

KIC 003120057

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})
003120057-01	OBS	No	2.508042	131.581038	144.9	5.301	10.6	10.6	2.45	7402	3.97	8465.31
003120057-02	OBS	No	0.626986	131.910369	101.9	2.804	10.9	11.9	2.45	7402	2.87	53754.19
003120057-03	OBS	No	0.836008	132.182027	137.7	3.000	8.7	-1.0	2.45	7402	2.92	36627.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003120057-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003120057-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
003120057-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

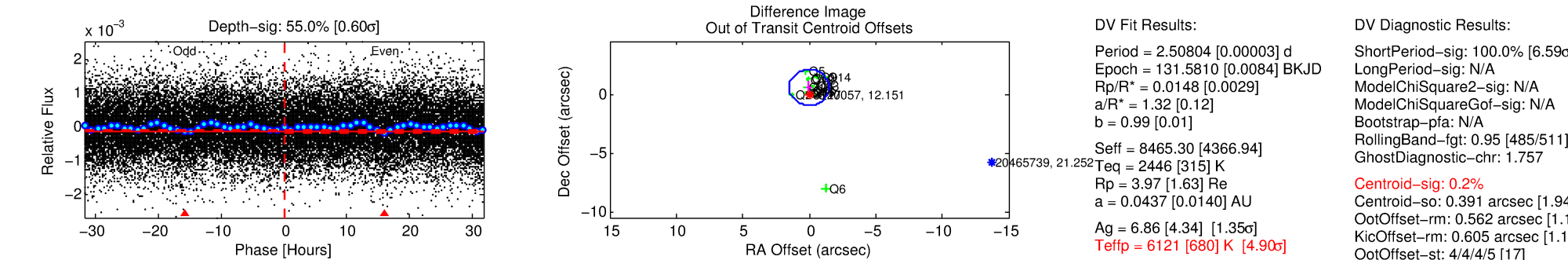
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 003120057-01

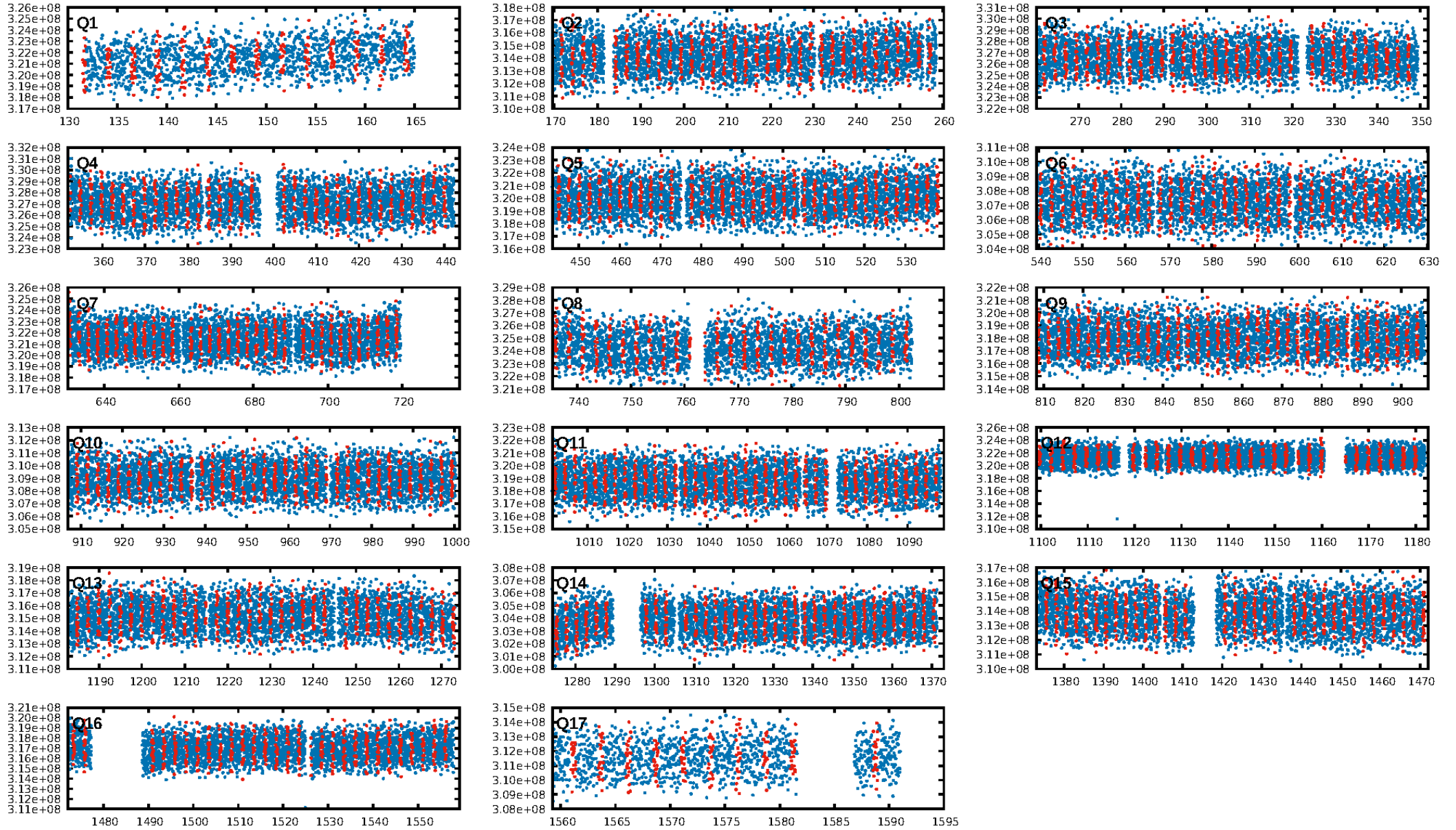
No Significant Match Found

KIC: 3120057 Candidate: 1 of 3 Period: 2.508 d

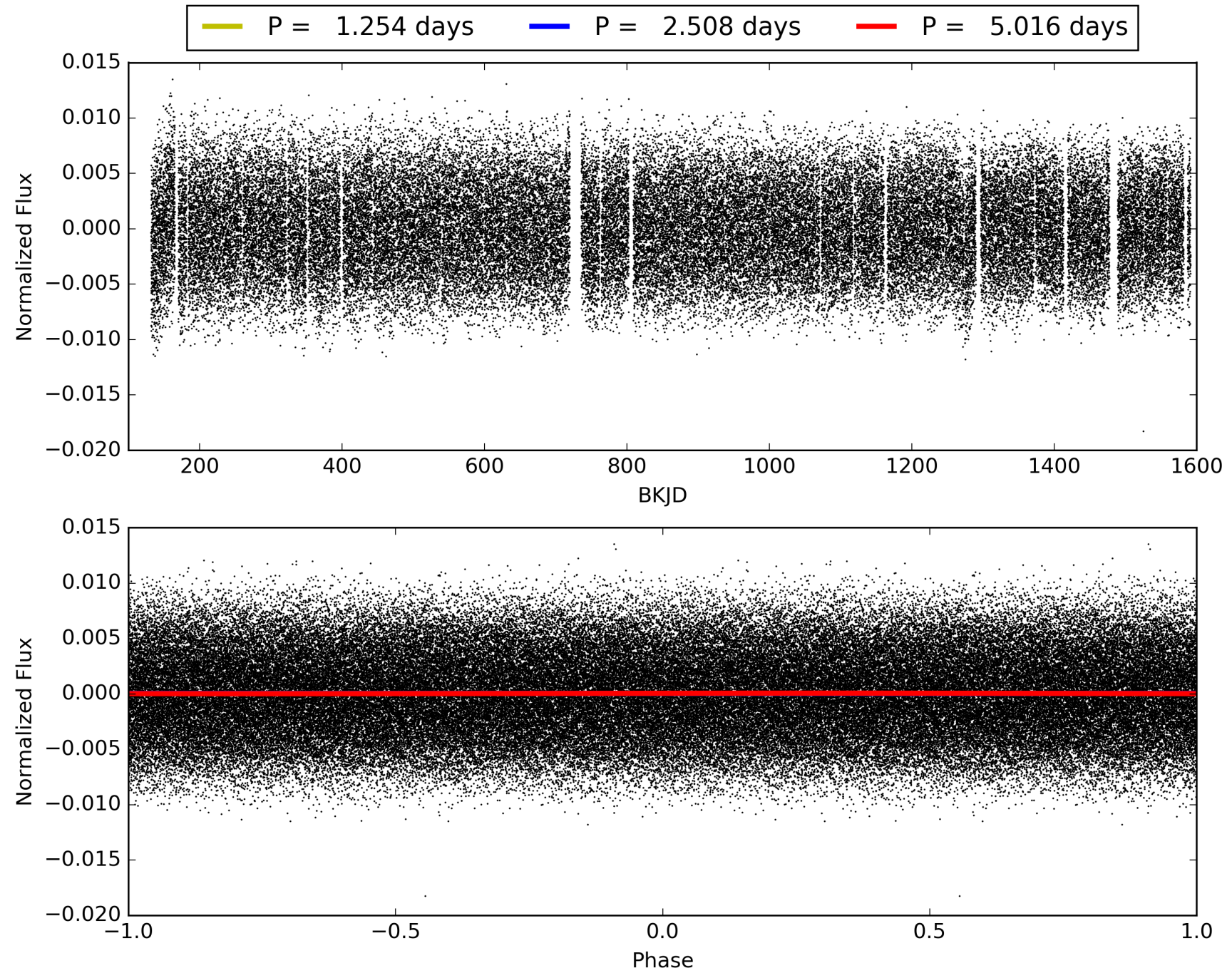


This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003120057-01, PDC Light Curves

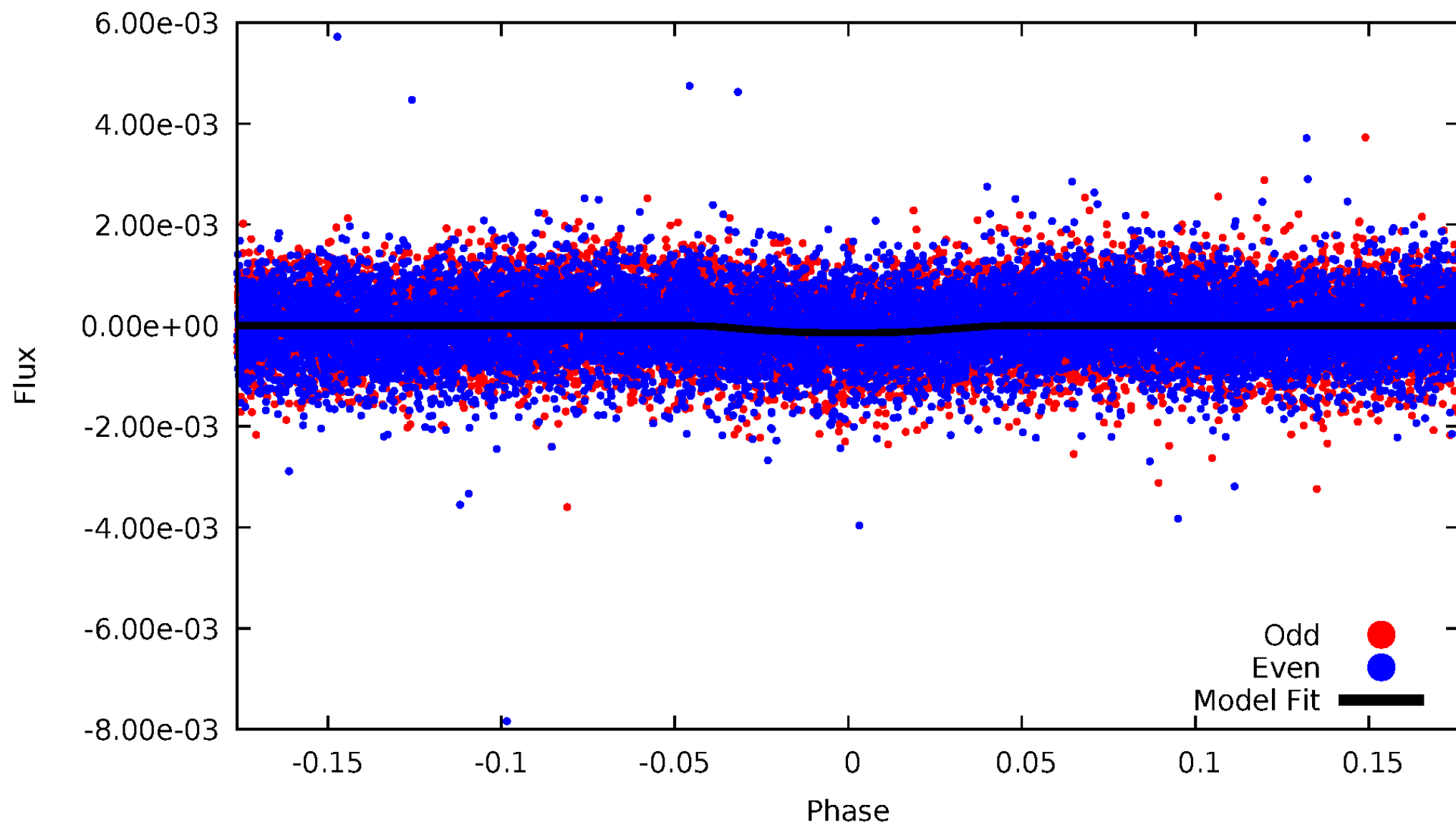


TCE 003120057-01



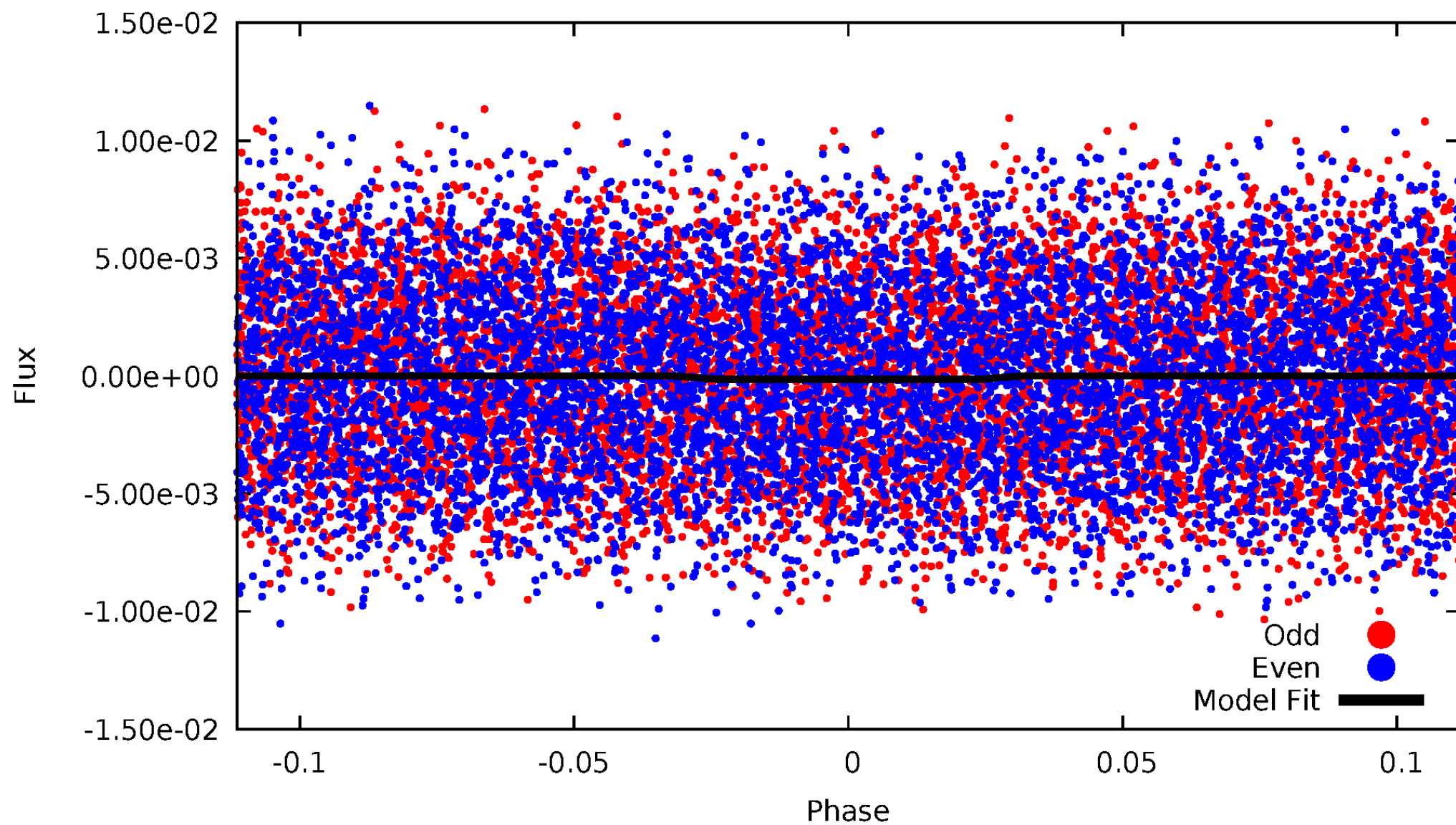
DV Odd/Even

TCE 003120057-01

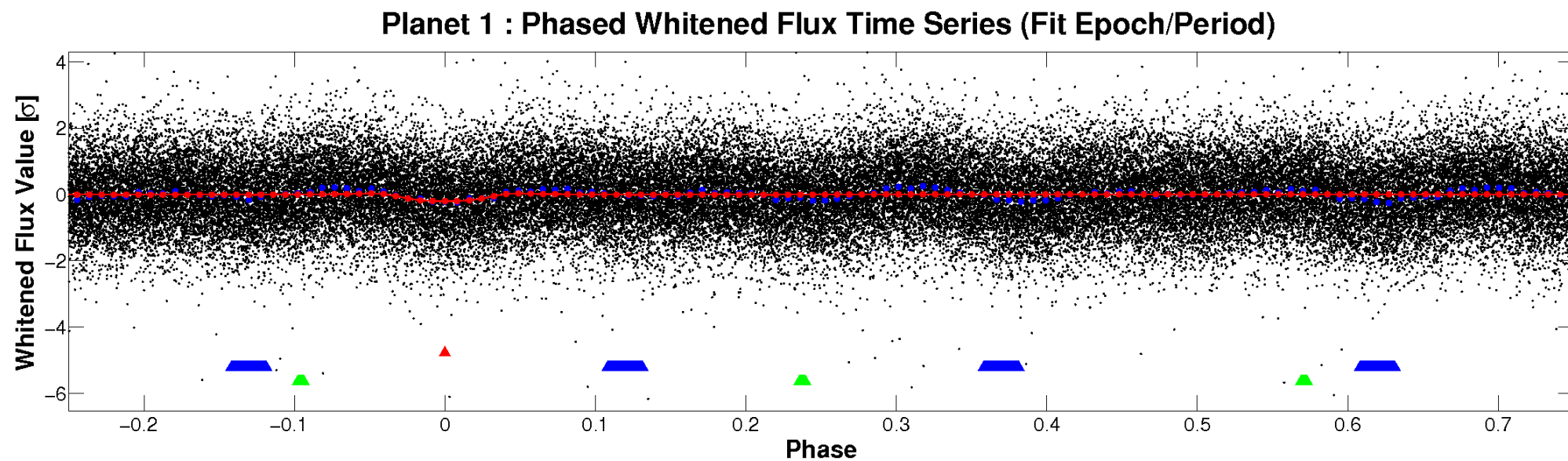
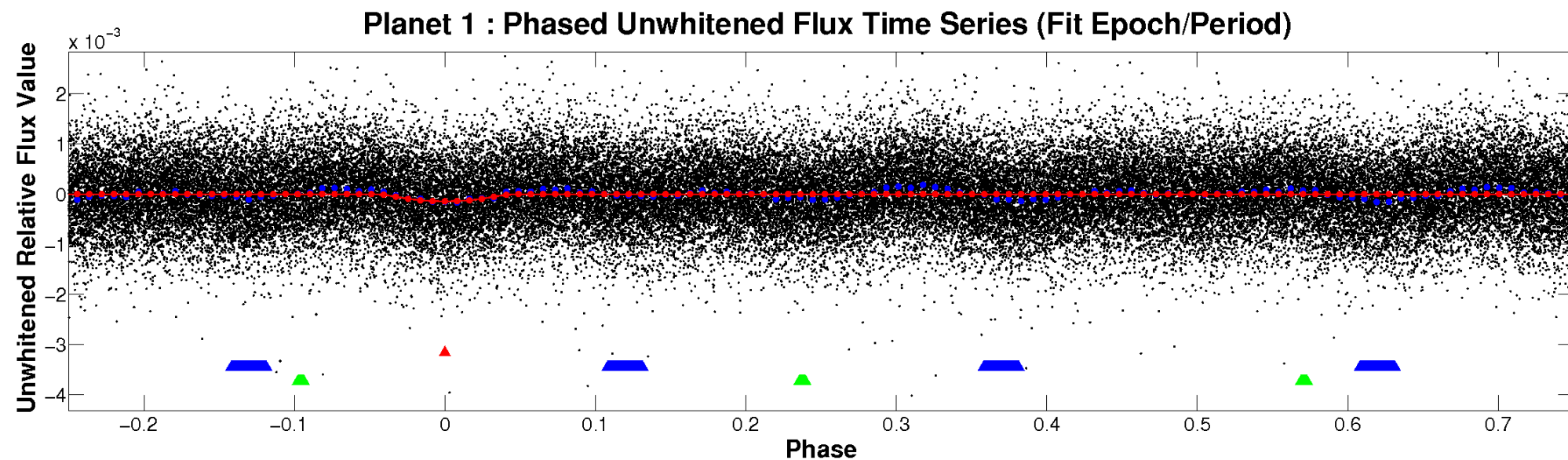


ALT Odd/Even

TCE 003120057-01

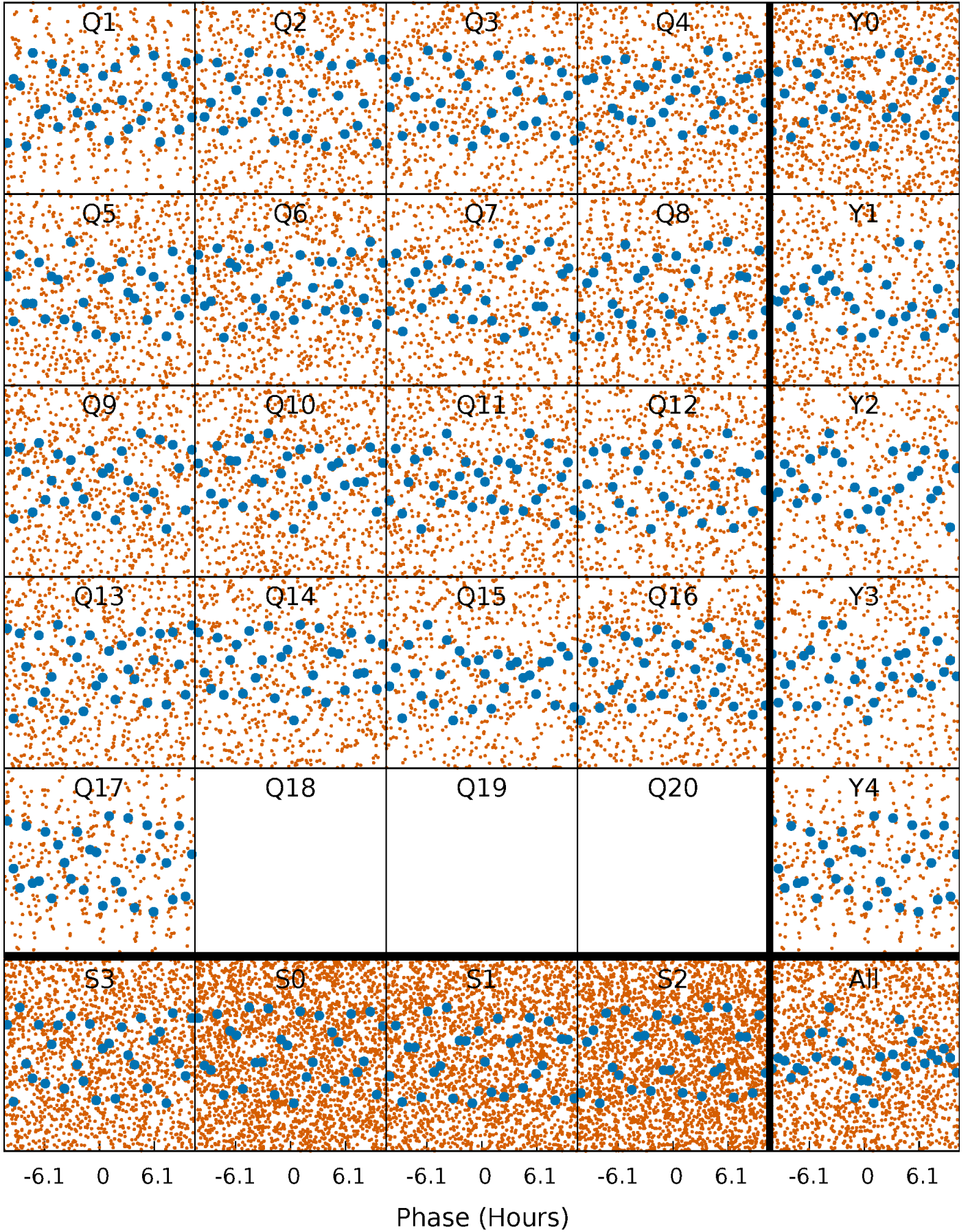


Non-Whitened Vs. Whitened Light Curve



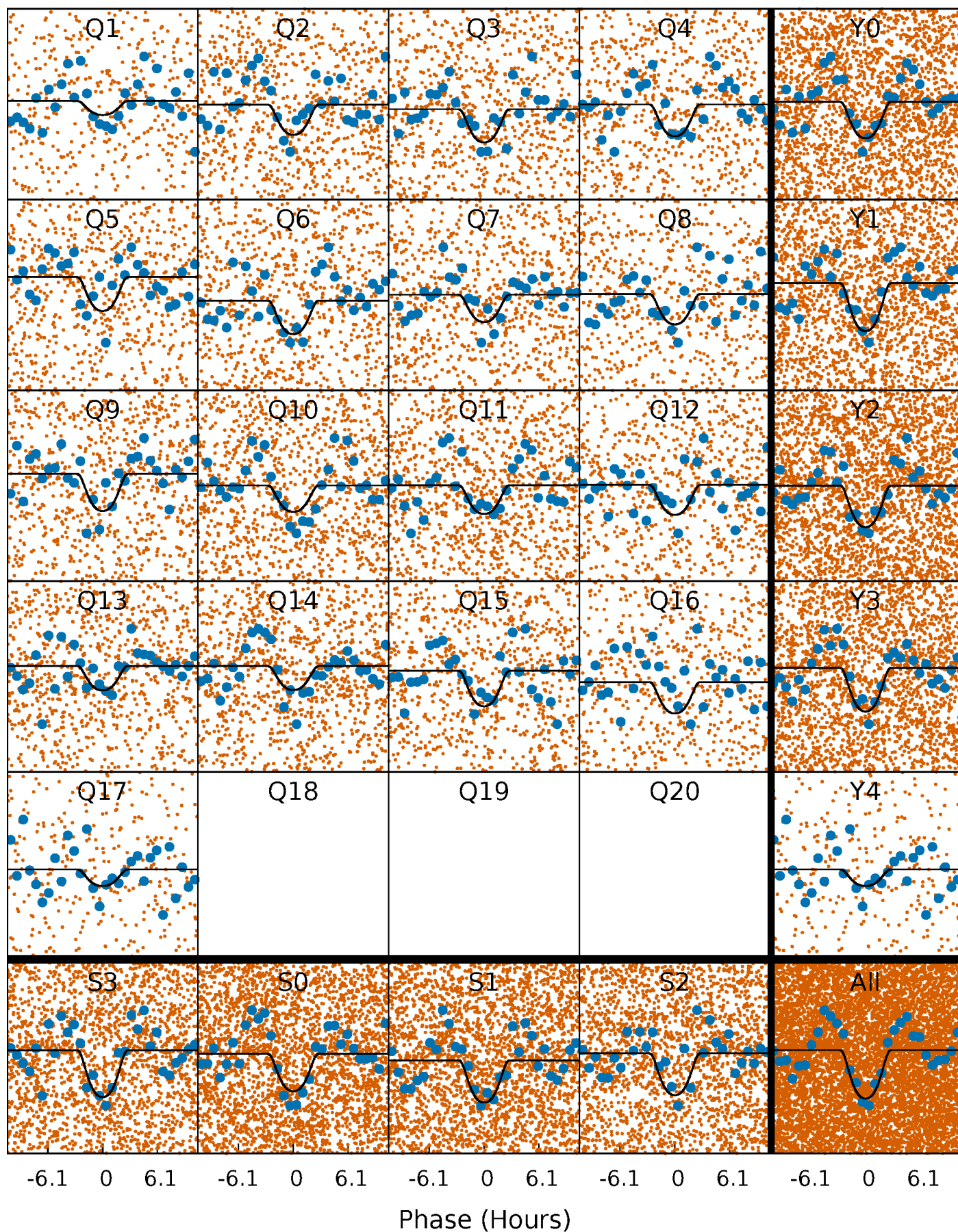
PDC Quarter-Phased Transit Curves

TCE 003120057-01 P= 2.508042 Days $T_0=131.581038$ (BKJD)



