

KIC 007662076

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})
007662076-01	OBS	No	0.536283	131.532273	2.6	1.952	11.3	1.8	1.80	7251	0.34	40736.29
007662076-02	OBS	No	0.536320	131.654744	68.2	1.500	9.9	-1.0	1.80	7251	1.51	40732.57
007662076-03	OBS	No	130.230487	216.980996	370.1	2.783	9.3	9.0	1.80	7251	4.00	26.89
007662076-05	OBS	No	117.385832	146.425325	184.0	2.091	8.4	7.1	1.80	7251	2.79	30.88
007662076-06	OBS	No	60.308606	151.882173	122.5	5.852	7.3	6.6	1.80	7251	2.29	75.05
007662076-08	OBS	No	17.719377	140.089121	60.1	2.500	7.5	-1.0	1.80	7251	1.42	384.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007662076-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
007662076-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007662076-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007662076-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
007662076-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
007662076-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

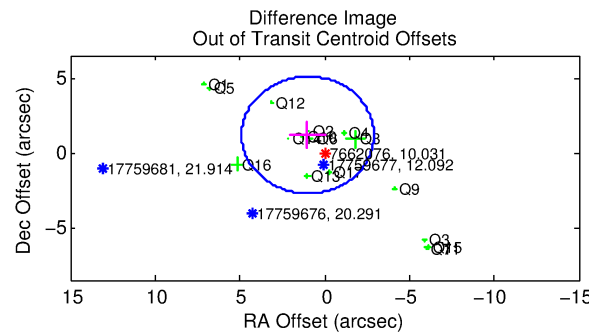
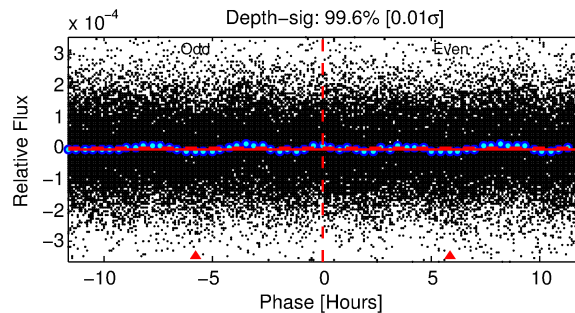
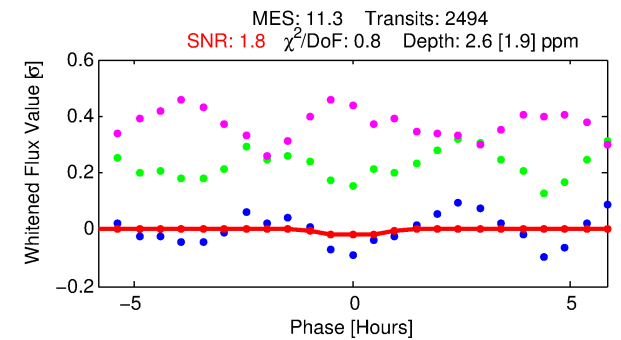
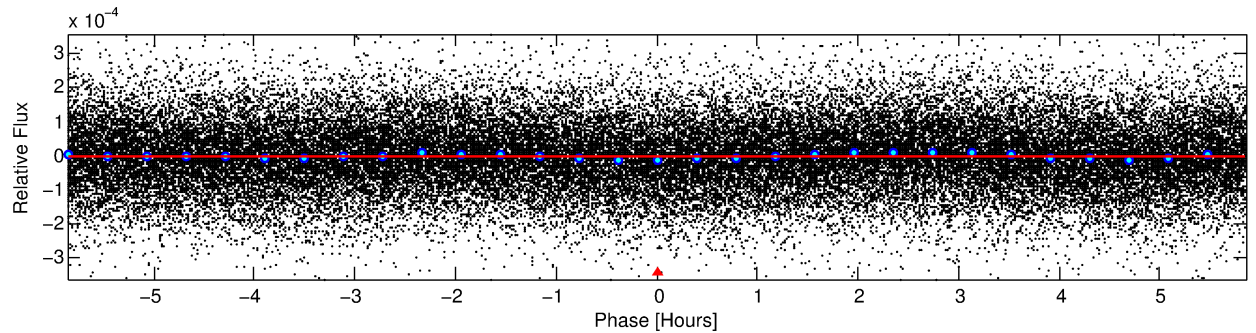
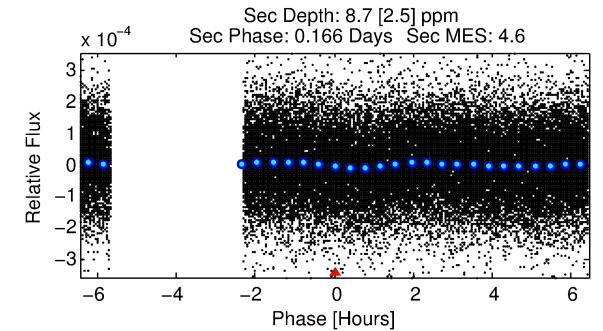
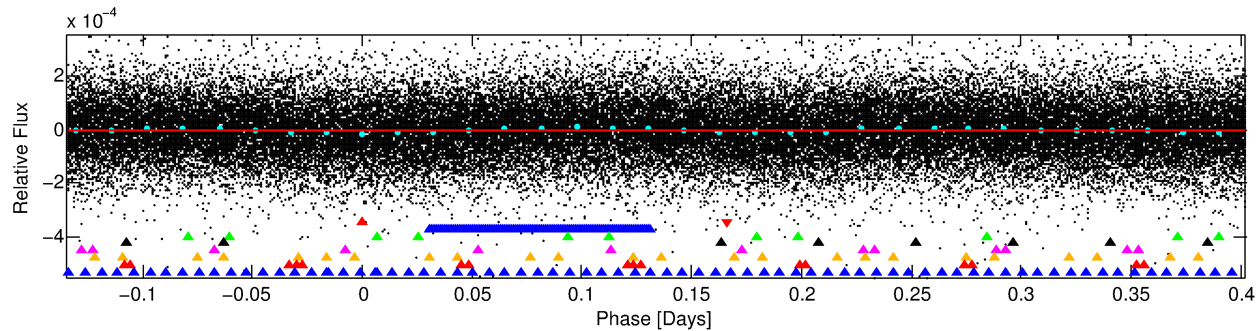
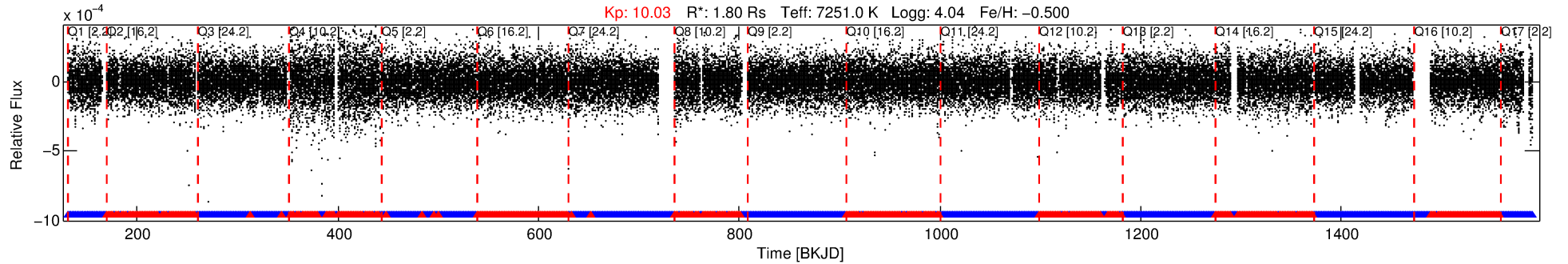
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007662076-01

No Significant Match Found

DV One-Page Summary

KIC: 7662076 Candidate: 1 of 8 Period: 0.536 d



DV Fit Results:

Period = 0.53628 [0.00006] d
Epoch = 131.5323 [0.0088] BKJD
 $R_p/R^* = 0.0017$ [0.0007]
 $a/R^* = 1.32$ [0.74]
 $b = 0.90$ [0.29]
 $S_{\text{eff}} = 40736.29$ [20088.30]
 $T_{\text{eq}} = 3623$ [447] K
 $R_p = 0.34$ [0.18] R_{e}
 $a = 0.0140$ [0.0041] AU
 $A_g = 8.39$ [8.51] [0.87σ]
 $T_{\text{eff}} = 9531$ [2178] K [2.66σ]

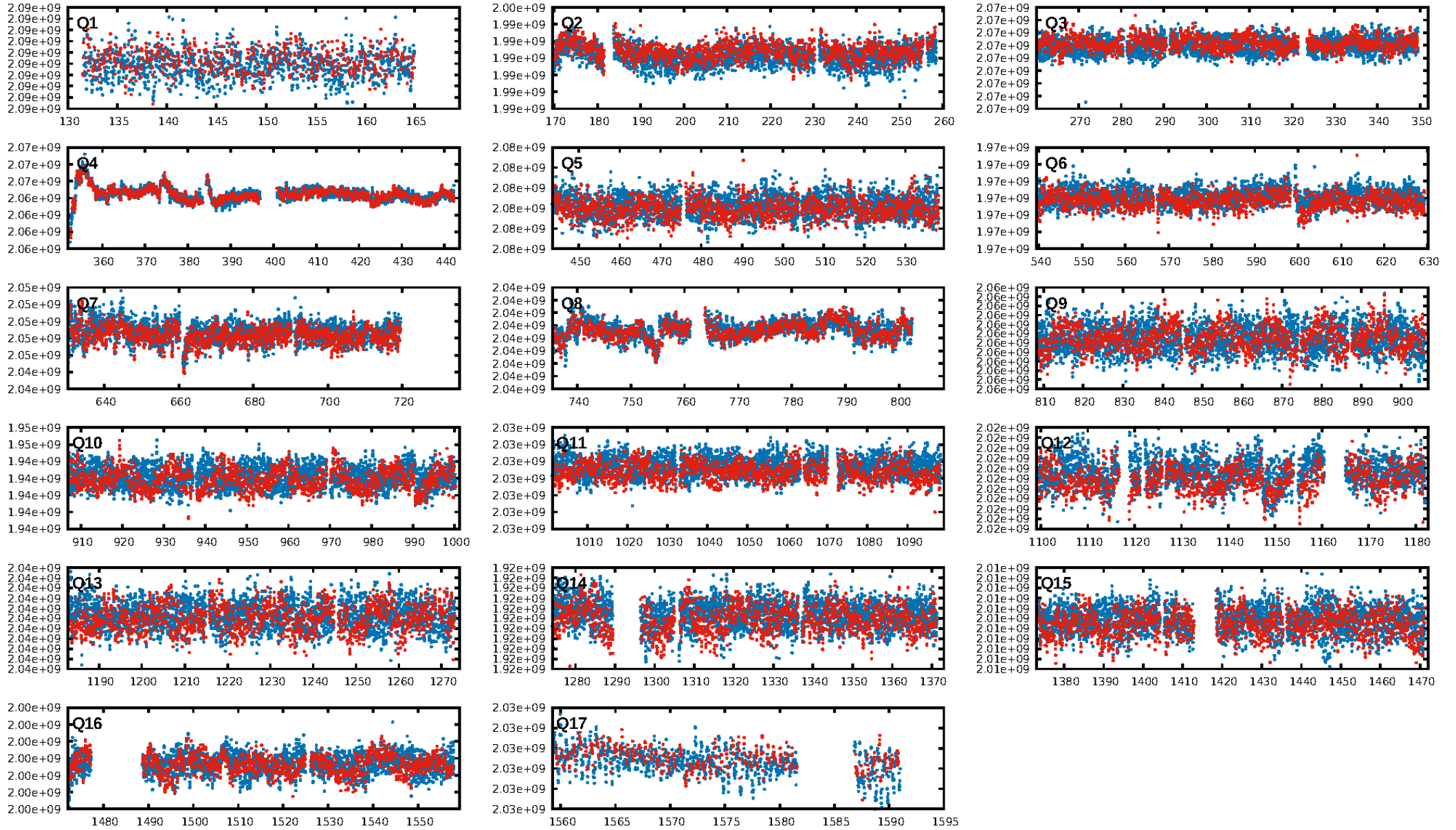
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.66 [1578/2382]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.541 arcsec [1.18σ]
KicOffset-rm: 2.065 arcsec [1.74σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.35 [6/17]
DiffImageOverlap-fno: 0.00 [0/17]

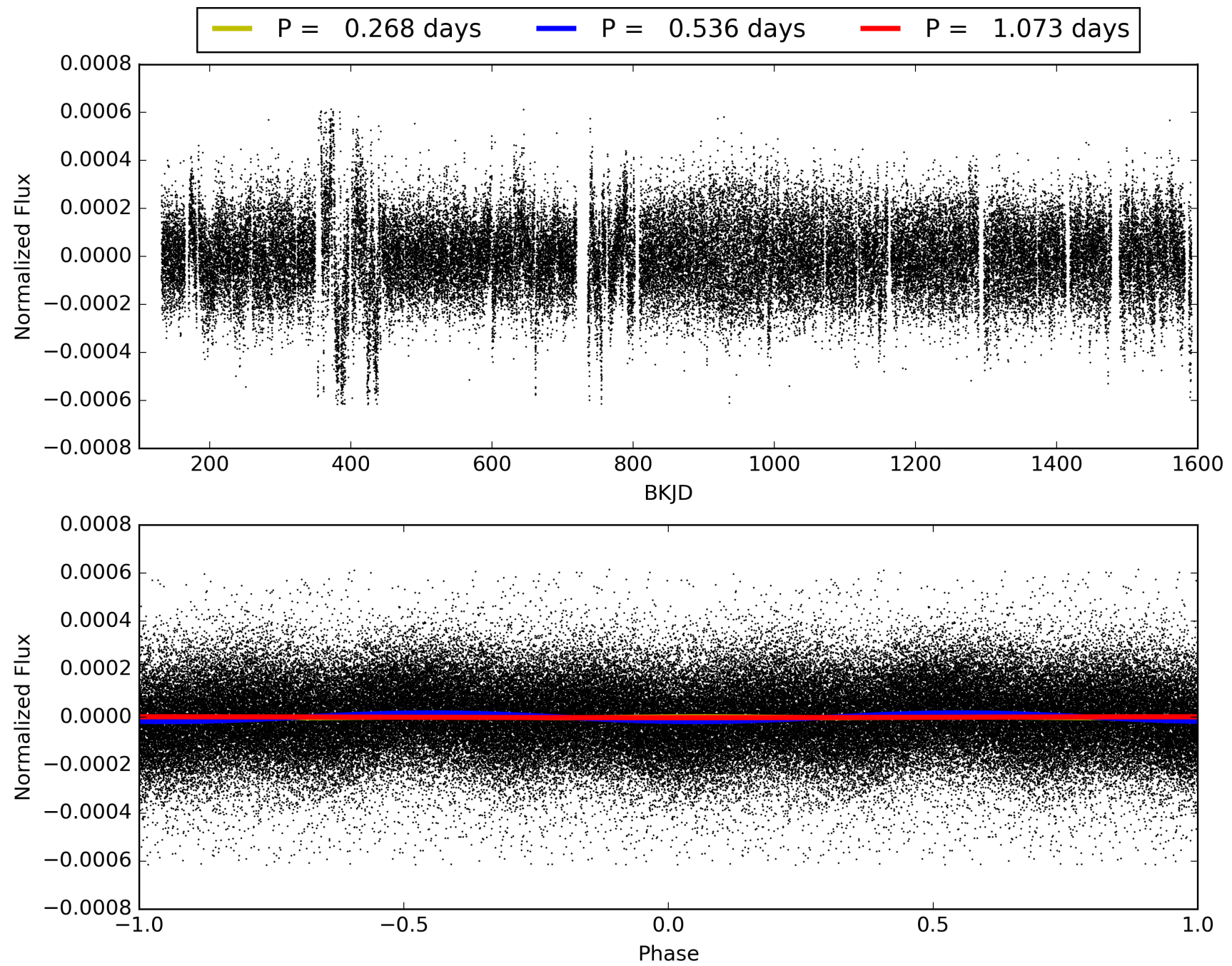
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007662076-01, PDC Light Curves

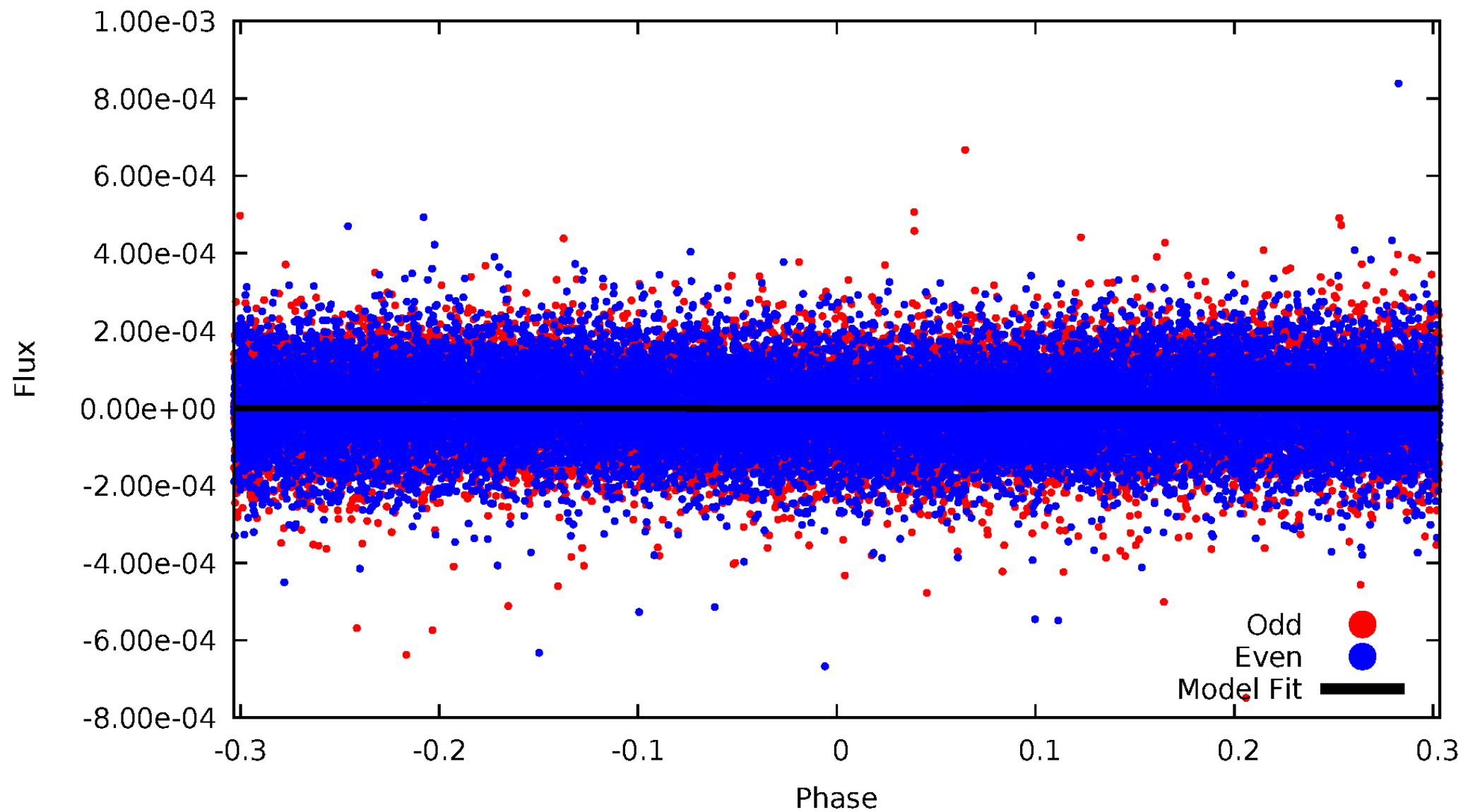


TCE 007662076-01



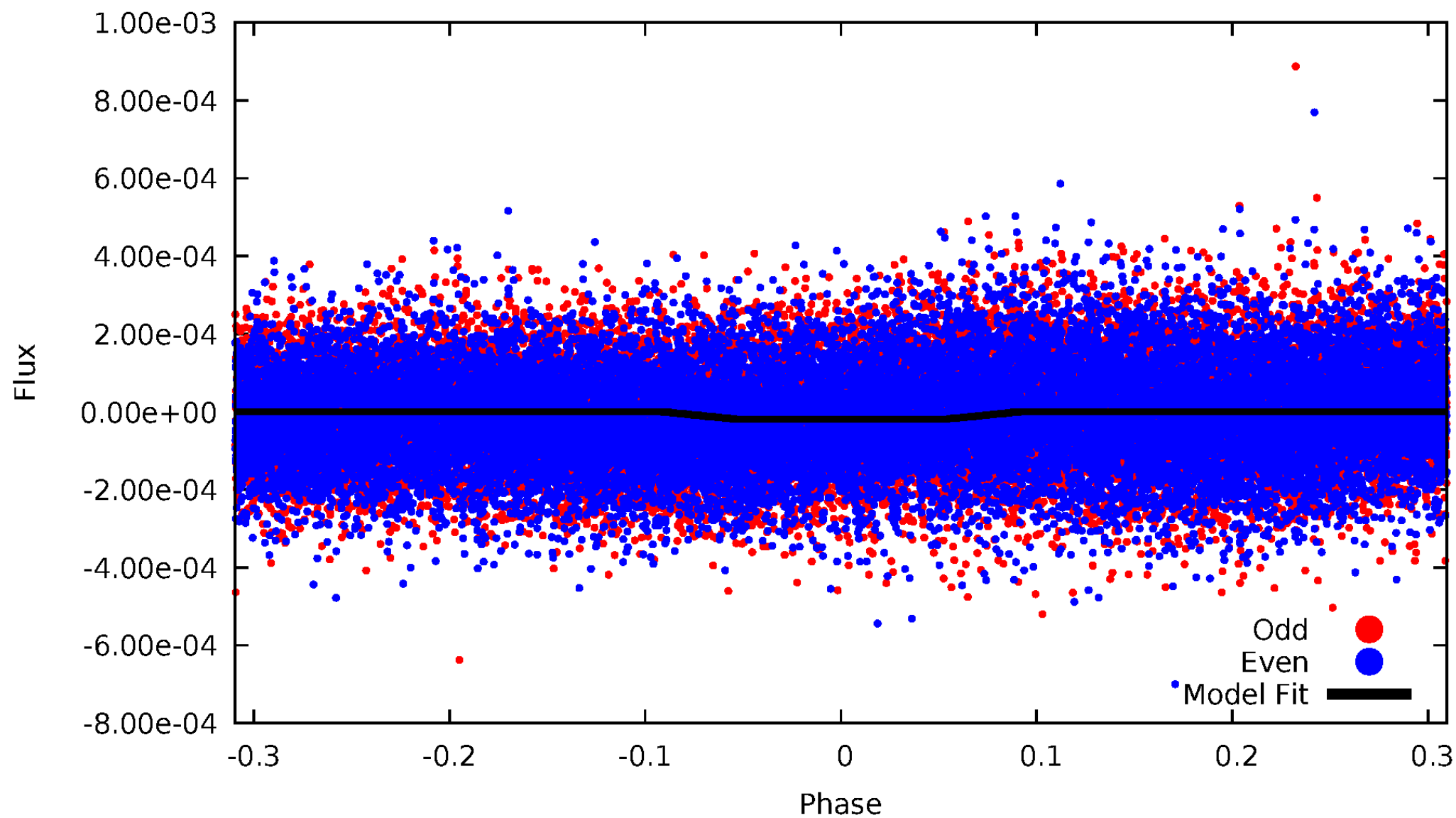
DV Odd/Even

TCE 007662076-01

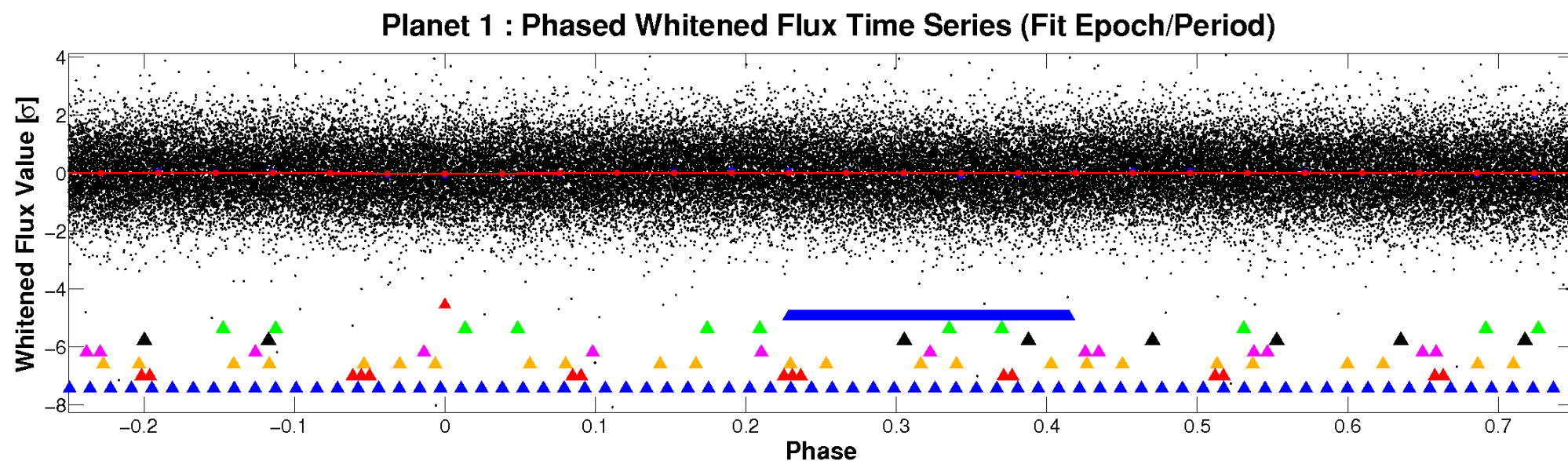
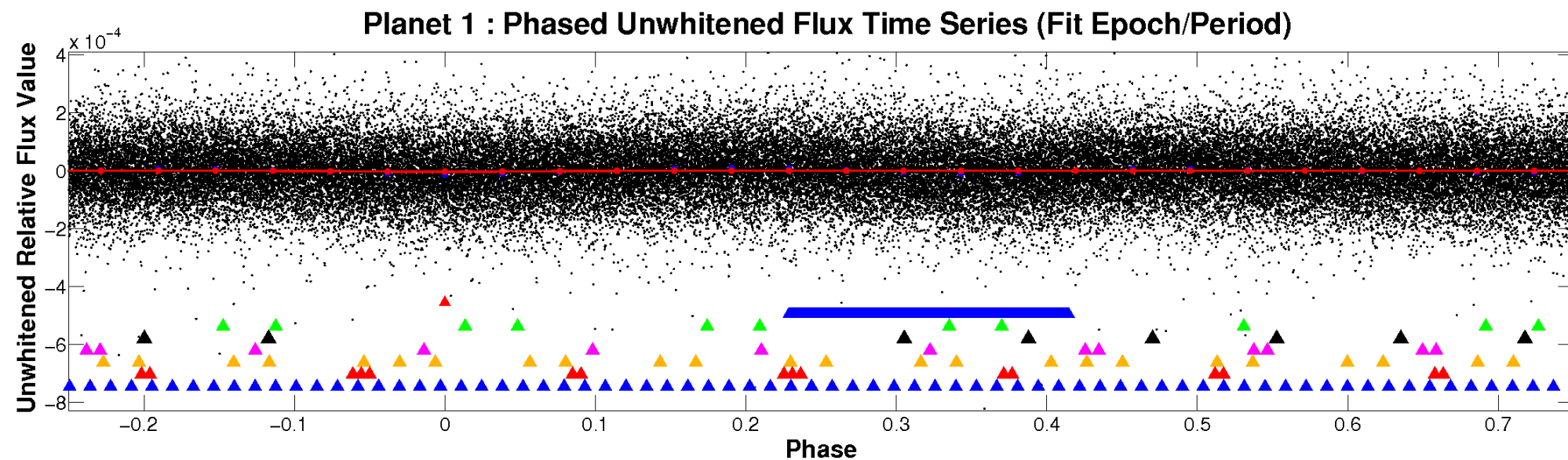


ALT Odd/Even

TCE 007662076-01

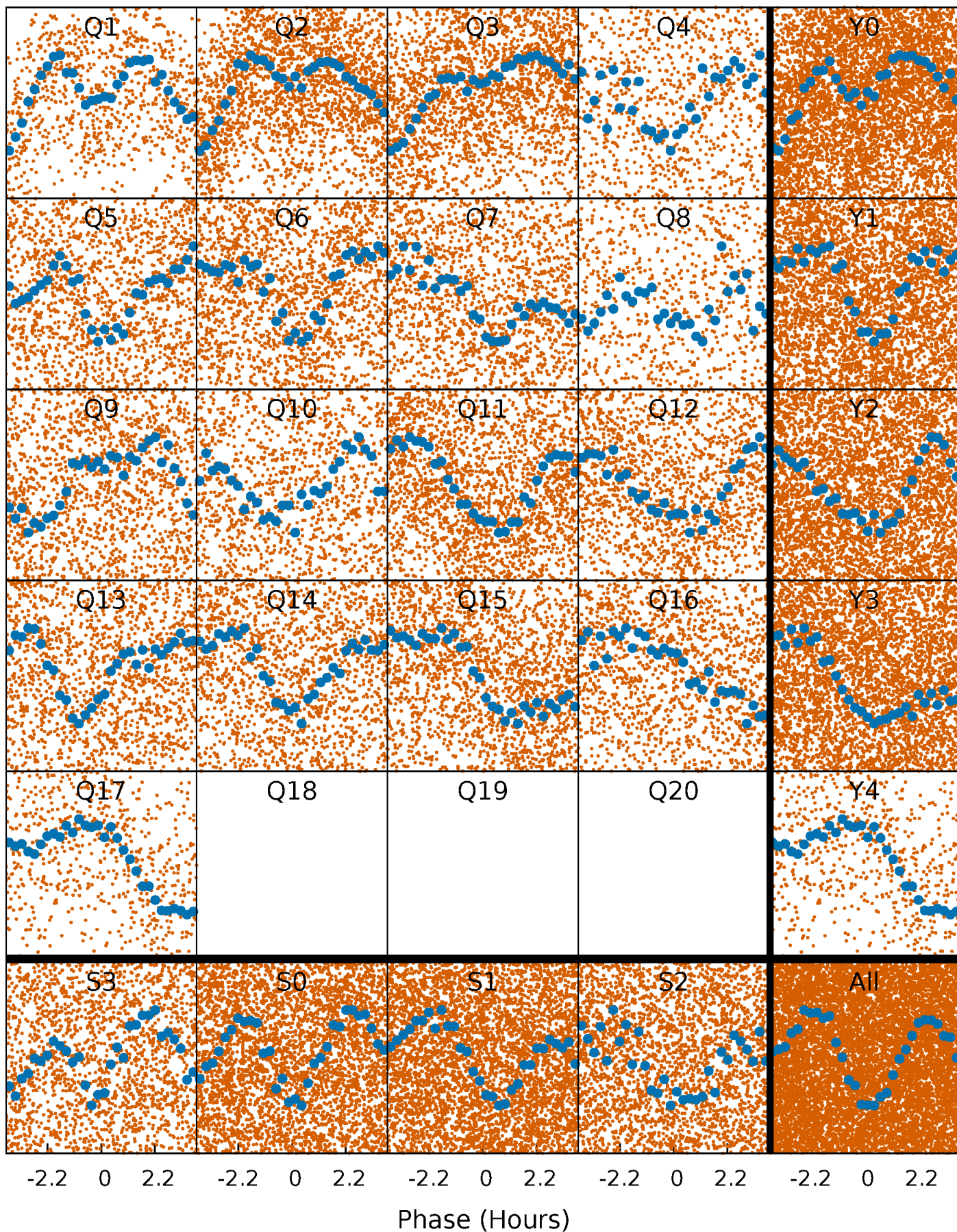


Non-Whitened Vs. Whitened Light Curve



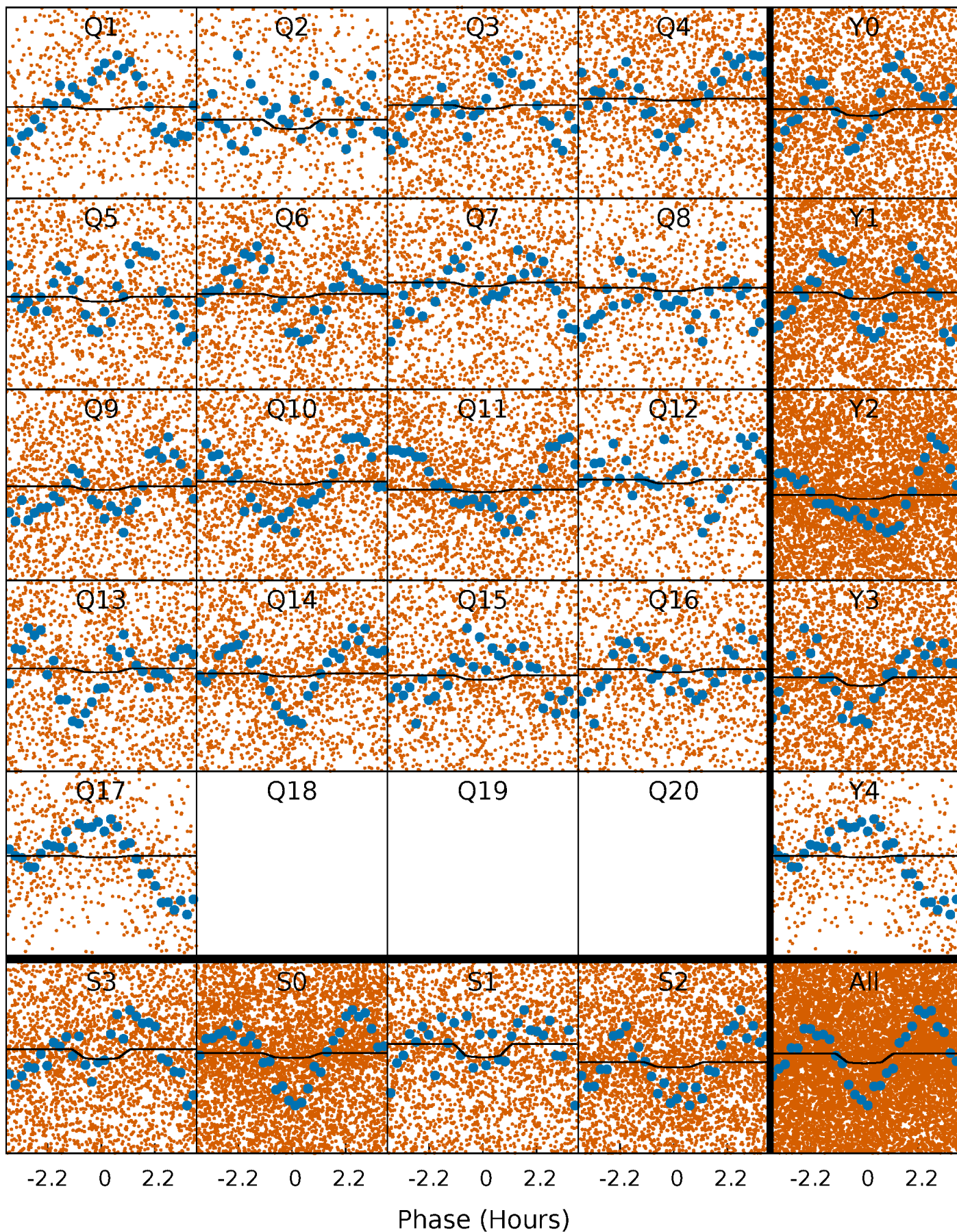
PDC Quarter-Phased Transit Curves

TCE 007662076-01 P= 0.536283 Days $T_0=131.532273$ (BKJD)



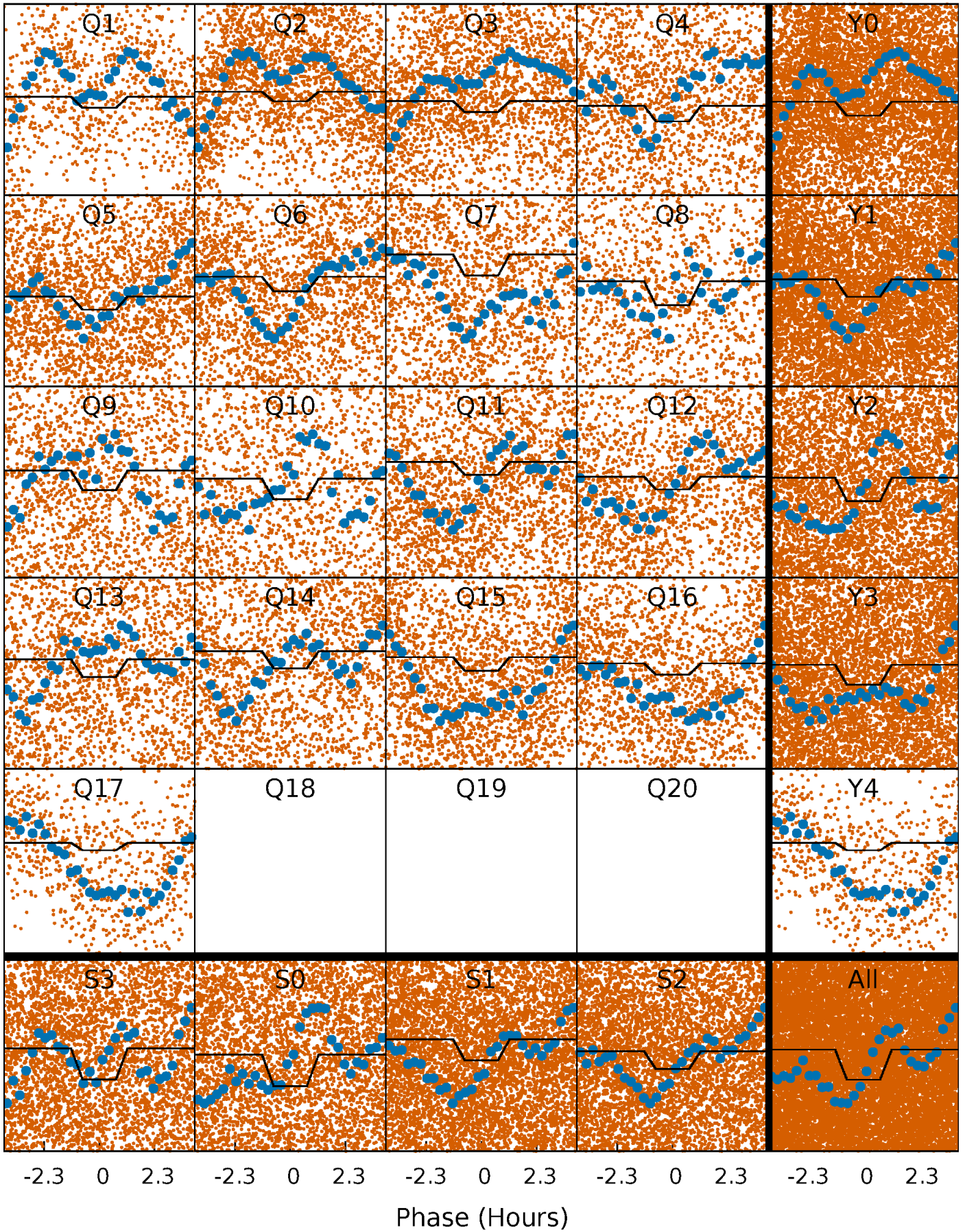
DV Quarter-Phased Transit Curves

TCE 007662076-01 P= 0.536283 Days $T_0=131.532273$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

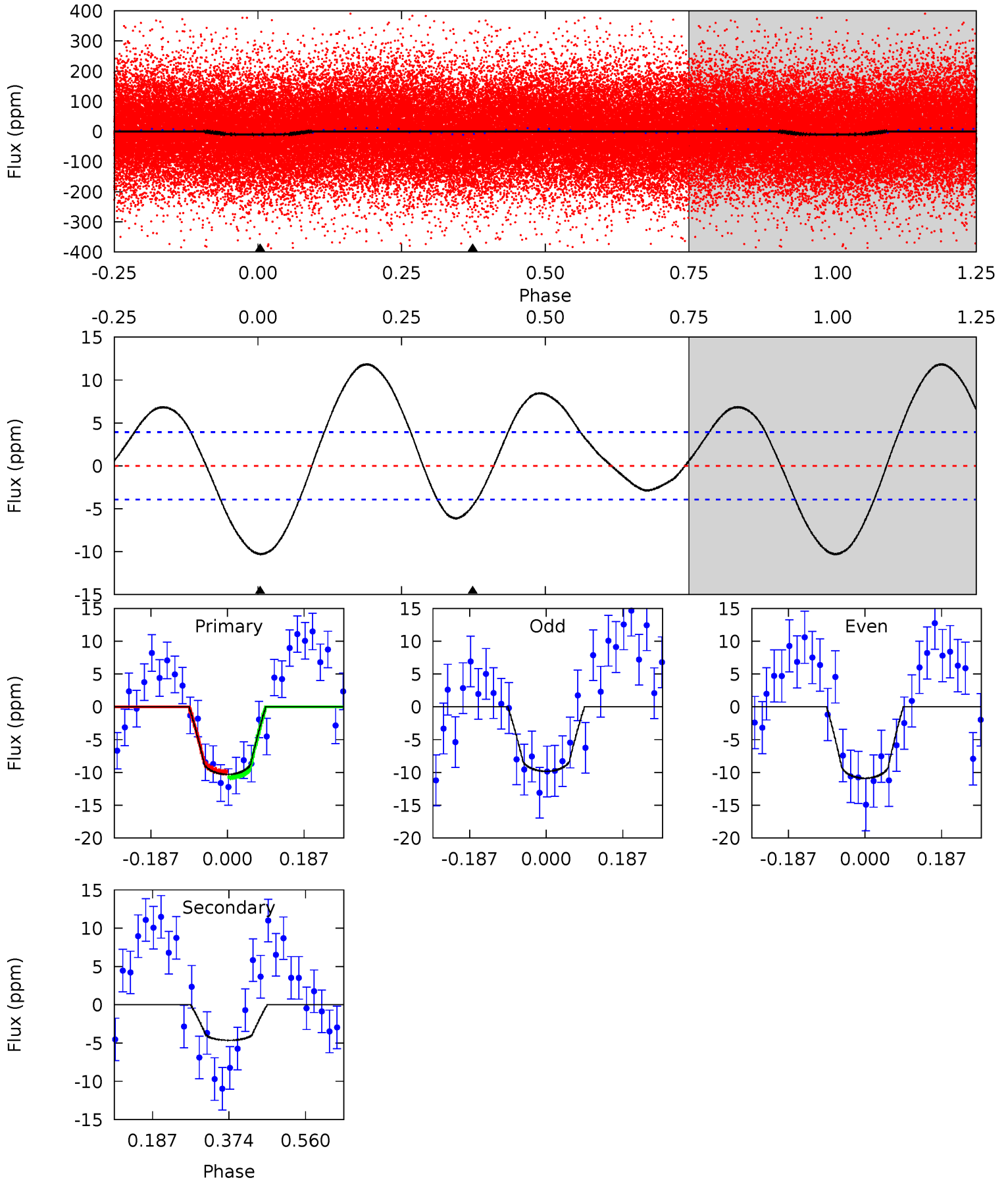
TCE 007662076-01 P= 0.536324 Days $T_0=131.541900$ (BKJD)



DV Model-Shift Uniqueness Test

007662076-01, P = 0.536283 Days, E = 130.995990 Days

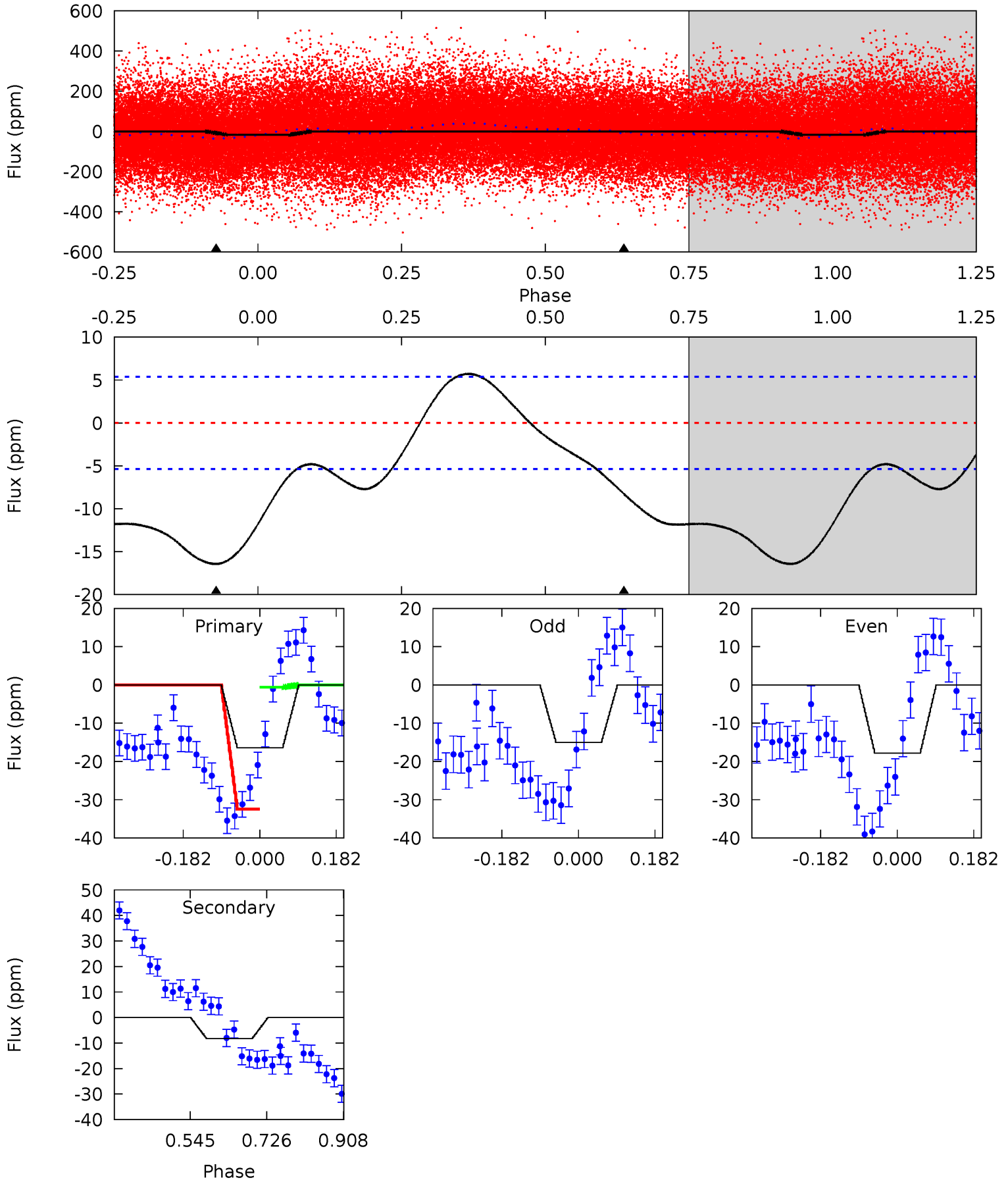
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	5.24	0	0	4.43	1.32	3.01	11.6	11.6	5.24	5.24	0.60	1.34	0.53	0.42



Alt Model-Shift Uniqueness Test

007662076-01, P = 0.536324 Days, E = 131.005576 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	6.83	0	0	4.44	1.34	4.19	13.6	13.6	6.83	6.83	1.16	0.91	0.26	14.1



Stellar Parameters For KIC 007662076

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7251^{+230}_{-281}	$4.035^{+0.273}_{-0.147}$	$-0.500^{+0.250}_{-0.300}$	$1.799^{+0.512}_{-0.563}$	$1.280^{+0.218}_{-0.178}$	$0.310^{+0.517}_{-0.125}$
	+3%/-4%	+7%/-4%	+50%/-60%	+28%/-31%	+17%/-14%	+167%/-40%
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 007662076-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5 ± 1	$0.32^{+0.16}_{-0.14}$	4978^{+386}_{-484}	8068^{+4288}_{-1647}	$4.945^{+10.427}_{-2.785}$
Alt.	-8 ± 1	$0.83^{+0.20}_{-0.19}$	4997^{+390}_{-465}	5461^{+641}_{-542}	$1.309^{+0.825}_{-0.482}$

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

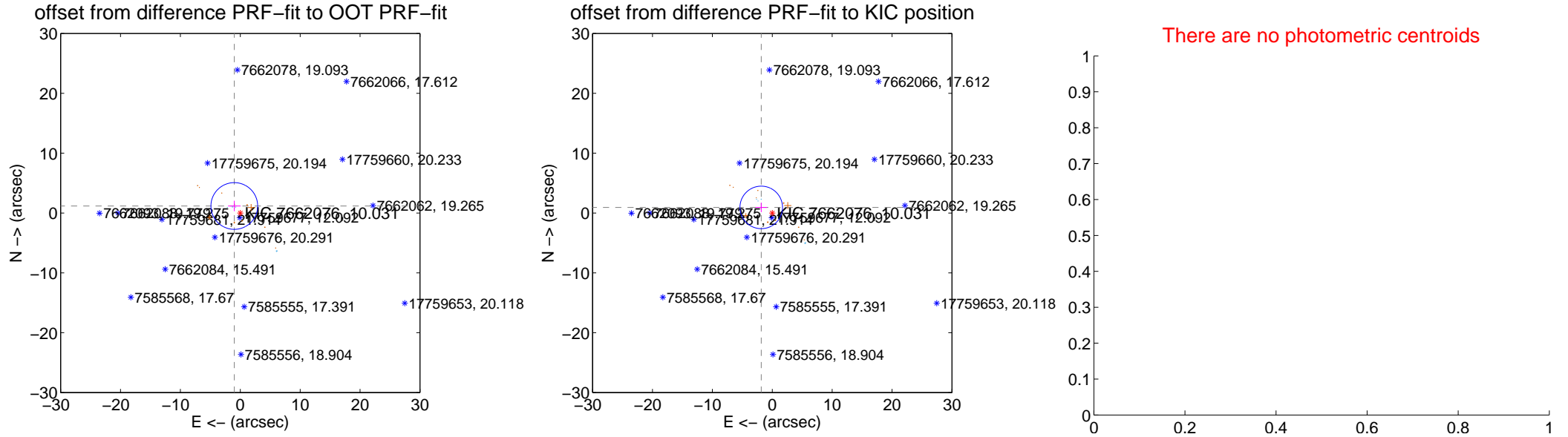
DV Centroid Data

Supplemental centroid analysis for 007662076-01. **Kepler magnitude: 10.03.** Transit SNR 1.80

There are 6 quarters with good PRF difference image offsets

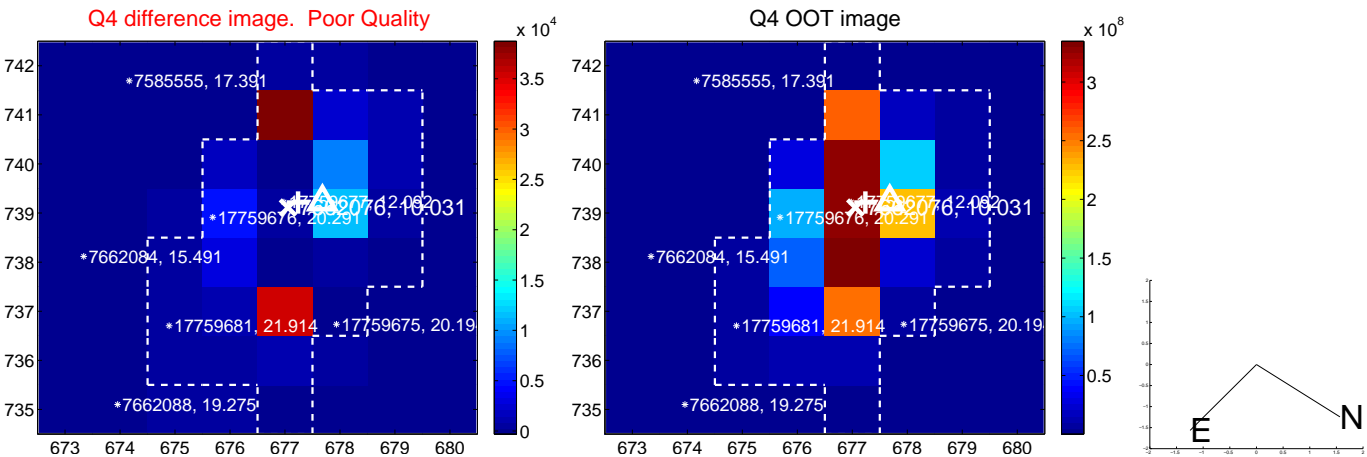
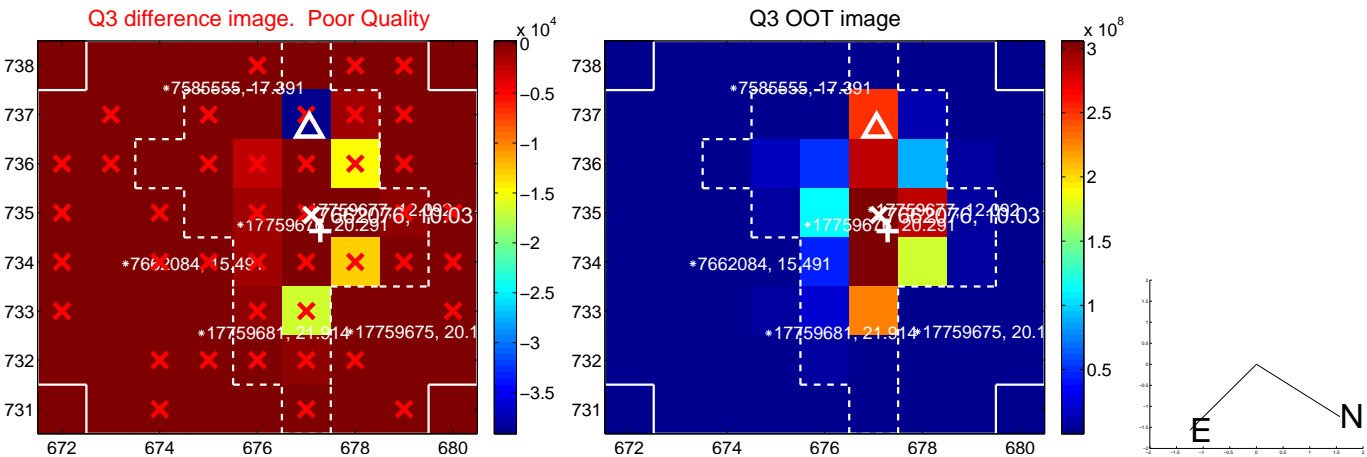
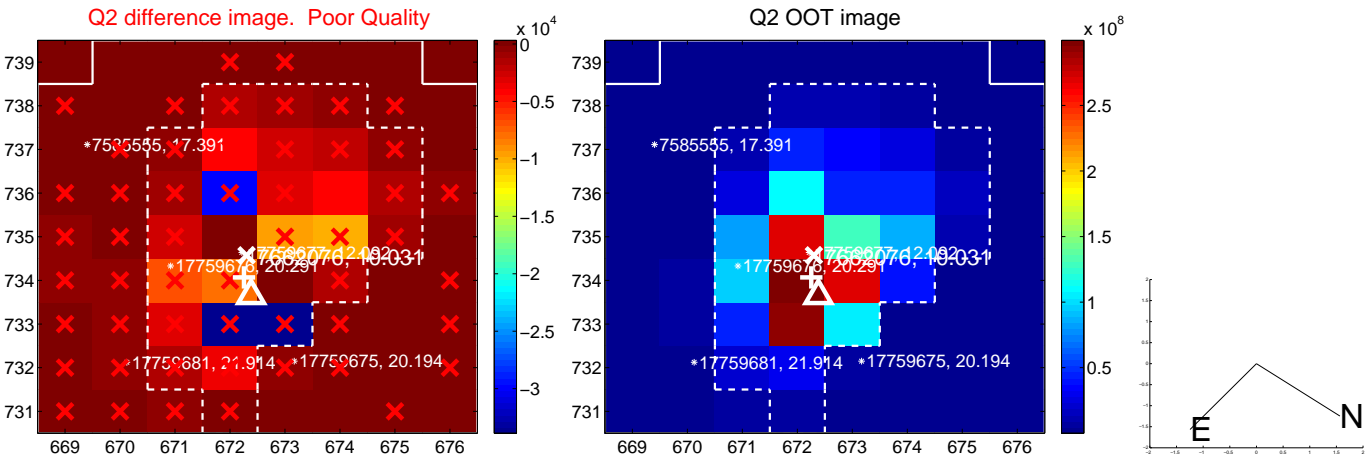
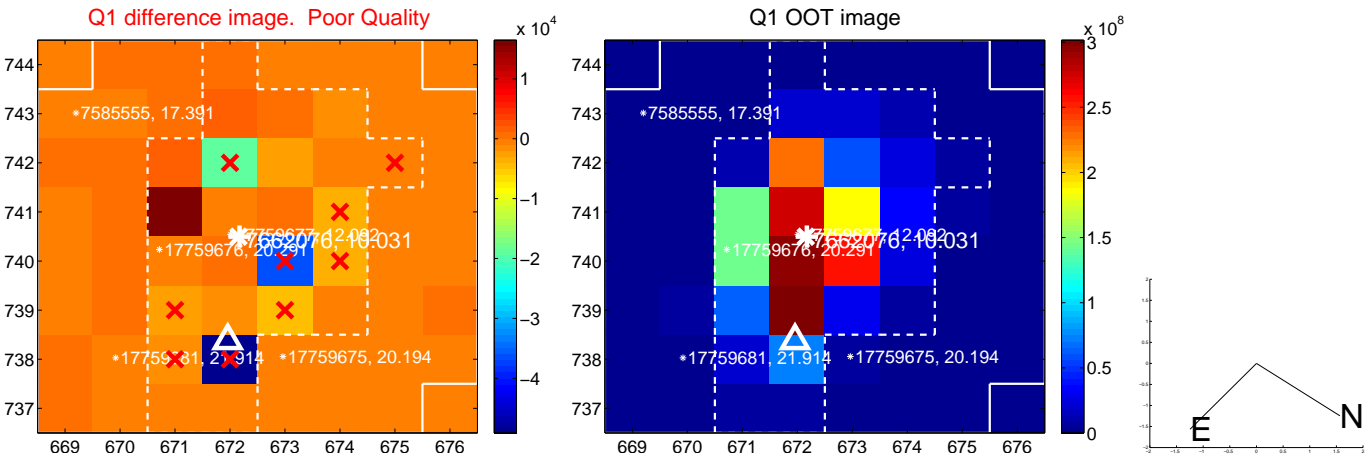
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.541 ± 1.301	1.18	1.000 ± 1.043	1.173 ± 0.875
PRF-fit source offset from KIC position	2.065 ± 1.184	1.74	1.840 ± 0.971	0.937 ± 0.788
photometric centroid source offset	—	—	—	—

