

KIC 006862920

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})
006862920-01	OBS	No	0.614251	131.522356	581.4	1.059	12.7	18.8	1.86	7413	4.86	34265.84
006862920-02	OBS	No	0.614252	131.902834	481.7	1.108	10.0	15.1	1.86	7413	4.77	34265.78
006862920-03	OBS	No	0.550806	131.977219	1079.9	6.610	9.3	21.9	1.86	7413	7.48	39626.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006862920-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006862920-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
006862920-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV

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

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

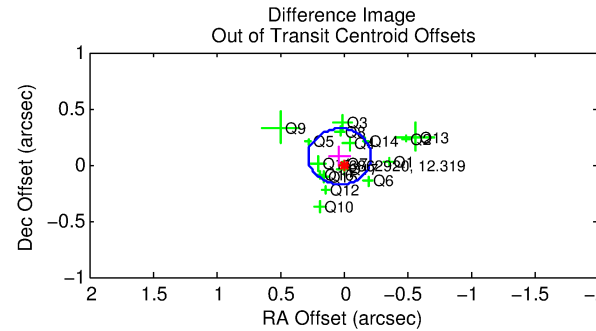
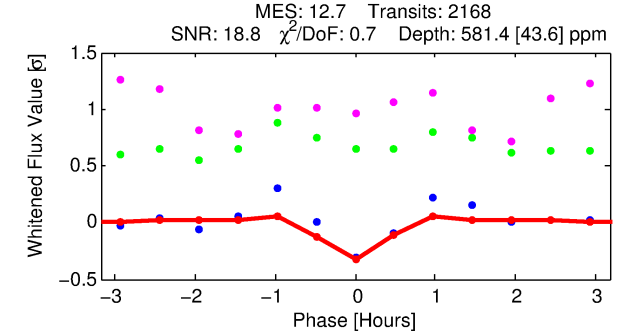
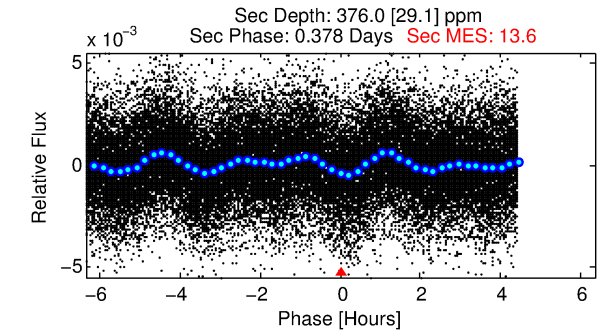
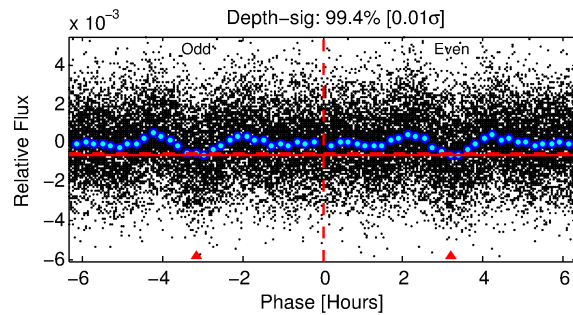
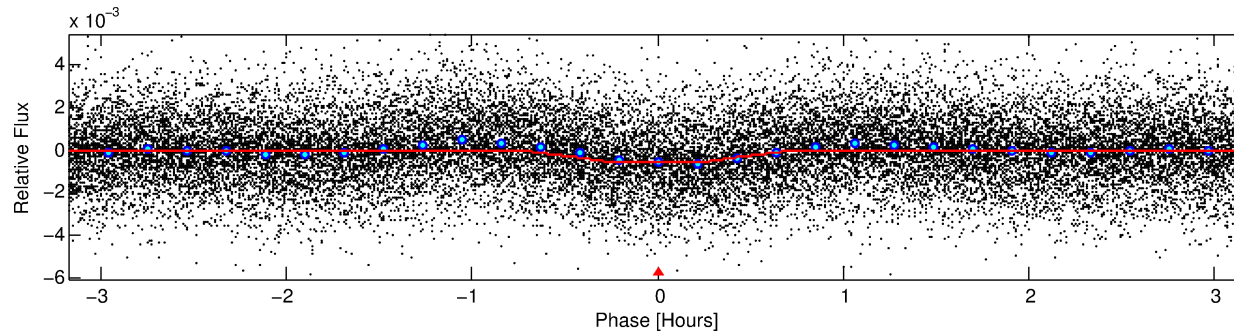
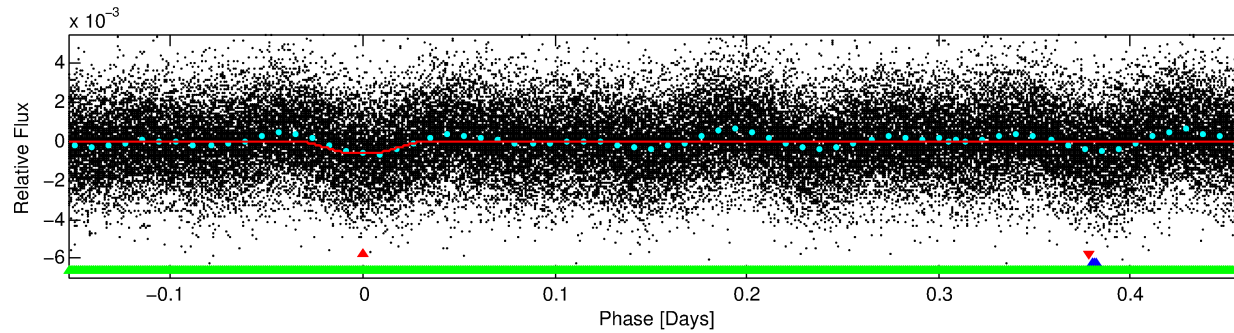
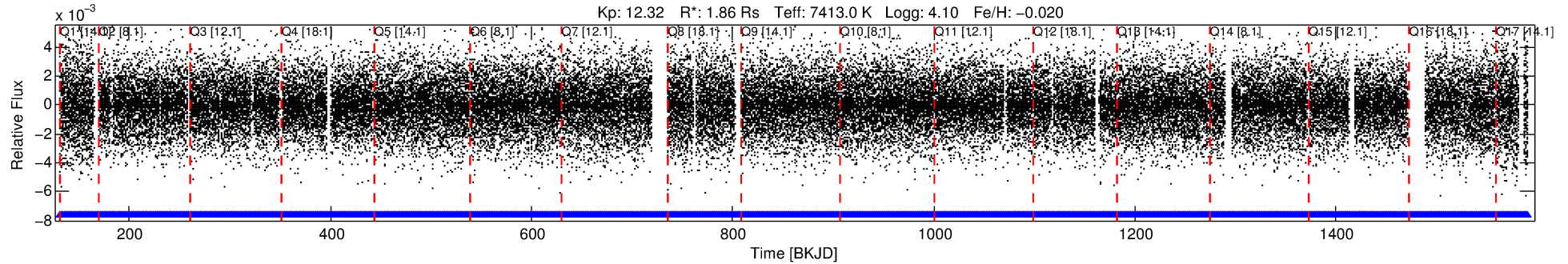
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006862920-01

No Significant Match Found

DV One-Page Summary

KIC: 6862920 Candidate: 1 of 3 Period: 0.614 d



DV Fit Results:

Period = 0.61425 [0.00001] d
Epoch = 131.5224 [0.0008] BKJD
Rp/R* = 0.0239 [0.0049]
a/R* = 3.39 [3.89]
b = 0.70 [0.90]
Seff = 34265.84 [13156.85]
Teq = 3469 [333] K
Rp = 4.86 [1.78] Re
a = 0.0166 [0.0040] AU
Ag = 2.41 [1.29] [1.09 σ]
Teffp = 6682 [758] K [3.88 σ]

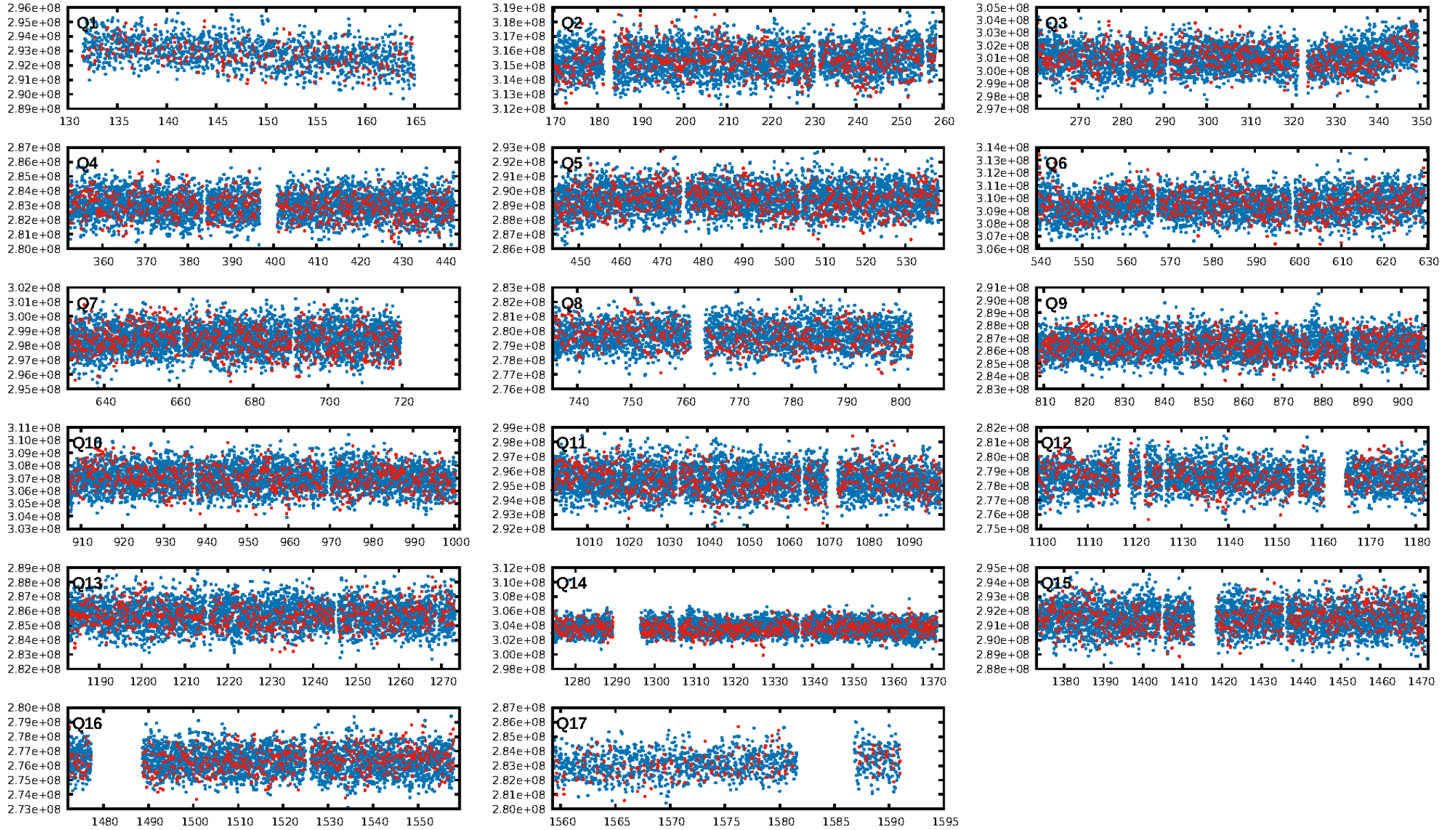
DV Diagnostic Results:

ShortPeriod-sig: 18.0% [0.23 σ]
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2071/2071]
GhostDiagnostic-chr: 2.993
Centroid-sig: 0.1%
Centroid-so: 0.146 arcsec [5.23 σ]
OotOffset-rm: 0.079 arcsec [0.96 σ]
KicOffset-rm: 0.104 arcsec [1.23 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

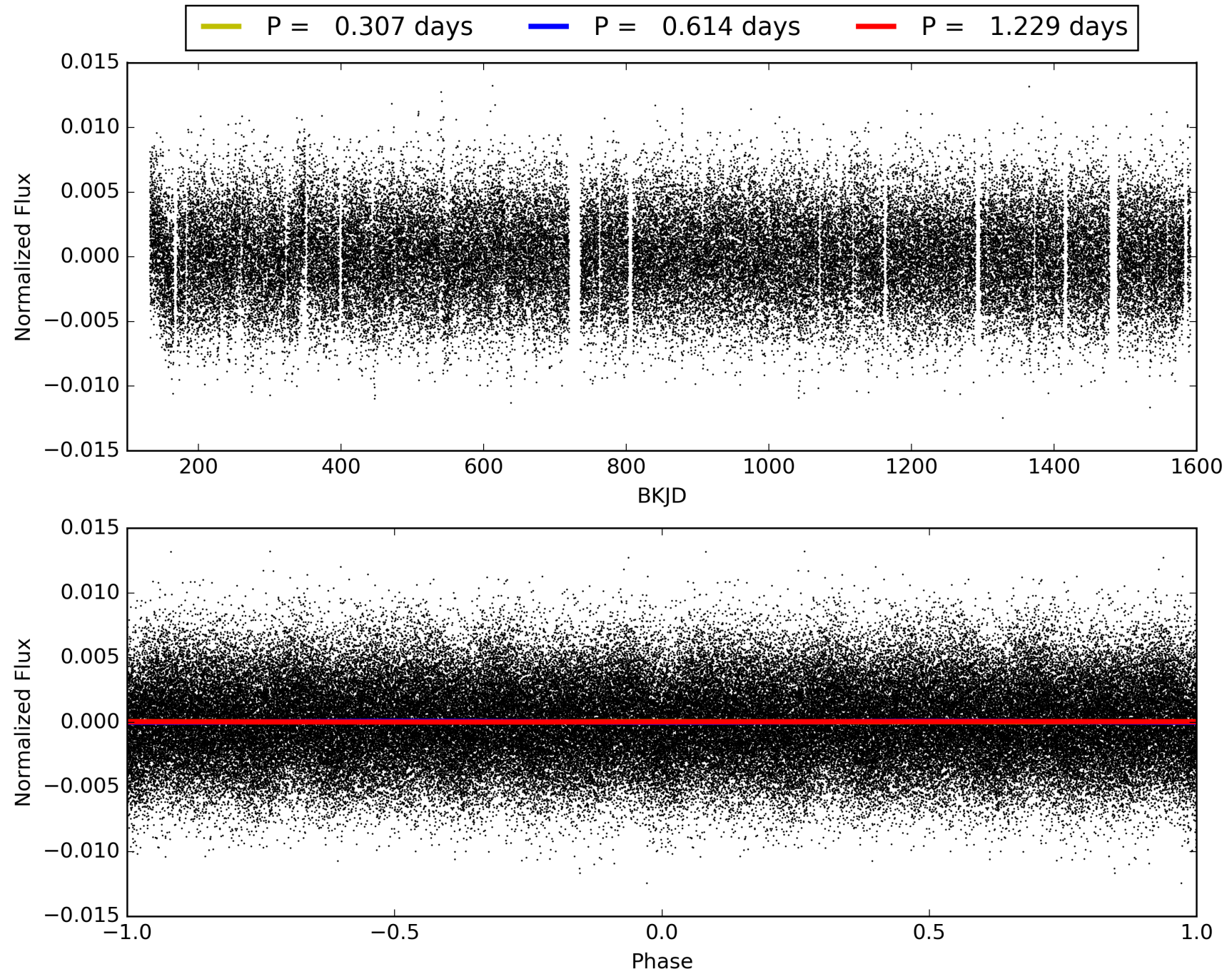
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:32:46 Z

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

TCE 006862920-01, PDC Light Curves

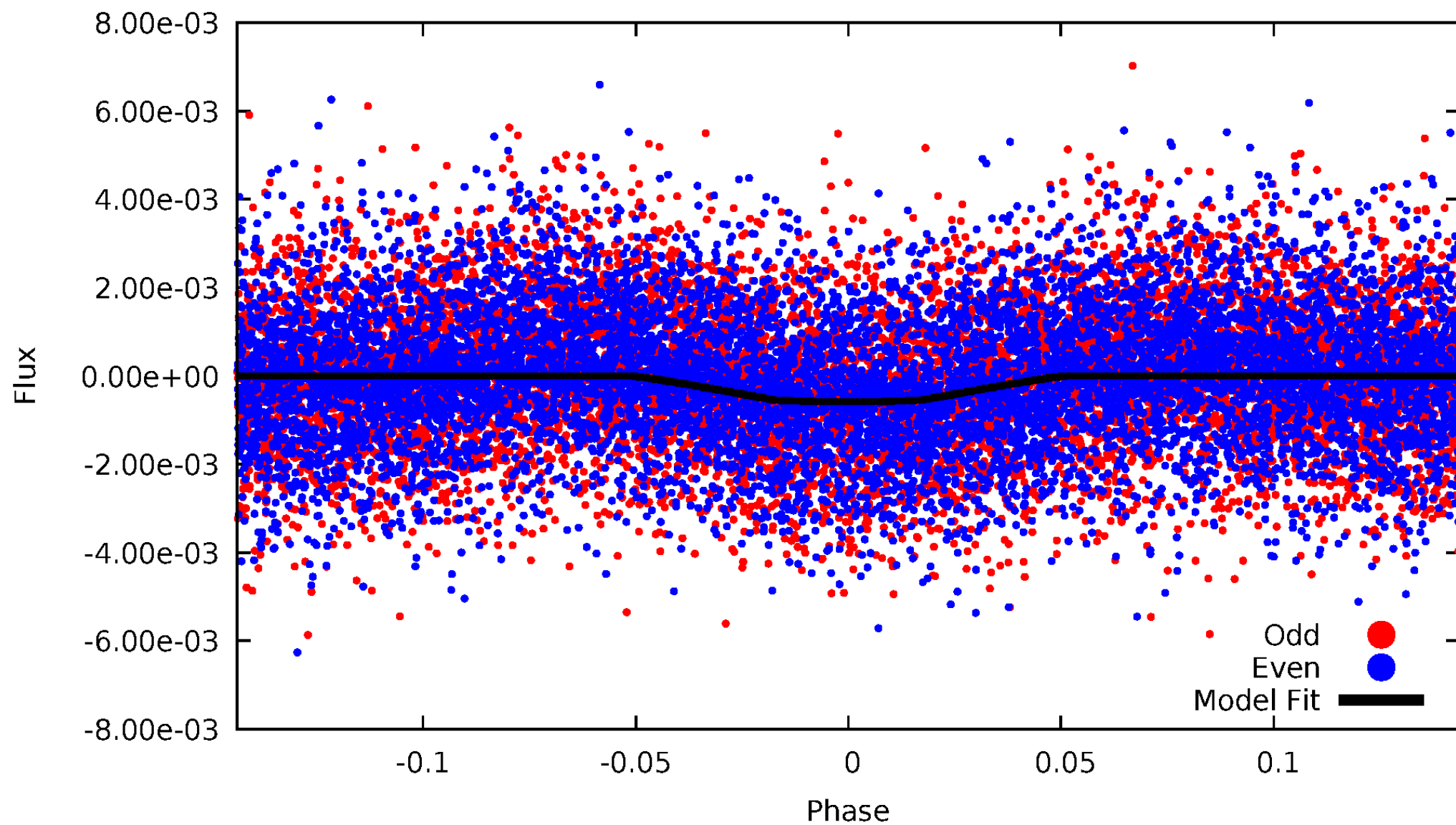


TCE 006862920-01



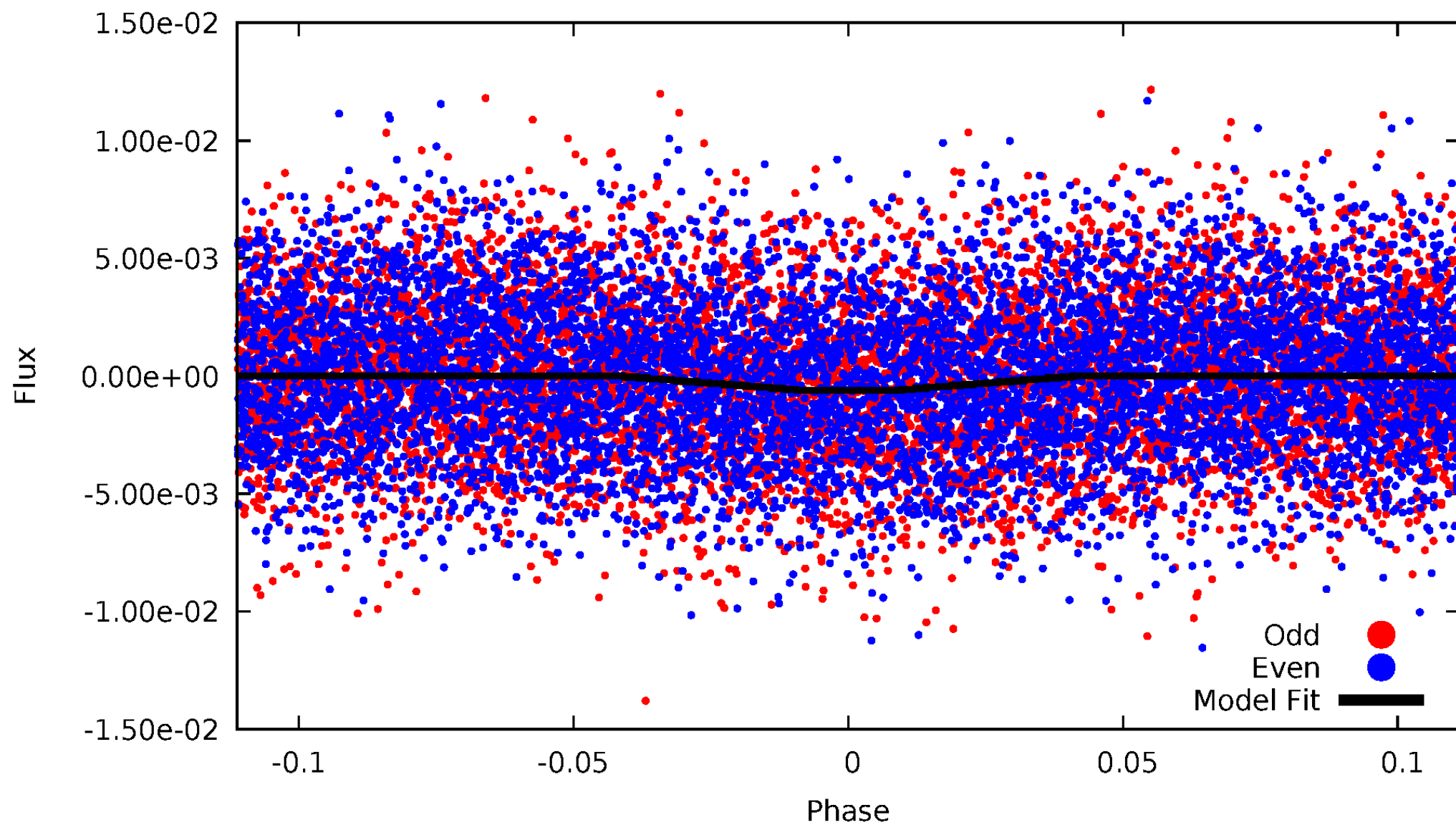
DV Odd/Even

TCE 006862920-01

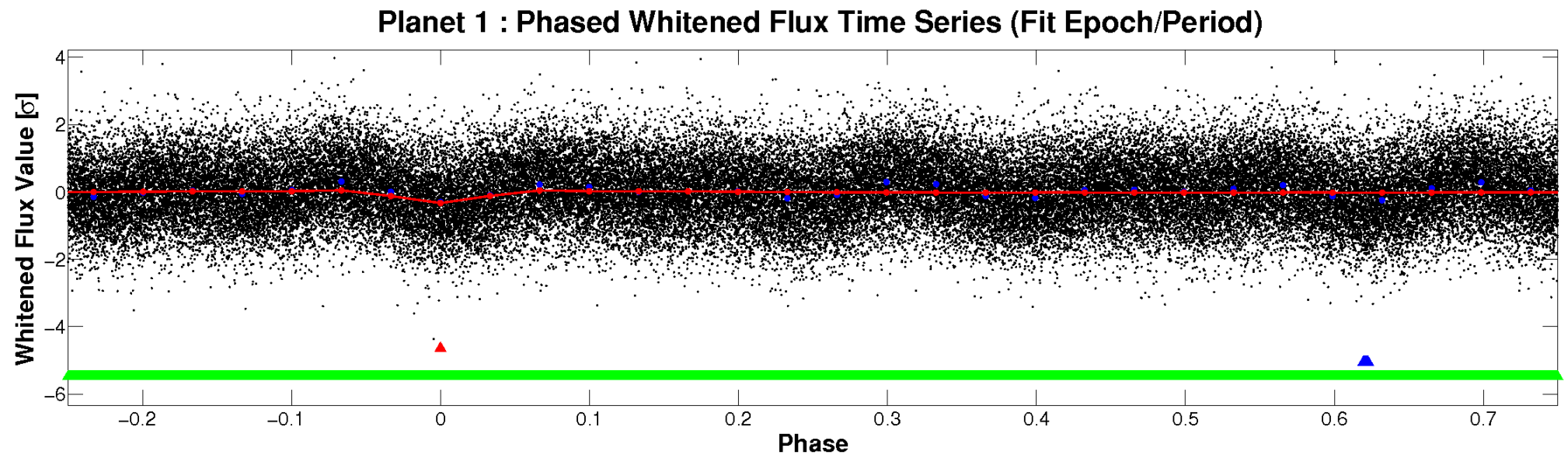
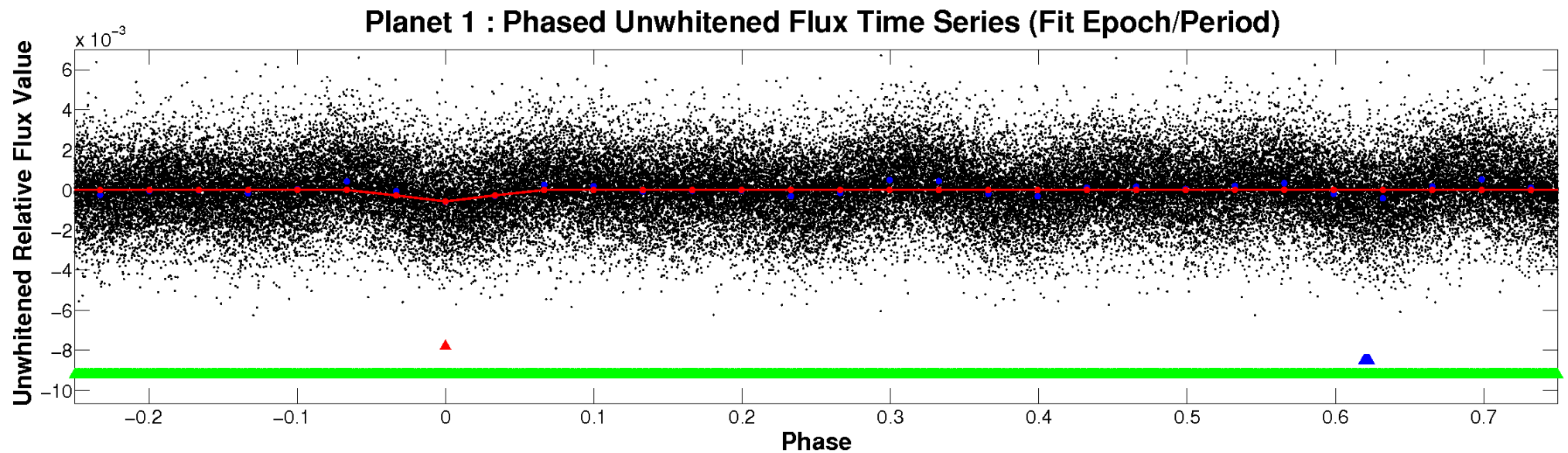


