

KIC 011044372

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})
011044372-01	OBS	No	0.700157	131.546883	383.7	1.725	10.9	11.6	2.36	8235	5.40	64110.67
011044372-02	OBS	No	0.700159	131.895975	400.1	1.433	10.9	12.8	2.36	8235	5.07	64110.46
011044372-03	OBS	No	57.200317	162.482932	2895.1	2.434	7.4	7.9	2.36	8235	12.99	180.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011044372-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
011044372-02	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011044372-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

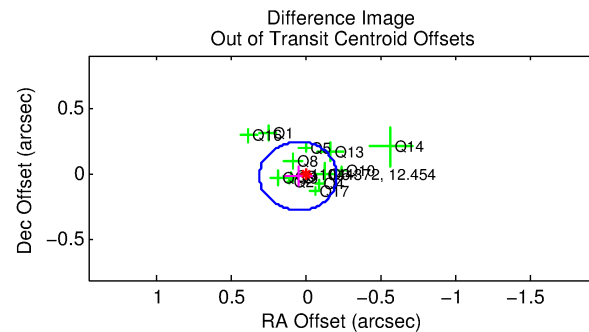
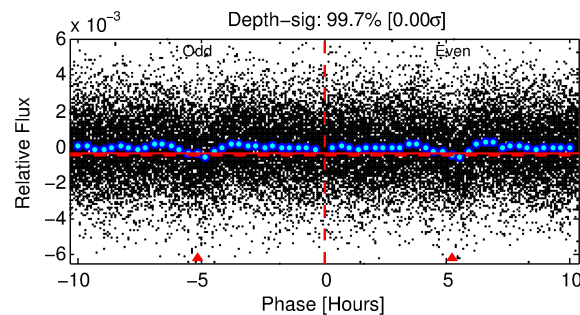
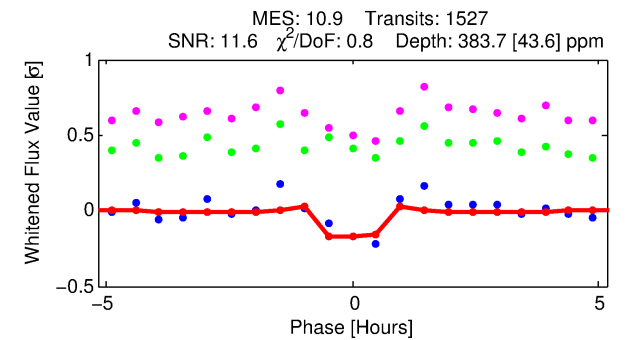
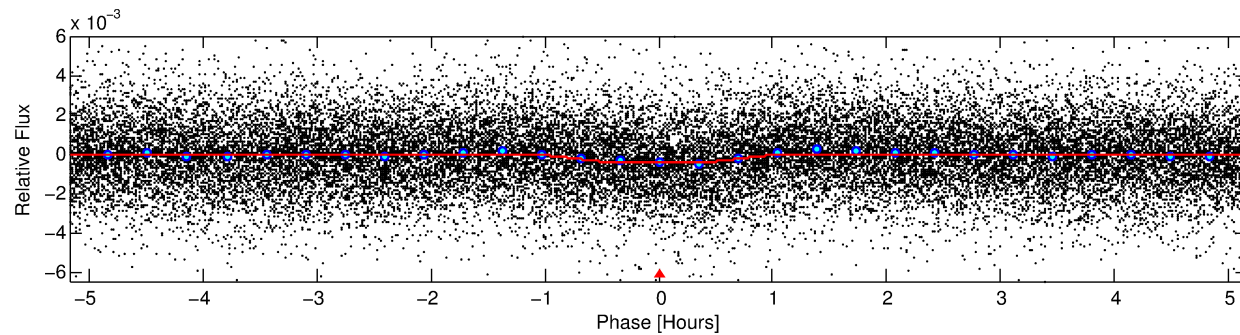
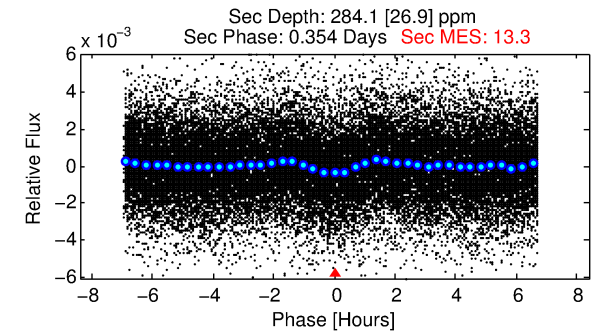
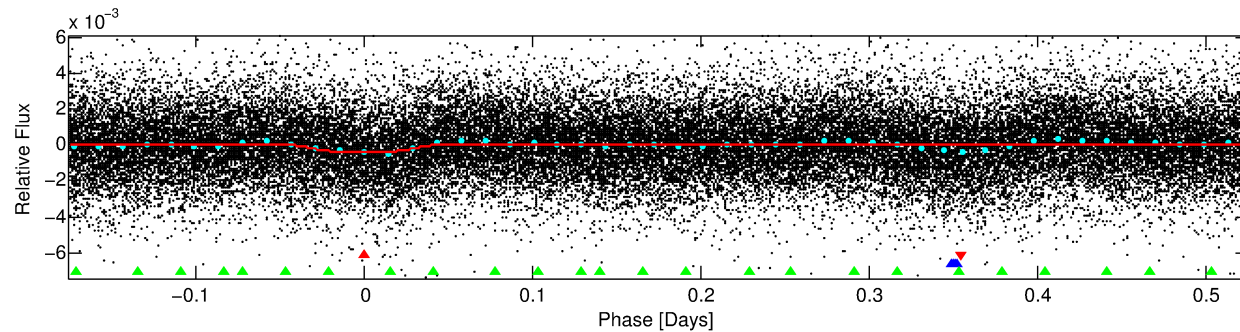
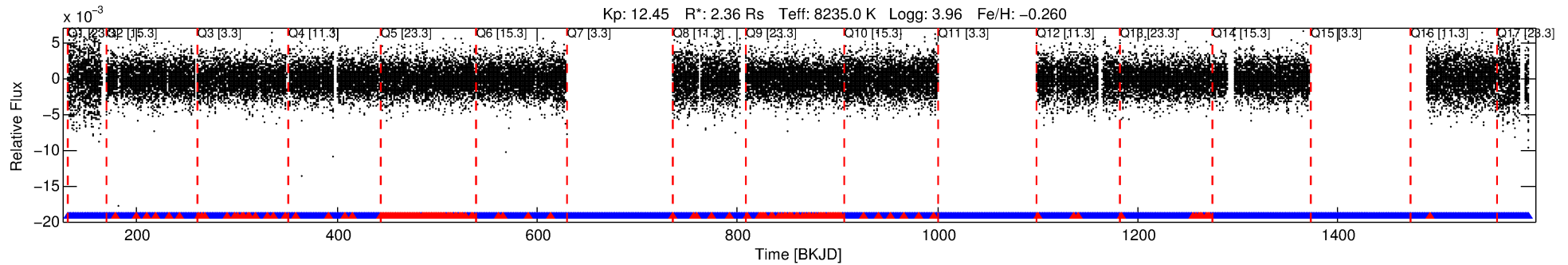
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011044372-01

No Significant Match Found

DV One-Page Summary

KIC: 11044372 Candidate: 1 of 3 Period: 0.700 d



DV Fit Results:

Period = 0.70016 [0.00001] d
Epoch = 131.5469 [0.0015] BKJD
Rp/R* = 0.0209 [0.0047]
a/R* = 1.77 [1.55]
b = 0.90 [0.28]
Seff = 64110.67 [31168.10]
Teff = 4058 [493] K
Rp = 5.40 [2.18] Re
a = 0.0189 [0.0057] AU
Ag = 1.92 [1.24] [0.74σ]
Teffp = 7388 [895] K [3.26σ]

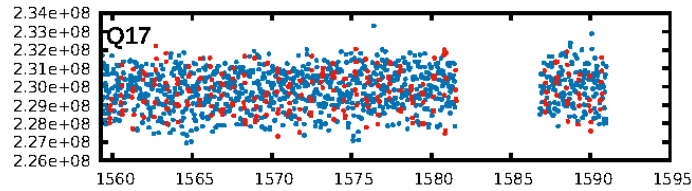
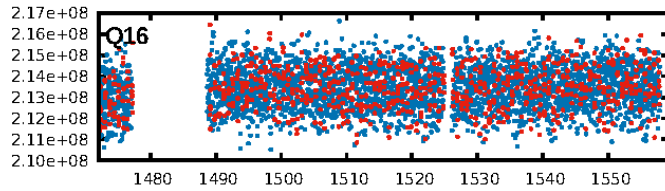
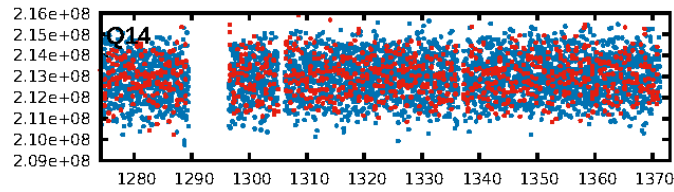
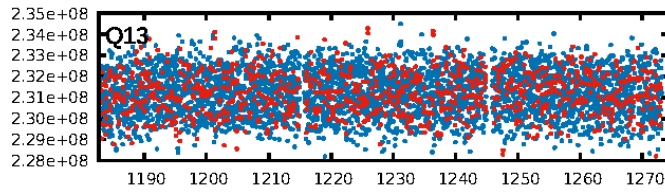
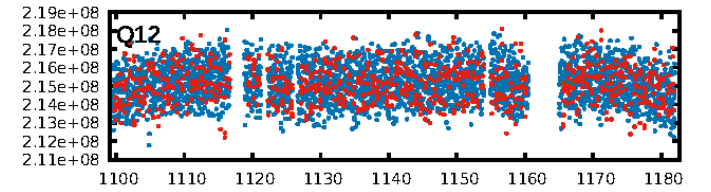
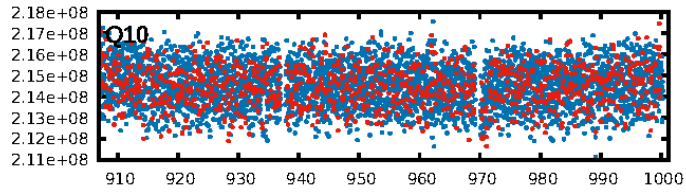
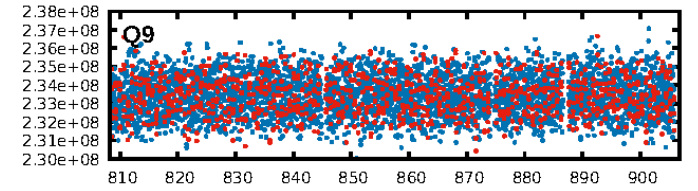
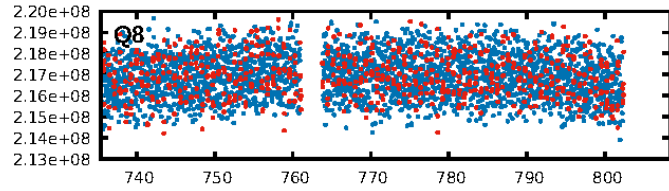
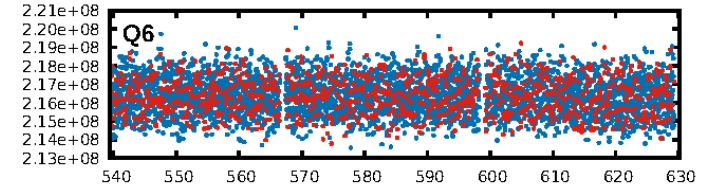
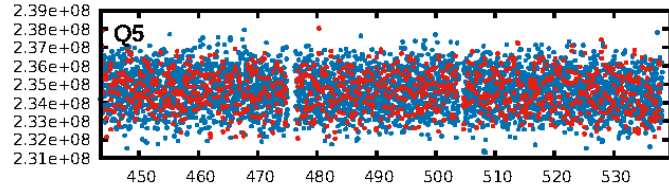
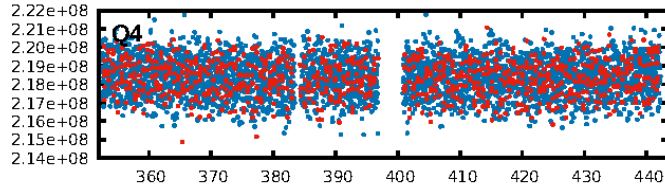
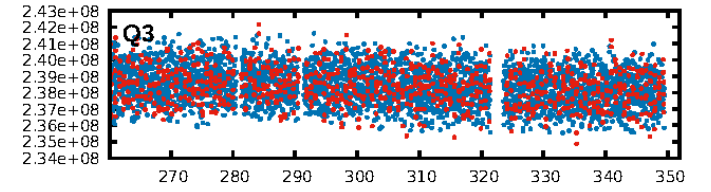
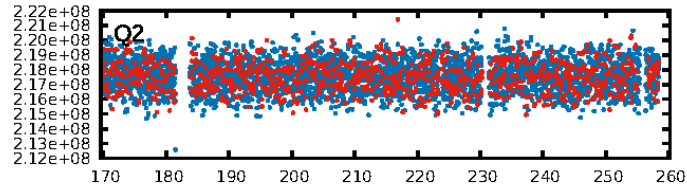
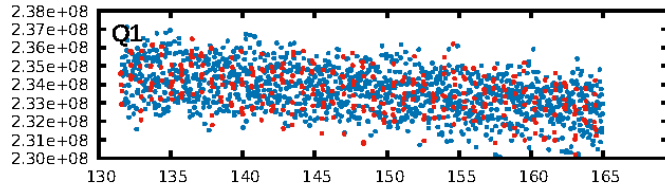
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.69e-20
RollingBand-fgt: 0.86 [1238/1441]
GhostDiagnostic-chr: 1.102
Centroid-sig: 13.5%
Centroid-so: 0.204 arcsec [3.41σ]
OotOffset-rm: 0.050 arcsec [0.58σ]
KicOffset-rm: 0.092 arcsec [1.16σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [14/14]

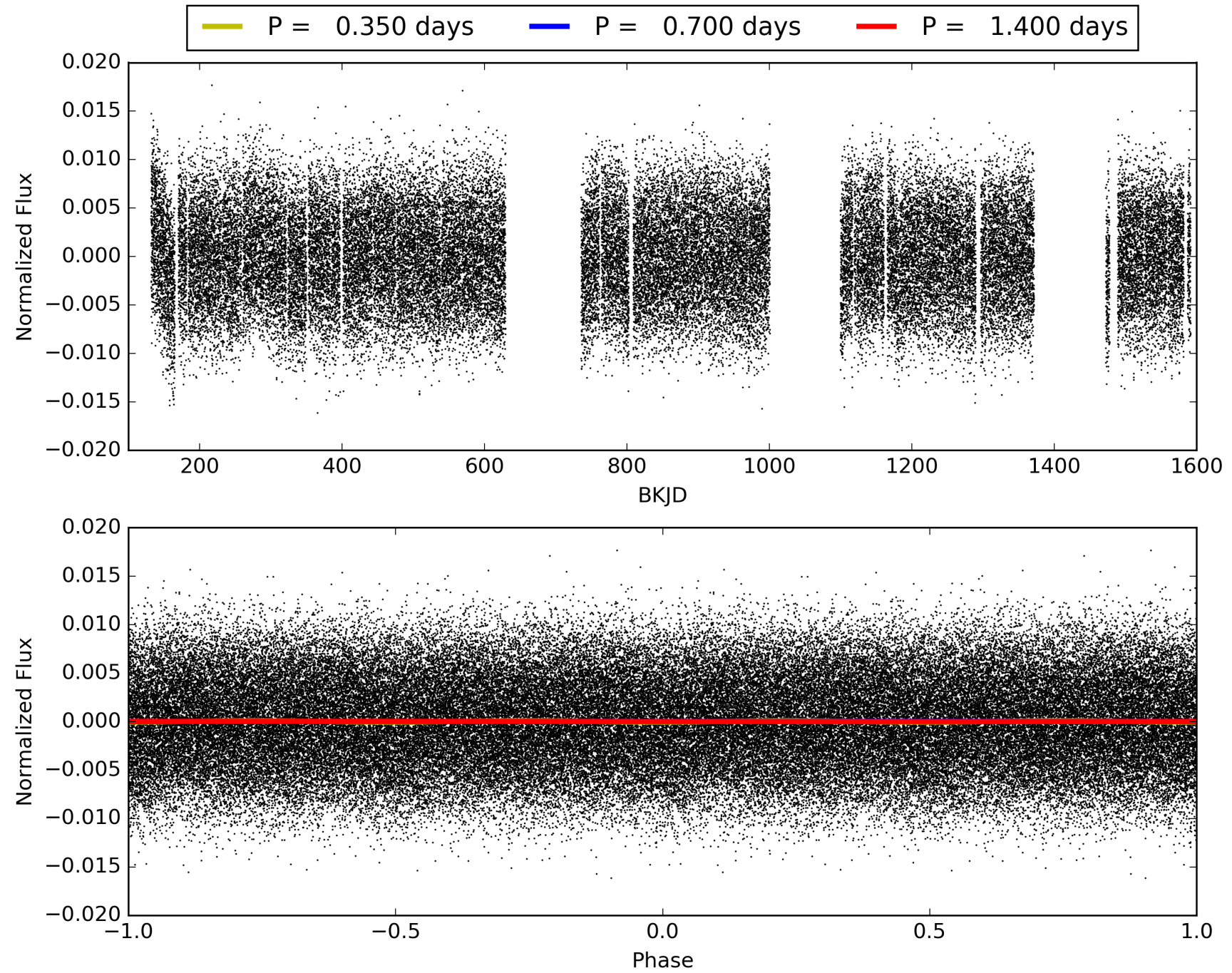
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:45:57 Z

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

TCE 011044372-01, PDC Light Curves

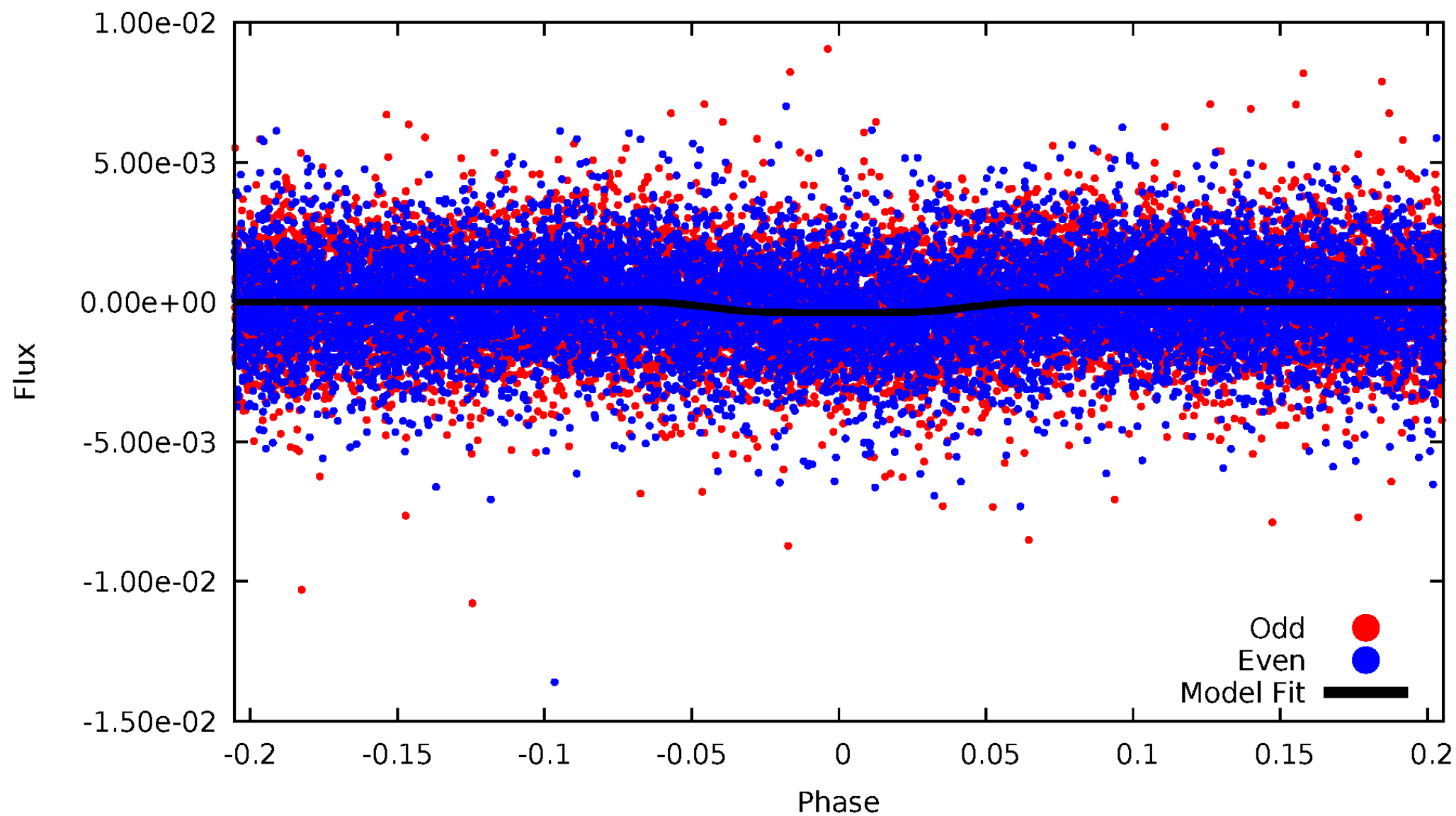


TCE 011044372-01



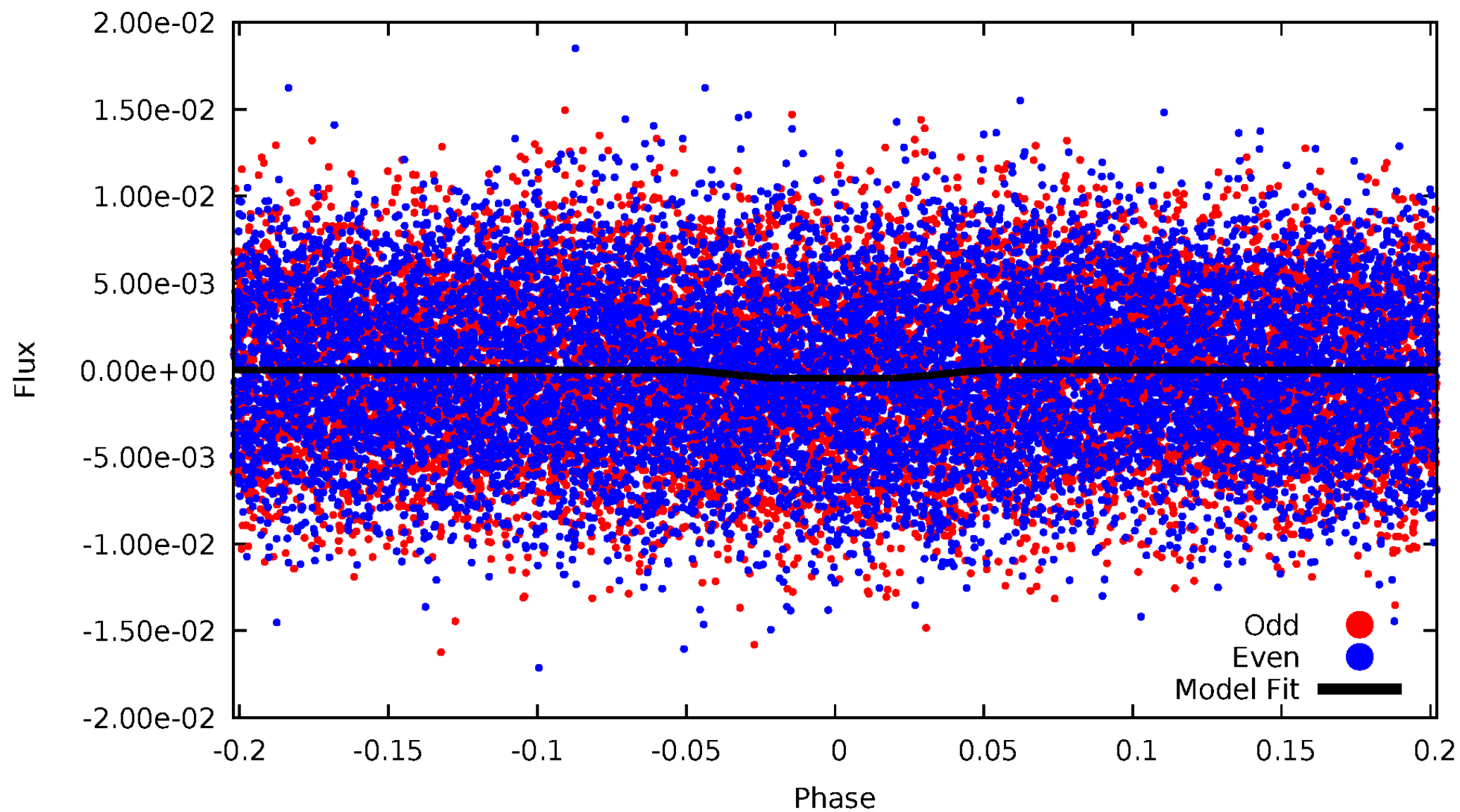
DV Odd/Even

TCE 011044372-01

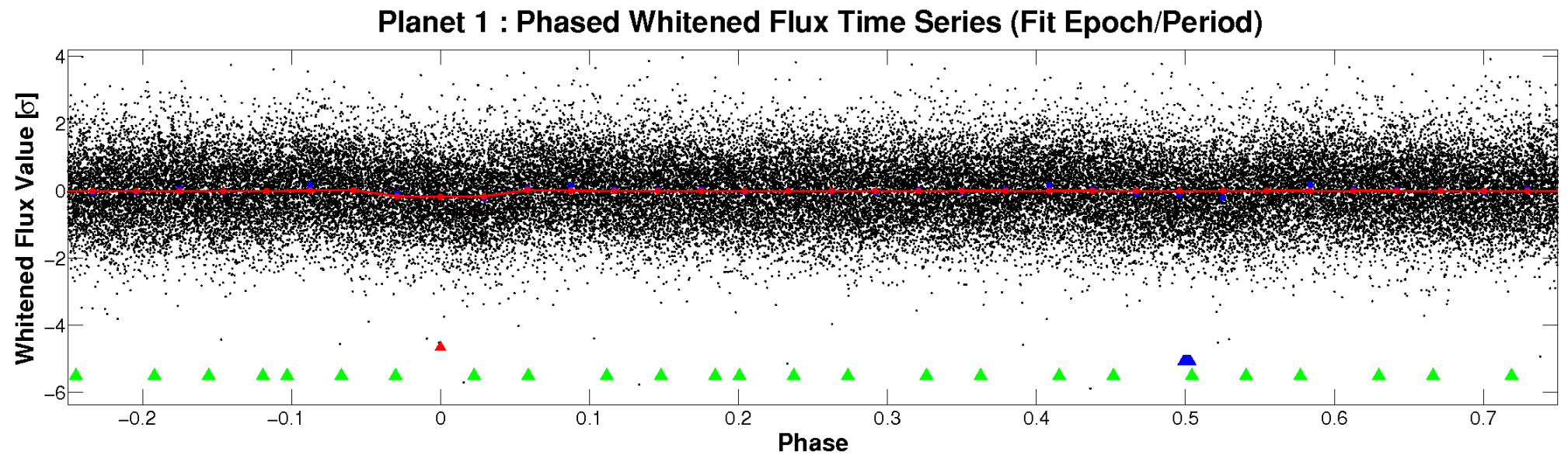
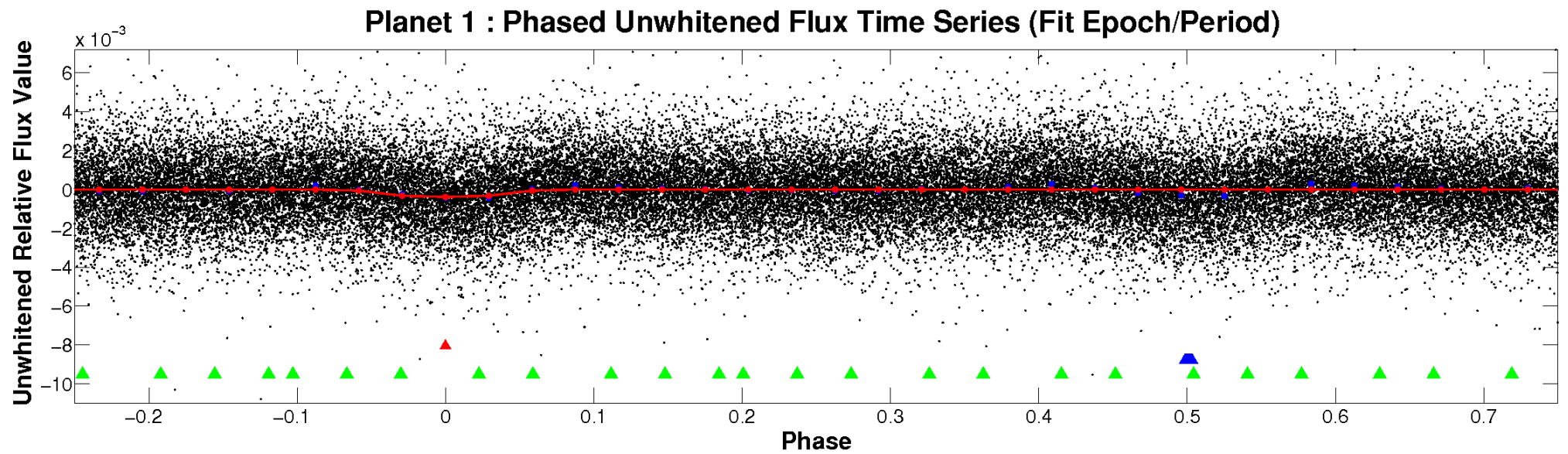