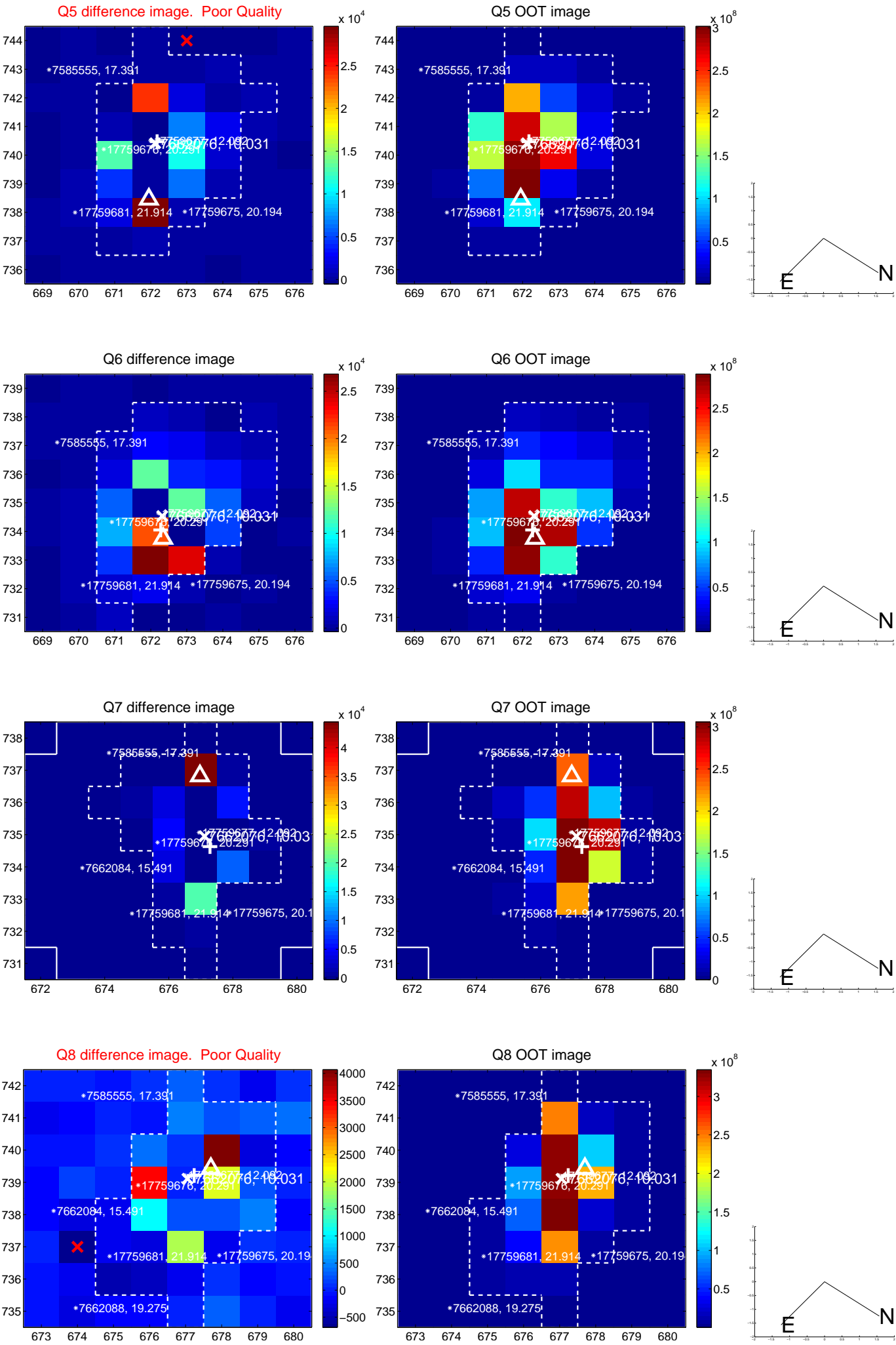


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

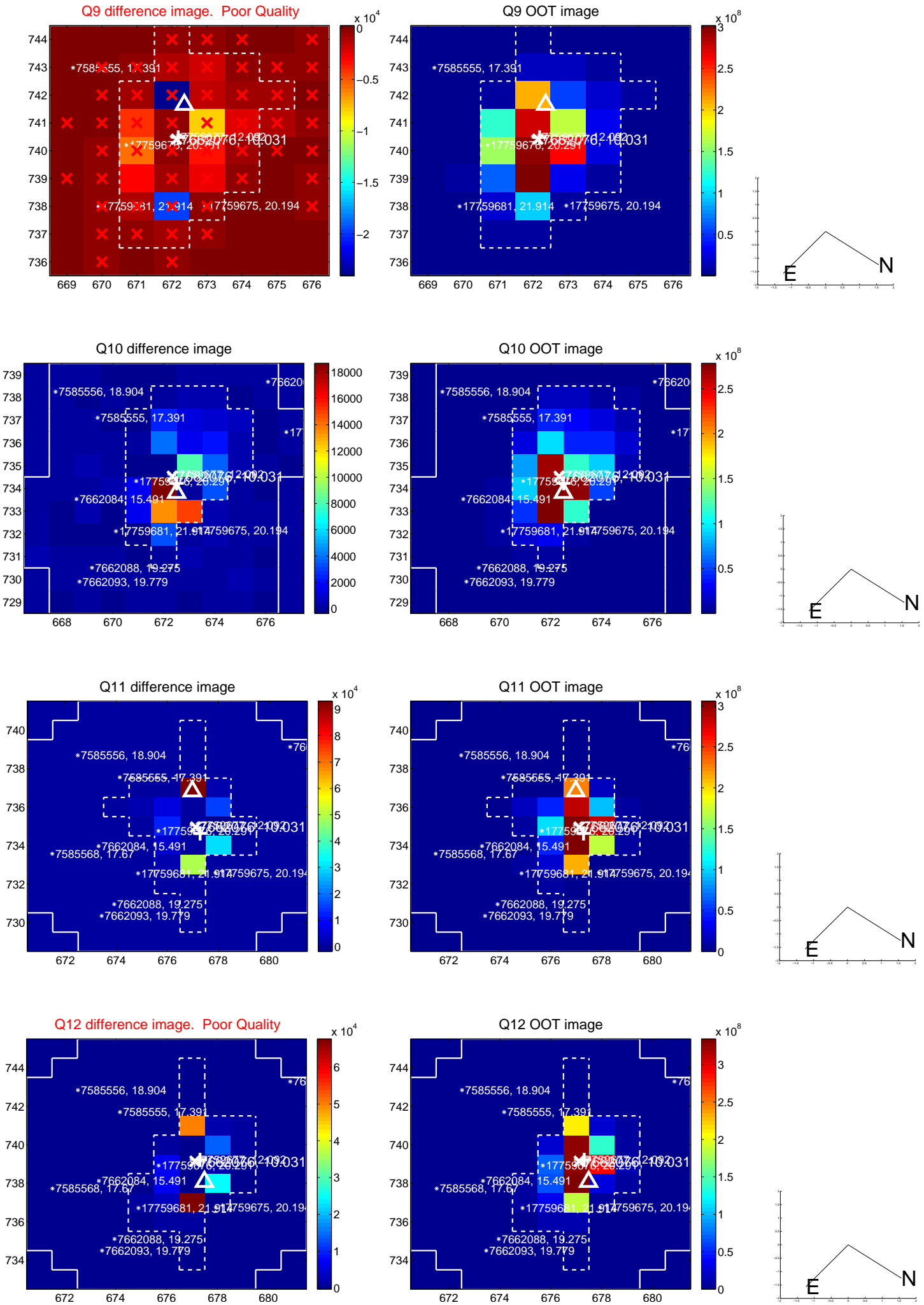
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



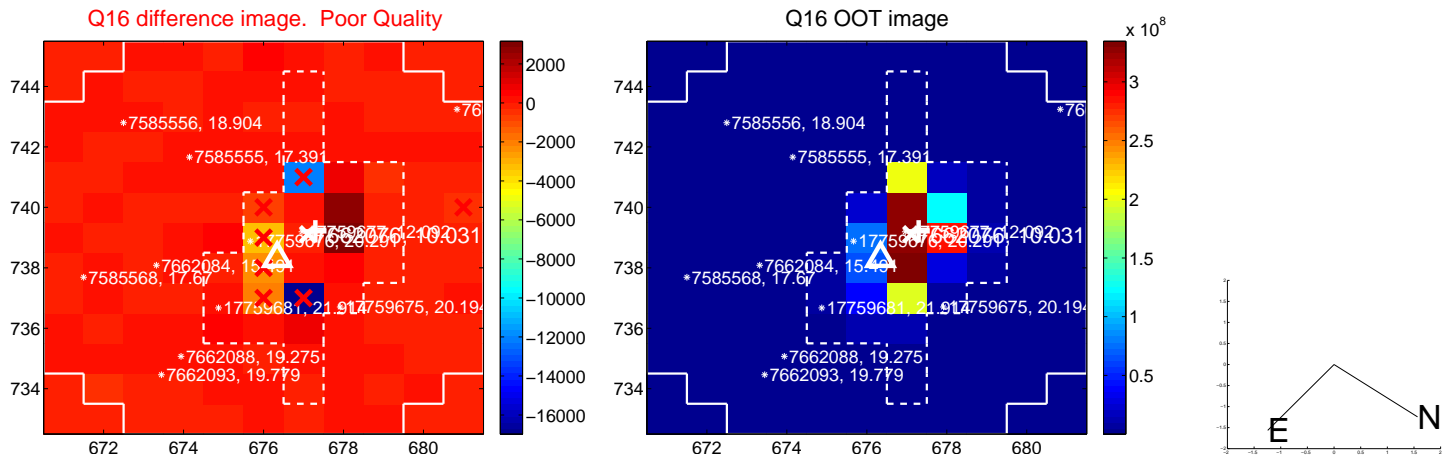
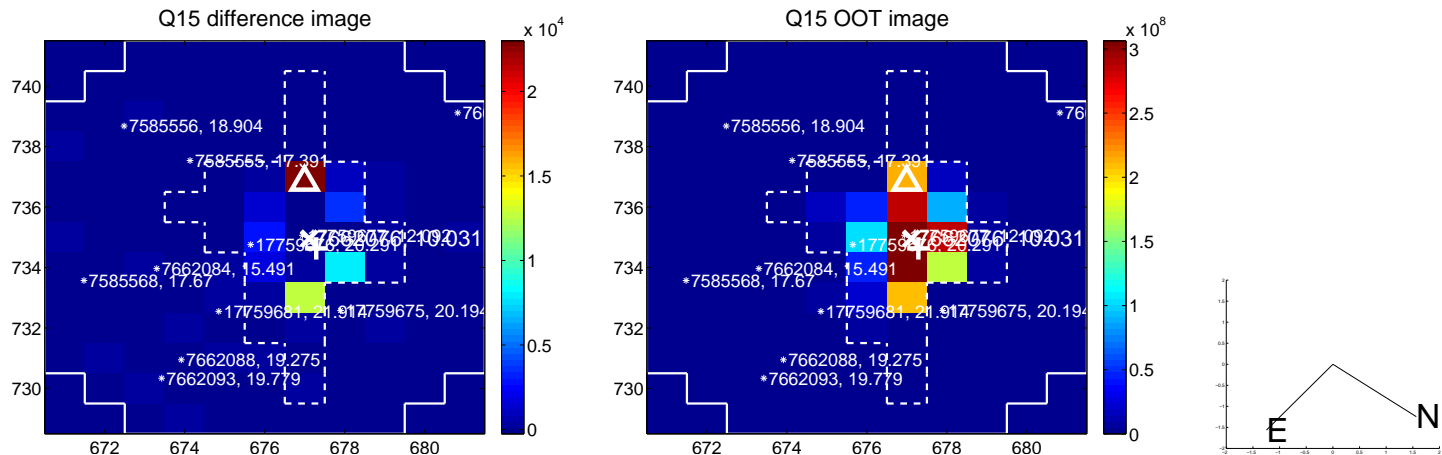
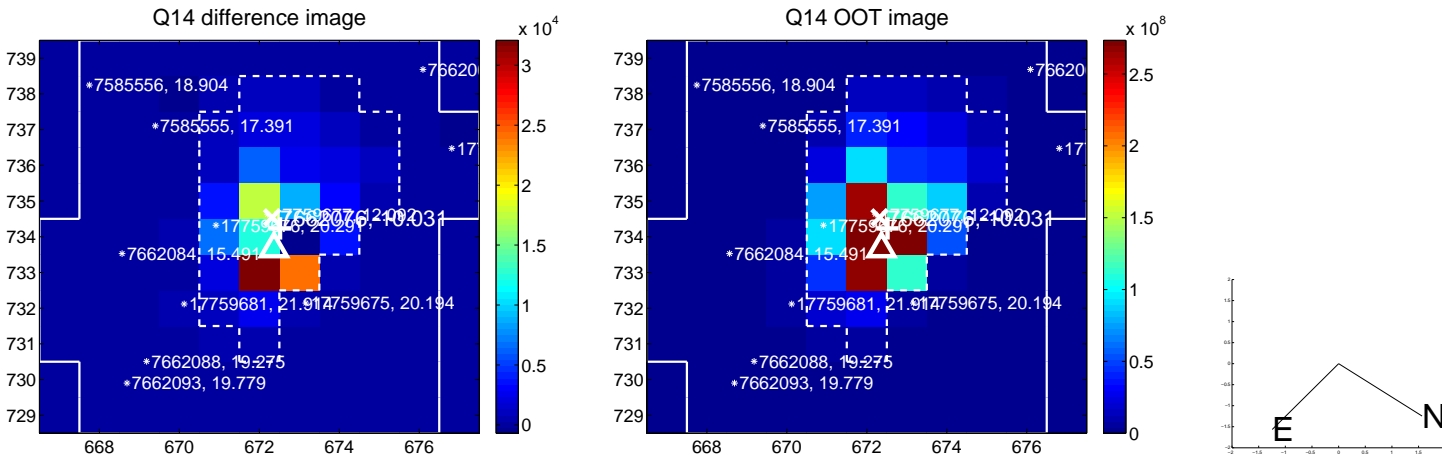
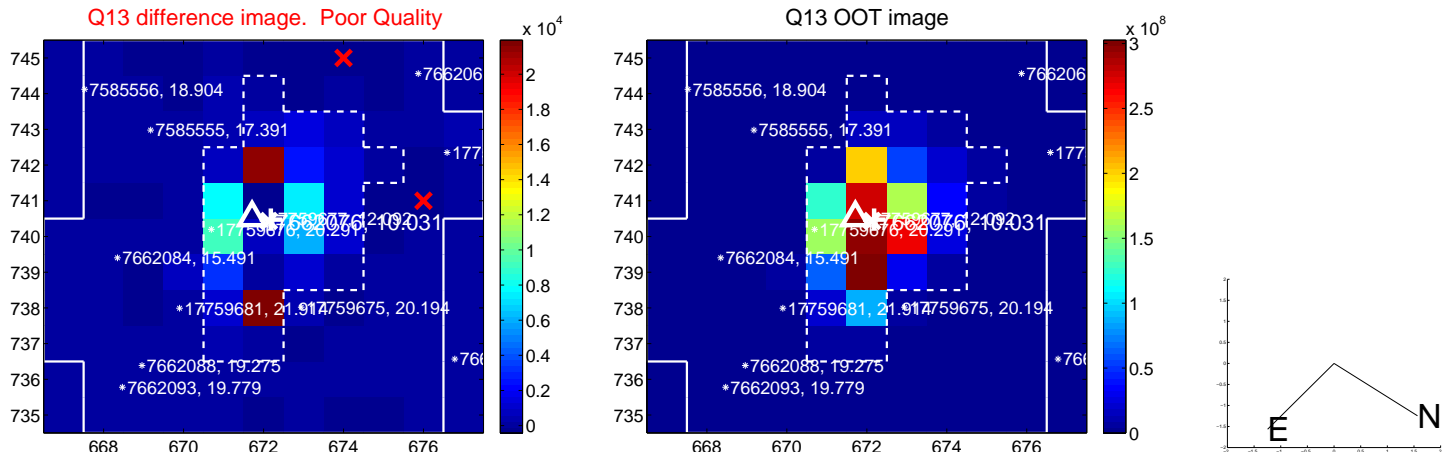
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



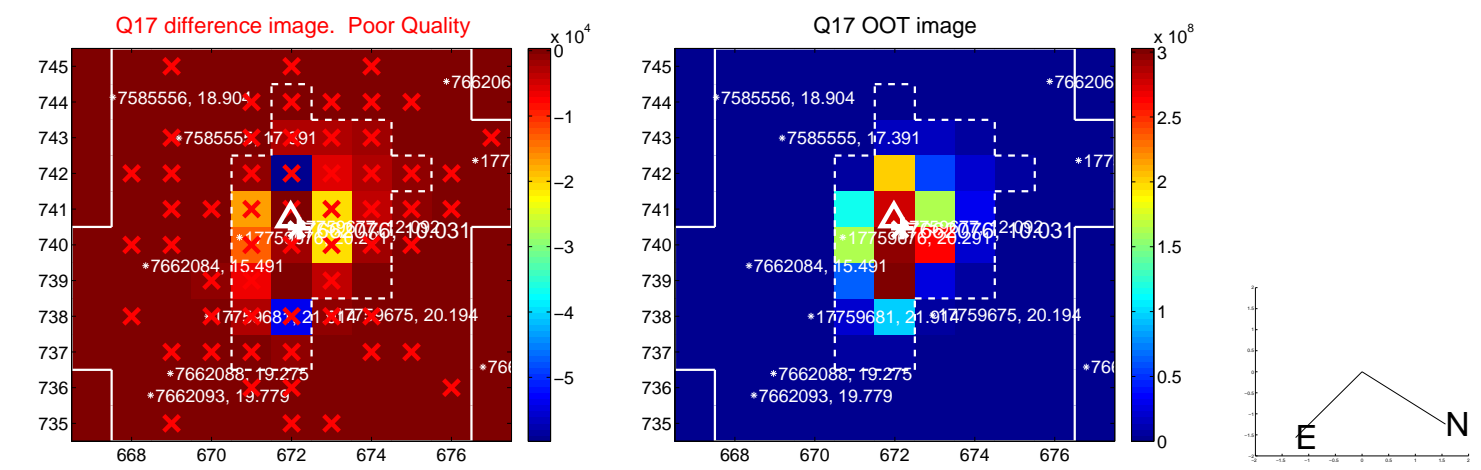
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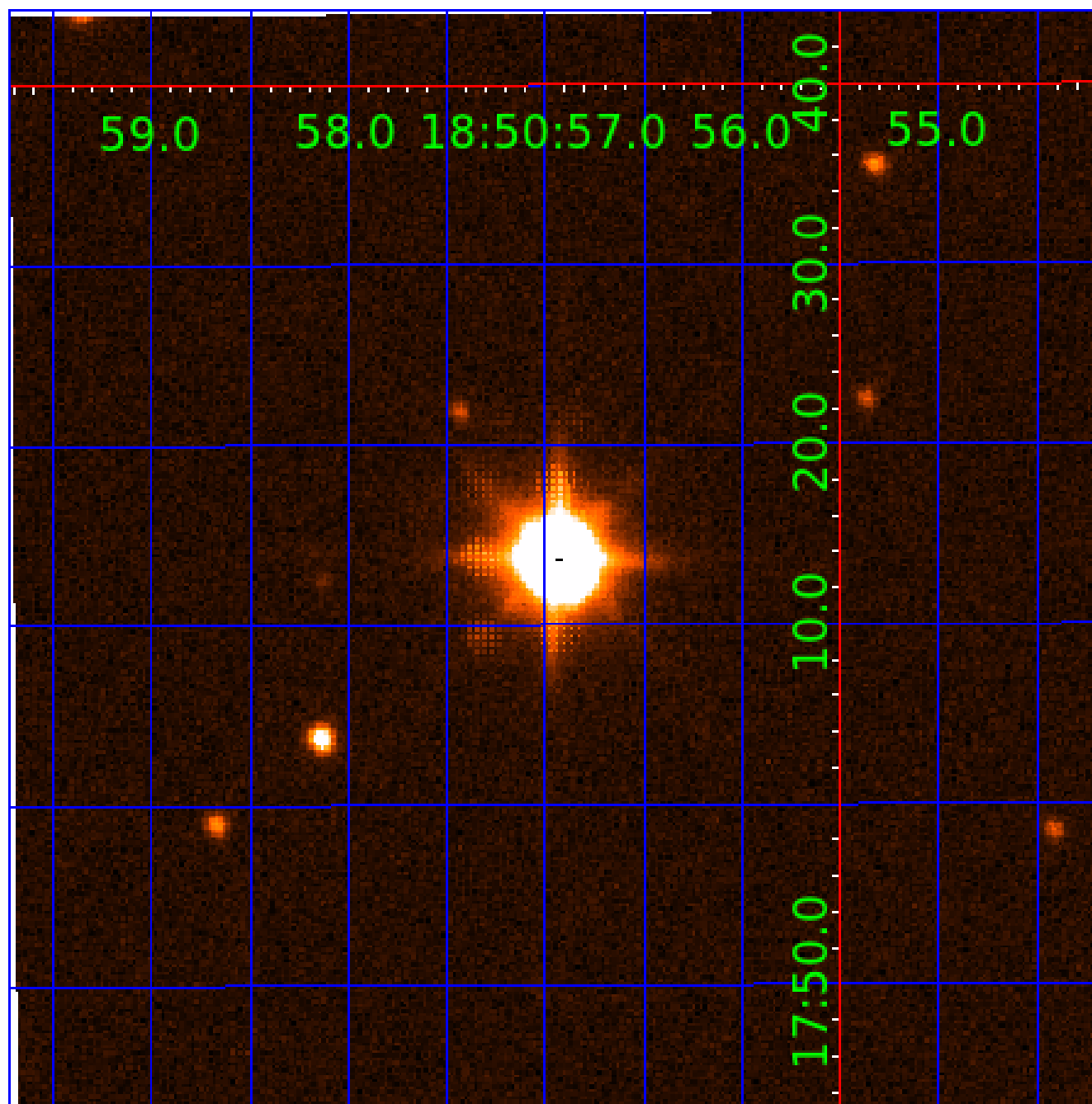
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 007662076

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})
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007662076-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007662076-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007662076-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
007662076-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
007662076-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

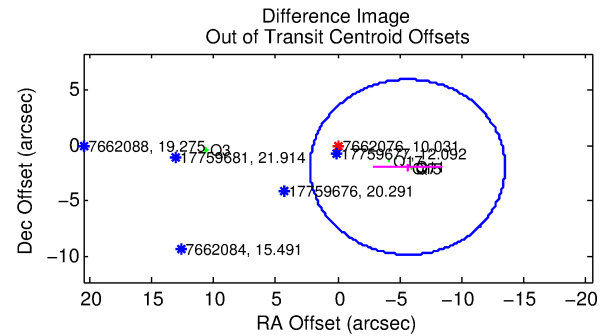
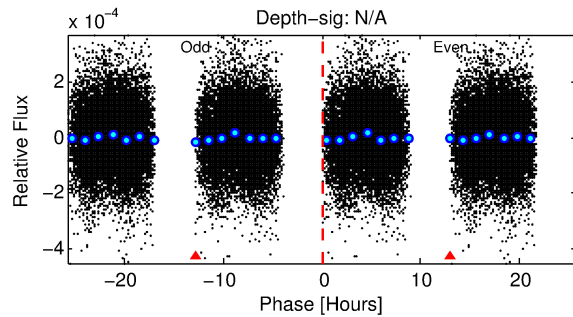
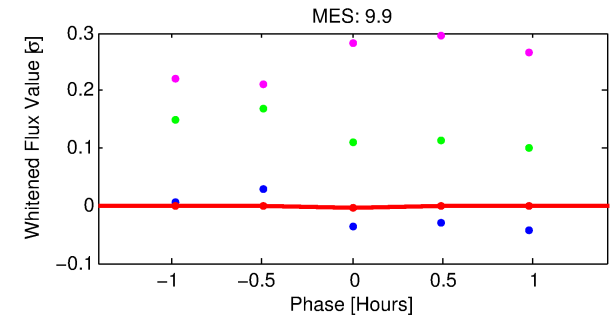
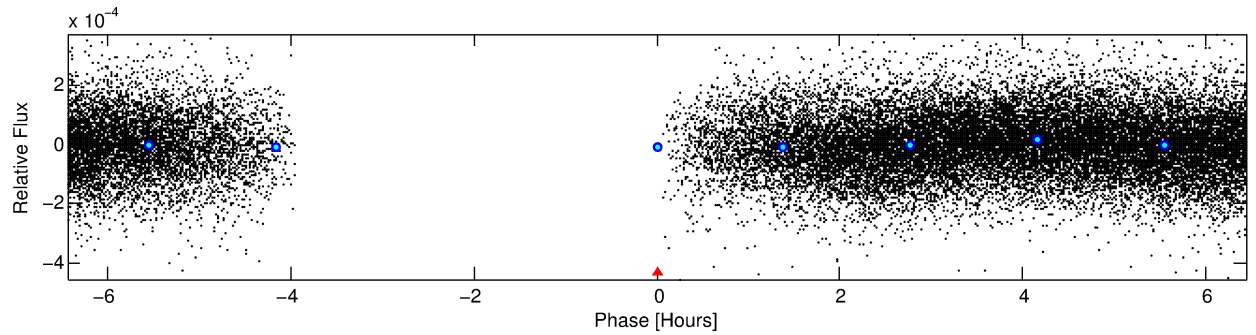
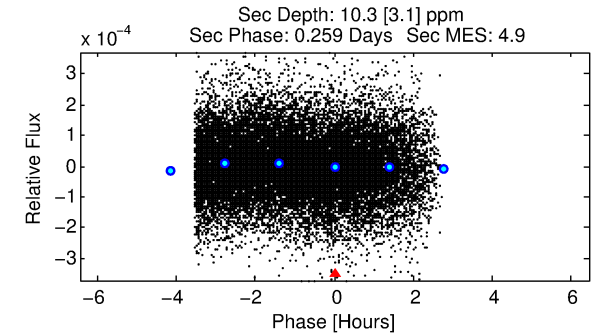
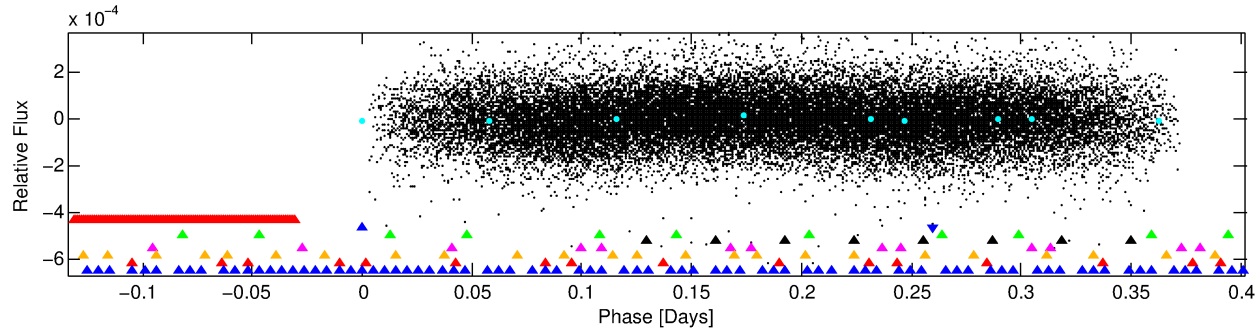
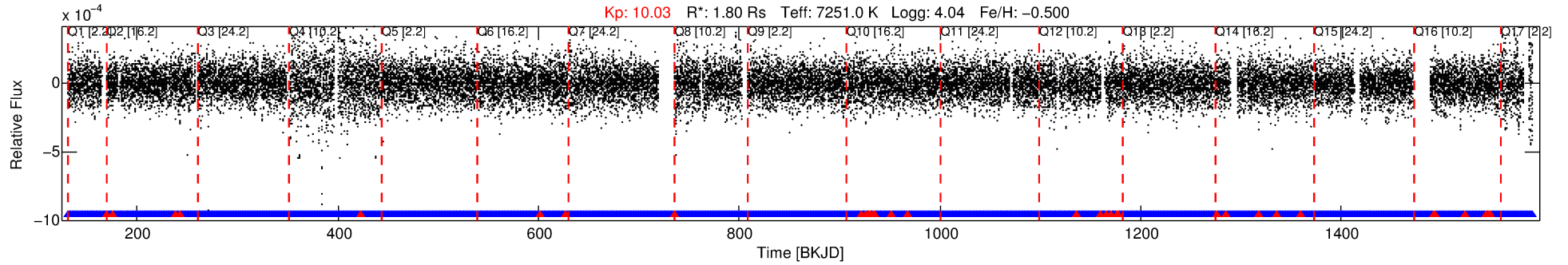
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007662076-02

No Significant Match Found

DV One-Page Summary

KIC: 7662076 Candidate: 2 of 8 Period: 0.536 d



TPS TCE Results:

Period = 0.53632 d
Epoch = 131.6547 BKJD

DV fit results are unavailable

DV Diagnostic Results:

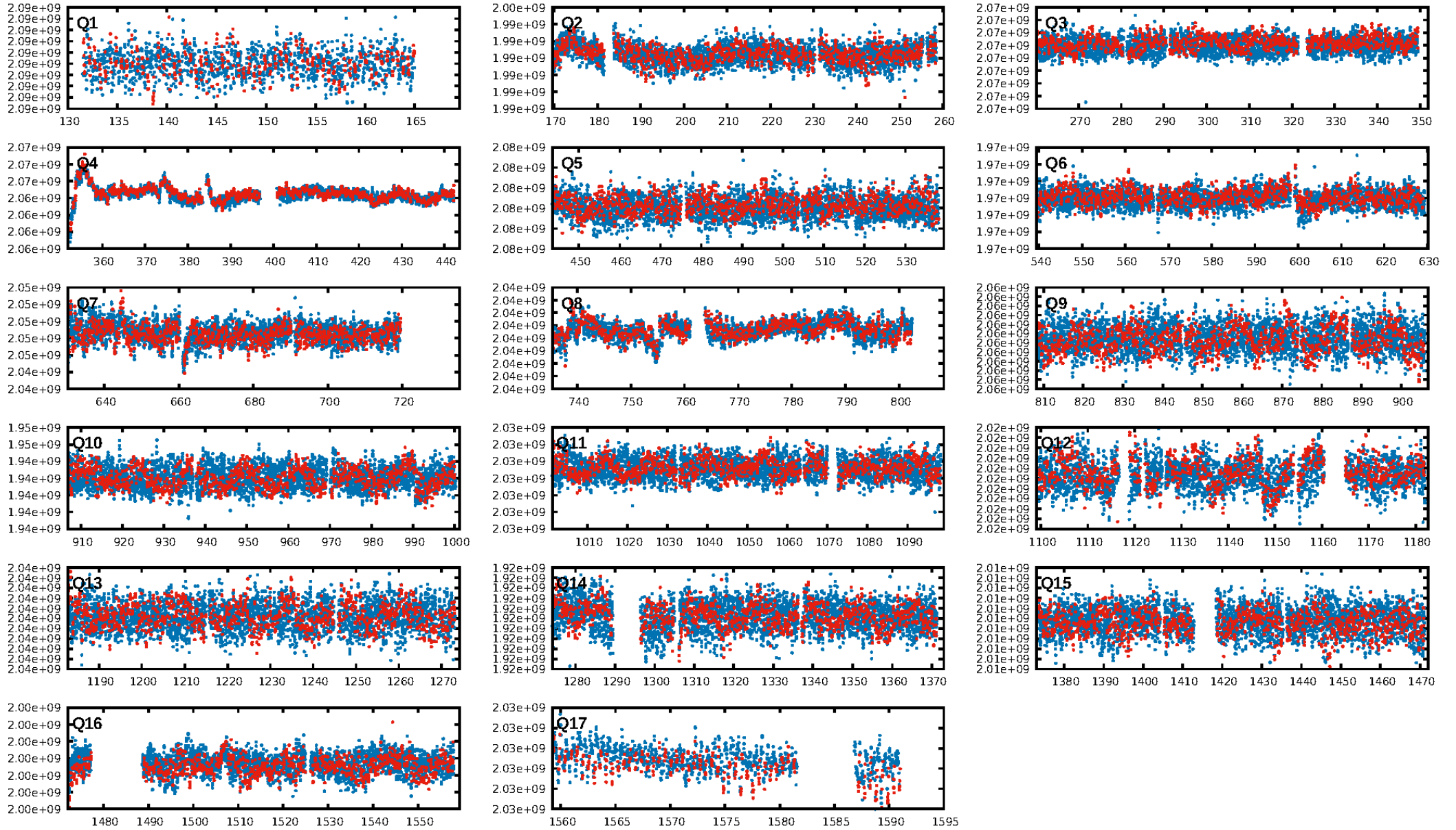
ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [141.45σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [2345/2379]
GhostDiagnostic-chr: N/A

Centroid-sig: N/A
Centroid-so: 0.530 arcsec [6.94σ]
OotOffset-rm: 5.947 arcsec [2.27σ]
KicOffset-rm: 5.228 arcsec [2.28σ]
OotOffset-st: 0/4/0/1 [5]
KicOffset-st: 0/4/0/1 [5]
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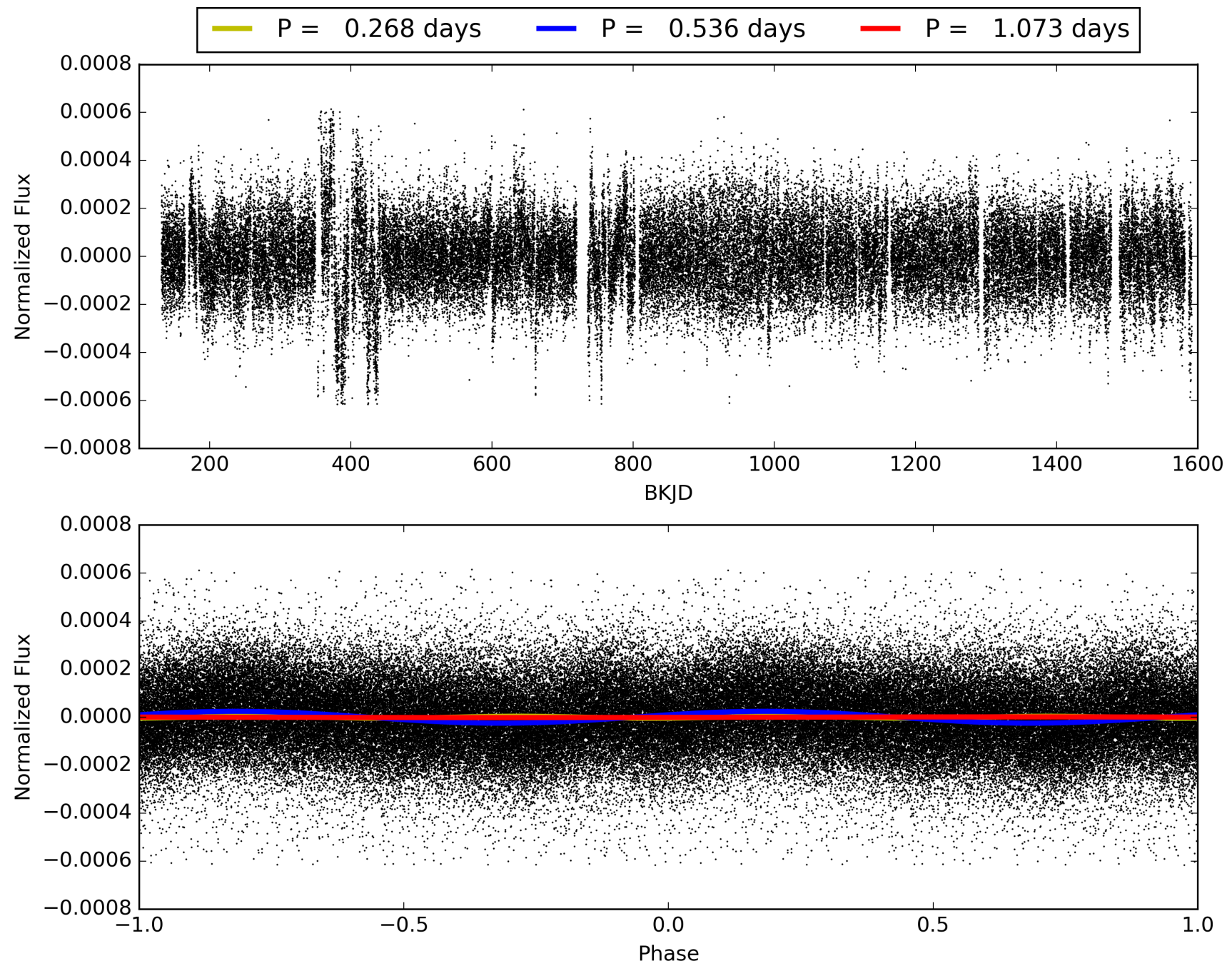
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:44:02 Z

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

TCE 007662076-02, PDC Light Curves

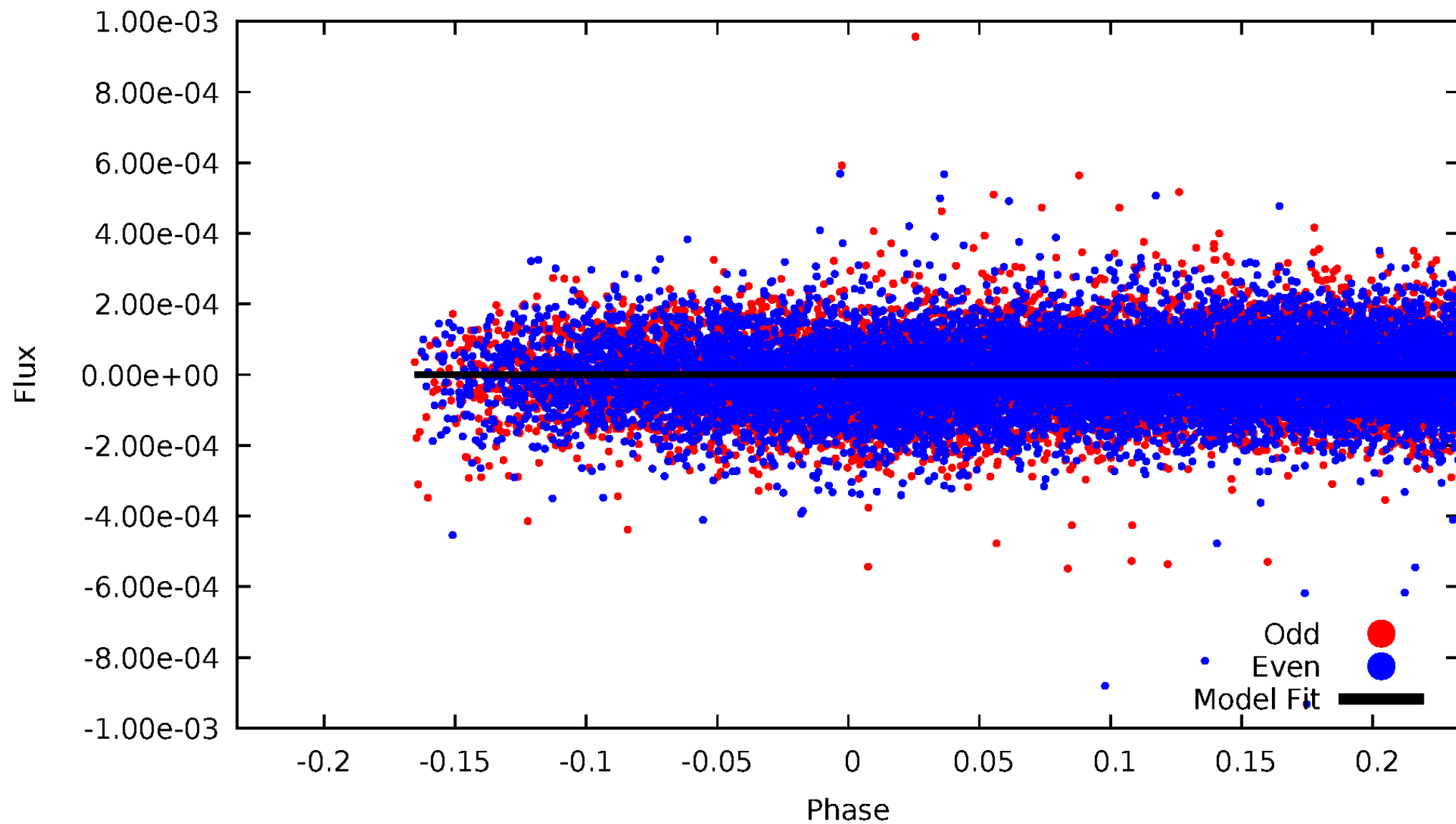


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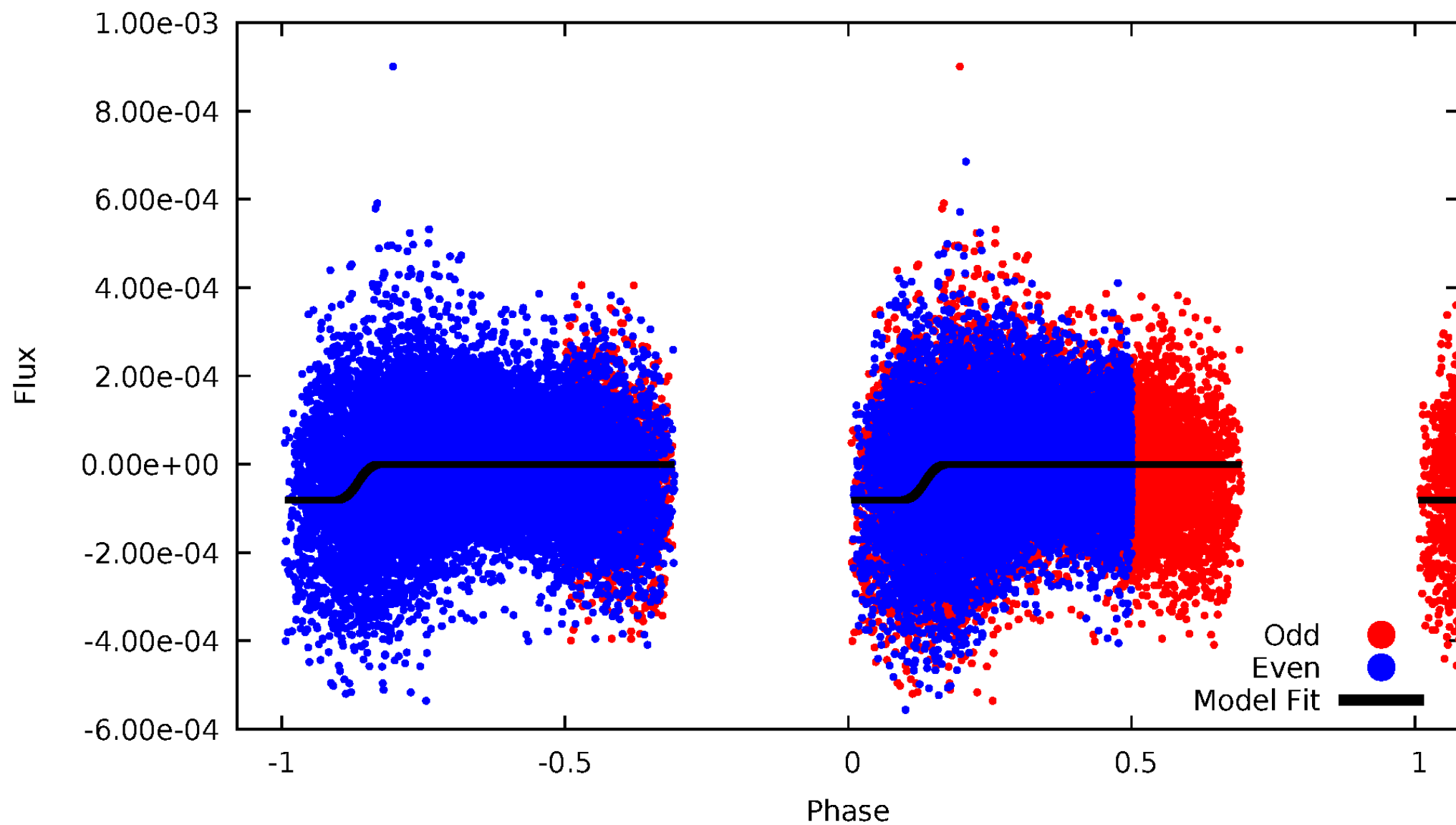
DV Odd/Even

TCE 007662076-02



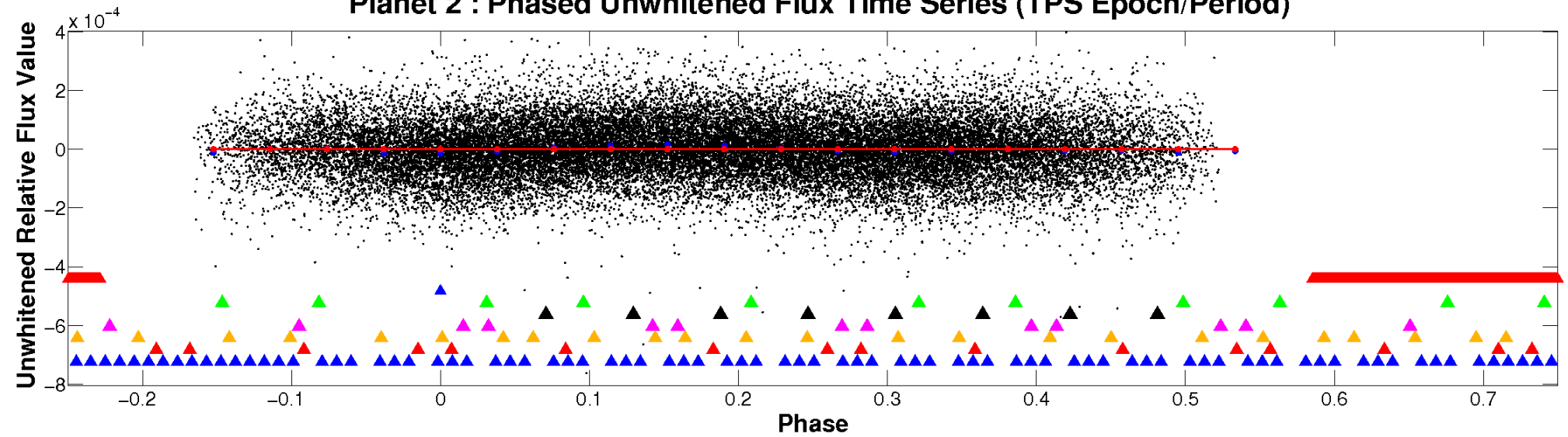
ALT Odd/Even

TCE 007662076-02

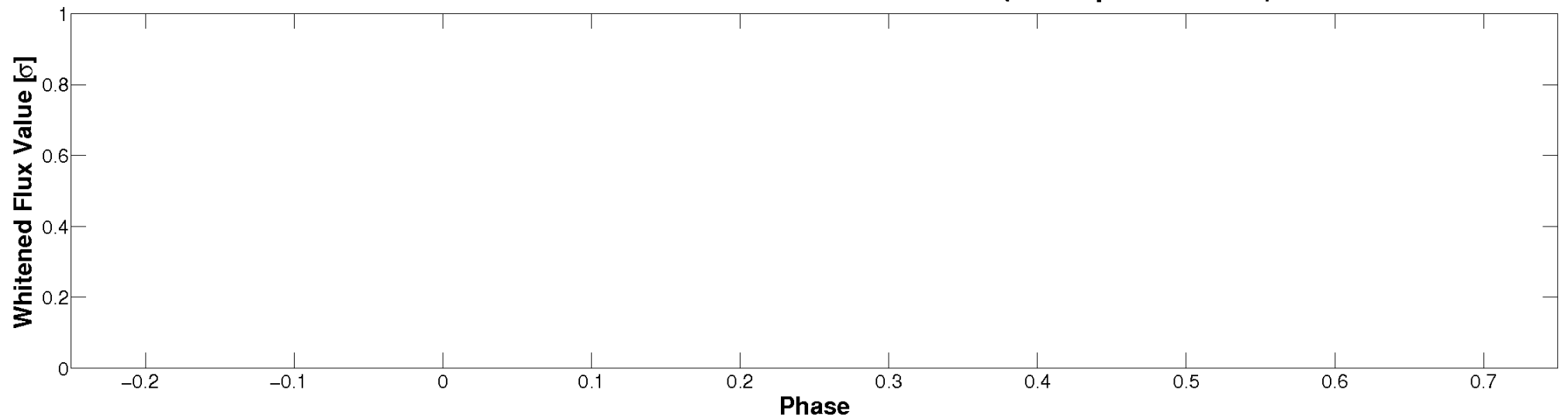


Non-Whitened Vs. Whitened Light Curve

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

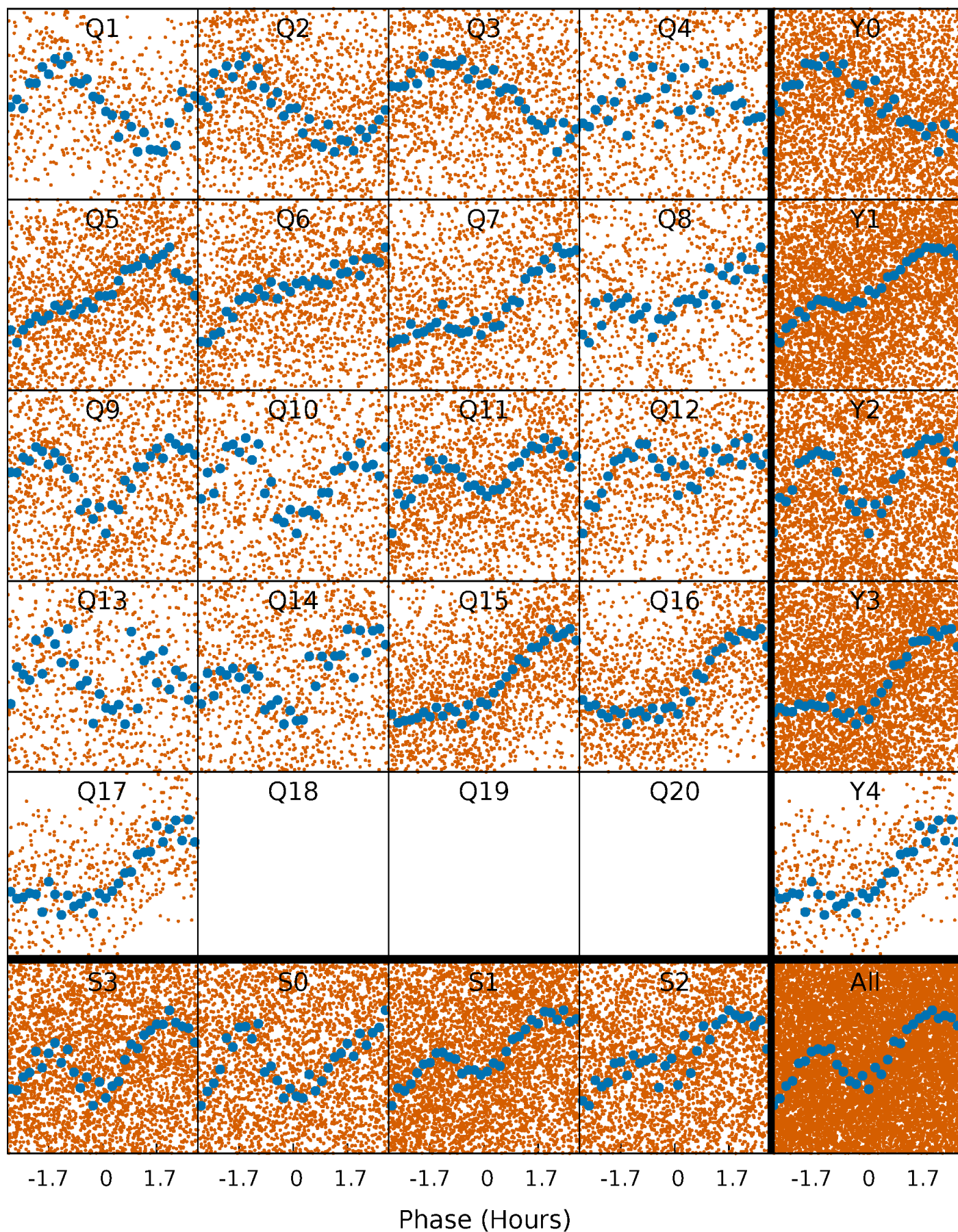


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



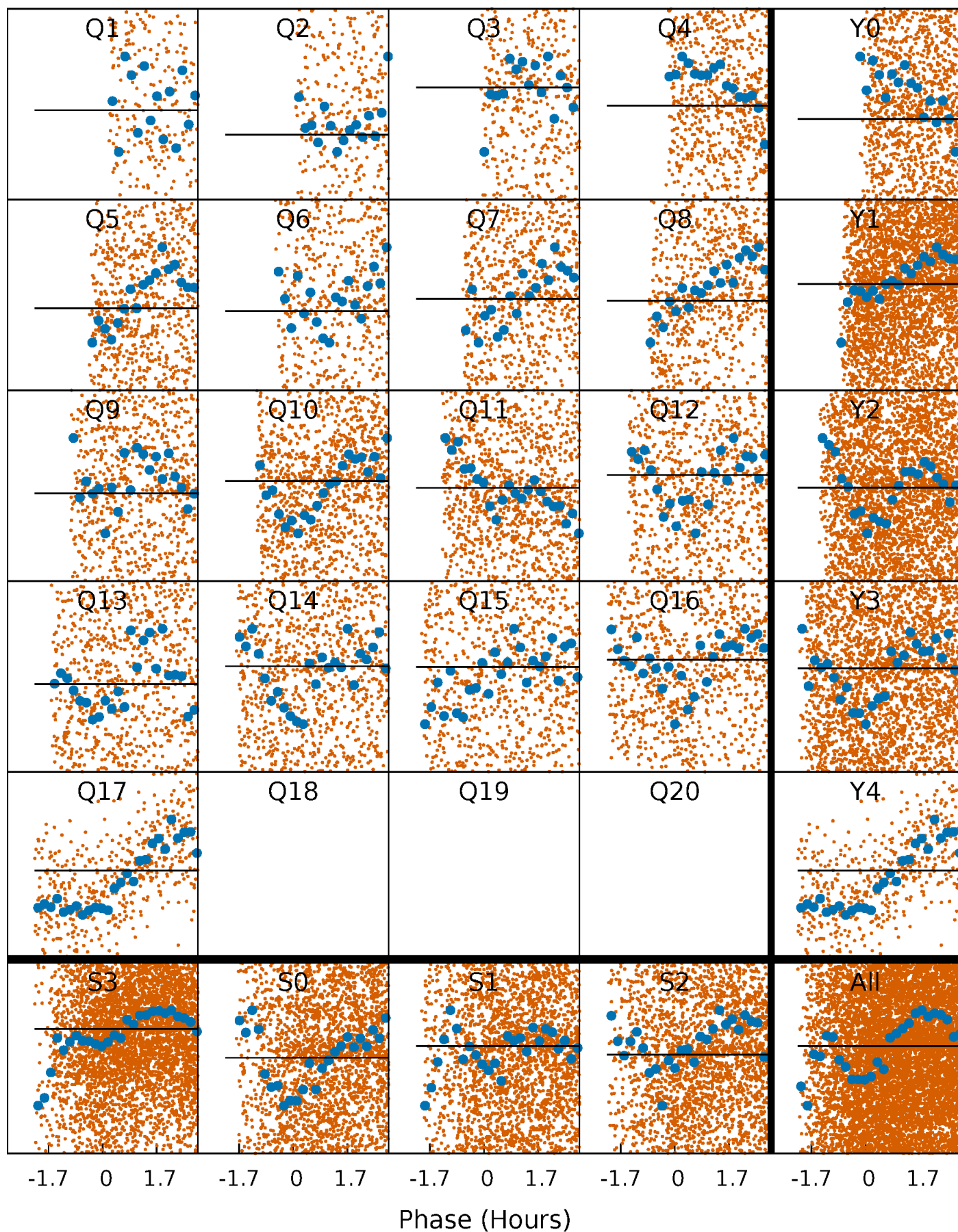
PDC Quarter-Phased Transit Curves

TCE 007662076-02 P= 0.536320 Days $T_0=131.654744$ (BKJD)



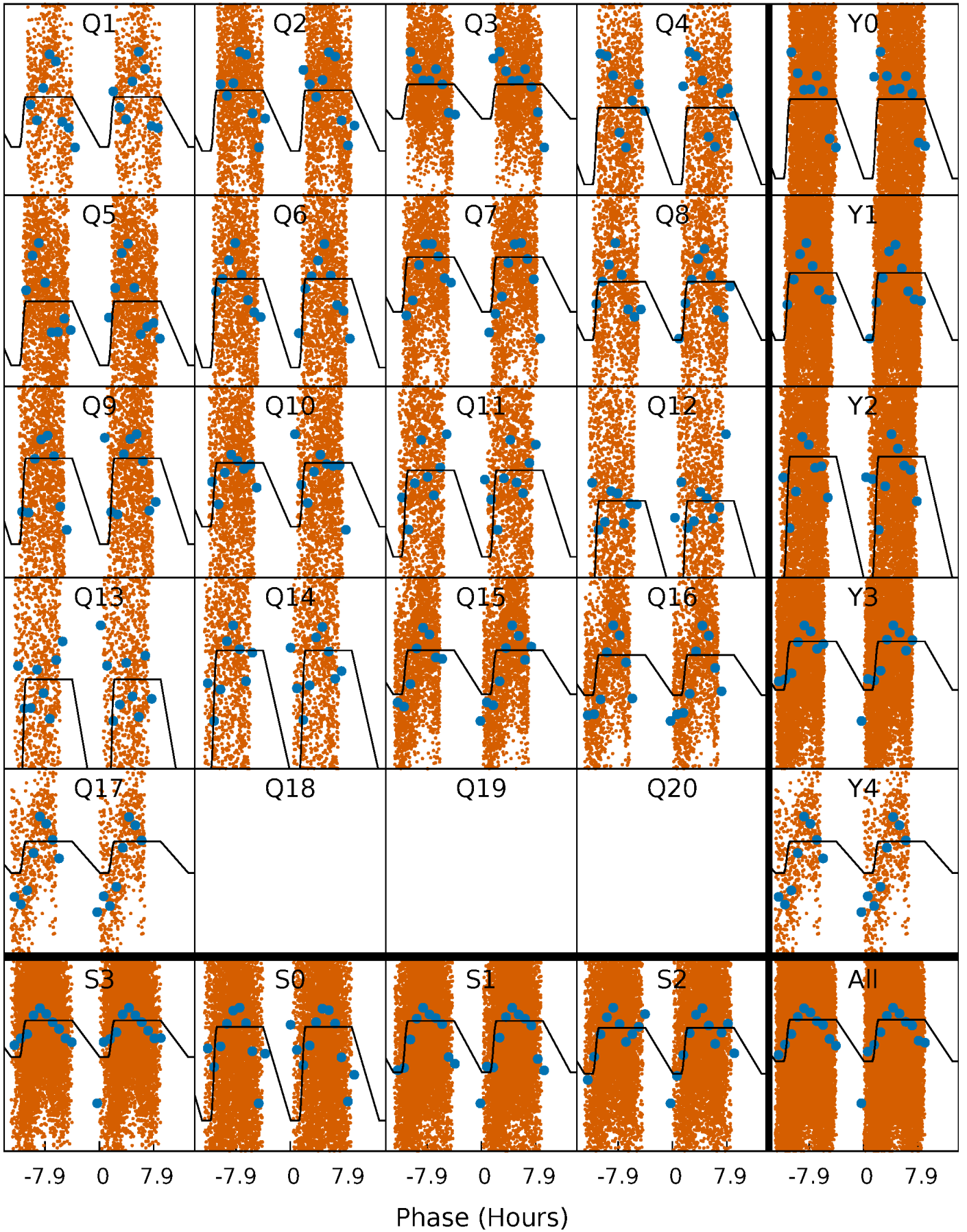
DV Quarter-Phased Transit Curves

TCE 007662076-02 $P = 0.536320$ Days $T_0 = 131.654744$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

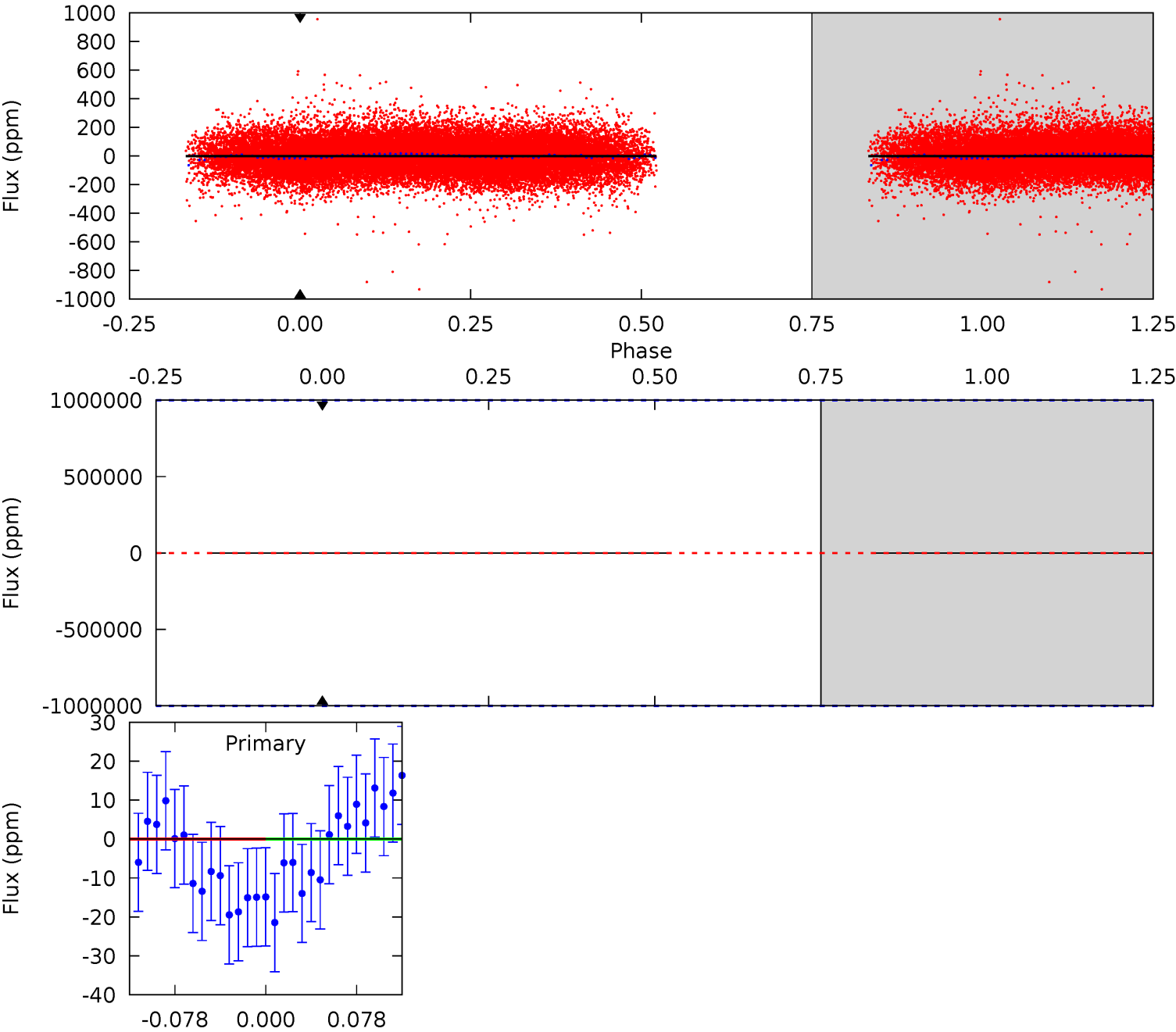
TCE 007662076-02 P= 0.536320 Days $T_0=131.563022$ (BKJD)