ALT Odd/Even

TCE 006862920-01

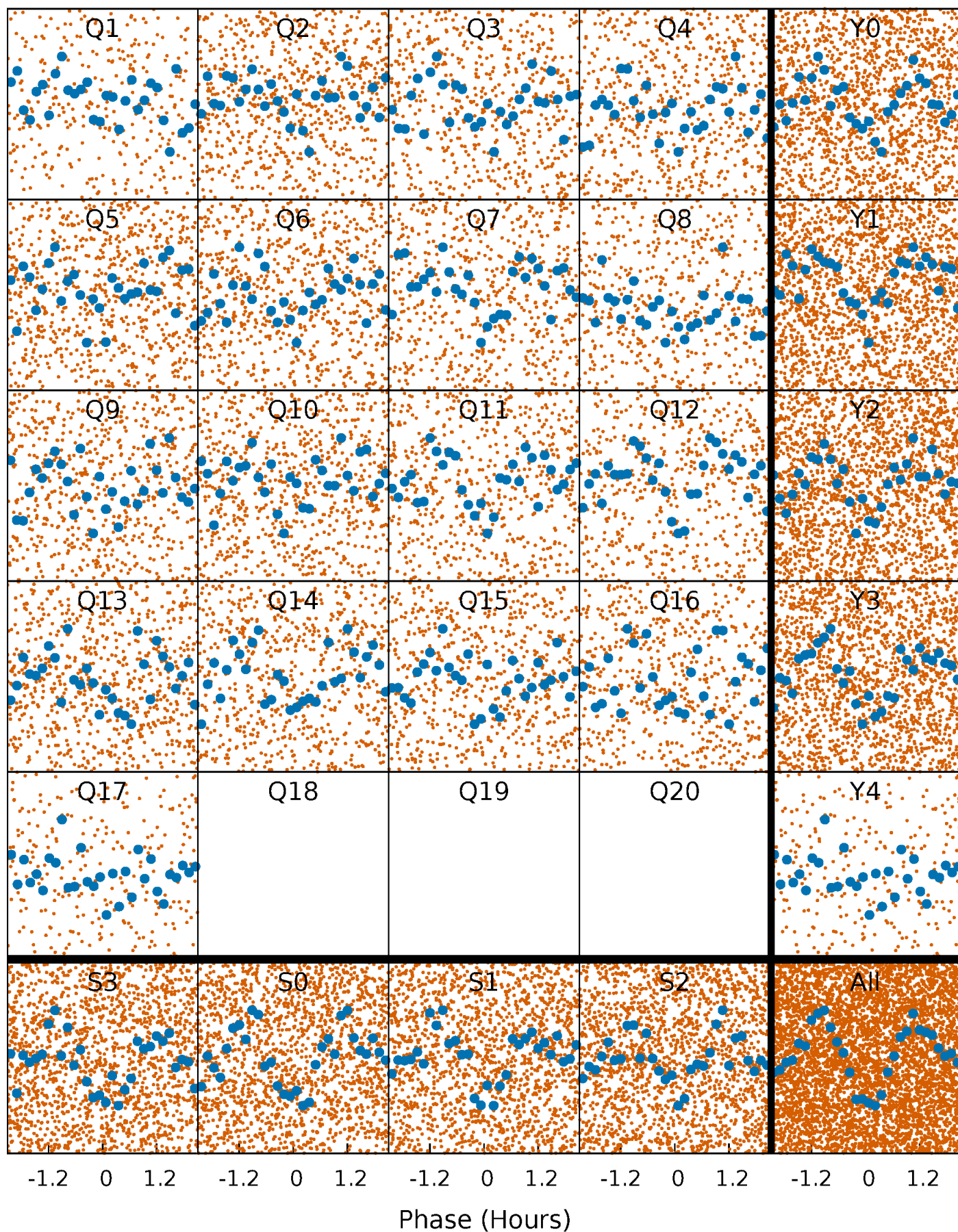


Non-Whitened Vs. Whitened Light Curve



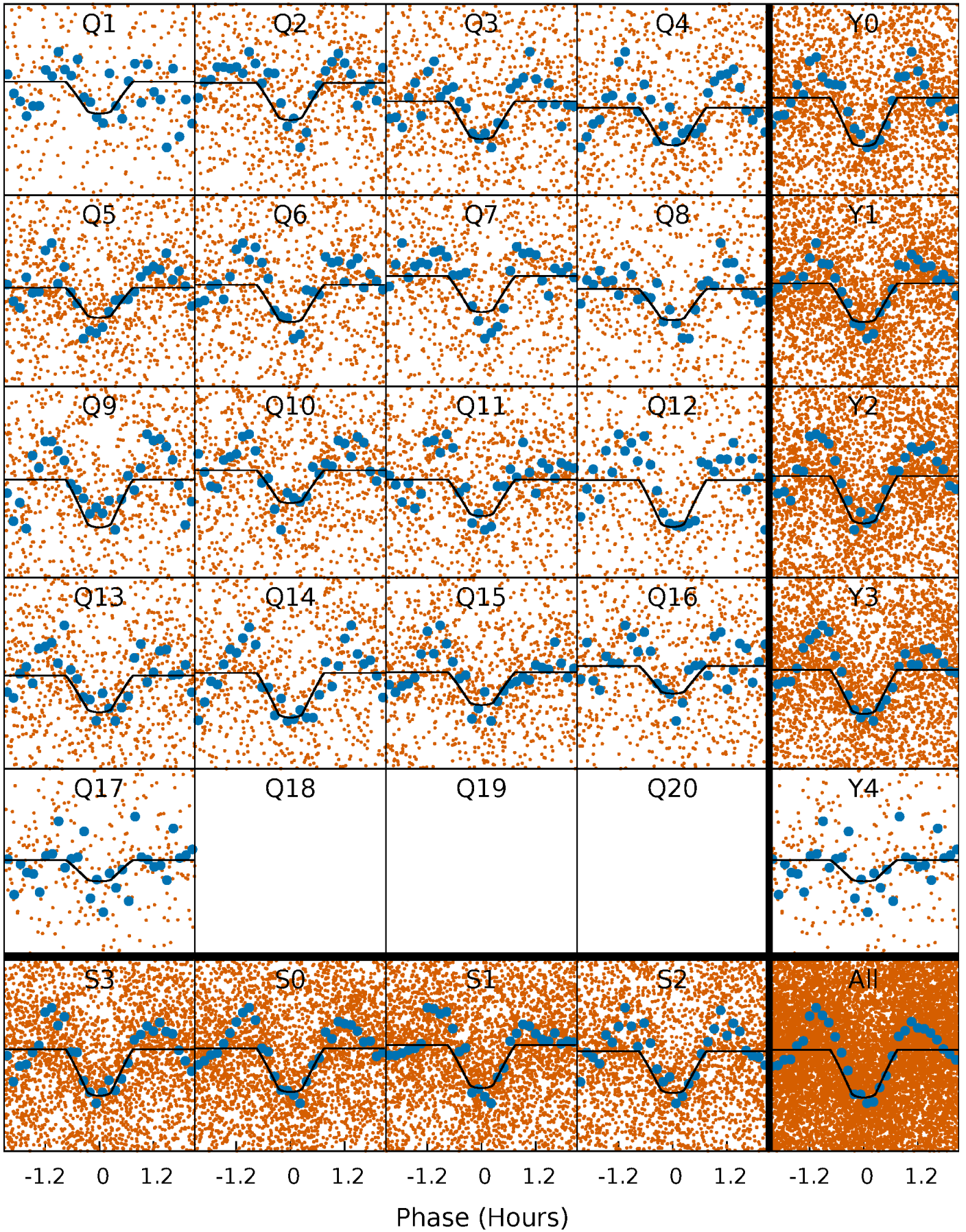
PDC Quarter-Phased Transit Curves

TCE 006862920-01 P= 0.614251 Days $T_0=131.522356$ (BKJD)



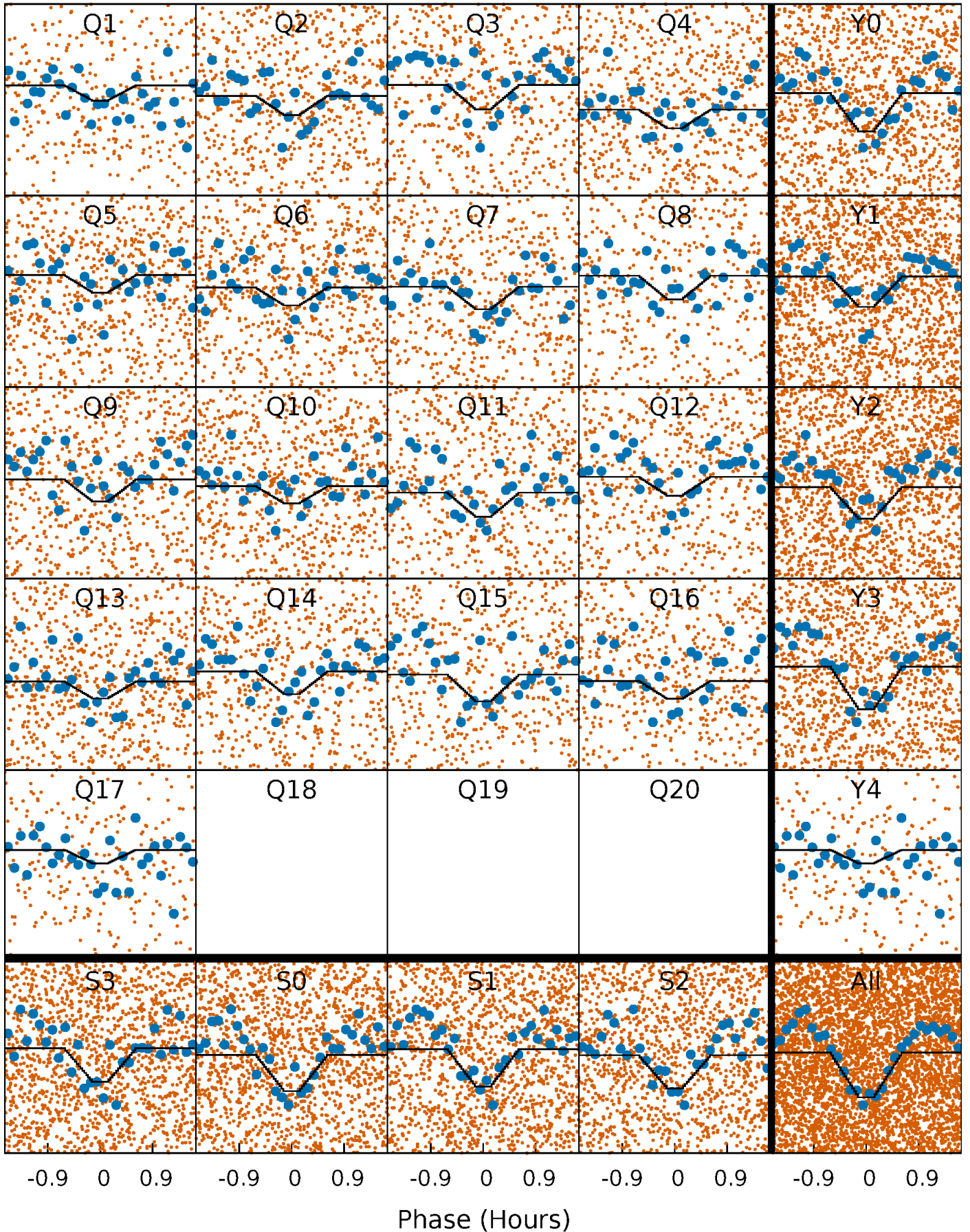
DV Quarter-Phased Transit Curves

TCE 006862920-01 P= 0.614251 Days $T_0=131.522356$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

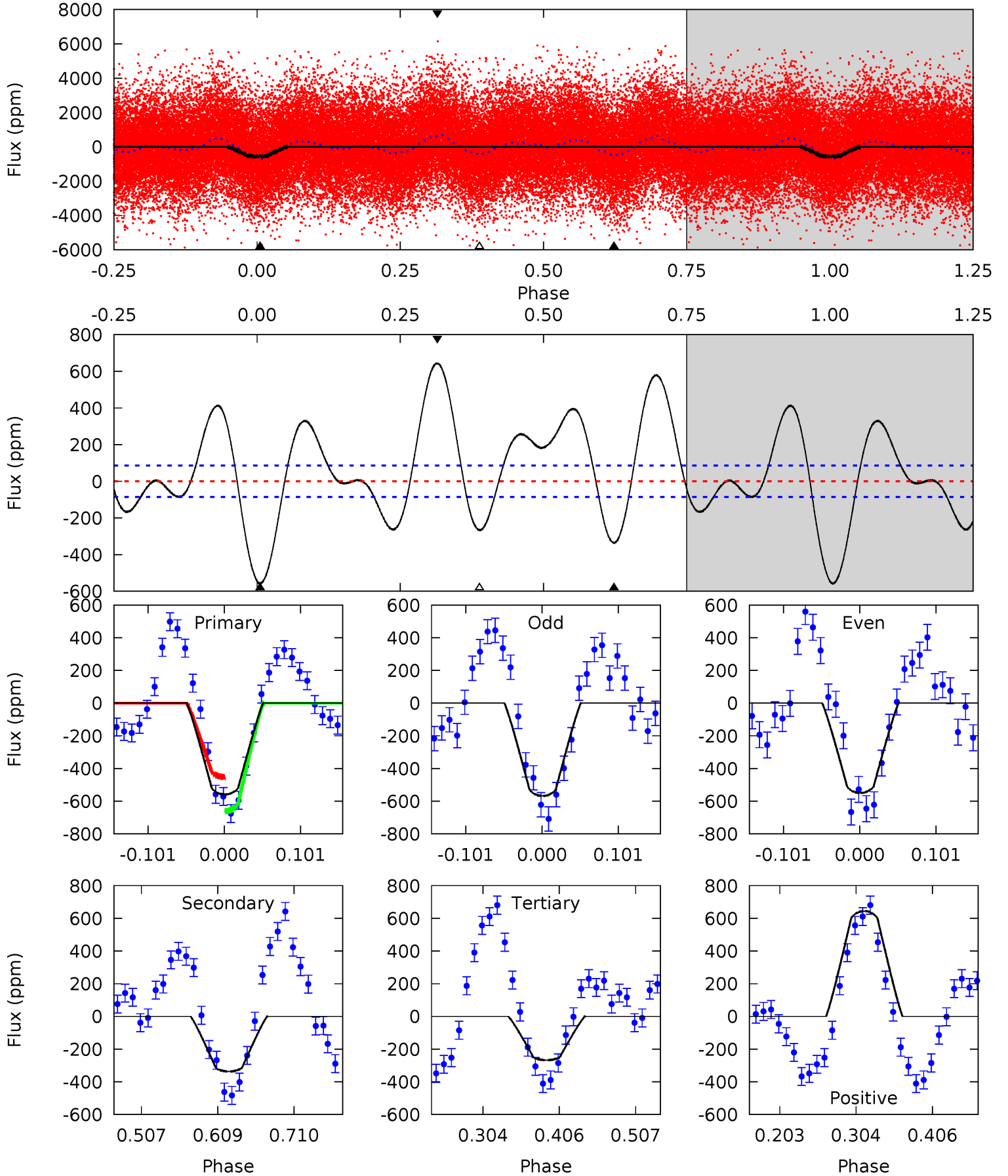
TCE 006862920-01 P= 0.614254 Days $T_0=131.522777$ (BKJD)



DV Model-Shift Uniqueness Test

006862920-01, P = 0.614251 Days, E = 130.908105 Days

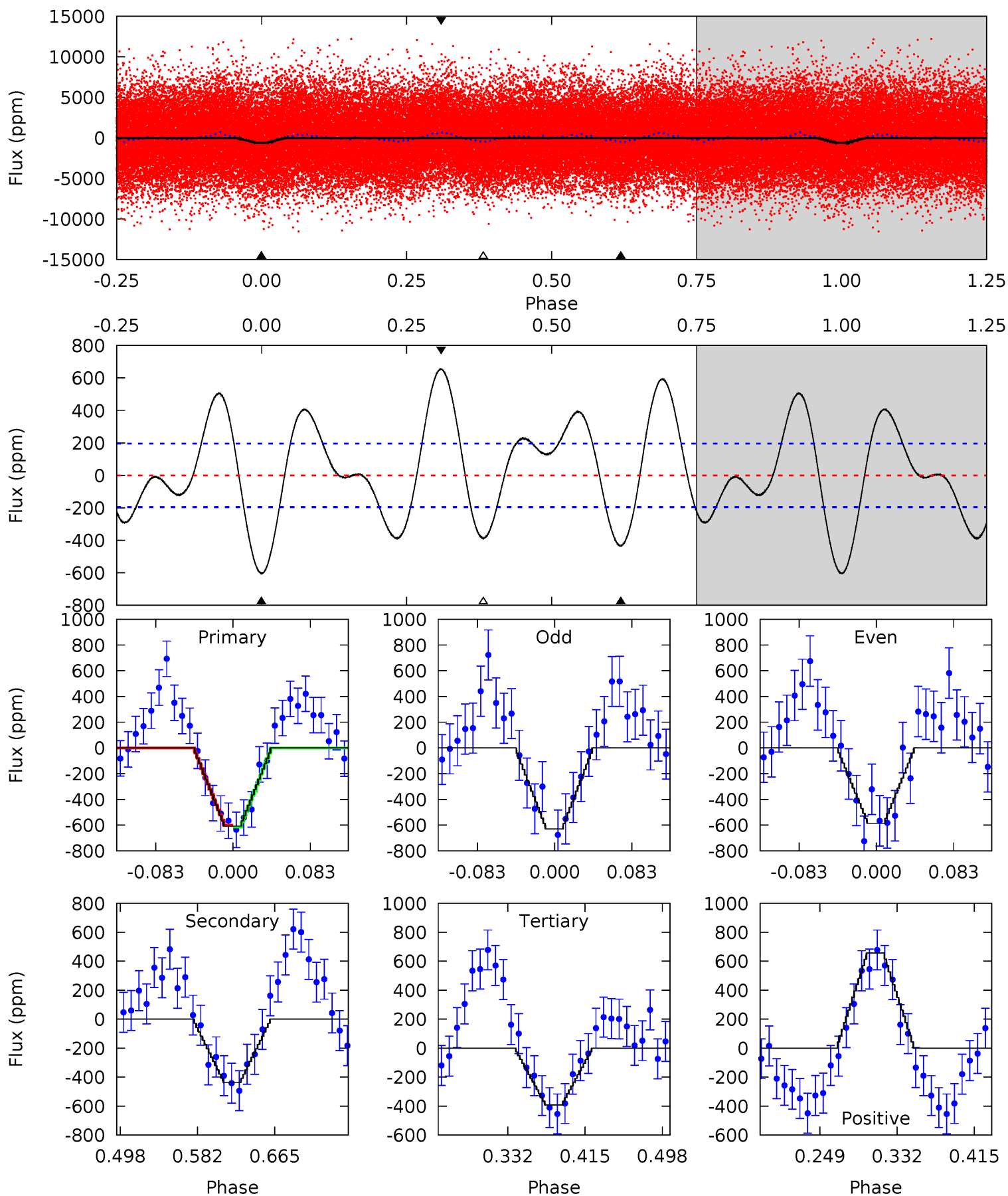
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.6	17.9	14.2	34.2	4.56	1.64	11.5	15.4	-4.54	3.67	-16.3	0.49	0.96	0.54	5.54



Alt Model-Shift Uniqueness Test

006862920-01, P = 0.614254 Days, E = 130.908523 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	10.3	9.20	15.4	4.60	1.73	6.01	5.07	-1.17	1.08	-5.16	0.50	1.24	0.52	0.15



Stellar Parameters For KIC 006862920

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7413^{+207}_{-337}	$4.103^{+0.144}_{-0.176}$	$-0.020^{+0.200}_{-0.350}$	$1.865^{+0.569}_{-0.379}$	$1.605^{+0.189}_{-0.260}$	$0.348^{+0.261}_{-0.174}$
	+3%/-5%	+4%/-4%	+1000%/-1750%	+31%/-20%	+12%/-16%	+75%/-50%
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 006862920-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-337 ± 19	$4.85^{+1.32}_{-1.09}$	4841^{+374}_{-307}	6113^{+980}_{-684}	$2.096^{+1.516}_{-0.767}$
Alt.	-438 ± 43	$4.96^{+1.32}_{-1.06}$	4848^{+332}_{-329}	6519^{+1050}_{-722}	$2.629^{+1.587}_{-0.975}$

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

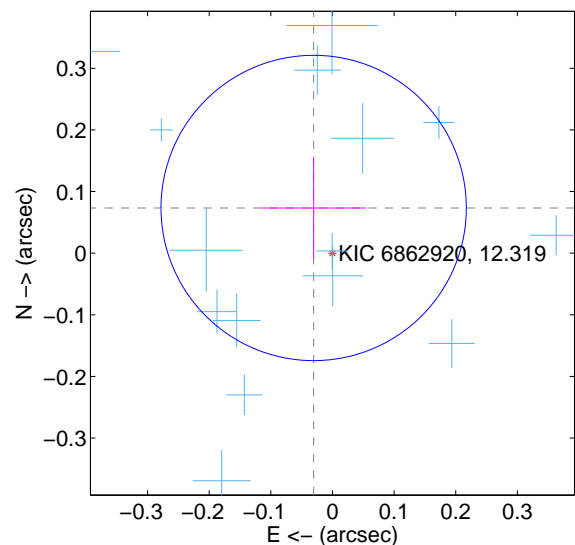
Supplemental centroid analysis for 006862920-01. Kepler magnitude: 12.32. Transit SNR 18.76

There are 17 quarters with good PRF difference image offsets

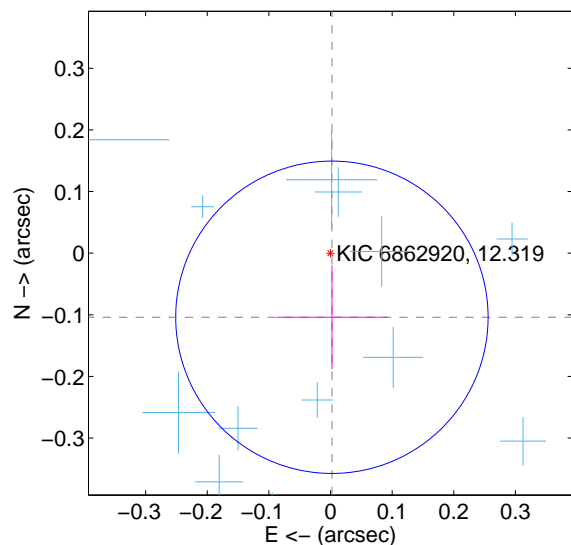
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.079 ± 0.083	0.96	0.031 ± 0.085	0.073 ± 0.082
PRF-fit source offset from KIC position	0.104 ± 0.084	1.23	-0.002 ± 0.090	-0.104 ± 0.084
photometric centroid source offset	0.15 ± 0.03	5.23	-0.05 ± 0.03	-0.14 ± 0.03

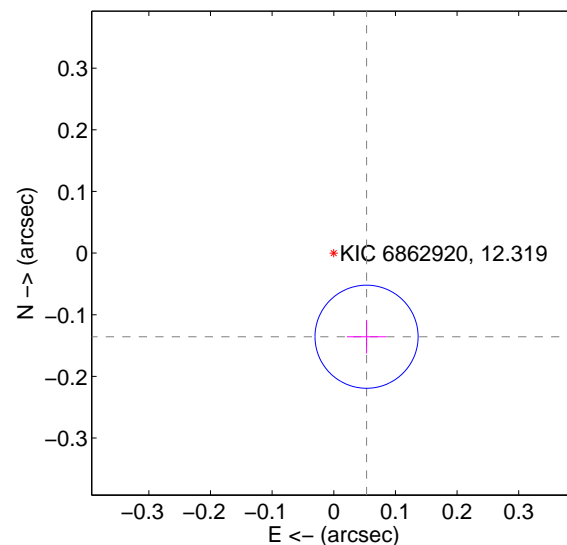
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

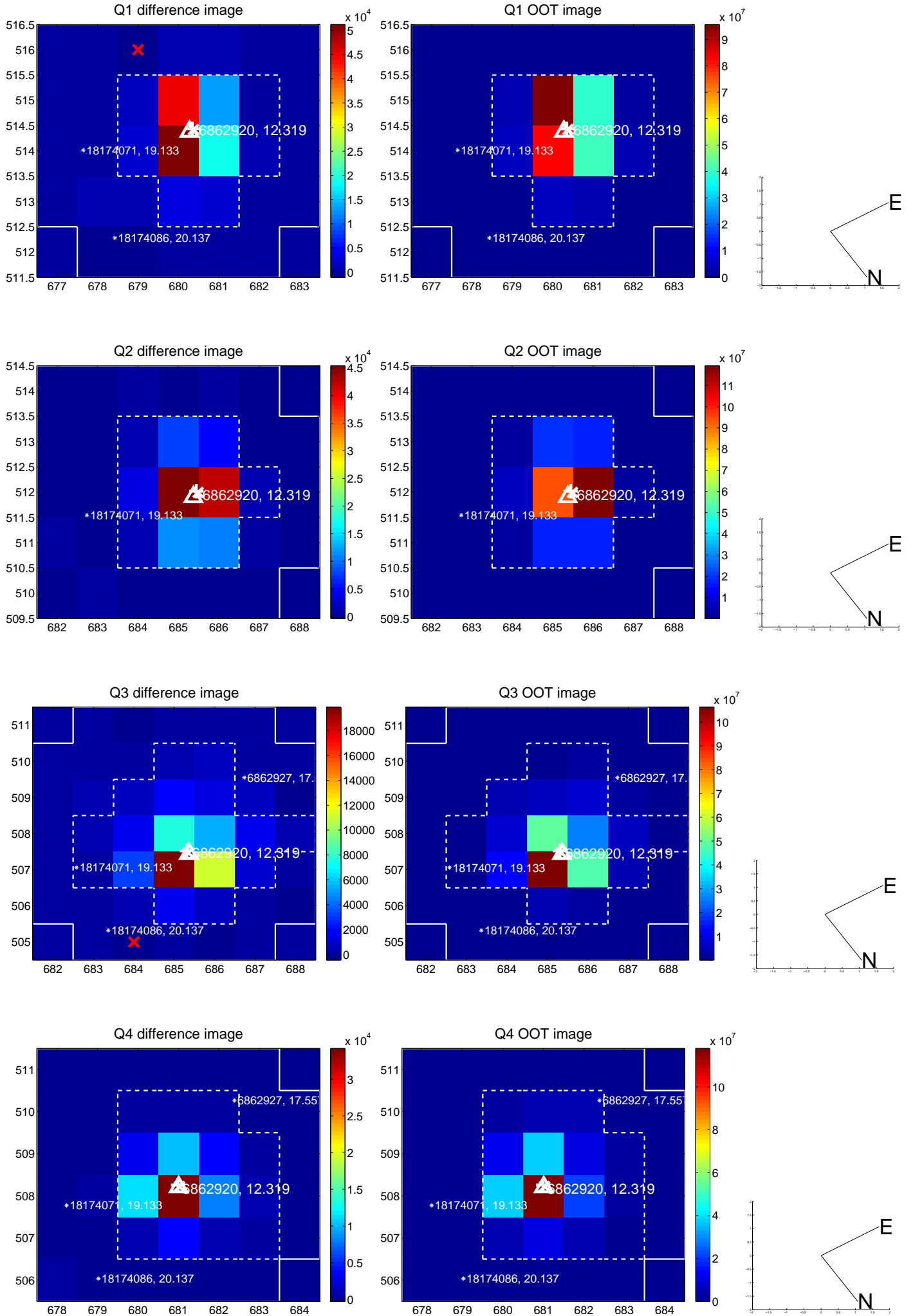


offset from photometric centroids

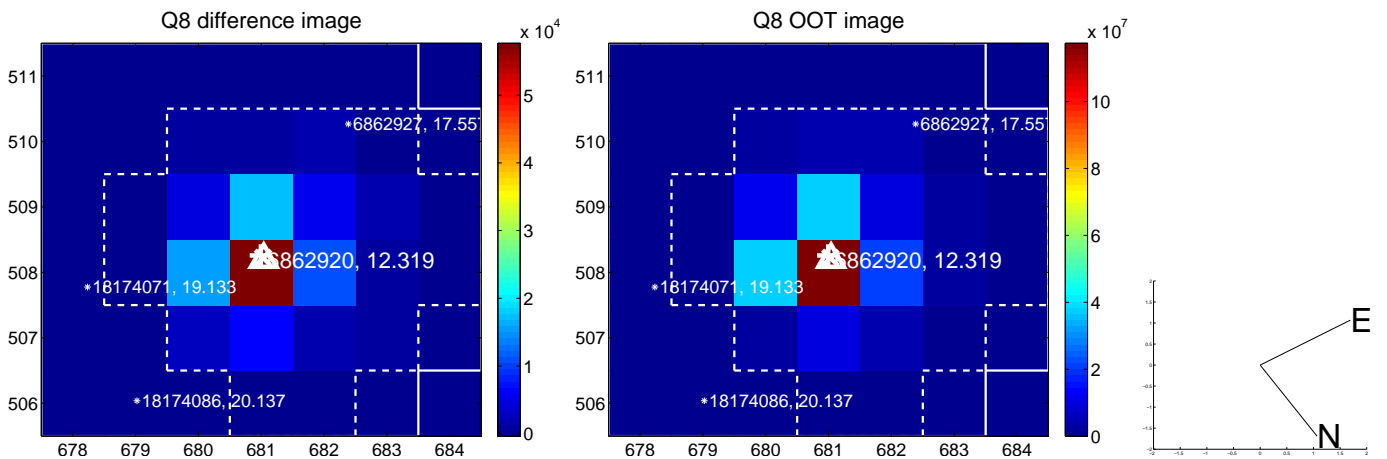
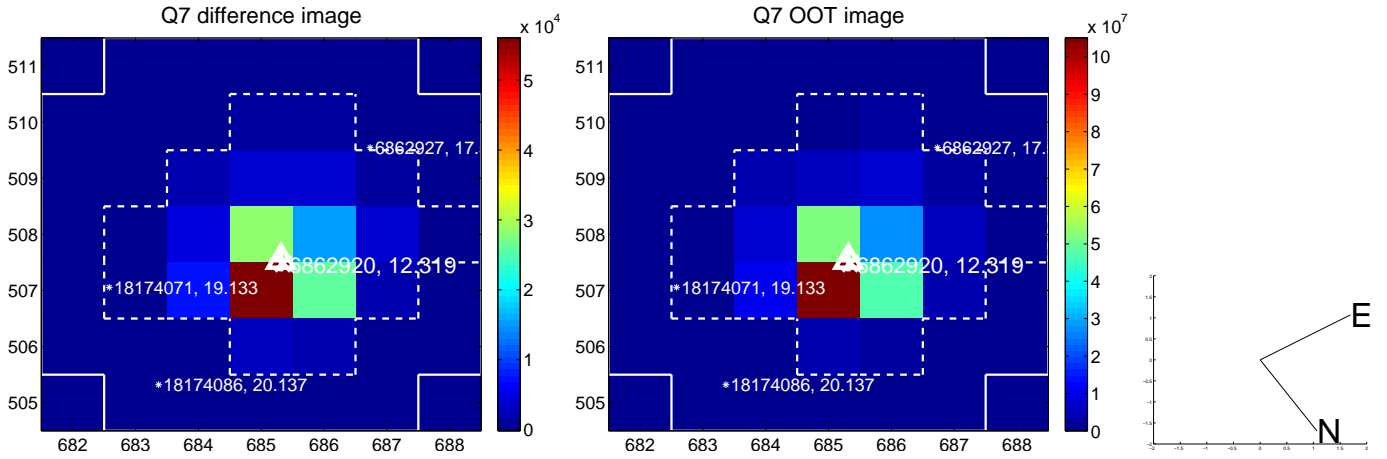
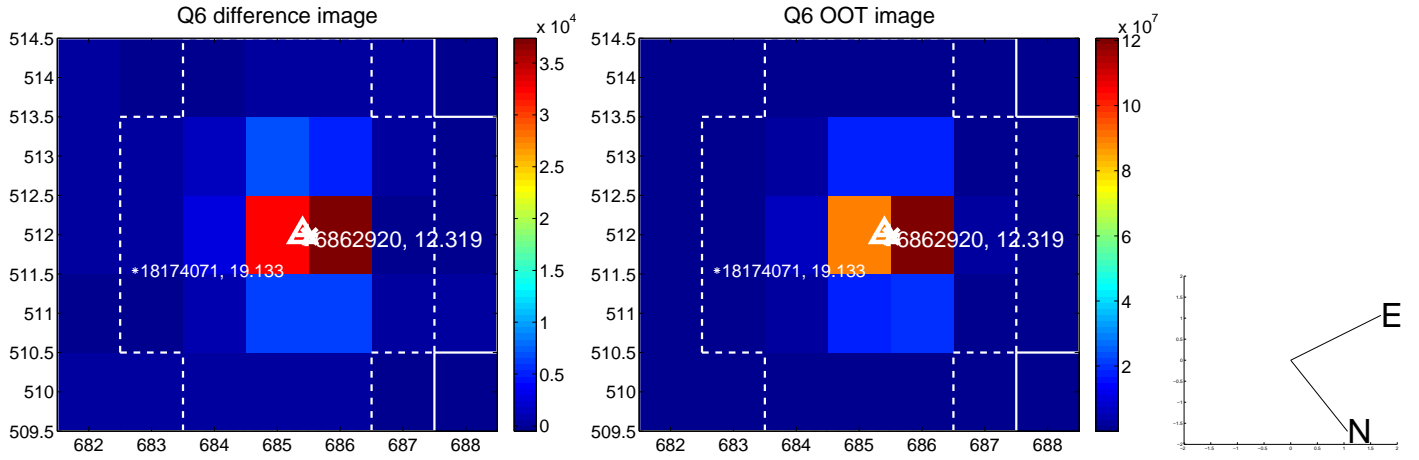
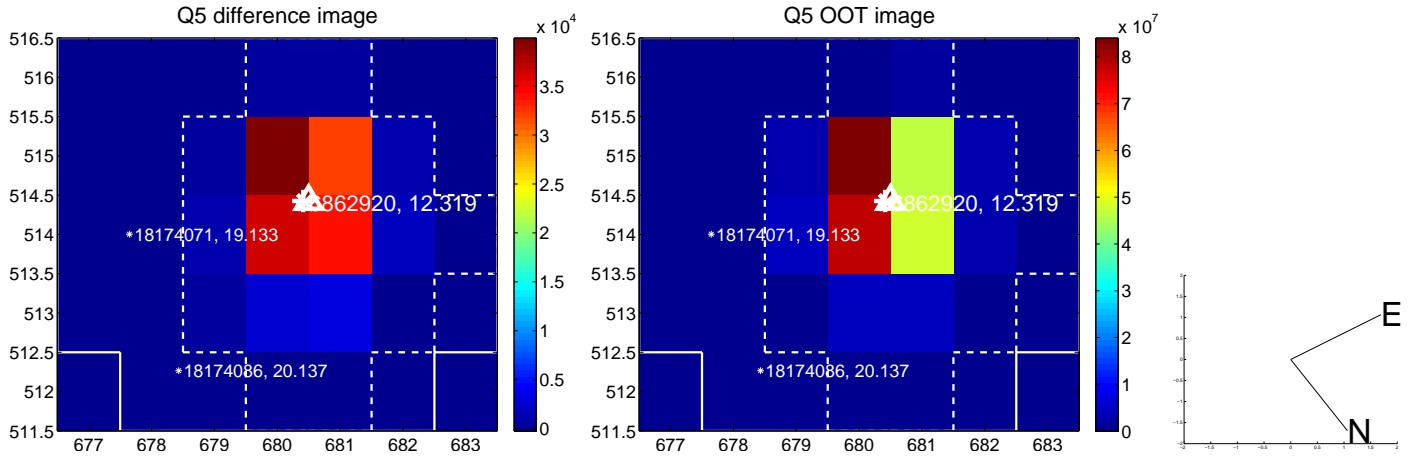


