

KIC 007699056

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})
007699056-01	OBS	No	0.960276	131.807706	783.0	0.738	14.7	24.3	3.28	7655	9.68	62417.75
007699056-02	OBS	No	0.960257	132.260561	101.6	2.623	15.1	6.3	3.28	7655	3.85	62419.41
007699056-03	OBS	No	0.960276	131.535555	771.8	0.785	12.6	23.6	3.28	7655	10.82	62417.75
007699056-04	OBS	No	0.960285	132.010336	767.6	0.862	13.9	25.0	3.28	7655	10.73	62416.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007699056-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
007699056-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007699056-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007699056-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

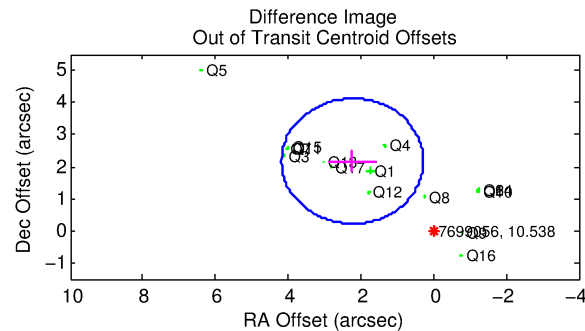
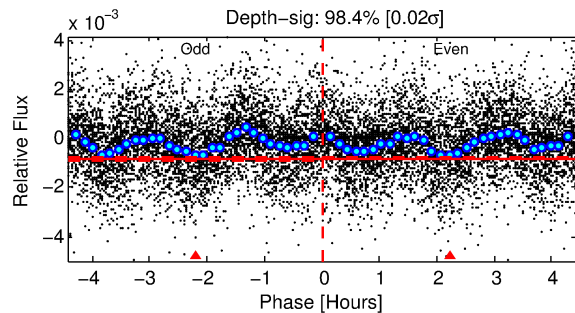
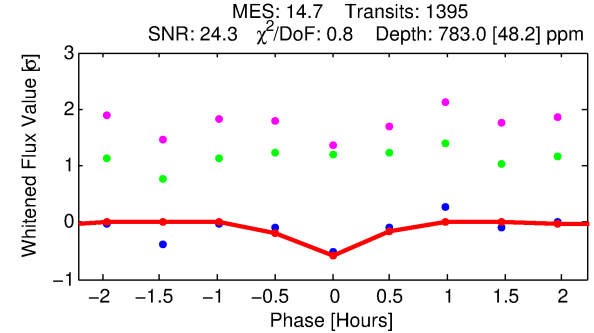
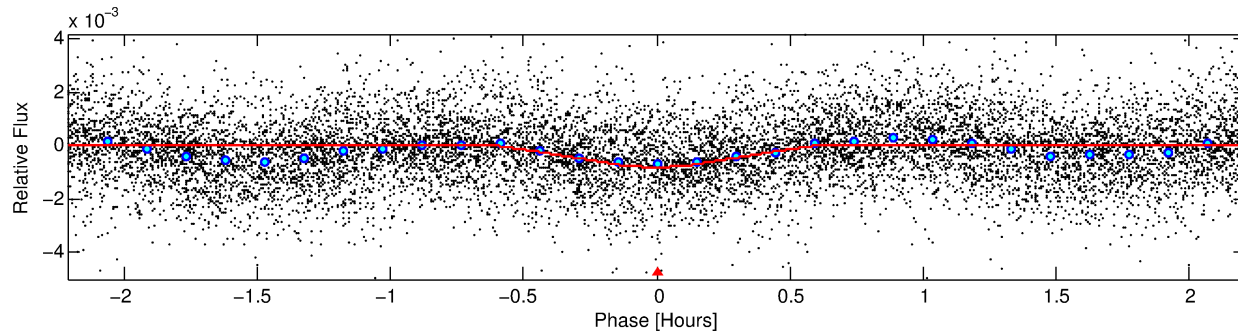
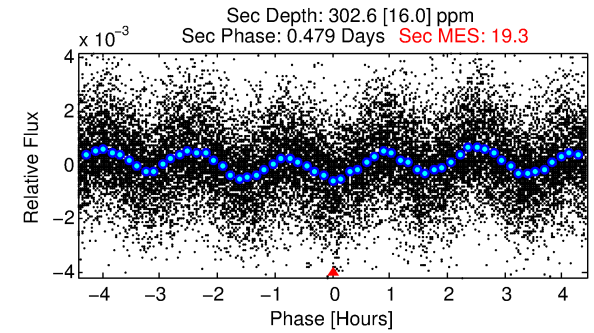
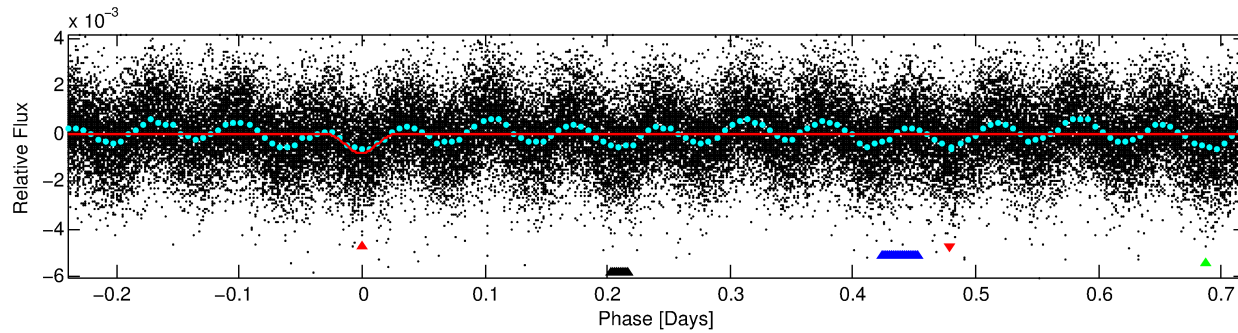
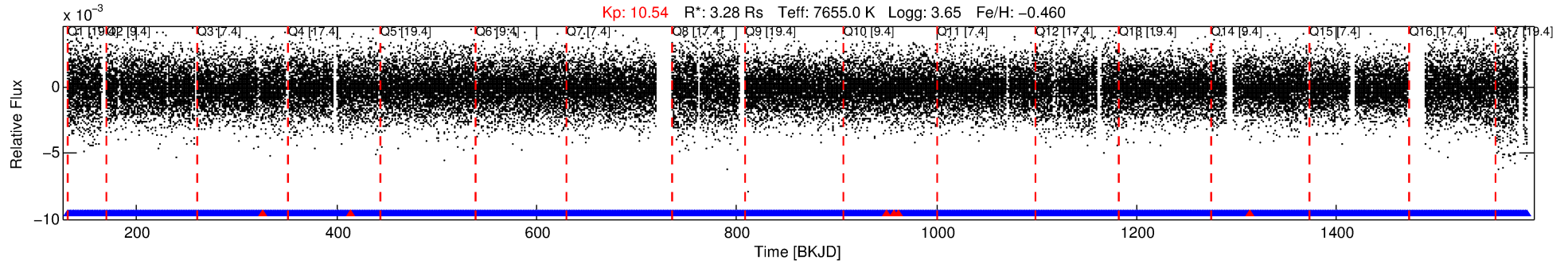
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007699056-01

No Significant Match Found

DV One-Page Summary

KIC: 7699056 Candidate: 1 of 4 Period: 0.960 d



DV Fit Results:

Period = 0.96028 [0.00000] d
Epoch = 131.8077 [0.0006] BKJD
Rp/R* = 0.0270 [0.0062]
a/R* = 8.83 [11.11]
b = 0.52 [1.79]
Seff = 62417.75 [56850.30]
Teq = 4030 [918] K
Rp = 9.67 [5.63] Re
a = 0.0230 [0.0125] AU
Ag = 0.94 [0.95] [-0.06σ]
Teffp = 6140 [751] K [1.78σ]

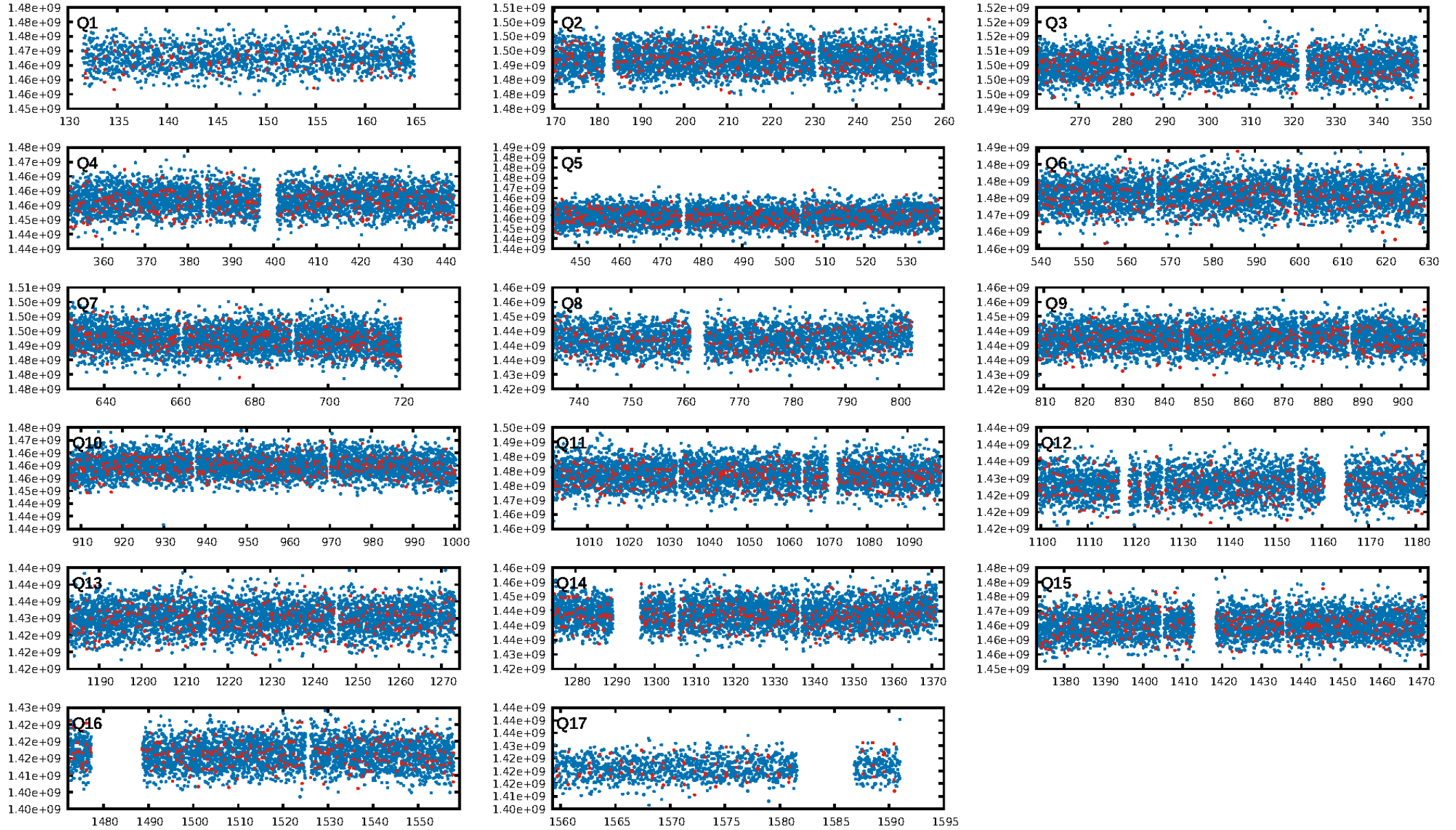
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1326/1333]
GhostDiagnostic-chr: 1.325
Centroid-sig: N/A
Centroid-so: 0.561 arcsec [9.85σ]
OotOffset-rm: 3.117 arcsec [4.79σ]
KicOffset-rm: 2.789 arcsec [4.82σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.29 [5/17]
DiffImageOverlap-fno: 0.00 [0/17]

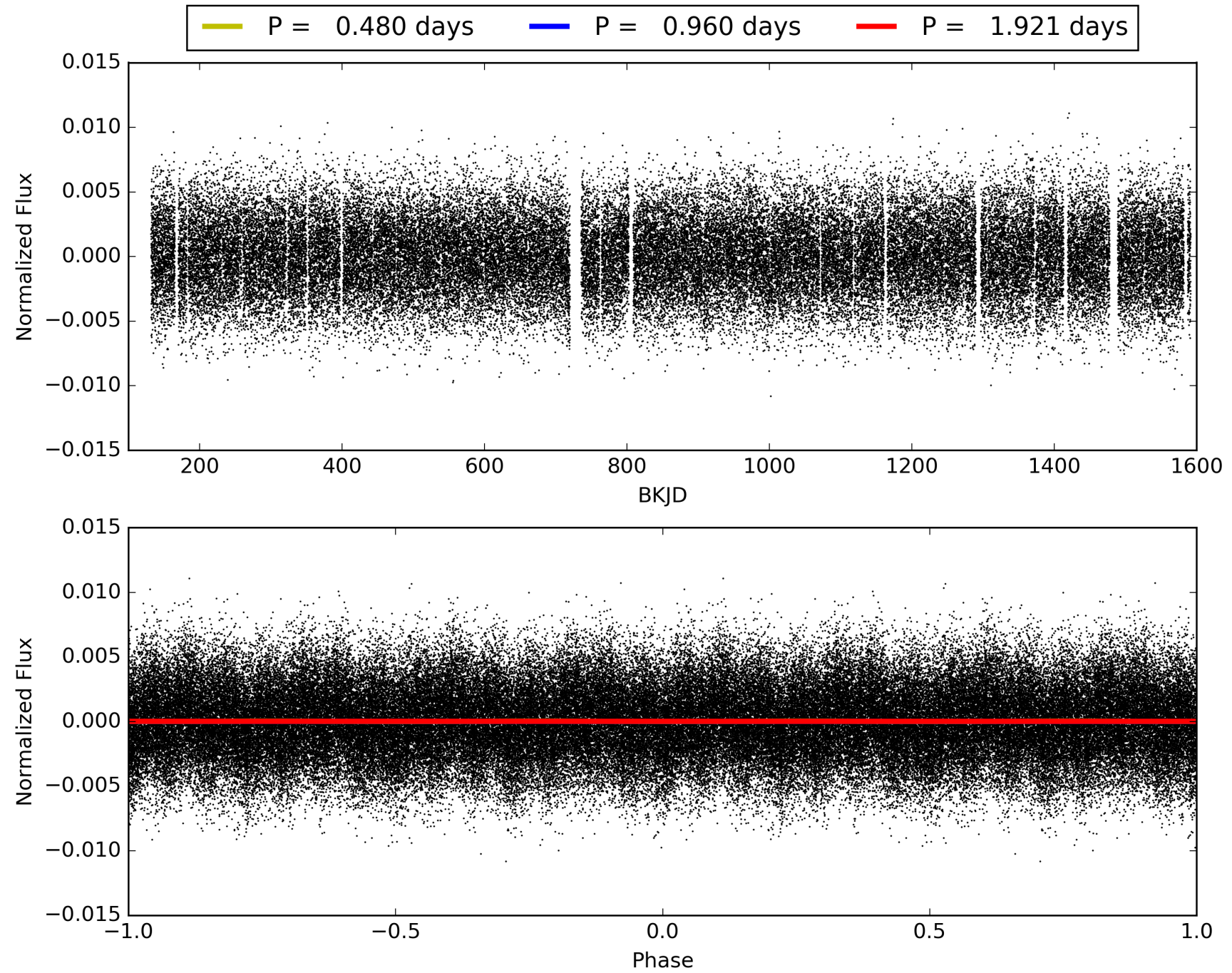
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:20:44 Z

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

TCE 007699056-01, PDC Light Curves

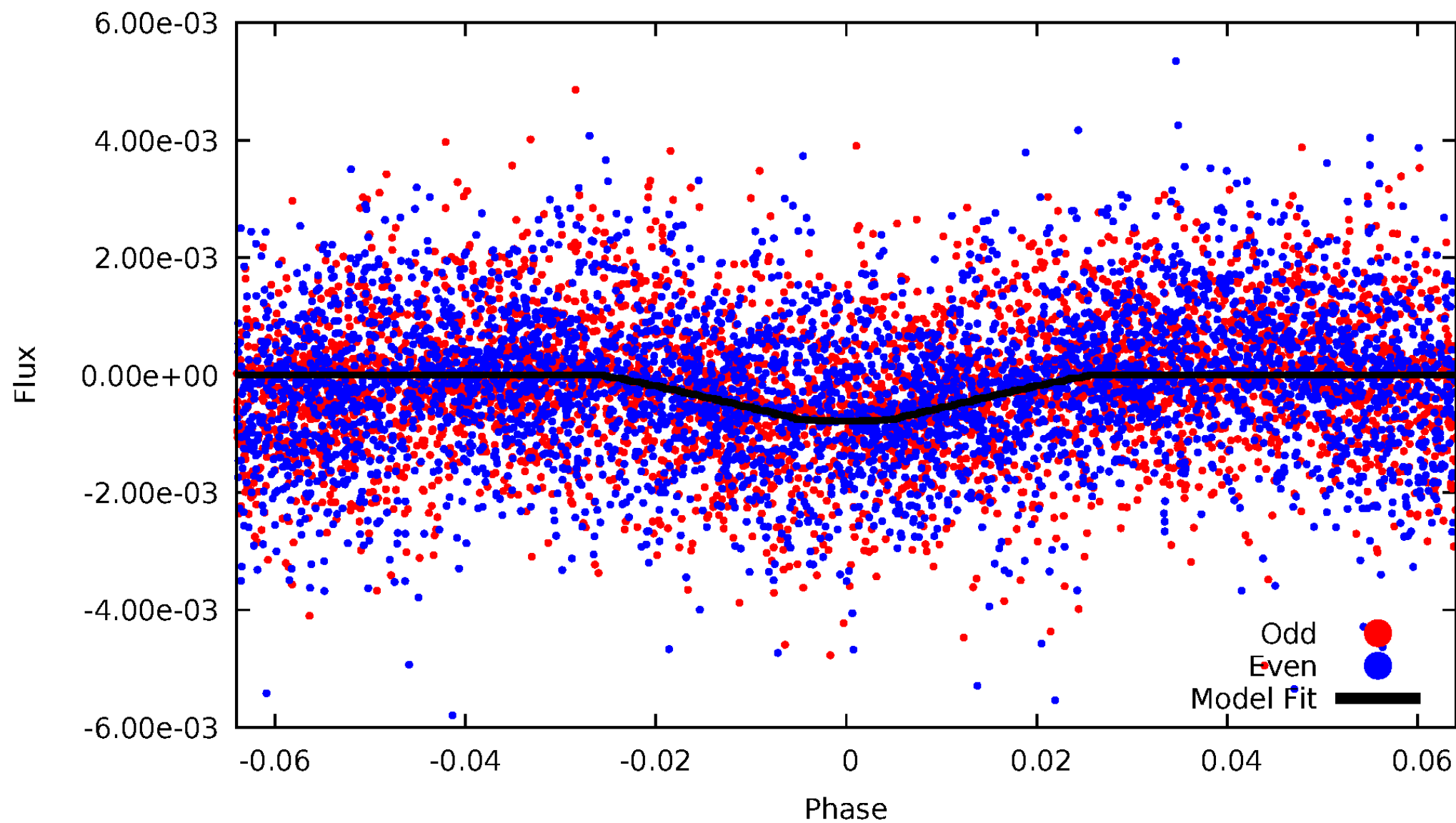


TCE 007699056-01



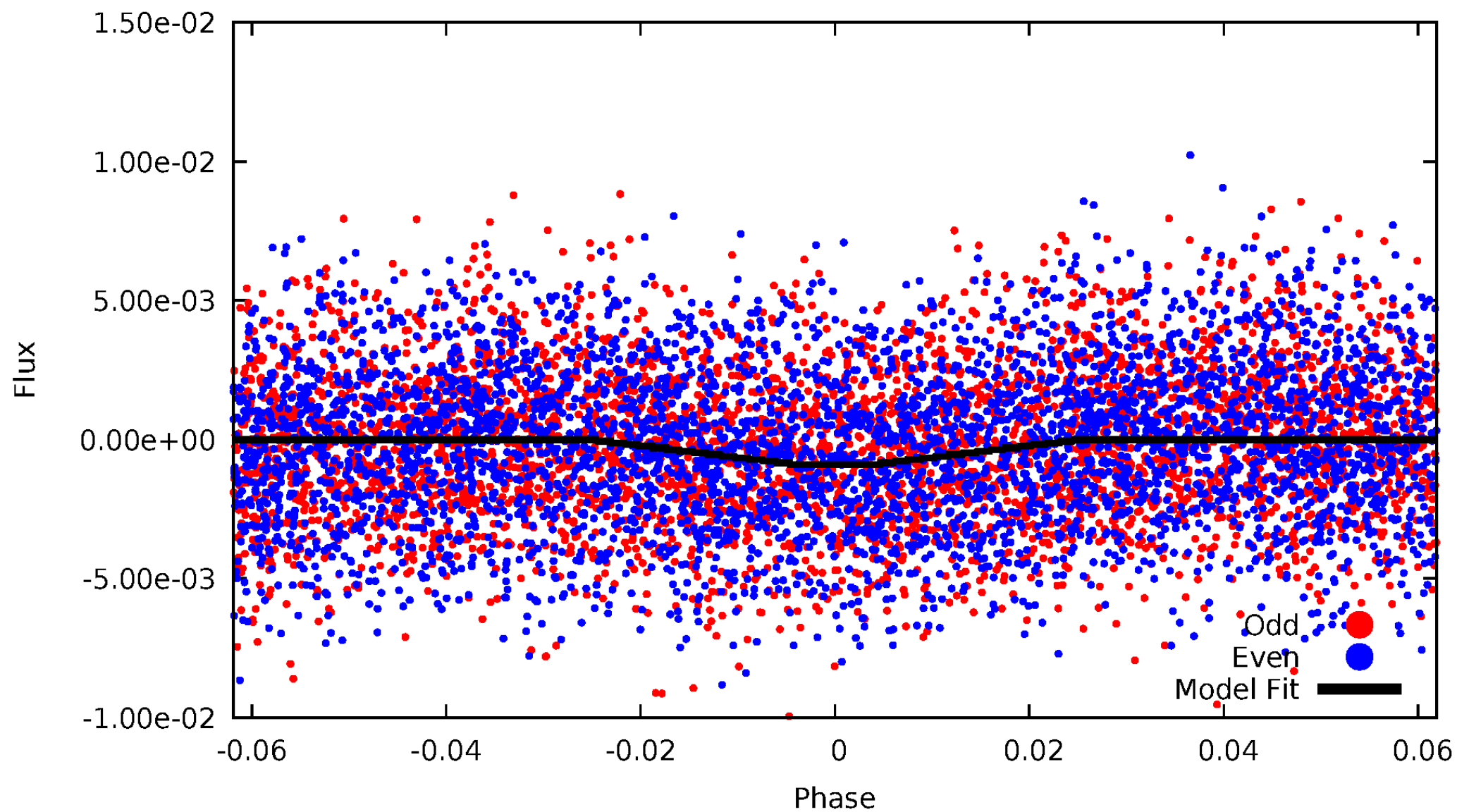
DV Odd/Even

TCE 007699056-01

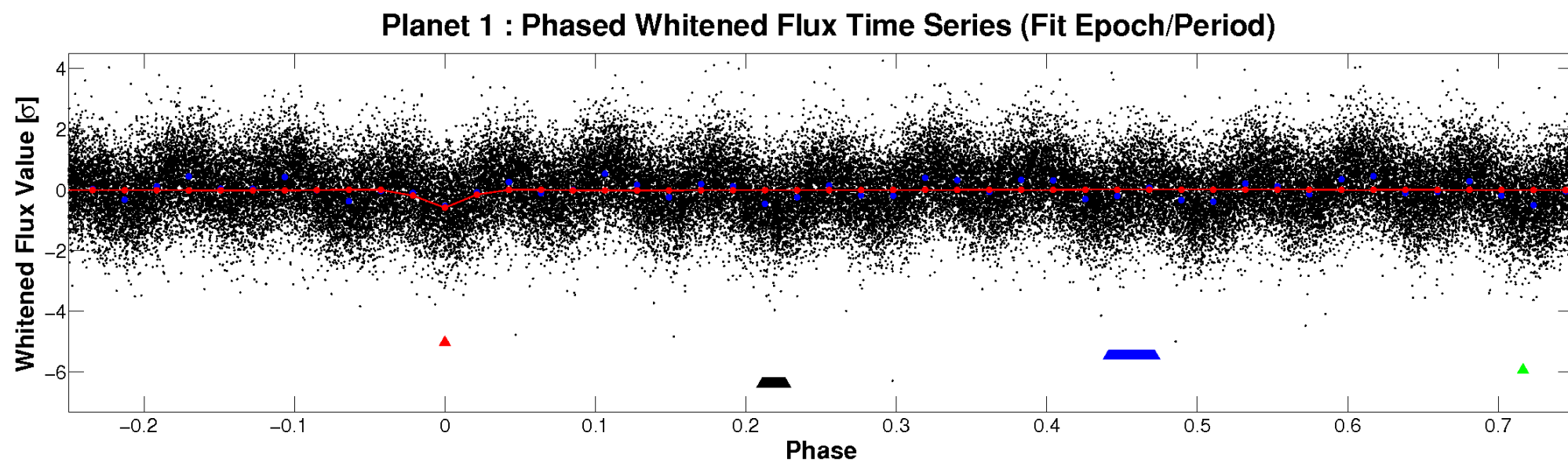
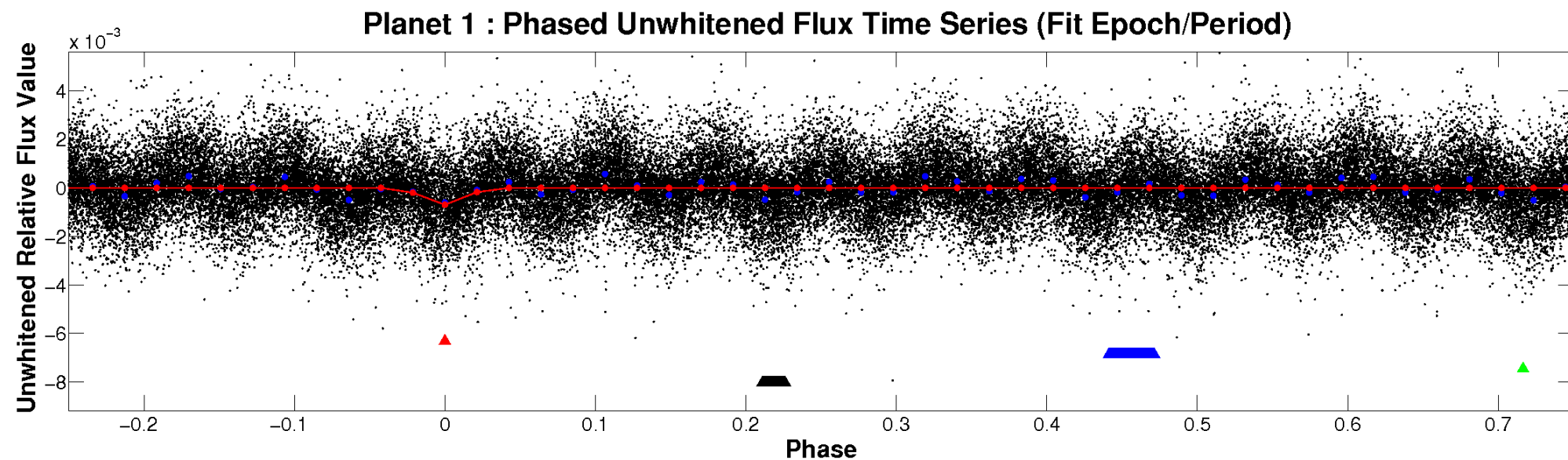


ALT Odd/Even

TCE 007699056-01

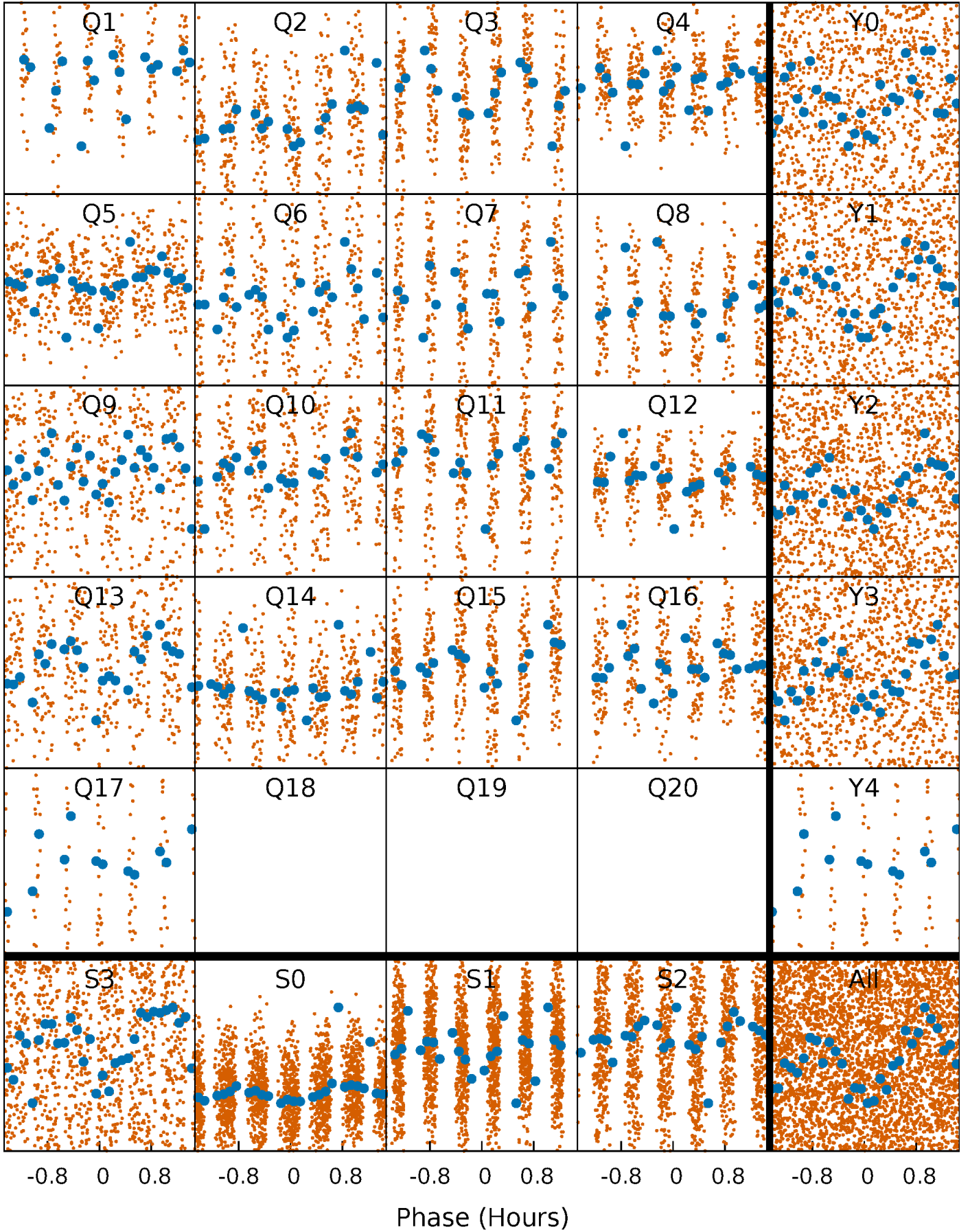


Non-Whitened Vs. Whitened Light Curve



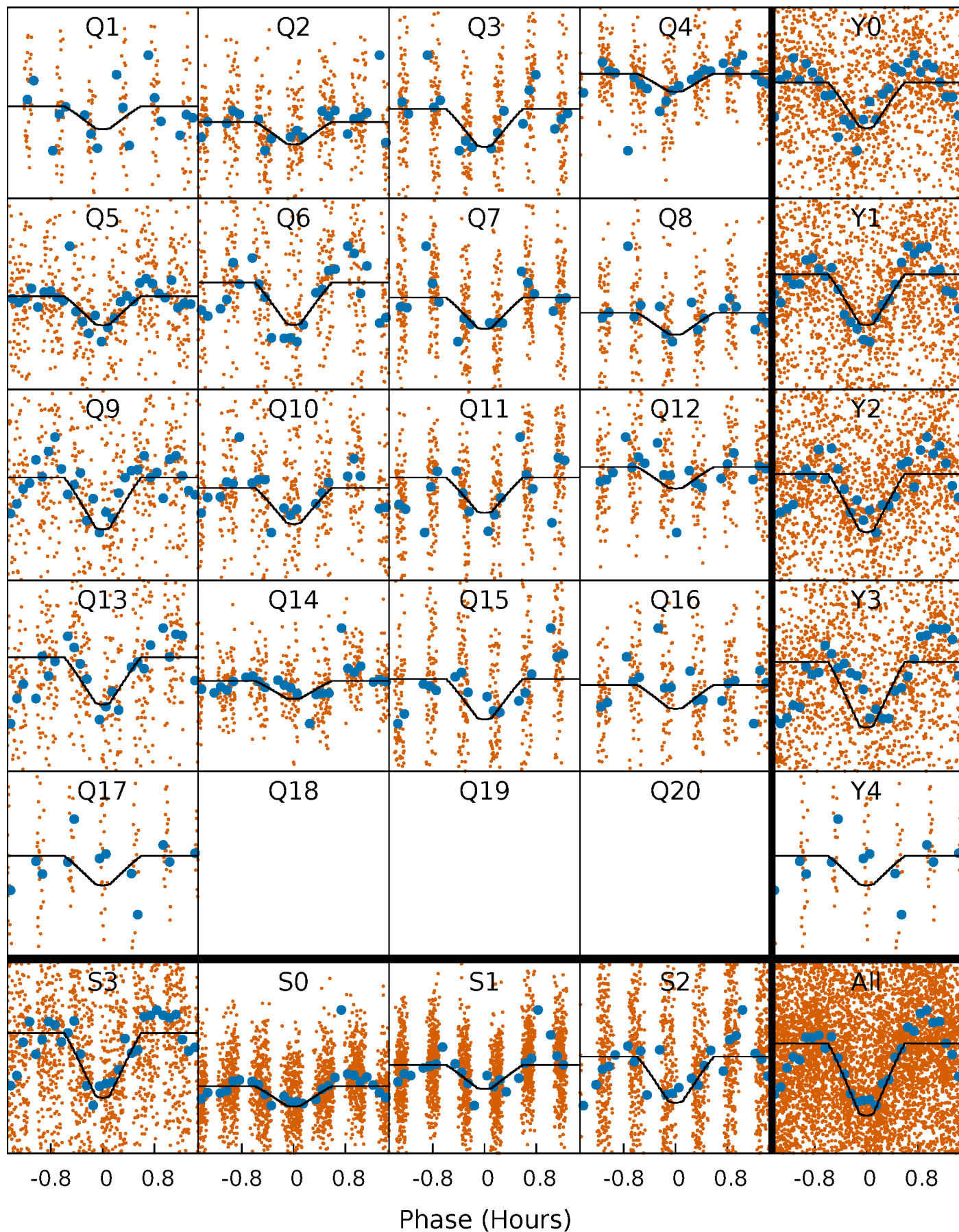
PDC Quarter-Phased Transit Curves

TCE 007699056-01 P= 0.960276 Days $T_0=131.807706$ (BKJD)



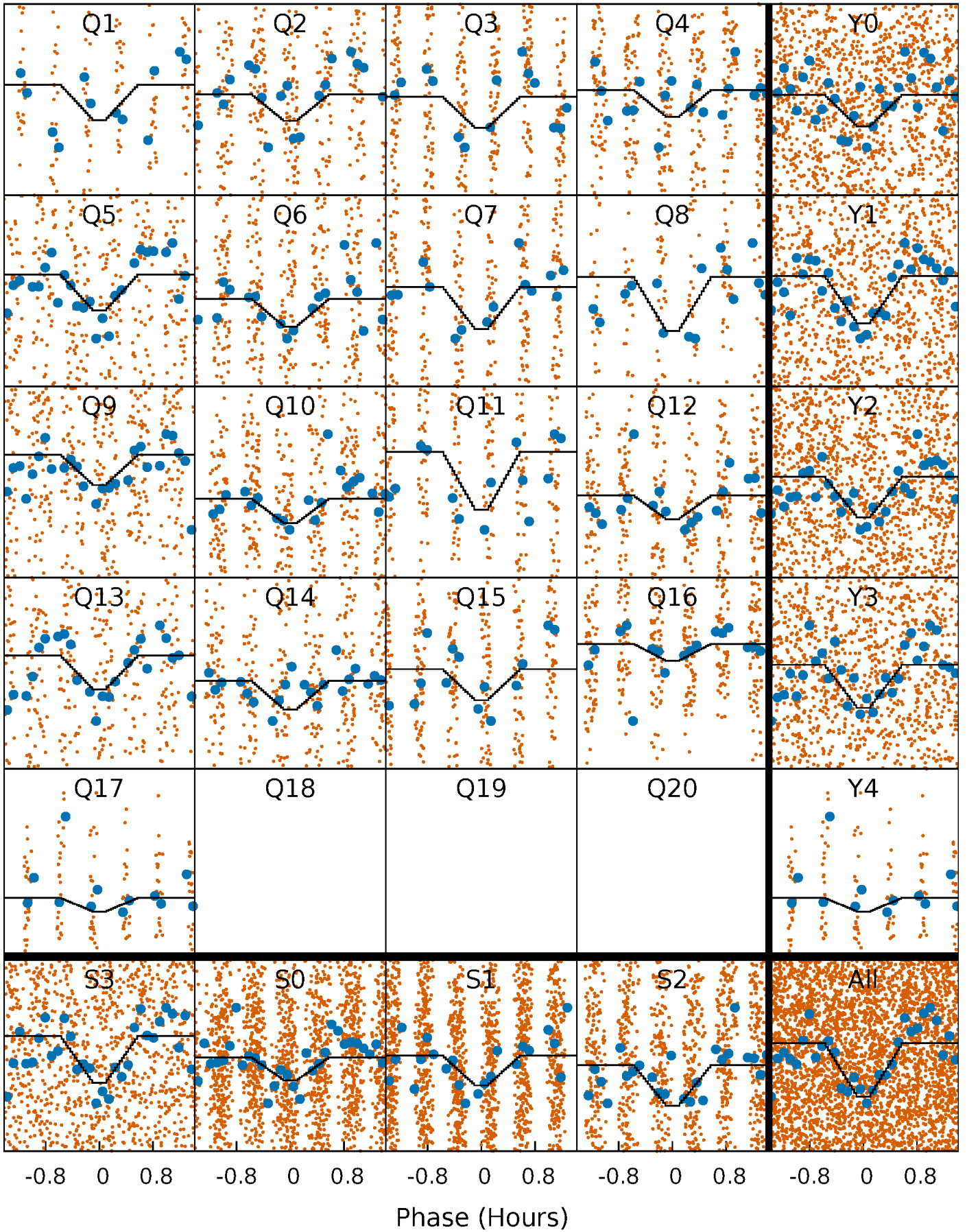
DV Quarter-Phased Transit Curves

TCE 007699056-01 P= 0.960276 Days $T_0=131.807706$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

