

KIC 008767034

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})
008767034-01	OBS	7089.01	0.586382	131.566135	24.5	4.161	13.5	9.8	0.61	4556	0.29	1030.16
008767034-02	OBS	No	19.237477	149.361219	68.5	7.045	11.6	2.7	0.61	4556	0.58	9.81
008767034-04	OBS	No	35.172465	161.730937	614.9	4.518	11.0	9.0	0.61	4556	1.69	4.39
008767034-05	OBS	No	43.007251	142.200562	722.9	1.925	12.2	11.4	0.61	4556	1.94	3.35
008767034-06	OBS	No	25.103715	149.656632	529.6	1.097	9.0	7.7	0.61	4556	1.48	6.88
008767034-08	OBS	No	50.891218	162.364936	569.1	3.375	9.0	10.8	0.61	4556	1.65	2.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008767034-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
008767034-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
008767034-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008767034-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_MEAS
008767034-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_MEAS
008767034-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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.

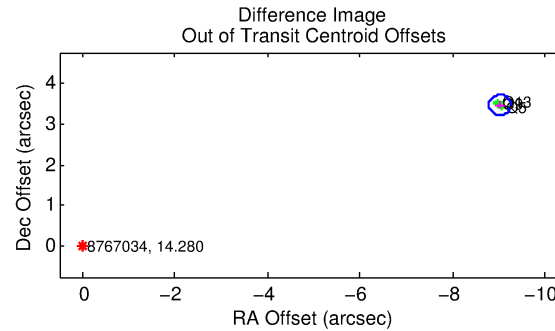
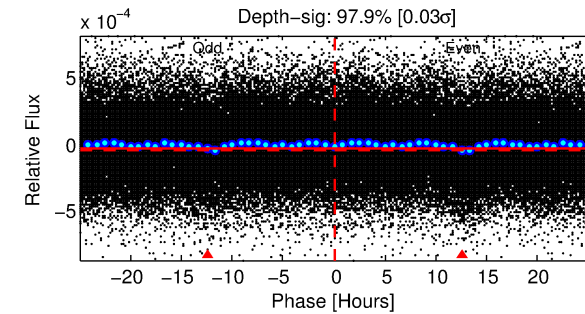
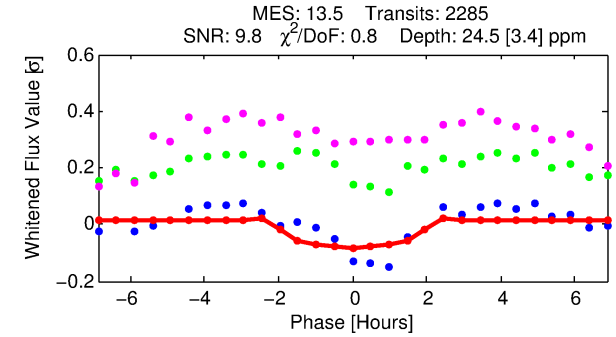
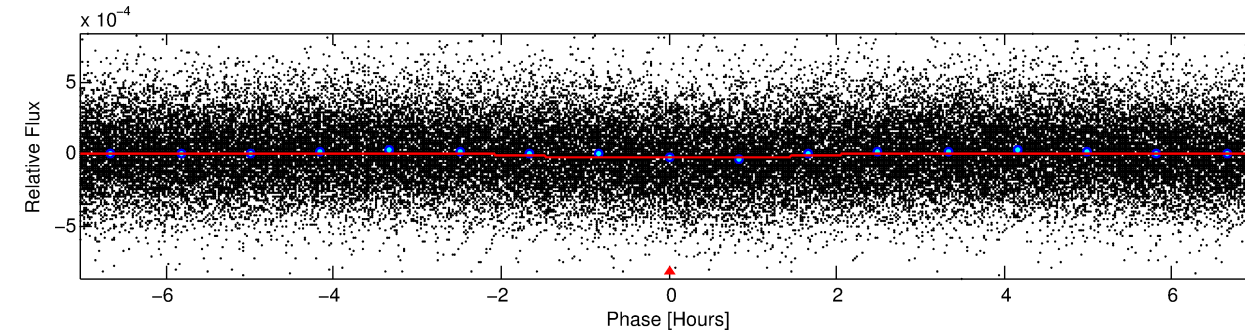
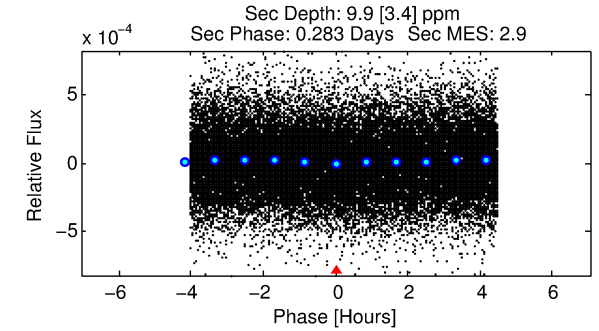
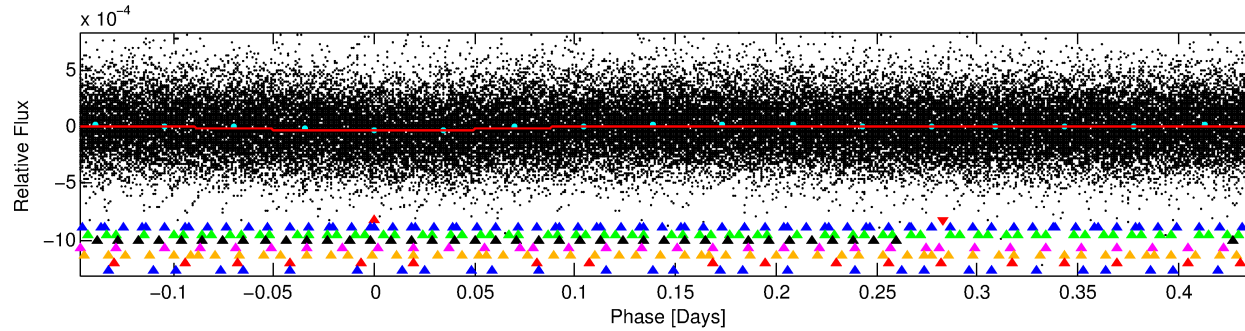
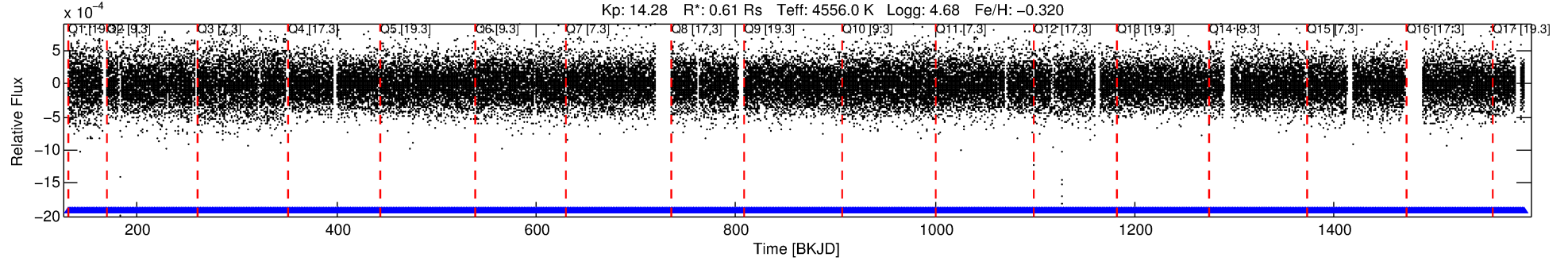
Ephemeris Match Information For 008767034-01

No Significant Match Found

DV One-Page Summary

KIC: 8767034 Candidate: 1 of 8 Period: 0.586 d
KOI: K07089.01 Corr: 0.807

Kp: 14.28 R*: 0.61 Rs Teff: 4556.0 K Logg: 4.68 Fe/H: -0.320



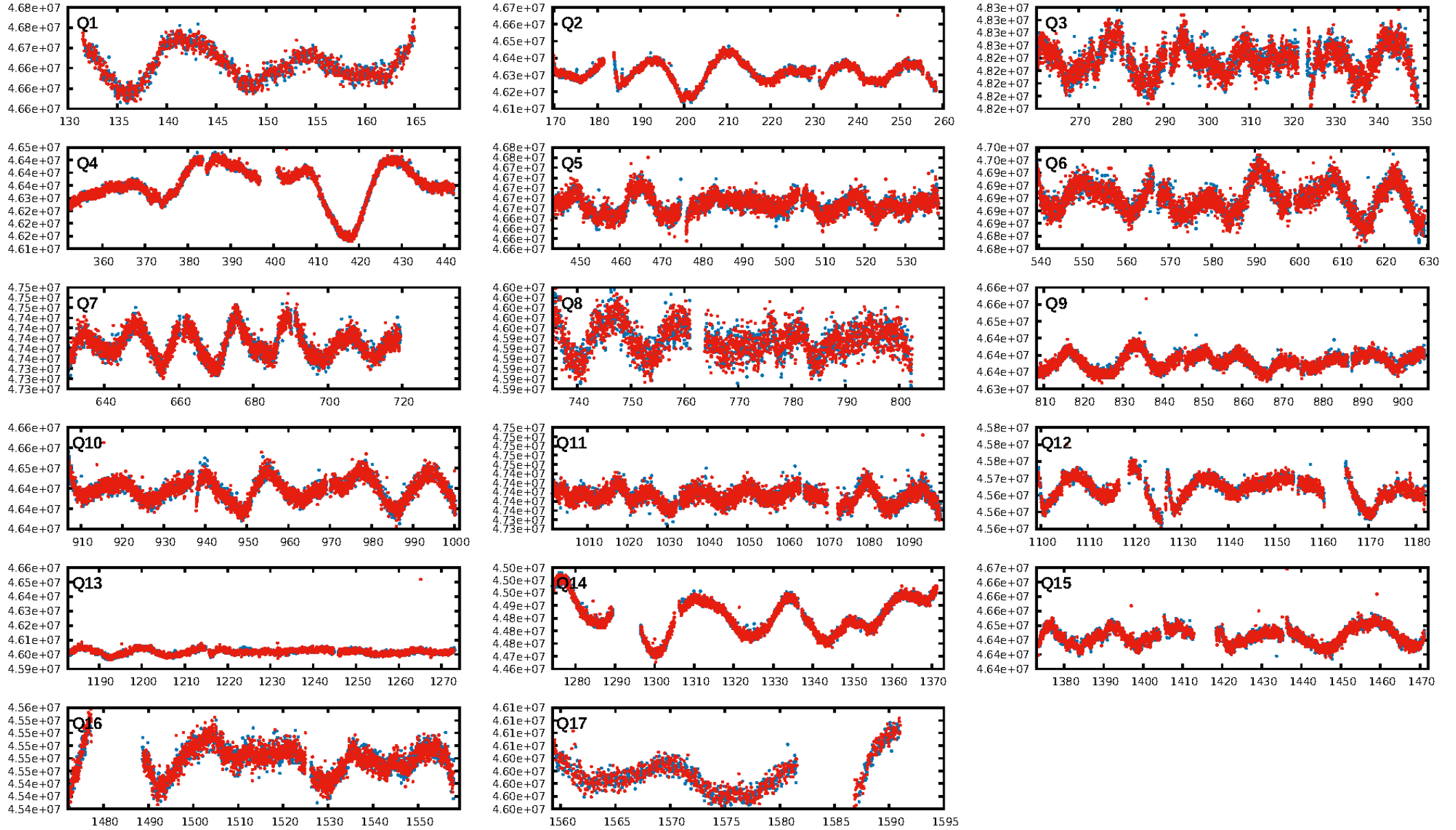
DV Fit Results:

Period = 0.58638 [0.00001] d
Epoch = 131.5661 [0.0043] BKJD
Rp/R* = 0.0044 [0.0037]
a/R* = 1.25 [1.18]
b = 0.09 [29.72]
Seff = 1030.16 [162.89]
Teq = 1445 [57] K
Rp = 0.29 [0.25] Re
a = 0.0119 [0.0009] AU
Ag = 9.01 [15.52] [0.52σ]
Teff = 3870 [1667] K [1.45σ]

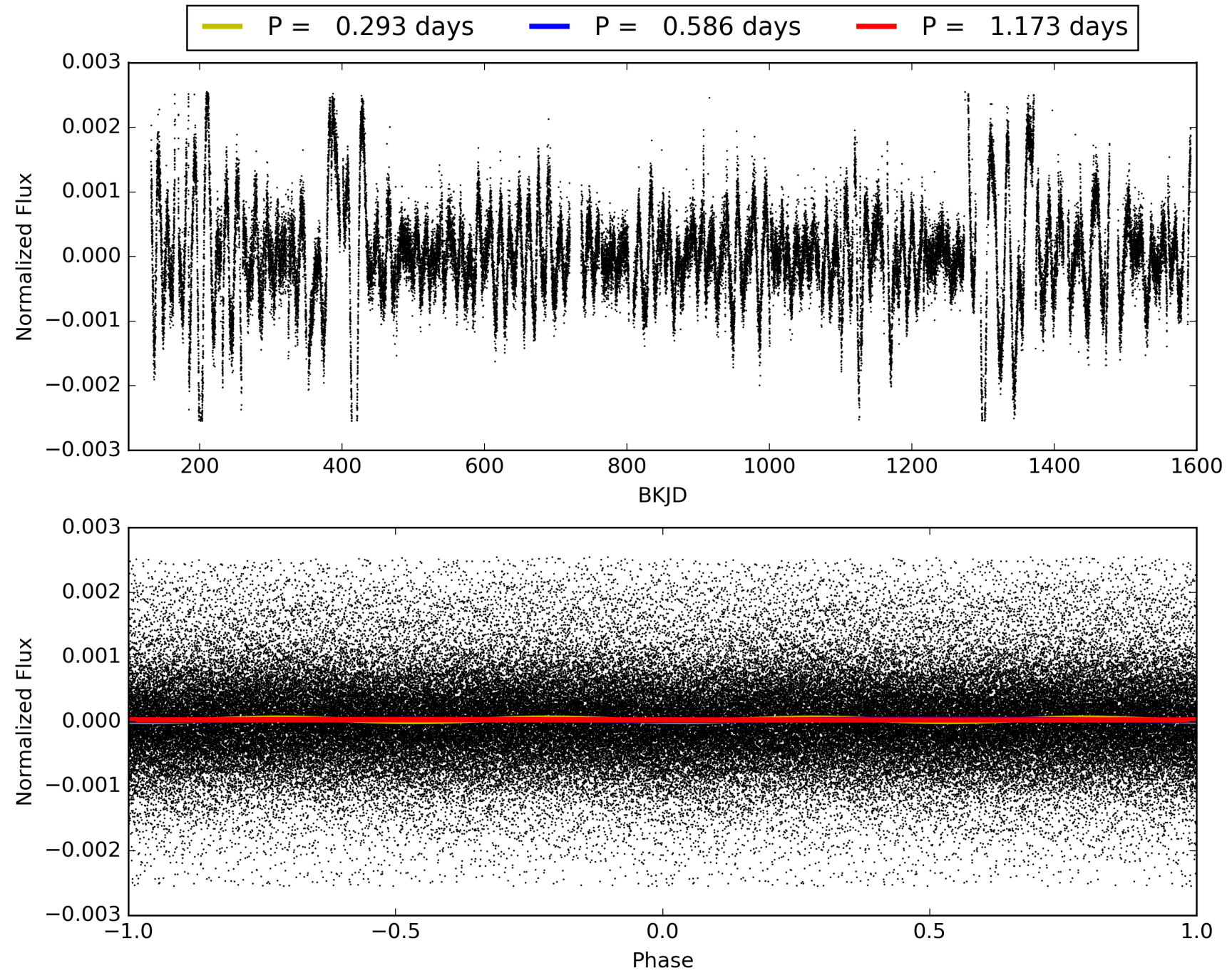
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [54.71σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 2.84e-16
RollingBand-fgt: 1.00 [2181/2181]
GhostDiagnostic-chr: -2.293
Centroid-sig: 0.0%
Centroid-so: 4.816 arcsec [4.68σ]
OotOffset-rm: 9.658 arcsec [117.84σ]
KicOffset-rm: 9.676 arcsec [117.95σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008767034-01, PDC Light Curves

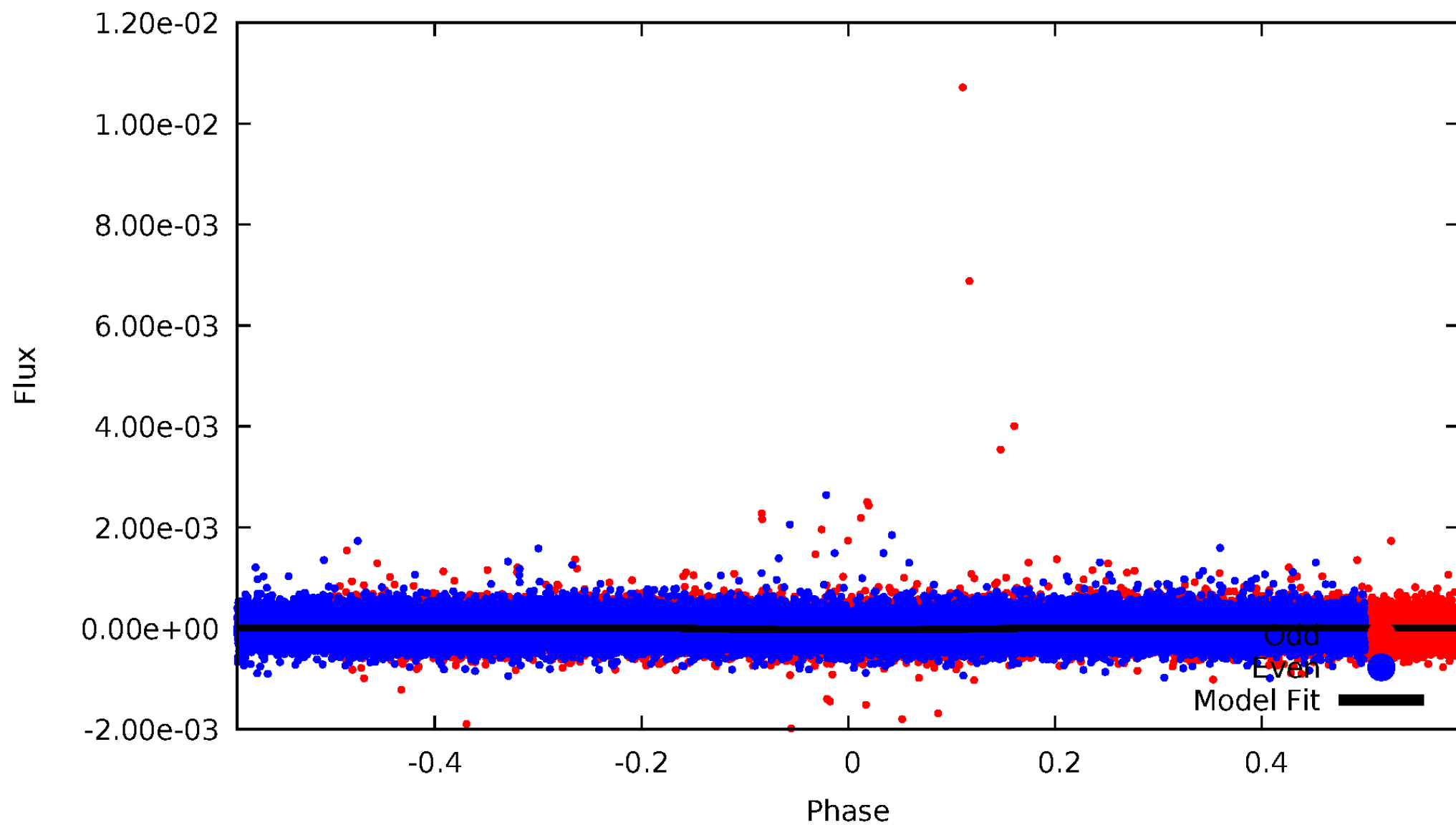


TCE 008767034-01



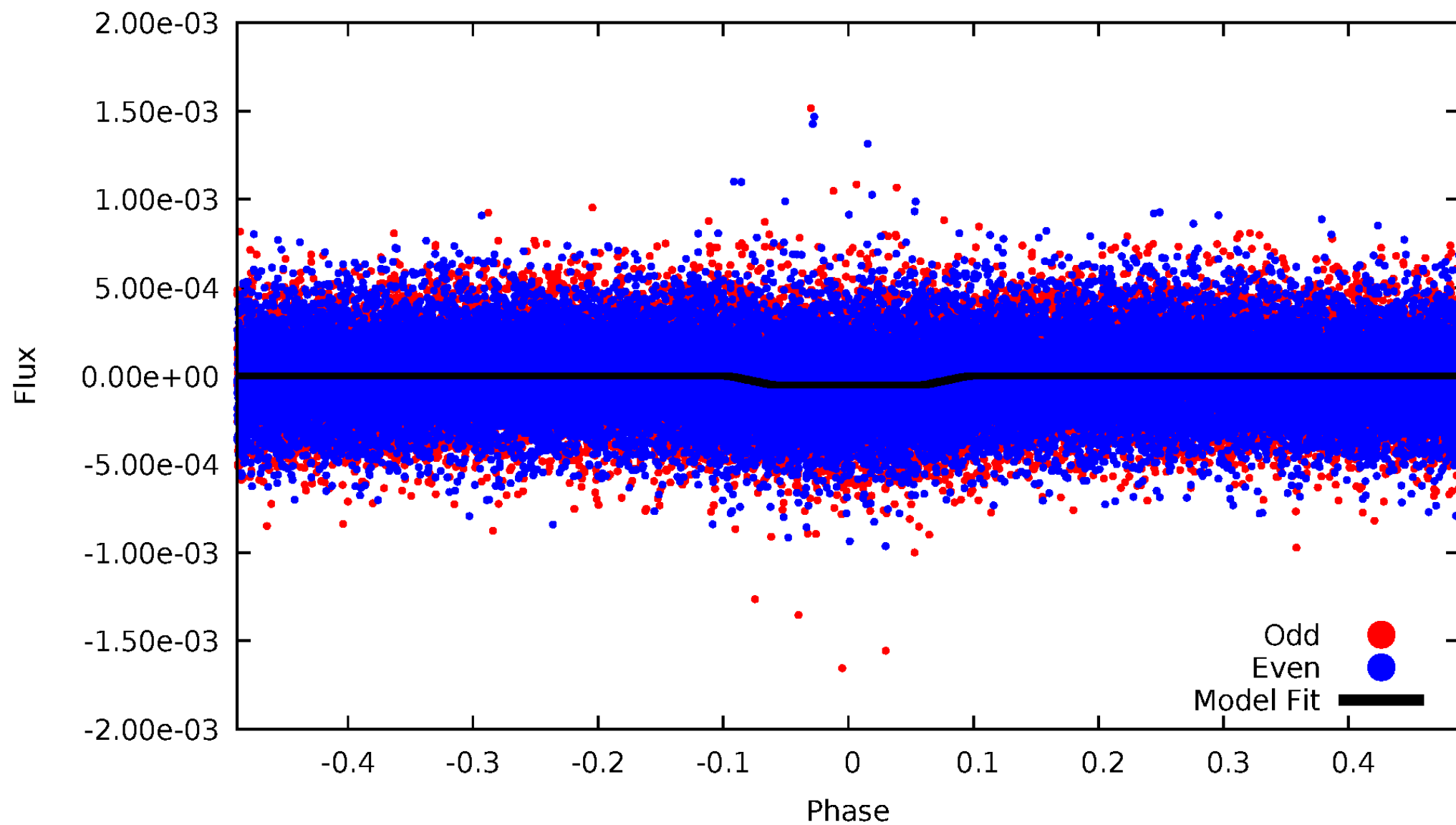
DV Odd/Even

TCE 008767034-01



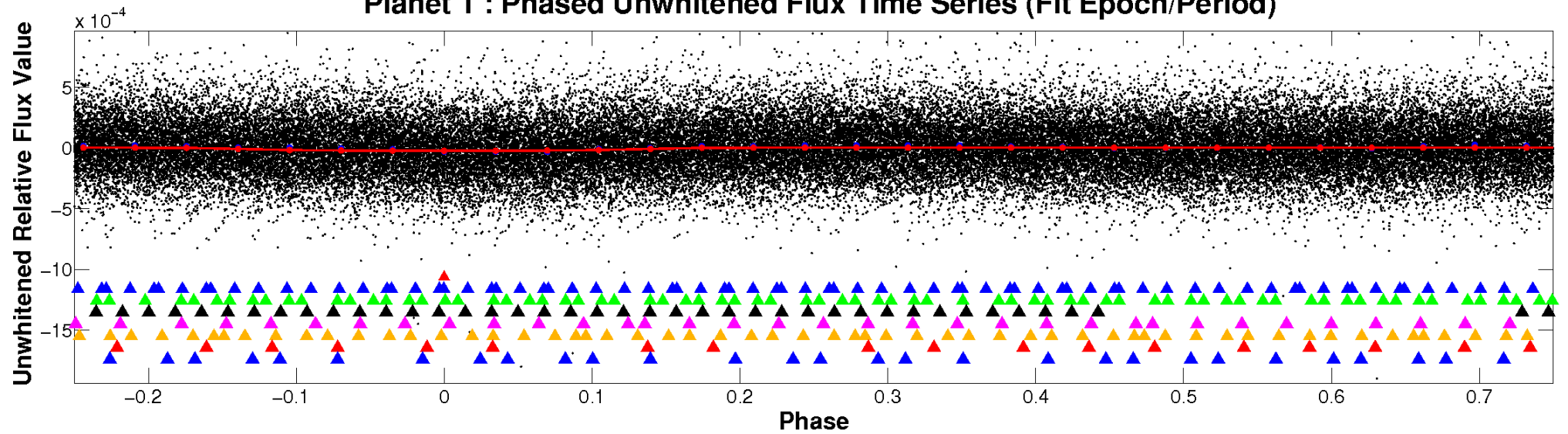
ALT Odd/Even

TCE 008767034-01

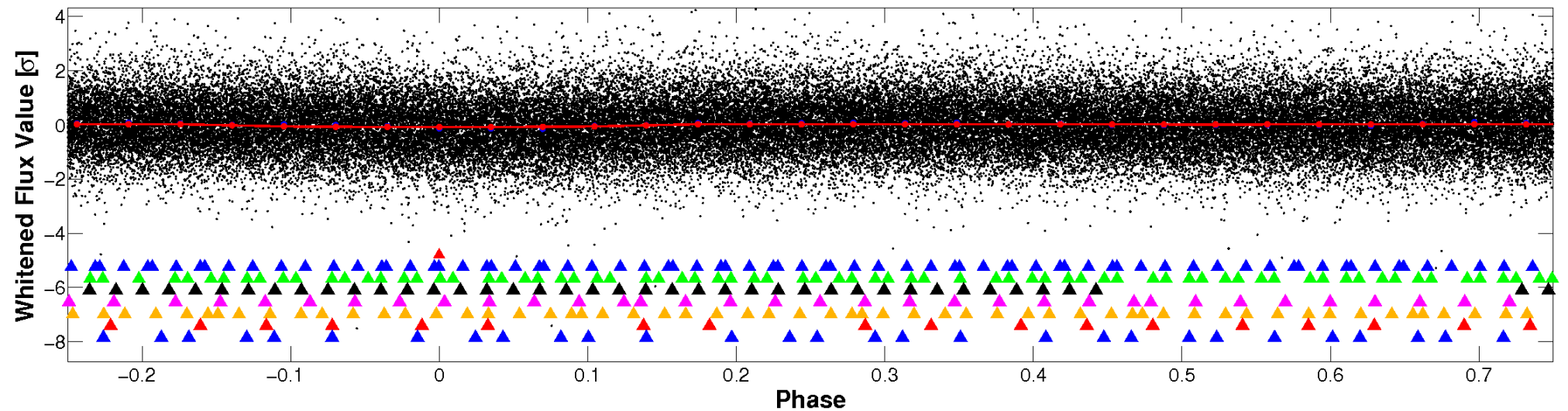


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

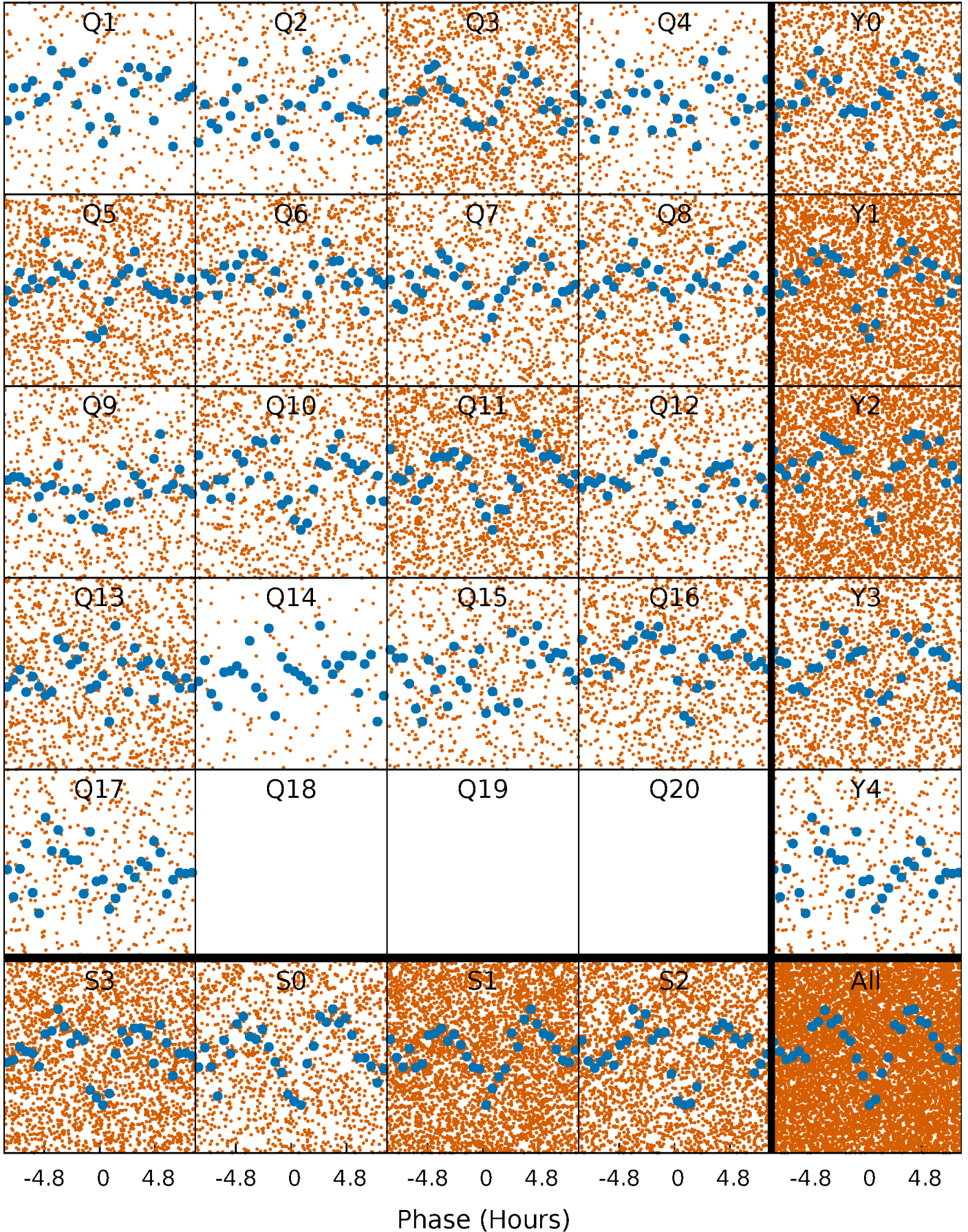


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



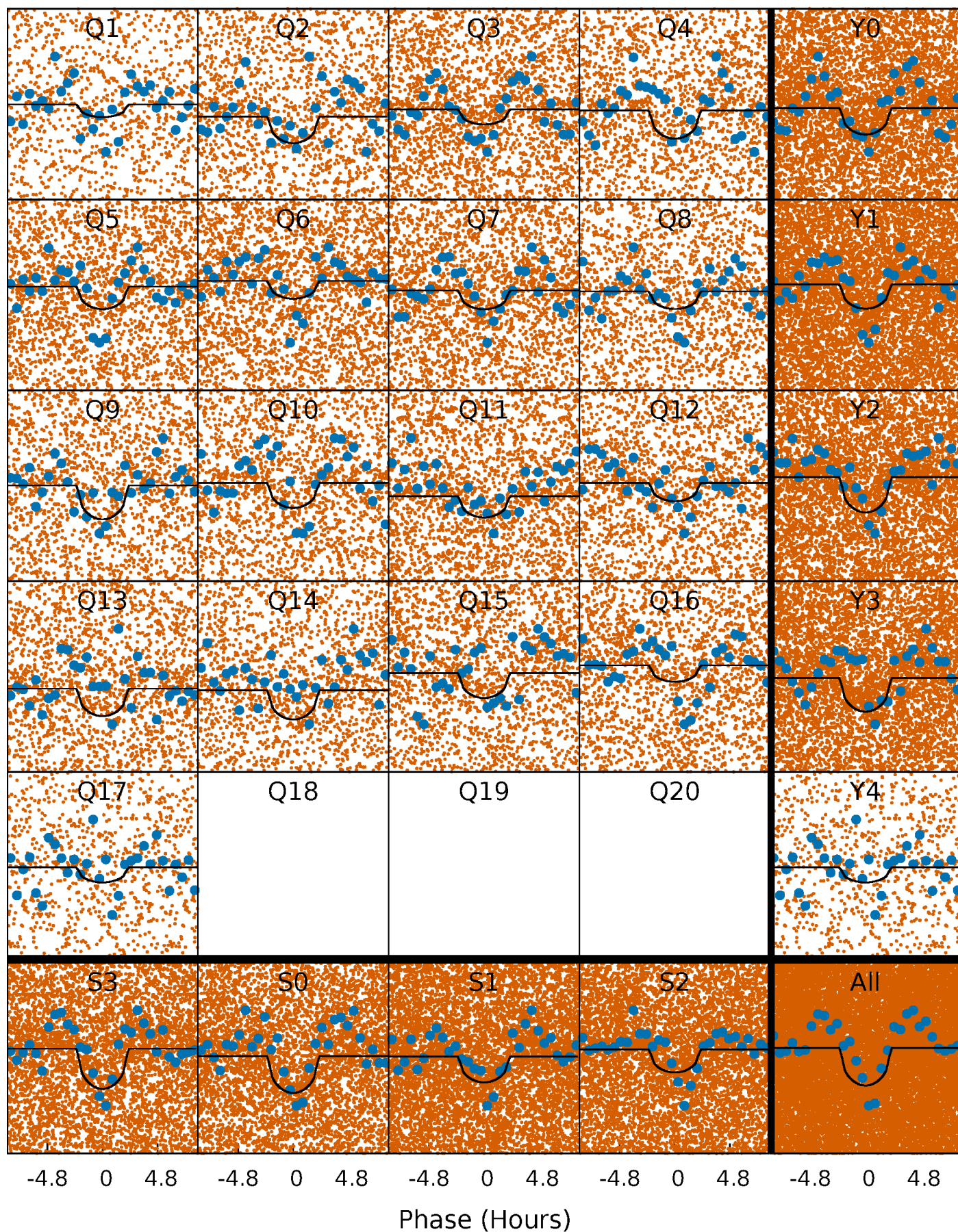
PDC Quarter-Phased Transit Curves

TCE 008767034-01 P= 0.586382 Days $T_0=131.566135$ (BKJD)



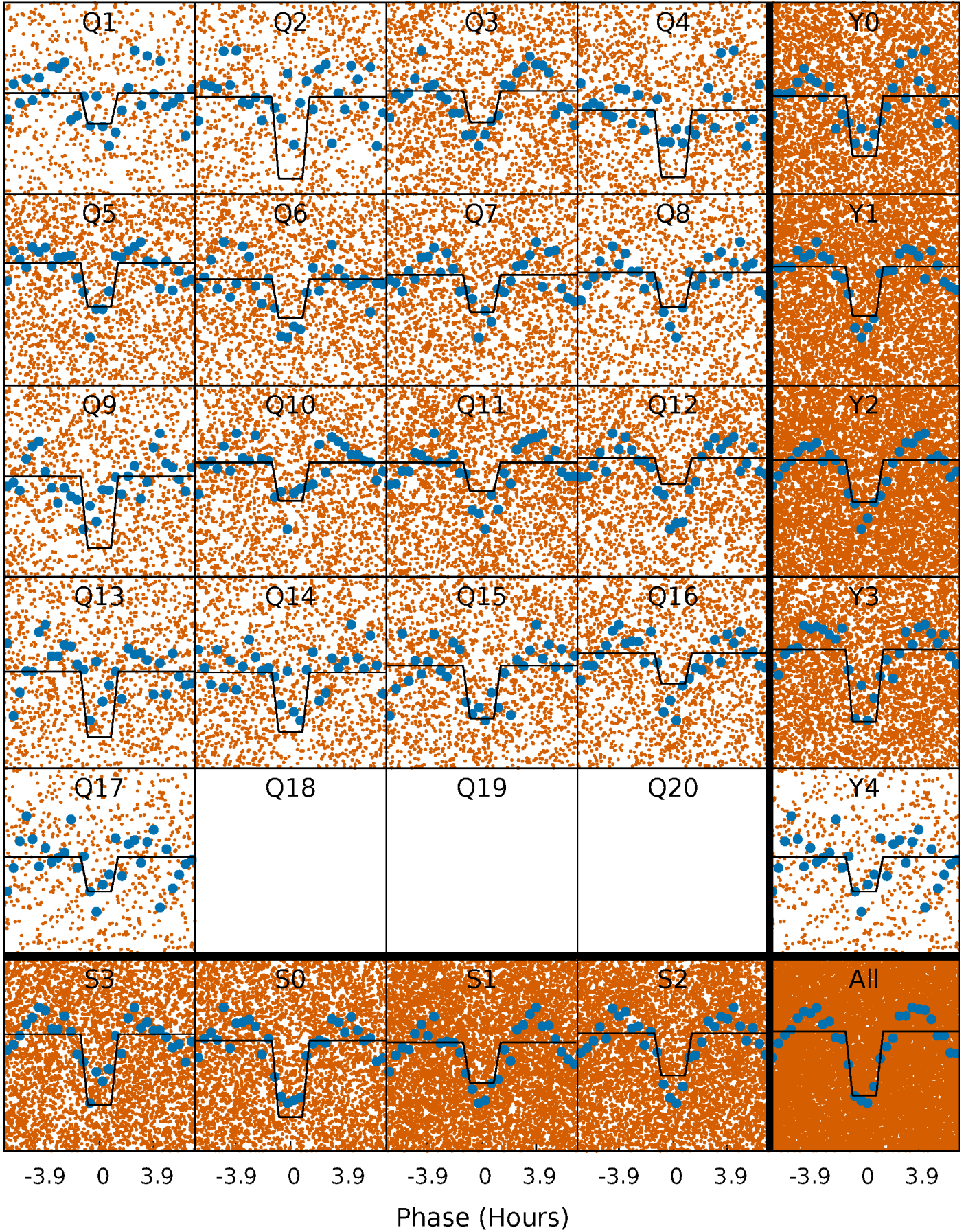
DV Quarter-Phased Transit Curves

TCE 008767034-01 P= 0.586382 Days $T_0=131.566135$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

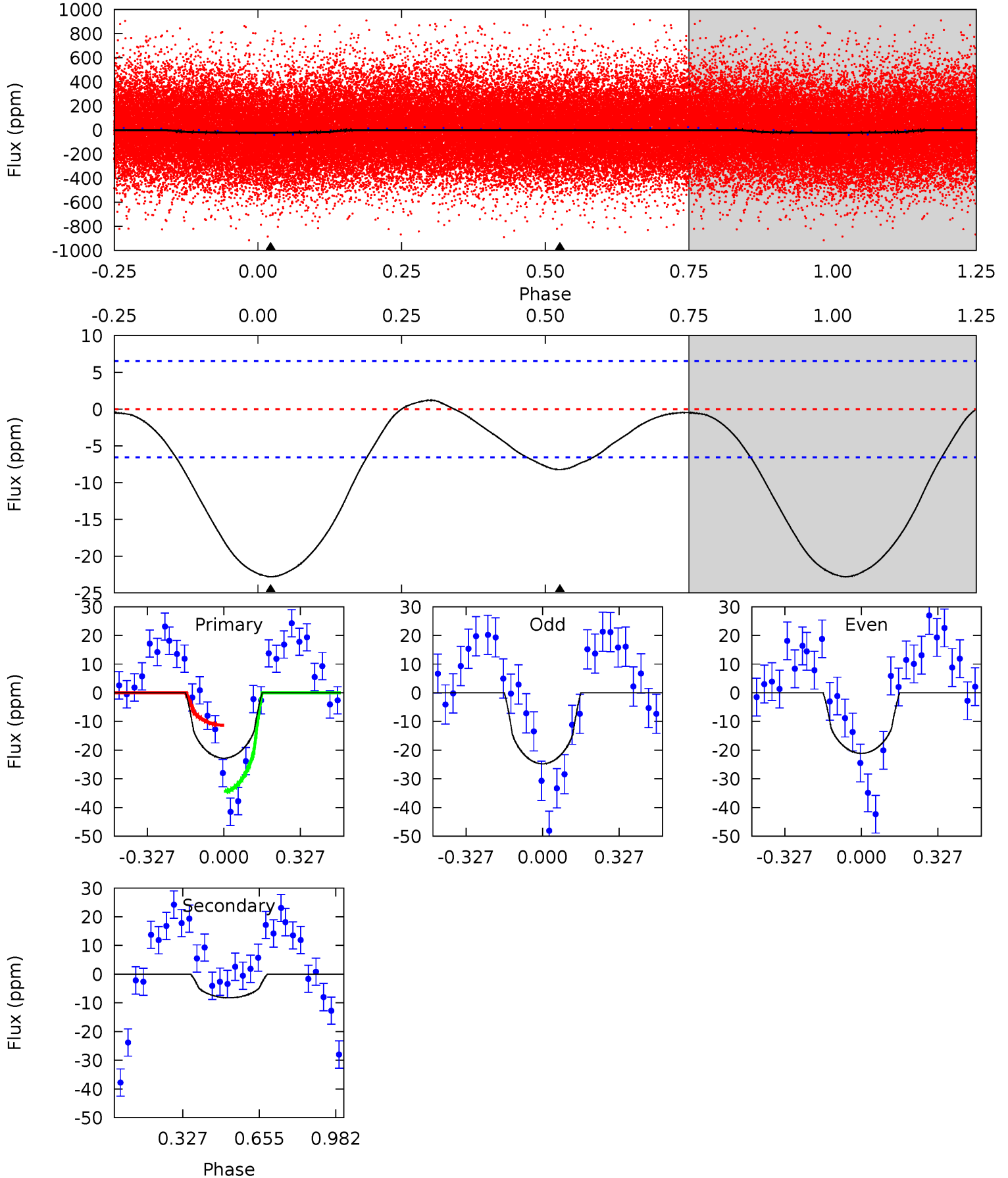
TCE 008767034-01 P= 0.586404 Days $T_0=131.562578$ (BKJD)



DV Model-Shift Uniqueness Test

008767034-01, P = 0.586382 Days, E = 130.979753 Days

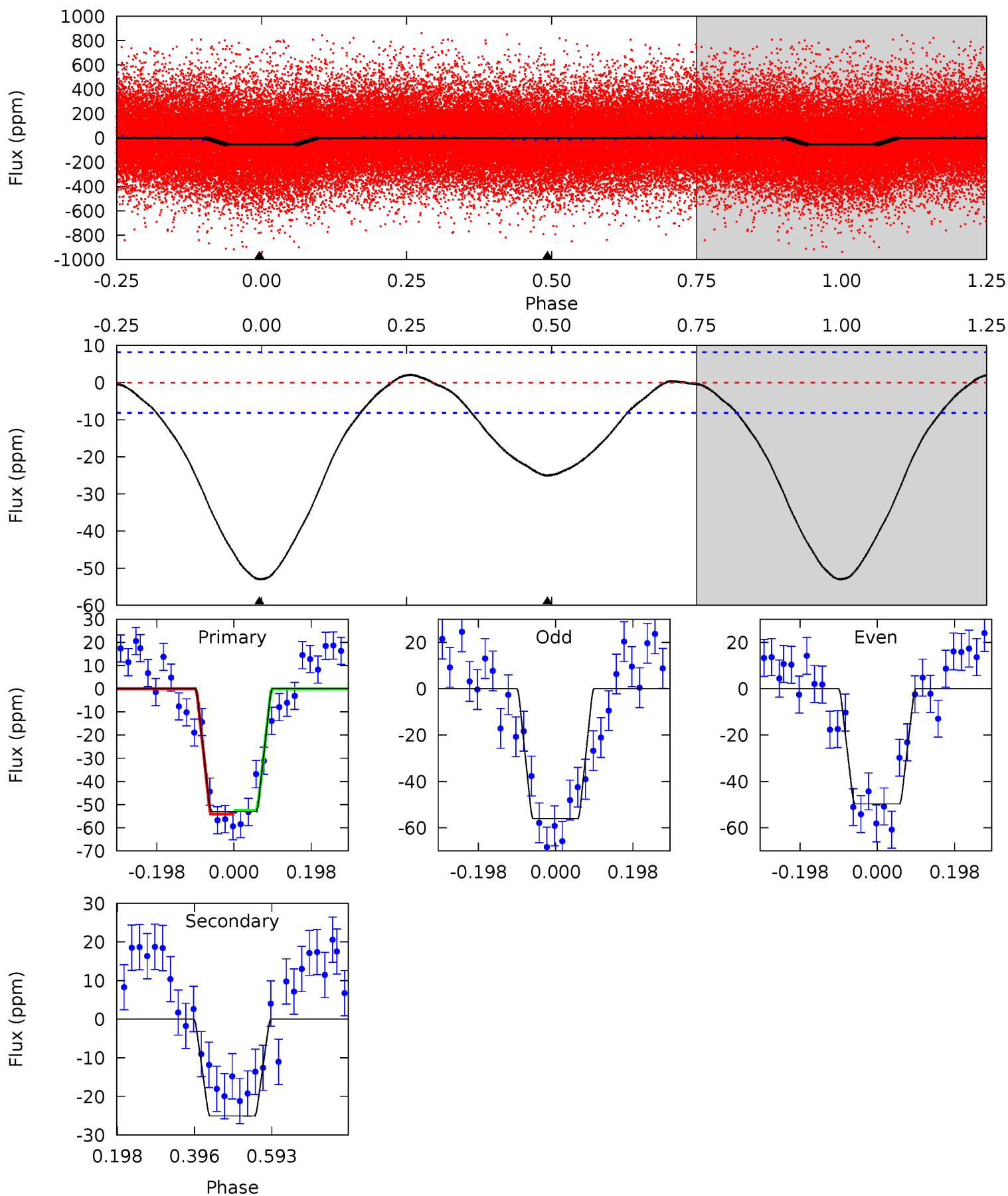
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	5.41	0	0	4.31	0.98	0.55	15.0	15.0	5.41	5.41	1.20	1.02	0.05	7.54



Alt Model-Shift Uniqueness Test

008767034-01, P = 0.586404 Days, E = 130.976174 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	13.6	0	0	4.42	1.29	0.94	28.7	28.7	13.6	13.6	1.72	1.03	0.04	0.43



Stellar Parameters For KIC 008767034

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4556^{+136}_{-123}	$4.676^{+0.028}_{-0.052}$	$-0.320^{+0.300}_{-0.300}$	$0.615^{+0.061}_{-0.041}$	$0.669^{+0.058}_{-0.064}$	$4.042^{+0.520}_{-0.813}$
	+3%/-3%	+1%/-1%	+94%/-94%	+10%/-7%	+9%/-10%	+13%/-20%
Source	PHO1	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 008767034-01 / KOI 7089.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 2	$0.33^{+0.22}_{-0.19}$	2034^{+73}_{-61}	3709^{+1550}_{-592}	$5.615^{+27.761}_{-3.596}$
Alt.	-25 ± 2	$0.50^{+0.25}_{-0.24}$	2032^{+65}_{-61}	3909^{+1164}_{-496}	$7.892^{+21.516}_{-4.396}$

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

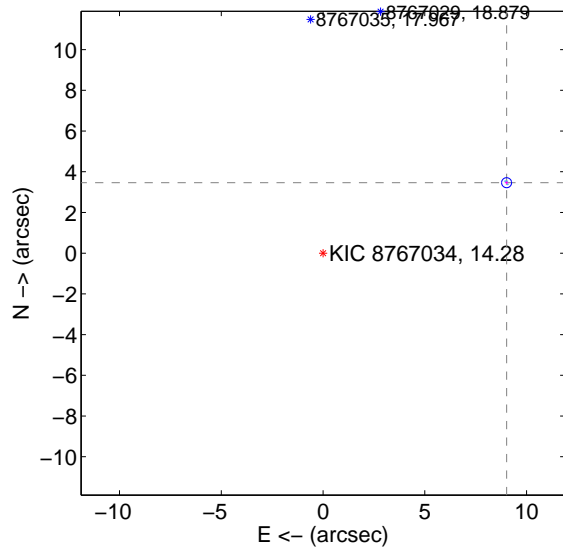
Supplemental centroid analysis for 008767034-01. Kepler magnitude: 14.28. Transit SNR 9.79

There are 3 quarters with good PRF difference image offsets

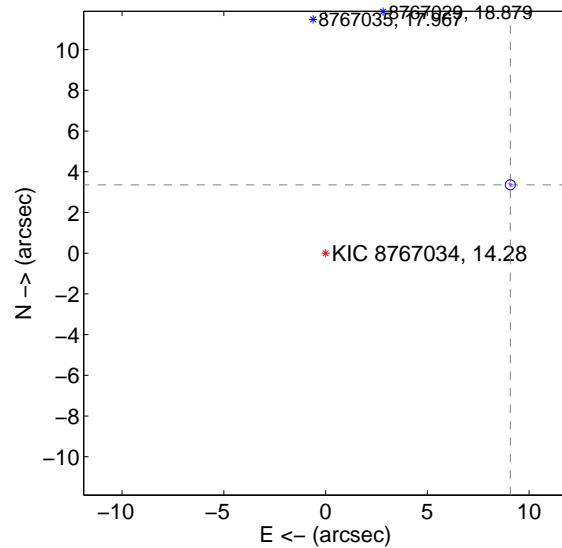
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.658 ± 0.082	117.84	-9.016 ± 0.083	3.462 ± 0.073
PRF-fit source offset from KIC position	9.676 ± 0.082	117.95	-9.074 ± 0.083	3.357 ± 0.073
photometric centroid source offset	4.82 ± 1.03	4.68	0.65 ± 1.00	4.77 ± 1.03

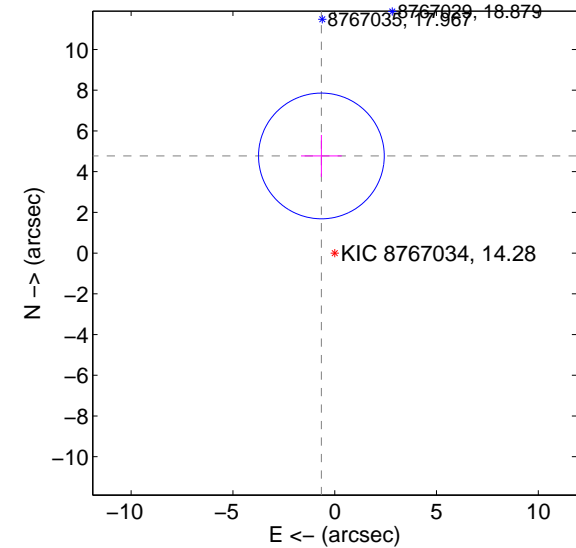
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

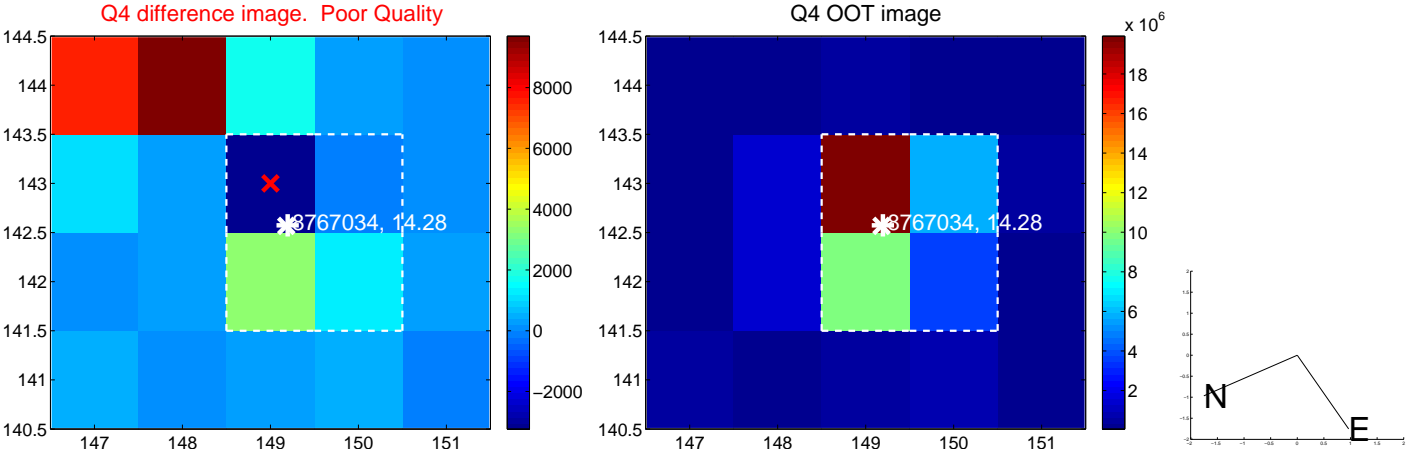
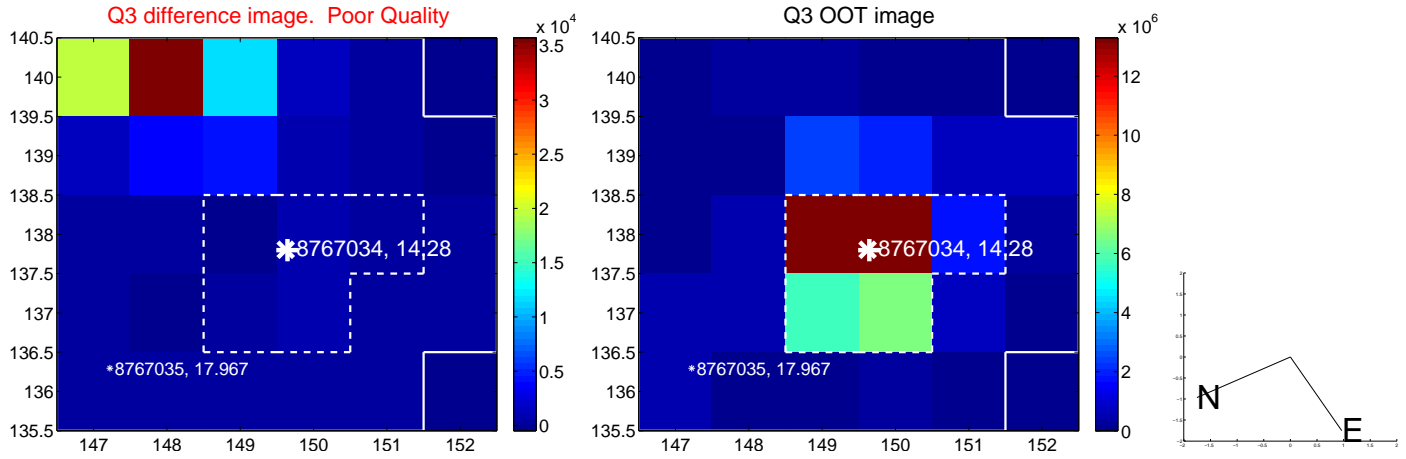
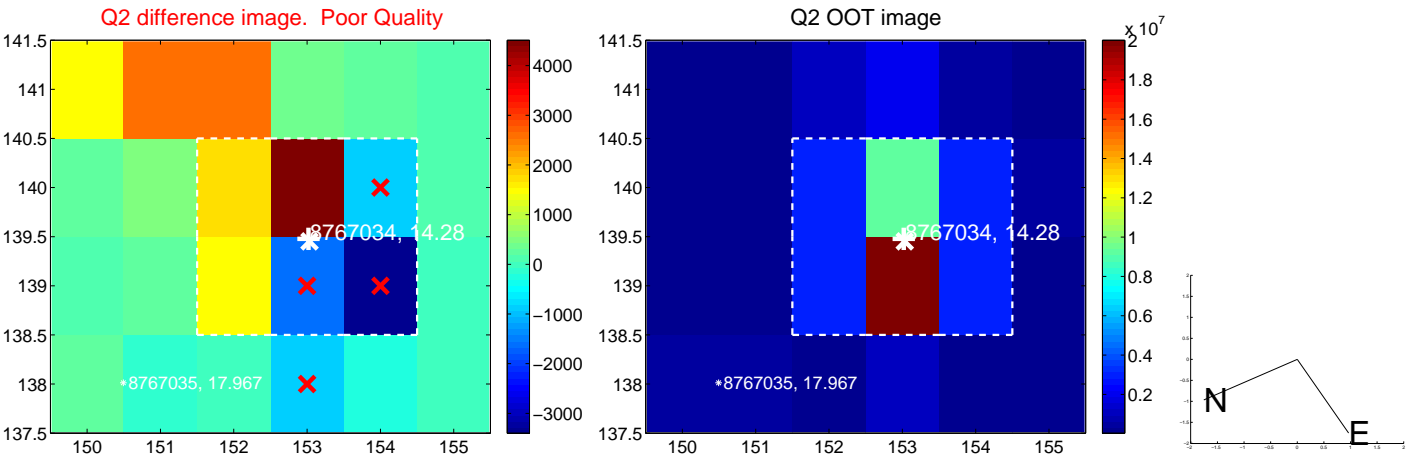
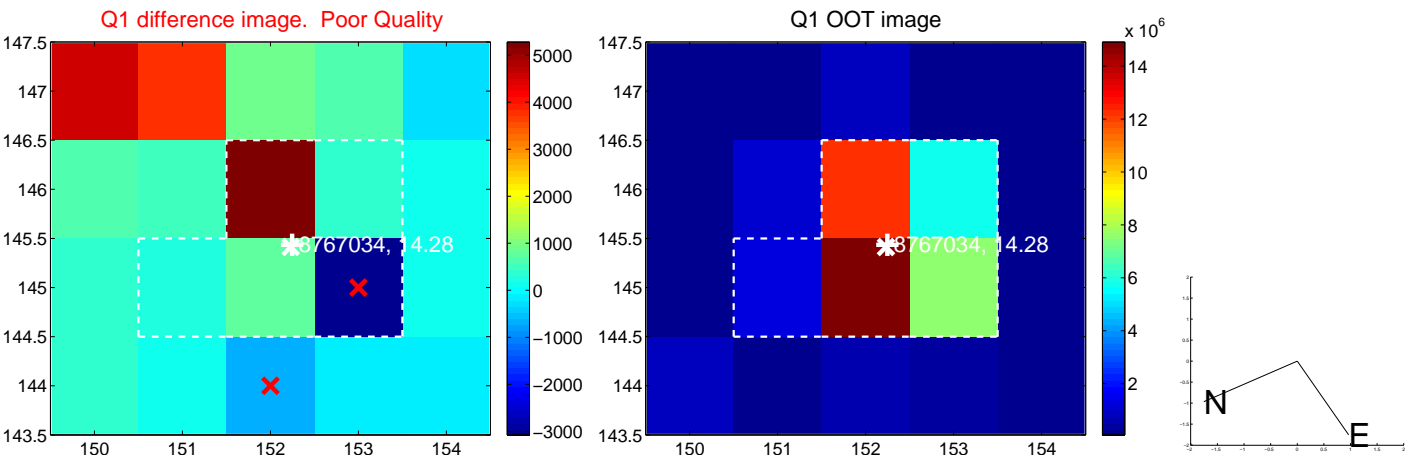


offset from photometric centroids

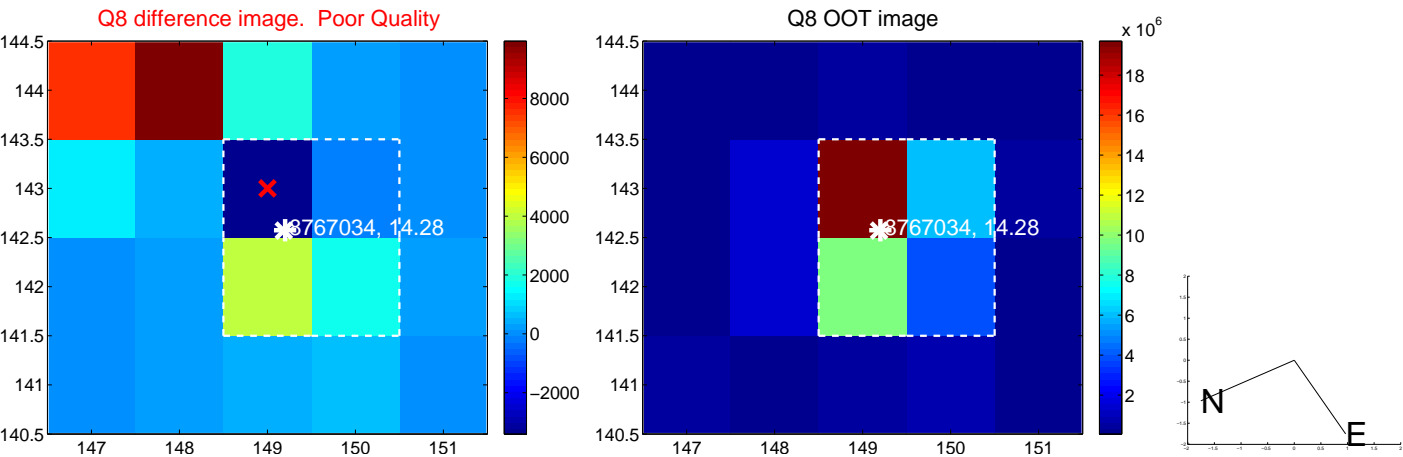
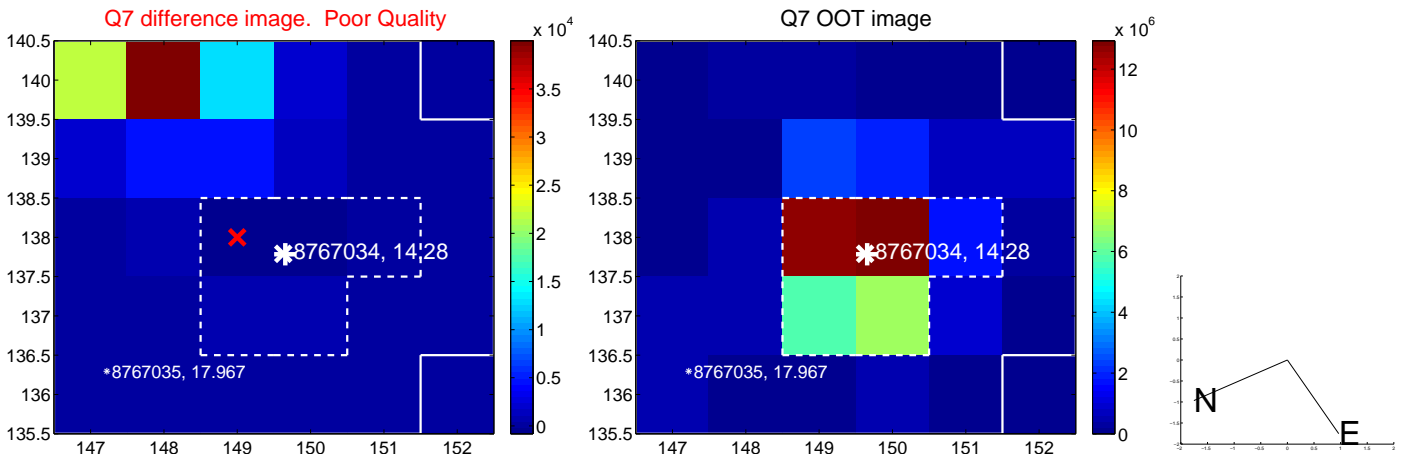
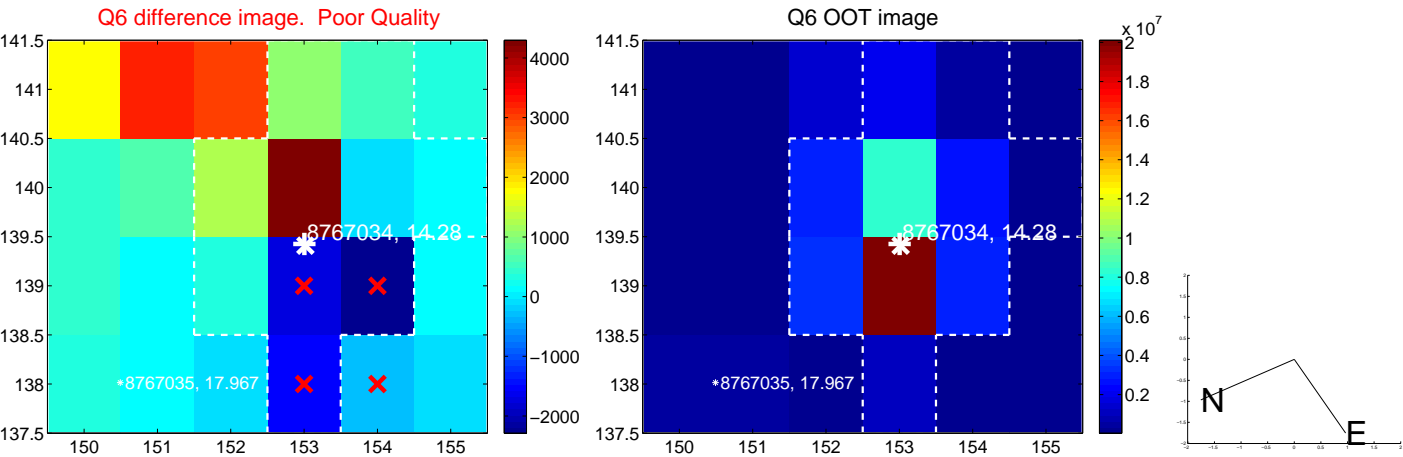
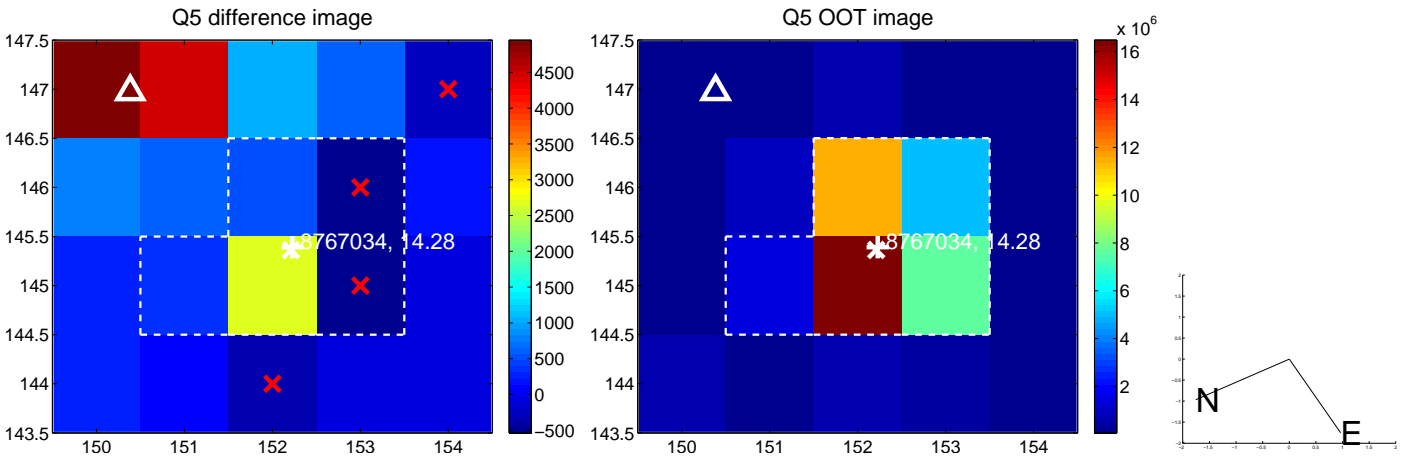


