

KIC 003439374

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})
003439374-01	OBS	No	0.696707	131.977536	1.8	0.885	9.9	0.6	1.75	7196	0.28	24250.27
003439374-02	OBS	No	0.696826	132.035708	1.6	8.328	10.3	1.0	1.75	7196	0.23	24244.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003439374-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
003439374-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS

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

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

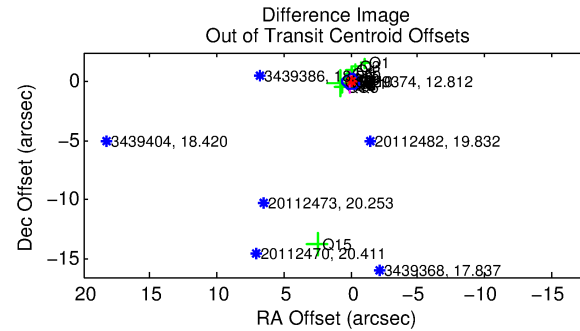
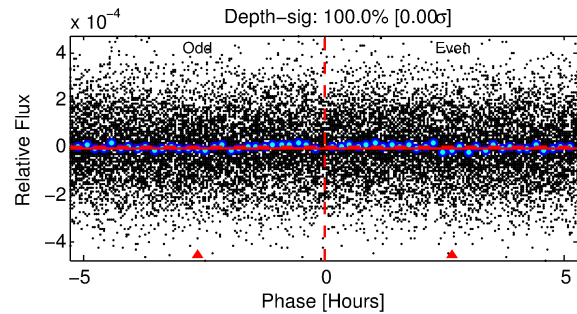
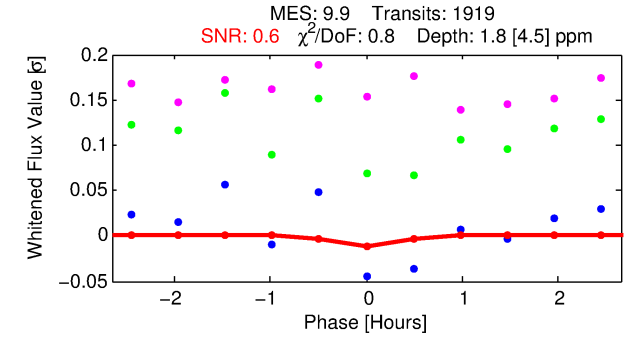
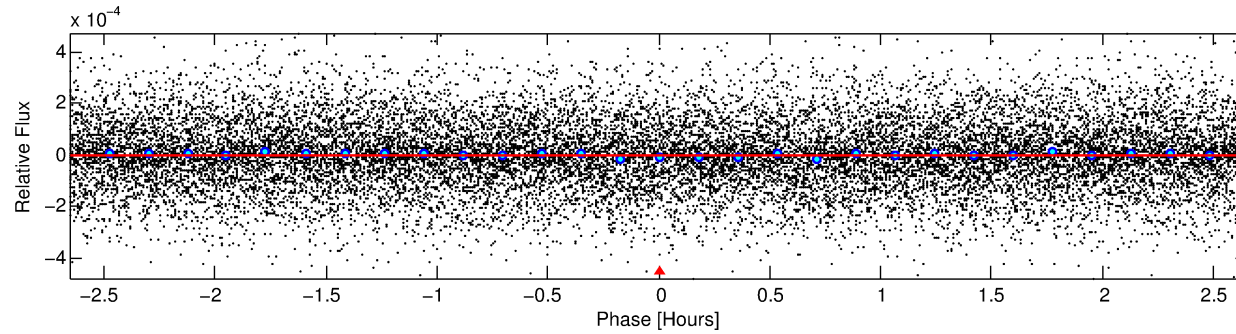
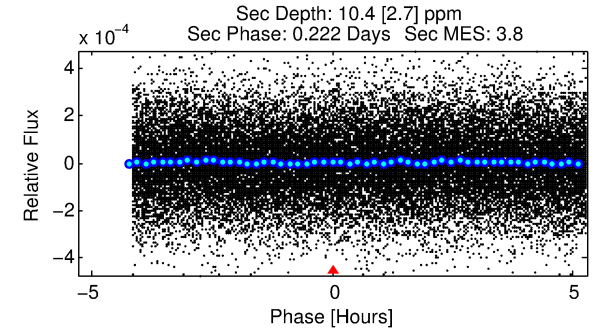
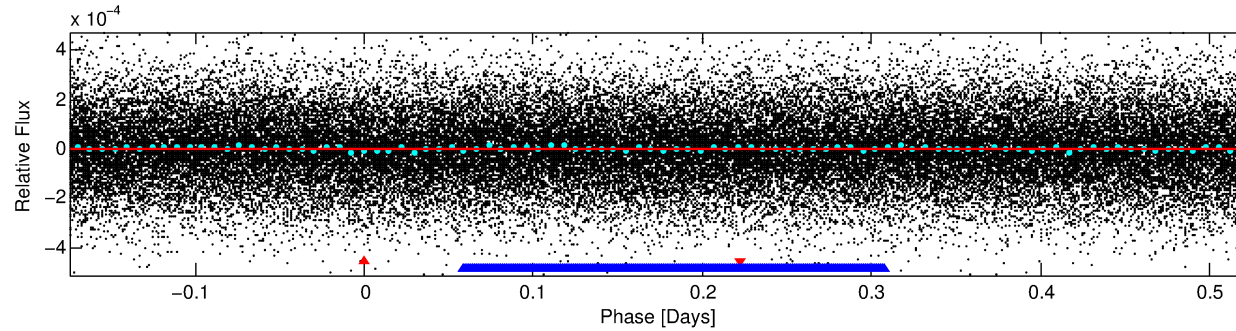
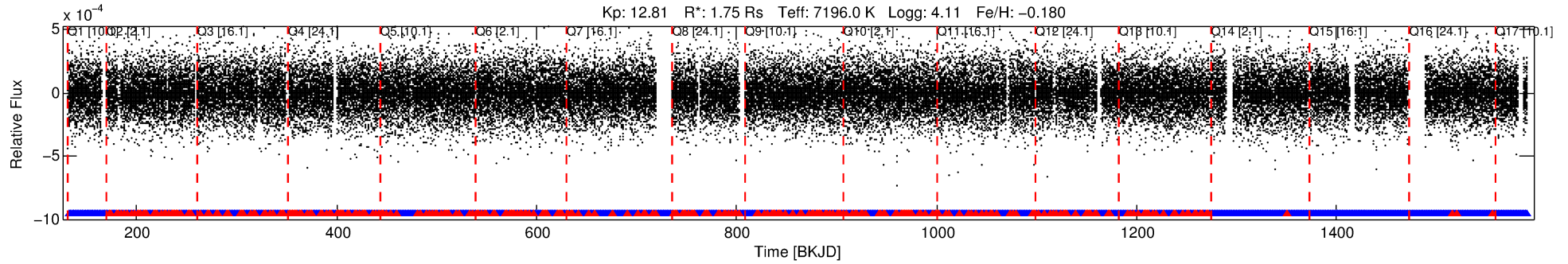
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003439374-01

No Significant Match Found

DV One-Page Summary

KIC: 3439374 Candidate: 1 of 2 Period: 0.697 d



DV Fit Results:

Period = 0.69671 [0.00019] d
Epoch = 131.9775 [0.0242] BKJD
Rp/R* = 0.0014 [0.0020]
a/R* = 2.80 [9.59]
b = 0.90 [0.84]
Seff = 24250.27 [9373.49]
Teq = 3182 [307] K
Rp = 0.27 [0.39] Re
a = 0.0174 [0.0043] AU
Ag = 23.03 [65.55] [0.34 σ]
Teffp = 10777 [7626] K [1.00 σ]

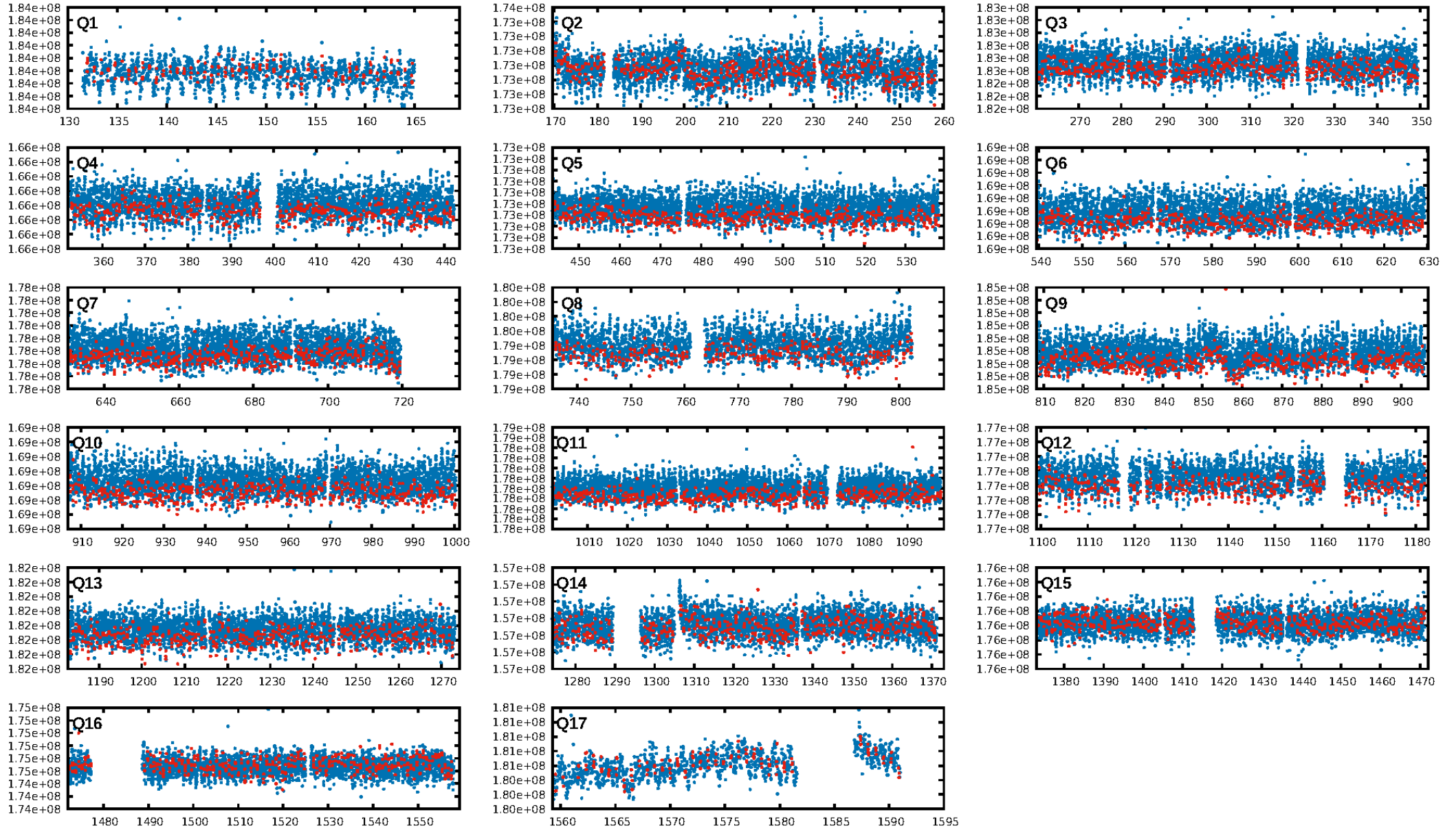
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.83 [1518/1833]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.046 arcsec [0.22 σ]
KicOffset-rm: 0.082 arcsec [0.11 σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.80 [12/15]
DiffImageOverlap-fno: 0.00 [0/17]

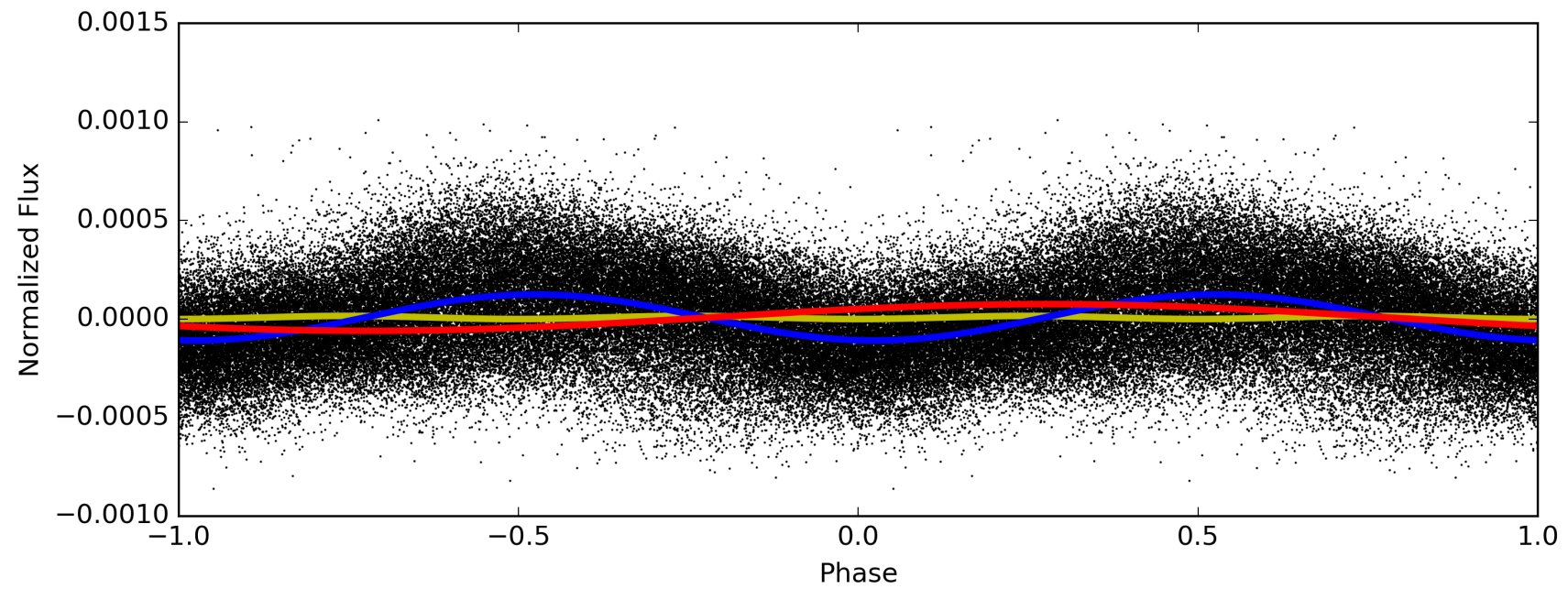
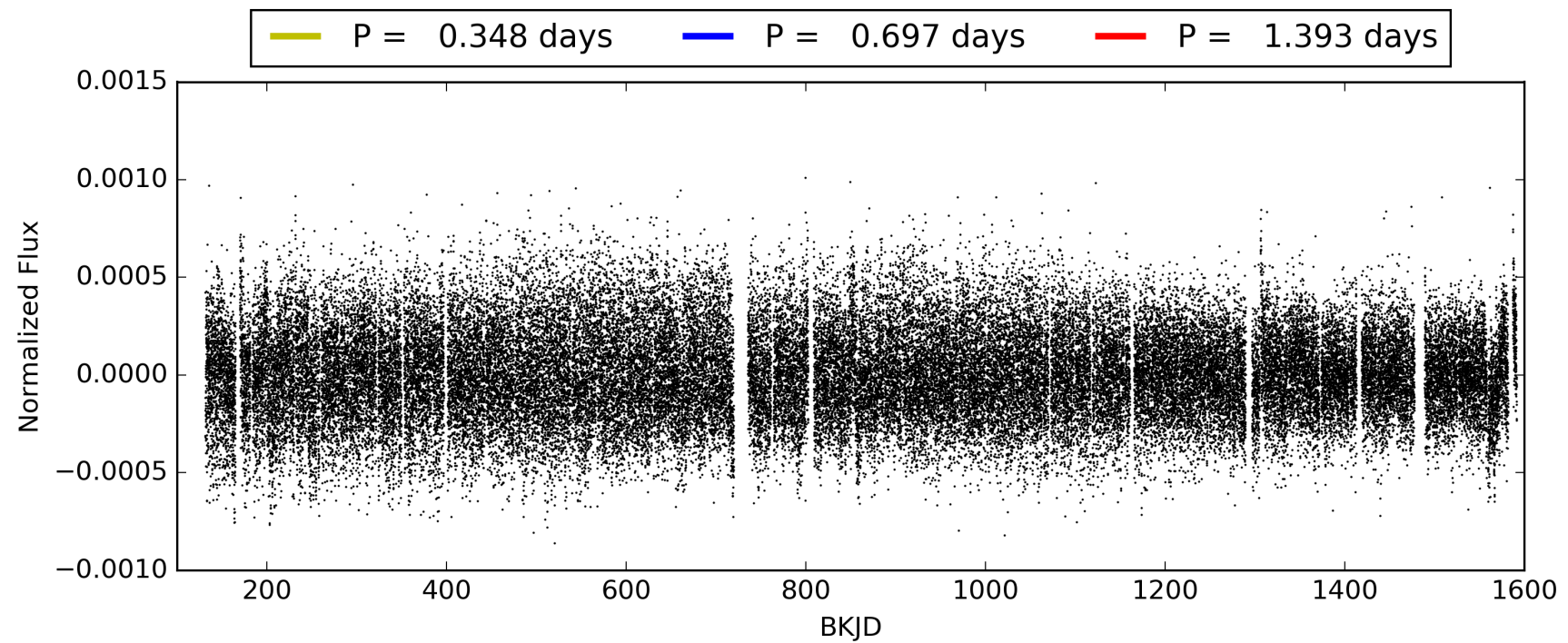
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:04:40 Z