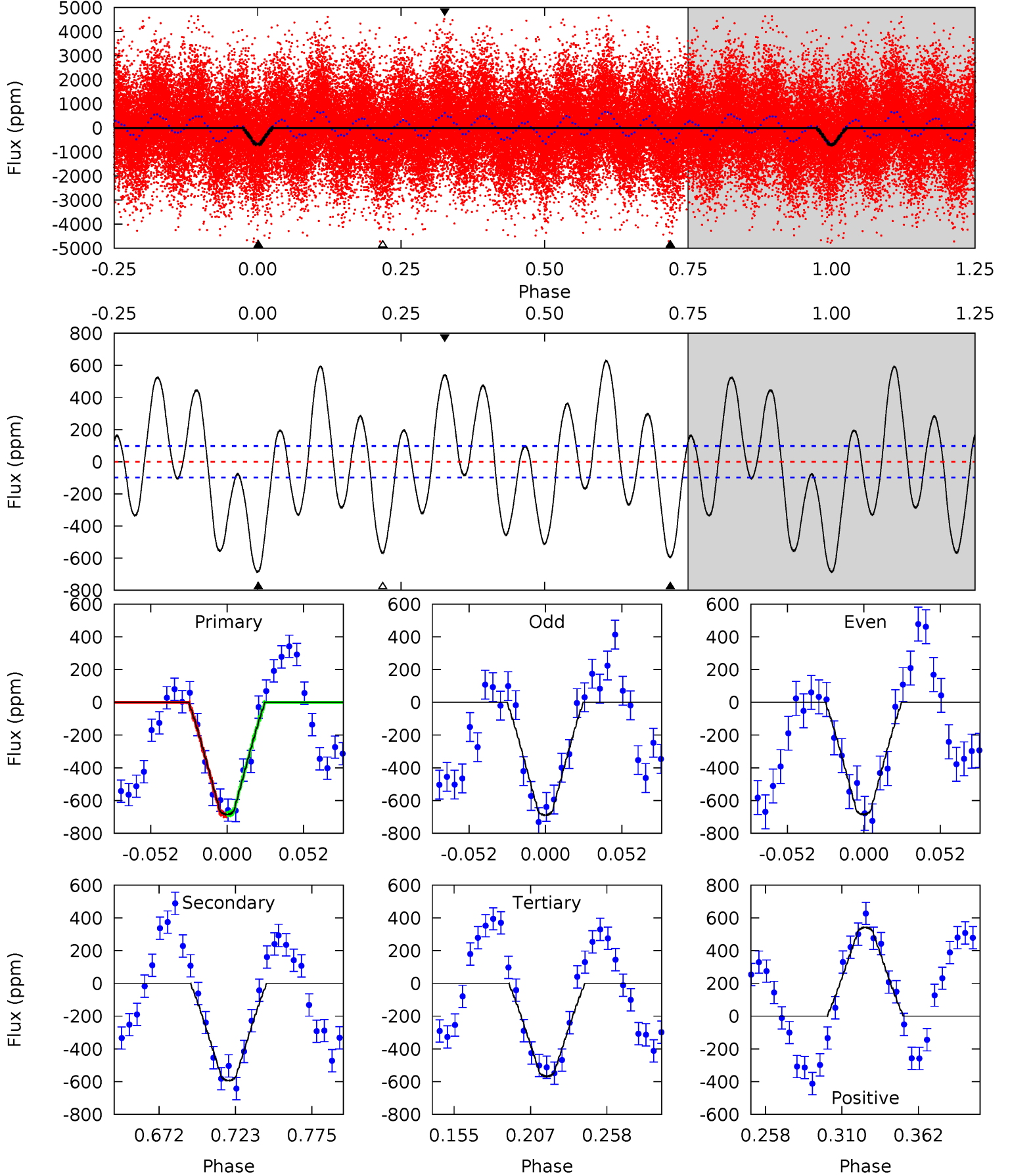
TCE 007699056-01 P= 0.960279 Days $T_0=131.808065$ (BKJD)



DV Model-Shift Uniqueness Test

007699056-01, P = 0.960276 Days, E = 130.847430 Days

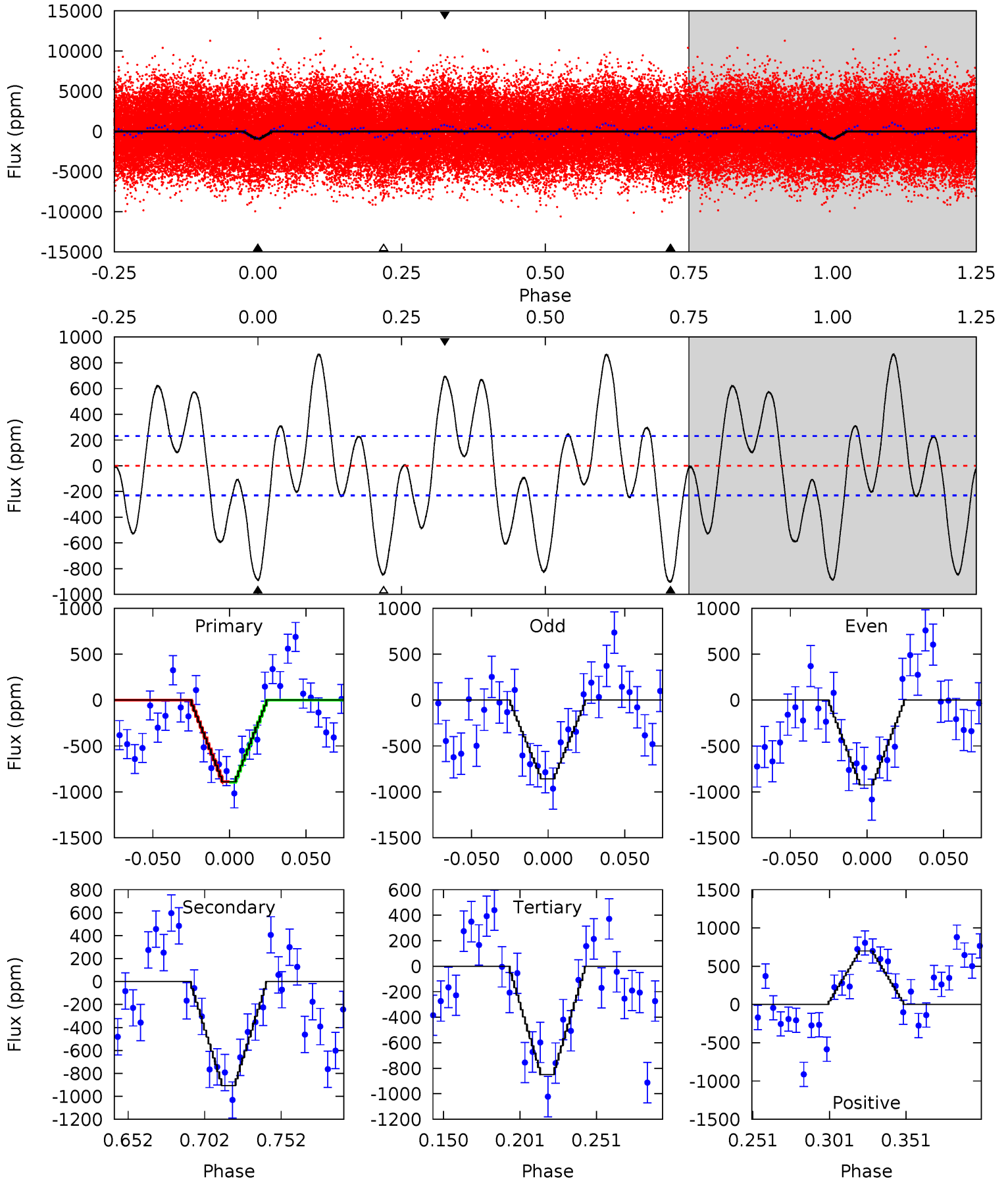
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.7	28.3	27.0	25.8	4.70	1.95	14.7	5.64	6.90	1.24	2.50	0.11	1.00	0.48	0.13



Alt Model-Shift Uniqueness Test

007699056-01, P = 0.960279 Days, E = 130.847786 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	18.5	17.4	14.3	4.71	1.96	8.71	0.85	3.93	1.15	4.23	0.68	1.02	0.49	0.09



Stellar Parameters For KIC 007699056

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	7655^{+212}_{-319}	$3.653^{+0.535}_{-0.094}$	$-0.460^{+0.250}_{-0.300}$	$3.279^{+0.310}_{-1.755}$	$1.765^{+0.163}_{-0.489}$	$0.070^{+0.490}_{-0.014}$
	+3%/-4%	+15%/-3%	+54%/-65%	+9%/-54%	+9%/-28%	+696%/-20%
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 007699056-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-593 ± 21	$8.89^{+2.80}_{-2.98}$	5478^{+328}_{-730}	6842^{+1302}_{-890}	$2.193^{+2.595}_{-0.936}$
Alt.	-907 ± 49	$10.04^{+2.72}_{-3.25}$	5506^{+334}_{-711}	7388^{+1252}_{-899}	$2.631^{+2.773}_{-0.980}$

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 $A_{\text{obs}} \gg 1.0$

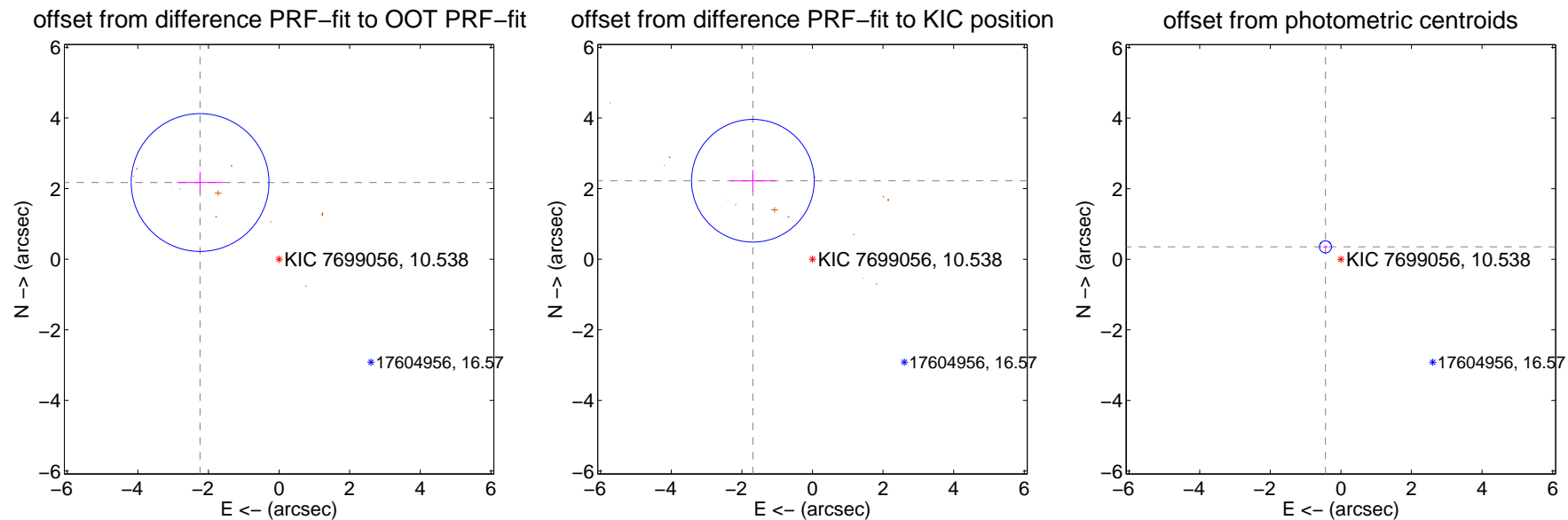
DV Centroid Data

Supplemental centroid analysis for 007699056-01. **Kepler magnitude: 10.54.** Transit SNR 24.30

There are 5 quarters with good PRF difference image offsets

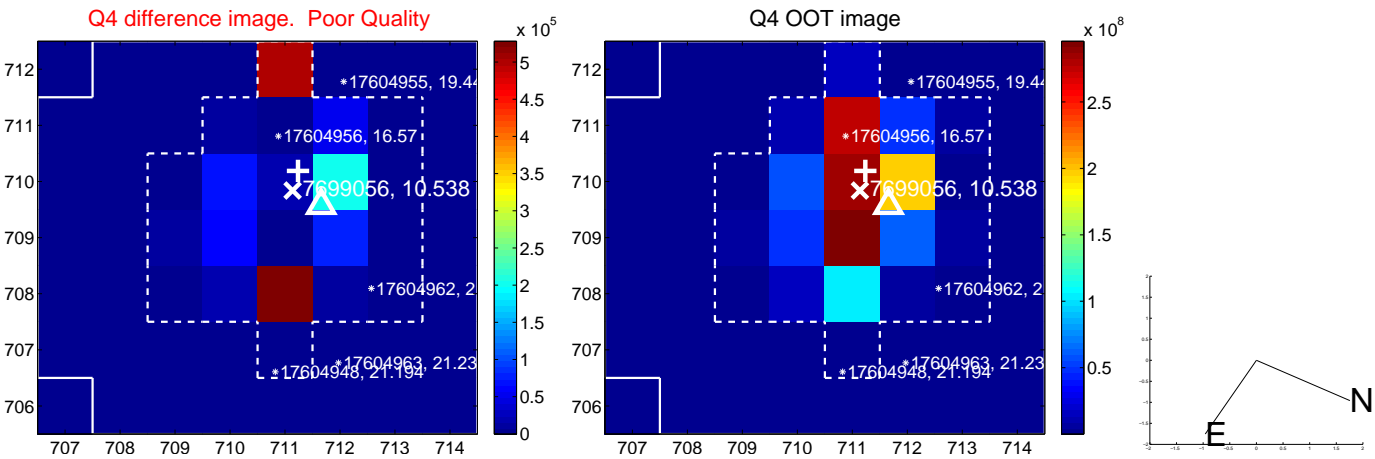
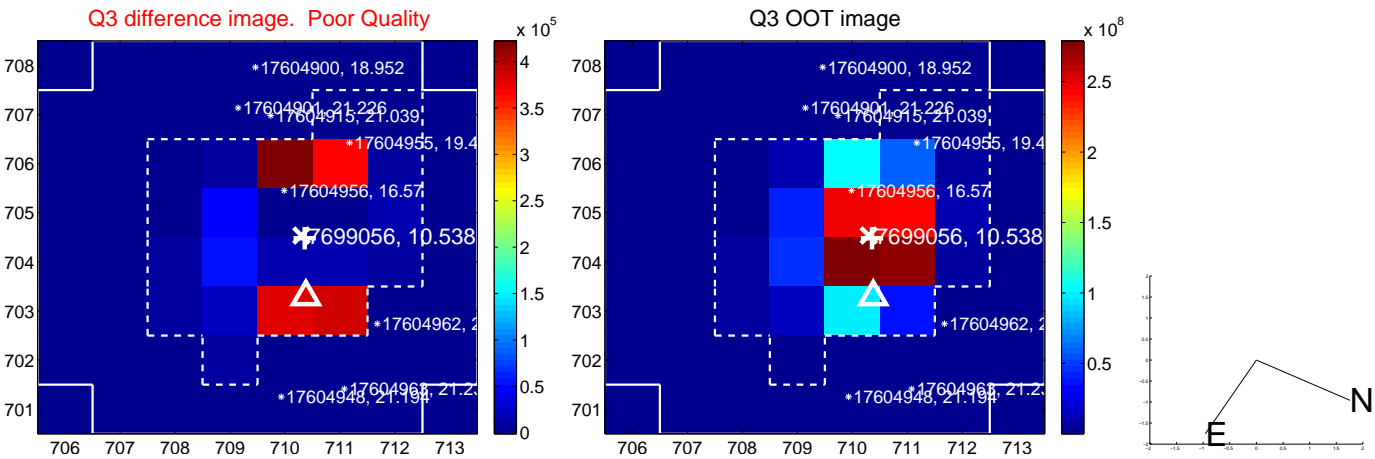
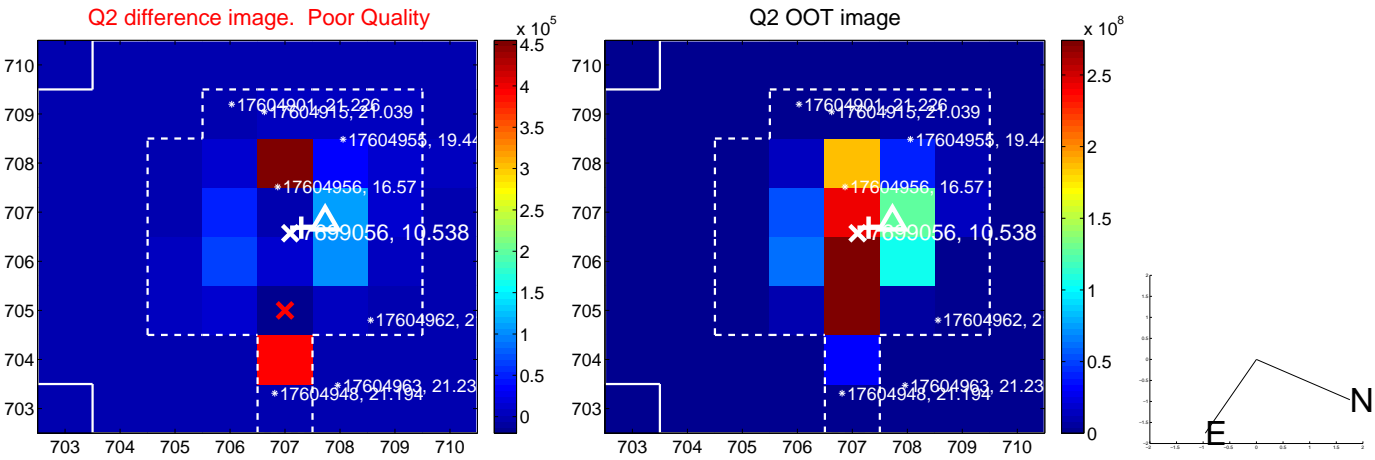
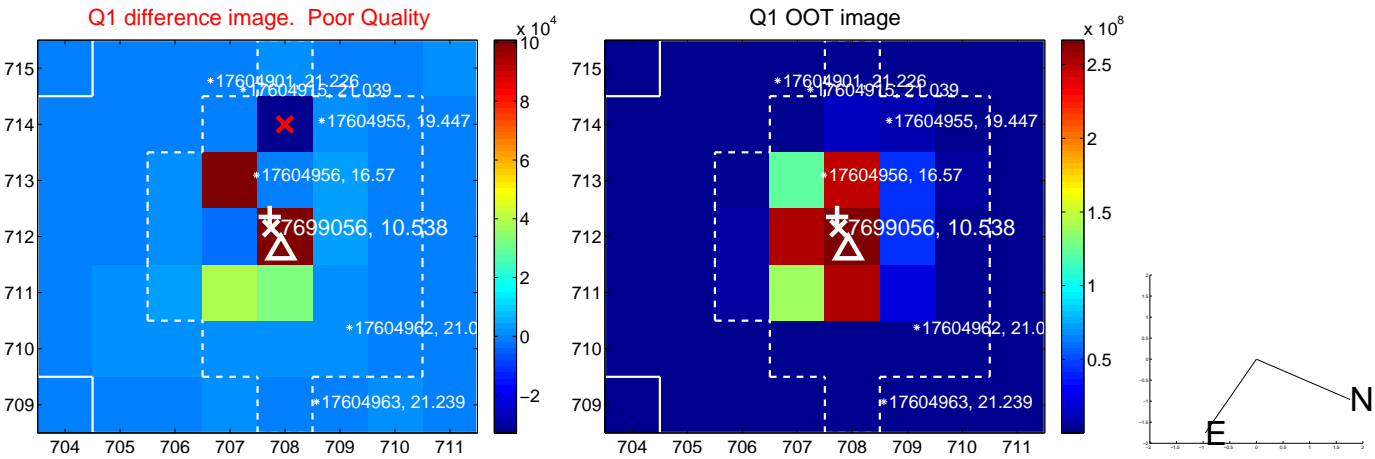
The direct PRF centroid is offset from the target star catalog position by about 0.78 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.117 ± 0.650	4.79	2.236 ± 0.650	2.171 ± 0.305
PRF-fit source offset from KIC position	2.789 ± 0.579	4.82	1.687 ± 0.637	2.222 ± 0.303
photometric centroid source offset	0.56 ± 0.06	9.85	0.44 ± 0.07	0.35 ± 0.04

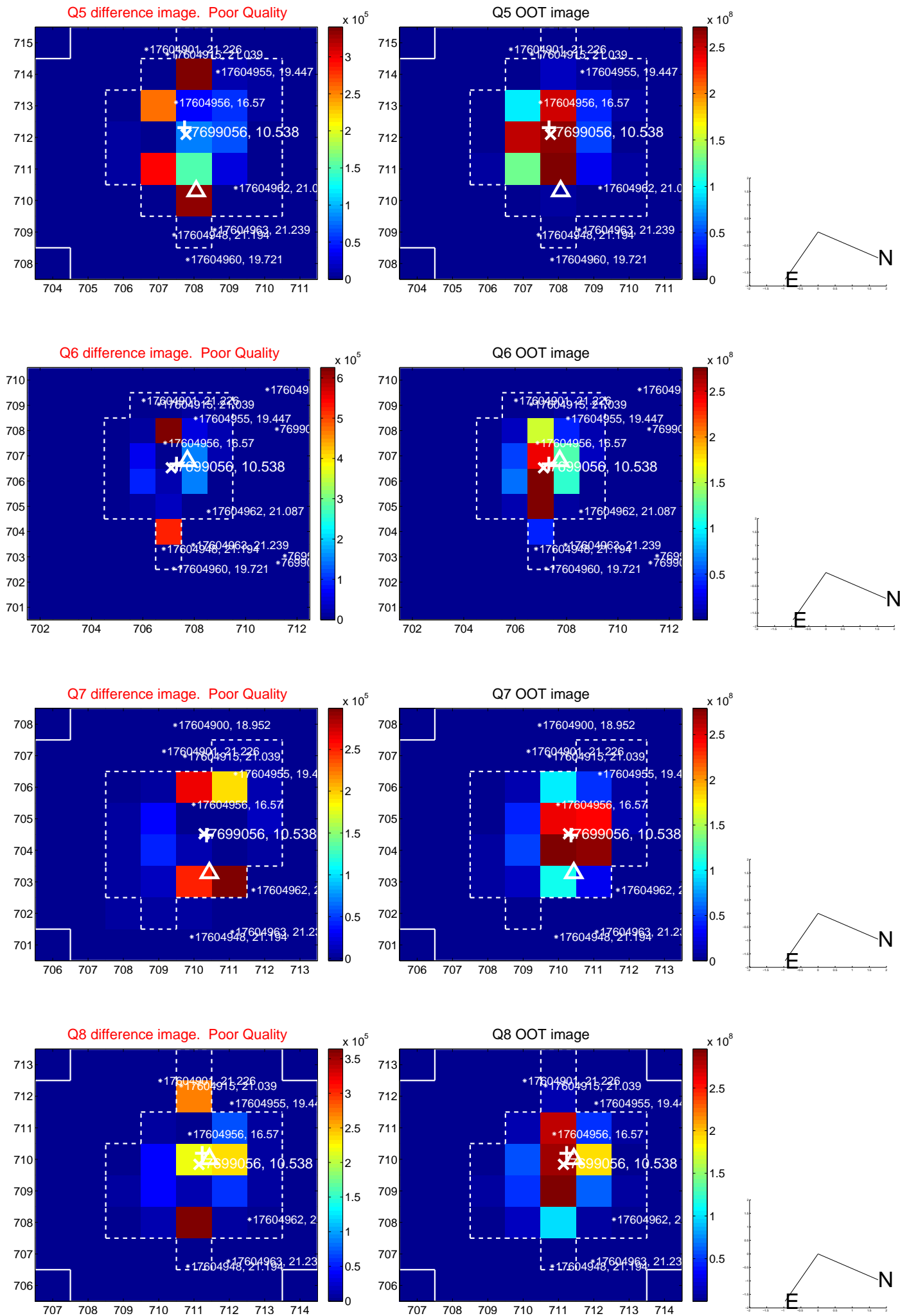


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

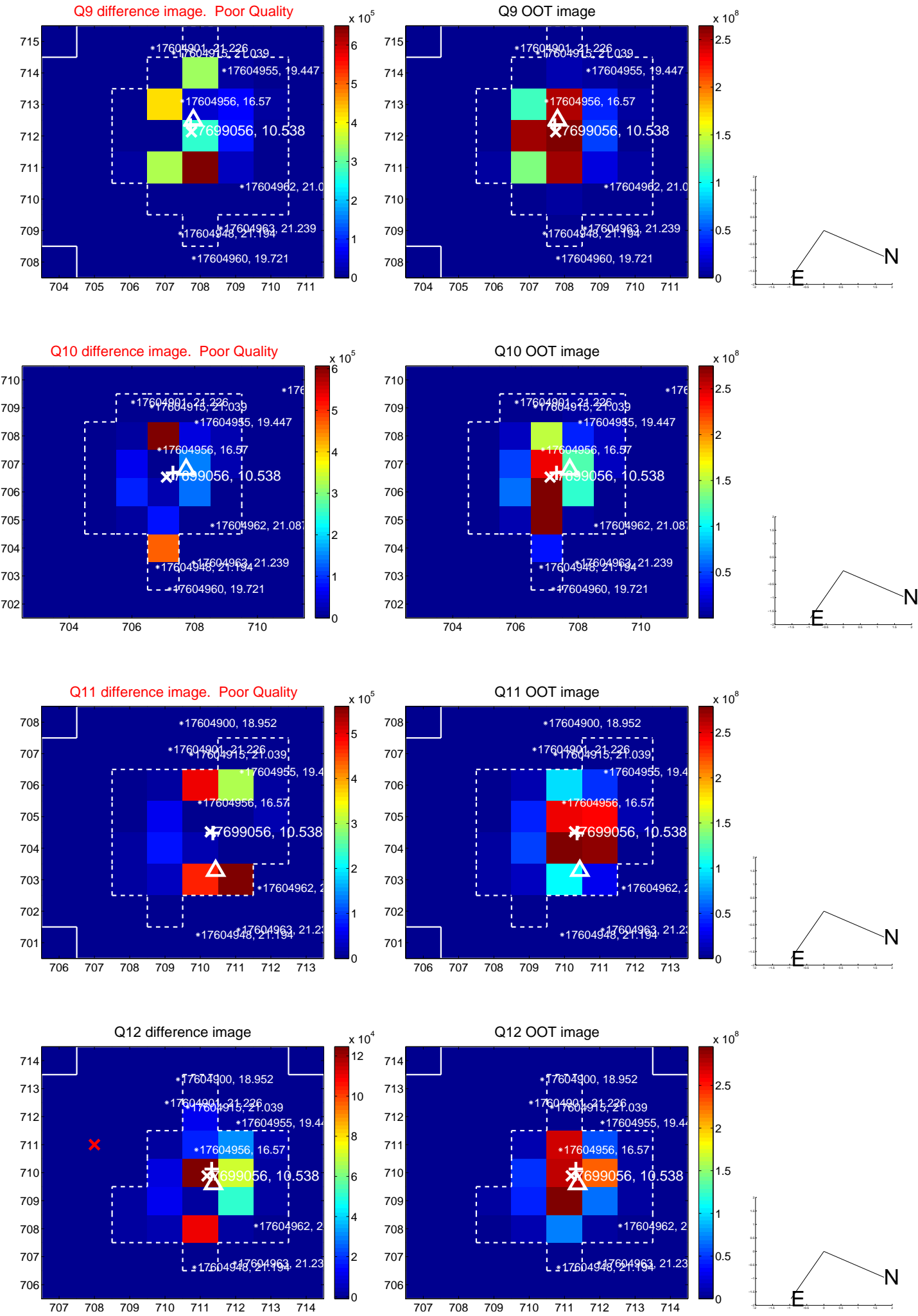
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



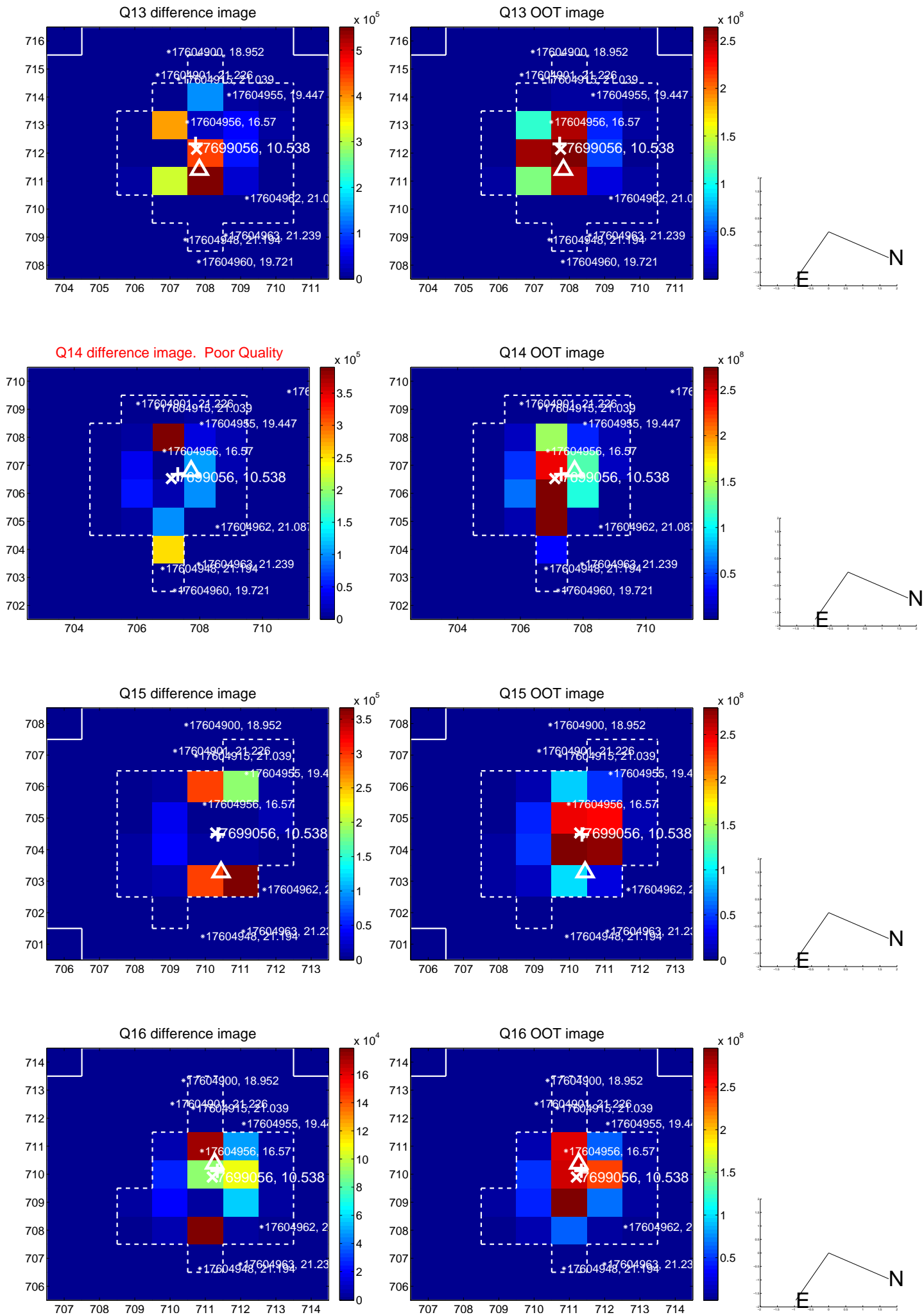
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



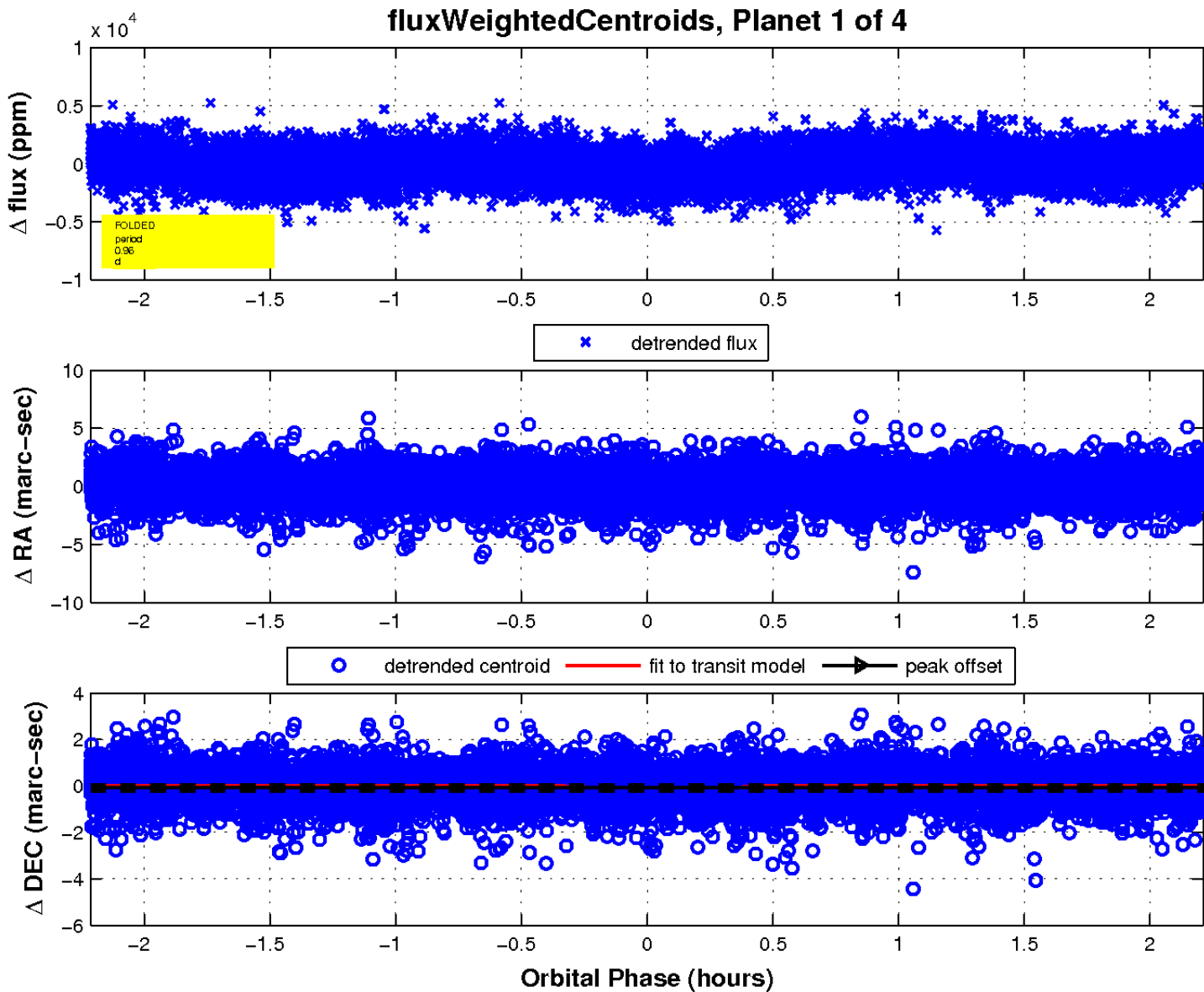
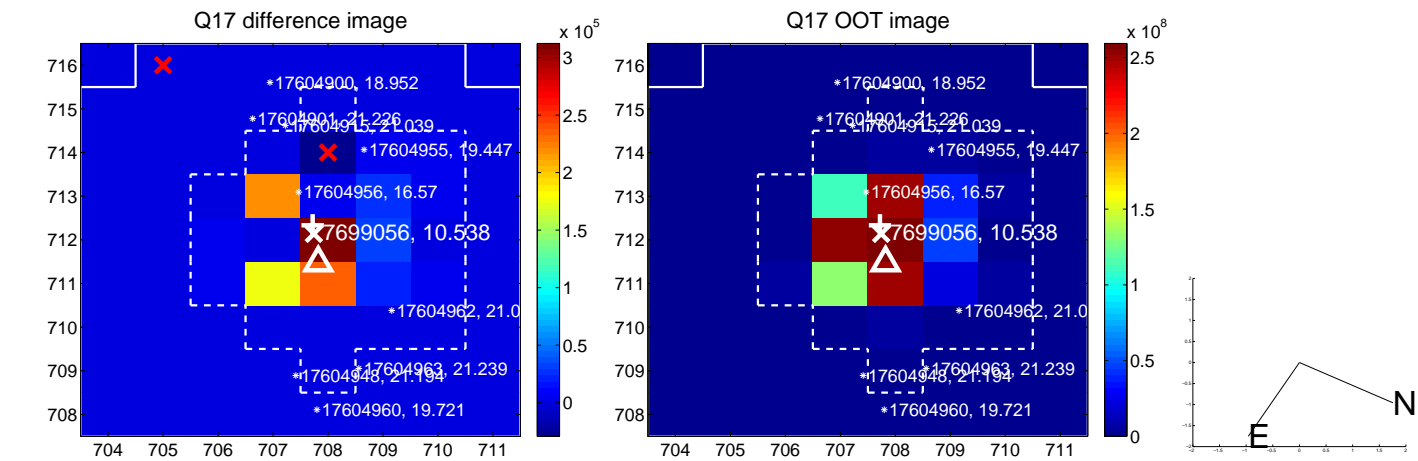
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

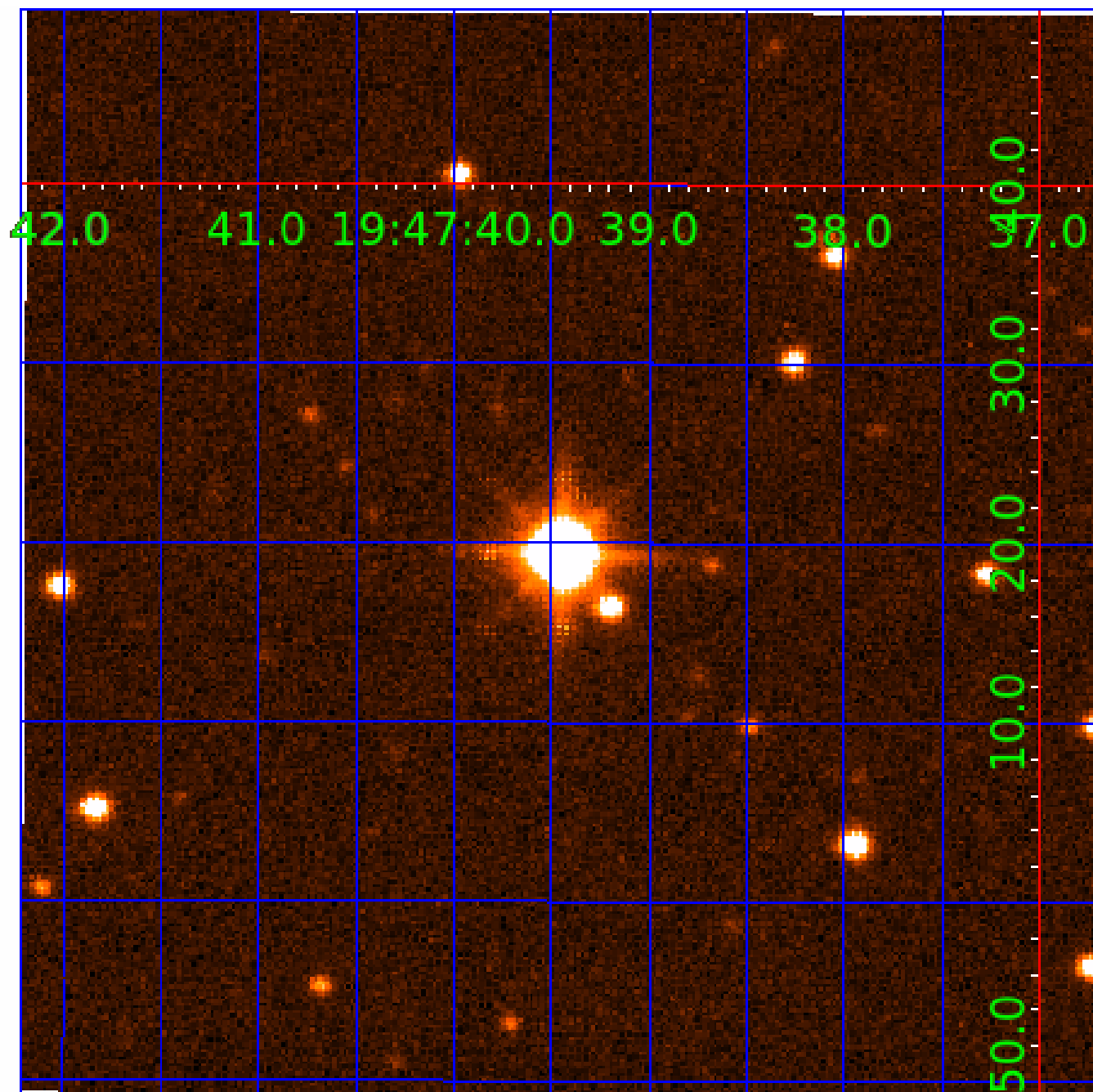


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007699056

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})
007699056-01	OBS	No	0.960276	131.807706	783.0	0.738	14.7	24.3	3.28	7655	9.68	62417.75
007699056-02	OBS	No	0.960257	132.260561	101.6	2.623	15.1	6.3	3.28	7655	3.85	62419.41
007699056-03	OBS	No	0.960276	131.535555	771.8	0.785	12.6	23.6	3.28	7655	10.82	62417.75
007699056-04	OBS	No	0.960285	132.010336	767.6	0.862	13.9	25.0	3.28	7655	10.73	62416.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007699056-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
007699056-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007699056-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007699056-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