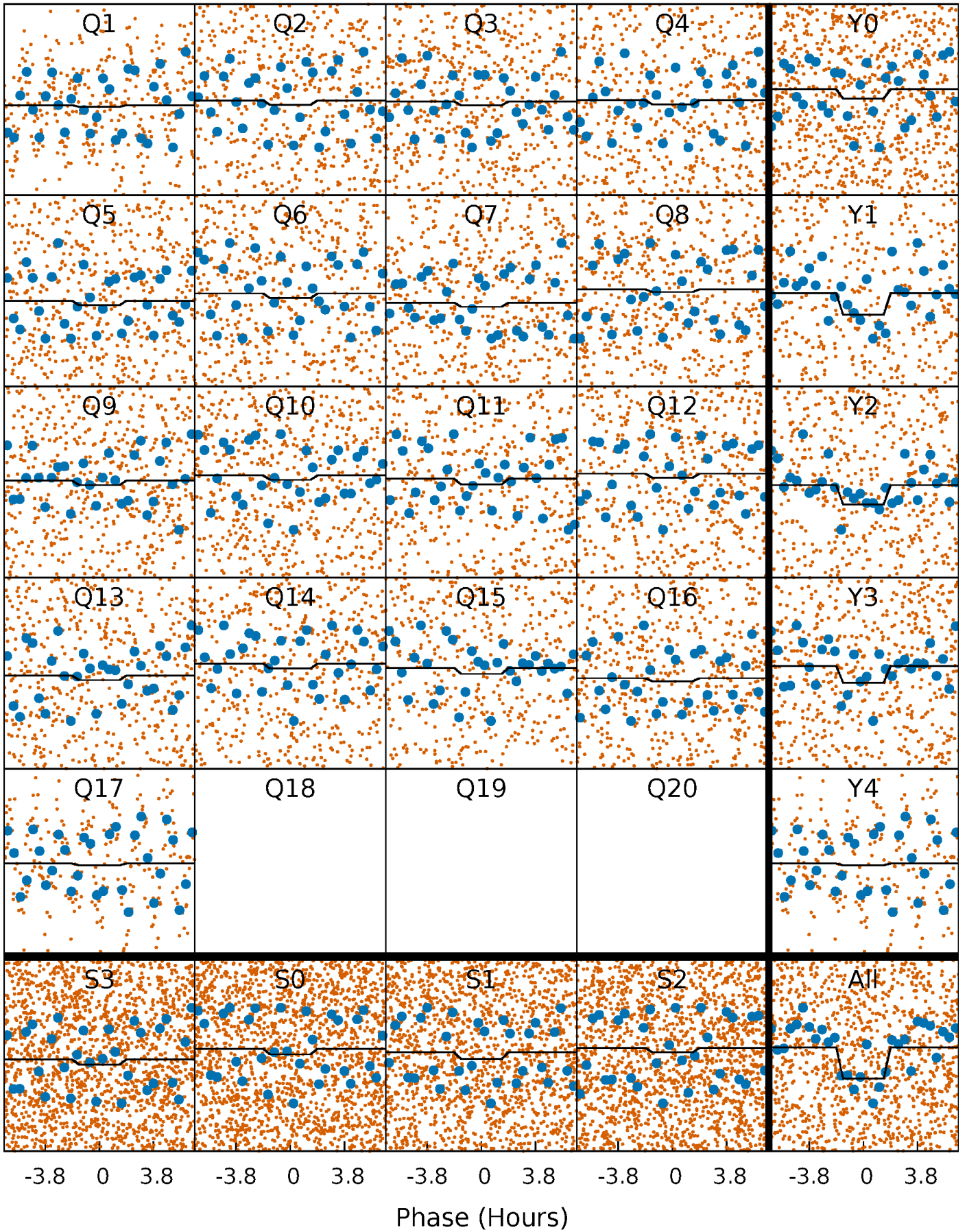
DV Quarter-Phased Transit Curves

TCE 003120057-01 P= 2.508042 Days $T_0=131.581038$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

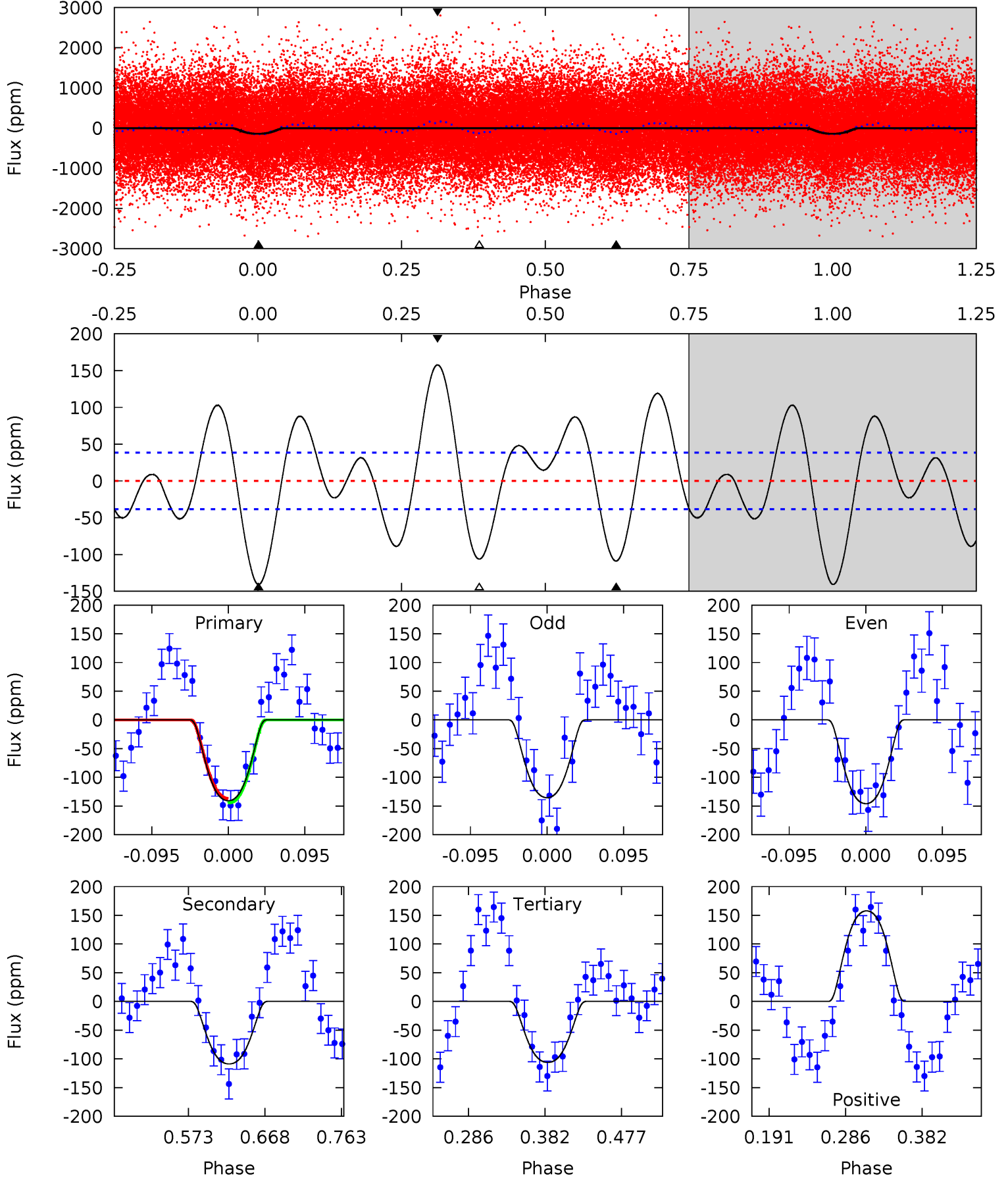
TCE 003120057-01 P= 2.508076 Days $T_0=131.570910$ (BKJD)



DV Model-Shift Uniqueness Test

003120057-01, P = 2.508042 Days, E = 129.072996 Days

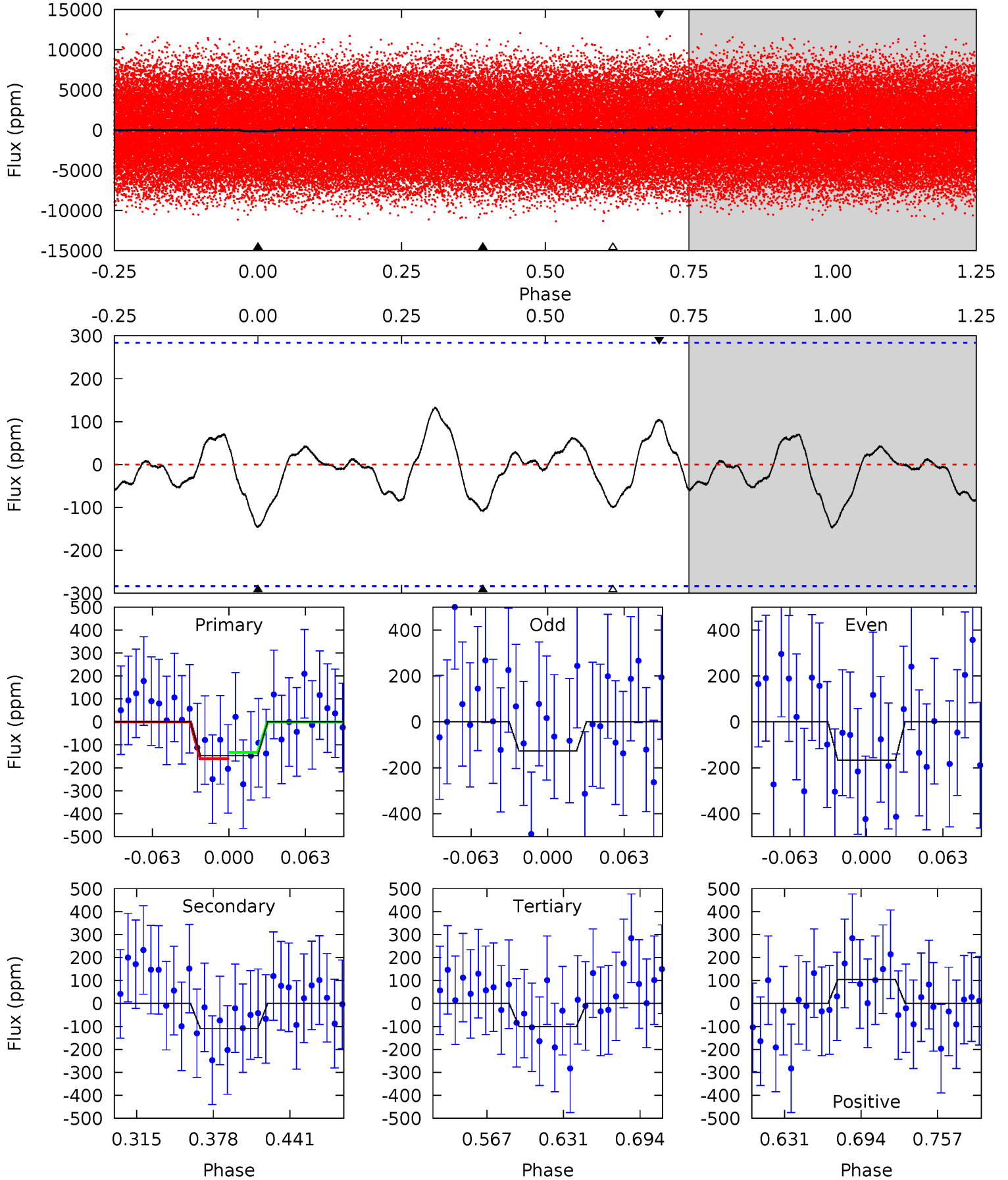
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	13.0	12.6	18.8	4.57	1.67	6.81	4.11	-2.02	0.32	-5.82	0.62	1.03	0.53	0.44



Alt Model-Shift Uniqueness Test

003120057-01, P = 2.508076 Days, E = 129.062834 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.41	1.79	1.65	1.71	4.66	1.86	0.82	0.76	0.70	0.14	0.08	0.33	0.94	0.48	0.22



Stellar Parameters For KIC 003120057

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7402^{+205}_{-333}	$3.907^{+0.273}_{-0.126}$	$-0.060^{+0.200}_{-0.350}$	$2.453^{+0.477}_{-0.887}$	$1.770^{+0.193}_{-0.386}$	$0.169^{+0.352}_{-0.065}$
	+3%/-4%	+7%/-3%	+333%/-583%	+19%/-36%	+11%/-22%	+208%/-39%
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 003120057-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-109 ± 8	$3.81^{+1.03}_{-0.91}$	3364^{+234}_{-294}	6017^{+743}_{-546}	$7.747^{+5.498}_{-2.775}$
Alt.	-109 ± 61	$3.04^{+0.96}_{-0.82}$	3366^{+230}_{-300}	6660^{+1679}_{-1303}	11^{+14}_{-6}

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 $A_{obs} \gg 1.0$

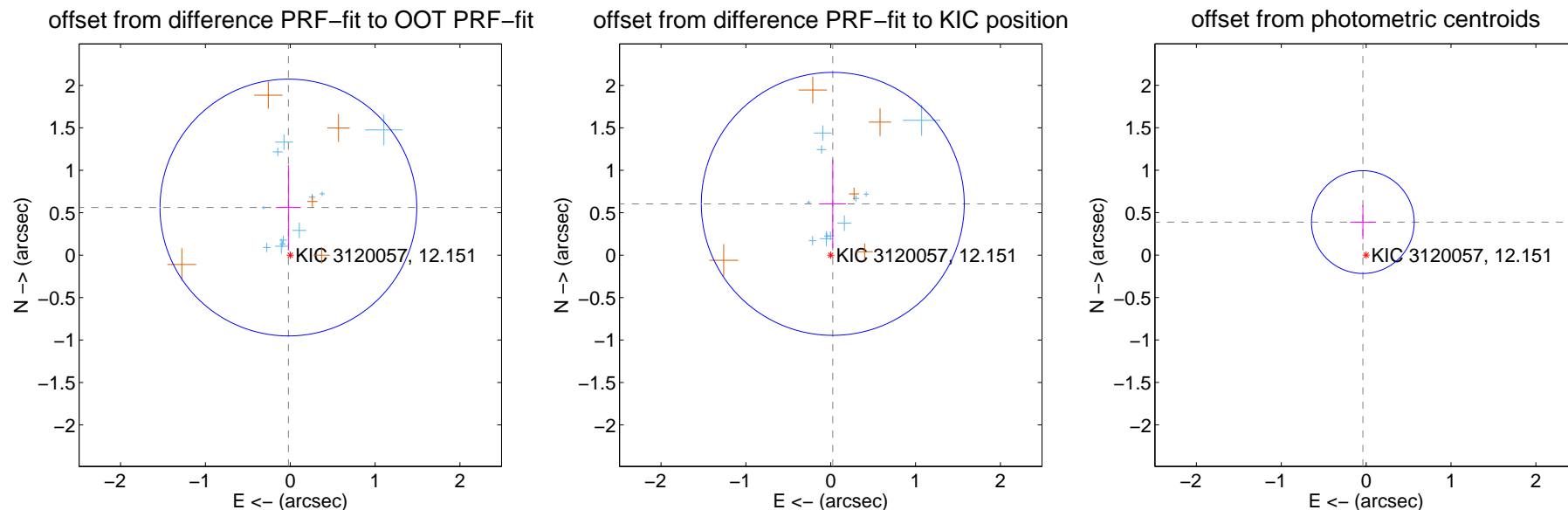
DV Centroid Data

Supplemental centroid analysis for 003120057-01. Kepler magnitude: 12.15. Transit SNR 10.59

There are 11 quarters with good PRF difference image offsets

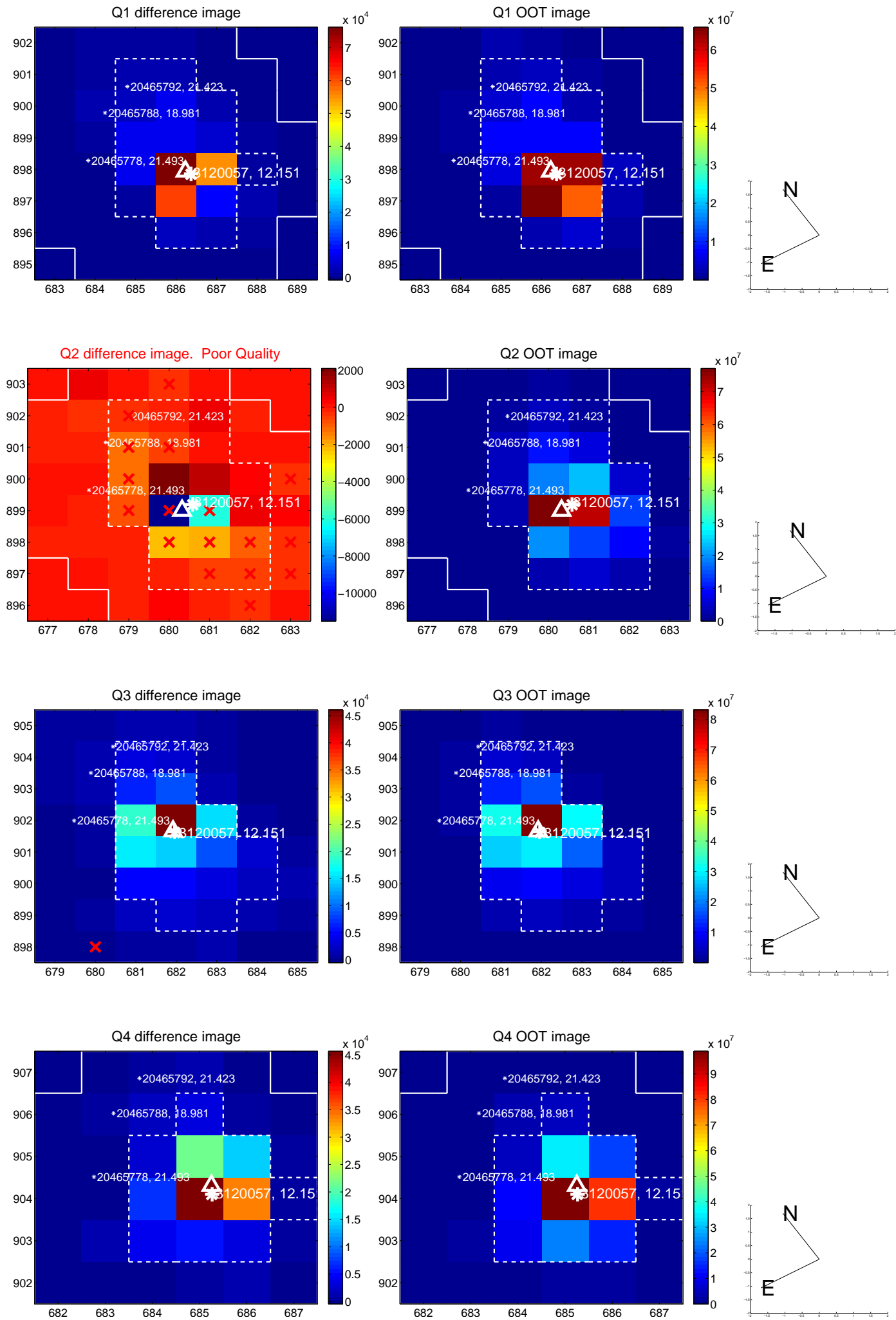
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.562 ± 0.504	1.11	0.022 ± 0.147	0.561 ± 0.503
PRF-fit source offset from KIC position	0.605 ± 0.516	1.17	-0.024 ± 0.155	0.604 ± 0.519
photometric centroid source offset	0.39 ± 0.20	1.94	0.04 ± 0.15	0.39 ± 0.20

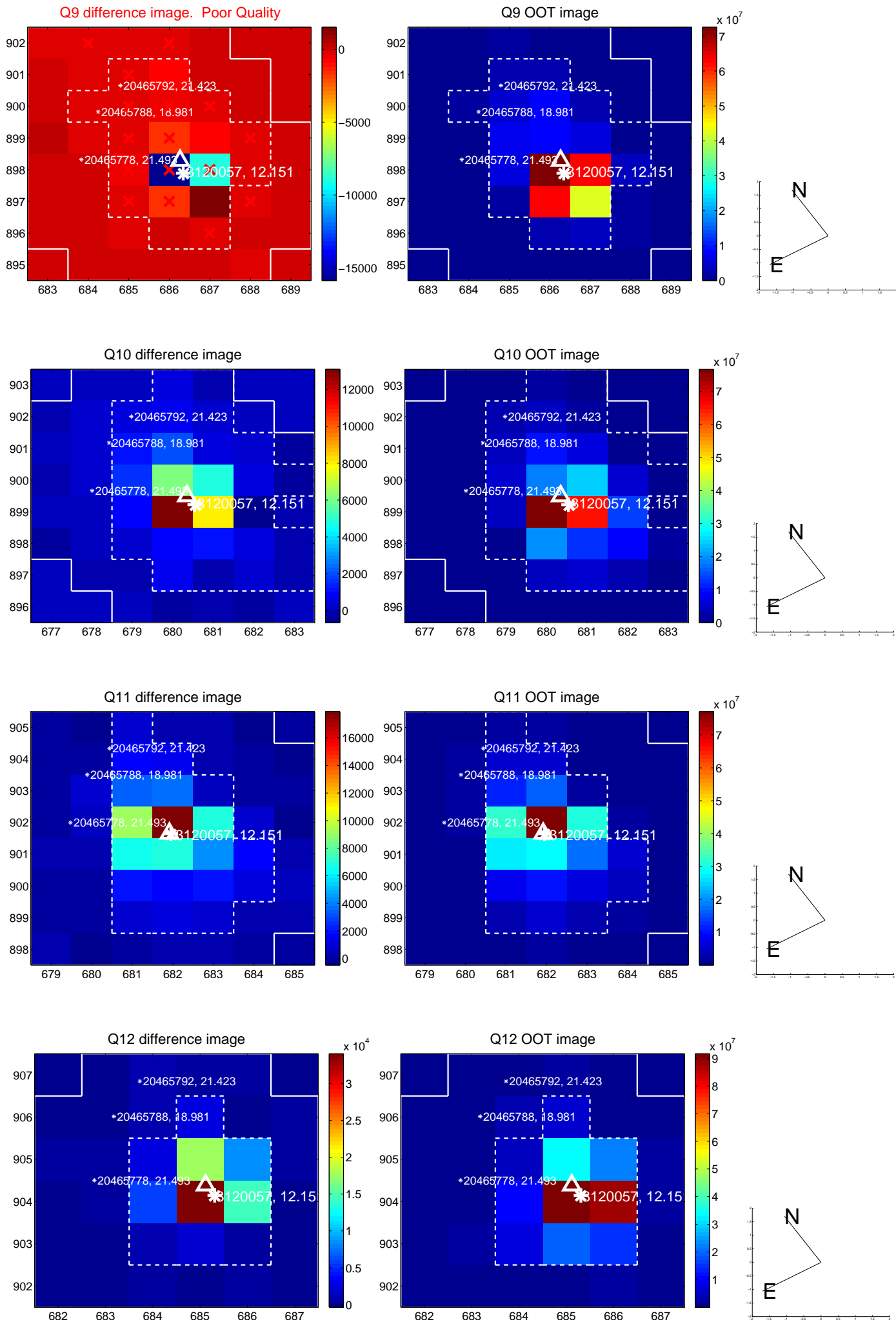


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

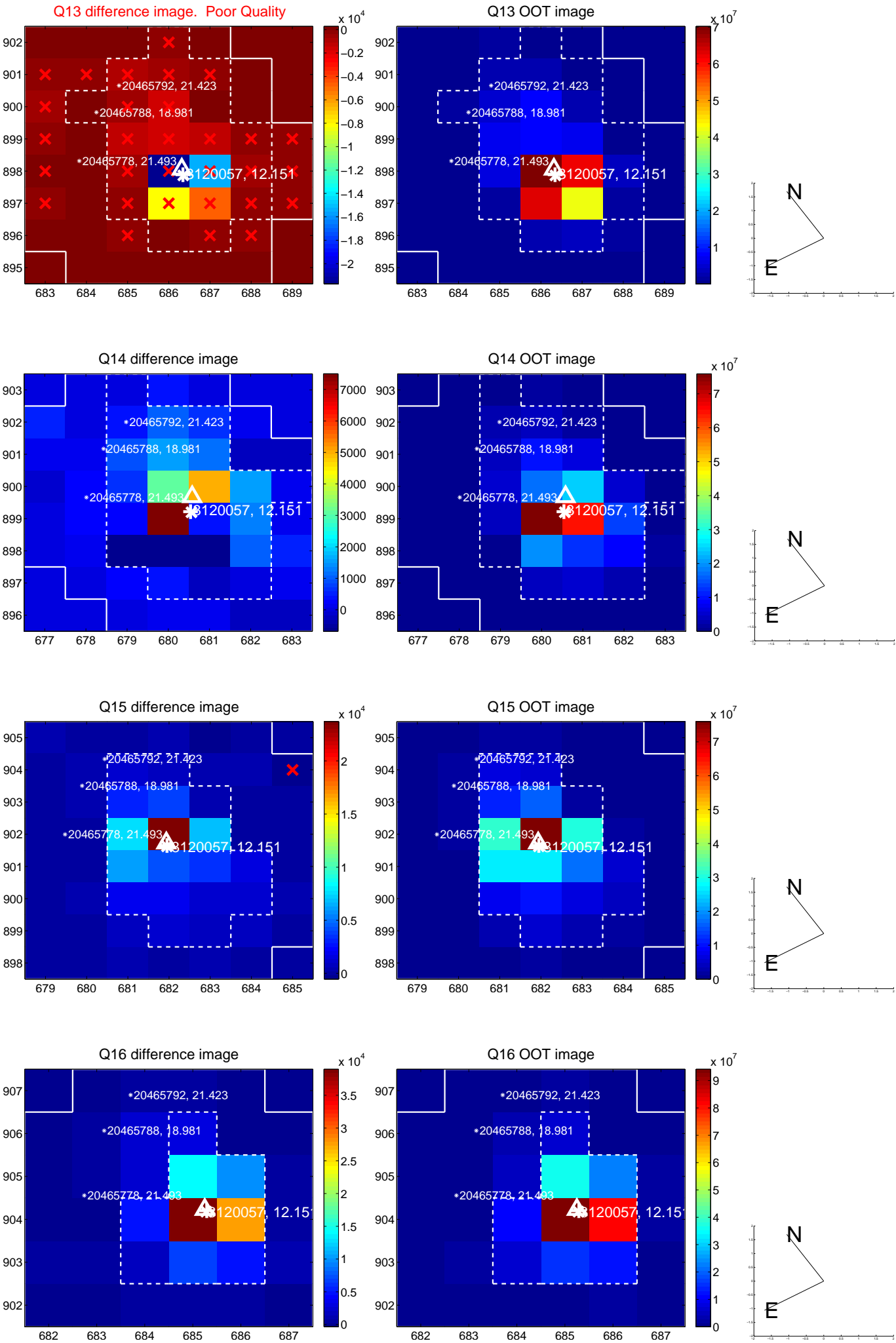
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



