

KIC 003750207

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})
003750207-01	OBS	No	1.284400	132.628767	9.7	3.680	7.3	2.6	1.22	6621	0.58	4165.41
003750207-02	OBS	No	2.569565	134.017792	39.9	6.526	8.2	9.3	1.22	6621	0.90	1652.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003750207-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV
003750207-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

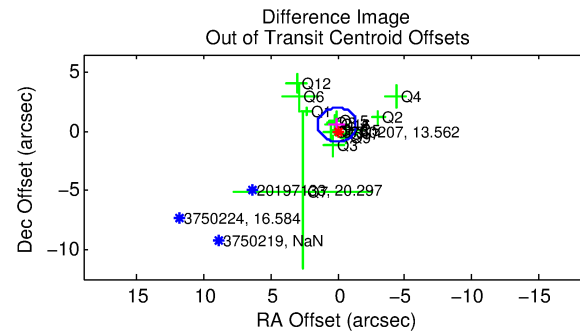
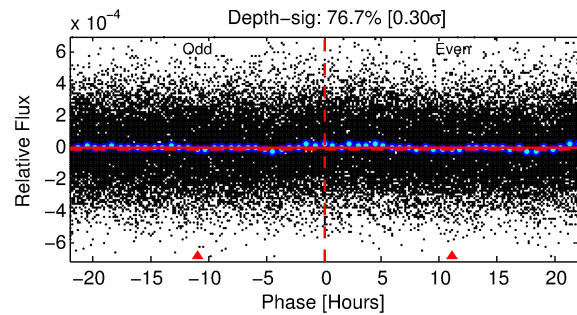
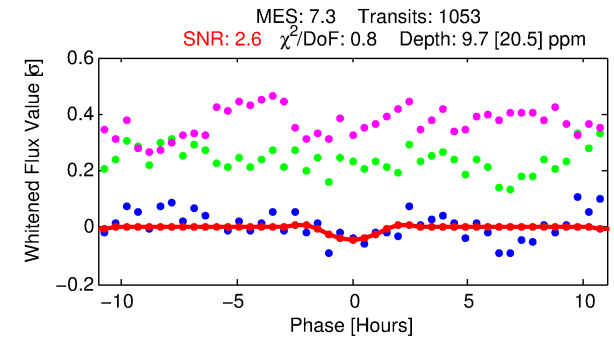
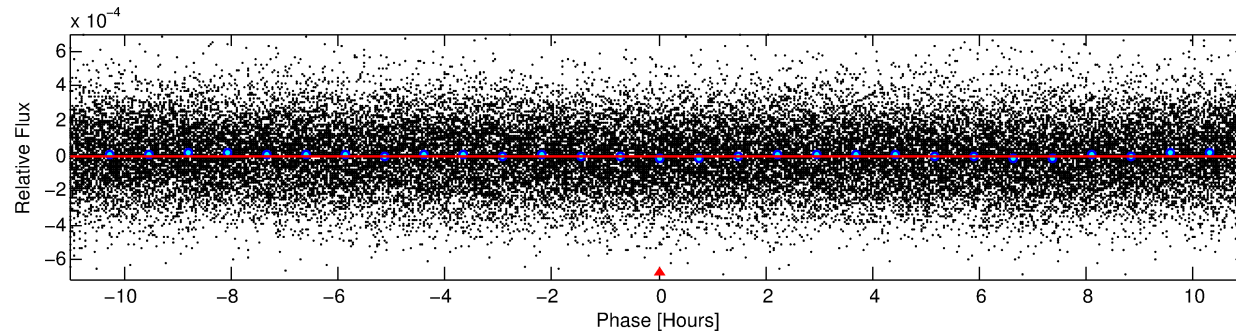
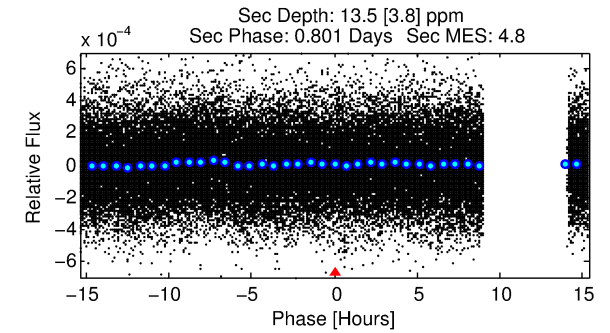
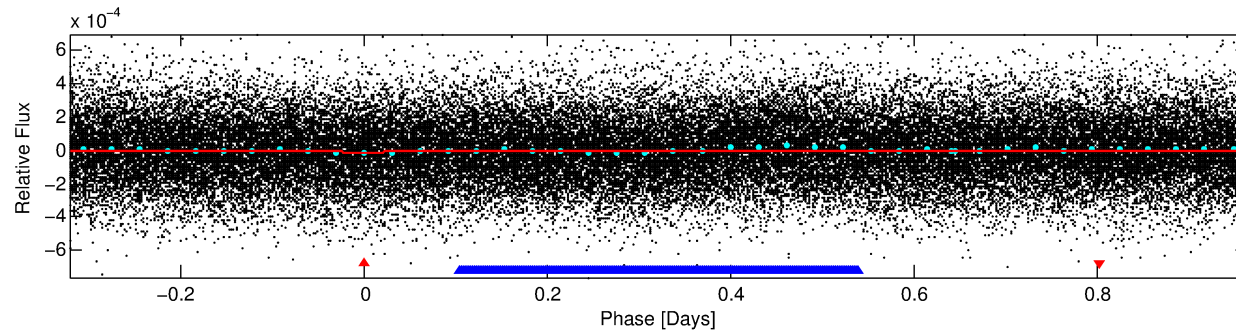
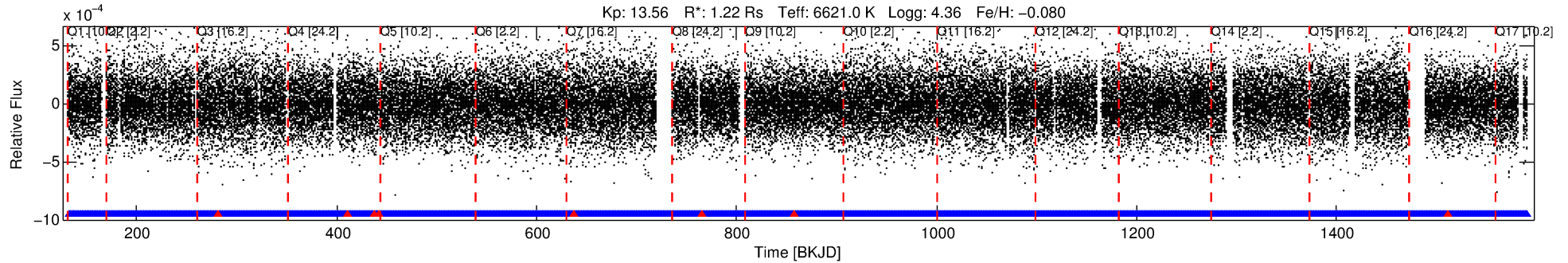
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003750207-01

No Significant Match Found

DV One-Page Summary

KIC: 3750207 Candidate: 1 of 2 Period: 1.284 d



DV Fit Results:

Period = 1.28440 [0.00005] d
Epoch = 132.6288 [0.0175] BKJD
Rp/R* = 0.0044 [0.0067]
a/R* = 1.05 [0.11]
b = 1.00 [0.02]
Seff = 4165.41 [1699.60]
Teq = 2049 [209] K
Rp = 0.58 [0.92] Re
a = 0.0248 [0.0069] AU
Ag = 13.46 [41.82] [0.30σ]
Teffp = 6067 [4679] K [0.86σ]

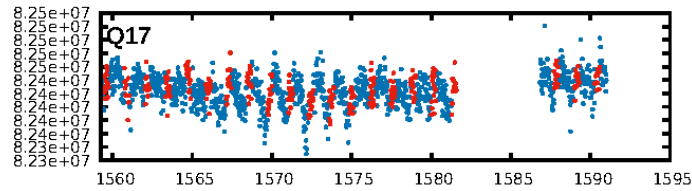
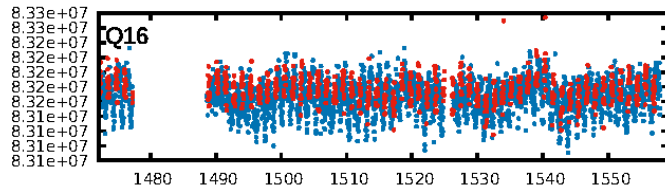
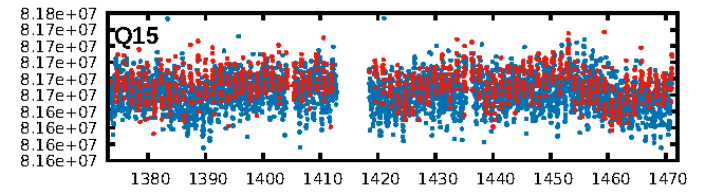
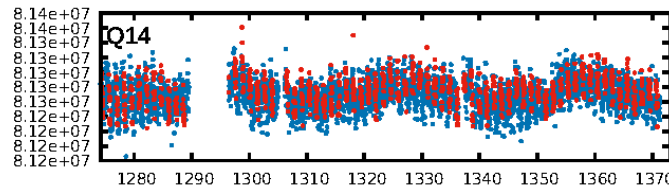
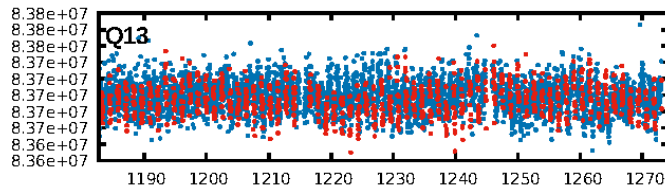
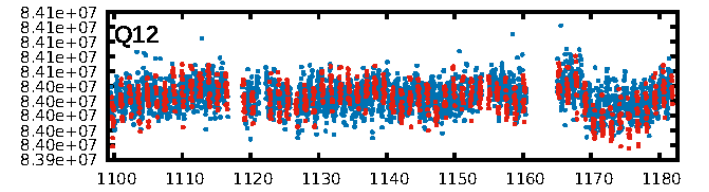
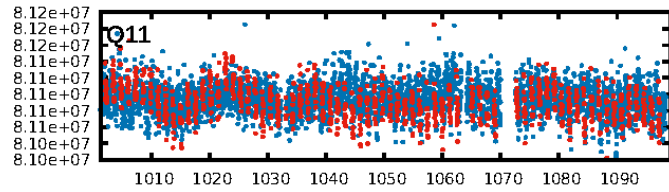
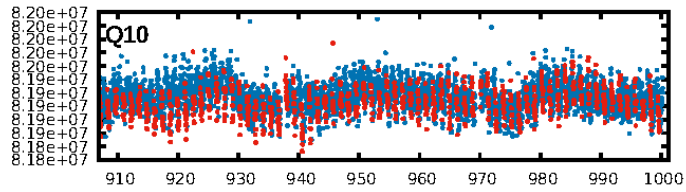
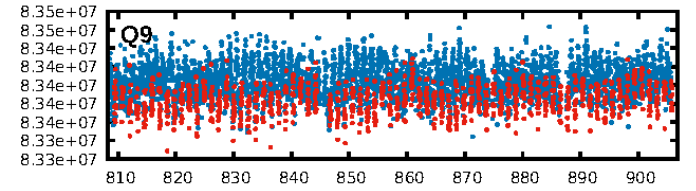
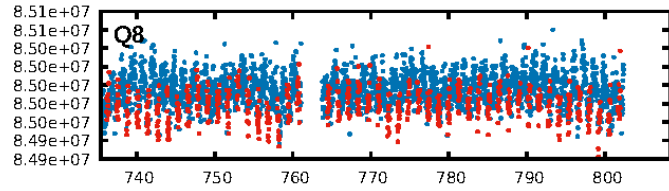
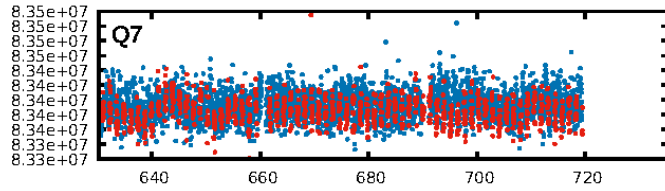
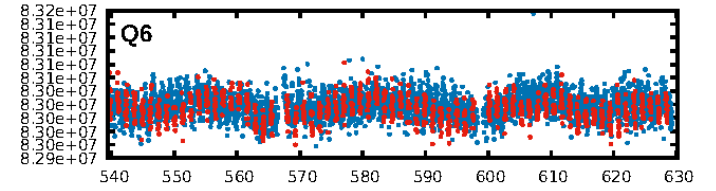
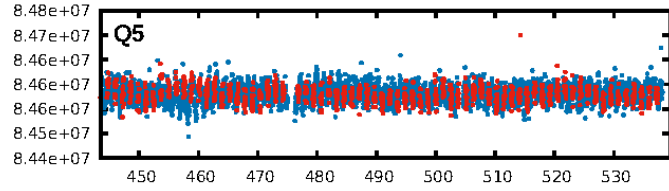
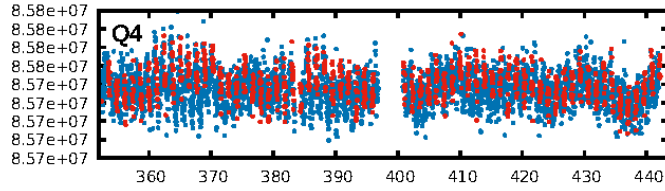
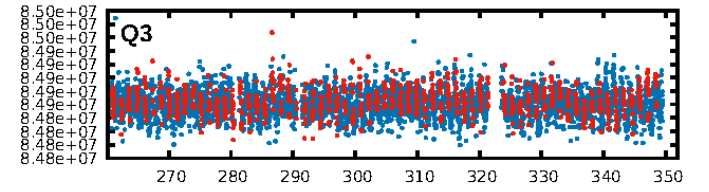
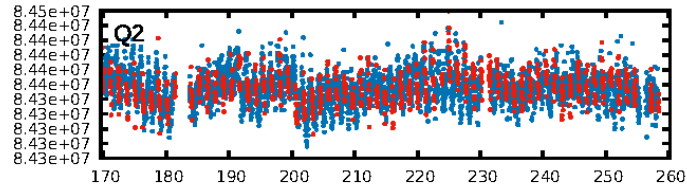
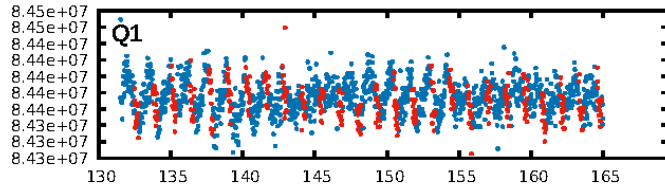
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [4.12σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.63e-11
RollingBand-fgt: 0.99 [998/1006]
GhostDiagnostic-chr: 2.538
Centroid-sig: 67.7%
Centroid-so: 2.270 arcsec [0.52σ]
OotOffset-rm: 0.538 arcsec [1.12σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-rm: 0.613 arcsec [1.31σ]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.44 [7/16]
DiffImageOverlap-fno: 1.00 [17/17]

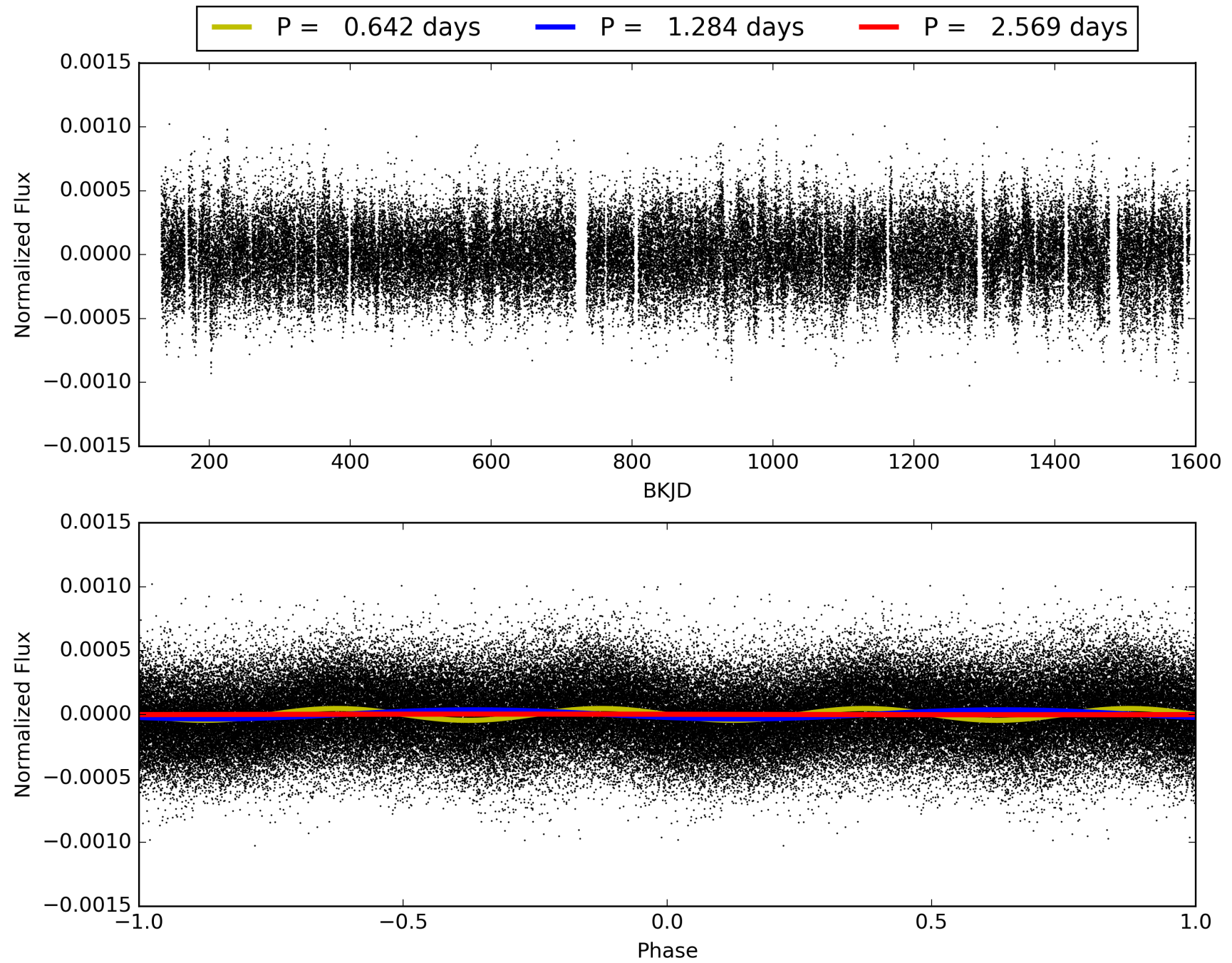
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:39:04 Z

