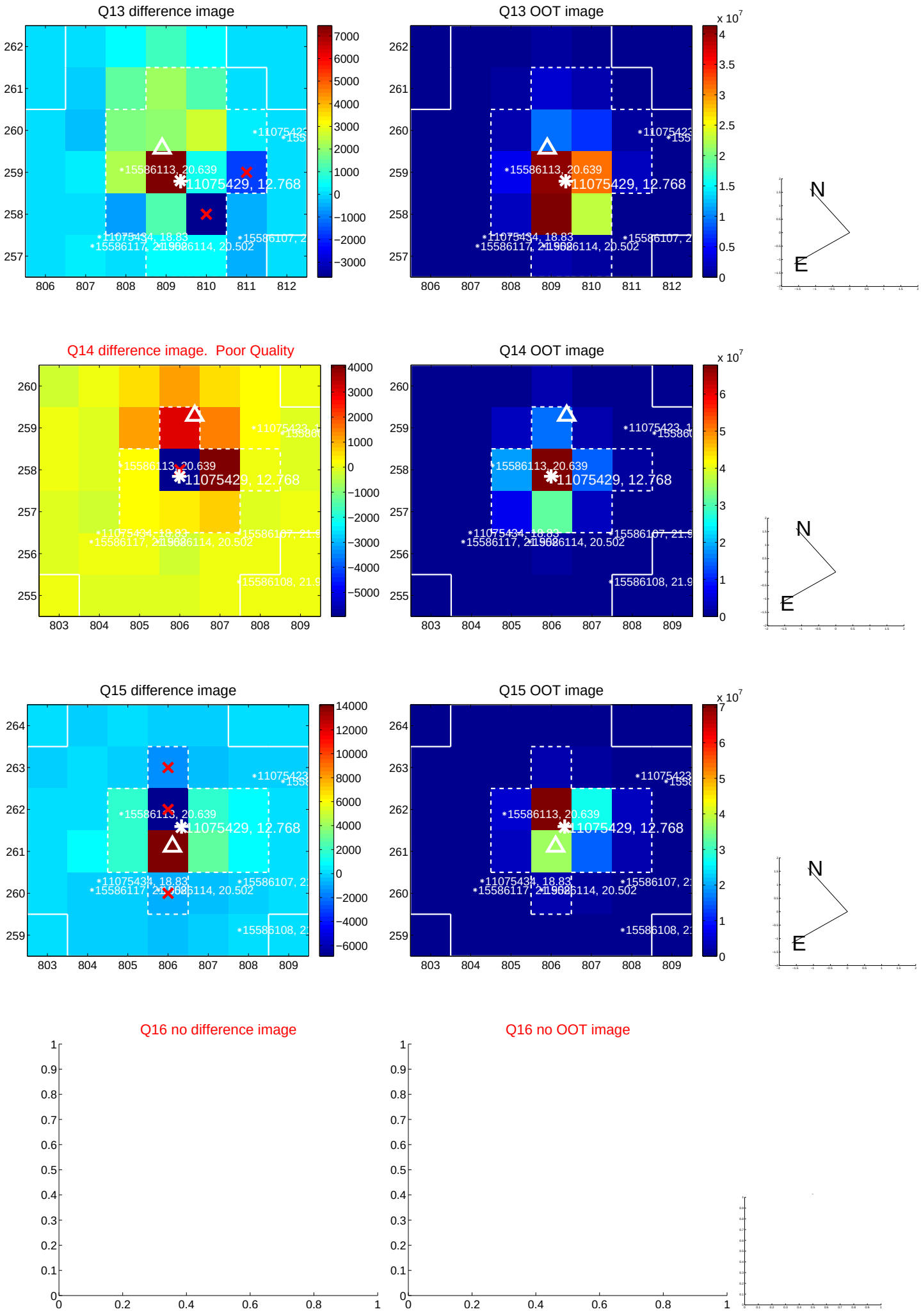




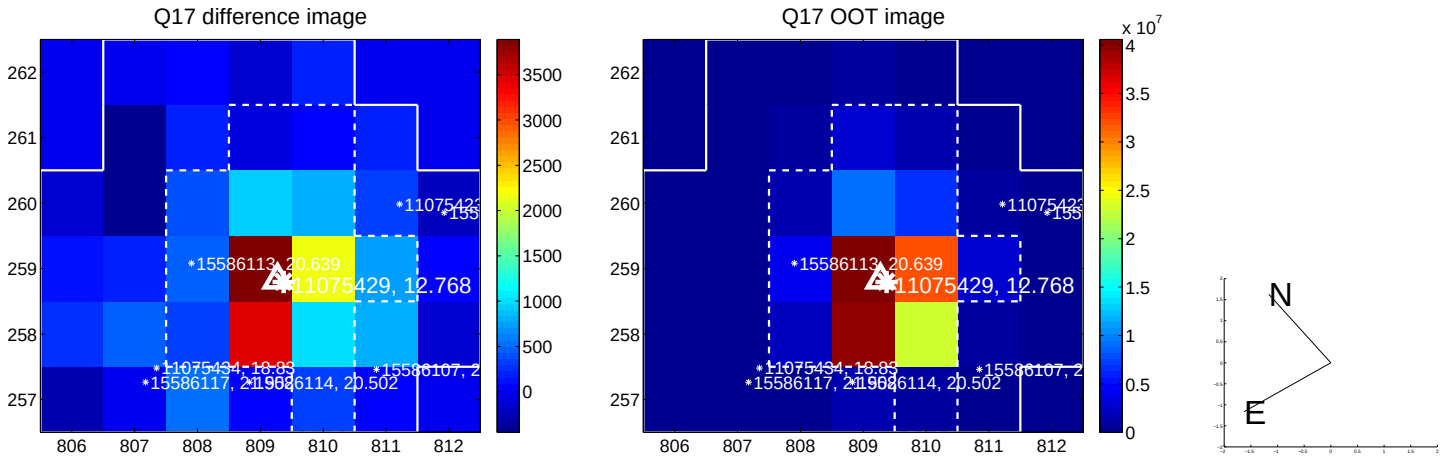


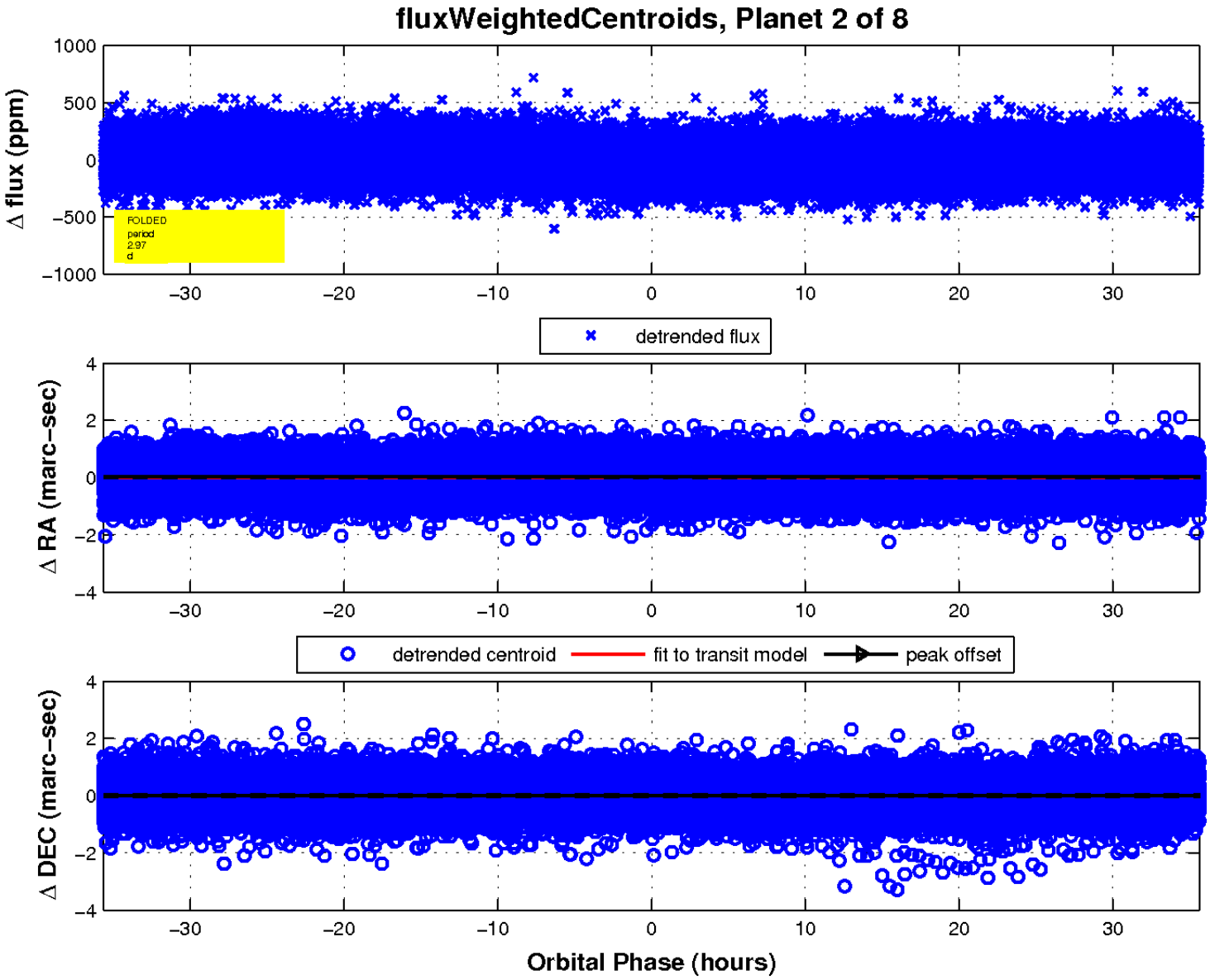


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

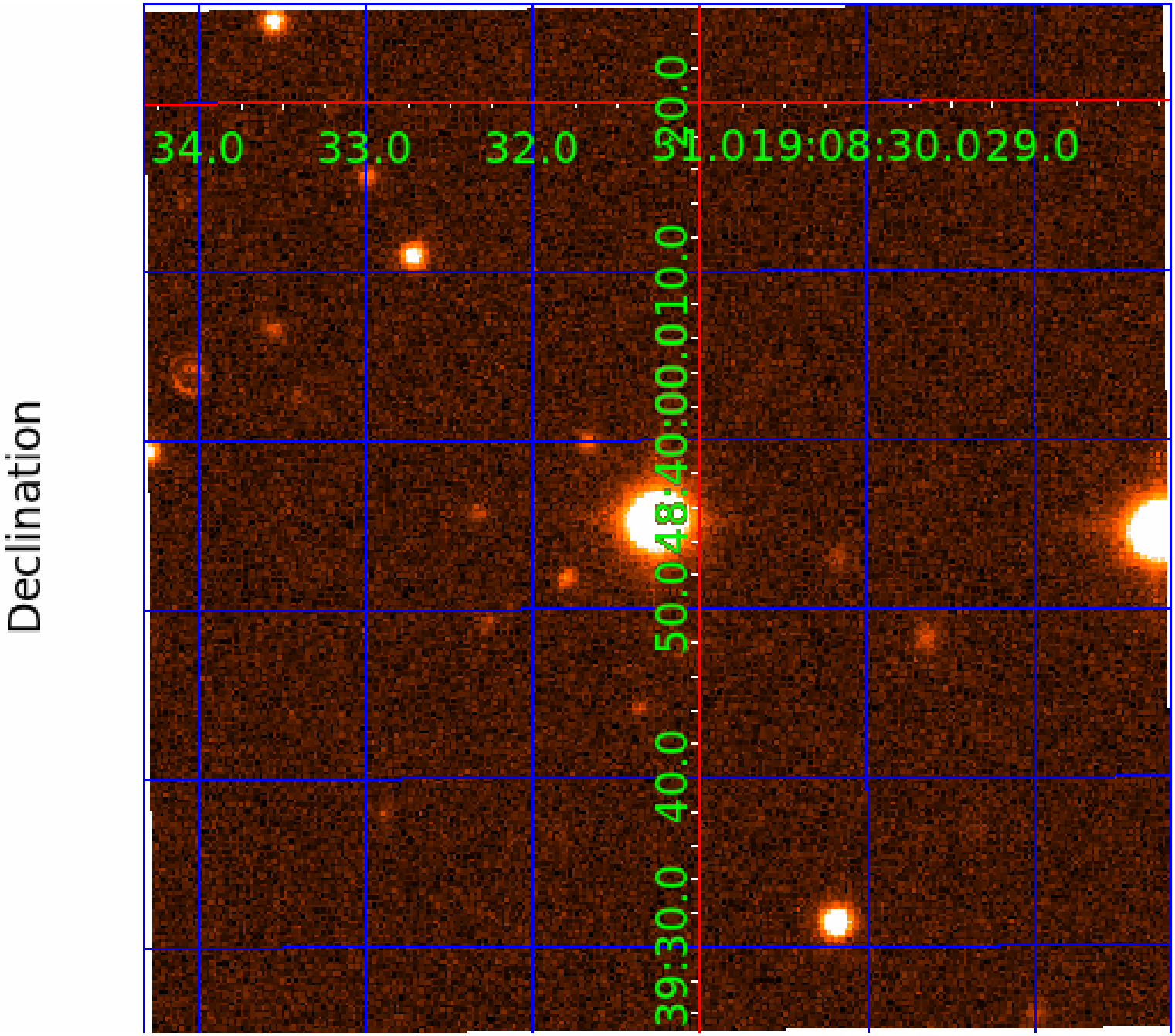


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image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29.0

KIC 011075429

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 ($S_\oplus$)
011075429-01	OBS	2198.01	23.920989	139.076752	154.5	4.970	14.5	16.3	1.97	7121	2.78	256.23
011075429-02	OBS	No	2.970207	133.255025	22.8	14.079	7.7	6.6	1.97	7121	1.85	4136.32
011075429-03	OBS	No	232.879284	220.802473	204.2	14.518	11.2	8.6	1.97	7121	3.11	12.33
011075429-05	OBS	No	113.483857	243.296868	142.3	16.305	8.7	6.8	1.97	7121	2.62	32.14
011075429-06	OBS	No	134.928395	201.311999	201.5	6.788	7.9	7.4	1.97	7121	3.20	25.52
011075429-07	OBS	No	118.726252	217.971834	152.6	5.625	8.4	9.4	1.97	7121	2.86	30.27
011075429-08	OBS	No	93.222487	139.641842	146.1	7.395	7.5	7.5	1.97	7121	2.71	41.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011075429-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
011075429-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011075429-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
011075429-07	OBS	FP	0.02	1	0	0	0	MOD_NONUNIQ_ALT—CENT_FEW_MEAS
011075429-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

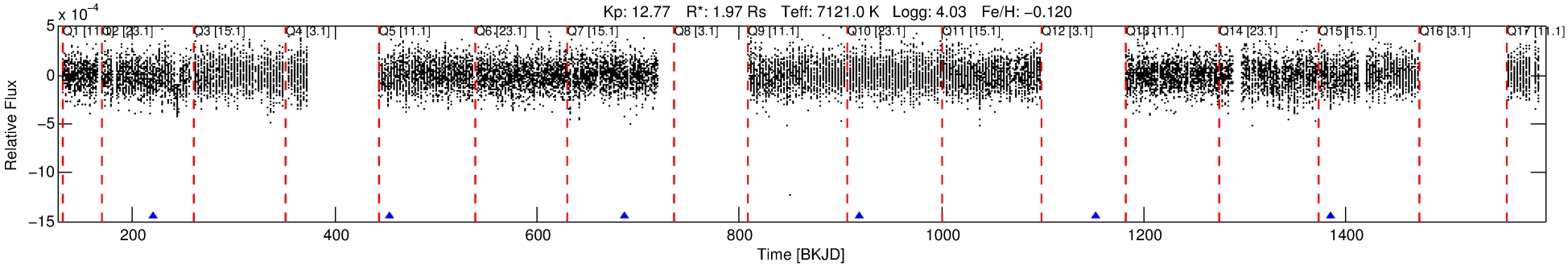
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

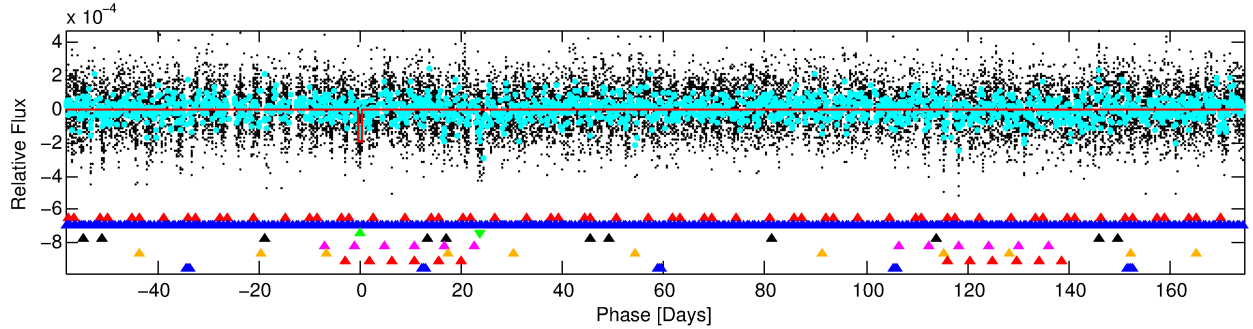
Ephemeris Match Information For 011075429-03

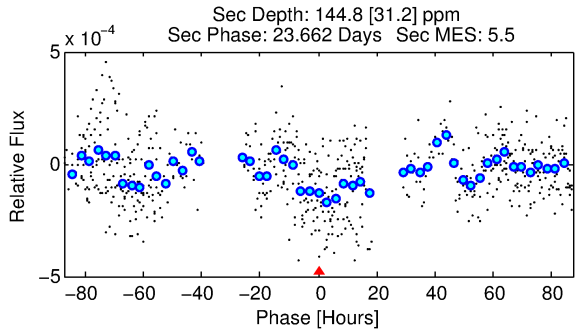
No Significant Match Found

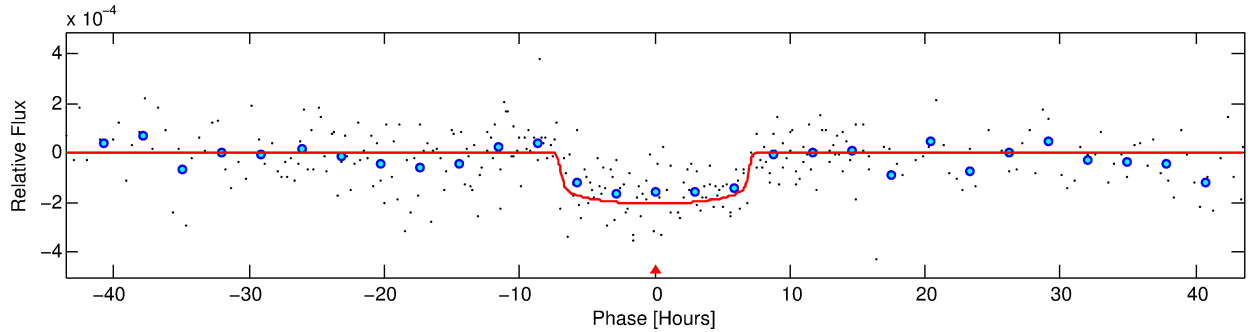
DV One-Page Summary

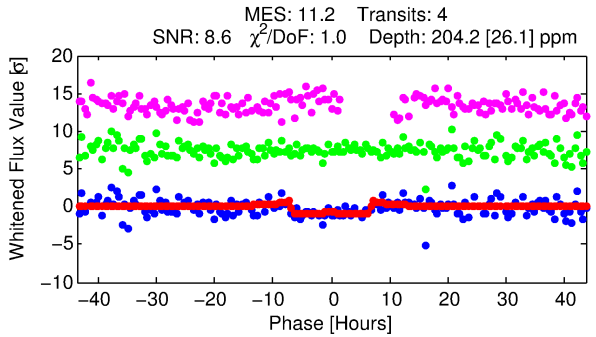
KIC: 11075429 Candidate: 3 of 8 Period: 232.879 d
KOI: K02198 Corr: No Ephemeris Match

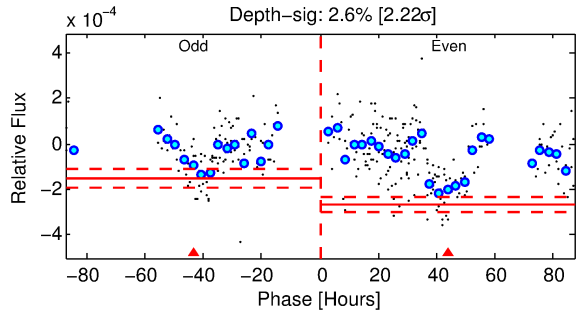


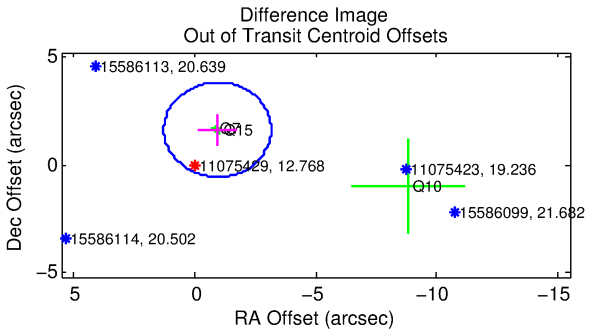












DV Fit Results:

Period = 232.87928 [0.00329] d
Epoch = 220.8025 [0.0113] BKJD
Rp/R* = 0.0144 [0.0021]
a/R* = 76.12 [57.27]
b = 0.80 [0.34]

Seff = 12.33 [4.48]
Teq = 478 [43] K
Rp = 3.11 [0.88] Re
a = 0.8526 [0.1858] AU

Ag = 5992.67 [2962.42] [2.02σ]
Teffp = 6499 [632] K [9.51σ]

DV Diagnostic Results:

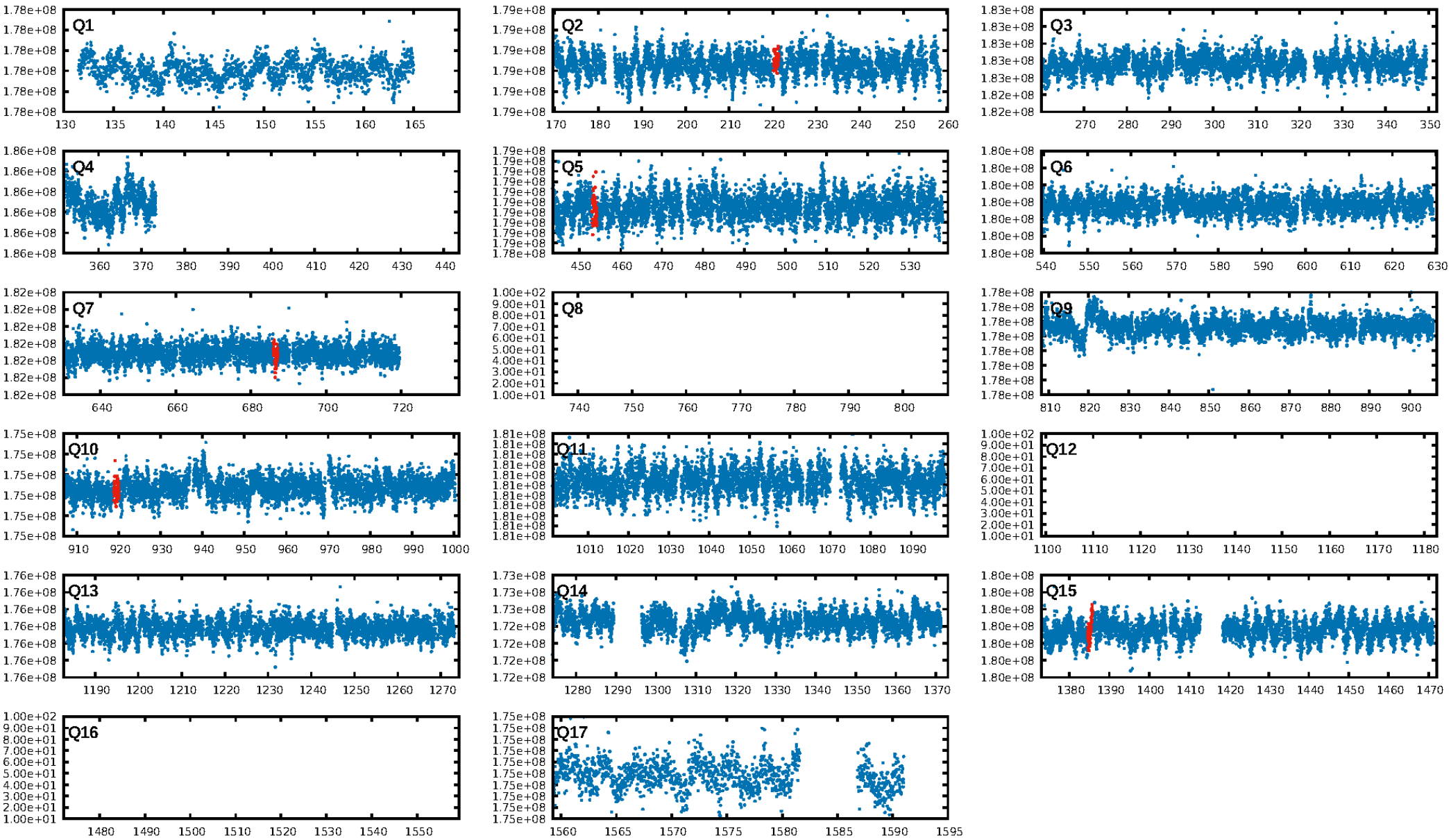
ShortPeriod−sig: 100.0% [146.69σ]
LongPeriod−sig: N/A
ModelChiSquare2−sig: 2.7%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: 5.38e−17
RollingBand−fgt: 1.00 [4/4]
GhostDiagnostic−chr: 5.741

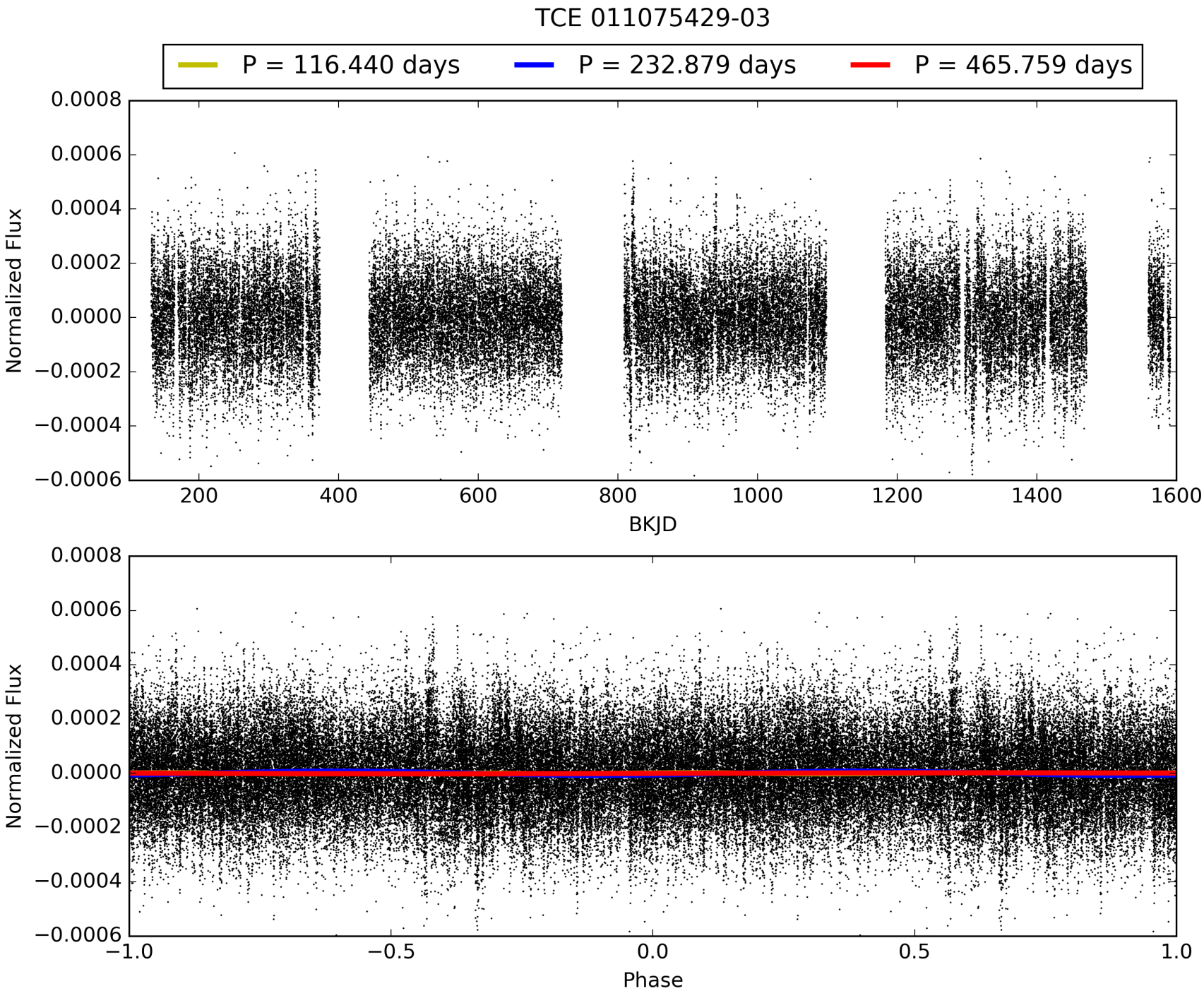
Centroid−sig: 18.9%
Centroid−so: 1.013 arcsec [1.26σ]
OotOffset−rm: 1.887 arcsec [2.56σ]
KicOffset−rm: 1.989 arcsec [2.69σ]
OotOffset−st: 1/2/0/0 [3]
KicOffset−st: 1/2/0/0 [3]
DiffImageQuality−fgm: 0.67 [2/3]
DiffImageOverlap−fno: 0.40 [2/5]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 21:21:57 Z

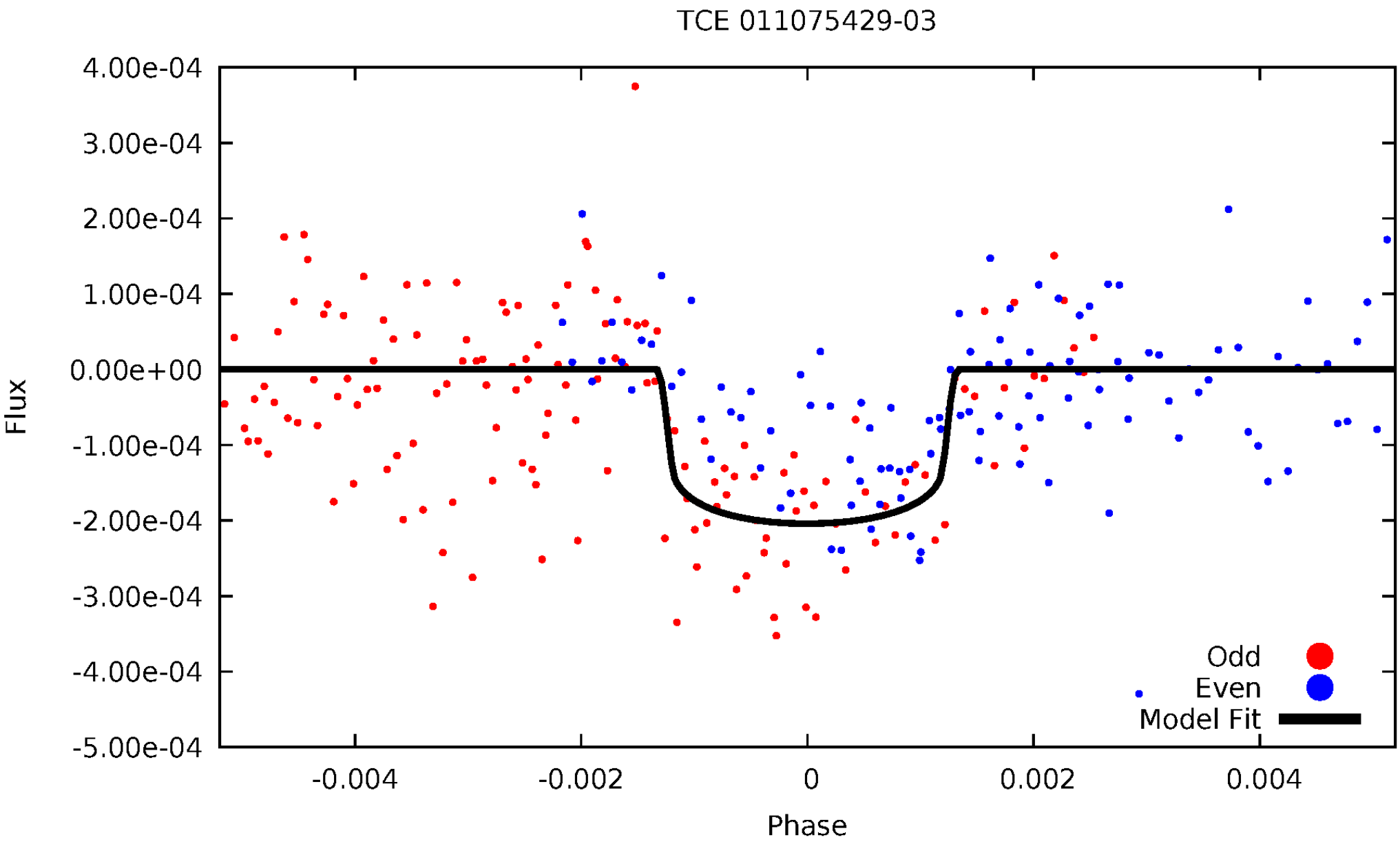
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011075429-03, PDC Light Curves




TCE 011075429-03
P = 116.440 days
P = 232.879 days
P = 465.759 days
Normalized Flux
BKJD
Normalized Flux
Phase

DV Odd/Even


TCE 011075429-03
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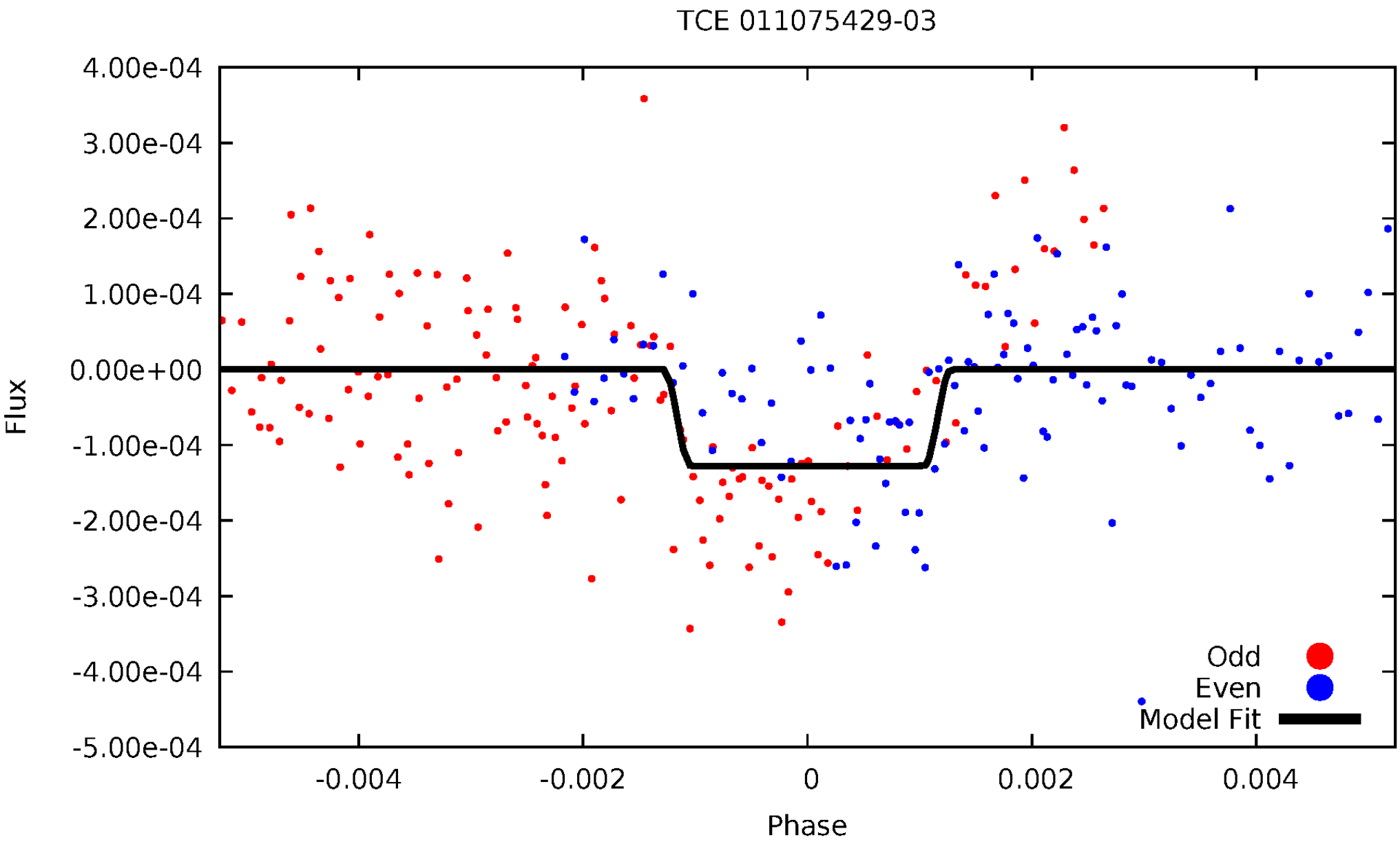
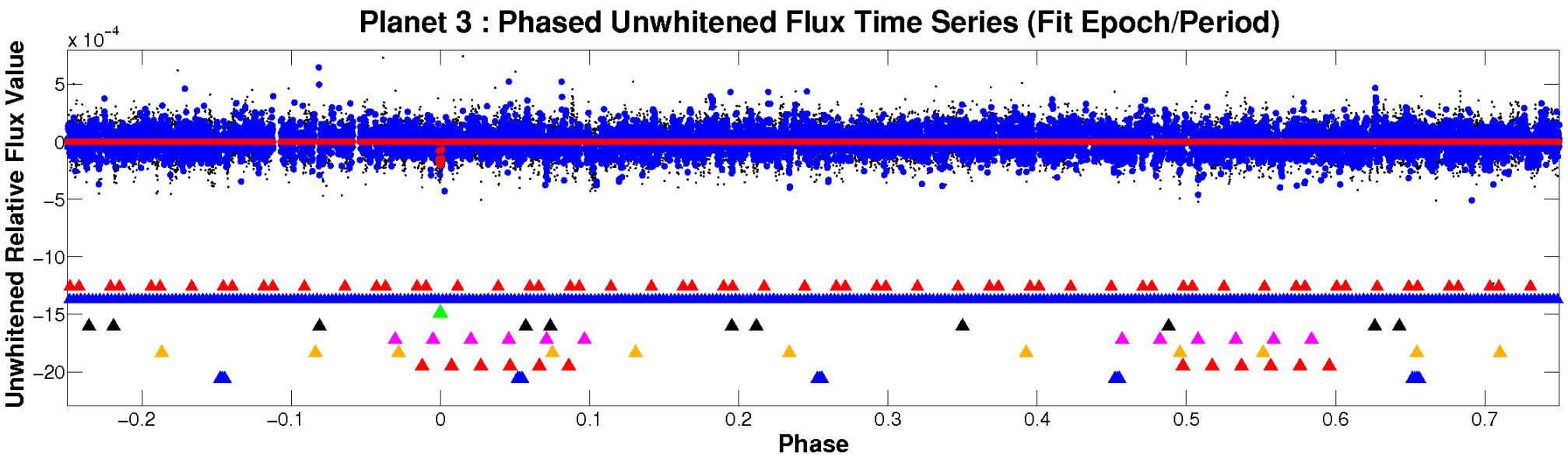
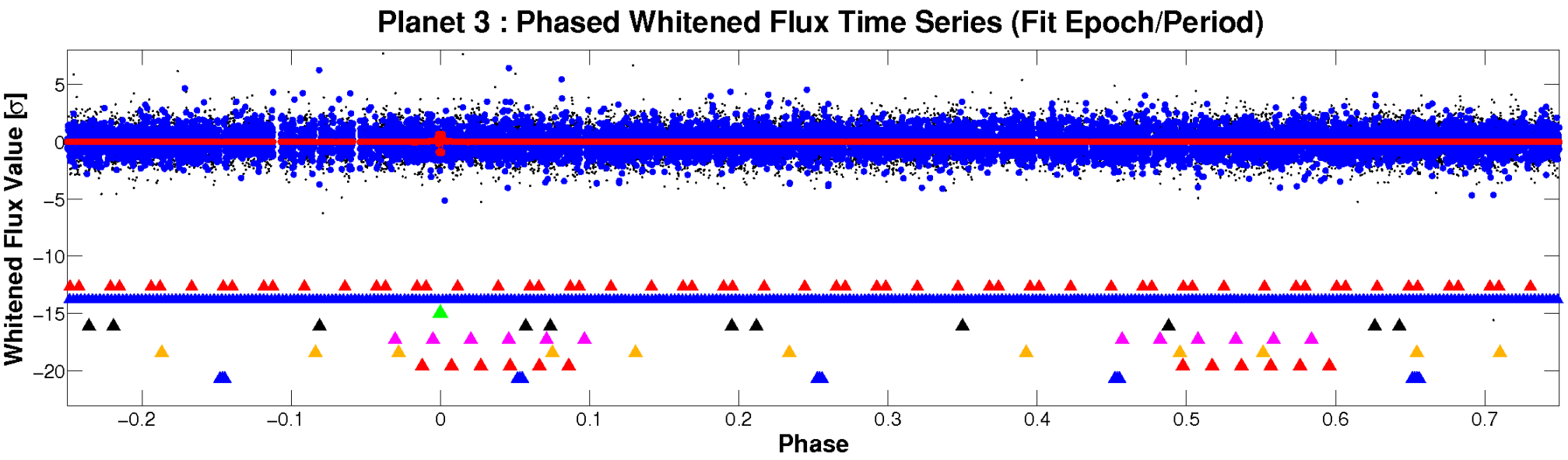
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
-5.00e-04
Flux
-0.004
-0.002
0
0.002
0.004
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 011075429-03
4.00e-04
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
-5.00e-04
Flux
-0.004
-0.002
0
0.002
0.004
Phase
Odd
Even
Model Fit

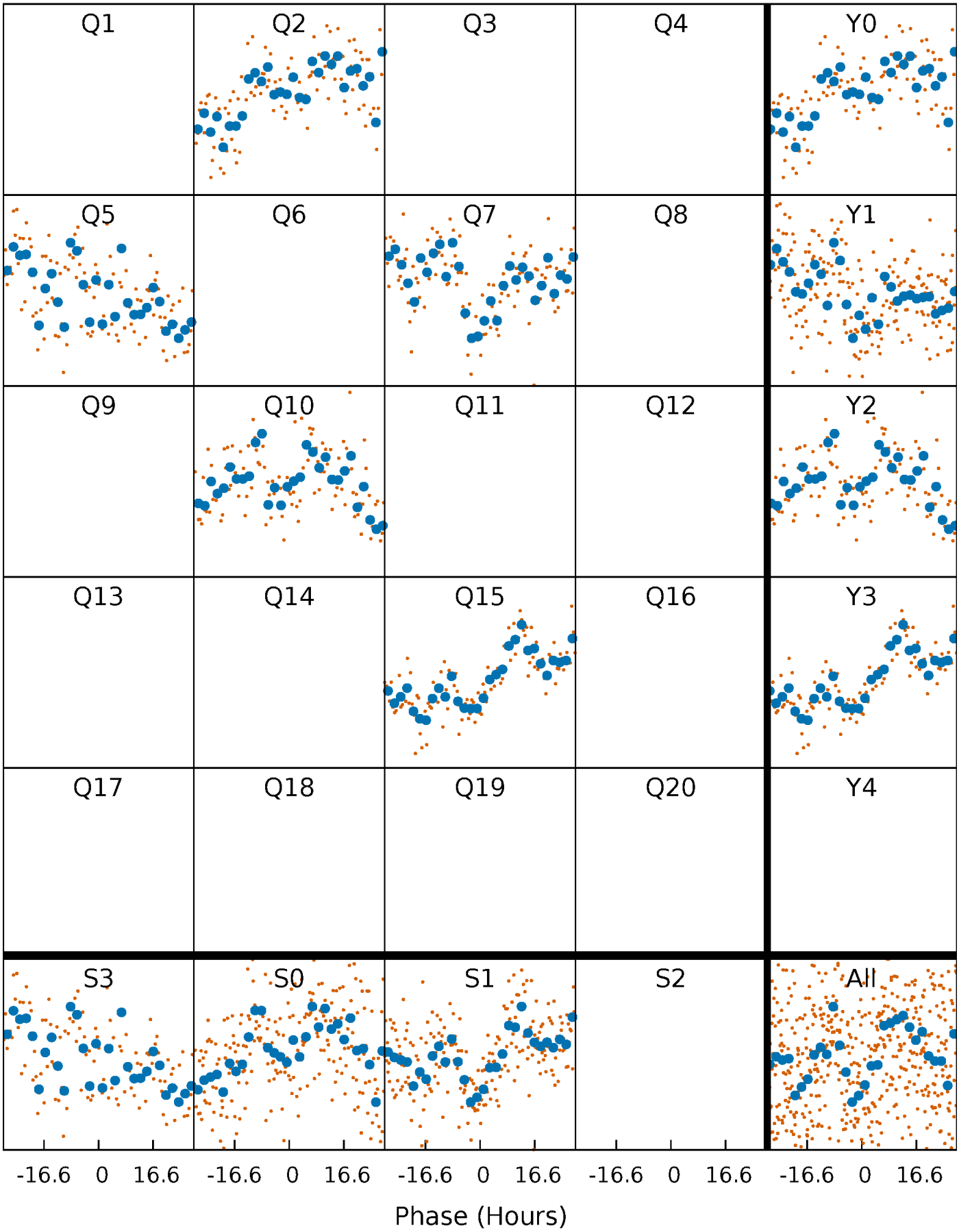
Non-Whitened Vs. Whitened Light Curve





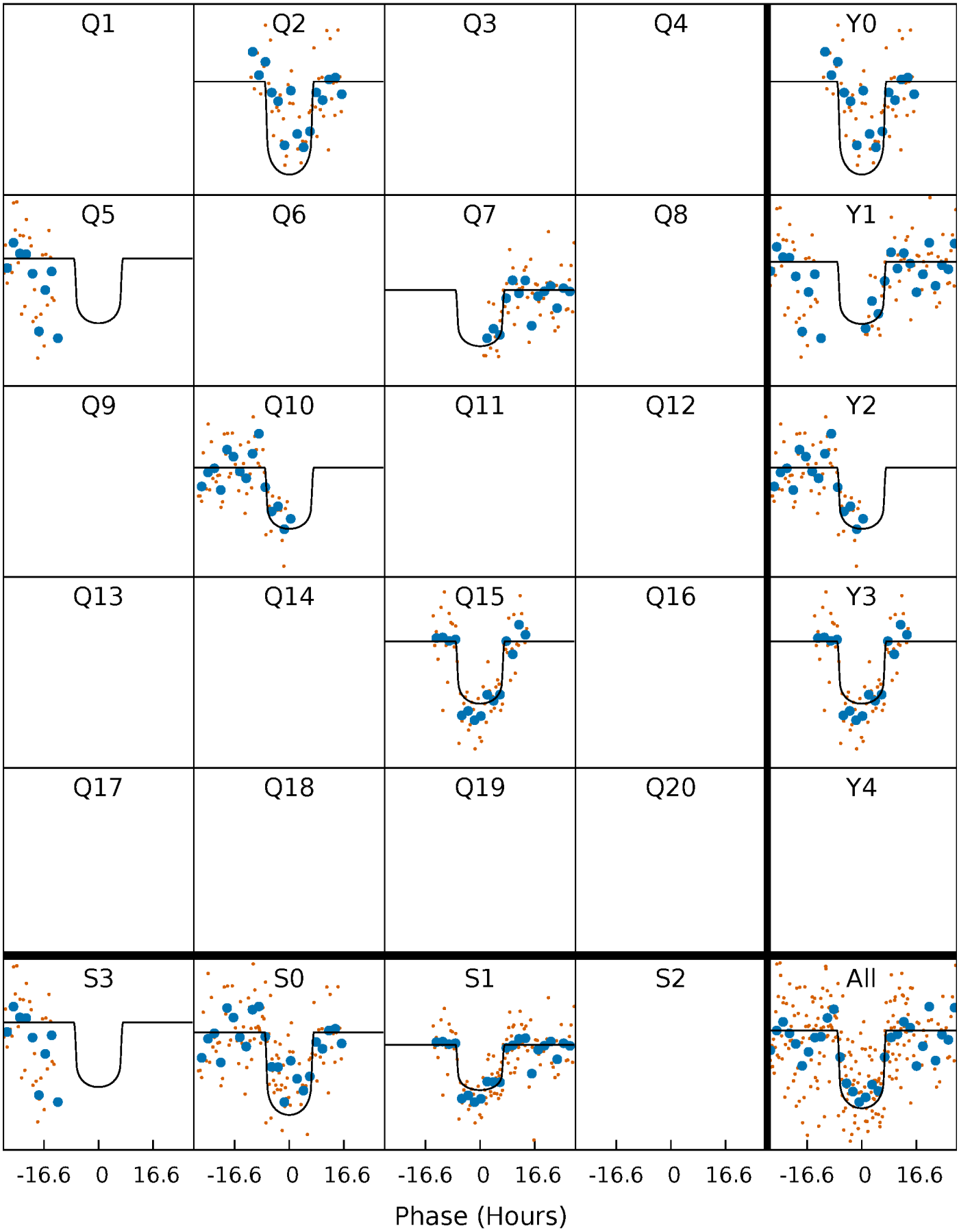
PDC Quarter-Phased Transit Curves

TCE 011075429-03 P=232.879284 Days T_0=220.802473 (BKJD)



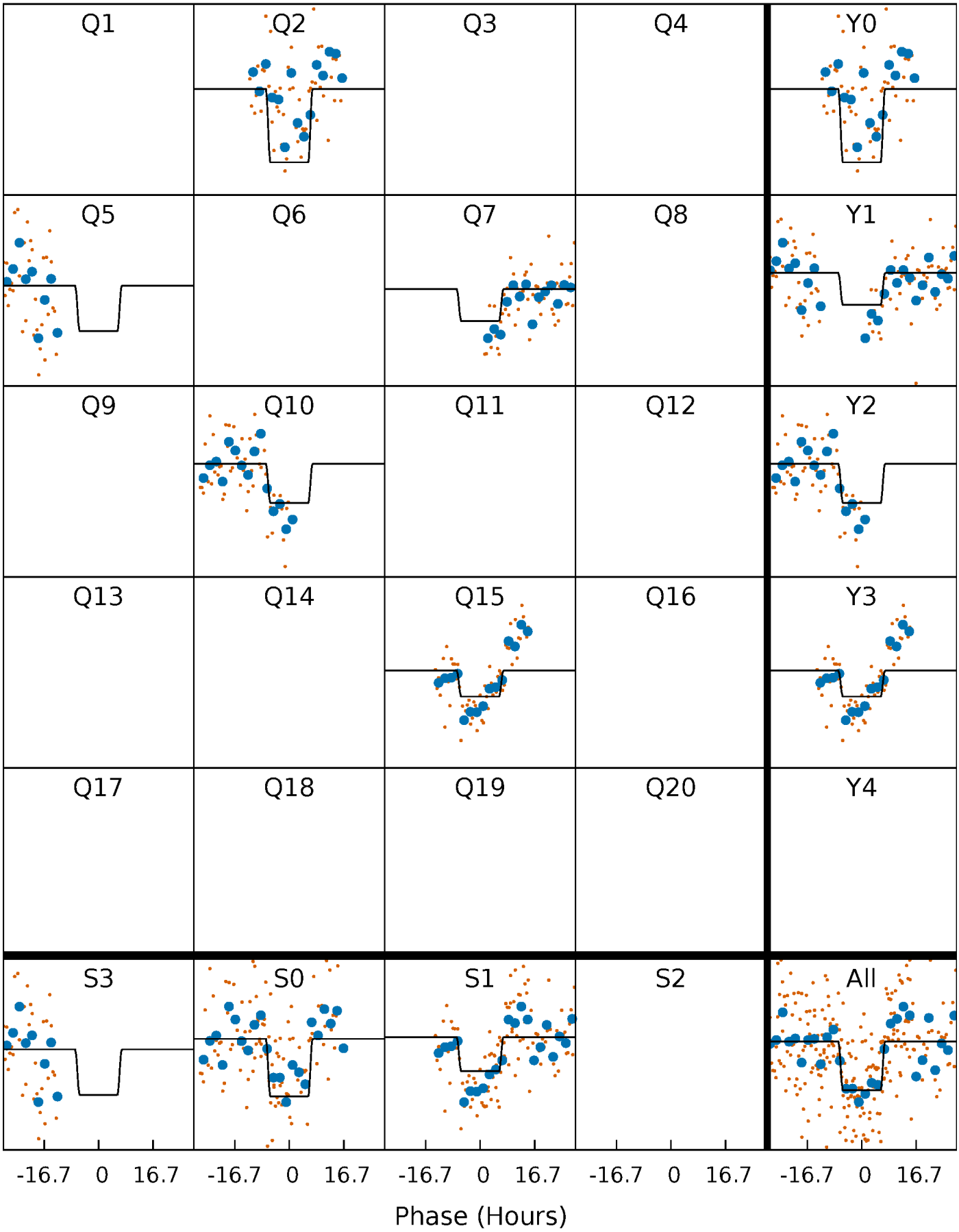
DV Quarter-Phased Transit Curves

TCE 011075429-03 P=232.879284 Days T_0=220.802473 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

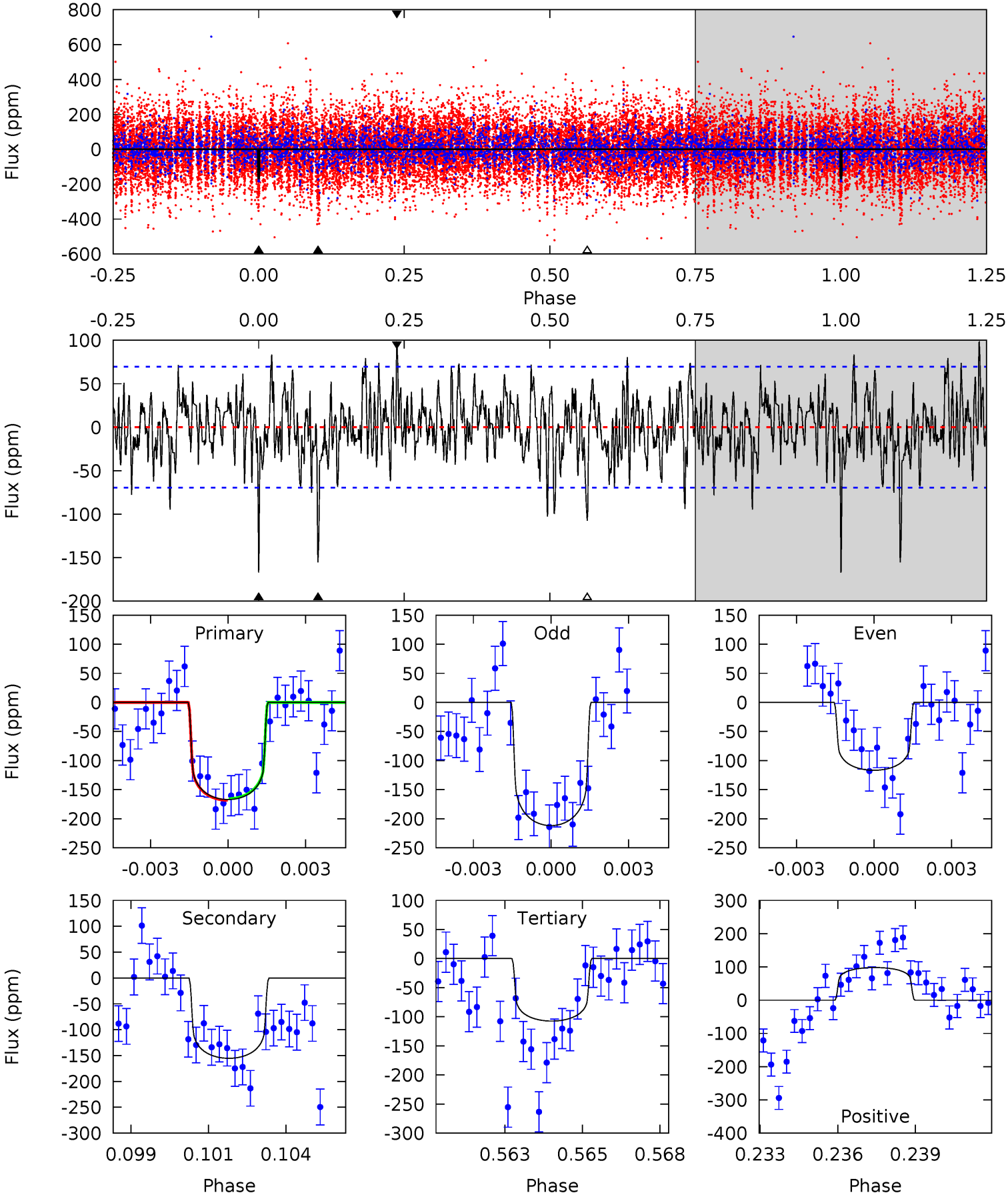
TCE 011075429-03 P=232.874472 Days T_0=220.801457 (BKJD)