ALT Odd/Even

TCE 011044372-01

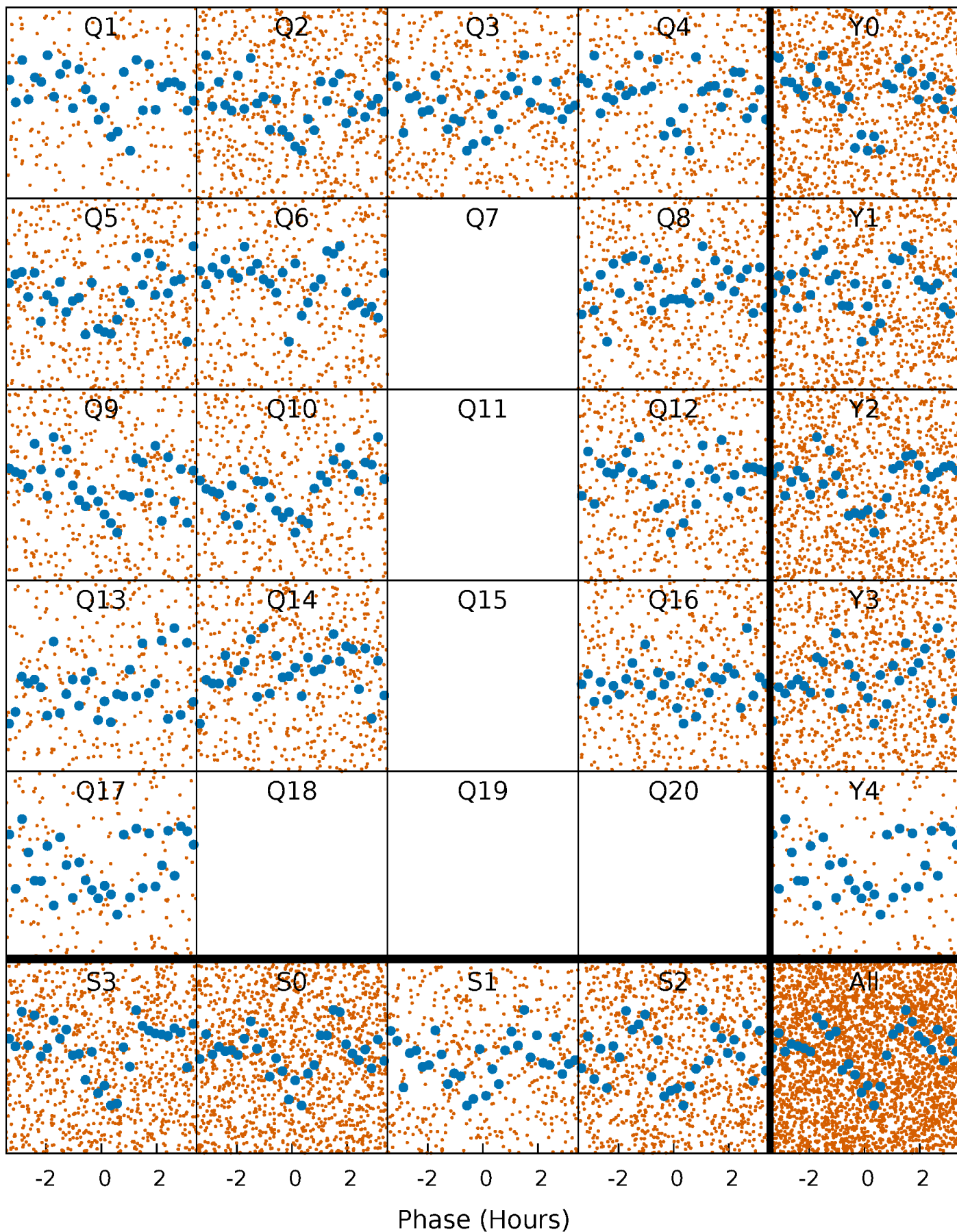


Non-Whitened Vs. Whitened Light Curve



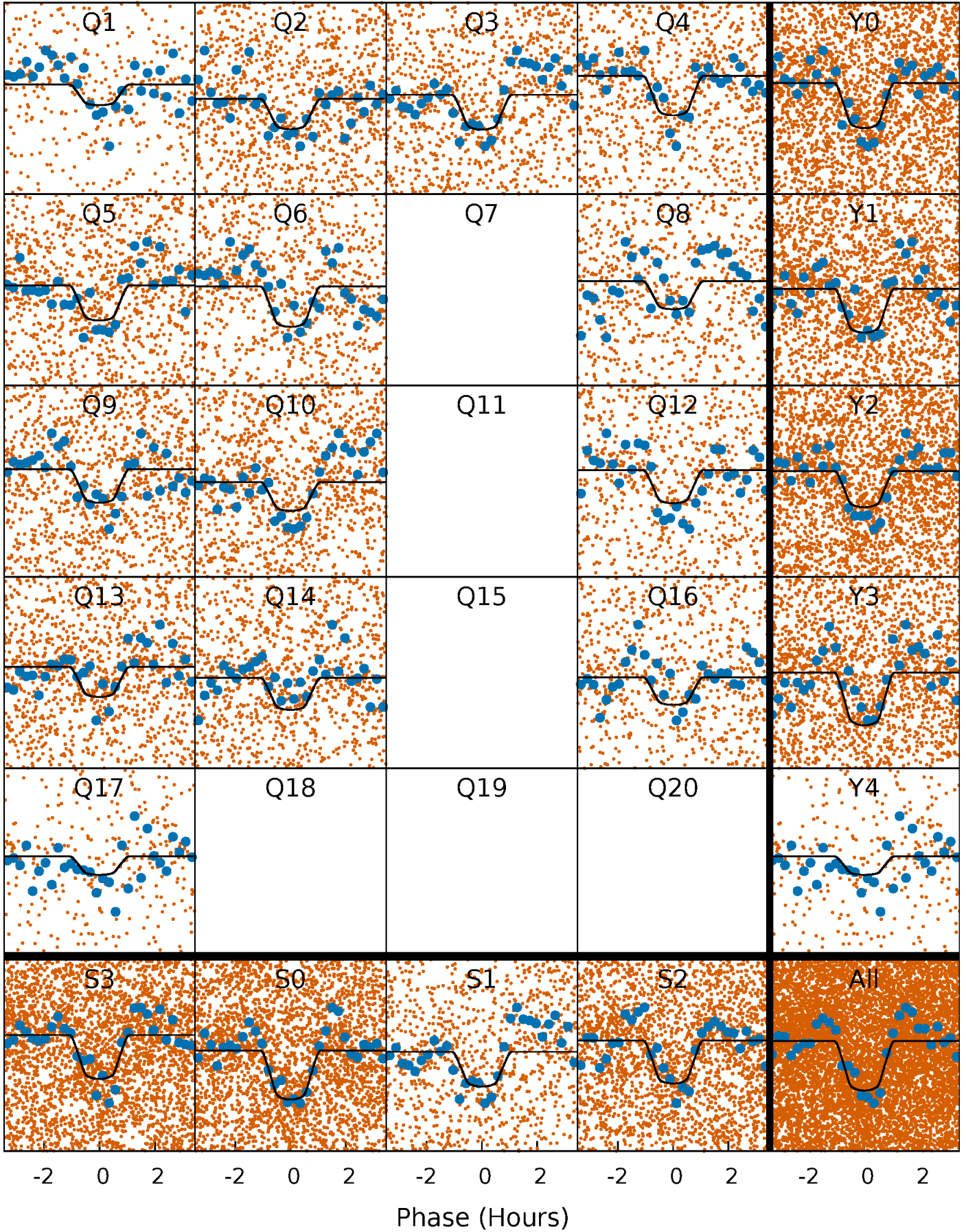
PDC Quarter-Phased Transit Curves

TCE 011044372-01 P= 0.700157 Days $T_0=131.546883$ (BKJD)



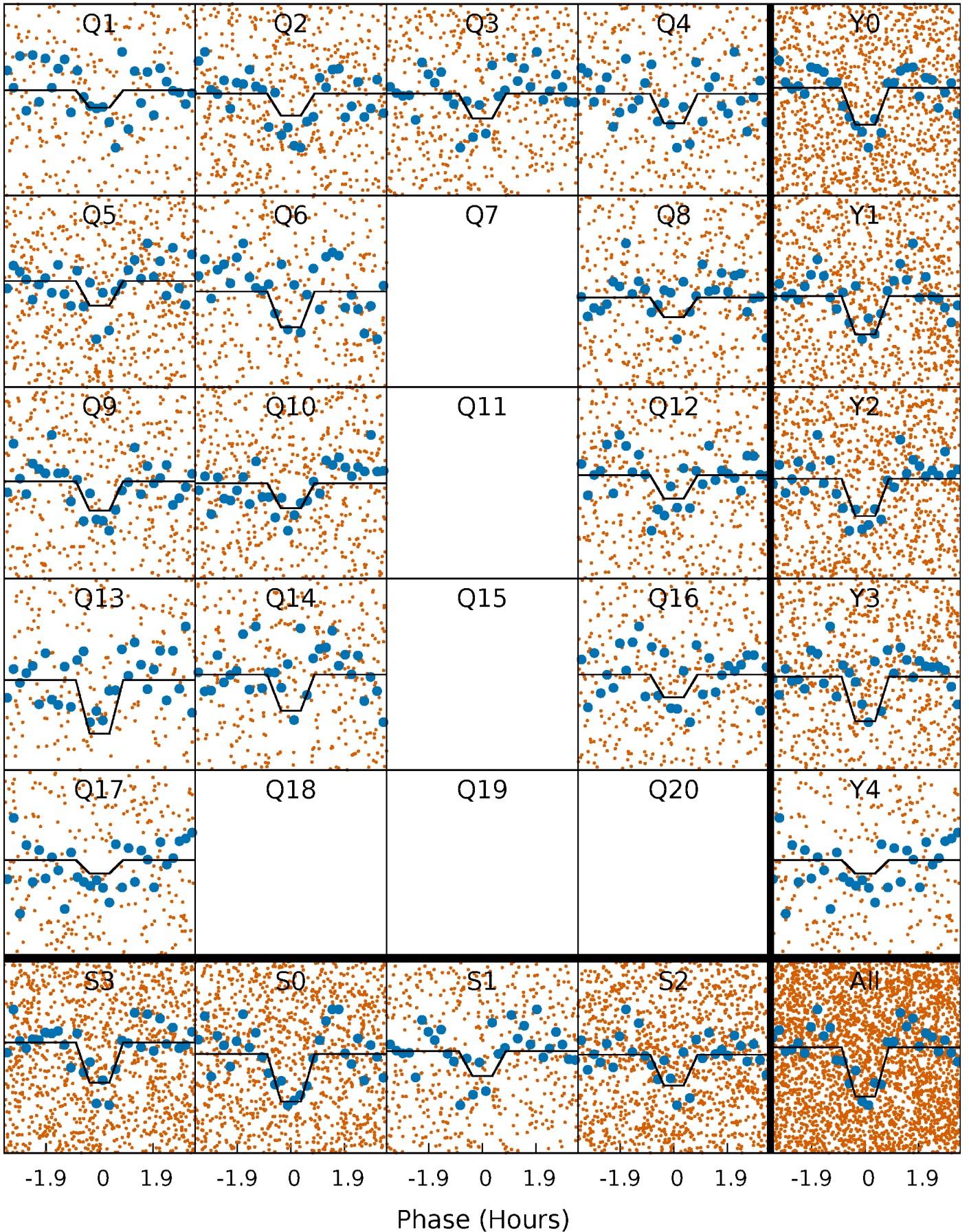
DV Quarter-Phased Transit Curves

TCE 011044372-01 P= 0.700157 Days $T_0=131.546883$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

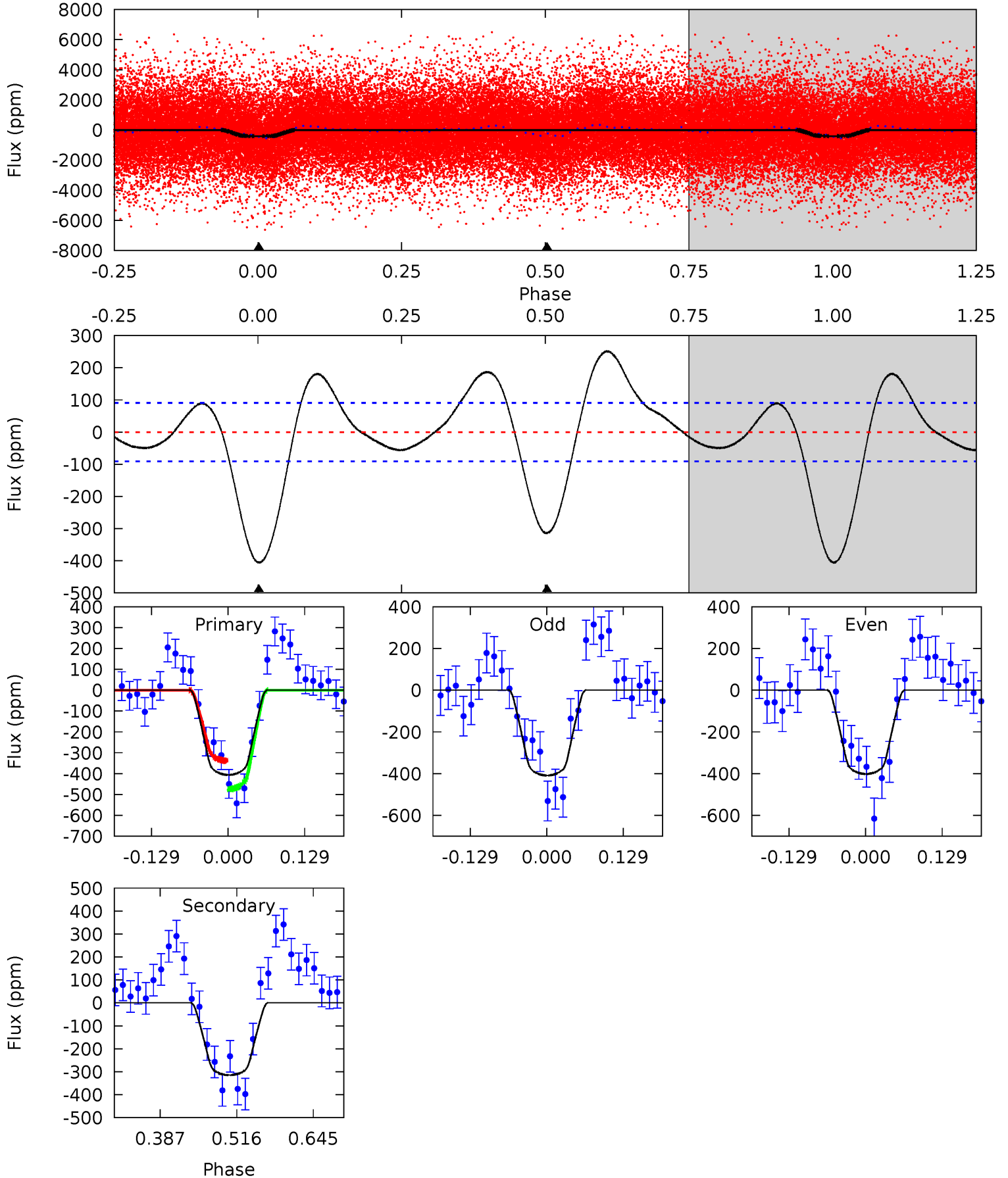
TCE 011044372-01 P= 0.700162 Days $T_0=131.547348$ (BKJD)



DV Model-Shift Uniqueness Test

011044372-01, P = 0.700157 Days, E = 130.846726 Days

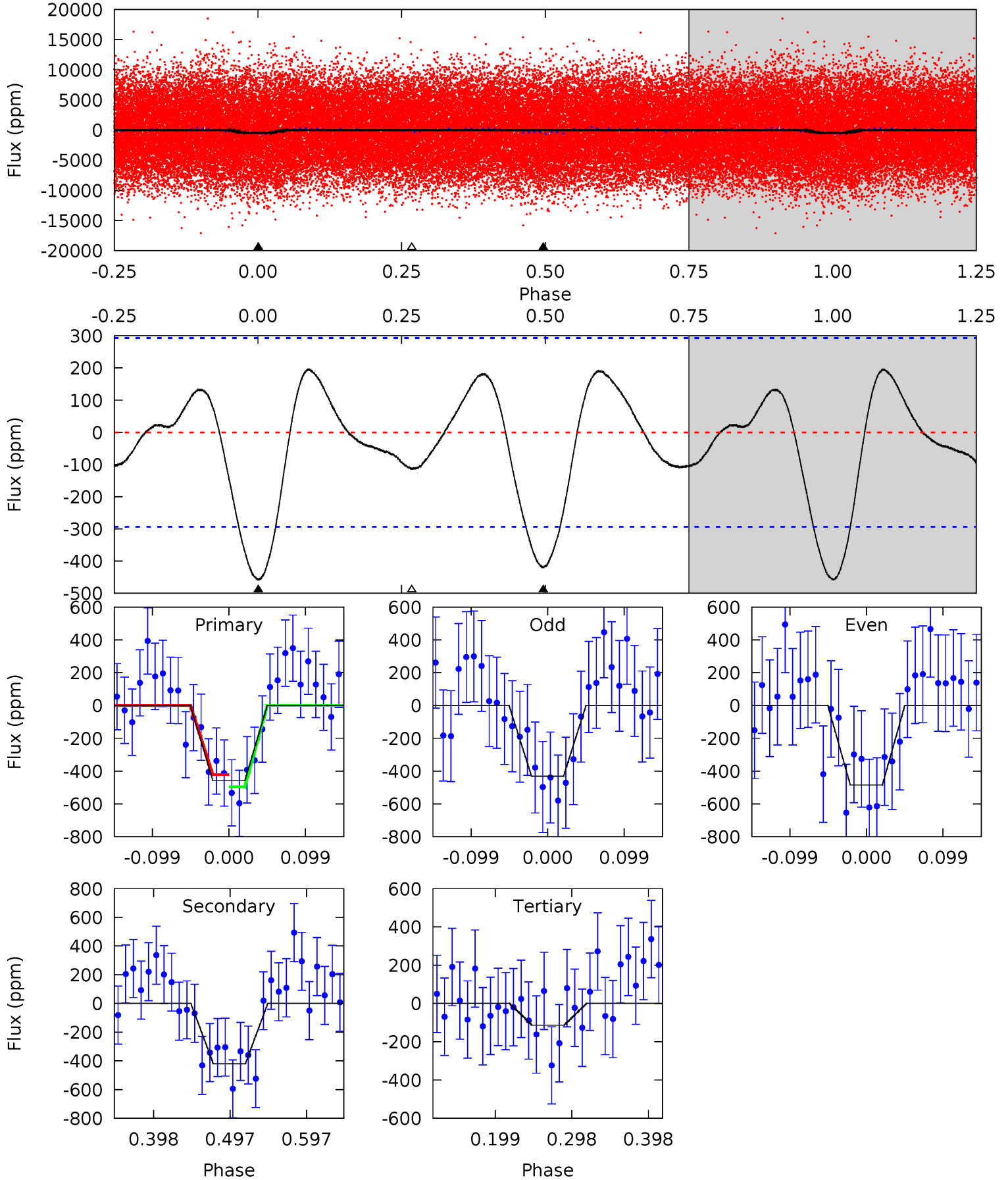
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.2	15.6	0	0	4.51	1.52	3.07	20.2	20.2	15.6	15.6	0.18	1.08	0.38	3.36



Alt Model-Shift Uniqueness Test

011044372-01, P = 0.700162 Days, E = 130.847186 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.12	6.52	1.77	0	4.57	1.65	1.40	5.36	7.12	4.76	6.52	0.42	0.95	0.30	0.58



Stellar Parameters For KIC 011044372

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	8235^{+228}_{-342}	$3.958^{+0.259}_{-0.111}$	$-0.260^{+0.150}_{-0.300}$	$2.363^{+0.399}_{-0.798}$	$1.848^{+0.093}_{-0.371}$	$0.197^{+0.317}_{-0.066}$
	+3%/-4%	+7%/-3%	+58%/-115%	+17%/-34%	+5%/-20%	+161%/-33%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011044372-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-315 ± 20	$5.14^{+1.52}_{-1.40}$	5563^{+375}_{-486}	7038^{+1458}_{-852}	$2.294^{+2.047}_{-0.922}$
Alt.	-419 ± 64	$5.30^{+1.48}_{-1.38}$	5562^{+377}_{-438}	7583^{+1720}_{-1047}	$2.866^{+2.694}_{-1.166}$

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 $A_{obs} \gg 1.0$

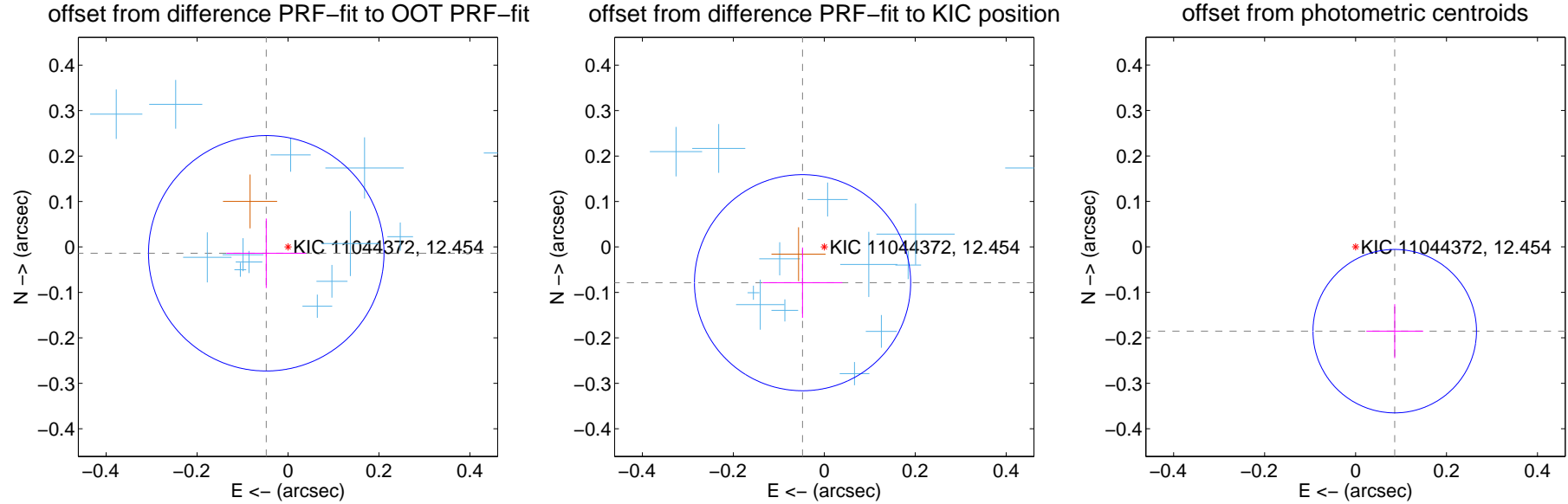
DV Centroid Data

Supplemental centroid analysis for 011044372-01. Kepler magnitude: 12.45. Transit SNR 11.56

There are 13 quarters with good PRF difference image offsets

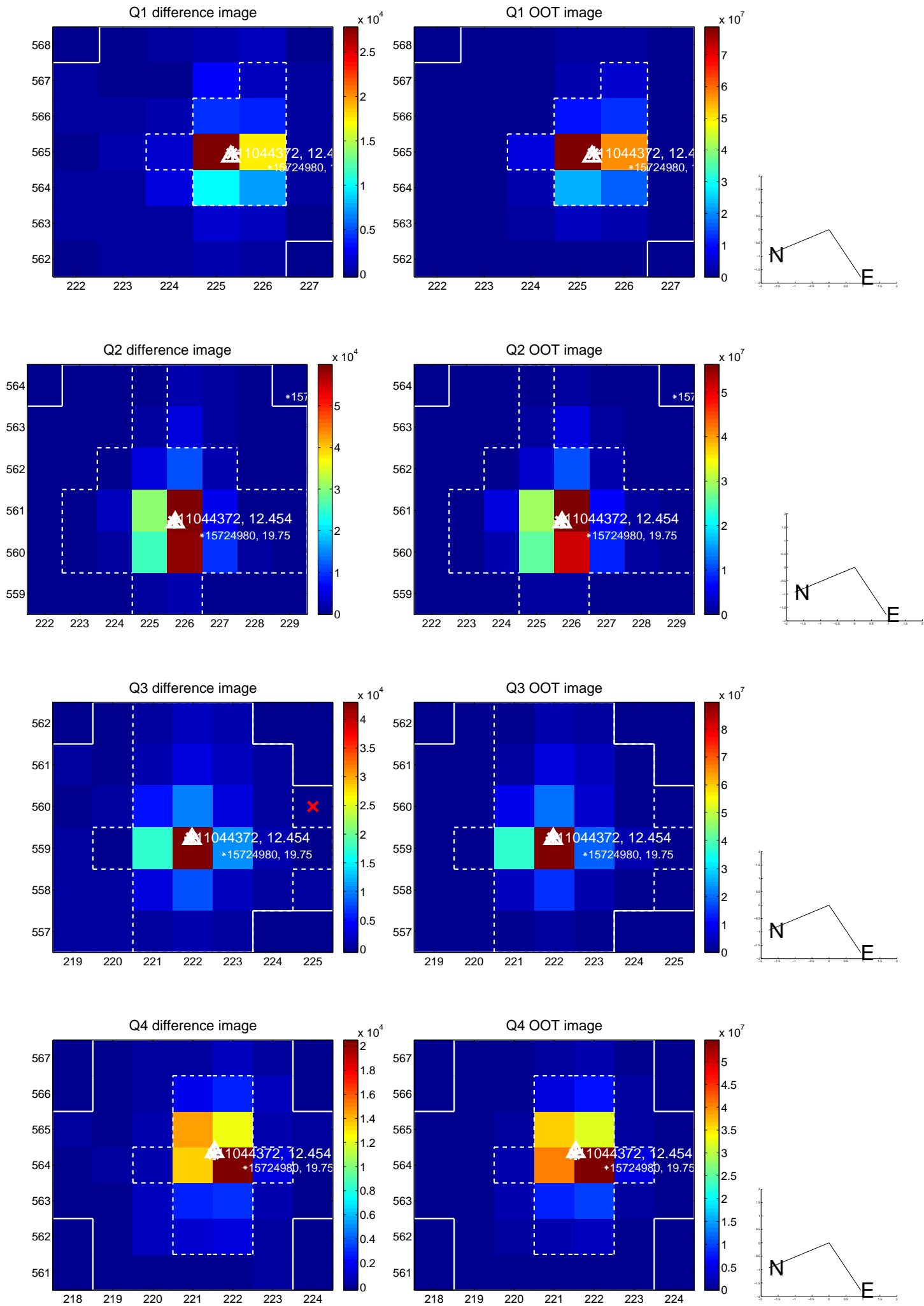
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.050 ± 0.086	0.58	0.048 ± 0.088	-0.014 ± 0.076
PRF-fit source offset from KIC position	0.092 ± 0.079	1.16	0.048 ± 0.088	-0.079 ± 0.077
photometric centroid source offset	0.20 ± 0.06	3.41	-0.09 ± 0.06	-0.19 ± 0.06