DV Model-Shift Uniqueness Test

007662076-02, P = 0.536320 Days, E = 131.654744 Days

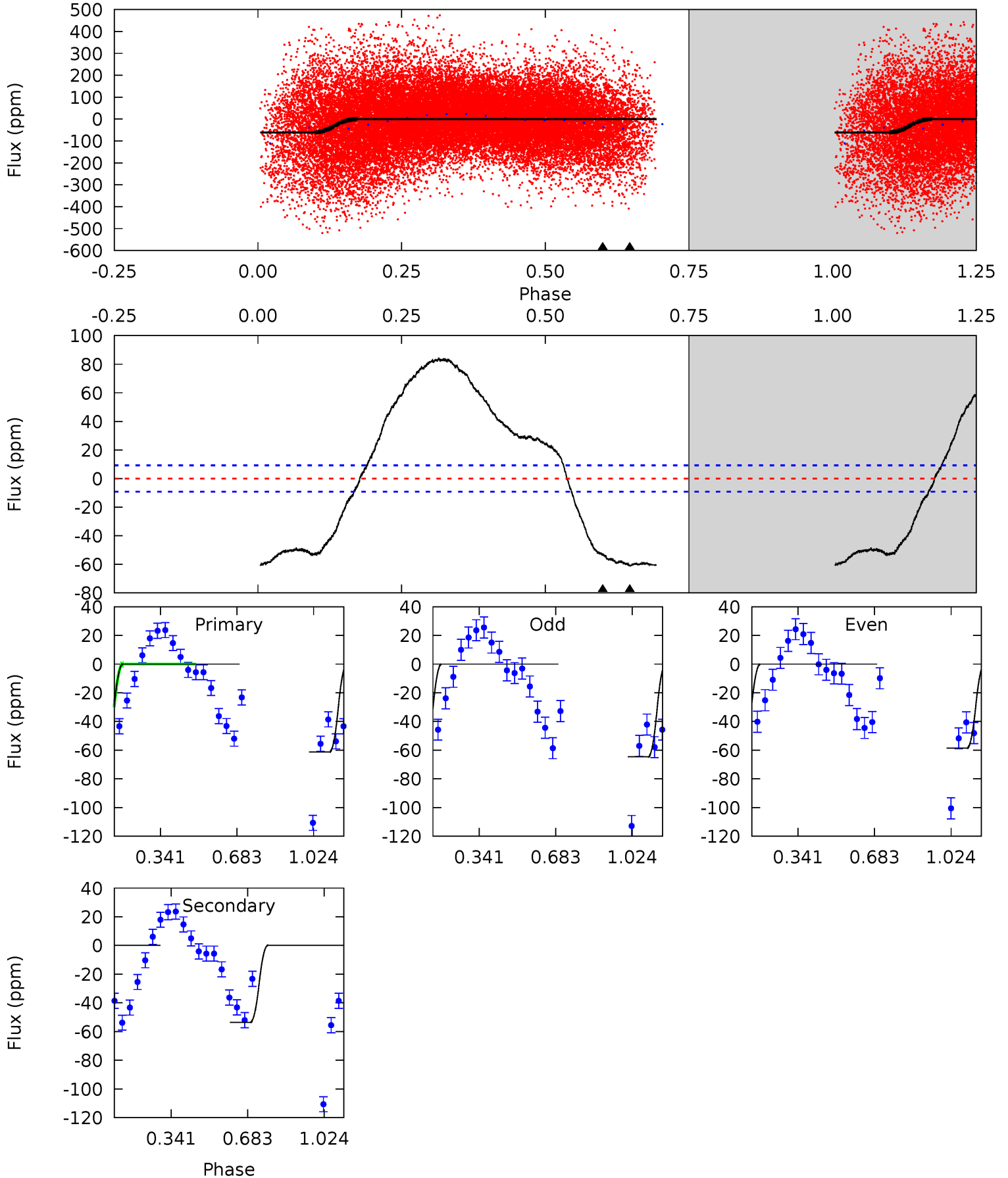
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007662076-02, P = 0.536320 Days, E = 131.563022 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.7	25.1	0	0	4.30	0.95	18.6	28.7	28.7	25.1	25.1	1.41	1.14	0.58	0



Stellar Parameters For KIC 007662076

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	7251^{+230}_{-281}	$4.035^{+0.273}_{-0.147}$	$-0.500^{+0.250}_{-0.300}$	$1.799^{+0.512}_{-0.563}$	$1.280^{+0.218}_{-0.178}$	$0.310^{+0.517}_{-0.125}$
	+3%/-4%	+7%/-4%	+50%/-60%	+28%/-31%	+17%/-14%	+167%/-40%
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 007662076-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$13.51^{+14.83}_{-9.52}$	4976^{+415}_{-437}	-5314^{+42714}_{-29699}	$-0.454^{+118.999}_{-89.665}$
Alt.	-54 ± 2	$13.62^{+14.42}_{-9.30}$	4977^{+389}_{-426}	-4093^{+6192}_{-322}	$0.032^{+0.270}_{-0.024}$

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

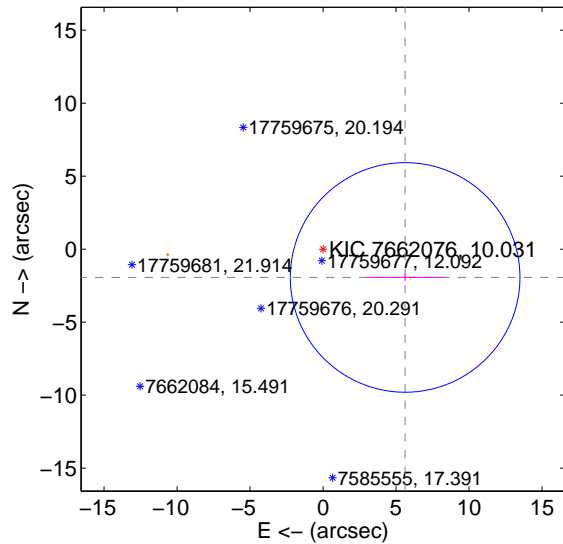
Supplemental centroid analysis for 007662076-02. **Kepler magnitude: 10.03.** Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

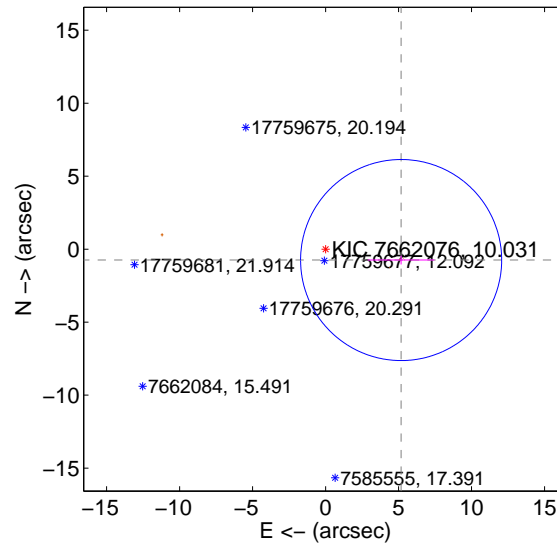
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.947 ± 2.622	2.27	-5.624 ± 2.697	-1.936 ± 0.249
PRF-fit source offset from KIC position	5.228 ± 2.296	2.28	-5.175 ± 2.284	-0.744 ± 0.302
photometric centroid source offset	0.53 ± 0.08	6.94	0.33 ± 0.10	0.41 ± 0.06

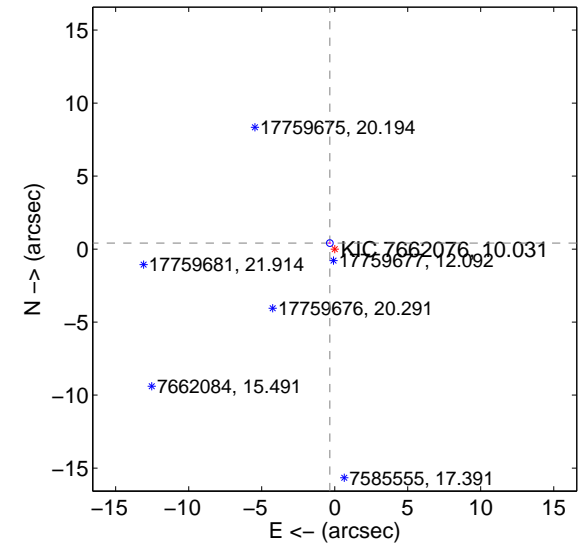
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

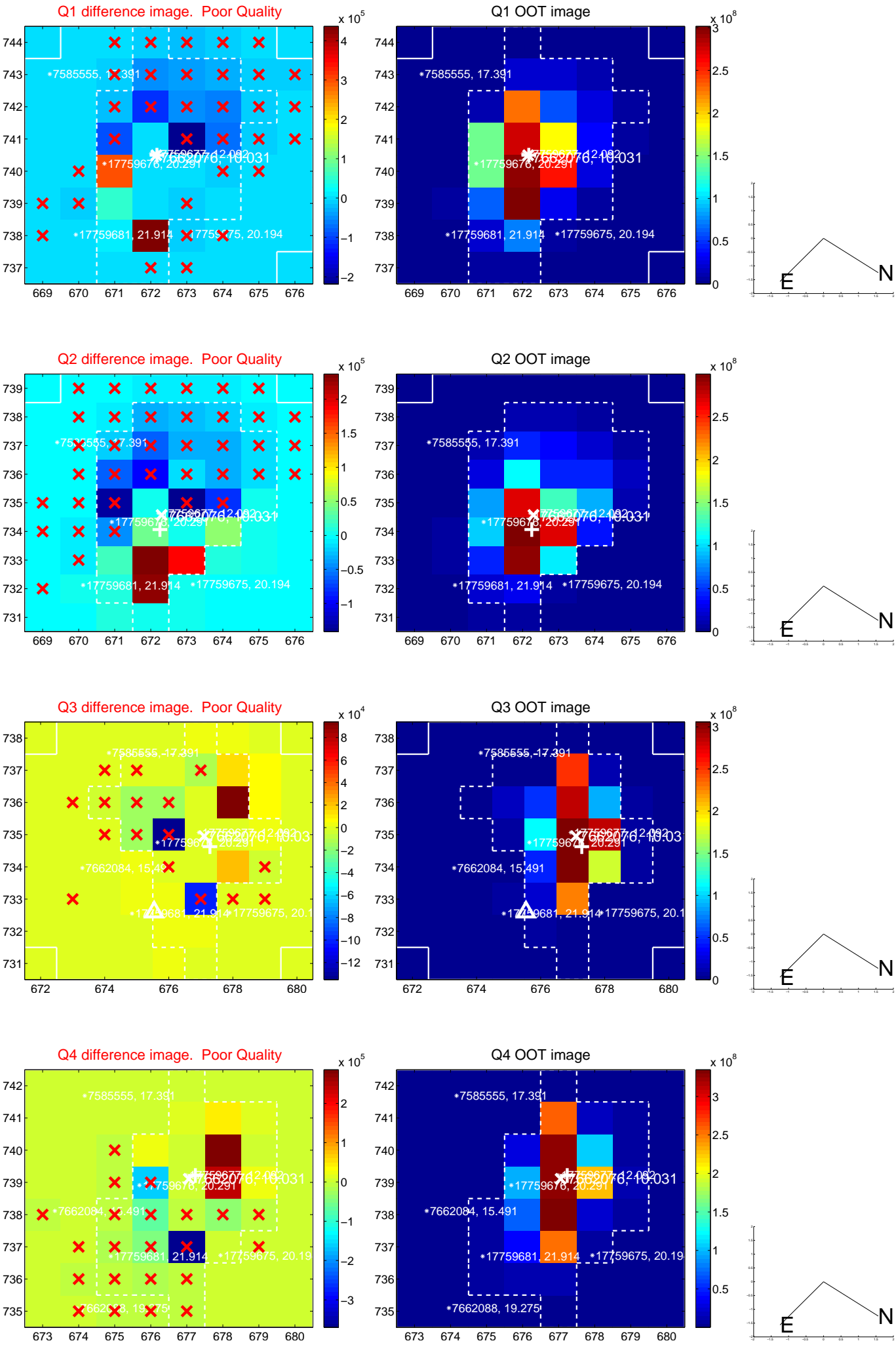


offset from photometric centroids

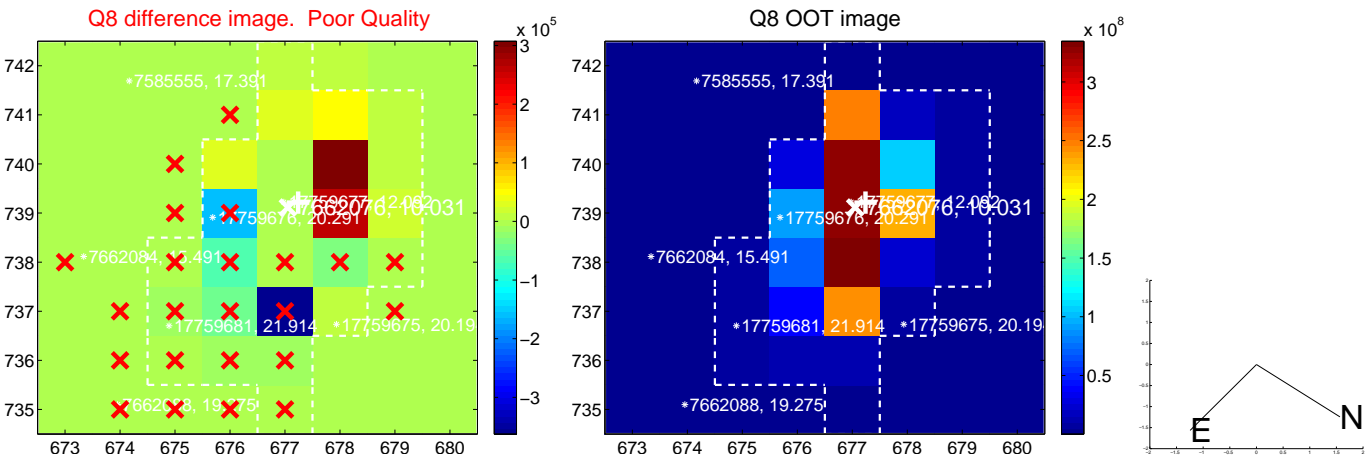
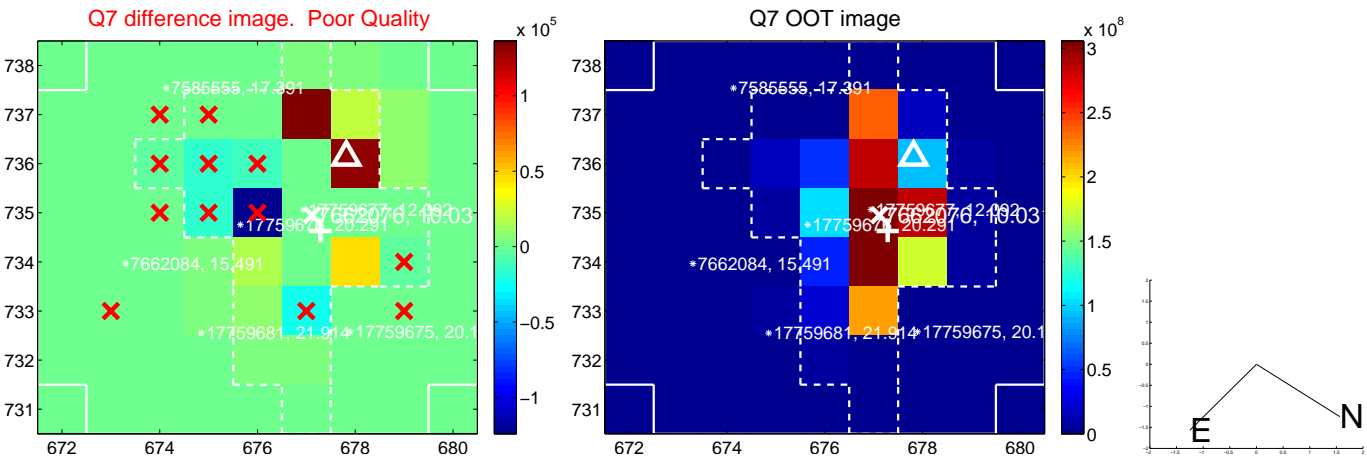
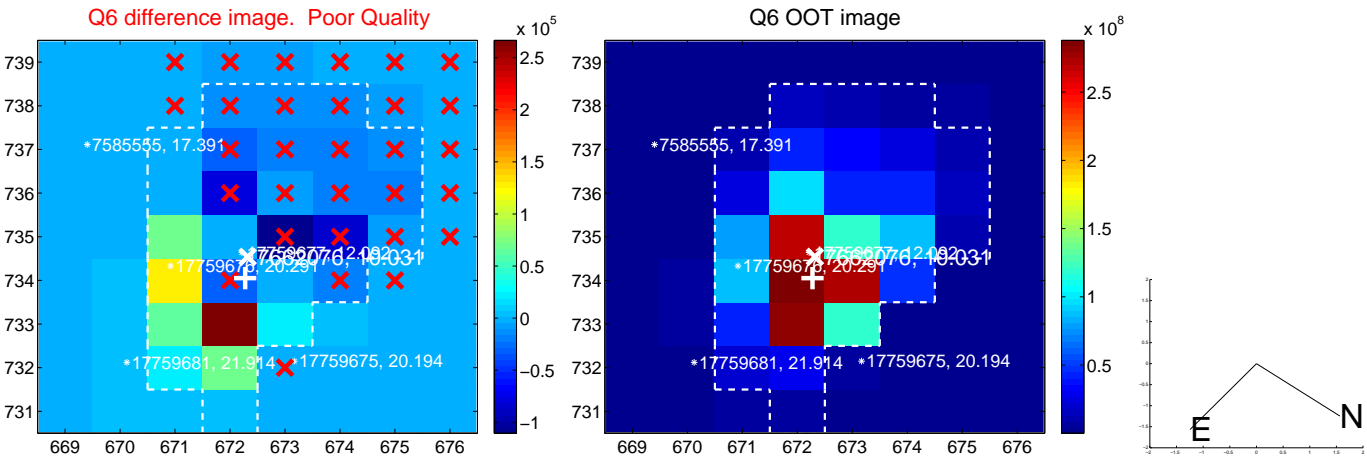
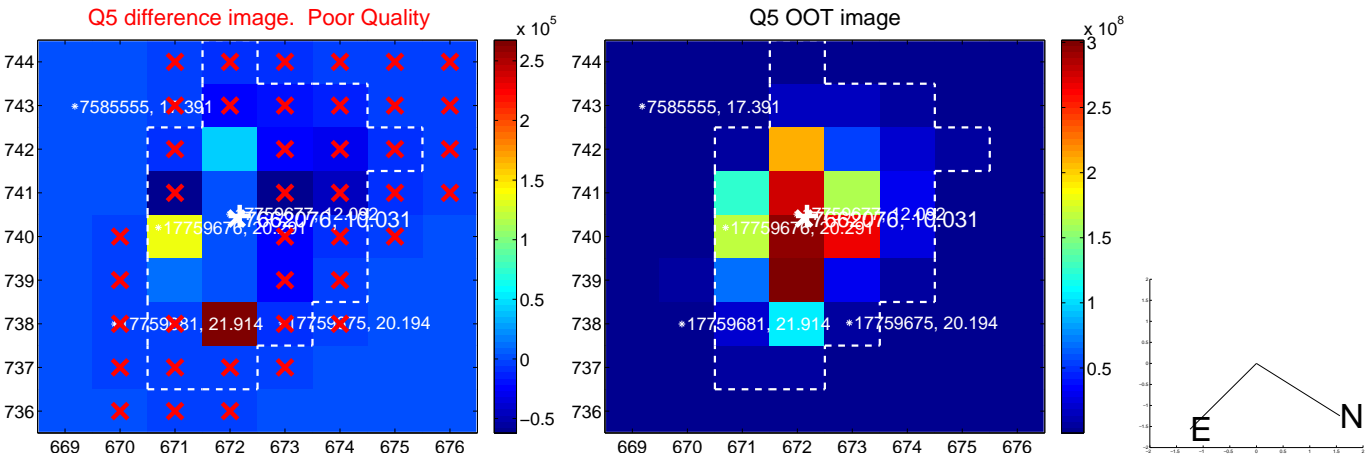


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

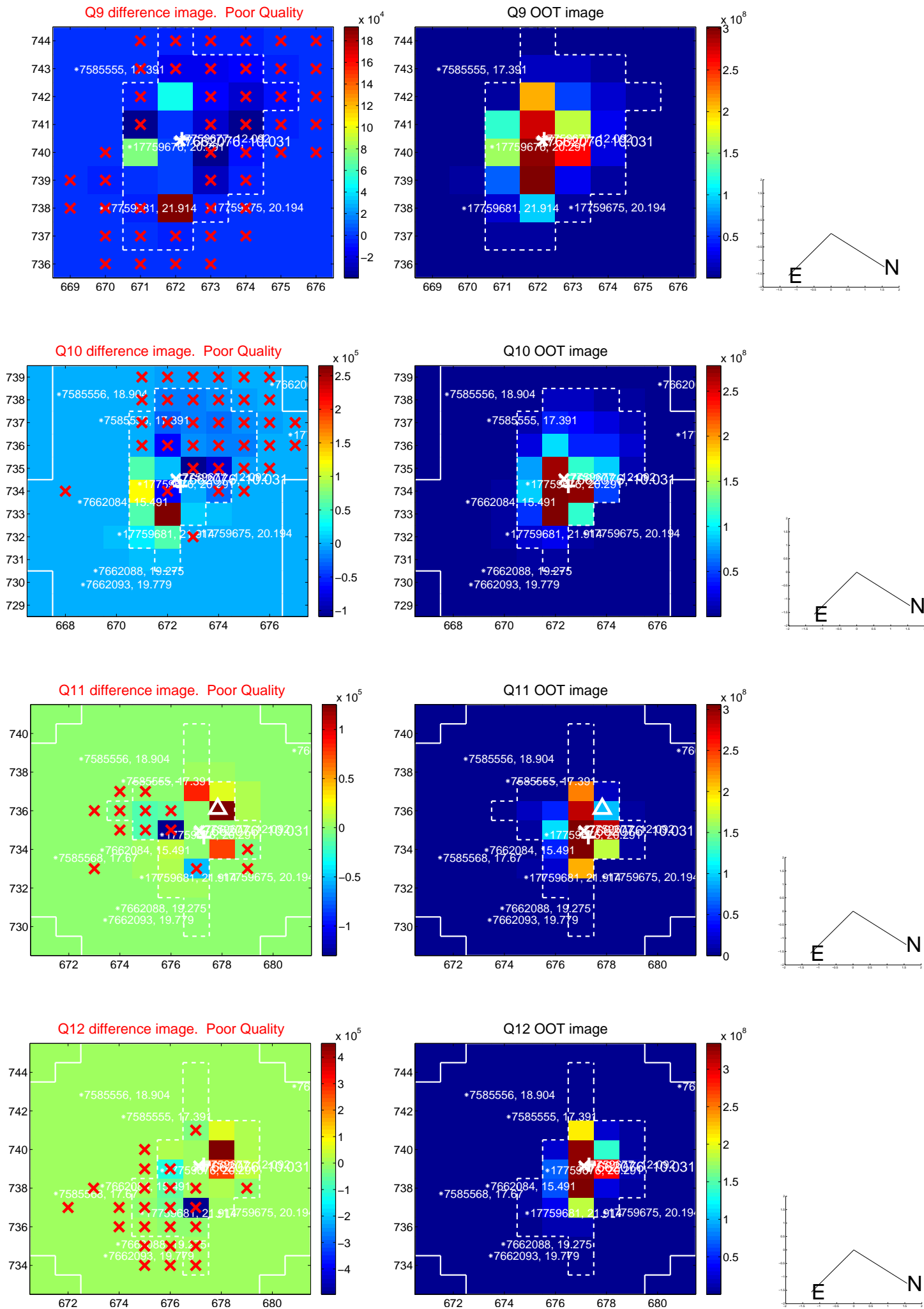
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



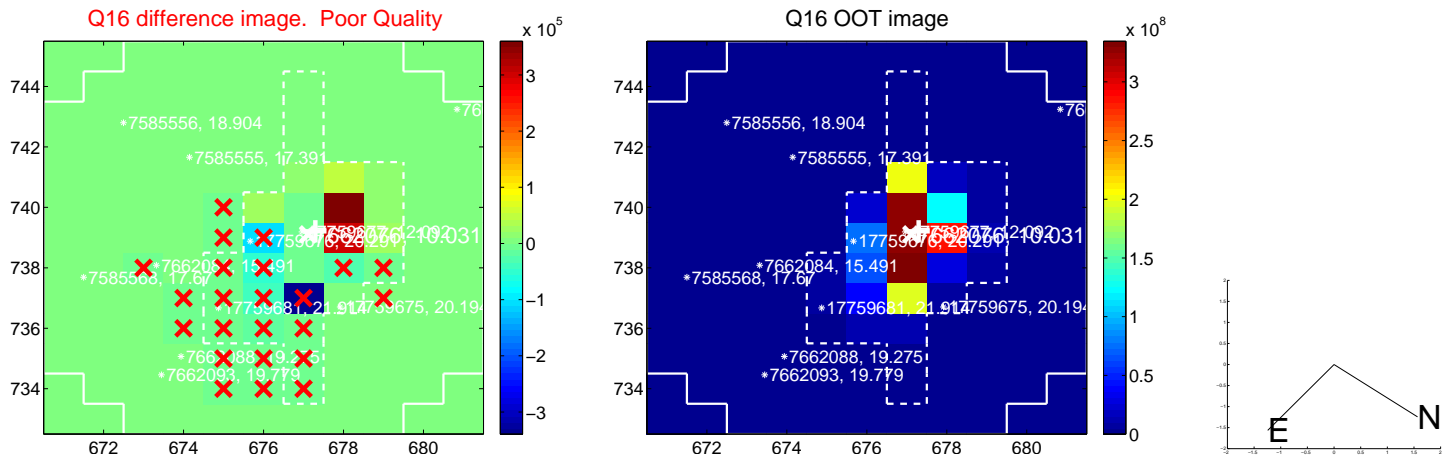
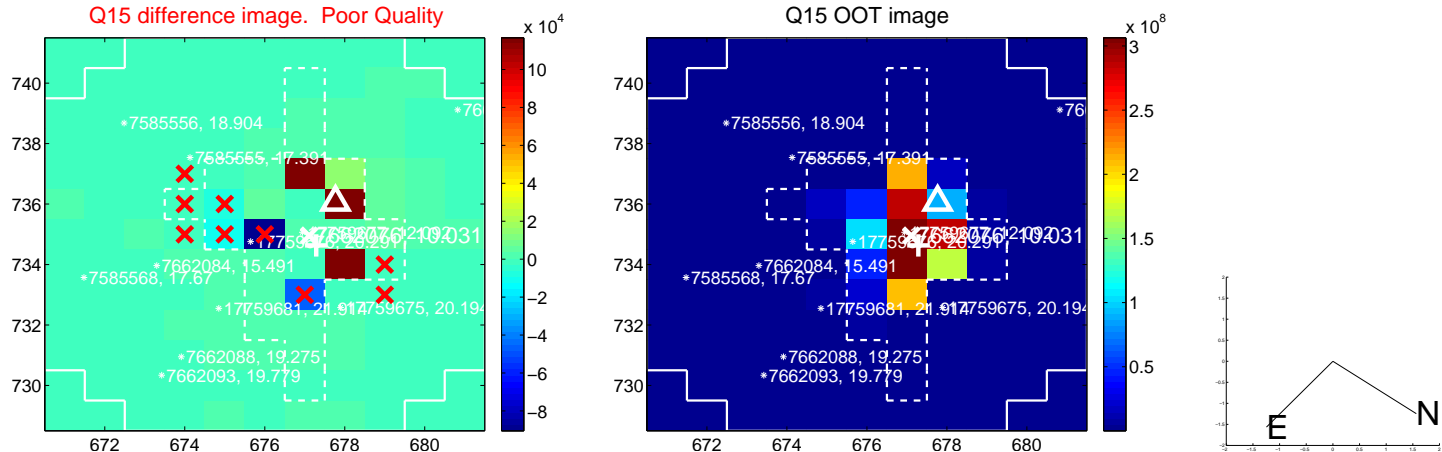
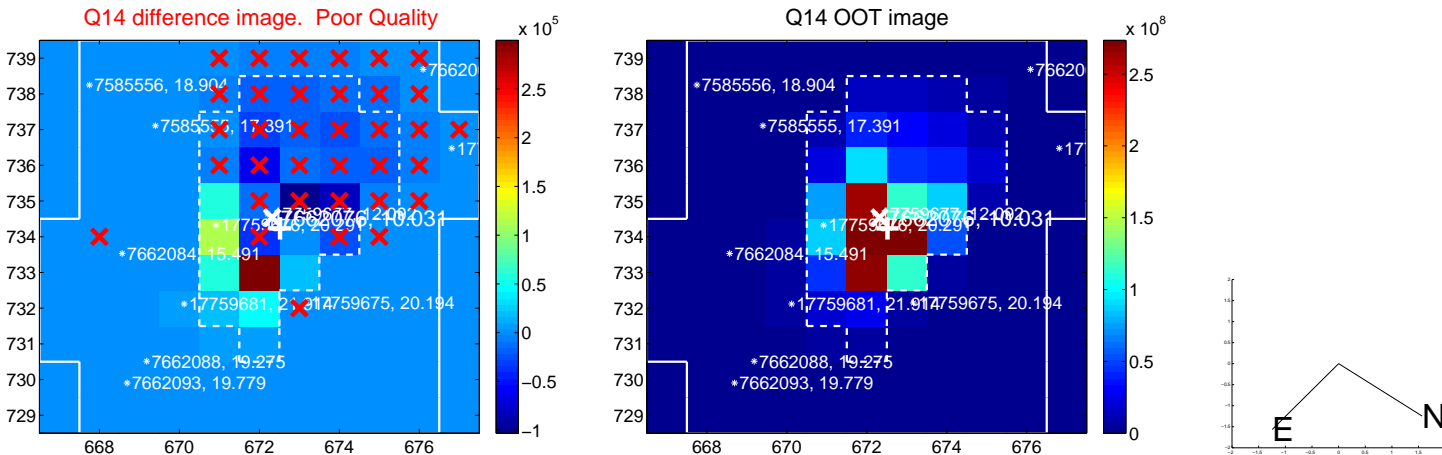
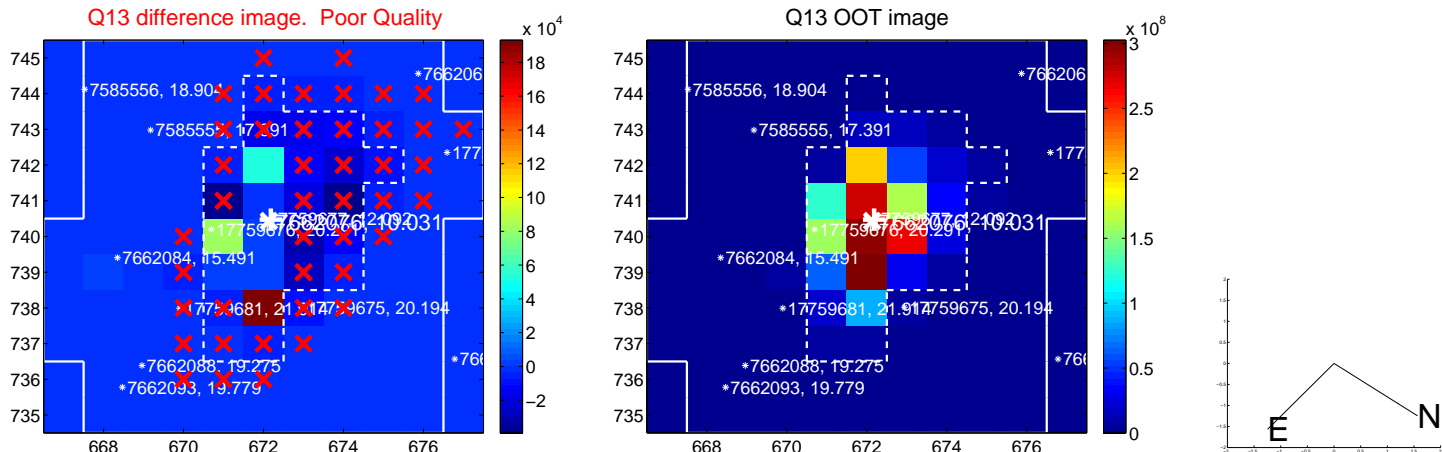
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



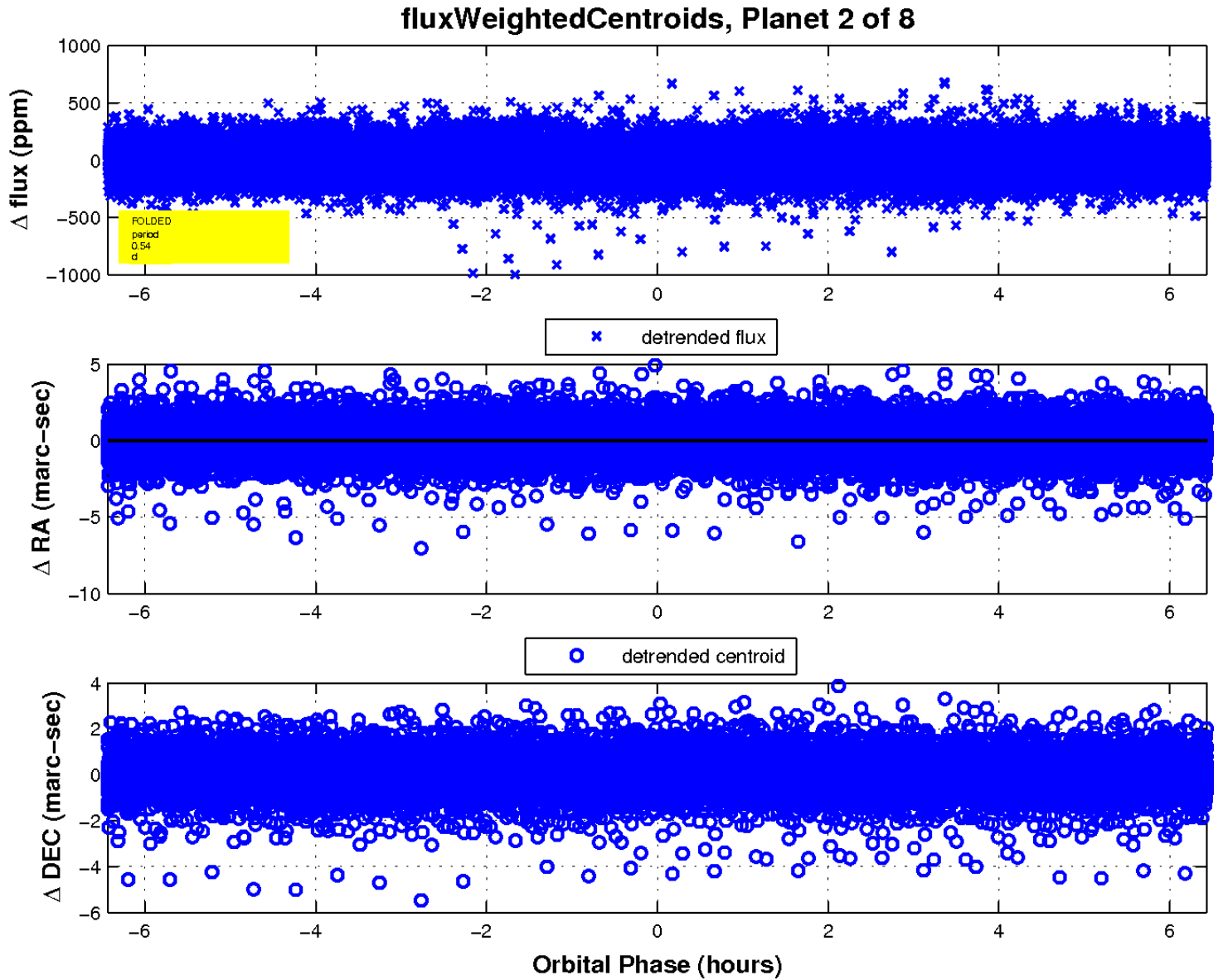
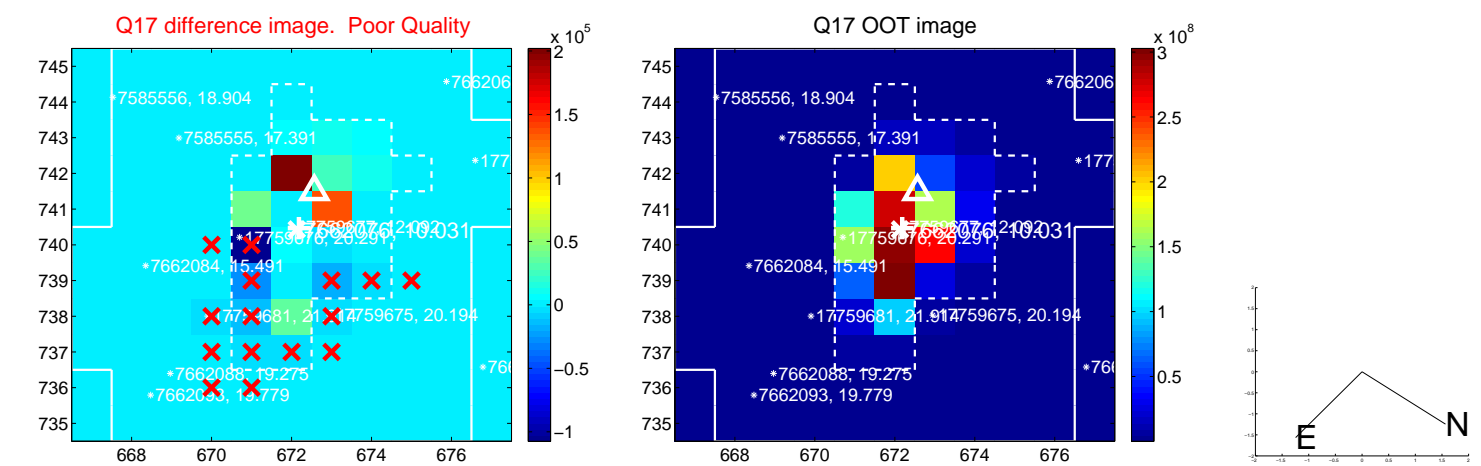
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

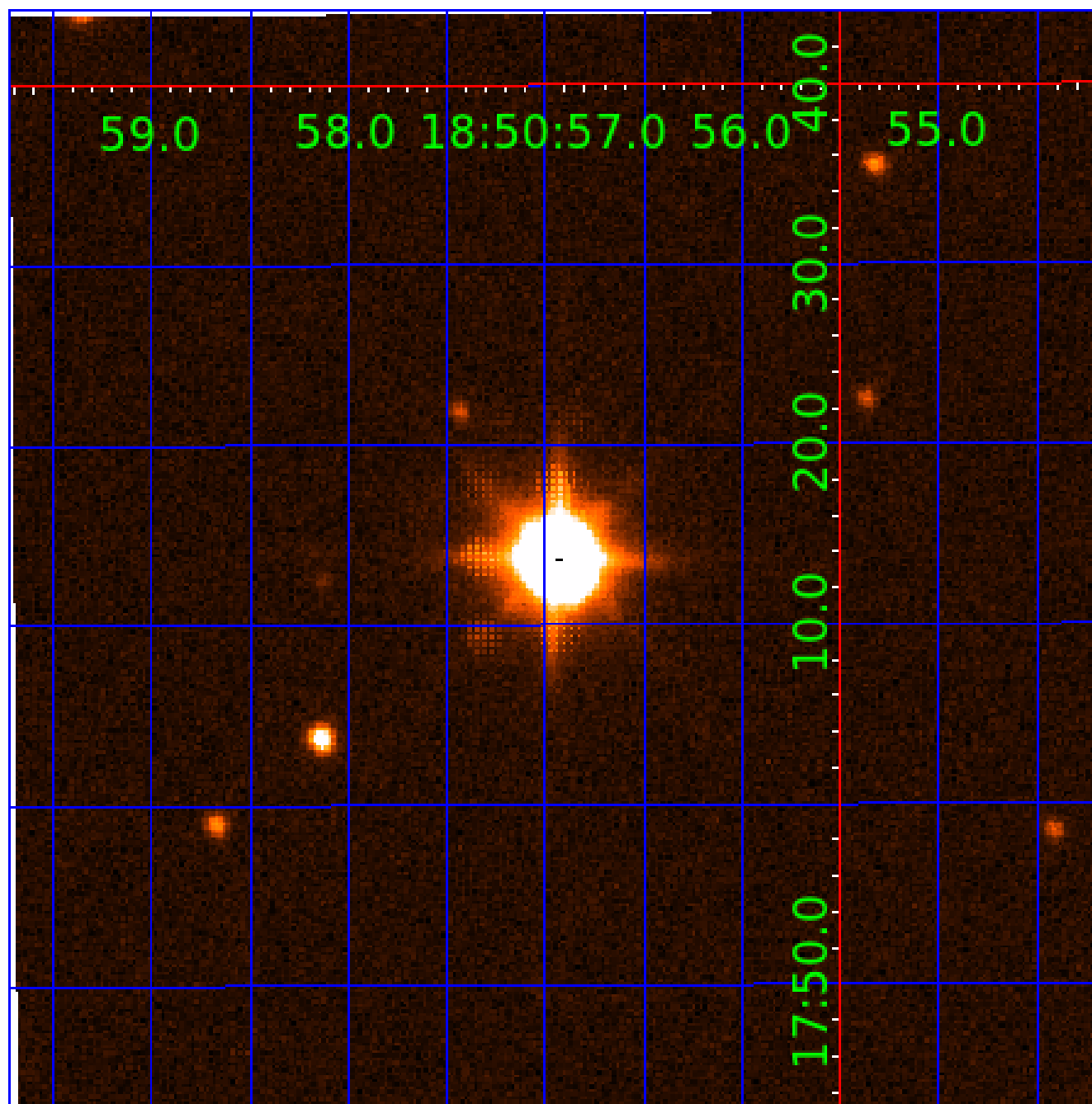


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007662076

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})
007662076-01	OBS	No	0.536283	131.532273	2.6	1.952	11.3	1.8	1.80	7251	0.34	40736.29
007662076-02	OBS	No	0.536320	131.654744	68.2	1.500	9.9	-1.0	1.80	7251	1.51	40732.57
007662076-03	OBS	No	130.230487	216.980996	370.1	2.783	9.3	9.0	1.80	7251	4.00	26.89
007662076-05	OBS	No	117.385832	146.425325	184.0	2.091	8.4	7.1	1.80	7251	2.79	30.88
007662076-06	OBS	No	60.308606	151.882173	122.5	5.852	7.3	6.6	1.80	7251	2.29	75.05
007662076-08	OBS	No	17.719377	140.089121	60.1	2.500	7.5	-1.0	1.80	7251	1.42	384.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007662076-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
007662076-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007662076-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007662076-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
007662076-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
007662076-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

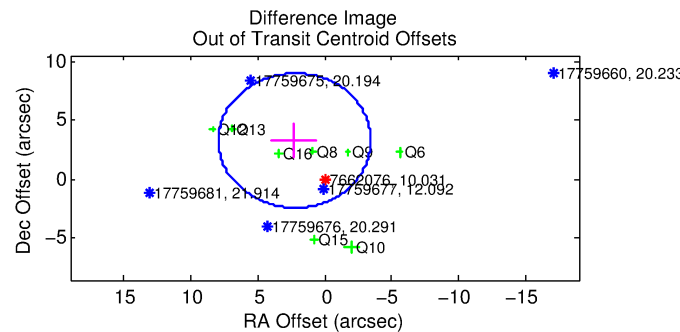
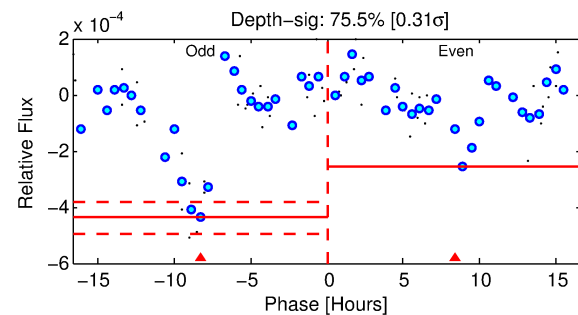
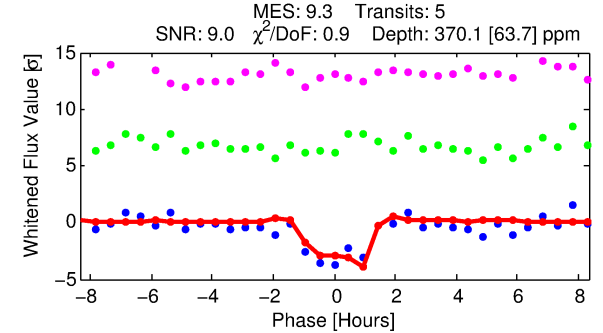
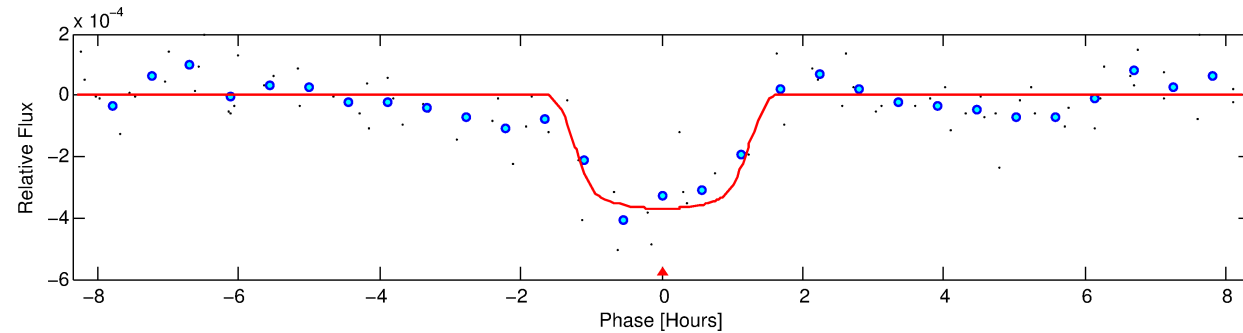
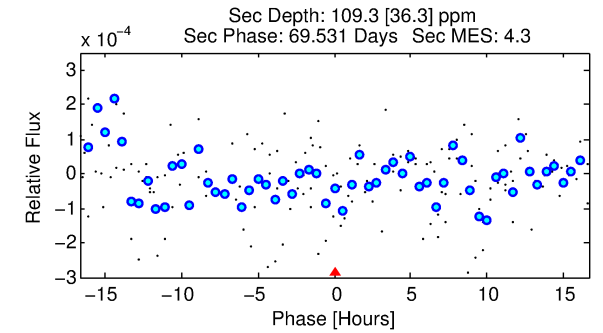
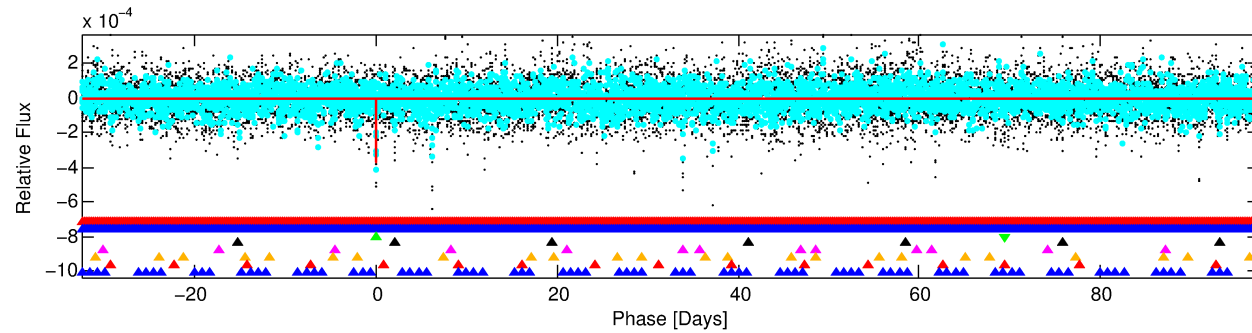
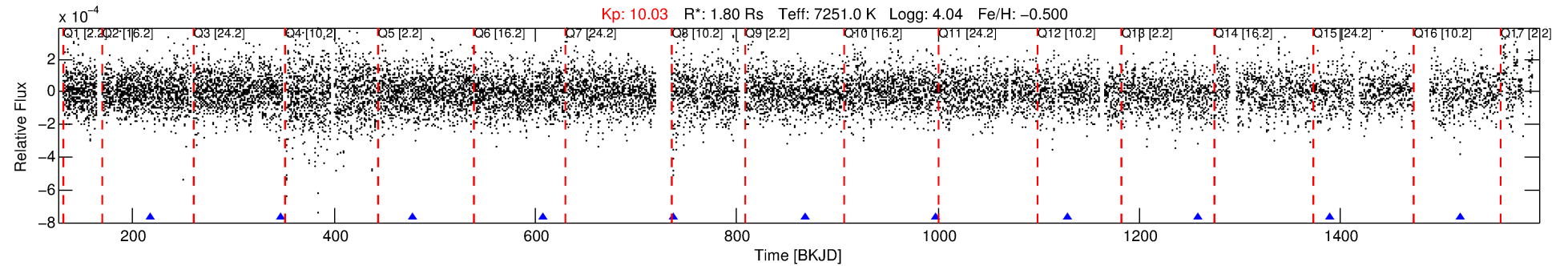
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007662076-03

No Significant Match Found

DV One-Page Summary

KIC: 7662076 Candidate: 3 of 8 Period: 130.230 d



DV Fit Results:

Period = 130.23049 [0.00121] d
Epoch = 216.9810 [0.0077] BKJD
Rp/R* = 0.0204 [0.0423]
a/R* = 175.69 [2312.47]
b = 0.89 [2.98]
Seff = 26.89 [13.26]
Teq = 581 [72] K
Rp = 4.00 [8.40] Re
a = 0.5460 [0.1614] AU
Ag = 1121.59 [4707.20] [0.24σ]
Teff = 5195 [5421] K [0.85σ]

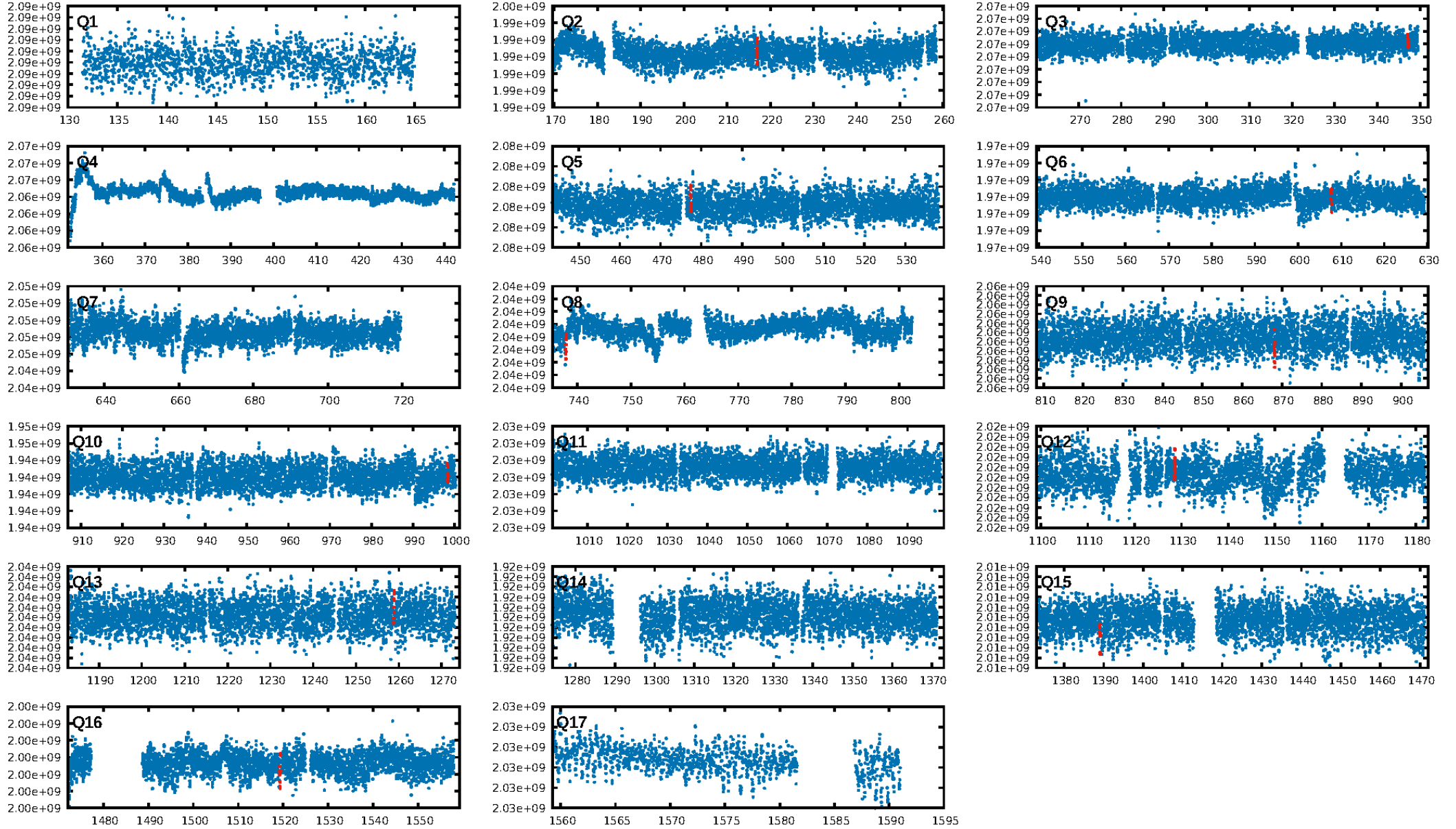
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [88.55σ]
LongPeriod-sig: 100.0% [311.83σ]
ModelChiSquare2-sig: 16.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 0.705 arcsec [2.29σ]
OotOffset-rm: 3.981 arcsec [2.10σ]
KicOffset-rm: 4.149 arcsec [2.71σ]
OotOffset-st: 2/1/3/2 [8]
KicOffset-st: 2/1/3/2 [8]
DiffImageQuality-fgm: 0.00 [0/8]
DiffImageOverlap-fno: 0.00 [0/10]

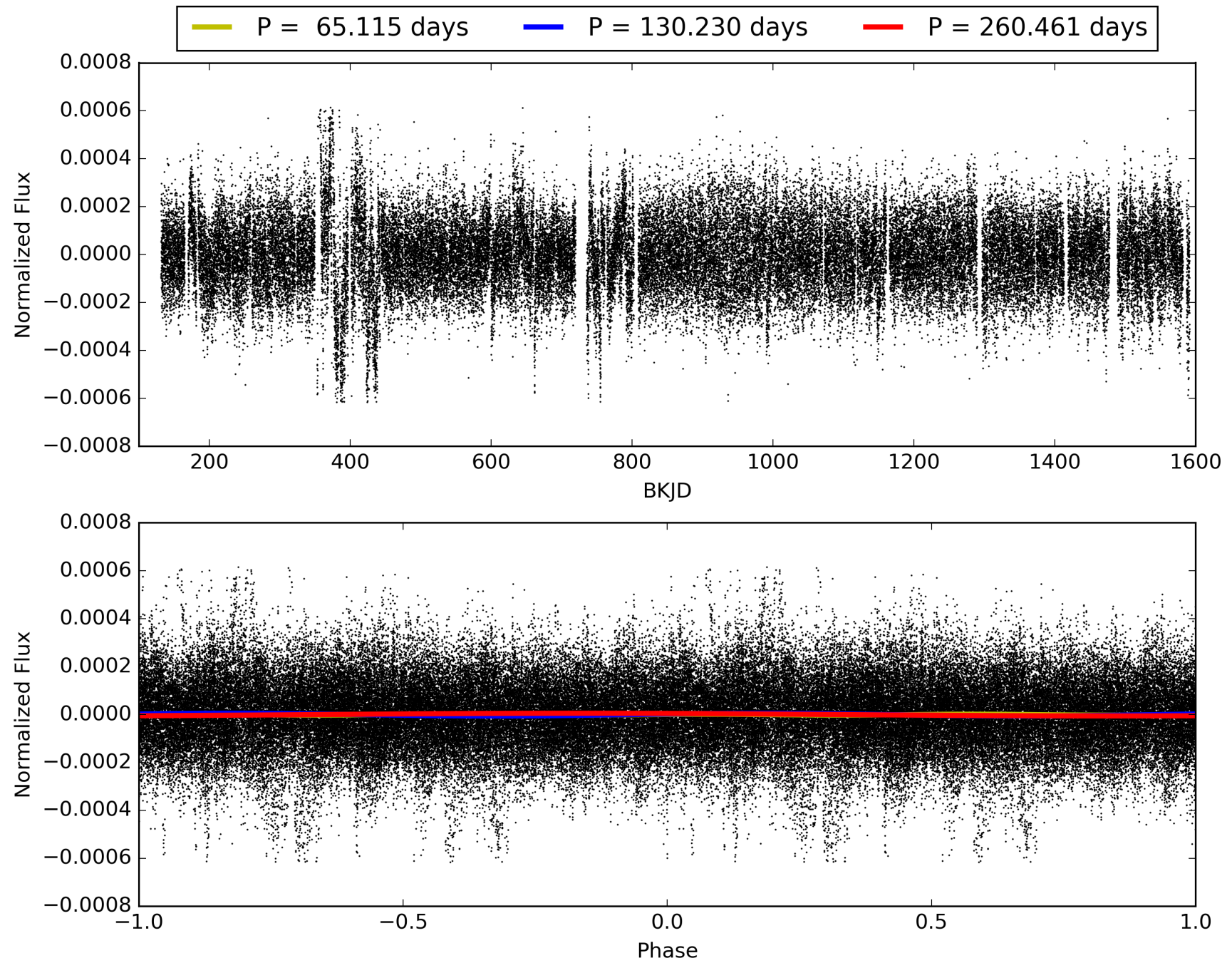
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:44:11 Z