DV Model-Shift Uniqueness Test

011075429-03, P = 232.879284 Days, E = 220.802473 Days

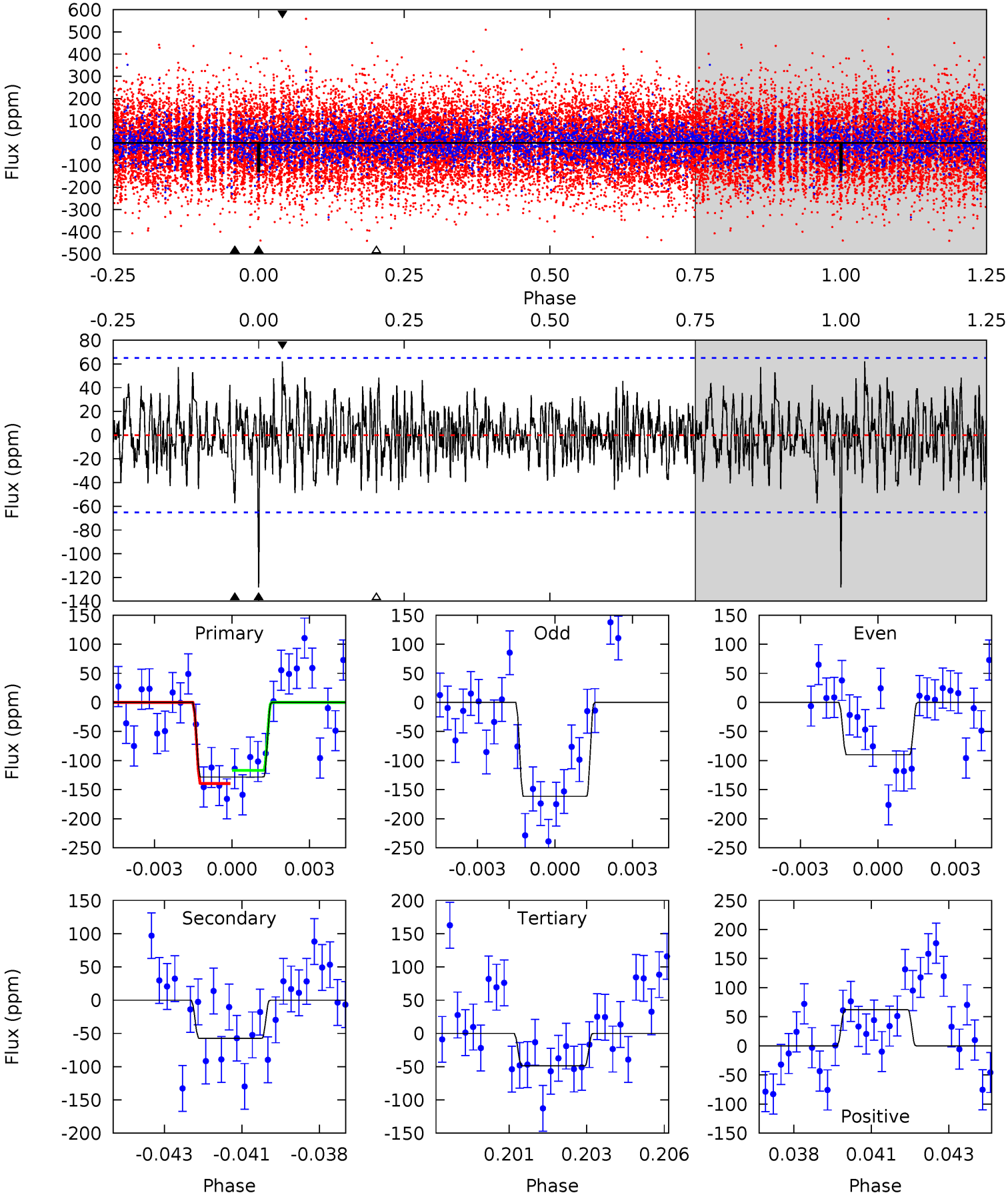
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	11.8	8.16	7.46	5.28	3.01	2.32	4.53	5.23	3.64	4.34	3.61	0.97	0.37	0.10



Alt Model-Shift Uniqueness Test

011075429-03, P = 232.874472 Days, E = 220.801457 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	4.65	3.96	5.03	5.28	3.02	1.43	6.45	5.38	0.69	-0.38	2.92	0.87	0.33	0.91



Stellar Parameters For KIC 011075429

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	M($M_\odot$)	$p_\star$ (g·cm^{-3})
	7121^{+199}_{-249}	$4.031^{+0.192}_{-0.128}$	$-0.120^{+0.250}_{-0.350}$	$1.972^{+0.427}_{-0.475}$	$1.521^{+0.171}_{-0.278}$	$0.279^{+0.302}_{-0.109}$
	+3%/-3%	+5%/-3%	+208%/-292%	+22%/-24%	+11%/-18%	+108%/-39%
Source	PHO1	FLK73	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 011075429-03 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-155±13	$3.04^{+0.65}_{-0.58}$	658^{+44}_{-43}	6487^{+628}_{-493}	6647^{+3336}_{-2195}
Alt.	-57±12	$2.39^{+0.61}_{-0.54}$	661^{+41}_{-43}	5718^{+793}_{-510}	3904^{+2881}_{-1472}

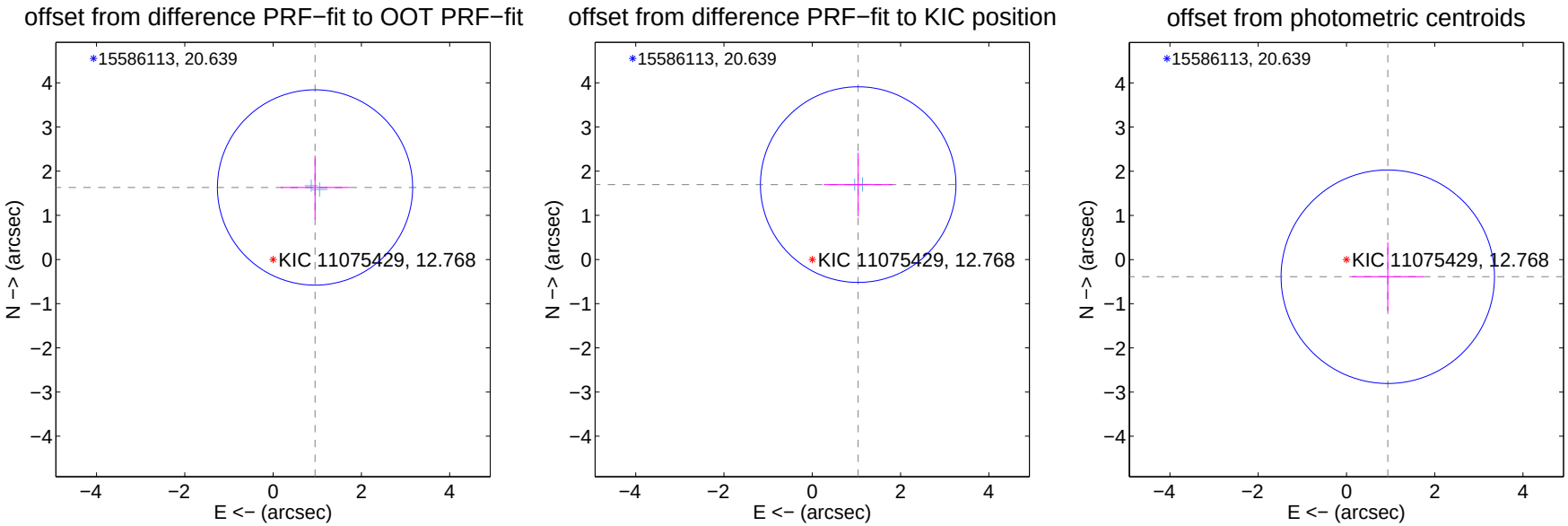
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

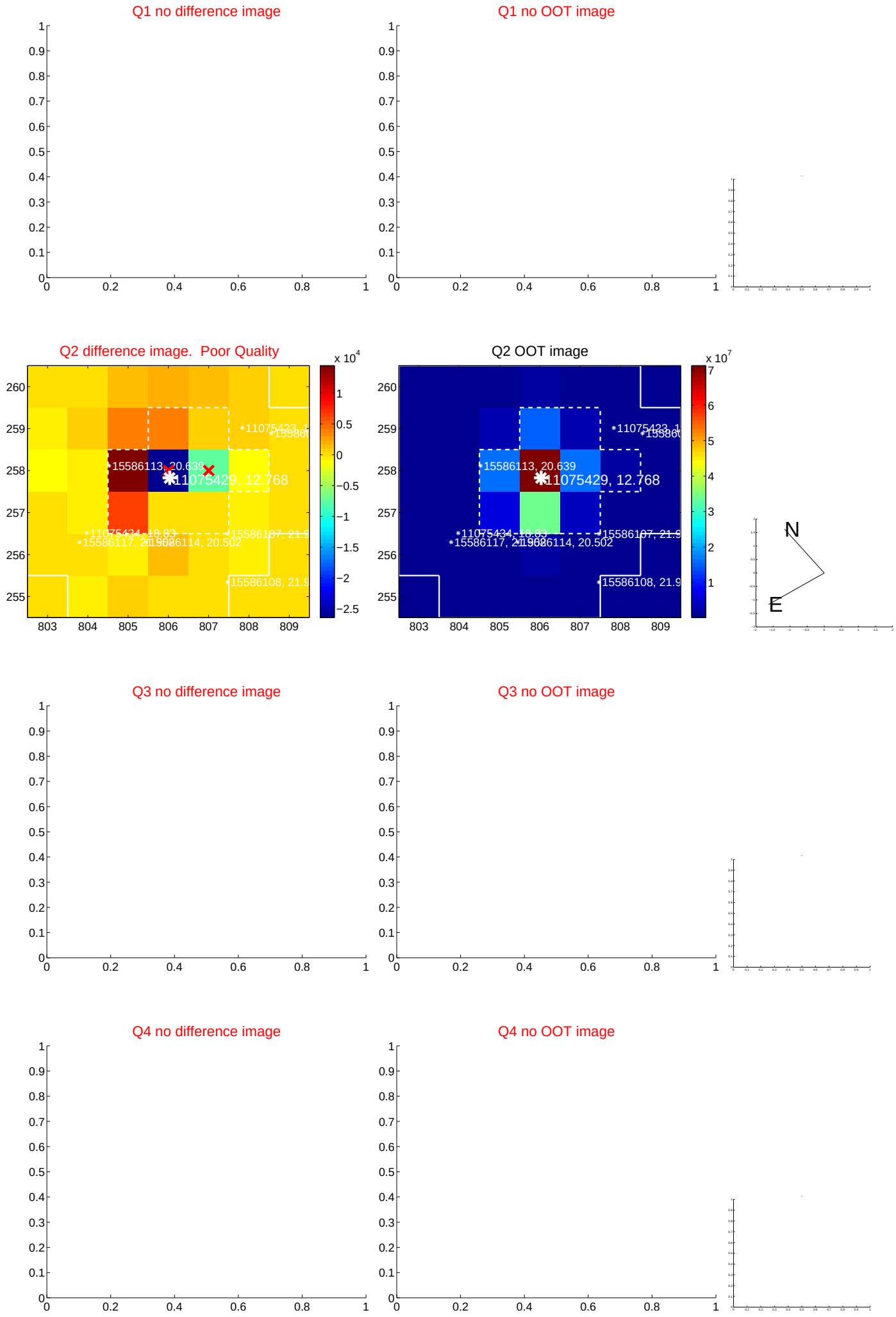
Supplemental centroid analysis for 011075429-03. Kepler magnitude: 12.77. Transit SNR 8.60
There are 2 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.887 ± 0.737	2.56	-0.950 ± 0.779	1.630 ± 0.722
PRF-fit source offset from KIC position	1.989 ± 0.738	2.69	-1.040 ± 0.779	1.695 ± 0.722
photometric centroid source offset	1.01 ± 0.81	1.26	-0.94 ± 0.81	-0.39 ± 0.78

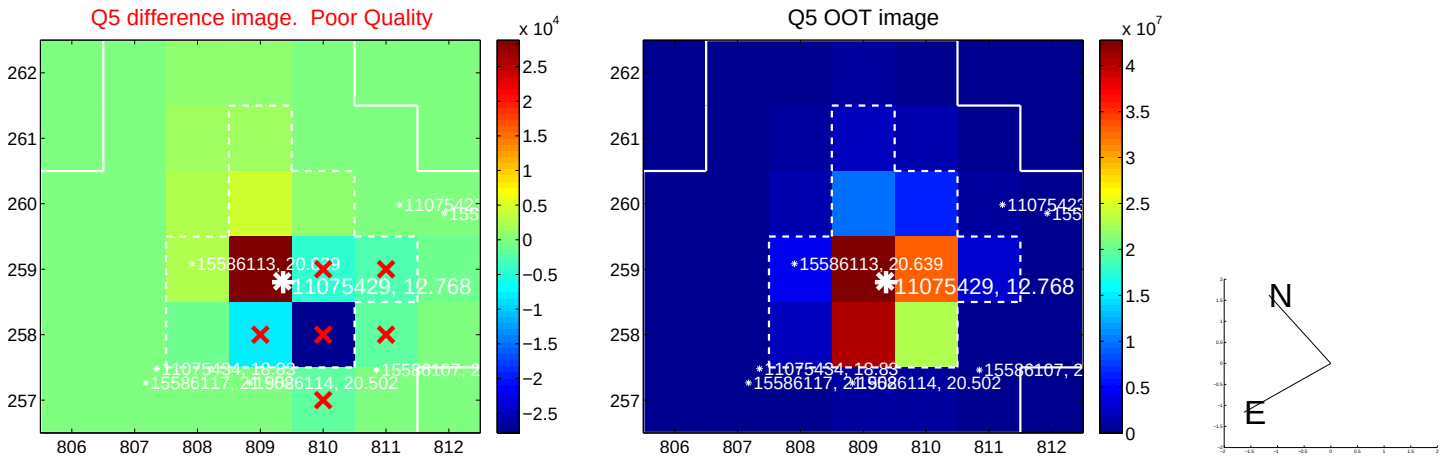


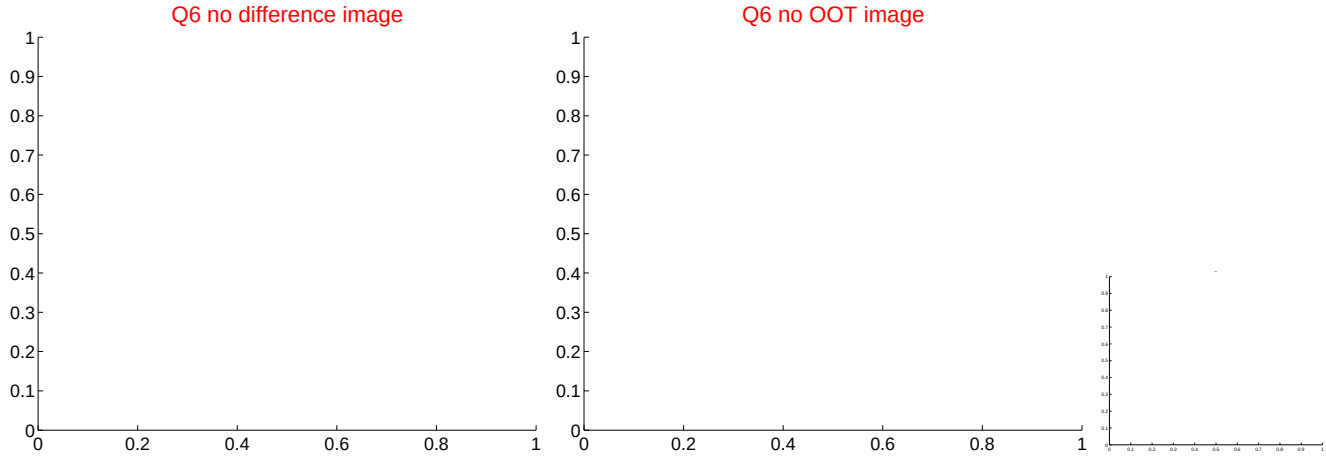
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

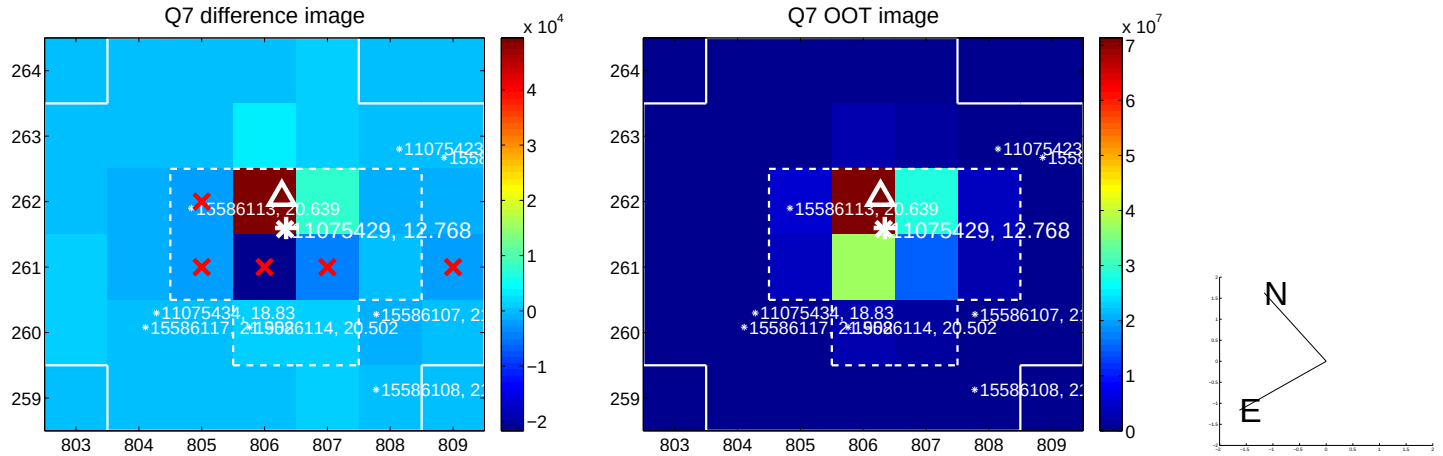
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

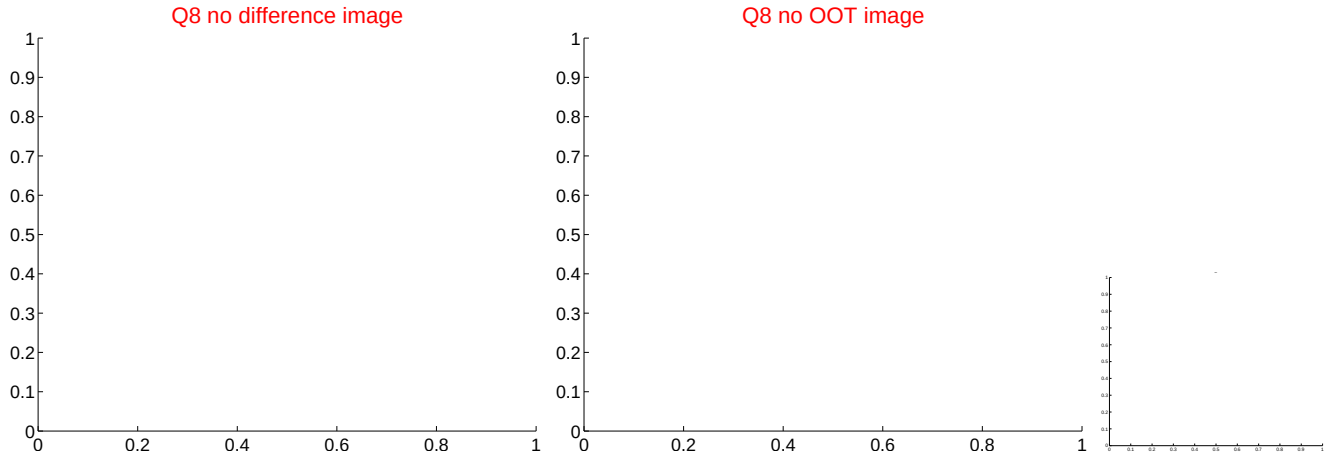


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

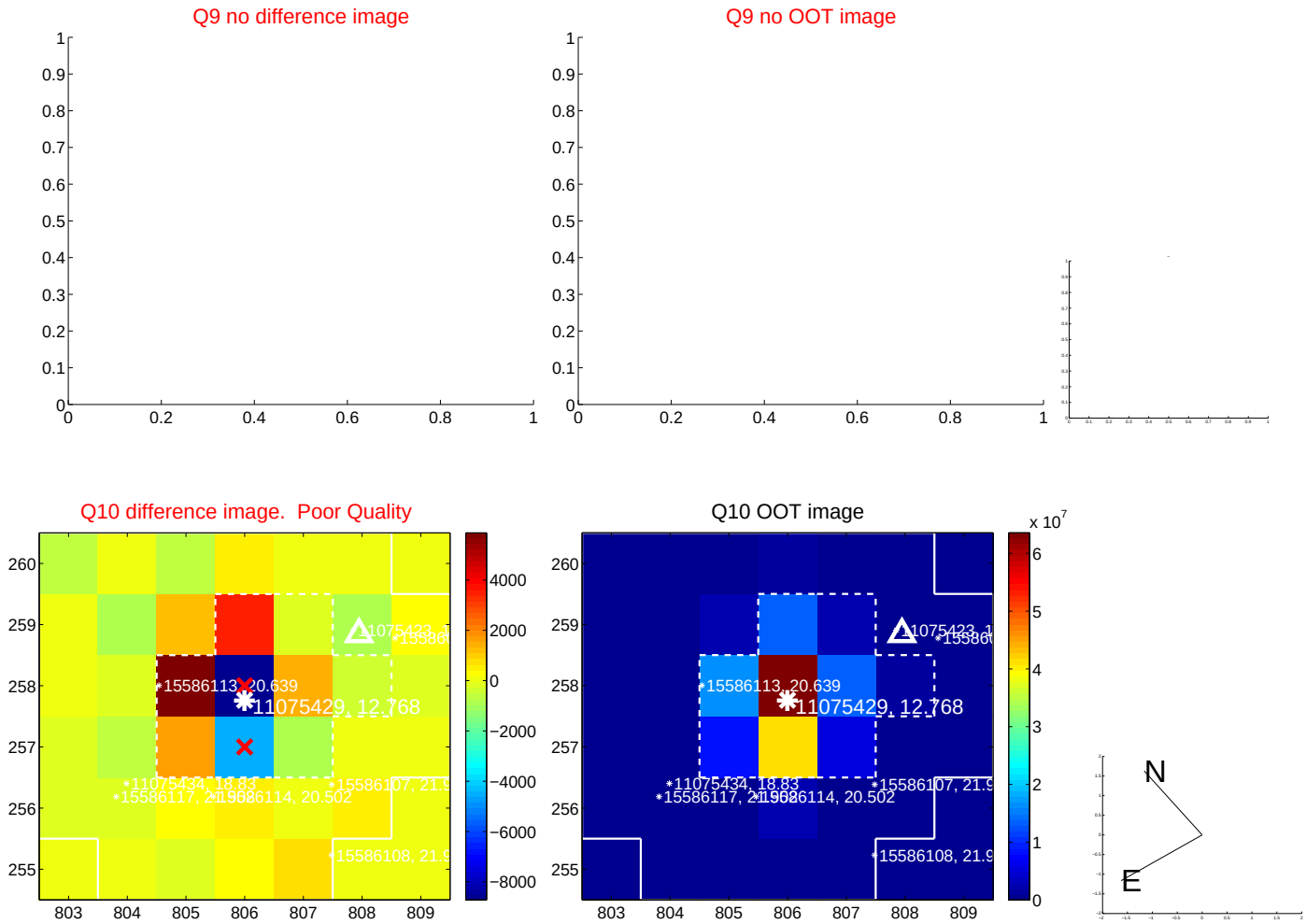


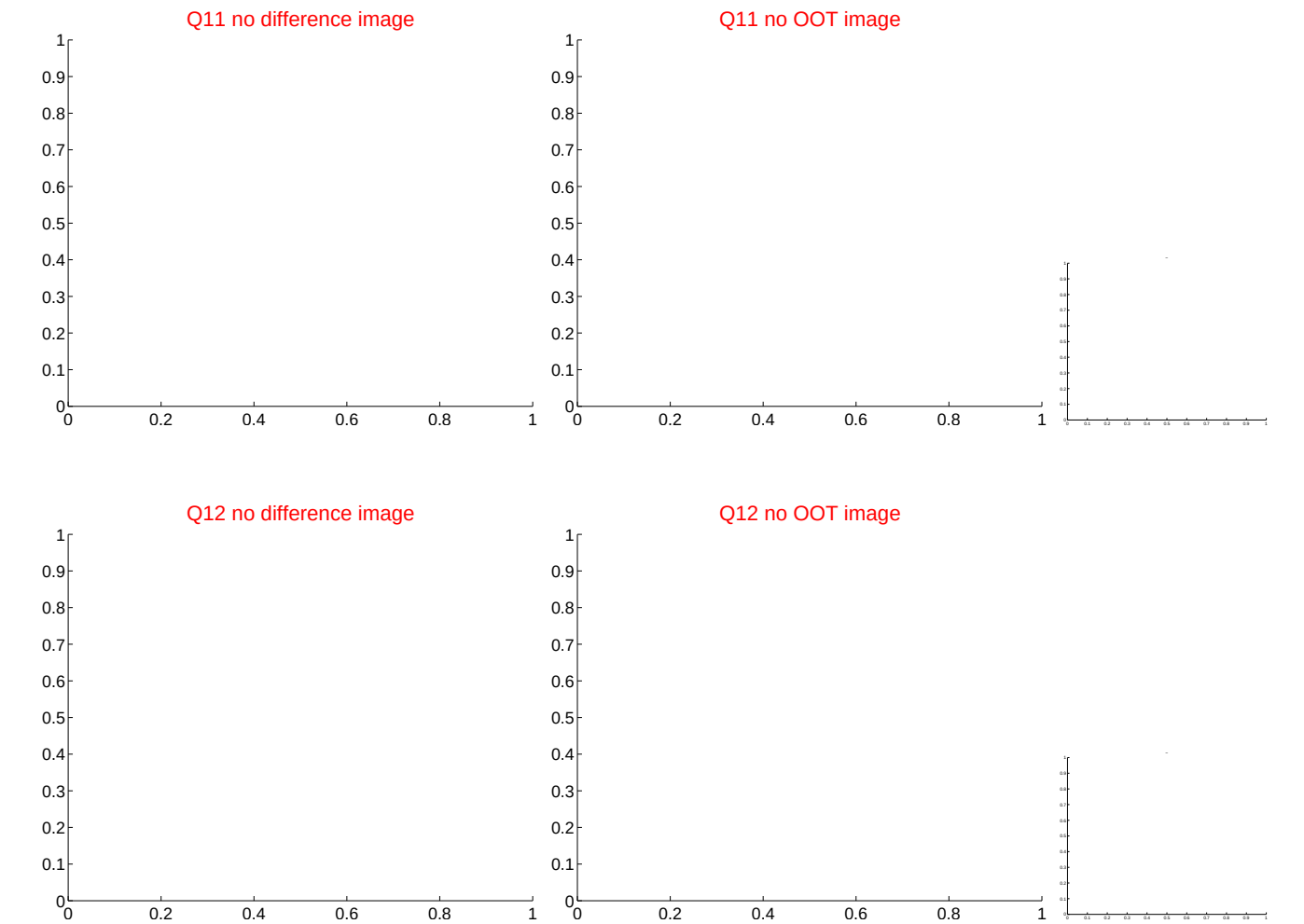




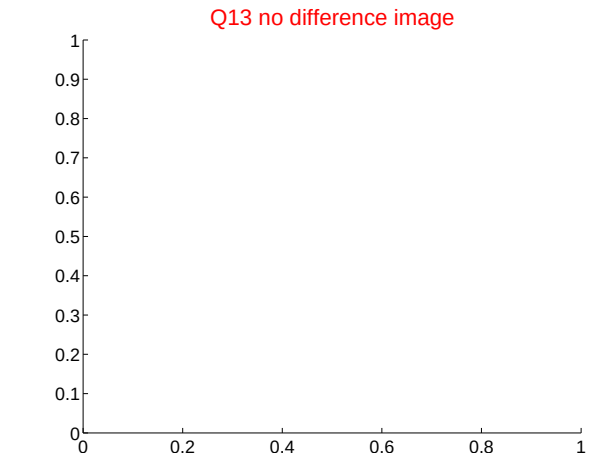


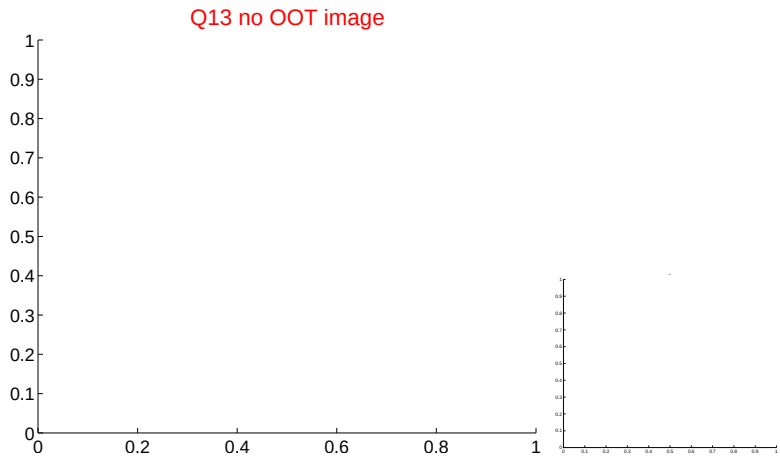
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

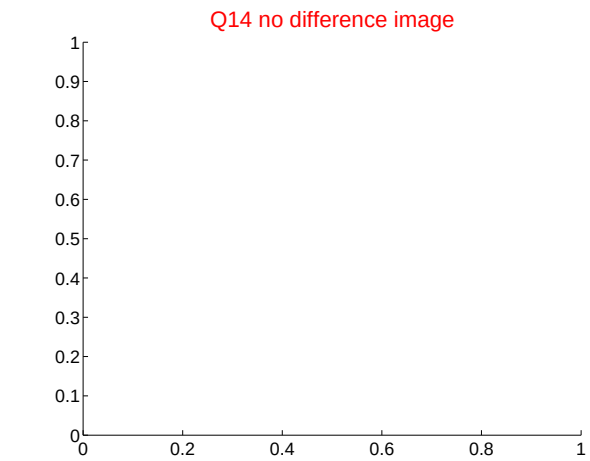


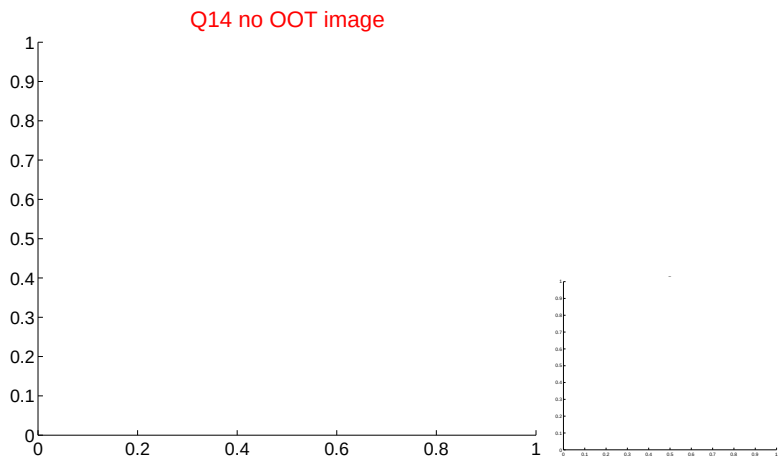


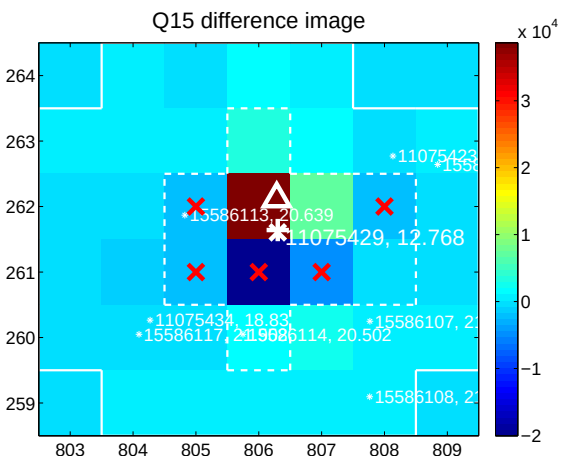
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

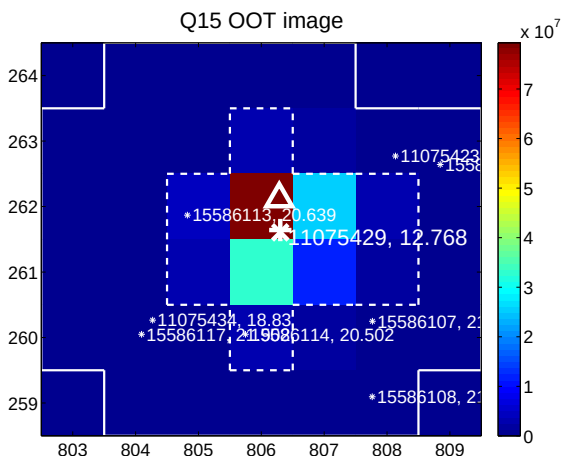


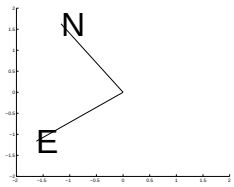


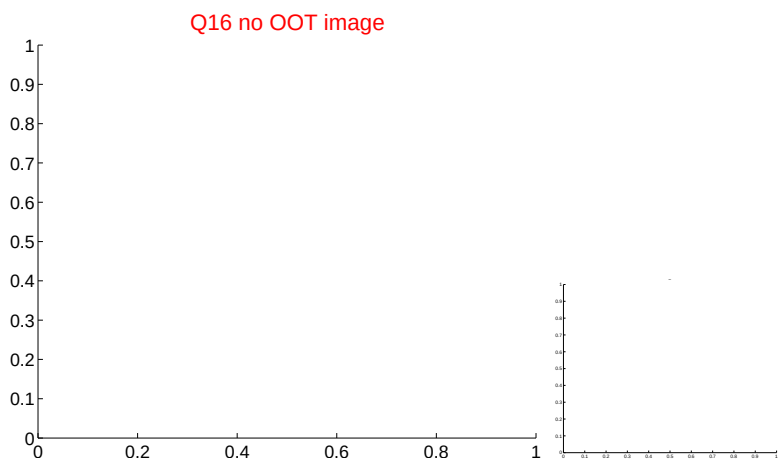




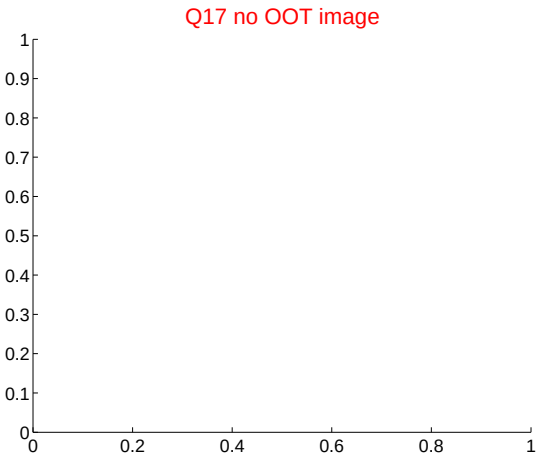


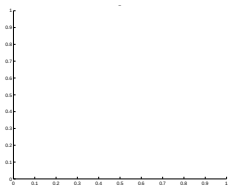


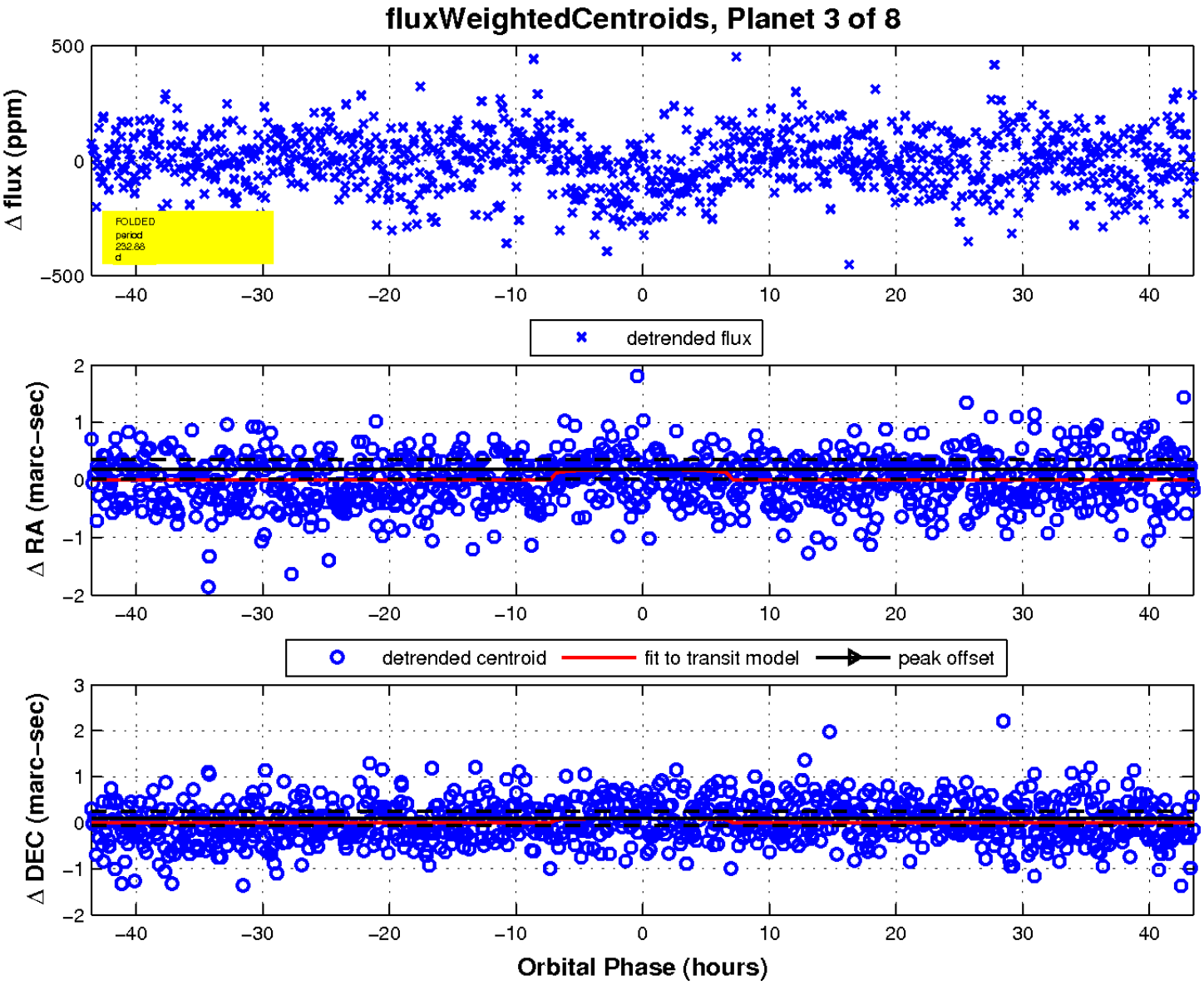




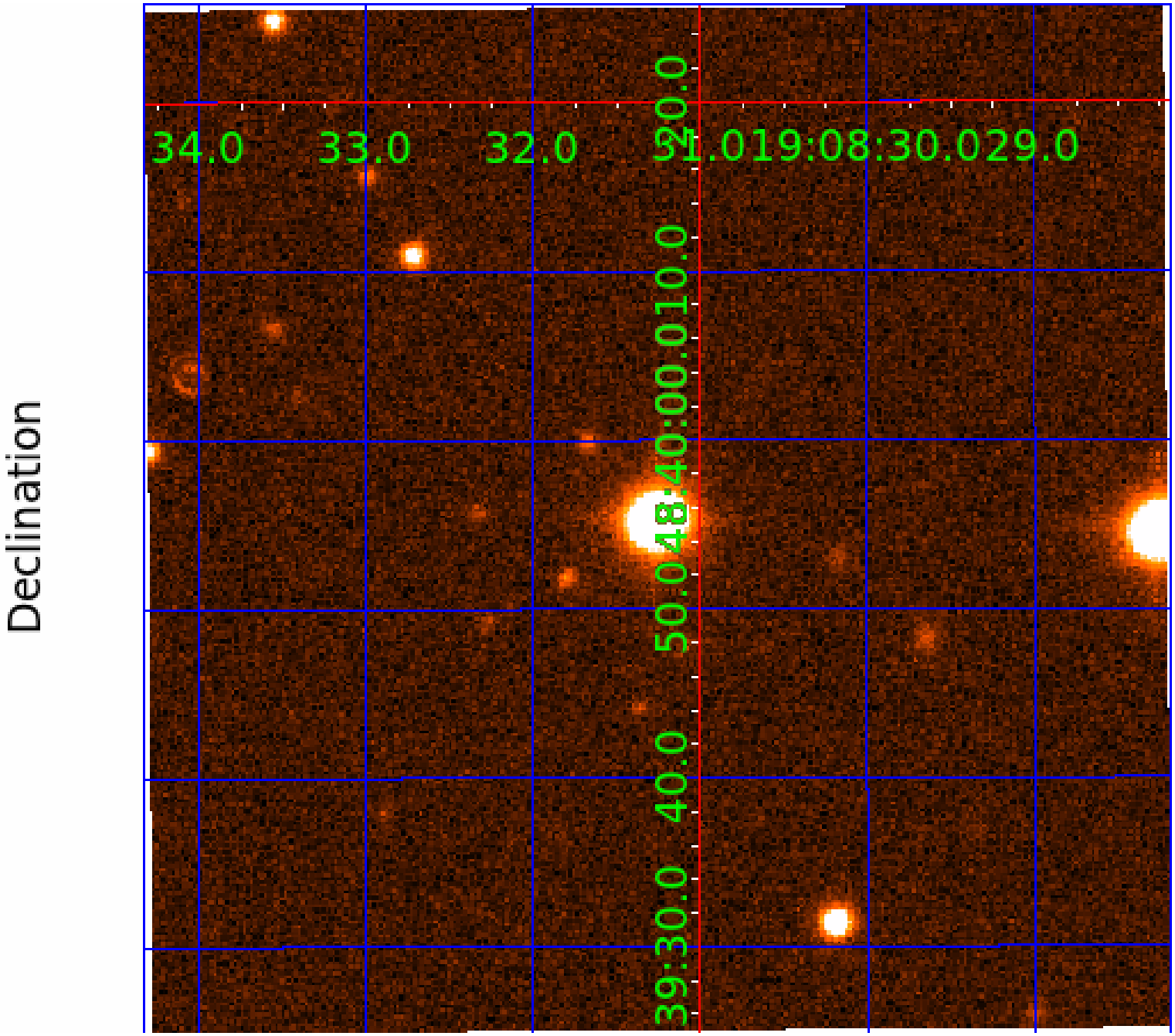
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image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20.0
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33.0
32.0
31.0
19:08:30.0
29.0

KIC 011075429

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 ($S_\oplus$)
011075429-01	OBS	2198.01	23.920989	139.076752	154.5	4.970	14.5	16.3	1.97	7121	2.78	256.23
011075429-02	OBS	No	2.970207	133.255025	22.8	14.079	7.7	6.6	1.97	7121	1.85	4136.32
011075429-03	OBS	No	232.879284	220.802473	204.2	14.518	11.2	8.6	1.97	7121	3.11	12.33
011075429-05	OBS	No	113.483857	243.296868	142.3	16.305	8.7	6.8	1.97	7121	2.62	32.14
011075429-06	OBS	No	134.928395	201.311999	201.5	6.788	7.9	7.4	1.97	7121	3.20	25.52
011075429-07	OBS	No	118.726252	217.971834	152.6	5.625	8.4	9.4	1.97	7121	2.86	30.27
011075429-08	OBS	No	93.222487	139.641842	146.1	7.395	7.5	7.5	1.97	7121	2.71	41.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011075429-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
011075429-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011075429-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
011075429-07	OBS	FP	0.02	1	0	0	0	MOD_NONUNIQ_ALT—CENT_FEW_MEAS
011075429-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

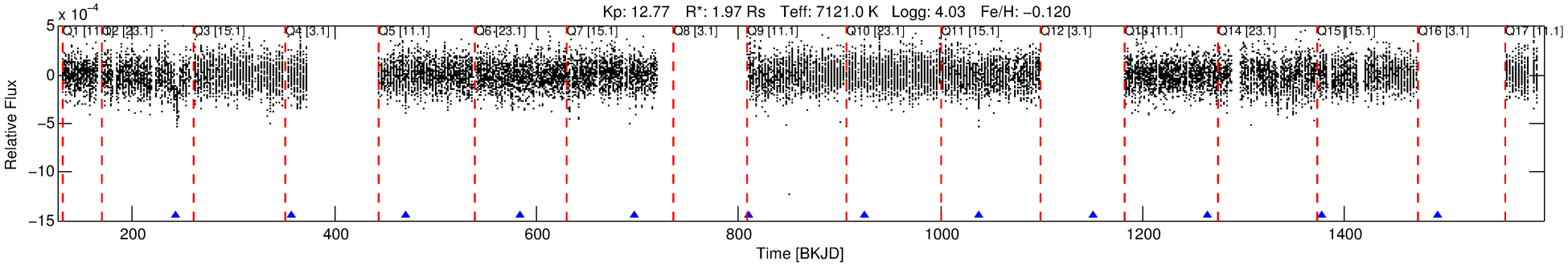
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

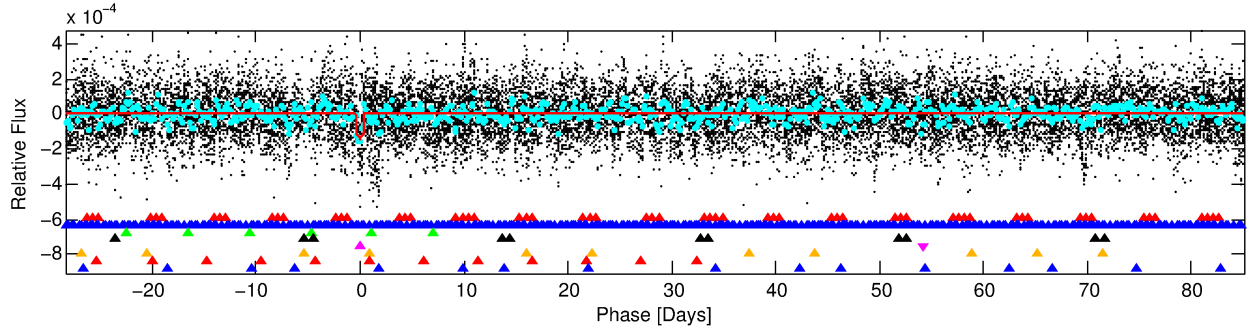
Ephemeris Match Information For 011075429-05

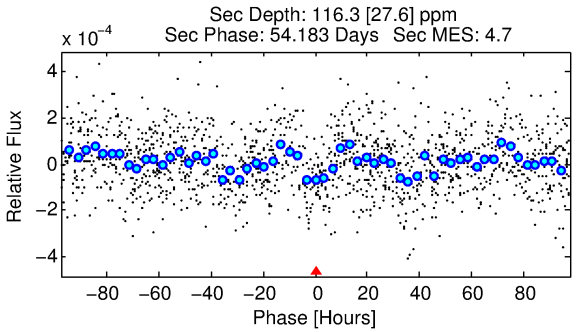
No Significant Match Found

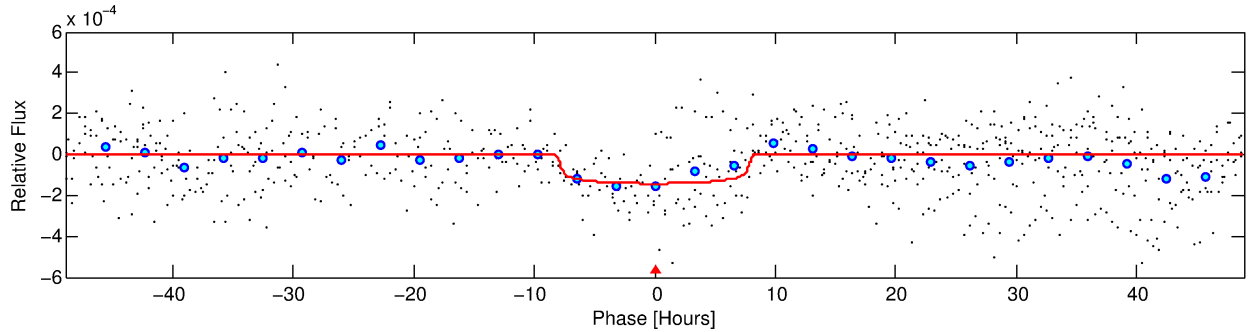
DV One-Page Summary

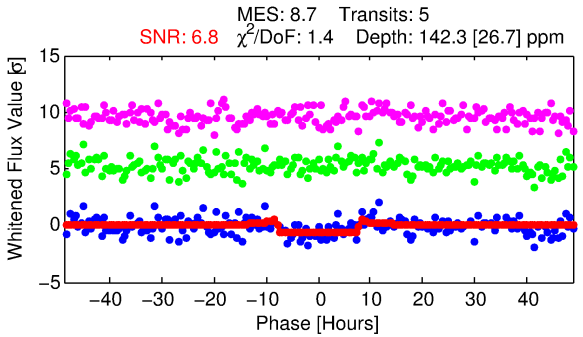
KIC: 11075429 Candidate: 5 of 8 Period: 113.484 d
KOI: K02198 Corr: No Ephemeris Match

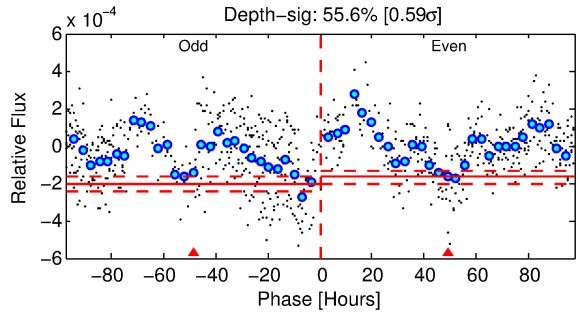


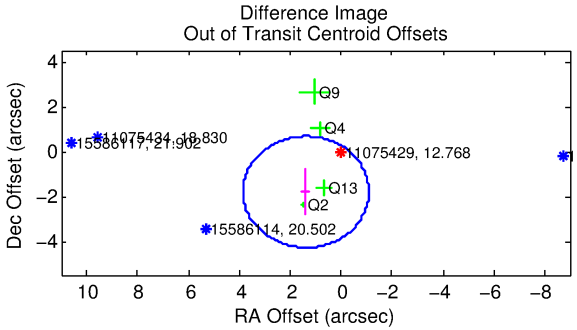












DV Fit Results:

Period = 113.48386 [0.00450] d
Epoch = 243.2969 [0.0230] BKJD
Rp/R* = 0.0122 [0.0023]
a/R* = 31.06 [29.71]
b = 0.83 [0.37]

Seff = 32.14 [11.69]
Teq = 607 [55] K
Rp = 2.62 [0.80] Re
a = 0.5279 [0.1151] AU

Ag = 2598.45 [1456.09] [1.78σ]
Teffp = 6702 [788] K [7.72σ]

DV Diagnostic Results:

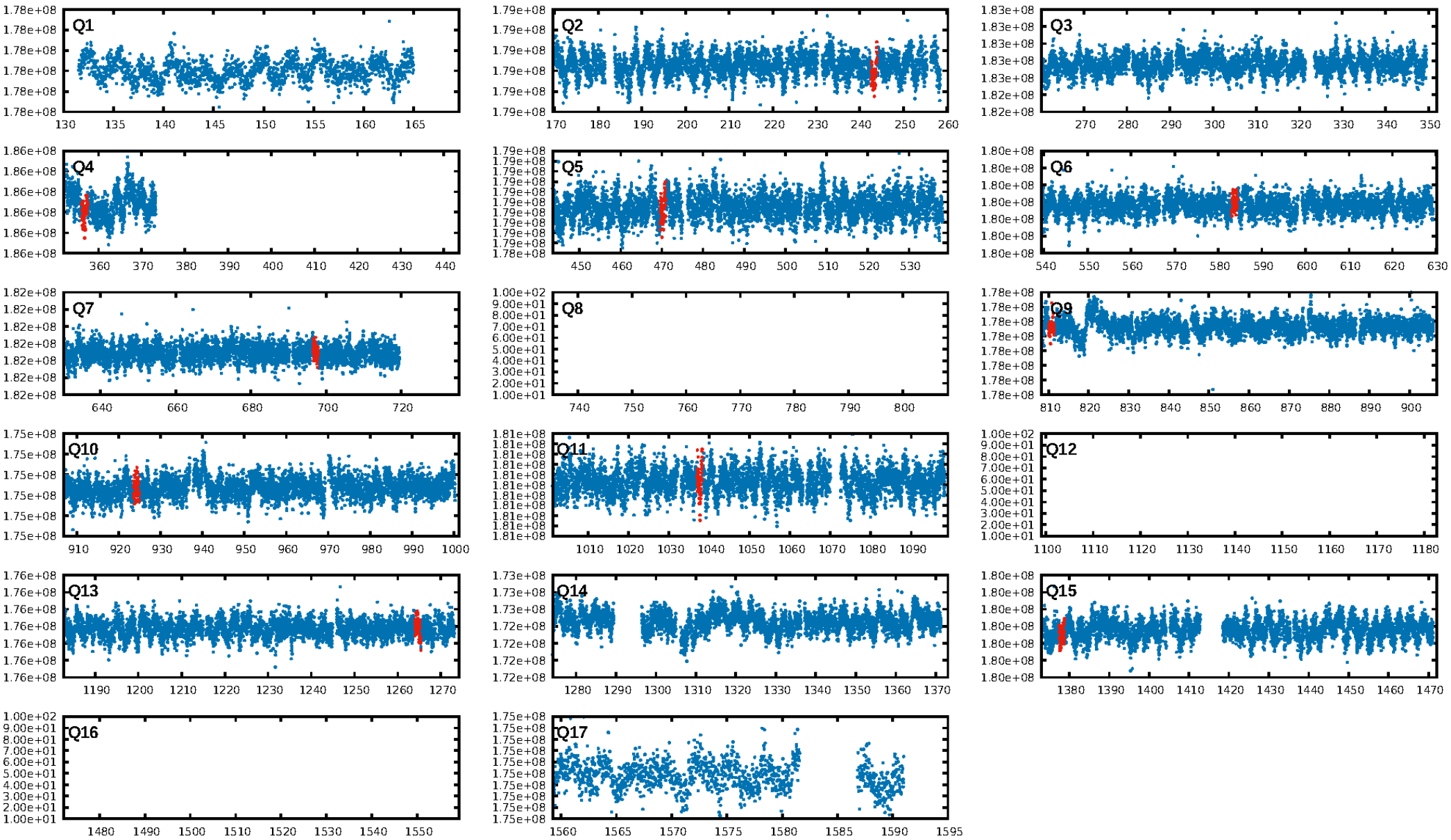
ShortPeriod−sig: 100.0% [27.16σ]
LongPeriod−sig: 100.0% [7.29σ]
ModelChiSquare2−sig: 0.0%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: 8.71e−11
RollingBand−fgt: 1.00 [4/4]
GhostDiagnostic−chr: 1.308

