

KIC 003348714

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})
003348714-01	OBS	No	0.749283	132.217133	0.4	5.127	8.4	0.0	1.64	7416	0.11	20483.83
003348714-02	OBS	No	54.877972	146.814605	2846.2	3.774	10.3	9.3	1.64	7416	15.65	66.85
003348714-03	OBS	No	62.027682	135.597301	2630.9	4.949	8.7	8.1	1.64	7416	14.75	56.77
003348714-04	OBS	No	45.353096	155.094725	1596.4	3.227	8.3	6.5	1.64	7416	6.77	86.19
003348714-05	OBS	No	19.952573	138.770189	1000.4	0.573	8.0	3.2	1.64	7416	8.13	257.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003348714-01	OBS	FP	0.00	1	0	0	0	LPP_DV
003348714-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003348714-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT
003348714-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003348714-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST

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

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

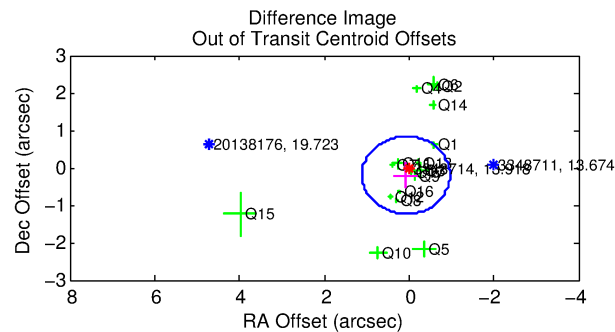
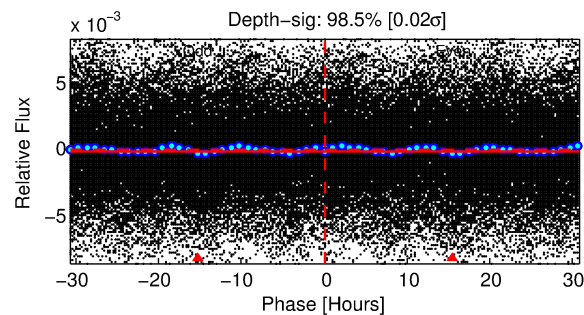
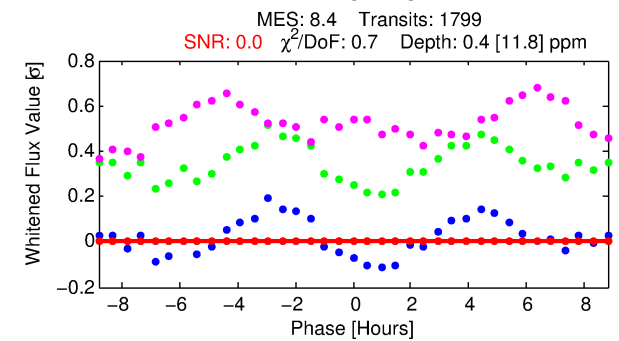
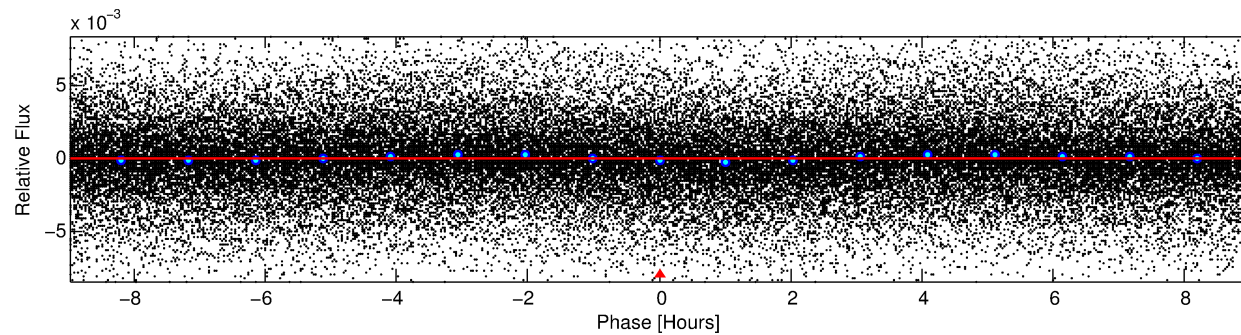
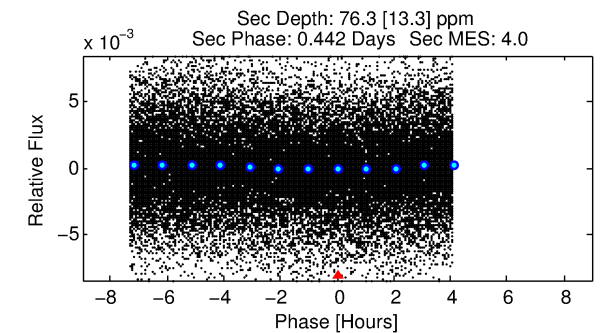
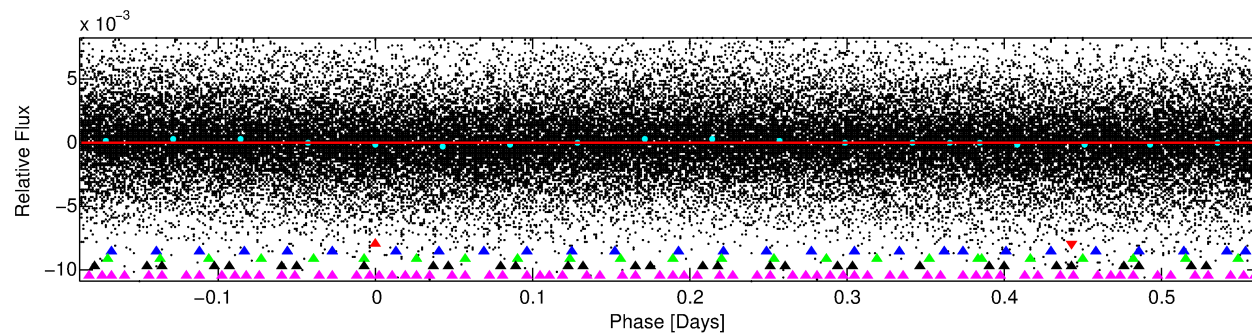
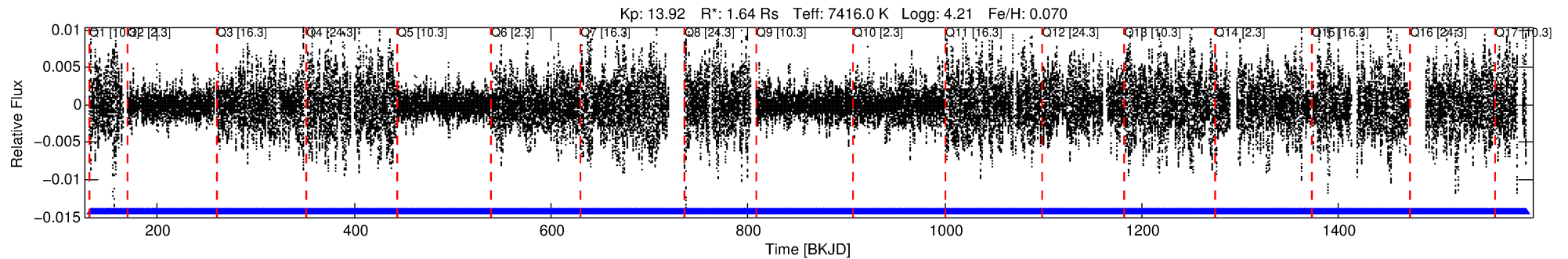
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003348714-01

No Significant Match Found

DV One-Page Summary

KIC: 3348714 Candidate: 1 of 5 Period: 0.749 d



DV Fit Results:

Period = 0.74928 [0.00227] d
Epoch = 132.2171 [0.3280] BKJD
Rp/R* = 0.0006 [0.0094]
a/R* = 1.15 [5.67]
b = 0.71 [14.24]
Seff = 20483.83 [8742.39]
Teq = 3051 [325] K
Rp = 0.11 [1.68] Re
a = 0.0188 [0.0052] AU
Ag = 1186.83 [35518.36] [0.03σ]
Teff = 27683 [207124] K [0.12σ]

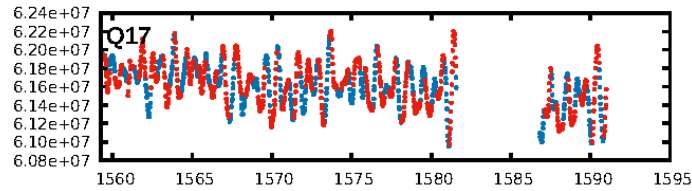
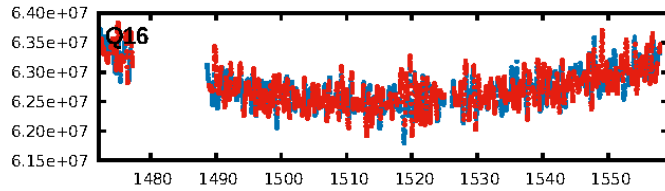
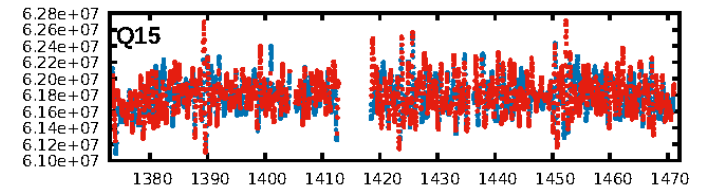
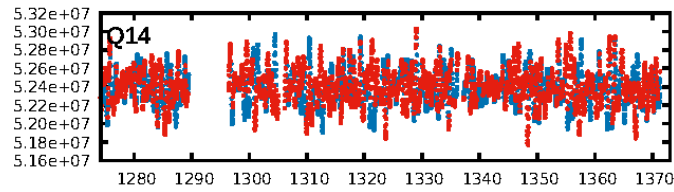
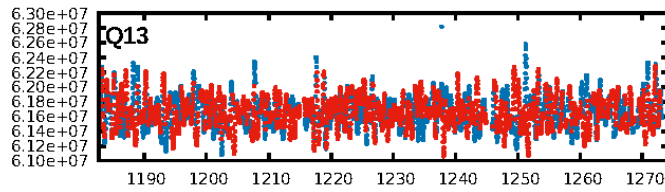
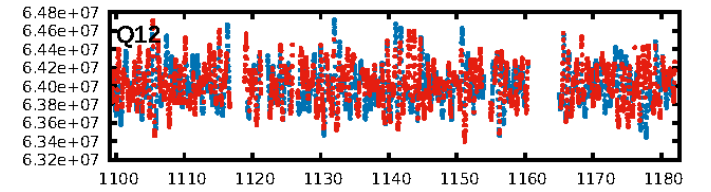
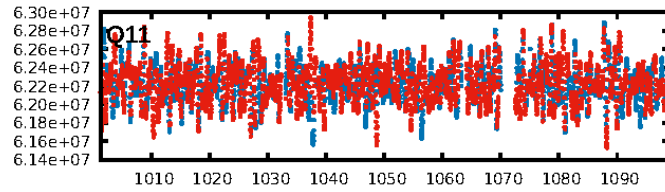
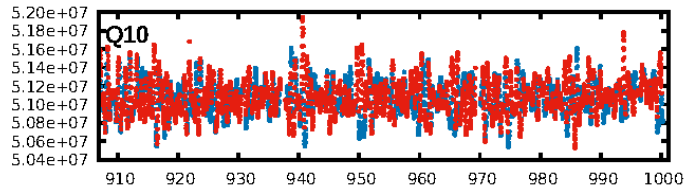
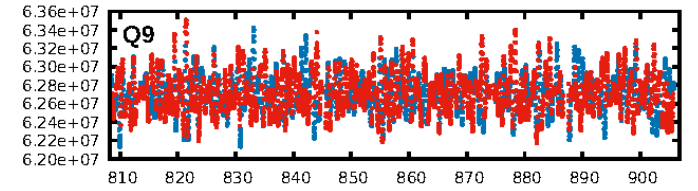
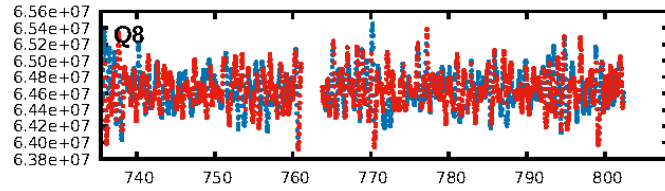
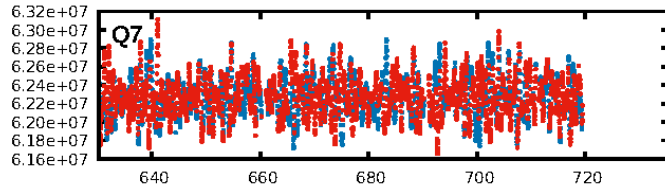
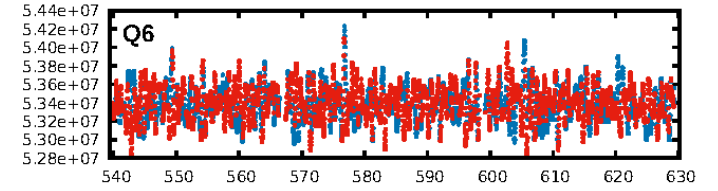
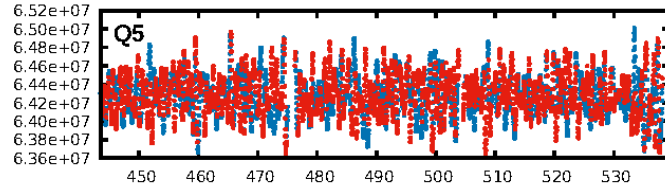
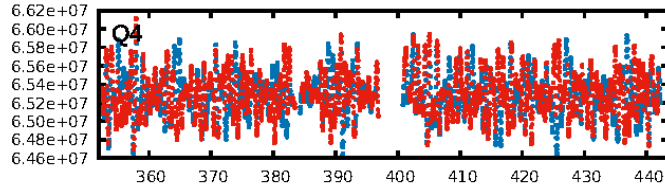
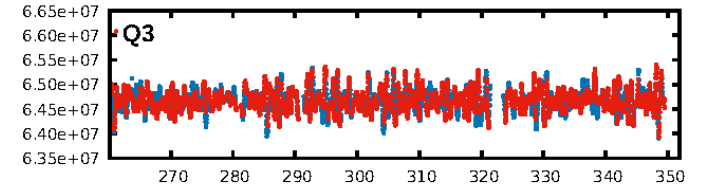
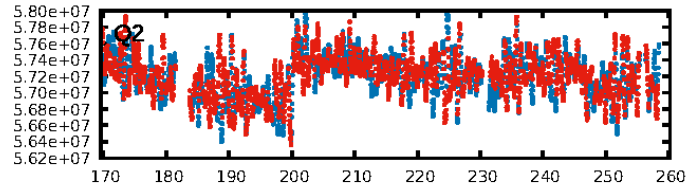
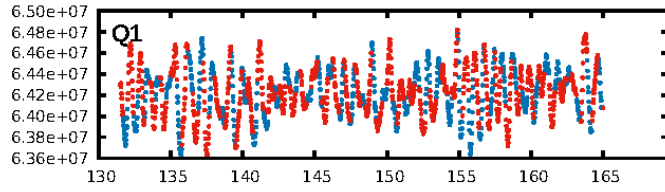
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [89.34σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.87e-13
RollingBand-igt: 1.00 [1718/1718]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.213 arcsec [0.62σ]
KicOffset-rm: 0.010 arcsec [0.03σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 1.00 [17/17]

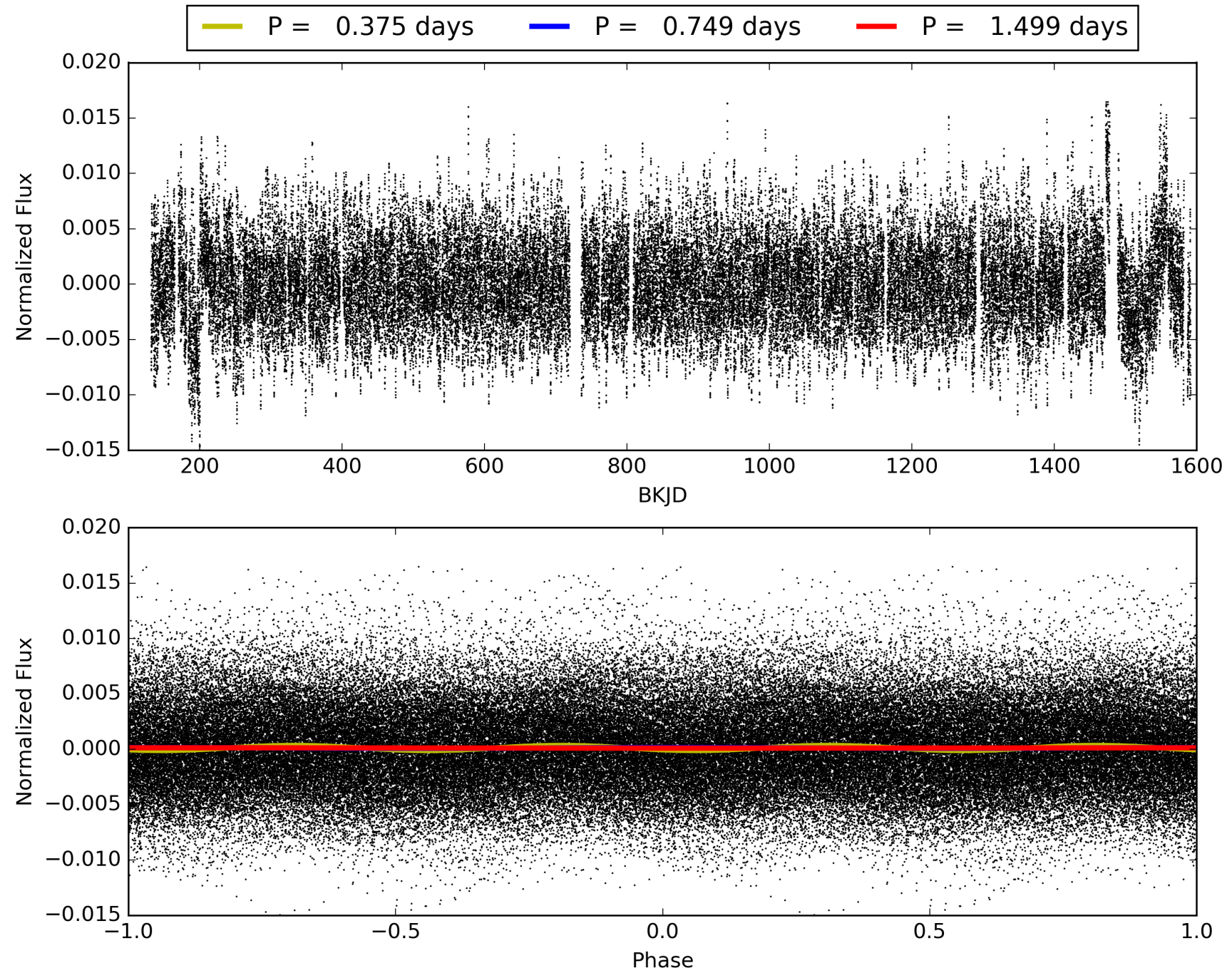
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003348714-01, PDC Light Curves

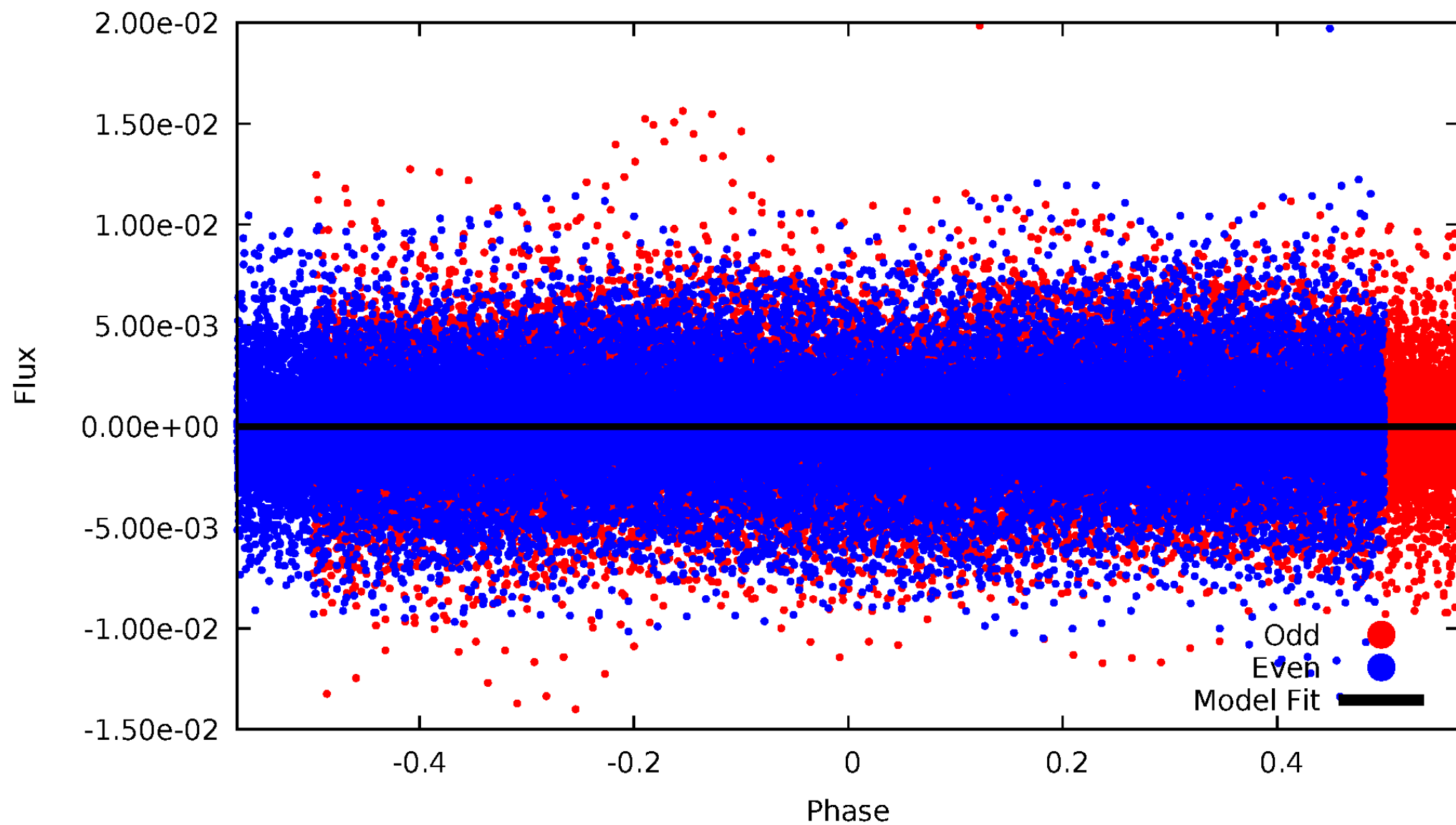


TCE 003348714-01



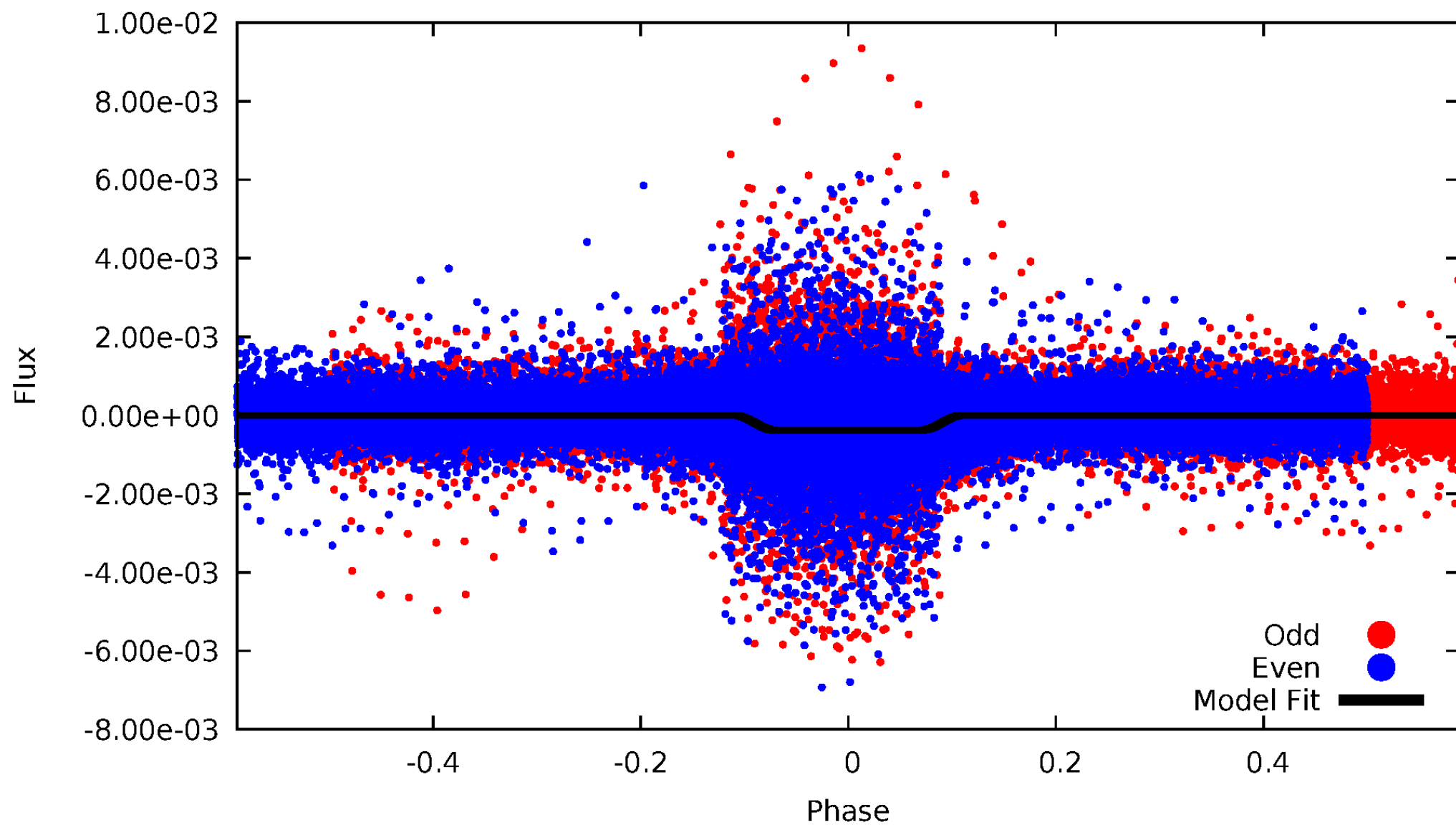
DV Odd/Even

TCE 003348714-01



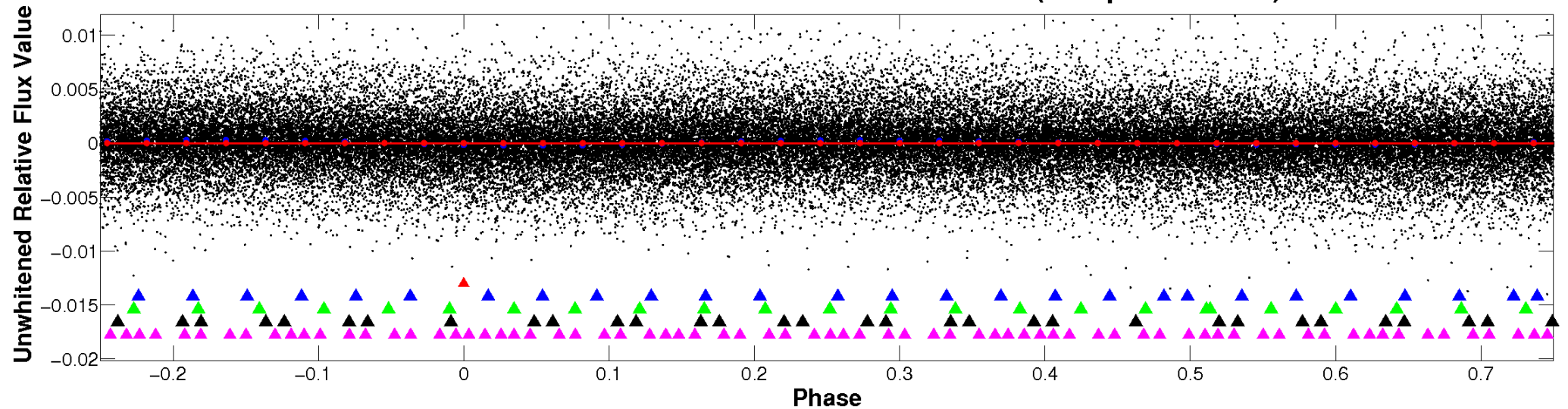
ALT Odd/Even

TCE 003348714-01

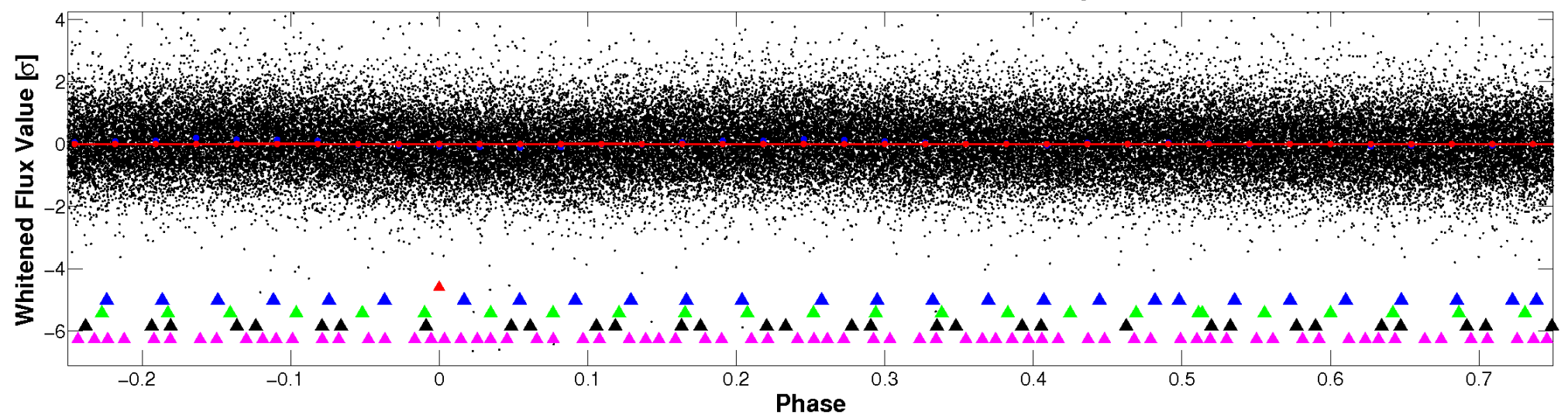


Non-Whitened Vs. Whitened Light Curve

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

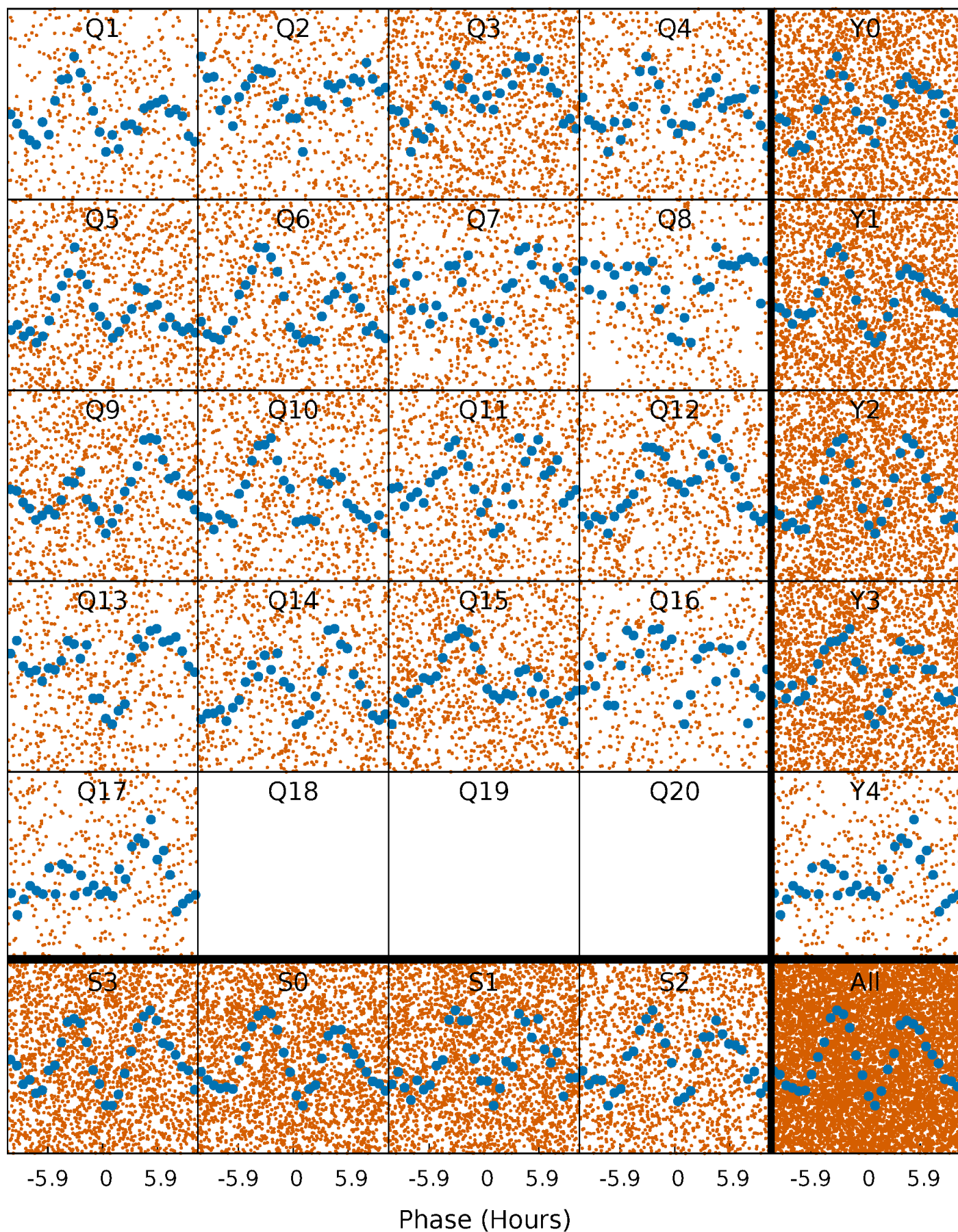


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



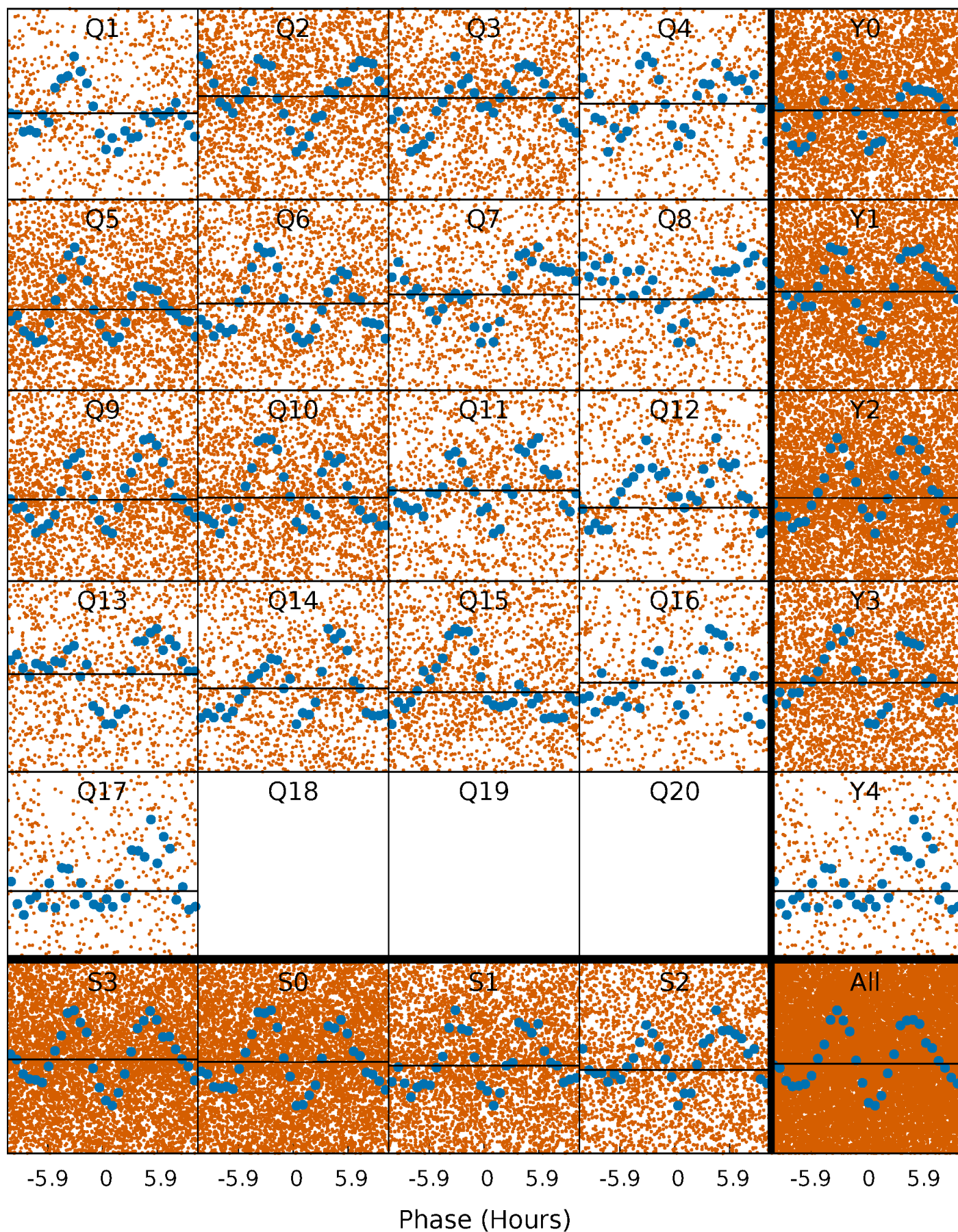
PDC Quarter-Phased Transit Curves

TCE 003348714-01 P= 0.749283 Days $T_0=132.217133$ (BKJD)



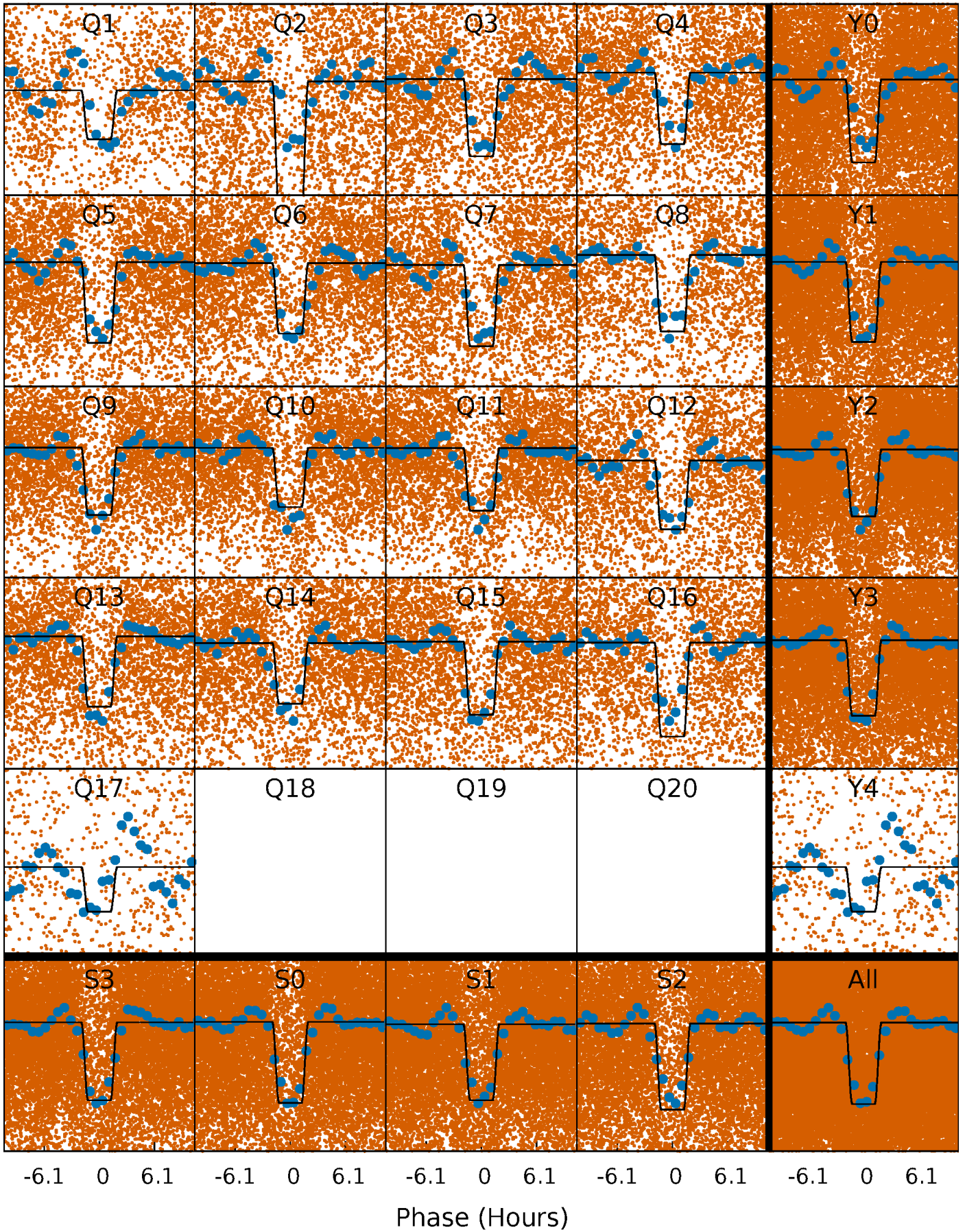
DV Quarter-Phased Transit Curves

TCE 003348714-01 P= 0.749283 Days $T_0=132.217133$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

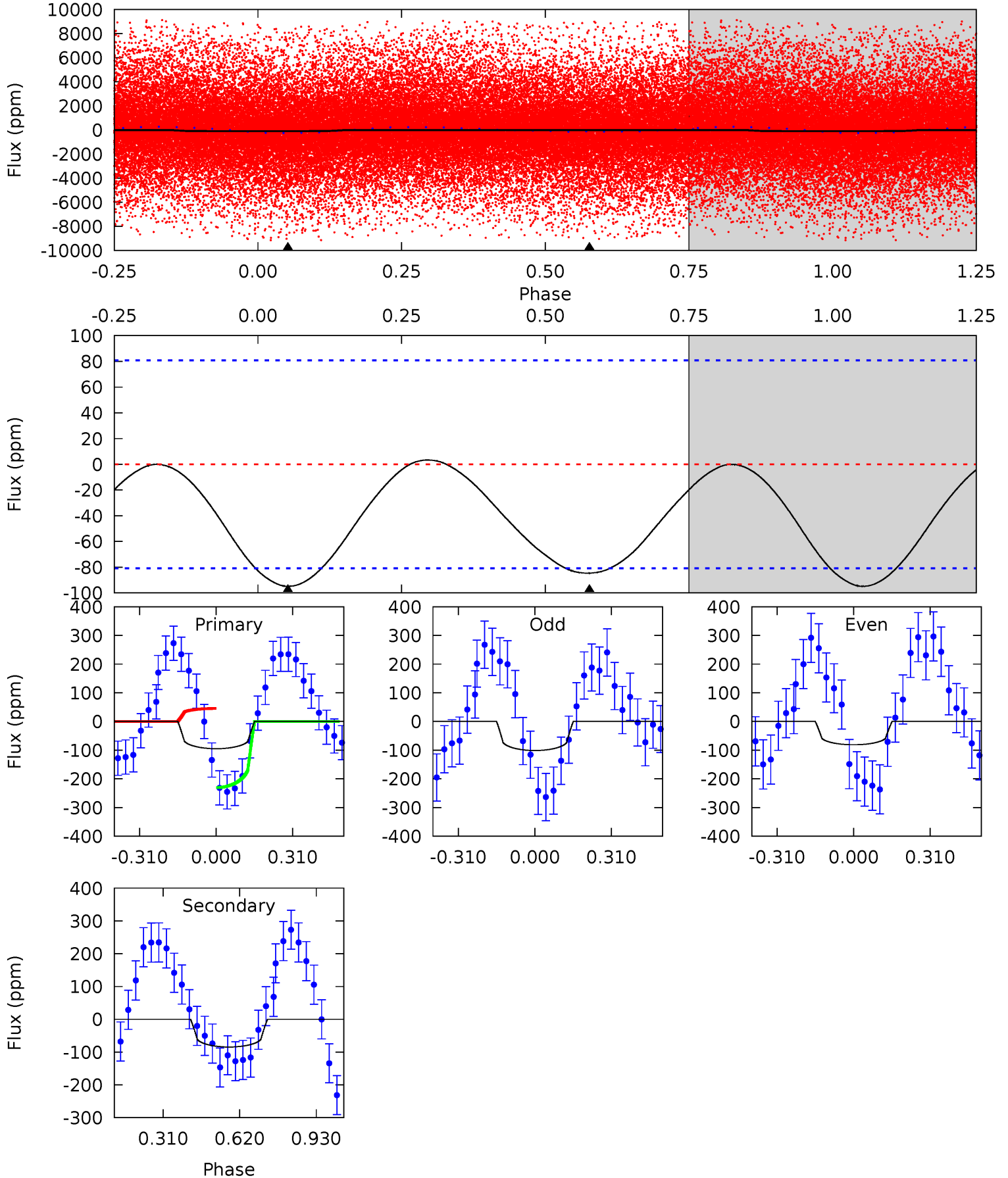
TCE 003348714-01 P= 0.749333 Days $T_0=132.198592$ (BKJD)



DV Model-Shift Uniqueness Test

003348714-01, P = 0.749283 Days, E = 131.467850 Days

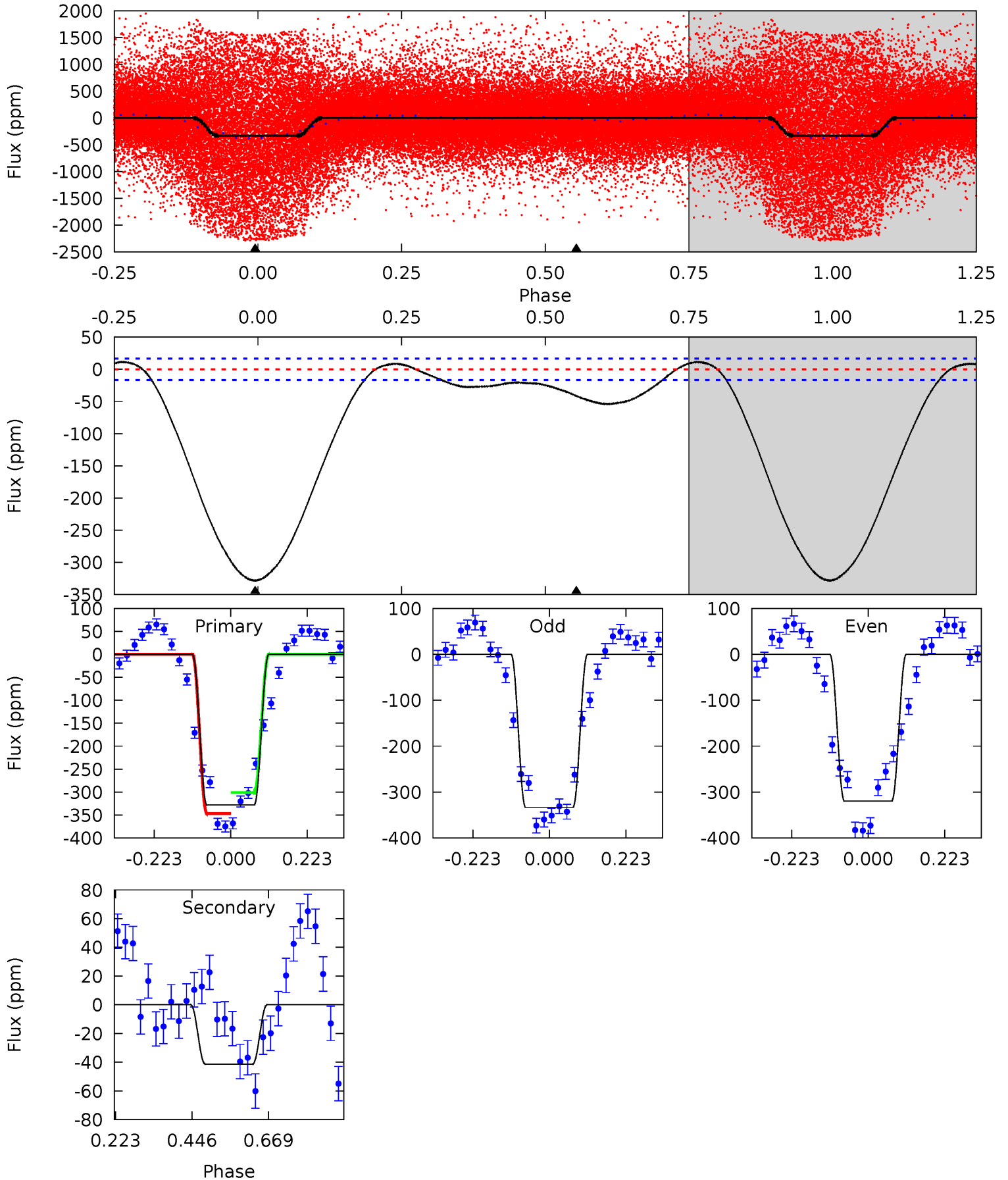
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.08	4.53	0	0	4.32	1.02	0.14	5.08	5.08	4.53	4.53	0.54	1.04	0.03	5.00