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

TCE 003750207-01, PDC Light Curves

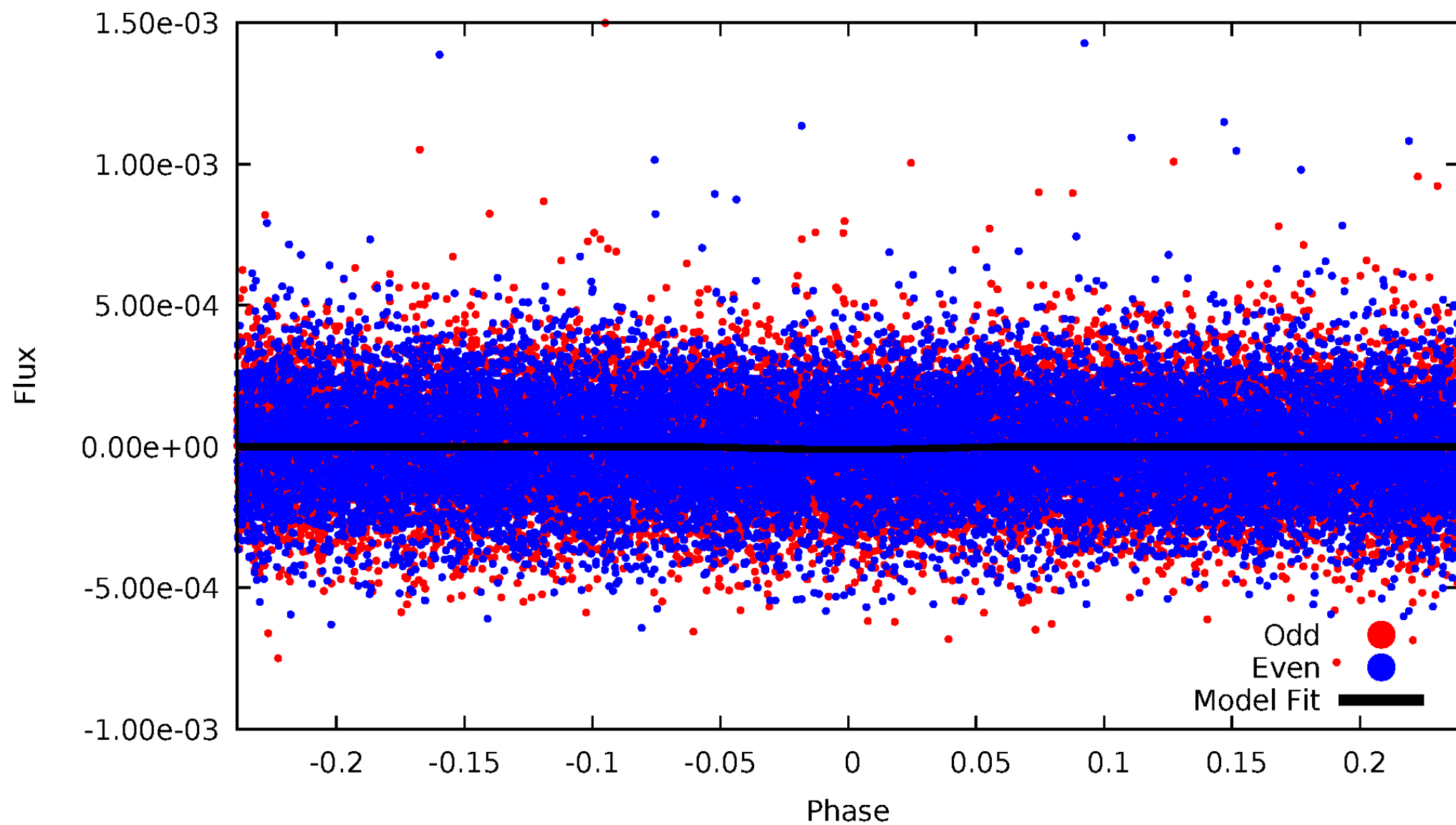


TCE 003750207-01



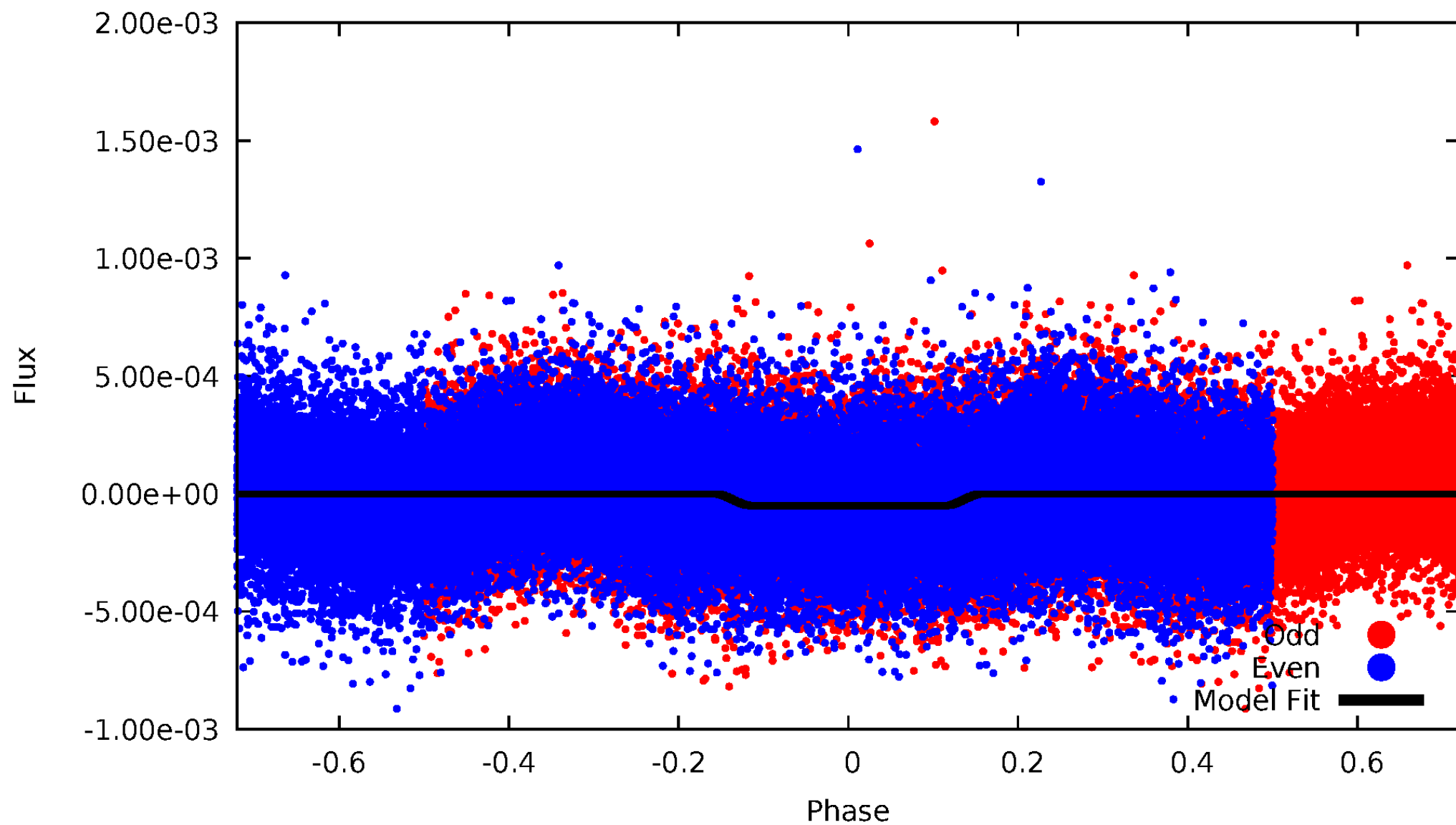
DV Odd/Even

TCE 003750207-01

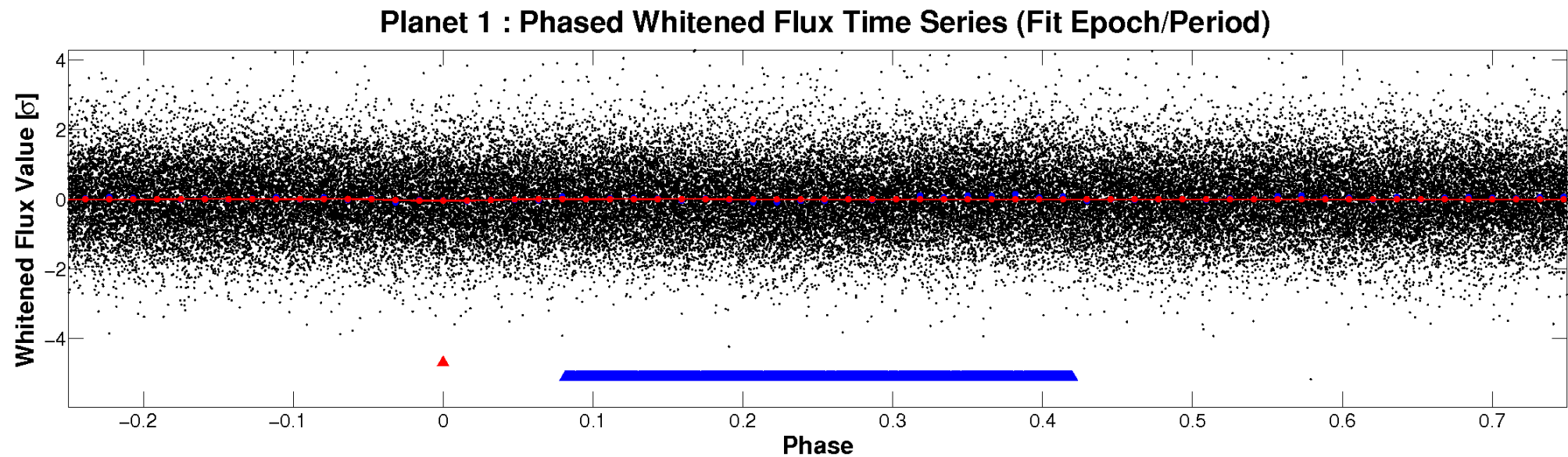
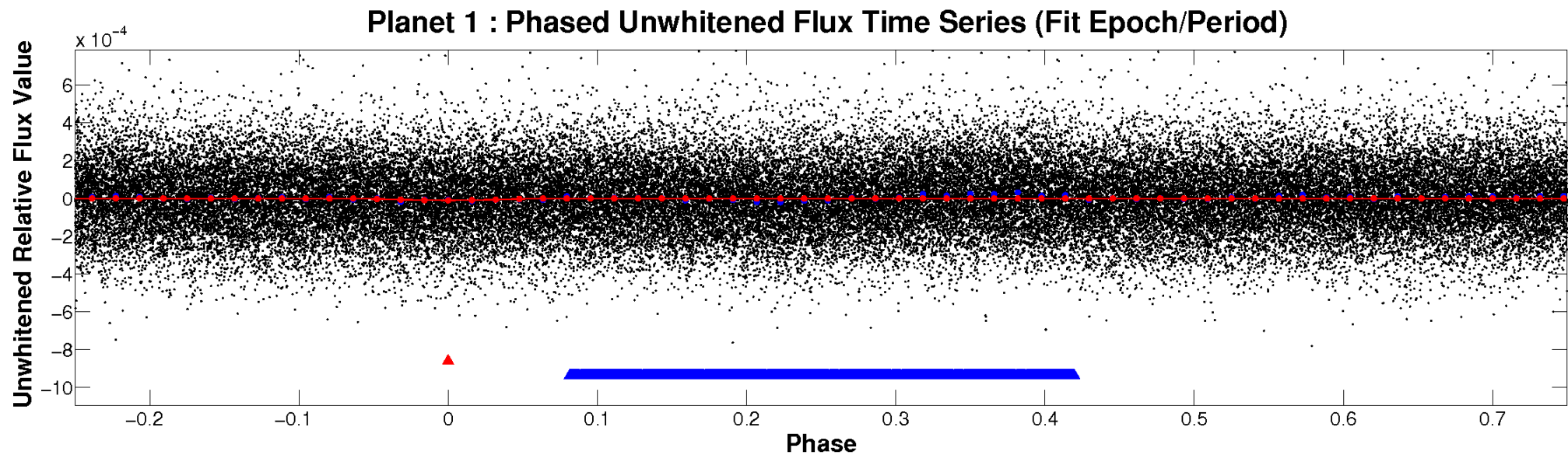


ALT Odd/Even

TCE 003750207-01

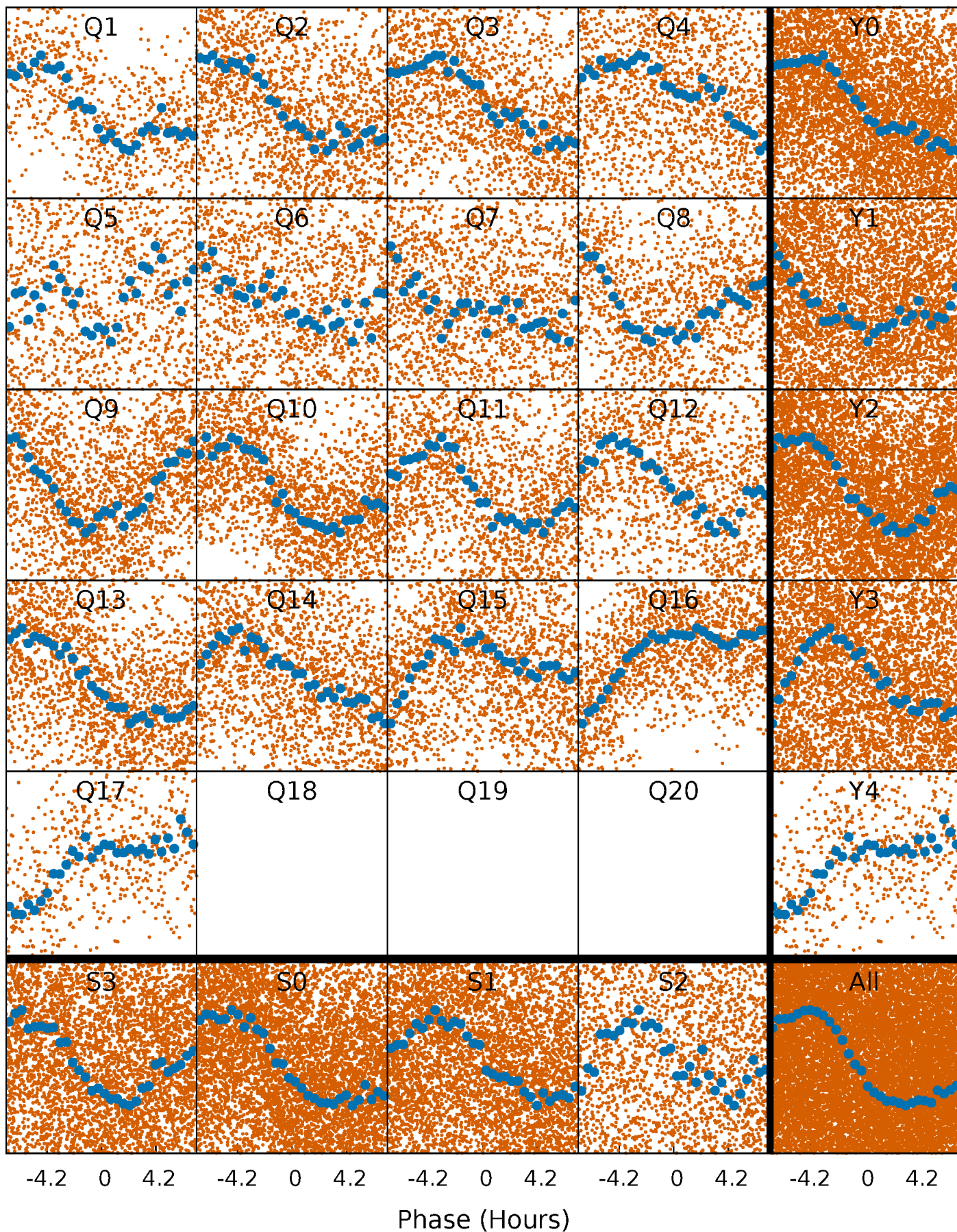


Non-Whitened Vs. Whitened Light Curve



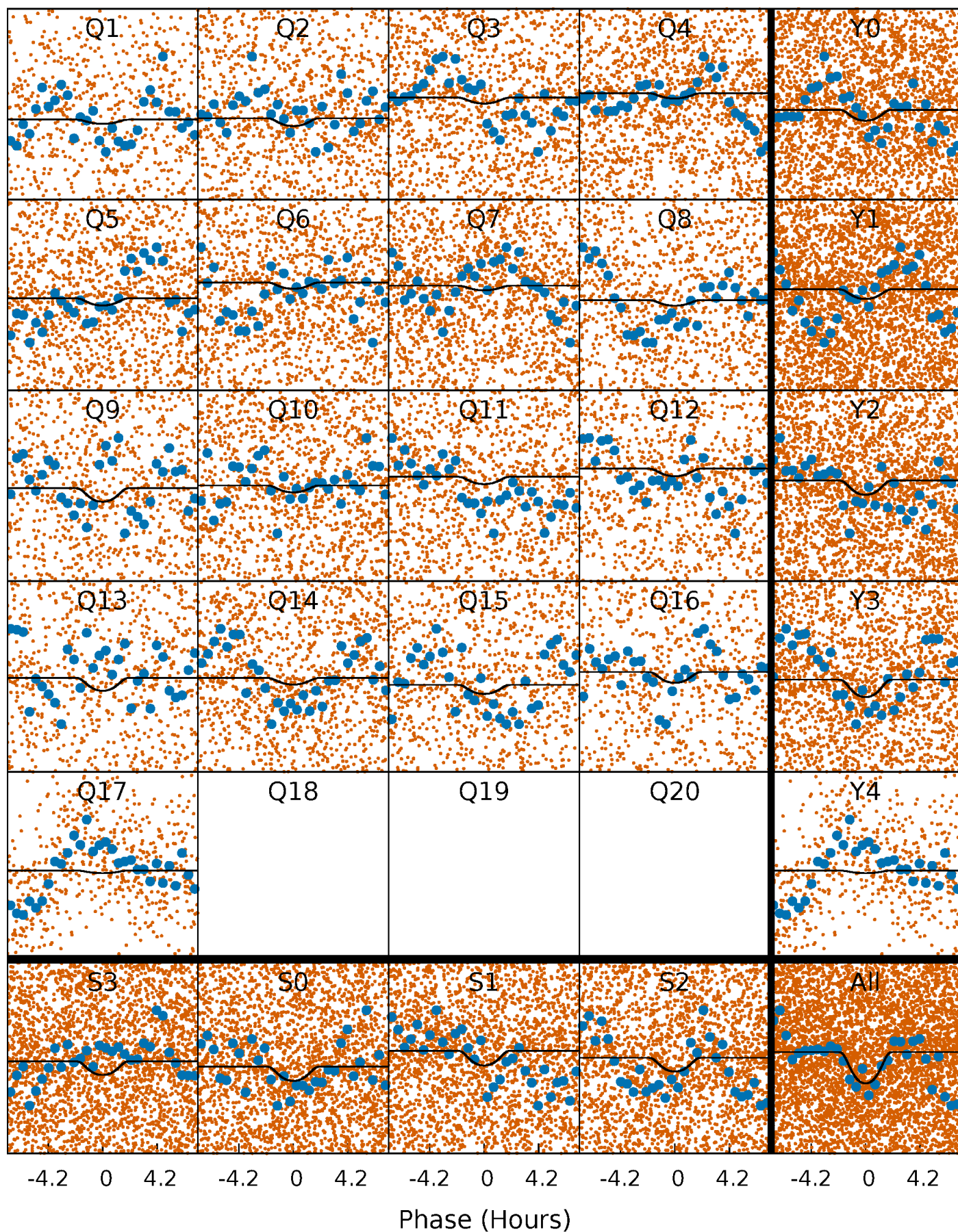
PDC Quarter-Phased Transit Curves

TCE 003750207-01 P= 1.284400 Days $T_0=132.628767$ (BKJD)