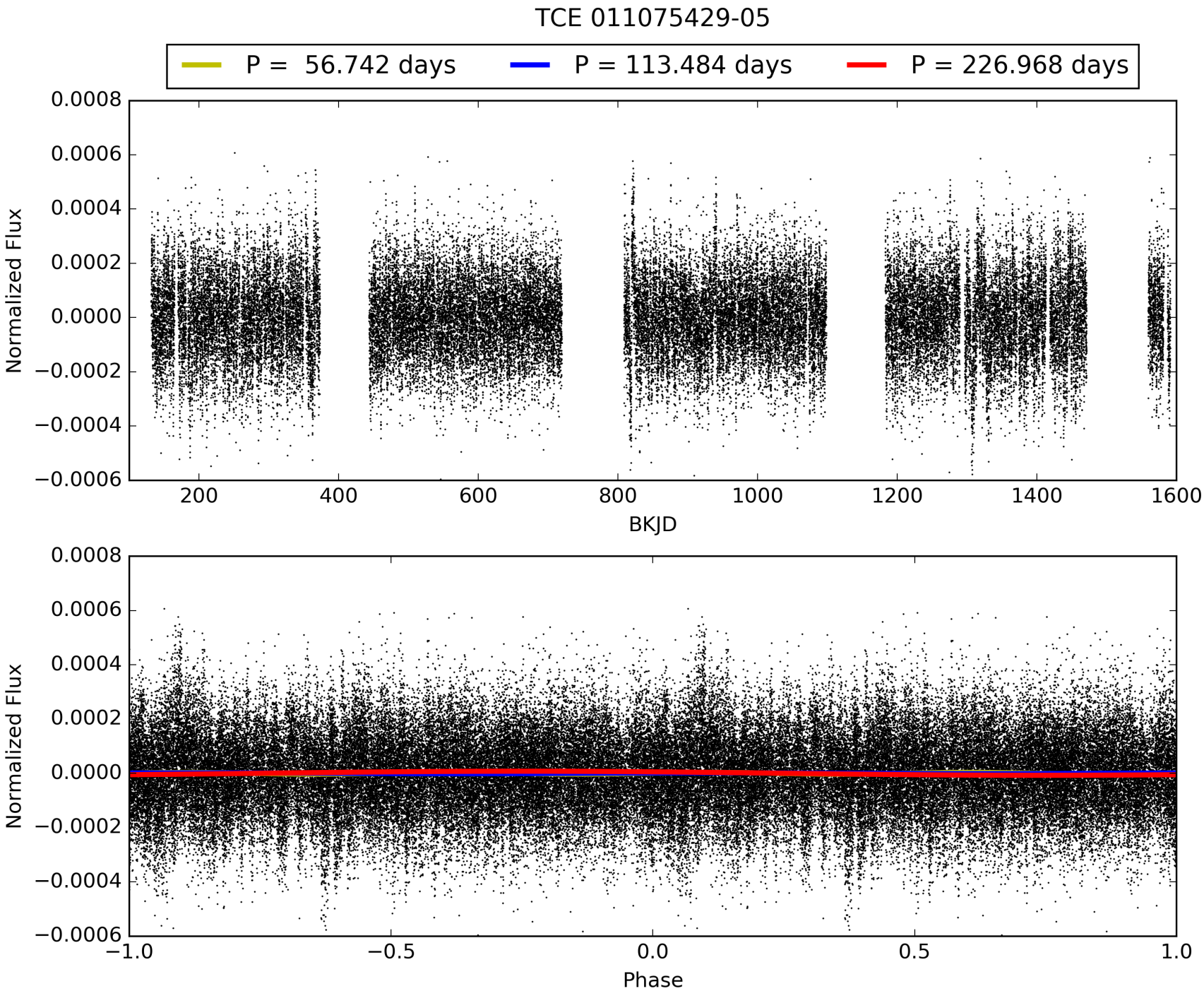
Centroid−sig: 31.6%
Centroid−so: 0.590 arcsec [0.96σ]
OotOffset−rm: 2.278 arcsec [2.76σ]
KicOffset−rm: 2.275 arcsec [2.54σ]
OotOffset−st: 1/0/1/2 [4]
KicOffset−st: 1/0/1/2 [4]
DiffImageQuality−fgm: 0.50 [2/4]
DiffImageOverlap−fno: 0.00 [0/9]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 21:22:07 Z

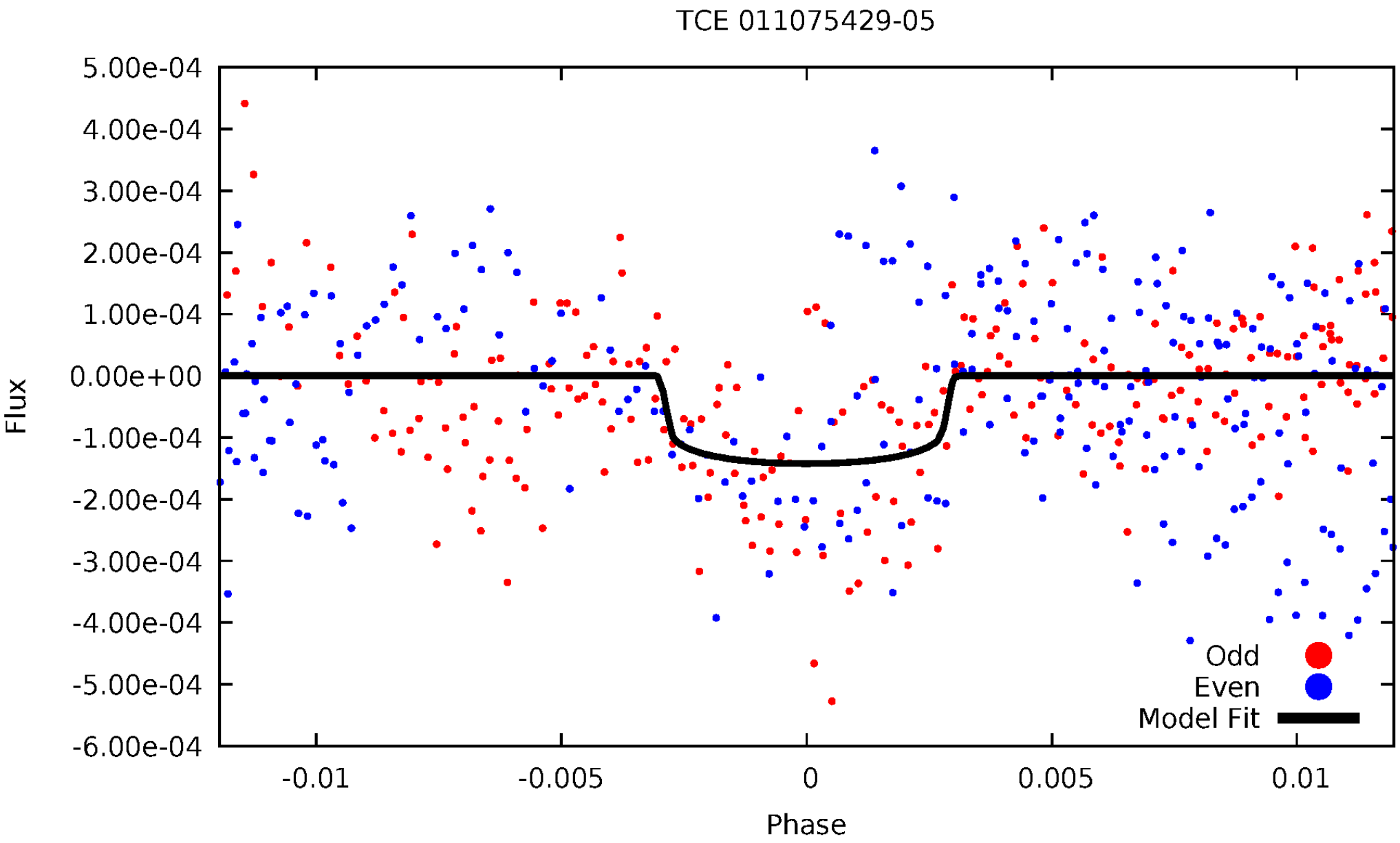
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011075429-05, PDC Light Curves

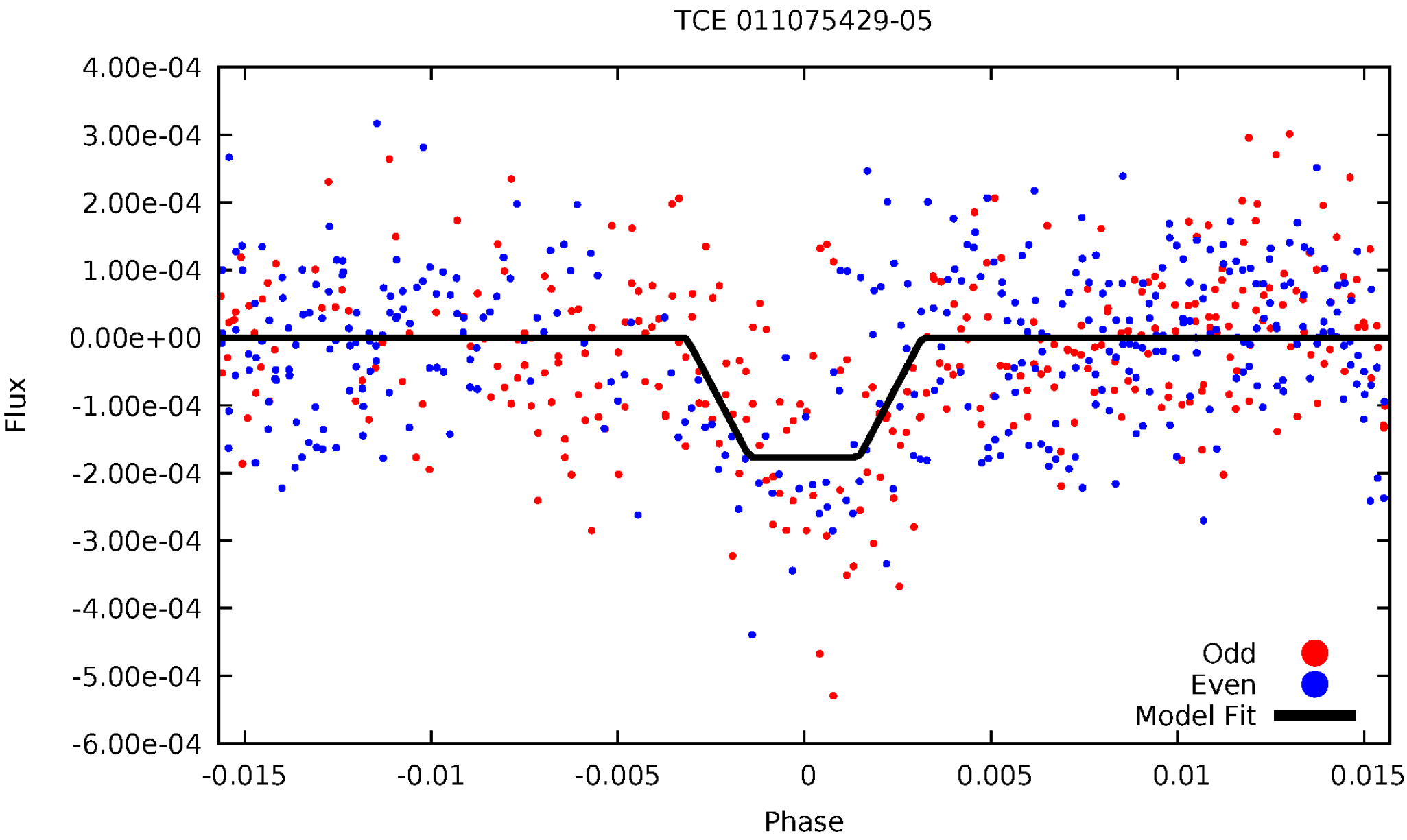



TCE 011075429-05
P = 56.742 days
P = 113.484 days
P = 226.968 days
Normalized Flux
0.0008
0.0006
0.0004
0.0002
0.0000
−0.0002
−0.0004
−0.0006
200
400
600
800
1000
1200
1400
1600
BKJD
Normalized Flux
0.0008
0.0006
0.0004
0.0002
0.0000
−0.0002
−0.0004
−0.0006
−1.0
−0.5
0.0
0.5
1.0
Phase

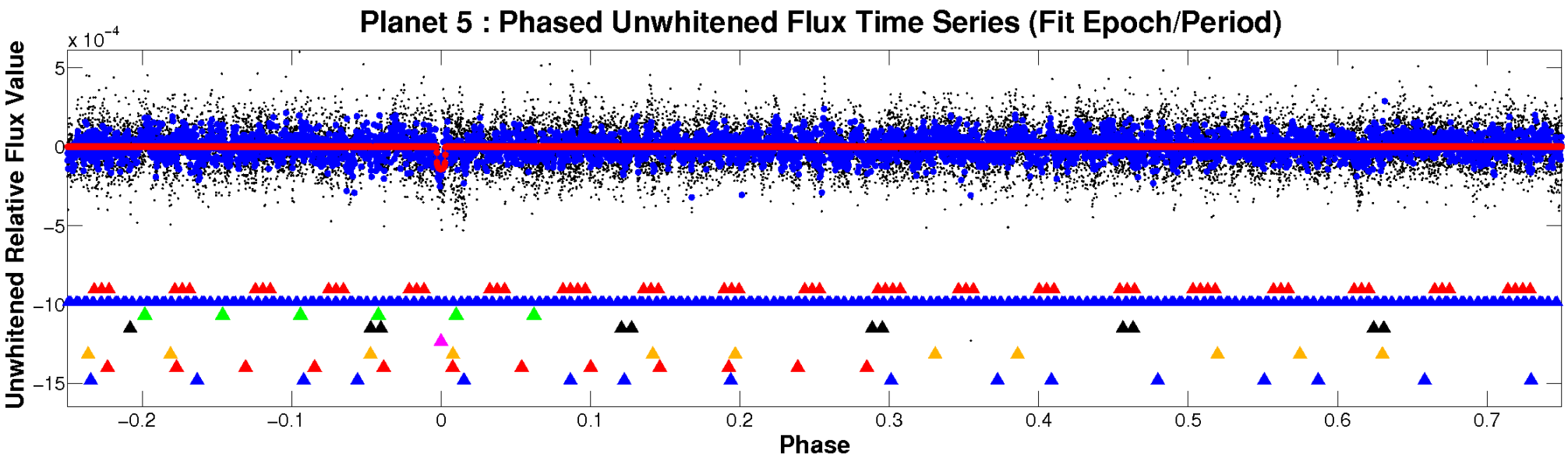
DV Odd/Even

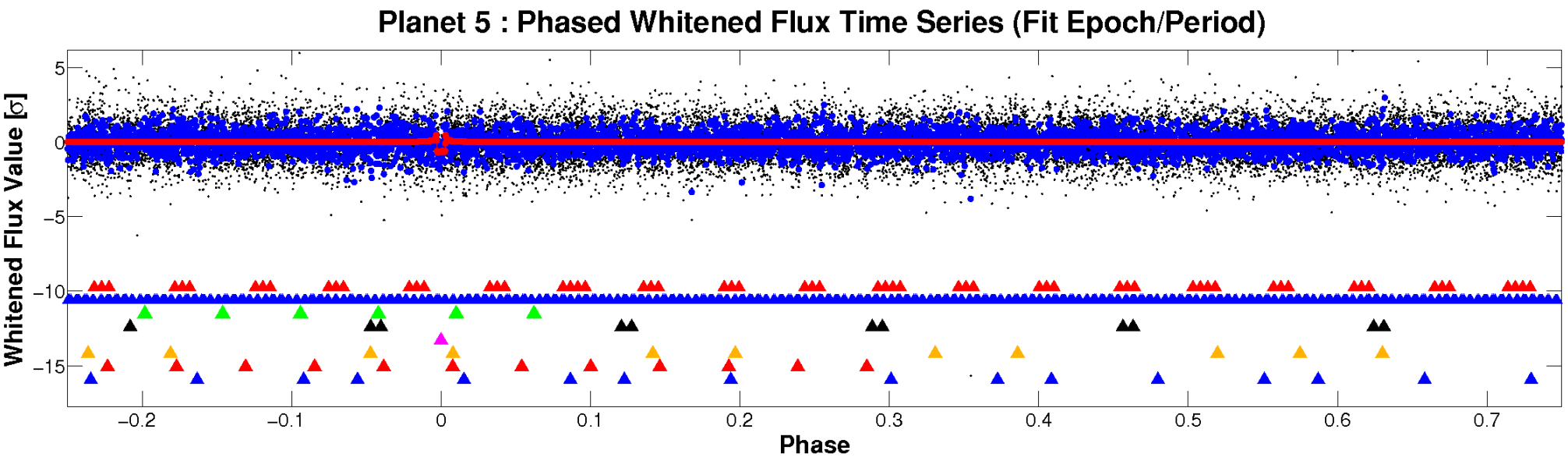

TCE 011075429-05
5.00e-04
4.00e-04
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
-5.00e-04
-6.00e-04
Flux
-0.01
-0.005
0
0.005
0.01
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 011075429-05
4.00e-04
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
-5.00e-04
-6.00e-04
Flux
-0.015
-0.01
-0.005
0
0.005
0.01
0.015
Phase
Odd
Even
Model Fit

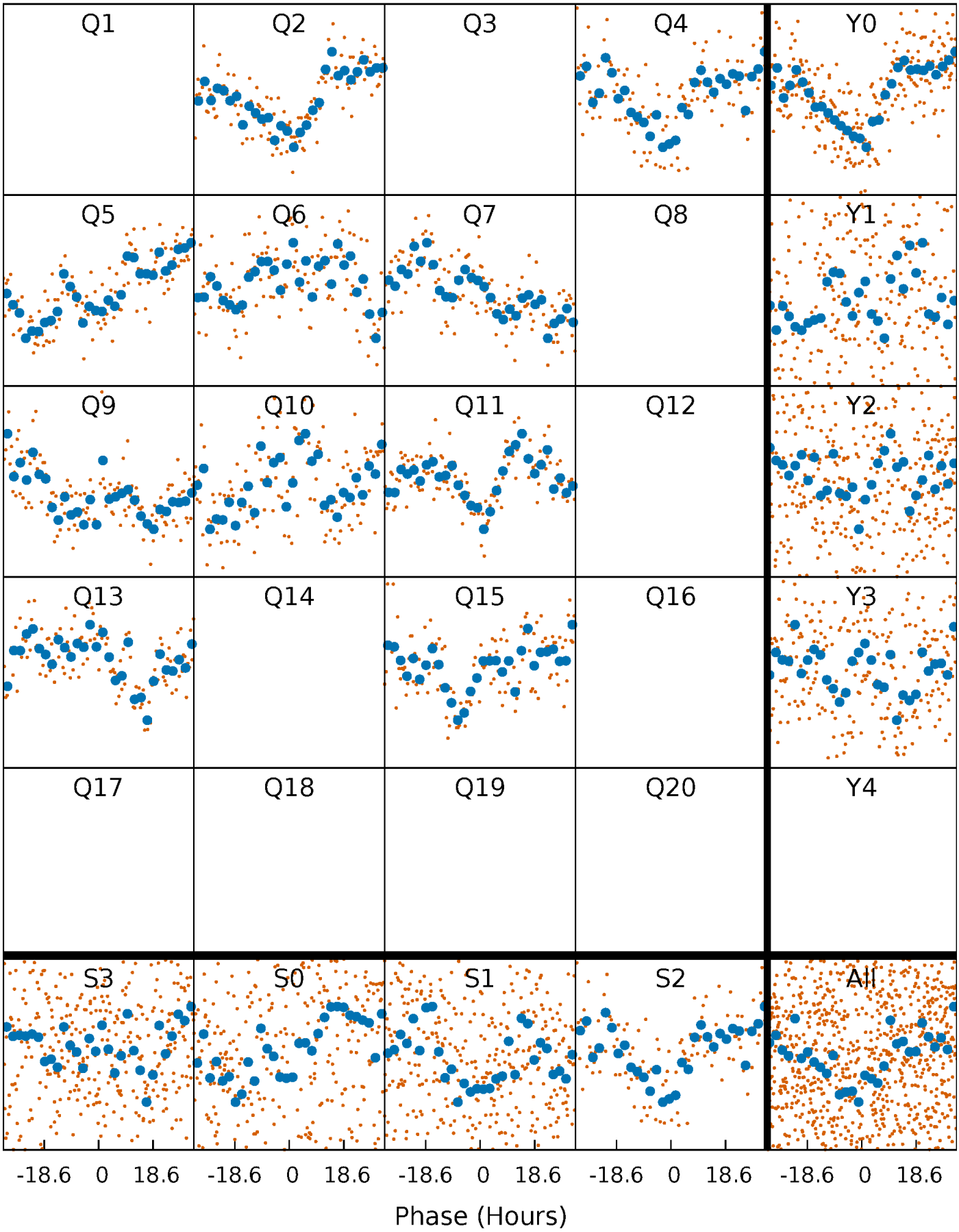
Non-Whitened Vs. Whitened Light Curve





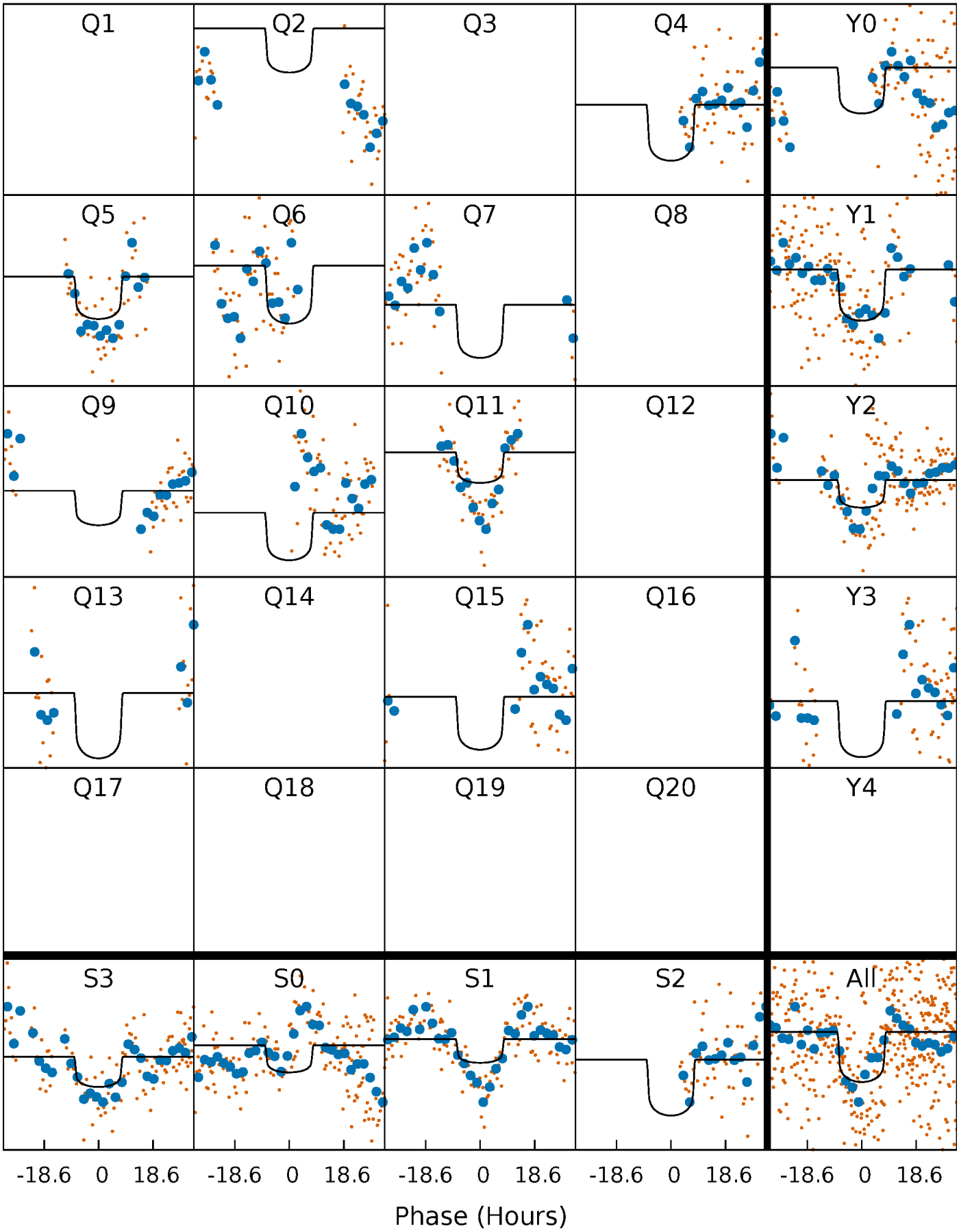
PDC Quarter-Phased Transit Curves

TCE 011075429-05 P=113.483857 Days T_0=243.296868 (BKJD)



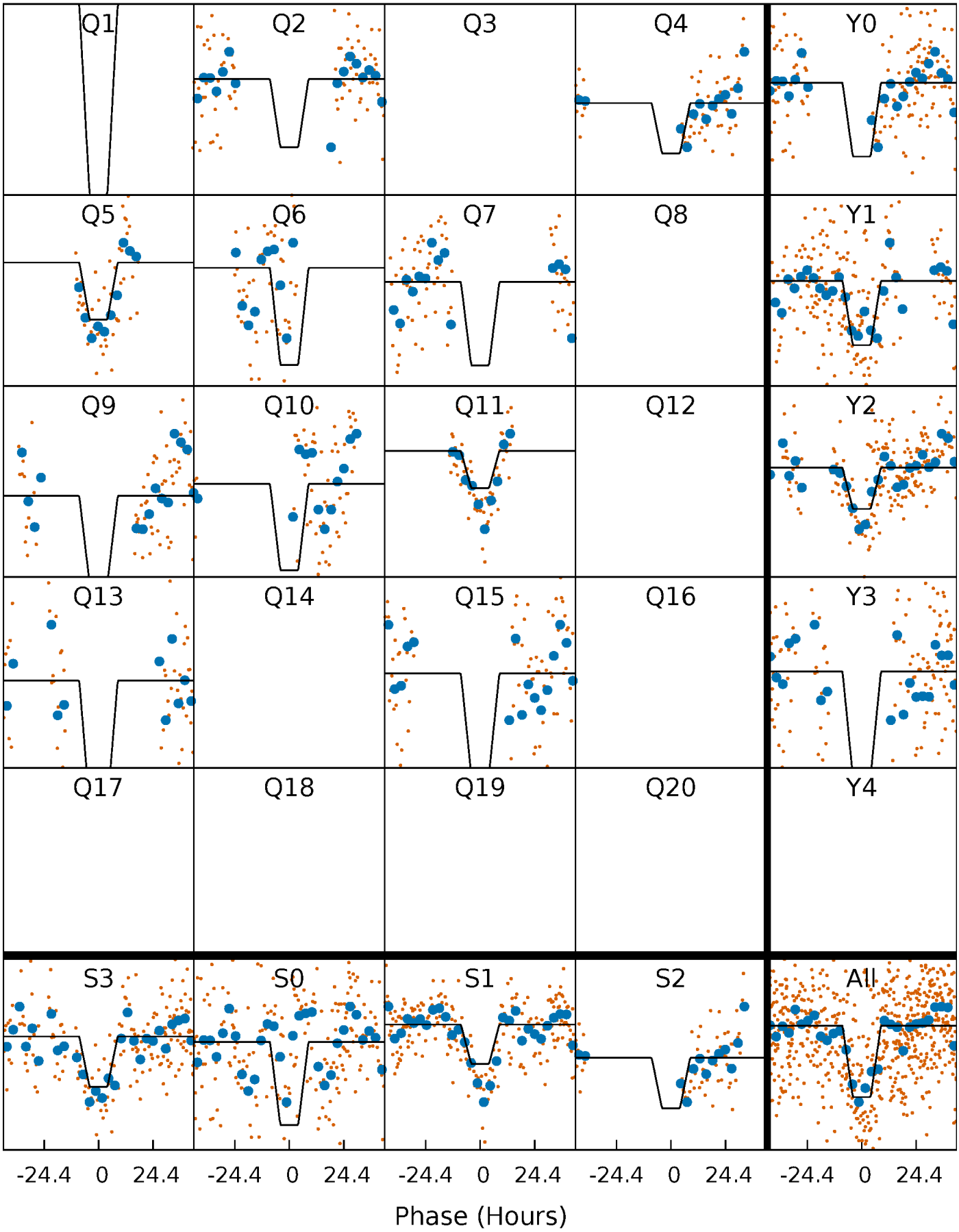
DV Quarter-Phased Transit Curves

TCE 011075429-05 P=113.483857 Days T_0=243.296868 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

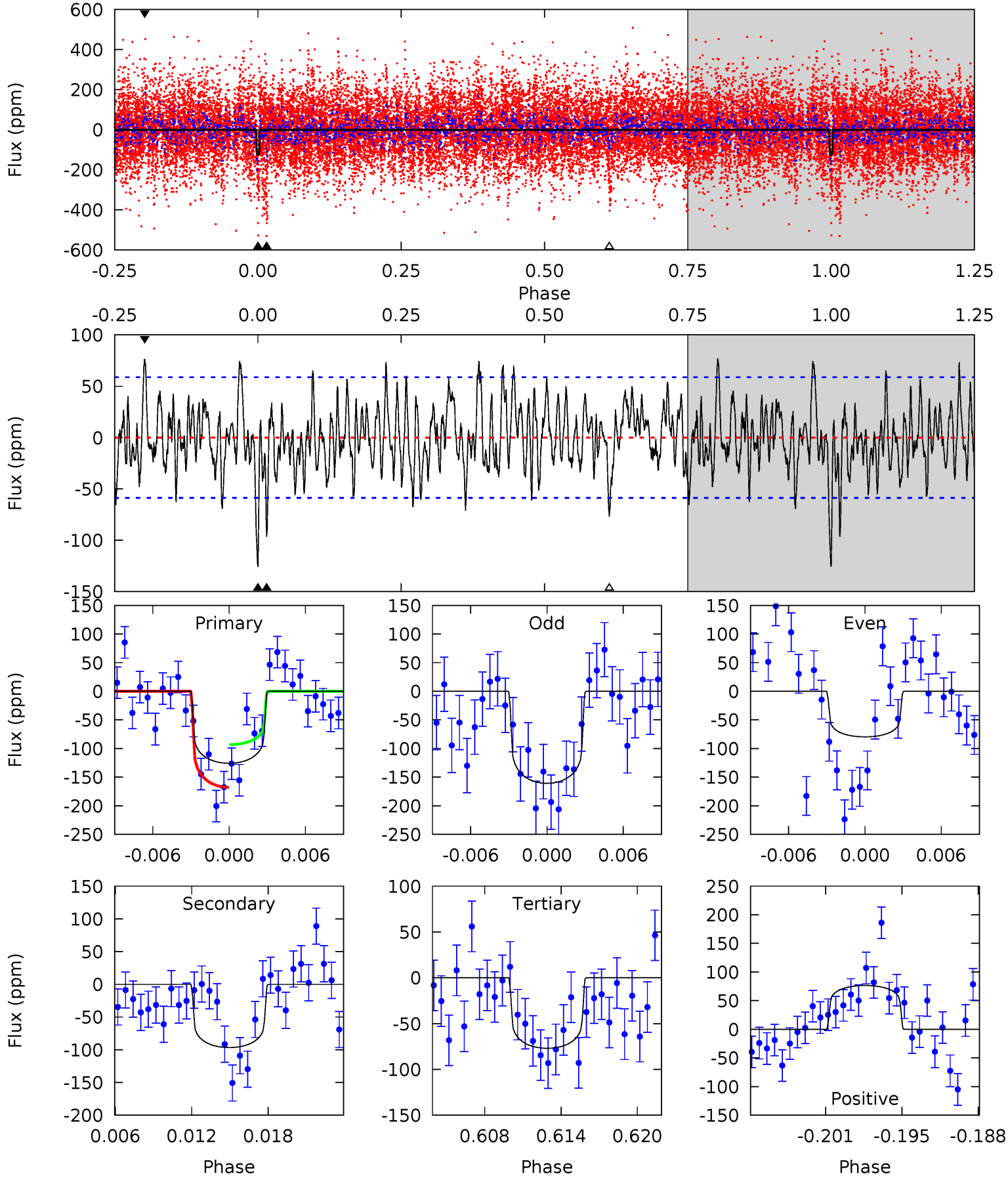
TCE 011075429-05 P=113.487992 Days T_0=243.238068 (BKJD)



DV Model-Shift Uniqueness Test

011075429-05, P = 113.483857 Days, E = 129.813011 Days

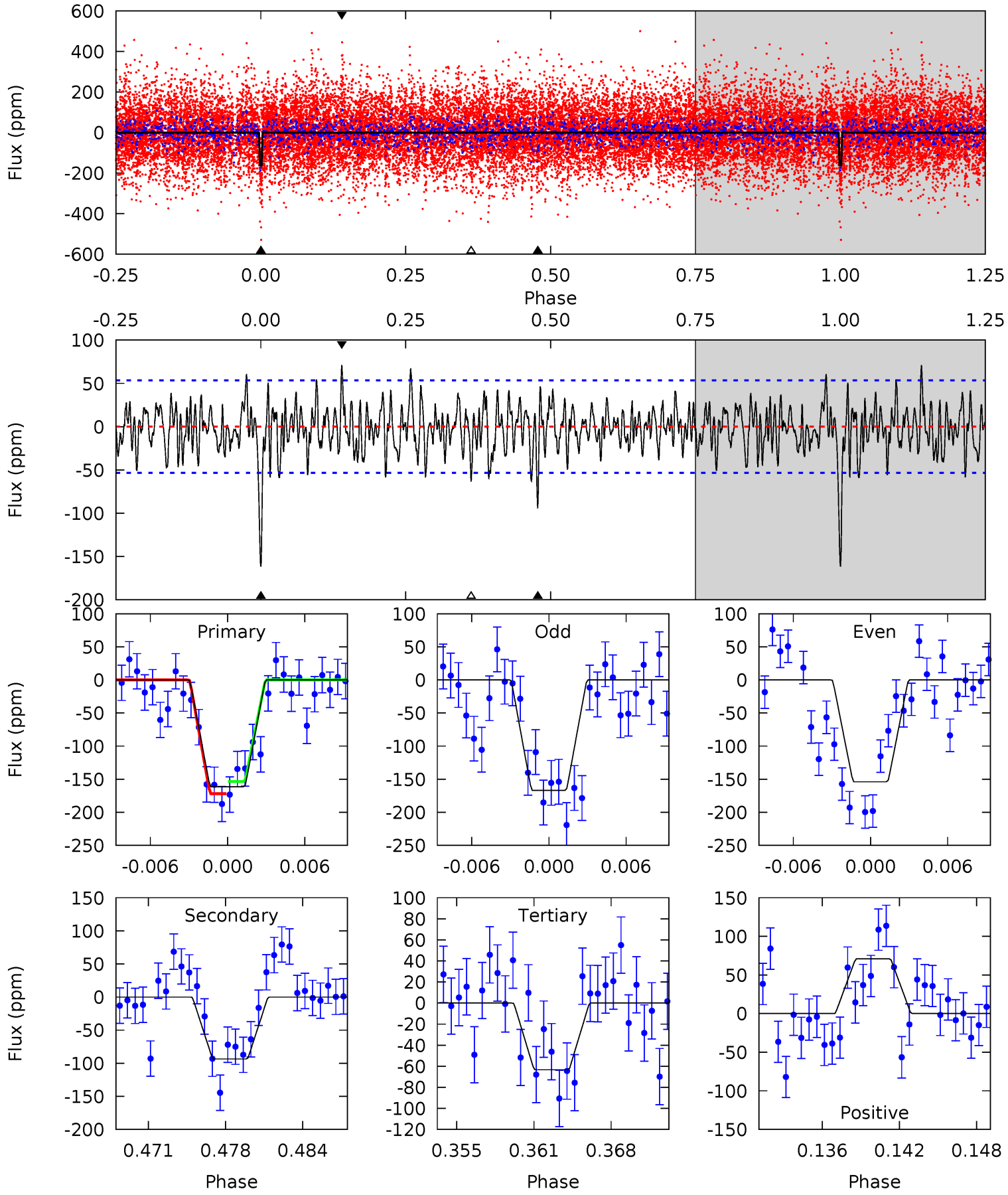
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	8.43	6.72	6.68	5.12	2.74	2.39	4.26	4.30	1.71	1.75	3.51	1.12	0.38	3.23



Alt Model-Shift Uniqueness Test

011075429-05, P = 113.487992 Days, E = 129.750076 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	8.96	6.06	6.80	5.11	2.72	2.08	9.40	8.67	2.89	2.16	0.62	0.70	0.31	0.88



Stellar Parameters For KIC 011075429

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	M($M_\odot$)	$p_\star$ (g·cm^{-3})
	7121^{+199}_{-249}	$4.031^{+0.192}_{-0.128}$	$-0.120^{+0.250}_{-0.350}$	$1.972^{+0.427}_{-0.475}$	$1.521^{+0.171}_{-0.278}$	$0.279^{+0.302}_{-0.109}$
	+3%/-3%	+5%/-3%	+208%/-292%	+22%/-24%	+11%/-18%	+108%/-39%
Source	PHO1	FLK73	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 011075429-05 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-97±11	$2.53^{+0.62}_{-0.53}$	842^{+57}_{-58}	6350^{+721}_{-611}	2263^{+1351}_{-843}
Alt.	-94±10	$2.75^{+0.70}_{-0.55}$	841^{+54}_{-60}	6023^{+609}_{-500}	1858^{+1120}_{-672}

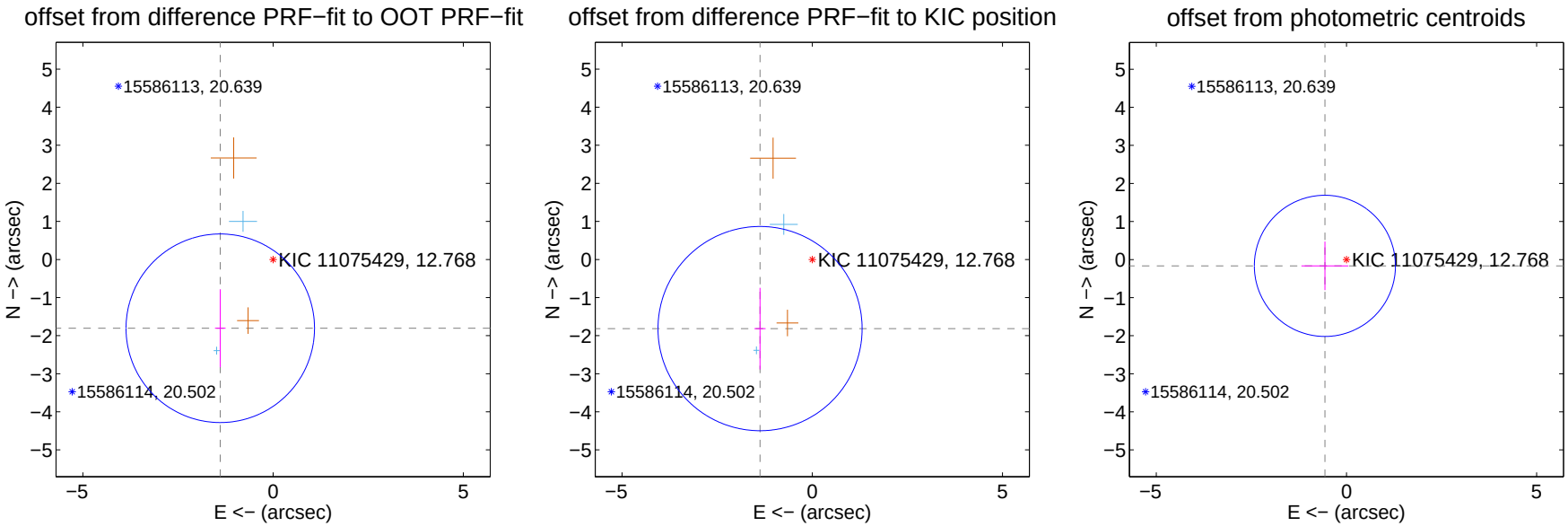
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

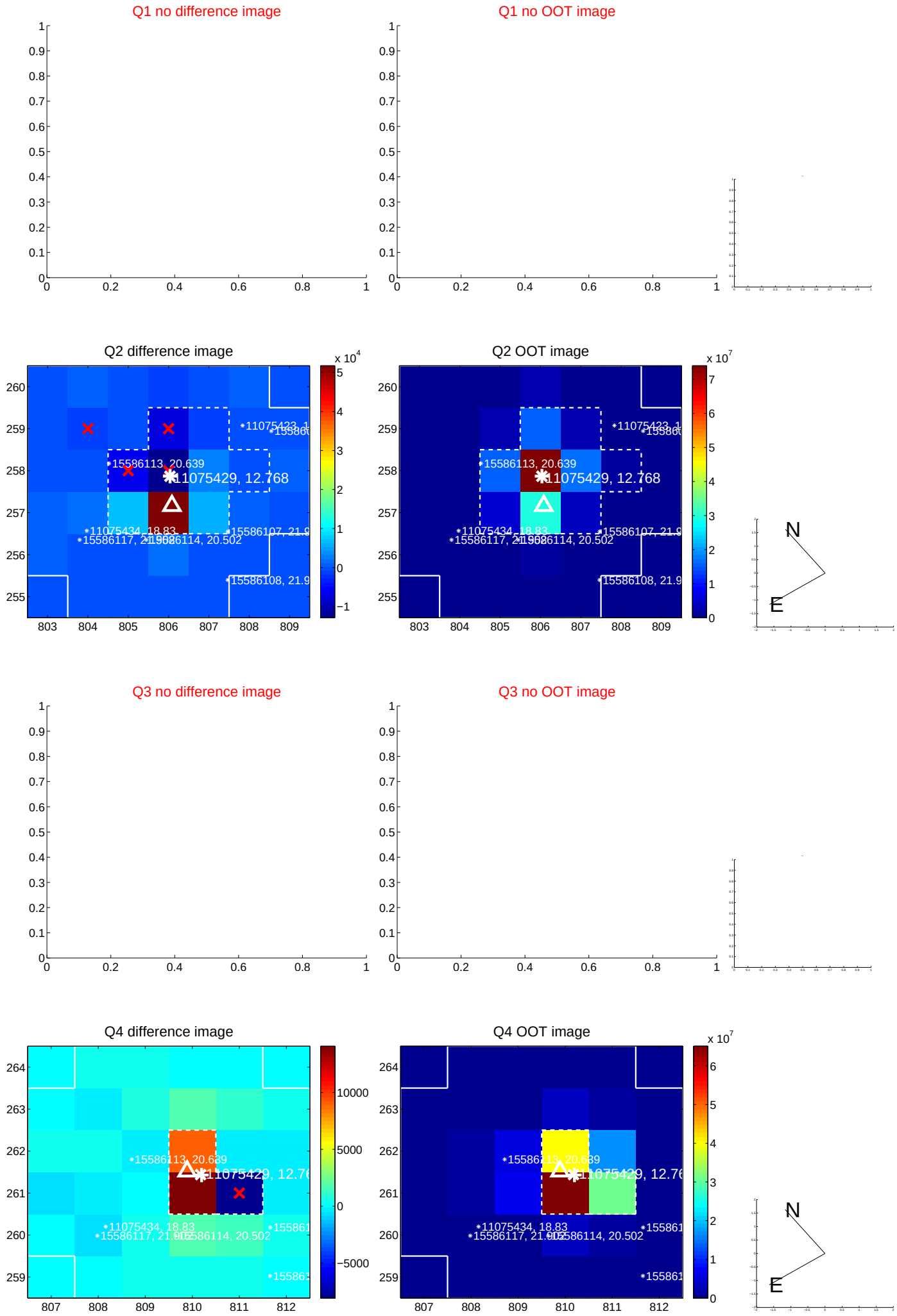
Supplemental centroid analysis for 011075429-05. Kepler magnitude: 12.77. Transit SNR 6.80
There are 2 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.278 ± 0.825	2.76	1.388 ± 0.140	-1.806 ± 1.023
PRF-fit source offset from KIC position	2.275 ± 0.894	2.54	1.372 ± 0.145	-1.814 ± 1.072
photometric centroid source offset	0.59 ± 0.62	0.96	0.57 ± 0.62	-0.17 ± 0.64

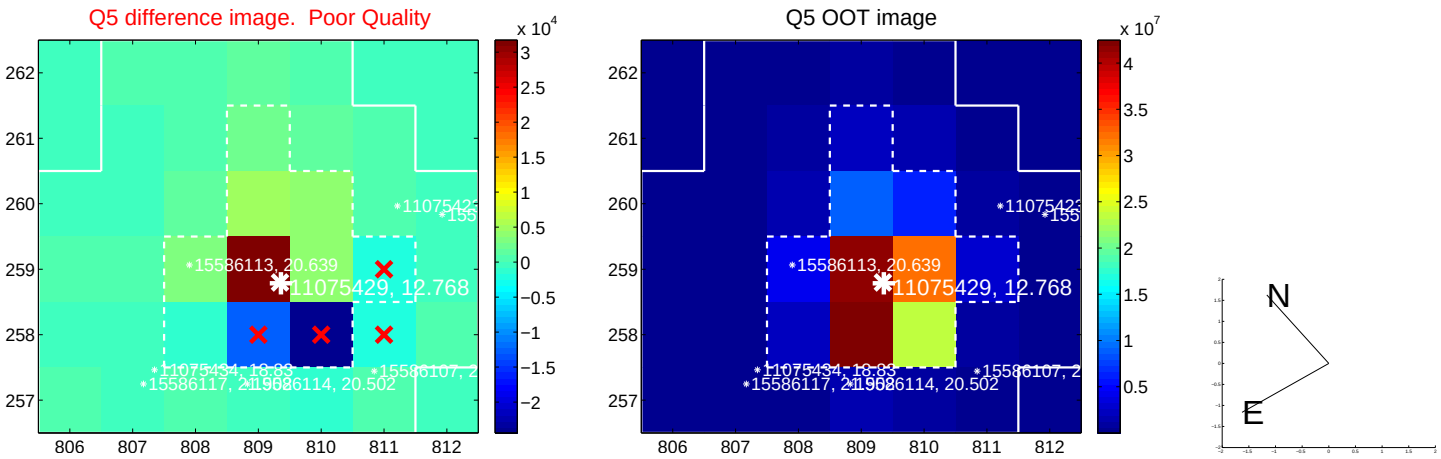


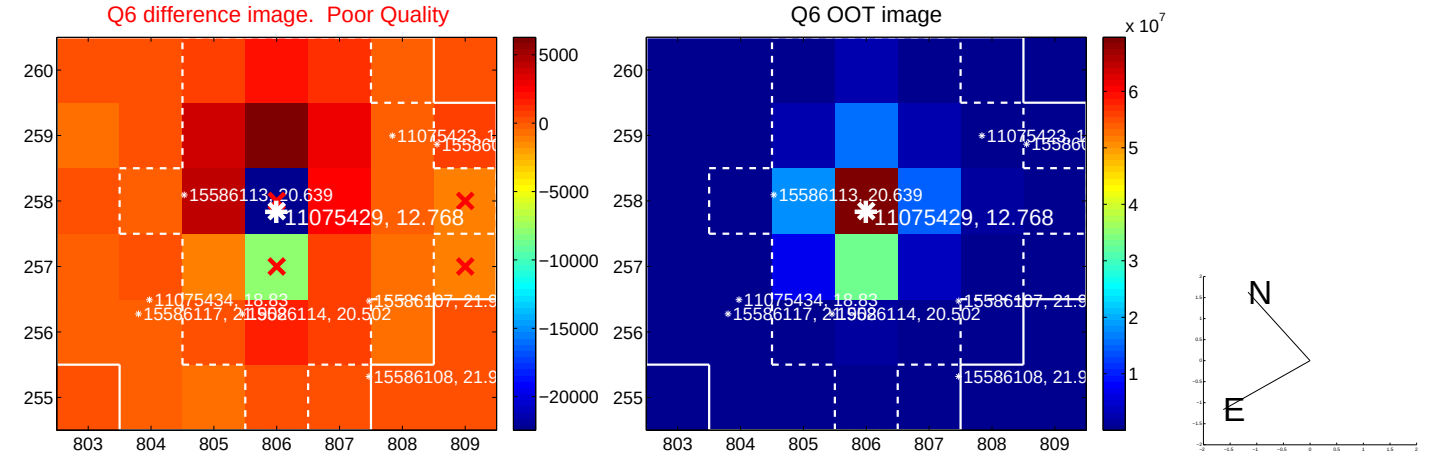
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

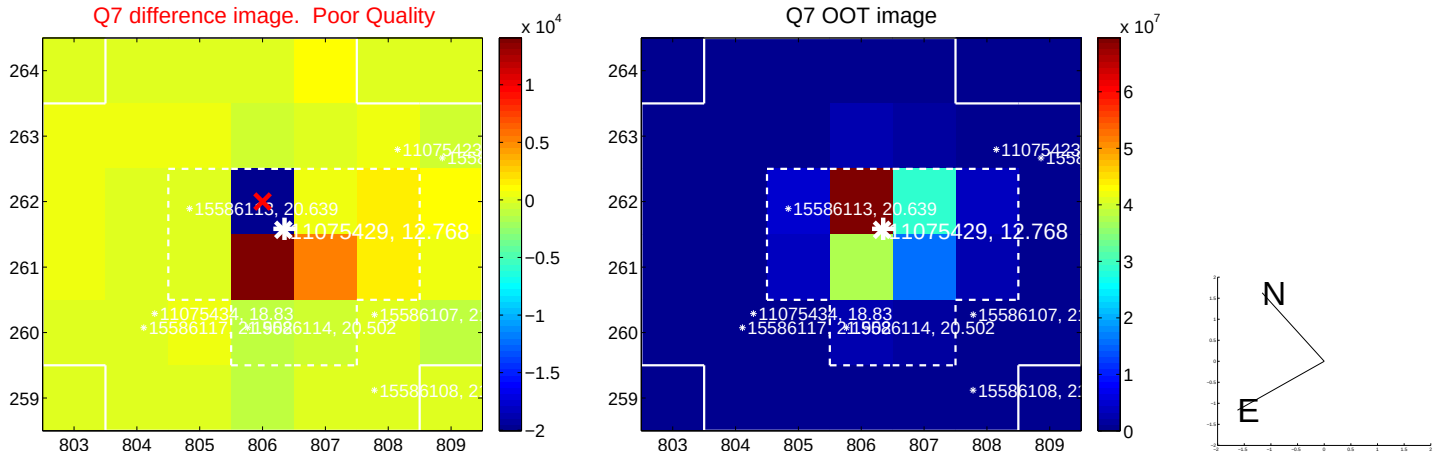
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

