

KIC 005034333

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})
005034333-01	OBS	6124.01	6.932428	134.878389	6222.3	9.493	372.1	411.4	2.17	8675	30.03	2907.35
005034333-02	OBS	No	6.932338	136.217524	42.5	15.000	18.0	-1.0	2.17	8675	1.44	2907.41
005034333-03	OBS	No	2.310780	132.564064	39.2	6.080	18.5	9.1	2.17	8675	1.57	12579.60
005034333-04	OBS	No	1.386939	131.630204	11.0	2.480	11.4	3.2	2.17	8675	0.83	24846.70
005034333-05	OBS	No	0.866544	131.875777	65.7	3.000	9.1	-1.0	2.17	8675	1.79	46518.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005034333-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED—HAS_SEC_TCE
005034333-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
005034333-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—RESIDUAL_TCE
005034333-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005034333-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT—RESIDUAL_TCE—CENT_NOFITS

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

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

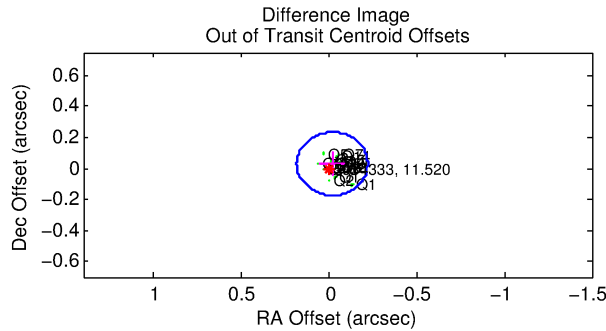
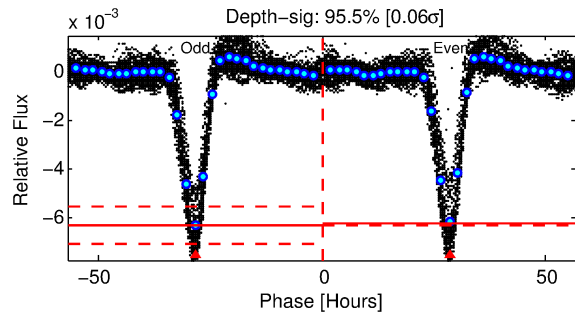
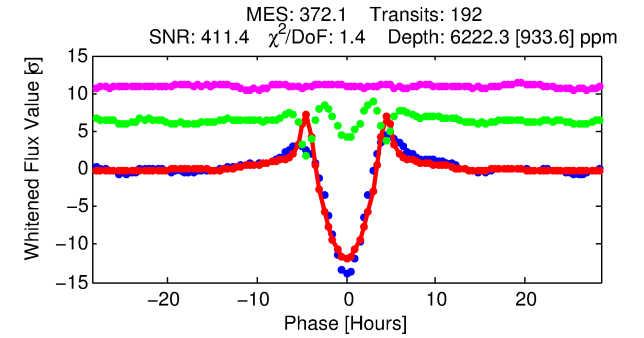
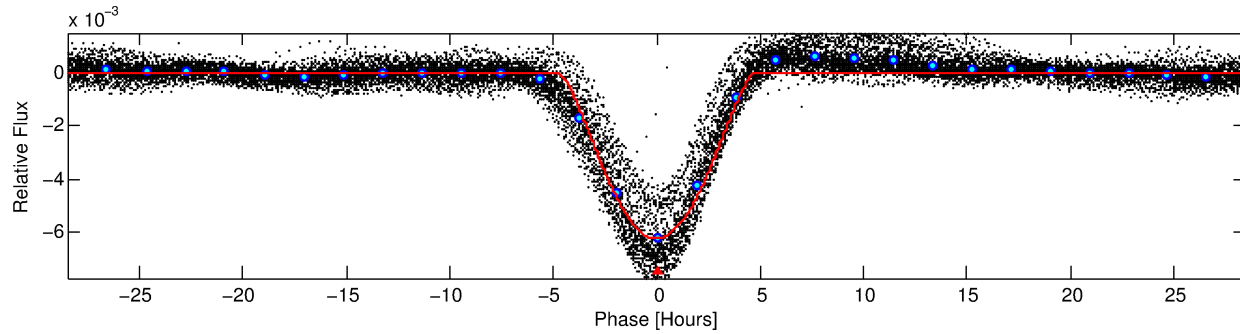
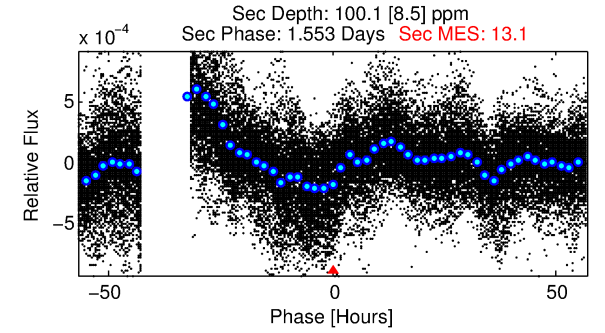
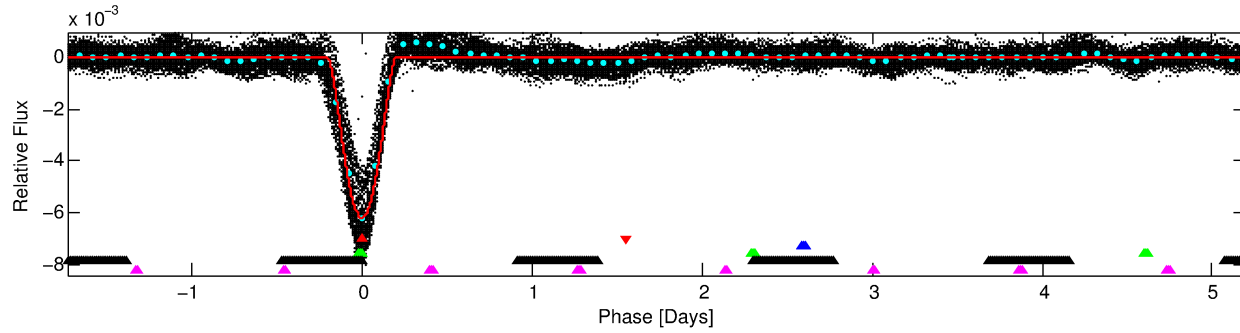
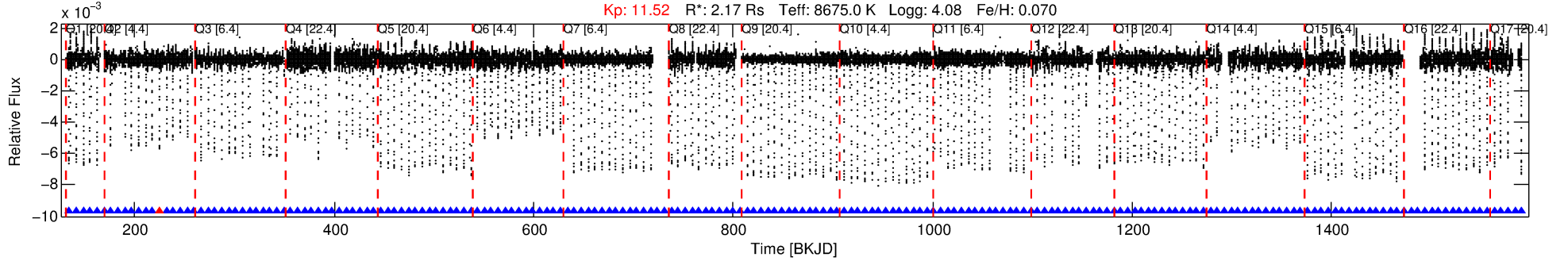
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005034333-01

No Significant Match Found

DV One-Page Summary

KIC: 5034333 Candidate: 1 of 5 Period: 6.932 d
KOI: K06124.01 Corr: 0.897



DV Fit Results:

Period = 6.93243 [0.00000] d
Epoch = 134.8784 [0.0004] BKJD
Rp/R* = 0.1269 [0.0039]
a/R* = 3.08 [0.01]
b = 1.00 [0.01]
Seff = 2907.35 [990.58]
Teq = 1872 [159] K
Rp = 30.03 [7.55] Re
a = 0.0906 [0.0183] AU
Ag = 0.50 [0.15] [-3.29 σ]
Teffp = 2435 [131] K [2.73 σ]

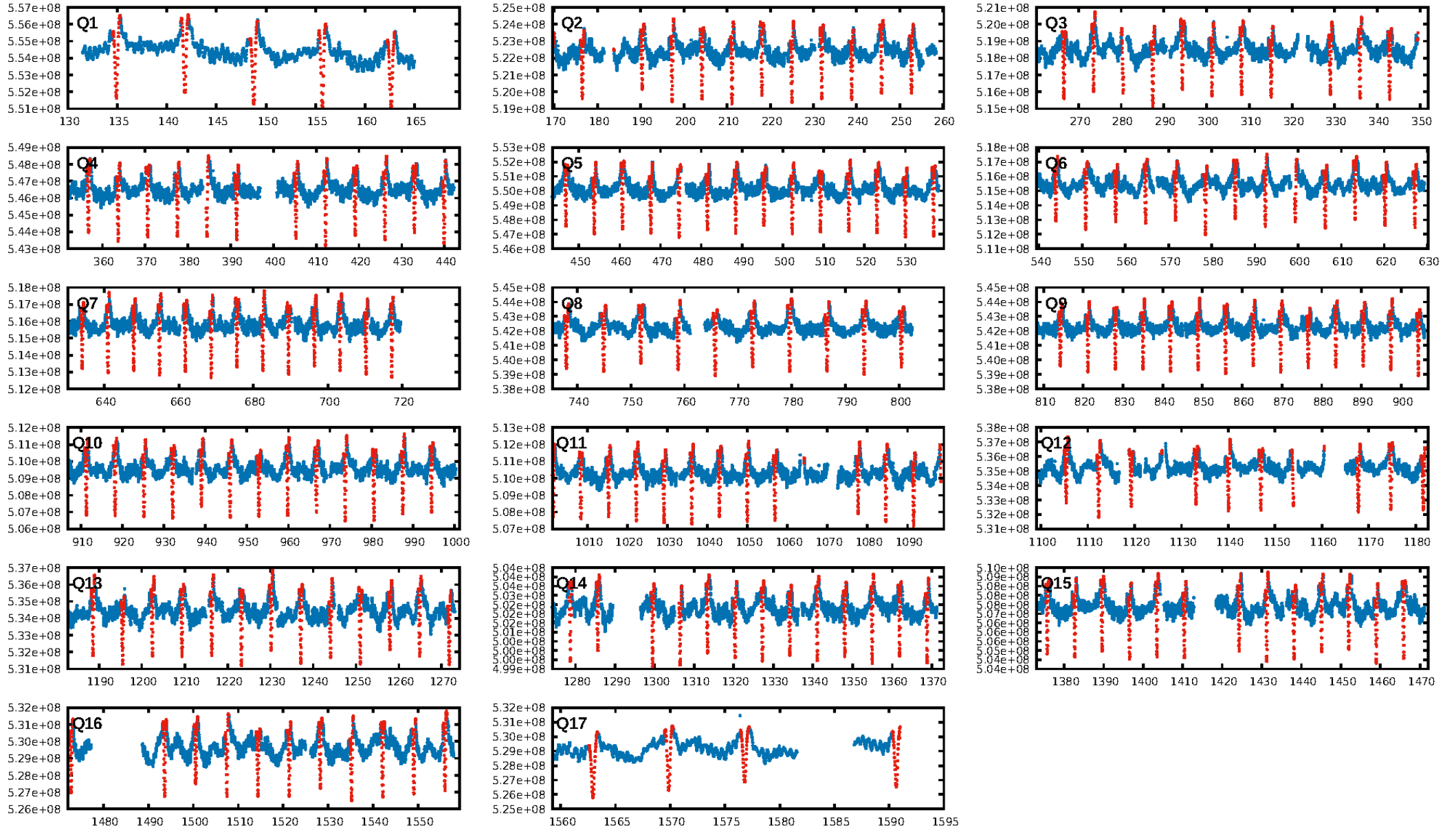
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [182/183]
GhostDiagnostic-chr: 2.926
Centroid-sig: 0.0%
Centroid-so: 0.266 arcsec [47.61 σ]
OotOffset-rm: 0.035 arcsec [0.52 σ]
KicOffset-rm: 0.187 arcsec [2.68 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

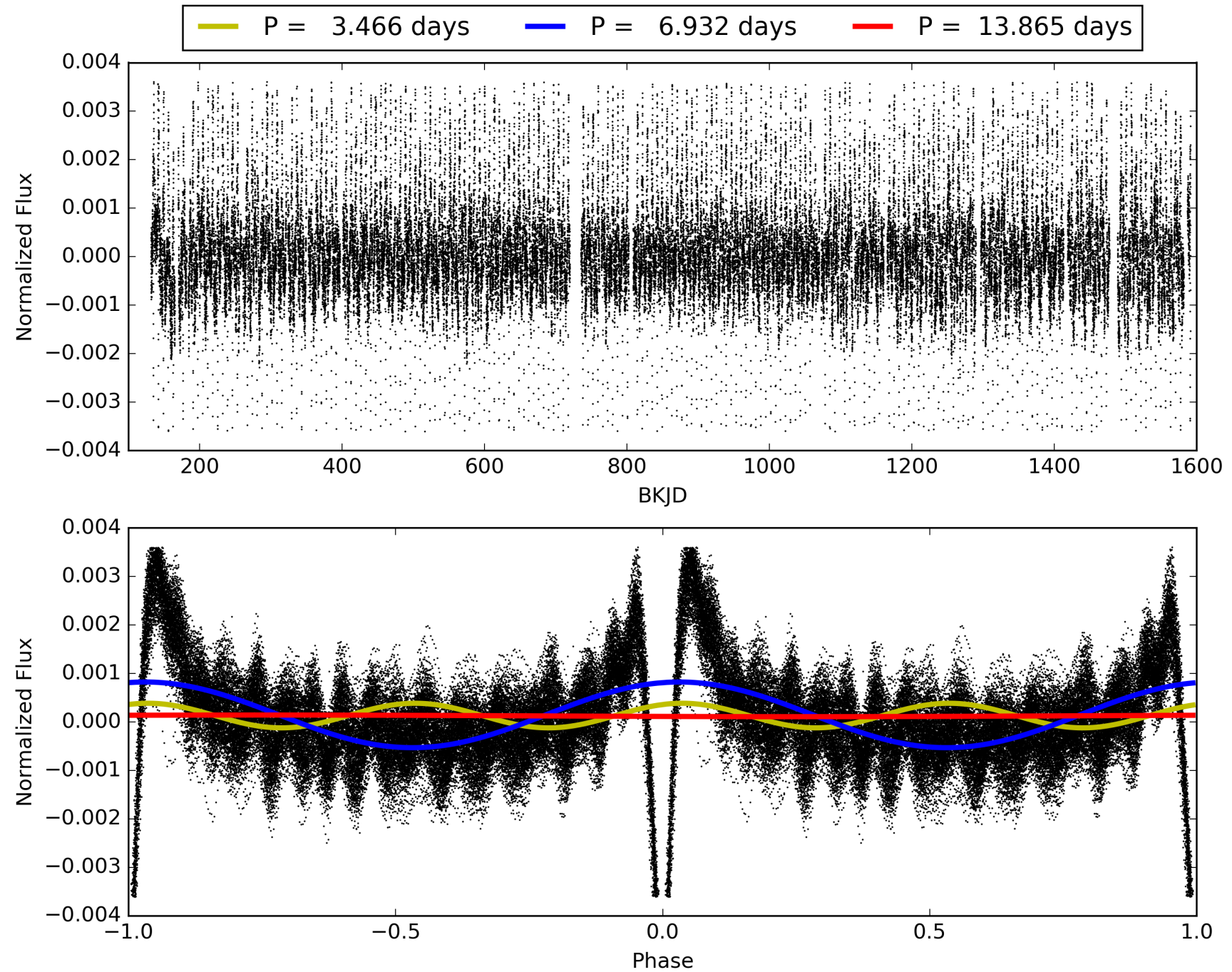
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:51:21 Z

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

TCE 005034333-01, PDC Light Curves

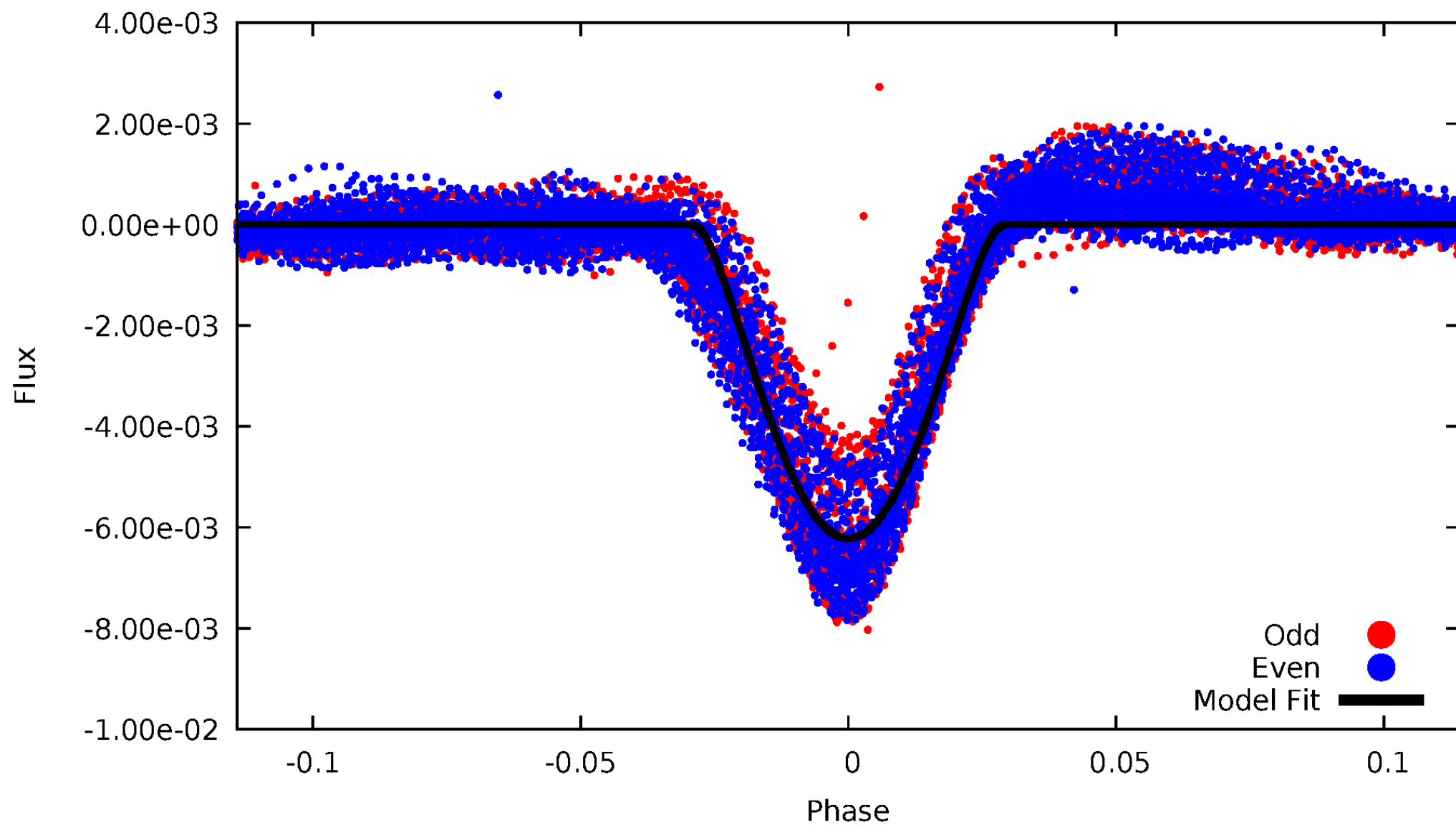


TCE 005034333-01



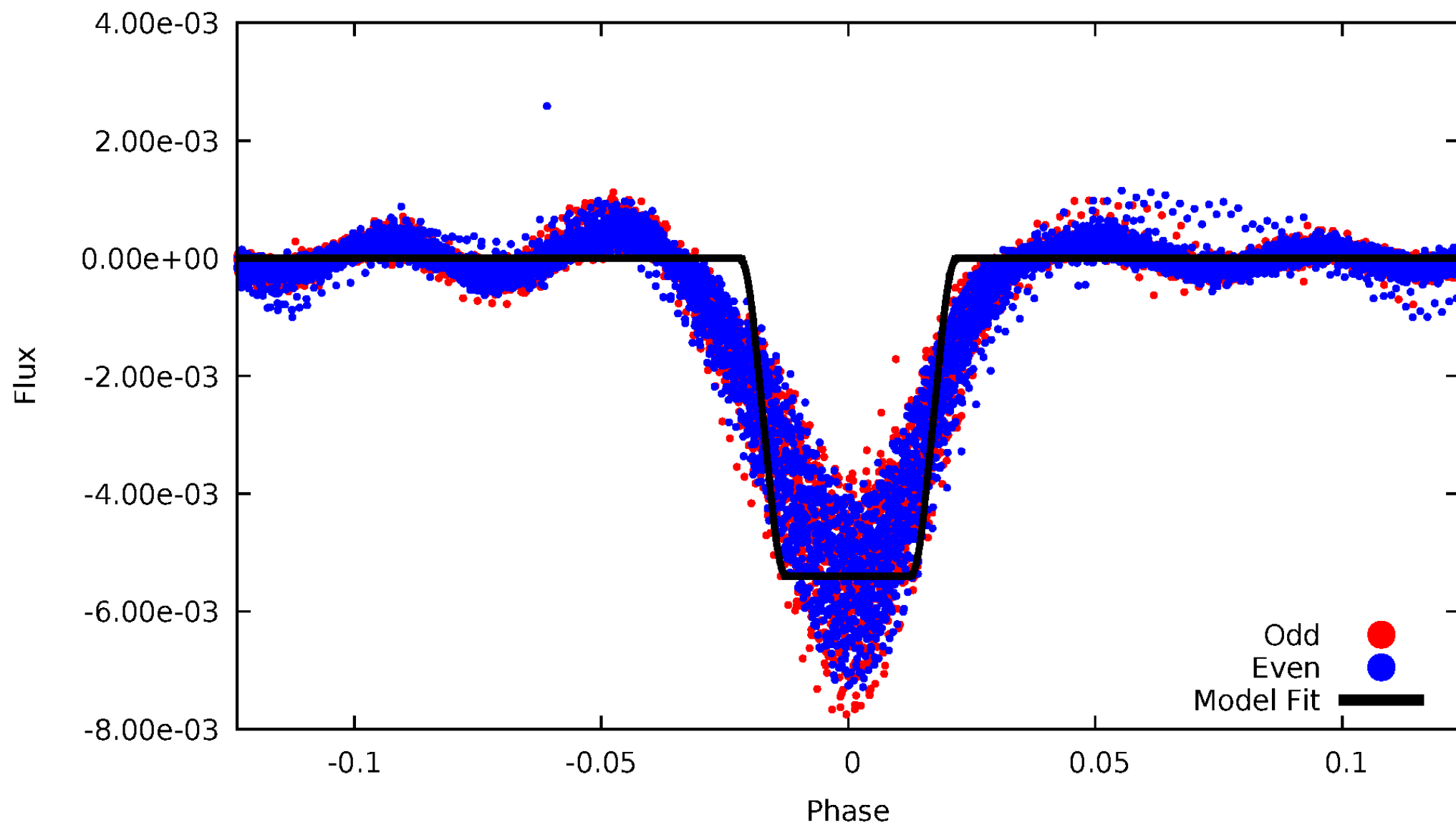
DV Odd/Even

TCE 005034333-01

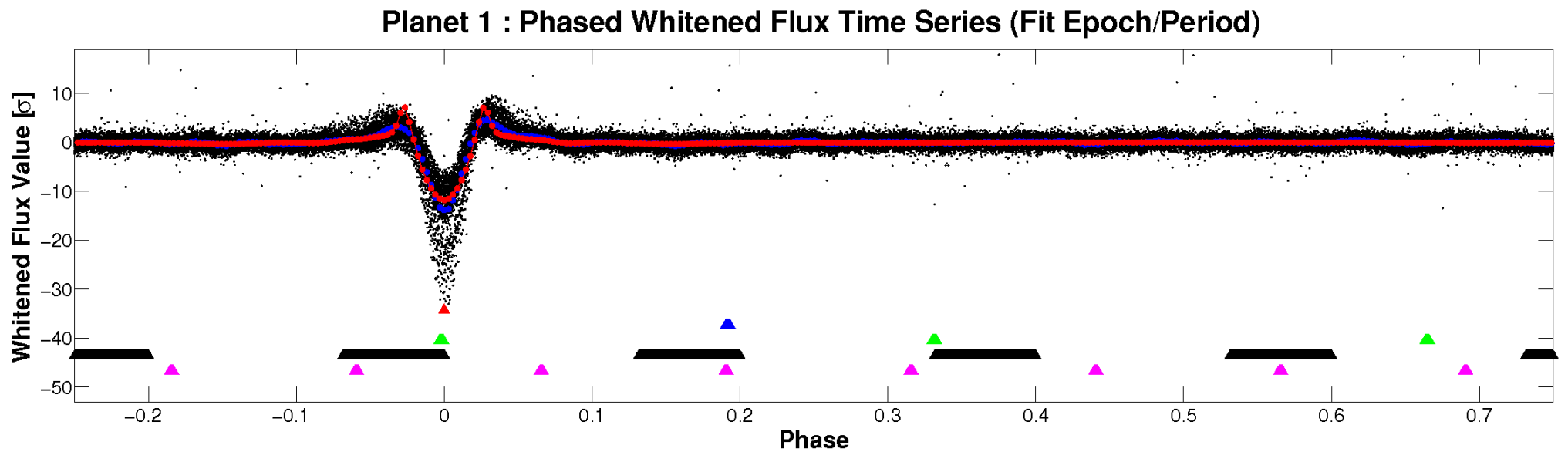
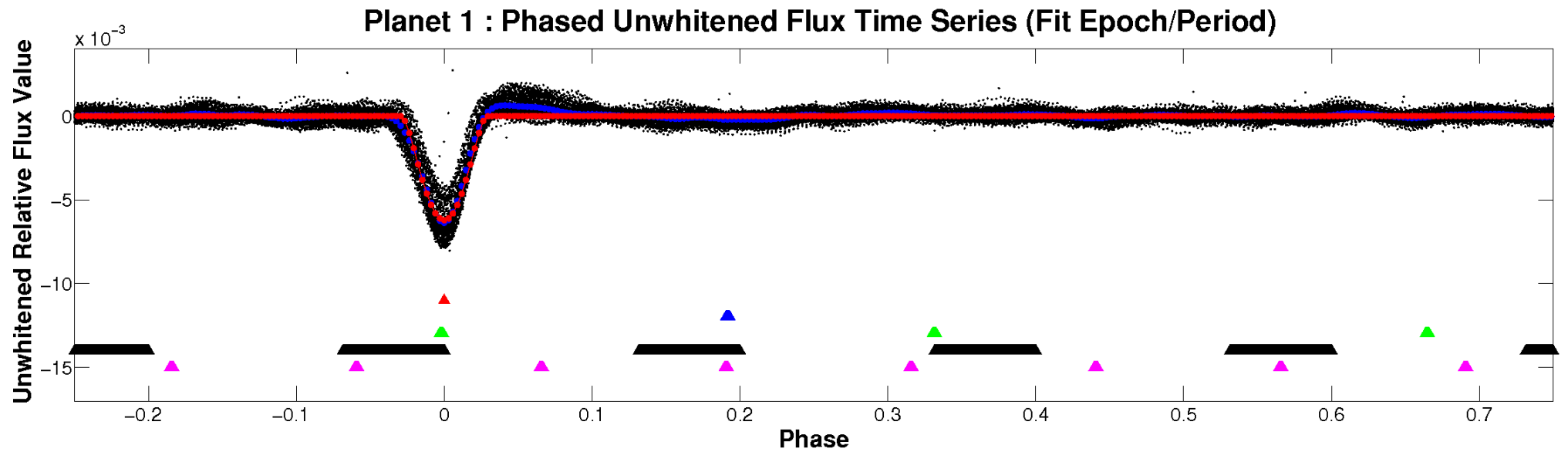


ALT Odd/Even

TCE 005034333-01

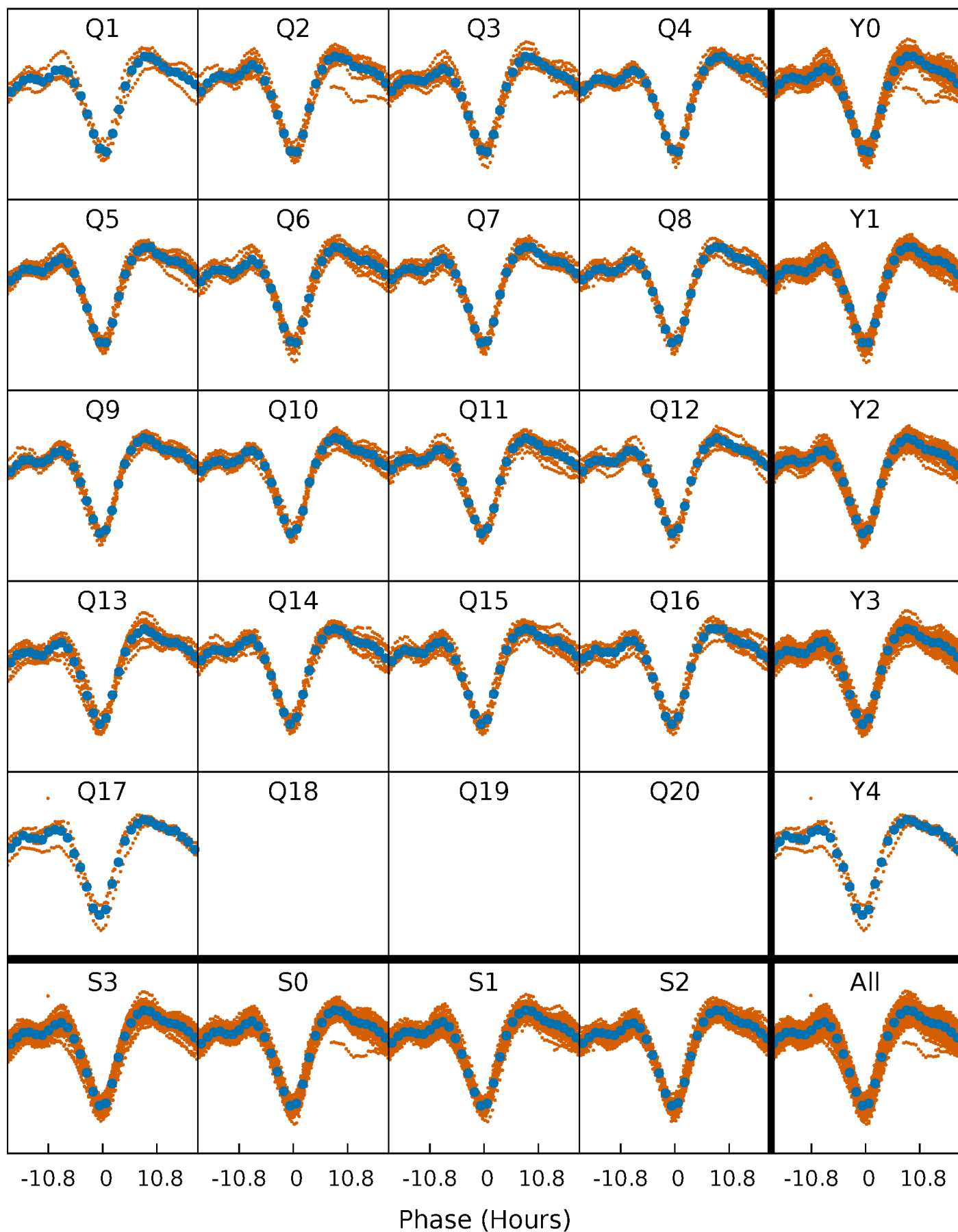


Non-Whitened Vs. Whitened Light Curve



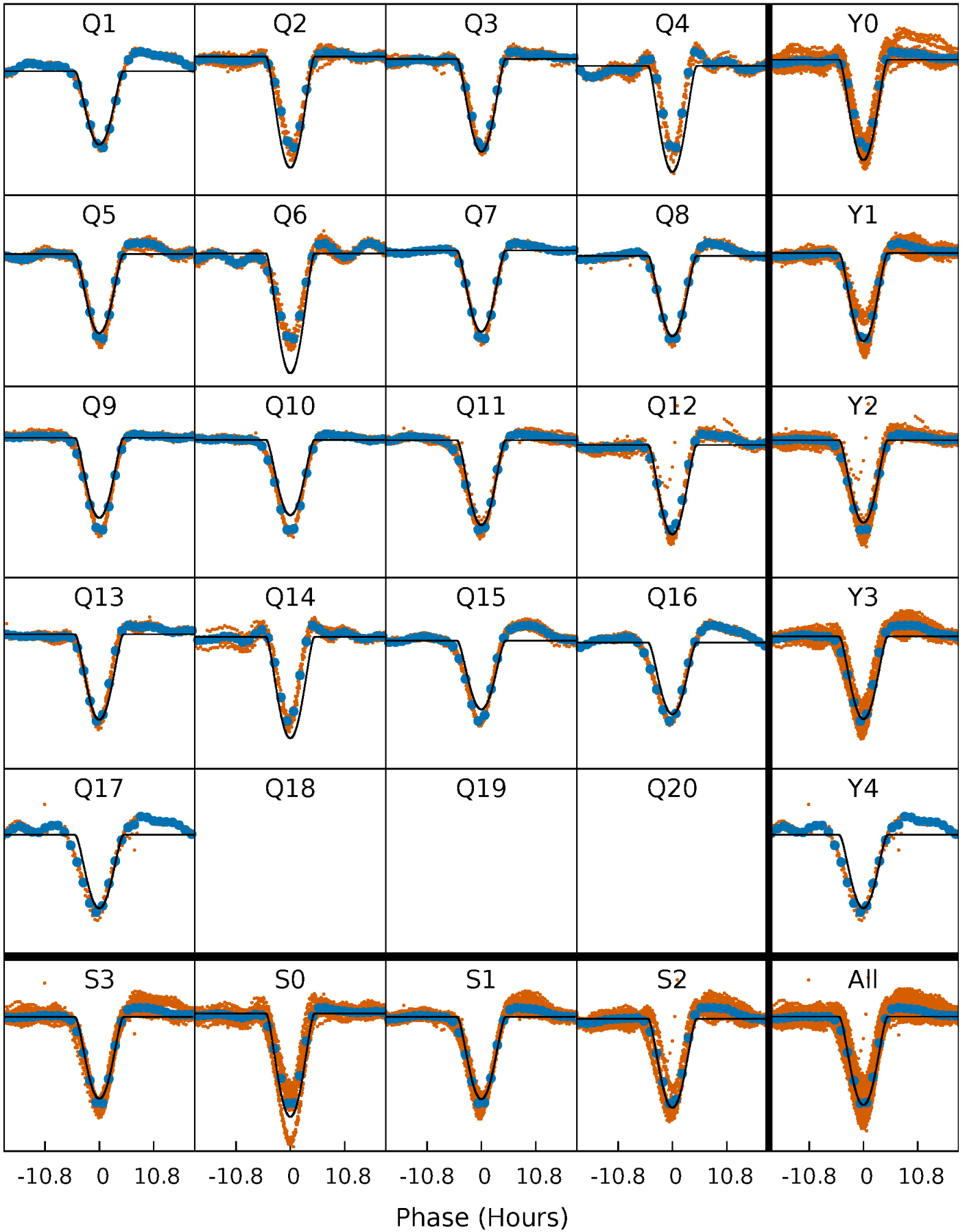
PDC Quarter-Phased Transit Curves

TCE 005034333-01 P= 6.932428 Days $T_0=134.878389$ (BKJD)



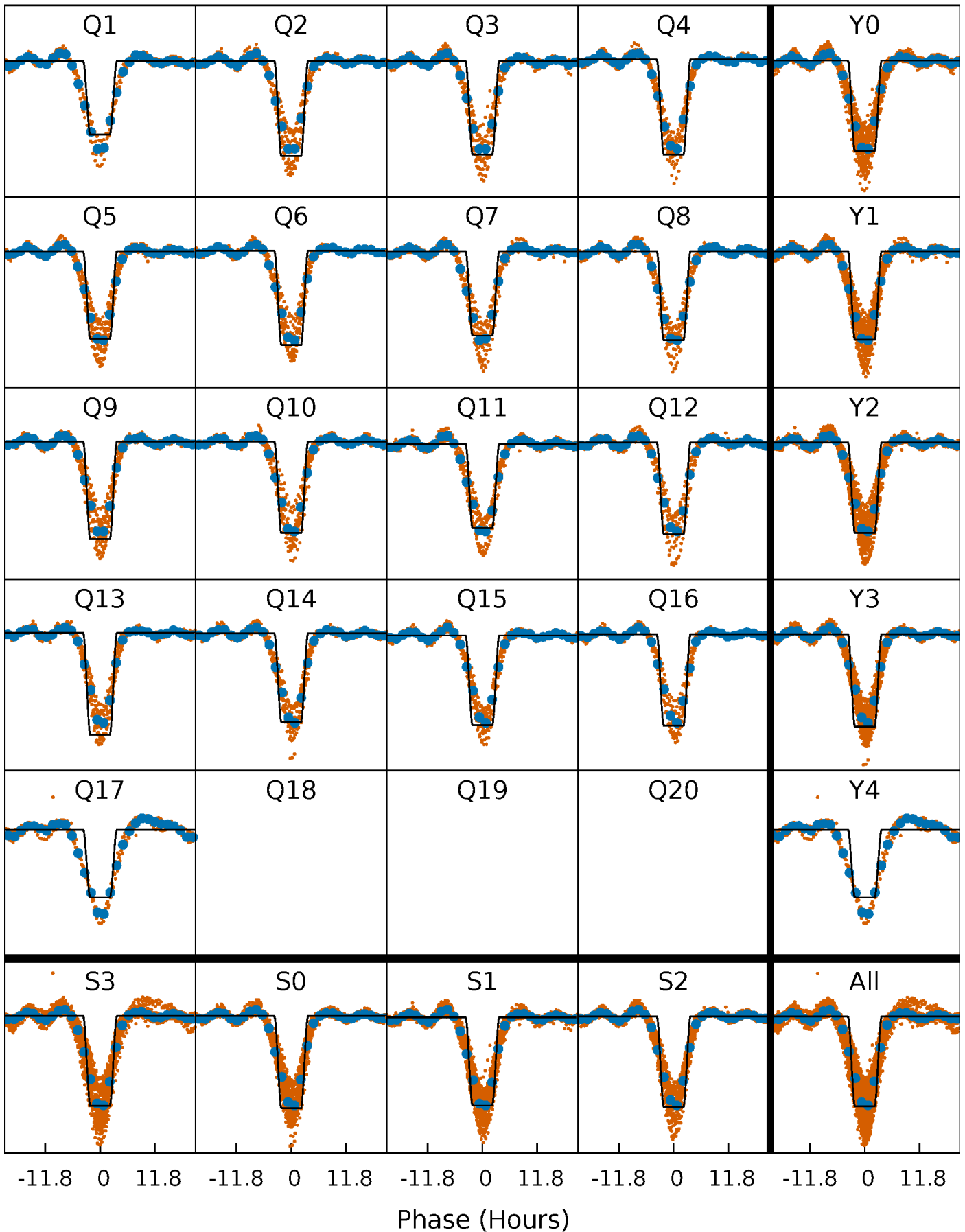
DV Quarter-Phased Transit Curves

TCE 005034333-01 P= 6.932428 Days $T_0=134.878389$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

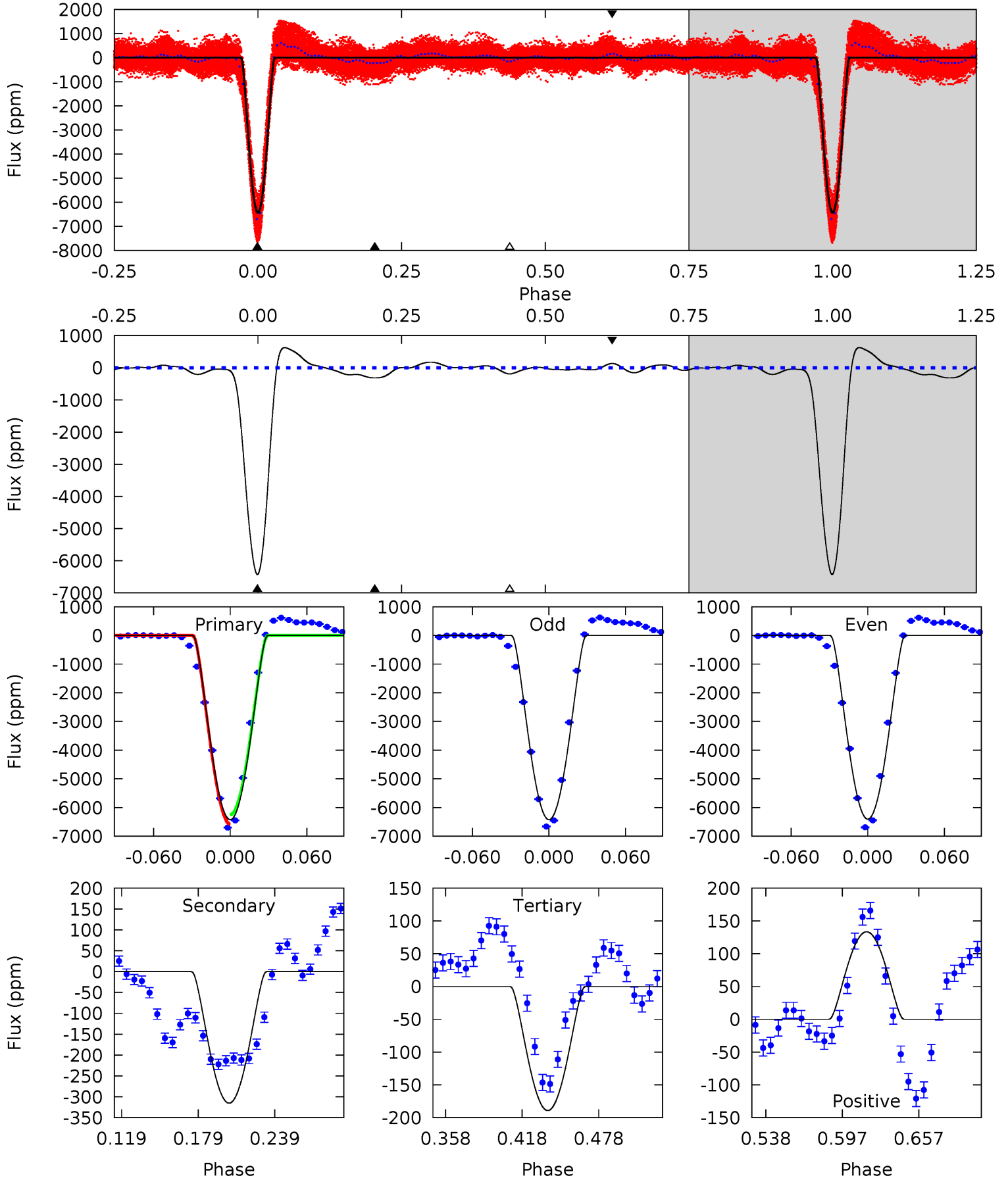
TCE 005034333-01 P= 6.932215 Days $T_0=134.892265$ (BKJD)



DV Model-Shift Uniqueness Test

005034333-01, P = 6.932428 Days, E = 127.945961 Days

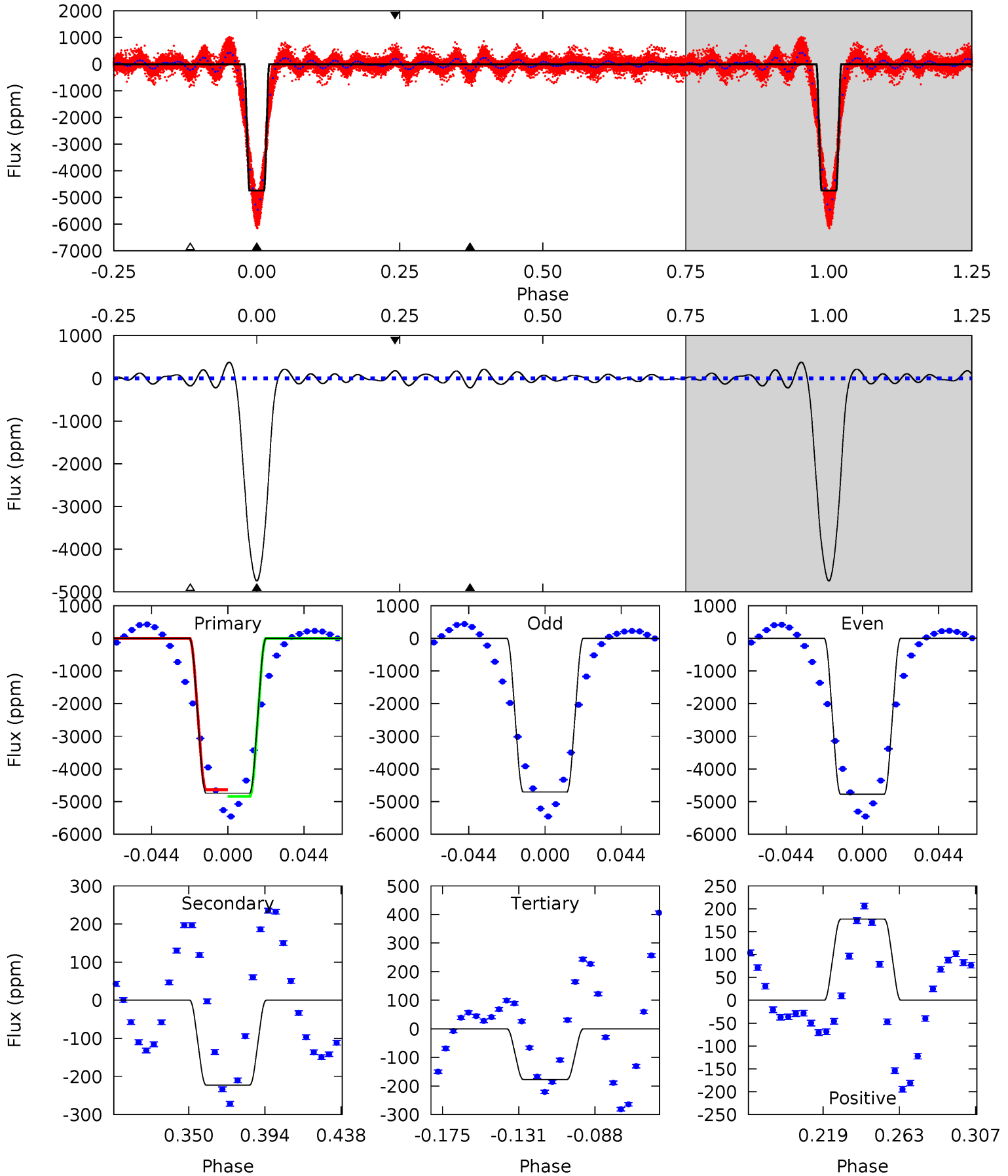
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1363	66.9	40.1	28.3	4.67	1.88	22.9	1323	1335	26.8	38.6	2.02	0.95	0.09	0



Alt Model-Shift Uniqueness Test

005034333-01, P = 6.932215 Days, E = 127.960050 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1171	55.0	43.8	43.8	4.74	2.02	22.8	1127	1127	11.2	11.2	8.05	1.01	0.07	24.1



Stellar Parameters For KIC 005034333

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8675^{+238}_{-408}	$4.080^{+0.150}_{-0.150}$	$0.070^{+0.150}_{-0.600}$	$2.168^{+0.487}_{-0.541}$	$2.057^{+0.370}_{-0.493}$	$0.284^{+0.259}_{-0.117}$
	+3%/-5%	+4%/-4%	+214%/-857%	+22%/-25%	+18%/-24%	+91%/-41%
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 005034333-01 / KOI 6124.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-315 ± 5	$30.42^{+4.09}_{-4.28}$	2610^{+170}_{-185}	3435^{+79}_{-87}	$1.559^{+0.365}_{-0.317}$
Alt.	-223 ± 4	$17.45^{+2.56}_{-2.53}$	2612^{+166}_{-181}	3964^{+130}_{-112}	$3.282^{+0.963}_{-0.721}$