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

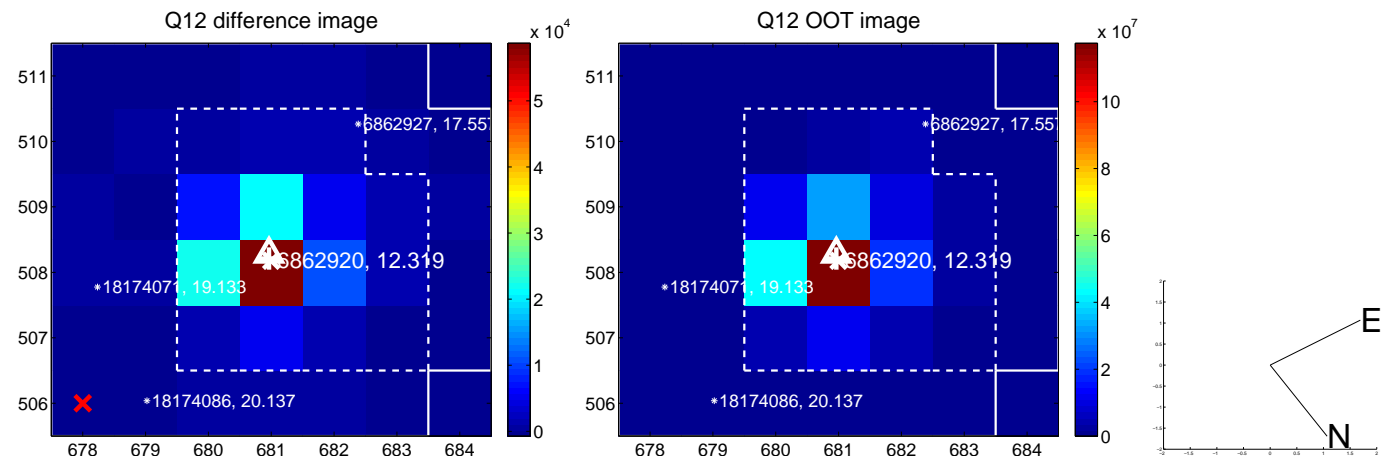
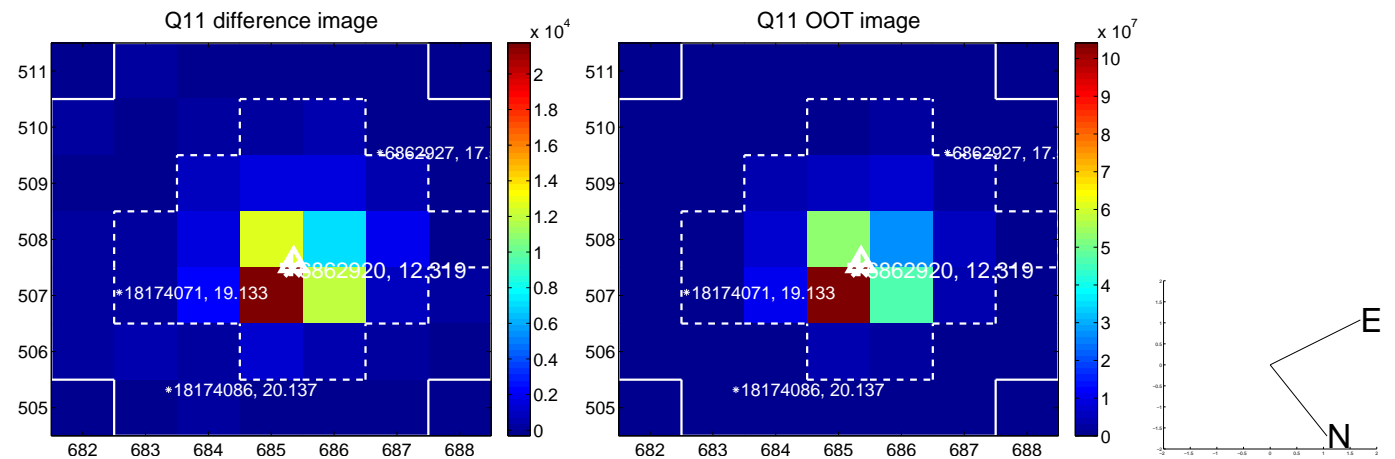
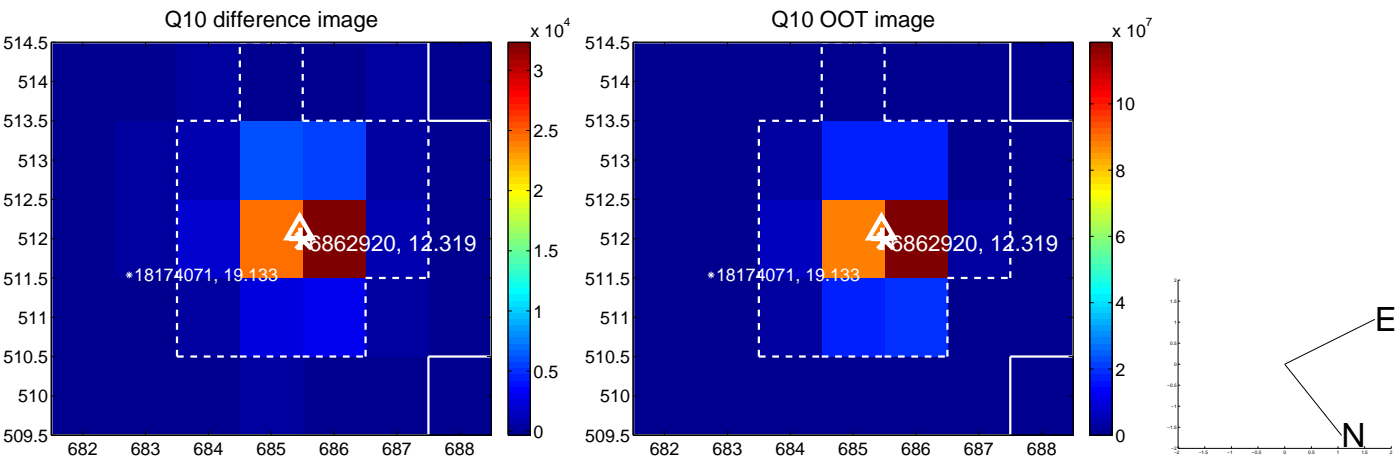
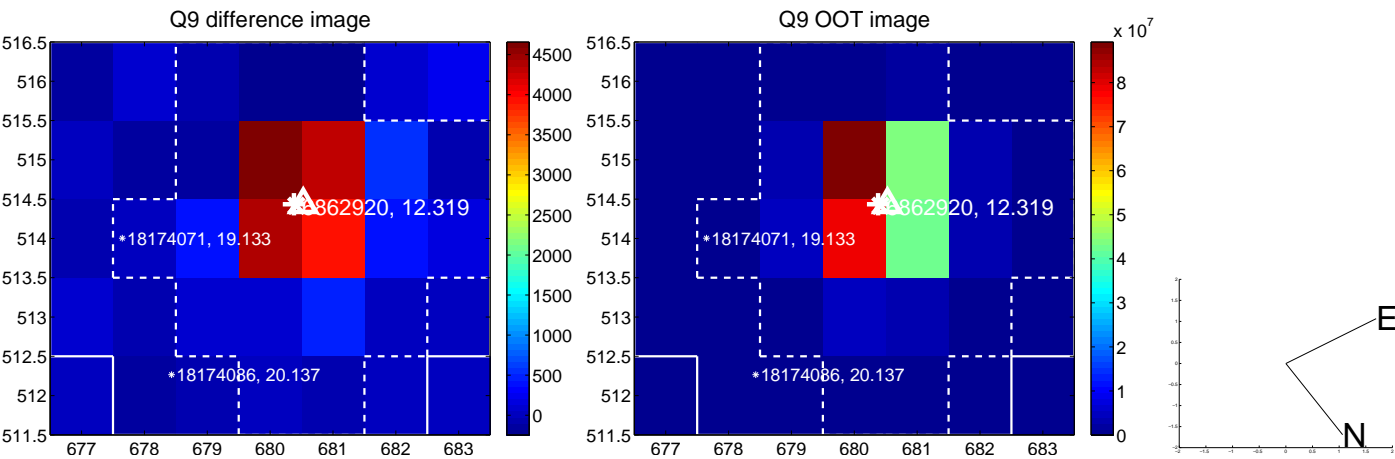
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



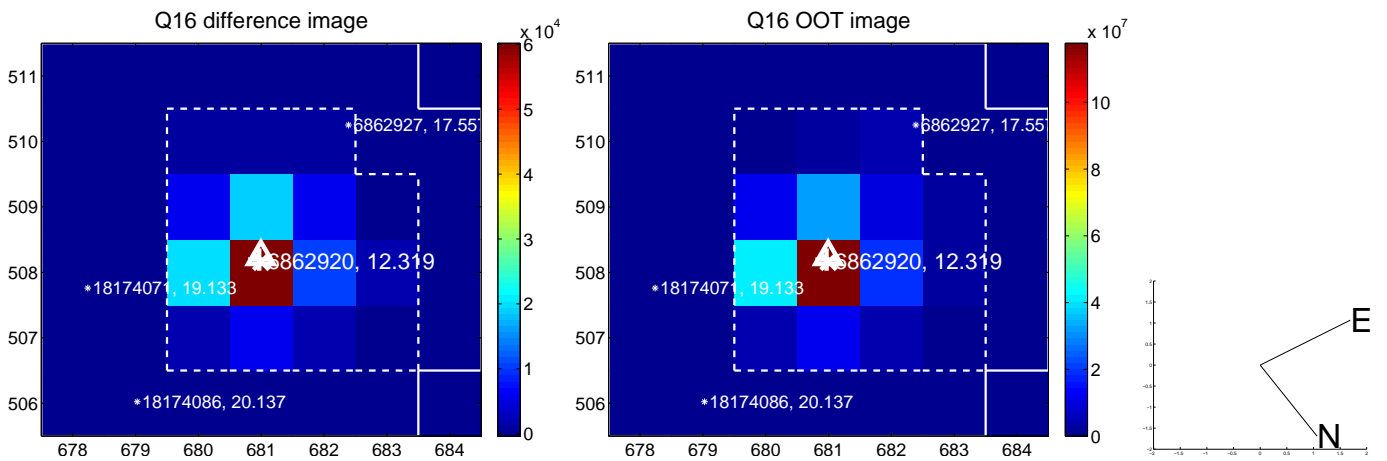
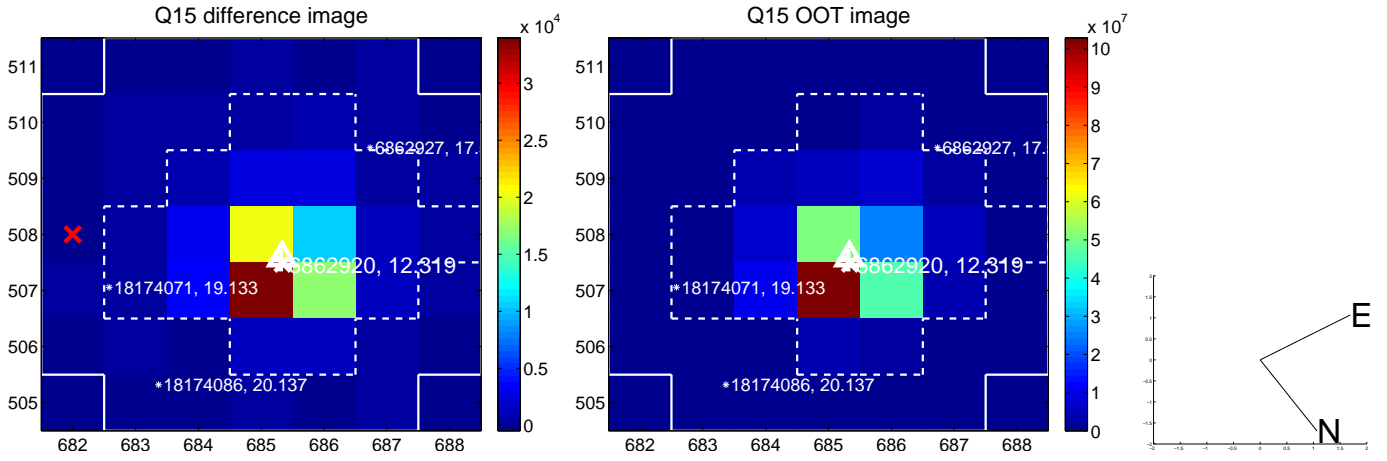
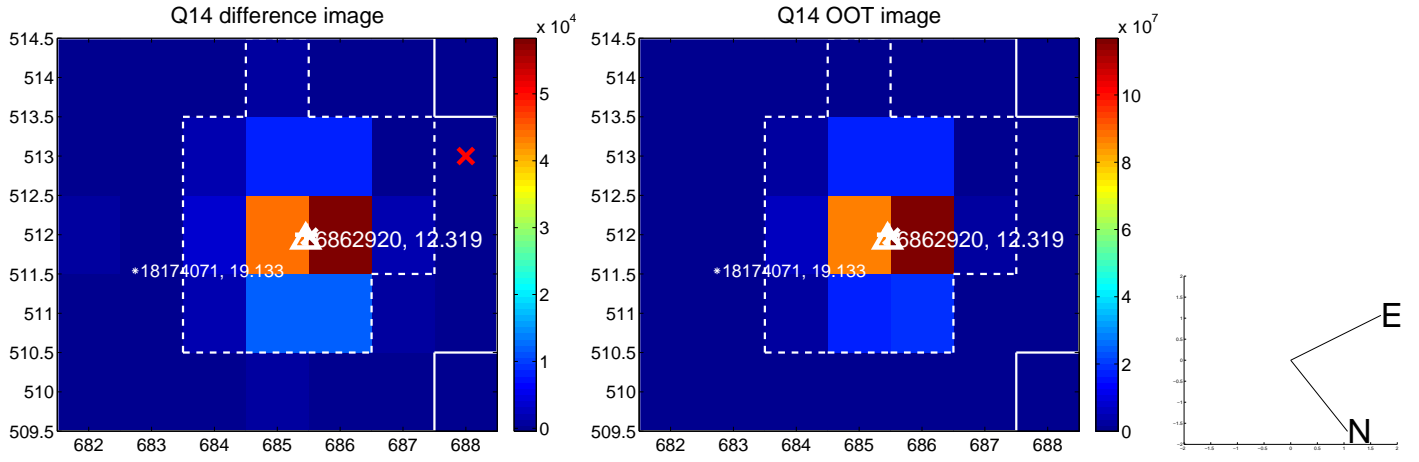
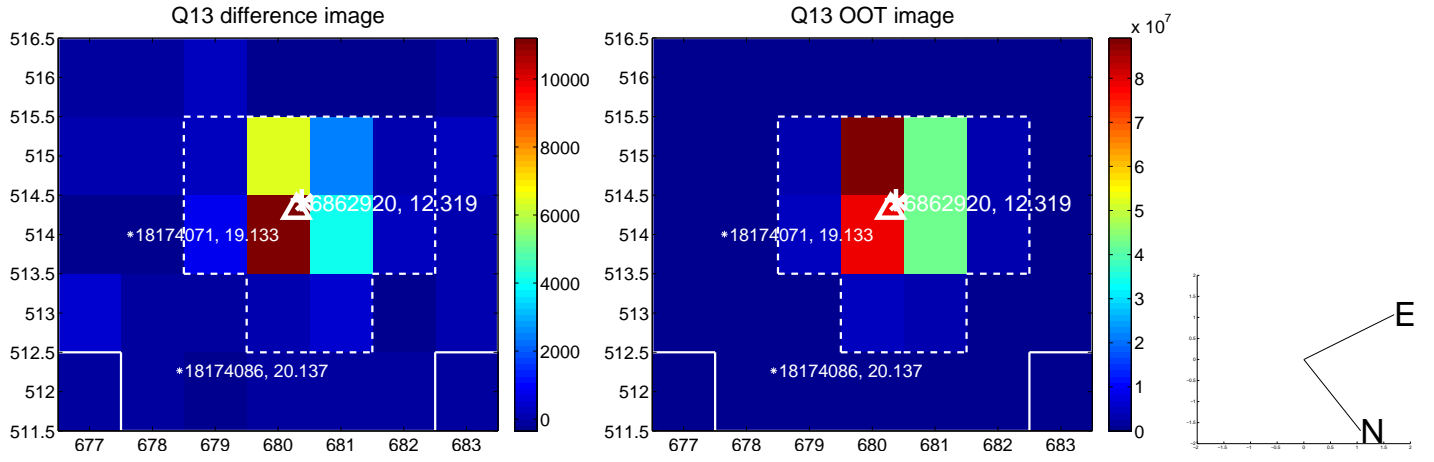
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

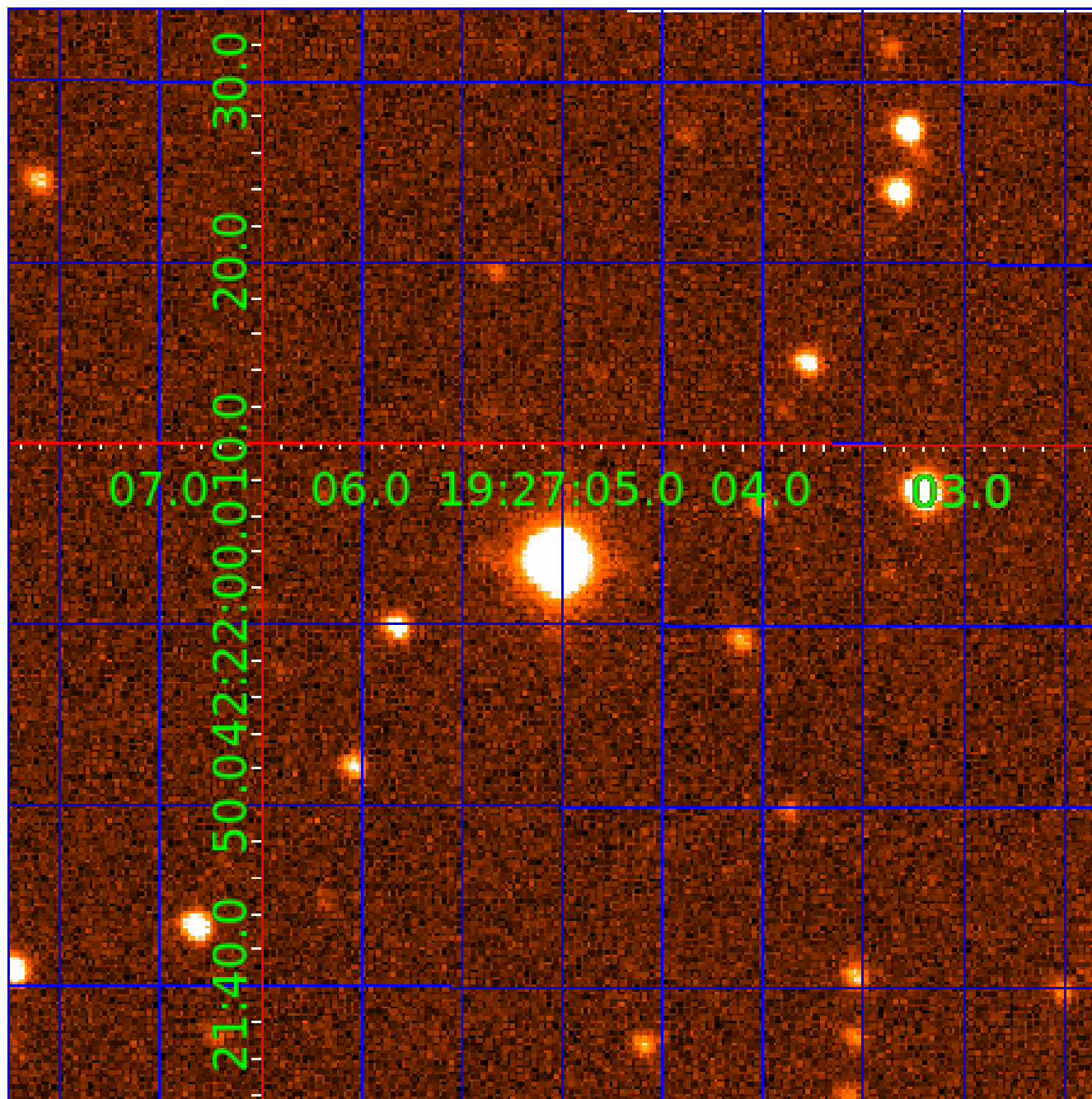


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006862920

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})
006862920-01	OBS	No	0.614251	131.522356	581.4	1.059	12.7	18.8	1.86	7413	4.86	34265.84
006862920-02	OBS	No	0.614252	131.902834	481.7	1.108	10.0	15.1	1.86	7413	4.77	34265.78
006862920-03	OBS	No	0.550806	131.977219	1079.9	6.610	9.3	21.9	1.86	7413	7.48	39626.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006862920-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006862920-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
006862920-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV

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

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

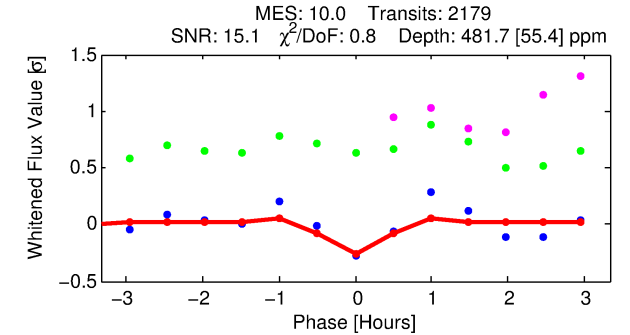
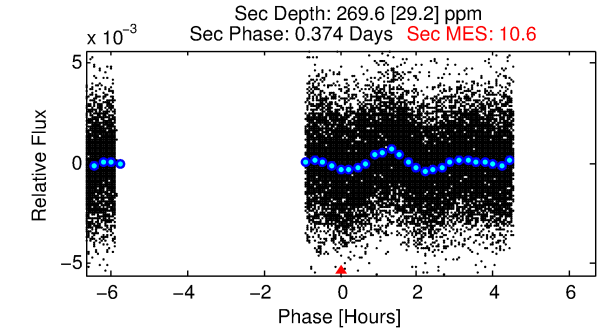
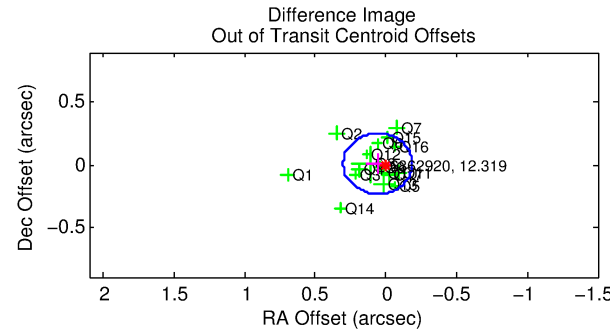
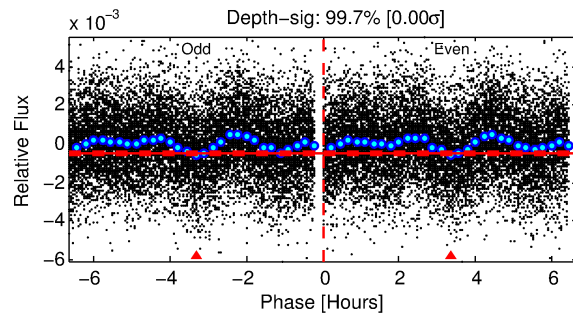
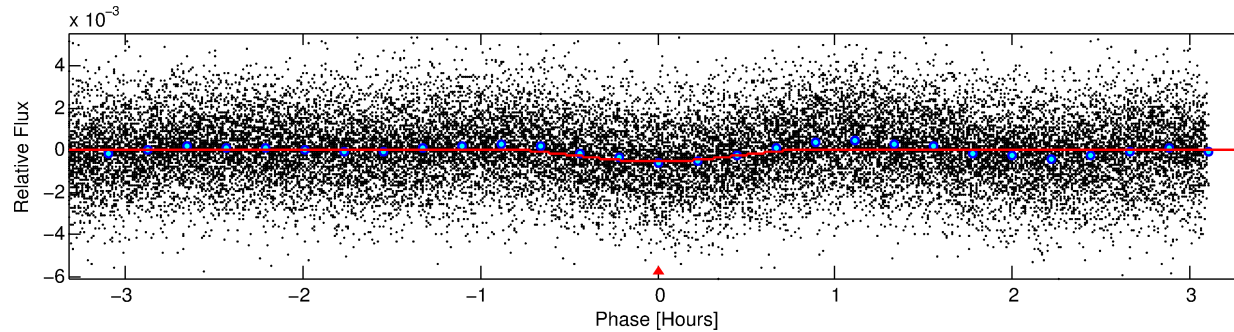
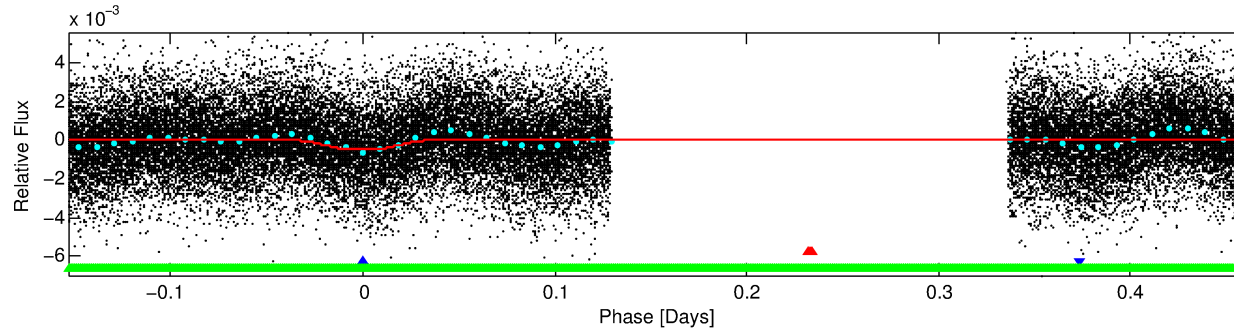
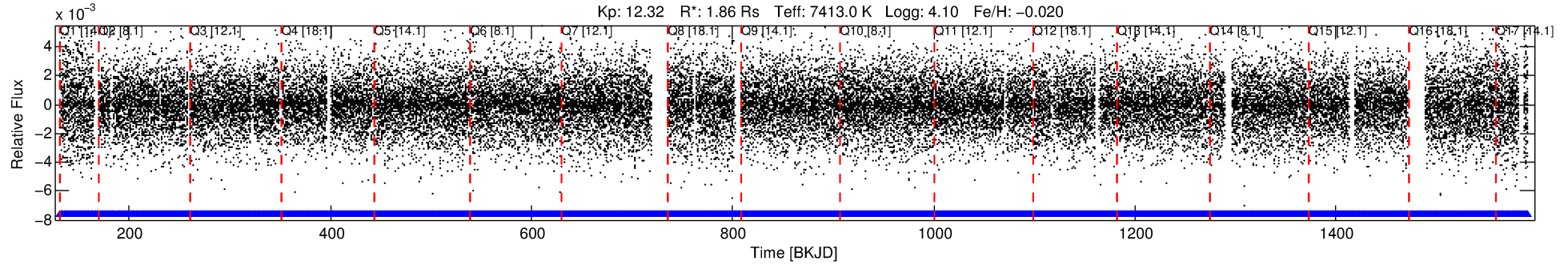
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006862920-02

No Significant Match Found

DV One-Page Summary

KIC: 6862920 Candidate: 2 of 3 Period: 0.614 d



DV Fit Results:

Period = 0.61425 [0.00001] d
Epoch = 131.9028 [0.0010] BKJD
Rp/R* = 0.0234 [0.0065]
a/R* = 2.27 [3.09]
b = 0.90 [0.36]
Seff = 34265.78 [13156.83]
Teq = 3469 [333] K
Rp = 4.77 [1.97] Re
a = 0.0166 [0.0040] AU
Ag = 1.79 [1.18] [0.67σ]
Teffp = 6206 [921] K [2.79σ]