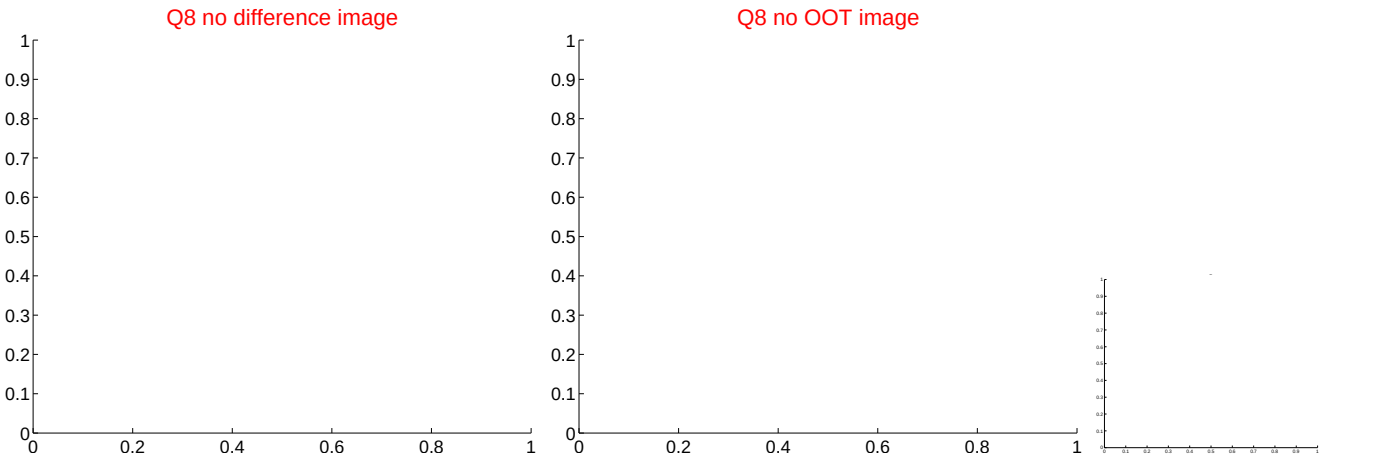


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

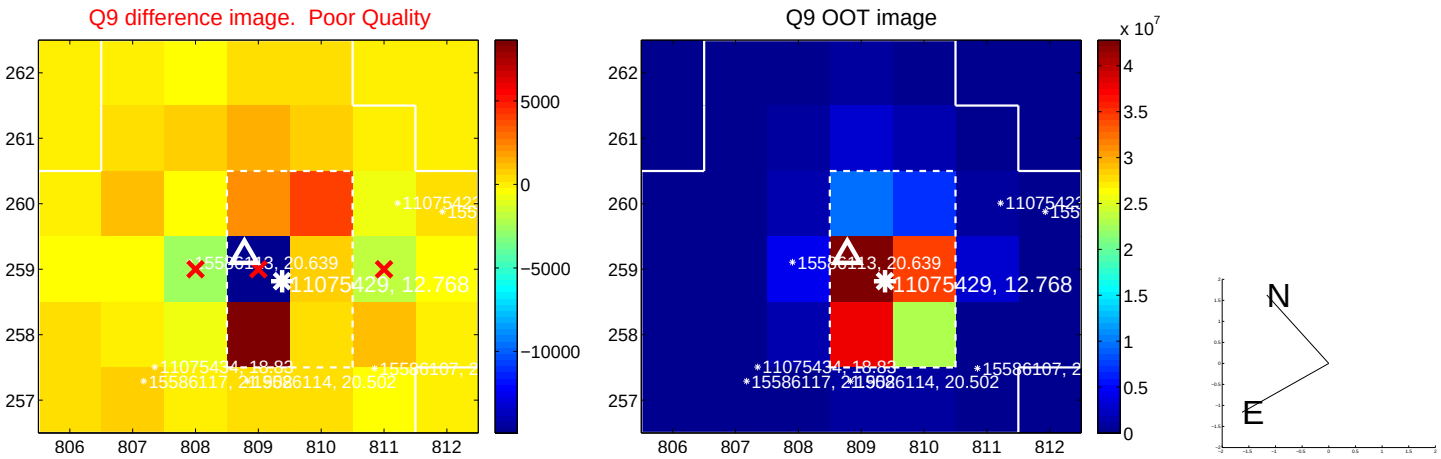


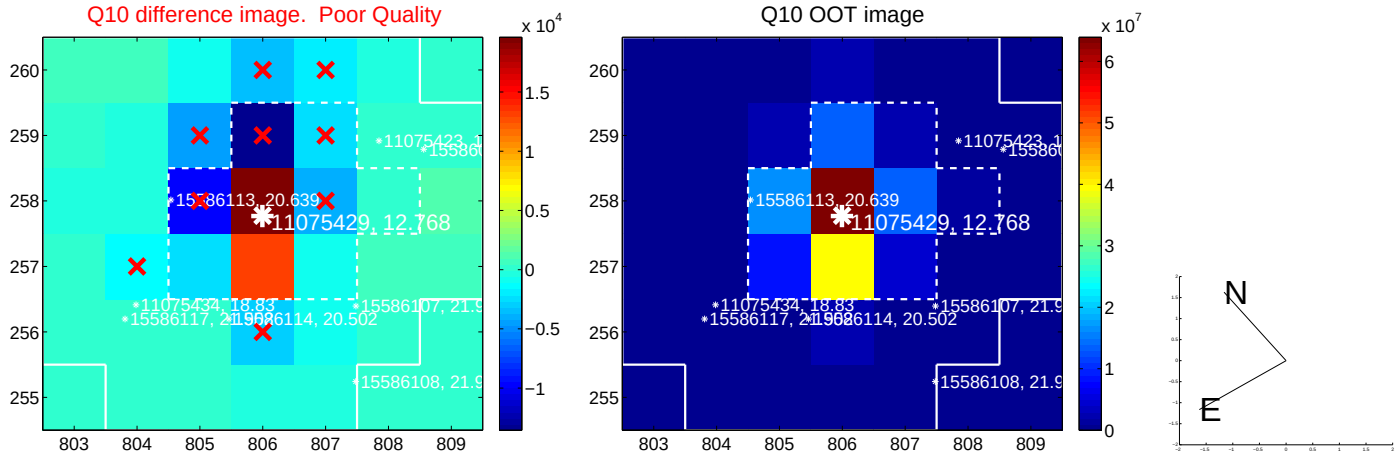


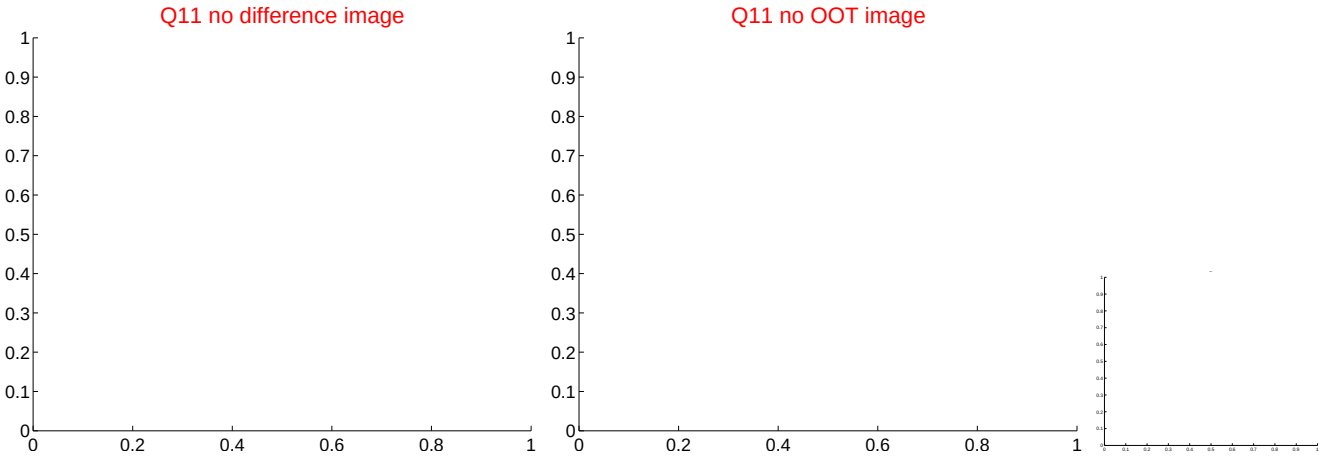


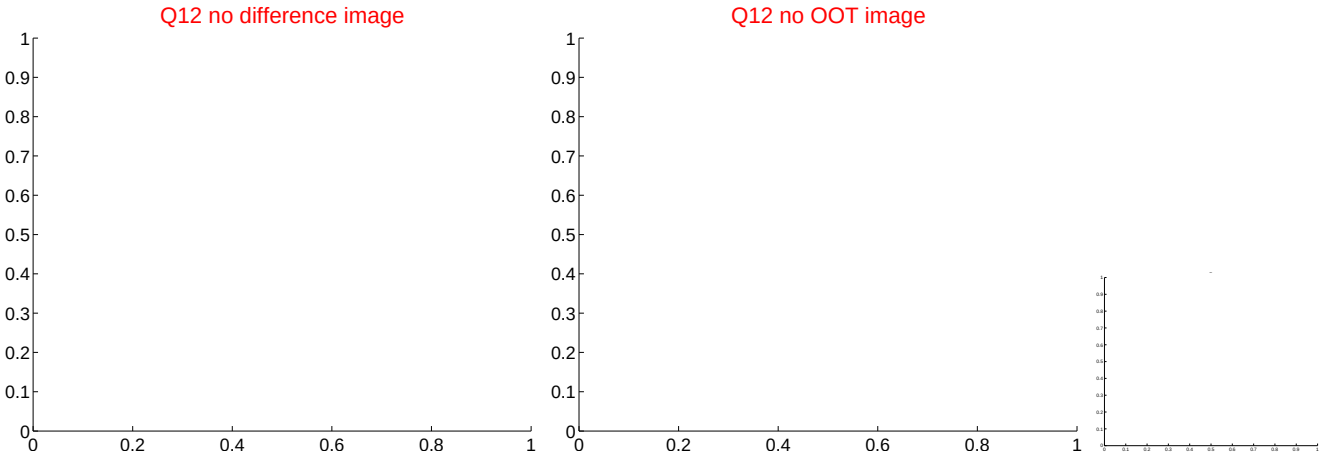


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

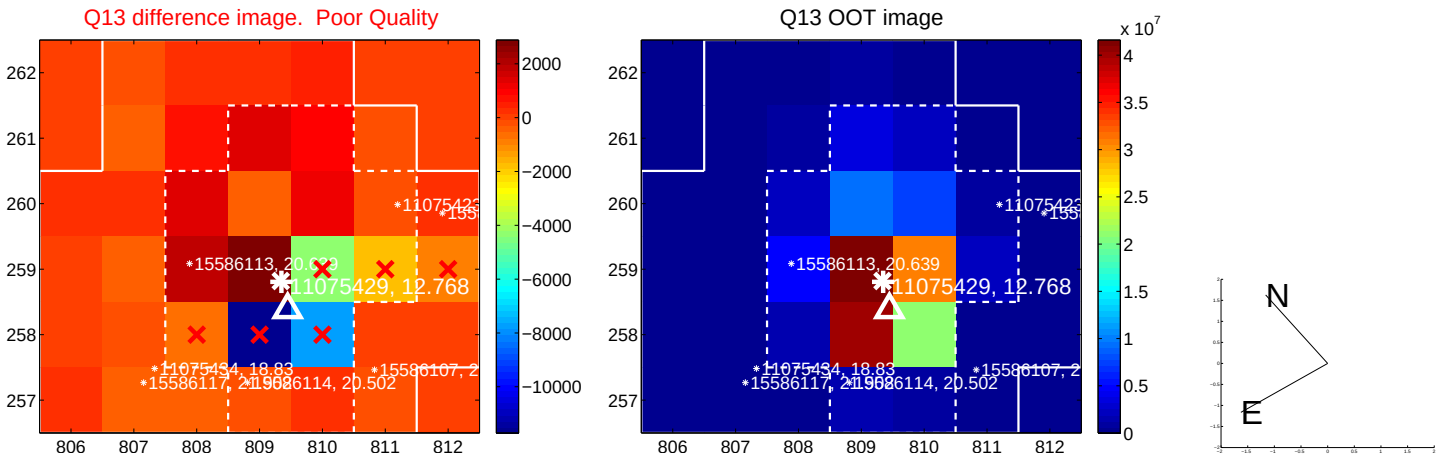


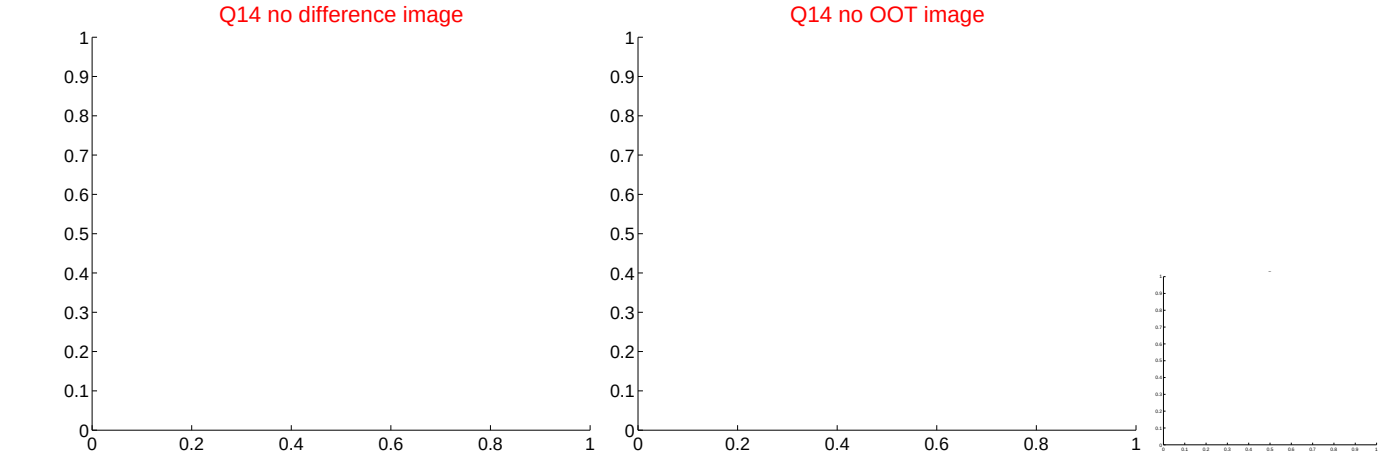


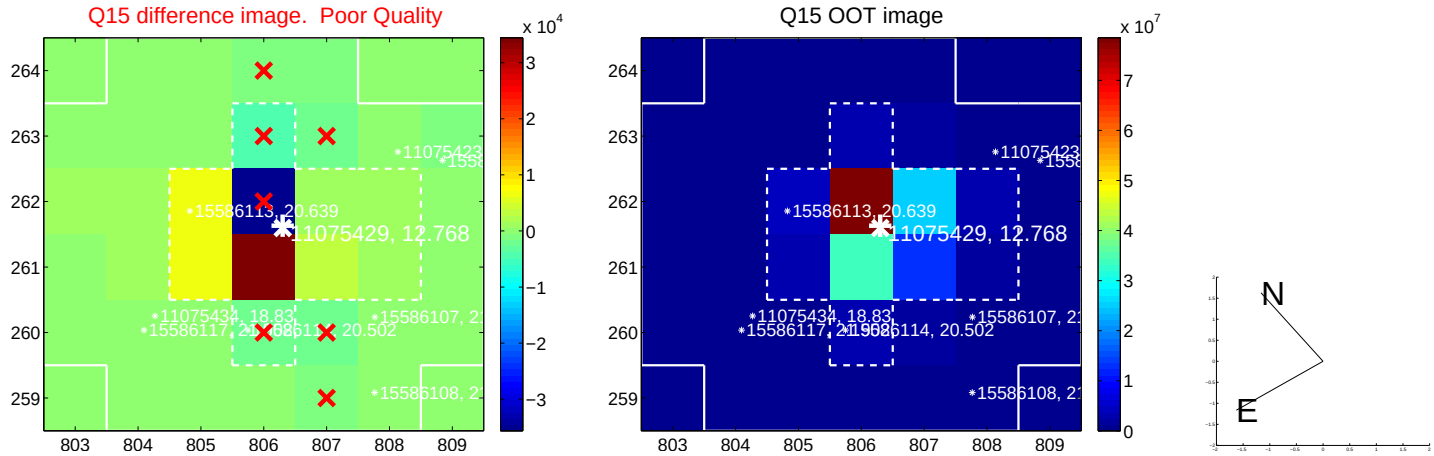


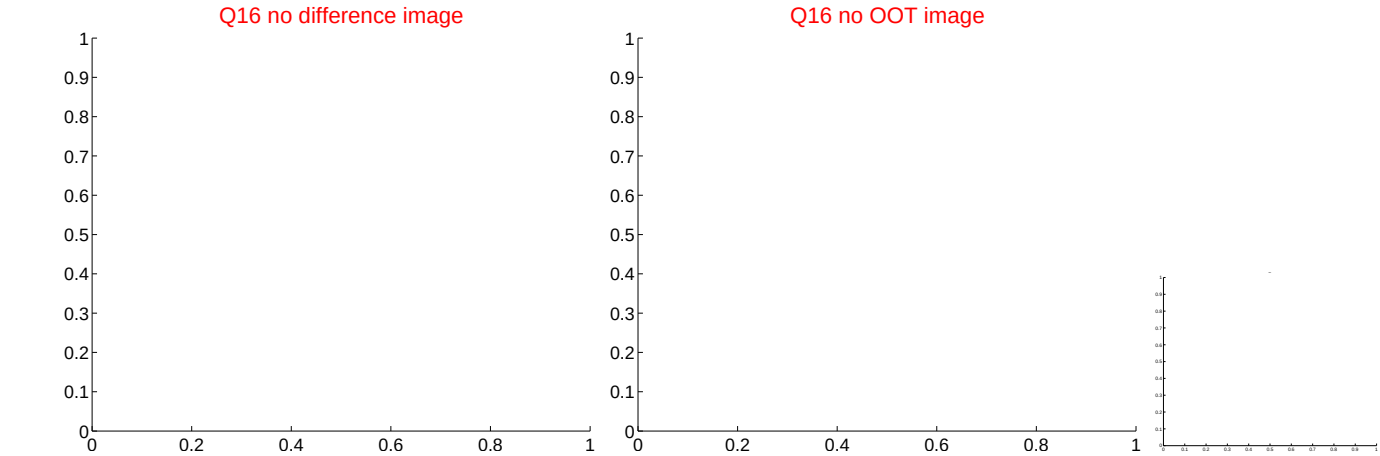


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

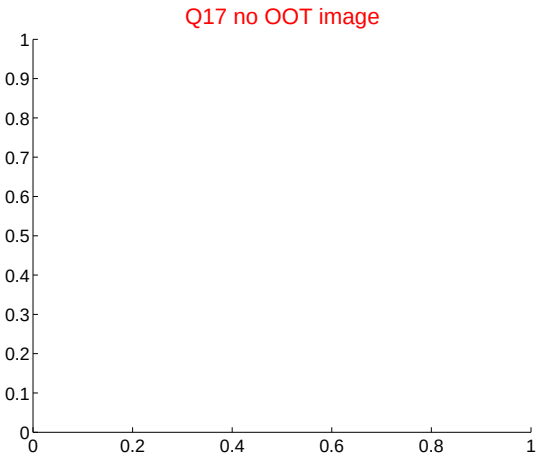


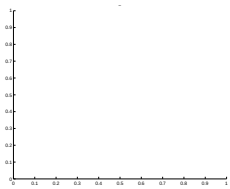


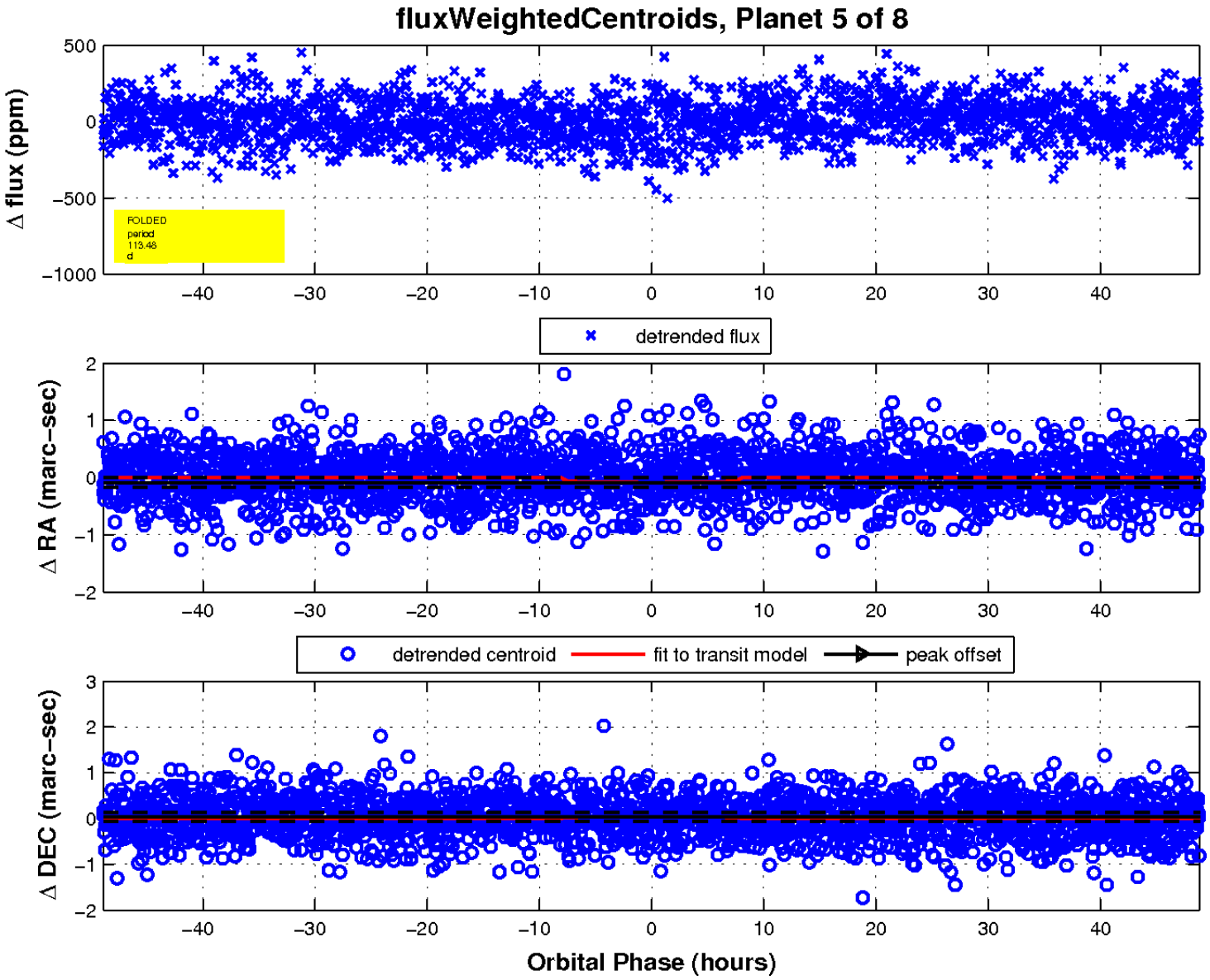




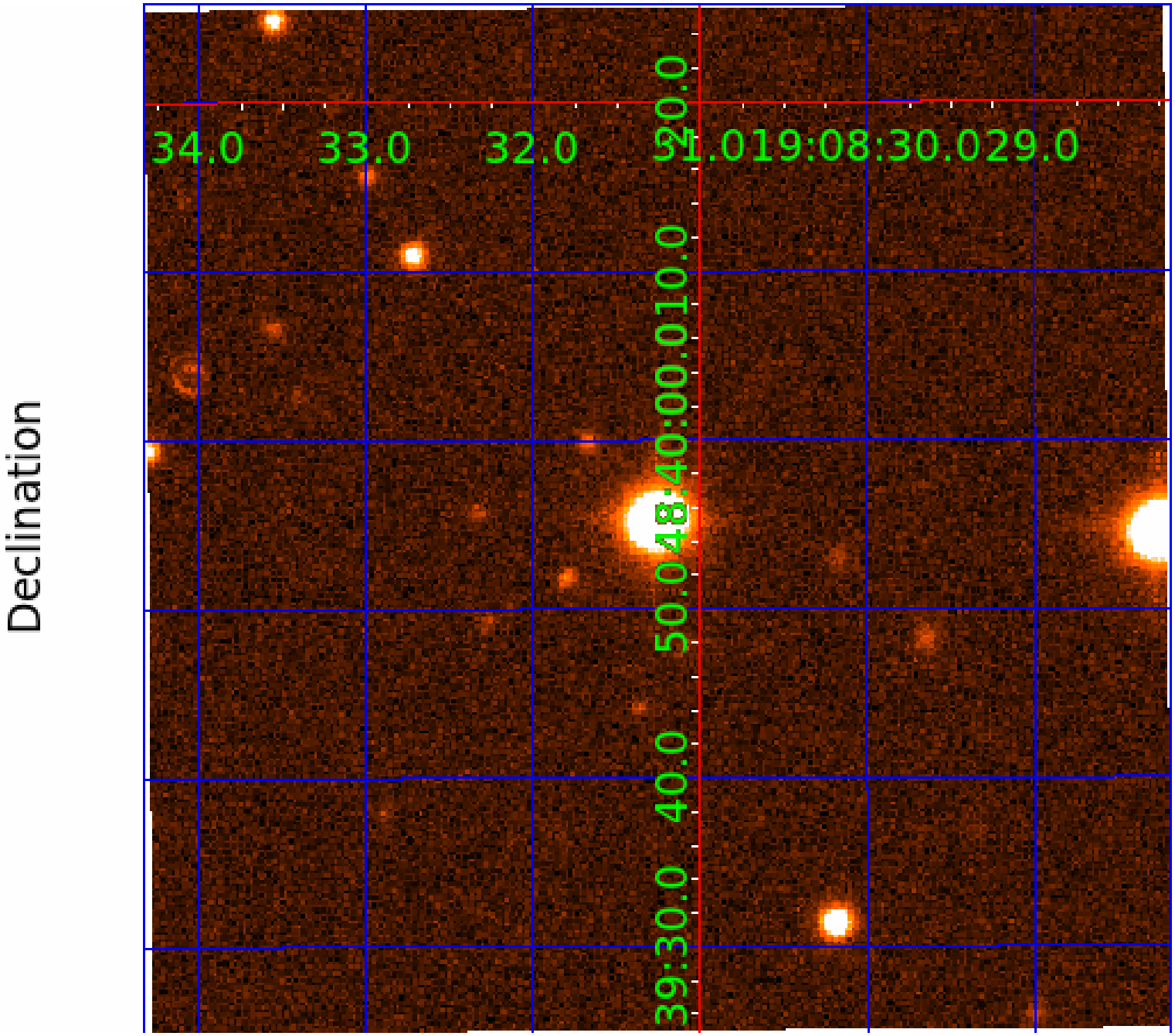
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image


Declination
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10.0
20.0
34.0
33.0
32.0
31.0
19:08:30.0
29.0

KIC 011075429

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 ($S_\oplus$)
011075429-01	OBS	2198.01	23.920989	139.076752	154.5	4.970	14.5	16.3	1.97	7121	2.78	256.23
011075429-02	OBS	No	2.970207	133.255025	22.8	14.079	7.7	6.6	1.97	7121	1.85	4136.32
011075429-03	OBS	No	232.879284	220.802473	204.2	14.518	11.2	8.6	1.97	7121	3.11	12.33
011075429-05	OBS	No	113.483857	243.296868	142.3	16.305	8.7	6.8	1.97	7121	2.62	32.14
011075429-06	OBS	No	134.928395	201.311999	201.5	6.788	7.9	7.4	1.97	7121	3.20	25.52
011075429-07	OBS	No	118.726252	217.971834	152.6	5.625	8.4	9.4	1.97	7121	2.86	30.27
011075429-08	OBS	No	93.222487	139.641842	146.1	7.395	7.5	7.5	1.97	7121	2.71	41.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011075429-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
011075429-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011075429-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
011075429-07	OBS	FP	0.02	1	0	0	0	MOD_NONUNIQ_ALT—CENT_FEW_MEAS
011075429-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

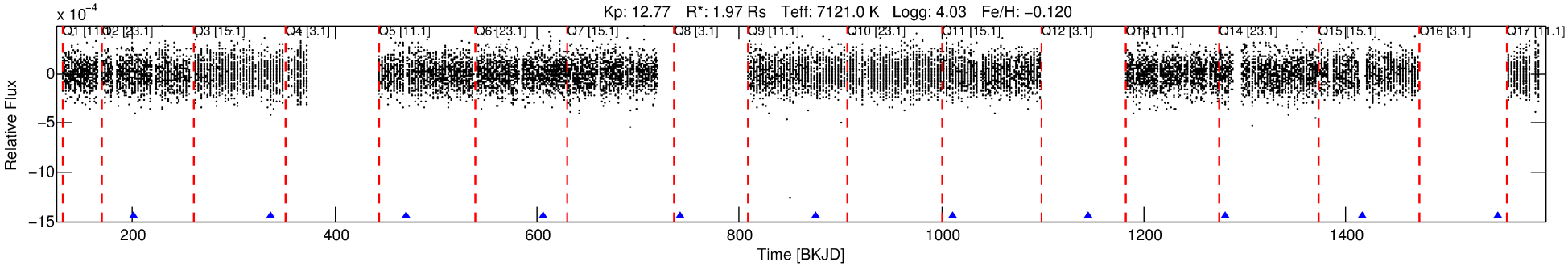
Ephemeris Match Information For 011075429-06

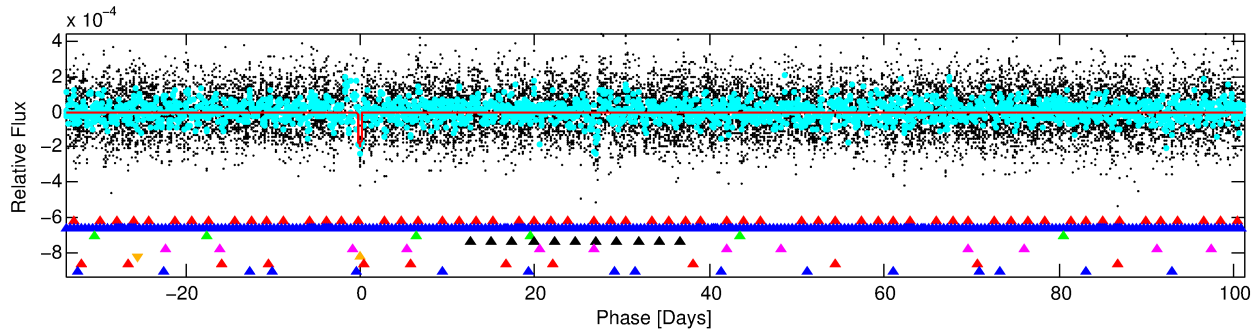
No Significant Match Found

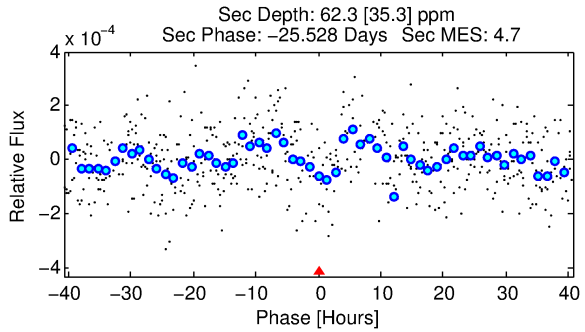
DV One-Page Summary

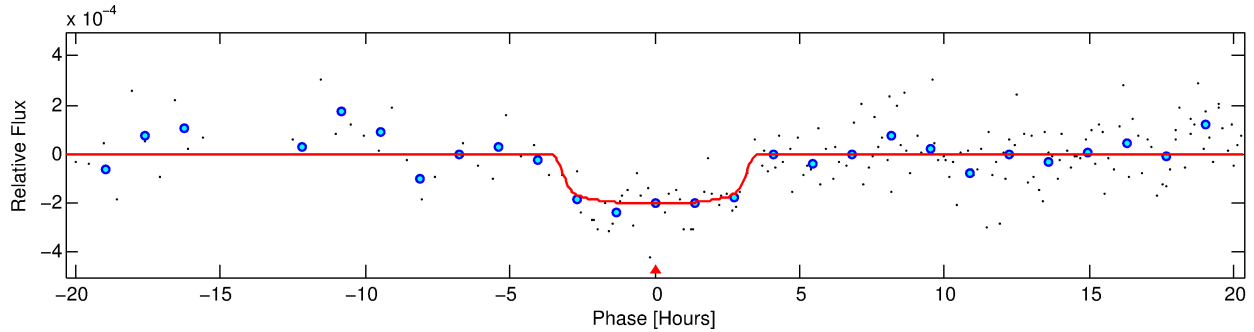
KIC: 11075429 Candidate: 6 of 8 Period: 134.928 d
KOI: K02198 Corr: No Ephemeris Match

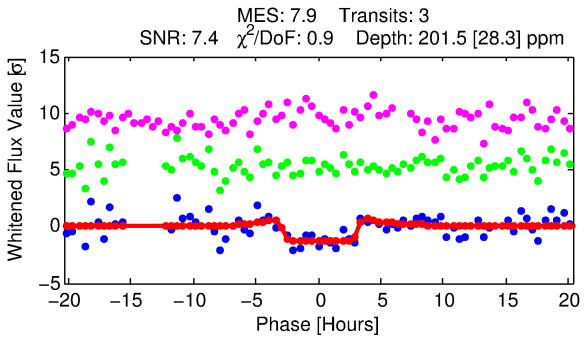
Kp: 12.77 R*: 1.97 Rs Teff: 7121.0 K Logg: 4.03 Fe/H: −0.120

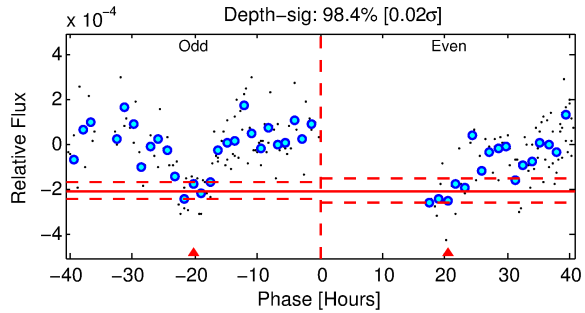


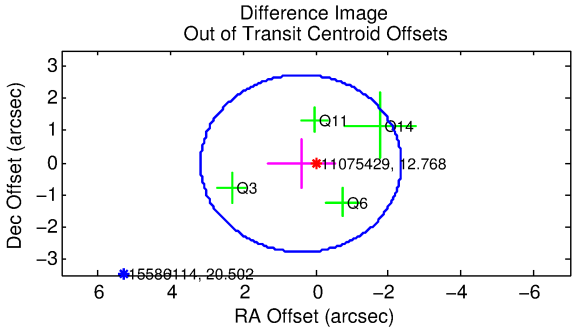












DV Fit Results:

Period = 134.92839 [0.00577] d
Epoch = 201.3120 [0.0376] BKJD
Rp/R* = 0.0149 [0.0051]
a/R* = 77.08 [157.61]
b = 0.88 [0.53]

Seff = 25.52 [9.28]
Teq = 573 [52] K
Rp = 3.20 [1.34] Re
a = 0.5925 [0.1291] AU

Ag = 1174.24 [1114.88] [1.05σ]
Teffp = 5187 [1166] K [3.95σ]

DV Diagnostic Results:

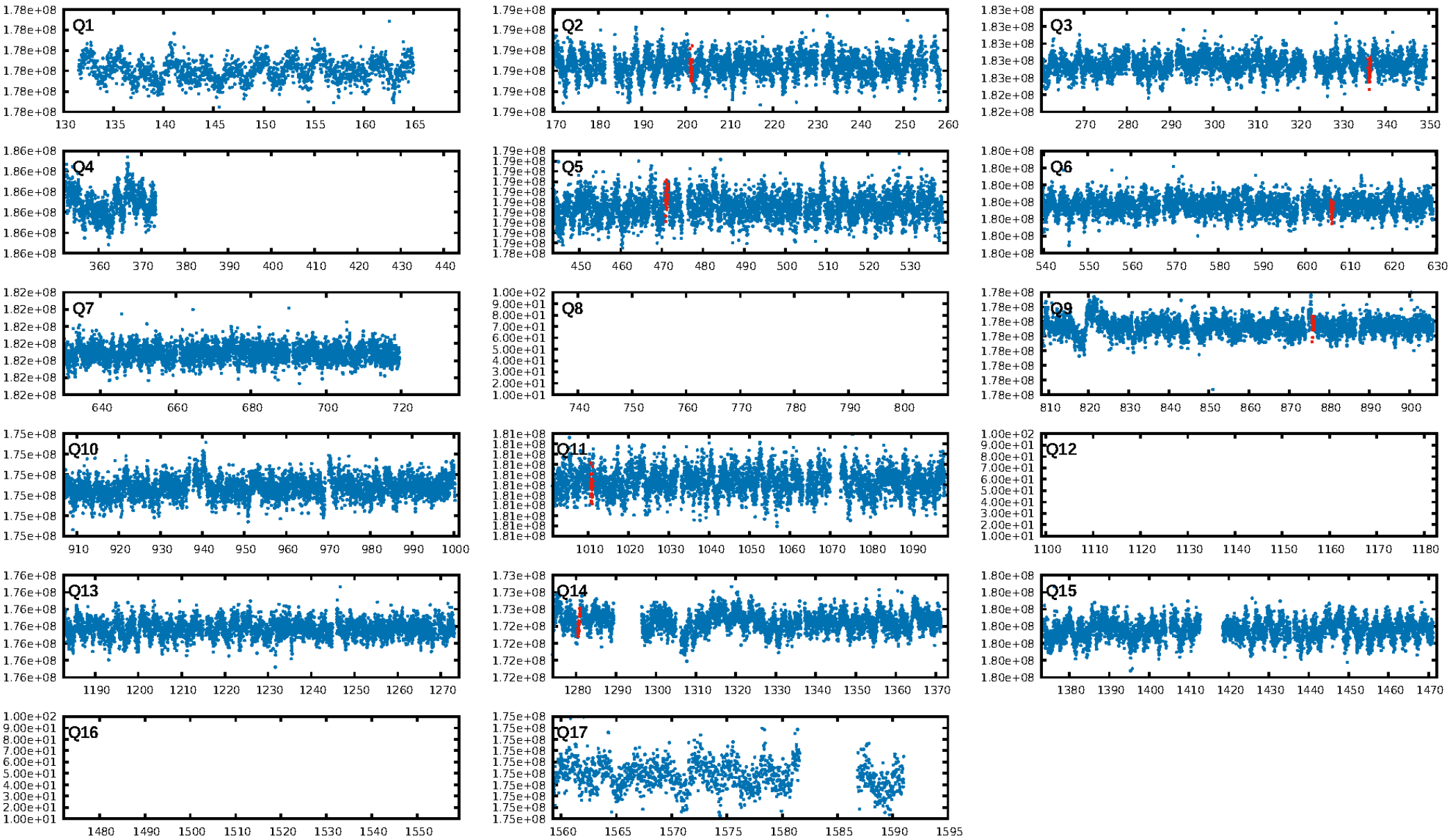
ShortPeriod−sig: 100.0% [7.59σ]
LongPeriod−sig: 100.0% [146.69σ]
ModelChiSquare2−sig: 96.9%
ModelChiSquareGof−sig: 100.0%
Bootstrap−pfa: 3.18e−08
RollingBand−fgt: 1.00 [3/3]
GhostDiagnostic−chr: −3.054

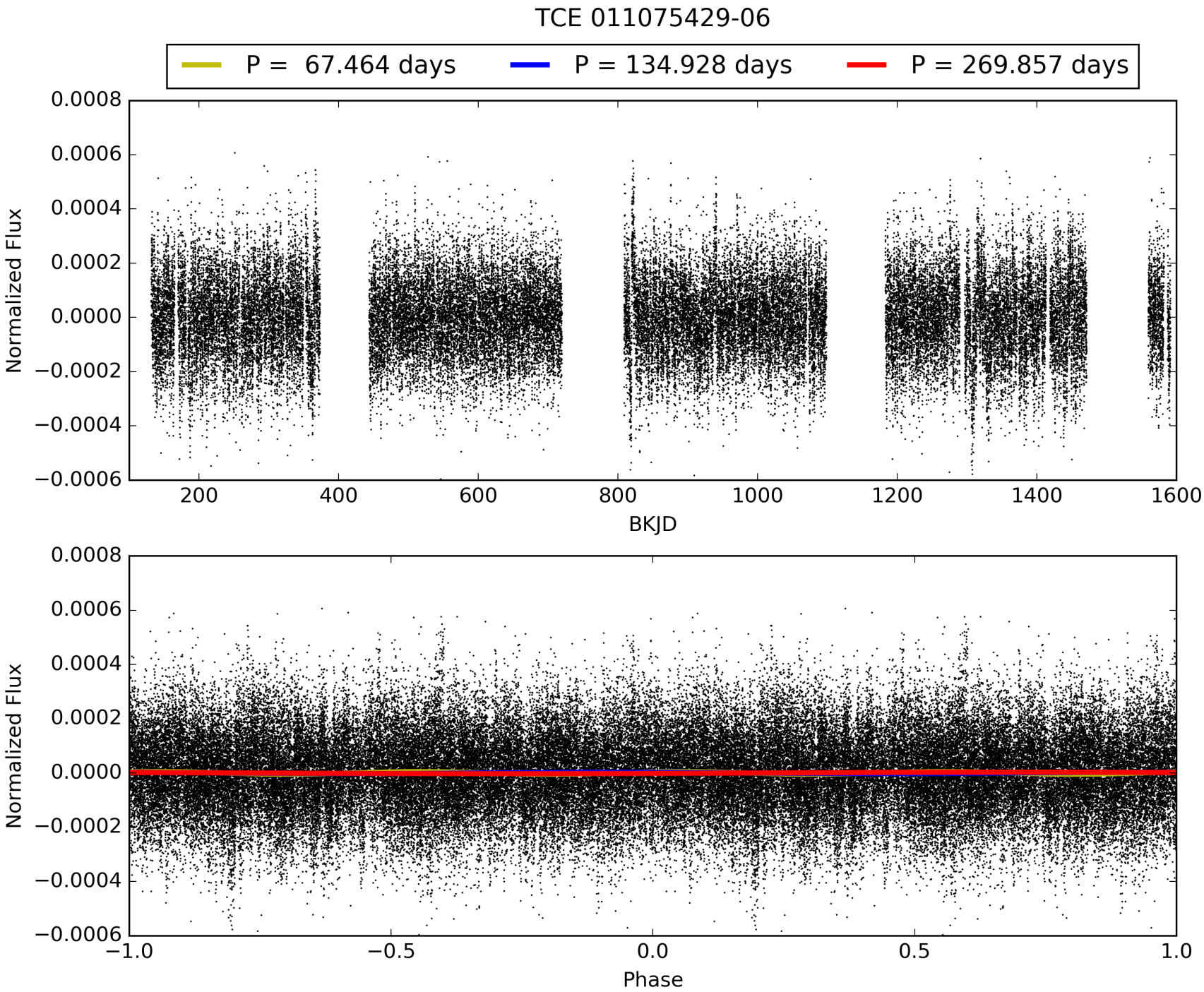
Centroid−sig: 1.3%
Centroid−so: 1.960 arcsec [2.28σ]
OotOffset−rm: 0.403 arcsec [0.44σ]
KicOffset−rm: 0.324 arcsec [0.36σ]
OotOffset−st: 2/2/0/0 [4]
KicOffset−st: 2/2/0/0 [4]
DiffImageQuality−fgm: 1.00 [4/4]
DiffImageOverlap−fno: 0.33 [2/6]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 21:22:11 Z

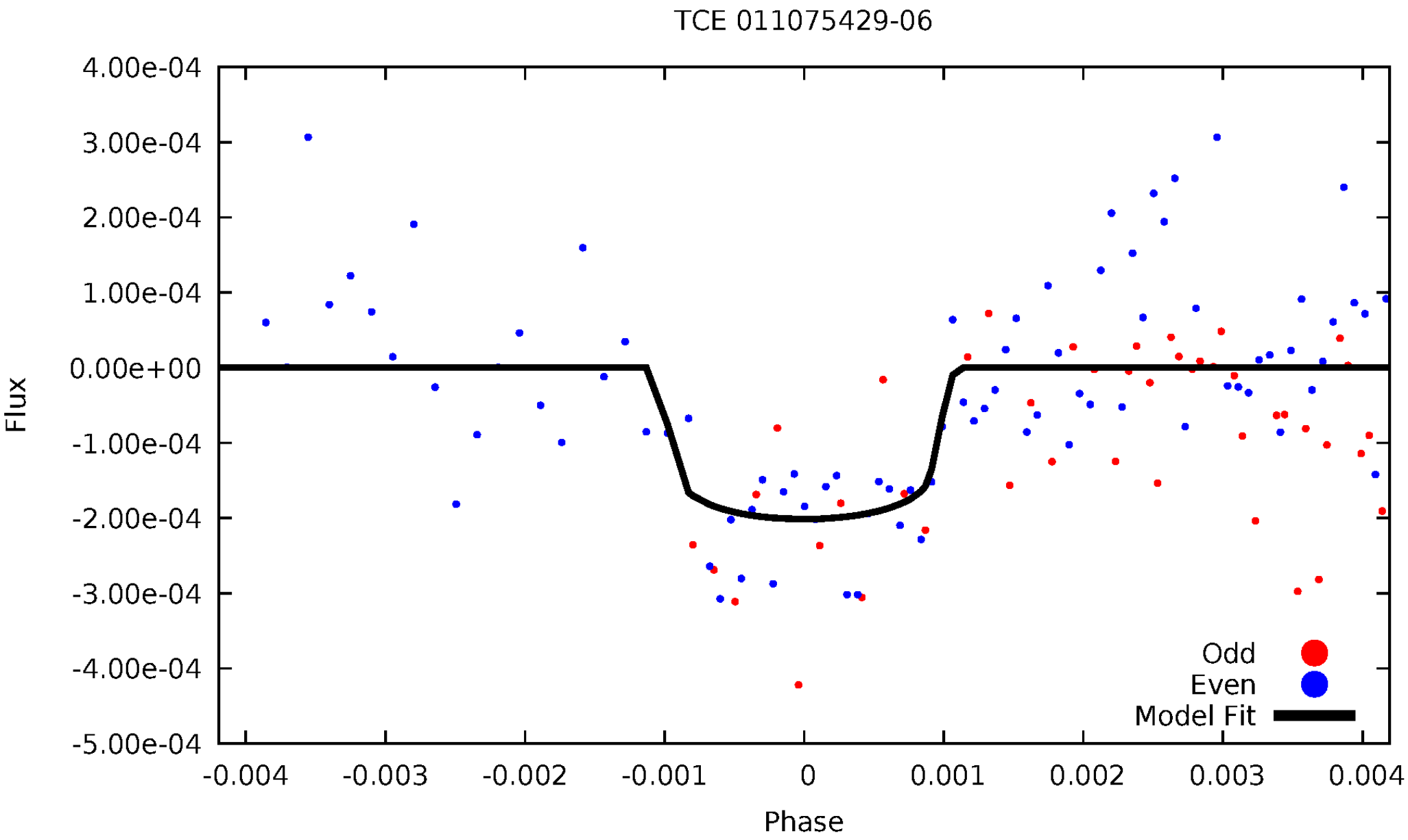
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011075429-06, PDC Light Curves

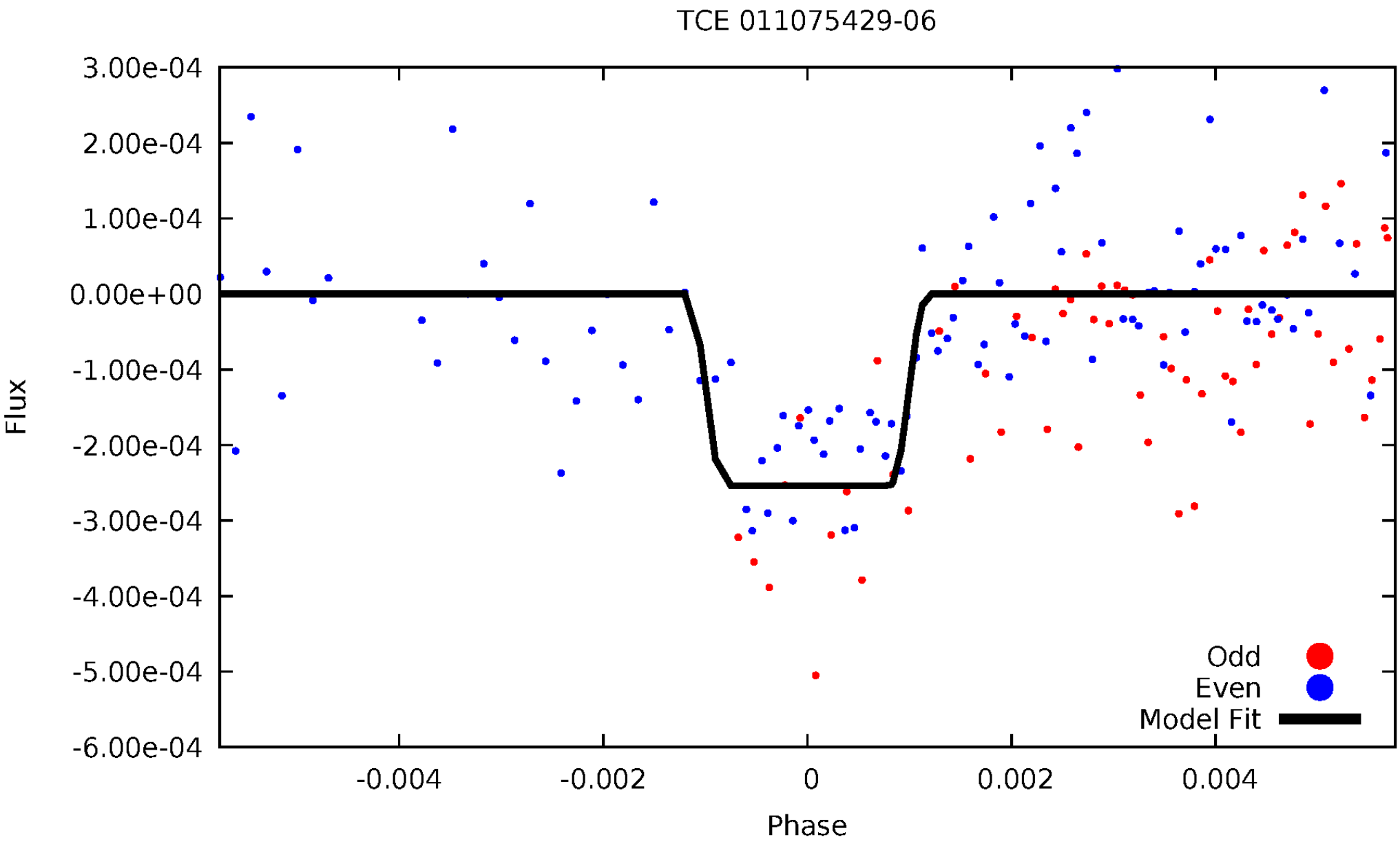



TCE 011075429-06
P = 67.464 days
P = 134.928 days
P = 269.857 days
Normalized Flux
BKJD
Normalized Flux
Phase

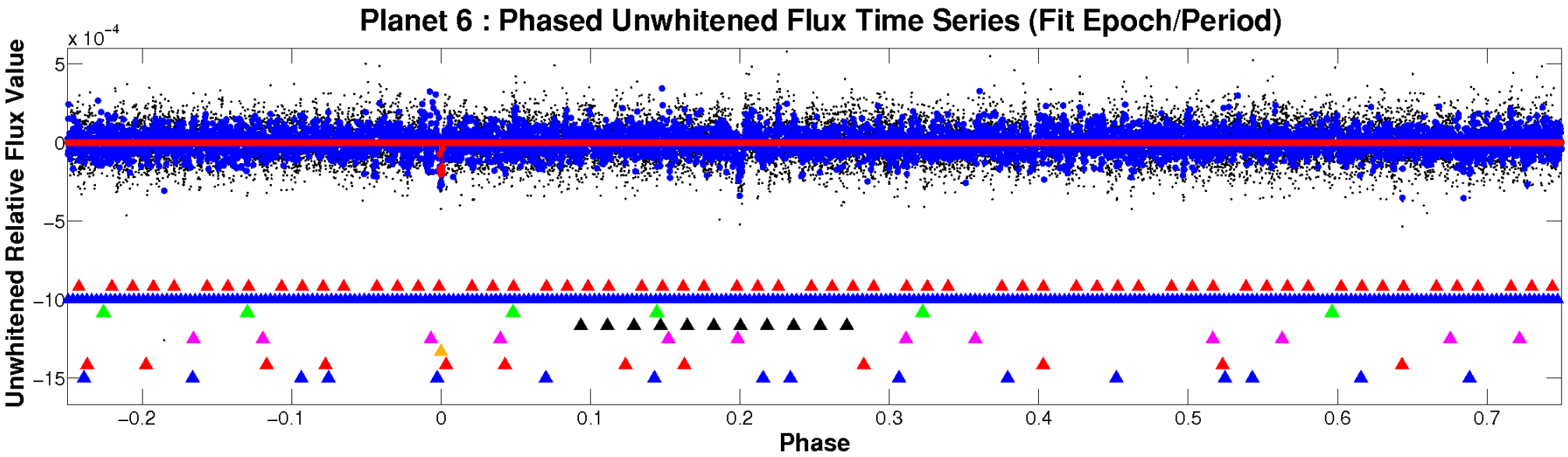
DV Odd/Even

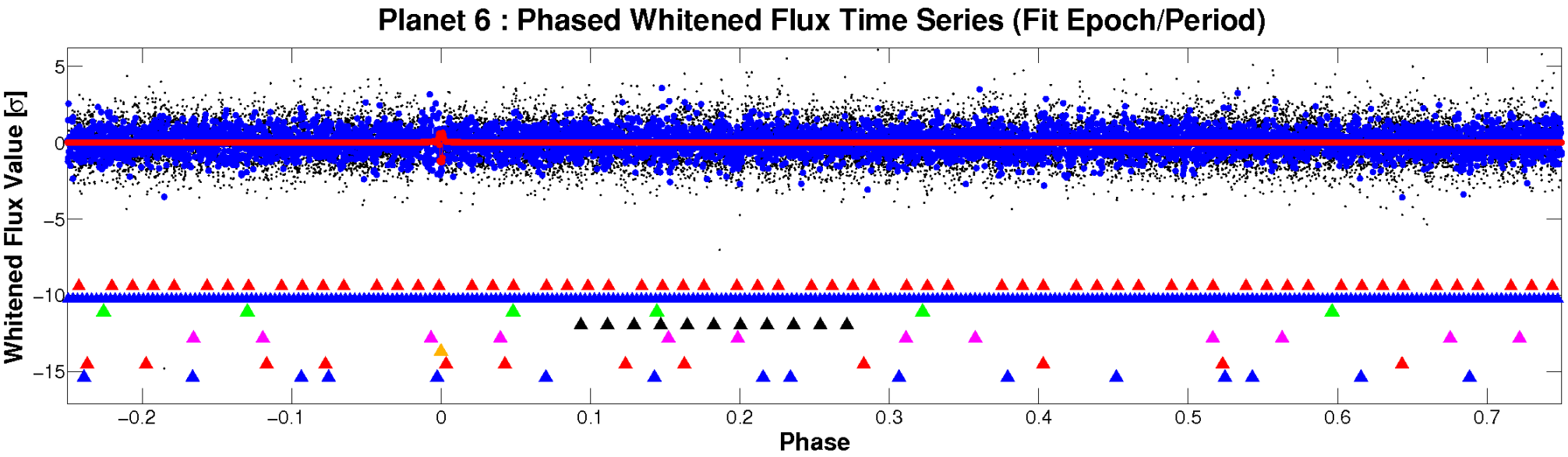

TCE 011075429-06
4.00e-04
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
-5.00e-04
Flux
-0.004
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
0.004
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 011075429-06
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
-5.00e-04
-6.00e-04
Flux
-0.004
-0.002
0
0.002
0.004
Phase
Odd
Even
Model Fit

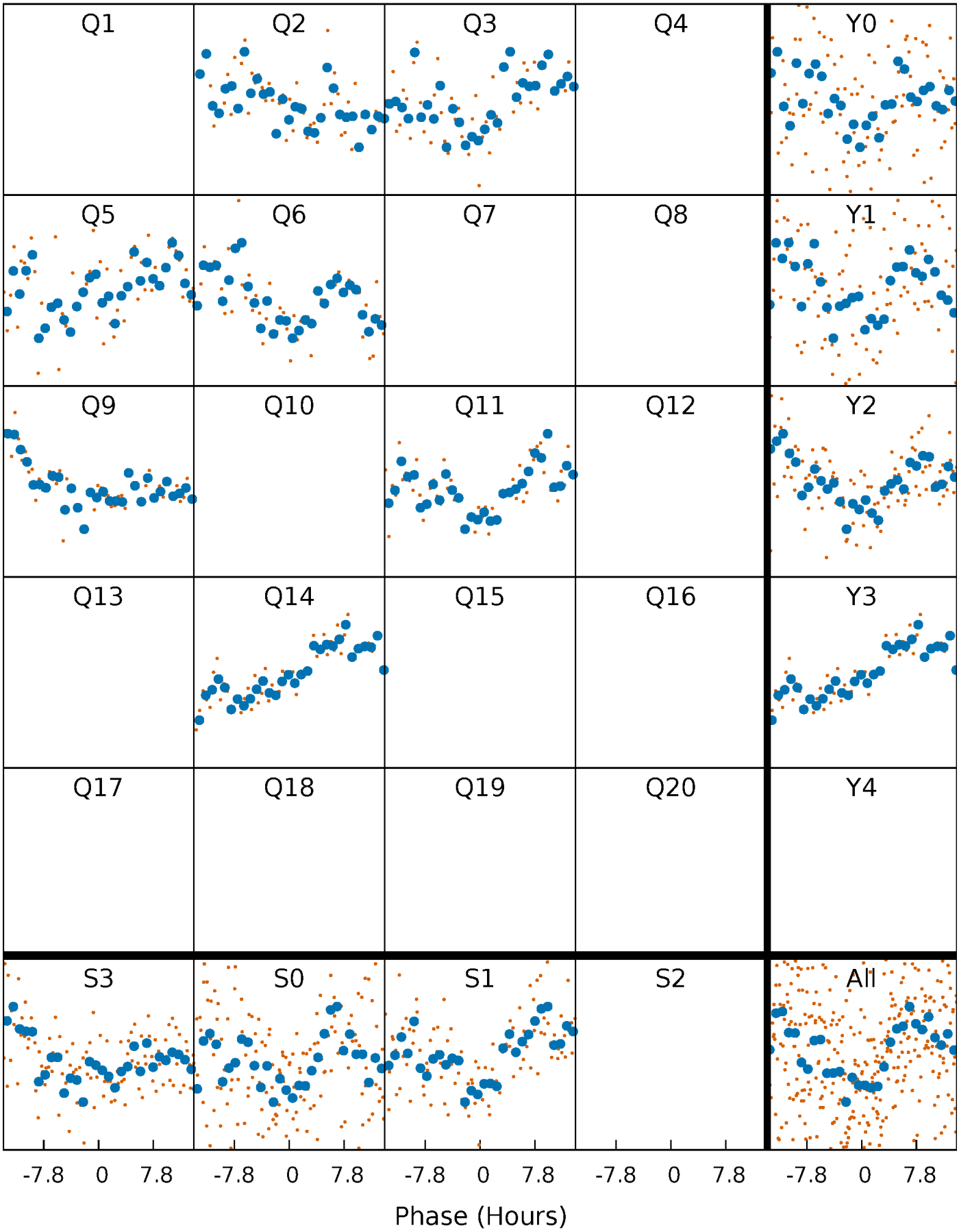
Non-Whitened Vs. Whitened Light Curve





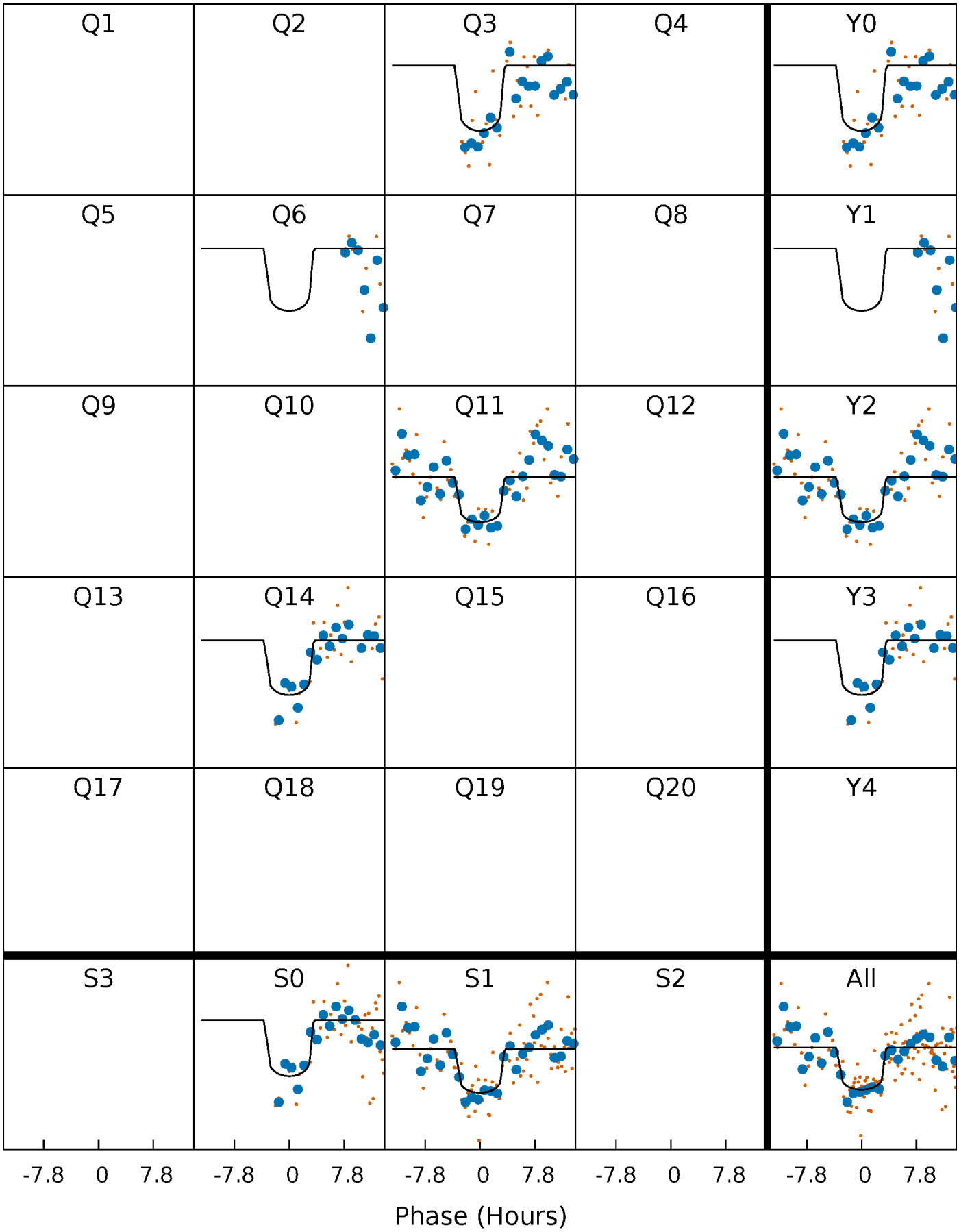
PDC Quarter-Phased Transit Curves

TCE 011075429-06 P=134.928395 Days T_0=201.311999 (BKJD)



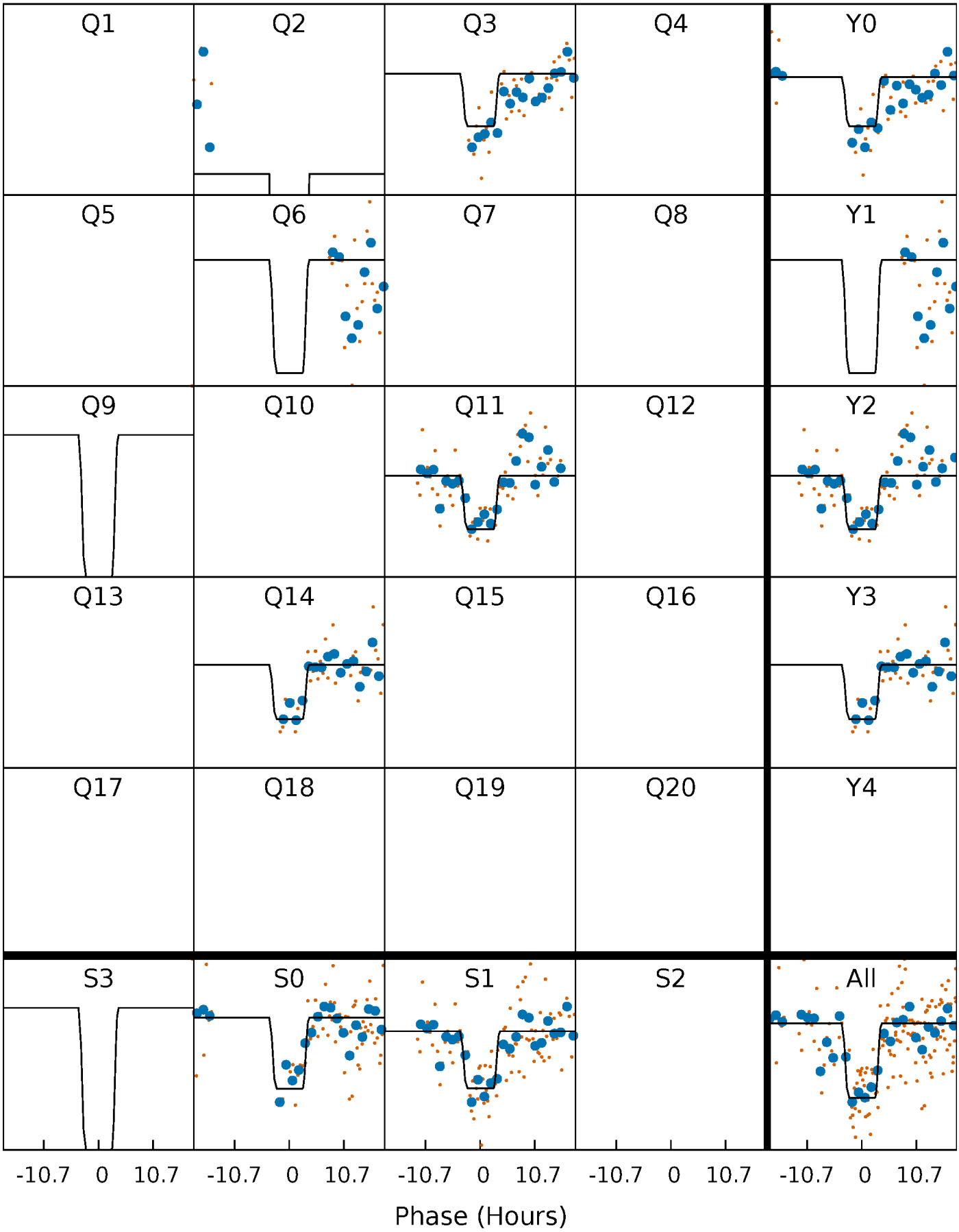
DV Quarter-Phased Transit Curves

TCE 011075429-06 P=134.928395 Days T_0=201.311999 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