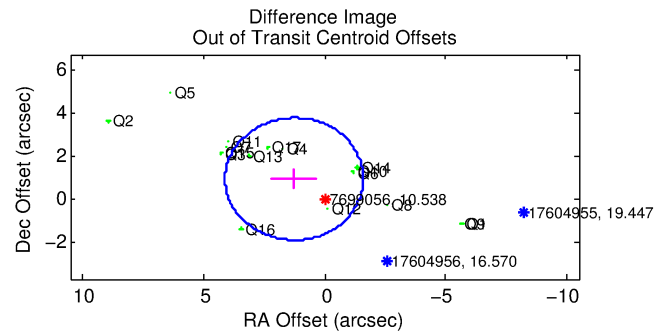
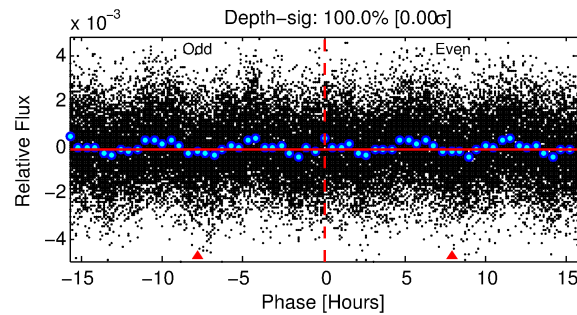
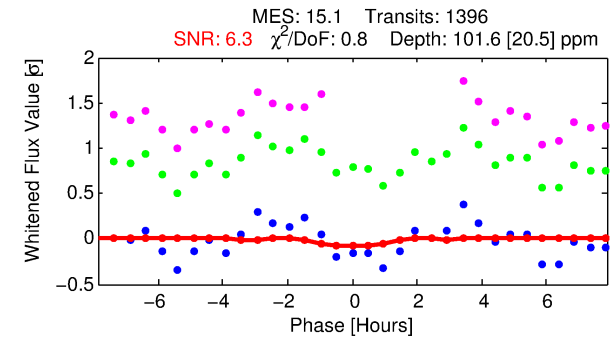
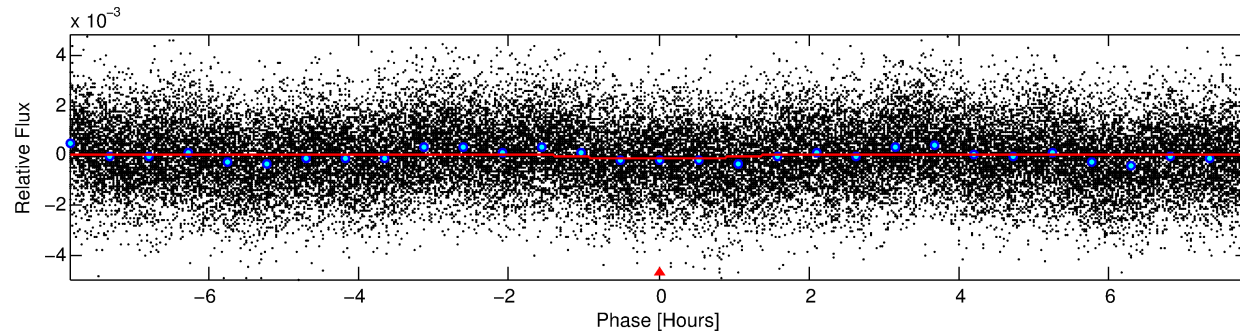
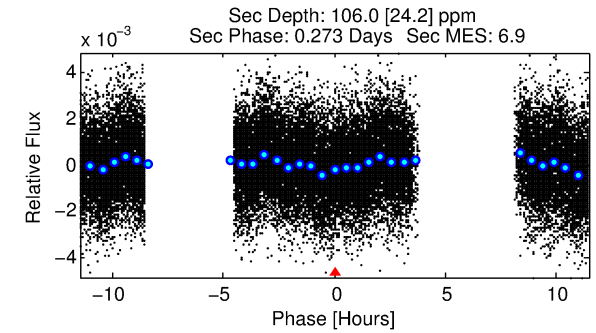
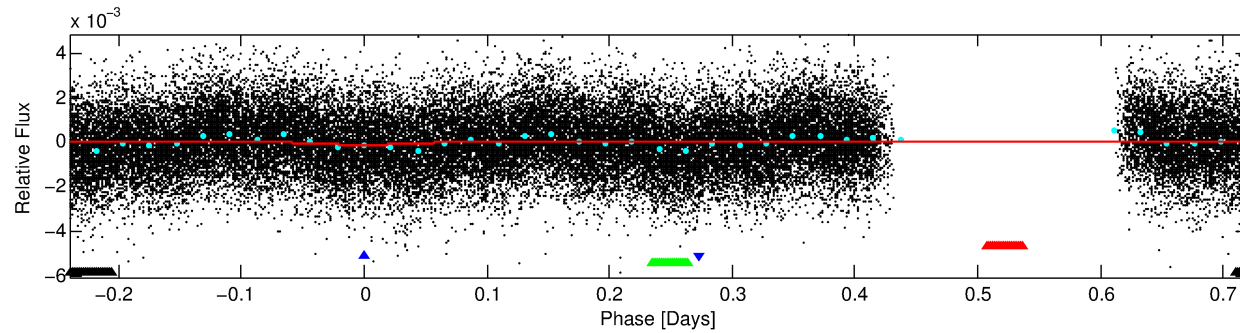
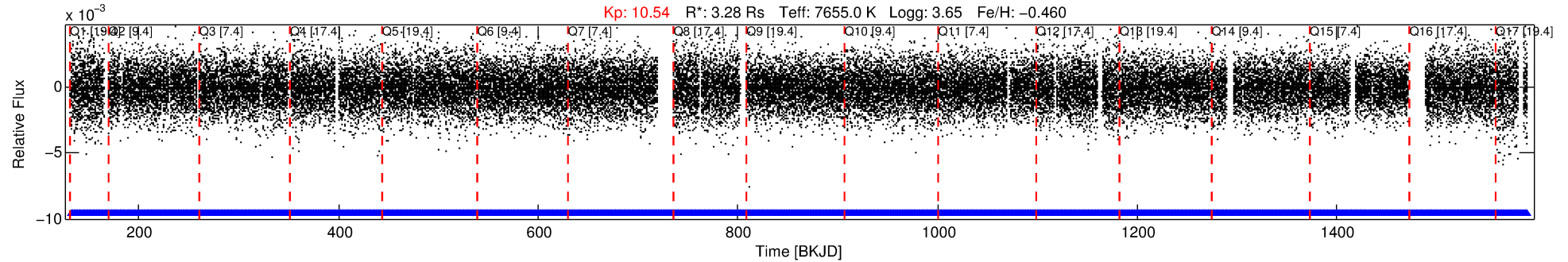
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007699056-02

No Significant Match Found

DV One-Page Summary

KIC: 7699056 Candidate: 2 of 4 Period: 0.960 d



DV Fit Results:

Period = 0.96026 [0.00002] d
Epoch = 132.2606 [0.0058] BKJD
Rp/R* = 0.0108 [0.0109]
a/R* = 1.59 [5.97]
b = 0.90 [1.33]
Seff = 62419.41 [56851.82]
Teq = 4030 [918] K
Rp = 3.85 [4.43] Re
a = 0.0230 [0.0125] AU
Ag = 2.08 [4.65] [0.23σ]
Teffp = 7485 [3841] K [0.87σ]

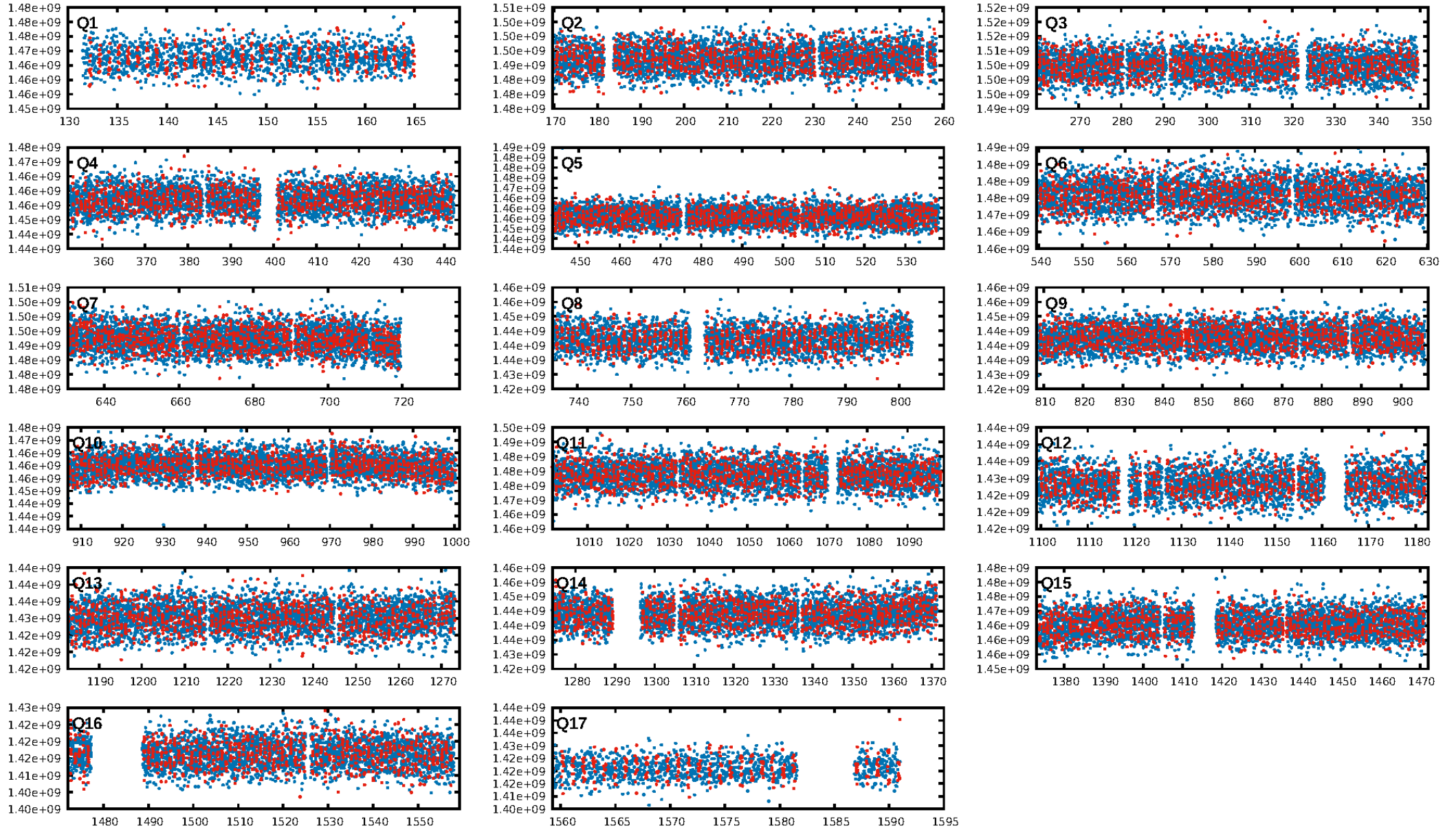
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1332/1332]
GhostDiagnostic-chr: 1.449
Centroid-sig: N/A
Centroid-so: 0.681 arcsec [2.97σ]
OotOffset-rm: 1.559 arcsec [1.64σ]
KicOffset-rm: 1.624 arcsec [1.80σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.24 [4/17]
DiffImageOverlap-fno: 0.00 [0/17]

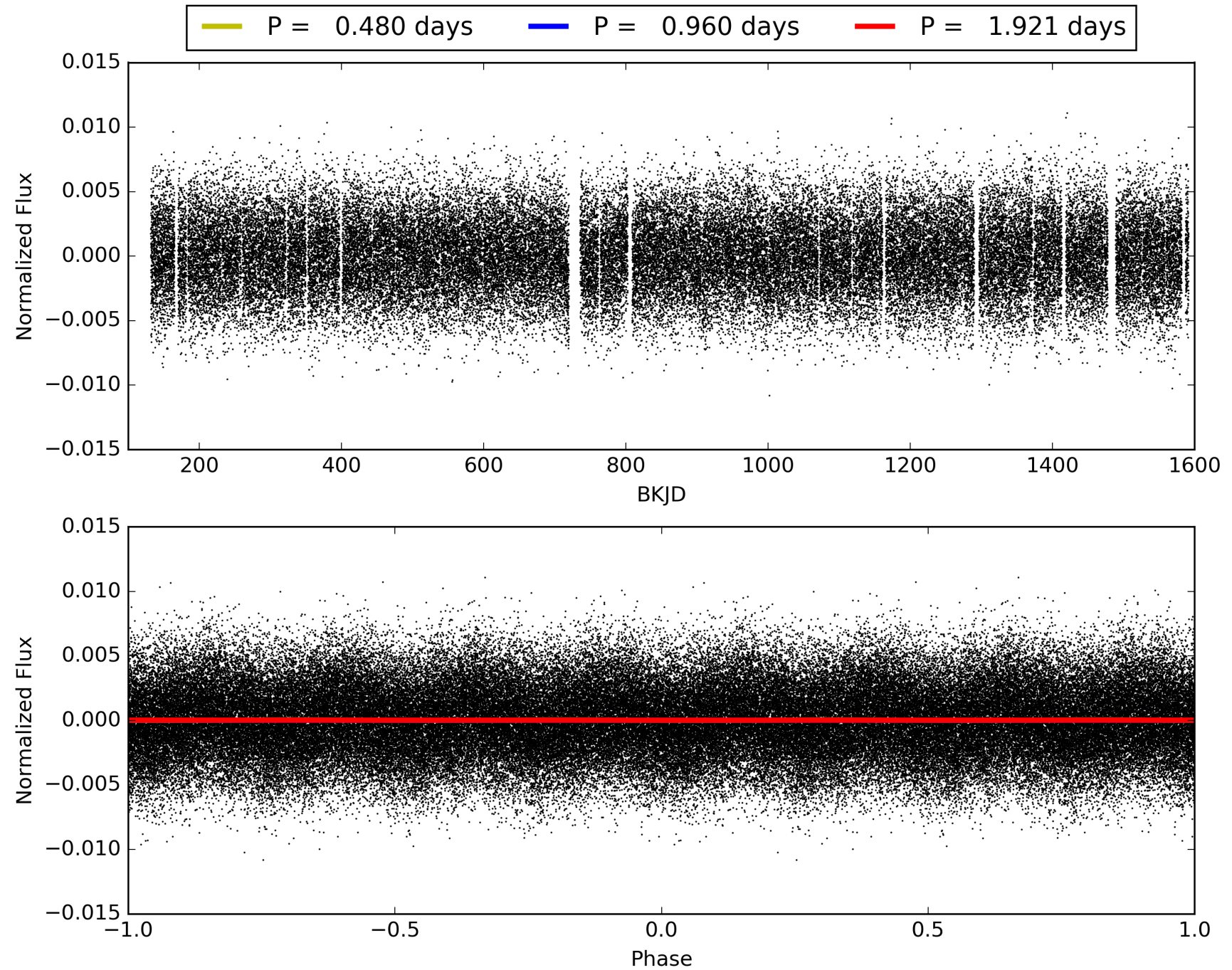
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007699056-02, PDC Light Curves

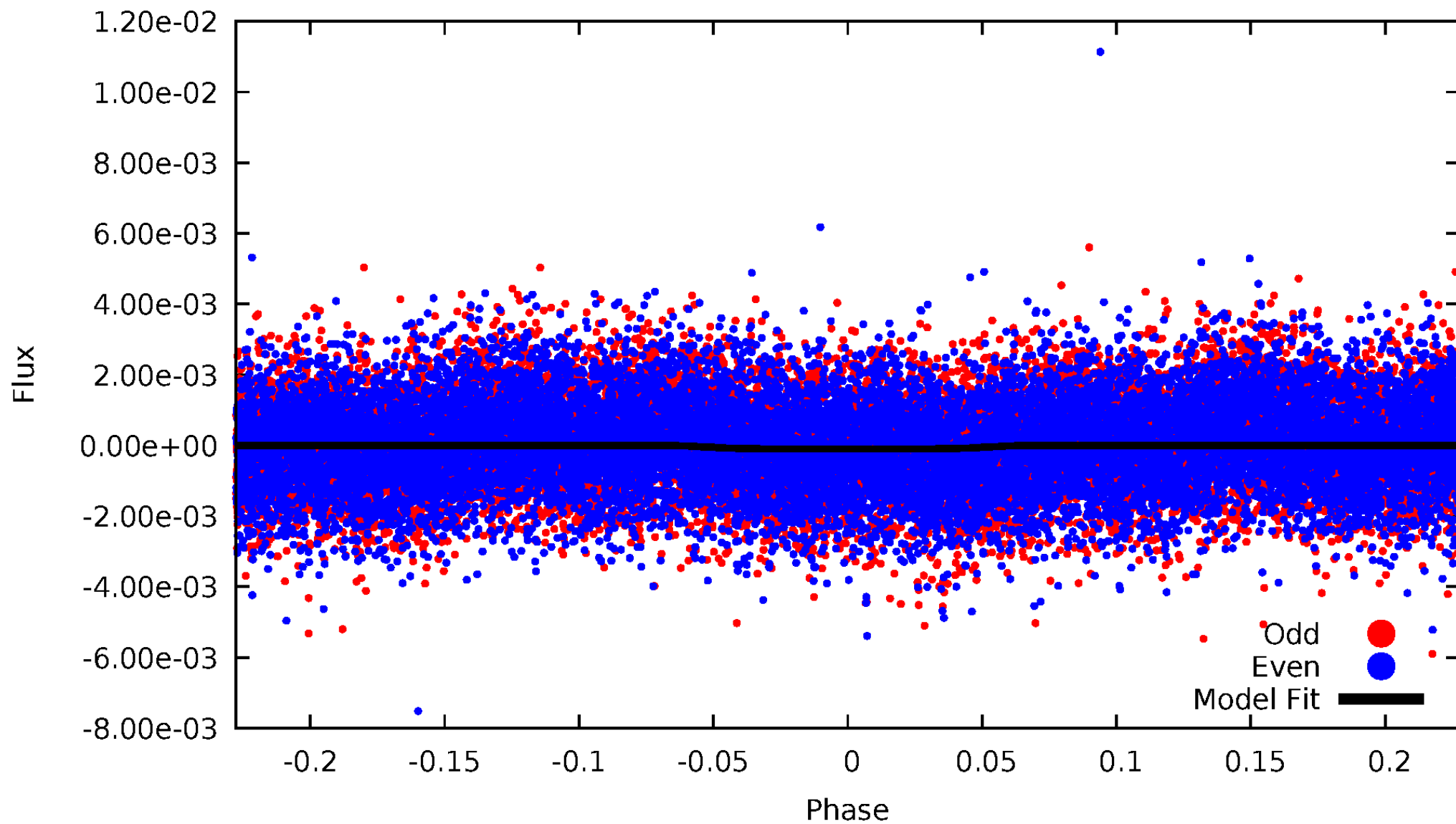


TCE 007699056-02



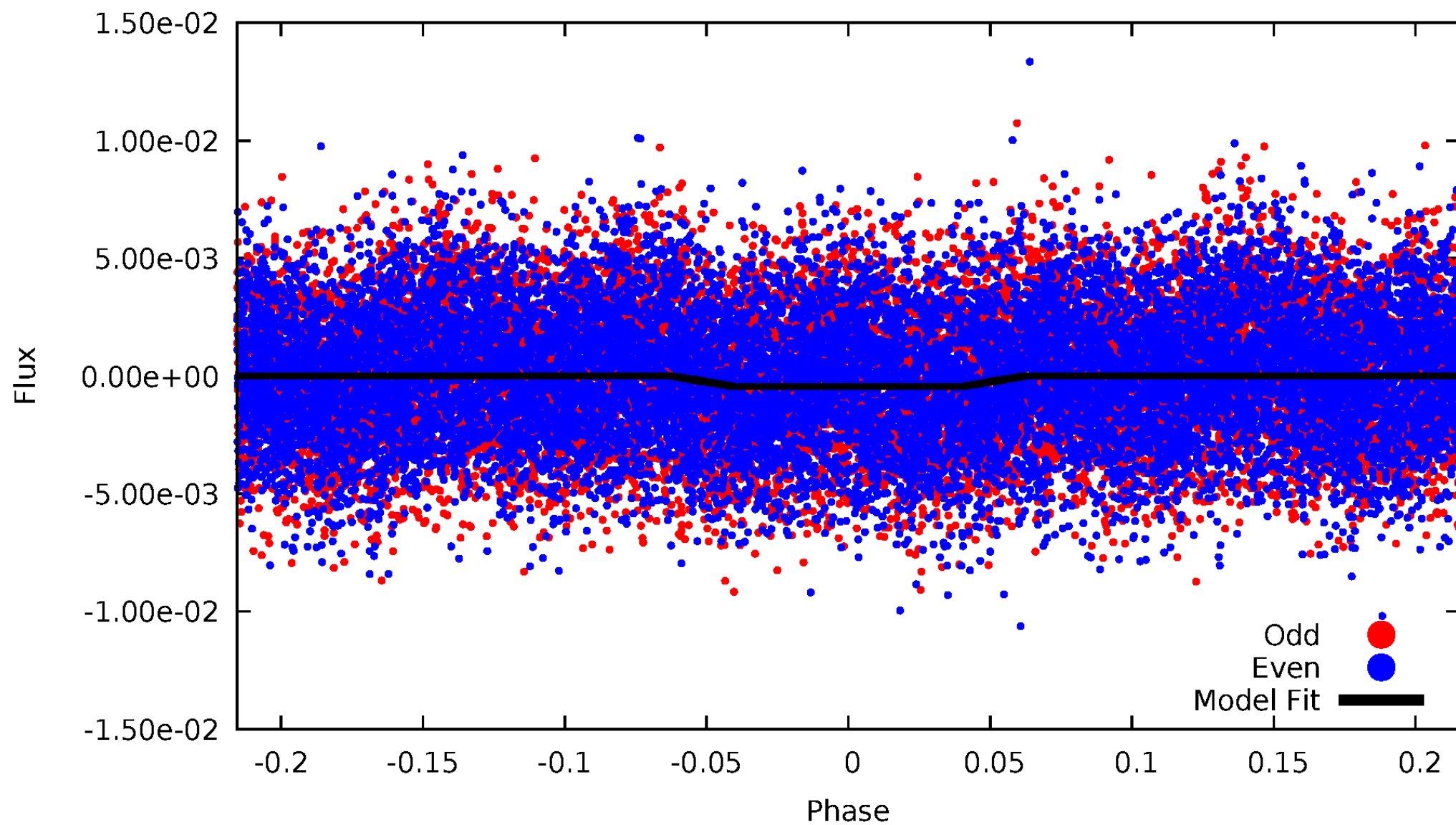
DV Odd/Even

TCE 007699056-02



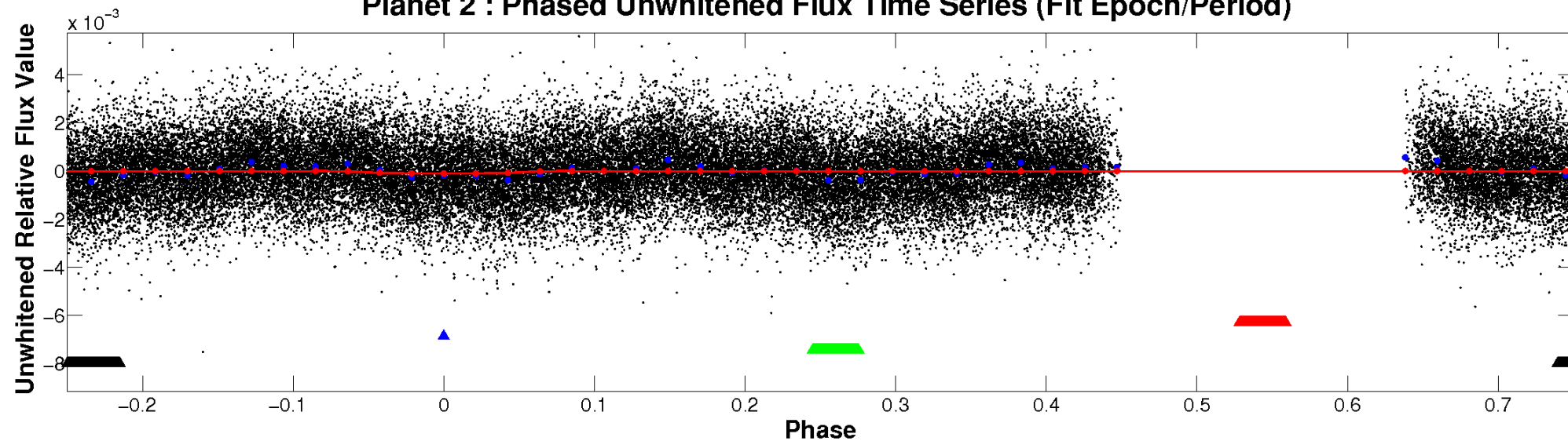
ALT Odd/Even

TCE 007699056-02

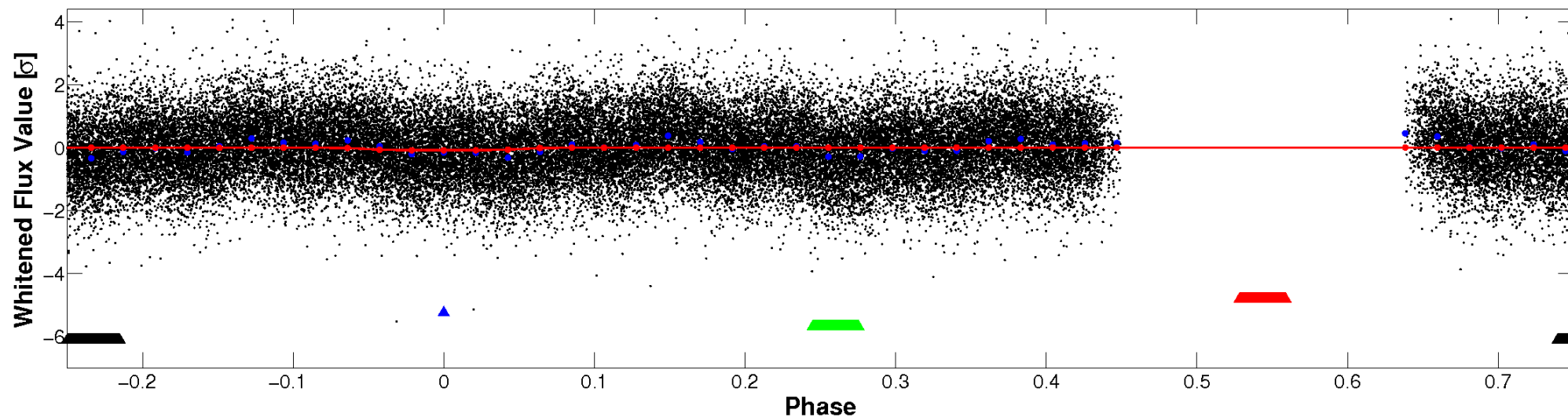


Non-Whitened Vs. Whitened Light Curve

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

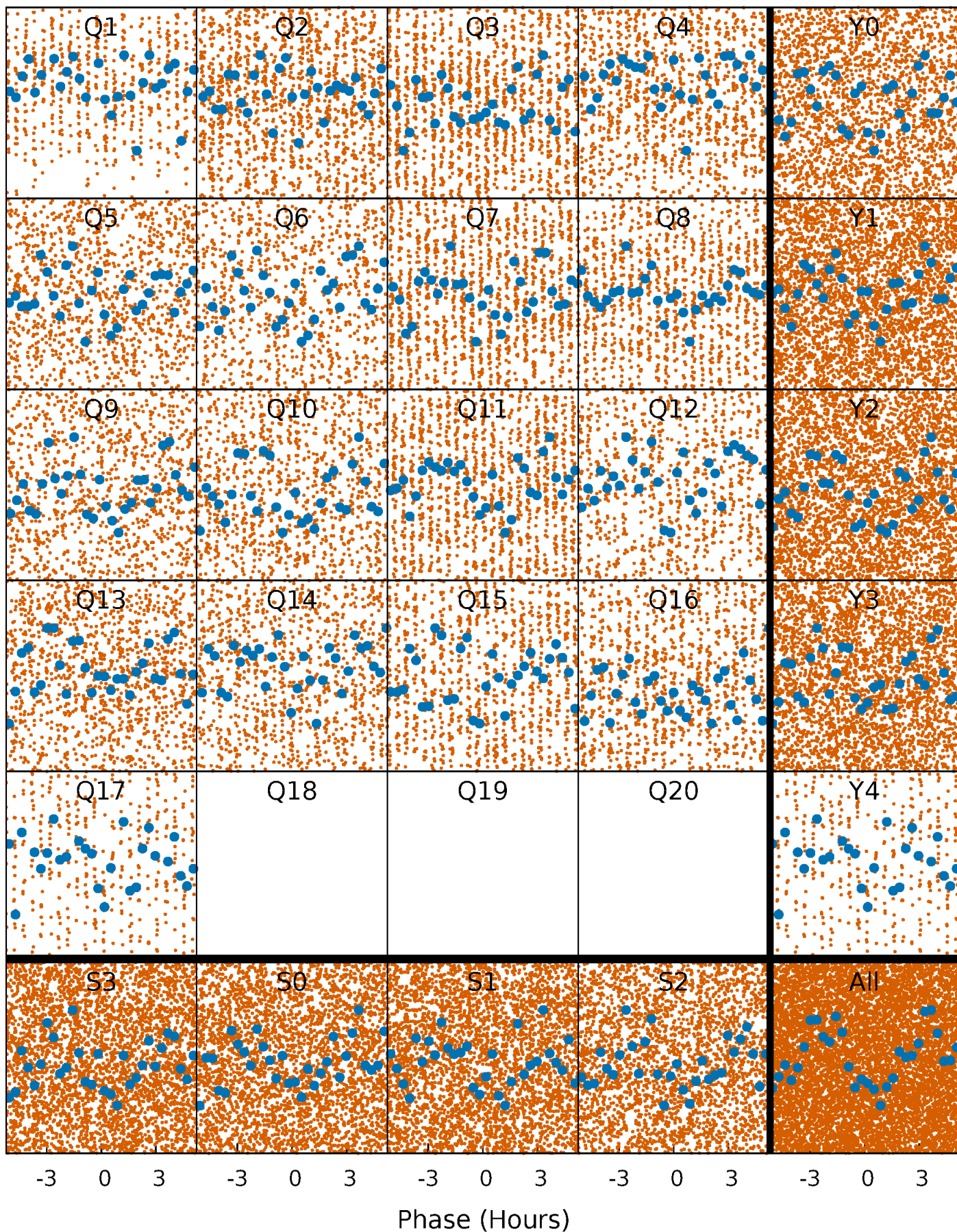


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



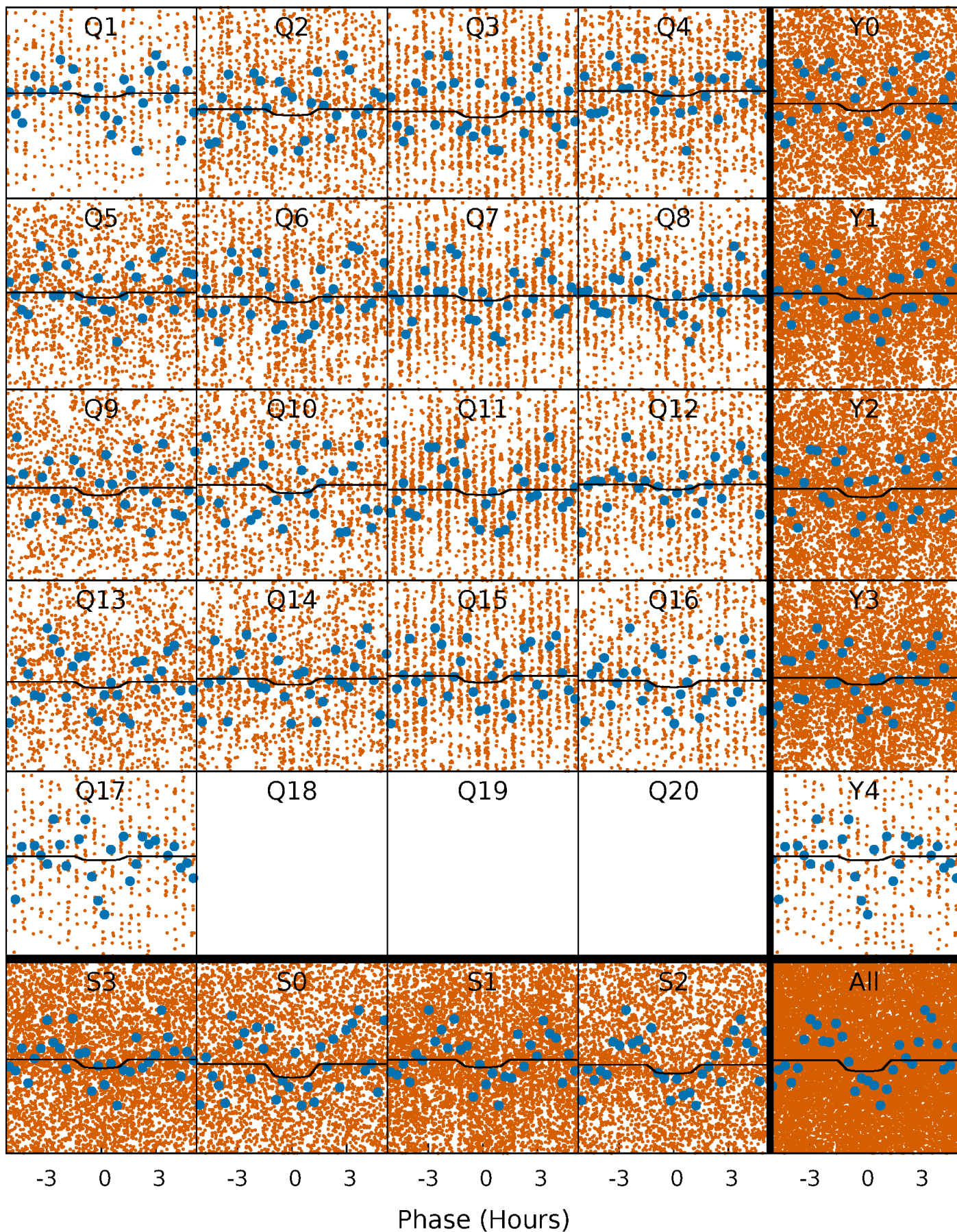
PDC Quarter-Phased Transit Curves

TCE 007699056-02 P= 0.960257 Days $T_0=132.260561$ (BKJD)



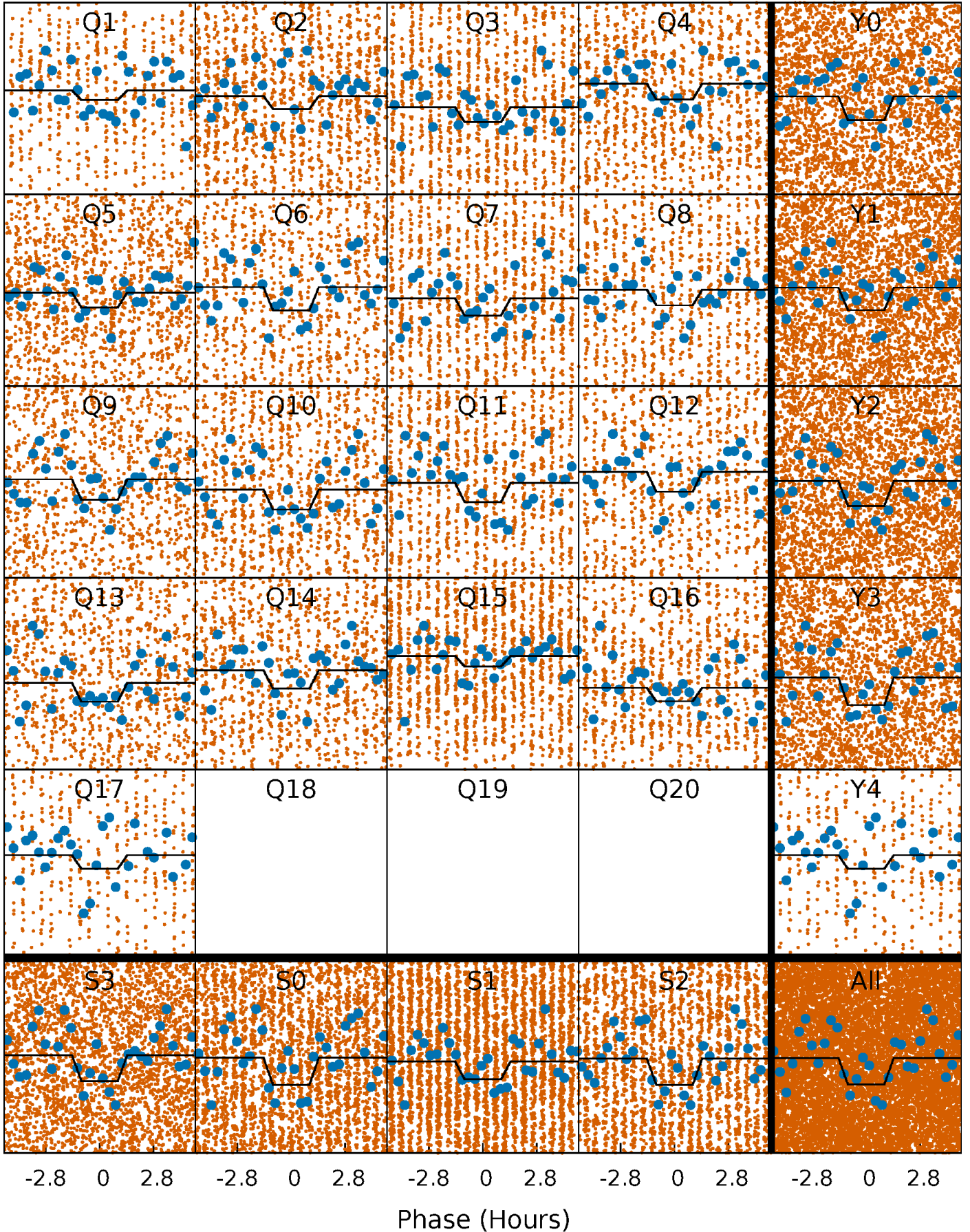
DV Quarter-Phased Transit Curves

TCE 007699056-02 P= 0.960257 Days $T_0=132.260561$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