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

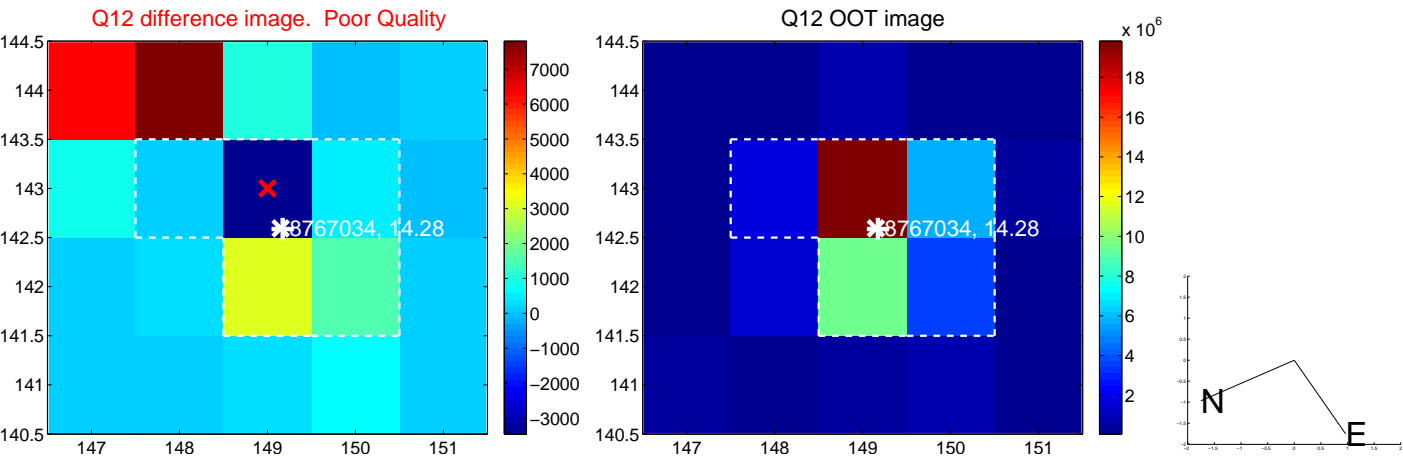
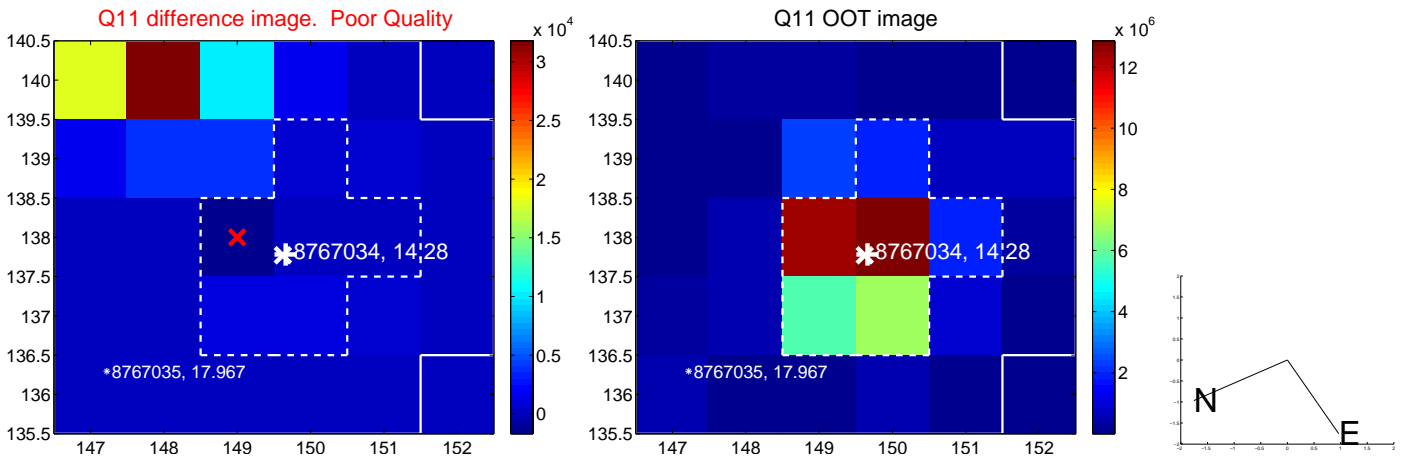
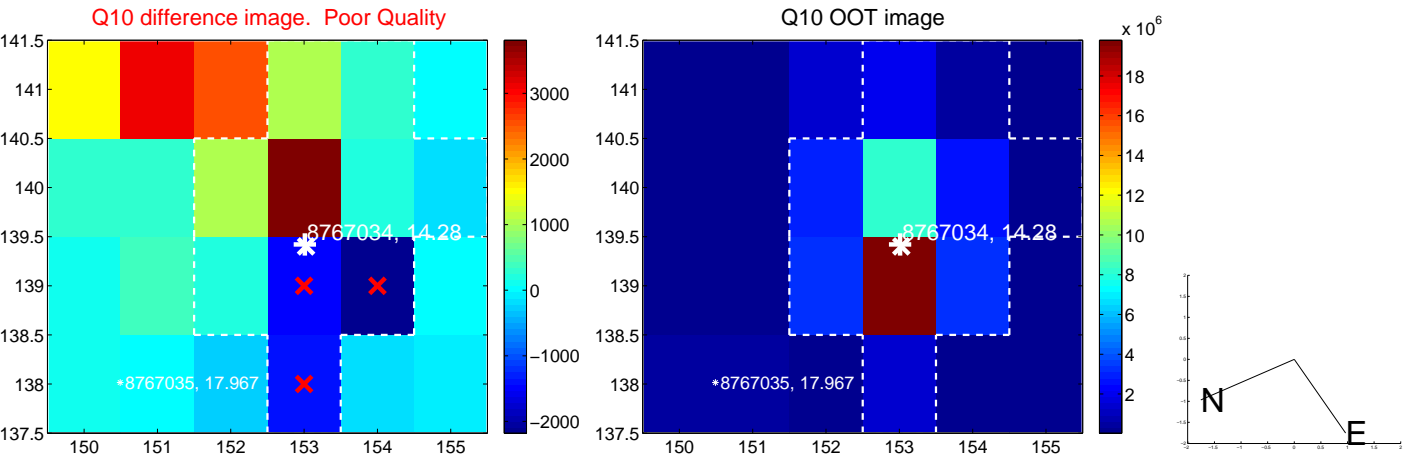
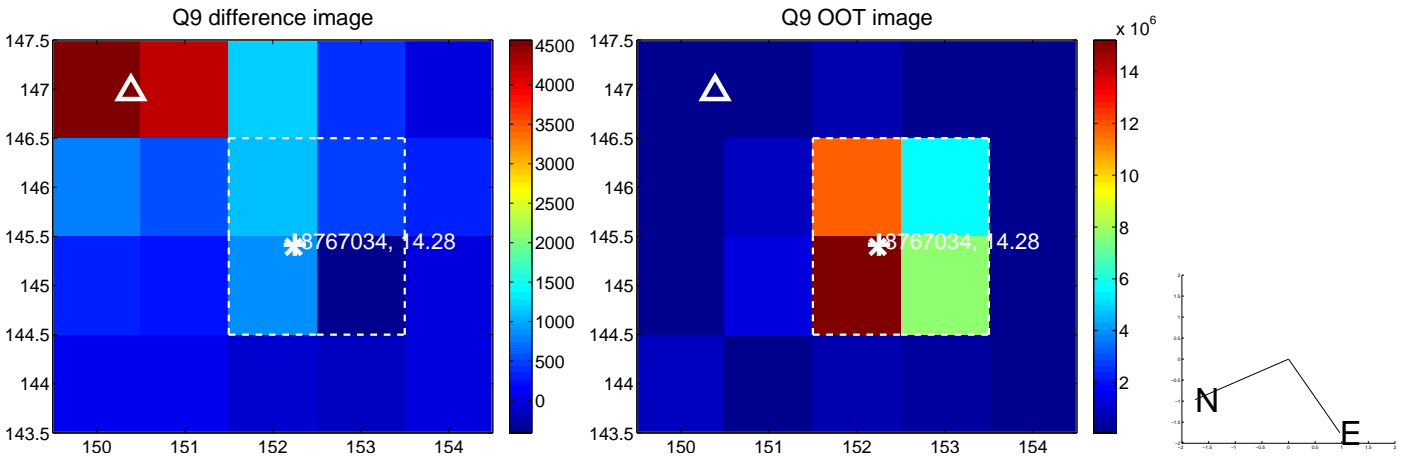
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



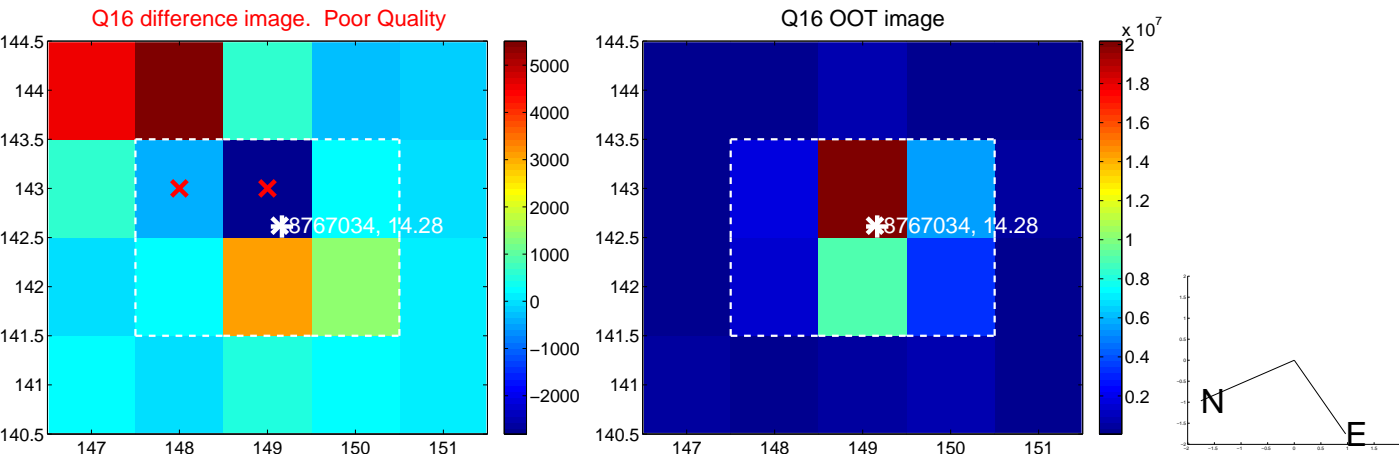
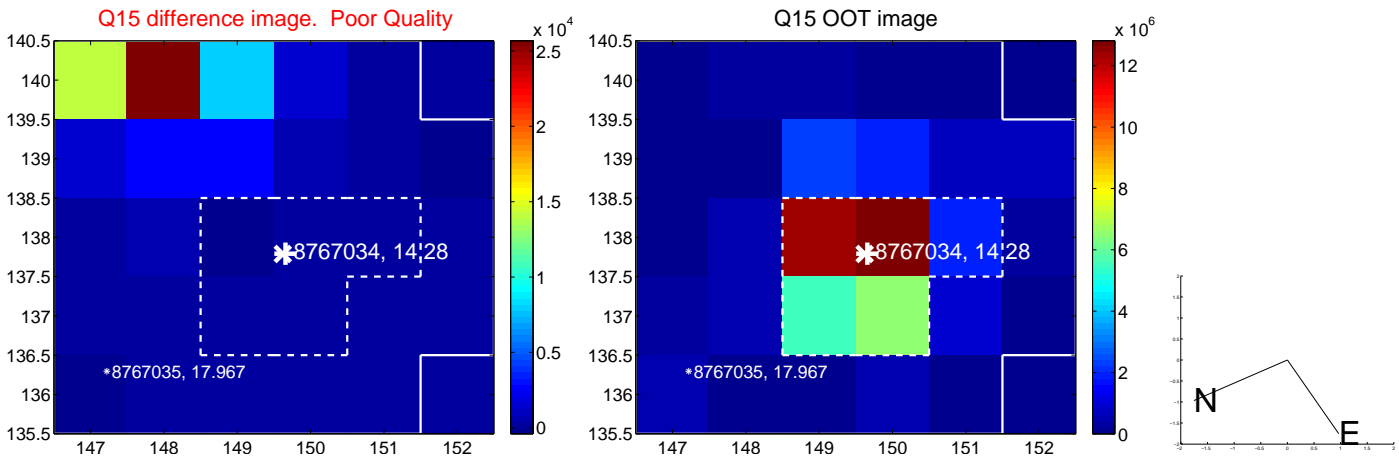
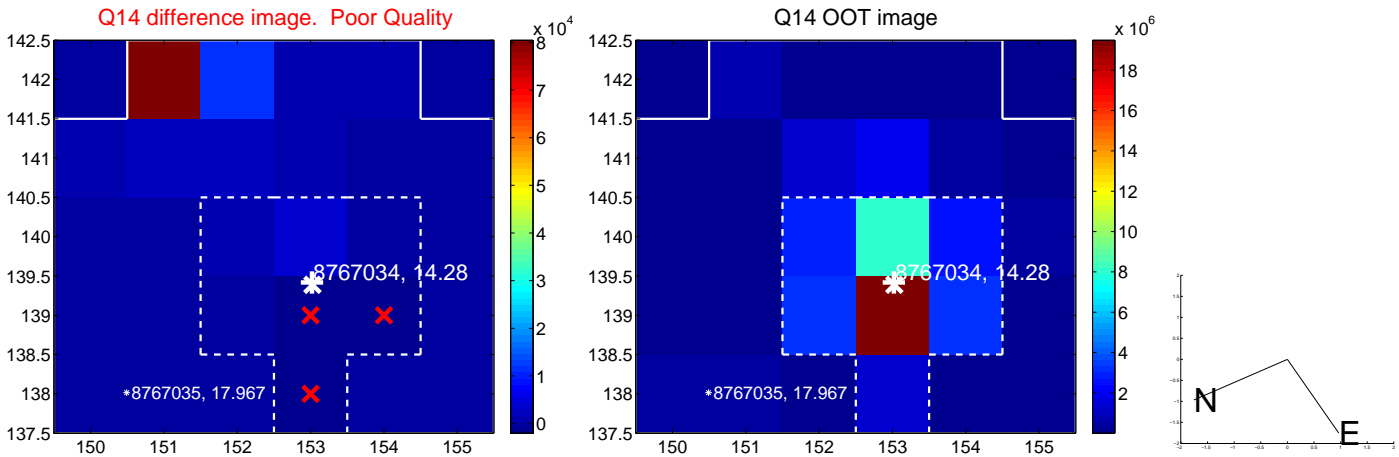
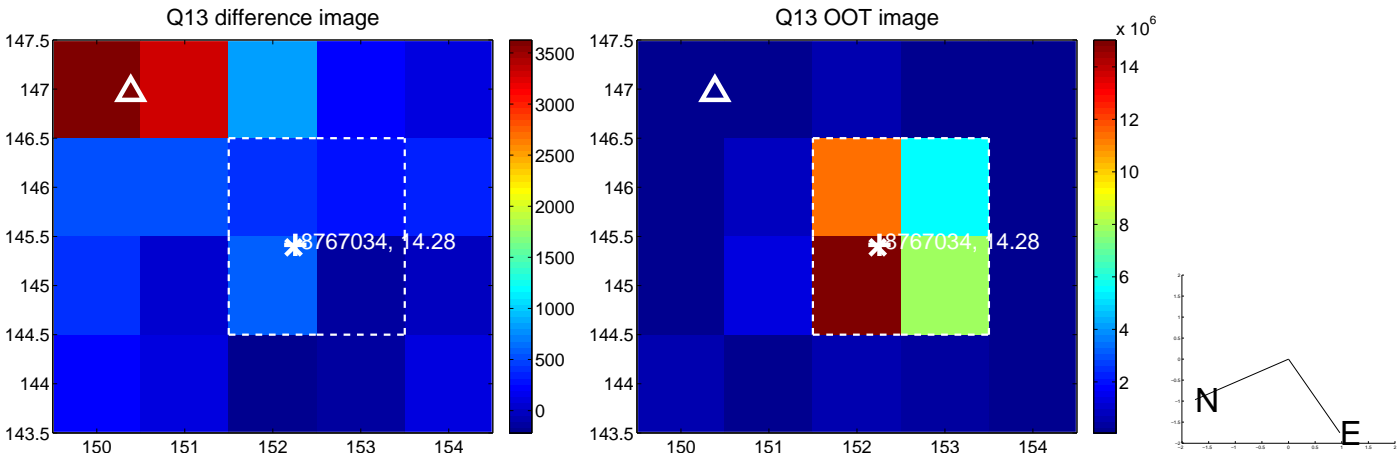
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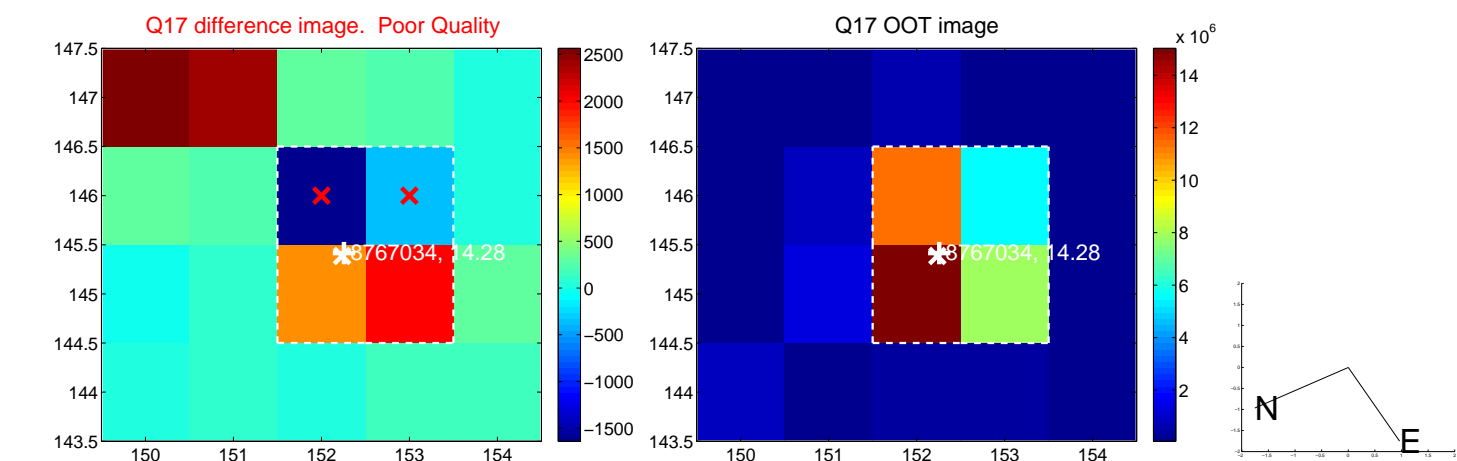
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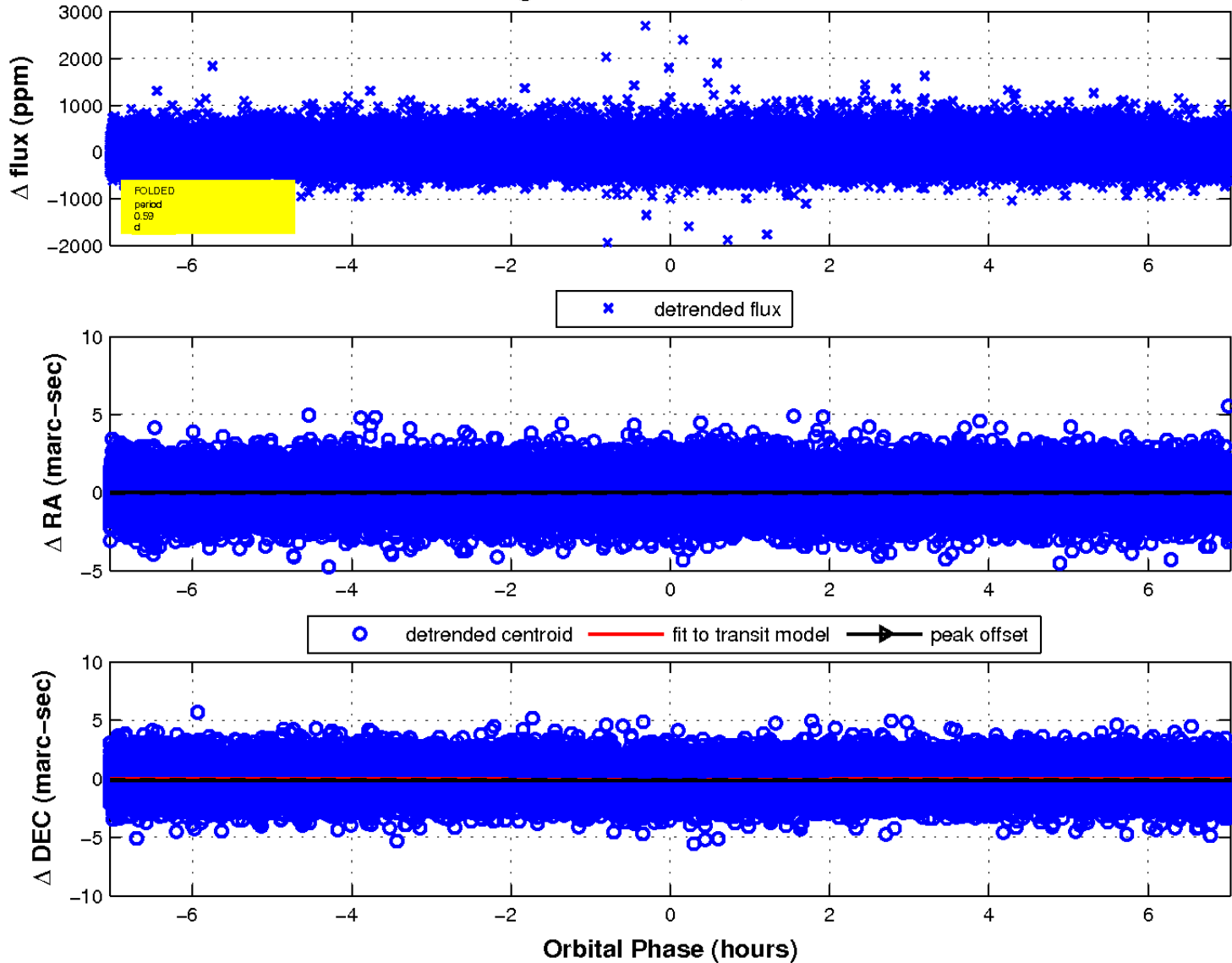
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

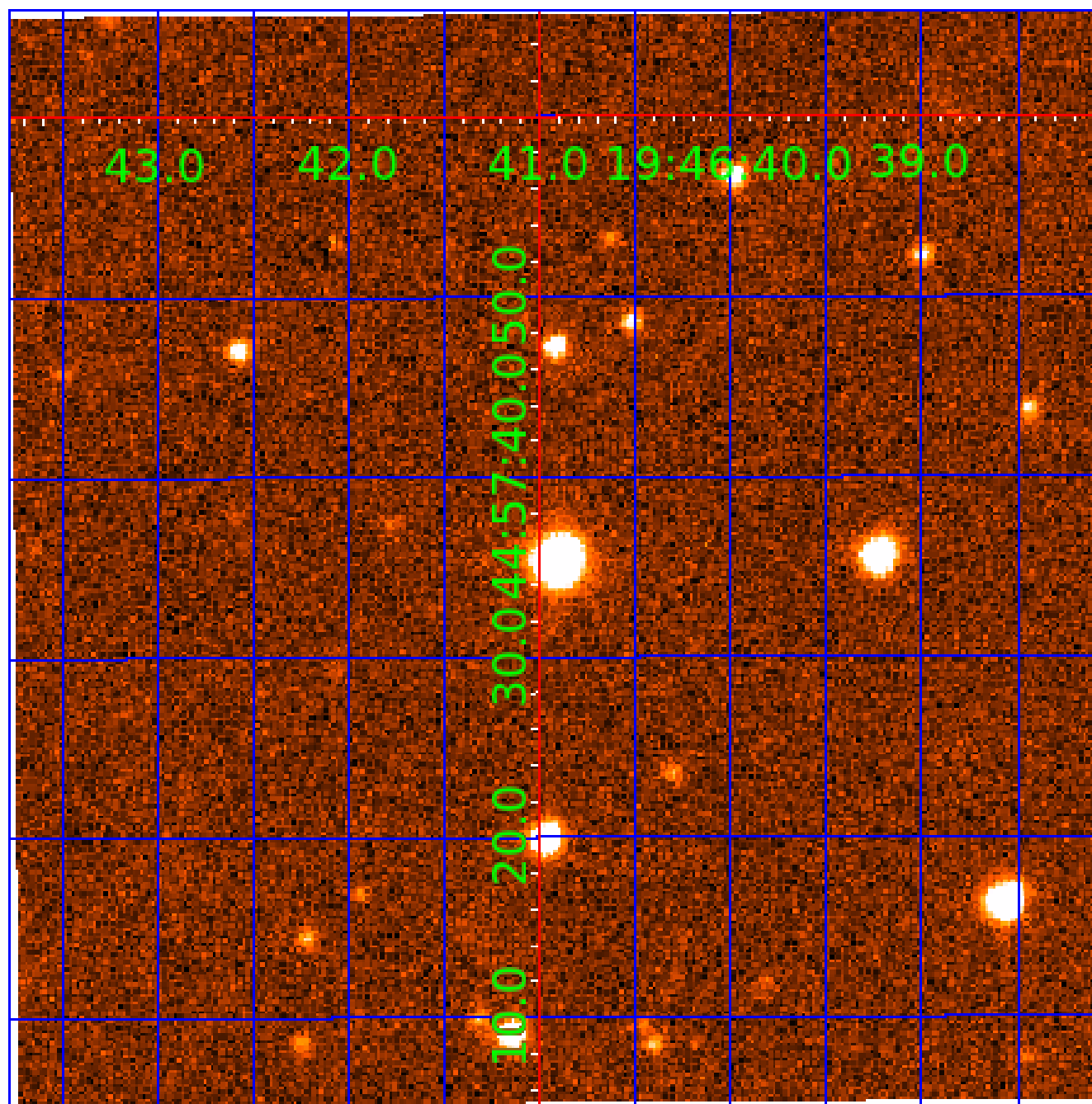


fluxWeightedCentroids, Planet 1 of 8



UKIRT Image

Declination



KIC 008767034

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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Robovetter Results

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008767034-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
008767034-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008767034-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_MEAS
008767034-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_MEAS
008767034-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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 008767034-02

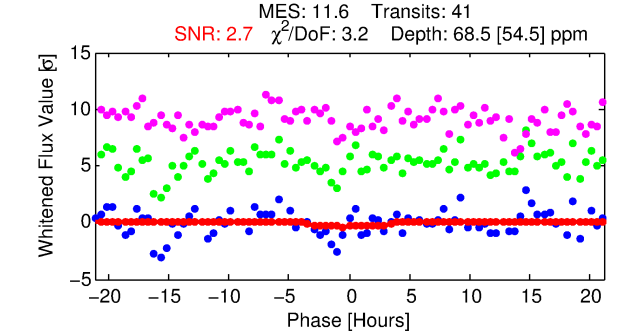
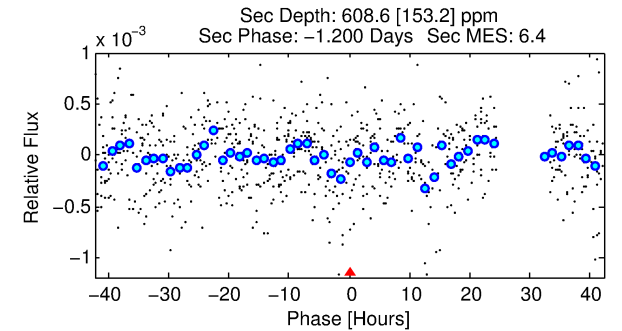
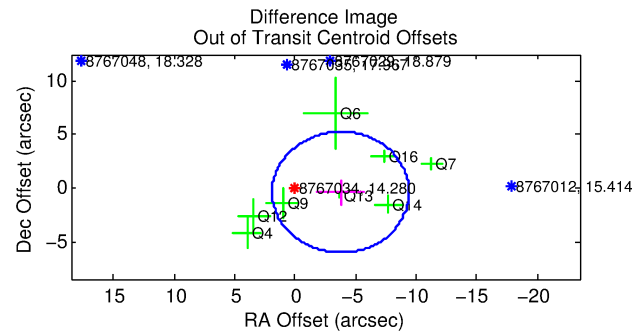
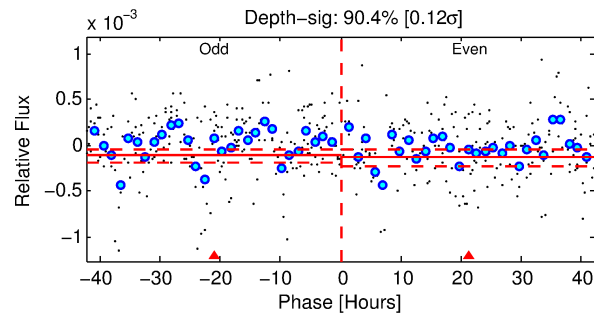
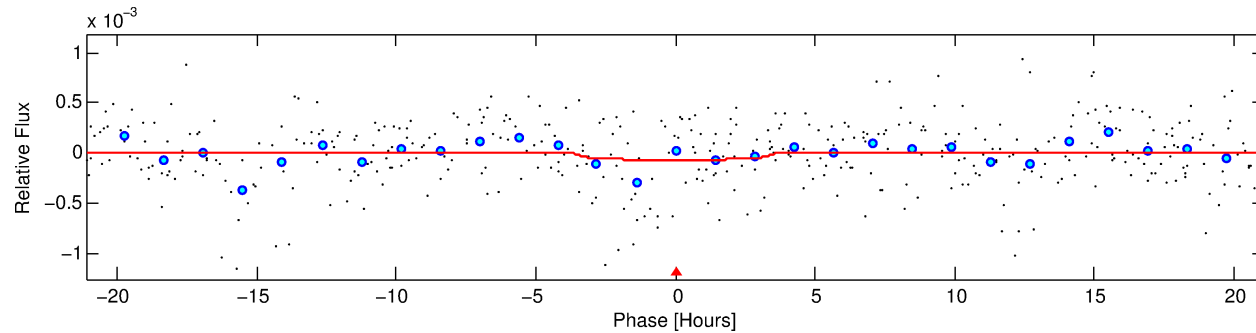
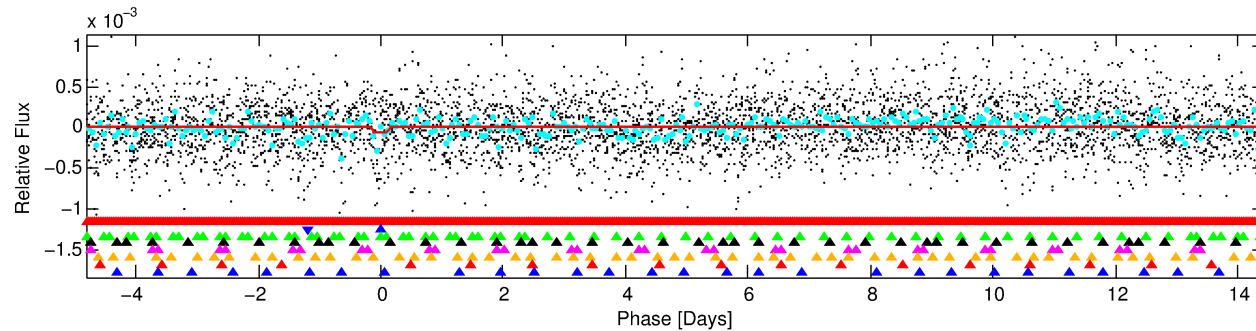
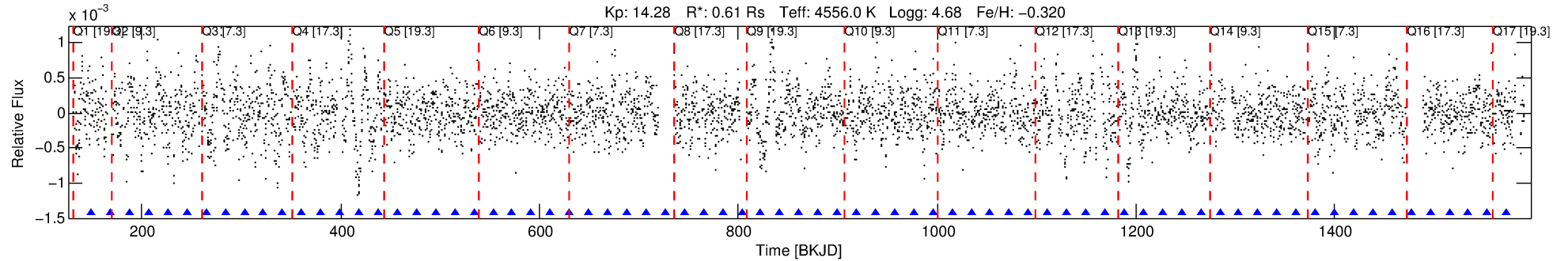
No Significant Match Found

DV One-Page Summary

KIC: 8767034 Candidate: 2 of 8 Period: 19.237 d

KOI: K07089 Corr: No Ephemeris Match

Kp: 14.28 R*: 0.61 Rs Teff: 4556.0 K Logg: 4.68 Fe/H: -0.320



DV Fit Results:

Period = 19.23748 [0.00185] d
Epoch = 149.3612 [0.0753] BKJD
Rp/R* = 0.0086 [0.0301]
a/R* = 12.38 [157.06]
b = 0.82 [5.27]
Seff = 9.81 [1.55]
Teff = 451 [18] K
Rp = 0.58 [2.02] Re
a = 0.1220 [0.0094] AU
Ag = 14920.82 [104429.01] [0.14σ]
Teffp = 7711 [13493] K [0.54σ]

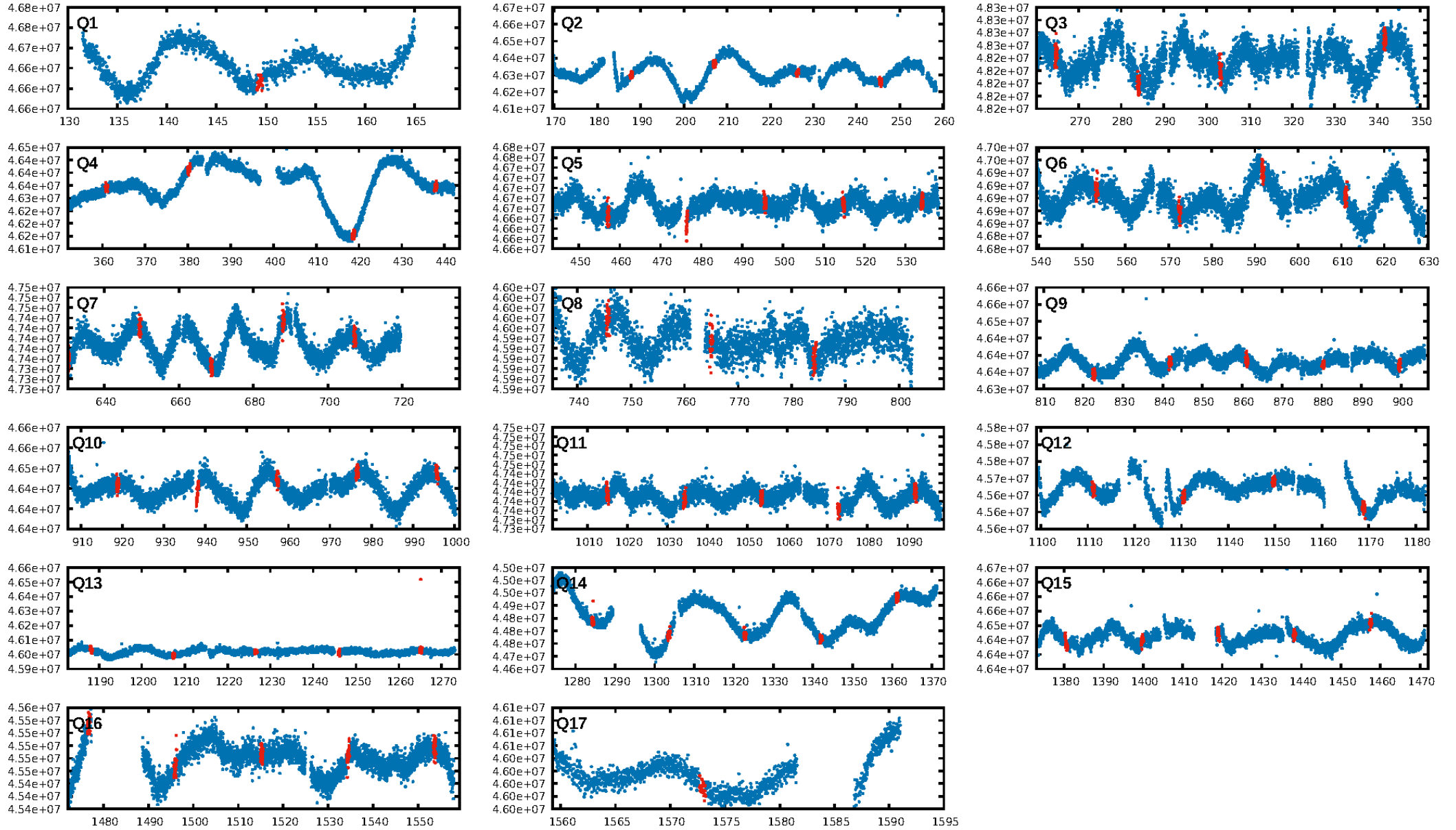
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [54.71σ]
LongPeriod-sig: 78.1% [1.23σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.42e-19
RollingBand-fgt: 1.00 [40/40]
GhostDiagnostic-chr: 0.2005
Centroid-sig: 46.6%
Centroid-so: 1.044 arcsec [0.65σ]
OotOffset-rm: 3.766 arcsec [2.00σ]
KicOffset-rm: 3.833 arcsec [2.16σ]
OotOffset-st: 2/1/3/2 [8]
KicOffset-st: 2/1/3/2 [8]
DiffImageQuality-fgm: 0.00 [0/8]
DiffImageOverlap-fno: 0.00 [0/17]

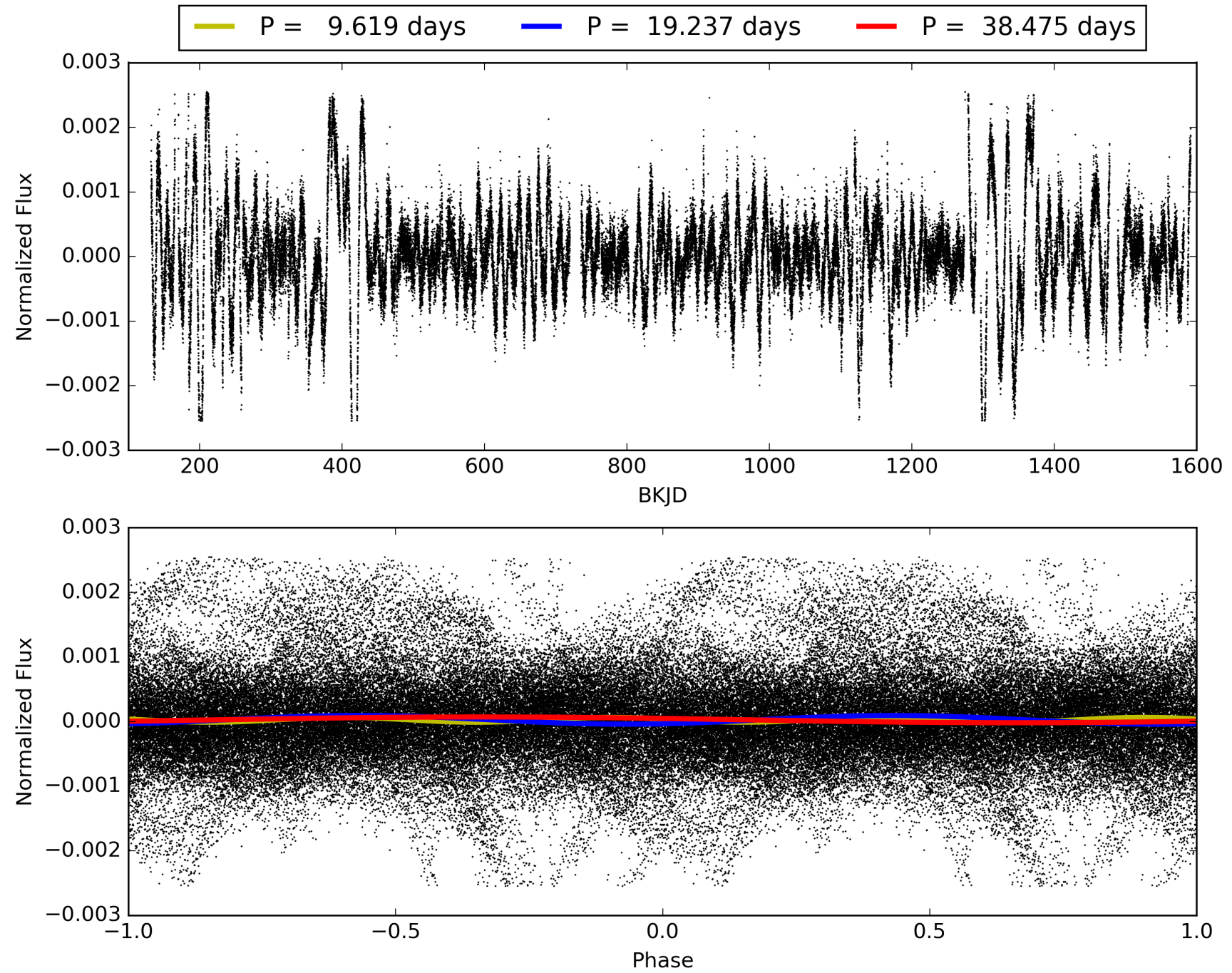
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:40:24 Z

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

TCE 008767034-02, PDC Light Curves

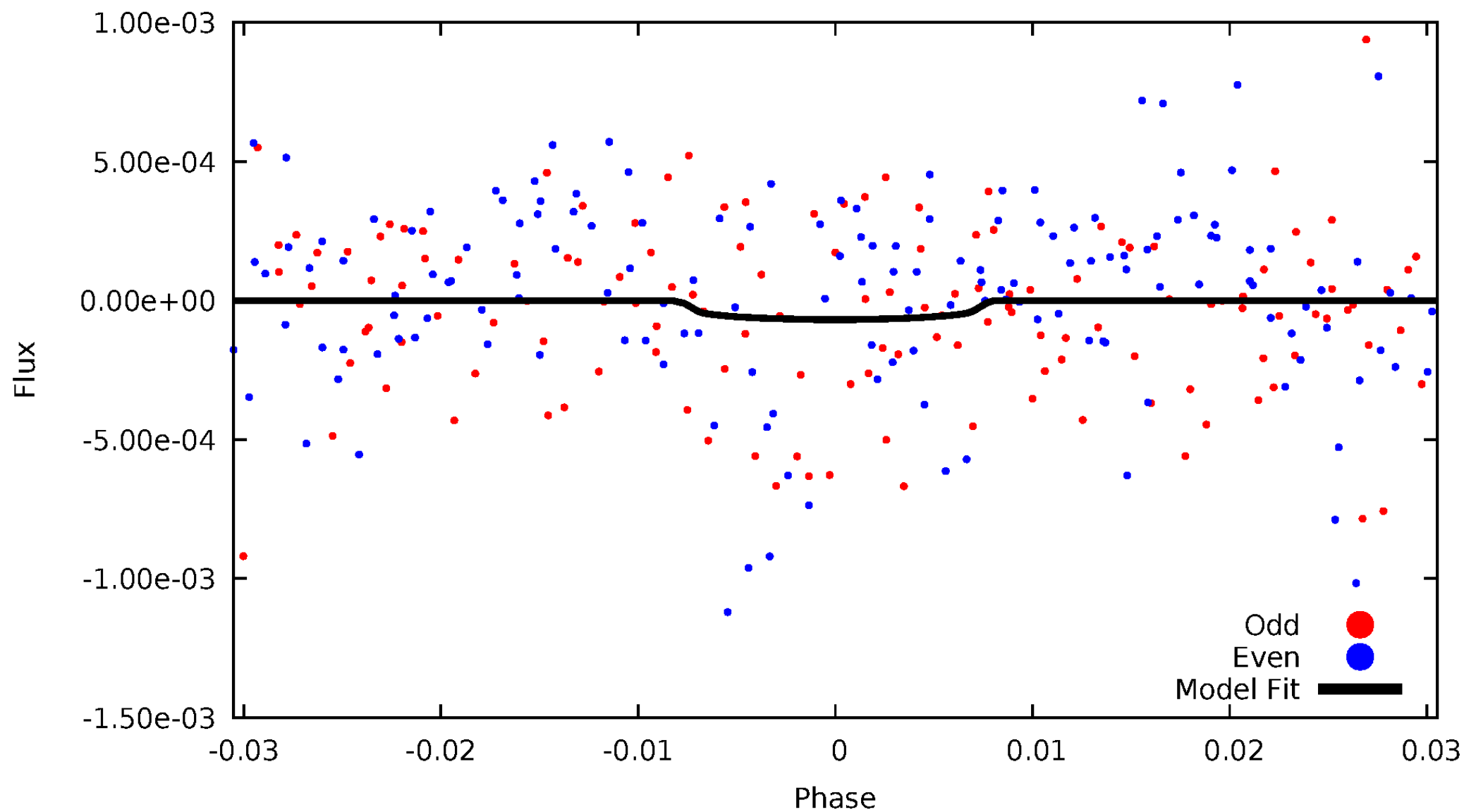


TCE 008767034-02



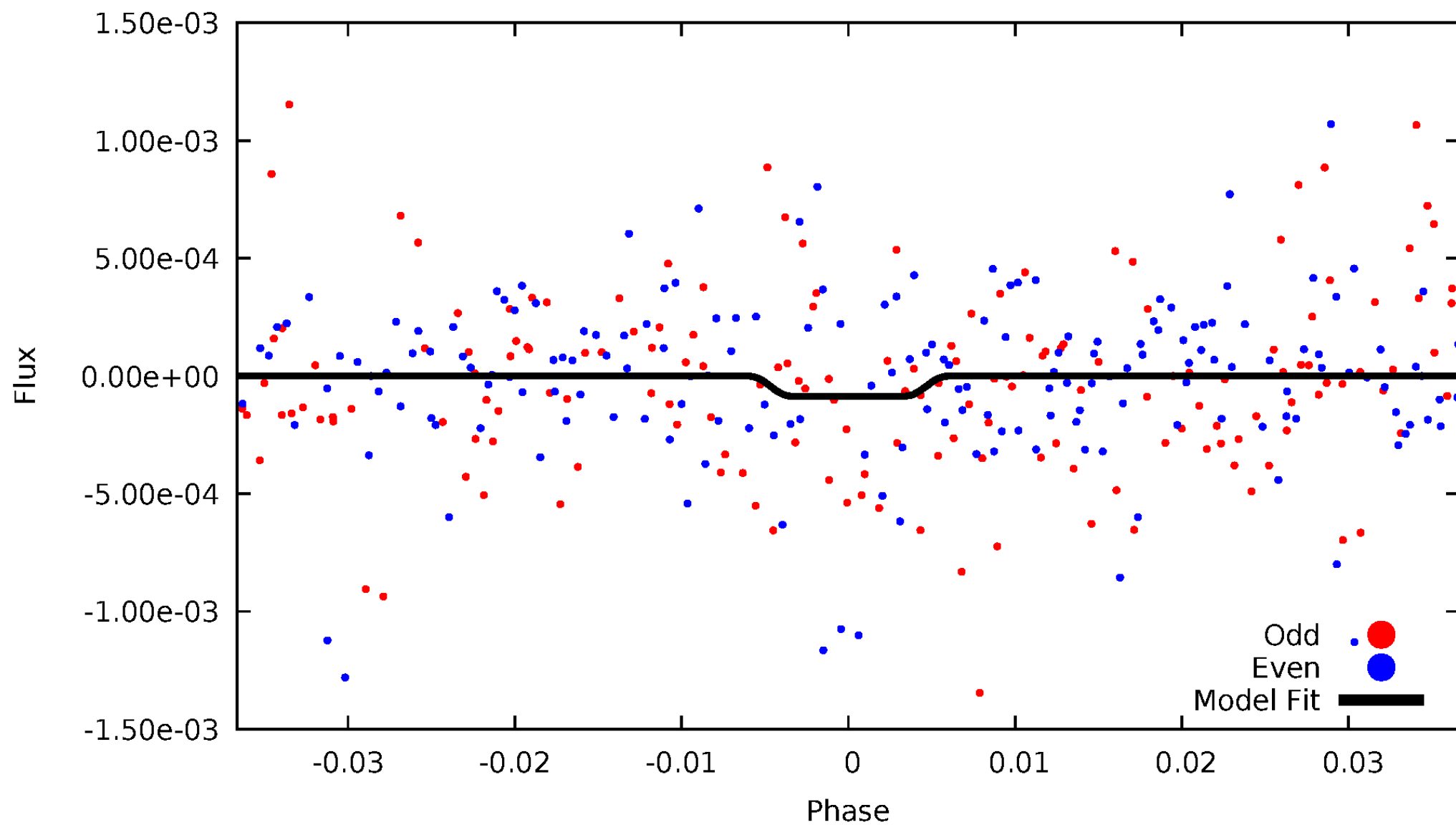
DV Odd/Even

TCE 008767034-02



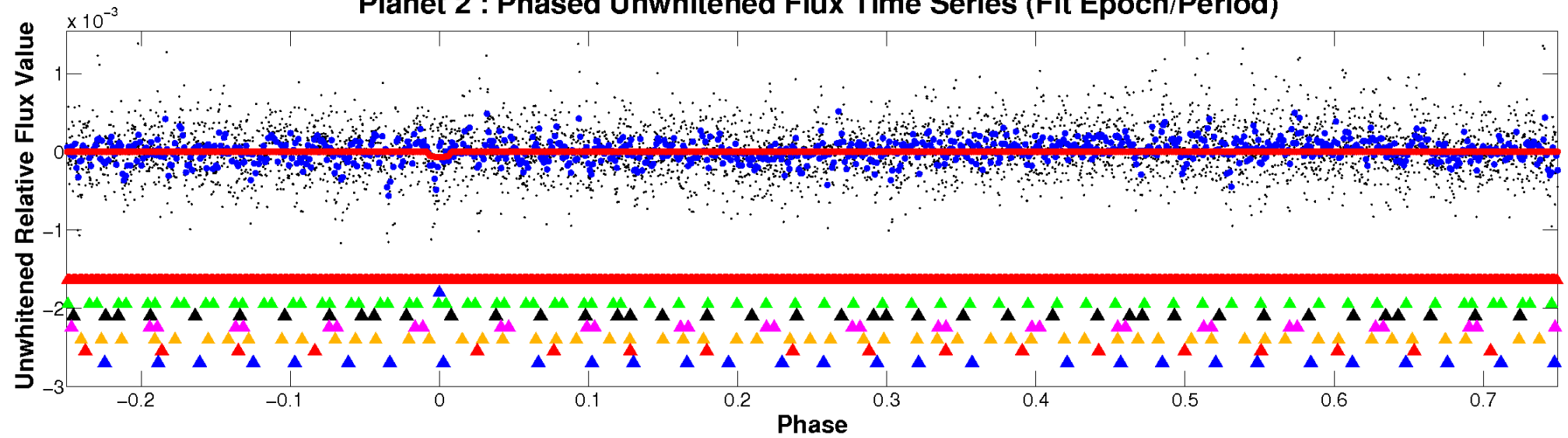
ALT Odd/Even

TCE 008767034-02

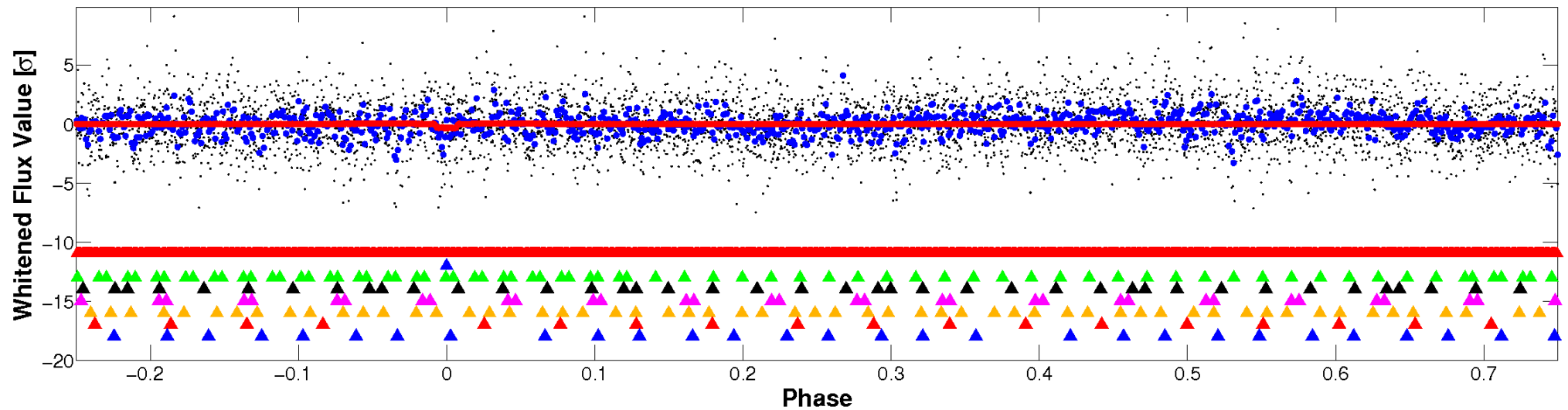


Non-Whitened Vs. Whitened Light Curve

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

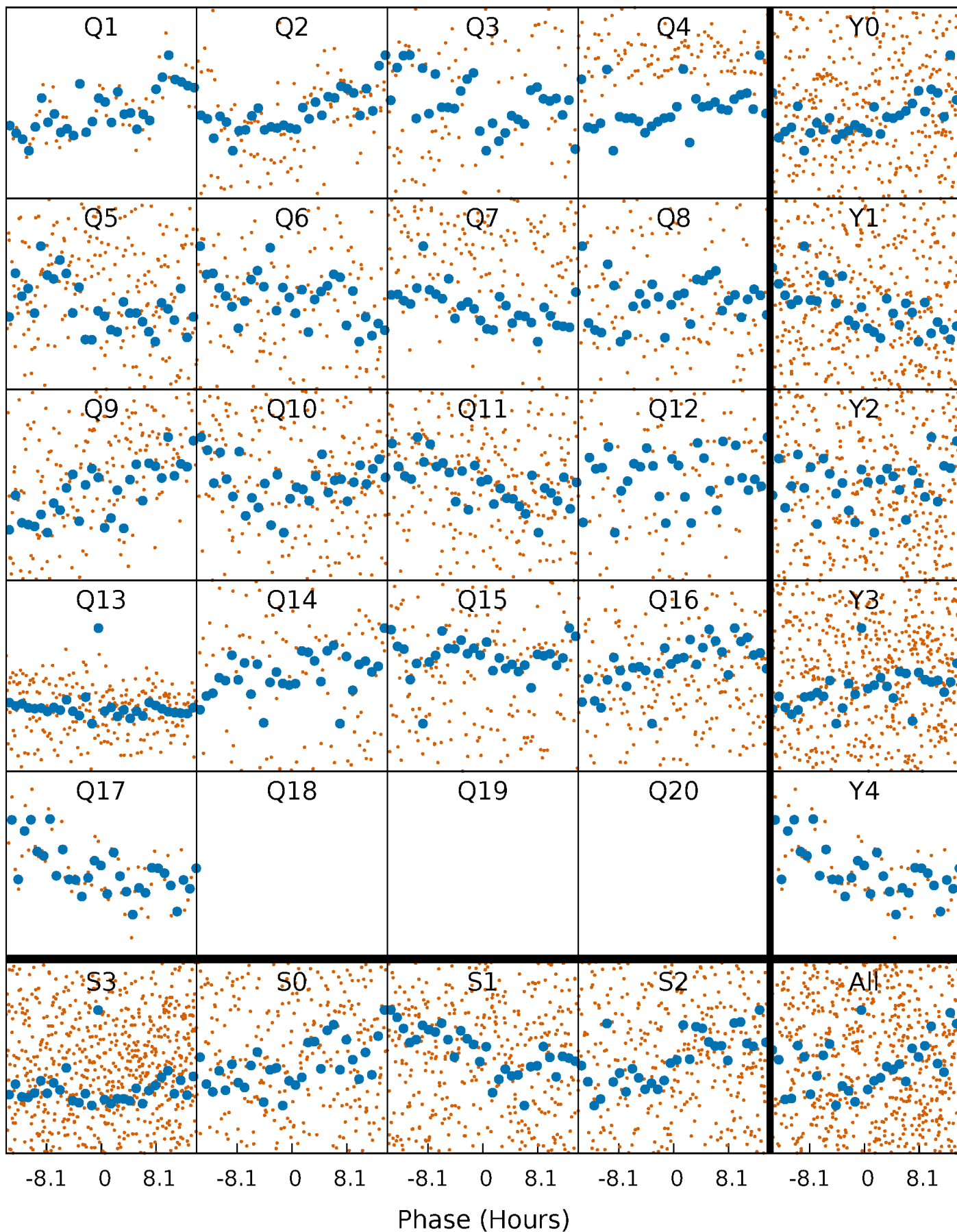


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



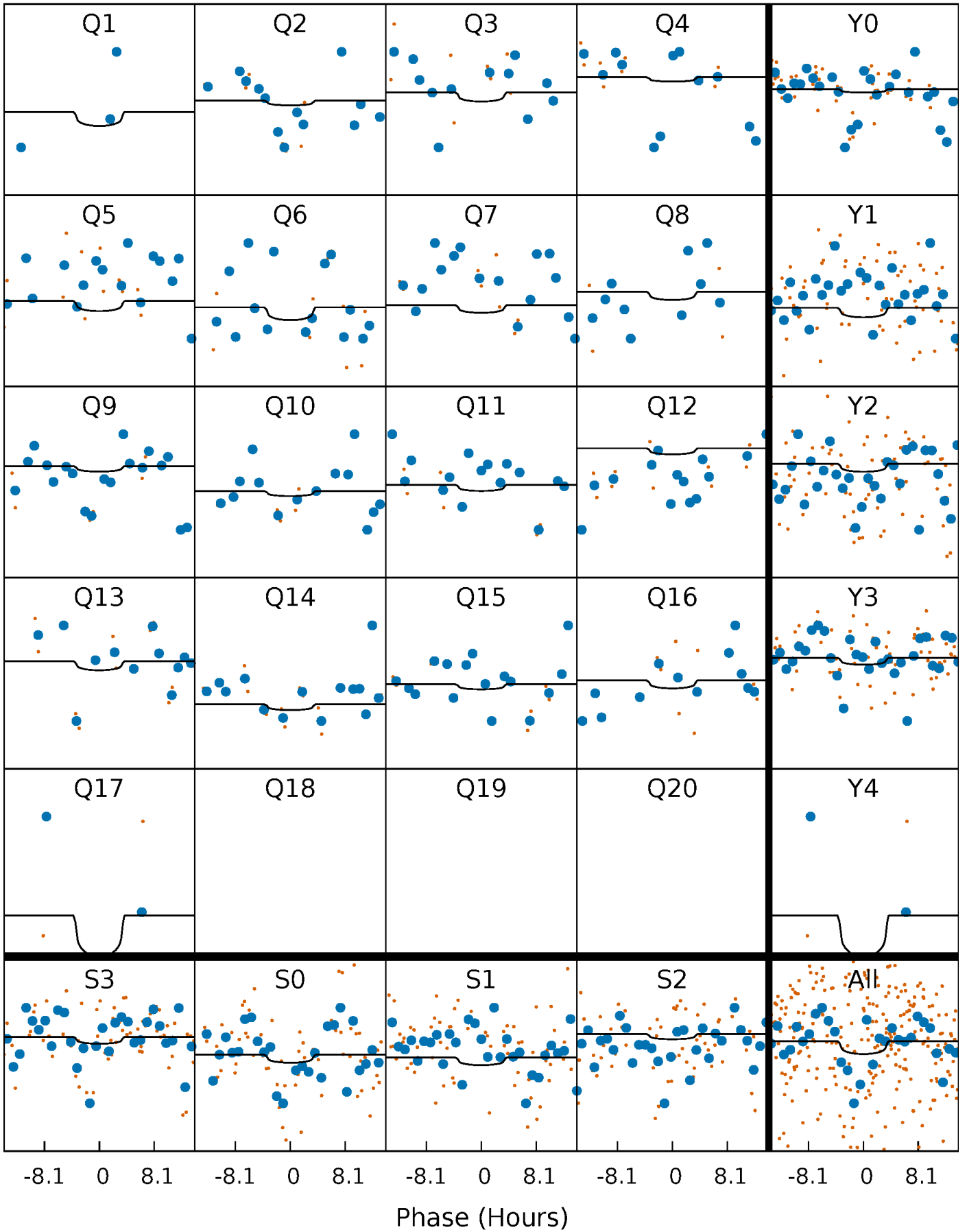
PDC Quarter-Phased Transit Curves

TCE 008767034-02 P= 19.237477 Days $T_0=149.361219$ (BKJD)