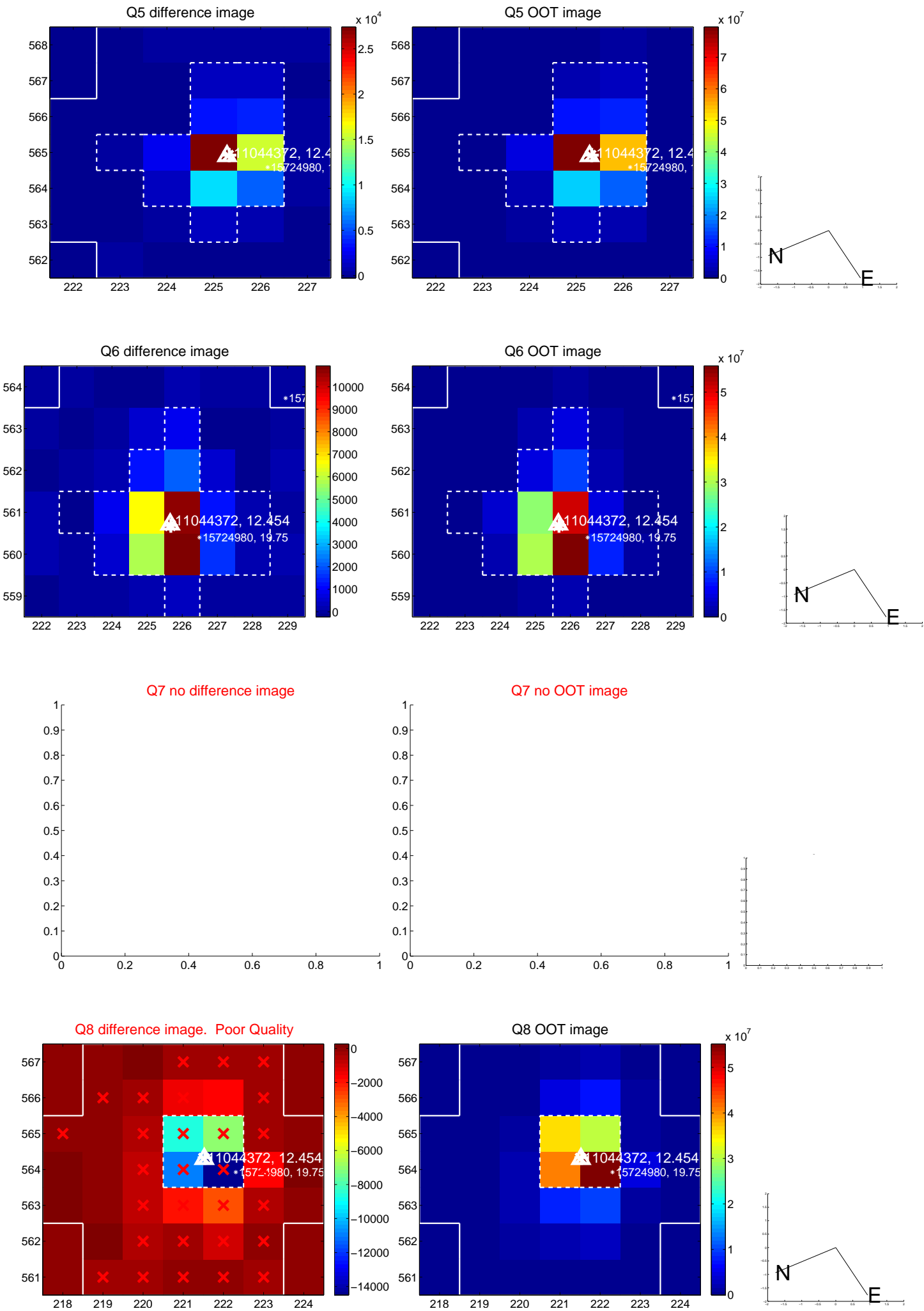


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

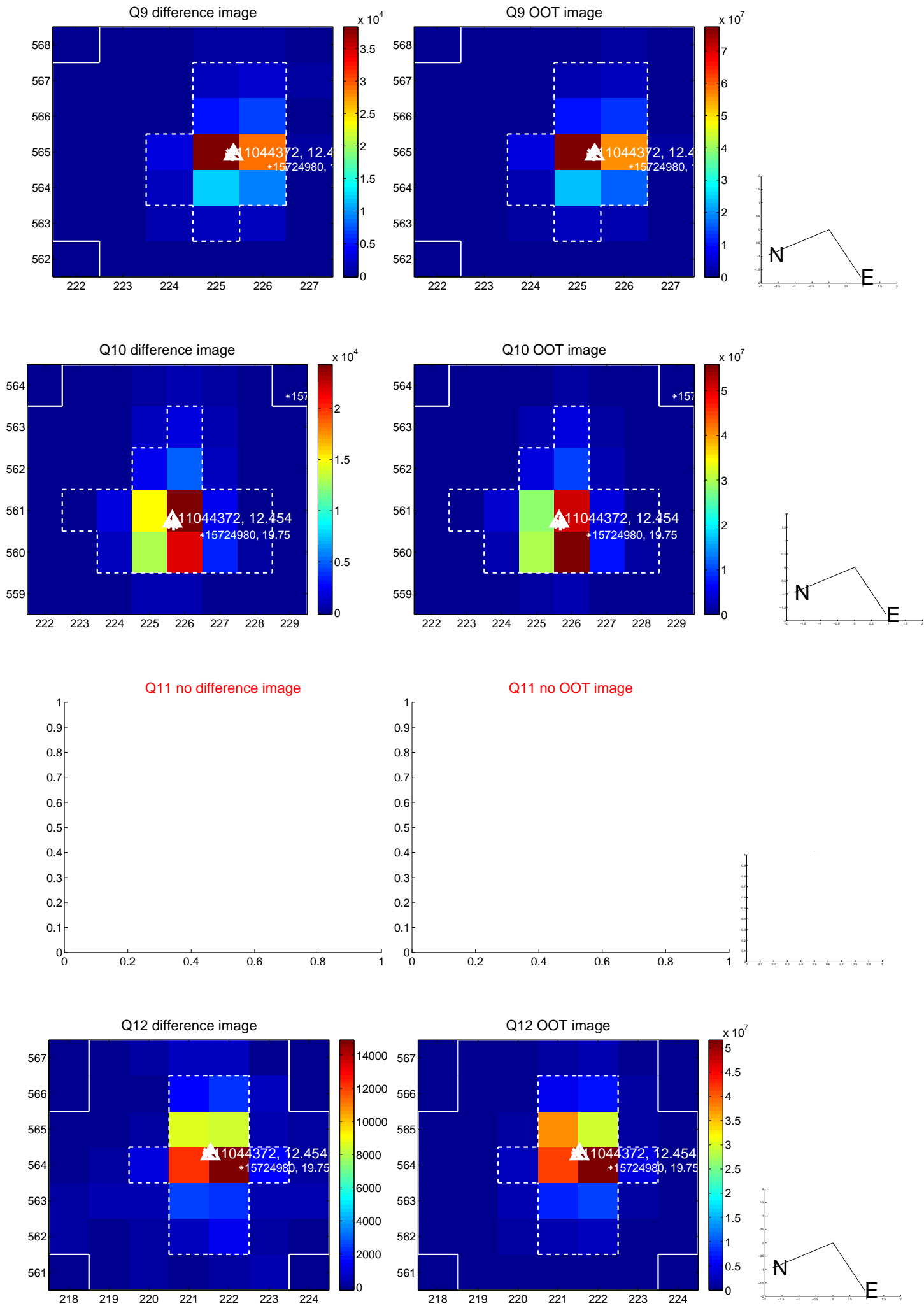
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



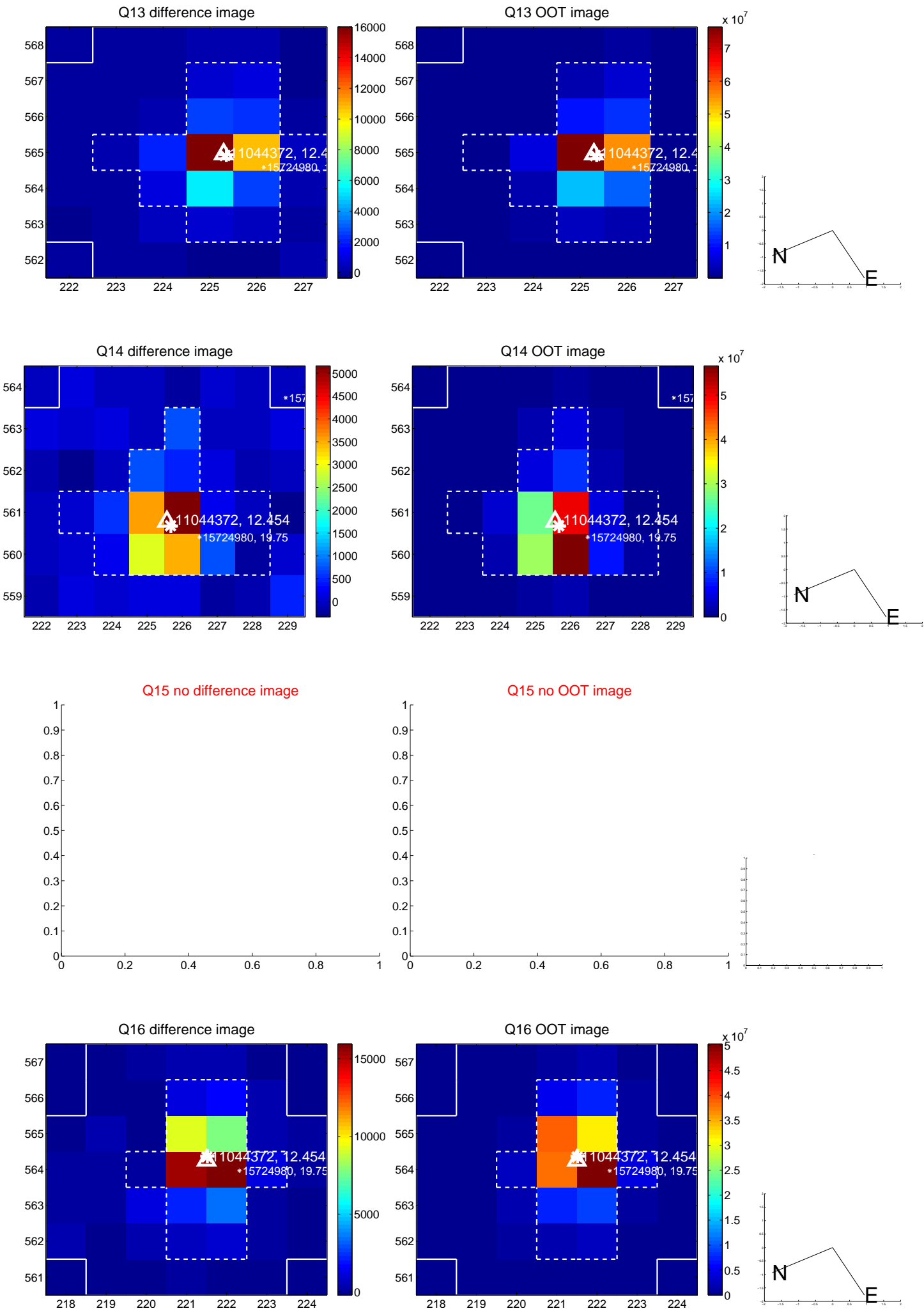
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



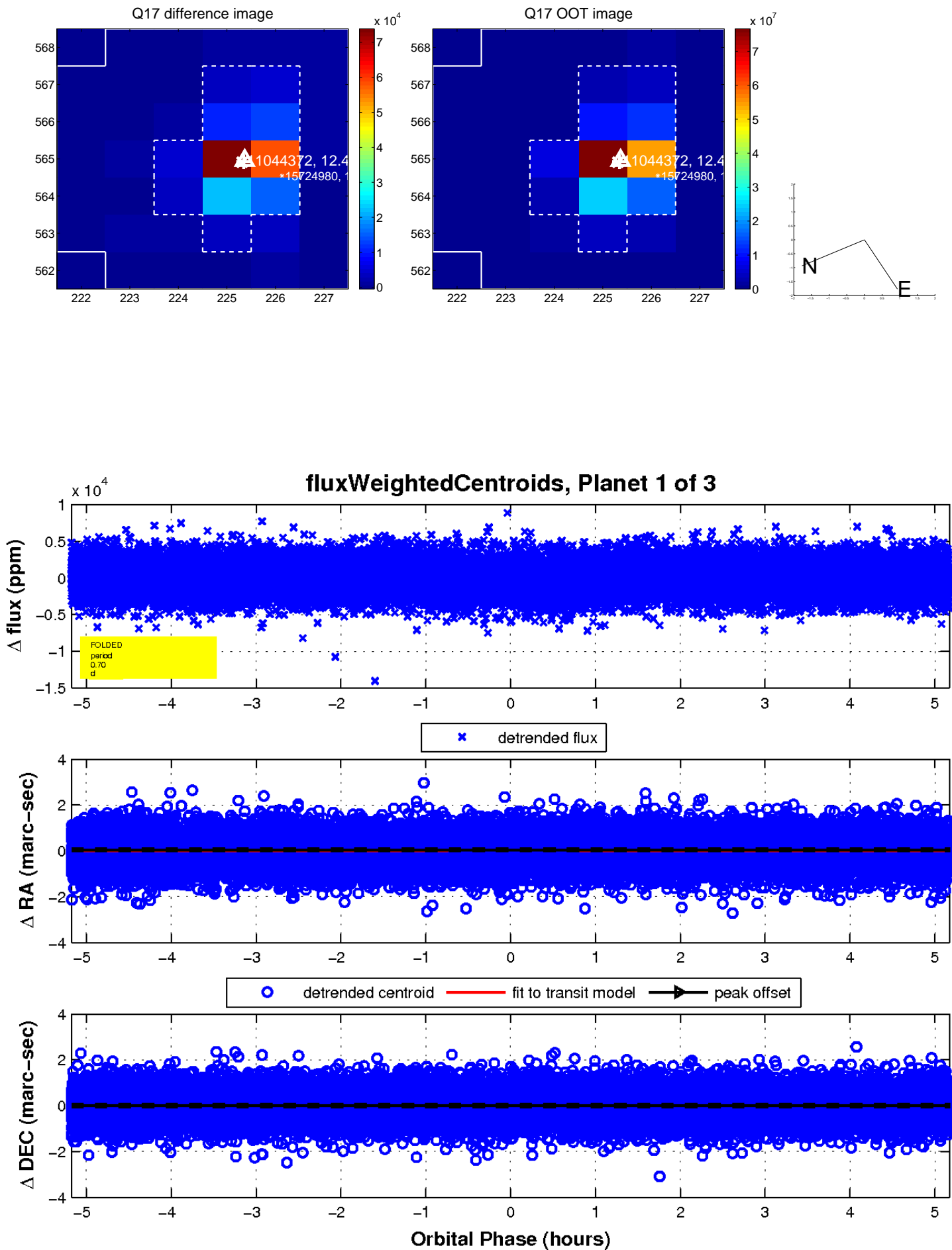
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

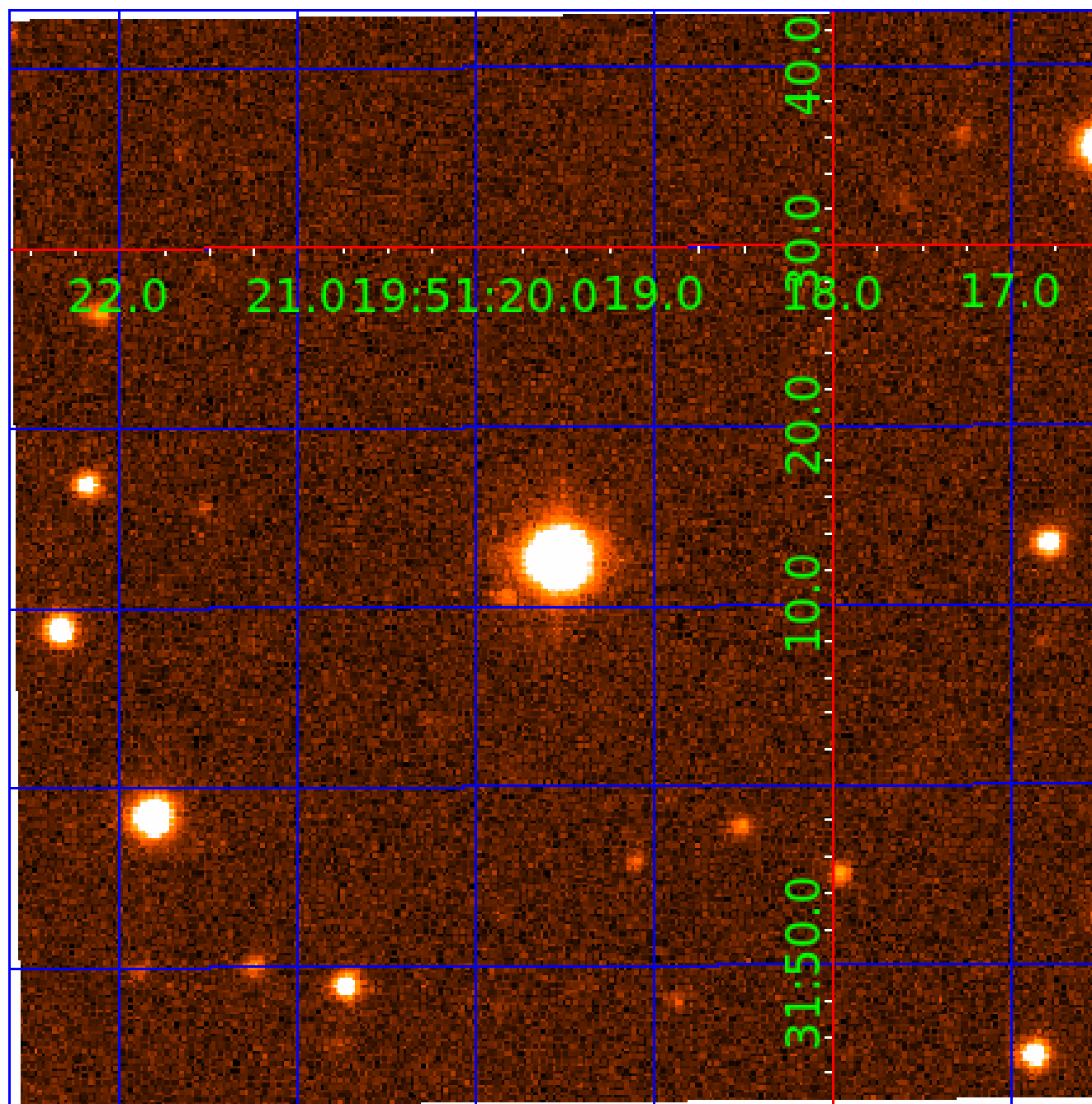


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011044372

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})
011044372-01	OBS	No	0.700157	131.546883	383.7	1.725	10.9	11.6	2.36	8235	5.40	64110.67
011044372-02	OBS	No	0.700159	131.895975	400.1	1.433	10.9	12.8	2.36	8235	5.07	64110.46
011044372-03	OBS	No	57.200317	162.482932	2895.1	2.434	7.4	7.9	2.36	8235	12.99	180.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011044372-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
011044372-02	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011044372-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

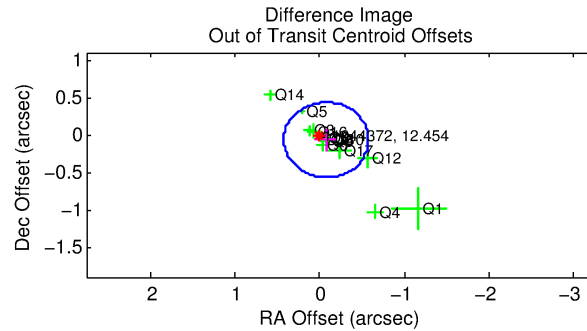
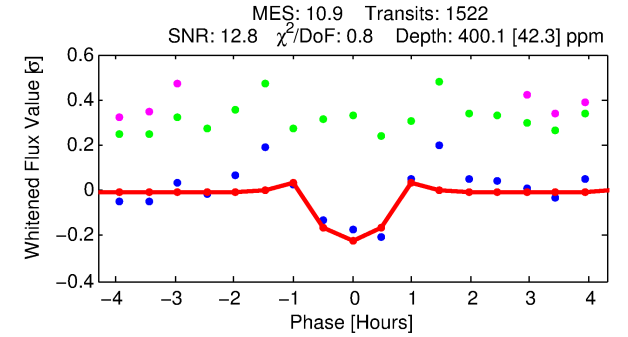
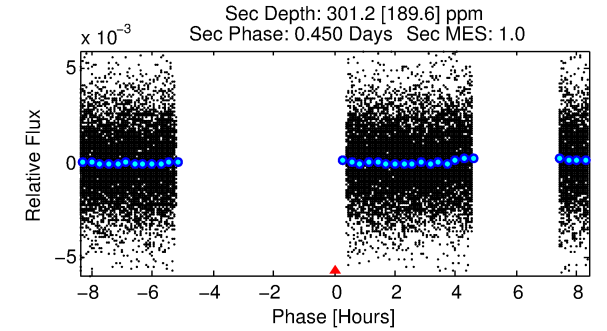
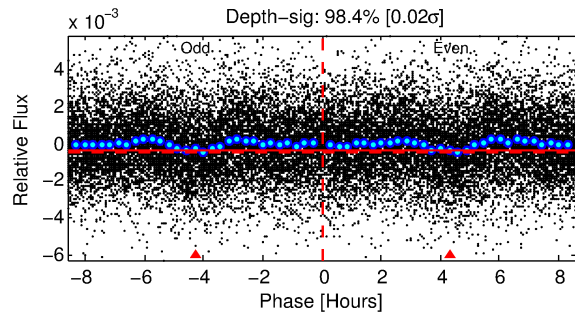
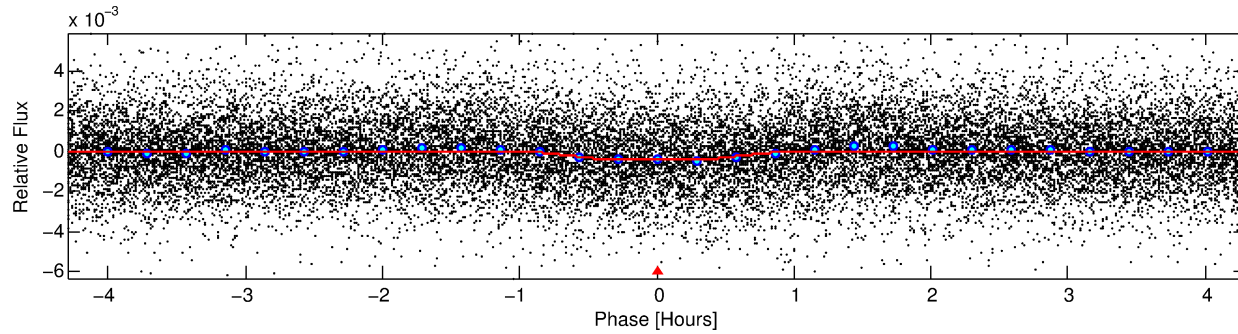
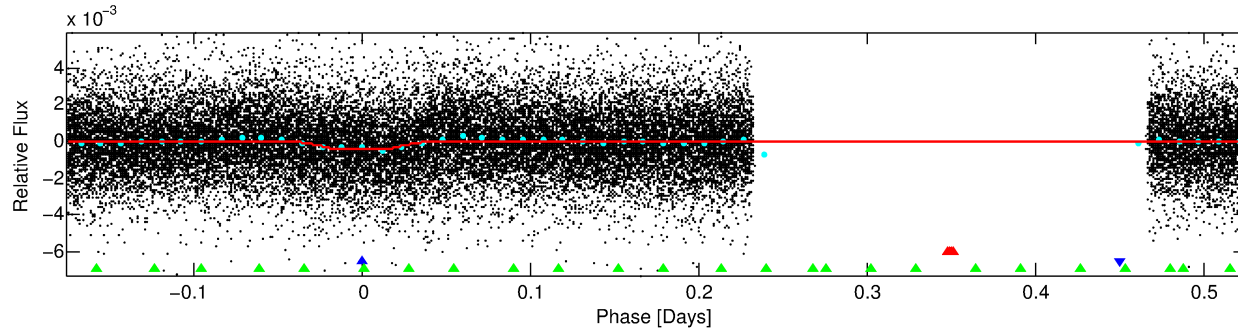
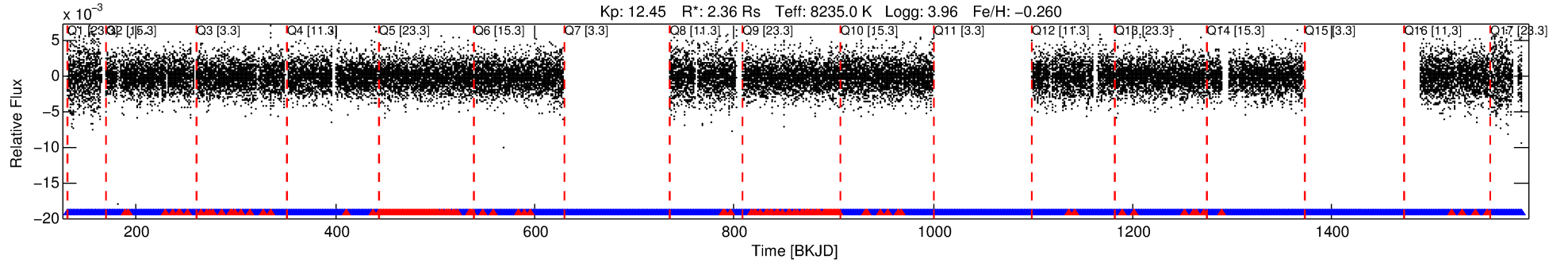
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011044372-02

No Significant Match Found

DV One-Page Summary

KIC: 11044372 Candidate: 2 of 3 Period: 0.700 d



DV Fit Results:

Period = 0.70016 [0.00001] d
Epoch = 131.8960 [0.0013] BKJD
Rp/R* = 0.0196 [0.0070]
a/R* = 2.93 [5.22]
b = 0.69 [1.58]
Seff = 64110.46 [31168.00]
Teff = 4057 [493] K
Rp = 5.07 [2.49] Re
a = 0.0189 [0.0057] AU
Ag = 2.32 [2.45] [0.54 σ]
Teffp = 7740 [1870] K [1.90 σ]