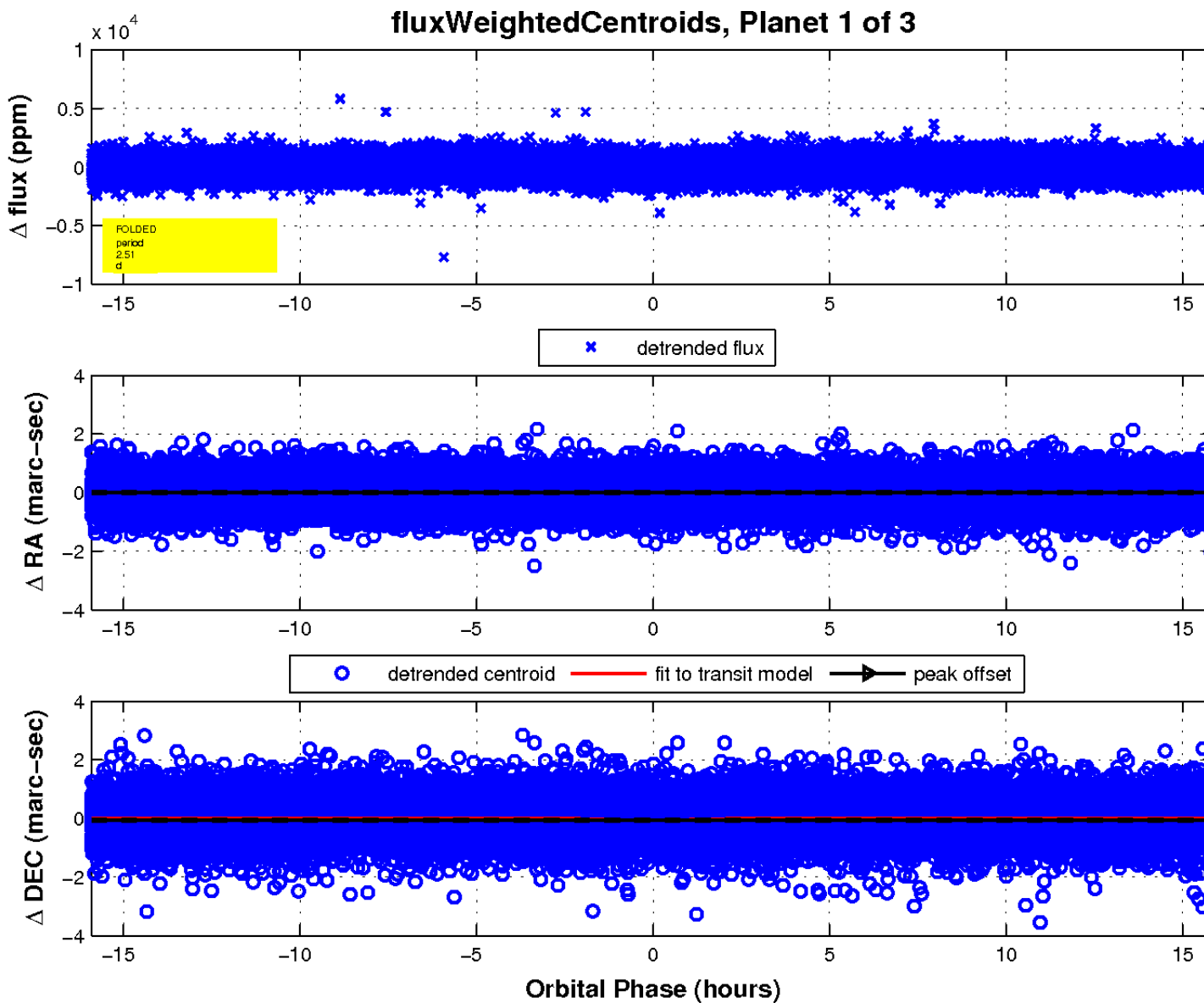
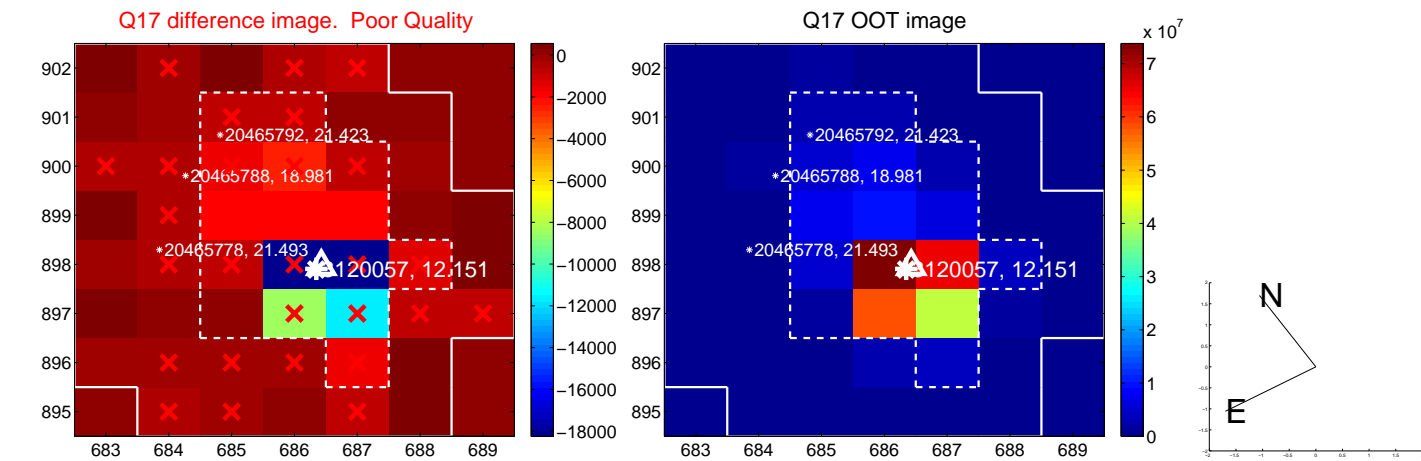
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

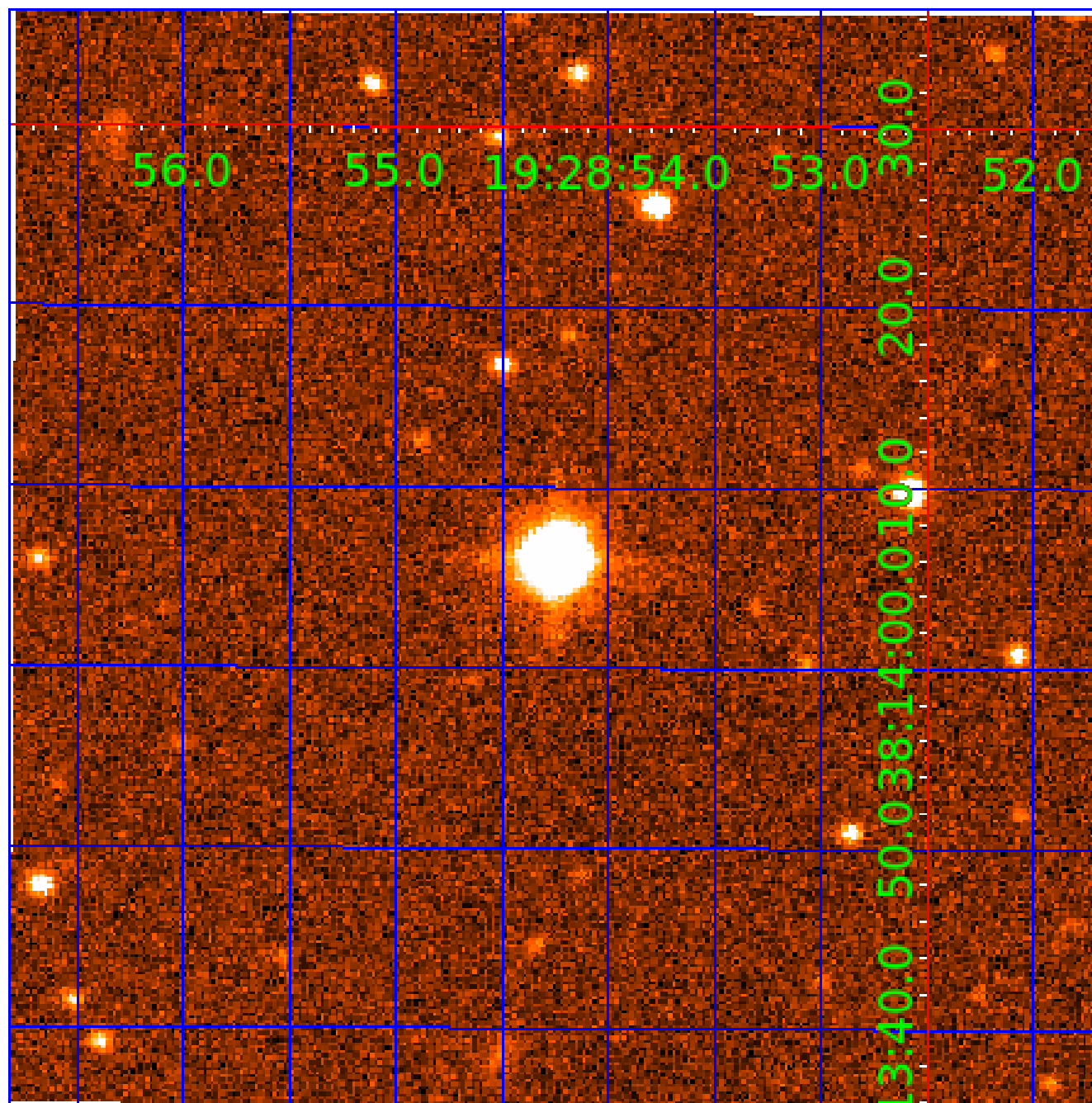


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003120057

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})
003120057-01	OBS	No	2.508042	131.581038	144.9	5.301	10.6	10.6	2.45	7402	3.97	8465.31
003120057-02	OBS	No	0.626986	131.910369	101.9	2.804	10.9	11.9	2.45	7402	2.87	53754.19
003120057-03	OBS	No	0.836008	132.182027	137.7	3.000	8.7	-1.0	2.45	7402	2.92	36627.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003120057-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003120057-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
003120057-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

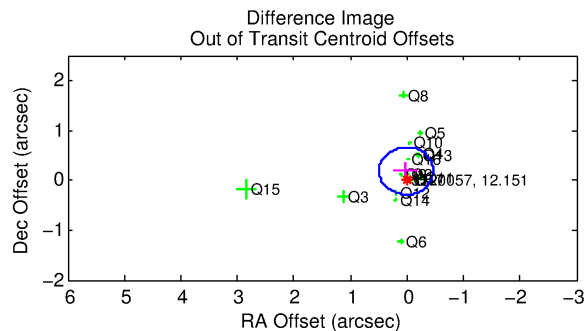
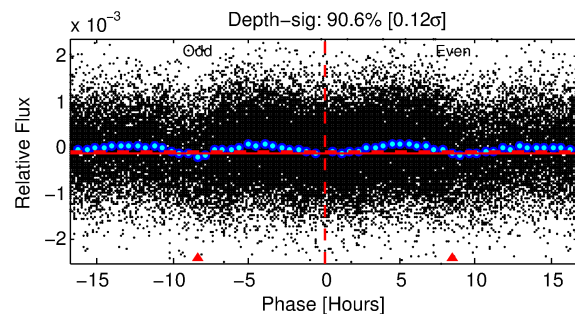
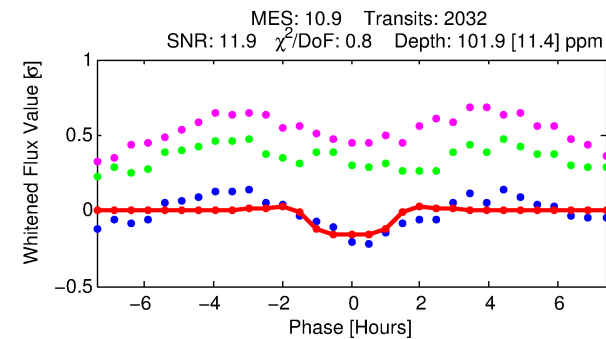
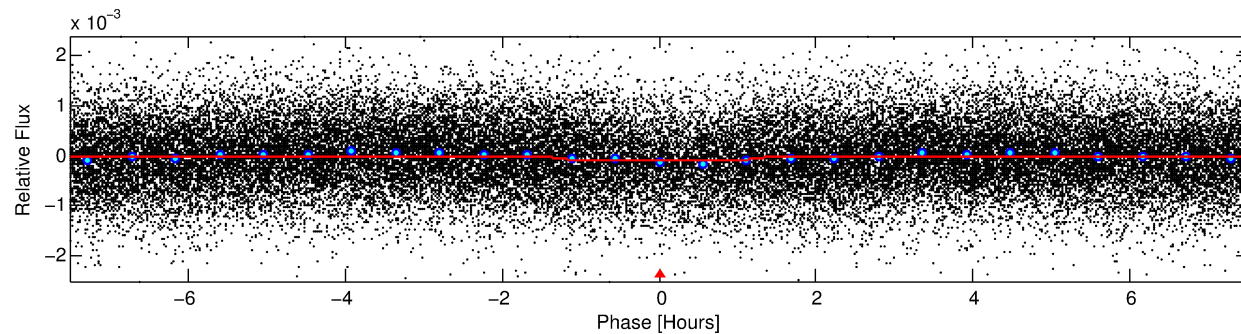
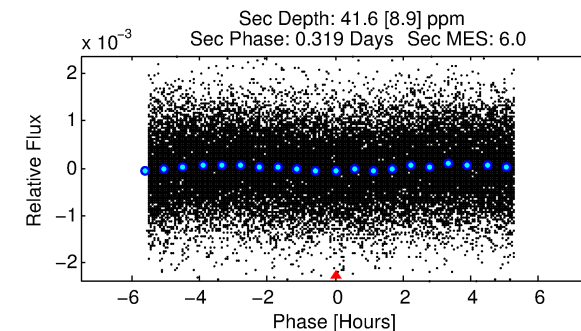
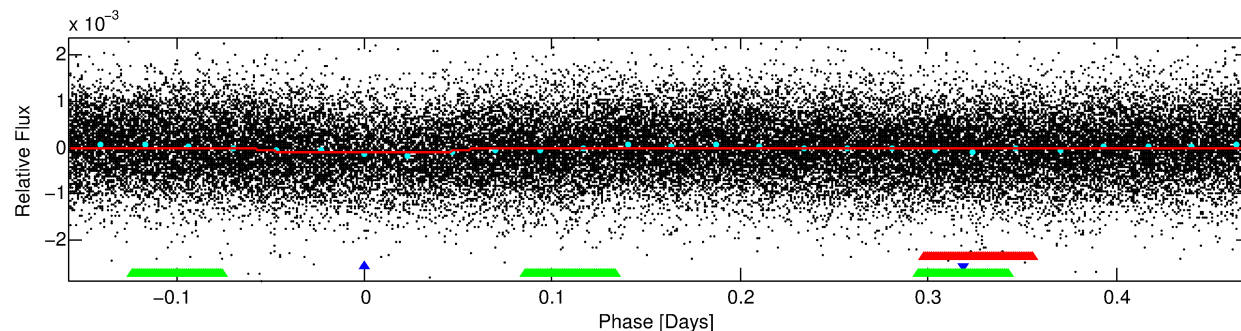
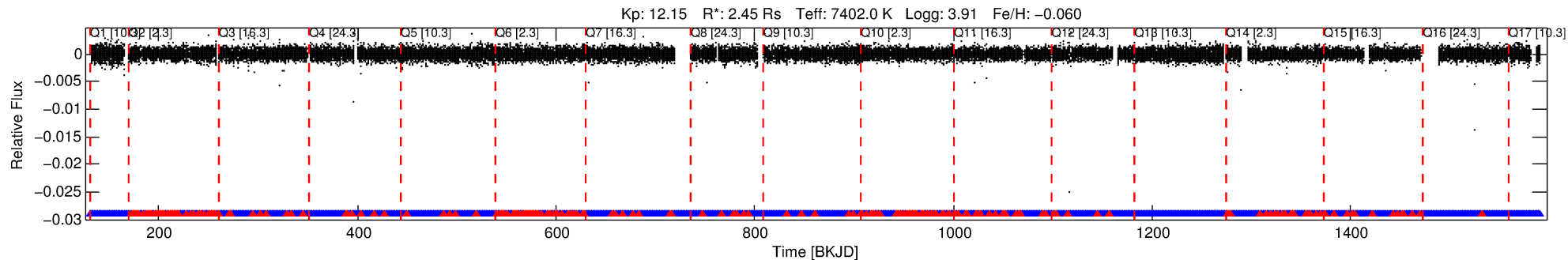
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003120057-02

No Significant Match Found

DV One-Page Summary

KIC: 3120057 Candidate: 2 of 3 Period: 0.627 d



DV Fit Results:

Period = 0.62699 [0.00001] d
Epoch = 131.9104 [0.0026] BKJD
Rp/R* = 0.0107 [0.0045]
a/R* = 1.23 [1.11]
b = 0.90 [0.58]
Seff = 53754.19 [27729.82]
Teq = 3883 [501] K
Rp = 2.87 [1.59] Re
a = 0.0174 [0.0055] AU
Ag = 0.84 [0.83] [-0.20σ]
Teff = 5742 [1277] K [1.36σ]

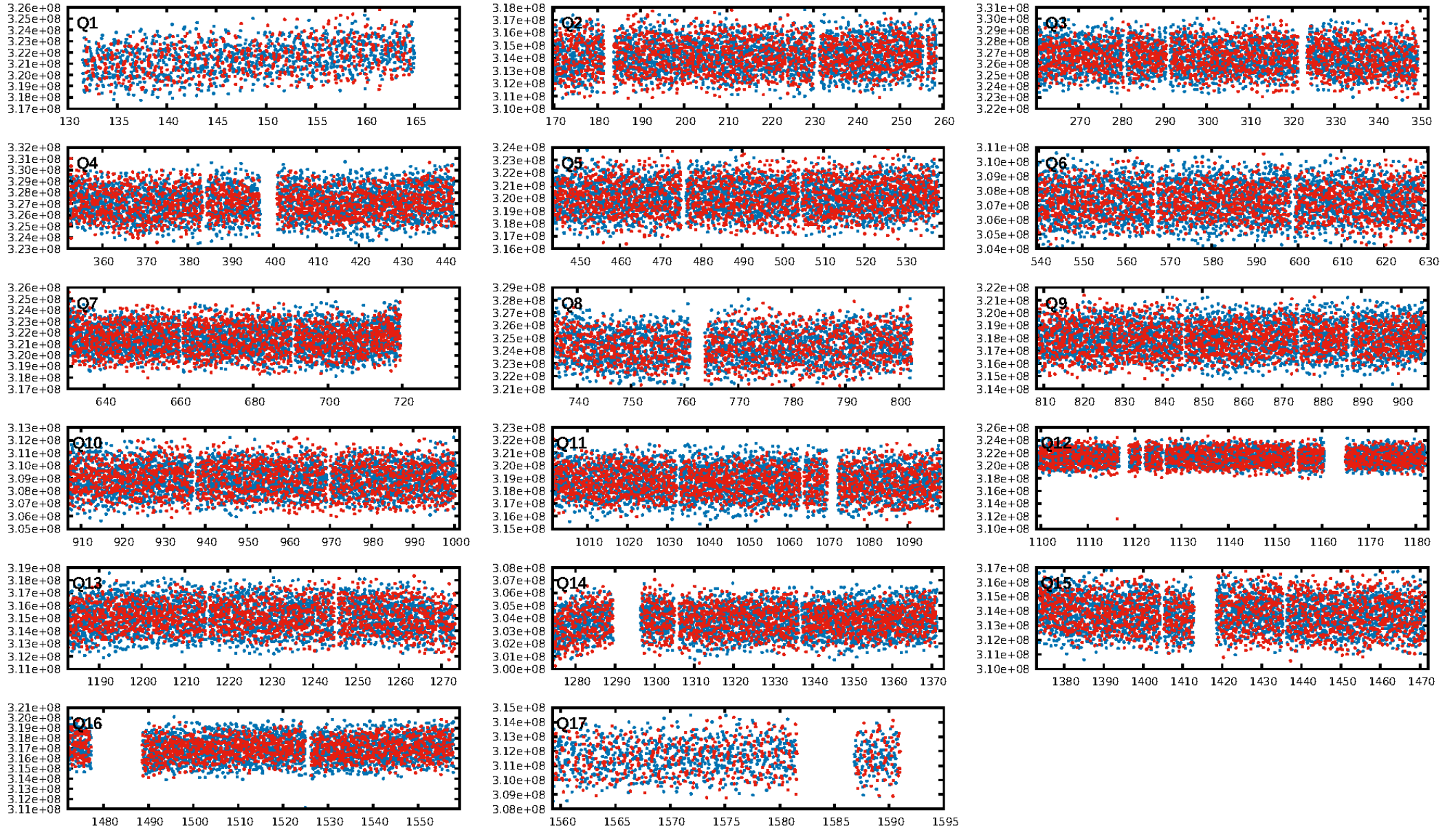
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 77.8% [1.22σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.88 [1707/1946]
GhostDiagnostic-chr: 1.004
Centroid-sig: 14.4%
Centroid-so: 0.182 arcsec [1.28σ]
OotOffset-rm: 0.186 arcsec [1.17σ]
KicOffset-rm: 0.242 arcsec [1.38σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 0.00 [0/17]

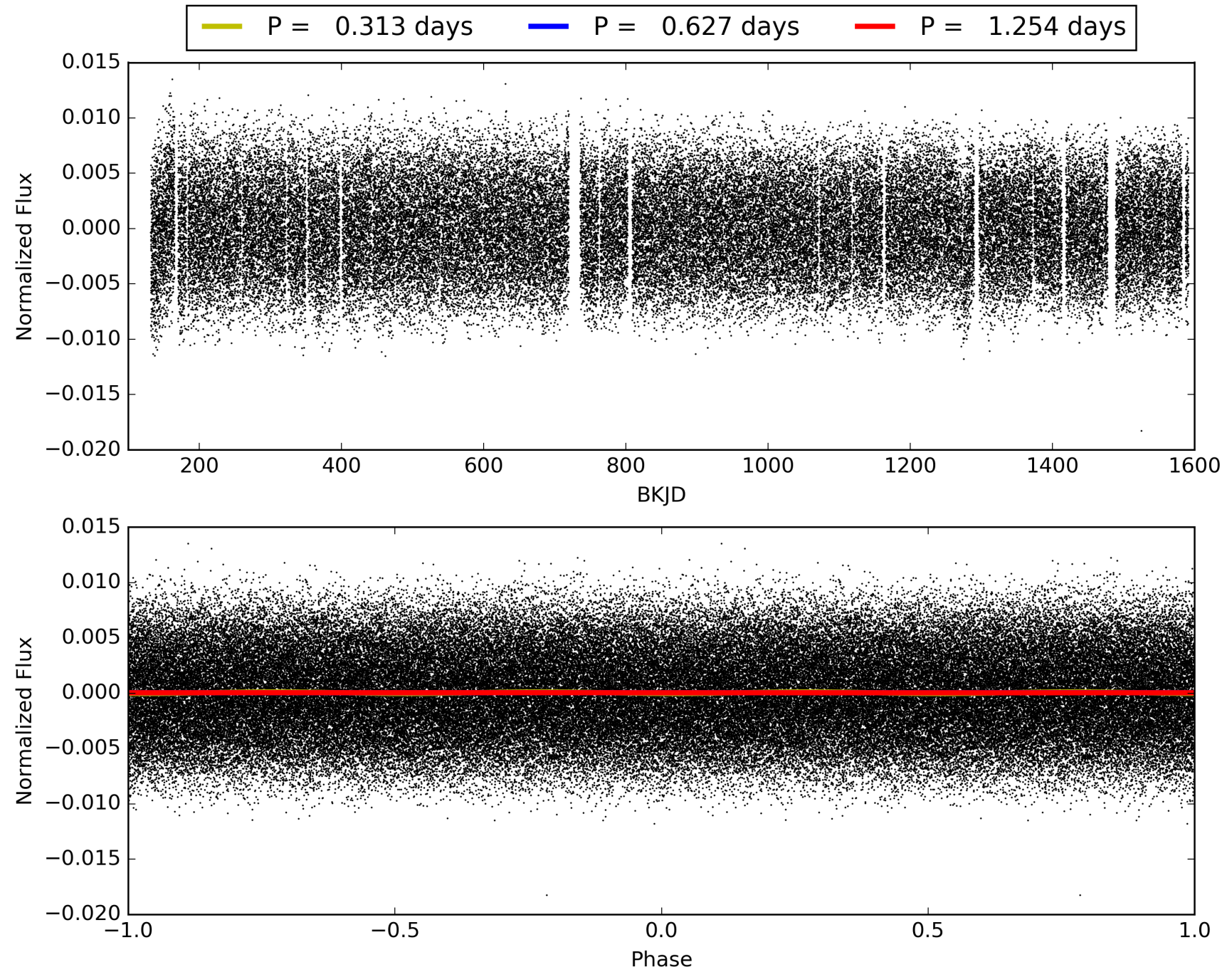
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:46:48 Z