Alt Model-Shift Uniqueness Test

003348714-01, P = 0.749333 Days, E = 131.449259 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
86.6	10.9	0	0	4.39	1.22	2.50	86.6	86.6	10.9	10.9	1.83	1.04	0.03	6.15



Stellar Parameters For KIC 003348714

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7416^{+206}_{-335}	$4.210^{+0.087}_{-0.203}$	$0.070^{+0.150}_{-0.350}$	$1.637^{+0.562}_{-0.241}$	$1.582^{+0.214}_{-0.235}$	$0.508^{+0.198}_{-0.271}$
	+3%/-5%	+2%/-5%	+214%/-500%	+34%/-15%	+14%/-15%	+39%/-53%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003348714-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-85 ± 19	$1.27^{+1.22}_{-0.92}$	4317^{+295}_{-267}	8562^{+22026}_{-2830}	$9.926^{+124.846}_{-7.469}$
Alt.	-41 ± 4	$3.71^{+1.86}_{-1.81}$	4309^{+356}_{-250}	3795^{+1733}_{-6663}	$0.577^{+1.558}_{-0.319}$

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

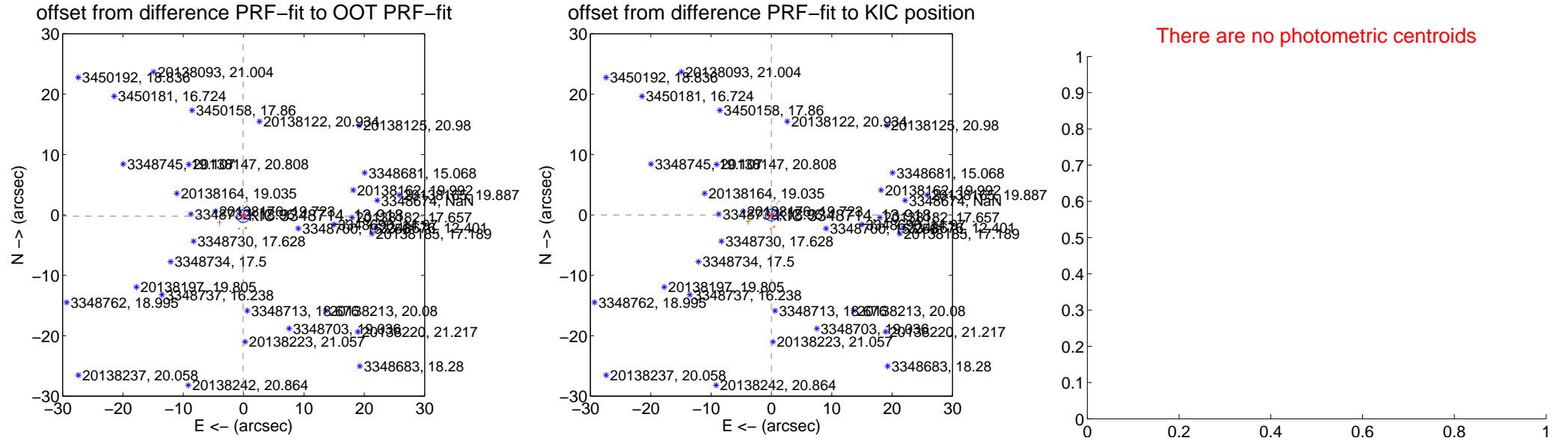
DV Centroid Data

Supplemental centroid analysis for 003348714-01. Kepler magnitude: 13.92. Transit SNR 0.04

There are 12 quarters with good PRF difference image offsets

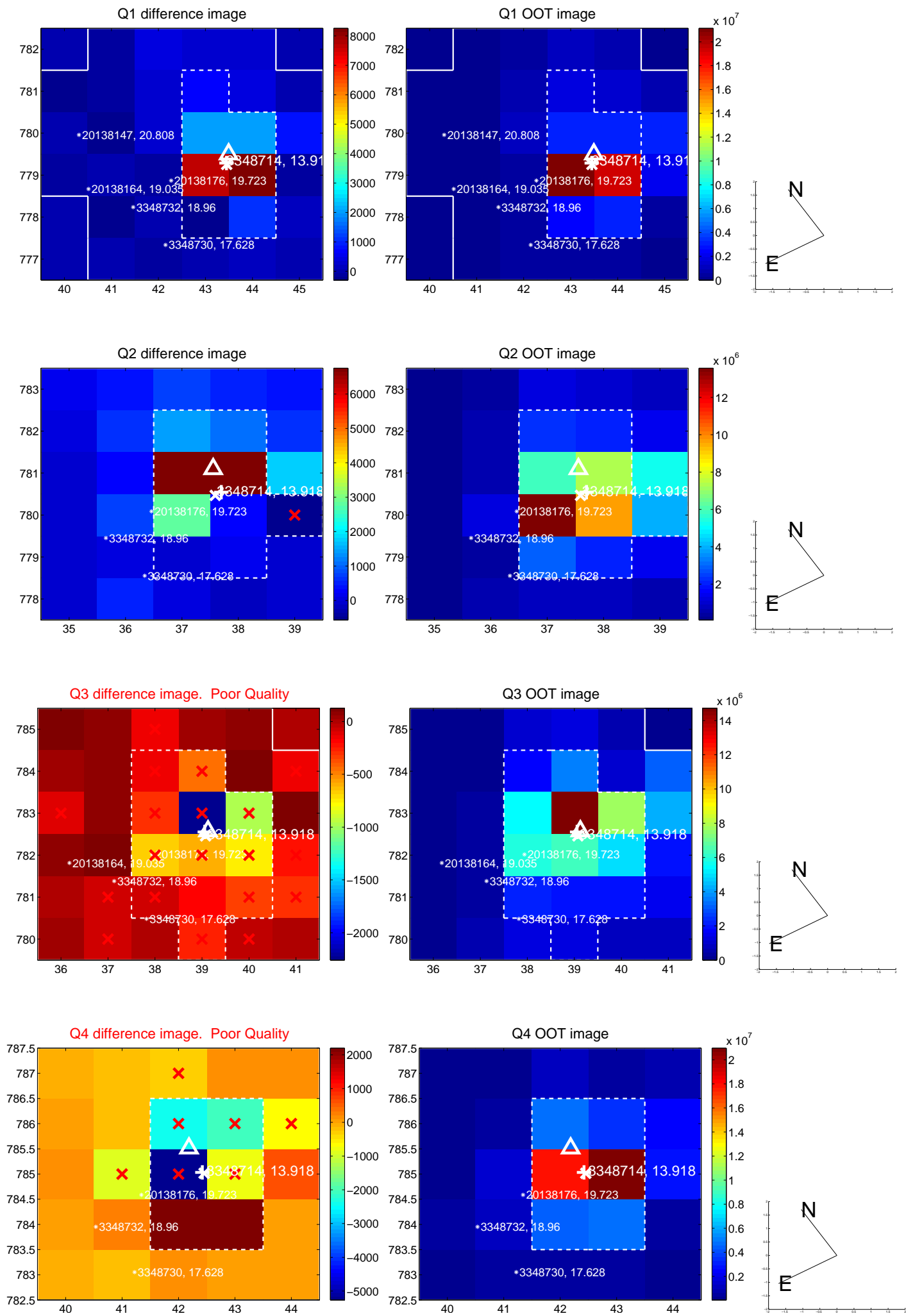
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.213 ± 0.345	0.62	0.073 ± 0.251	-0.201 ± 0.318
PRF-fit source offset from KIC position	0.010 ± 0.329	0.03	0.008 ± 0.251	-0.005 ± 0.325
photometric centroid source offset	—	—	—	—

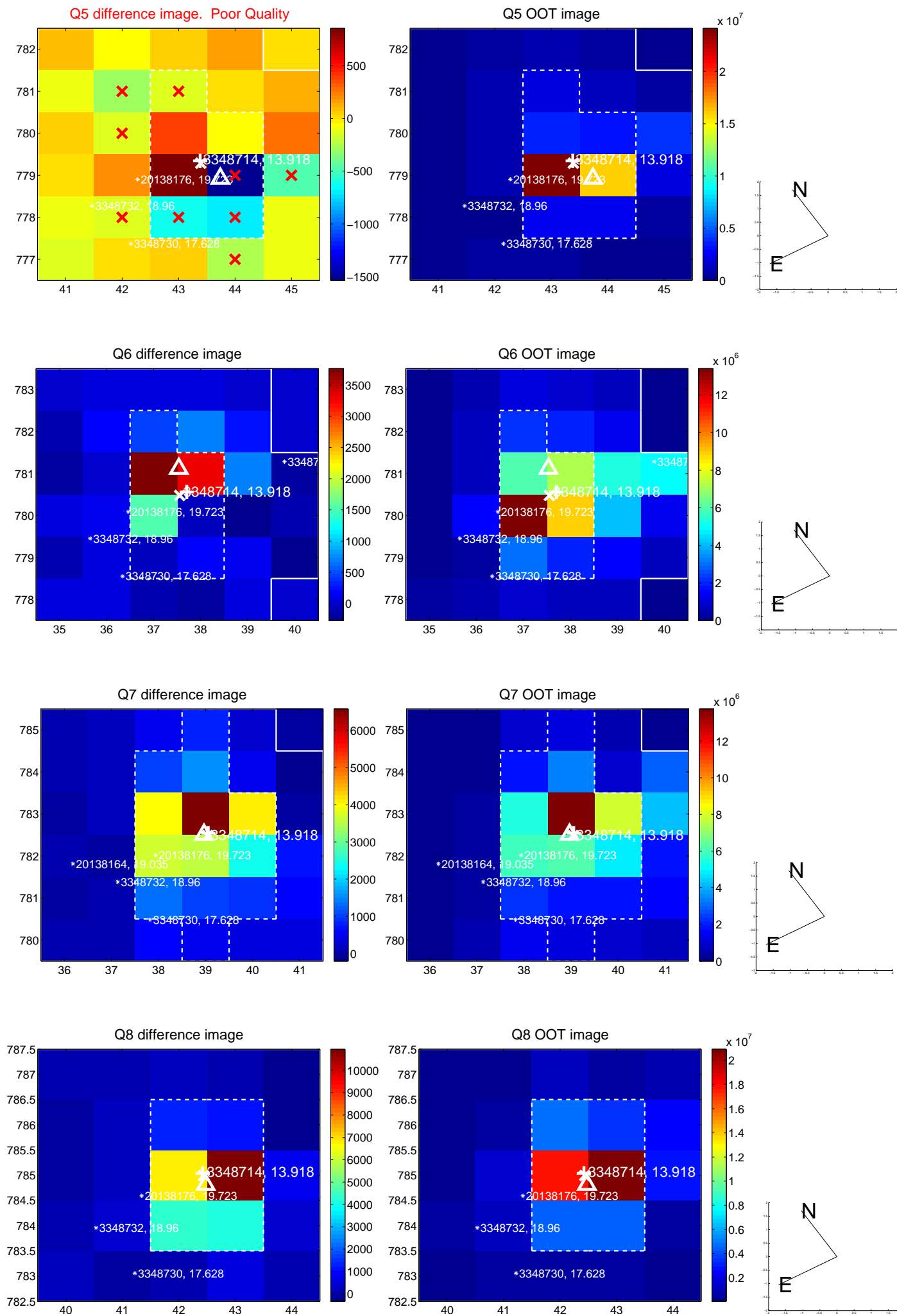


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

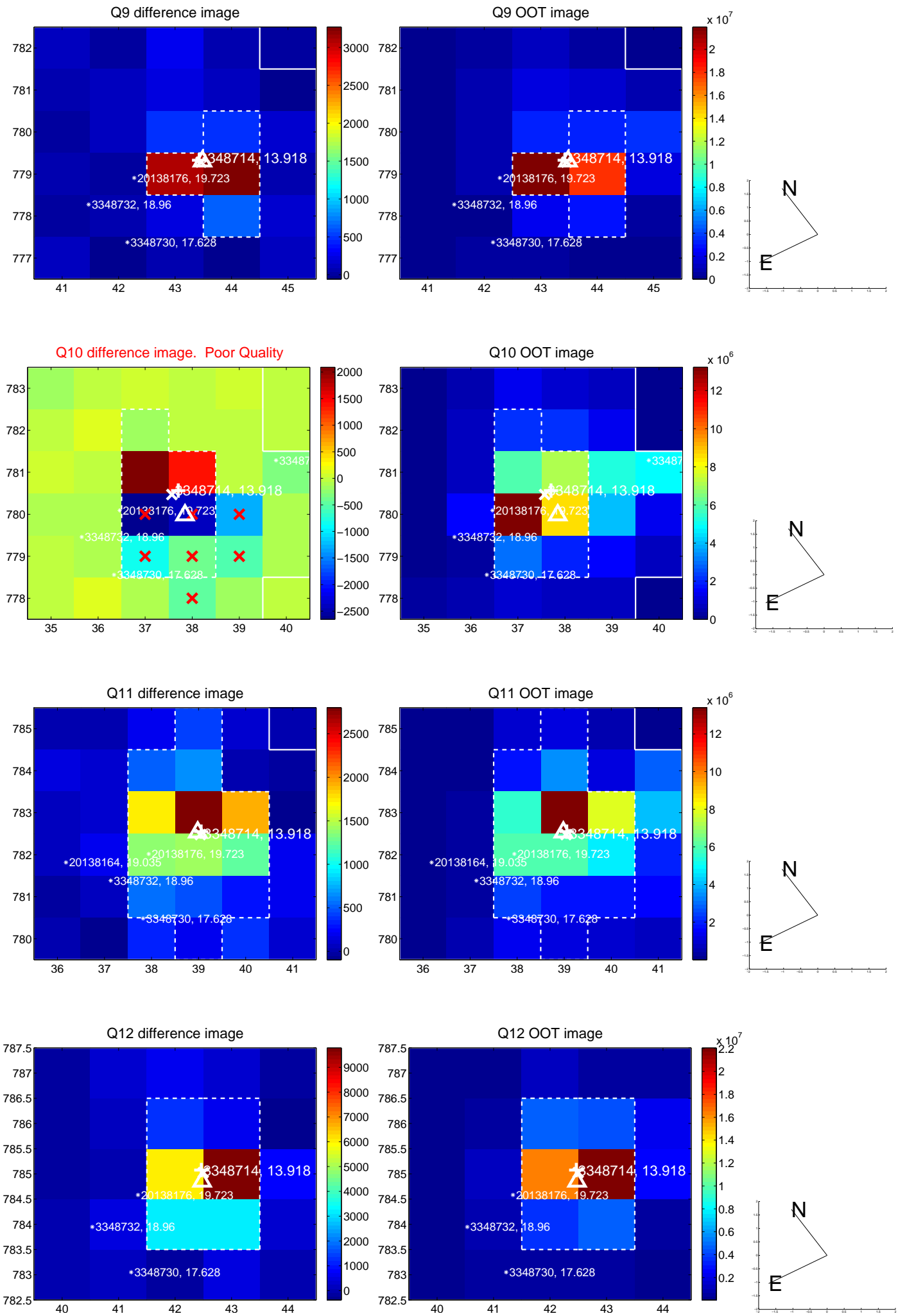
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



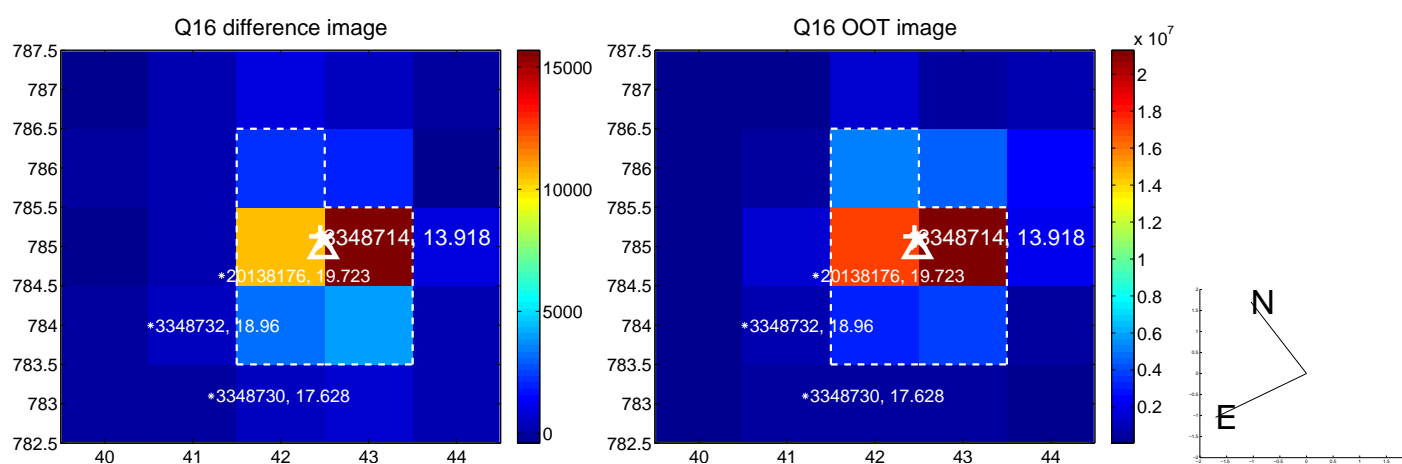
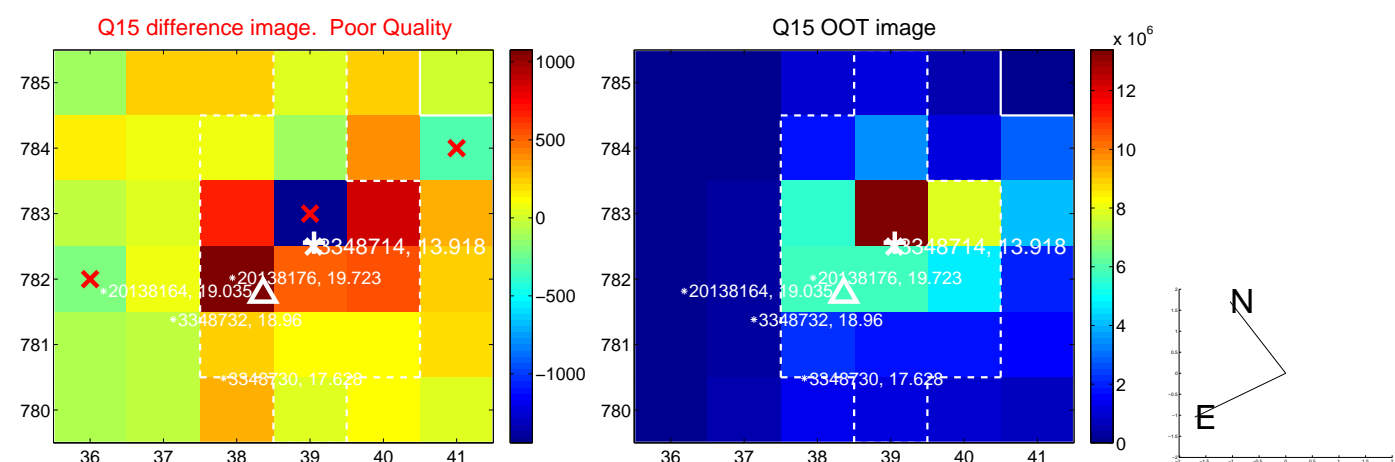
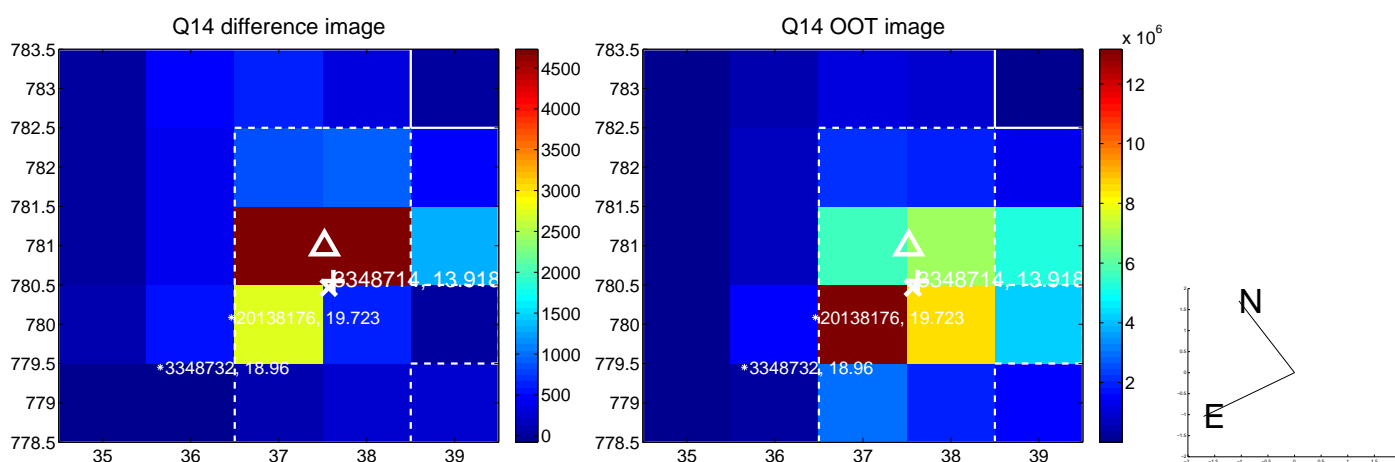
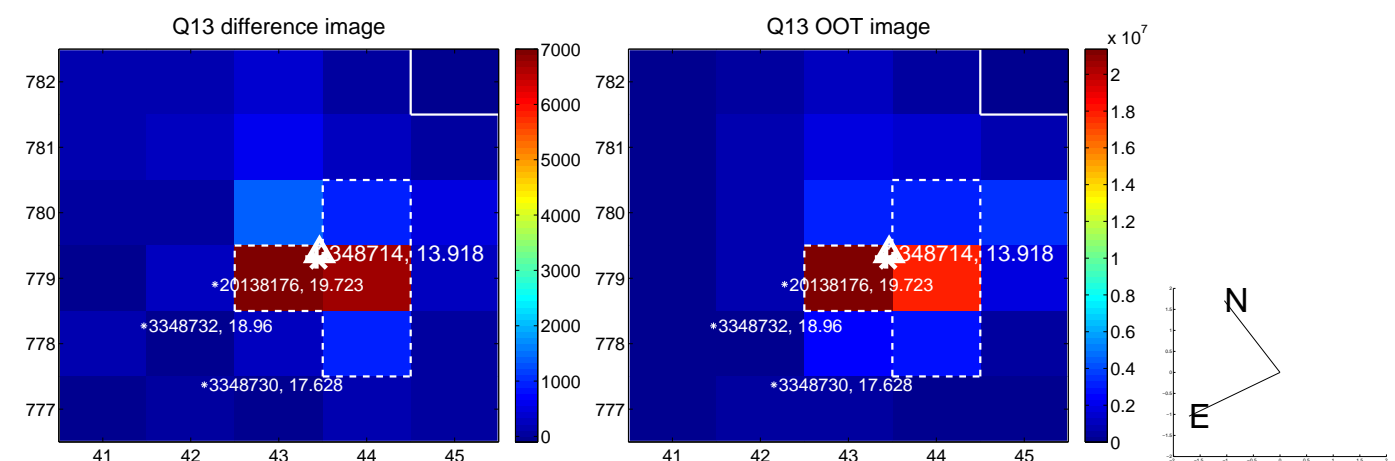
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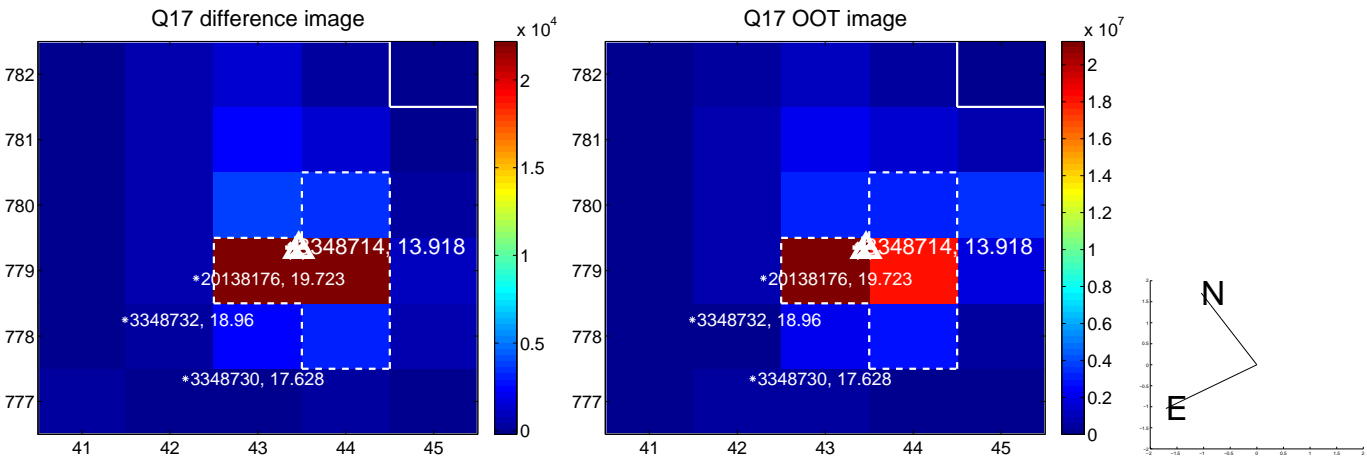
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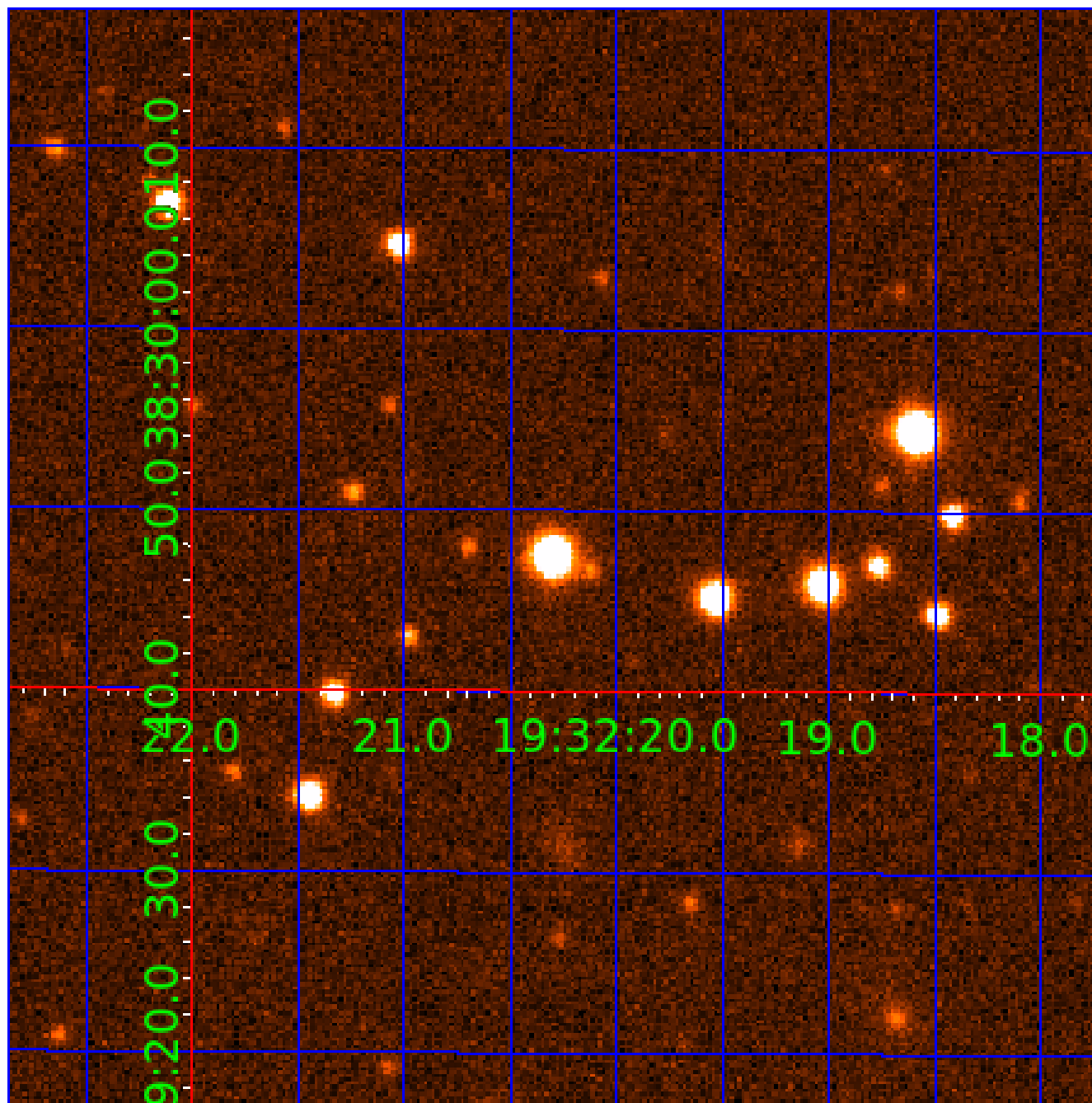
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 003348714

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

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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003348714-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT
003348714-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003348714-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST

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

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

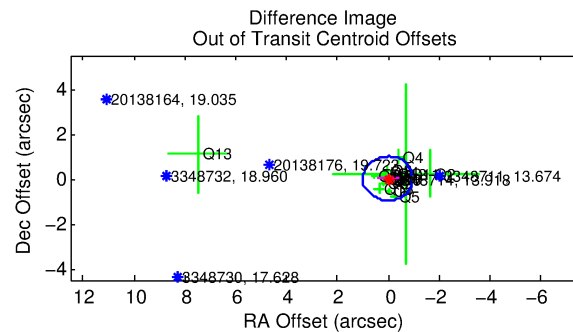
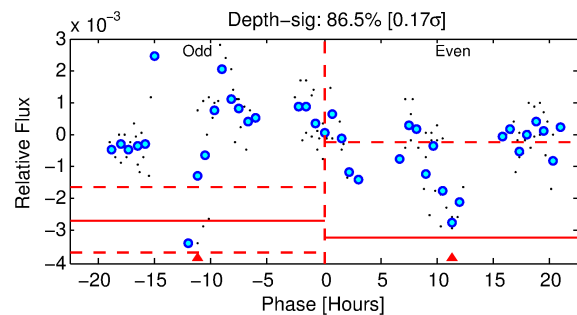
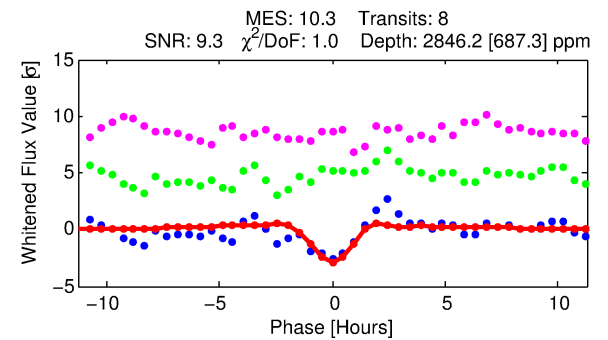
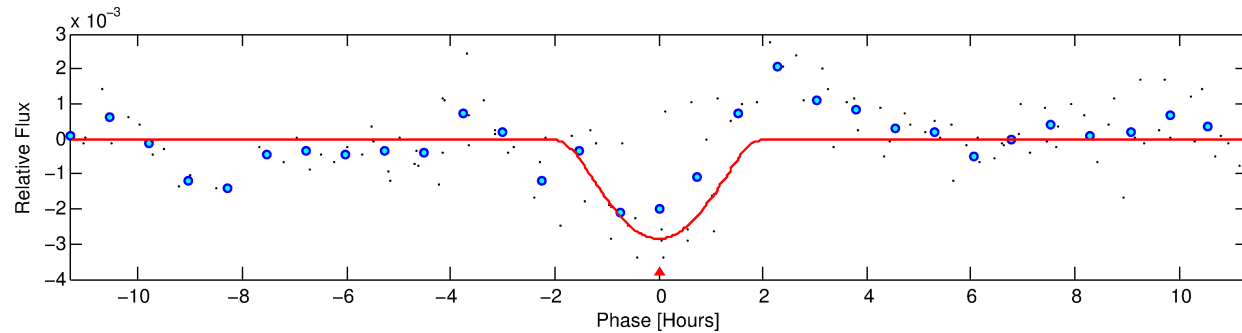
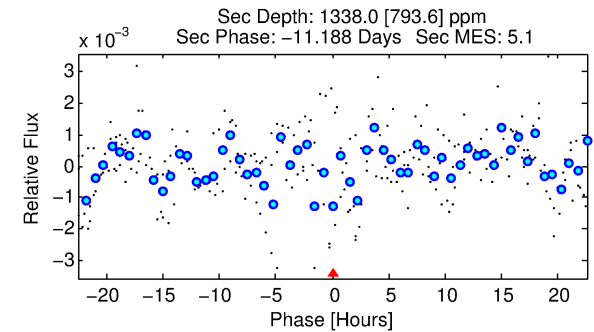
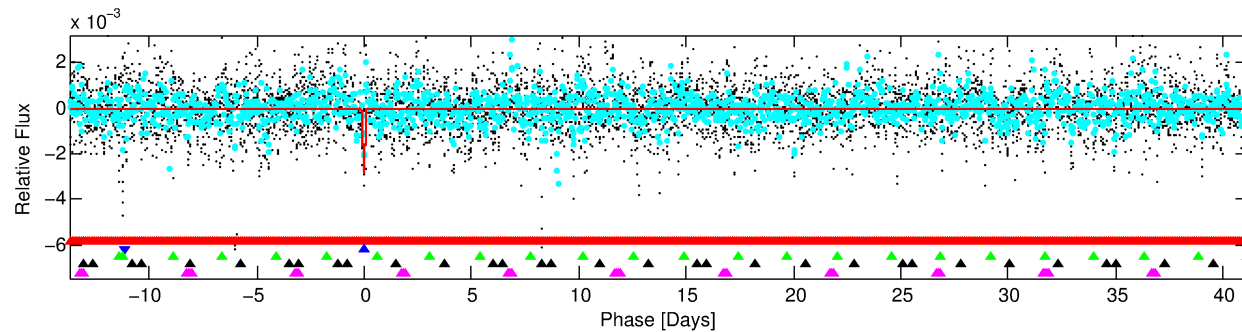
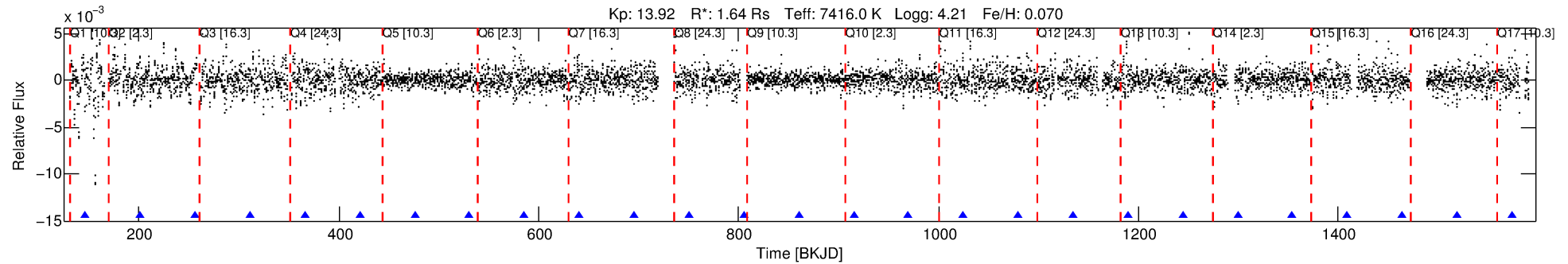
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003348714-02

No Significant Match Found

DV One-Page Summary

KIC: 3348714 Candidate: 2 of 5 Period: 54.878 d



DV Fit Results:

Period = 54.87797 [0.00055] d
Epoch = 146.8146 [0.0078] BKJD
Rp/R* = 0.0876 [0.3527]
a/R* = 47.79 [42.64]
b = 1.00 [0.52]
Seff = 66.85 [28.53]
Teq = 729 [78] K
Rp = 15.65 [63.23] Re
a = 0.3296 [0.0913] AU
Ag = 326.55 [2639.56] [0.12σ]
Teffp = 4792 [9675] K [0.42σ]

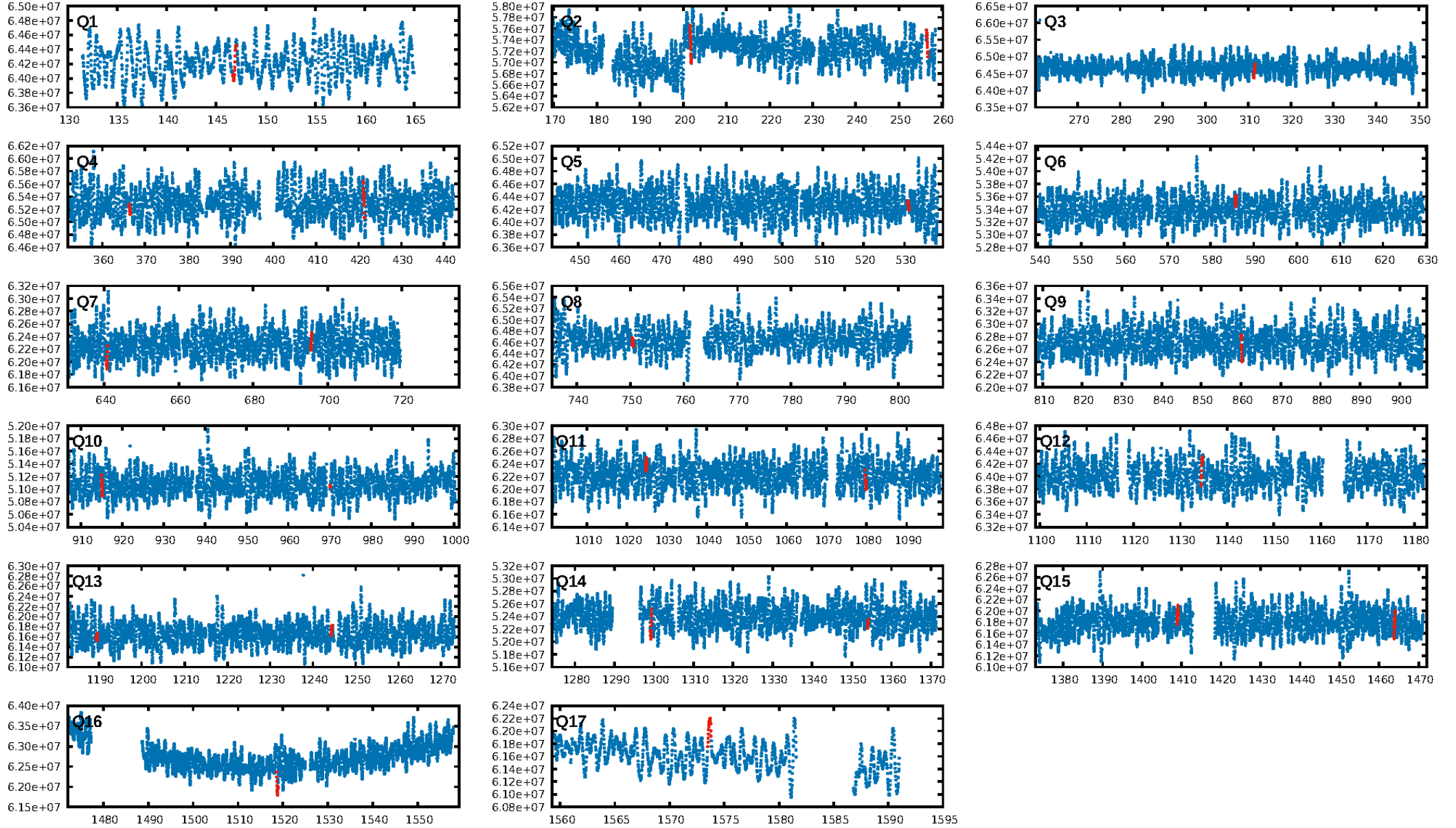
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [46.04σ]
LongPeriod-sig: 100.0% [27.57σ]
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.40e-14
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -1.326
Centroid-sig: 30.3%
Centroid-so: 0.623 arcsec [3.81σ]
OotOffset-rm: 0.028 arcsec [0.08σ]
KicOffset-rm: 0.246 arcsec [0.91σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 0.00 [0/17]

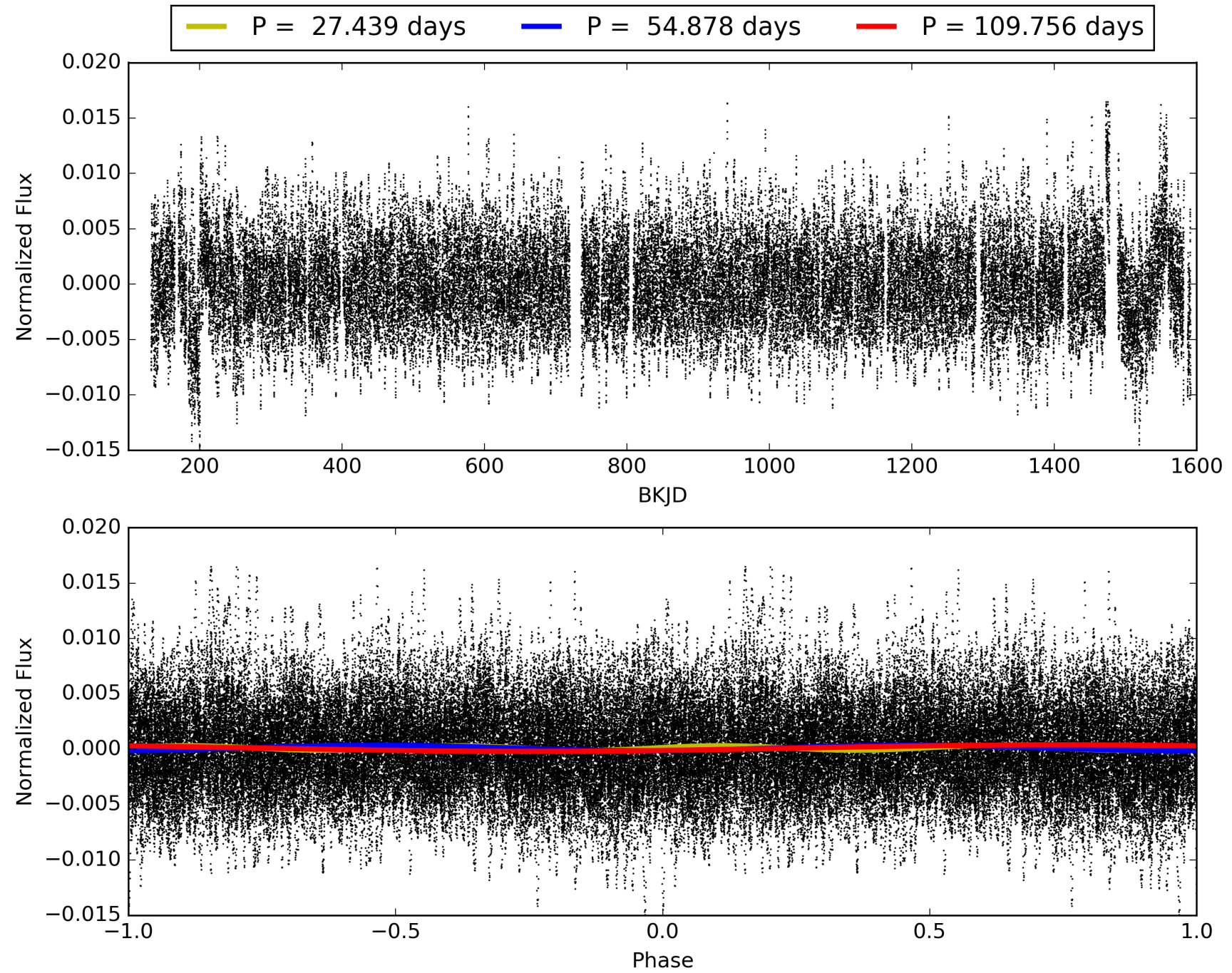
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:22:16 Z