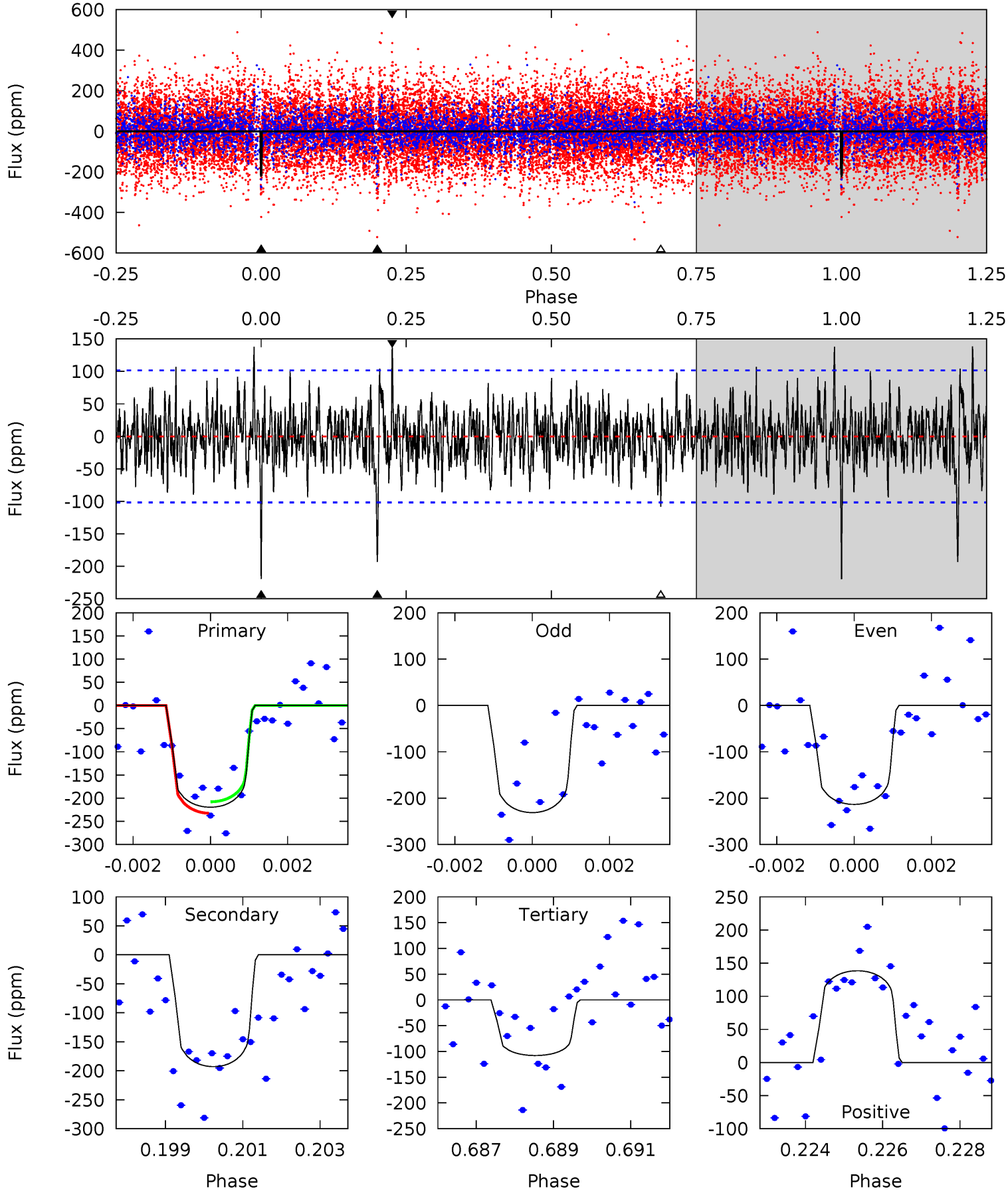
TCE 011075429-06 P=134.929549 Days T_0=201.294486 (BKJD)



DV Model-Shift Uniqueness Test

011075429-06, P = 134.928395 Days, E = 66.383604 Days

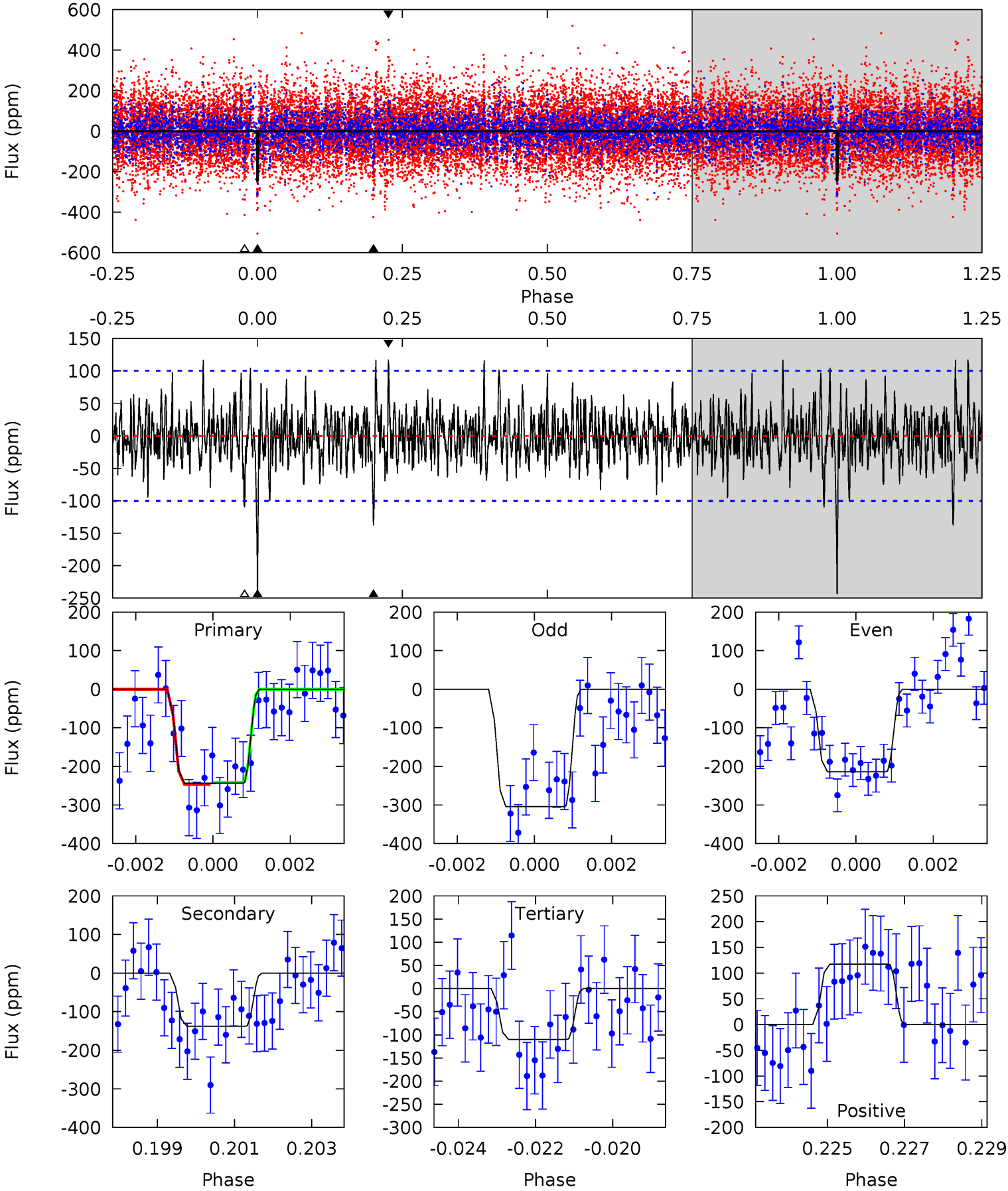
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	10.1	5.66	7.26	5.33	3.09	1.76	5.85	4.25	4.45	2.85	0.44	1.02	0.39	0.64



Alt Model-Shift Uniqueness Test

011075429-06, P = 134.929549 Days, E = 66.364937 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	7.32	5.83	6.24	5.32	3.09	1.65	7.12	6.71	1.49	1.08	2.27	1.12	0.33	0.13



Stellar Parameters For KIC 011075429

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	M($M_\odot$)	$p_\star$ (g·cm^{-3})
	7121^{+199}_{-249}	$4.031^{+0.192}_{-0.128}$	$-0.120^{+0.250}_{-0.350}$	$1.972^{+0.427}_{-0.475}$	$1.521^{+0.171}_{-0.278}$	$0.279^{+0.302}_{-0.109}$
	+3%/-3%	+5%/-3%	+208%/-292%	+22%/-24%	+11%/-18%	+108%/-39%
Source	PHO1	FLK73	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 011075429-06 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-193±19	$3.14^{+1.11}_{-1.16}$	794^{+53}_{-52}	6840^{+2021}_{-1017}	3672^{+5849}_{-1736}
Alt.	-138±19	$3.36^{+1.20}_{-1.10}$	794^{+51}_{-60}	5974^{+1363}_{-743}	2304^{+2728}_{-1055}

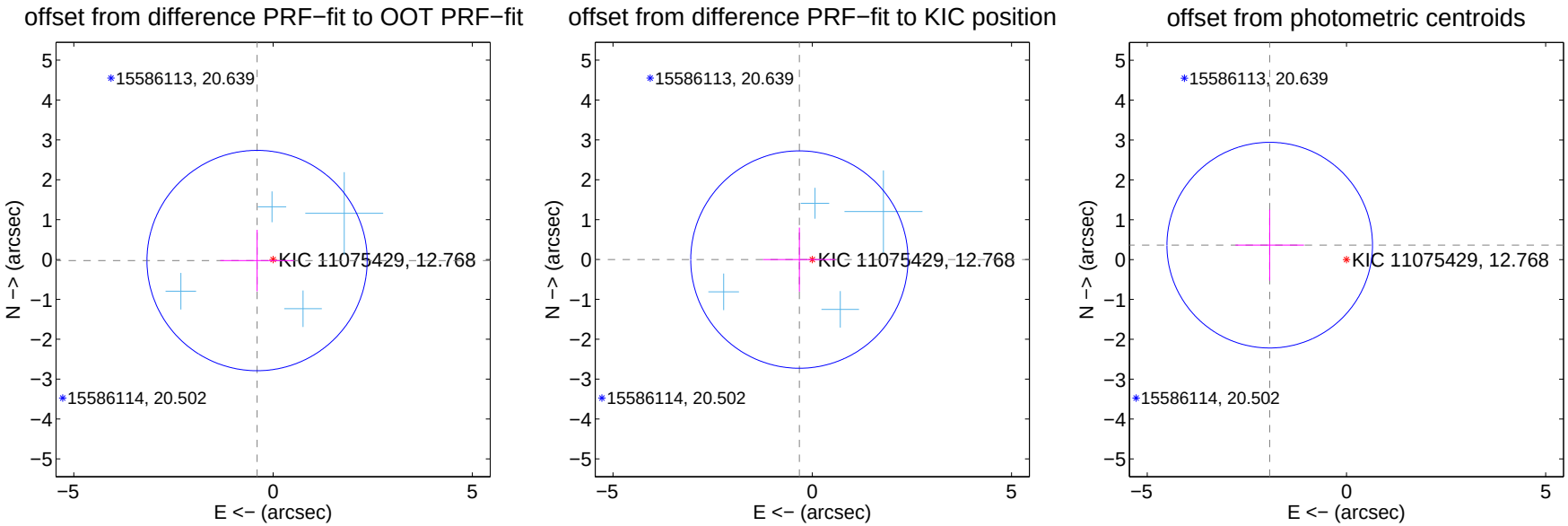
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

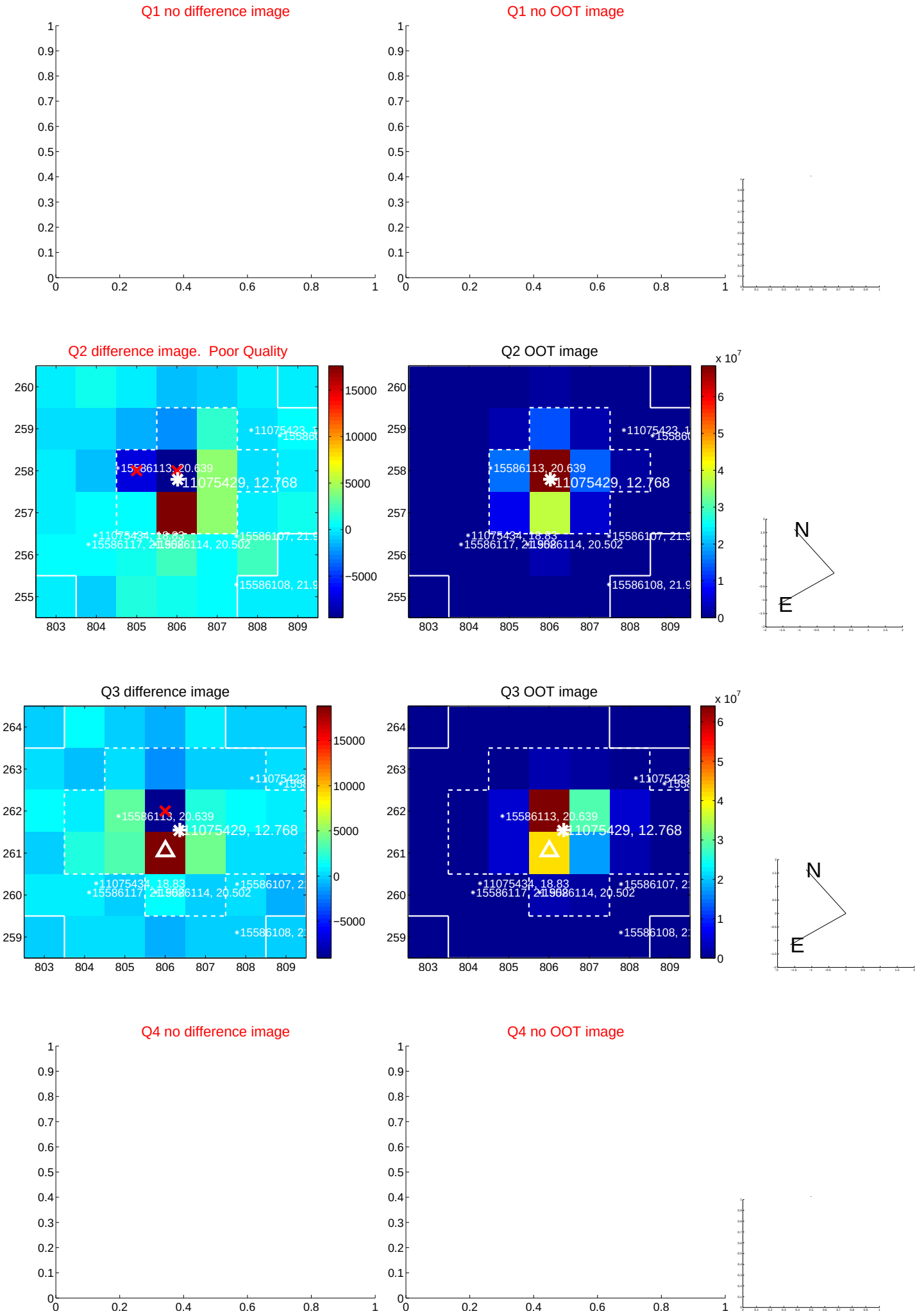
Supplemental centroid analysis for 011075429-06. Kepler magnitude: 12.77. Transit SNR 7.40
There are 4 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.403 ± 0.921	0.44	0.402 ± 0.922	-0.026 ± 0.771
PRF-fit source offset from KIC position	0.324 ± 0.909	0.36	0.324 ± 0.909	-0.002 ± 0.803
photometric centroid source offset	1.96 ± 0.86	2.28	1.93 ± 0.86	0.36 ± 0.89

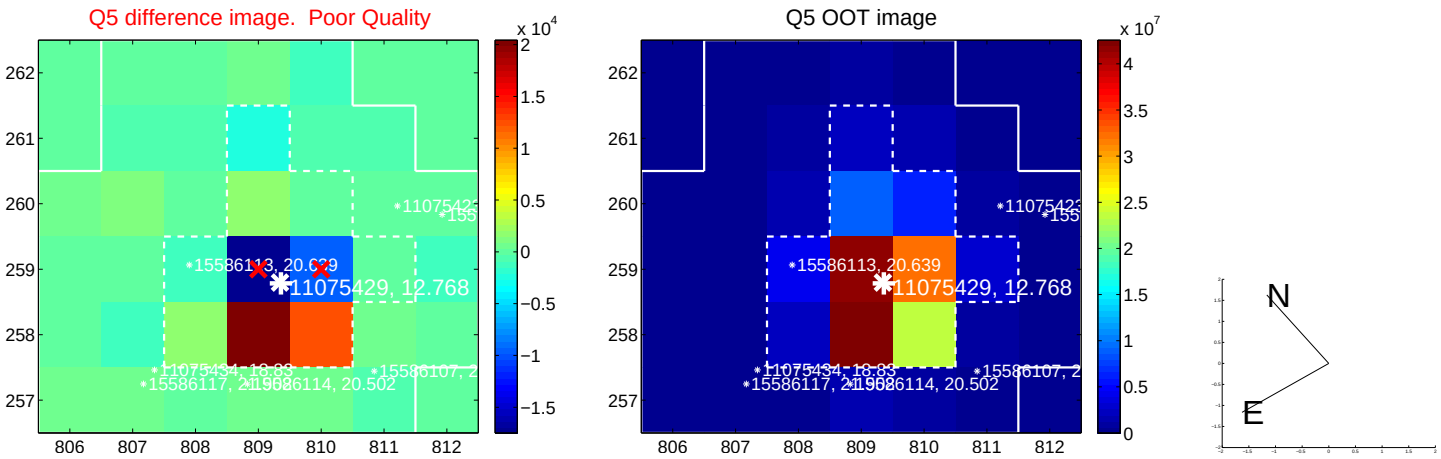


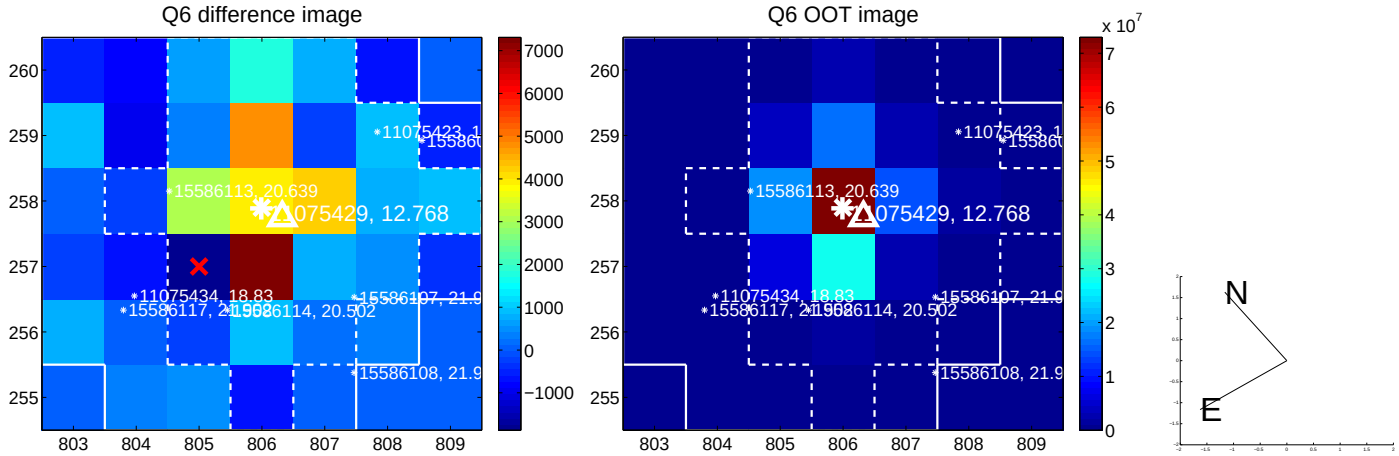
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

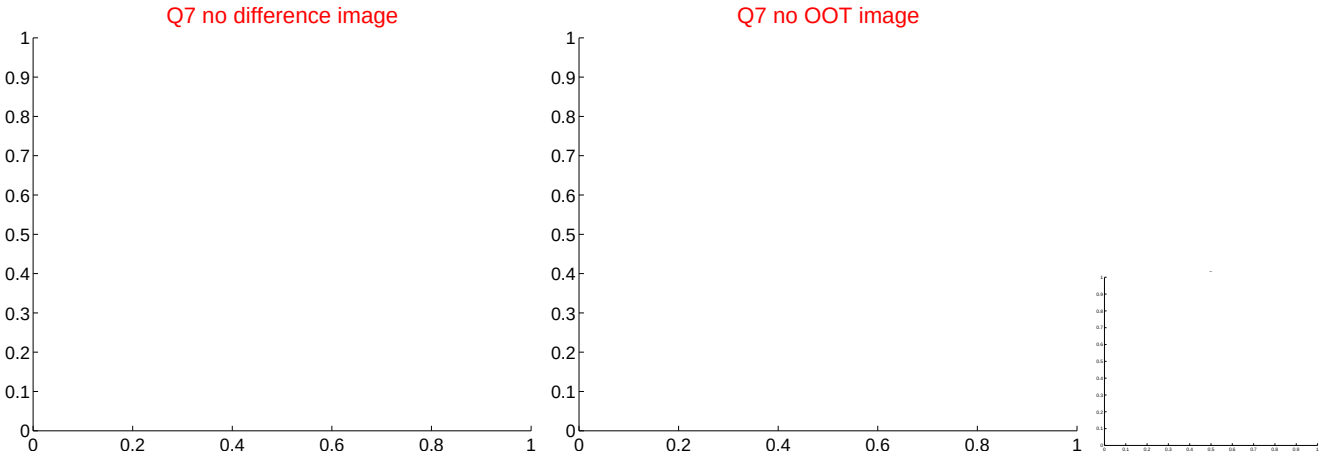
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

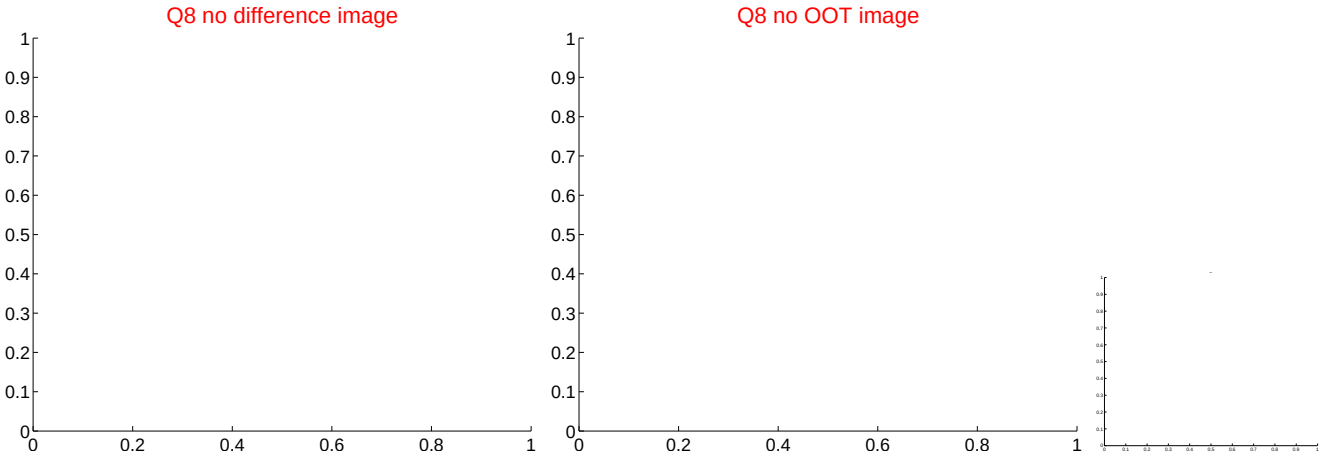


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

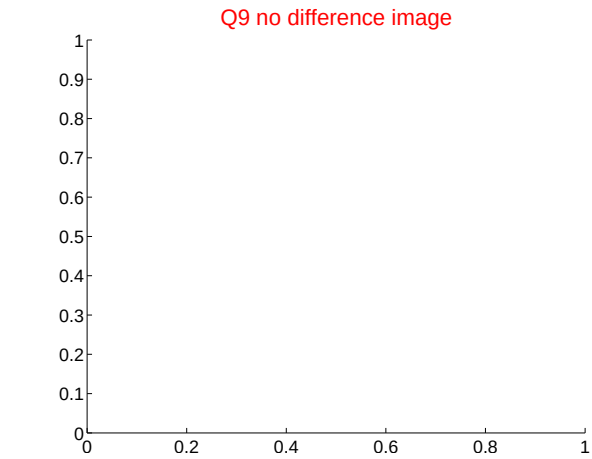


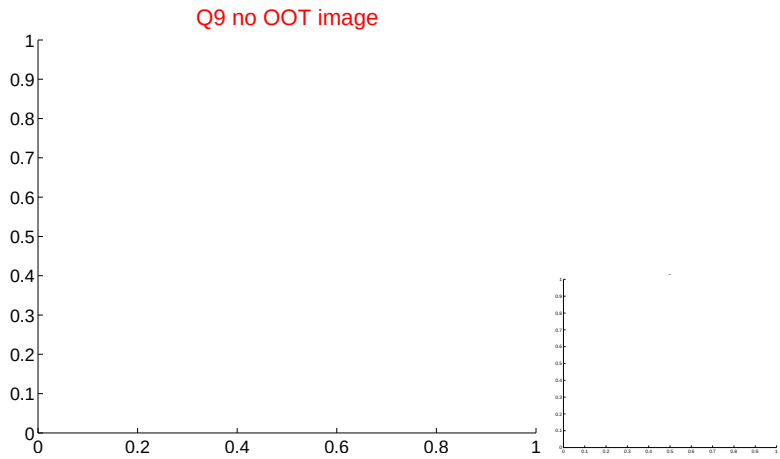


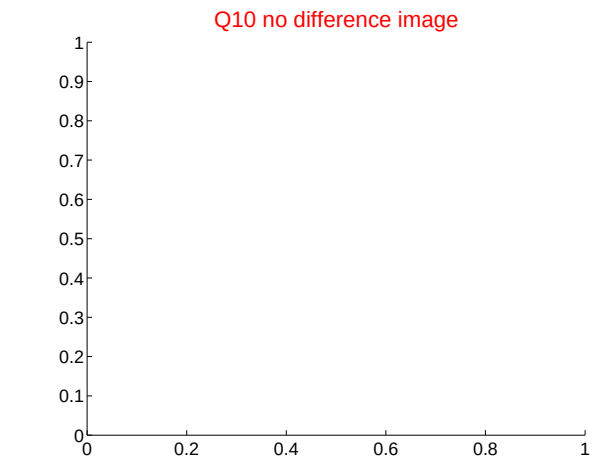


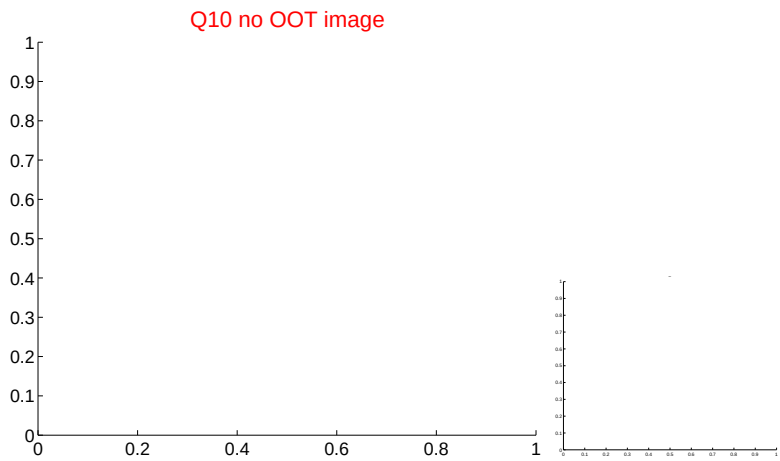


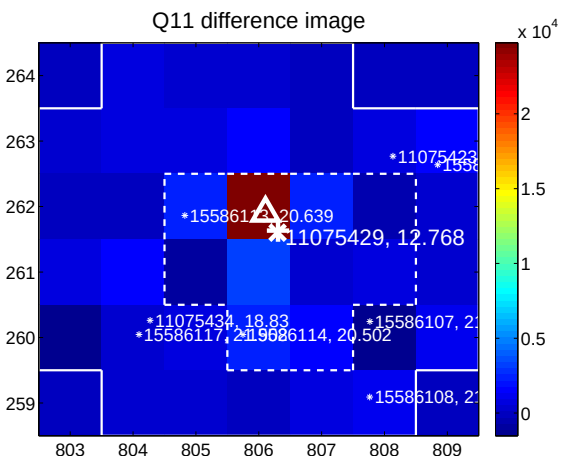
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

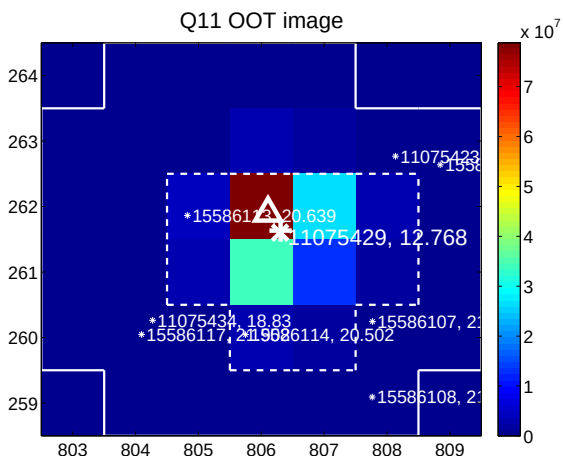


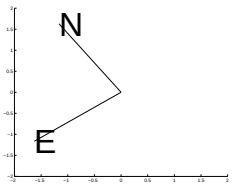


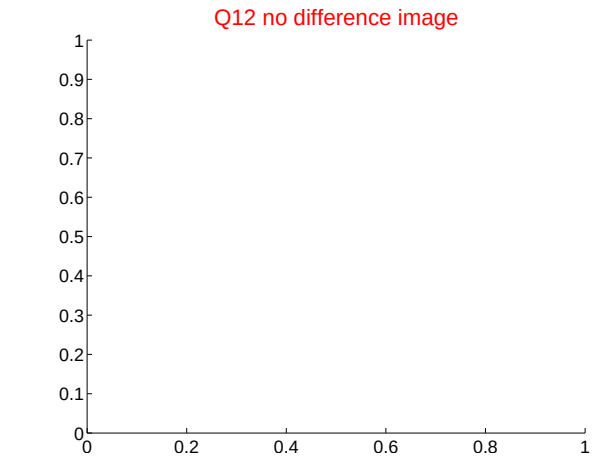


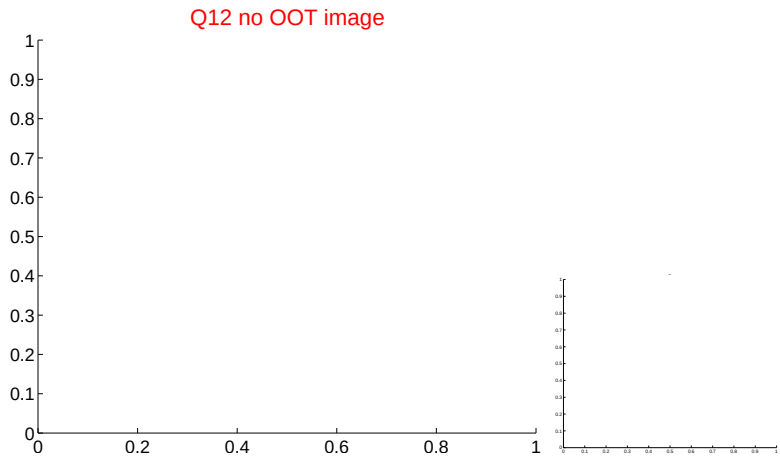




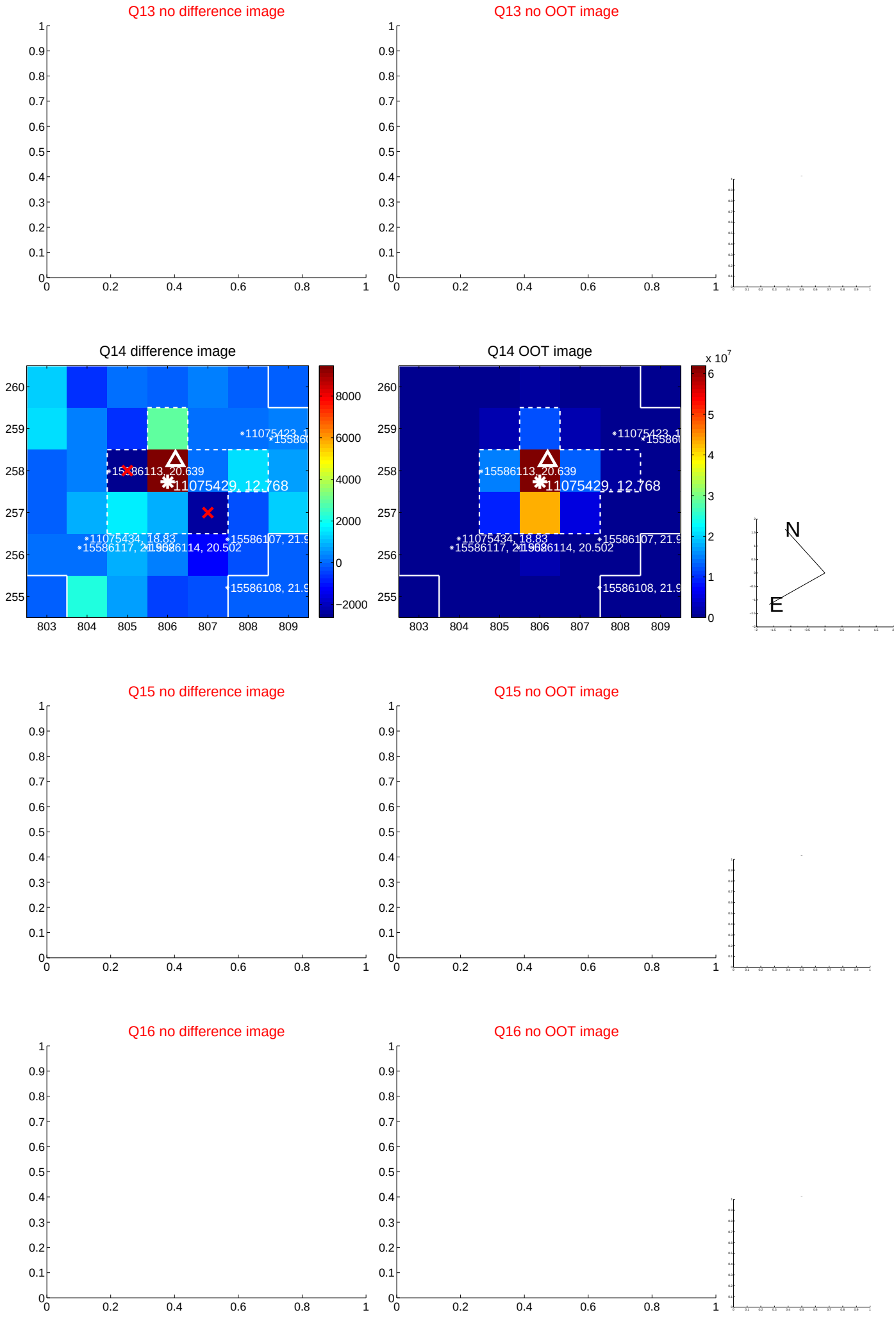




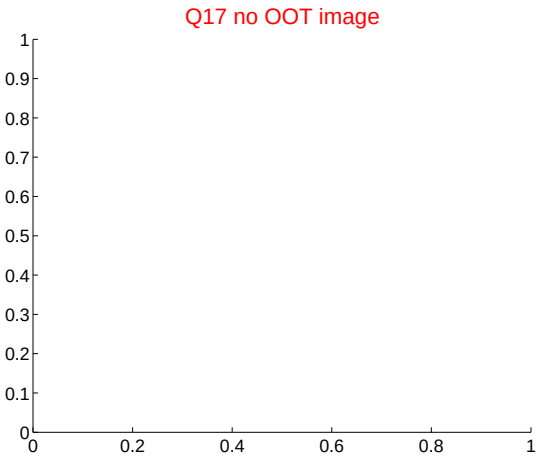


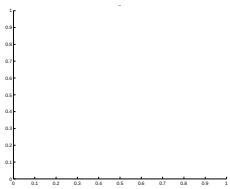


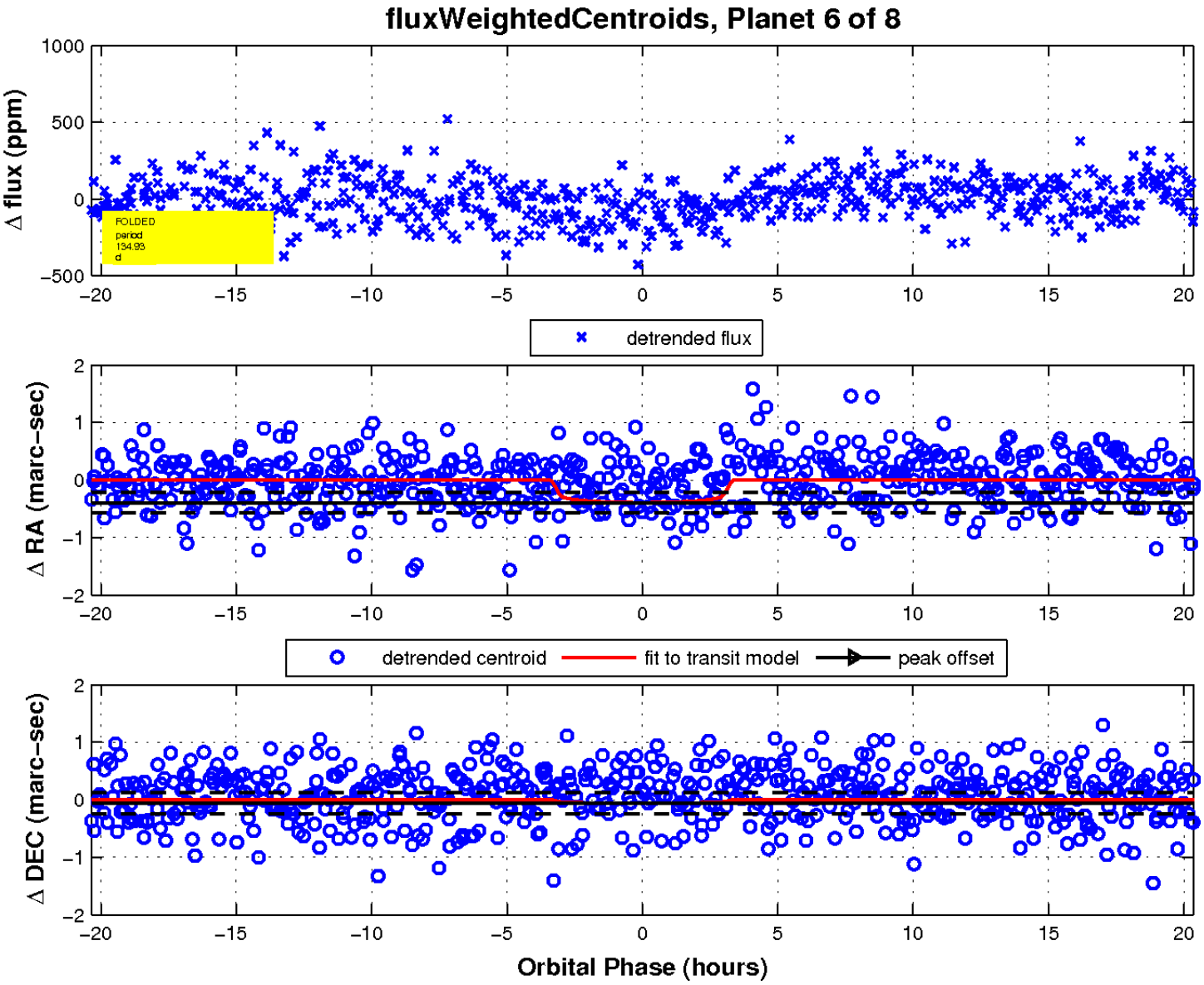
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



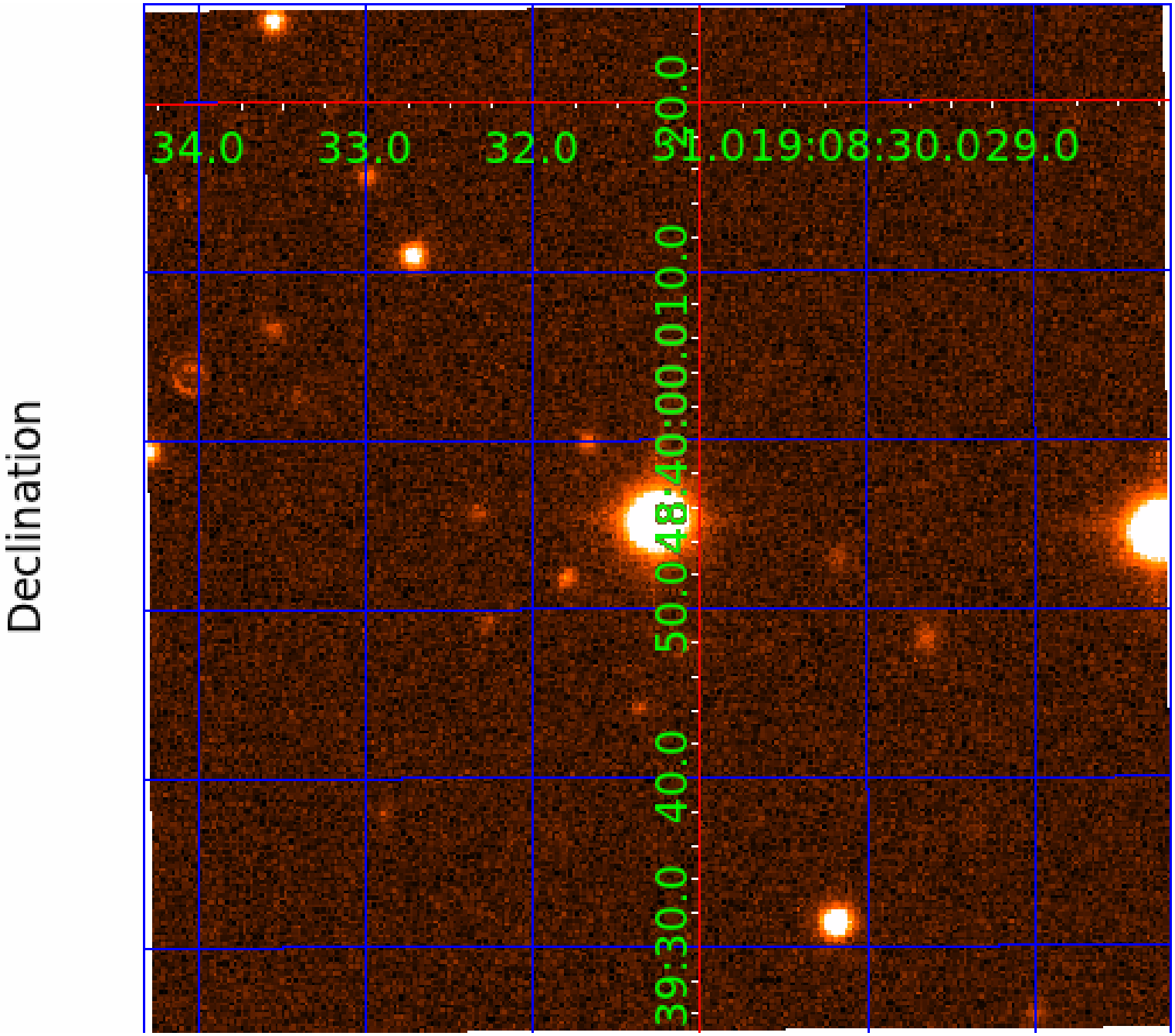
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image


Declination
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50.0
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10.0
20.0
34.0
33.0
32.0
31.0
19:08:30.0
29.0

KIC 011075429

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 ($S_\oplus$)
011075429-01	OBS	2198.01	23.920989	139.076752	154.5	4.970	14.5	16.3	1.97	7121	2.78	256.23
011075429-02	OBS	No	2.970207	133.255025	22.8	14.079	7.7	6.6	1.97	7121	1.85	4136.32
011075429-03	OBS	No	232.879284	220.802473	204.2	14.518	11.2	8.6	1.97	7121	3.11	12.33
011075429-05	OBS	No	113.483857	243.296868	142.3	16.305	8.7	6.8	1.97	7121	2.62	32.14
011075429-06	OBS	No	134.928395	201.311999	201.5	6.788	7.9	7.4	1.97	7121	3.20	25.52
011075429-07	OBS	No	118.726252	217.971834	152.6	5.625	8.4	9.4	1.97	7121	2.86	30.27
011075429-08	OBS	No	93.222487	139.641842	146.1	7.395	7.5	7.5	1.97	7121	2.71	41.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011075429-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
011075429-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011075429-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
011075429-07	OBS	FP	0.02	1	0	0	0	MOD_NONUNIQ_ALT—CENT_FEW_MEAS
011075429-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

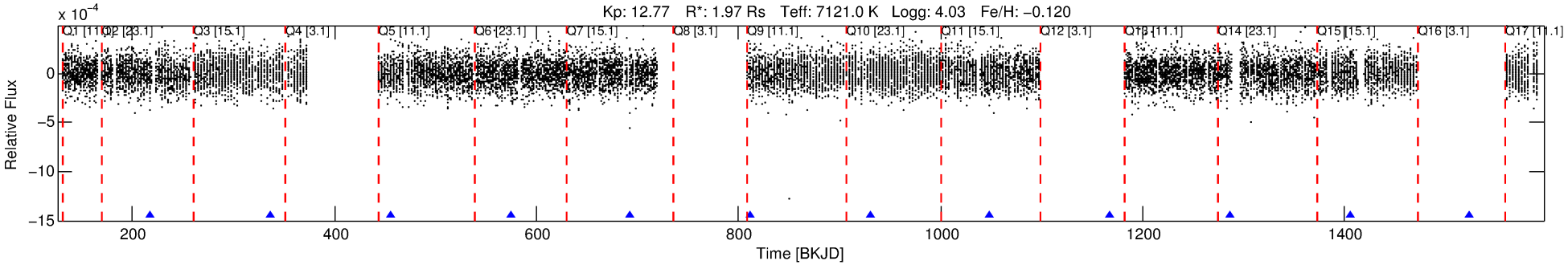
Ephemeris Match Information For 011075429-07

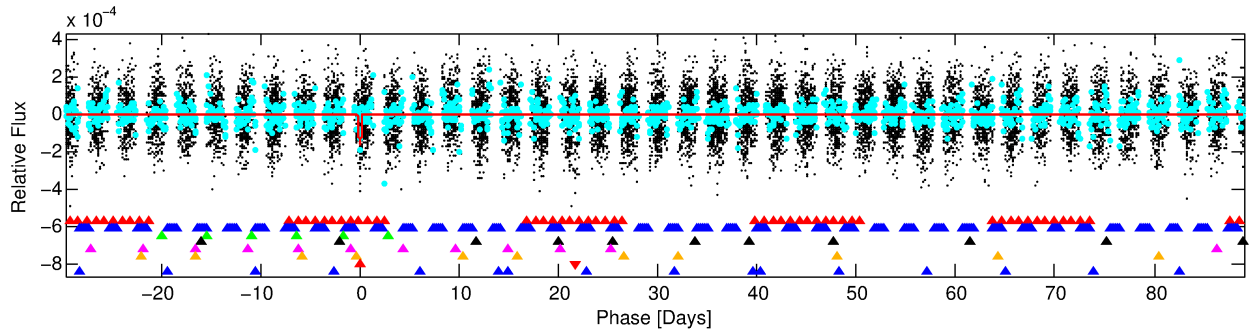
No Significant Match Found

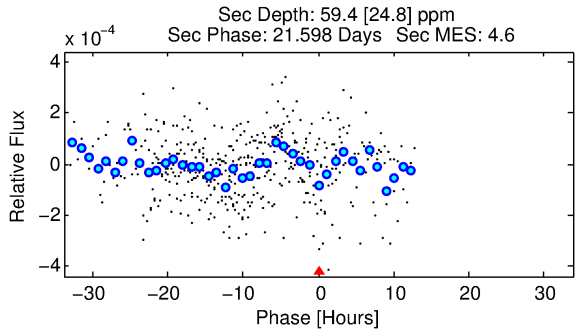
DV One-Page Summary

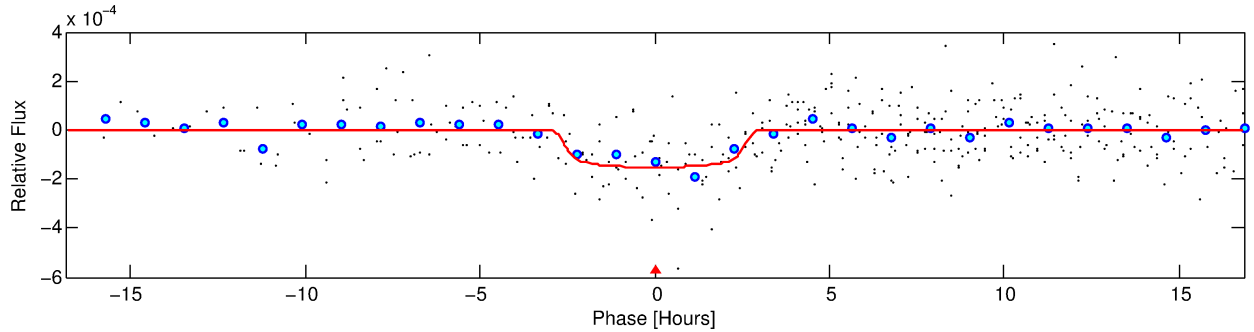
KIC: 11075429 Candidate: 7 of 8 Period: 118.726 d
KOI: K02198 Corr: No Ephemeris Match

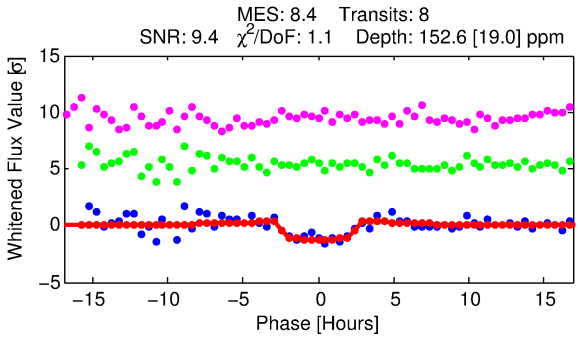
Kp: 12.77 R*: 1.97 Rs Teff: 7121.0 K Logg: 4.03 Fe/H: −0.120

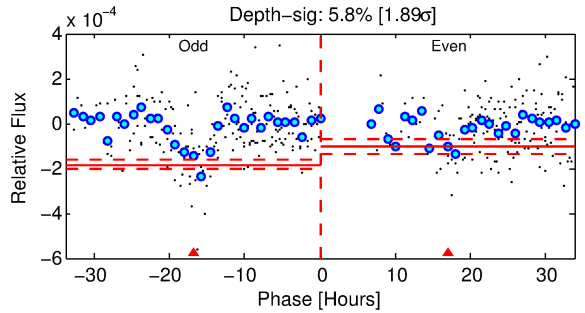


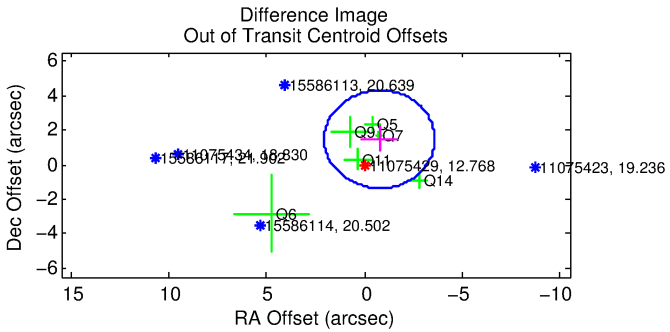












DV Fit Results:

Period = 118.72625 [0.00209] d
Epoch = 217.9718 [0.0089] BKJD
Rp/R* = 0.0133 [0.0029]
a/R* = 70.22 [89.84]
b = 0.91 [0.23]

Seff = 30.26 [11.00]
Teq = 598 [54] K
Rp = 2.86 [0.93] Re
a = 0.5441 [0.1186] AU

Ag = 1182.07 [816.00] [1.45σ]
Teffp = 5422 [839] K [5.74σ]

DV Diagnostic Results:

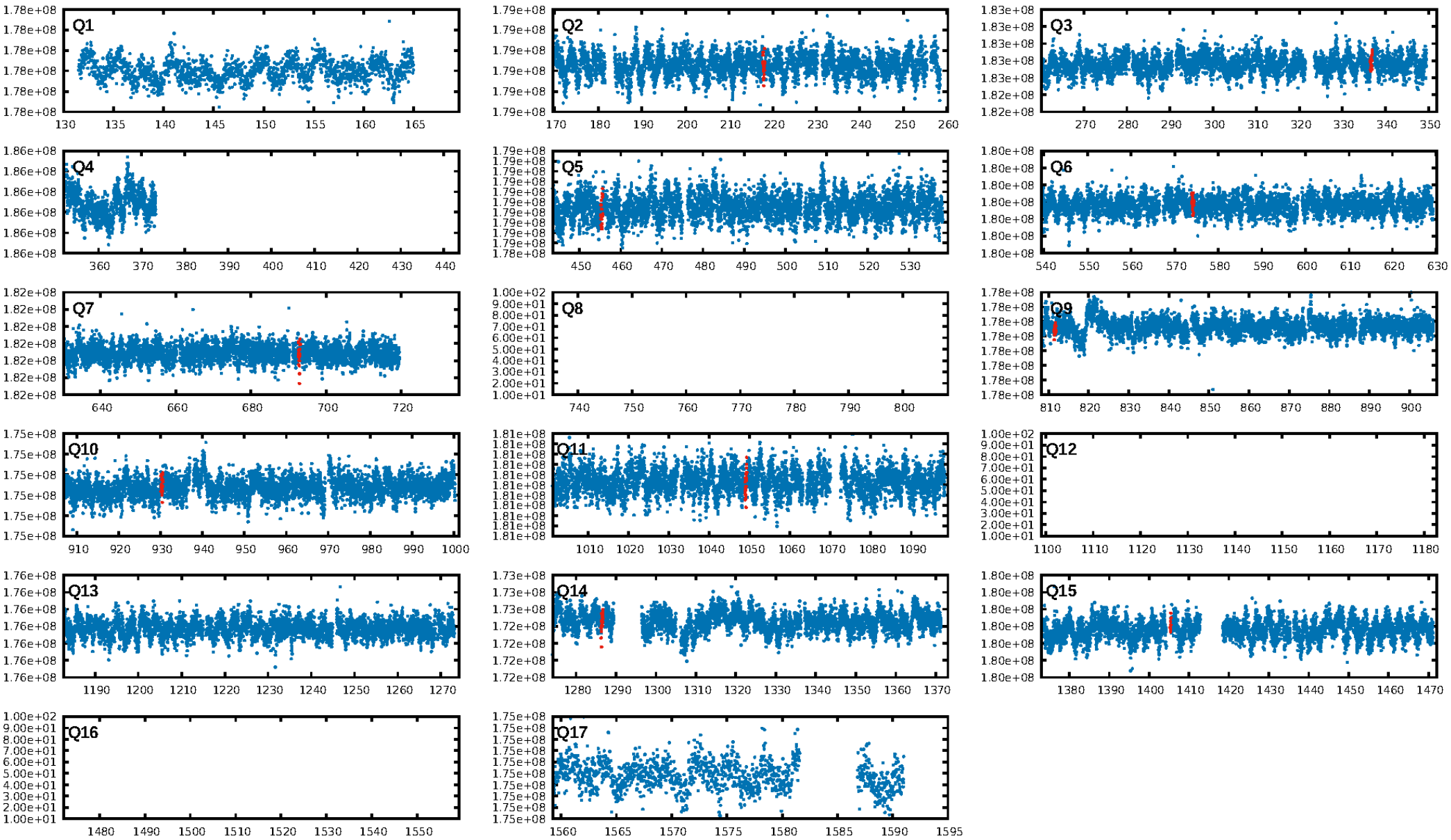
ShortPeriod−sig: 100.0% [7.29σ]
LongPeriod−sig: 100.0% [50.36σ]
ModelChiSquare2−sig: 5.0%
ModelChiSquareGof−sig: 99.9%
Bootstrap−pfa: 2.01e−09
RollingBand−fgt: 1.00 [8/8]
GhostDiagnostic−chr: 17.01