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 $A_{obs} \gg 1.0$

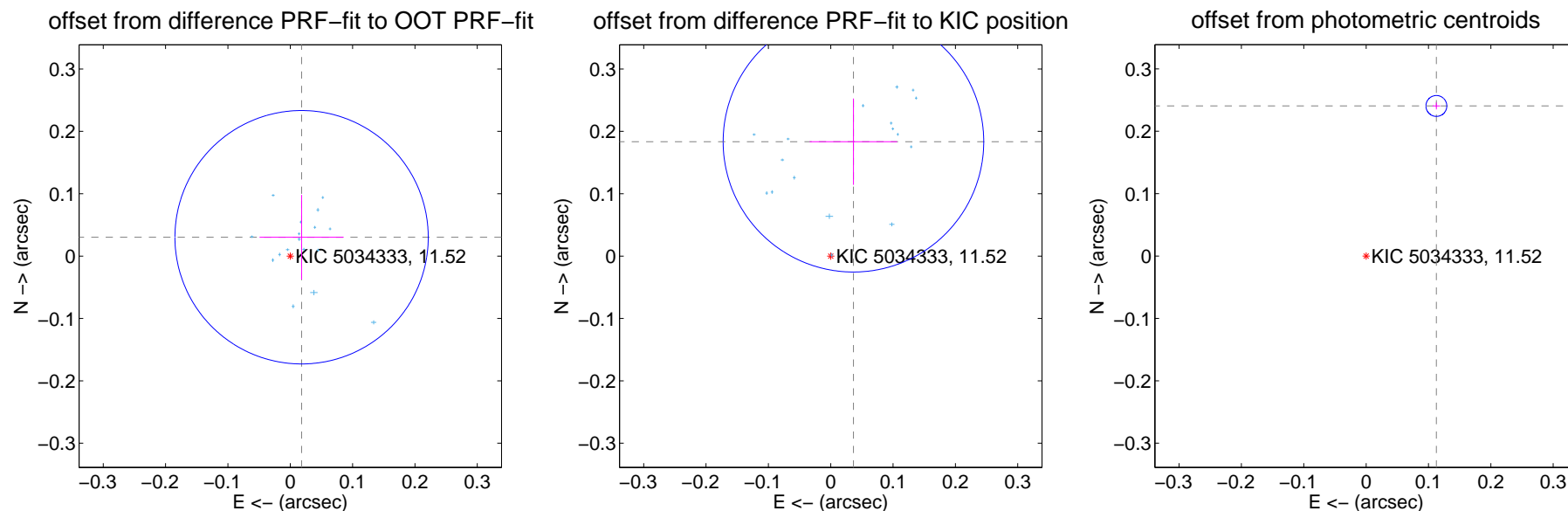
DV Centroid Data

Supplemental centroid analysis for 005034333-01. **Kepler magnitude: 11.52**. Transit SNR 411.38

There are 17 quarters with good PRF difference image offsets

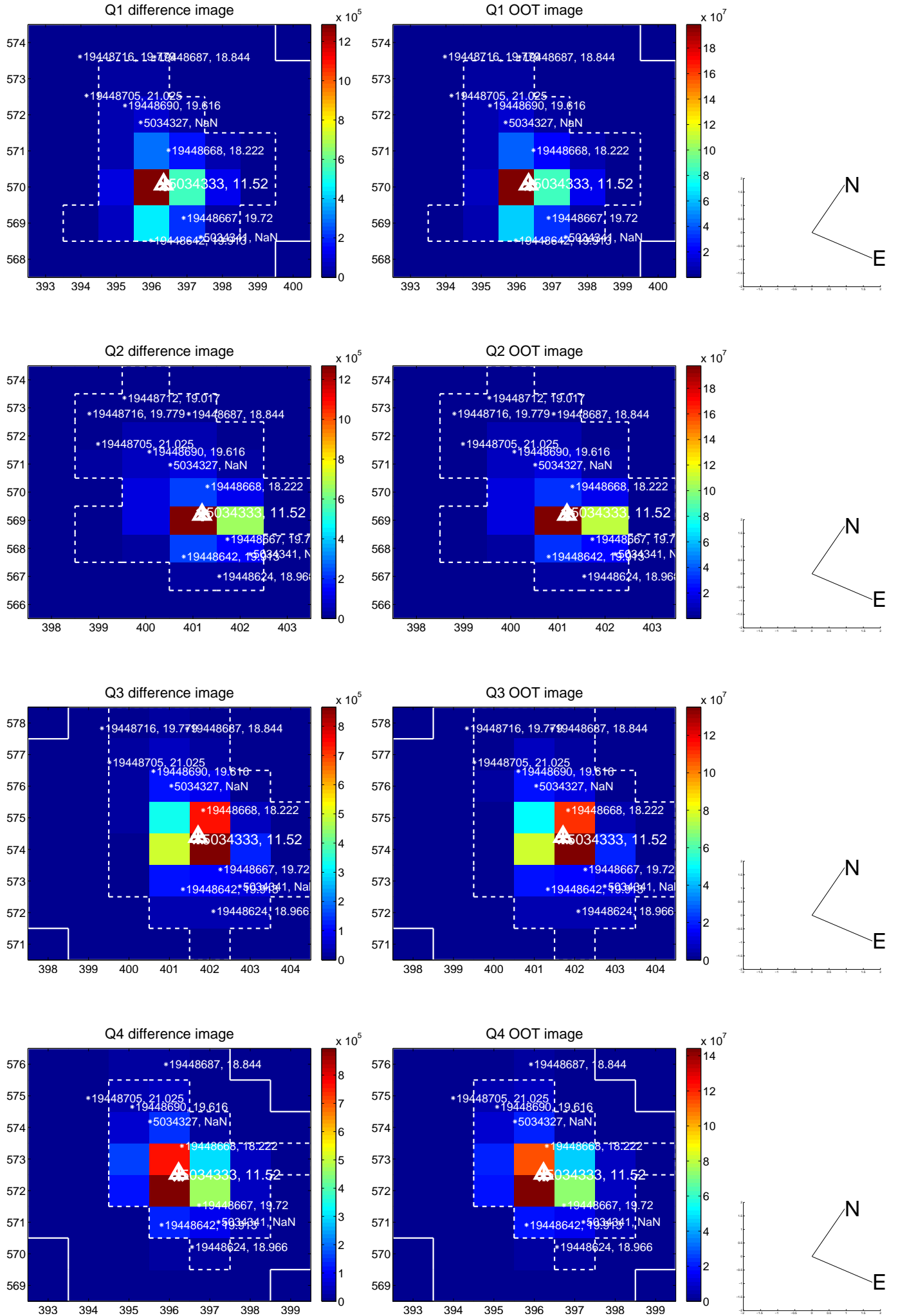
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.035 ± 0.068	0.52	-0.018 ± 0.067	0.030 ± 0.068
PRF-fit source offset from KIC position	0.187 ± 0.070	2.68	-0.036 ± 0.070	0.183 ± 0.069
photometric centroid source offset	0.27 ± 0.01	47.61	-0.11 ± 0.01	0.24 ± 0.01

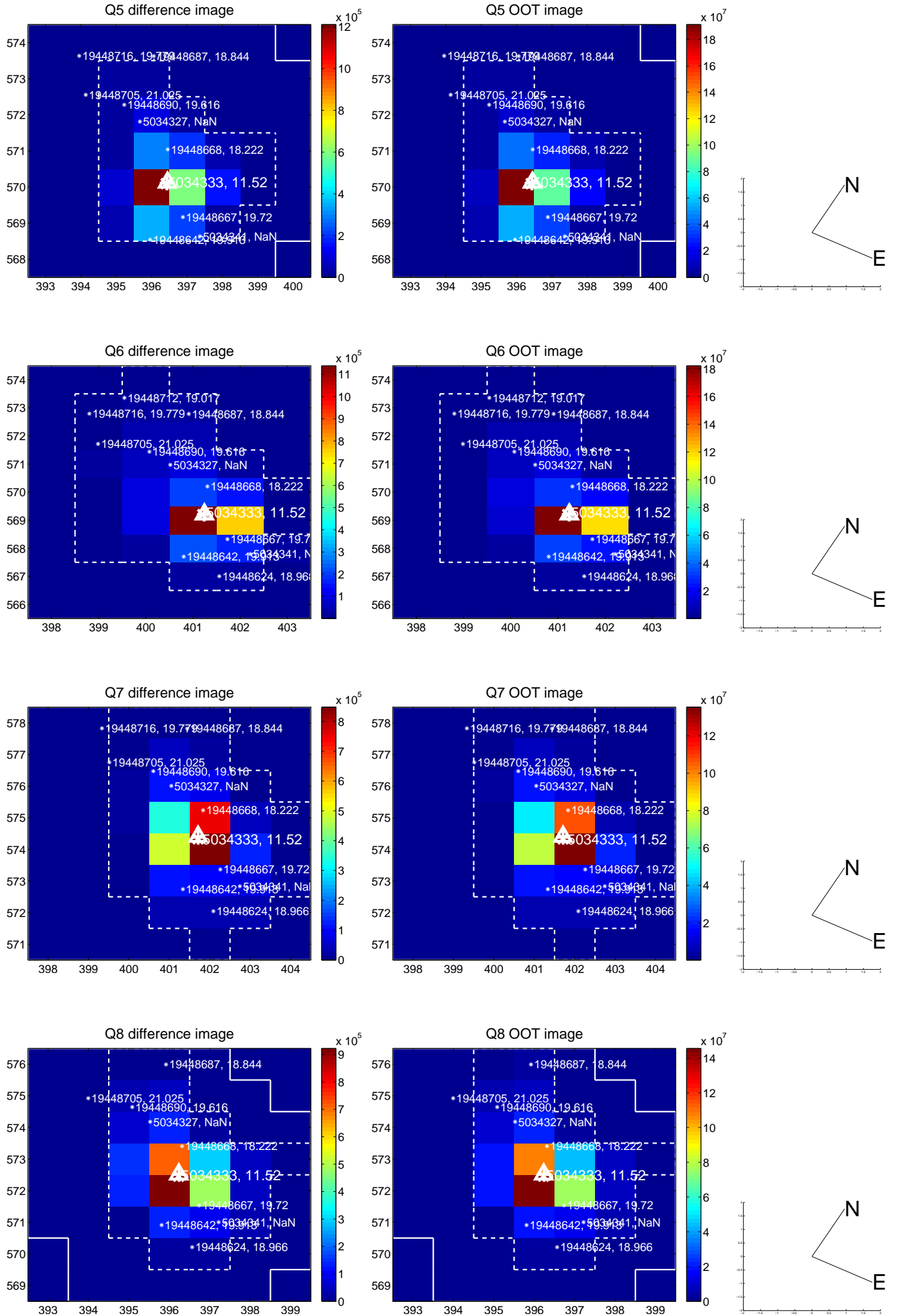


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

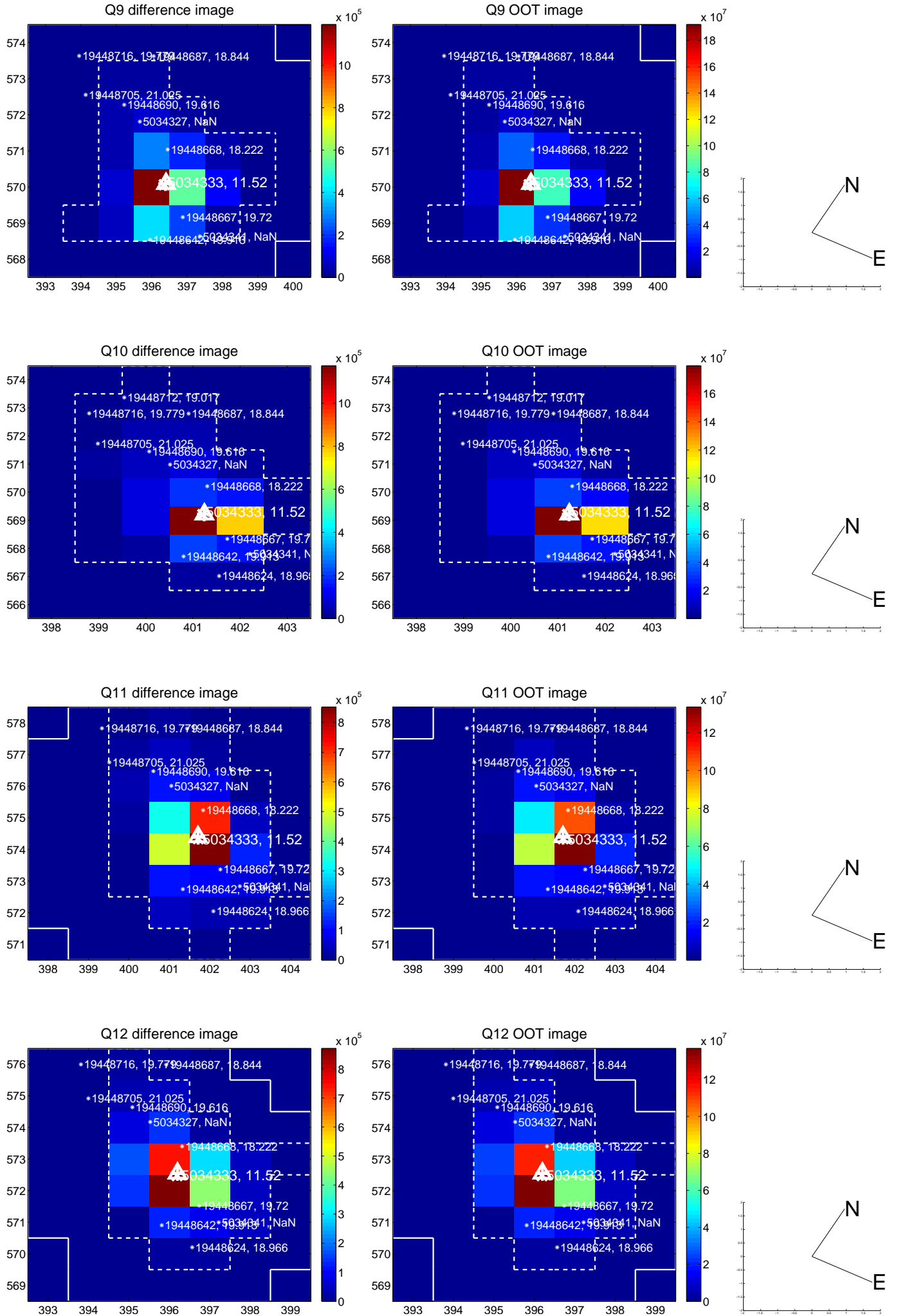
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



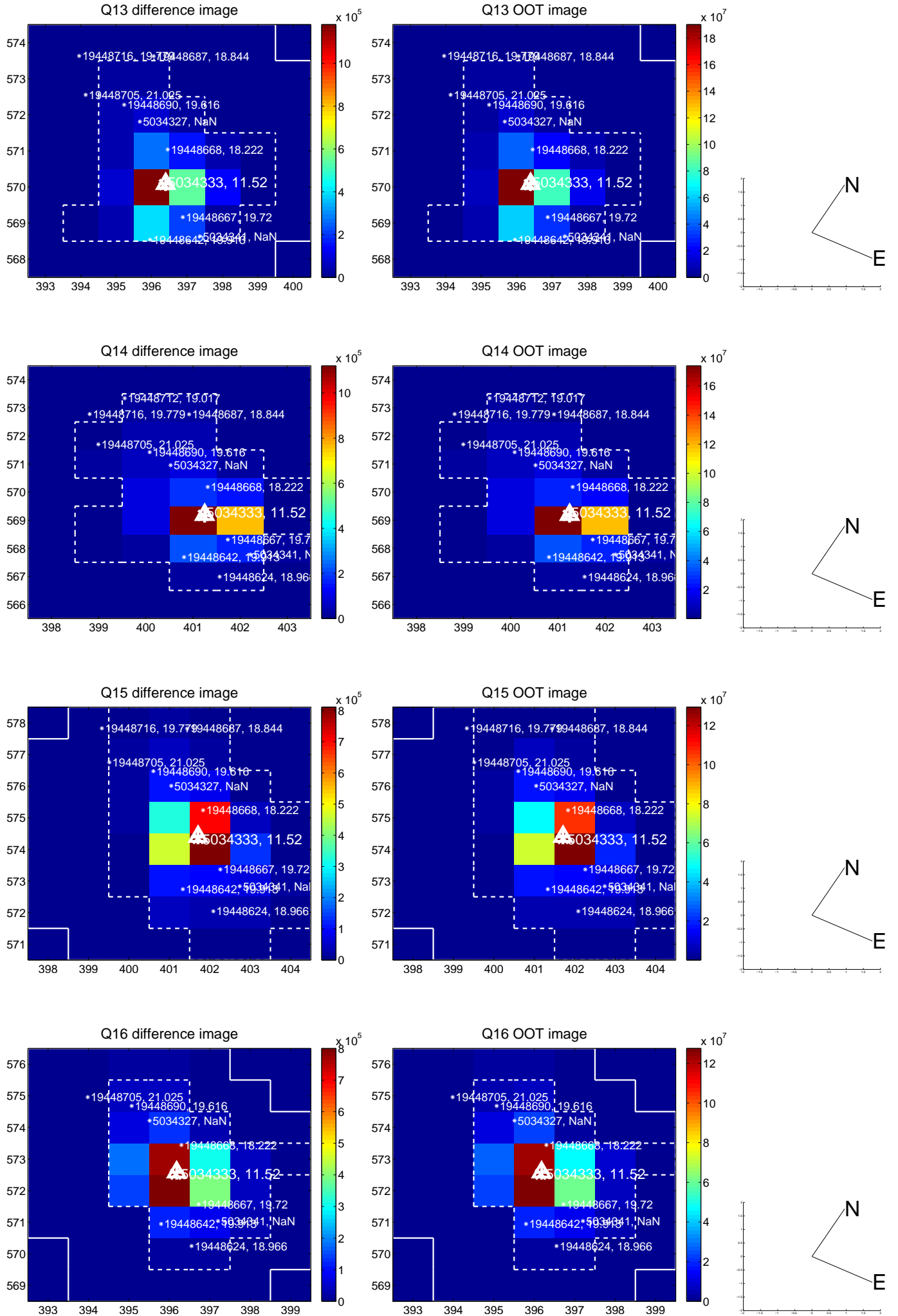
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



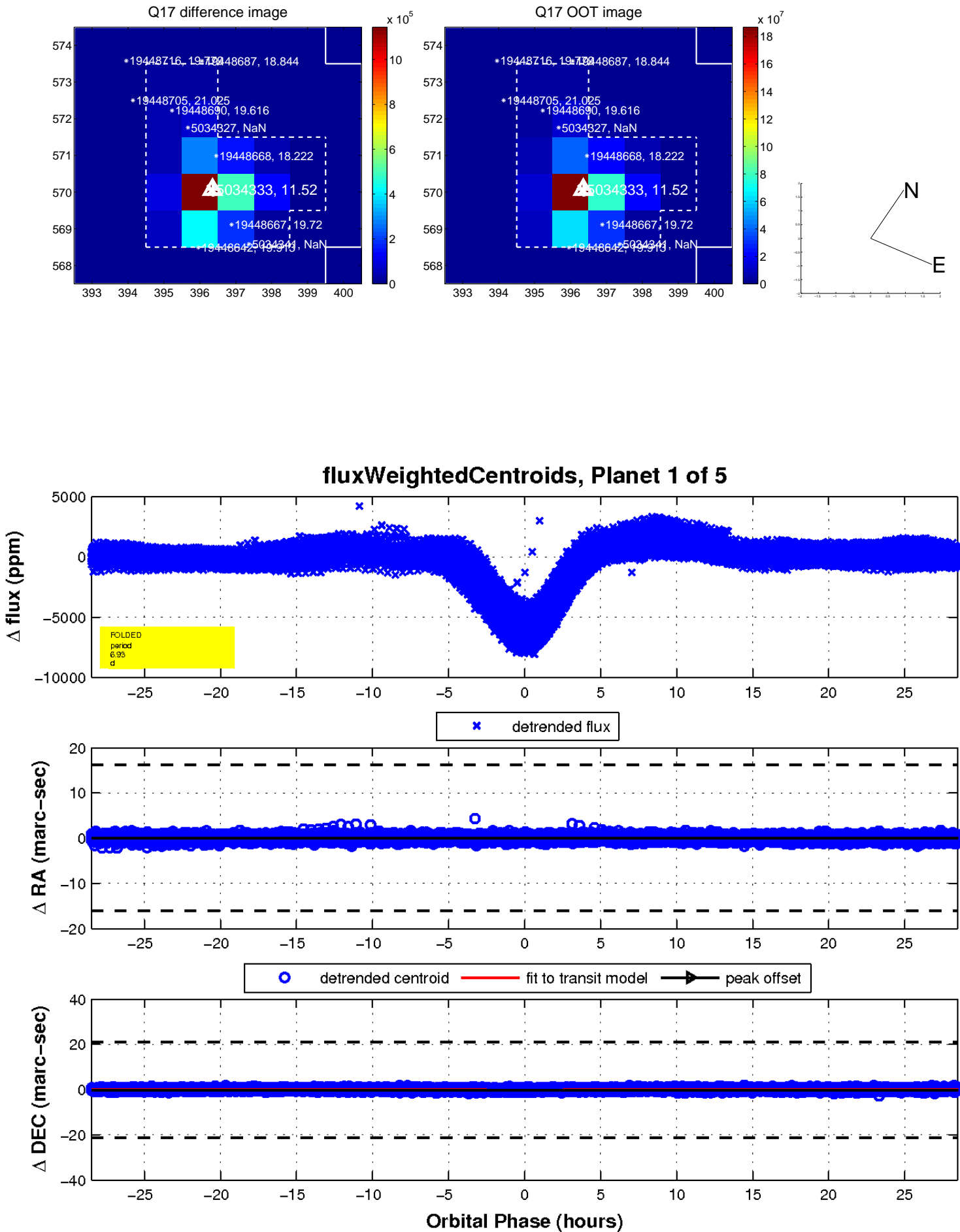
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

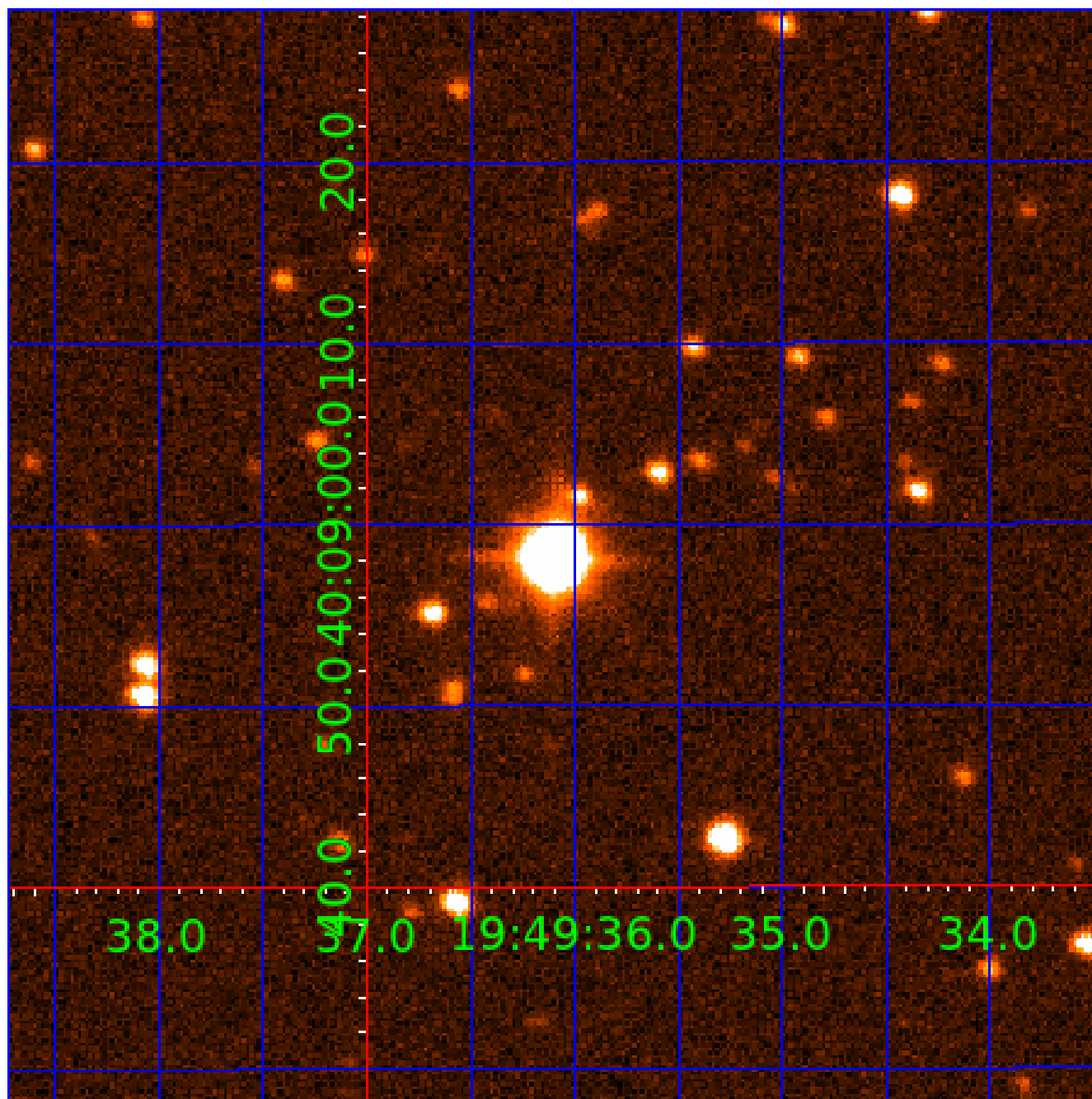


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



UKIRT Image

Declination



KIC 005034333

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})
005034333-01	OBS	6124.01	6.932428	134.878389	6222.3	9.493	372.1	411.4	2.17	8675	30.03	2907.35
005034333-02	OBS	No	6.932338	136.217524	42.5	15.000	18.0	-1.0	2.17	8675	1.44	2907.41
005034333-03	OBS	No	2.310780	132.564064	39.2	6.080	18.5	9.1	2.17	8675	1.57	12579.60
005034333-04	OBS	No	1.386939	131.630204	11.0	2.480	11.4	3.2	2.17	8675	0.83	24846.70
005034333-05	OBS	No	0.866544	131.875777	65.7	3.000	9.1	-1.0	2.17	8675	1.79	46518.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005034333-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED—HAS_SEC_TCE
005034333-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
005034333-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—RESIDUAL_TCE
005034333-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005034333-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT—RESIDUAL_TCE—CENT_NOFITS

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 005034333-02

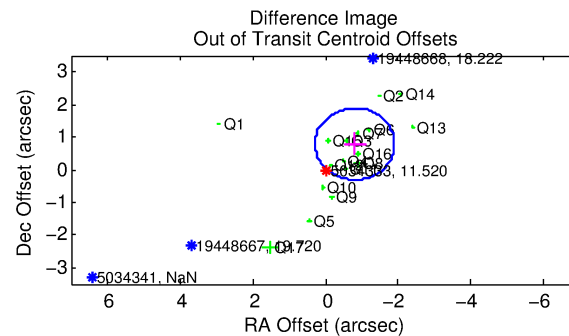
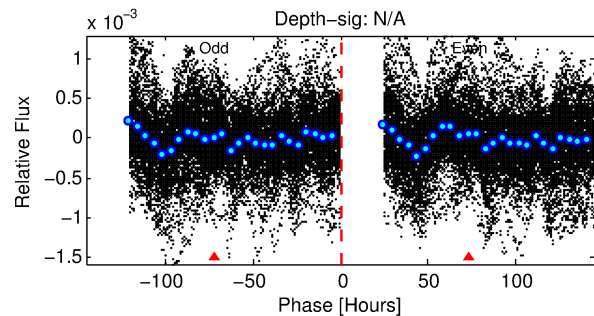
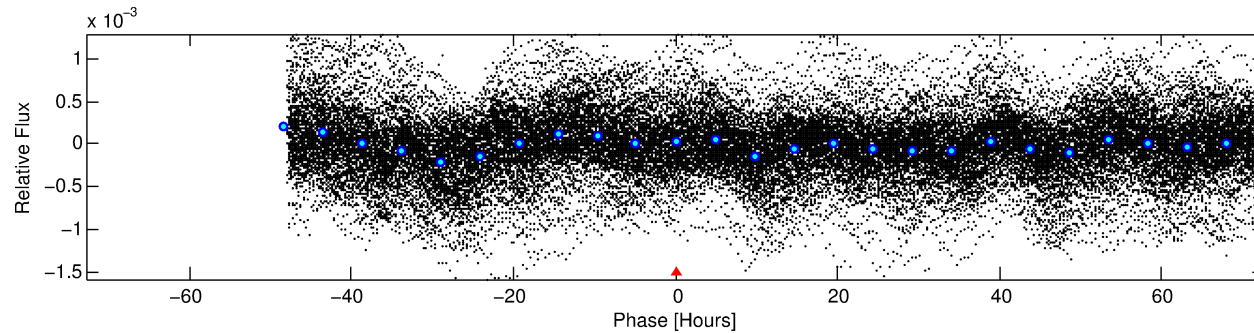
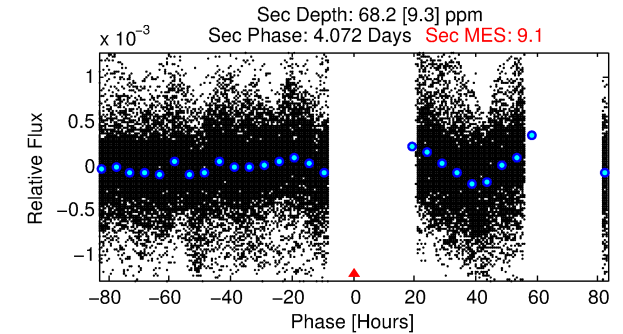
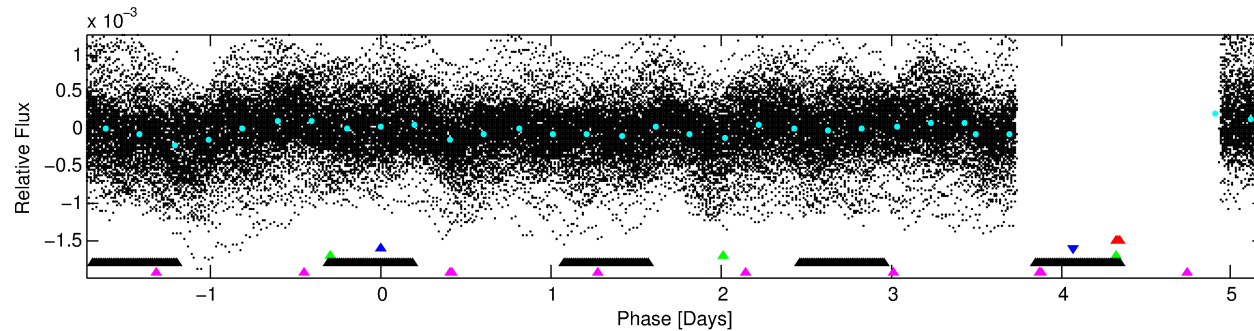
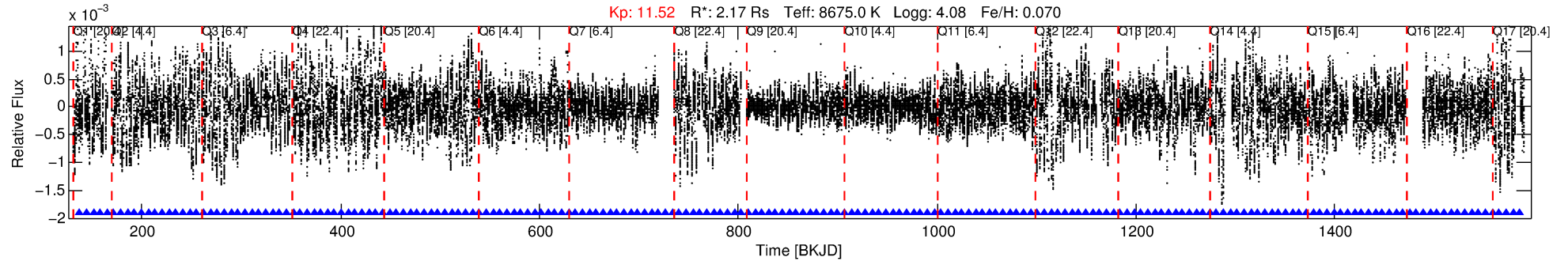
No Significant Match Found

DV One-Page Summary

KIC: 5034333 Candidate: 2 of 5 Period: 6.932 d

KOI: K06124 Corr: No Ephemeris Match

Kp: 11.52 R*: 2.17 Rs Teff: 8675.0 K Logg: 4.08 Fe/H: 0.070



TPS TCE Results:

Period = 6.93234 d
Epoch = 136.2175 BKJD

DV fit results are unavailable

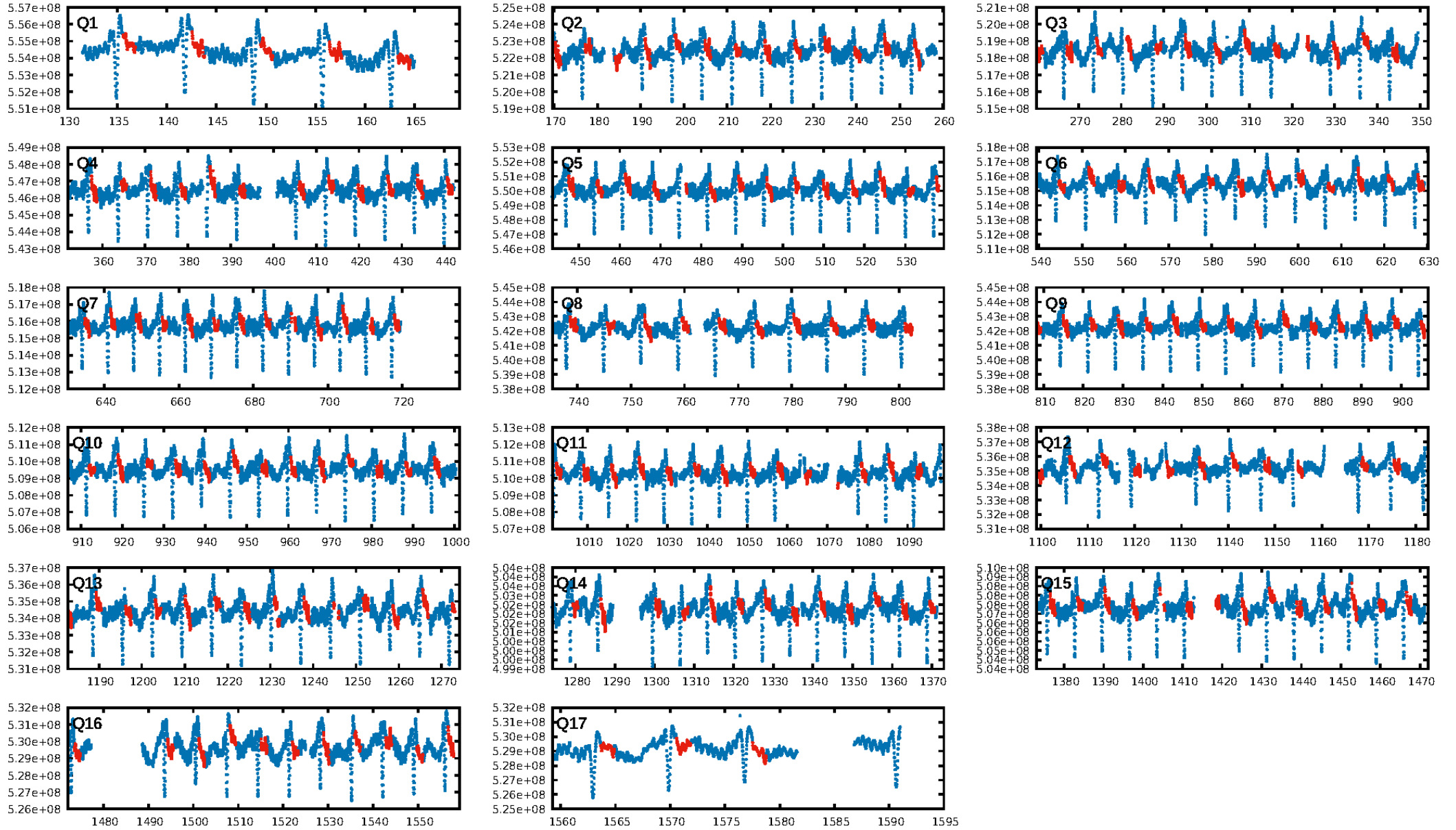
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [6.85σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [193/193]
GhostDiagnostic-chr: -0.4287
Centroid-sig: 0.6%
Centroid-so: 0.331 arcsec [5.17σ]
OotOffset-rm: 1.129 arcsec [3.09σ]
KicOffset-rm: 1.275 arcsec [3.32σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 0.00 [0/17]

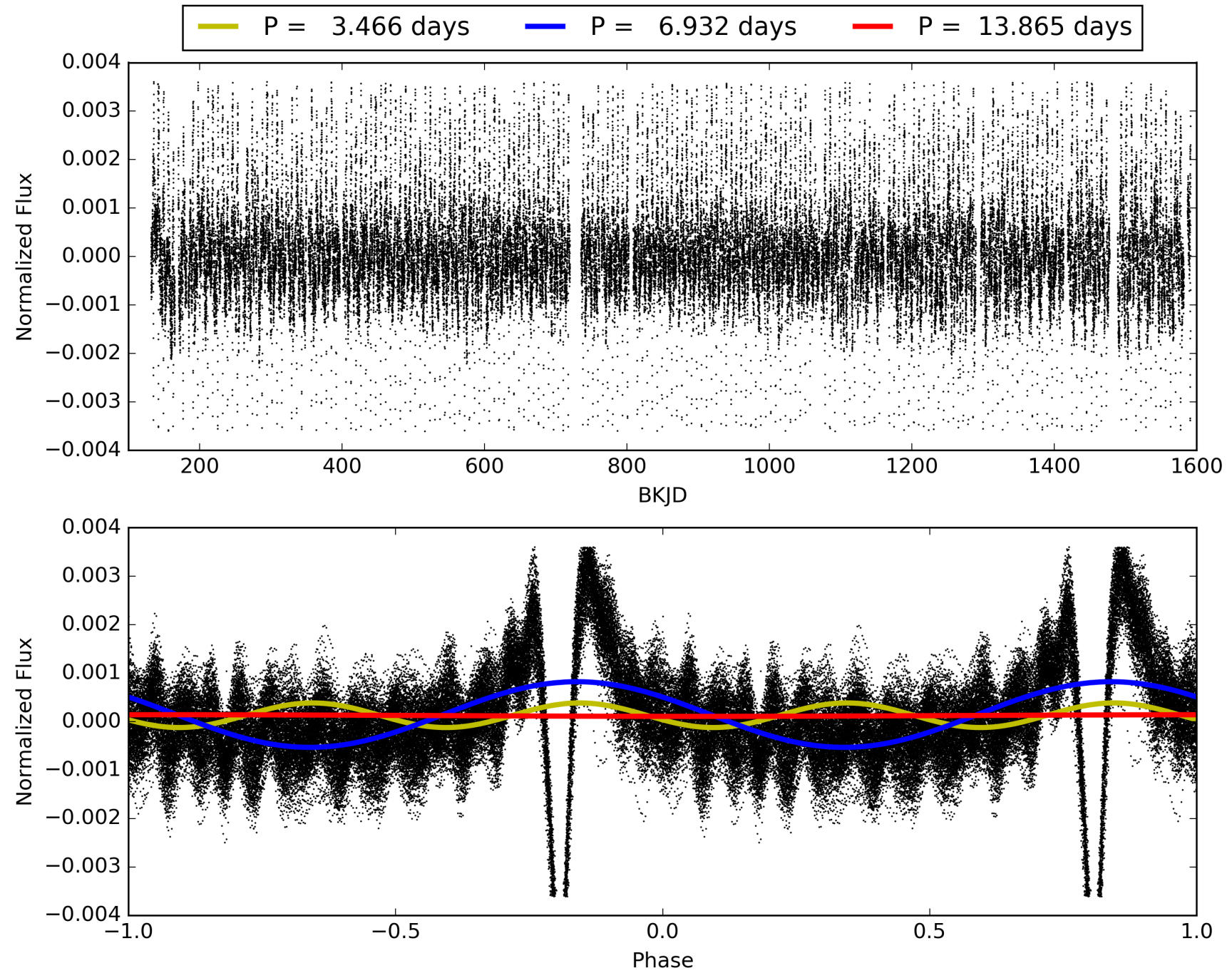
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:51:30 Z

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

TCE 005034333-02, PDC Light Curves

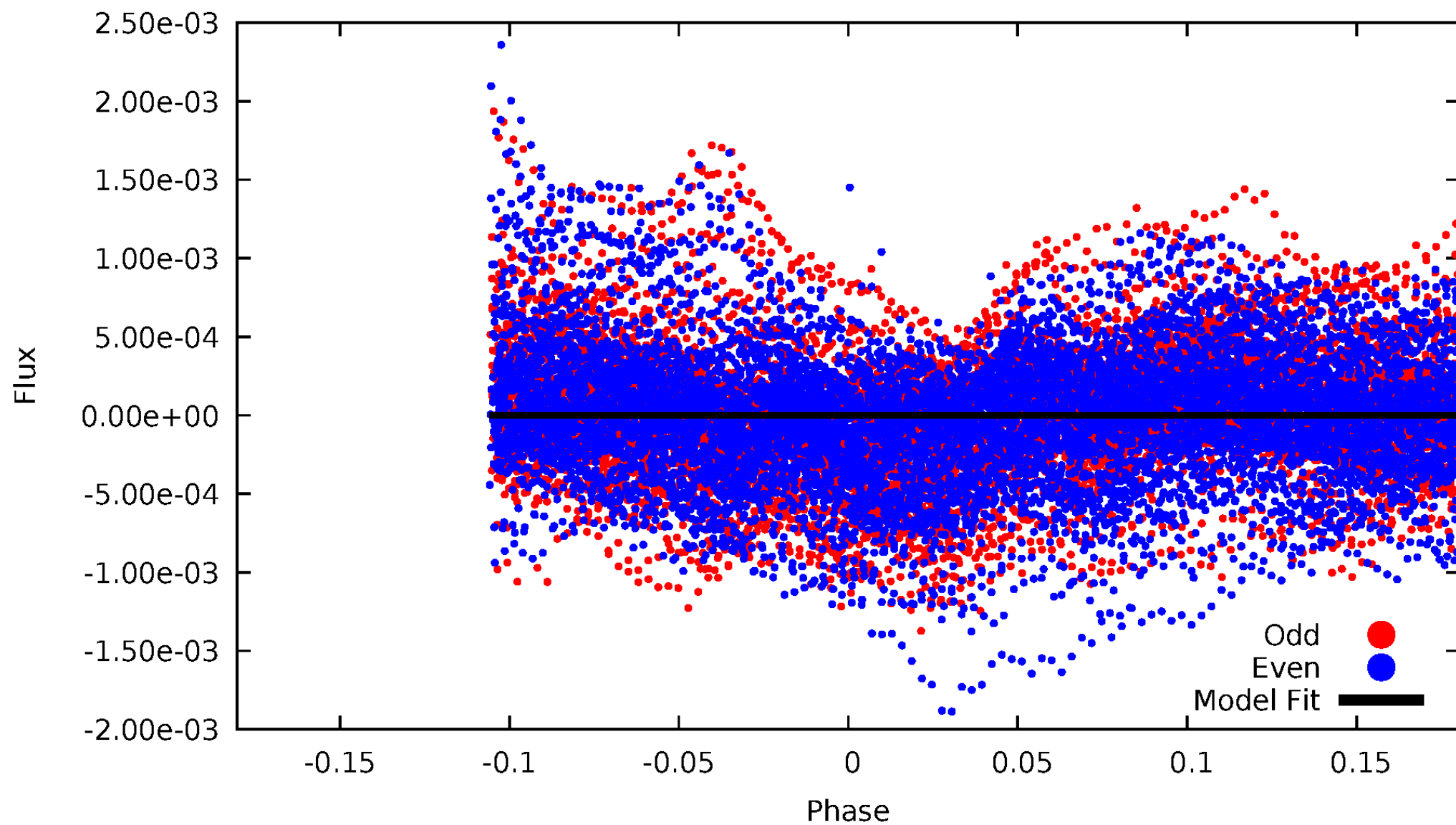


TCE 005034333-02



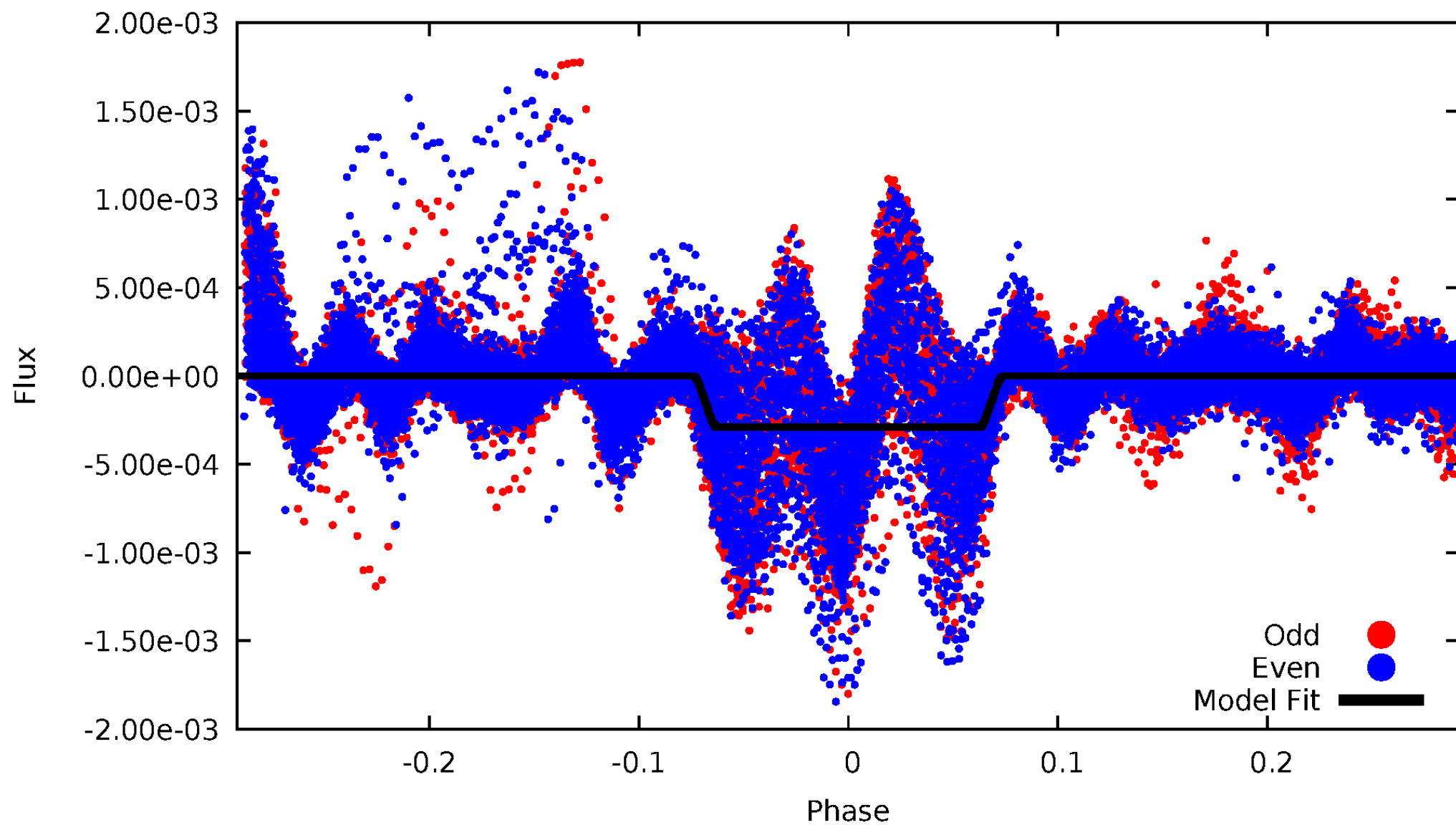
DV Odd/Even

TCE 005034333-02

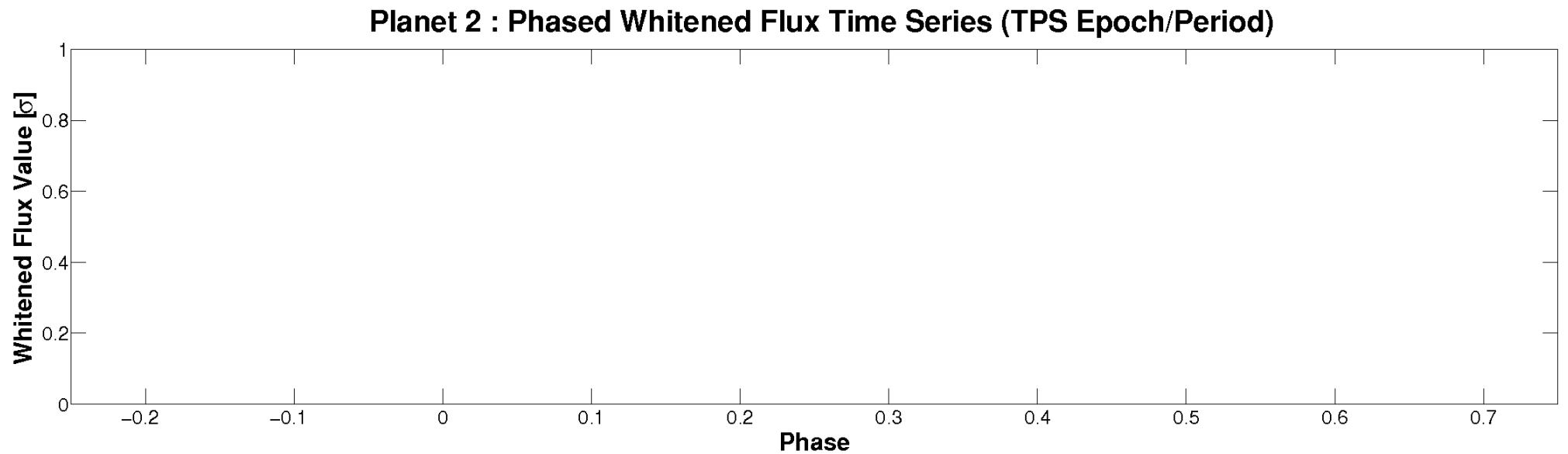
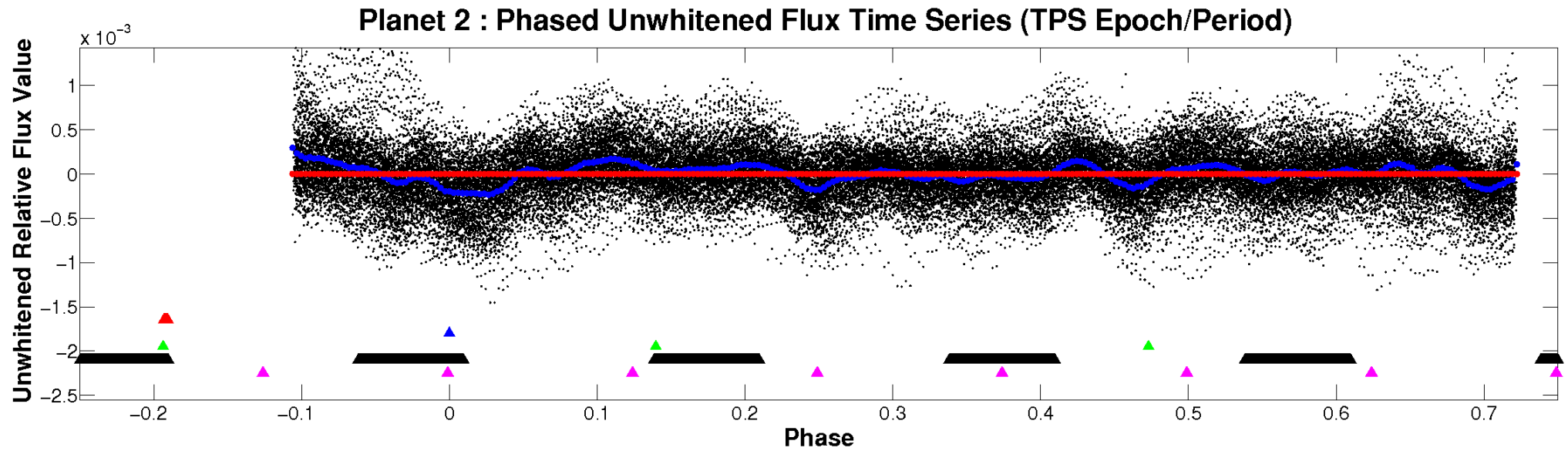