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

TCE 003439374-01, PDC Light Curves

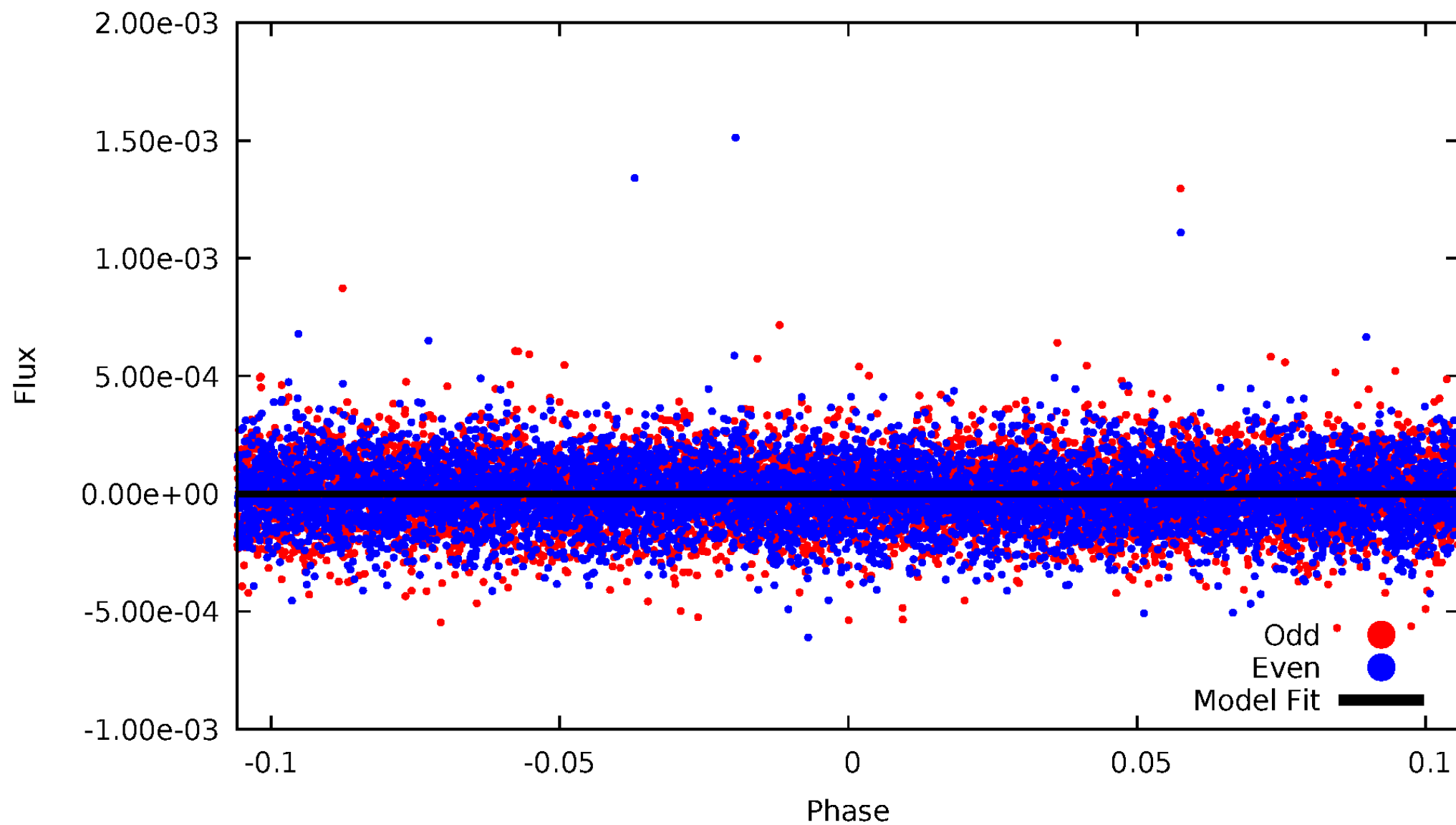


TCE 003439374-01



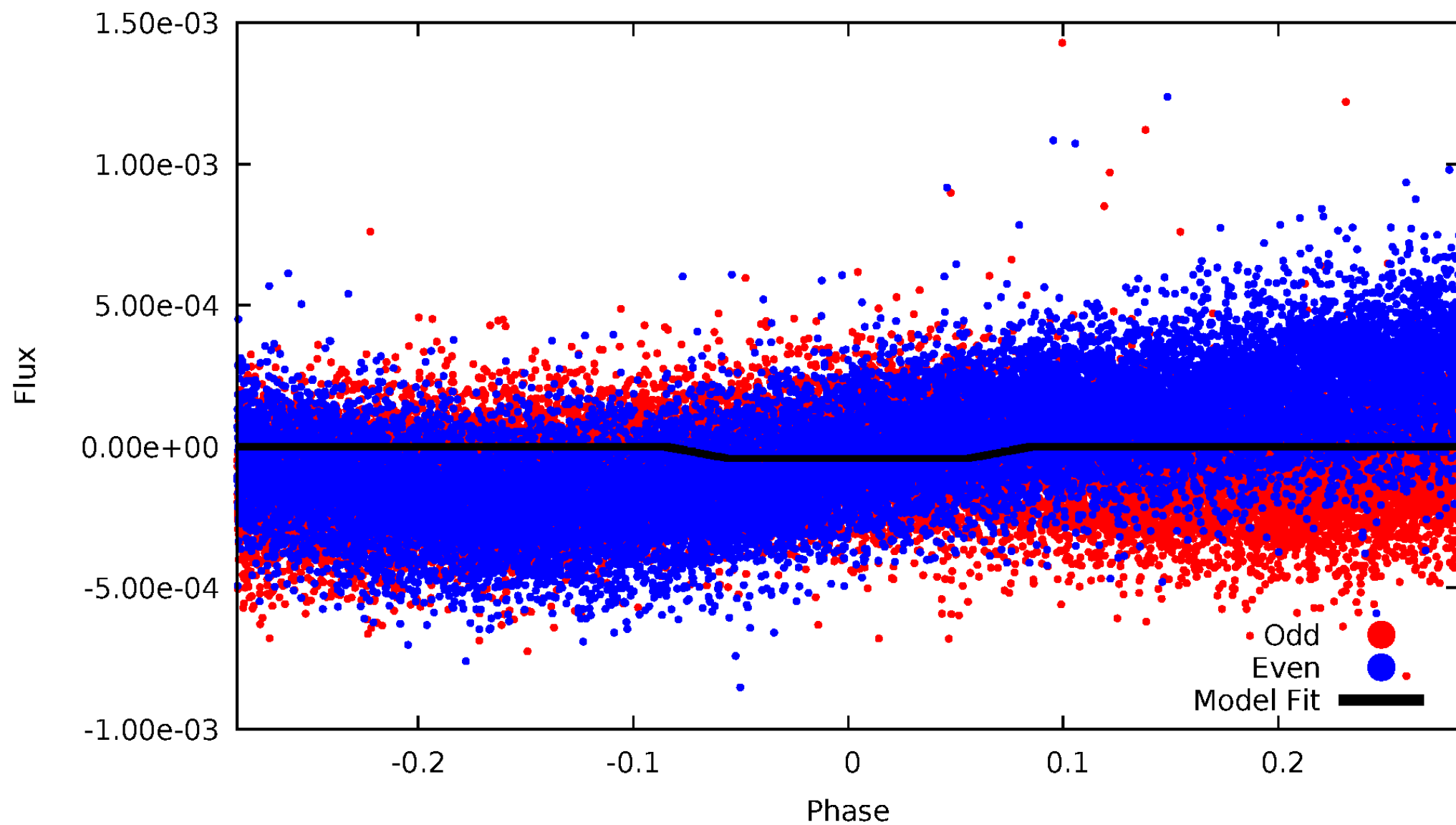
DV Odd/Even

TCE 003439374-01



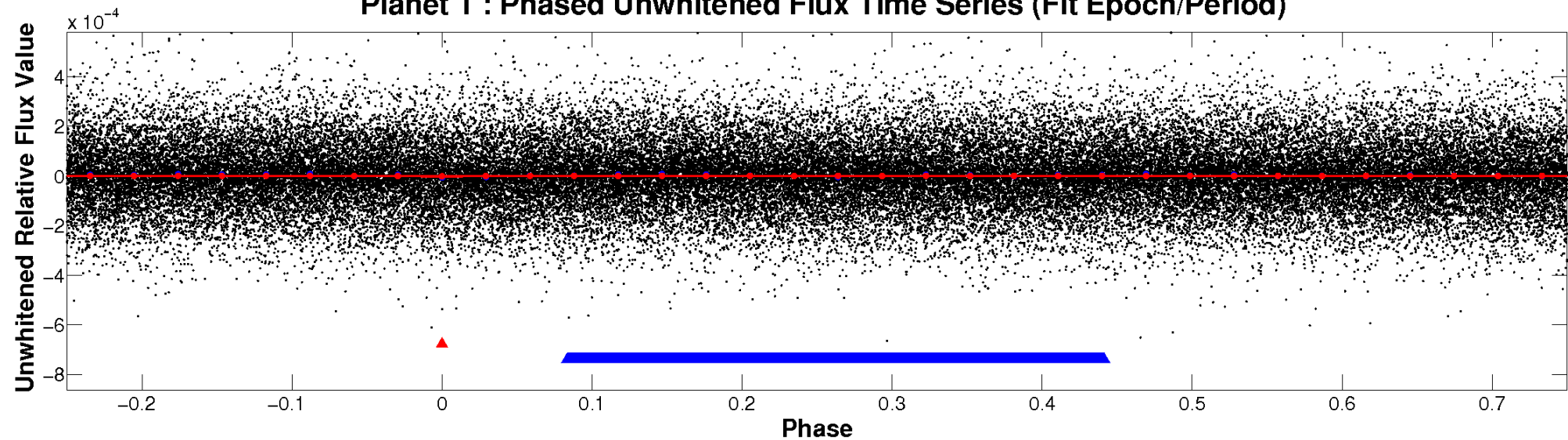
ALT Odd/Even

TCE 003439374-01

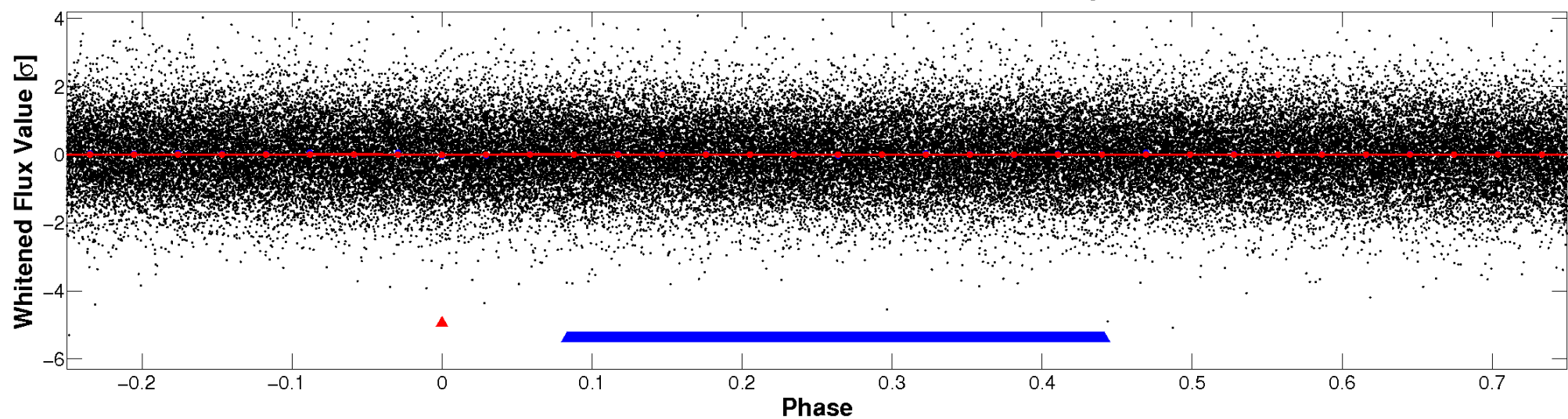


Non-Whitened Vs. Whitened Light Curve

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

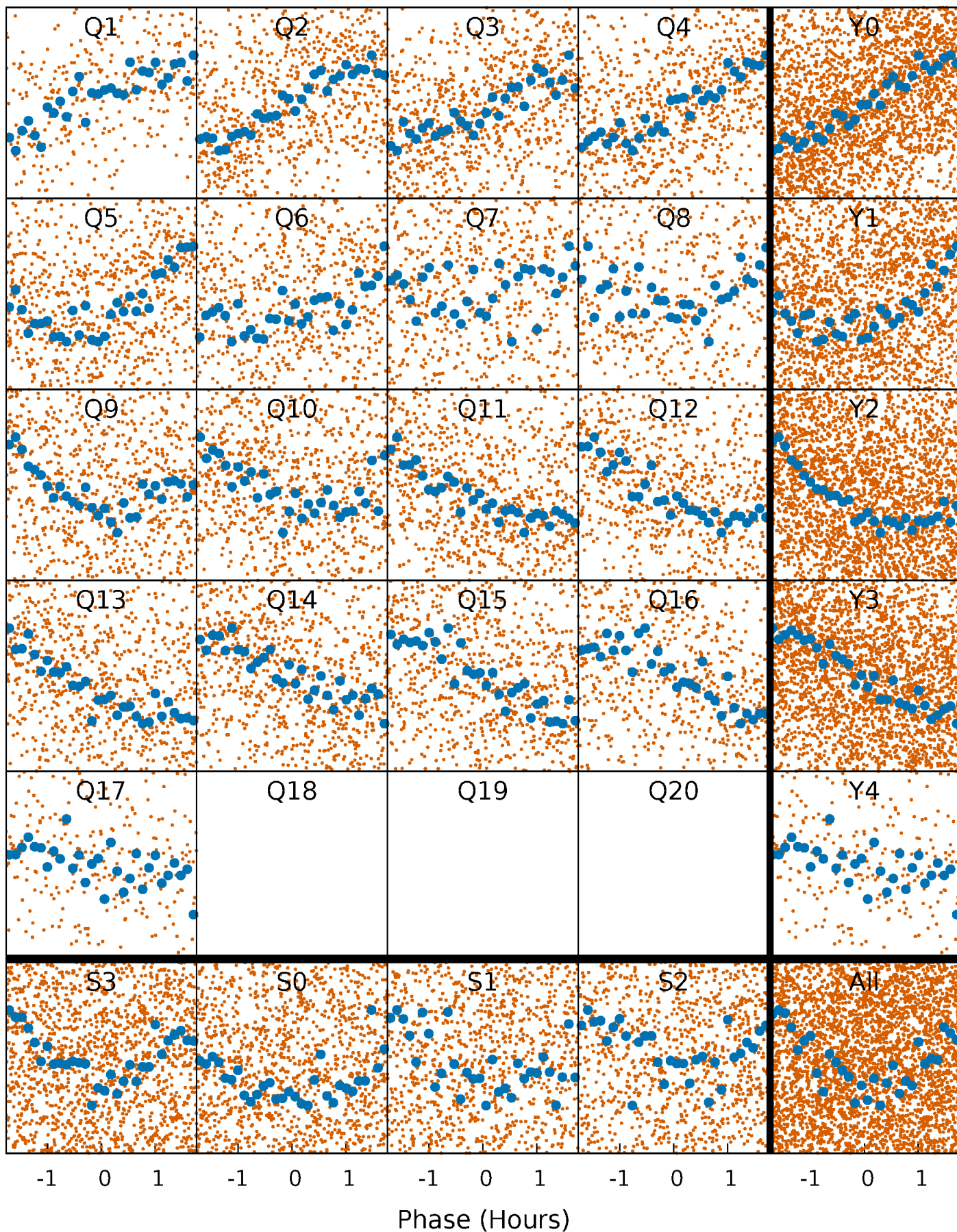


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



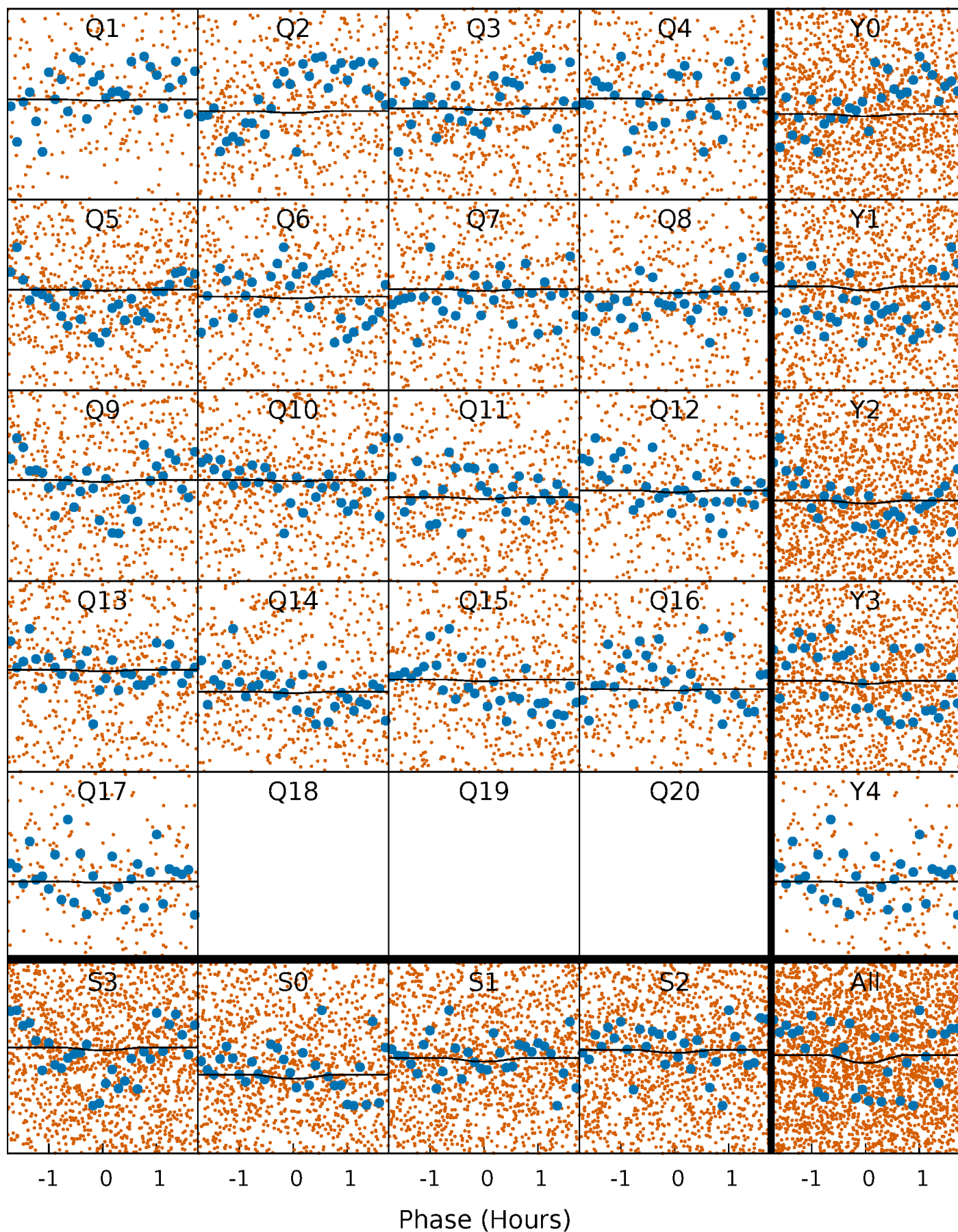
PDC Quarter-Phased Transit Curves

TCE 003439374-01 P= 0.696707 Days $T_0=131.977536$ (BKJD)