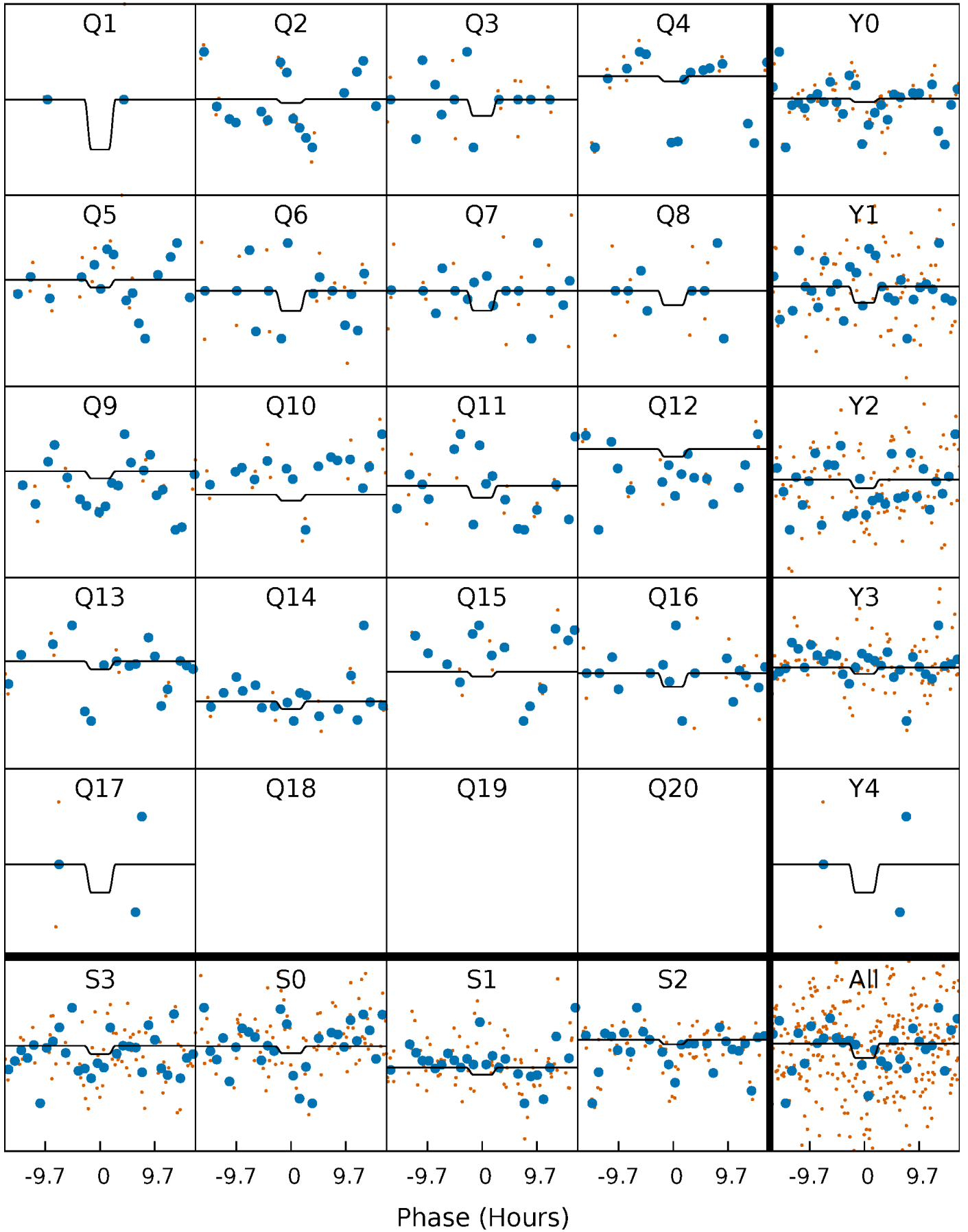
DV Quarter-Phased Transit Curves

TCE 008767034-02 P= 19.237477 Days $T_0=149.361219$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

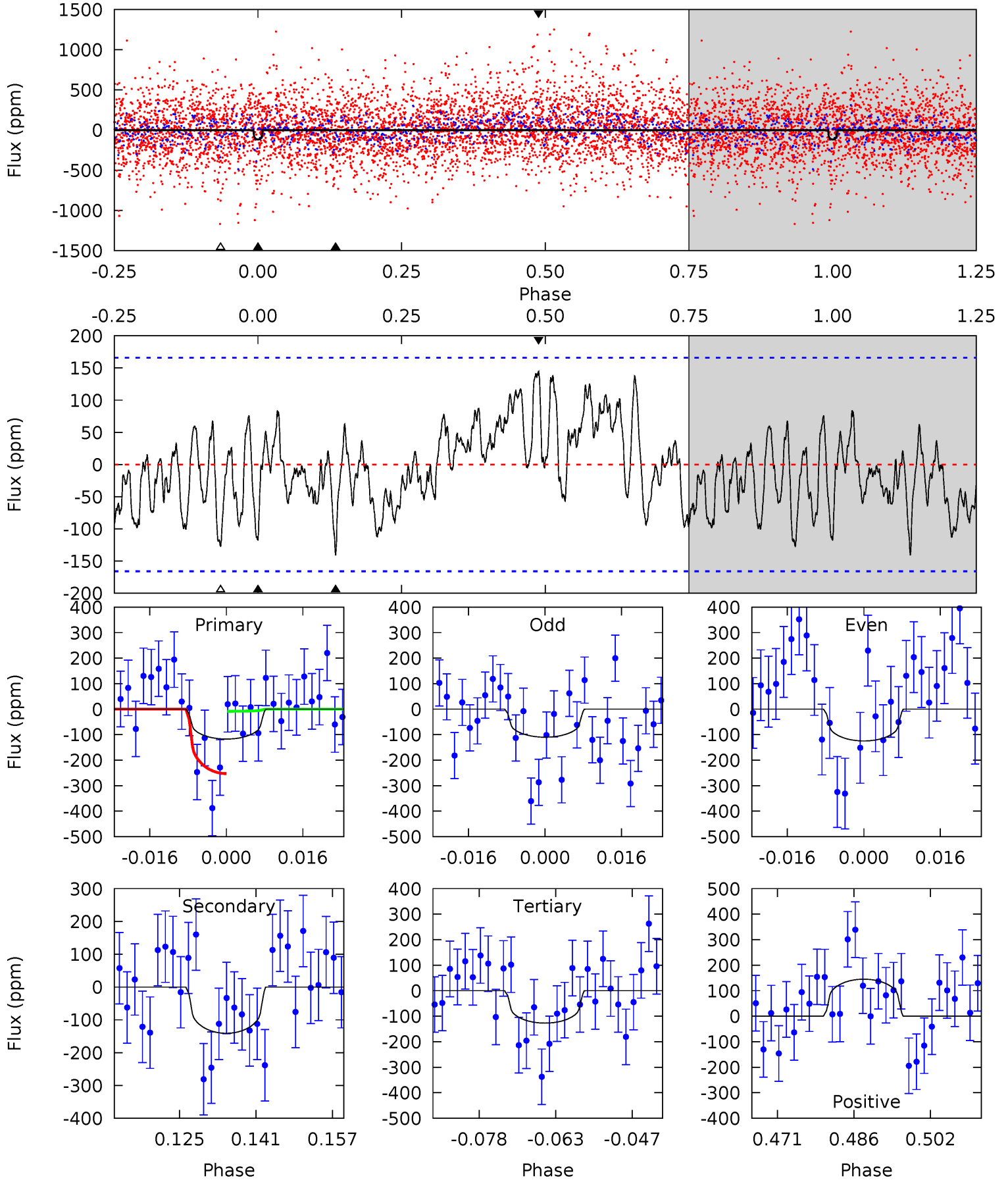
TCE 008767034-02 P= 19.238420 Days $T_0=149.271952$ (BKJD)



DV Model-Shift Uniqueness Test

008767034-02, P = 19.237477 Days, E = 130.123742 Days

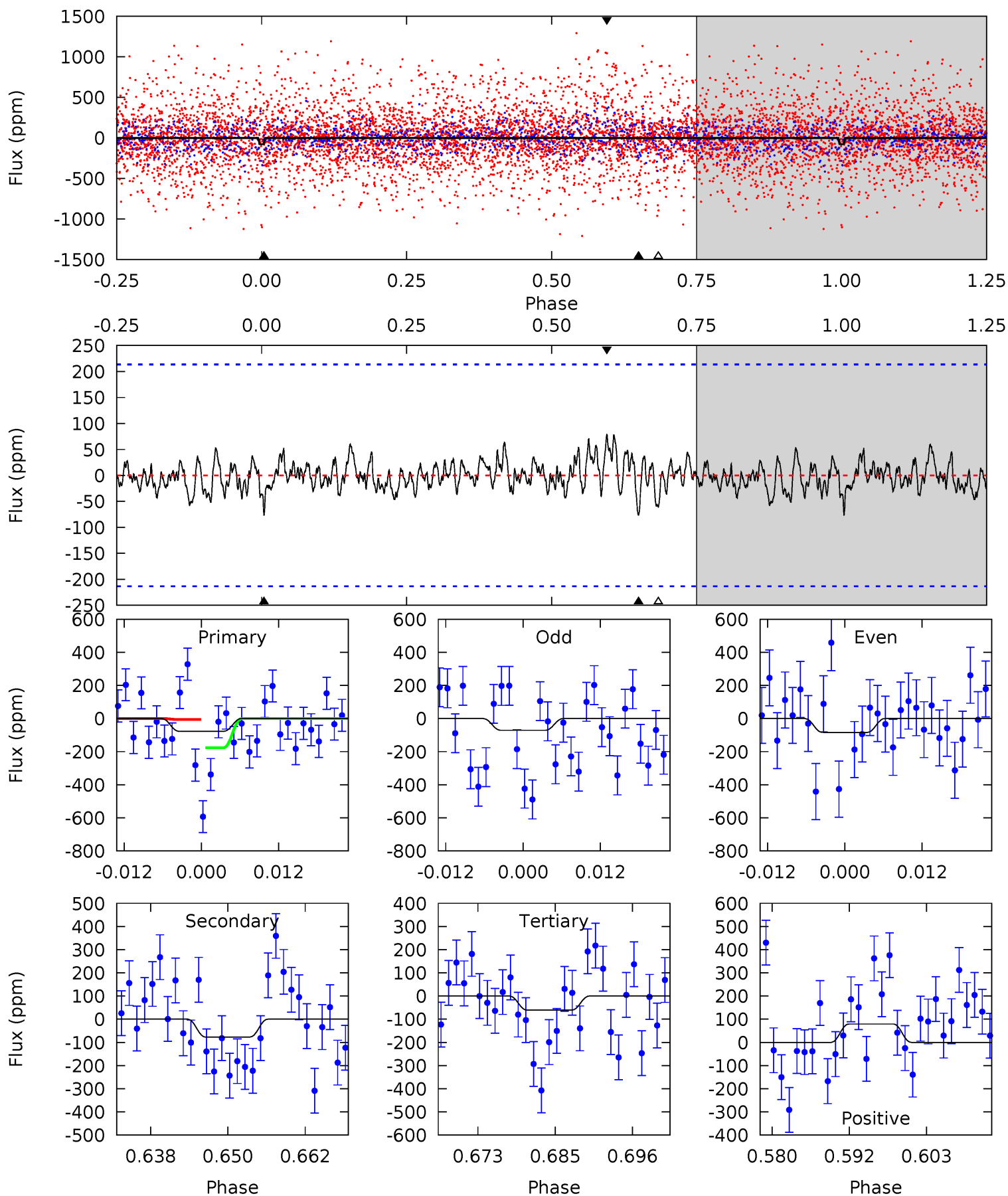
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.50	4.20	3.78	4.32	4.94	2.42	1.74	-0.28	-0.83	0.42	-0.13	0.22	-1.64	0.51	3.65



Alt Model-Shift Uniqueness Test

008767034-02, P = 19.238420 Days, E = 130.033532 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.81	1.80	1.43	1.85	5.00	2.52	0.57	0.38	-0.04	0.37	-0.05	0.15	7.5E6	0.51	2.01



Stellar Parameters For KIC 008767034

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4556^{+136}_{-123}	$4.676^{+0.028}_{-0.052}$	$-0.320^{+0.300}_{-0.300}$	$0.615^{+0.061}_{-0.041}$	$0.669^{+0.058}_{-0.064}$	$4.042^{+0.520}_{-0.813}$
	+3%/-3%	+1%/-1%	+94%/-94%	+10%/-7%	+9%/-10%	+13%/-20%
Source	PHO1	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 008767034-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-141 ± 34	$1.54^{+1.75}_{-1.06}$	636^{+21}_{-20}	3638^{+2136}_{-774}	504^{+4628}_{-401}
Alt.	-77 ± 43	$1.65^{+1.71}_{-1.10}$	635^{+23}_{-20}	3160^{+1408}_{-635}	196^{+1621}_{-158}

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 $A_{obs} \gg 1.0$

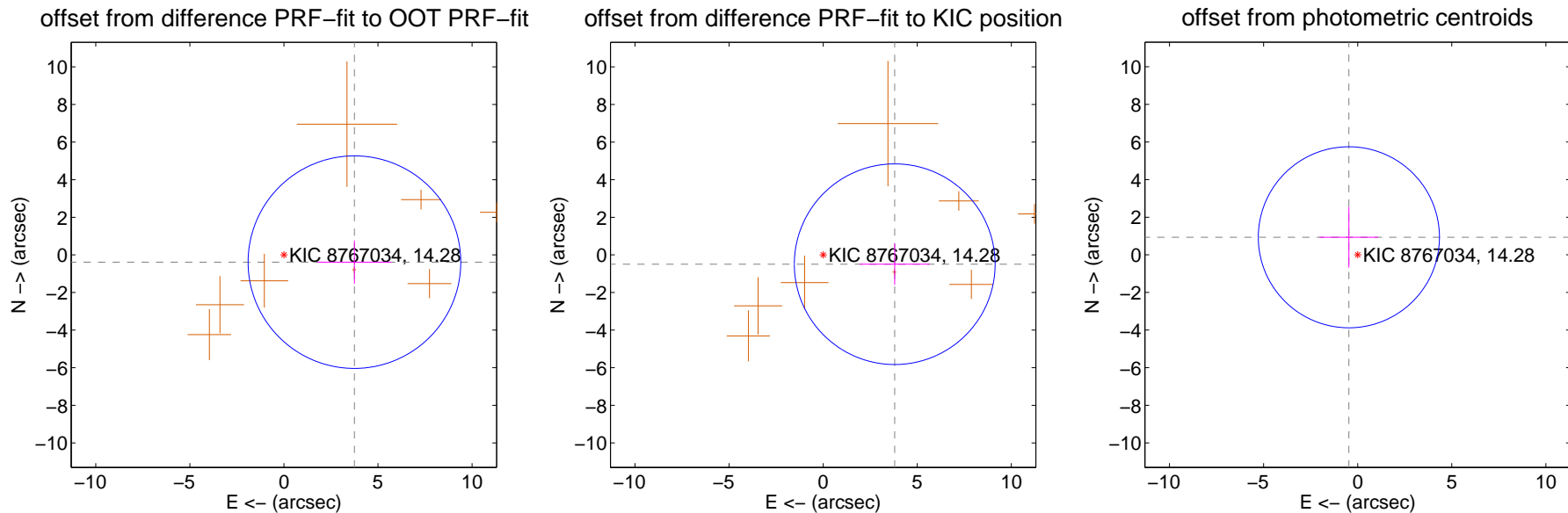
DV Centroid Data

Supplemental centroid analysis for 008767034-02. Kepler magnitude: 14.28. Transit SNR 2.69

There are 0 quarters with good PRF difference image offsets

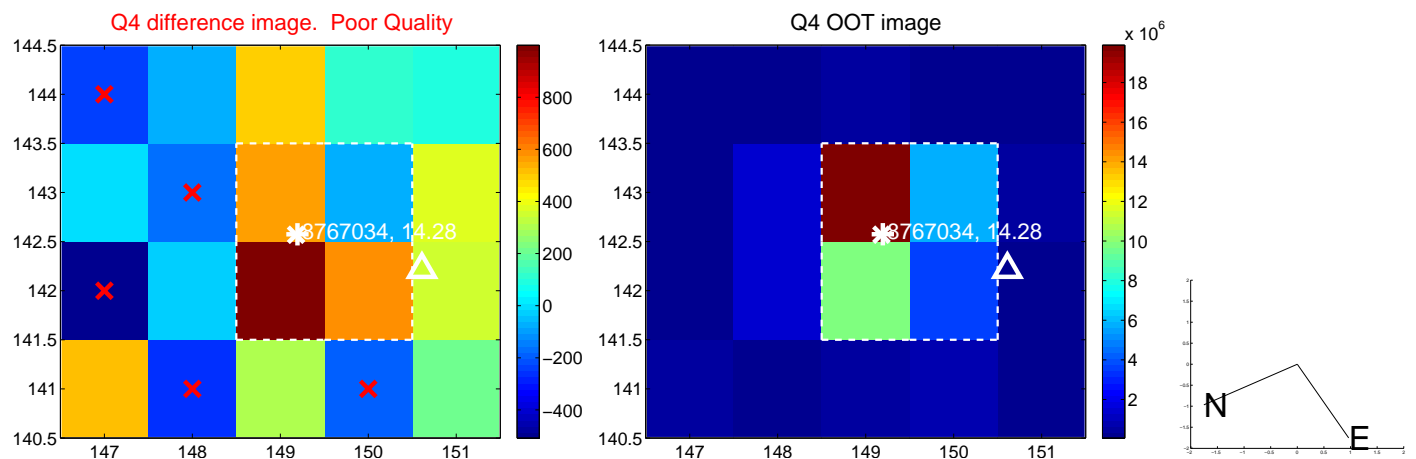
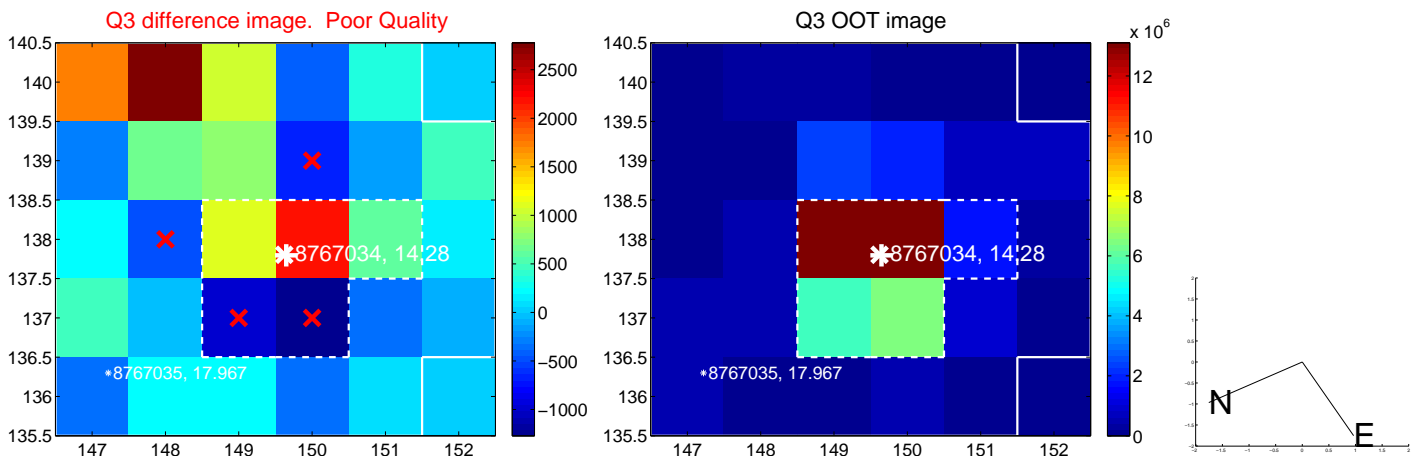
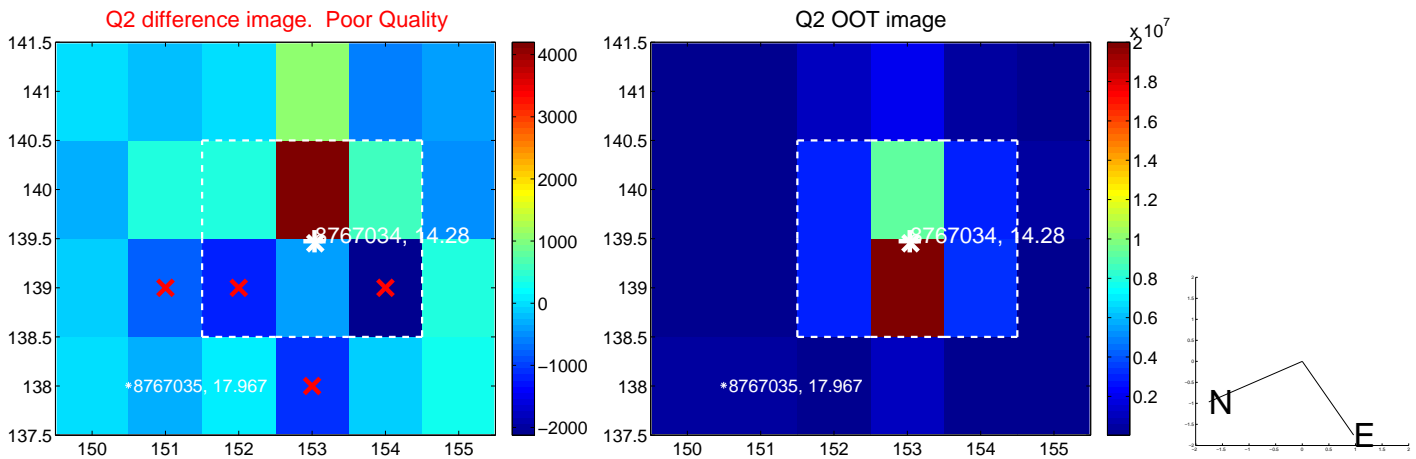
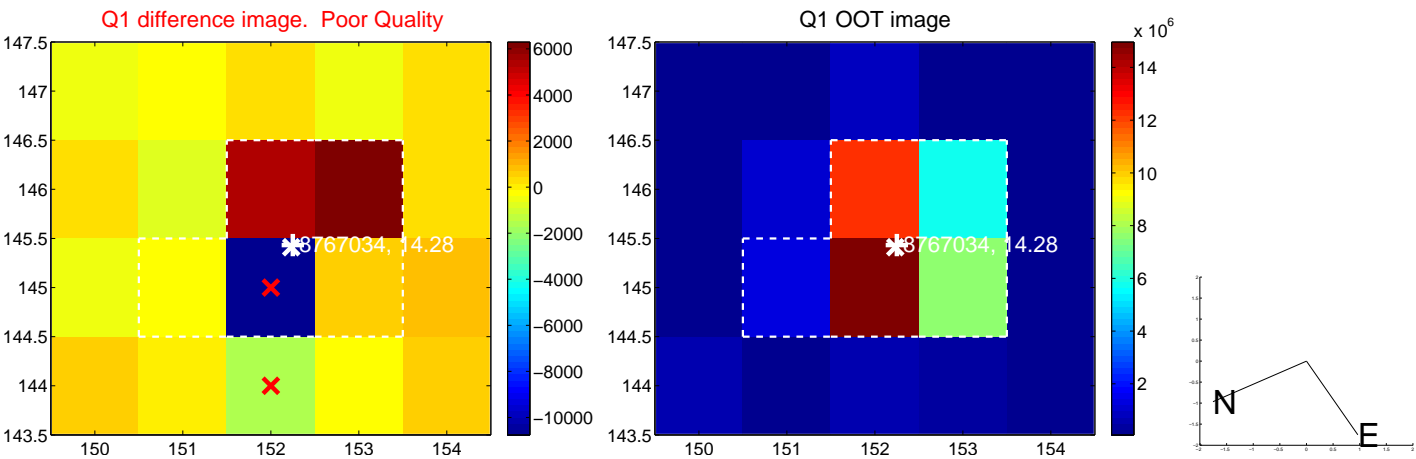
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.766 ± 1.883	2.00	-3.746 ± 1.955	-0.386 ± 1.152
PRF-fit source offset from KIC position	3.833 ± 1.778	2.16	-3.801 ± 1.849	-0.495 ± 1.096
photometric centroid source offset	1.04 ± 1.60	0.65	0.47 ± 1.56	0.93 ± 1.62

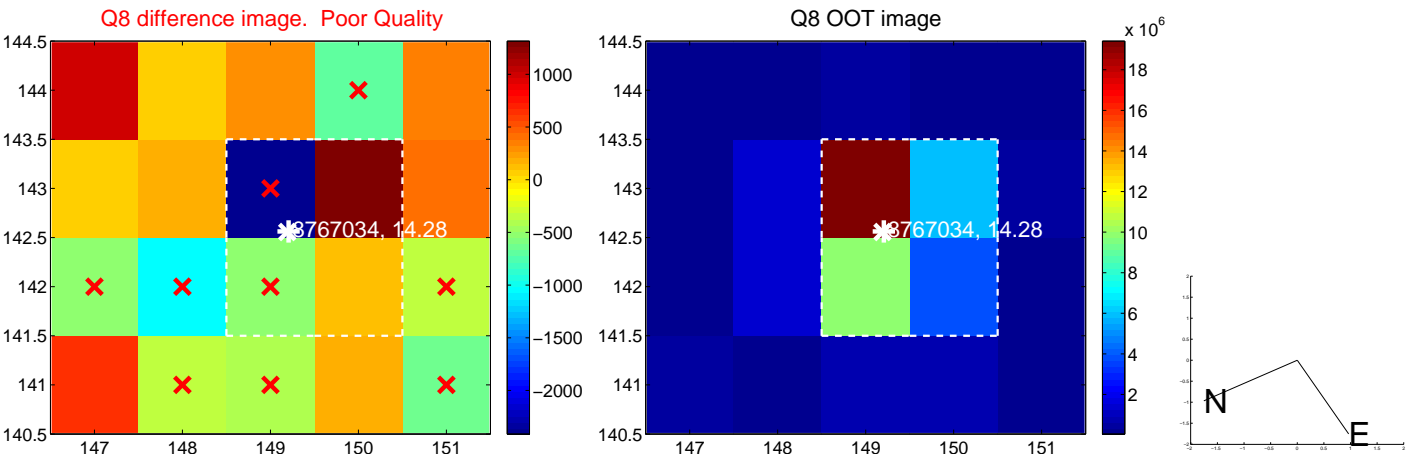
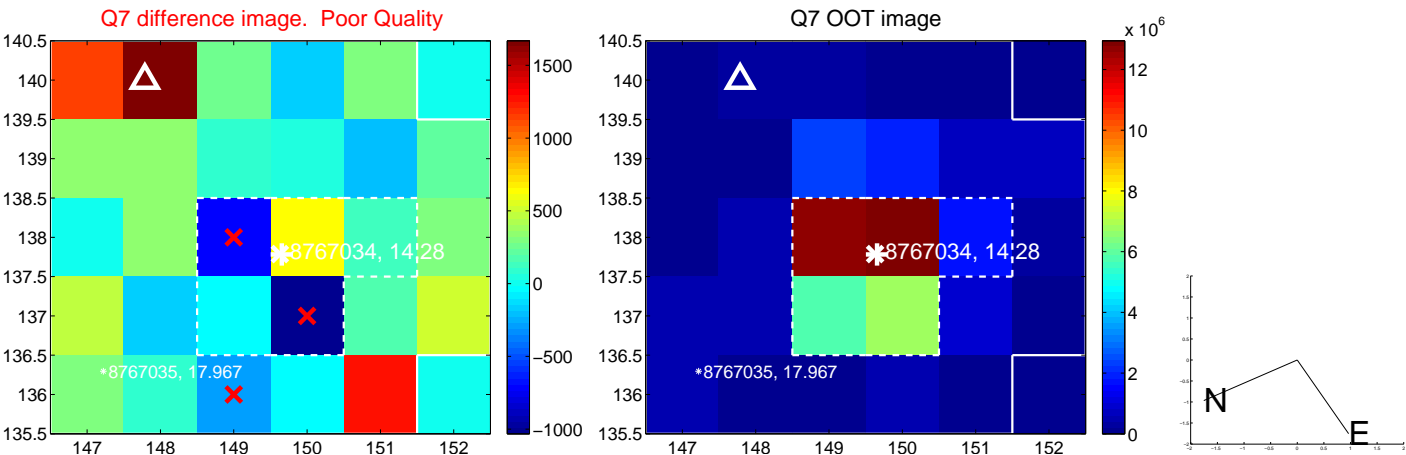
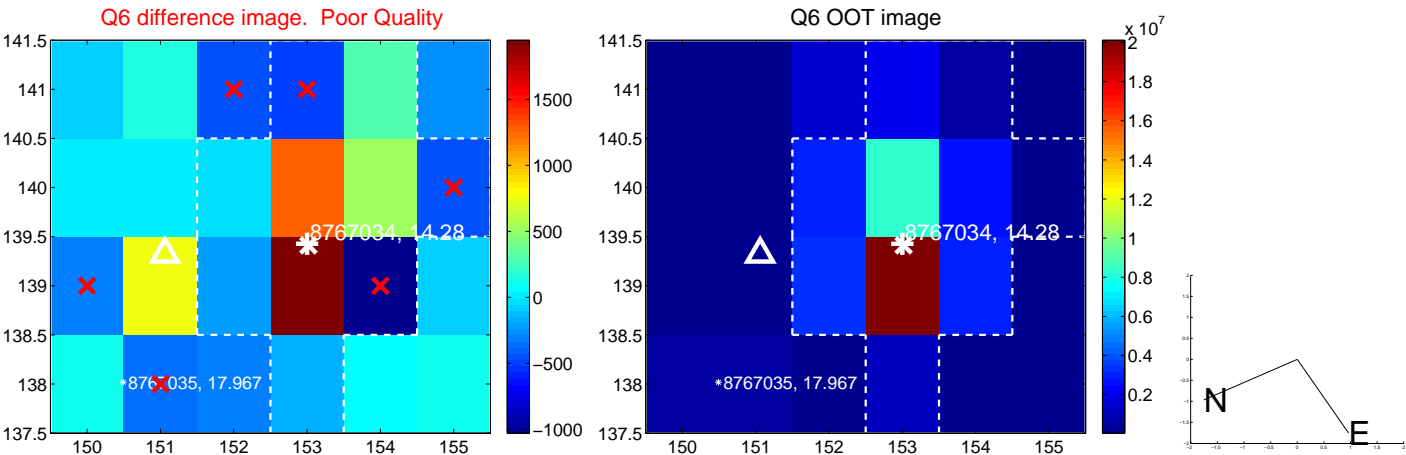
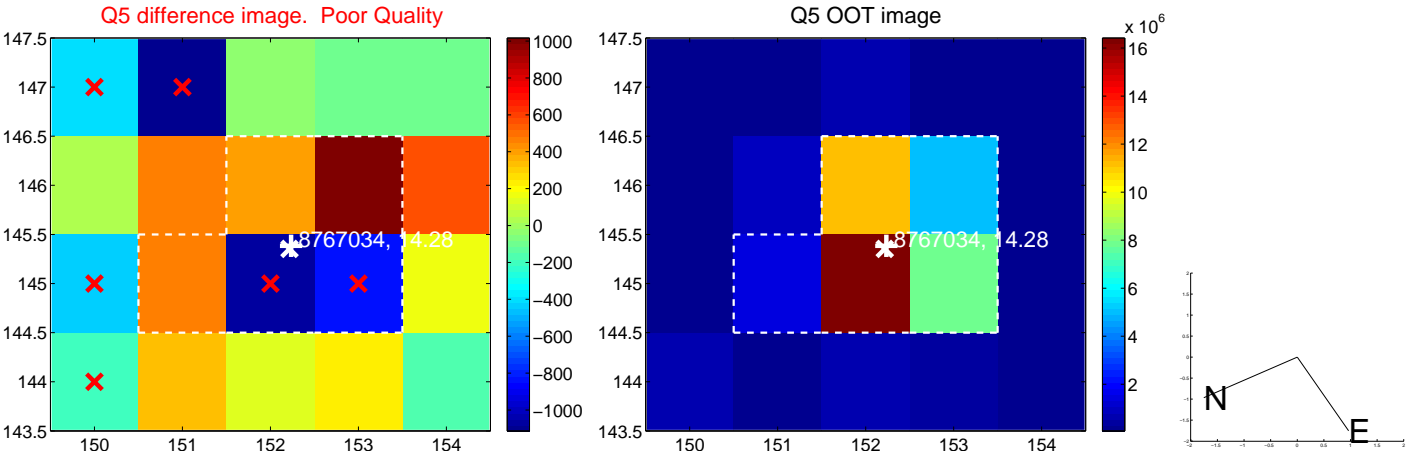


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

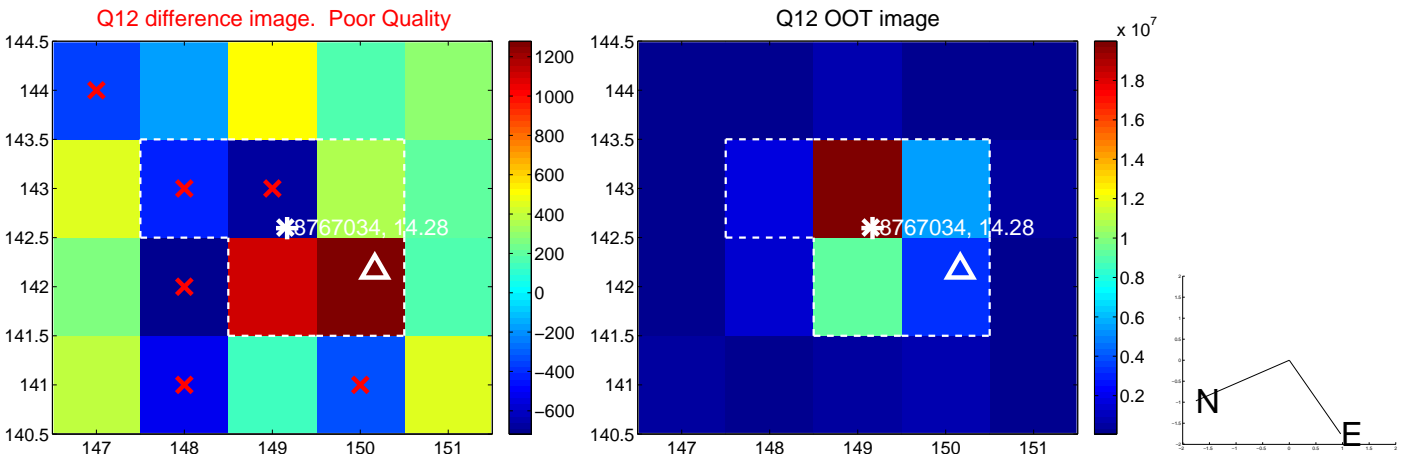
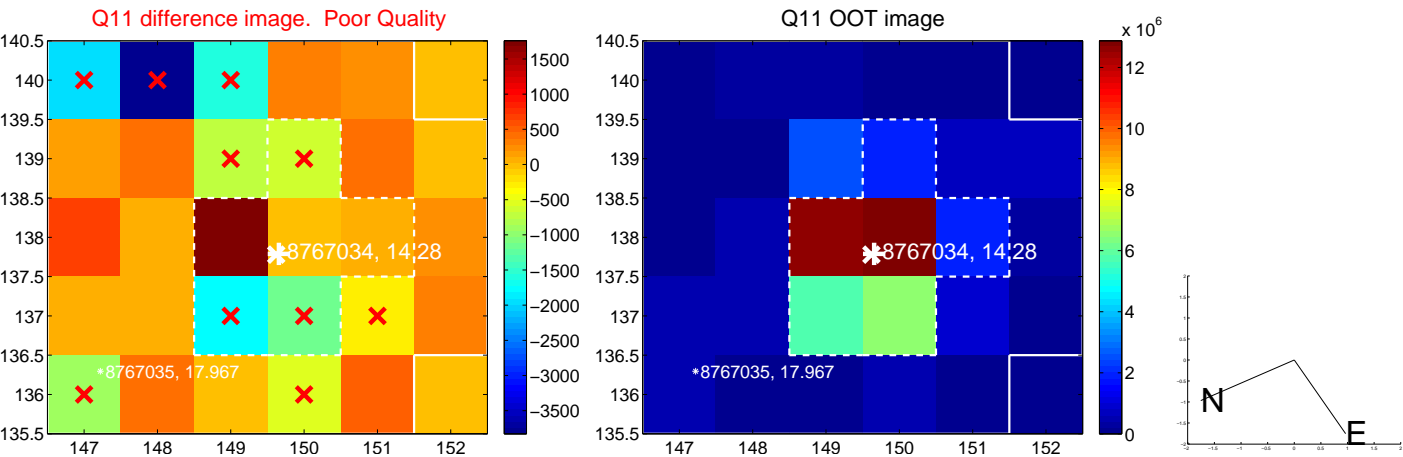
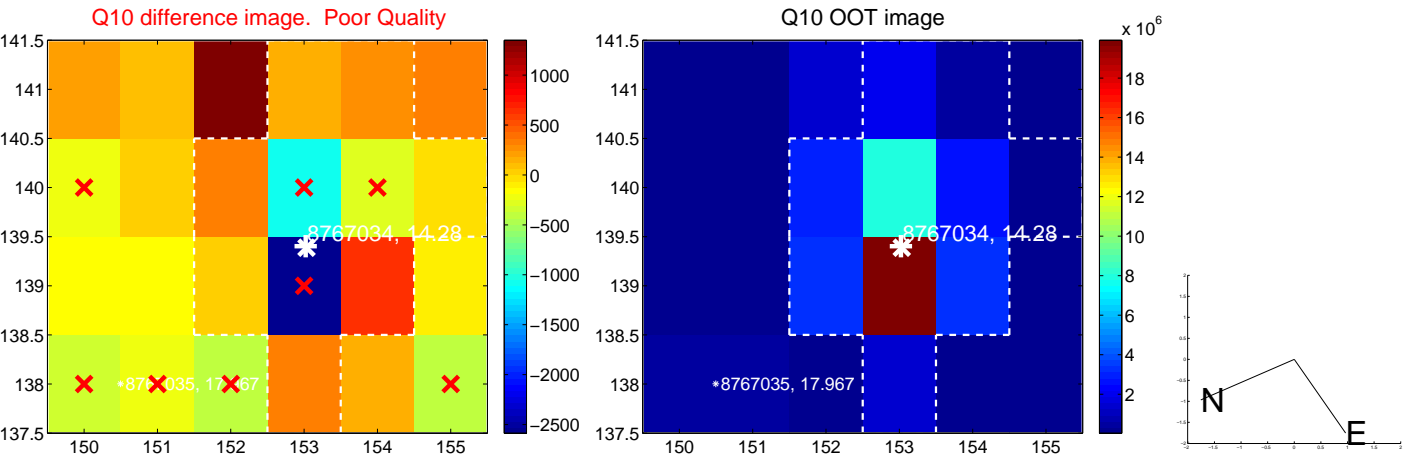
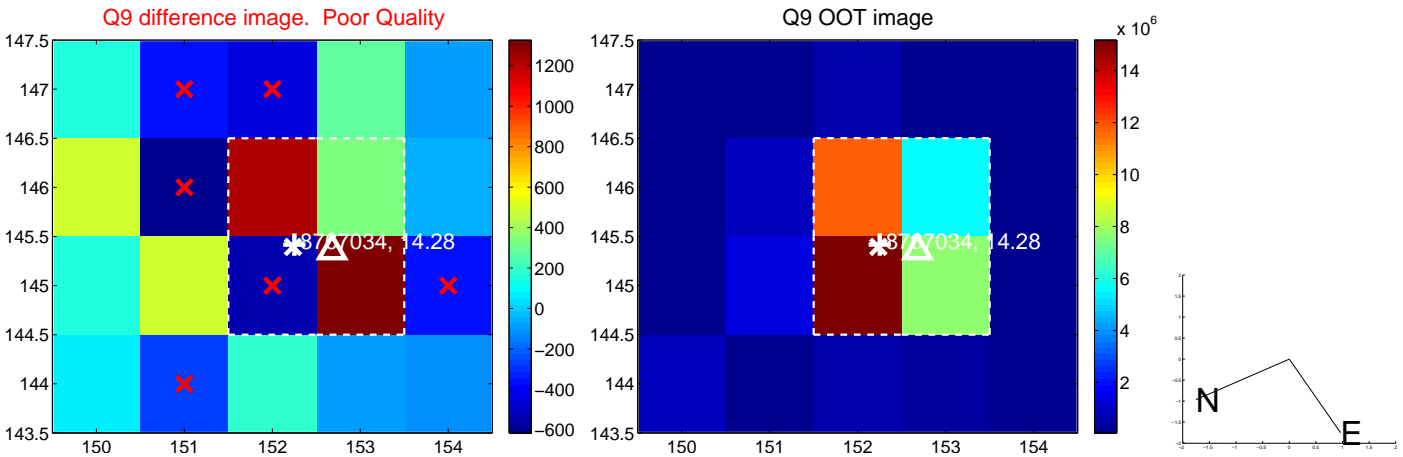
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



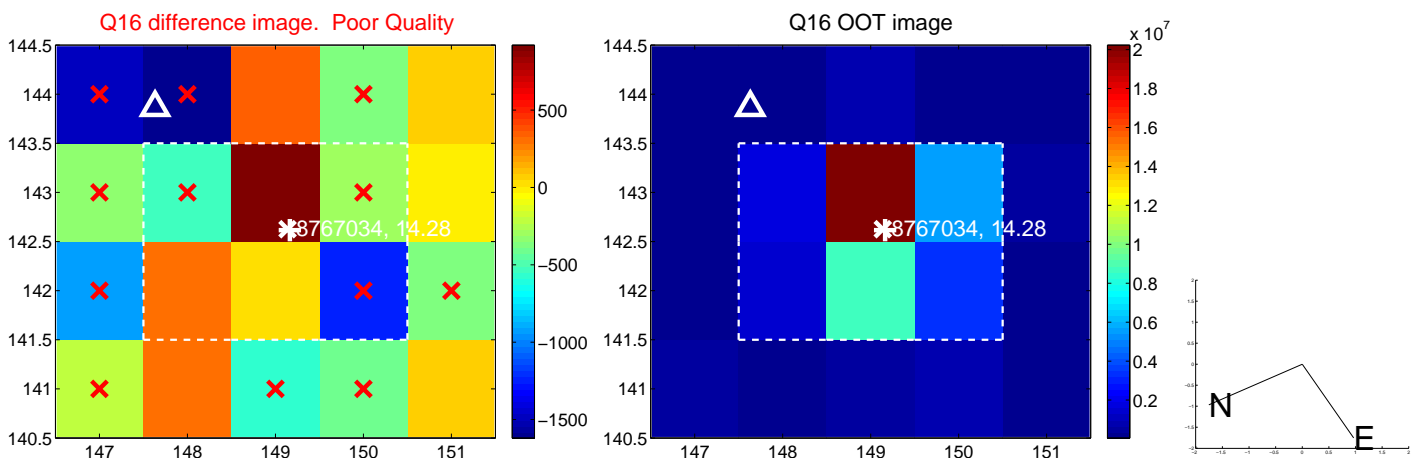
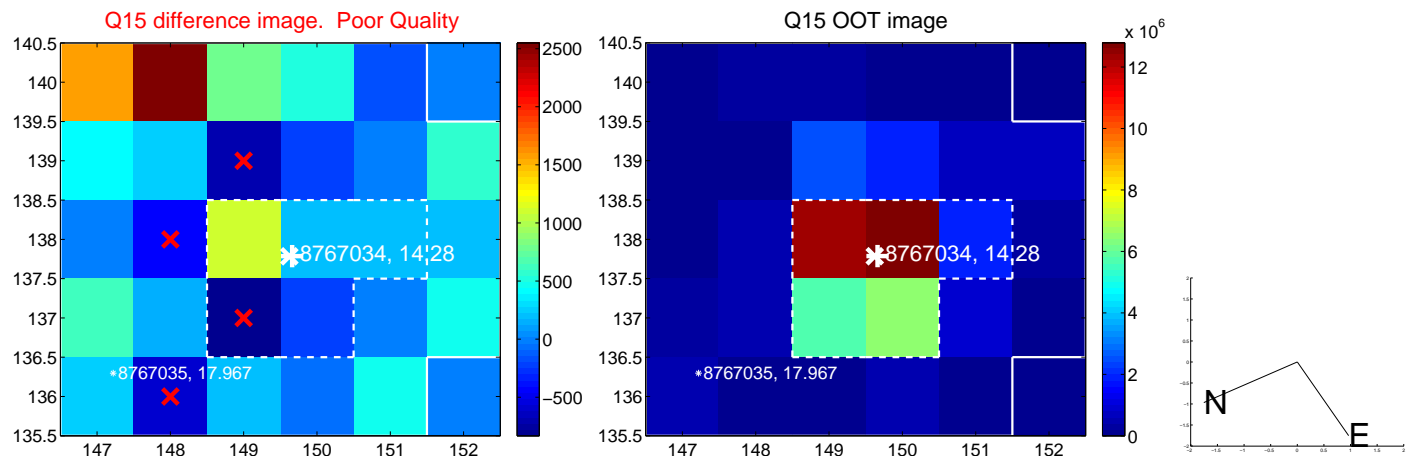
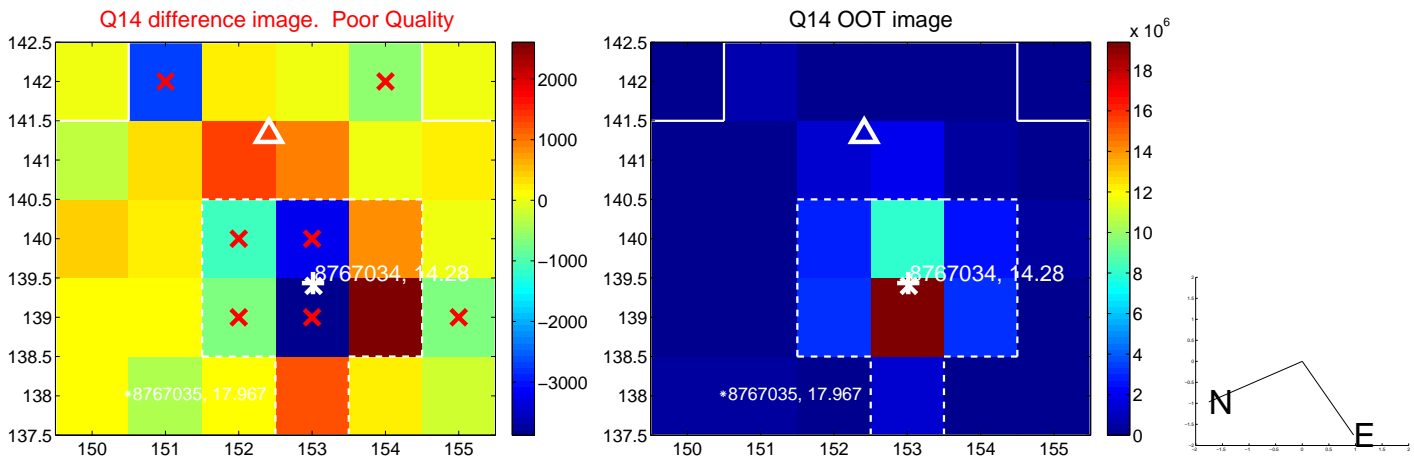
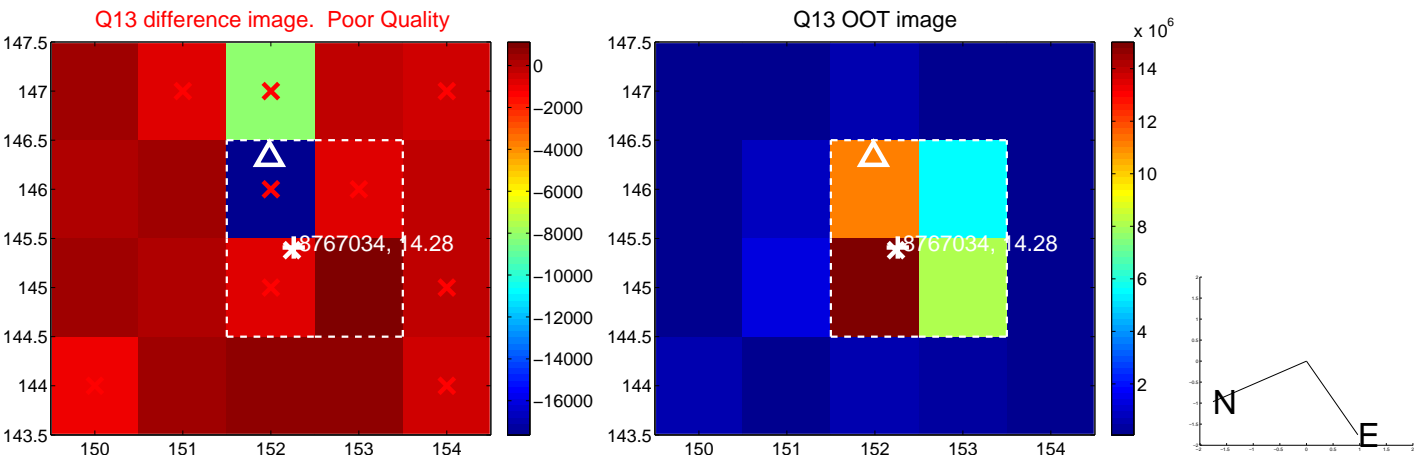
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



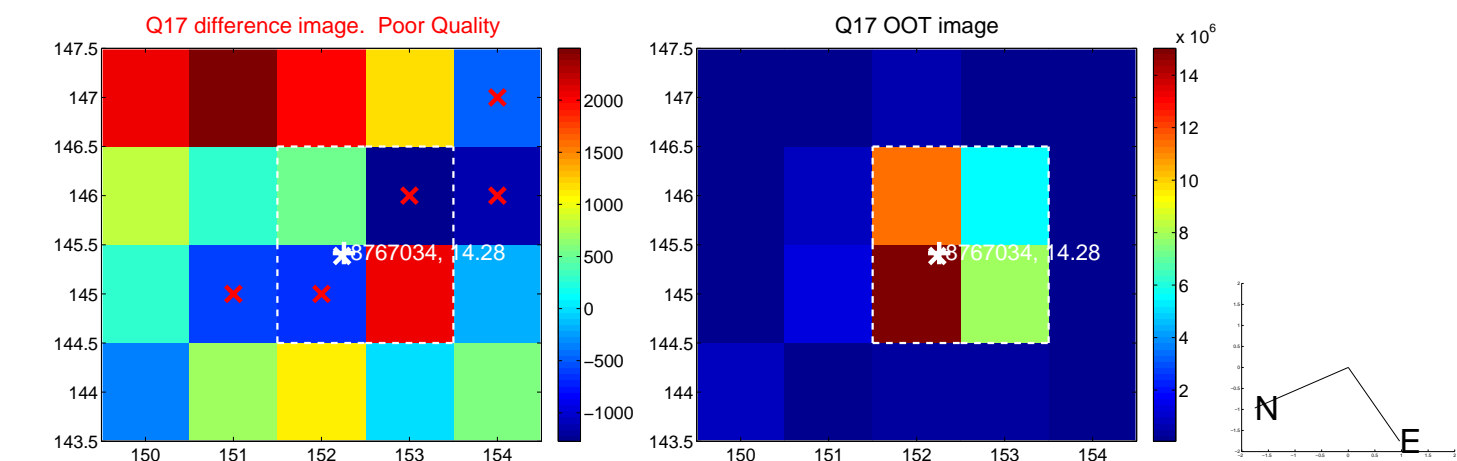
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



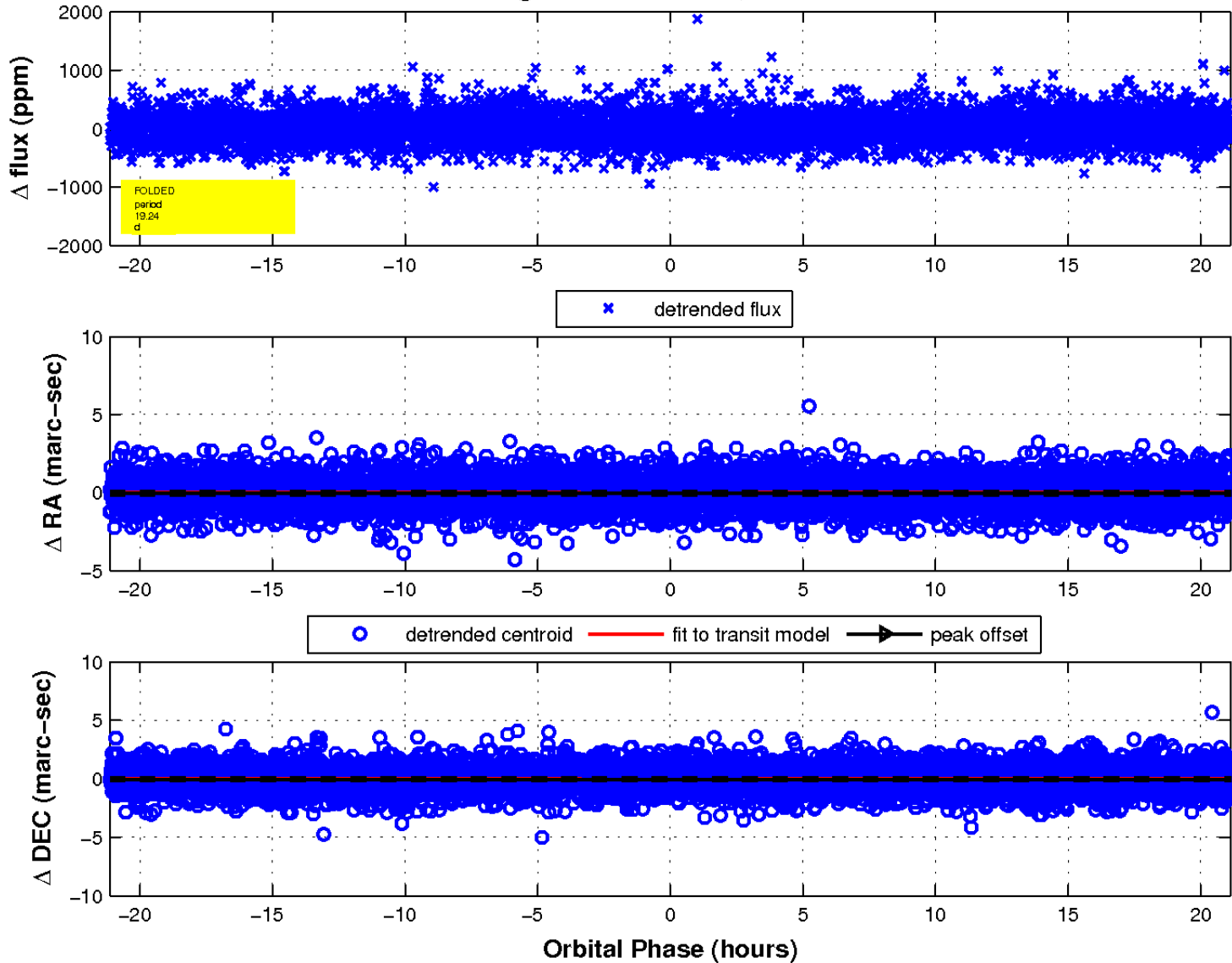
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

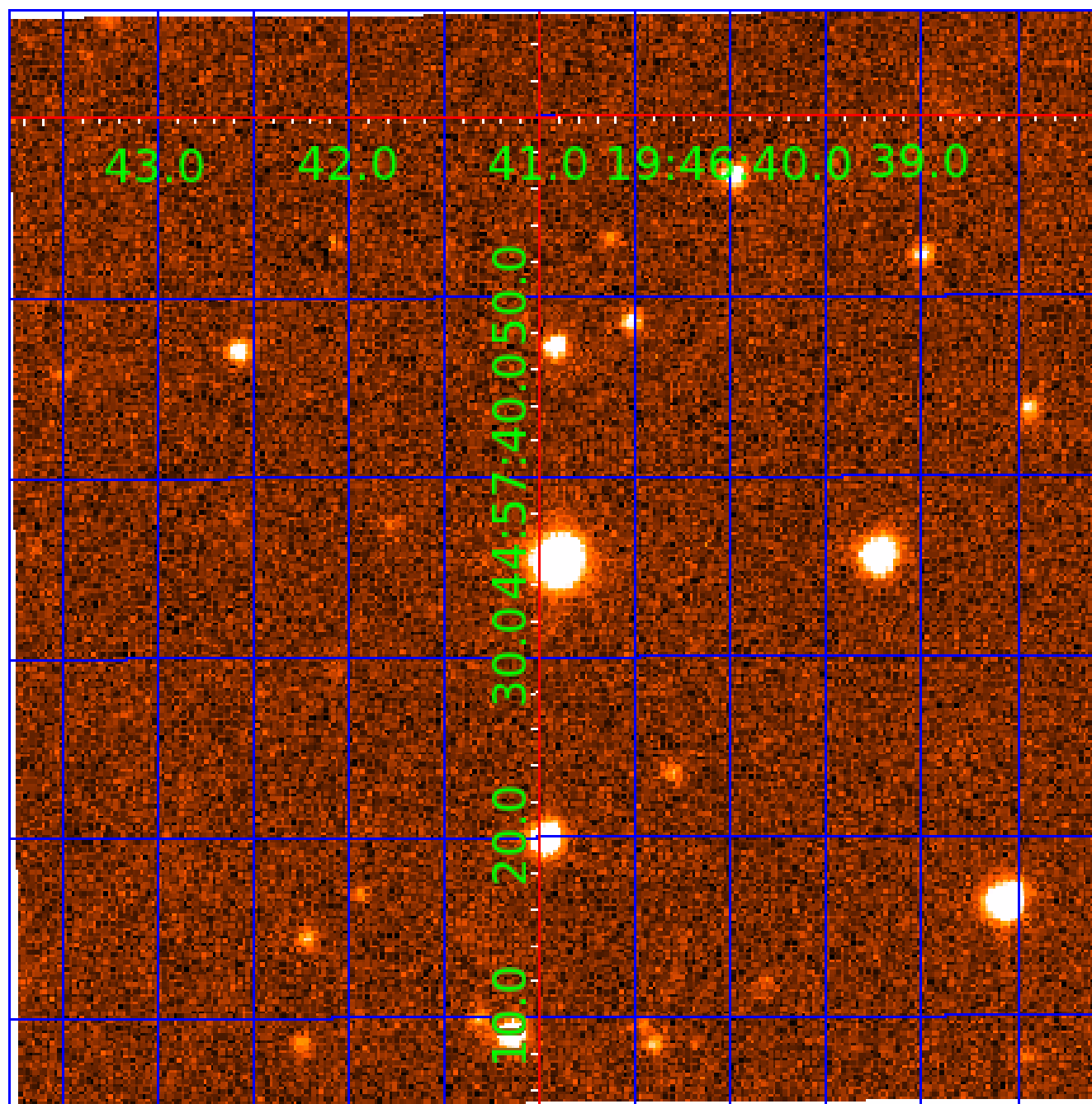


fluxWeightedCentroids, Planet 2 of 8



UKIRT Image

Declination



KIC 008767034

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})
008767034-01	OBS	7089.01	0.586382	131.566135	24.5	4.161	13.5	9.8	0.61	4556	0.29	1030.16
008767034-02	OBS	No	19.237477	149.361219	68.5	7.045	11.6	2.7	0.61	4556	0.58	9.81
008767034-04	OBS	No	35.172465	161.730937	614.9	4.518	11.0	9.0	0.61	4556	1.69	4.39
008767034-05	OBS	No	43.007251	142.200562	722.9	1.925	12.2	11.4	0.61	4556	1.94	3.35
008767034-06	OBS	No	25.103715	149.656632	529.6	1.097	9.0	7.7	0.61	4556	1.48	6.88
008767034-08	OBS	No	50.891218	162.364936	569.1	3.375	9.0	10.8	0.61	4556	1.65	2.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008767034-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
008767034-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
008767034-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008767034-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_MEAS
008767034-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_MEAS
008767034-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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.