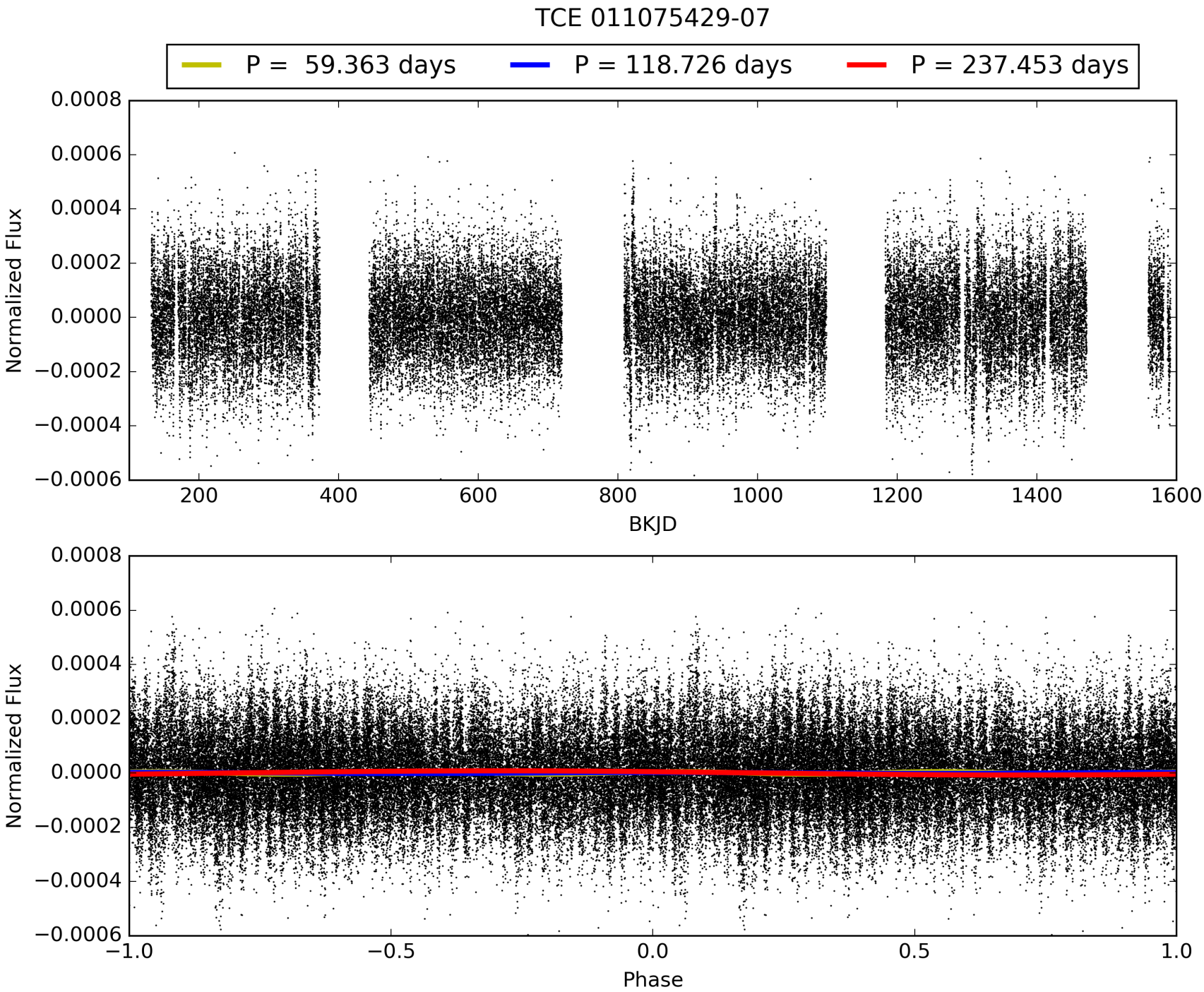
Centroid−sig: 8.3%
Centroid−so: 1.172 arcsec [1.13σ]
OotOffset−rm: 1.651 arcsec [1.75σ]
KicOffset−rm: 1.708 arcsec [1.69σ]
OotOffset−st: 2/2/0/2 [6]
KicOffset−st: 2/2/0/2 [6]
DiffImageQuality−fgm: 0.83 [5/6]
DiffImageOverlap−fno: 0.88 [7/8]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 21:22:15 Z

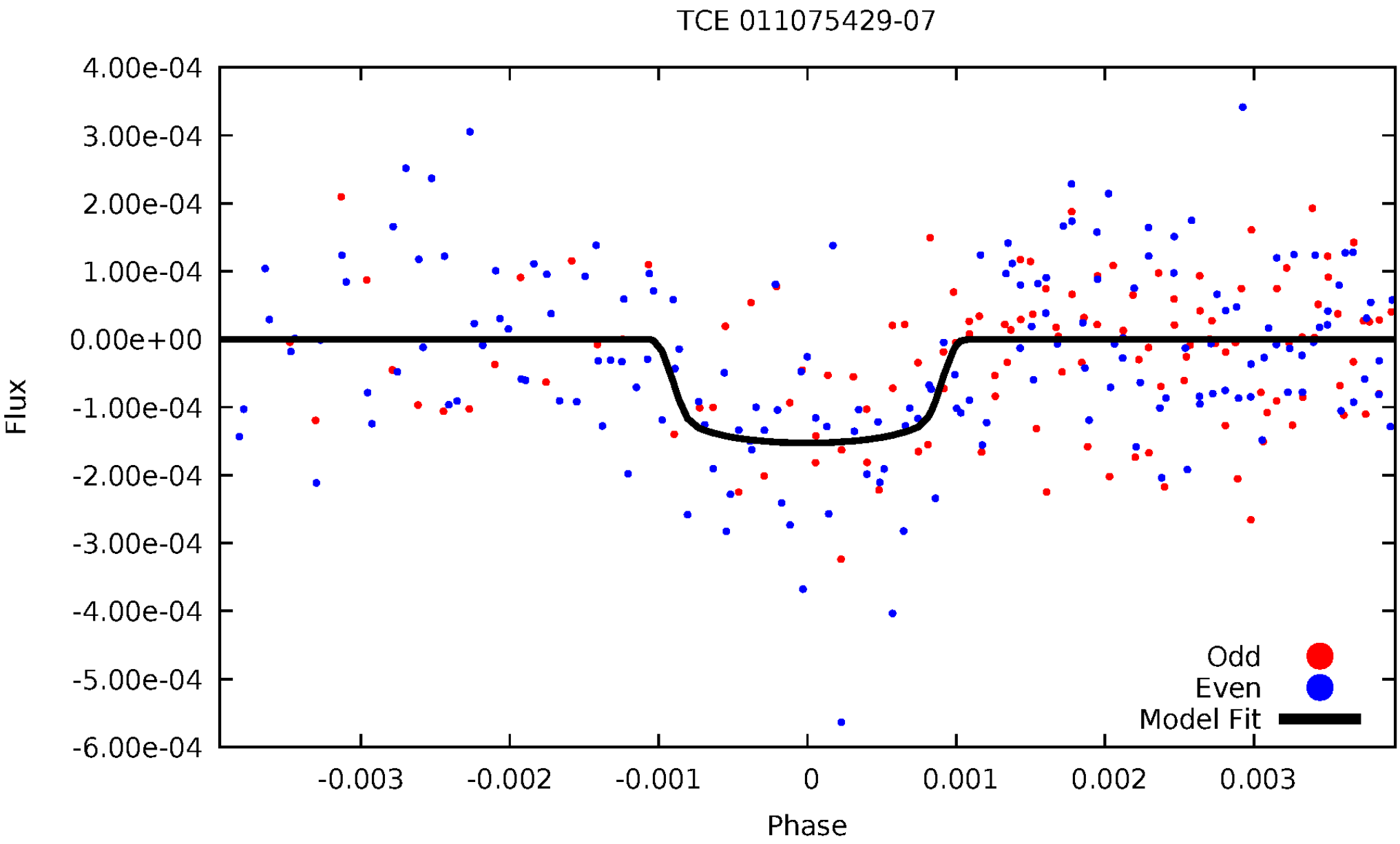
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011075429-07, PDC Light Curves

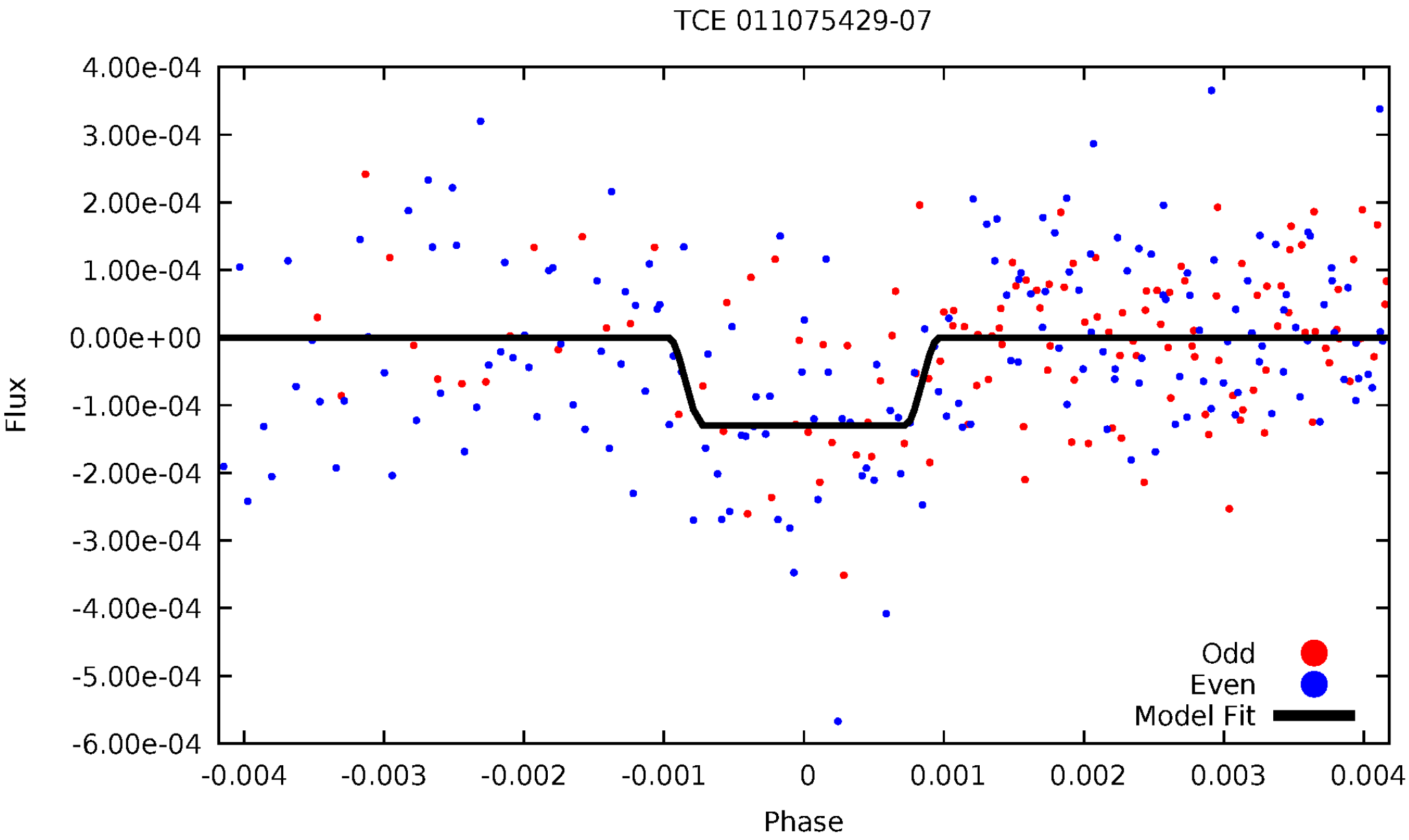



TCE 011075429-07
P = 59.363 days
P = 118.726 days
P = 237.453 days
Normalized Flux
BKJD
Phase

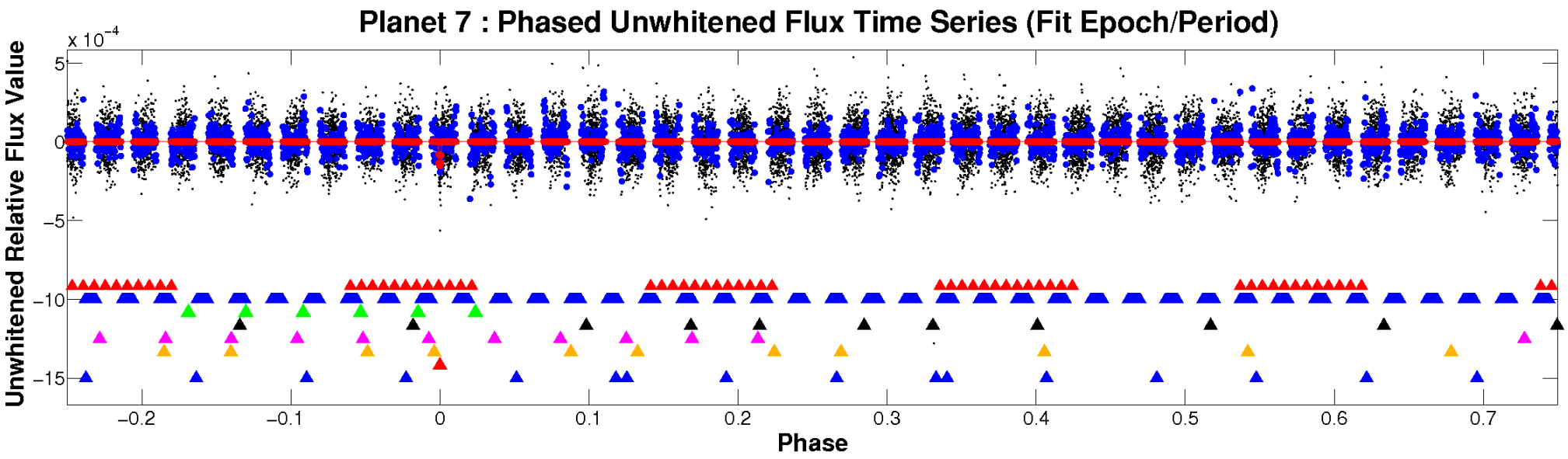
DV Odd/Even

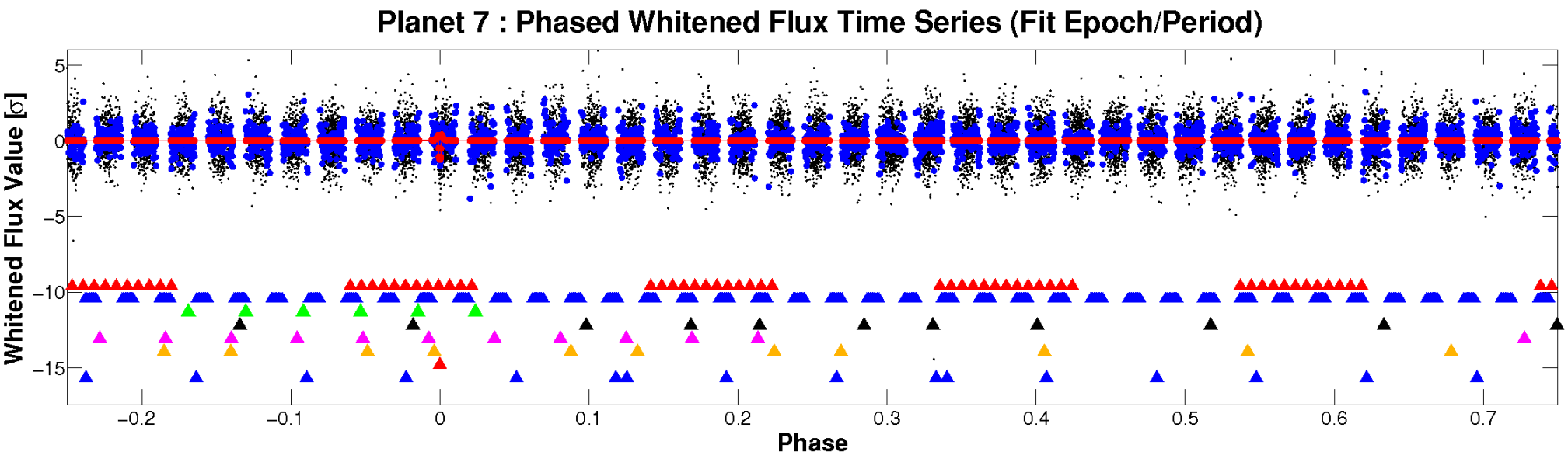

TCE 011075429-07
4.00e-04
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
-5.00e-04
-6.00e-04
Flux
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 011075429-07
4.00e-04
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
-5.00e-04
-6.00e-04
Flux
-0.004
-0.003
-0.002
-0.001
0
0.001
0.002
0.003
0.004
Phase
Odd
Even
Model Fit

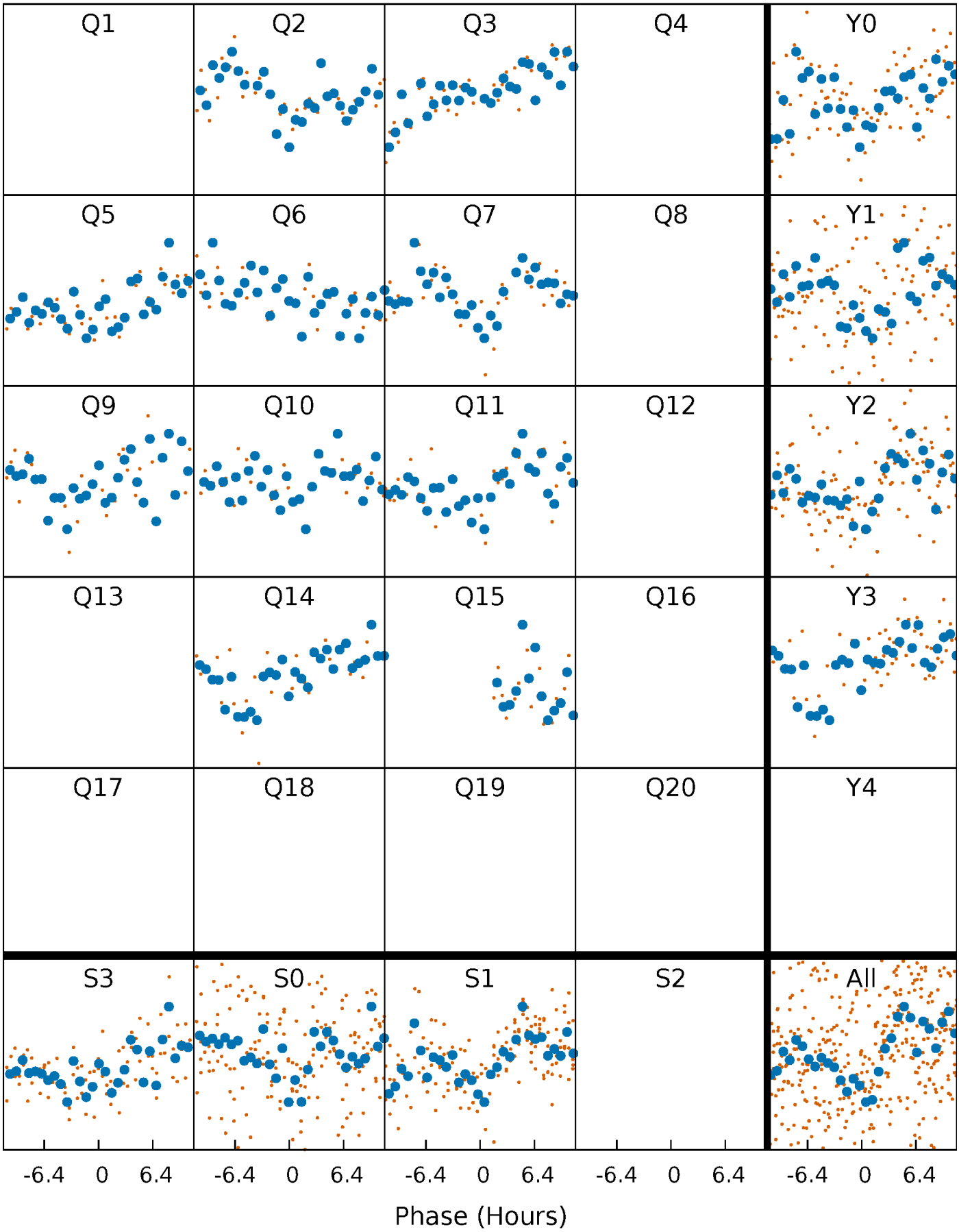
Non-Whitened Vs. Whitened Light Curve





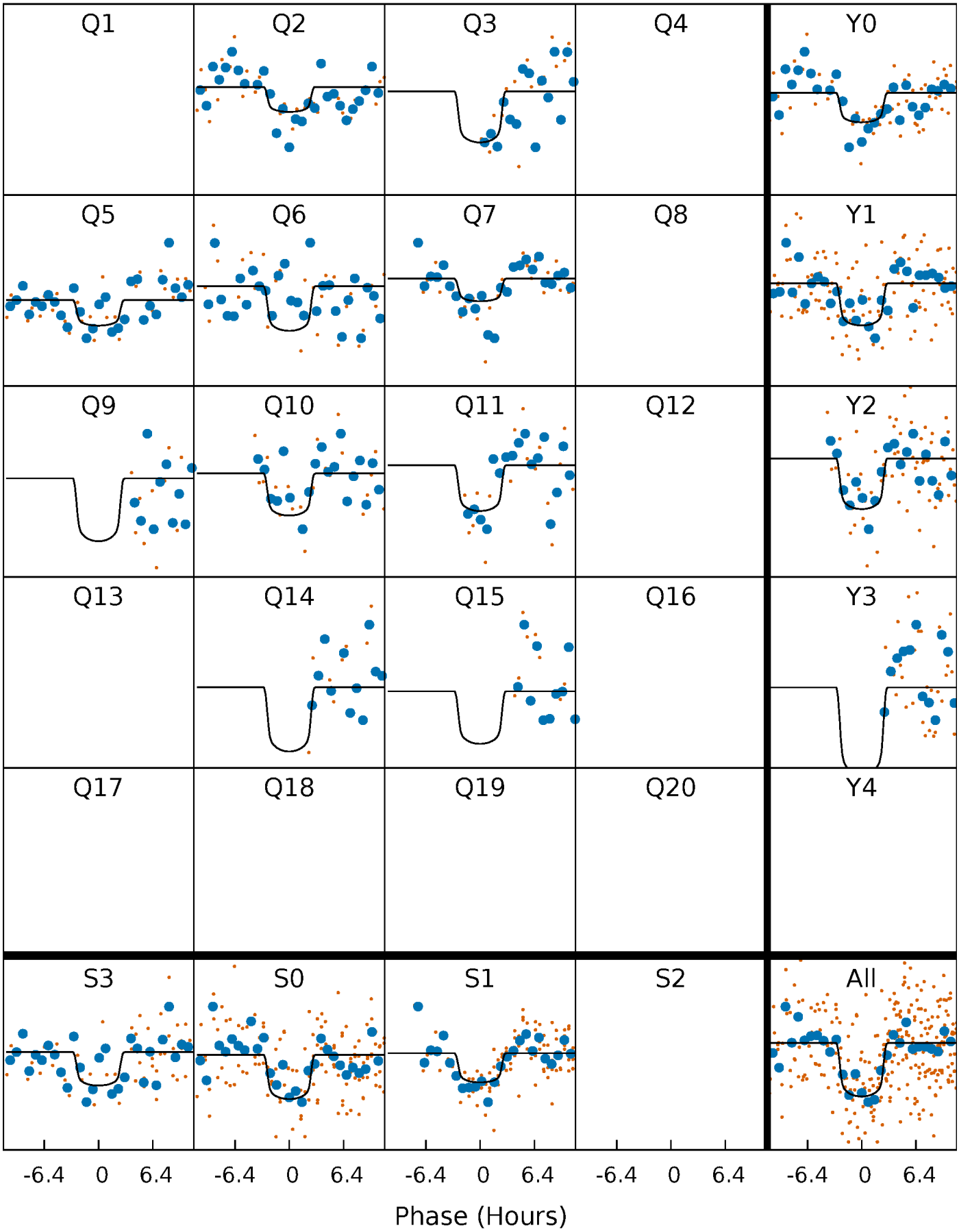
PDC Quarter-Phased Transit Curves

TCE 011075429-07 P=118.726252 Days T_0=217.971834 (BKJD)



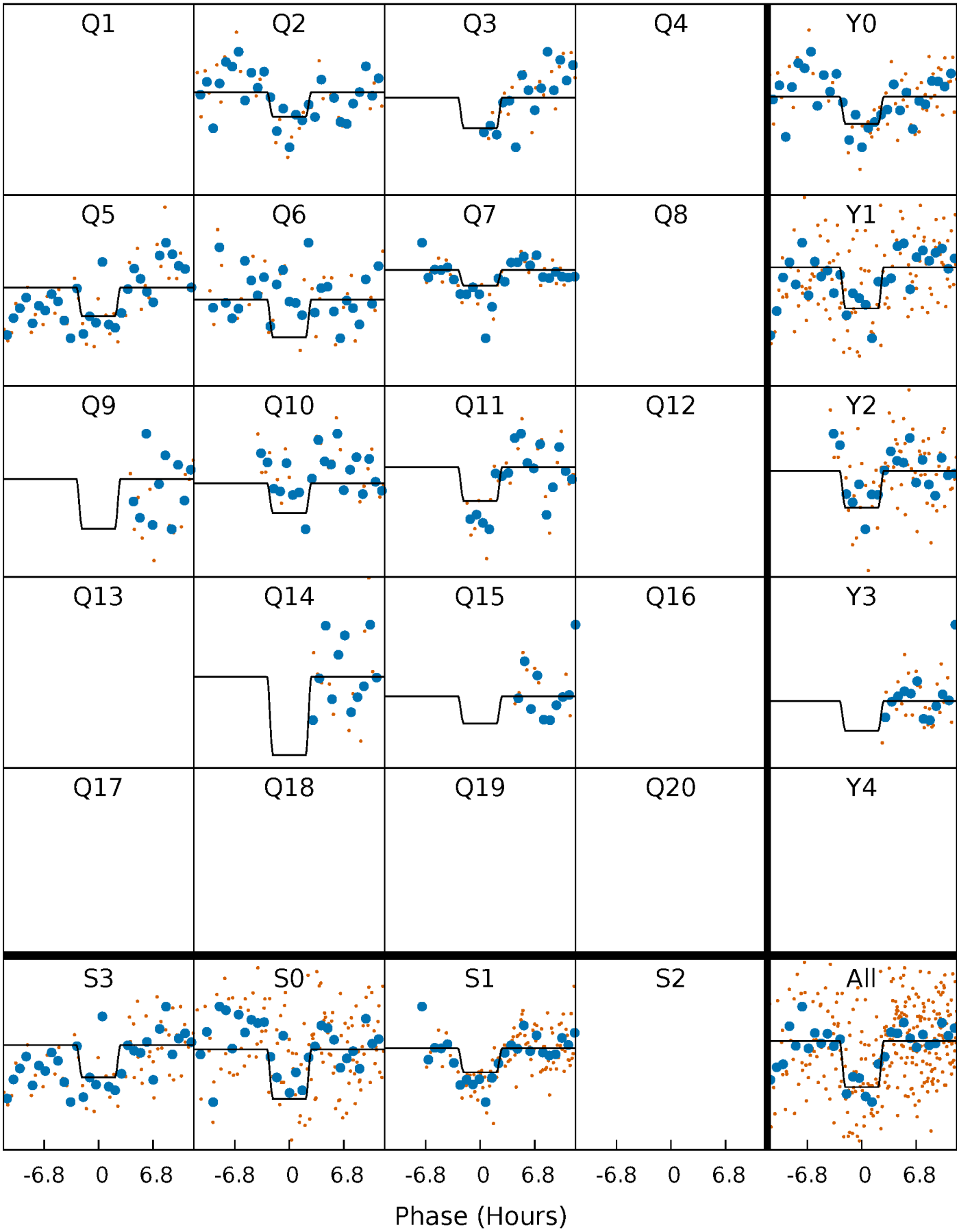
DV Quarter-Phased Transit Curves

TCE 011075429-07 P=118.726252 Days T_0=217.971834 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

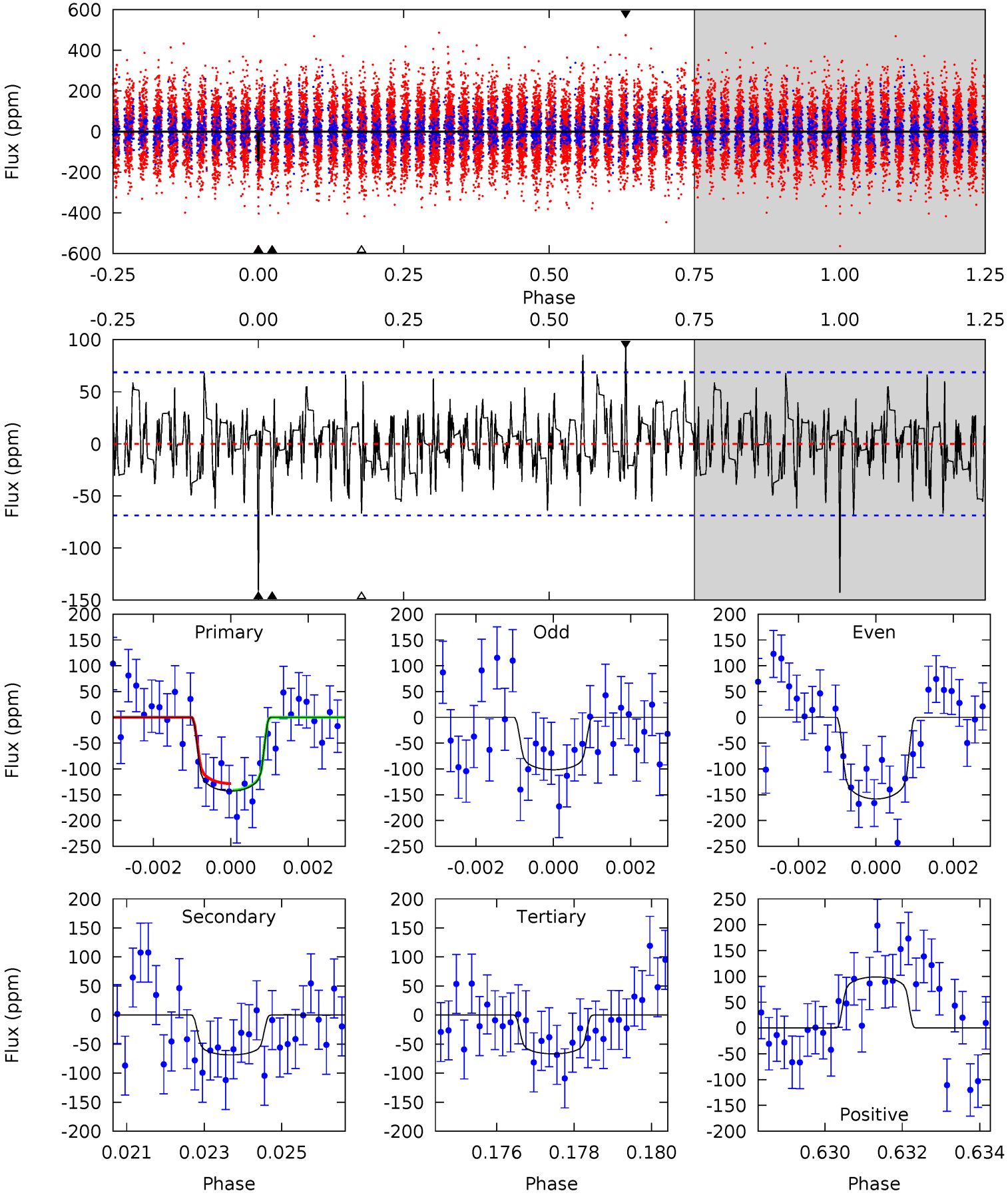
TCE 011075429-07 P=118.724540 Days T_0=217.976795 (BKJD)



DV Model-Shift Uniqueness Test

011075429-07, P = 118.726252 Days, E = 99.245582 Days

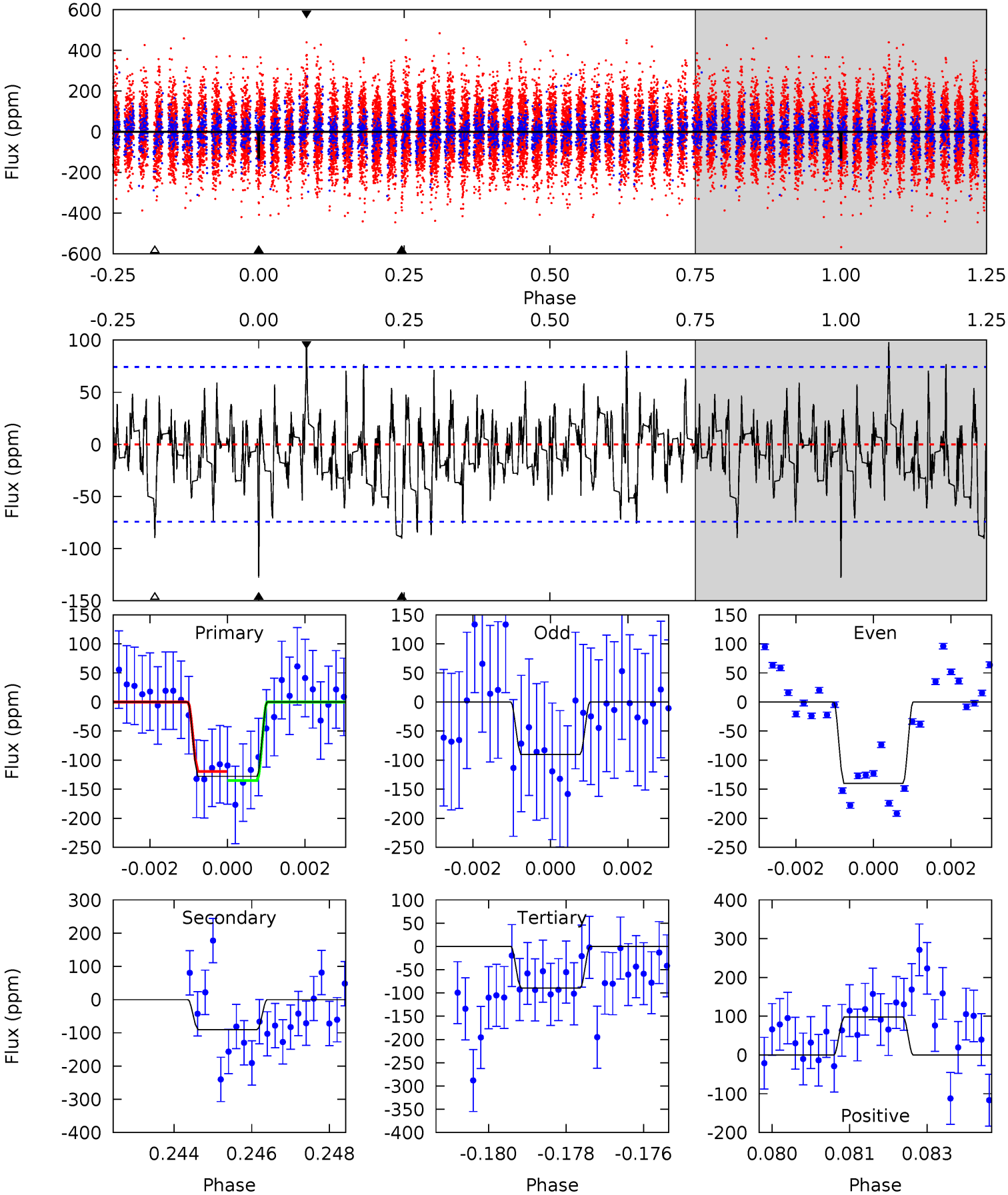
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	5.31	5.17	7.66	5.32	3.08	1.75	5.89	3.40	0.14	-2.35	2.13	0.99	0.41	0.51



Alt Model-Shift Uniqueness Test

011075429-07, P = 118.724540 Days, E = 99.252255 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.19	6.50	6.44	7.03	5.34	3.11	1.86	2.75	2.16	0.05	-0.53	1.76	0.88	0.43	0.56



Stellar Parameters For KIC 011075429

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	M($M_\odot$)	$p_\star$ (g·cm^{-3})
	7121^{+199}_{-249}	$4.031^{+0.192}_{-0.128}$	$-0.120^{+0.250}_{-0.350}$	$1.972^{+0.427}_{-0.475}$	$1.521^{+0.171}_{-0.278}$	$0.279^{+0.302}_{-0.109}$
	+3%/-3%	+5%/-3%	+208%/-292%	+22%/-24%	+11%/-18%	+108%/-39%
Source	PHO1	FLK73	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 011075429-07 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-69±13	$2.81^{+0.79}_{-0.71}$	832^{+58}_{-59}	5559^{+782}_{-527}	1377^{+1151}_{-563}
Alt.	-90±14	$2.41^{+0.69}_{-0.69}$	826^{+56}_{-53}	6377^{+1151}_{-681}	2468^{+2298}_{-1009}

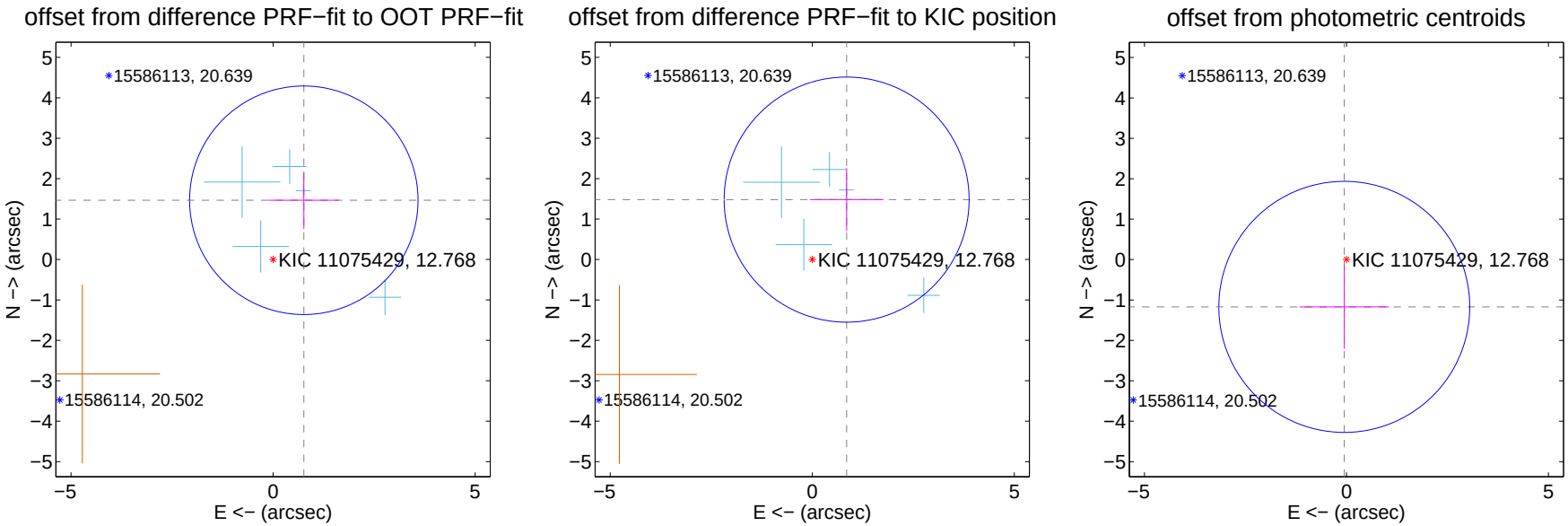
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

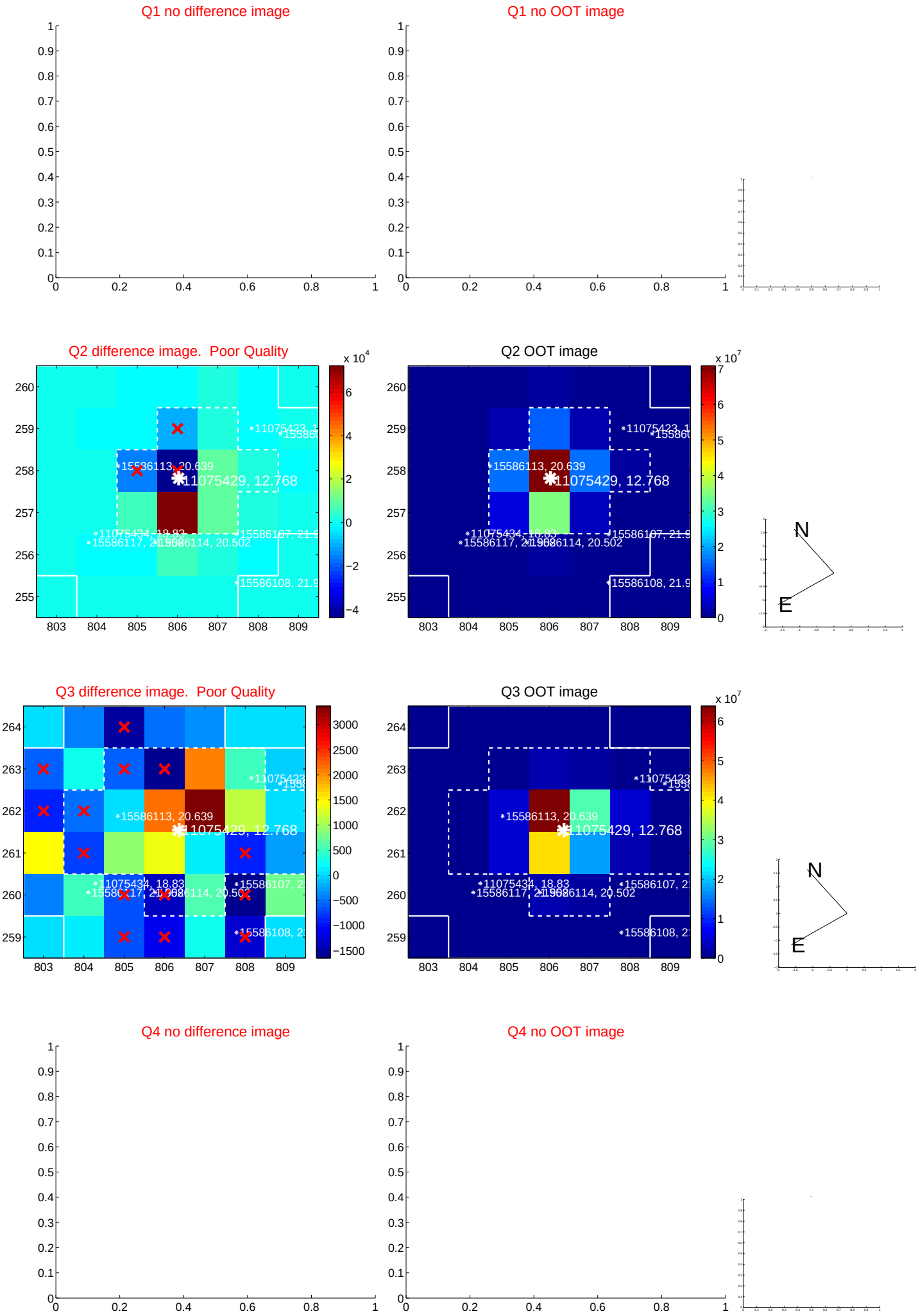
Supplemental centroid analysis for 011075429-07. Kepler magnitude: 12.77. Transit SNR 9.41
There are 5 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.651 ± 0.942	1.75	-0.760 ± 0.872	1.465 ± 0.707
PRF-fit source offset from KIC position	1.708 ± 1.011	1.69	-0.850 ± 0.911	1.481 ± 0.780
photometric centroid source offset	1.17 ± 1.04	1.13	0.05 ± 1.11	-1.17 ± 1.04

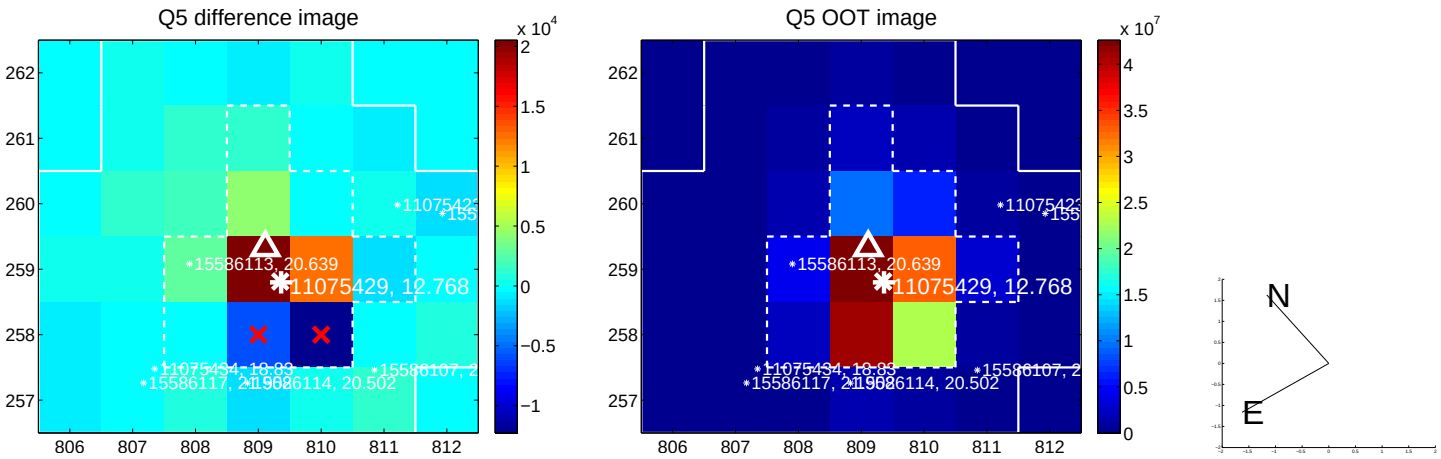


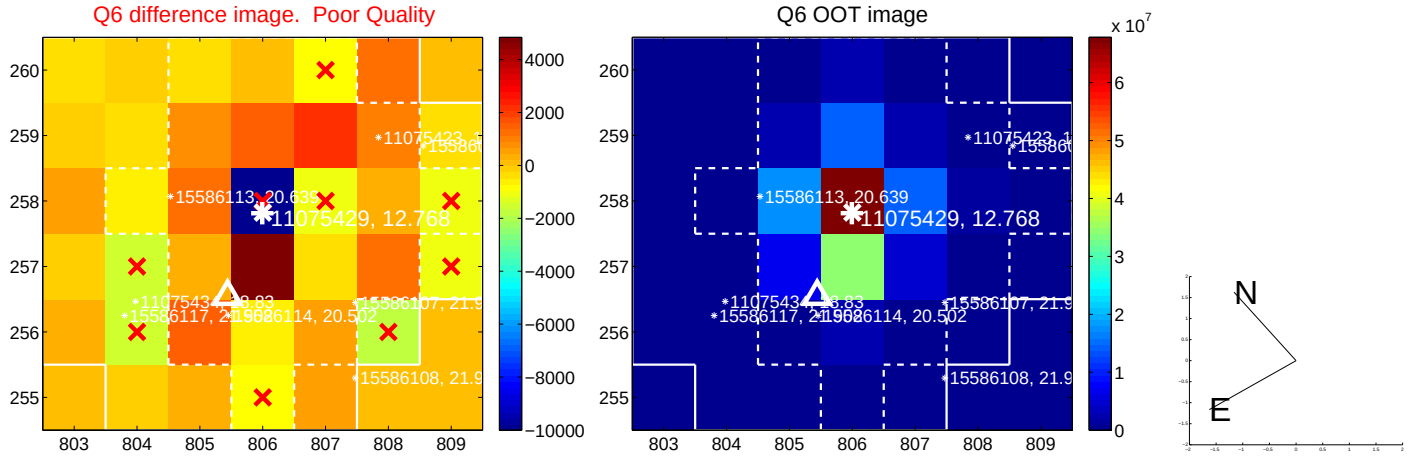
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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

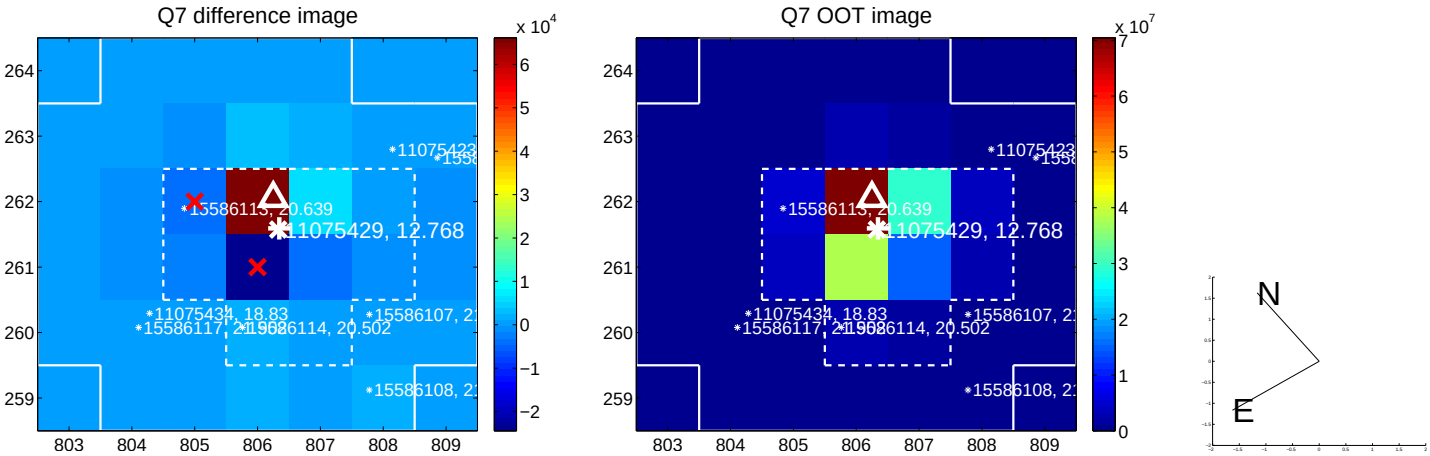
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