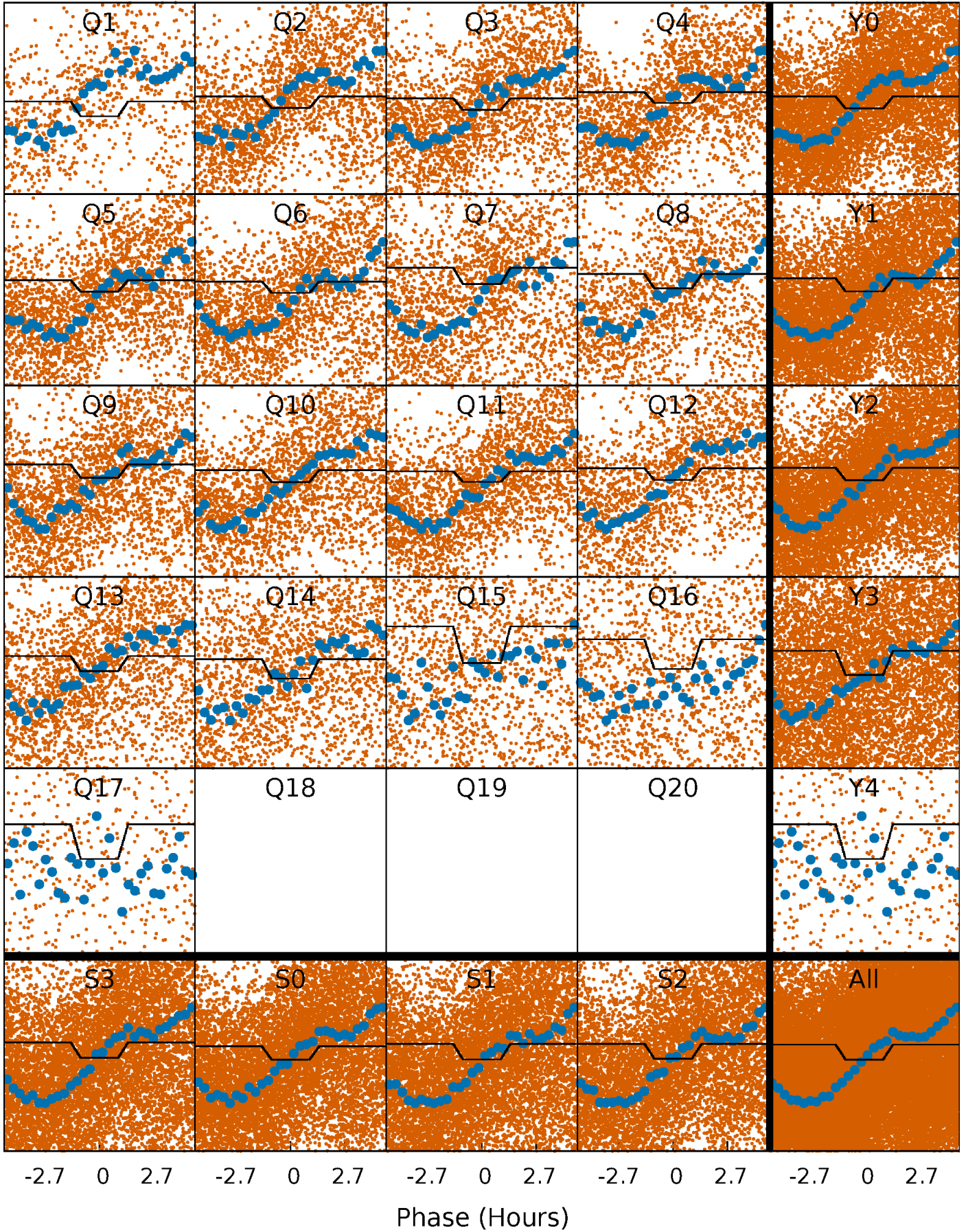
DV Quarter-Phased Transit Curves

TCE 003439374-01 P= 0.696707 Days $T_0=131.977536$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

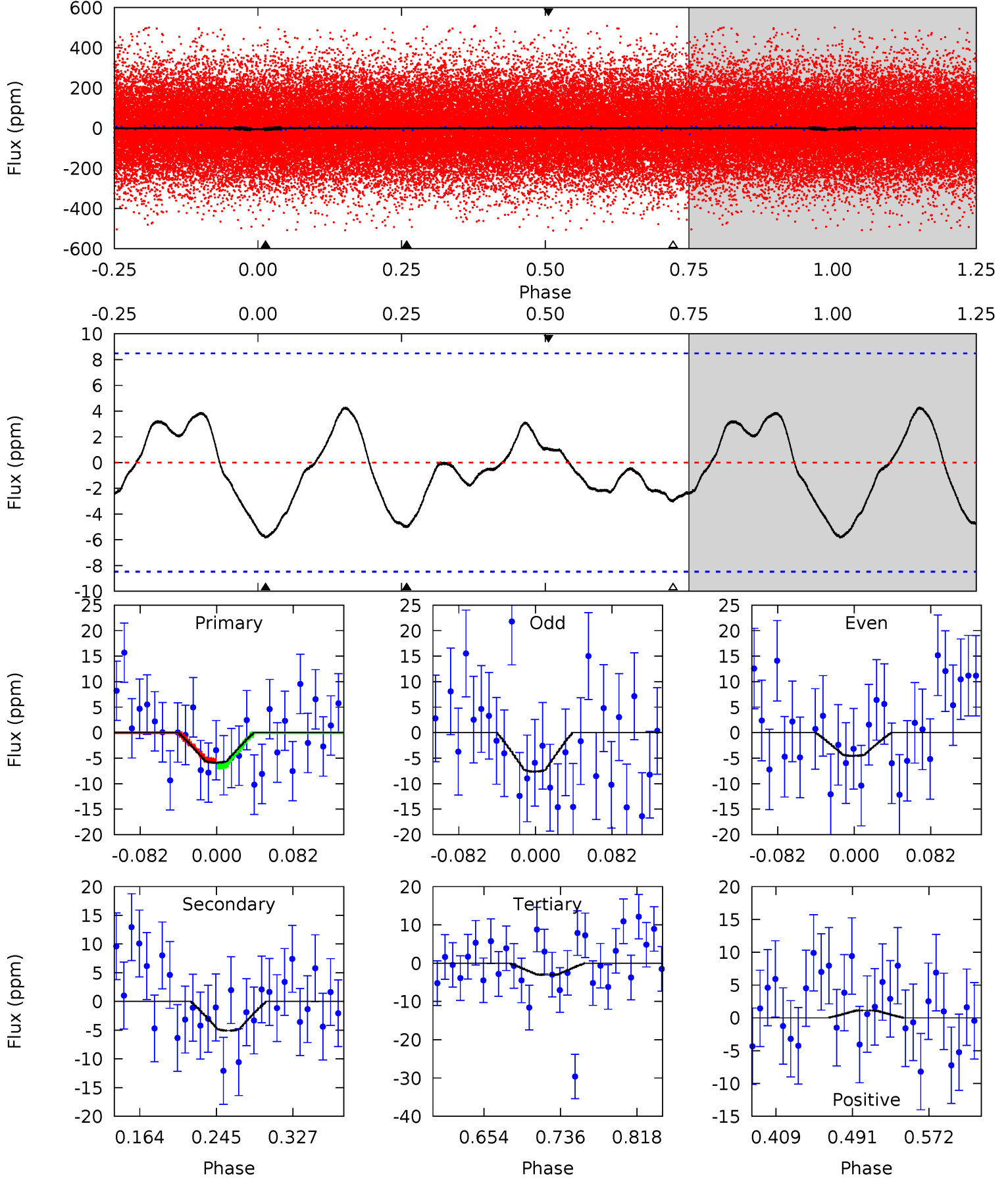
TCE 003439374-01 P= 0.696829 Days $T_0=131.980278$ (BKJD)



DV Model-Shift Uniqueness Test

003439374-01, P = 0.696707 Days, E = 131.280829 Days

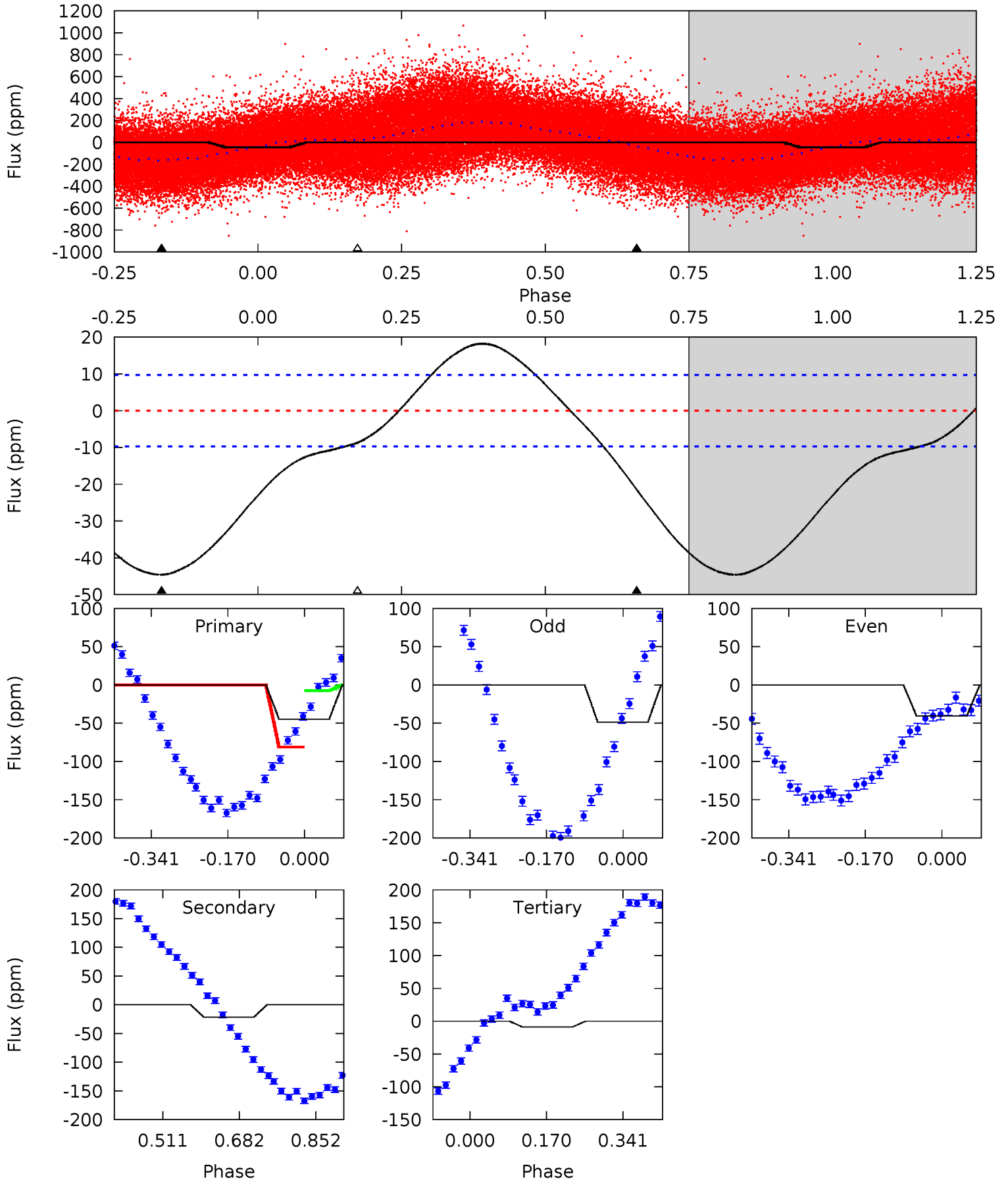
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.19	2.76	1.68	0.62	4.61	1.74	1.13	1.51	2.57	1.08	2.14	0.84	1.01	0.42	0.30



Alt Model-Shift Uniqueness Test

003439374-01, P = 0.696829 Days, E = 131.283449 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.5	9.86	4.00	0	4.45	1.37	5.91	16.5	20.5	5.86	9.86	1.83	1.06	0.29	17.5



Stellar Parameters For KIC 003439374

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7196^{+200}_{-300}	$4.114^{+0.170}_{-0.187}$	$-0.180^{+0.250}_{-0.350}$	$1.751^{+0.520}_{-0.426}$	$1.452^{+0.209}_{-0.255}$	$0.381^{+0.360}_{-0.187}$
	+3%/-4%	+4%/-5%	+139%/-194%	+30%/-24%	+14%/-18%	+95%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 003439374-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 2	$0.39^{+0.35}_{-0.26}$	4437^{+353}_{-301}	7311^{+9381}_{-2309}	$5.331^{+37.897}_{-4.055}$
Alt.	-21 ± 2	$1.22^{+0.49}_{-0.42}$	4424^{+367}_{-330}	5795^{+1514}_{-837}	$2.374^{+3.184}_{-1.171}$

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

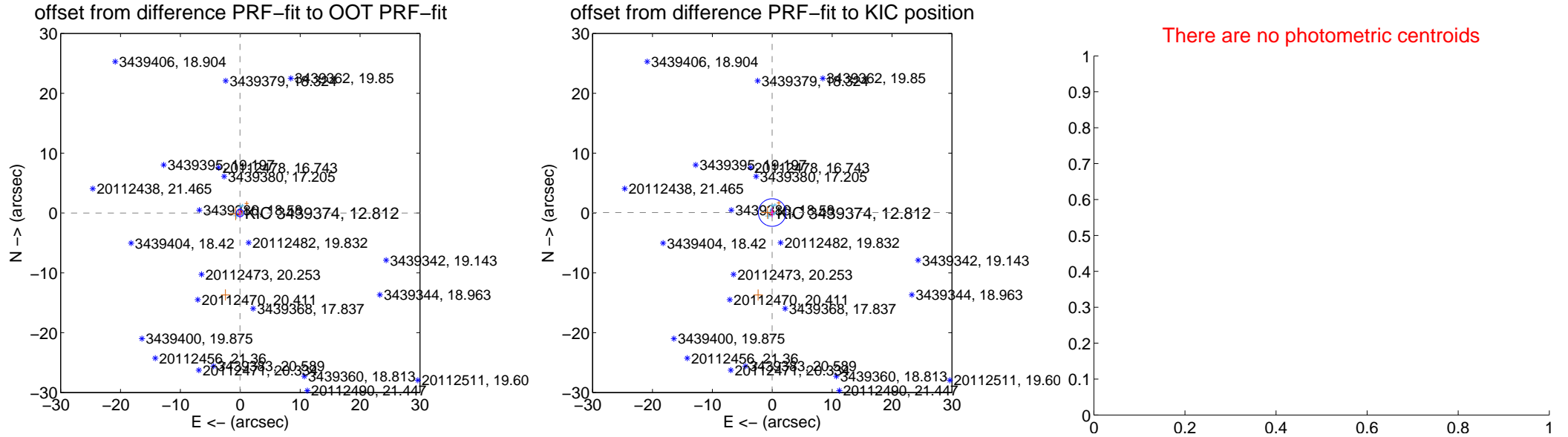
DV Centroid Data

Supplemental centroid analysis for 003439374-01. Kepler magnitude: 12.81. Transit SNR 0.57