ALT Odd/Even

TCE 005034333-02

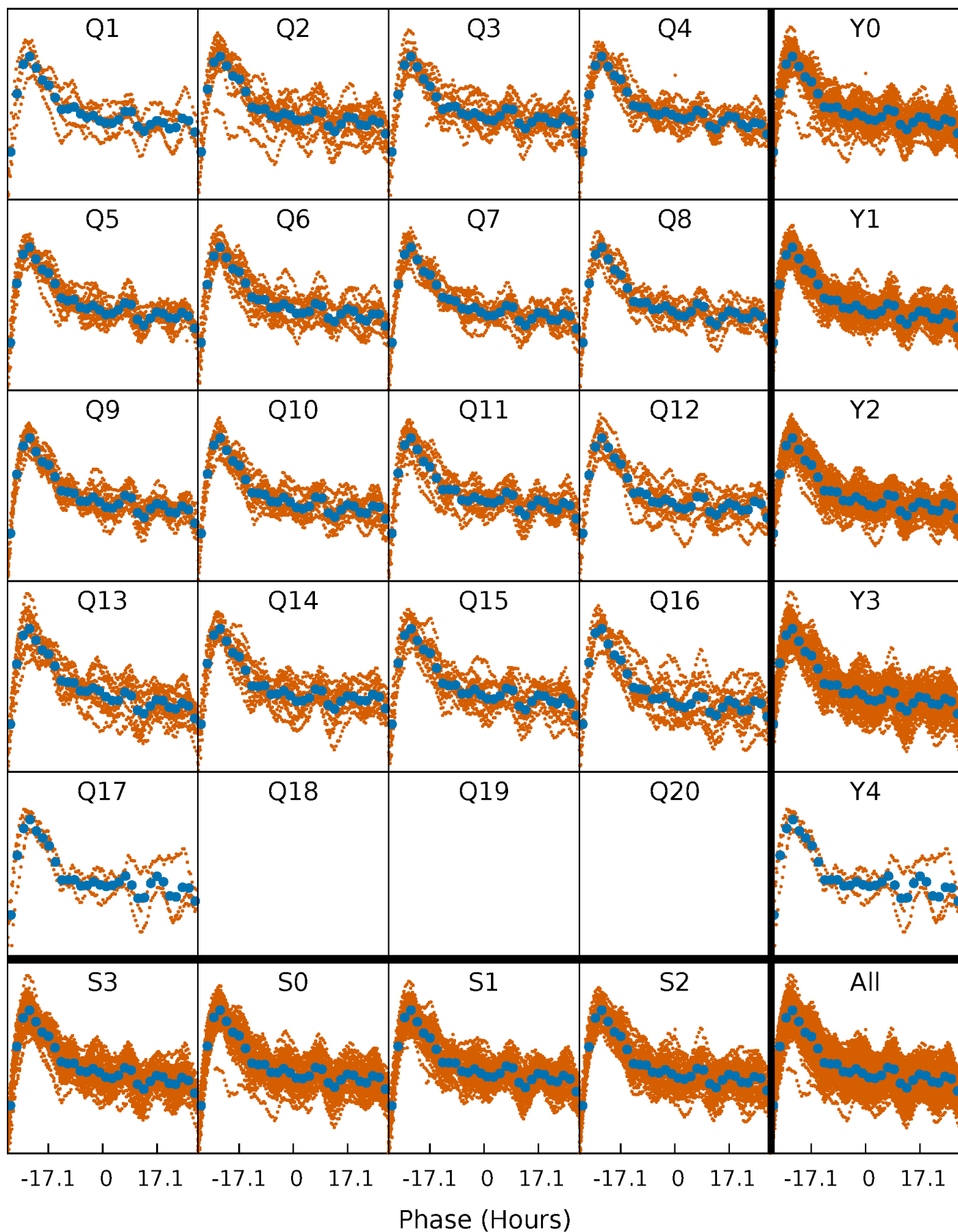


Non-Whitened Vs. Whitened Light Curve



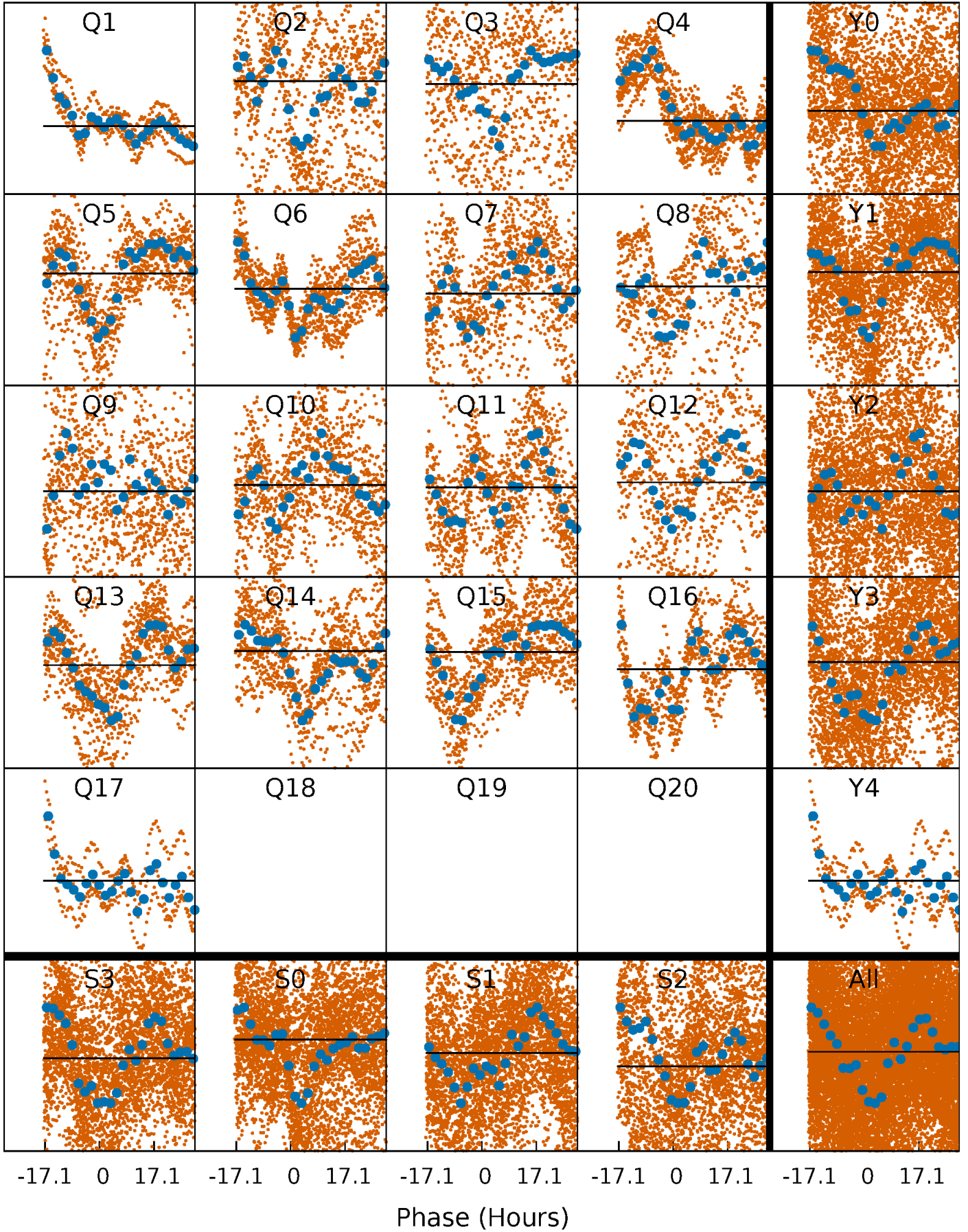
PDC Quarter-Phased Transit Curves

TCE 005034333-02 P= 6.932338 Days $T_0=136.217524$ (BKJD)



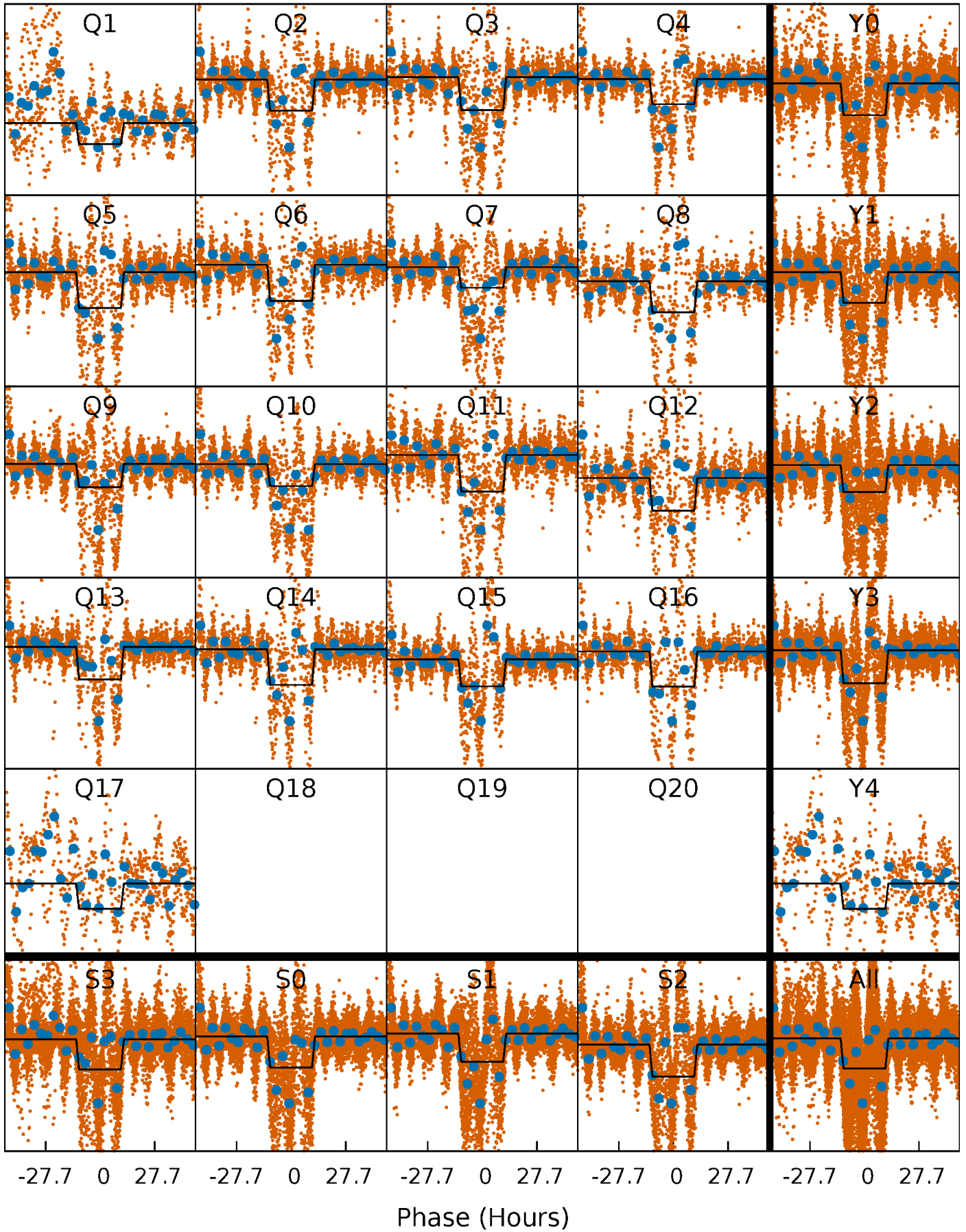
DV Quarter-Phased Transit Curves

TCE 005034333-02 $P = 6.932338$ Days $T_0 = 136.217524$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

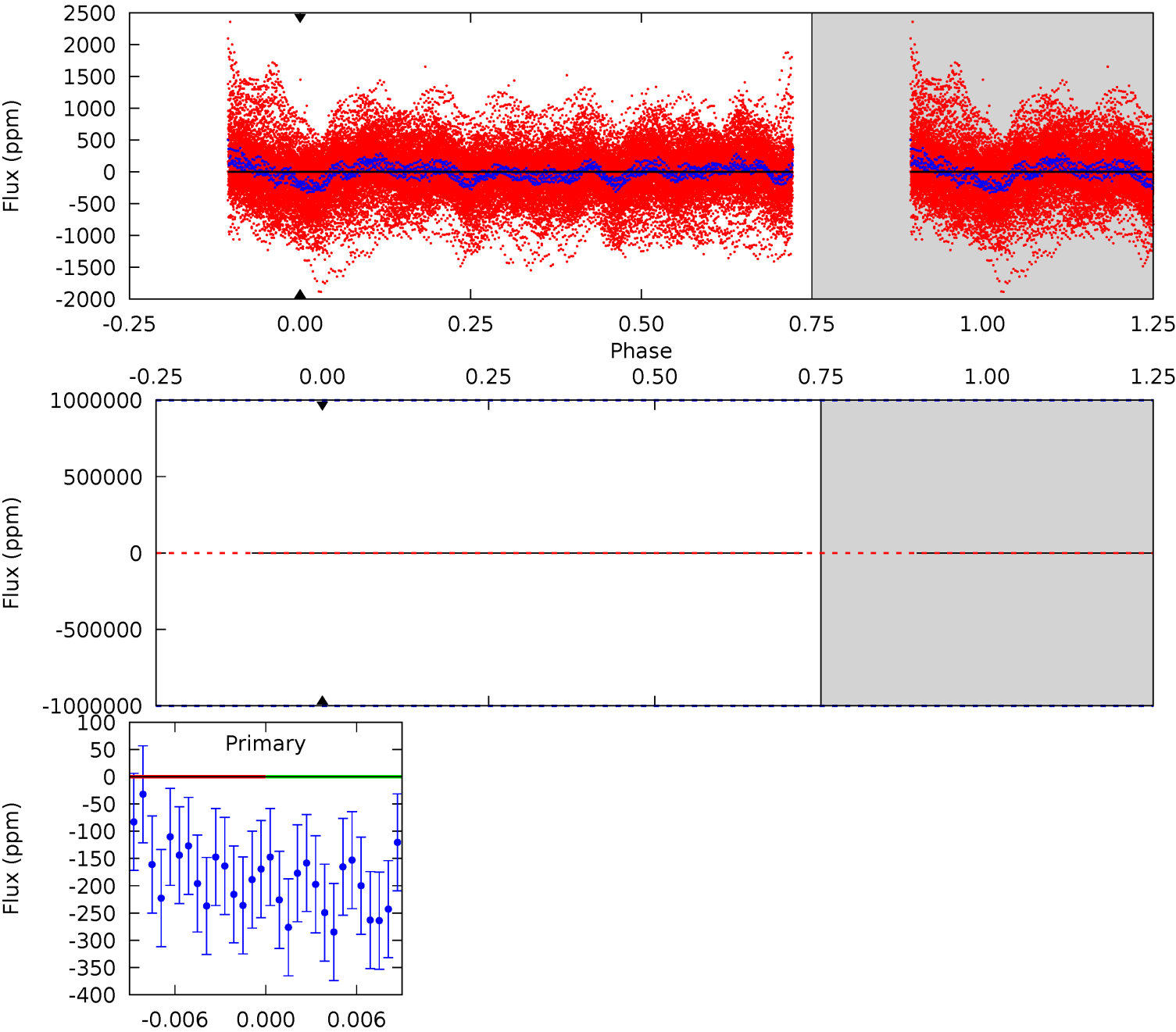
TCE 005034333-02 $P = 6.932338$ Days $T_0 = 137.483623$ (BKJD)



DV Model-Shift Uniqueness Test

005034333-02, P = 6.932338 Days, E = 129.285186 Days

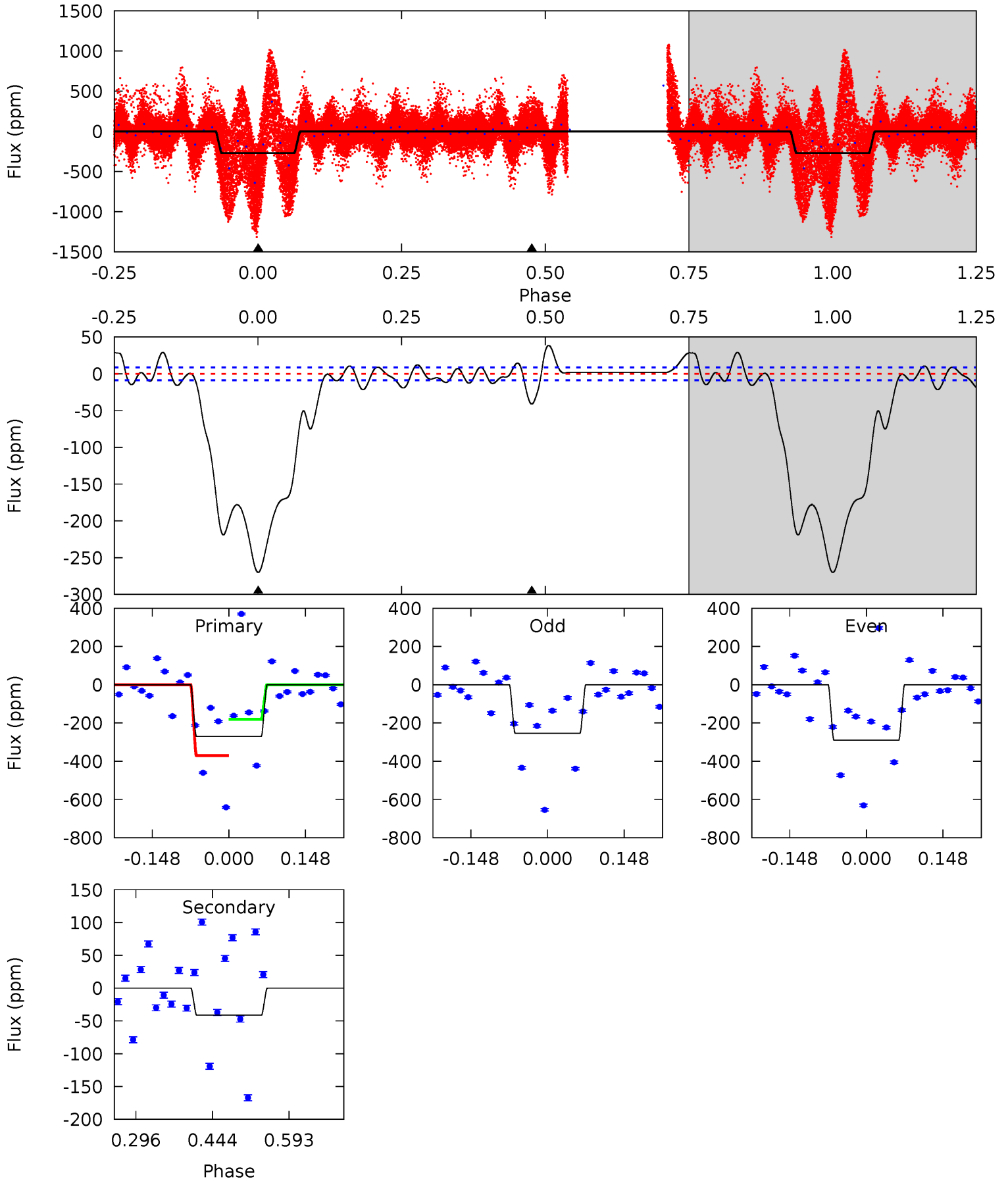
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005034333-02, P = 6.932338 Days, E = 130.551285 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
139.3	21.2	0	0	4.48	1.45	6.71	139.3	139.3	21.2	21.2	9.36	1.12	0.13	46.8



Stellar Parameters For KIC 005034333

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8675^{+238}_{-408}	$4.080^{+0.150}_{-0.150}$	$0.070^{+0.150}_{-0.600}$	$2.168^{+0.487}_{-0.541}$	$2.057^{+0.370}_{-0.493}$	$0.284^{+0.259}_{-0.117}$
	+3%/-5%	+4%/-4%	+214%/-857%	+22%/-25%	+18%/-24%	+91%/-41%
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 005034333-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$16.50^{+17.48}_{-11.76}$	2606^{+183}_{-172}	-4802^{+72601}_{-61075}	$-12.193^{+3206.827}_{-3013.843}$
Alt.	-41 ± 2	$17.38^{+19.88}_{-12.44}$	2617^{+175}_{-184}	2774^{+1966}_{-5371}	$0.596^{+7.011}_{-0.463}$

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

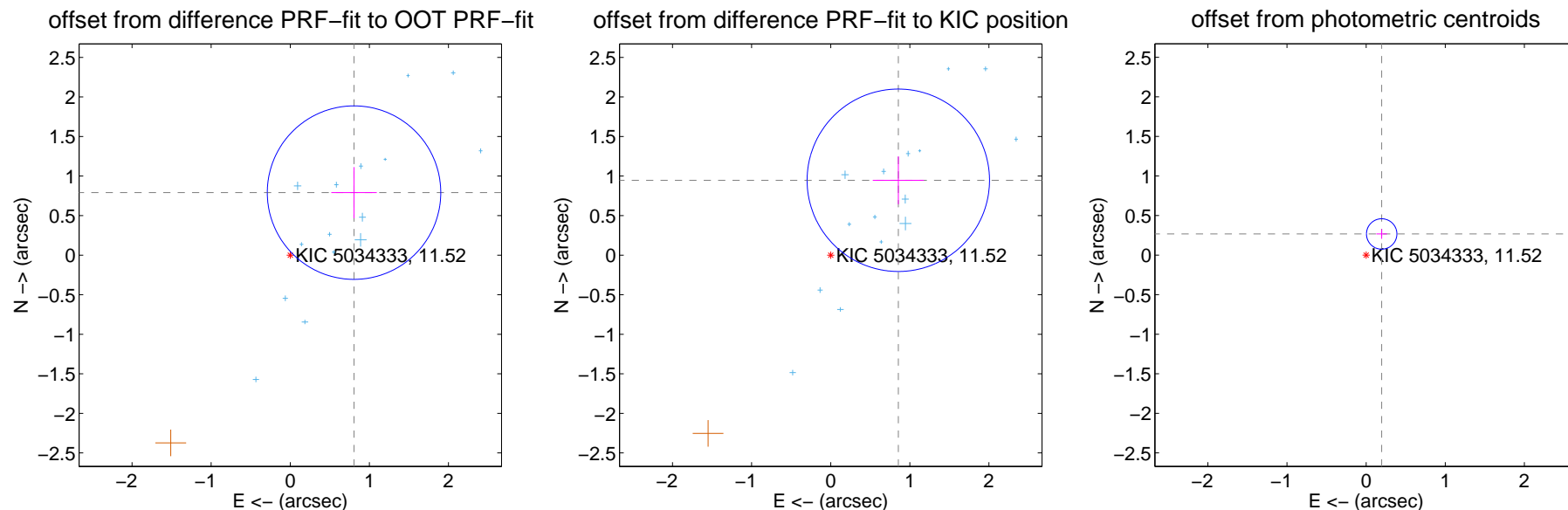
DV Centroid Data

Supplemental centroid analysis for 005034333-02. **Kepler magnitude: 11.52**. Transit SNR -1.00

There are 16 quarters with good PRF difference image offsets

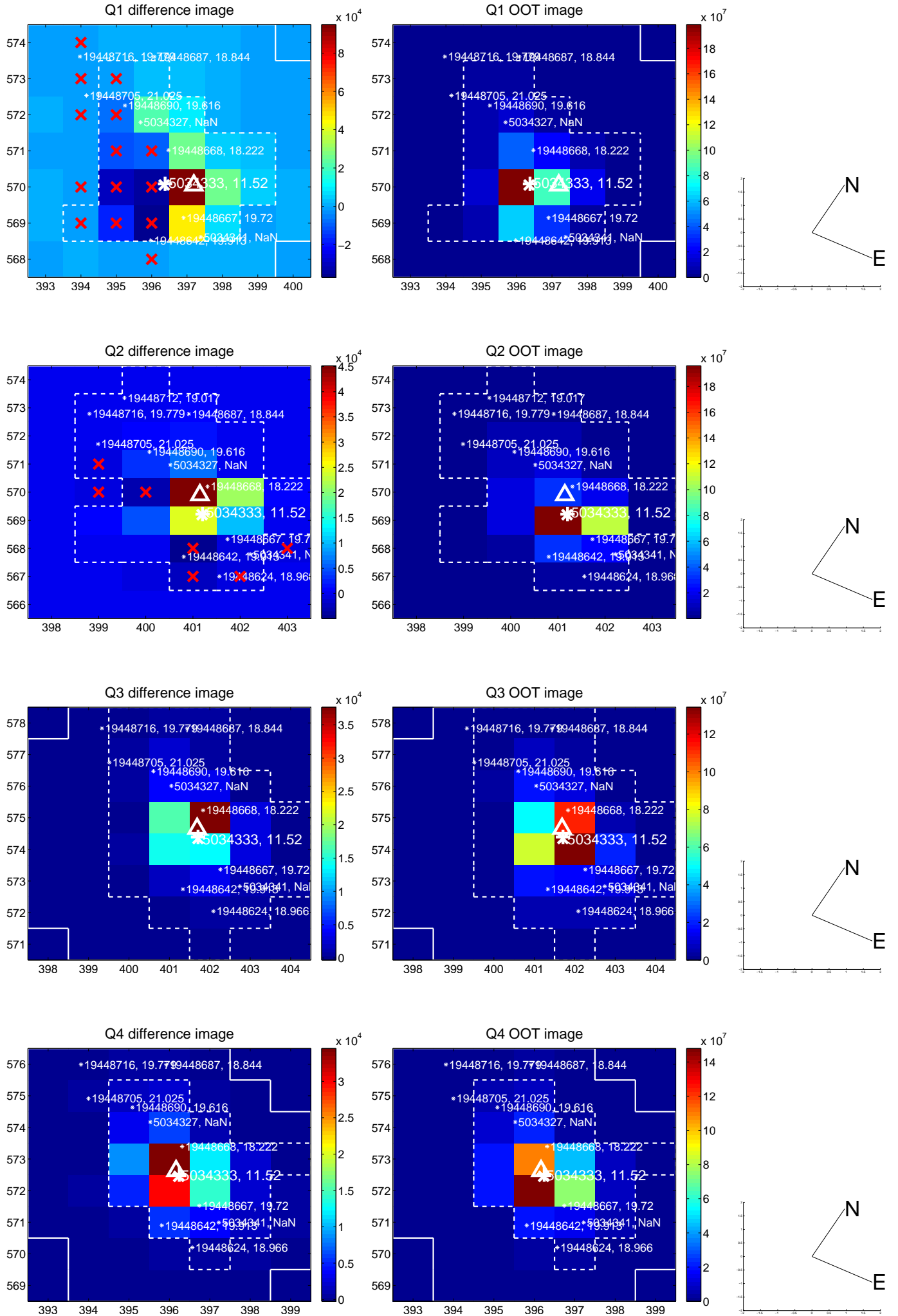
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.129 ± 0.366	3.09	-0.806 ± 0.287	0.790 ± 0.323
PRF-fit source offset from KIC position	1.275 ± 0.384	3.32	-0.854 ± 0.323	0.947 ± 0.303
photometric centroid source offset	0.33 ± 0.06	5.17	-0.20 ± 0.07	0.27 ± 0.06

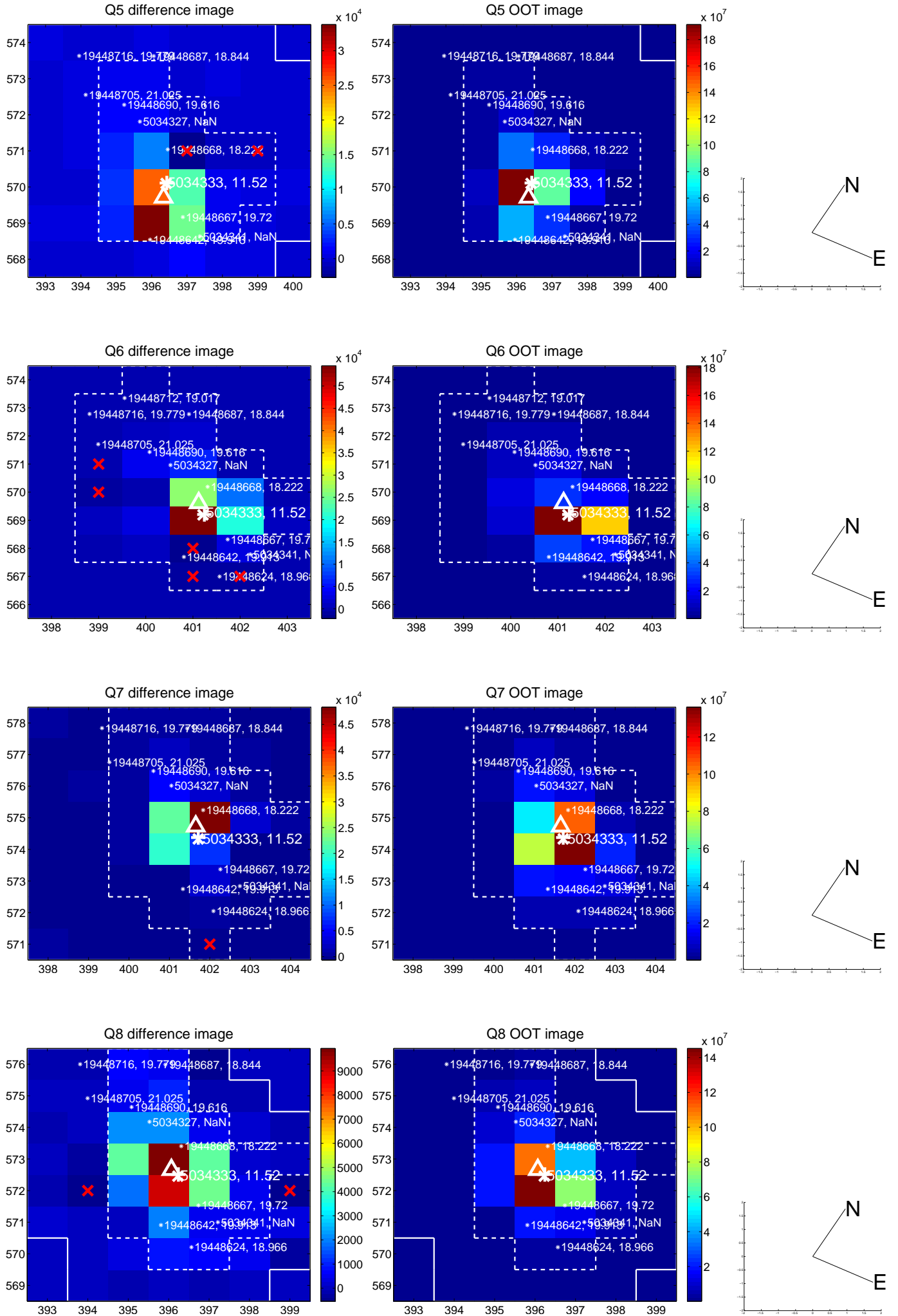


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

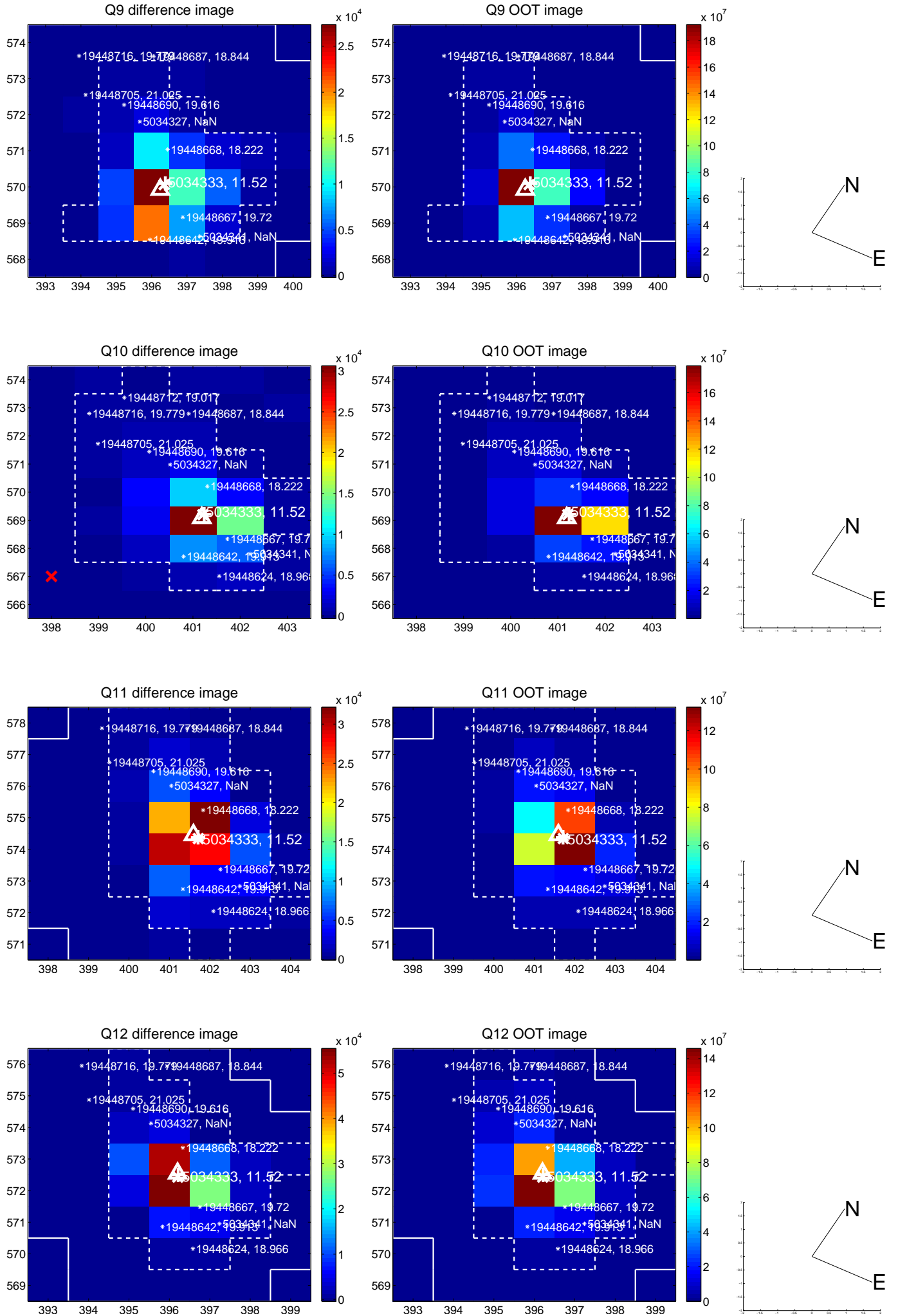
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



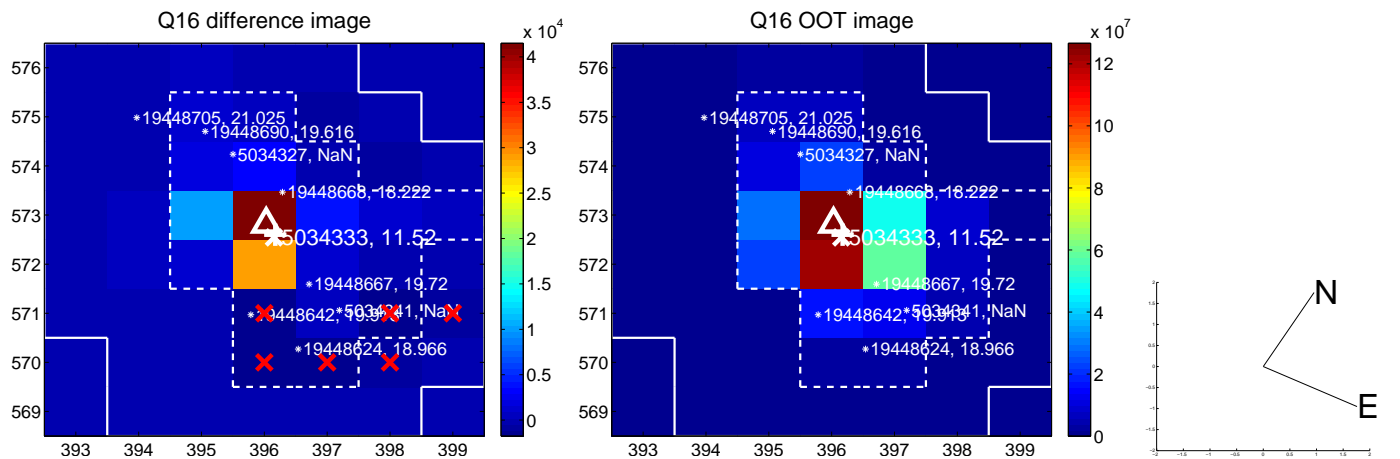
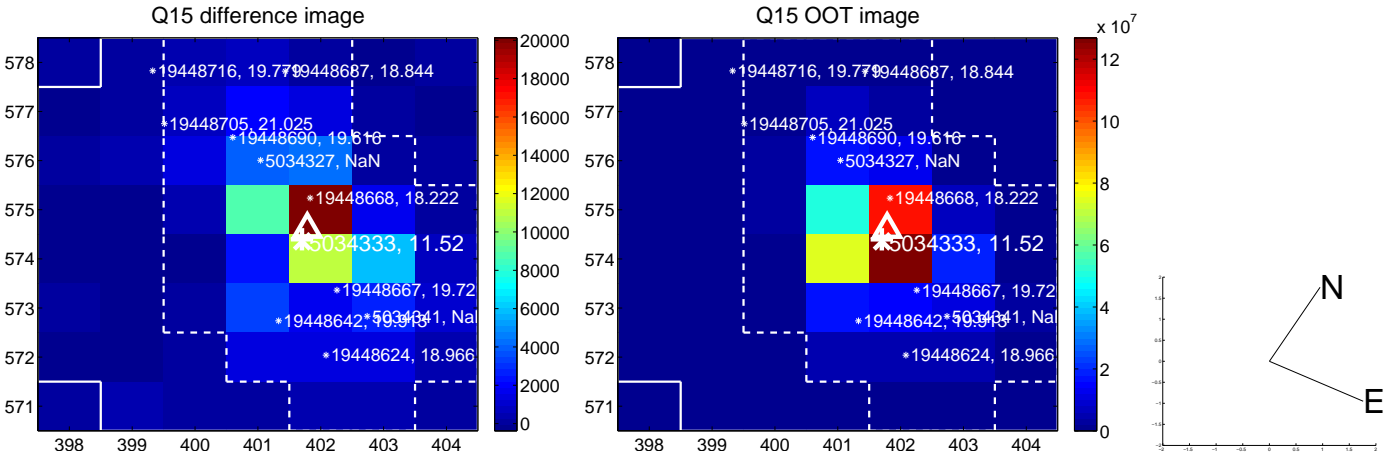
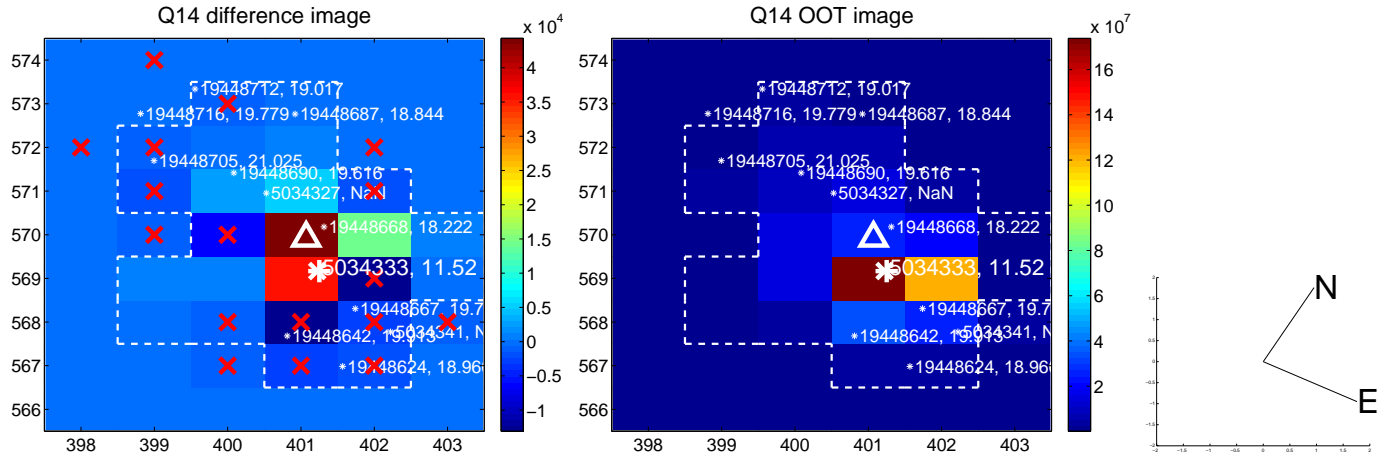
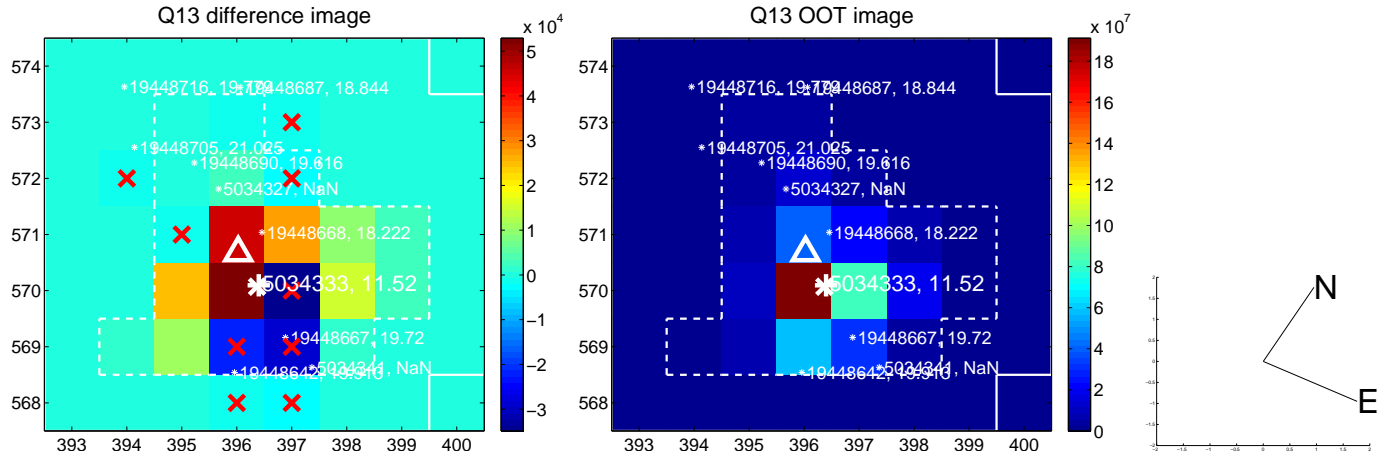
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



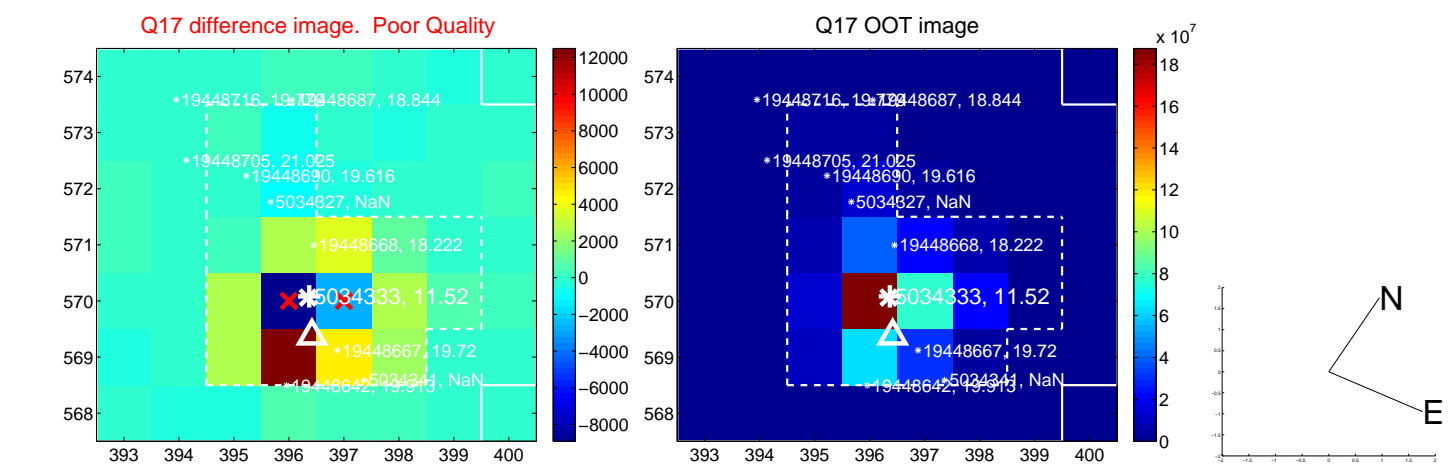
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



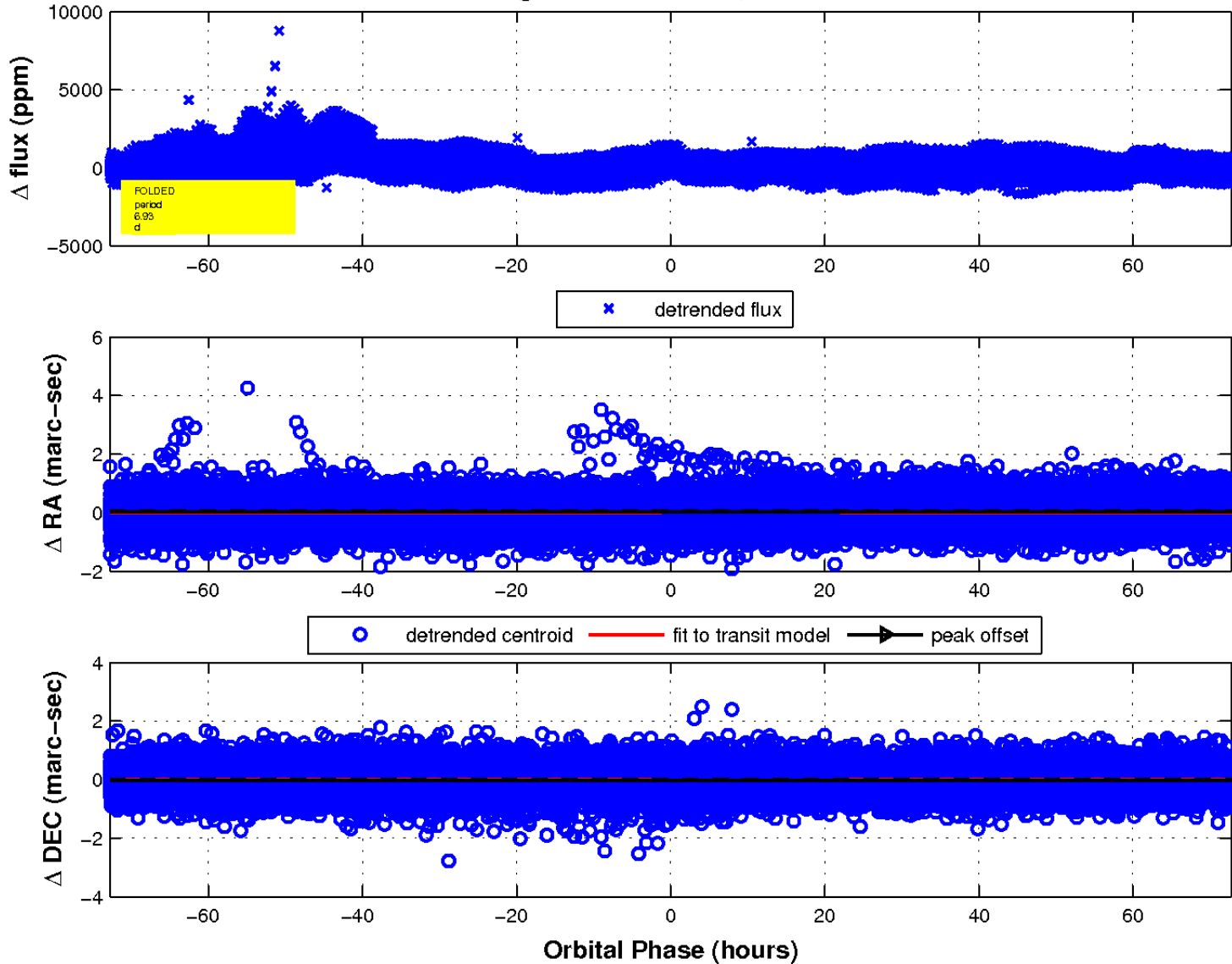
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