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

TCE 007662076-03, PDC Light Curves

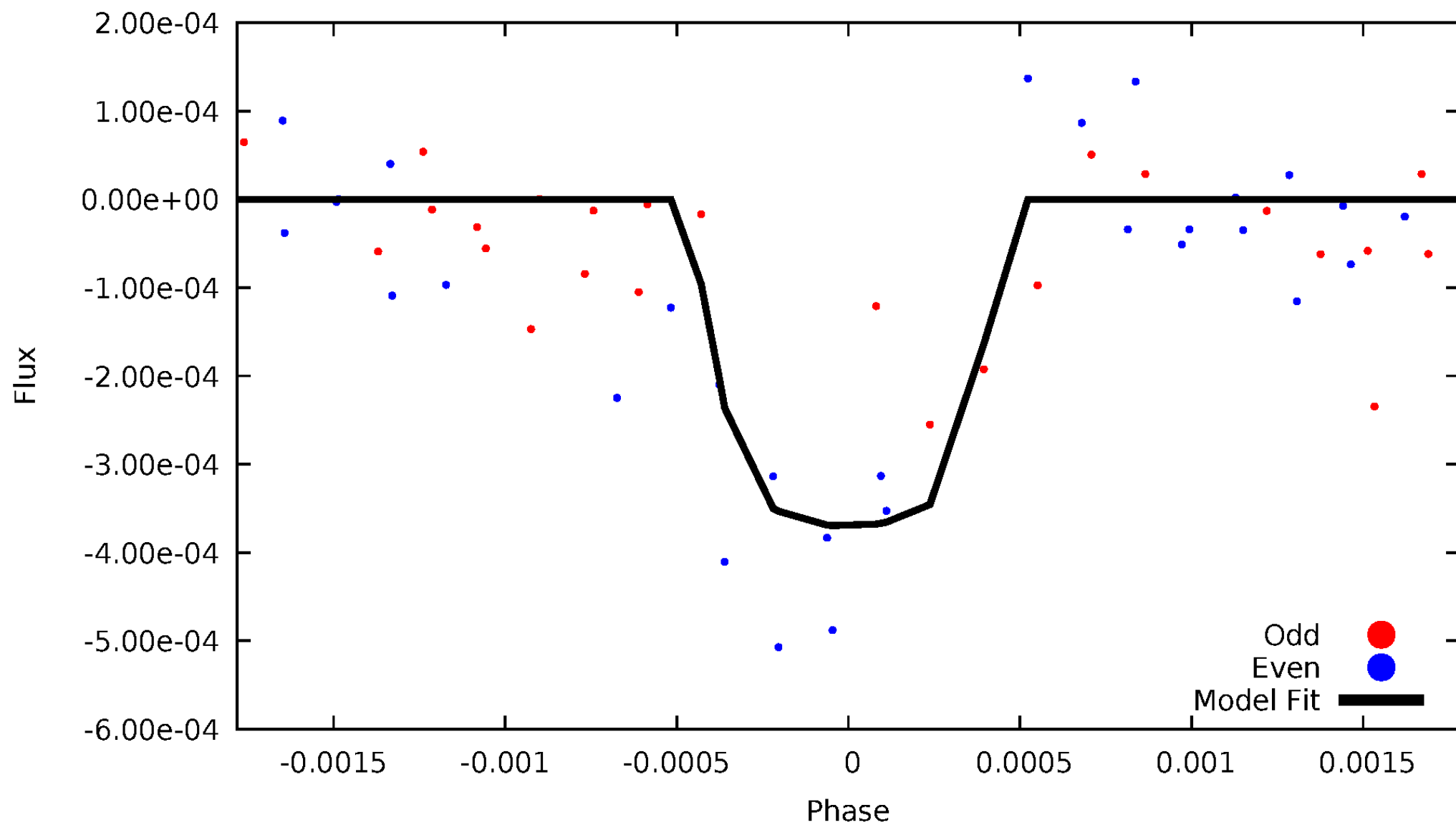


TCE 007662076-03



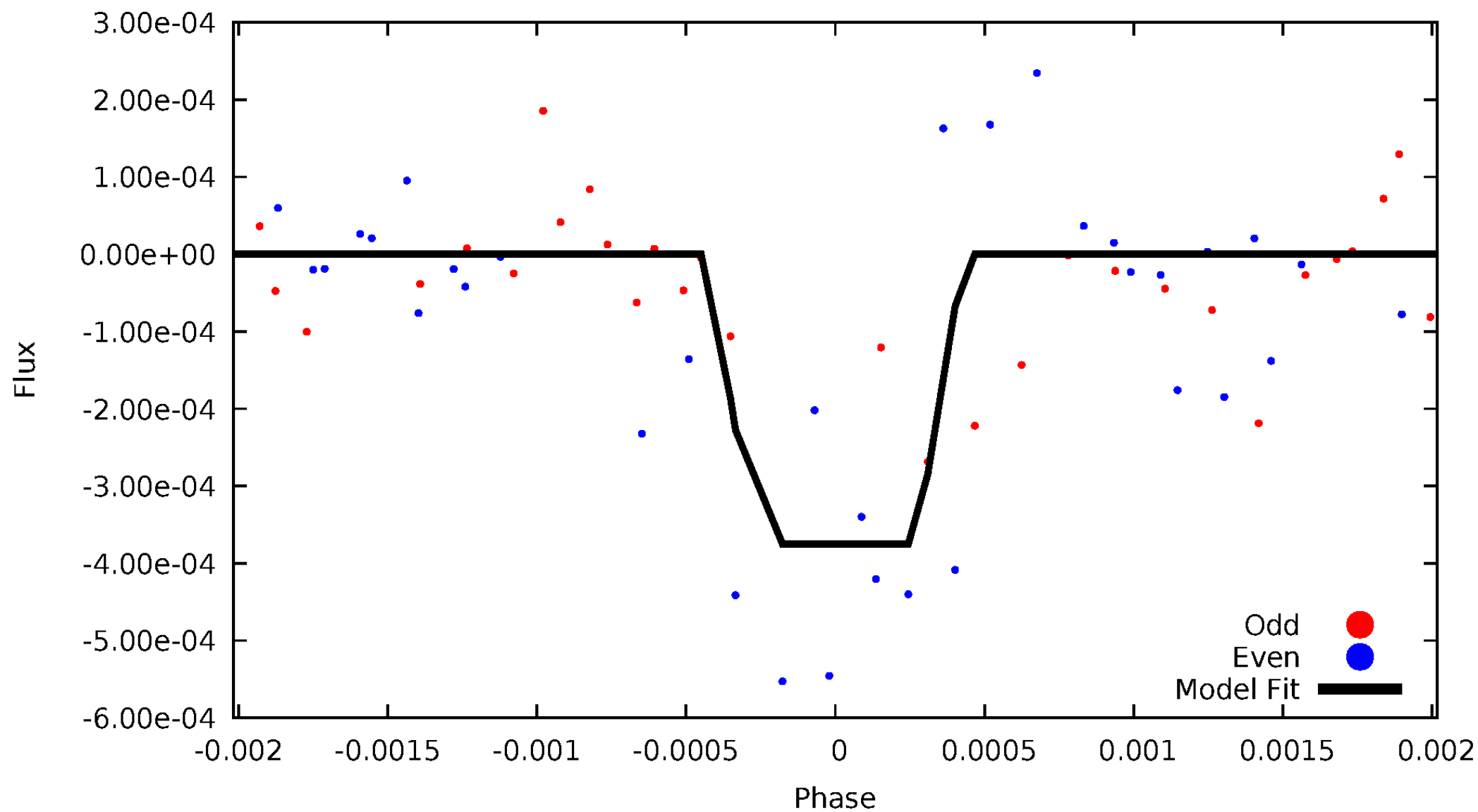
DV Odd/Even

TCE 007662076-03



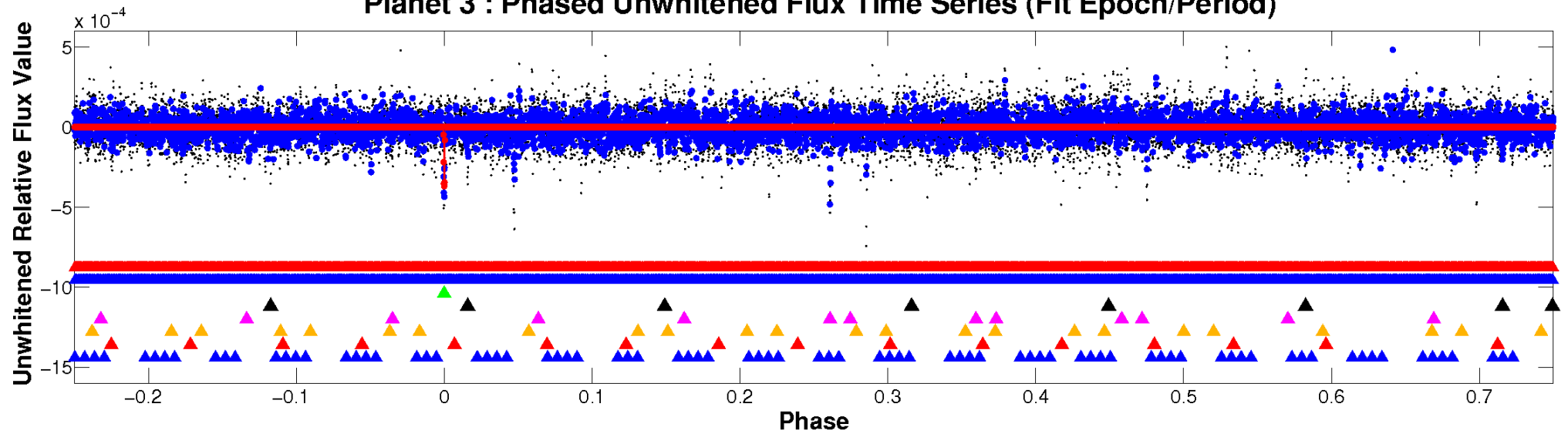
ALT Odd/Even

TCE 007662076-03

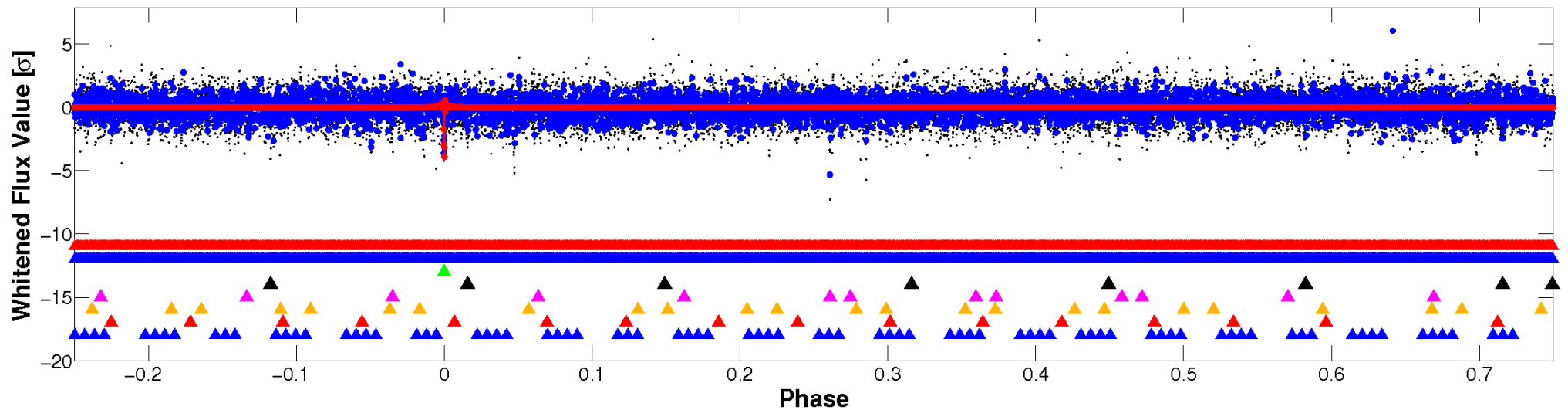


Non-Whitened Vs. Whitened Light Curve

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

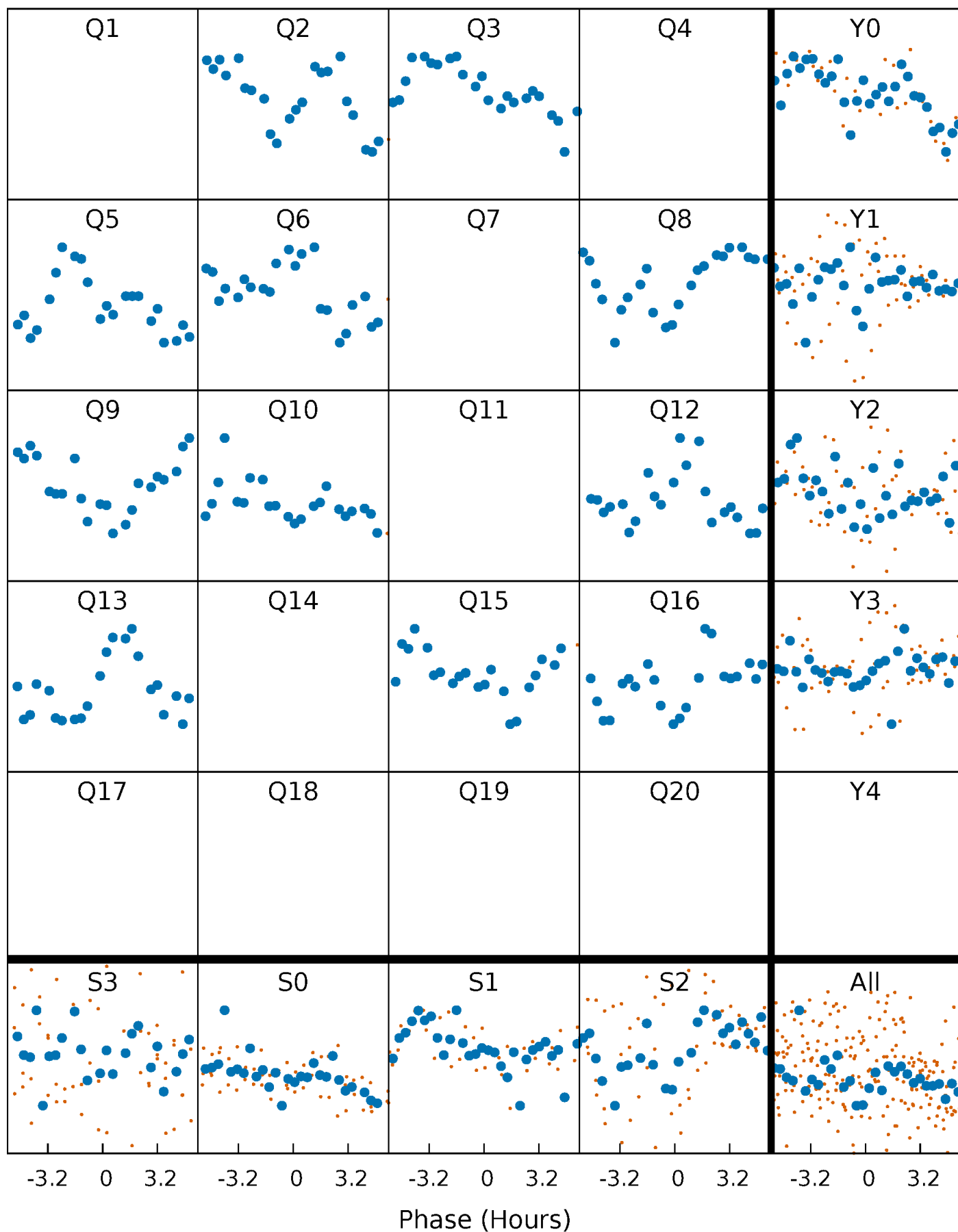


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



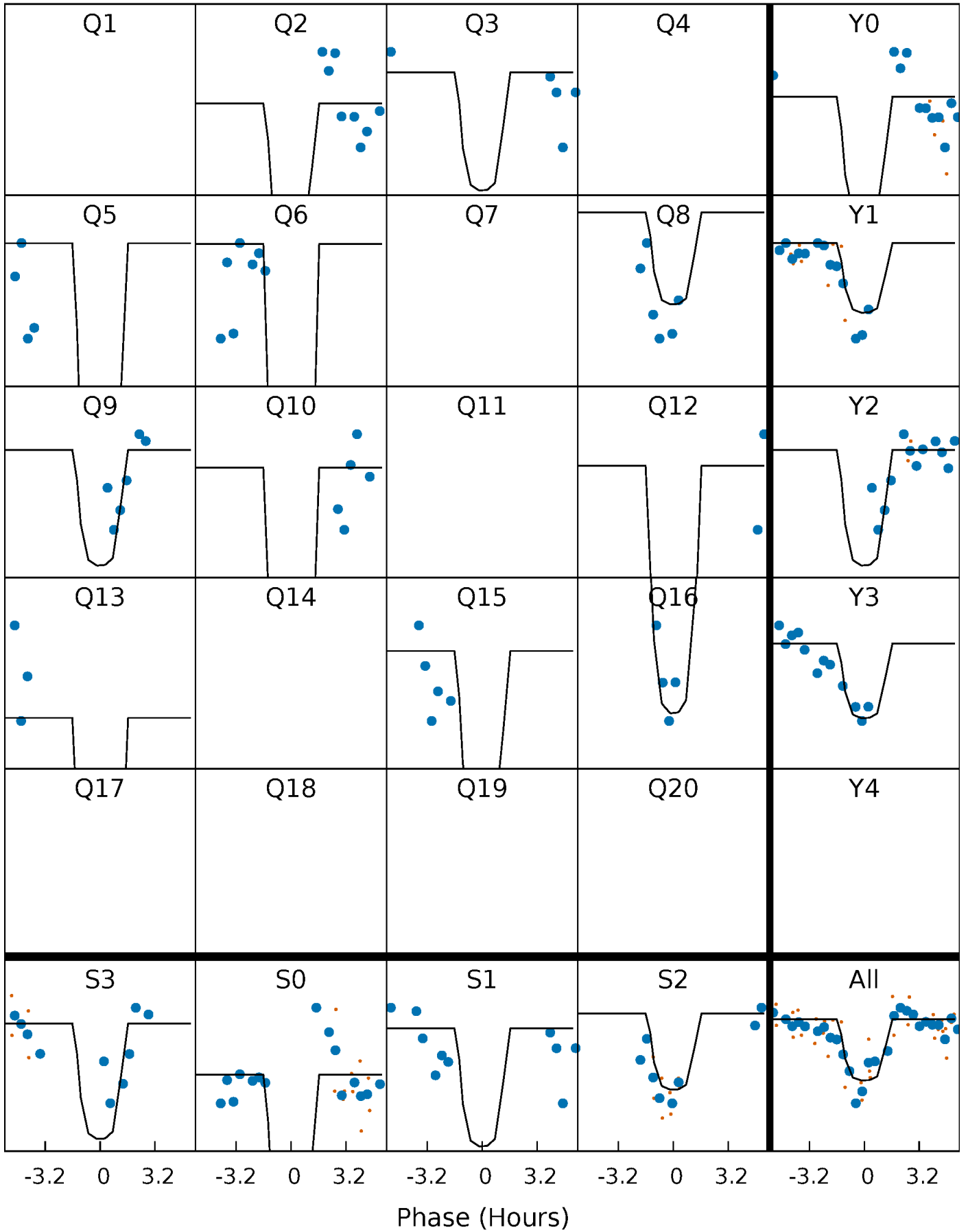
PDC Quarter-Phased Transit Curves

TCE 007662076-03 P=130.230487 Days $T_0=216.980996$ (BKJD)



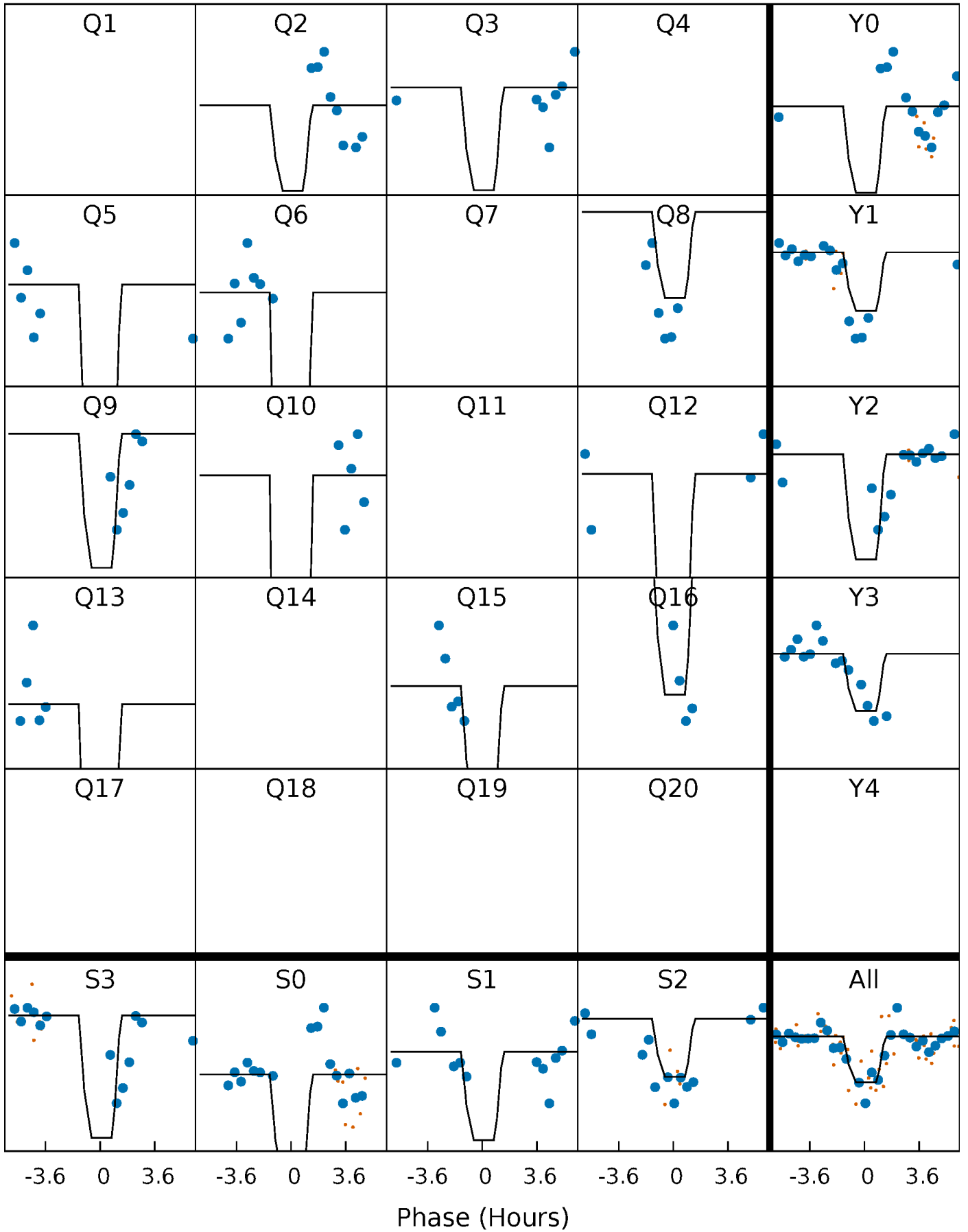
DV Quarter-Phased Transit Curves

TCE 007662076-03 P=130.230487 Days $T_0=216.980996$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

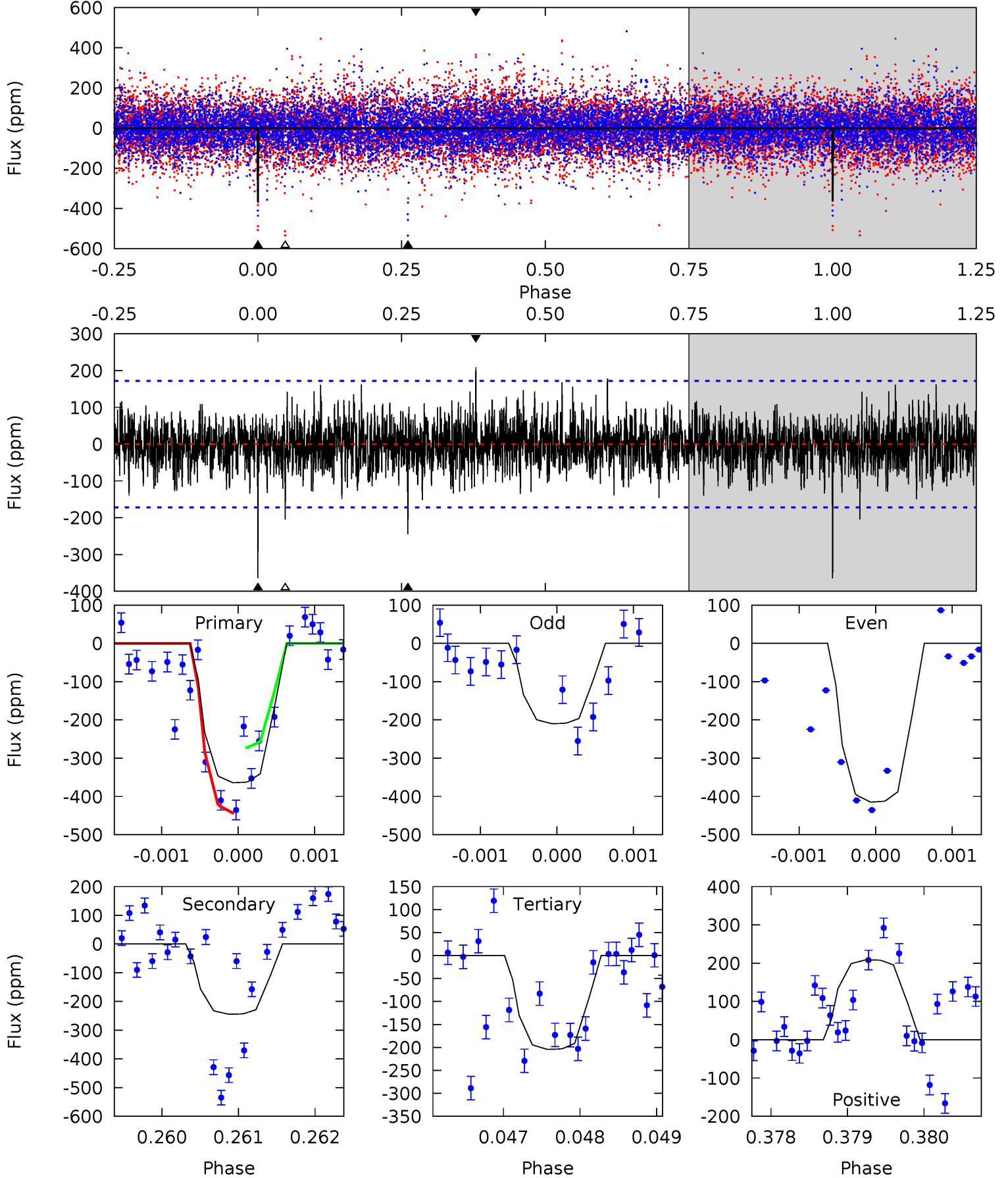
TCE 007662076-03 P=130.224393 Days $T_0=217.001991$ (BKJD)



DV Model-Shift Uniqueness Test

007662076-03, P = 130.230487 Days, E = 86.750509 Days

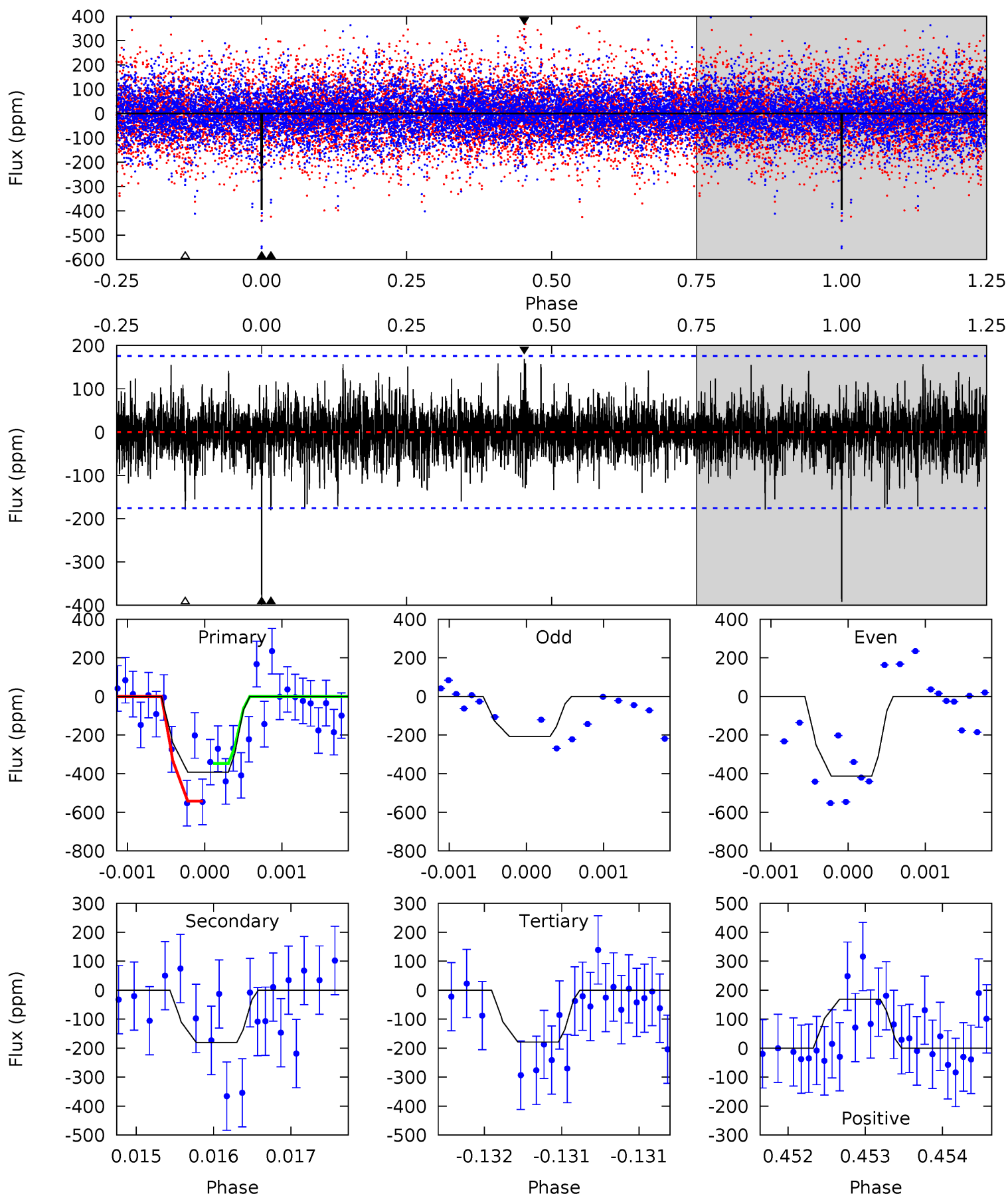
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	7.80	6.52	6.66	5.49	3.34	1.51	5.10	4.96	1.28	1.14	2.56	1.00	0.36	2.64



Alt Model-Shift Uniqueness Test

007662076-03, P = 130.224393 Days, E = 86.777598 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	5.63	5.59	5.28	5.49	3.35	1.30	6.65	6.96	0.04	0.35	2.68	1.04	0.30	2.53



Stellar Parameters For KIC 007662076

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7251^{+230}_{-281}	$4.035^{+0.273}_{-0.147}$	$-0.500^{+0.250}_{-0.300}$	$1.799^{+0.512}_{-0.563}$	$1.280^{+0.218}_{-0.178}$	$0.310^{+0.517}_{-0.125}$
	+3%/-4%	+7%/-4%	+50%/-60%	+28%/-31%	+17%/-14%	+167%/-40%
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 007662076-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-245 ± 31	$7.21^{+6.78}_{-4.96}$	801^{+63}_{-72}	4729^{+3441}_{-1004}	765^{+6526}_{-562}
Alt.	-180 ± 32	$6.89^{+7.64}_{-4.71}$	798^{+63}_{-76}	4534^{+2857}_{-1021}	613^{+5452}_{-472}

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

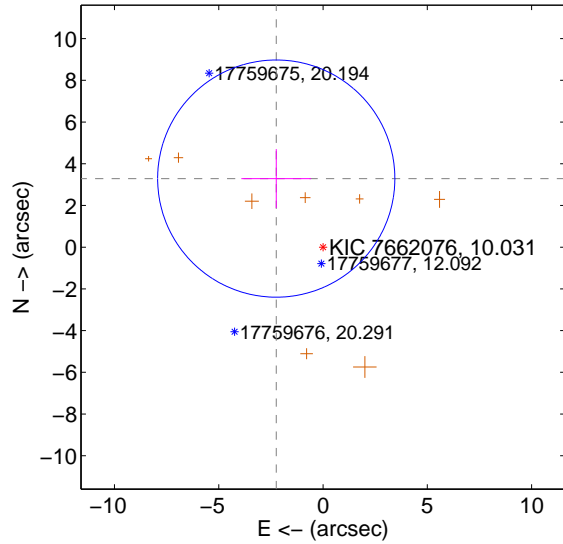
Supplemental centroid analysis for 007662076-03. **Kepler magnitude: 10.03.** Transit SNR 9.00

There are 0 quarters with good PRF difference image offsets

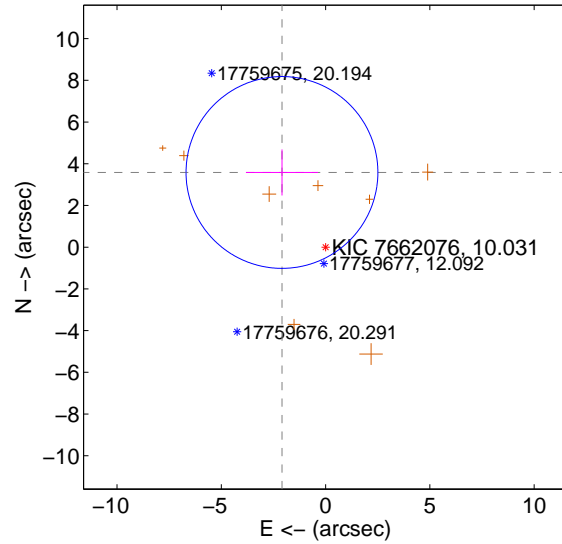
The direct PRF centroid is offset from the target star catalog position by about 0.79 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.981 ± 1.896	2.10	2.244 ± 1.673	3.289 ± 1.415
PRF-fit source offset from KIC position	4.149 ± 1.533	2.71	2.092 ± 1.725	3.583 ± 1.104
photometric centroid source offset	0.70 ± 0.31	2.29	0.44 ± 0.38	0.55 ± 0.25

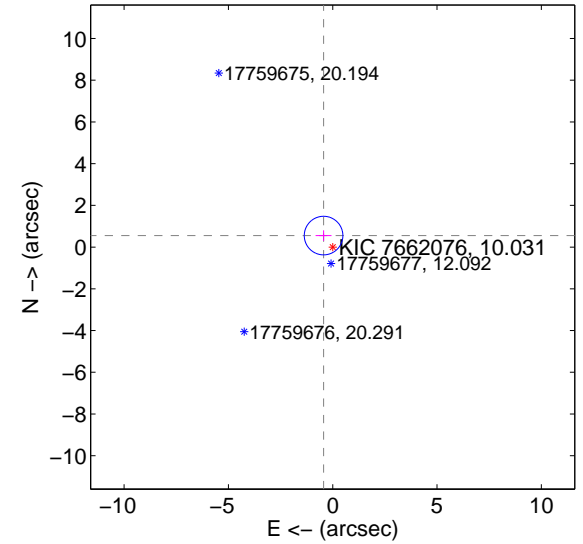
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

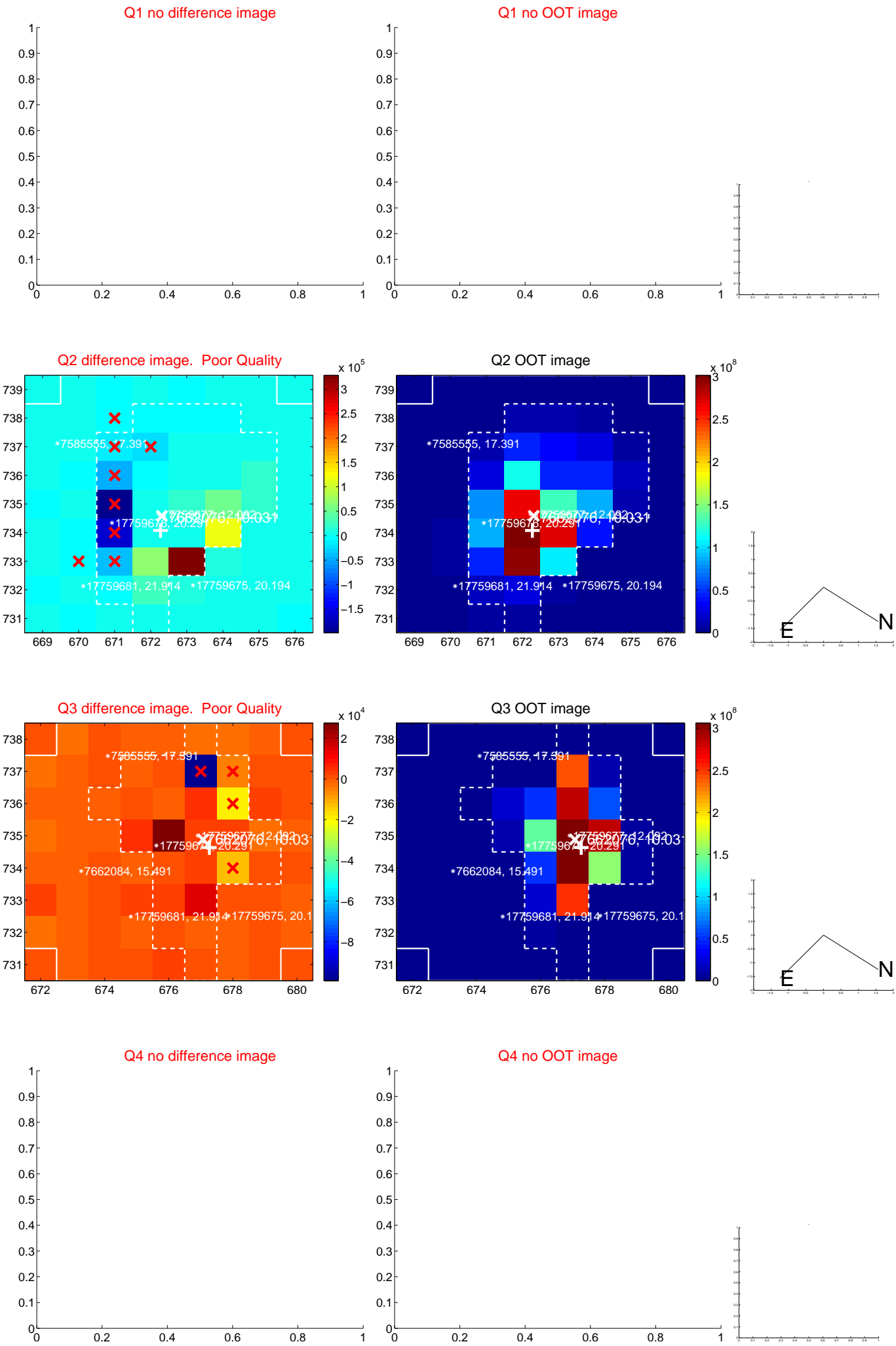


offset from photometric centroids

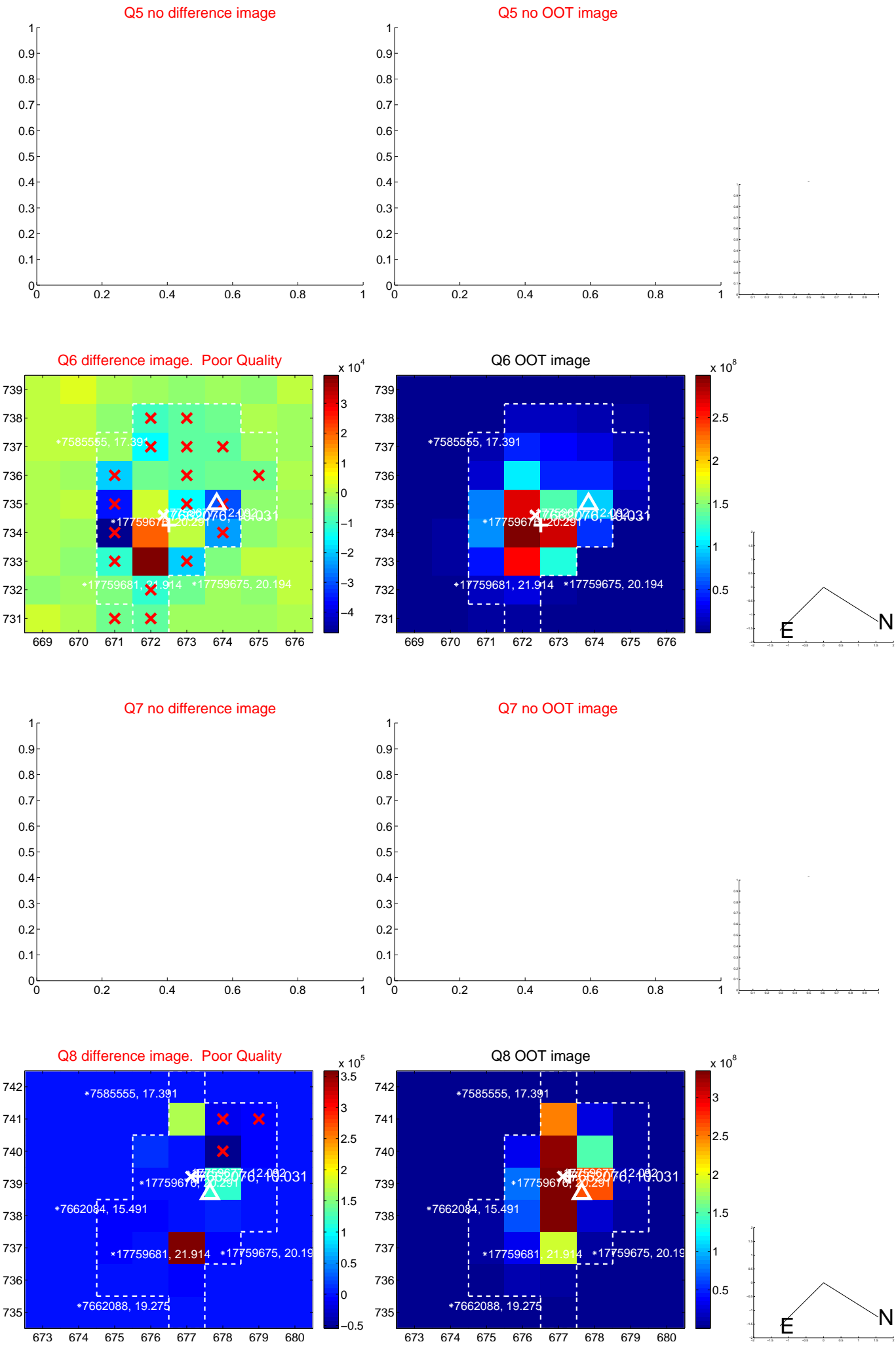


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

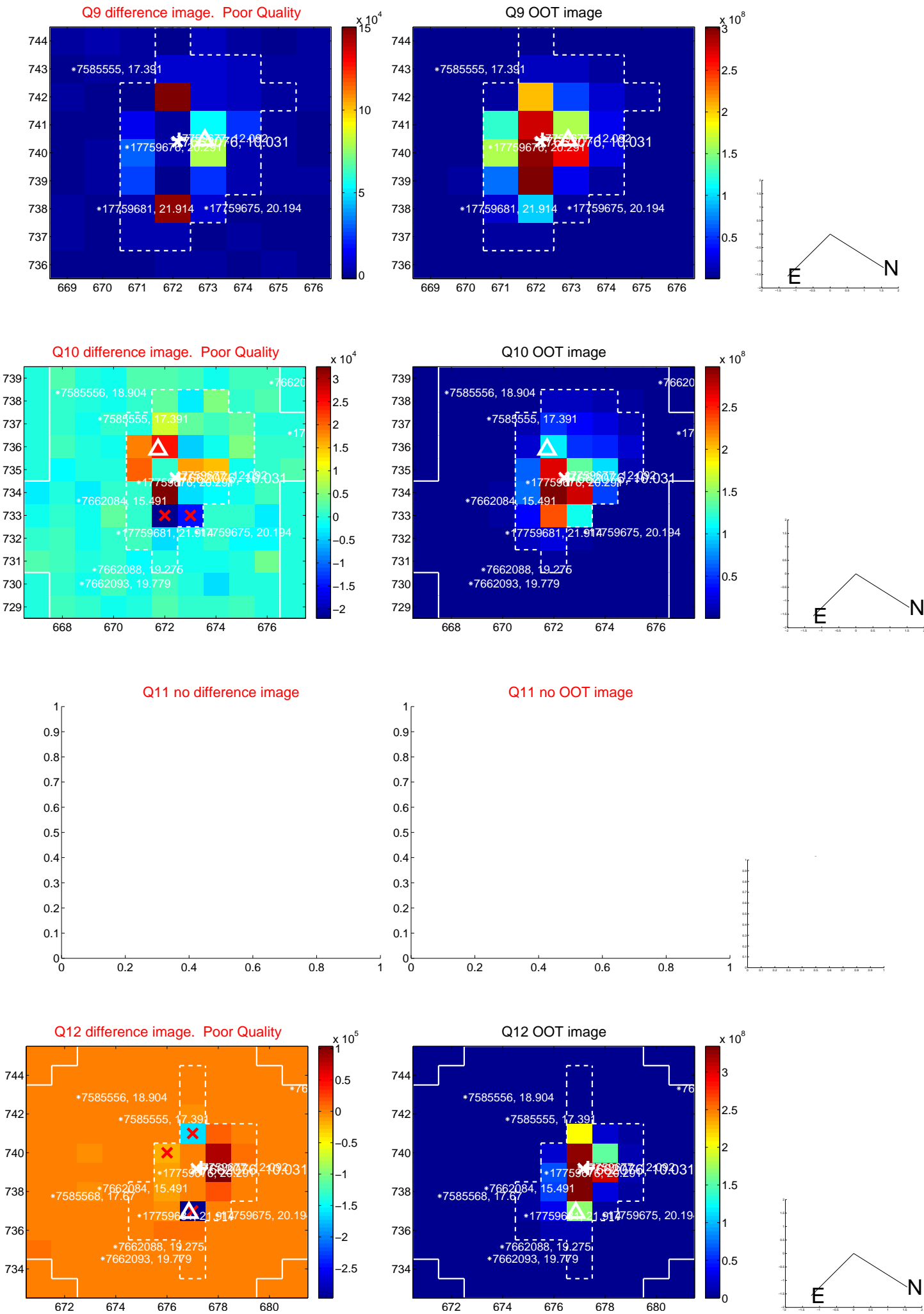
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



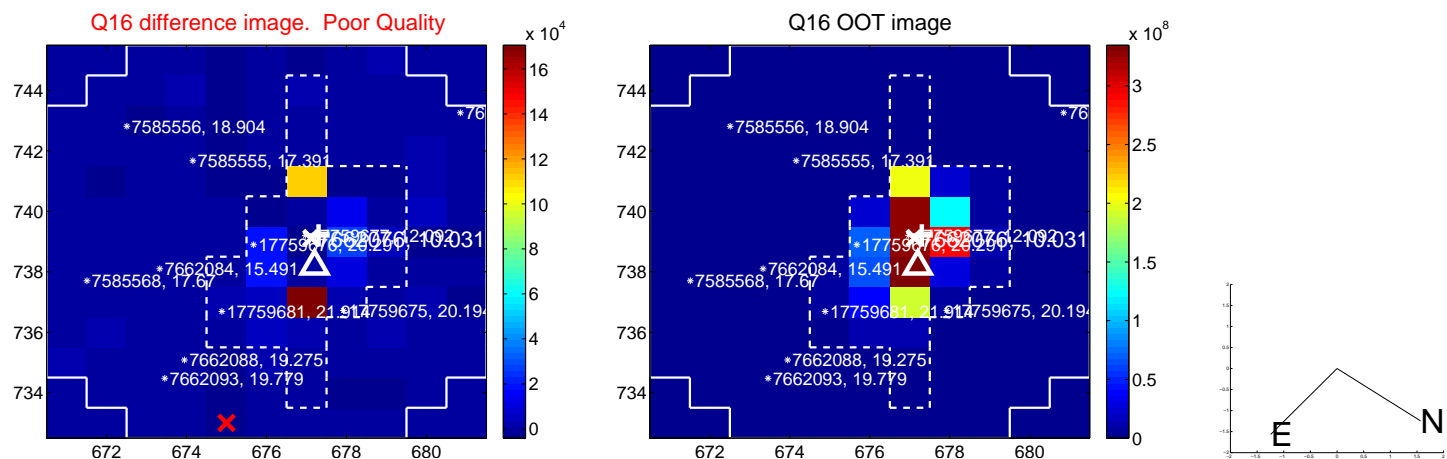
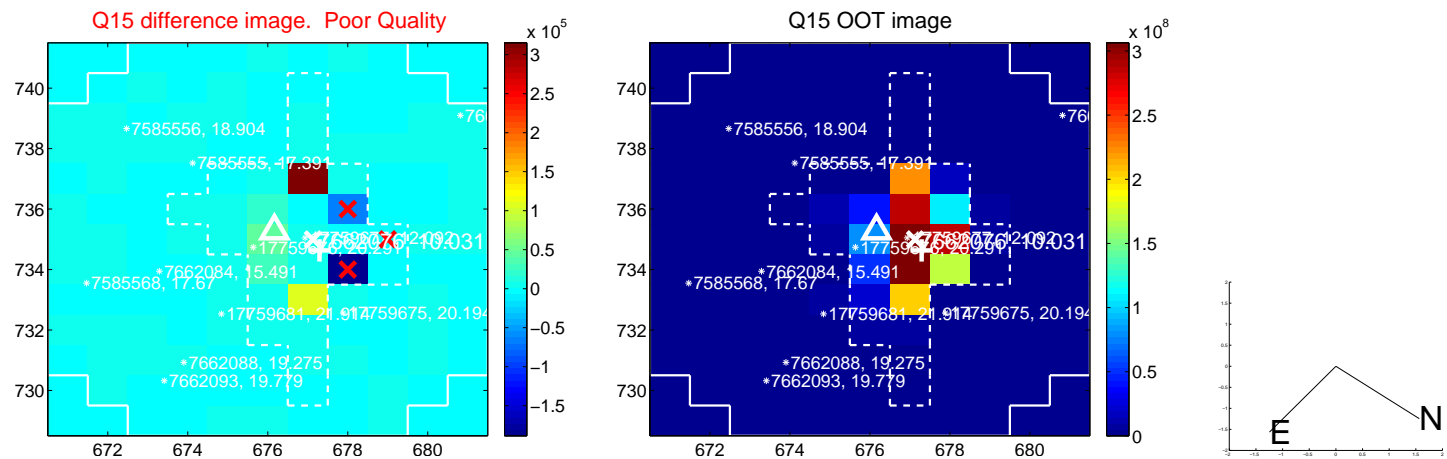
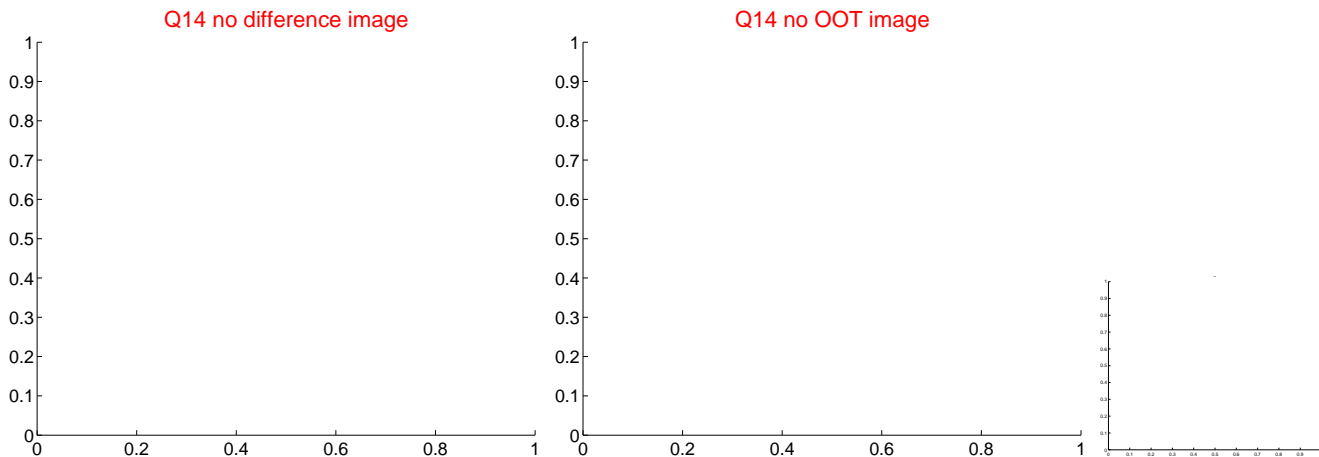
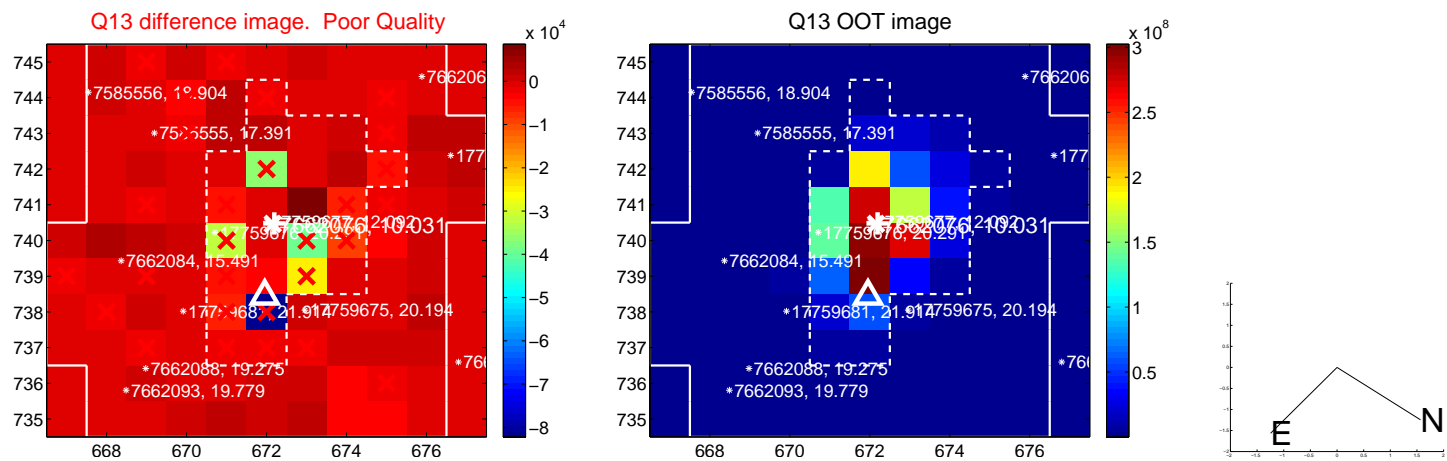
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



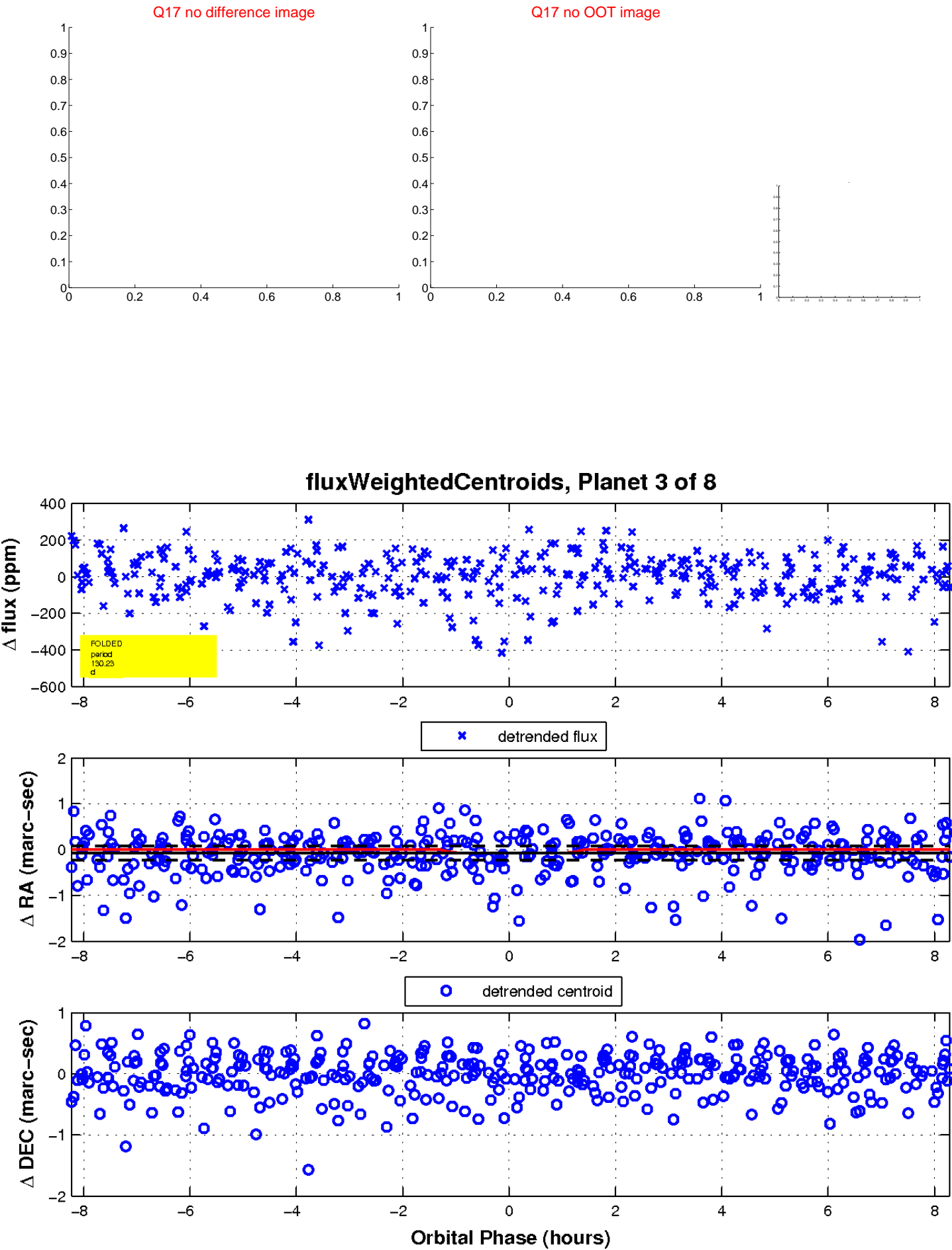
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