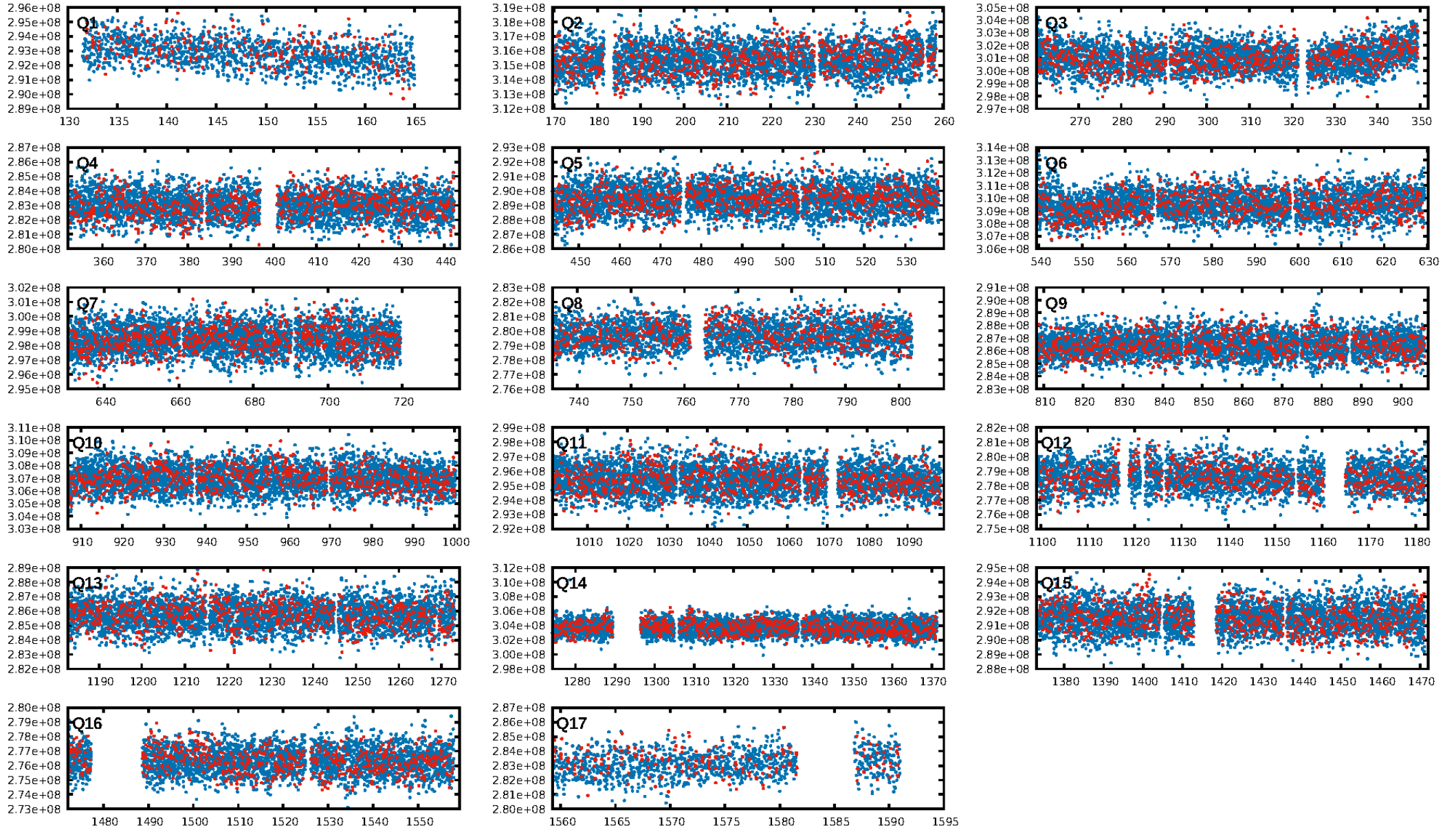
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2081/2081]
GhostDiagnostic-chr: 1.474
Centroid-sig: 56.9%
Centroid-so: 0.214 arcsec [6.36σ]
OotOffset-rm: 0.059 arcsec [0.73σ]
KicOffset-rm: 0.178 arcsec [2.28σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 0.00 [0/17]

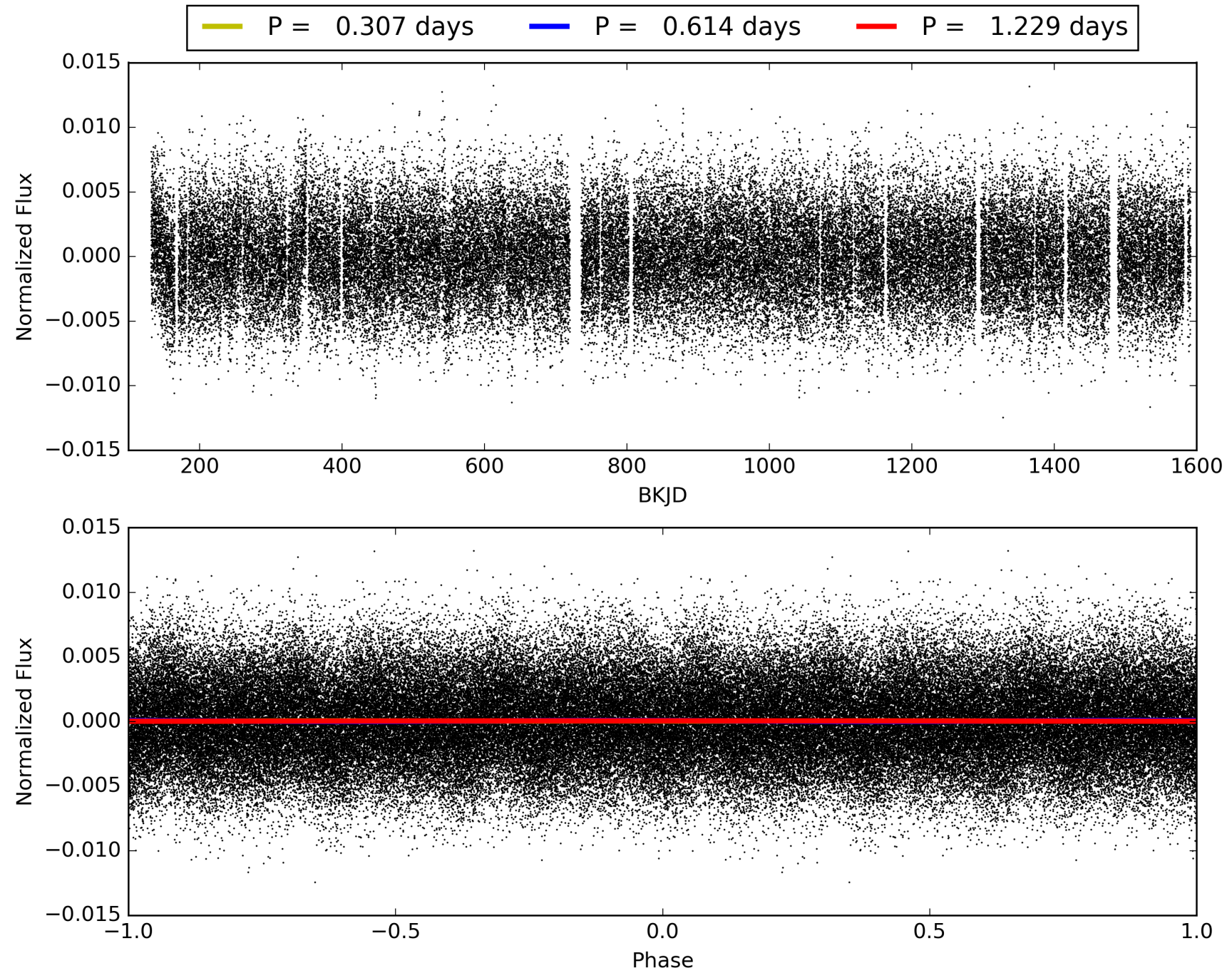
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:32:56 Z

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

TCE 006862920-02, PDC Light Curves

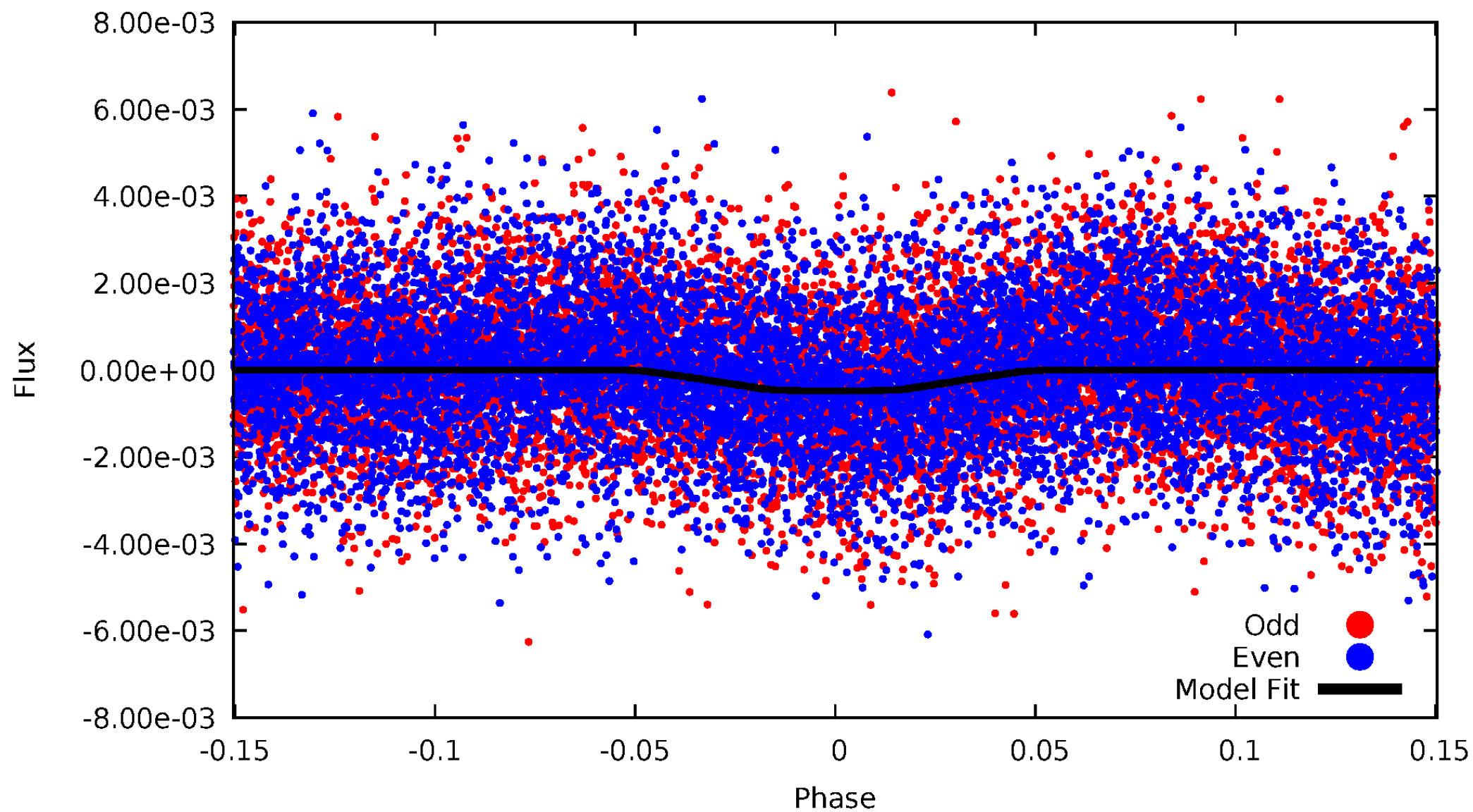


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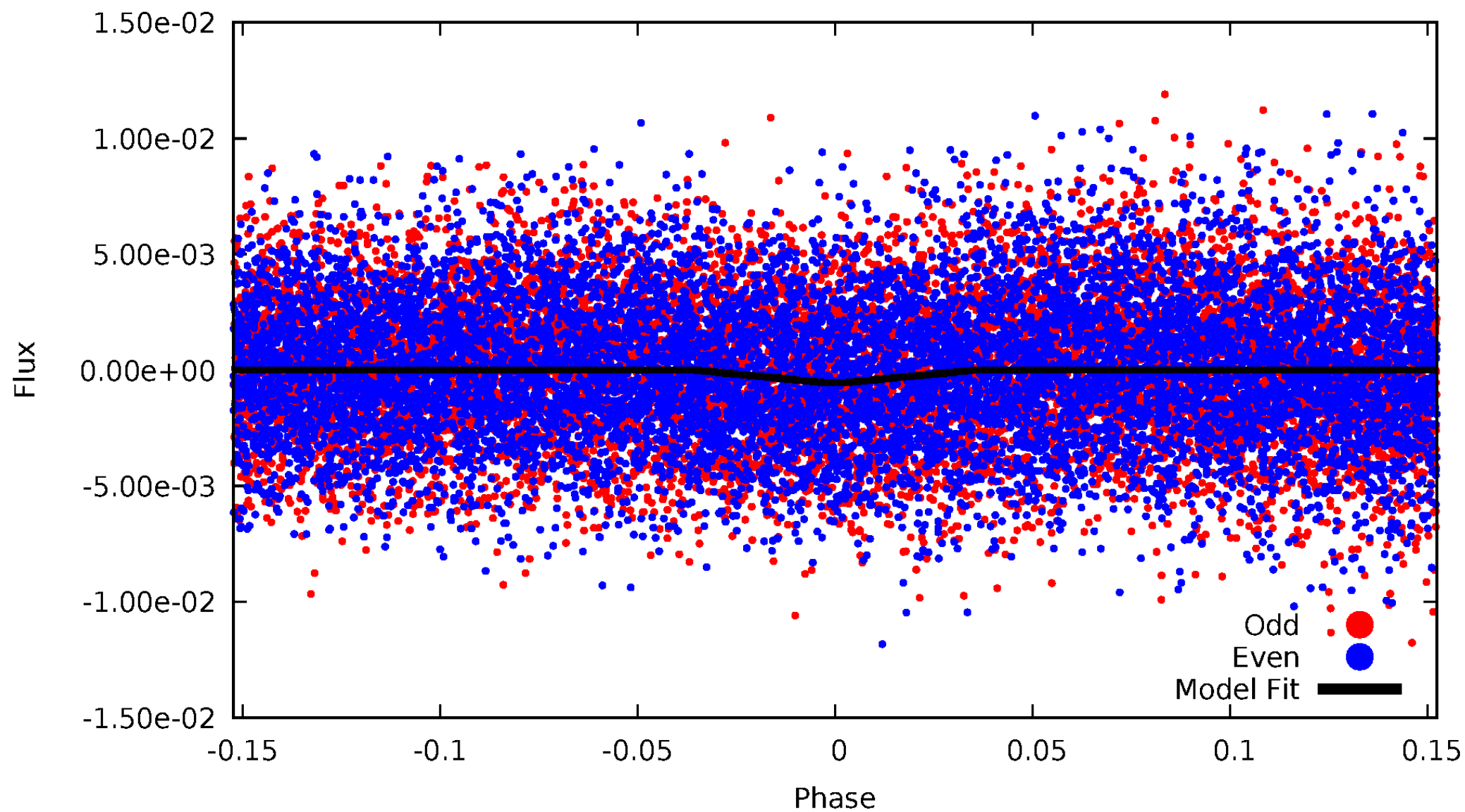
DV Odd/Even

TCE 006862920-02



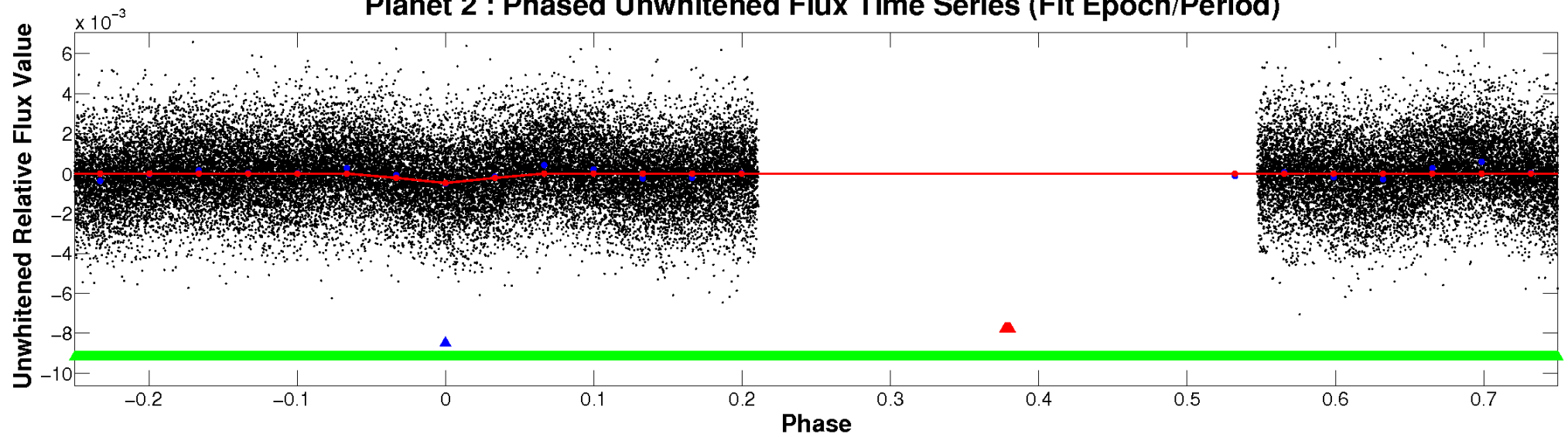
ALT Odd/Even

TCE 006862920-02

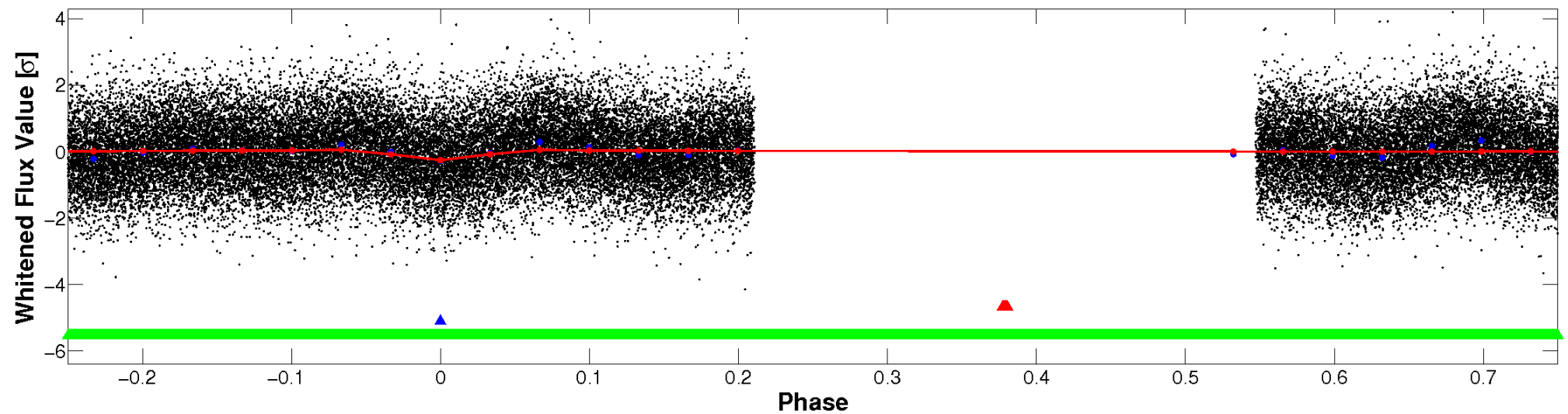


Non-Whitened Vs. Whitened Light Curve

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

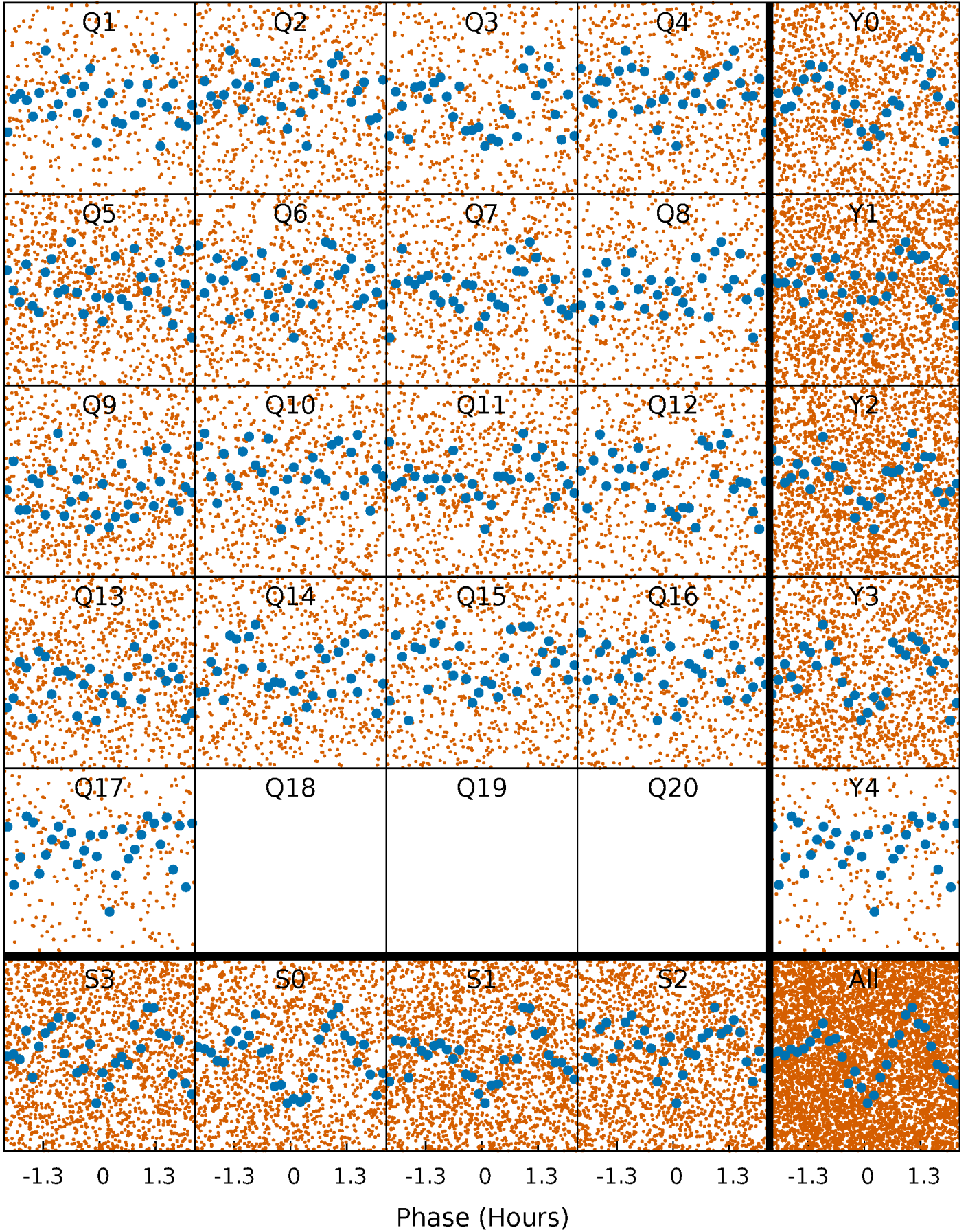


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



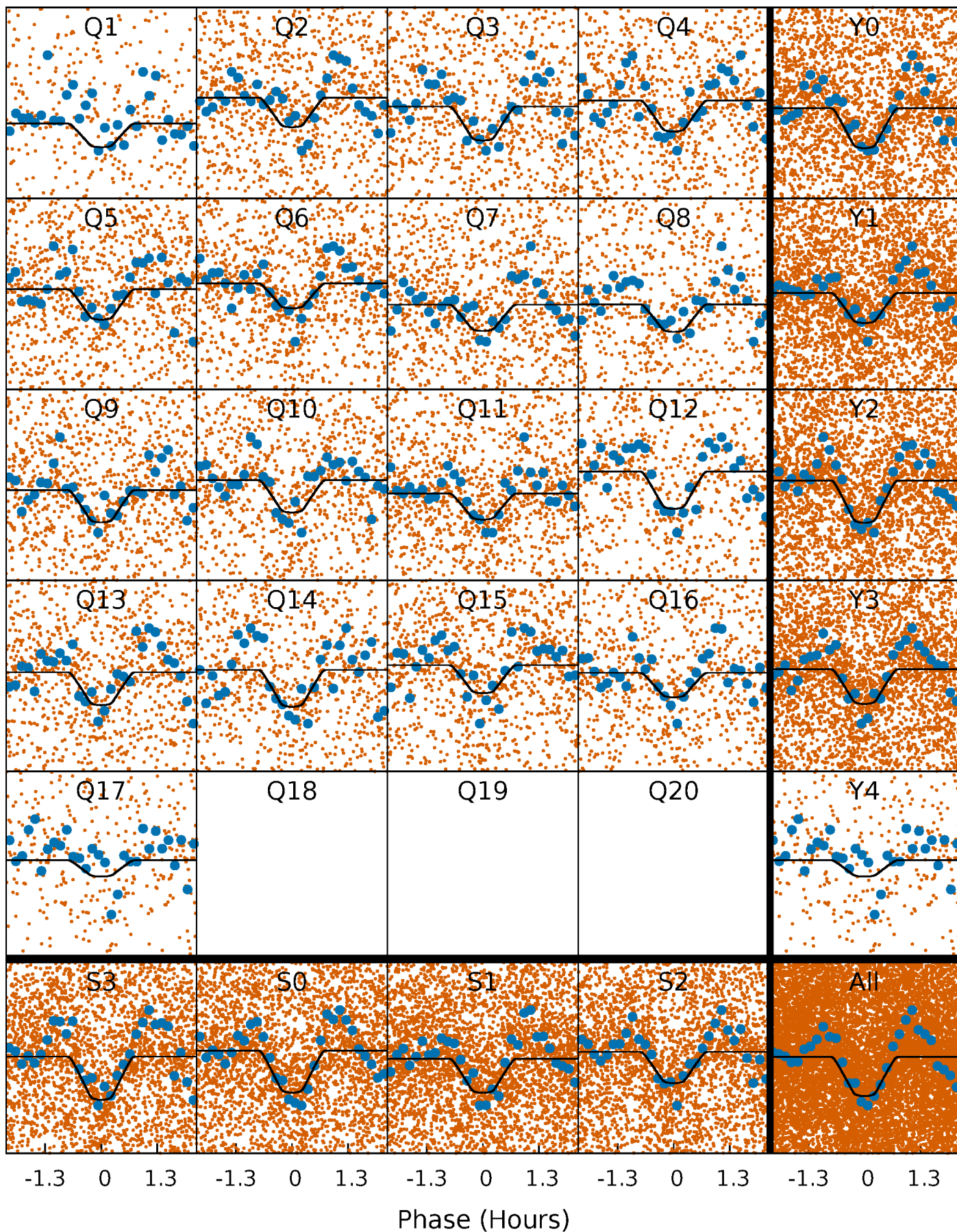
PDC Quarter-Phased Transit Curves

TCE 006862920-02 P= 0.614252 Days $T_0=131.902834$ (BKJD)



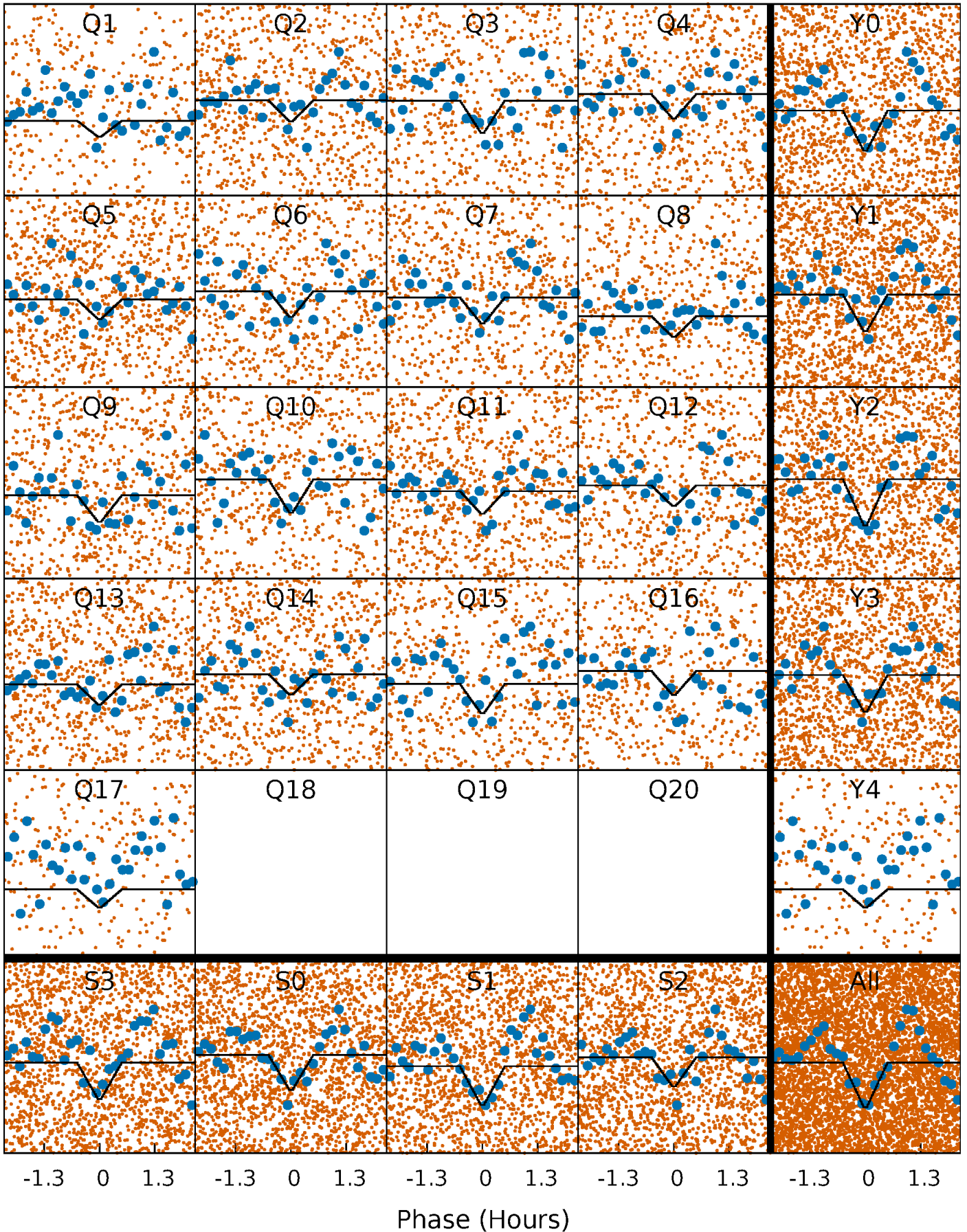
DV Quarter-Phased Transit Curves

TCE 006862920-02 $P = 0.614252$ Days $T_0 = 131.902834$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