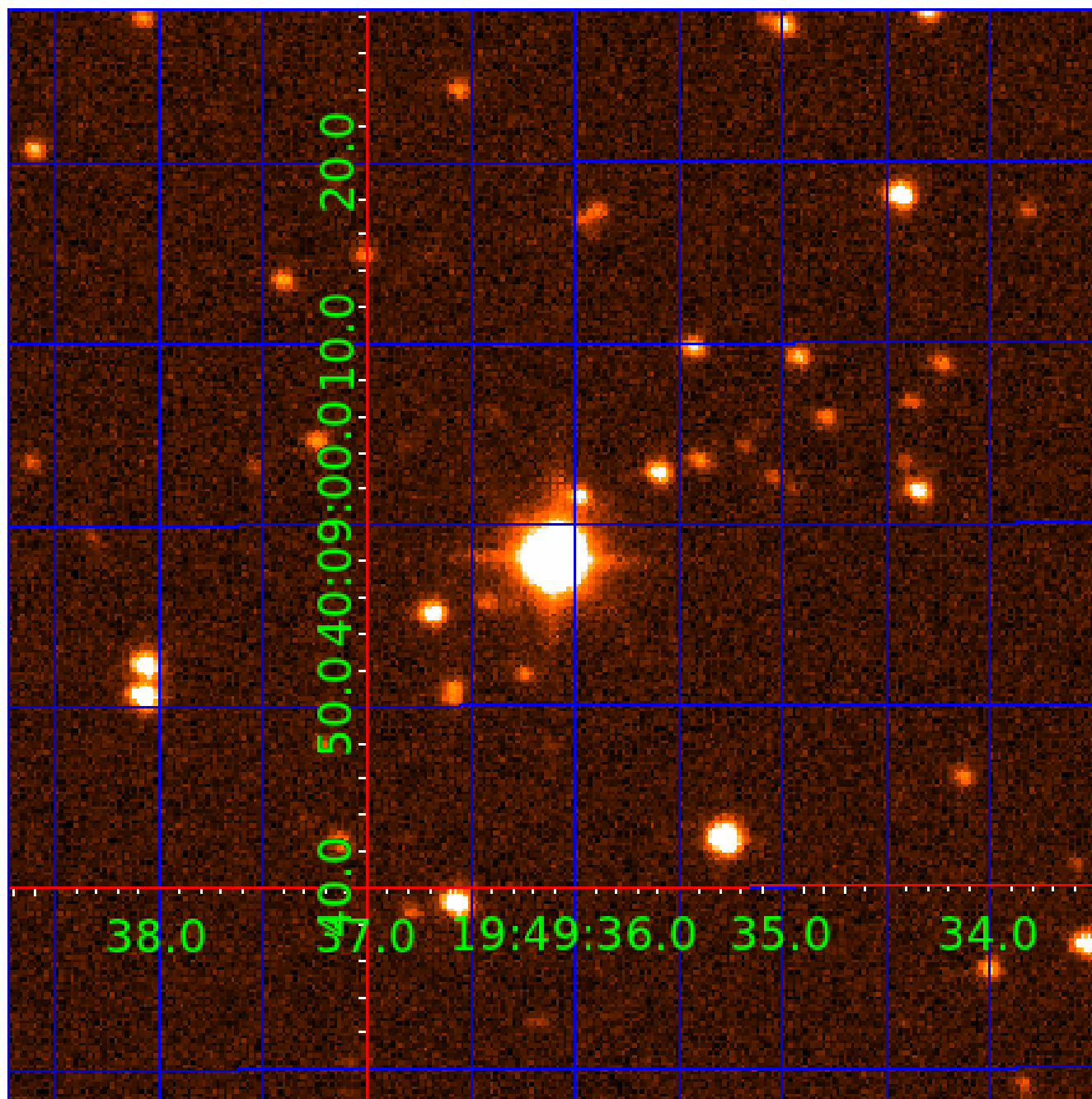


fluxWeightedCentroids, Planet 2 of 5



UKIRT Image

Declination



KIC 005034333

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})
005034333-01	OBS	6124.01	6.932428	134.878389	6222.3	9.493	372.1	411.4	2.17	8675	30.03	2907.35
005034333-02	OBS	No	6.932338	136.217524	42.5	15.000	18.0	-1.0	2.17	8675	1.44	2907.41
005034333-03	OBS	No	2.310780	132.564064	39.2	6.080	18.5	9.1	2.17	8675	1.57	12579.60
005034333-04	OBS	No	1.386939	131.630204	11.0	2.480	11.4	3.2	2.17	8675	0.83	24846.70
005034333-05	OBS	No	0.866544	131.875777	65.7	3.000	9.1	-1.0	2.17	8675	1.79	46518.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005034333-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED—HAS_SEC_TCE
005034333-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
005034333-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—RESIDUAL_TCE
005034333-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005034333-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT—RESIDUAL_TCE—CENT_NOFITS

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 005034333-03

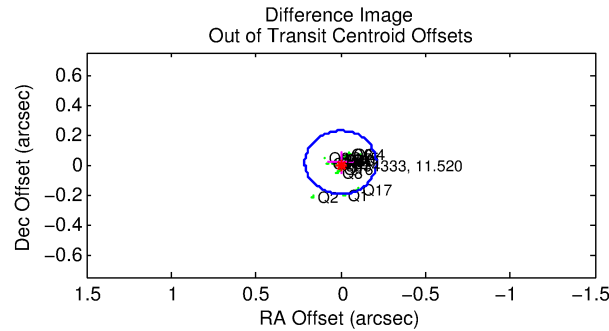
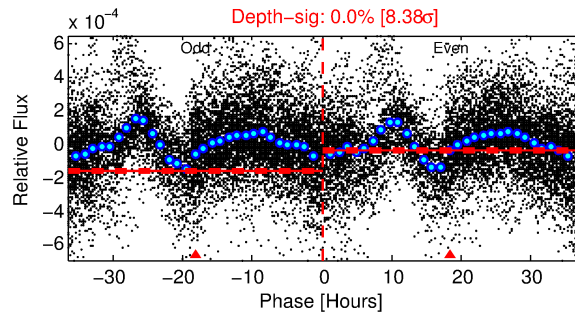
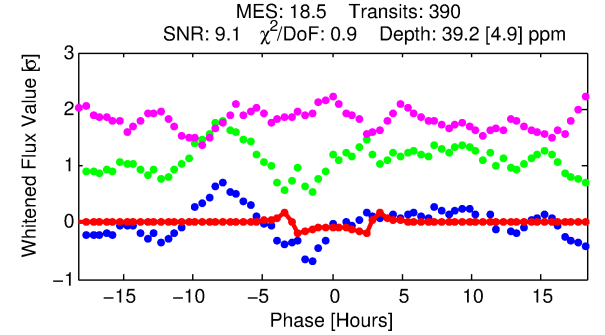
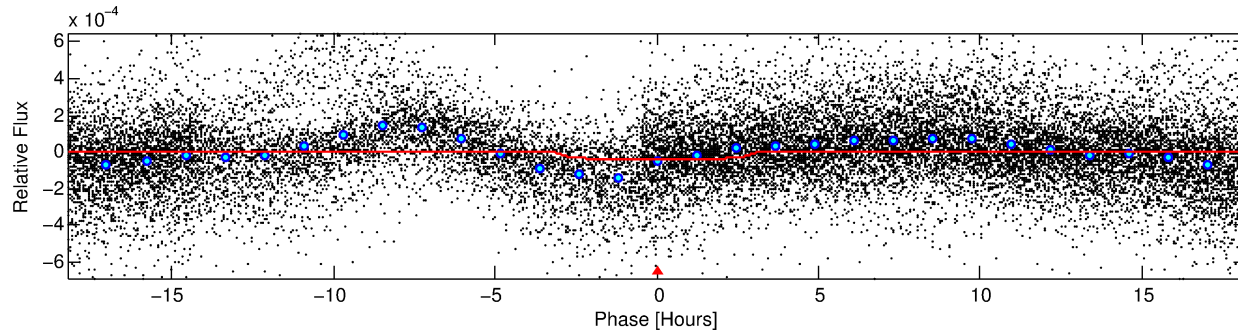
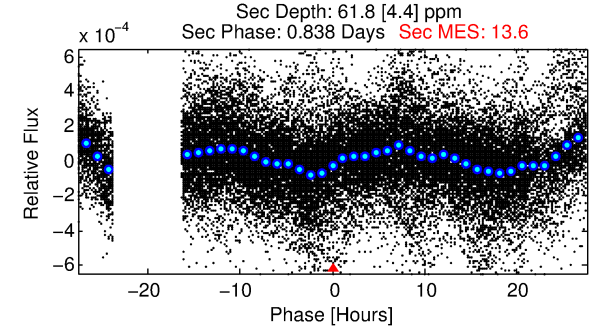
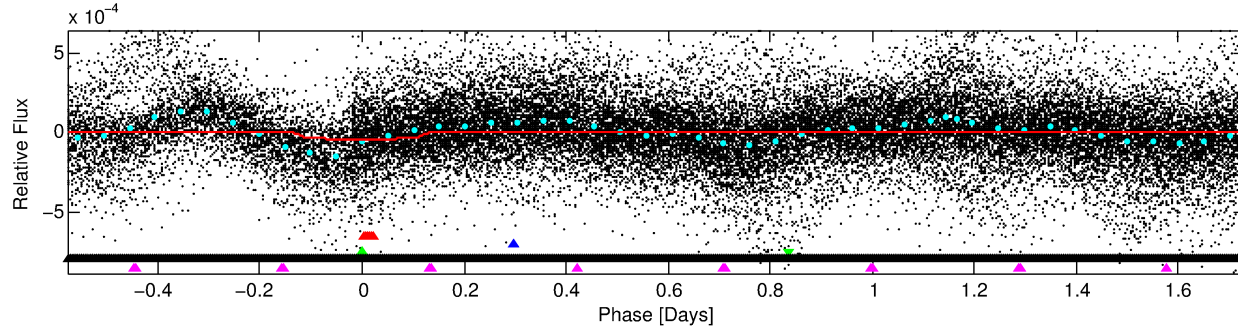
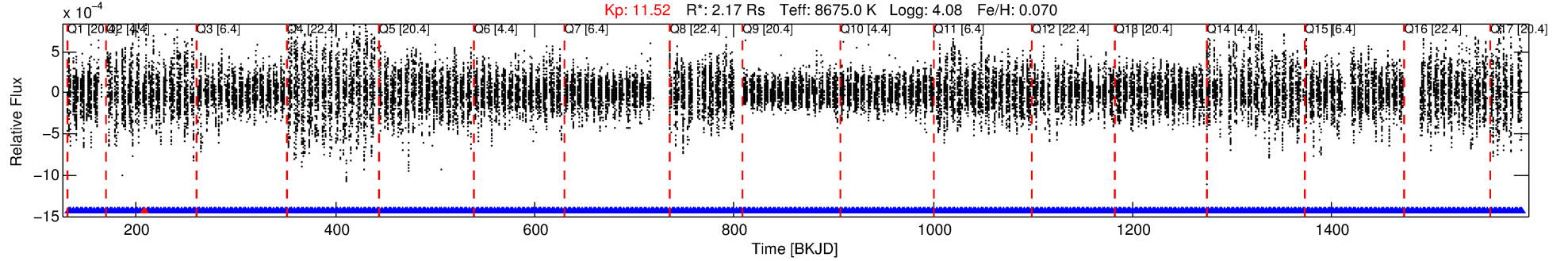
No Significant Match Found

DV One-Page Summary

KIC: 5034333 Candidate: 3 of 5 Period: 2.311 d

KOI: K06124 Corr: No Ephemeris Match

Kp: 11.52 R*: 2.17 Rs Teff: 8675.0 K Logg: 4.08 Fe/H: 0.070



DV Fit Results:

Period = 2.31078 [0.00001] d
Epoch = 132.5641 [0.0026] BKJD
Rp/R* = 0.0066 [0.0009]
a/R* = 1.61 [0.74]
b = 0.90 [0.16]
Seff = 12579.61 [4286.05]
Teff = 2700 [230] K
Rp = 1.57 [0.44] Re
a = 0.0435 [0.0088] AU
Ag = 26.15 [10.28] [2.44σ]
Teffp = 9441 [781] K [8.28σ]

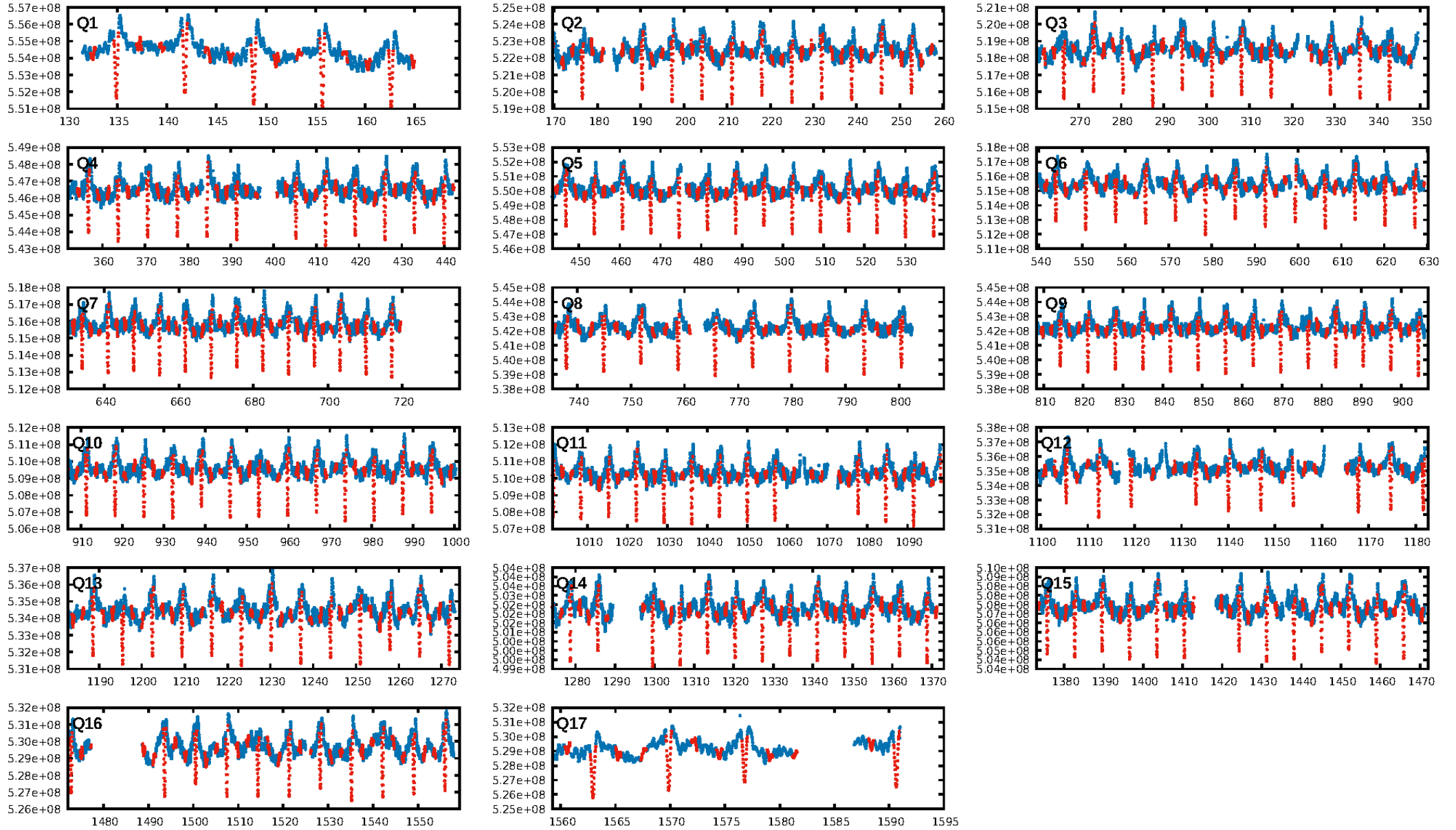
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.38σ]
LongPeriod-sig: 100.0% [6.85σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [371/372]
GhostDiagnostic-chr: -4.862
Centroid-sig: 8.6%
Centroid-so: 0.520 arcsec [1.08σ]
OotOffset-rm: 0.016 arcsec [0.22σ]
KicOffset-rm: 0.164 arcsec [2.29σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

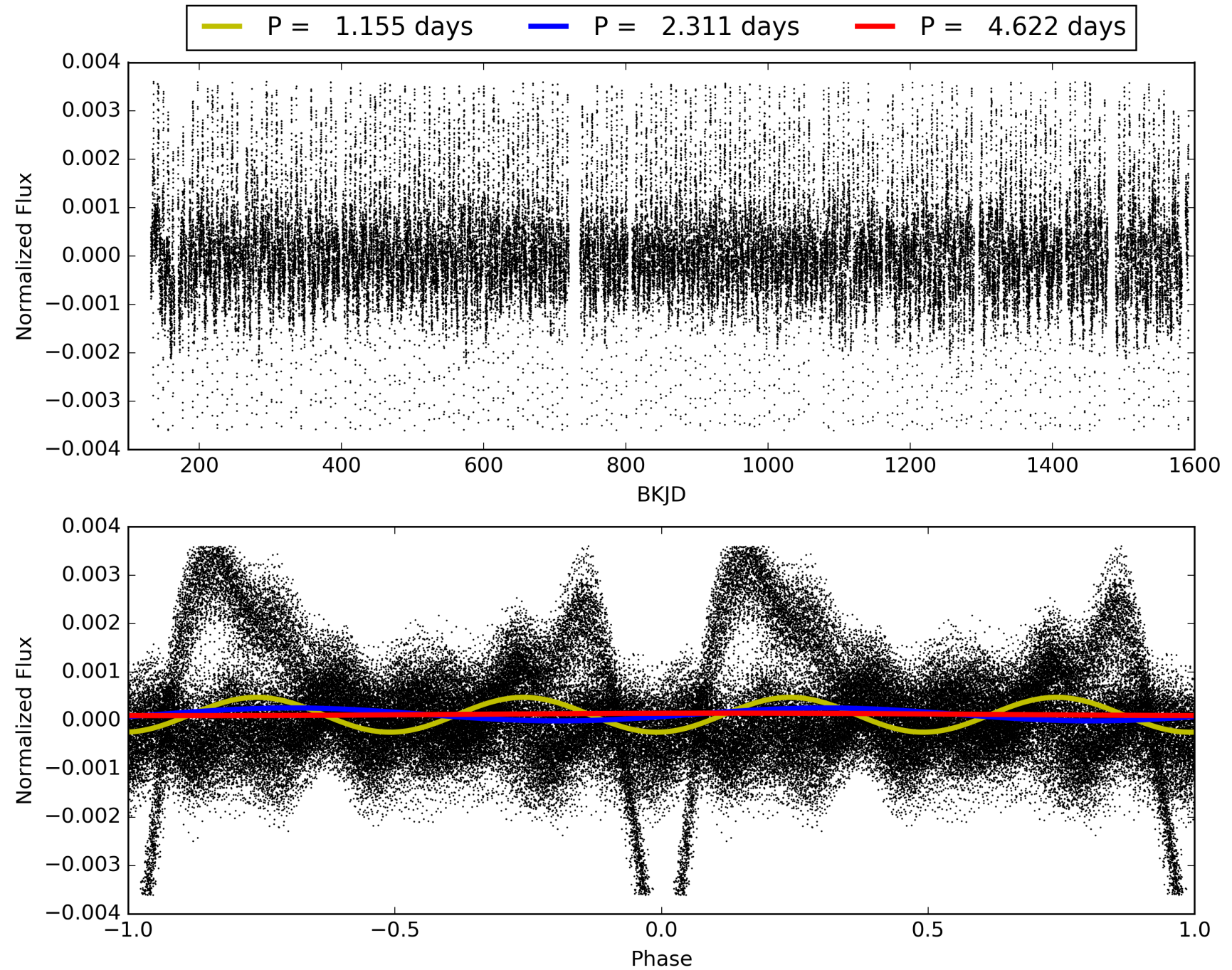
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:51:41 Z

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

TCE 005034333-03, PDC Light Curves

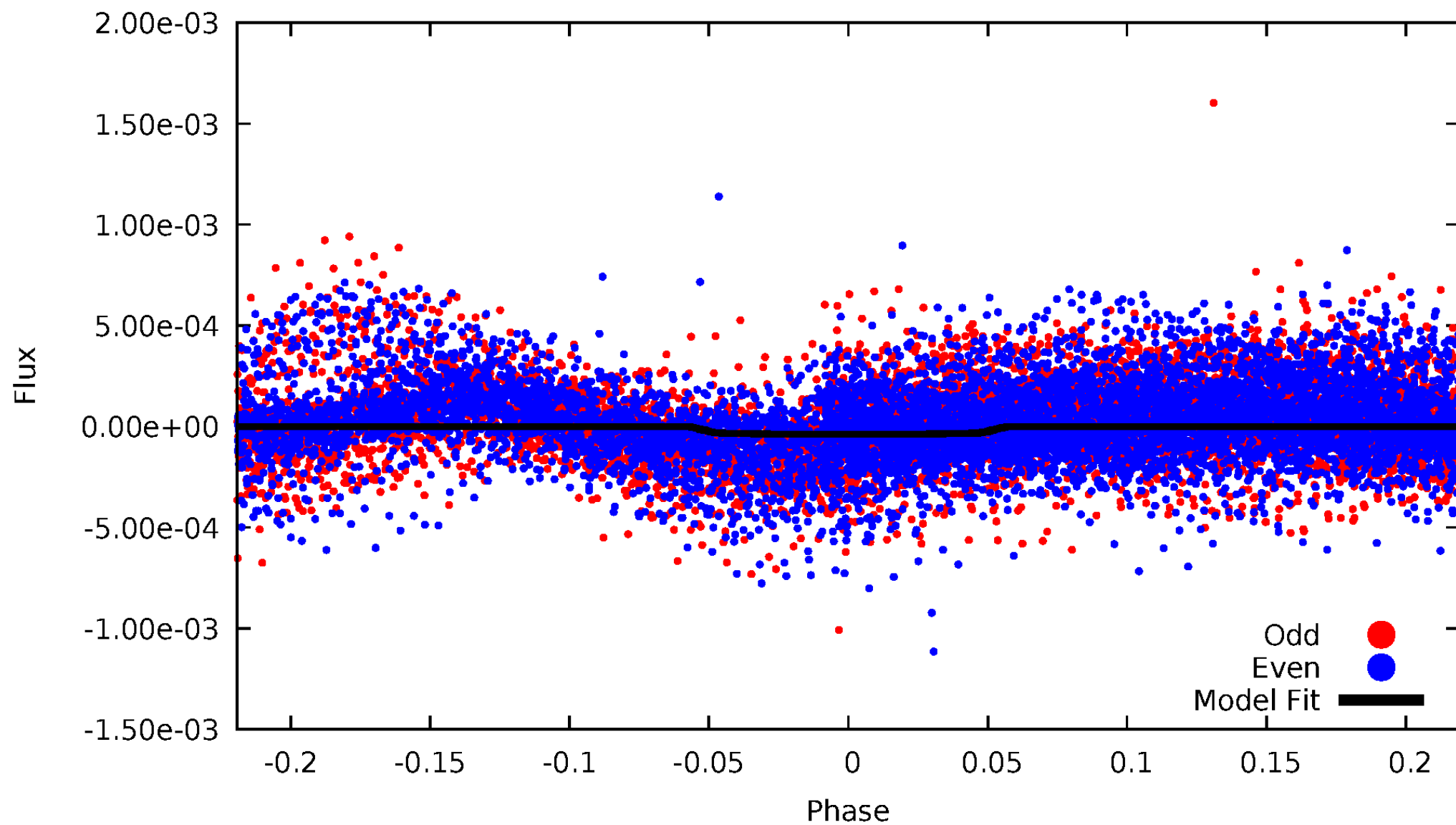


TCE 005034333-03



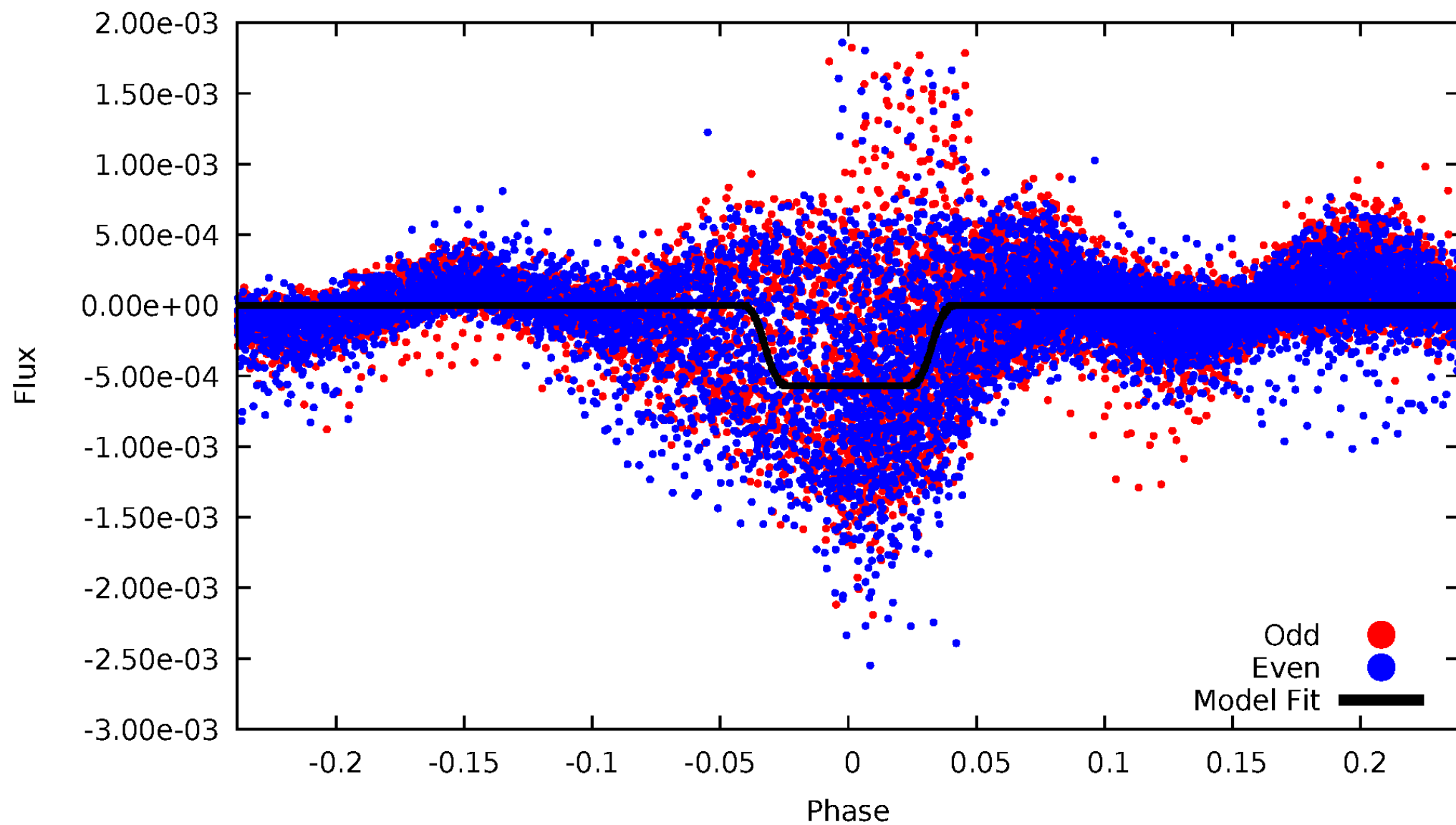
DV Odd/Even

TCE 005034333-03



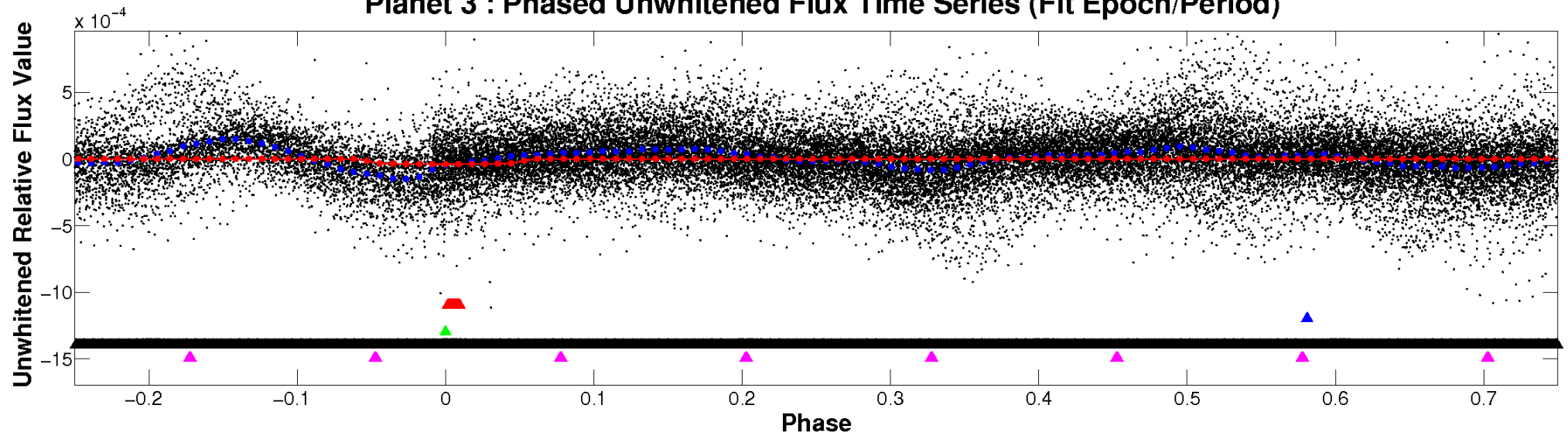
ALT Odd/Even

TCE 005034333-03

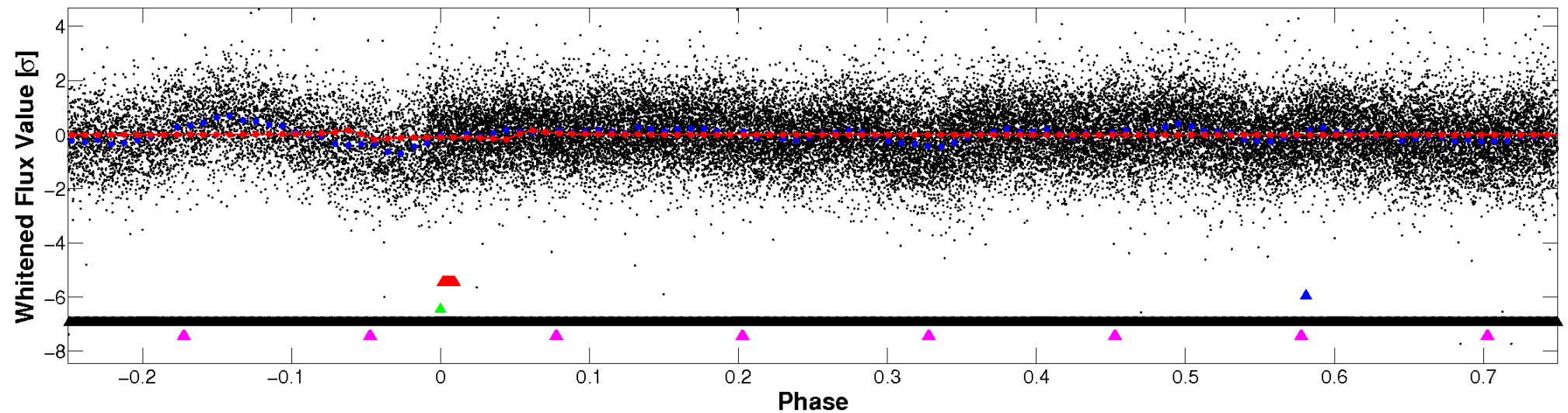


Non-Whitened Vs. Whitened Light Curve

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

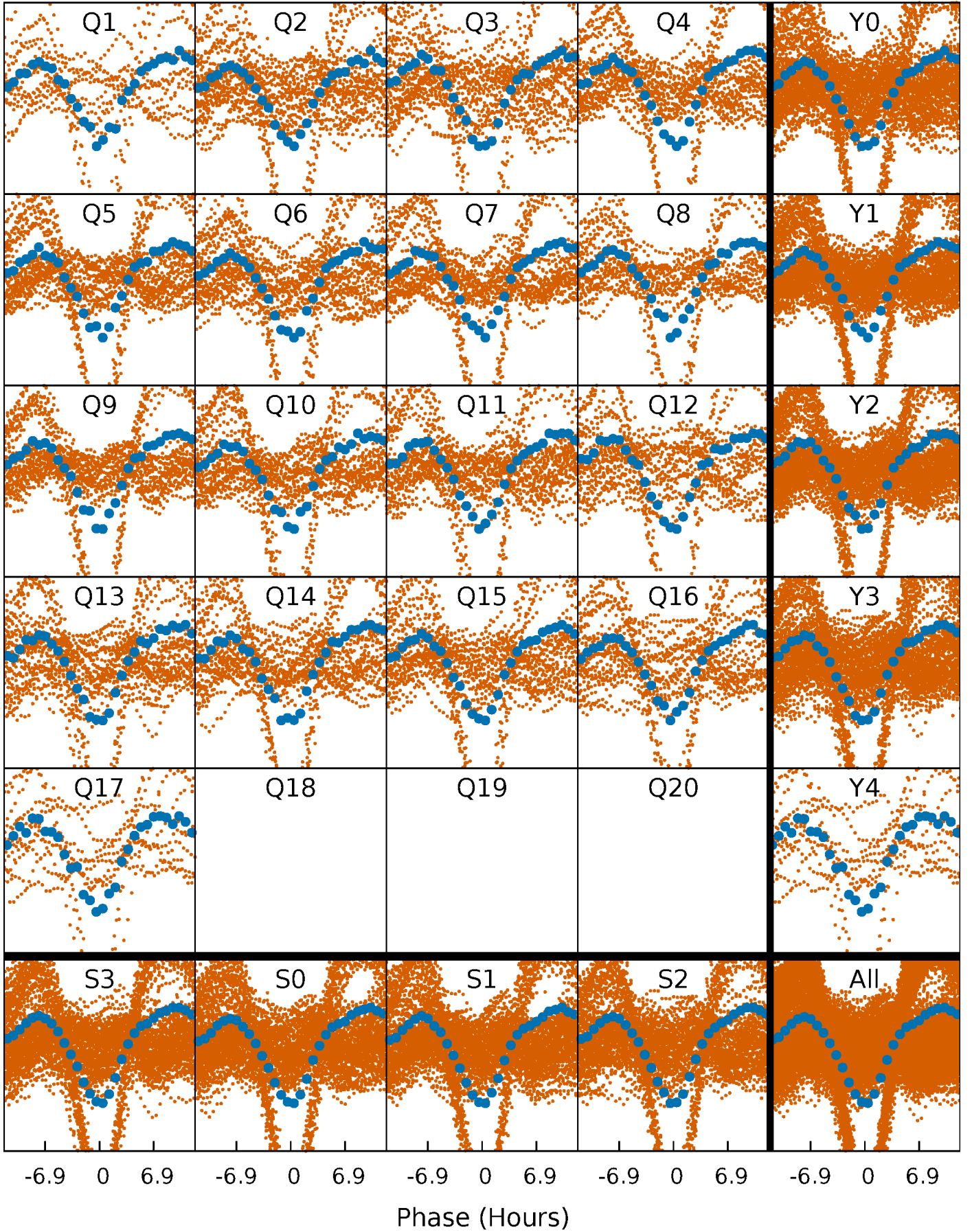


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



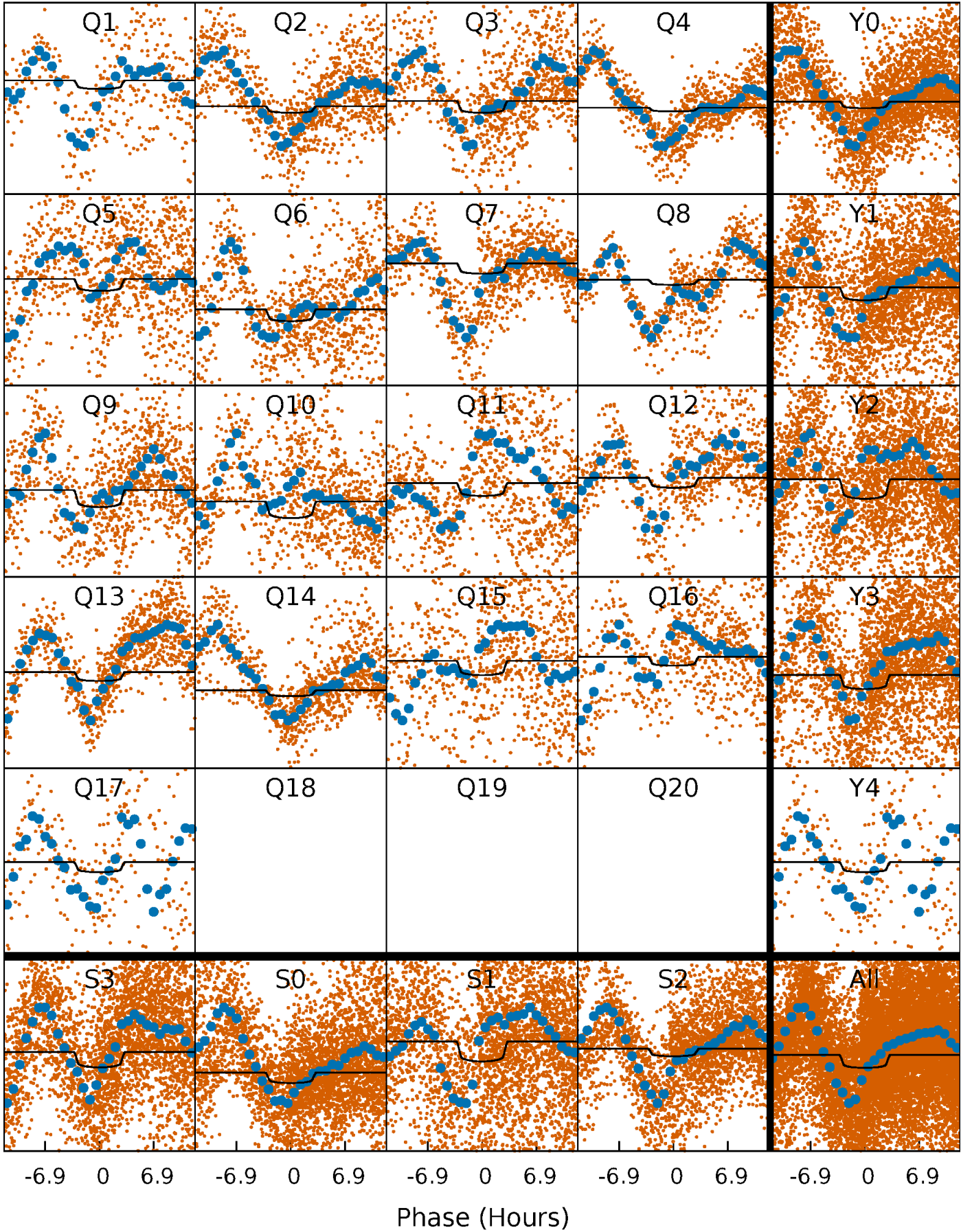
PDC Quarter-Phased Transit Curves

TCE 005034333-03 P= 2.310780 Days $T_0=132.564064$ (BKJD)



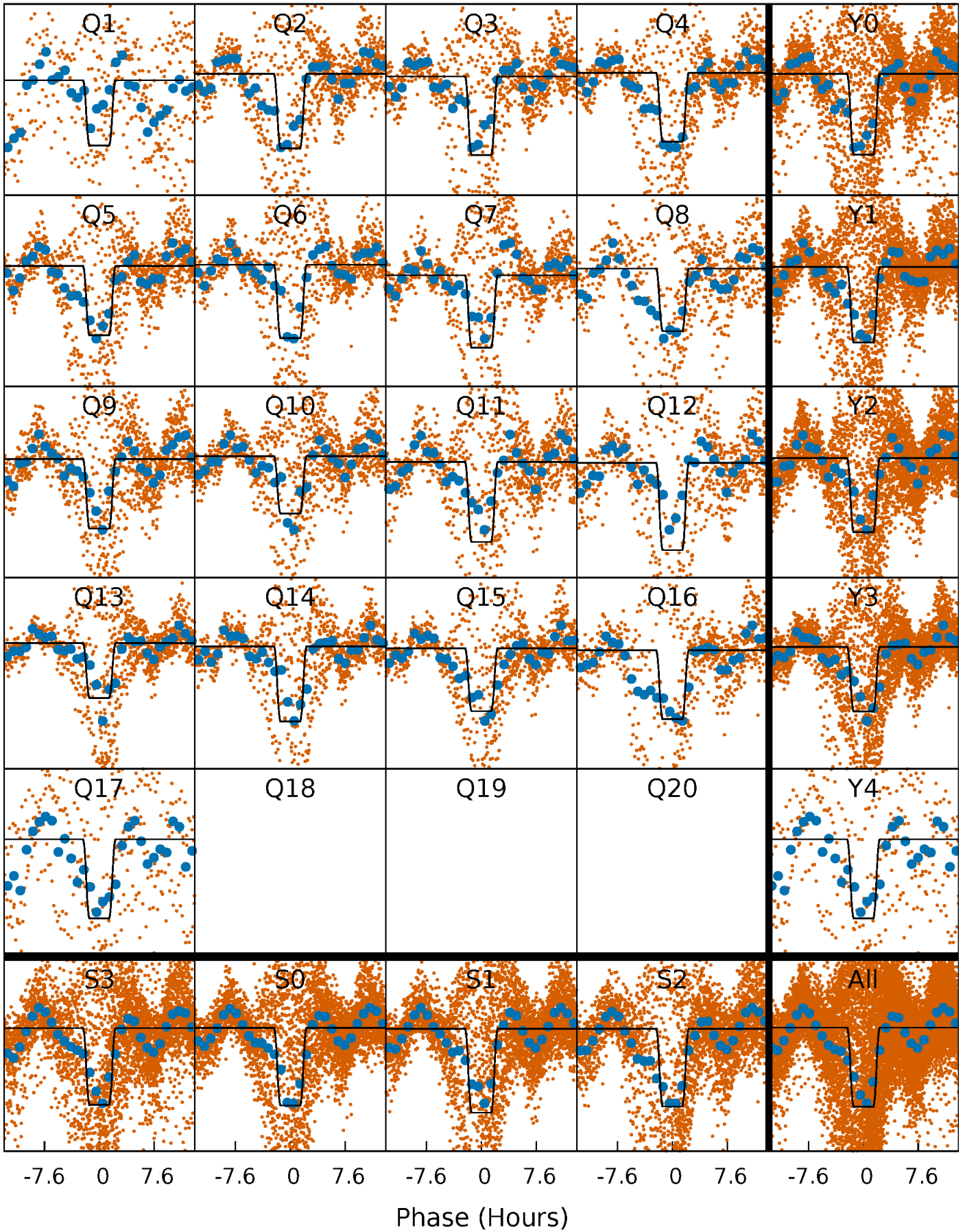
DV Quarter-Phased Transit Curves

TCE 005034333-03 $P = 2.310780$ Days $T_0 = 132.564064$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

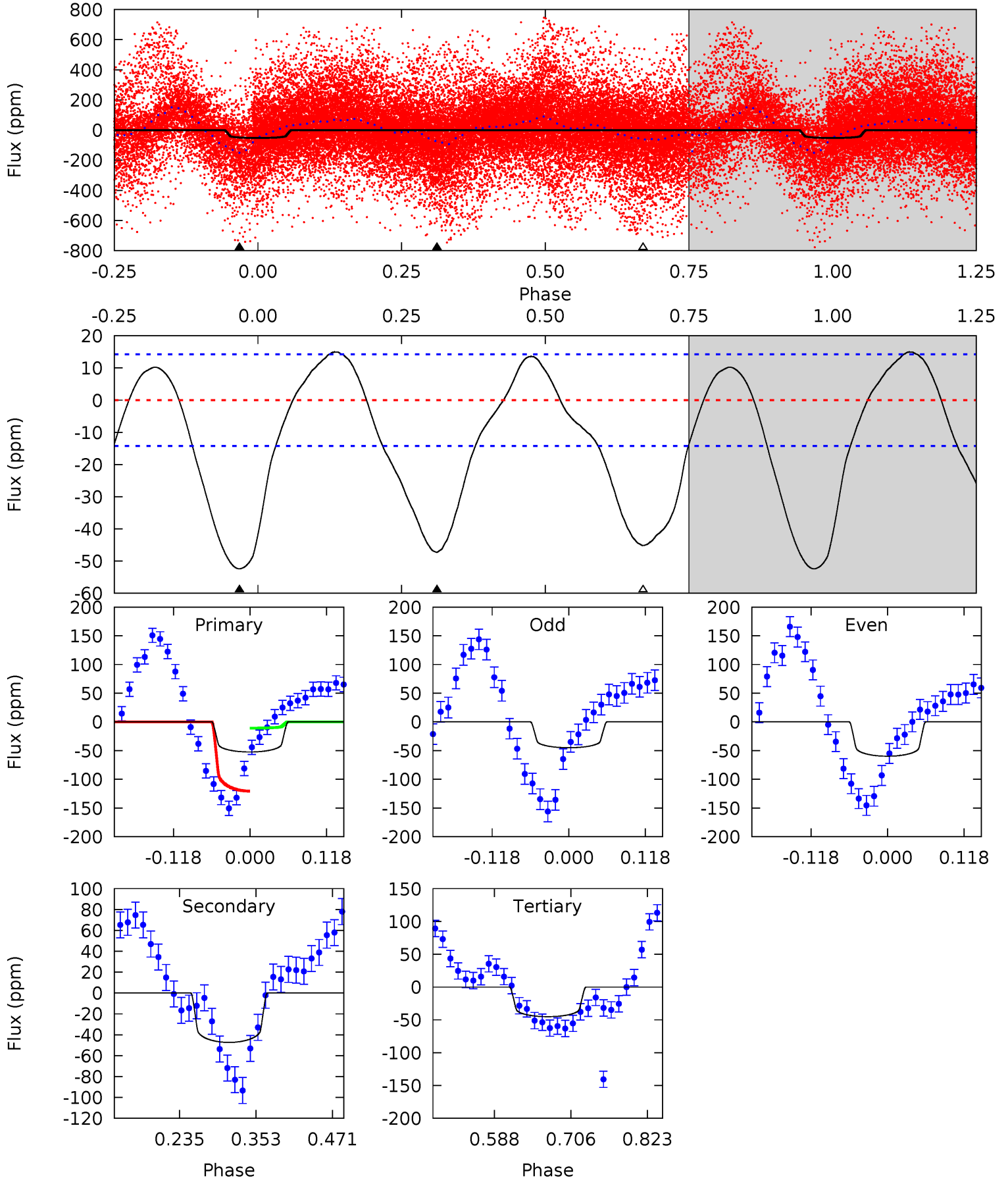
TCE 005034333-03 P= 2.310723 Days $T_0=132.570440$ (BKJD)