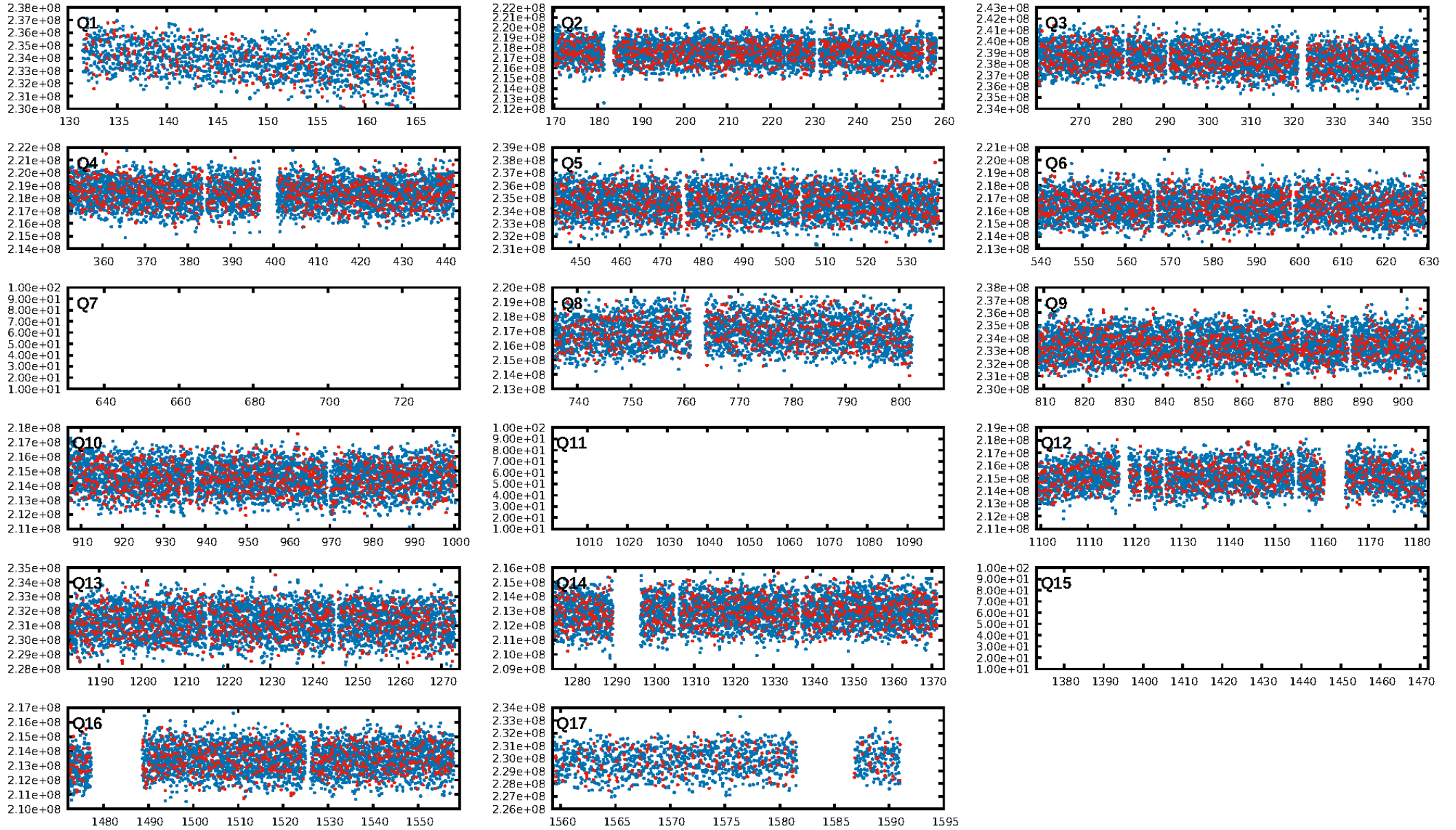
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [480.04 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.99e-20
RollingBand-fgt: 0.87 [1245/1436]
GhostDiagnostic-chr: 0.7726
Centroid-sig: 67.7%
Centroid-so: 0.196 arcsec [3.20 σ]
OotOffset-rm: 0.106 arcsec [0.63 σ]
KicOffset-rm: 0.149 arcsec [0.97 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [14/14]

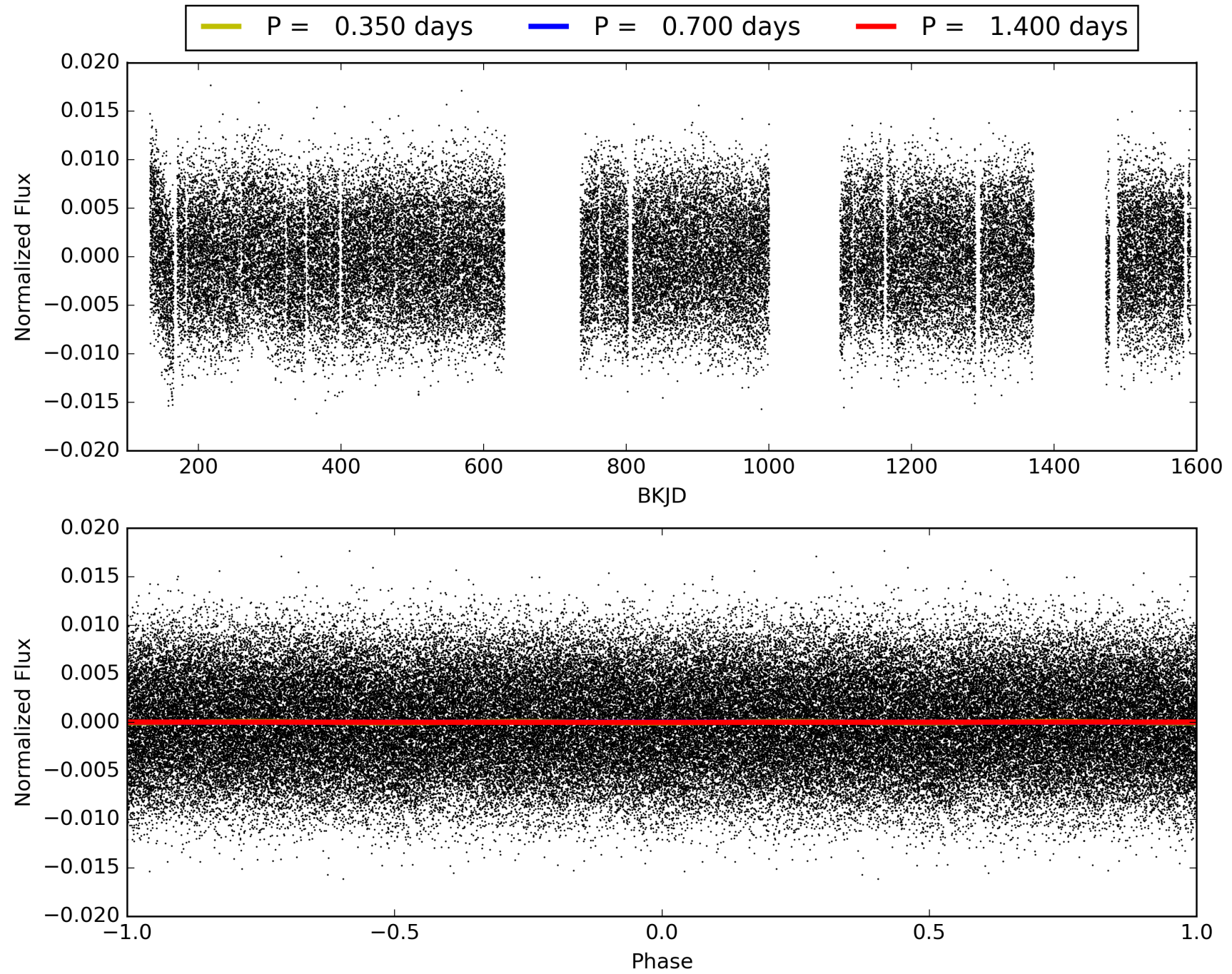
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:46:07 Z

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

TCE 011044372-02, PDC Light Curves

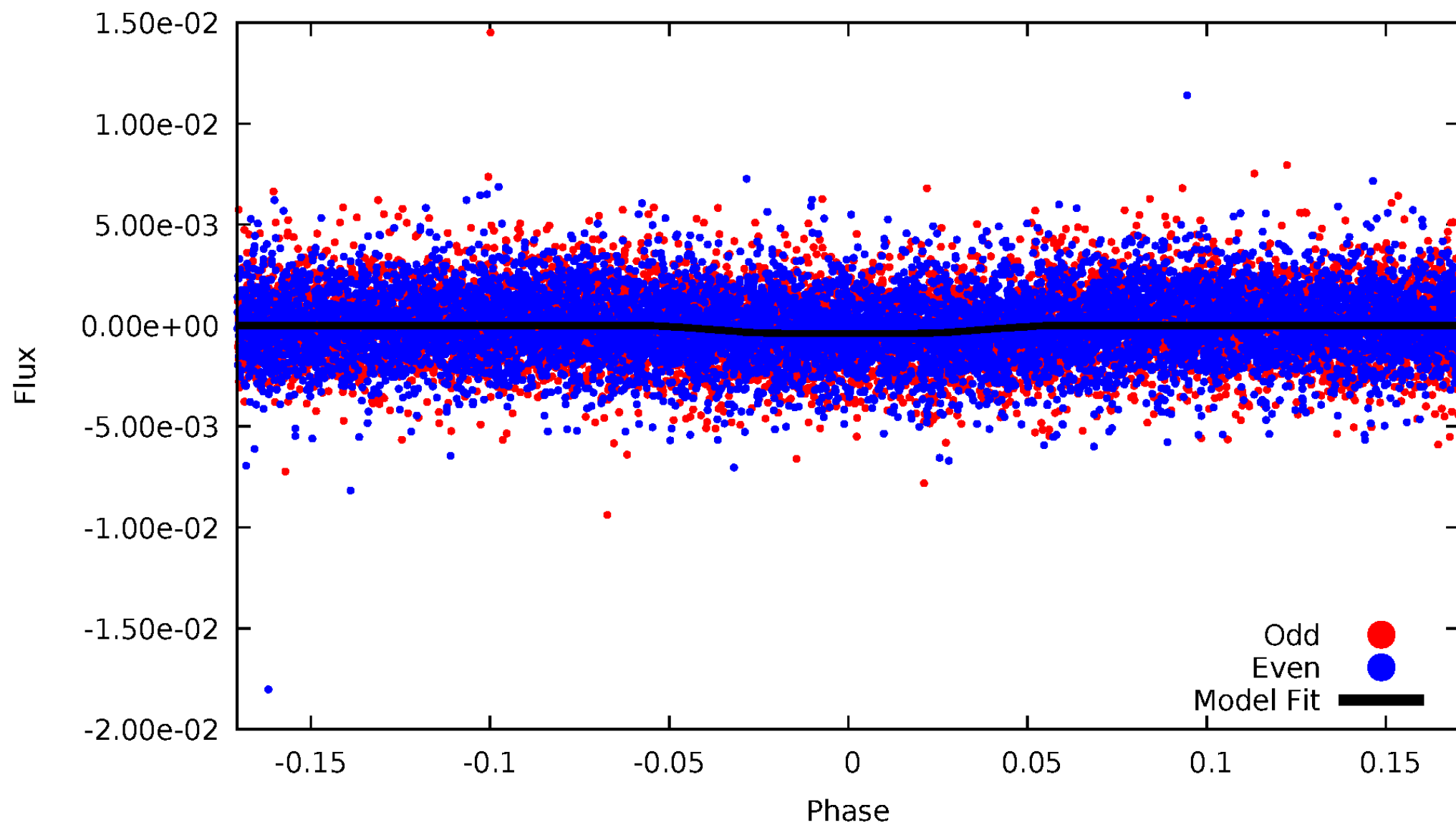


TCE 011044372-02



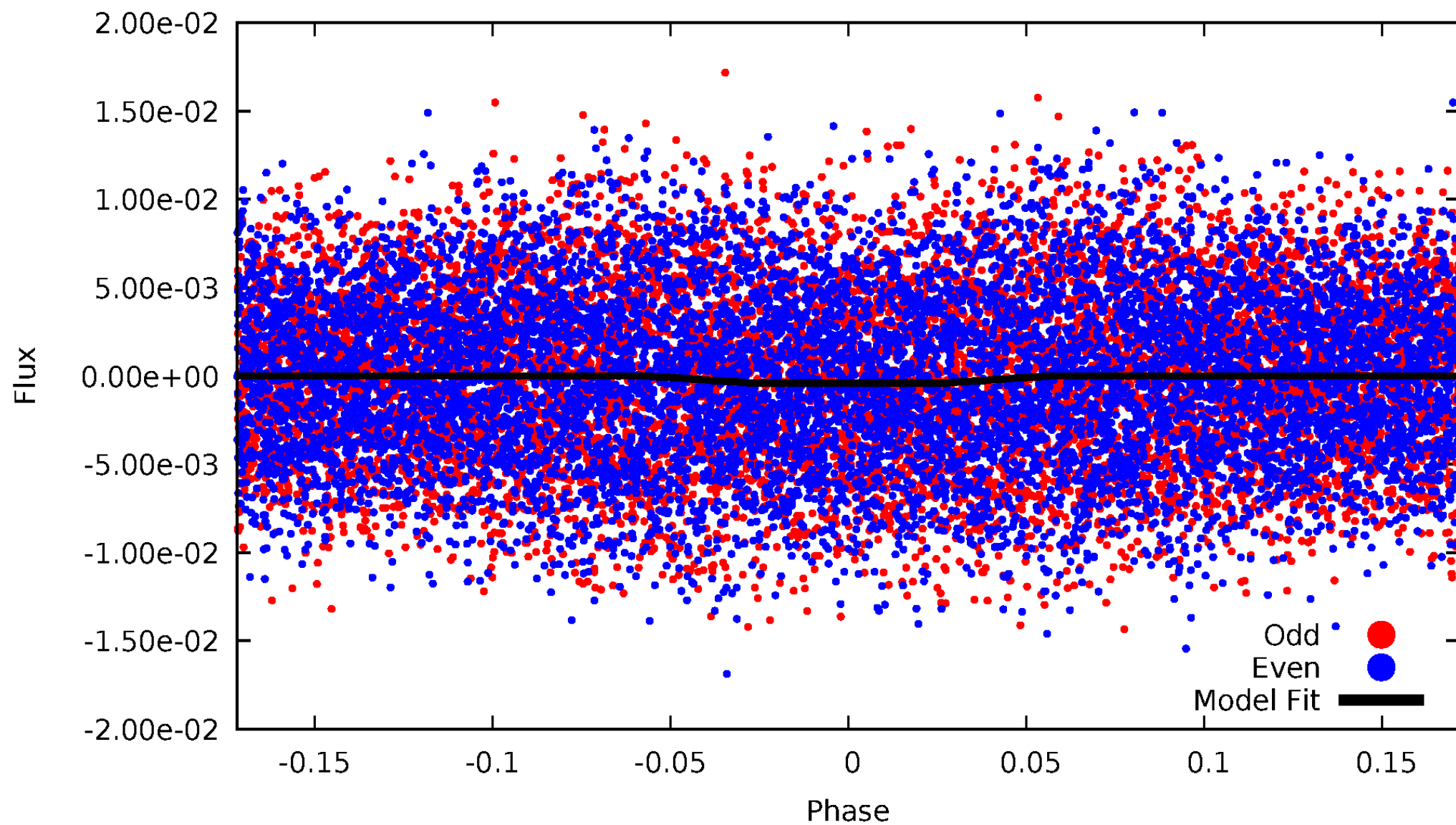
DV Odd/Even

TCE 011044372-02



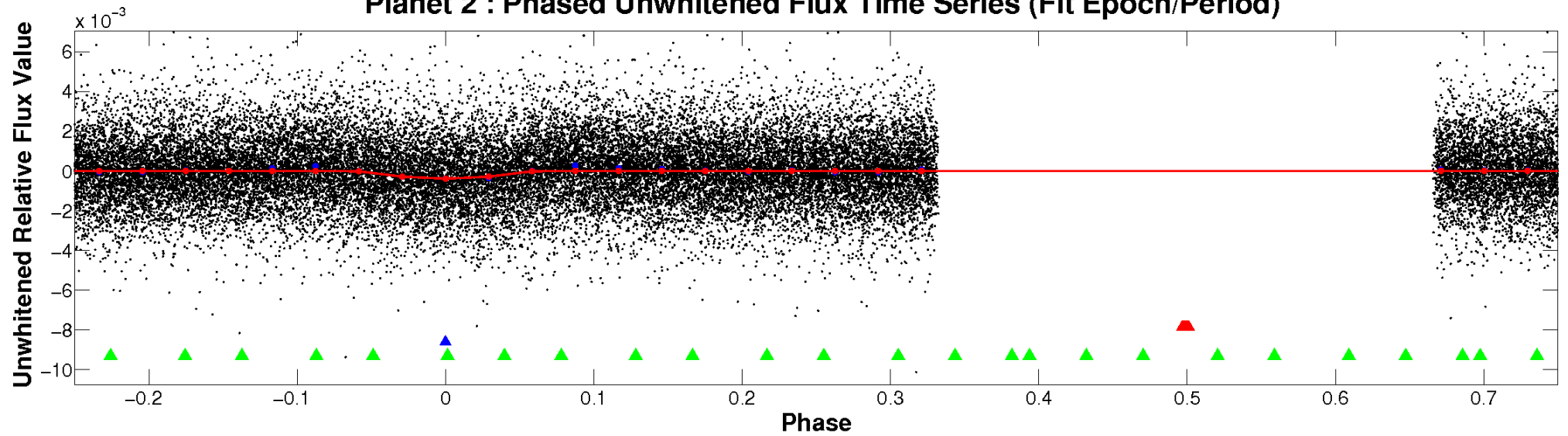
ALT Odd/Even

TCE 011044372-02

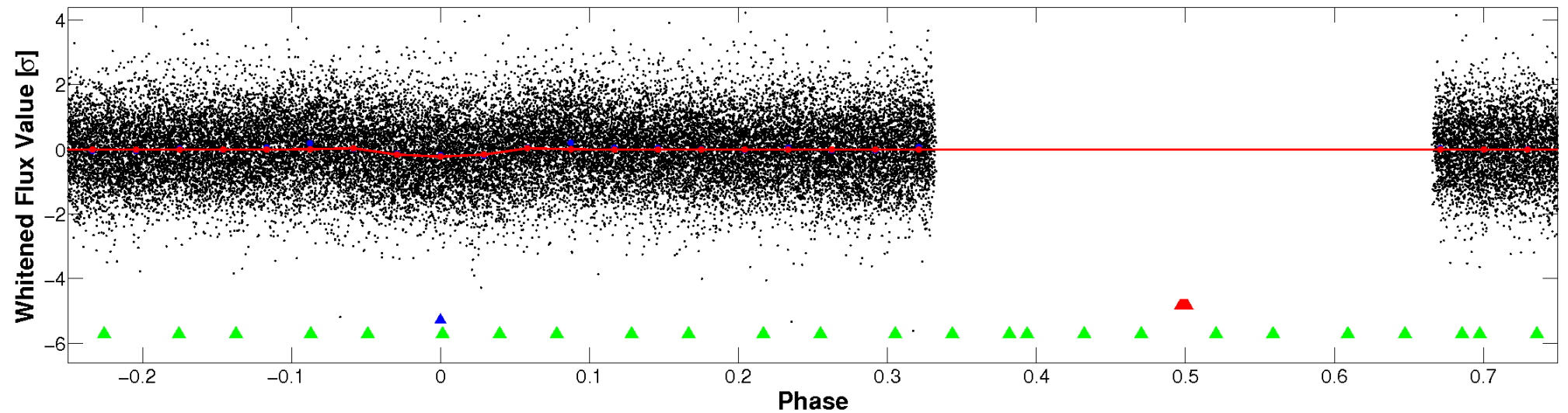


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

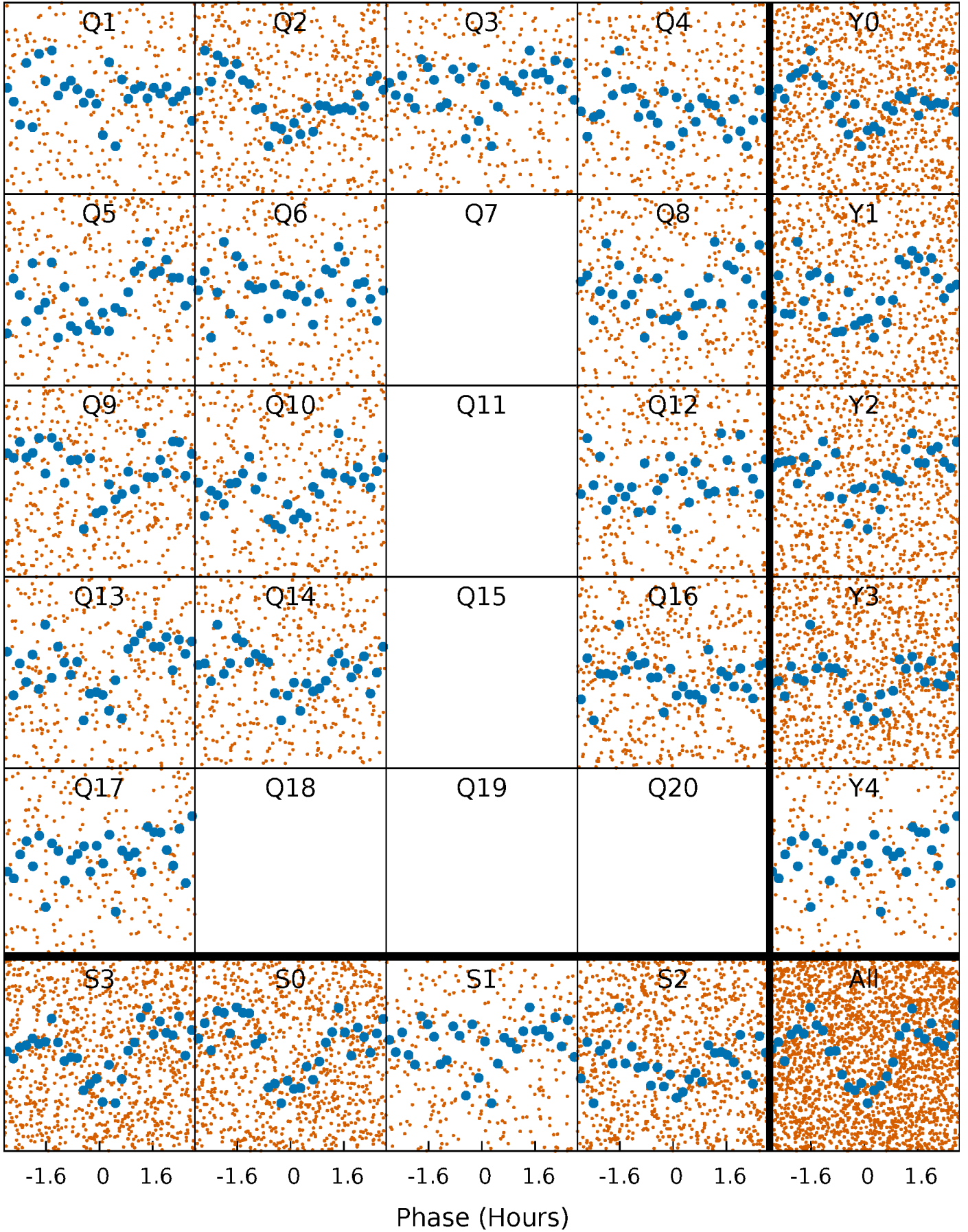


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



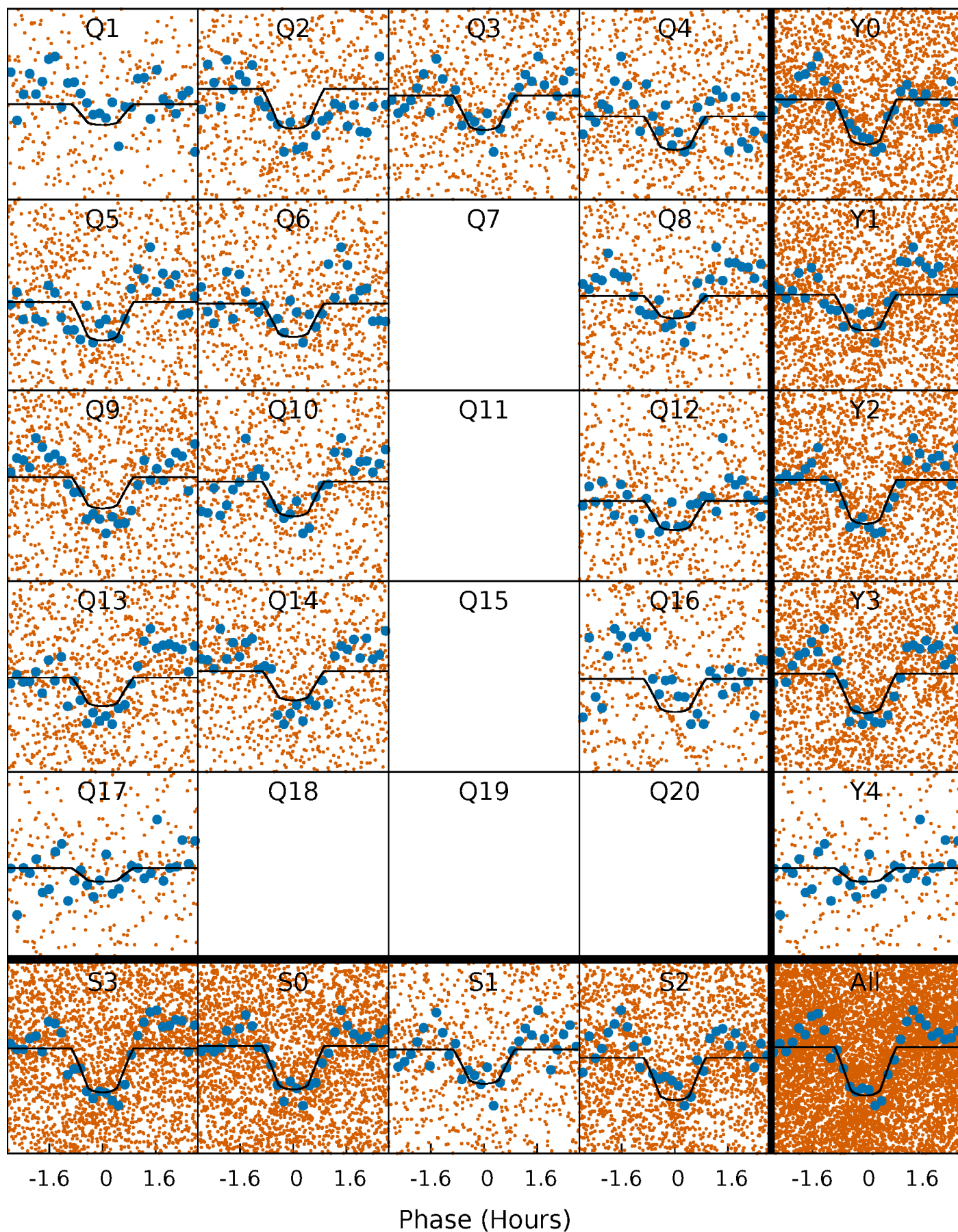
PDC Quarter-Phased Transit Curves

TCE 011044372-02 P= 0.700159 Days $T_0=131.895975$ (BKJD)