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

TCE 003120057-02, PDC Light Curves

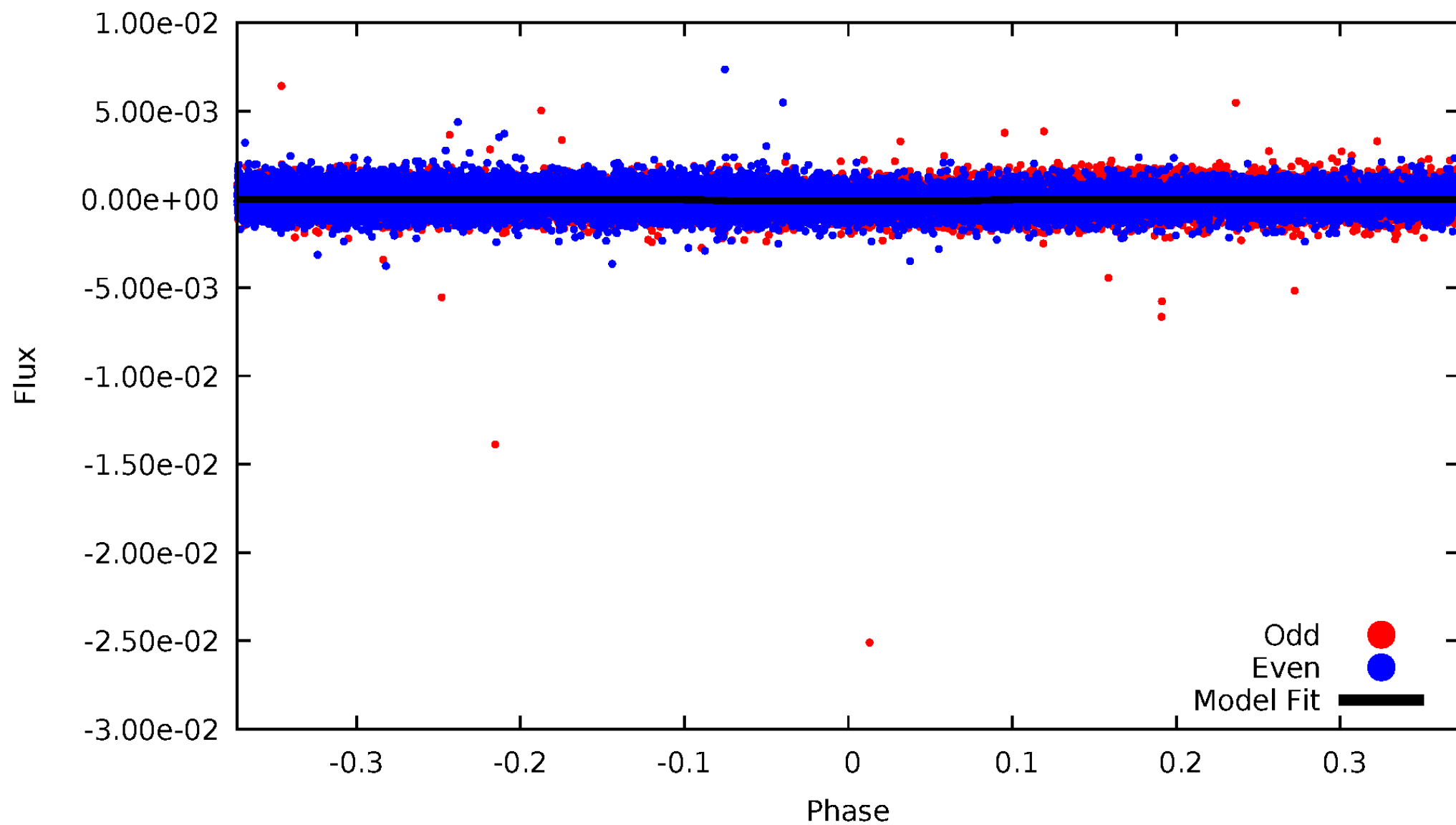


TCE 003120057-02



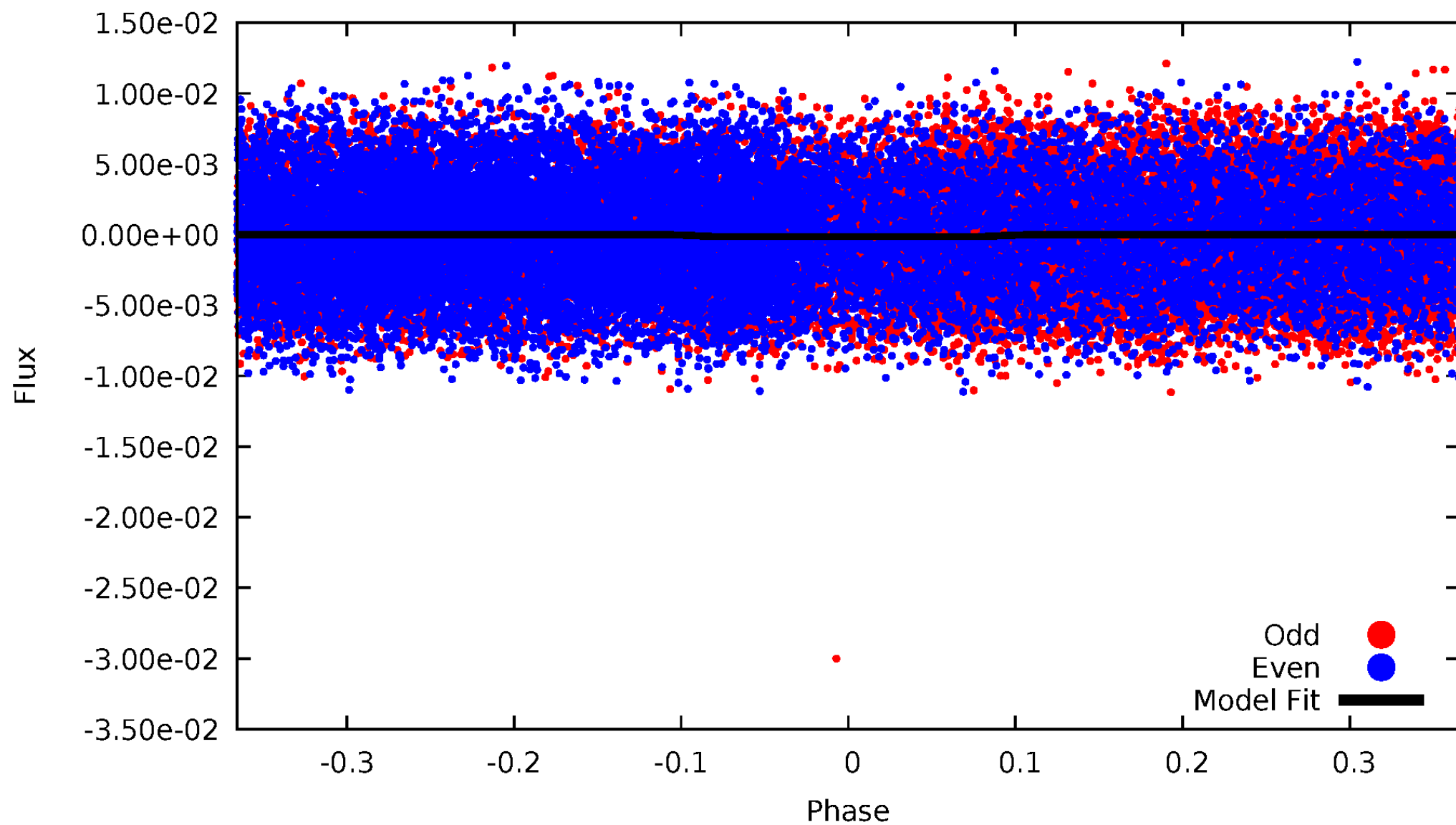
DV Odd/Even

TCE 003120057-02



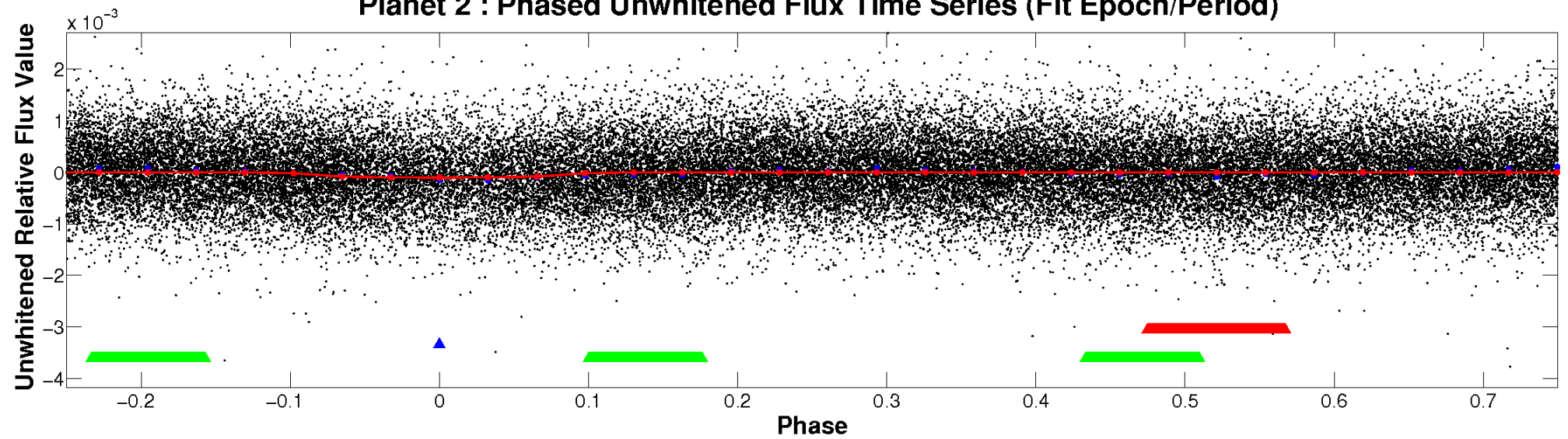
ALT Odd/Even

TCE 003120057-02

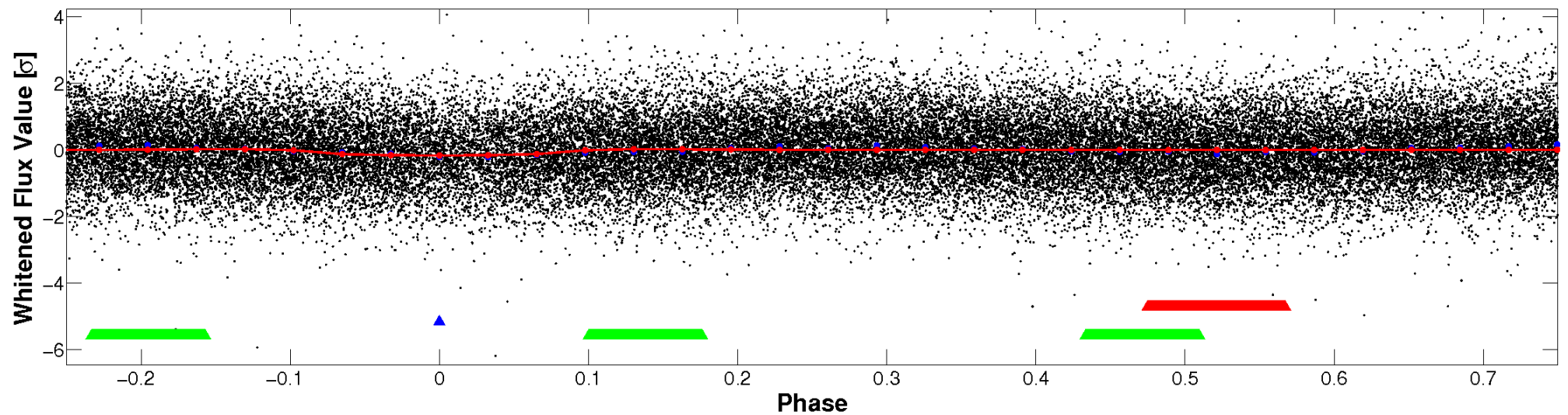


Non-Whitened Vs. Whitened Light Curve

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

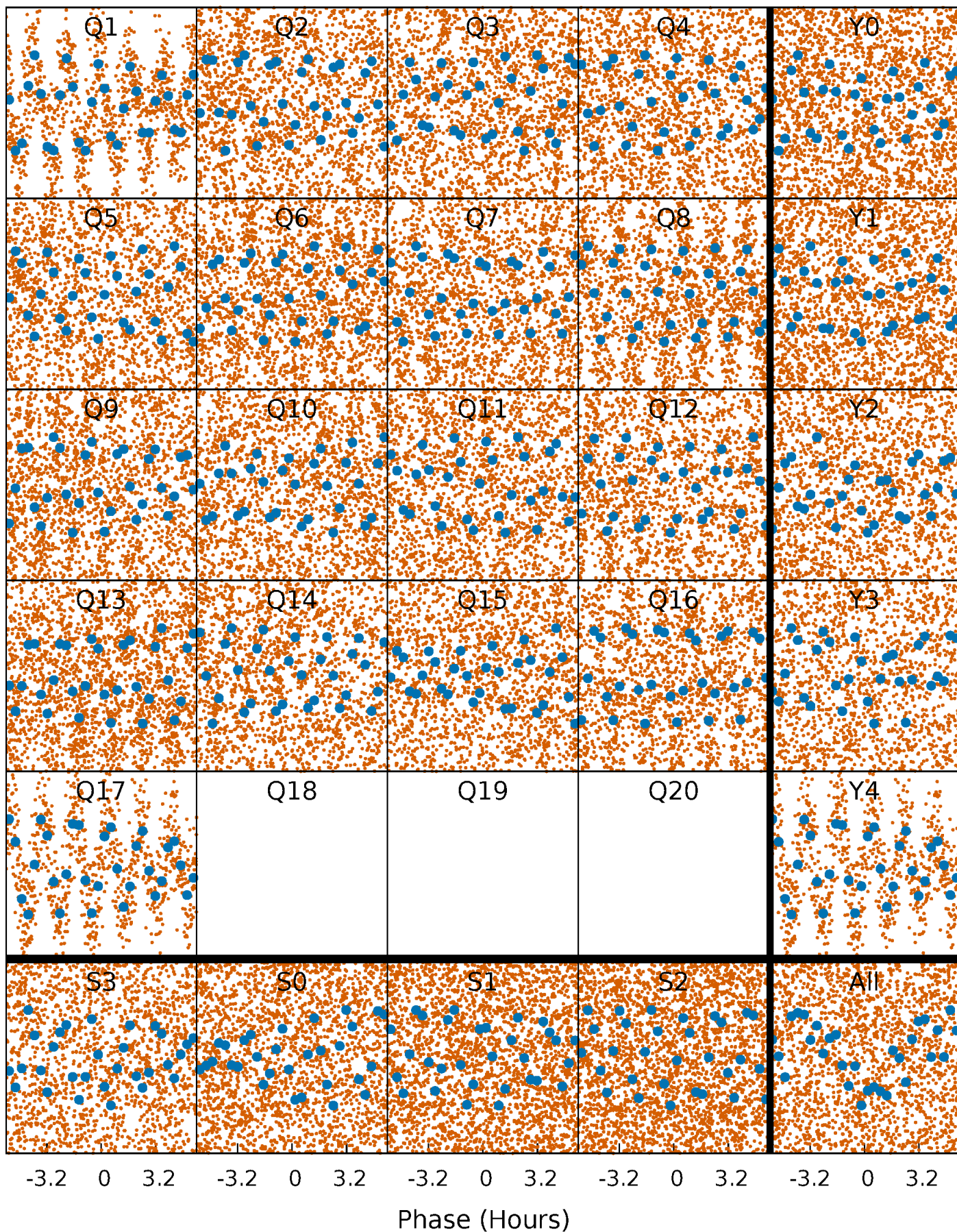


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



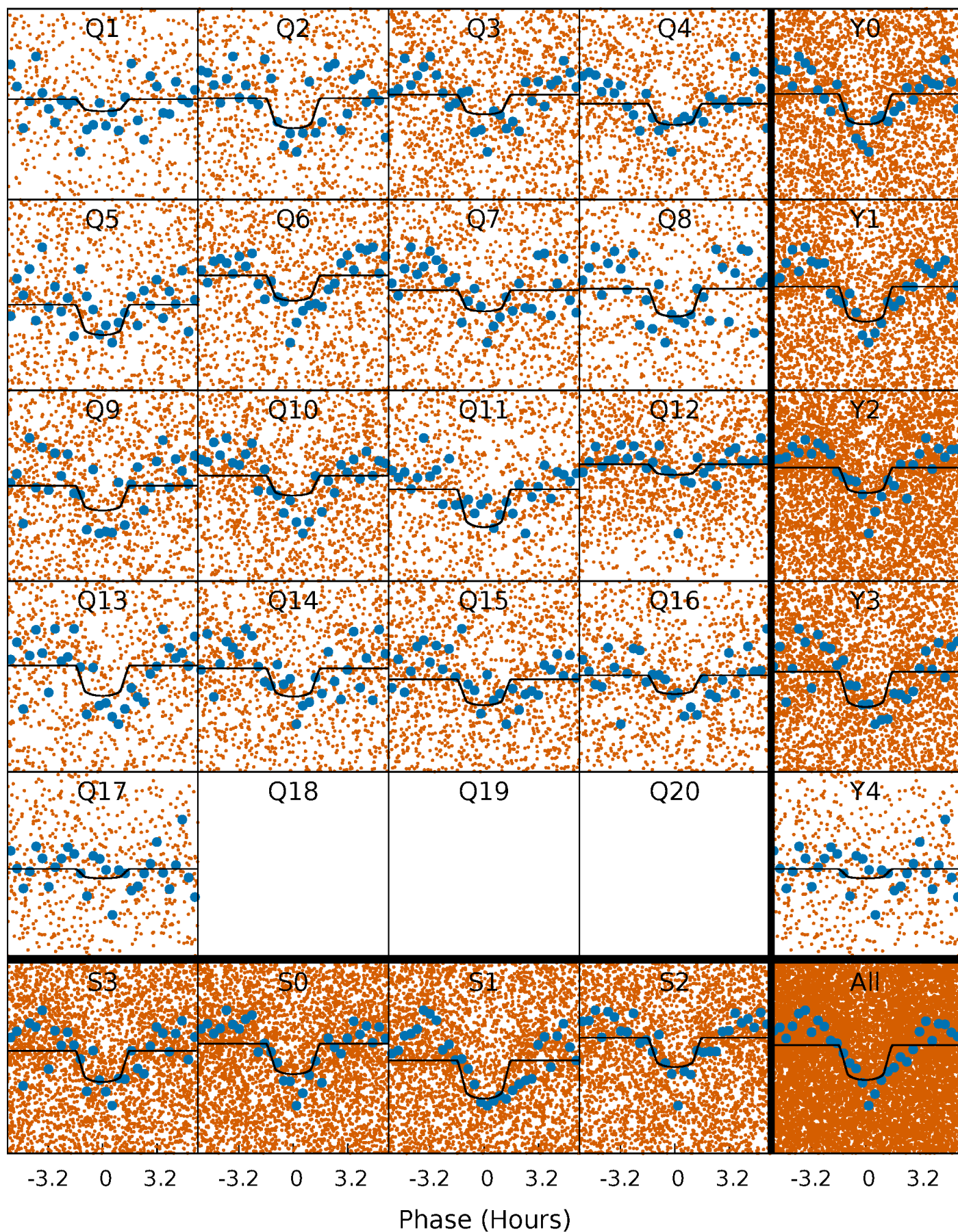
PDC Quarter-Phased Transit Curves

TCE 003120057-02 P= 0.626986 Days $T_0=131.910369$ (BKJD)



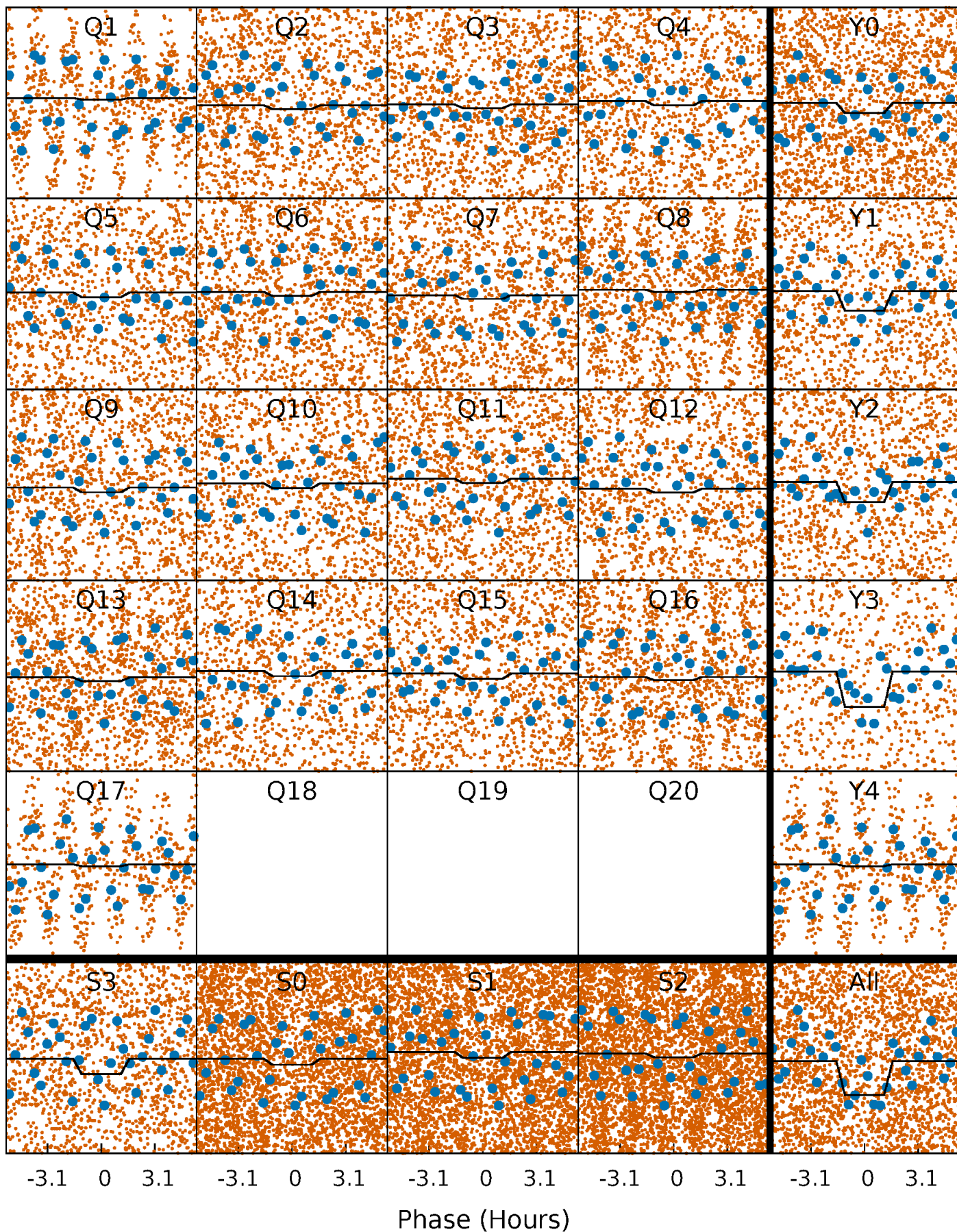
DV Quarter-Phased Transit Curves

TCE 003120057-02 P= 0.626986 Days $T_0=131.910369$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

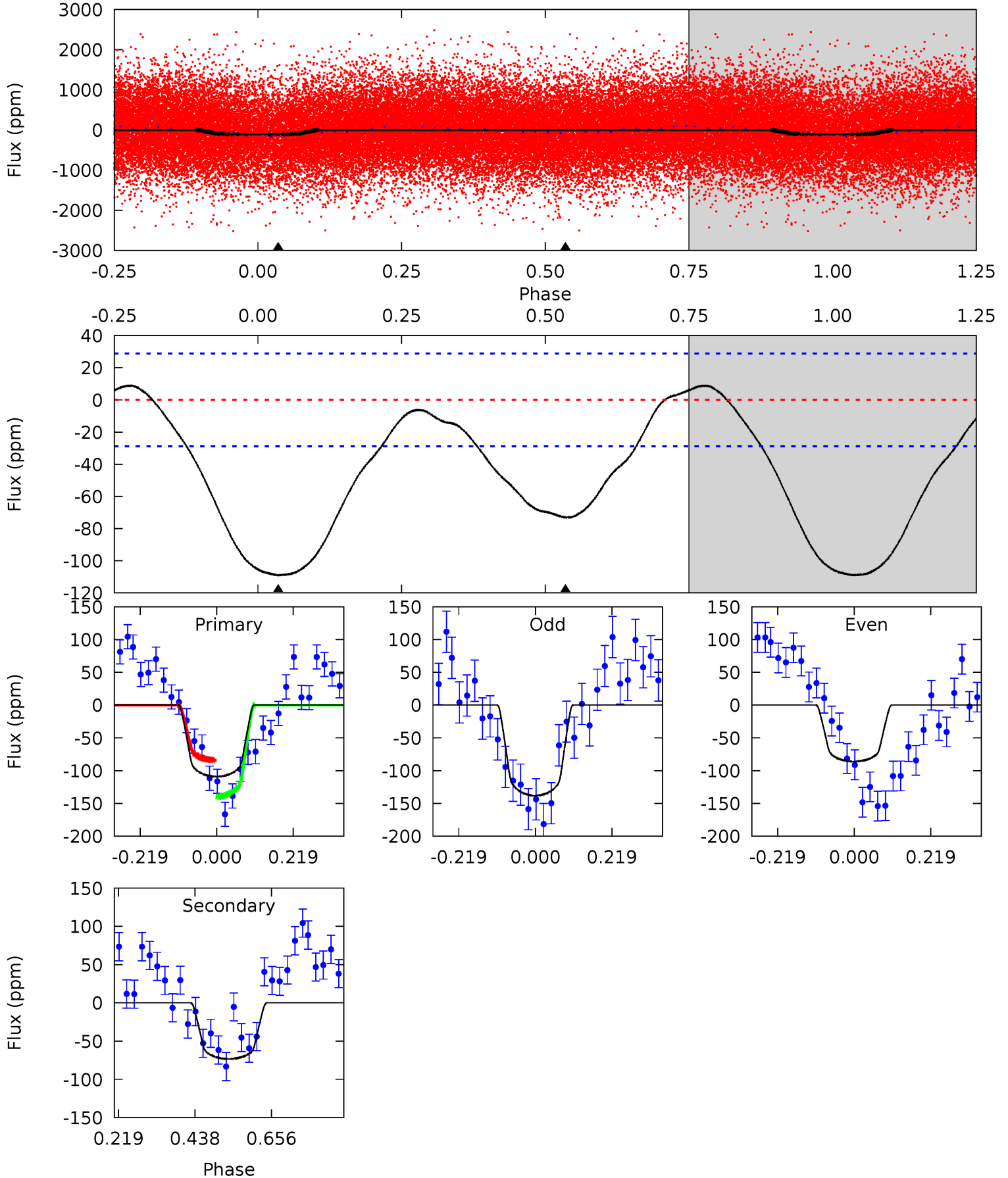
TCE 003120057-02 P= 0.627000 Days $T_0=131.900719$ (BKJD)



DV Model-Shift Uniqueness Test

003120057-02, P = 0.626986 Days, E = 131.910369 Days

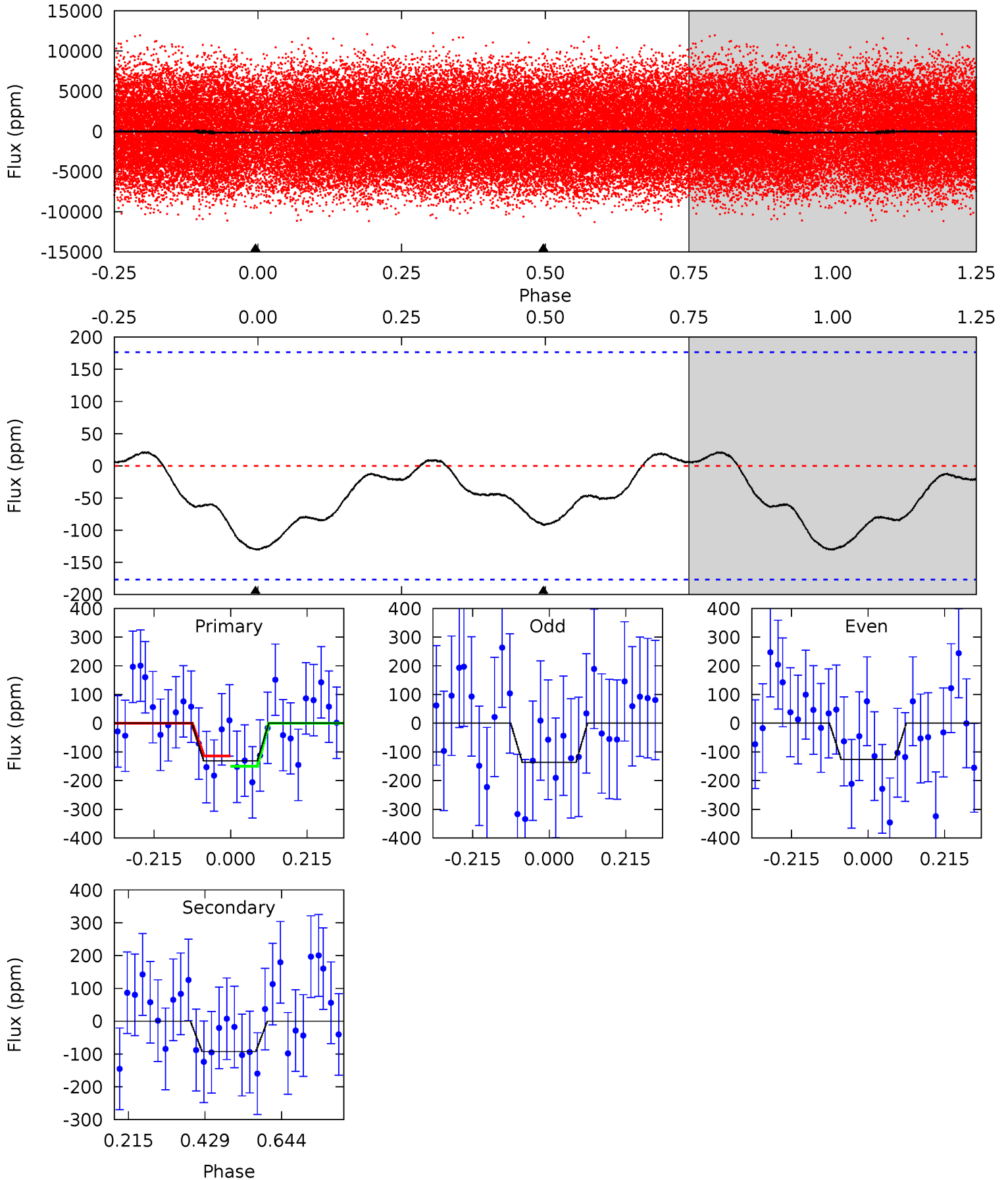
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	11.2	0	0	4.40	1.23	1.17	16.6	16.6	11.2	11.2	3.96	0.80	0.08	4.27



Alt Model-Shift Uniqueness Test

003120057-02, P = 0.627000 Days, E = 131.900719 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.26	2.31	0	0	4.40	1.24	0.34	3.26	3.26	2.31	2.31	0.13	0.60	0.14	0.45