DV Model-Shift Uniqueness Test

005034333-03, P = 2.310780 Days, E = 130.253284 Days

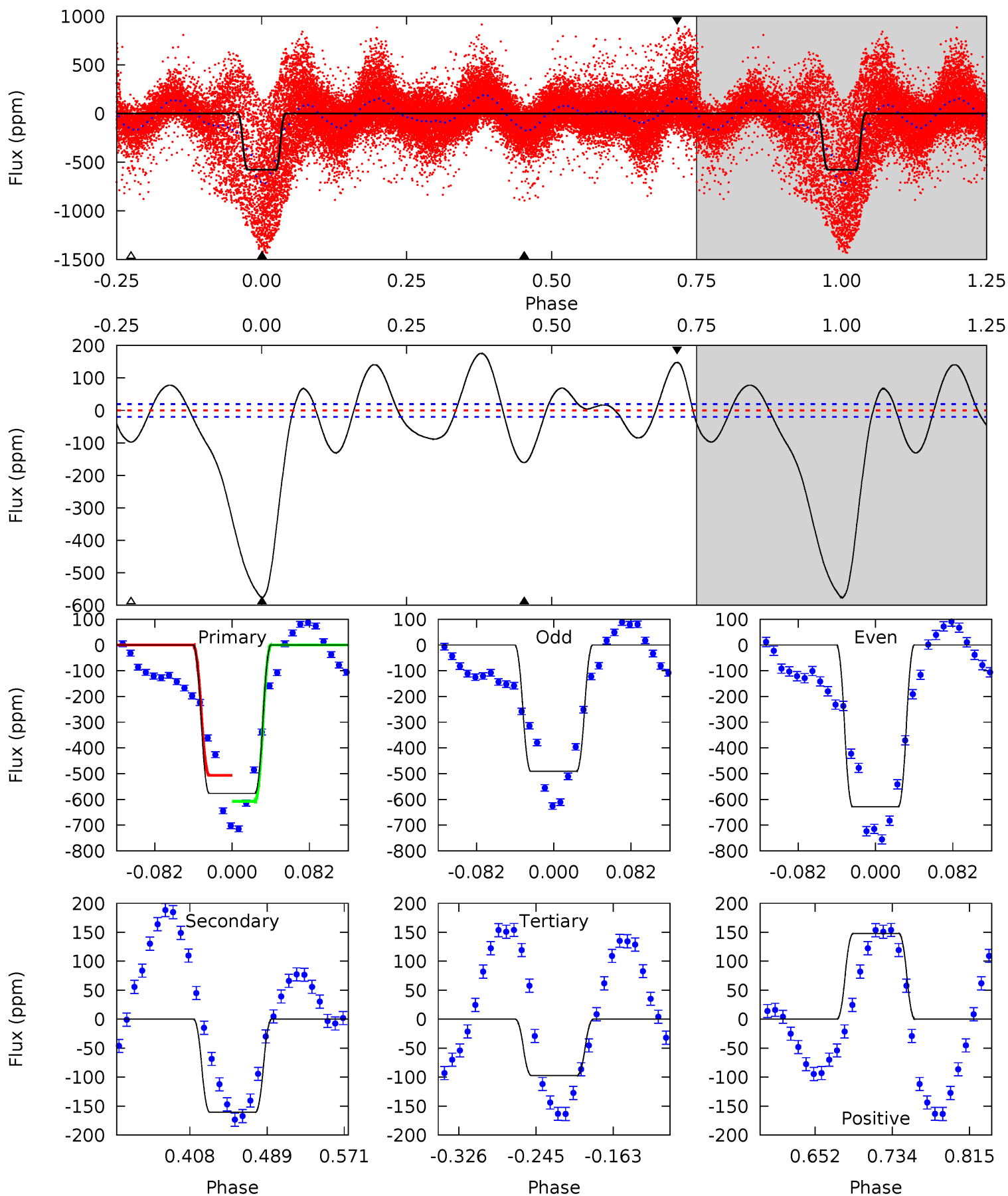
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	15.0	14.4	0	4.53	1.56	6.49	2.31	16.7	0.68	15.0	2.41	1.12	0.22	17.2



Alt Model-Shift Uniqueness Test

005034333-03, P = 2.310723 Days, E = 130.259717 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
135.8	37.8	23.0	34.9	4.61	1.74	18.2	112.9	100.9	14.9	2.96	16.0	0.86	0.23	11.0



Stellar Parameters For KIC 005034333

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8675^{+238}_{-408}	$4.080^{+0.150}_{-0.150}$	$0.070^{+0.150}_{-0.600}$	$2.168^{+0.487}_{-0.541}$	$2.057^{+0.370}_{-0.493}$	$0.284^{+0.259}_{-0.117}$
	+3%/-5%	+4%/-4%	+214%/-857%	+22%/-25%	+18%/-24%	+91%/-41%
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 005034333-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-47 ± 3	$1.55^{+0.33}_{-0.29}$	3760^{+250}_{-244}	8833^{+1001}_{-792}	20^{+8}_{-6}
Alt.	-161 ± 4	$5.71^{+0.79}_{-0.84}$	3775^{+236}_{-276}	5934^{+206}_{-207}	$5.164^{+1.418}_{-1.080}$

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

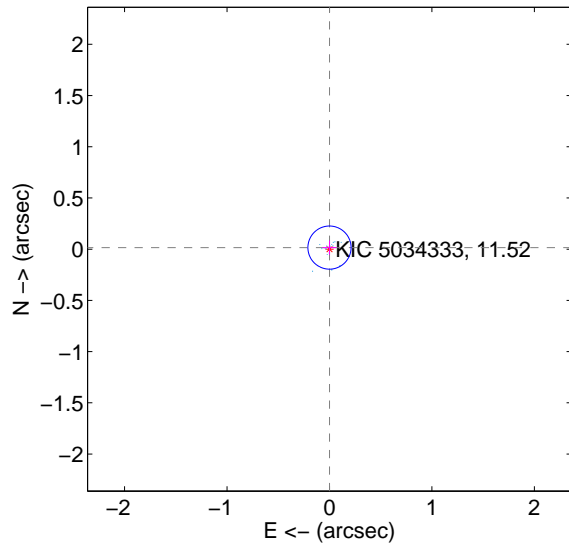
Supplemental centroid analysis for 005034333-03. **Kepler magnitude: 11.52.** Transit SNR 9.08

There are 17 quarters with good PRF difference image offsets

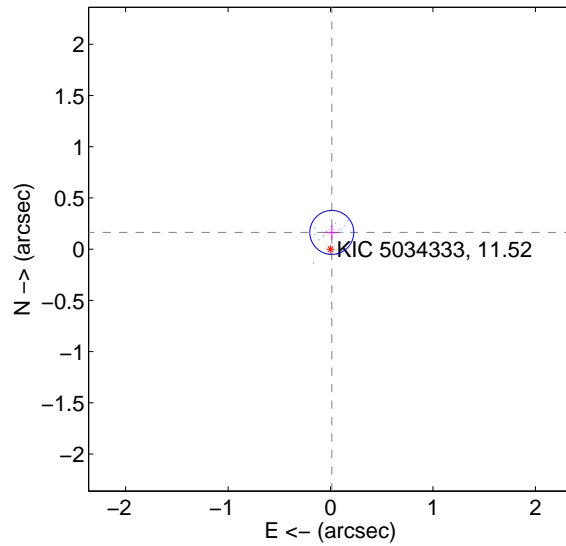
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.016 ± 0.070	0.22	-0.000 ± 0.069	0.016 ± 0.070
PRF-fit source offset from KIC position	0.164 ± 0.072	2.29	-0.013 ± 0.071	0.164 ± 0.071
photometric centroid source offset	0.52 ± 0.48	1.08	-0.51 ± 0.48	-0.11 ± 0.45

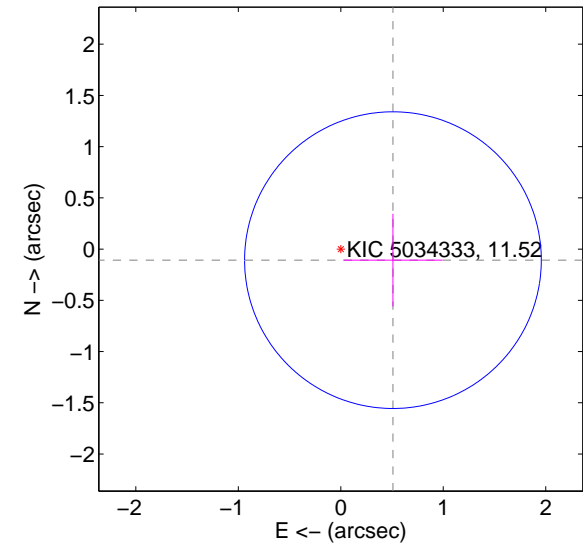
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

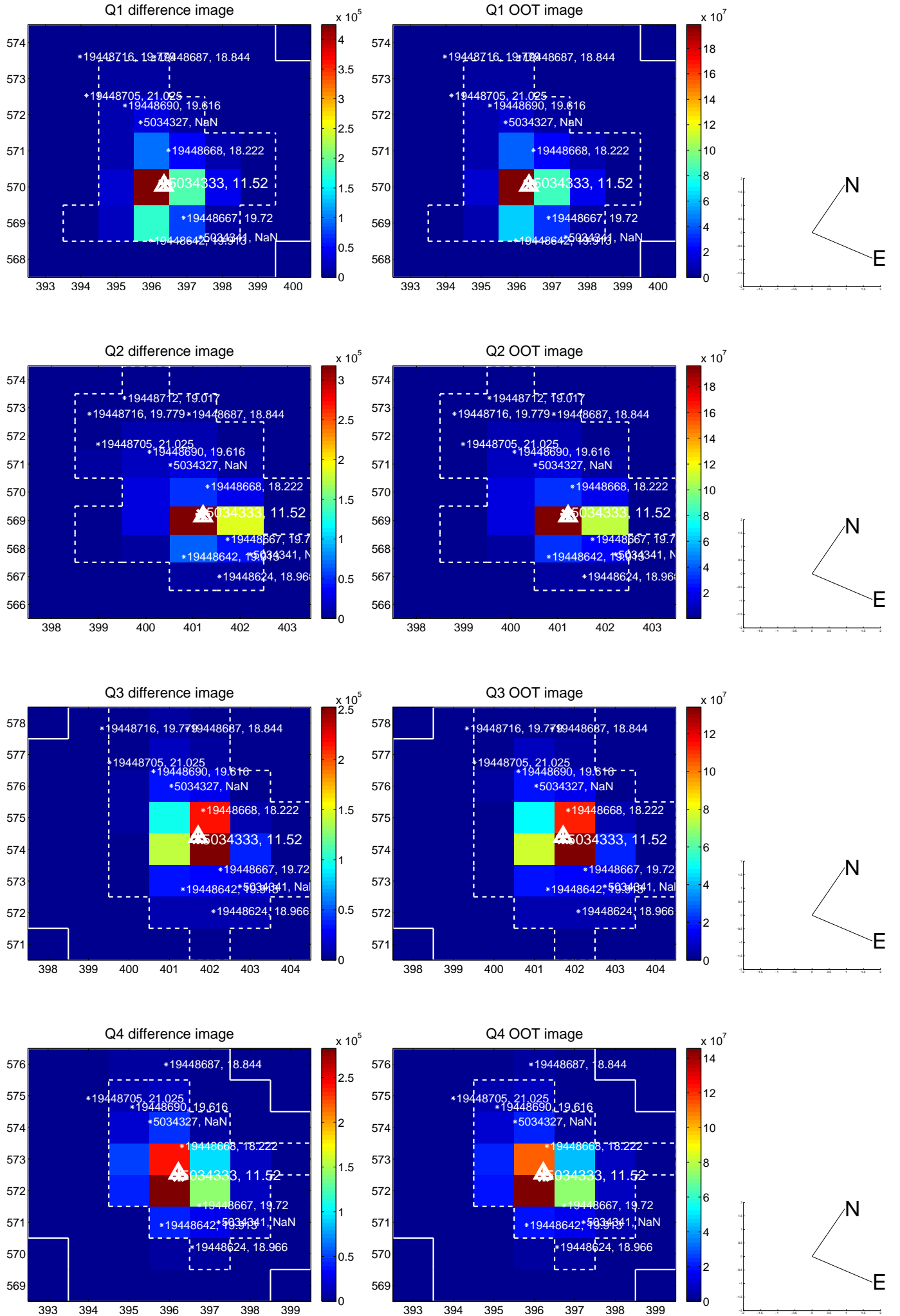


offset from photometric centroids

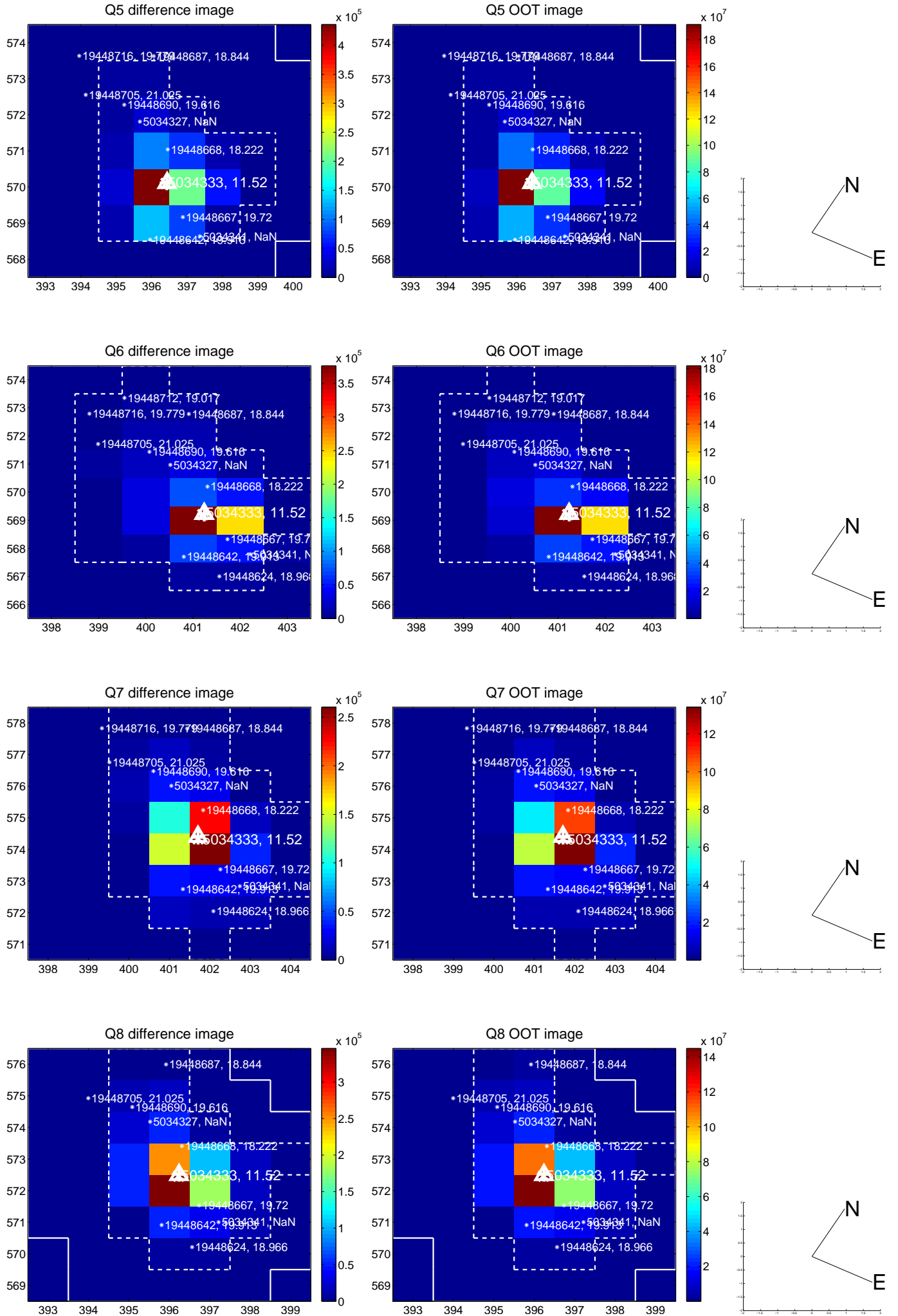


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

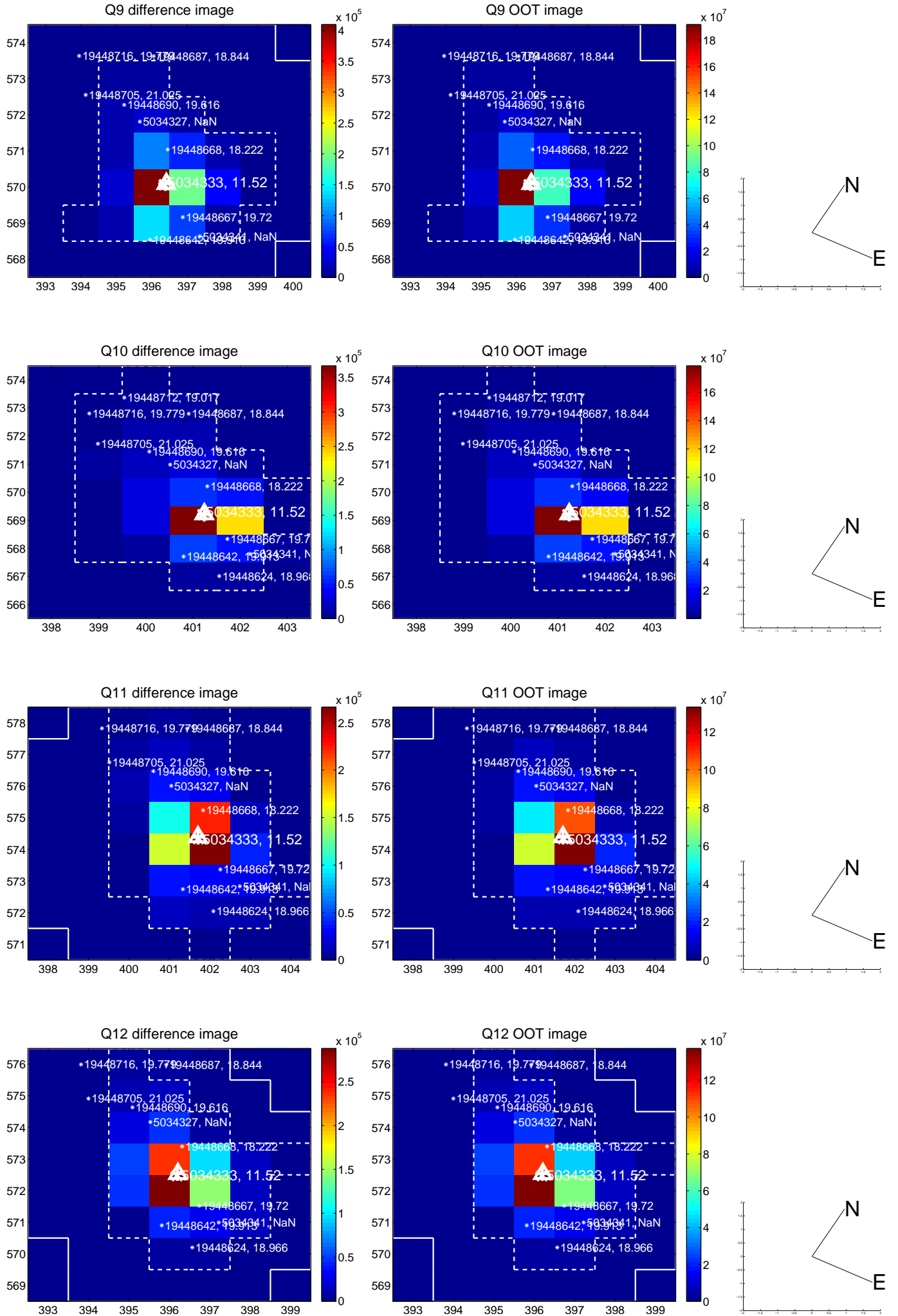
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



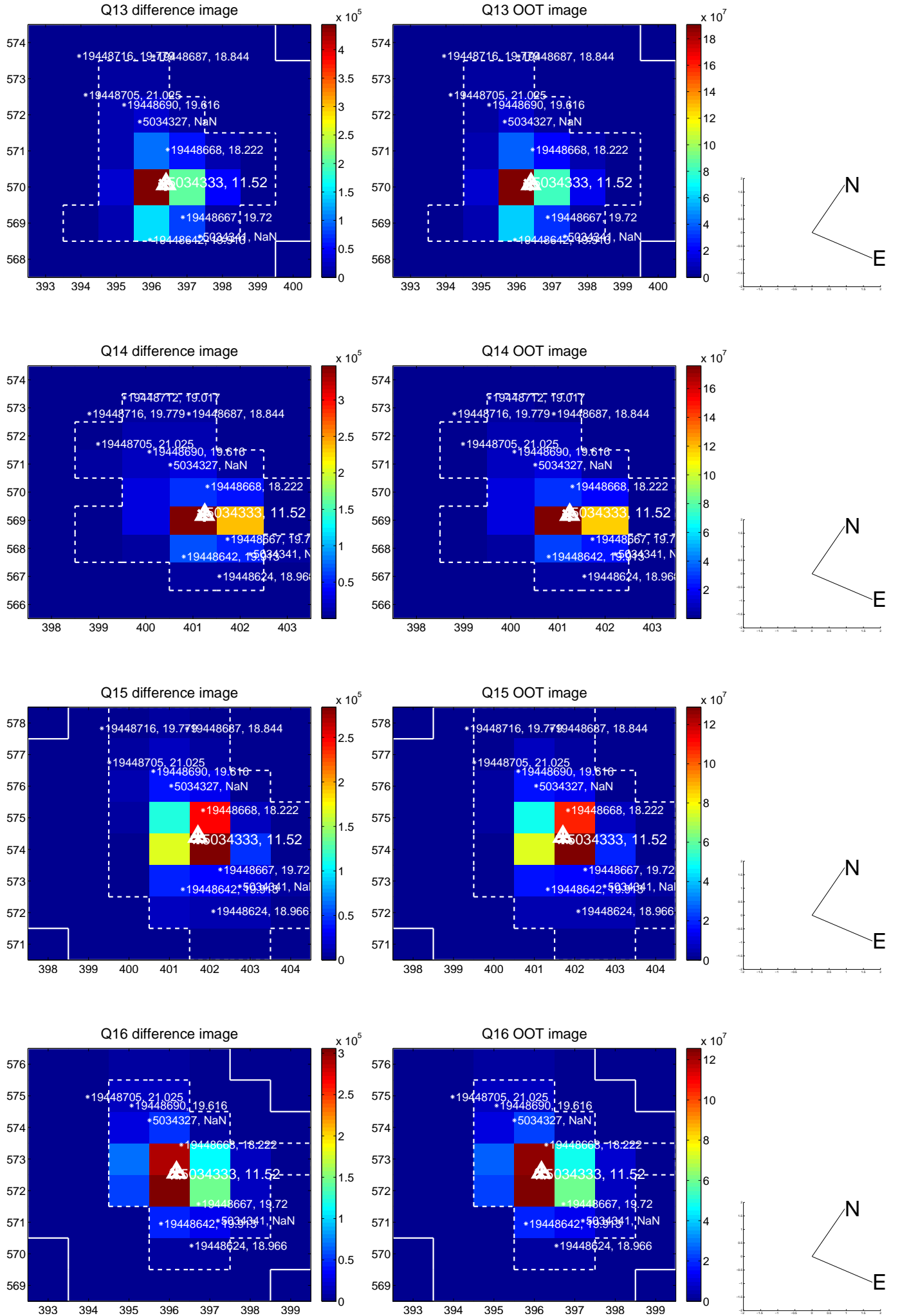
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



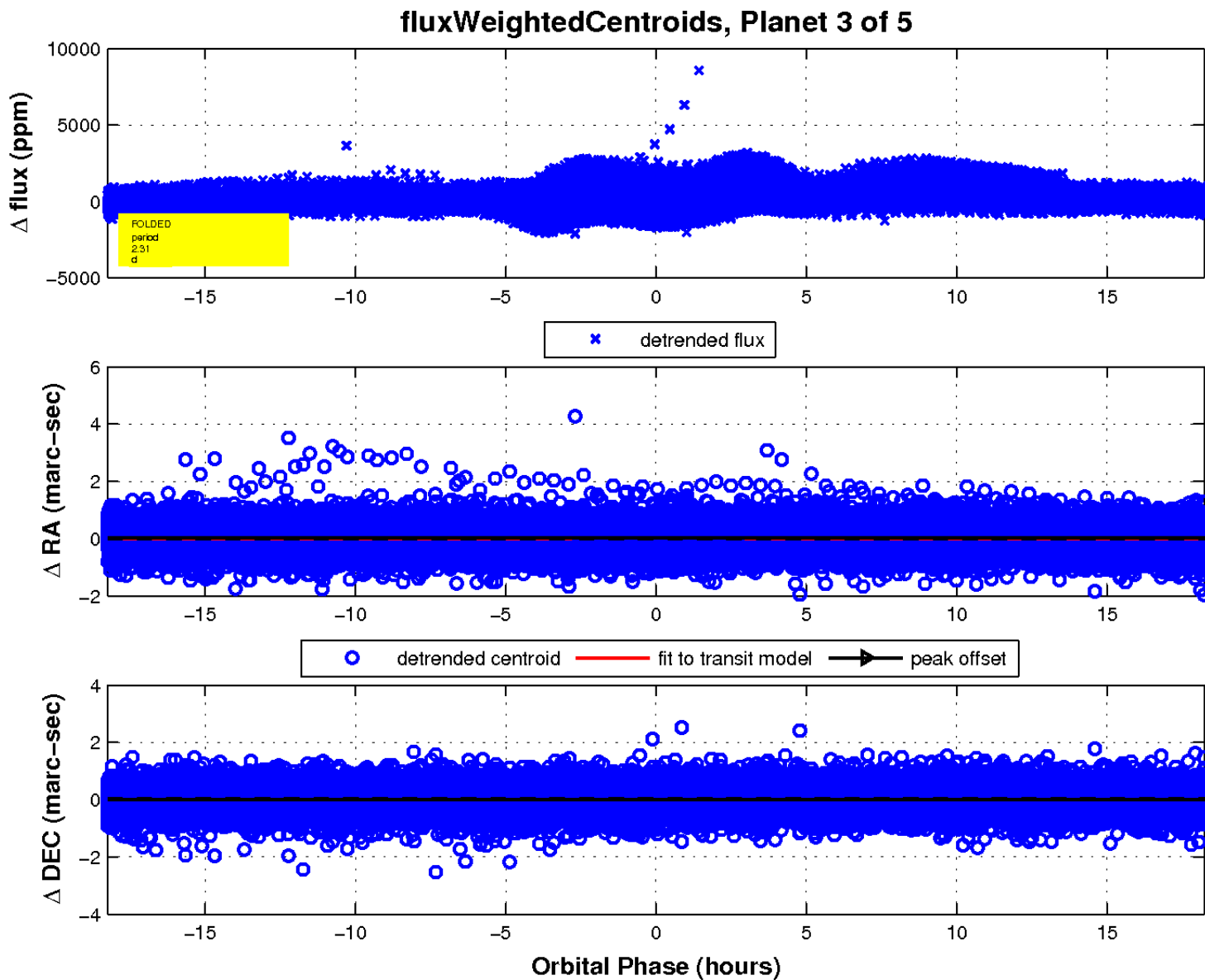
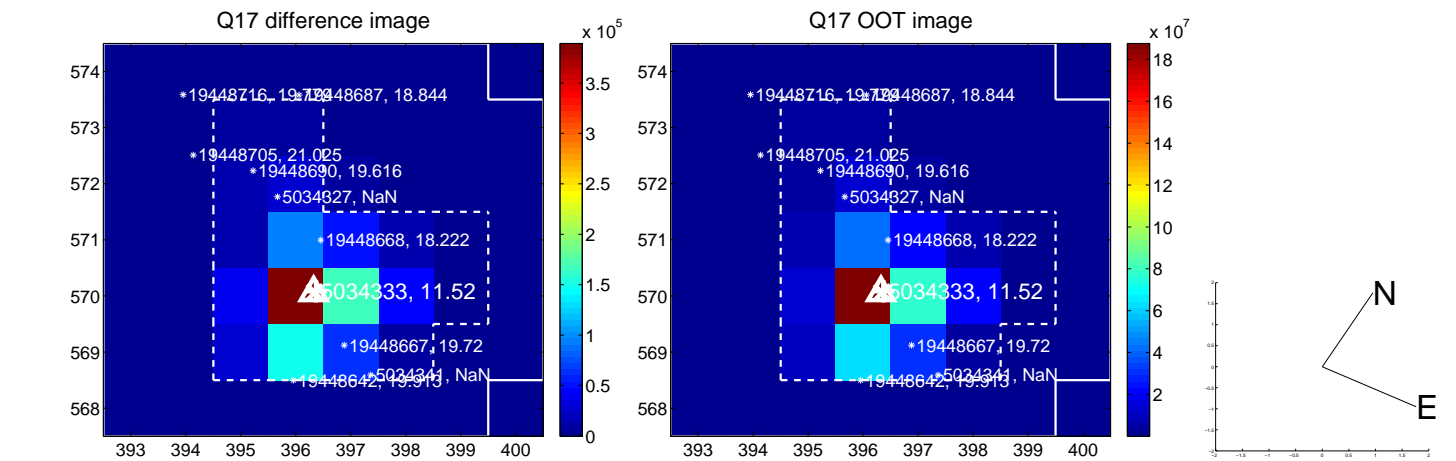
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

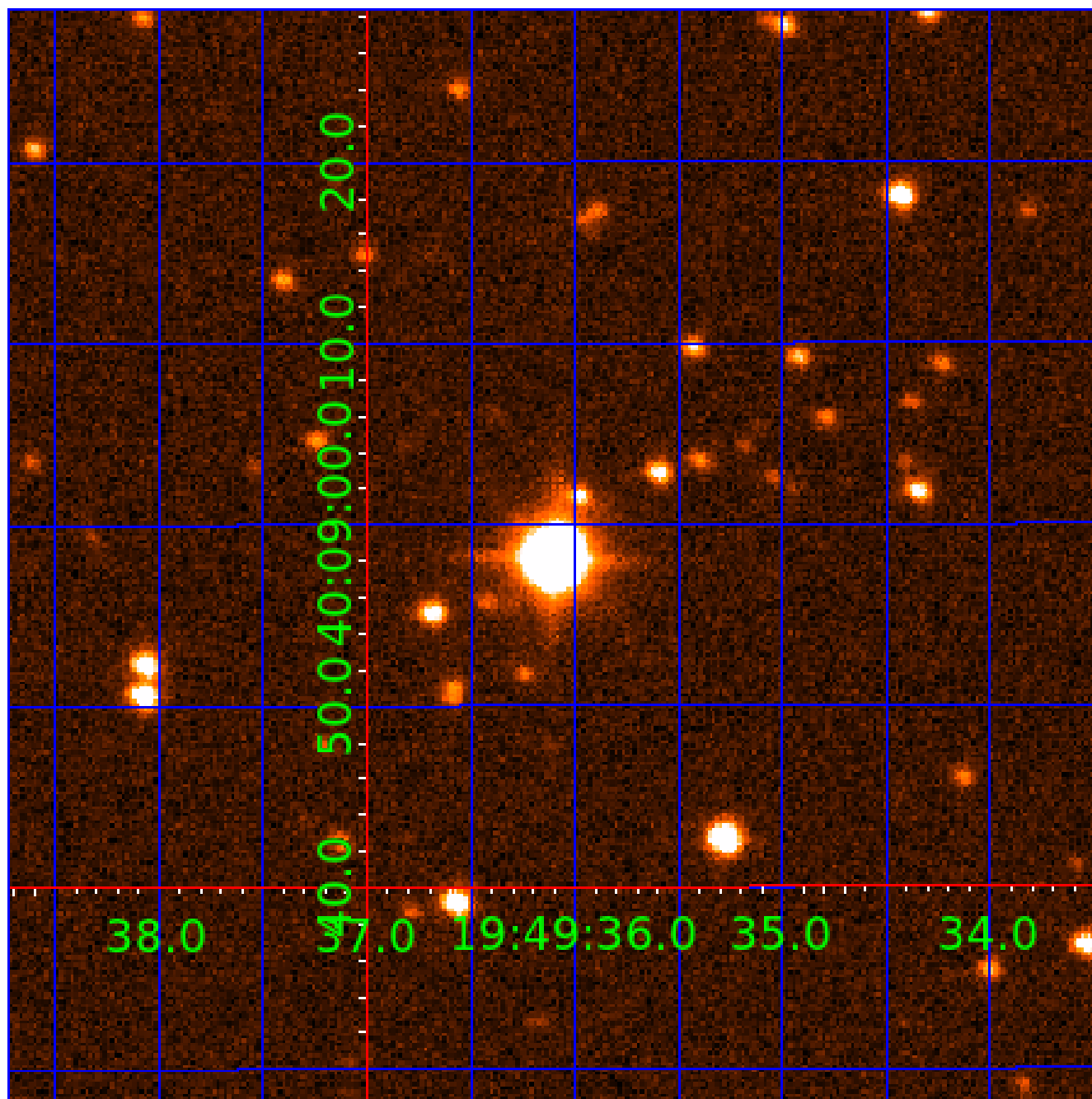


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005034333

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})
005034333-01	OBS	6124.01	6.932428	134.878389	6222.3	9.493	372.1	411.4	2.17	8675	30.03	2907.35
005034333-02	OBS	No	6.932338	136.217524	42.5	15.000	18.0	-1.0	2.17	8675	1.44	2907.41
005034333-03	OBS	No	2.310780	132.564064	39.2	6.080	18.5	9.1	2.17	8675	1.57	12579.60
005034333-04	OBS	No	1.386939	131.630204	11.0	2.480	11.4	3.2	2.17	8675	0.83	24846.70
005034333-05	OBS	No	0.866544	131.875777	65.7	3.000	9.1	-1.0	2.17	8675	1.79	46518.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005034333-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED—HAS_SEC_TCE
005034333-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
005034333-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—RESIDUAL_TCE
005034333-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005034333-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT—RESIDUAL_TCE—CENT_NOFITS

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 005034333-04

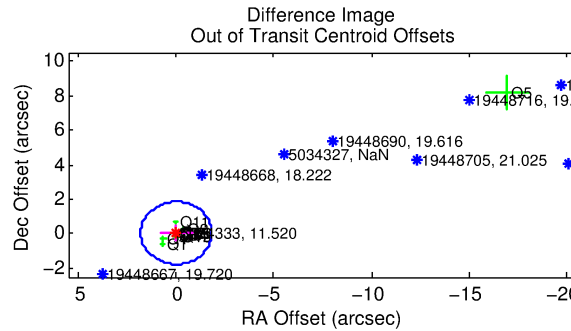
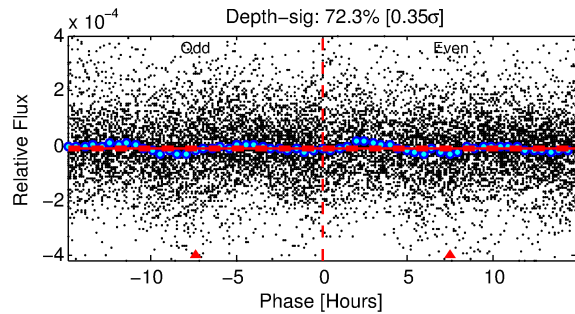
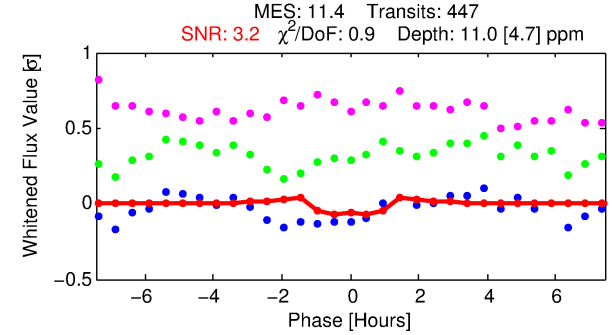
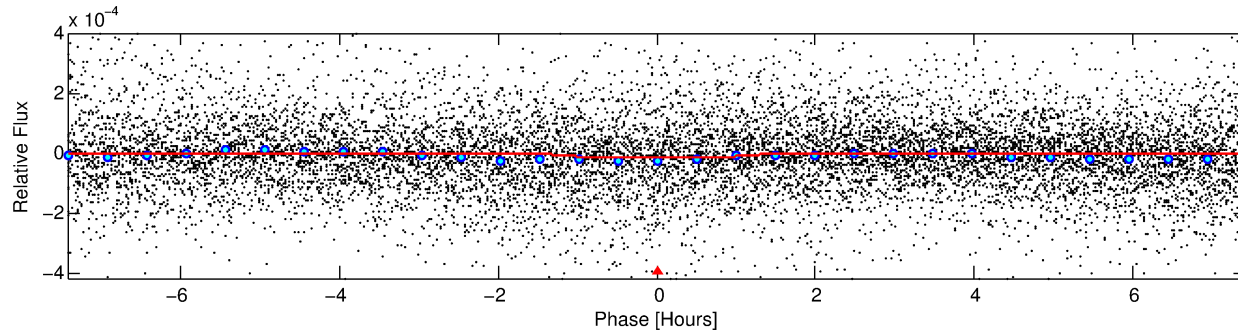
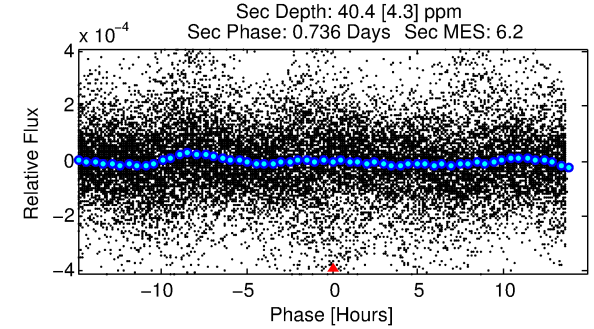
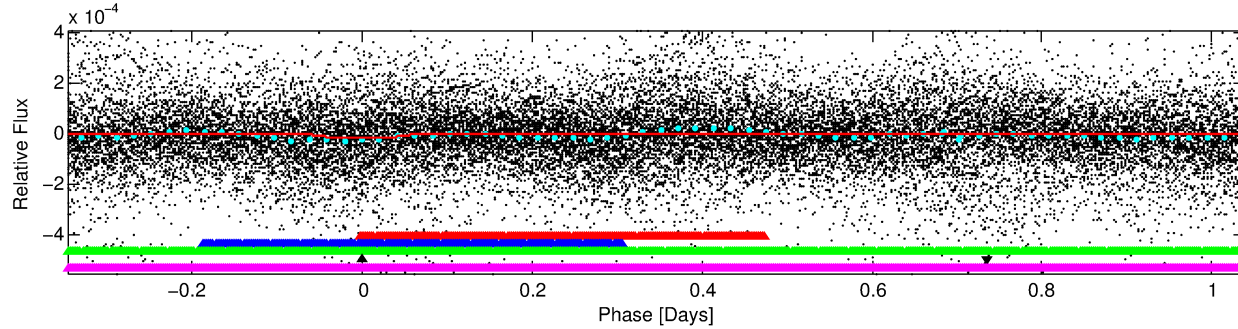
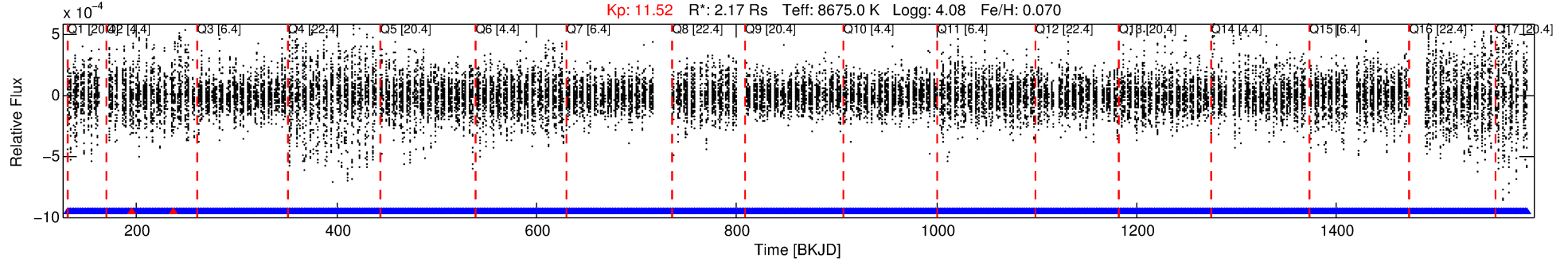
No Significant Match Found

DV One-Page Summary

KIC: 5034333 Candidate: 4 of 5 Period: 1.387 d

KOI: K06124 Corr: No Ephemeris Match

Kp: 11.52 R*: 2.17 Rs Teff: 8675.0 K Logg: 4.08 Fe/H: 0.070



DV Fit Results:

Period = 1.38694 [0.00003] d
Epoch = 131.6302 [0.0062] BKJD
Rp/R* = 0.0035 [0.0014]
a/R* = 2.08 [3.77]
b = 0.90 [0.48]
Seff = 24846.70 [8465.62]
Teq = 3201 [273] K
Rp = 0.84 [0.39] Re
a = 0.0310 [0.0063] AU
Ag = 30.56 [26.18] [1.13σ]
Teffp = 11638 [2415] K [3.47σ]

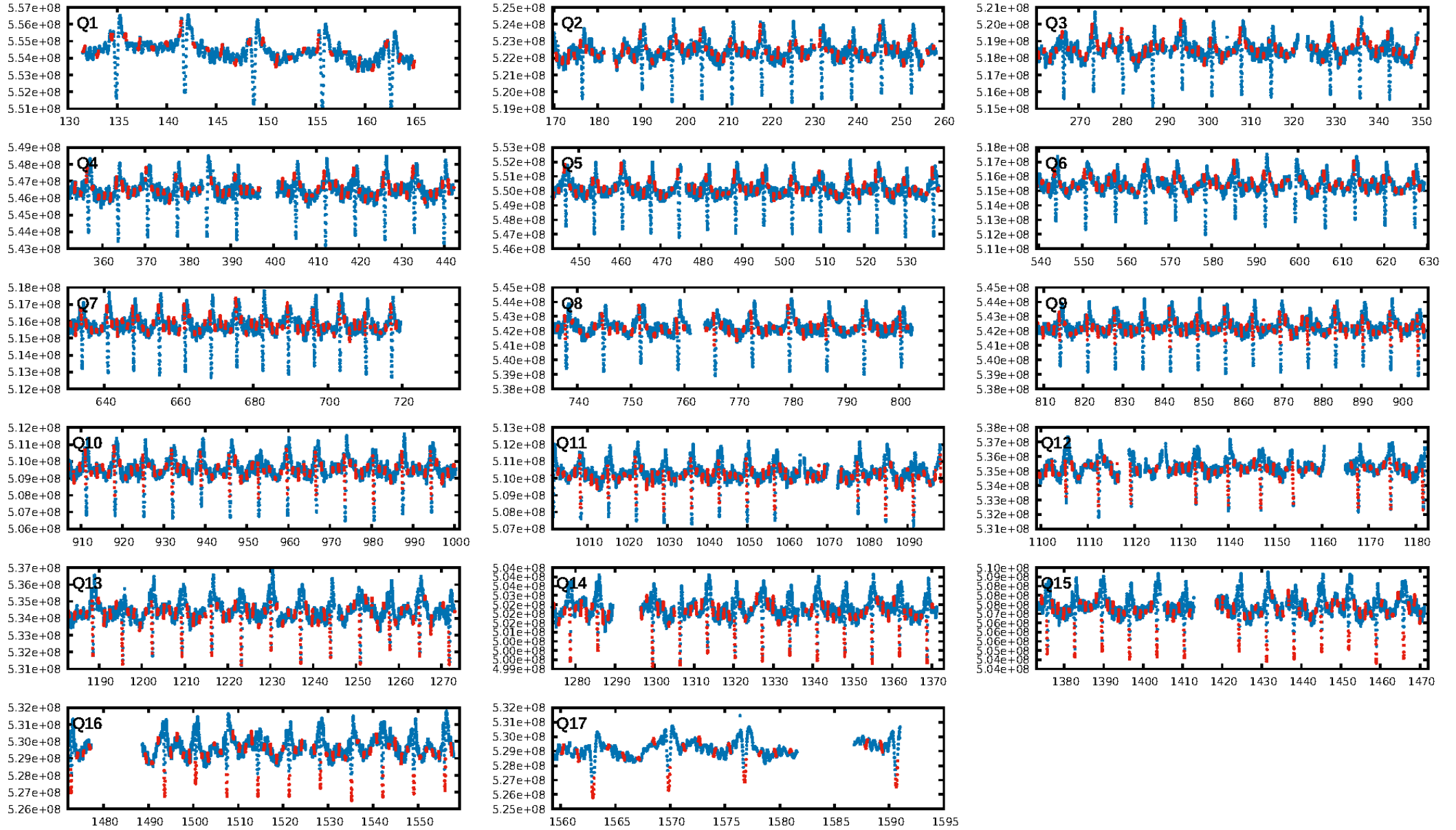
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.21σ]
LongPeriod-sig: 99.9% [3.38σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [423/425]
GhostDiagnostic-chr: 0.4552
Centroid-sig: 71.2%
Centroid-so: 0.982 arcsec [0.68σ]
OotOffset-rm: 0.044 arcsec [0.07σ]
KicOffset-rm: 0.218 arcsec [0.31σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 0.12 [2/17]

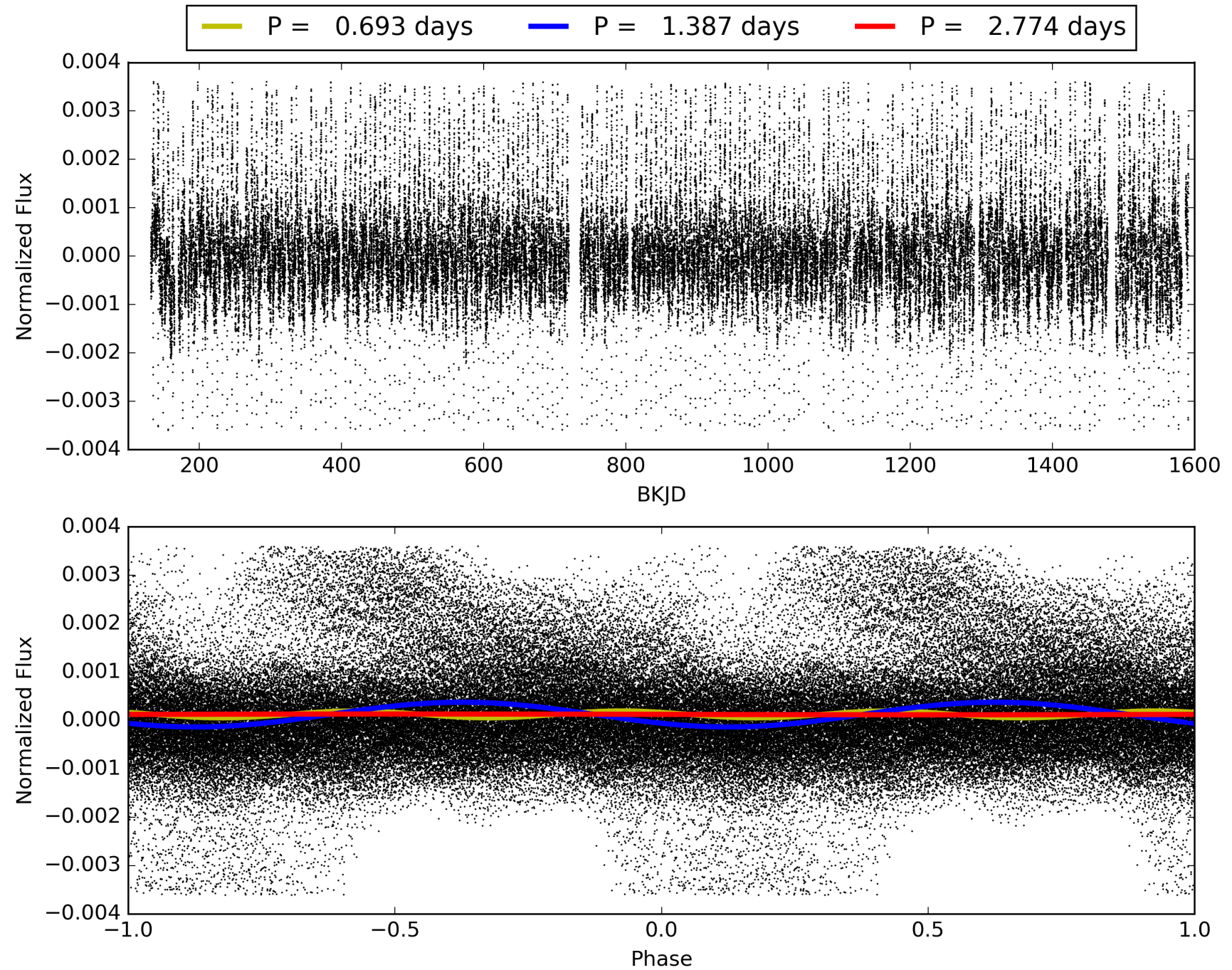
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:51:49 Z