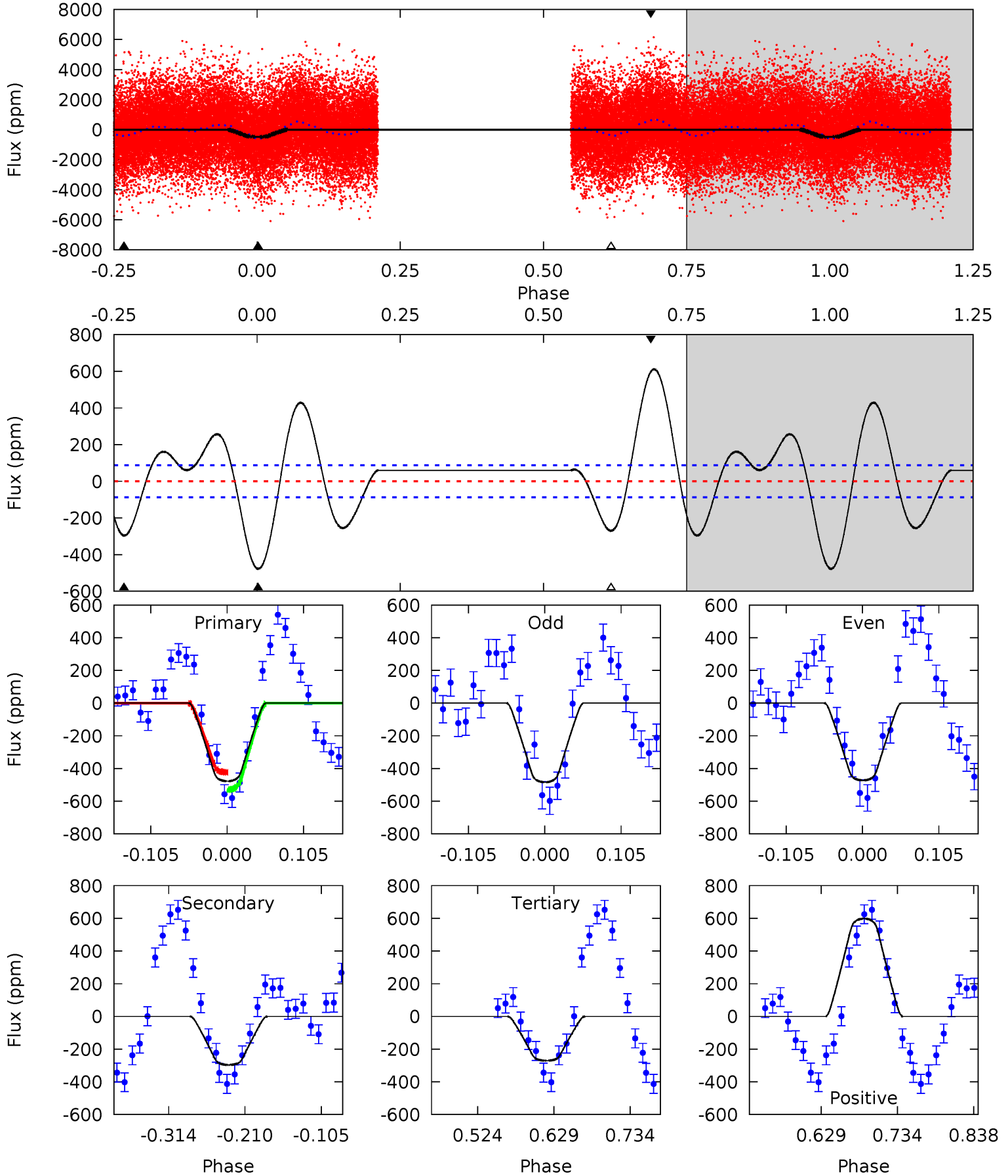
TCE 006862920-02 P= 0.614254 Days $T_0=131.903054$ (BKJD)



DV Model-Shift Uniqueness Test

006862920-02, P = 0.614252 Days, E = 131.288582 Days

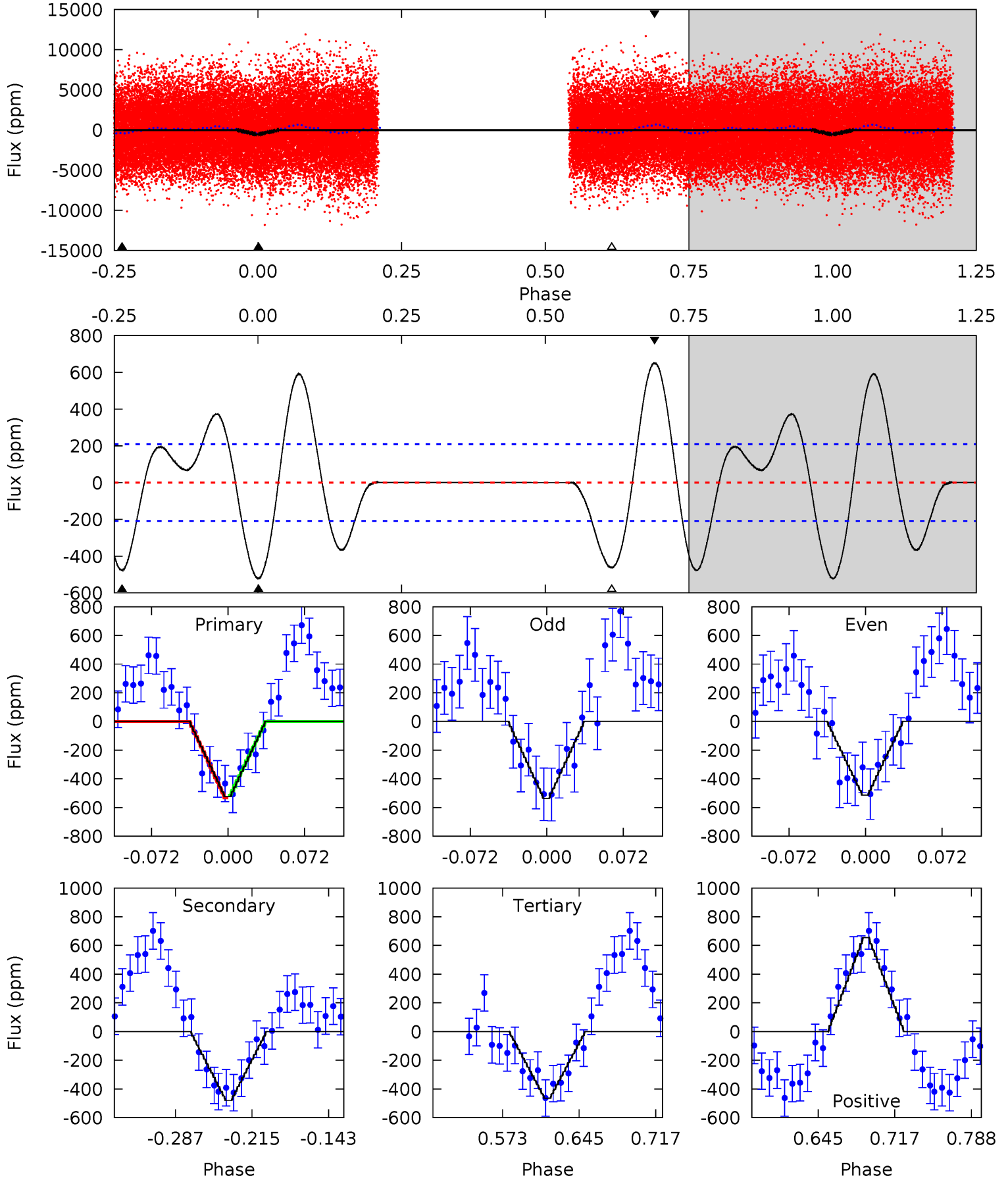
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.9	15.5	14.1	31.2	4.55	1.62	13.2	10.8	-6.27	1.35	-15.7	0.30	0.98	0.56	2.79



Alt Model-Shift Uniqueness Test

006862920-02, P = 0.614254 Days, E = 131.288800 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	10.6	10.3	14.5	4.63	1.80	6.80	1.33	-2.87	0.34	-3.86	0.25	0.93	0.55	0.18



Stellar Parameters For KIC 006862920

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7413^{+207}_{-337}	$4.103^{+0.144}_{-0.176}$	$-0.020^{+0.200}_{-0.350}$	$1.865^{+0.569}_{-0.379}$	$1.605^{+0.189}_{-0.260}$	$0.348^{+0.261}_{-0.174}$
	+3%/-5%	+4%/-4%	+1000%/-1750%	+31%/-20%	+12%/-16%	+75%/-50%
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 006862920-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-297 ± 19	$4.69^{+1.68}_{-1.32}$	4854^{+353}_{-323}	6004^{+1237}_{-849}	$1.996^{+1.786}_{-0.907}$
Alt.	-480 ± 45	$4.80^{+1.51}_{-1.49}$	4827^{+385}_{-328}	6857^{+1718}_{-946}	$3.098^{+3.278}_{-1.276}$

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 $A_{obs} \gg 1.0$

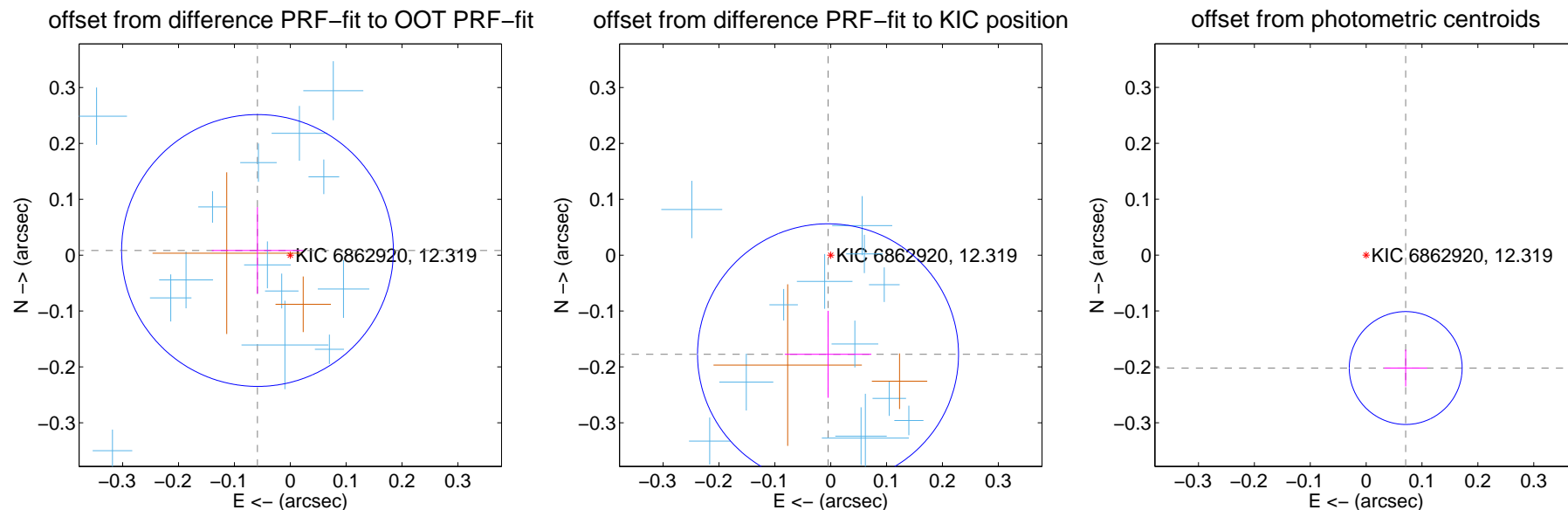
DV Centroid Data

Supplemental centroid analysis for 006862920-02. Kepler magnitude: 12.32. Transit SNR 15.07

There are 14 quarters with good PRF difference image offsets

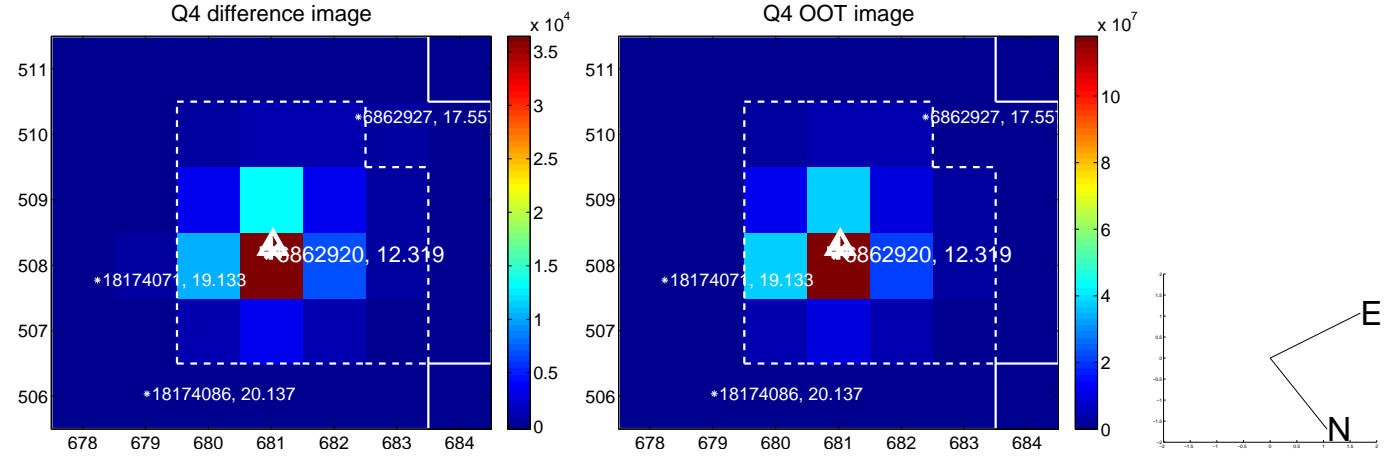
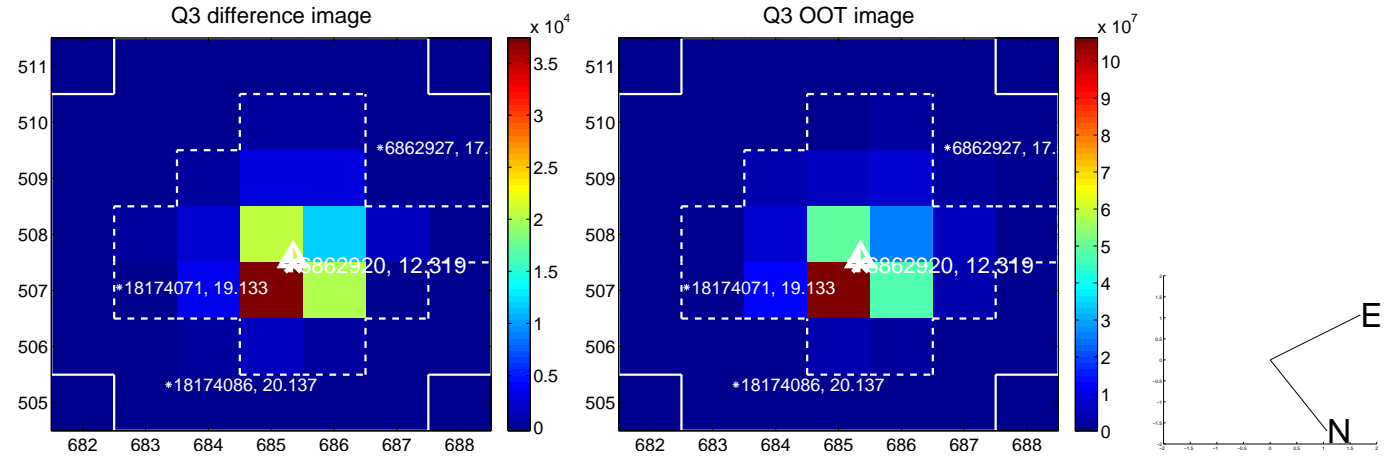
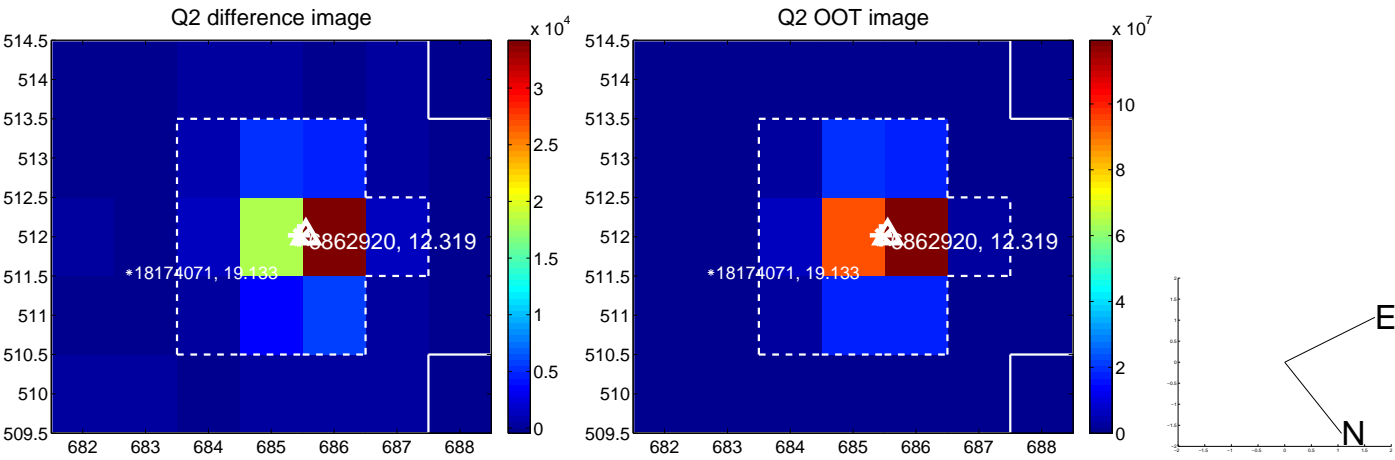
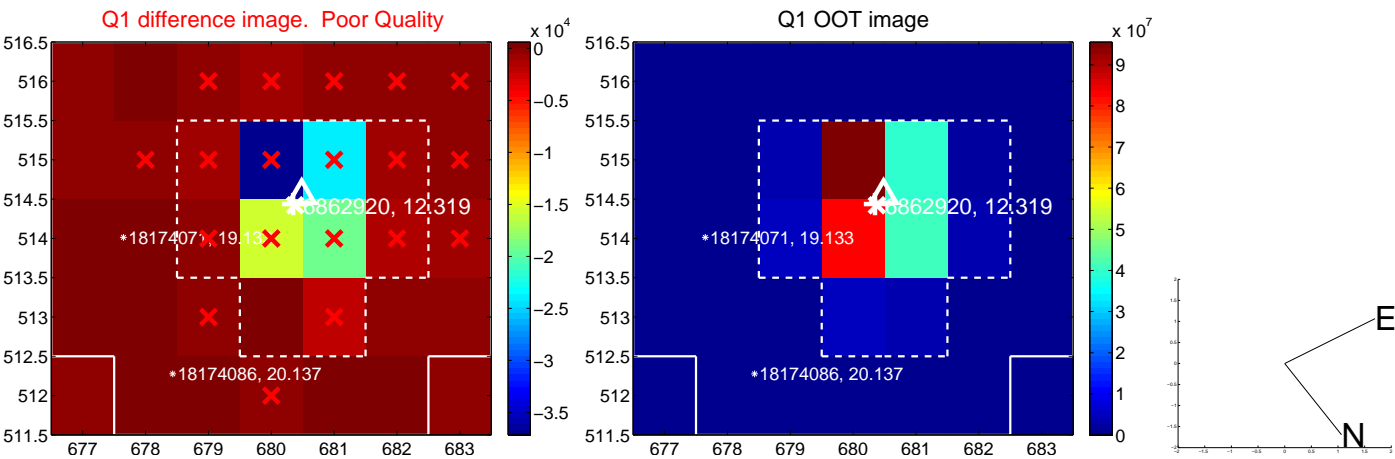
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.059 ± 0.081	0.73	0.059 ± 0.082	0.008 ± 0.077
PRF-fit source offset from KIC position	0.178 ± 0.078	2.28	0.005 ± 0.077	-0.178 ± 0.078
photometric centroid source offset	0.21 ± 0.03	6.36	-0.07 ± 0.04	-0.20 ± 0.03

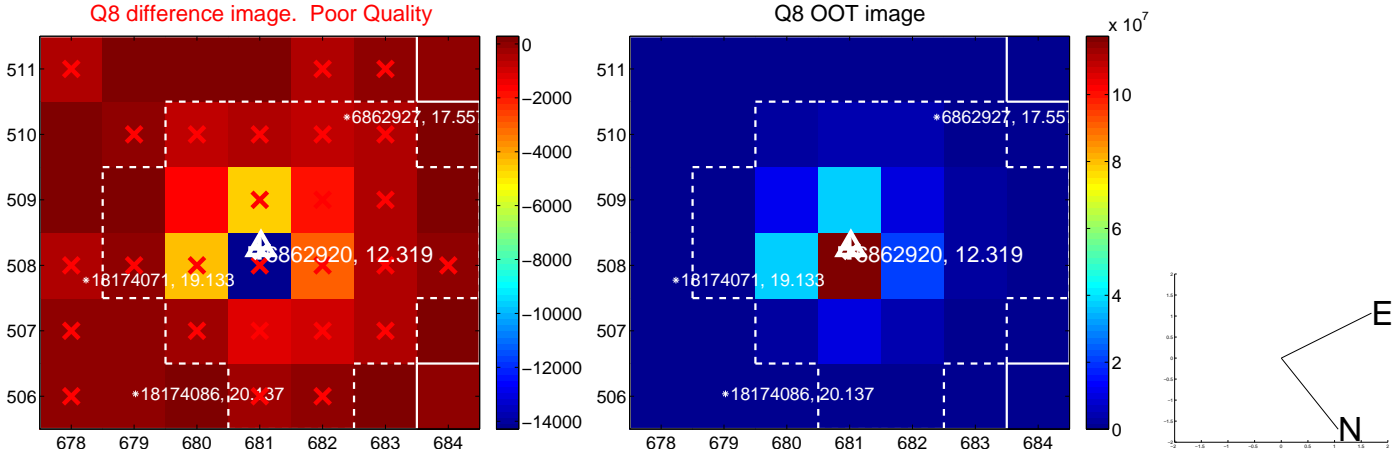
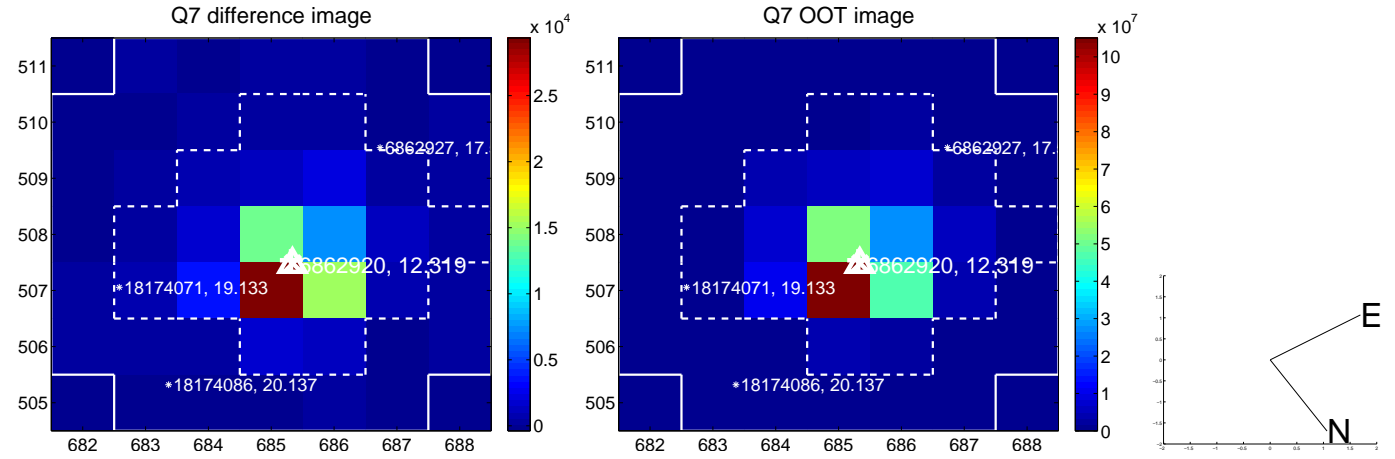
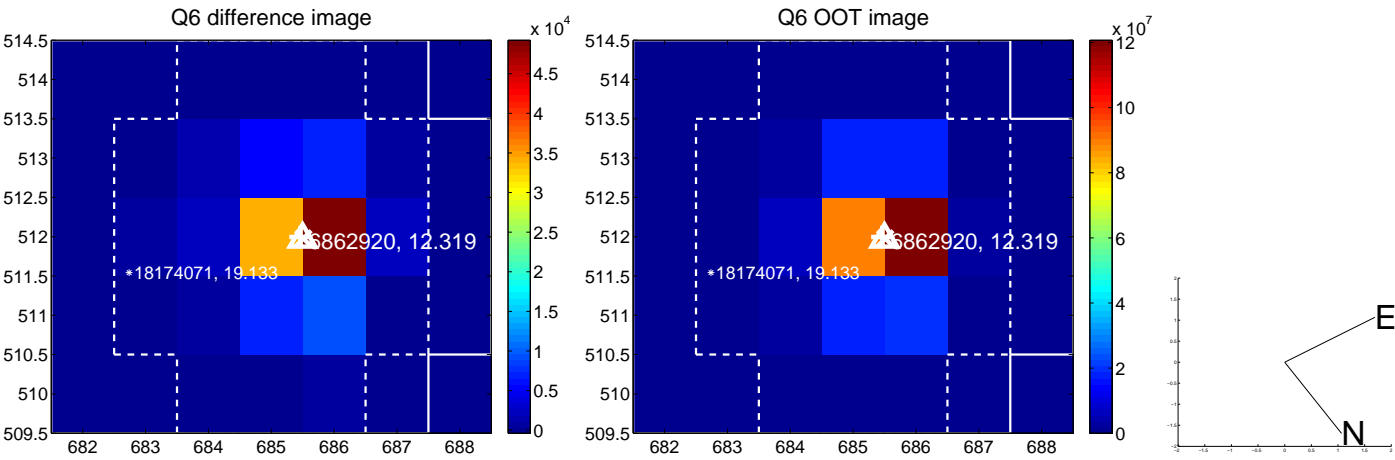
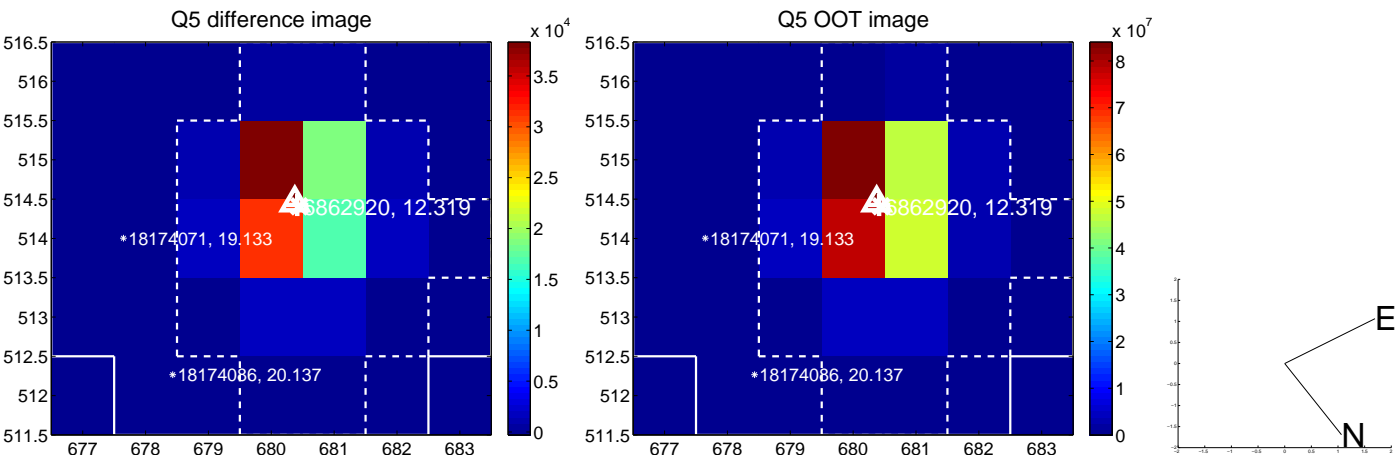