Stellar Parameters For KIC 003120057

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7402^{+205}_{-333}	$3.907^{+0.273}_{-0.126}$	$-0.060^{+0.200}_{-0.350}$	$2.453^{+0.477}_{-0.887}$	$1.770^{+0.193}_{-0.386}$	$0.169^{+0.352}_{-0.065}$
	+3%/-4%	+7%/-3%	+333%/-583%	+19%/-36%	+11%/-22%	+208%/-39%
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 003120057-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-73 ± 7	$2.69^{+1.30}_{-1.10}$	5353^{+362}_{-515}	6148^{+2405}_{-1279}	$1.612^{+3.204}_{-0.870}$
Alt.	-93 ± 40	$3.00^{+1.30}_{-1.16}$	5361^{+367}_{-472}	6210^{+2351}_{-1572}	$1.620^{+3.003}_{-0.964}$

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 $A_{obs} \gg 1.0$

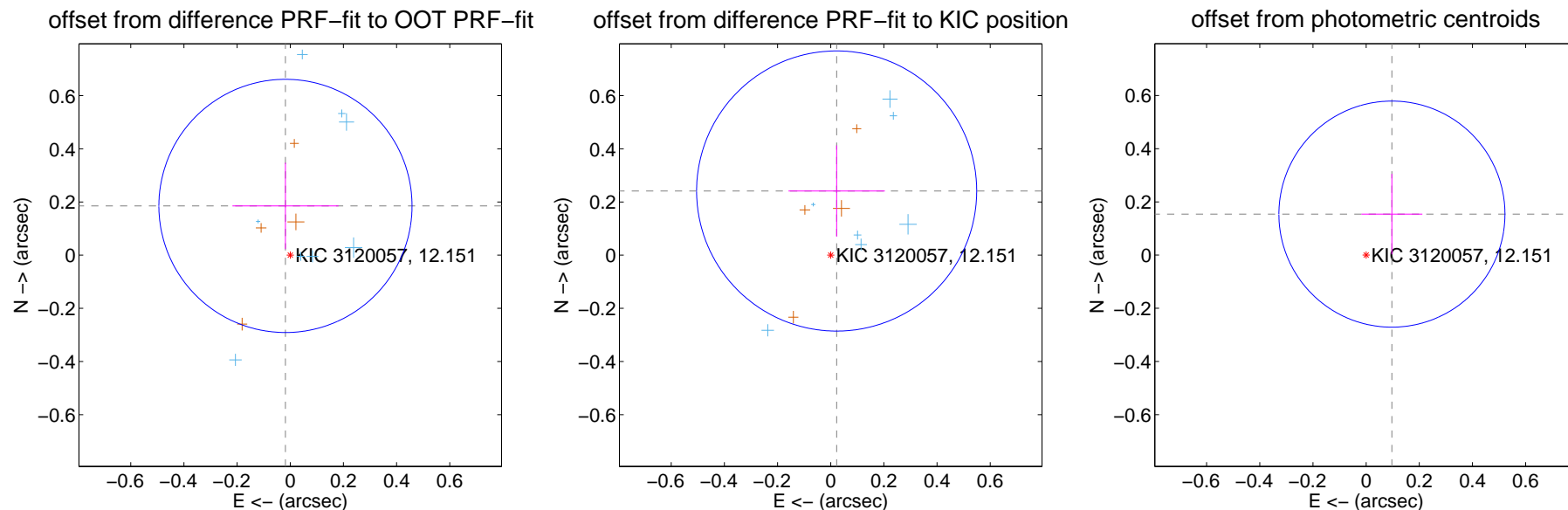
DV Centroid Data

Supplemental centroid analysis for 003120057-02. Kepler magnitude: 12.15. Transit SNR 11.86

There are 9 quarters with good PRF difference image offsets

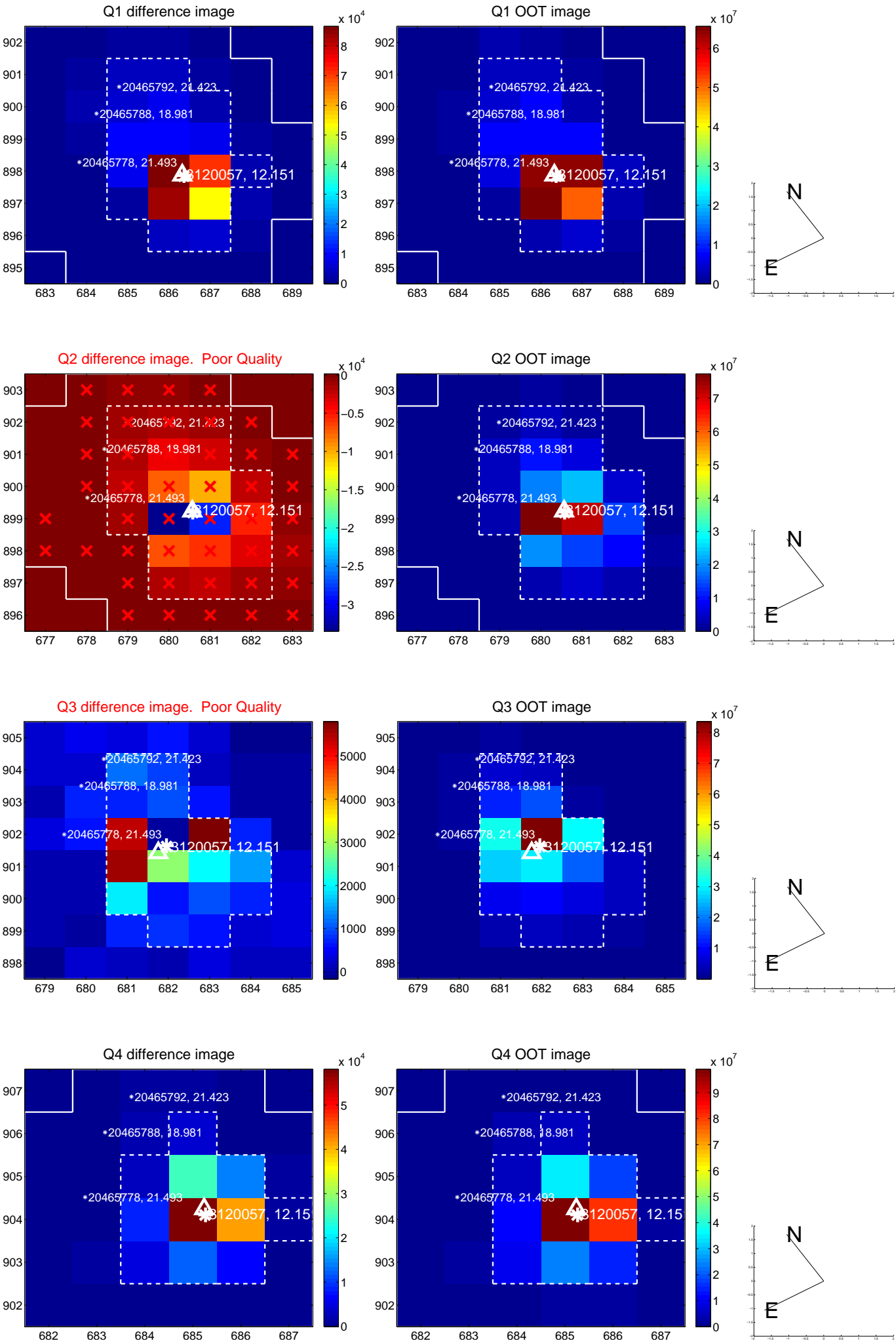
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.186 ± 0.159	1.17	0.018 ± 0.200	0.185 ± 0.162
PRF-fit source offset from KIC position	0.242 ± 0.176	1.38	-0.022 ± 0.181	0.241 ± 0.171
photometric centroid source offset	0.18 ± 0.14	1.28	-0.10 ± 0.11	0.15 ± 0.15

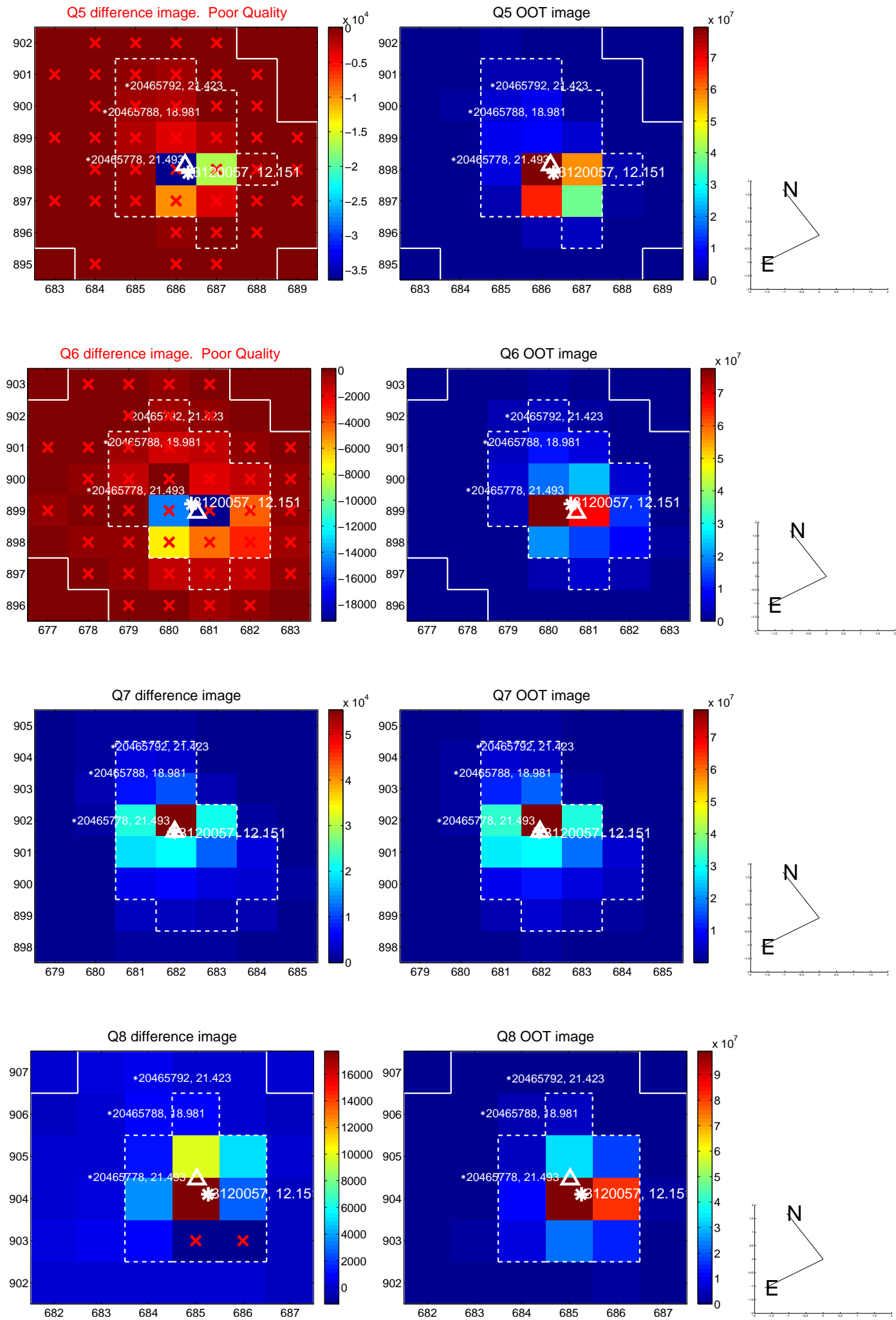


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

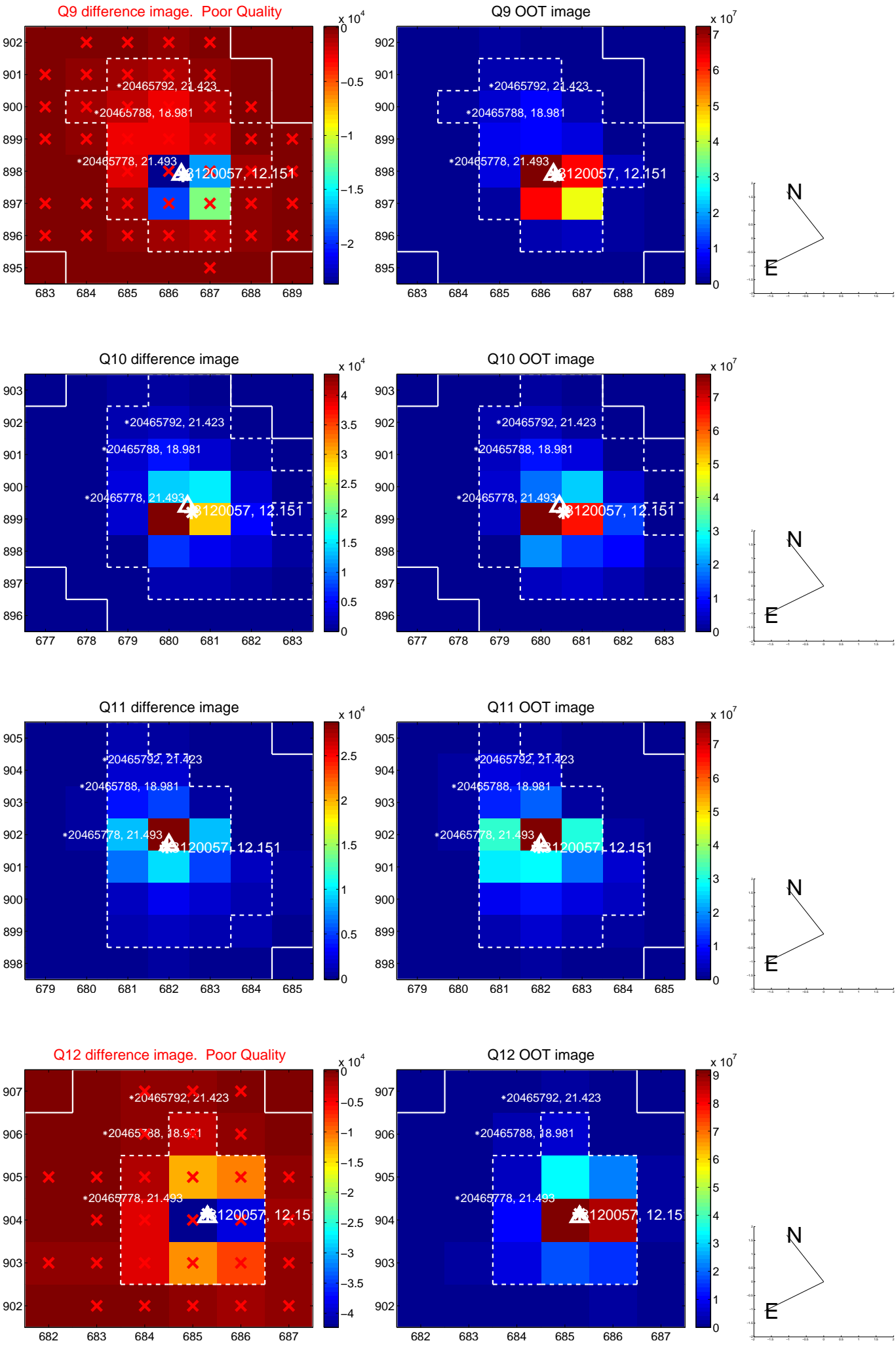
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



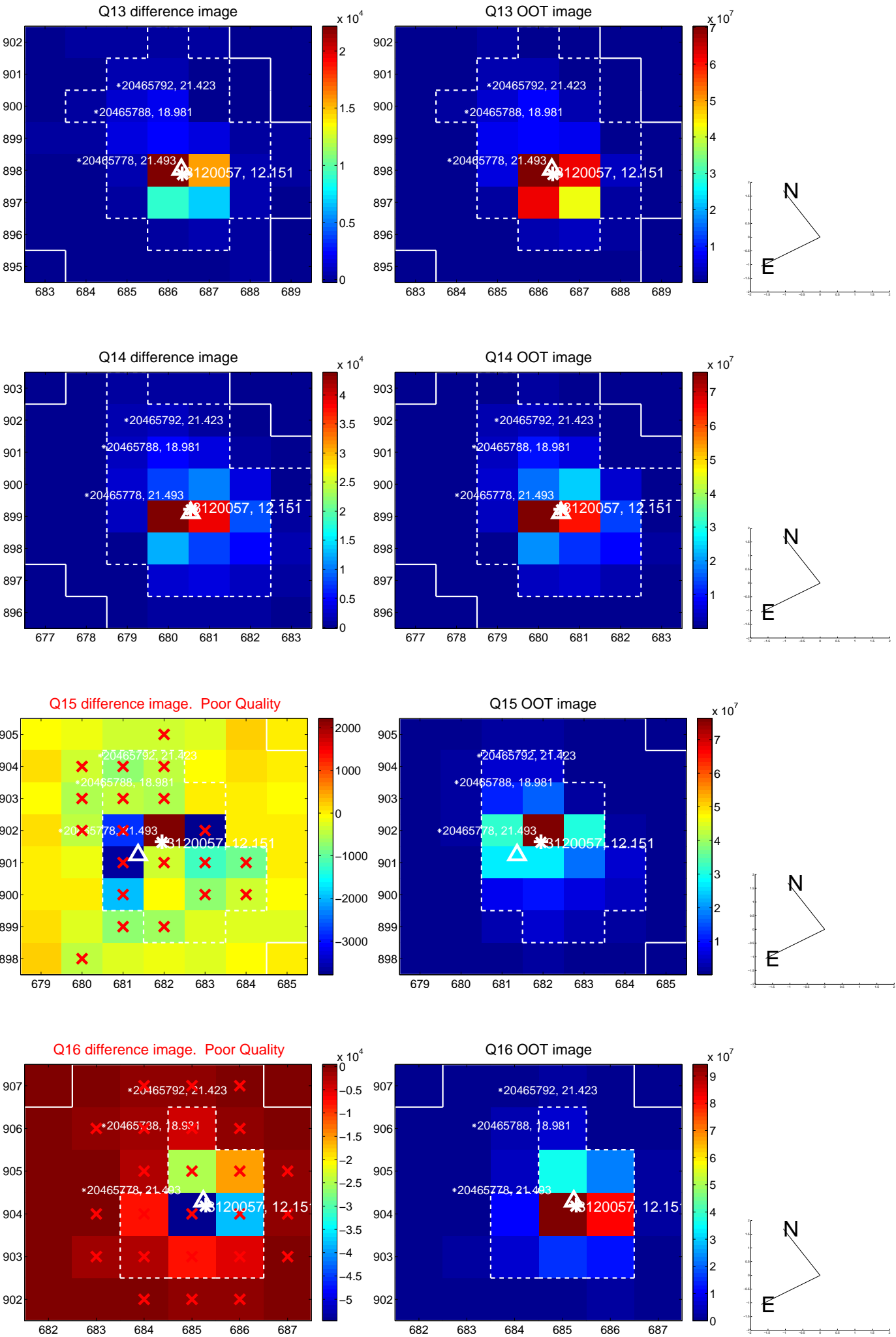
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



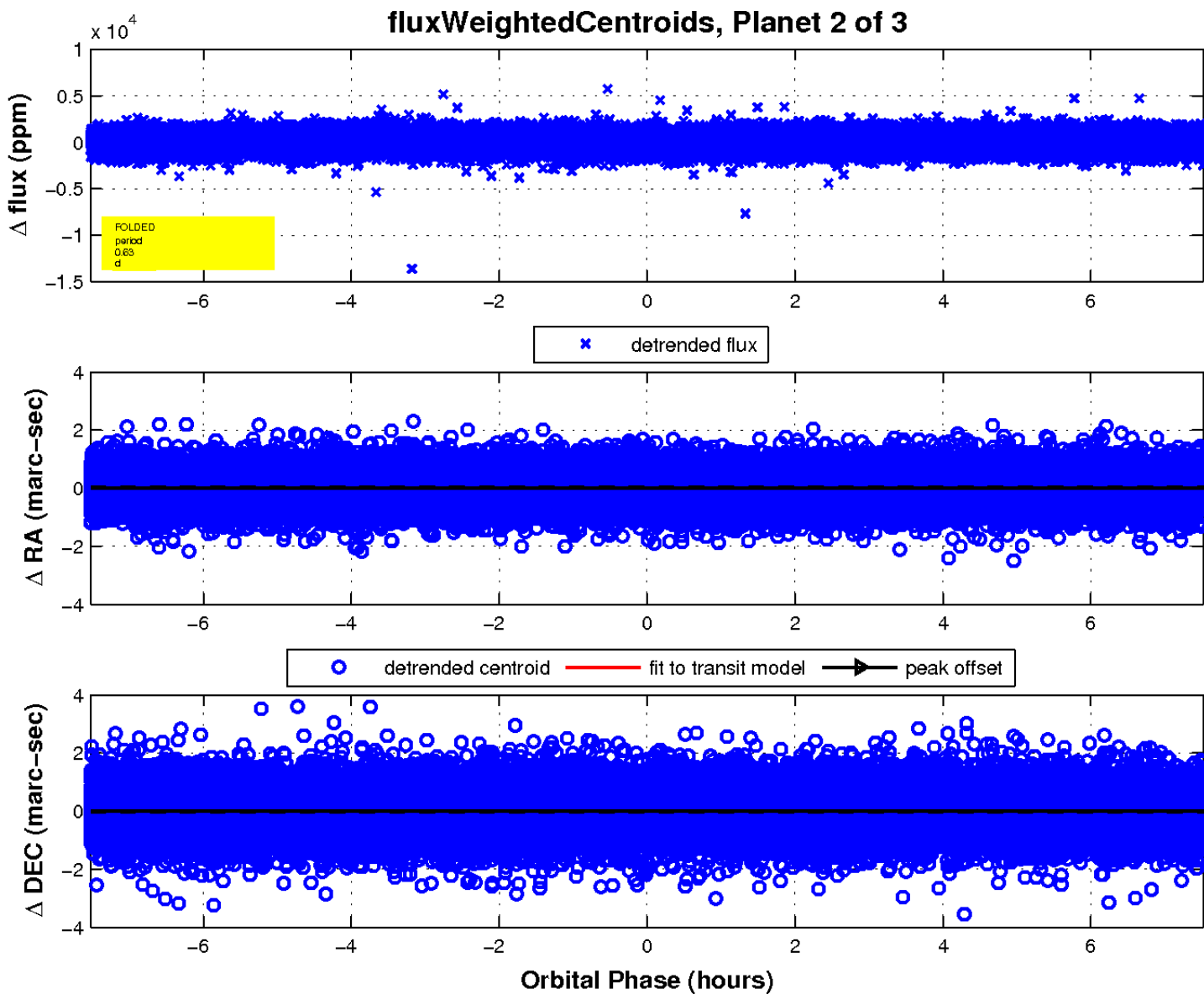
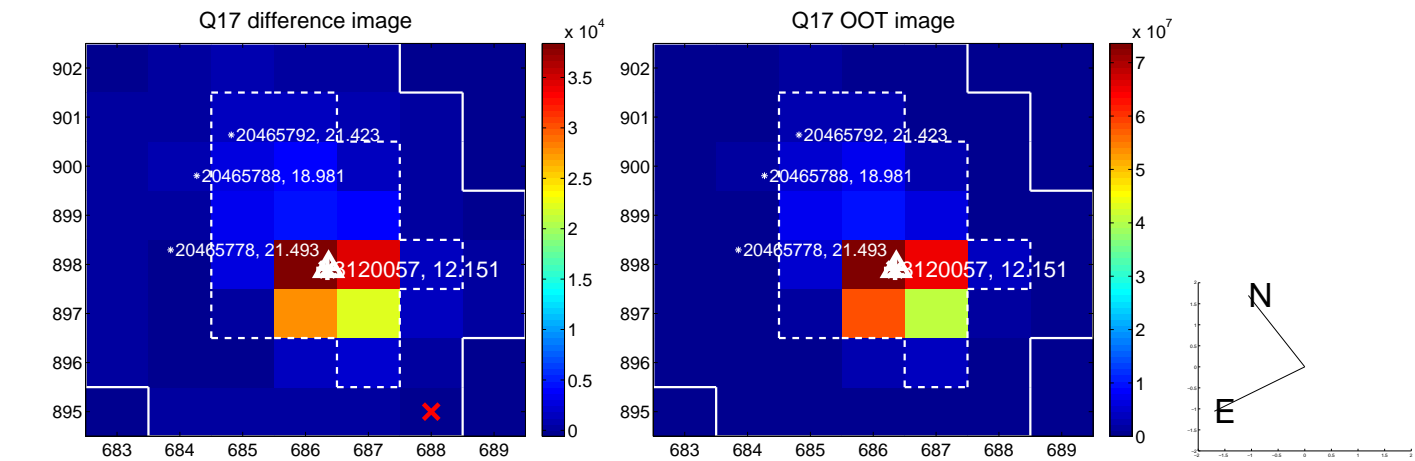
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

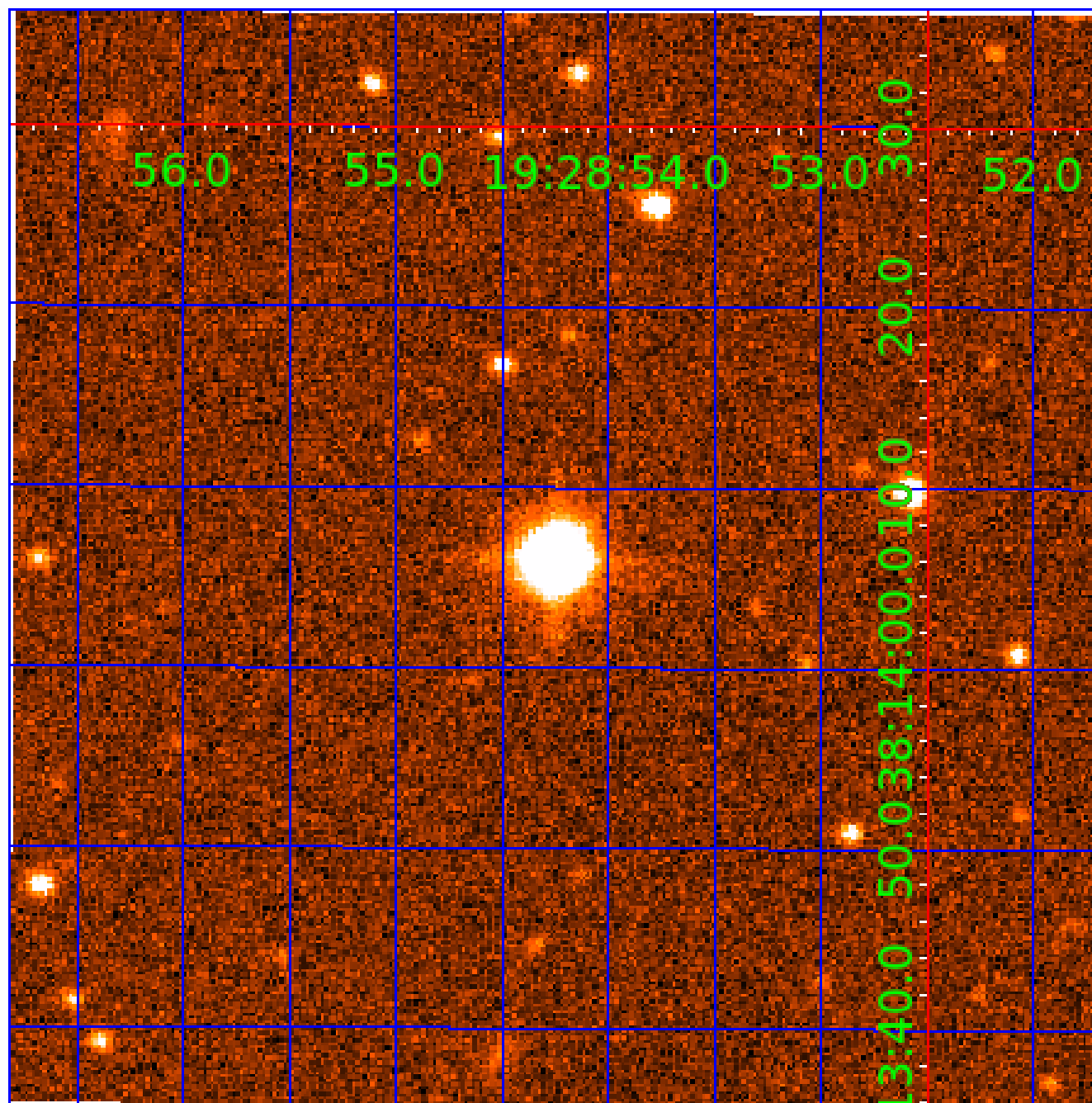


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003120057

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})
003120057-01	OBS	No	2.508042	131.581038	144.9	5.301	10.6	10.6	2.45	7402	3.97	8465.31
003120057-02	OBS	No	0.626986	131.910369	101.9	2.804	10.9	11.9	2.45	7402	2.87	53754.19
003120057-03	OBS	No	0.836008	132.182027	137.7	3.000	8.7	-1.0	2.45	7402	2.92	36627.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003120057-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003120057-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—SAME_NTL_PERIOD
003120057-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