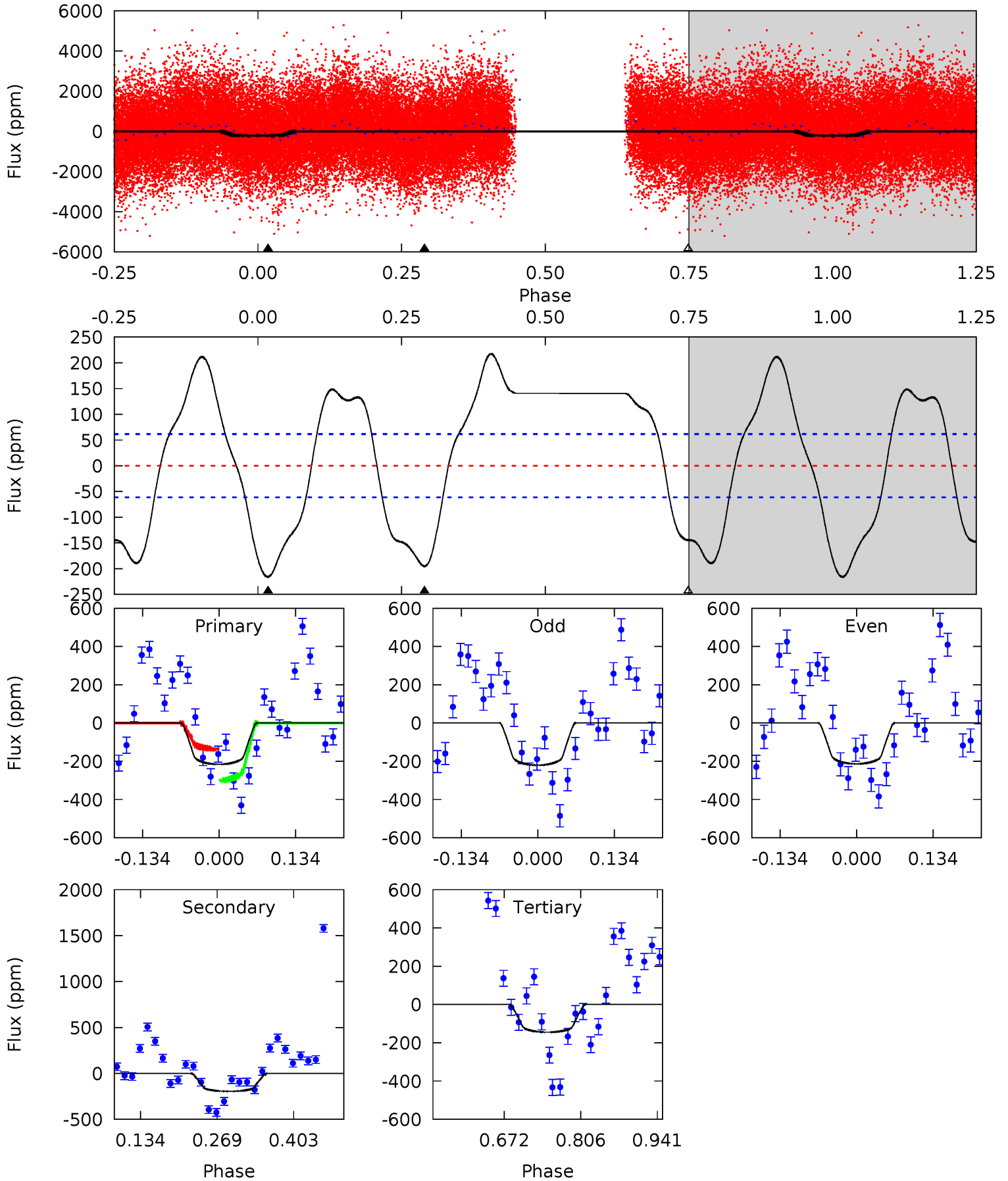
TCE 007699056-02 P= 0.960279 Days $T_0=132.256027$ (BKJD)



DV Model-Shift Uniqueness Test

007699056-02, P = 0.960257 Days, E = 131.300304 Days

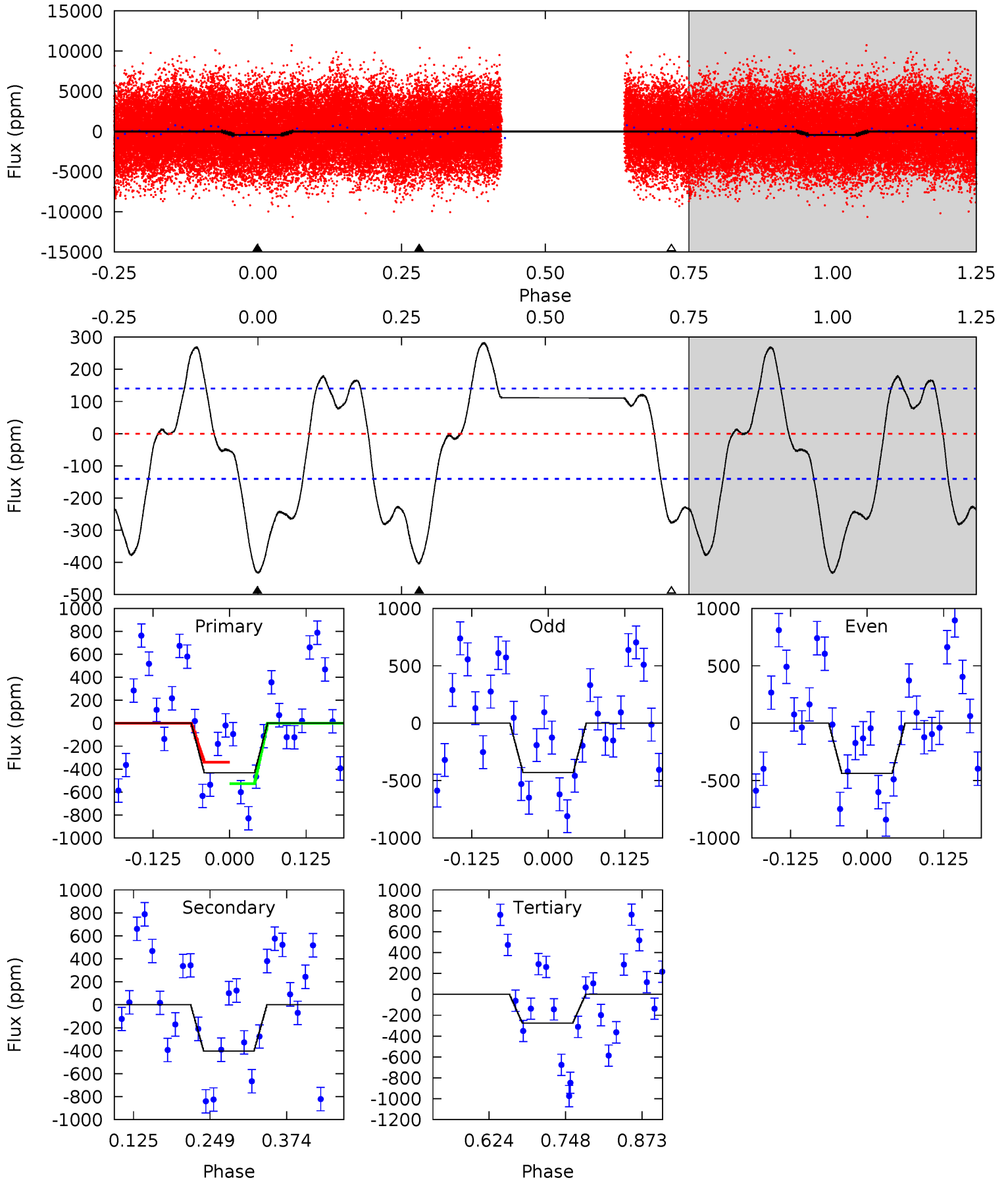
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	14.3	10.6	0	4.50	1.50	8.82	5.22	15.8	3.71	14.3	0.26	1.05	0.50	6.09



Alt Model-Shift Uniqueness Test

007699056-02, P = 0.960279 Days, E = 131.295748 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	13.0	8.91	0	4.52	1.54	5.68	5.03	13.9	4.09	13.0	0.14	1.09	0.39	2.99



Stellar Parameters For KIC 007699056

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7655^{+212}_{-319}	$3.653^{+0.535}_{-0.094}$	$-0.460^{+0.250}_{-0.300}$	$3.279^{+0.310}_{-1.755}$	$1.765^{+0.163}_{-0.489}$	$0.070^{+0.490}_{-0.014}$
	+3%/-4%	+15%/-3%	+54%/-65%	+9%/-54%	+9%/-28%	+696%/-20%
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 007699056-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-195 ± 14	$4.18^{+3.64}_{-2.63}$	5513^{+322}_{-710}	7639^{+9707}_{-2302}	$3.110^{+20.512}_{-2.180}$
Alt.	-404 ± 31	$6.49^{+4.16}_{-3.29}$	5470^{+363}_{-699}	7164^{+4988}_{-1620}	$2.784^{+8.638}_{-1.734}$

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

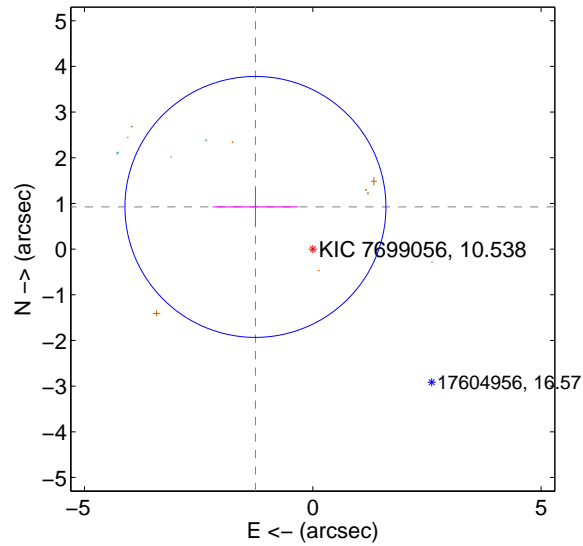
Supplemental centroid analysis for 007699056-02. **Kepler magnitude: 10.54.** Transit SNR 6.28

There are 4 quarters with good PRF difference image offsets

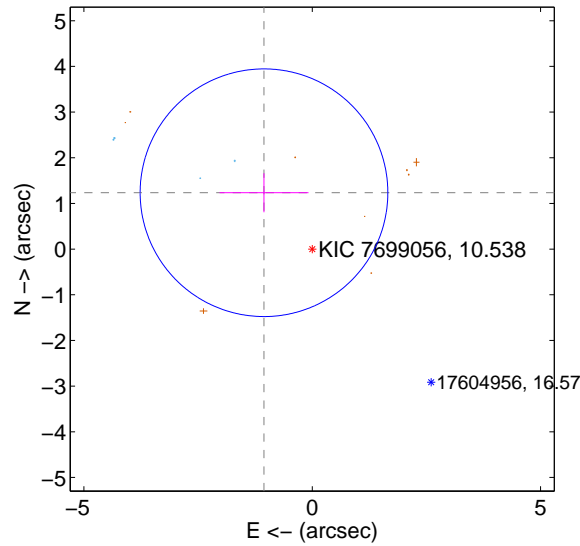
The direct PRF centroid is offset from the target star catalog position by about 0.78 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.559 ± 0.952	1.64	1.256 ± 0.937	0.924 ± 0.411
PRF-fit source offset from KIC position	1.624 ± 0.904	1.80	1.056 ± 0.974	1.234 ± 0.428
photometric centroid source offset	0.68 ± 0.23	2.97	0.56 ± 0.26	0.39 ± 0.15

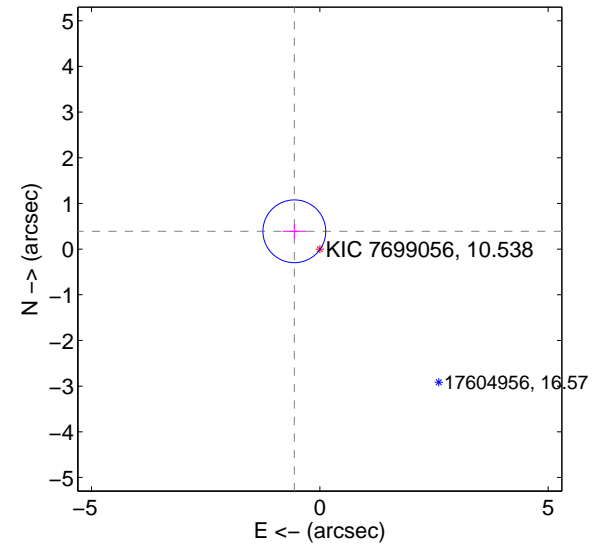
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

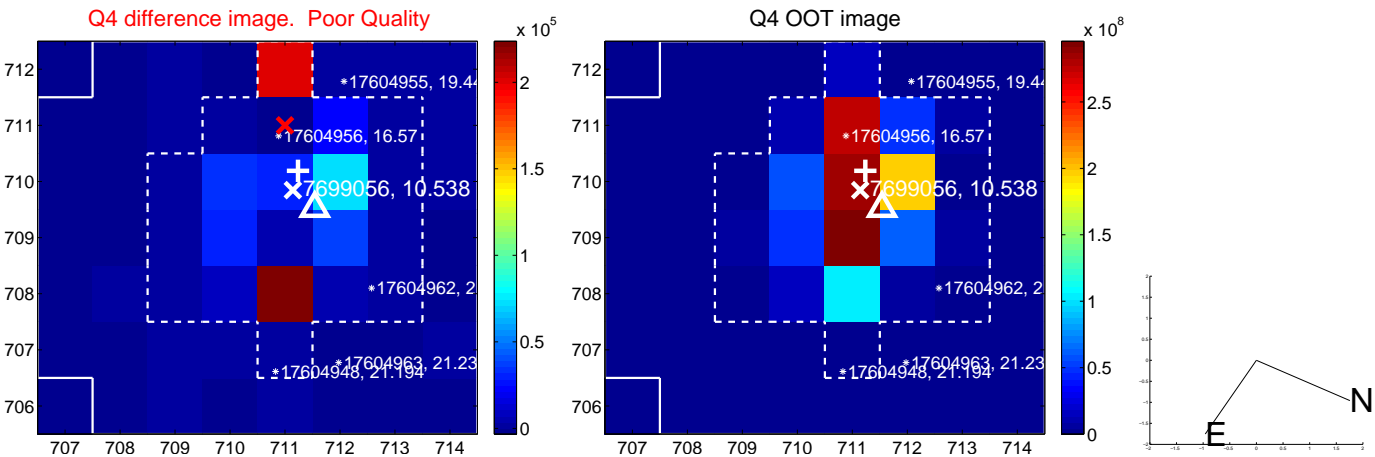
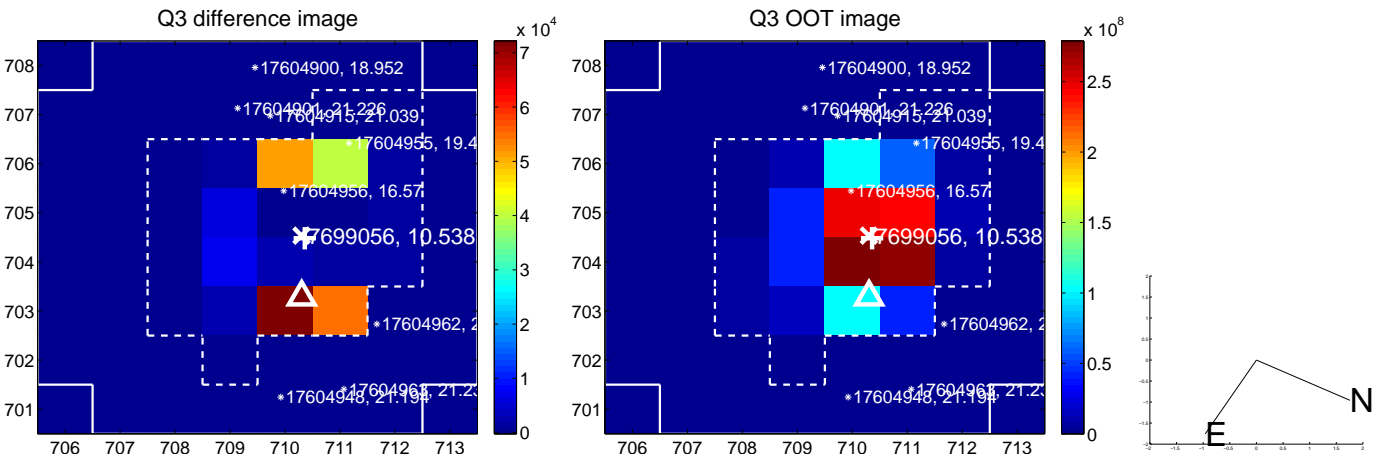
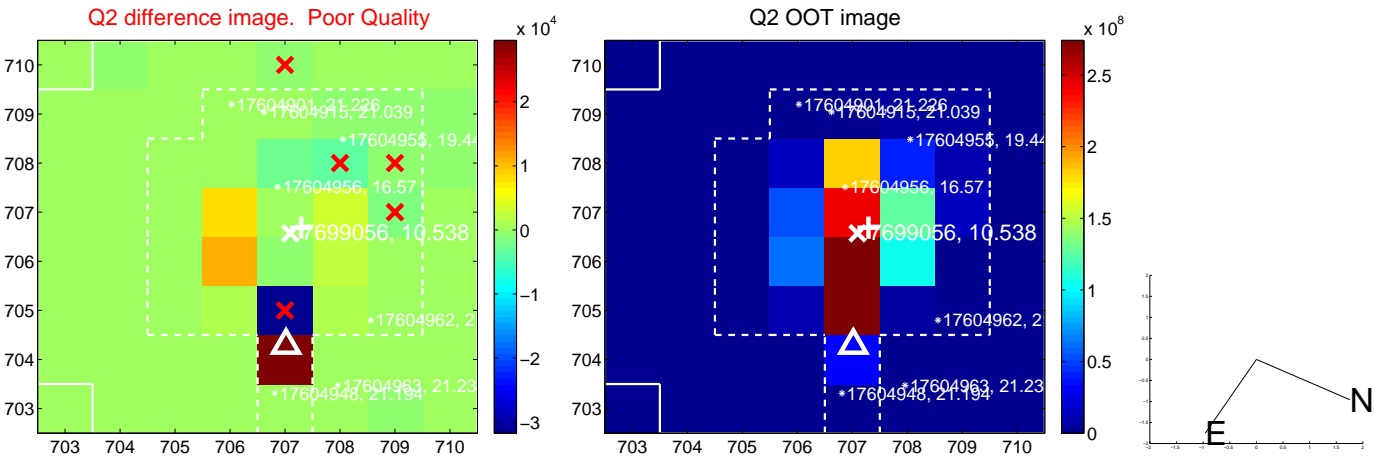
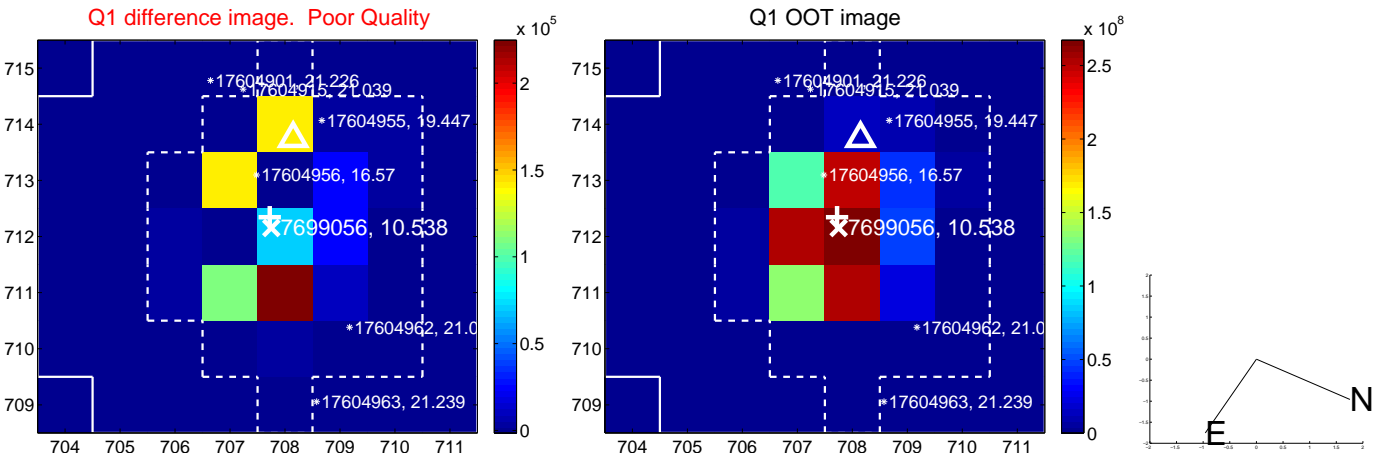


offset from photometric centroids

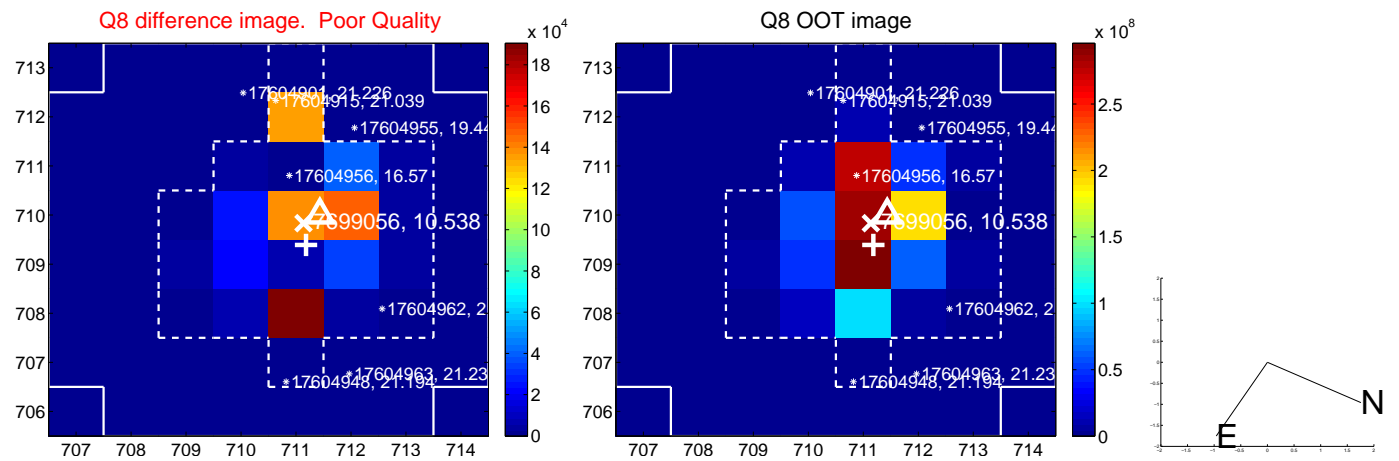
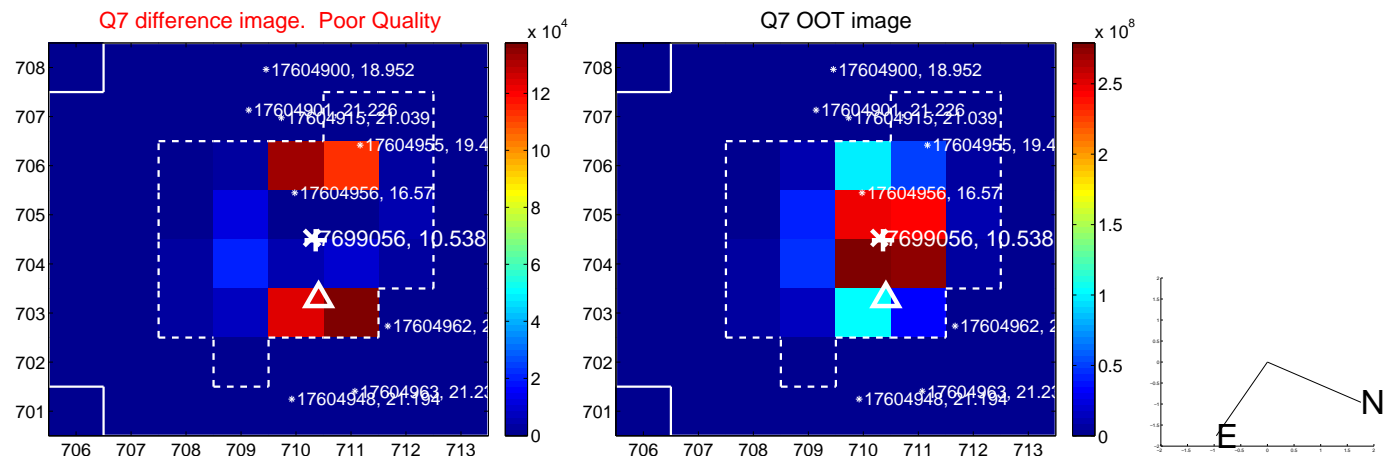
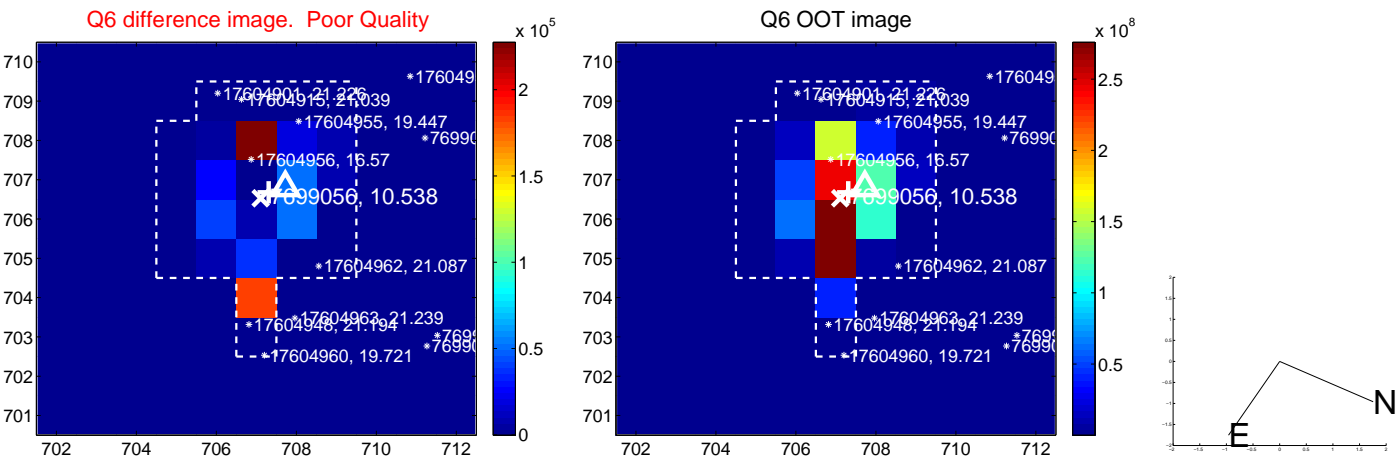
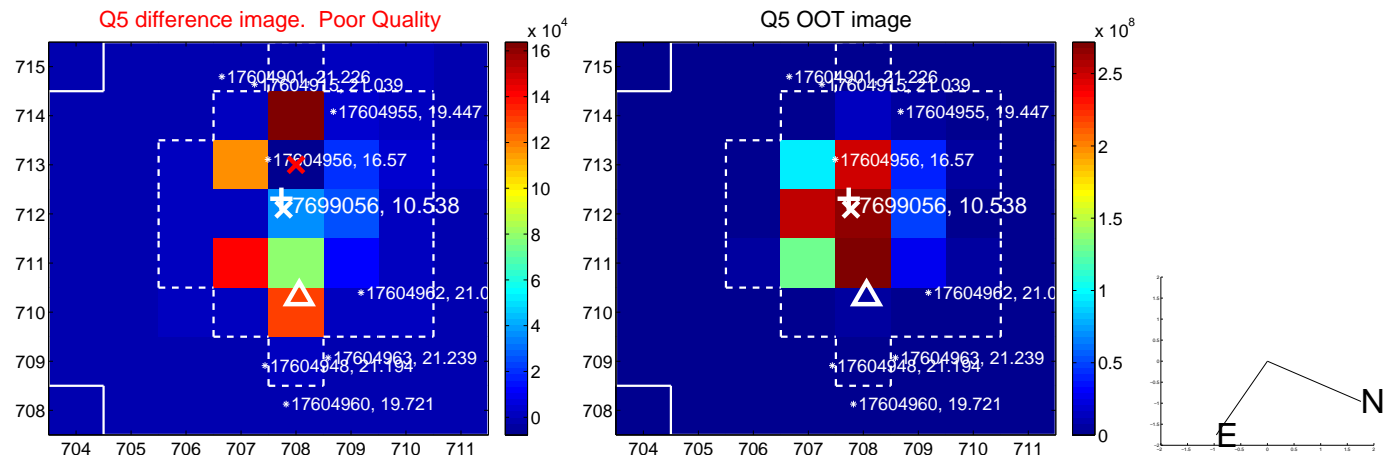


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

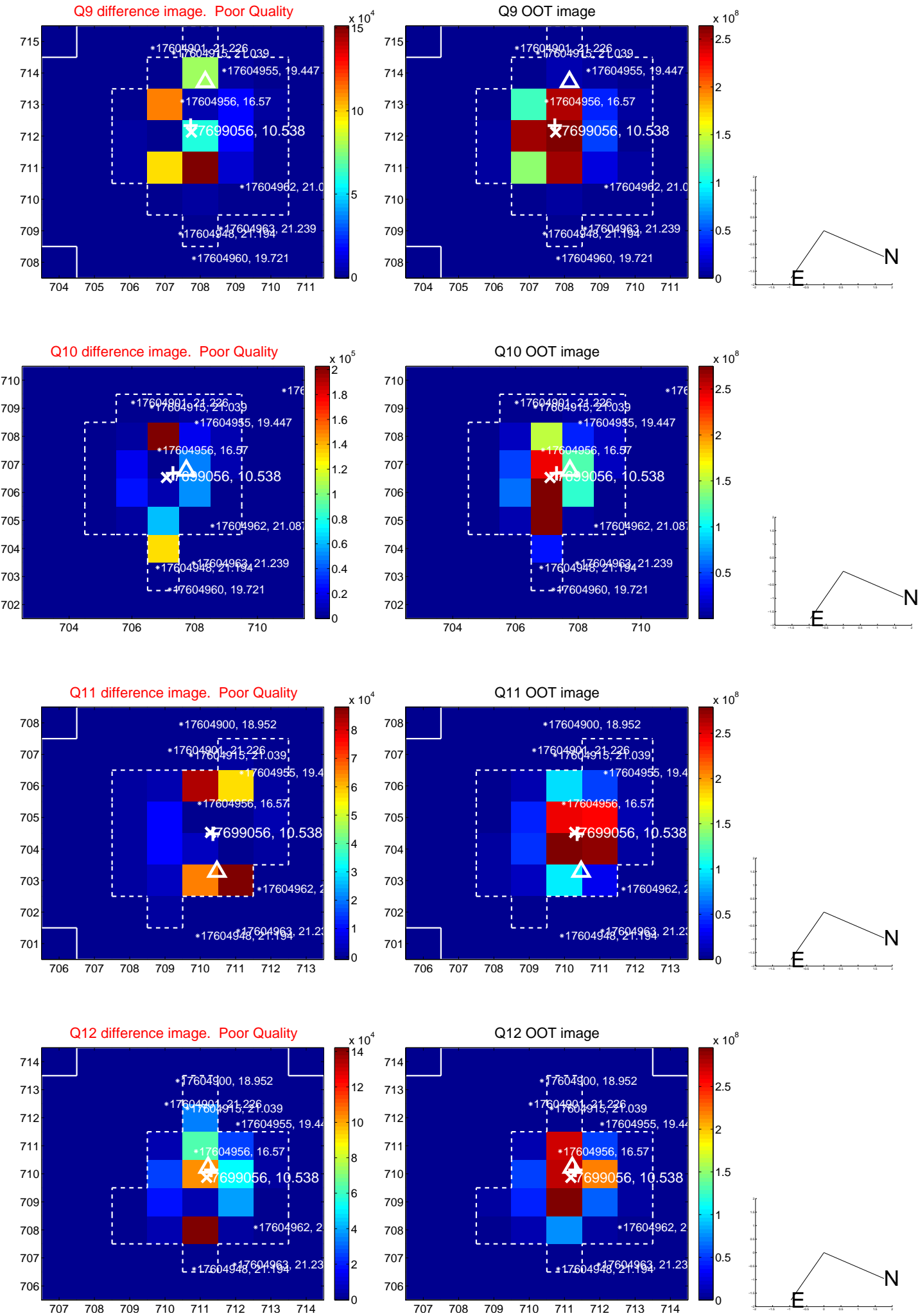
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



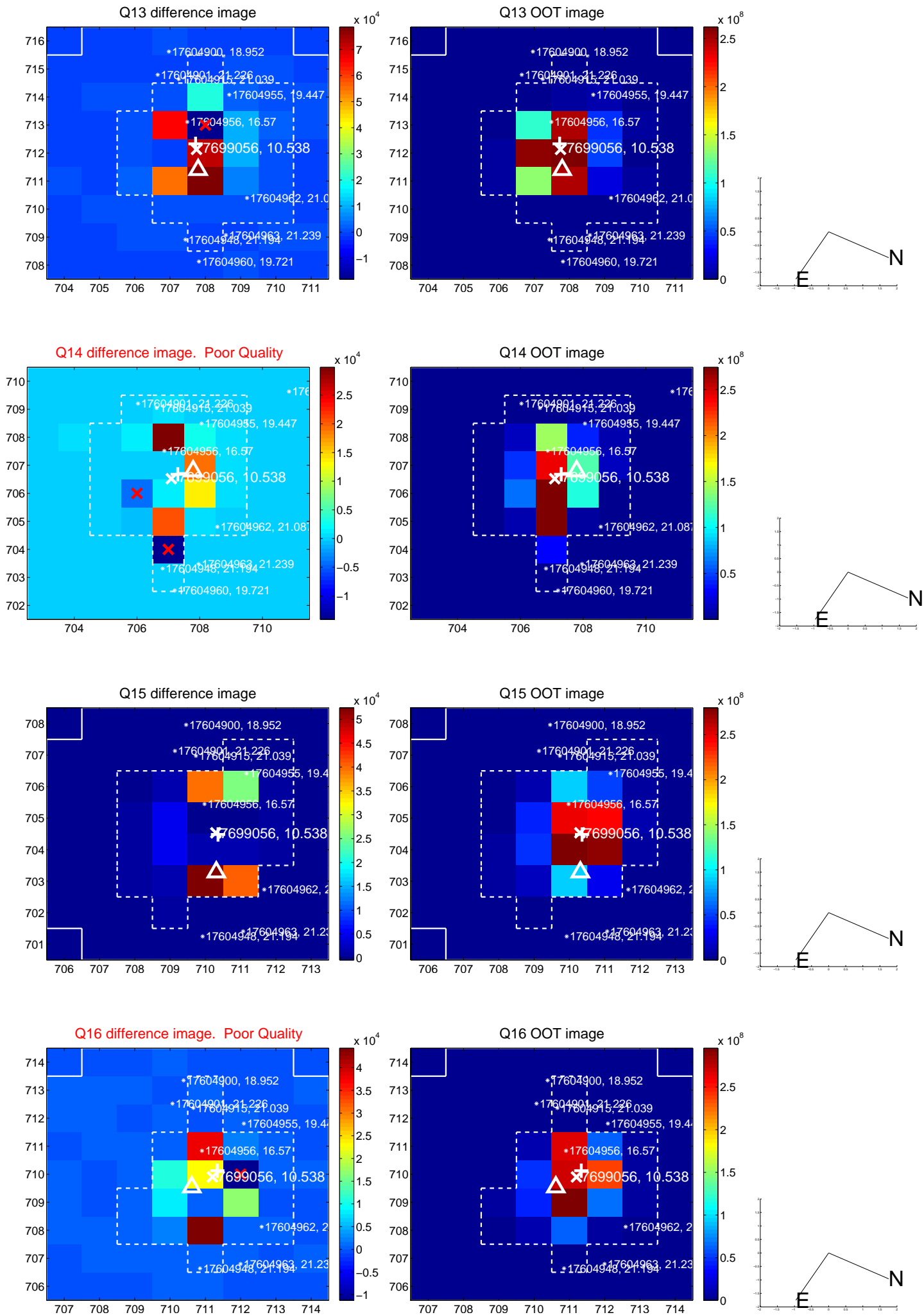
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



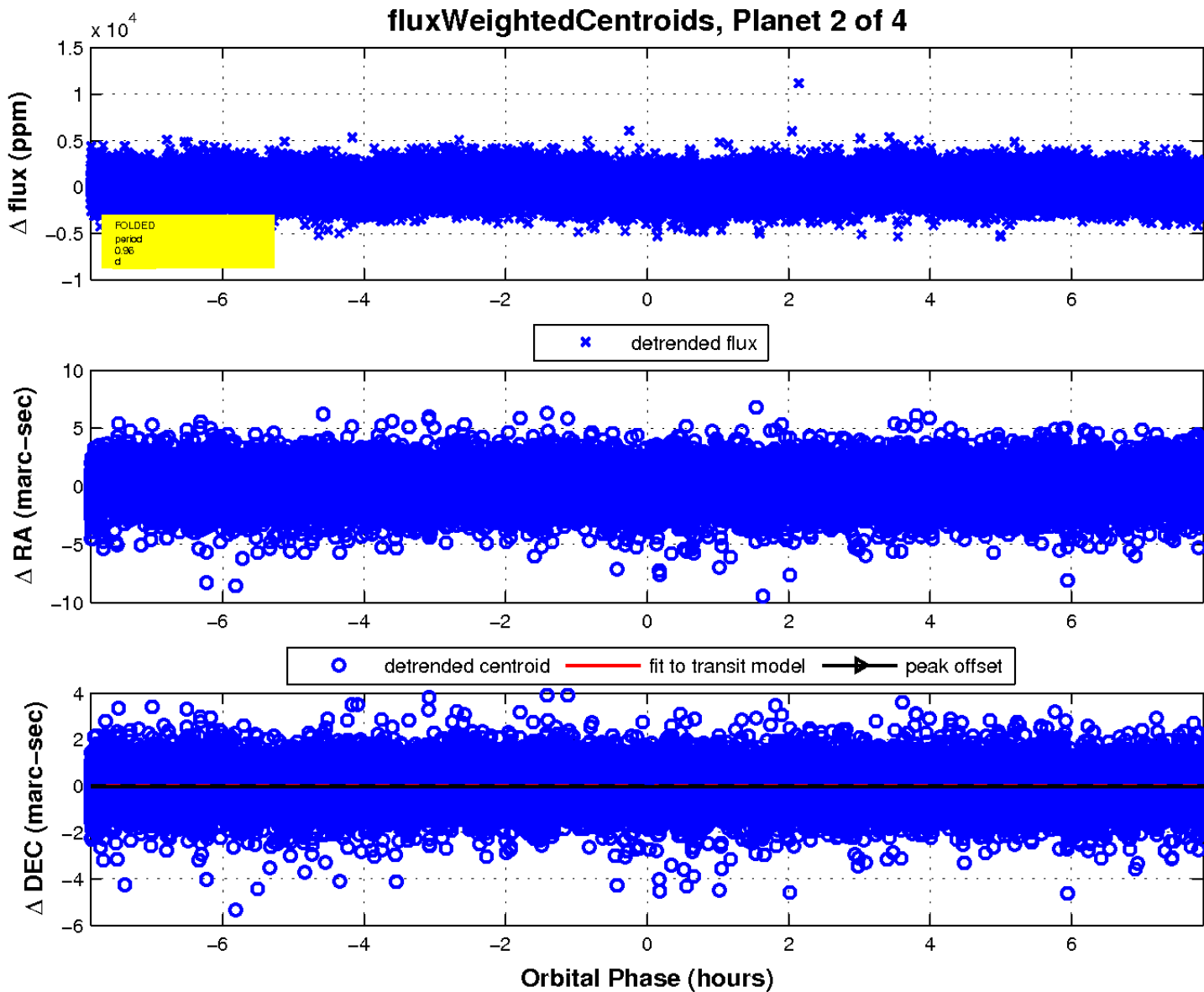
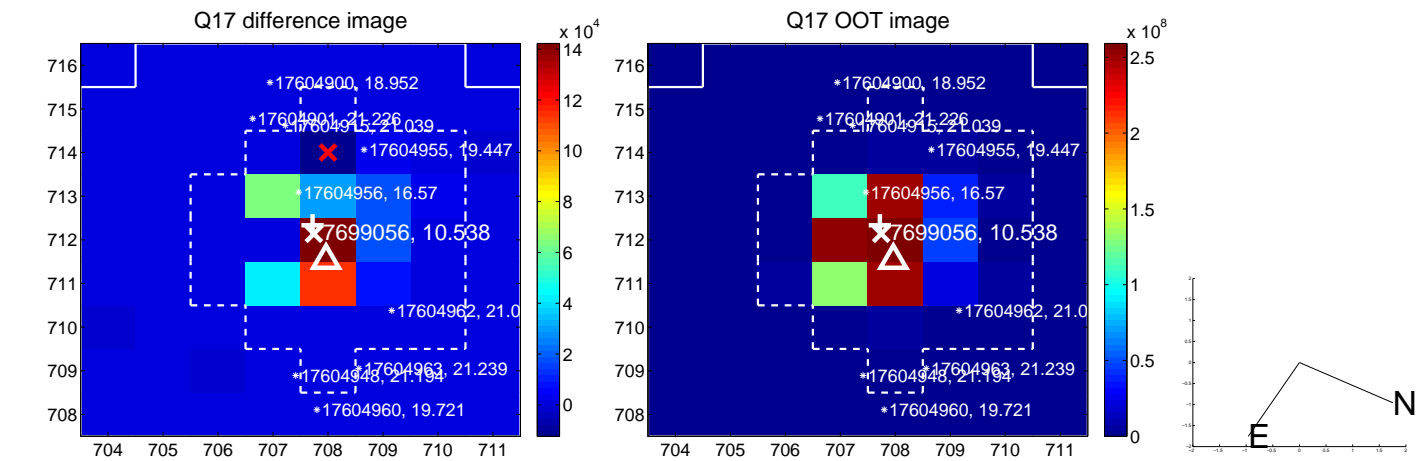
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