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

TCE 005034333-04, PDC Light Curves

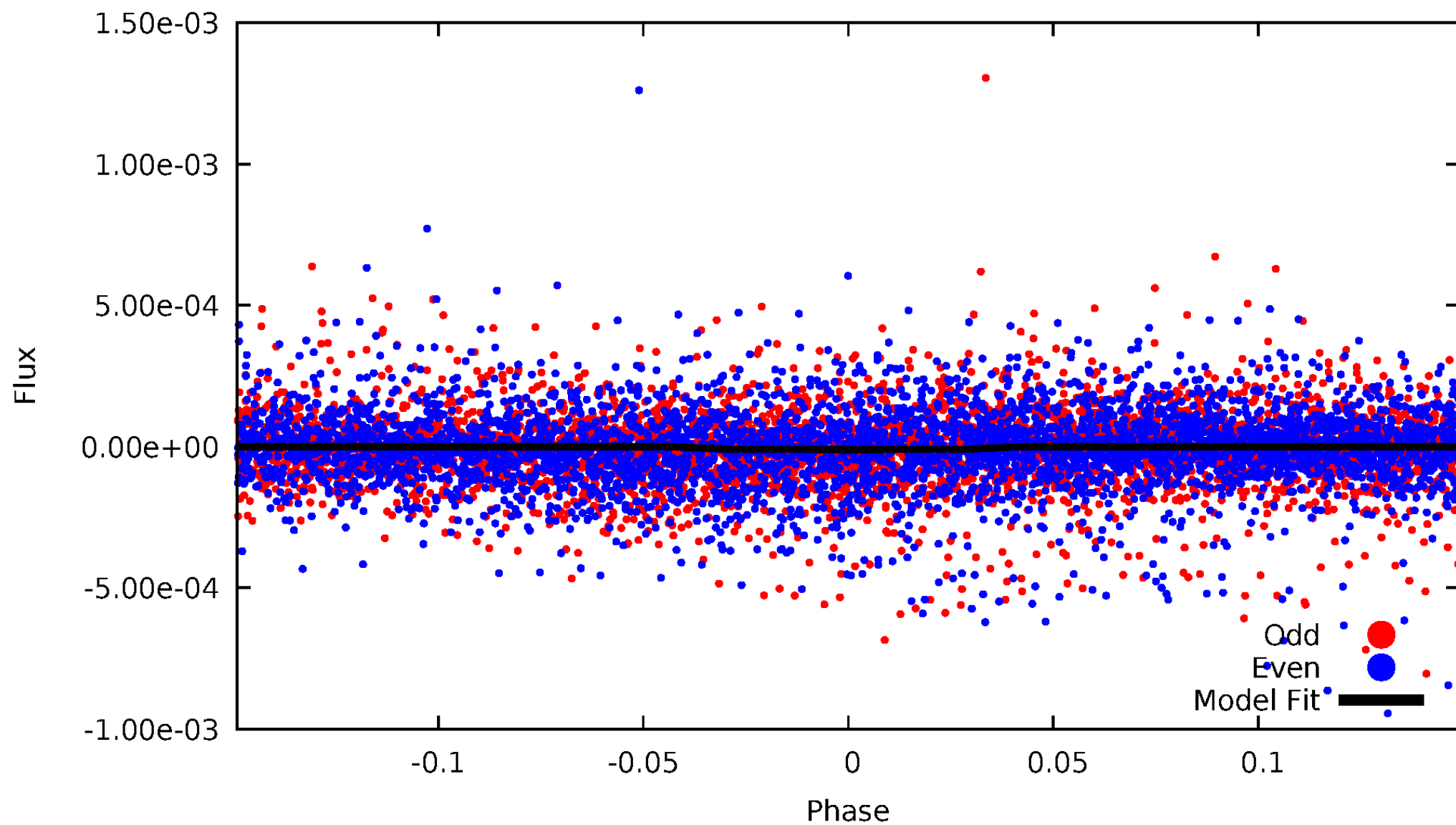


TCE 005034333-04



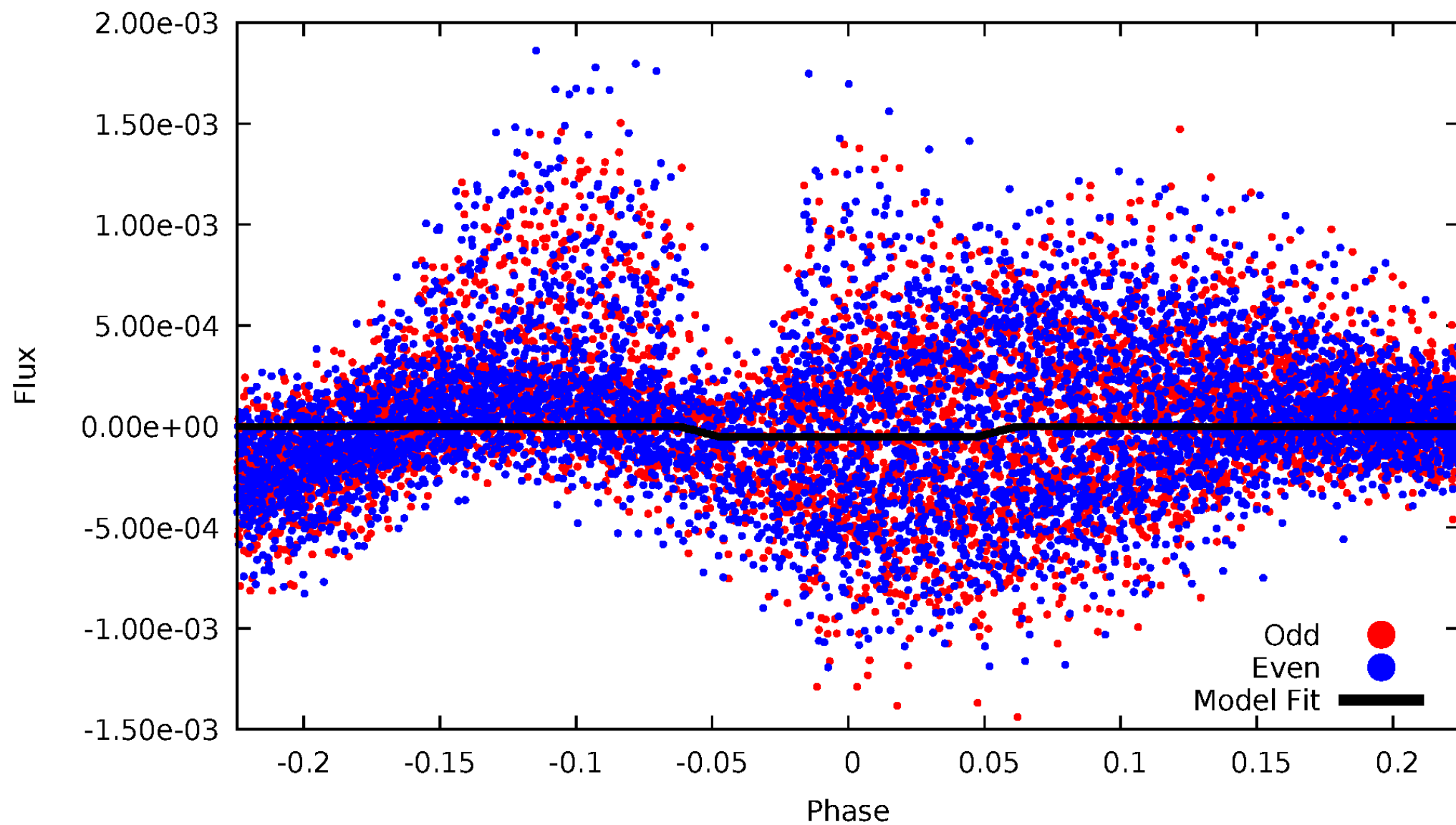
DV Odd/Even

TCE 005034333-04



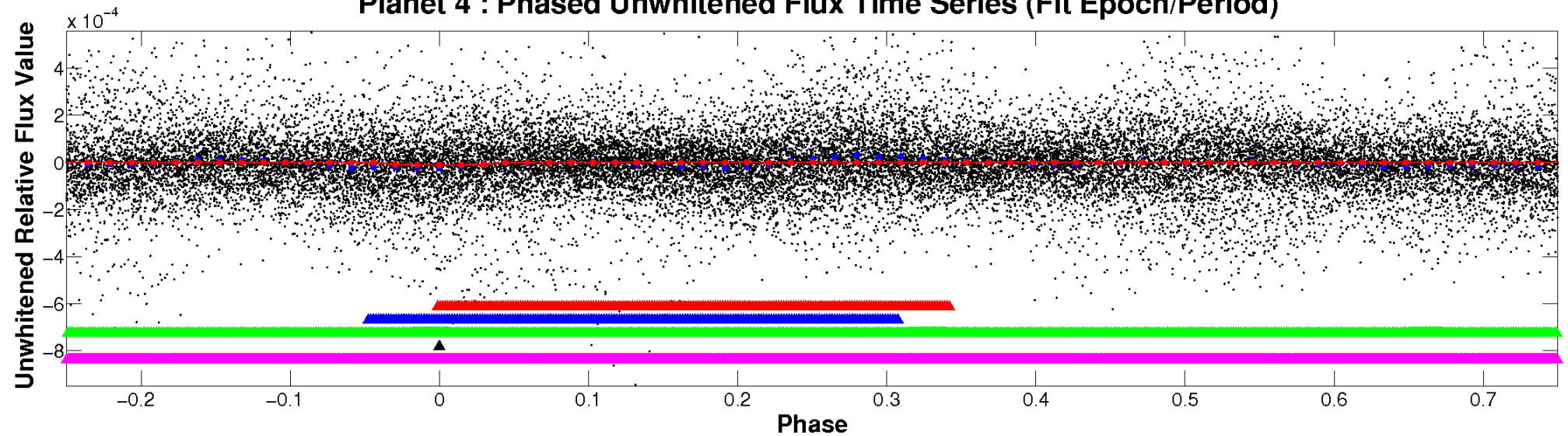
ALT Odd/Even

TCE 005034333-04

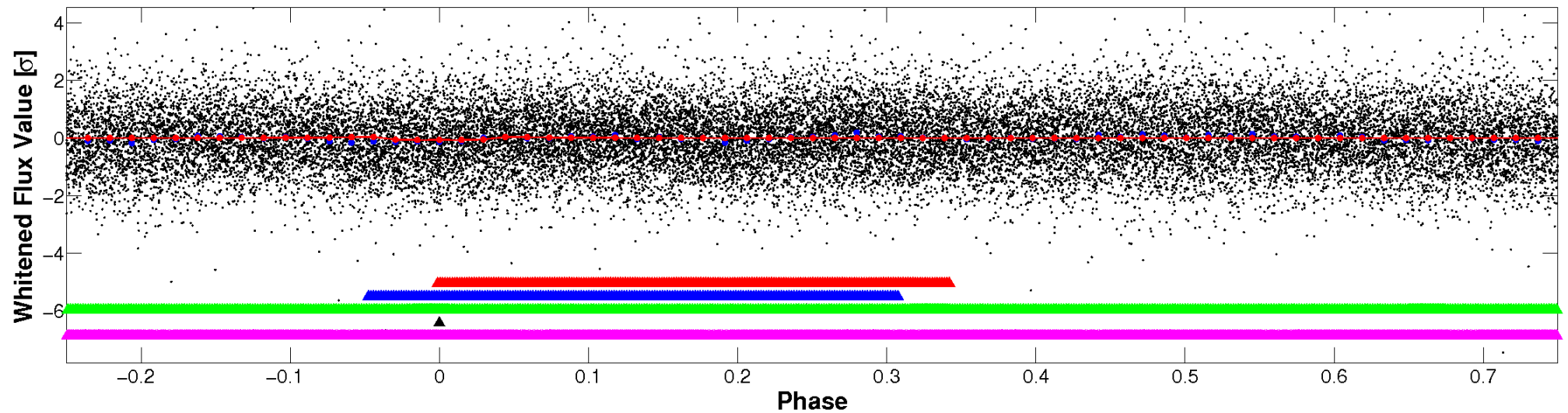


Non-Whitened Vs. Whitened Light Curve

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

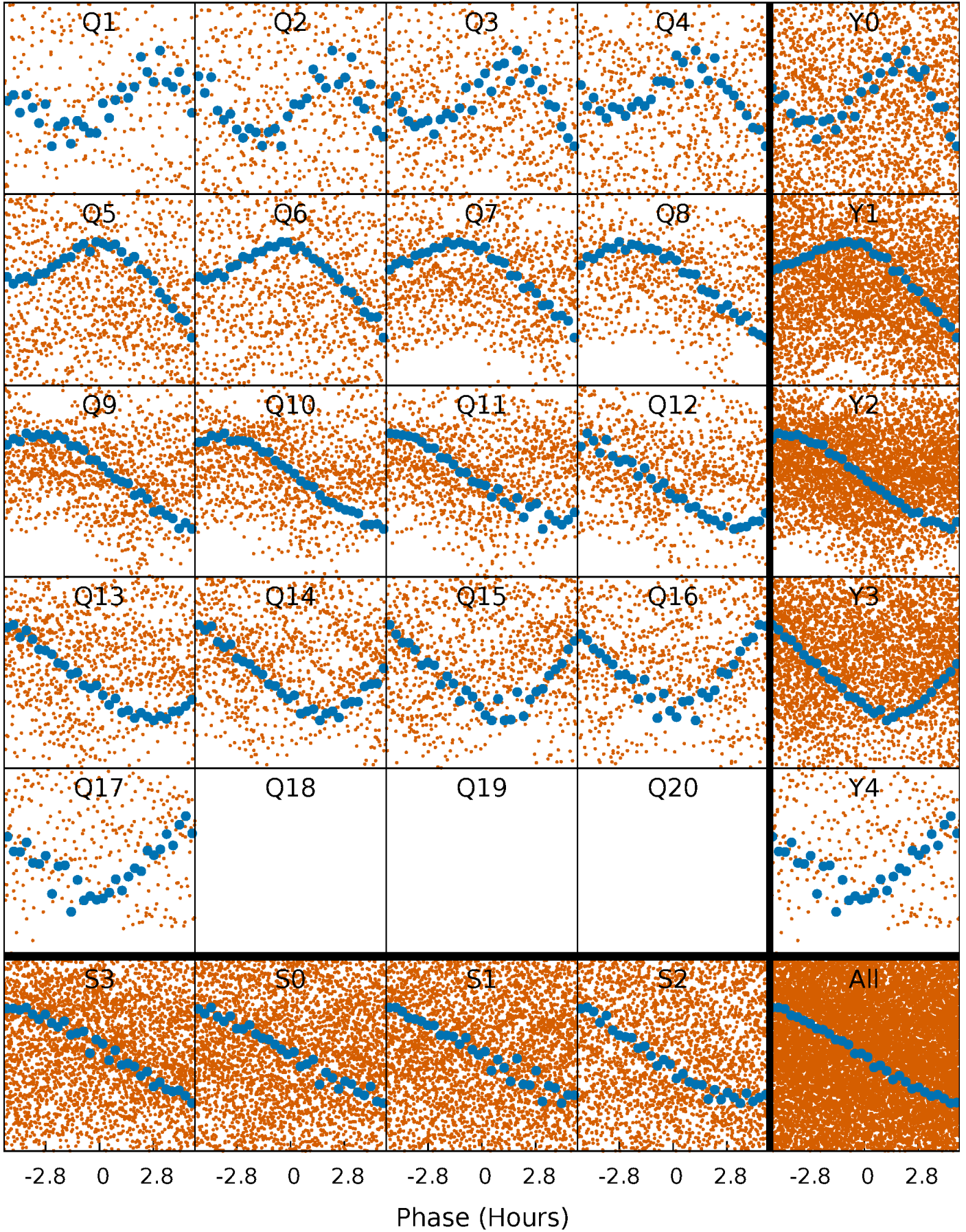


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



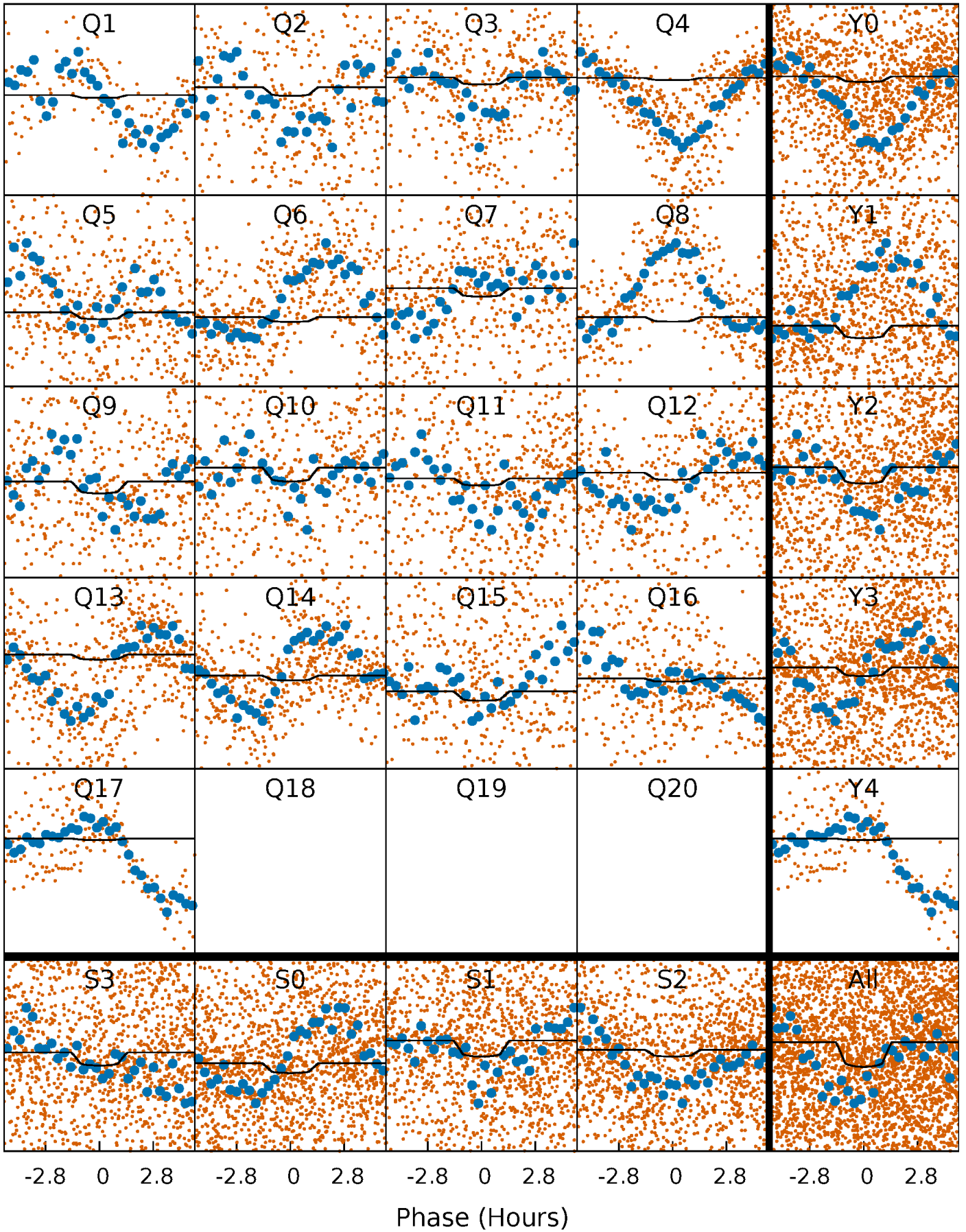
PDC Quarter-Phased Transit Curves

TCE 005034333-04 P= 1.386939 Days $T_0=131.630204$ (BKJD)



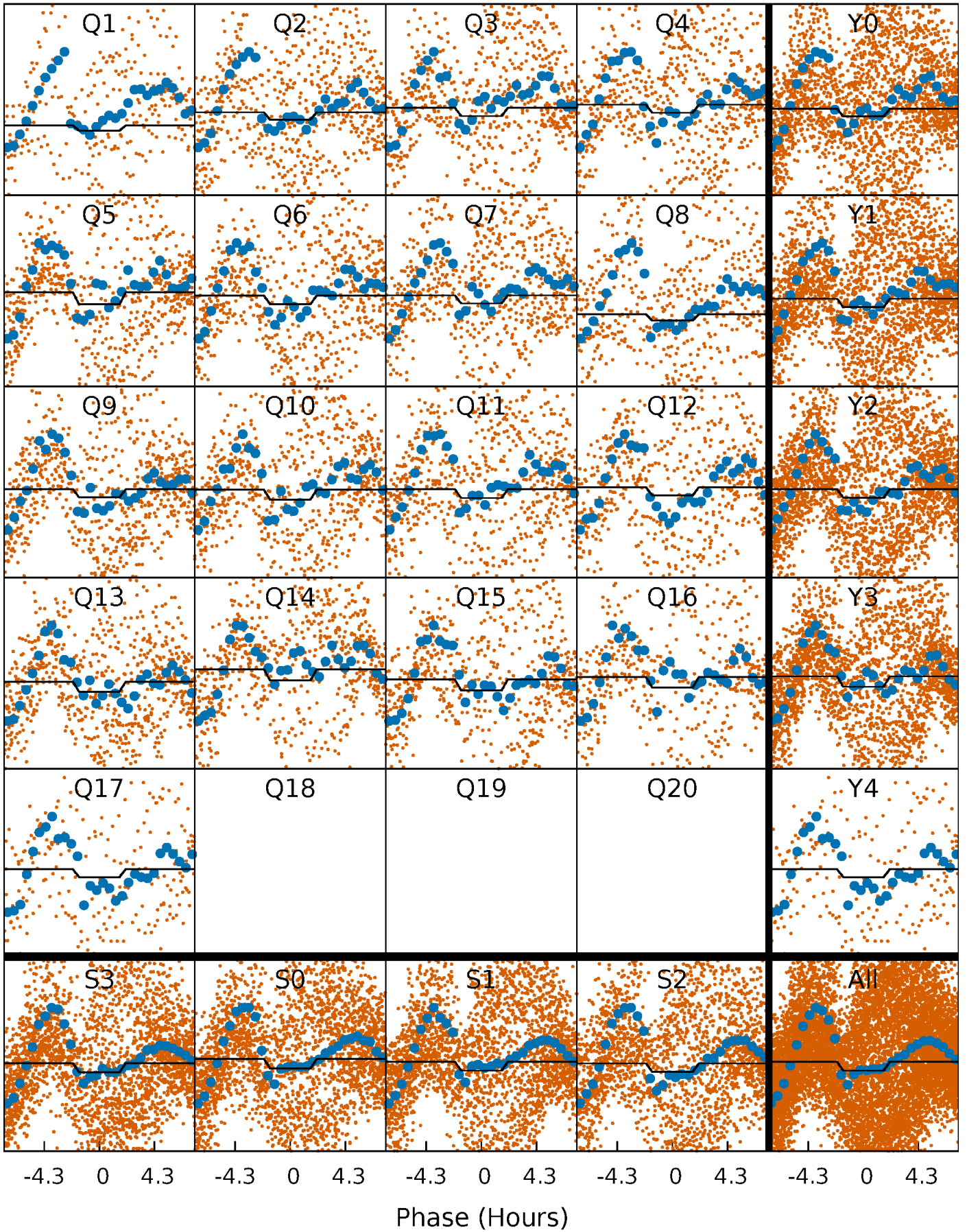
DV Quarter-Phased Transit Curves

TCE 005034333-04 P= 1.386939 Days $T_0=131.630204$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

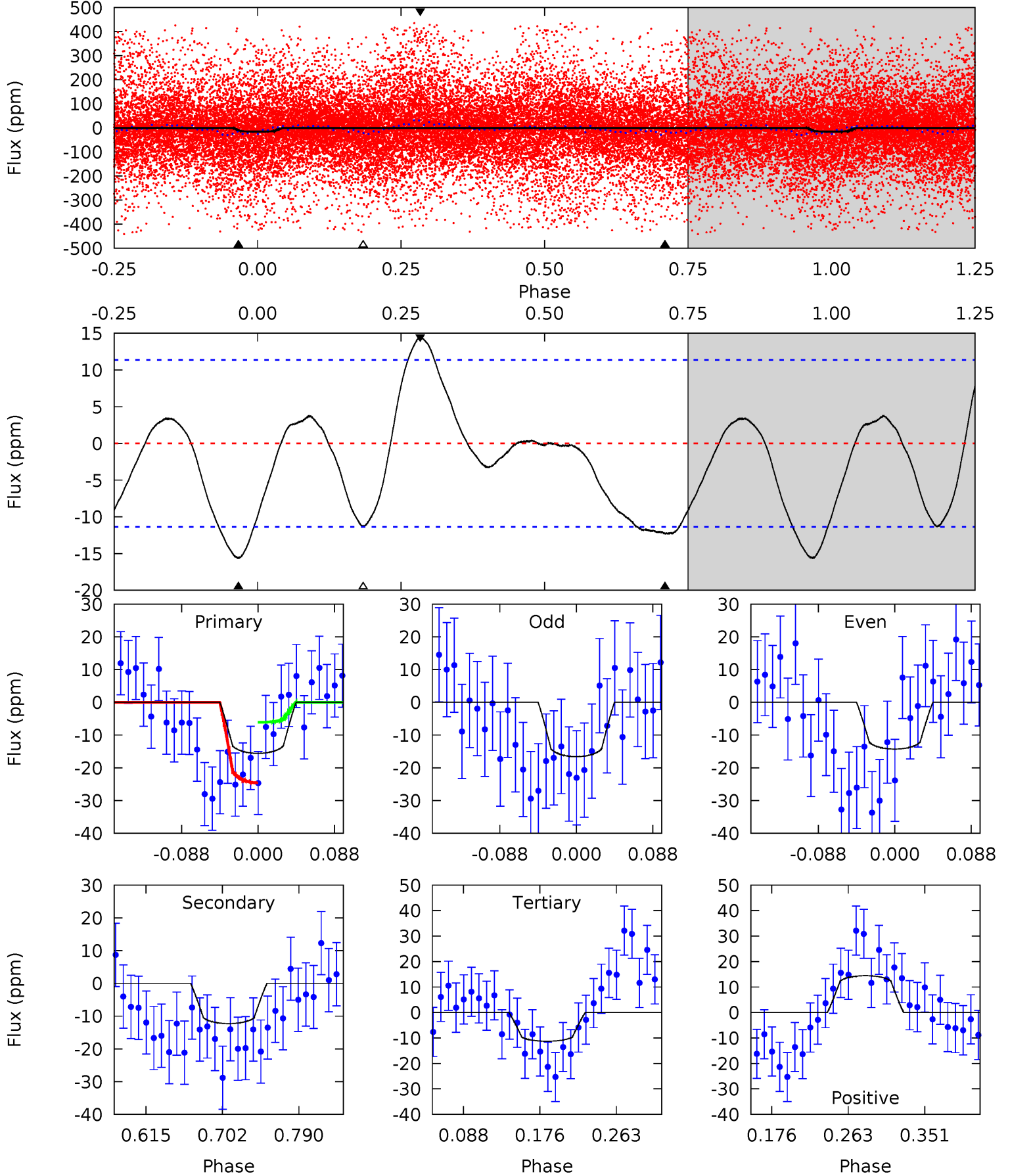
TCE 005034333-04 $P = 1.386449$ Days $T_0 = 131.609667$ (BKJD)



DV Model-Shift Uniqueness Test

005034333-04, P = 1.386939 Days, E = 130.243265 Days

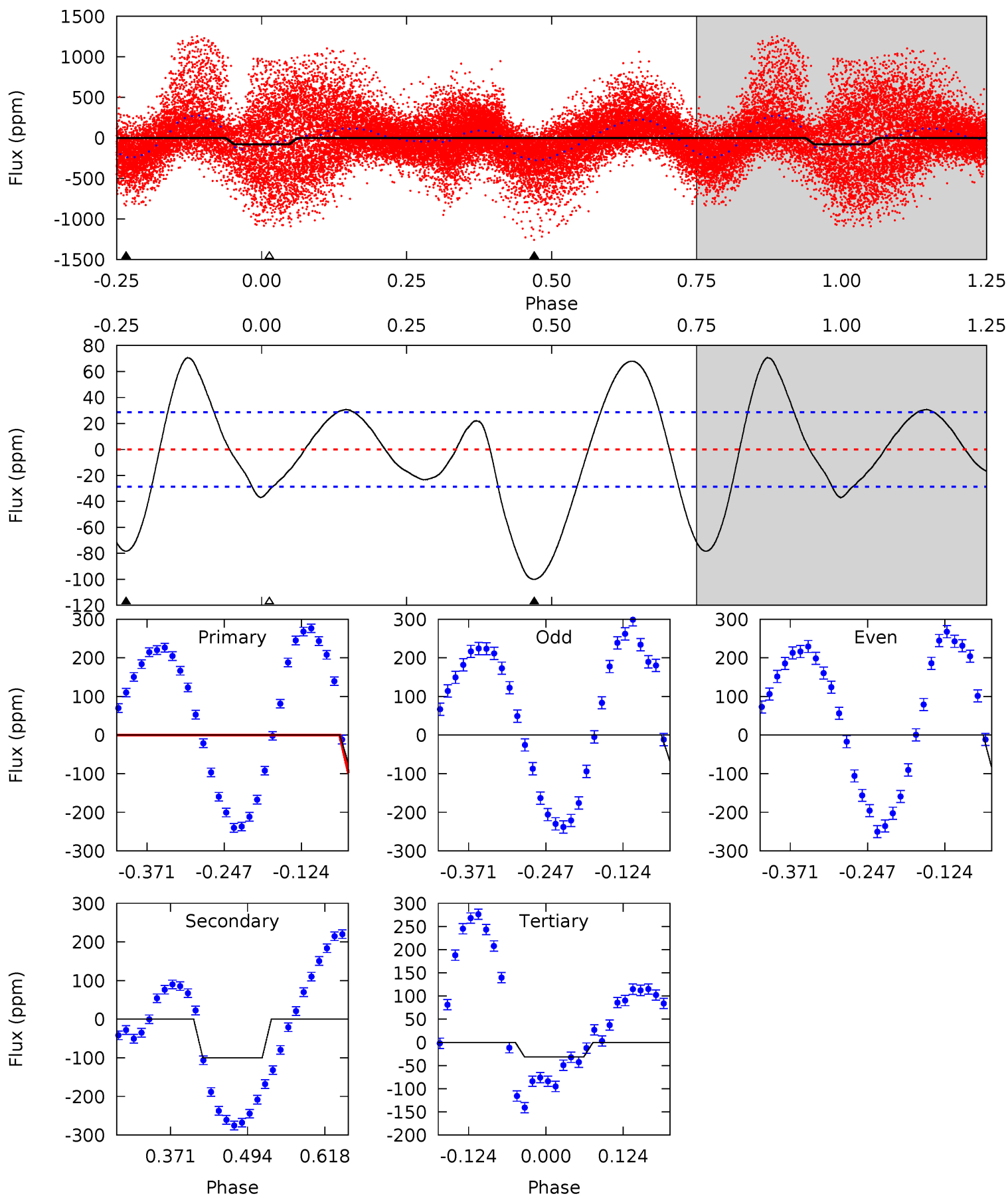
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.29	4.96	4.55	5.84	4.59	1.71	2.39	1.74	0.46	0.40	-0.88	0.47	1.39	0.48	3.78



Alt Model-Shift Uniqueness Test

005034333-04, P = 1.386449 Days, E = 130.223218 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	15.8	4.92	0	4.52	1.54	4.35	7.43	12.4	10.9	15.8	1.39	0.80	0.41	3.29



Stellar Parameters For KIC 005034333

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8675^{+238}_{-408}	$4.080^{+0.150}_{-0.150}$	$0.070^{+0.150}_{-0.600}$	$2.168^{+0.487}_{-0.541}$	$2.057^{+0.370}_{-0.493}$	$0.284^{+0.259}_{-0.117}$
	+3%/-5%	+4%/-4%	+214%/-857%	+22%/-25%	+18%/-24%	+91%/-41%
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 005034333-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-12 ± 2	$0.83^{+0.37}_{-0.30}$	4438^{+322}_{-268}	8427^{+3837}_{-1662}	$9.083^{+14.615}_{-4.772}$
Alt.	-100 ± 6	$1.69^{+0.40}_{-0.40}$	4452^{+321}_{-316}	10891^{+2072}_{-1464}	18^{+11}_{-6}

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

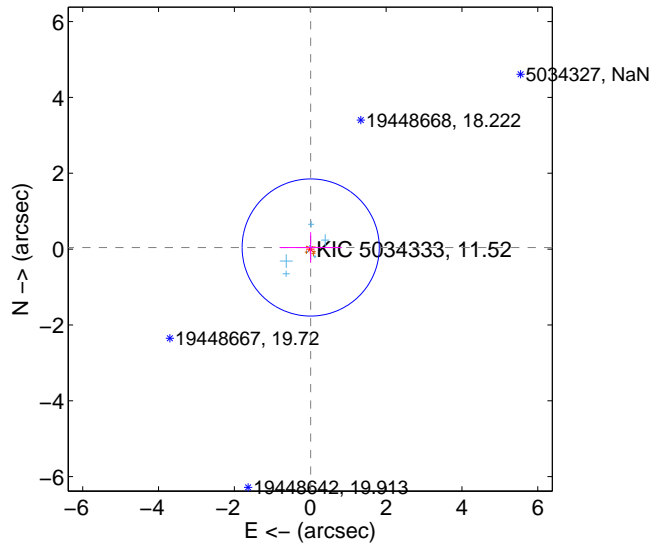
Supplemental centroid analysis for 005034333-04. **Kepler magnitude: 11.52.** Transit SNR 3.21

There are 10 quarters with good PRF difference image offsets

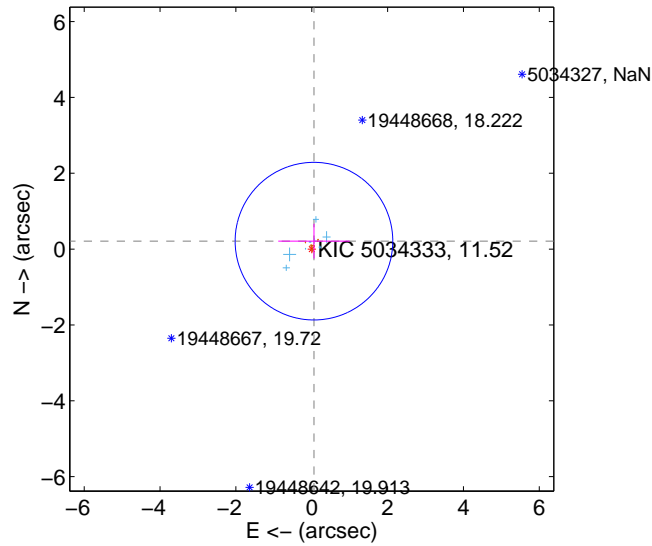
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.044 ± 0.603	0.07	-0.012 ± 0.820	0.042 ± 0.404
PRF-fit source offset from KIC position	0.218 ± 0.693	0.31	-0.058 ± 0.942	0.210 ± 0.460
photometric centroid source offset	0.98 ± 1.45	0.68	-0.95 ± 1.45	0.25 ± 1.38

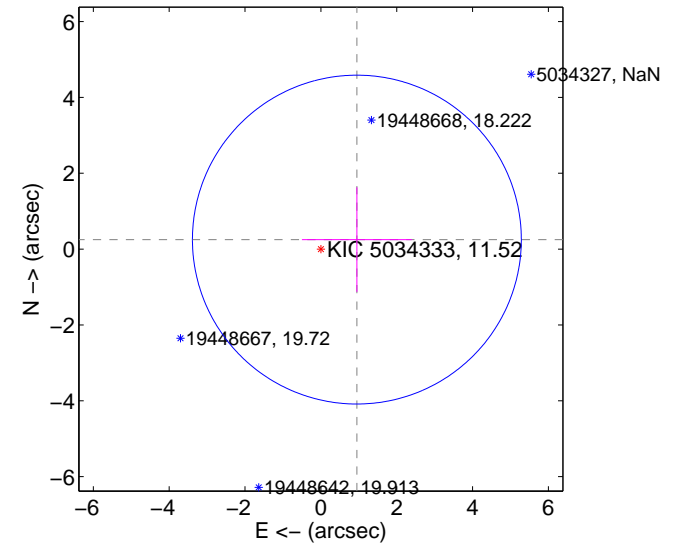
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

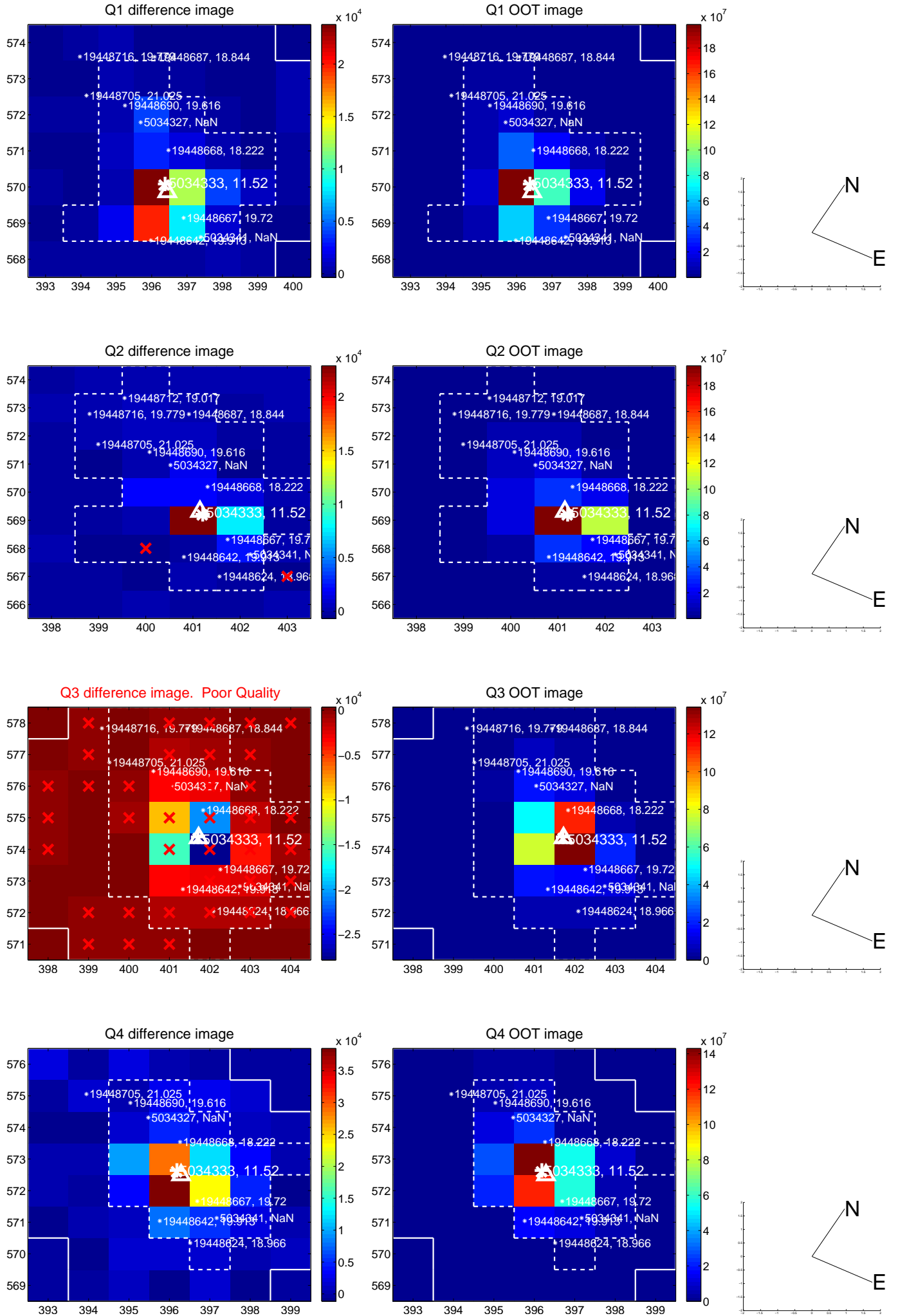


offset from photometric centroids

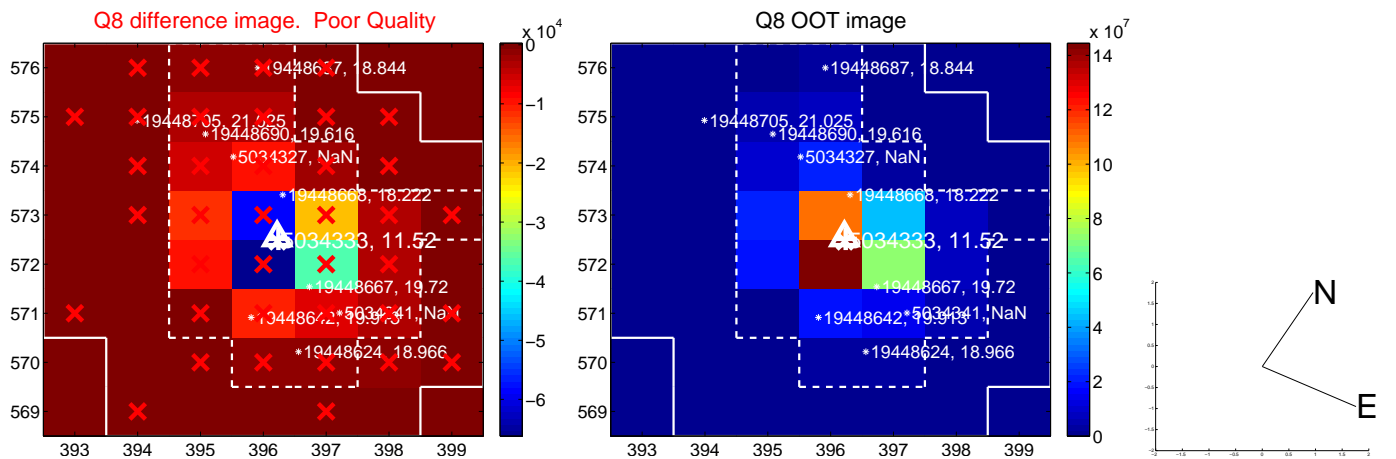
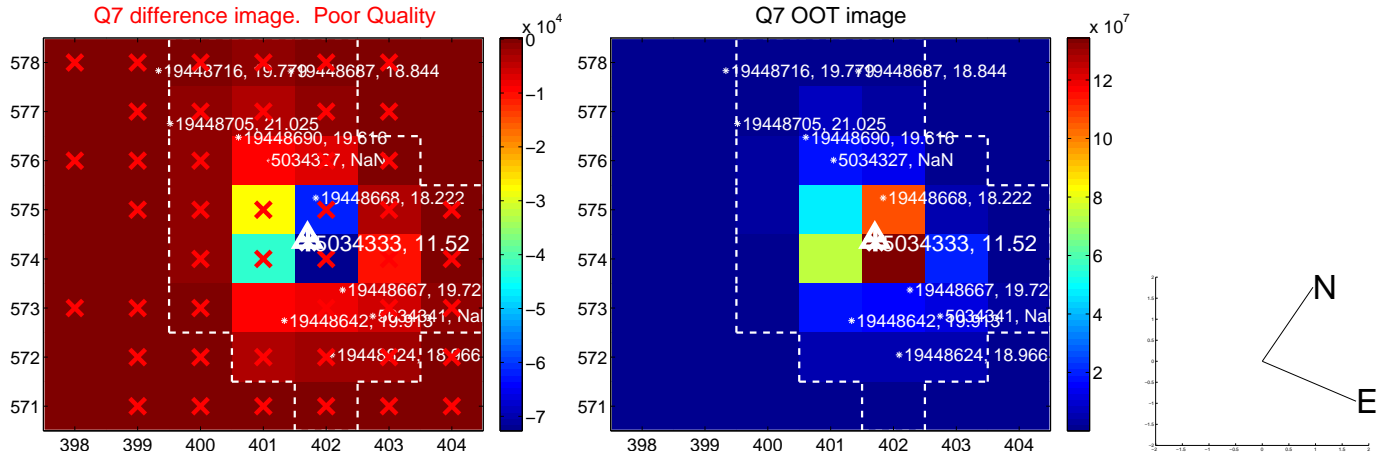
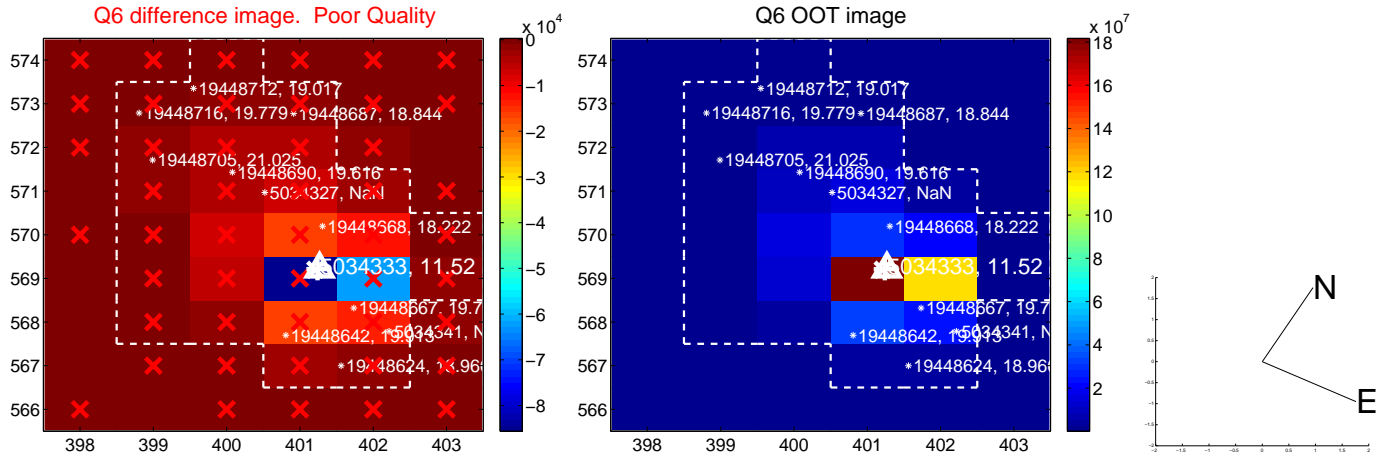
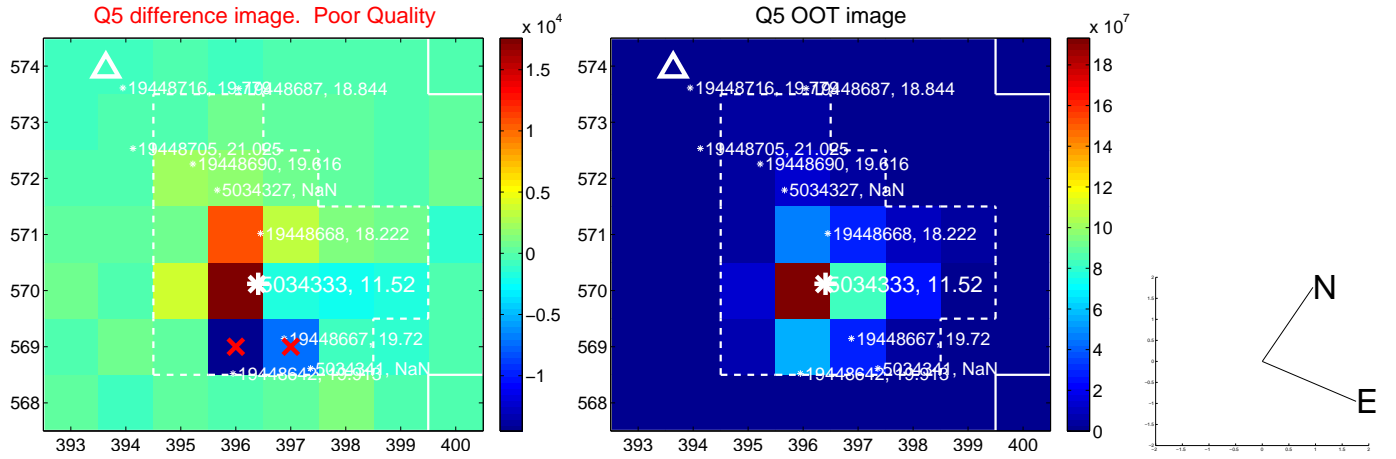


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

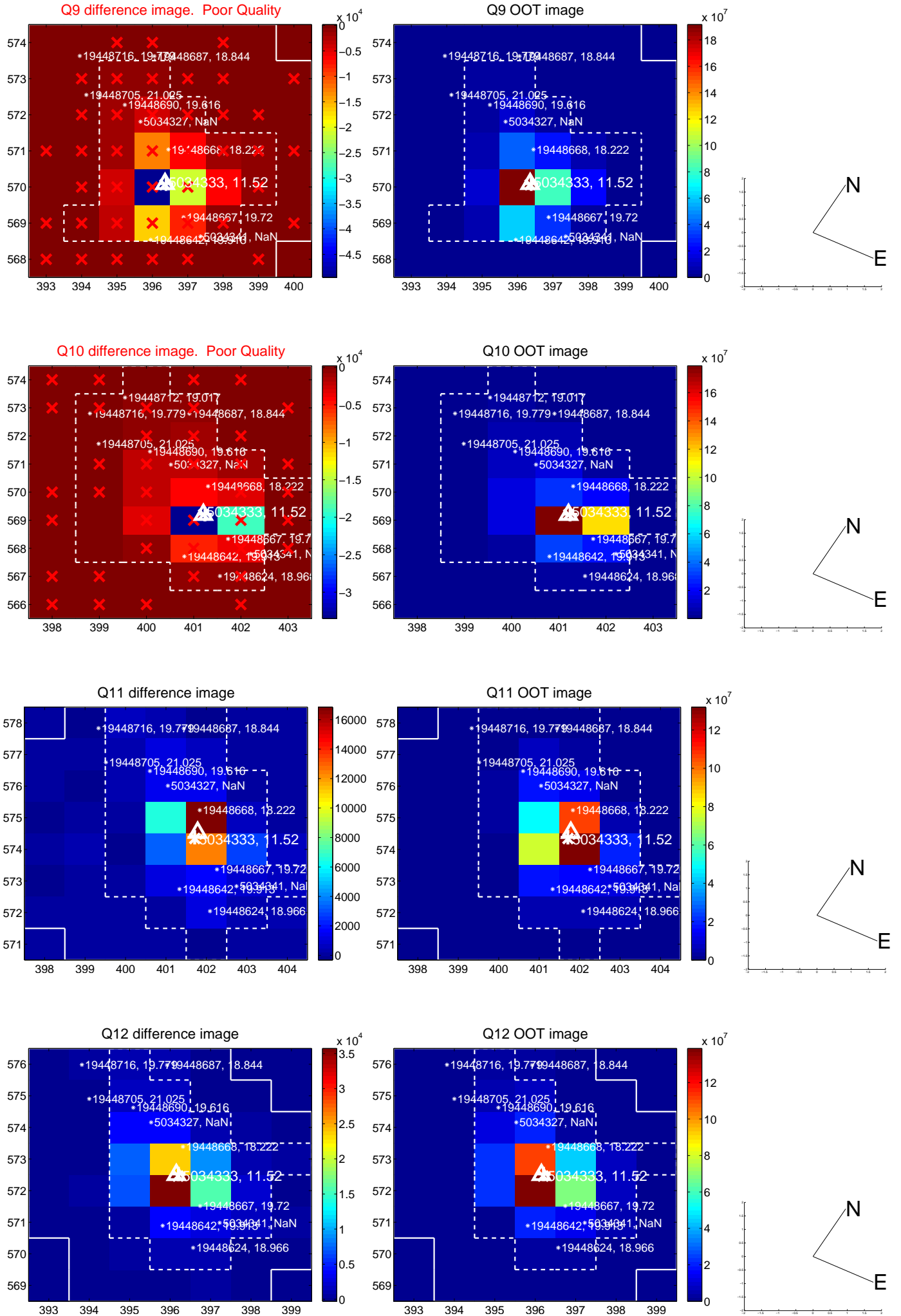
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