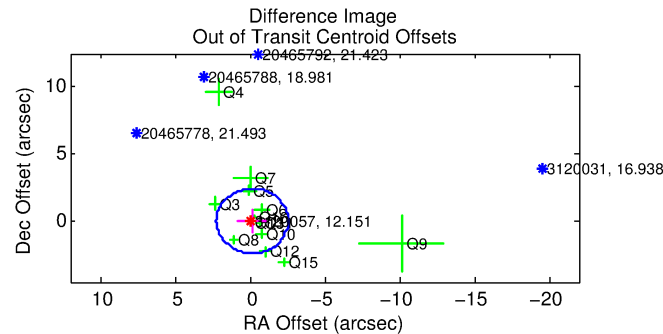
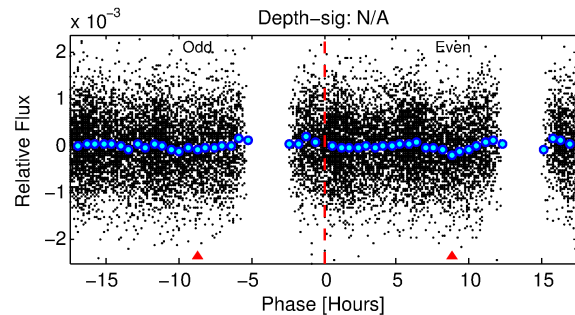
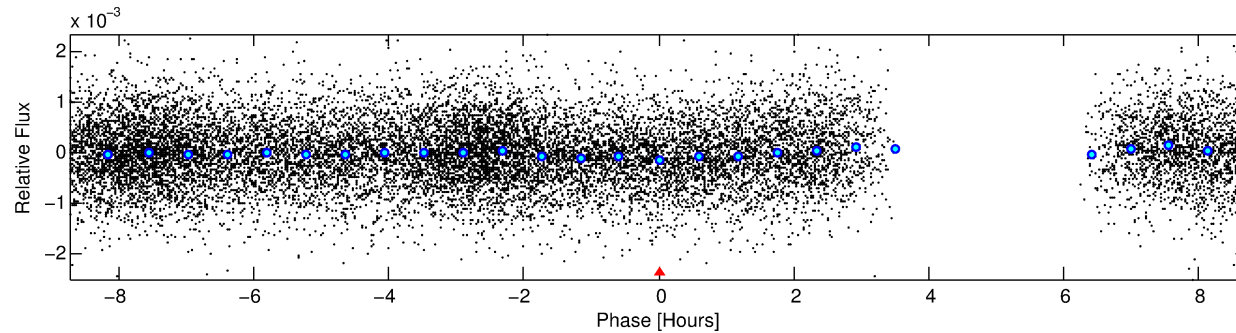
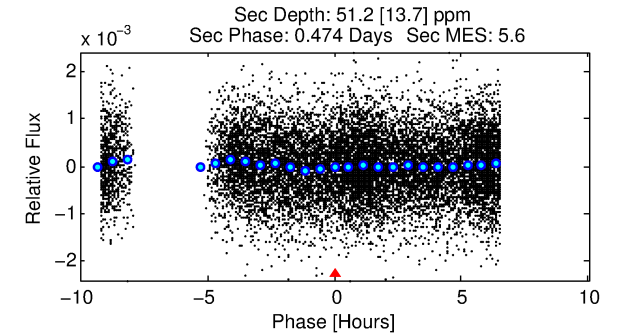
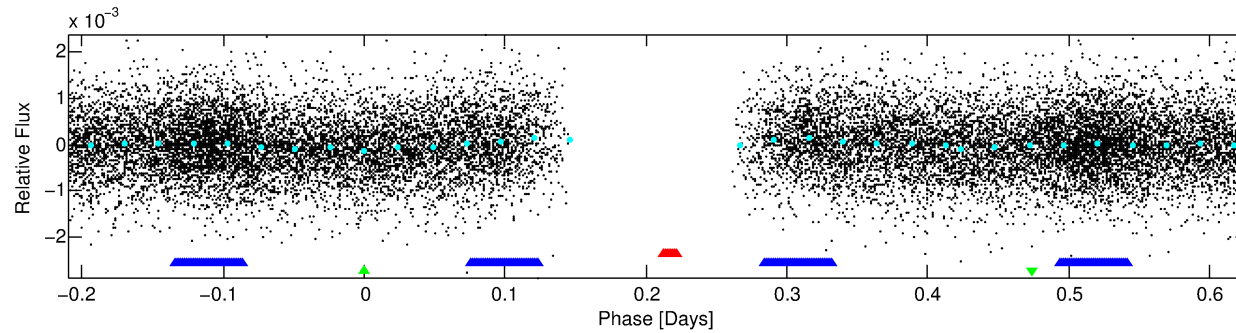
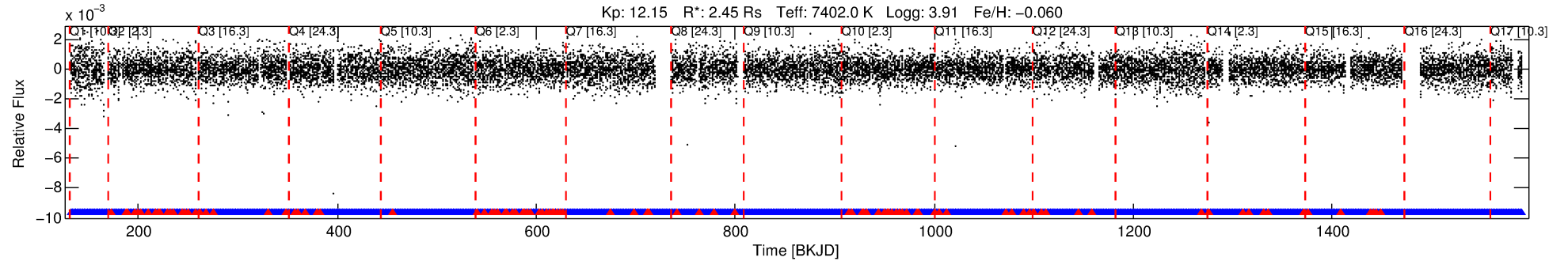
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003120057-03

No Significant Match Found

DV One-Page Summary

KIC: 3120057 Candidate: 3 of 3 Period: 0.836 d



TPS TCE Results:

Period = 0.83601 d
Epoch = 132.1820 BKJD

DV fit results are unavailable

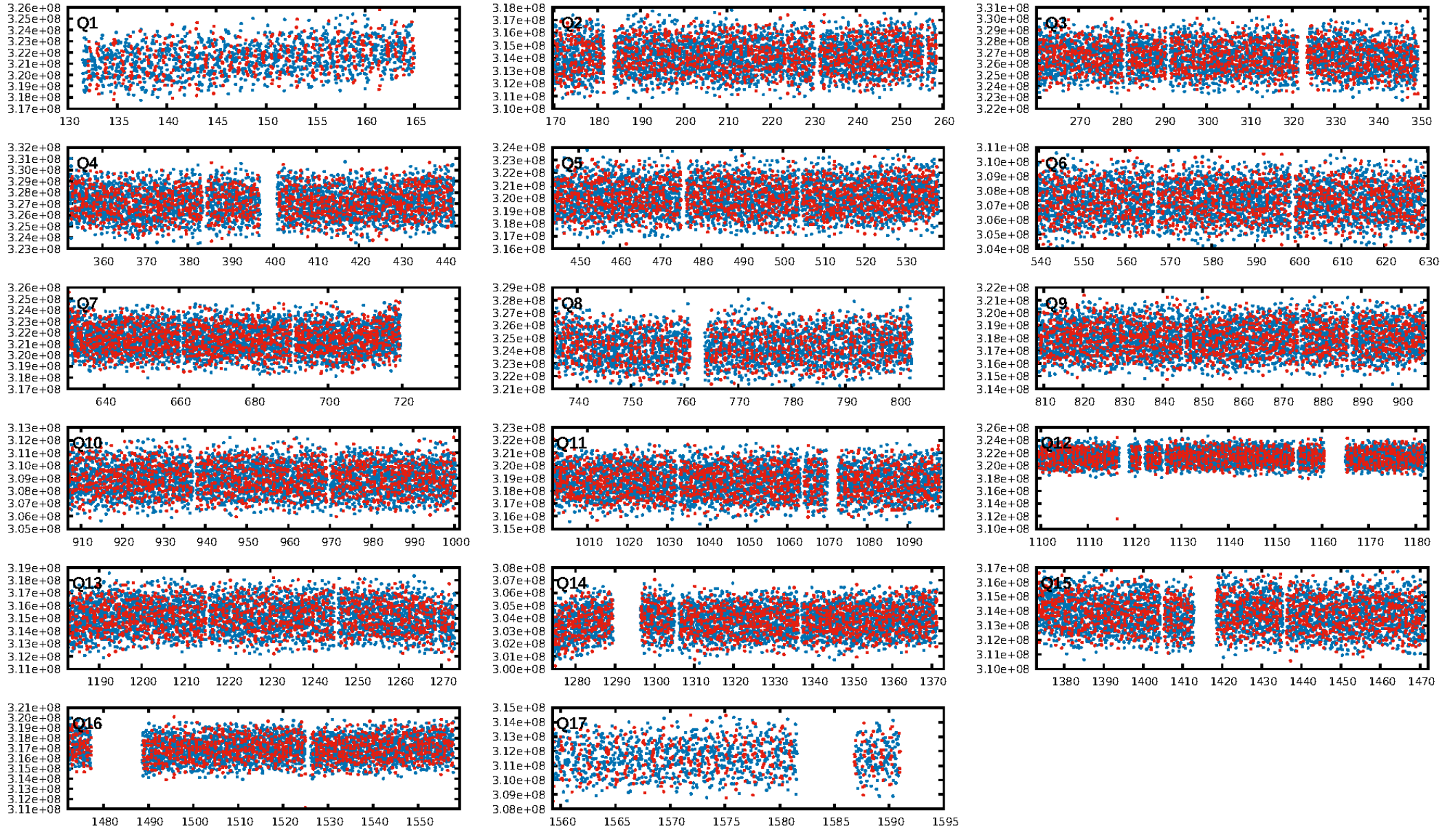
DV Diagnostic Results:

ShortPeriod-sig: 77.8% [1.22 σ]
LongPeriod-sig: 100.0% [6.59 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.81 [425/524]
GhostDiagnostic-chr: 0.6645
Centroid-sig: 52.2%
Centroid-so: 0.111 arcsec [0.93 σ]
OotOffset-rm: 0.158 arcsec [0.20 σ]
KicOffset-rm: 0.227 arcsec [0.35 σ]
OotOffset-st: 2/4/4/3 [13]
KicOffset-st: 2/4/4/3 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 0.00 [0/17]

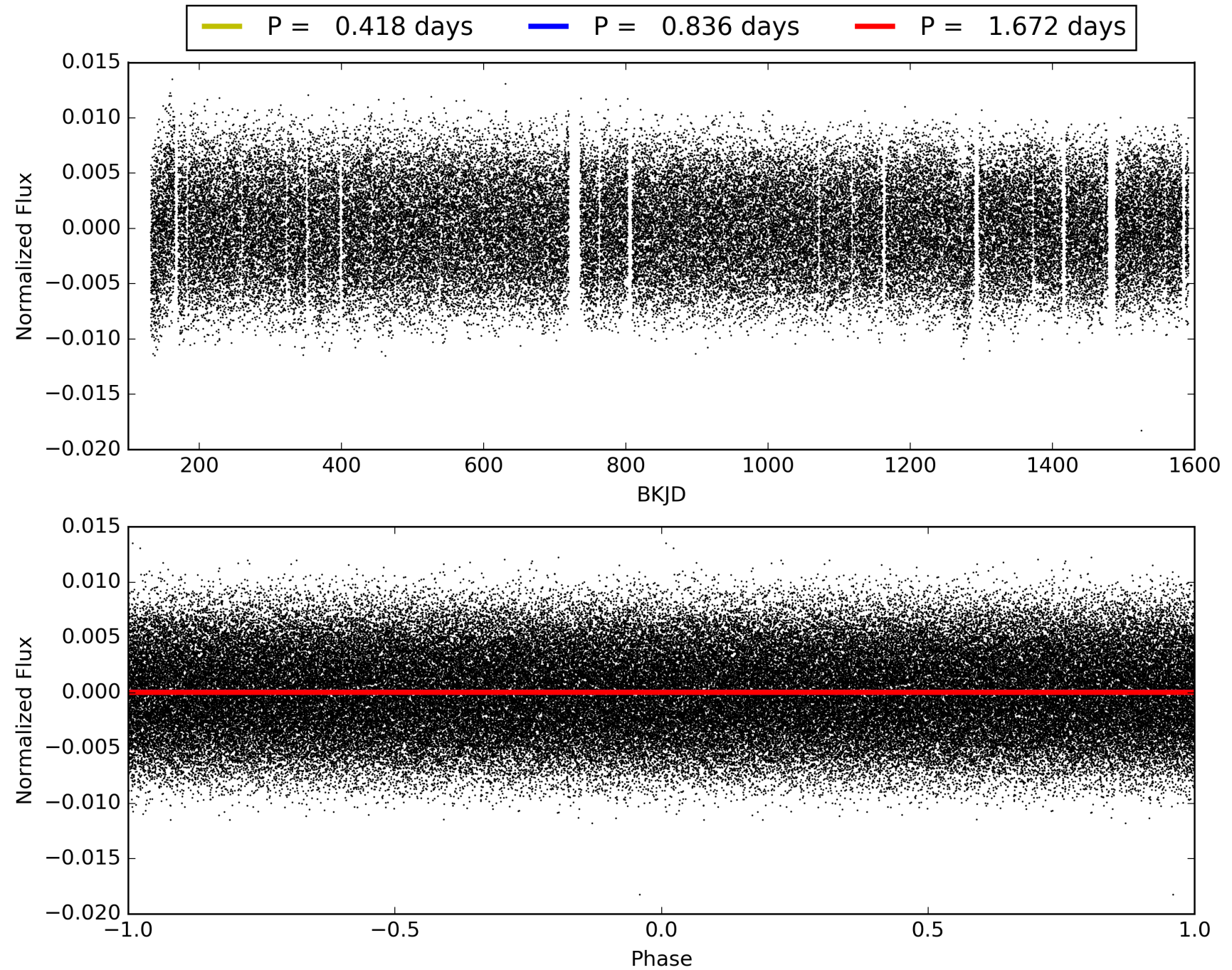
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:46:58 Z

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

TCE 003120057-03, PDC Light Curves

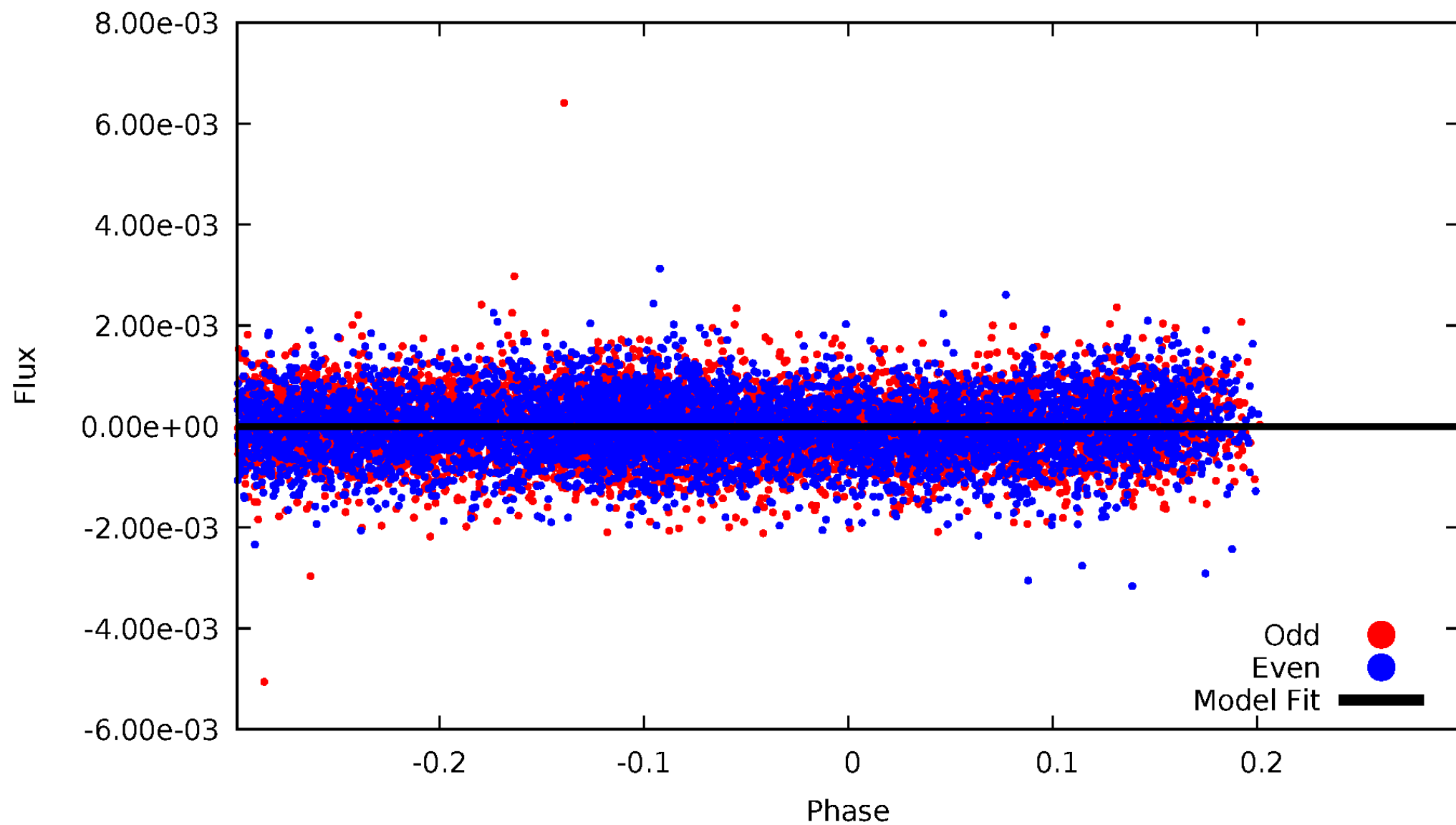


TCE 003120057-03



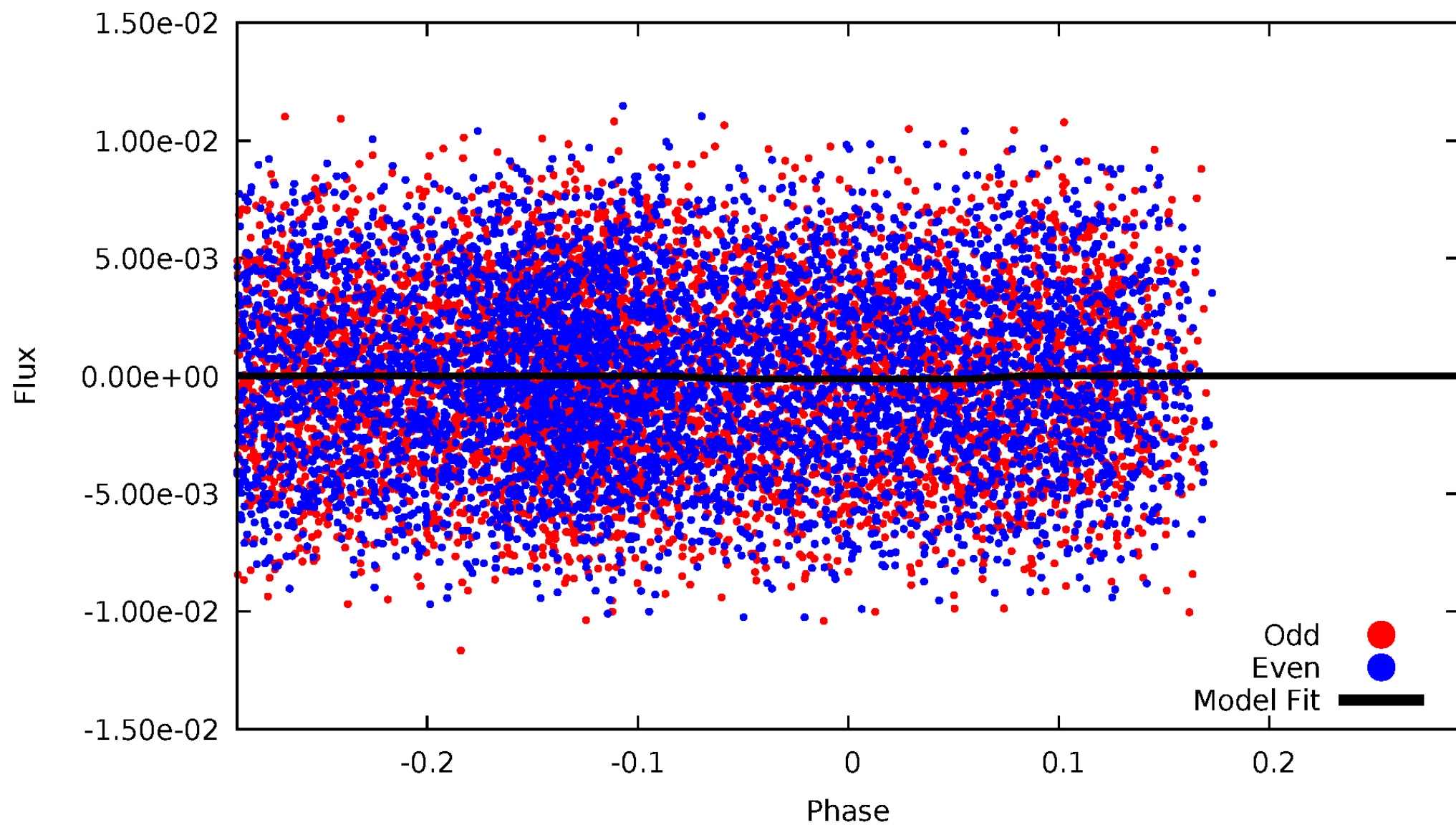
DV Odd/Even

TCE 003120057-03

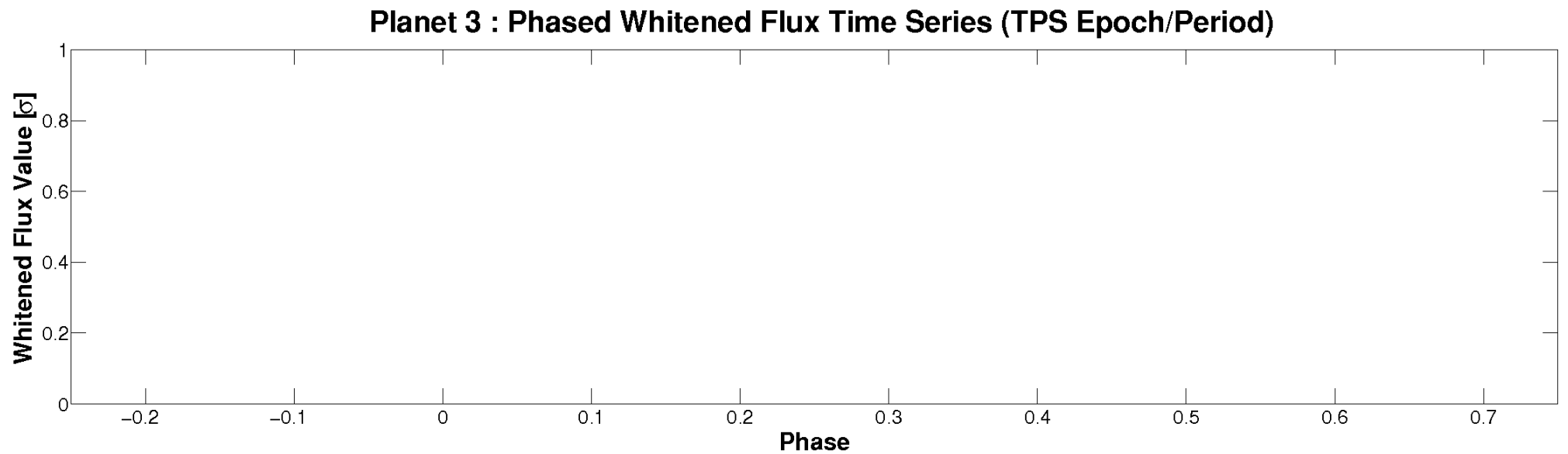
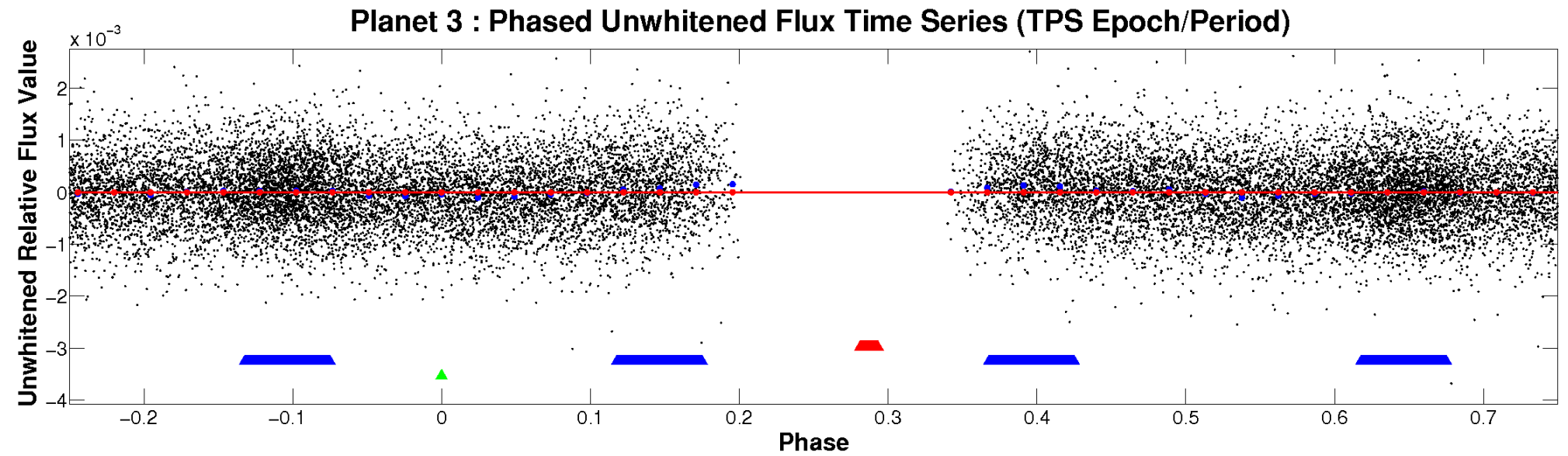