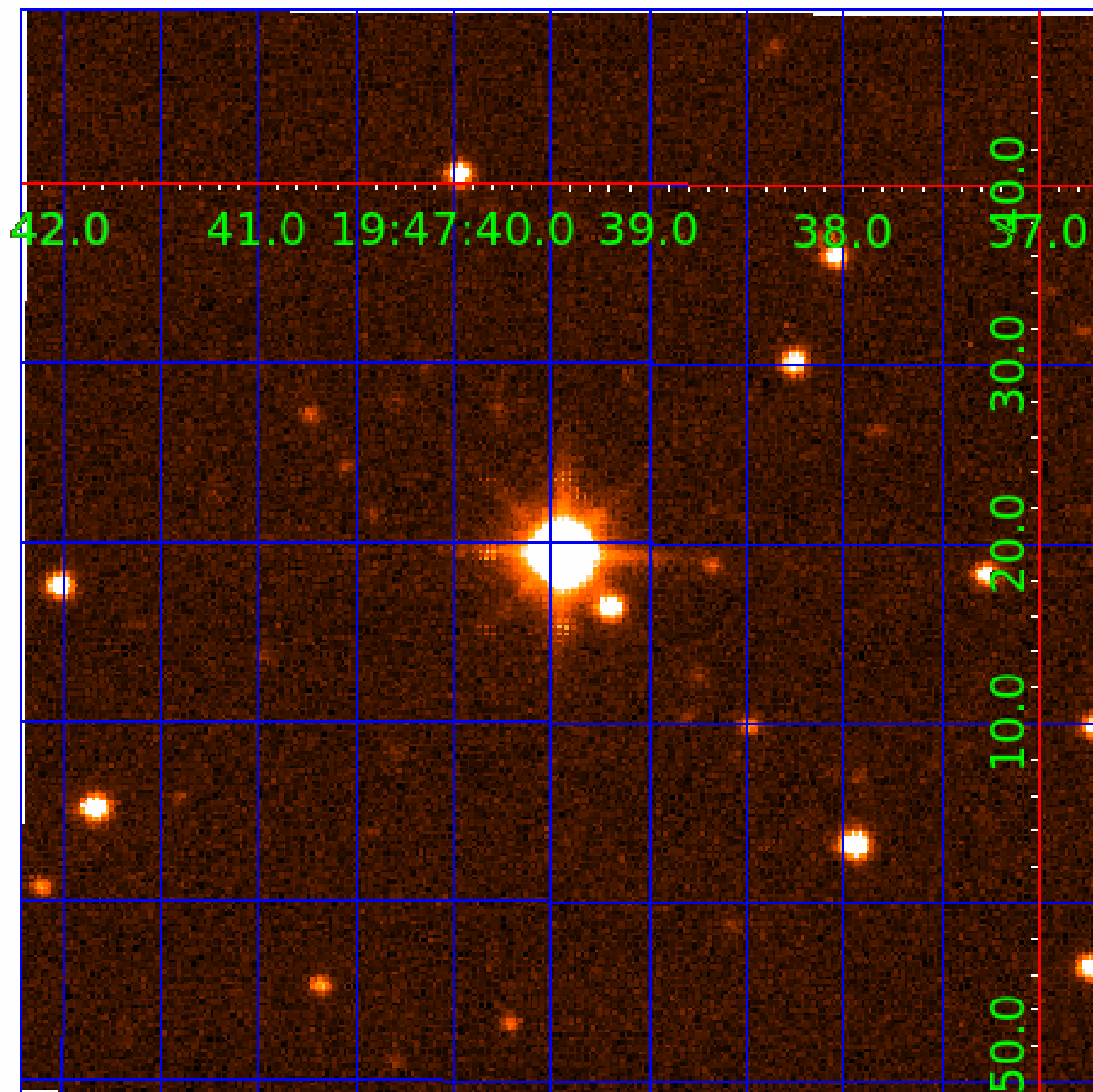


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007699056

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})
007699056-01	OBS	No	0.960276	131.807706	783.0	0.738	14.7	24.3	3.28	7655	9.68	62417.75
007699056-02	OBS	No	0.960257	132.260561	101.6	2.623	15.1	6.3	3.28	7655	3.85	62419.41
007699056-03	OBS	No	0.960276	131.535555	771.8	0.785	12.6	23.6	3.28	7655	10.82	62417.75
007699056-04	OBS	No	0.960285	132.010336	767.6	0.862	13.9	25.0	3.28	7655	10.73	62416.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007699056-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
007699056-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007699056-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007699056-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

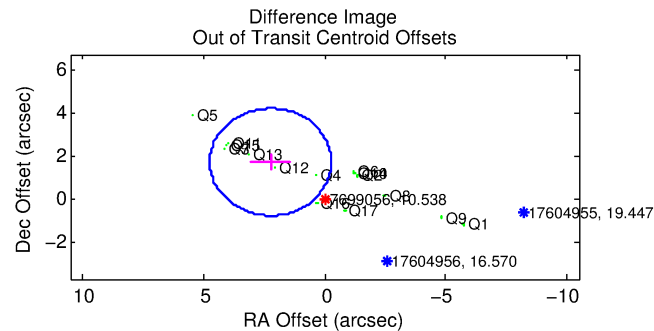
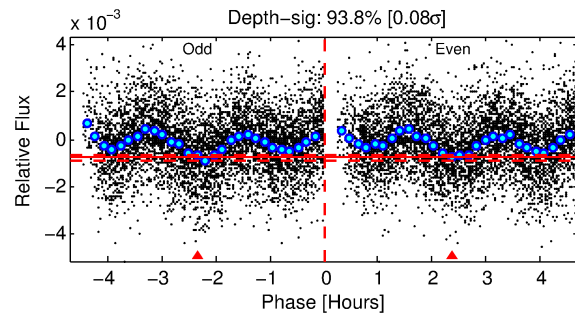
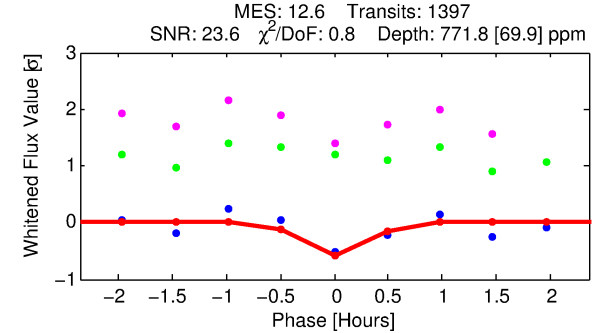
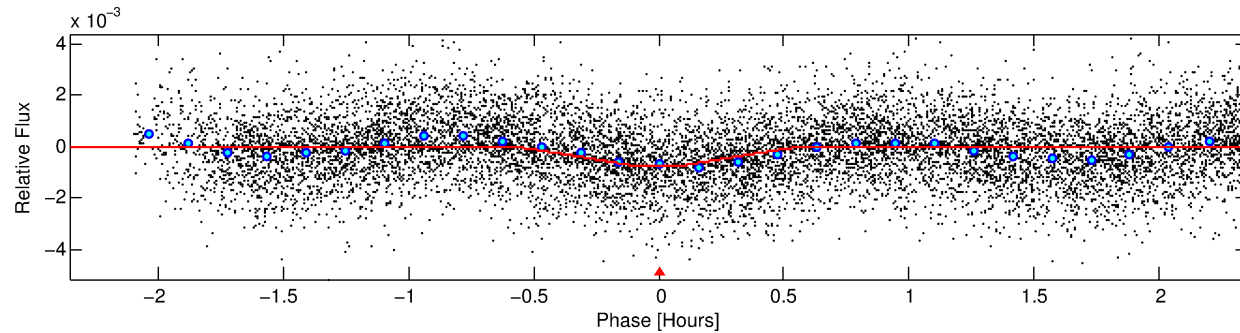
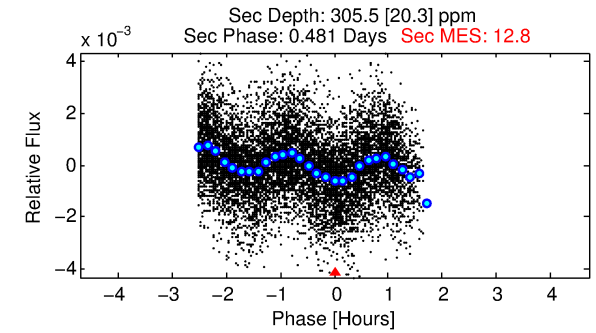
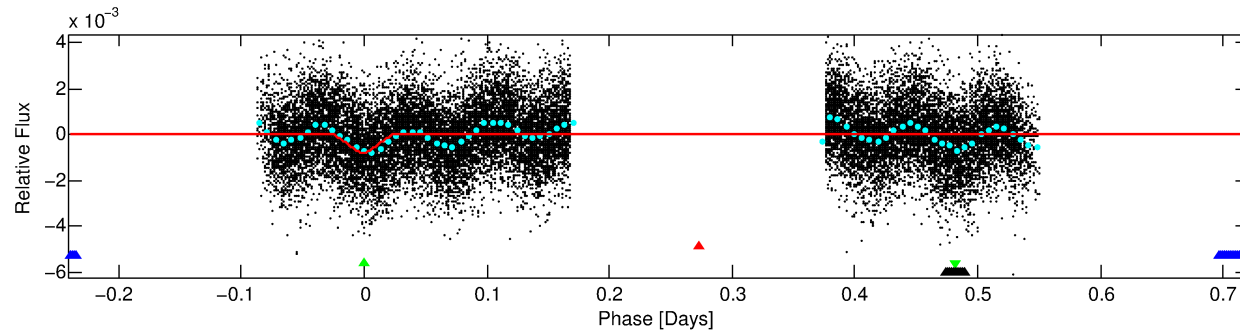
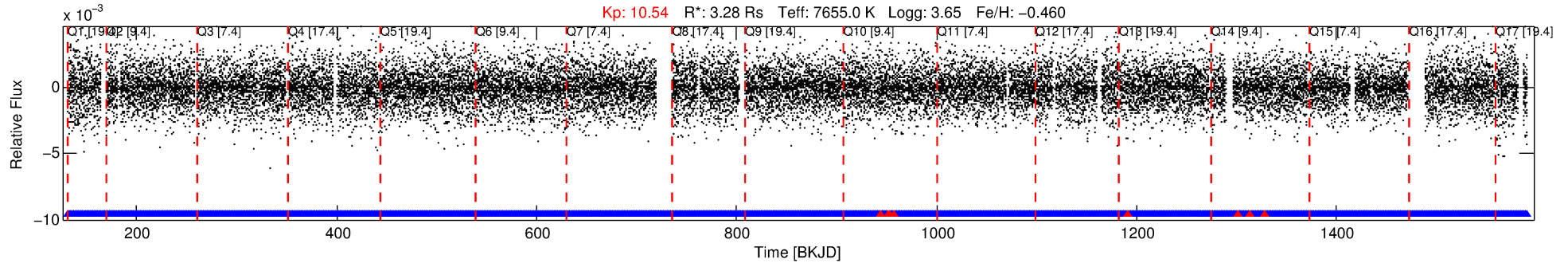
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007699056-03

No Significant Match Found

DV One-Page Summary

KIC: 7699056 Candidate: 3 of 4 Period: 0.960 d



DV Fit Results:

Period = 0.96028 [0.00000] d
Epoch = 131.5356 [0.0006] BKJD
 R_p/R^* = 0.0302 [0.0077]
 a/R^* = 4.73 [6.27]
 b = 0.90 [0.29]
 Seff = 62417.75 [56850.31]
 T_{eq} = 4030 [918] K
 R_p = 10.82 [6.42] R_e
 a = 0.0230 [0.0125] AU
 A_g = 0.76 [0.79] [-0.30σ]
 T_{eff} = 5820 [788] K [1.48σ]

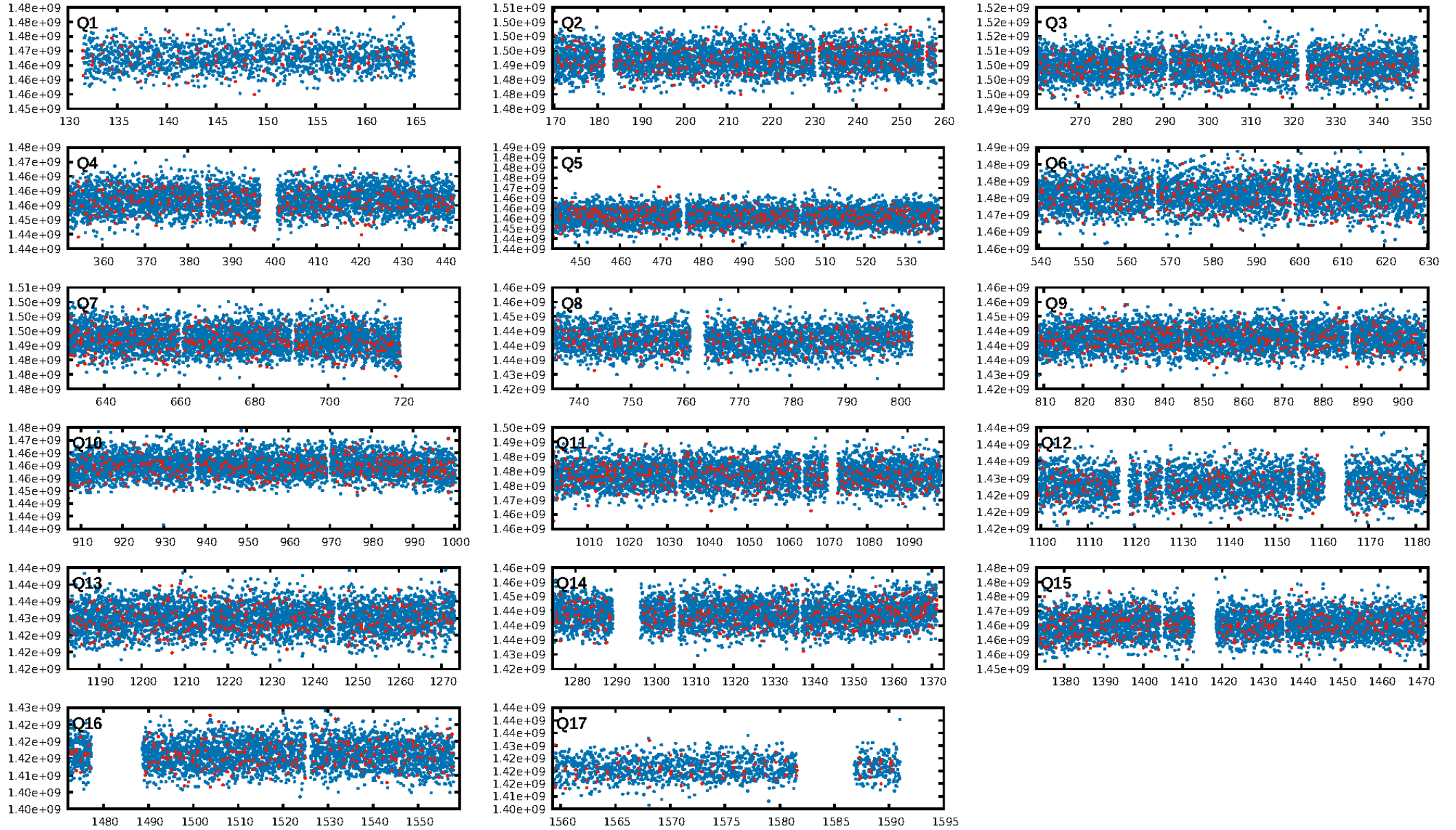
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1326/1334]
GhostDiagnostic-chr: 1.2
Centroid-sig: N/A
Centroid-so: 0.495 arcsec [8.01σ]
OotOffset-rm: 2.819 arcsec [3.38σ]
KicOffset-rm: 2.642 arcsec [3.42σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.24 [4/17]
DiffImageOverlap-fno: 0.00 [0/17]

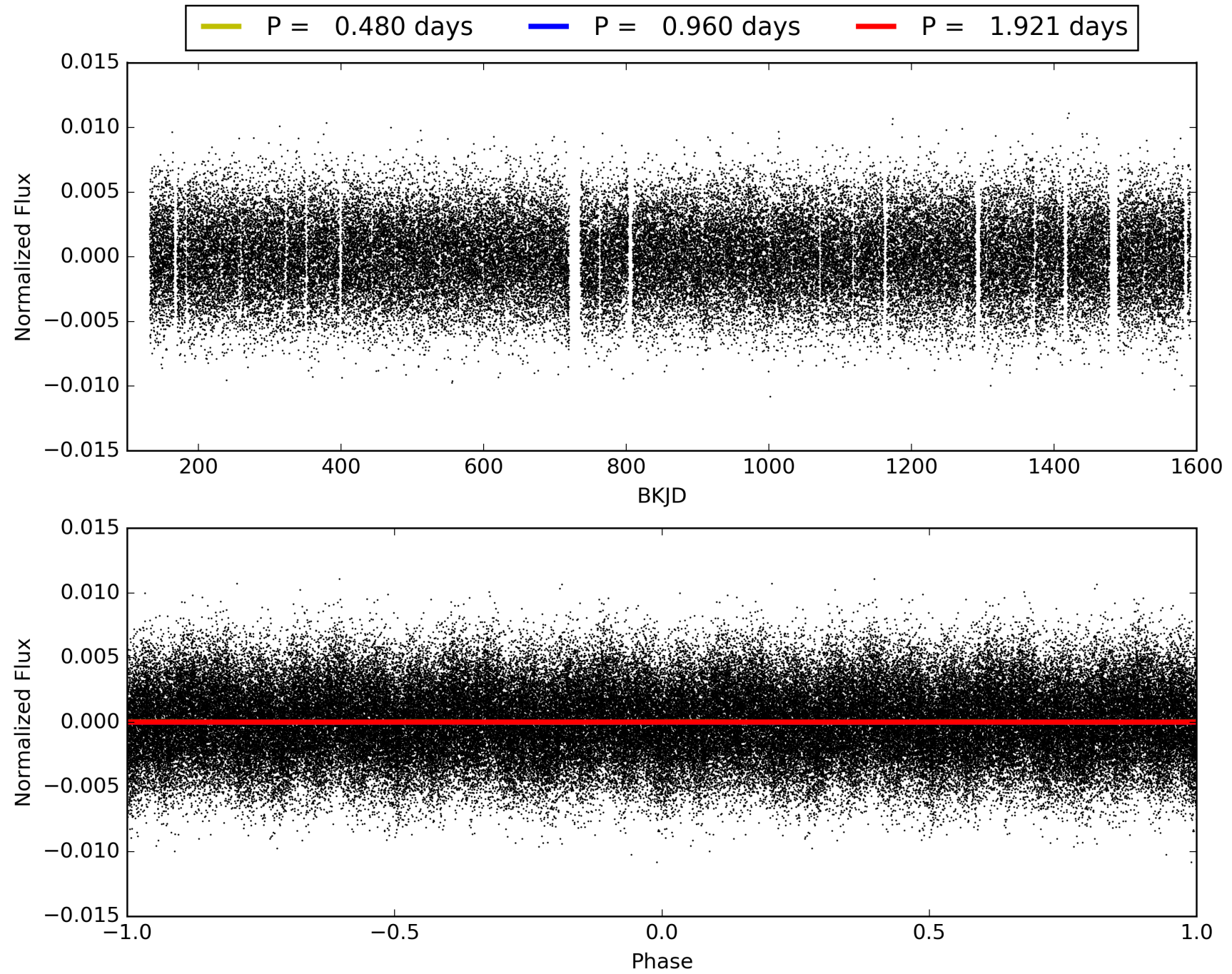
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:21:03 Z

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

TCE 007699056-03, PDC Light Curves

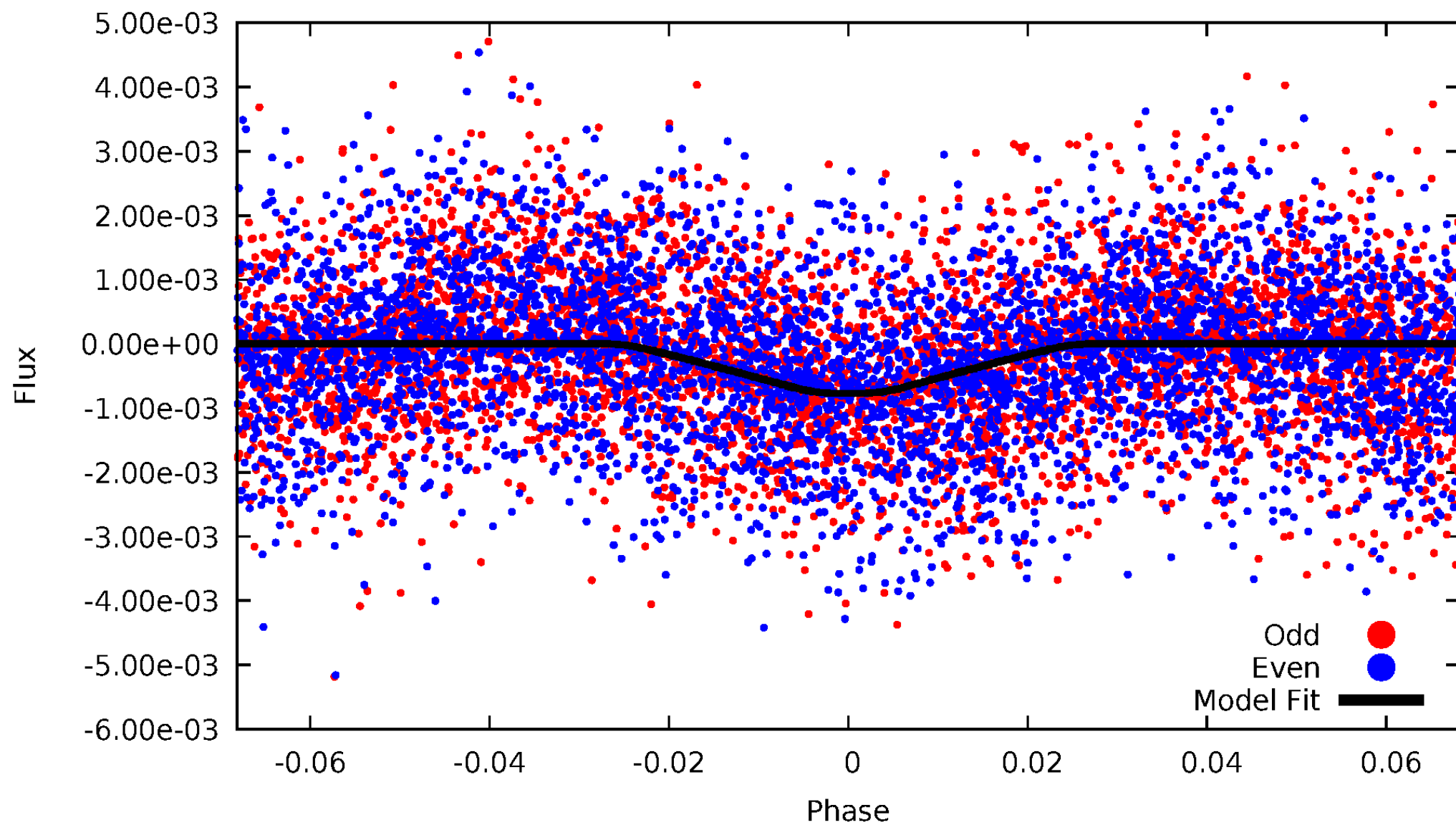


TCE 007699056-03



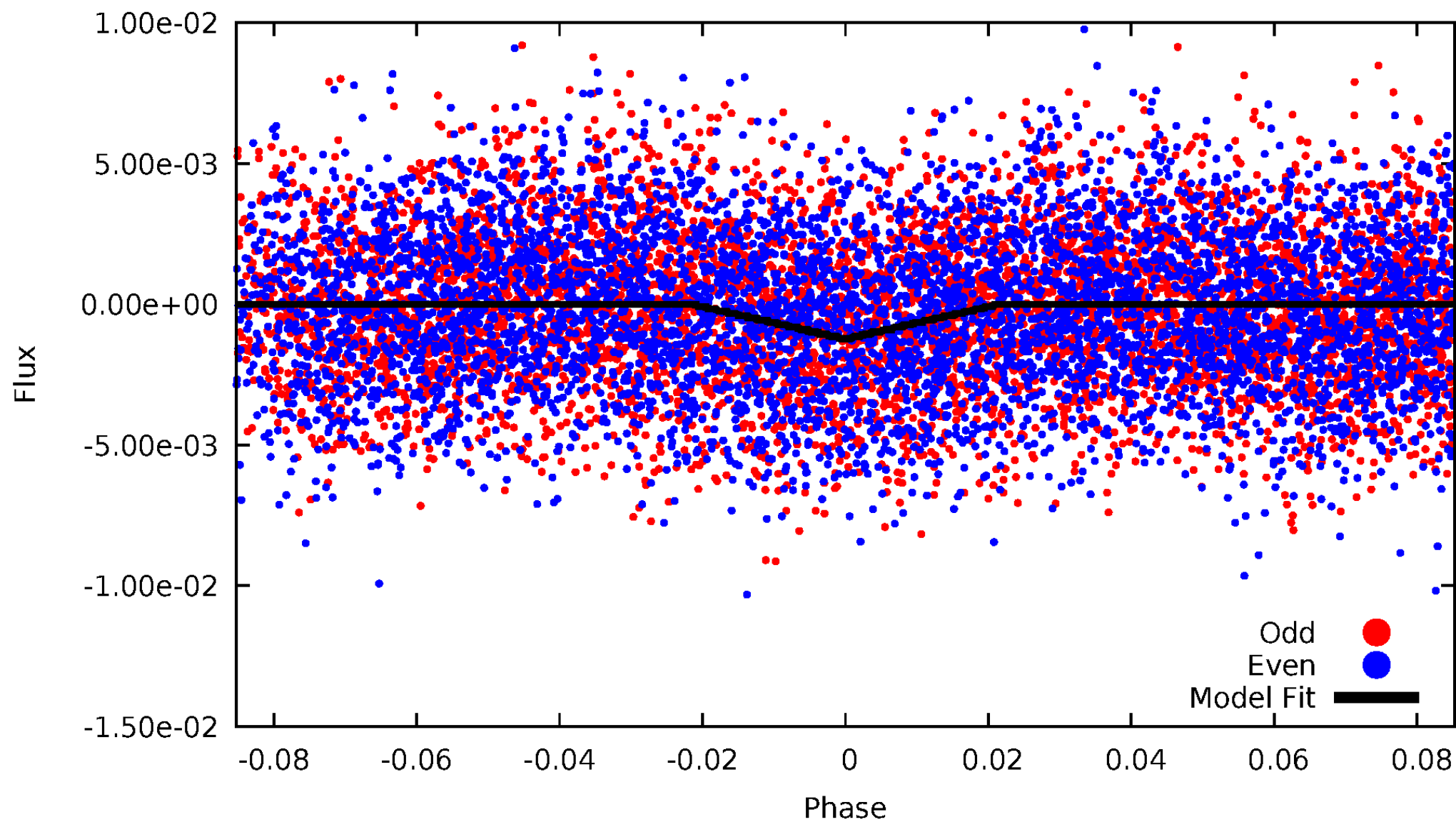
DV Odd/Even

TCE 007699056-03



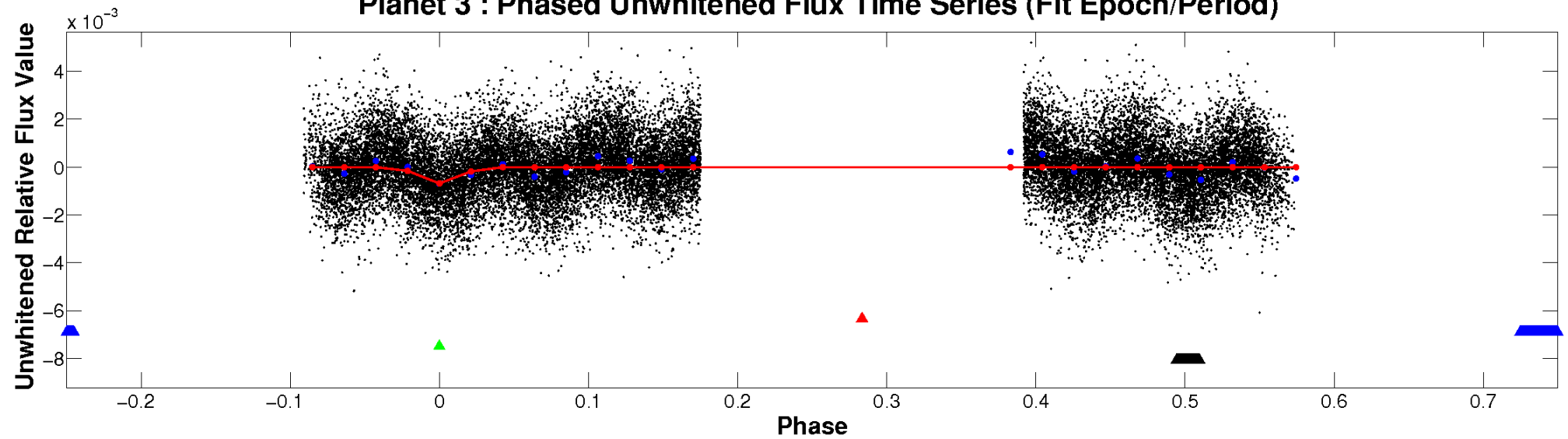
ALT Odd/Even

TCE 007699056-03

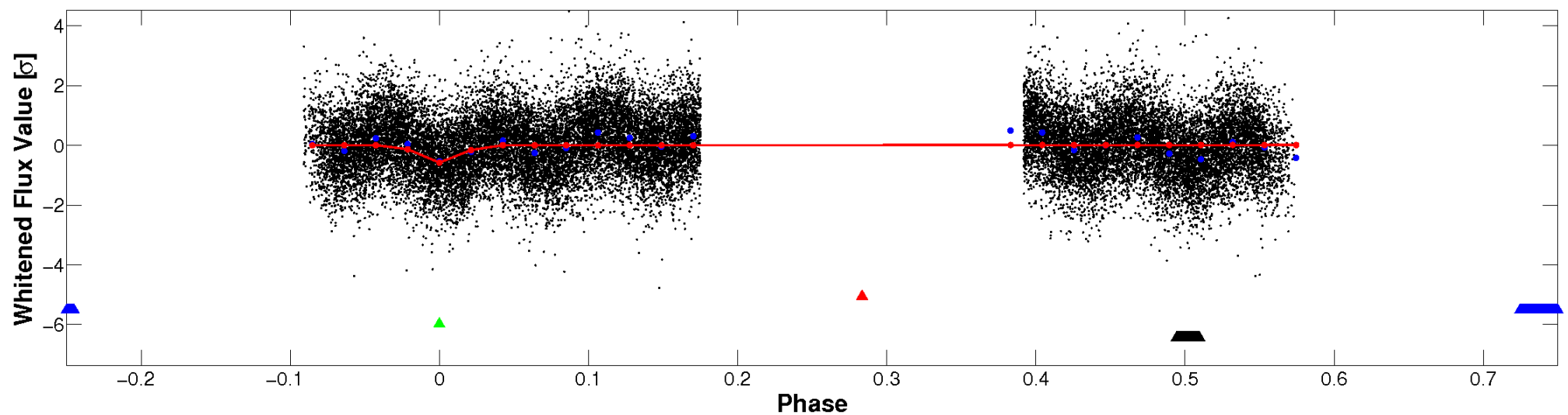


Non-Whitened Vs. Whitened Light Curve

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

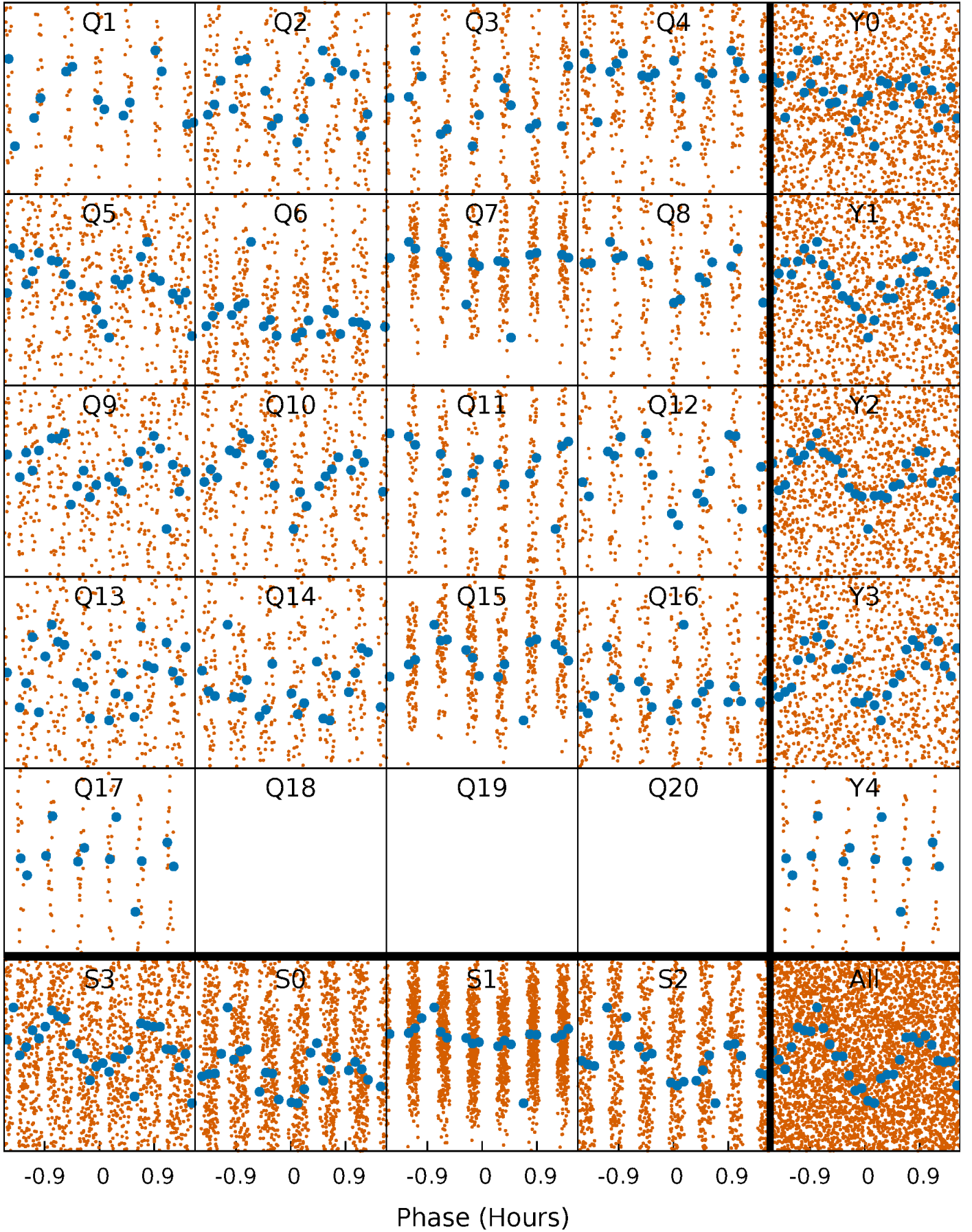


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



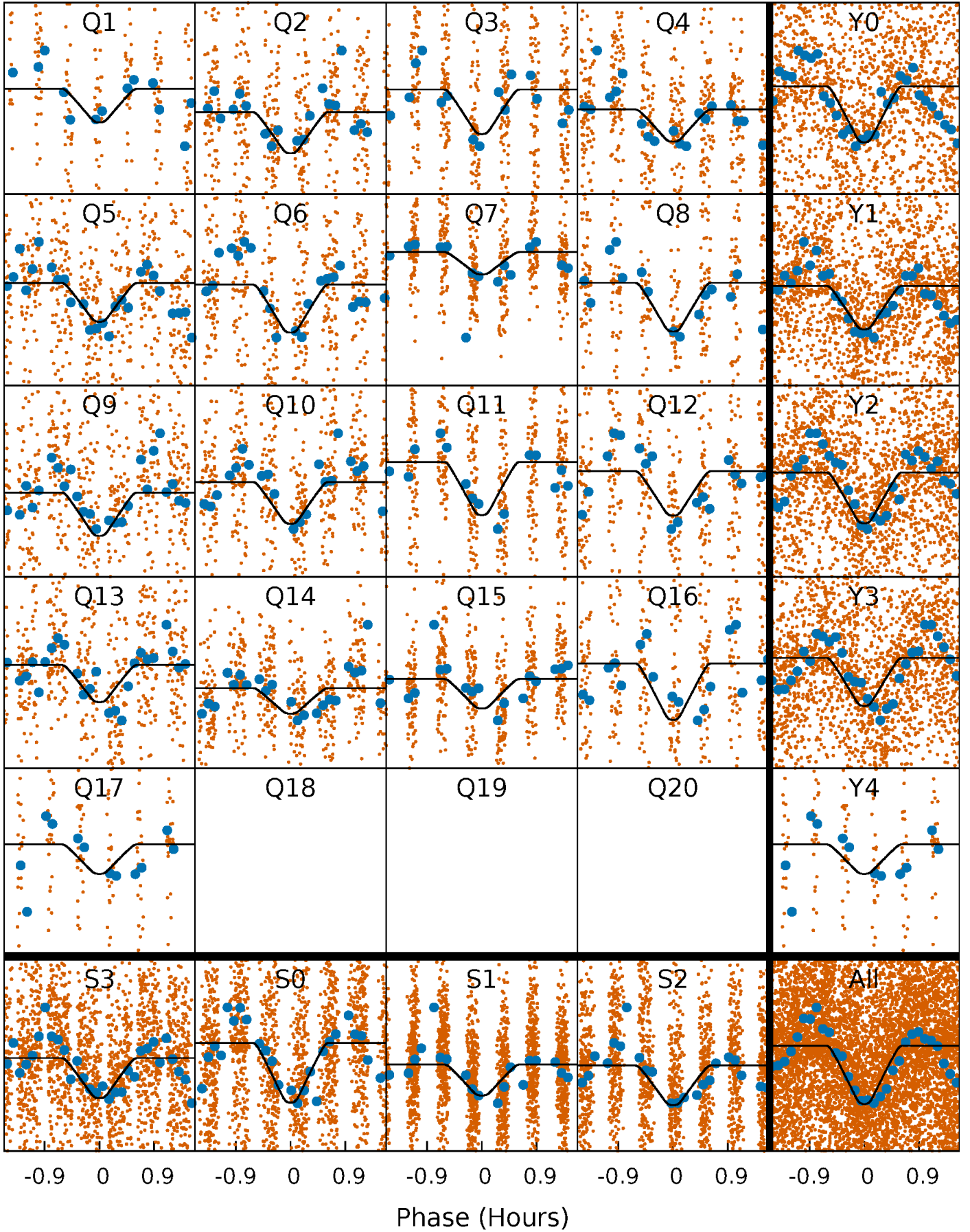
PDC Quarter-Phased Transit Curves

TCE 007699056-03 P= 0.960276 Days $T_0=131.535555$ (BKJD)