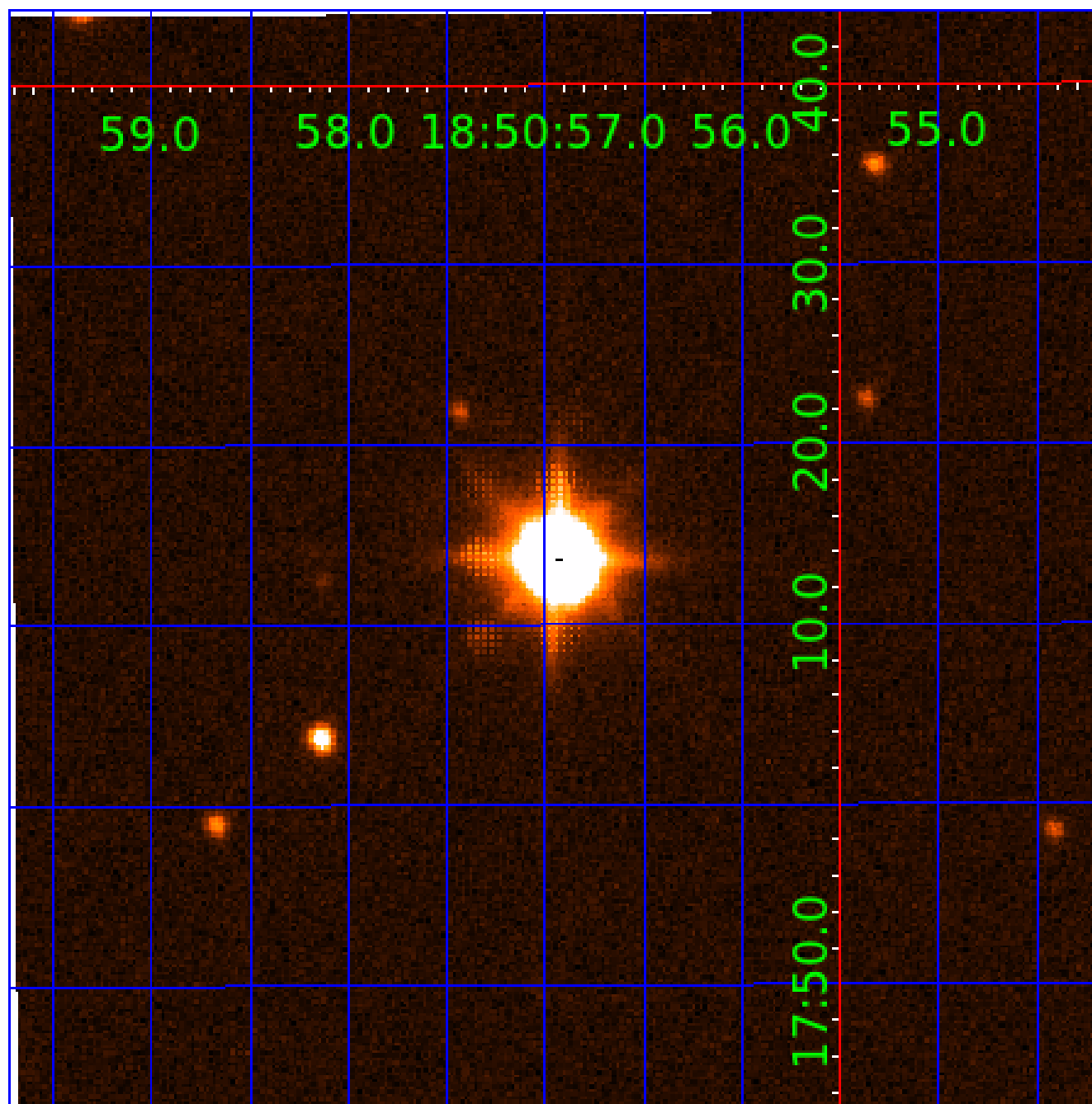


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007662076

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})
007662076-01	OBS	No	0.536283	131.532273	2.6	1.952	11.3	1.8	1.80	7251	0.34	40736.29
007662076-02	OBS	No	0.536320	131.654744	68.2	1.500	9.9	-1.0	1.80	7251	1.51	40732.57
007662076-03	OBS	No	130.230487	216.980996	370.1	2.783	9.3	9.0	1.80	7251	4.00	26.89
007662076-05	OBS	No	117.385832	146.425325	184.0	2.091	8.4	7.1	1.80	7251	2.79	30.88
007662076-06	OBS	No	60.308606	151.882173	122.5	5.852	7.3	6.6	1.80	7251	2.29	75.05
007662076-08	OBS	No	17.719377	140.089121	60.1	2.500	7.5	-1.0	1.80	7251	1.42	384.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007662076-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
007662076-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007662076-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007662076-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
007662076-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
007662076-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

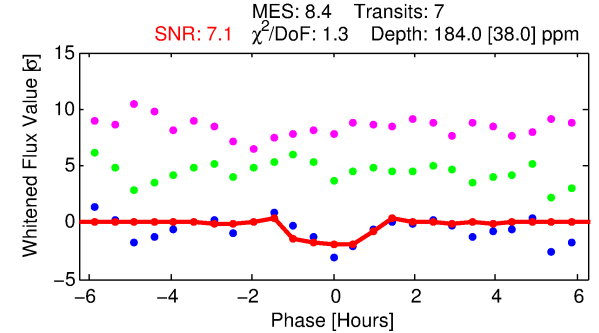
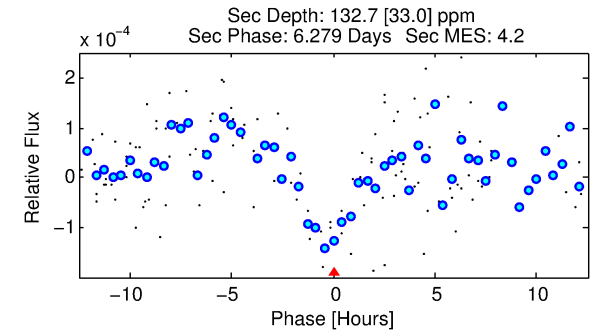
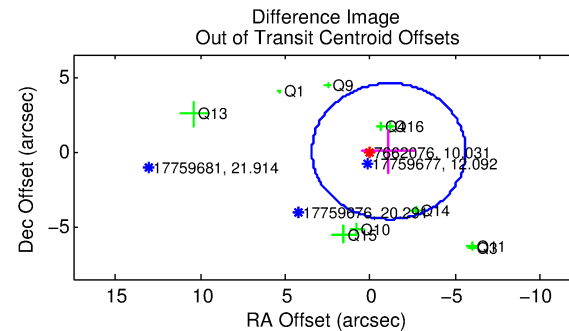
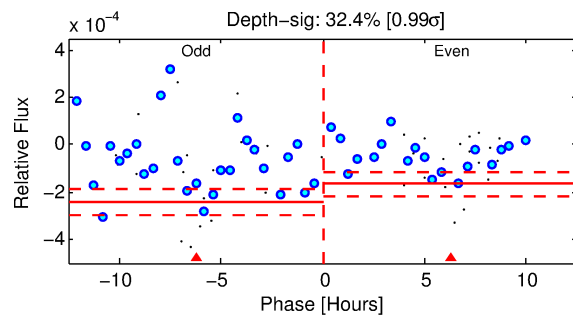
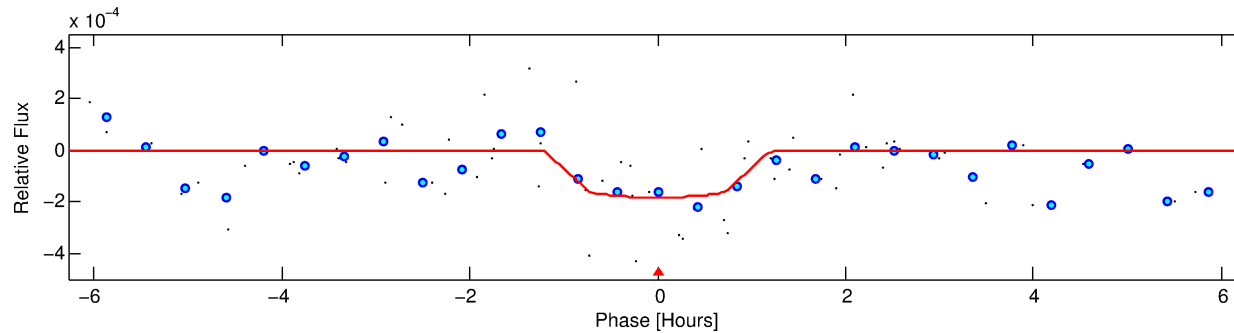
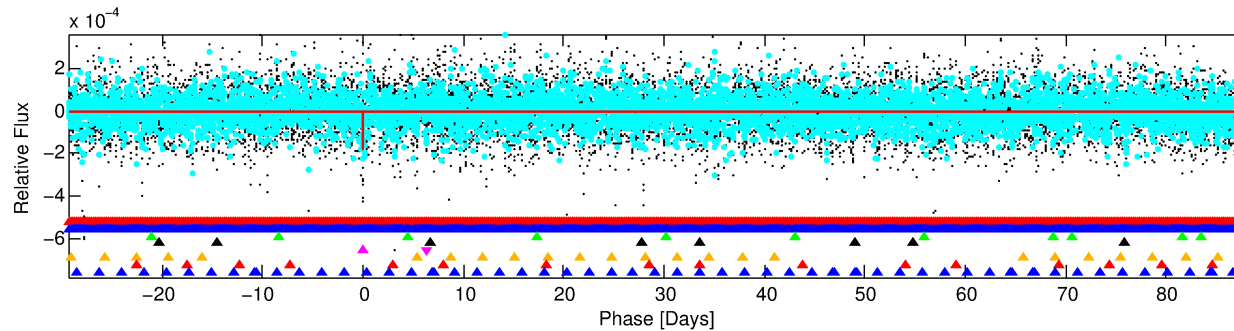
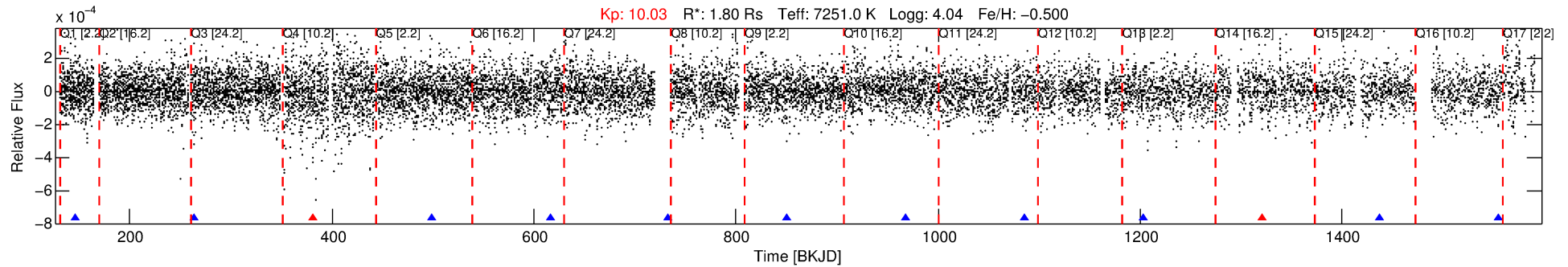
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007662076-05

No Significant Match Found

DV One-Page Summary

KIC: 7662076 Candidate: 5 of 8 Period: 117.386 d



DV Fit Results:

Period = 117.38583 [0.00120] d
Epoch = 146.4253 [0.0076] BKJD
 $R_p/R^* = 0.0142$ [0.0097]
 $a/R^* = 217.73$ [912.83]
 $b = 0.88$ [1.10]
 $\text{Seff} = 30.88$ [15.23]
 $T_{\text{eq}} = 601$ [74] K
 $R_p = 2.79$ [2.10] R_e
 $a = 0.5095$ [0.1506] AU
 $A_g = 2433.26$ [3564.13] [0.68 σ]
 $T_{\text{eff}} = 6527$ [2279] K [2.60 σ]

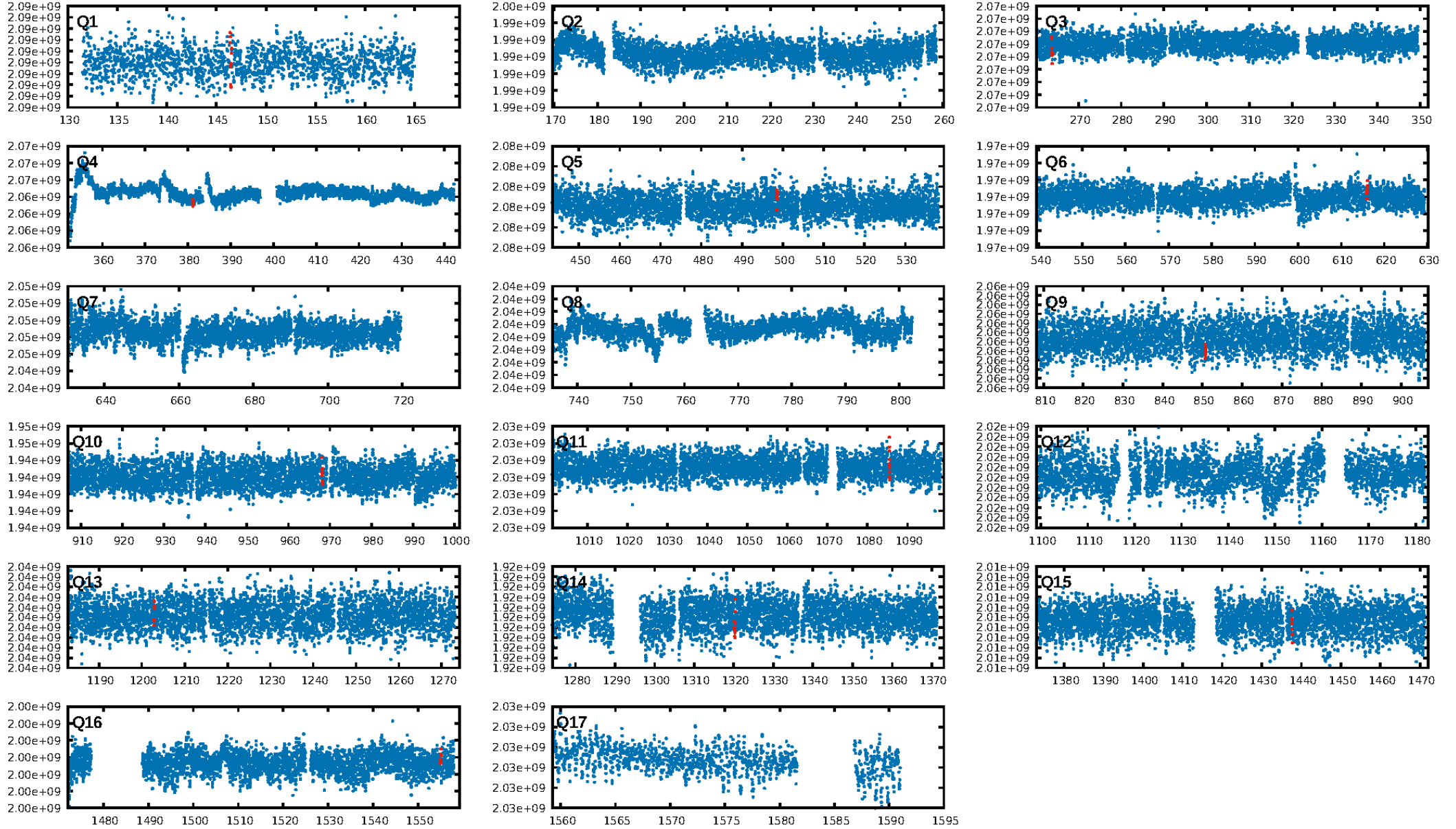
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [202.28 σ]
LongPeriod-sig: 100.0% [88.55 σ]
ModelChiSquare2-sig: 2.1%
ModelChiSquareGof-sig: 99.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.67 [4/6]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 0.275 arcsec [0.40 σ]
OotOffset-rm: 1.117 arcsec [0.74 σ]
KicOffset-rm: 1.739 arcsec [0.98 σ]
OotOffset-st: 2/3/2/3 [10]
KicOffset-st: 2/3/2/3 [10]
DiffImageQuality-fgm: 0.20 [2/10]
DiffImageOverlap-fno: 0.00 [0/12]

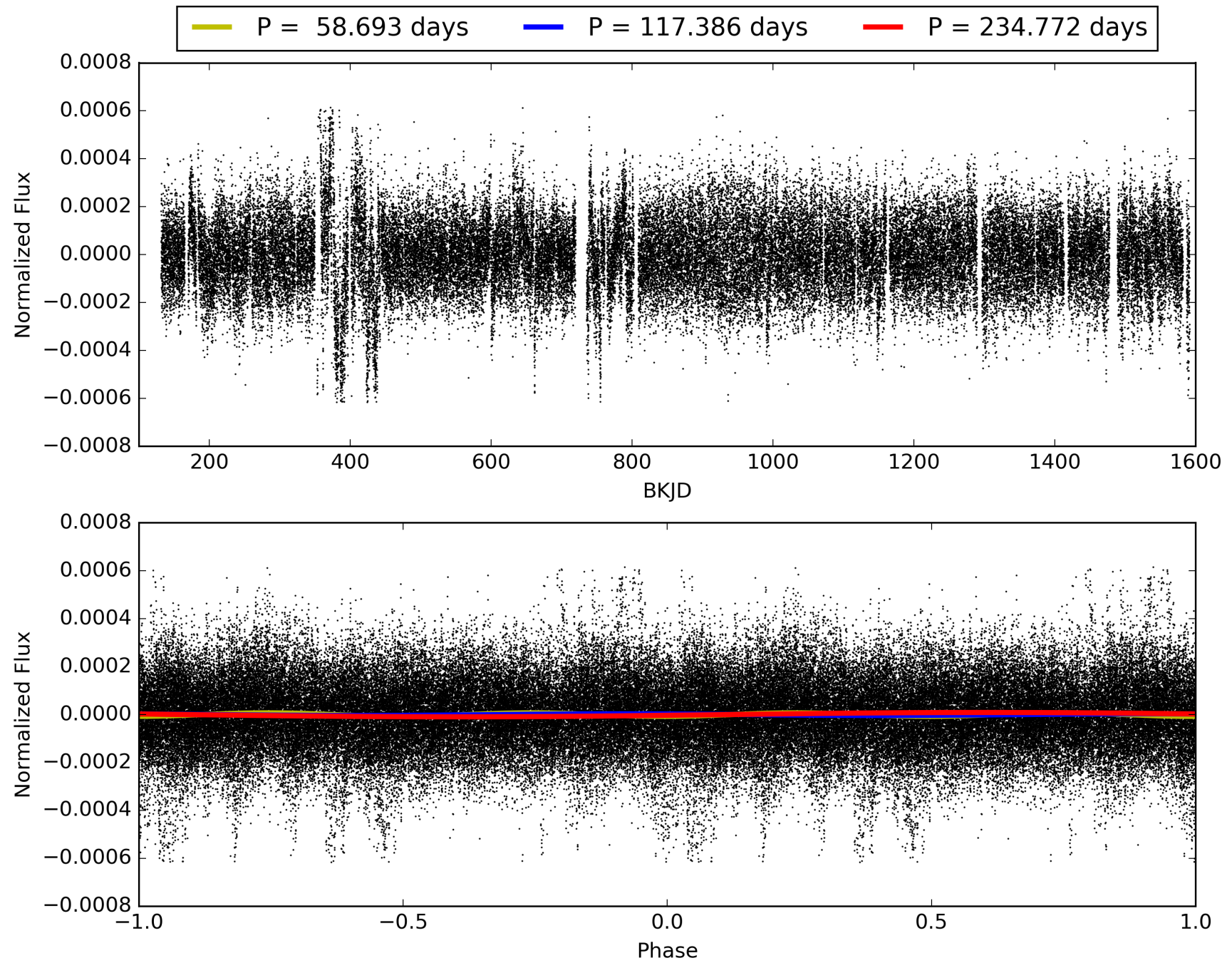
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:44:22 Z

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

TCE 007662076-05, PDC Light Curves

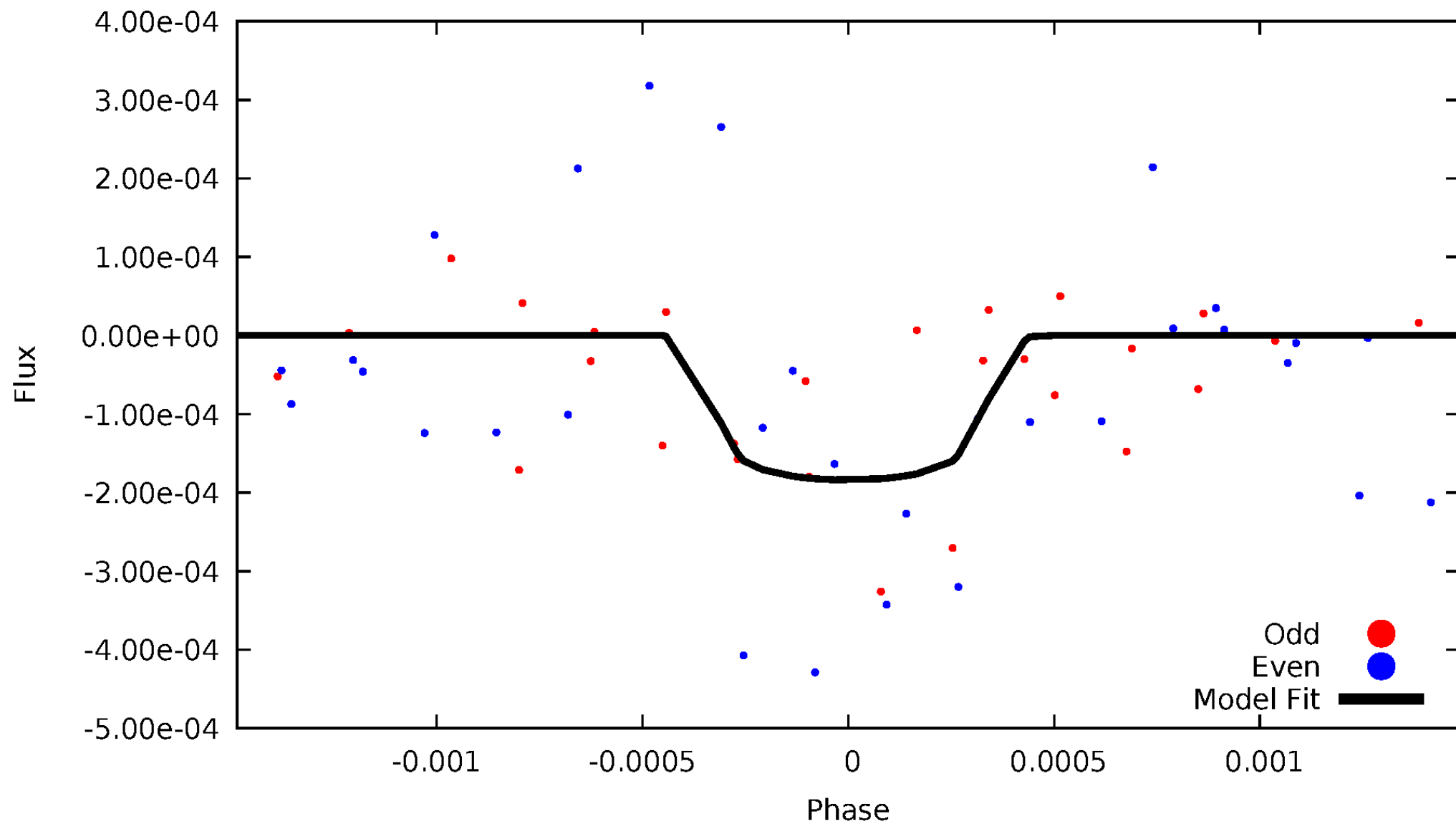


TCE 007662076-05



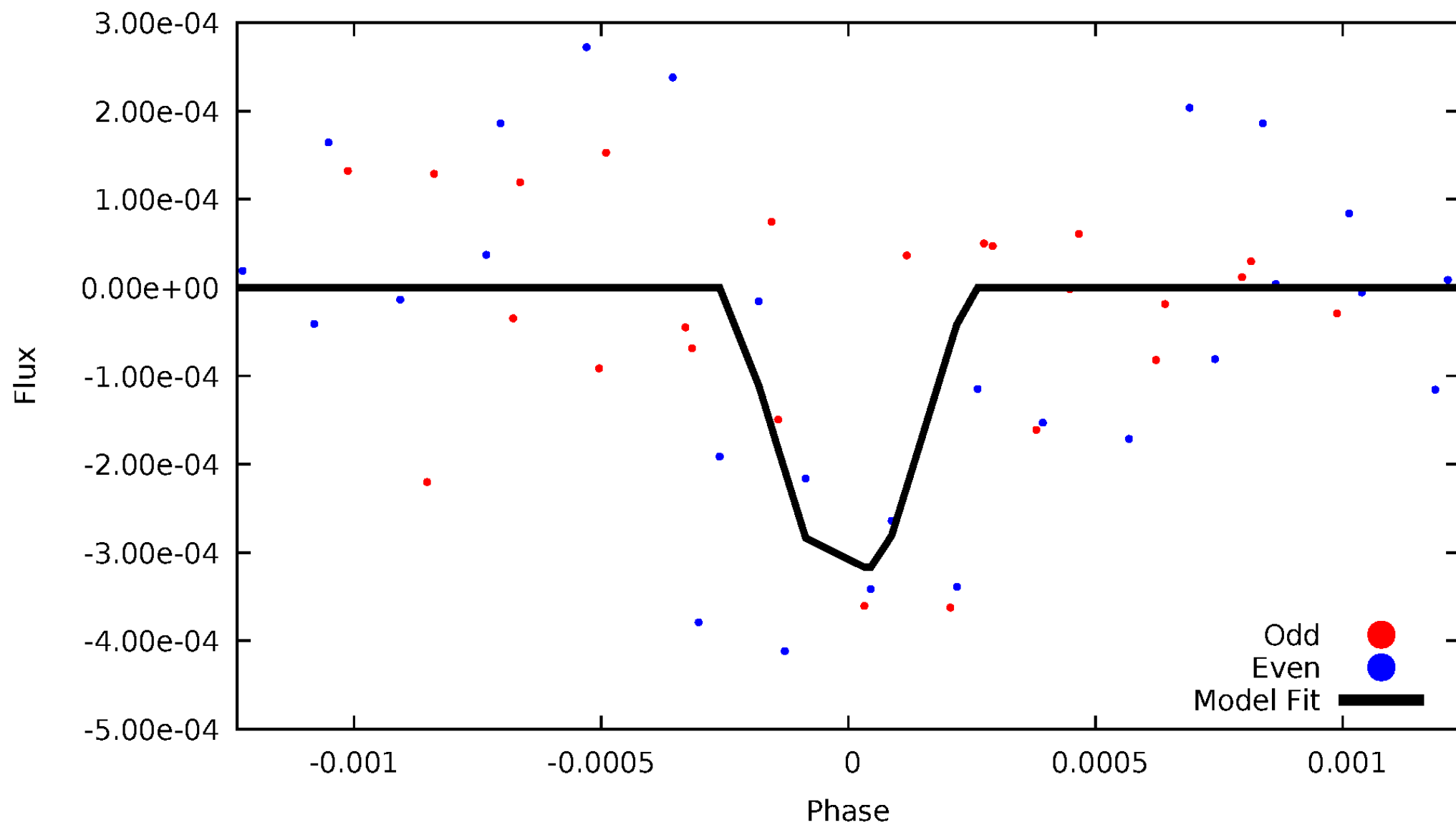
DV Odd/Even

TCE 007662076-05



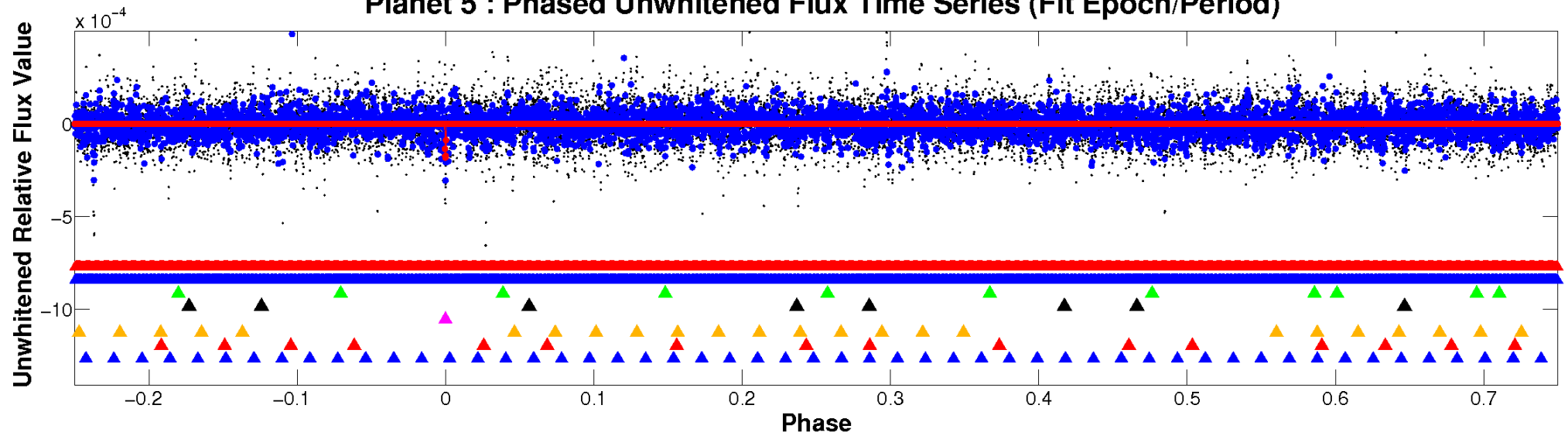
ALT Odd/Even

TCE 007662076-05

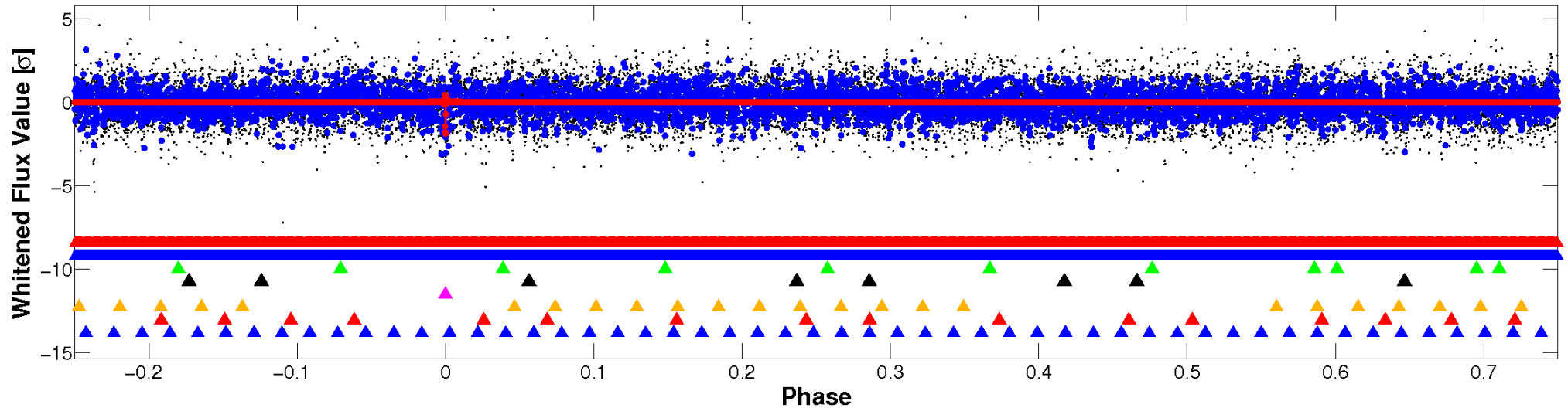


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

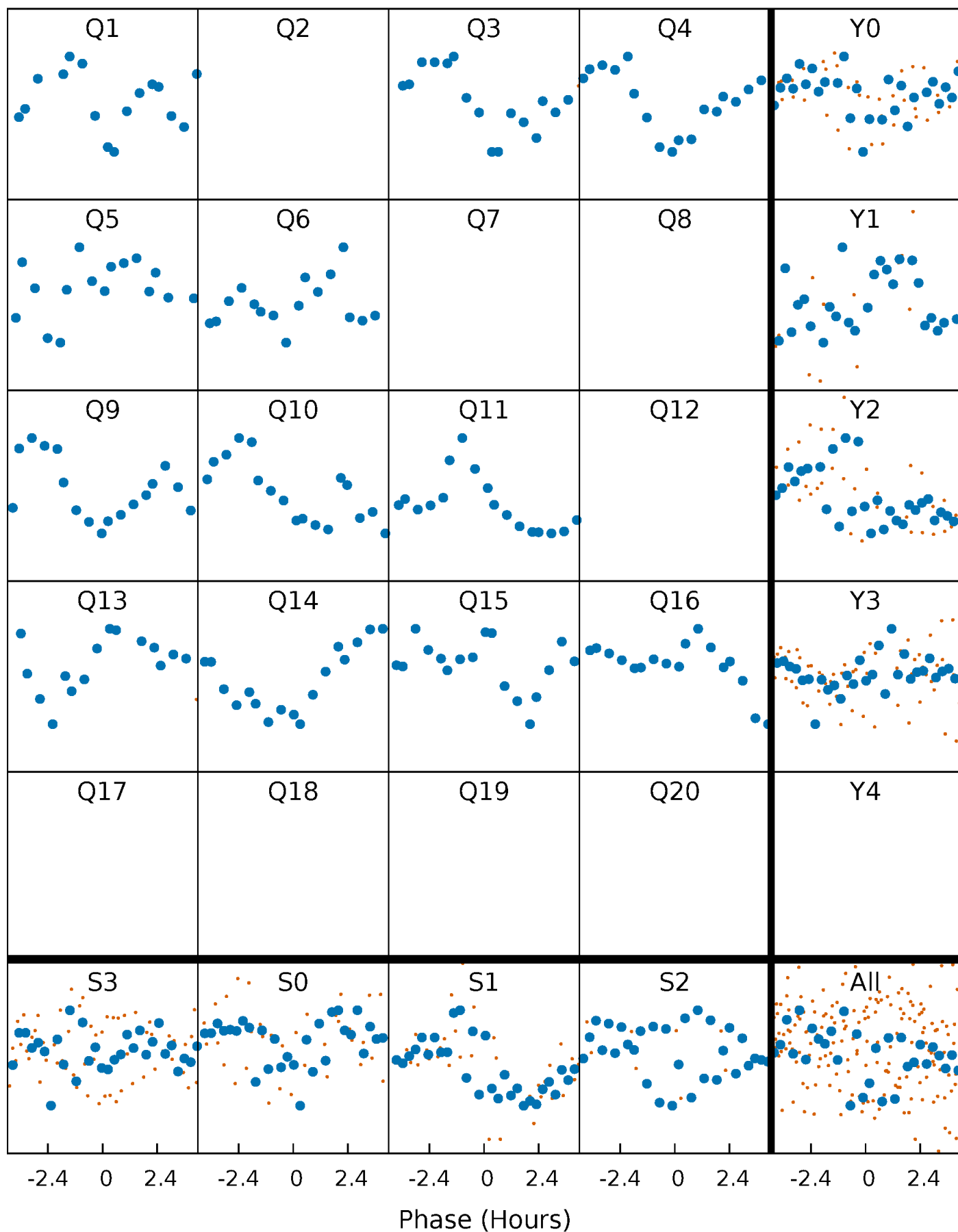


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



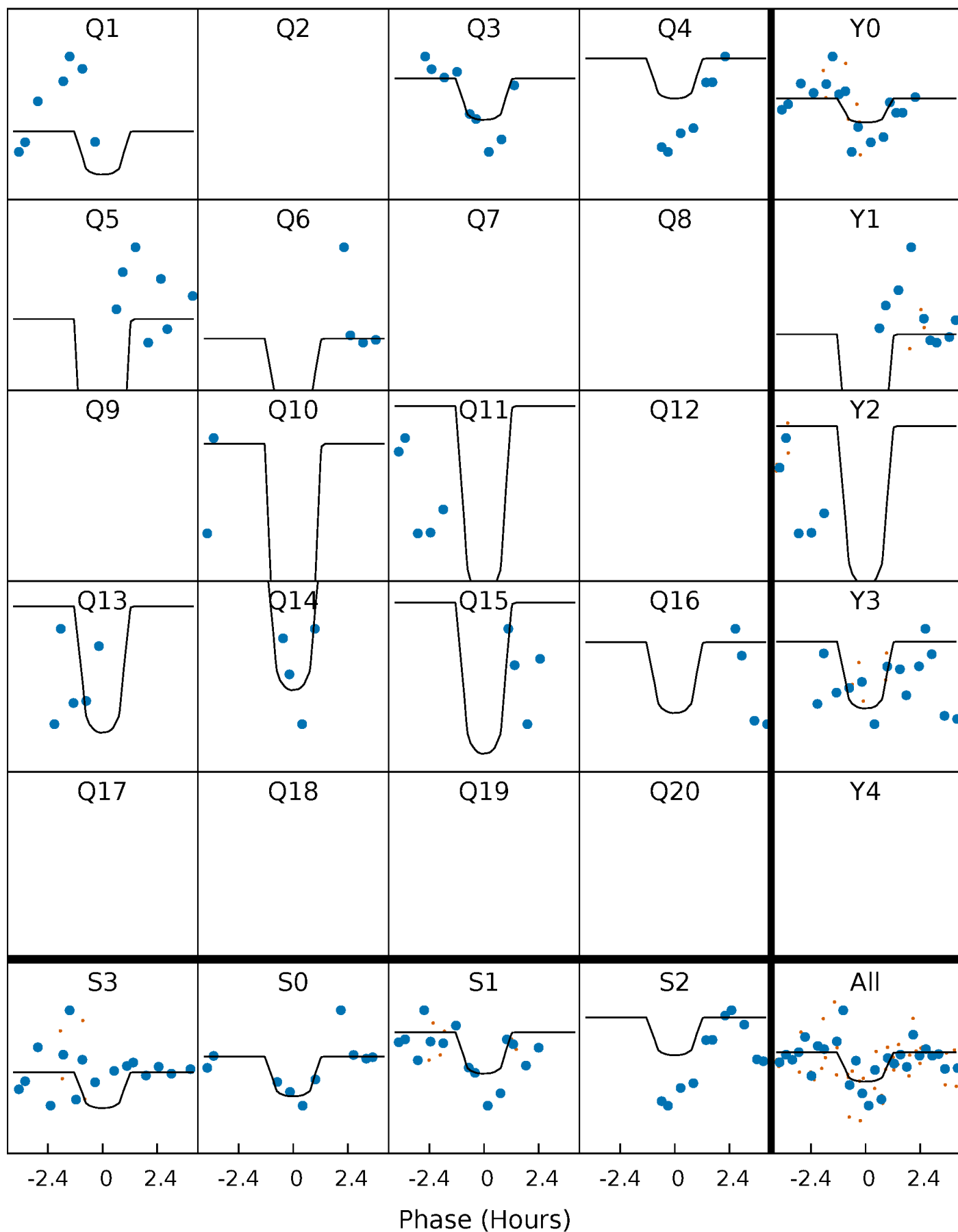
PDC Quarter-Phased Transit Curves

TCE 007662076-05 $P=117.385832$ Days $T_0=146.425325$ (BKJD)



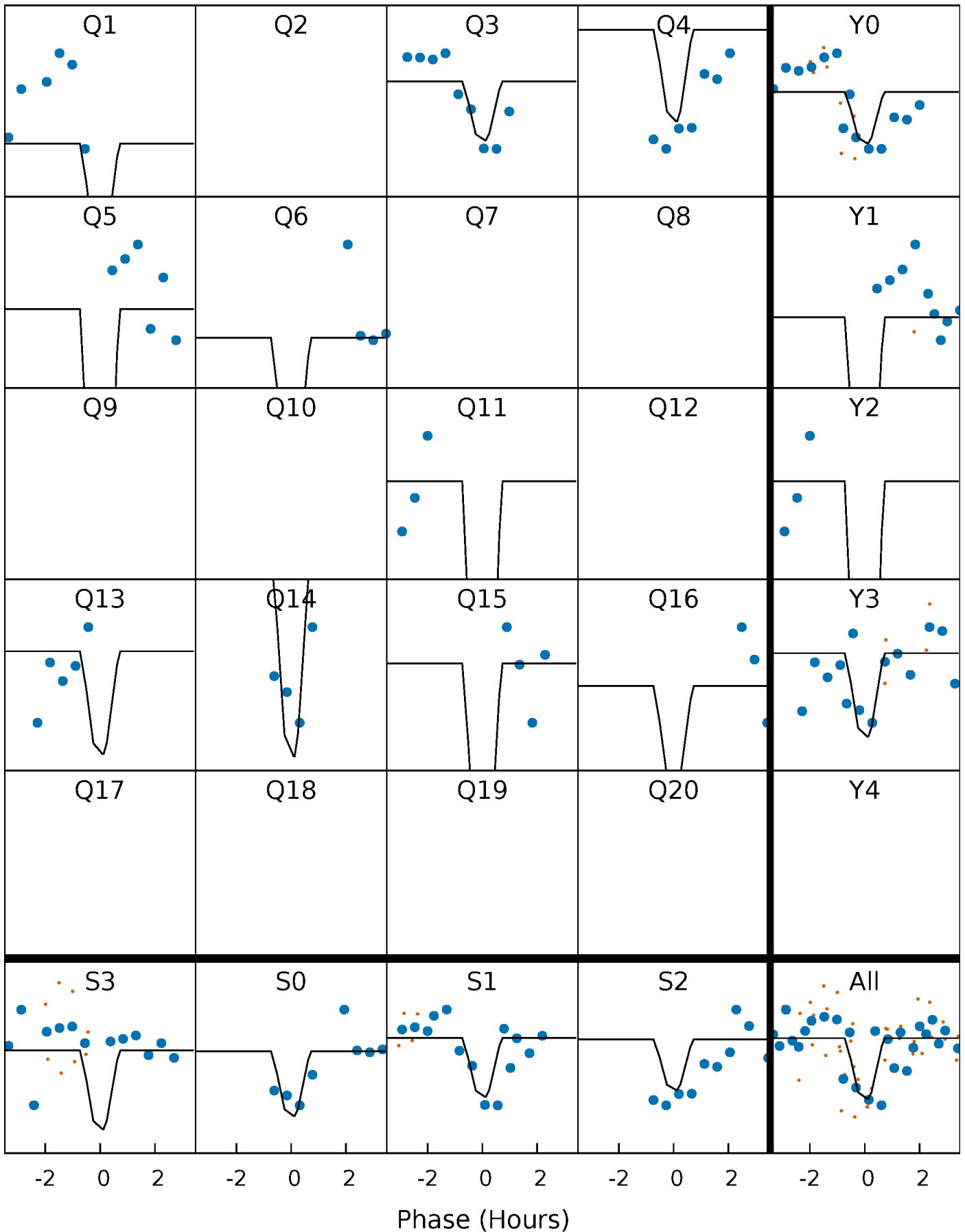
DV Quarter-Phased Transit Curves

TCE 007662076-05 P=117.385832 Days $T_0=146.425325$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

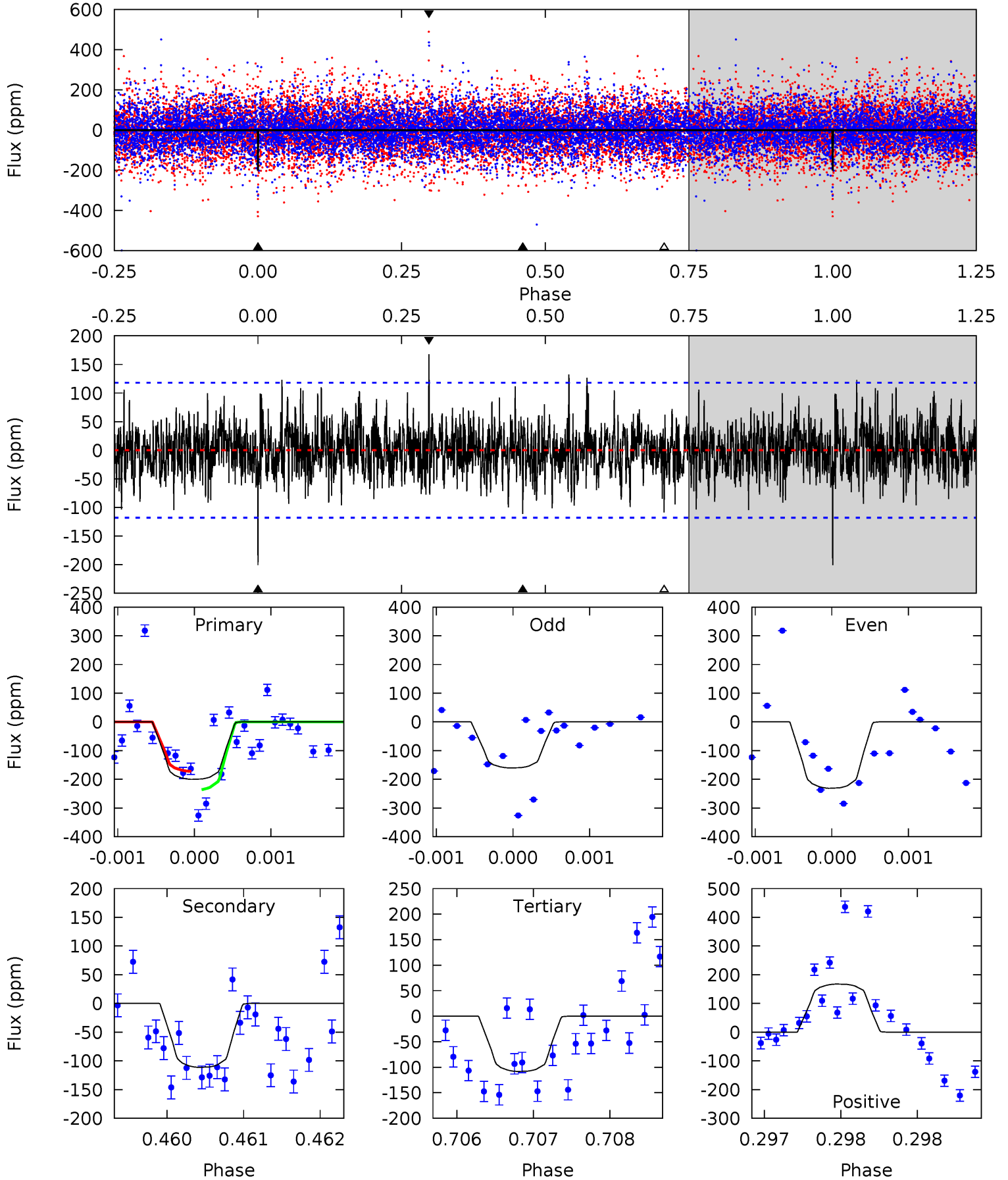
TCE 007662076-05 P=117.385907 Days $T_0=146.430768$ (BKJD)



DV Model-Shift Uniqueness Test

007662076-05, P = 117.385832 Days, E = 29.039493 Days

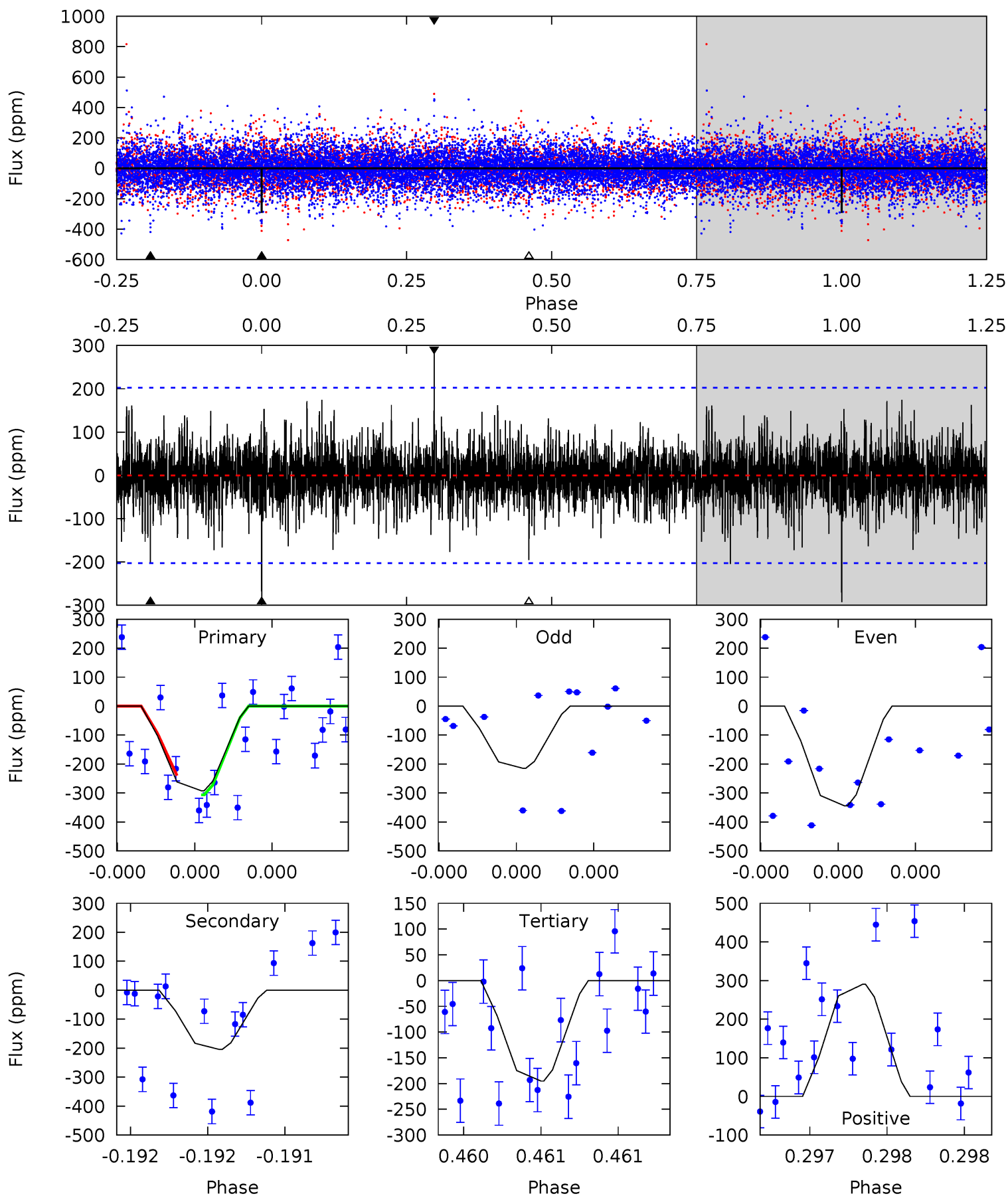
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.32	5.18	5.04	7.80	5.49	3.35	1.59	4.28	1.52	0.14	-2.61	1.64	0.99	0.46	1.48



Alt Model-Shift Uniqueness Test

007662076-05, P = 117.385907 Days, E = 29.044861 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.12	5.68	5.42	8.07	5.62	3.56	1.28	2.70	0.05	0.26	-2.39	1.77	0.97	0.50	0.91



Stellar Parameters For KIC 007662076

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7251^{+230}_{-281}	$4.035^{+0.273}_{-0.147}$	$-0.500^{+0.250}_{-0.300}$	$1.799^{+0.512}_{-0.563}$	$1.280^{+0.218}_{-0.178}$	$0.310^{+0.517}_{-0.125}$
	+3%/-4%	+7%/-4%	+50%/-60%	+28%/-31%	+17%/-14%	+167%/-40%
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 007662076-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-111 ± 21	$2.86^{+1.85}_{-1.65}$	830^{+62}_{-75}	5980^{+3966}_{-1203}	1983^{+9028}_{-1293}
Alt.	-204 ± 36	$3.36^{+2.14}_{-1.74}$	831^{+63}_{-74}	6434^{+3519}_{-1266}	2636^{+8380}_{-1691}

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

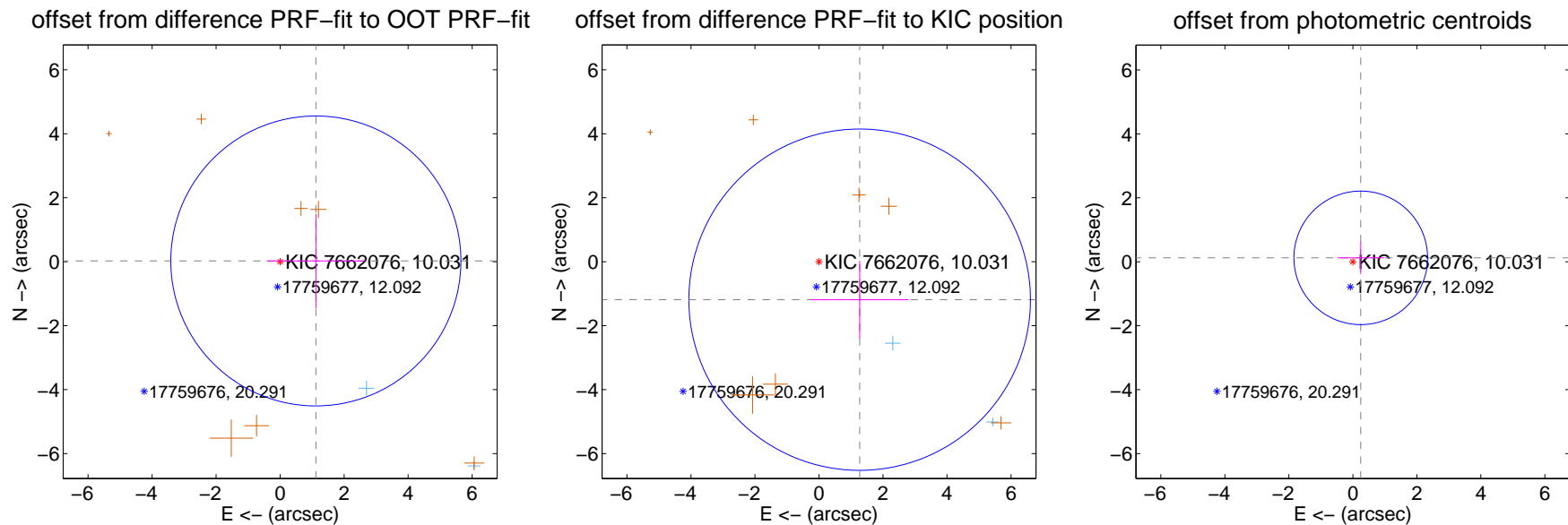
DV Centroid Data

Supplemental centroid analysis for 007662076-05. **Kepler magnitude: 10.03.** Transit SNR 7.06

There are 2 quarters with good PRF difference image offsets

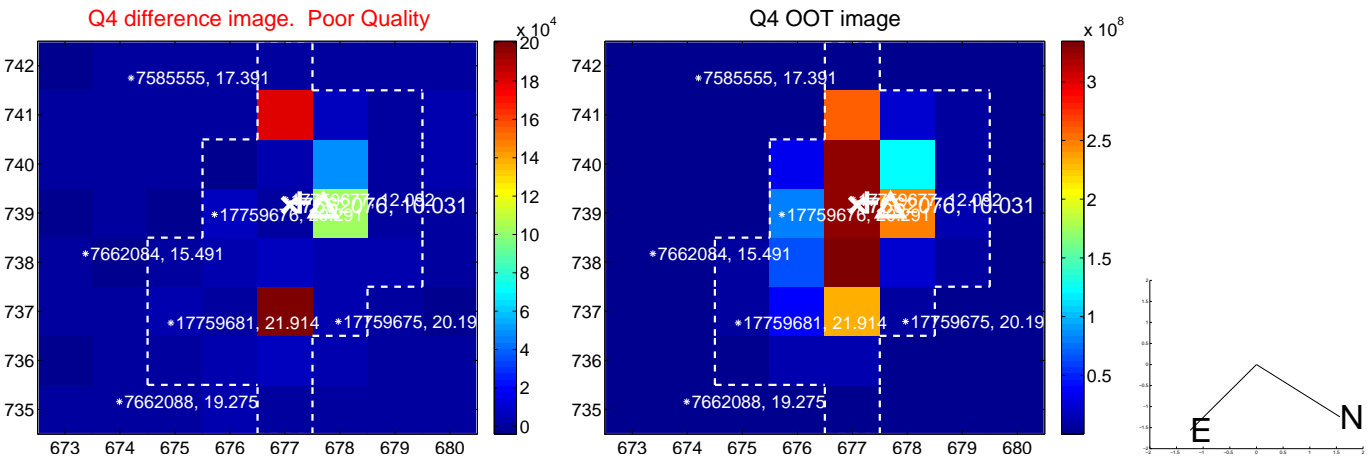
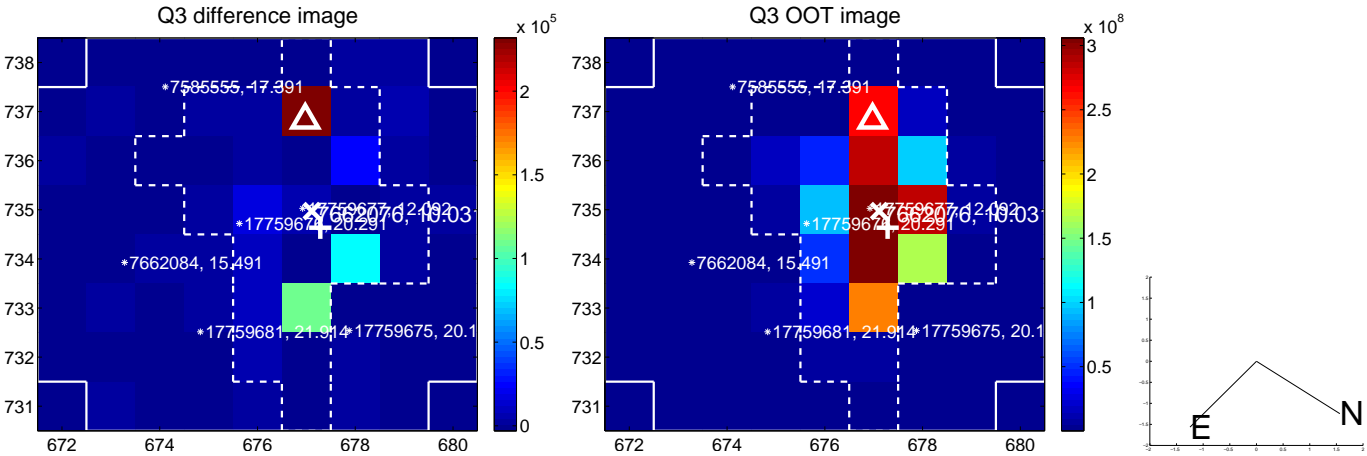
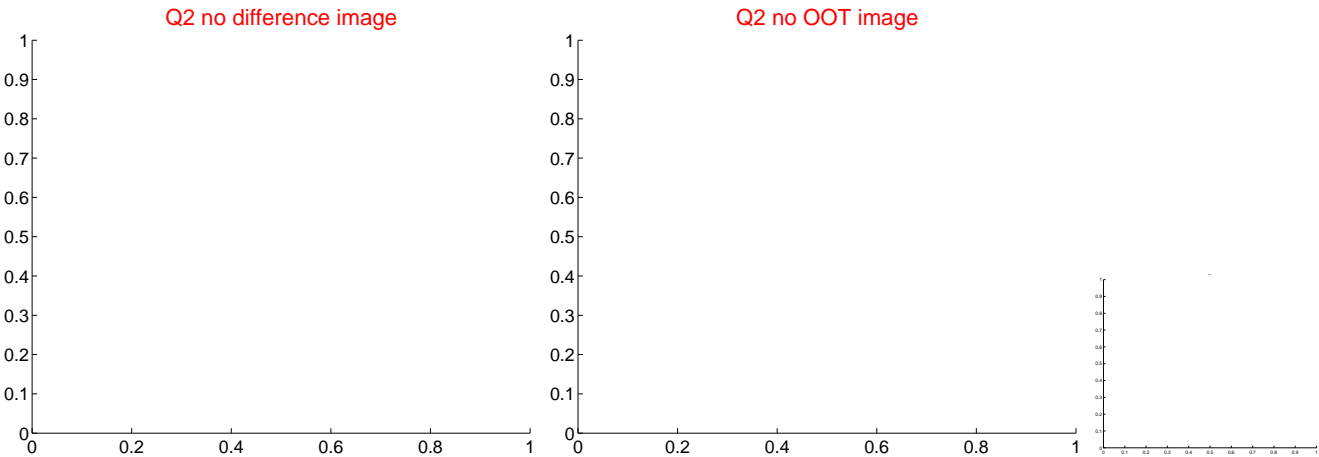
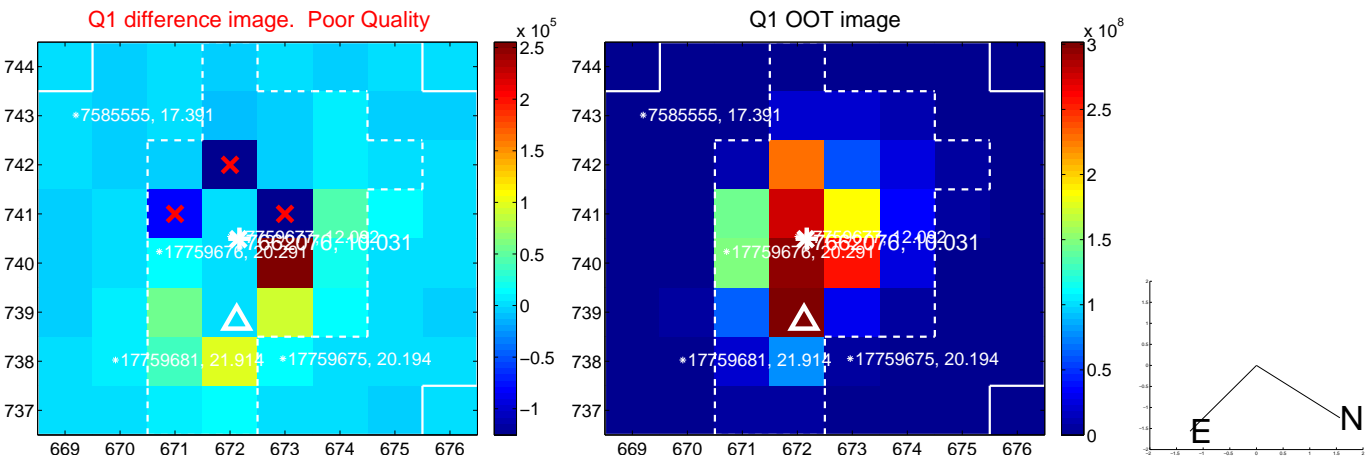
The direct PRF centroid is offset from the target star catalog position by about 0.99 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.117 ± 1.511	0.74	-1.116 ± 1.531	0.023 ± 1.470
PRF-fit source offset from KIC position	1.739 ± 1.778	0.98	-1.270 ± 1.530	-1.187 ± 1.212
photometric centroid source offset	0.28 ± 0.70	0.40	-0.25 ± 0.74	0.12 ± 0.50