There are 12 quarters with good PRF difference image offsets

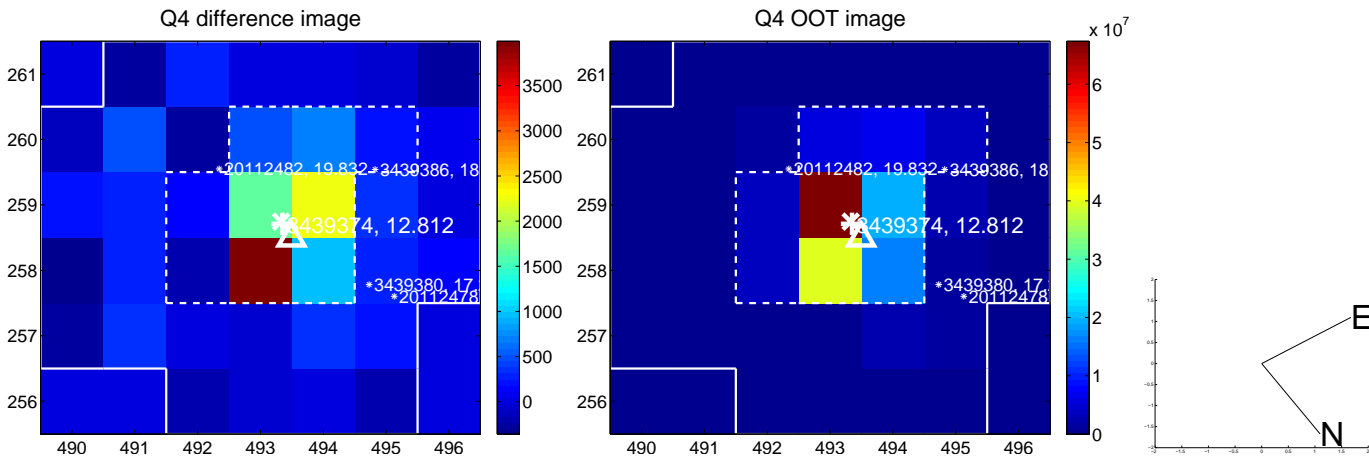
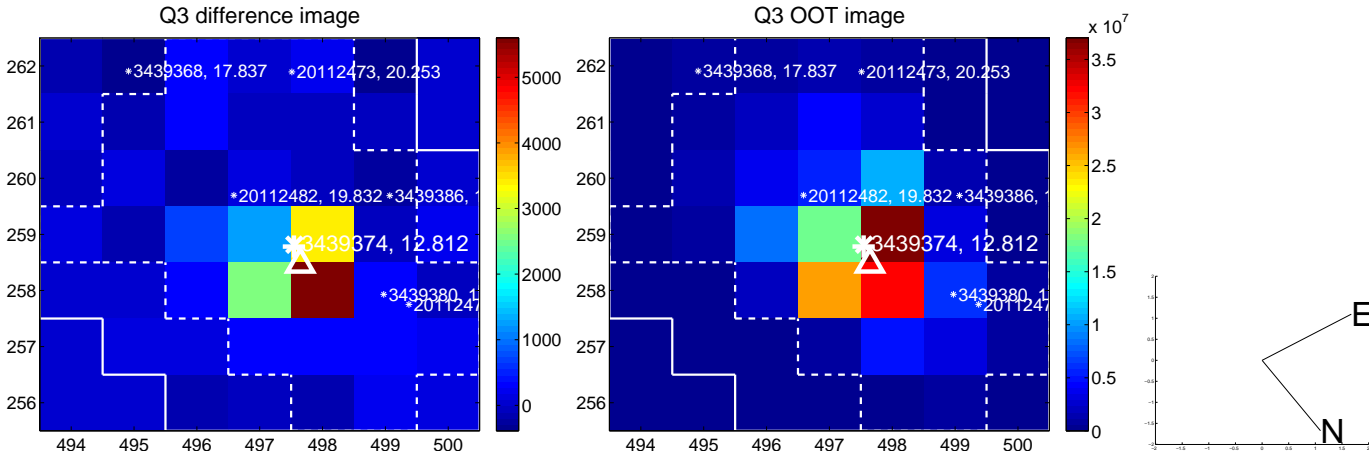
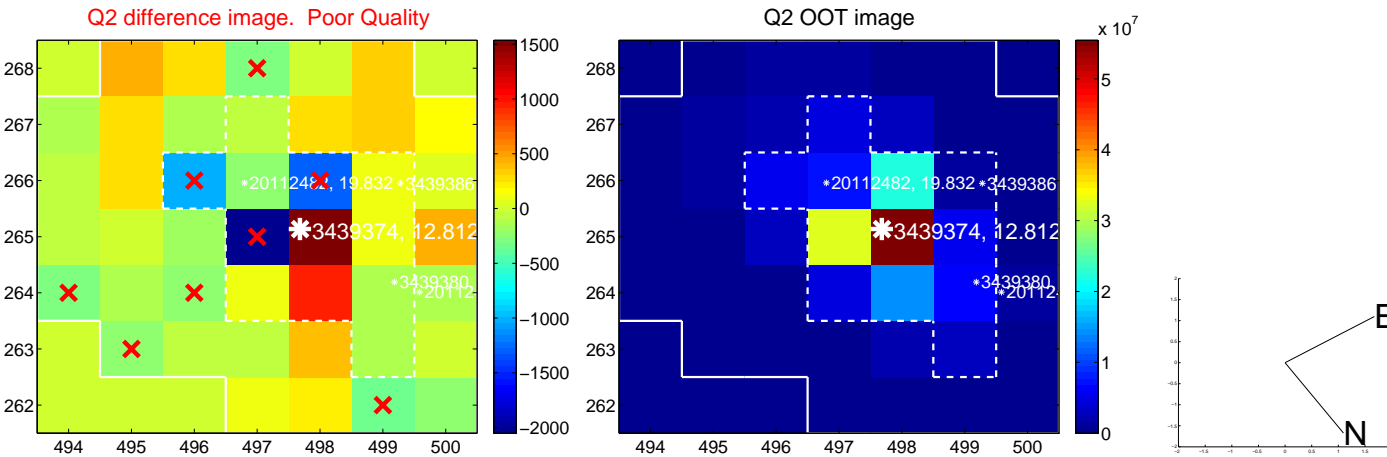
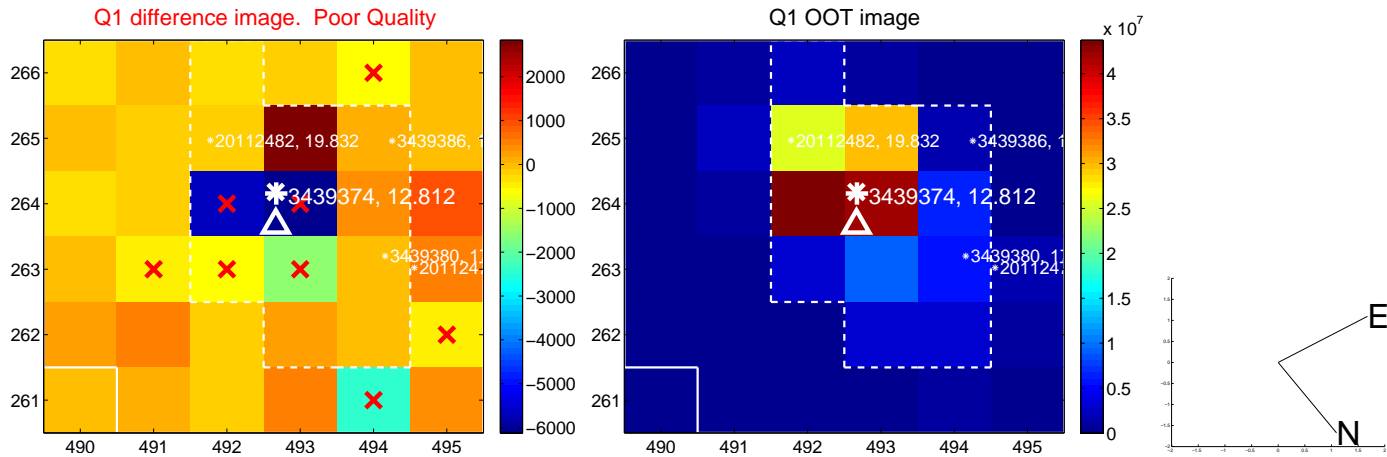
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.046 ± 0.209	0.22	0.046 ± 0.199	-0.001 ± 0.859
PRF-fit source offset from KIC position	0.082 ± 0.768	0.11	0.017 ± 0.199	0.080 ± 0.817
photometric centroid source offset	—	—	—	—

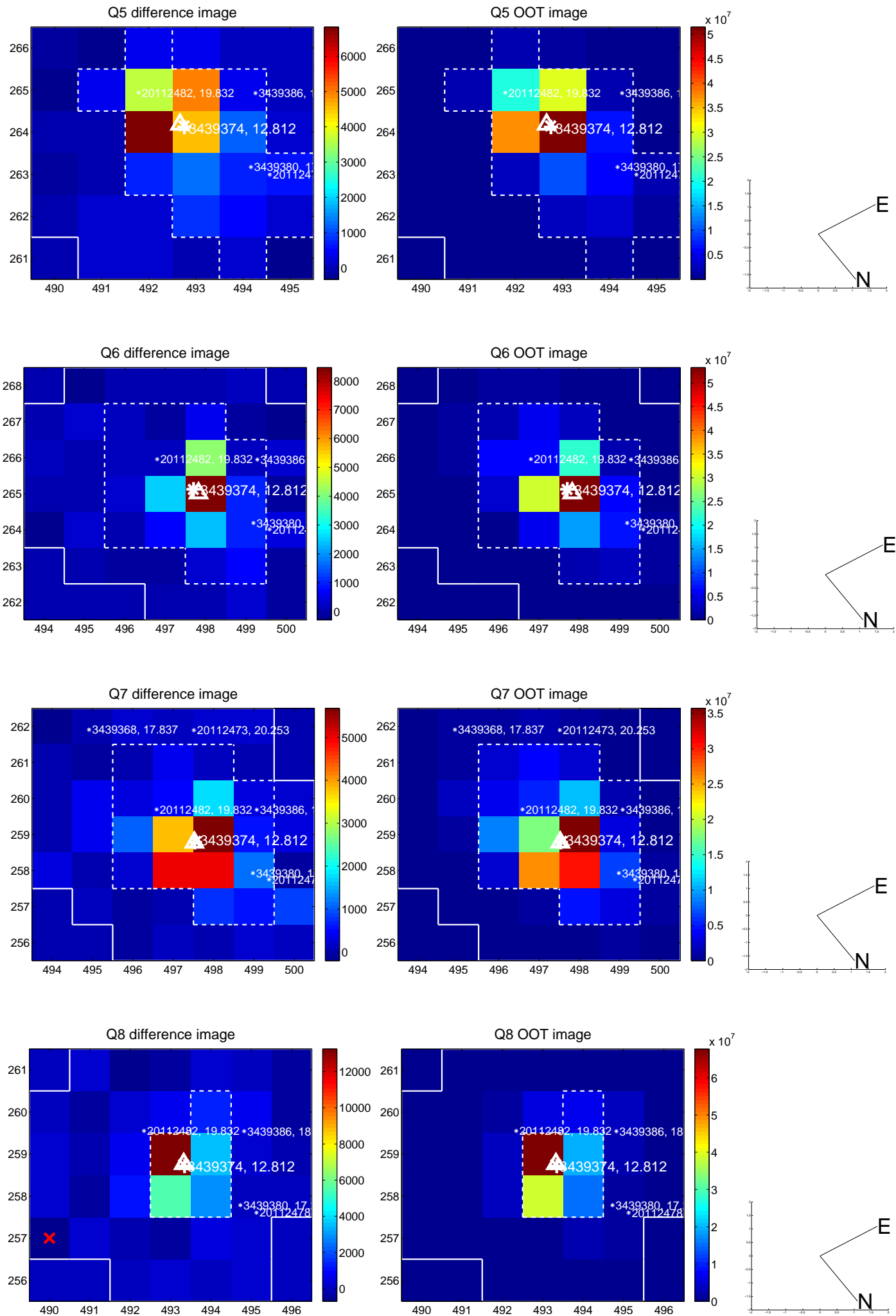


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

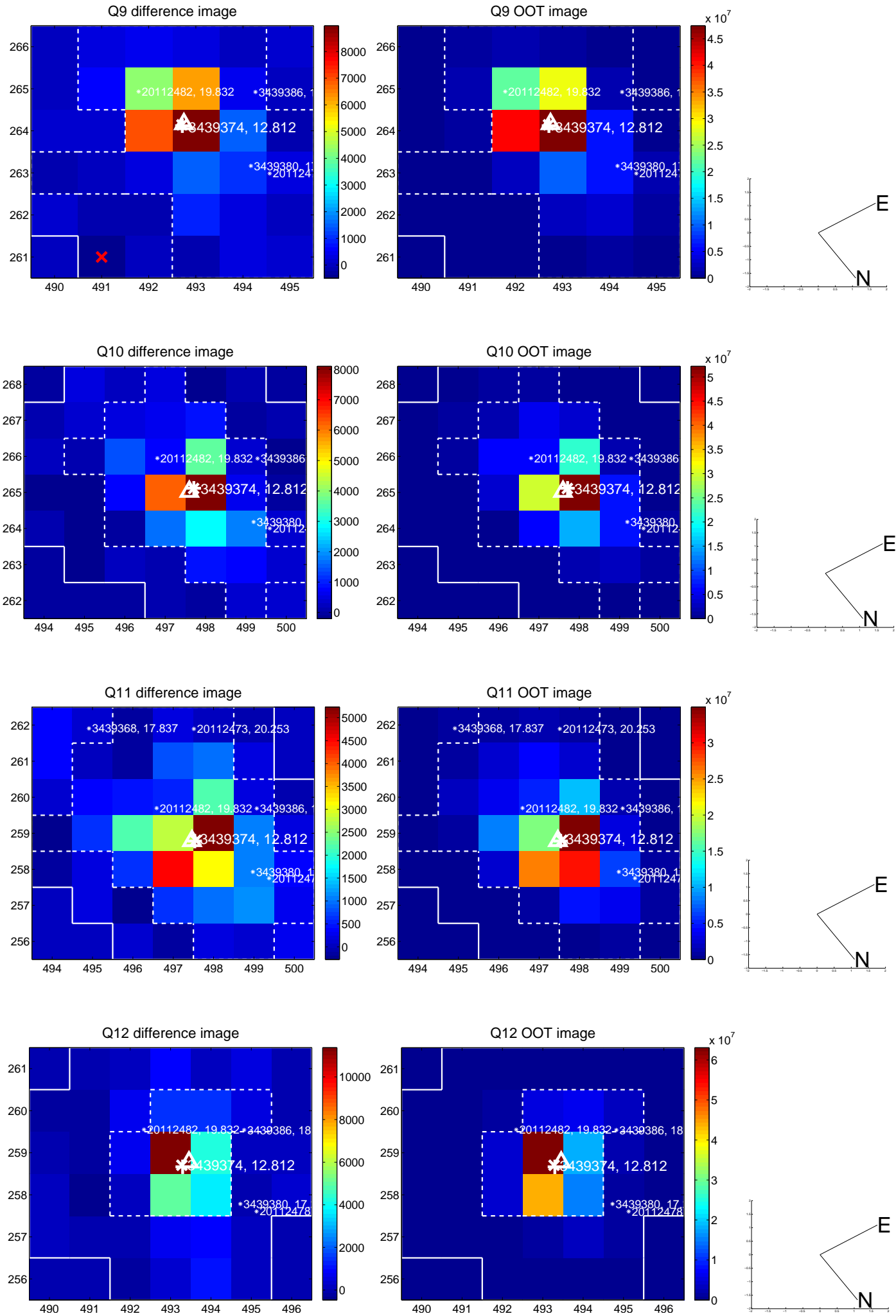
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