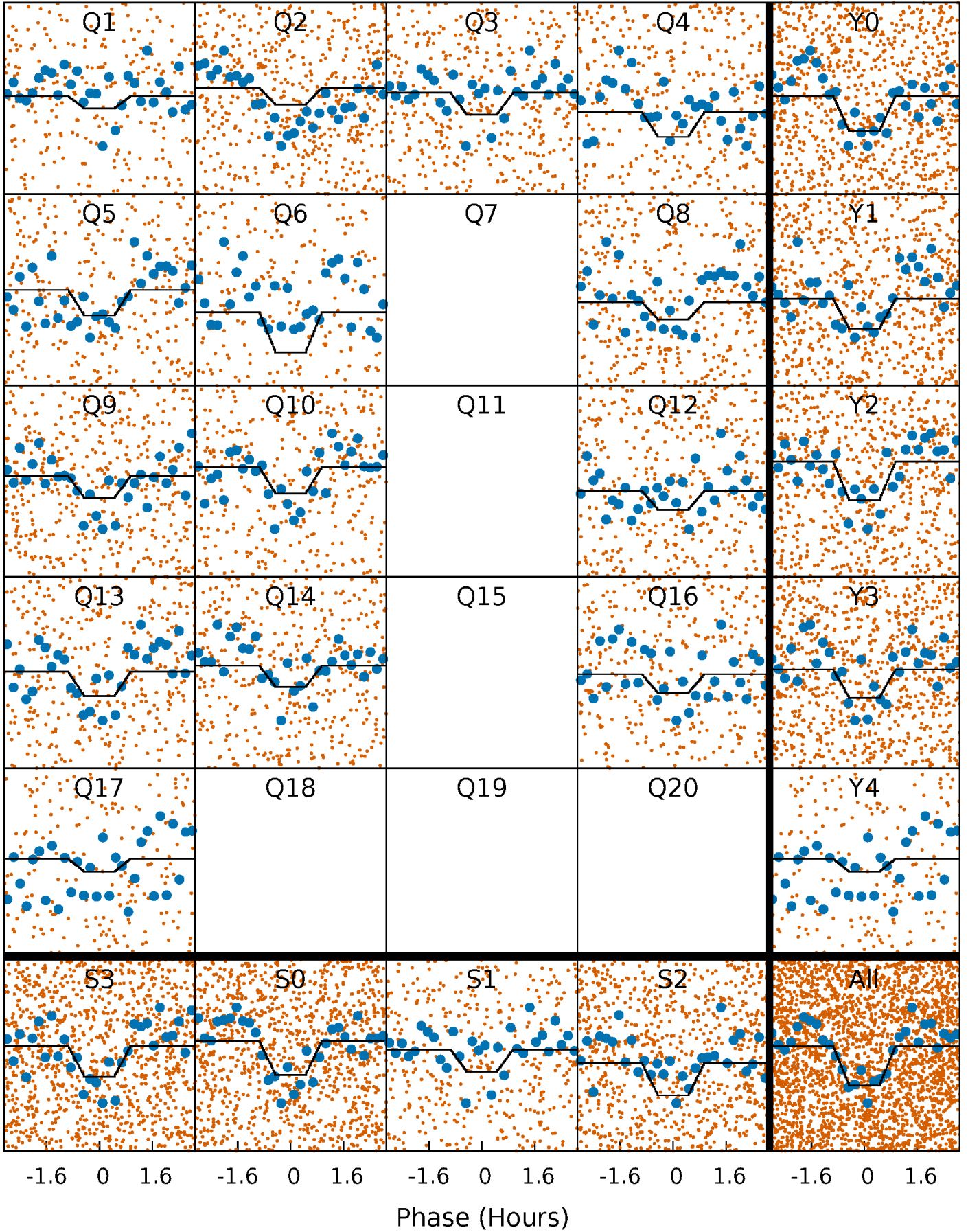
DV Quarter-Phased Transit Curves

TCE 011044372-02 P= 0.700159 Days $T_0=131.895975$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

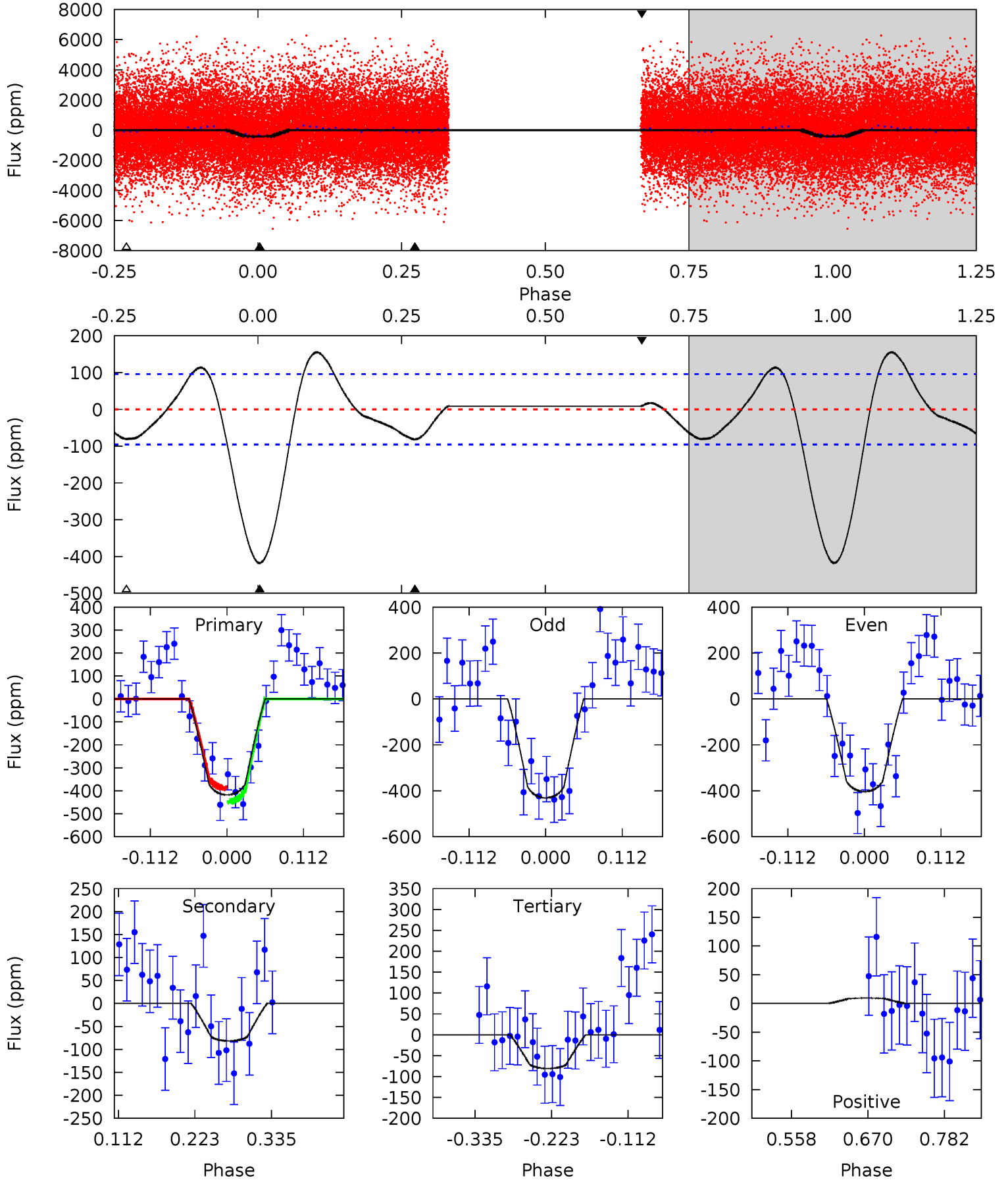
TCE 011044372-02 P= 0.700162 Days $T_0=131.894642$ (BKJD)



DV Model-Shift Uniqueness Test

011044372-02, P = 0.700159 Days, E = 131.195816 Days

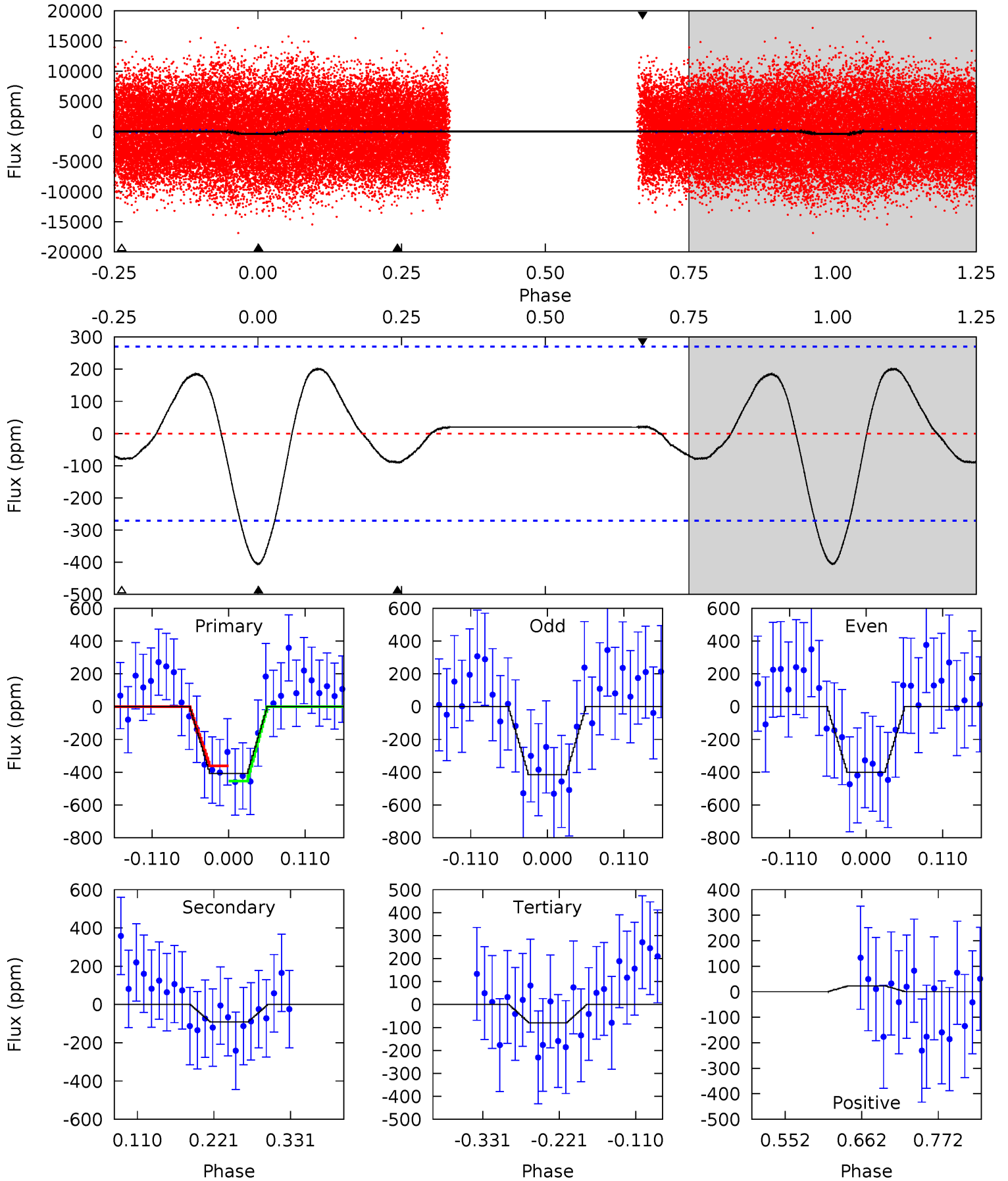
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	3.88	3.83	0.44	4.54	1.59	2.86	16.0	19.4	0.04	3.43	0.64	0.91	0.27	1.41



Alt Model-Shift Uniqueness Test

011044372-02, P = 0.700162 Days, E = 131.194480 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.85	1.54	1.35	0.38	4.54	1.60	1.51	5.50	6.47	0.19	1.15	0.12	0.98	0.33	0.76



Stellar Parameters For KIC 011044372

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8235^{+228}_{-342}	$3.958^{+0.259}_{-0.111}$	$-0.260^{+0.150}_{-0.300}$	$2.363^{+0.399}_{-0.798}$	$1.848^{+0.093}_{-0.371}$	$0.197^{+0.317}_{-0.066}$
	+3%/-4%	+7%/-3%	+58%/-115%	+17%/-34%	+5%/-20%	+161%/-33%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011044372-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-82 ± 21	$4.74^{+1.97}_{-1.88}$	5596^{+358}_{-480}	4806^{+1840}_{-1707}	$0.703^{+1.191}_{-0.375}$
Alt.	-91 ± 60	$4.96^{+2.00}_{-1.99}$	5608^{+339}_{-466}	4755^{+2068}_{-8648}	$0.656^{+1.484}_{-0.460}$

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 $A_{obs} \gg 1.0$

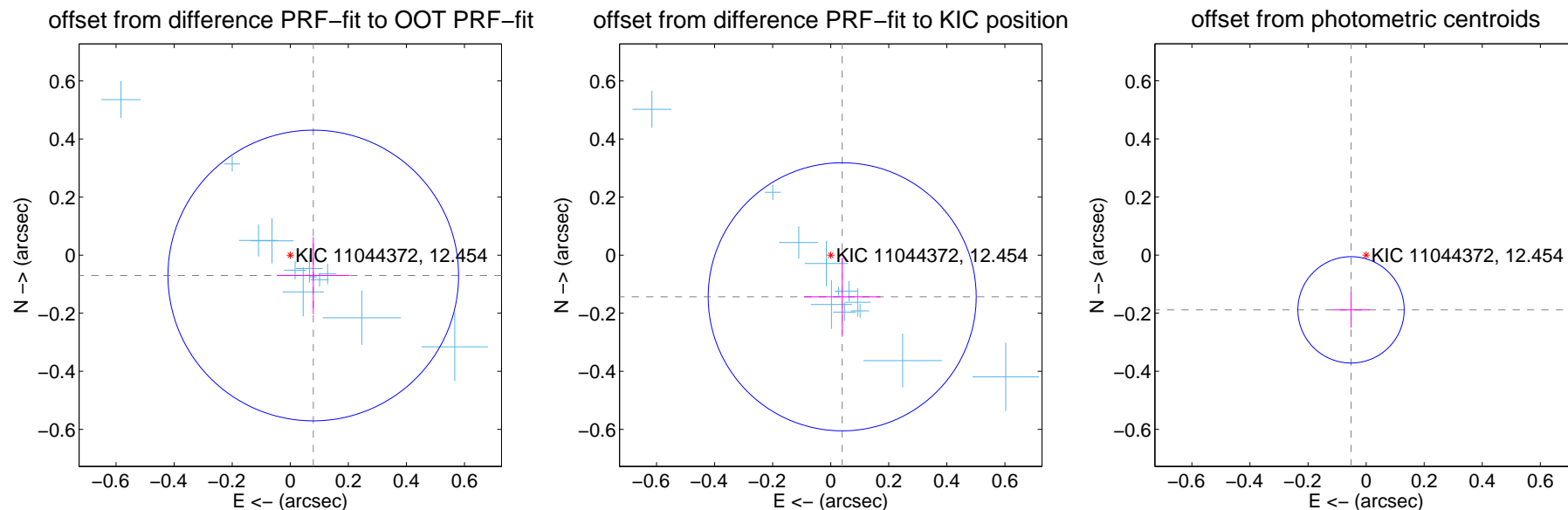
DV Centroid Data

Supplemental centroid analysis for 011044372-02. Kepler magnitude: 12.45. Transit SNR 12.76

There are 13 quarters with good PRF difference image offsets

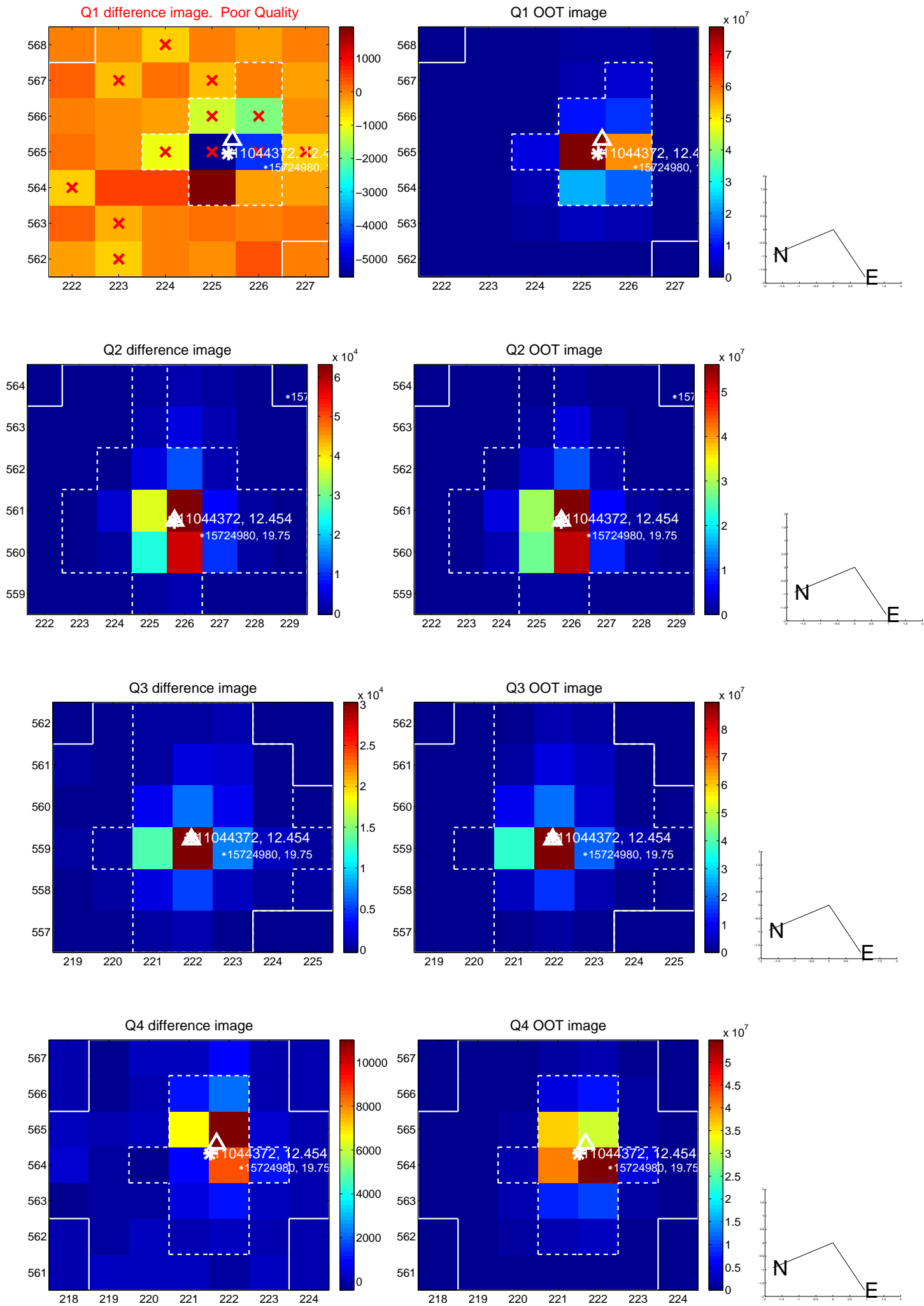
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.106 ± 0.167	0.63	-0.079 ± 0.126	-0.070 ± 0.132
PRF-fit source offset from KIC position	0.149 ± 0.154	0.97	-0.040 ± 0.132	-0.143 ± 0.132
photometric centroid source offset	0.20 ± 0.06	3.20	0.05 ± 0.06	-0.19 ± 0.06

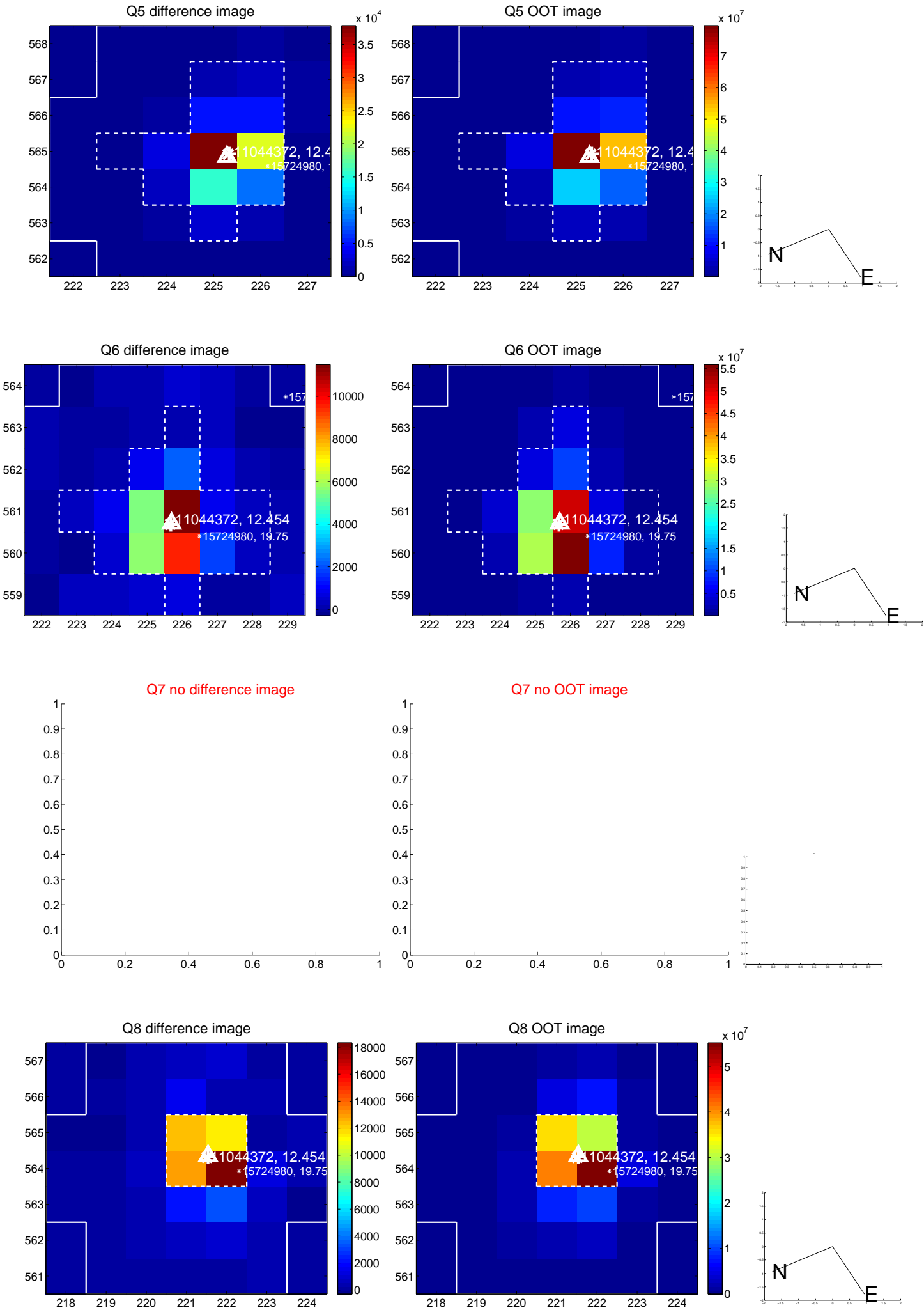


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

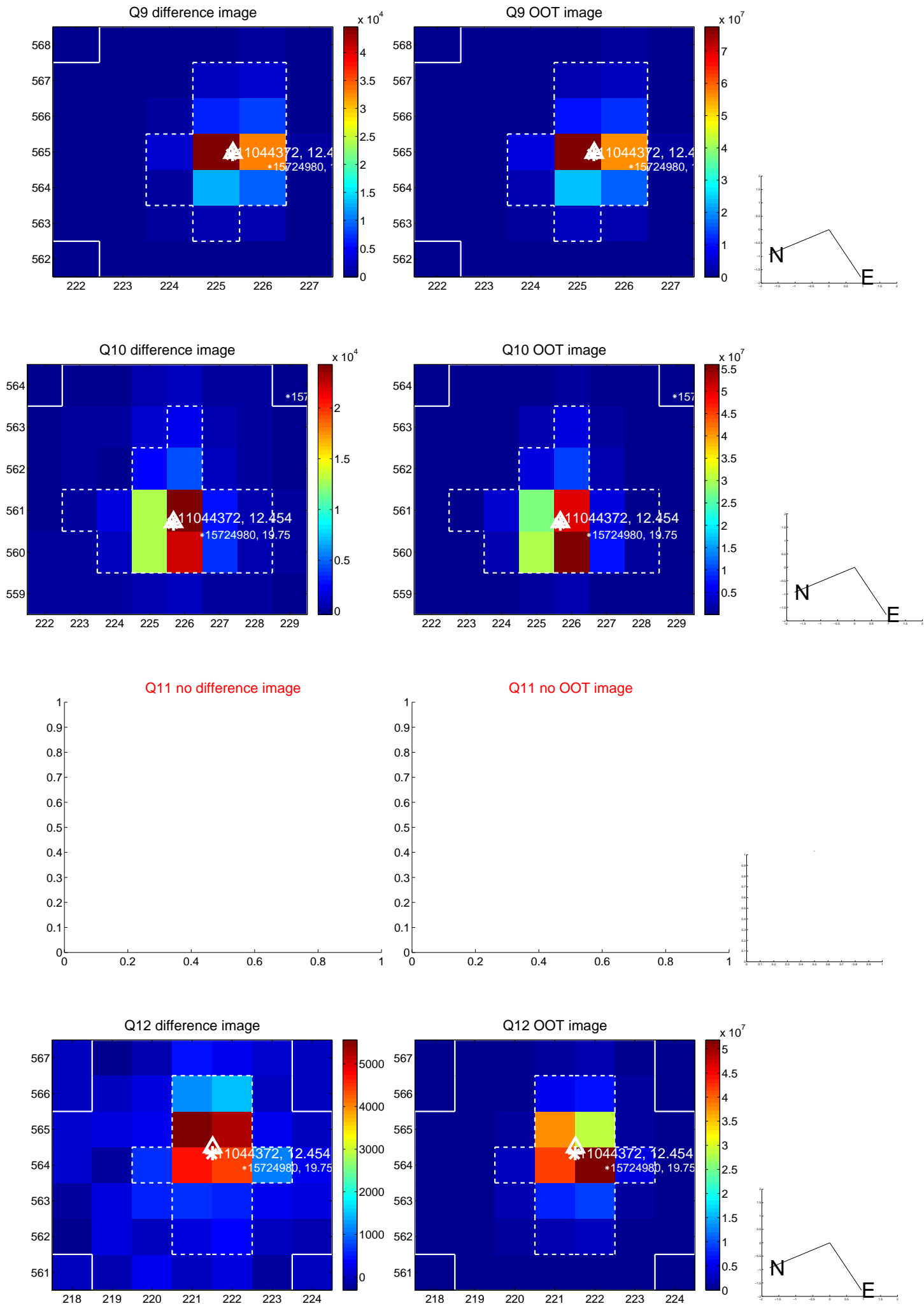
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



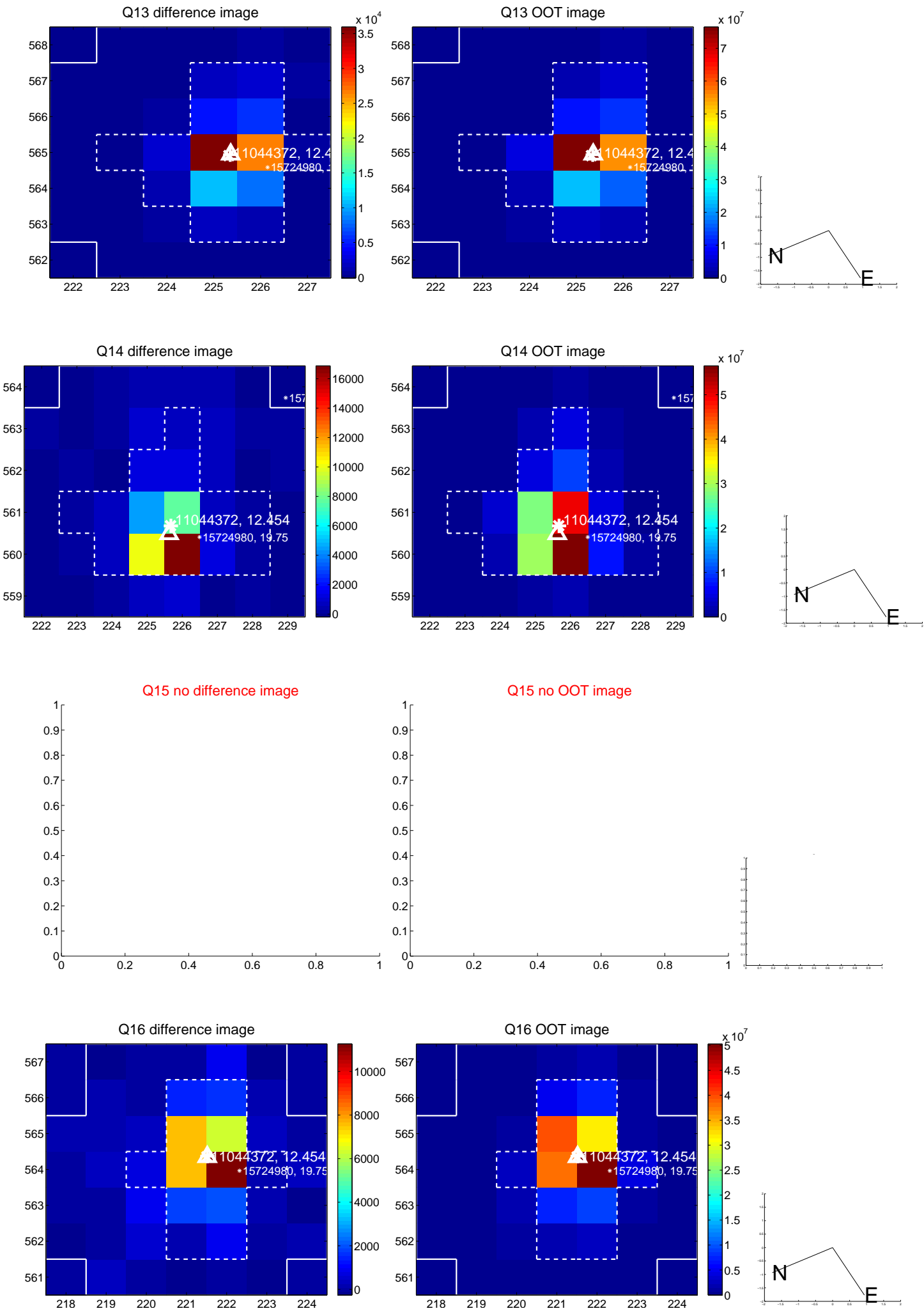
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