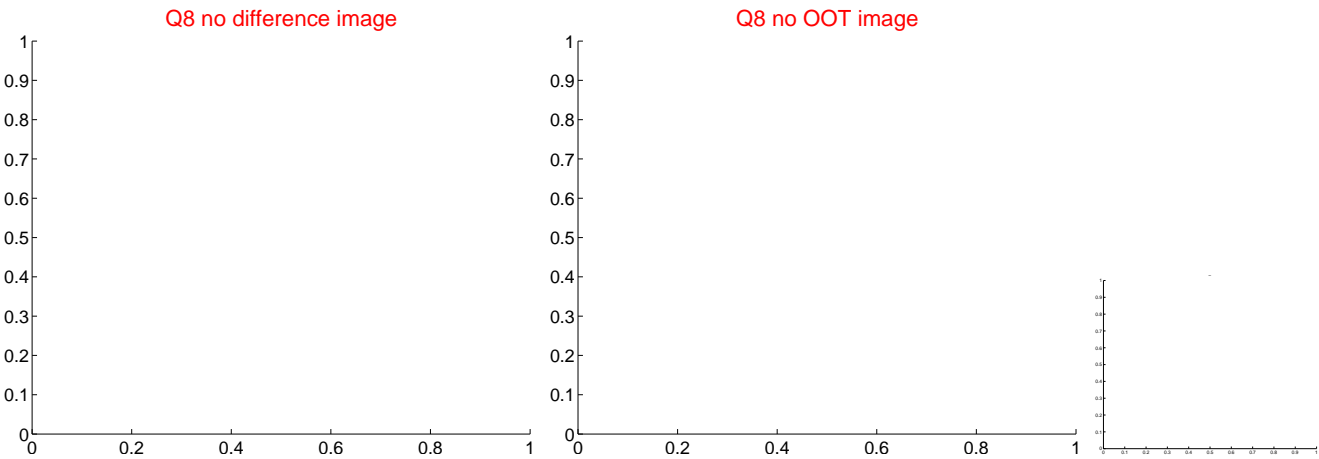
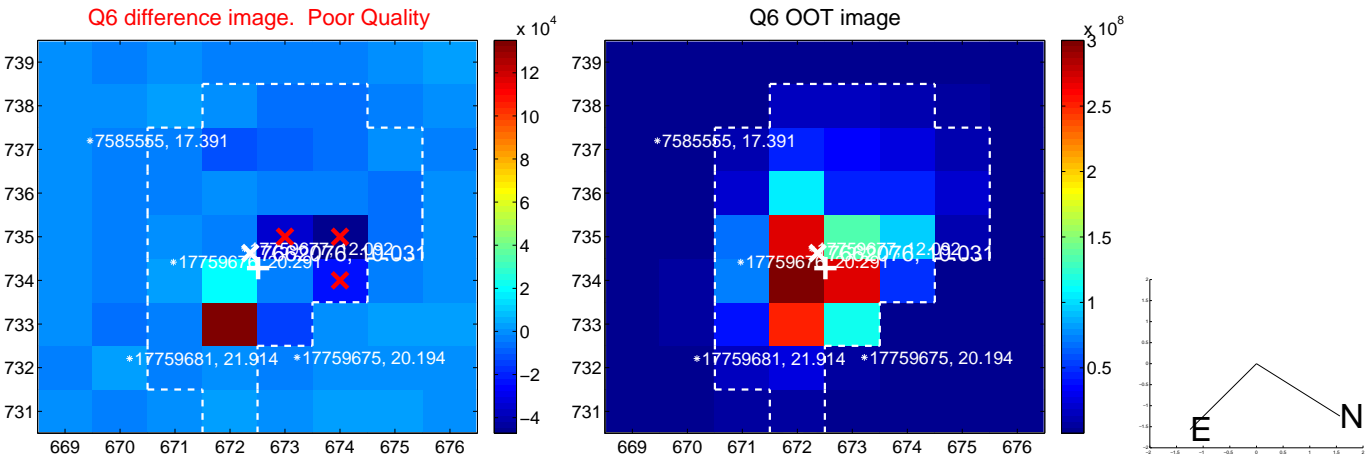
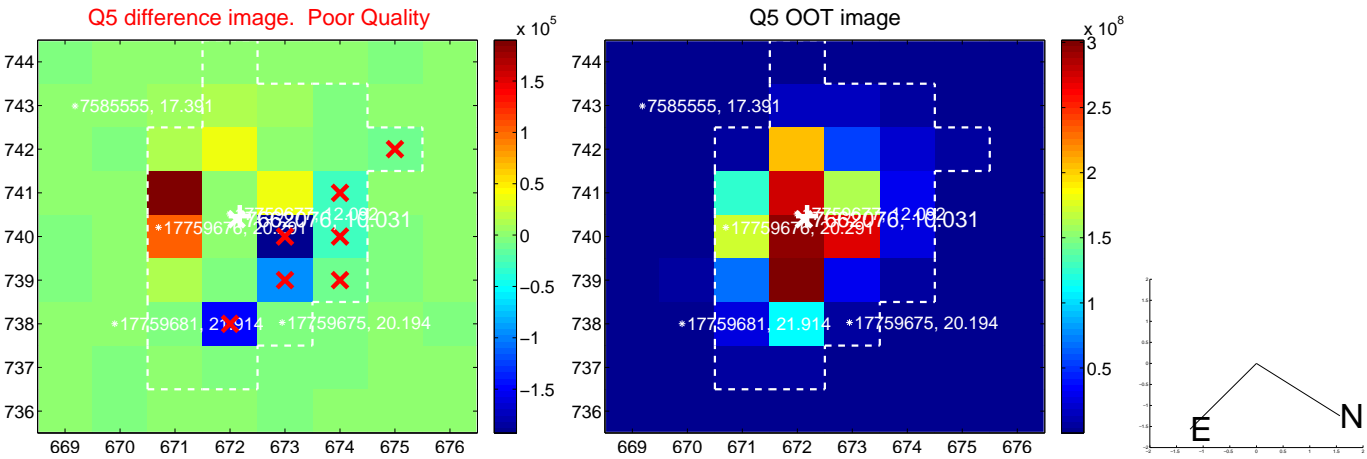


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

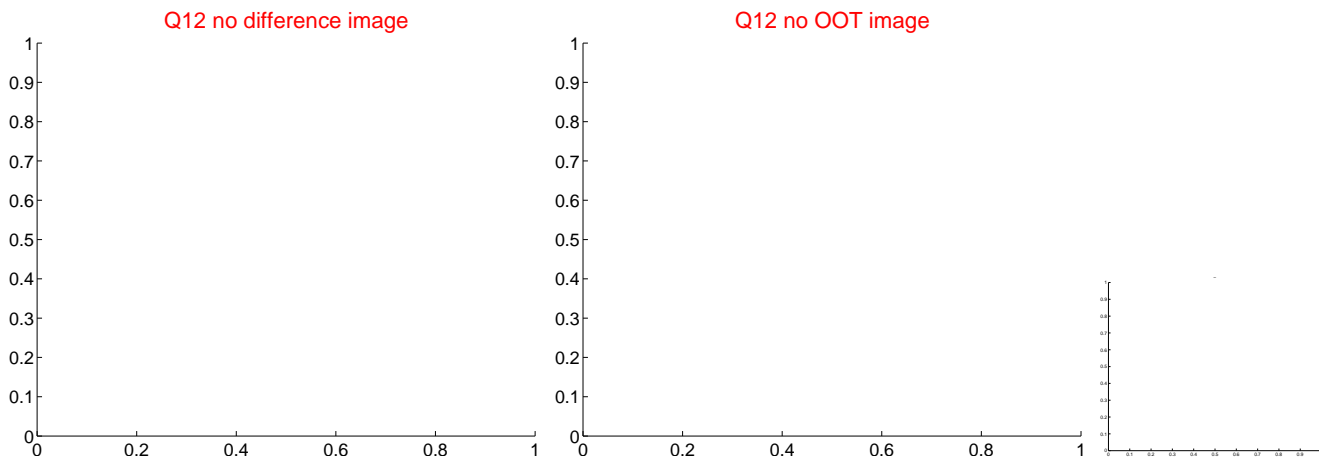
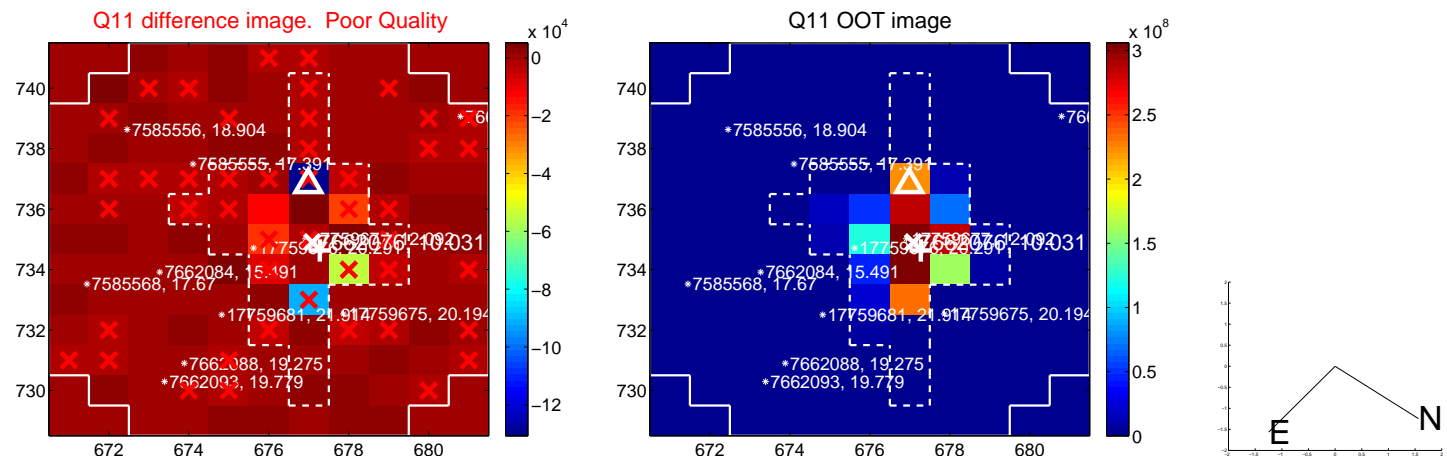
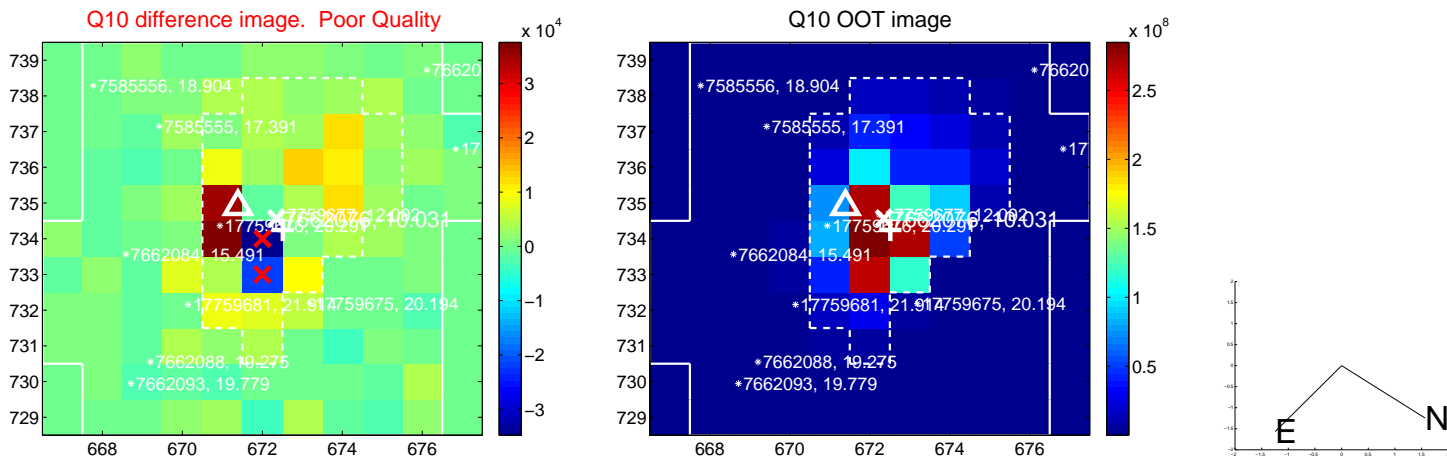
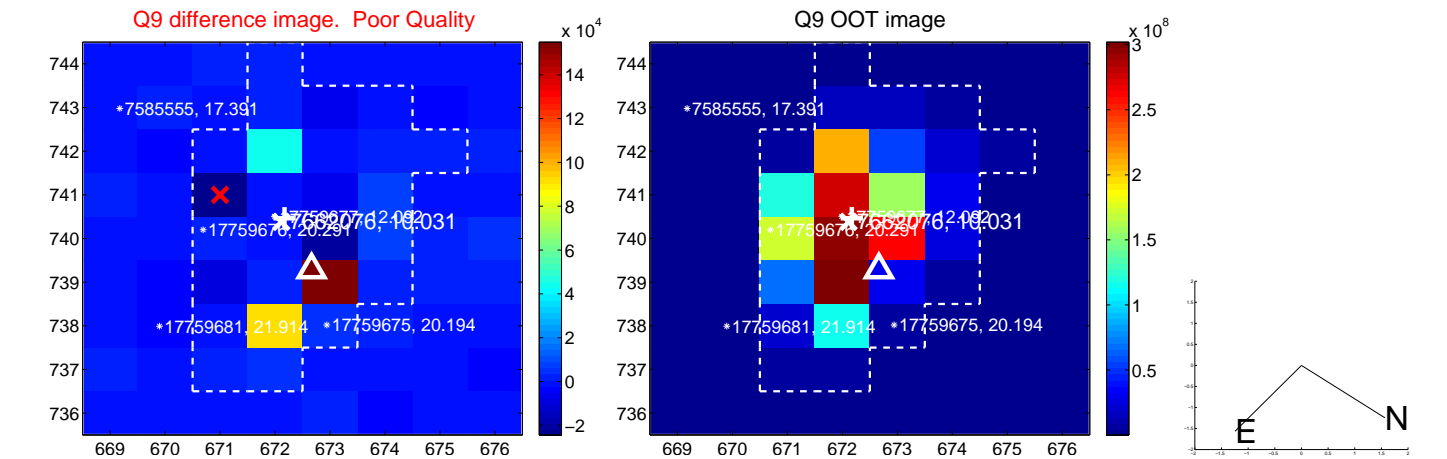
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



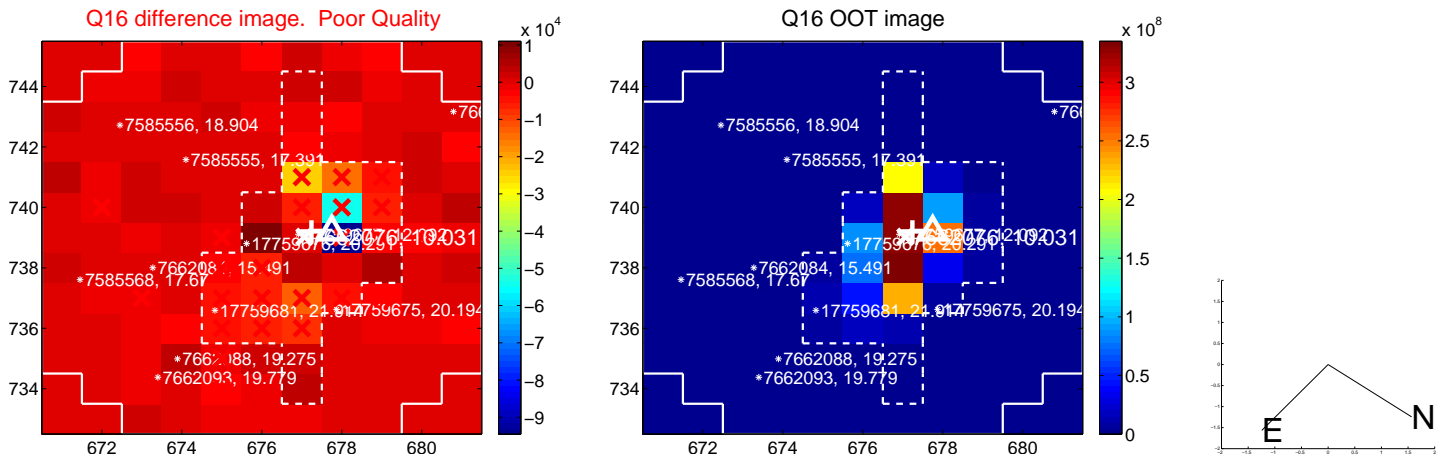
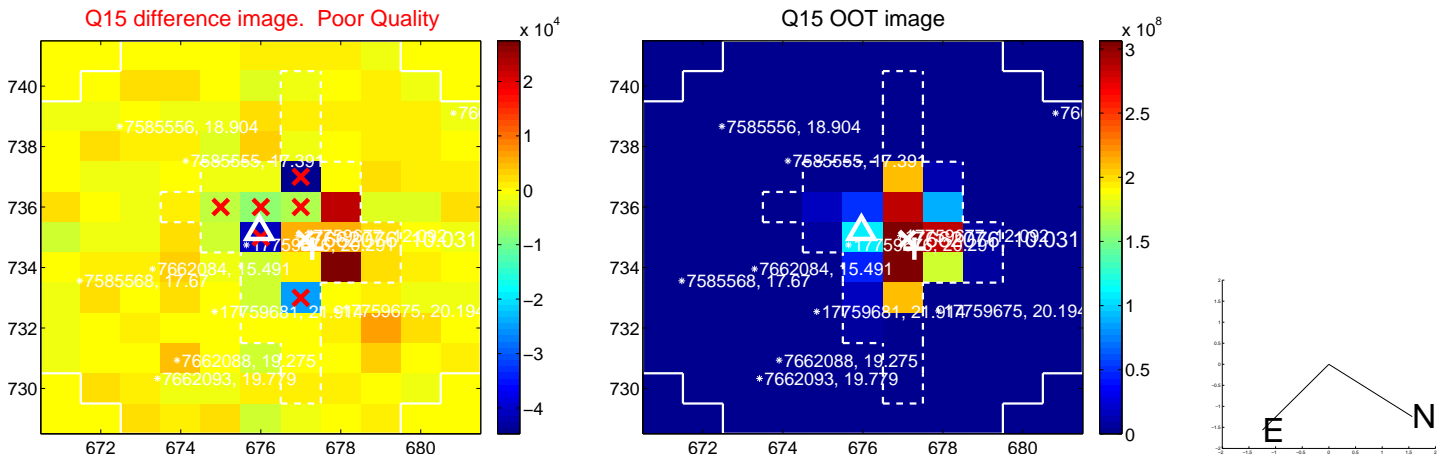
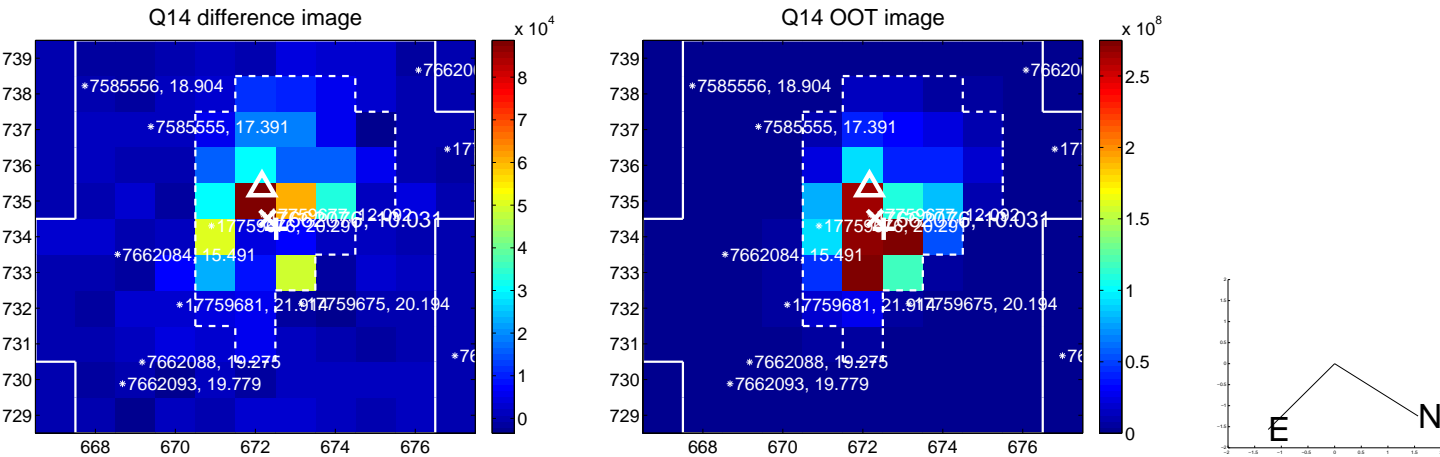
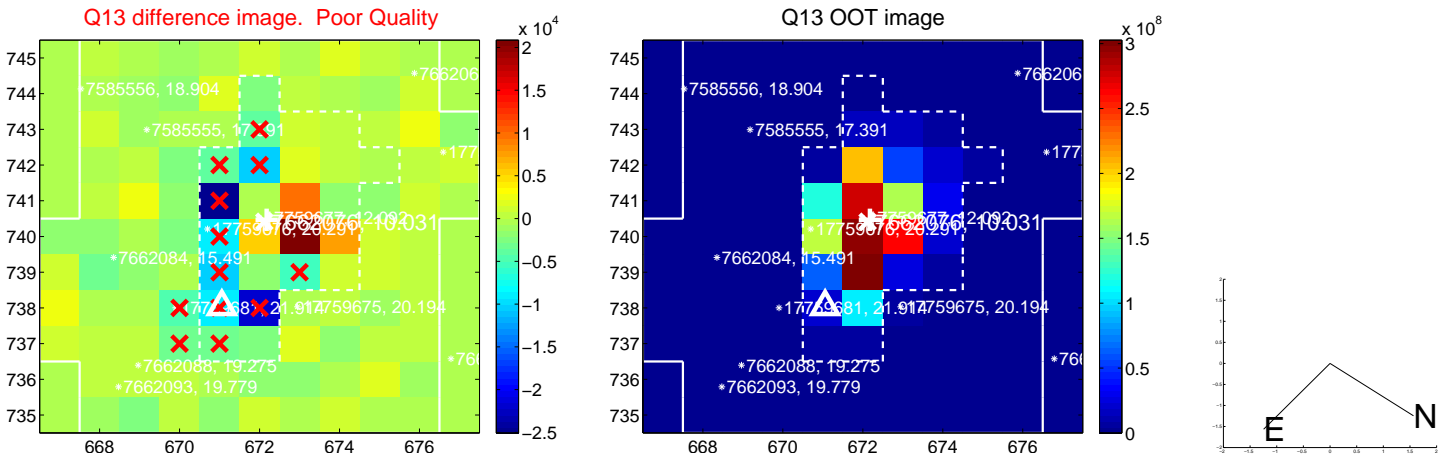
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



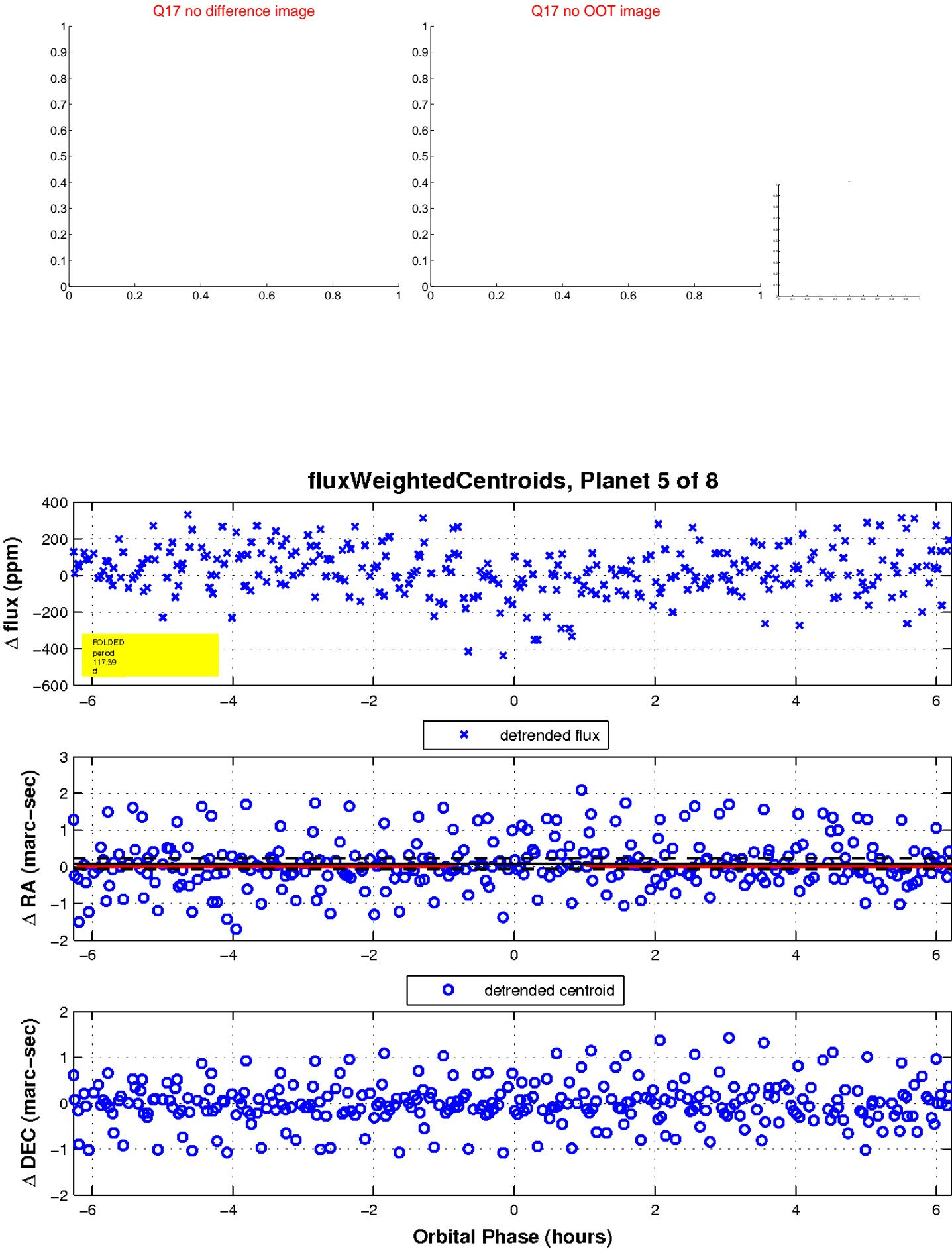
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

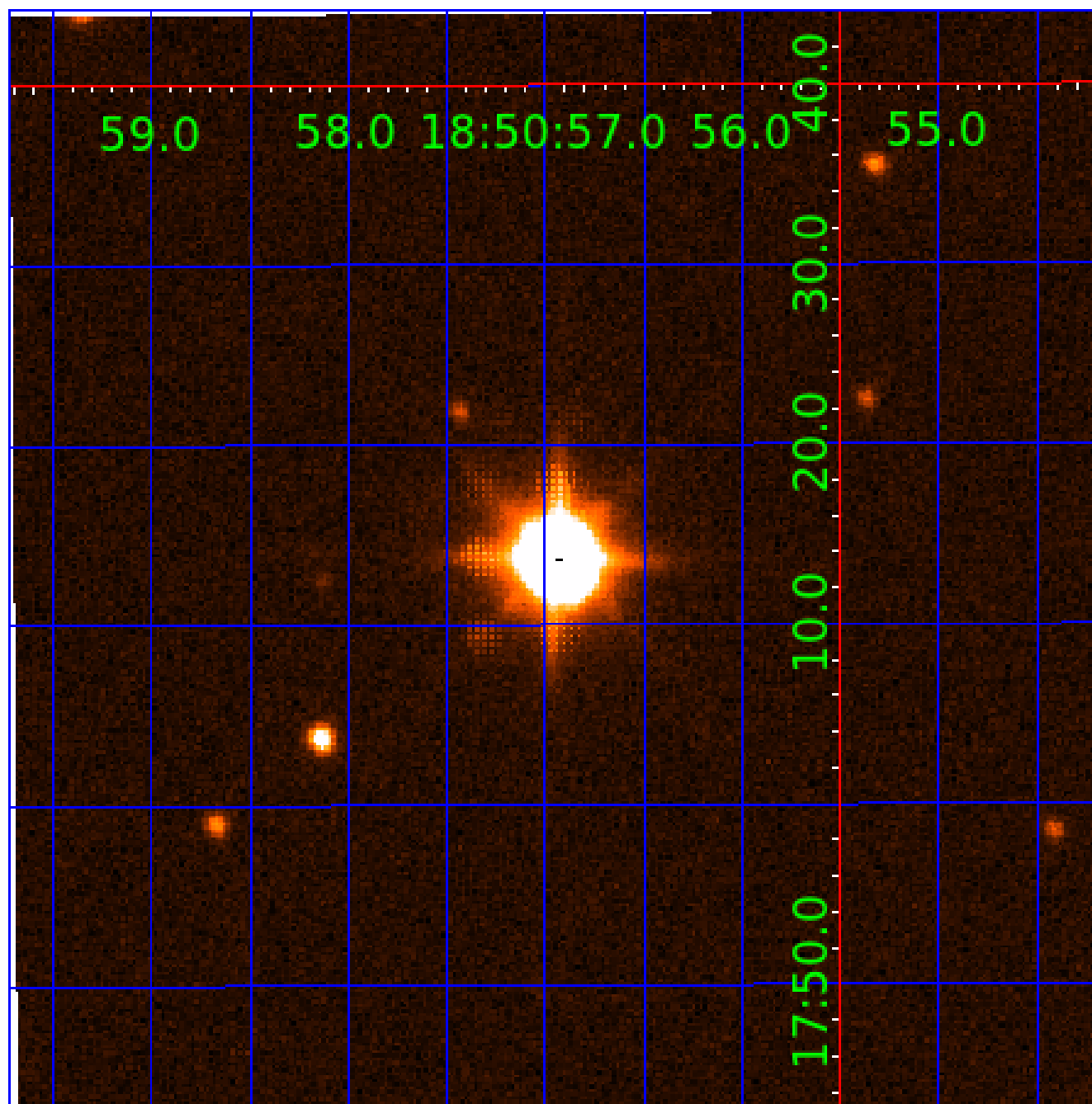


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007662076

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})
007662076-01	OBS	No	0.536283	131.532273	2.6	1.952	11.3	1.8	1.80	7251	0.34	40736.29
007662076-02	OBS	No	0.536320	131.654744	68.2	1.500	9.9	-1.0	1.80	7251	1.51	40732.57
007662076-03	OBS	No	130.230487	216.980996	370.1	2.783	9.3	9.0	1.80	7251	4.00	26.89
007662076-05	OBS	No	117.385832	146.425325	184.0	2.091	8.4	7.1	1.80	7251	2.79	30.88
007662076-06	OBS	No	60.308606	151.882173	122.5	5.852	7.3	6.6	1.80	7251	2.29	75.05
007662076-08	OBS	No	17.719377	140.089121	60.1	2.500	7.5	-1.0	1.80	7251	1.42	384.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007662076-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
007662076-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007662076-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007662076-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
007662076-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
007662076-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED

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

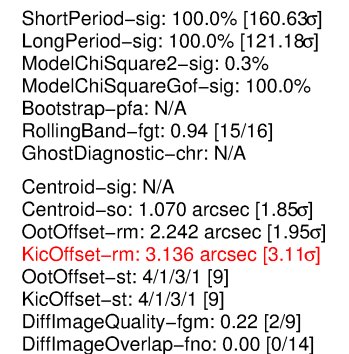
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

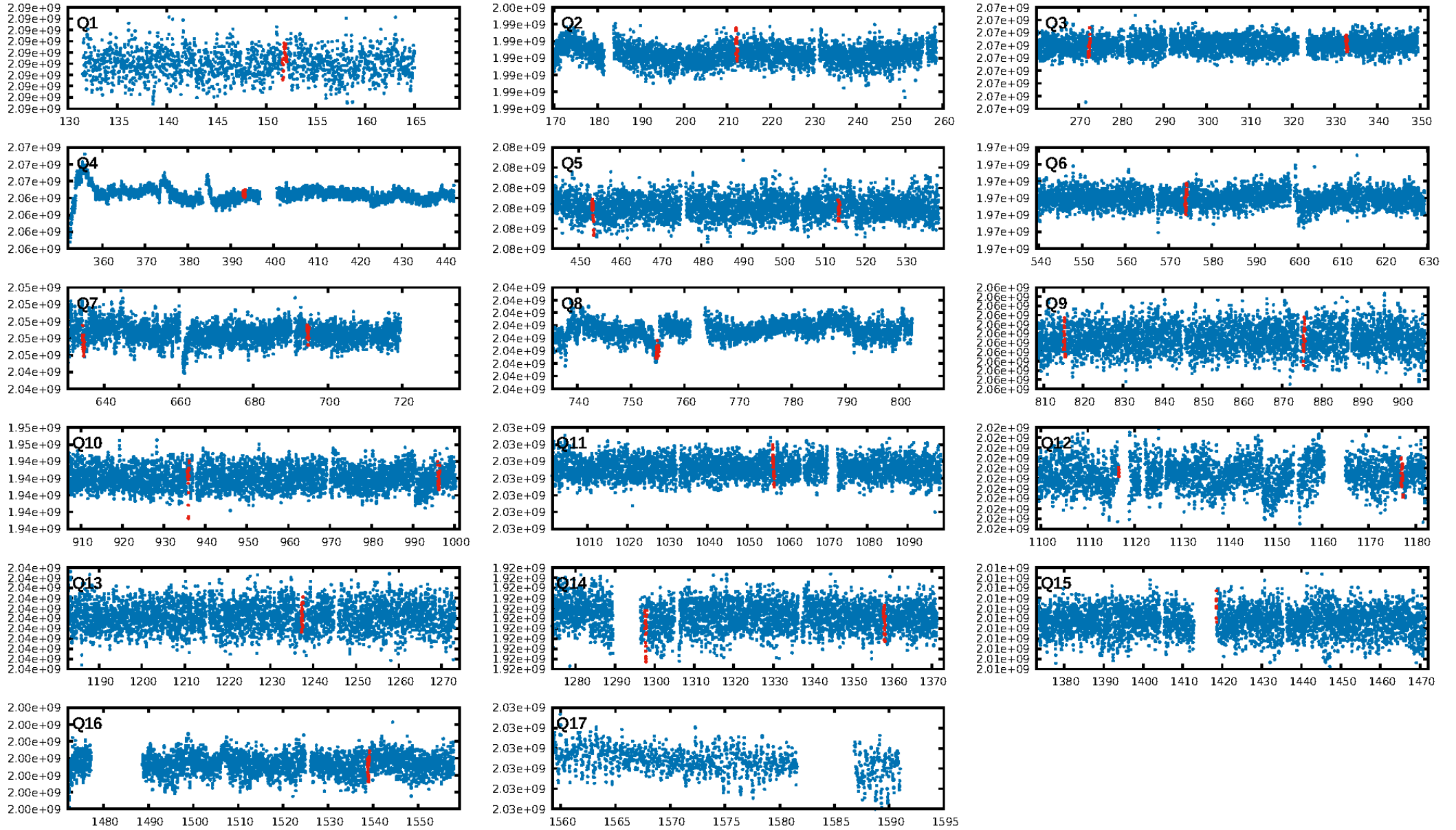
Ephemeris Match Information For 007662076-06

No Significant Match Found

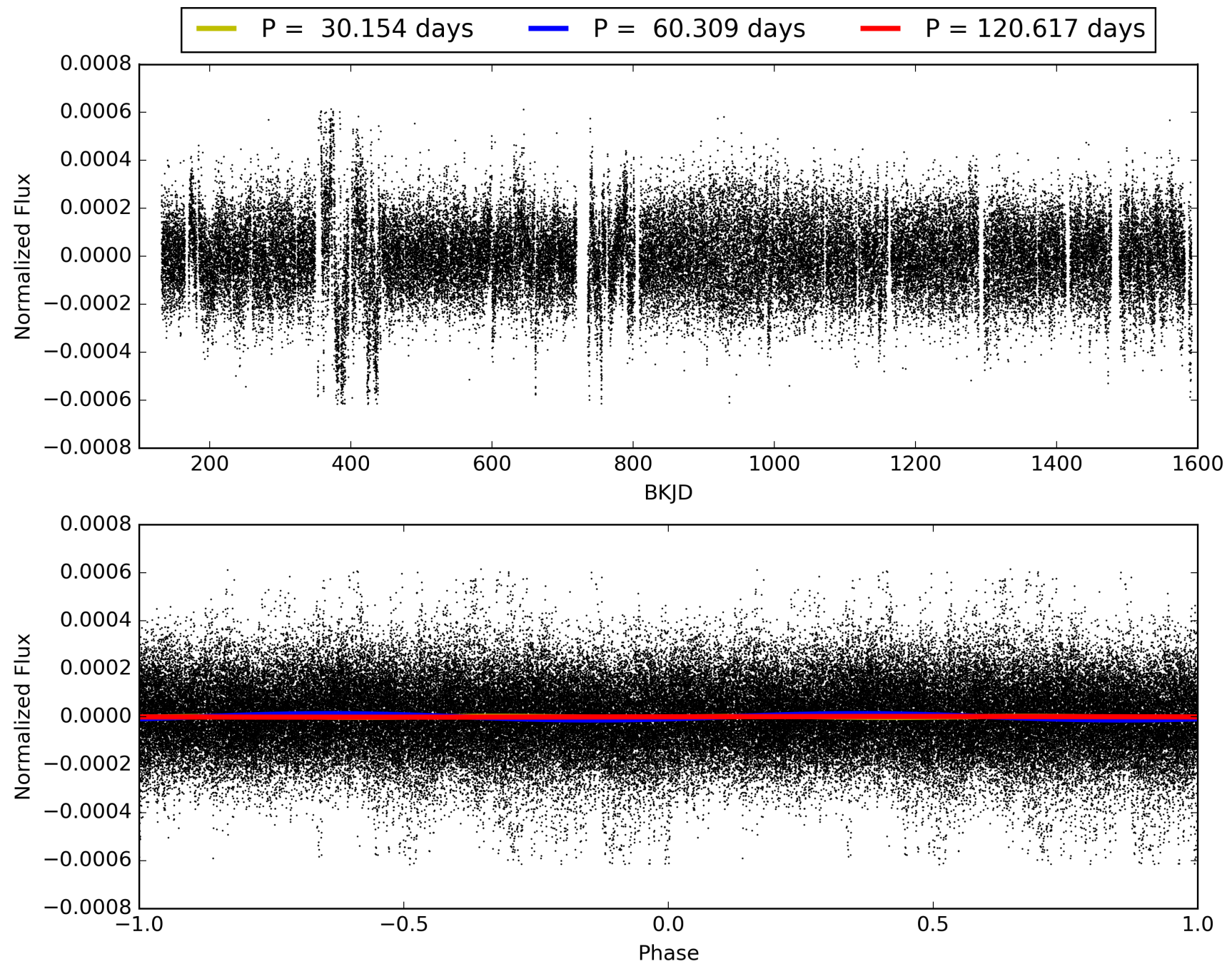
KIC: 7662076 Candidate: 6 of 8 Period: 60.309 d



TCE 007662076-06, PDC Light Curves

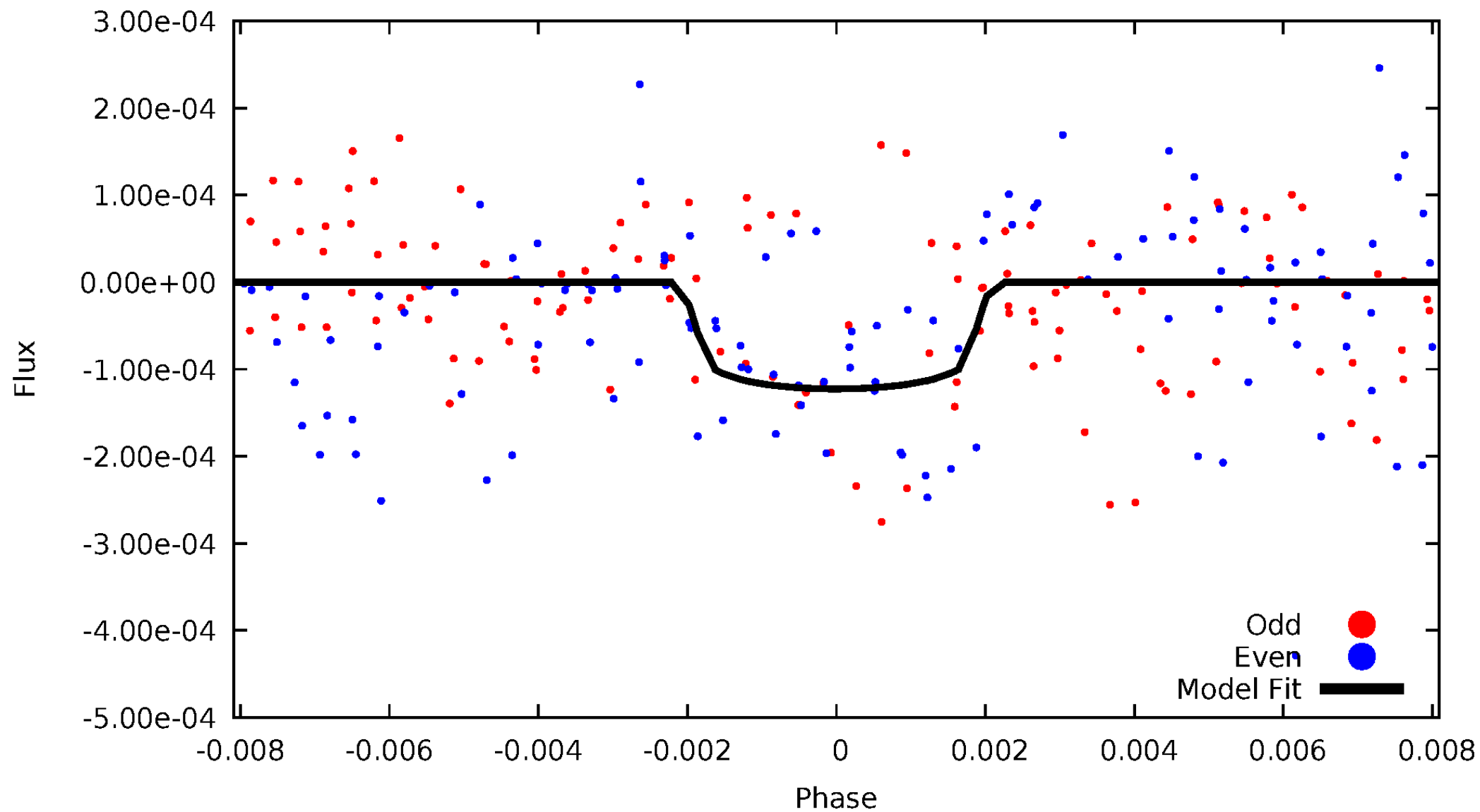


TCE 007662076-06



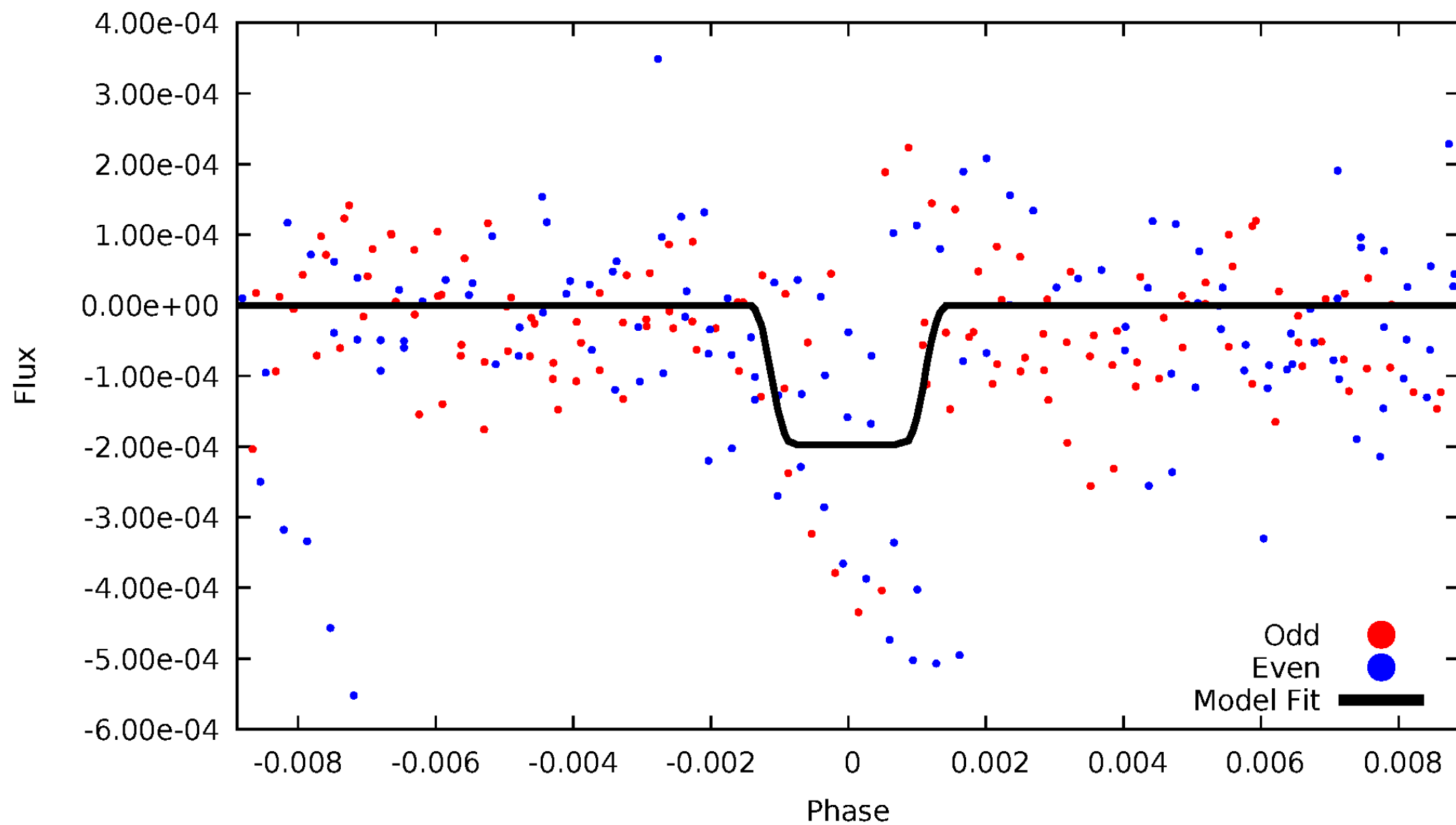
DV Odd/Even

TCE 007662076-06



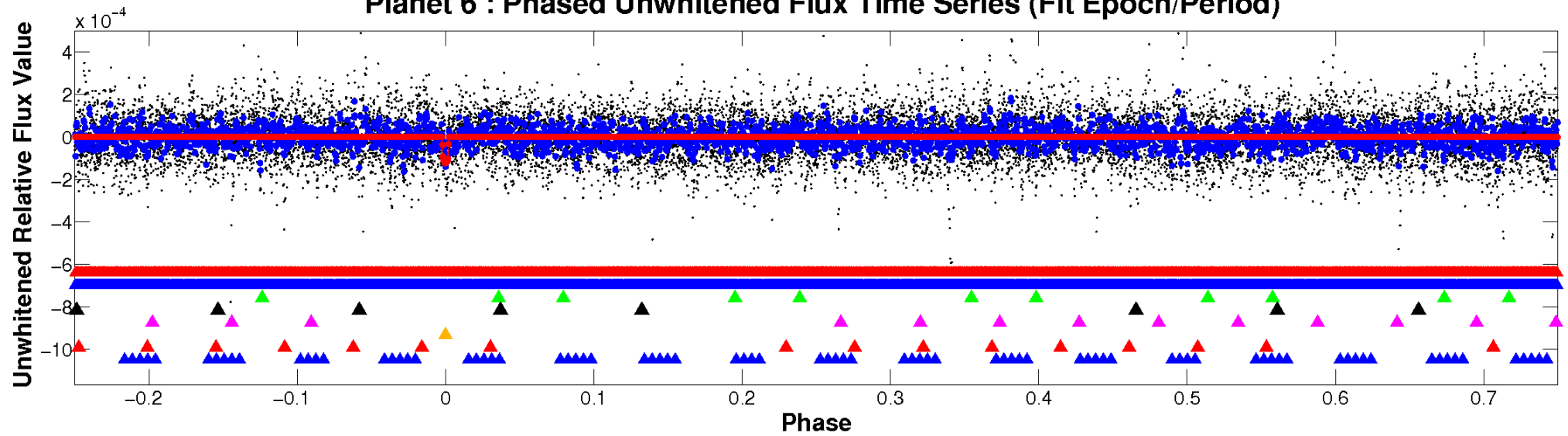
ALT Odd/Even

TCE 007662076-06

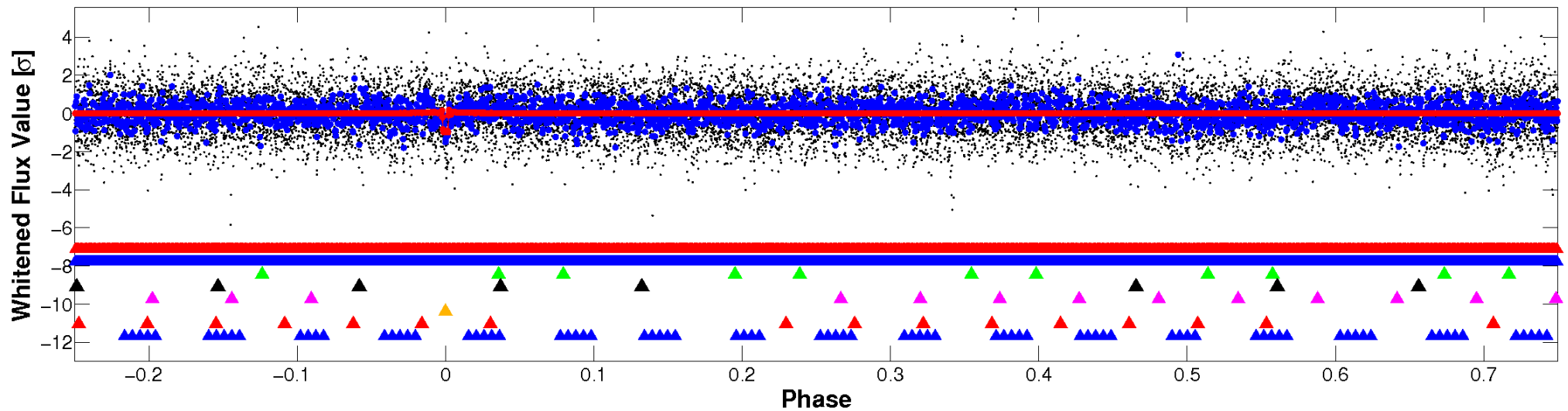


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

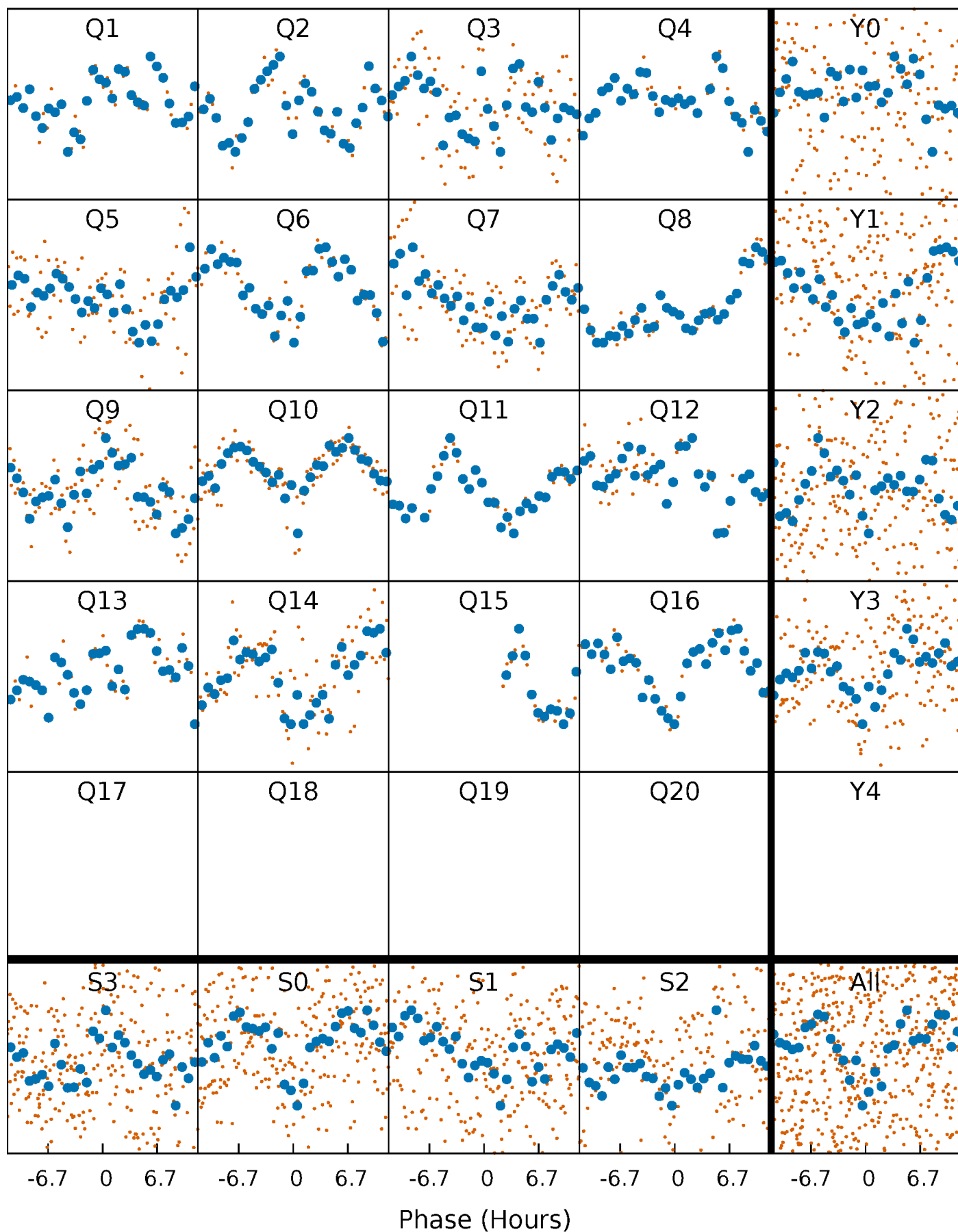


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



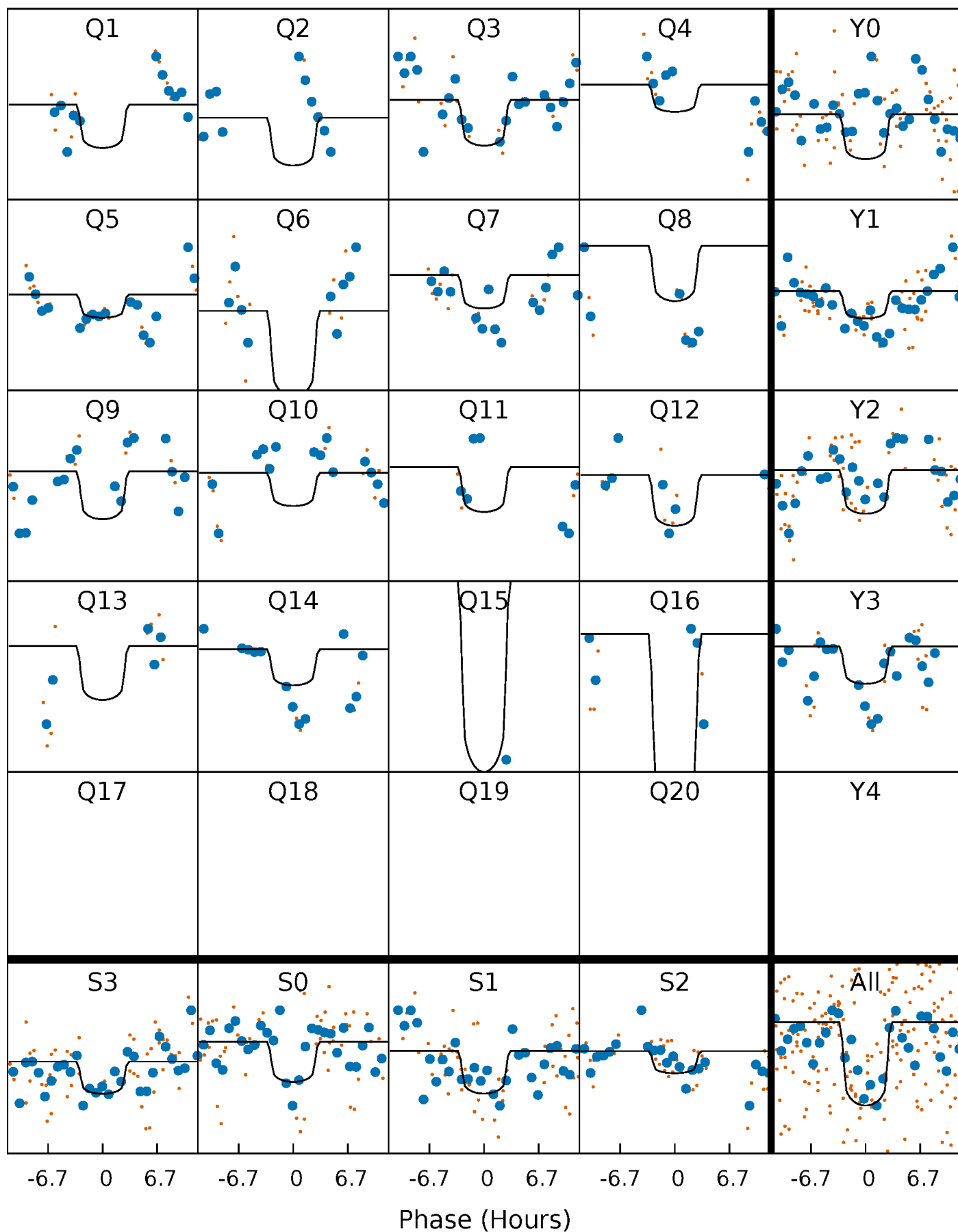
PDC Quarter-Phased Transit Curves

TCE 007662076-06 P= 60.308606 Days $T_0=151.882173$ (BKJD)