ALT Odd/Even

TCE 003120057-03

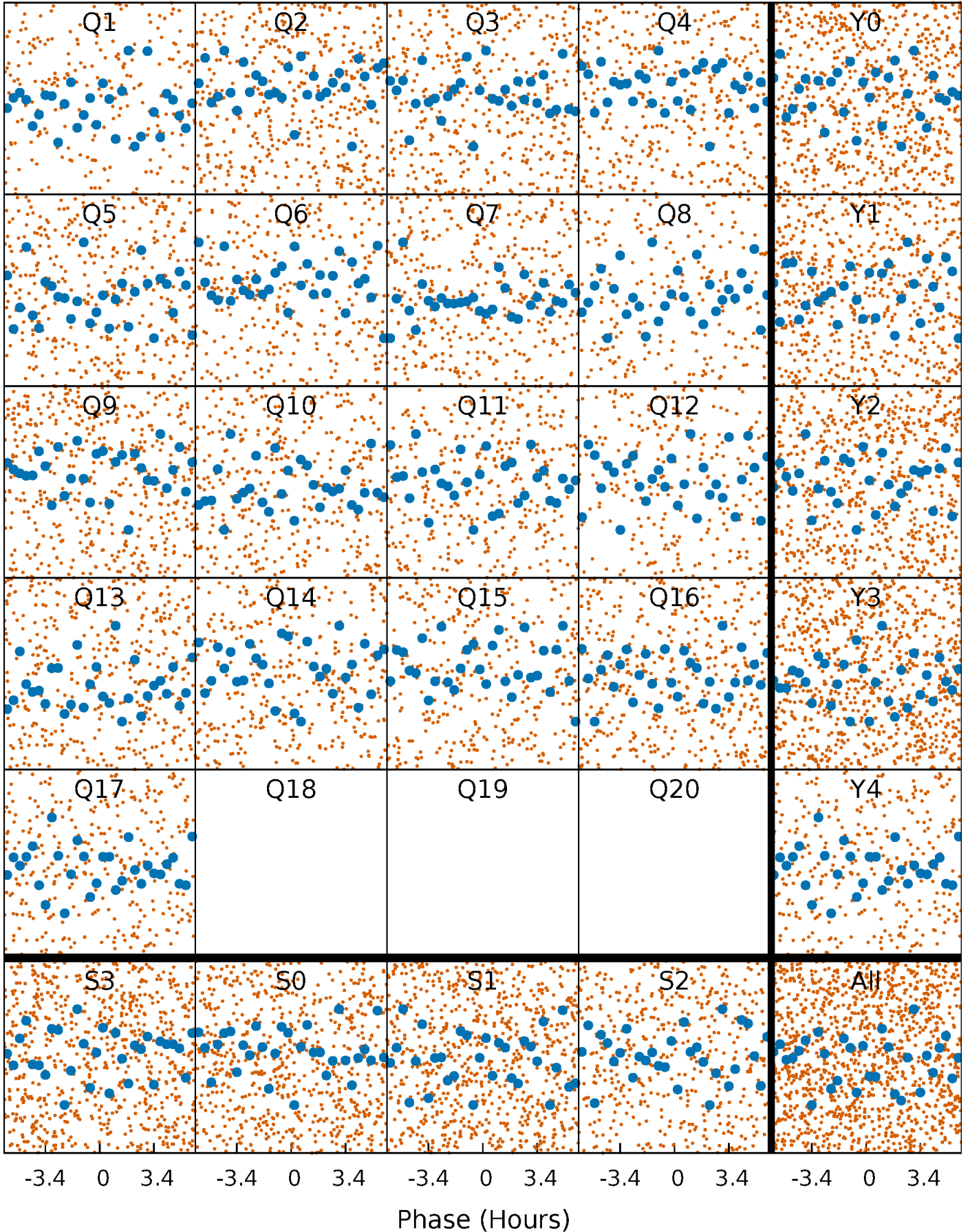


Non-Whitened Vs. Whitened Light Curve



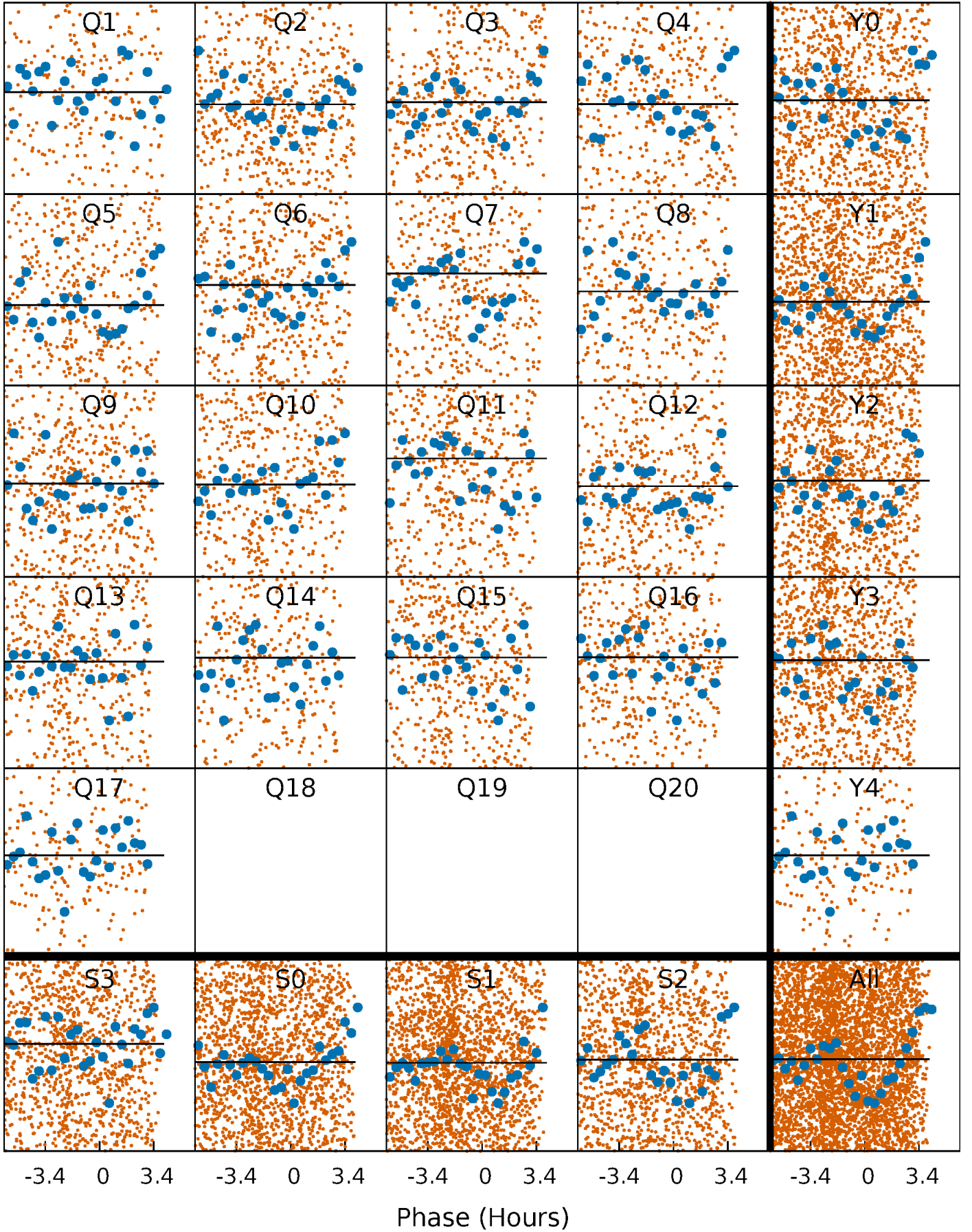
PDC Quarter-Phased Transit Curves

TCE 003120057-03 P= 0.836008 Days $T_0=132.182027$ (BKJD)



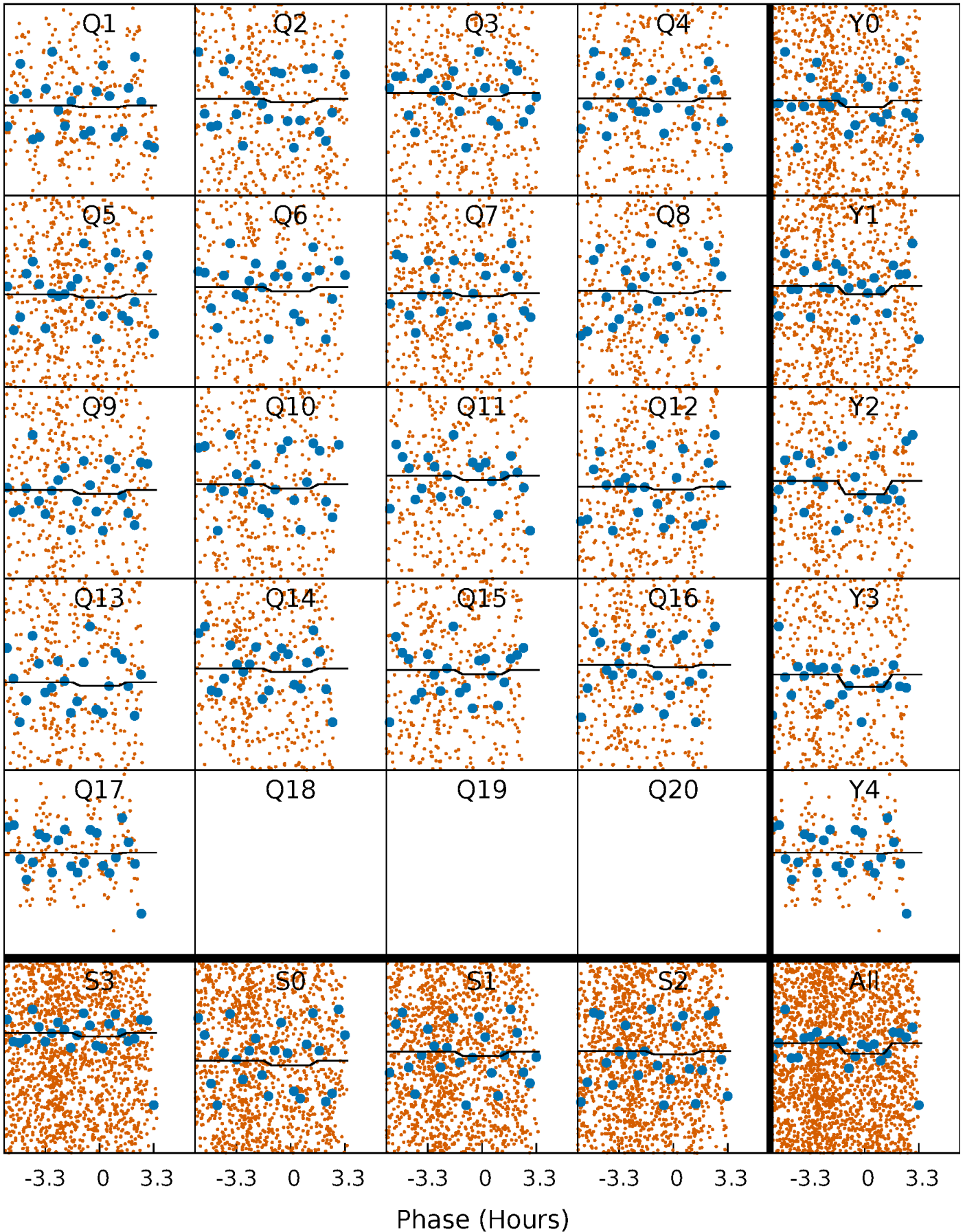
DV Quarter-Phased Transit Curves

TCE 003120057-03 P= 0.836008 Days $T_0=132.182027$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

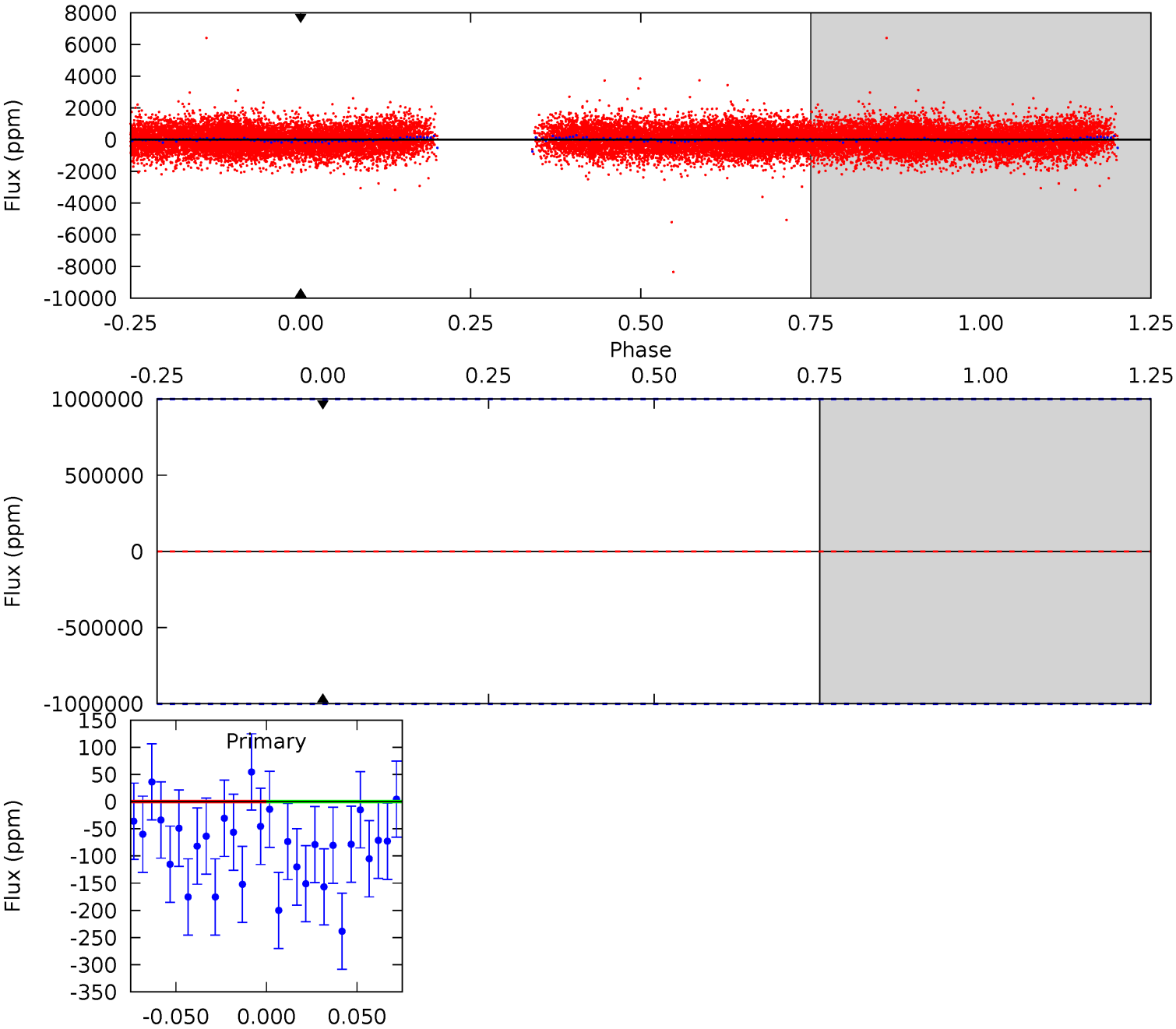
TCE 003120057-03 P= 0.836008 Days $T_0=132.205302$ (BKJD)



DV Model-Shift Uniqueness Test

003120057-03, P = 0.836008 Days, E = 131.346019 Days

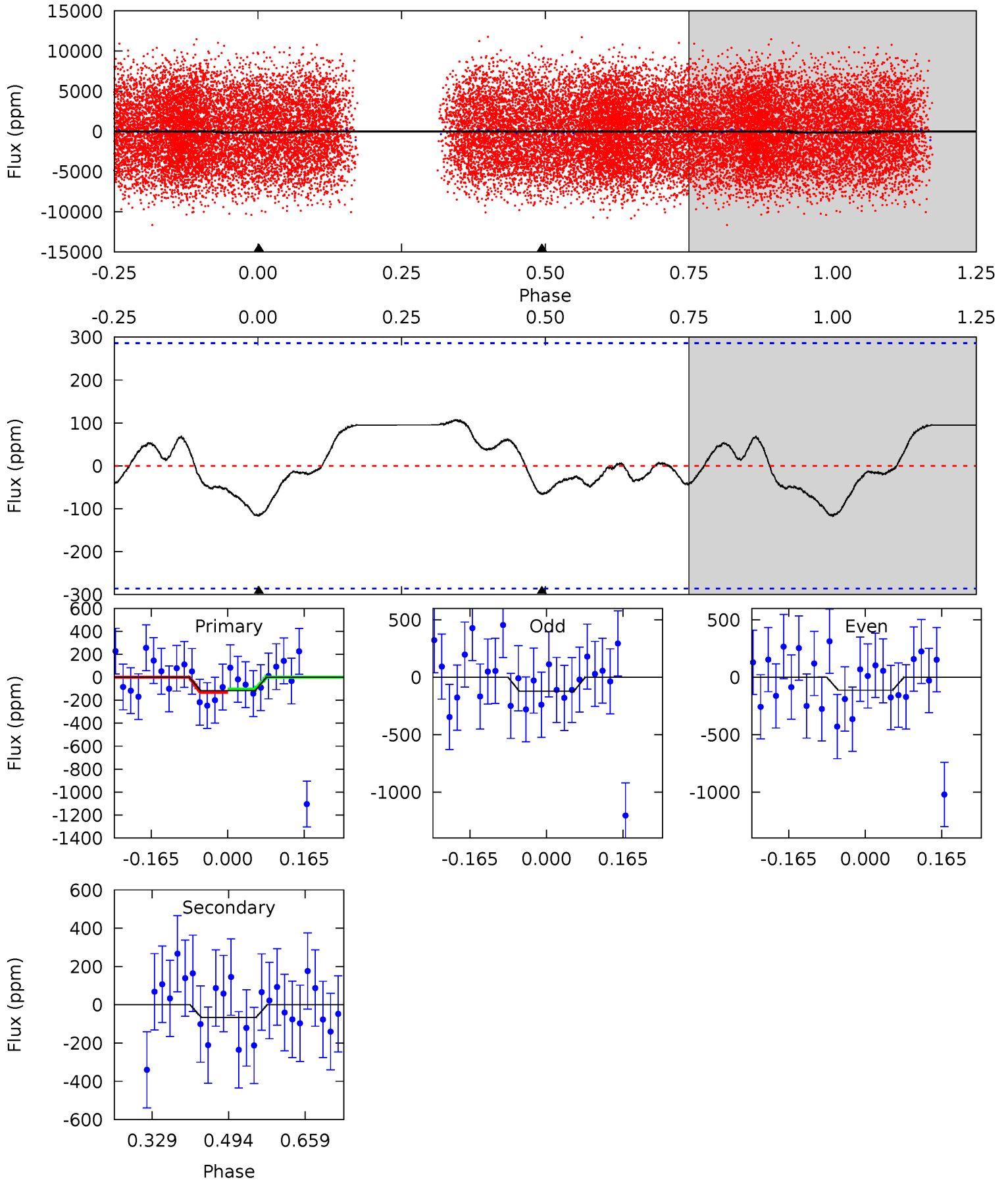
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003120057-03, P = 0.836008 Days, E = 131.369294 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.82	1.04	0	0	4.46	1.39	0.49	1.82	1.82	1.04	1.04	0.07	1.25	0.48	0.25



Stellar Parameters For KIC 003120057

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7402^{+205}_{-333}	$3.907^{+0.273}_{-0.126}$	$-0.060^{+0.200}_{-0.350}$	$2.453^{+0.477}_{-0.887}$	$1.770^{+0.193}_{-0.386}$	$0.169^{+0.352}_{-0.065}$
	+3%/-4%	+7%/-3%	+333%/-583%	+19%/-36%	+11%/-22%	+208%/-39%
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 003120057-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$19.25^{+19.05}_{-14.04}$	4838^{+356}_{-397}	4313^{+35231}_{-36473}	$0.729^{+127.323}_{-101.496}$
Alt.	-67 ± 64	$18.05^{+20.66}_{-13.63}$	4830^{+364}_{-412}	-3984^{+8024}_{-336}	$0.038^{+0.542}_{-0.037}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

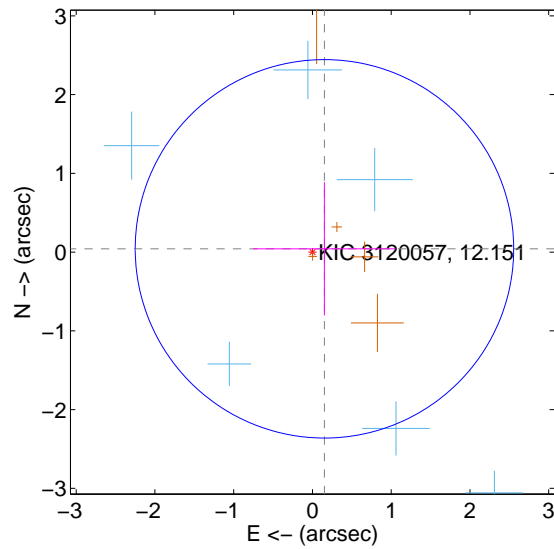
Supplemental centroid analysis for 003120057-03. Kepler magnitude: 12.15. Transit SNR -1.00

There are 6 quarters with good PRF difference image offsets

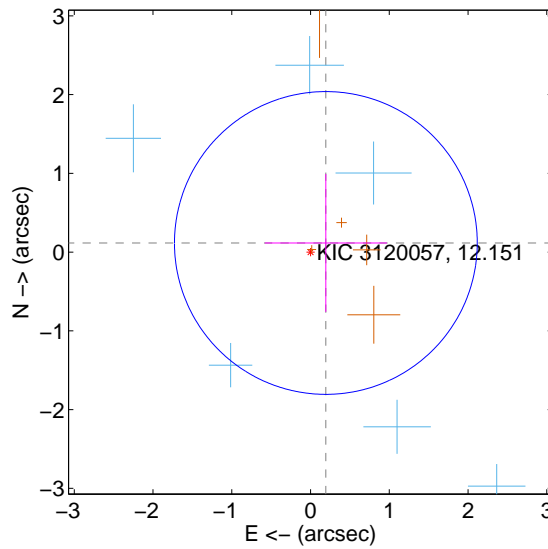
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.158 ± 0.801	0.20	-0.153 ± 0.903	0.042 ± 0.846
PRF-fit source offset from KIC position	0.227 ± 0.641	0.35	-0.195 ± 0.776	0.116 ± 0.875
photometric centroid source offset	0.11 ± 0.12	0.93	-0.08 ± 0.10	0.07 ± 0.14

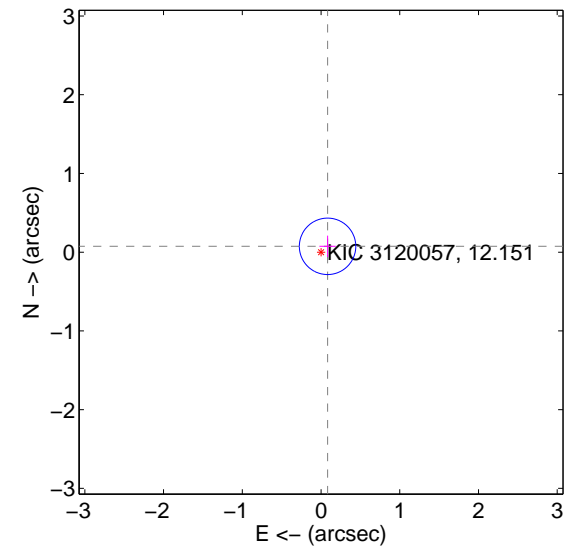
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

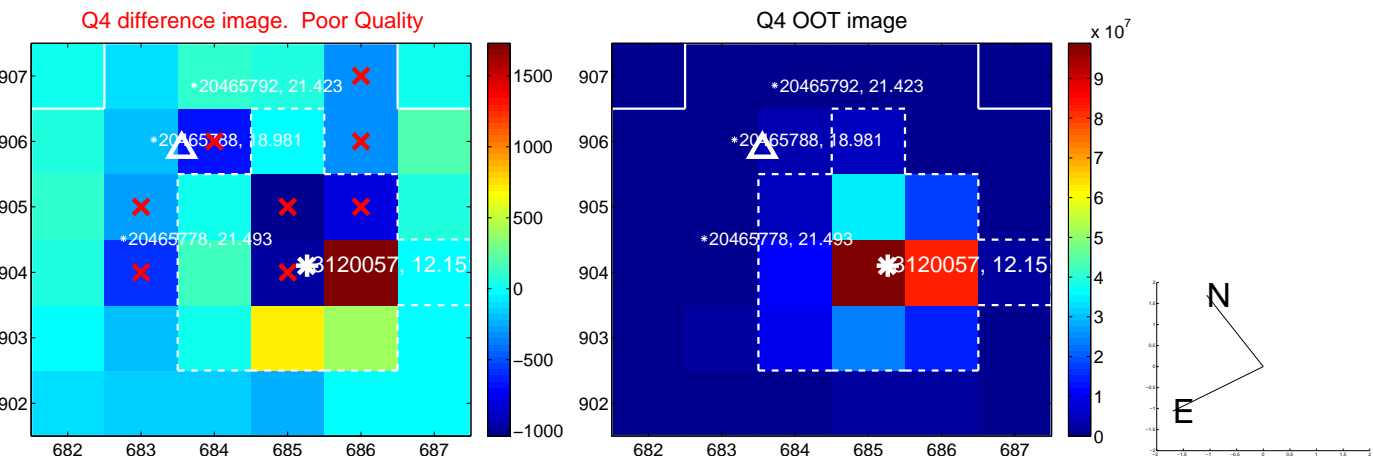
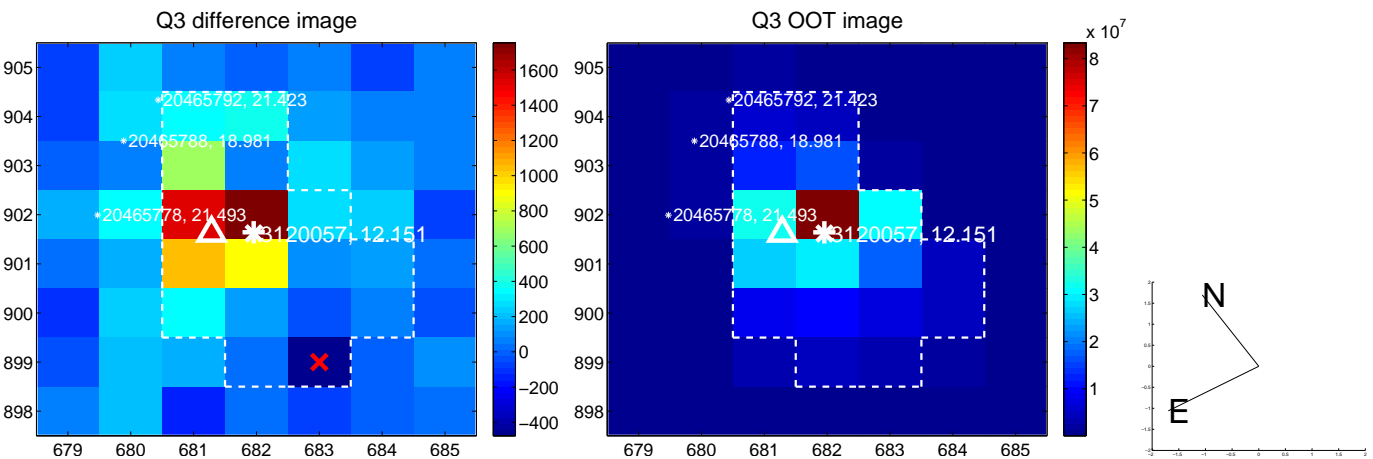
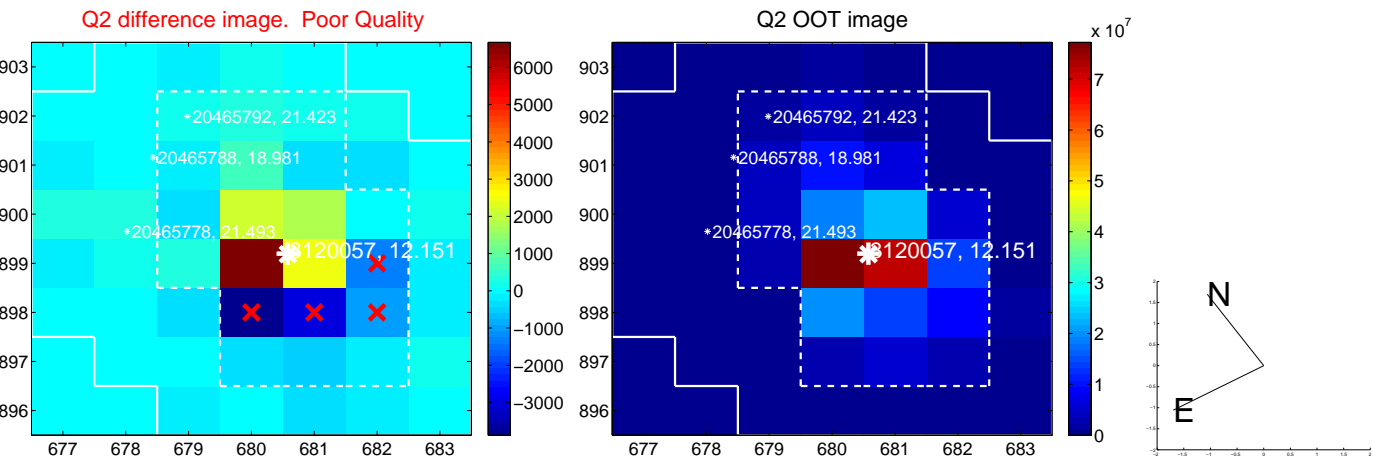
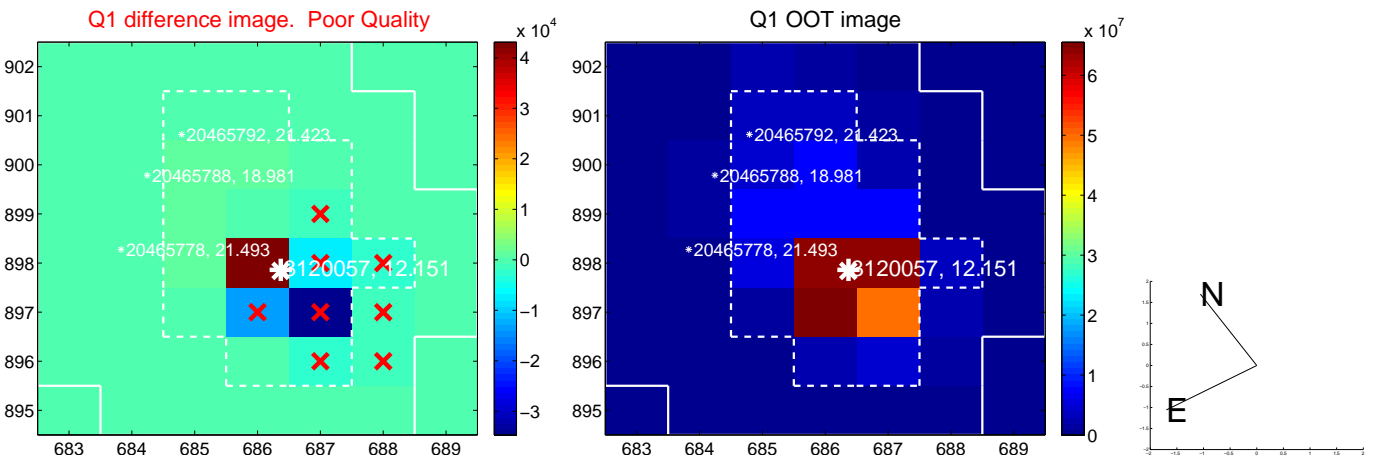