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

TCE 003348714-02, PDC Light Curves

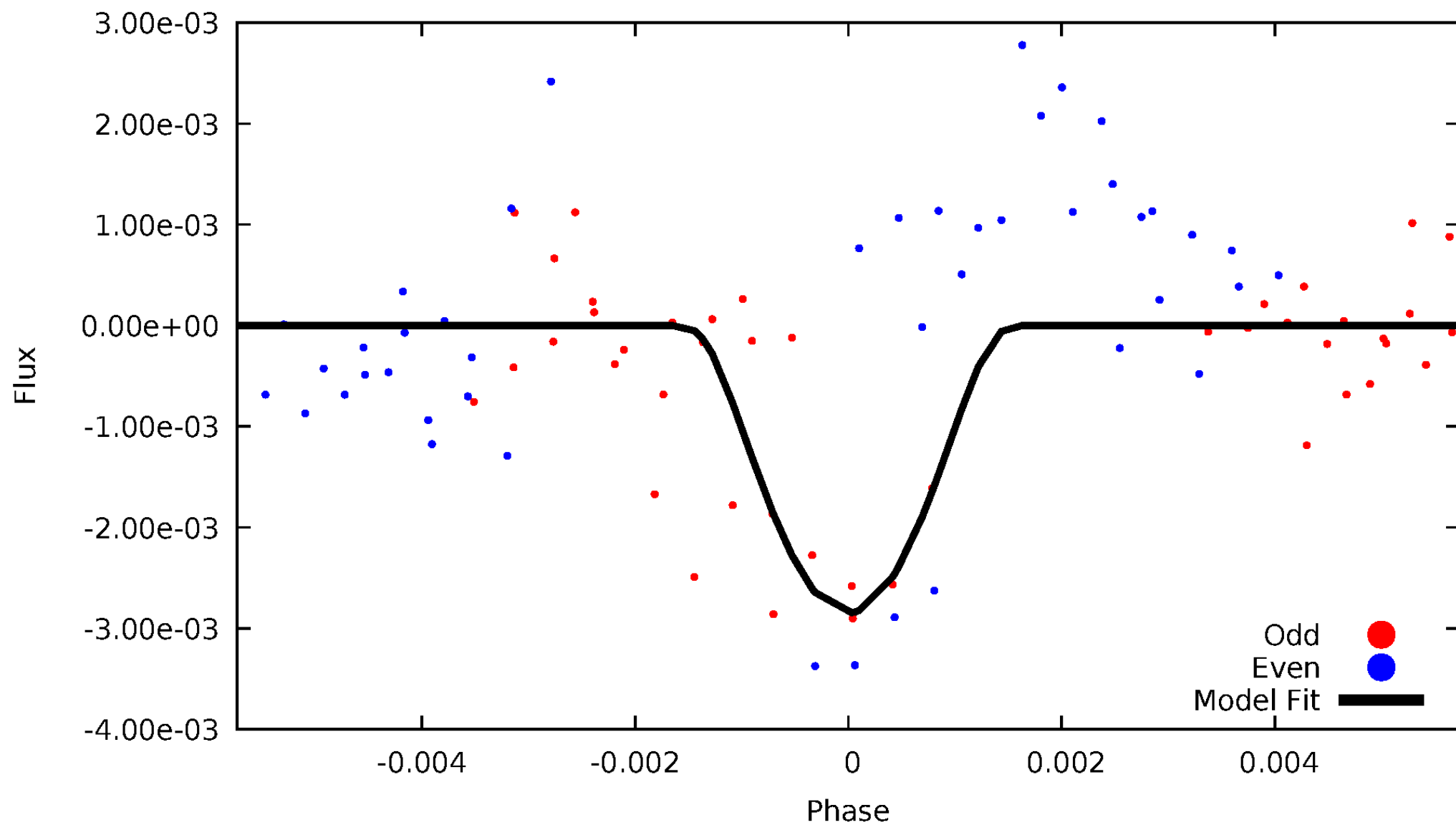


TCE 003348714-02



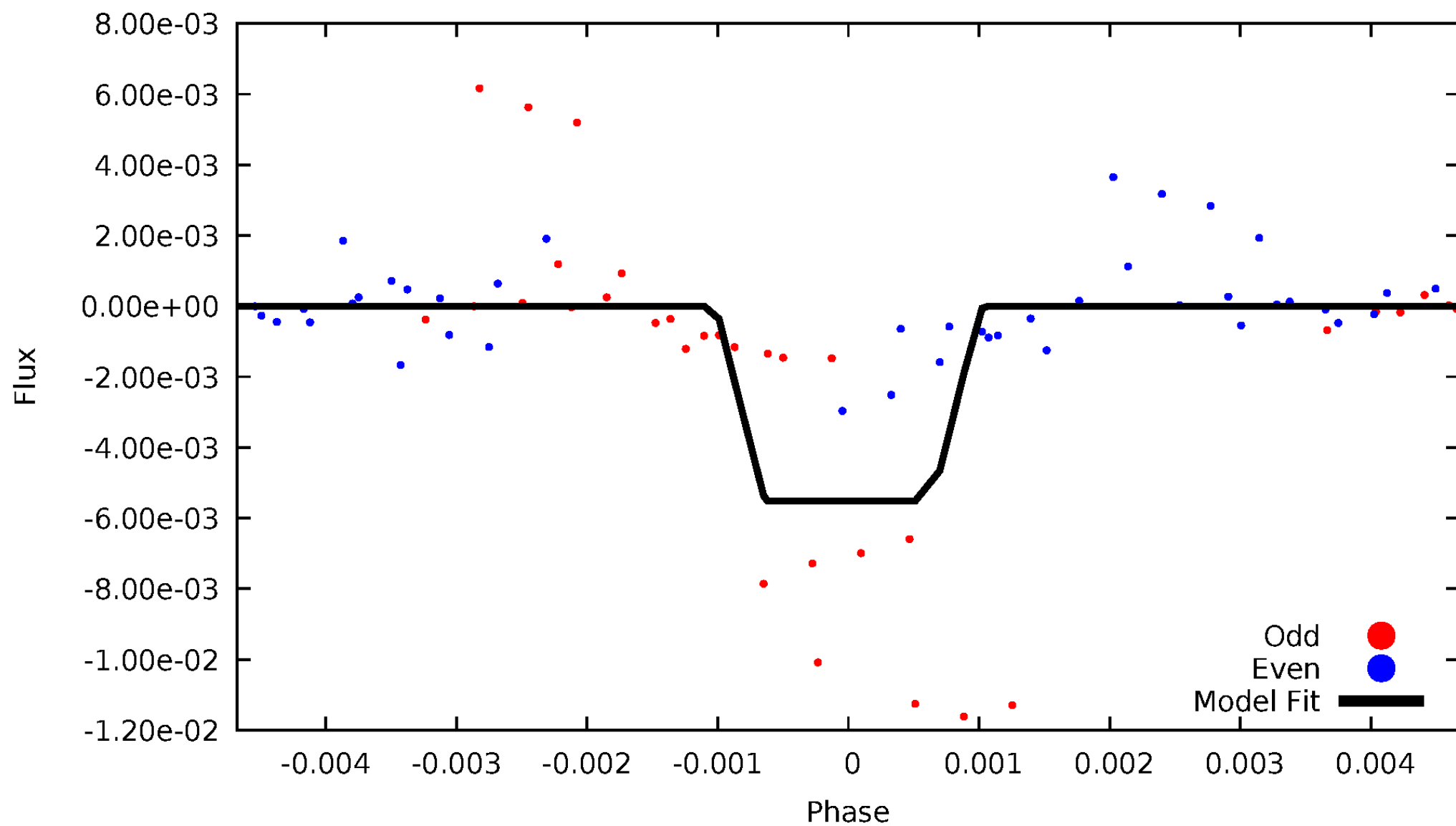
DV Odd/Even

TCE 003348714-02



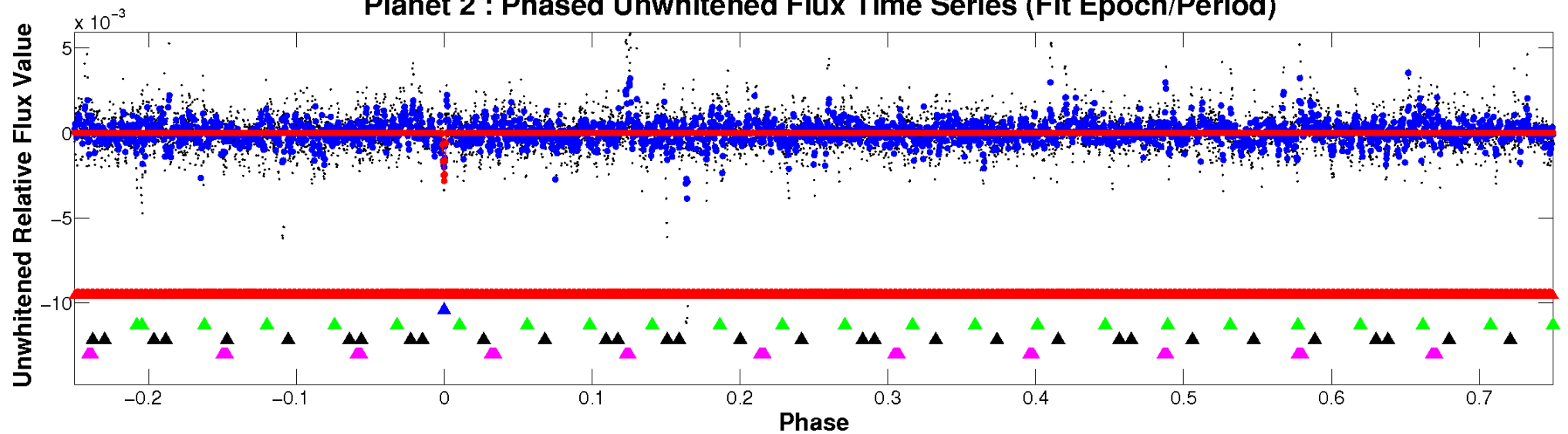
ALT Odd/Even

TCE 003348714-02

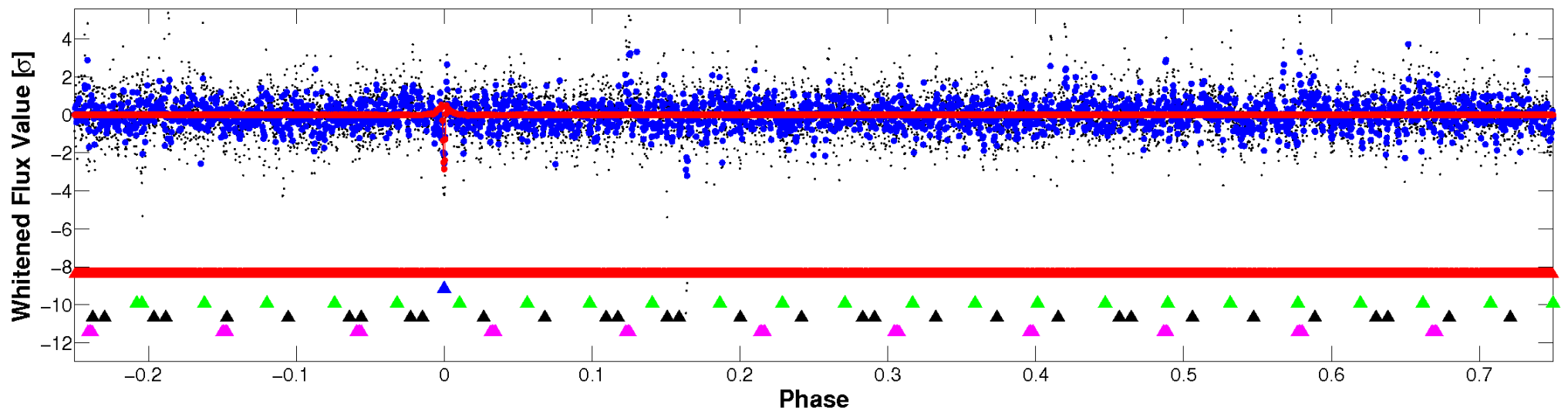


Non-Whitened Vs. Whitened Light Curve

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

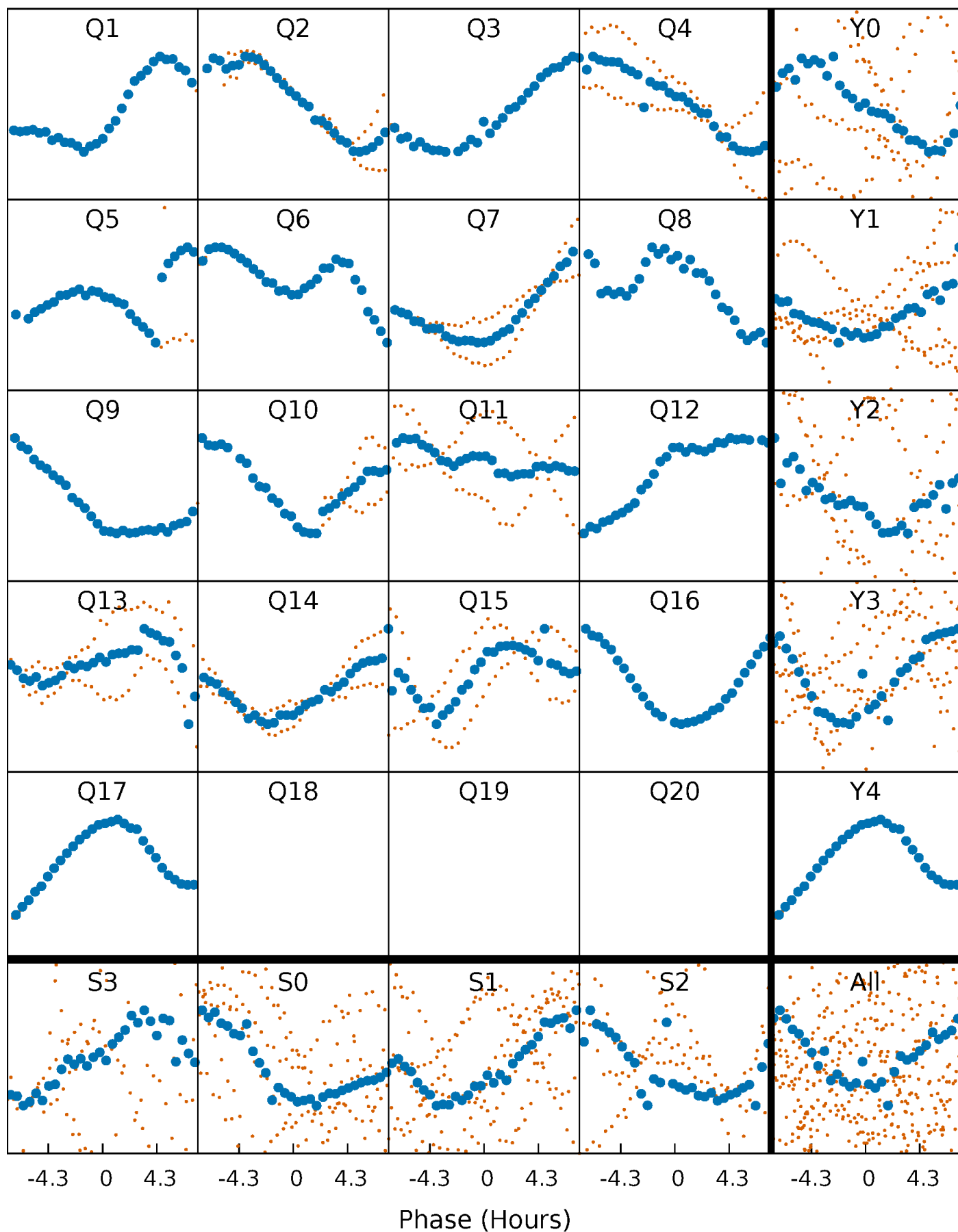


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



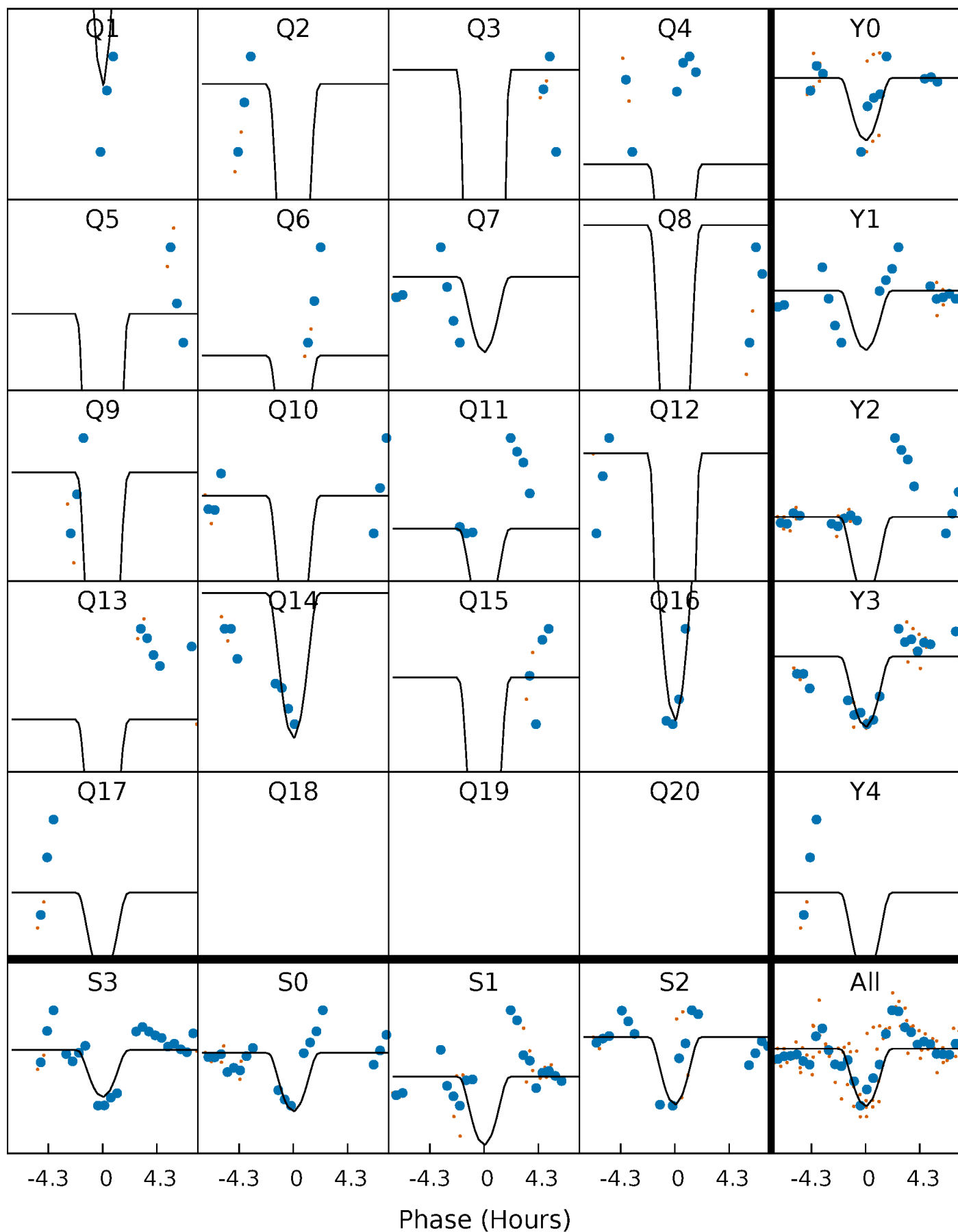
PDC Quarter-Phased Transit Curves

TCE 003348714-02 P= 54.877972 Days $T_0=146.814605$ (BKJD)



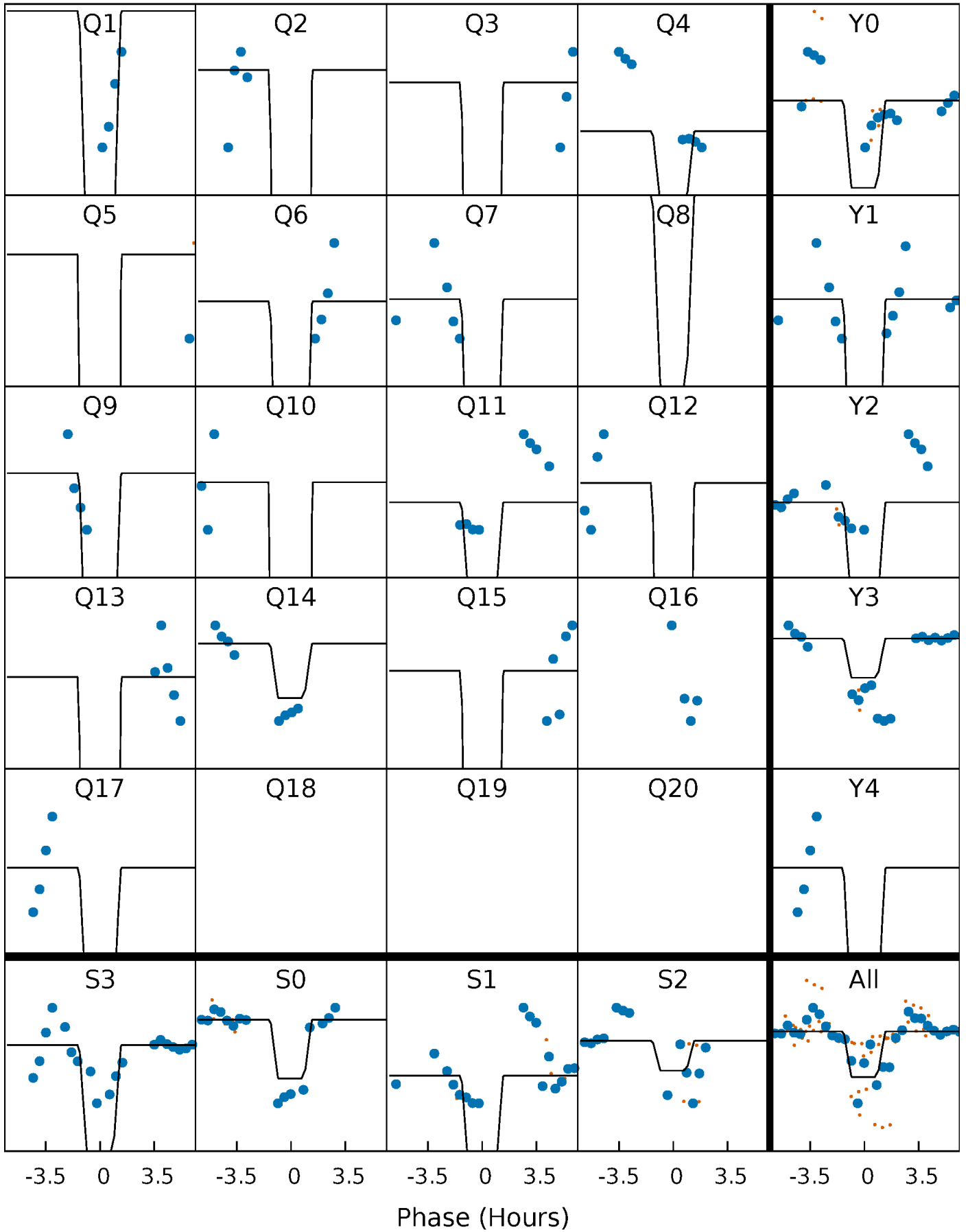
DV Quarter-Phased Transit Curves

TCE 003348714-02 P= 54.877972 Days $T_0=146.814605$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

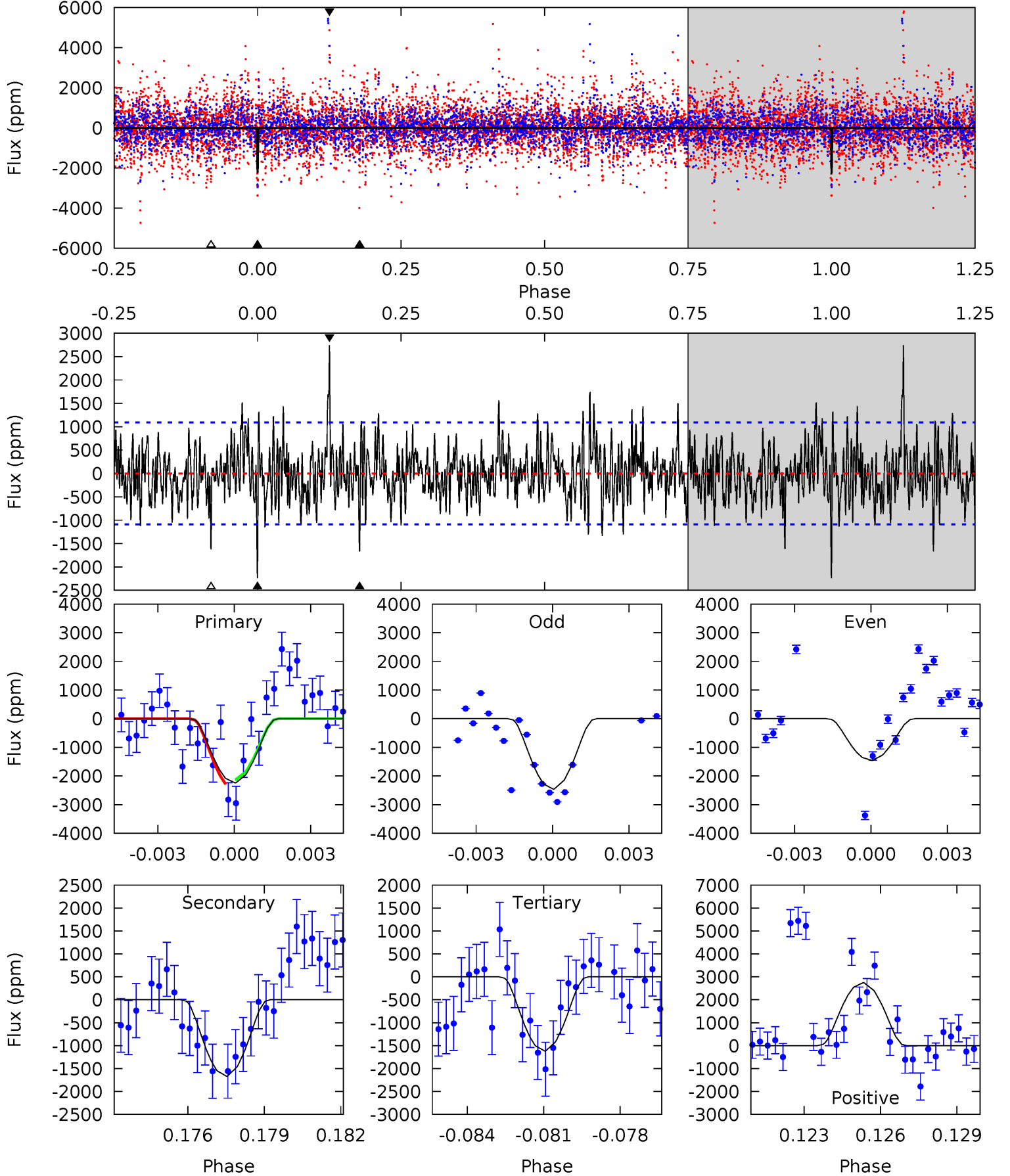
TCE 003348714-02 P= 54.877529 Days $T_0=146.799953$ (BKJD)



DV Model-Shift Uniqueness Test

003348714-02, P = 54.877972 Days, E = 91.936633 Days

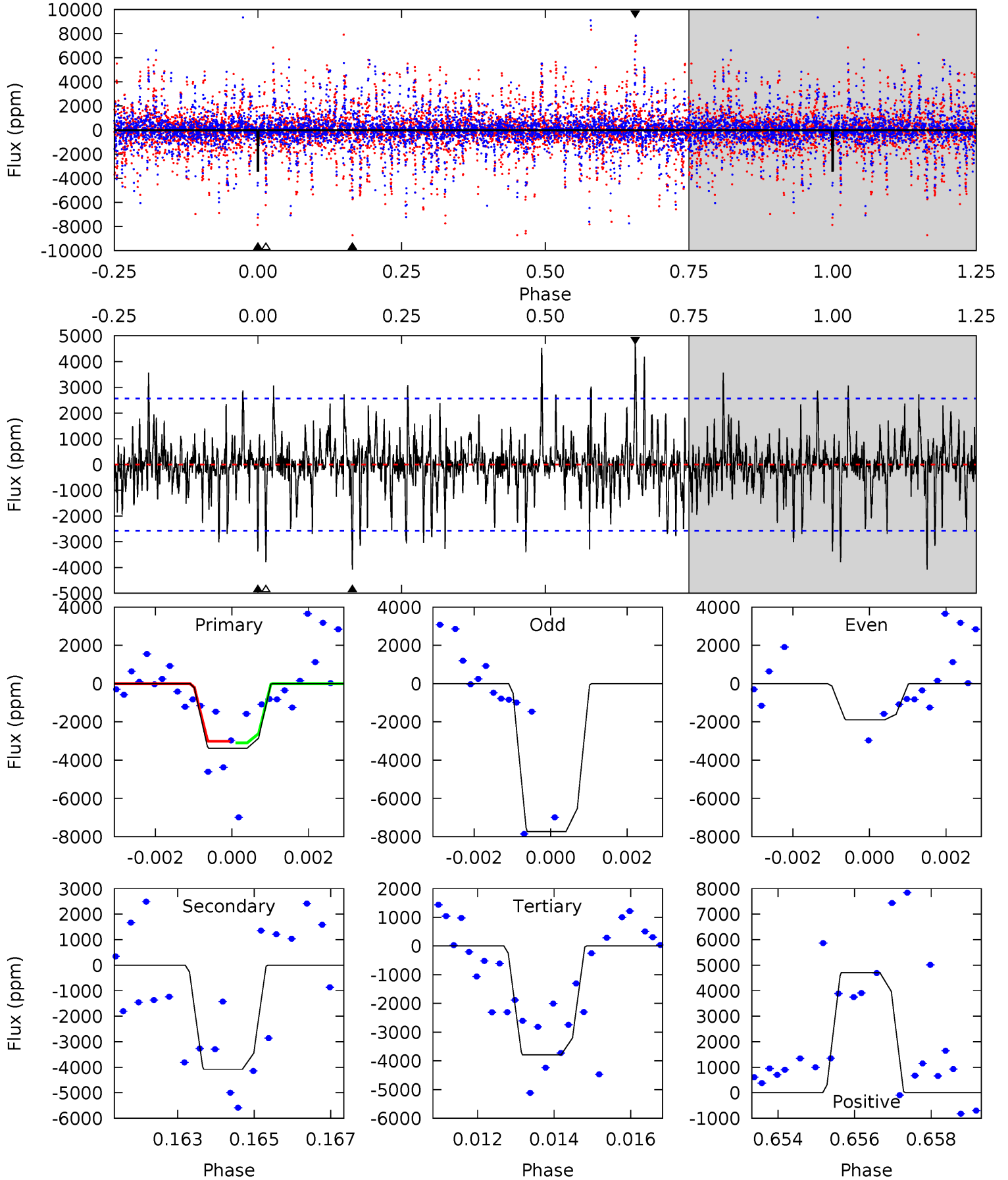
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	8.06	7.82	13.3	5.27	2.99	2.34	3.00	-2.44	0.24	-5.21	2.43	5.76	0.55	0.38



Alt Model-Shift Uniqueness Test

003348714-02, P = 54.877529 Days, E = 91.922424 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.00	8.47	7.86	9.76	5.33	3.09	1.84	-0.86	-2.76	0.61	-1.30	5.82	2.07	0.54	0.07



Stellar Parameters For KIC 003348714

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7416^{+206}_{-335}	$4.210^{+0.087}_{-0.203}$	$0.070^{+0.150}_{-0.350}$	$1.637^{+0.562}_{-0.241}$	$1.582^{+0.214}_{-0.235}$	$0.508^{+0.198}_{-0.271}$
	+3%/-5%	+2%/-5%	+214%/-500%	+34%/-15%	+14%/-15%	+39%/-53%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003348714-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1669 ± 207	$49.17^{+53.15}_{-33.24}$	1029^{+75}_{-67}	3362^{+1702}_{-632}	41^{+363}_{-32}
Alt.	-4079 ± 482	$50.60^{+50.08}_{-33.99}$	1031^{+85}_{-63}	3854^{+2262}_{-739}	90^{+800}_{-67}

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 $A_{obs} \gg 1.0$

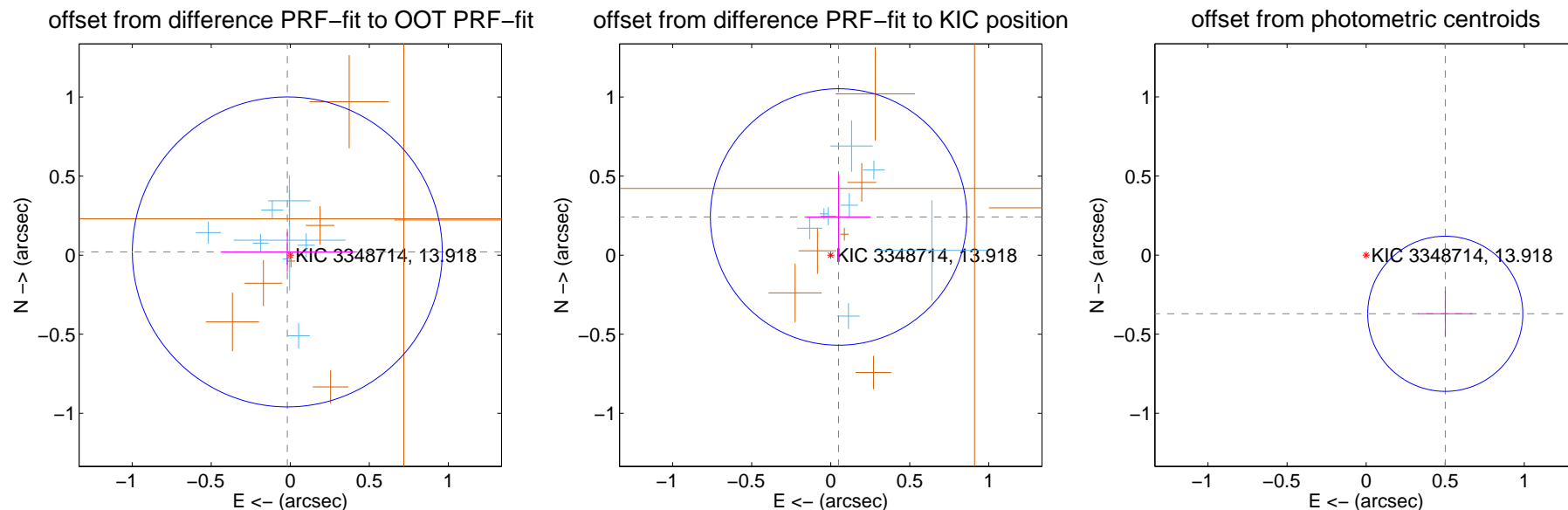
DV Centroid Data

Supplemental centroid analysis for 003348714-02. Kepler magnitude: 13.92. Transit SNR 9.31

There are 8 quarters with good PRF difference image offsets

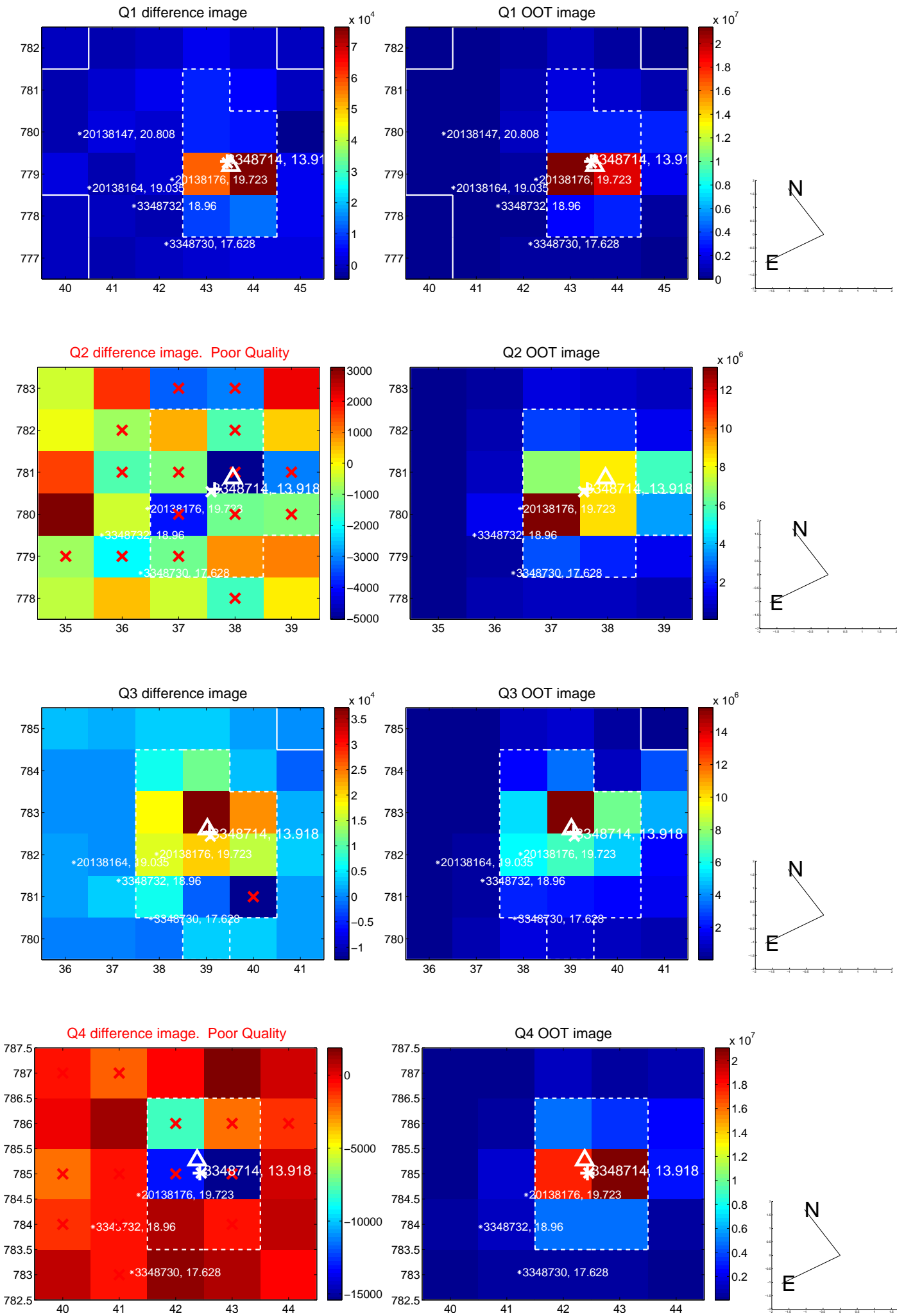
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.028 ± 0.327	0.08	0.019 ± 0.421	0.021 ± 0.125
PRF-fit source offset from KIC position	0.246 ± 0.270	0.91	-0.050 ± 0.204	0.241 ± 0.273
photometric centroid source offset	0.62 ± 0.16	3.81	-0.50 ± 0.17	-0.37 ± 0.15

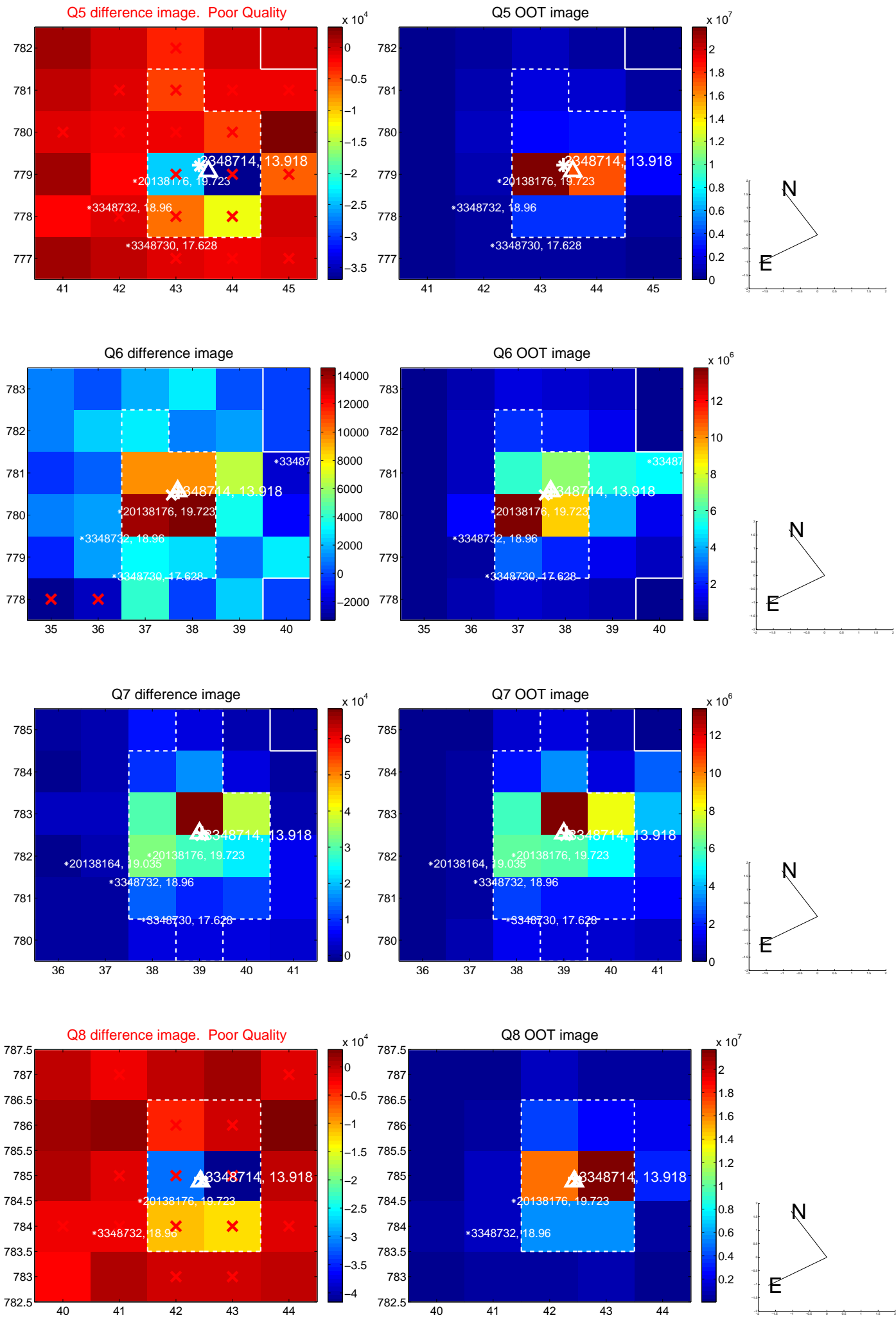


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

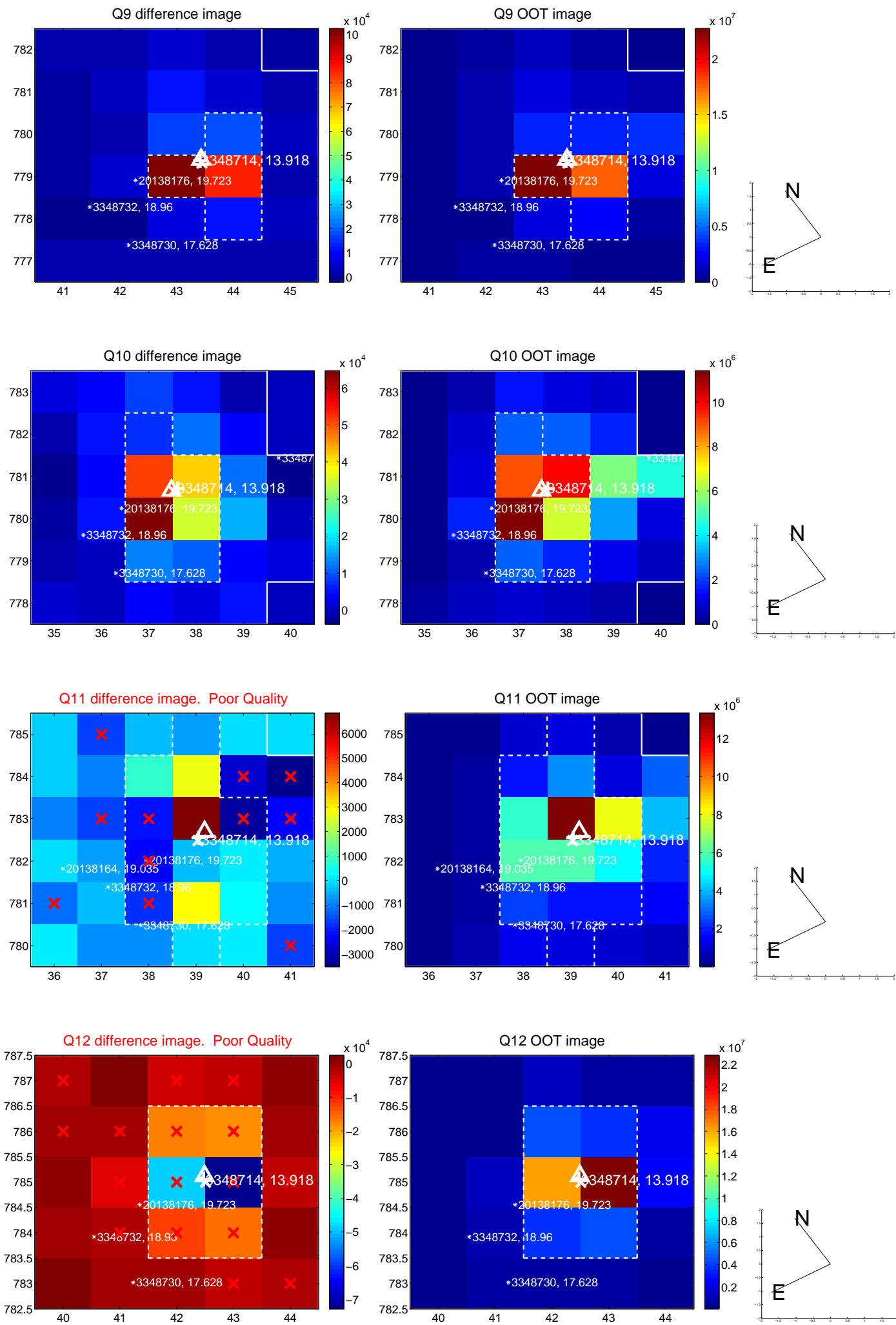
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



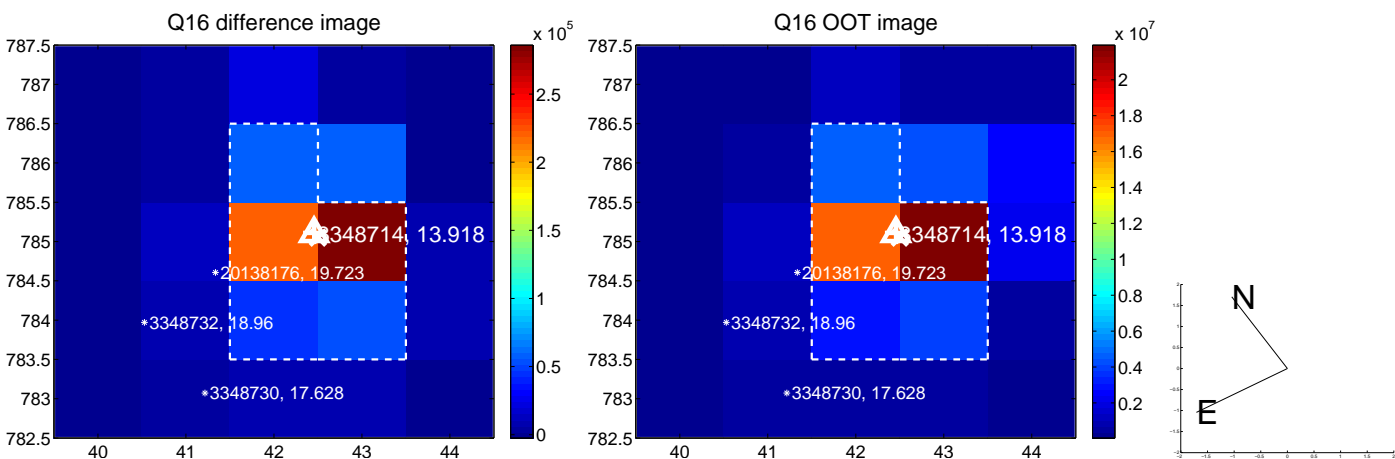
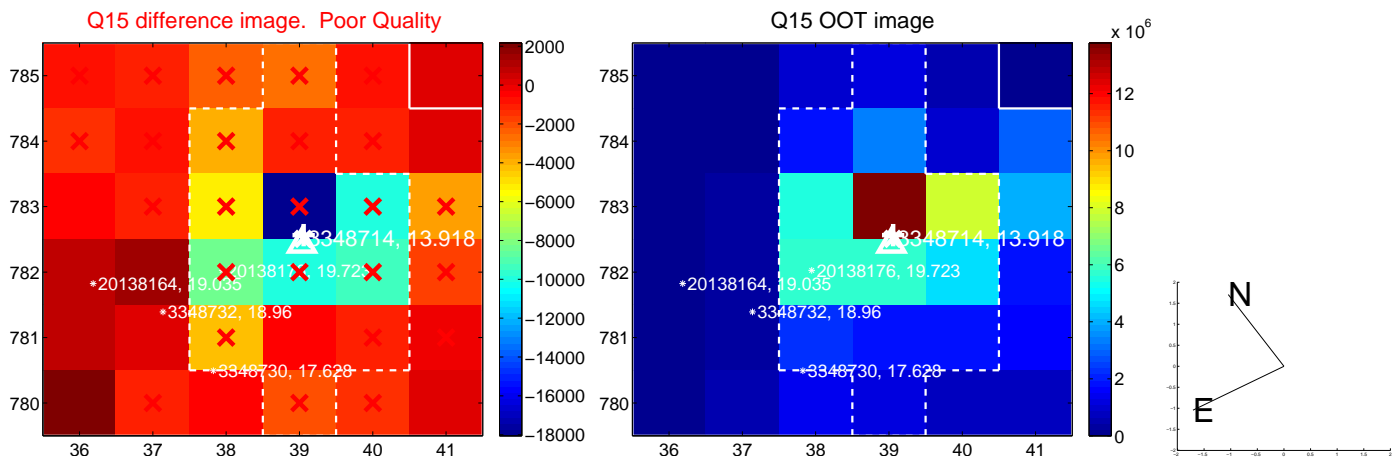
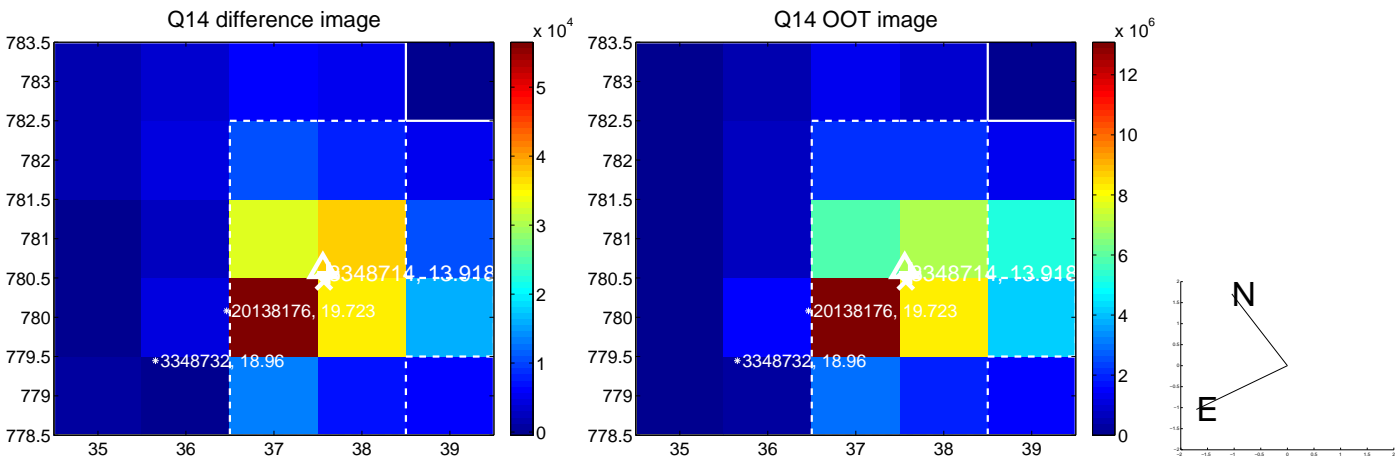
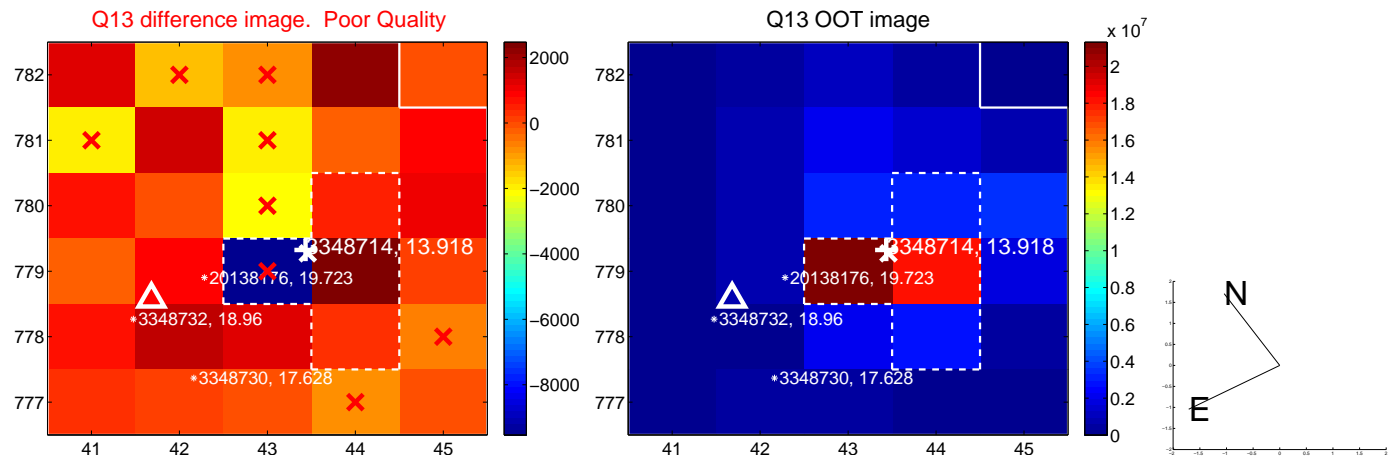
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