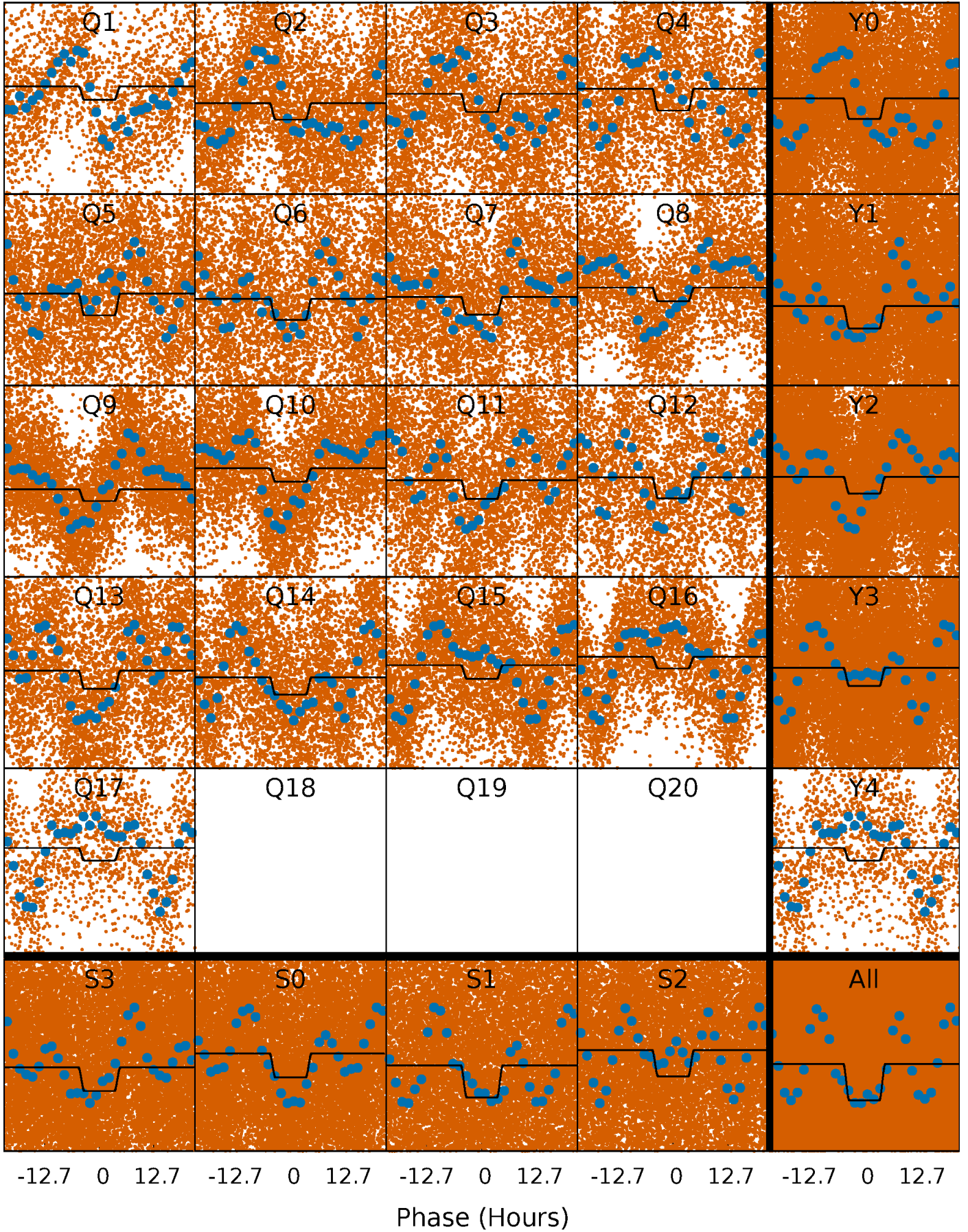
DV Quarter-Phased Transit Curves

TCE 003750207-01 P= 1.284400 Days $T_0=132.628767$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

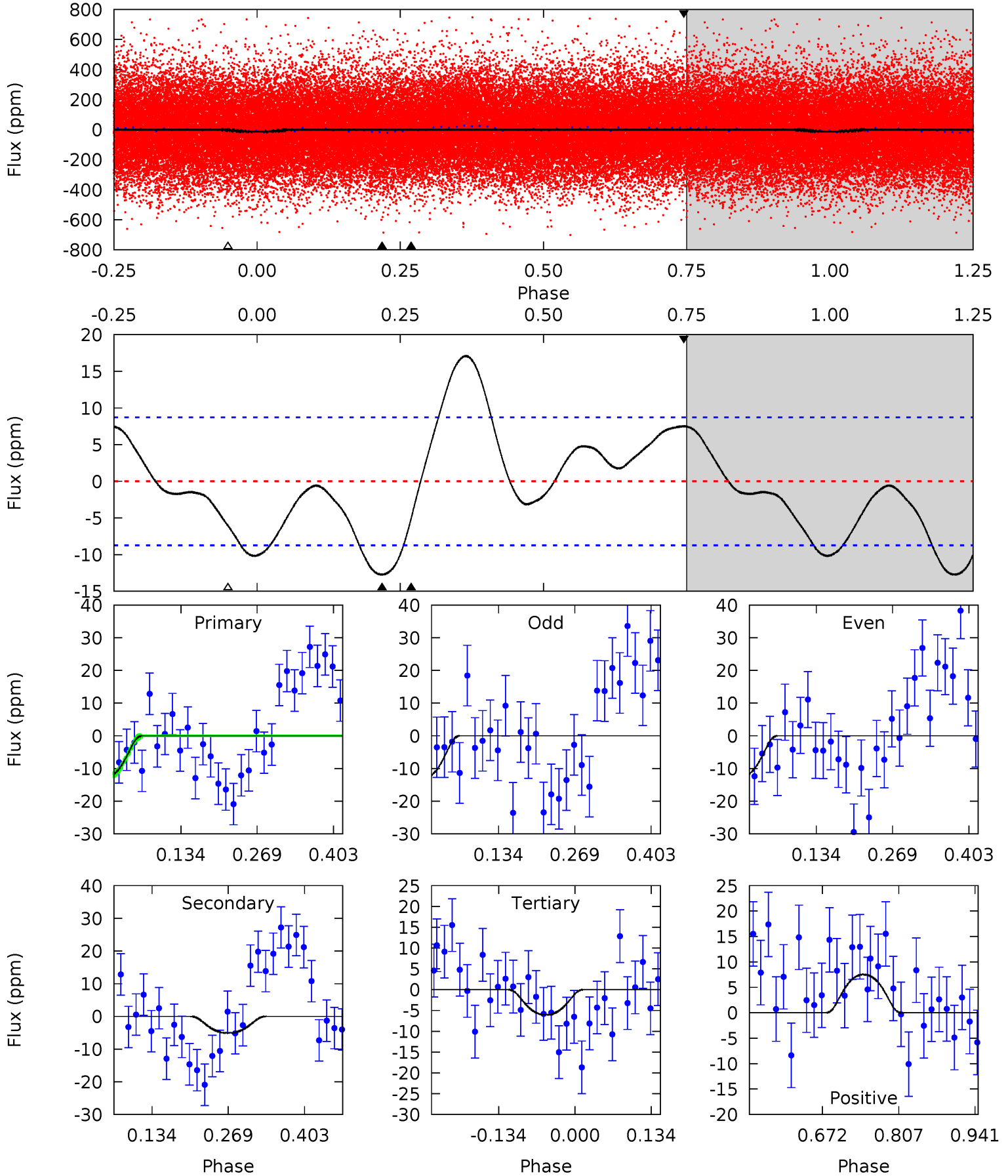
TCE 003750207-01 P= 1.284763 Days $T_0=132.625301$ (BKJD)



DV Model-Shift Uniqueness Test

003750207-01, P = 1.284400 Days, E = 131.344367 Days

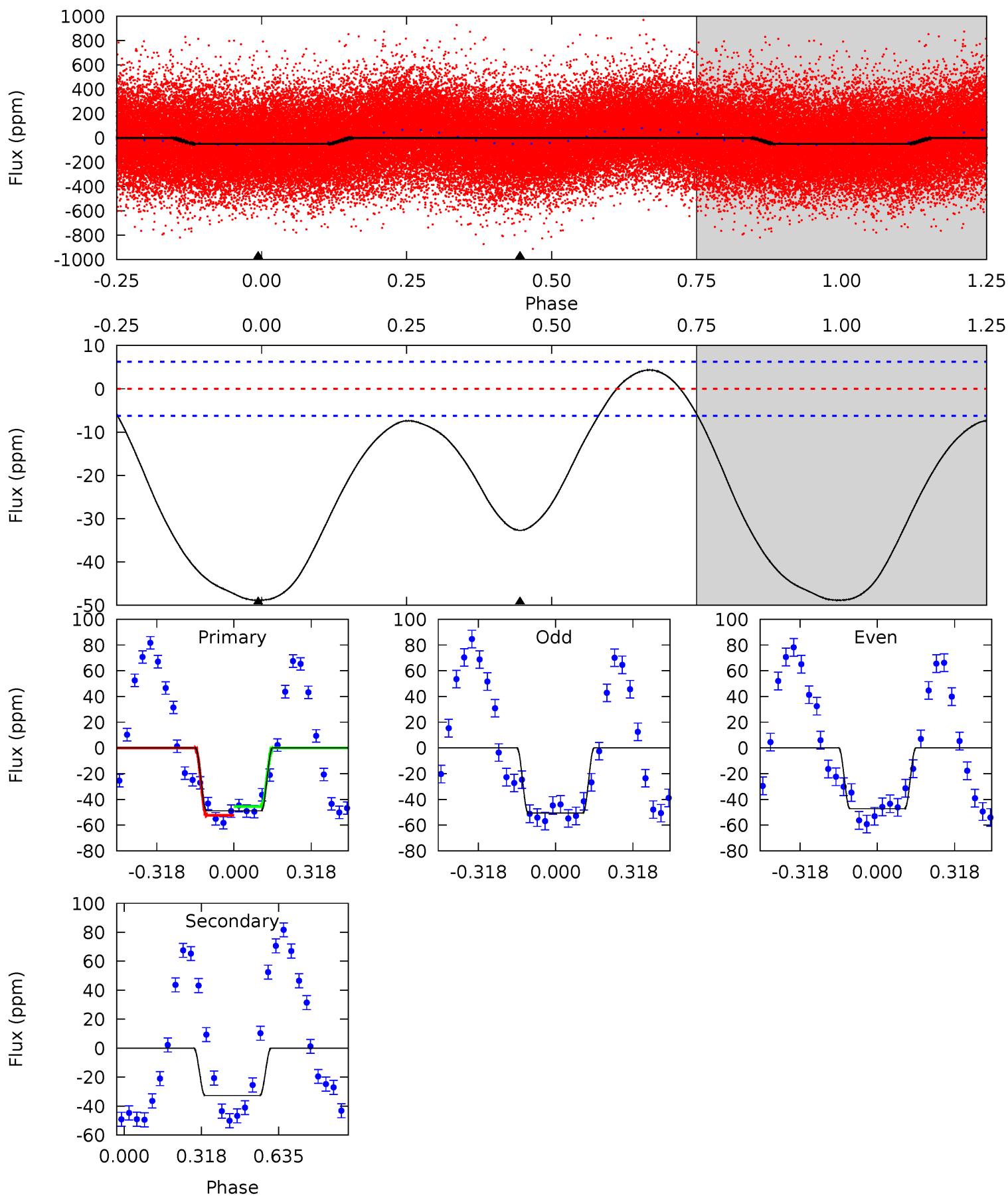
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.57	2.63	3.12	3.87	4.50	1.50	2.58	3.44	2.69	-0.50	-1.25	0.11	1.83	0.57	0.07



Alt Model-Shift Uniqueness Test

003750207-01, P = 1.284763 Days, E = 131.340538 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.8	22.6	0	0	4.32	1.00	3.34	33.8	33.8	22.6	22.6	1.14	1.05	0.08	2.28



Stellar Parameters For KIC 003750207

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6621^{+161}_{-221}	$4.356^{+0.067}_{-0.202}$	$-0.080^{+0.250}_{-0.300}$	$1.219^{+0.419}_{-0.140}$	$1.237^{+0.187}_{-0.187}$	$0.961^{+0.279}_{-0.514}$
	+2%/-3%	+2%/-5%	+312%/-375%	+34%/-11%	+15%/-15%	+29%/-54%
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 003750207-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 2	$0.91^{+0.88}_{-0.62}$	2897^{+205}_{-139}	3991^{+2637}_{-1166}	$1.948^{+17.058}_{-1.477}$
Alt.	-33 ± 1	$1.22^{+0.86}_{-0.72}$	2905^{+203}_{-143}	5282^{+3425}_{-1035}	$7.340^{+36.026}_{-4.819}$

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

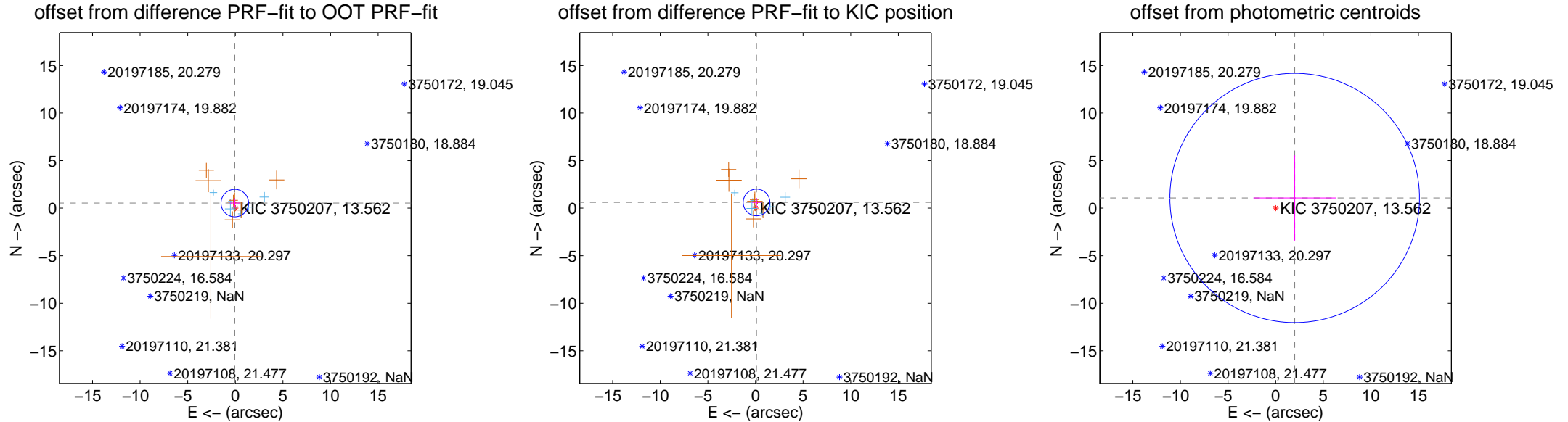
DV Centroid Data

Supplemental centroid analysis for 003750207-01. Kepler magnitude: 13.56. Transit SNR 2.56

There are 7 quarters with good PRF difference image offsets

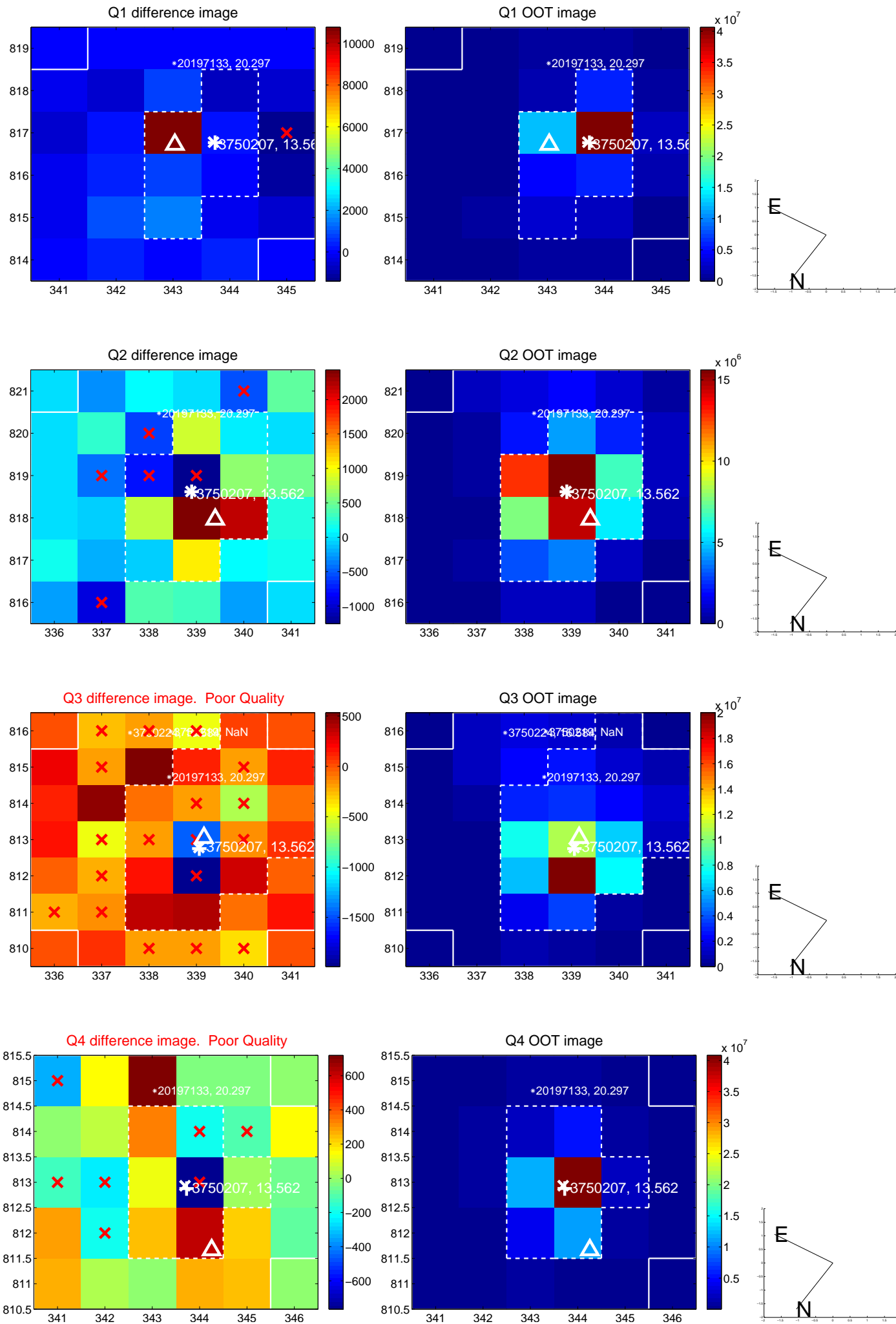
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.538 ± 0.482	1.12	0.056 ± 0.516	0.535 ± 0.489
PRF-fit source offset from KIC position	0.613 ± 0.467	1.31	-0.112 ± 0.505	0.603 ± 0.464
photometric centroid source offset	2.27 ± 4.37	0.52	-2.00 ± 4.33	1.07 ± 4.49