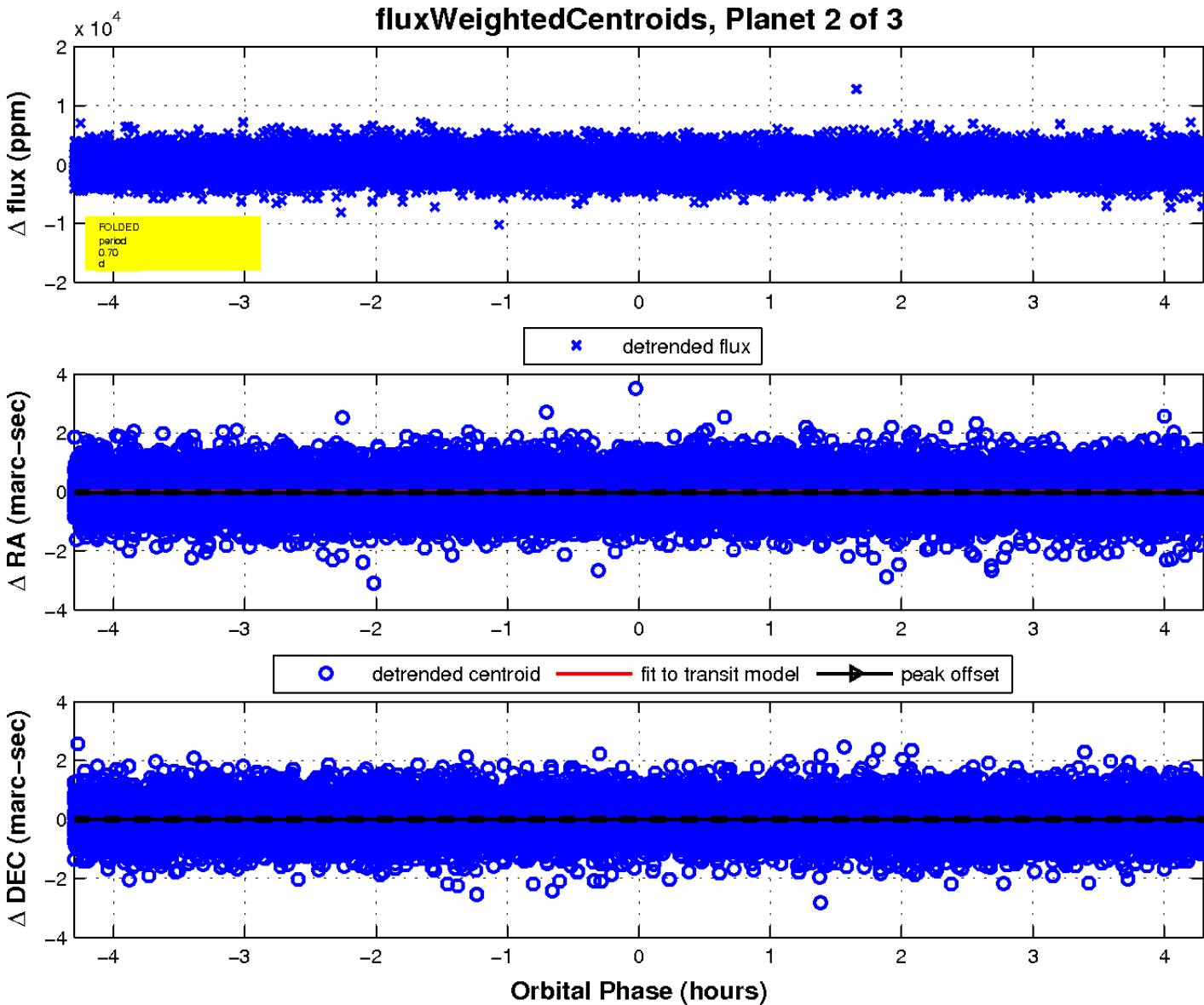
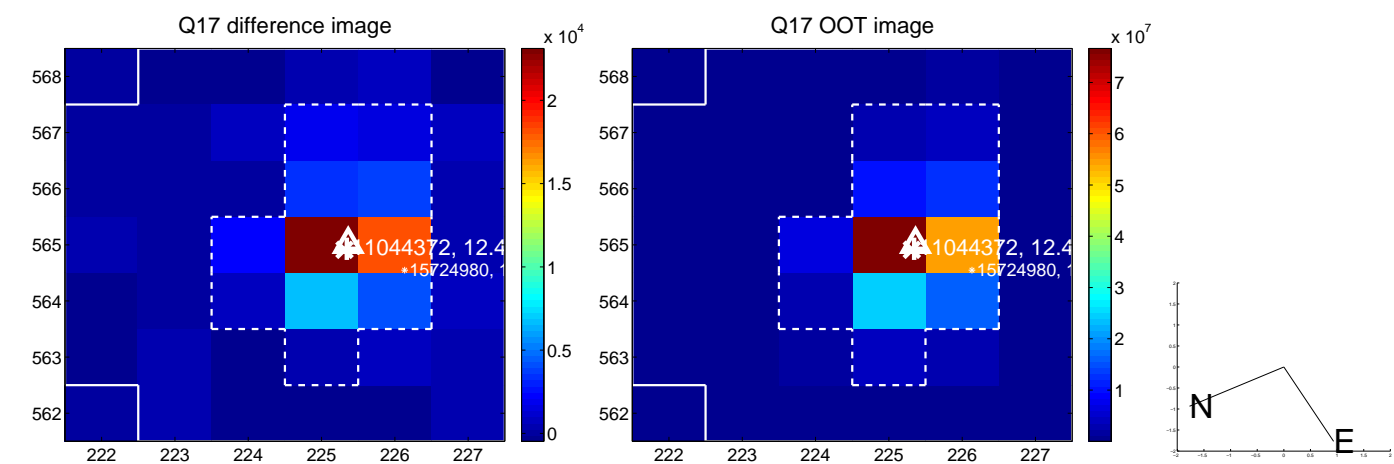
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

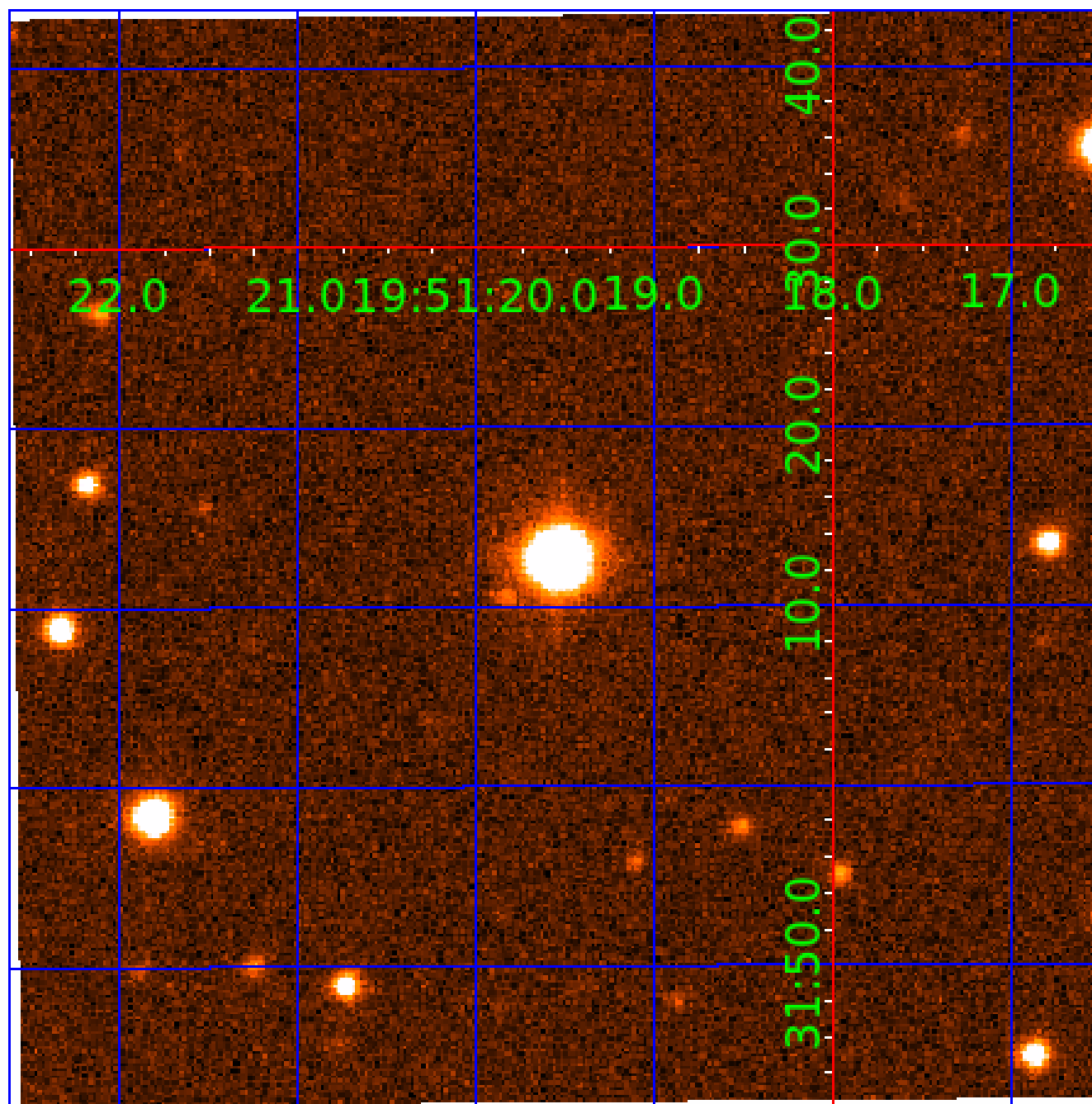


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011044372

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})
011044372-01	OBS	No	0.700157	131.546883	383.7	1.725	10.9	11.6	2.36	8235	5.40	64110.67
011044372-02	OBS	No	0.700159	131.895975	400.1	1.433	10.9	12.8	2.36	8235	5.07	64110.46
011044372-03	OBS	No	57.200317	162.482932	2895.1	2.434	7.4	7.9	2.36	8235	12.99	180.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011044372-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
011044372-02	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011044372-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

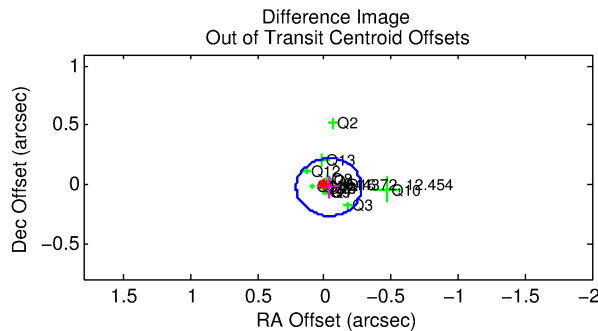
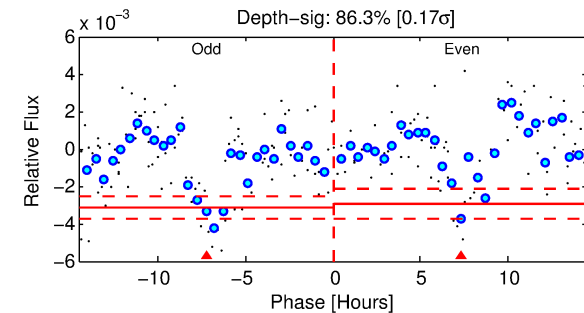
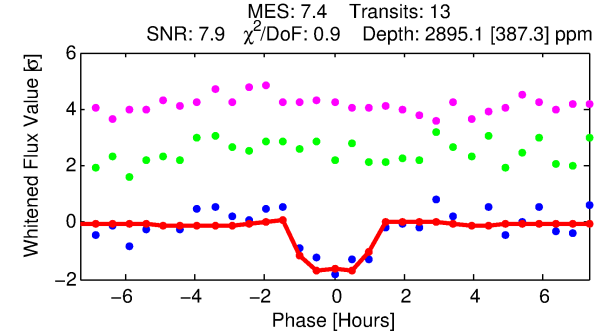
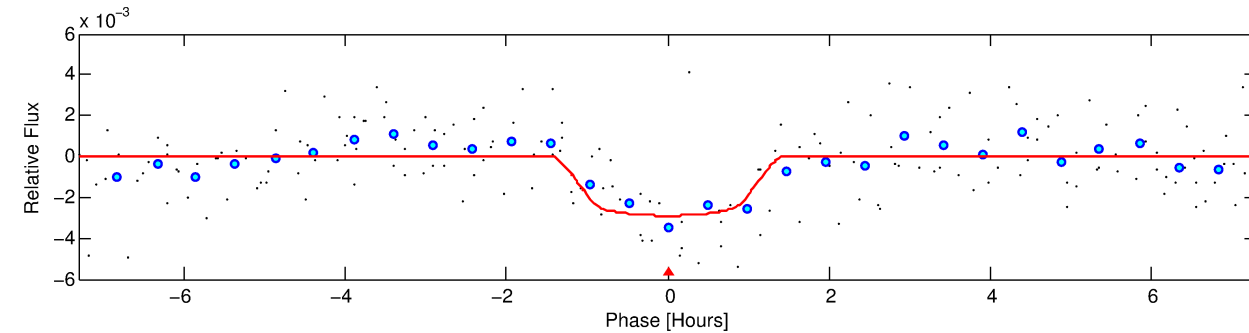
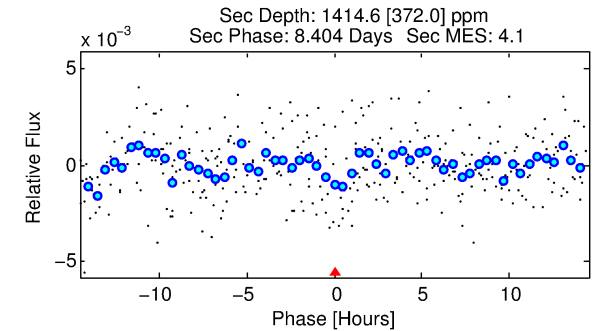
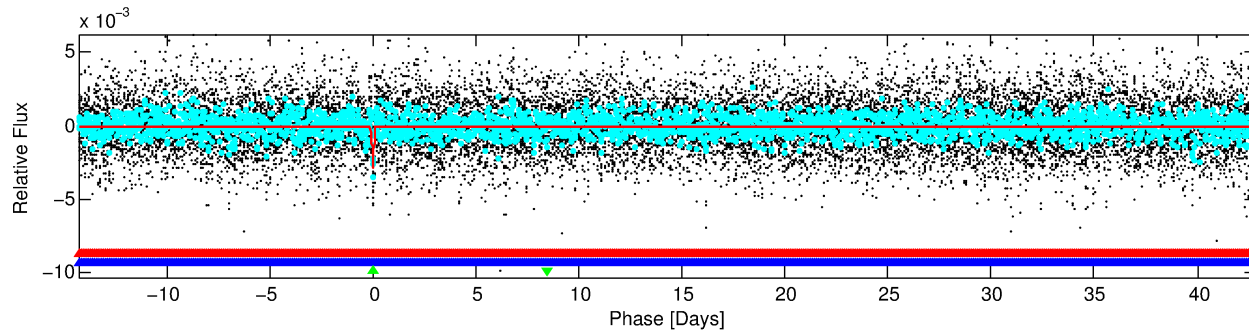
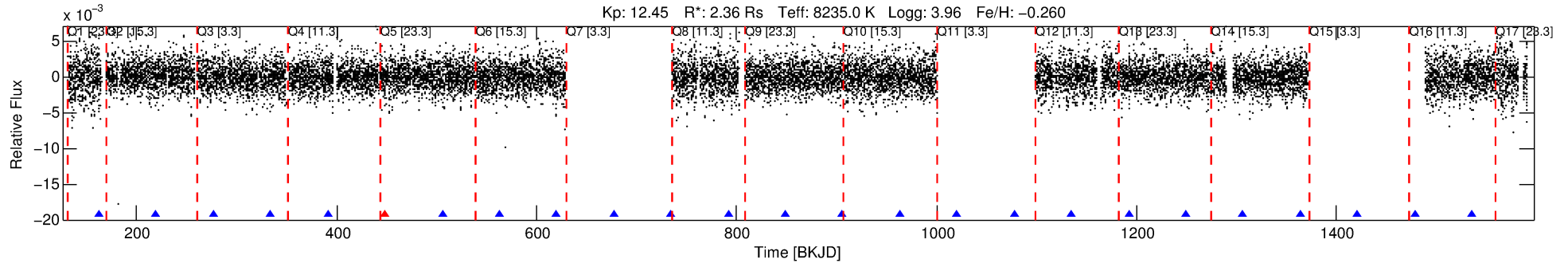
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011044372-03

No Significant Match Found

DV One-Page Summary

KIC: 11044372 Candidate: 3 of 3 Period: 57.200 d



DV Fit Results:

Period = 57.20032 [0.00051] d
Epoch = 162.4829 [0.0057] BKJD
Rp/R* = 0.0504 [0.0502]
a/R* = 178.79 [995.18]
b = 0.33 [14.95]
Seff = 180.85 [87.92]
Teq = 935 [114] K
Rp = 12.99 [13.66] Re
a = 0.3567 [0.1071] AU
Ag = 586.42 [1208.15] [0.48σ]
Teffp = 7115 [3585] K [1.72σ]

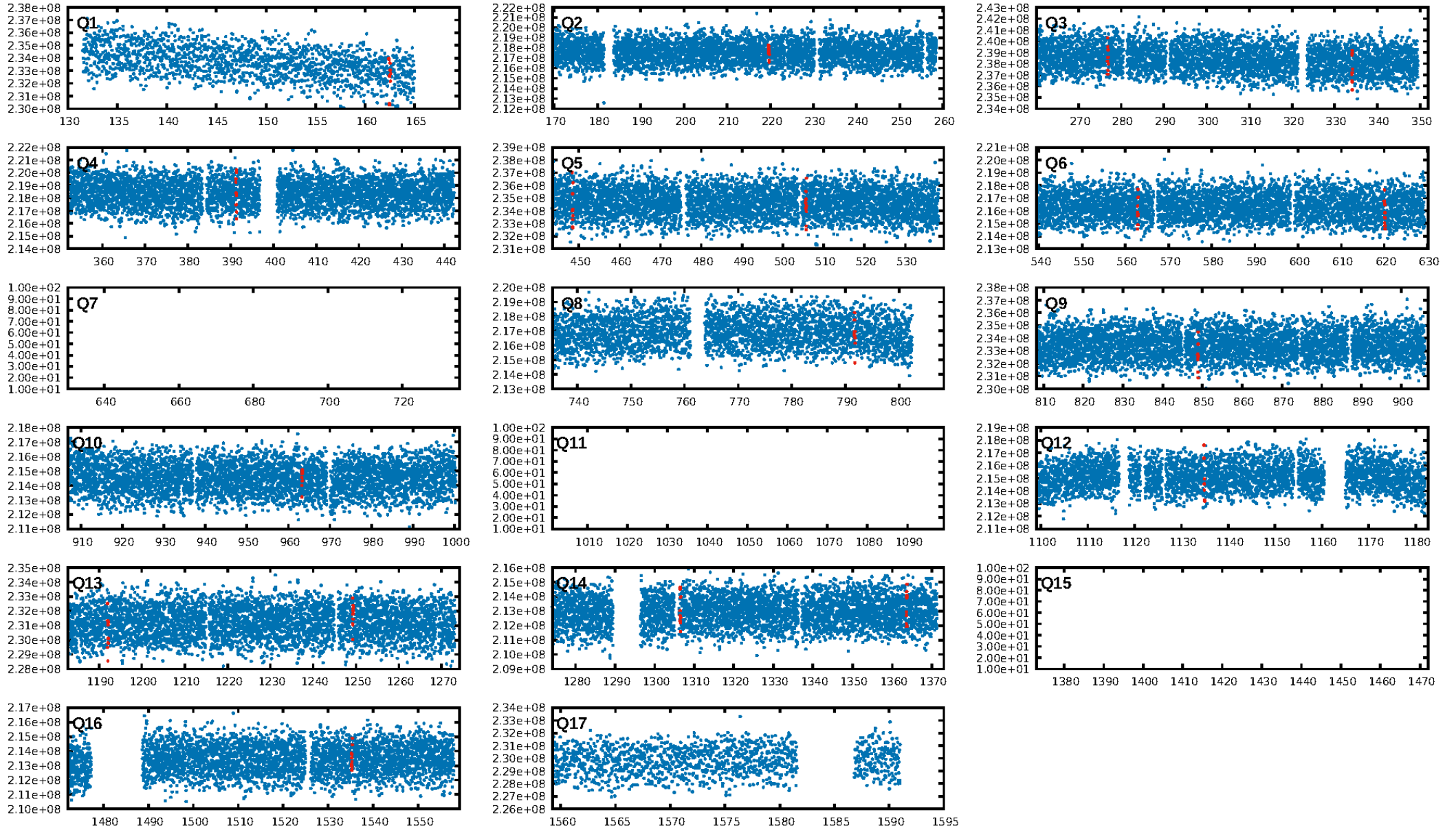
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [480.04σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 95.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.83e-10
RollingBand-fgt: 0.92 [11/12]
GhostDiagnostic-chr: -34.75
Centroid-sig: 15.9%
Centroid-so: 0.252 arcsec [4.09σ]
OotOffset-rm: 0.042 arcsec [0.51σ]
KicOffset-rm: 0.110 arcsec [1.36σ]
OotOffset-st: 4/1/4/4 [13]
KicOffset-st: 4/1/4/4 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 0.00 [0/13]

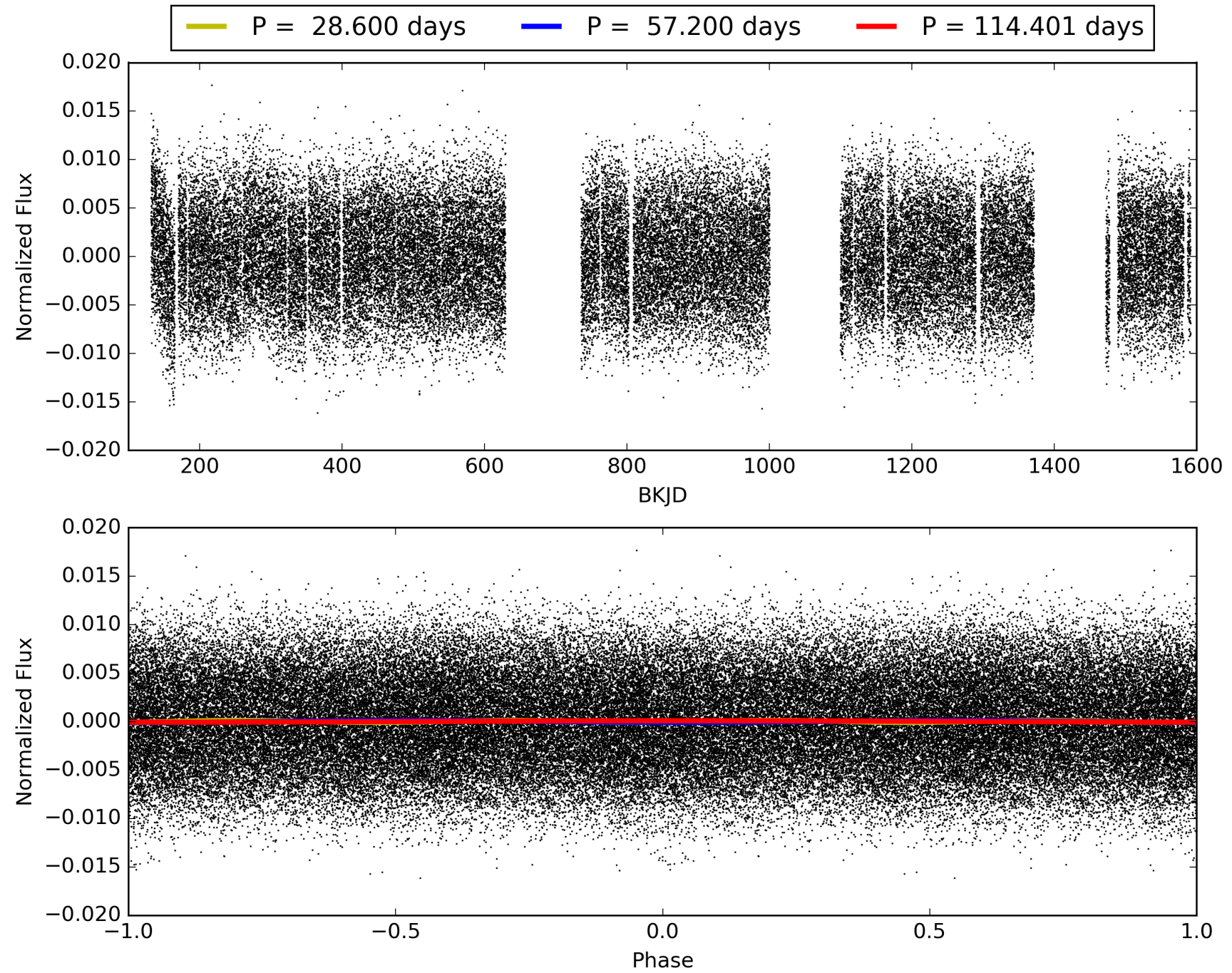
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:46:14 Z