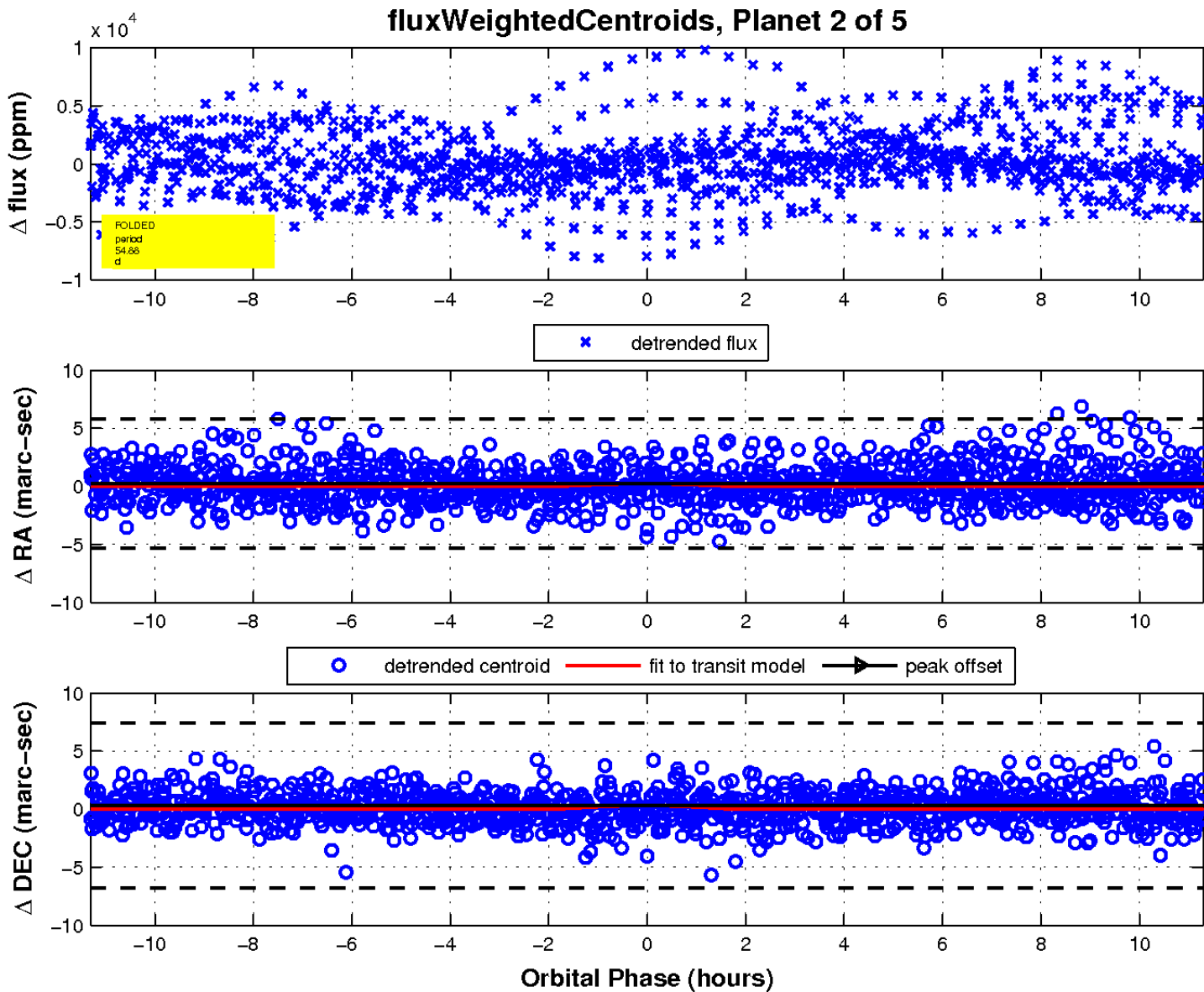
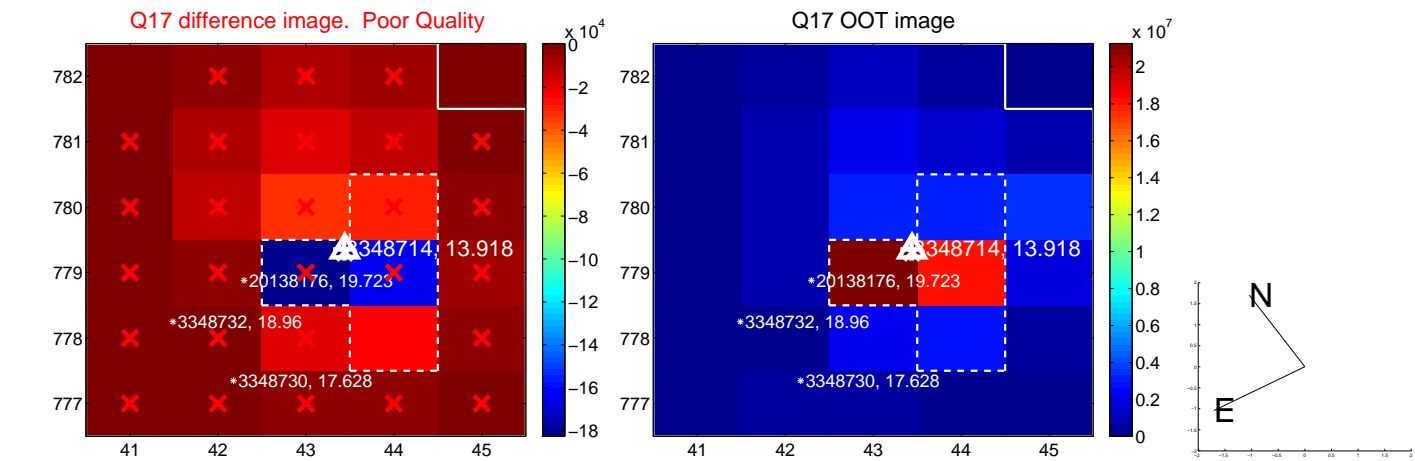
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

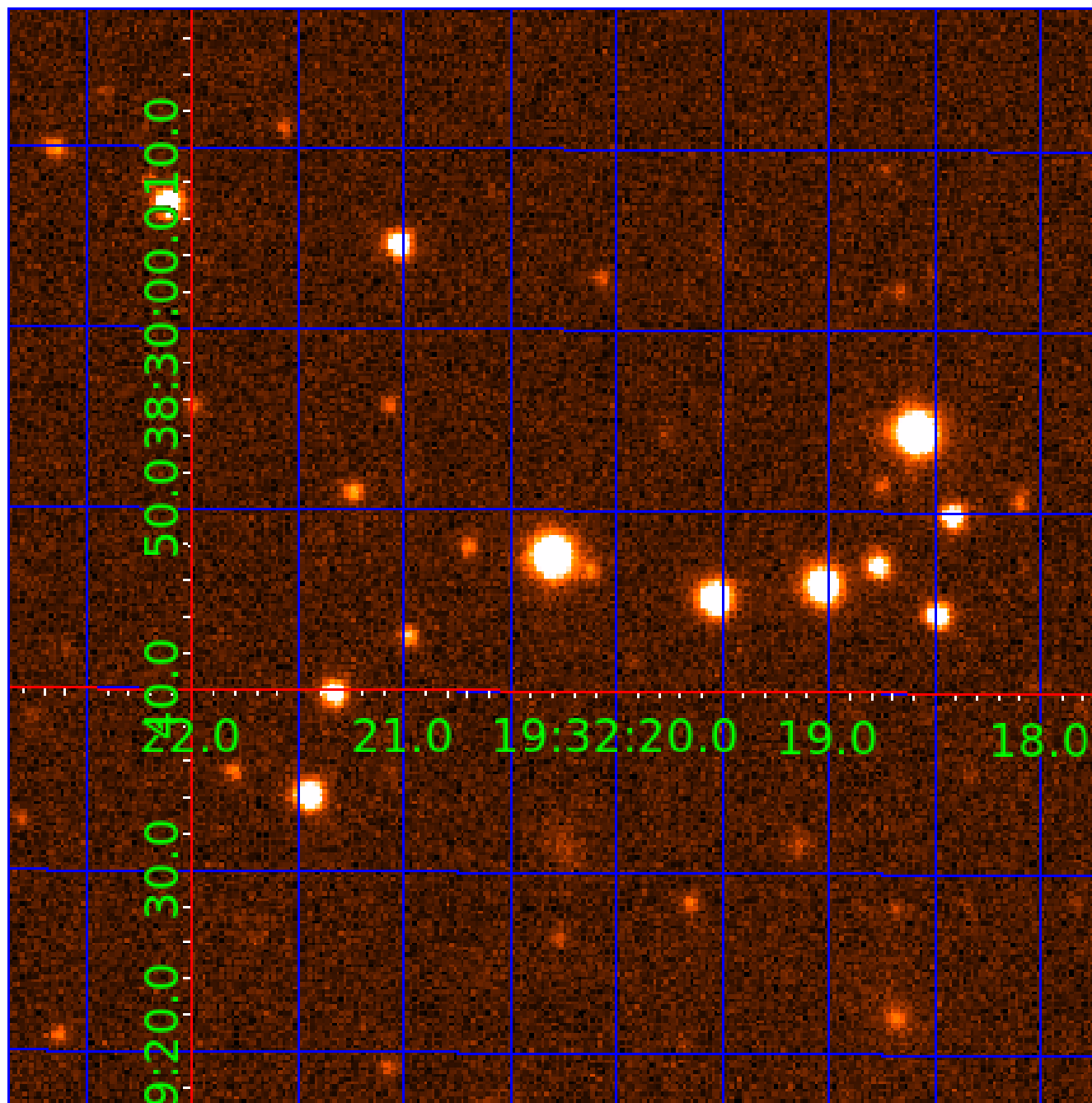


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003348714

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})
003348714-01	OBS	No	0.749283	132.217133	0.4	5.127	8.4	0.0	1.64	7416	0.11	20483.83
003348714-02	OBS	No	54.877972	146.814605	2846.2	3.774	10.3	9.3	1.64	7416	15.65	66.85
003348714-03	OBS	No	62.027682	135.597301	2630.9	4.949	8.7	8.1	1.64	7416	14.75	56.77
003348714-04	OBS	No	45.353096	155.094725	1596.4	3.227	8.3	6.5	1.64	7416	6.77	86.19
003348714-05	OBS	No	19.952573	138.770189	1000.4	0.573	8.0	3.2	1.64	7416	8.13	257.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003348714-01	OBS	FP	0.00	1	0	0	0	LPP_DV
003348714-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003348714-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT
003348714-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003348714-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST

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

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

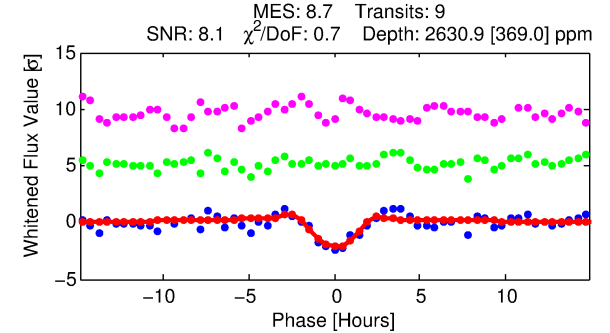
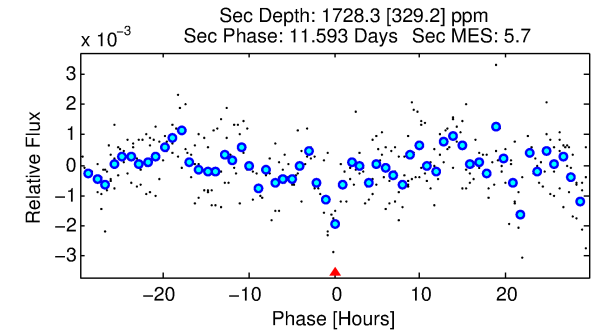
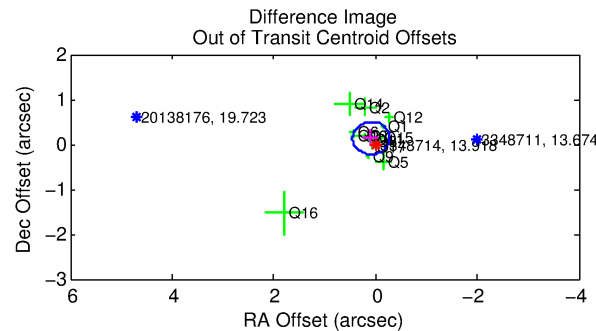
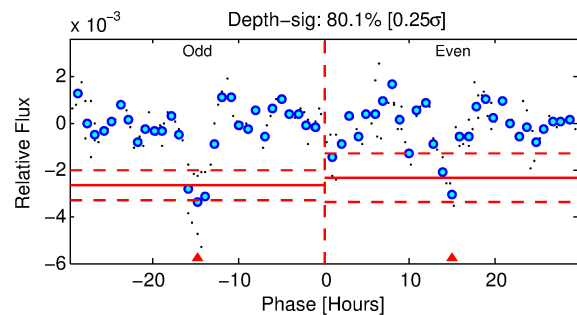
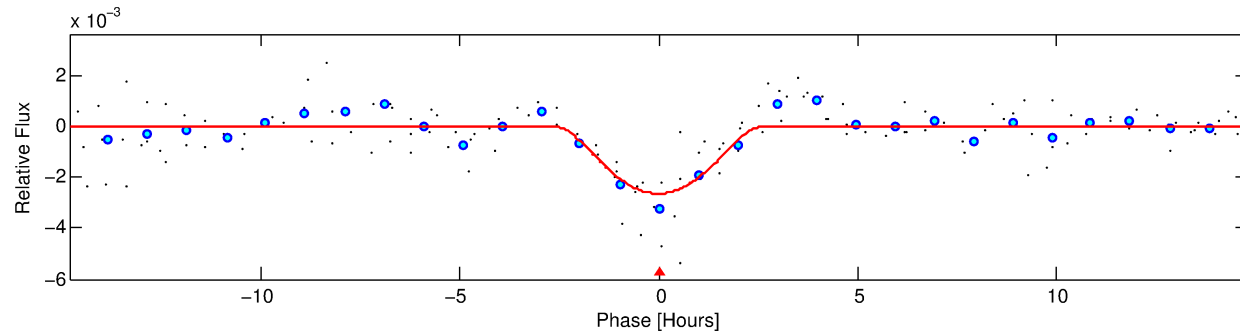
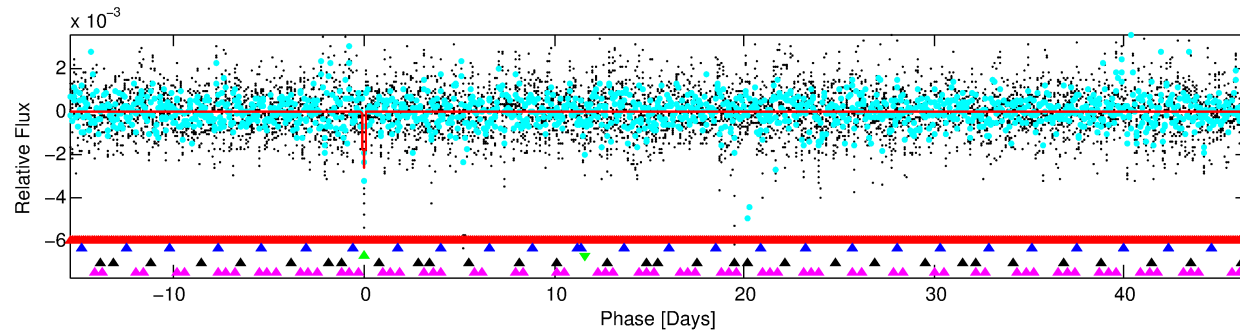
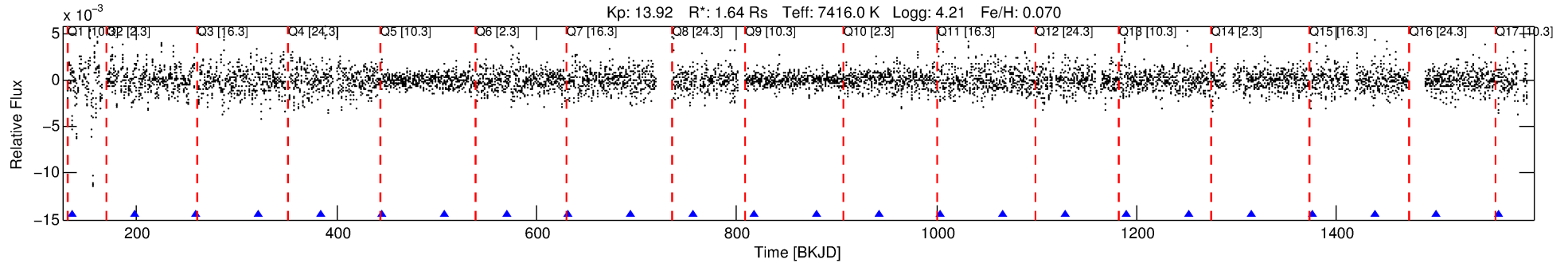
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003348714-03

No Significant Match Found

DV One-Page Summary

KIC: 3348714 Candidate: 3 of 5 Period: 62.028 d



DV Fit Results:

Period = 62.02768 [0.00086] d
Epoch = 135.5973 [0.0120] BKJD
Rp/R* = 0.0826 [0.2369]
a/R* = 40.51 [27.44]
b = 1.00 [0.36]
Seff = 56.78 [24.23]
Teq = 700 [75] K
Rp = 14.75 [42.62] Re
a = 0.3576 [0.0990] AU
Ag = 558.81 [3215.02] [0.17 σ]
Teffp = 5262 [7555] K [0.60 σ]

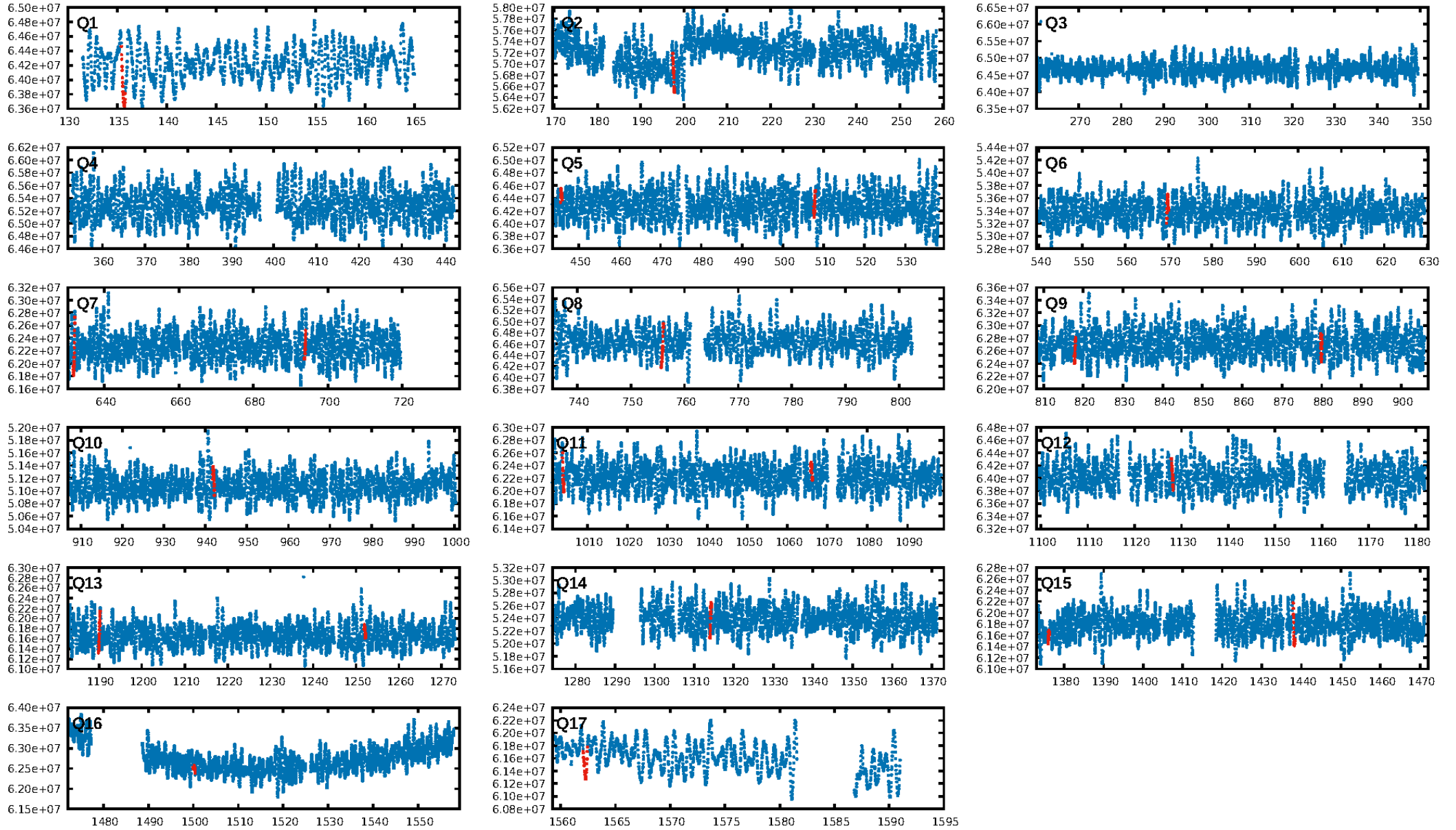
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [27.57 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 45.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.44e-11
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 1.036
Centroid-sig: 22.4%
Centroid-so: 0.599 arcsec [3.51 σ]
OotOffset-rm: 0.161 arcsec [1.33 σ]
KicOffset-rm: 0.273 arcsec [1.76 σ]
OotOffset-st: 4/3/3/4 [14]
KicOffset-st: 4/3/3/4 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 0.00 [0/15]

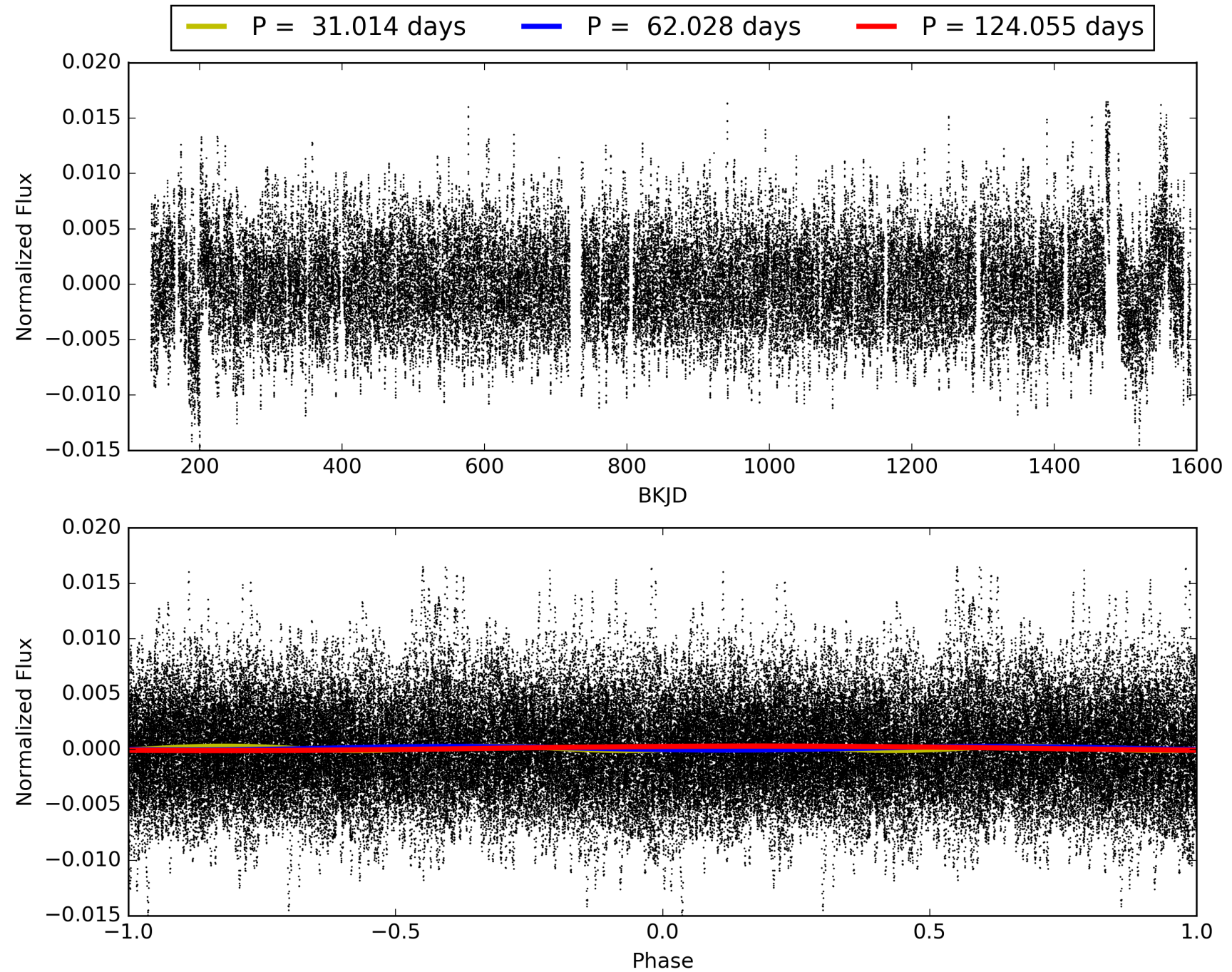
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:22:20 Z

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

TCE 003348714-03, PDC Light Curves

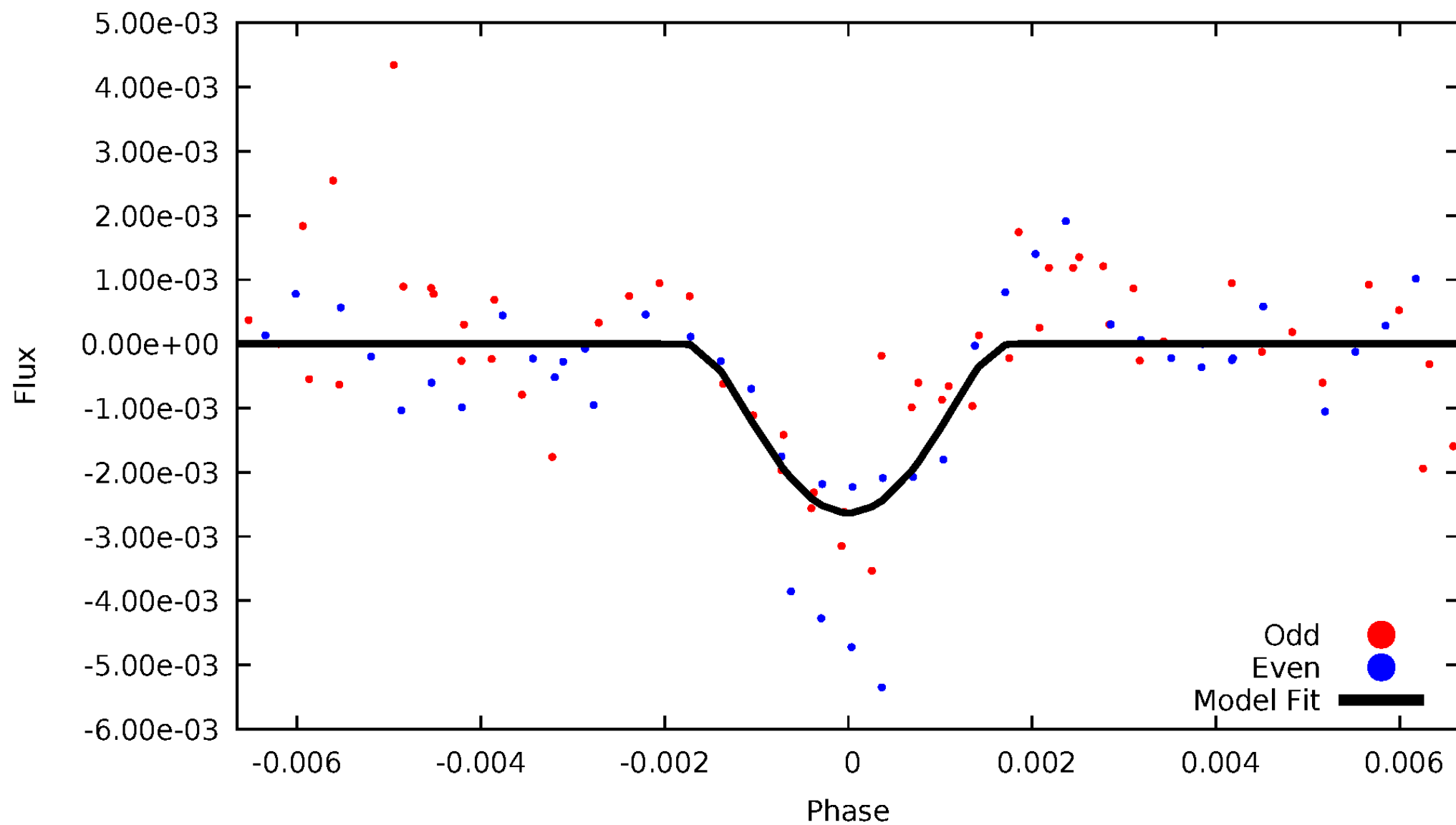


TCE 003348714-03



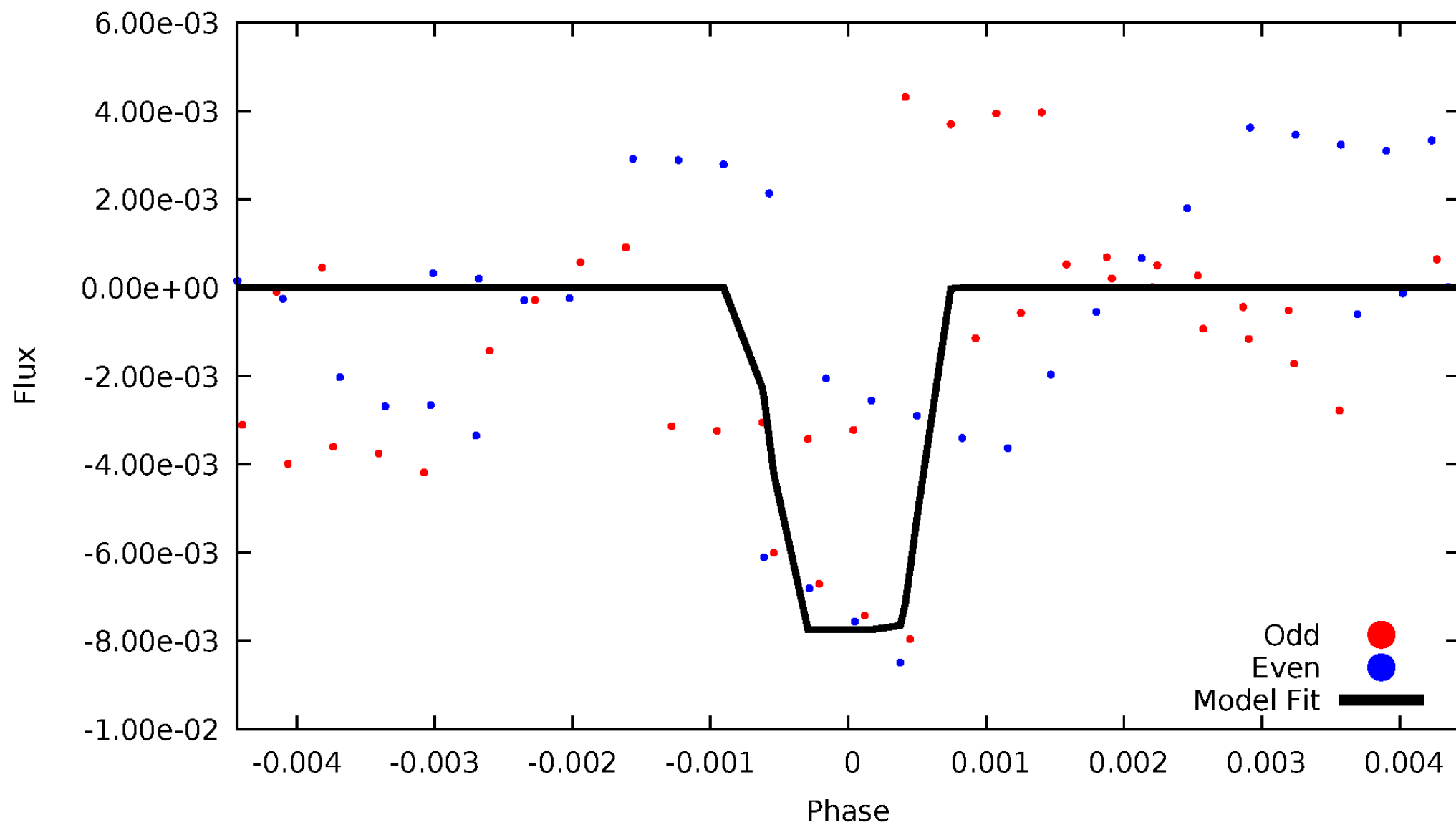
DV Odd/Even

TCE 003348714-03



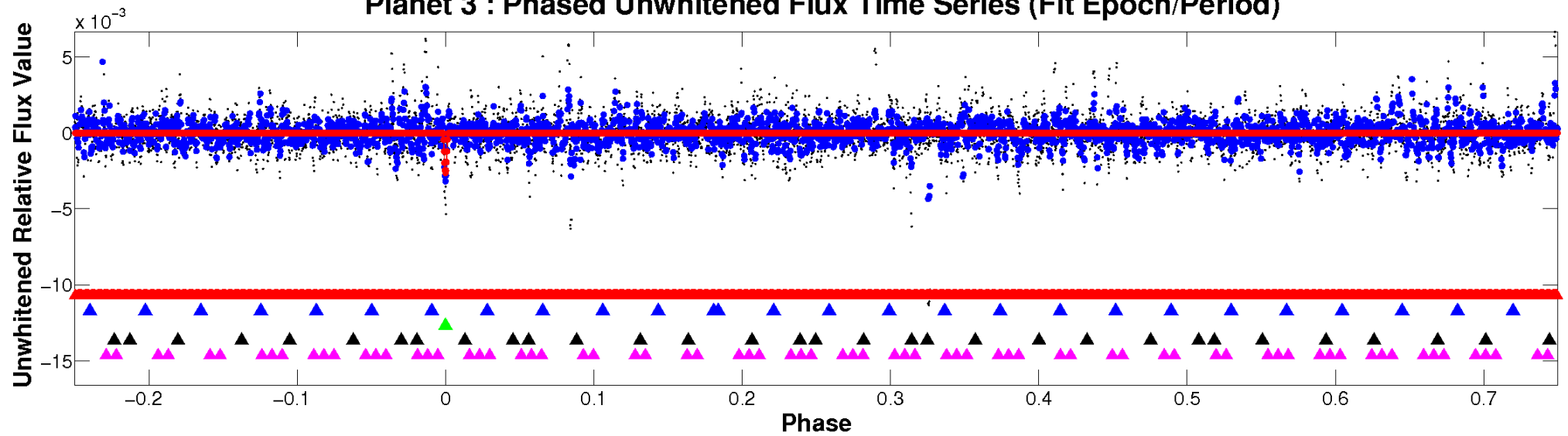
ALT Odd/Even

TCE 003348714-03

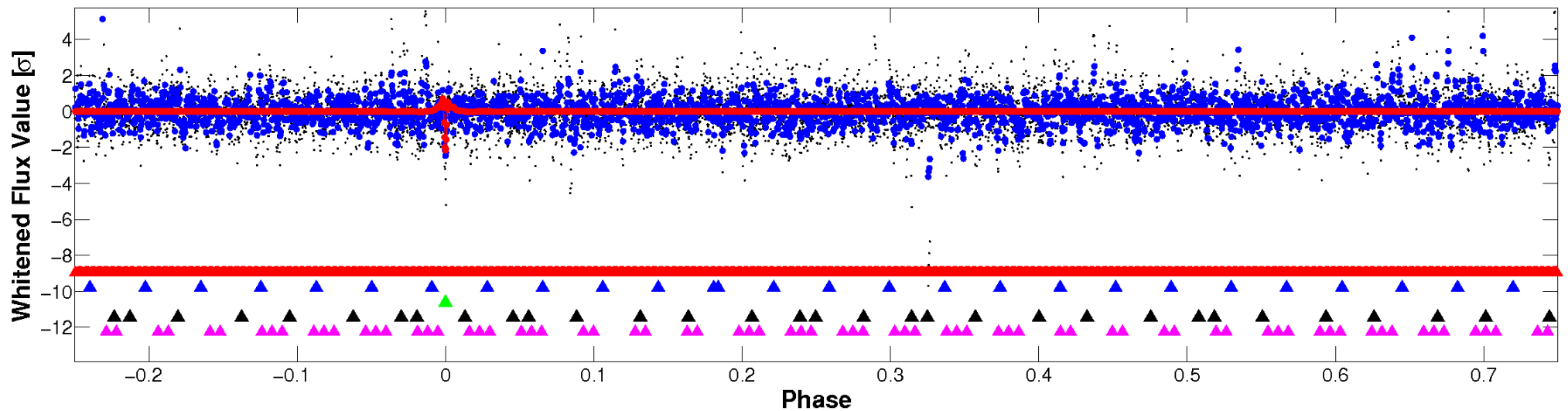


Non-Whitened Vs. Whitened Light Curve

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

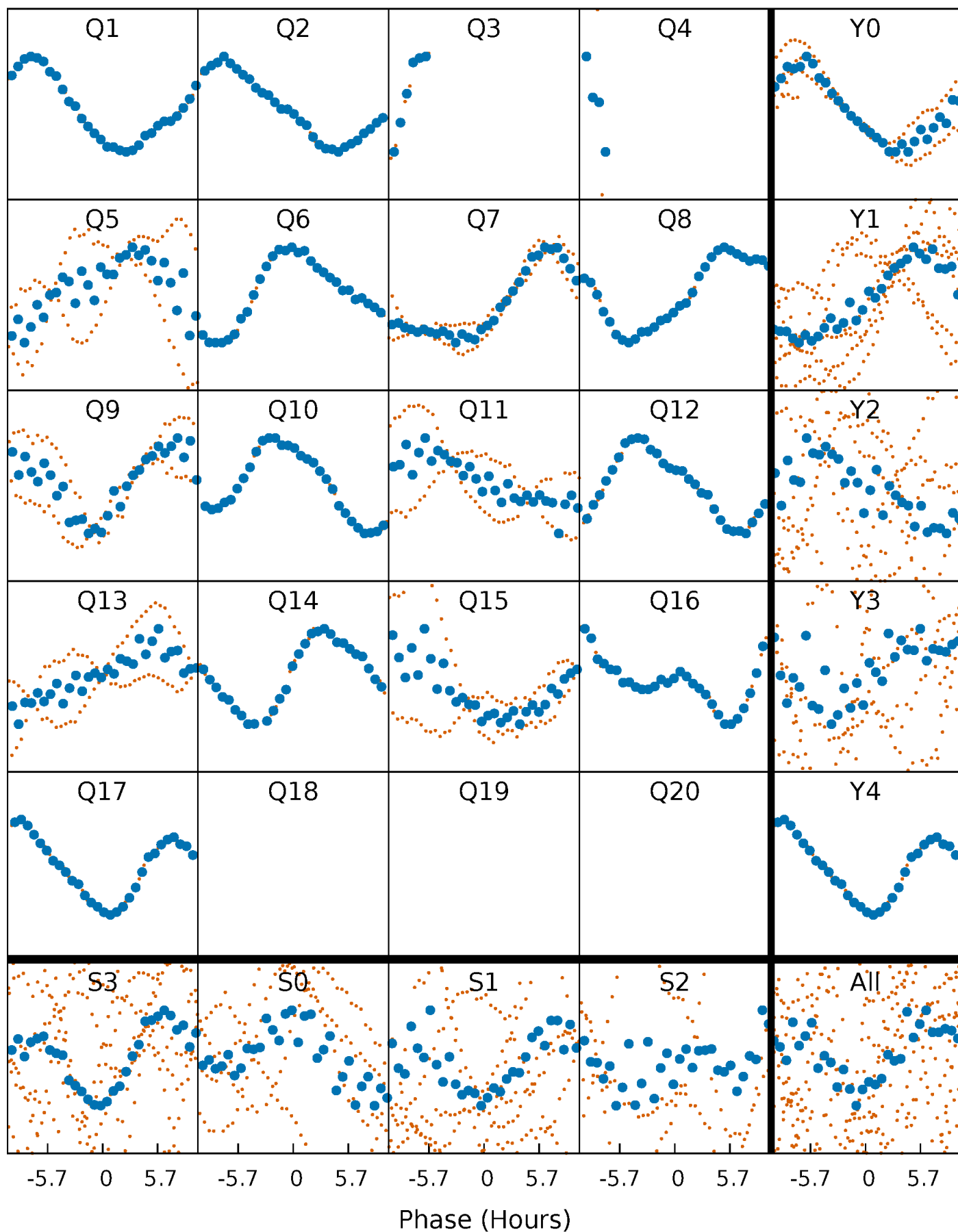


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



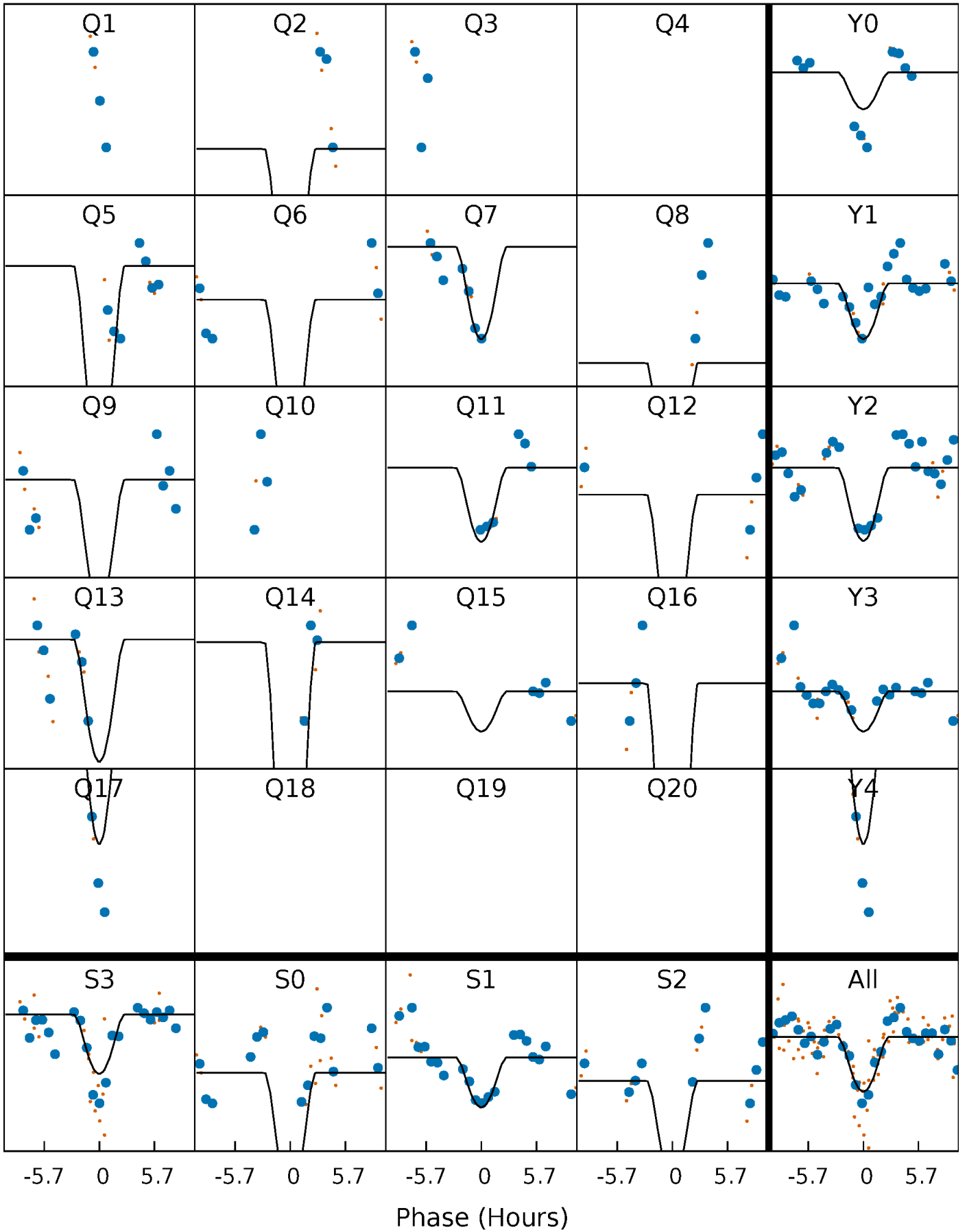
PDC Quarter-Phased Transit Curves

TCE 003348714-03 P= 62.027682 Days $T_0=135.597301$ (BKJD)



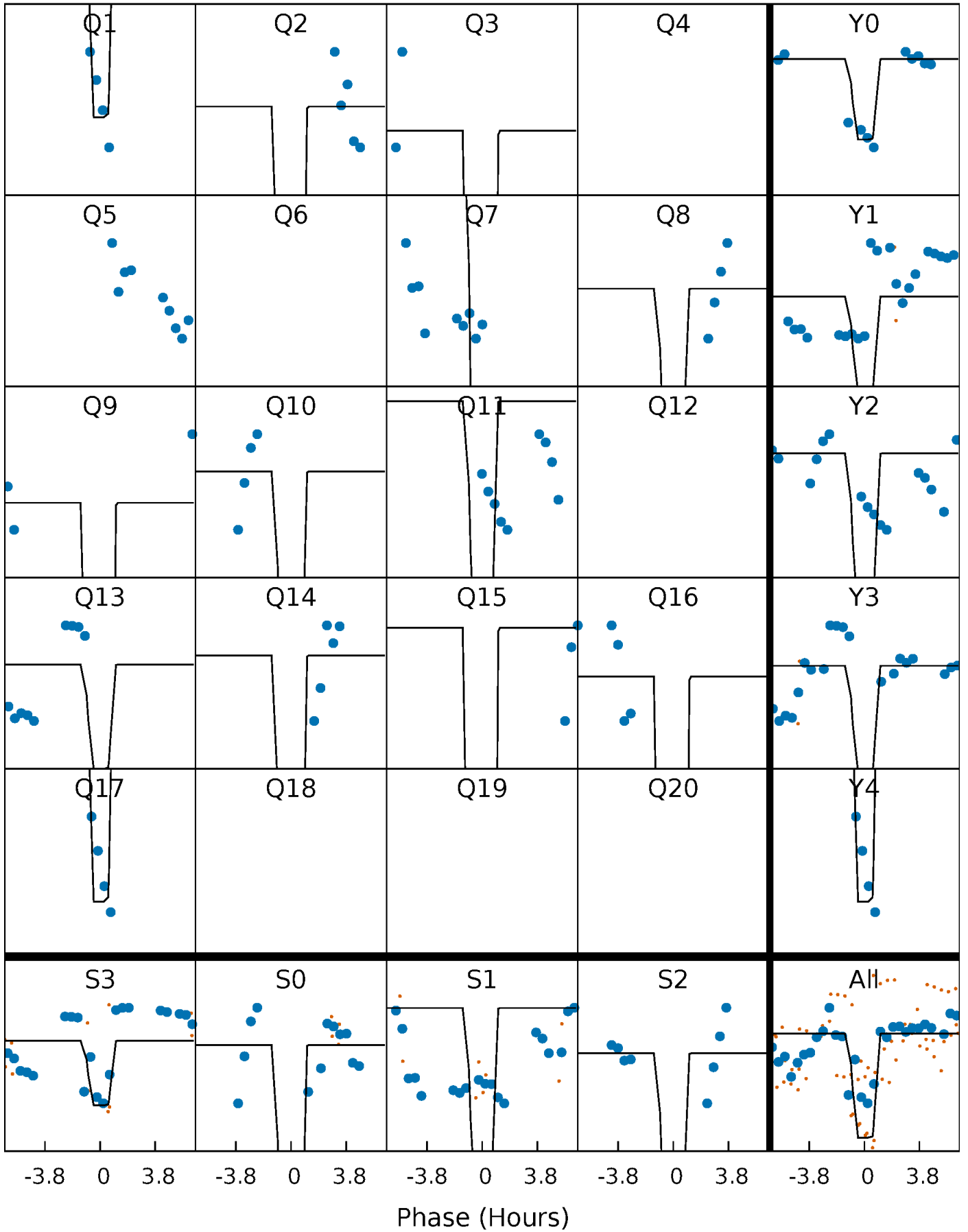
DV Quarter-Phased Transit Curves

TCE 003348714-03 P= 62.027682 Days $T_0=135.597301$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