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

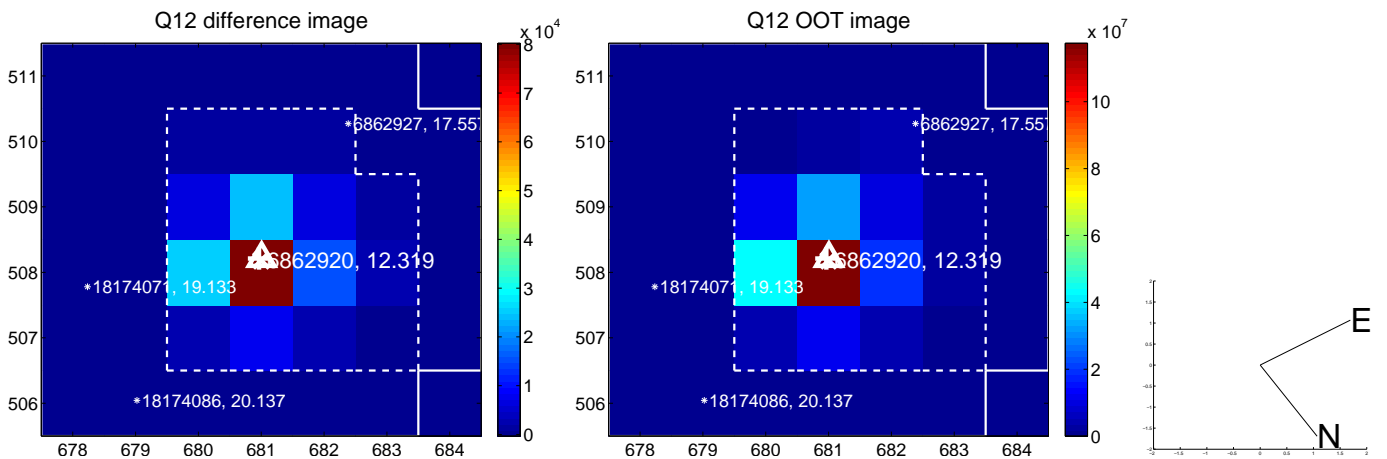
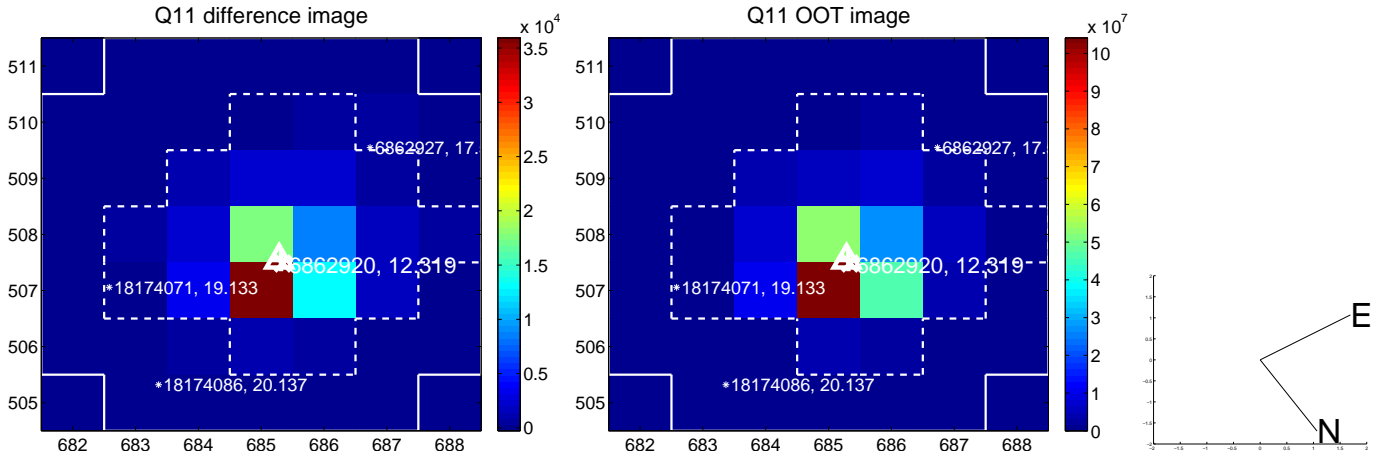
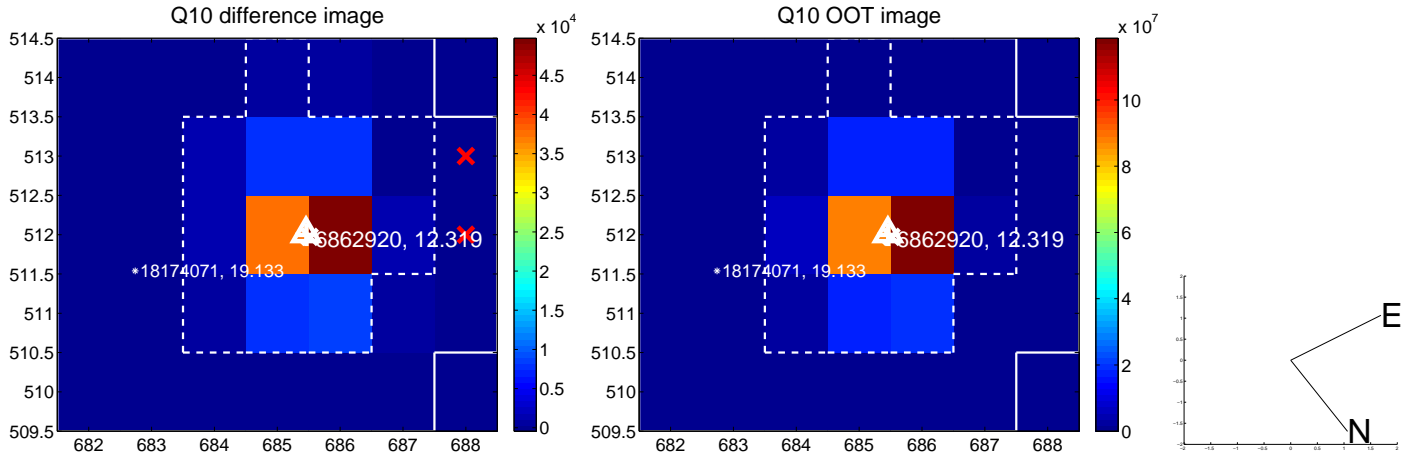
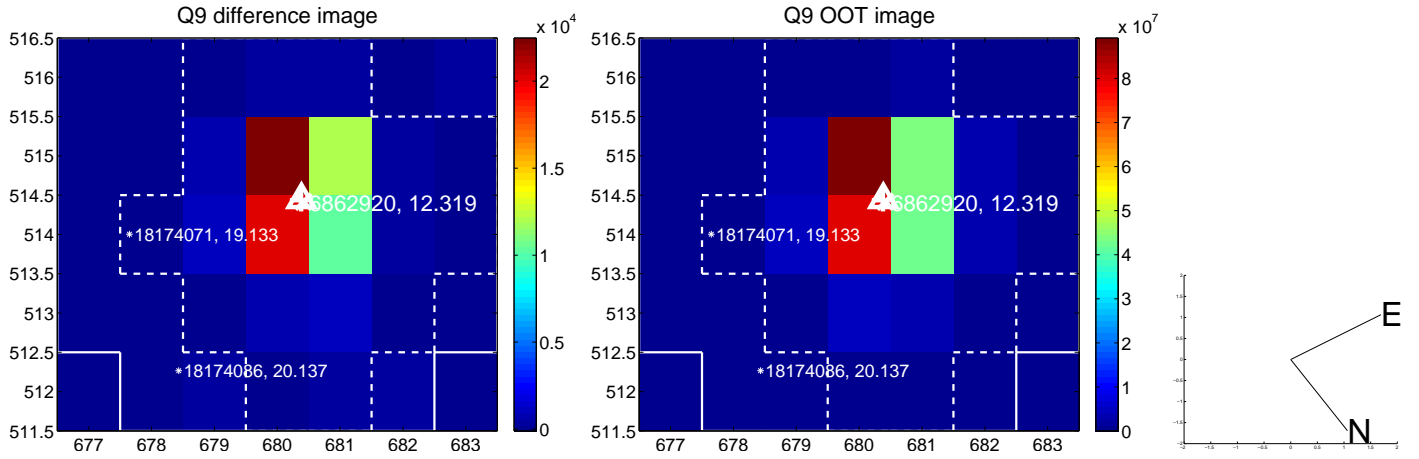
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



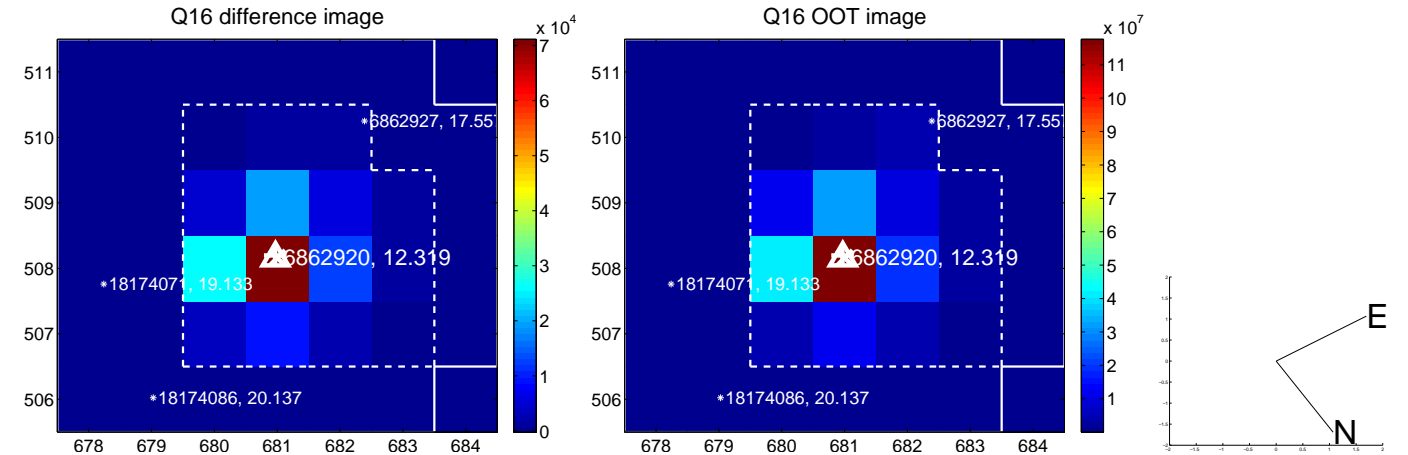
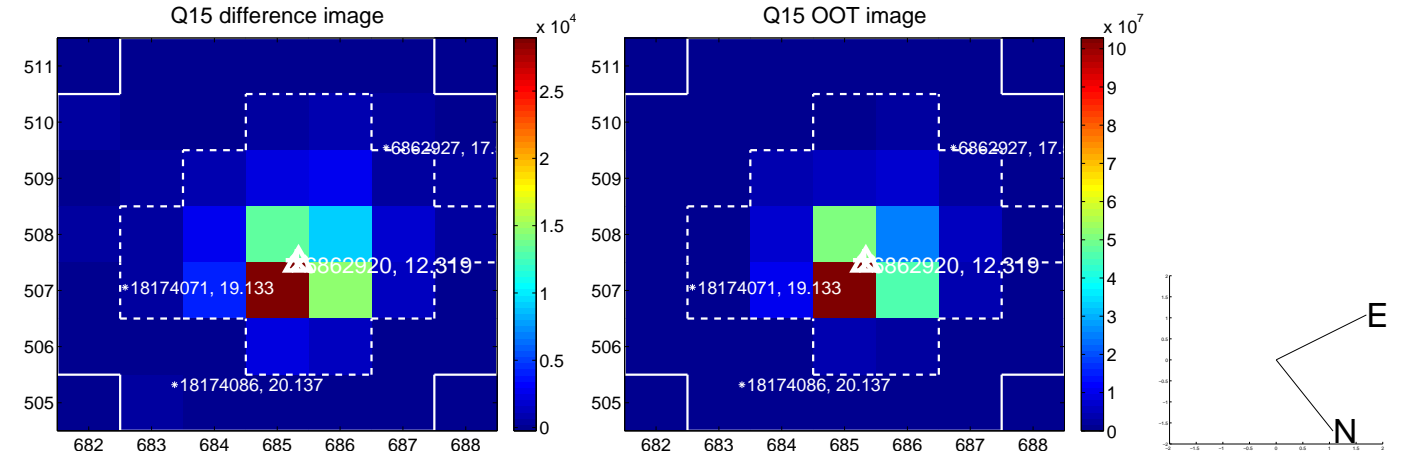
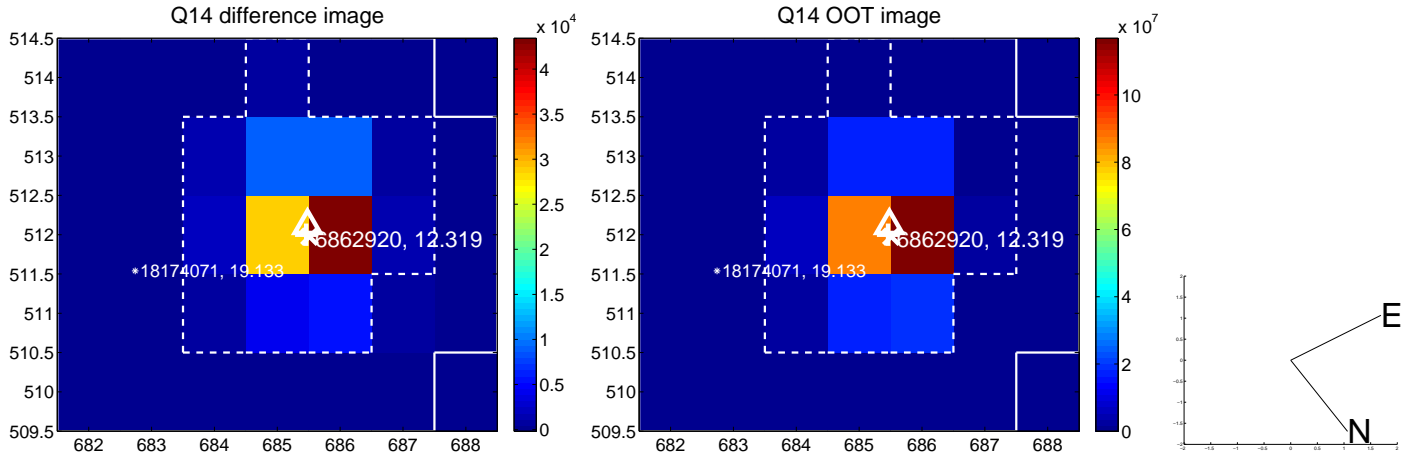
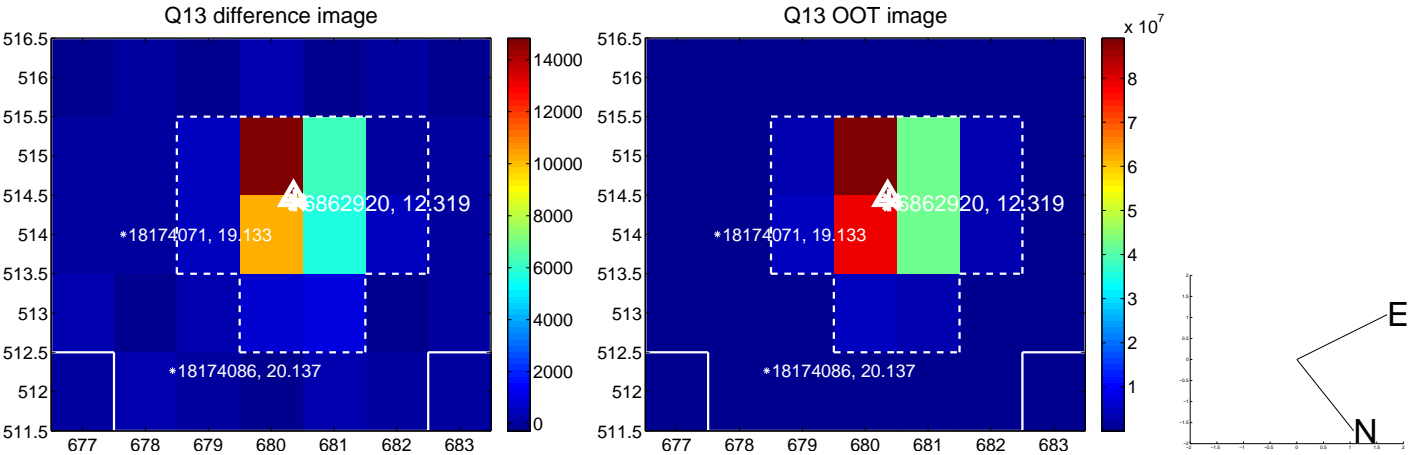
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



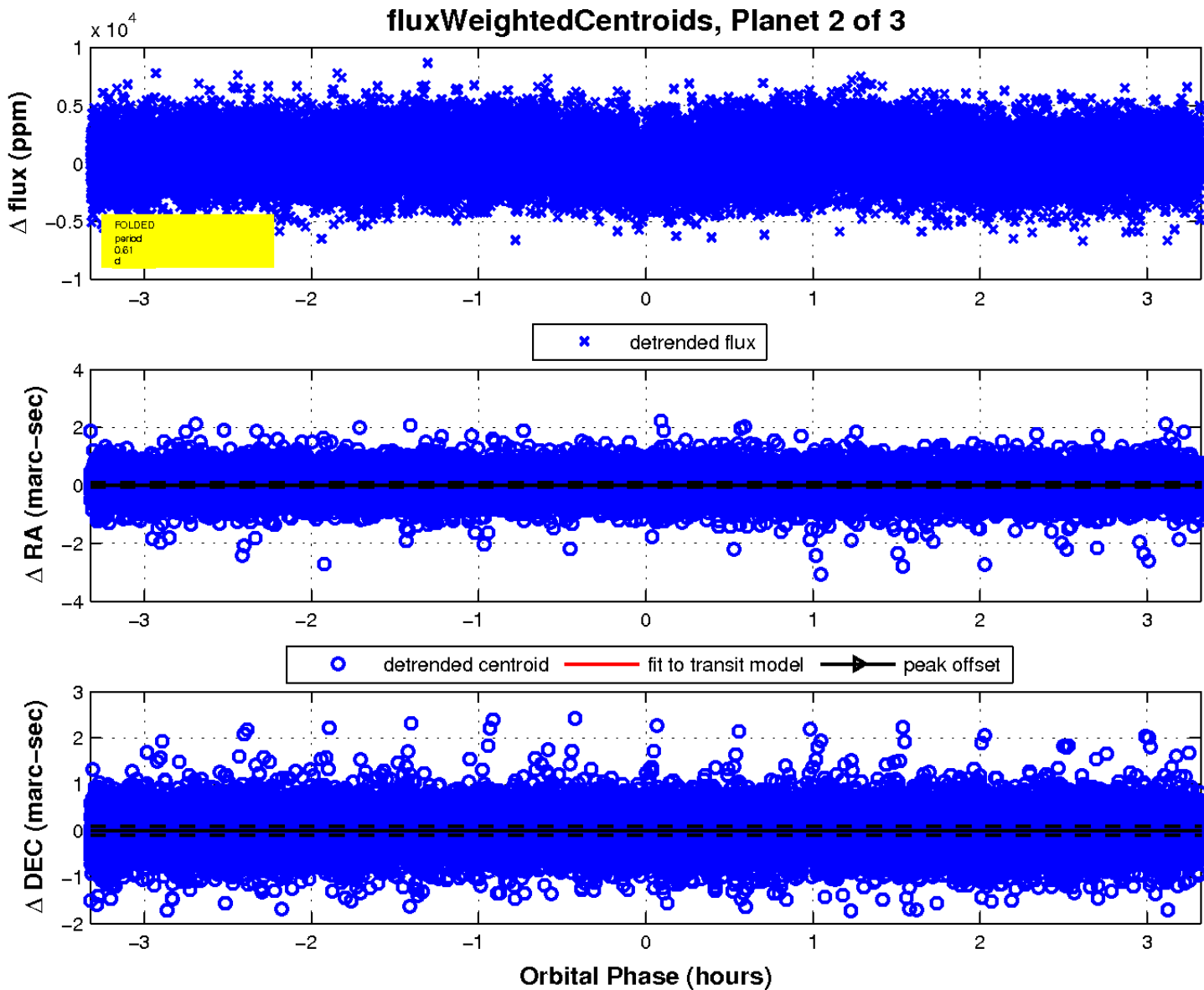
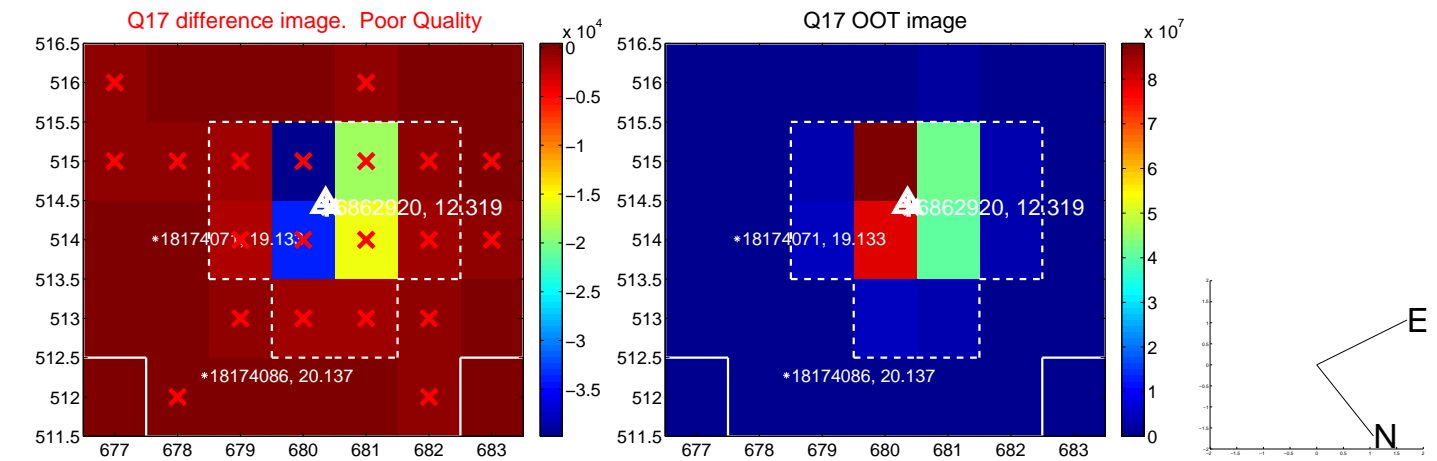
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

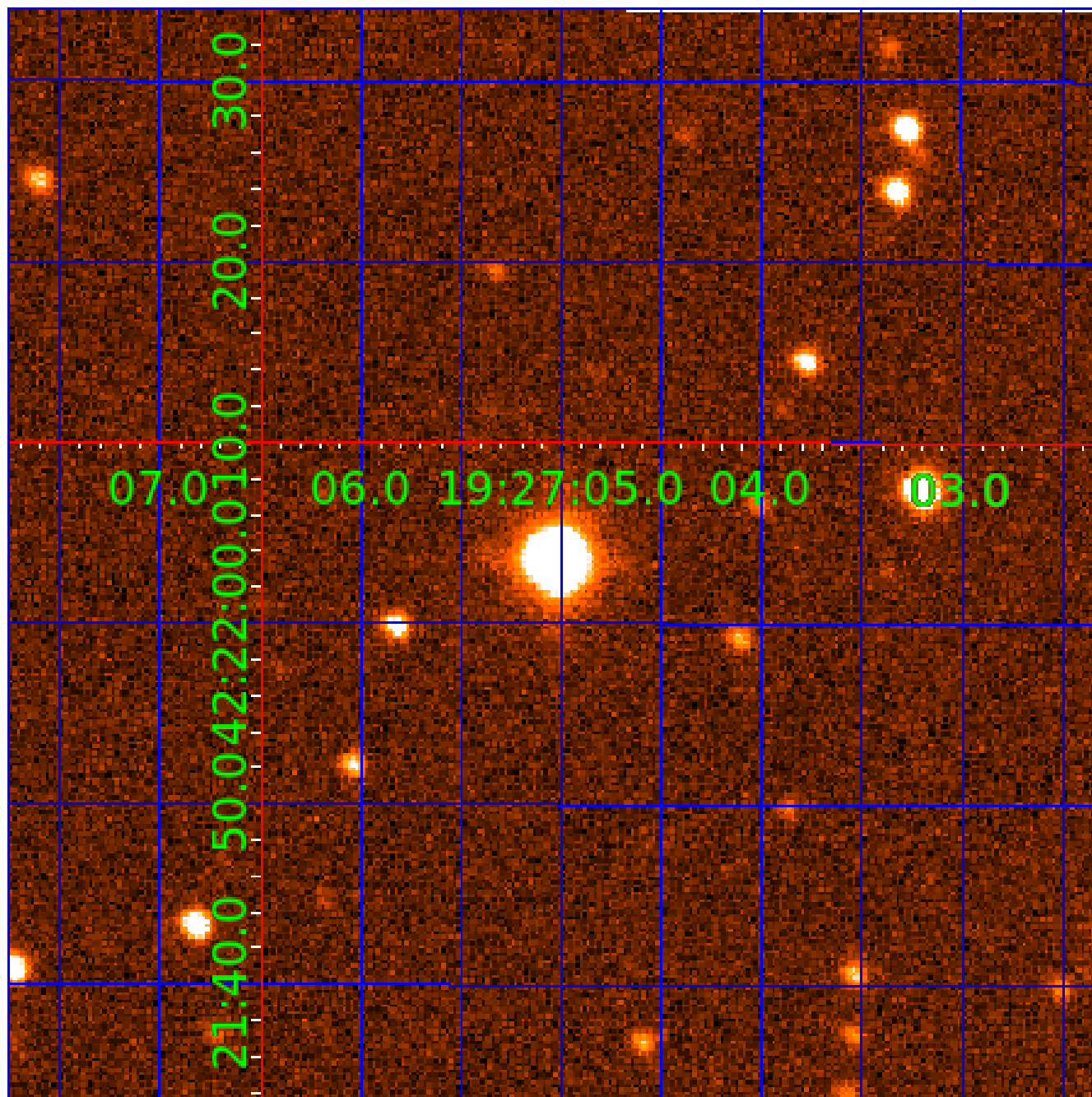


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006862920

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})
006862920-01	OBS	No	0.614251	131.522356	581.4	1.059	12.7	18.8	1.86	7413	4.86	34265.84
006862920-02	OBS	No	0.614252	131.902834	481.7	1.108	10.0	15.1	1.86	7413	4.77	34265.78
006862920-03	OBS	No	0.550806	131.977219	1079.9	6.610	9.3	21.9	1.86	7413	7.48	39626.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006862920-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006862920-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
006862920-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV

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

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

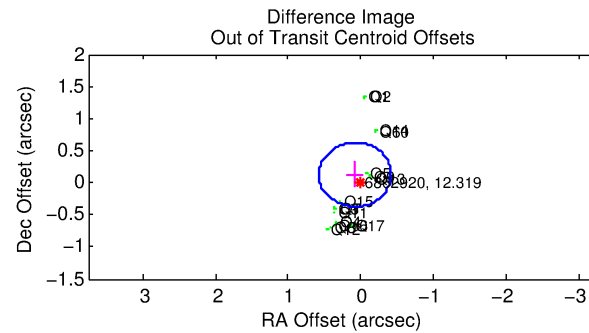
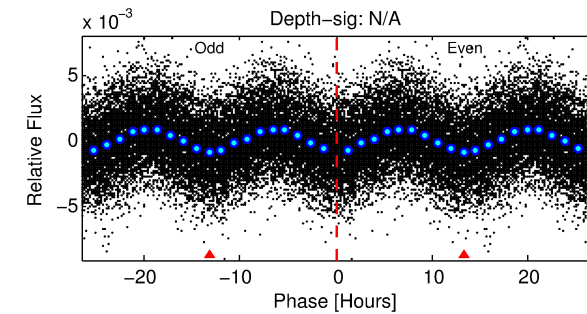
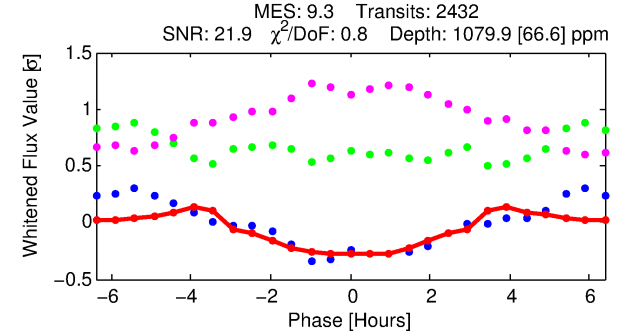
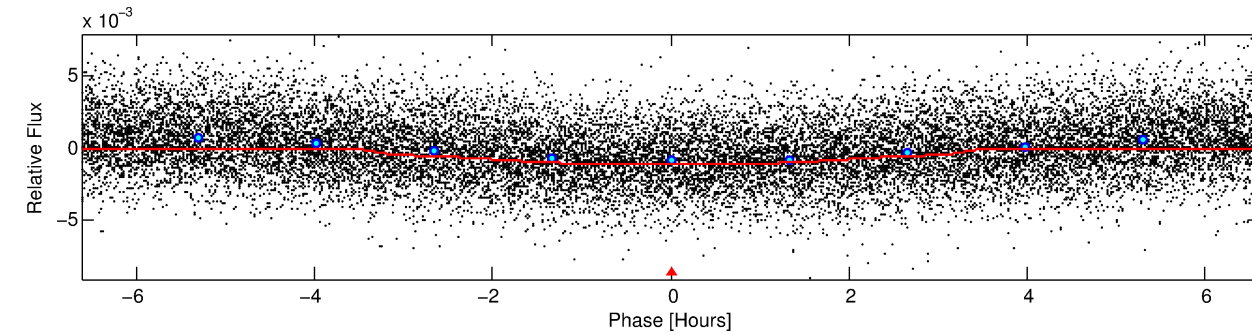
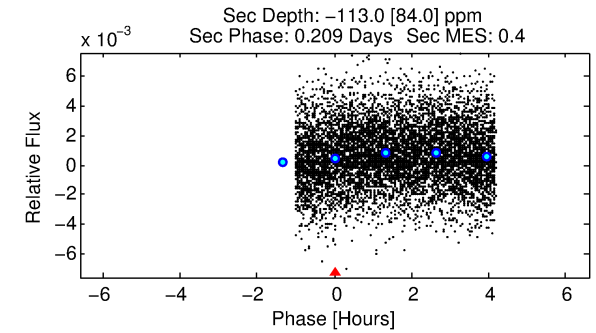
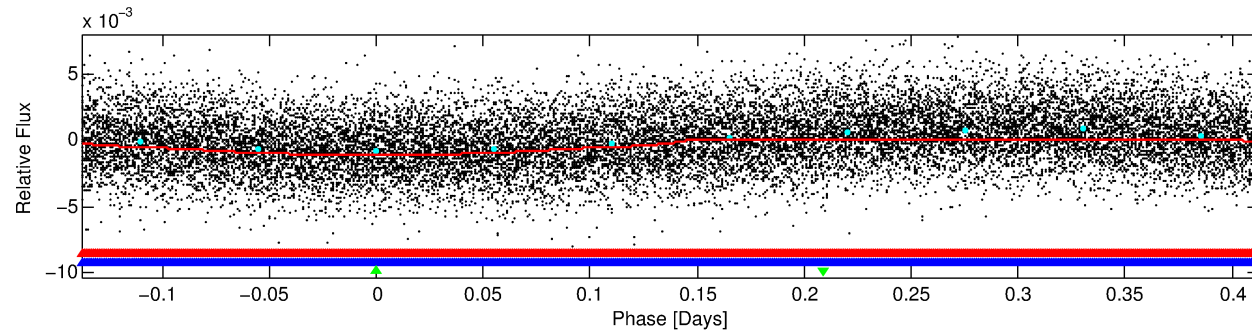
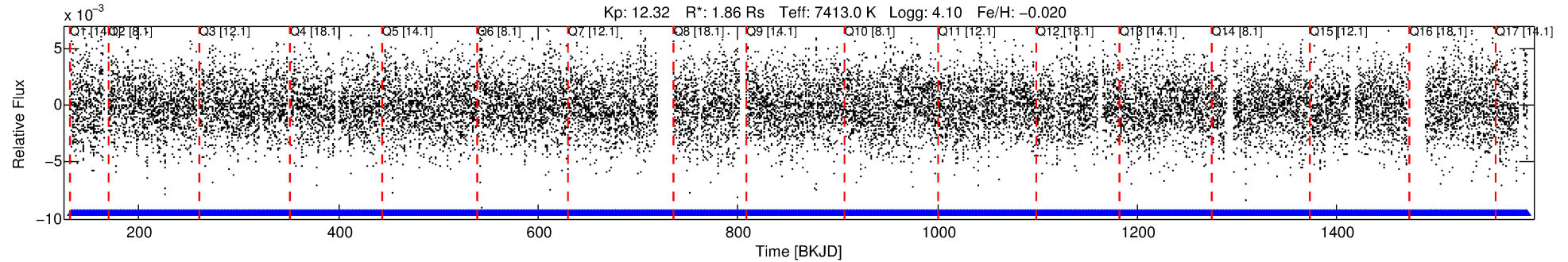
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006862920-03

No Significant Match Found

DV One-Page Summary

KIC: 6862920 Candidate: 3 of 3 Period: 0.551 d



DV Fit Results:

Period = 0.55081 [0.00000] d
Epoch = 131.9772 [0.0019] BKJD
Rp/R* = 0.0367 [0.0013]
a/R* = 1.00 [0.00]
b = 0.95 [0.01]
Seff = 39626.97 [15215.34]
Teff = 3598 [345] K
Rp = 7.48 [2.30] Re
a = 0.0154 [0.0038] AU
Ag = N/A
Teffp = N/A