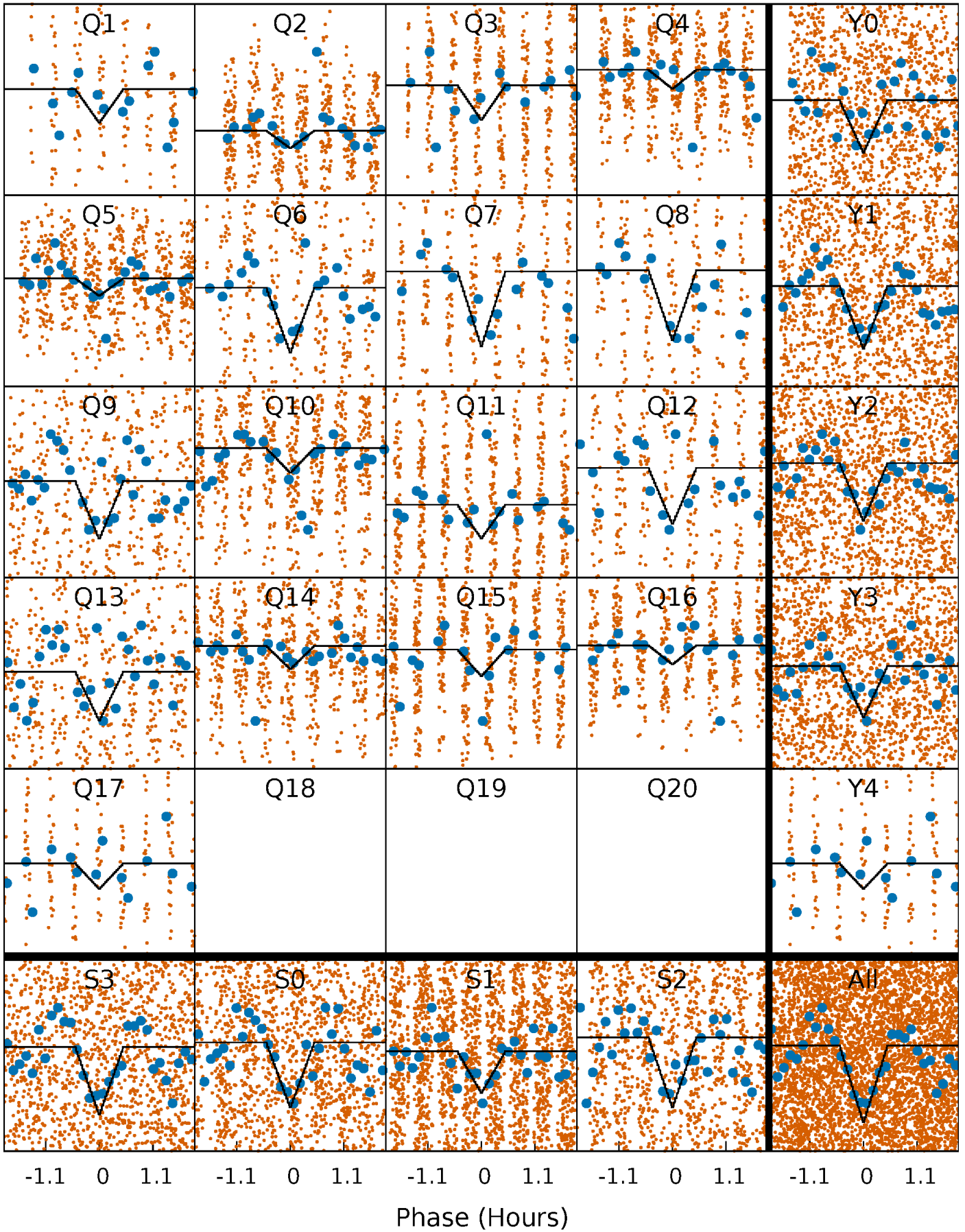
DV Quarter-Phased Transit Curves

TCE 007699056-03 $P = 0.960276$ Days $T_0 = 131.535555$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

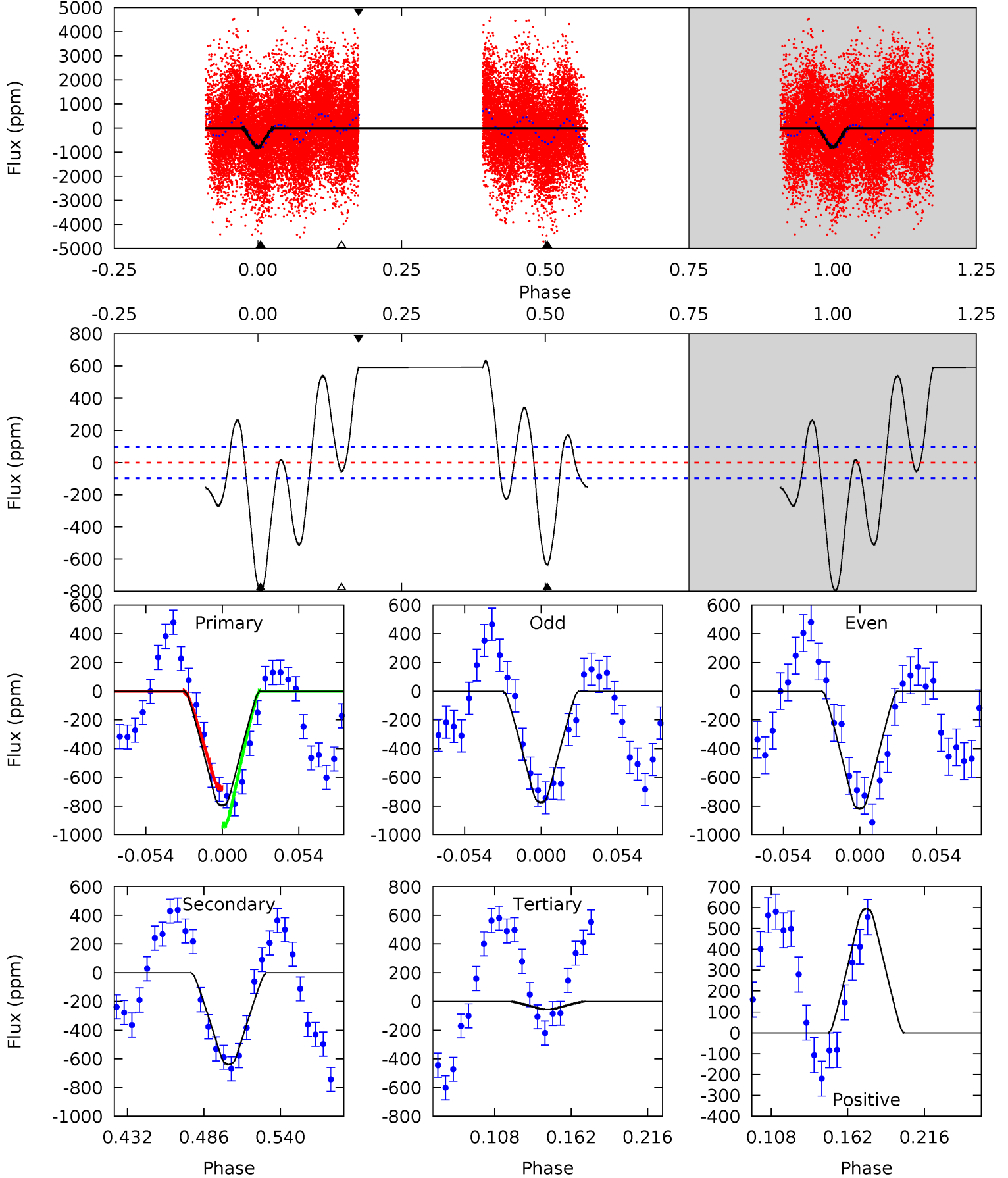
TCE 007699056-03 P= 0.960283 Days $T_0=131.532861$ (BKJD)



DV Model-Shift Uniqueness Test

007699056-03, P = 0.960276 Days, E = 130.575279 Days

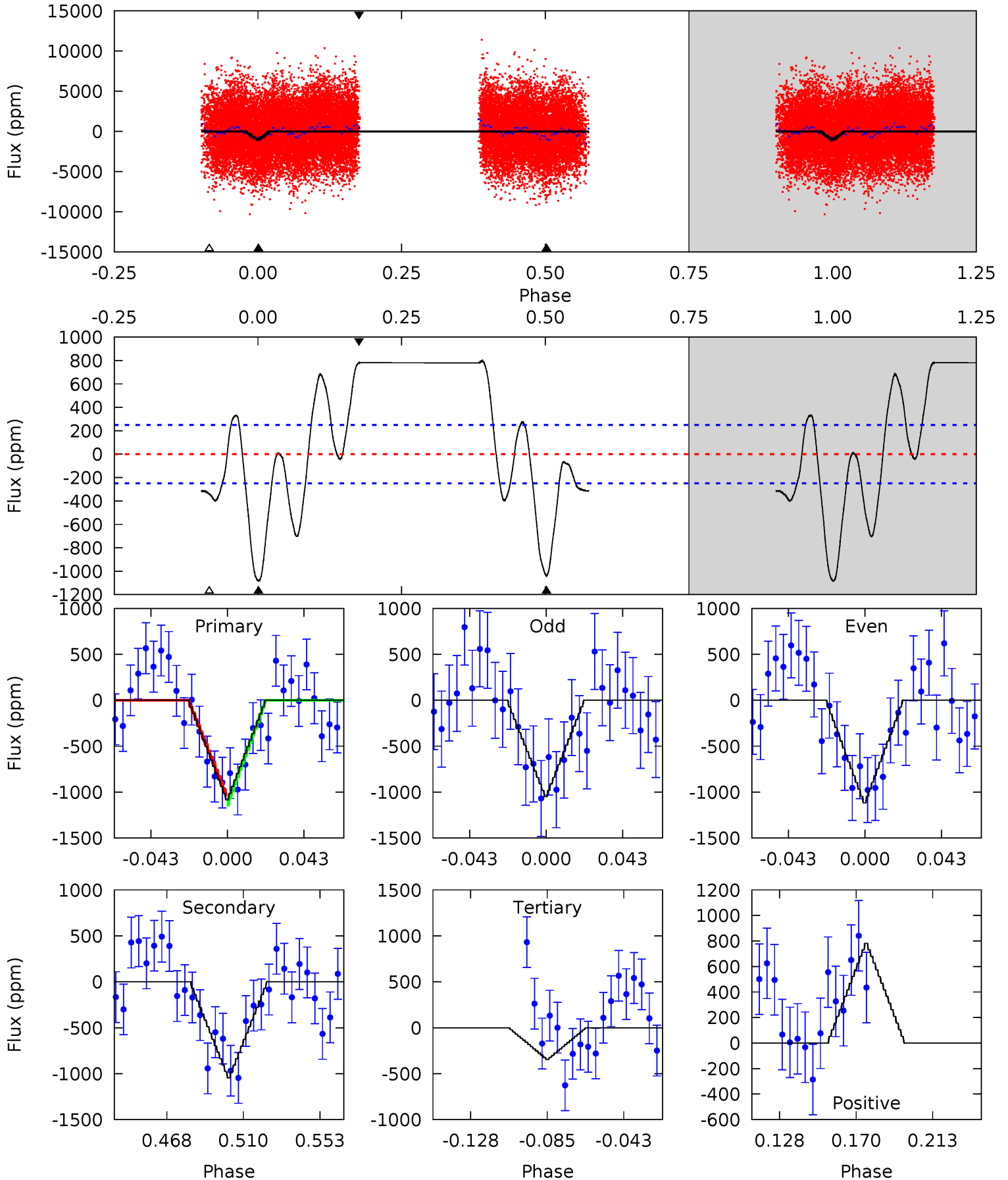
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.5	30.8	2.63	28.6	4.69	1.93	15.7	35.8	9.81	28.2	2.19	1.09	1.05	0.44	6.39



Alt Model-Shift Uniqueness Test

007699056-03, P = 0.960283 Days, E = 130.572578 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	19.9	6.57	14.9	4.74	2.03	7.69	14.1	5.74	13.3	5.00	0.65	1.08	0.43	1.00



Stellar Parameters For KIC 007699056

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7655^{+212}_{-319}	$3.653^{+0.535}_{-0.094}$	$-0.460^{+0.250}_{-0.300}$	$3.279^{+0.310}_{-1.755}$	$1.765^{+0.163}_{-0.489}$	$0.070^{+0.490}_{-0.014}$
	+3%/-4%	+15%/-3%	+54%/-65%	+9%/-54%	+9%/-28%	+696%/-20%
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 007699056-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-638 ± 21	$9.76^{+3.30}_{-3.33}$	5499^{+349}_{-737}	6551^{+1419}_{-879}	$1.932^{+2.405}_{-0.844}$
Alt.	-1046 ± 53	$11.63^{+3.63}_{-3.70}$	5502^{+342}_{-708}	6988^{+1231}_{-893}	$2.287^{+2.368}_{-0.962}$

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 $A_{\text{obs}} \gg 1.0$

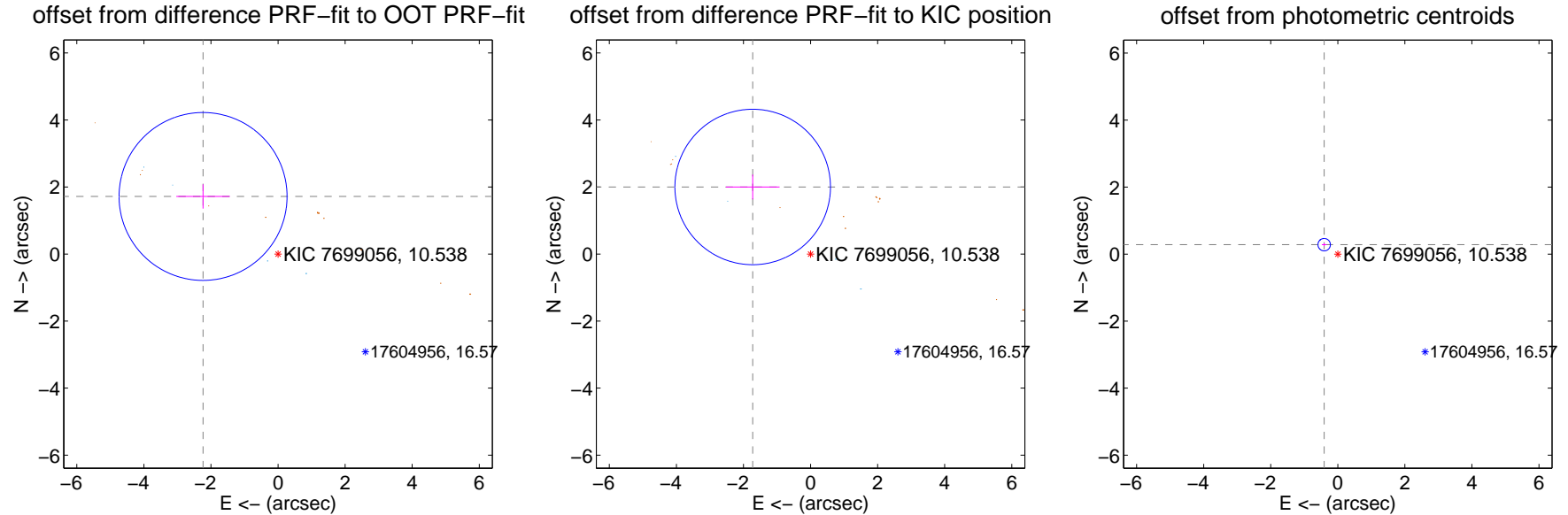
DV Centroid Data

Supplemental centroid analysis for 007699056-03. **Kepler magnitude: 10.54.** Transit SNR 23.61

There are 4 quarters with good PRF difference image offsets

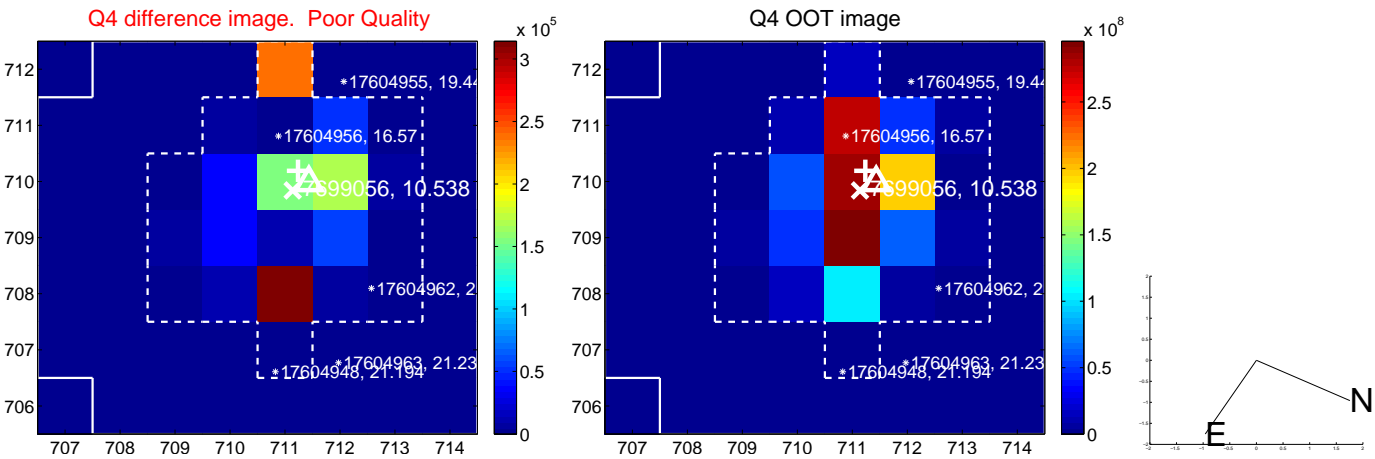
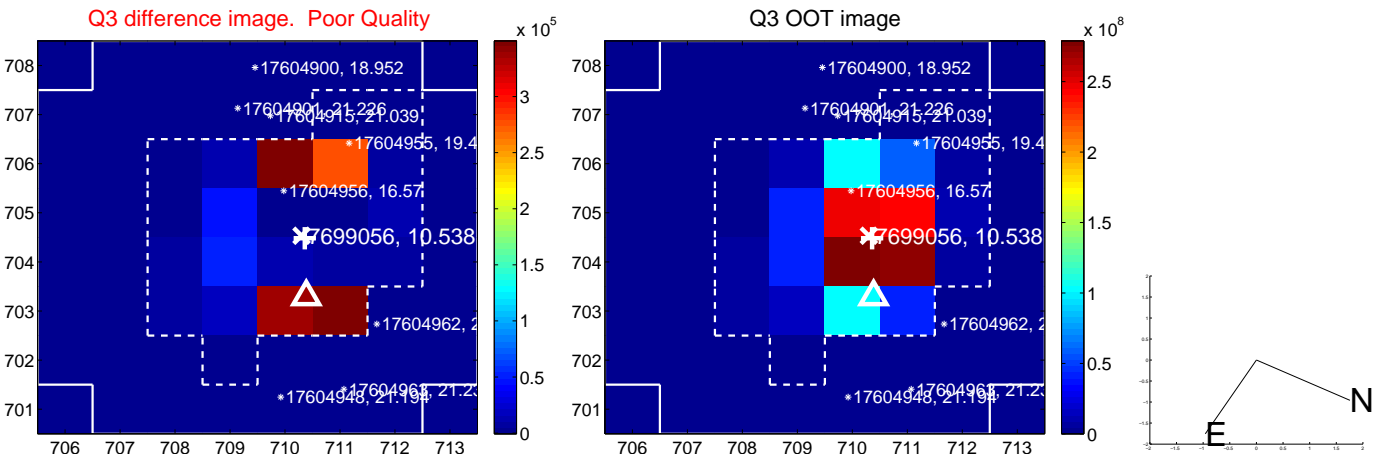
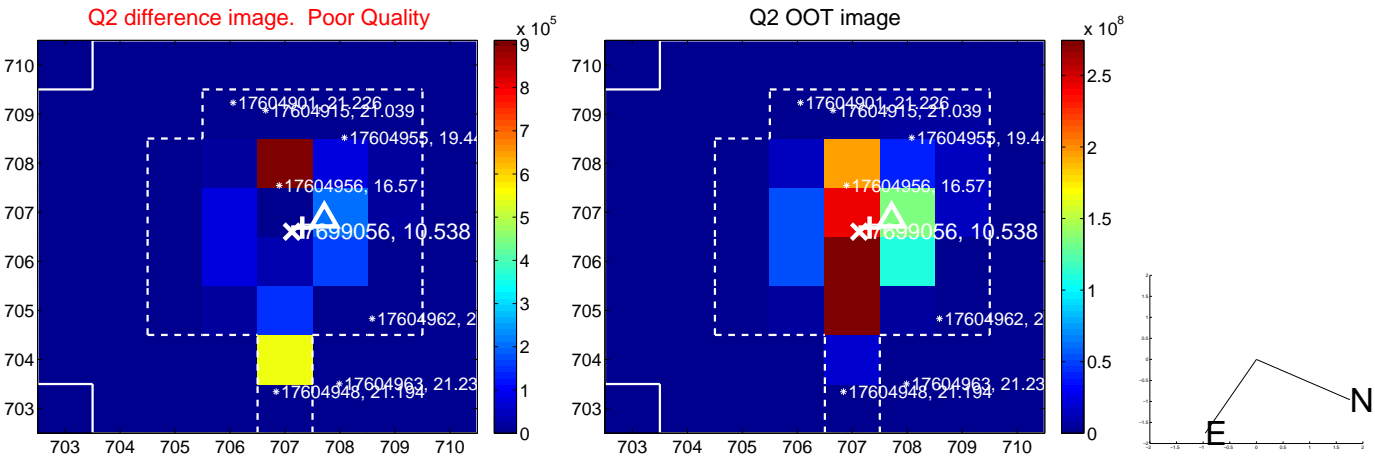
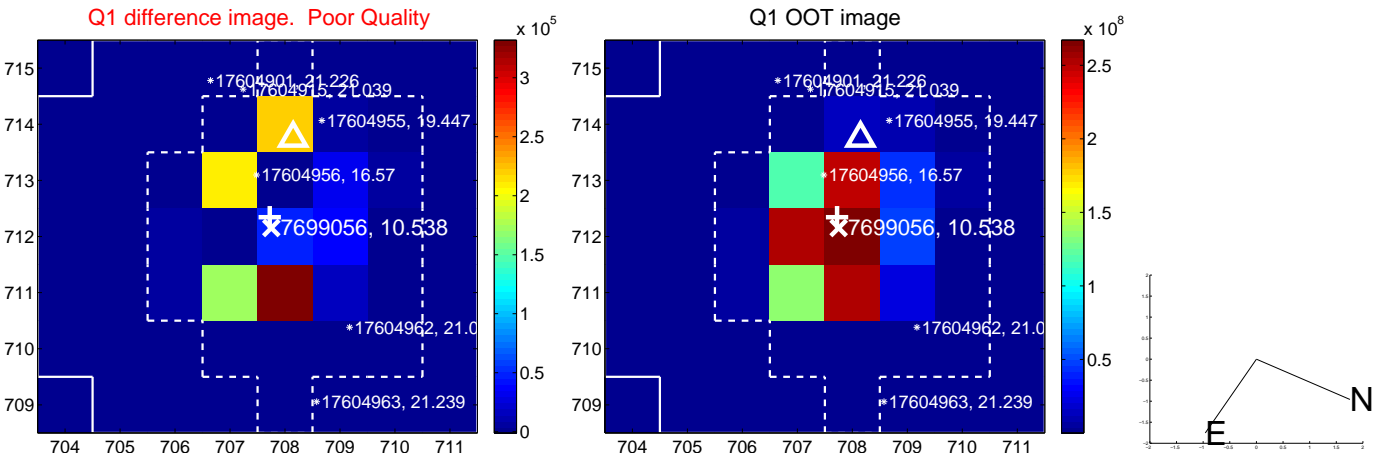
The direct PRF centroid is offset from the target star catalog position by about 0.81 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.819 ± 0.835	3.38	2.235 ± 0.797	1.718 ± 0.361
PRF-fit source offset from KIC position	2.642 ± 0.773	3.42	1.725 ± 0.802	2.001 ± 0.370
photometric centroid source offset	0.49 ± 0.06	8.01	0.41 ± 0.07	0.28 ± 0.04

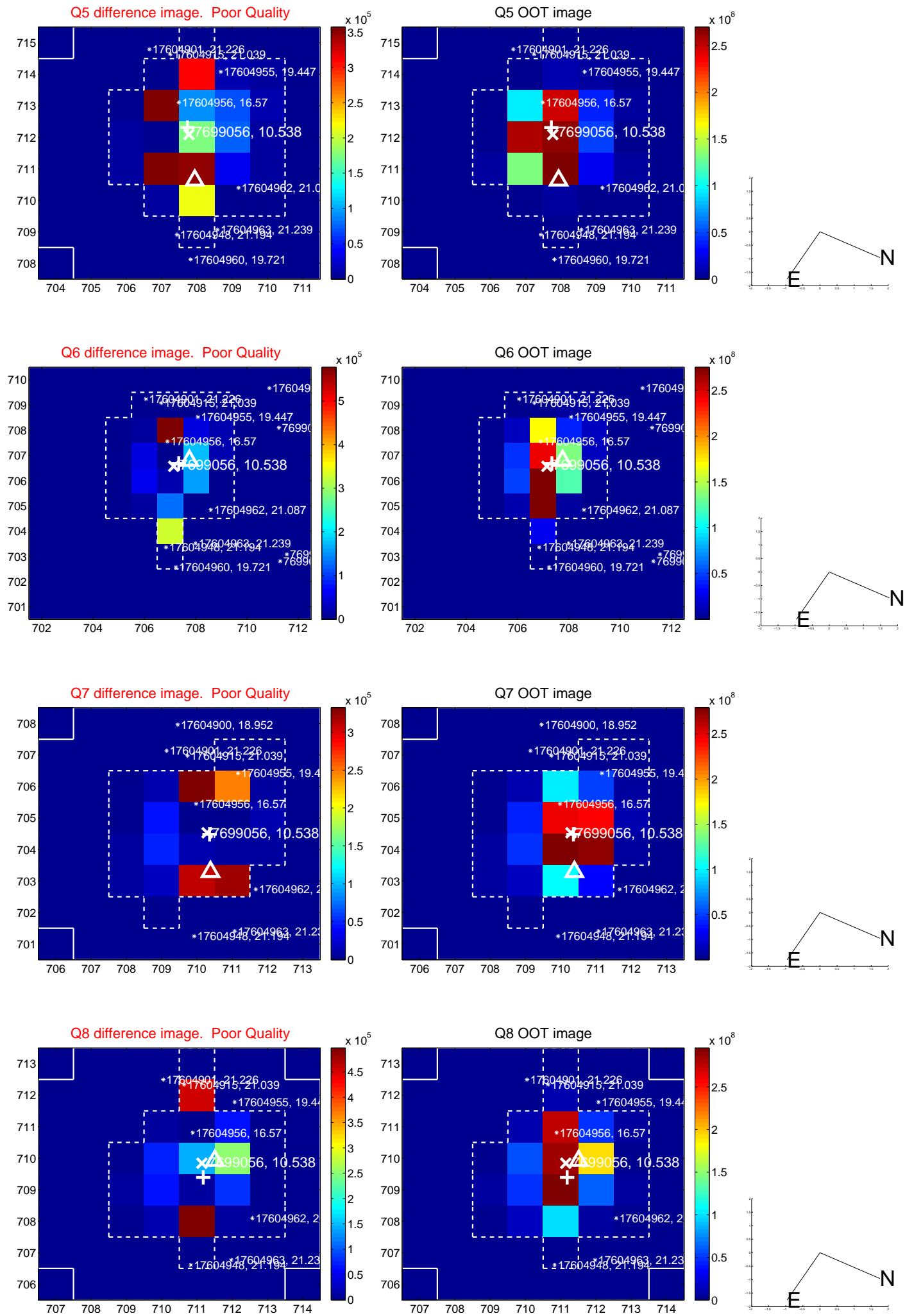


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

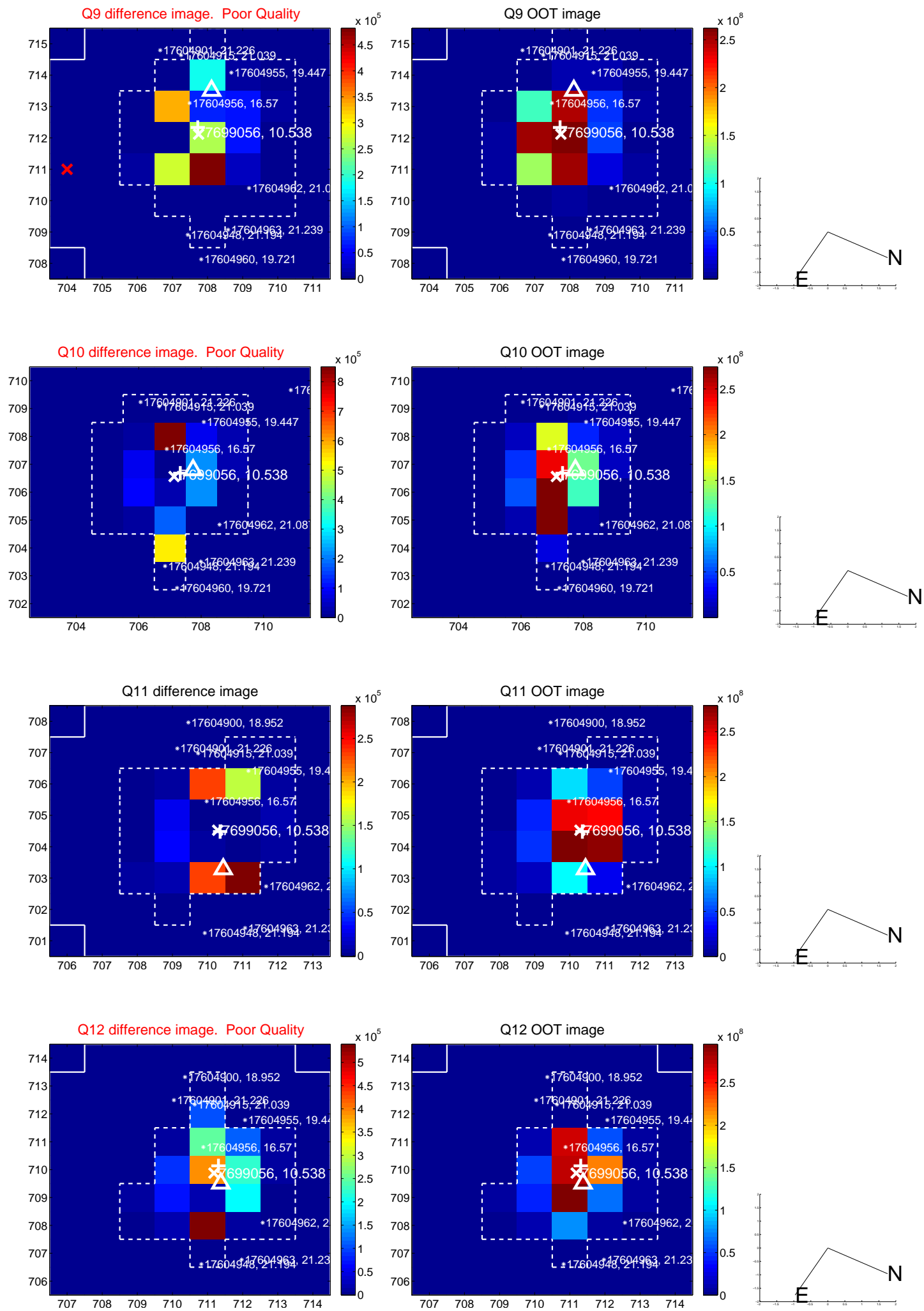
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



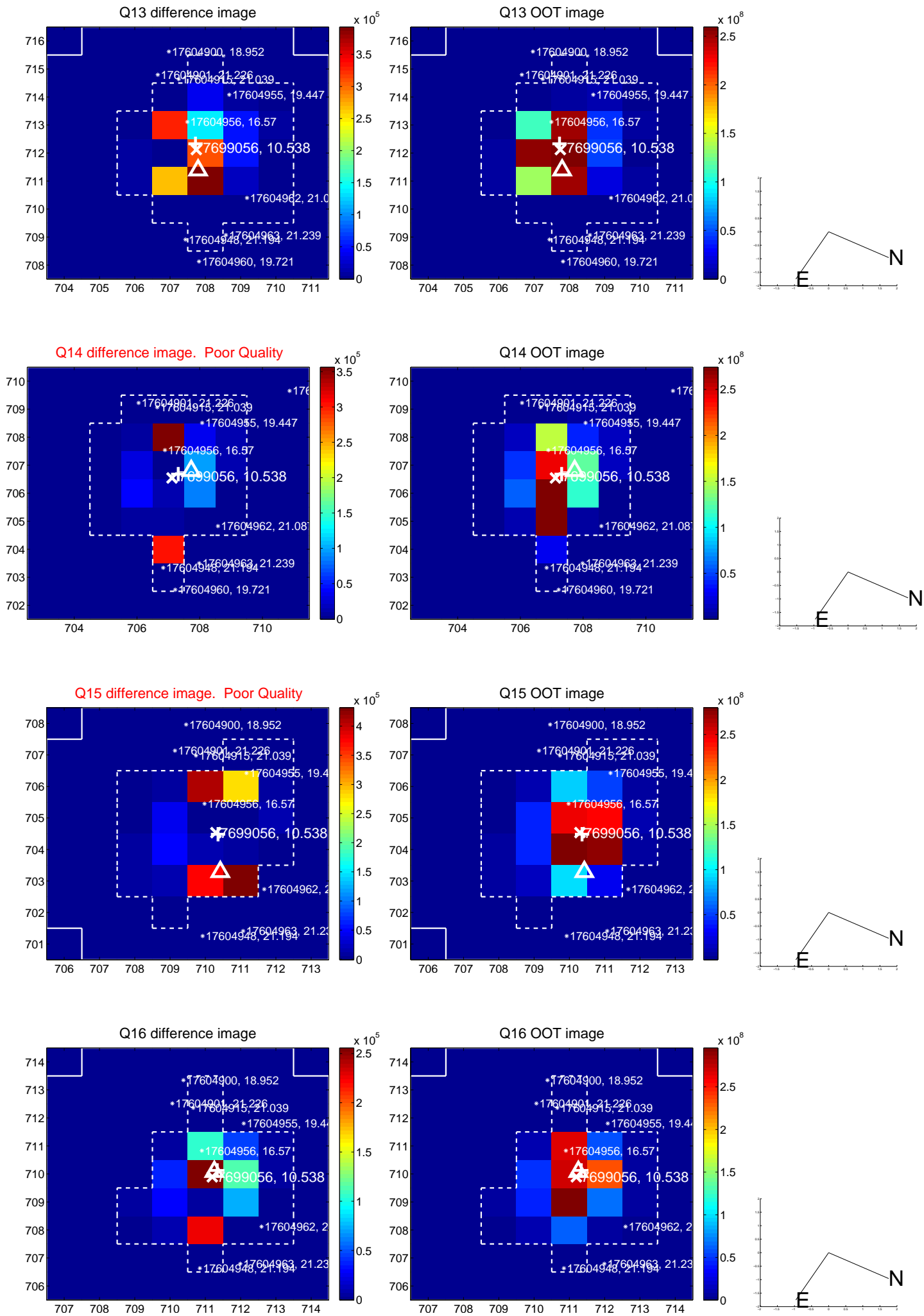
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



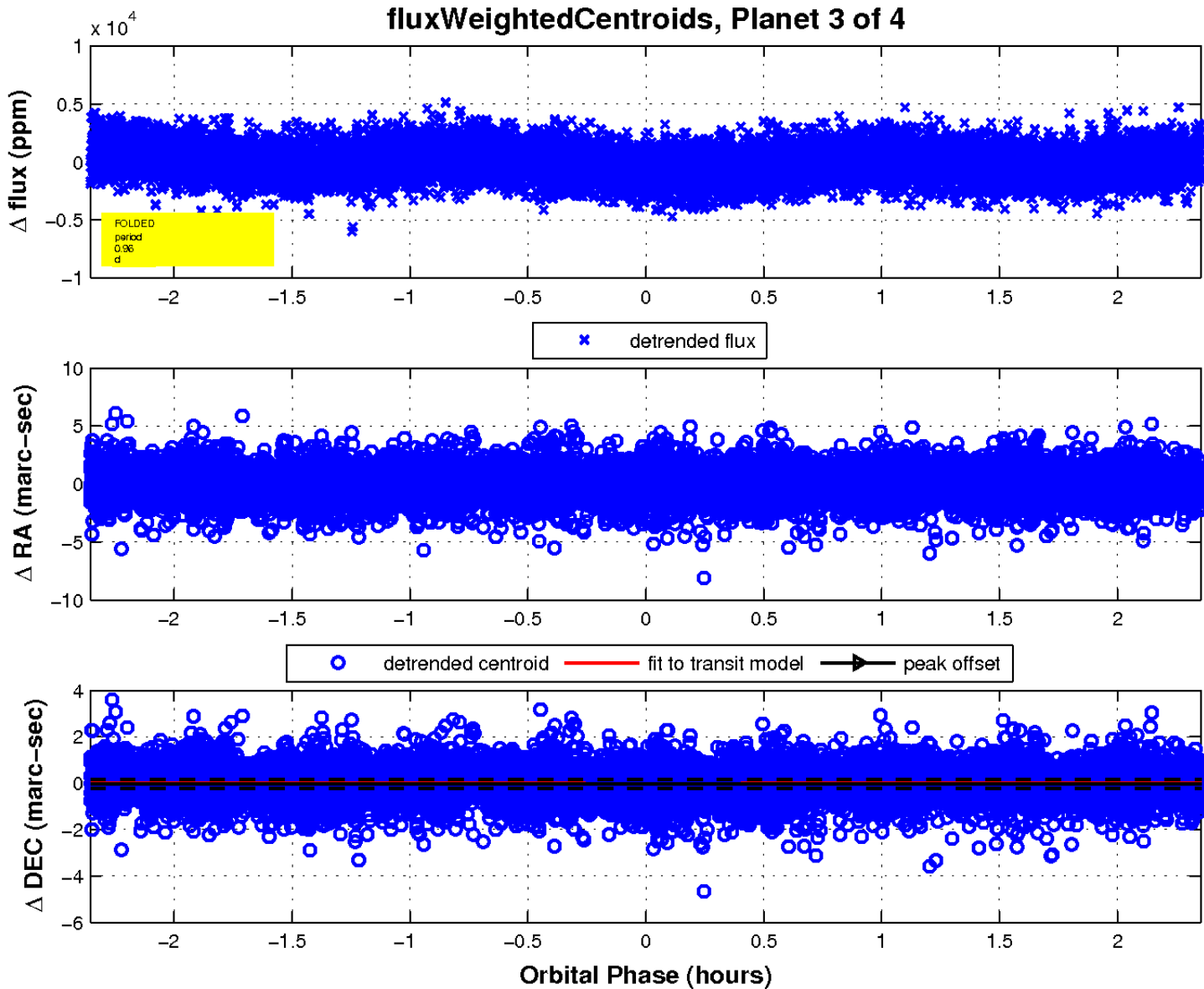
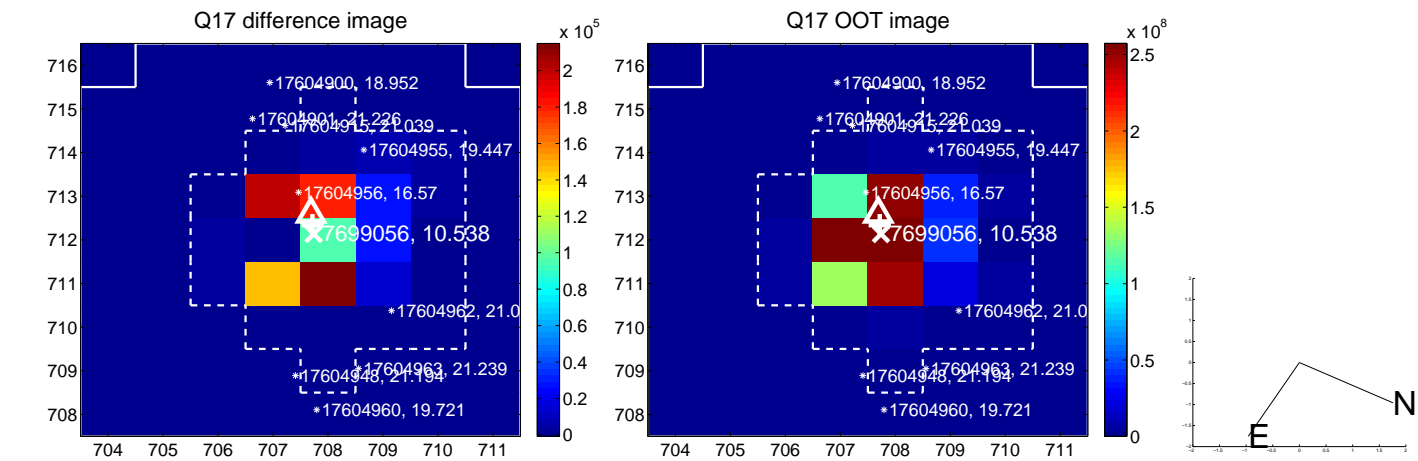
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