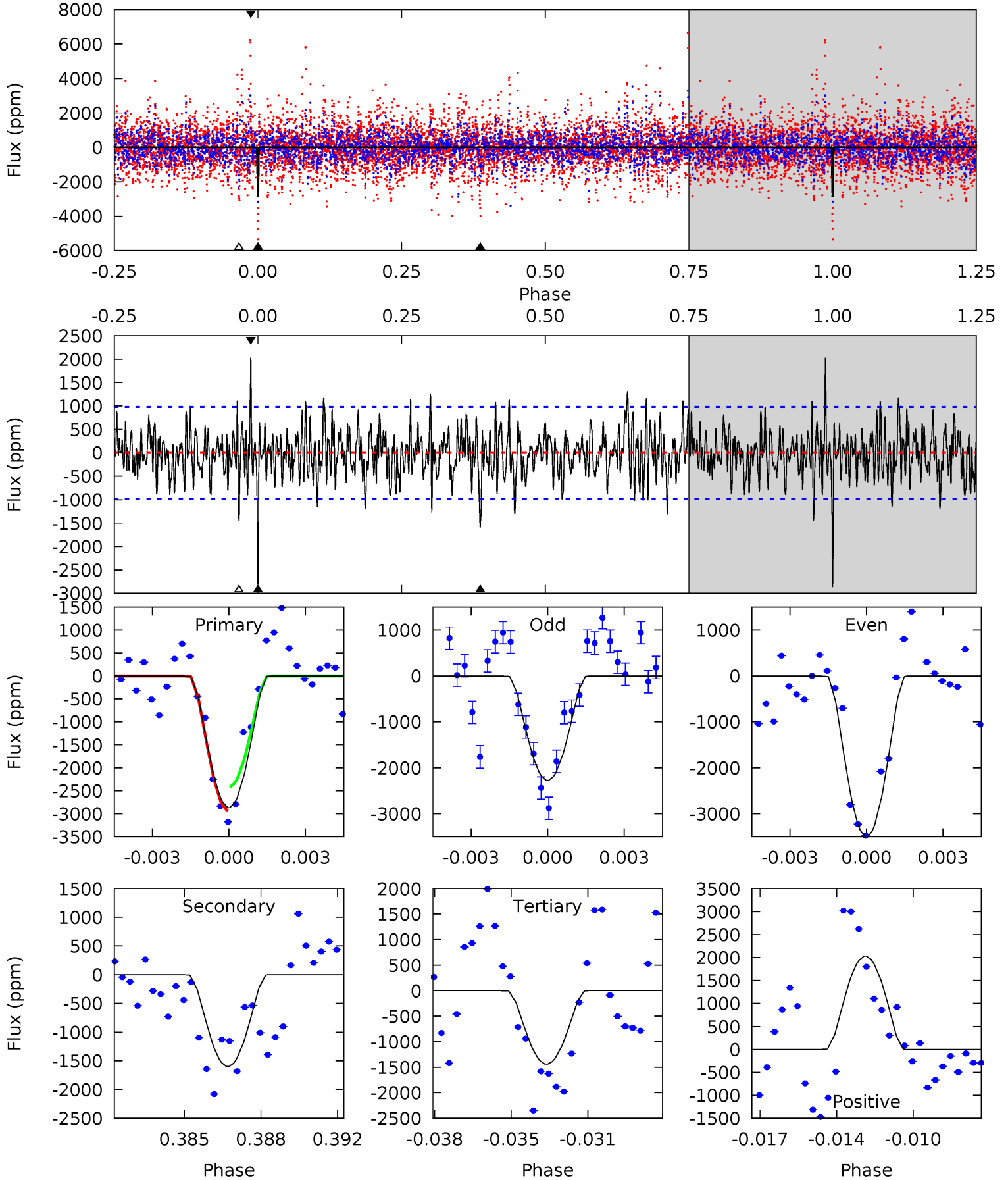
TCE 003348714-03 P= 62.027202 Days $T_0=135.596496$ (BKJD)



DV Model-Shift Uniqueness Test

003348714-03, P = 62.027682 Days, E = 73.569619 Days

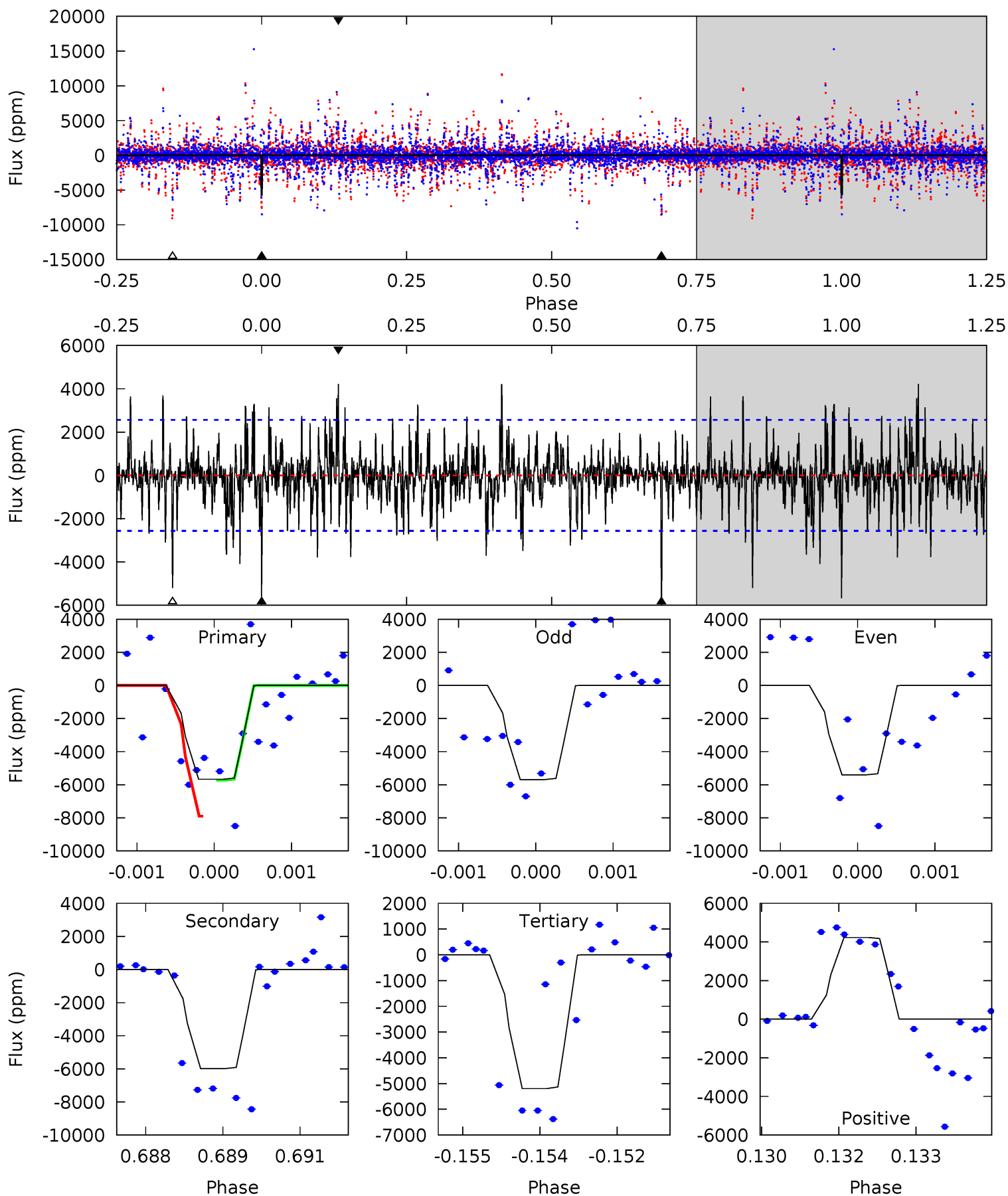
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	8.54	7.69	10.8	5.23	2.92	2.25	7.62	4.47	0.85	-2.30	3.13	0.93	0.41	1.36



Alt Model-Shift Uniqueness Test

003348714-03, P = 62.027202 Days, E = 73.569294 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	12.6	10.9	8.89	5.39	3.18	2.07	1.00	3.03	1.66	3.69	0.26	0.98	0.41	0



Stellar Parameters For KIC 003348714

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7416^{+206}_{-335}	$4.210^{+0.087}_{-0.203}$	$0.070^{+0.150}_{-0.350}$	$1.637^{+0.562}_{-0.241}$	$1.582^{+0.214}_{-0.235}$	$0.508^{+0.198}_{-0.271}$
	+3%/-5%	+2%/-5%	+214%/-500%	+34%/-15%	+14%/-15%	+39%/-53%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003348714-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1599±187	$33.12^{+38.05}_{-22.75}$	991^{+66}_{-62}	3821^{+2200}_{-842}	102^{+926}_{-81}
Alt.	-5983±476	$35.40^{+37.29}_{-24.87}$	988^{+77}_{-59}	4799^{+3950}_{-1129}	338^{+3234}_{-261}

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

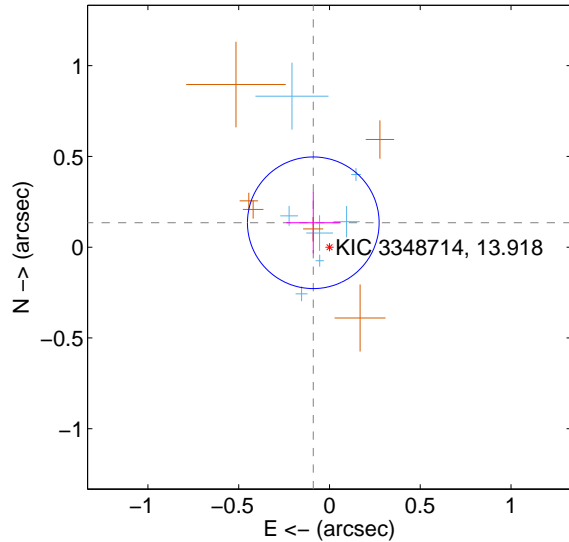
Supplemental centroid analysis for 003348714-03. Kepler magnitude: 13.92. Transit SNR 8.11

There are 7 quarters with good PRF difference image offsets

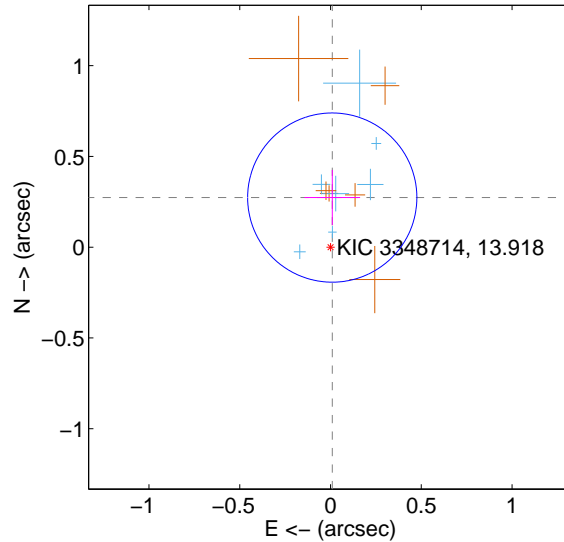
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.161 ± 0.121	1.33	0.089 ± 0.149	0.134 ± 0.169
PRF-fit source offset from KIC position	0.273 ± 0.155	1.76	-0.010 ± 0.153	0.273 ± 0.152
photometric centroid source offset	0.60 ± 0.17	3.51	-0.44 ± 0.19	-0.40 ± 0.14

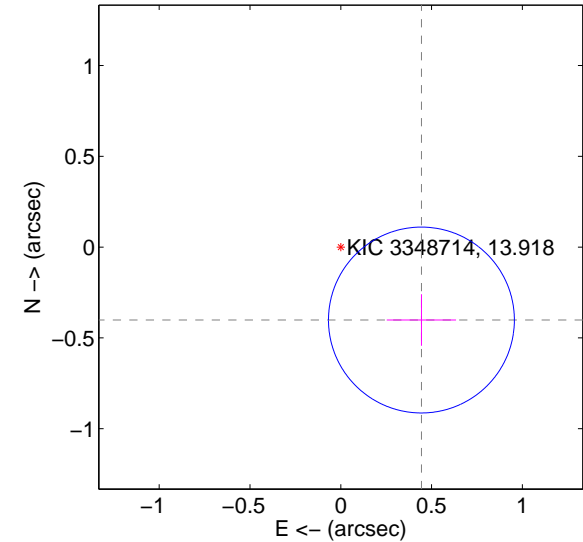
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

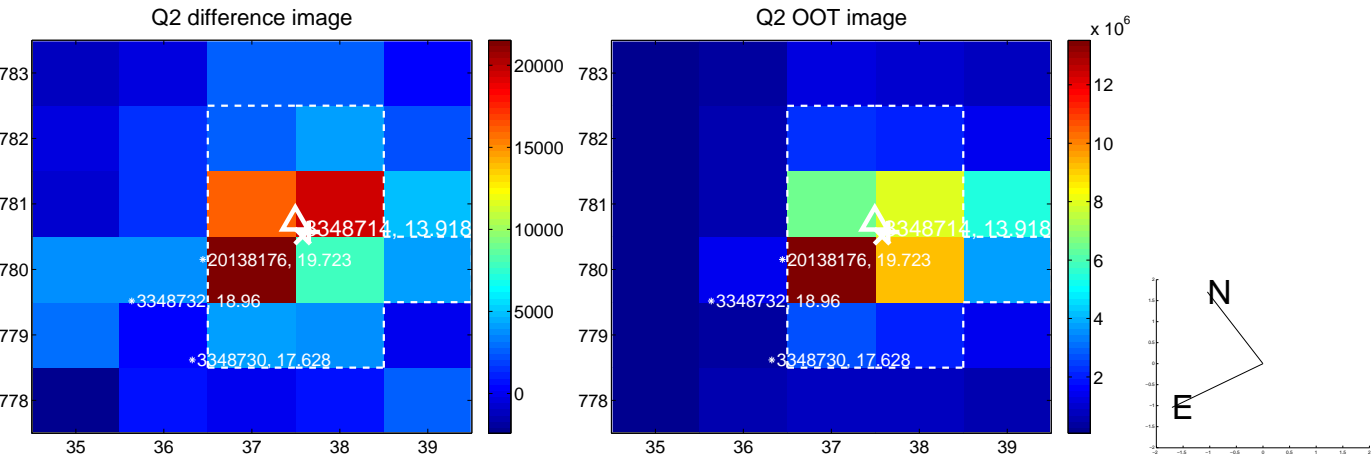
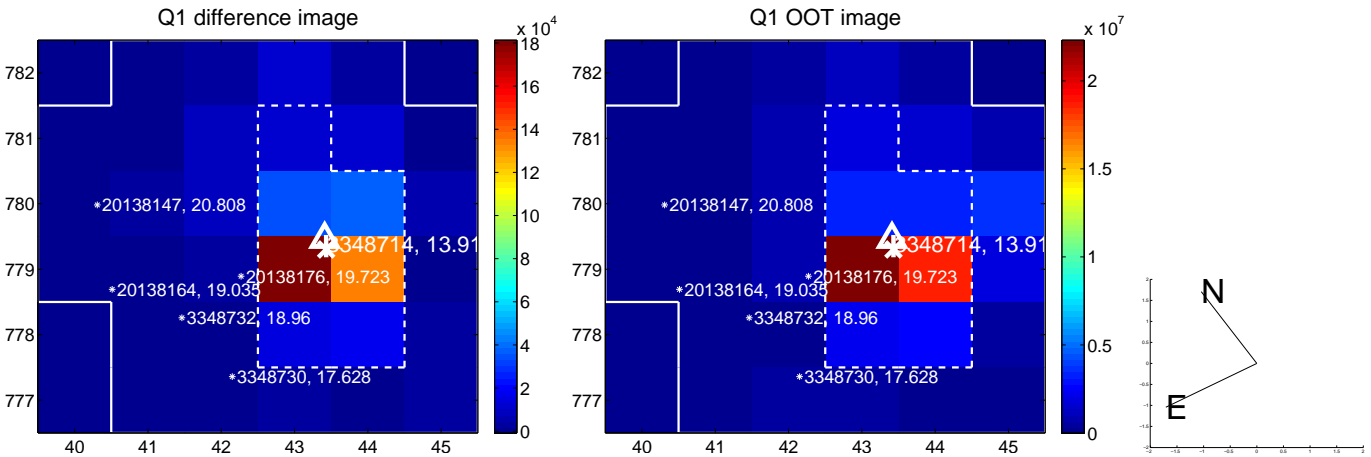


offset from photometric centroids

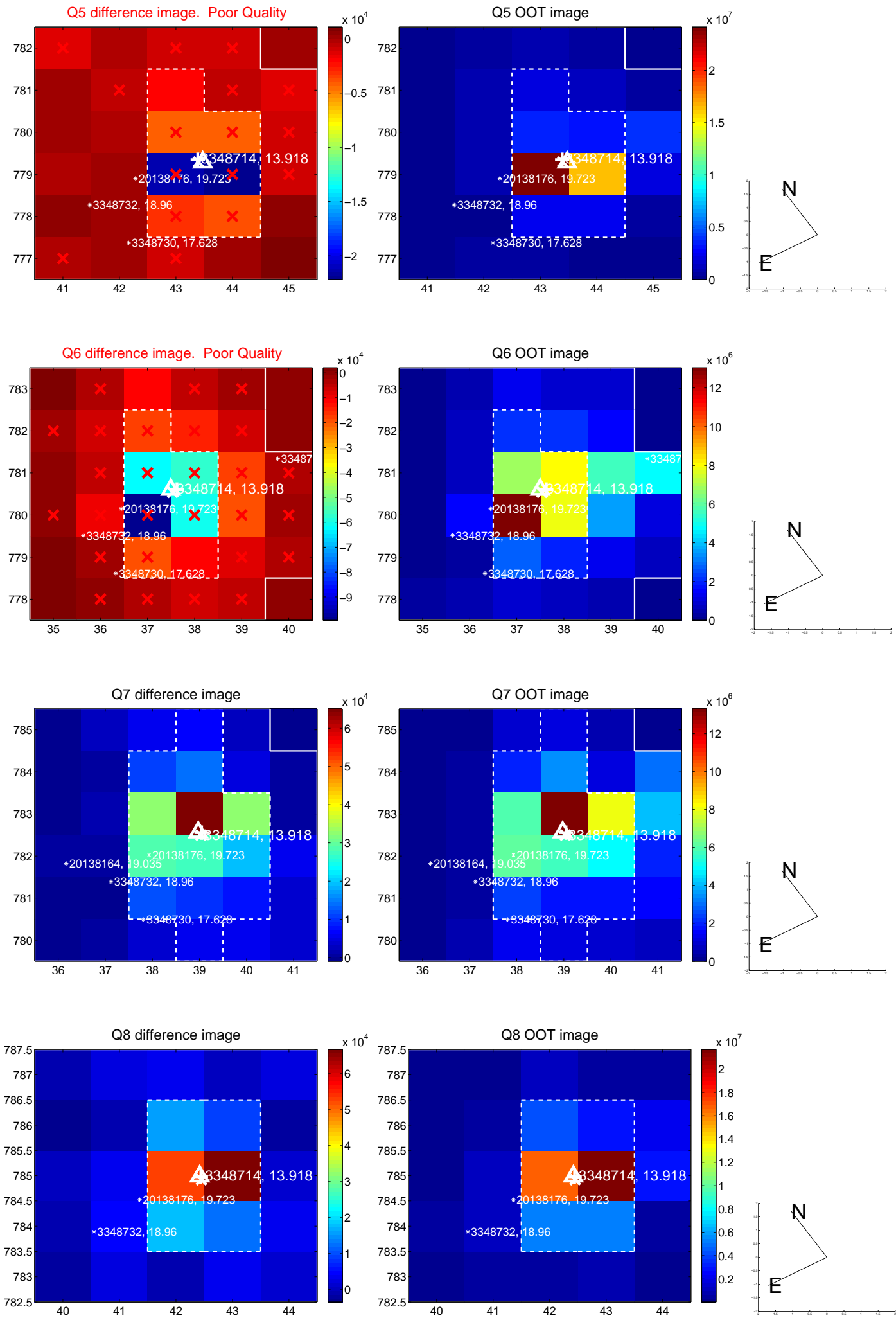


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

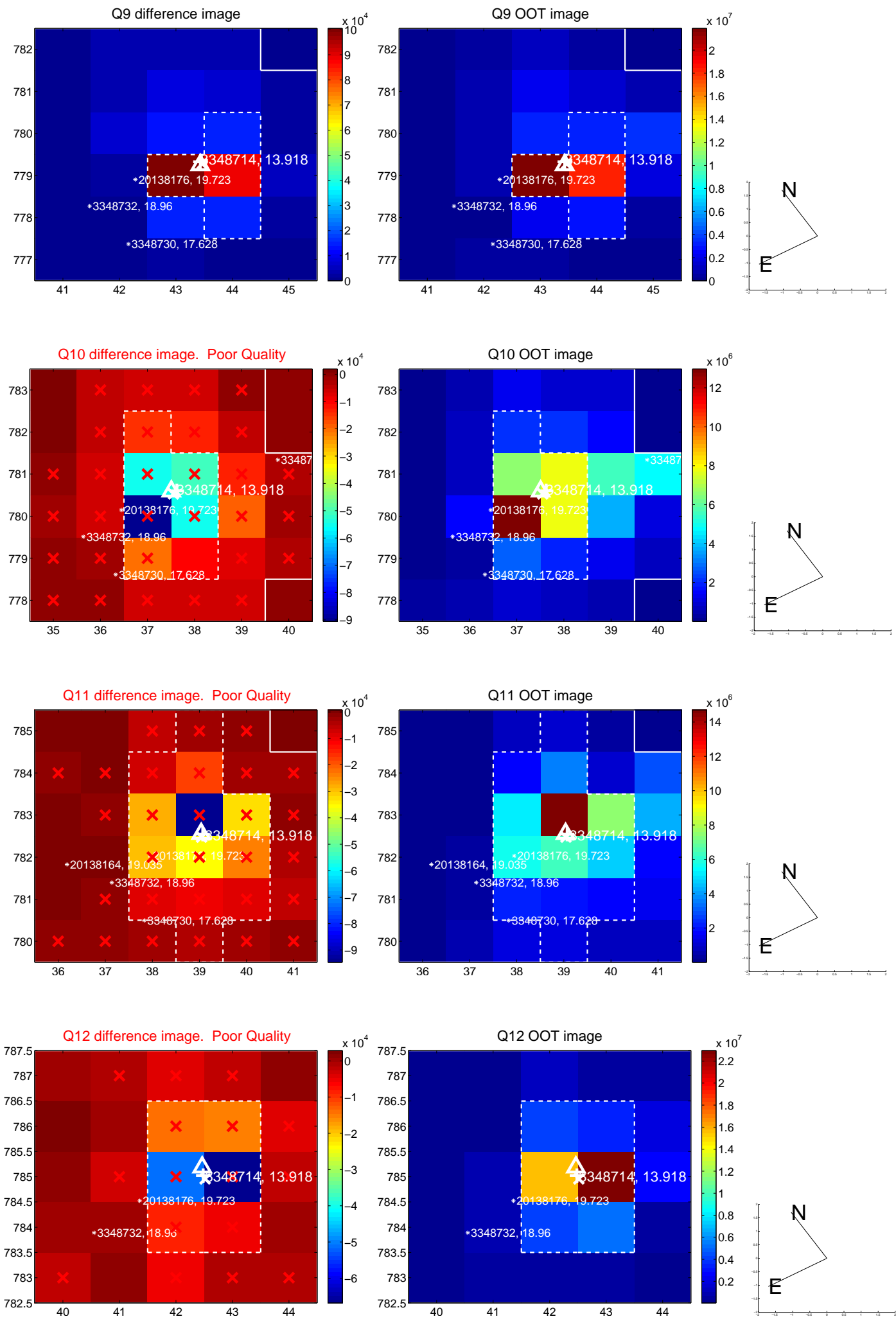
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



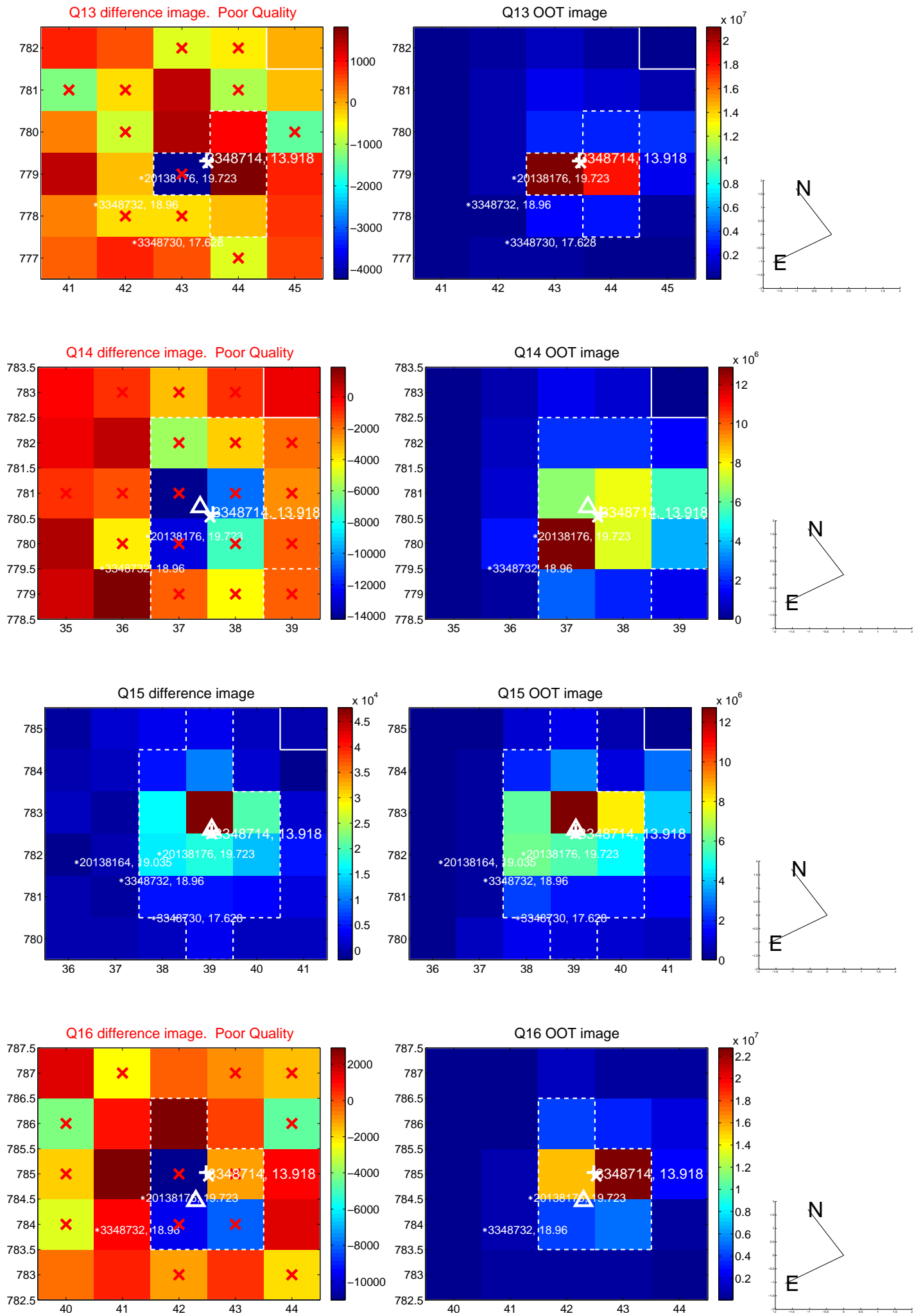
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



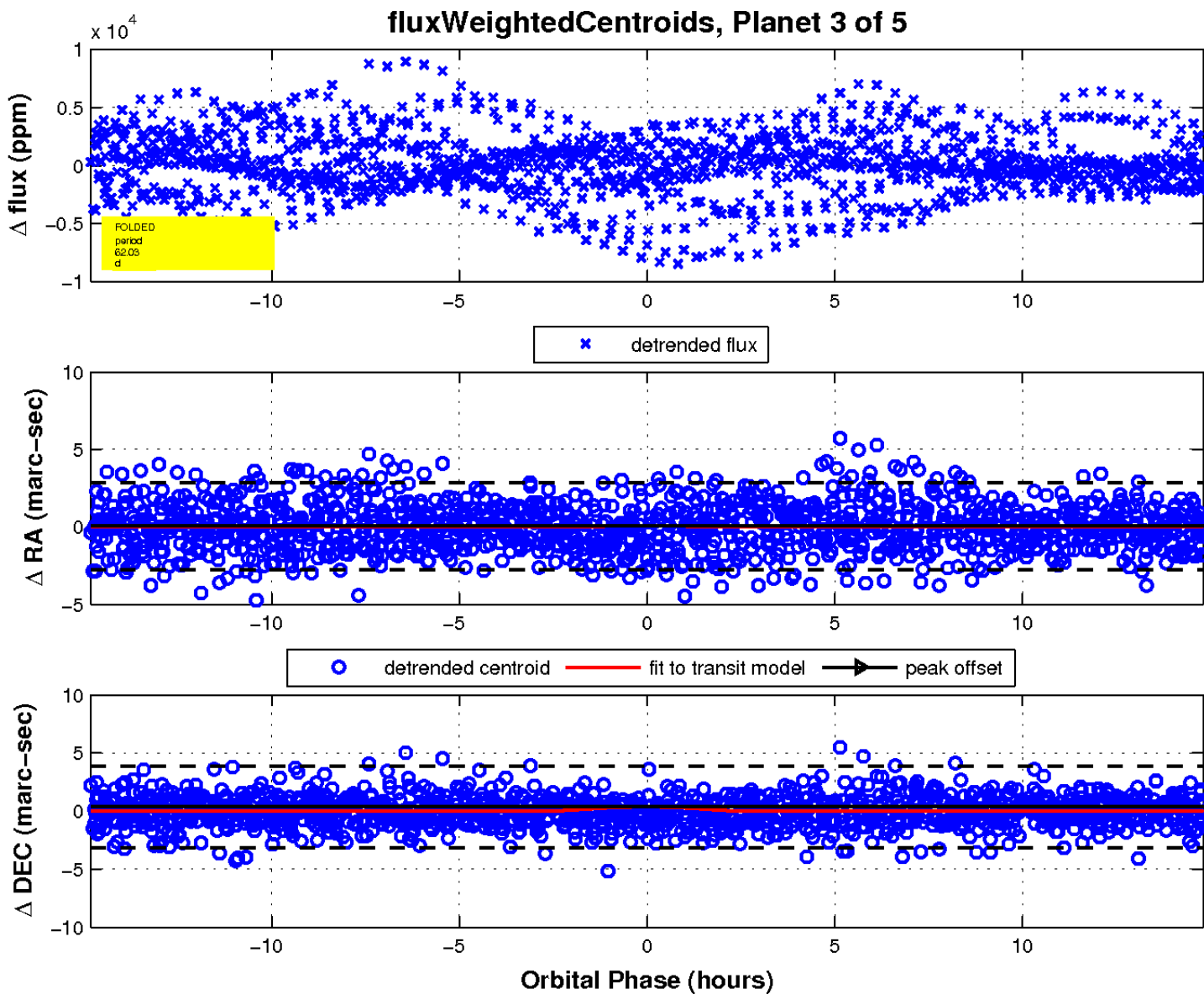
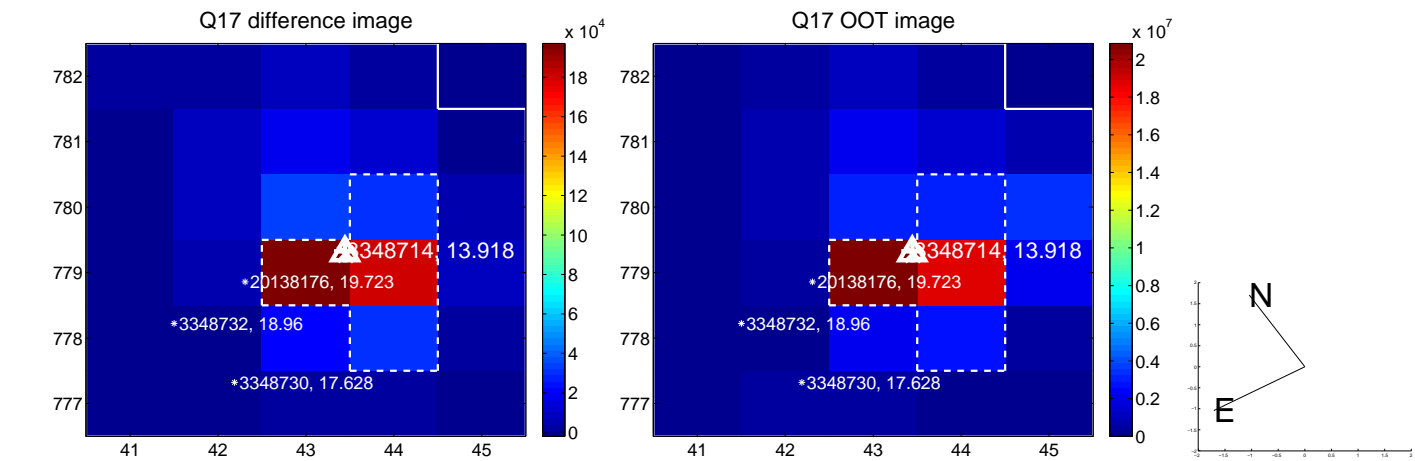
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

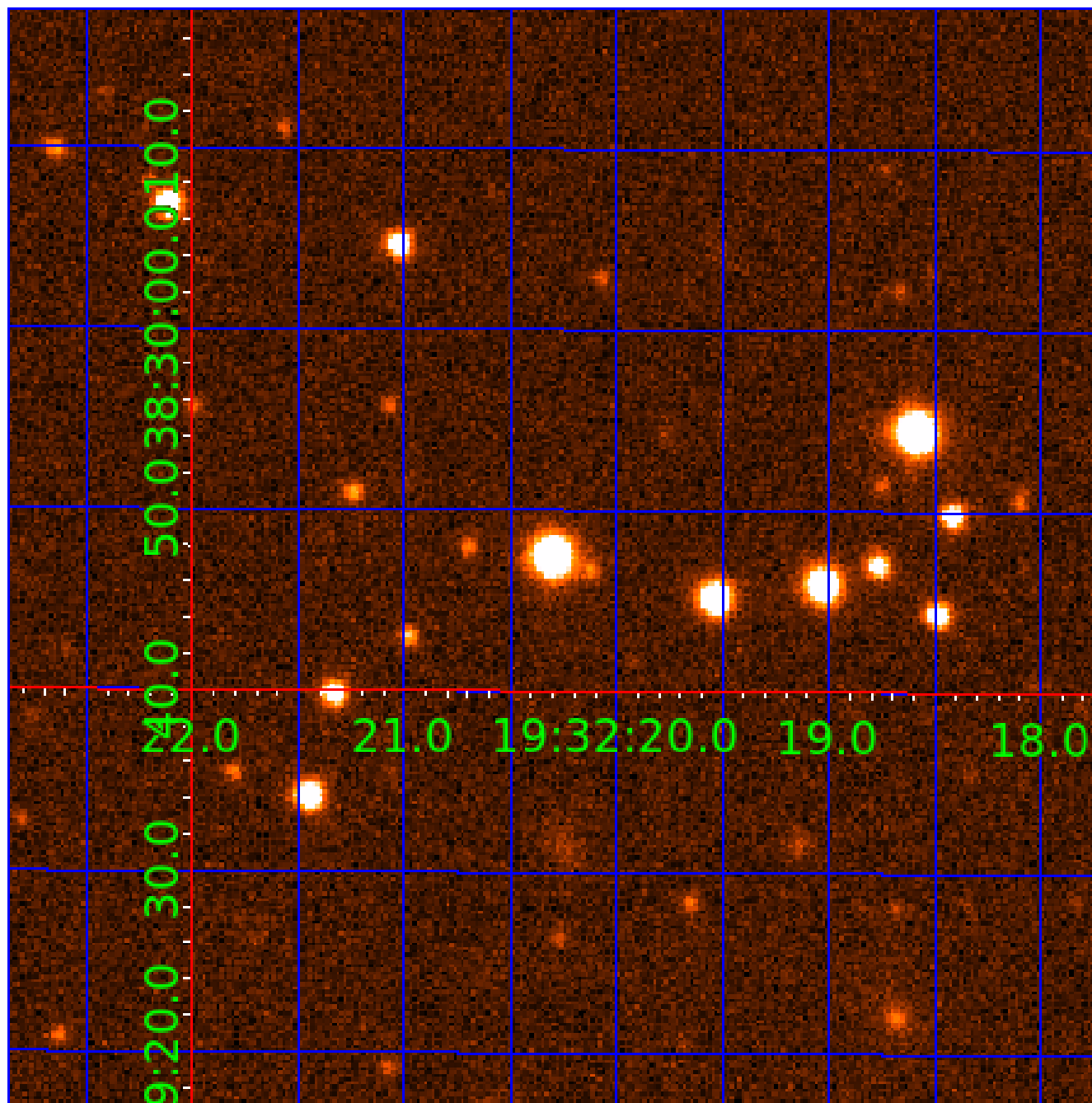


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003348714

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})
003348714-01	OBS	No	0.749283	132.217133	0.4	5.127	8.4	0.0	1.64	7416	0.11	20483.83
003348714-02	OBS	No	54.877972	146.814605	2846.2	3.774	10.3	9.3	1.64	7416	15.65	66.85
003348714-03	OBS	No	62.027682	135.597301	2630.9	4.949	8.7	8.1	1.64	7416	14.75	56.77
003348714-04	OBS	No	45.353096	155.094725	1596.4	3.227	8.3	6.5	1.64	7416	6.77	86.19
003348714-05	OBS	No	19.952573	138.770189	1000.4	0.573	8.0	3.2	1.64	7416	8.13	257.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003348714-01	OBS	FP	0.00	1	0	0	0	LPP_DV
003348714-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003348714-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT
003348714-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003348714-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST

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

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

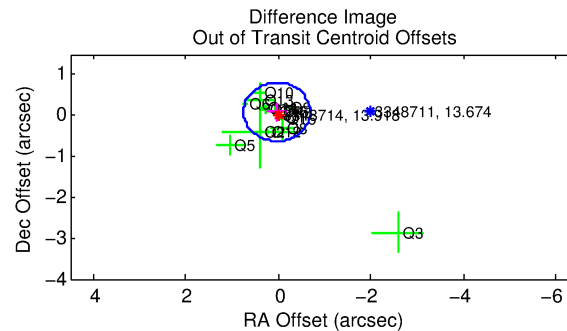
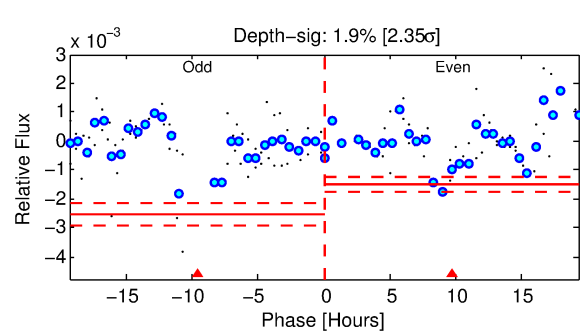
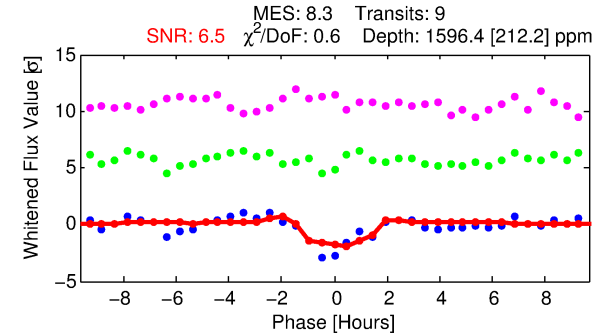
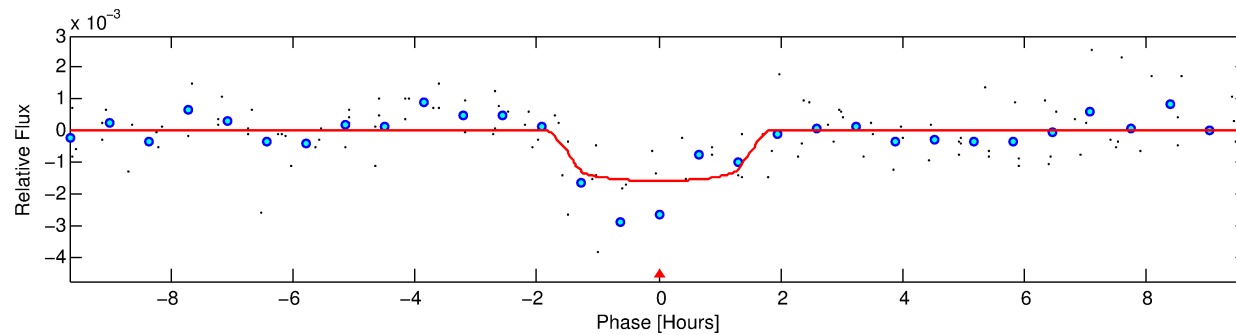
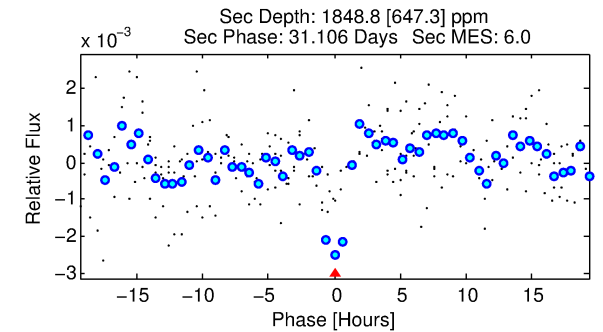
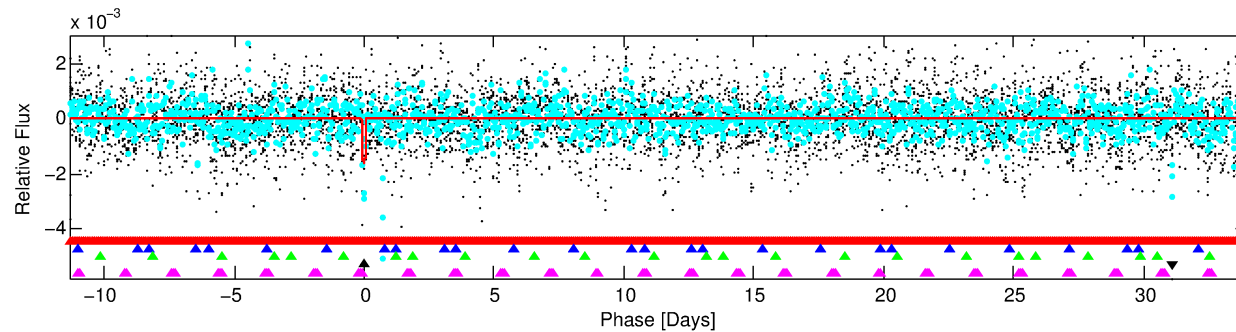
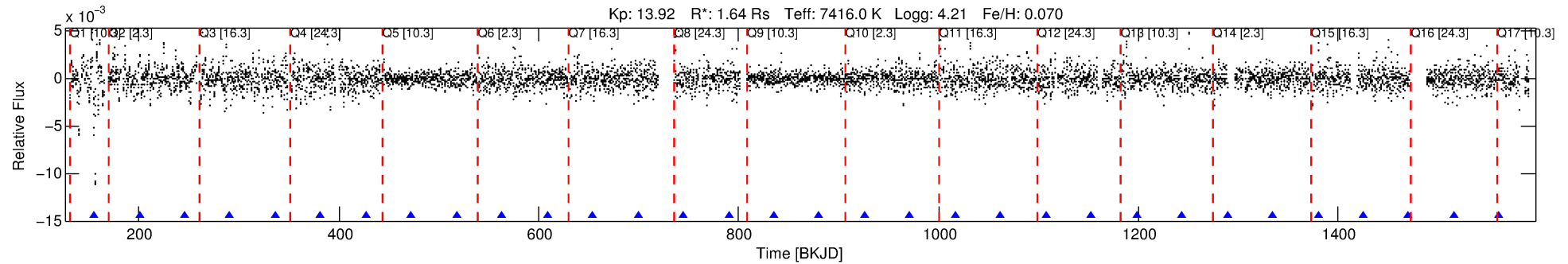
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003348714-04

No Significant Match Found

DV One-Page Summary

KIC: 3348714 Candidate: 4 of 5 Period: 45.353 d



DV Fit Results:

Period = 45.35310 [0.00049] d
Epoch = 155.0947 [0.0079] BKJD
Rp/R* = 0.0379 [0.0515]
a/R* = 100.11 [825.75]
b = 0.46 [14.40]
Seff = 86.19 [36.78]
Teq = 777 [83] K
Rp = 6.77 [9.49] Re
a = 0.2903 [0.0804] AU
Ag = 1870.83 [5178.21] [0.36σ]
Teffp = 7900 [5425] K [1.31σ]

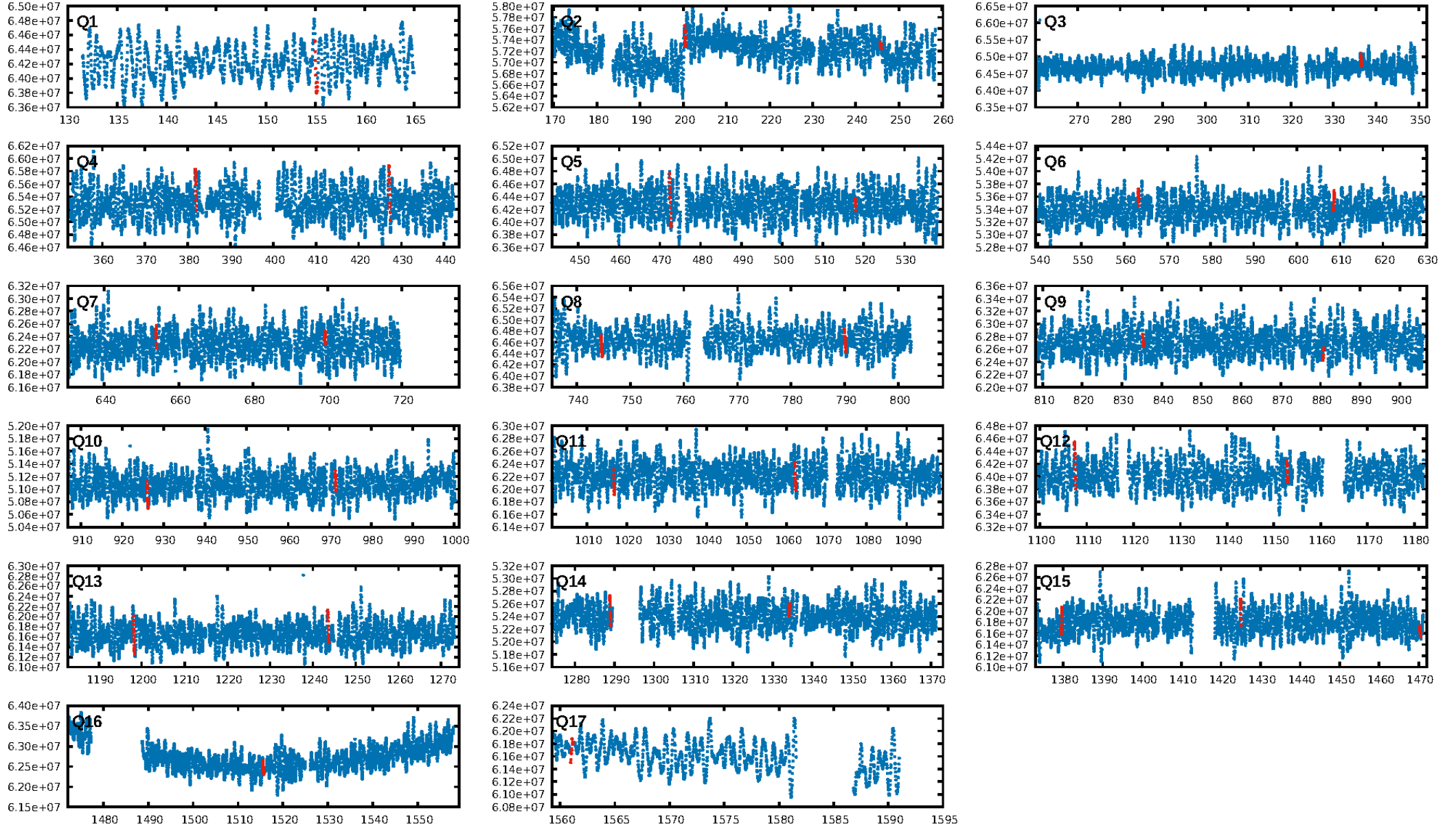
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [186.02σ]
LongPeriod-sig: 100.0% [46.04σ]
ModelChiSquare2-sig: 53.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.73e-10
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 3.427
Centroid-sig: 43.6%
Centroid-so: 0.634 arcsec [2.83σ]
OotOffset-rm: 0.096 arcsec [0.40σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-rm: 0.234 arcsec [1.30σ]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.44 [7/16]
DiffImageOverlap-fno: 0.00 [0/16]

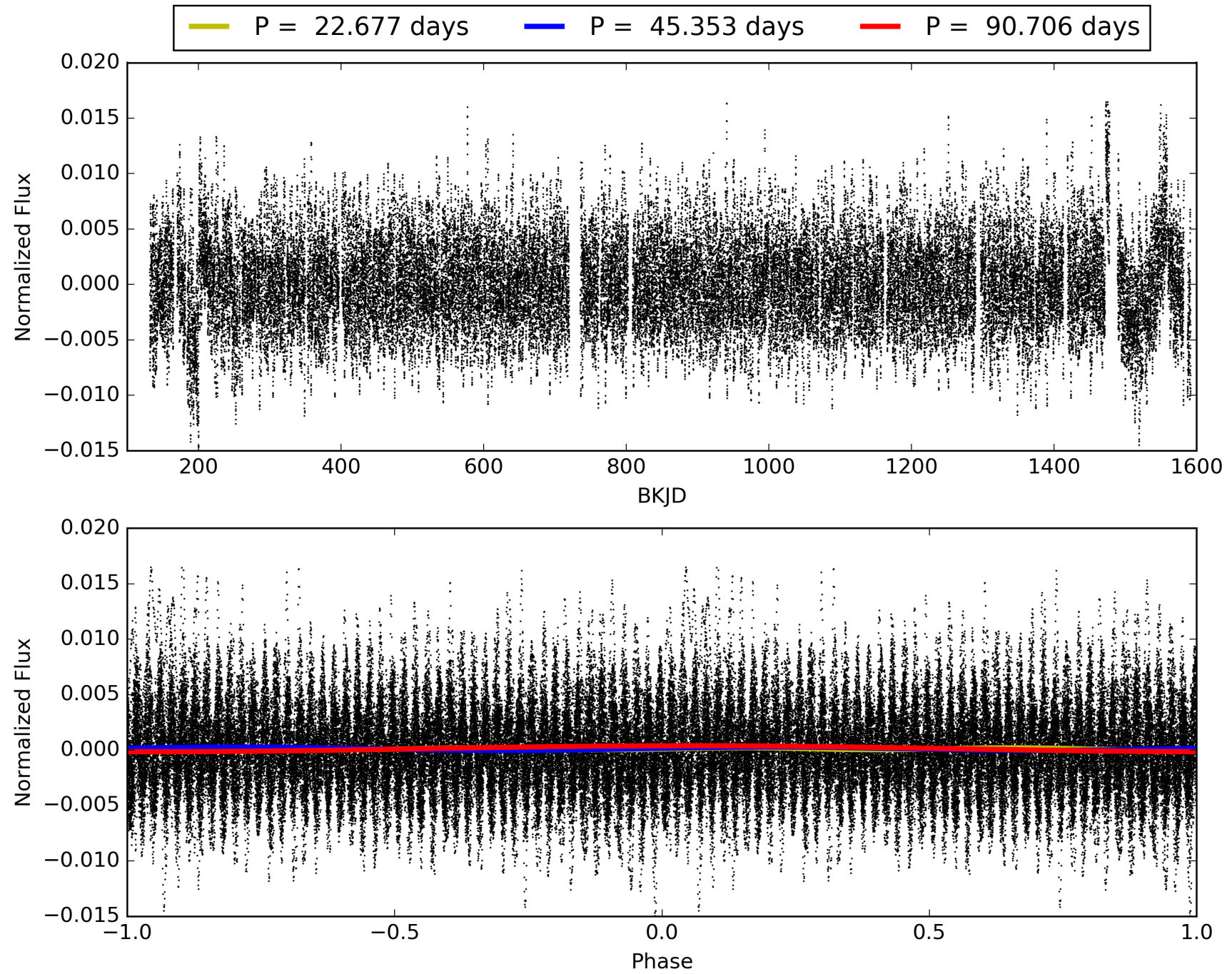
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:22:23 Z