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

TCE 011044372-03, PDC Light Curves

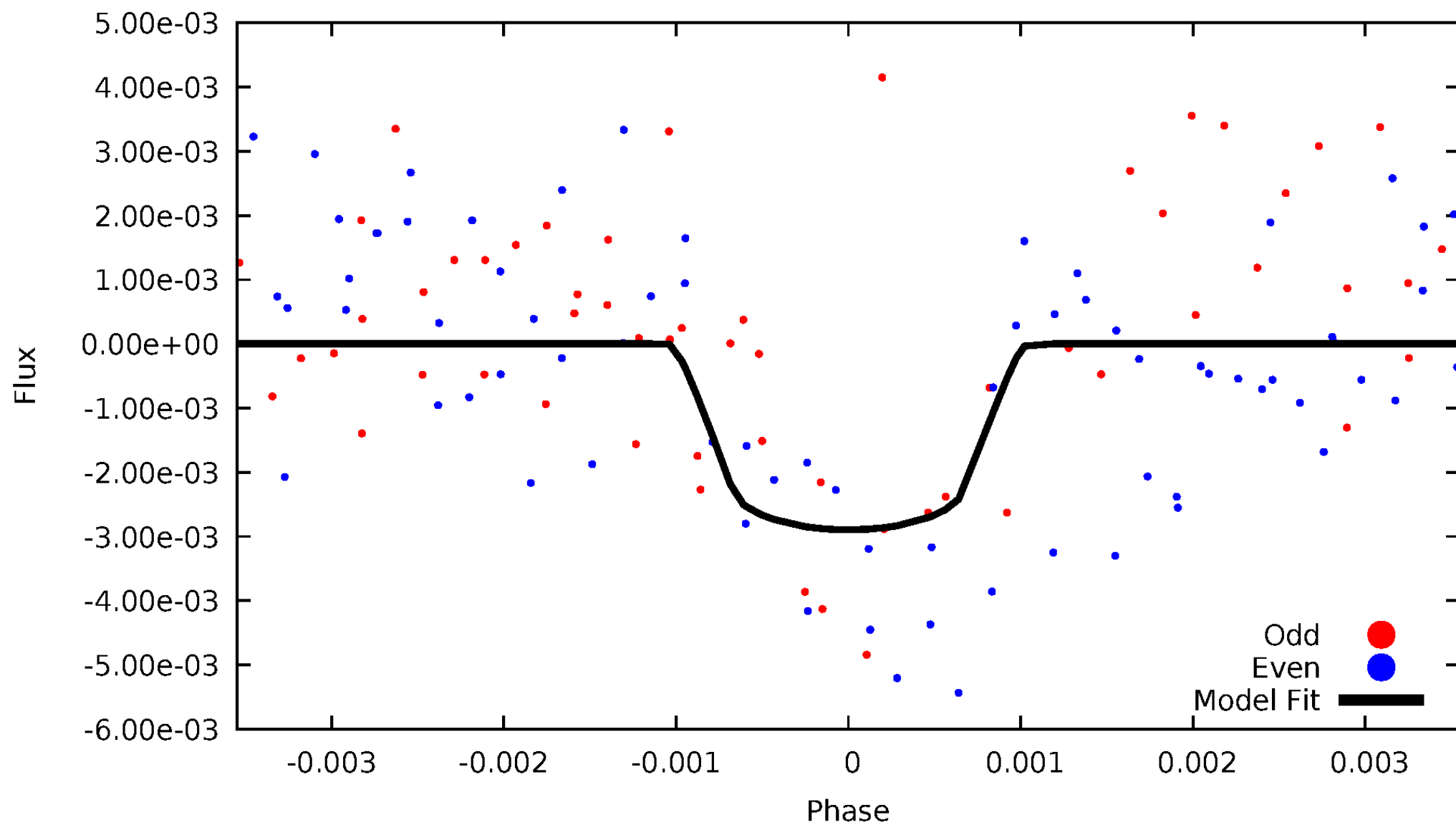


TCE 011044372-03



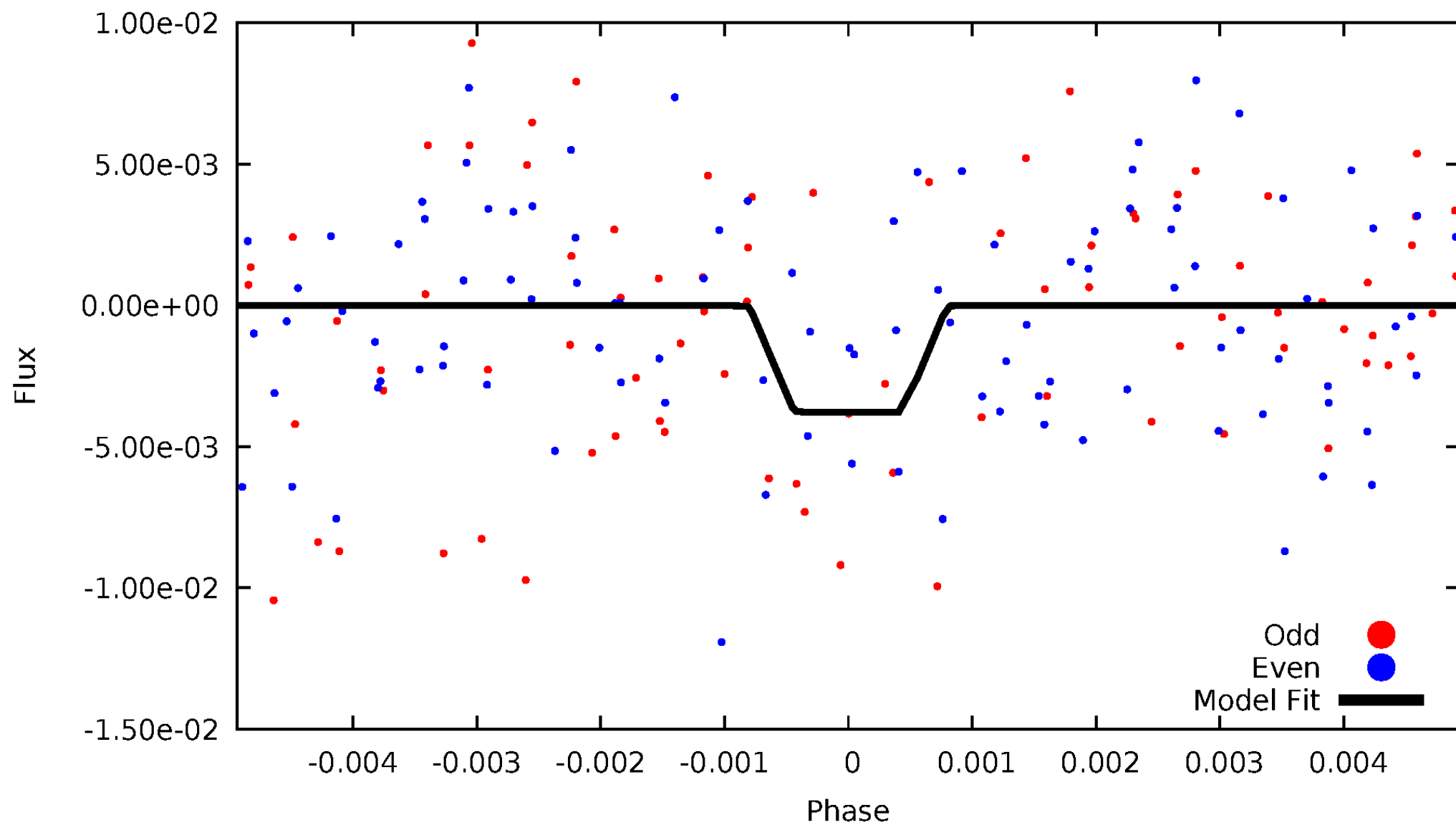
DV Odd/Even

TCE 011044372-03



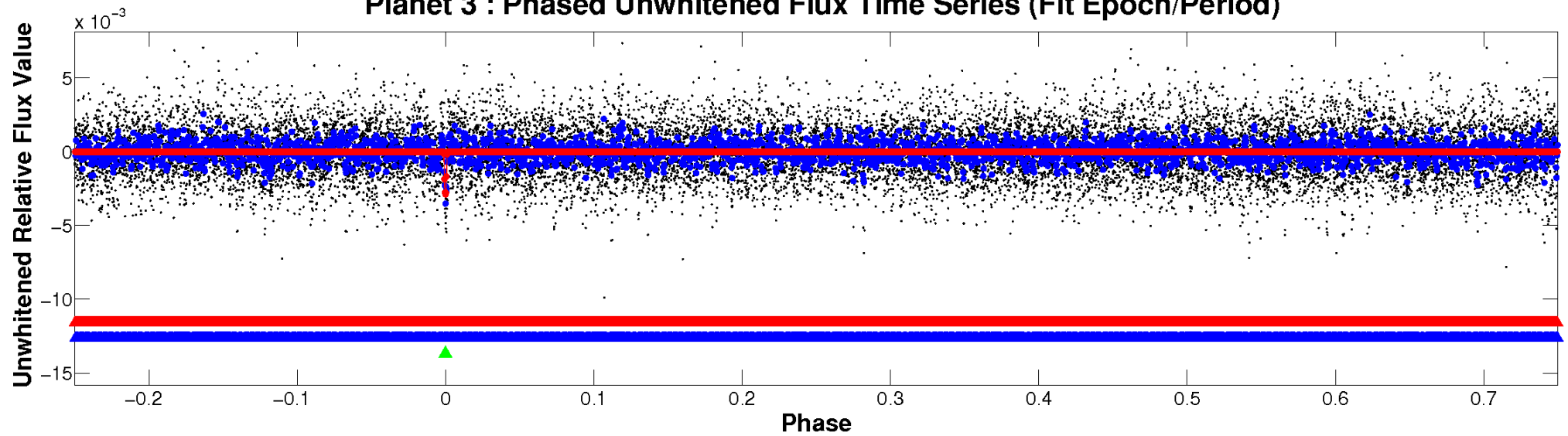
ALT Odd/Even

TCE 011044372-03

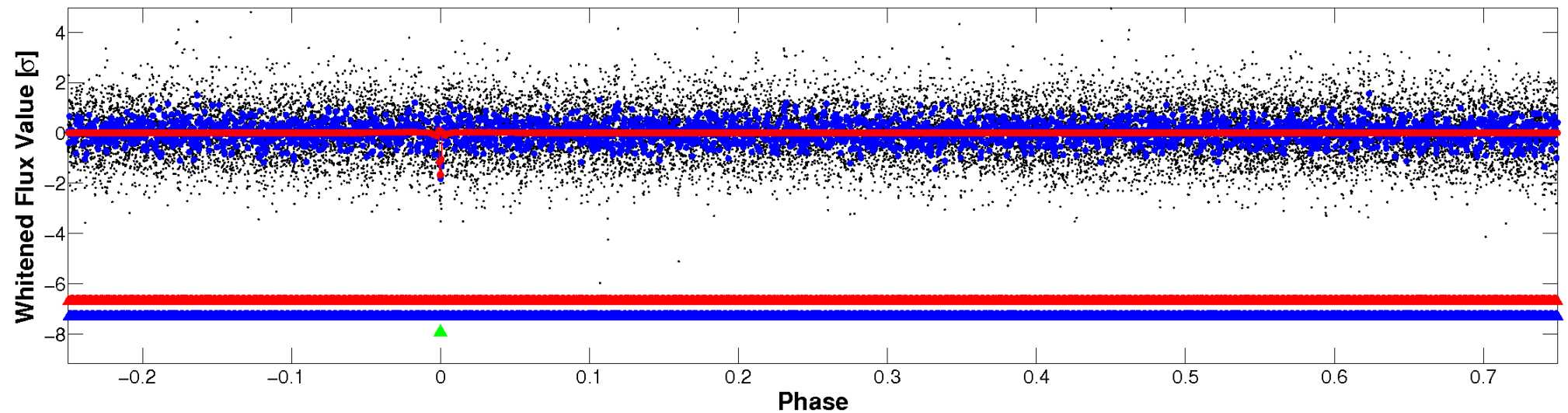


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

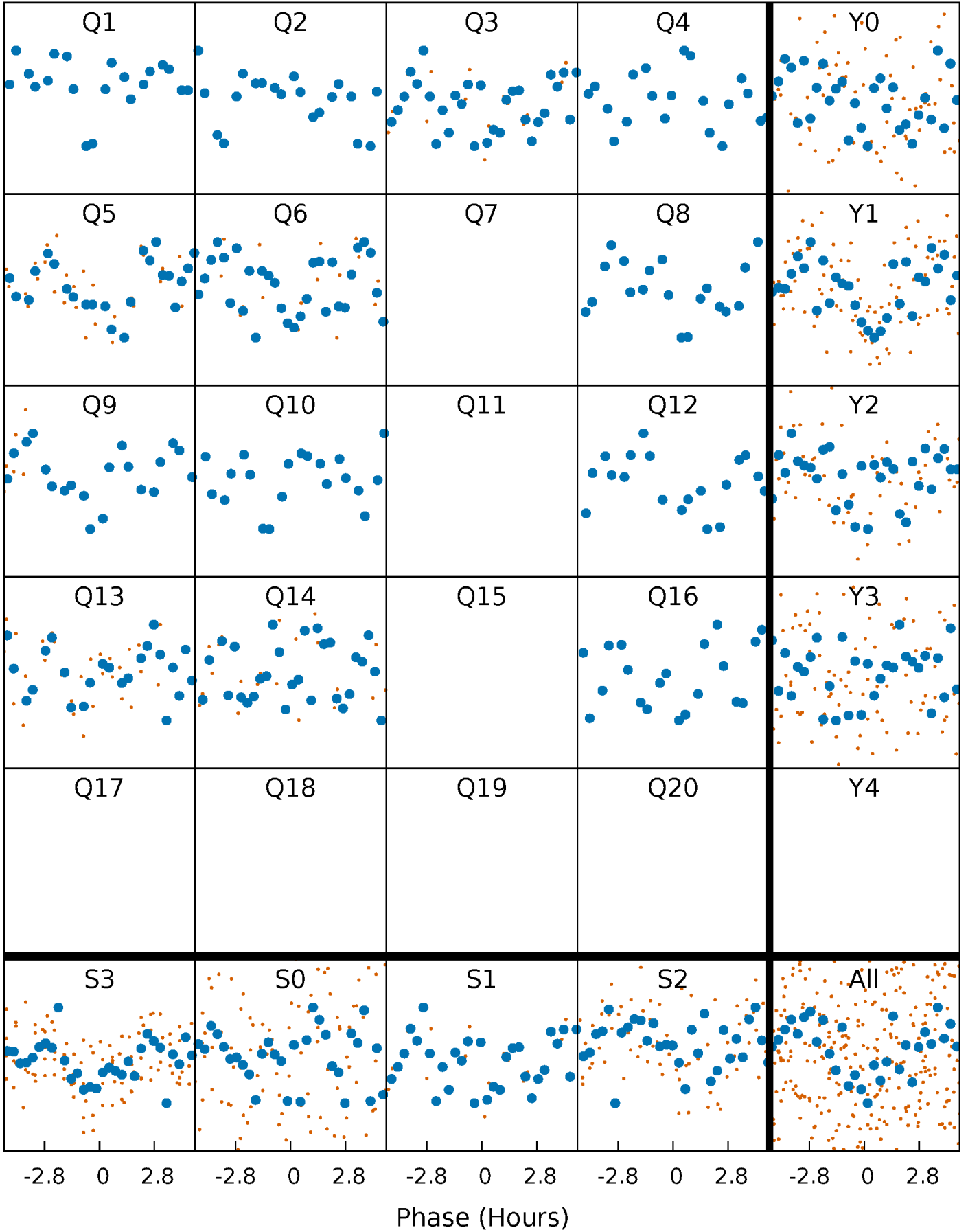


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



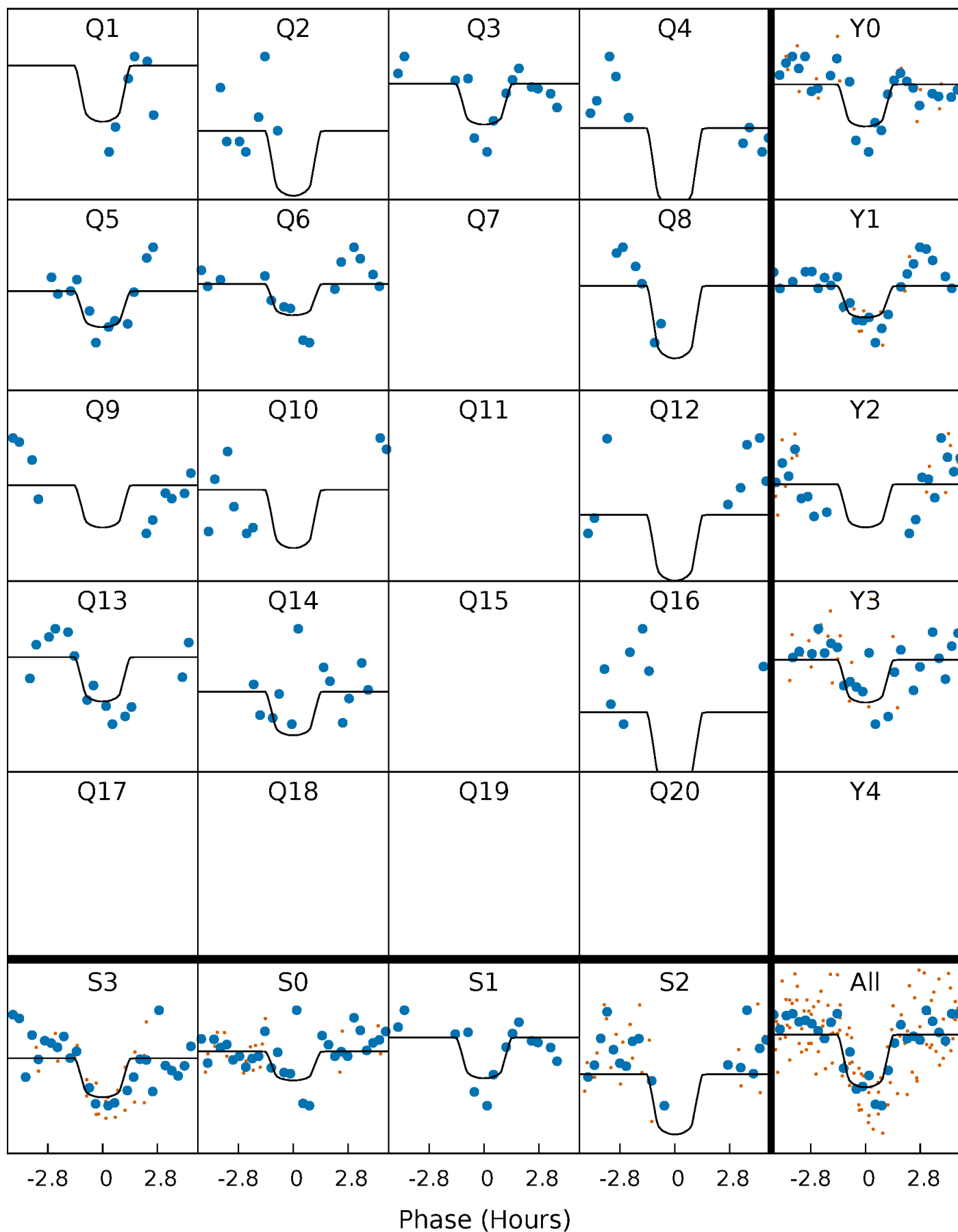
PDC Quarter-Phased Transit Curves

TCE 011044372-03 P= 57.200317 Days $T_0=162.482932$ (BKJD)



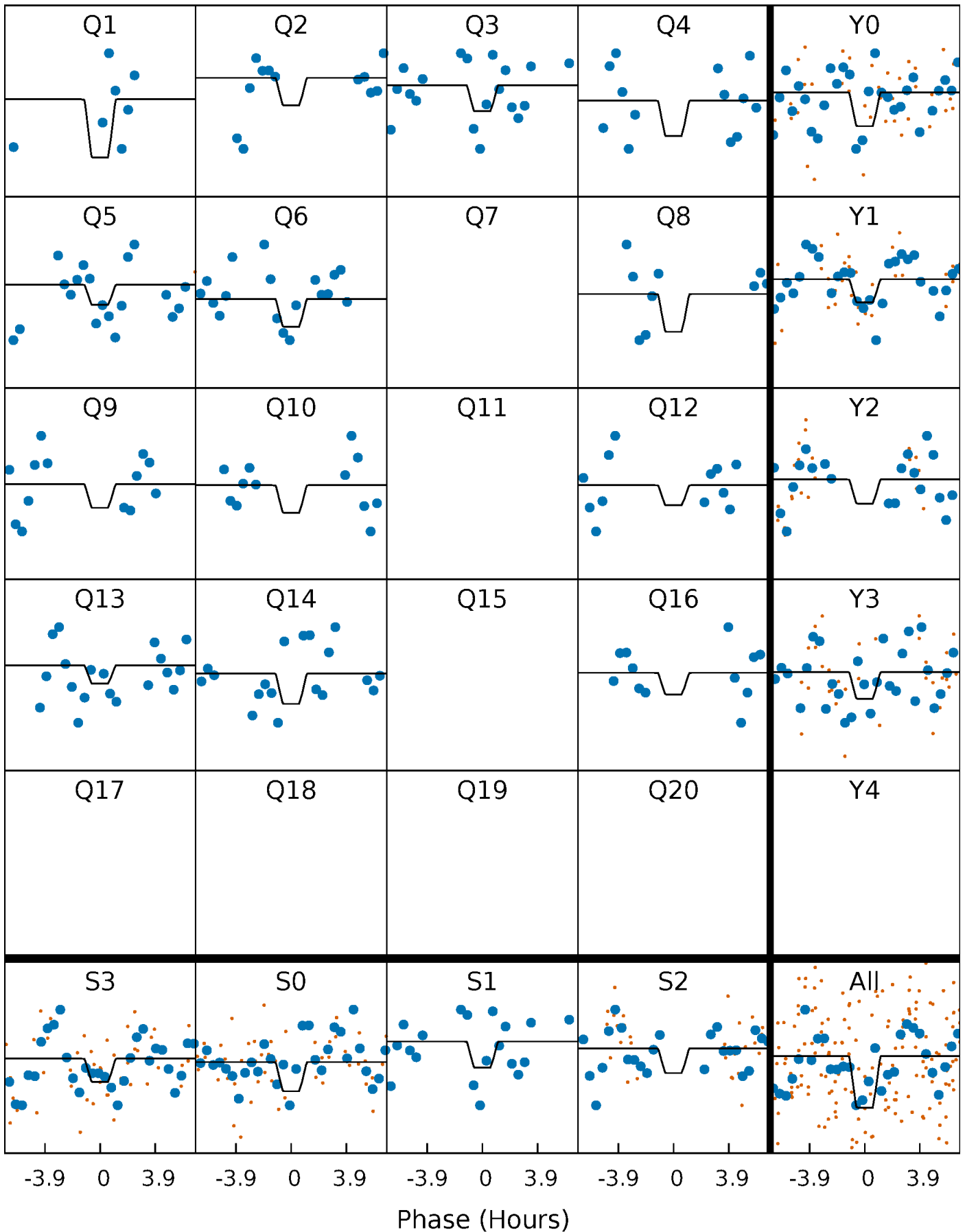
DV Quarter-Phased Transit Curves

TCE 011044372-03 P= 57.200317 Days $T_0=162.482932$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

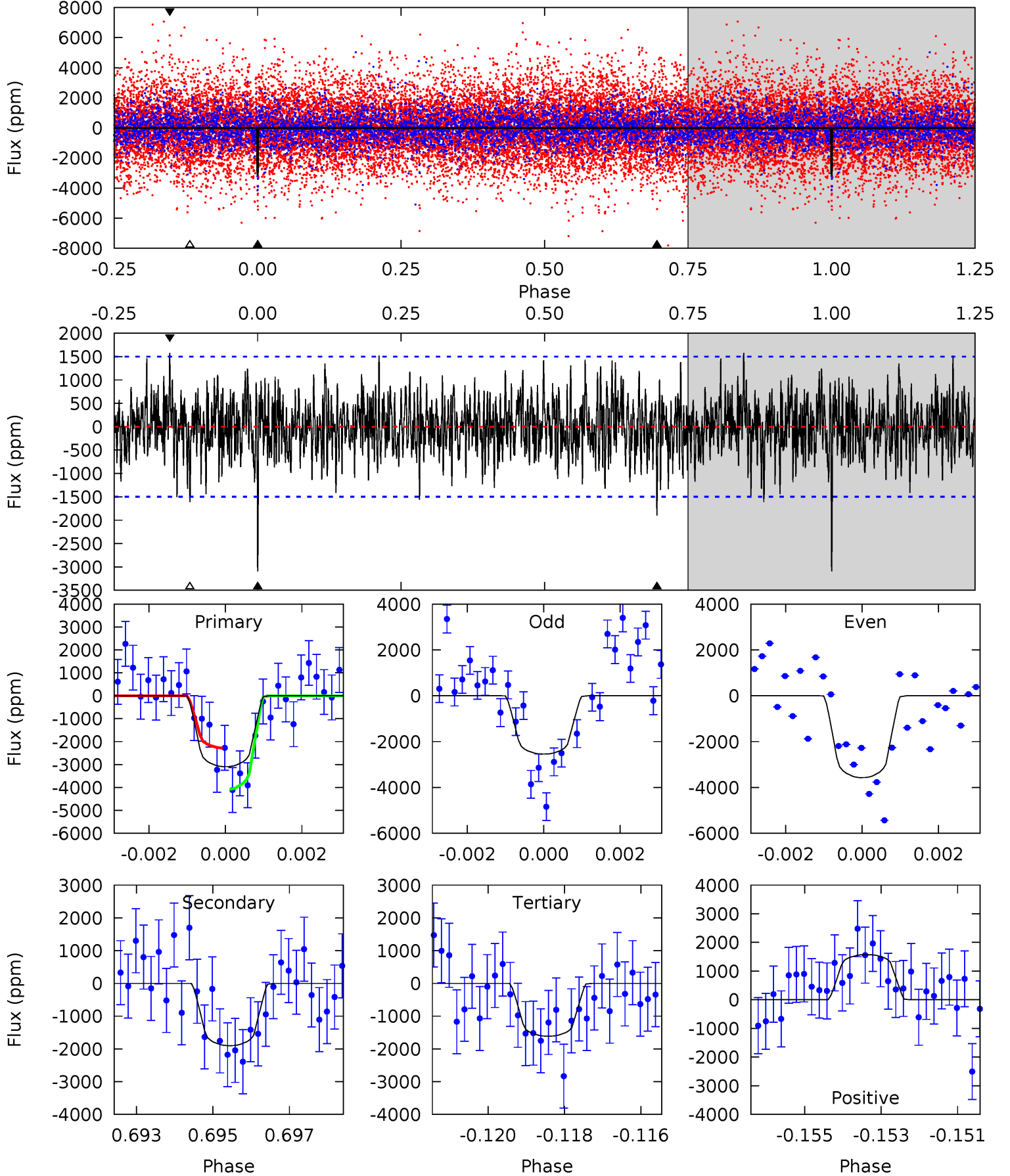
TCE 011044372-03 P= 57.201309 Days $T_0=162.489575$ (BKJD)



DV Model-Shift Uniqueness Test

011044372-03, P = 57.200317 Days, E = 105.282615 Days

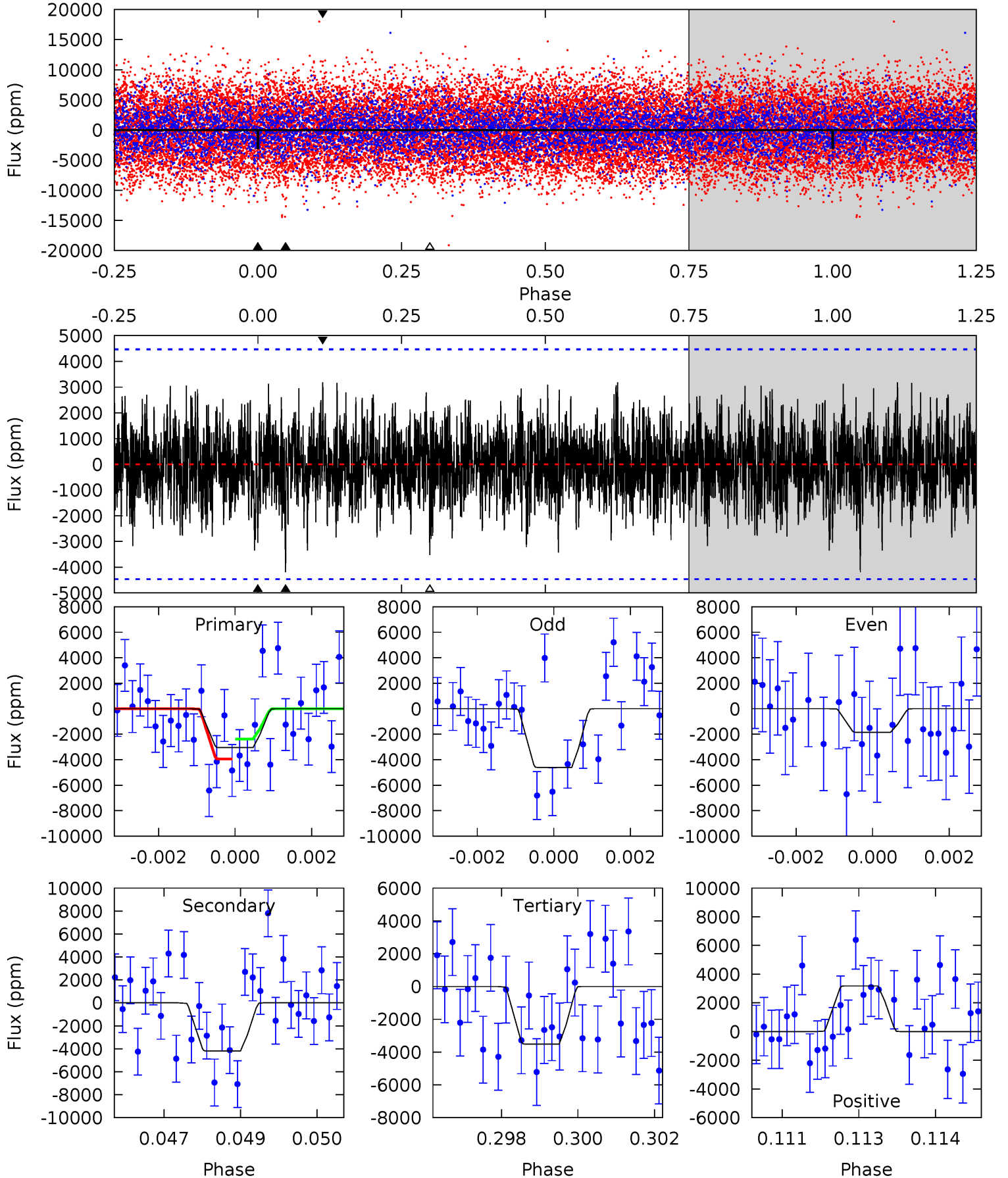
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	6.75	5.72	5.59	5.32	3.08	1.77	5.25	5.38	1.02	1.15	1.82	0.81	0.34	3.18