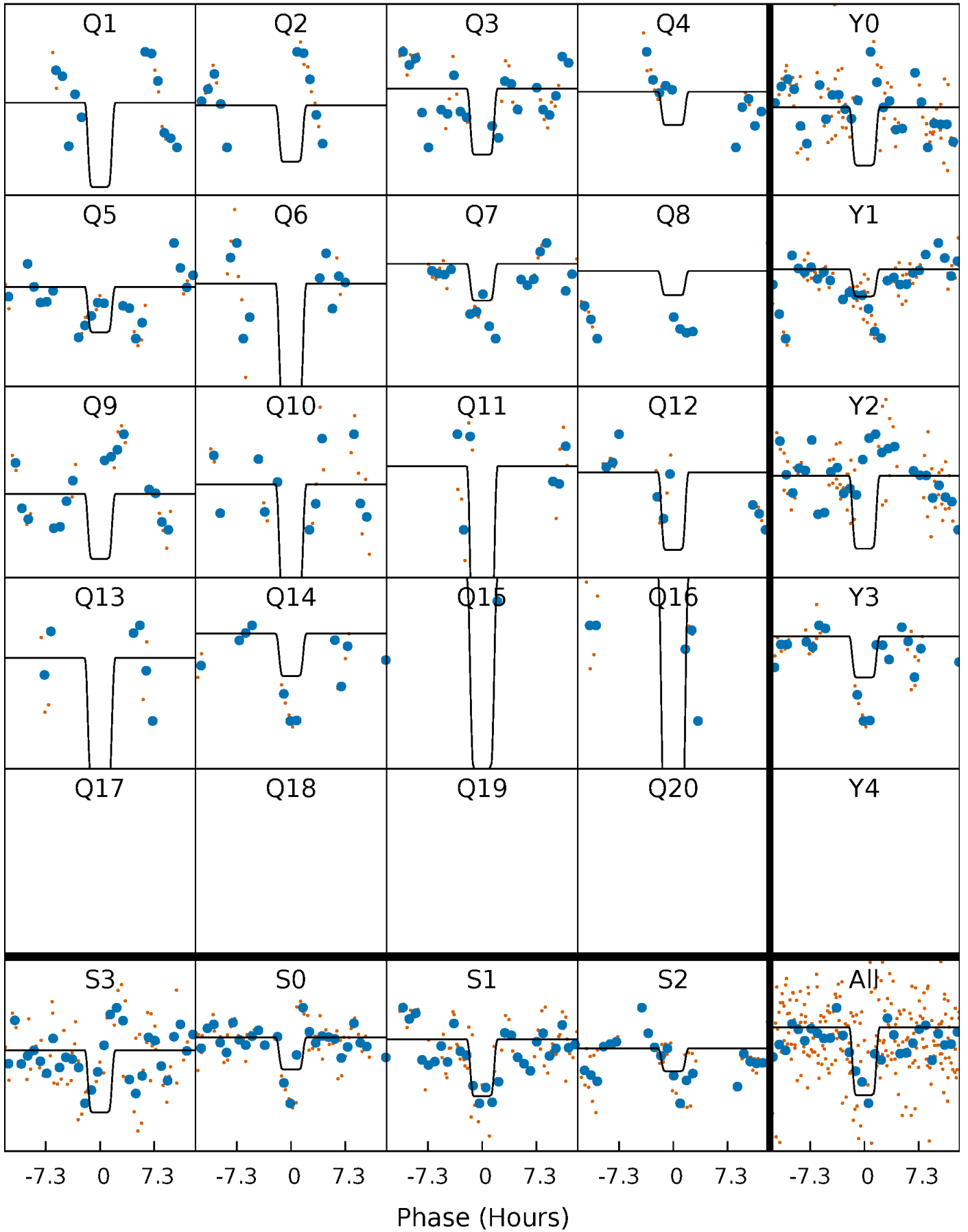
DV Quarter-Phased Transit Curves

TCE 007662076-06 P= 60.308606 Days $T_0=151.882173$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

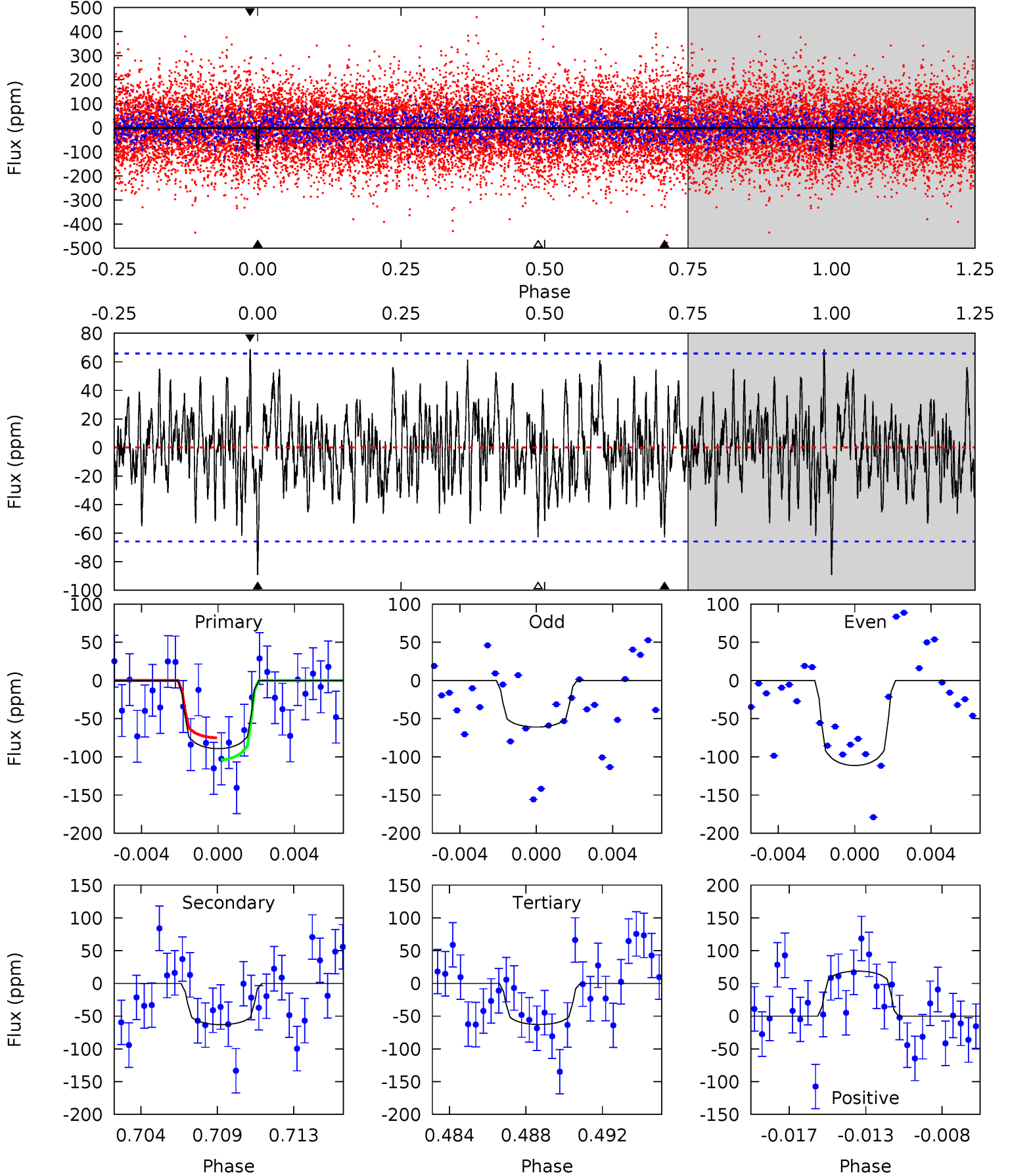
TCE 007662076-06 P= 60.309936 Days $T_0=151.884643$ (BKJD)



DV Model-Shift Uniqueness Test

007662076-06, P = 60.308606 Days, E = 91.573567 Days

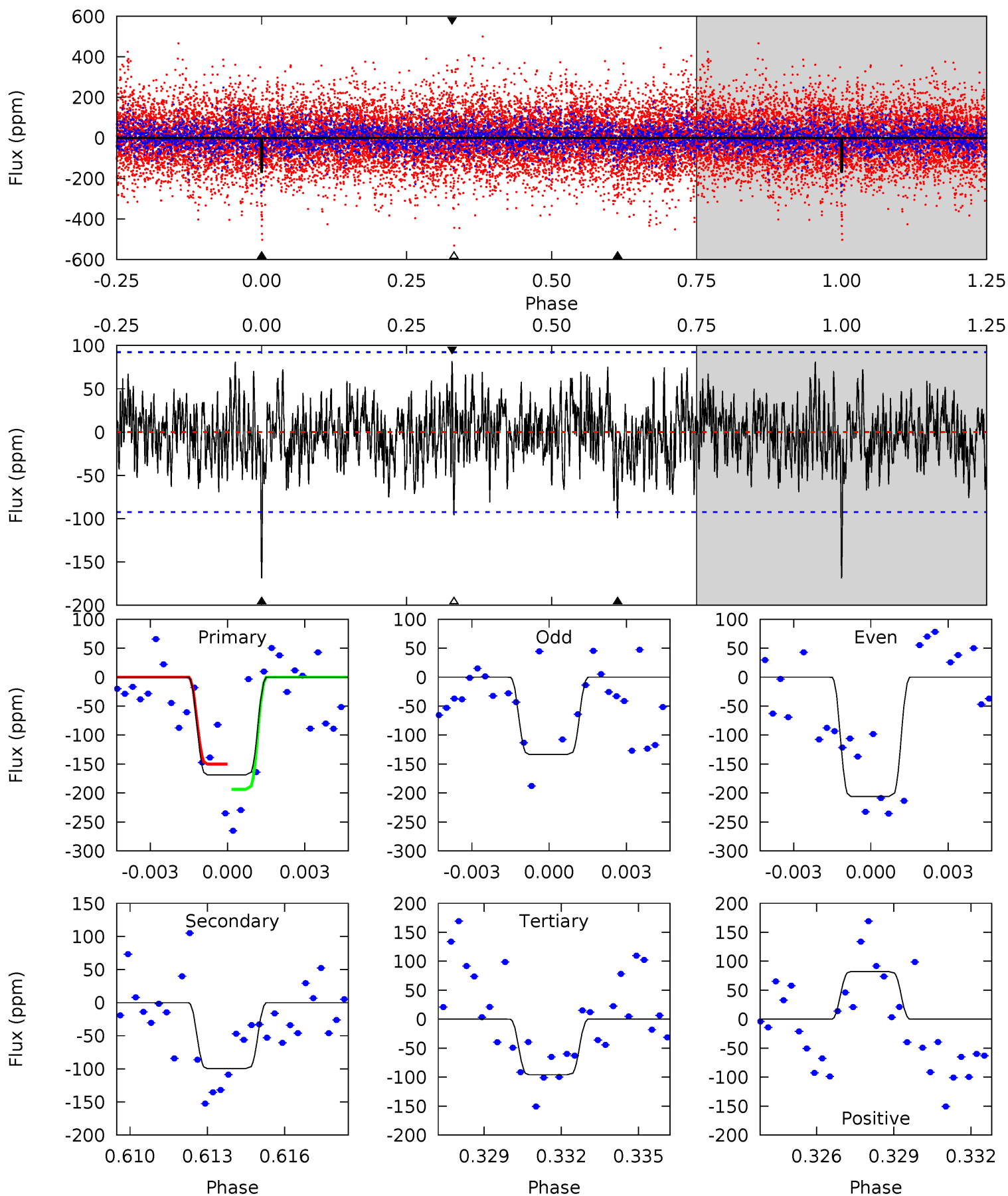
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.04	4.97	4.95	5.42	5.19	2.86	1.72	2.09	1.62	0.02	-0.45	1.97	0.87	0.44	1.14



Alt Model-Shift Uniqueness Test

007662076-06, P = 60.309936 Days, E = 91.574707 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.61	5.67	5.47	4.67	5.26	2.98	1.63	4.15	4.94	0.21	1.00	2.05	1.33	0.33	1.25



Stellar Parameters For KIC 007662076

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7251^{+230}_{-281}	$4.035^{+0.273}_{-0.147}$	$-0.500^{+0.250}_{-0.300}$	$1.799^{+0.512}_{-0.563}$	$1.280^{+0.218}_{-0.178}$	$0.310^{+0.517}_{-0.125}$
	+3%/-4%	+7%/-4%	+50%/-60%	+28%/-31%	+17%/-14%	+167%/-40%
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 007662076-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-63 ± 13	$2.37^{+1.63}_{-1.31}$	1030^{+81}_{-94}	5657^{+3261}_{-1119}	648^{+2876}_{-416}
Alt.	-100 ± 18	$2.61^{+1.84}_{-1.35}$	1035^{+74}_{-93}	6036^{+3246}_{-1227}	850^{+2939}_{-558}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

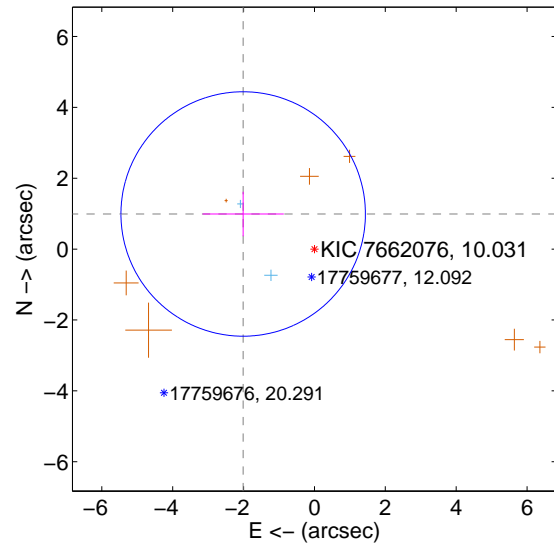
Supplemental centroid analysis for 007662076-06. **Kepler magnitude: 10.03.** Transit SNR 6.60

There are 2 quarters with good PRF difference image offsets

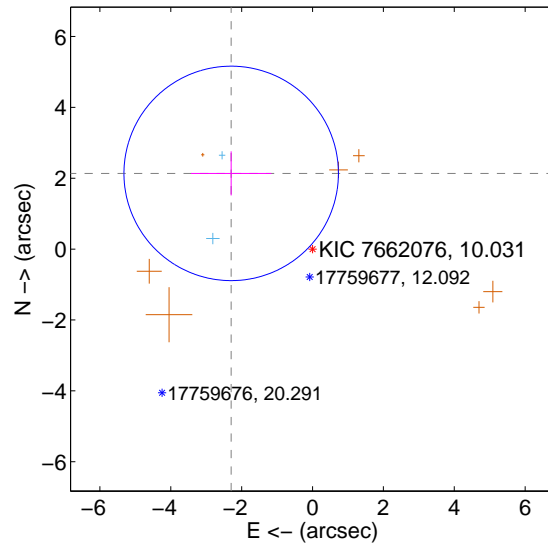
The direct PRF centroid is offset from the target star catalog position by about 0.89 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.242 ± 1.150	1.95	2.011 ± 1.146	0.991 ± 0.627
PRF-fit source offset from KIC position	3.136 ± 1.009	3.11	2.295 ± 1.132	2.136 ± 0.623
photometric centroid source offset	1.07 ± 0.58	1.85	-0.72 ± 0.71	0.79 ± 0.45

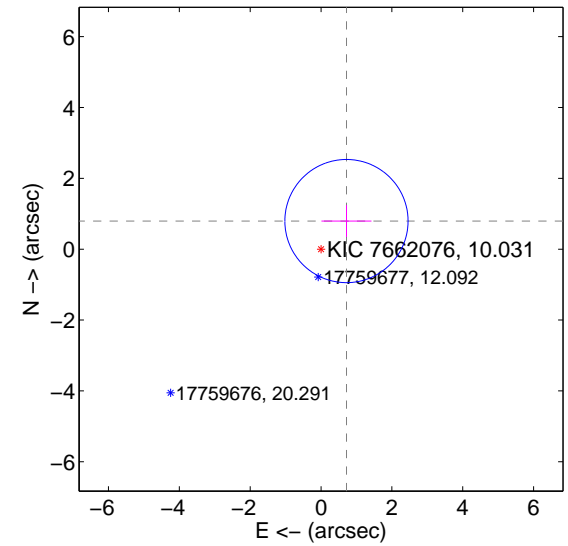
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

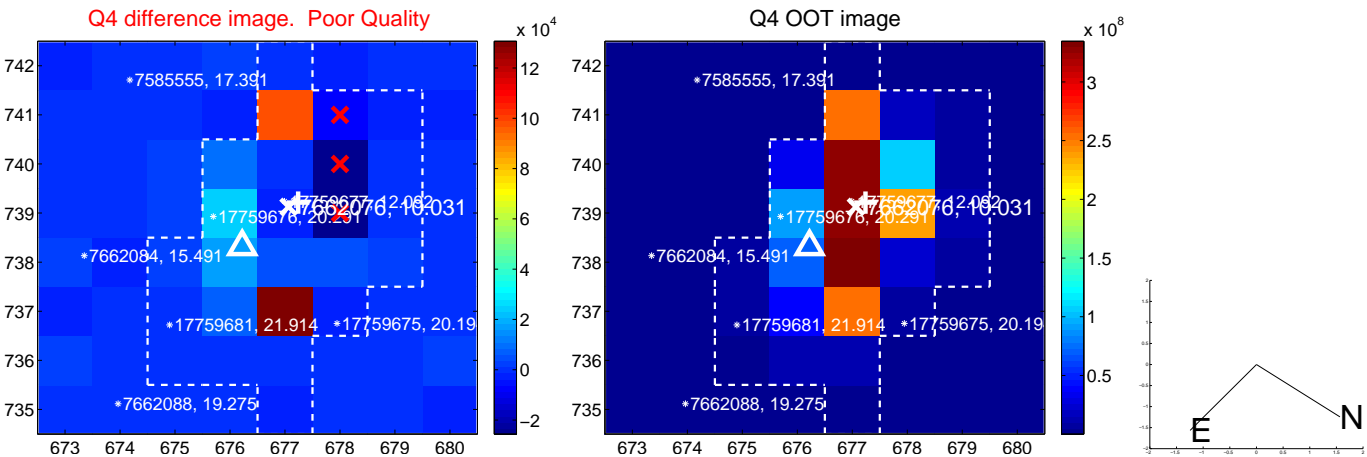
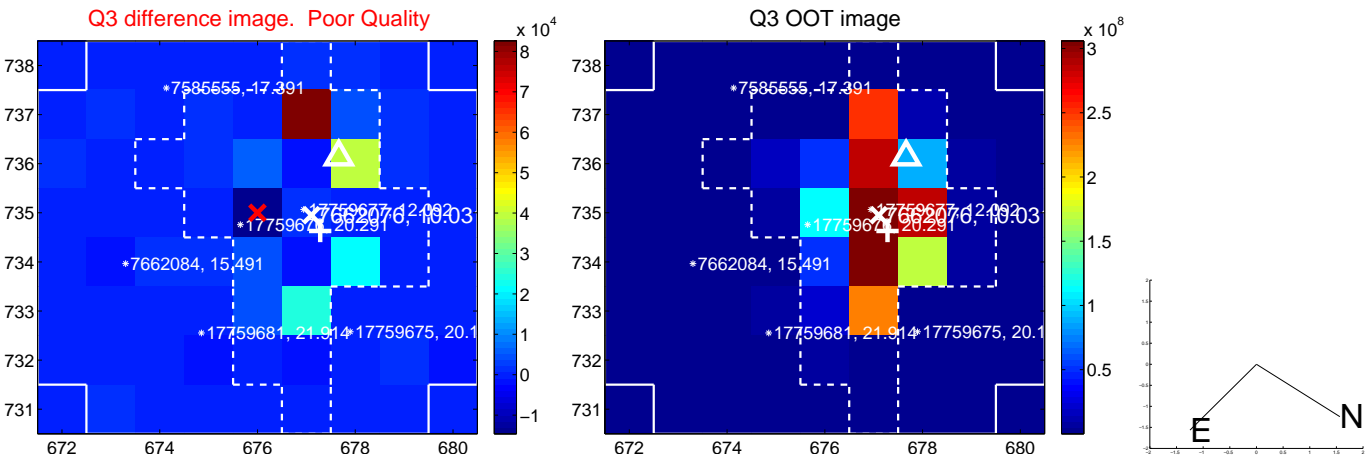
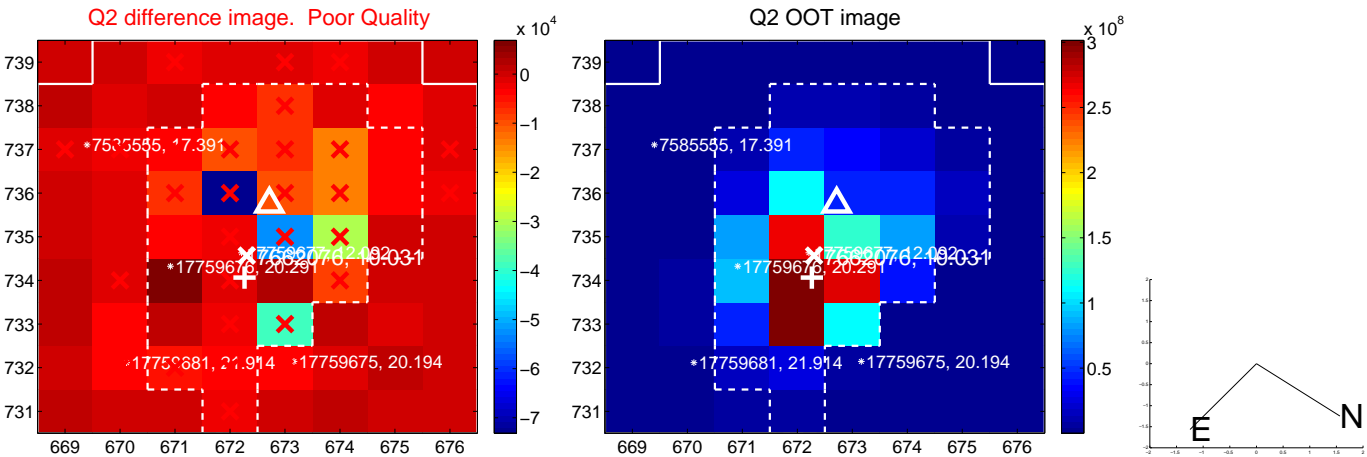
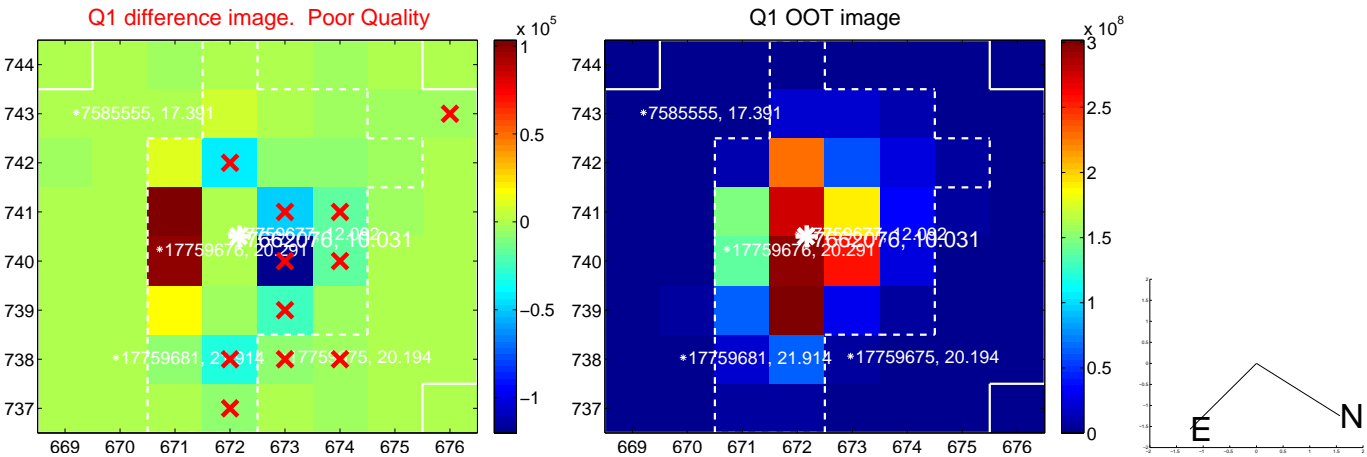


offset from photometric centroids

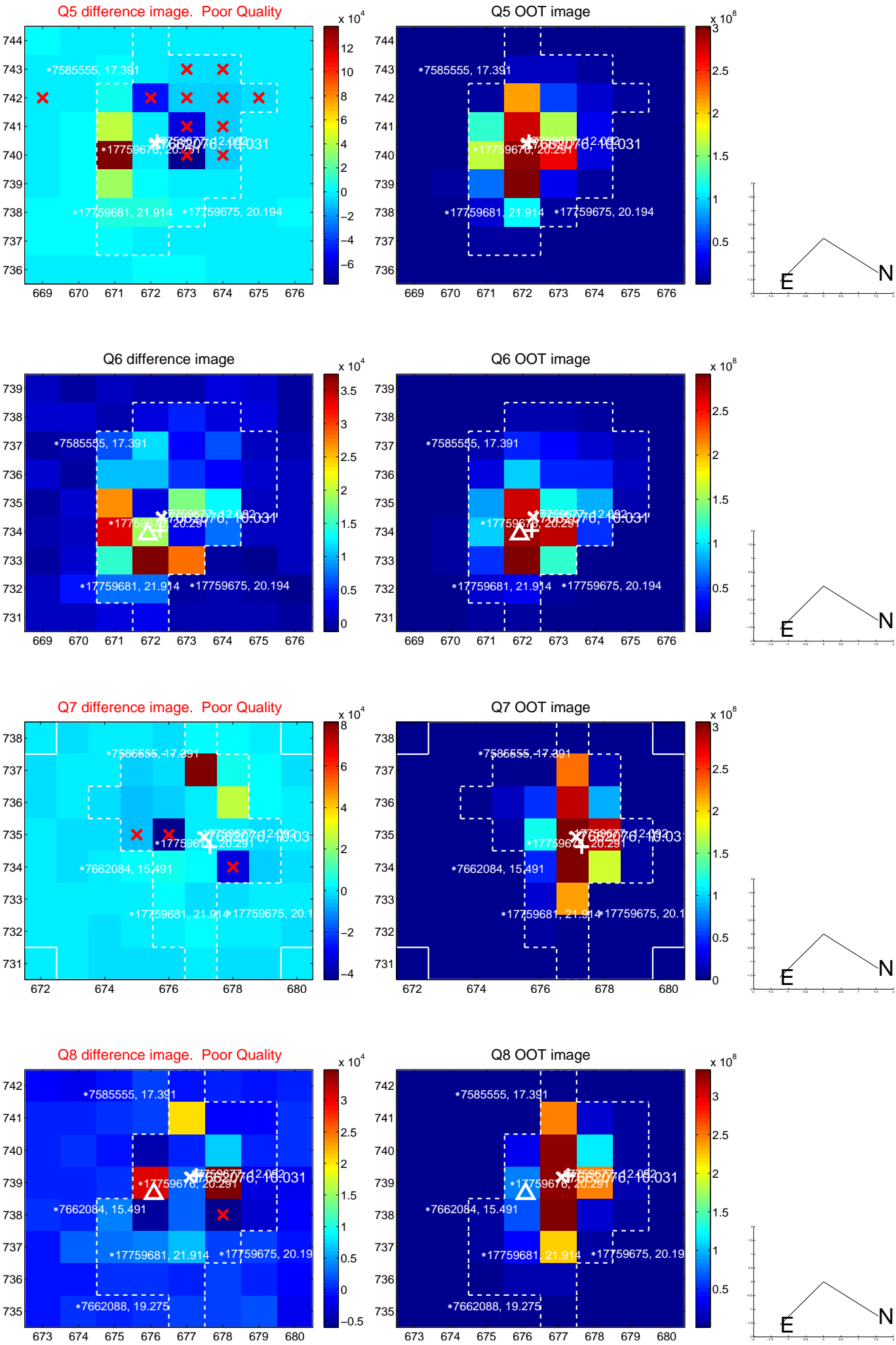


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

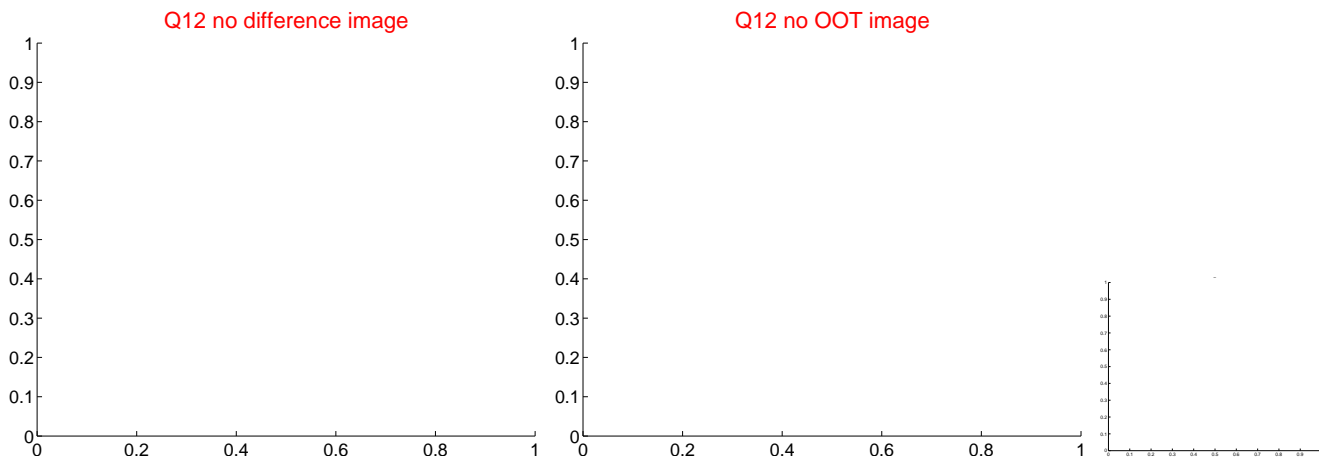
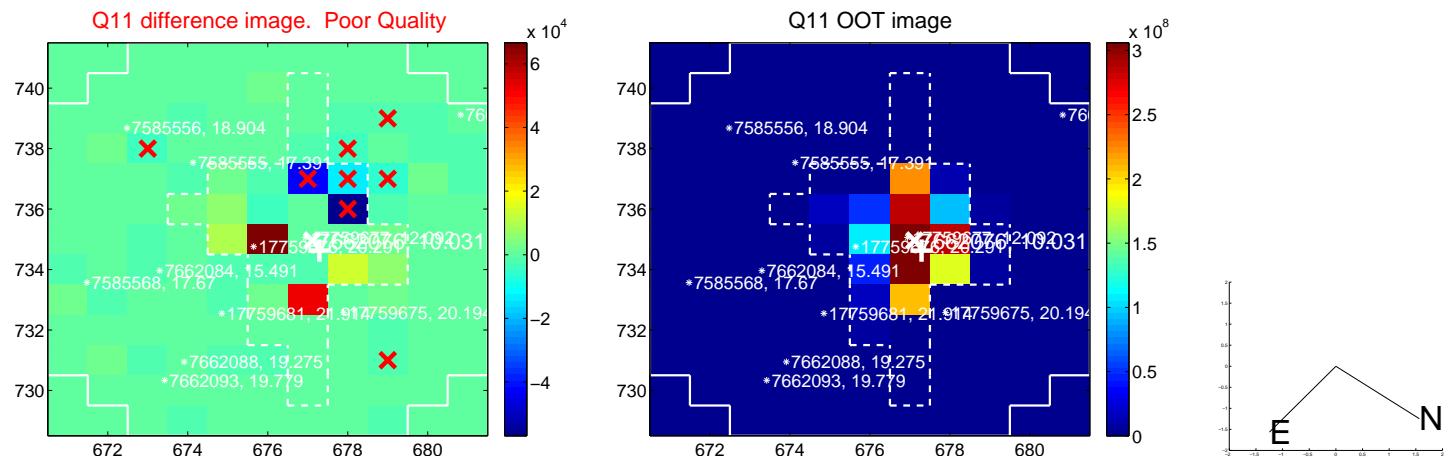
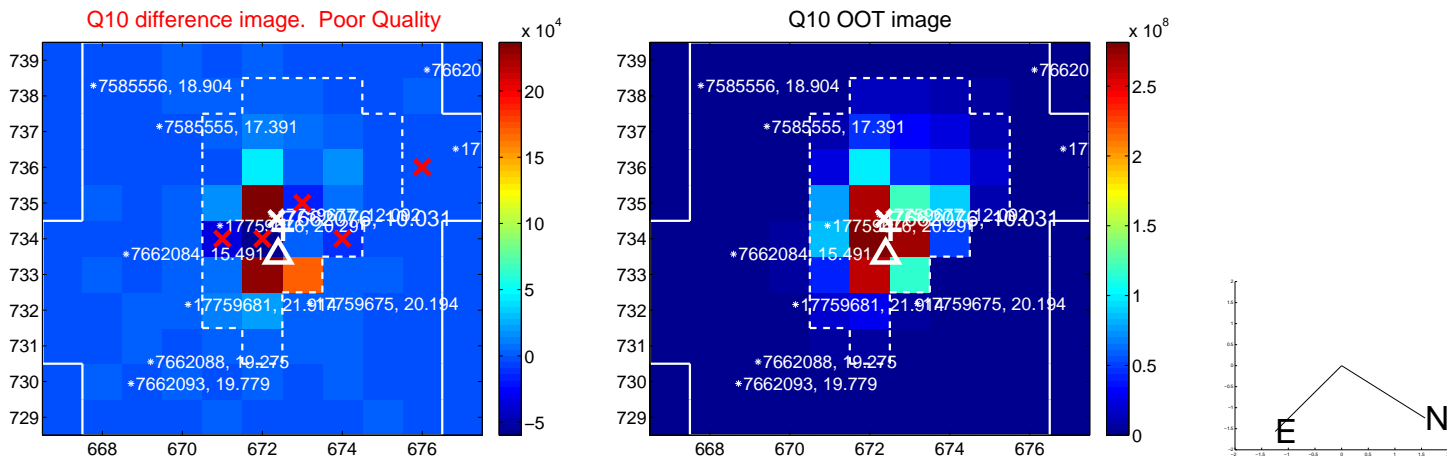
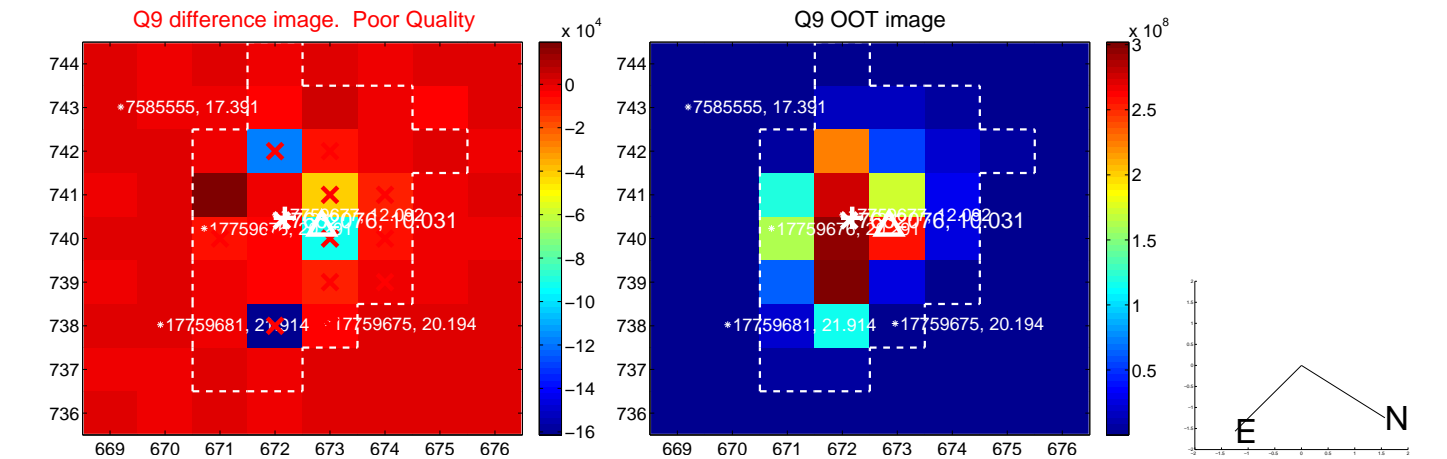
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



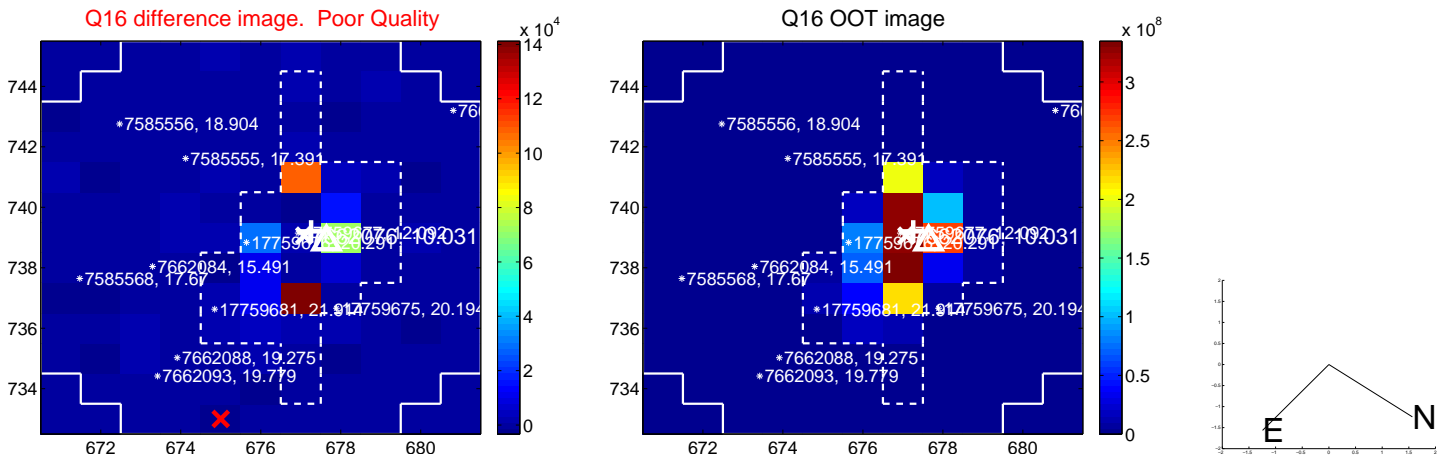
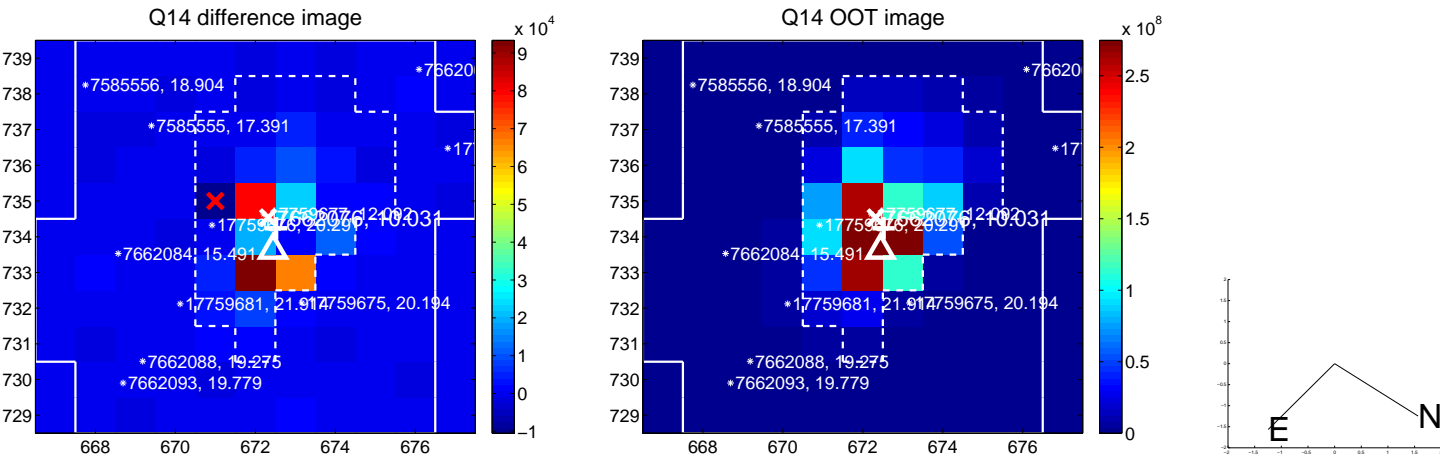
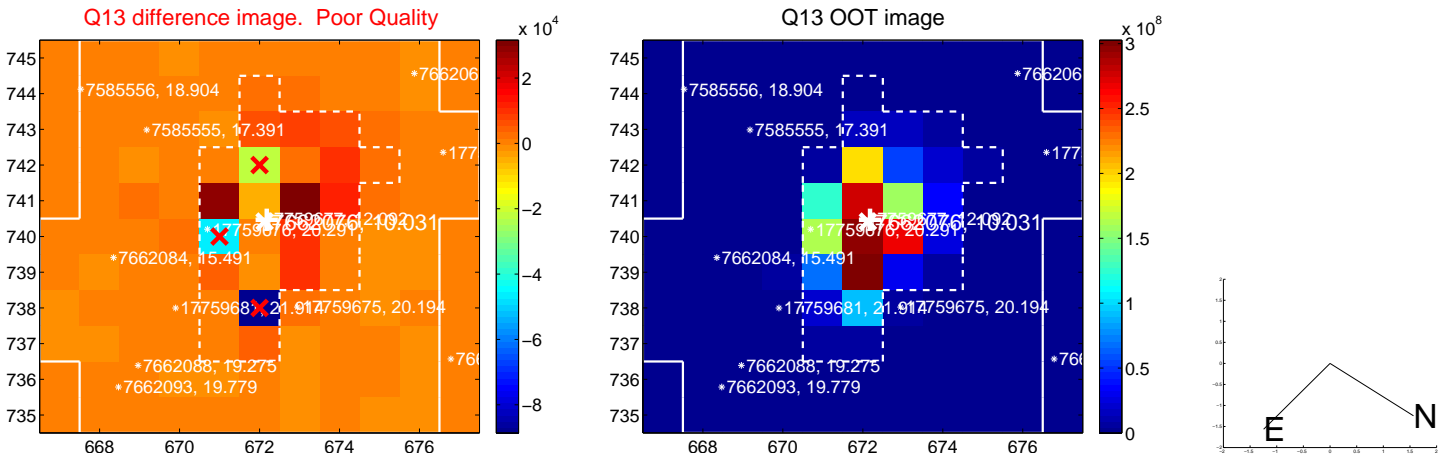
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



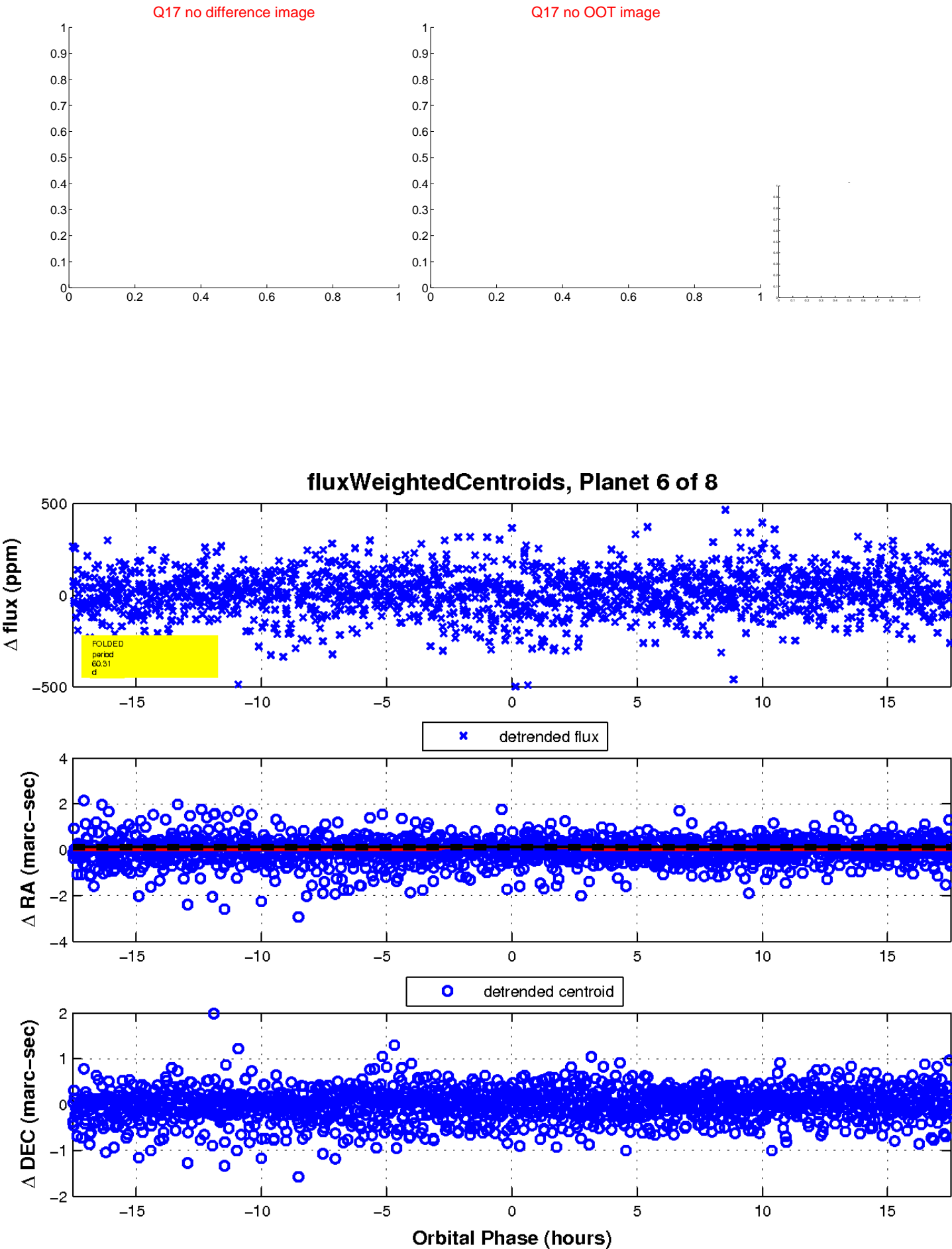
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

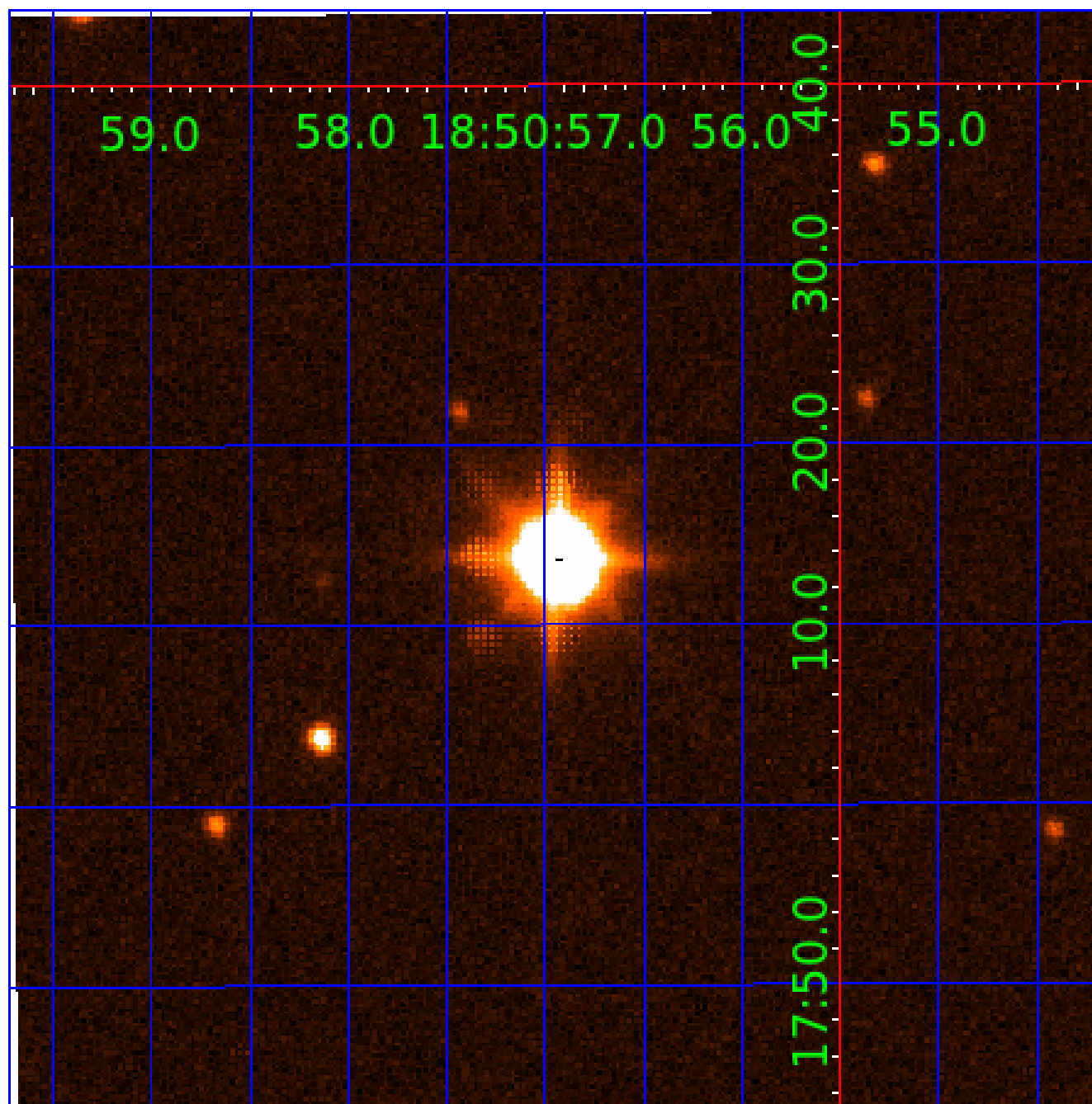


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007662076

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})
007662076-01	OBS	No	0.536283	131.532273	2.6	1.952	11.3	1.8	1.80	7251	0.34	40736.29
007662076-02	OBS	No	0.536320	131.654744	68.2	1.500	9.9	-1.0	1.80	7251	1.51	40732.57
007662076-03	OBS	No	130.230487	216.980996	370.1	2.783	9.3	9.0	1.80	7251	4.00	26.89
007662076-05	OBS	No	117.385832	146.425325	184.0	2.091	8.4	7.1	1.80	7251	2.79	30.88
007662076-06	OBS	No	60.308606	151.882173	122.5	5.852	7.3	6.6	1.80	7251	2.29	75.05
007662076-08	OBS	No	17.719377	140.089121	60.1	2.500	7.5	-1.0	1.80	7251	1.42	384.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007662076-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
007662076-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
007662076-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007662076-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
007662076-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
007662076-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

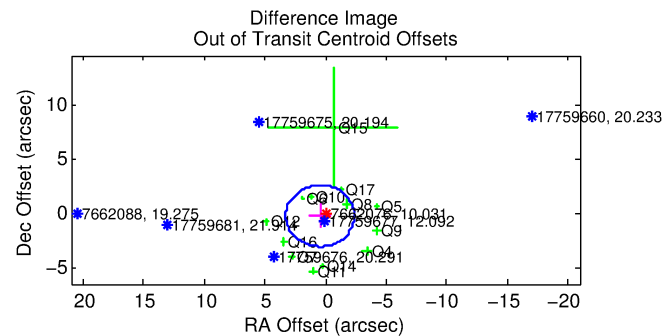
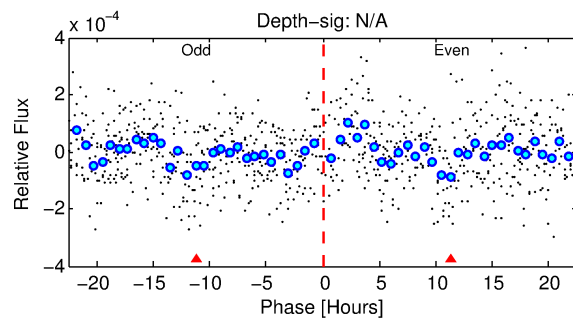
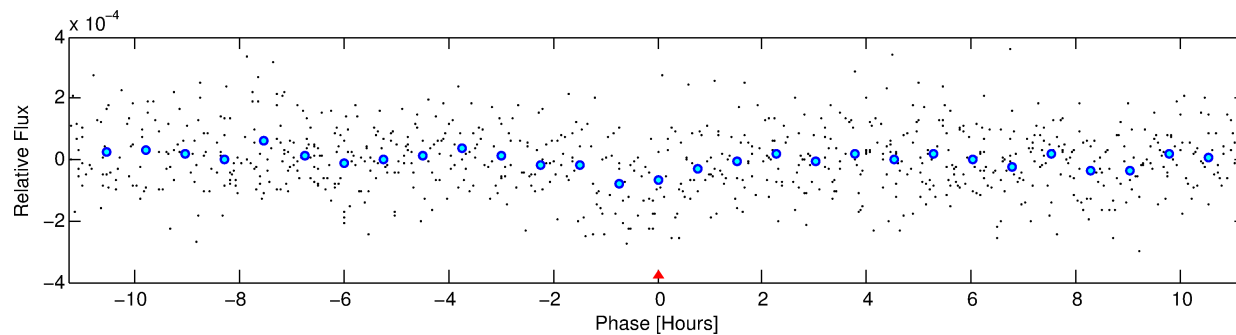
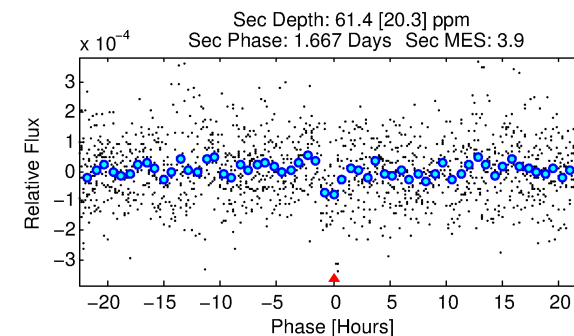
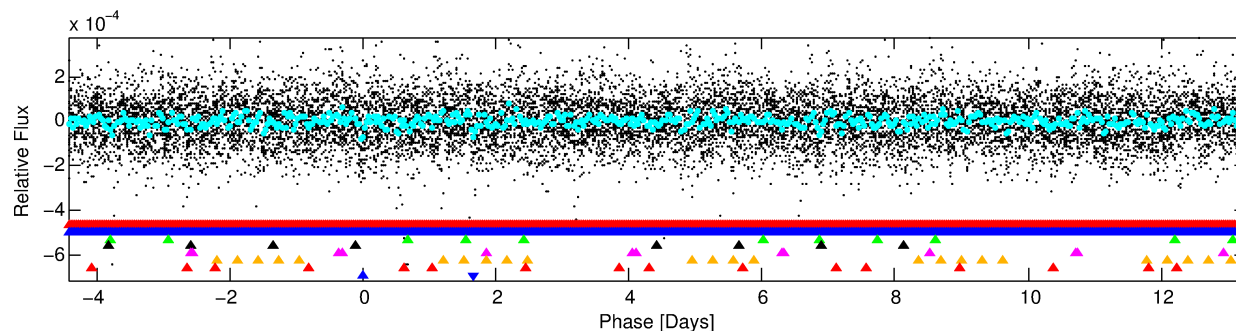
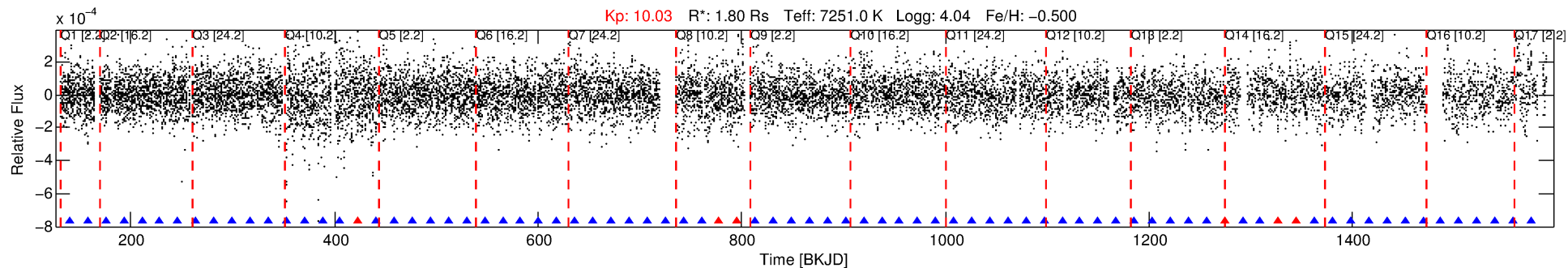
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007662076-08

No Significant Match Found

DV One-Page Summary

KIC: 7662076 Candidate: 8 of 8 Period: 17.719 d



TPS TCE Results:

Period = 17.71938 d
Epoch = 140.0891 BKJD

DV fit results are unavailable

DV Diagnostic Results:

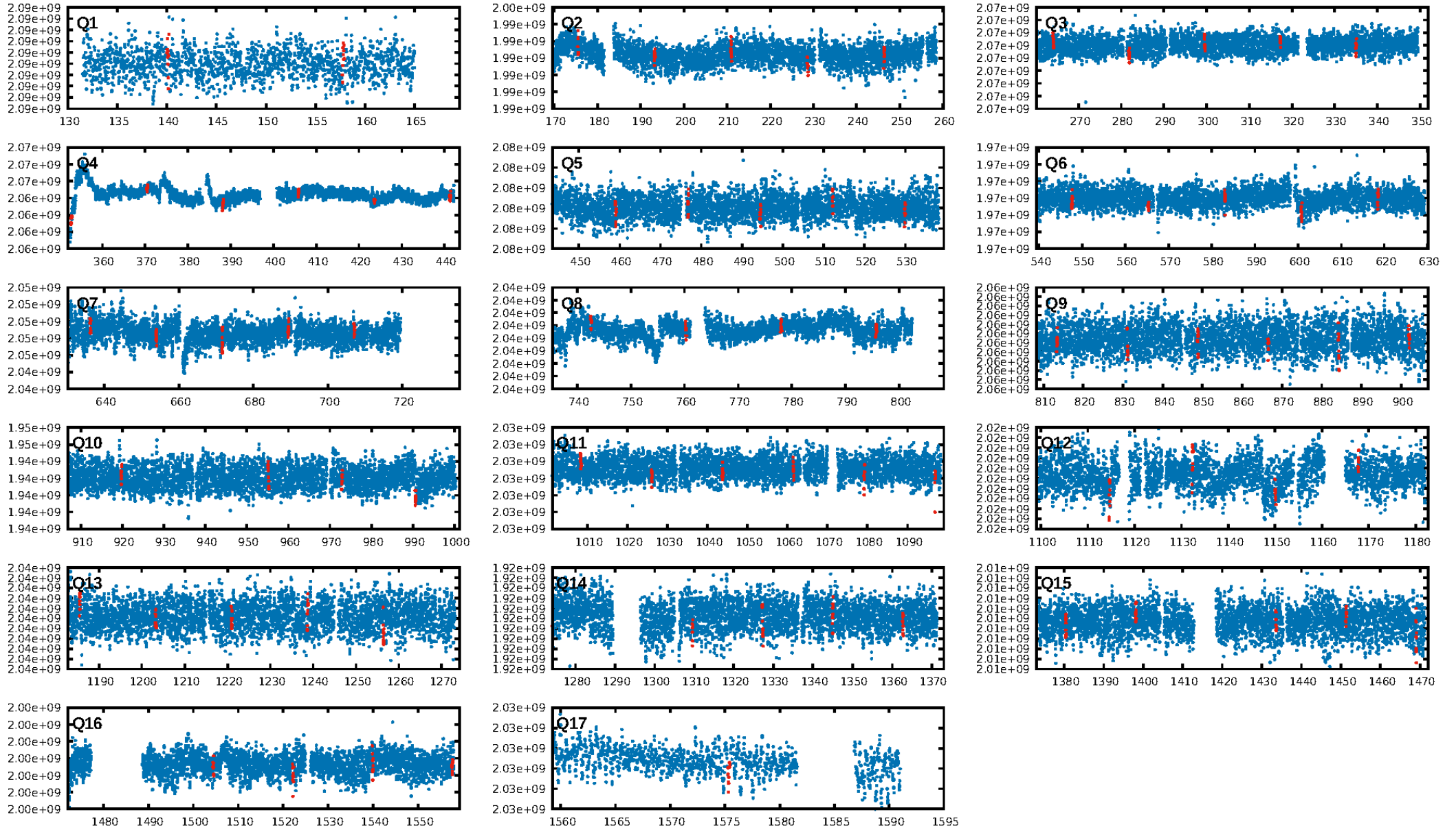
ShortPeriod-sig: 100.0% [141.45 σ]
LongPeriod-sig: 100.0% [160.63 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.84 [32/38]
GhostDiagnostic-chr: N/A

Centroid-sig: N/A
Centroid-so: 1.173 arcsec [3.22 σ]
OotOffset-rm: 0.520 arcsec [0.55 σ]
KicOffset-rm: 1.058 arcsec [1.19 σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 0.15 [2/13]
DiffImageOverlap-fno: 0.00 [0/17]