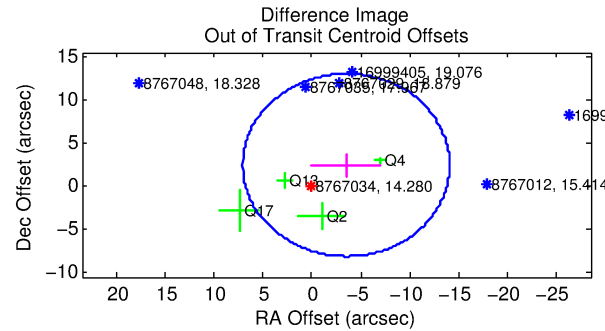
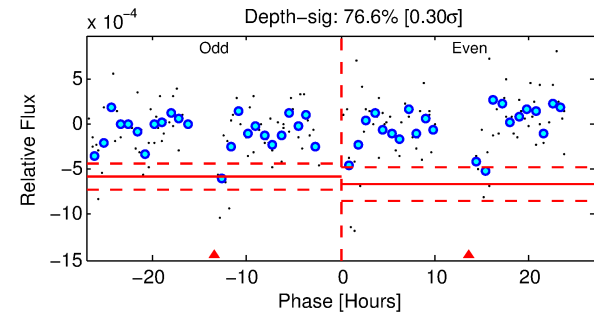
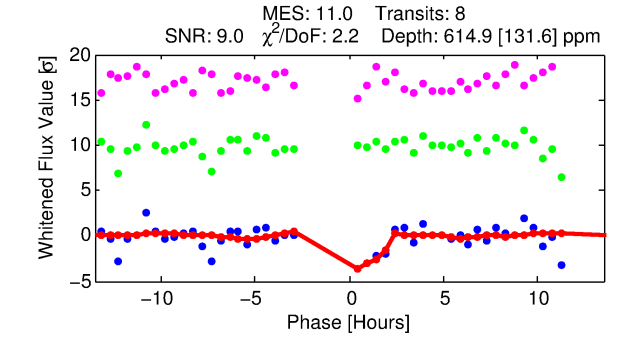
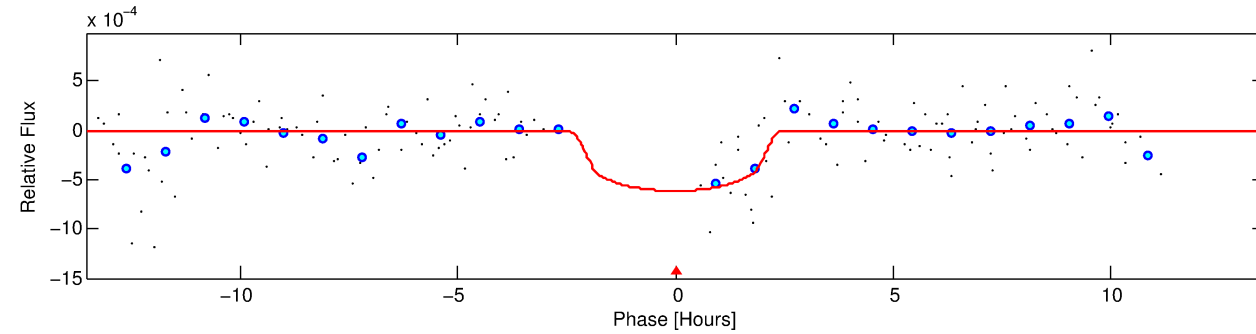
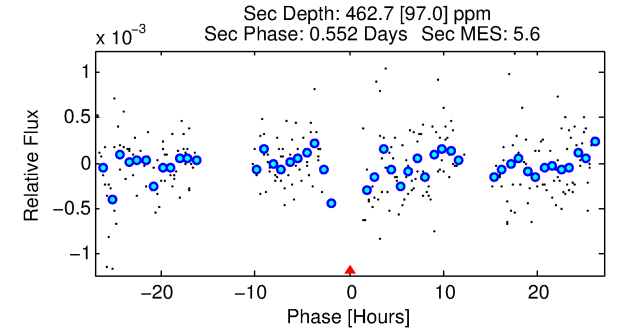
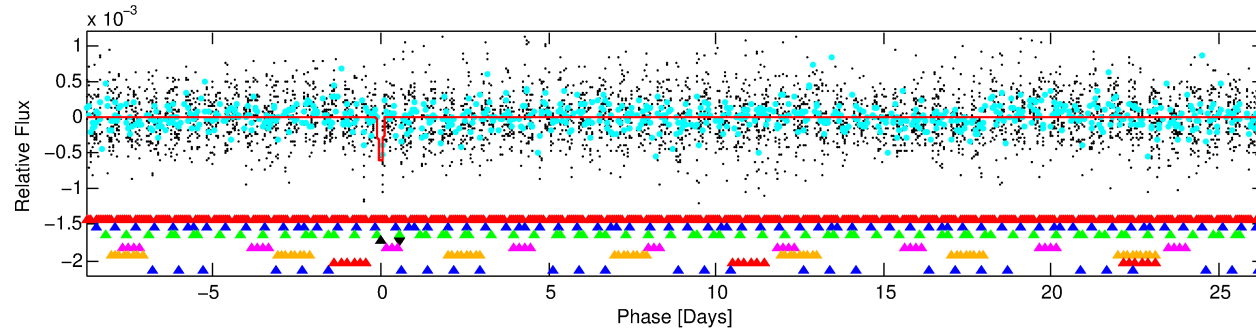
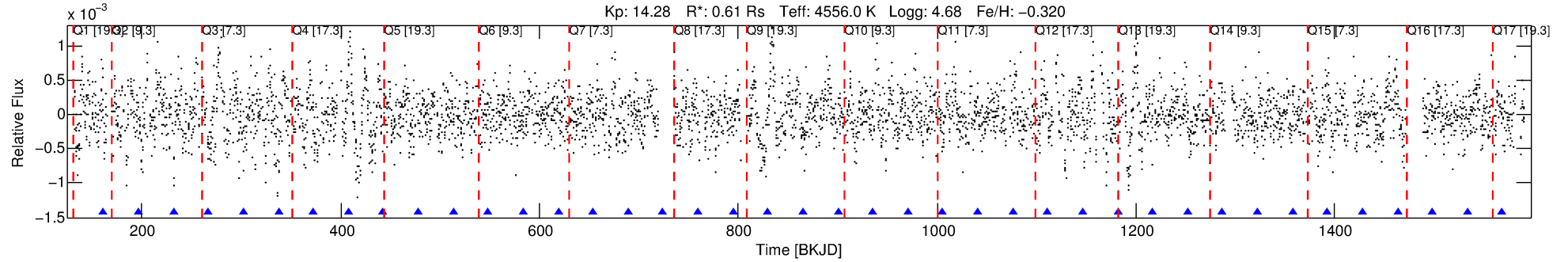
Ephemeris Match Information For 008767034-04

No Significant Match Found

DV One-Page Summary

KIC: 8767034 Candidate: 4 of 8 Period: 35.172 d

KOI: K07089 Corr: No Ephemeris Match



DV Fit Results:

Period = 35.17247 [0.00263] d
Epoch = 161.7309 [0.0554] BKJD
Rp/R* = 0.0252 [0.0350]
a/R* = 39.80 [203.71]
b = 0.78 [2.53]
Seff = 4.39 [0.69]
Teq = 369 [15] K
Rp = 1.69 [2.35] Re
a = 0.1824 [0.0141] AU
Ag = 2967.96 [8281.11] [0.36σ]
Teffp = 4211 [2938] K [1.31σ]

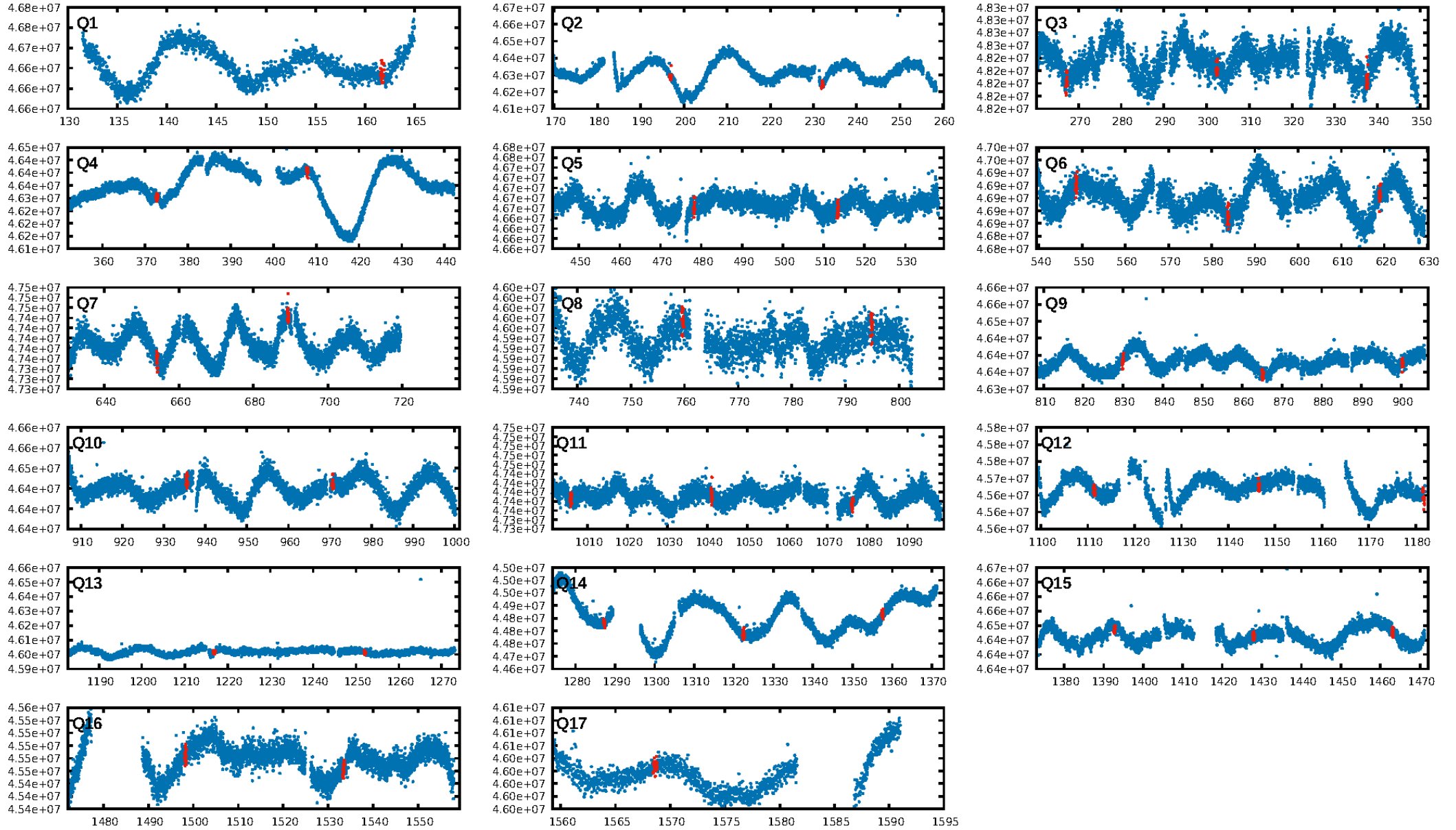
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [51.97σ]
LongPeriod-sig: 100.0% [38.29σ]
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.34e-19
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -4.526
Centroid-sig: 1.6%
Centroid-so: 0.650 arcsec [2.20σ]
OotOffset-rm: 4.264 arcsec [1.21σ]
KicOffset-rm: 4.243 arcsec [1.58σ]
OotOffset-st: 1/0/1/2 [4]
KicOffset-st: 1/0/1/2 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 0.00 [0/16]

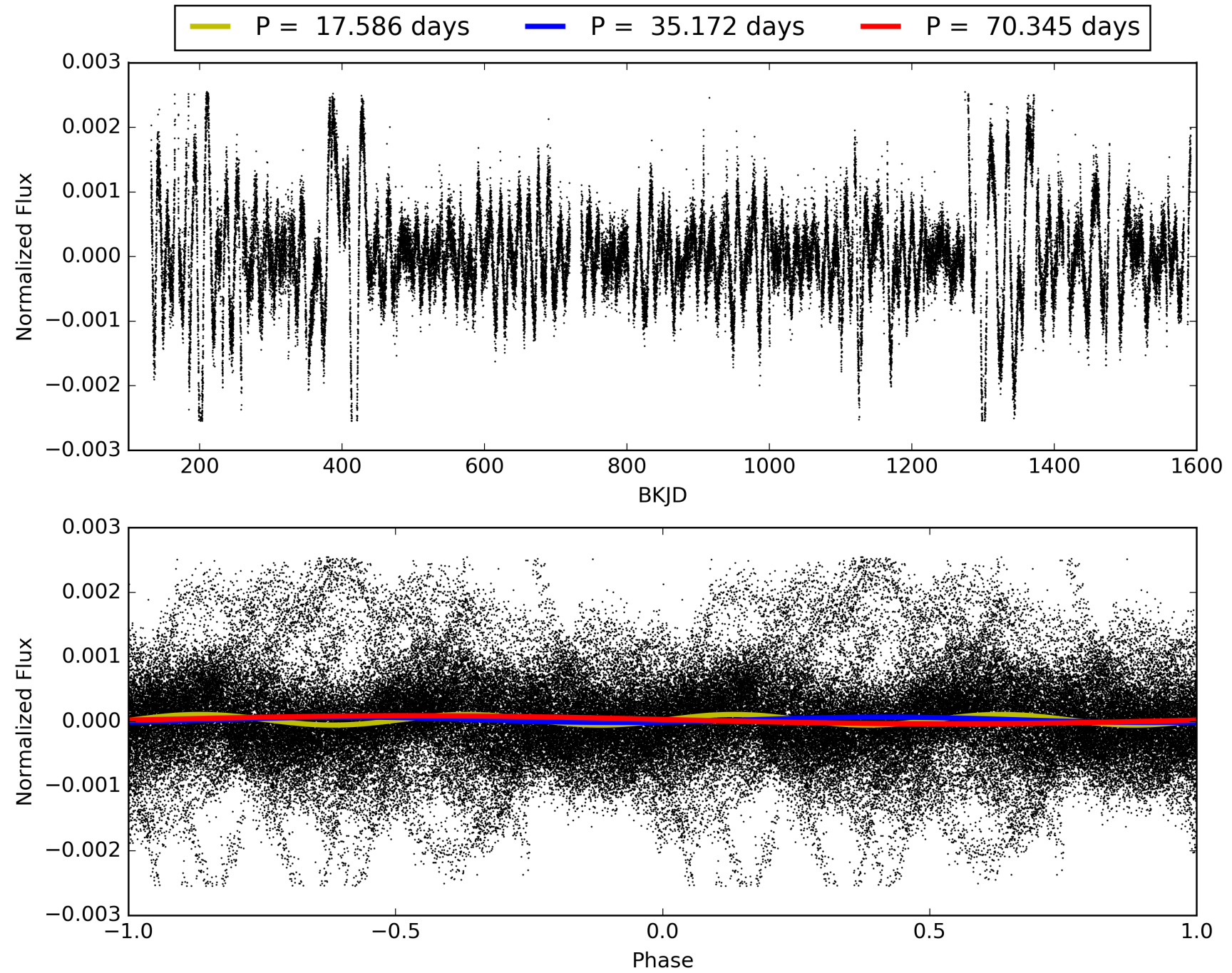
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:40:31 Z

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

TCE 008767034-04, PDC Light Curves

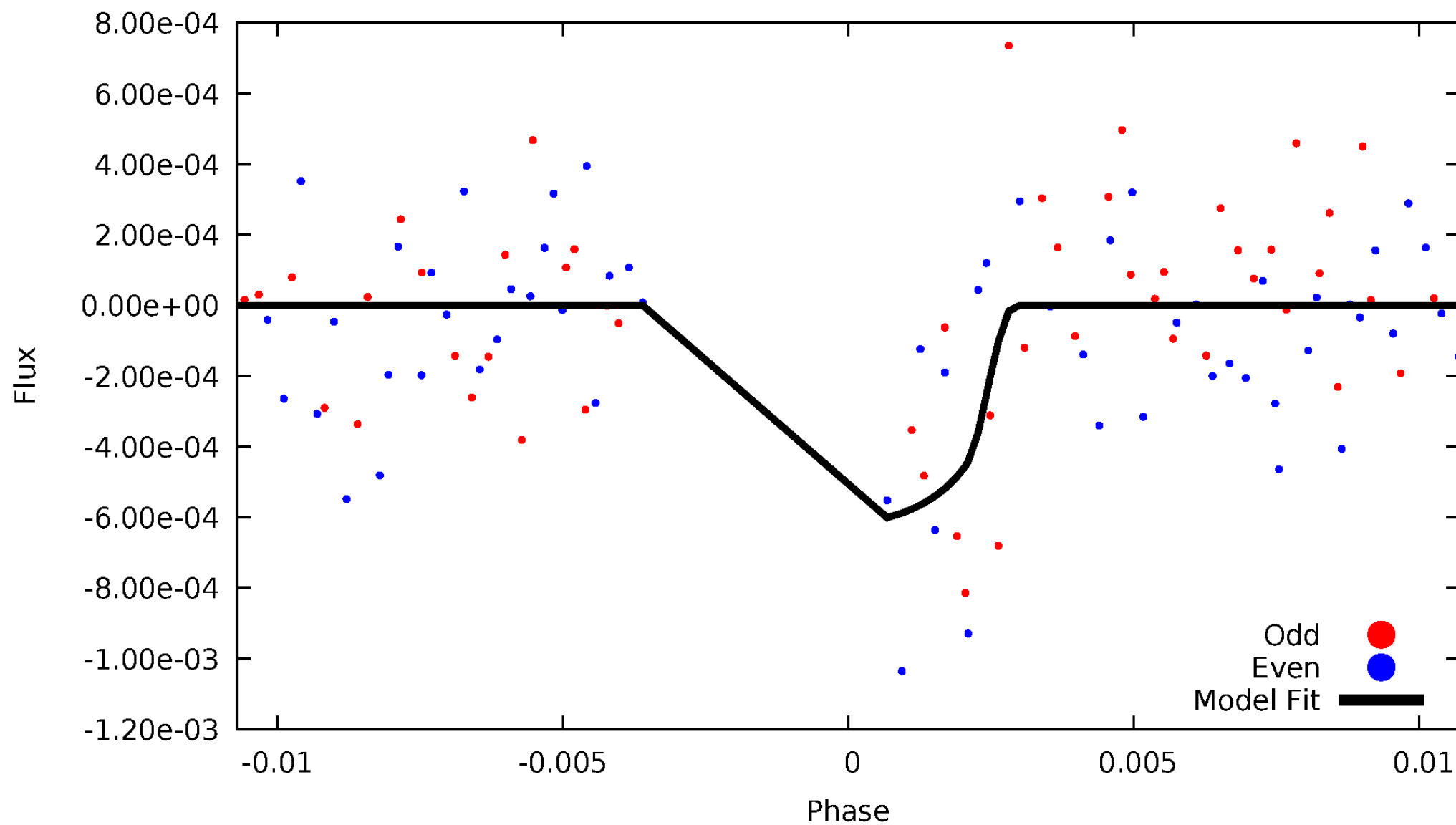


TCE 008767034-04



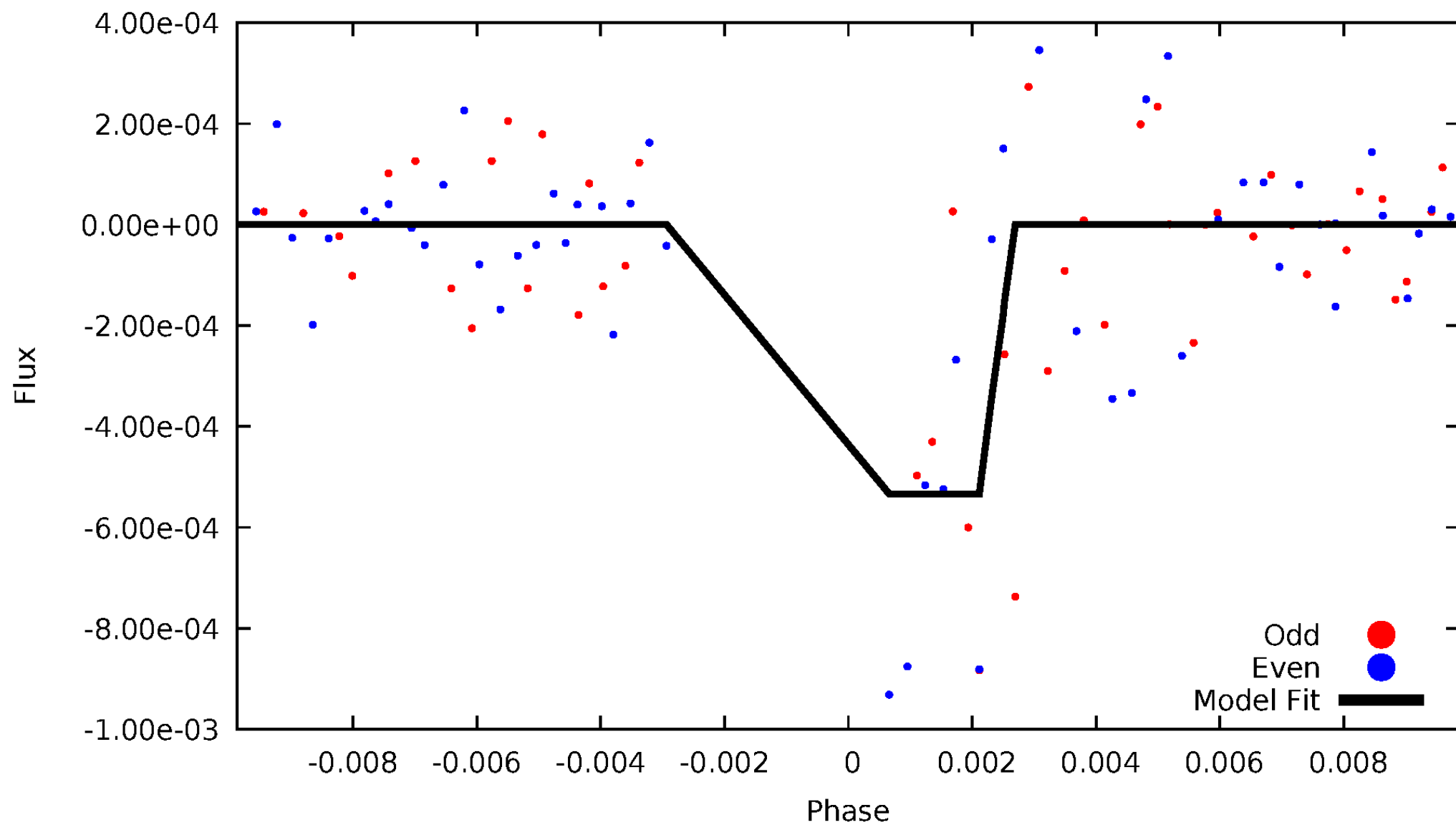
DV Odd/Even

TCE 008767034-04



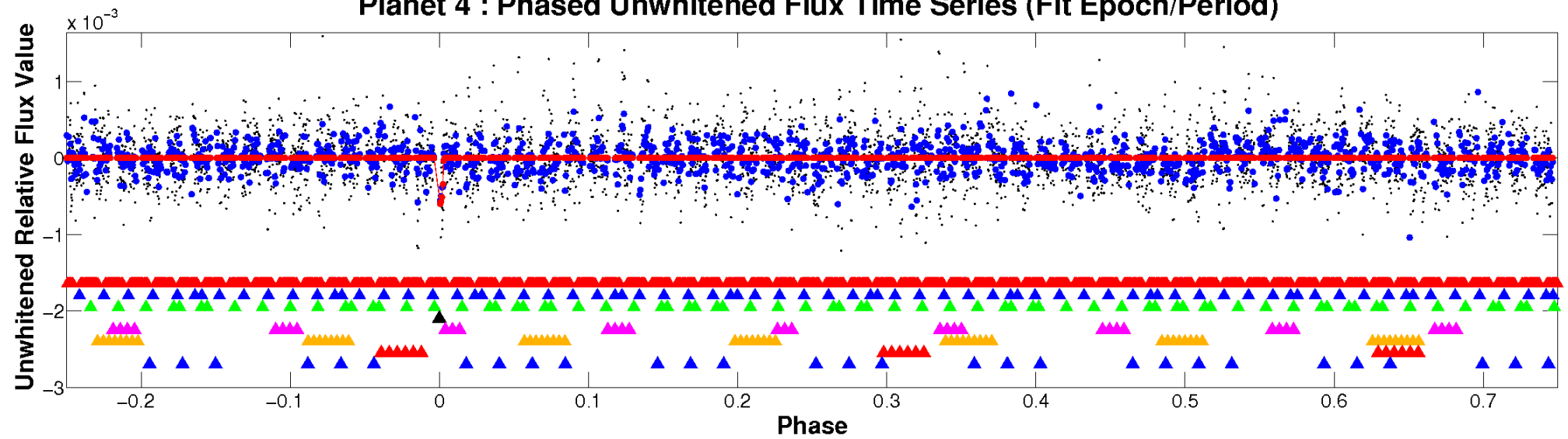
ALT Odd/Even

TCE 008767034-04

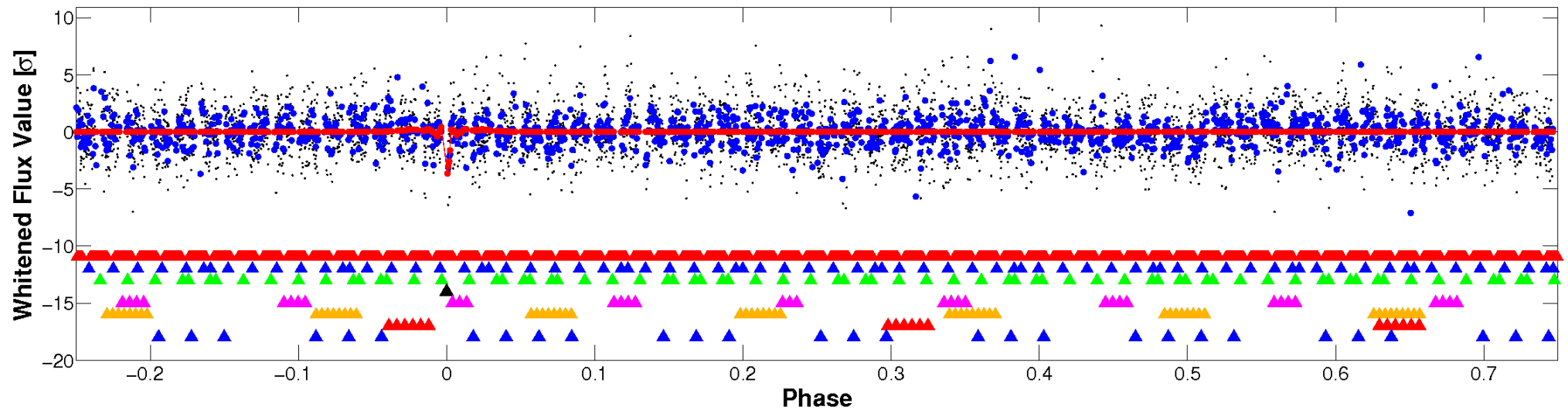


Non-Whitened Vs. Whitened Light Curve

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

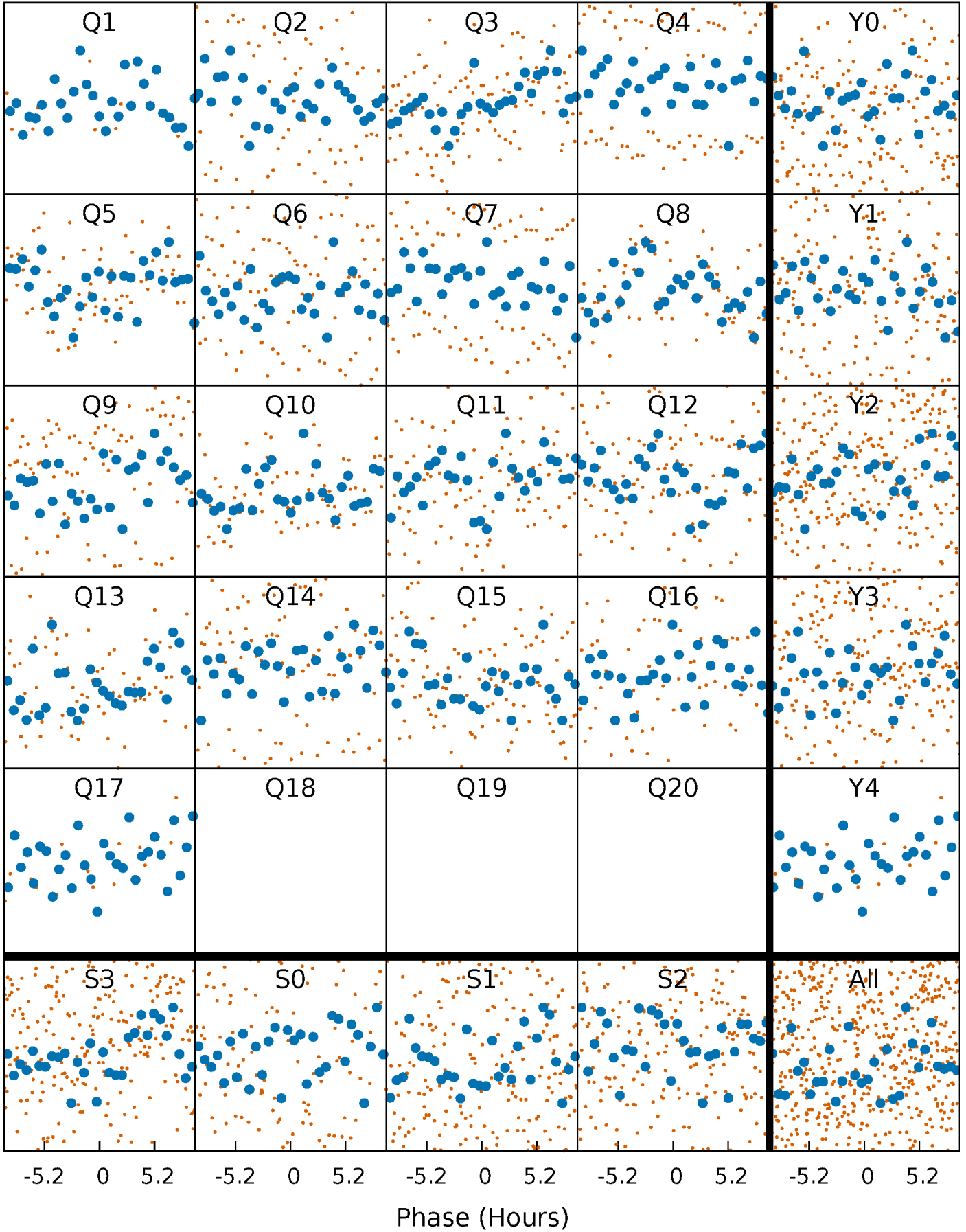


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



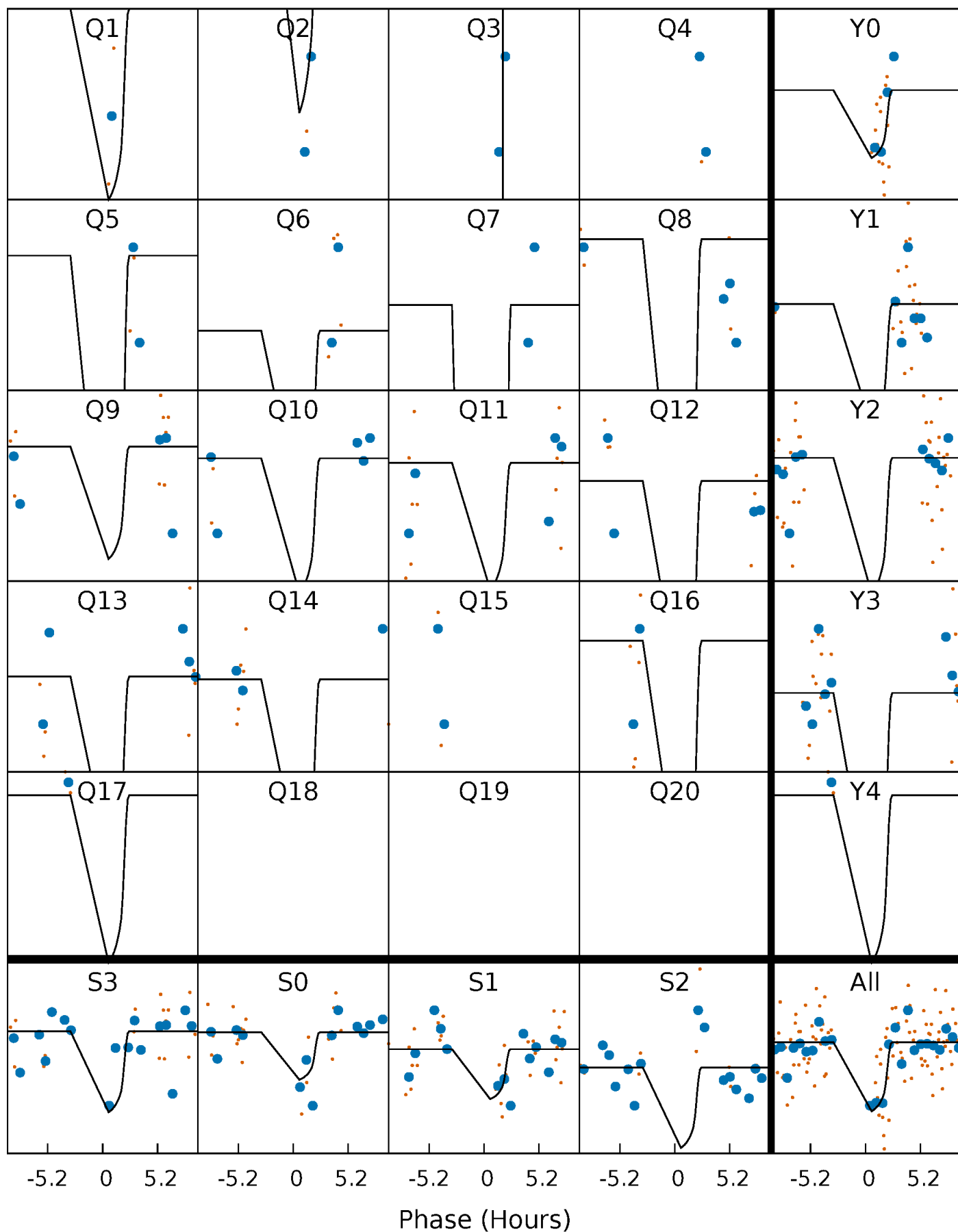
PDC Quarter-Phased Transit Curves

TCE 008767034-04 $P = 35.172465$ Days $T_0 = 161.730937$ (BKJD)



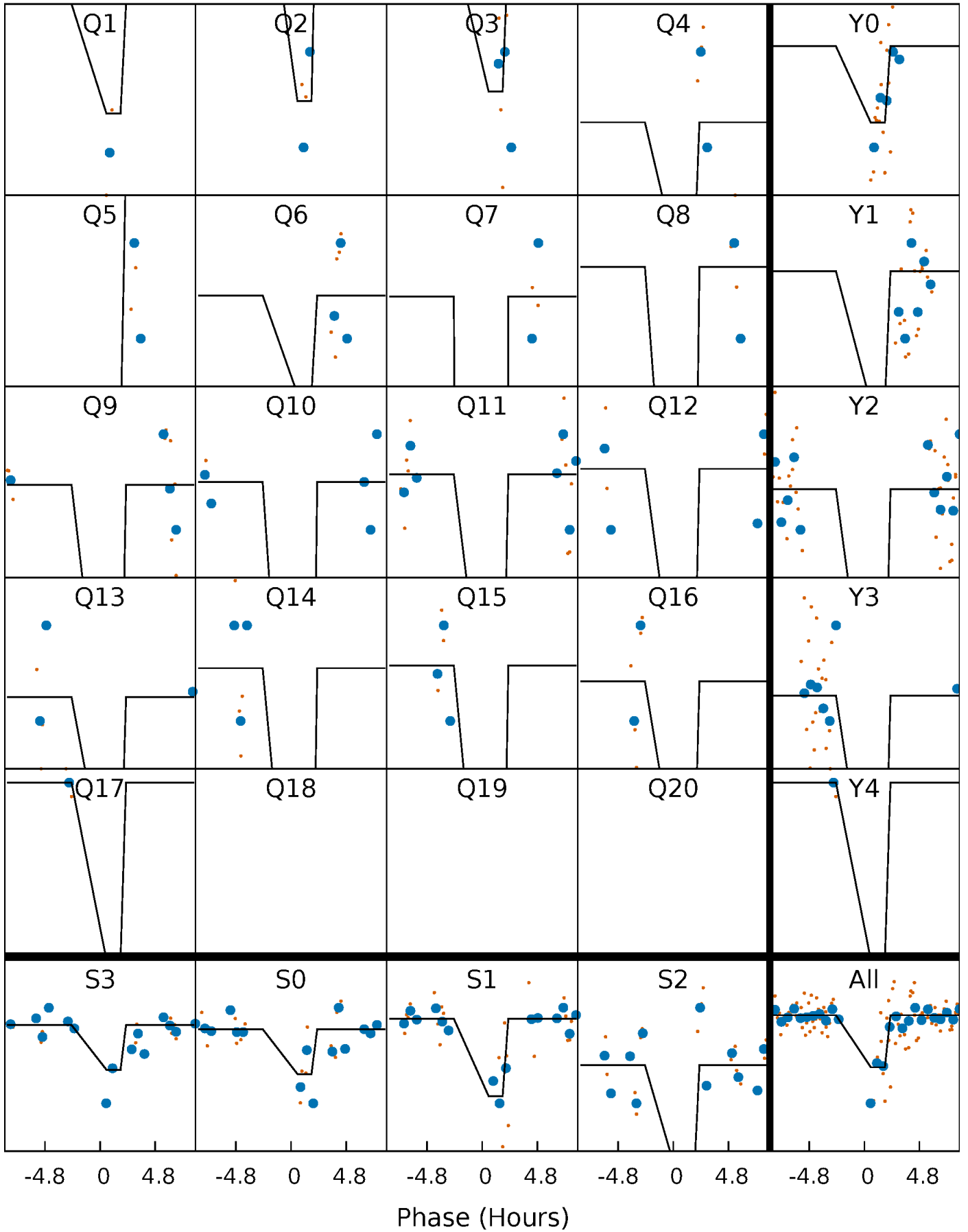
DV Quarter-Phased Transit Curves

TCE 008767034-04 P= 35.172465 Days $T_0=161.730937$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

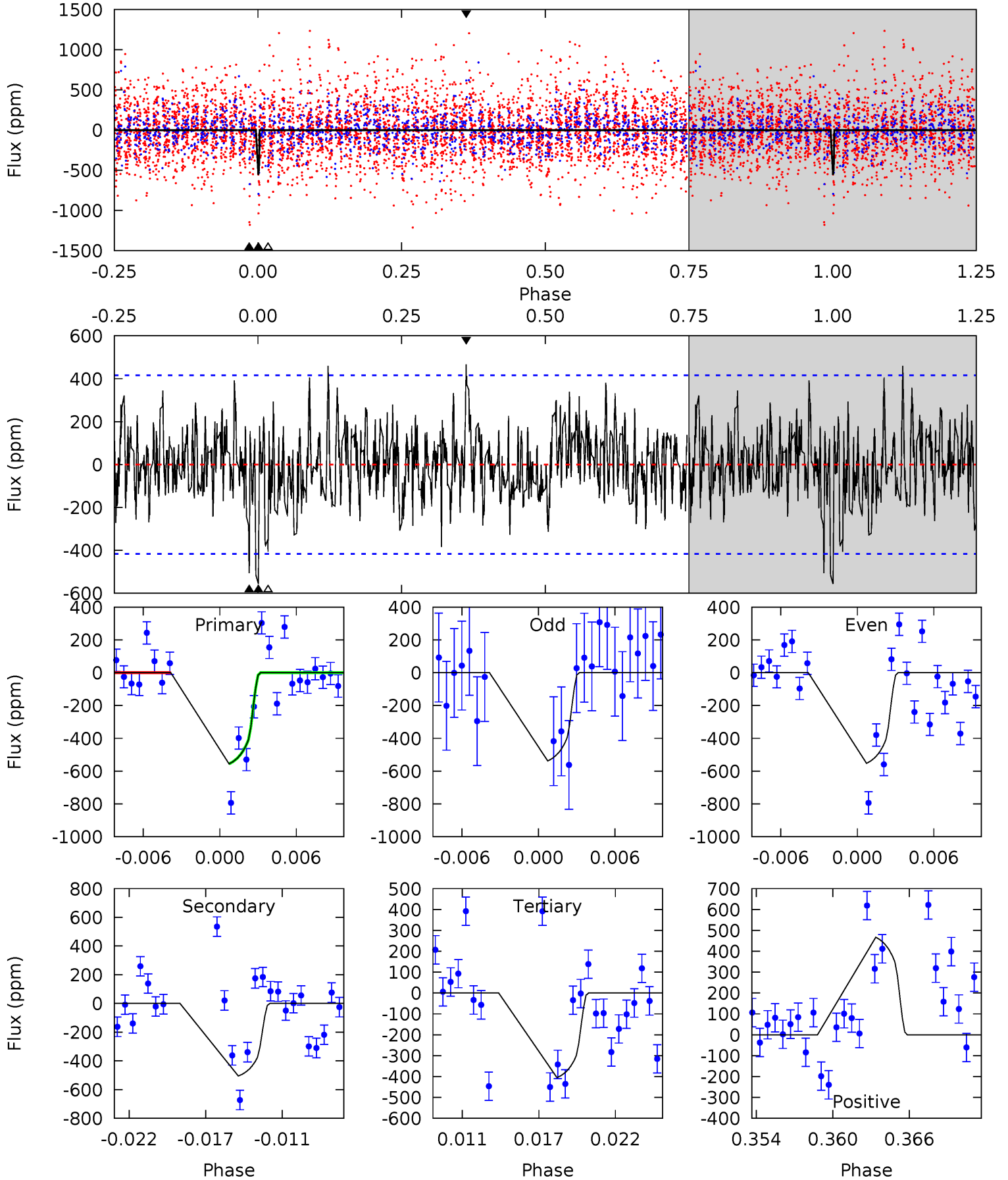
TCE 008767034-04 $P = 35.171861$ Days $T_0 = 161.731642$ (BKJD)



DV Model-Shift Uniqueness Test

008767034-04, P = 35.172465 Days, E = 126.558472 Days

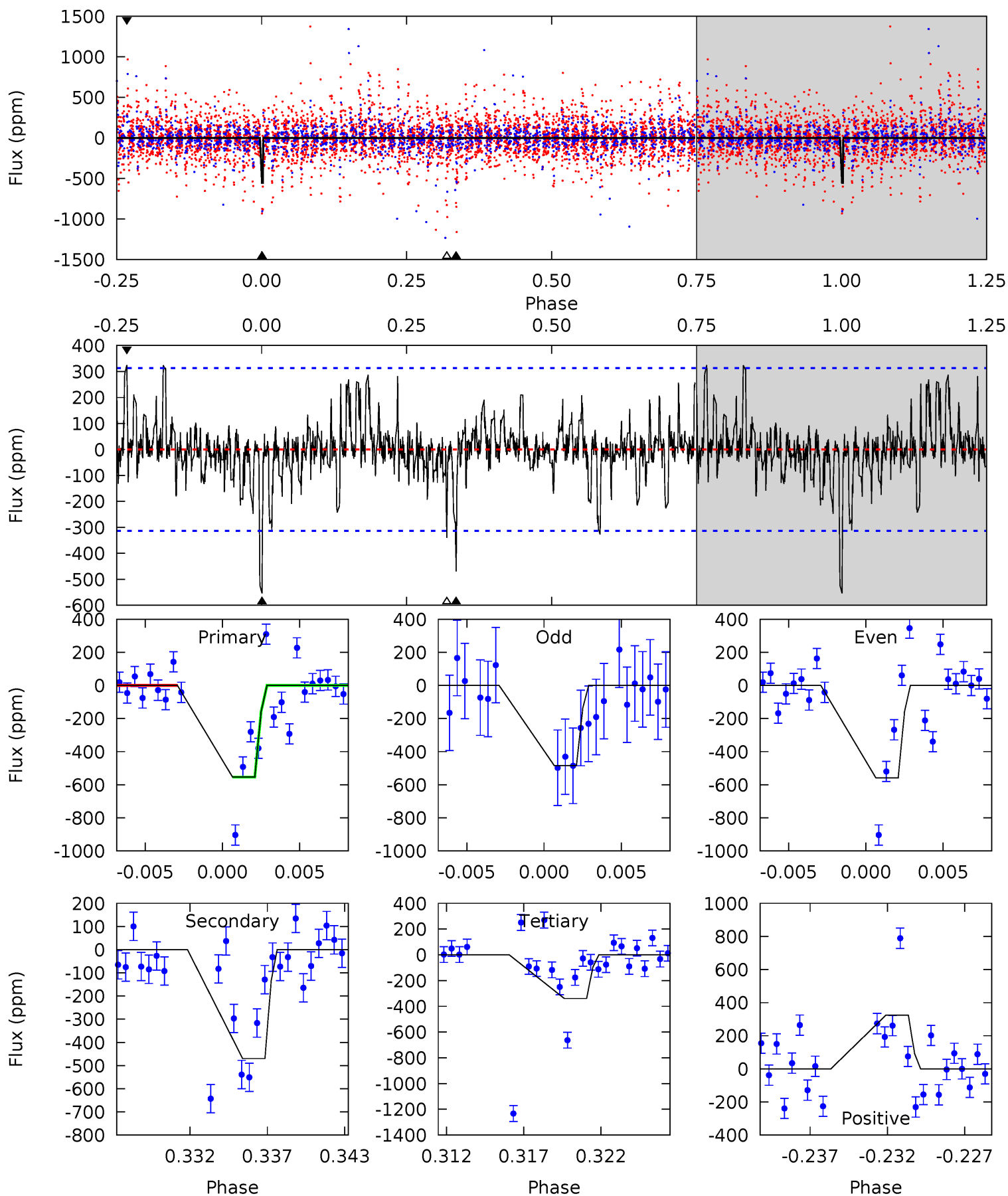
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.86	6.24	5.01	5.77	5.14	2.77	1.57	1.86	1.10	1.23	0.47	0.09	1.17	0.46	0



Alt Model-Shift Uniqueness Test

008767034-04, P = 35.171861 Days, E = 126.559781 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.12	7.73	5.59	5.34	5.16	2.80	1.18	3.53	3.77	2.14	2.39	0.54	0.93	0.37	0



Stellar Parameters For KIC 008767034

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4556^{+136}_{-123}	$4.676^{+0.028}_{-0.052}$	$-0.320^{+0.300}_{-0.300}$	$0.615^{+0.061}_{-0.041}$	$0.669^{+0.058}_{-0.064}$	$4.042^{+0.520}_{-0.813}$
	+3%/-3%	+1%/-1%	+94%/-94%	+10%/-7%	+9%/-10%	+13%/-20%
Source	PHO1	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 008767034-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-505 ± 81	$2.43^{+2.27}_{-1.62}$	519^{+18}_{-16}	3842^{+2193}_{-724}	1534^{+13748}_{-1128}
Alt.	-470 ± 61	$2.39^{+1.95}_{-1.47}$	518^{+18}_{-16}	3845^{+1676}_{-690}	1504^{+8472}_{-1067}

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

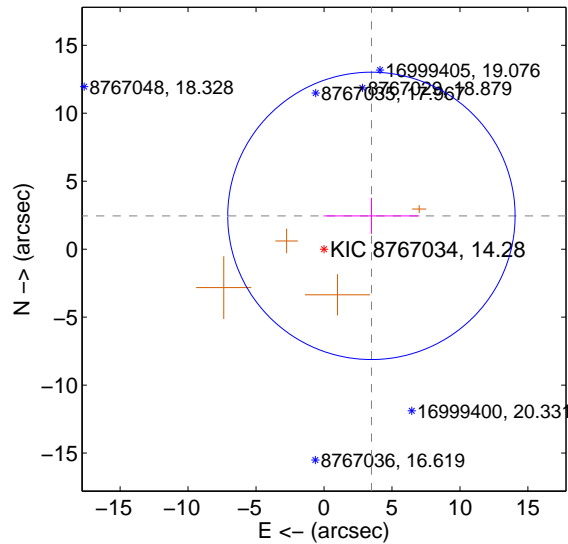
Supplemental centroid analysis for 008767034-04. Kepler magnitude: 14.28. Transit SNR 8.99

There are 0 quarters with good PRF difference image offsets

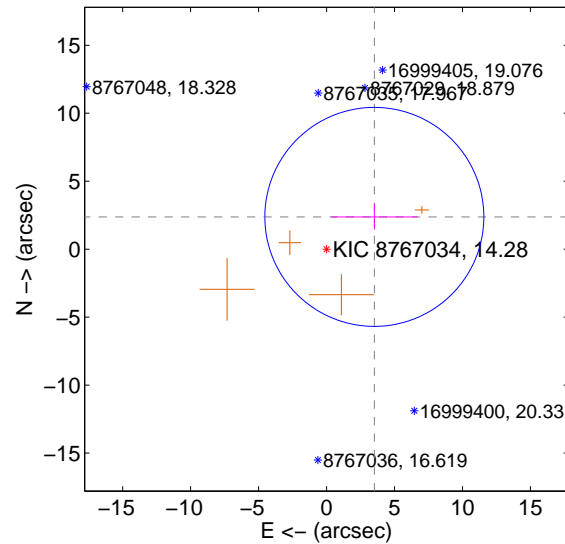
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.264 ± 3.523	1.21	-3.489 ± 3.516	2.451 ± 1.330
PRF-fit source offset from KIC position	4.243 ± 2.685	1.58	-3.516 ± 3.177	2.375 ± 0.942
photometric centroid source offset	0.65 ± 0.30	2.20	-0.49 ± 0.29	-0.43 ± 0.30

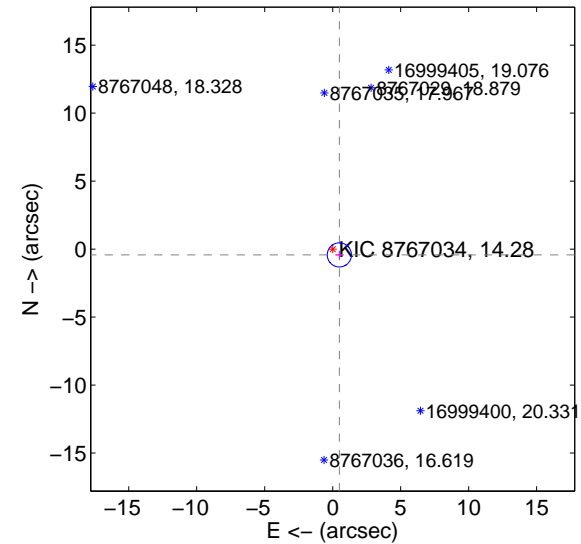
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

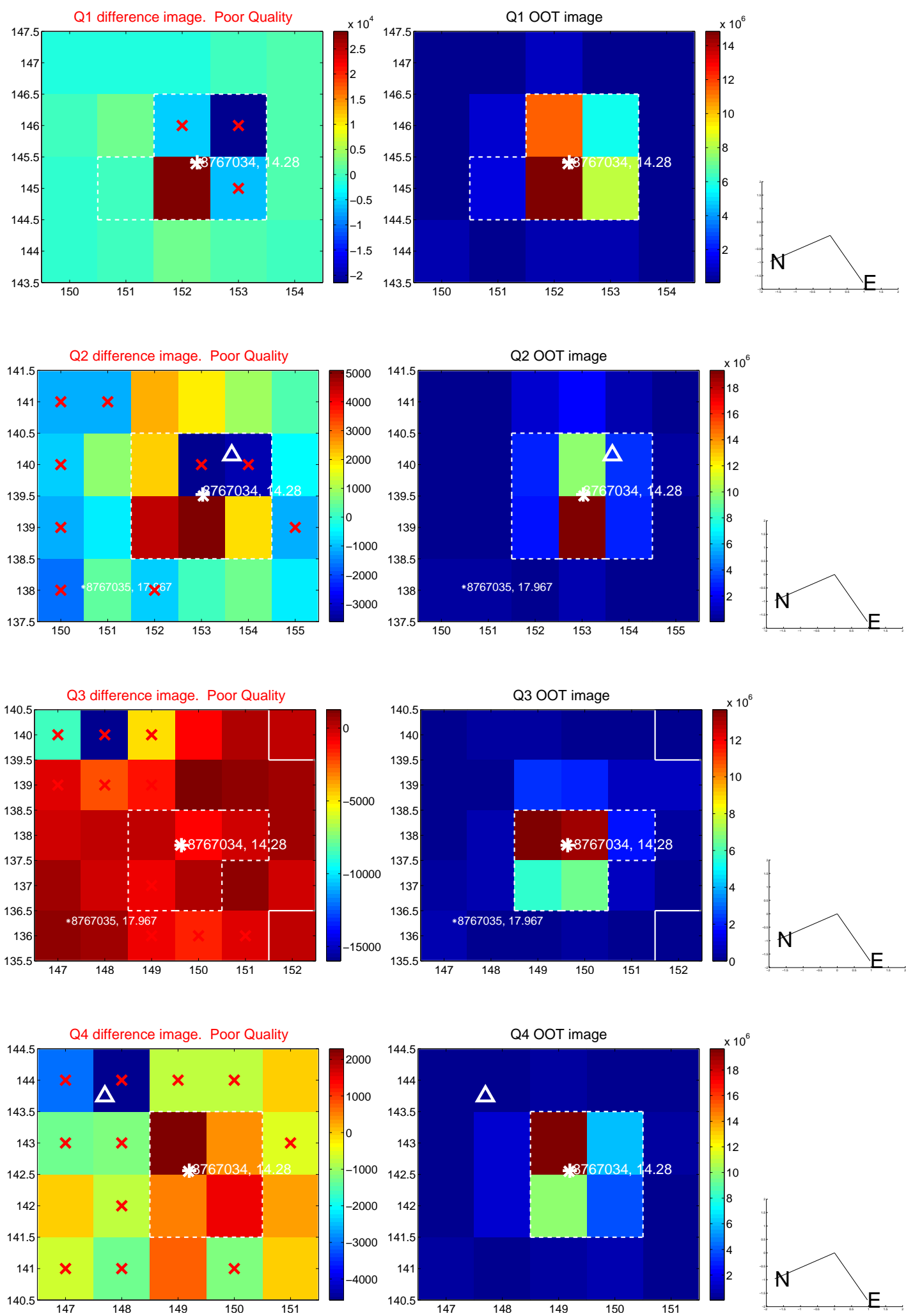


offset from photometric centroids

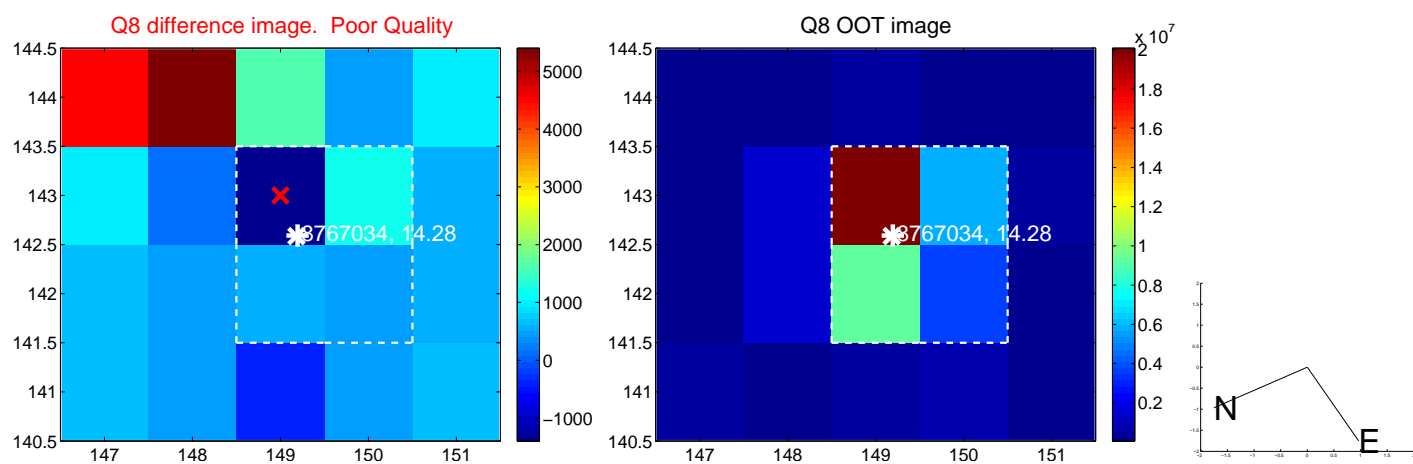
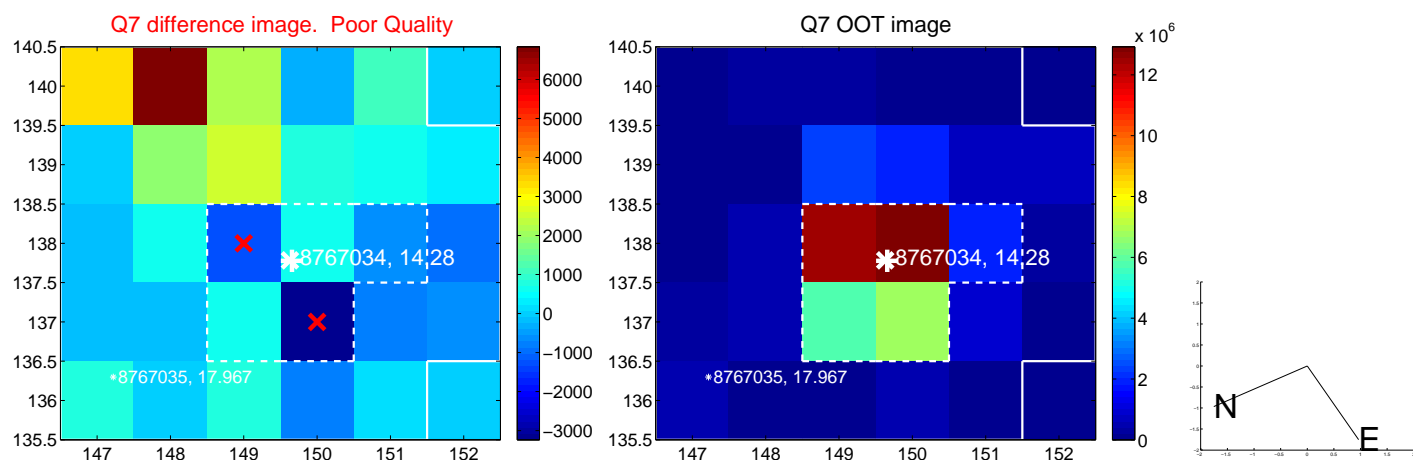
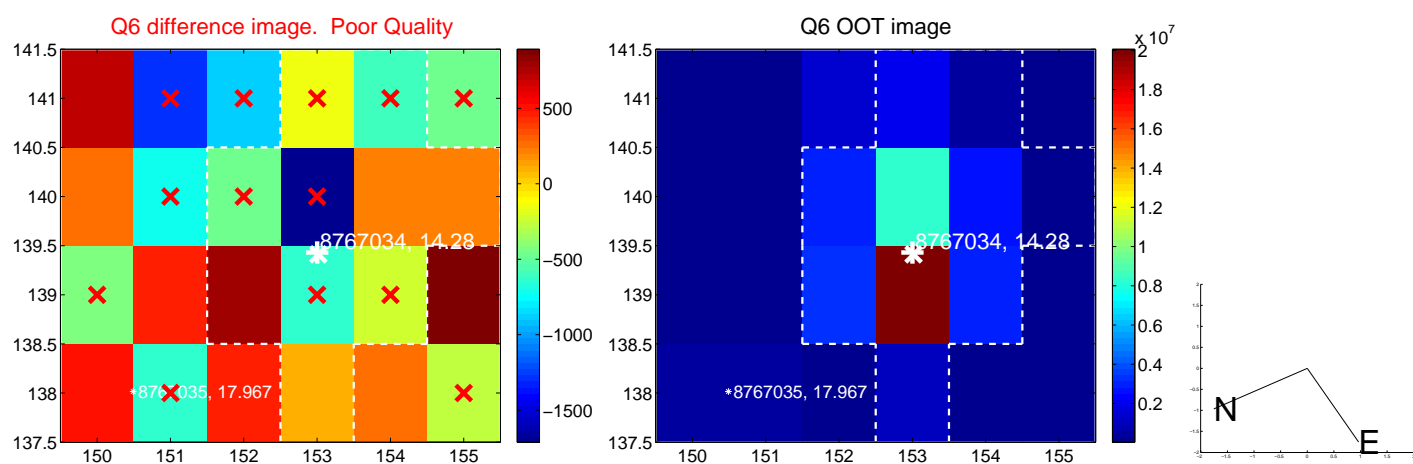
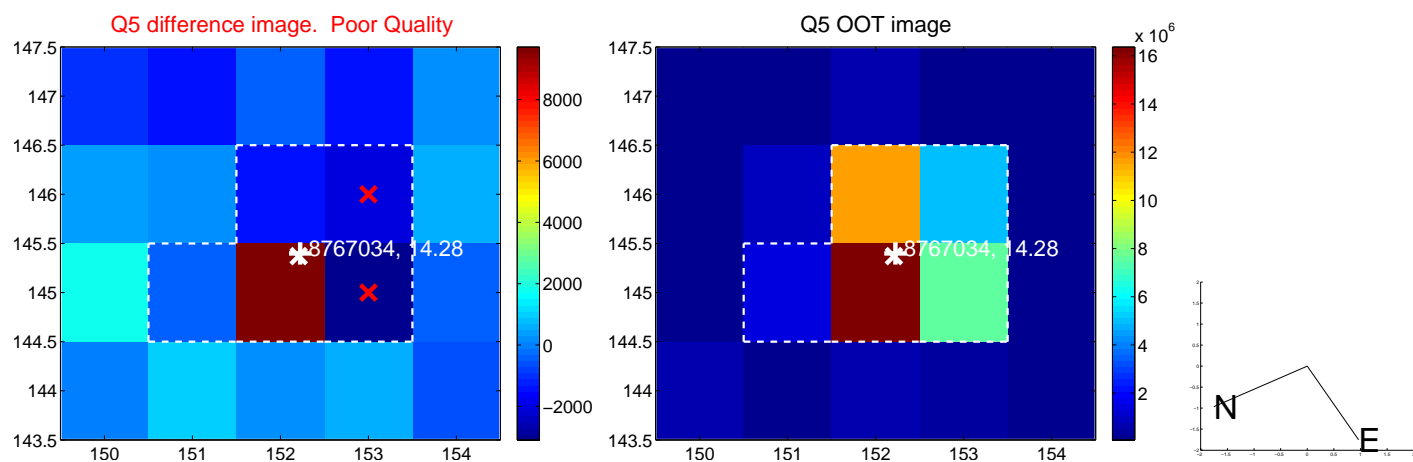


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

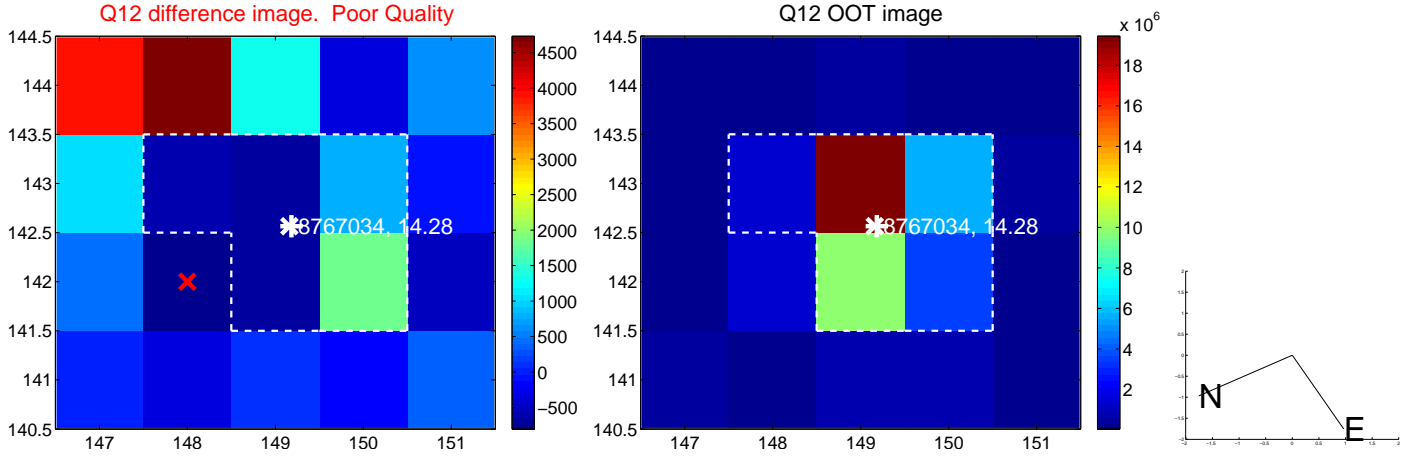
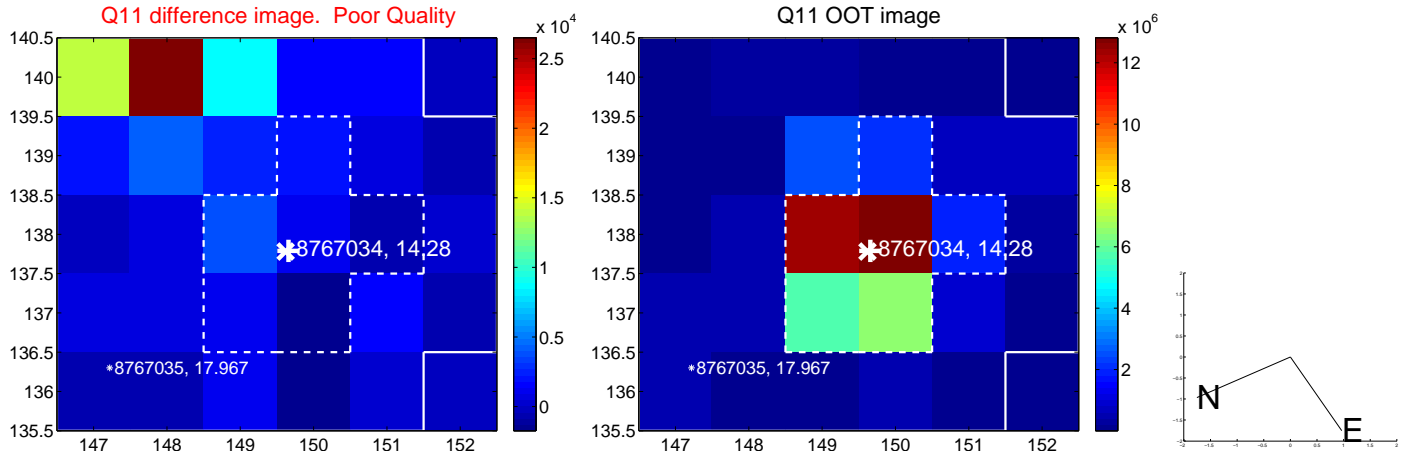
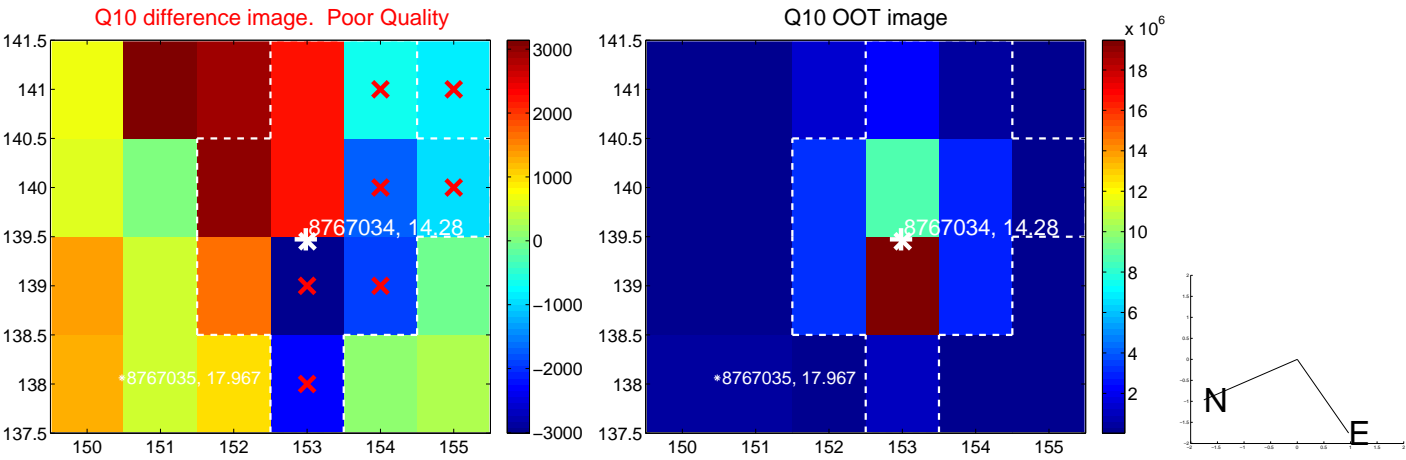
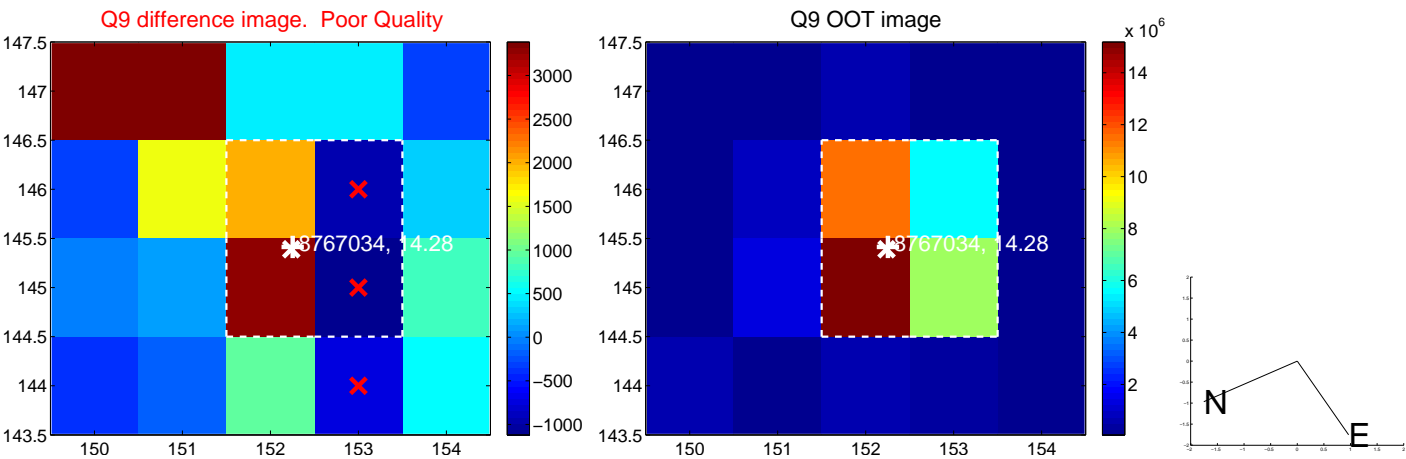
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