offset from photometric centroids

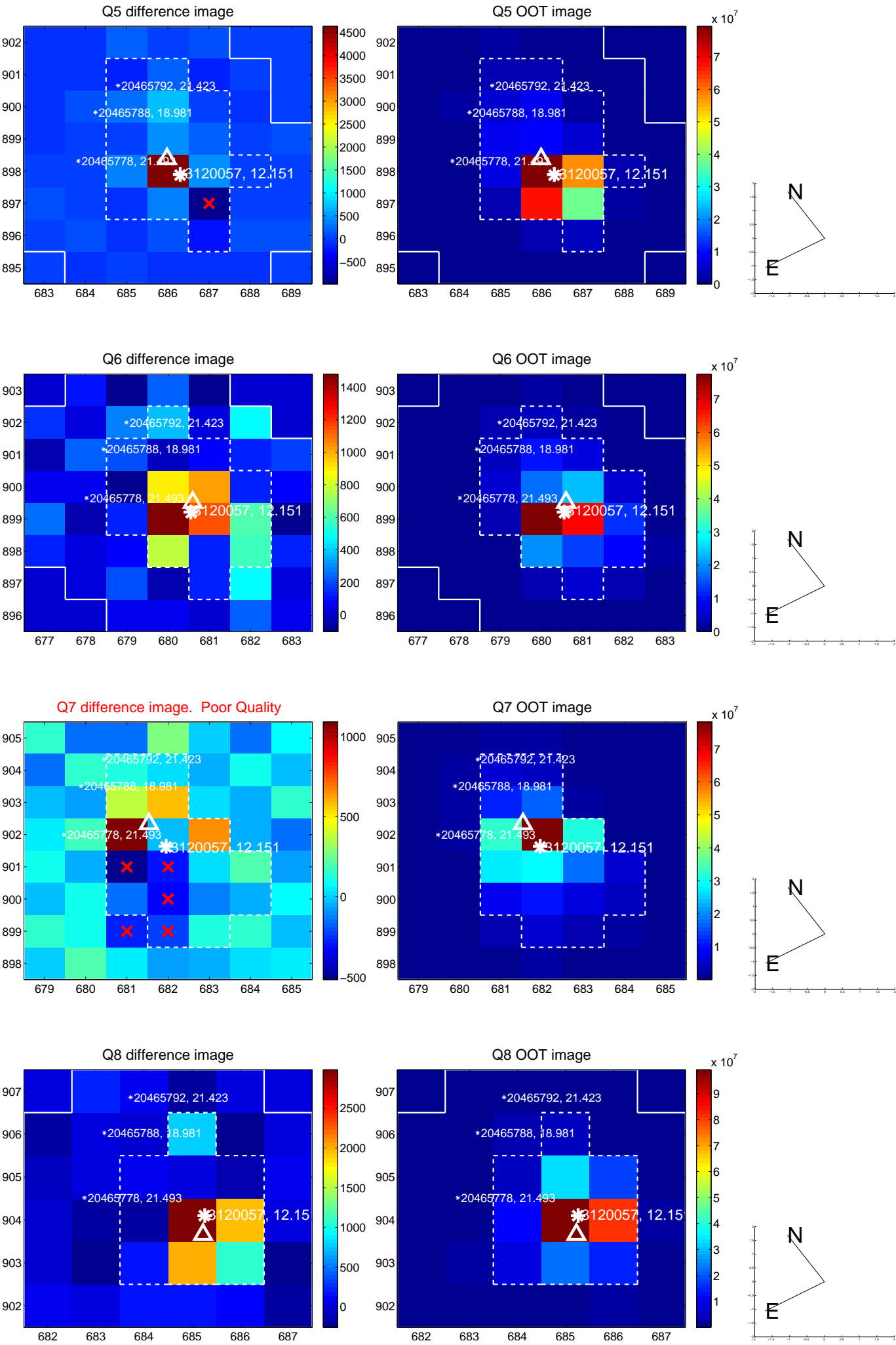


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

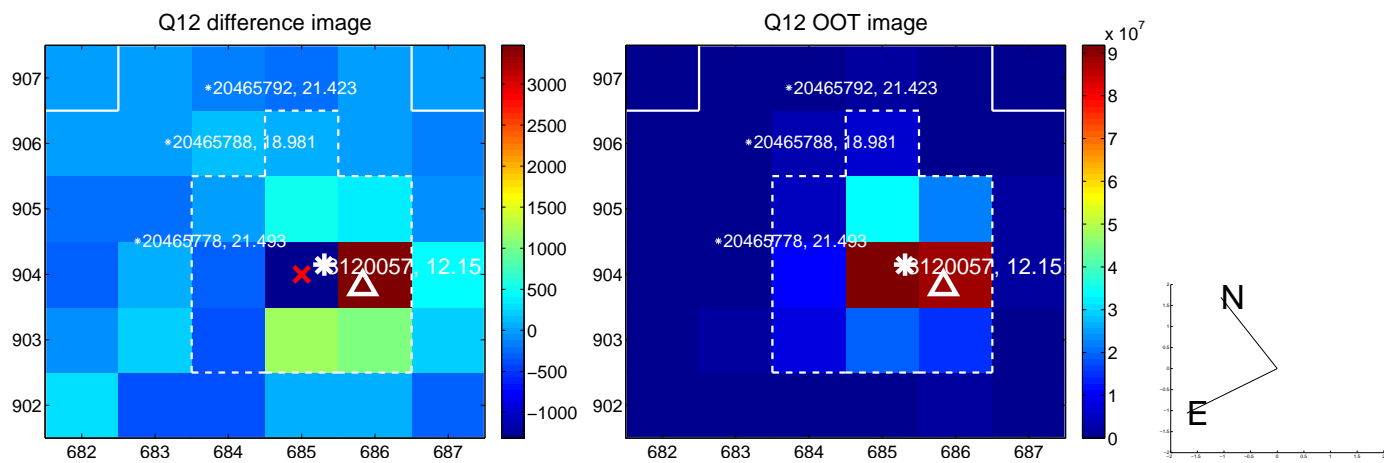
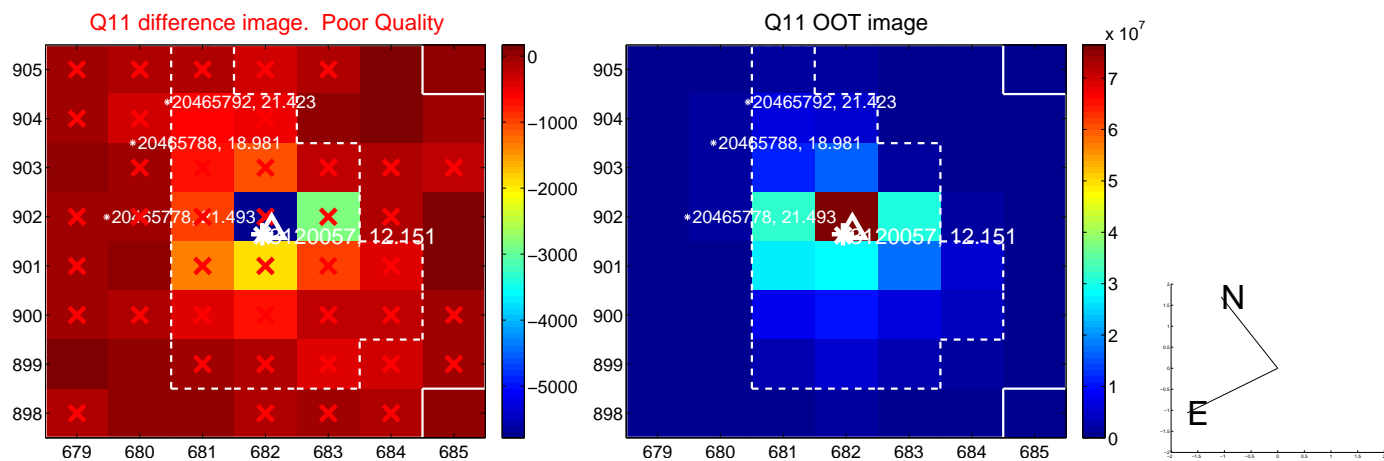
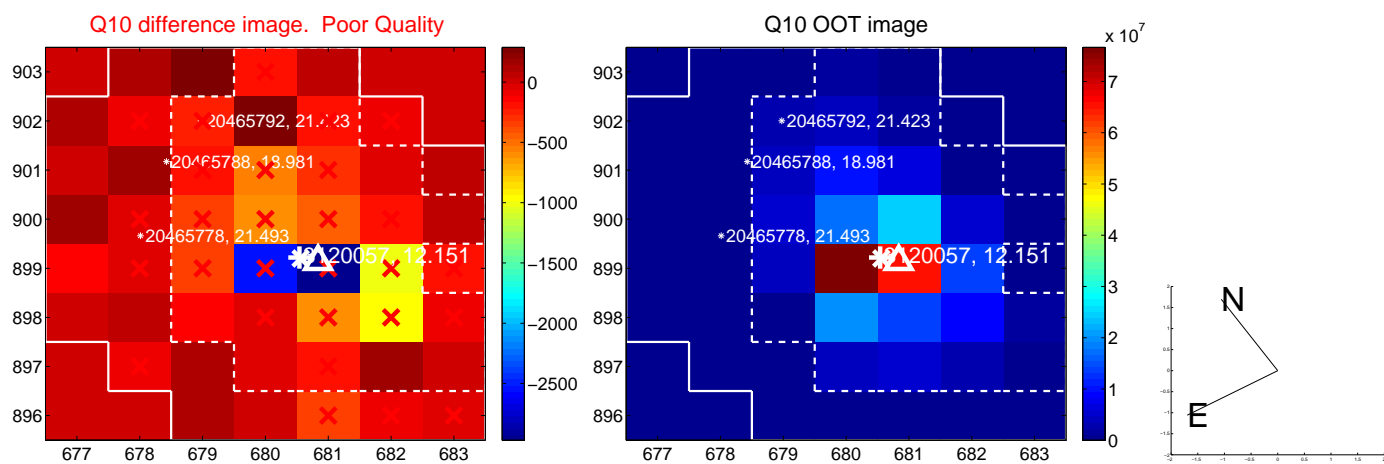
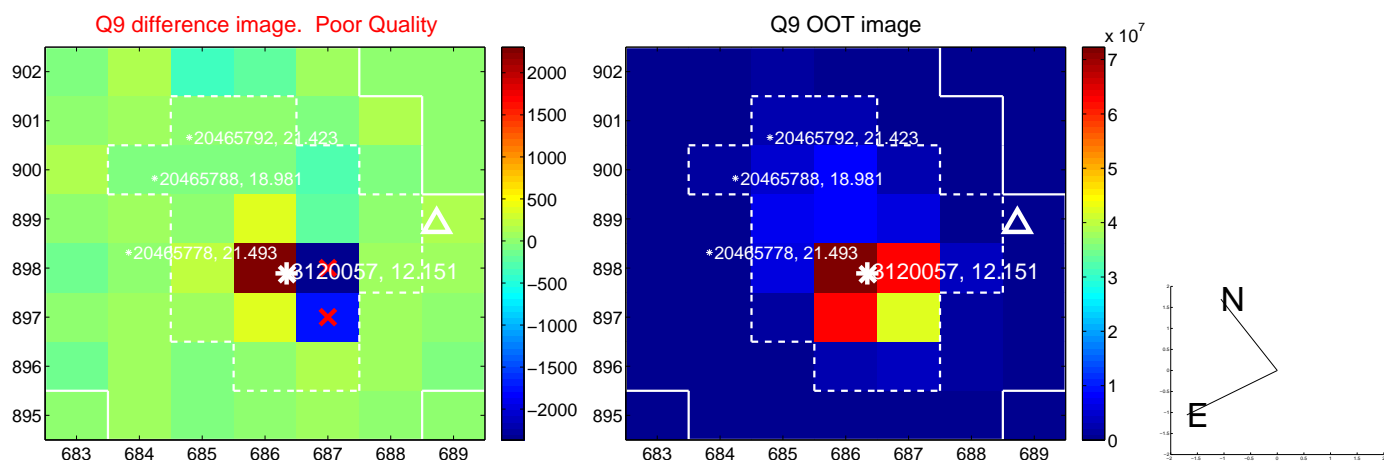
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



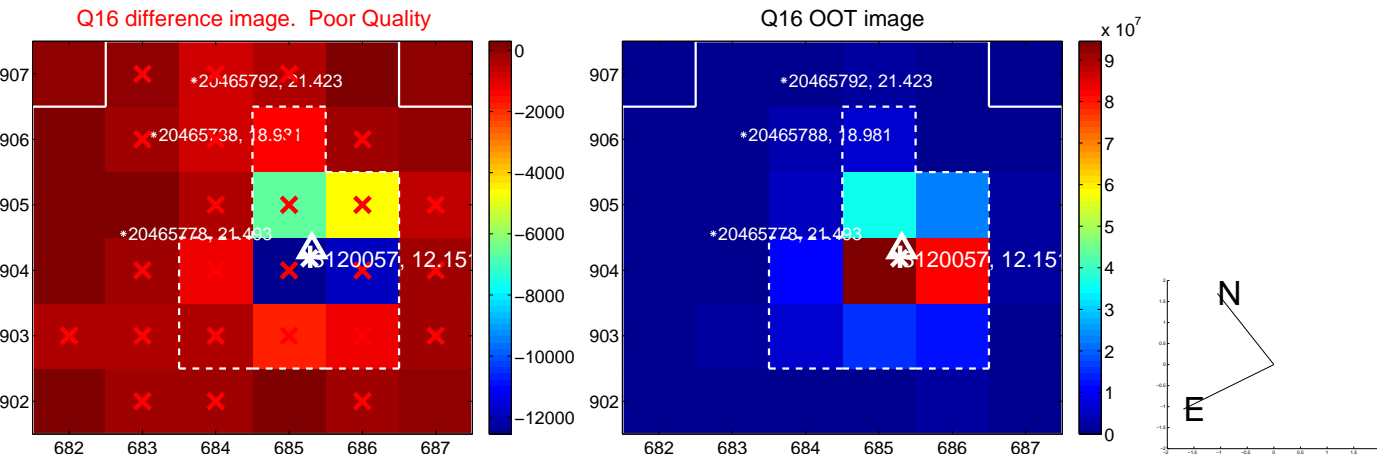
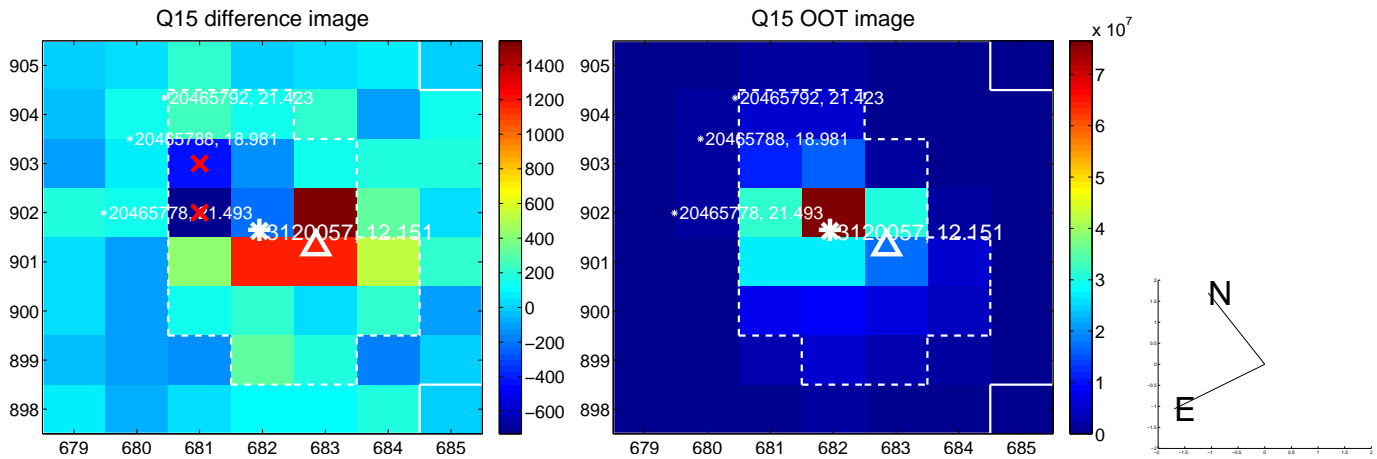
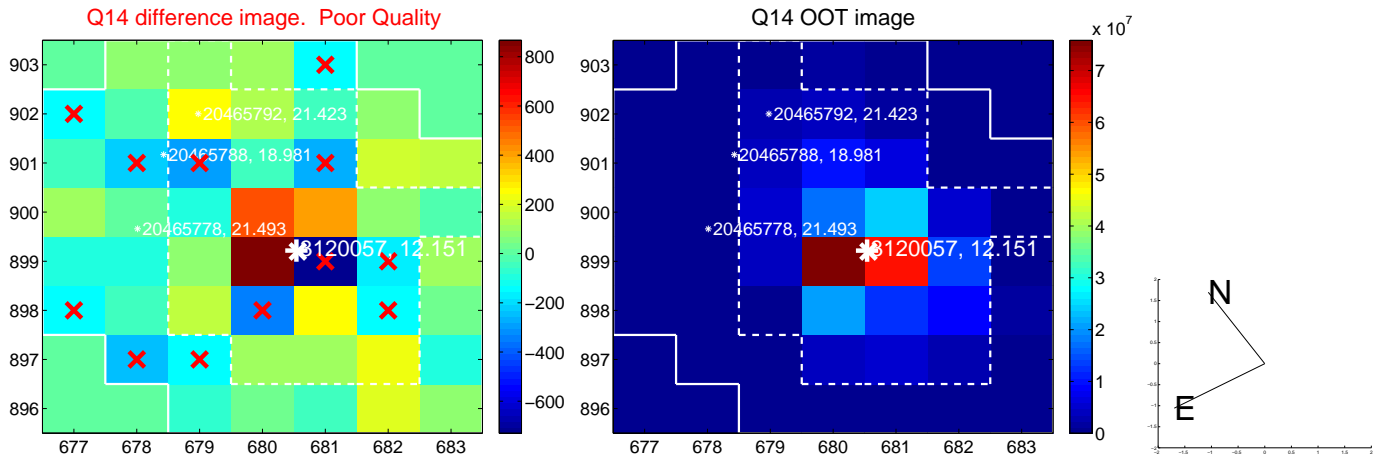
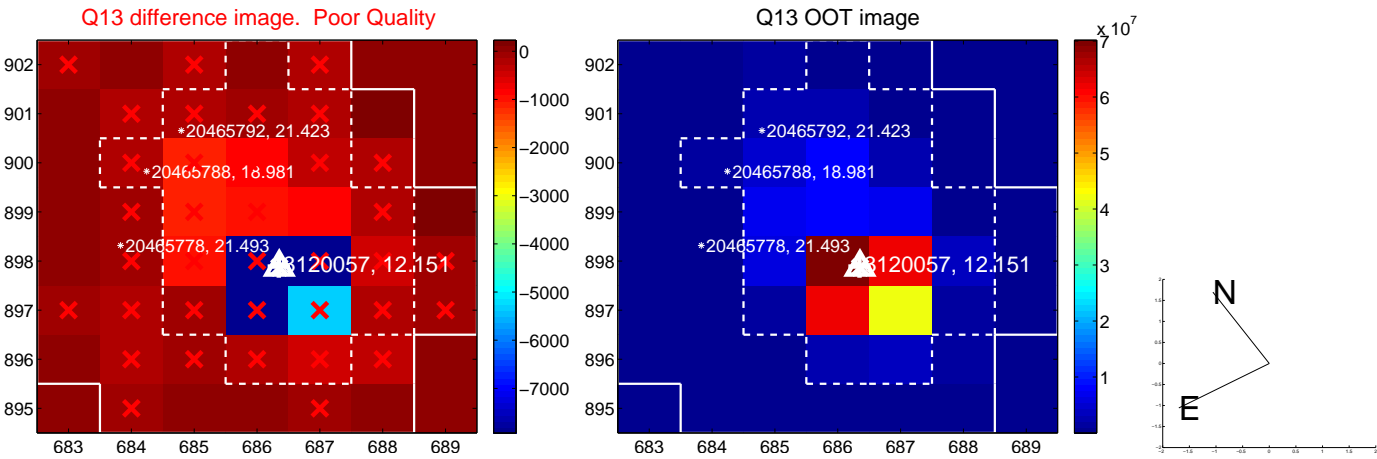
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



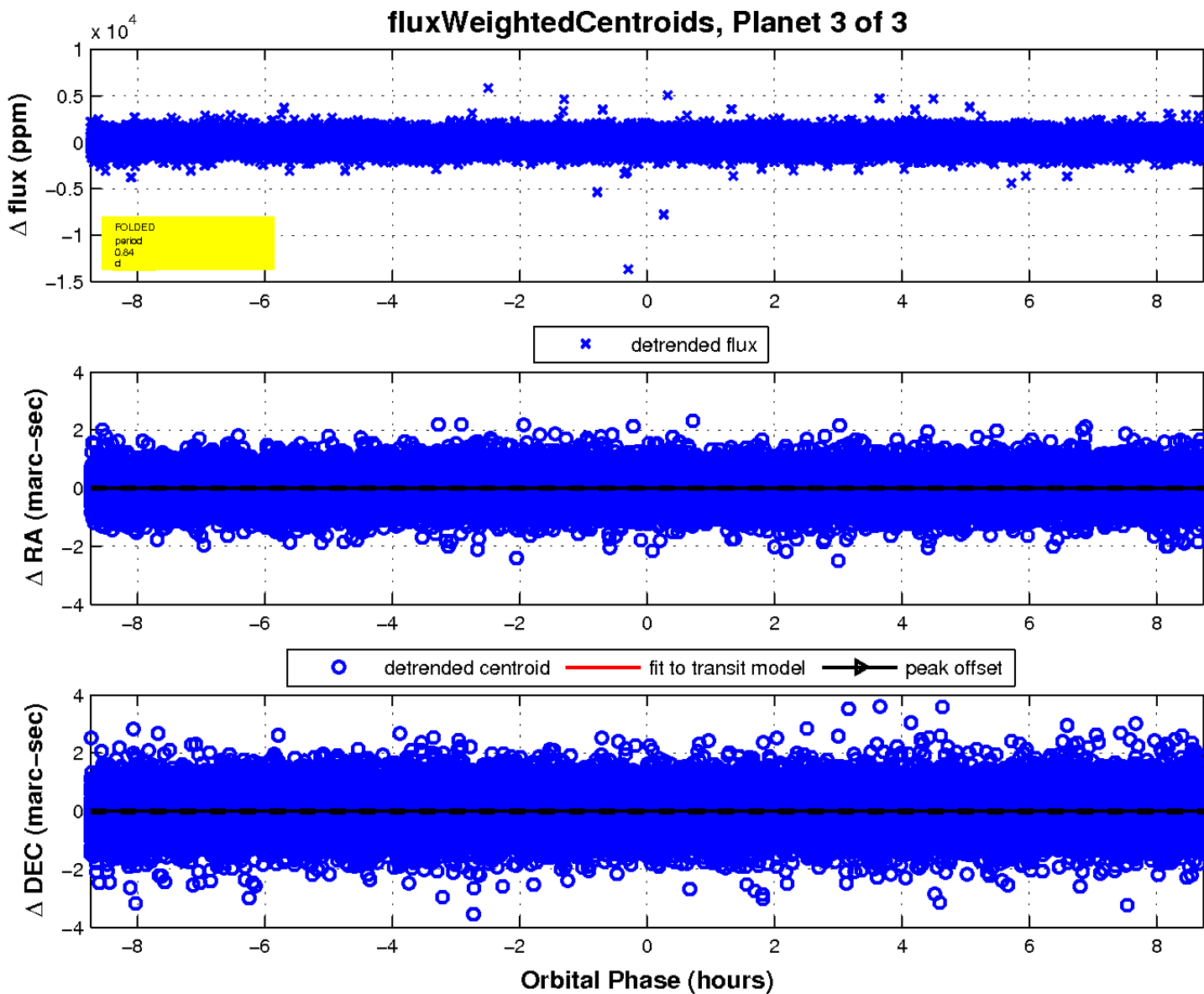
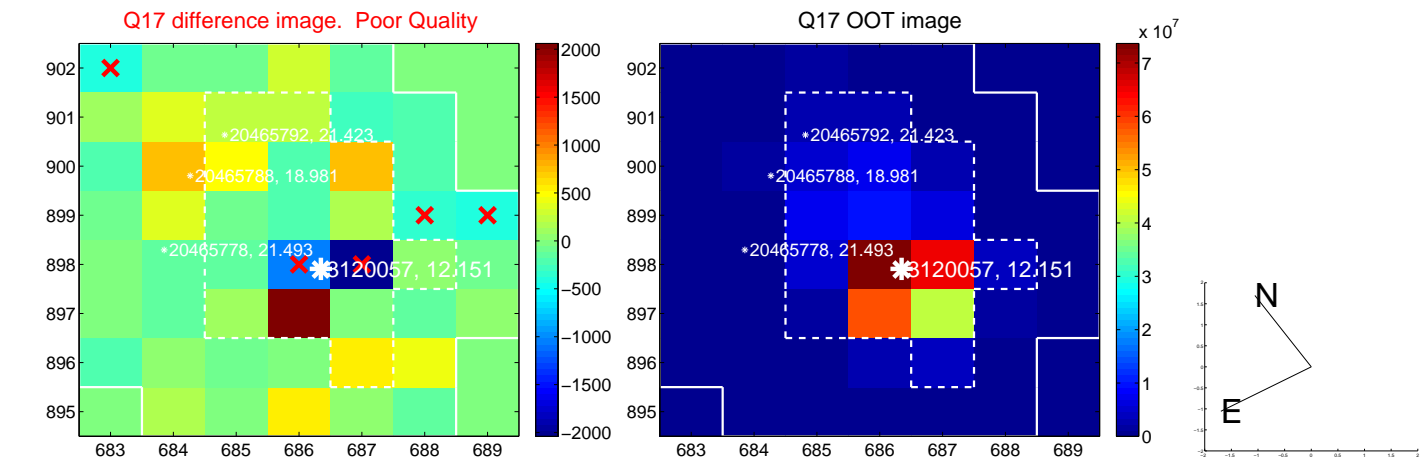
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