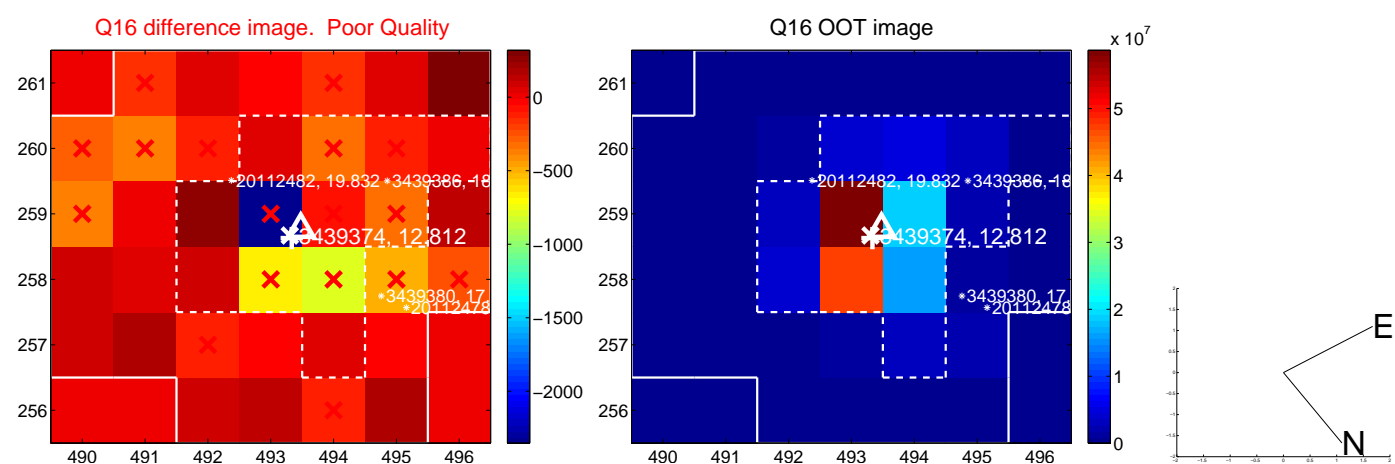
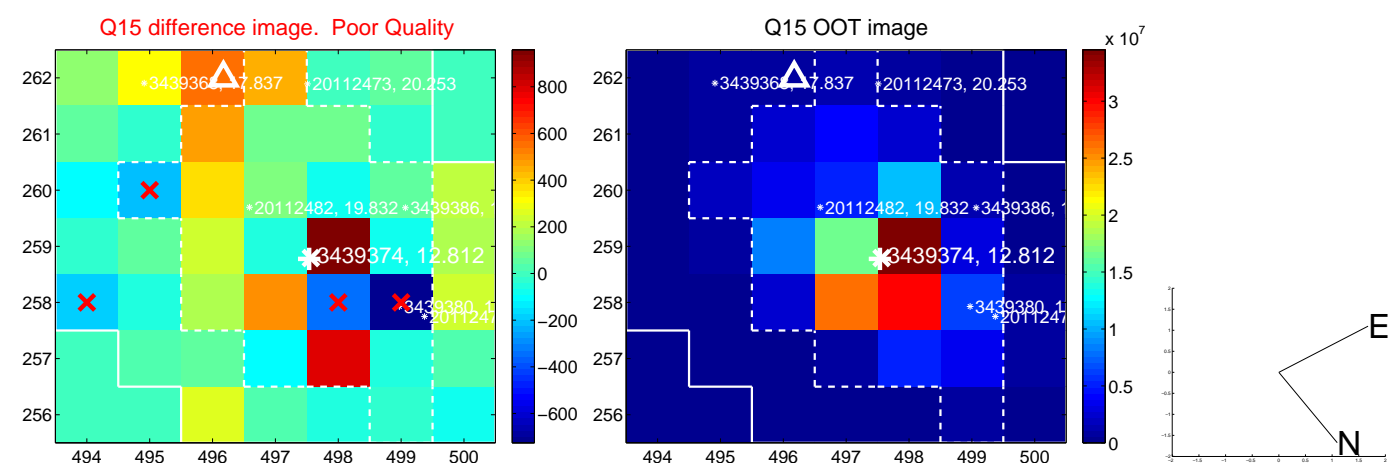
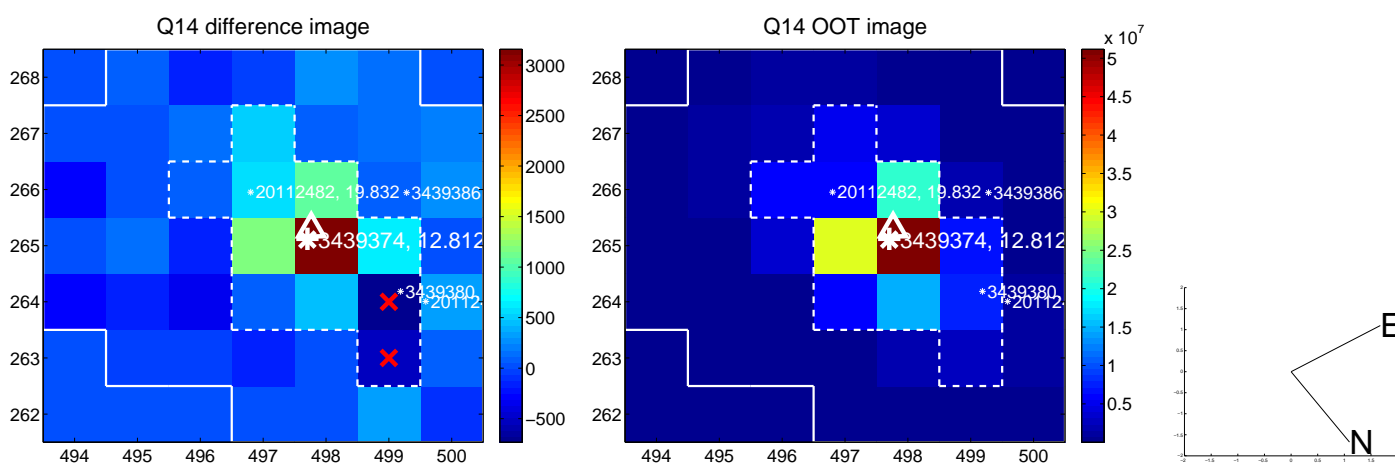
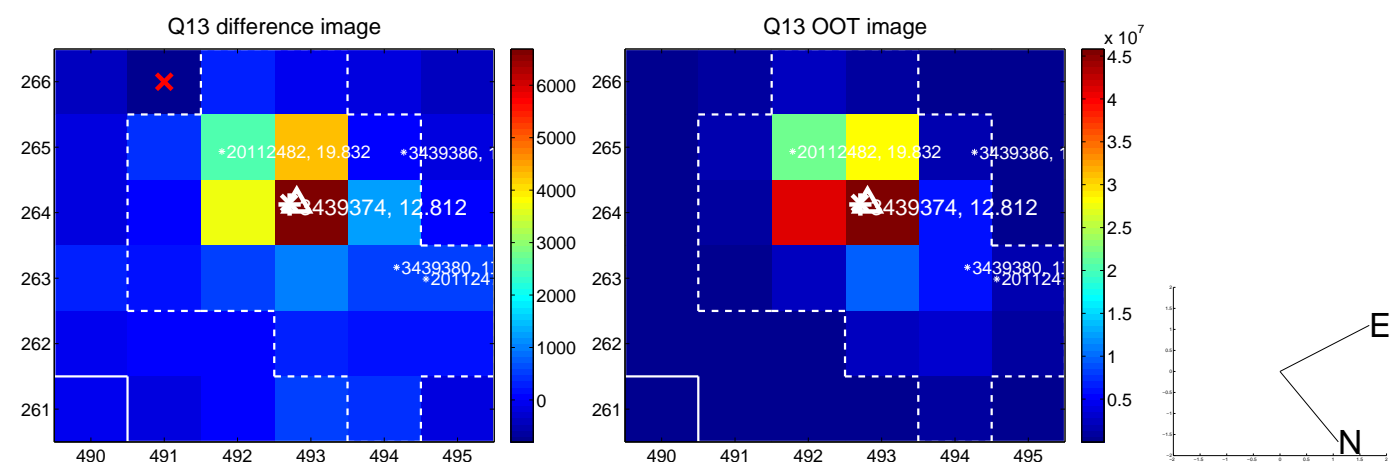
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



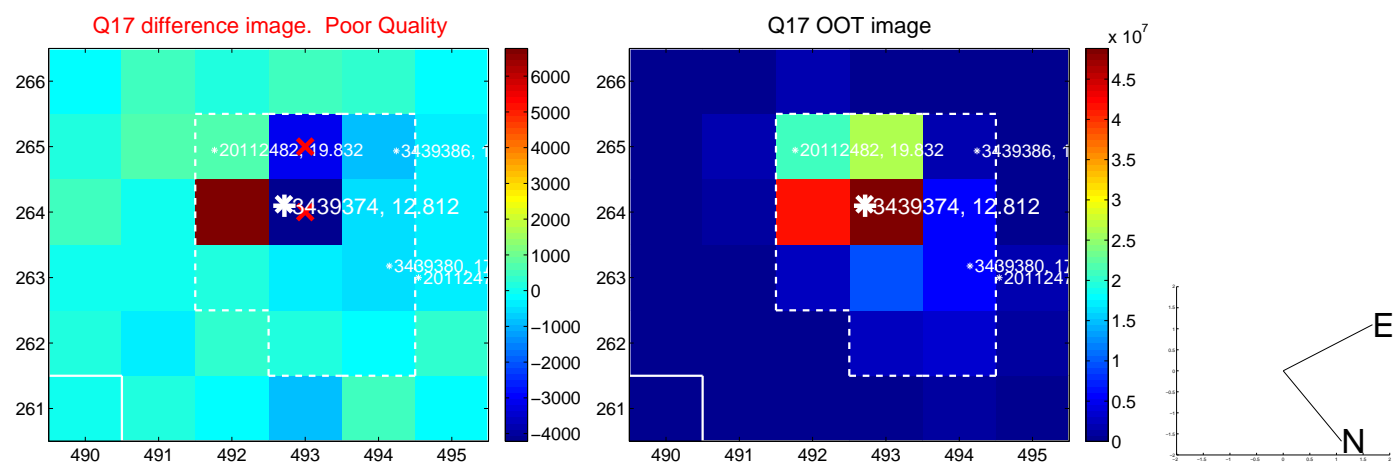
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

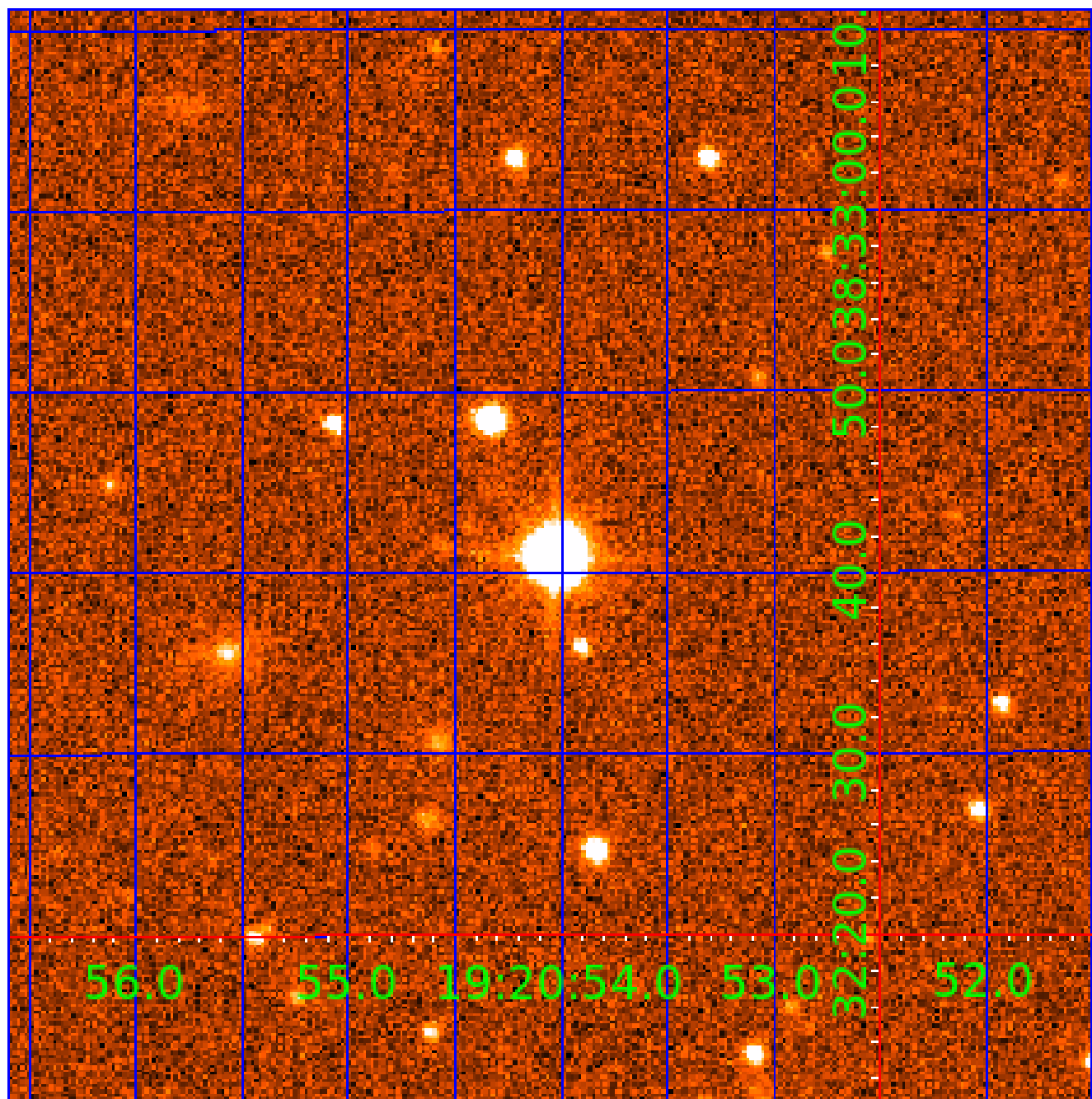


folded centroid time series figure for this object.



UKIRT Image

Declination



KIC 003439374

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})
003439374-01	OBS	No	0.696707	131.977536	1.8	0.885	9.9	0.6	1.75	7196	0.28	24250.27
003439374-02	OBS	No	0.696826	132.035708	1.6	8.328	10.3	1.0	1.75	7196	0.23	24244.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003439374-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
003439374-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS

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

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

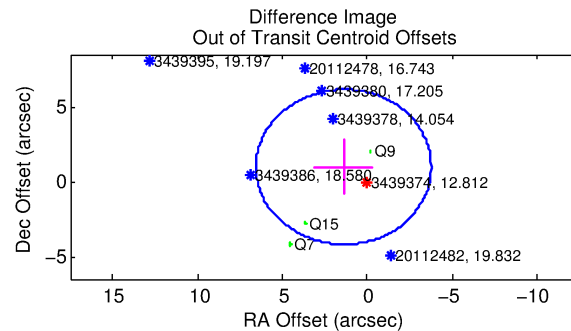
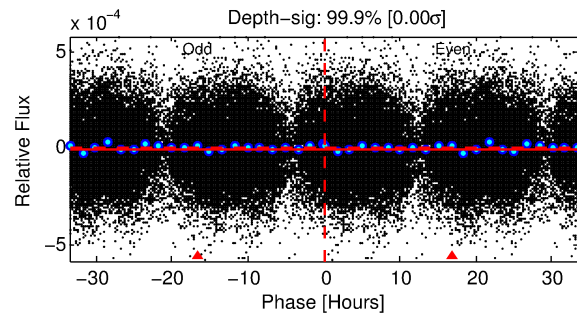
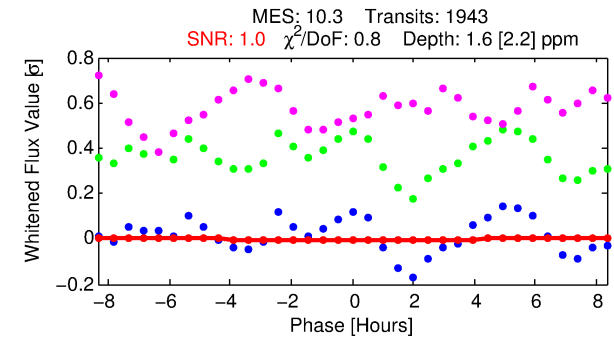
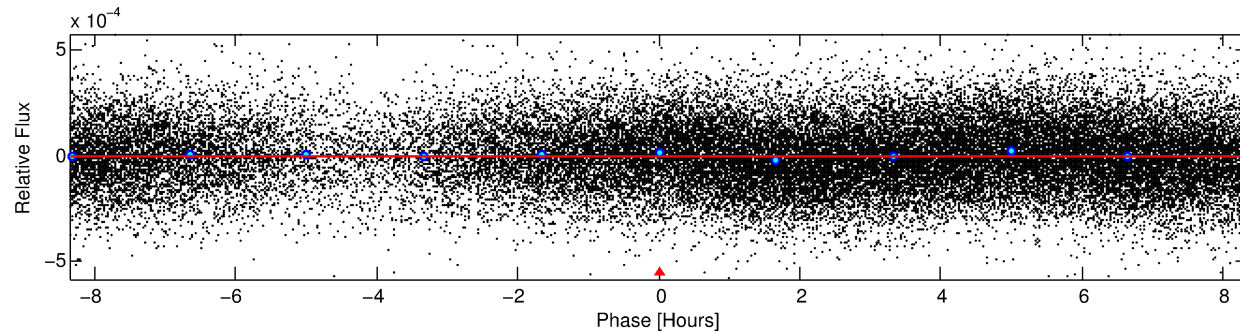
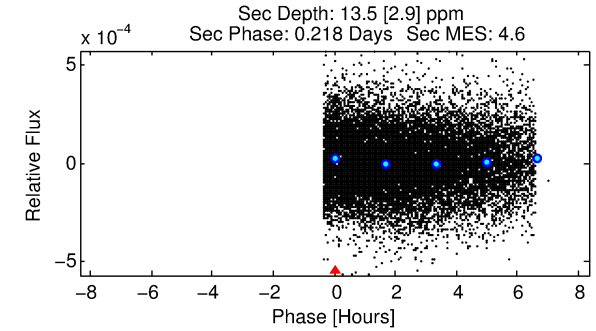
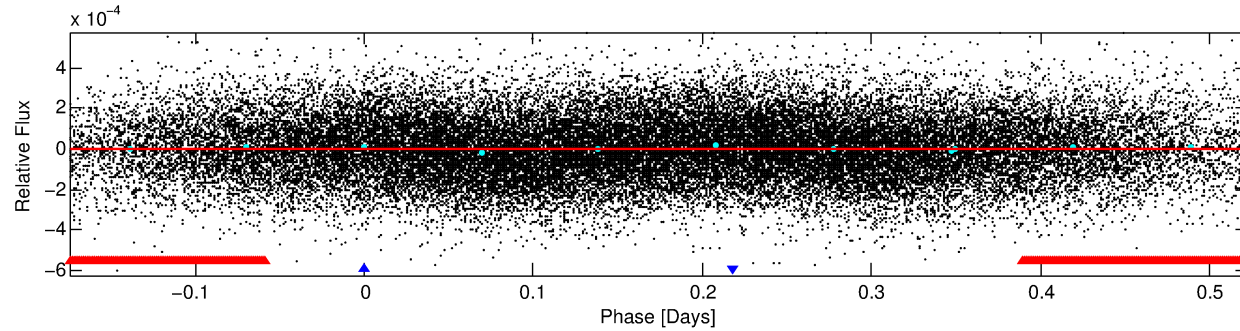
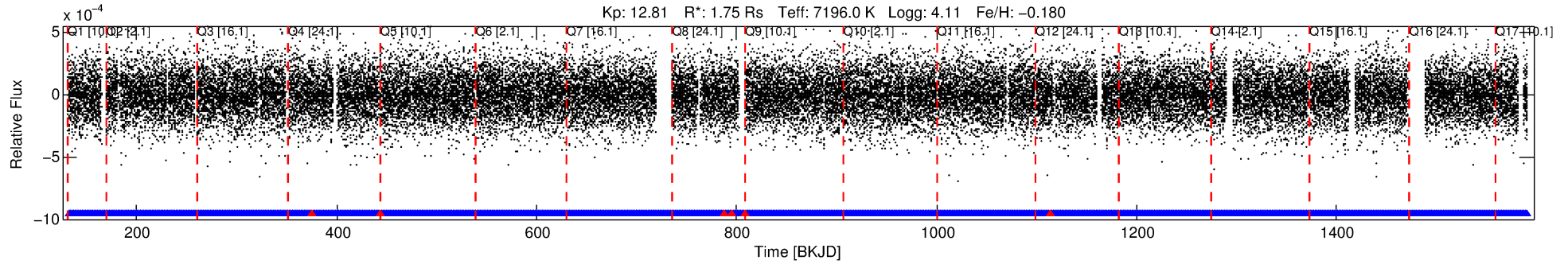
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003439374-02

No Significant Match Found

DV One-Page Summary

KIC: 3439374 Candidate: 2 of 2 Period: 0.697 d



DV Fit Results:

Period = 0.69683 [0.00013] d
Epoch = 132.0357 [0.1022] BKJD
Rp/R* = 0.0012 [0.0081]
a/R* = 1.00 [0.08]
b = 0.06 [645.34]
Seff = 24244.74 [9371.36]
Teff = 3182 [307] K
Rp = 0.23 [1.54] Re
a = 0.0174 [0.0043] AU
Ag = 44.07 [601.11] [0.07σ]
Teffp = 12675 [43214] K [0.22σ]