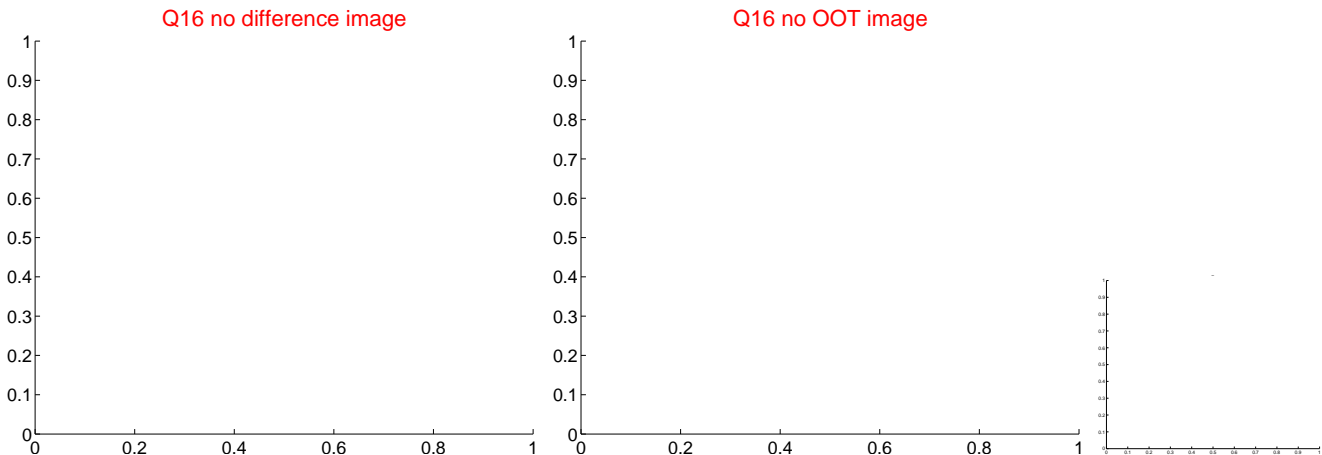
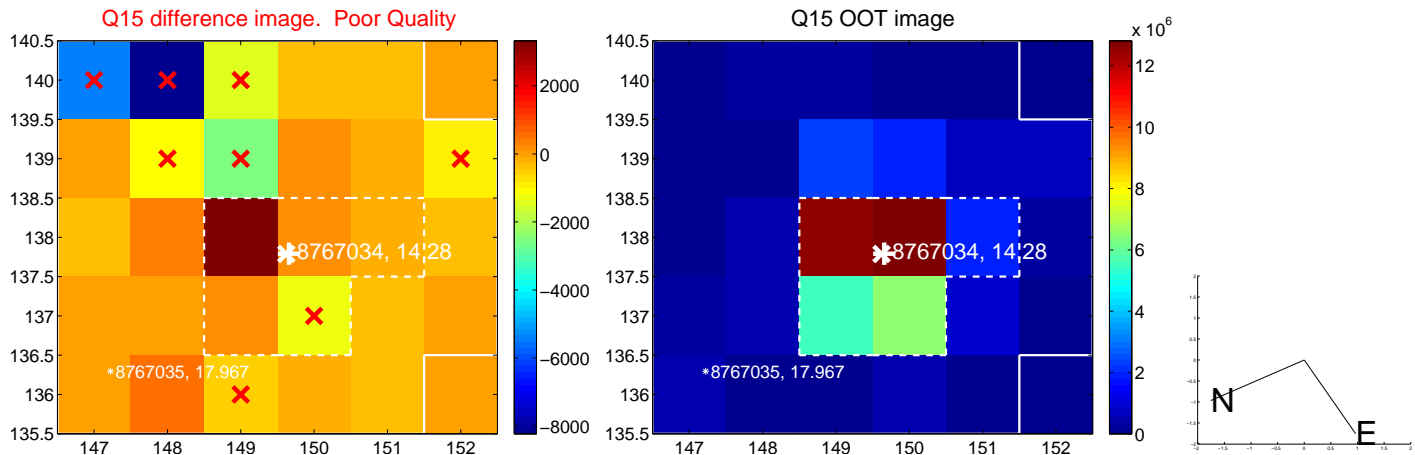
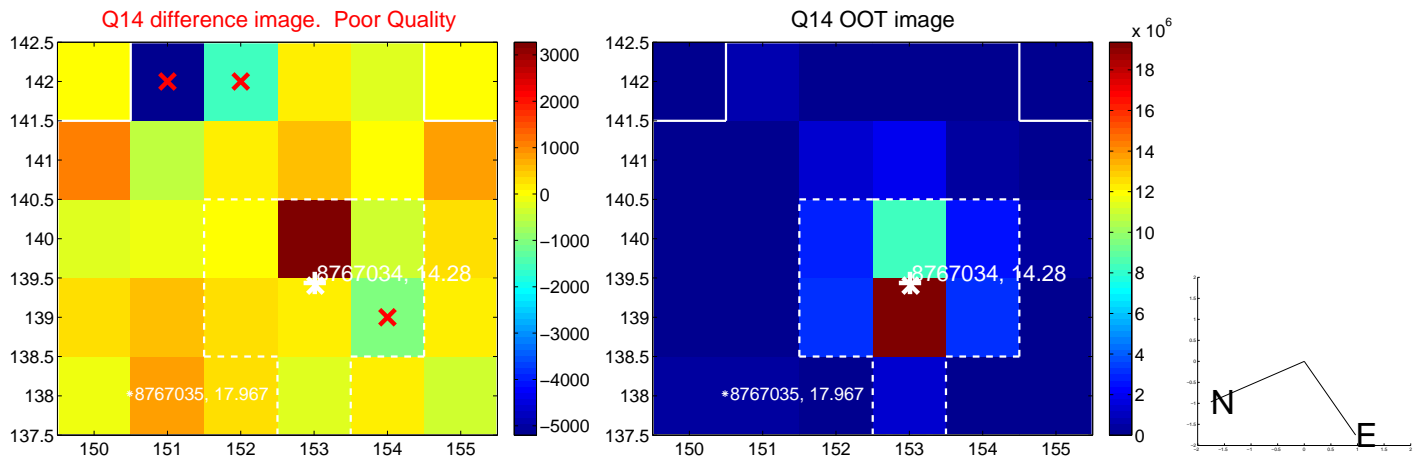
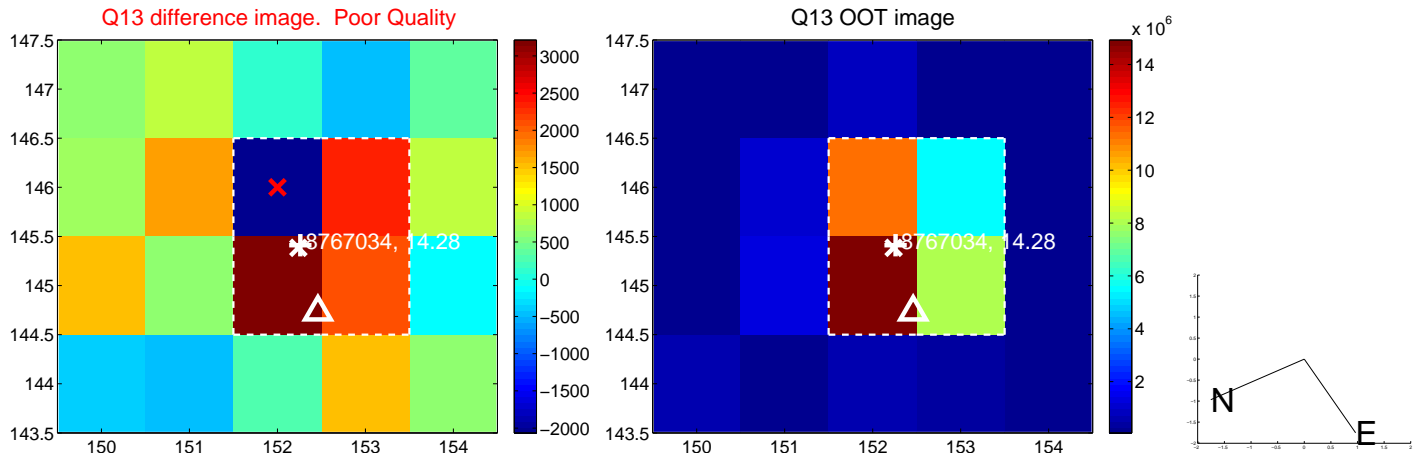
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



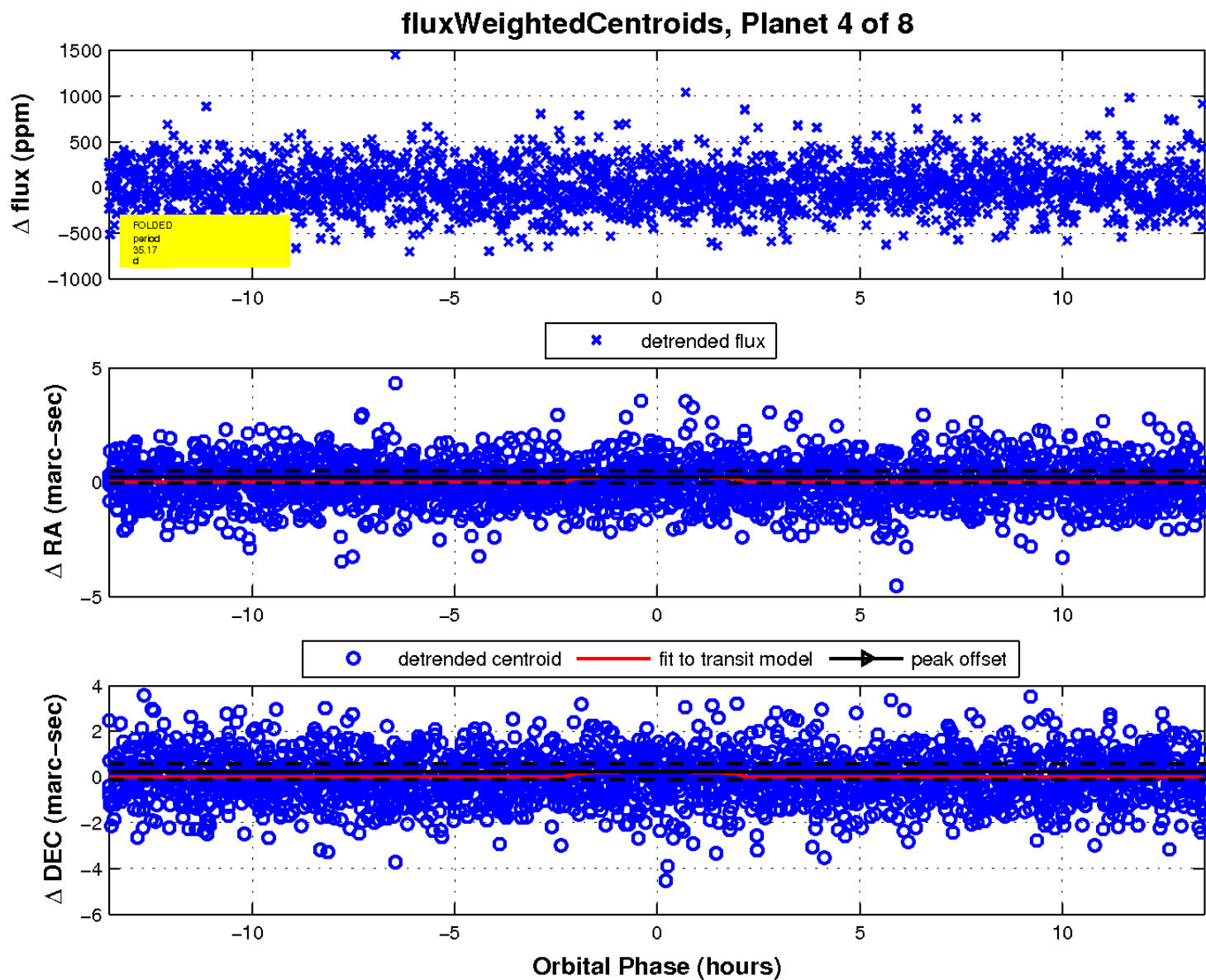
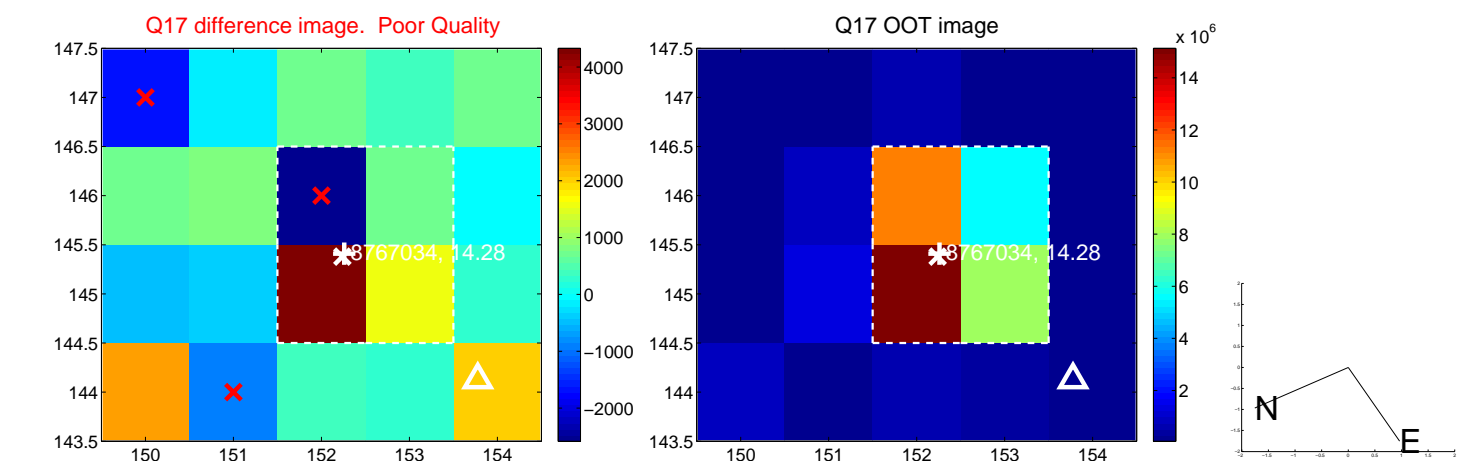
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

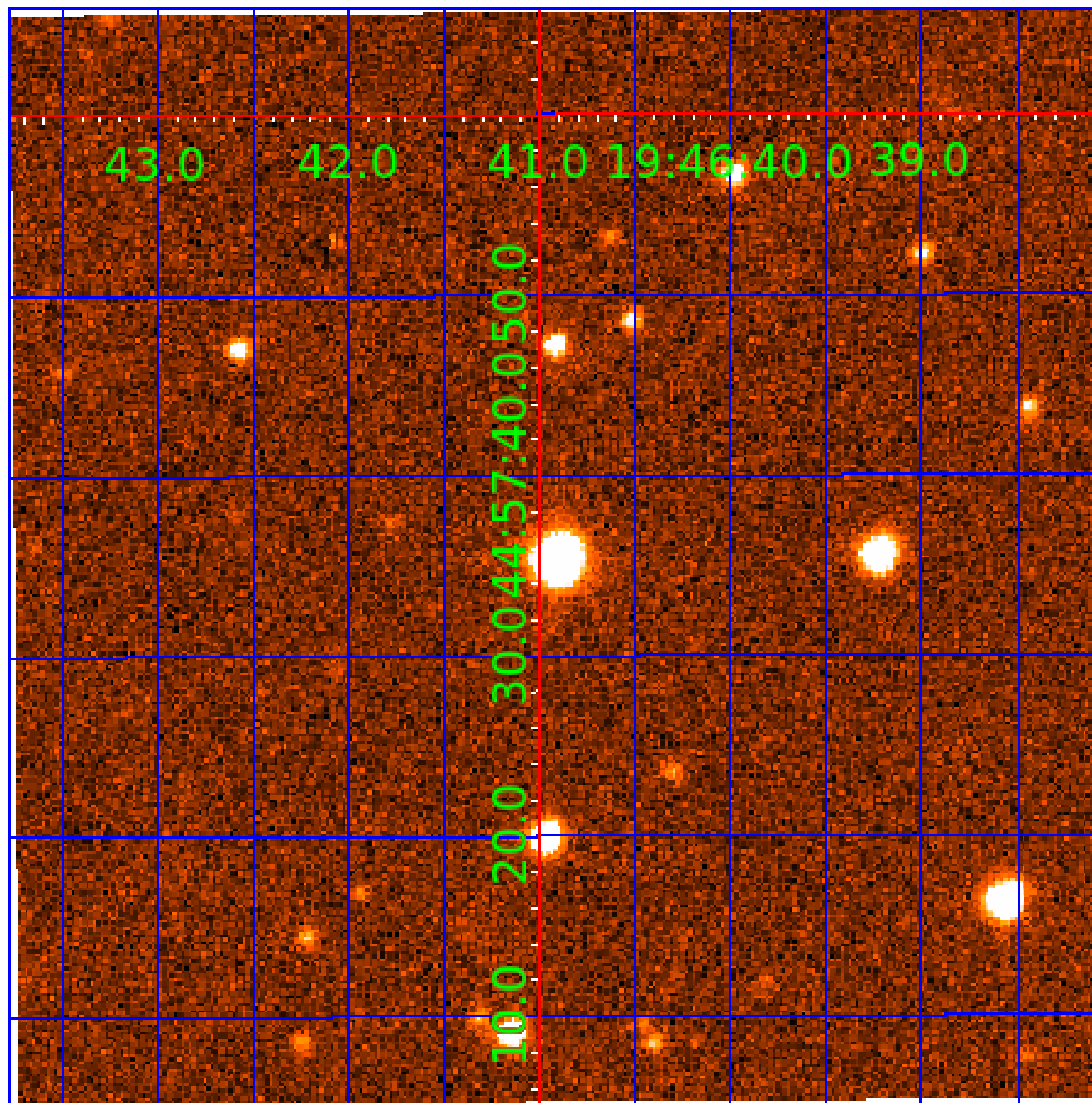


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008767034

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})
008767034-01	OBS	7089.01	0.586382	131.566135	24.5	4.161	13.5	9.8	0.61	4556	0.29	1030.16
008767034-02	OBS	No	19.237477	149.361219	68.5	7.045	11.6	2.7	0.61	4556	0.58	9.81
008767034-04	OBS	No	35.172465	161.730937	614.9	4.518	11.0	9.0	0.61	4556	1.69	4.39
008767034-05	OBS	No	43.007251	142.200562	722.9	1.925	12.2	11.4	0.61	4556	1.94	3.35
008767034-06	OBS	No	25.103715	149.656632	529.6	1.097	9.0	7.7	0.61	4556	1.48	6.88
008767034-08	OBS	No	50.891218	162.364936	569.1	3.375	9.0	10.8	0.61	4556	1.65	2.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008767034-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
008767034-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
008767034-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008767034-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_MEAS
008767034-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_MEAS
008767034-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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 008767034-05

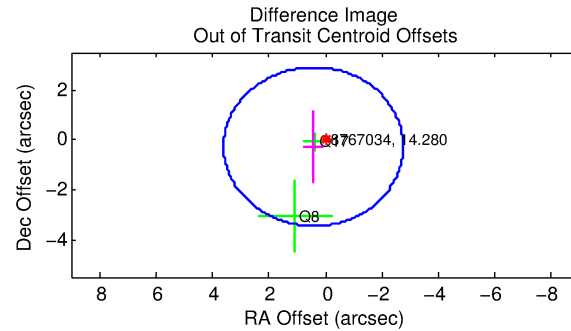
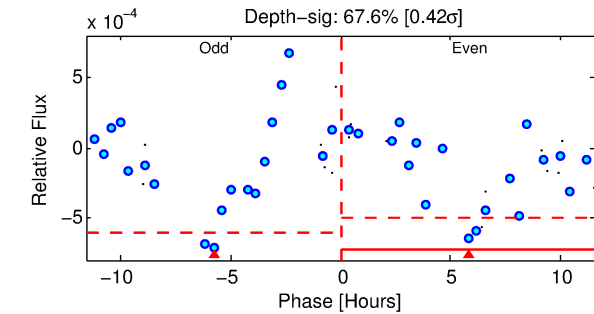
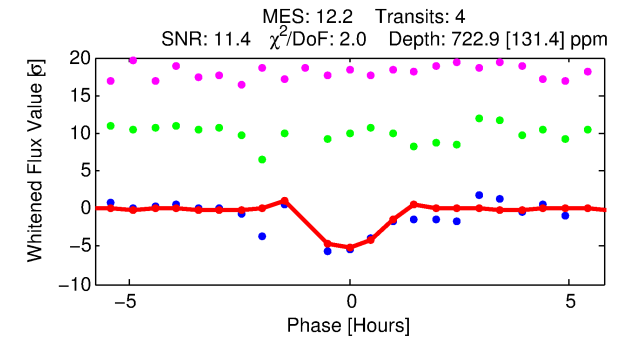
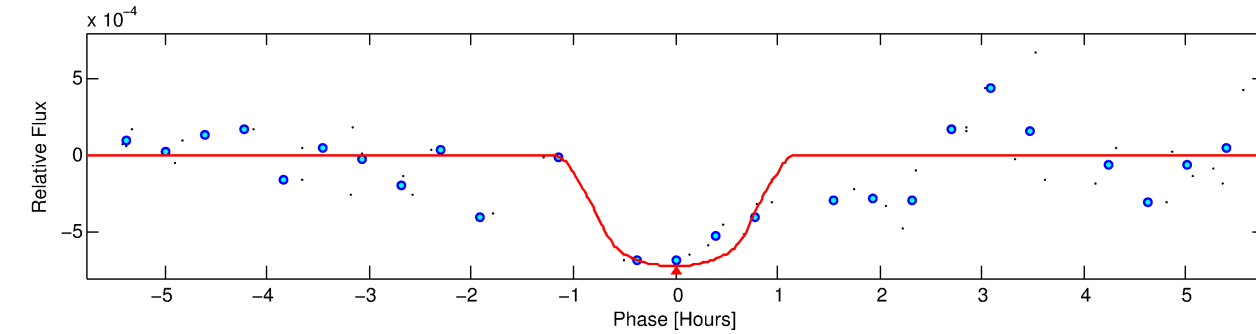
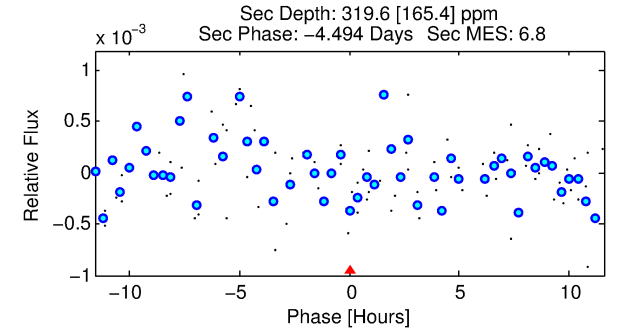
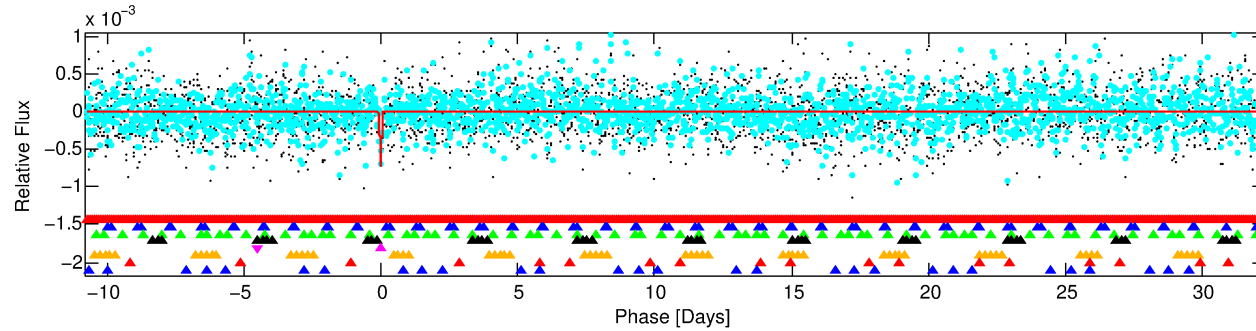
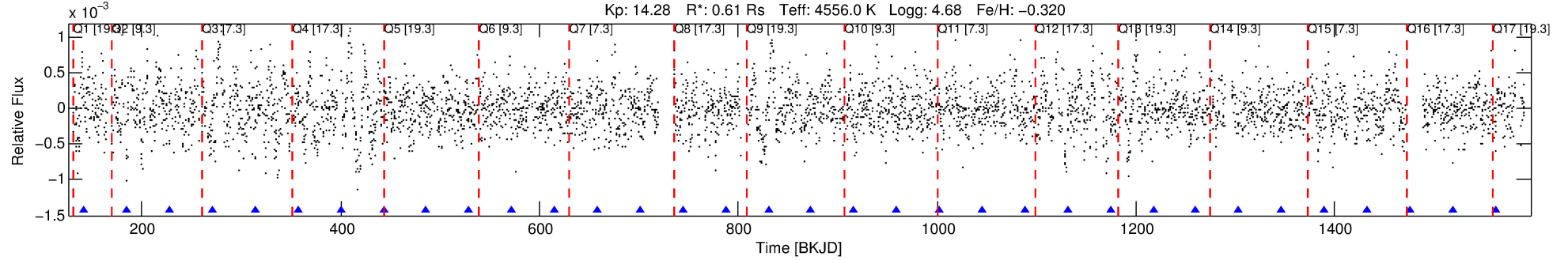
No Significant Match Found

DV One-Page Summary

KIC: 8767034 Candidate: 5 of 8 Period: 43.007 d

KOI: K07089 Corr: No Ephemeris Match

Kp: 14.28 R*: 0.61 Rs Teff: 4556.0 K Logg: 4.68 Fe/H: -0.320



DV Fit Results:

Period = 43.00725 [0.00117] d
Epoch = 142.2006 [0.0266] BKJD
Rp/R* = 0.0290 [0.1421]
a/R* = 97.39 [1700.69]
b = 0.86 [5.58]
Seff = 3.36 [0.53]
Teff = 345 [14] K
Rp = 1.94 [9.54] Re
a = 0.2086 [0.0161] AU
Ag = 2023.59 [19876.55] [0.10σ]
Teffp = 3579 [8788] K [0.37σ]

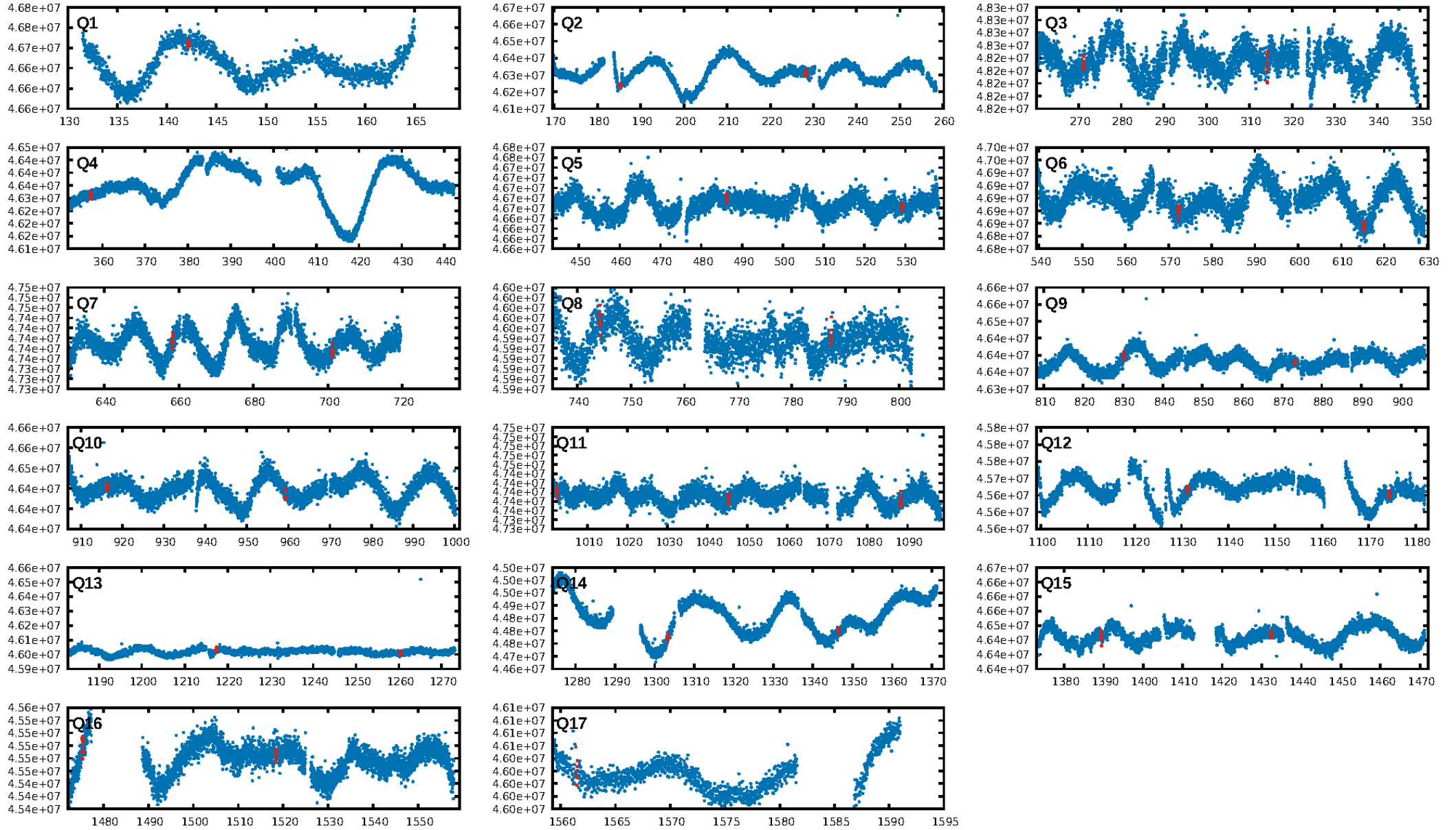
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [38.29σ]
LongPeriod-sig: 100.0% [48.70σ]
ModelChiSquare2-sig: 68.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.07e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.8581
Centroid-sig: 11.6%
Centroid-so: 0.532 arcsec [1.19σ]
OotOffset-rm: 0.508 arcsec [0.48σ]
KicOffset-rm: 0.542 arcsec [0.50σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/17]

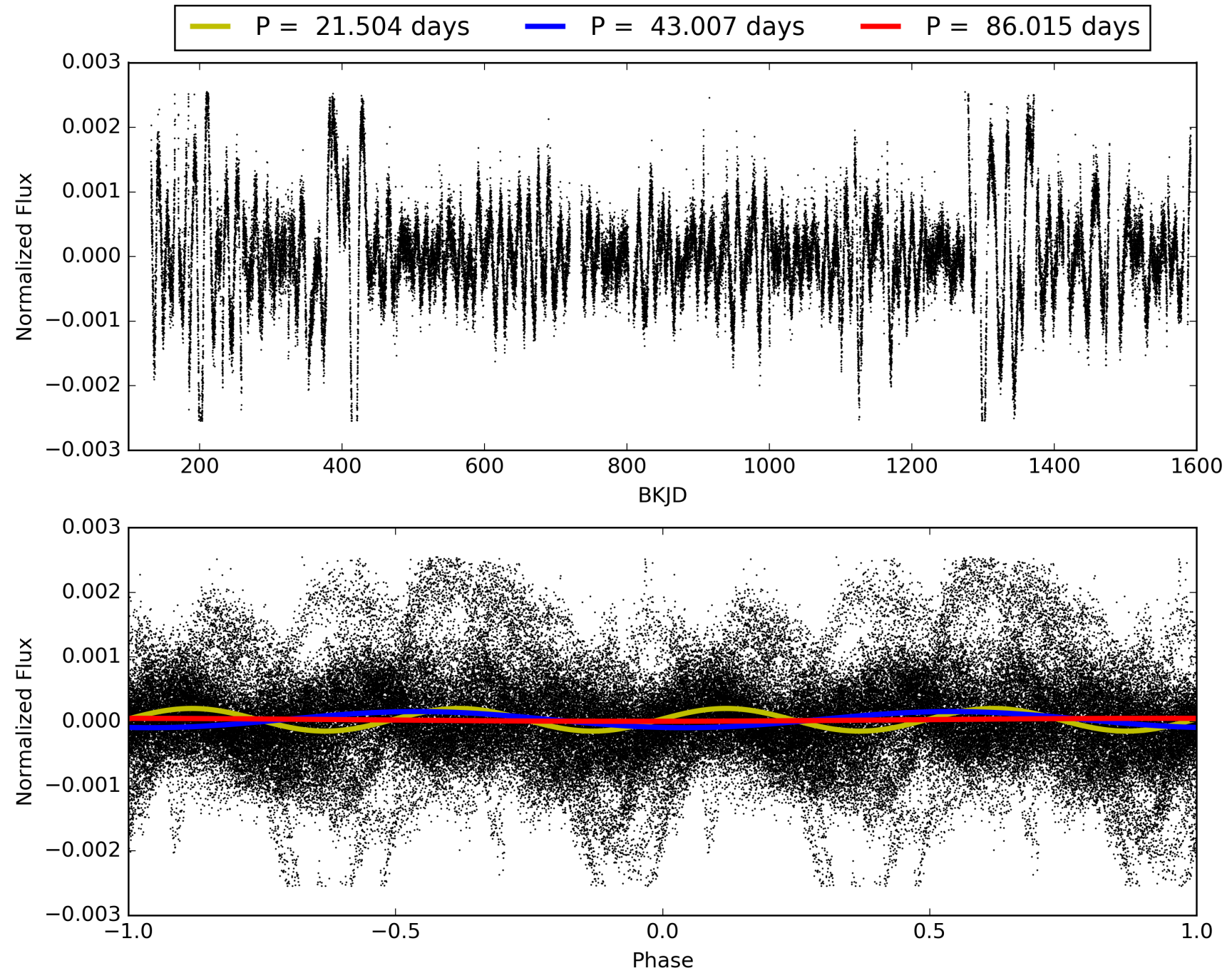
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:40:34 Z

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

TCE 008767034-05, PDC Light Curves

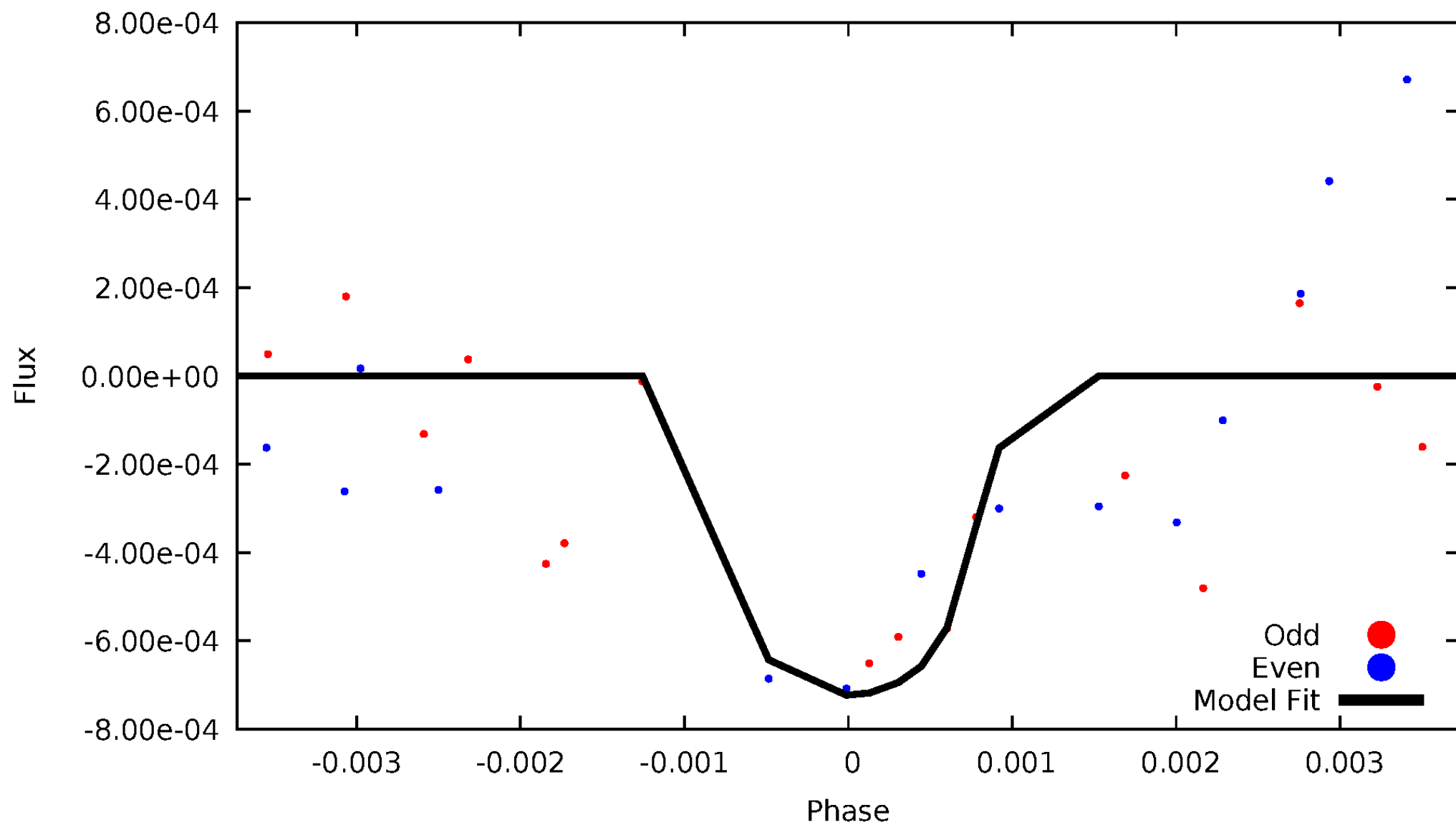


TCE 008767034-05



DV Odd/Even

TCE 008767034-05

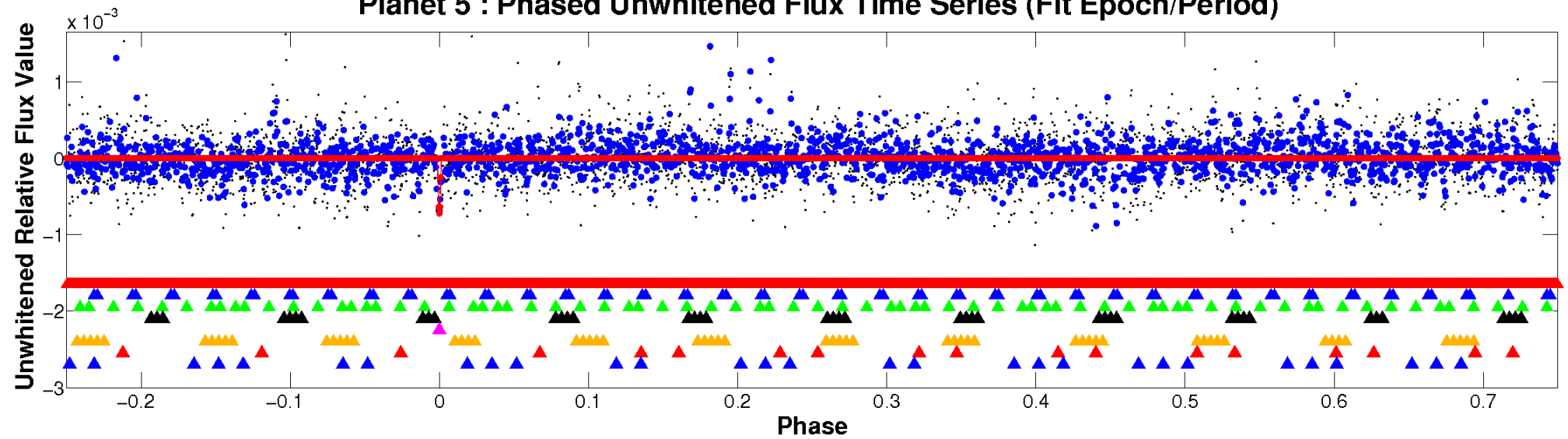


ALT Odd/Even

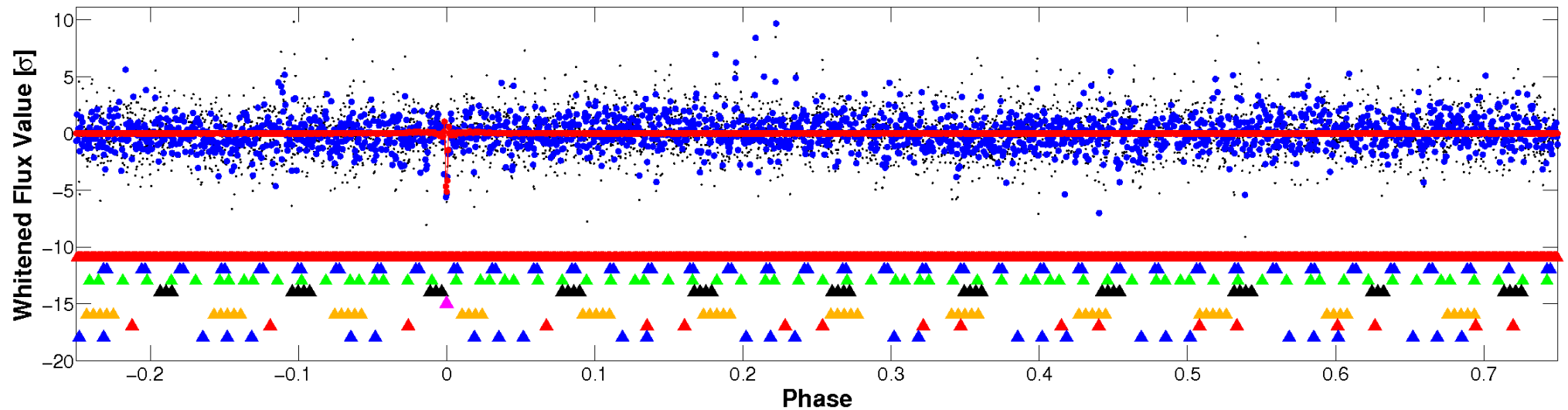
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

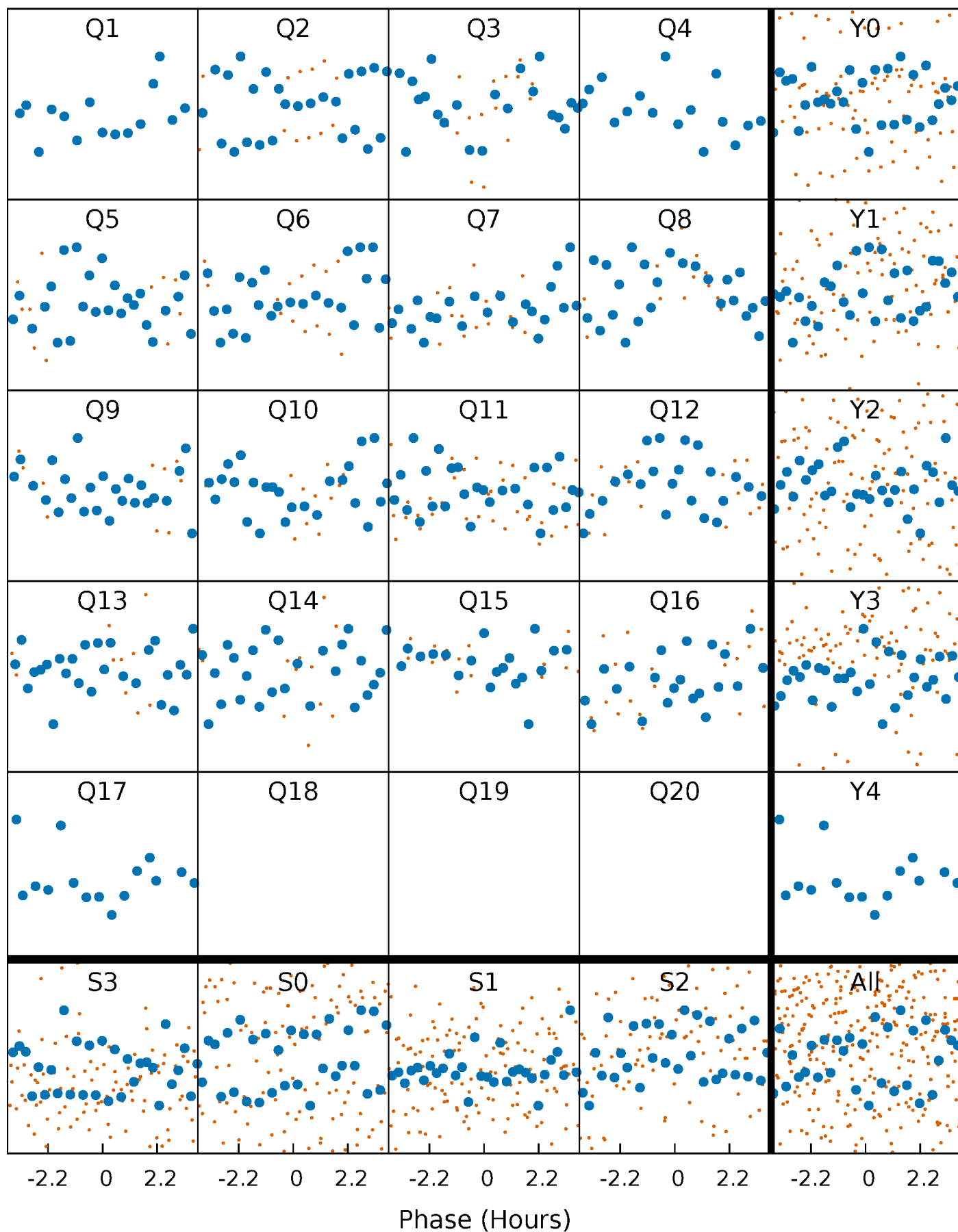


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



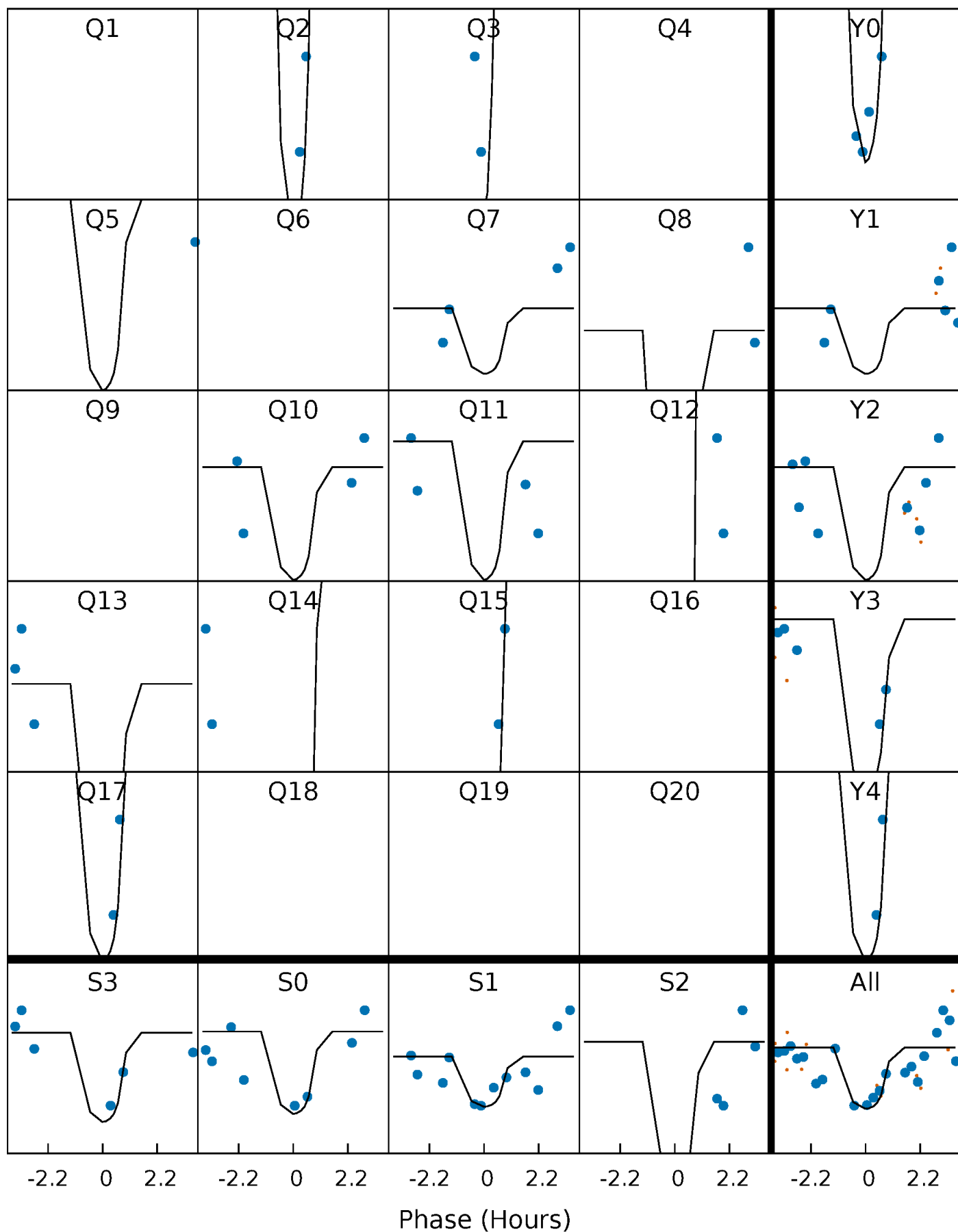
PDC Quarter-Phased Transit Curves

TCE 008767034-05 $P = 43.007251$ Days $T_0 = 142.200562$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008767034-05 P= 43.007251 Days $T_0=142.200562$ (BKJD)

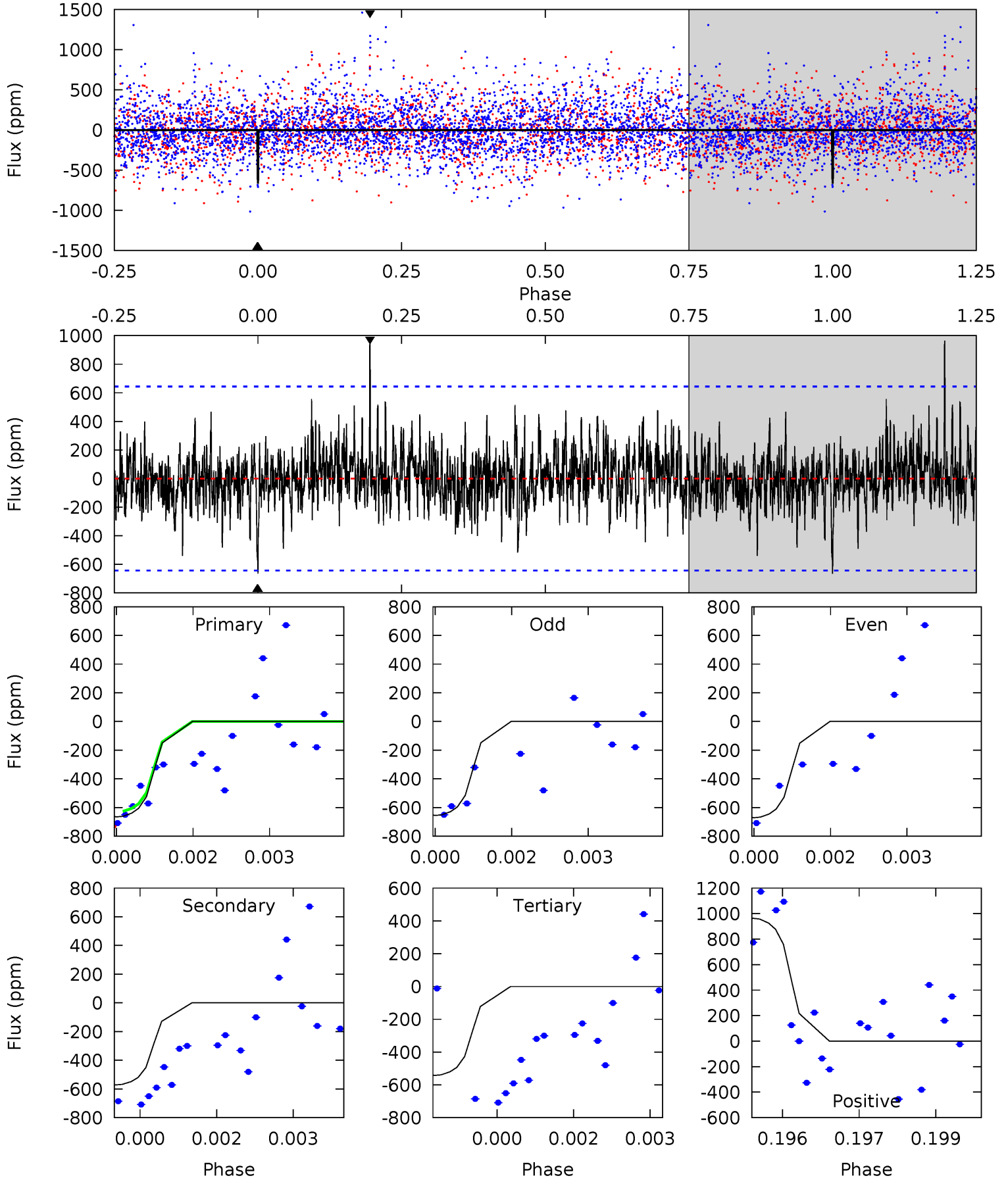


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

008767034-05, P = 43.007251 Days, E = 99.193311 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.56	4.78	4.53	8.05	5.37	3.17	1.33	1.03	-2.49	0.24	-3.27	0.06	0.99	0.59	0.00



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 008767034

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4556^{+136}_{-123}	$4.676^{+0.028}_{-0.052}$	$-0.320^{+0.300}_{-0.300}$	$0.615^{+0.061}_{-0.041}$	$0.669^{+0.058}_{-0.064}$	$4.042^{+0.520}_{-0.813}$
	+3%/-3%	+1%/-1%	+94%/-94%	+10%/-7%	+9%/-10%	+13%/-20%
Source	PHO1	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 008767034-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-572 ± 120	$7.00^{+7.86}_{-4.79}$	486^{+18}_{-16}	2835^{+1270}_{-472}	275^{+2428}_{-214}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

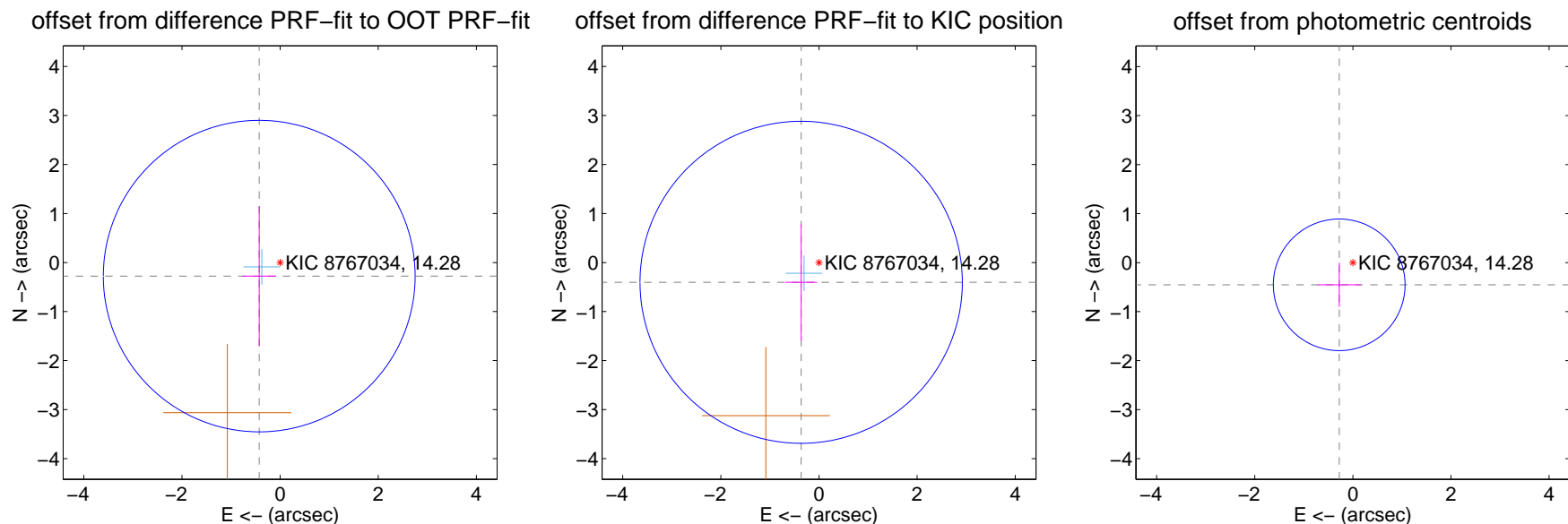
DV Centroid Data

Supplemental centroid analysis for 008767034-05. Kepler magnitude: 14.28. Transit SNR 11.44

There are 1 quarters with good PRF difference image offsets

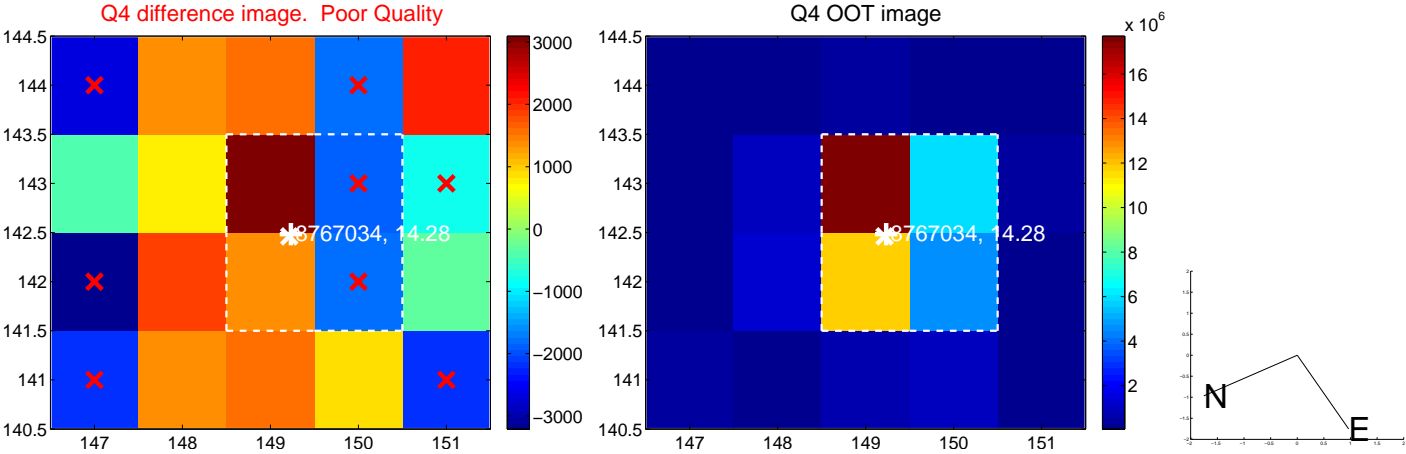
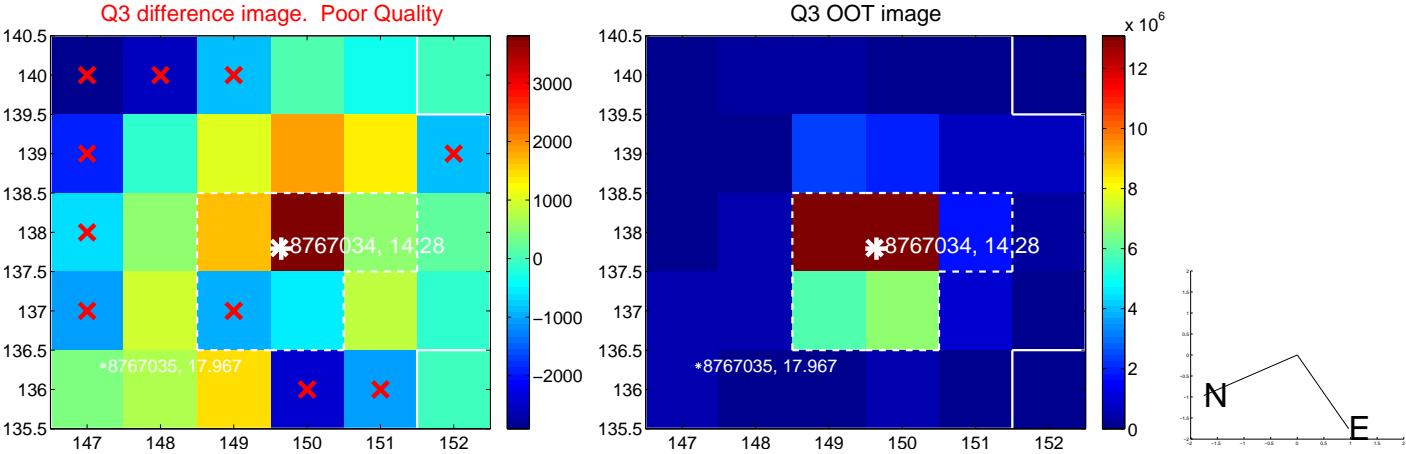
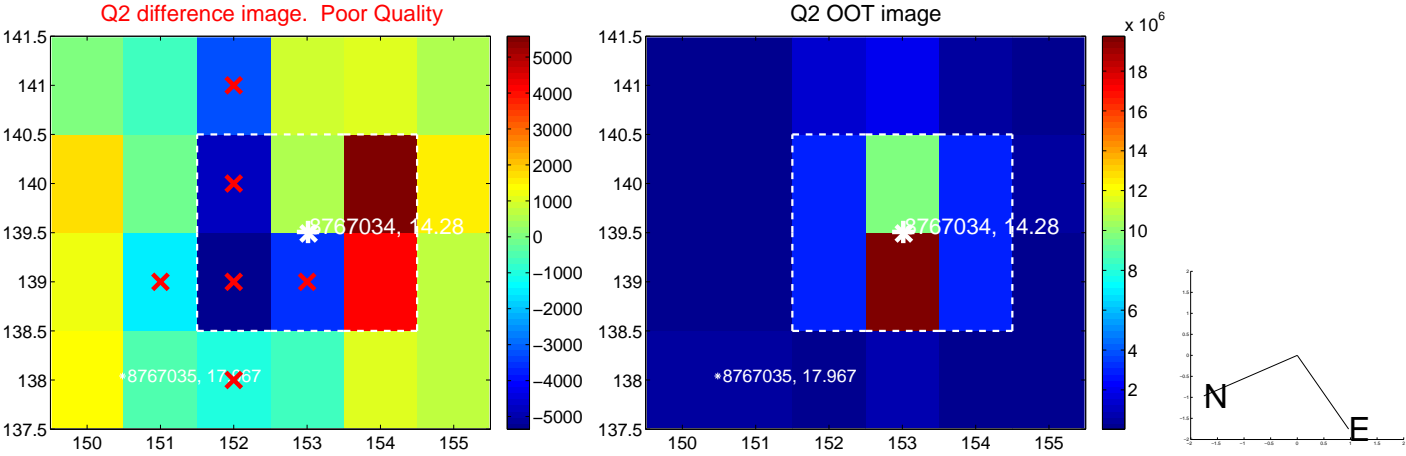
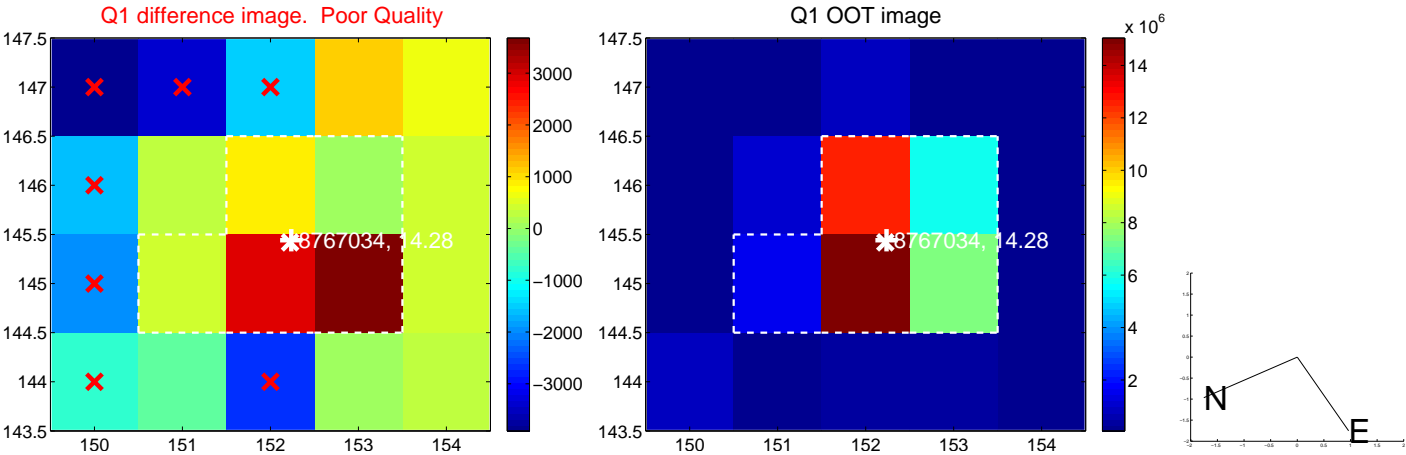
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.508 ± 1.059	0.48	0.426 ± 0.342	-0.277 ± 1.425
PRF-fit source offset from KIC position	0.542 ± 1.095	0.50	0.363 ± 0.324	-0.403 ± 1.187
photometric centroid source offset	0.53 ± 0.45	1.19	0.28 ± 0.44	-0.45 ± 0.45