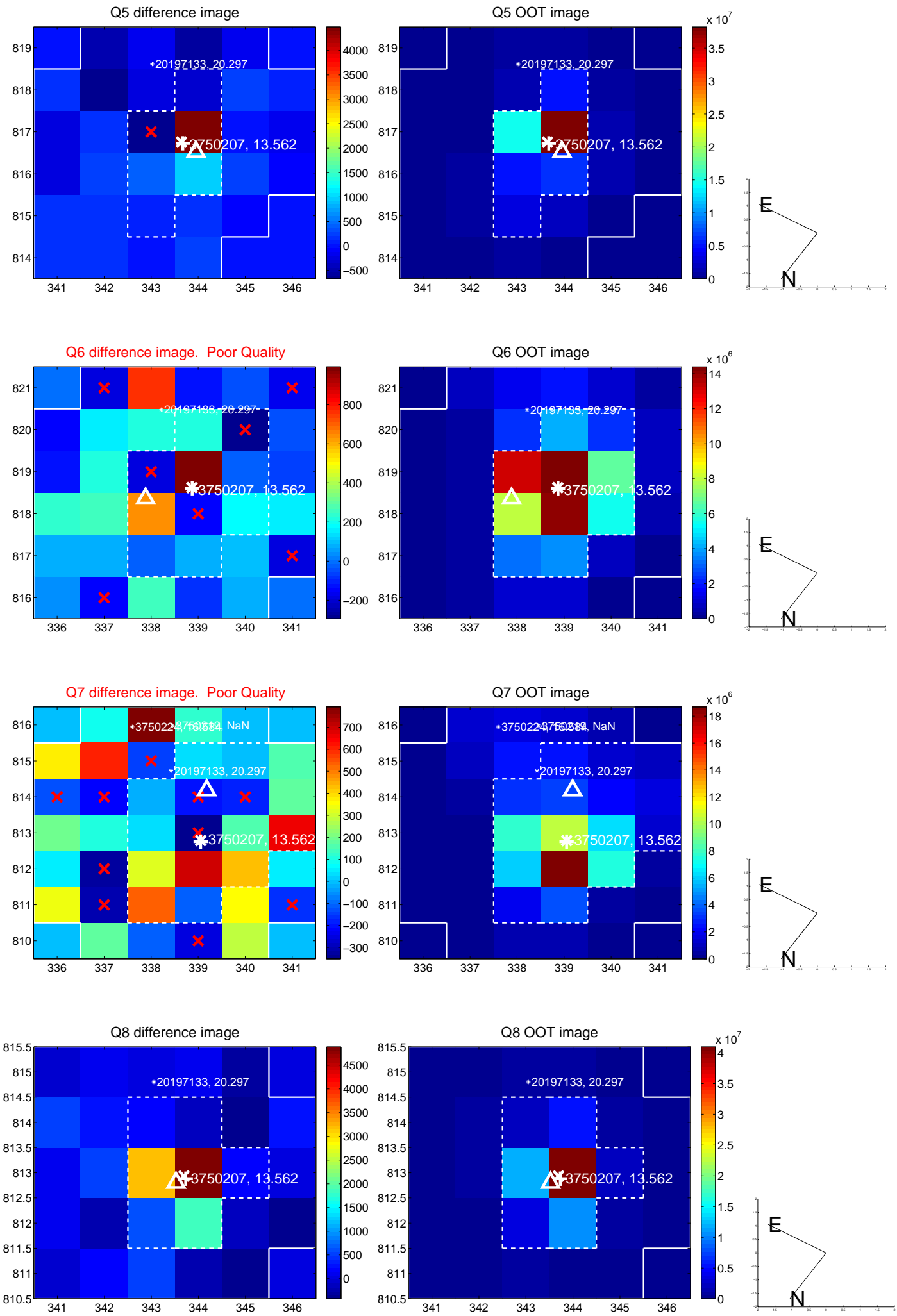


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

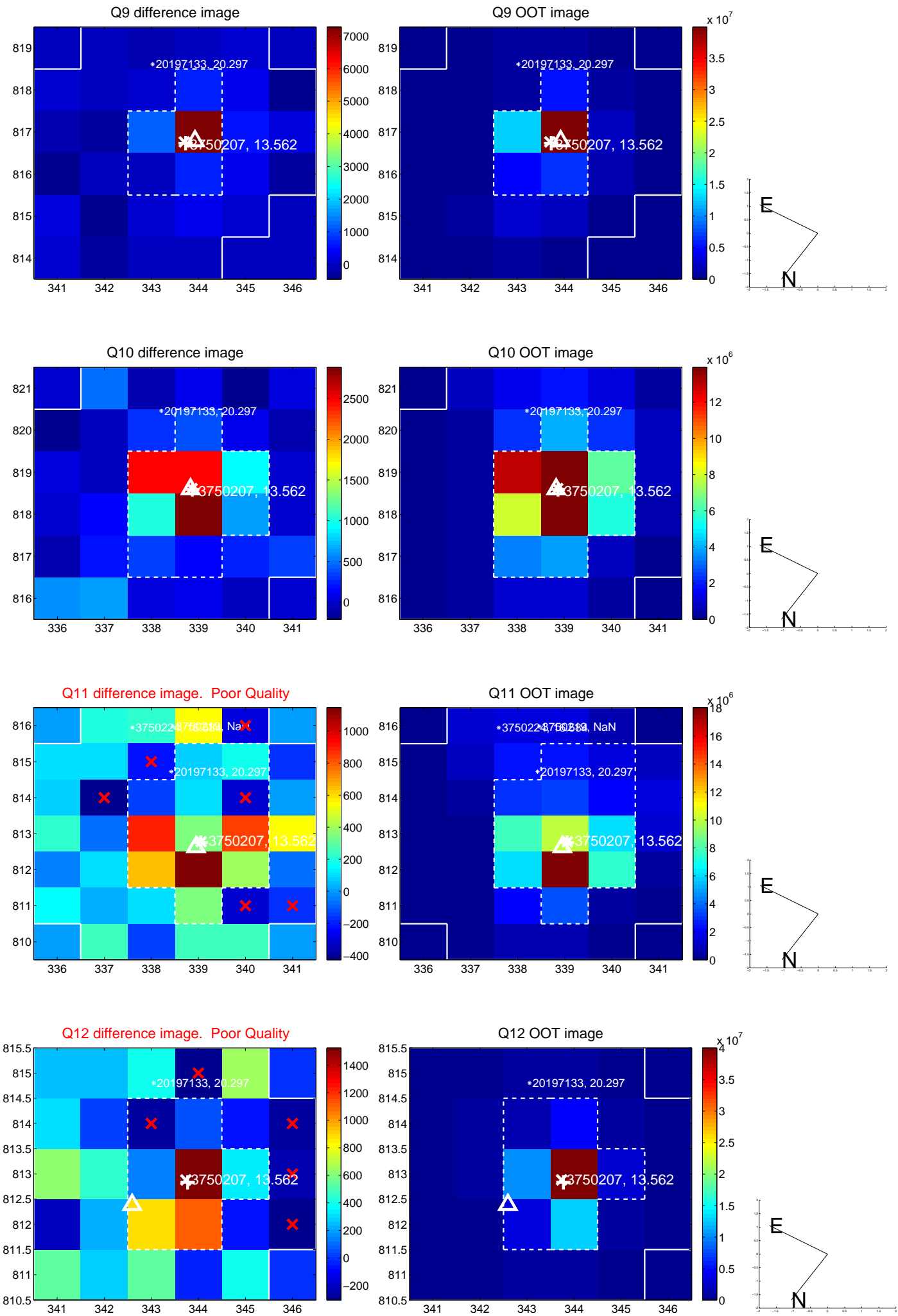
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



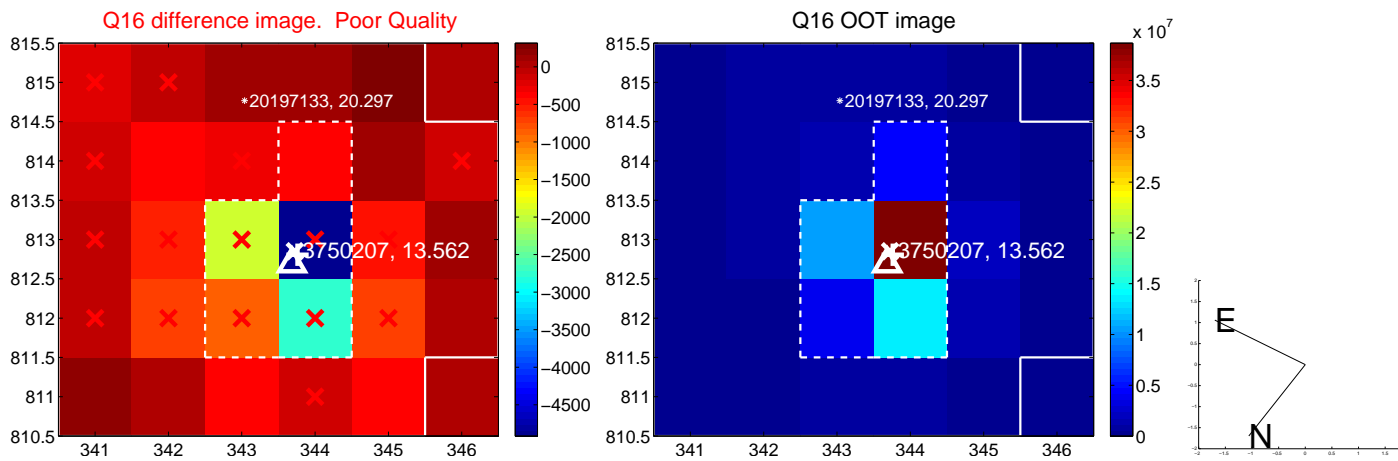
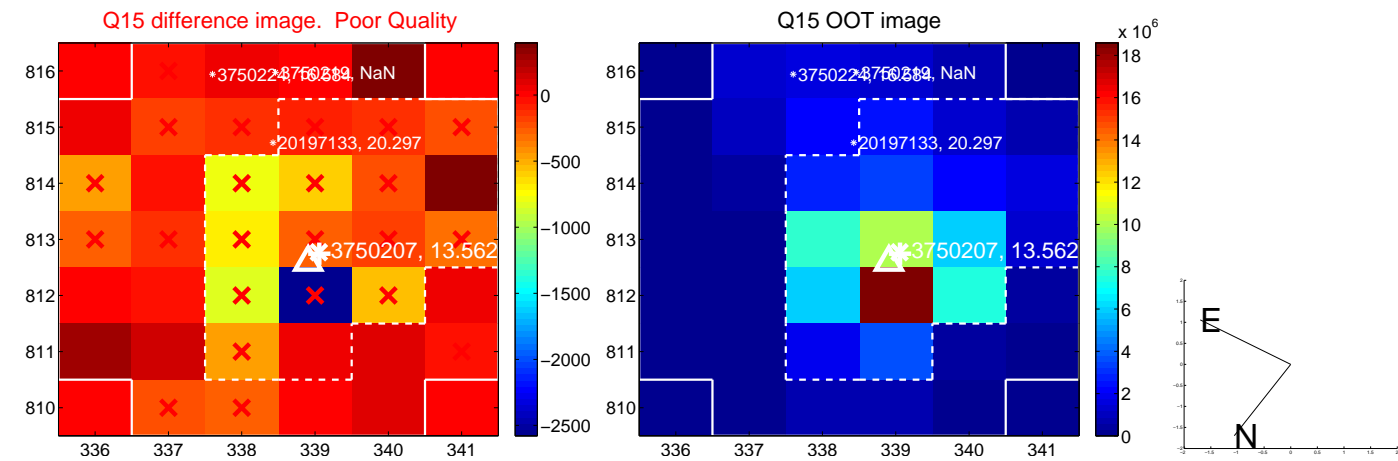
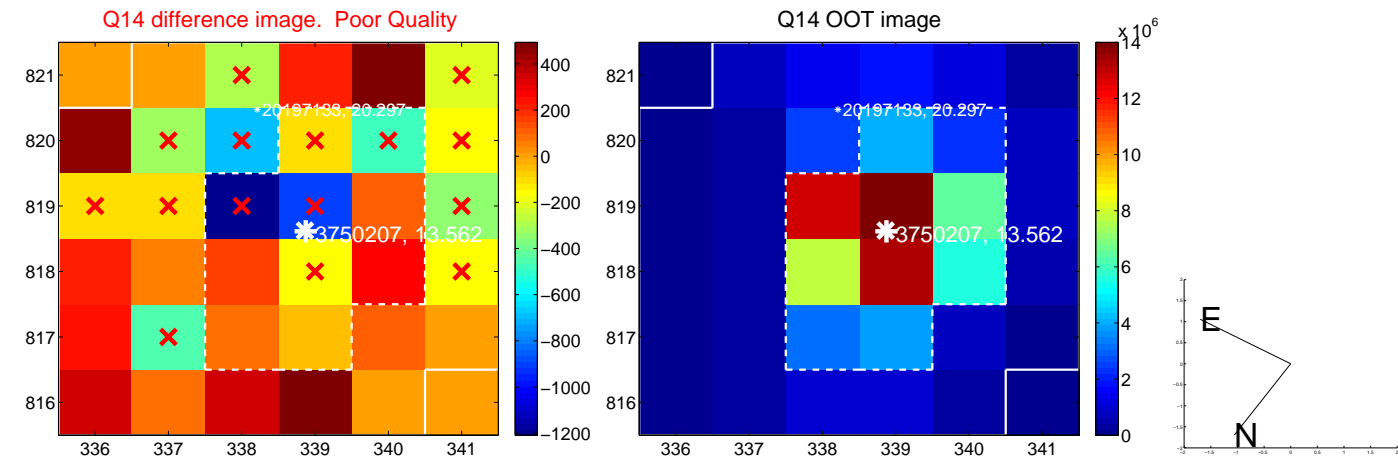
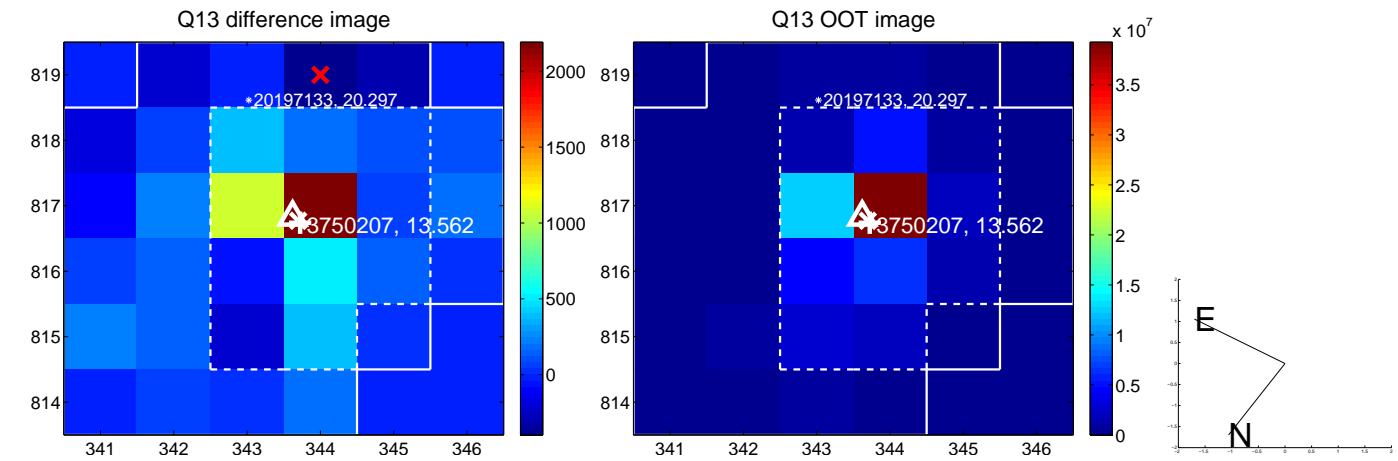
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



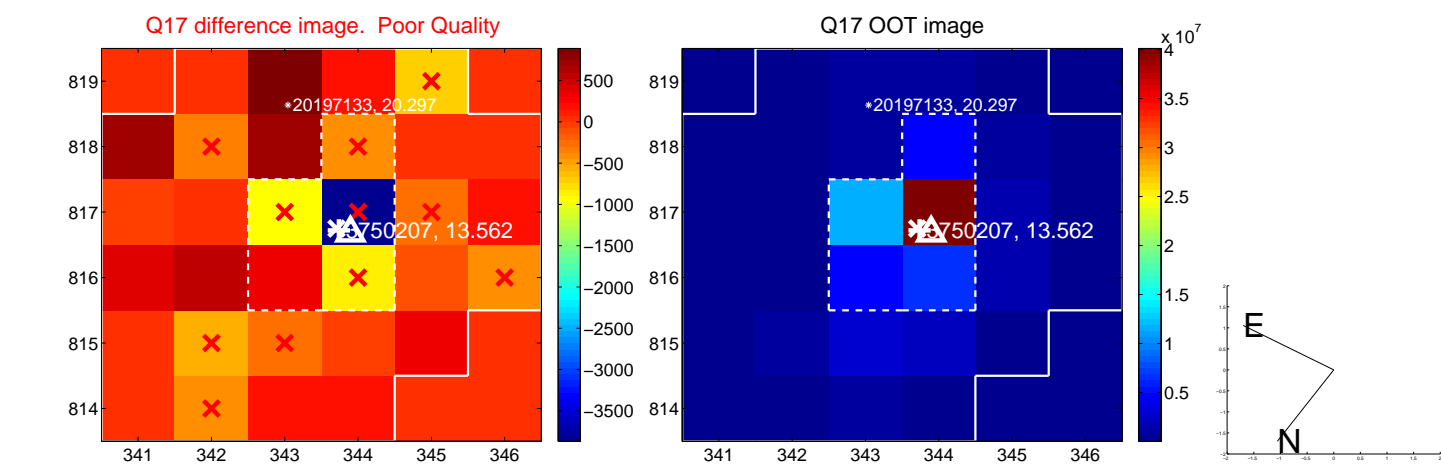
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



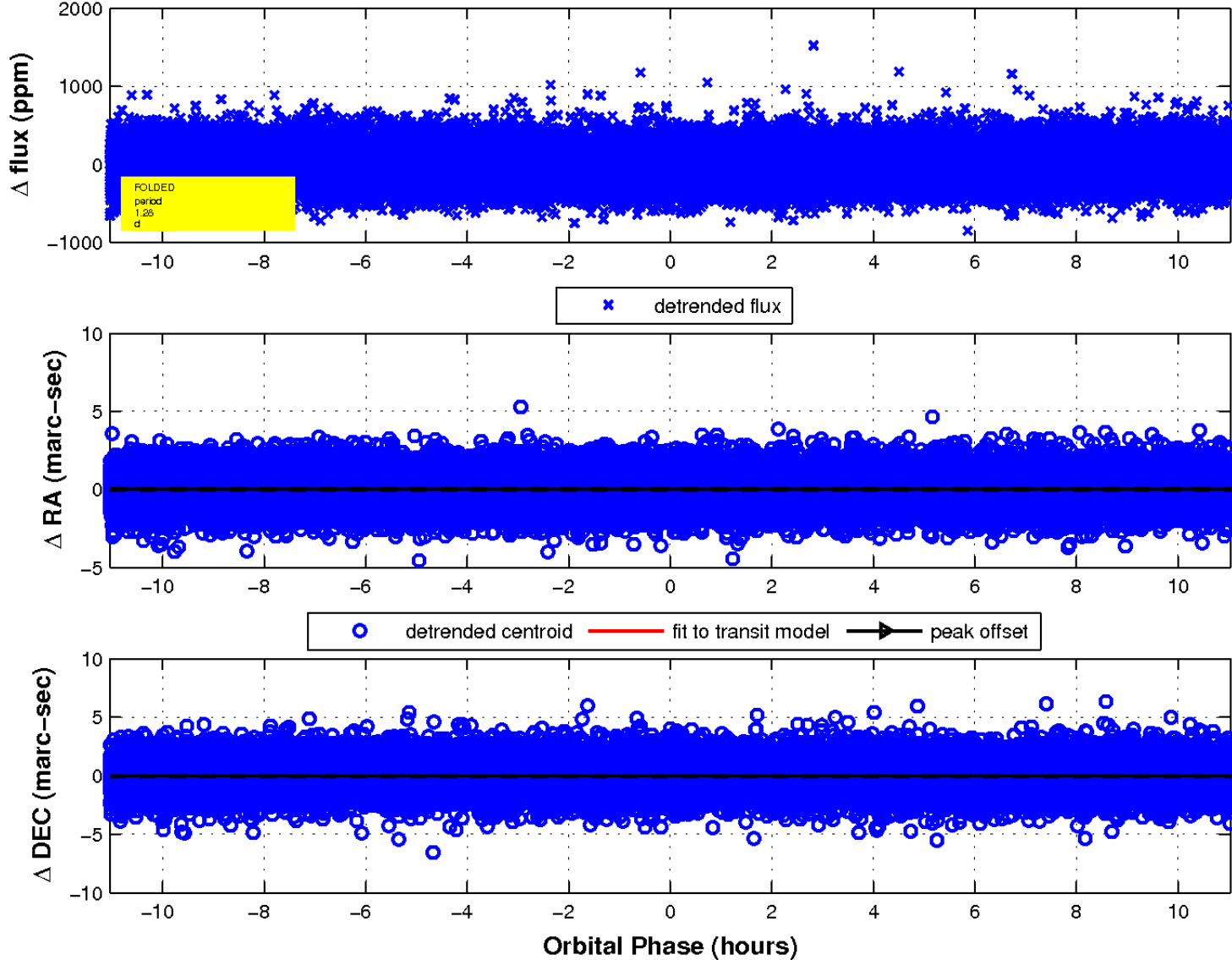
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