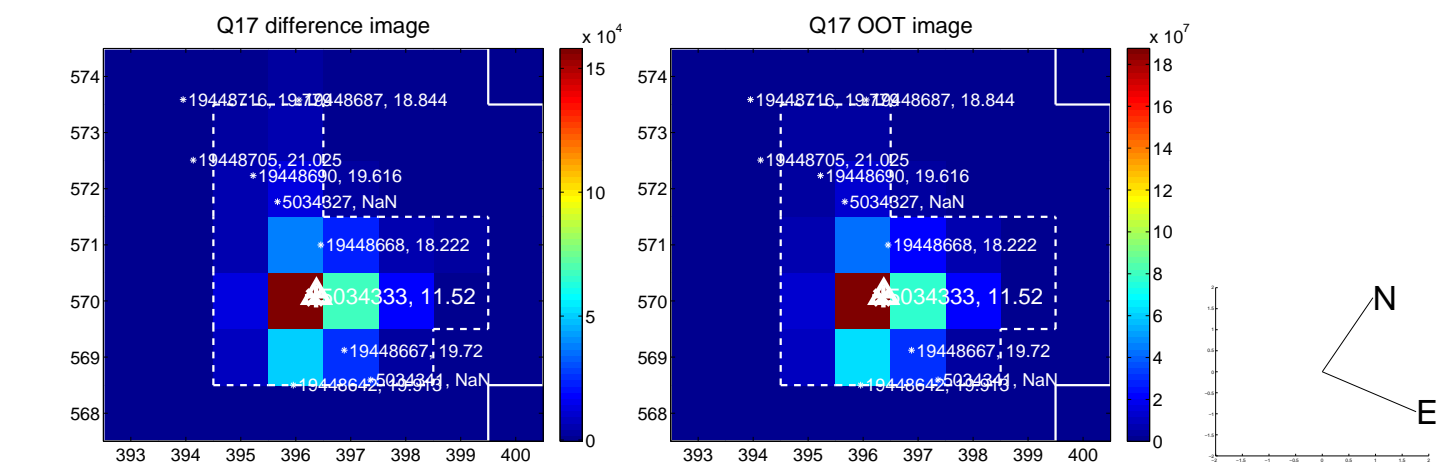
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



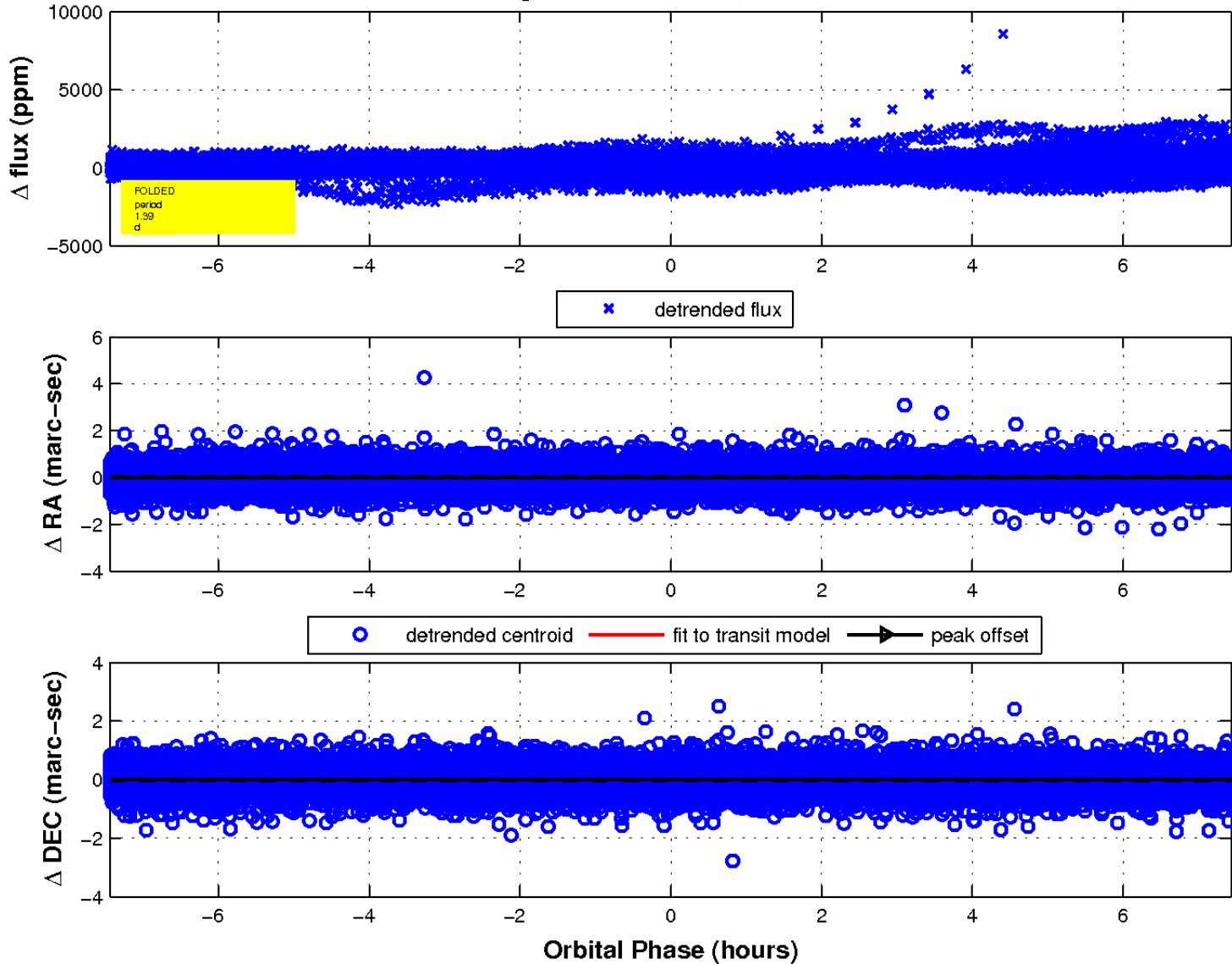
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

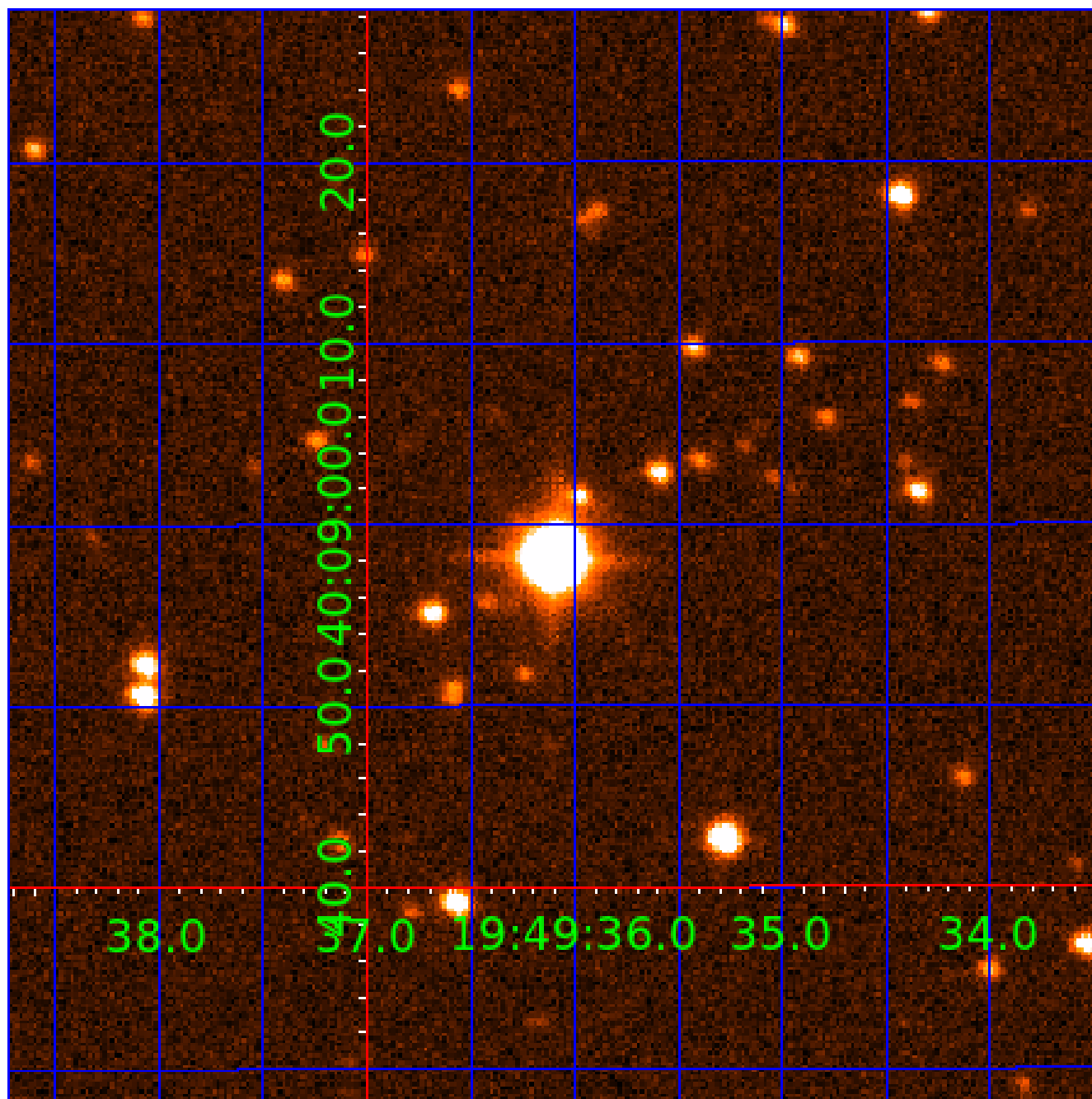


fluxWeightedCentroids, Planet 4 of 5



UKIRT Image

Declination



KIC 005034333

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})
005034333-01	OBS	6124.01	6.932428	134.878389	6222.3	9.493	372.1	411.4	2.17	8675	30.03	2907.35
005034333-02	OBS	No	6.932338	136.217524	42.5	15.000	18.0	-1.0	2.17	8675	1.44	2907.41
005034333-03	OBS	No	2.310780	132.564064	39.2	6.080	18.5	9.1	2.17	8675	1.57	12579.60
005034333-04	OBS	No	1.386939	131.630204	11.0	2.480	11.4	3.2	2.17	8675	0.83	24846.70
005034333-05	OBS	No	0.866544	131.875777	65.7	3.000	9.1	-1.0	2.17	8675	1.79	46518.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005034333-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED—HAS_SEC_TCE
005034333-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
005034333-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—RESIDUAL_TCE
005034333-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005034333-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT—RESIDUAL_TCE—CENT_NOFITS

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 005034333-05

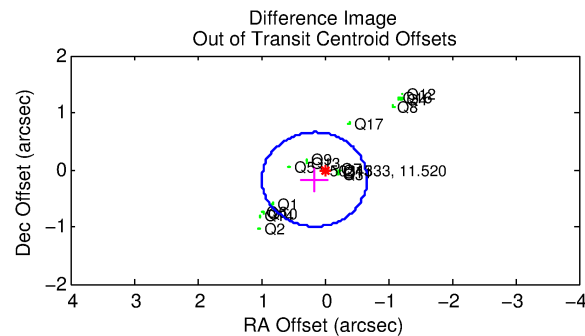
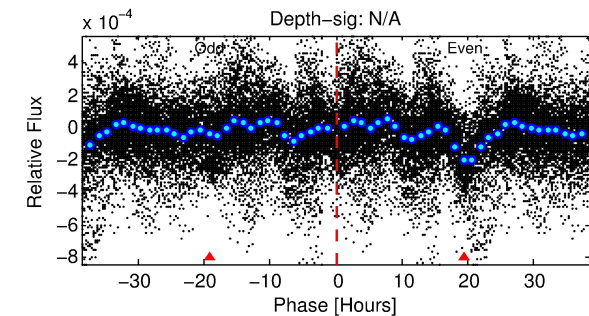
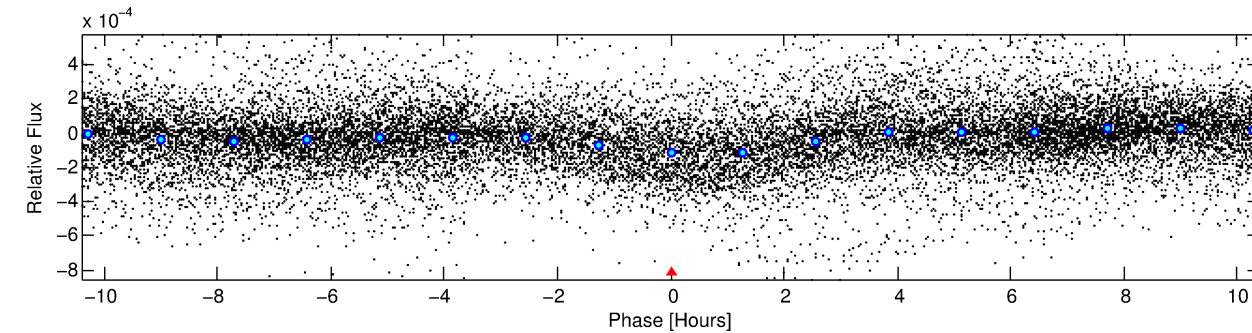
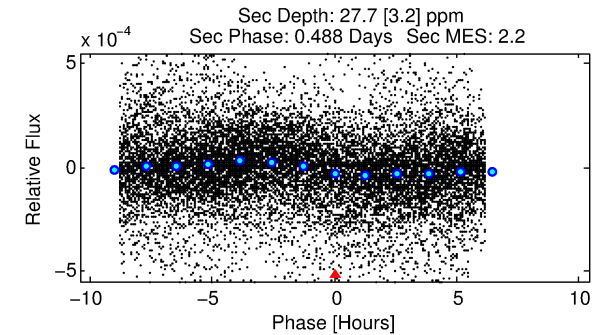
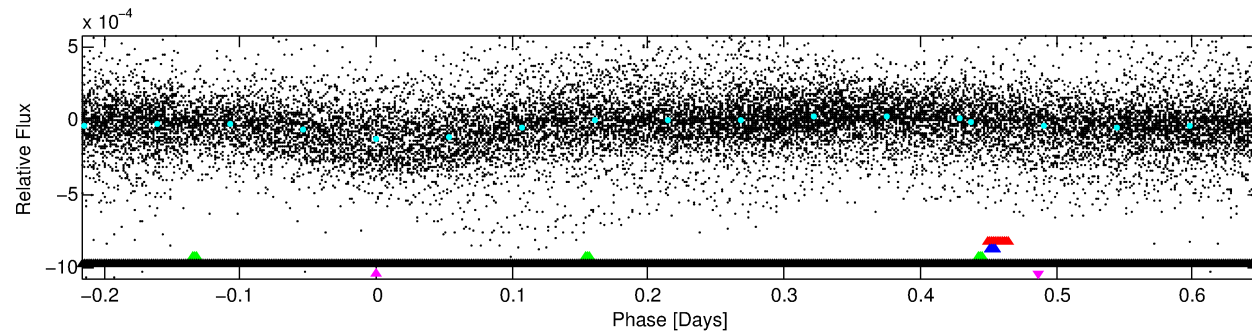
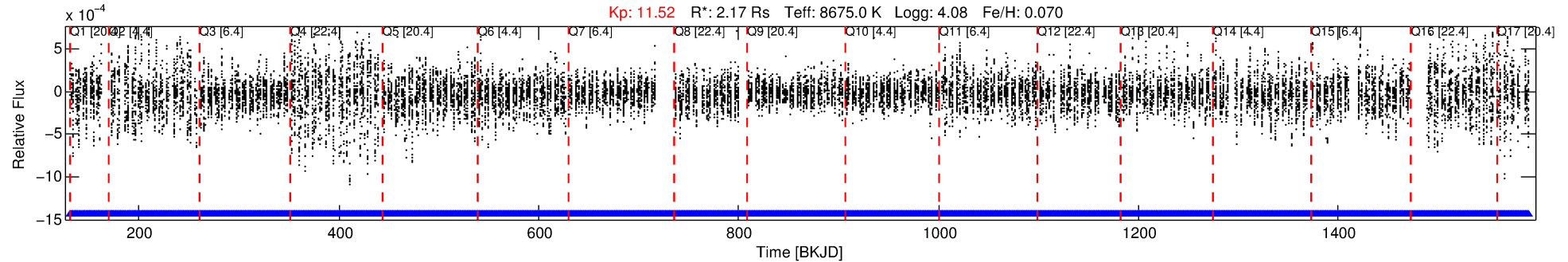
No Significant Match Found

DV One-Page Summary

KIC: 5034333 Candidate: 5 of 5 Period: 0.867 d

KOI: K06124 Corr: No Ephemeris Match

Kp: 11.52 R*: 2.17 Rs Teff: 8675.0 K Logg: 4.08 Fe/H: 0.070



TPS TCE Results:

Period = 0.86654 d
Epoch = 131.8758 BKJD

DV fit results are unavailable

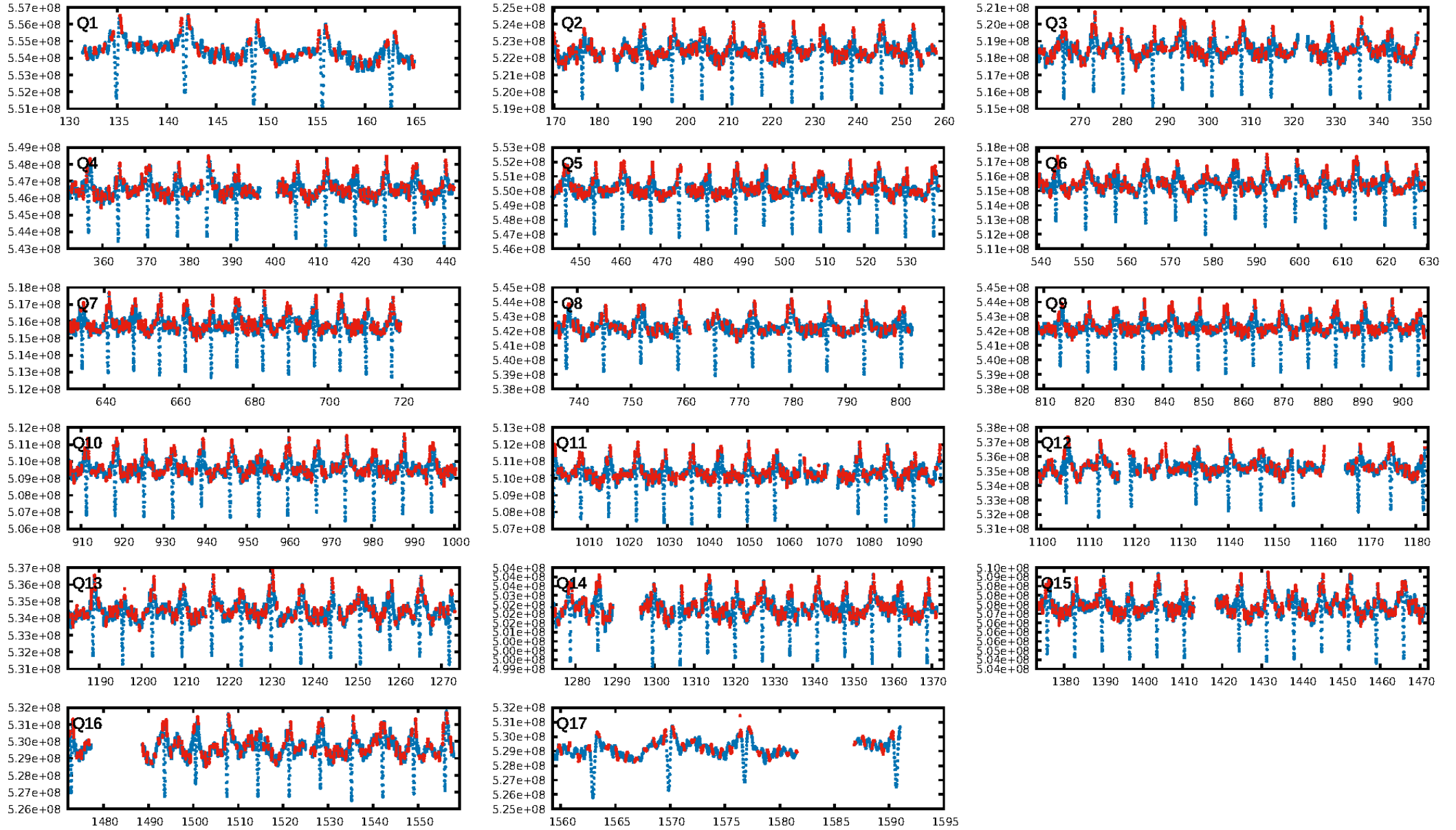
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.9% [3.21σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [543/543]
GhostDiagnostic-chr: -1.47
Centroid-sig: 0.2%
Centroid-so: 0.155 arcsec [4.47σ]
OotOffset-rm: 0.232 arcsec [0.85σ]
KicOffset-rm: 0.152 arcsec [0.55σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.00 [0/17]

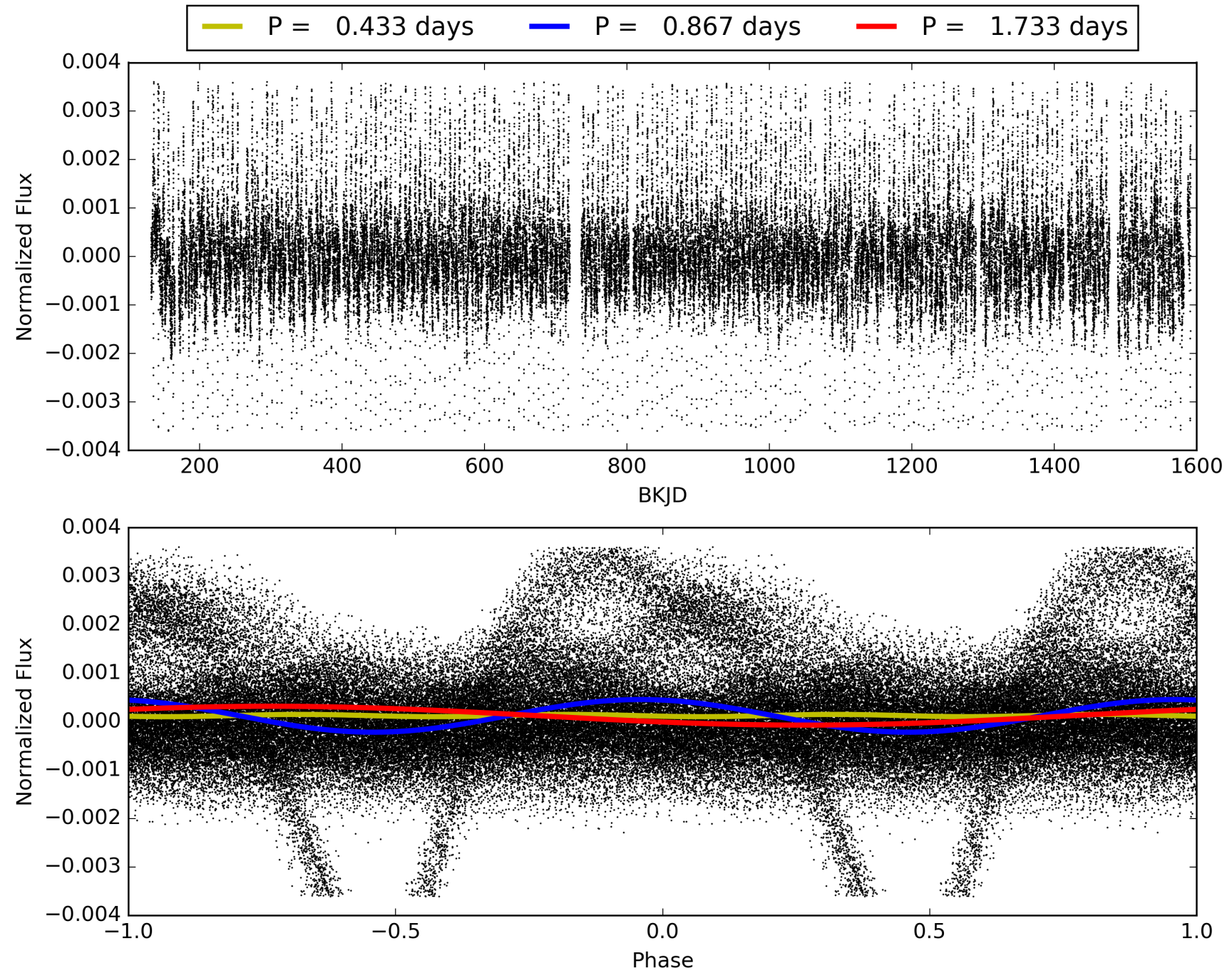
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:51:58 Z

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

TCE 005034333-05, PDC Light Curves

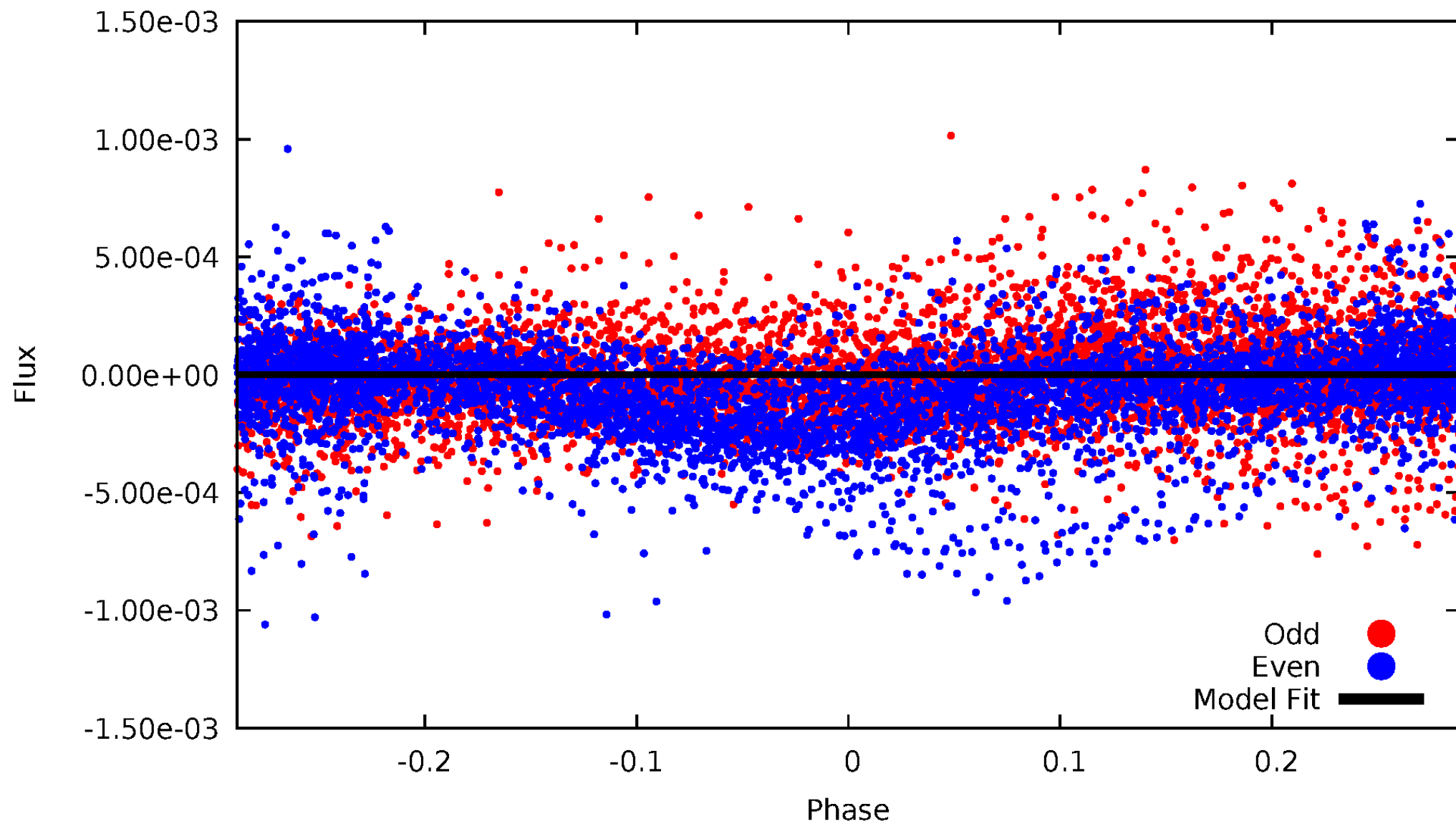


TCE 005034333-05



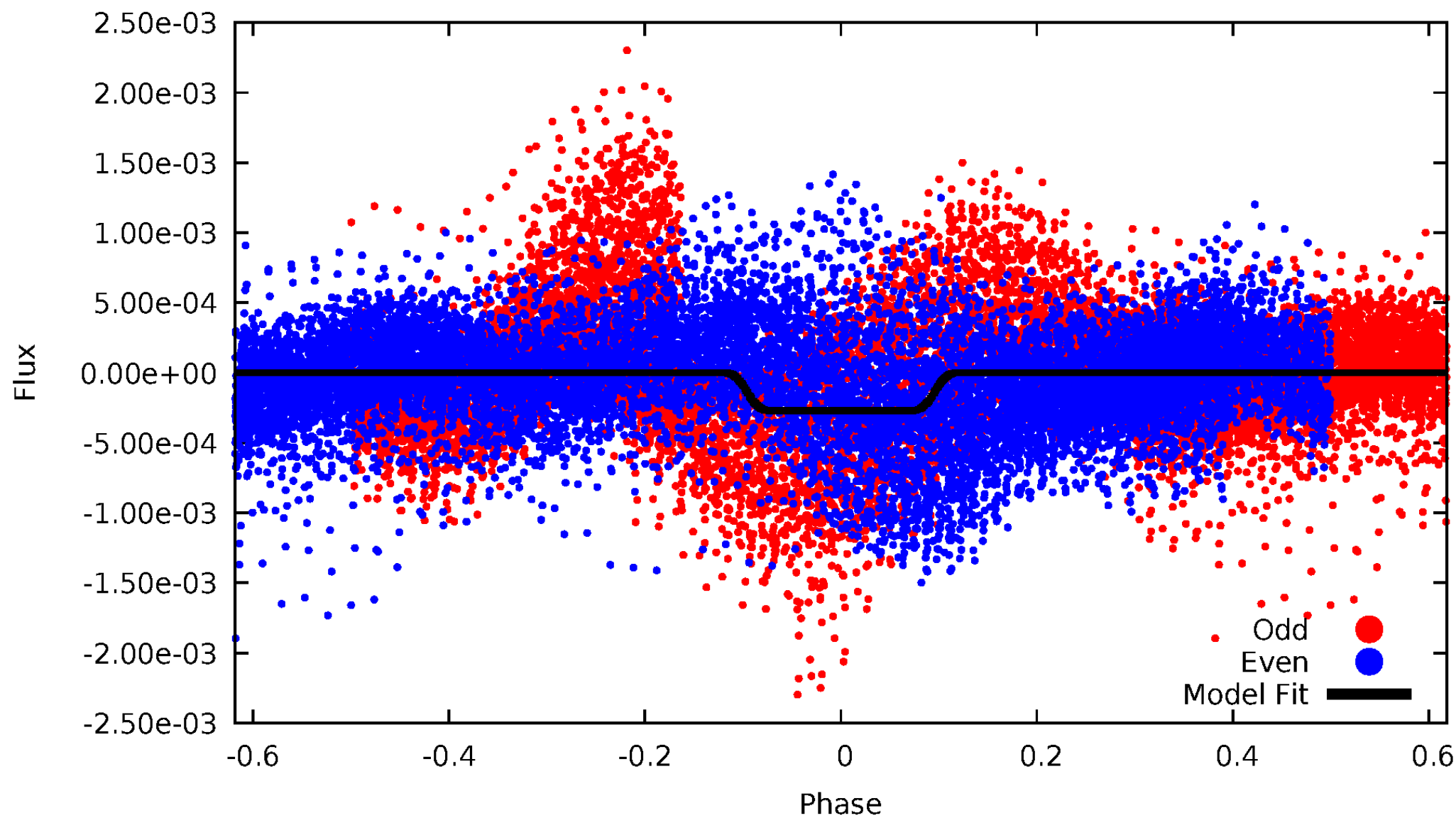
DV Odd/Even

TCE 005034333-05

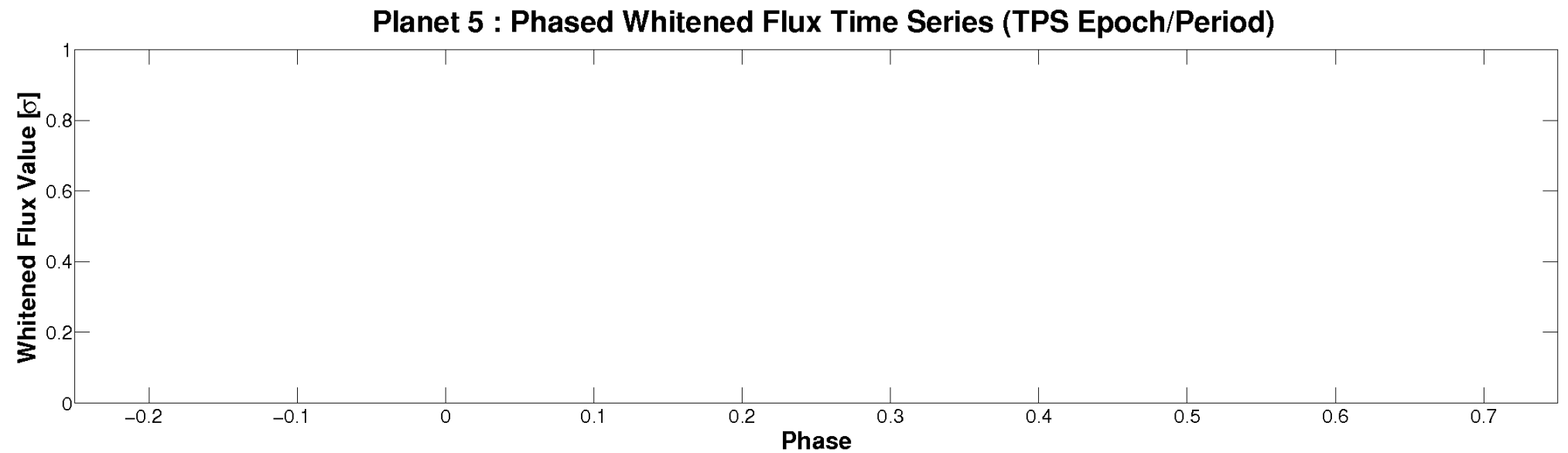
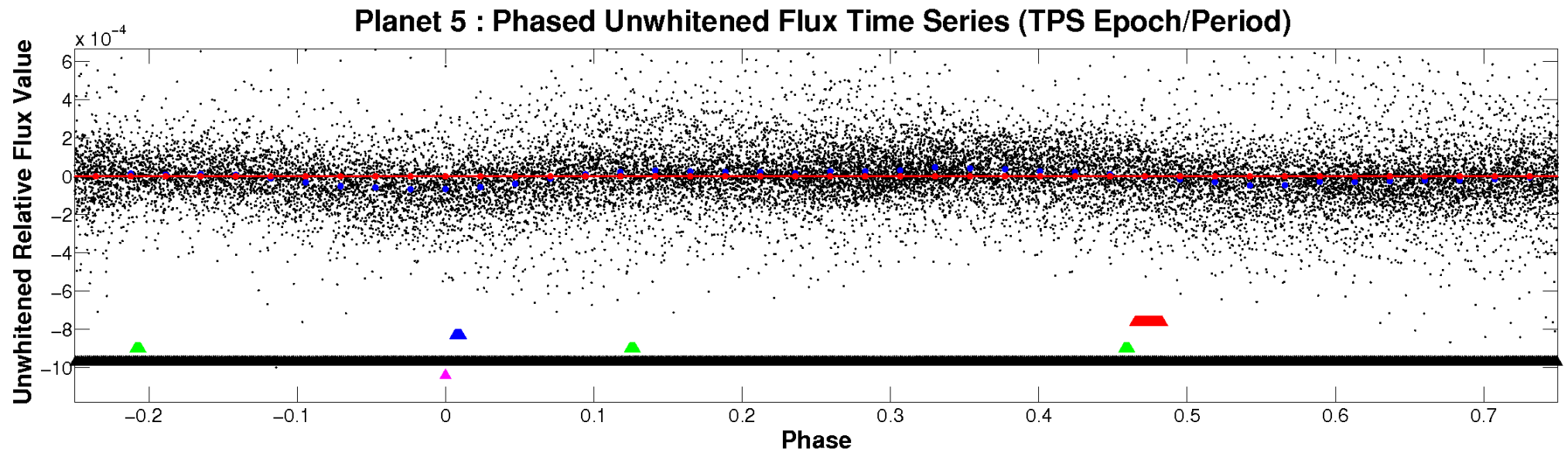


ALT Odd/Even

TCE 005034333-05

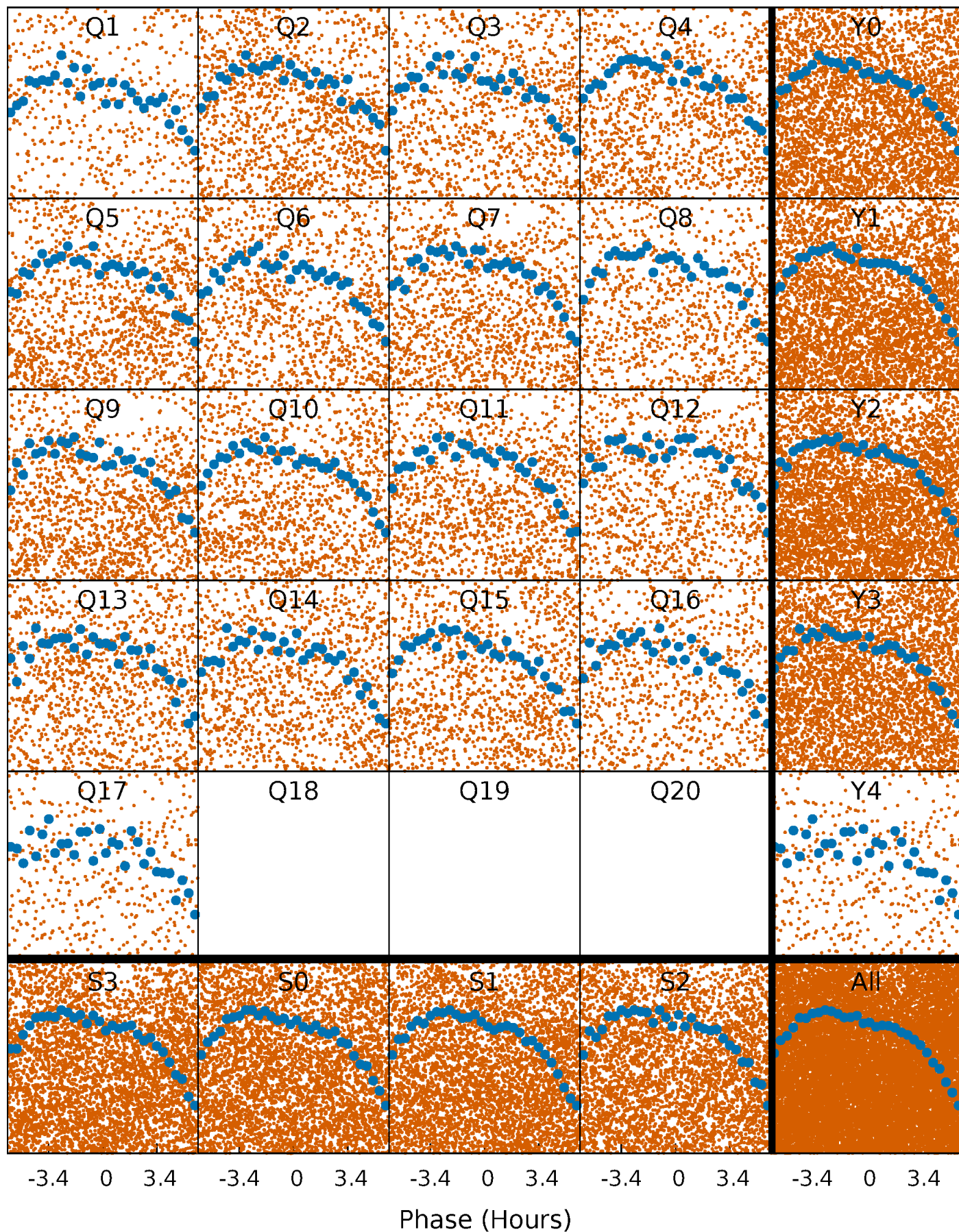


Non-Whitened Vs. Whitened Light Curve



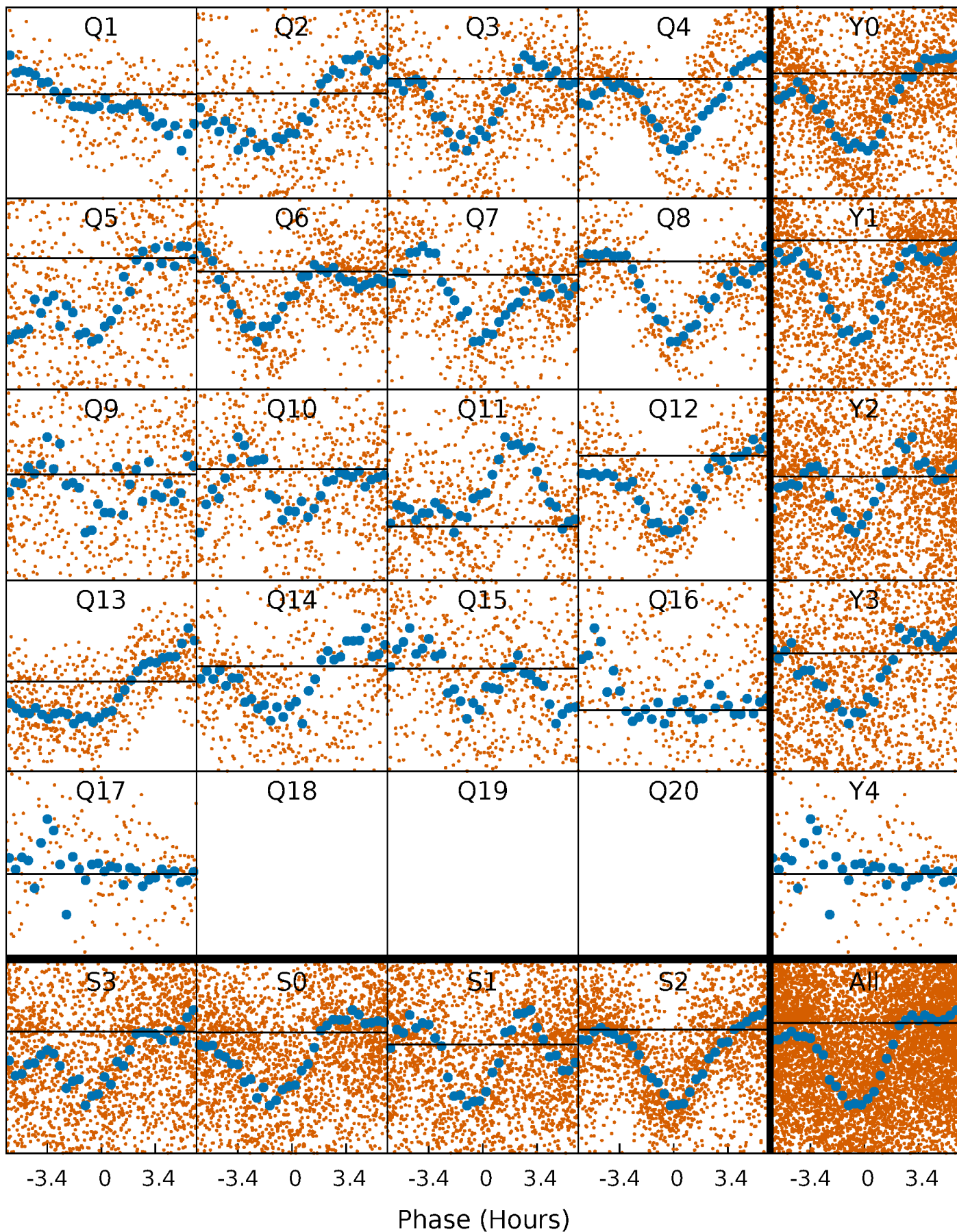
PDC Quarter-Phased Transit Curves

TCE 005034333-05 P= 0.866544 Days $T_0=131.875777$ (BKJD)



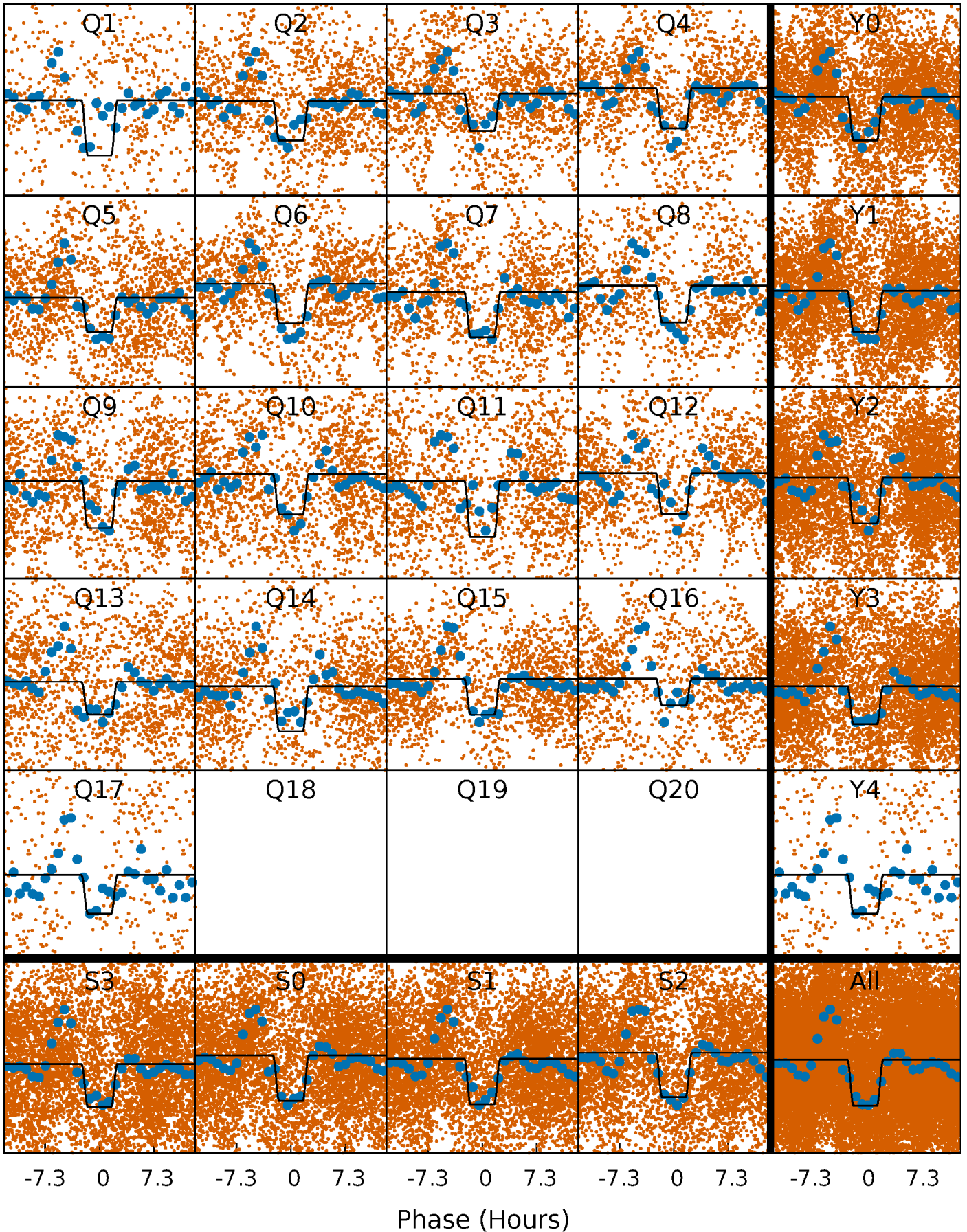
DV Quarter-Phased Transit Curves

TCE 005034333-05 P= 0.866544 Days $T_0=131.875777$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