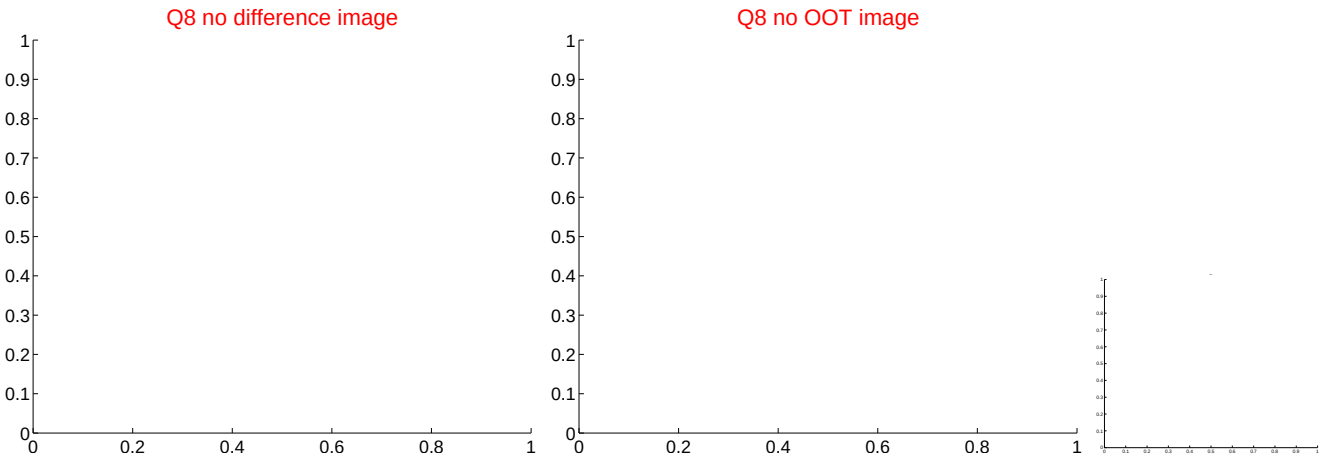


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

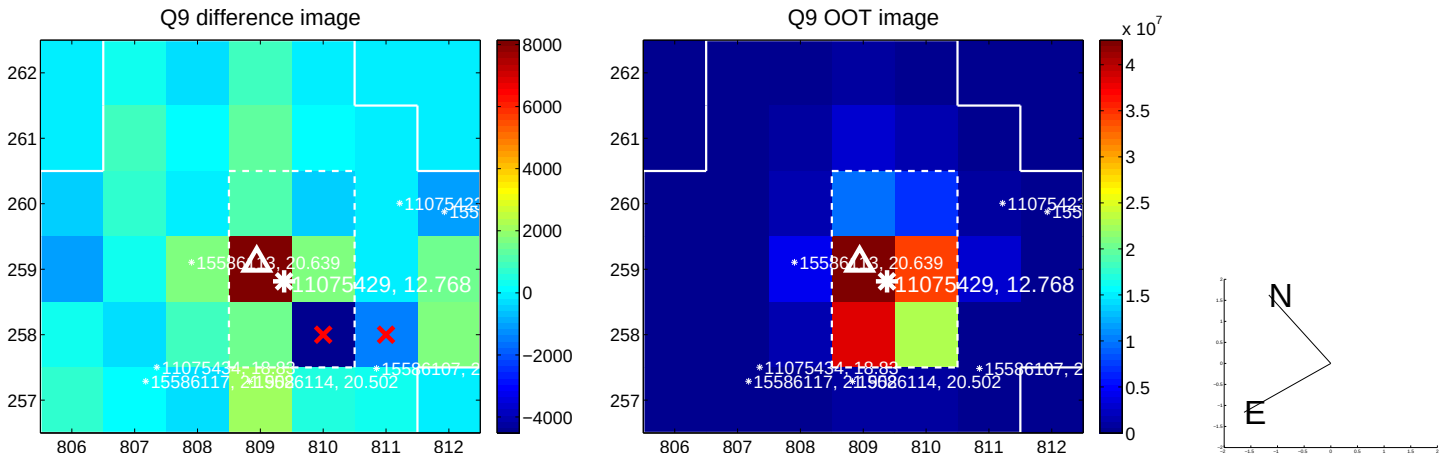


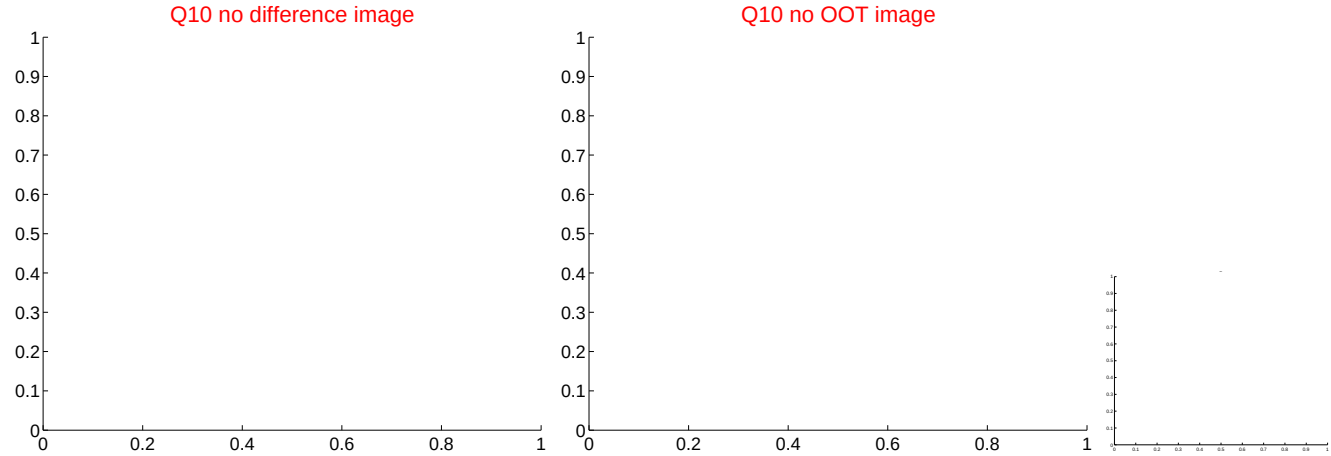


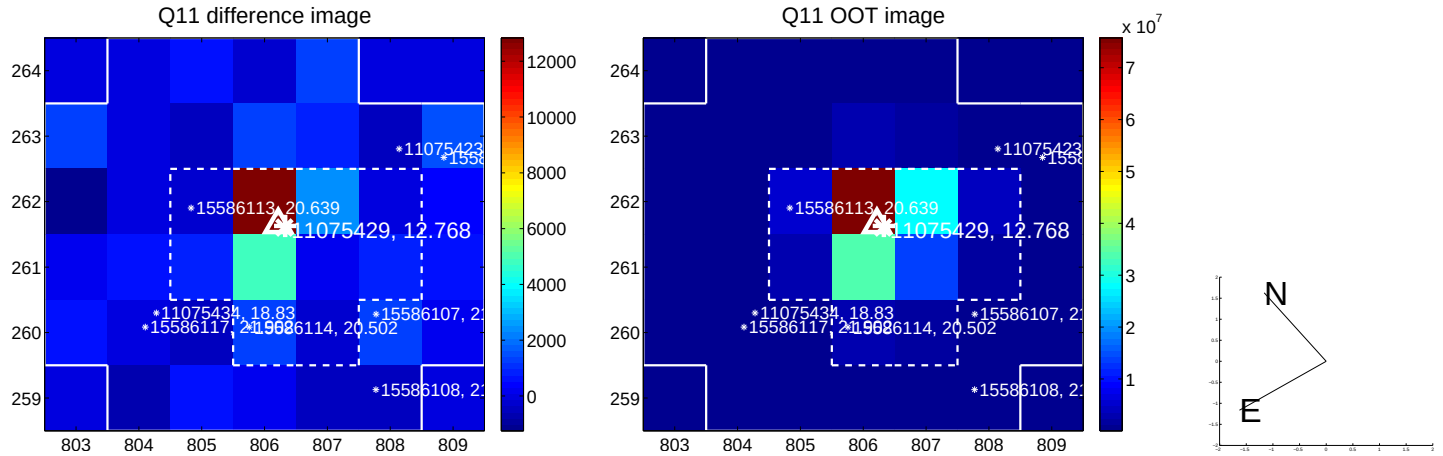


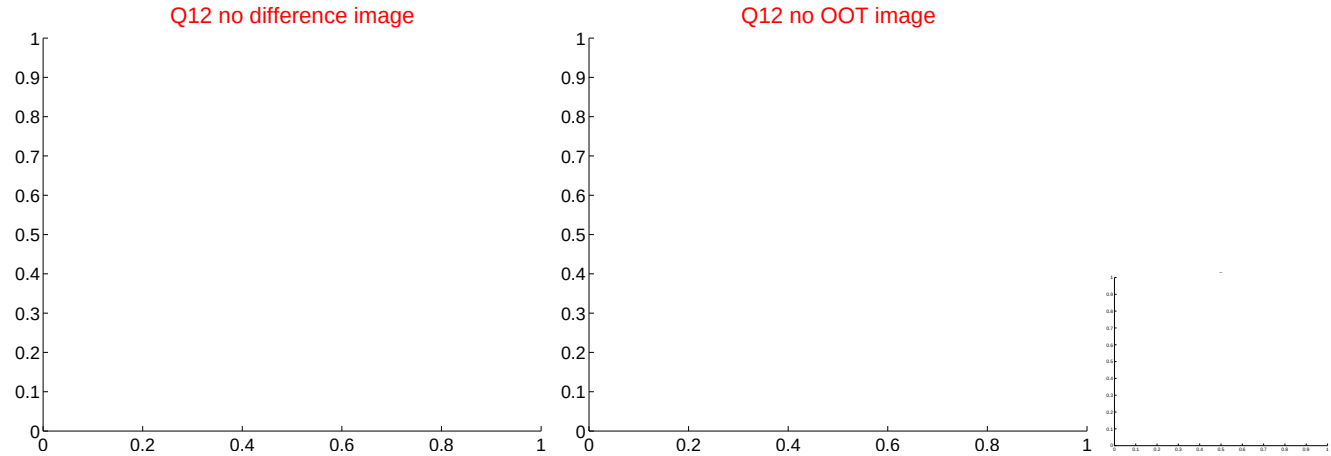


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

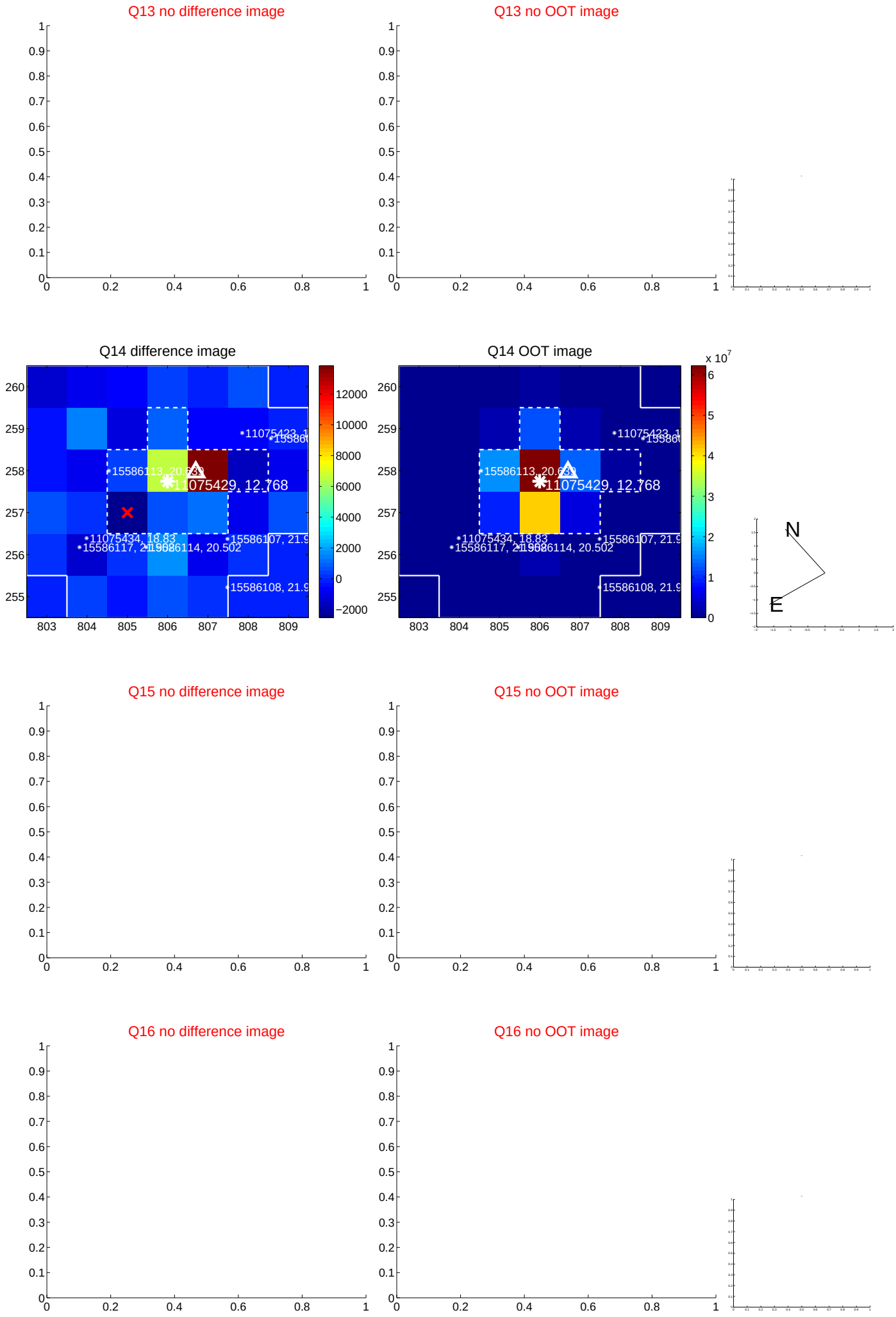




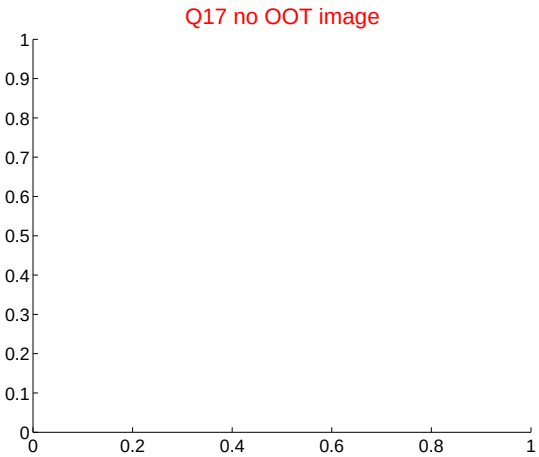


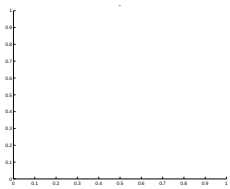


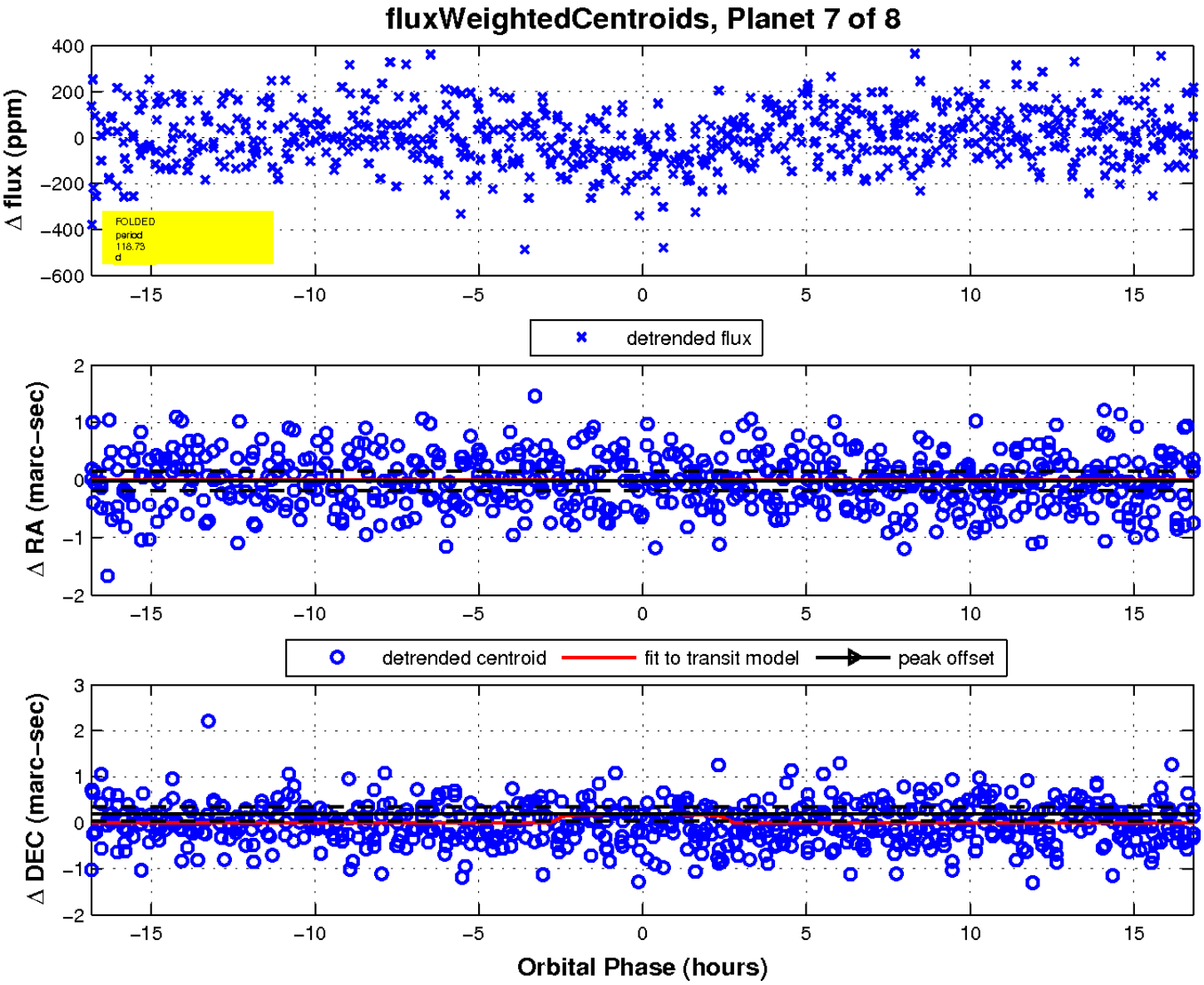
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



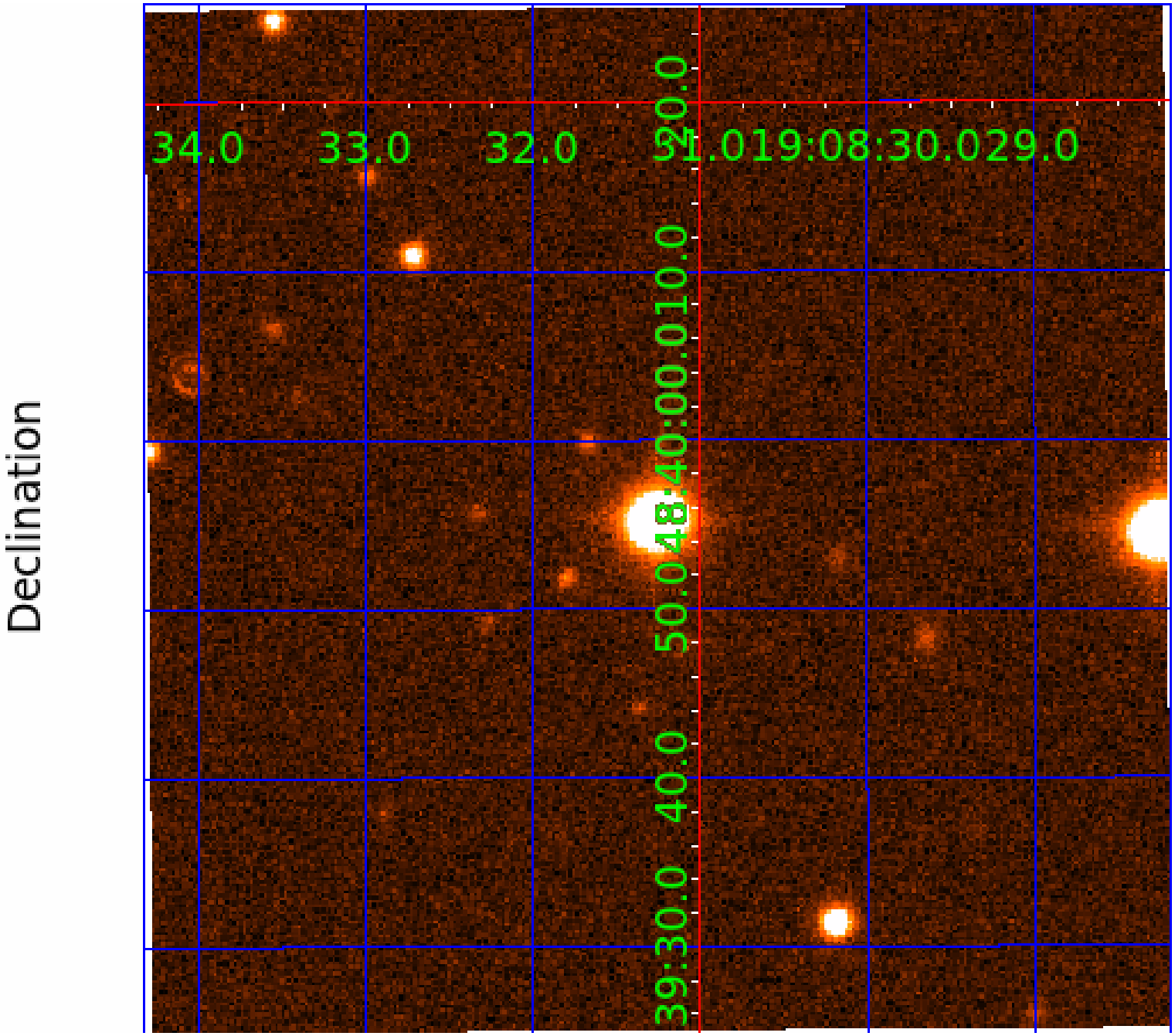
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.







UKIRT Image


Declination
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40.0
50.0
48:40:00.0
10.0
20.0
34.0
33.0
32.0
31.0
19:08:30.0
29.0

KIC 011075429

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 ($S_\oplus$)
011075429-01	OBS	2198.01	23.920989	139.076752	154.5	4.970	14.5	16.3	1.97	7121	2.78	256.23
011075429-02	OBS	No	2.970207	133.255025	22.8	14.079	7.7	6.6	1.97	7121	1.85	4136.32
011075429-03	OBS	No	232.879284	220.802473	204.2	14.518	11.2	8.6	1.97	7121	3.11	12.33
011075429-05	OBS	No	113.483857	243.296868	142.3	16.305	8.7	6.8	1.97	7121	2.62	32.14
011075429-06	OBS	No	134.928395	201.311999	201.5	6.788	7.9	7.4	1.97	7121	3.20	25.52
011075429-07	OBS	No	118.726252	217.971834	152.6	5.625	8.4	9.4	1.97	7121	2.86	30.27
011075429-08	OBS	No	93.222487	139.641842	146.1	7.395	7.5	7.5	1.97	7121	2.71	41.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011075429-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
011075429-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
011075429-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011075429-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
011075429-07	OBS	FP	0.02	1	0	0	0	MOD_NONUNIQ_ALT—CENT_FEW_MEAS
011075429-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

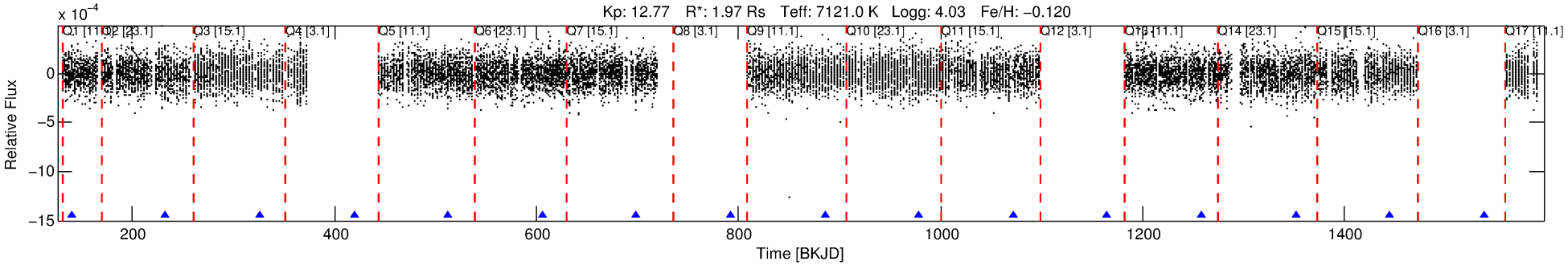
Ephemeris Match Information For 011075429-08

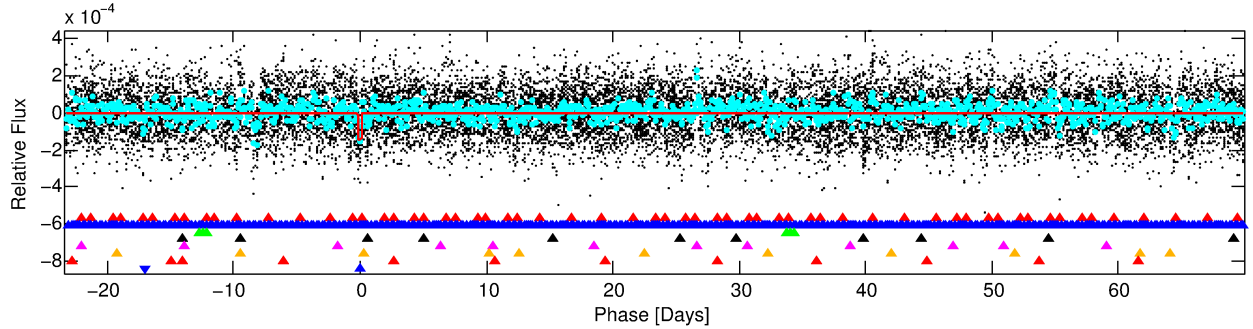
No Significant Match Found

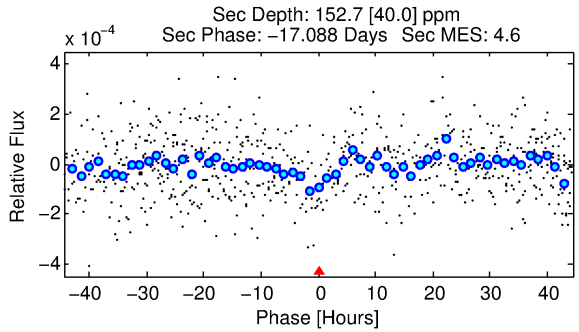
DV One-Page Summary

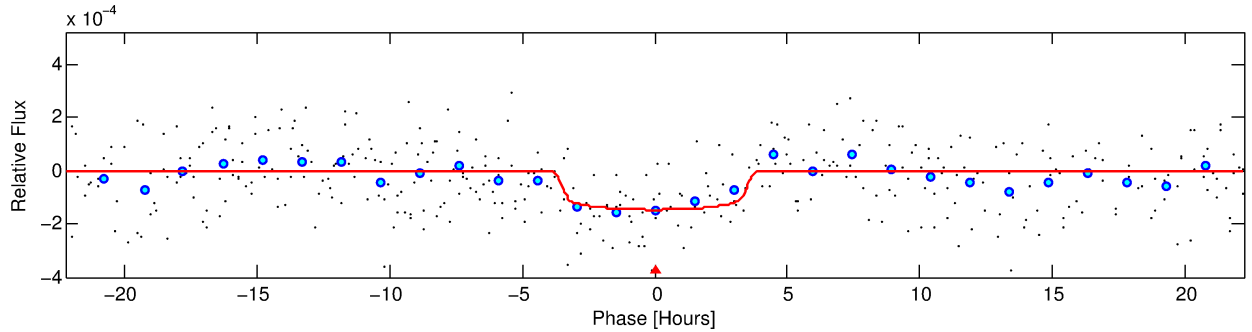
KIC: 11075429 Candidate: 8 of 8 Period: 93.222 d
KOI: K02198 Corr: No Ephemeris Match

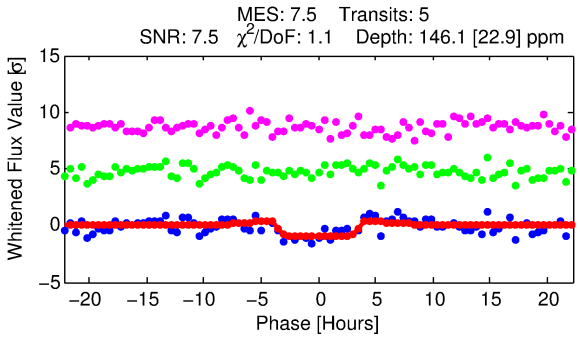
Kp: 12.77 R*: 1.97 Rs Teff: 7121.0 K Logg: 4.03 Fe/H: −0.120

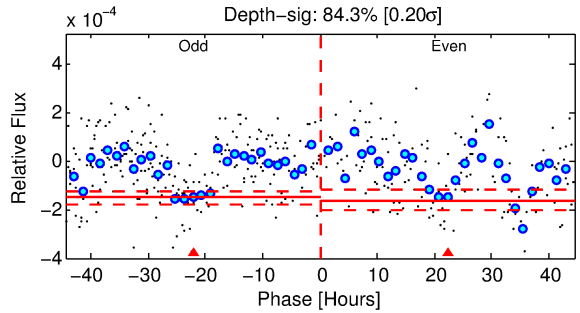


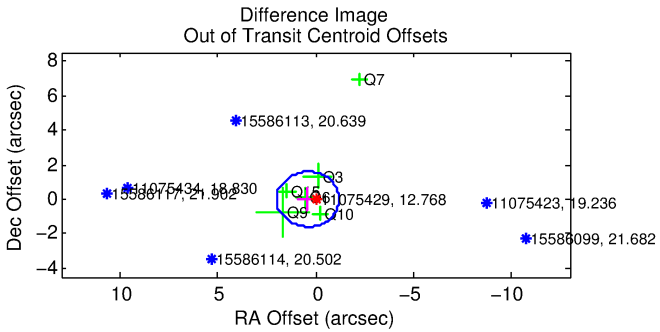












DV Fit Results:

Period = 93.22249 [0.00152] d
Epoch = 139.6418 [0.0148] BKJD
Rp/R* = 0.0126 [0.0047]
a/R* = 50.26 [111.59]
b = 0.87 [0.63]

Seff = 41.78 [15.19]
Teq = 648 [59] K
Rp = 2.71 [1.19] Re
a = 0.4631 [0.1009] AU

Ag = 2454.48 [2093.50] [1.17σ]
Teffp = 7055 [1405] K [4.56σ]

DV Diagnostic Results:

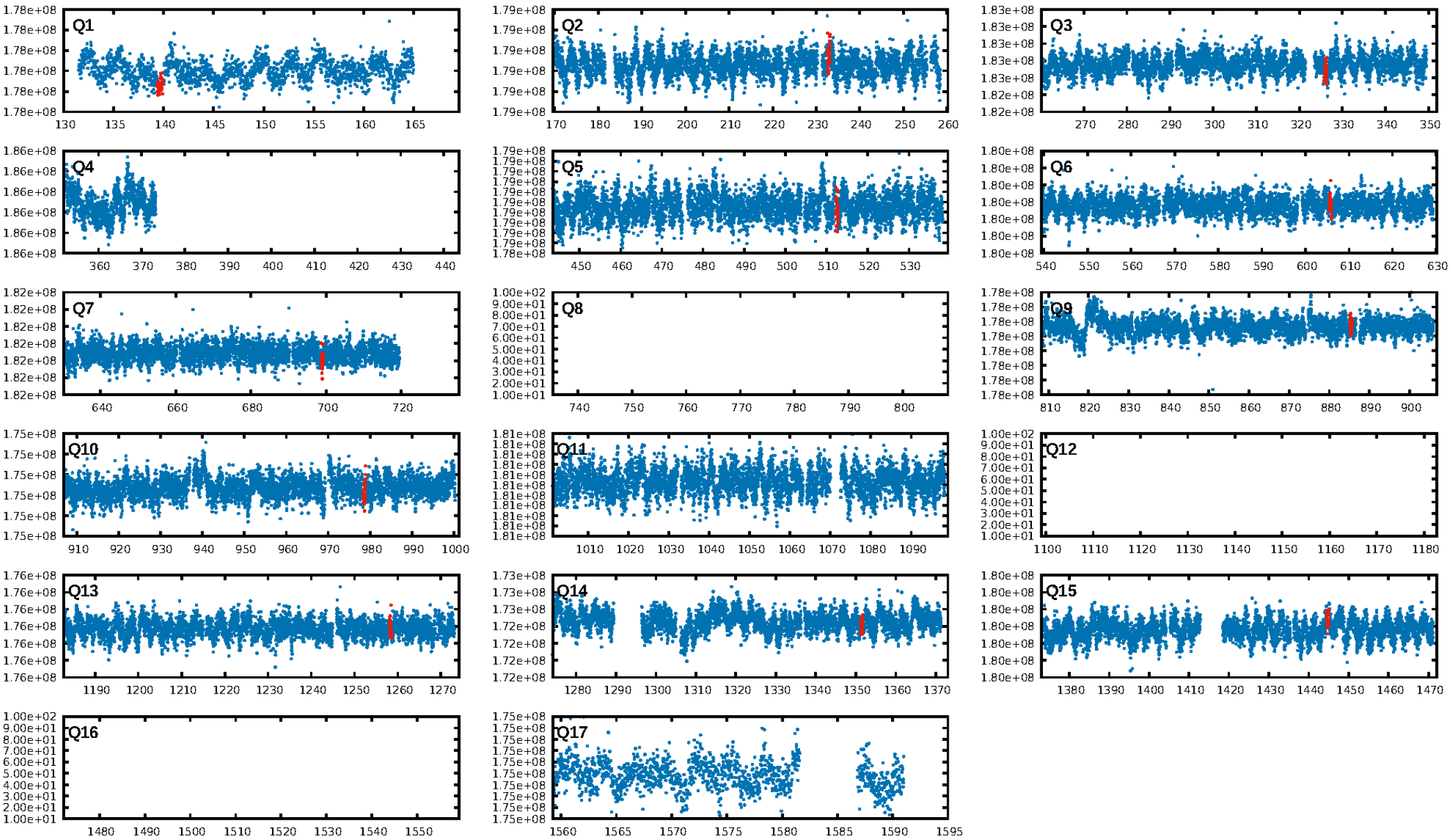
ShortPeriod−sig: 100.0% [186.67σ]
LongPeriod−sig: 100.0% [27.16σ]
ModelChiSquare2−sig: 65.1%
ModelChiSquareGof−sig: 99.9%
Bootstrap−pfa: 7.65e−08
RollingBand−fgt: 1.00 [5/5]
GhostDiagnostic−chr: 5.498

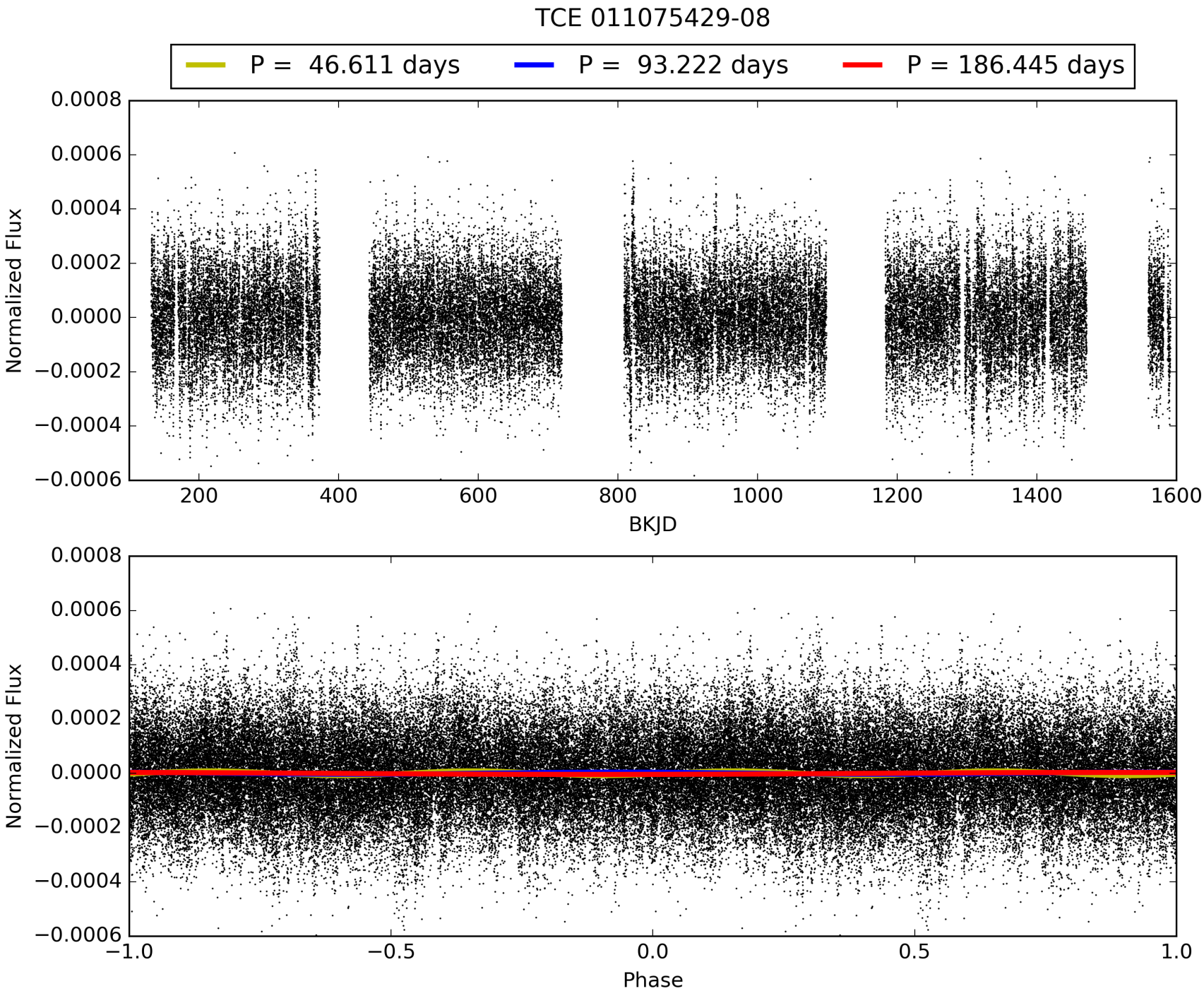
Centroid−sig: 89.9%
Centroid−so: 0.292 arcsec [0.32σ]
OotOffset−rm: 0.403 arcsec [0.76σ]
KicOffset−rm: 0.449 arcsec [0.90σ]
OotOffset−st: 2/3/0/1 [6]
KicOffset−st: 2/3/0/1 [6]
DiffImageQuality−fgm: 0.33 [2/6]
DiffImageOverlap−fno: 0.40 [4/10]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29−Jan−2016 21:22:20 Z

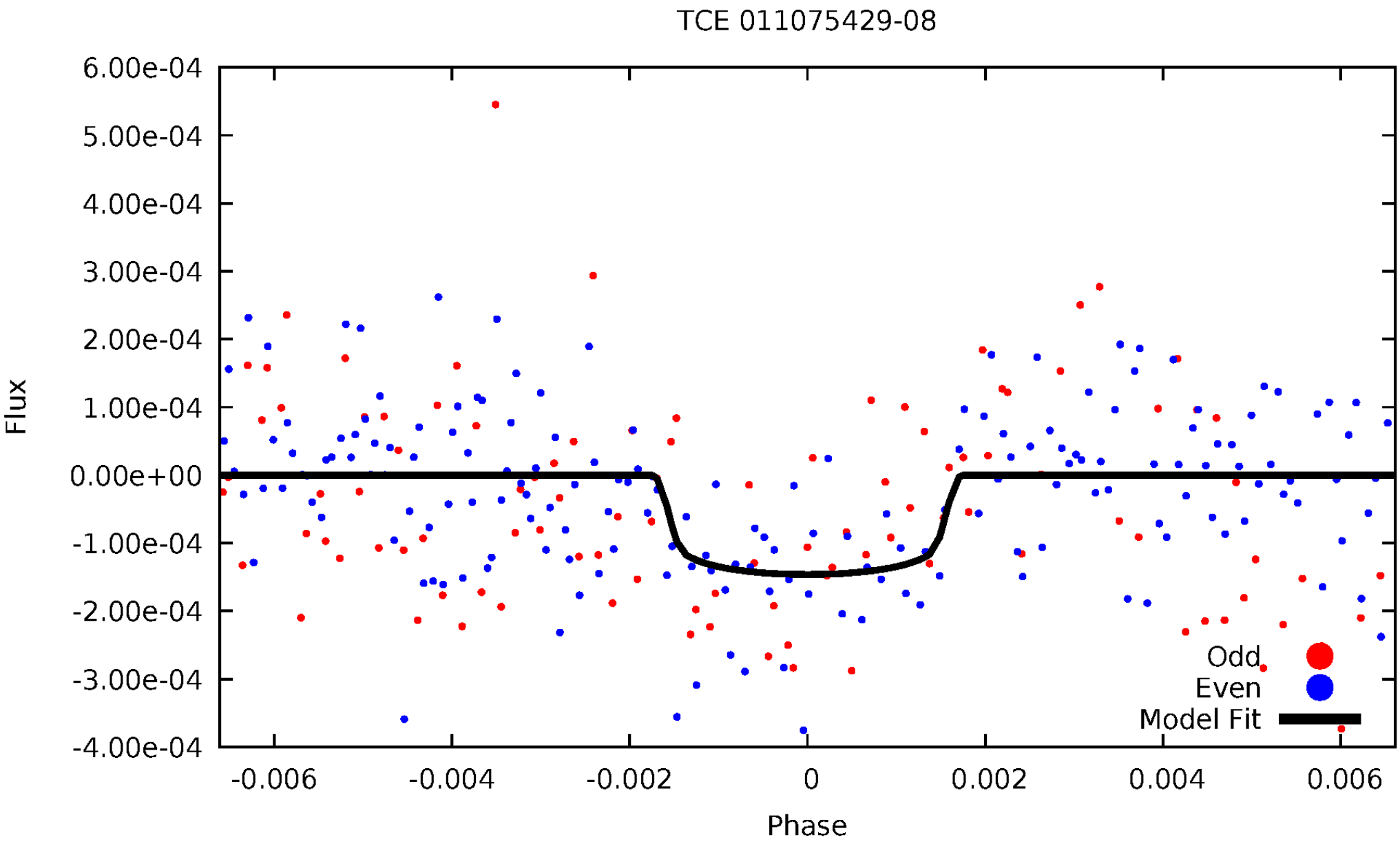
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011075429-08, PDC Light Curves

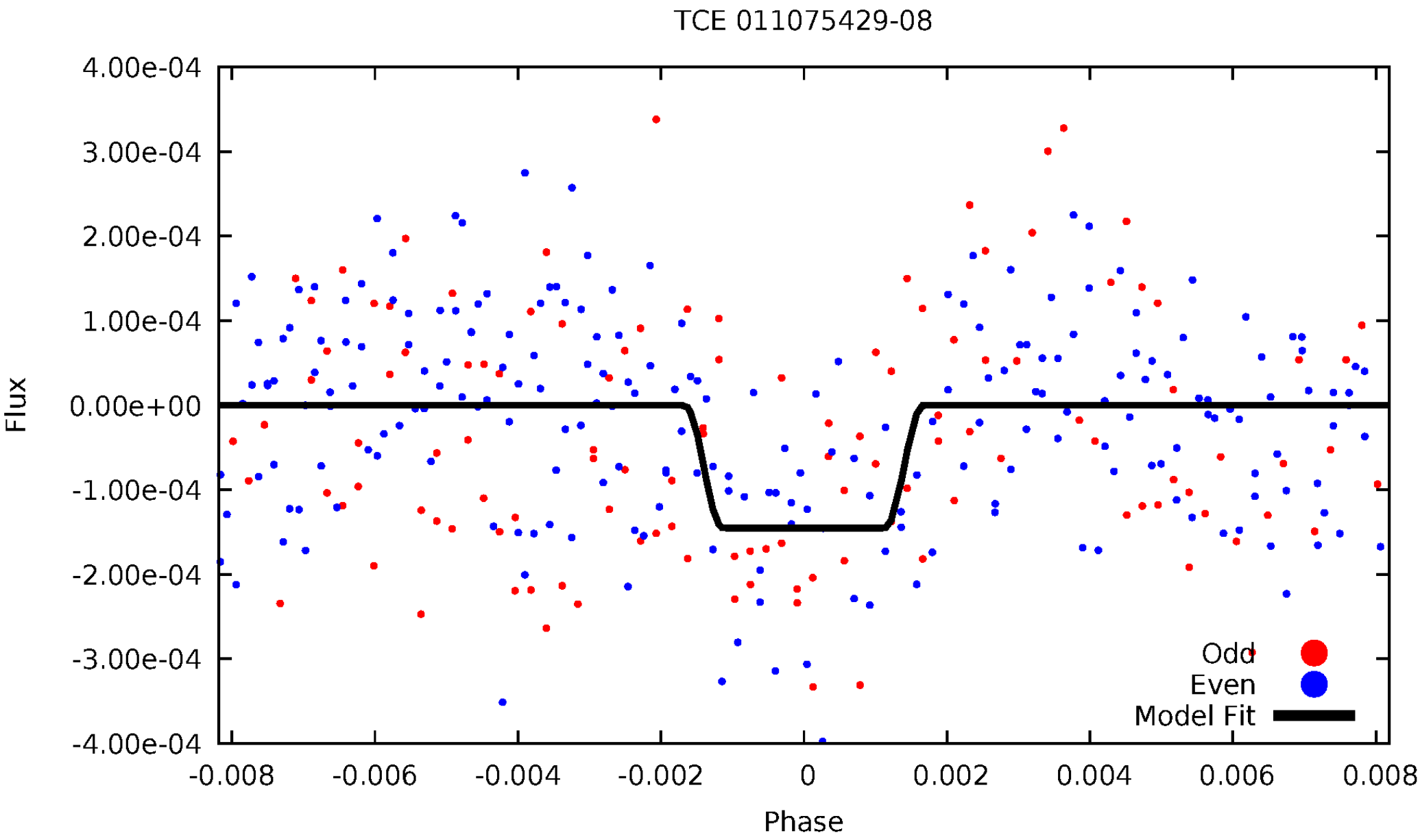



TCE 011075429-08
P = 46.611 days
P = 93.222 days
P = 186.445 days
Normalized Flux
BKJD
Normalized Flux
Phase

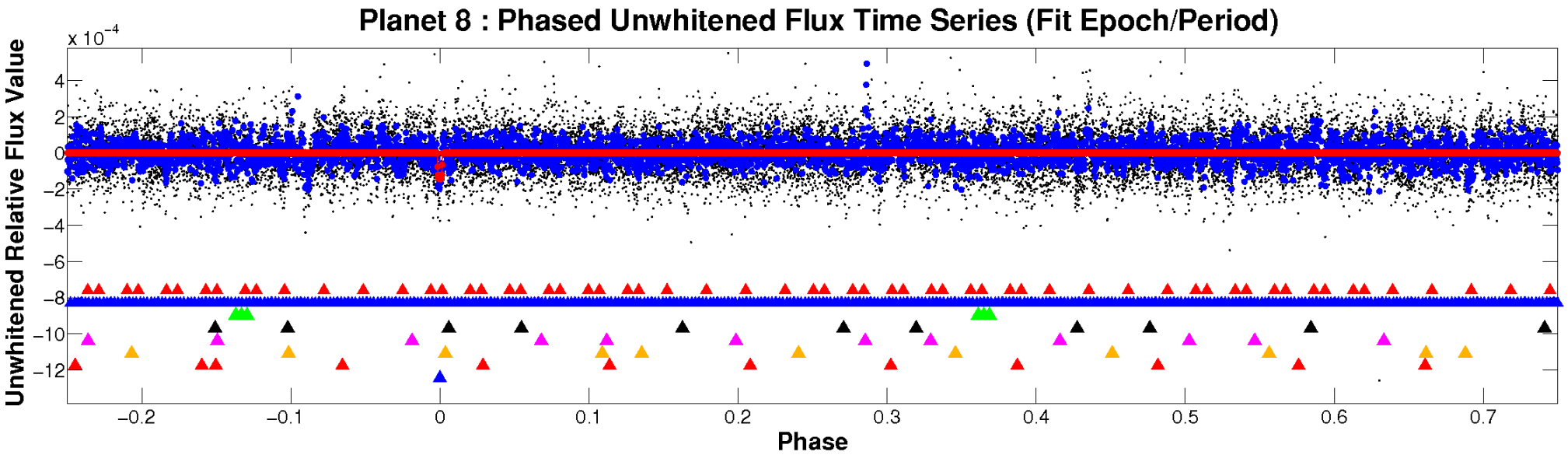
DV Odd/Even

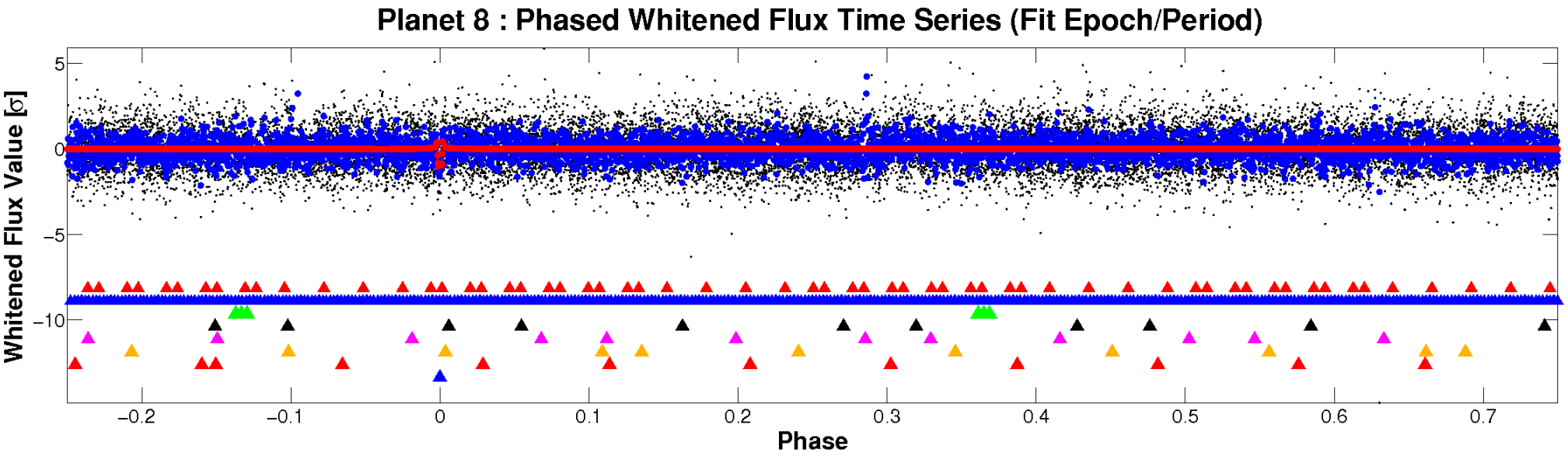

TCE 011075429-08
6.00e-04
5.00e-04
4.00e-04
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
Flux
-0.006
-0.004
-0.002
0
0.002
0.004
0.006
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 011075429-08
4.00e-04
3.00e-04
2.00e-04
1.00e-04
0.00e+00
-1.00e-04
-2.00e-04
-3.00e-04
-4.00e-04
Flux
-0.008
-0.006
-0.004
-0.002
0
0.002
0.004
0.006
0.008
Phase
Odd
Even
Model Fit

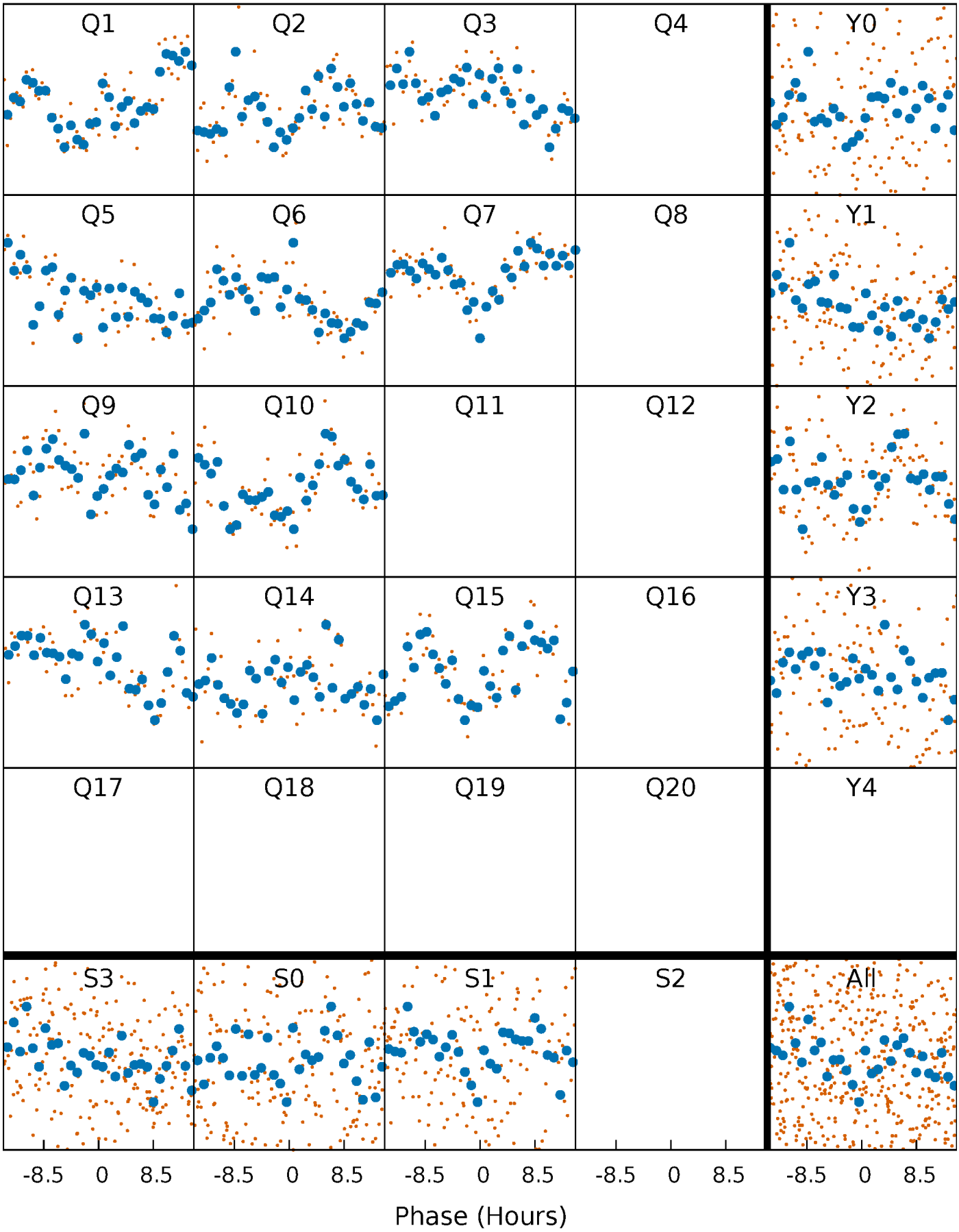
Non-Whitened Vs. Whitened Light Curve





PDC Quarter-Phased Transit Curves

TCE 011075429-08 P= 93.222487 Days T_0=139.641842 (BKJD)



DV Quarter-Phased Transit Curves

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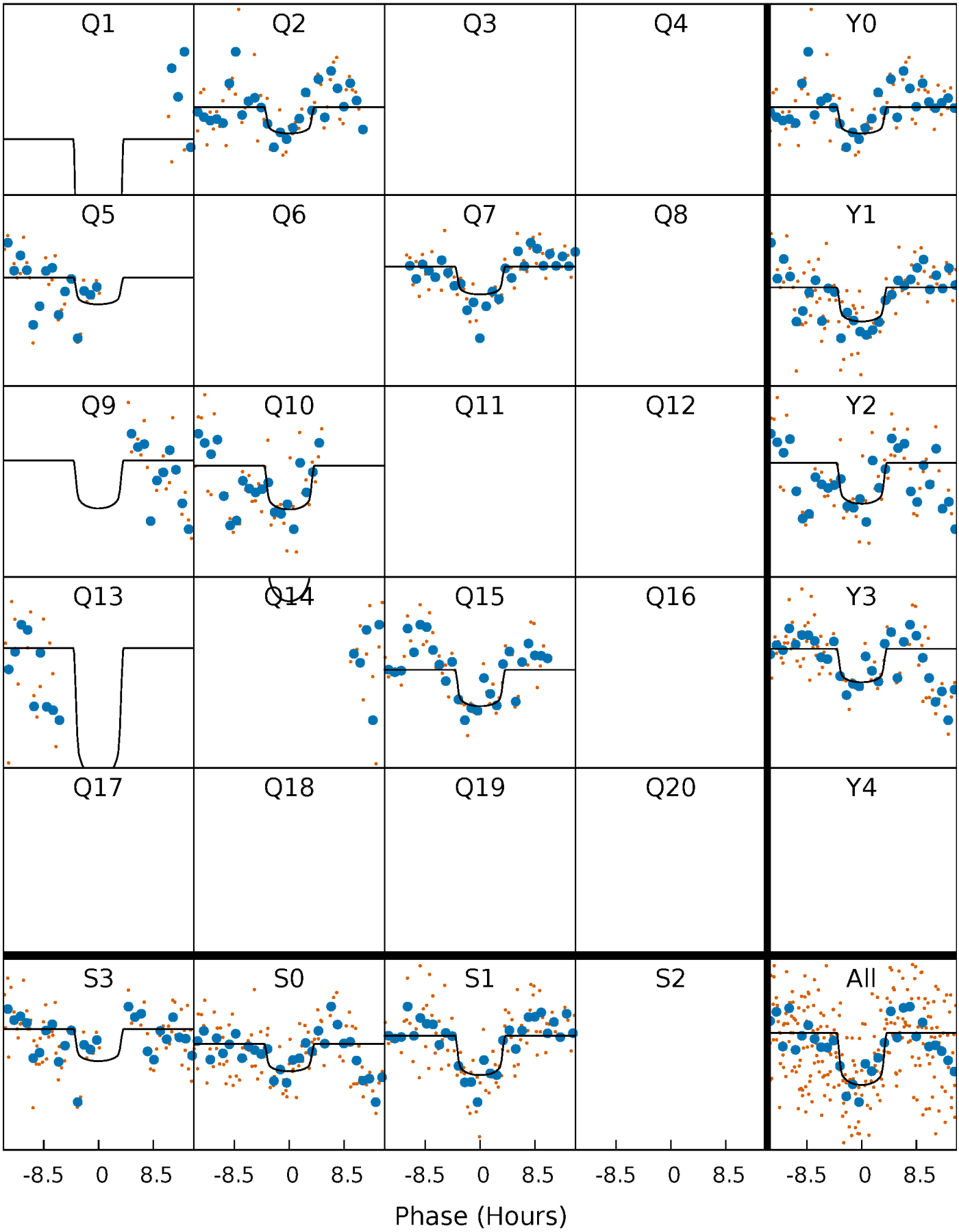
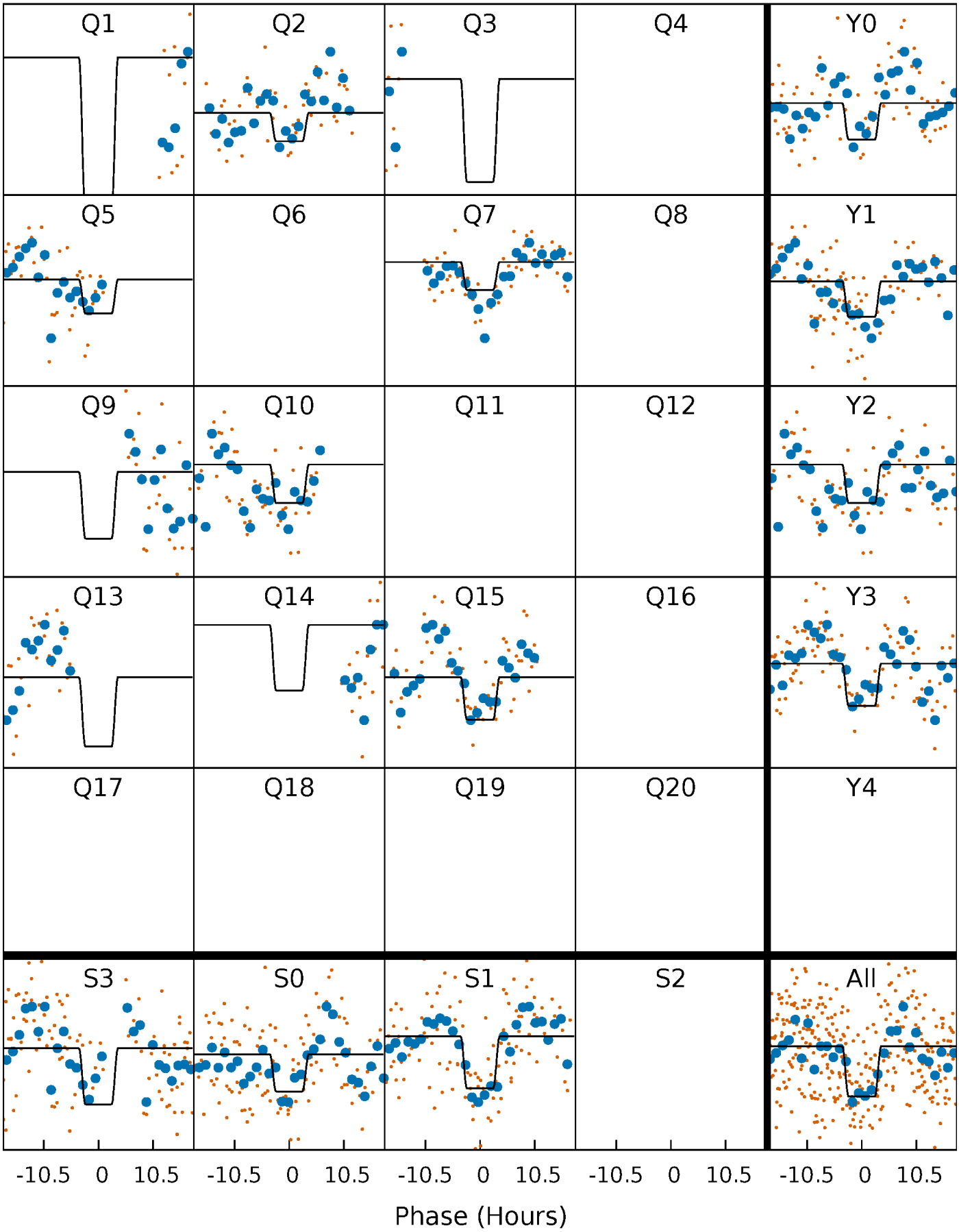