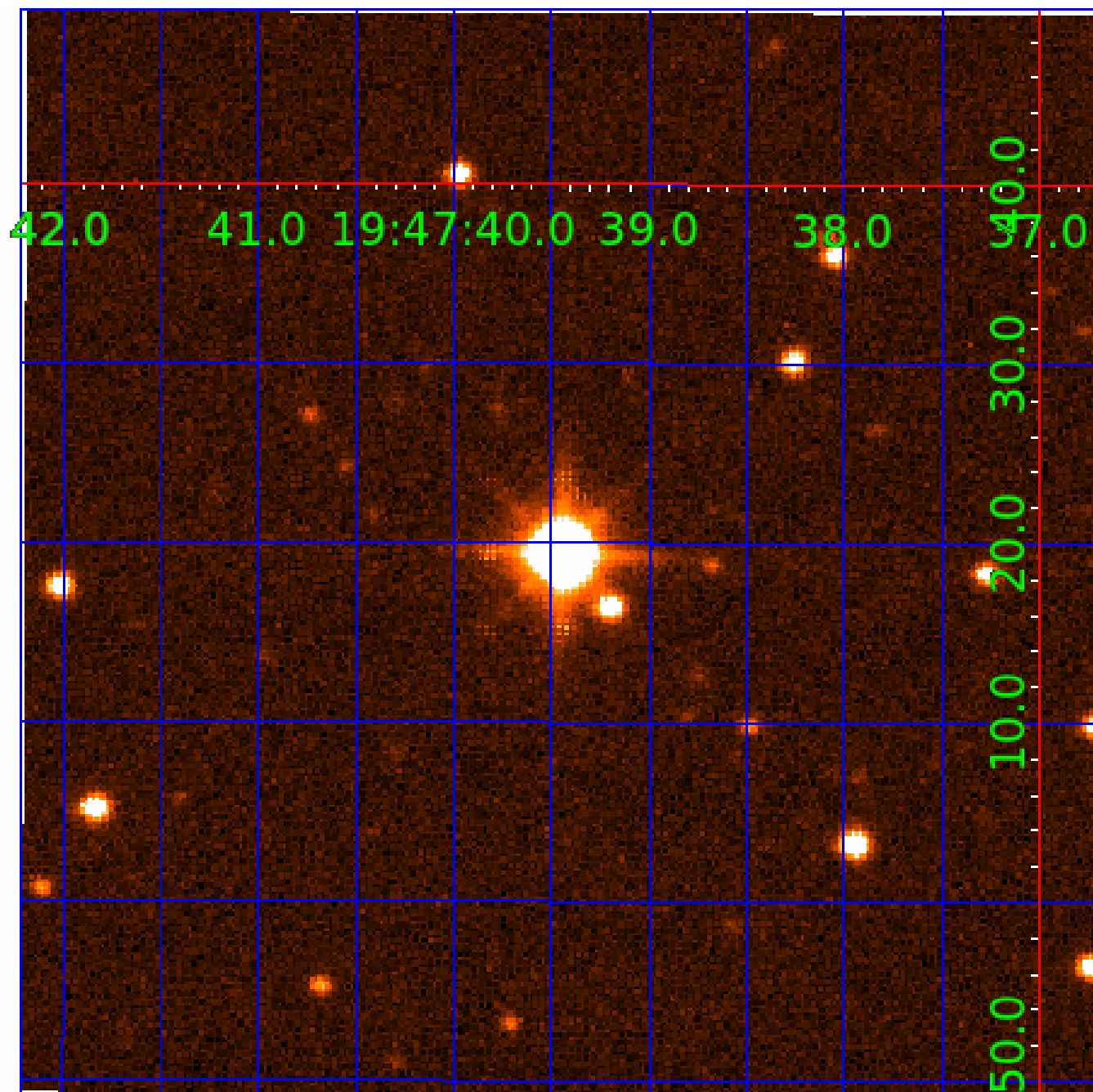


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007699056

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})
007699056-01	OBS	No	0.960276	131.807706	783.0	0.738	14.7	24.3	3.28	7655	9.68	62417.75
007699056-02	OBS	No	0.960257	132.260561	101.6	2.623	15.1	6.3	3.28	7655	3.85	62419.41
007699056-03	OBS	No	0.960276	131.535555	771.8	0.785	12.6	23.6	3.28	7655	10.82	62417.75
007699056-04	OBS	No	0.960285	132.010336	767.6	0.862	13.9	25.0	3.28	7655	10.73	62416.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007699056-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
007699056-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007699056-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007699056-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

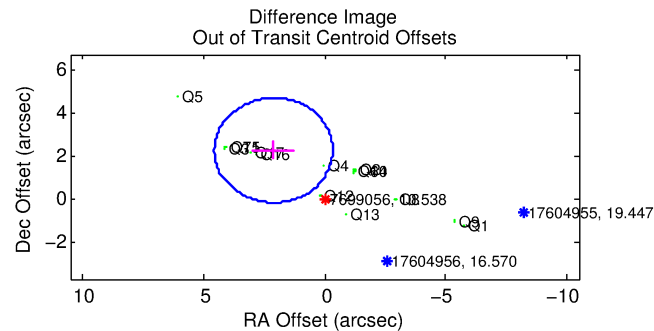
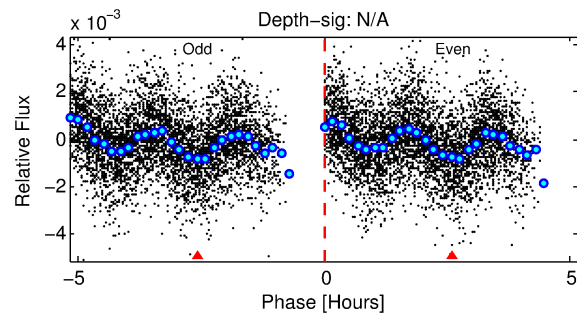
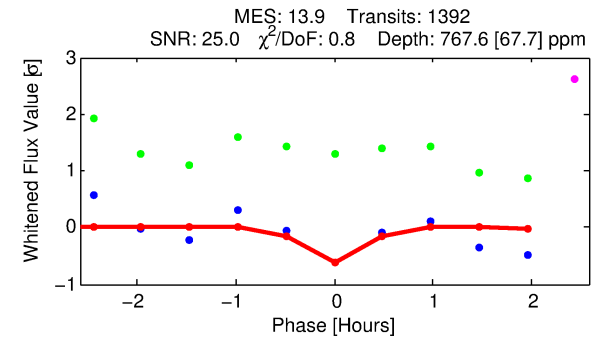
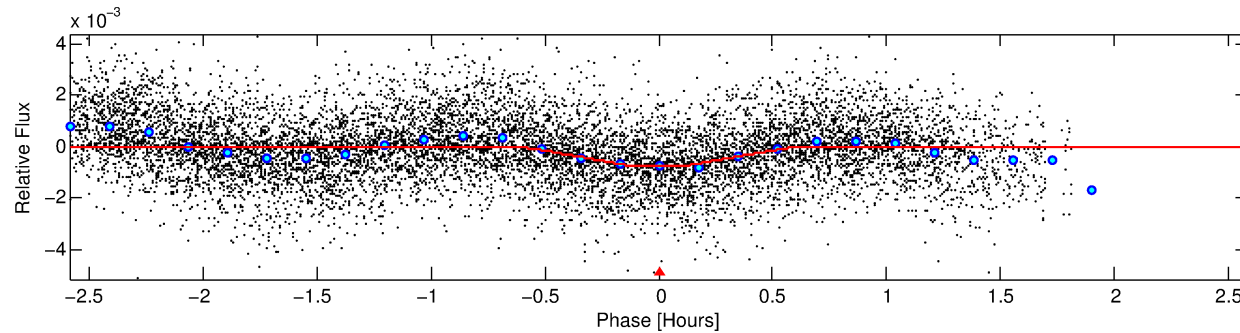
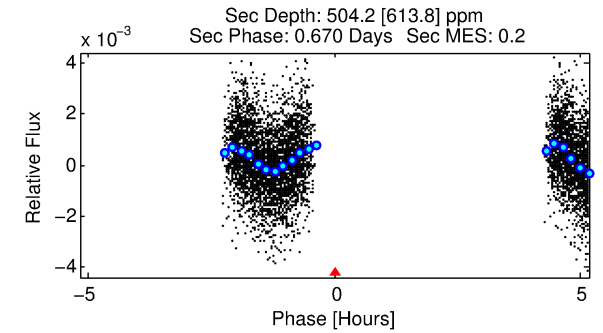
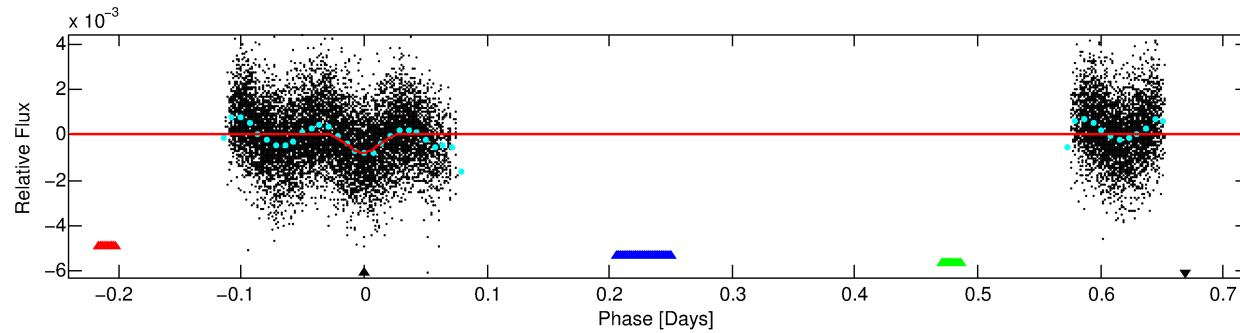
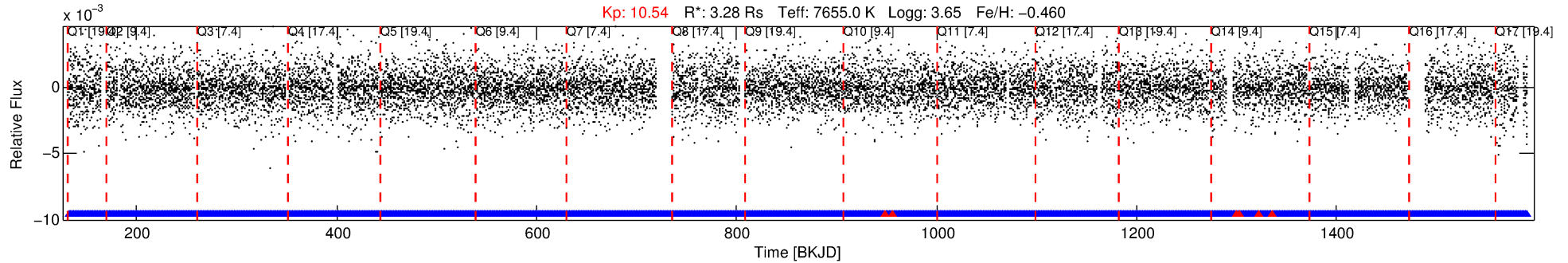
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007699056-04

No Significant Match Found

DV One-Page Summary

KIC: 7699056 Candidate: 4 of 4 Period: 0.960 d



DV Fit Results:

Period = 0.96029 [0.00001] d
Epoch = 132.0103 [0.0006] BKJD
Rp/R* = 0.0300 [0.0070]
a/R* = 4.37 [5.29]
b = 0.90 [0.28]
Seff = 62416.92 [56849.55]
Teq = 4030 [918] K
Rp = 10.73 [6.26] Re
a = 0.0230 [0.0125] AU
Ag = 1.28 [2.02] [0.14σ]
Teffp = 6625 [2176] K [1.10σ]

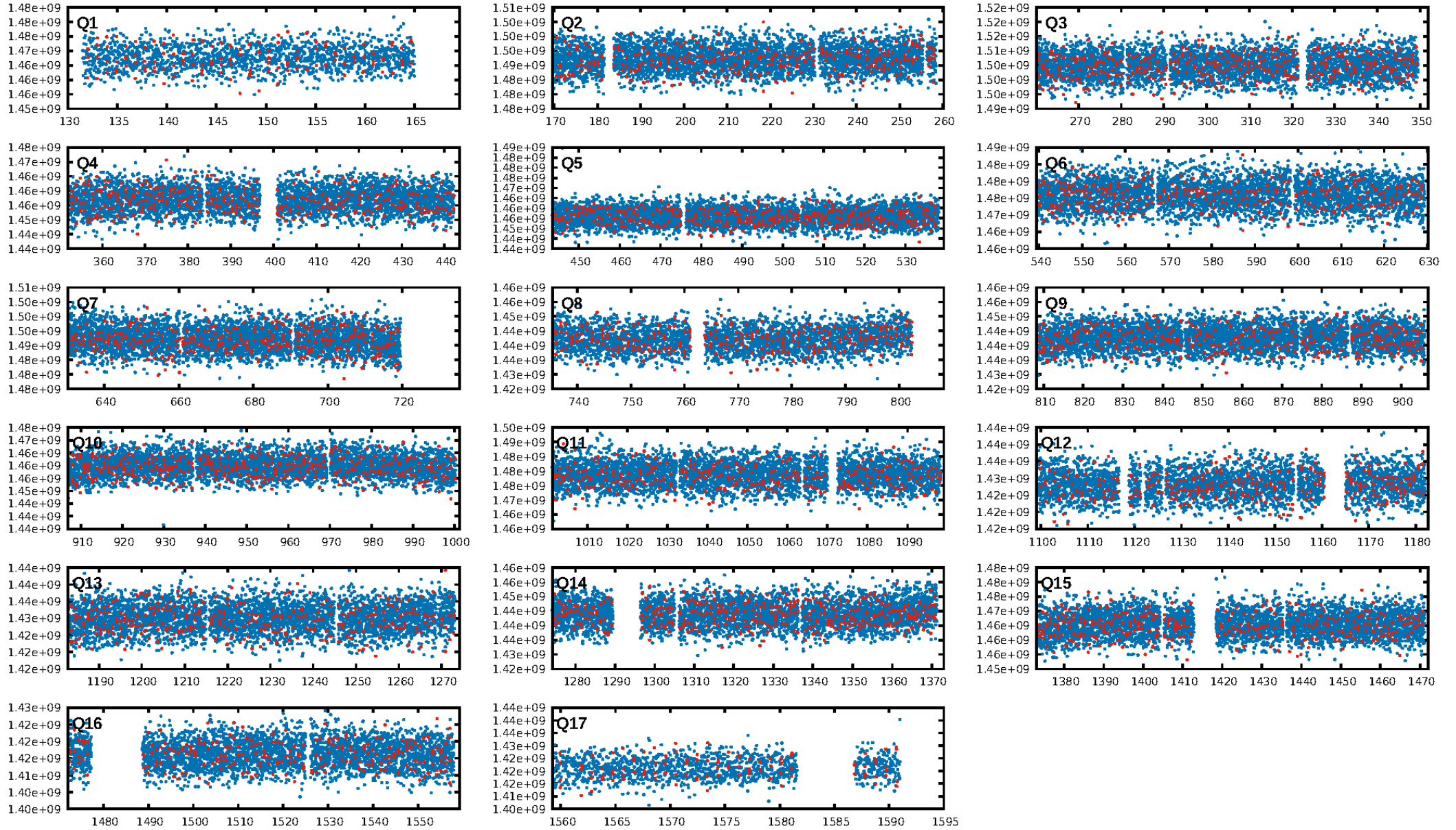
DV Diagnostic Results:

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 [1324/1330]
GhostDiagnostic-chr: 1.483
Centroid-sig: N/A
Centroid-so: 0.651 arcsec [10.95σ]
OotOffset-rm: 3.097 arcsec [3.80σ]
KicOffset-rm: 3.093 arcsec [4.34σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.06 [1/17]
DiffImageOverlap-fno: 0.00 [0/17]

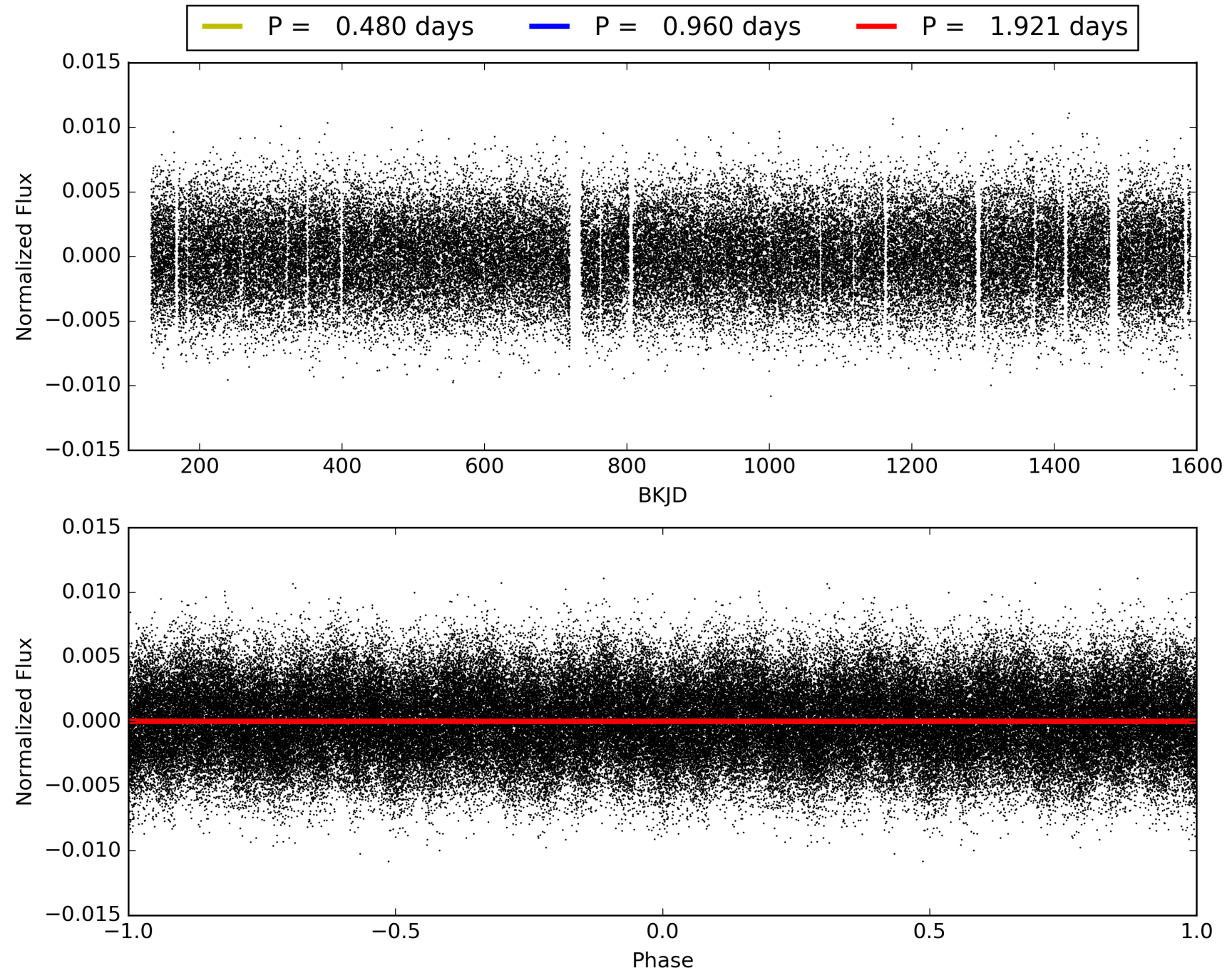
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:21:09 Z

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

TCE 007699056-04, PDC Light Curves

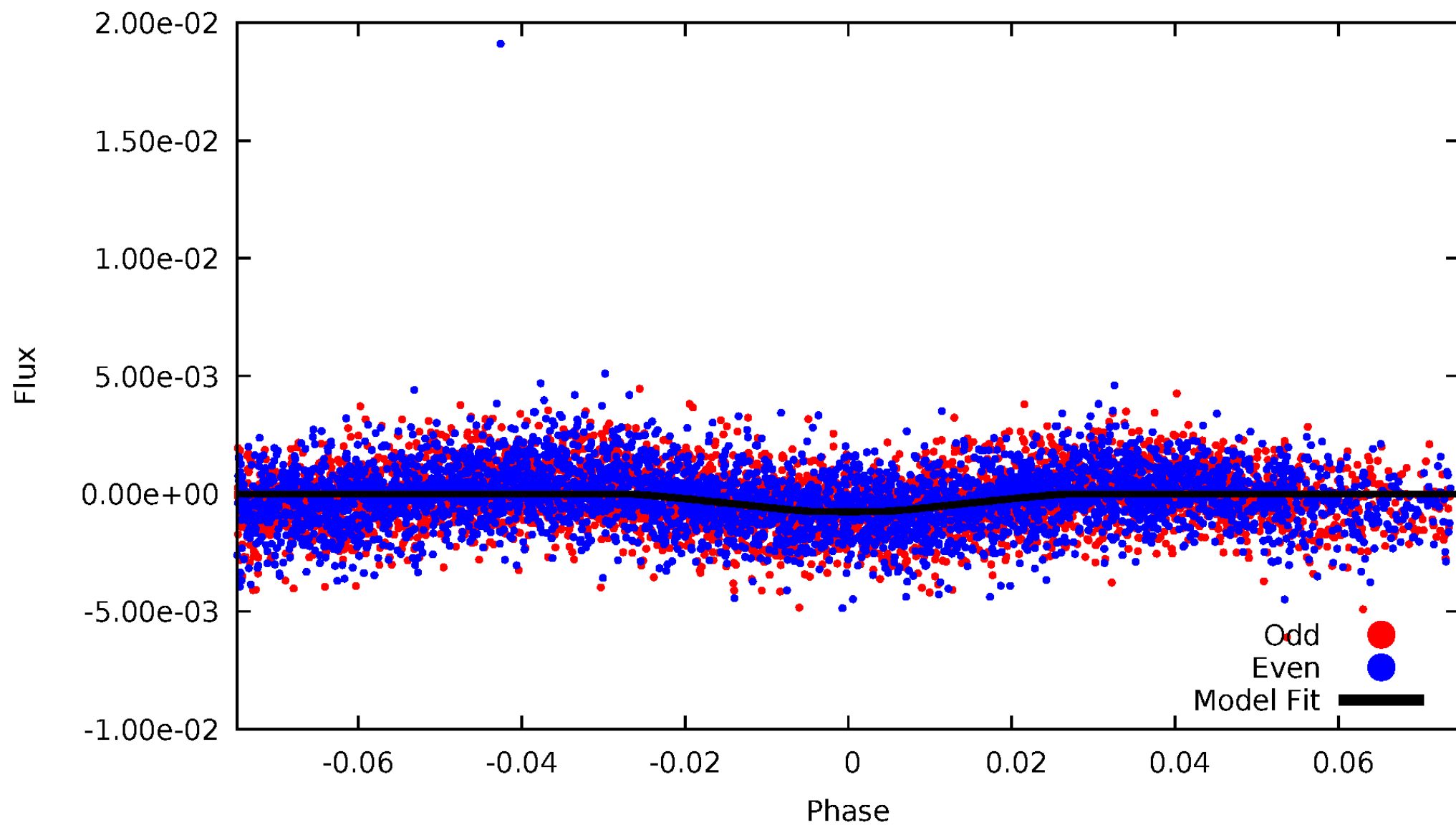


TCE 007699056-04



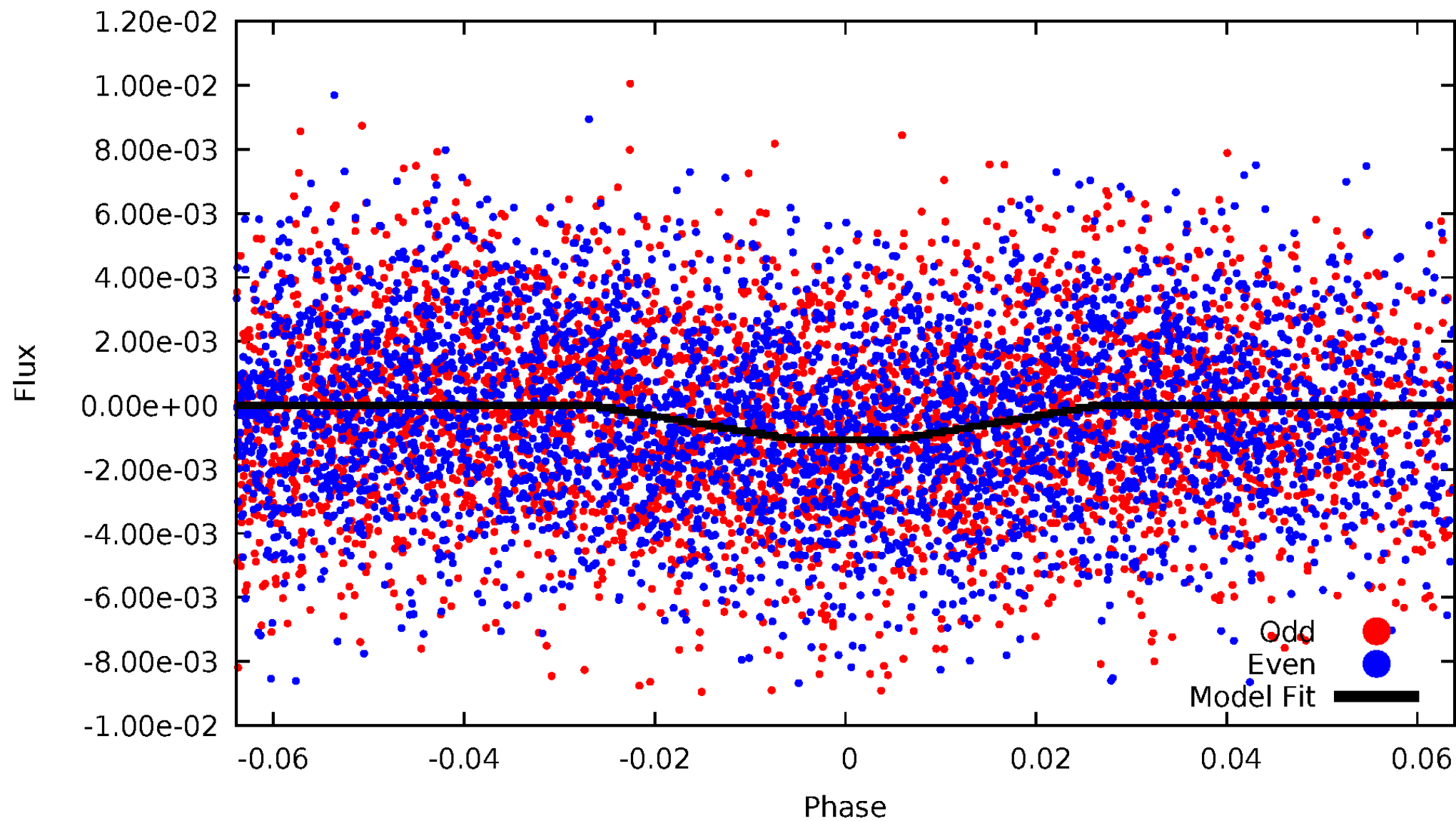
DV Odd/Even

TCE 007699056-04



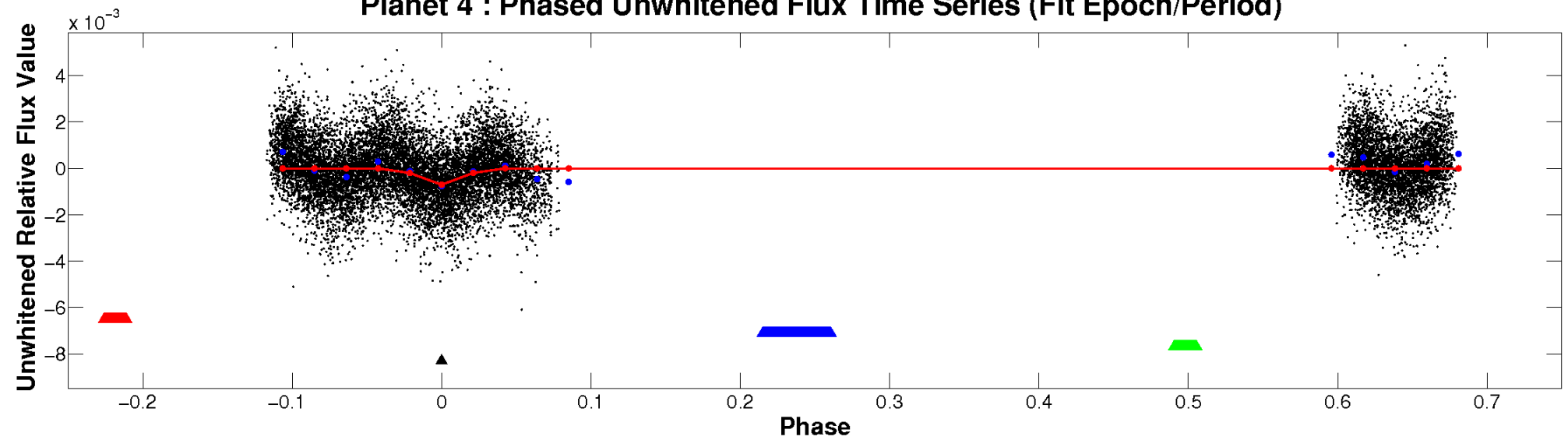
ALT Odd/Even

TCE 007699056-04

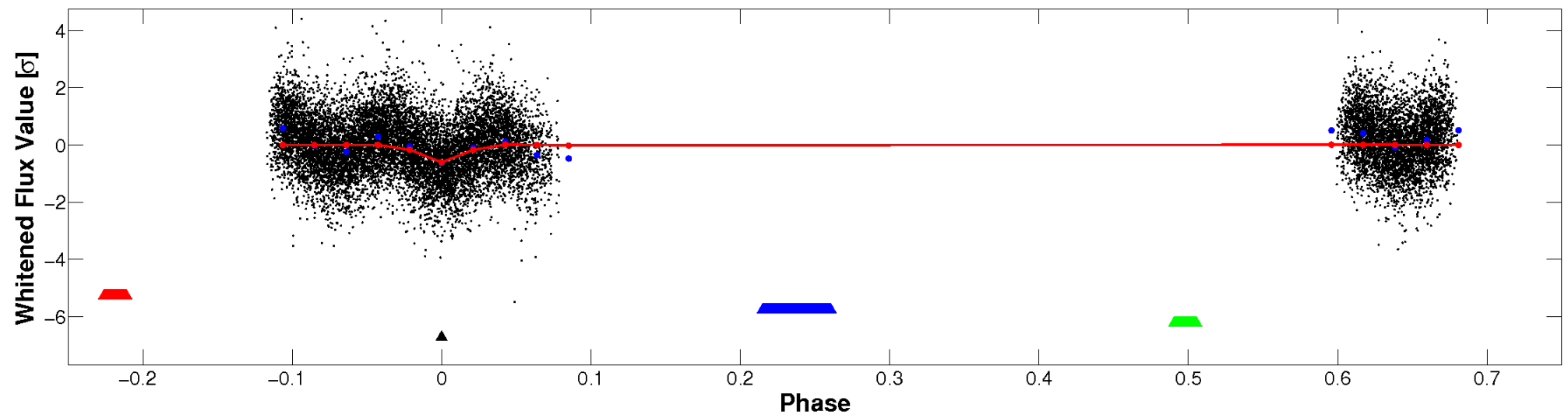


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

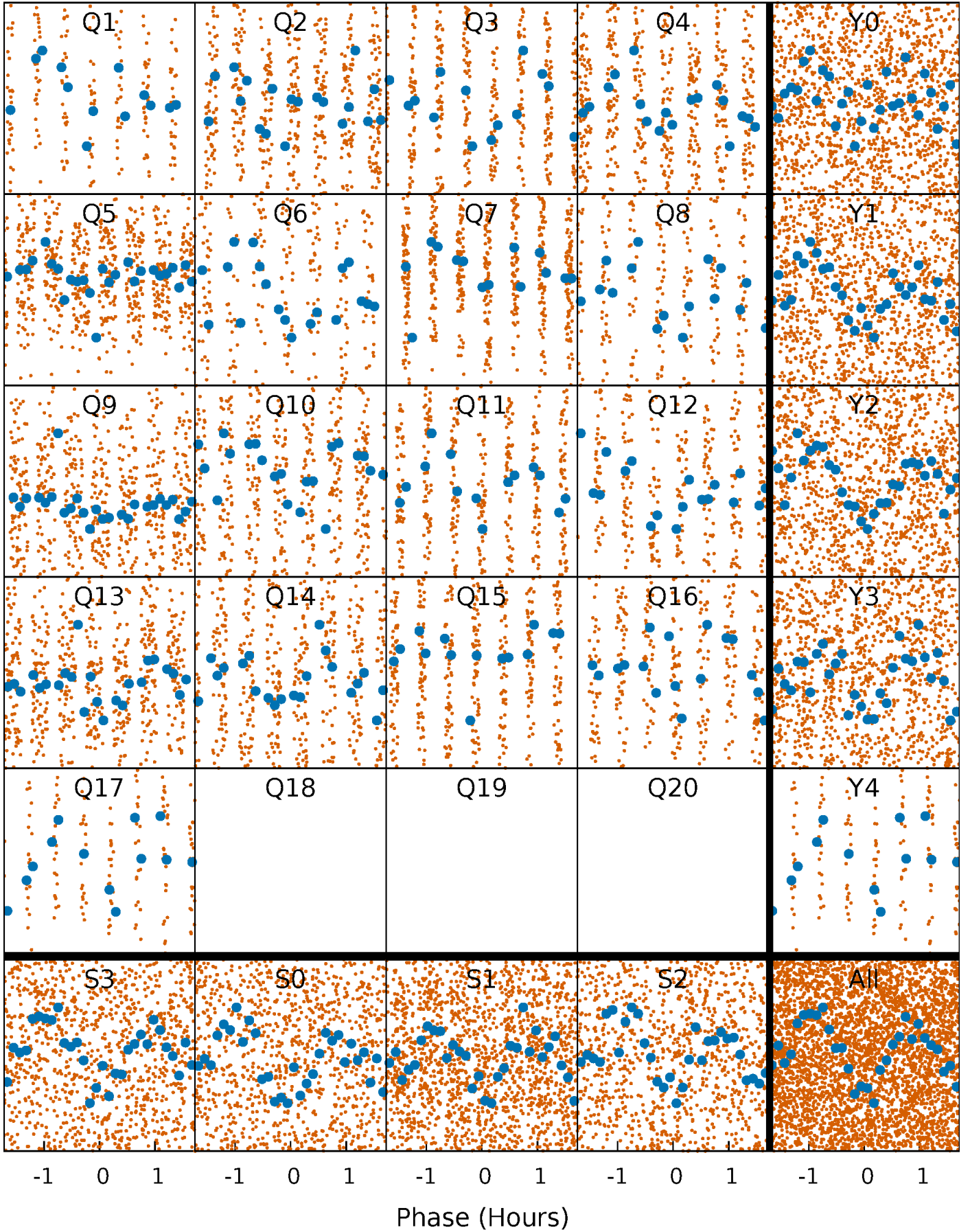


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



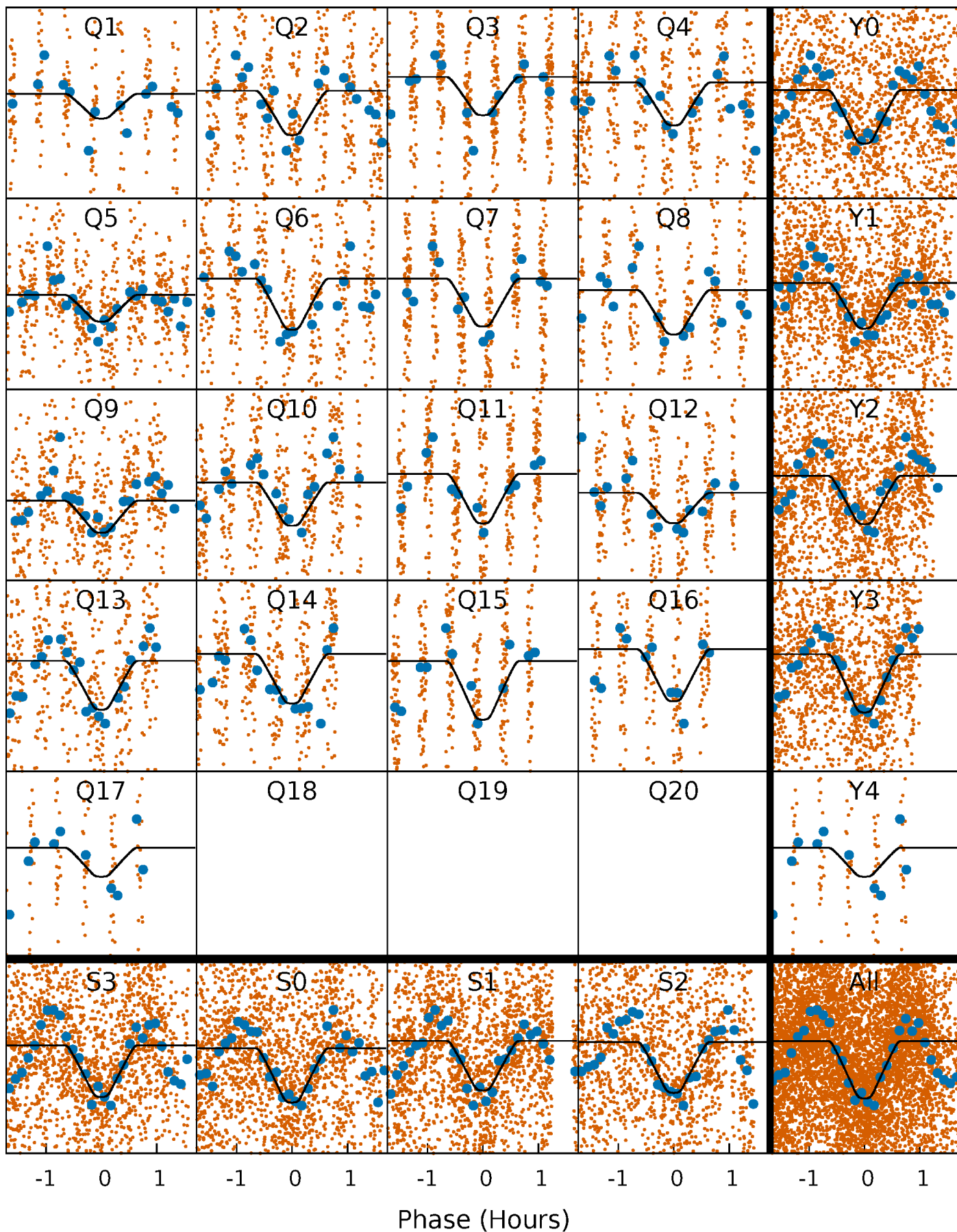
PDC Quarter-Phased Transit Curves

TCE 007699056-04 P= 0.960285 Days $T_0=132.010336$ (BKJD)