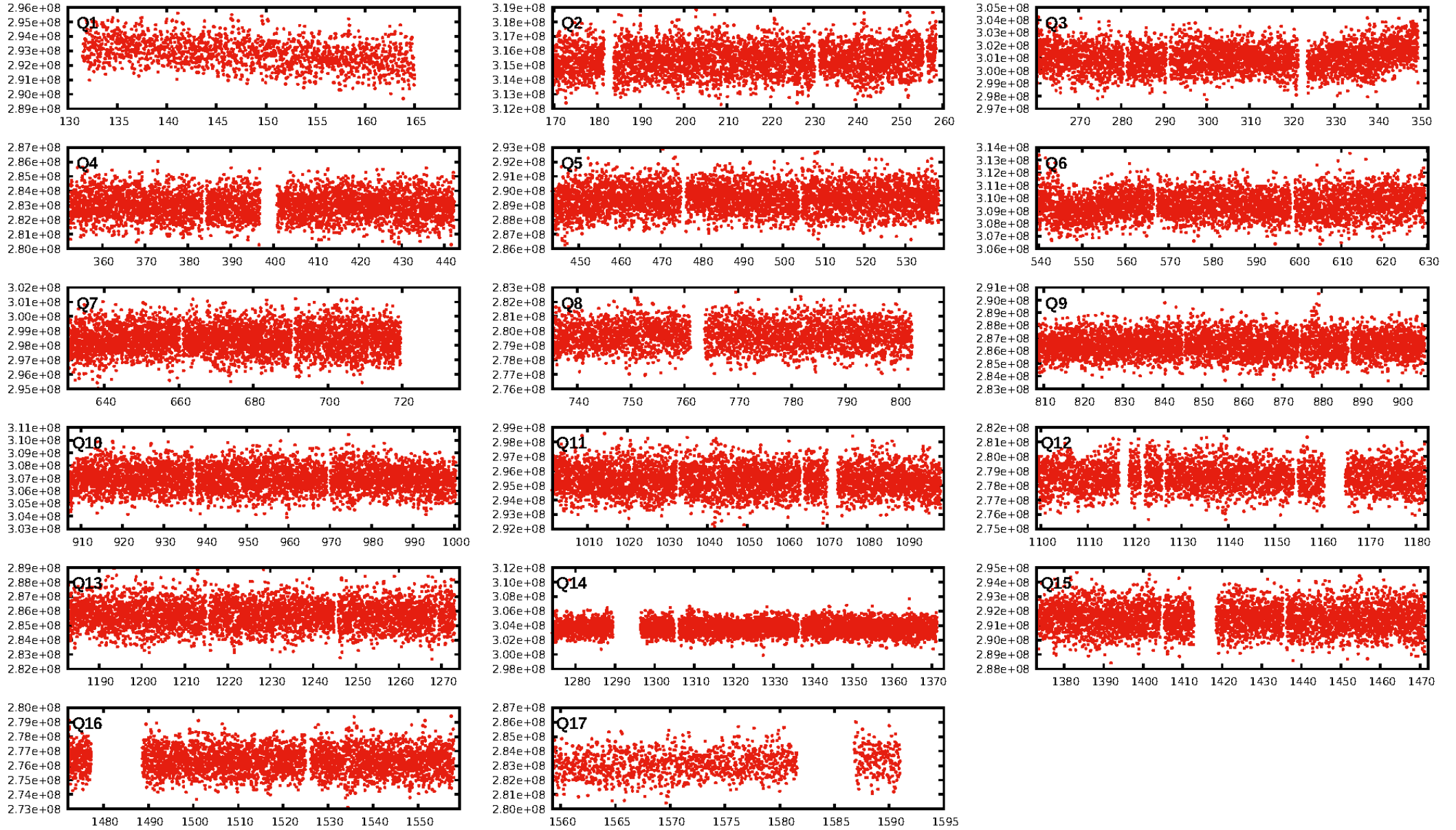
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 18.0% [0.23σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2324/2324]
GhostDiagnostic-chr: 1.573
Centroid-sig: 0.0%
Centroid-so: 0.181 arcsec [26.27σ]
OotOffset-rm: 0.150 arcsec [0.90σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.060 arcsec [0.30σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

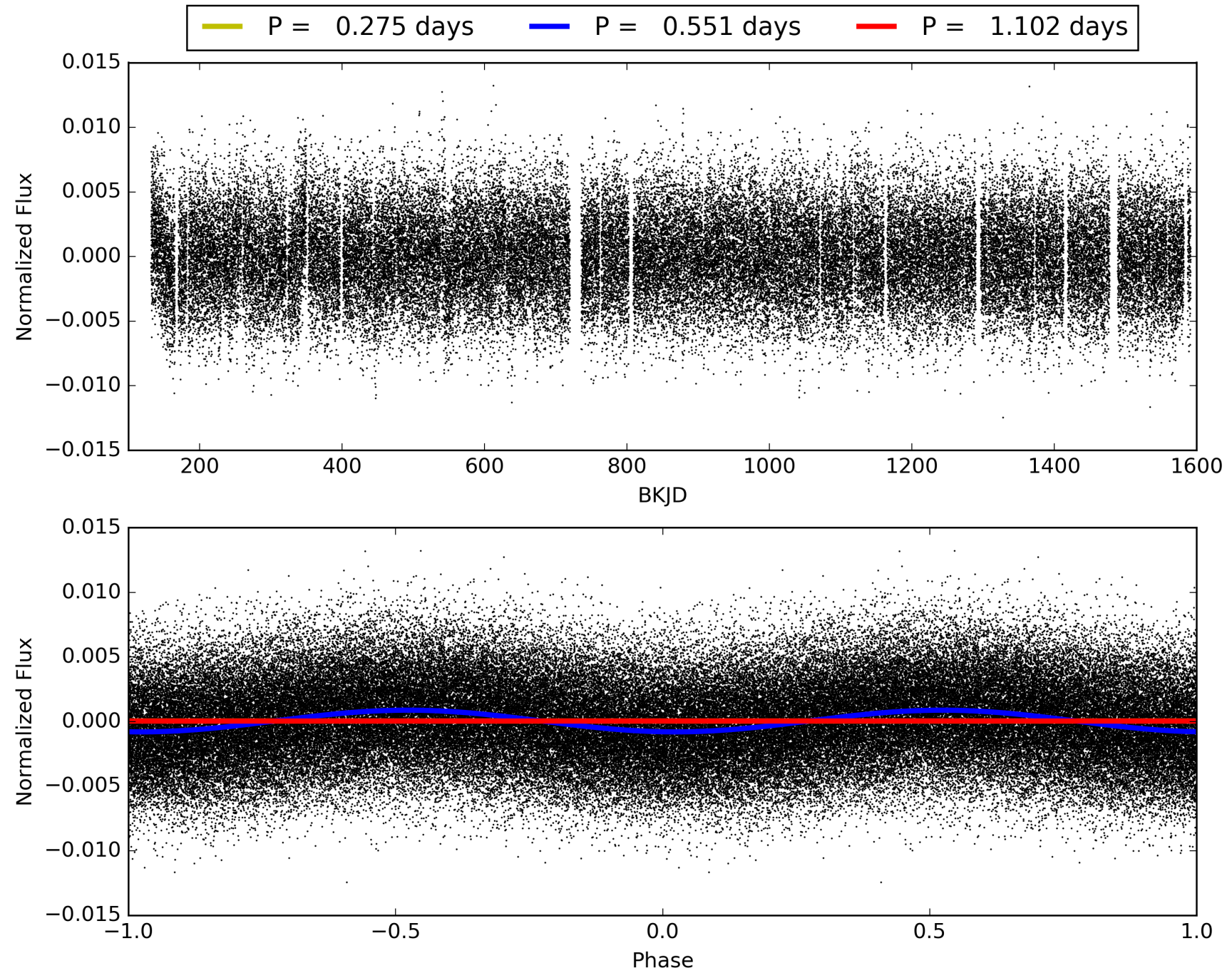
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:33:11 Z

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

TCE 006862920-03, PDC Light Curves

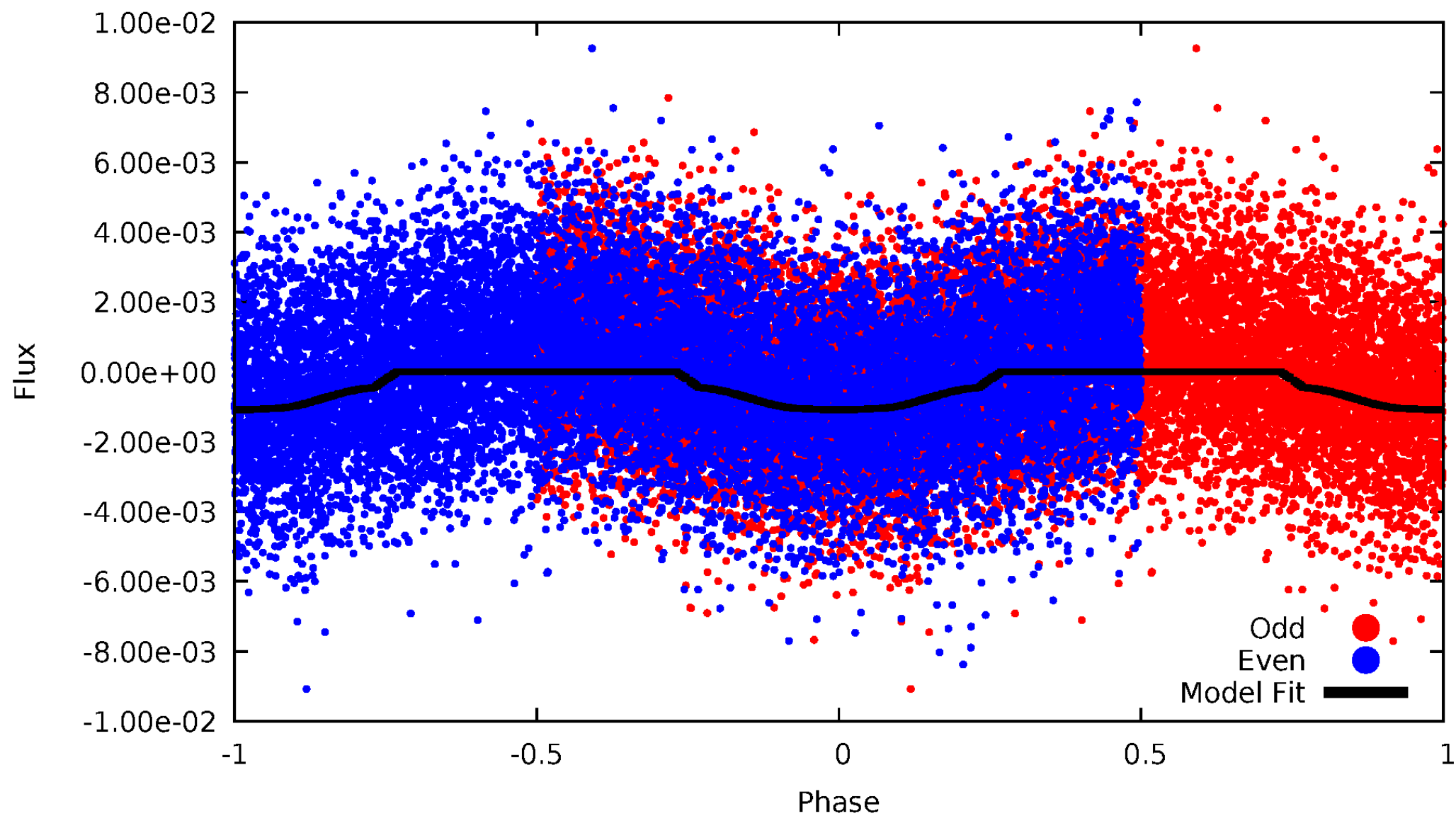


TCE 006862920-03



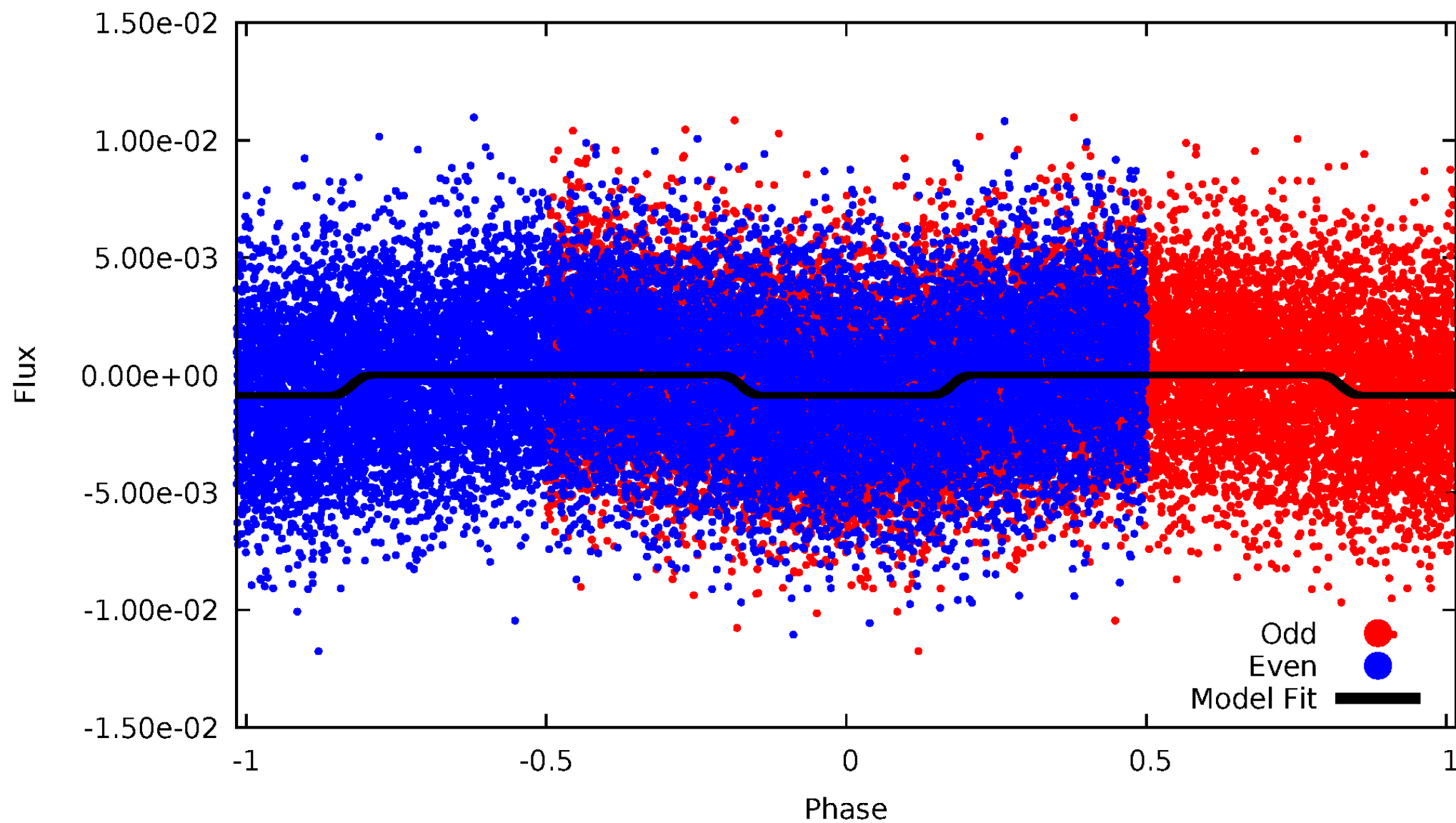
DV Odd/Even

TCE 006862920-03



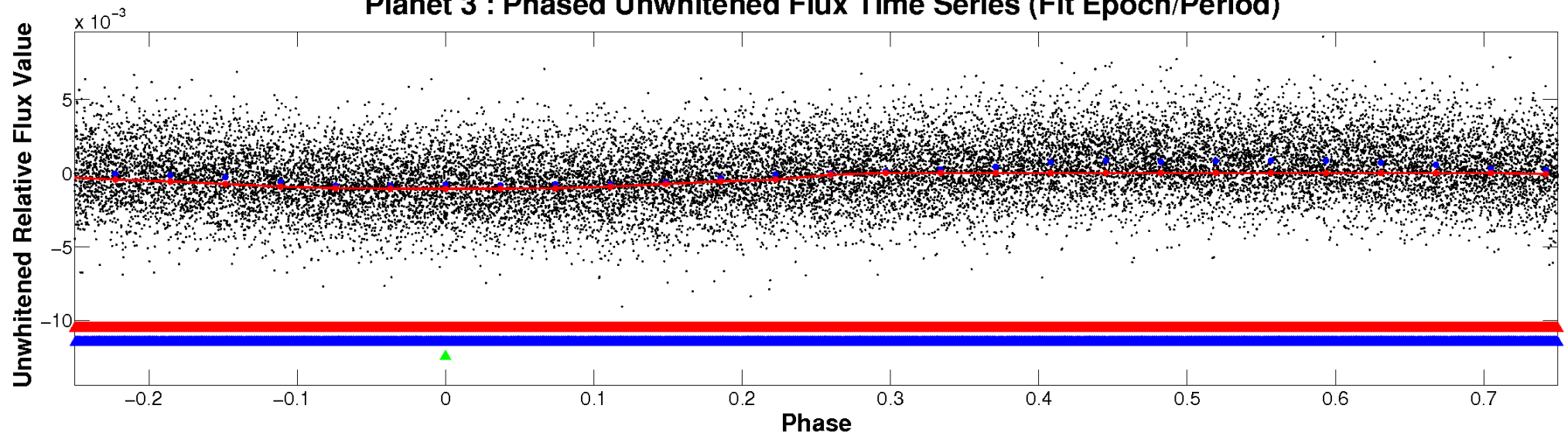
ALT Odd/Even

TCE 006862920-03

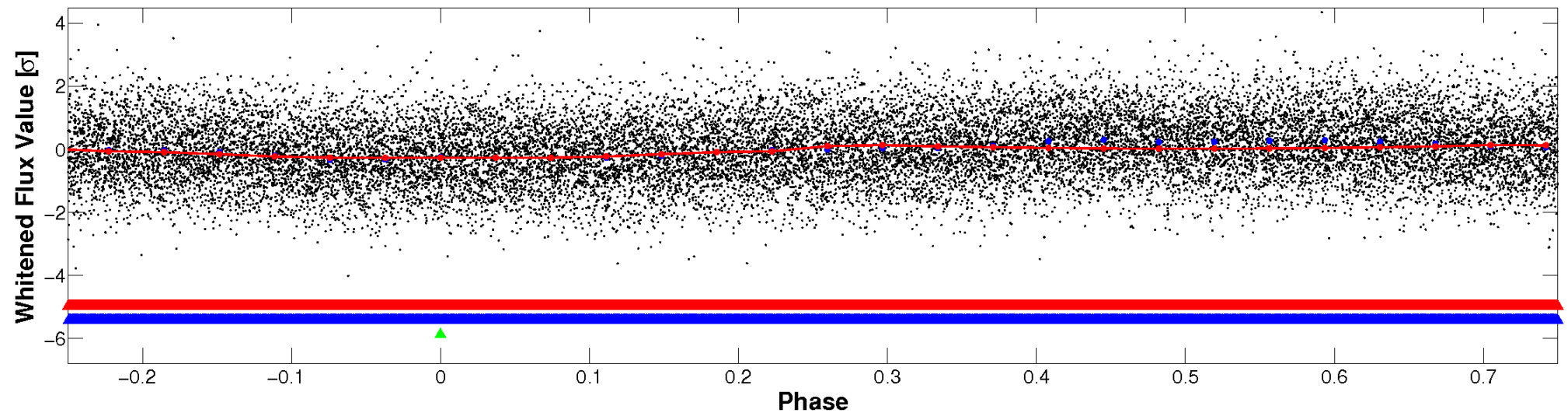


Non-Whitened Vs. Whitened Light Curve

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

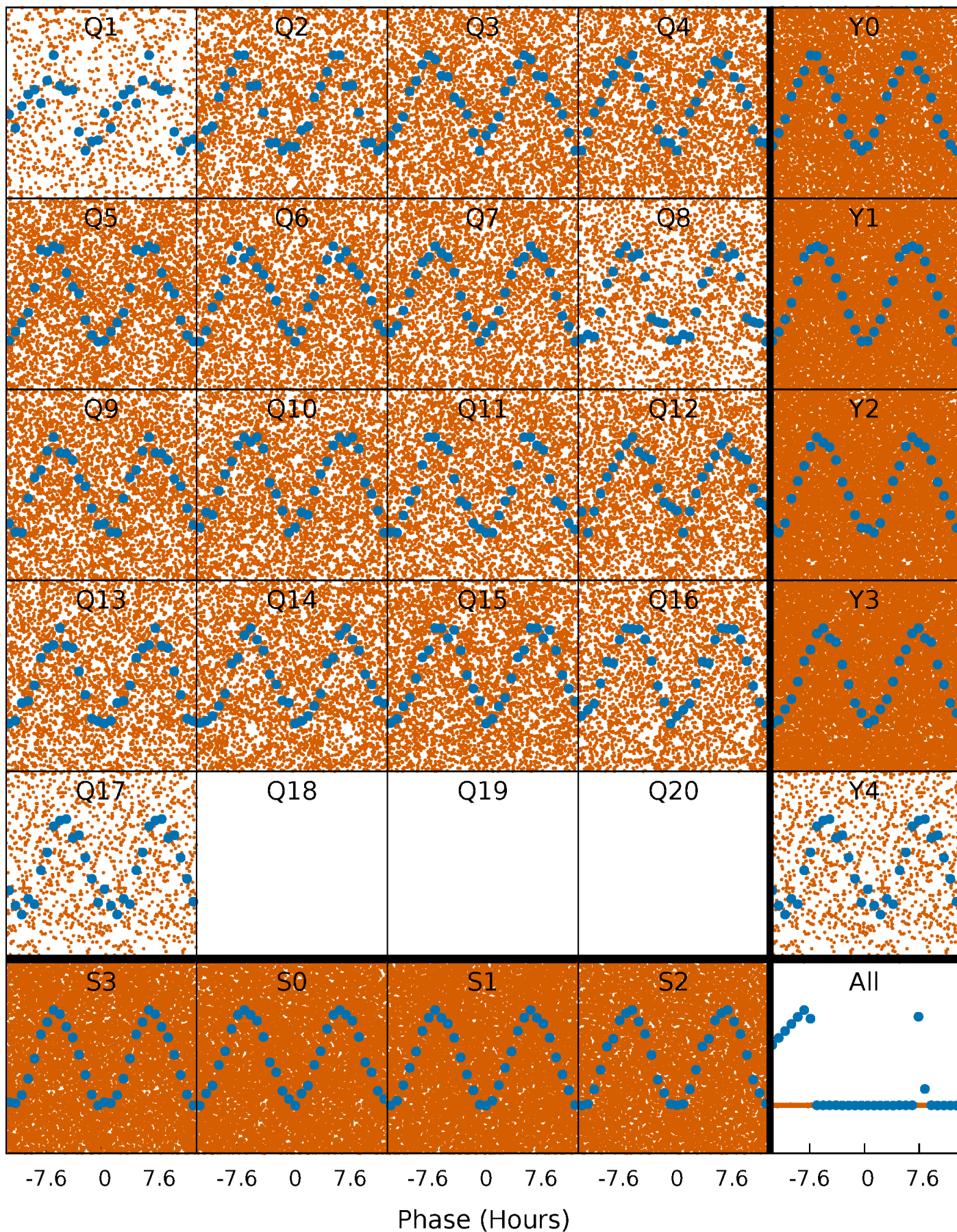


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



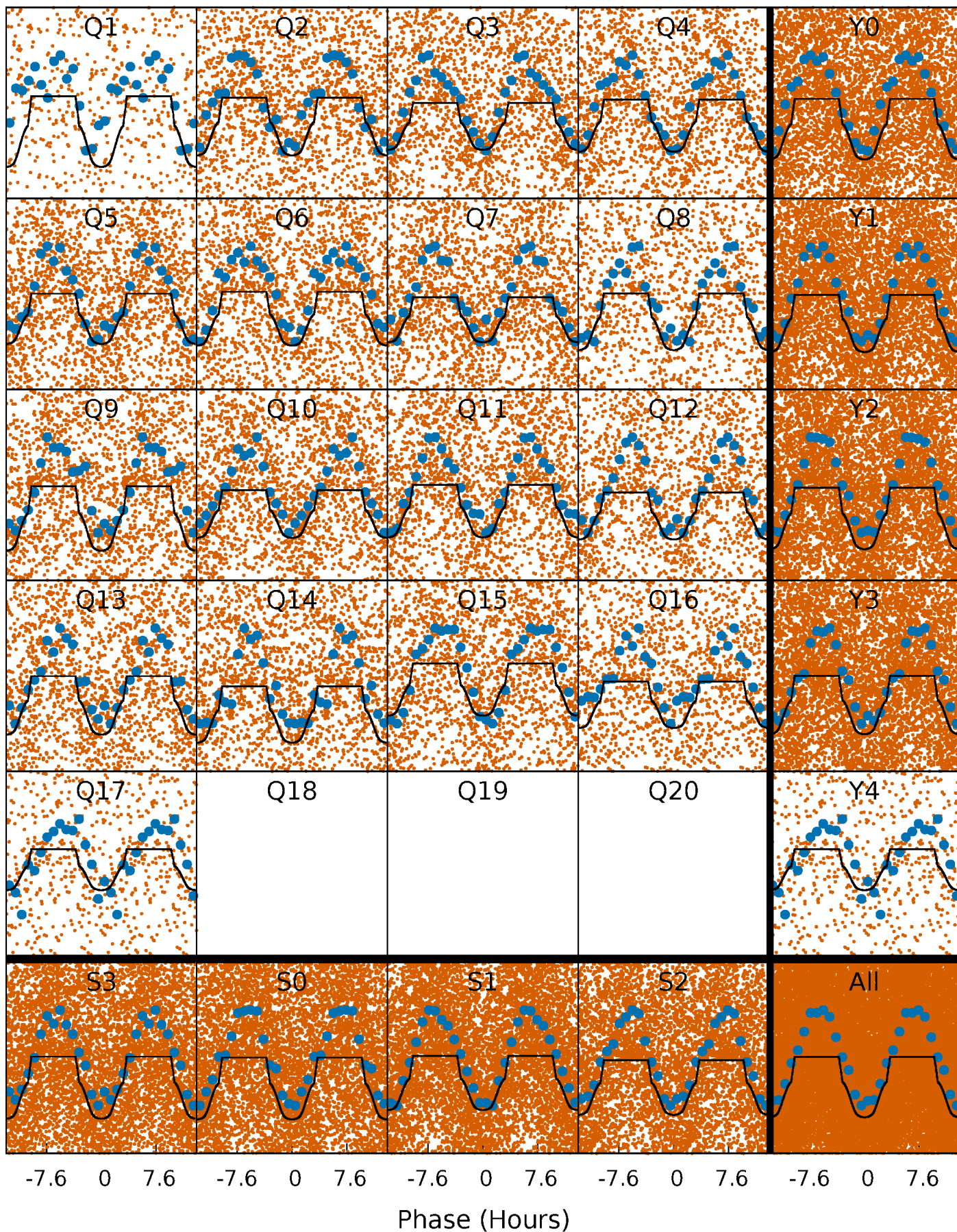
PDC Quarter-Phased Transit Curves

TCE 006862920-03 P= 0.550806 Days $T_0=131.977219$ (BKJD)



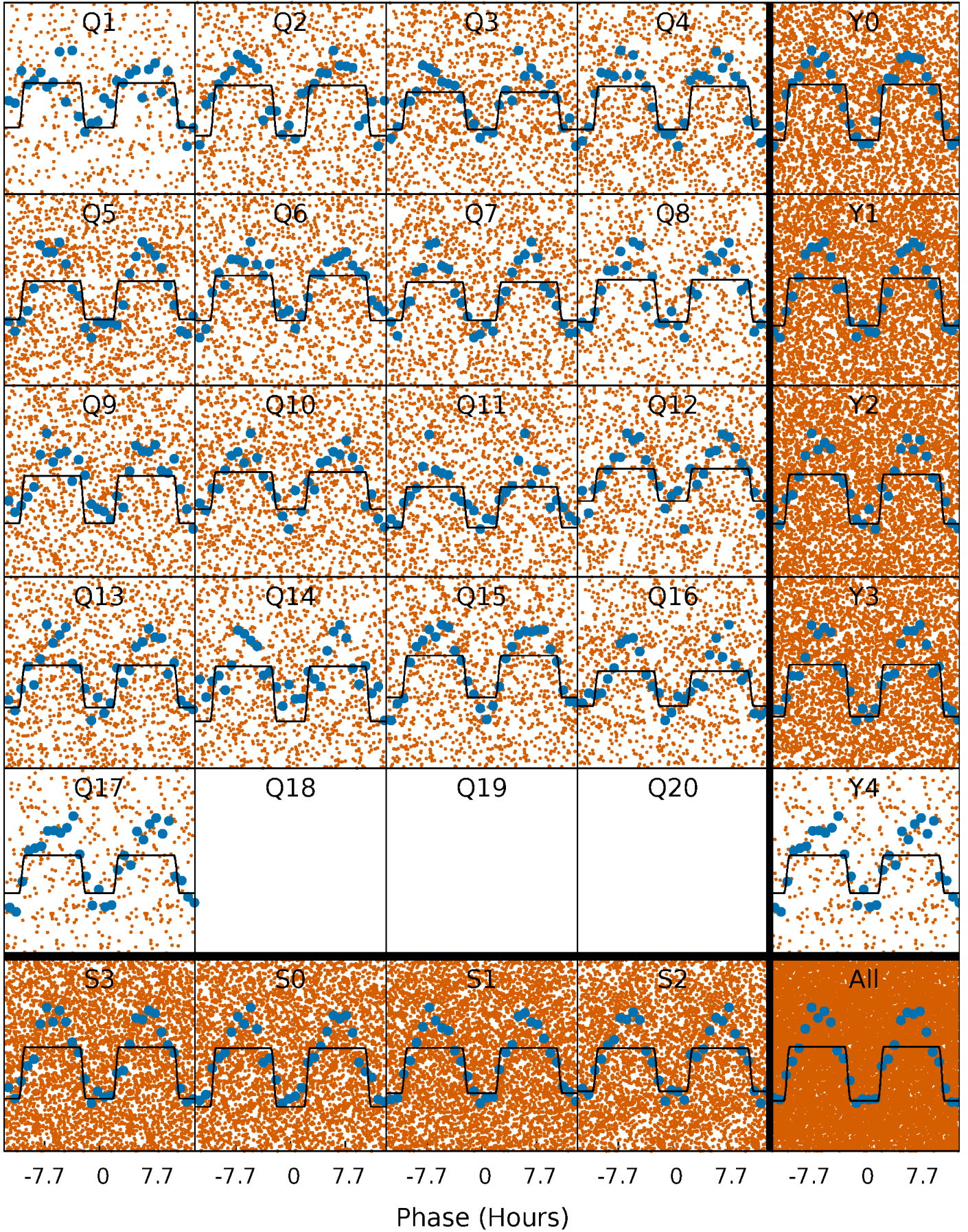
DV Quarter-Phased Transit Curves

TCE 006862920-03 P= 0.550806 Days $T_0=131.977219$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