Alt Model-Shift Uniqueness Test

011044372-03, P = 57.201309 Days, E = 105.288266 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.66	5.03	4.22	3.81	5.35	3.13	1.31	-0.56	-0.15	0.81	1.22	1.64	0.61	0.43	0.94



Stellar Parameters For KIC 011044372

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	8235^{+228}_{-342}	$3.958^{+0.259}_{-0.111}$	$-0.260^{+0.150}_{-0.300}$	$2.363^{+0.399}_{-0.798}$	$1.848^{+0.093}_{-0.371}$	$0.197^{+0.317}_{-0.066}$
	+3%/-4%	+7%/-3%	+58%/-115%	+17%/-34%	+5%/-20%	+161%/-33%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011044372-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1901 ± 282	$14.35^{+11.88}_{-7.93}$	1288^{+87}_{-100}	6814^{+5118}_{-1653}	610^{+2384}_{-423}
Alt.	-4197 ± 834	$16.52^{+12.31}_{-9.94}$	1284^{+84}_{-106}	7919^{+7780}_{-2030}	1026^{+5615}_{-699}

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 $A_{obs} \gg 1.0$

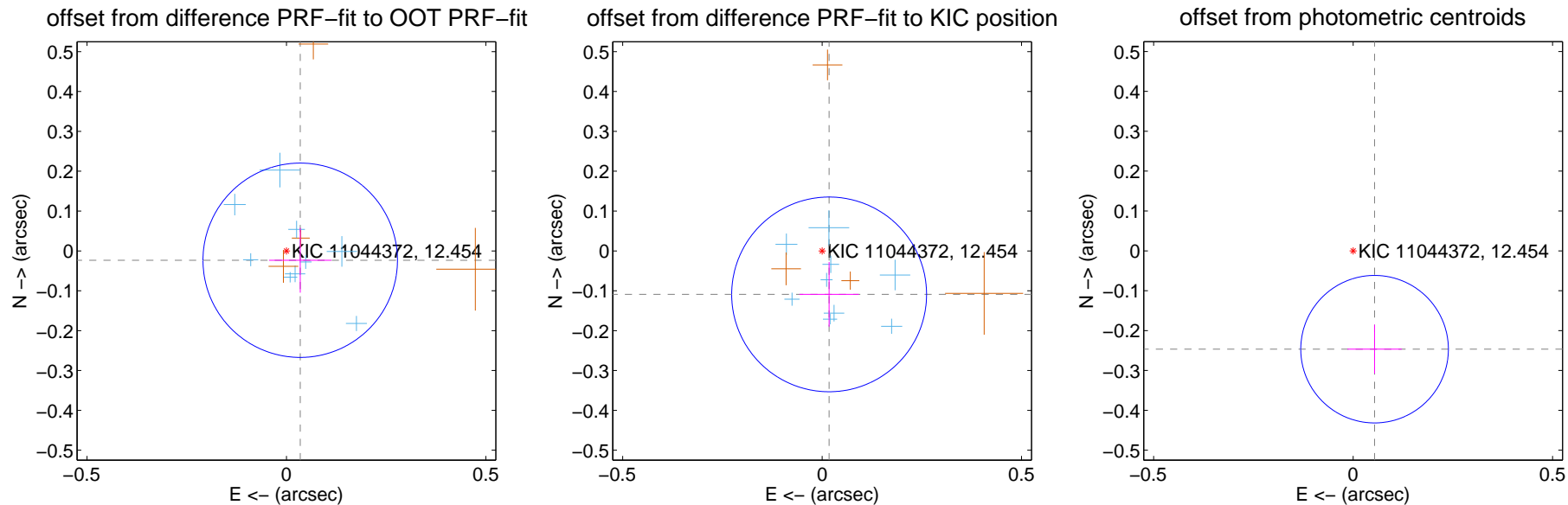
DV Centroid Data

Supplemental centroid analysis for 011044372-03. Kepler magnitude: 12.45. Transit SNR 7.91

There are 9 quarters with good PRF difference image offsets

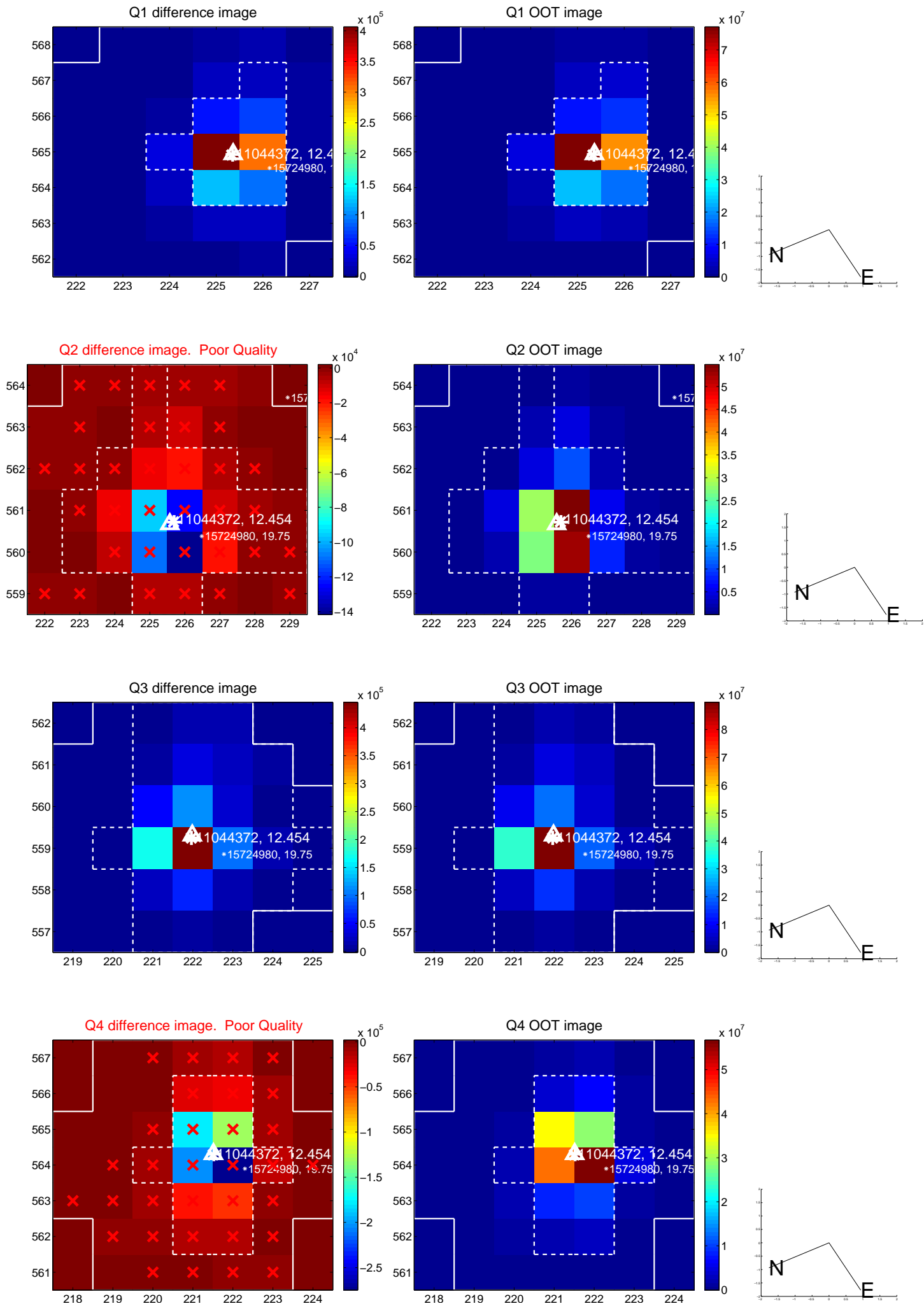
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.042 ± 0.081	0.51	-0.035 ± 0.078	-0.023 ± 0.081
PRF-fit source offset from KIC position	0.110 ± 0.081	1.36	-0.018 ± 0.074	-0.109 ± 0.081
photometric centroid source offset	0.25 ± 0.06	4.09	-0.05 ± 0.07	-0.25 ± 0.06

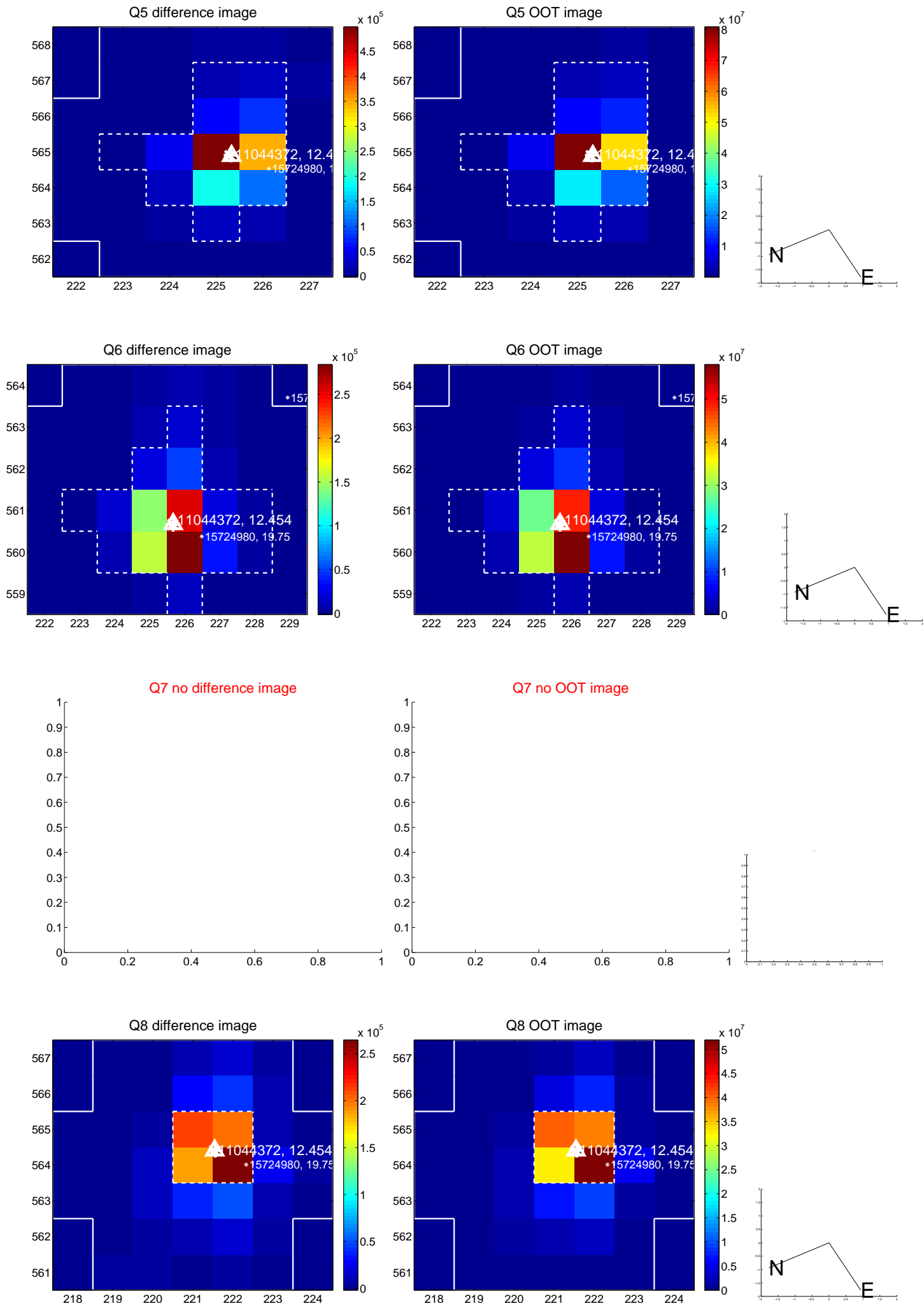


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

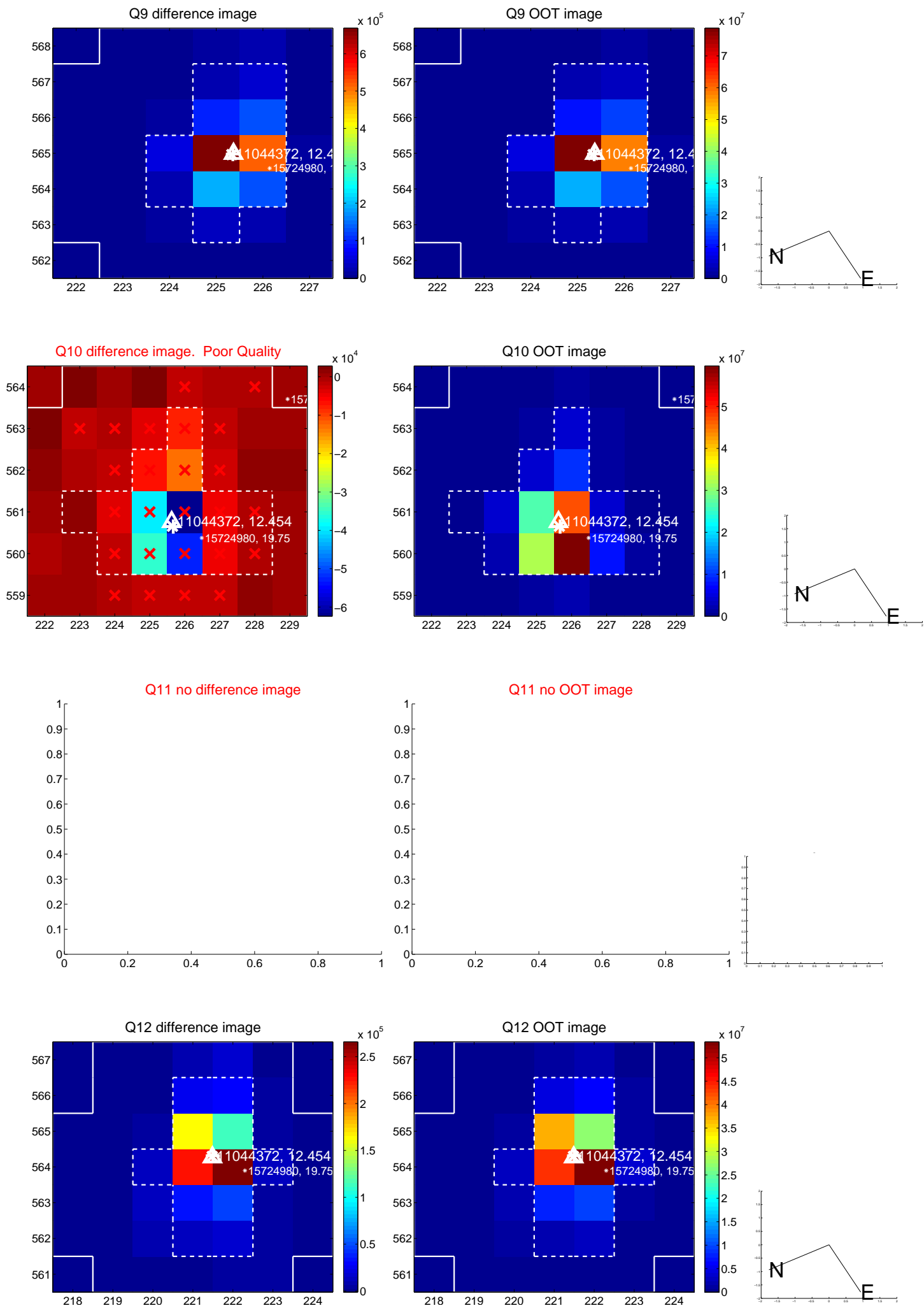
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



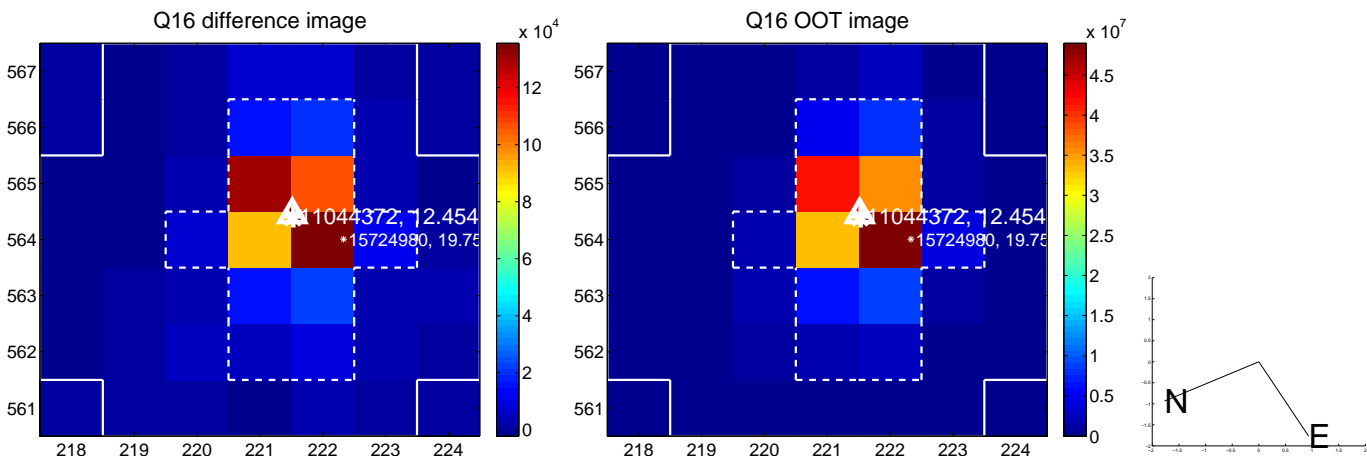
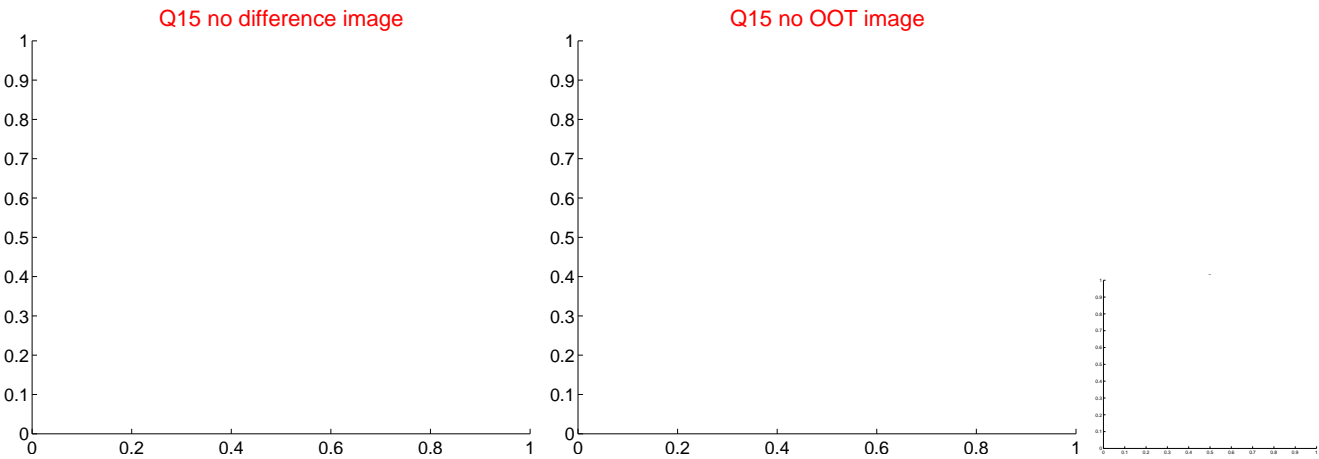
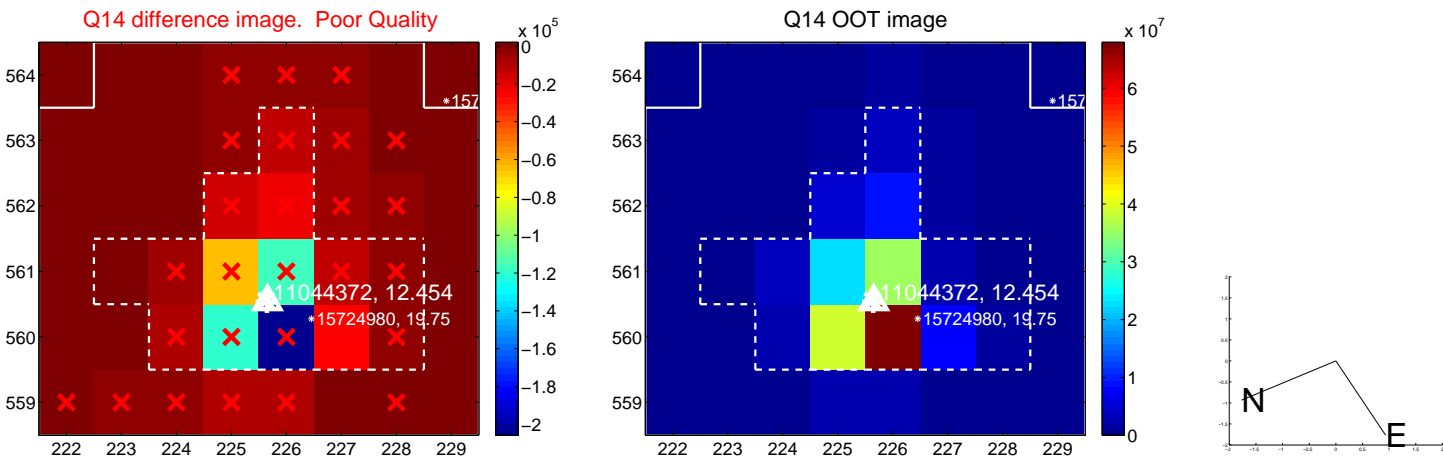
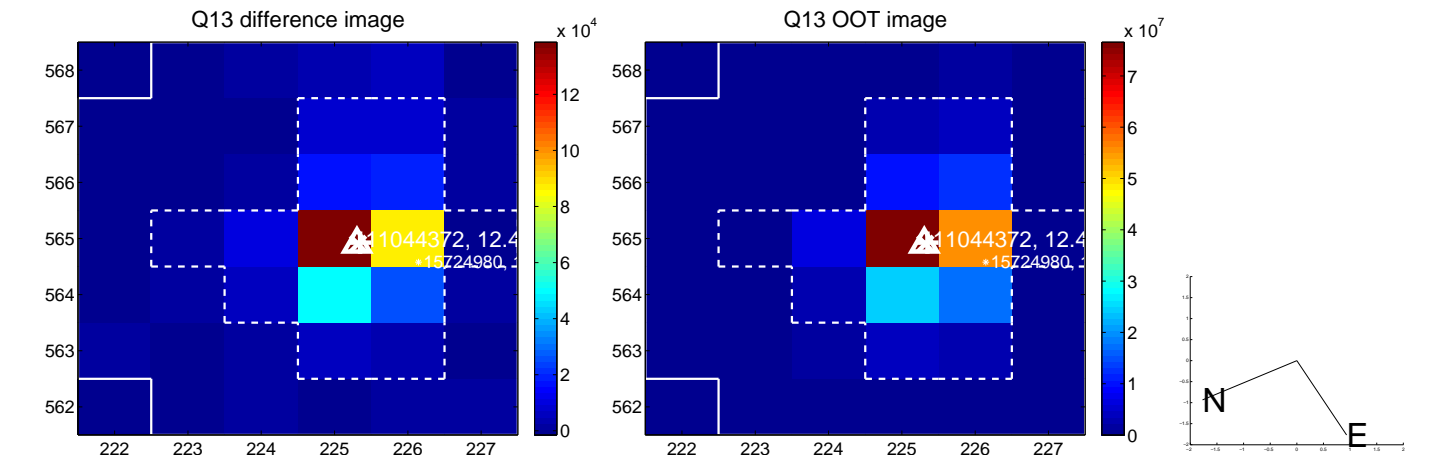
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



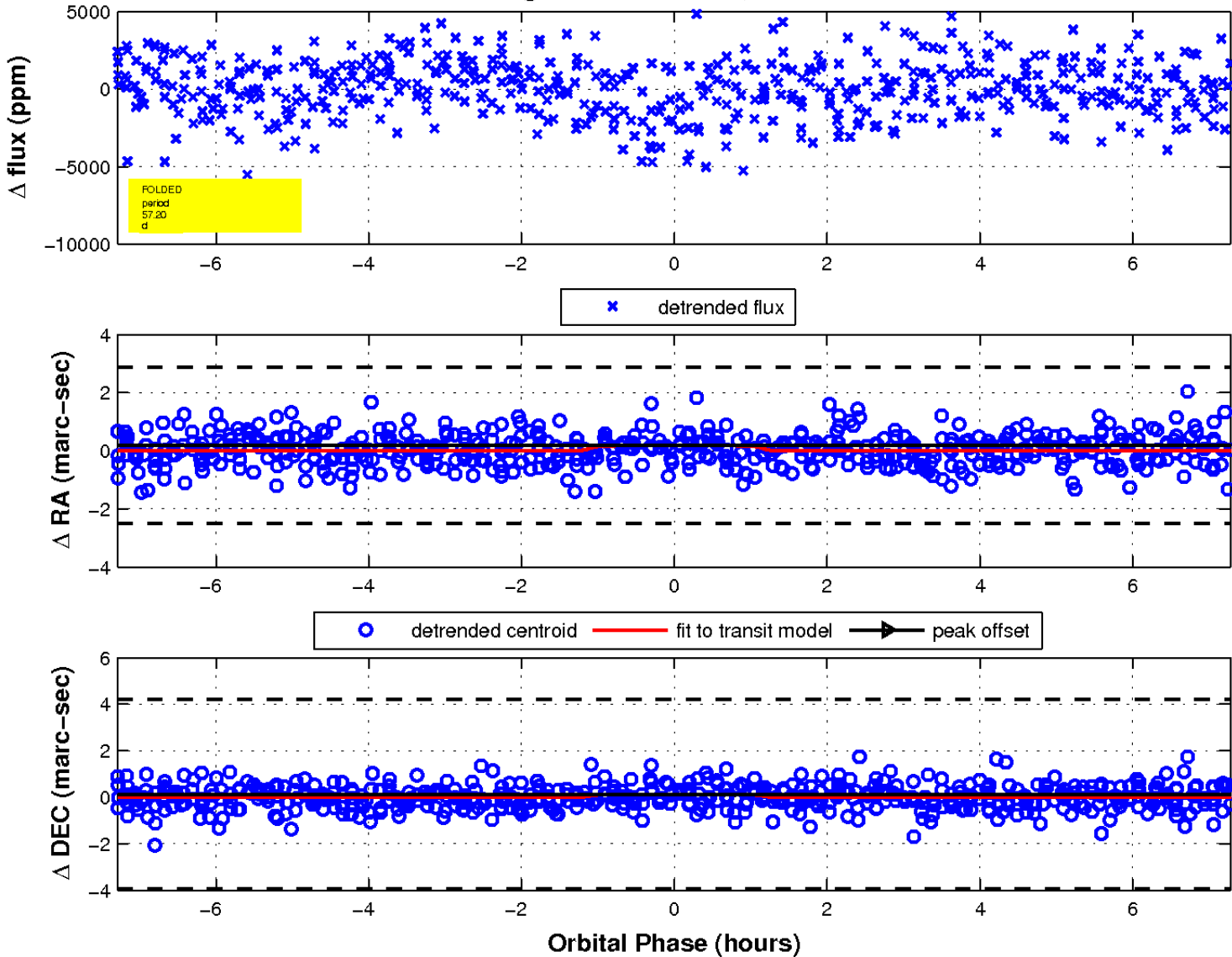
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