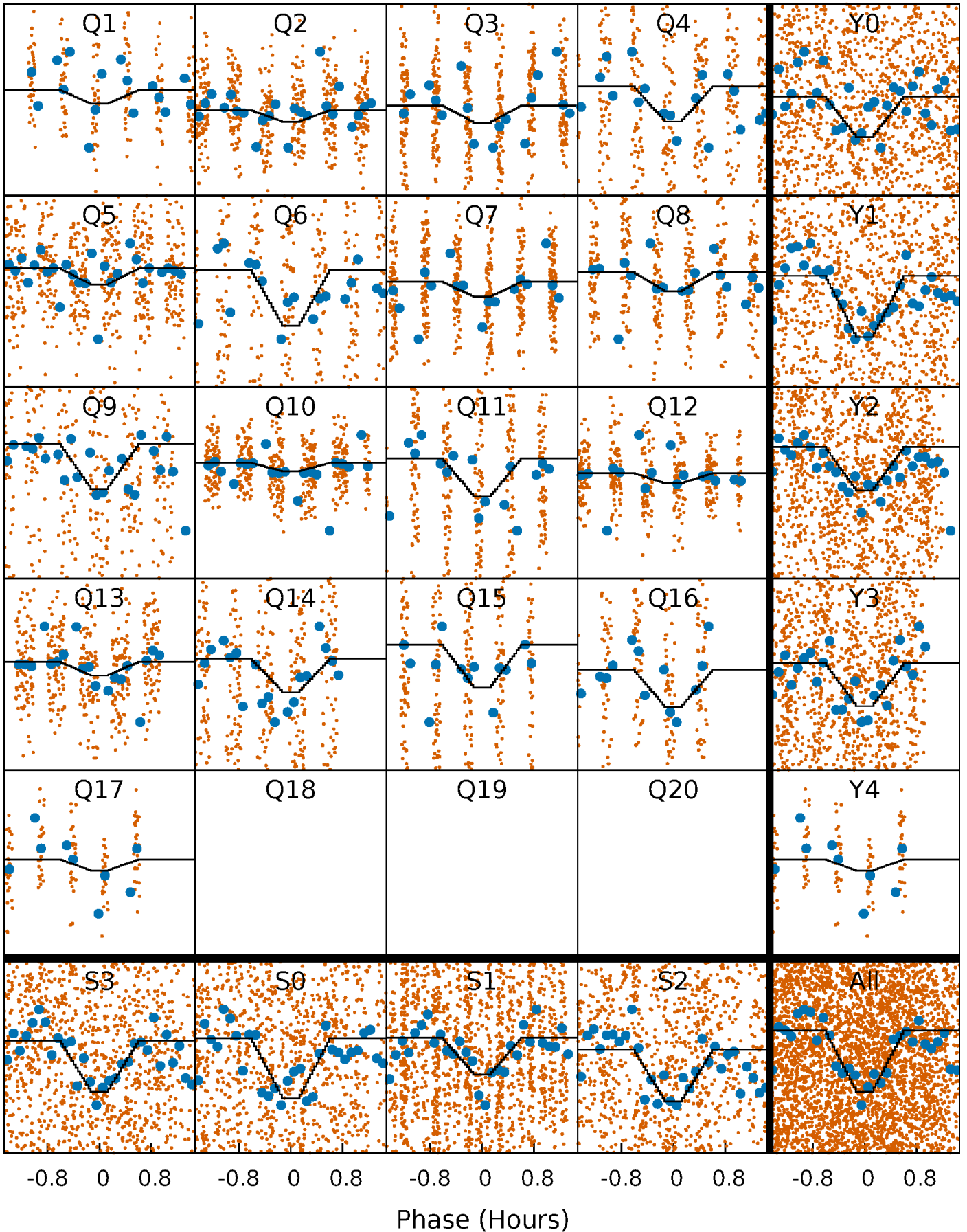
DV Quarter-Phased Transit Curves

TCE 007699056-04 P= 0.960285 Days $T_0=132.010336$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

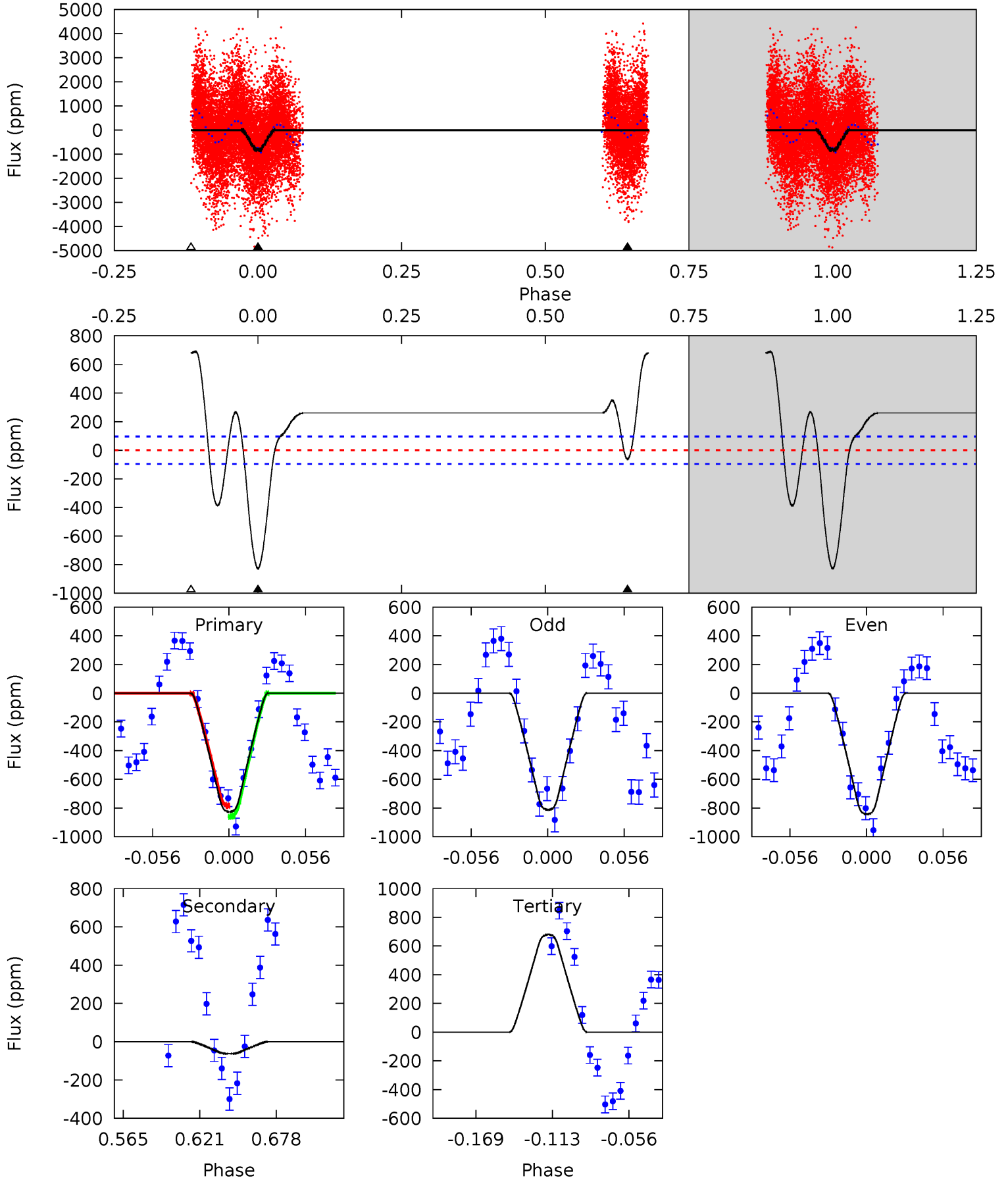
TCE 007699056-04 P= 0.960291 Days $T_0=132.007109$ (BKJD)



DV Model-Shift Uniqueness Test

007699056-04, P = 0.960285 Days, E = 131.050051 Days

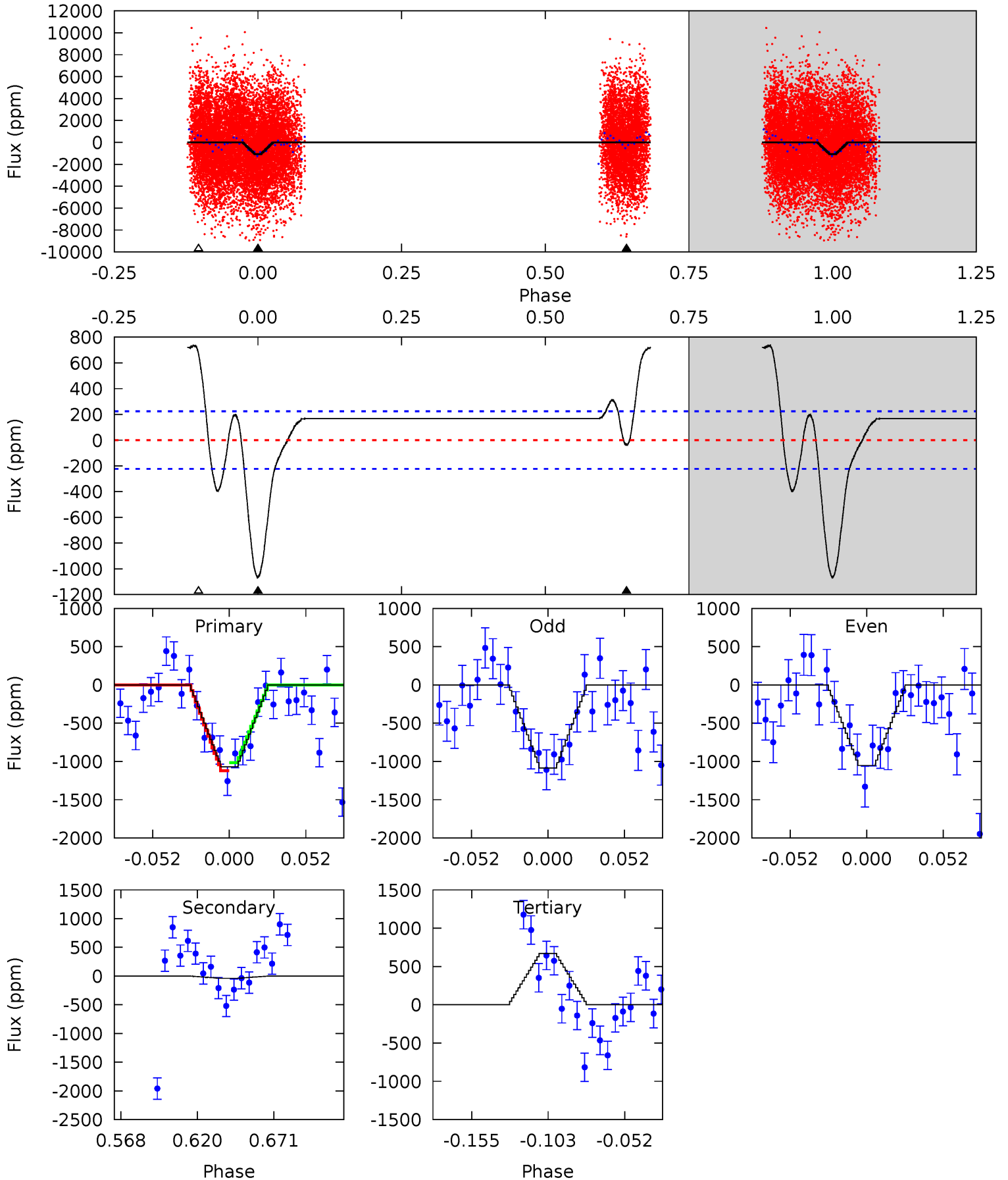
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.2	3.04	-33.0	0	4.68	1.91	18.5	73.2	40.2	36.1	3.04	0.74	1.04	0.45	1.94



Alt Model-Shift Uniqueness Test

007699056-04, P = 0.960291 Days, E = 131.046818 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.5	0.83	-14.1	0	4.70	1.95	7.91	36.6	22.5	15.0	0.83	0.35	1.05	0.41	1.09



Stellar Parameters For KIC 007699056

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7655^{+212}_{-319}	$3.653^{+0.535}_{-0.094}$	$-0.460^{+0.250}_{-0.300}$	$3.279^{+0.310}_{-1.755}$	$1.765^{+0.163}_{-0.489}$	$0.070^{+0.490}_{-0.014}$
	+3%/-4%	+15%/-3%	+54%/-65%	+9%/-54%	+9%/-28%	+696%/-20%
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 007699056-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-63 ± 21	$9.63^{+3.06}_{-3.26}$	5485^{+326}_{-819}	-3719^{+7236}_{-644}	$0.200^{+0.217}_{-0.104}$
Alt.	-40 ± 48	$10.68^{+3.15}_{-3.51}$	5473^{+356}_{-751}	-4158^{+1468}_{-513}	$0.101^{+0.181}_{-0.113}$

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 $A_{obs} \gg 1.0$

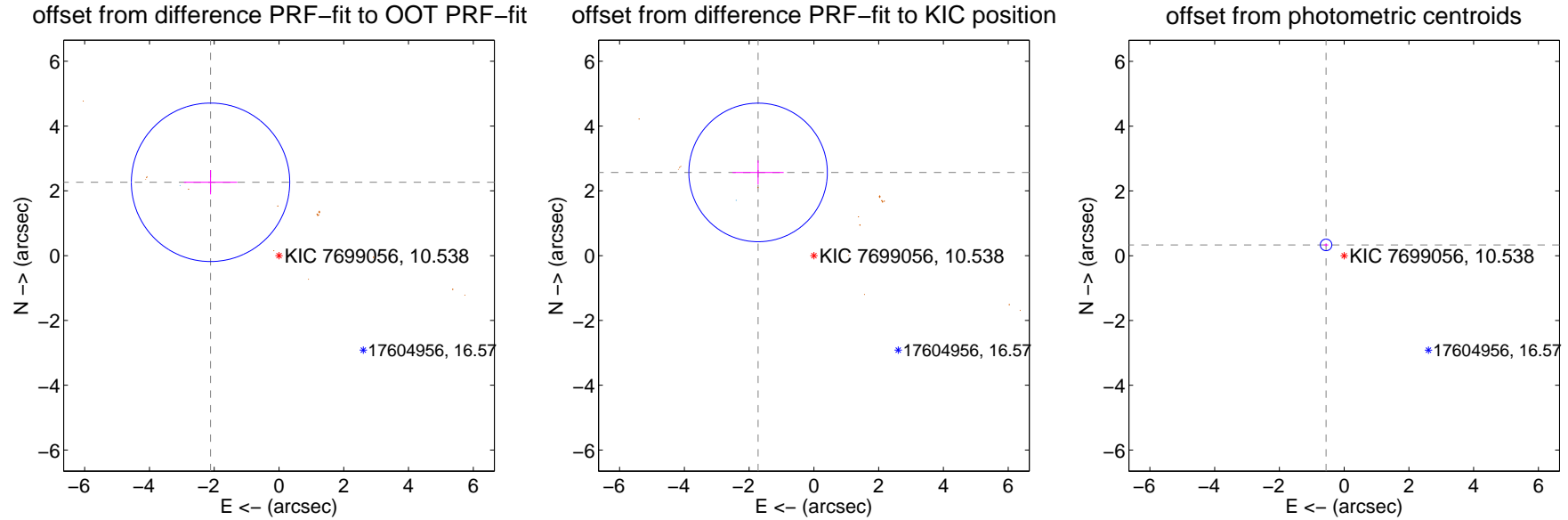
DV Centroid Data

Supplemental centroid analysis for 007699056-04. **Kepler magnitude: 10.54.** Transit SNR 24.97

There are 1 quarters with good PRF difference image offsets

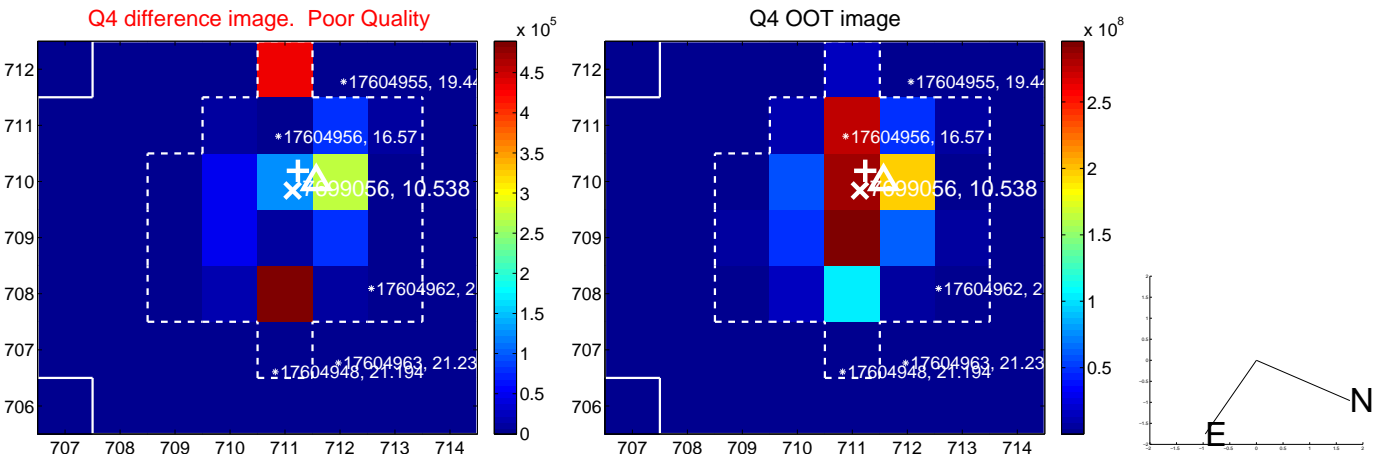
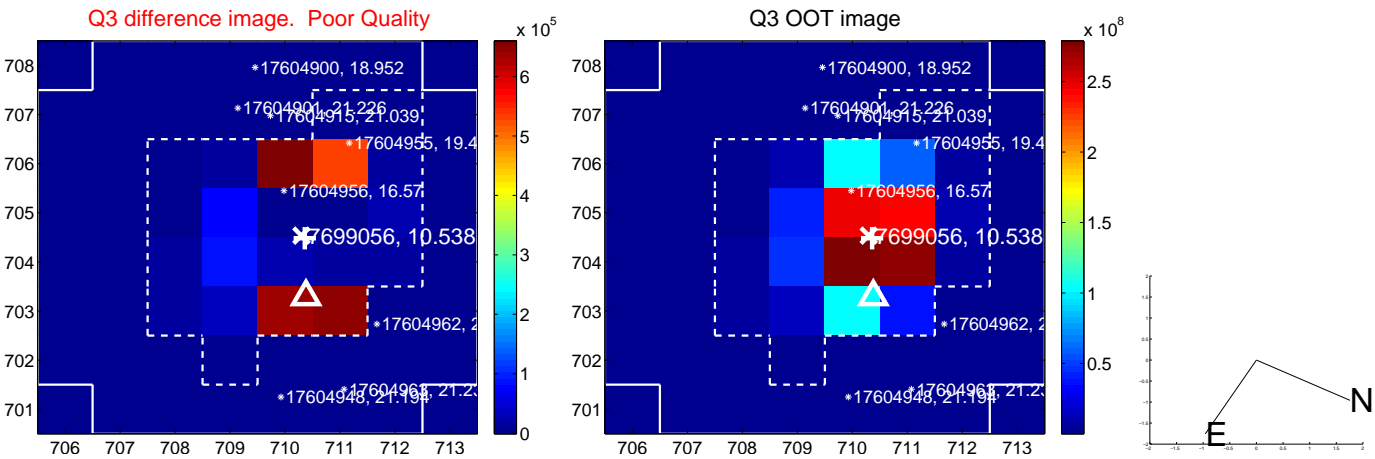
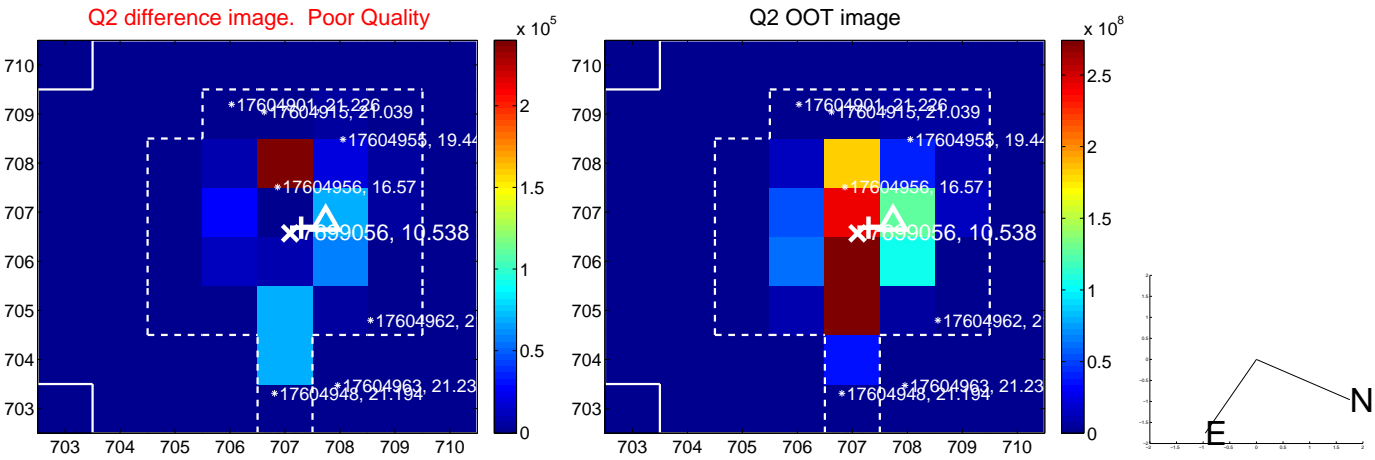
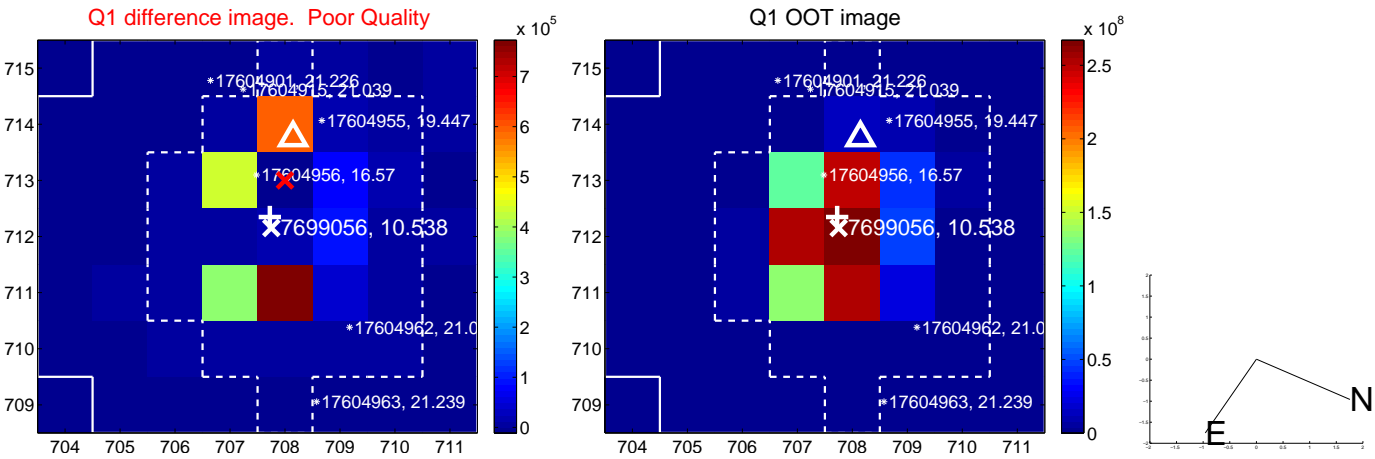
The direct PRF centroid is offset from the target star catalog position by about 0.80 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.097 ± 0.815	3.80	2.114 ± 0.822	2.263 ± 0.375
PRF-fit source offset from KIC position	3.093 ± 0.713	4.34	1.723 ± 0.791	2.568 ± 0.371
photometric centroid source offset	0.65 ± 0.06	10.95	0.56 ± 0.07	0.33 ± 0.04

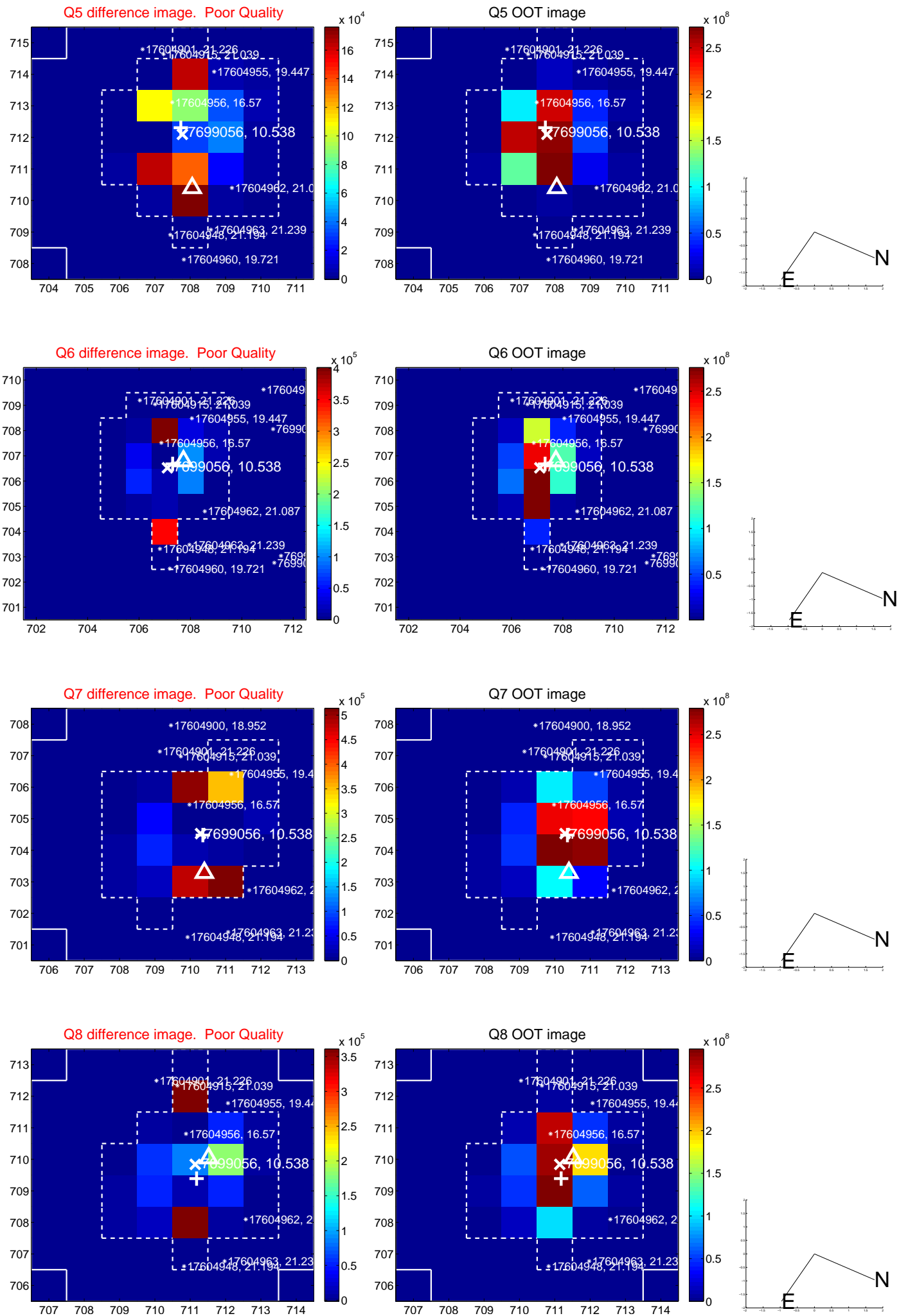


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

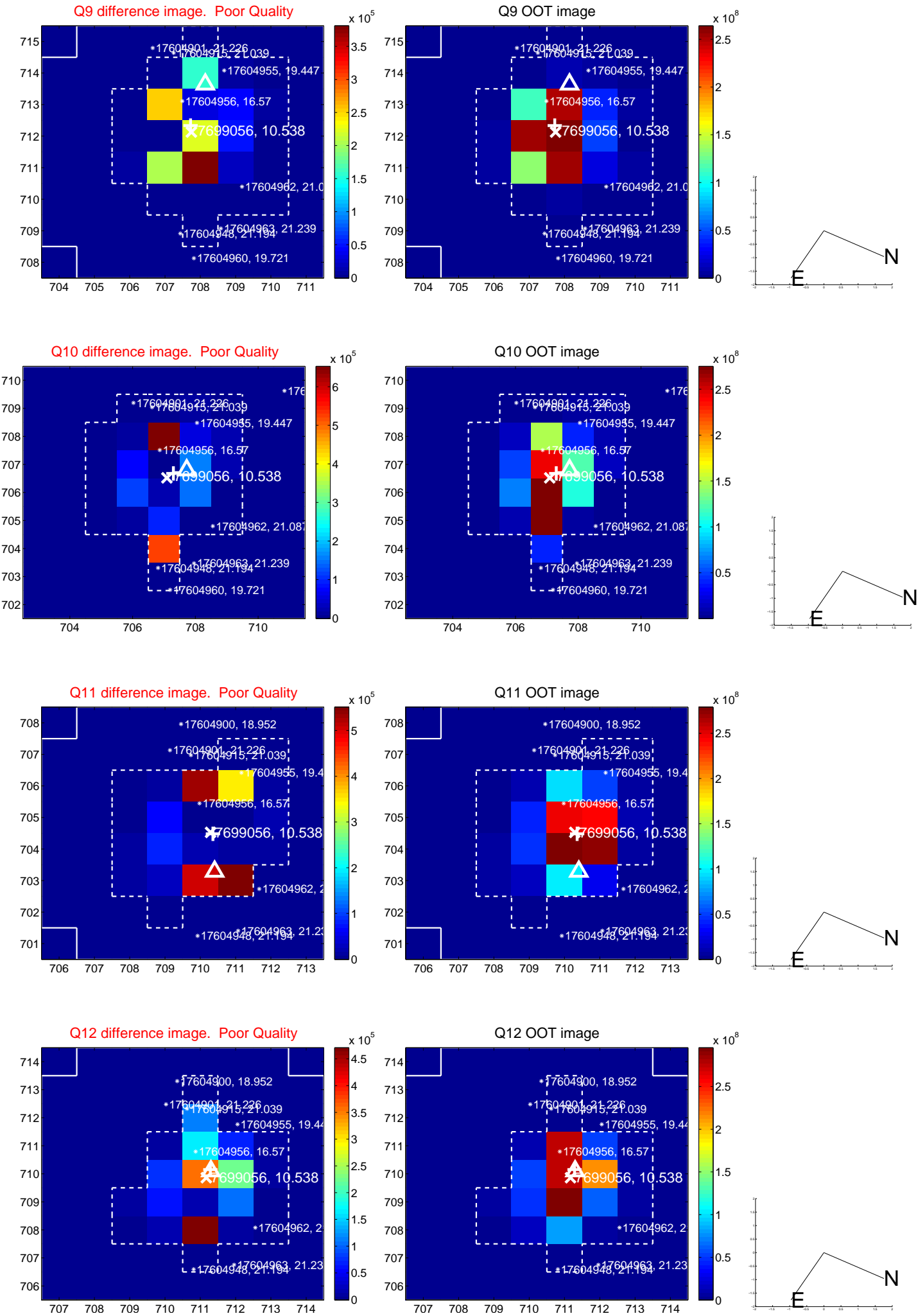
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



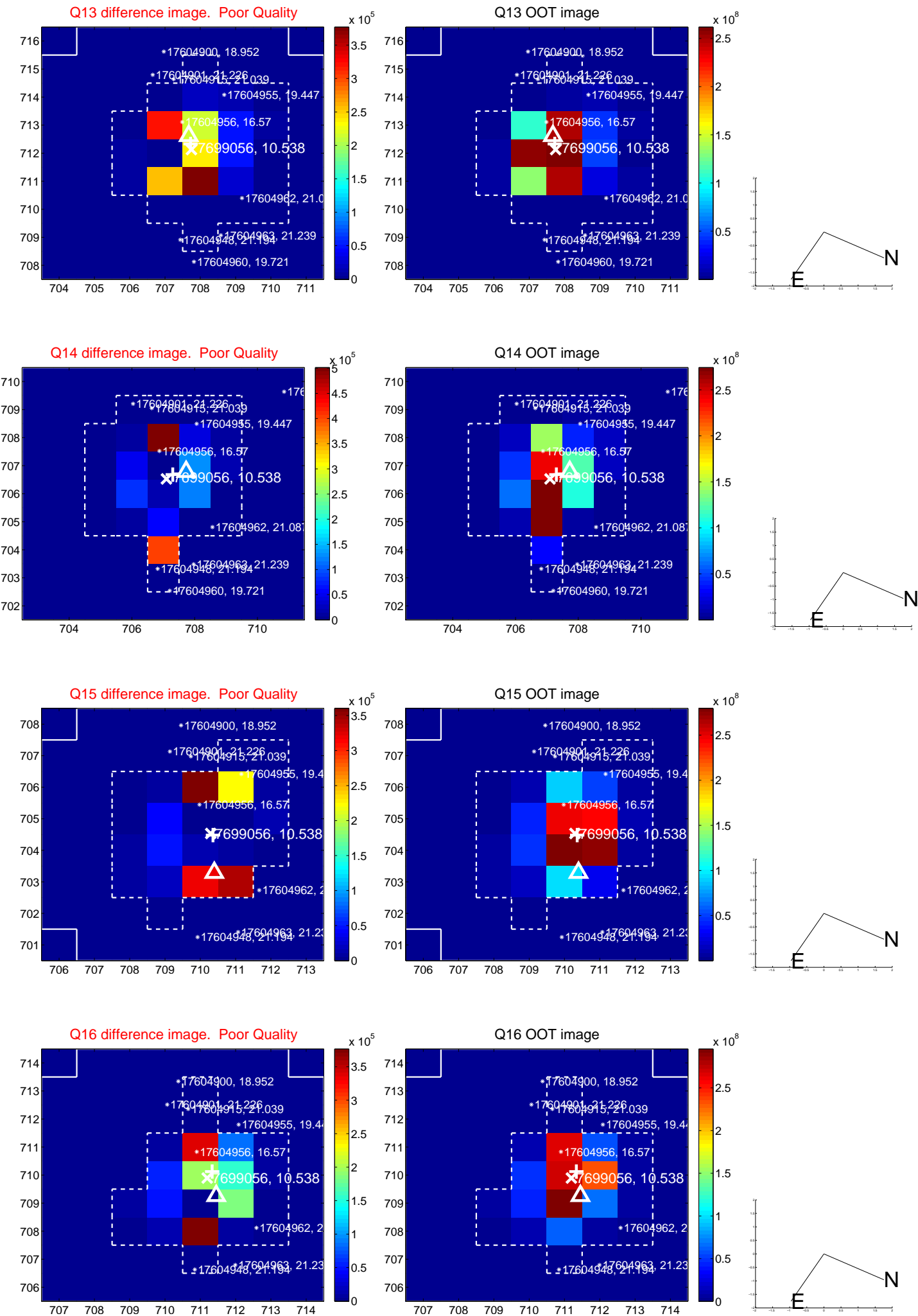
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



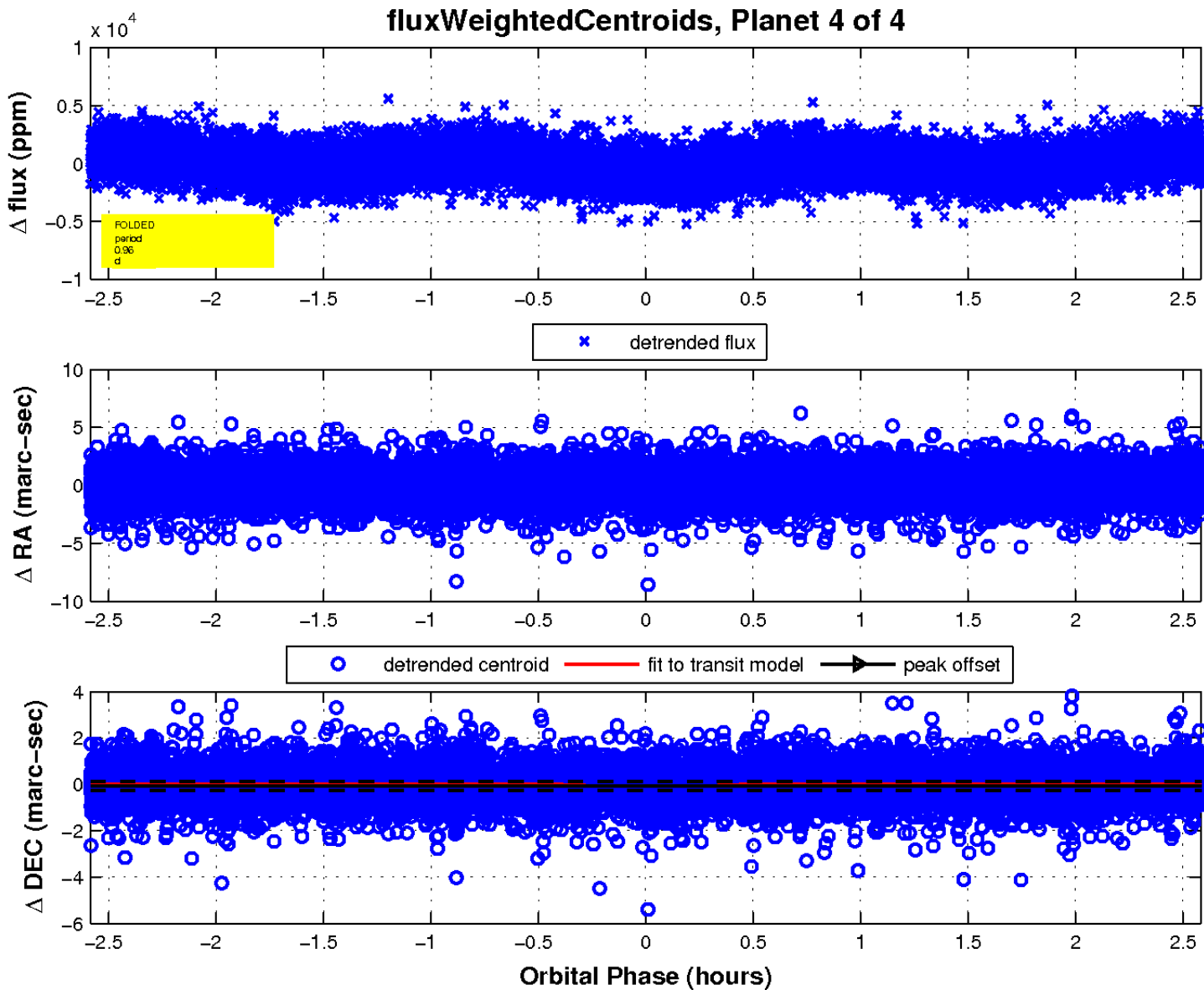
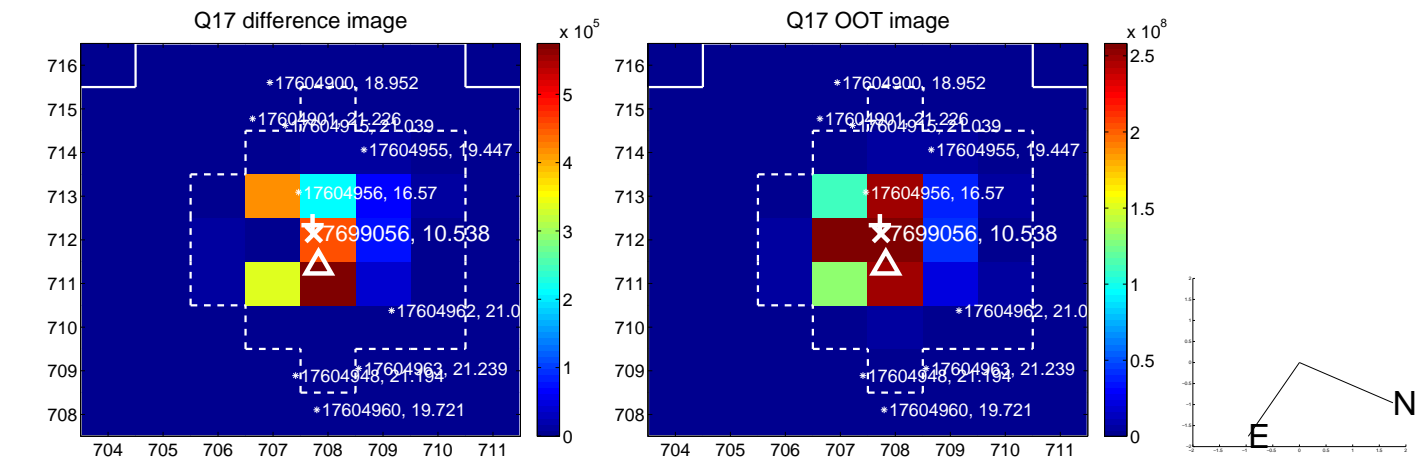
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