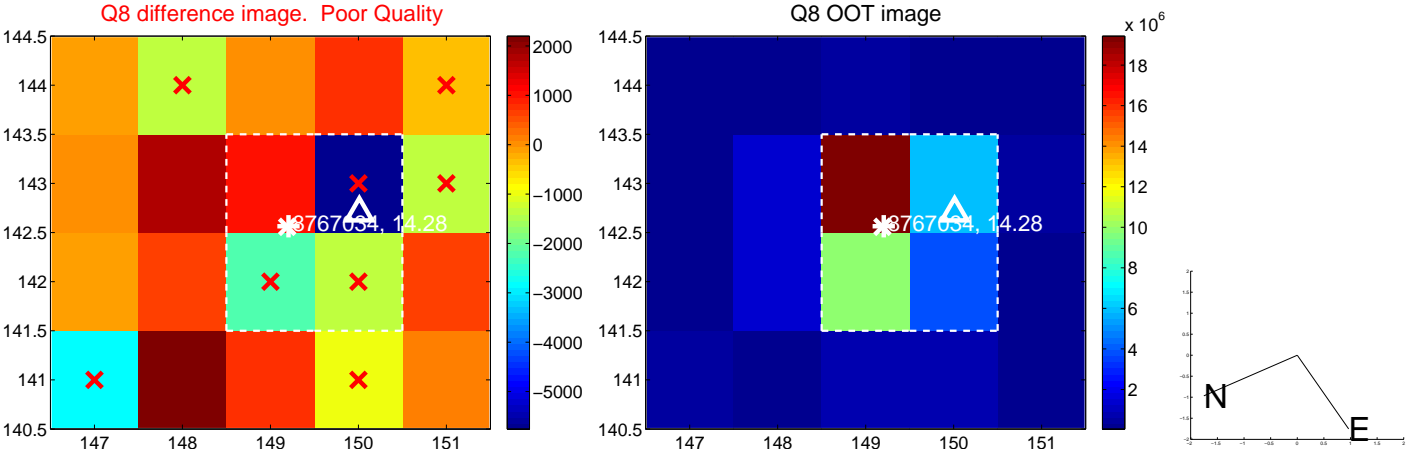
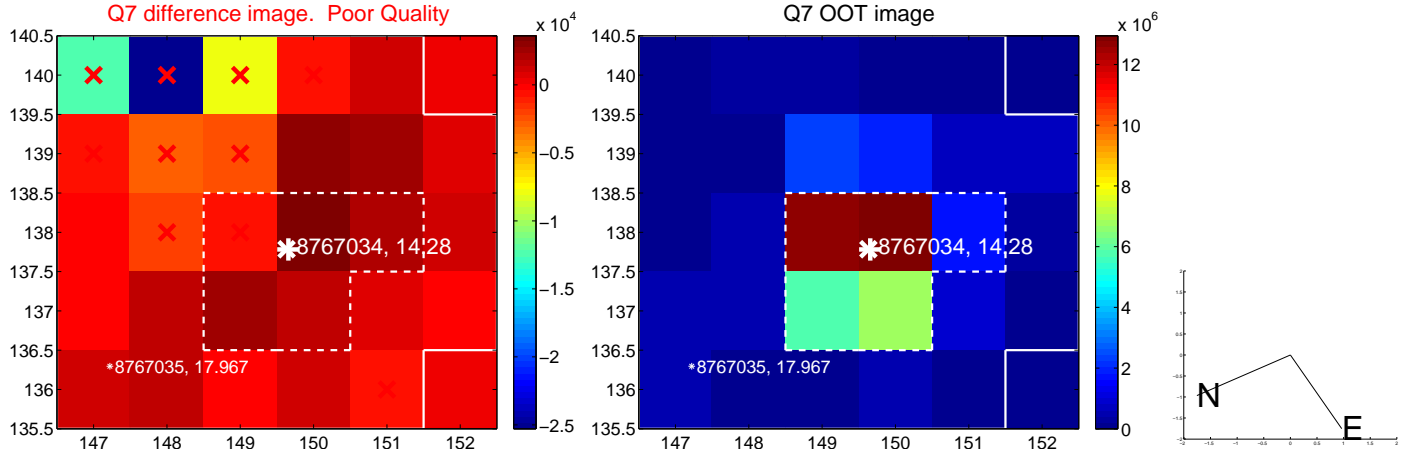
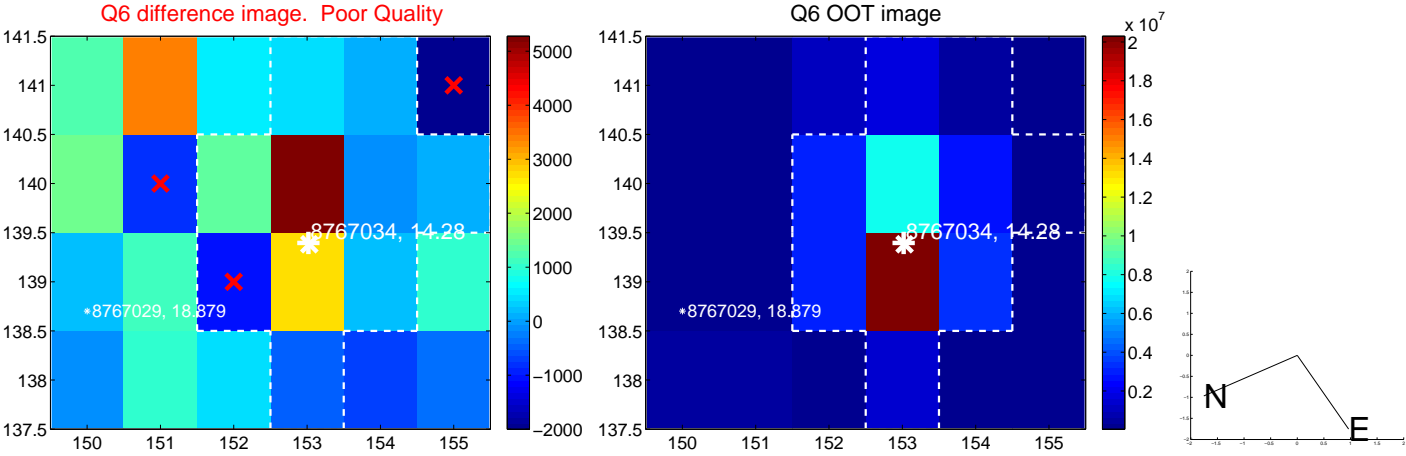
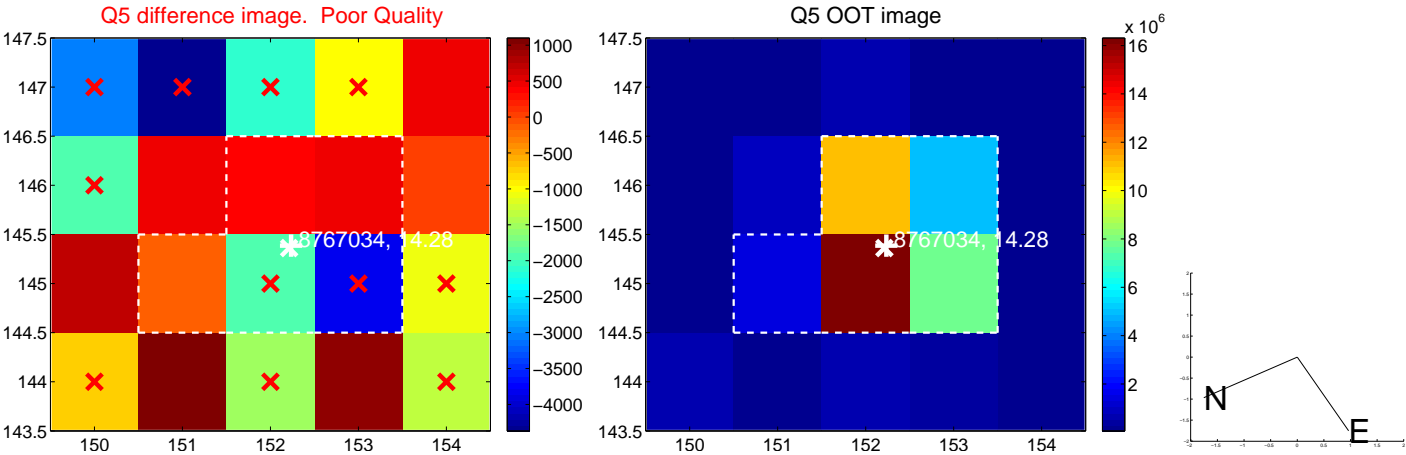


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

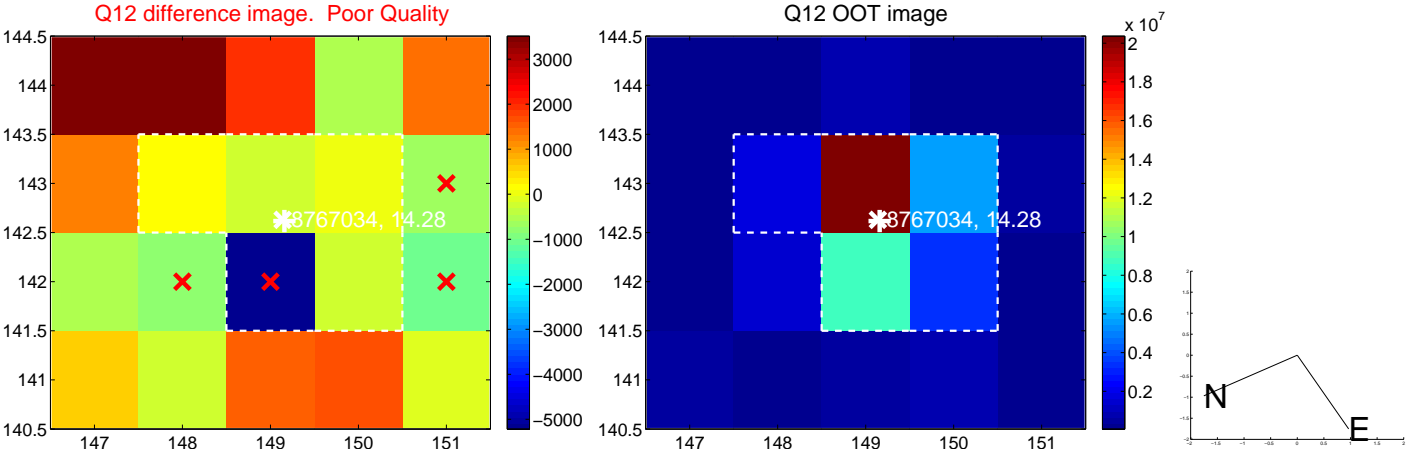
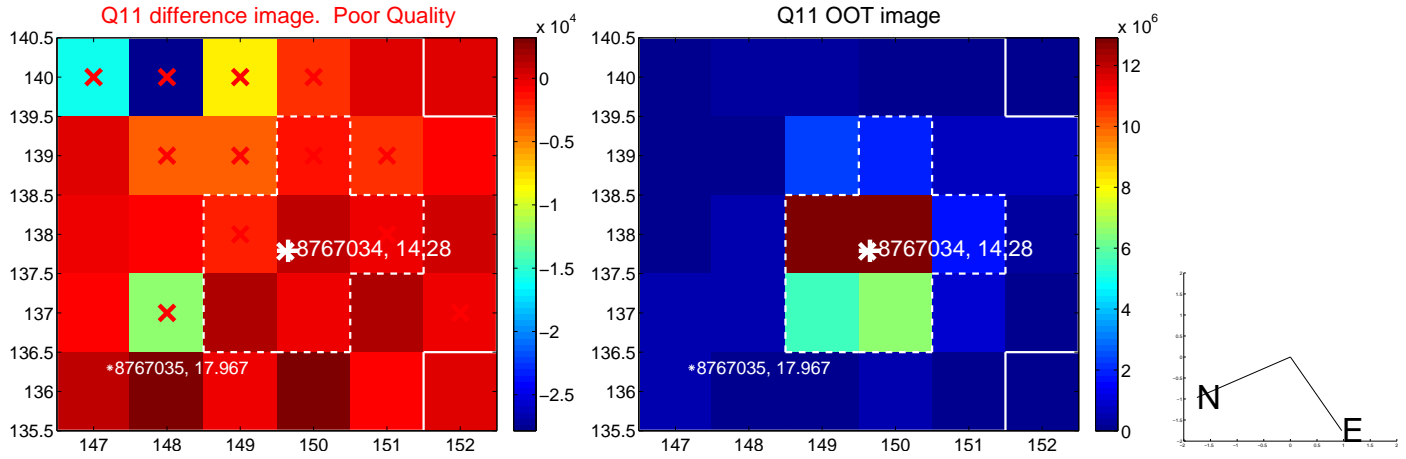
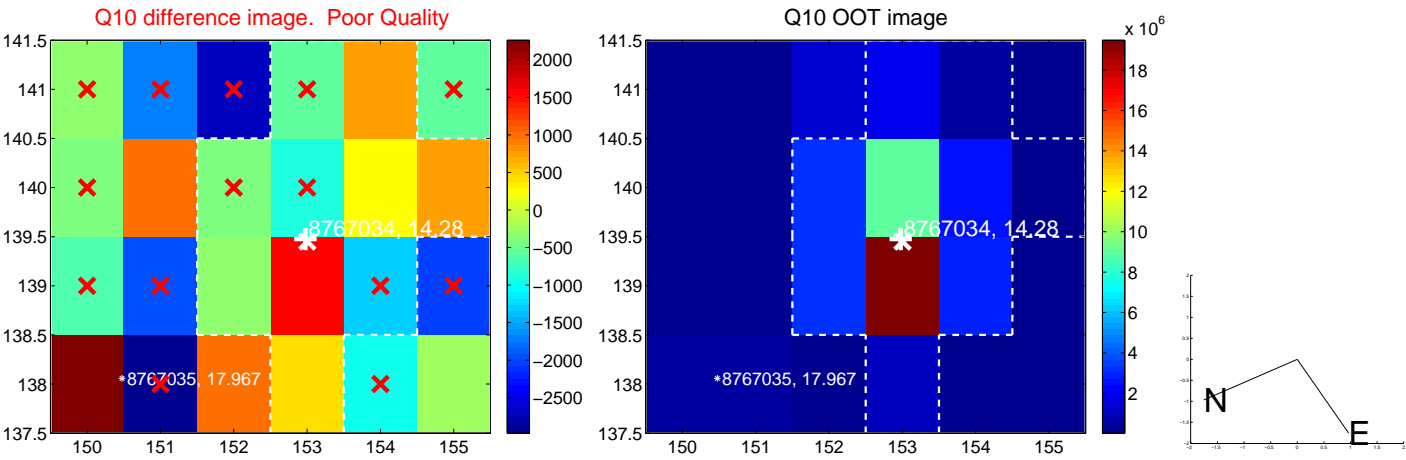
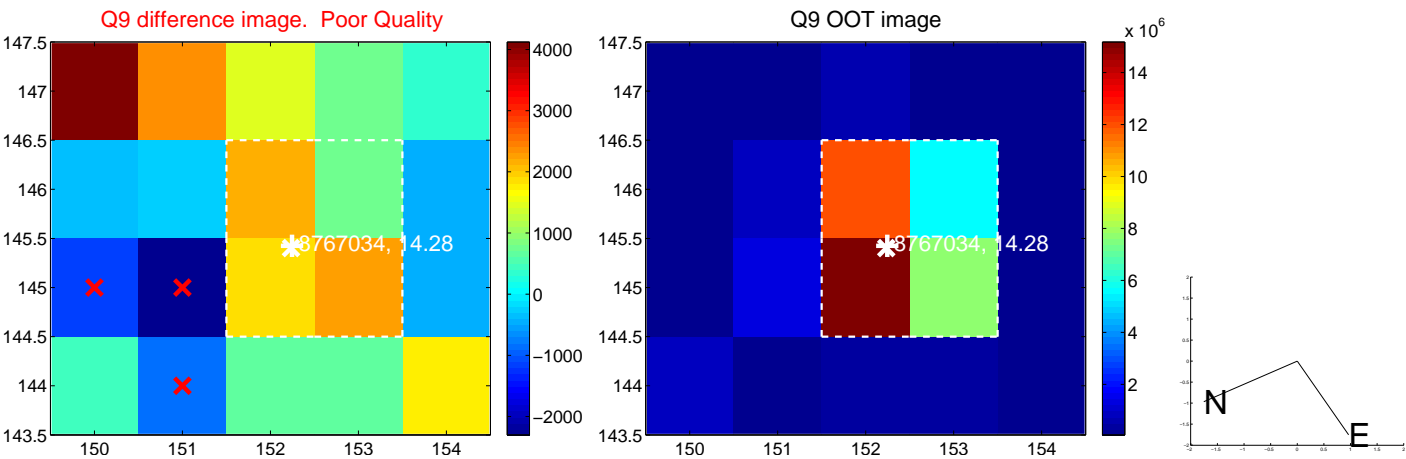
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



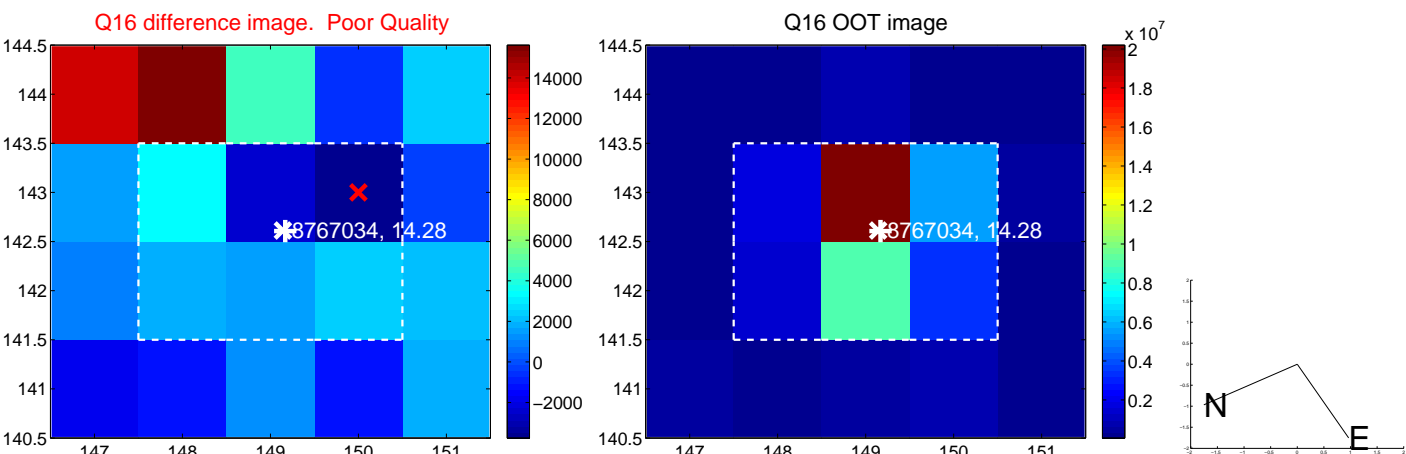
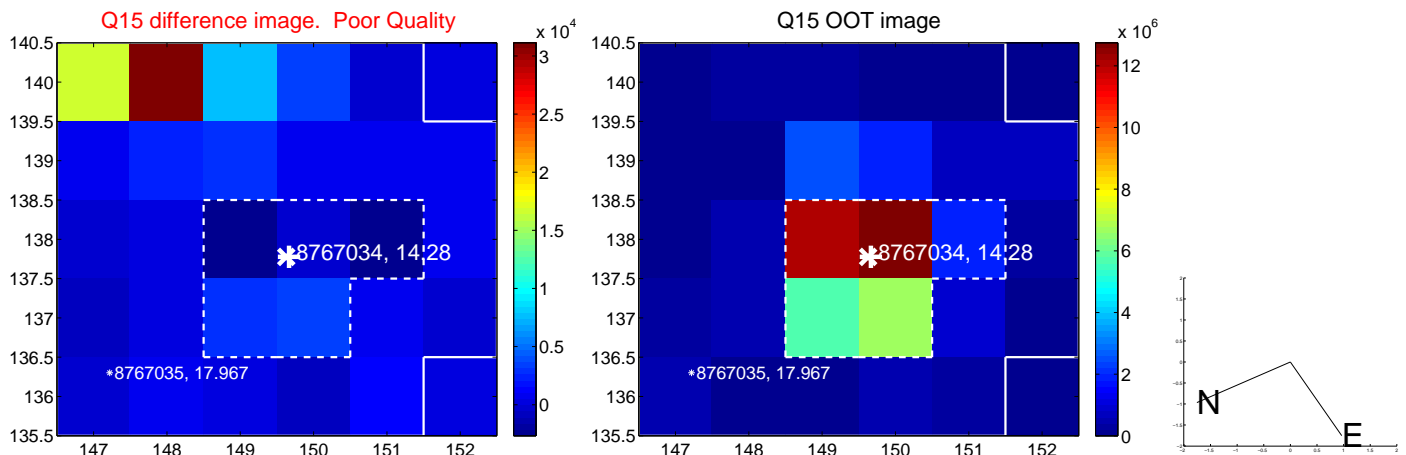
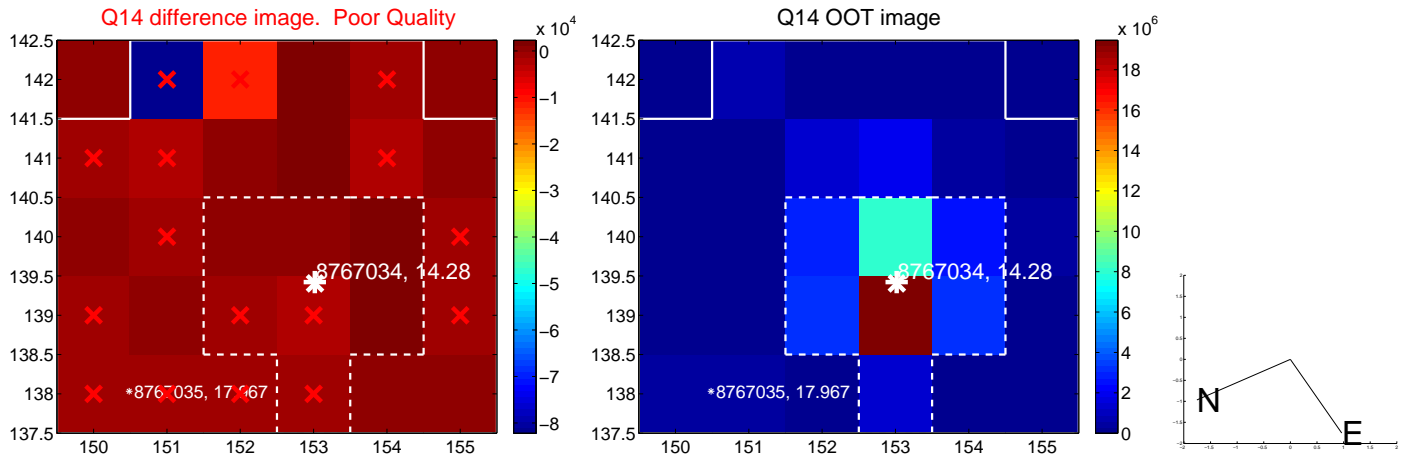
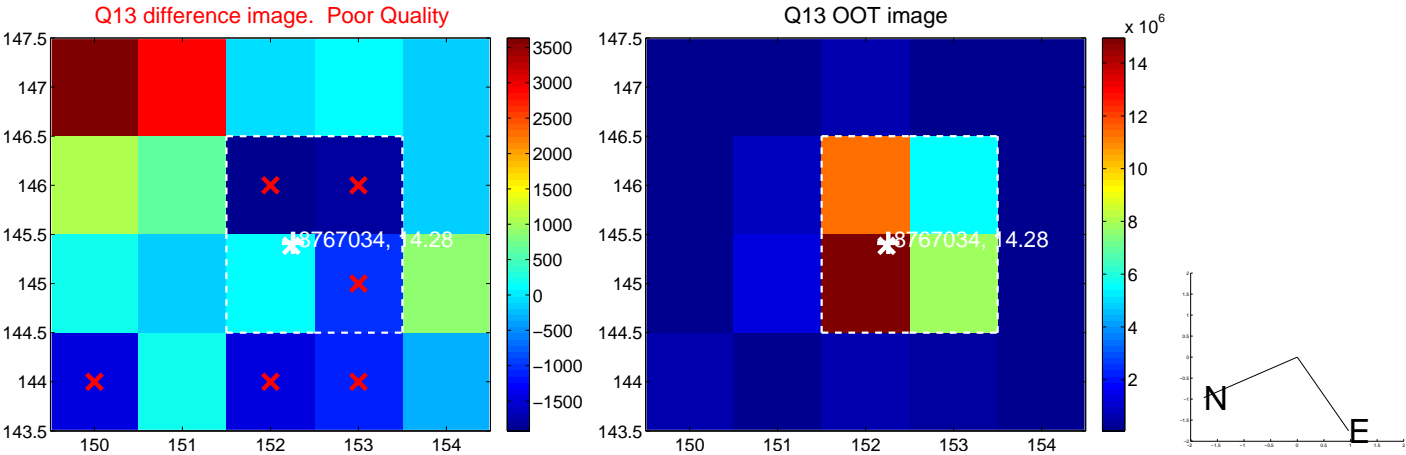
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



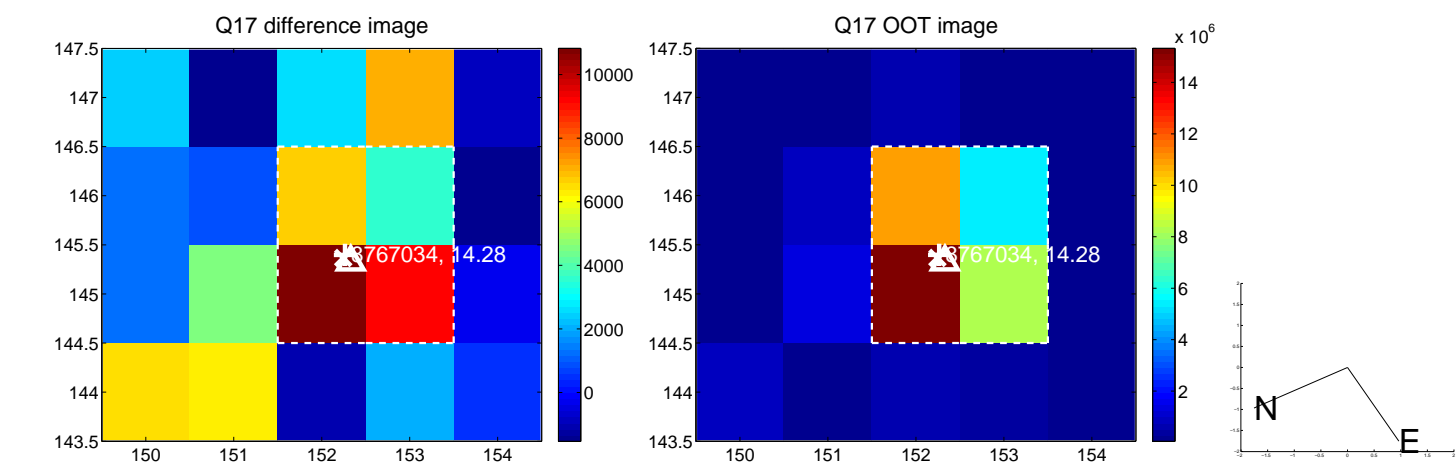
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



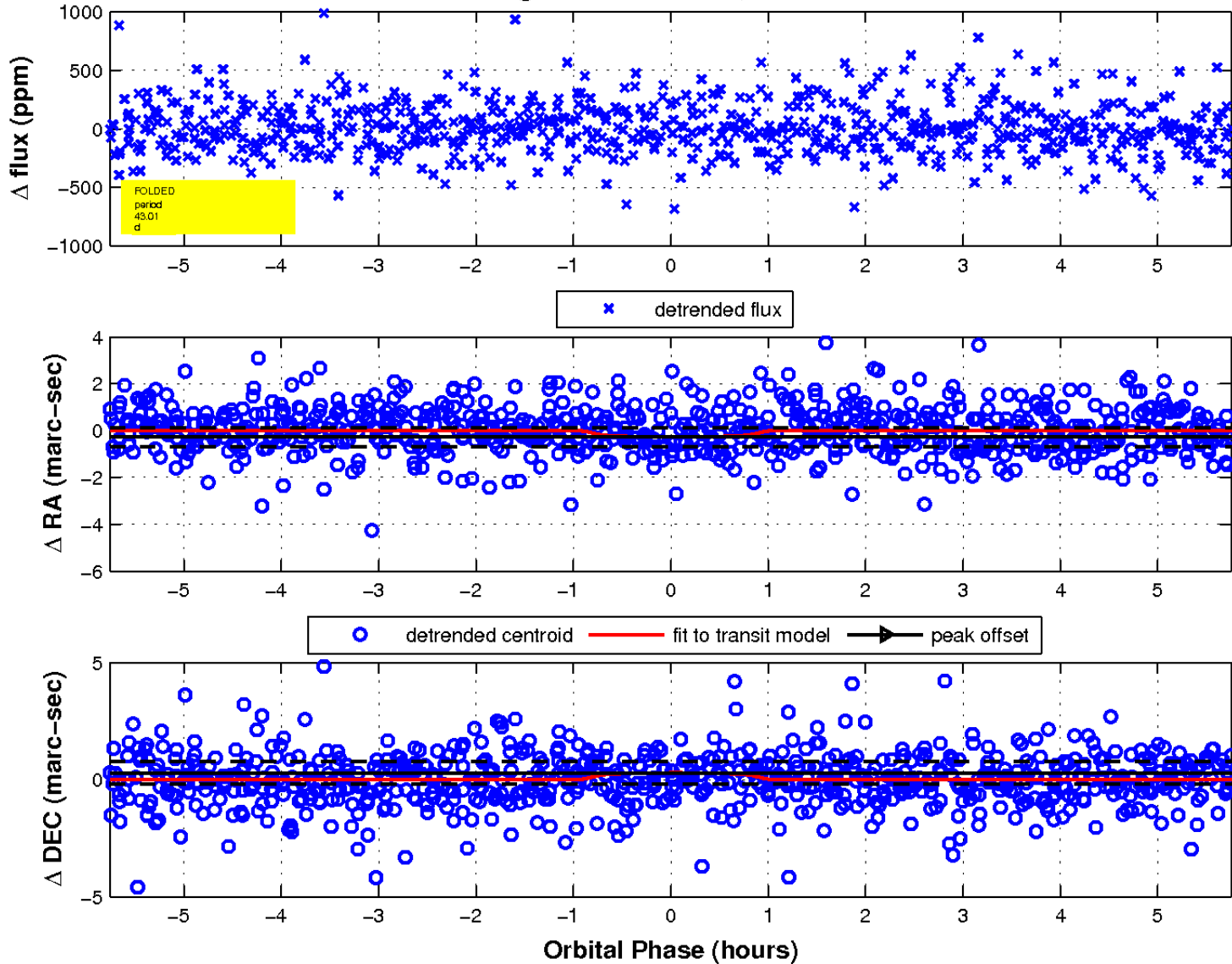
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

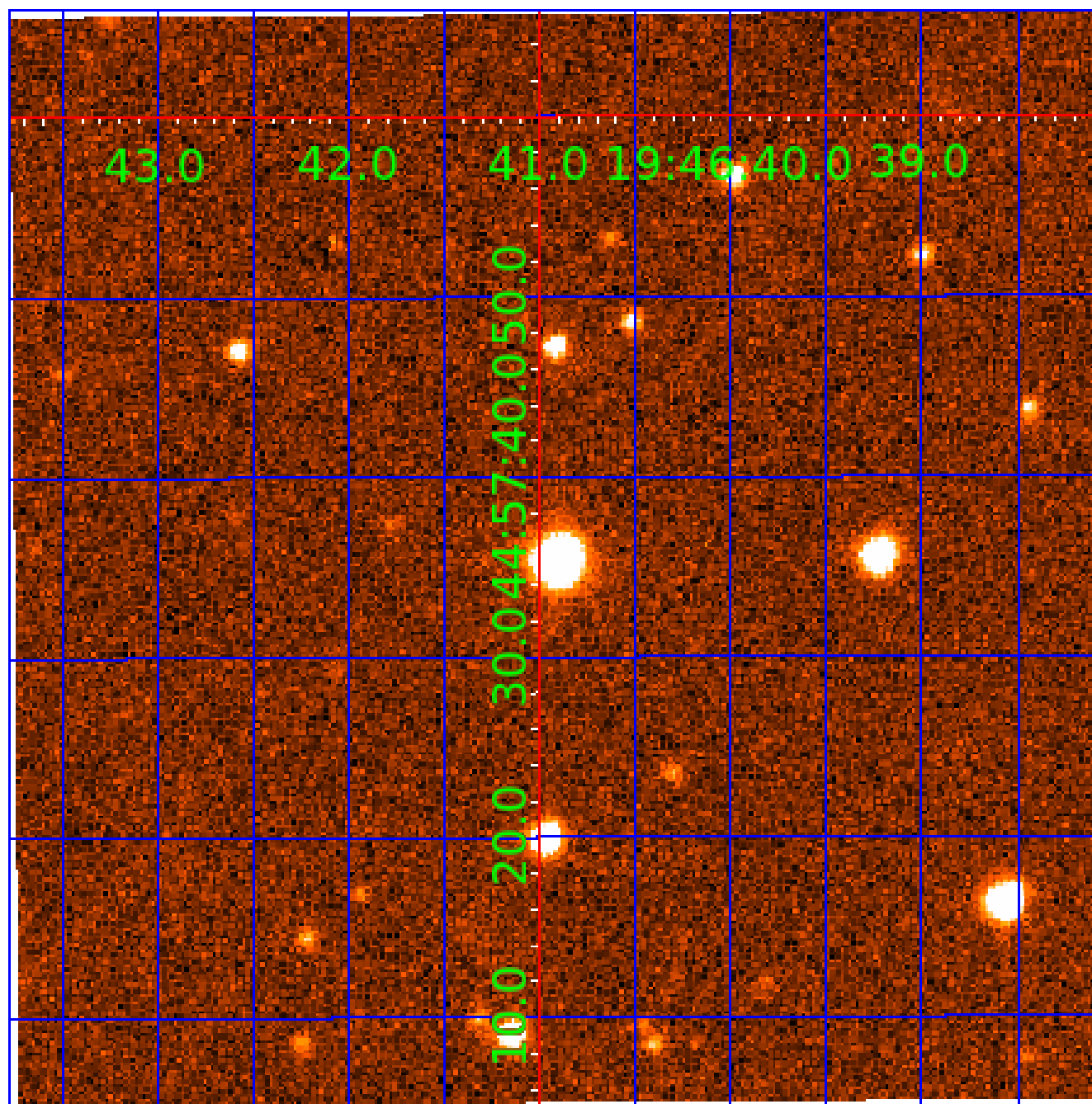


fluxWeightedCentroids, Planet 5 of 8



UKIRT Image

Declination



KIC 008767034

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})
008767034-01	OBS	7089.01	0.586382	131.566135	24.5	4.161	13.5	9.8	0.61	4556	0.29	1030.16
008767034-02	OBS	No	19.237477	149.361219	68.5	7.045	11.6	2.7	0.61	4556	0.58	9.81
008767034-04	OBS	No	35.172465	161.730937	614.9	4.518	11.0	9.0	0.61	4556	1.69	4.39
008767034-05	OBS	No	43.007251	142.200562	722.9	1.925	12.2	11.4	0.61	4556	1.94	3.35
008767034-06	OBS	No	25.103715	149.656632	529.6	1.097	9.0	7.7	0.61	4556	1.48	6.88
008767034-08	OBS	No	50.891218	162.364936	569.1	3.375	9.0	10.8	0.61	4556	1.65	2.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008767034-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
008767034-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
008767034-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008767034-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_MEAS
008767034-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_MEAS
008767034-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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.

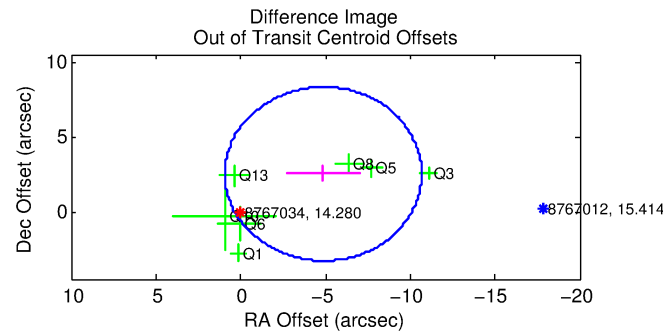
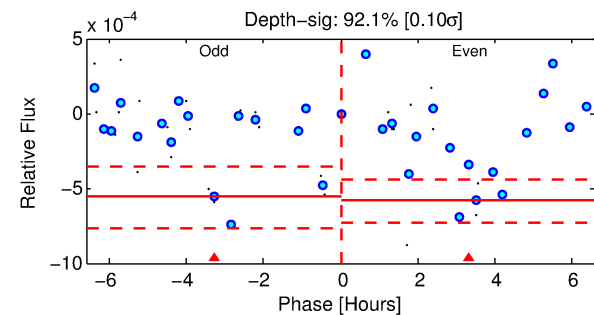
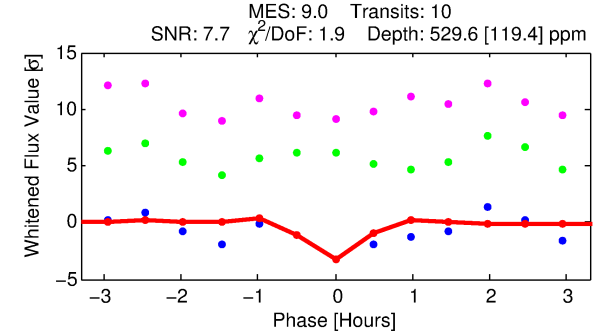
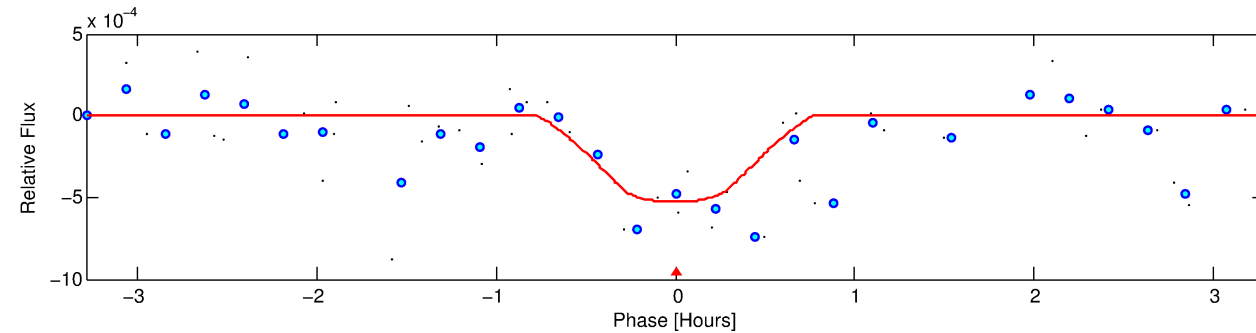
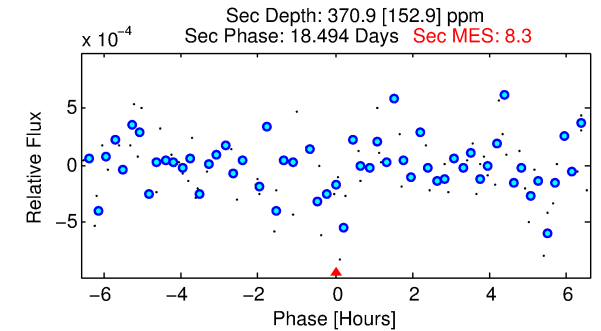
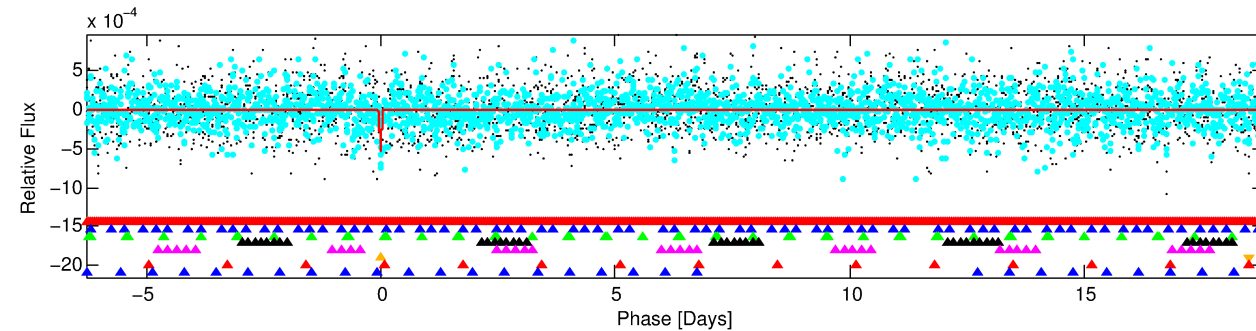
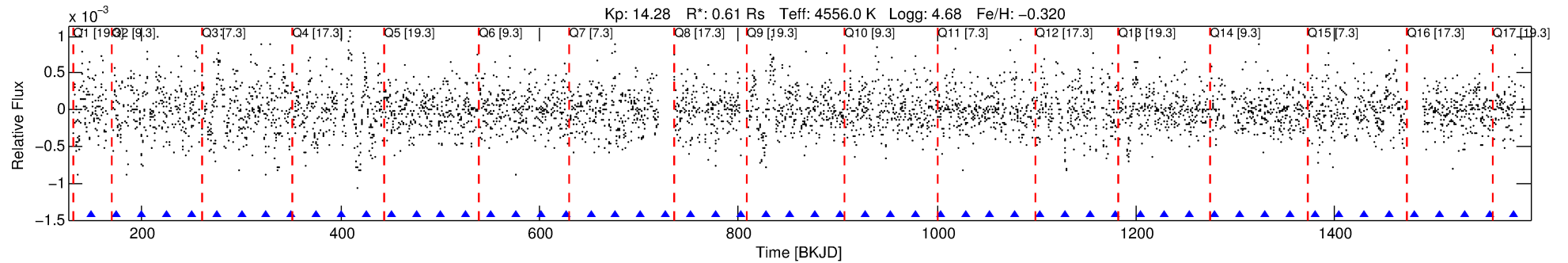
Ephemeris Match Information For 008767034-06

No Significant Match Found

DV One-Page Summary

KIC: 8767034 Candidate: 6 of 8 Period: 25.104 d

KOI: K07089 Corr: No Ephemeris Match



DV Fit Results:

Period = 25.10372 [0.00024] d
Epoch = 149.6566 [0.0085] BKJD
Rp/R* = 0.0221 [0.0530]
a/R* = 142.60 [1070.94]
b = 0.62 [7.87]
Seff = 6.88 [1.09]
Teq = 413 [16] K
Rp = 1.48 [3.56] Re
a = 0.1457 [0.0113] AU
Ag = 1974.32 [9524.12] [0.21 σ]
Teffp = 4256 [5133] K [0.75 σ]

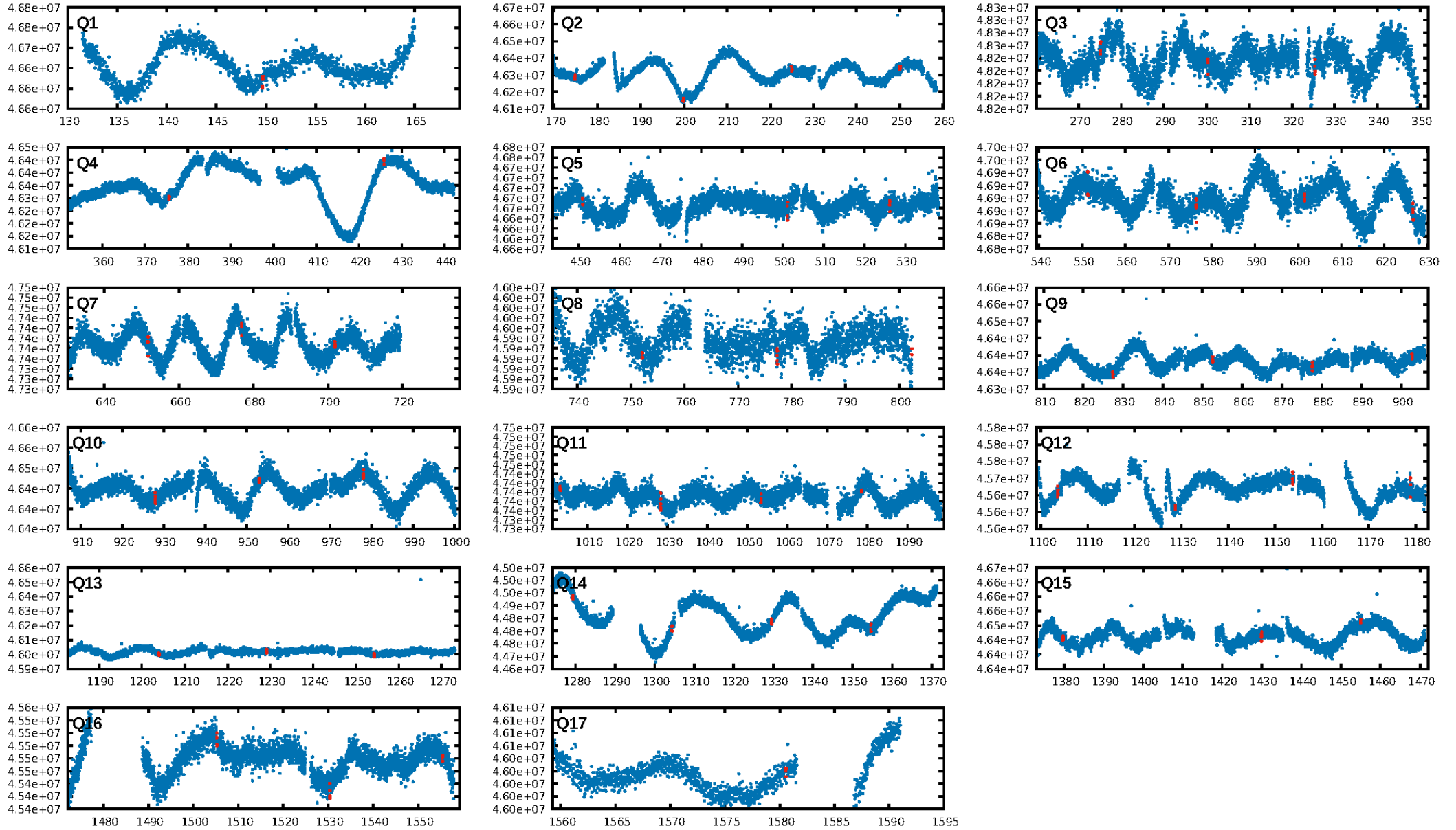
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [57.77 σ]
LongPeriod-sig: 100.0% [51.97 σ]
ModelChiSquare2-sig: 72.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.35e-08
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: -5.013
Centroid-sig: 42.9%
Centroid-so: 0.530 arcsec [0.84 σ]
OotOffset-rm: 5.482 arcsec [2.83 σ]
OotOffset-st: 2/1/1/3 [7]
KicOffset-rm: 5.477 arcsec [2.84 σ]
KicOffset-st: 2/1/1/3 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 0.00 [0/17]

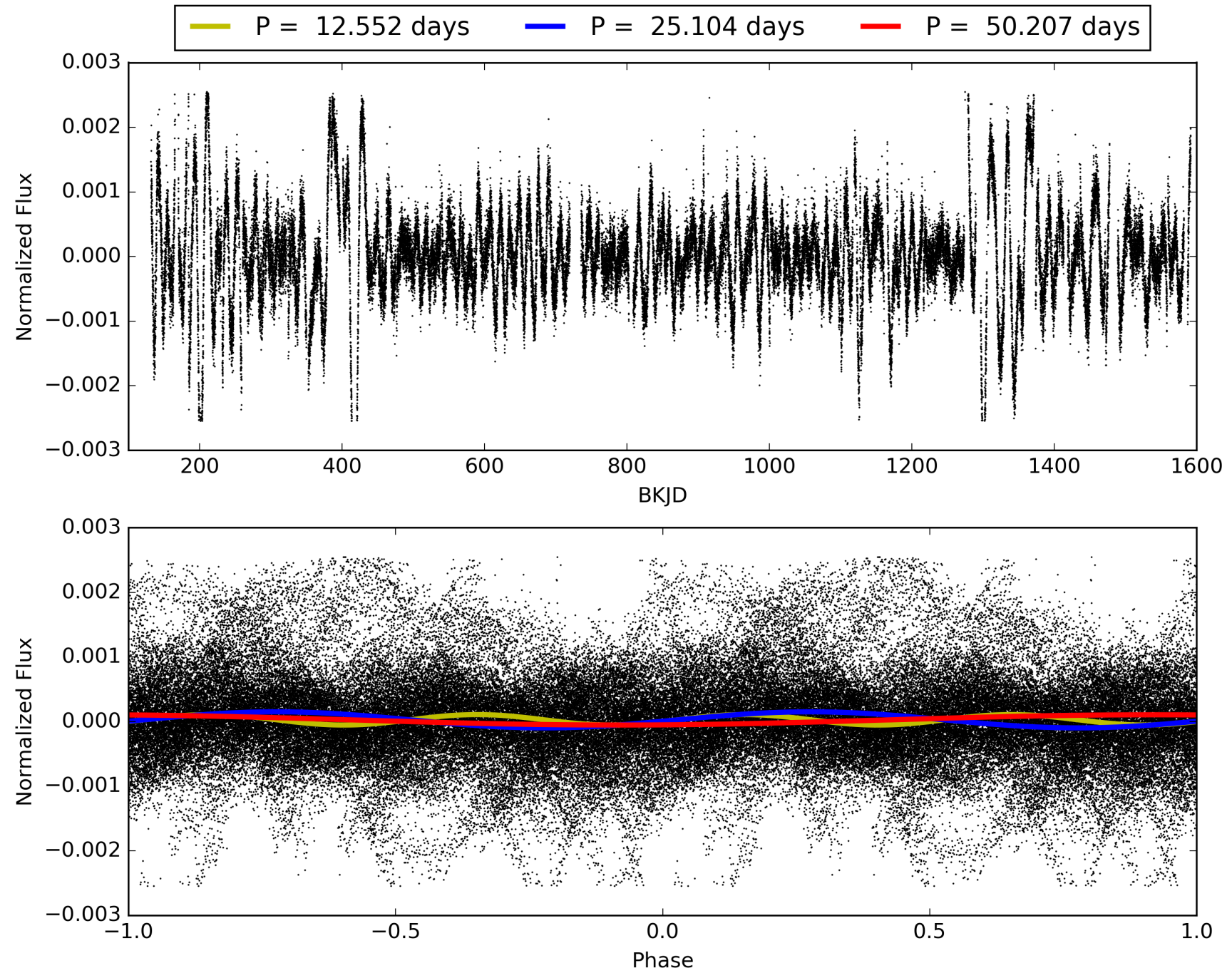
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:40:37 Z

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

TCE 008767034-06, PDC Light Curves

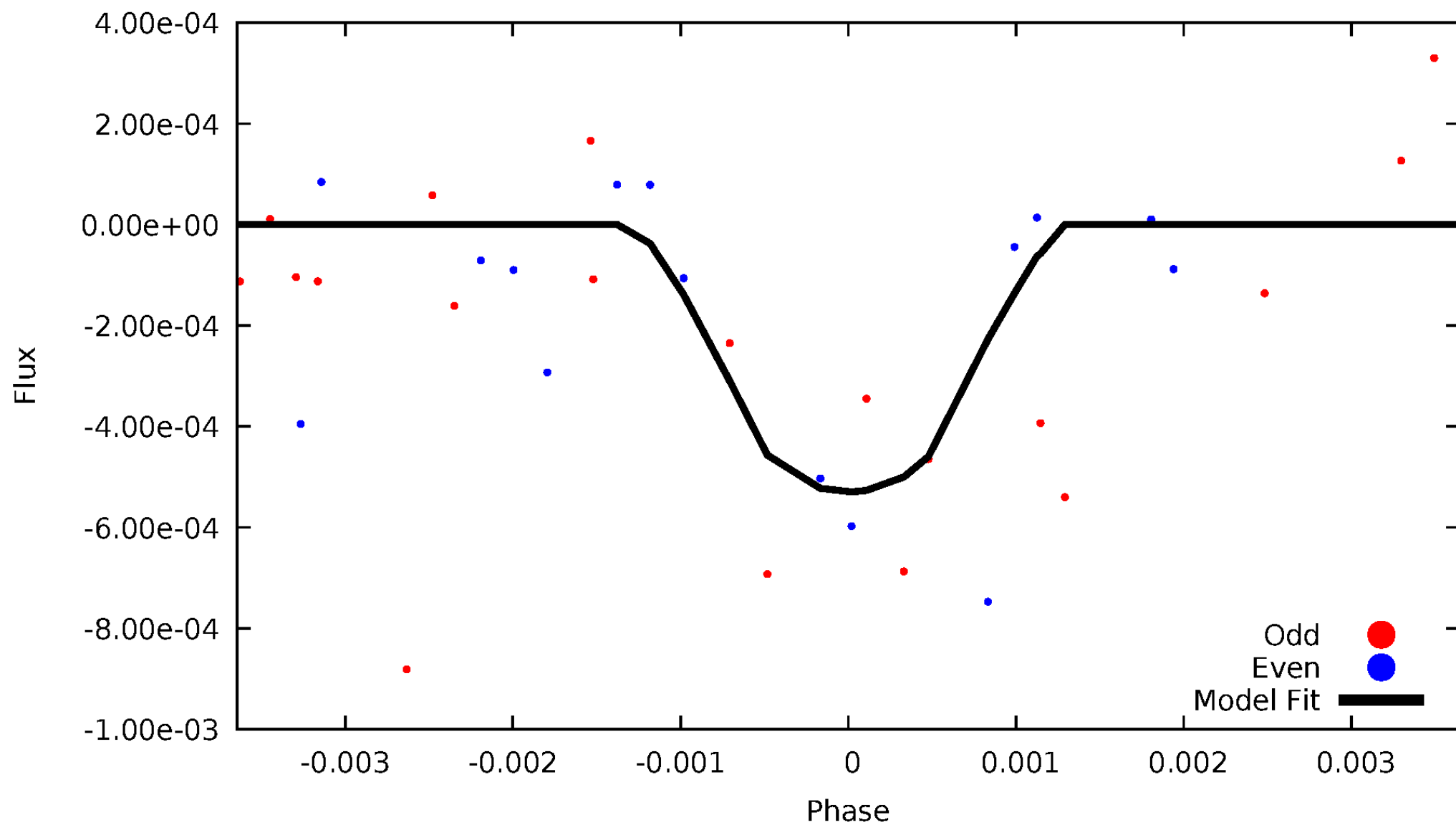


TCE 008767034-06



DV Odd/Even

TCE 008767034-06

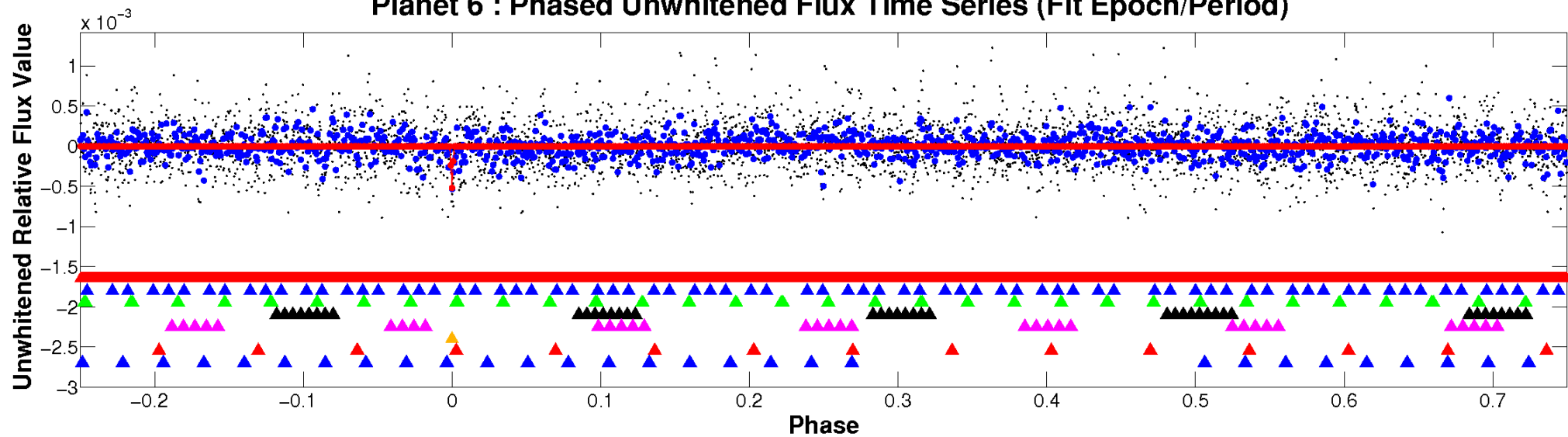


ALT Odd/Even

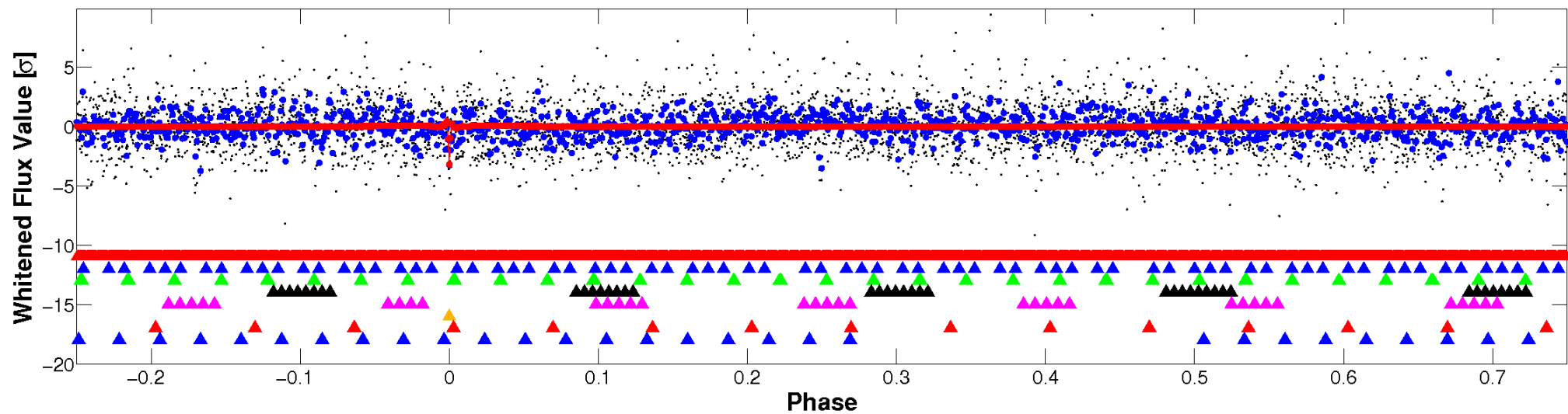
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