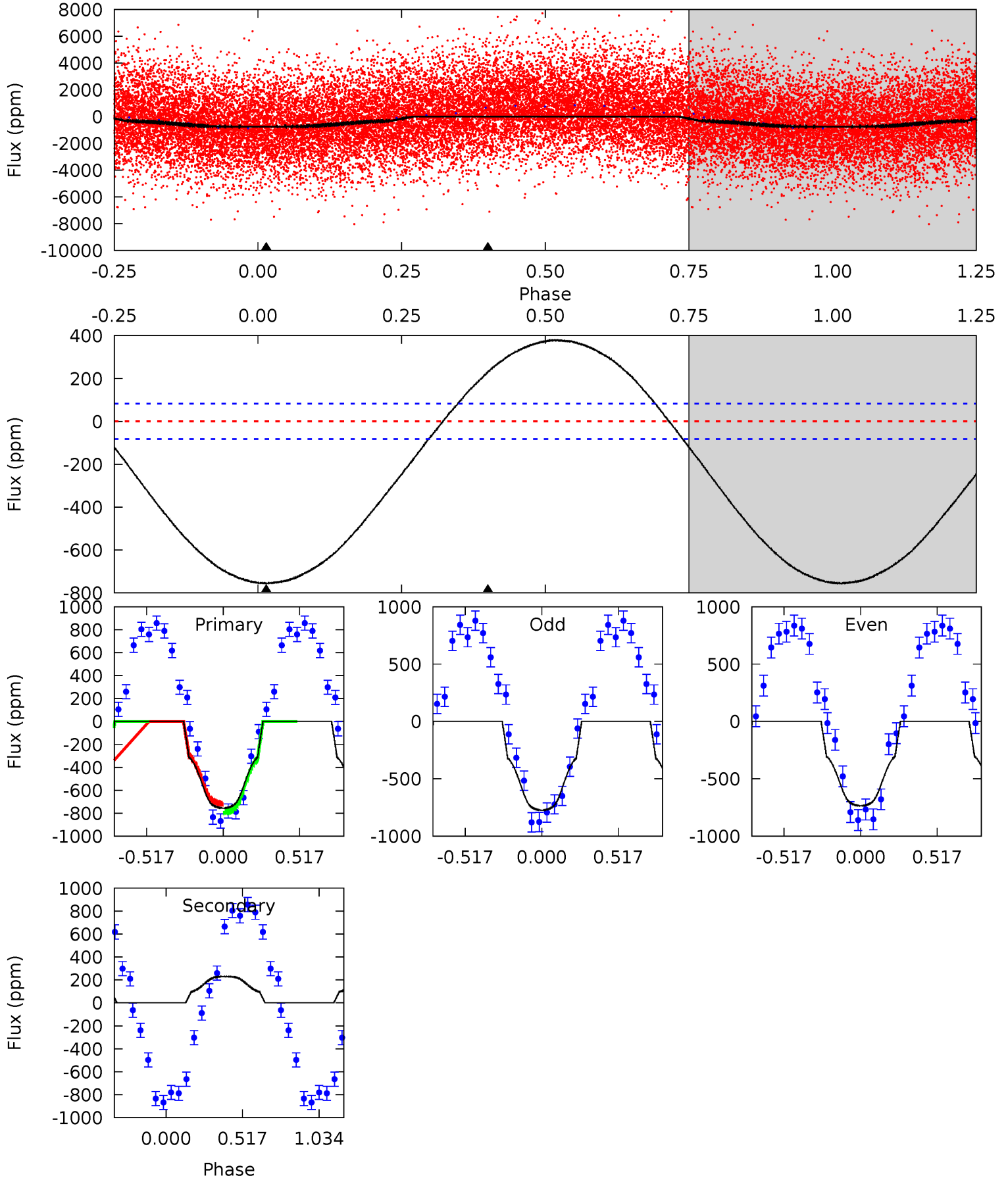
TCE 006862920-03 P= 0.550820 Days $T_0=131.966144$ (BKJD)



DV Model-Shift Uniqueness Test

006862920-03, P = 0.550806 Days, E = 131.426413 Days

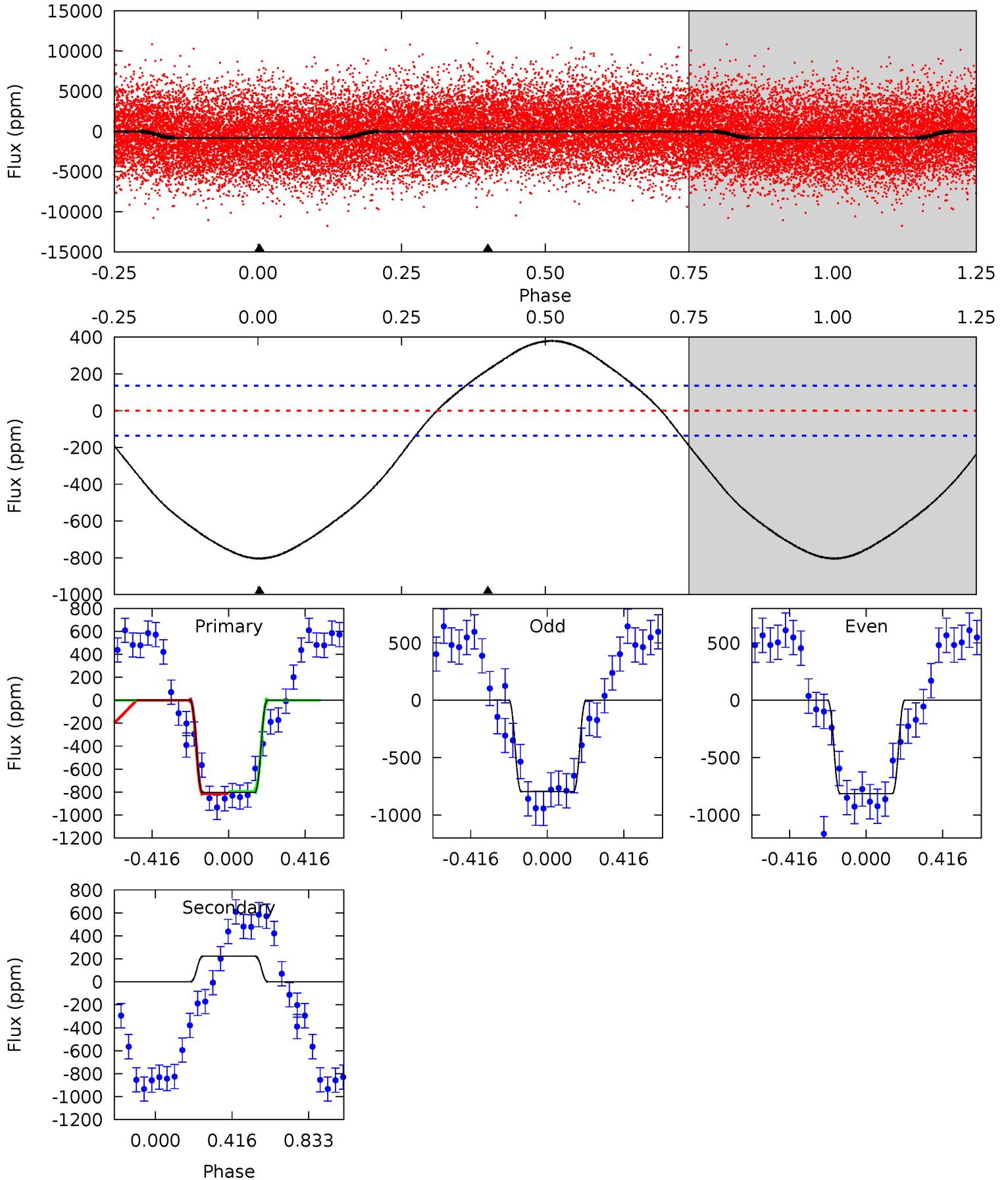
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.5	-11.7	0	0	4.21	0.65	5.14	38.5	38.5	-11.7	-11.7	0.98	0.93	0.33	1.92



Alt Model-Shift Uniqueness Test

006862920-03, P = 0.550820 Days, E = 131.415324 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.1	-6.94	0	0	4.26	0.81	3.21	25.1	25.1	-6.94	-6.94	0.28	1.24	0.32	0.33



Stellar Parameters For KIC 006862920

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7413^{+207}_{-337}	$4.103^{+0.144}_{-0.176}$	$-0.020^{+0.200}_{-0.350}$	$1.865^{+0.569}_{-0.379}$	$1.605^{+0.189}_{-0.260}$	$0.348^{+0.261}_{-0.174}$
	+3%/-5%	+4%/-4%	+1000%/-1750%	+31%/-20%	+12%/-16%	+75%/-50%
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 006862920-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	230 ± 20	$7.46^{+1.27}_{-0.81}$	5036^{+358}_{-349}	-5301^{+195}_{-195}	$-0.521^{+0.136}_{-0.152}$
Alt.	222 ± 32	$5.92^{+1.08}_{-0.67}$	5024^{+371}_{-341}	-5651^{+260}_{-252}	$-0.793^{+0.208}_{-0.254}$

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 $A_{obs} \gg 1.0$

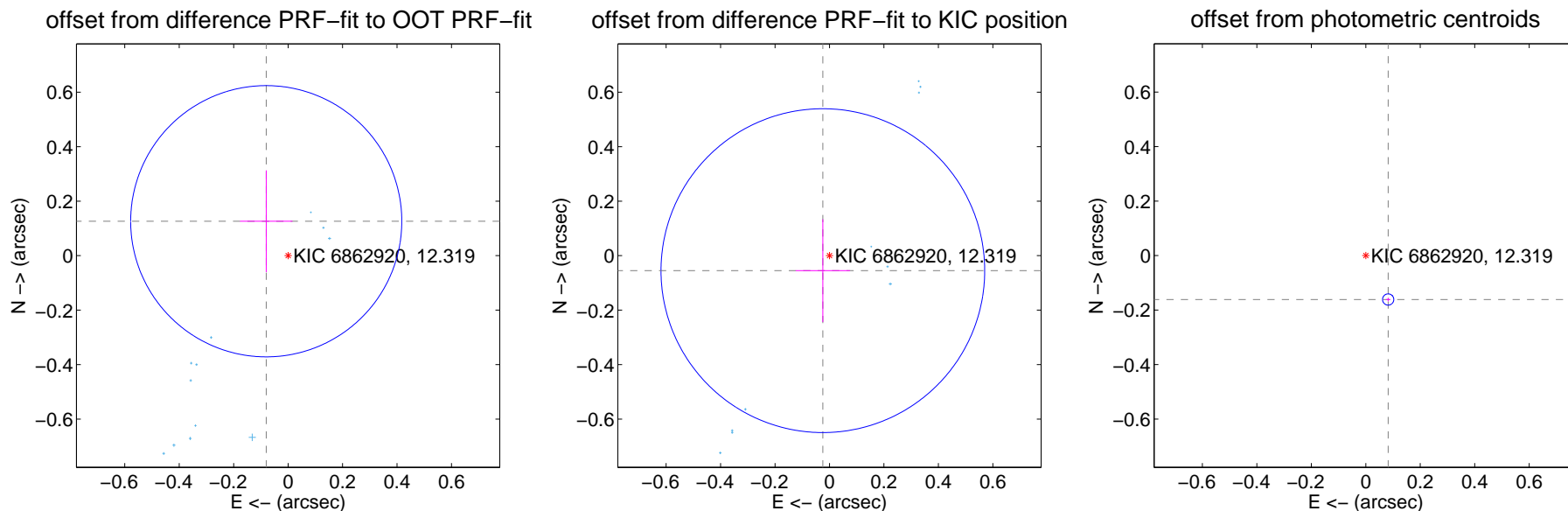
DV Centroid Data

Supplemental centroid analysis for 006862920-03. Kepler magnitude: 12.32. Transit SNR 21.95

There are 17 quarters with good PRF difference image offsets

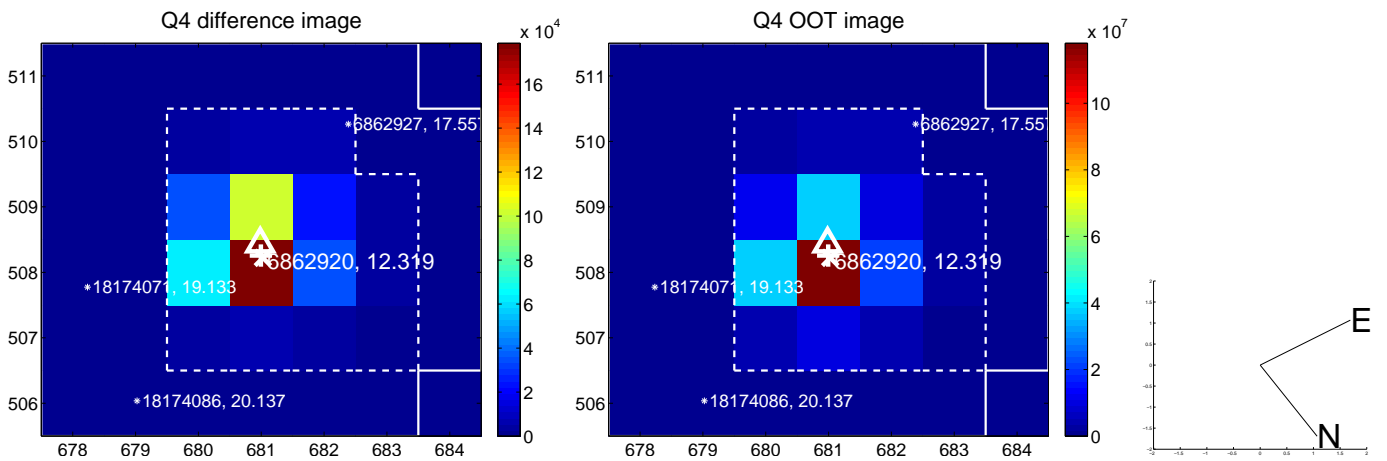
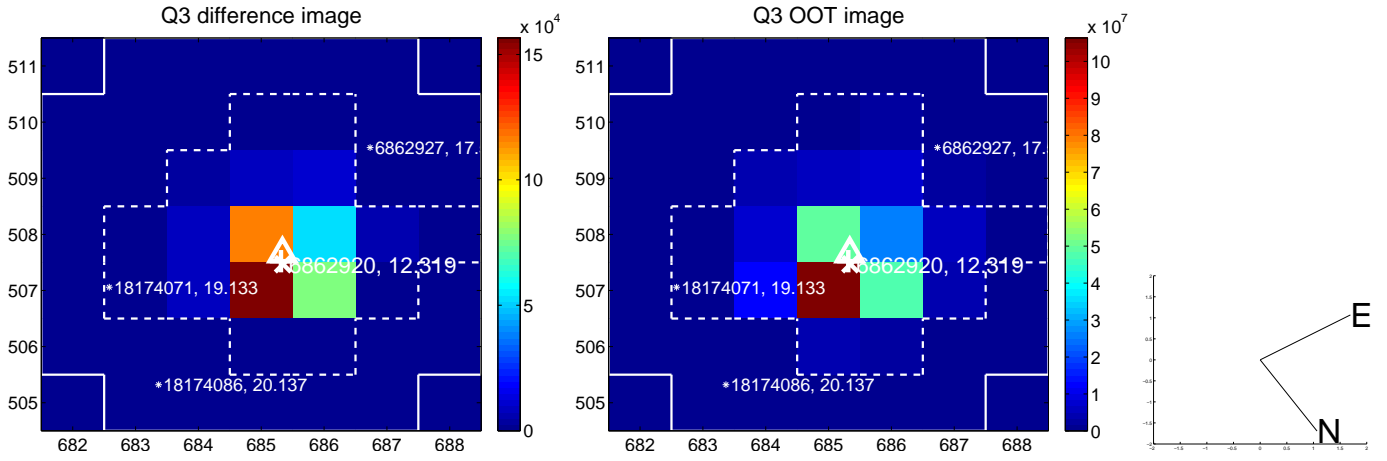
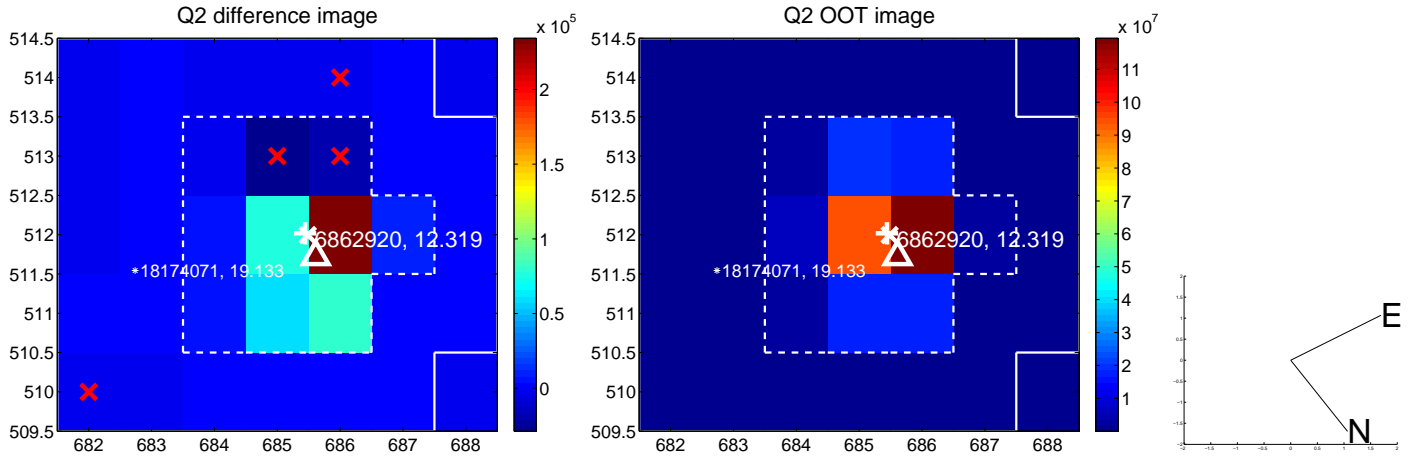
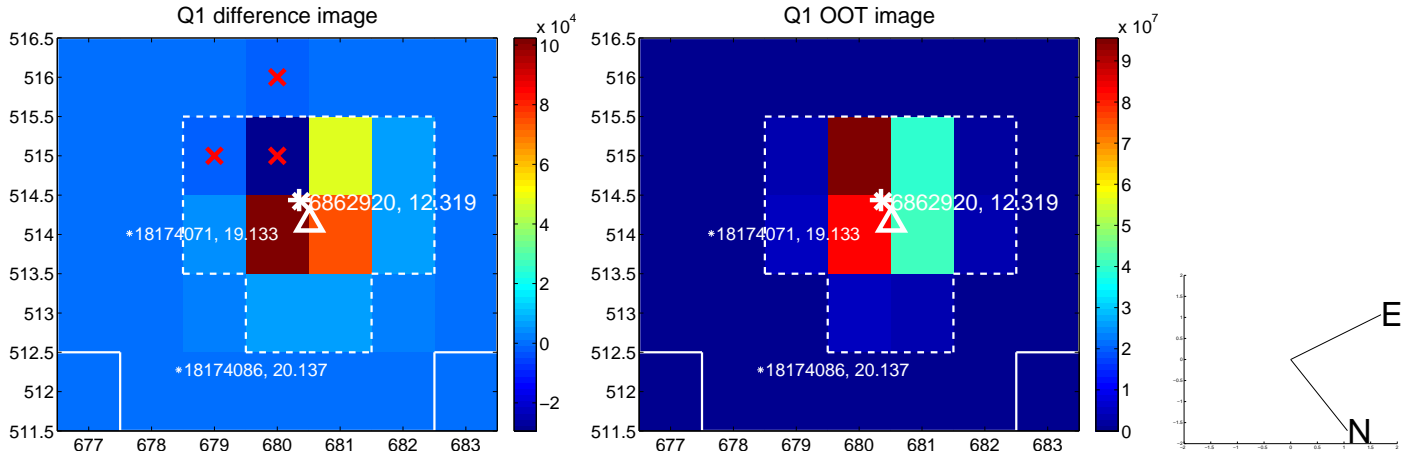
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.150 ± 0.166	0.90	0.080 ± 0.096	0.126 ± 0.187
PRF-fit source offset from KIC position	0.060 ± 0.198	0.30	0.024 ± 0.100	-0.055 ± 0.189
photometric centroid source offset	0.18 ± 0.01	26.27	-0.08 ± 0.01	-0.16 ± 0.01

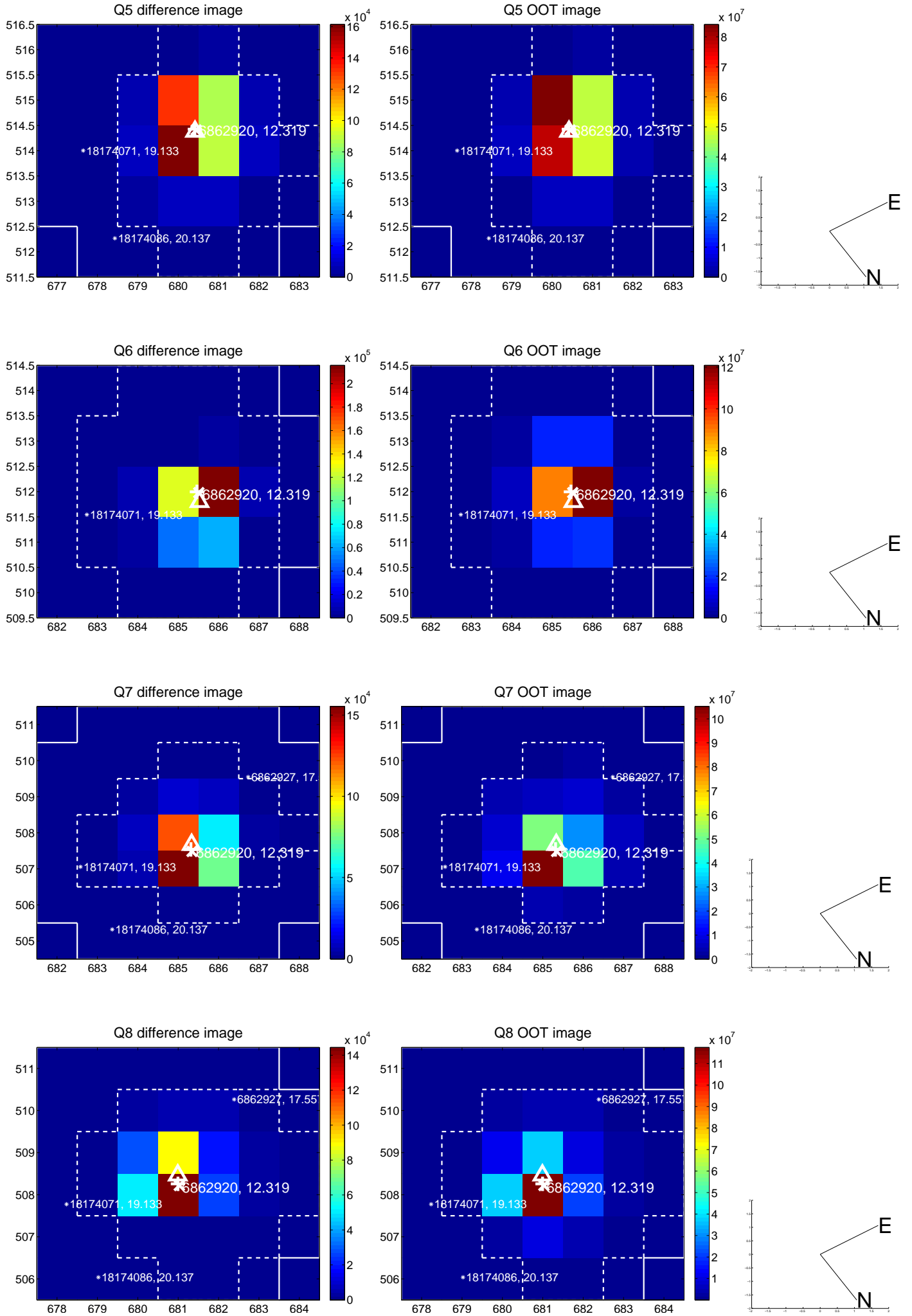


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

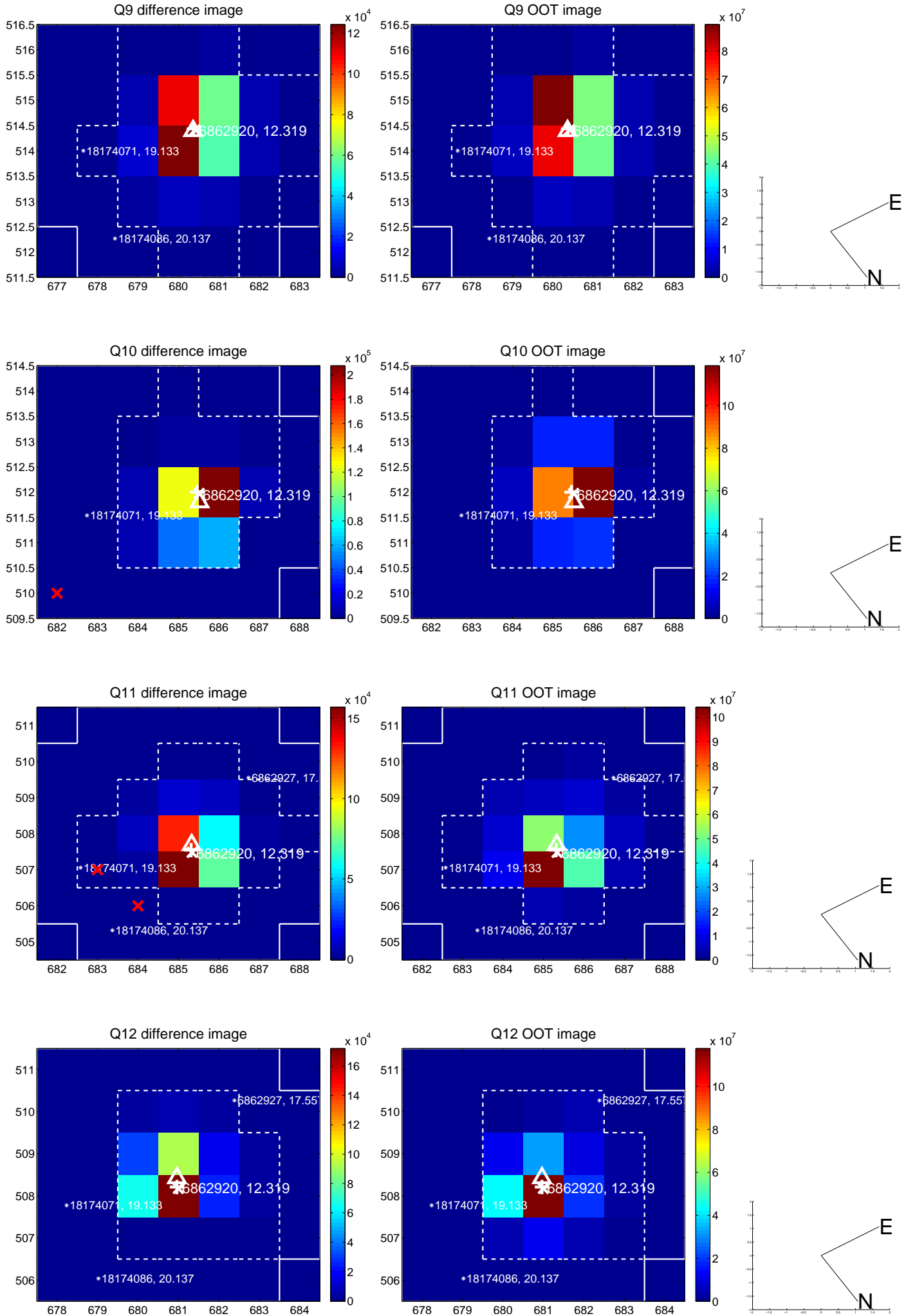
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



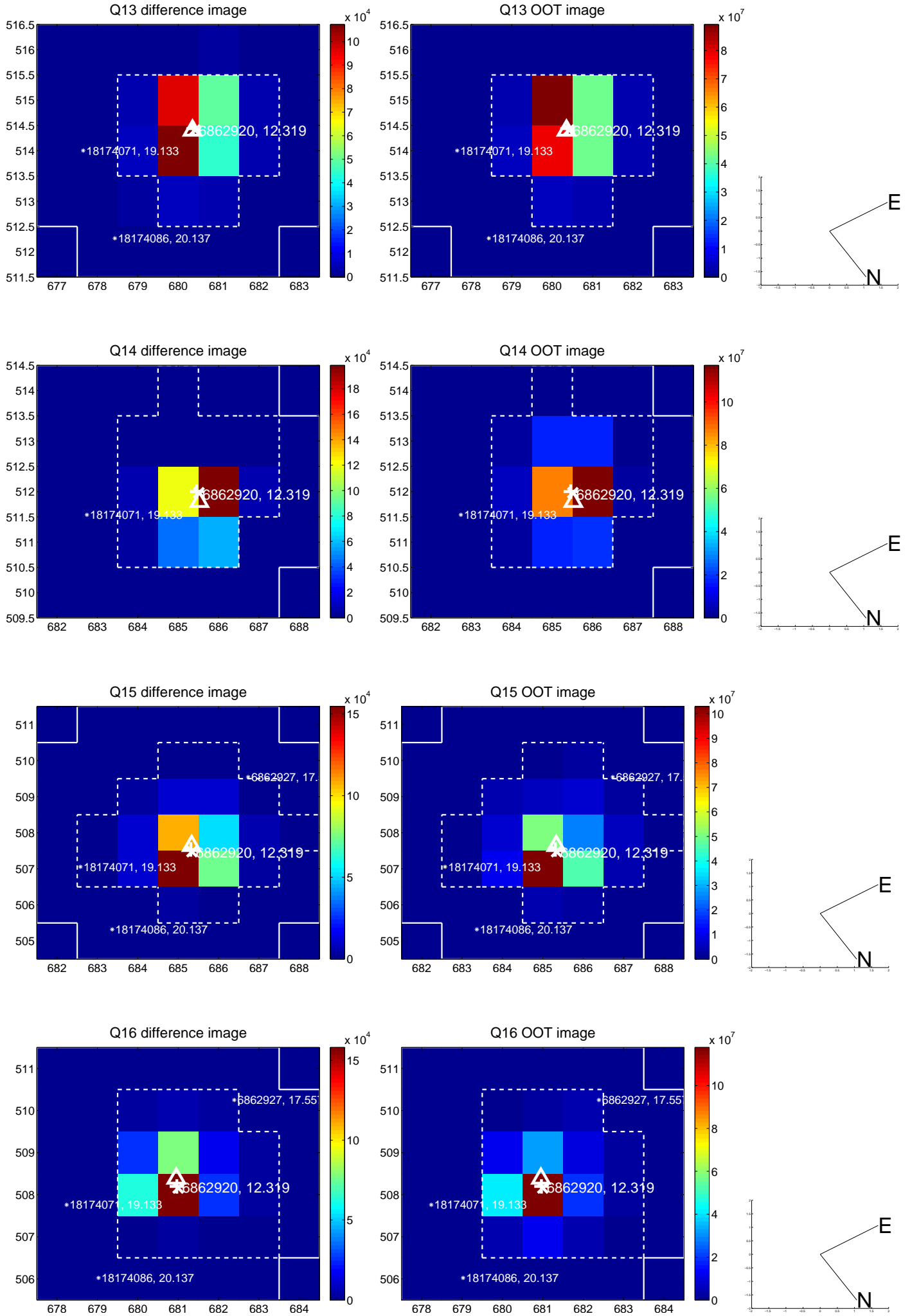
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