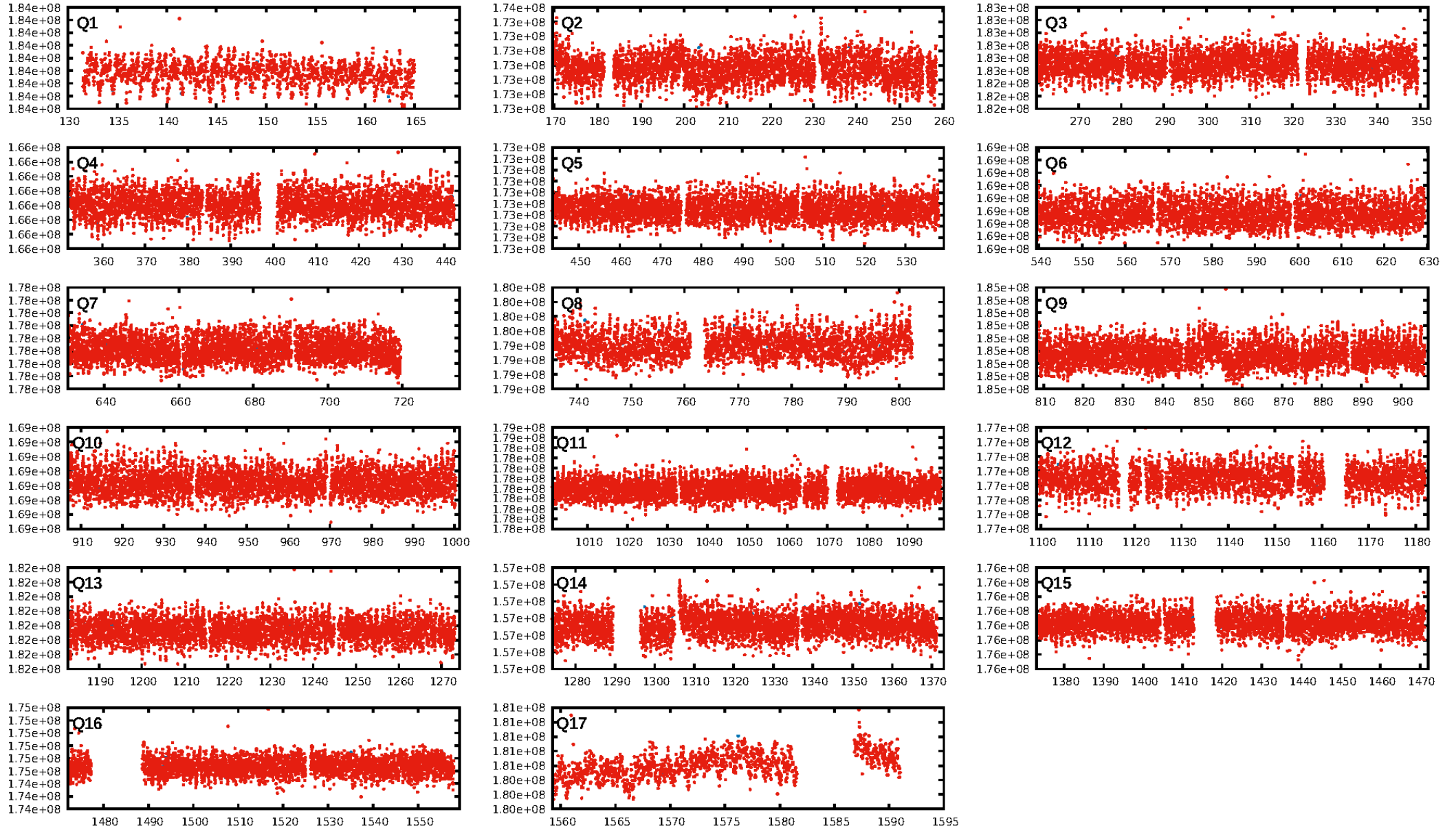
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1849/1855]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.689 arcsec [0.98σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-rm: 1.692 arcsec [0.99σ]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.00 [0/17]

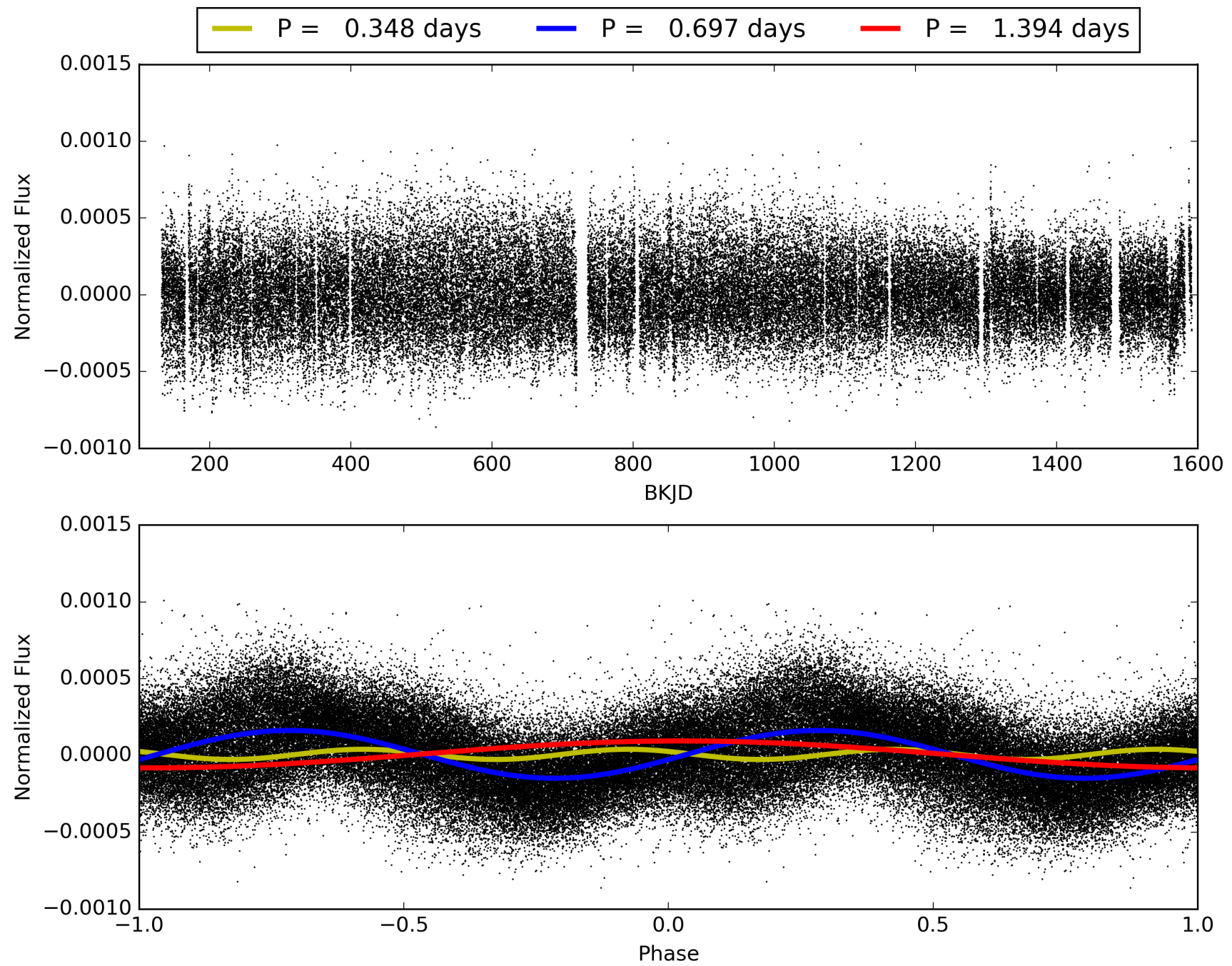
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:04:55 Z