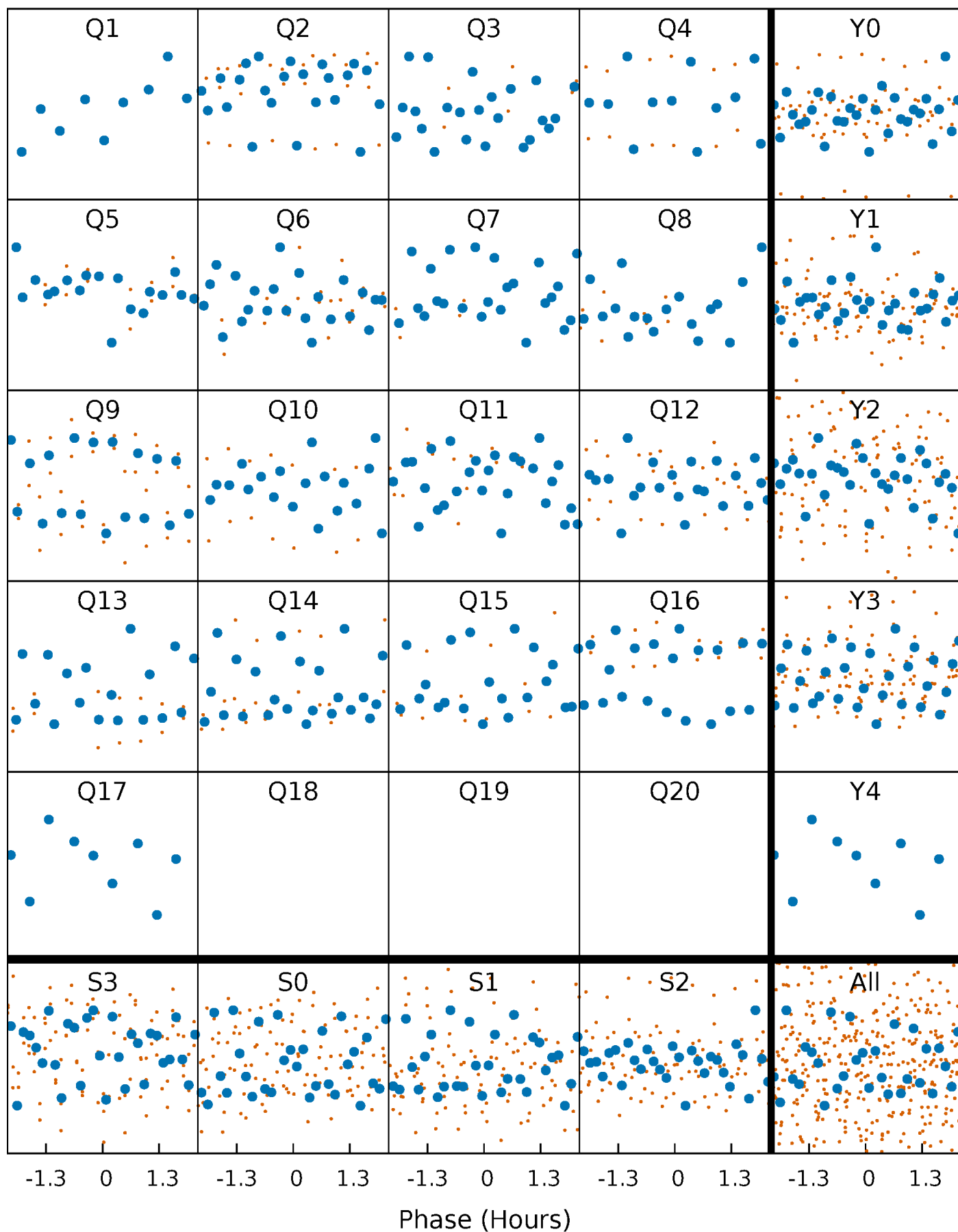


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



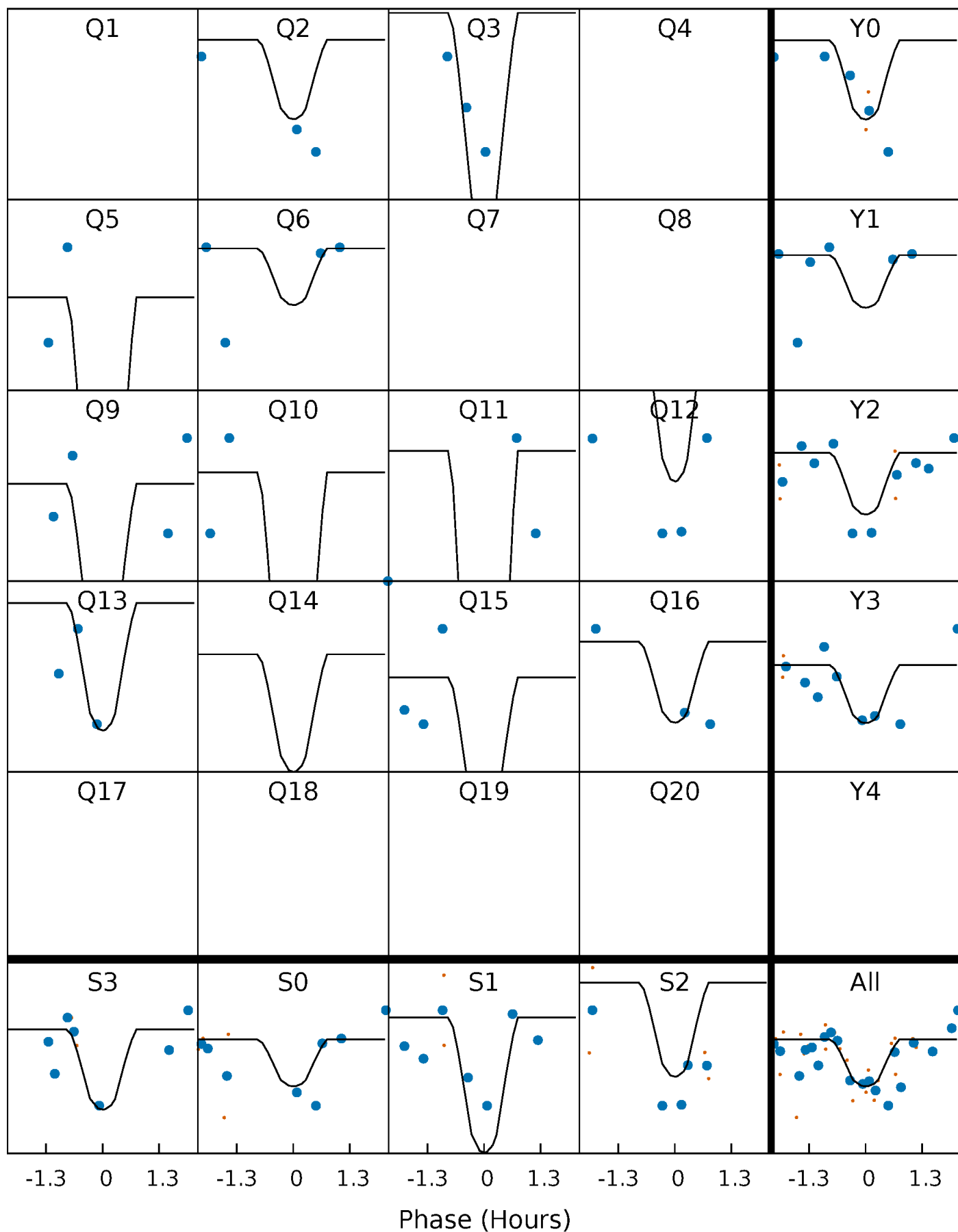
PDC Quarter-Phased Transit Curves

TCE 008767034-06 P= 25.103715 Days $T_0=149.656632$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008767034-06 P= 25.103715 Days $T_0=149.656632$ (BKJD)

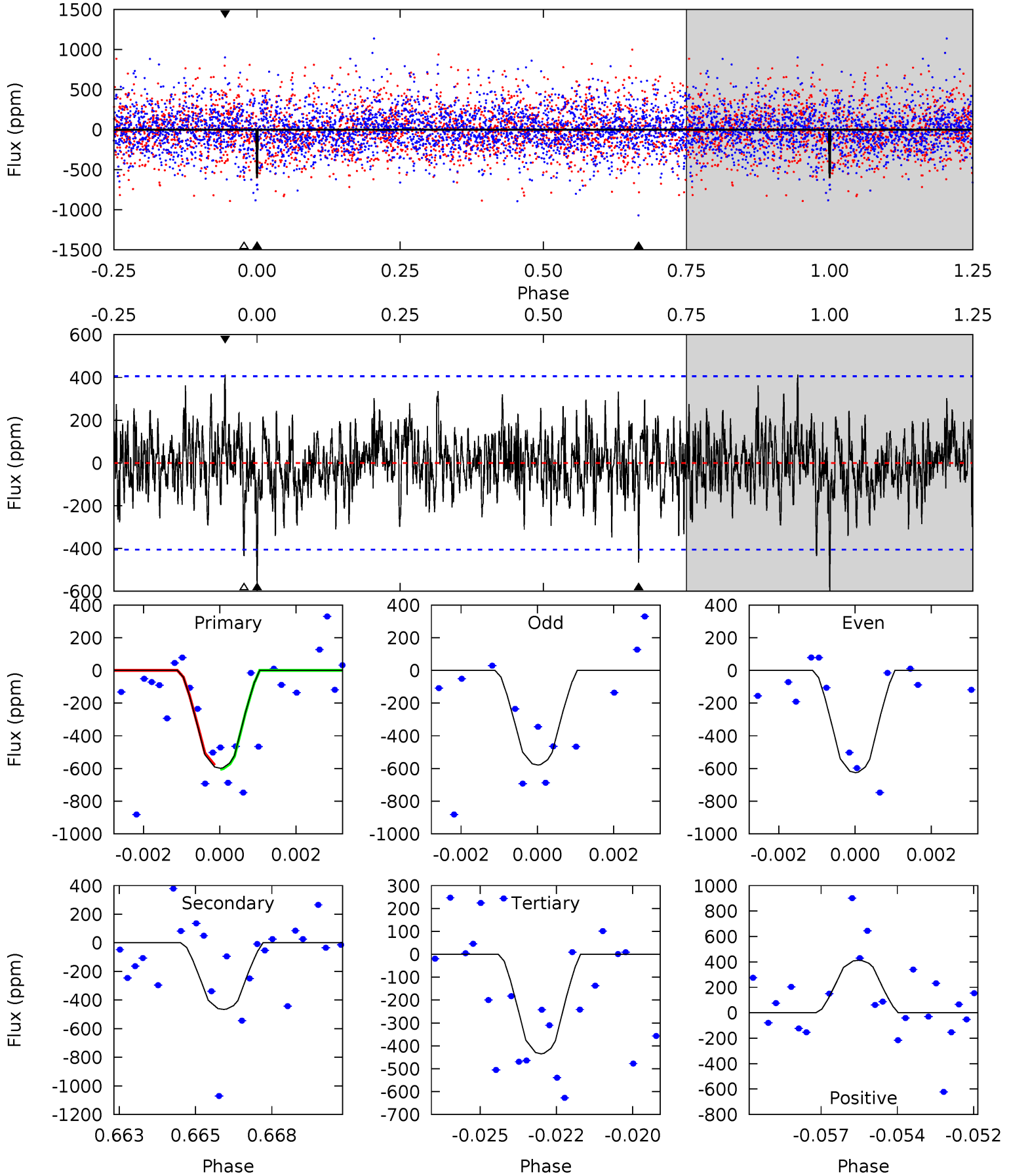


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

008767034-06, P = 25.103715 Days, E = 124.552917 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.81	6.07	5.67	5.38	5.29	3.03	1.50	2.14	2.42	0.40	0.69	0.30	0.95	0.41	0.16



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 008767034

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4556^{+136}_{-123}	$4.676^{+0.028}_{-0.052}$	$-0.320^{+0.300}_{-0.300}$	$0.615^{+0.061}_{-0.041}$	$0.669^{+0.058}_{-0.064}$	$4.042^{+0.520}_{-0.813}$
	+3%/-3%	+1%/-1%	+94%/-94%	+10%/-7%	+9%/-10%	+13%/-20%
Source	PHO1	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 008767034-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-466 ± 77	$2.89^{+2.95}_{-1.96}$	579^{+21}_{-18}	3561^{+1847}_{-681}	628^{+5316}_{-468}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

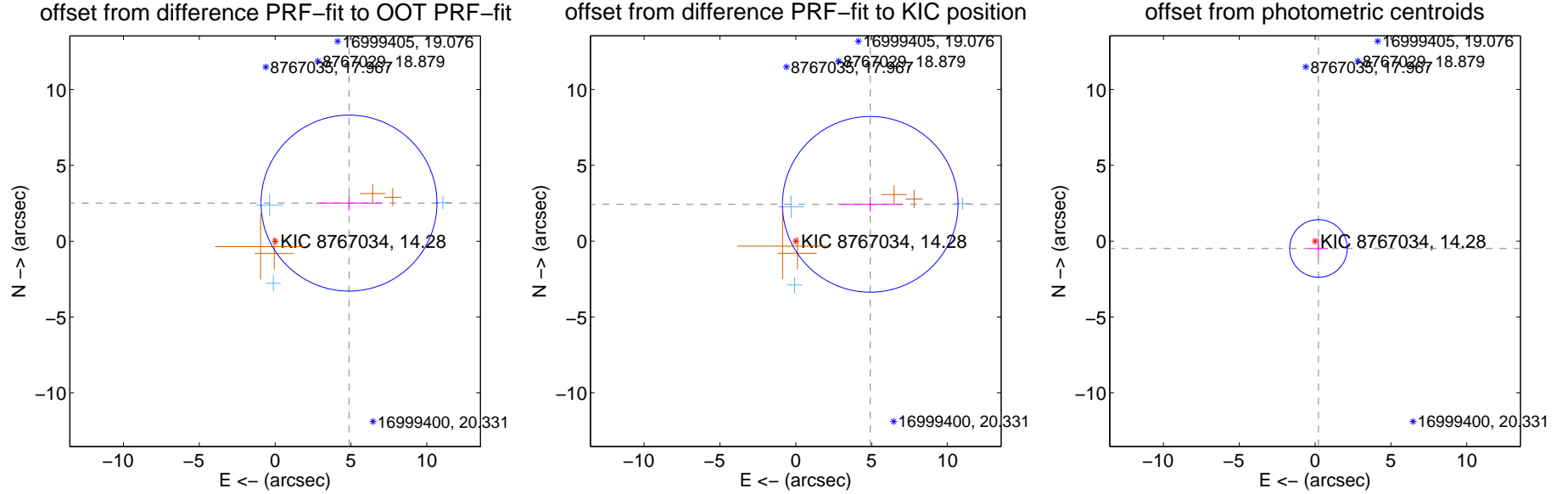
DV Centroid Data

Supplemental centroid analysis for 008767034-06. Kepler magnitude: 14.28. Transit SNR 7.69

There are 3 quarters with good PRF difference image offsets

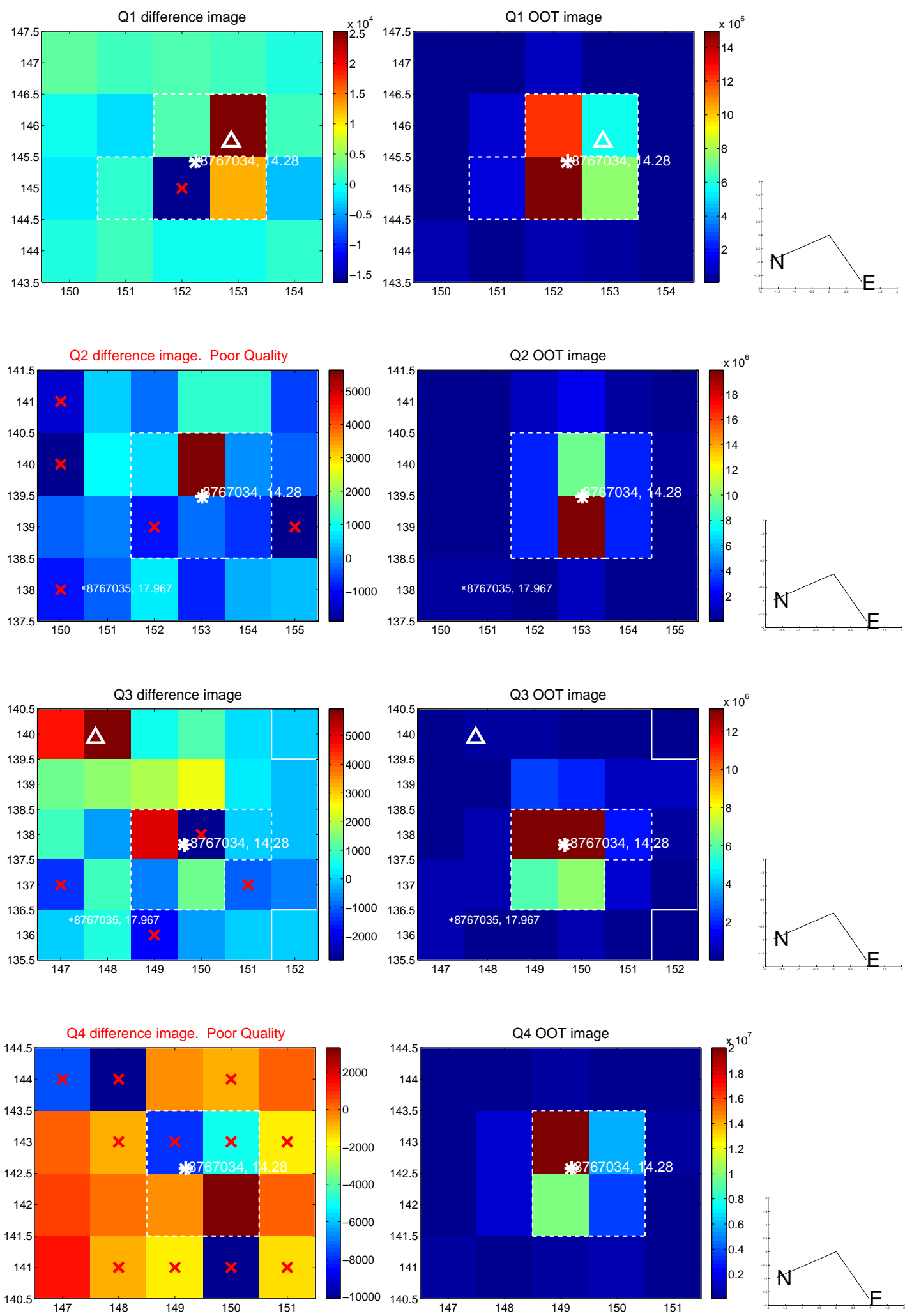
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.482 ± 1.934	2.83	-4.872 ± 2.160	2.512 ± 0.512
PRF-fit source offset from KIC position	5.477 ± 1.930	2.84	-4.910 ± 2.139	2.427 ± 0.505
photometric centroid source offset	0.53 ± 0.63	0.84	-0.22 ± 0.62	-0.48 ± 0.64

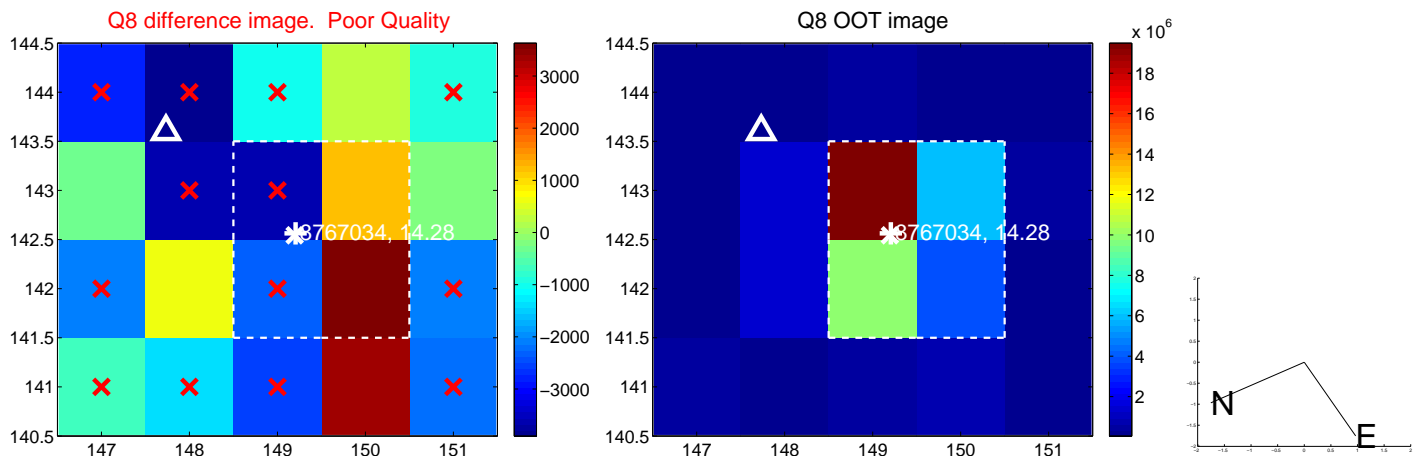
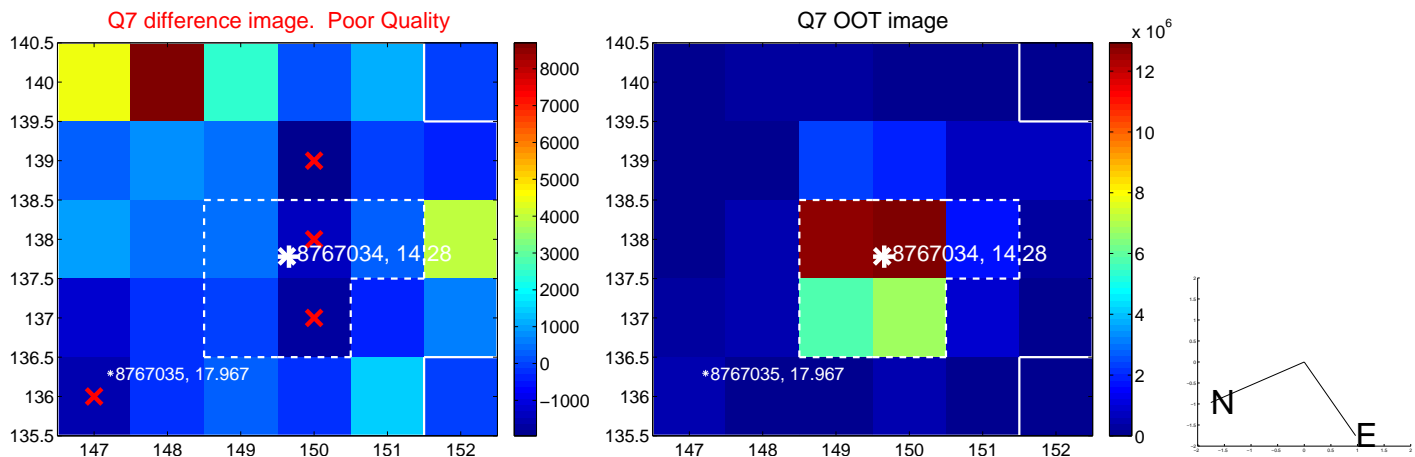
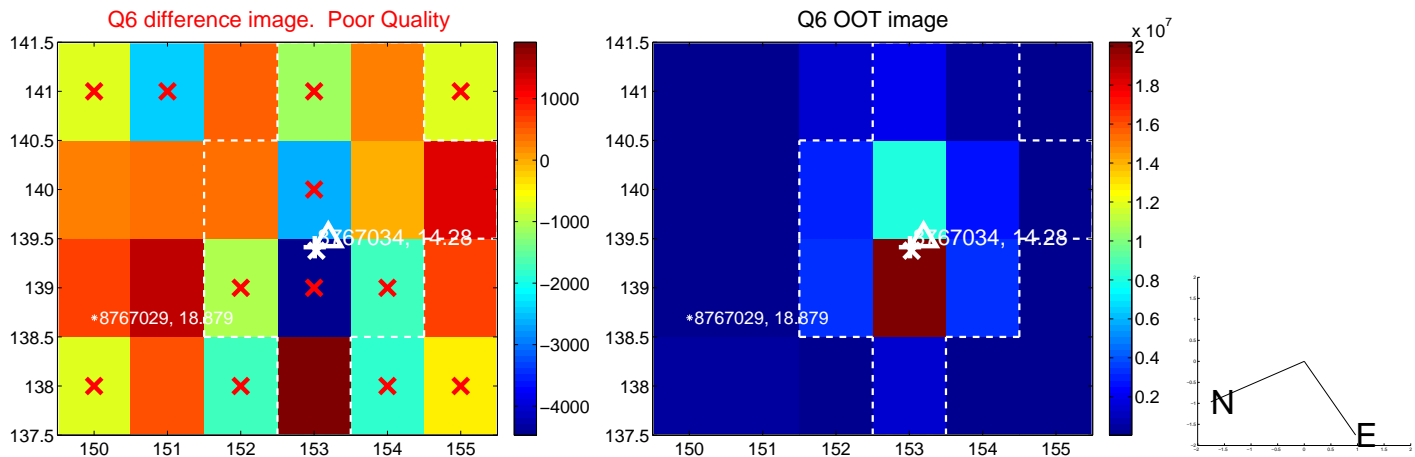
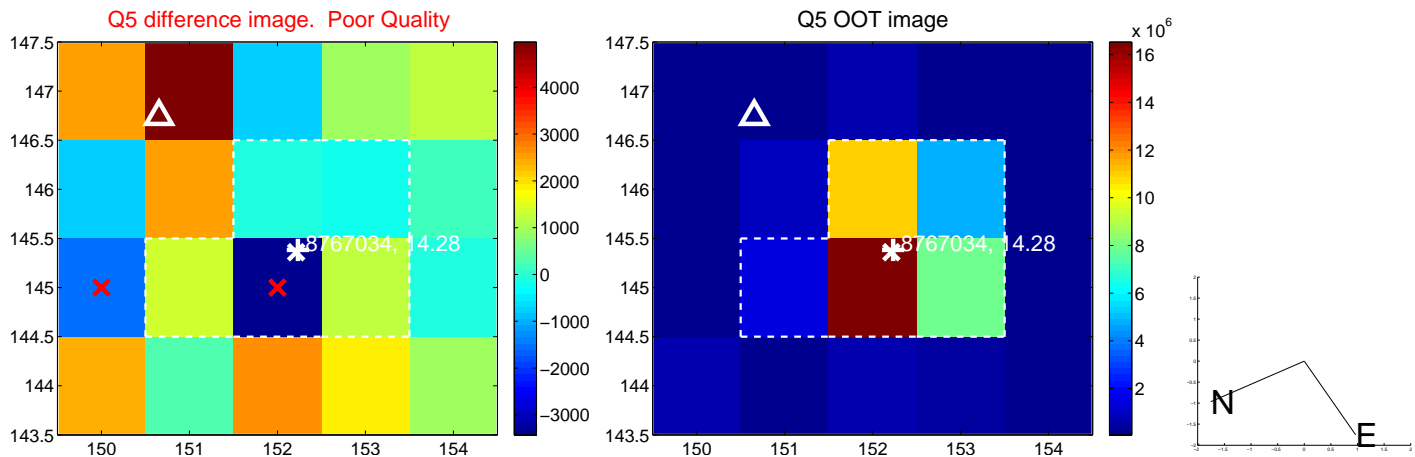


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

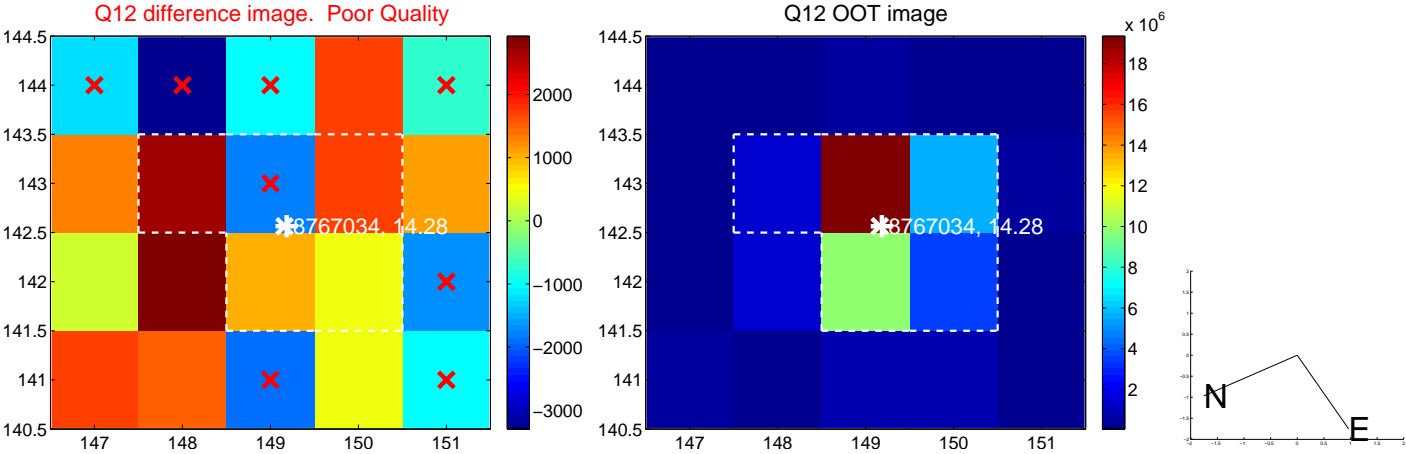
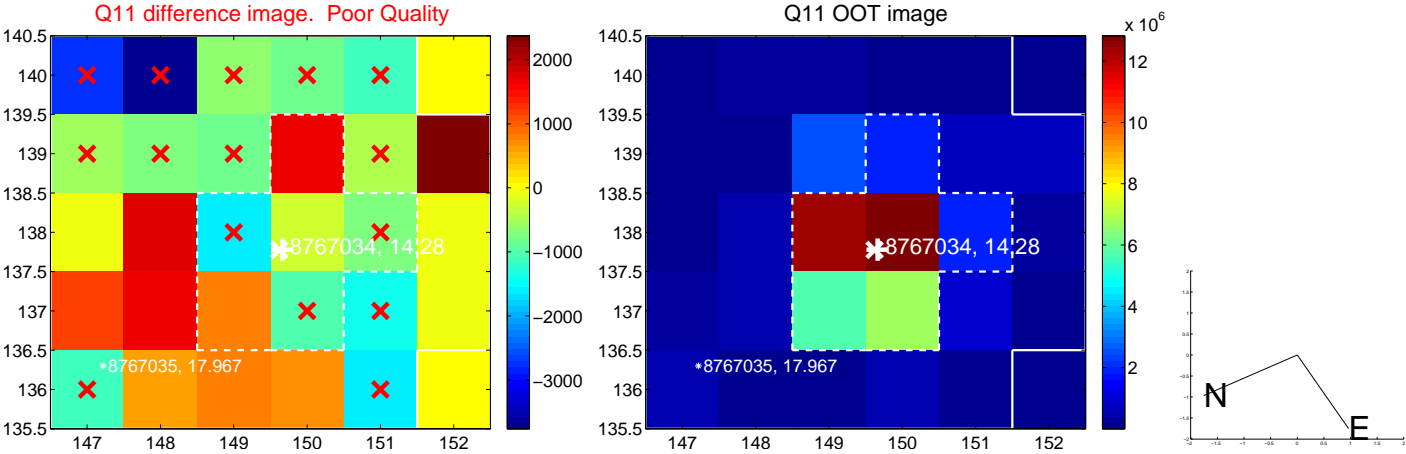
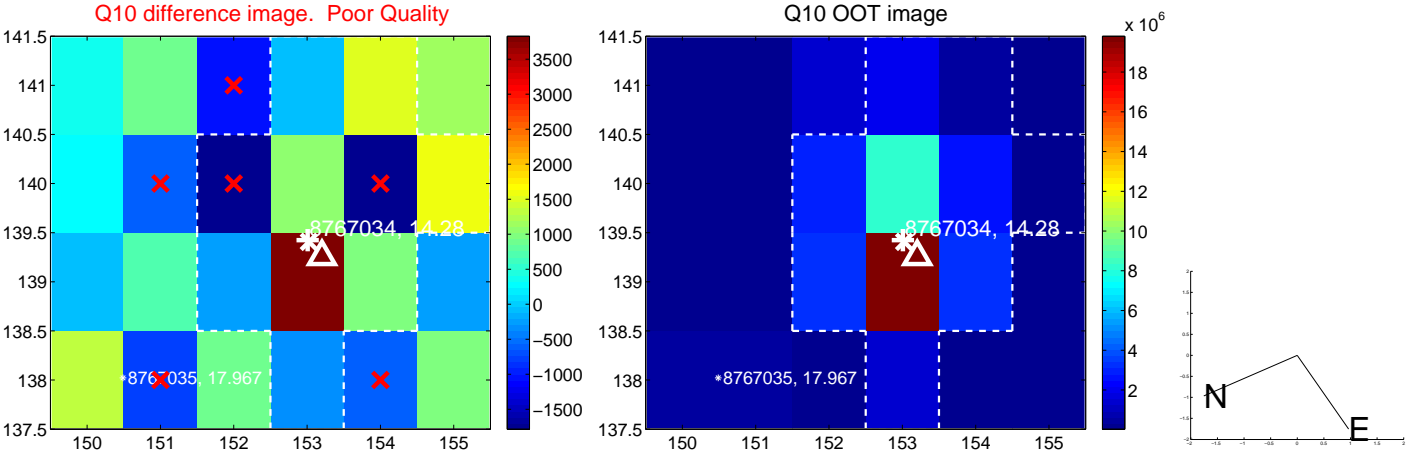
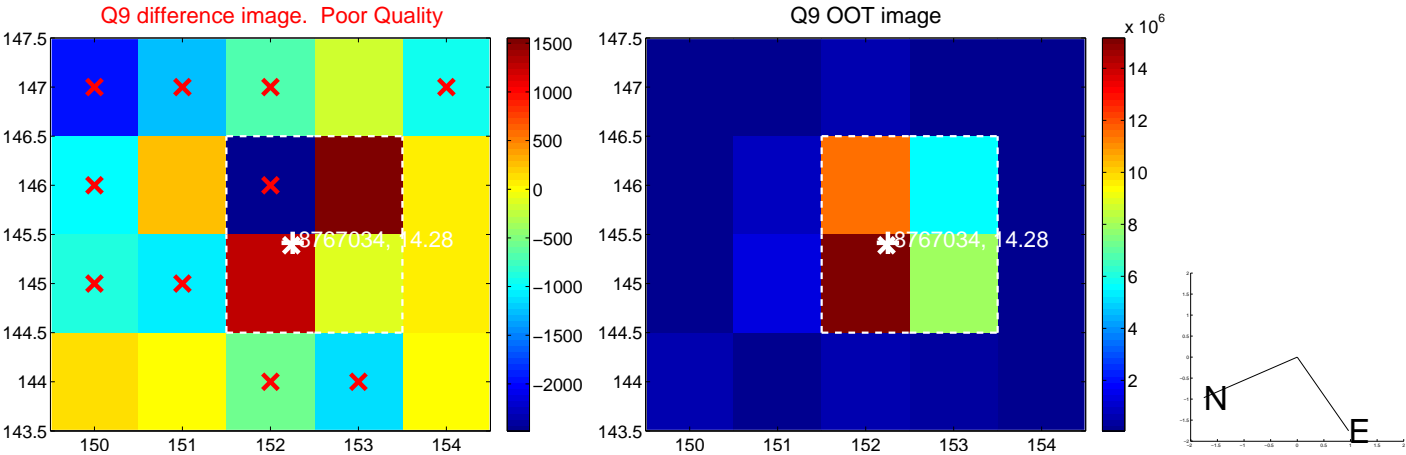
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



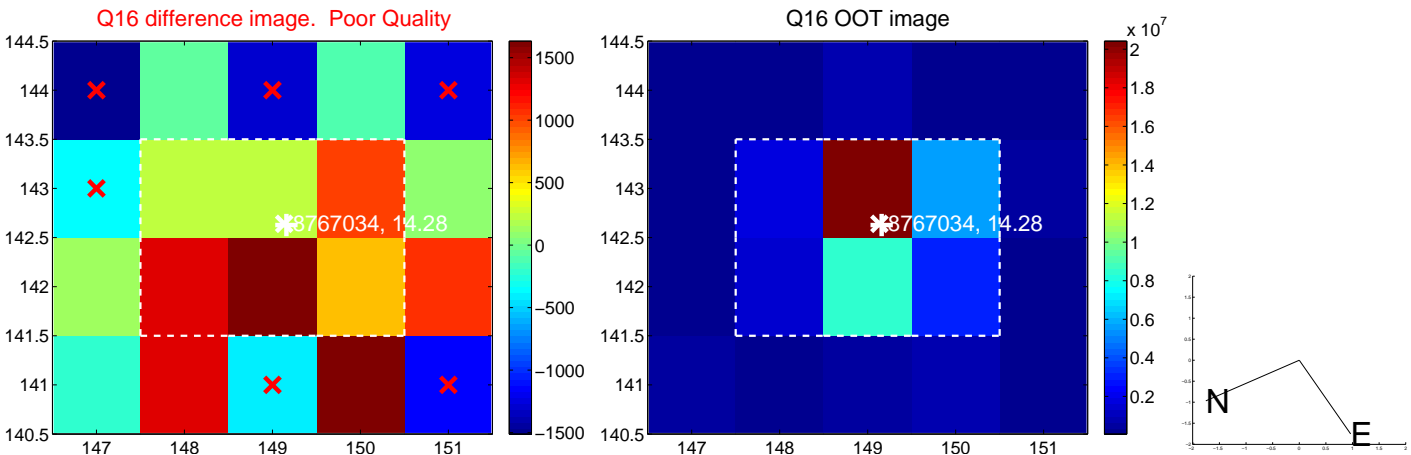
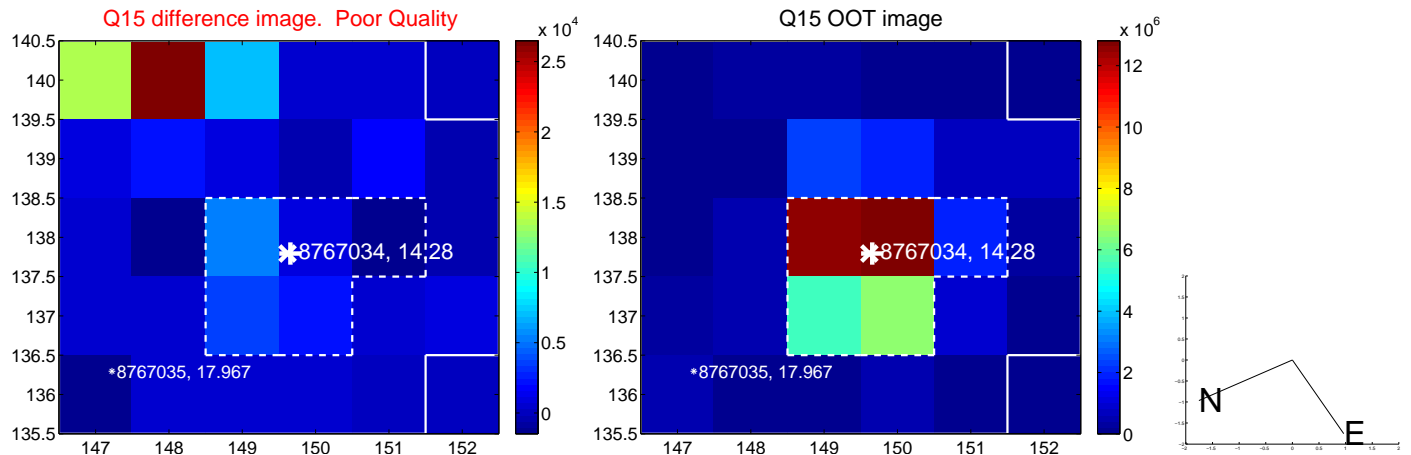
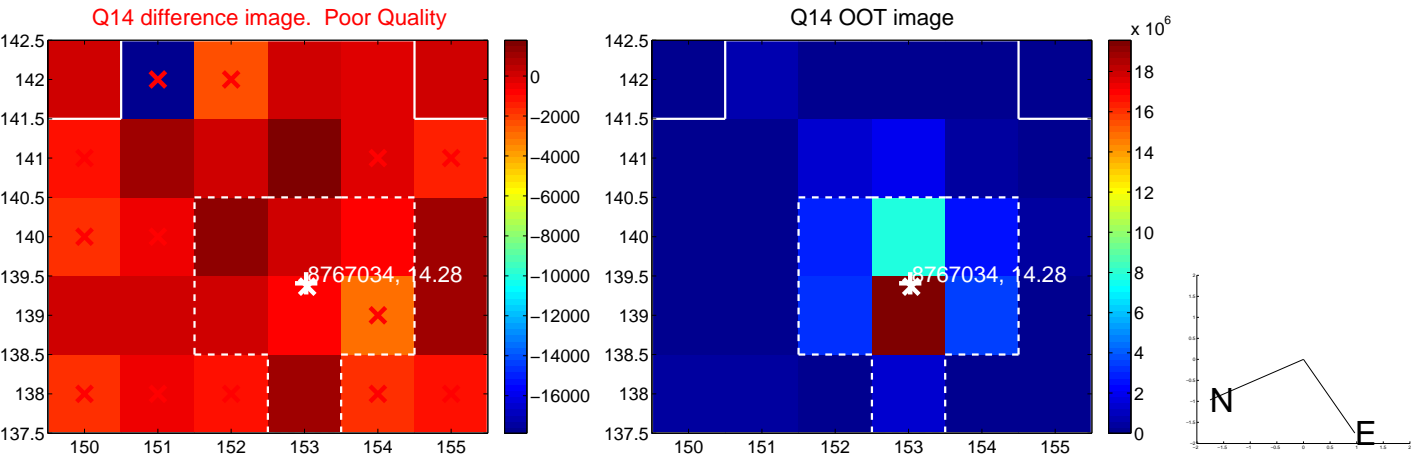
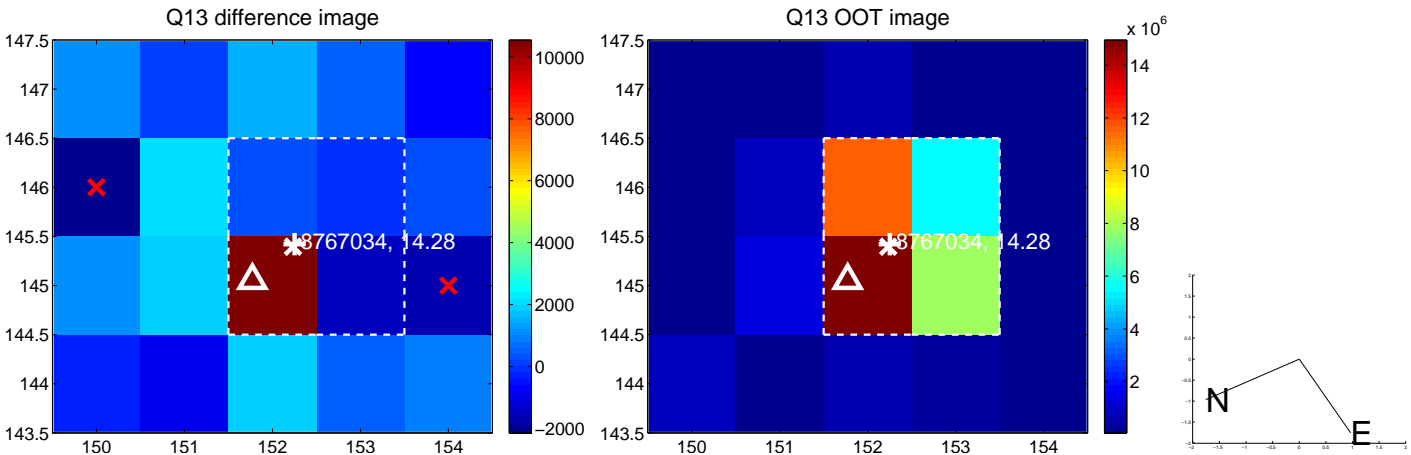
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



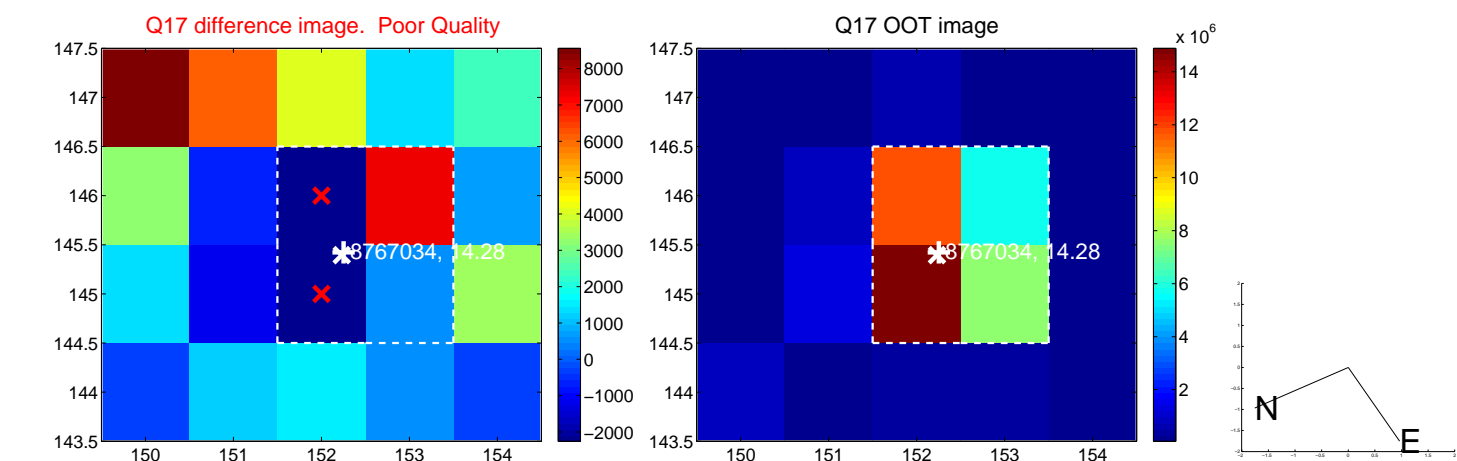
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



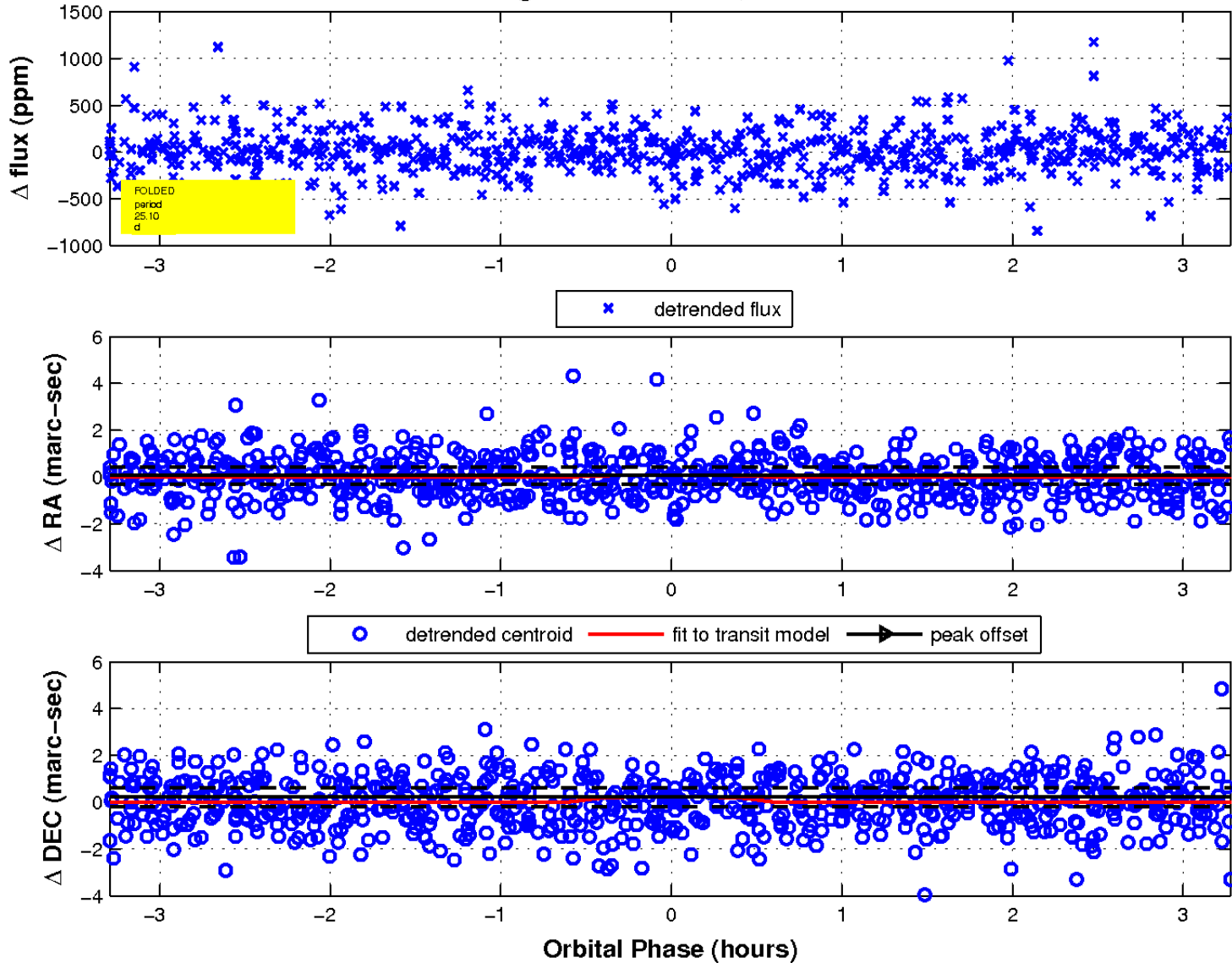
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

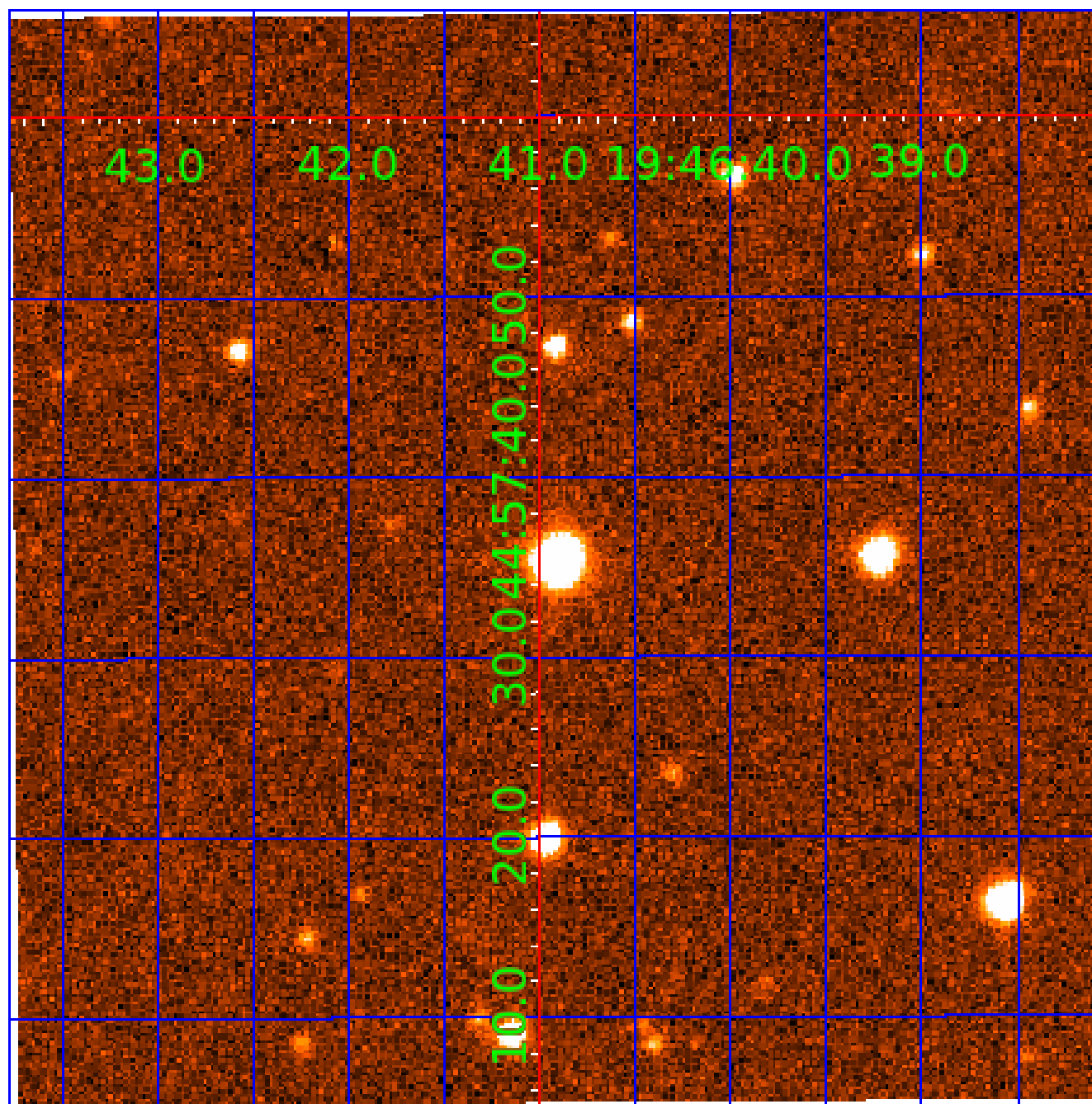


fluxWeightedCentroids, Planet 6 of 8



UKIRT Image

Declination



KIC 008767034

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})
008767034-01	OBS	7089.01	0.586382	131.566135	24.5	4.161	13.5	9.8	0.61	4556	0.29	1030.16
008767034-02	OBS	No	19.237477	149.361219	68.5	7.045	11.6	2.7	0.61	4556	0.58	9.81
008767034-04	OBS	No	35.172465	161.730937	614.9	4.518	11.0	9.0	0.61	4556	1.69	4.39
008767034-05	OBS	No	43.007251	142.200562	722.9	1.925	12.2	11.4	0.61	4556	1.94	3.35
008767034-06	OBS	No	25.103715	149.656632	529.6	1.097	9.0	7.7	0.61	4556	1.48	6.88
008767034-08	OBS	No	50.891218	162.364936	569.1	3.375	9.0	10.8	0.61	4556	1.65	2.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008767034-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
008767034-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST
008767034-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008767034-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_MEAS
008767034-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_MEAS
008767034-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

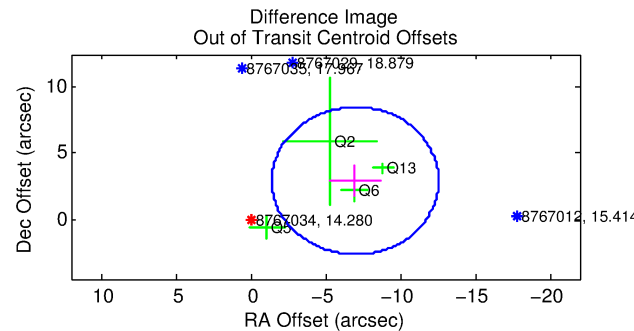
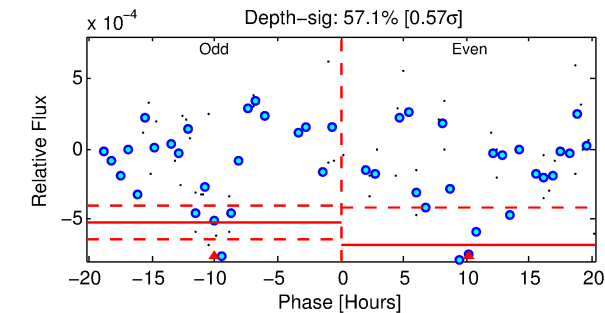
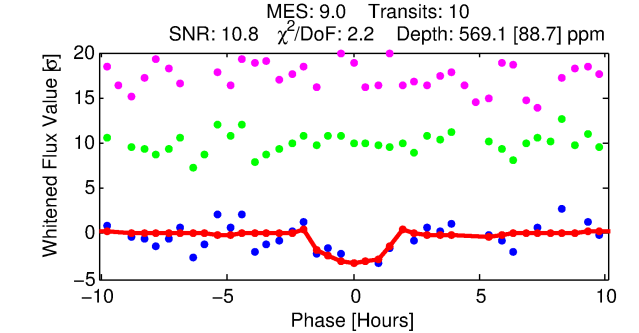
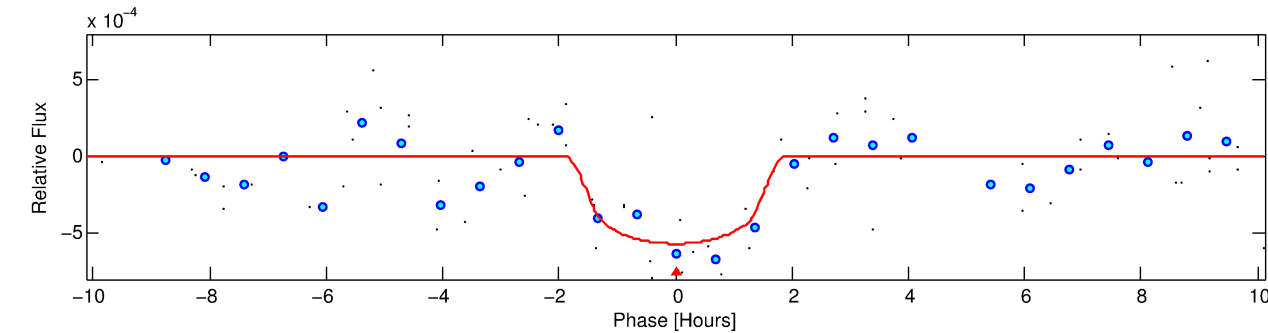
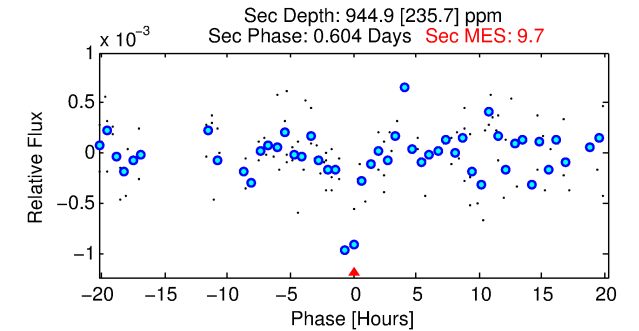
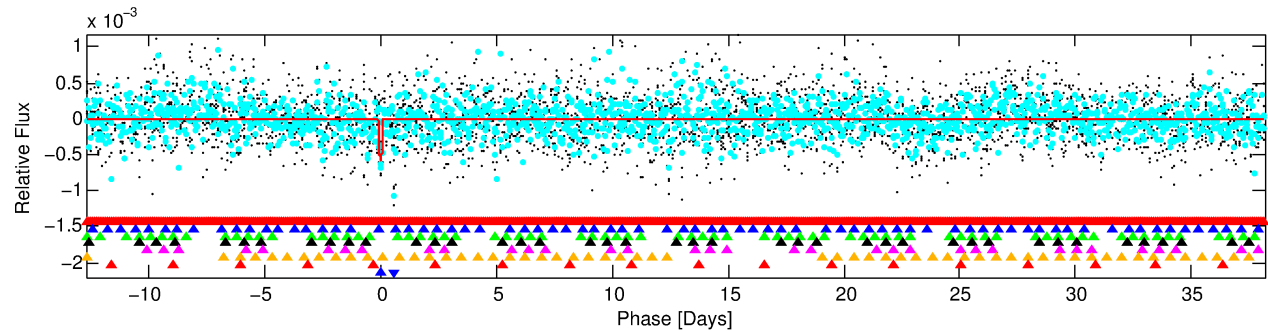
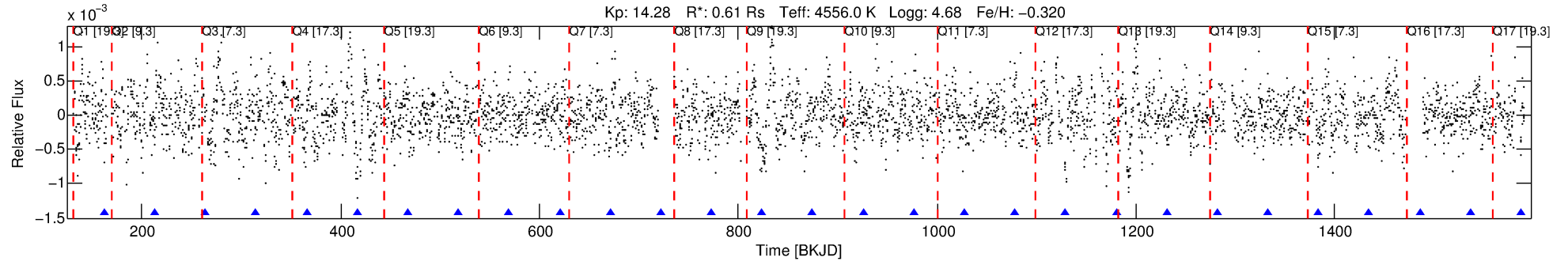
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008767034-08

No Significant Match Found

DV One-Page Summary

KIC: 8767034 Candidate: 8 of 8 Period: 50.891 d
KOI: K07089 Corr: No Ephemeris Match



DV Fit Results:

Period = 50.89122 [0.00089] d
Epoch = 162.3649 [0.0129] BKJD
Rp/R* = 0.0246 [0.0292]
a/R* = 73.33 [297.23]
b = 0.80 [1.84]
Seff = 2.68 [0.42]
Teq = 326 [13] K
Rp = 1.65 [1.97] Re
a = 0.2334 [0.0180] AU
Ag = 10368.54 [24737.16] [0.42 σ]
Teffp = 5091 [3037] K [1.57 σ]

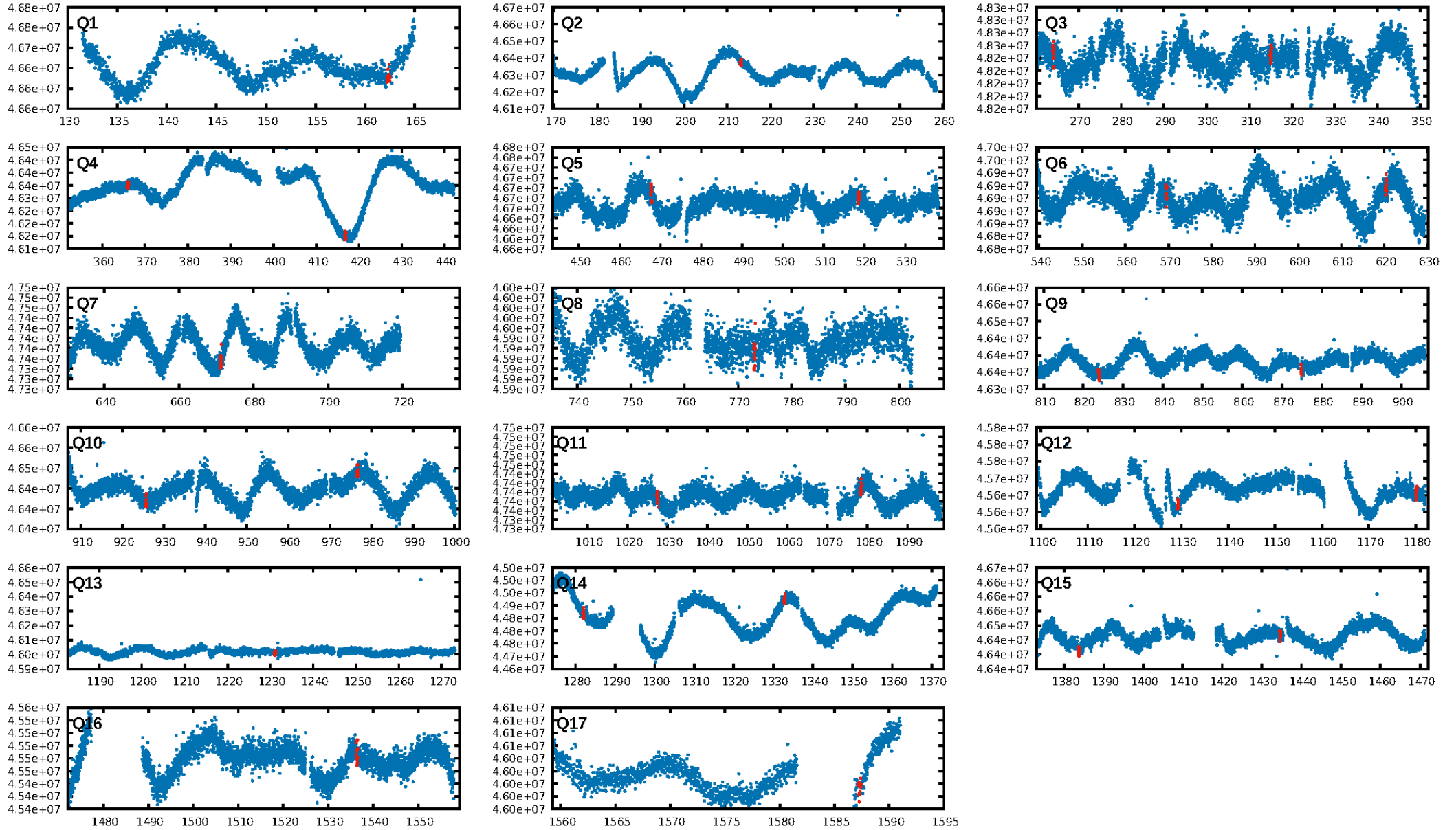
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [48.70 σ]
LongPeriod-sig: 100.0% [107.16 σ]
ModelChiSquare2-sig: 44.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.07e-11
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: -1.27
Centroid-sig: 35.3%
Centroid-so: 0.292 arcsec [0.65 σ]
OotOffset-rm: 7.584 arcsec [4.08 σ]
KicOffset-rm: 7.631 arcsec [4.27 σ]
OotOffset-st: 2/0/0/2 [4]
KicOffset-st: 2/0/0/2 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 0.00 [0/16]