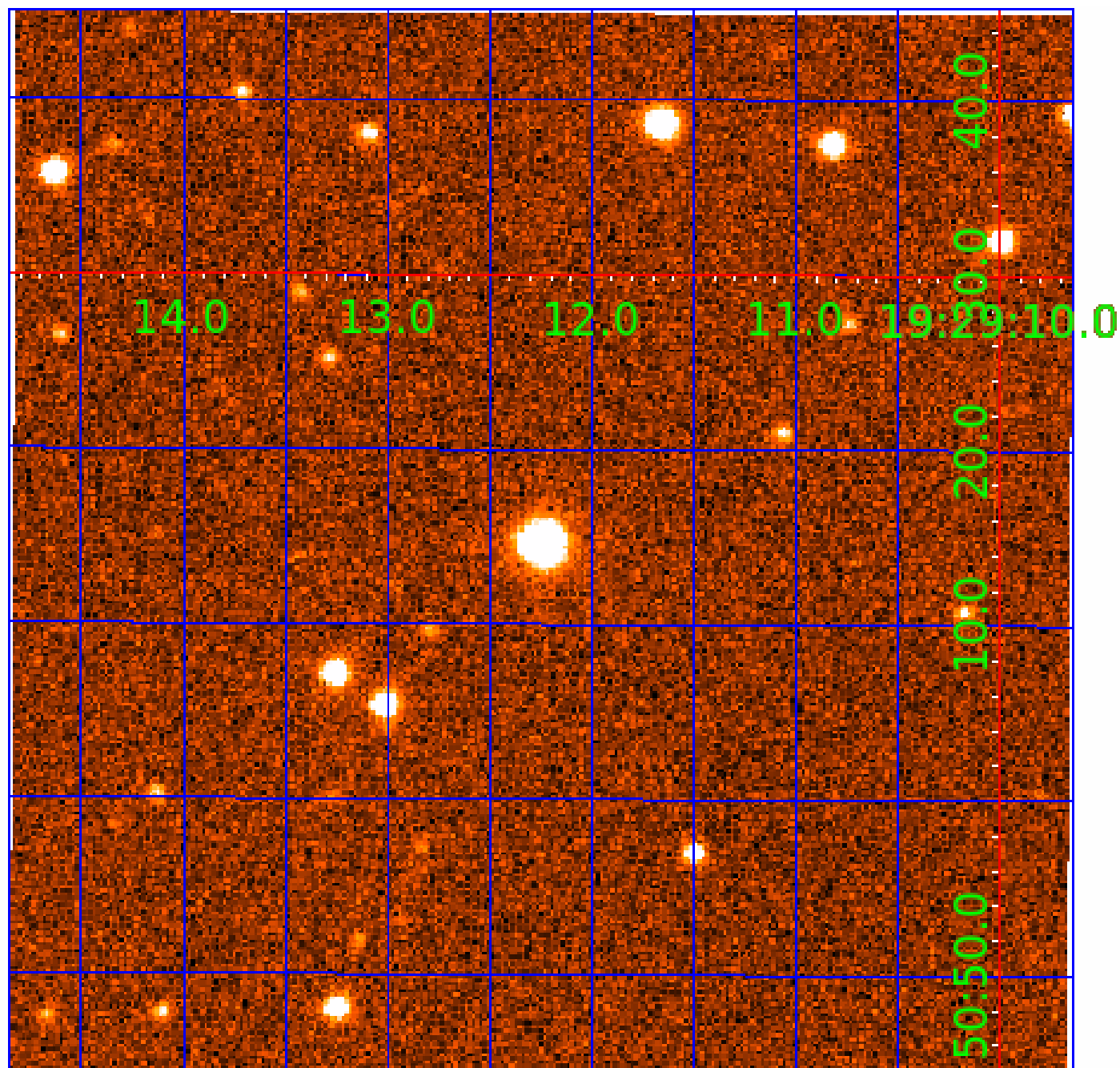


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 003750207

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})
003750207-01	OBS	No	1.284400	132.628767	9.7	3.680	7.3	2.6	1.22	6621	0.58	4165.41
003750207-02	OBS	No	2.569565	134.017792	39.9	6.526	8.2	9.3	1.22	6621	0.90	1652.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003750207-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV
003750207-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

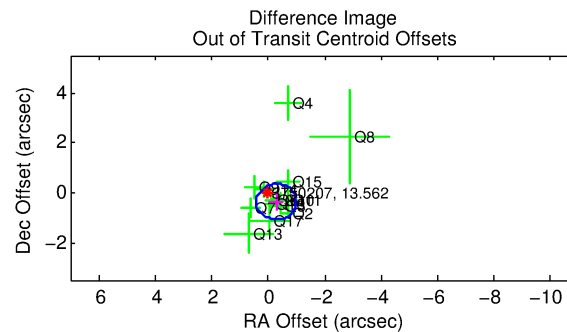
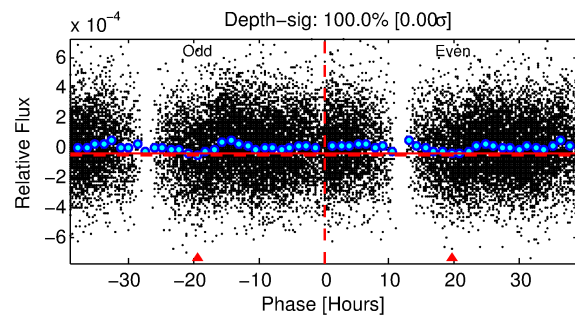
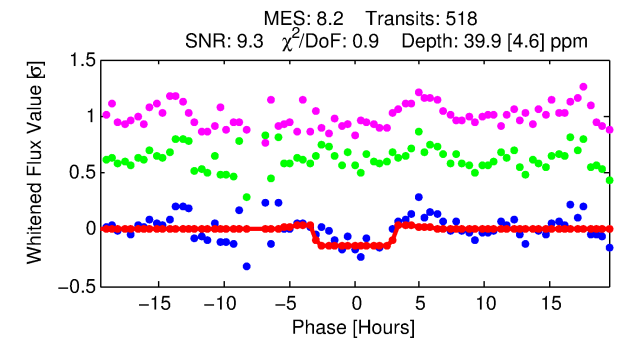
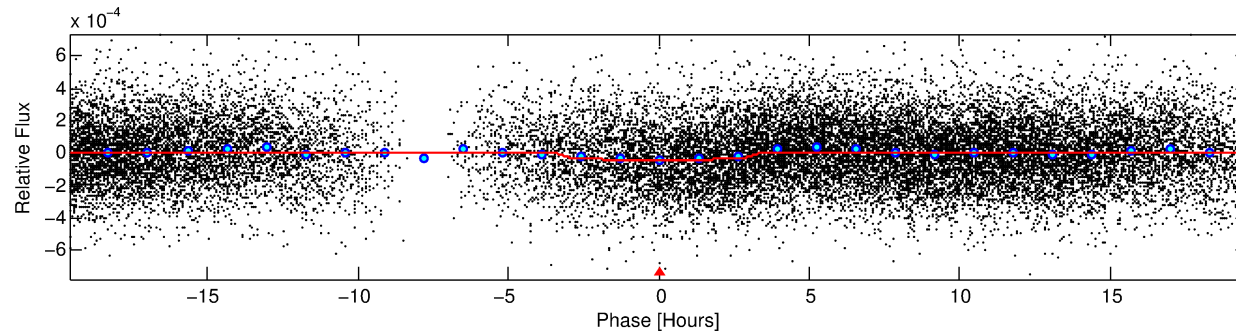
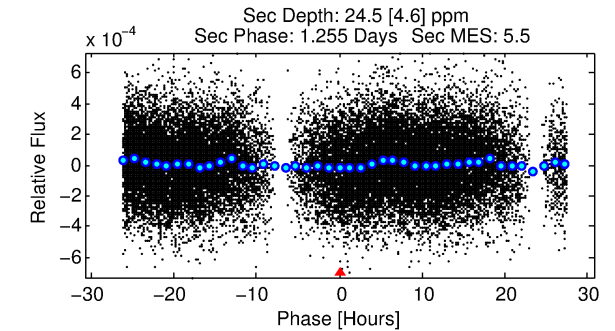
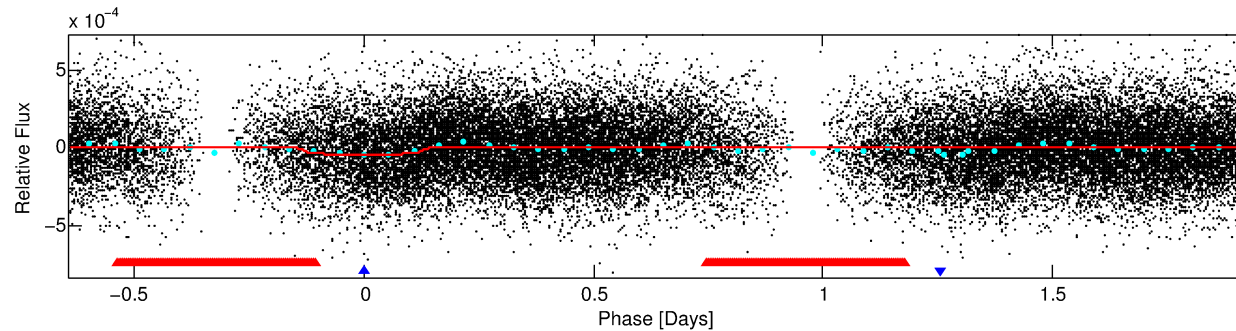
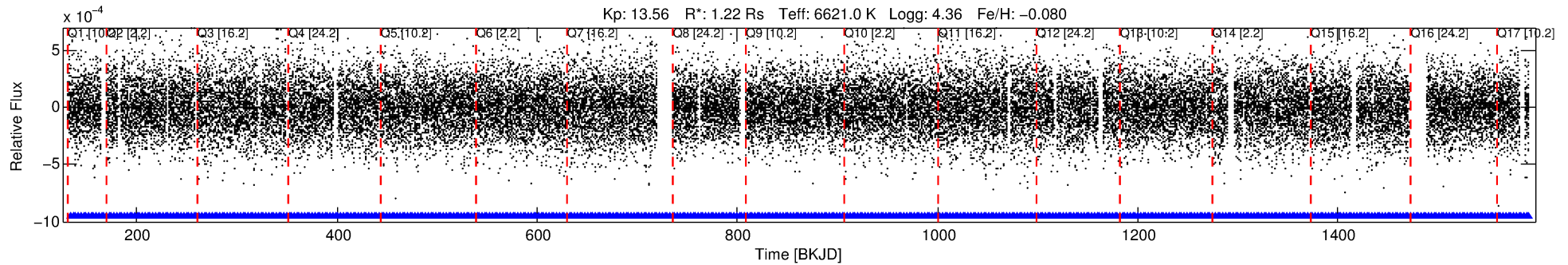
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003750207-02

No Significant Match Found

DV One-Page Summary

KIC: 3750207 Candidate: 2 of 2 Period: 2.570 d



DV Fit Results:

Period = 2.56957 [0.00002] d
Epoch = 134.0178 [0.0065] BKJD
Rp/R* = 0.0068 [0.0019]
a/R* = 1.65 [1.67]
b = 0.90 [0.34]
Seff = 1652.39 [674.22]
Teq = 1626 [166] K
Rp = 0.90 [0.40] Re
a = 0.0393 [0.0109] AU
Ag = 25.88 [18.19] [1.37σ]
Teffp = 5669 [854] K [4.65σ]

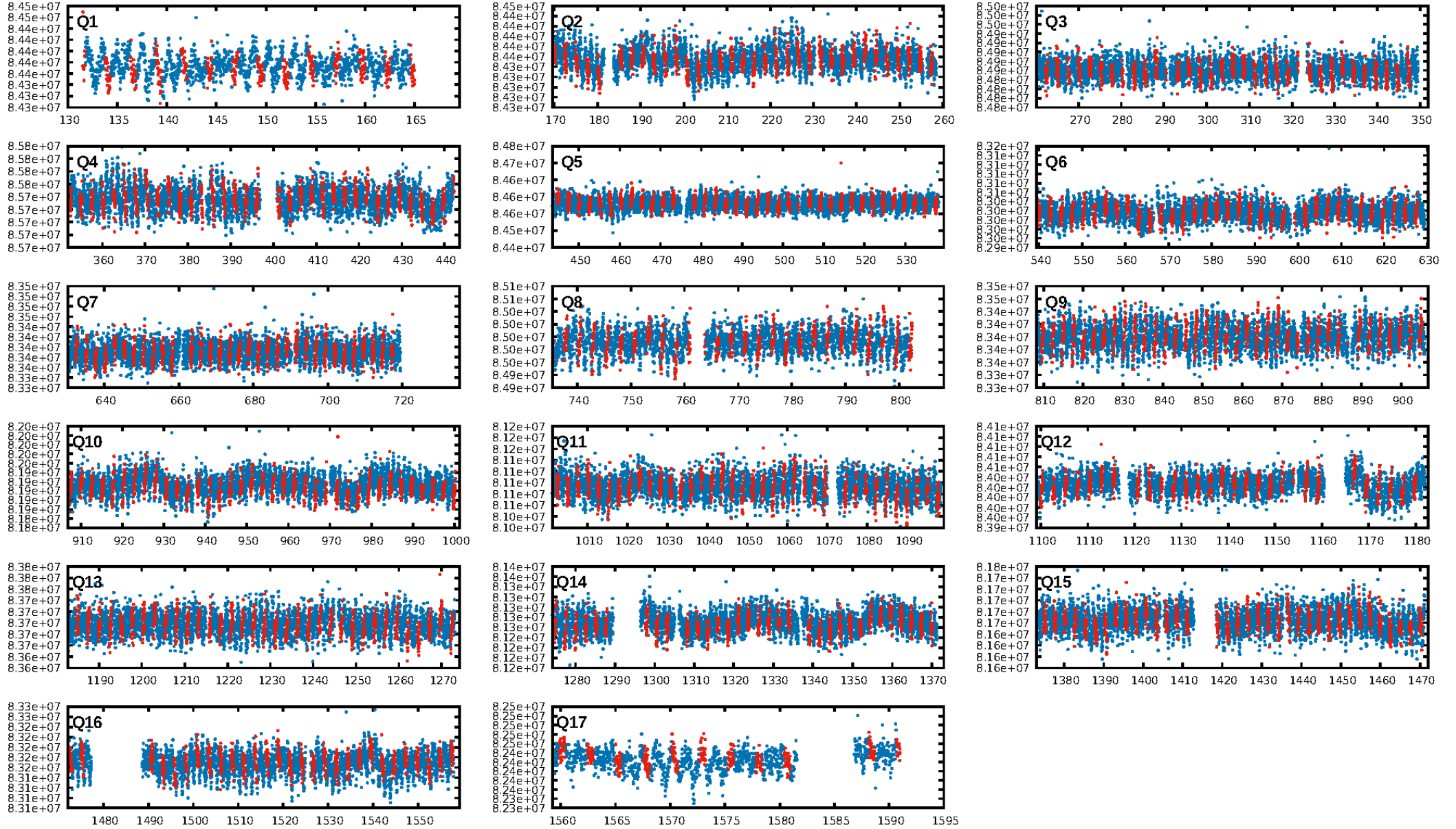
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.12σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.24e-13
RollingBand-fgt: 1.00 [498/498]
GhostDiagnostic-chr: 1.527
Centroid-sig: 61.9%
Centroid-so: 0.593 arcsec [0.64σ]
OotOffset-rm: 0.468 arcsec [1.97σ]
KicOffset-rm: 0.498 arcsec [2.84σ]
OotOffset-st: 4/4/3/3 [14]
KicOffset-st: 4/4/3/3 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 0.00 [0/17]

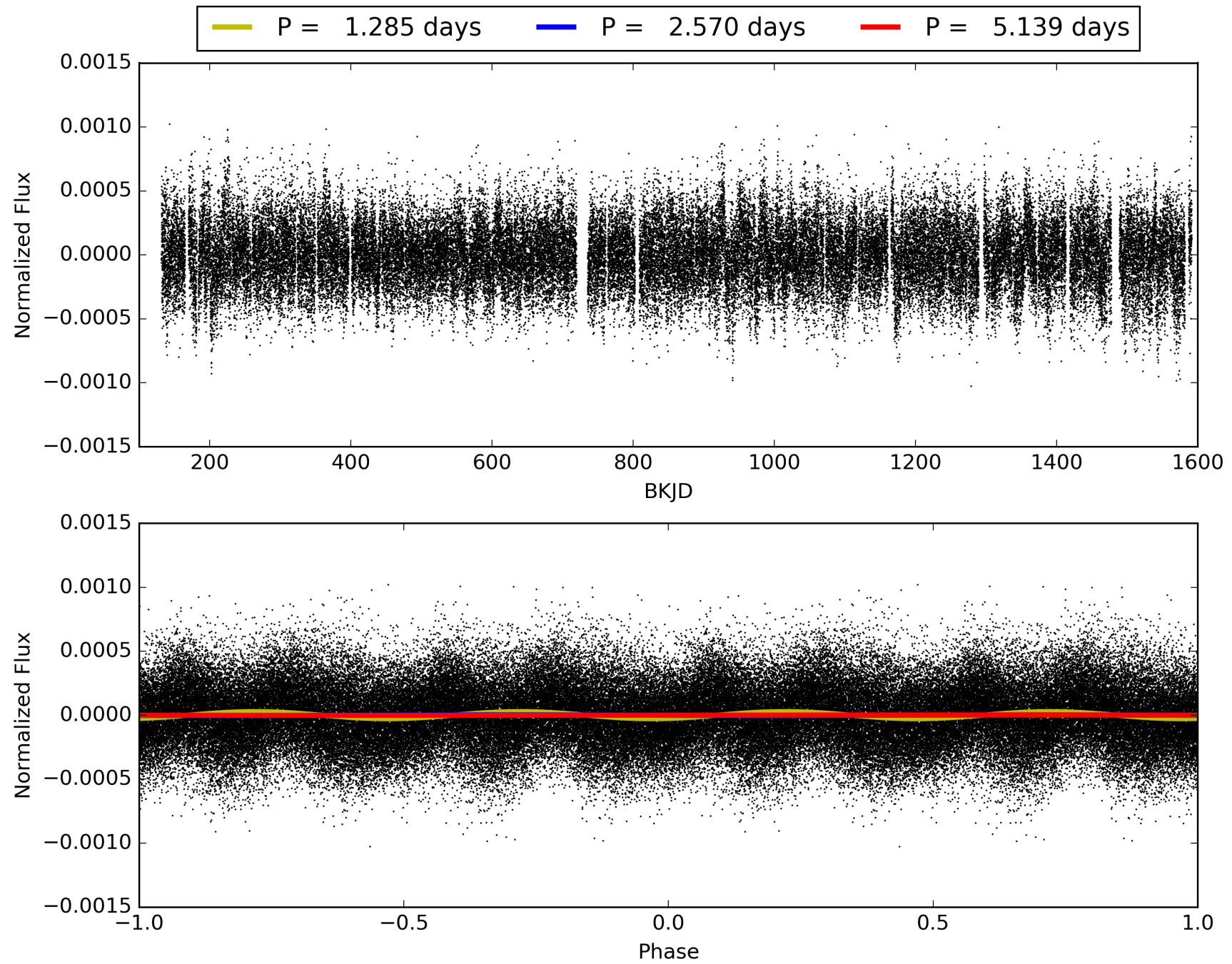
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:39:14 Z