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

TCE 003348714-04, PDC Light Curves

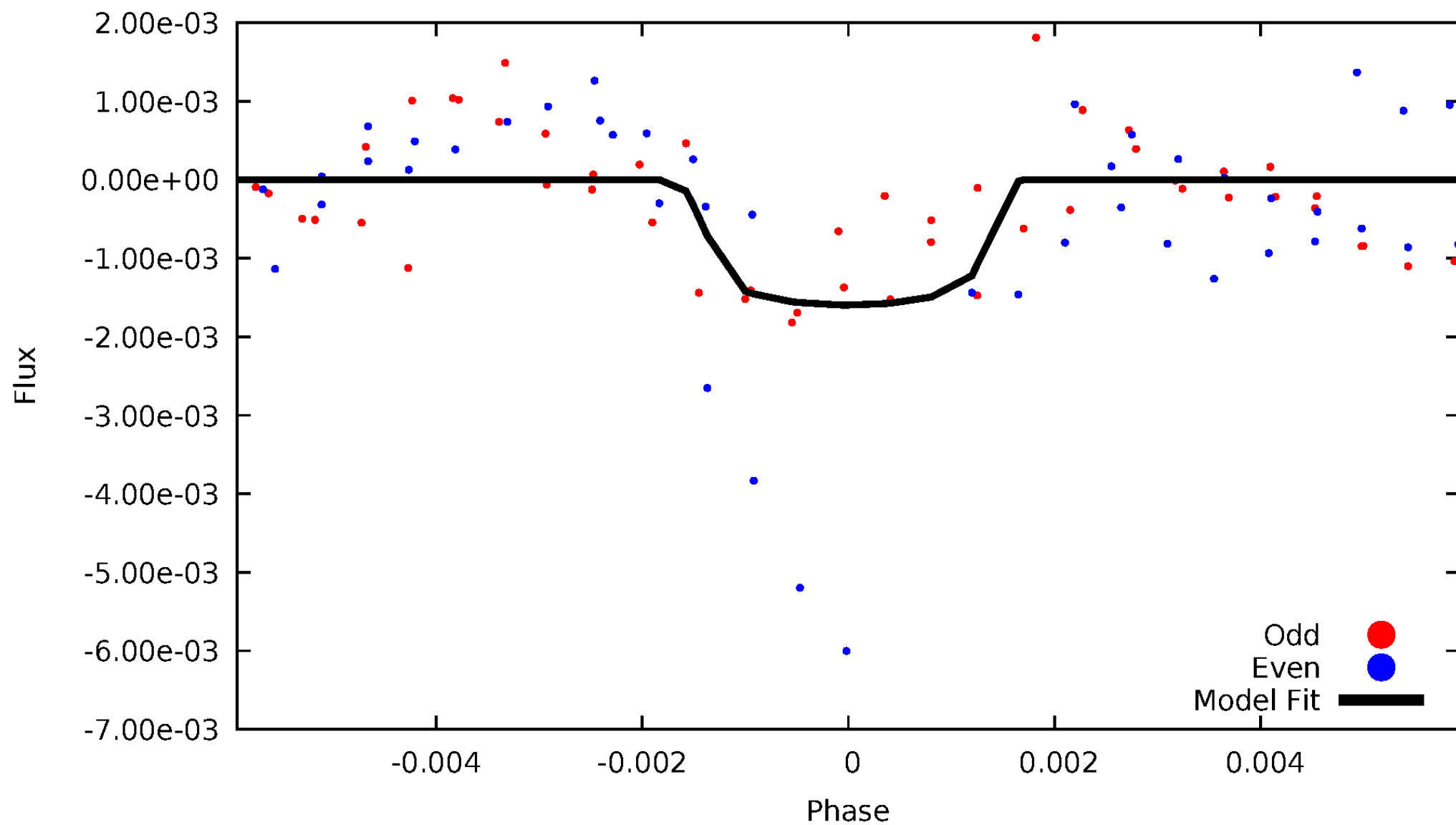


TCE 003348714-04



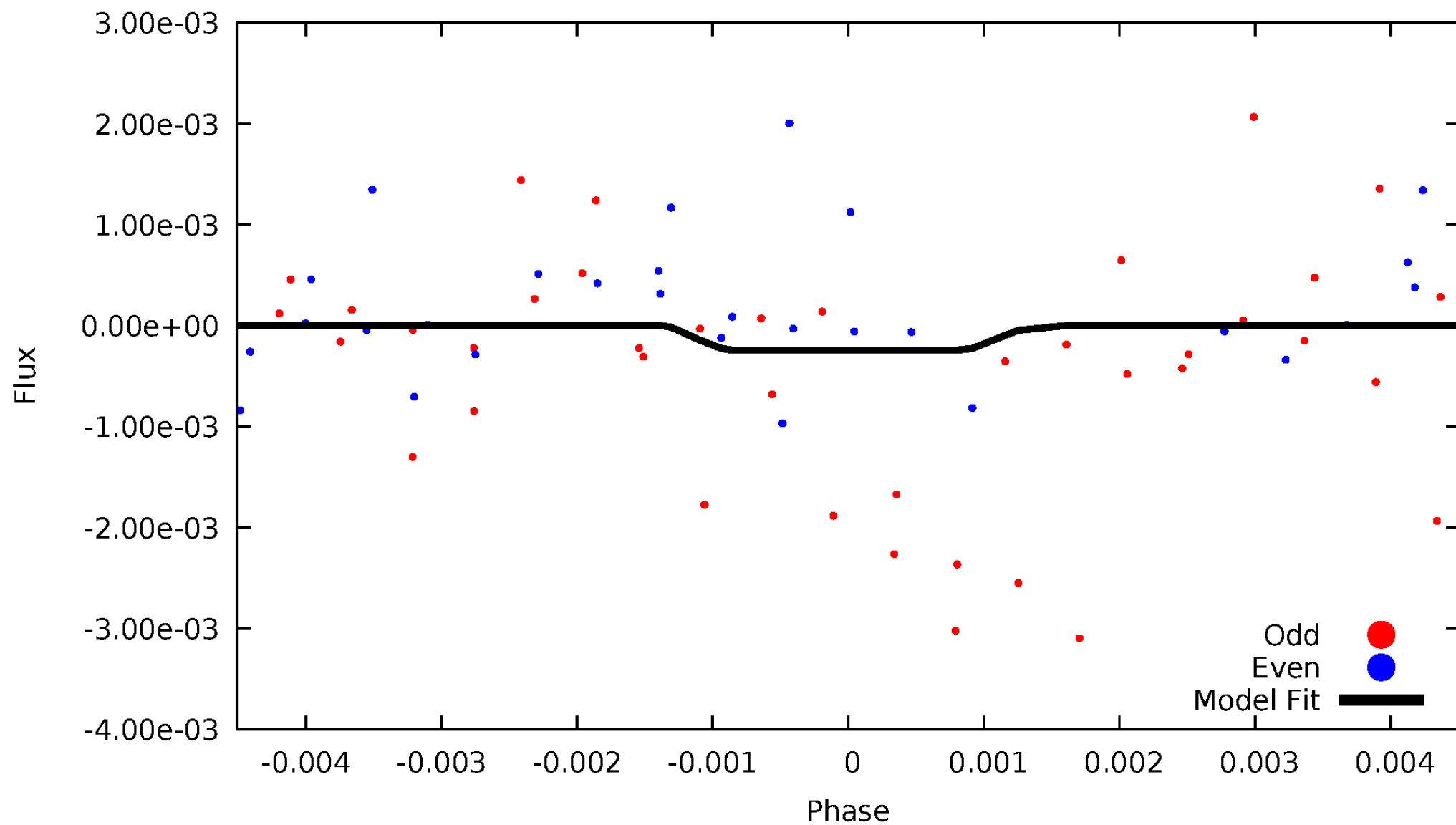
DV Odd/Even

TCE 003348714-04



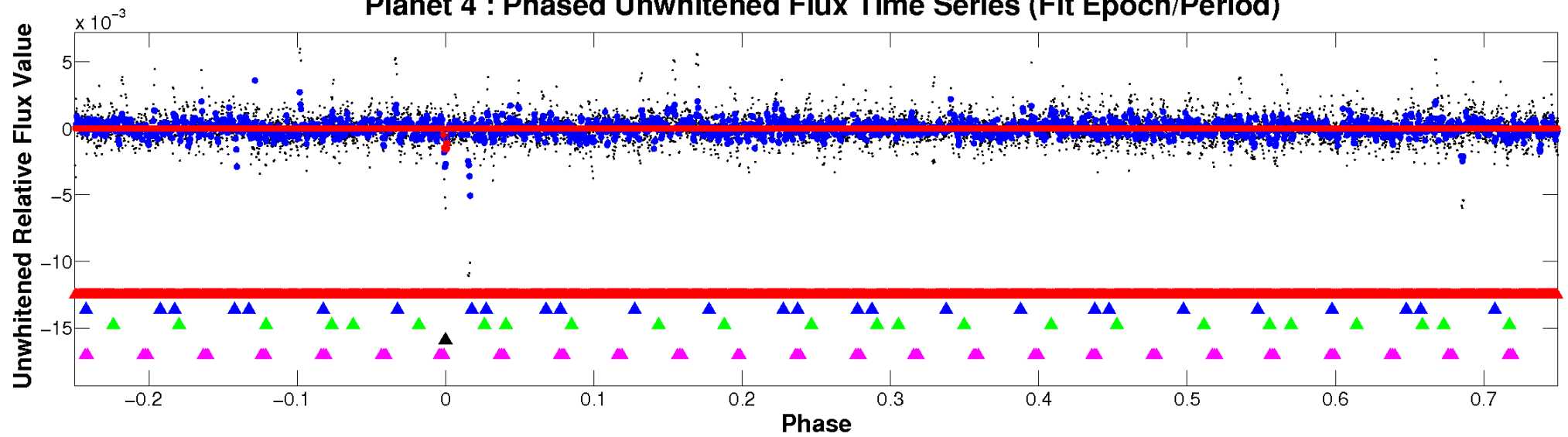
ALT Odd/Even

TCE 003348714-04

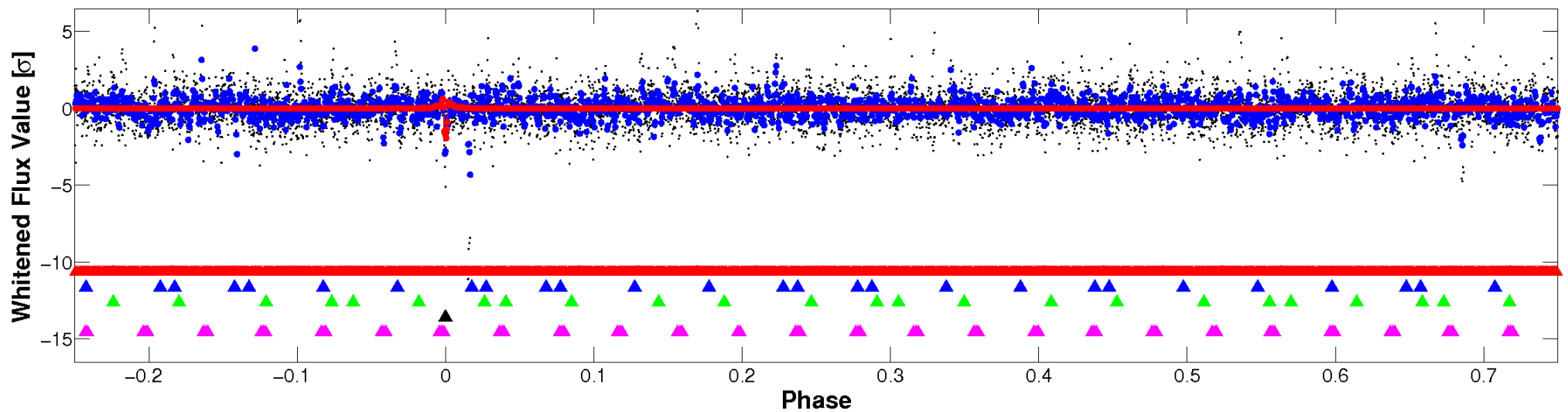


Non-Whitened Vs. Whitened Light Curve

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

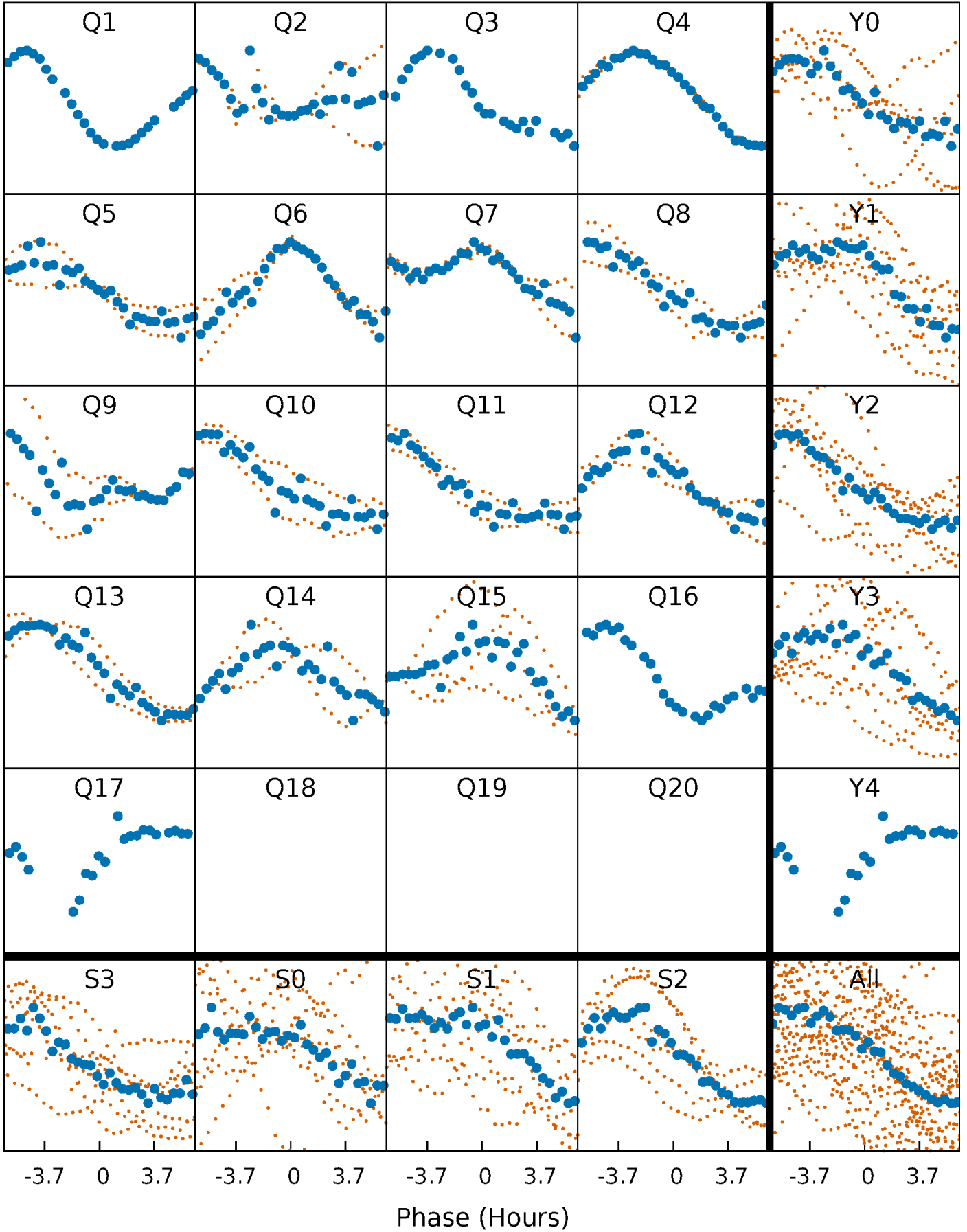


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



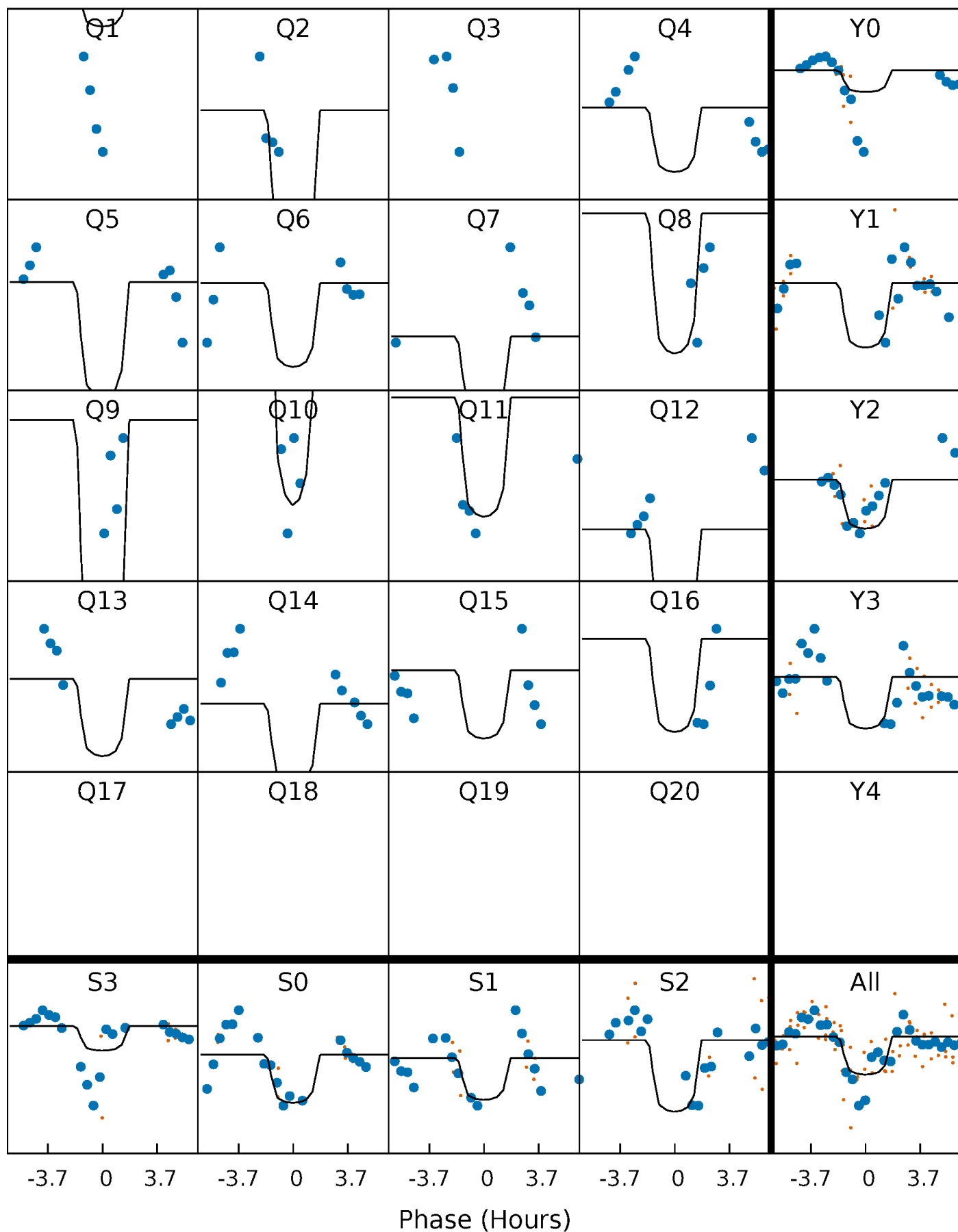
PDC Quarter-Phased Transit Curves

TCE 003348714-04 P= 45.353096 Days $T_0=155.094725$ (BKJD)



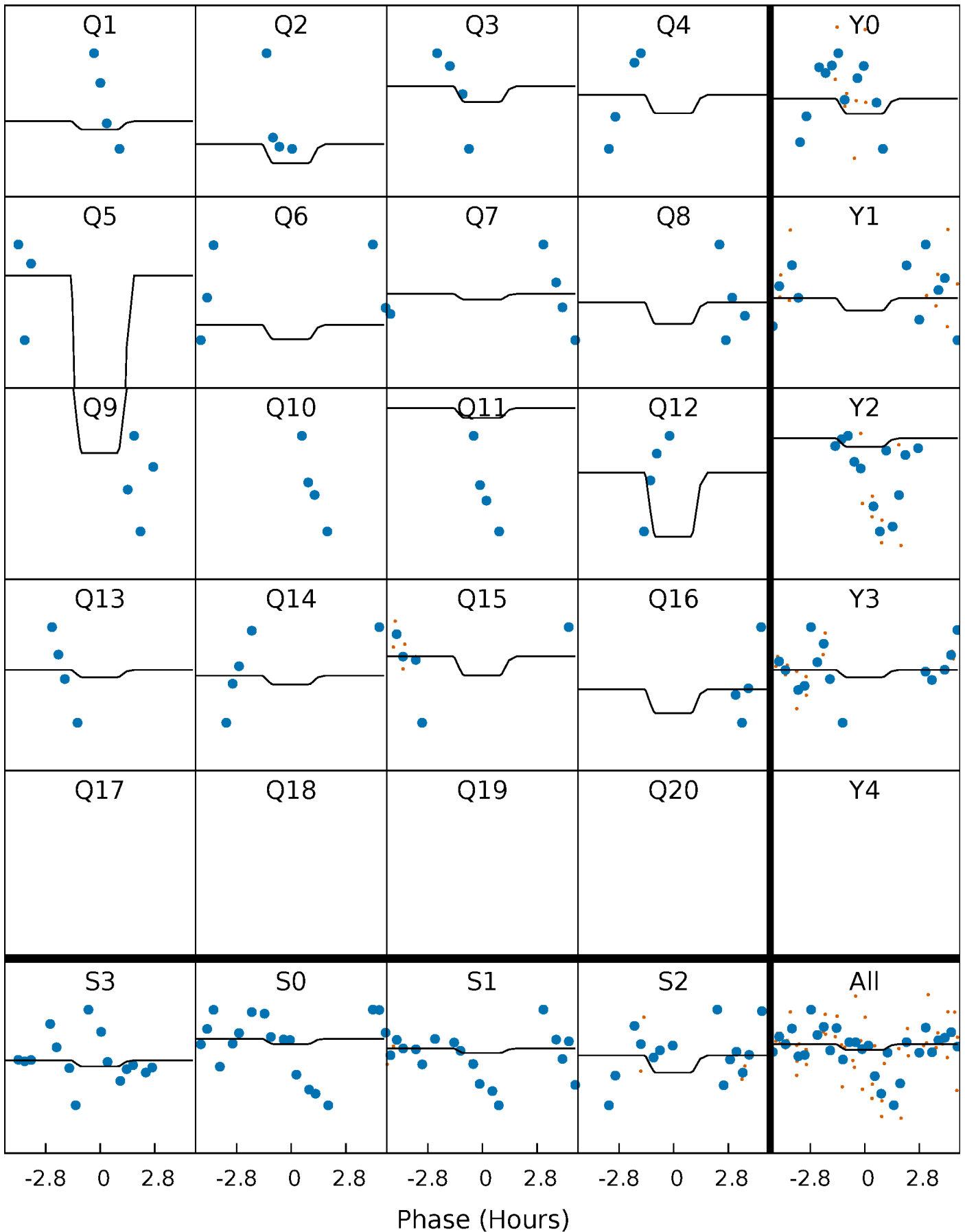
DV Quarter-Phased Transit Curves

TCE 003348714-04 P= 45.353096 Days $T_0=155.094725$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

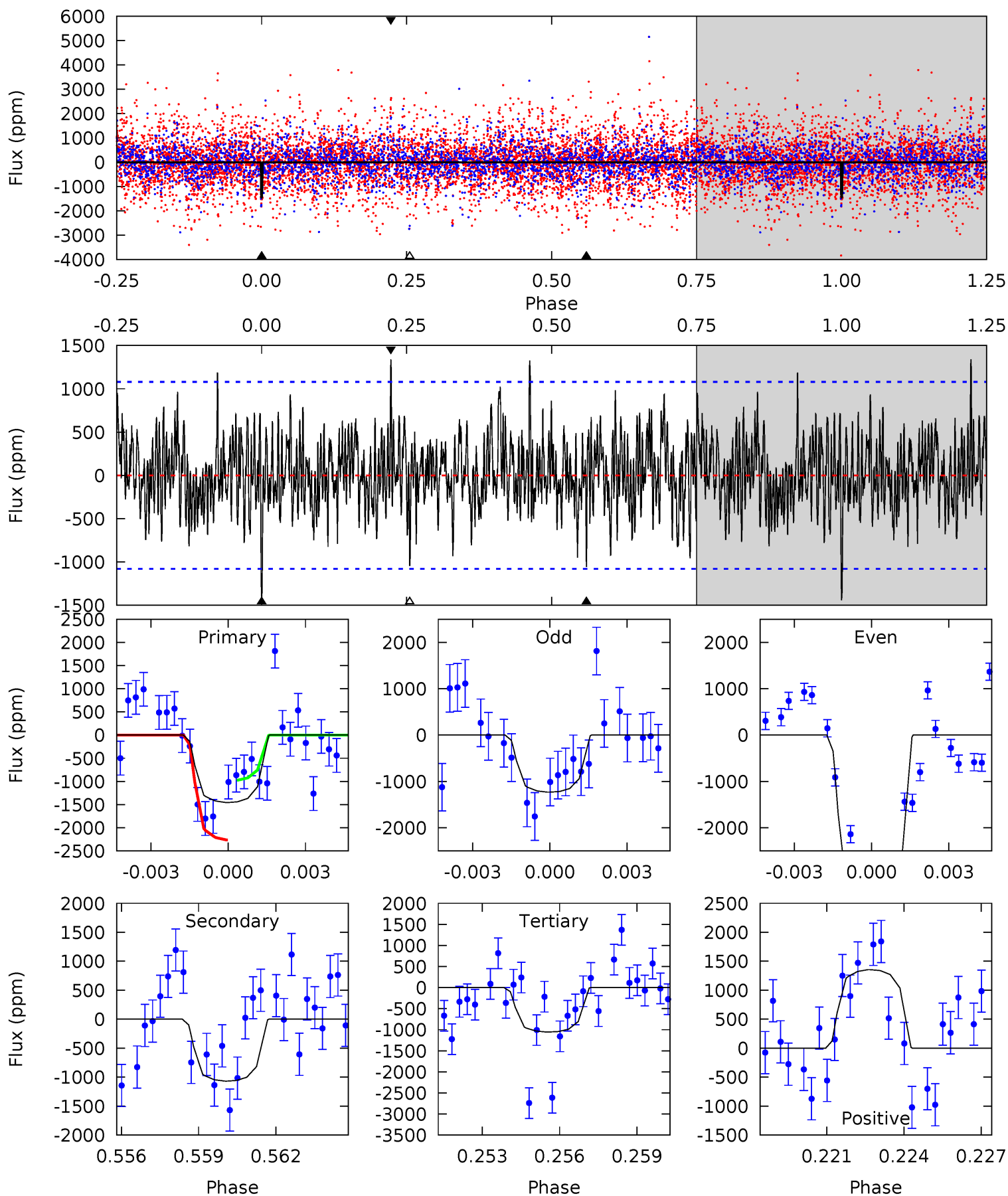
TCE 003348714-04 $P = 45.352126$ Days $T_0 = 155.052369$ (BKJD)



DV Model-Shift Uniqueness Test

003348714-04, P = 45.353096 Days, E = 109.741629 Days

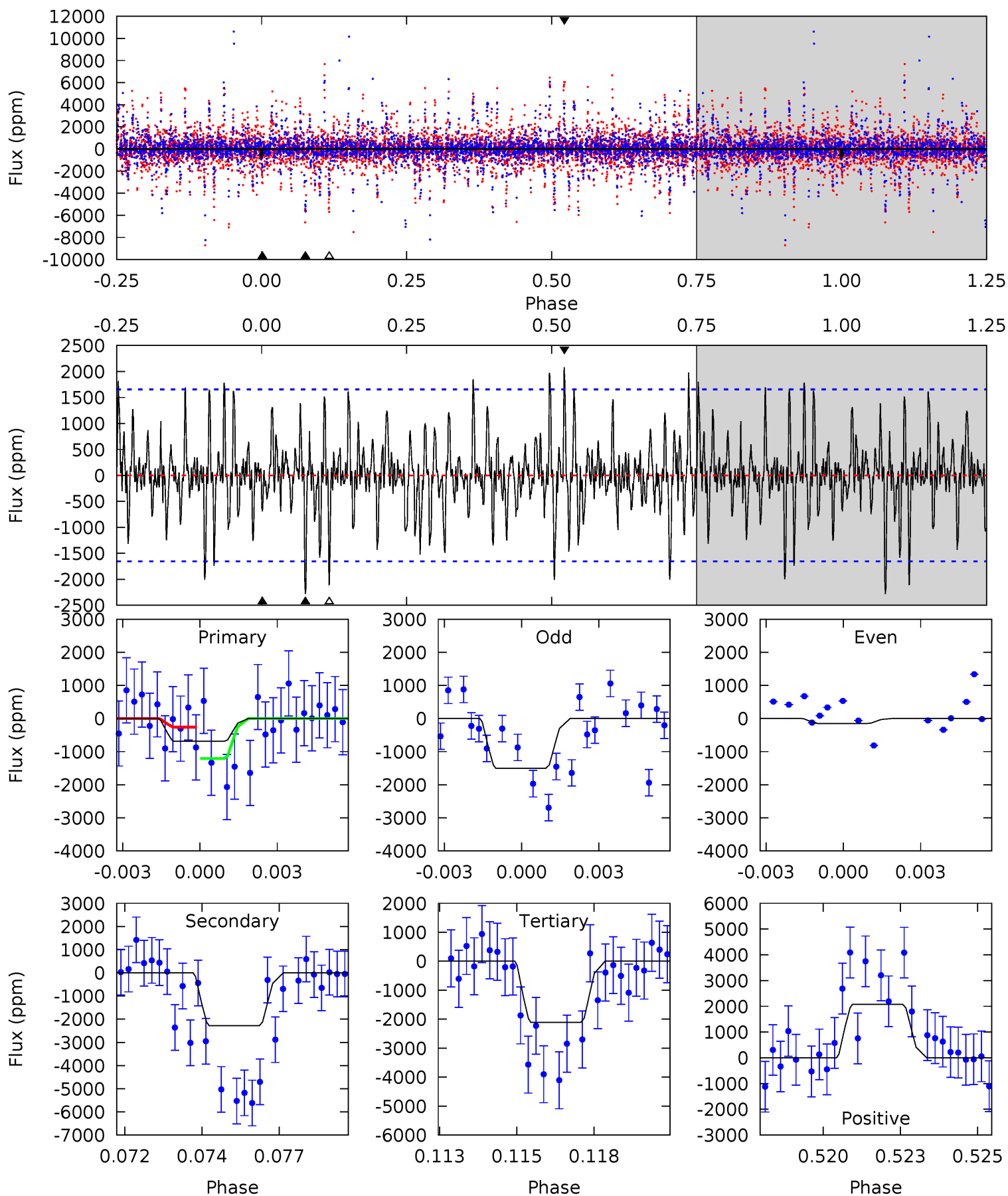
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.00	5.14	5.07	6.52	5.24	2.95	1.72	1.93	0.48	0.07	-1.38	5.83	1.19	0.48	3.14



Alt Model-Shift Uniqueness Test

003348714-04, P = 45.352126 Days, E = 109.700243 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.20	7.28	6.73	6.64	5.28	3.02	1.66	-4.53	-4.44	0.55	0.64	1.92	2.45	0.48	1.54



Stellar Parameters For KIC 003348714

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7416^{+206}_{-335}	$4.210^{+0.087}_{-0.203}$	$0.070^{+0.150}_{-0.350}$	$1.637^{+0.562}_{-0.241}$	$1.582^{+0.214}_{-0.235}$	$0.508^{+0.198}_{-0.271}$
	+3%/-5%	+2%/-5%	+214%/-500%	+34%/-15%	+14%/-15%	+39%/-53%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003348714-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1058 ± 206	$9.20^{+8.36}_{-5.96}$	1093^{+83}_{-56}	5848^{+4761}_{-1413}	566^{+3591}_{-415}
Alt.	-2281 ± 313	$7.77^{+7.80}_{-5.21}$	1101^{+93}_{-68}	8019^{+11962}_{-2492}	1682^{+15007}_{-1248}

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 $A_{obs} \gg 1.0$

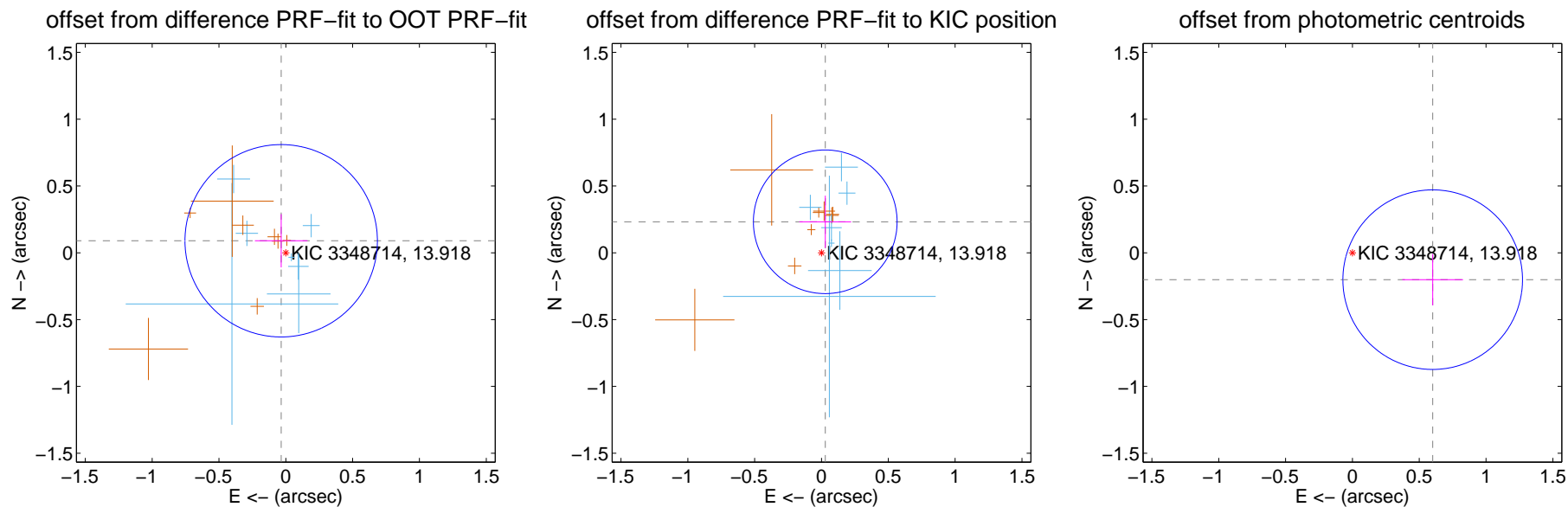
DV Centroid Data

Supplemental centroid analysis for 003348714-04. Kepler magnitude: 13.92. Transit SNR 6.52

There are 7 quarters with good PRF difference image offsets

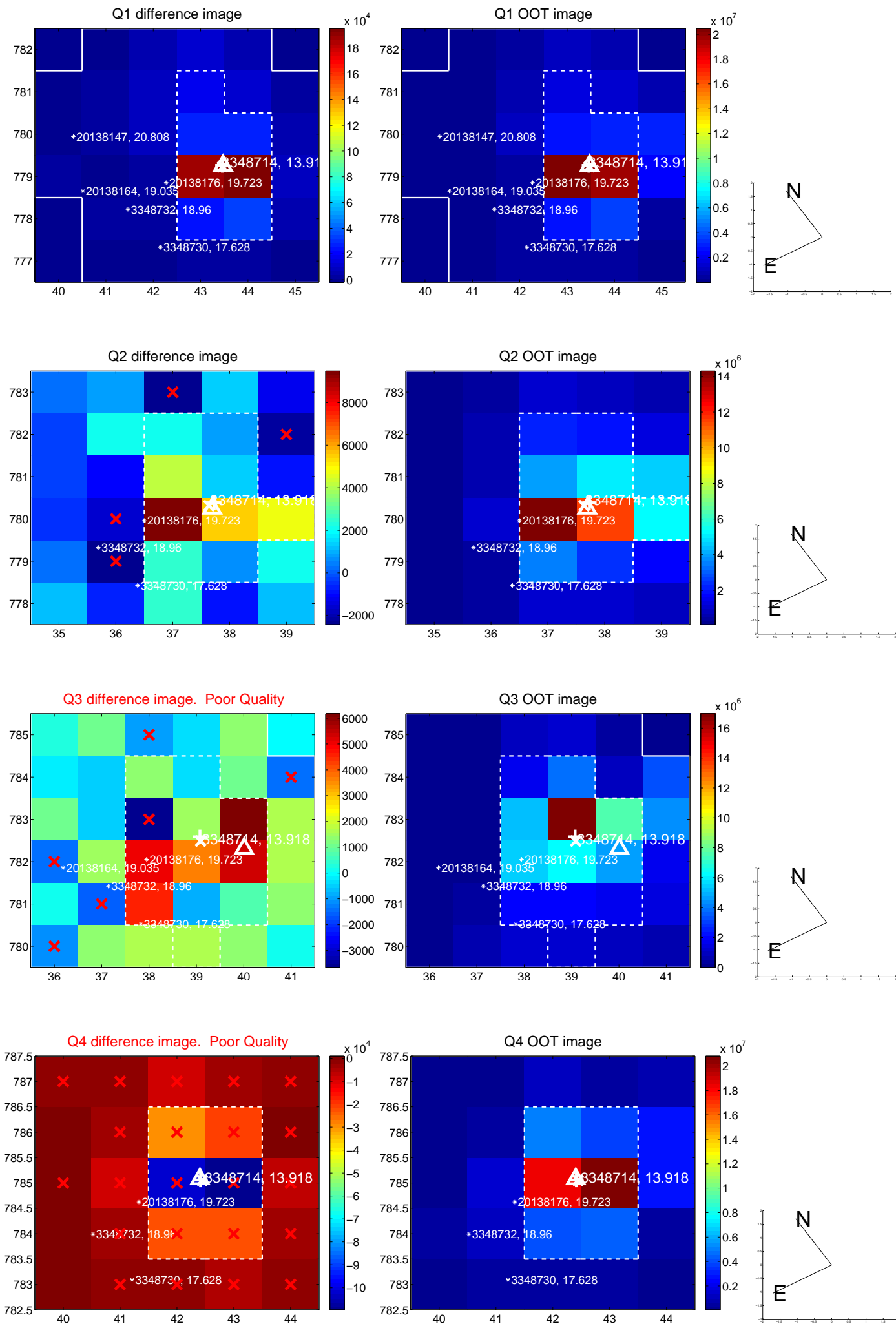
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.096 ± 0.240	0.40	0.035 ± 0.197	0.090 ± 0.199
PRF-fit source offset from KIC position	0.234 ± 0.179	1.30	-0.028 ± 0.194	0.232 ± 0.196
photometric centroid source offset	0.63 ± 0.22	2.83	-0.60 ± 0.23	-0.20 ± 0.19

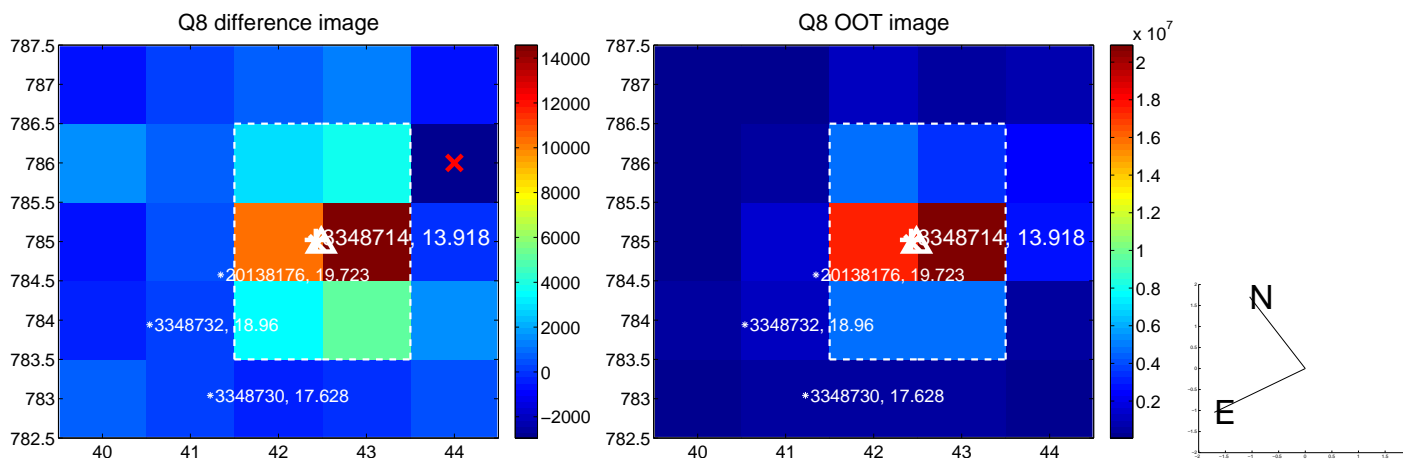
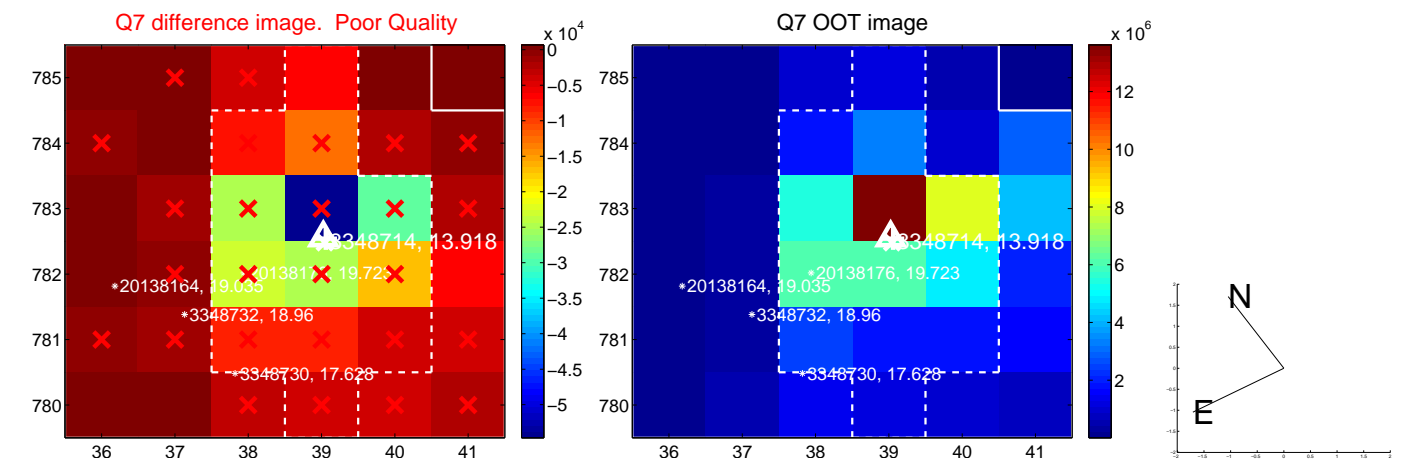
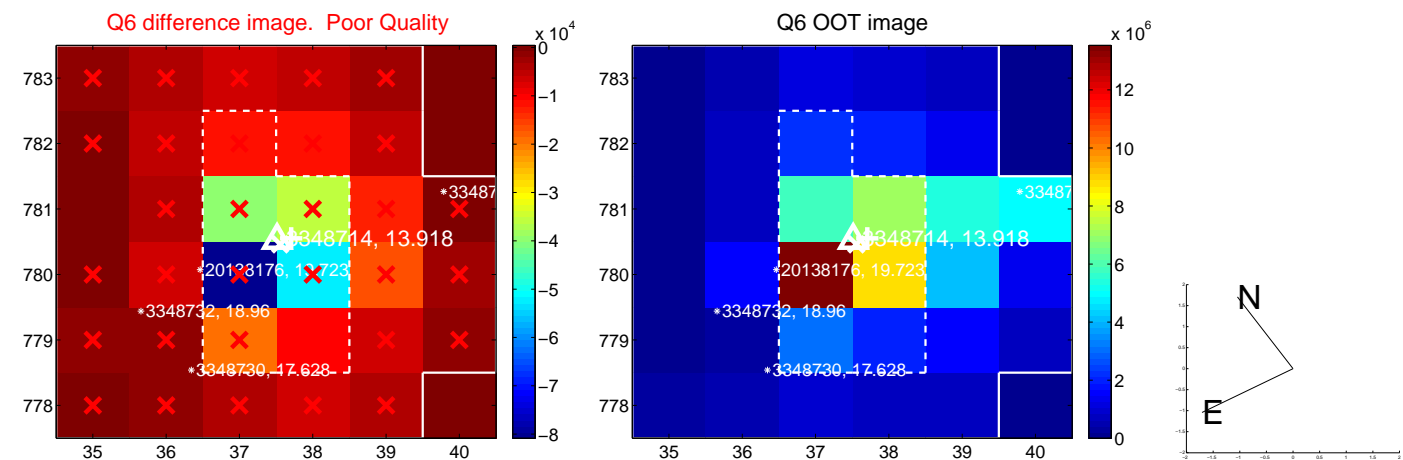
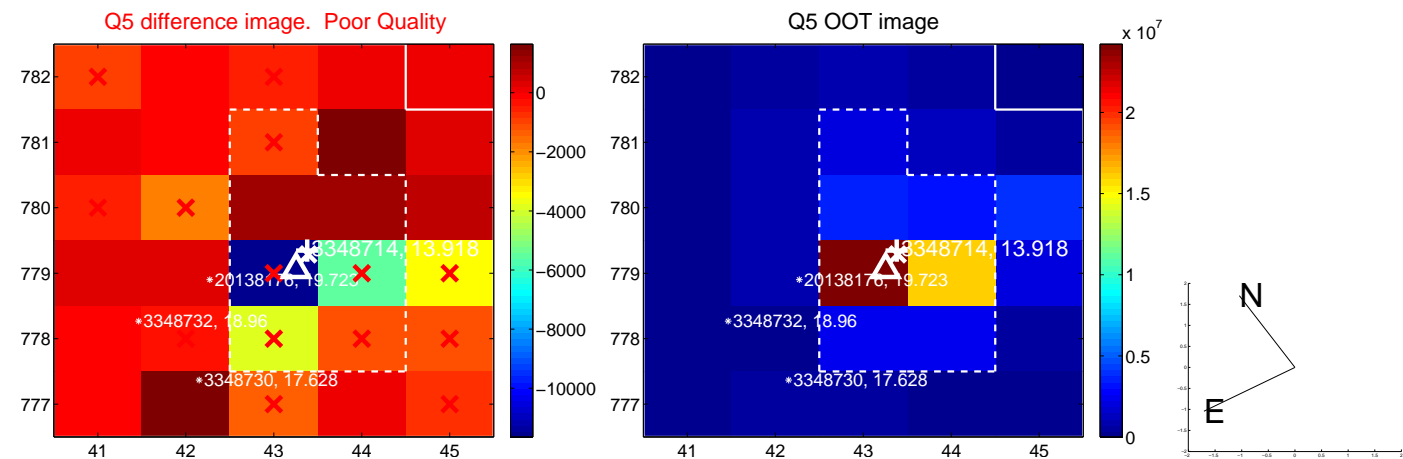