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

TCE 003439374-02, PDC Light Curves

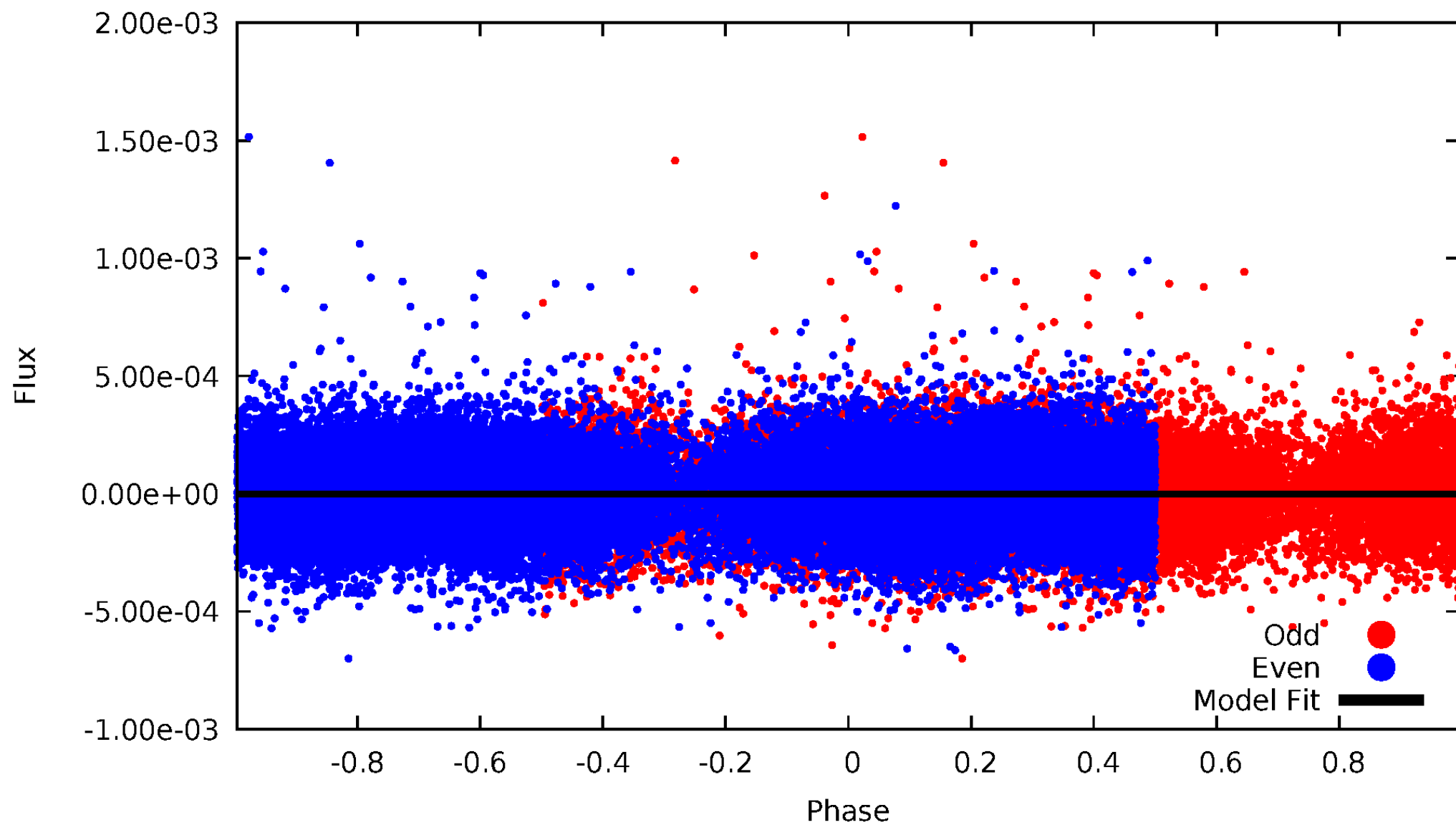


TCE 003439374-02



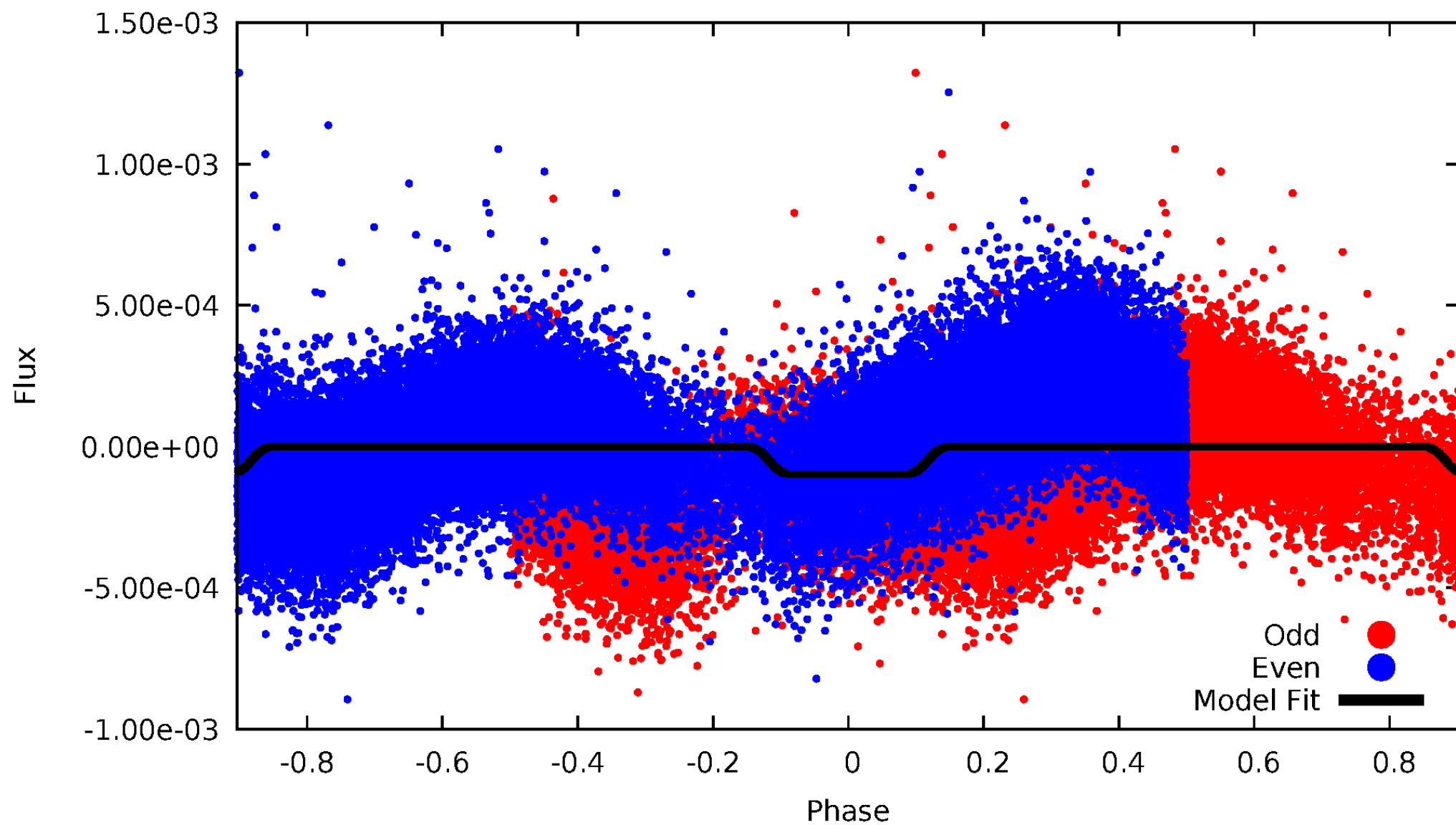
DV Odd/Even

TCE 003439374-02



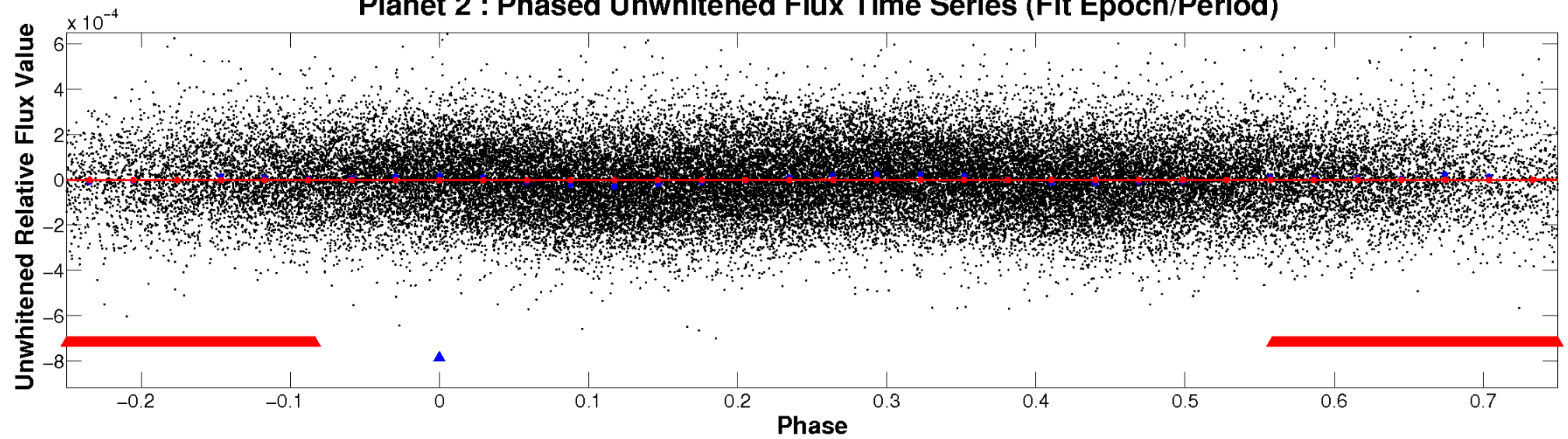
ALT Odd/Even

TCE 003439374-02

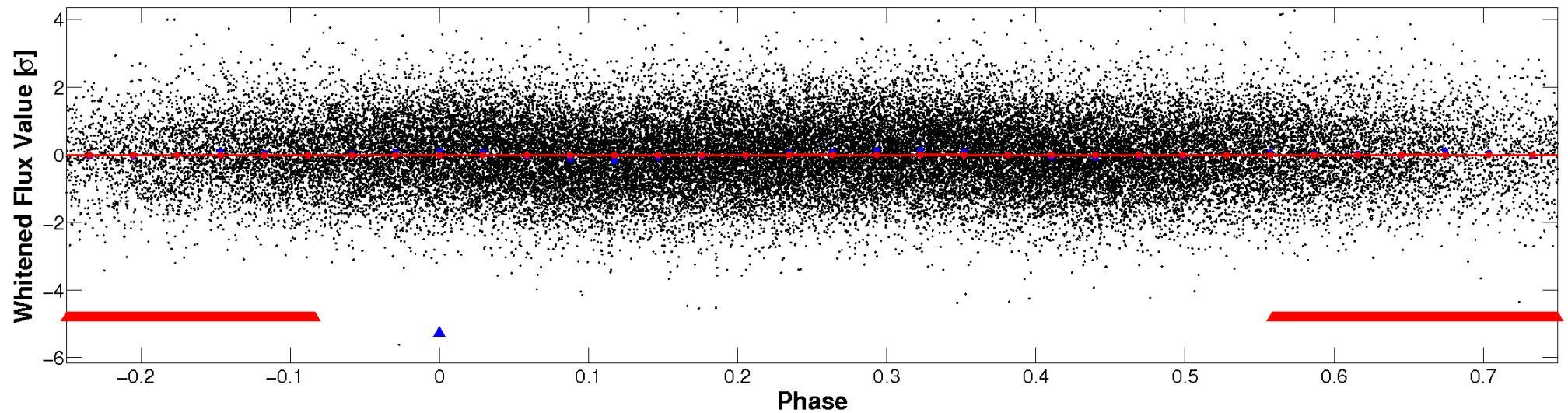


Non-Whitened Vs. Whitened Light Curve

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

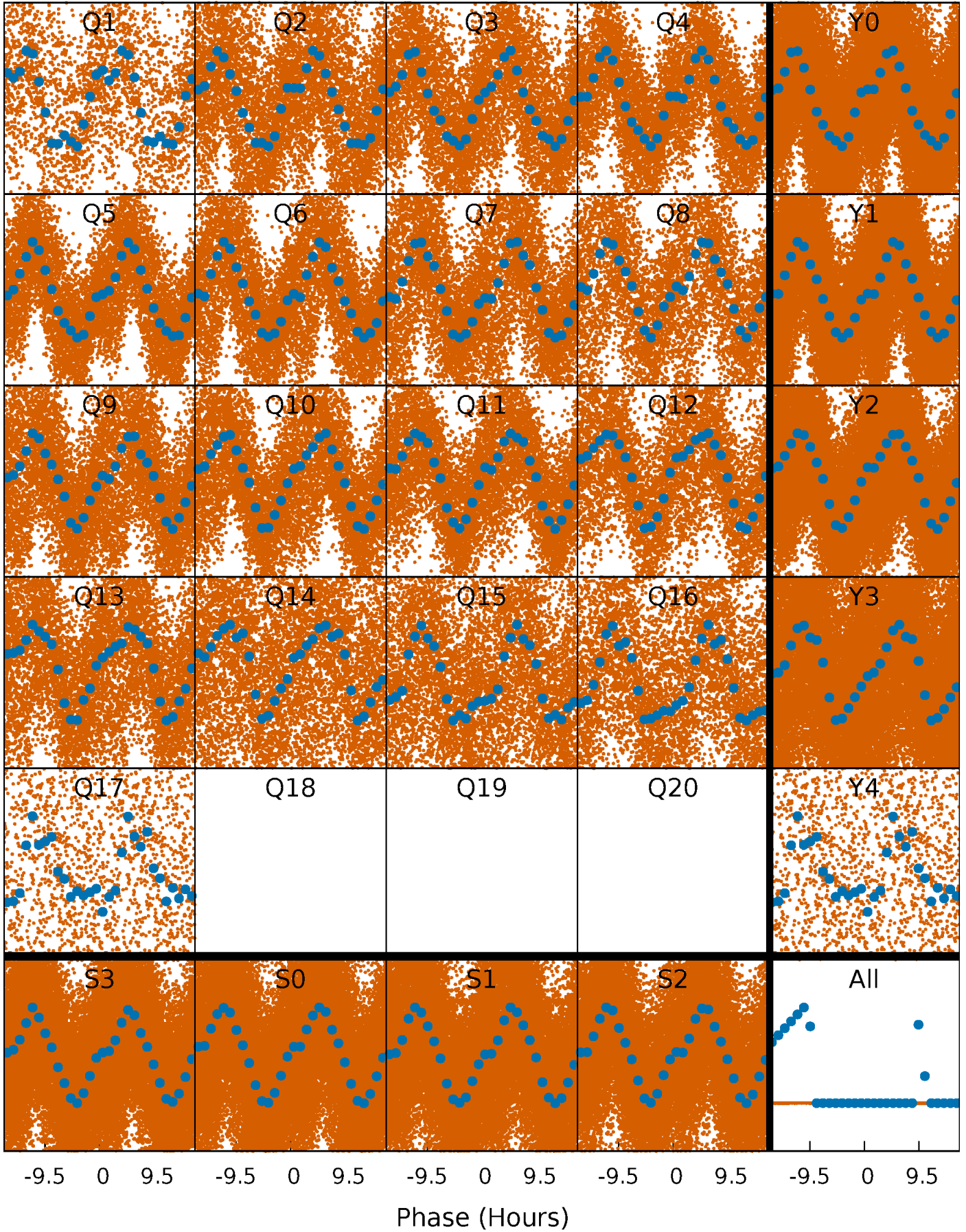


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



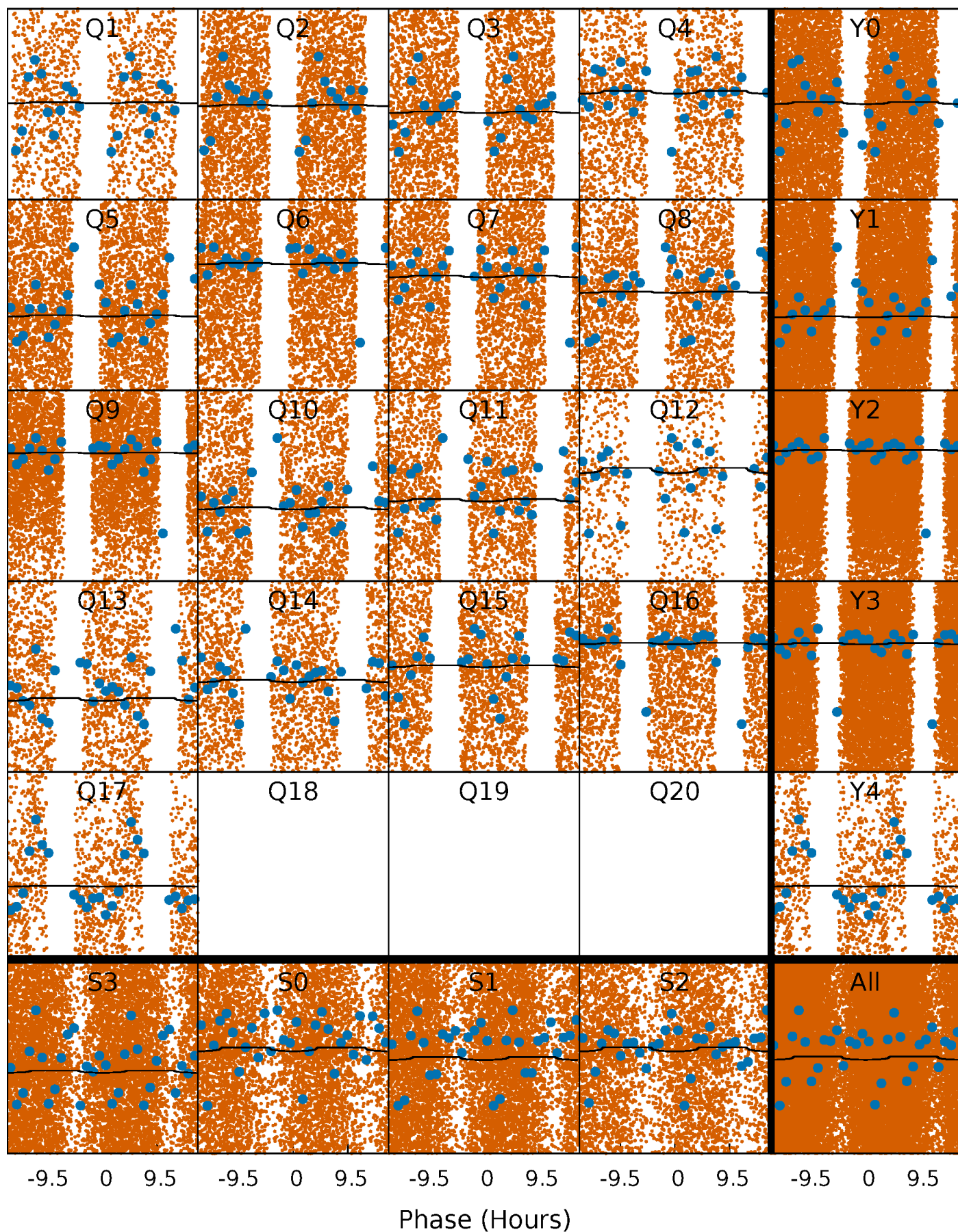
PDC Quarter-Phased Transit Curves

TCE 003439374-02 P= 0.696826 Days $T_0=132.035708$ (BKJD)



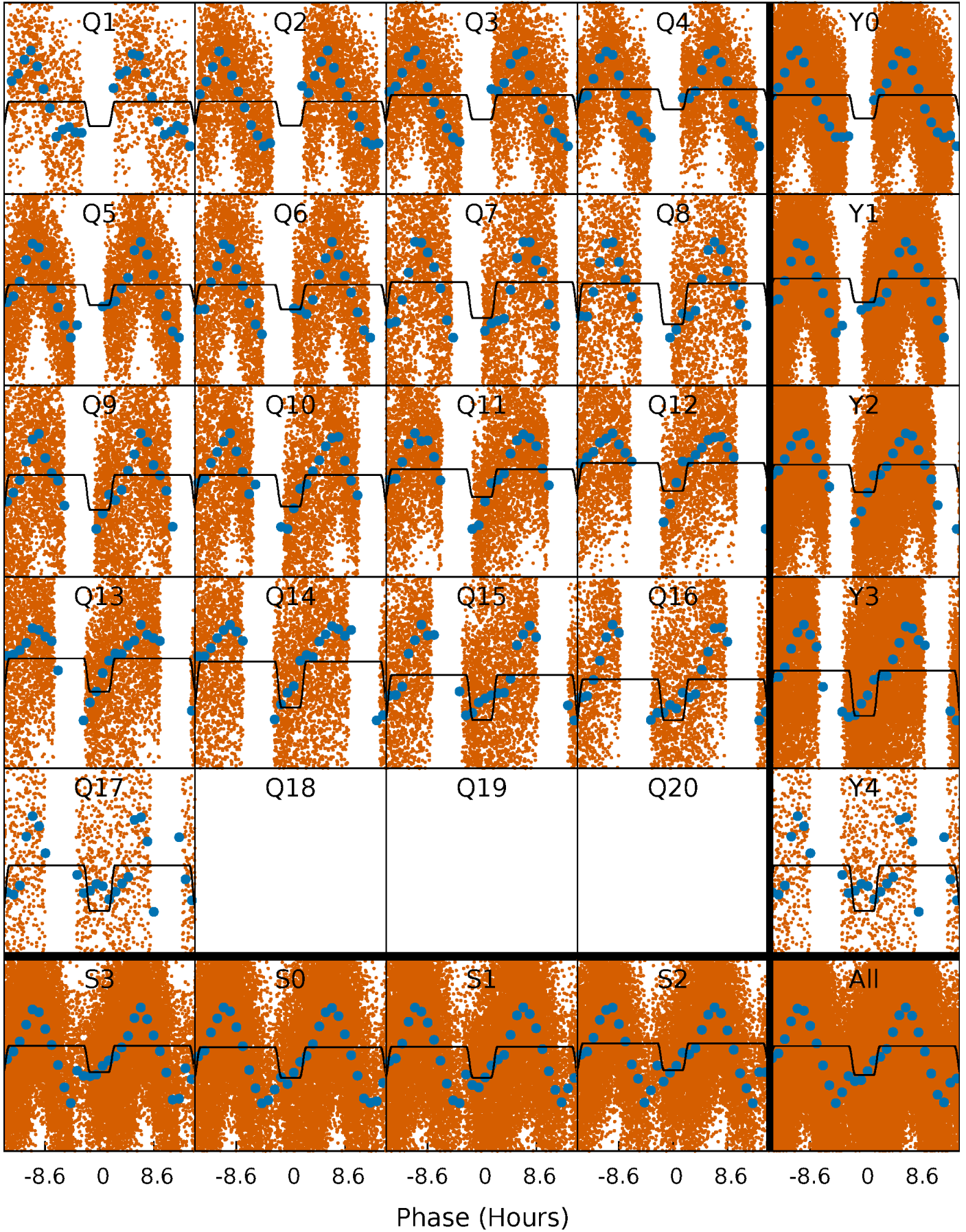
DV Quarter-Phased Transit Curves

TCE 003439374-02 P= 0.696826 Days $T_0=132.035708$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

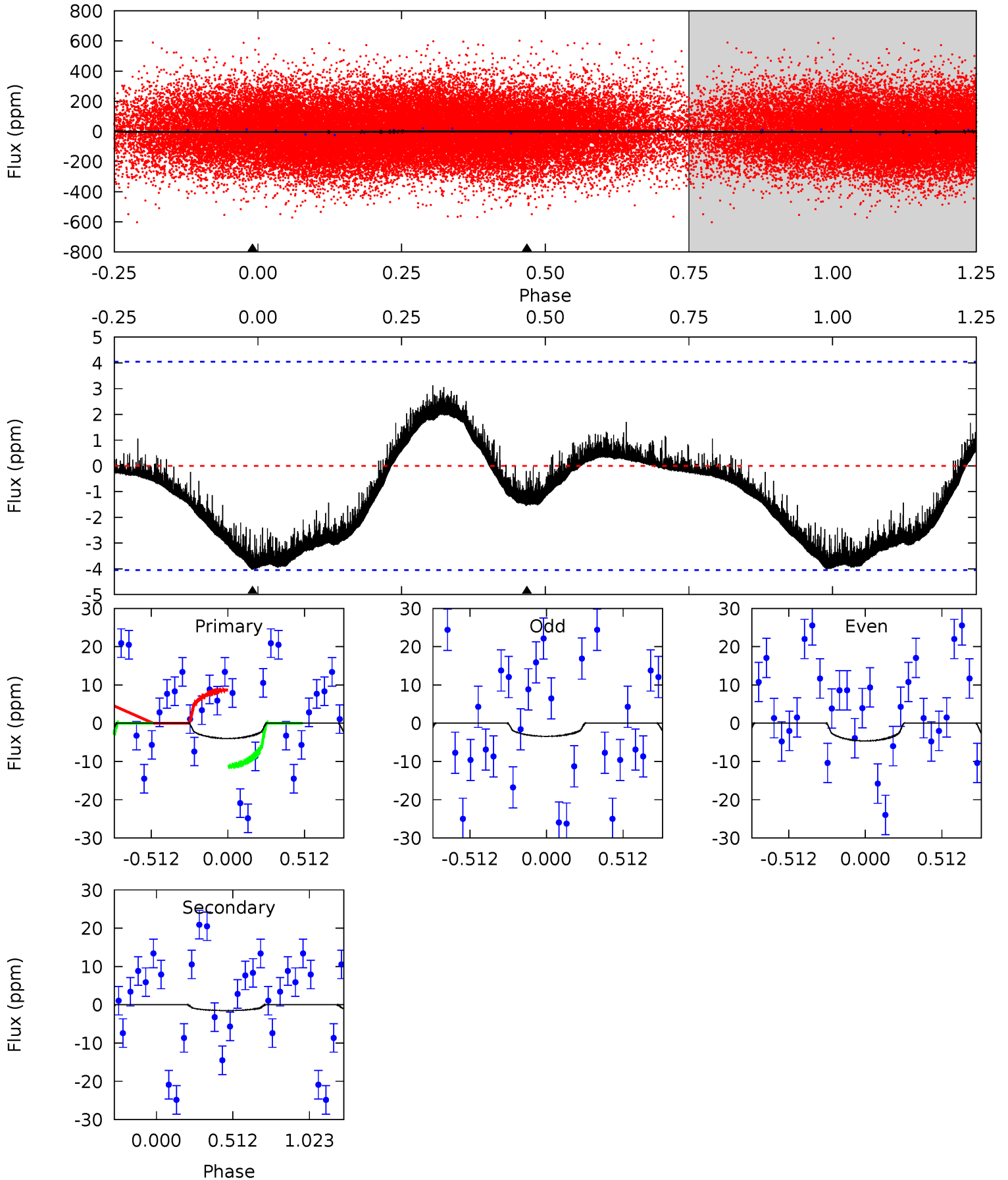
TCE 003439374-02 P= 0.696829 Days $T_0=131.980278$ (BKJD)