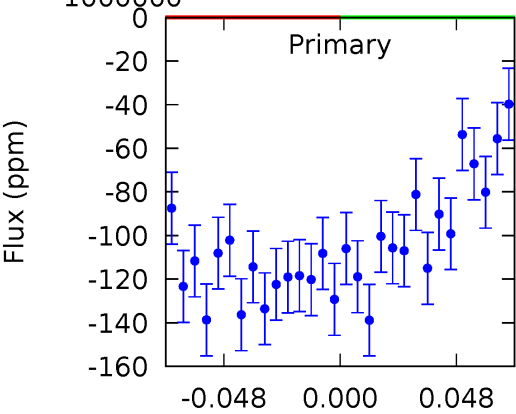
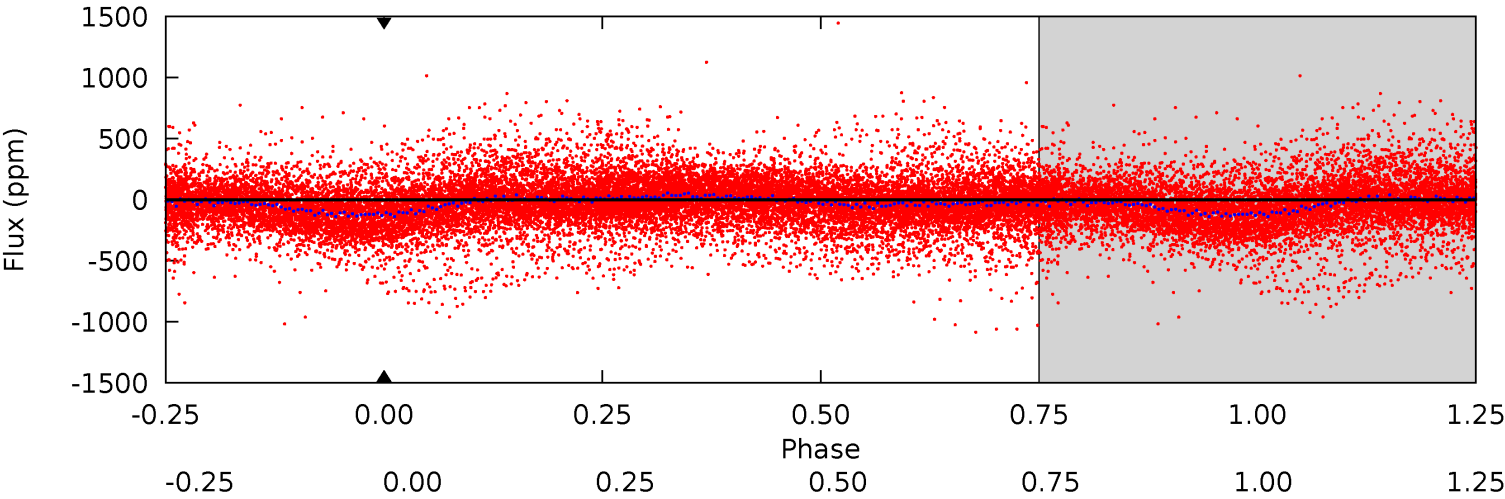
TCE 005034333-05 $P = 0.866544$ Days $T_0 = 131.829343$ (BKJD)



DV Model-Shift Uniqueness Test

005034333-05, P = 0.866544 Days, E = 131.009233 Days

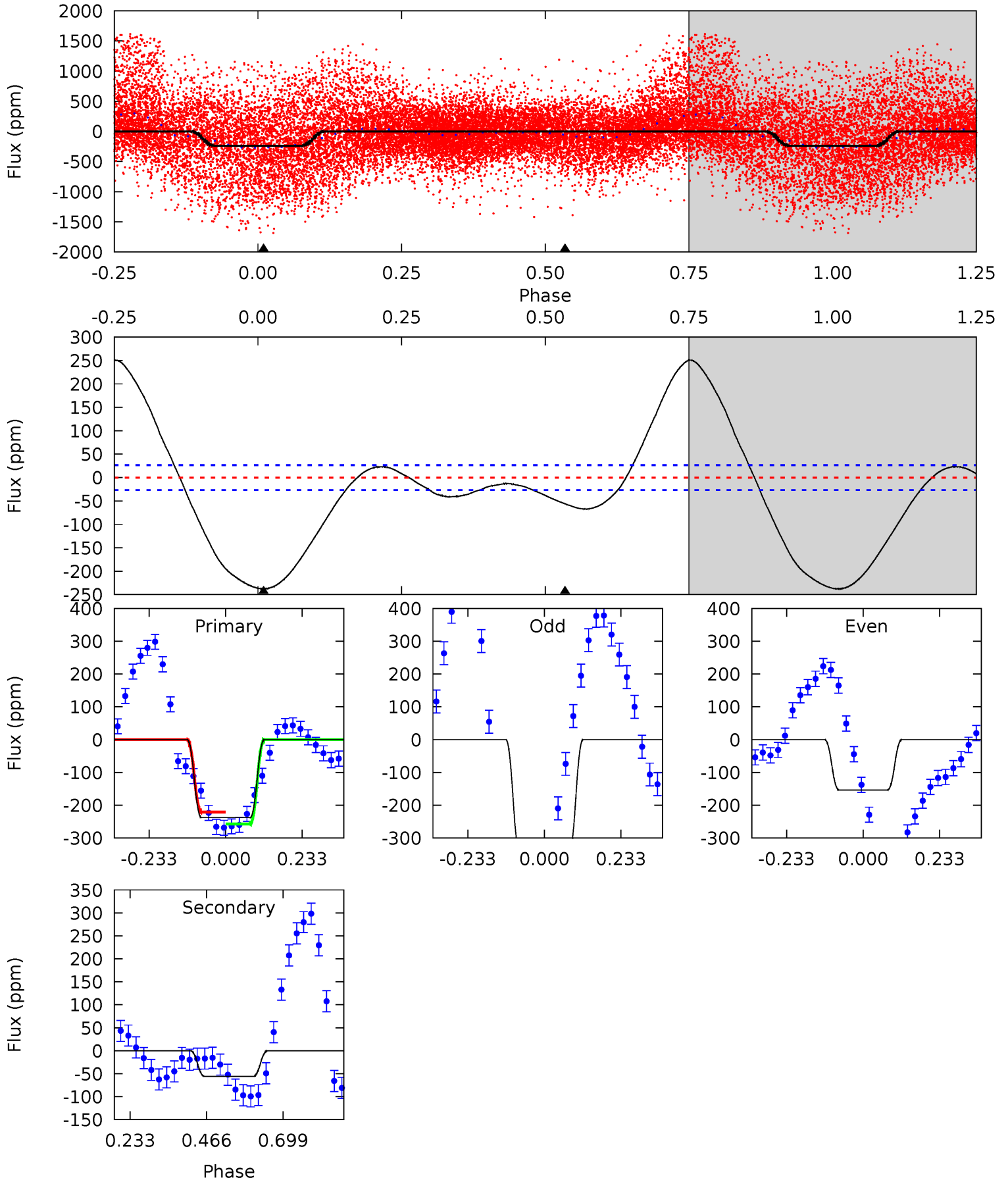
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005034333-05, P = 0.866544 Days, E = 130.962799 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.3	9.25	0	0	4.38	1.19	17.1	39.3	39.3	9.25	9.25	16.4	1.03	0.51	2.55



Stellar Parameters For KIC 005034333

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8675^{+238}_{-408}	$4.080^{+0.150}_{-0.150}$	$0.070^{+0.150}_{-0.600}$	$2.168^{+0.487}_{-0.541}$	$2.057^{+0.370}_{-0.493}$	$0.284^{+0.259}_{-0.117}$
	+3%/-5%	+4%/-4%	+214%/-857%	+22%/-25%	+18%/-24%	+91%/-41%
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 005034333-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$17.11^{+18.32}_{-11.56}$	5215^{+361}_{-358}	7266^{+58927}_{-58136}	$2.858^{+188.380}_{-143.741}$
Alt.	-56 ± 6	$17.75^{+18.92}_{-11.05}$	5223^{+334}_{-377}	-4100^{+7250}_{-292}	$0.050^{+0.298}_{-0.038}$

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

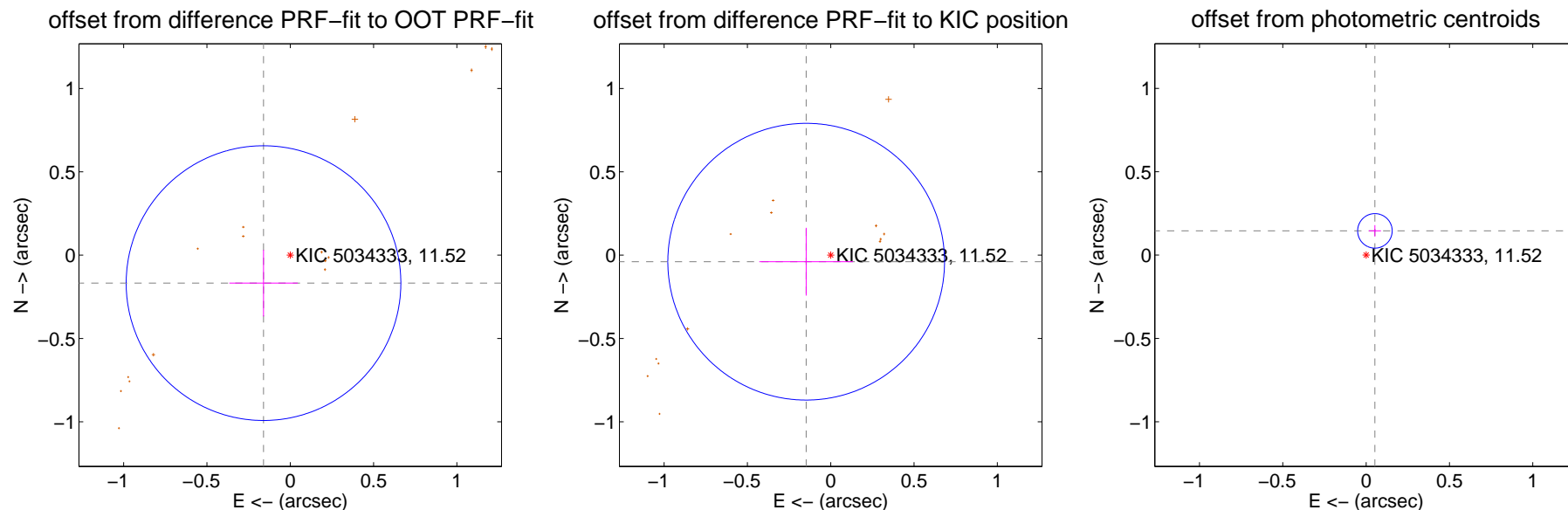
DV Centroid Data

Supplemental centroid analysis for 005034333-05. **Kepler magnitude: 11.52.** Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

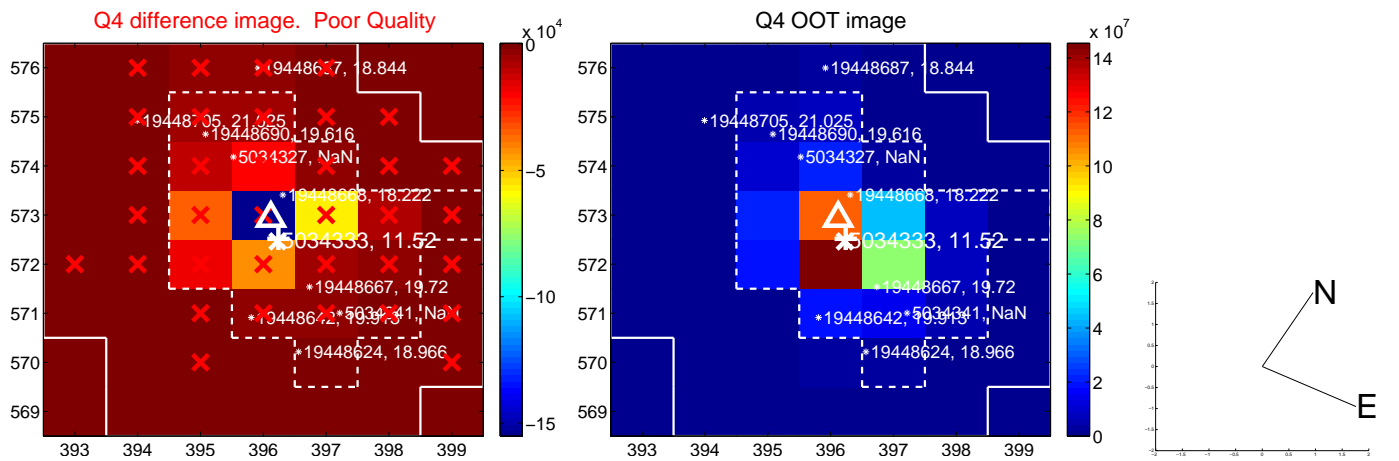
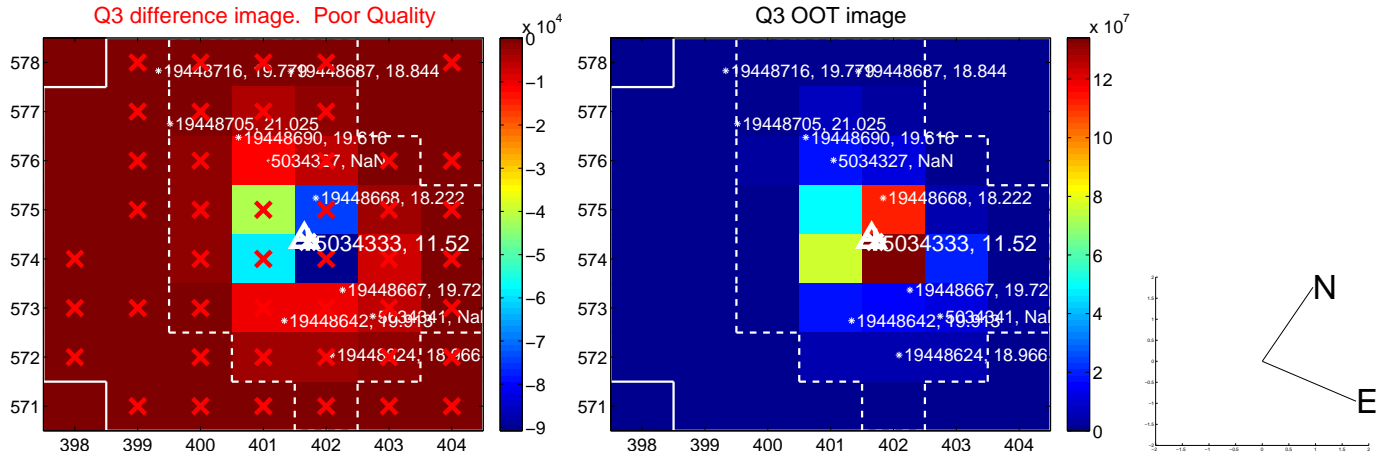
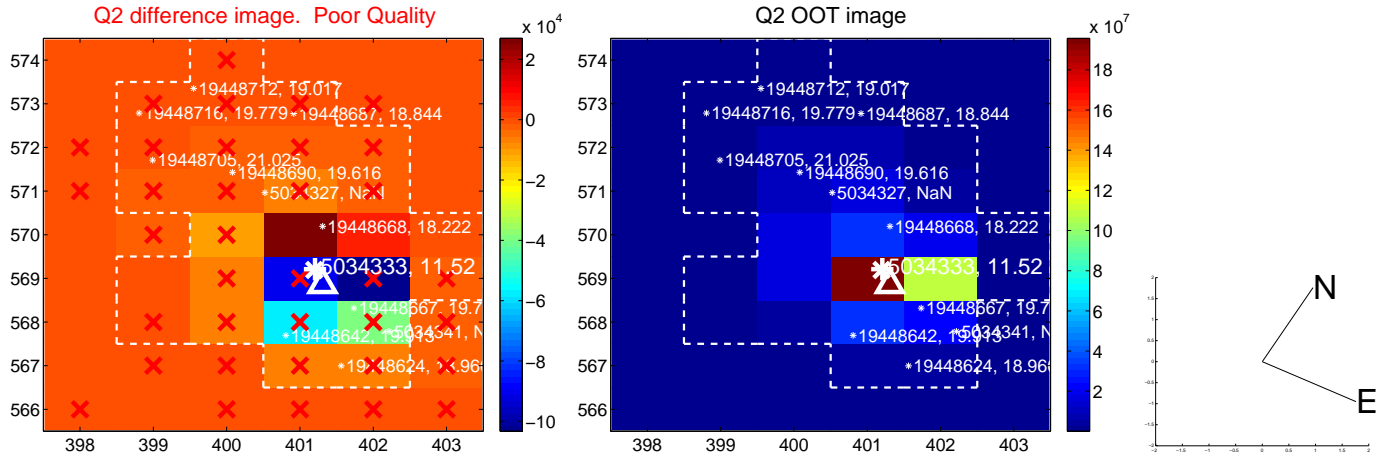
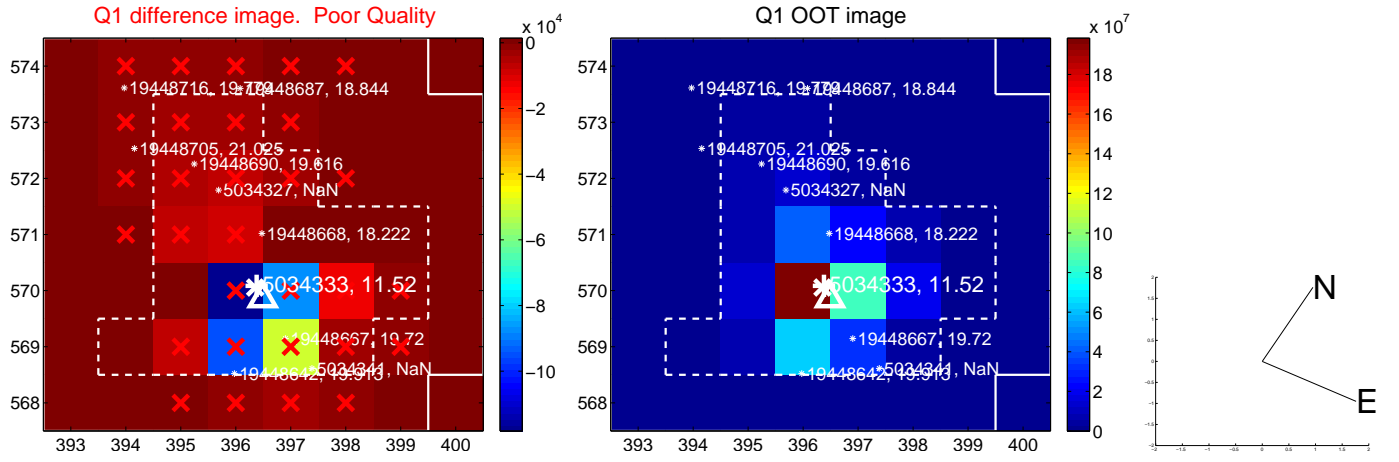
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.232 ± 0.275	0.85	0.161 ± 0.205	-0.168 ± 0.199
PRF-fit source offset from KIC position	0.152 ± 0.277	0.55	0.147 ± 0.281	-0.039 ± 0.203
photometric centroid source offset	0.15 ± 0.03	4.47	-0.05 ± 0.04	0.15 ± 0.03

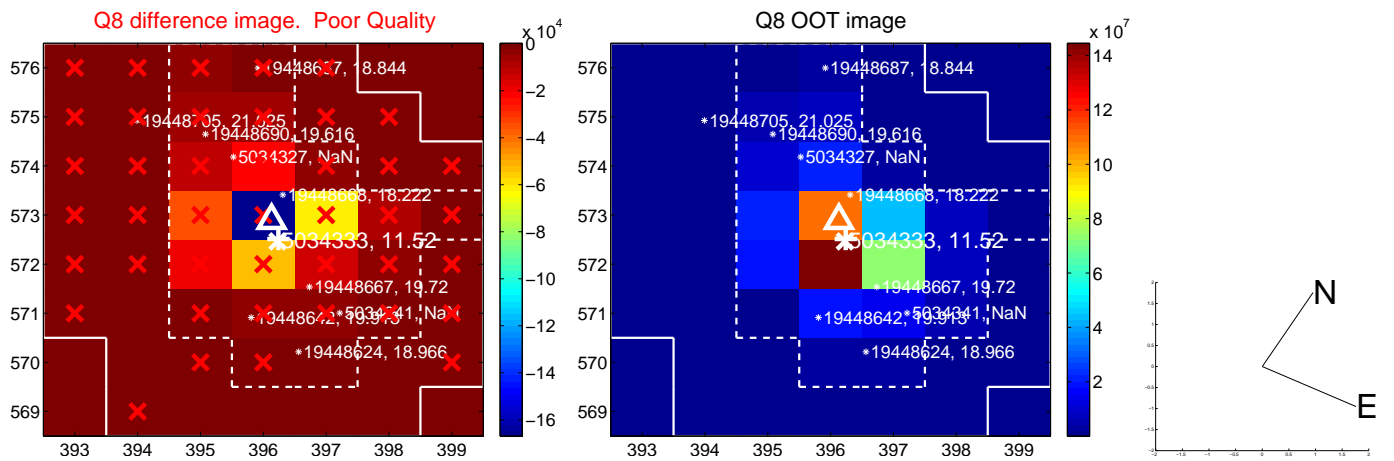
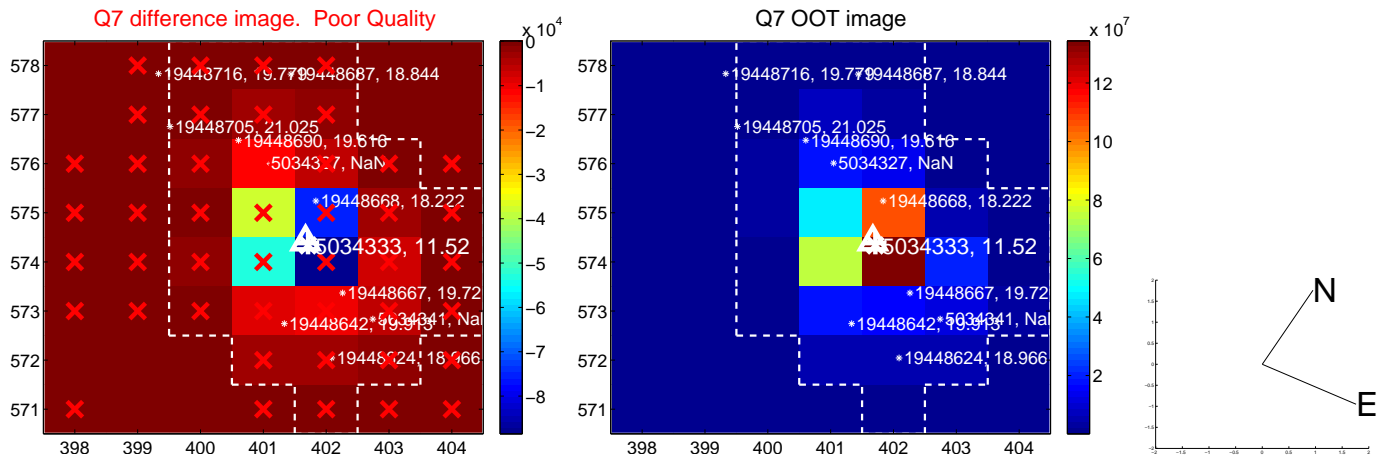
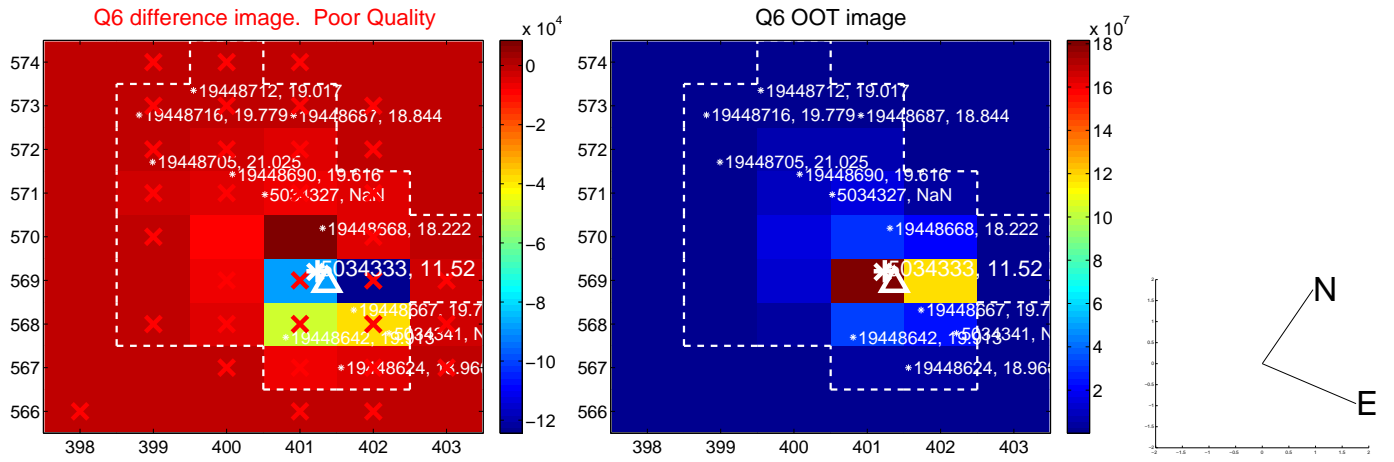
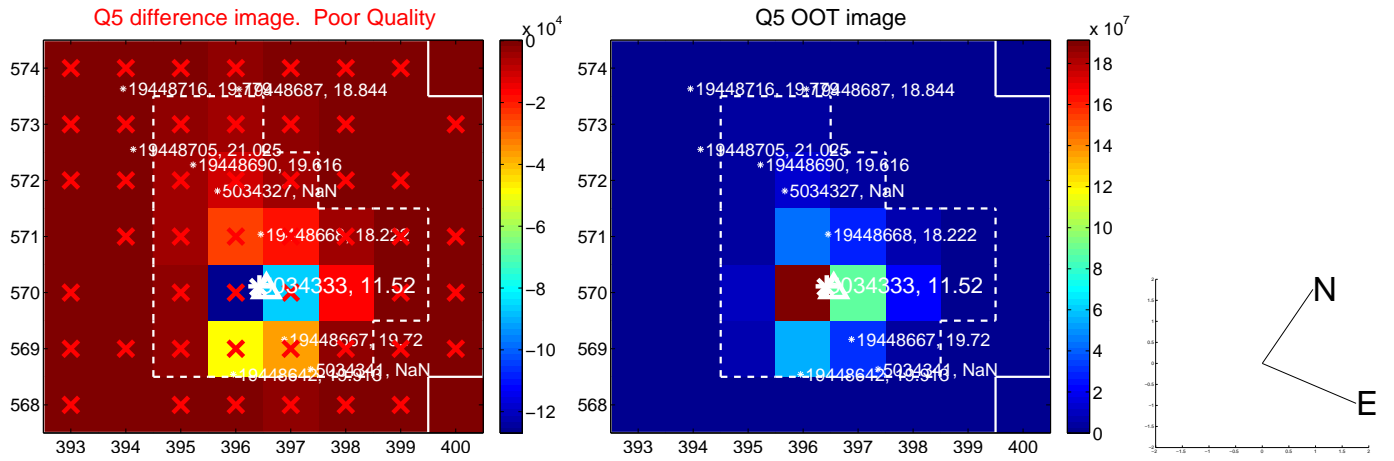


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

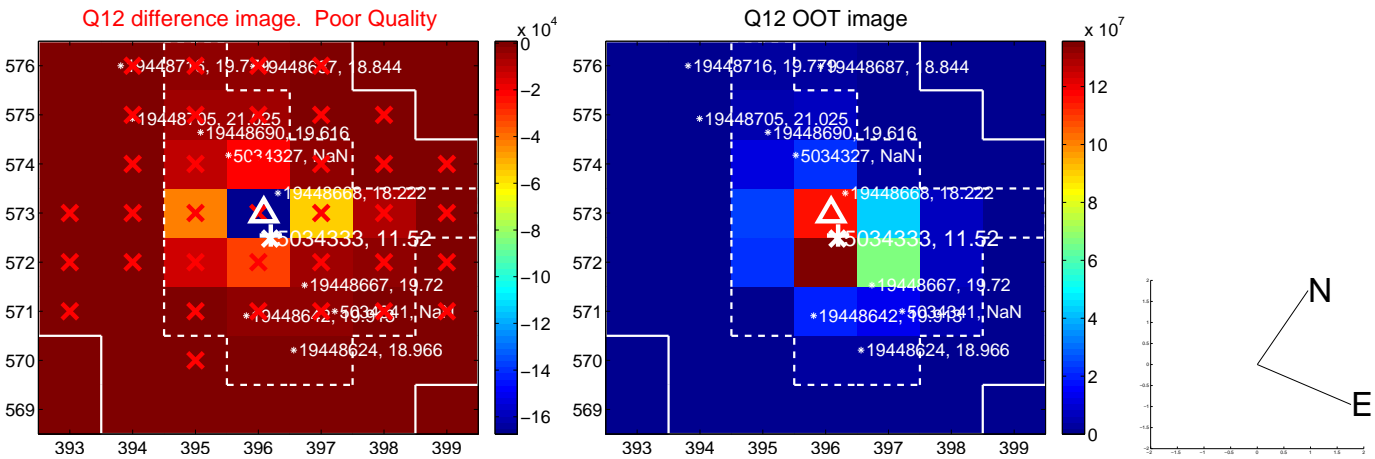
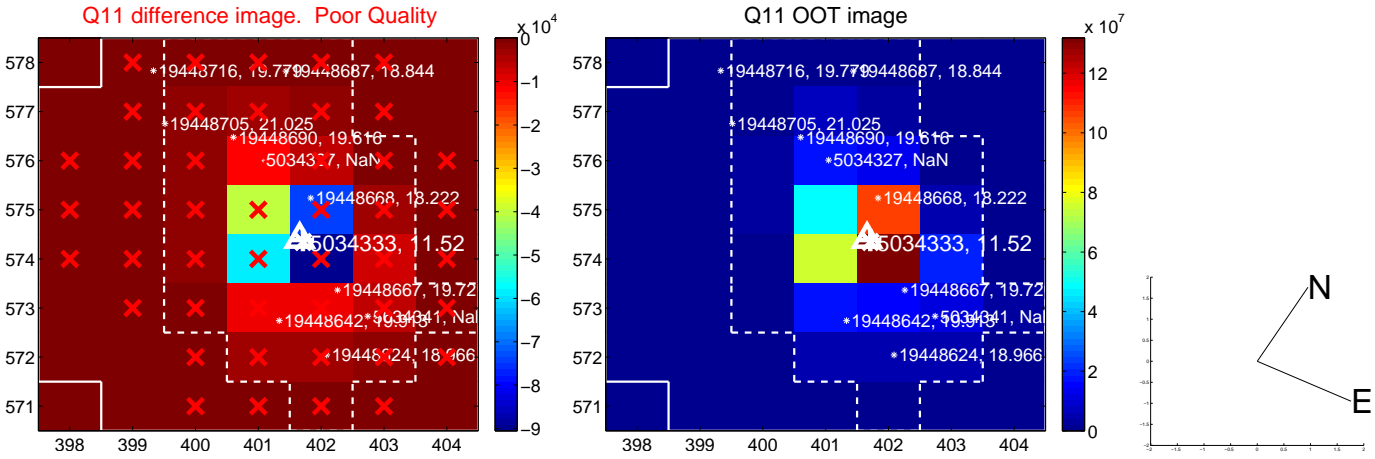
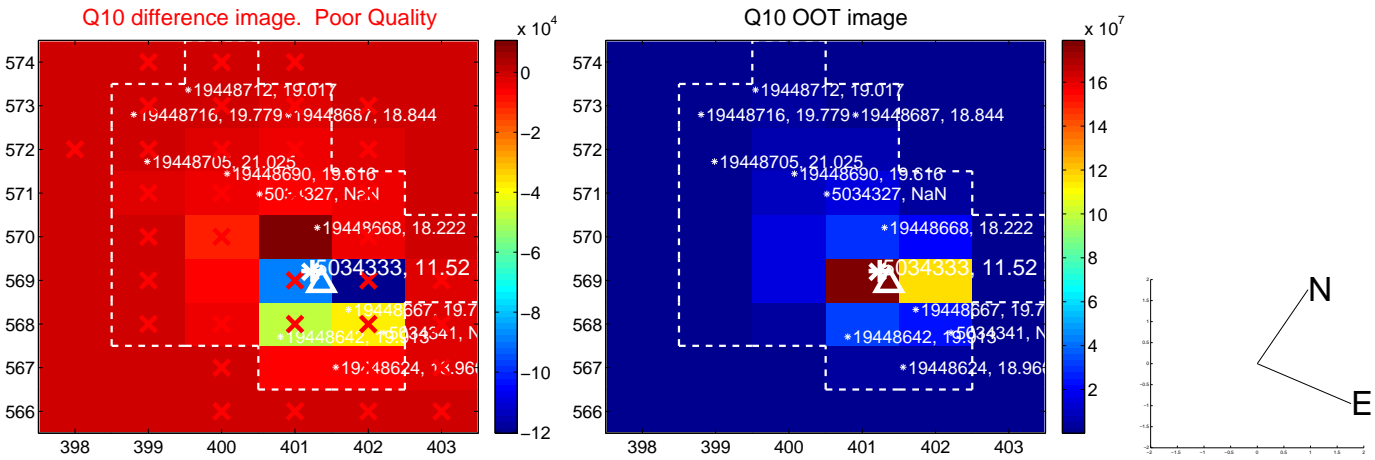
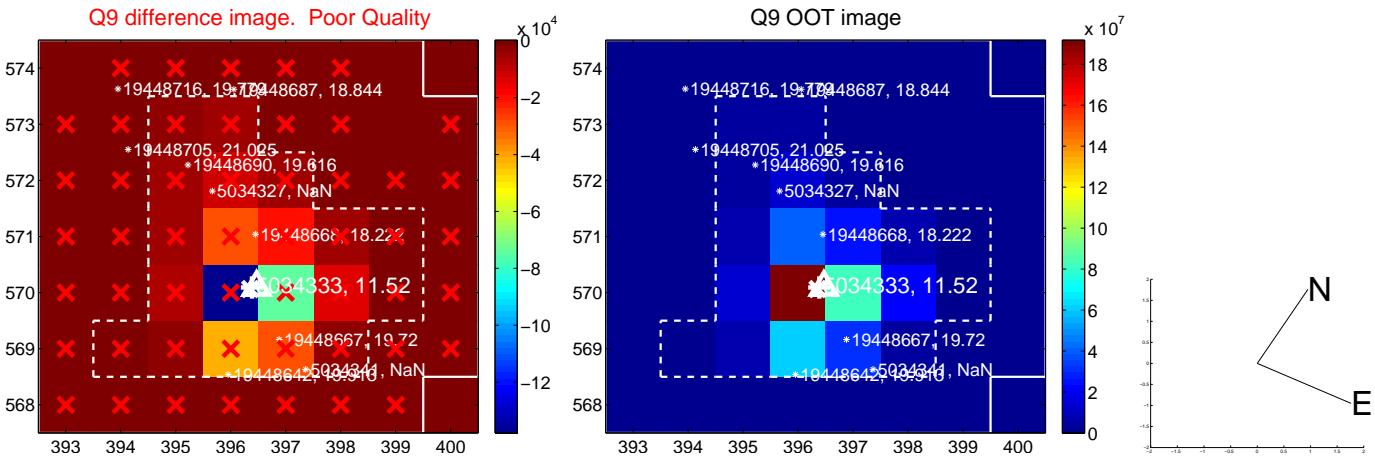
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



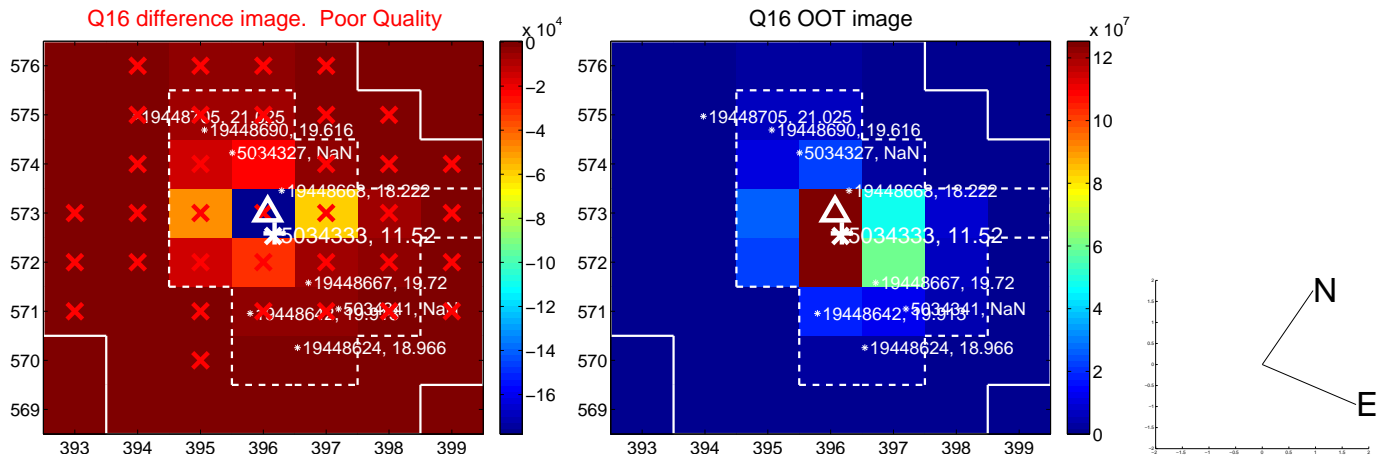
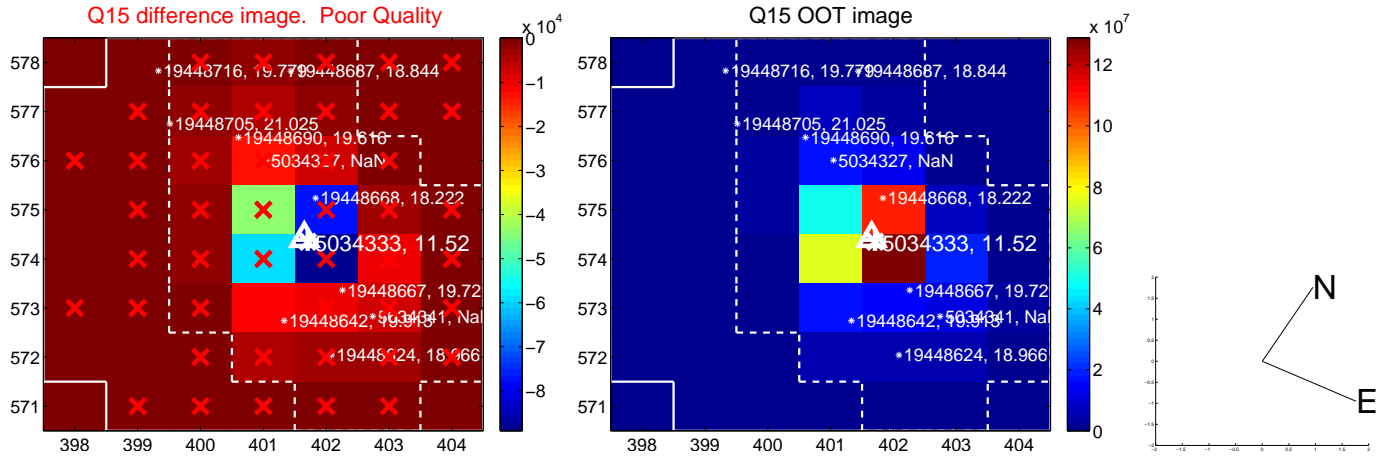
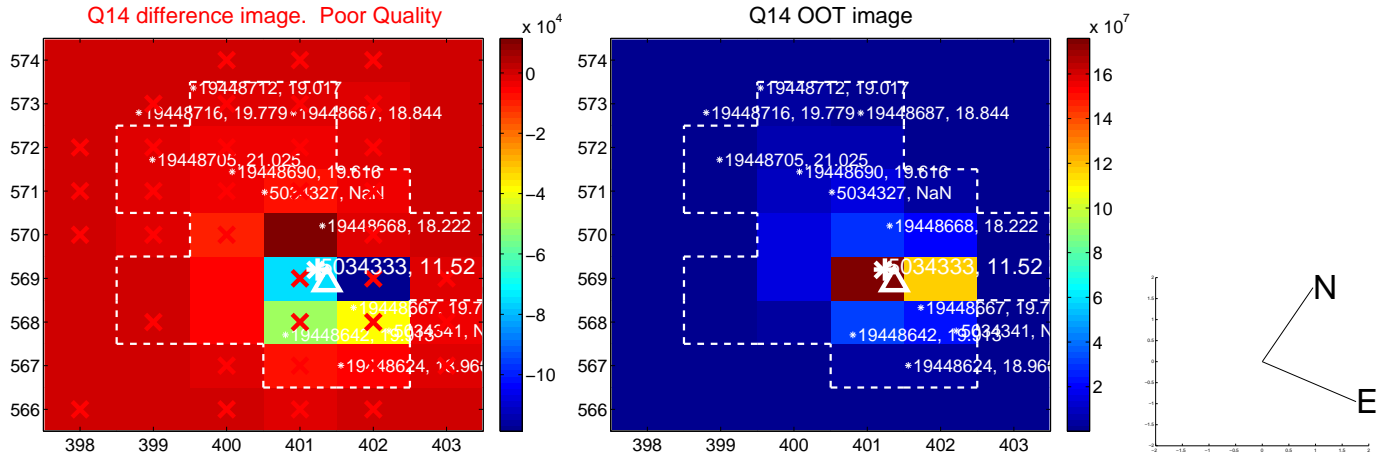
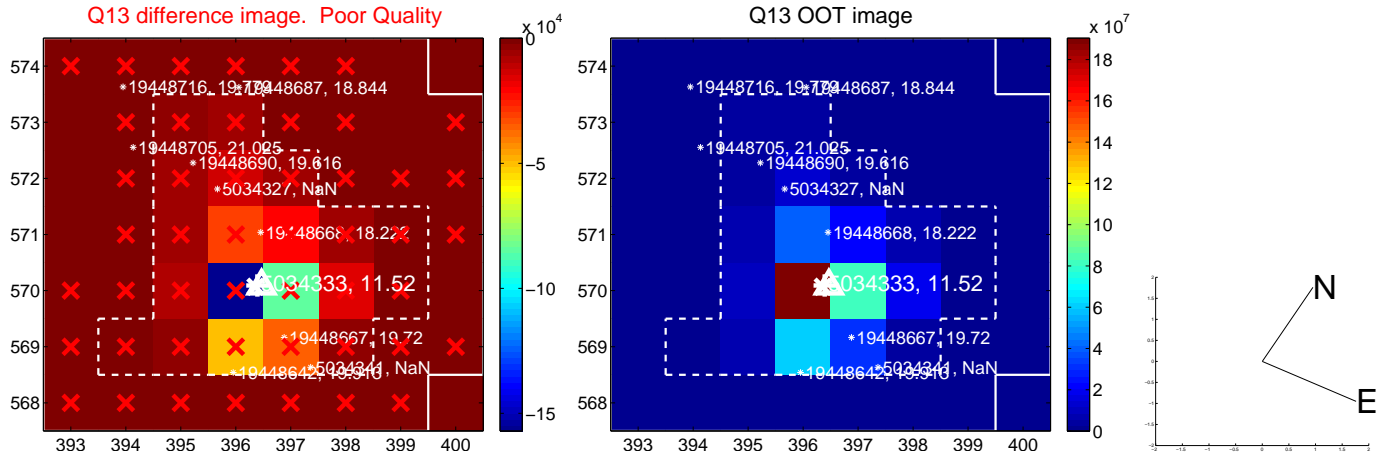
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



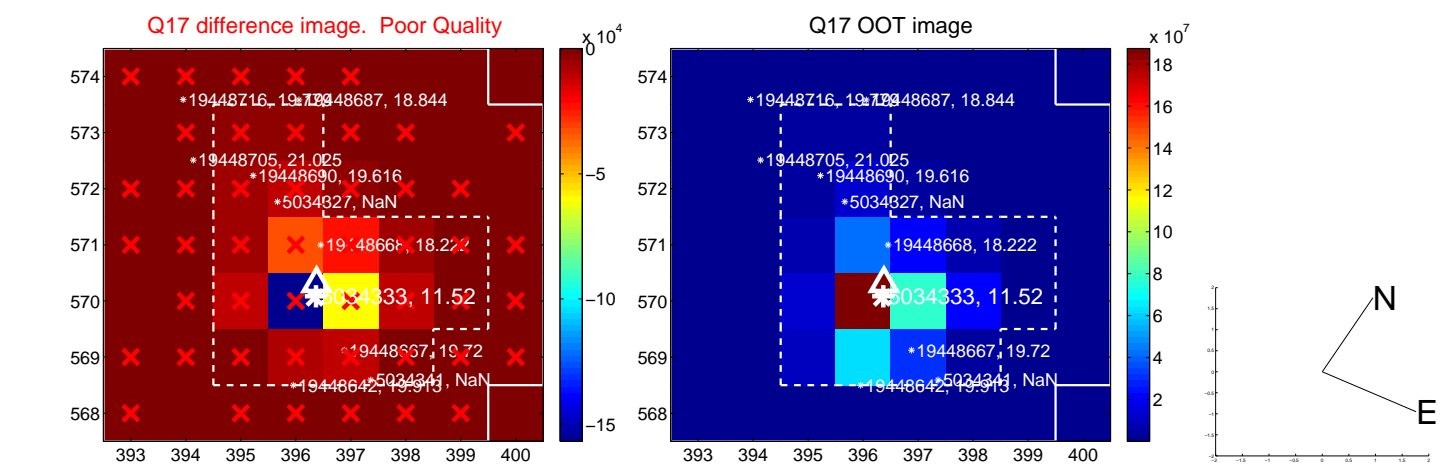
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



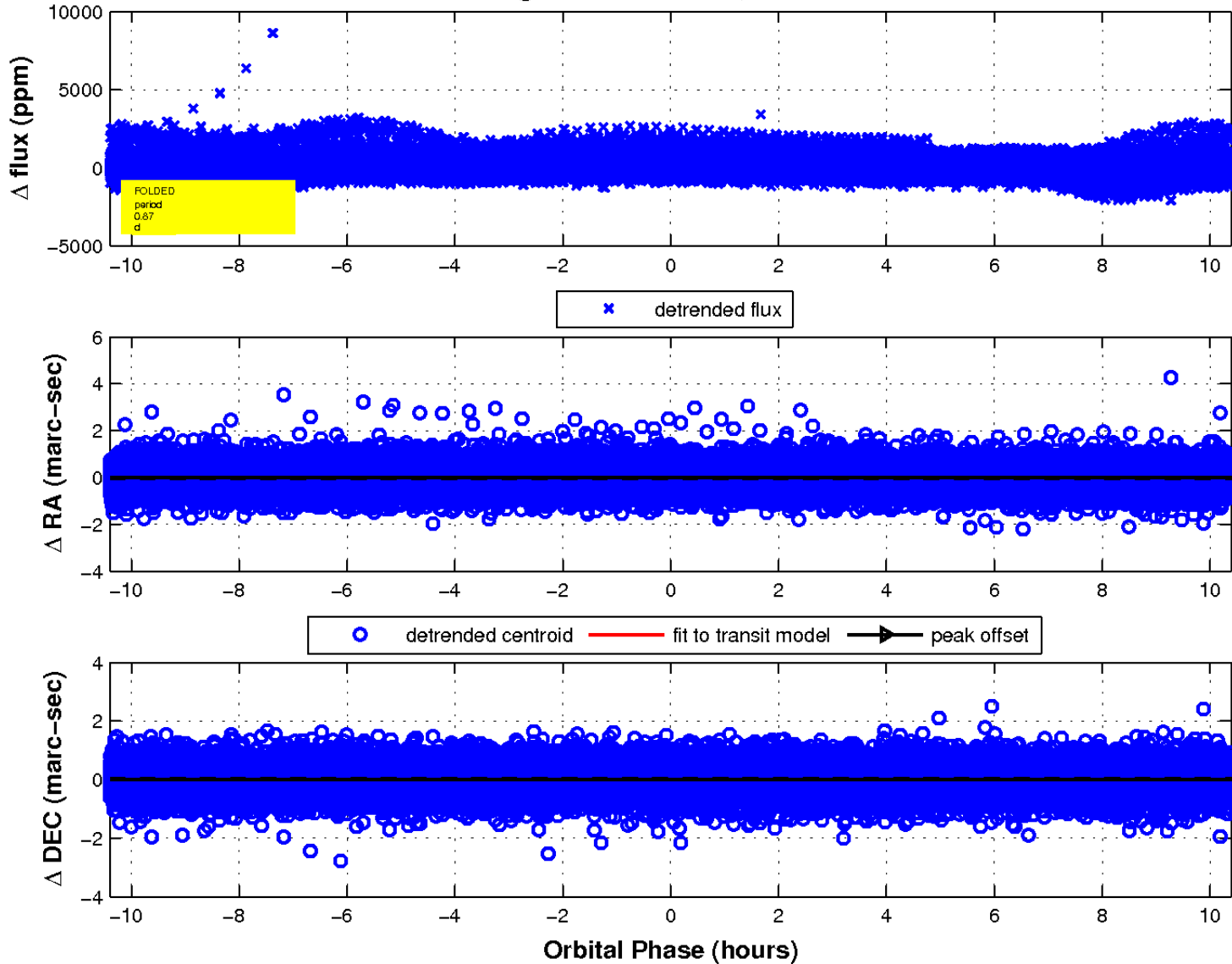
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 5 of 5



UKIRT Image

Declination