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

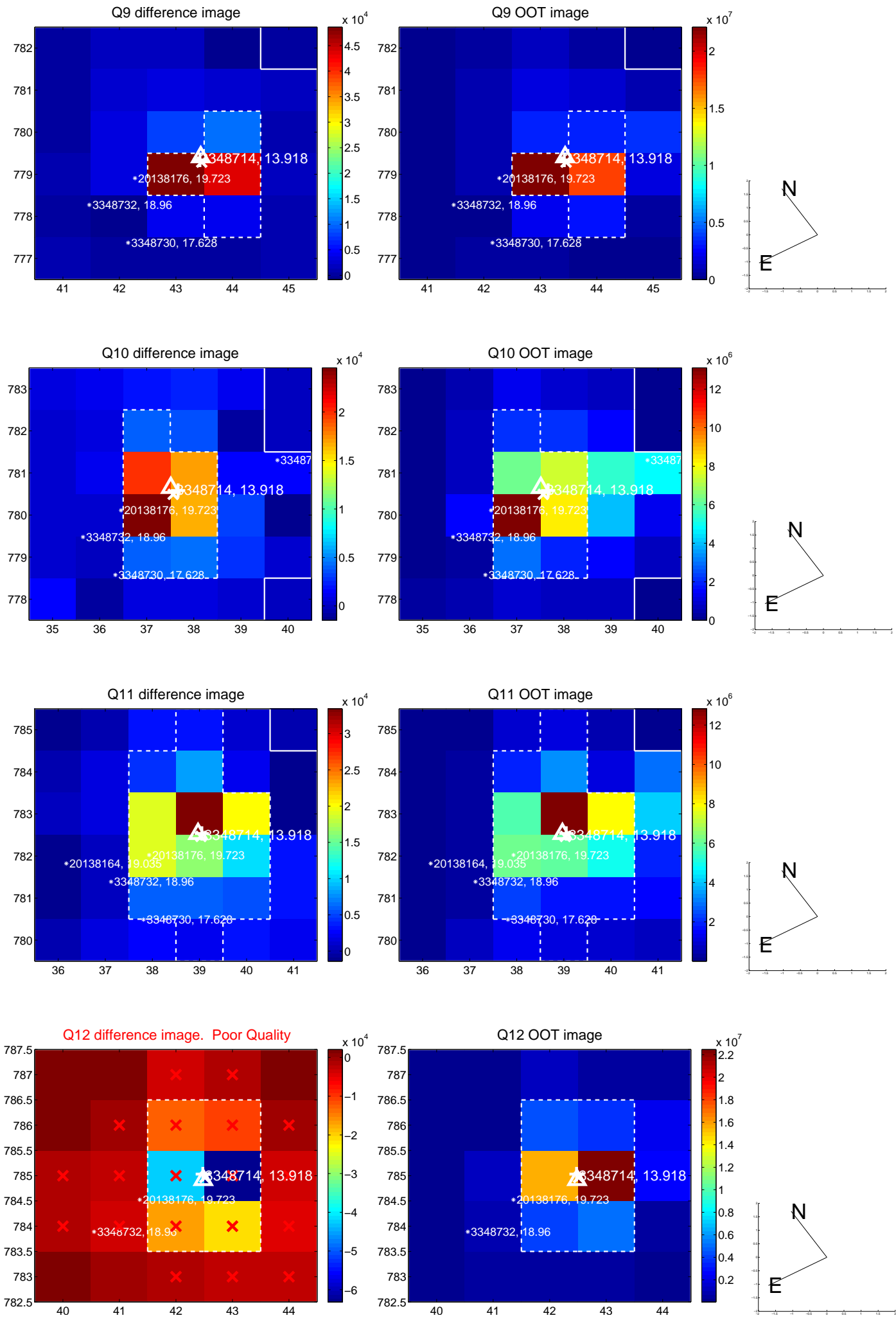
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



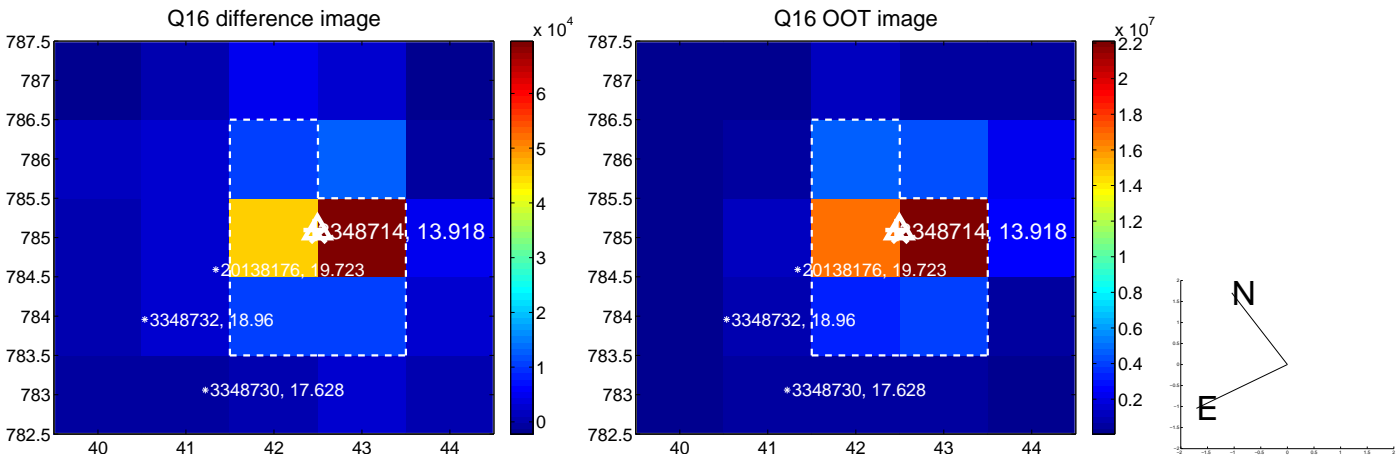
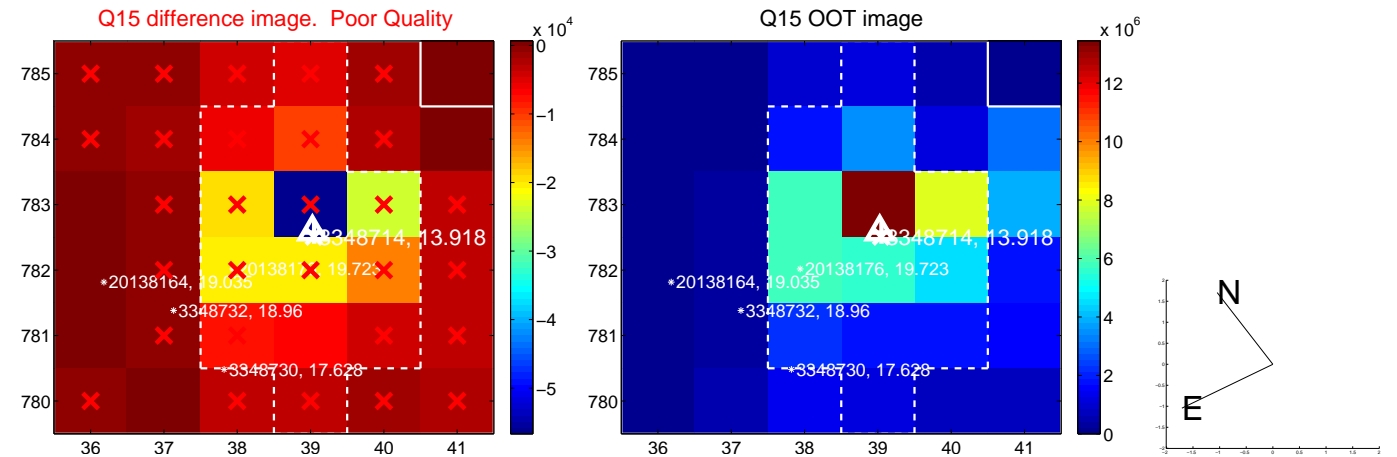
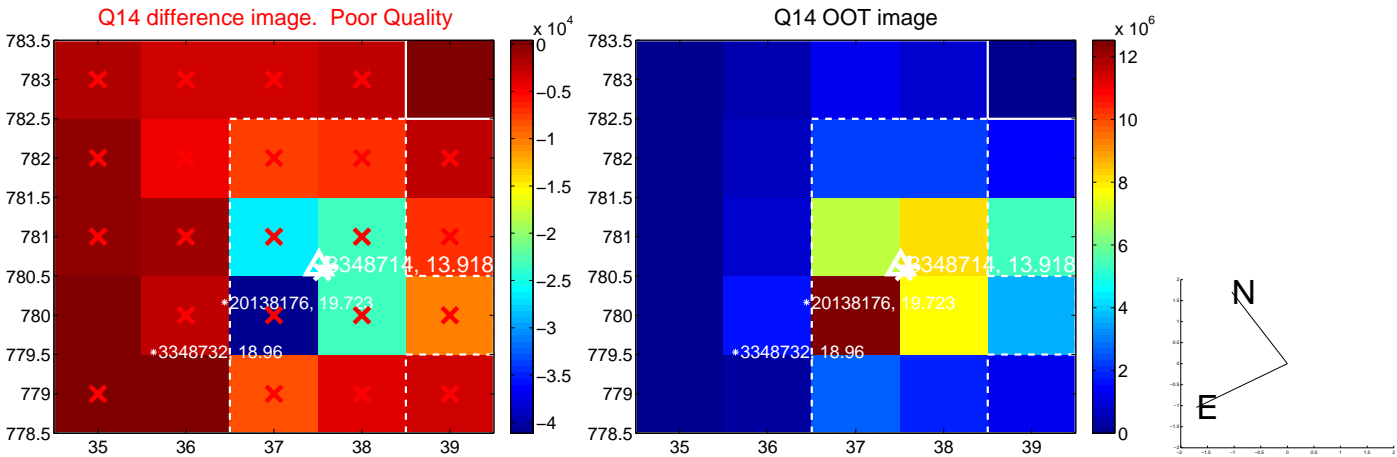
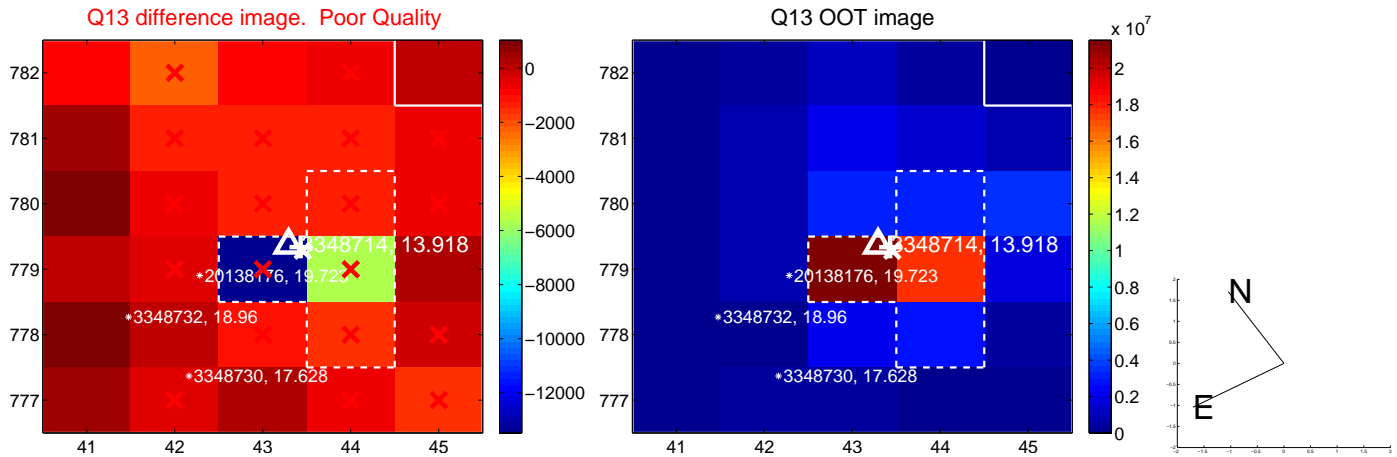
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



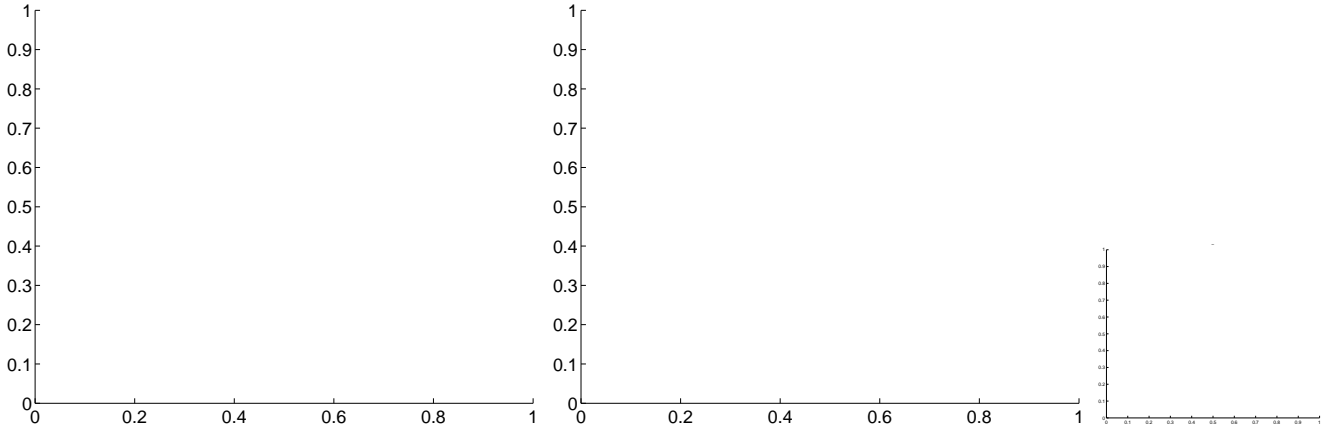
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



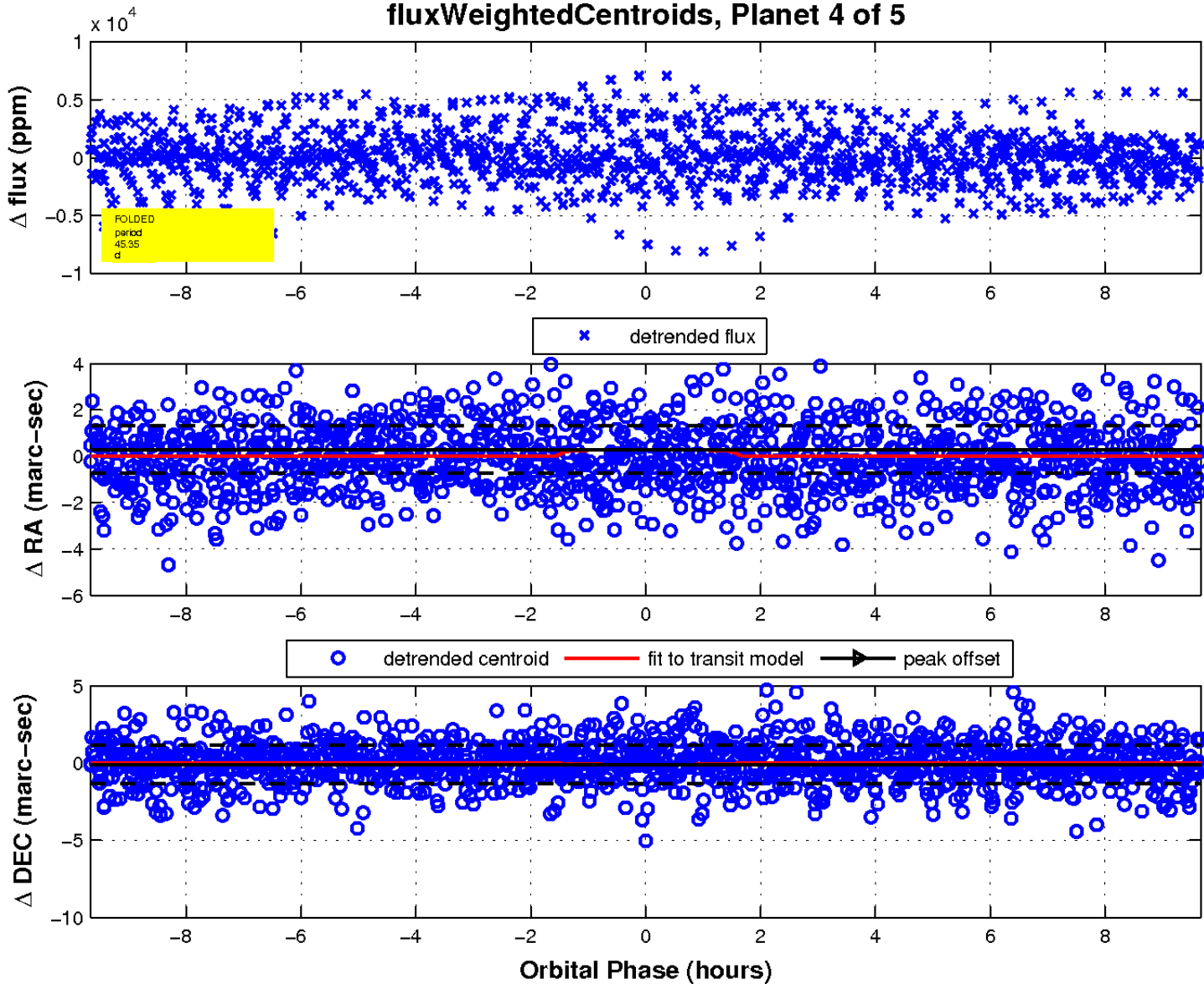
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image

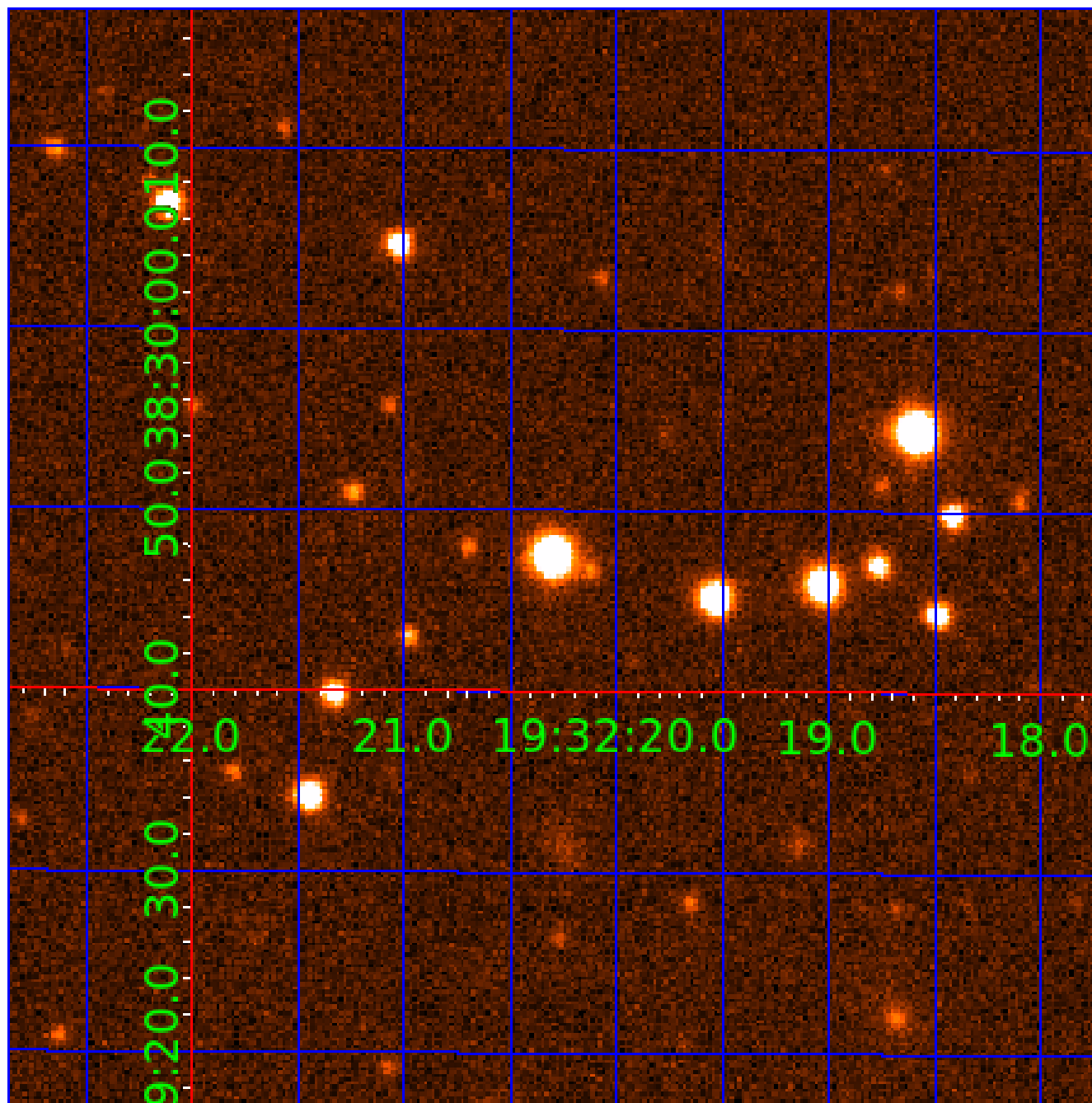


fluxWeightedCentroids, Planet 4 of 5



UKIRT Image

Declination



KIC 003348714

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})
003348714-01	OBS	No	0.749283	132.217133	0.4	5.127	8.4	0.0	1.64	7416	0.11	20483.83
003348714-02	OBS	No	54.877972	146.814605	2846.2	3.774	10.3	9.3	1.64	7416	15.65	66.85
003348714-03	OBS	No	62.027682	135.597301	2630.9	4.949	8.7	8.1	1.64	7416	14.75	56.77
003348714-04	OBS	No	45.353096	155.094725	1596.4	3.227	8.3	6.5	1.64	7416	6.77	86.19
003348714-05	OBS	No	19.952573	138.770189	1000.4	0.573	8.0	3.2	1.64	7416	8.13	257.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003348714-01	OBS	FP	0.00	1	0	0	0	LPP_DV
003348714-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003348714-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT
003348714-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
003348714-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST

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

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

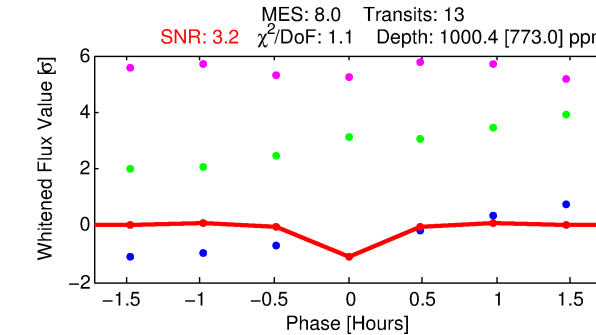
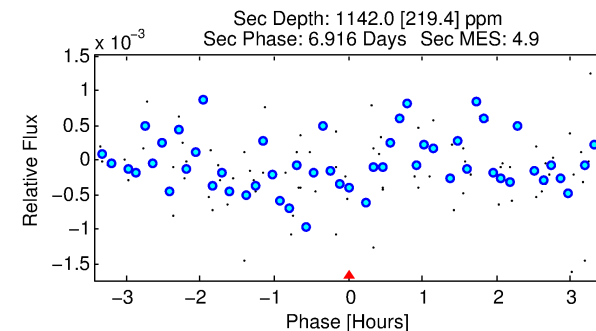
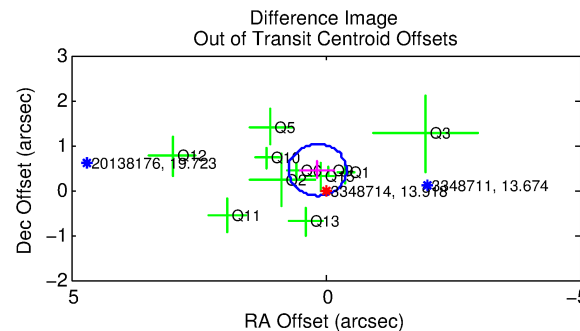
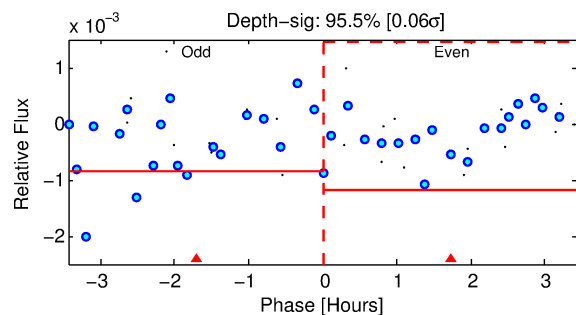
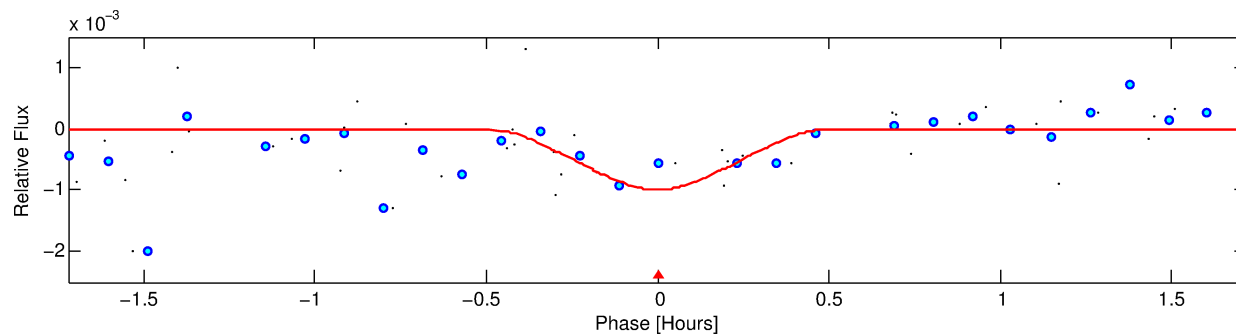
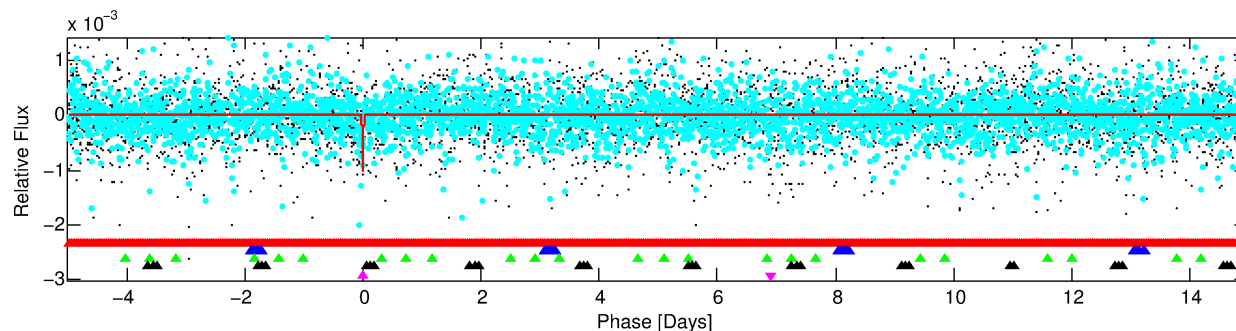
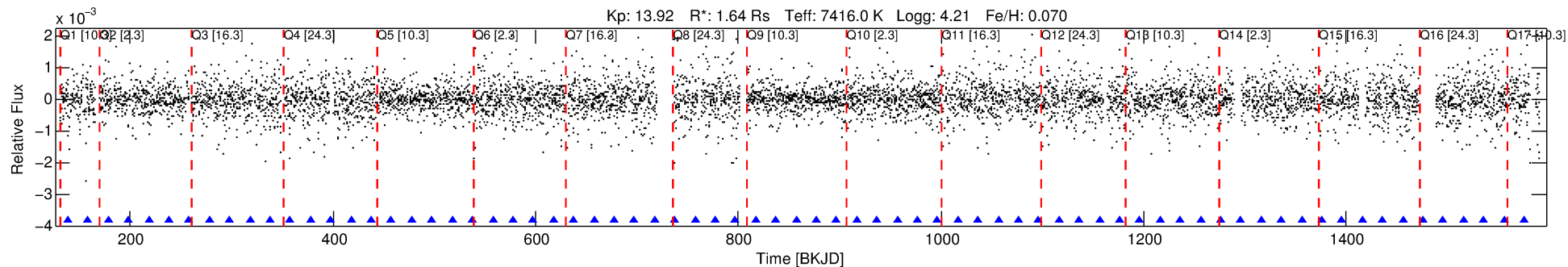
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003348714-05

No Significant Match Found

DV One-Page Summary

KIC: 3348714 Candidate: 5 of 5 Period: 19.953 d



DV Fit Results:

Period = 19.95257 [0.00031] d
Epoch = 138.7702 [0.0138] BKJD
Rp/R* = 0.0455 [0.7133]
a/R* = 105.35 [864.60]
b = 0.97 [1.75]
Seff = 257.60 [109.94]
Teq = 1022 [109] K
Rp = 8.13 [127.45] Re
a = 0.1679 [0.0465] AU
Ag = 268.16 [8409.39] [0.03 σ]
Teffp = 6391 [50105] K [0.1 σ]

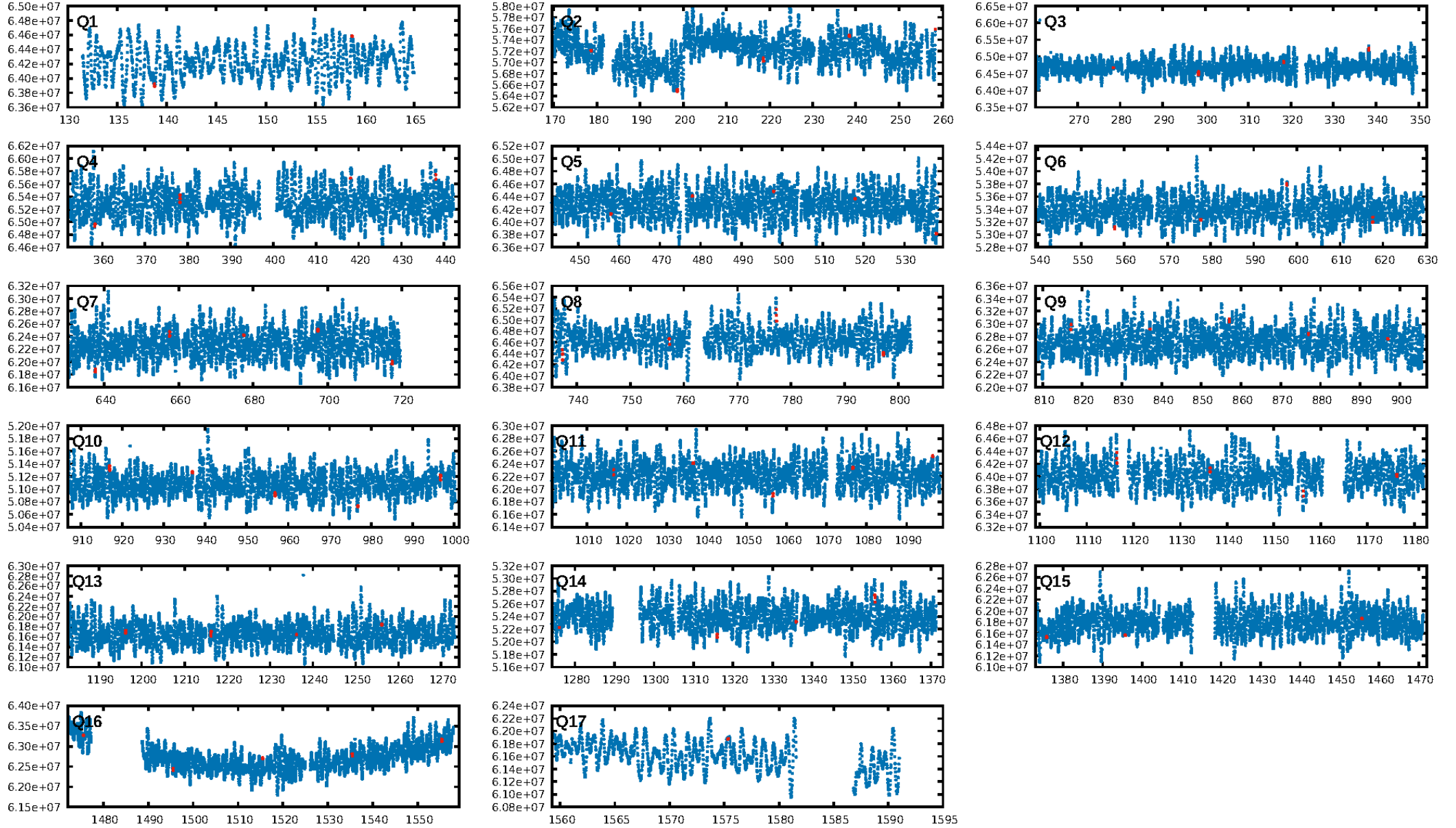
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [89.34 σ]
LongPeriod-sig: 100.0% [186.02 σ]
ModelChiSquare2-sig: 55.9%
ModelChiSquareGof-sig: 93.9%
Bootstrap-pfa: 1.43e-10
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: 0.1733
Centroid-sig: 66.0%
Centroid-so: 0.391 arcsec [0.90 σ]
OotOffset-rm: 0.473 arcsec [2.48 σ]
OotOffset-st: 3/3/1/4 [11]
KicOffset-rm: 0.572 arcsec [2.79 σ]
KicOffset-st: 3/3/1/4 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 0.18 [2/11]

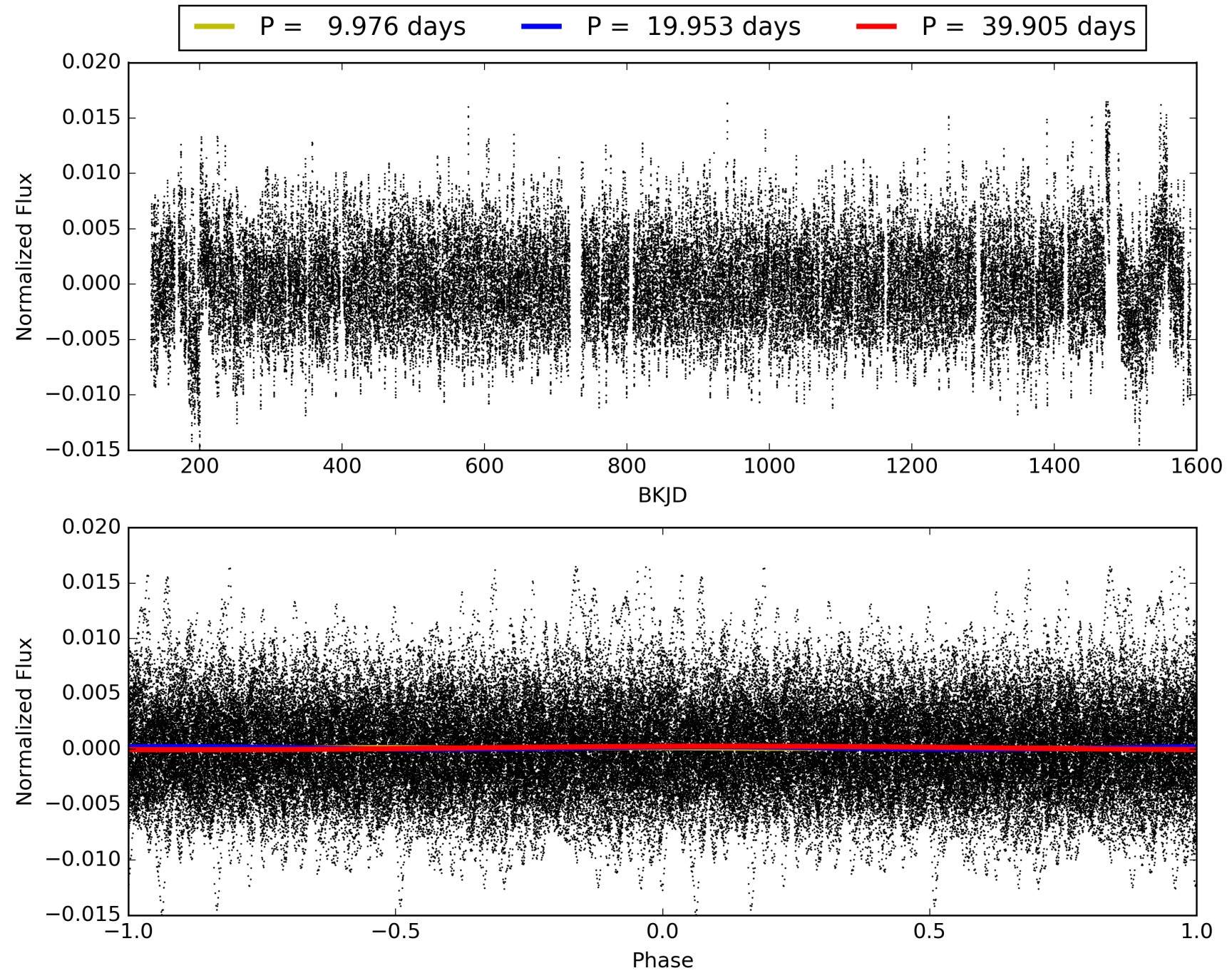
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:22:27 Z

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

TCE 003348714-05, PDC Light Curves

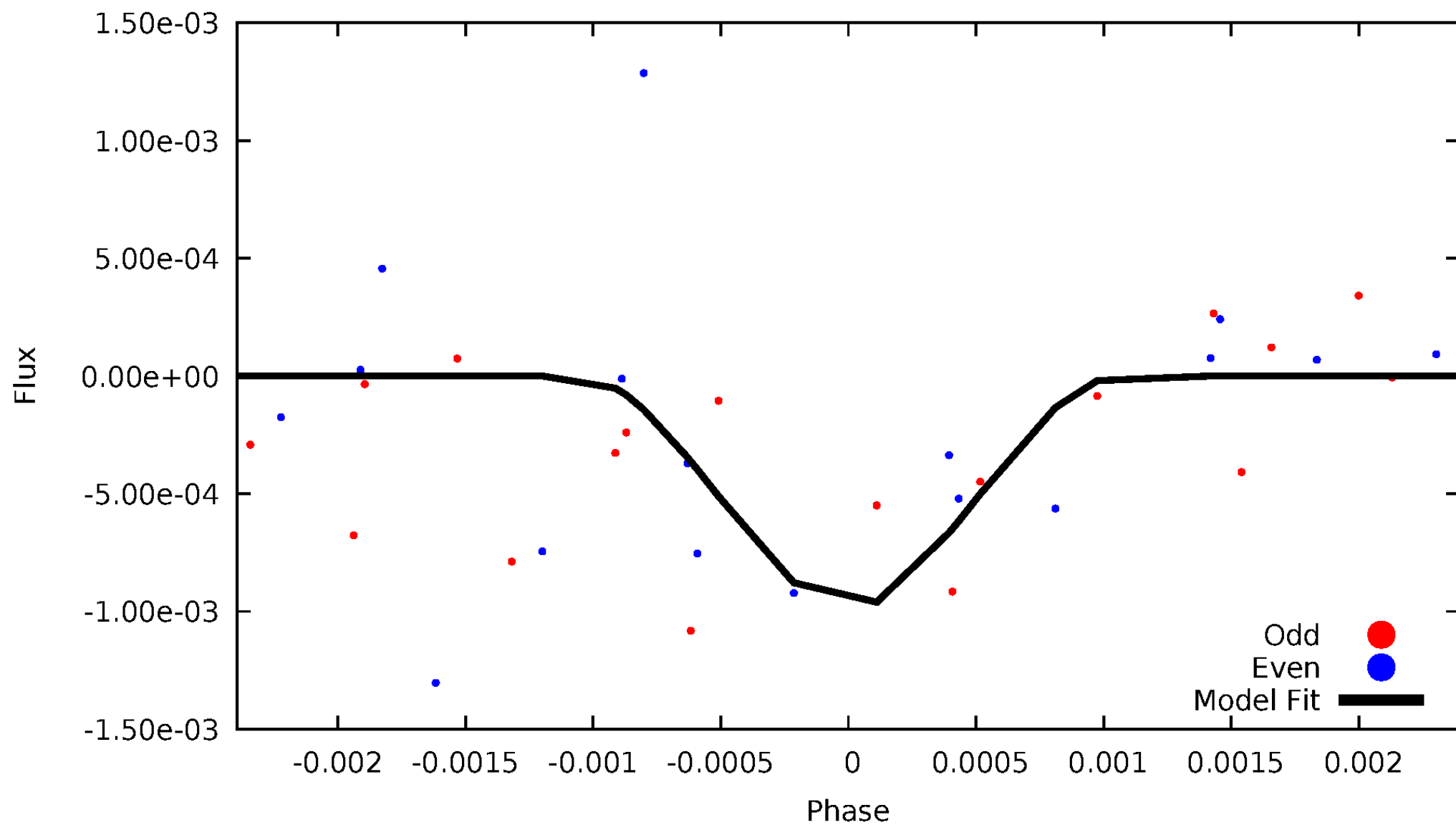


TCE 003348714-05



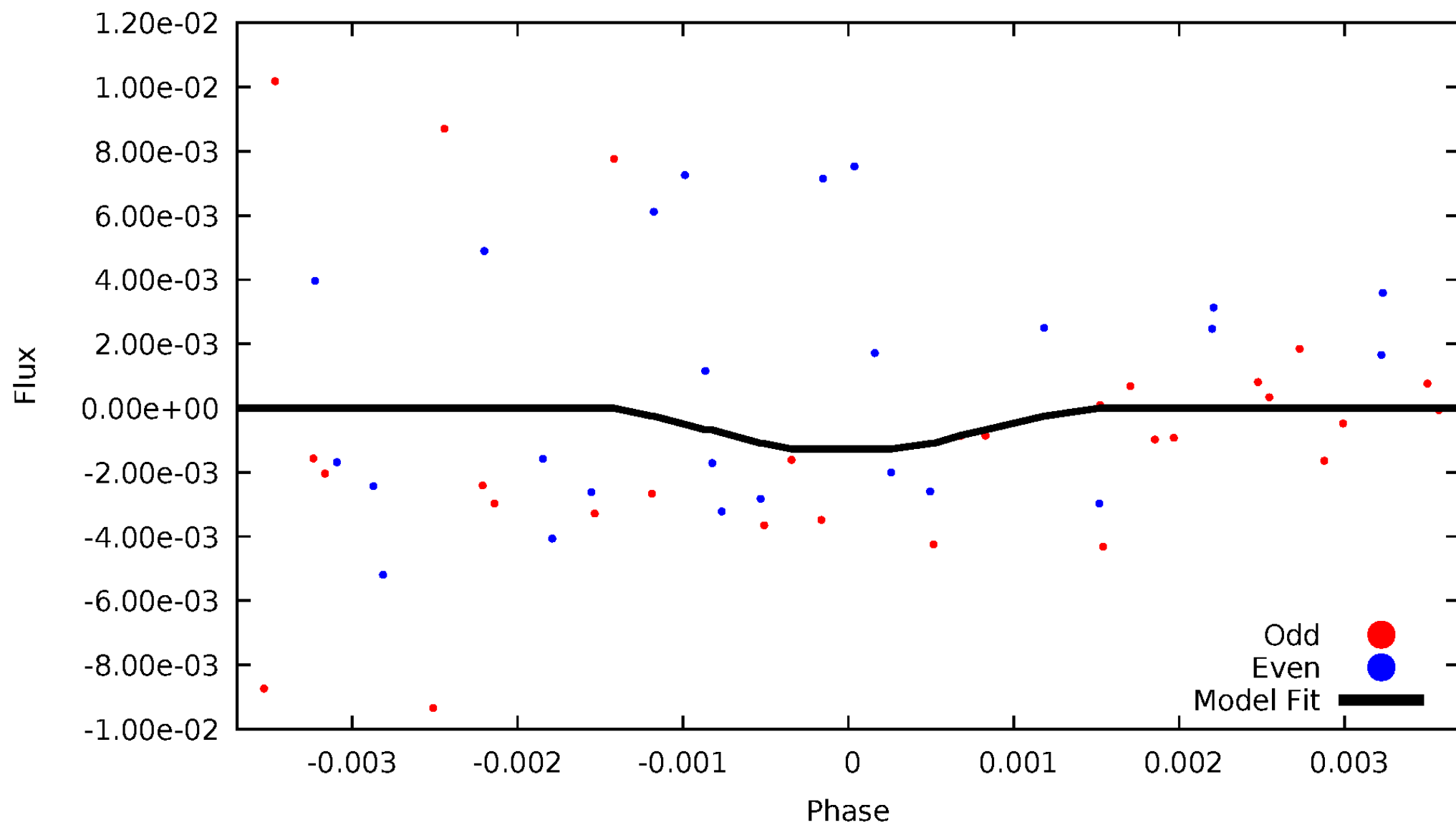
DV Odd/Even

TCE 003348714-05



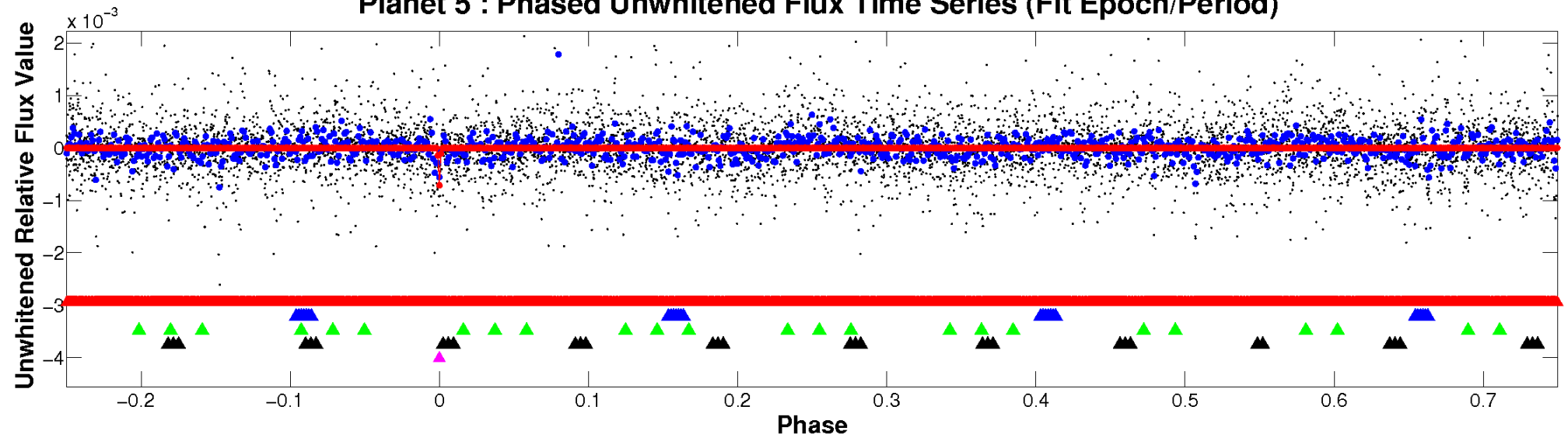
ALT Odd/Even

TCE 003348714-05

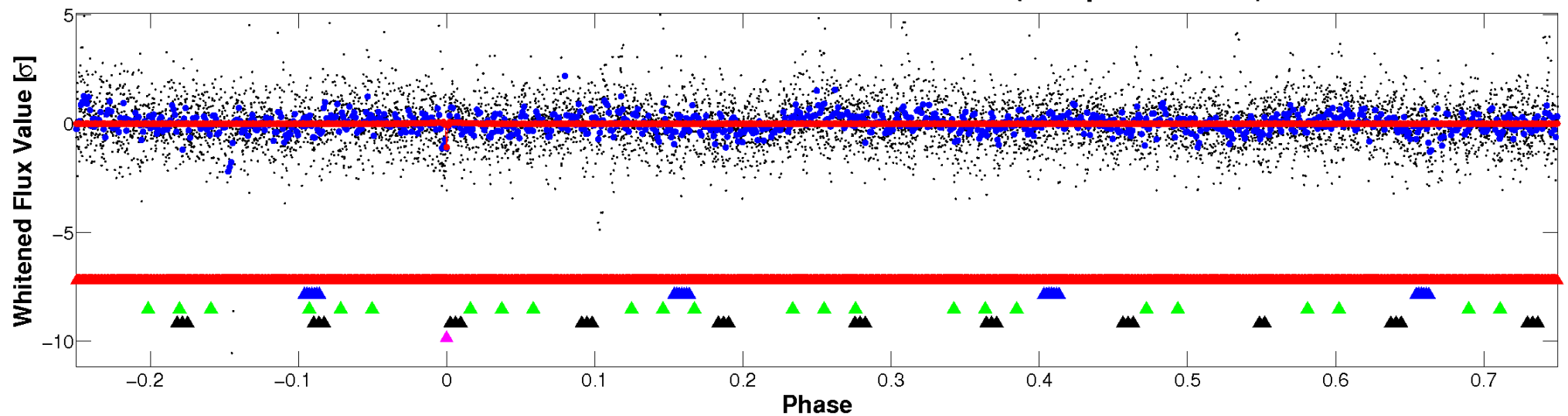


Non-Whitened Vs. Whitened Light Curve

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

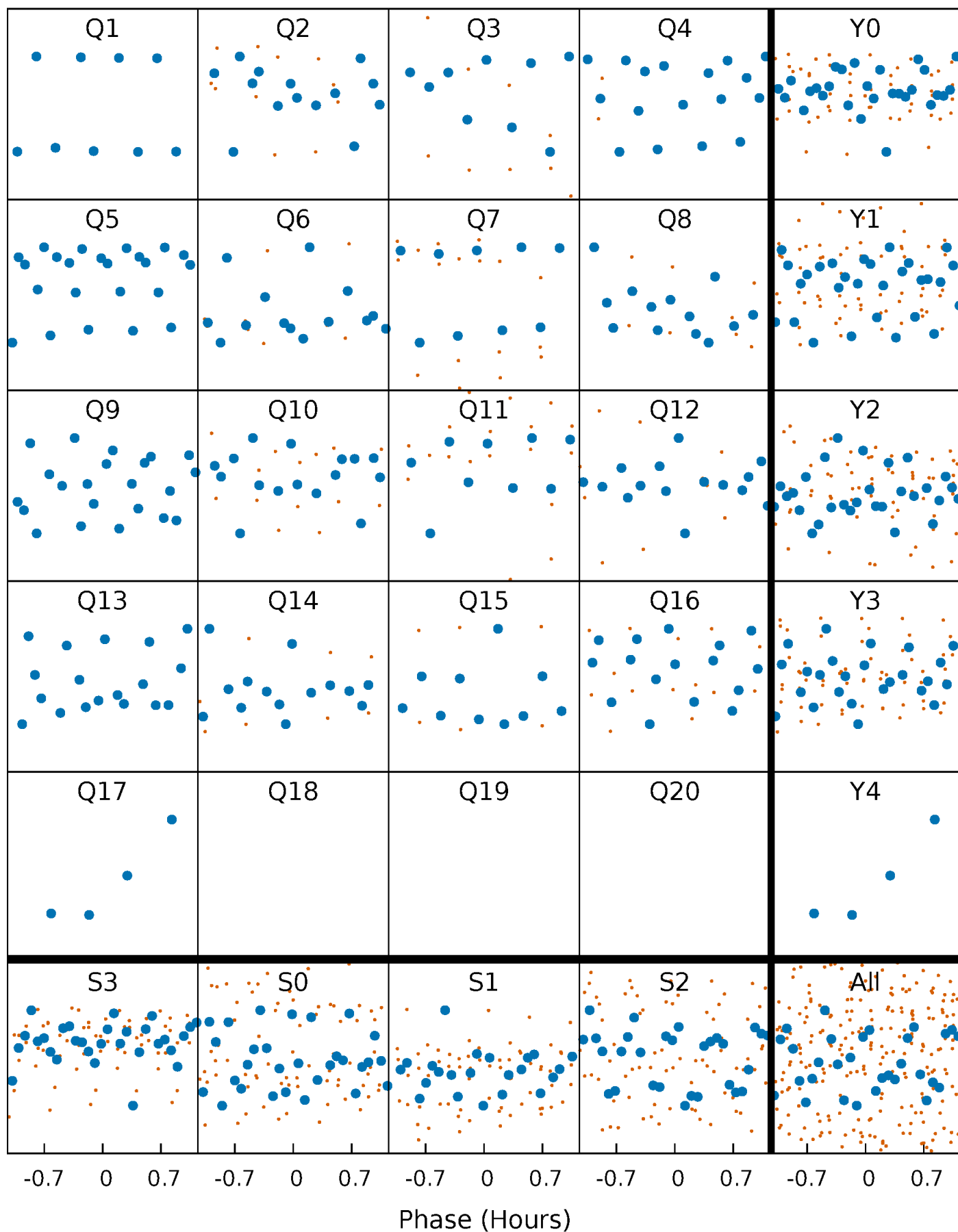


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



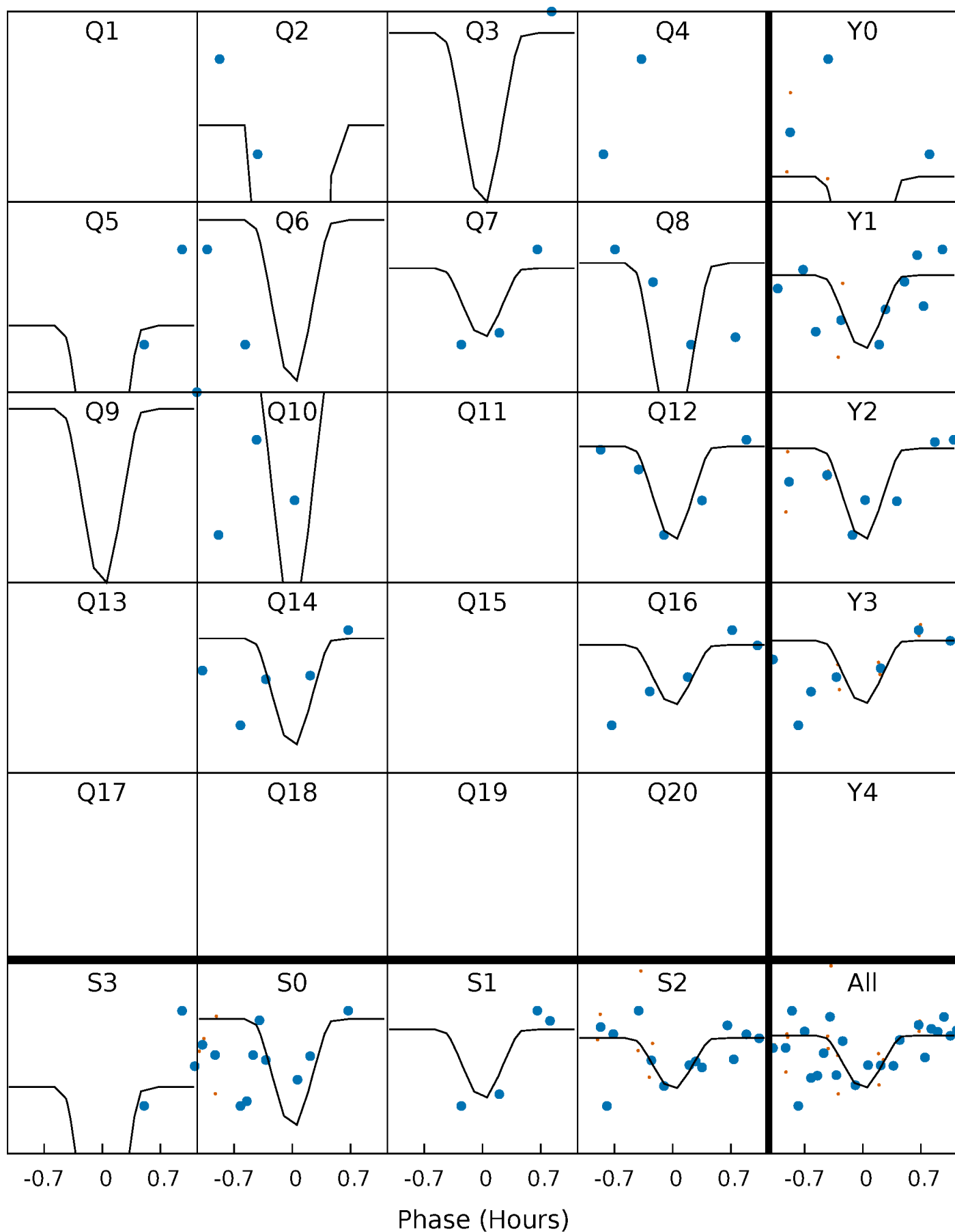
PDC Quarter-Phased Transit Curves

TCE 003348714-05 P= 19.952573 Days $T_0=138.770189$ (BKJD)