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

TCE 003750207-02, PDC Light Curves

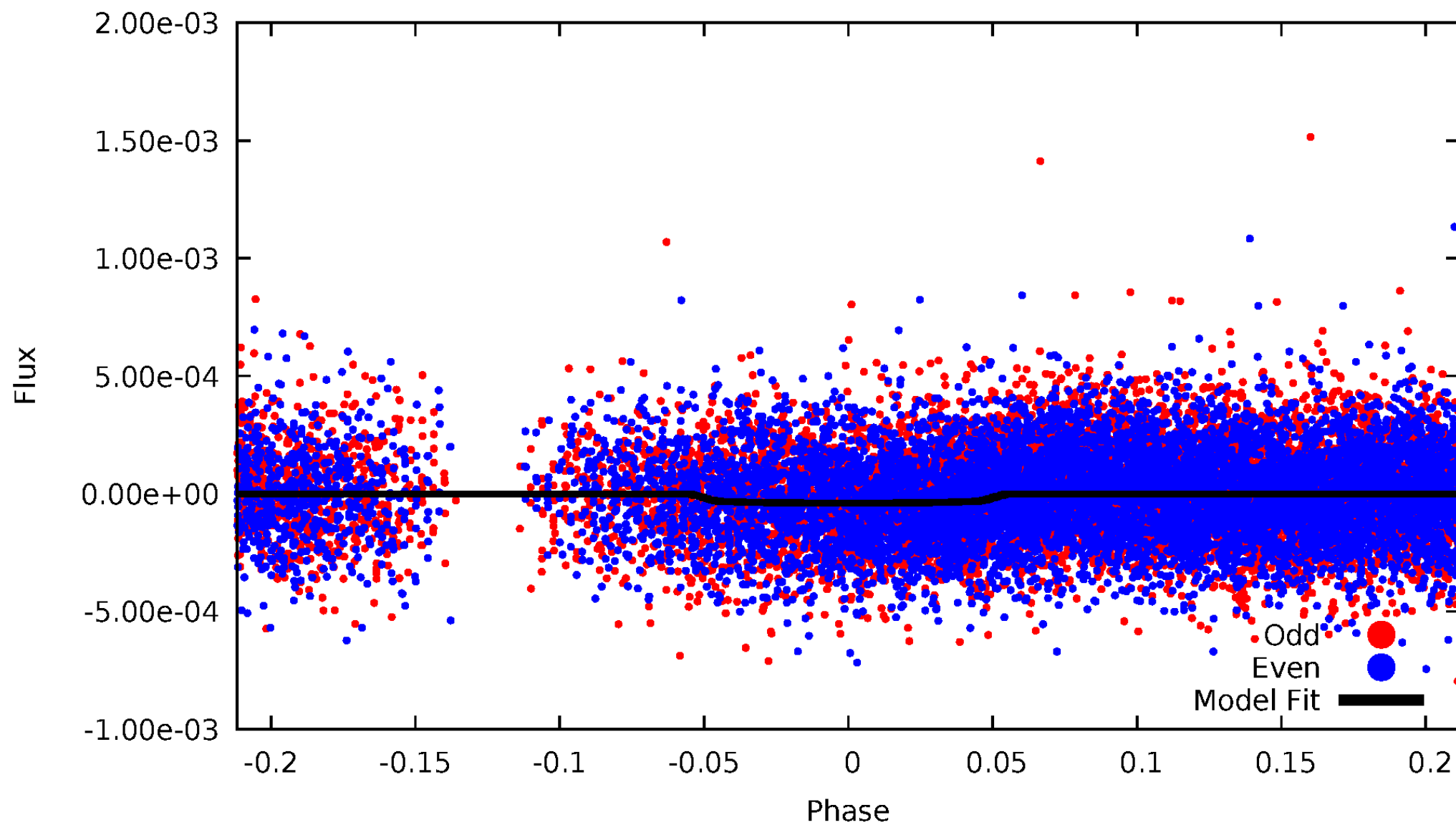


TCE 003750207-02



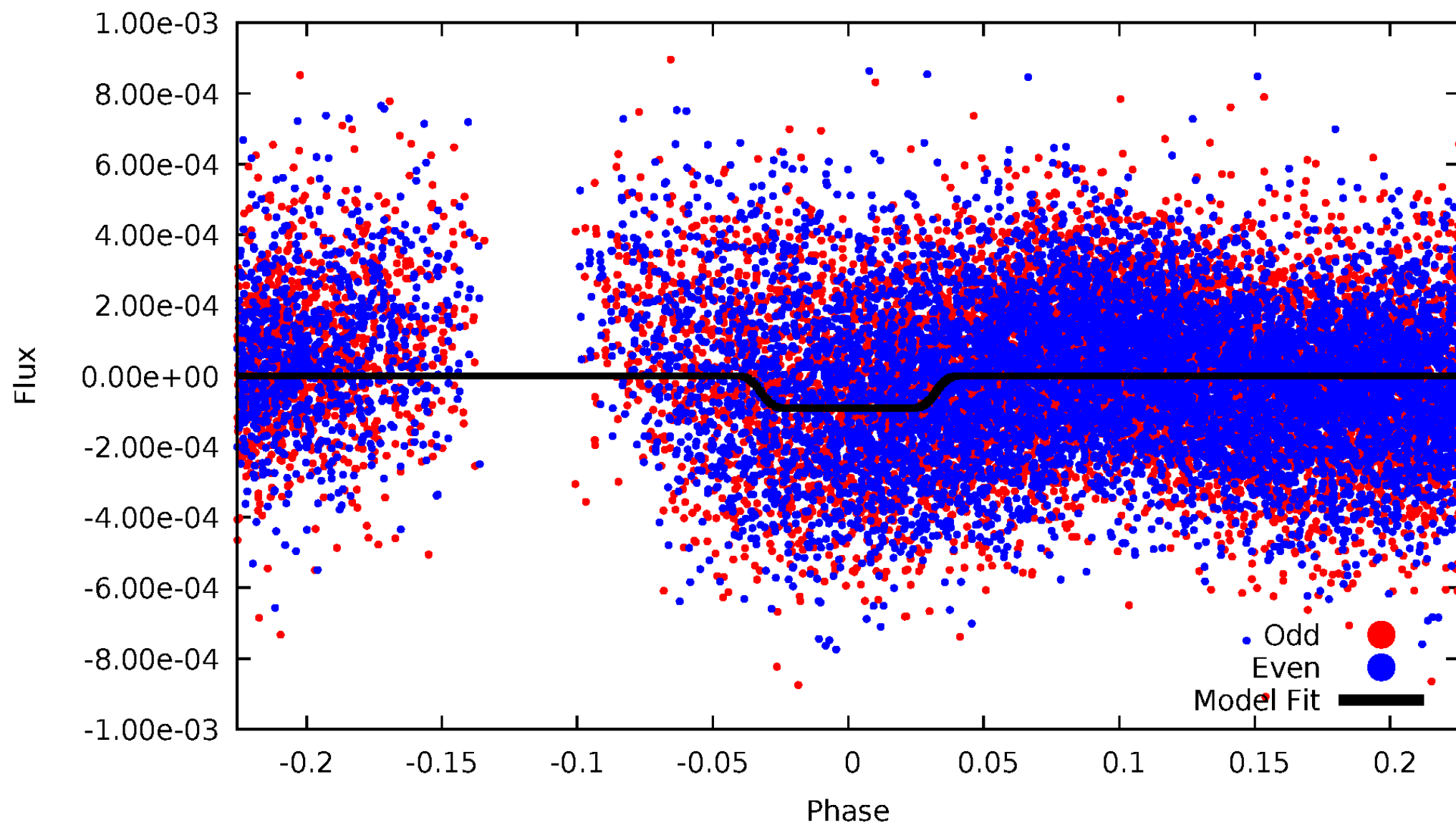
DV Odd/Even

TCE 003750207-02



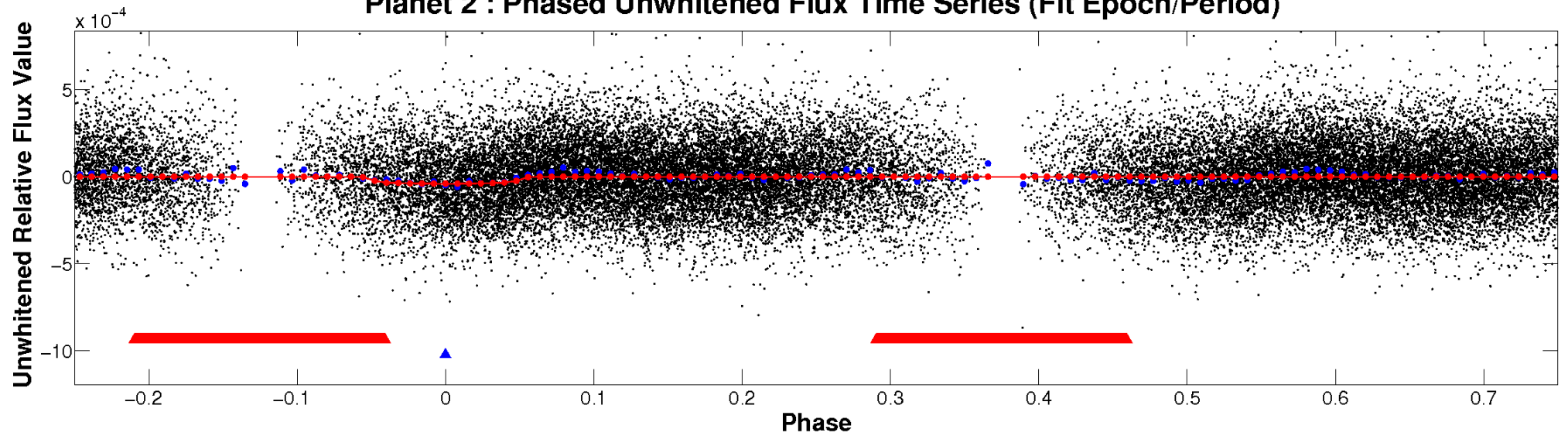
ALT Odd/Even

TCE 003750207-02

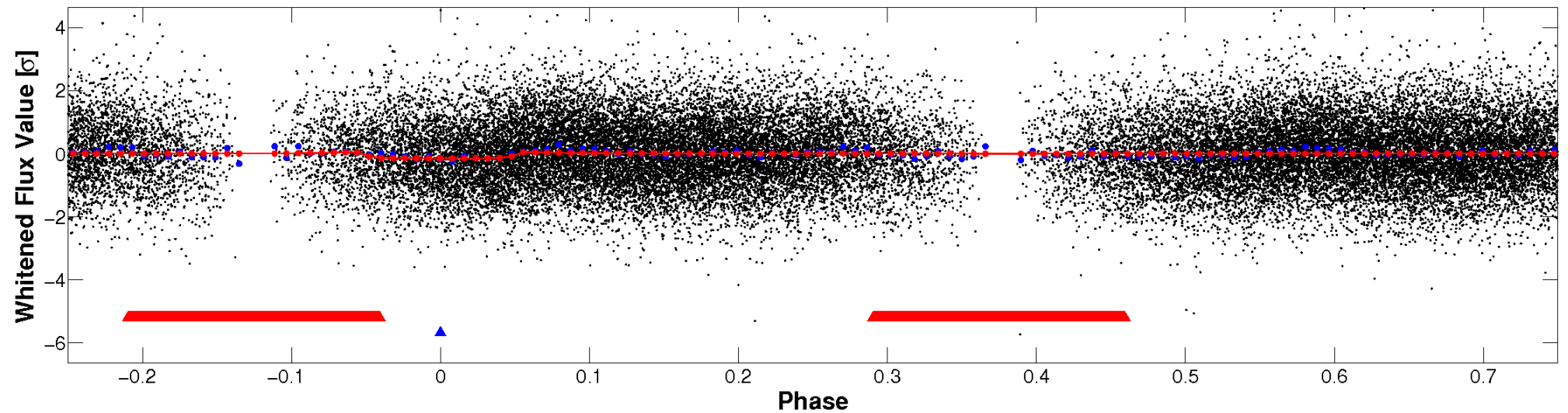


Non-Whitened Vs. Whitened Light Curve

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

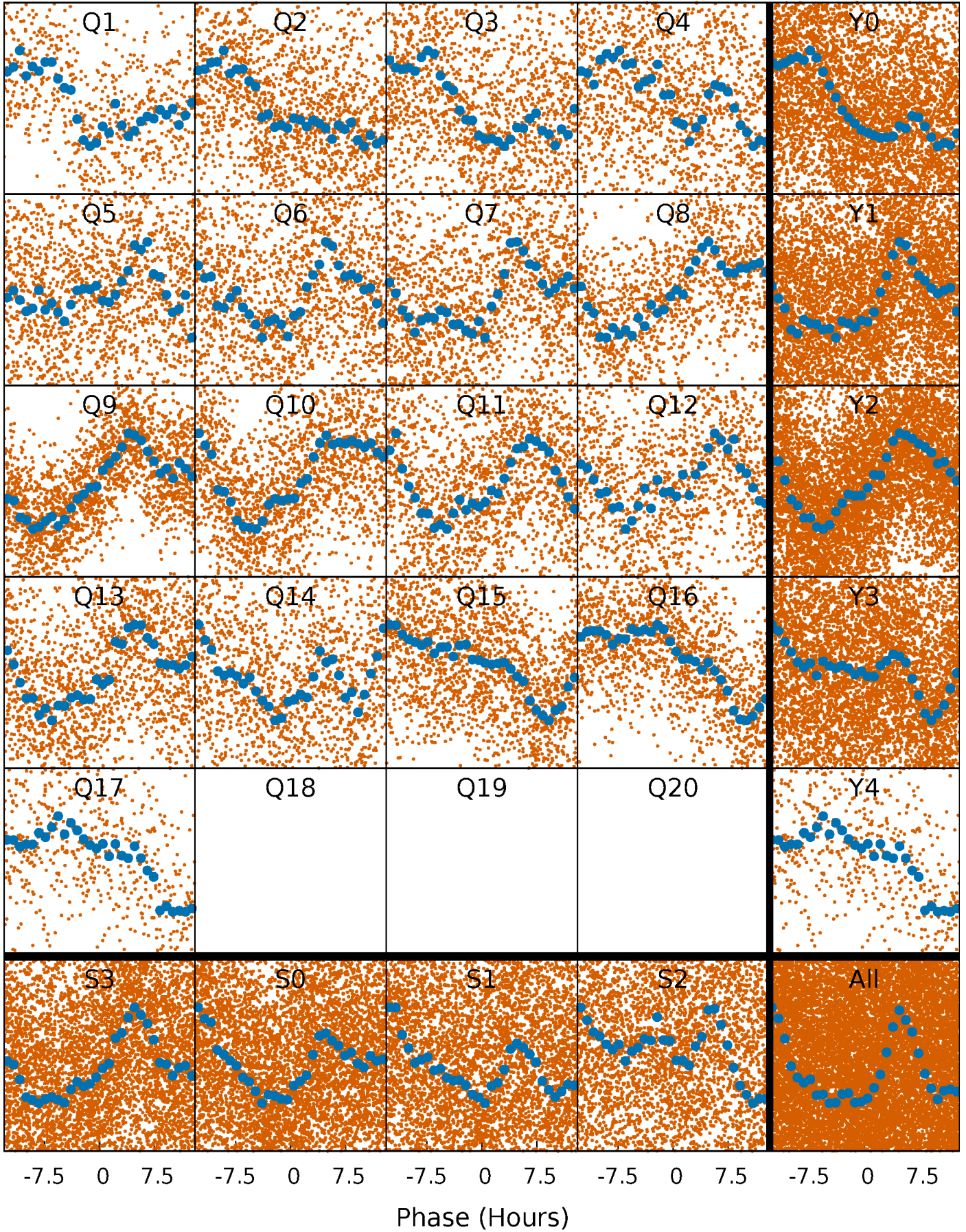


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



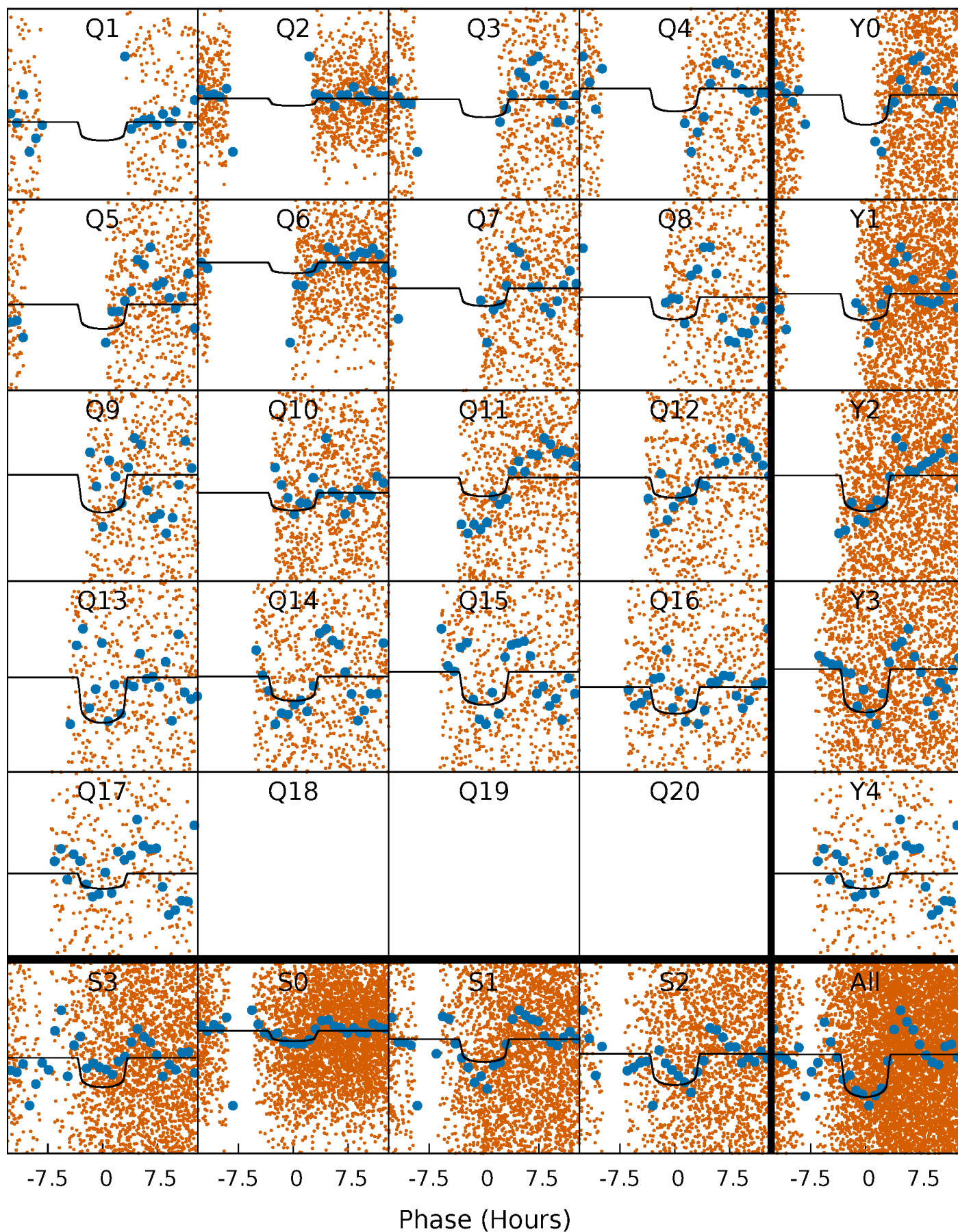
PDC Quarter-Phased Transit Curves

TCE 003750207-02 P= 2.569565 Days $T_0=134.017792$ (BKJD)