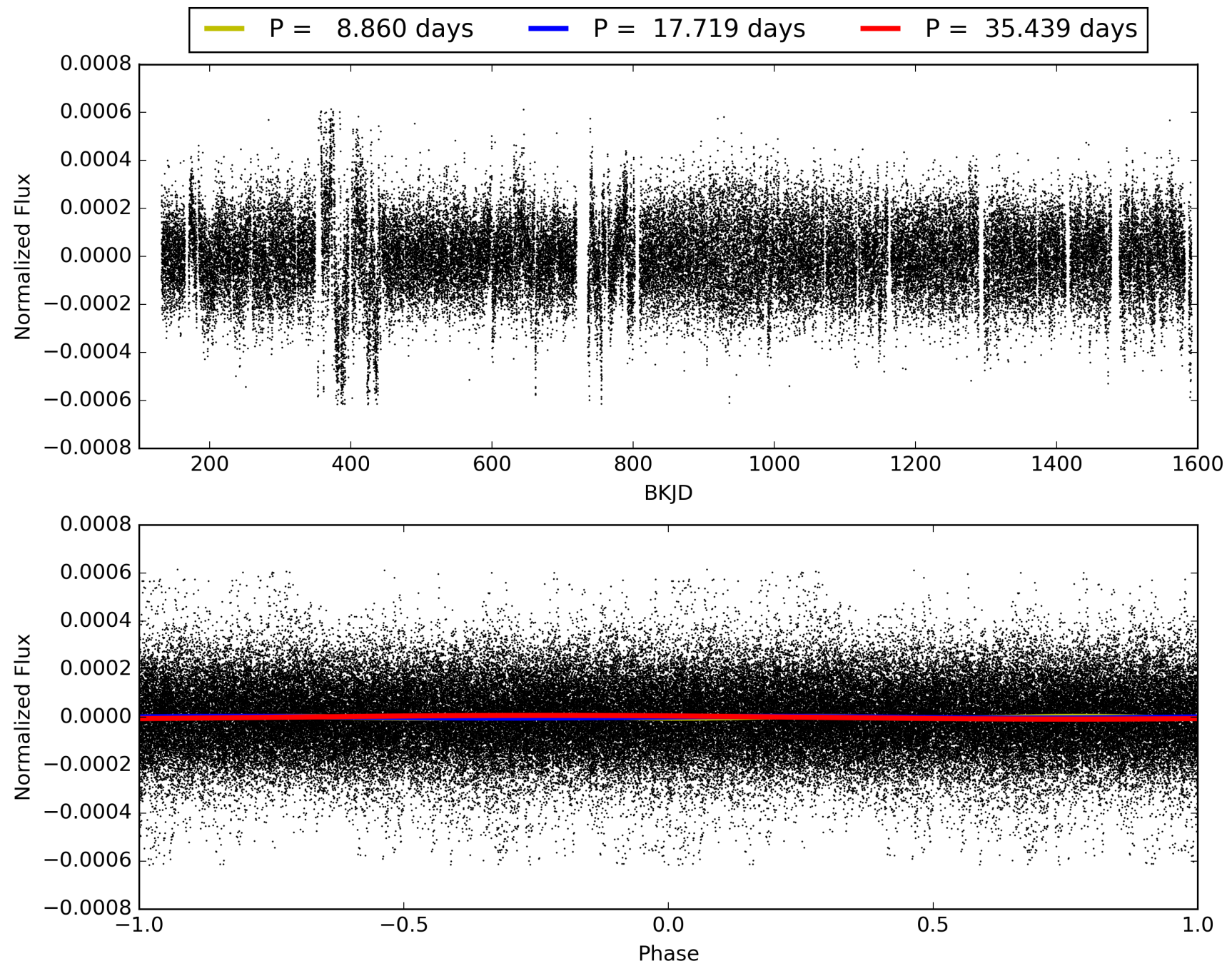
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:44:35 Z

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

TCE 007662076-08, PDC Light Curves

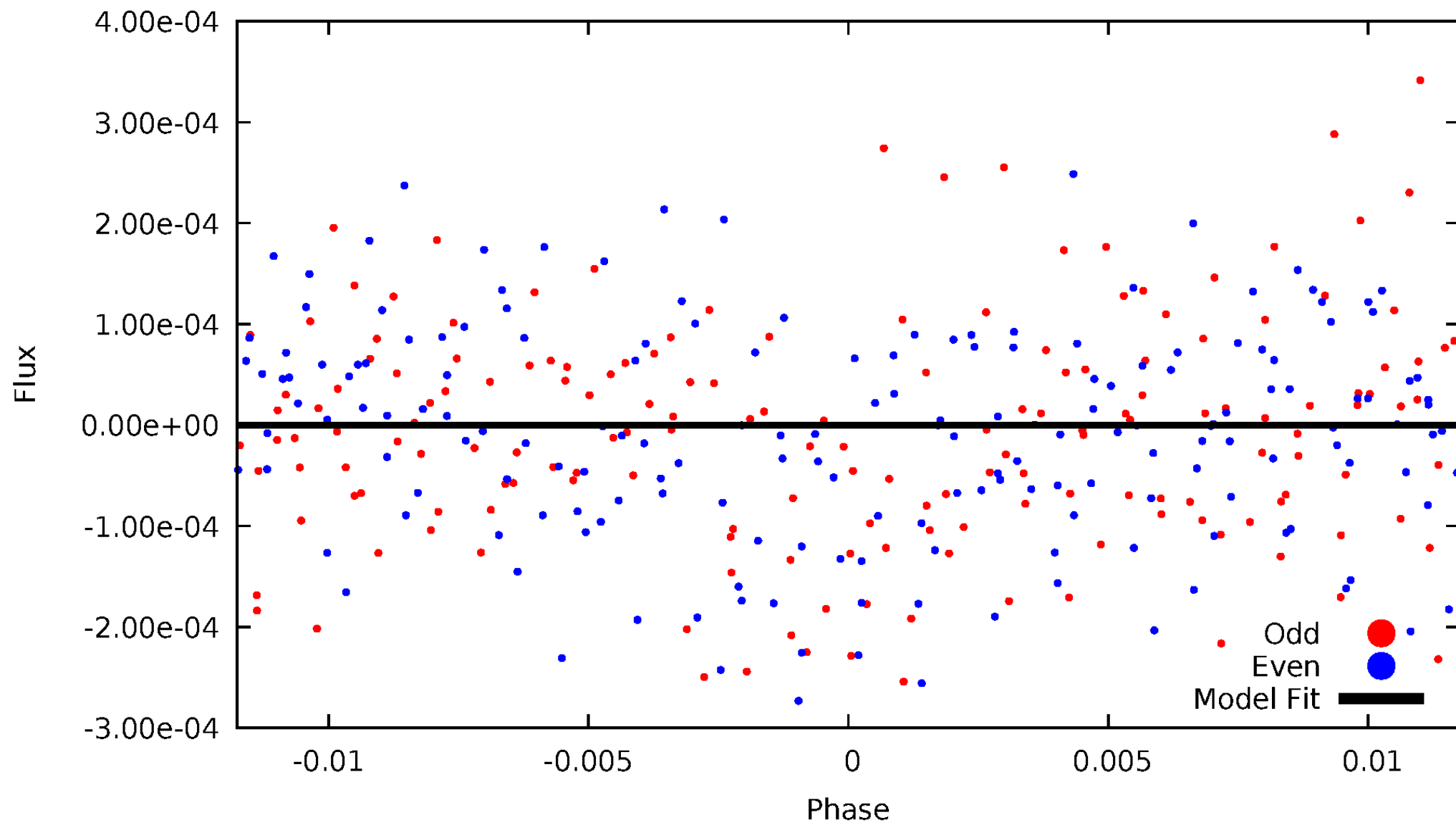


TCE 007662076-08



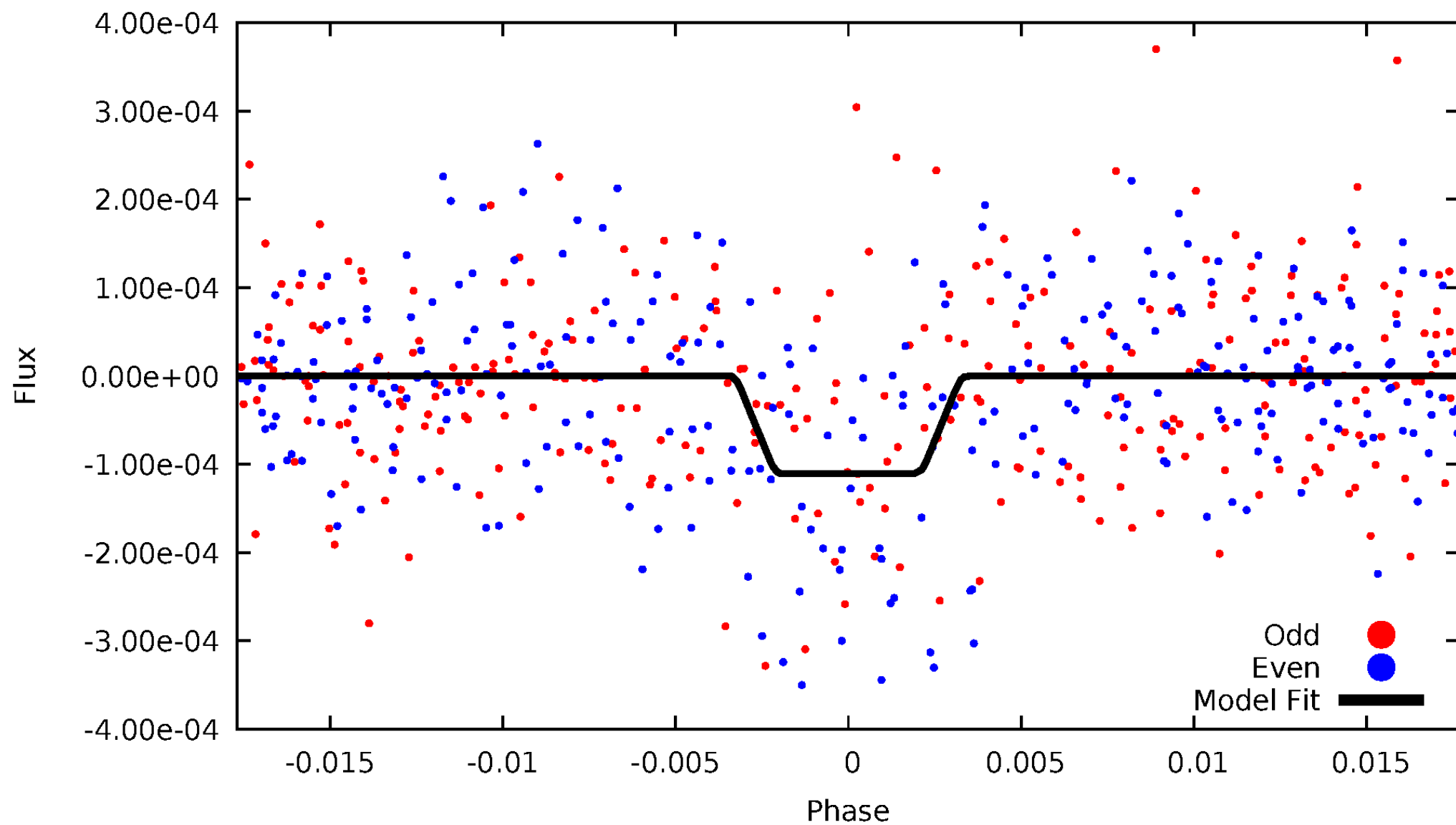
DV Odd/Even

TCE 007662076-08



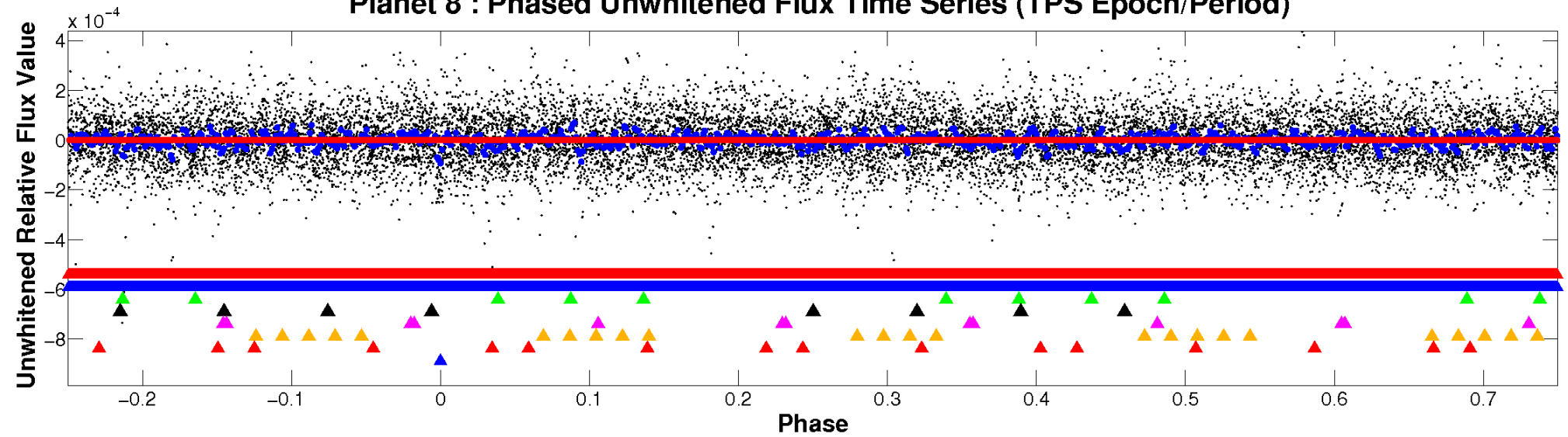
ALT Odd/Even

TCE 007662076-08

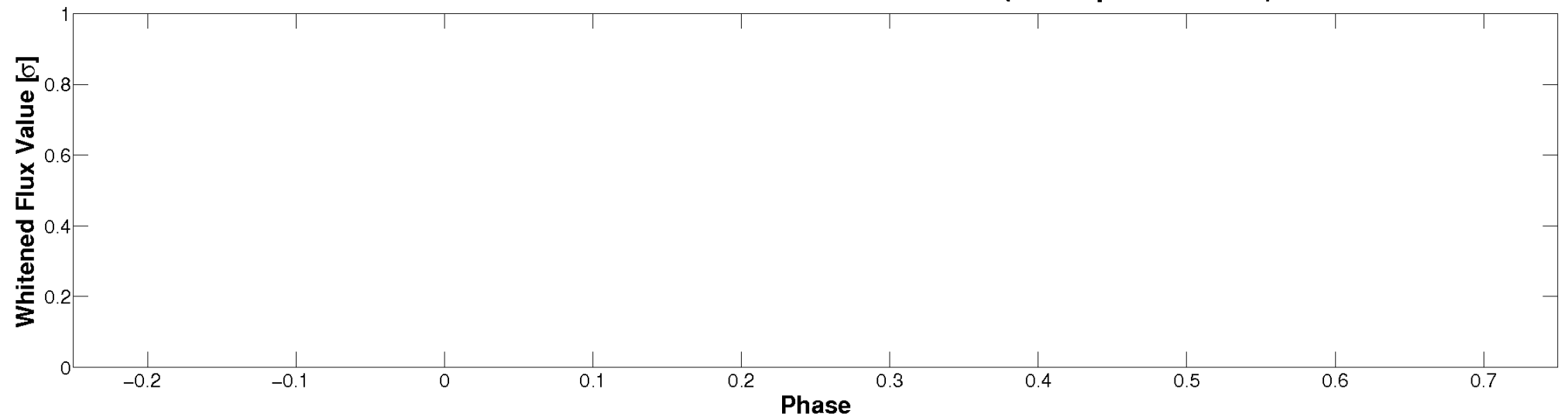


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

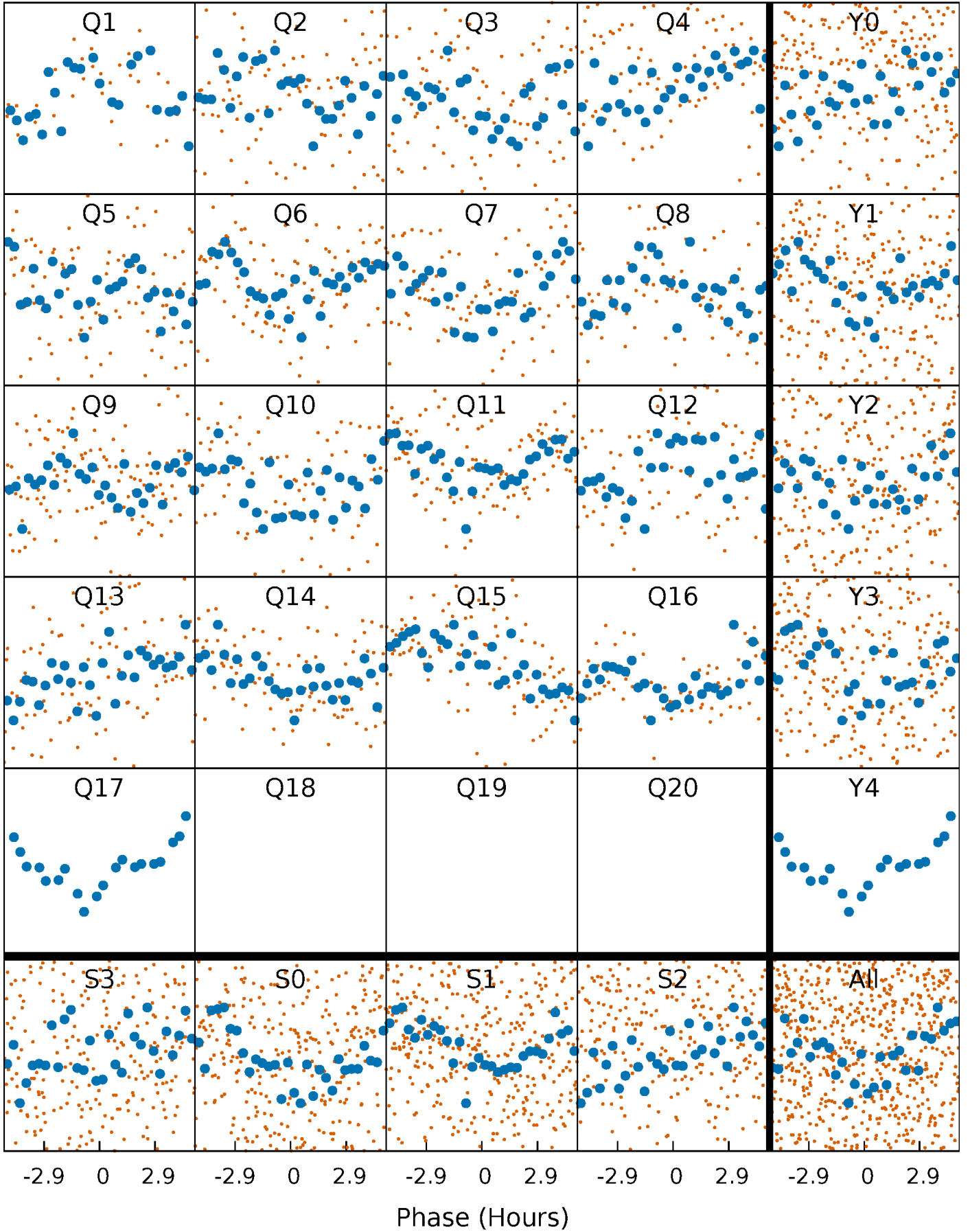


Planet 8 : Phased Whitened Flux Time Series (TPS Epoch/Period)



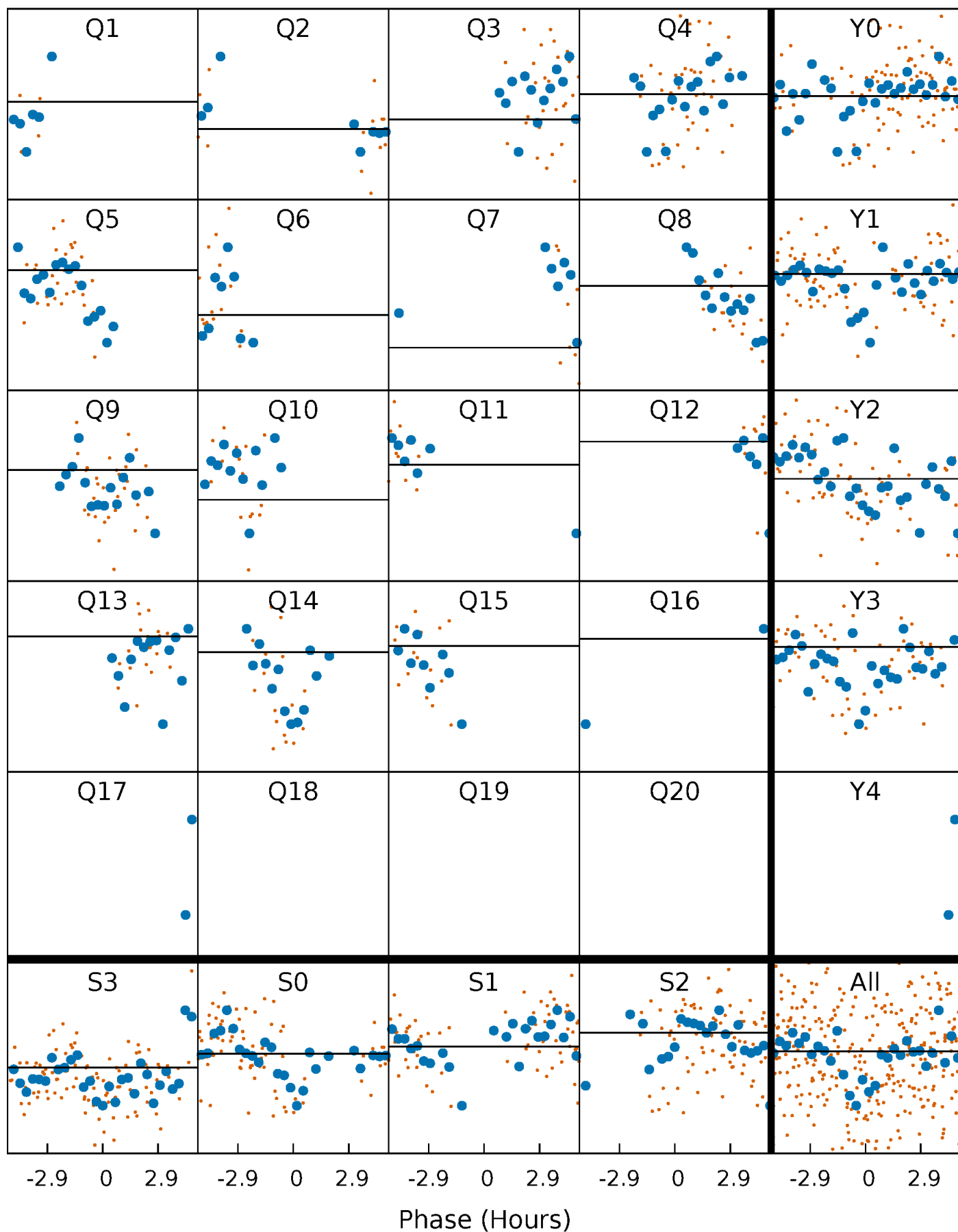
PDC Quarter-Phased Transit Curves

TCE 007662076-08 P= 17.719377 Days $T_0=140.089121$ (BKJD)



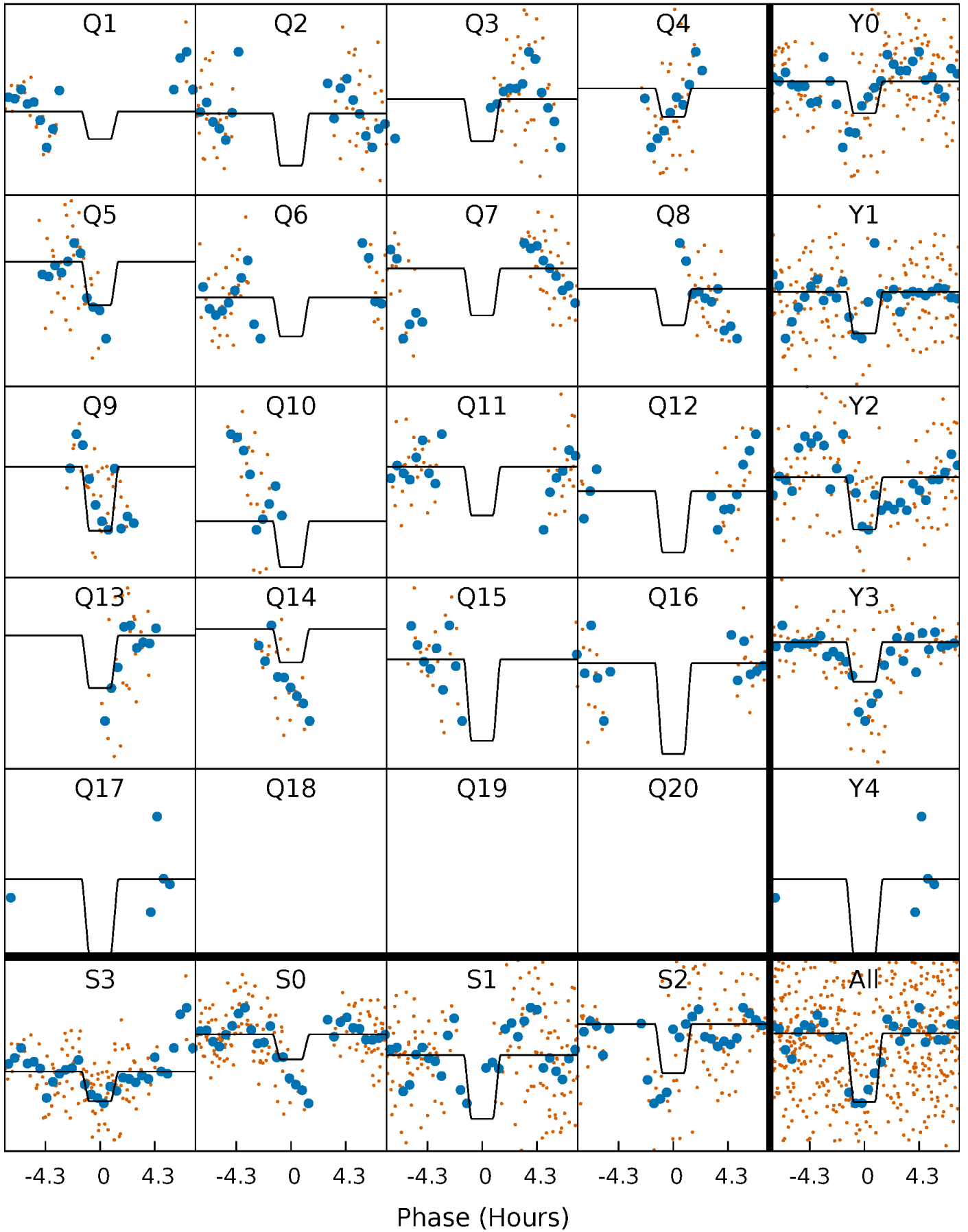
DV Quarter-Phased Transit Curves

TCE 007662076-08 P= 17.719377 Days $T_0=140.089121$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

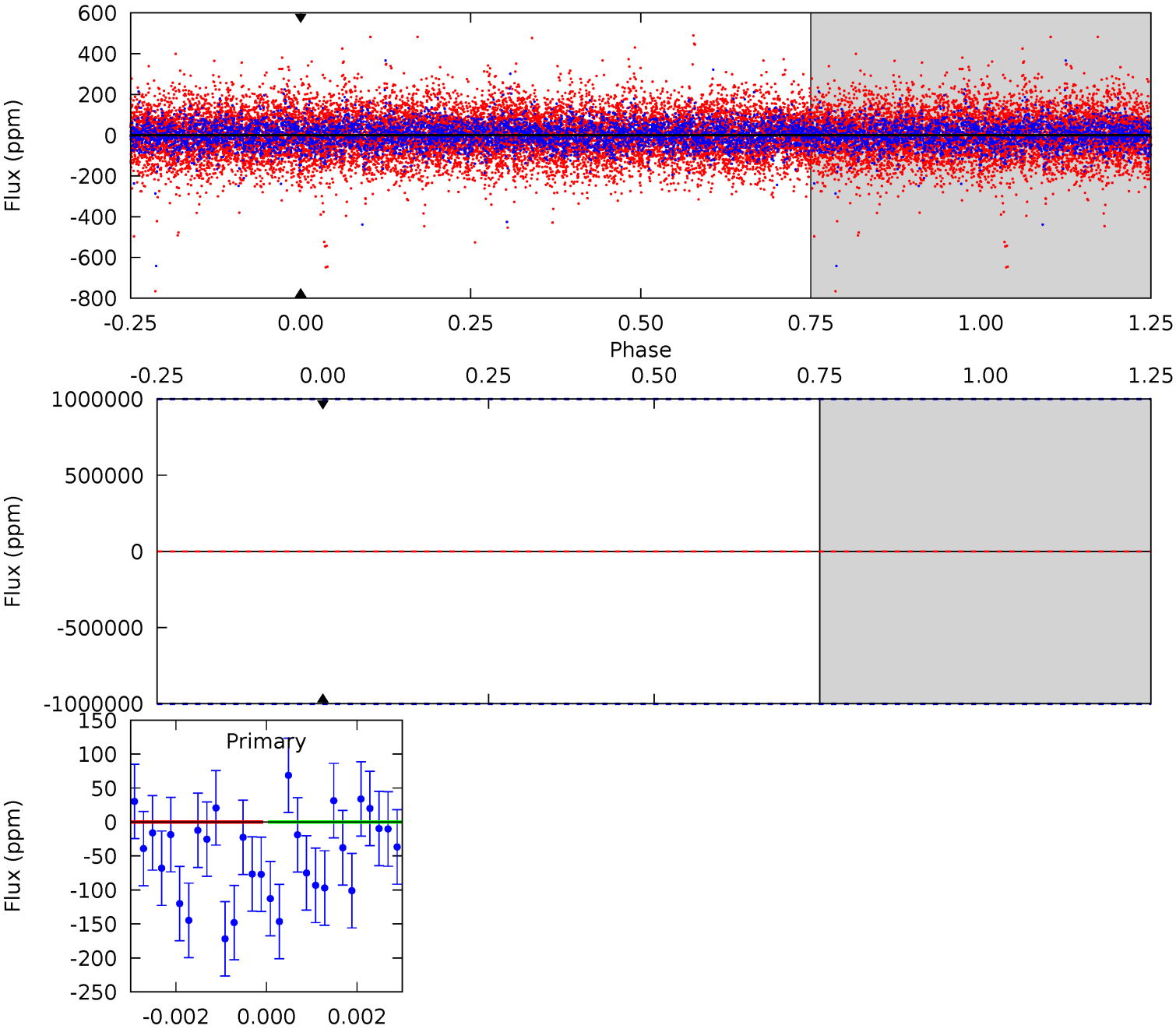
TCE 007662076-08 P= 17.719377 Days $T_0=140.097031$ (BKJD)



DV Model-Shift Uniqueness Test

007662076-08, P = 17.719377 Days, E = 122.369744 Days

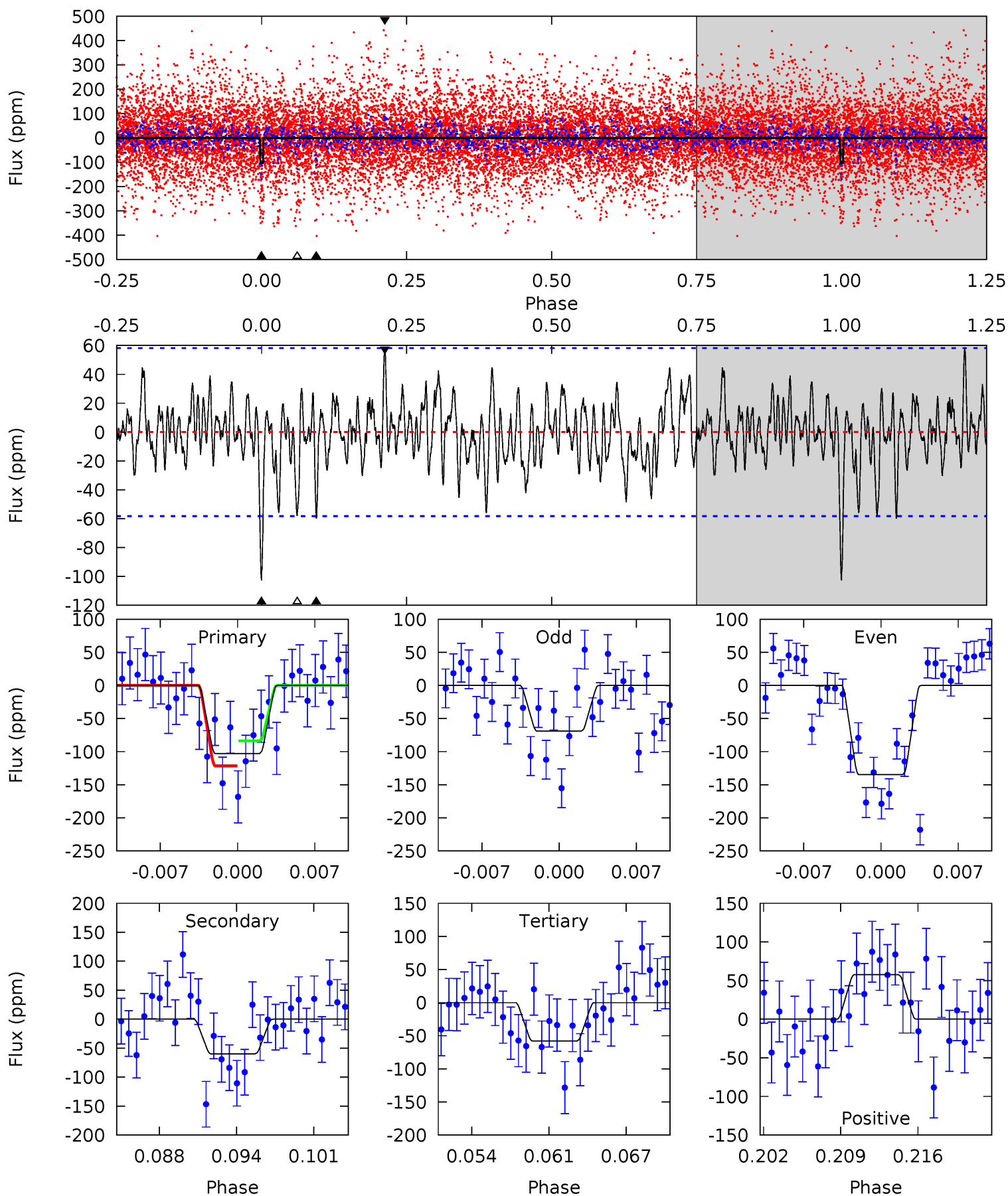
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007662076-08, P = 17.719377 Days, E = 122.377654 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.02	5.24	5.09	5.04	5.10	2.71	1.59	3.93	3.97	0.15	0.20	2.89	1.40	0.36	1.67



Stellar Parameters For KIC 007662076

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7251^{+230}_{-281}	$4.035^{+0.273}_{-0.147}$	$-0.500^{+0.250}_{-0.300}$	$1.799^{+0.512}_{-0.563}$	$1.280^{+0.218}_{-0.178}$	$0.310^{+0.517}_{-0.125}$
	+3%/-4%	+7%/-4%	+50%/-60%	+28%/-31%	+17%/-14%	+167%/-40%
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 007662076-08 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$14.46^{+13.92}_{-10.45}$	1547^{+133}_{-137}	-5835^{+40734}_{-33261}	$-151.272^{+8975.974}_{-12430.715}$
Alt.	-60 ± 11	$13.71^{+13.88}_{-9.66}$	1551^{+132}_{-133}	2986^{+1384}_{-612}	$3.653^{+36.076}_{-2.794}$

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

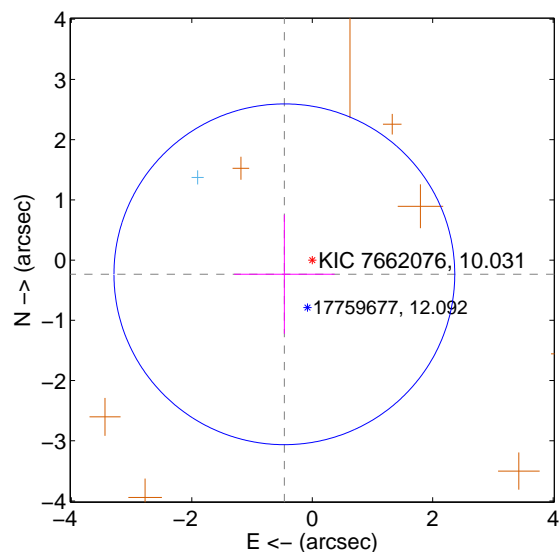
Supplemental centroid analysis for 007662076-08. **Kepler magnitude: 10.03.** Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

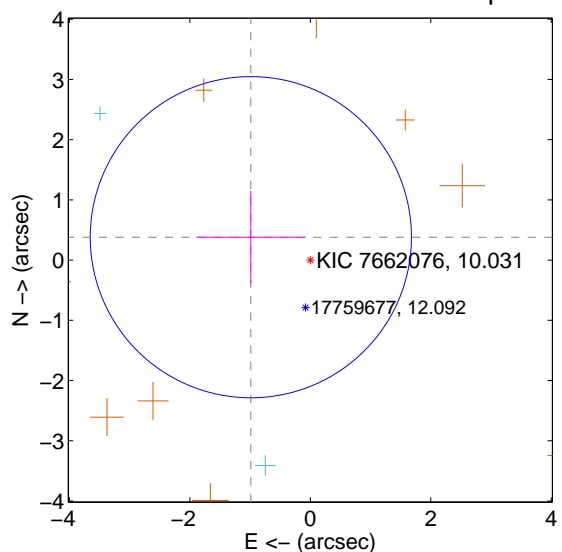
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.520 ± 0.943	0.55	0.463 ± 0.834	-0.236 ± 0.987
PRF-fit source offset from KIC position	1.058 ± 0.889	1.19	0.988 ± 0.906	0.380 ± 0.767
photometric centroid source offset	1.17 ± 0.36	3.22	0.68 ± 0.46	0.96 ± 0.30

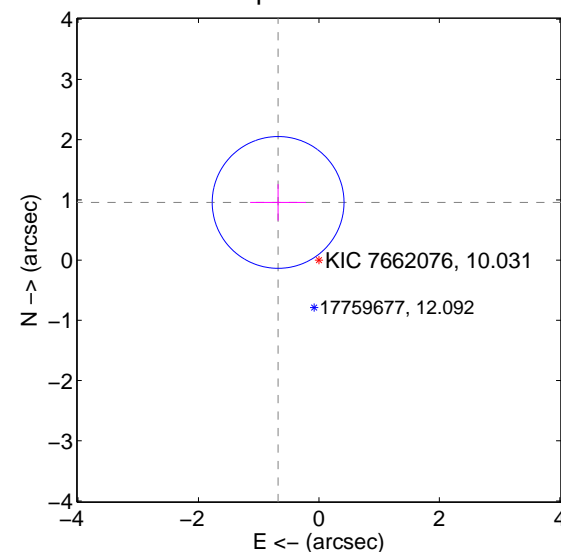
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

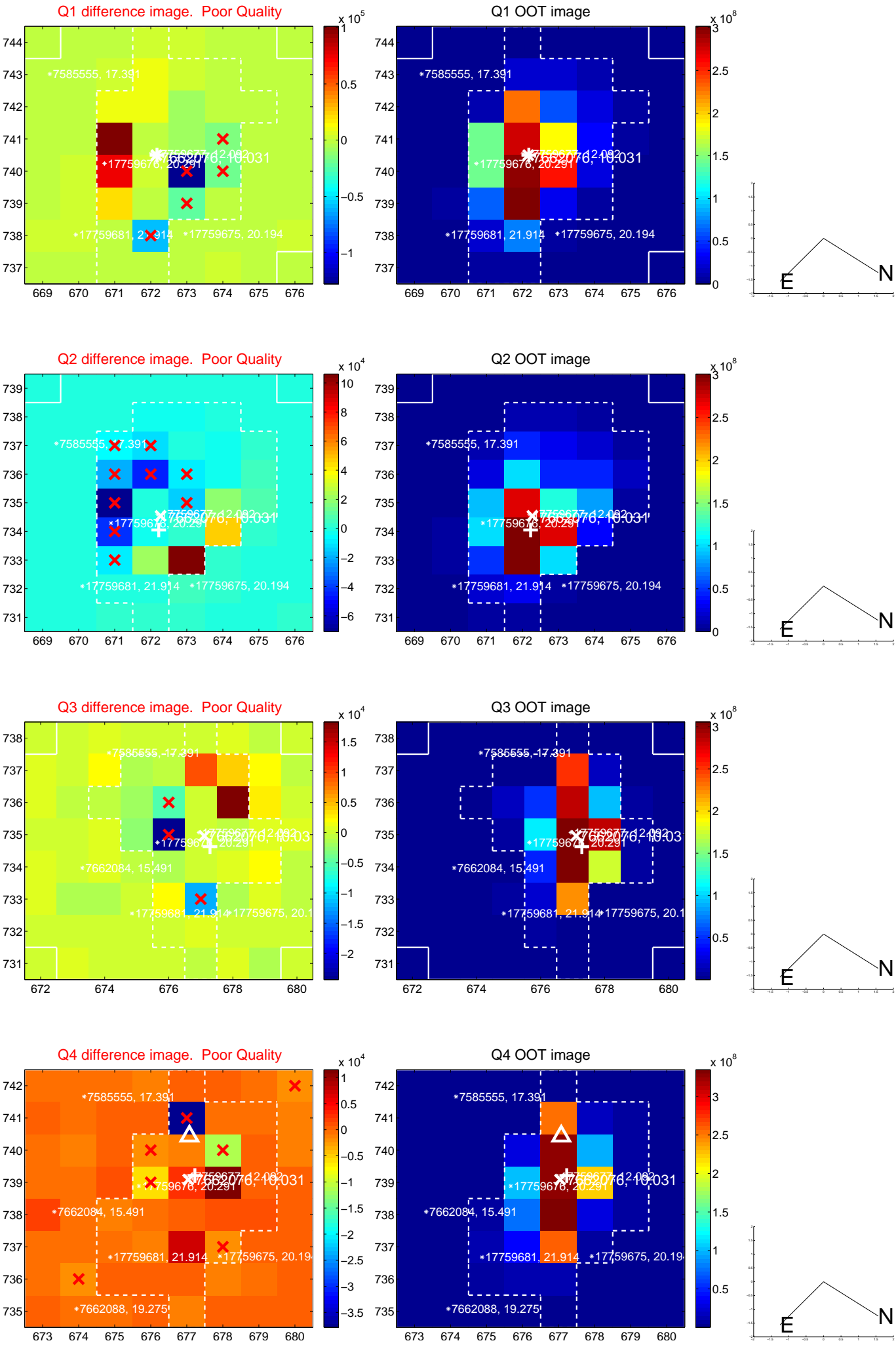


offset from photometric centroids

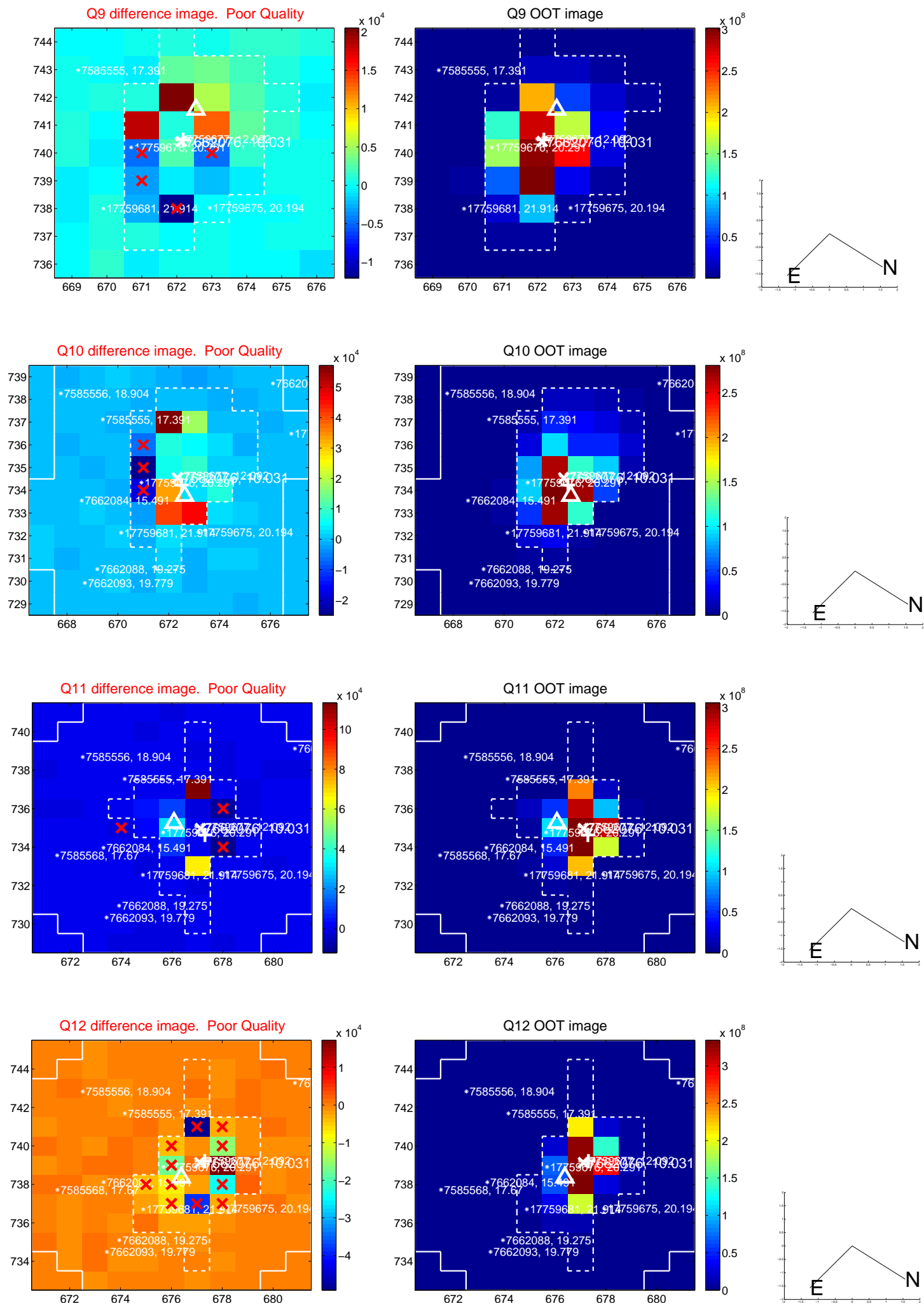


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

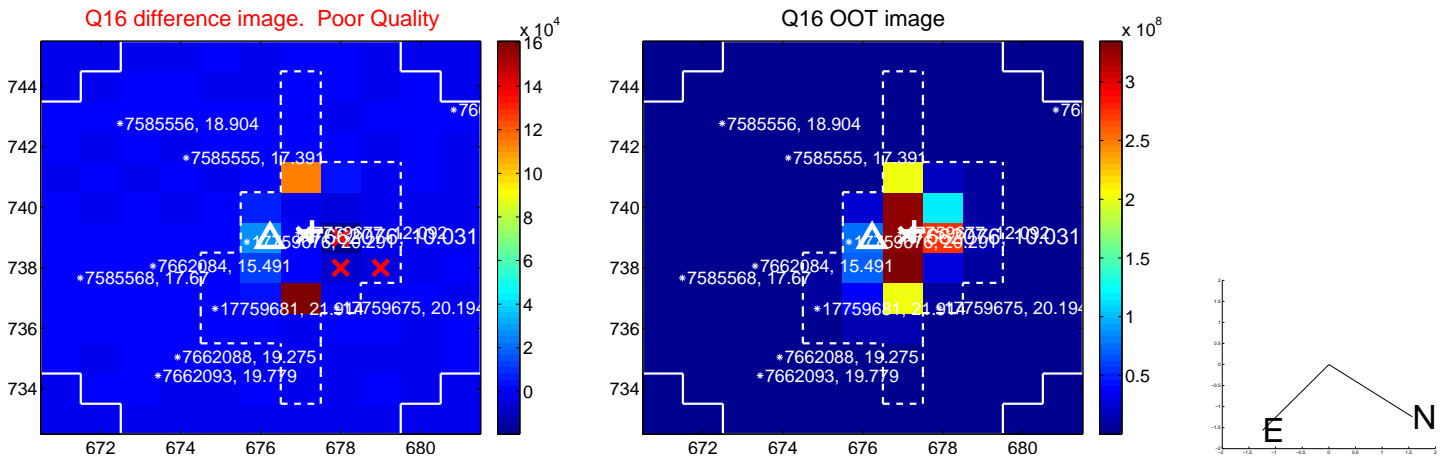
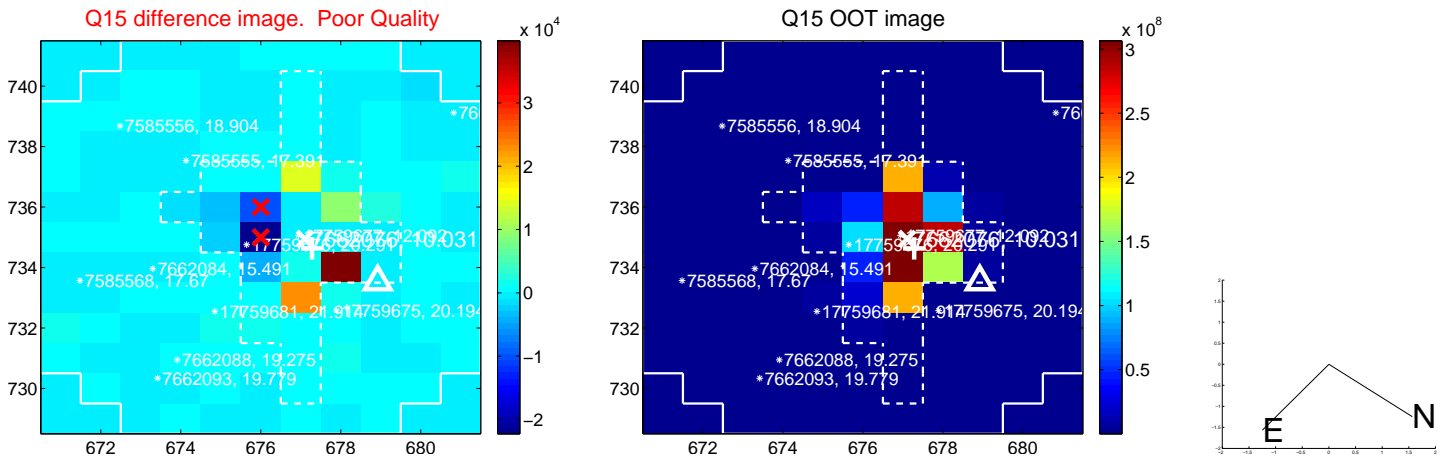
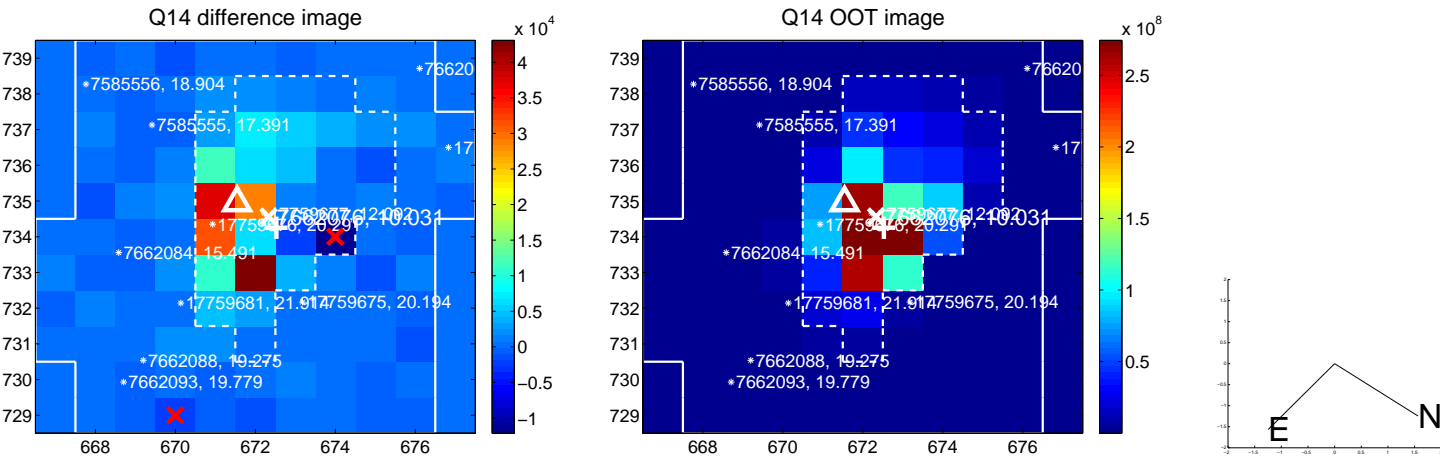
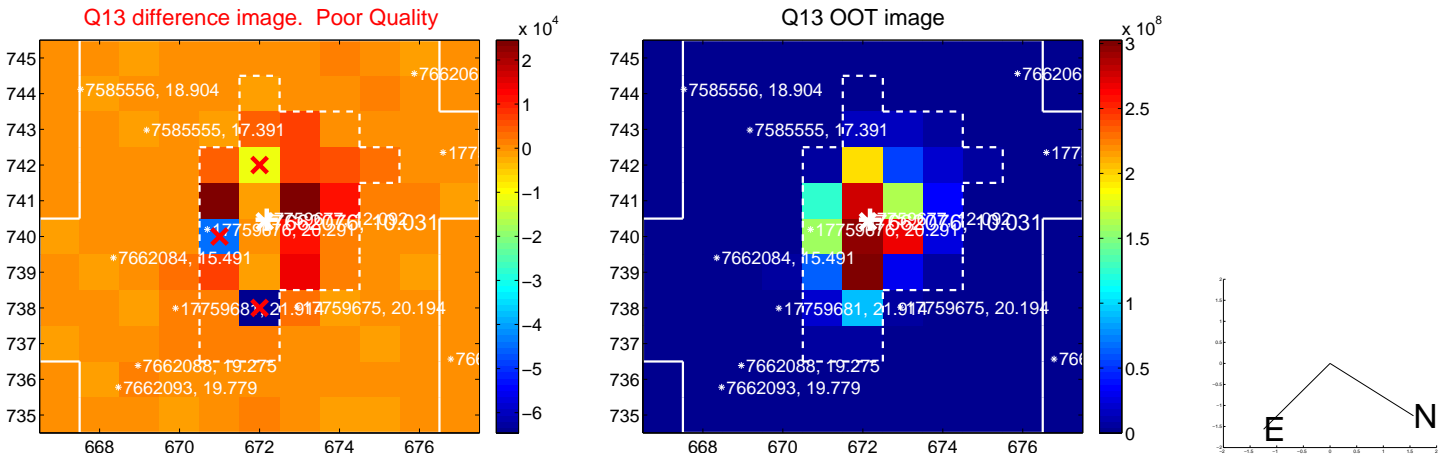
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



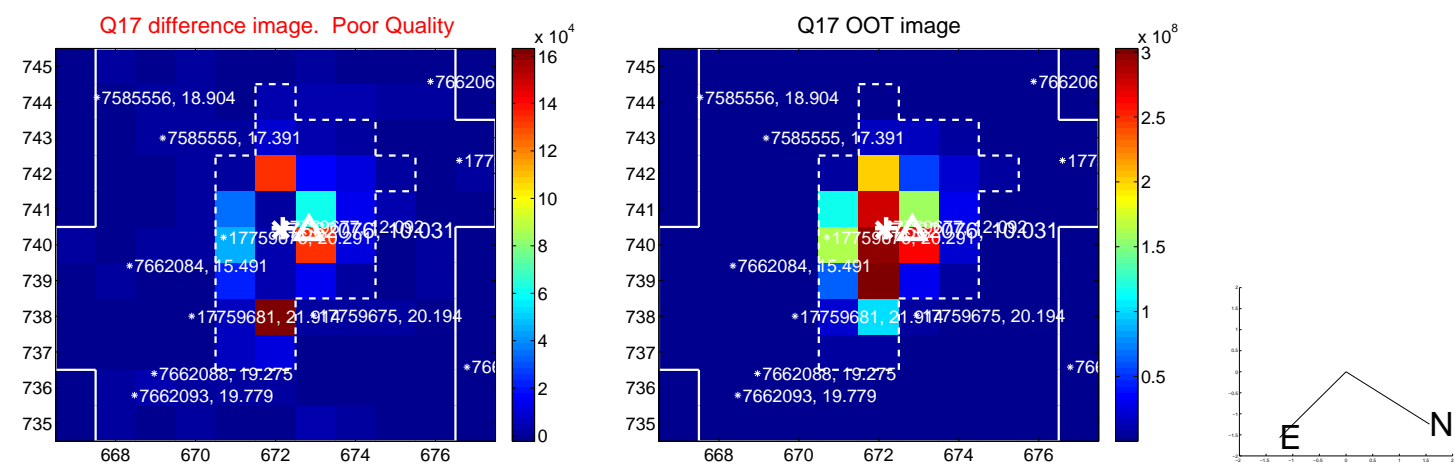
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



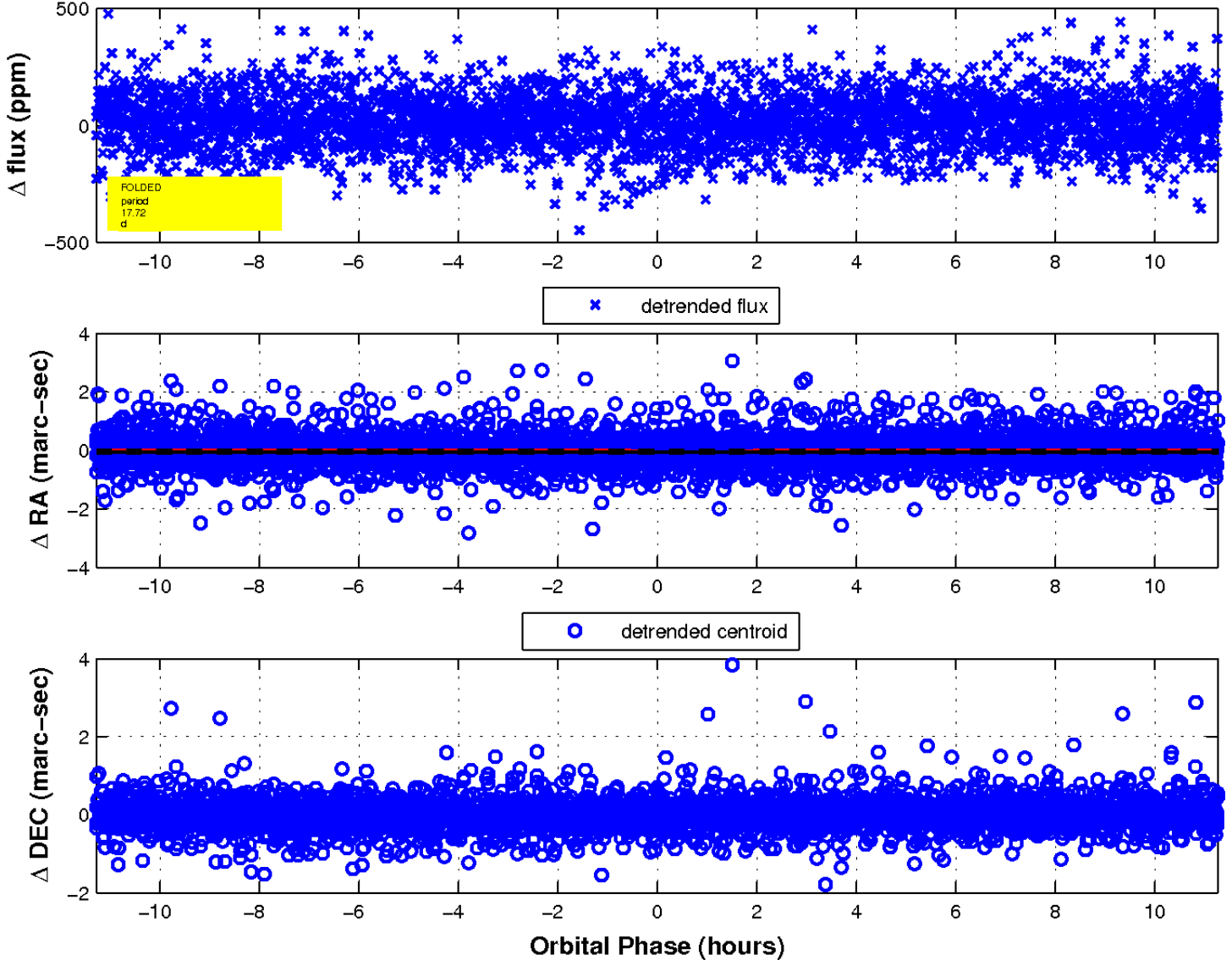
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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UKIRT Image

Declination