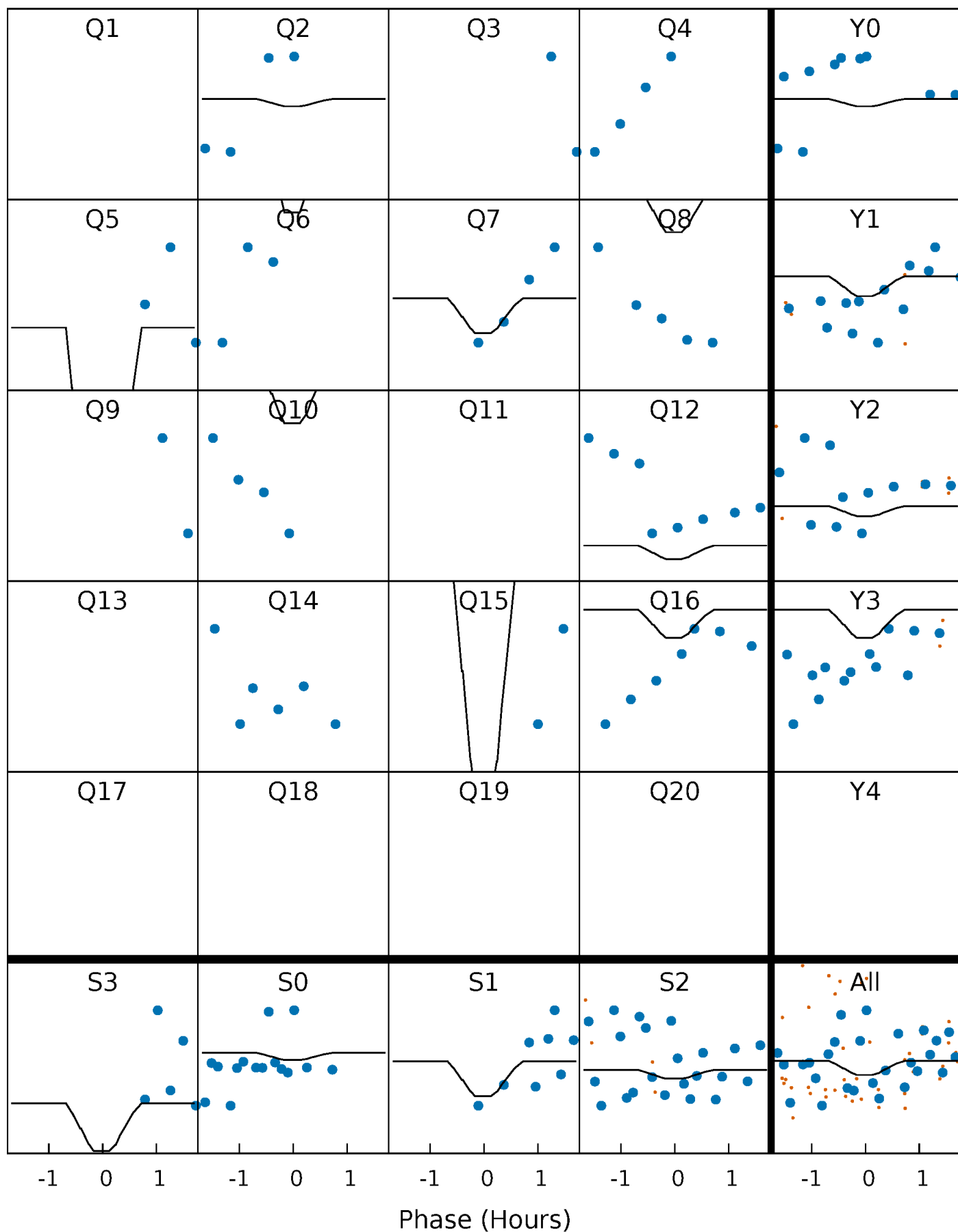
DV Quarter-Phased Transit Curves

TCE 003348714-05 P= 19.952573 Days $T_0=138.770189$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

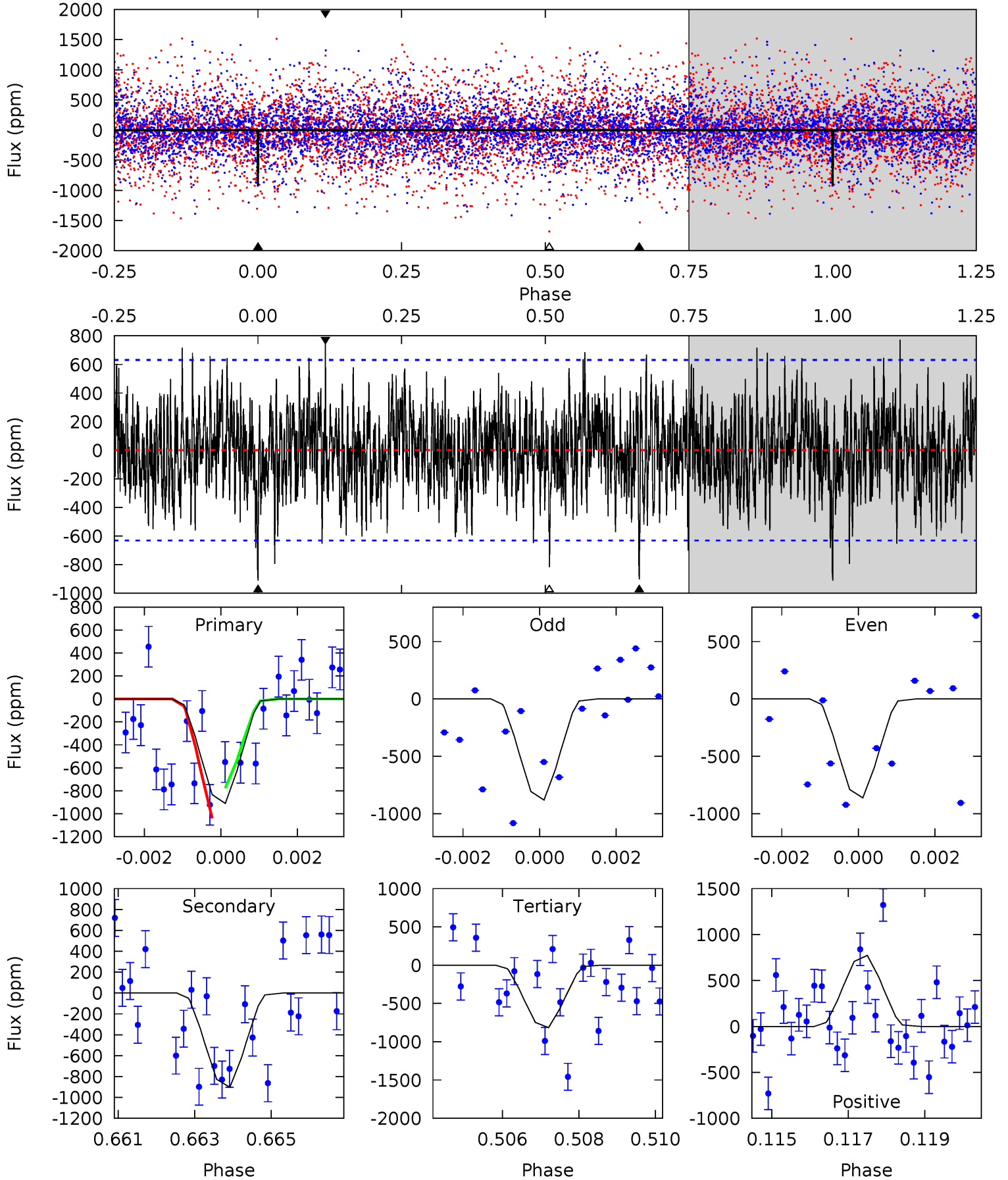
TCE 003348714-05 P= 19.953255 Days $T_0=138.747678$ (BKJD)



DV Model-Shift Uniqueness Test

003348714-05, P = 19.952573 Days, E = 118.817616 Days

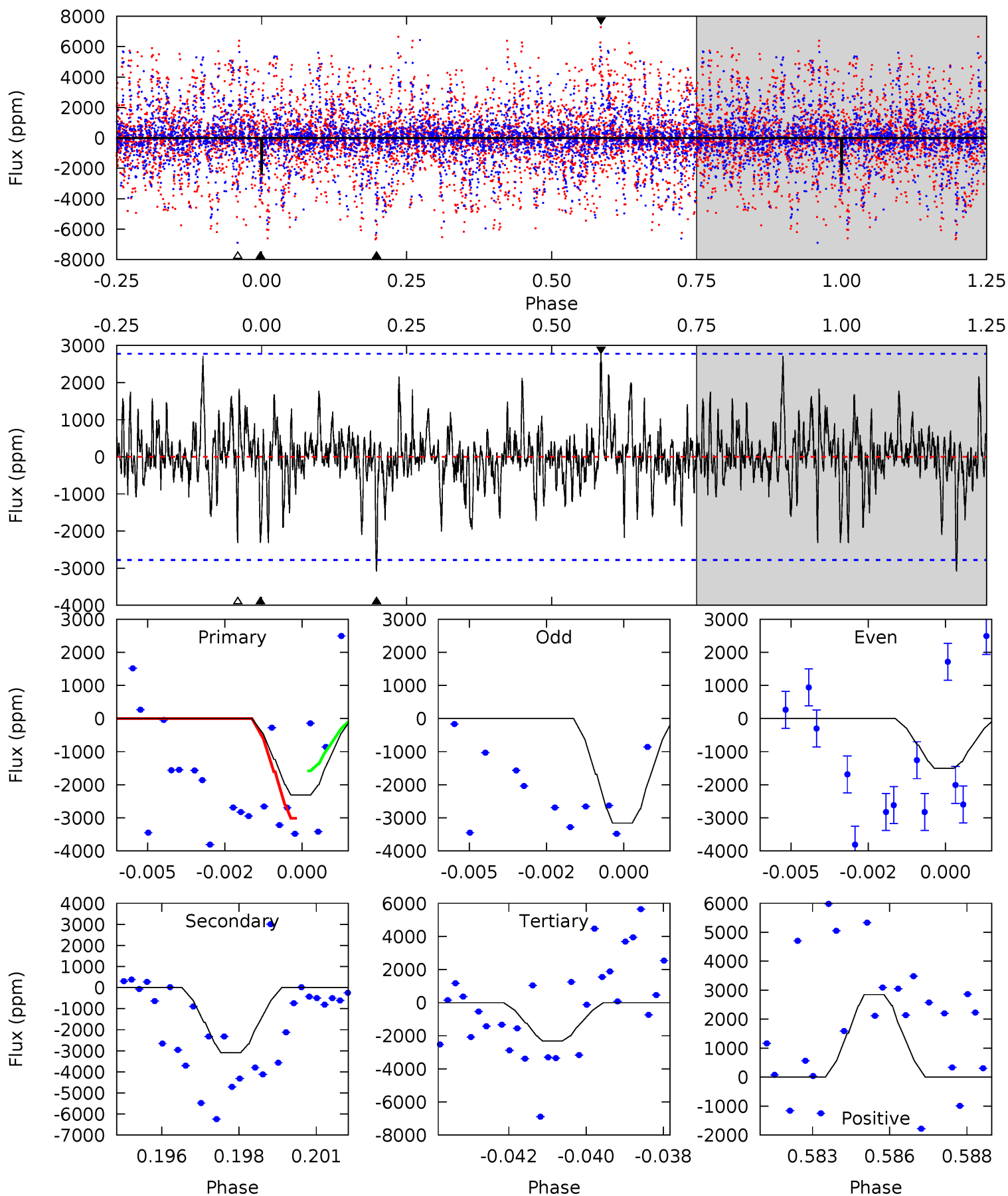
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.70	7.64	6.91	6.54	5.34	3.11	1.92	0.80	1.16	0.73	1.10	0.08	1.11	0.46	1.13



Alt Model-Shift Uniqueness Test

003348714-05, P = 19.953255 Days, E = 118.794423 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.41	5.89	4.43	5.43	5.30	3.04	1.20	-0.01	-1.02	1.46	0.46	1.41	-0.18	0.48	0



Stellar Parameters For KIC 003348714

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7416^{+206}_{-335}	$4.210^{+0.087}_{-0.203}$	$0.070^{+0.150}_{-0.350}$	$1.637^{+0.562}_{-0.241}$	$1.582^{+0.214}_{-0.235}$	$0.508^{+0.198}_{-0.271}$
	+3%/-5%	+2%/-5%	+214%/-500%	+34%/-15%	+14%/-15%	+39%/-53%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003348714-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-903 ± 118	$87.39^{+104.84}_{-60.96}$	1440^{+113}_{-87}	2563^{+1272}_{-739}	$1.800^{+18.654}_{-1.440}$
Alt.	-3090 ± 525	$95.69^{+99.22}_{-67.65}$	1441^{+101}_{-79}	3015^{+1548}_{-565}	$5.034^{+54.708}_{-3.750}$

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 $A_{obs} \gg 1.0$

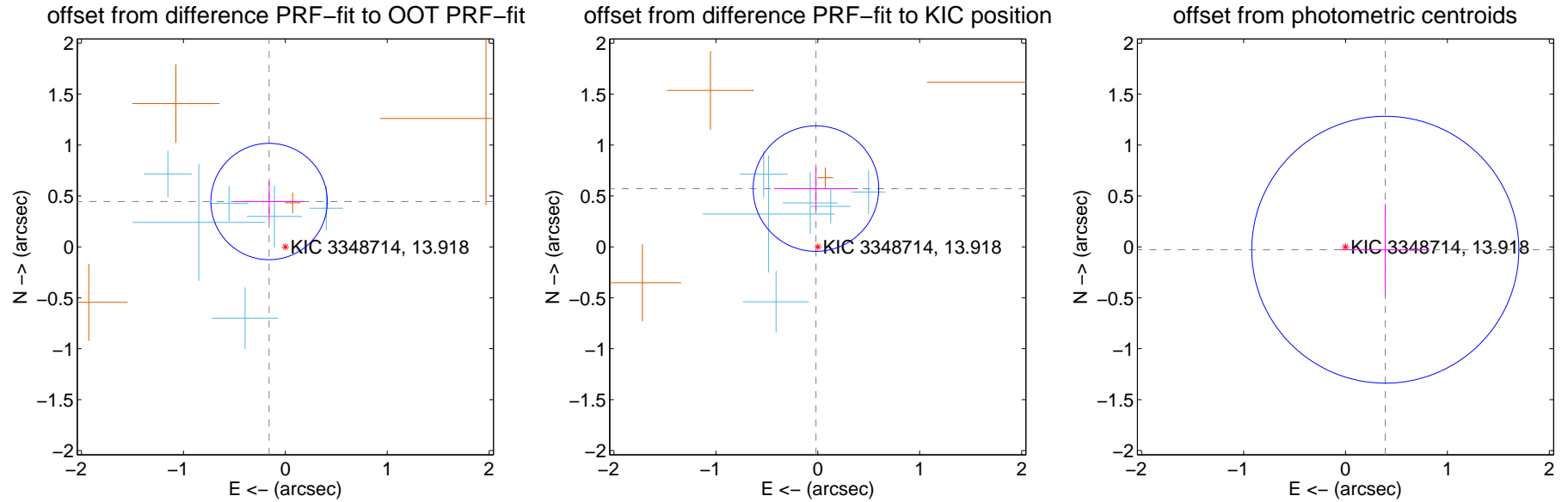
DV Centroid Data

Supplemental centroid analysis for 003348714-05. Kepler magnitude: 13.92. Transit SNR 3.24

There are 6 quarters with good PRF difference image offsets

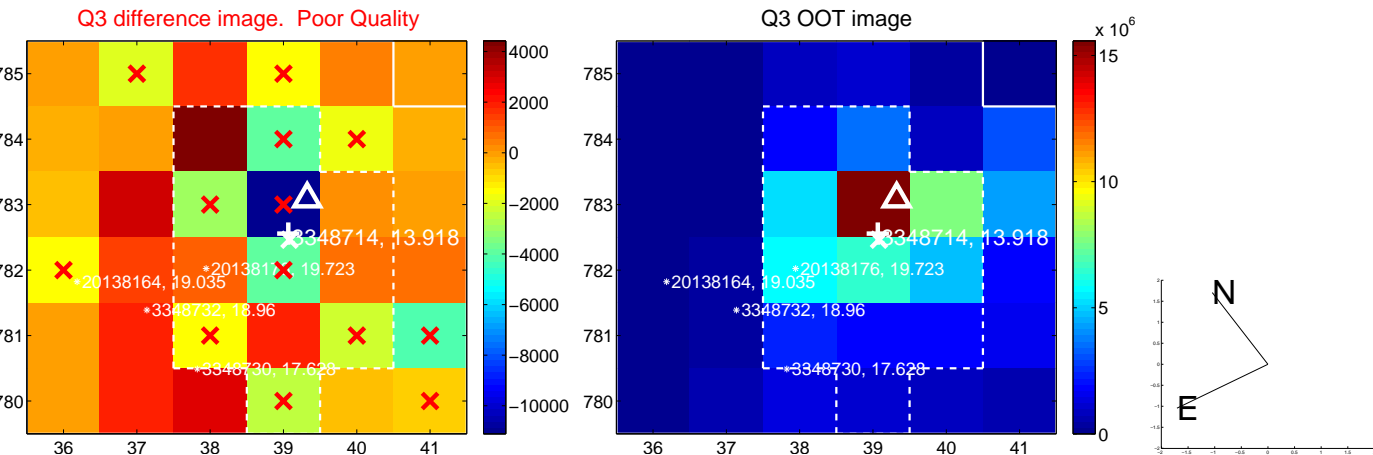
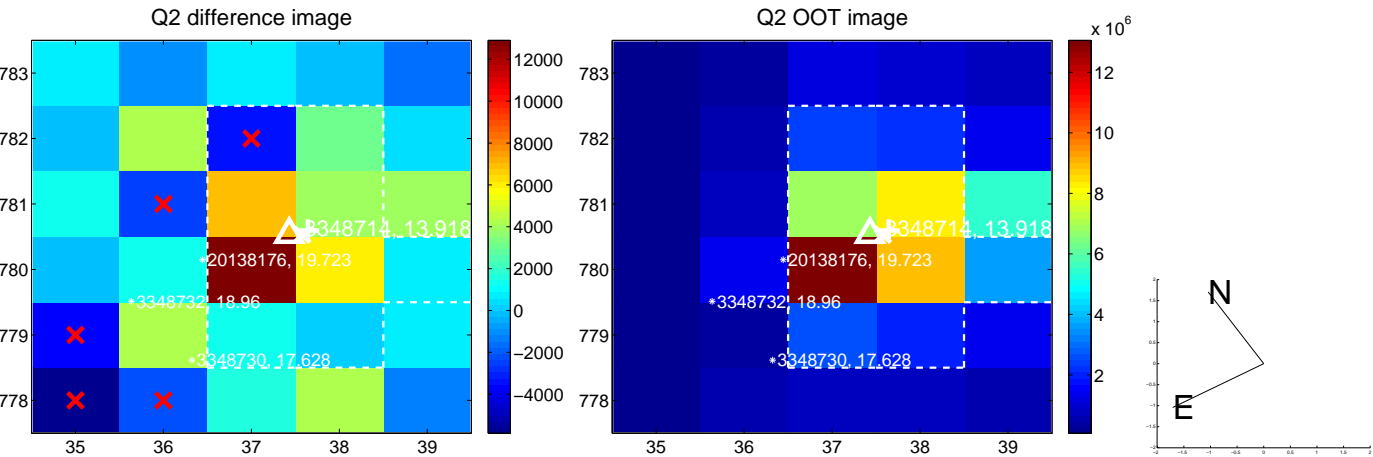
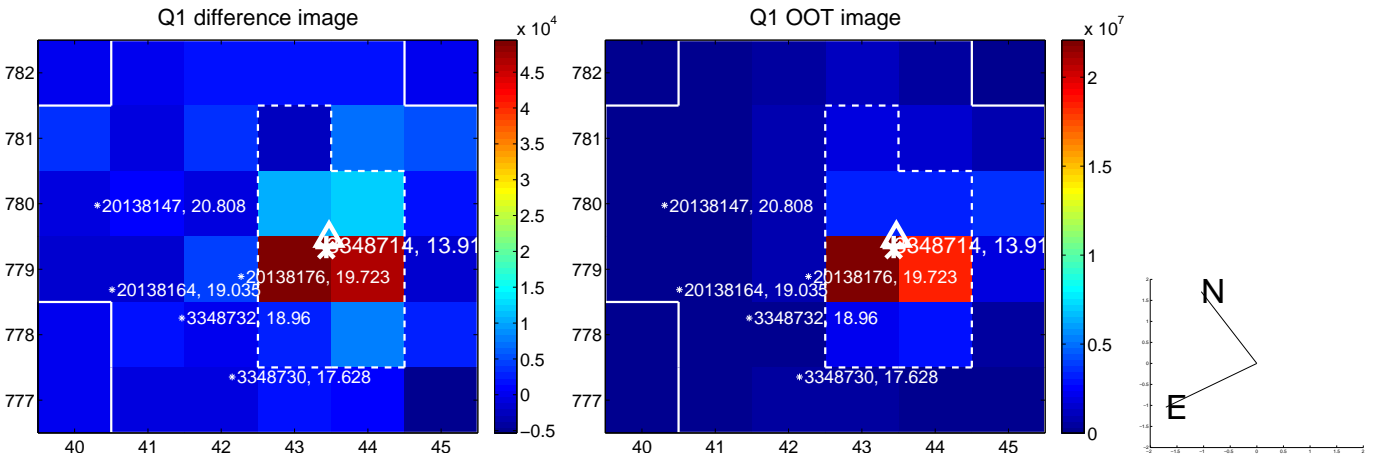
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.473 ± 0.190	2.48	0.159 ± 0.338	0.445 ± 0.193
PRF-fit source offset from KIC position	0.572 ± 0.205	2.79	0.018 ± 0.411	0.572 ± 0.209
photometric centroid source offset	0.39 ± 0.44	0.90	-0.39 ± 0.44	-0.03 ± 0.45

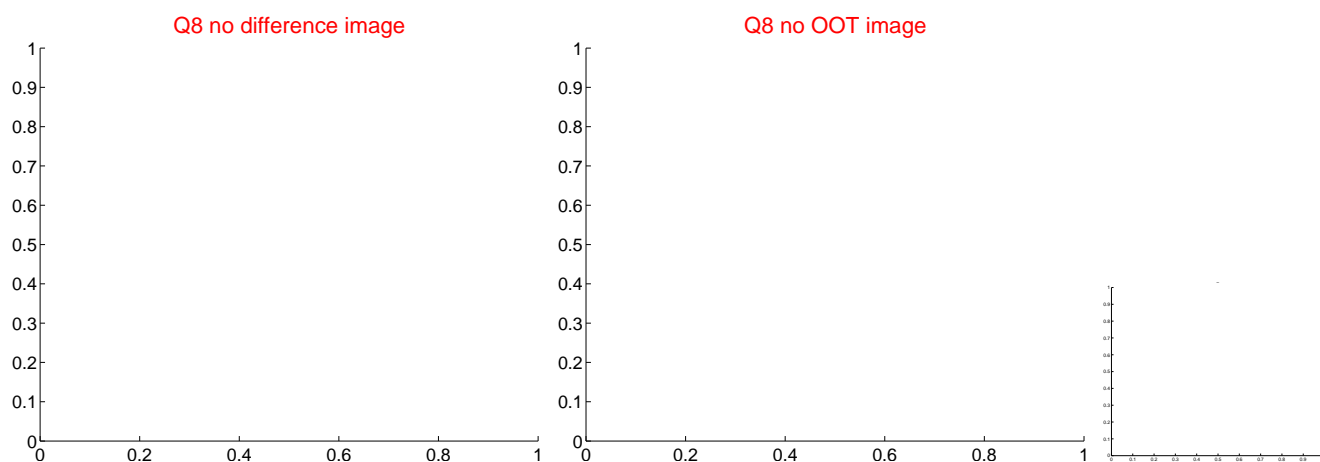
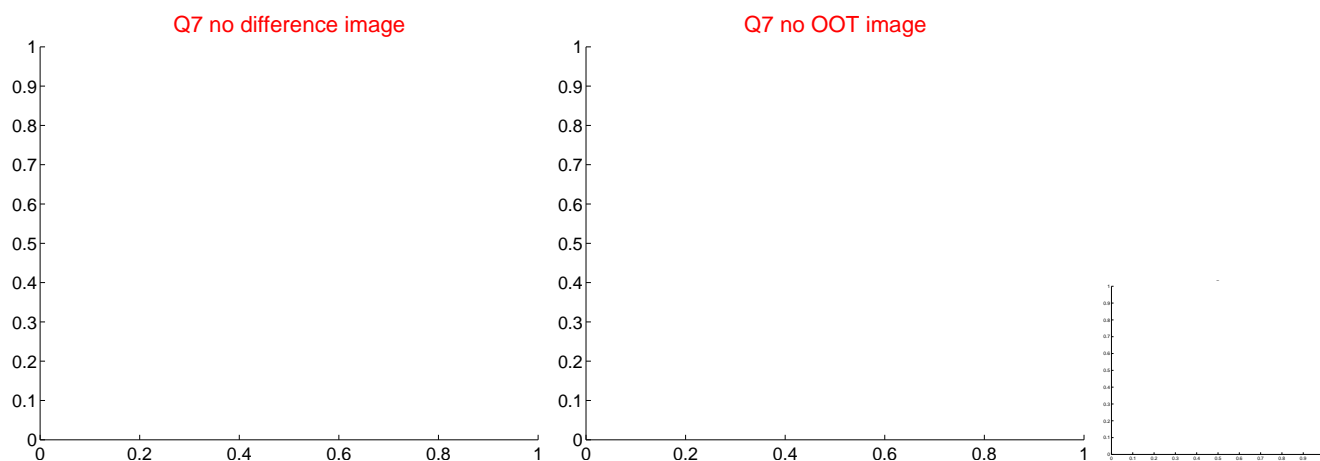
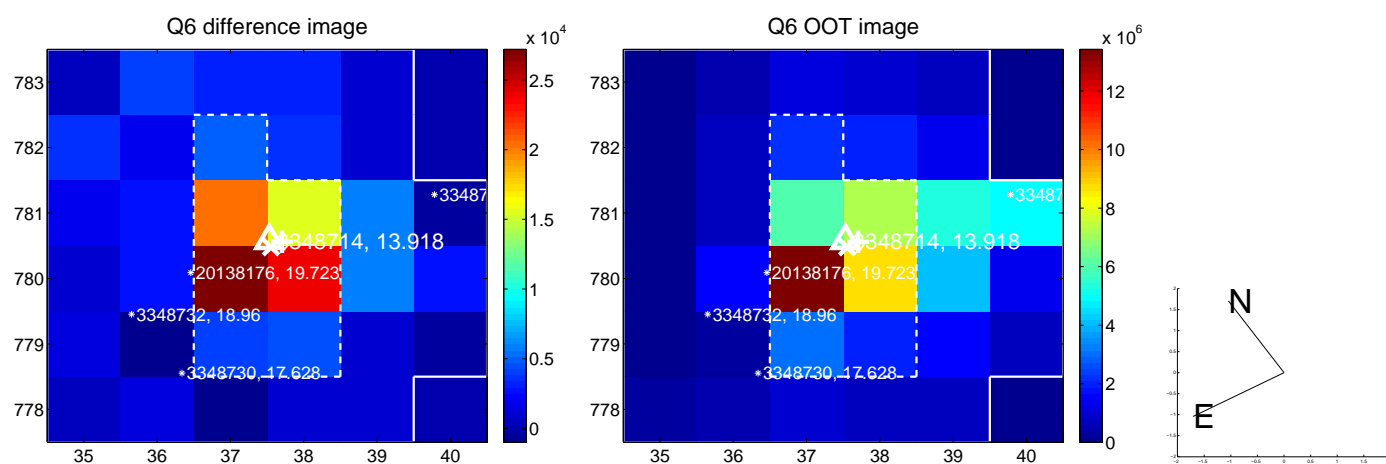
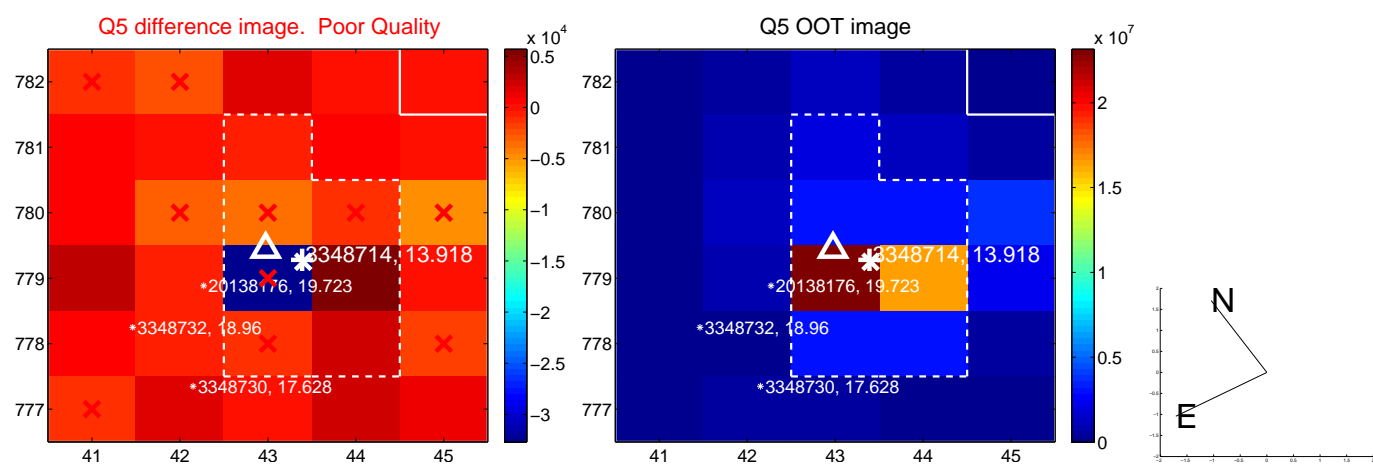


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

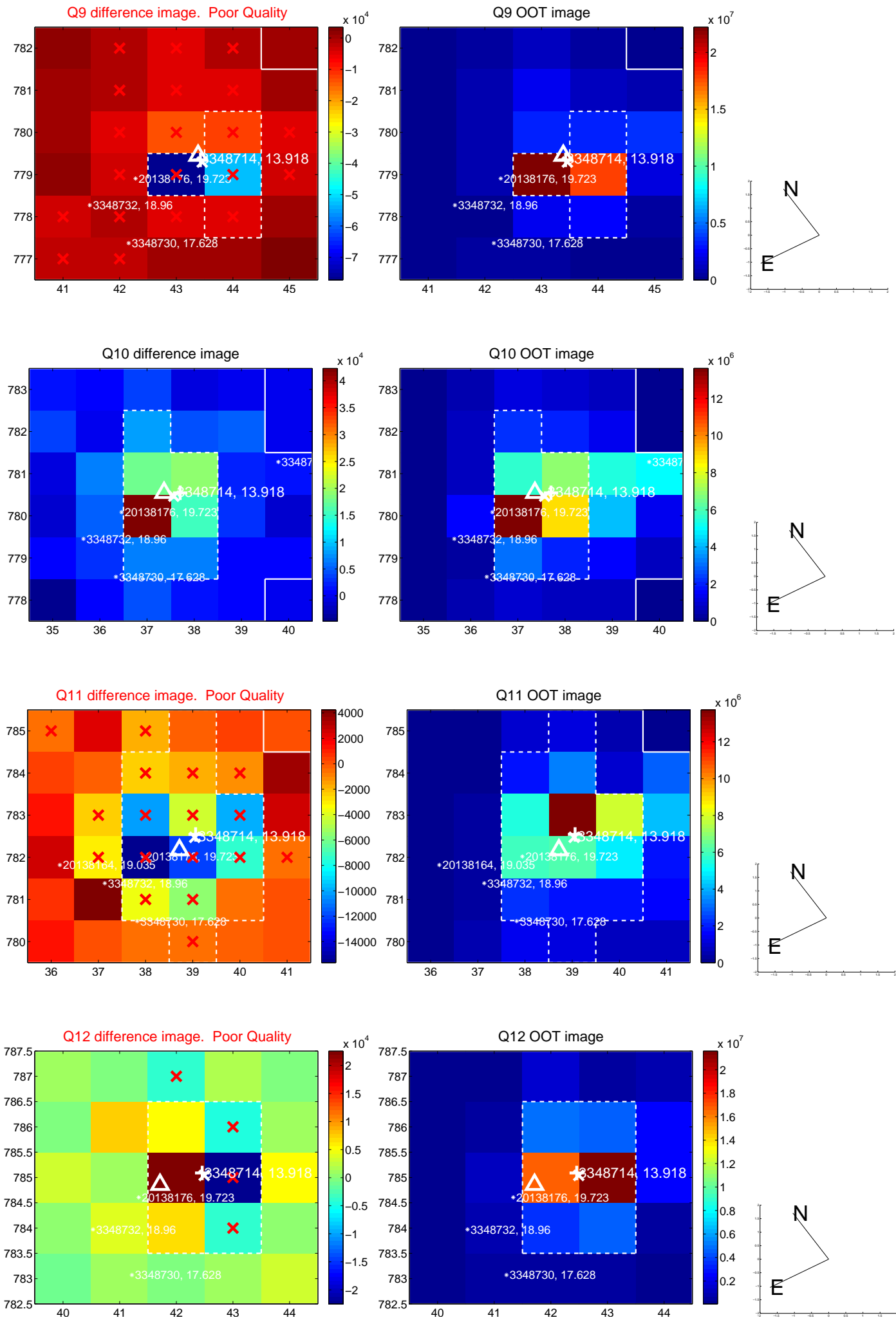
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



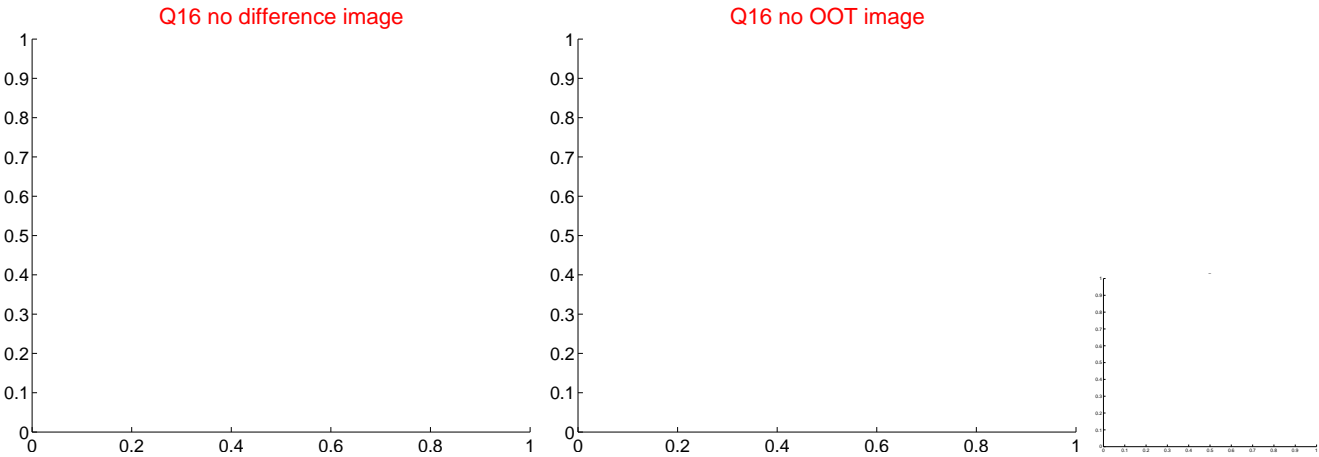
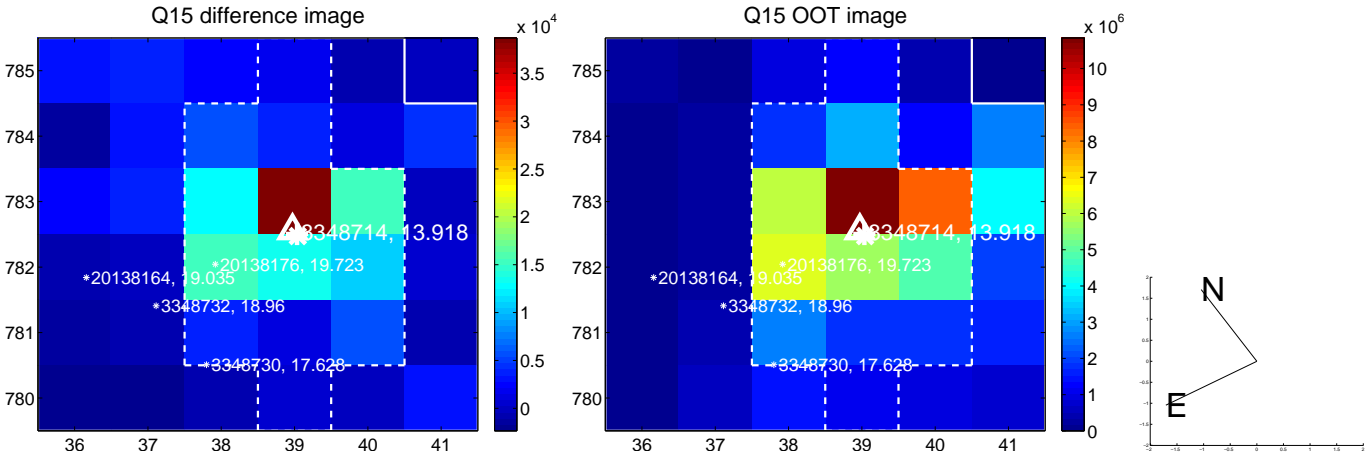
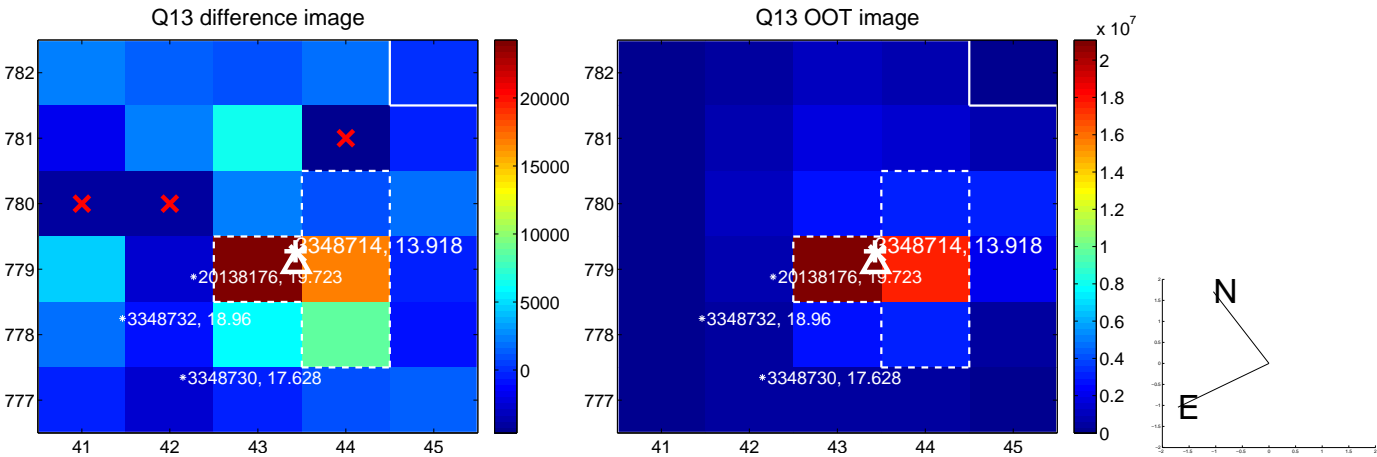
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



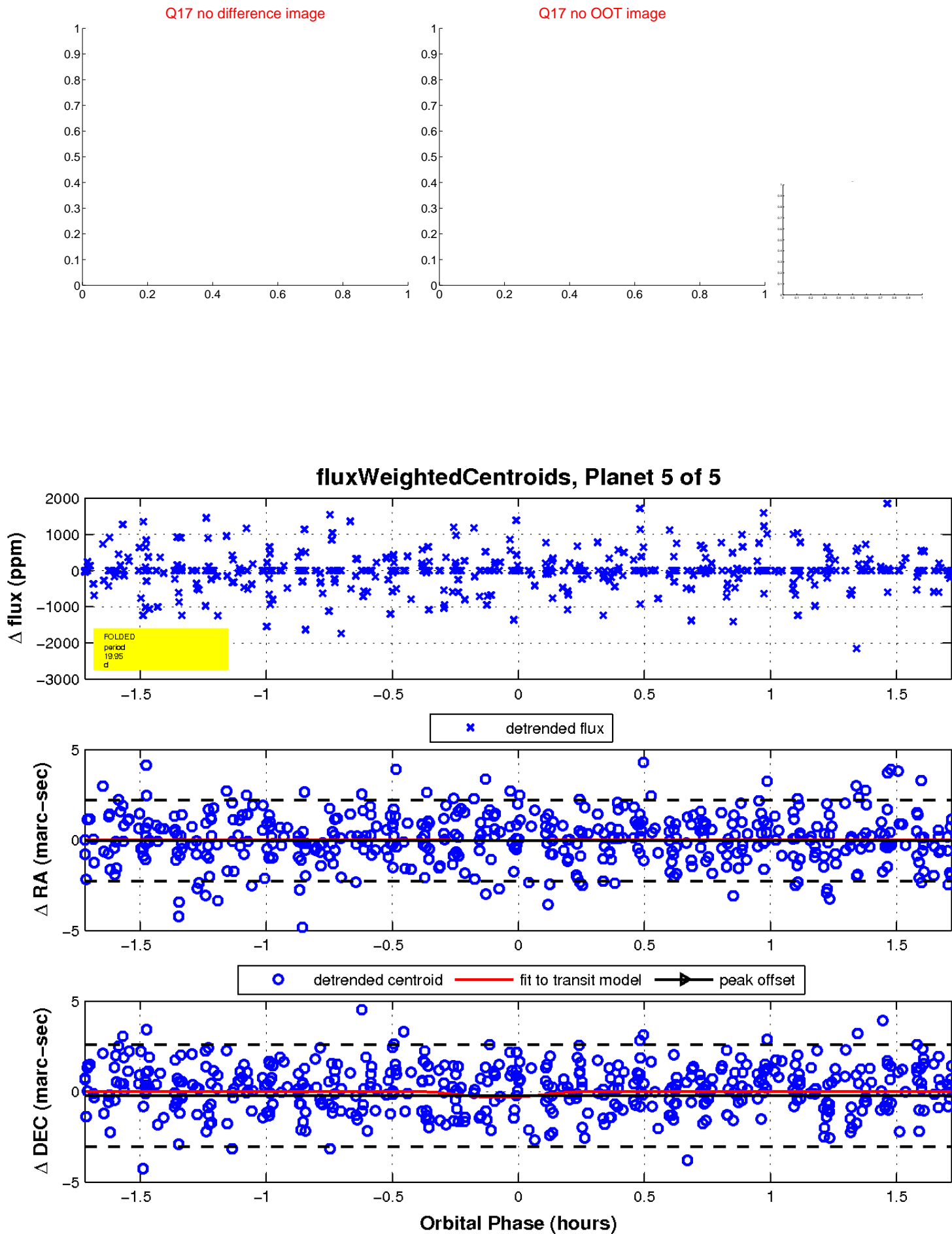
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