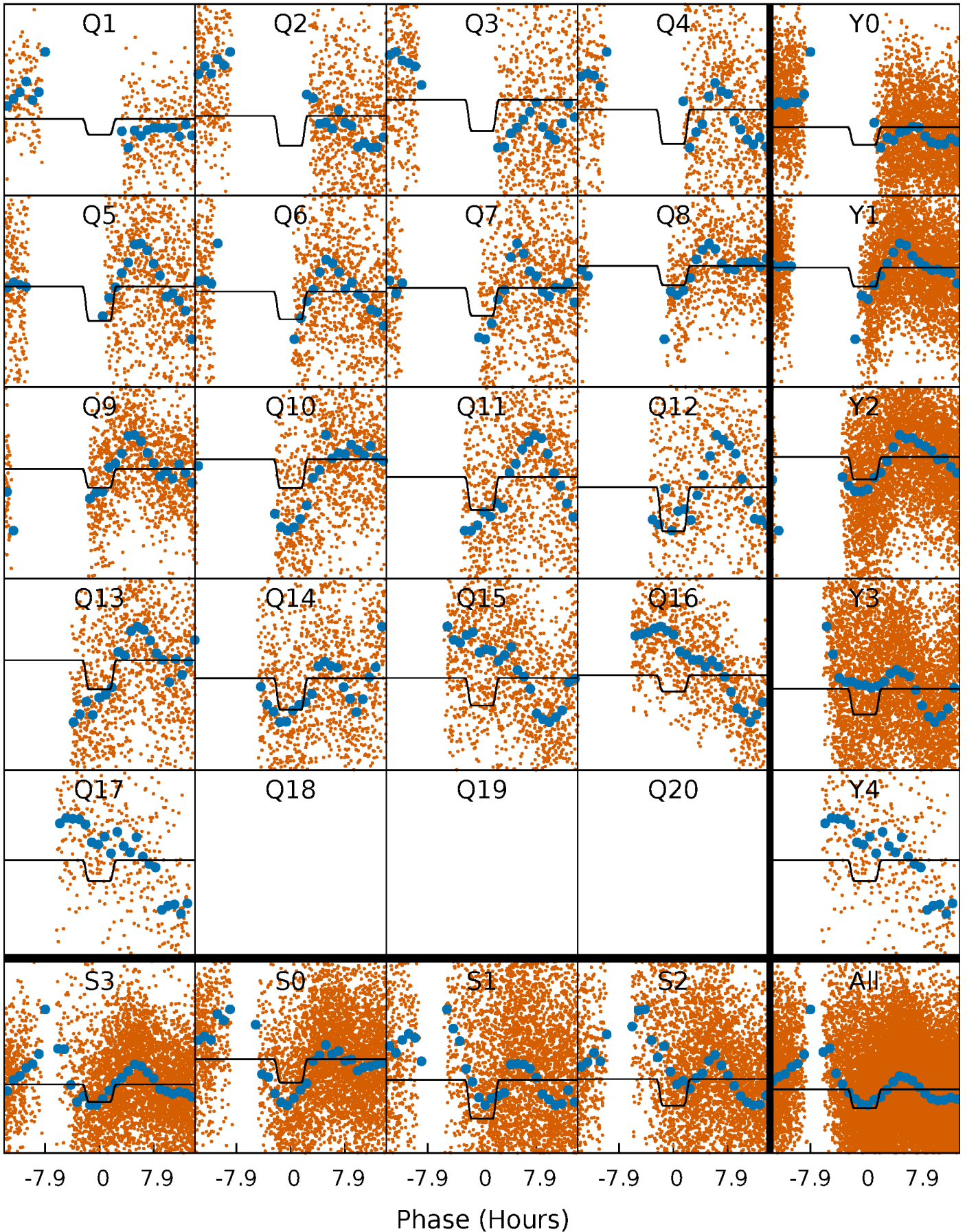
DV Quarter-Phased Transit Curves

TCE 003750207-02 P= 2.569565 Days $T_0=134.017792$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

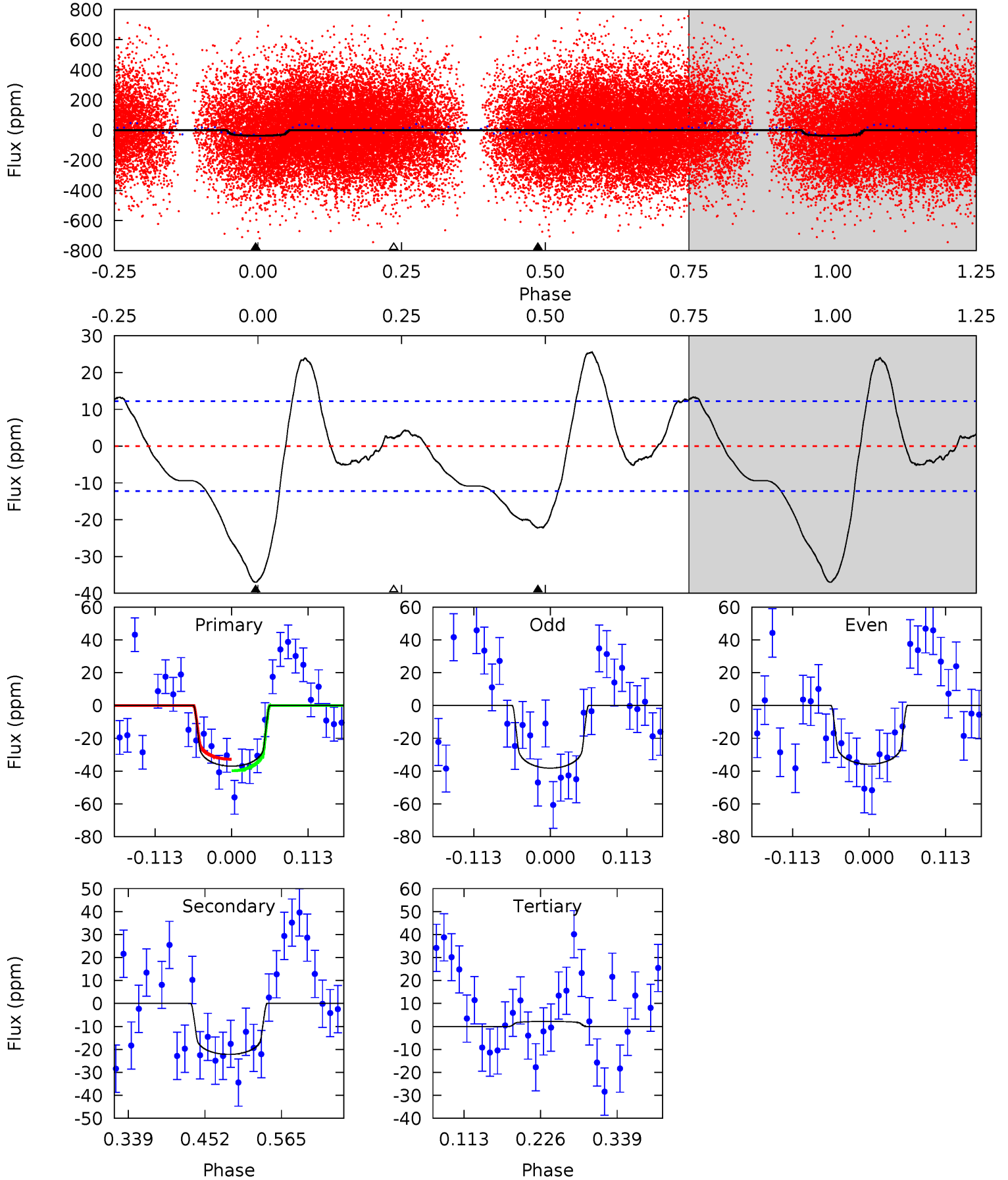
TCE 003750207-02 P= 2.569513 Days $T_0=134.013885$ (BKJD)



DV Model-Shift Uniqueness Test

003750207-02, P = 2.569565 Days, E = 131.448227 Days

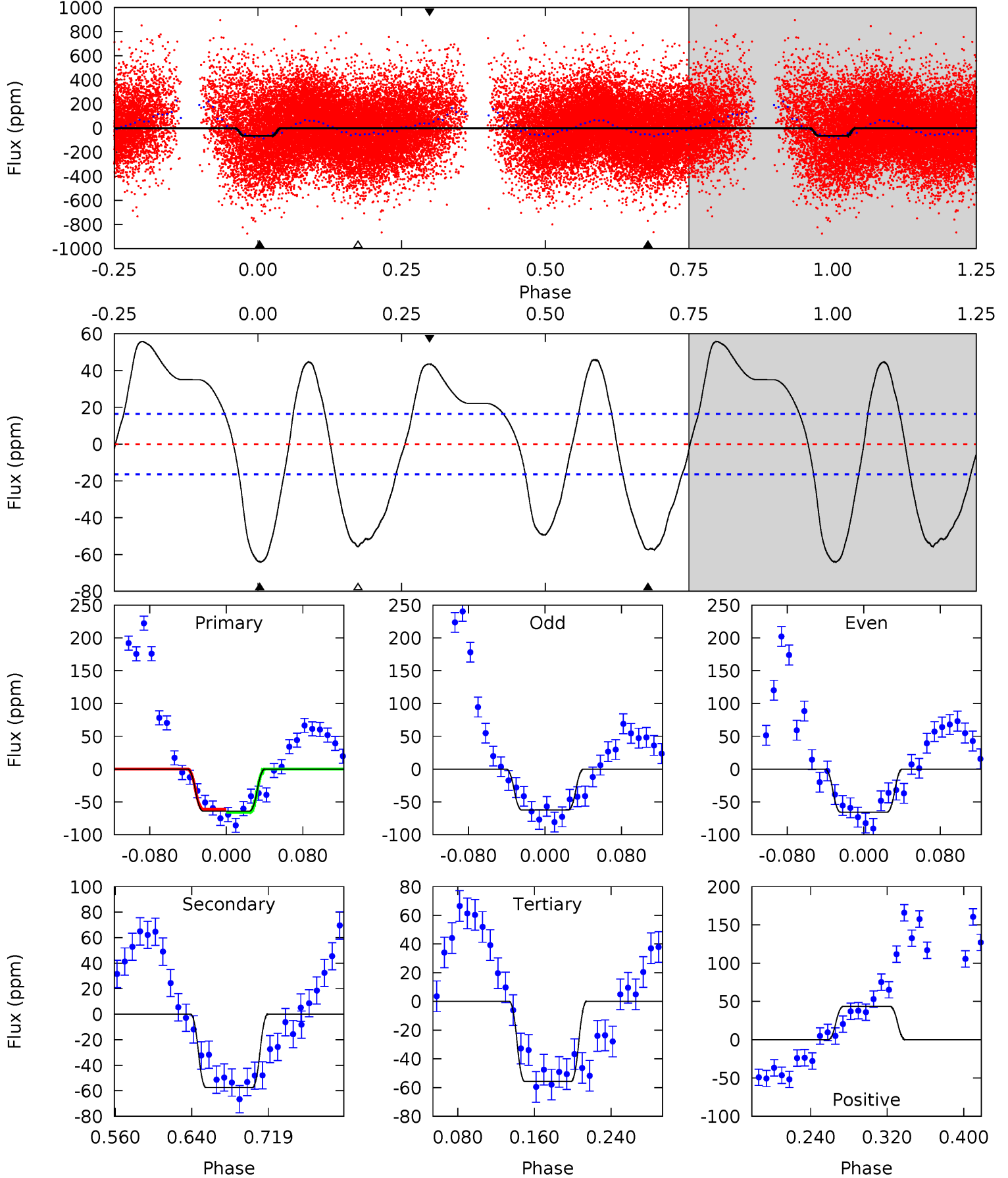
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	8.25	-0.81	0	4.54	1.59	2.26	14.6	13.8	9.06	8.25	0.45	1.05	0.41	1.26



Alt Model-Shift Uniqueness Test

003750207-02, P = 2.569513 Days, E = 131.444372 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	16.2	15.7	12.3	4.61	1.75	10.3	2.34	5.76	0.49	3.91	0.48	0.92	0.47	0.67



Stellar Parameters For KIC 003750207

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6621^{+161}_{-221}	$4.356^{+0.067}_{-0.202}$	$-0.080^{+0.250}_{-0.300}$	$1.219^{+0.419}_{-0.140}$	$1.237^{+0.187}_{-0.187}$	$0.961^{+0.279}_{-0.514}$
	+2%/-3%	+2%/-5%	+312%/-375%	+34%/-11%	+15%/-15%	+29%/-54%
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 003750207-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-22 ± 3	$0.95^{+0.31}_{-0.30}$	2304^{+185}_{-116}	5439^{+1066}_{-547}	21^{+24}_{-9}
Alt.	-57 ± 4	$1.33^{+0.33}_{-0.27}$	2310^{+175}_{-114}	5870^{+715}_{-489}	28^{+16}_{-10}

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 $A_{obs} \gg 1.0$

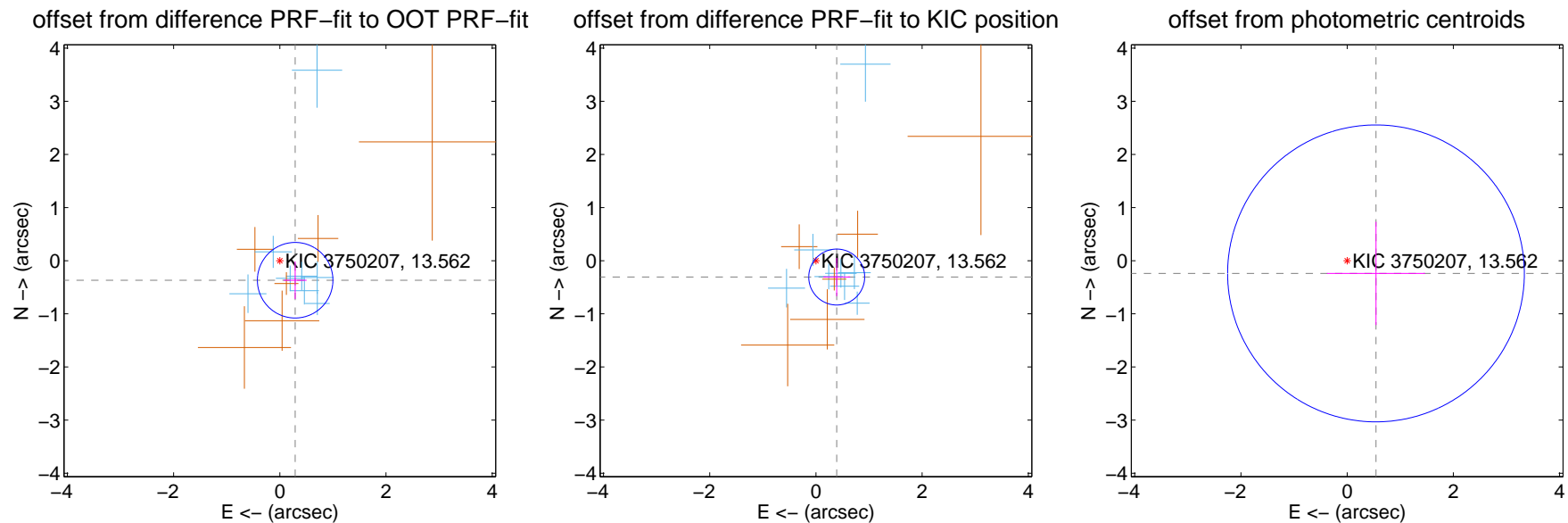
DV Centroid Data

Supplemental centroid analysis for 003750207-02. Kepler magnitude: 13.56. Transit SNR 9.29

There are 8 quarters with good PRF difference image offsets

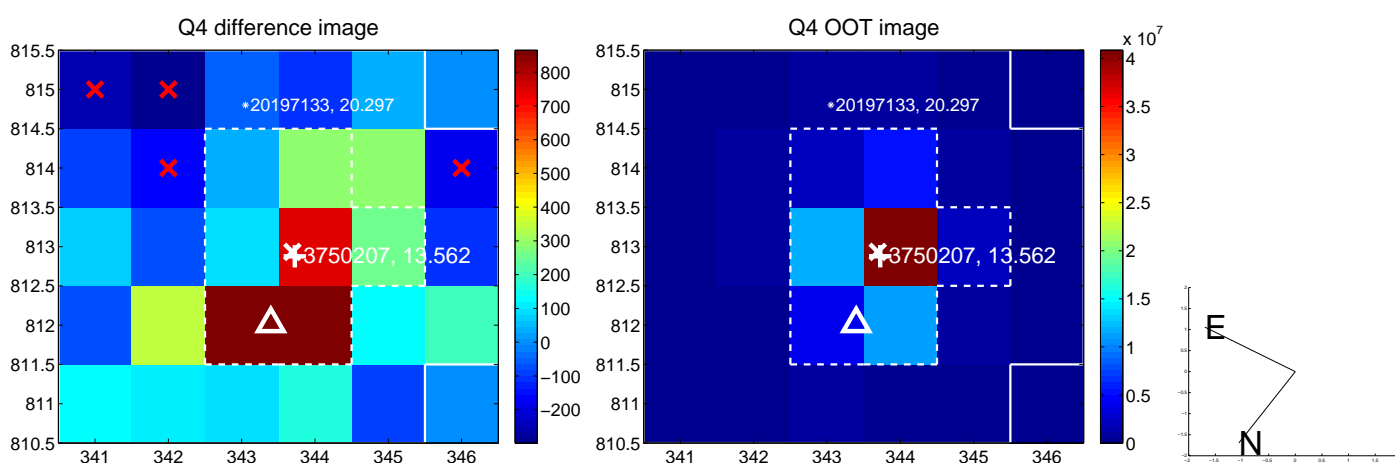
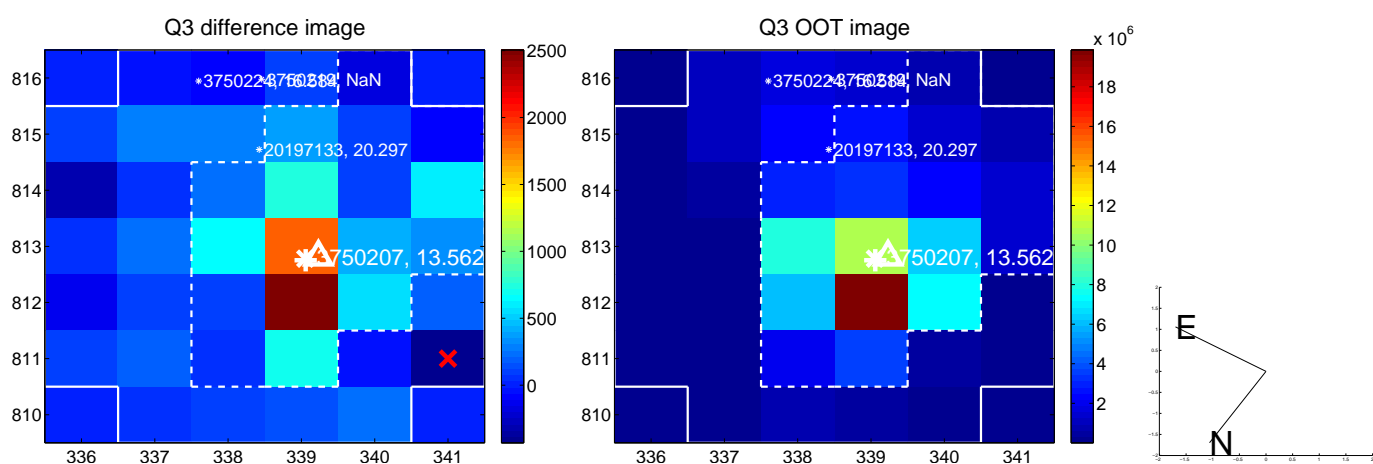
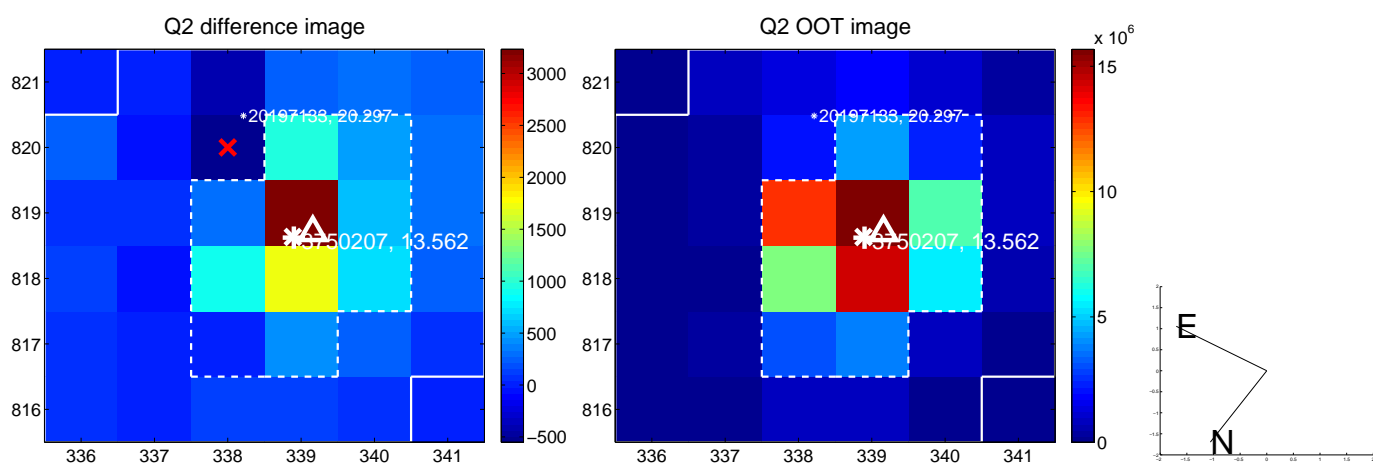
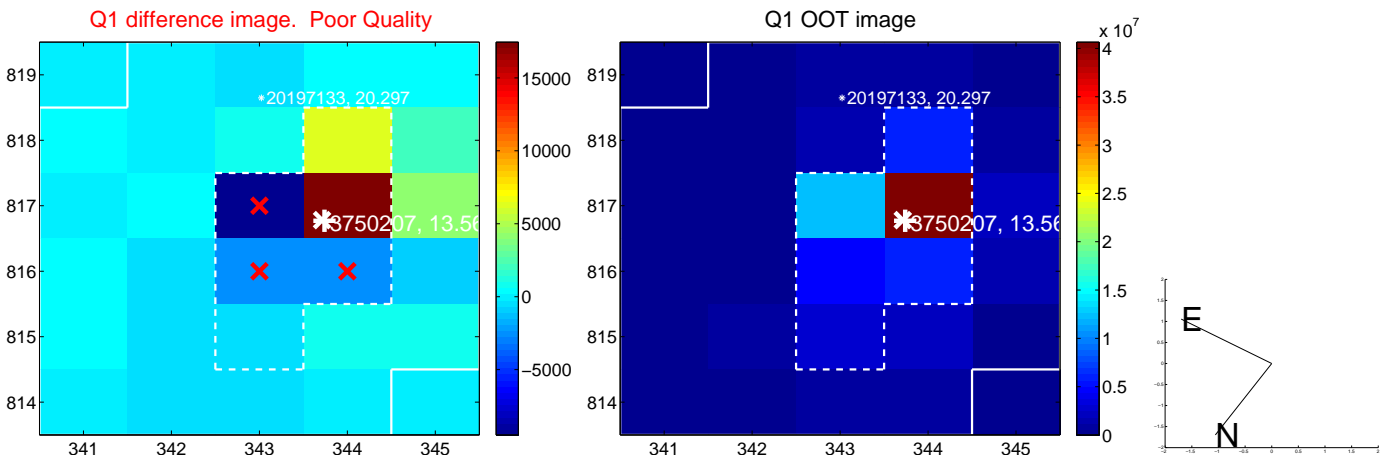
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.468 ± 0.237	1.97	-0.289 ± 0.216	-0.367 ± 0.352
PRF-fit source offset from KIC position	0.498 ± 0.175	2.84	-0.391 ± 0.253	-0.308 ± 0.358
photometric centroid source offset	0.59 ± 0.93	0.64	-0.54 ± 0.92	-0.24 ± 0.97