Alt. Detrend Quarter-Phased Transit Curves

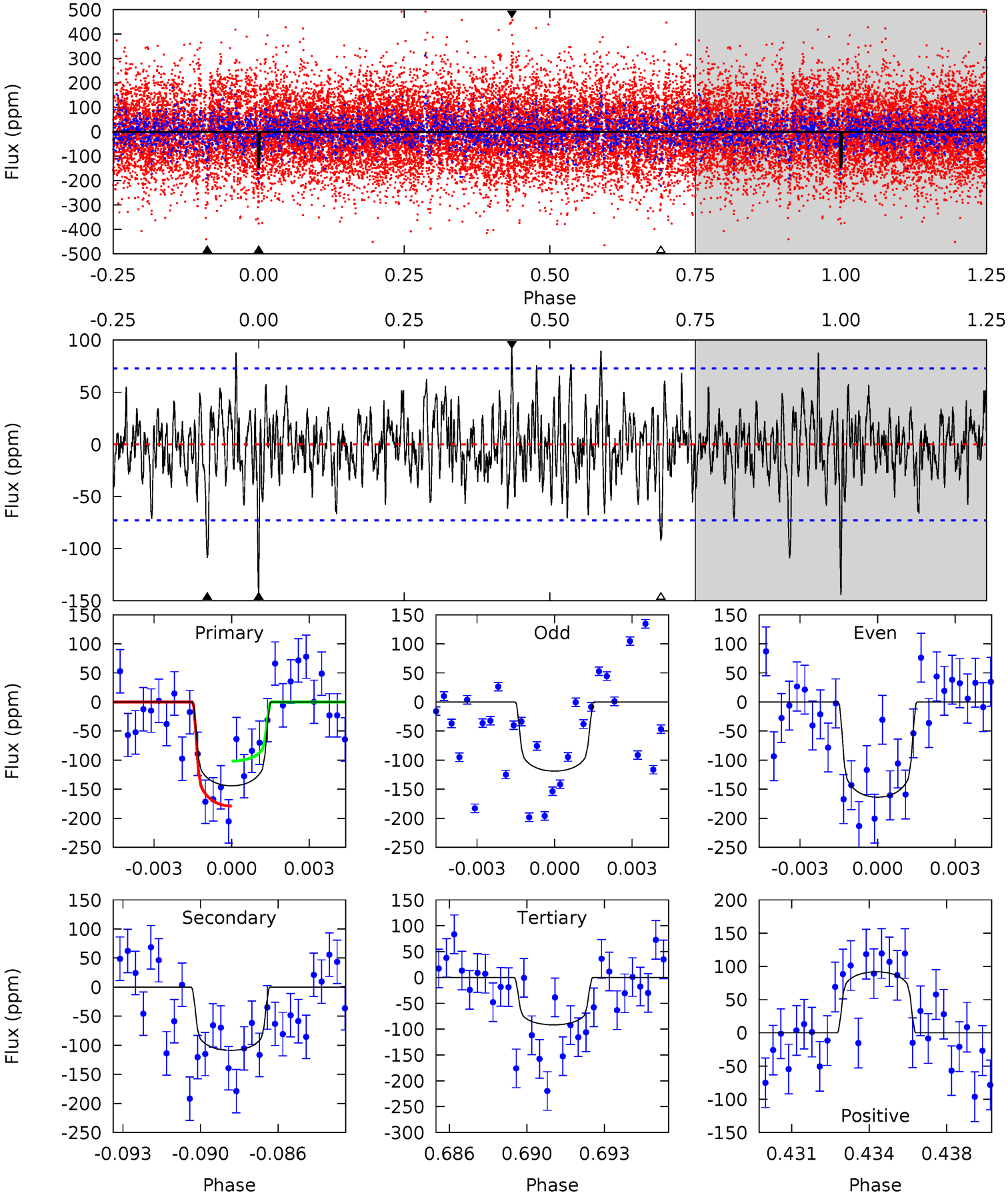
TCE 011075429-08 P= 93.223159 Days T_0=139.609081 (BKJD)



DV Model-Shift Uniqueness Test

011075429-08, P = 93.222487 Days, E = 46.419355 Days

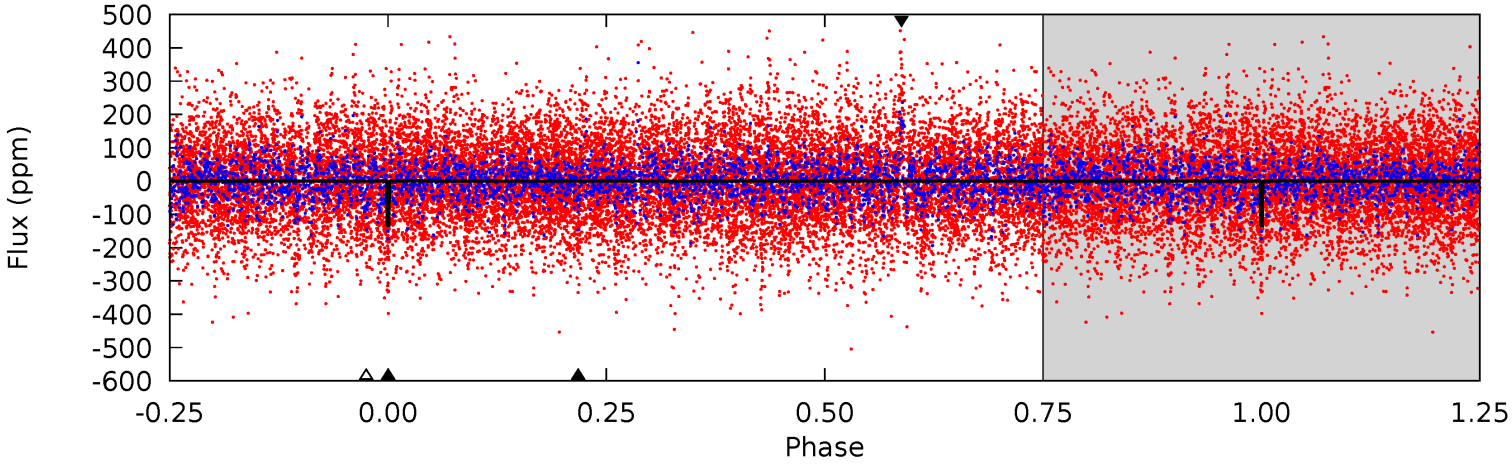
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	7.80	6.58	6.58	5.23	2.92	1.85	3.76	3.76	1.22	1.22	1.60	1.06	0.39	2.76

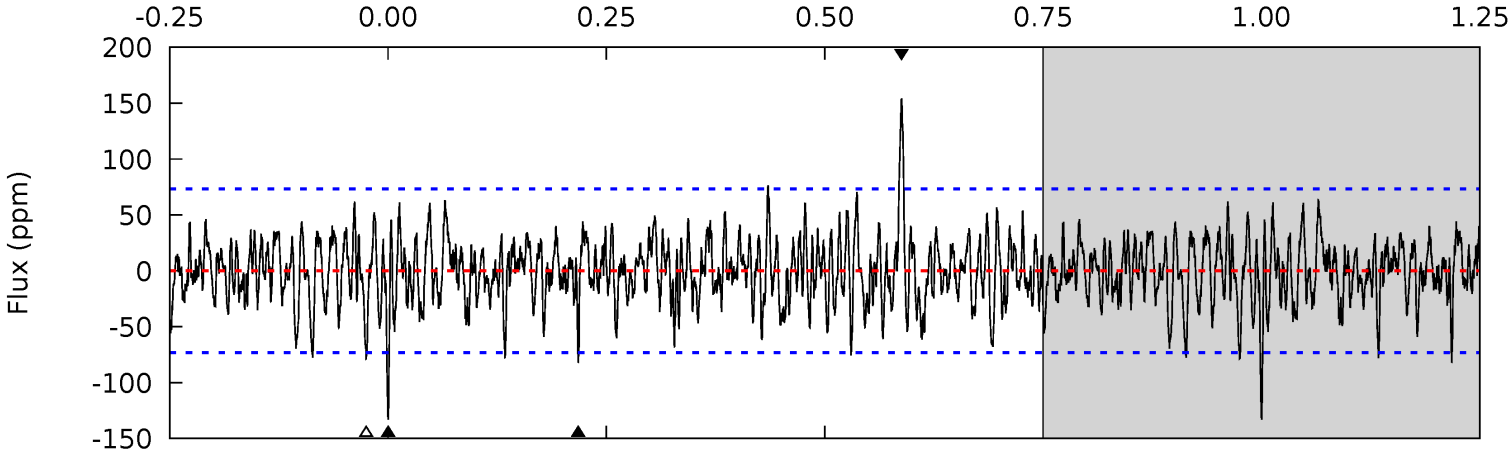


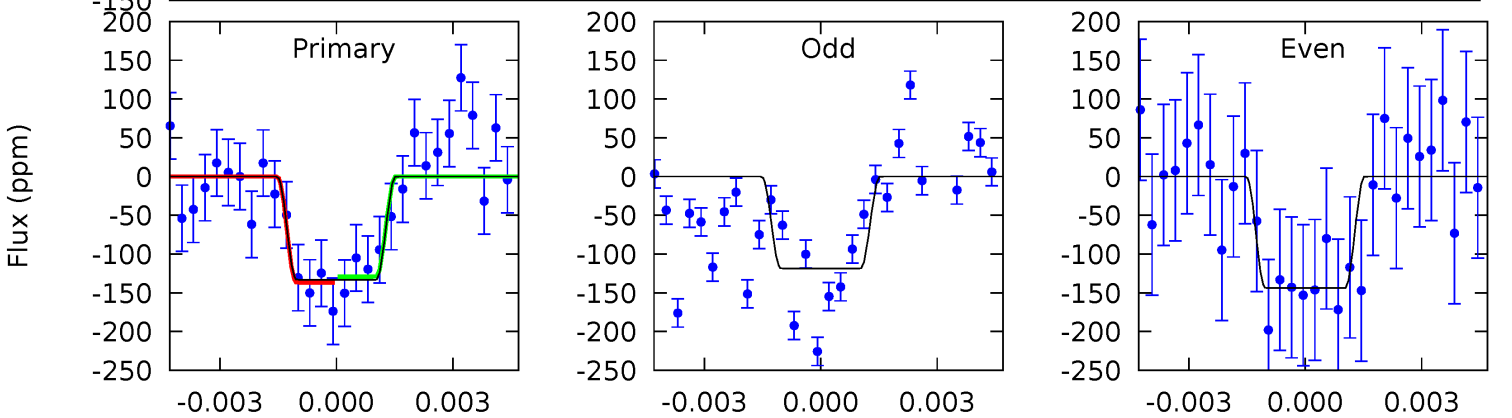
Alt Model-Shift Uniqueness Test

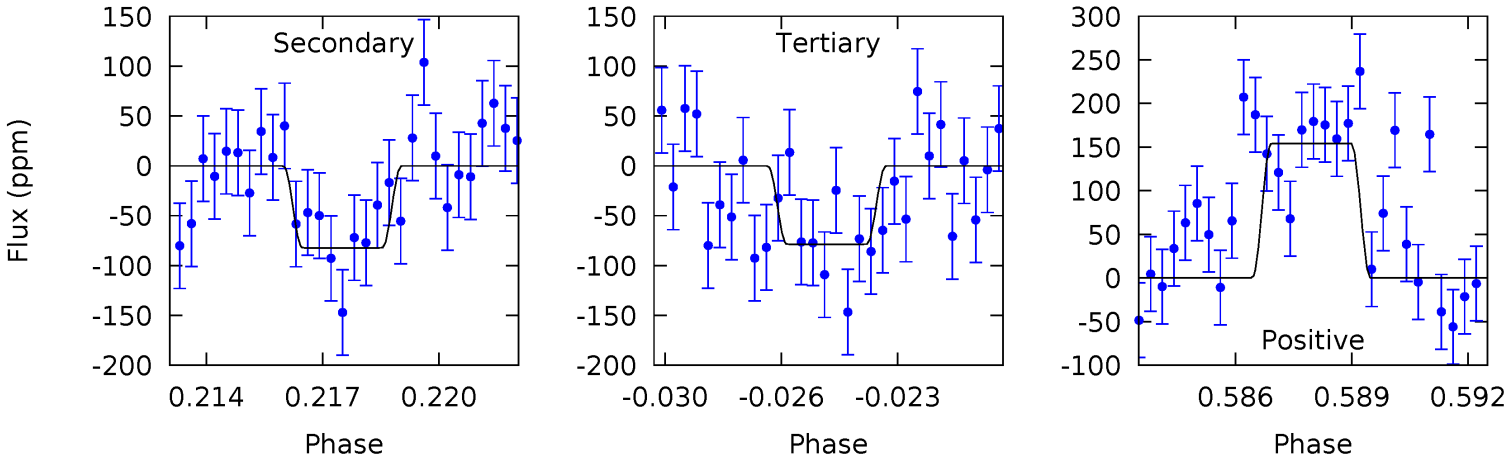
011075429-08, P = 93.223159 Days, E = 46.385922 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.52	5.88	5.62	11.0	5.24	2.94	1.88	3.90	-1.51	0.26	-5.14	0.90	1.28	0.54	0.27









Stellar Parameters For KIC 011075429

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	M($M_\odot$)	$p_\star$ (g·cm^{-3})
	7121^{+199}_{-249}	$4.031^{+0.192}_{-0.128}$	$-0.120^{+0.250}_{-0.350}$	$1.972^{+0.427}_{-0.475}$	$1.521^{+0.171}_{-0.278}$	$0.279^{+0.302}_{-0.109}$
	+3%/-3%	+5%/-3%	+208%/-292%	+22%/-24%	+11%/-18%	+108%/-39%
Source	PHO1	FLK73	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 011075429-08 / KOI

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-109±14	$2.67^{+1.13}_{-1.02}$	903^{+57}_{-69}	6381^{+2062}_{-938}	1785^{+3144}_{-926}
Alt.	-82±14	$2.49^{+1.09}_{-0.95}$	899^{+56}_{-65}	6149^{+1939}_{-940}	1535^{+2490}_{-789}

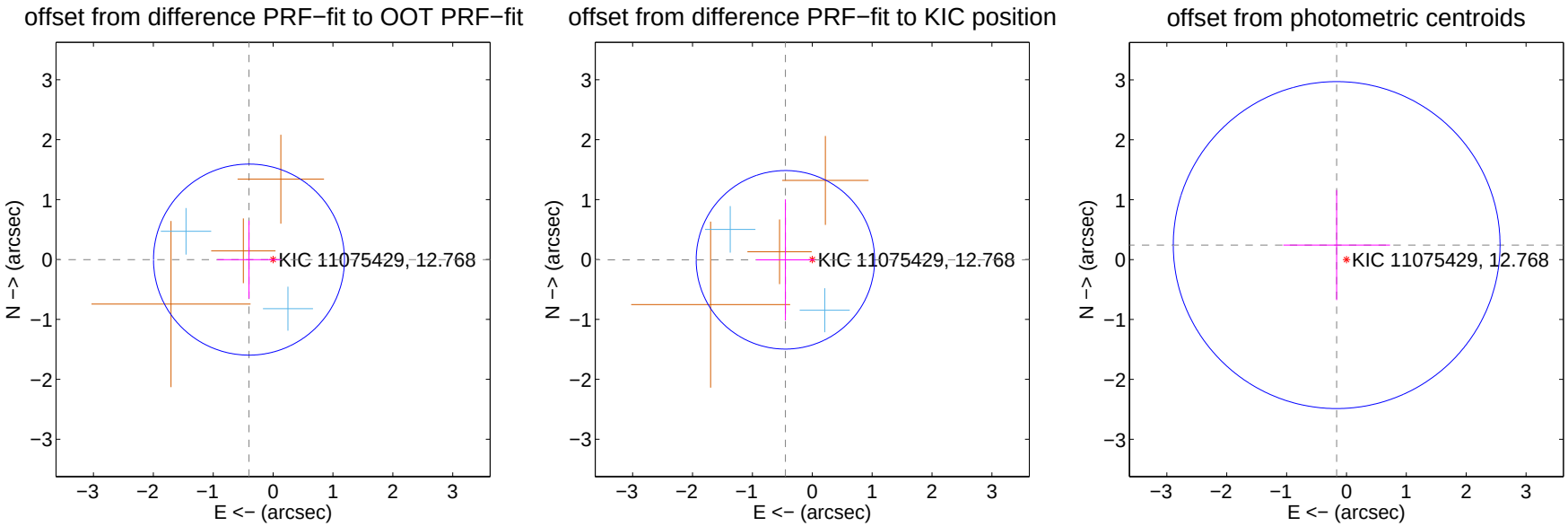
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

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

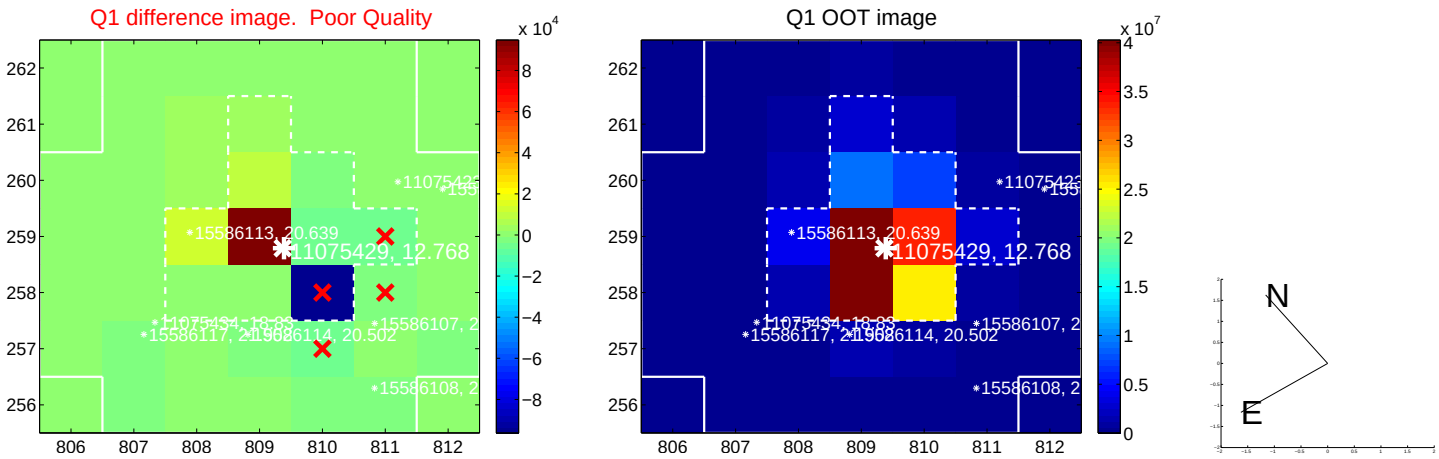
Supplemental centroid analysis for 011075429-08. Kepler magnitude: 12.77. Transit SNR 7.50
There are 2 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

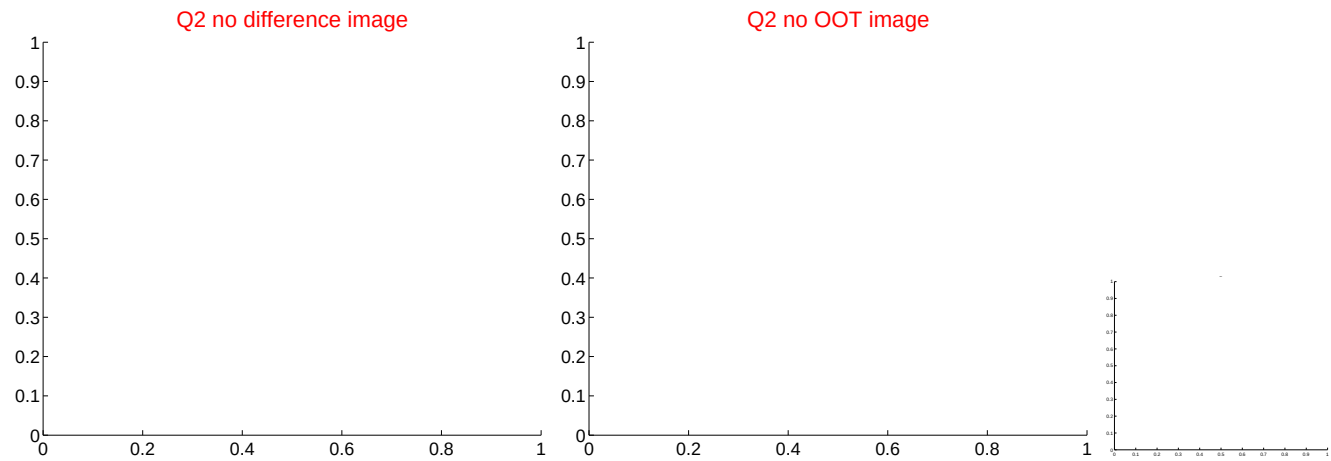
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.403 ± 0.531	0.76	0.403 ± 0.531	-0.002 ± 0.650
PRF-fit source offset from KIC position	0.449 ± 0.497	0.90	0.449 ± 0.487	-0.005 ± 1.011
photometric centroid source offset	0.29 ± 0.91	0.32	0.16 ± 0.89	0.24 ± 0.92

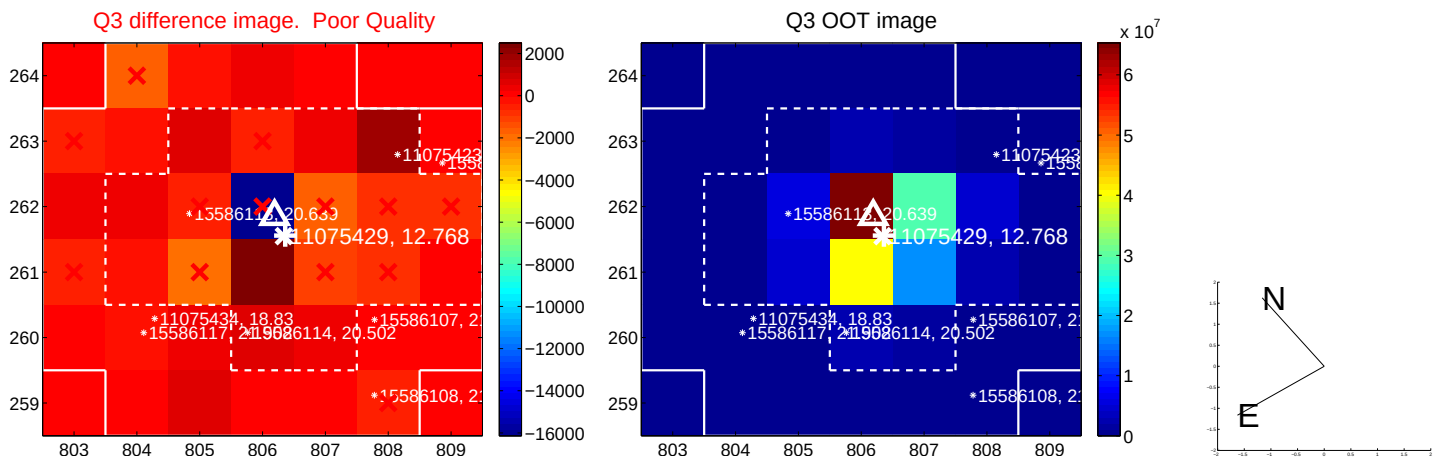


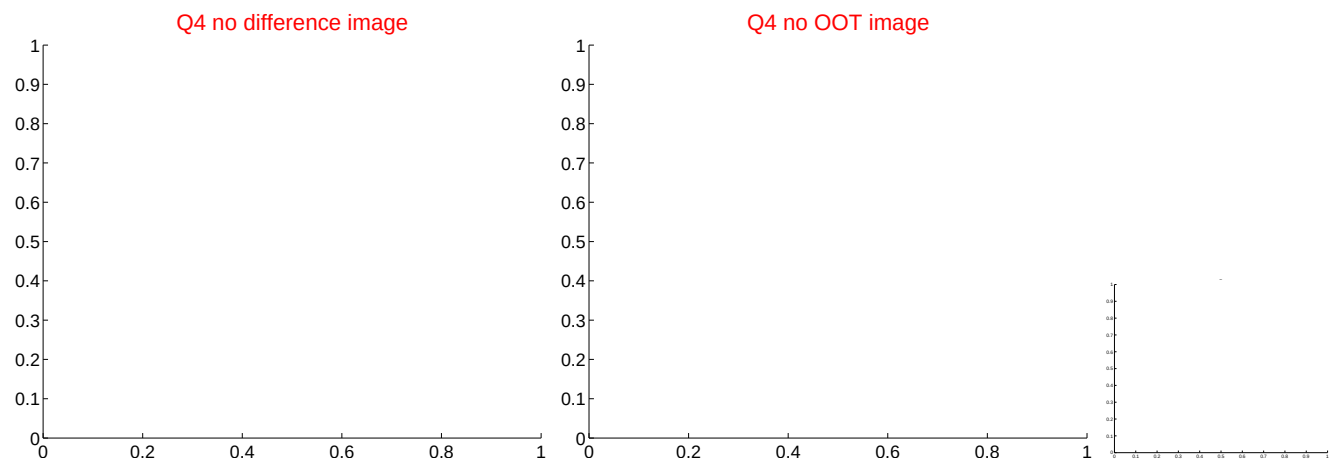
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red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









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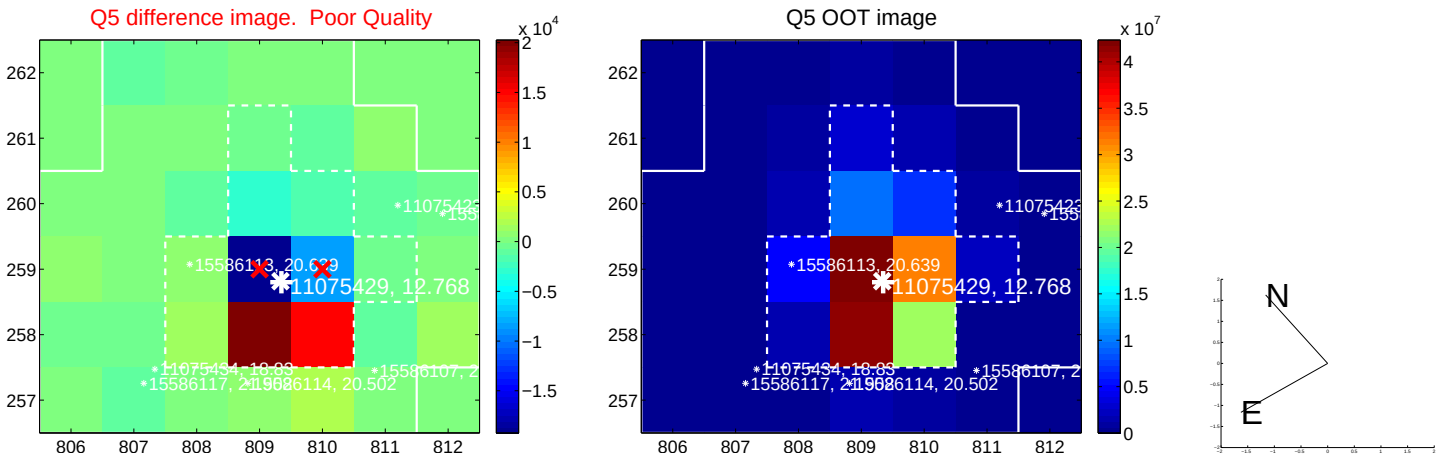

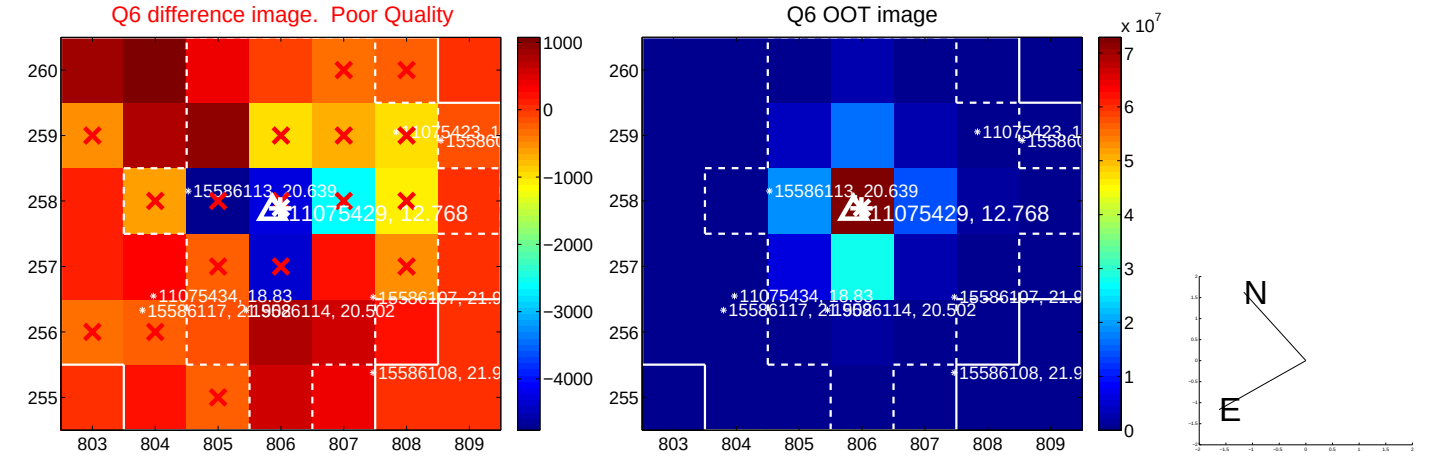

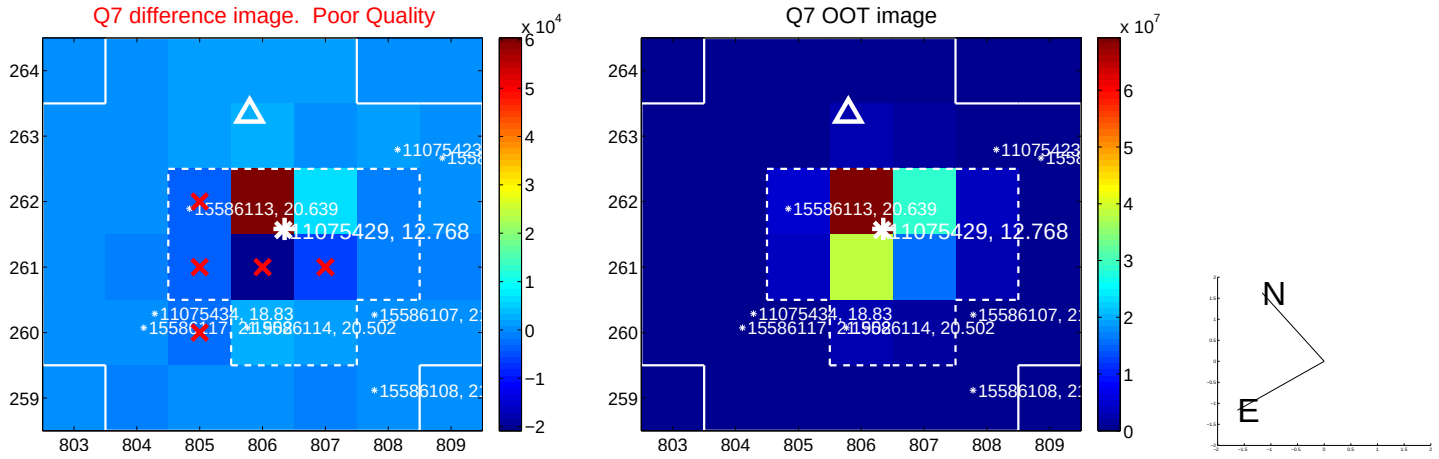

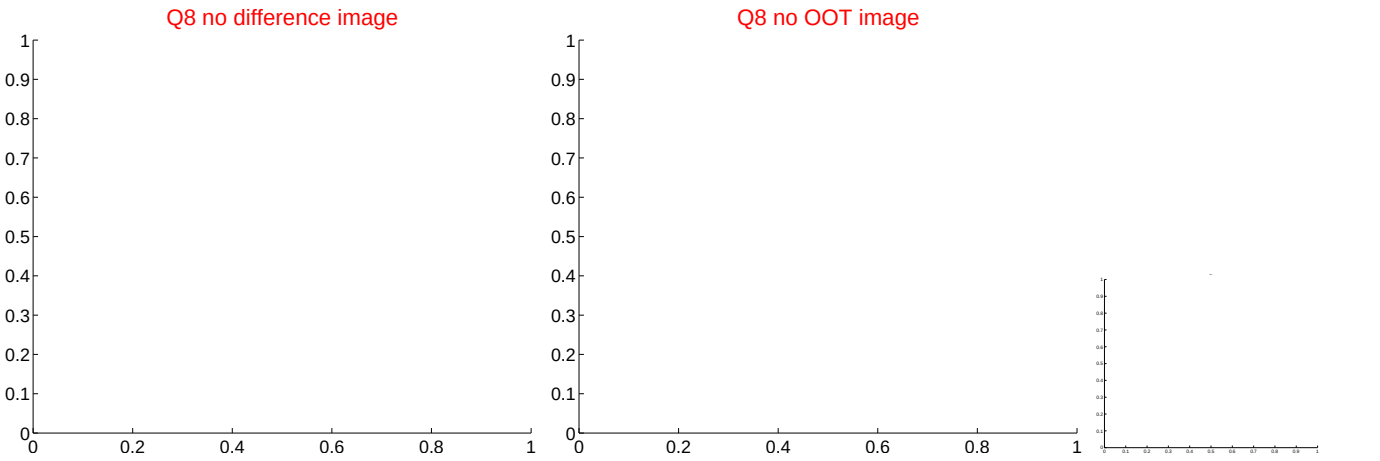

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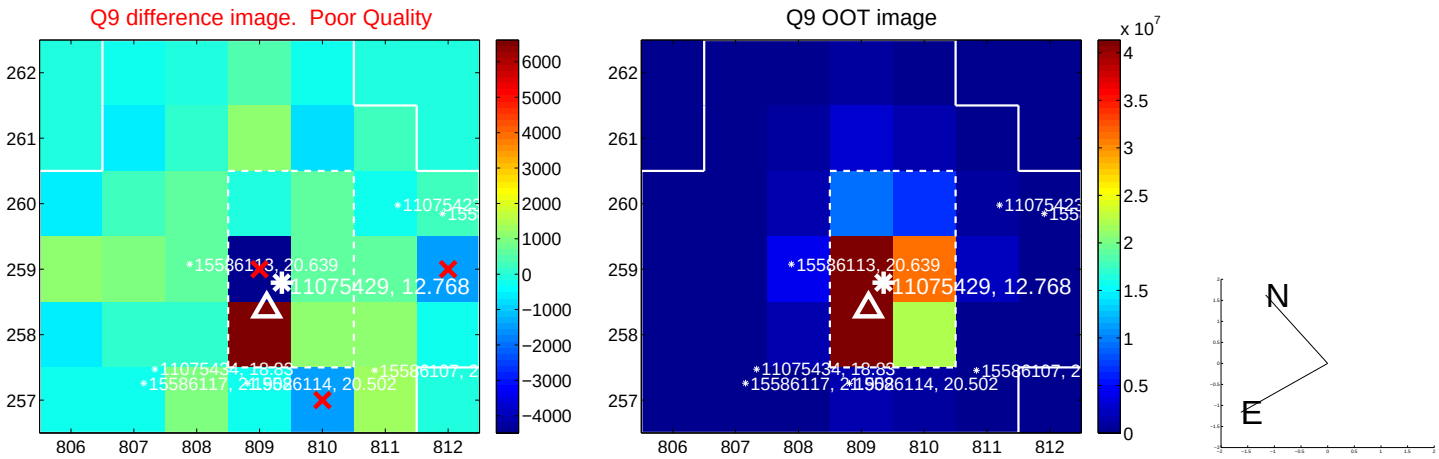

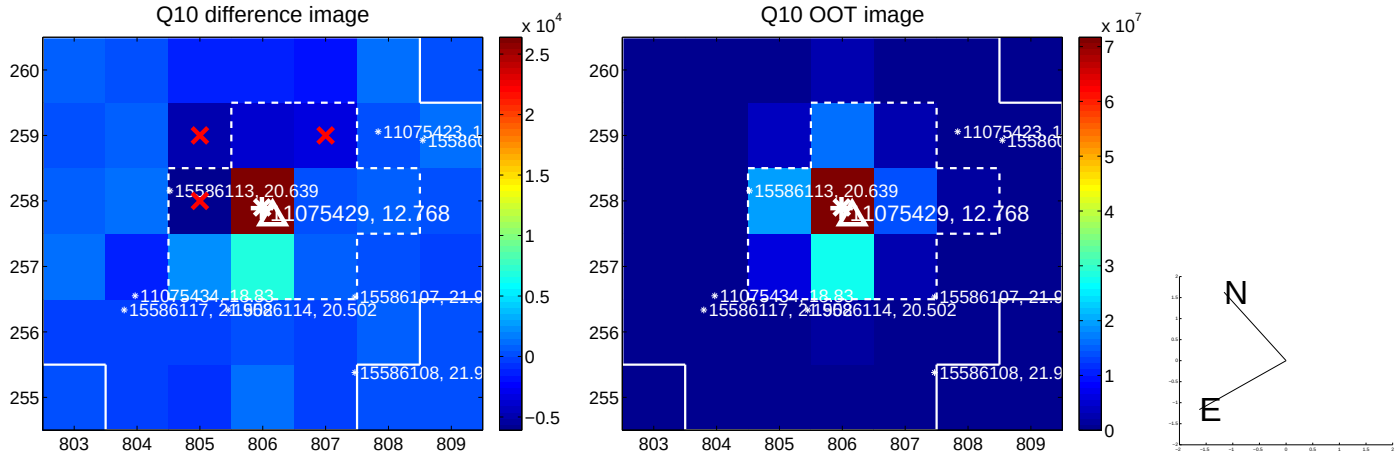

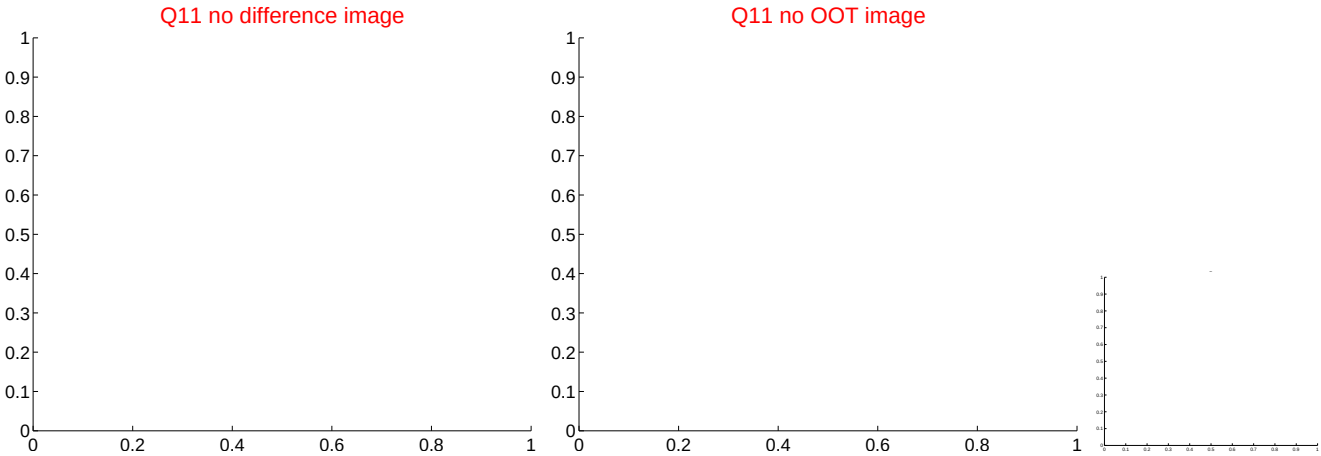

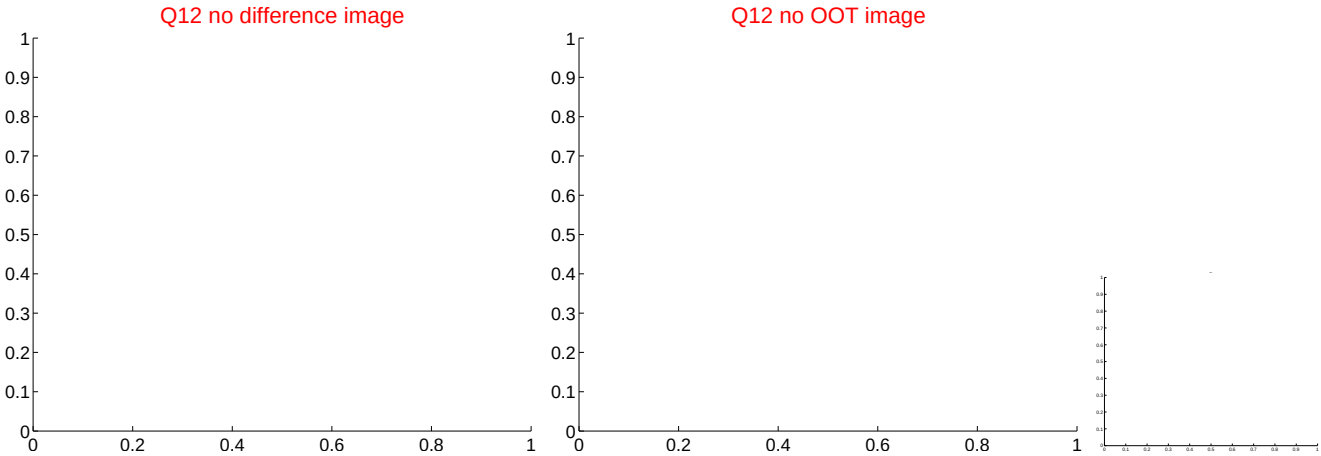

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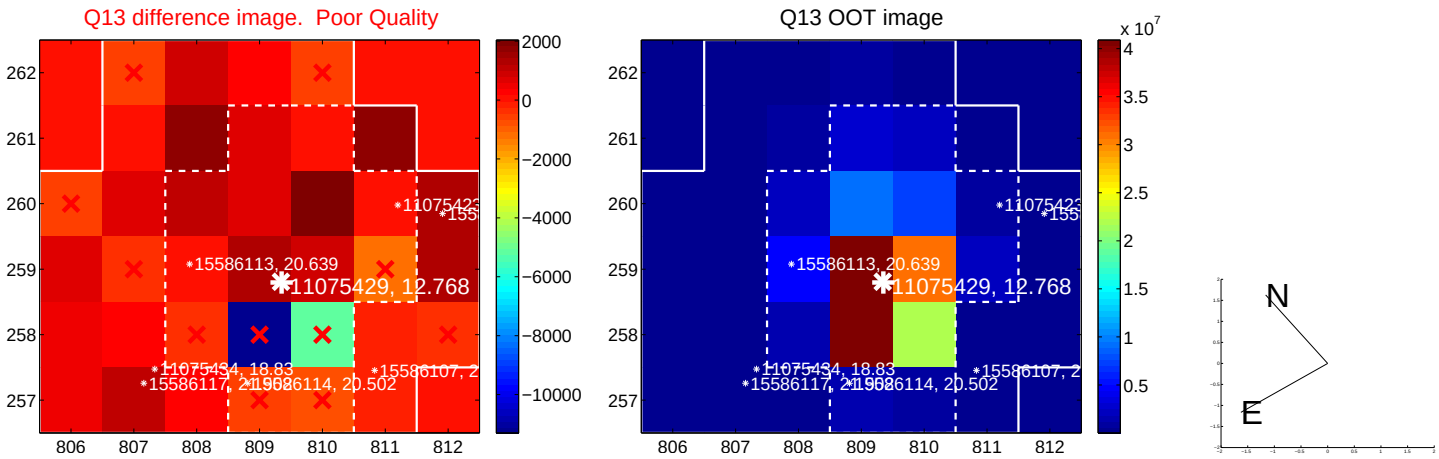

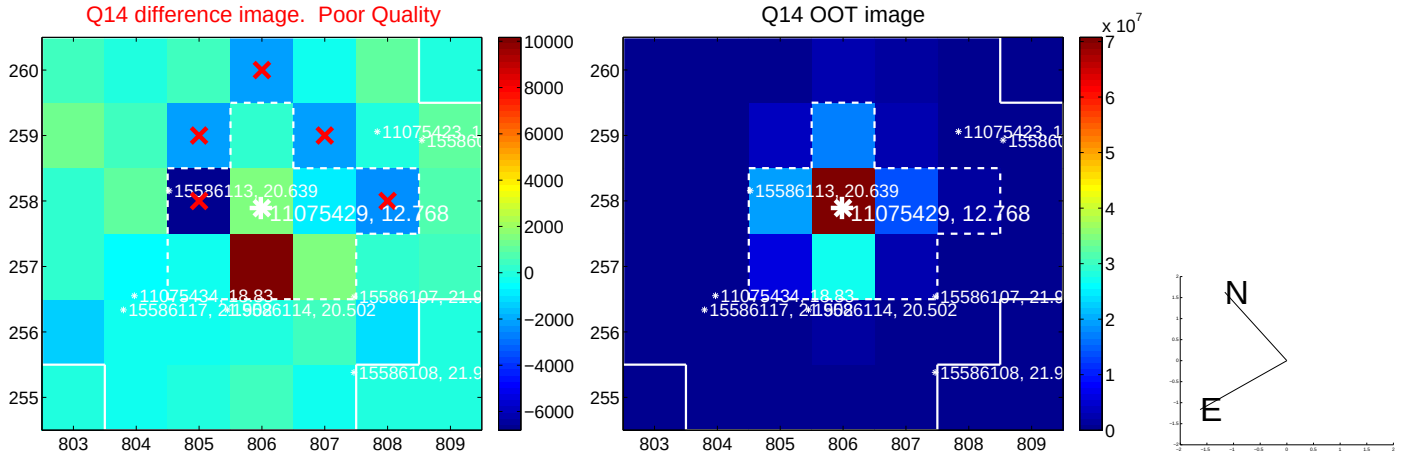

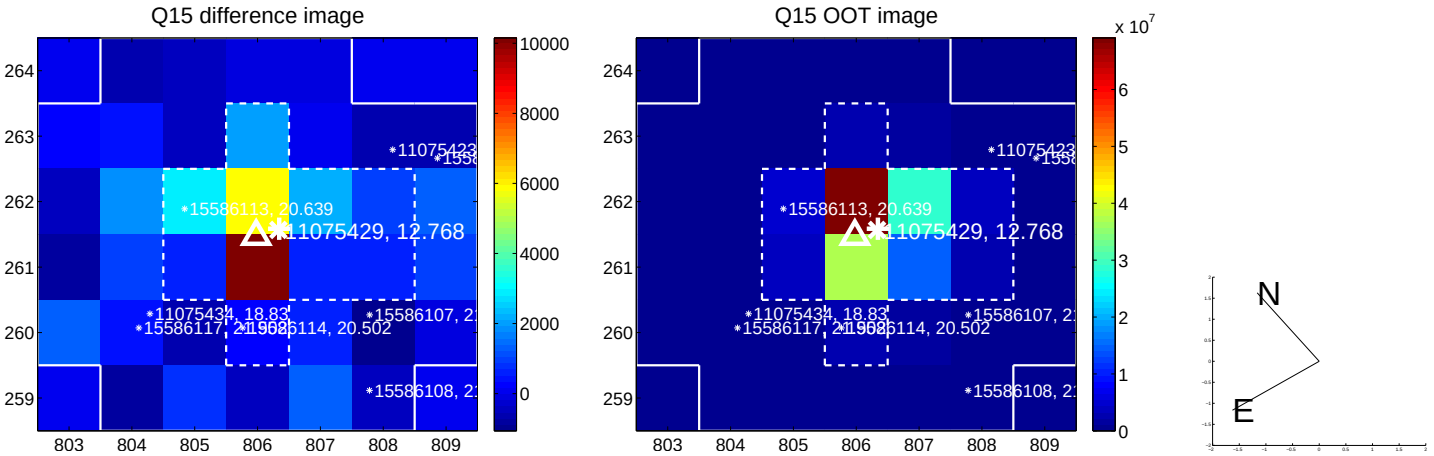

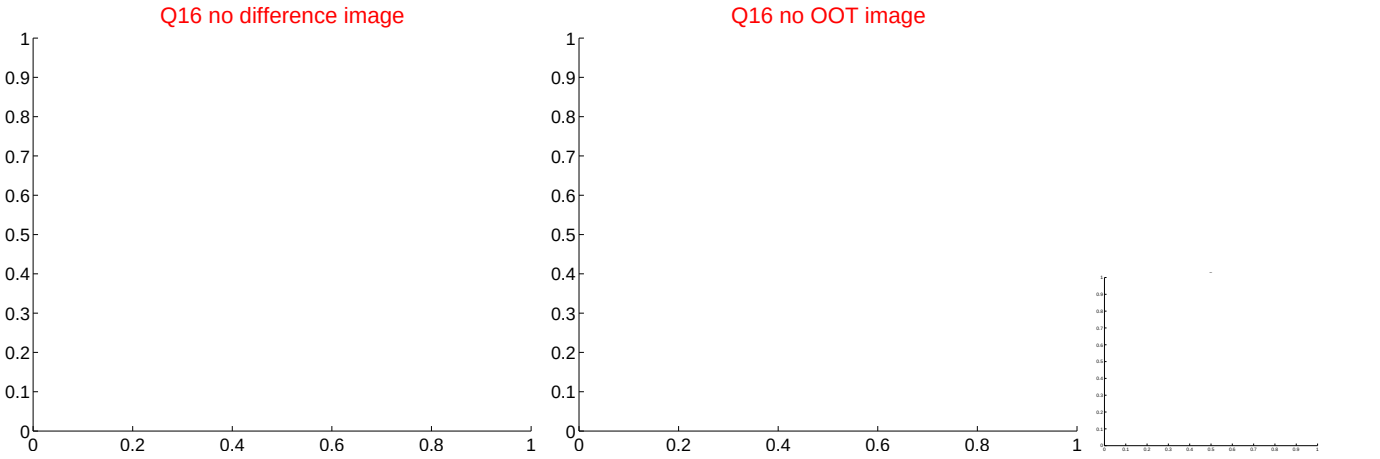

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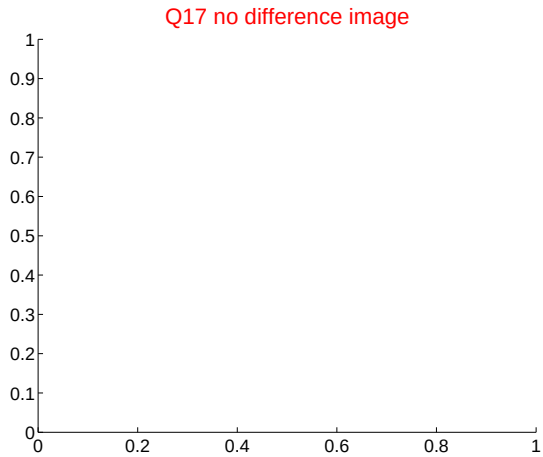
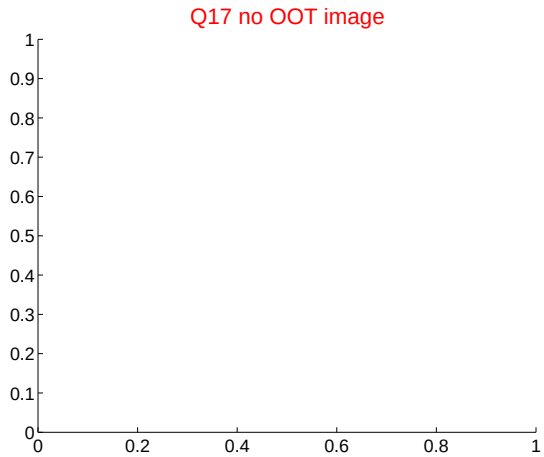
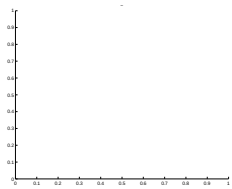
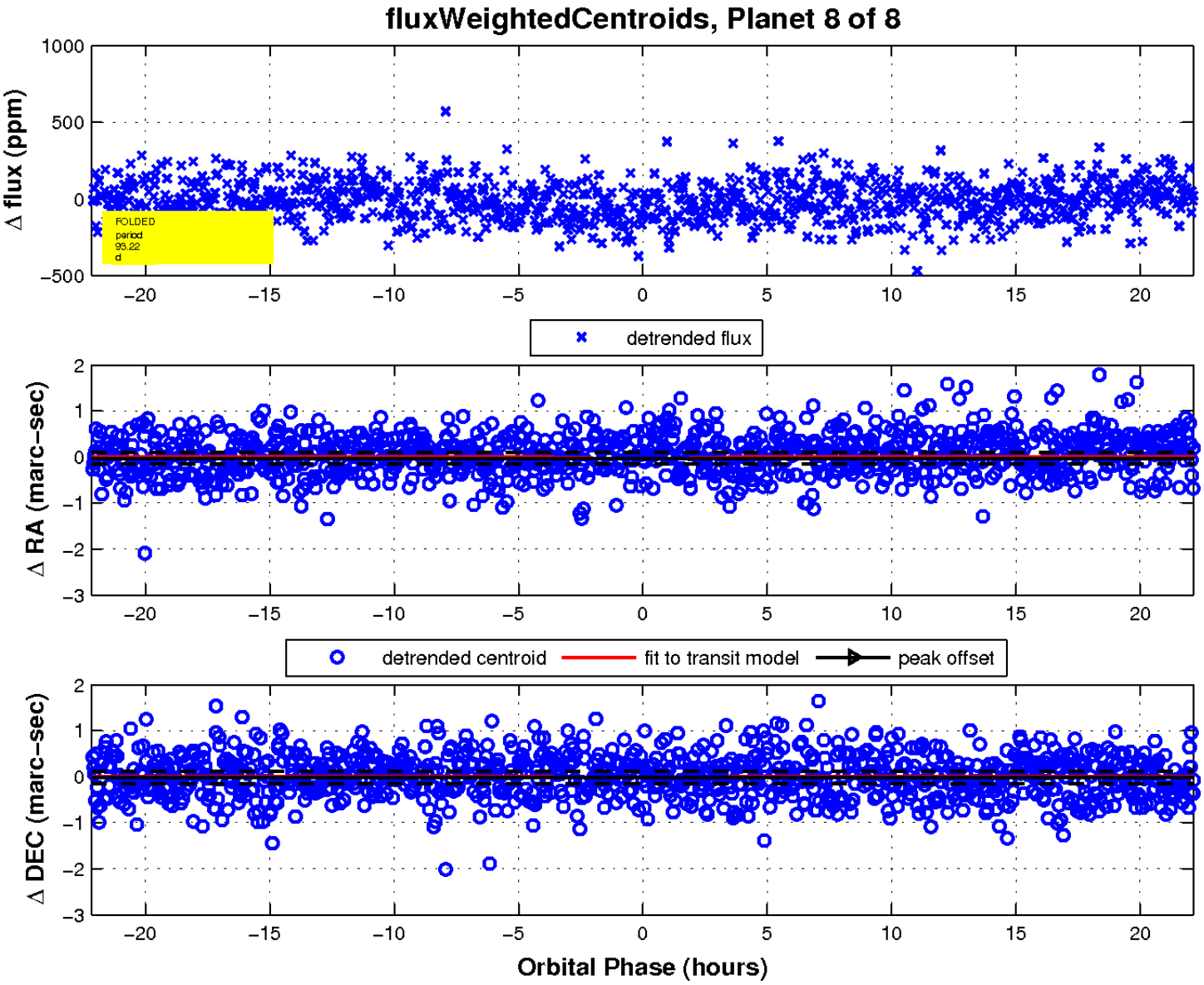
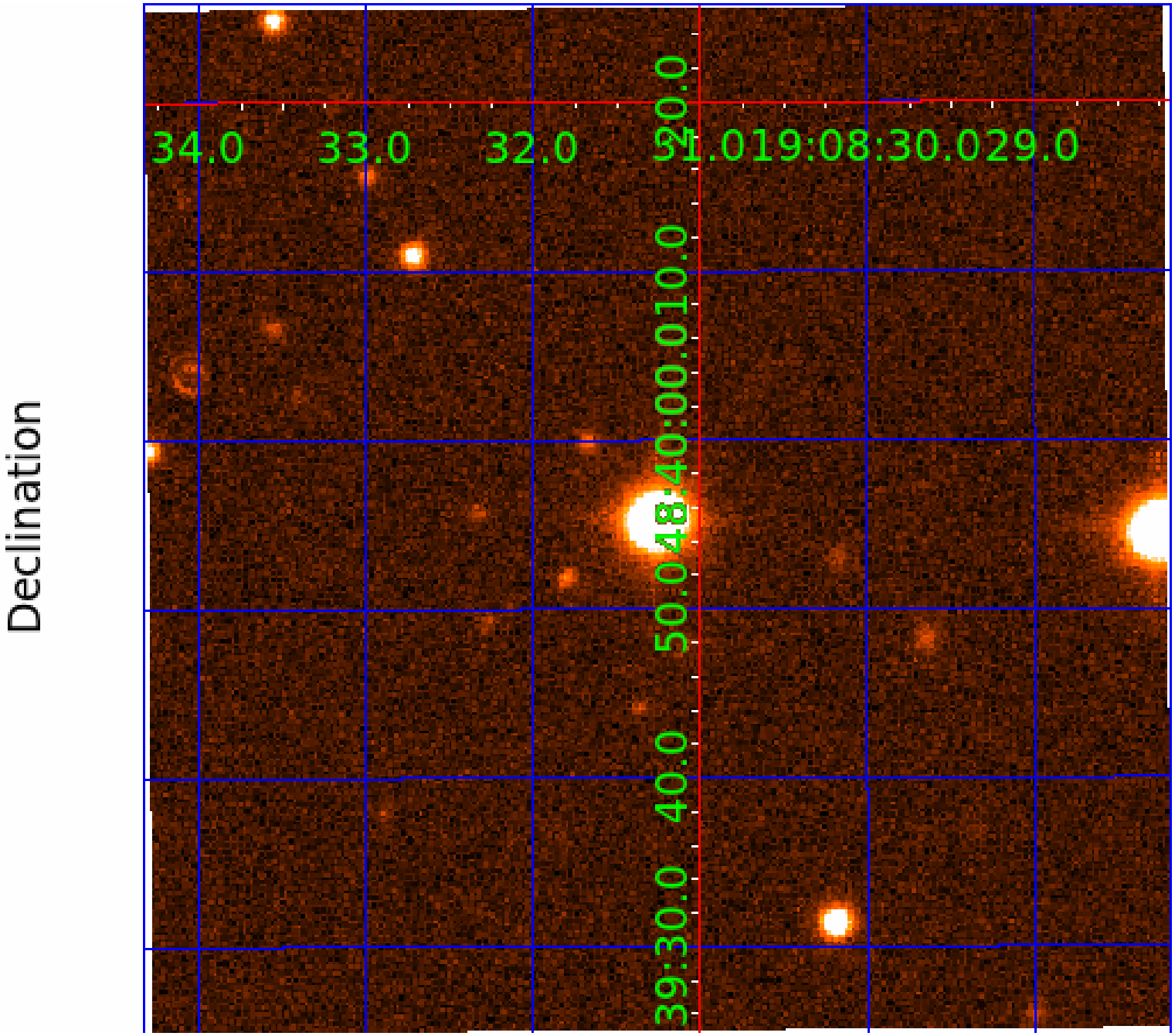








UKIRT Image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