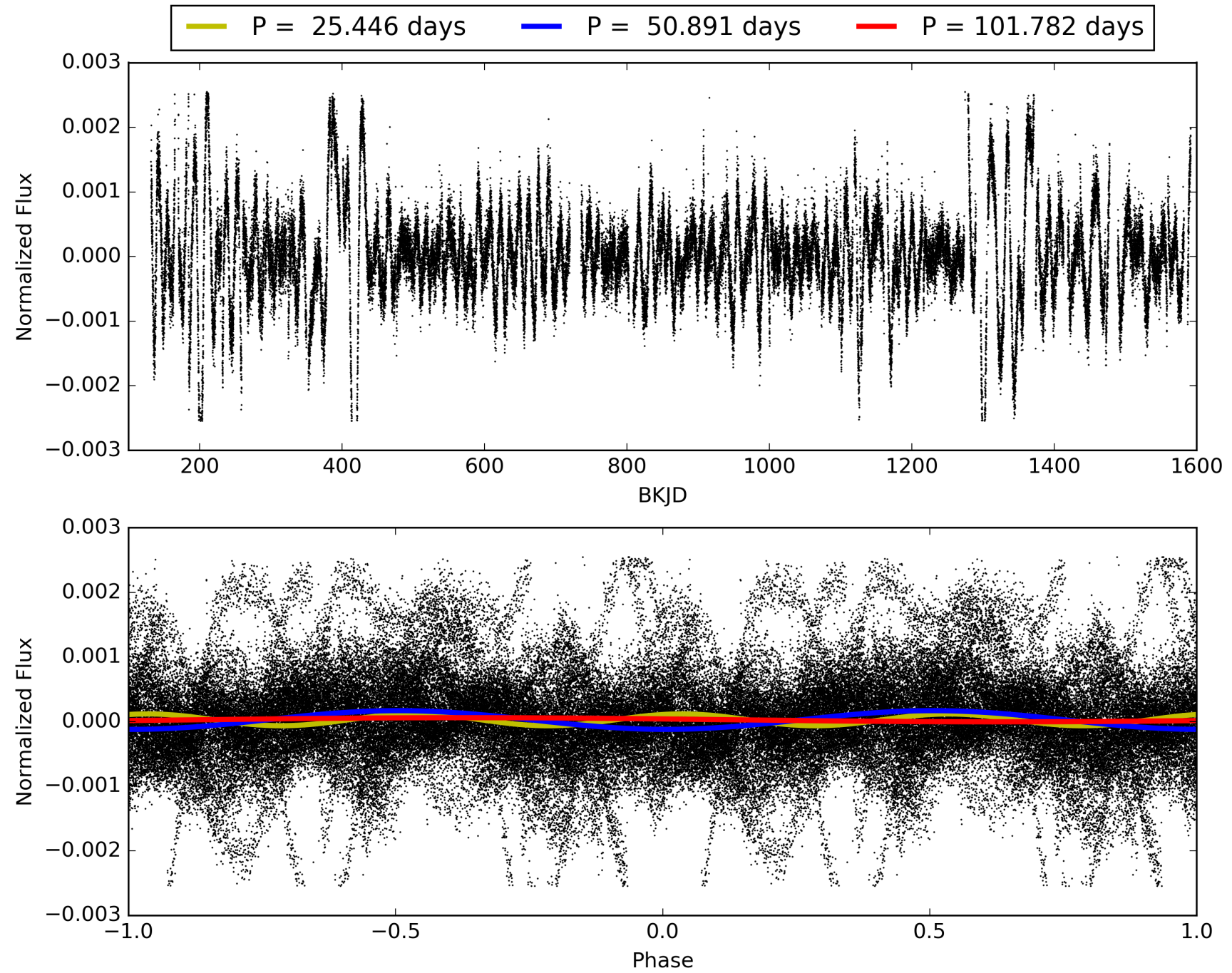
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:40:43 Z

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

TCE 008767034-08, PDC Light Curves

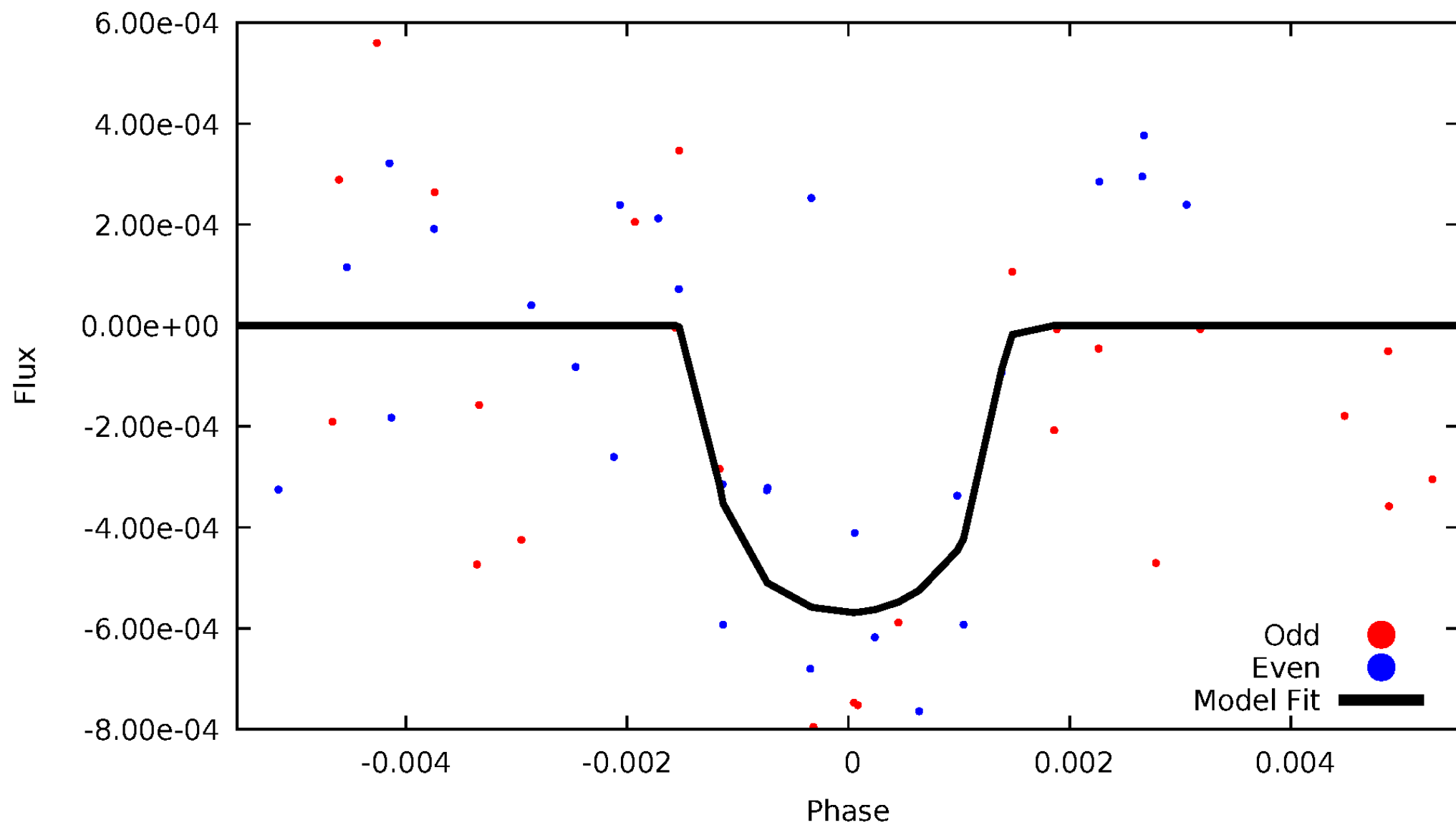


TCE 008767034-08



DV Odd/Even

TCE 008767034-08

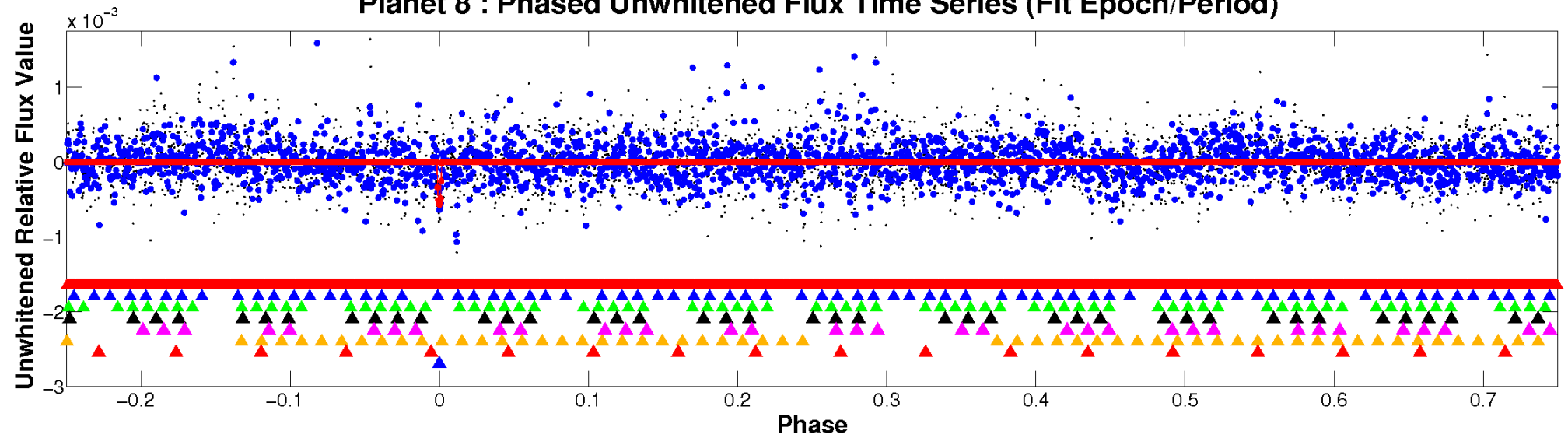


ALT Odd/Even

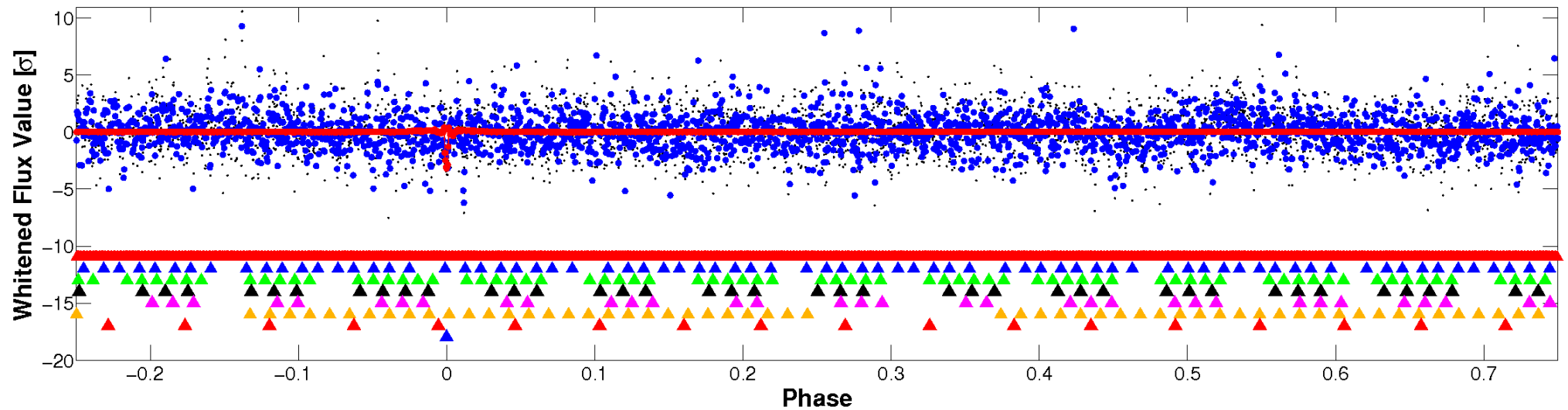
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

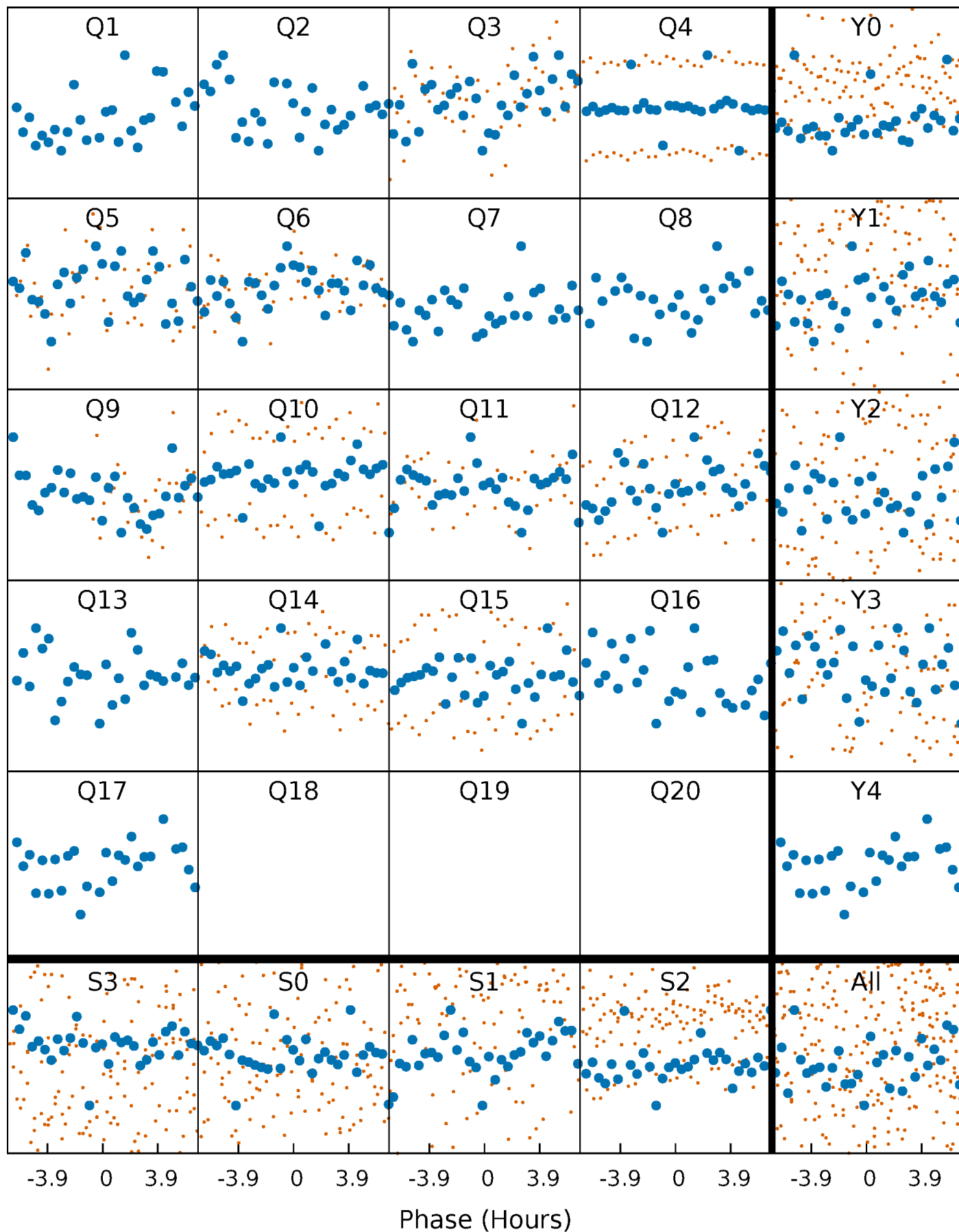


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



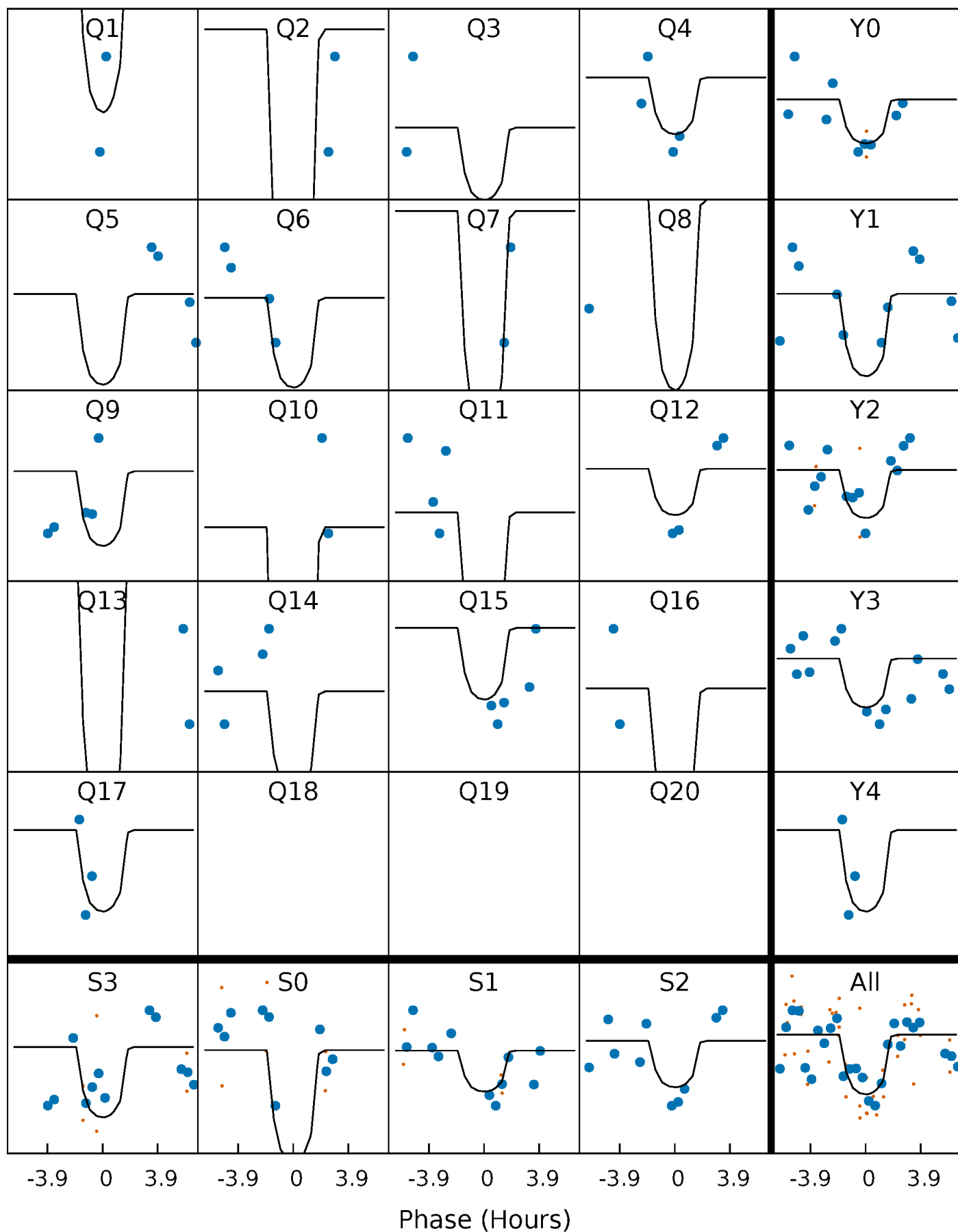
PDC Quarter-Phased Transit Curves

TCE 008767034-08 P= 50.891218 Days $T_0=162.364936$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008767034-08 $P = 50.891218$ Days $T_0 = 162.364936$ (BKJD)

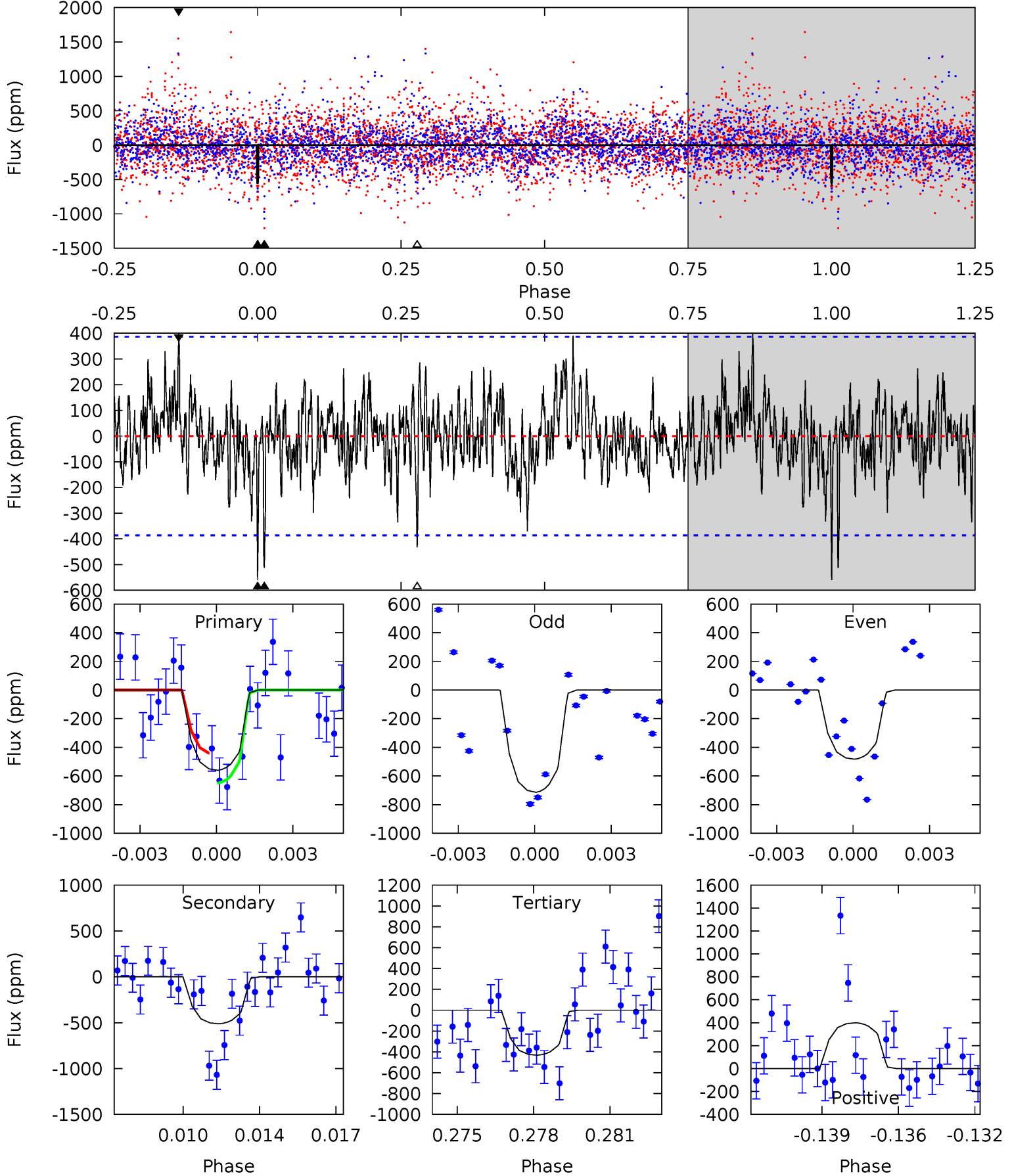


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

008767034-08, P = 50.891218 Days, E = 111.473718 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.58	6.93	5.85	5.40	5.23	2.93	1.52	1.74	2.18	1.08	1.53	1.45	1.00	0.42	1.41



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 008767034

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4556^{+136}_{-123}	$4.676^{+0.028}_{-0.052}$	$-0.320^{+0.300}_{-0.300}$	$0.615^{+0.061}_{-0.041}$	$0.669^{+0.058}_{-0.064}$	$4.042^{+0.520}_{-0.813}$
	+3%/-3%	+1%/-1%	+94%/-94%	+10%/-7%	+9%/-10%	+13%/-20%
Source	PHO1	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 008767034-08 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-512 ± 74	$2.15^{+1.63}_{-1.33}$	459^{+15}_{-16}	4033^{+1968}_{-698}	3349^{+19673}_{-2260}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

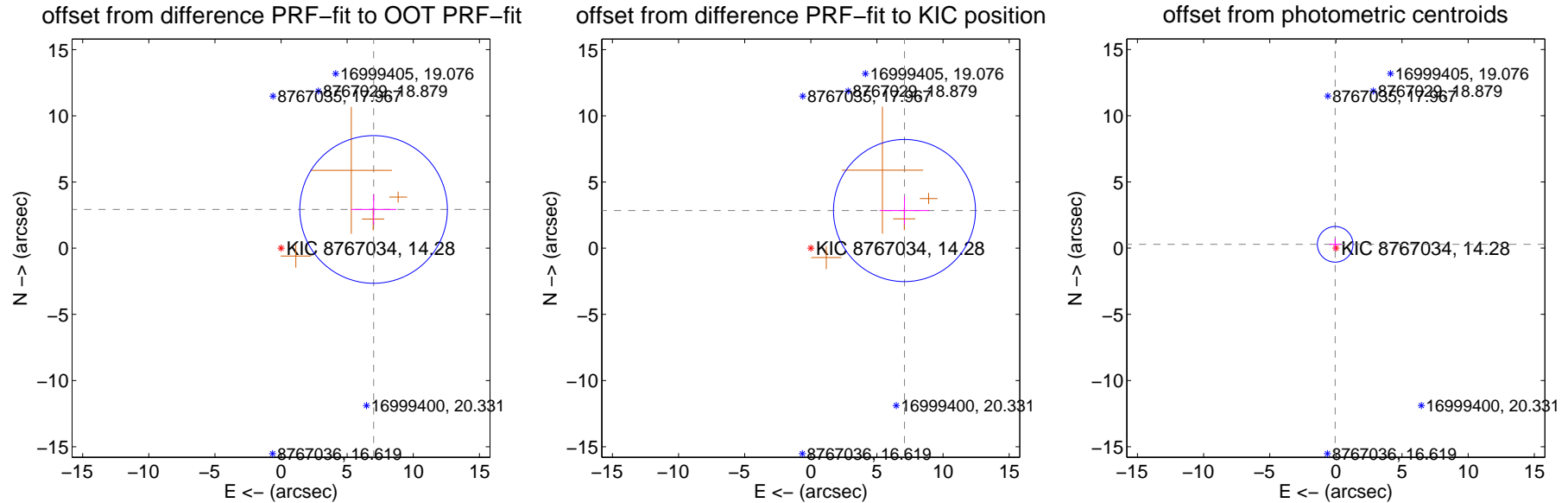
DV Centroid Data

Supplemental centroid analysis for 008767034-08. Kepler magnitude: 14.28. Transit SNR 10.79

There are 0 quarters with good PRF difference image offsets

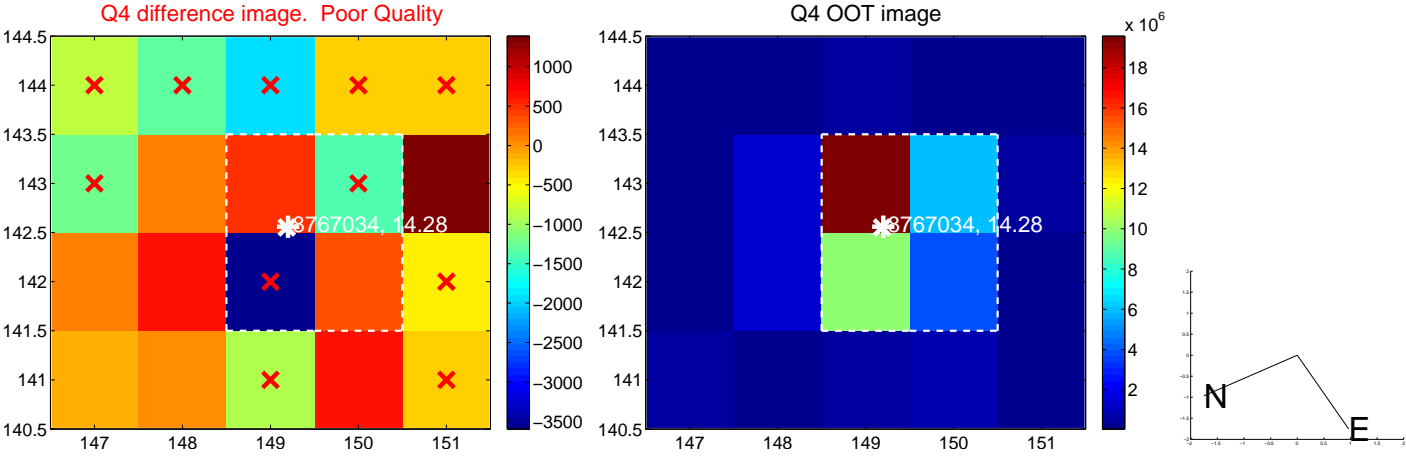
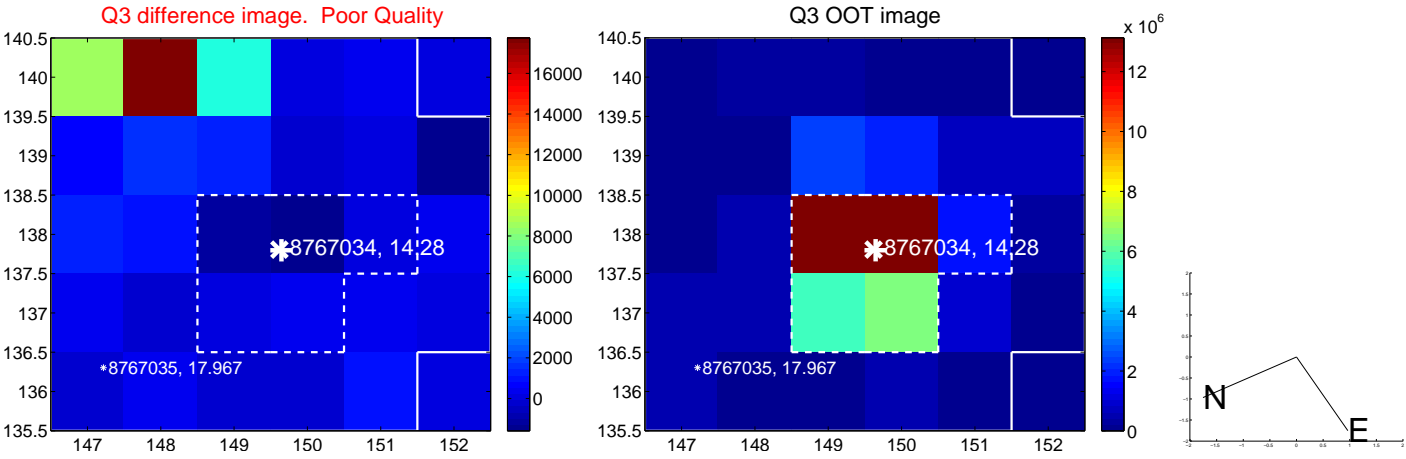
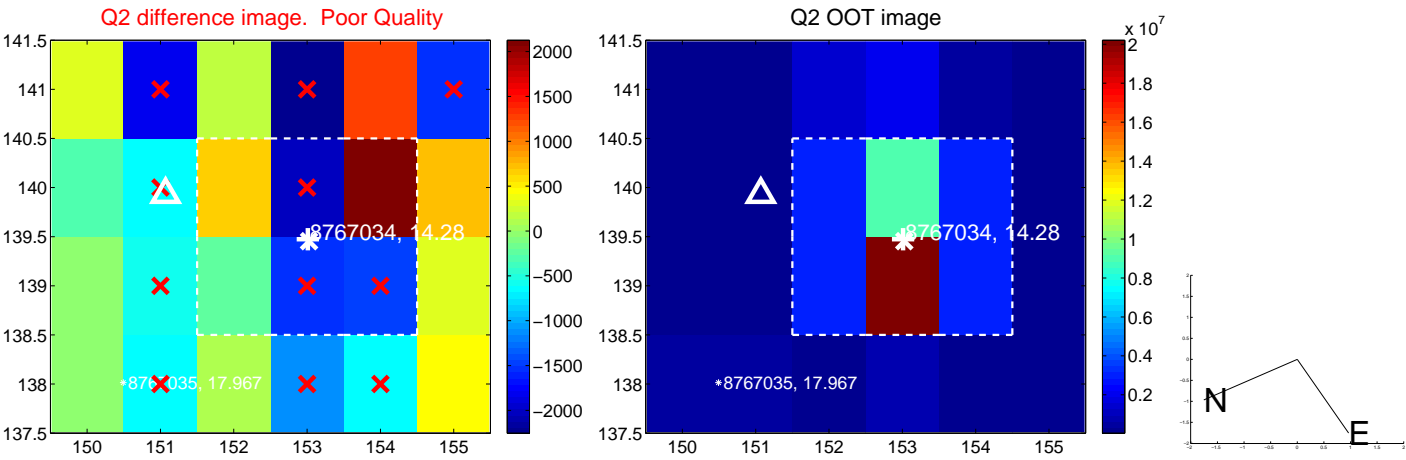
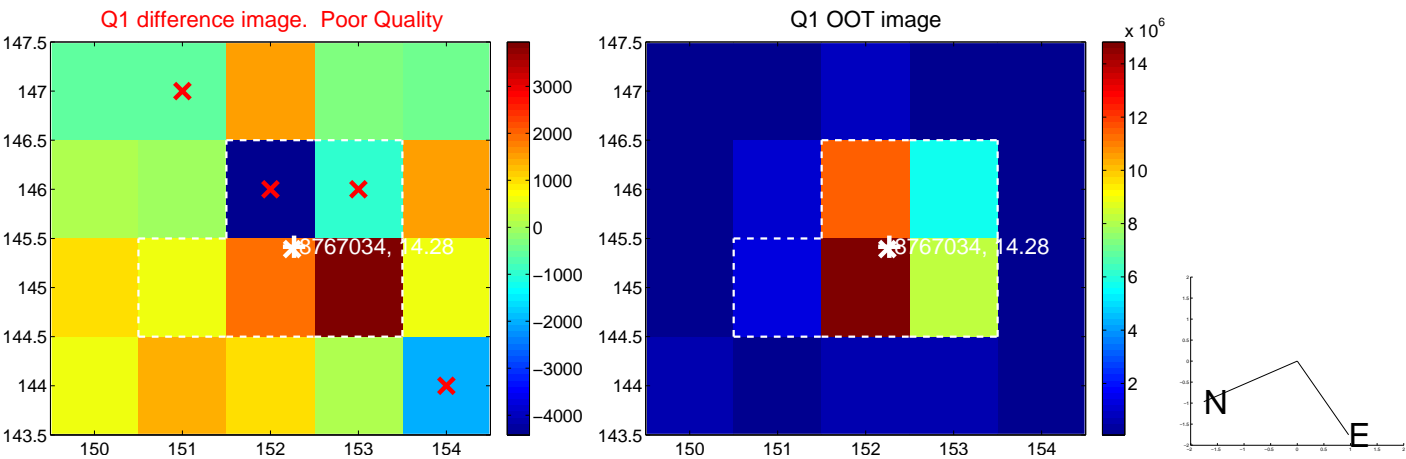
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.584 ± 1.859	4.08	-6.996 ± 1.724	2.927 ± 1.129
PRF-fit source offset from KIC position	7.631 ± 1.789	4.27	-7.081 ± 1.880	2.844 ± 1.065
photometric centroid source offset	0.29 ± 0.45	0.65	0.05 ± 0.44	0.29 ± 0.45

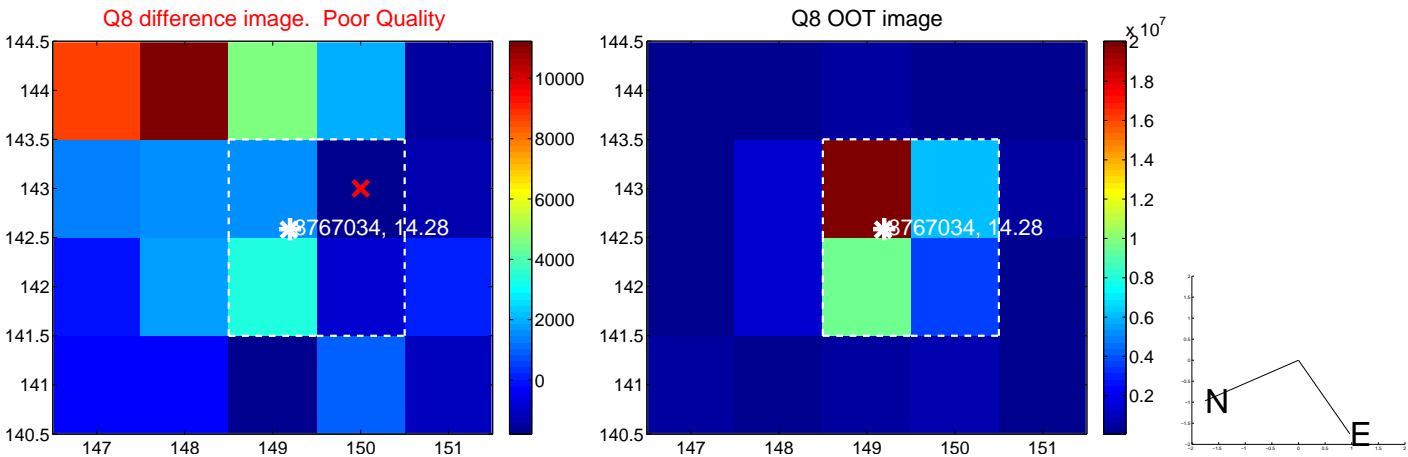
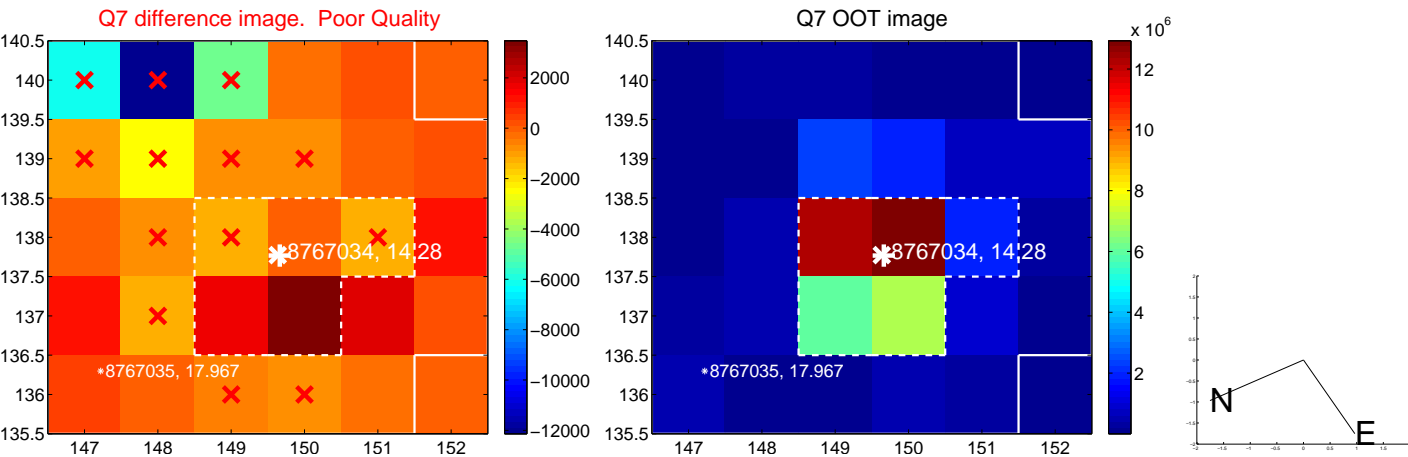
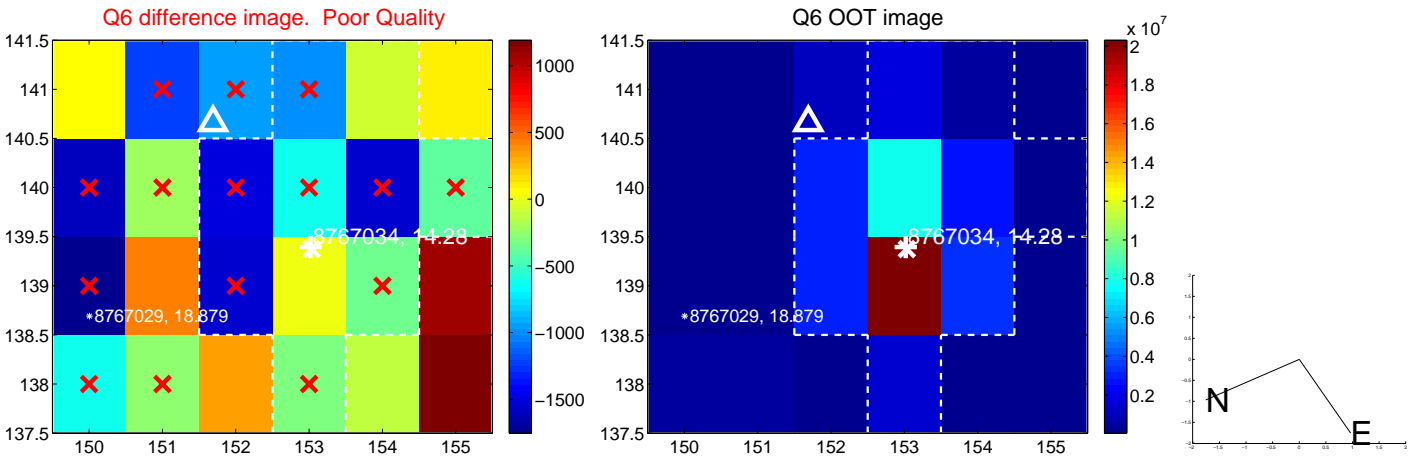
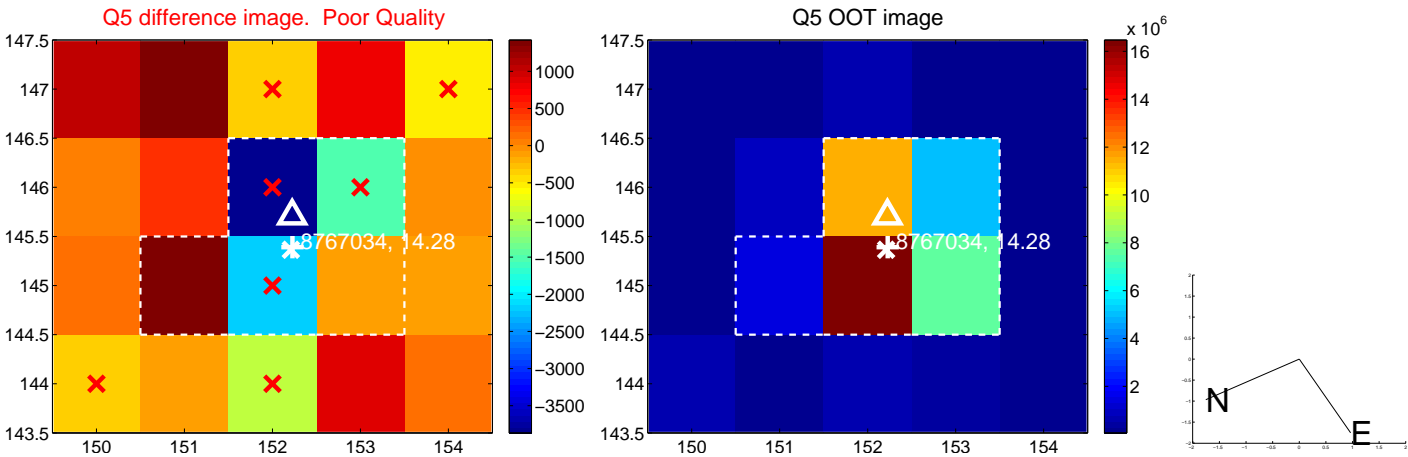


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

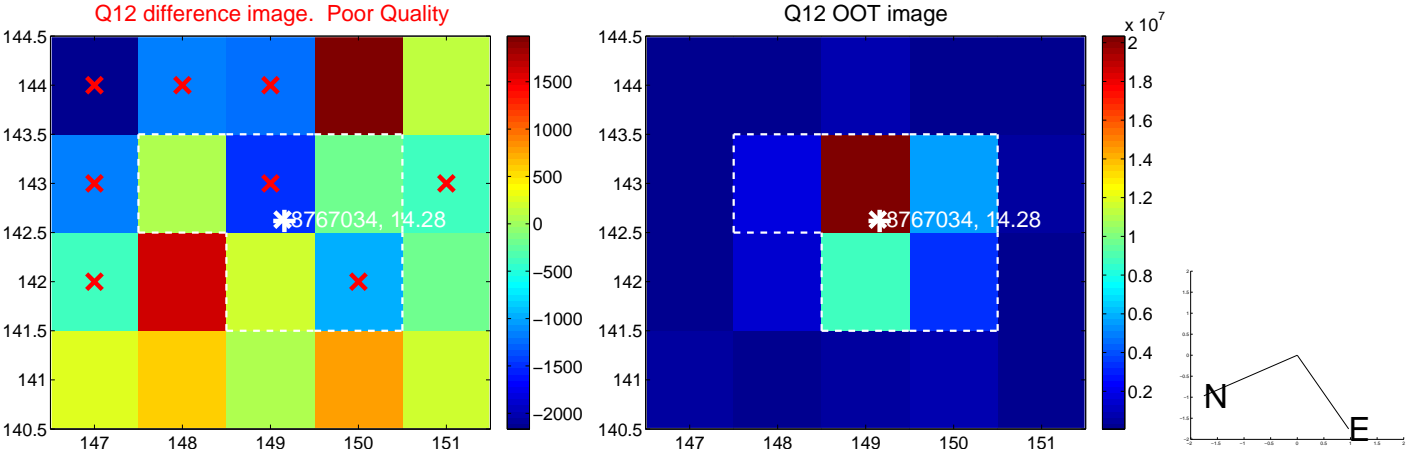
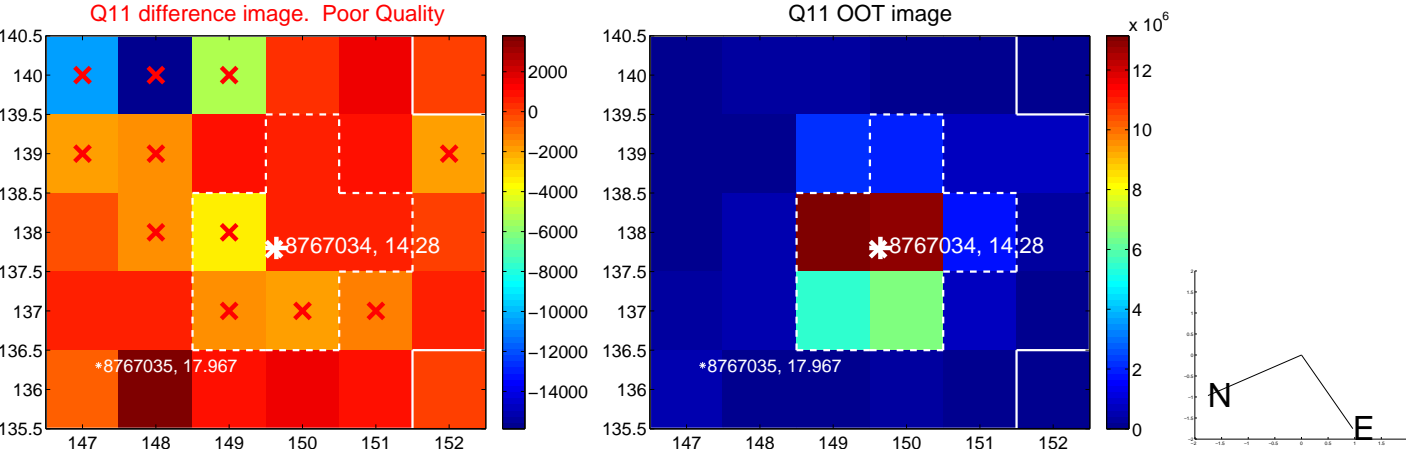
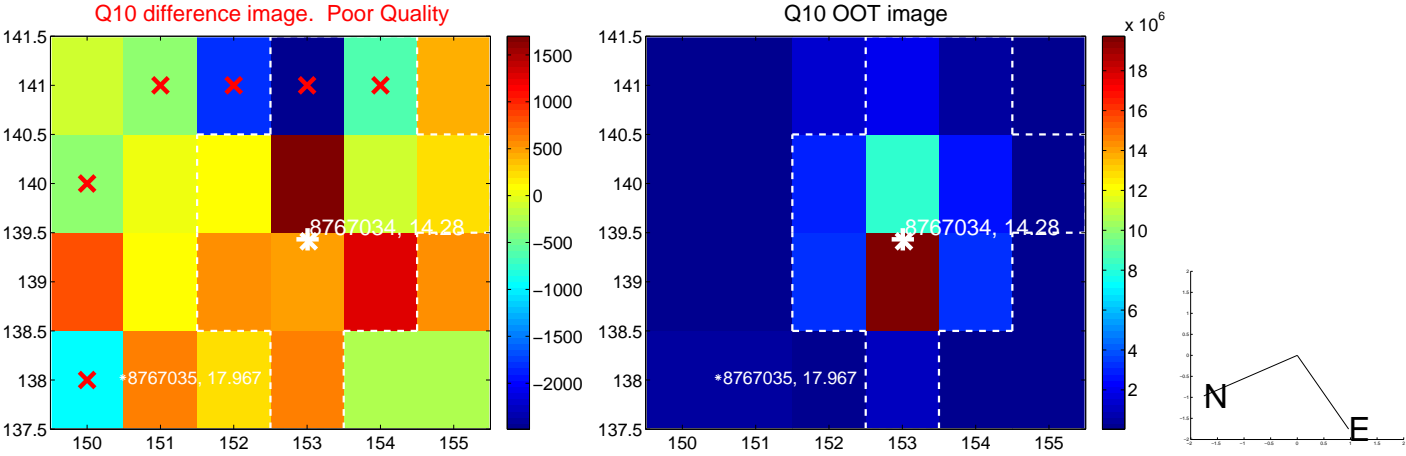
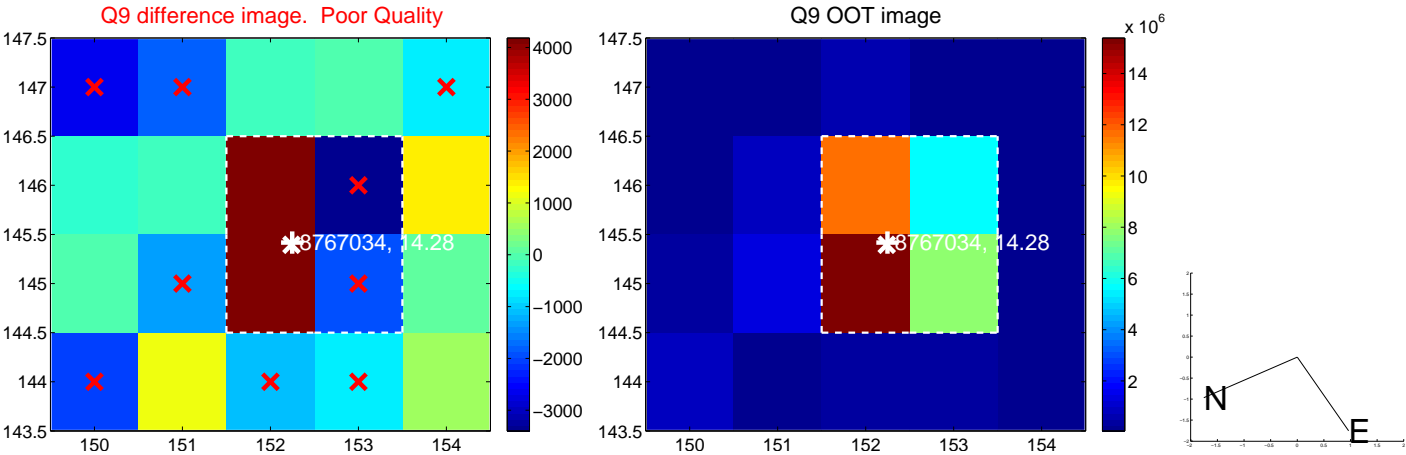
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



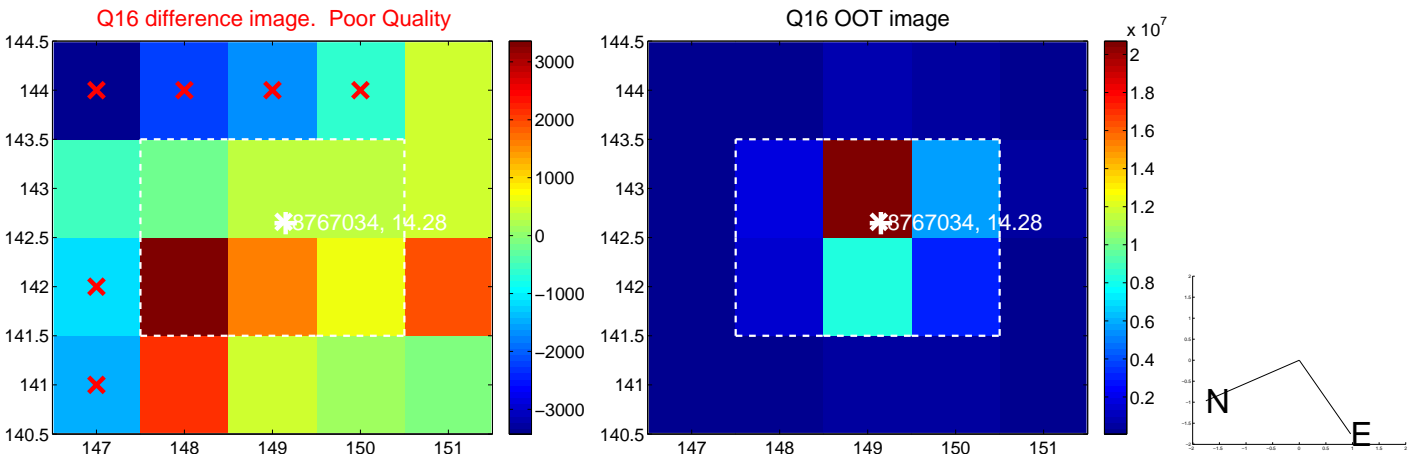
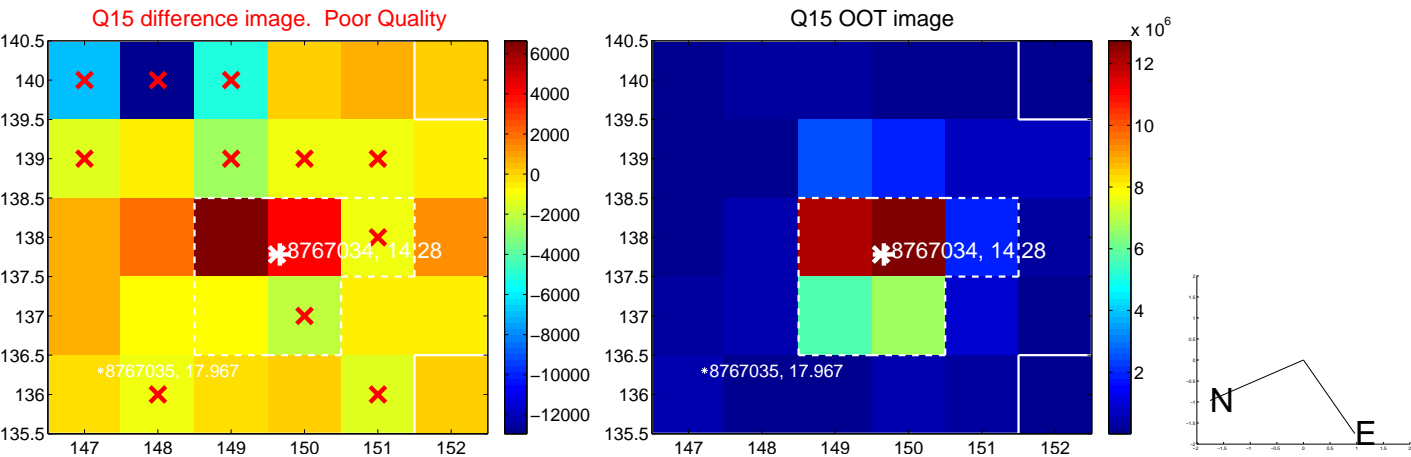
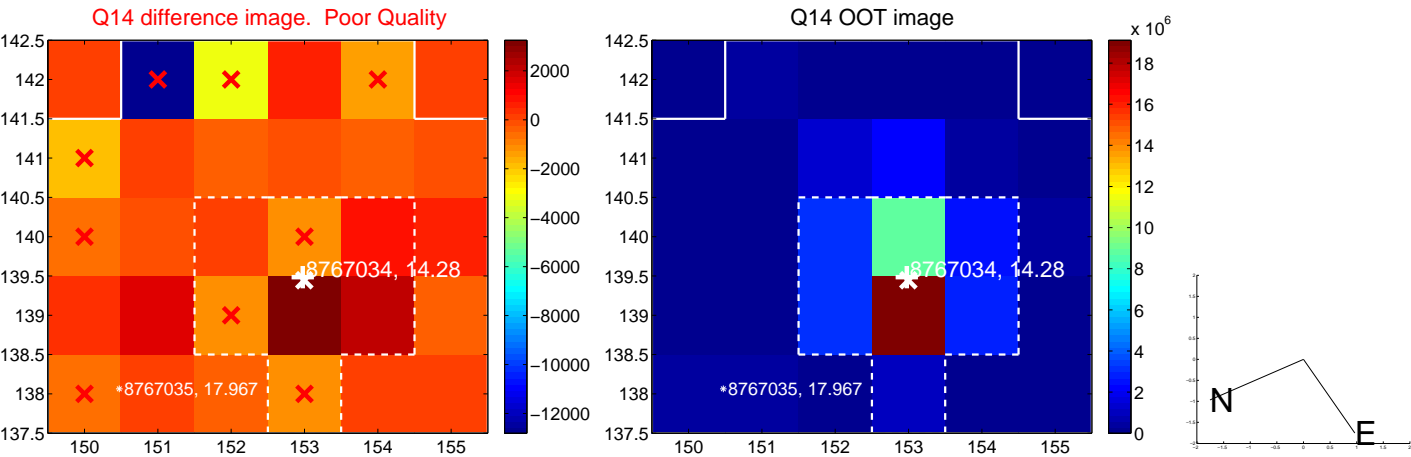
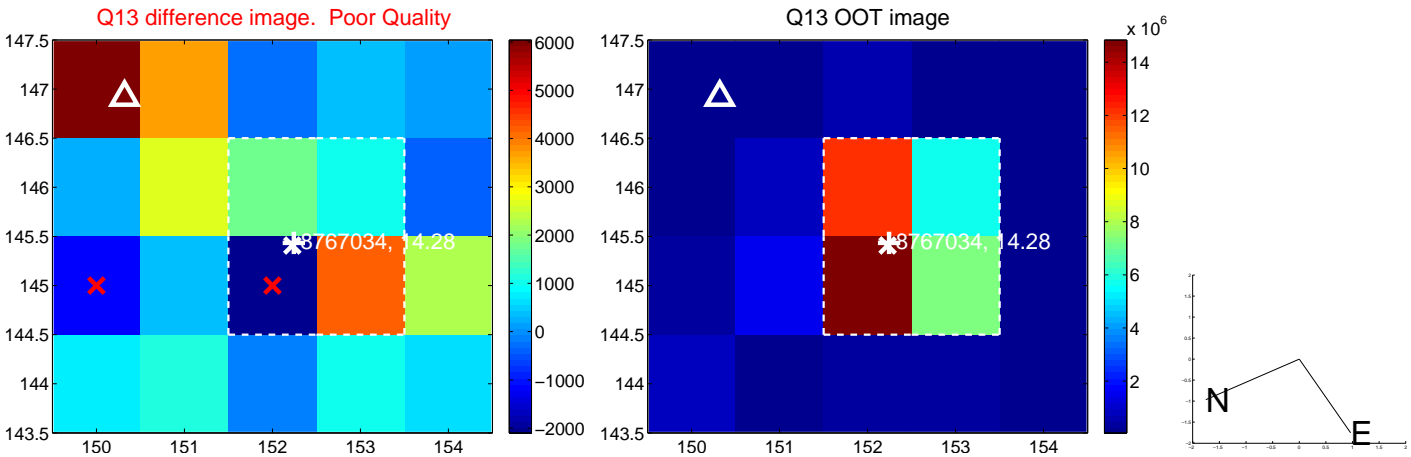
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



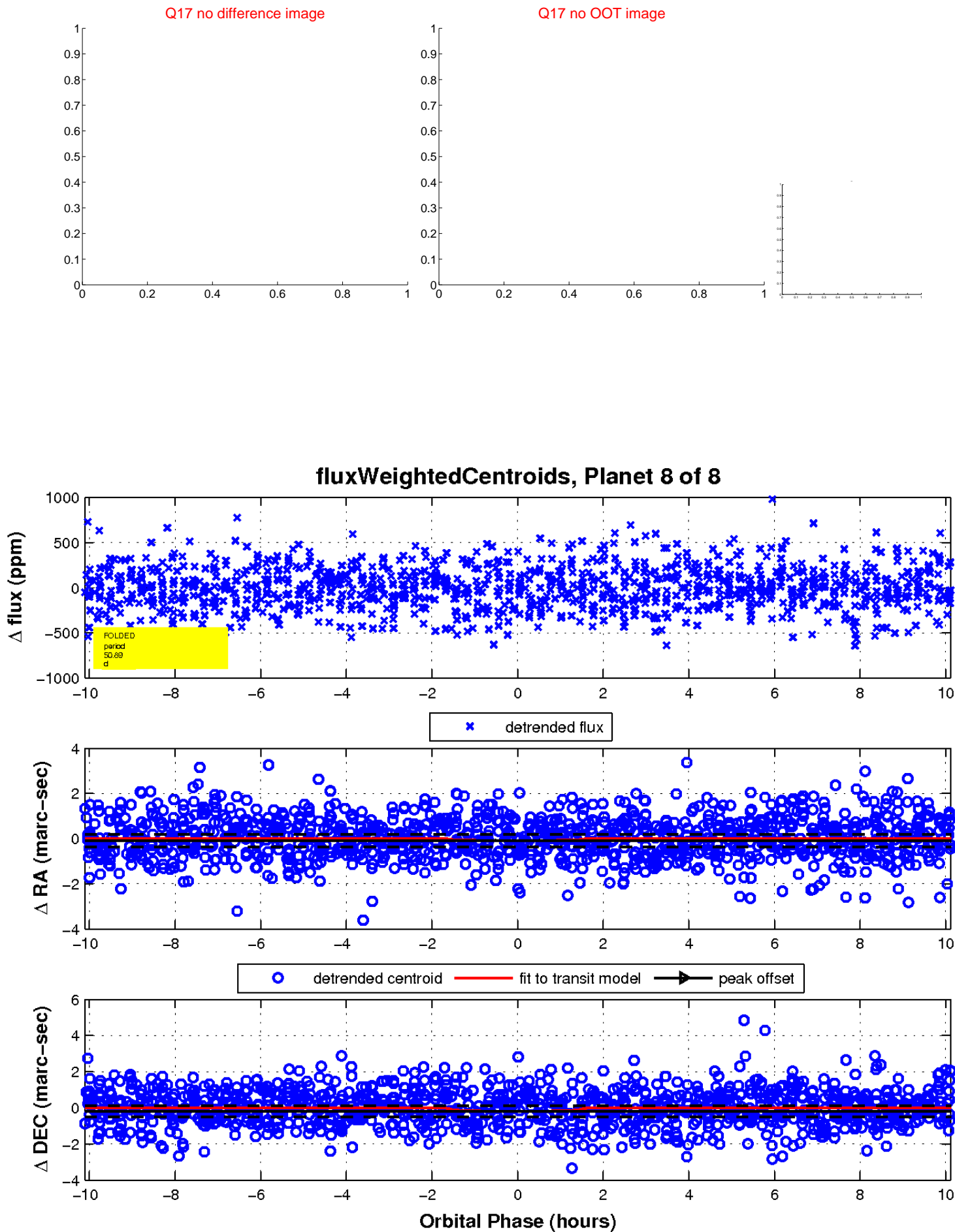
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