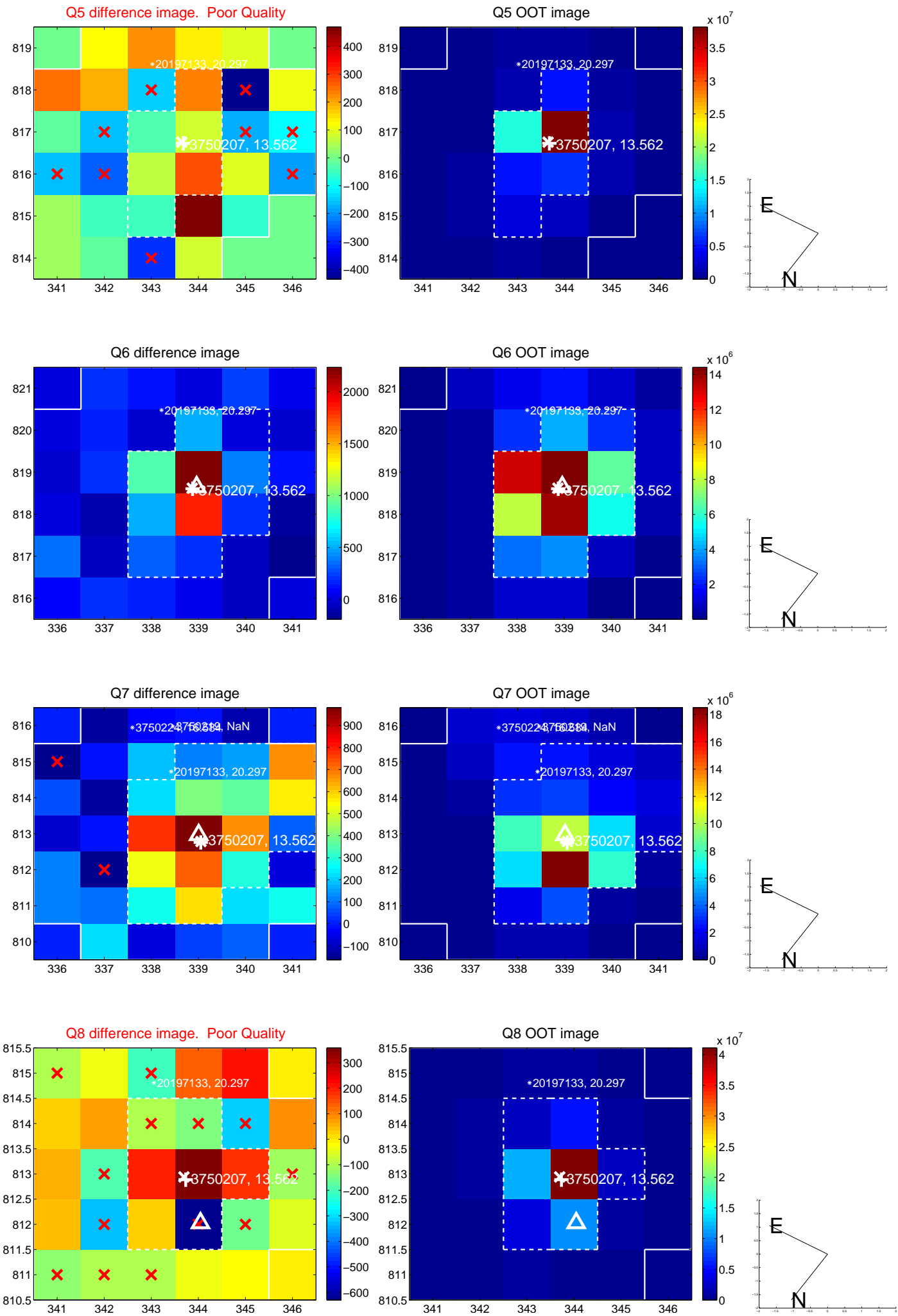


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

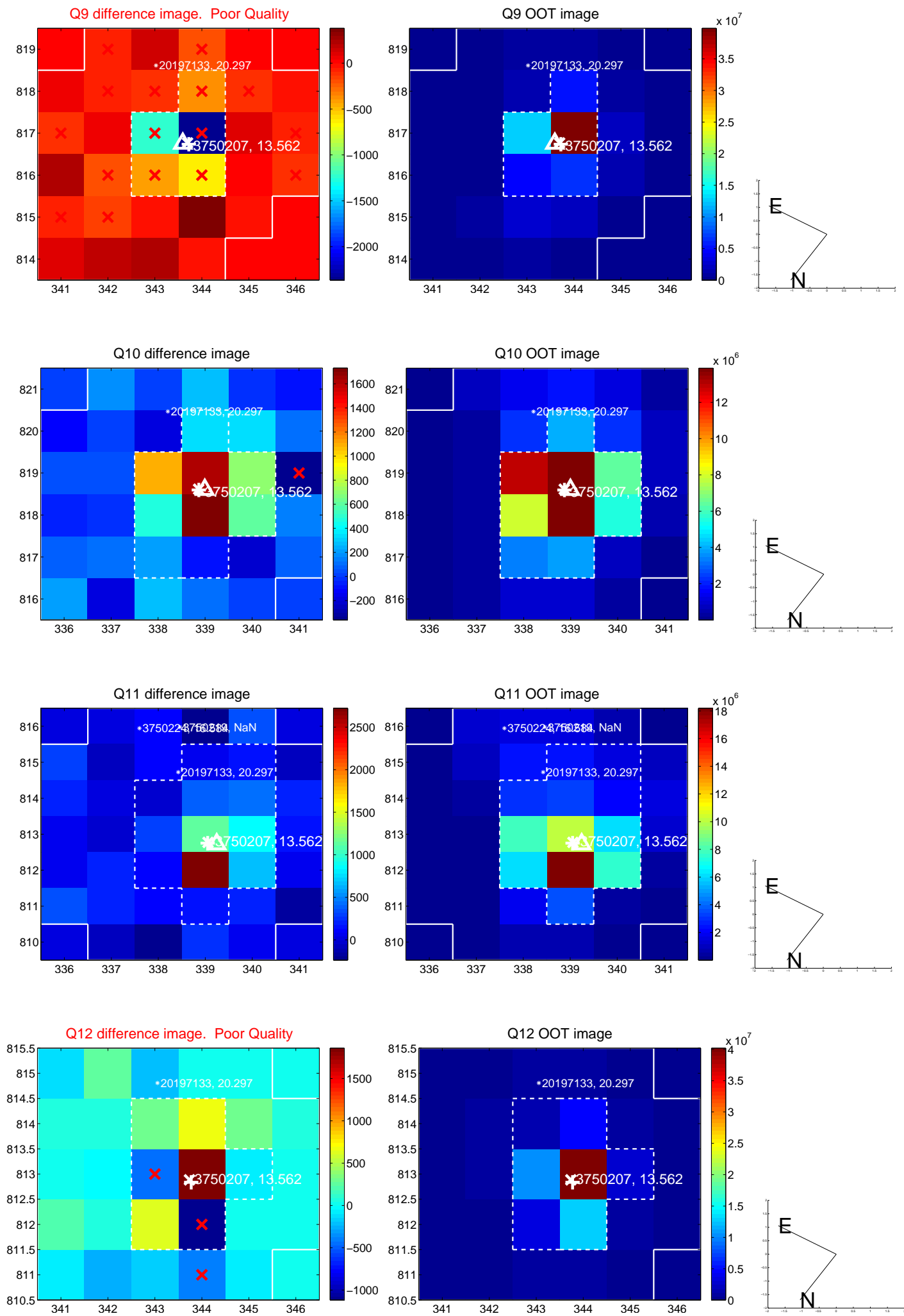
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



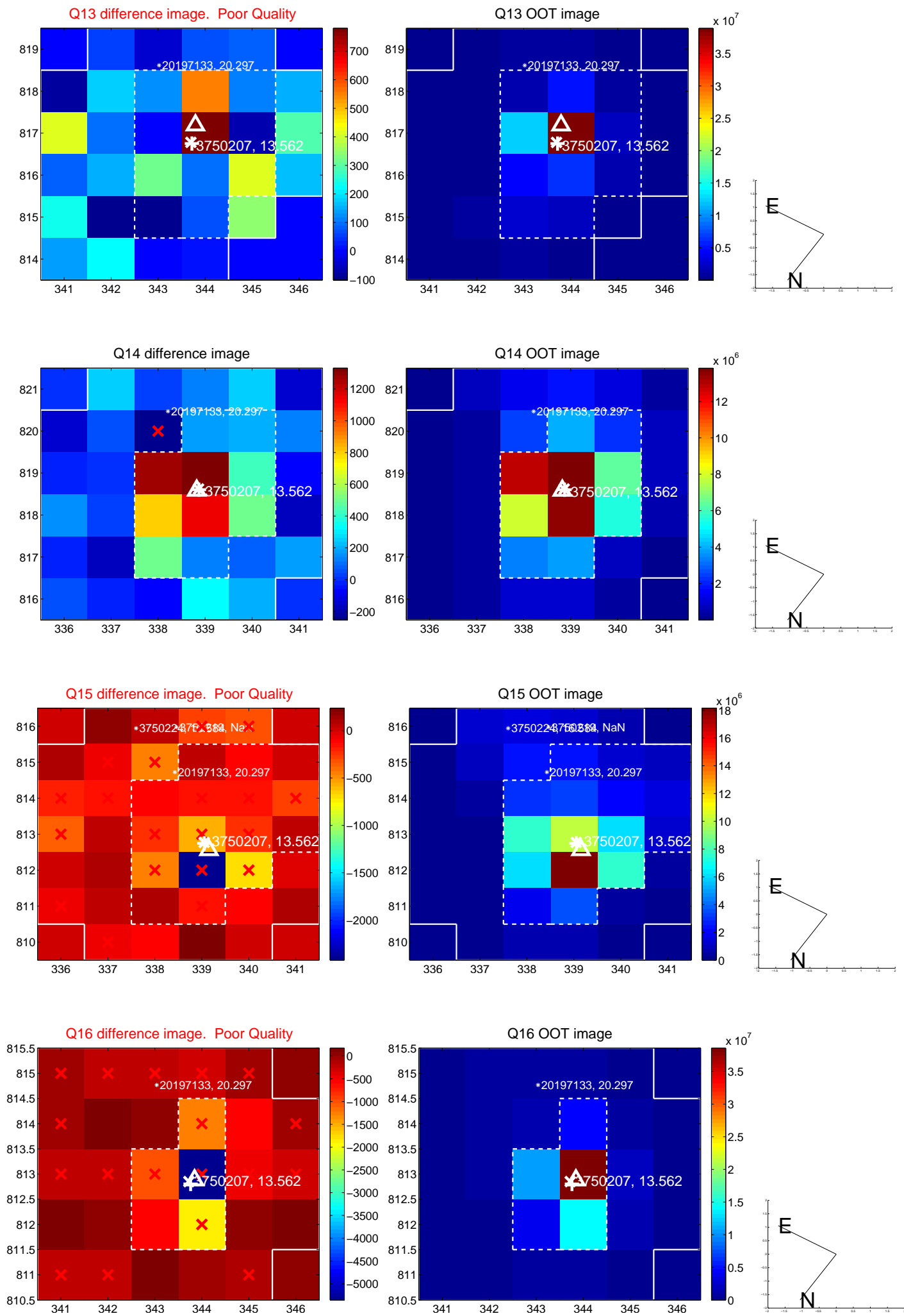
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



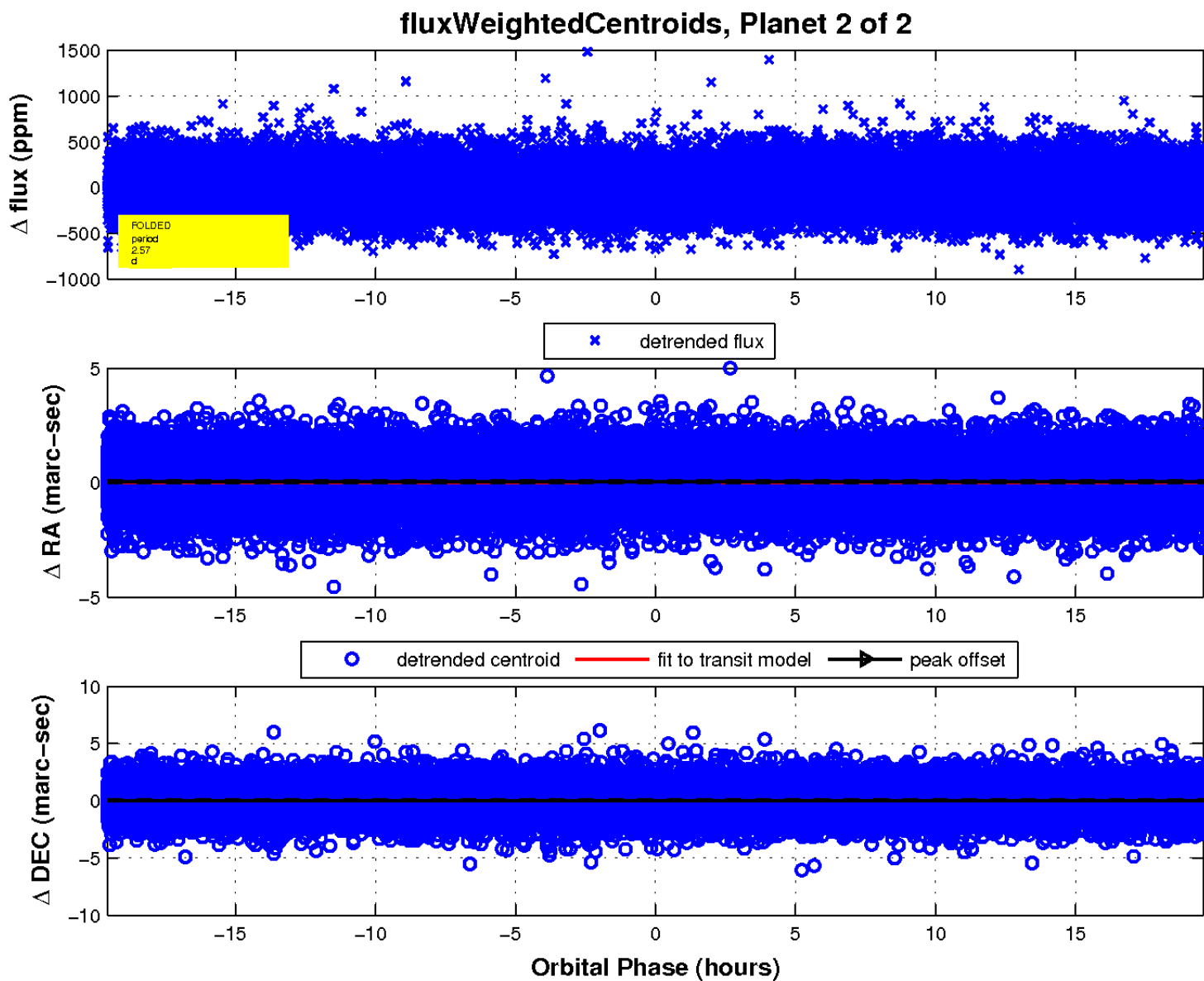
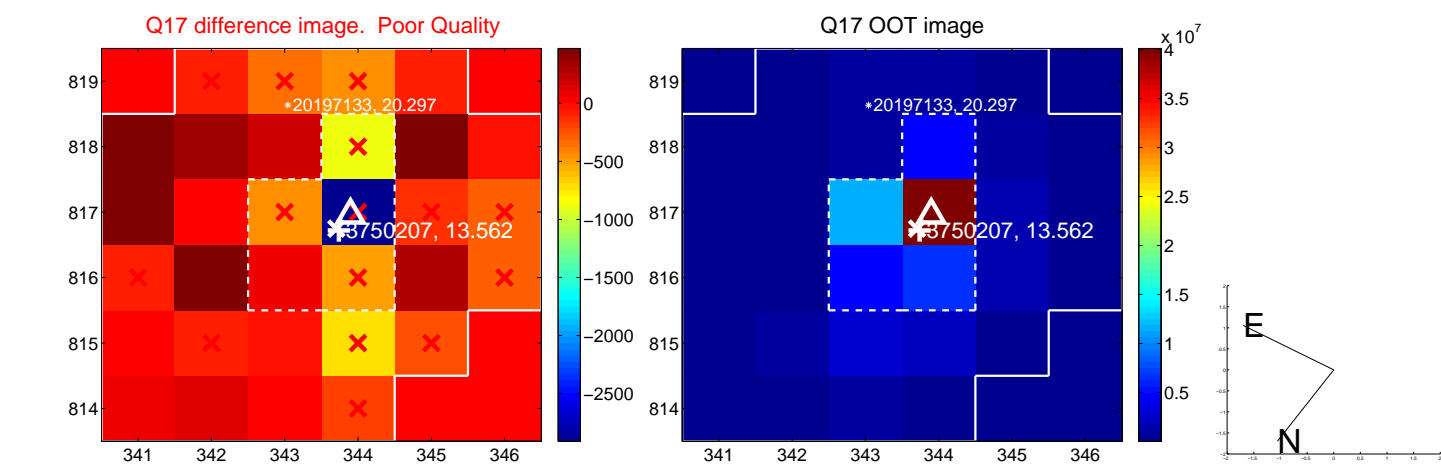
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