DV Model-Shift Uniqueness Test

003439374-02, P = 0.696826 Days, E = 131.338882 Days

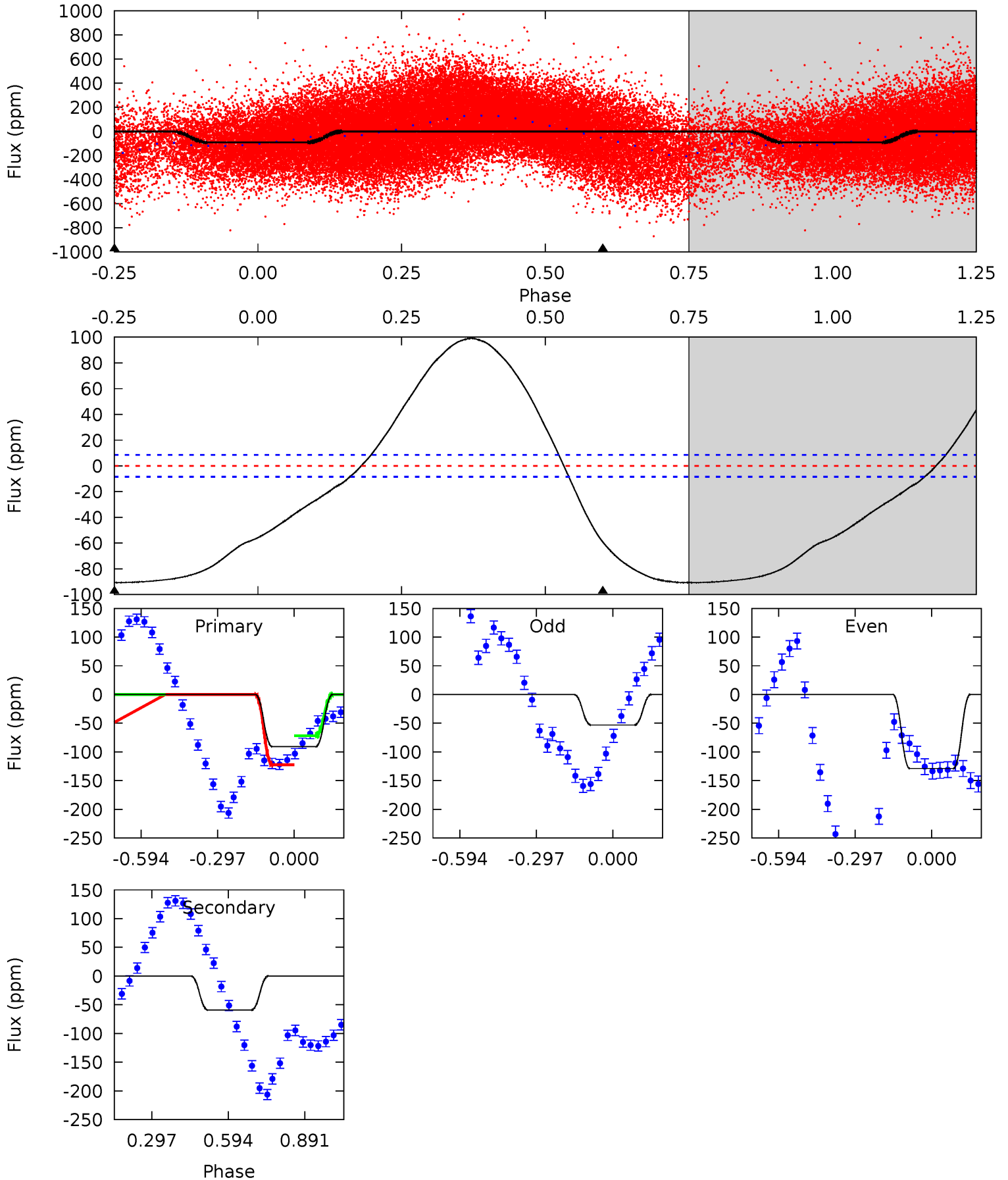
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.16	1.58	0	0	4.21	0.66	0.62	4.16	4.16	1.58	1.58	0.63	0.92	0.44	1.25



Alt Model-Shift Uniqueness Test

003439374-02, P = 0.696829 Days, E = 131.283449 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.9	29.9	0	0	4.33	1.04	17.5	45.9	45.9	29.9	29.9	18.5	0.95	0.52	13.7



Stellar Parameters For KIC 003439374

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7196^{+200}_{-300}	$4.114^{+0.170}_{-0.187}$	$-0.180^{+0.250}_{-0.350}$	$1.751^{+0.520}_{-0.426}$	$1.452^{+0.209}_{-0.255}$	$0.381^{+0.360}_{-0.187}$
	+3%/-4%	+4%/-5%	+139%/-194%	+30%/-24%	+14%/-18%	+95%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 003439374-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2 ± 1	$1.14^{+1.23}_{-0.82}$	4434^{+357}_{-302}	-3403^{+9117}_{-547}	$0.162^{+1.933}_{-0.139}$
Alt.	-59 ± 2	$2.08^{+1.51}_{-1.24}$	4450^{+333}_{-342}	5757^{+4646}_{-1515}	$2.272^{+11.586}_{-1.523}$

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 $A_{obs} \gg 1.0$

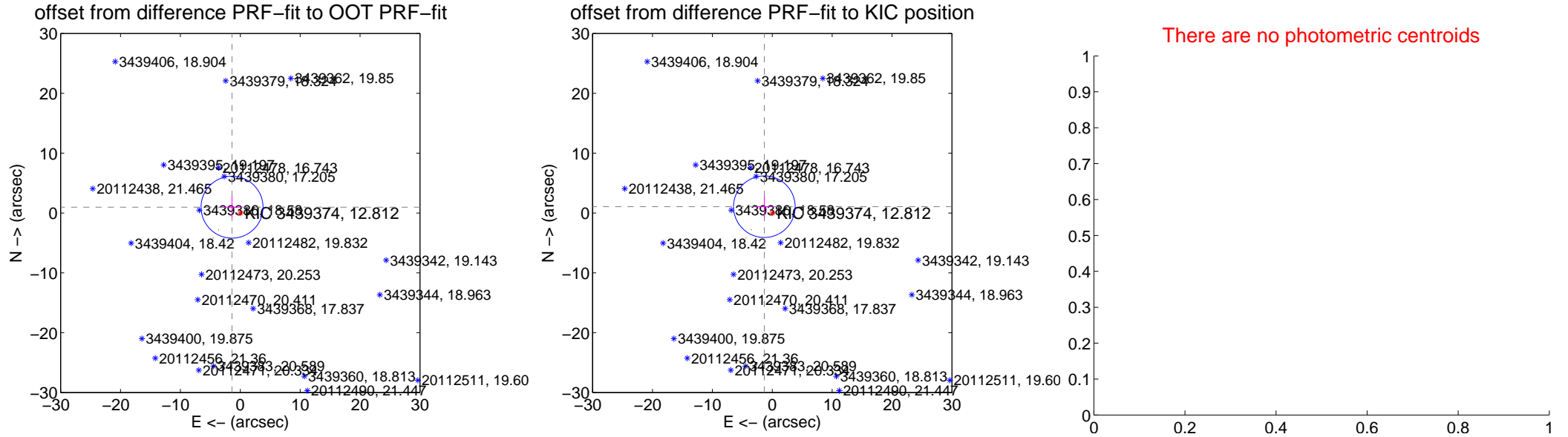
DV Centroid Data

Supplemental centroid analysis for 003439374-02. Kepler magnitude: 12.81. Transit SNR 0.96

There are 1 quarters with good PRF difference image offsets

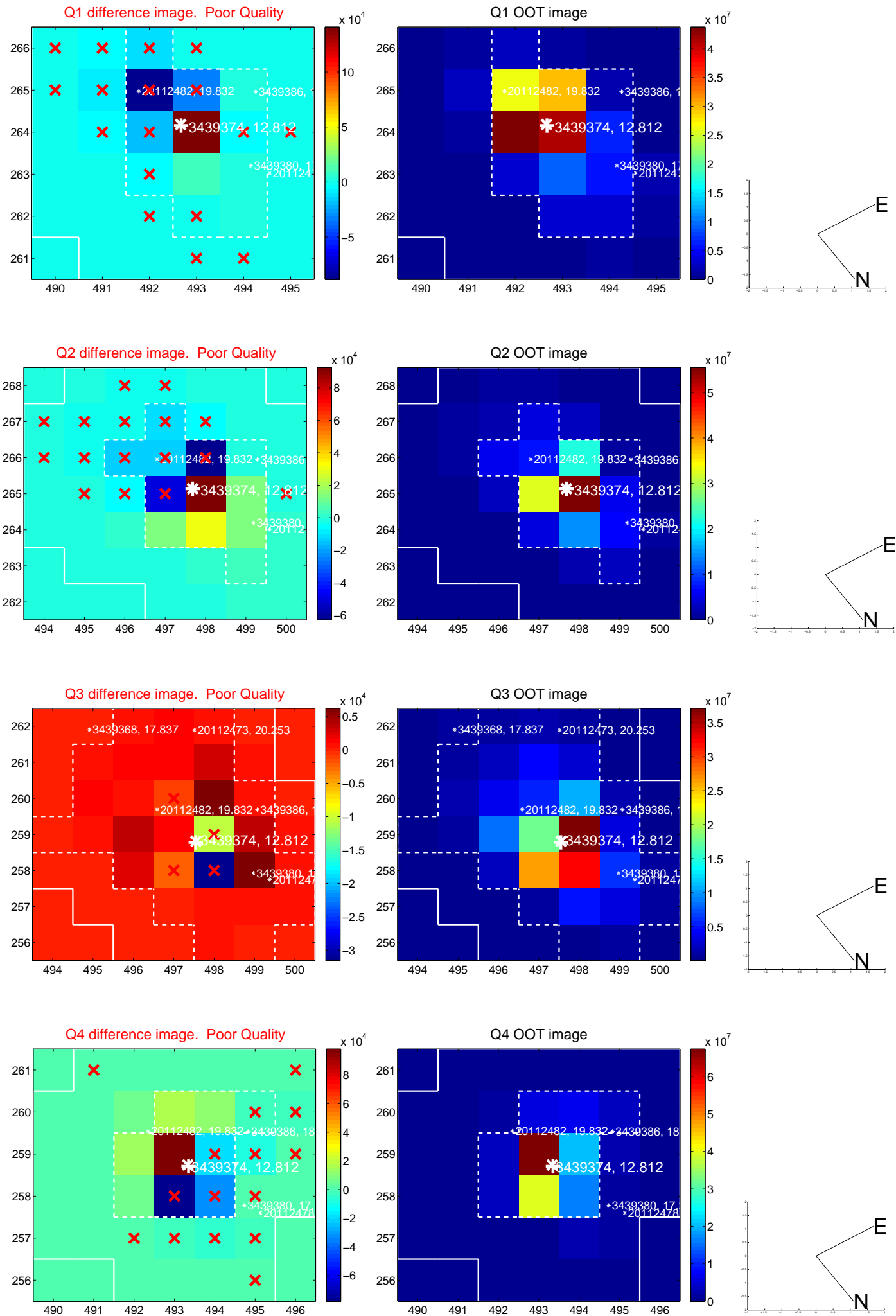
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.689 ± 1.724	0.98	1.378 ± 1.697	0.977 ± 1.778
PRF-fit source offset from KIC position	1.692 ± 1.715	0.99	1.323 ± 1.654	1.056 ± 1.806
photometric centroid source offset	—	—	—	—

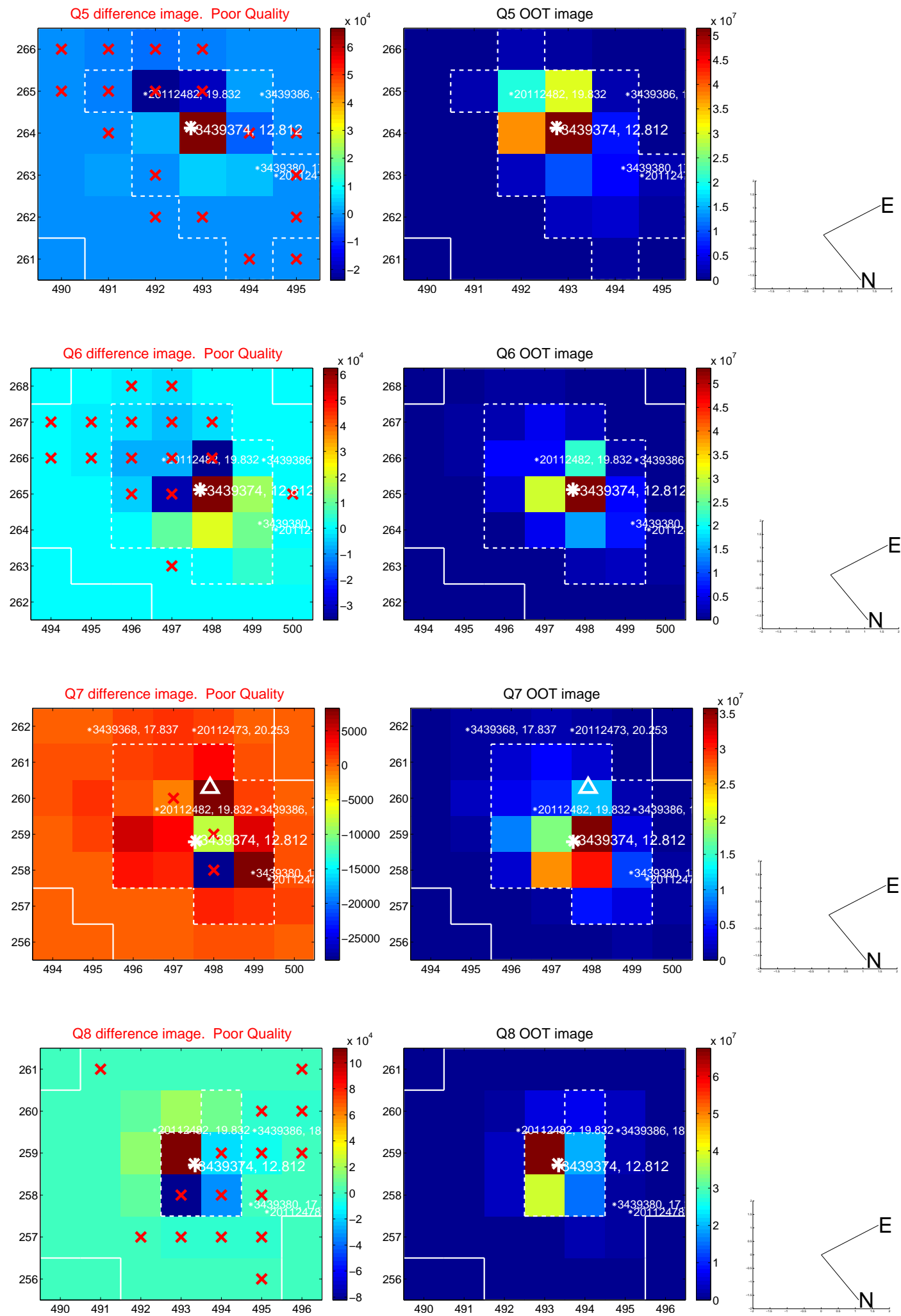


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

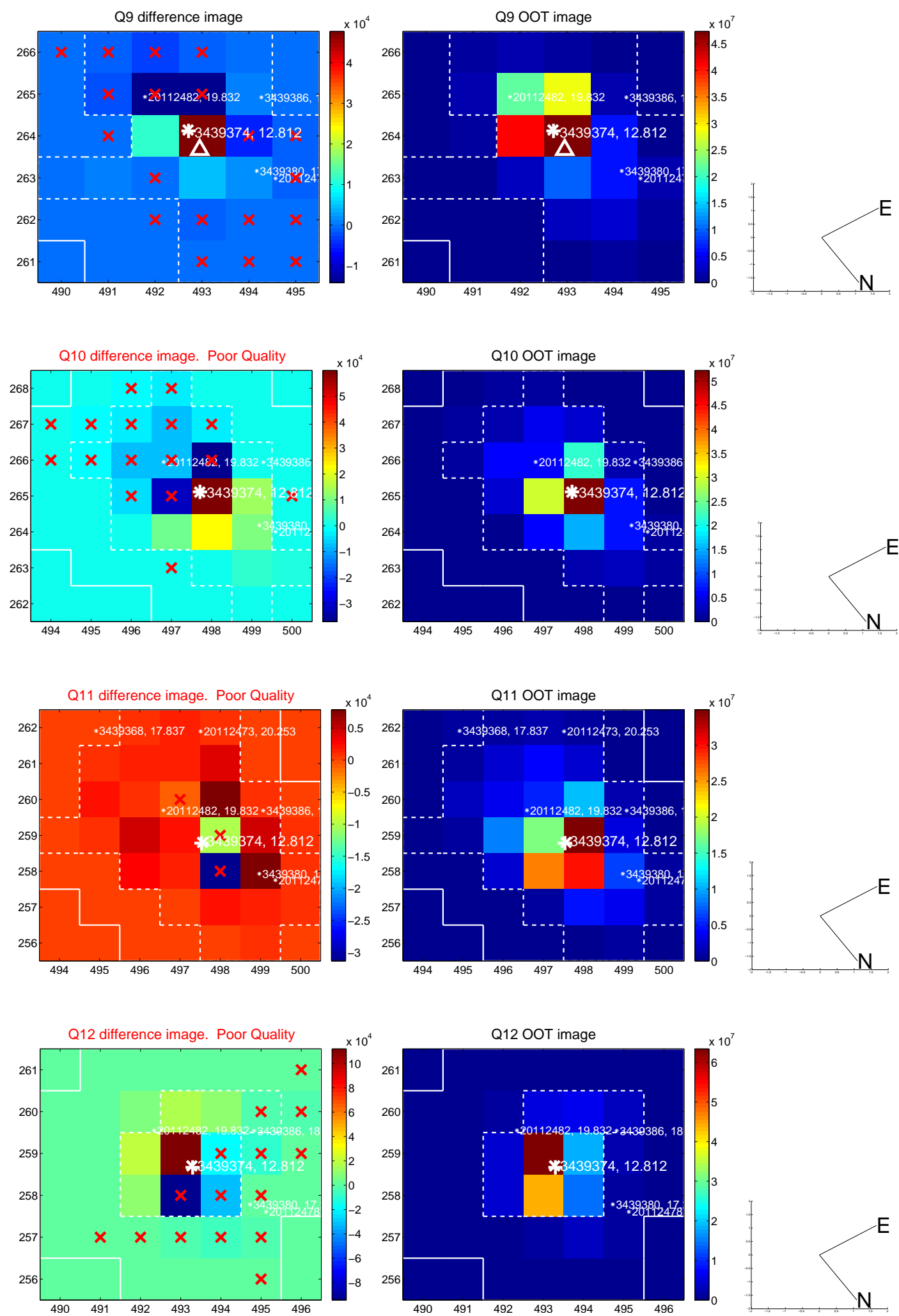
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



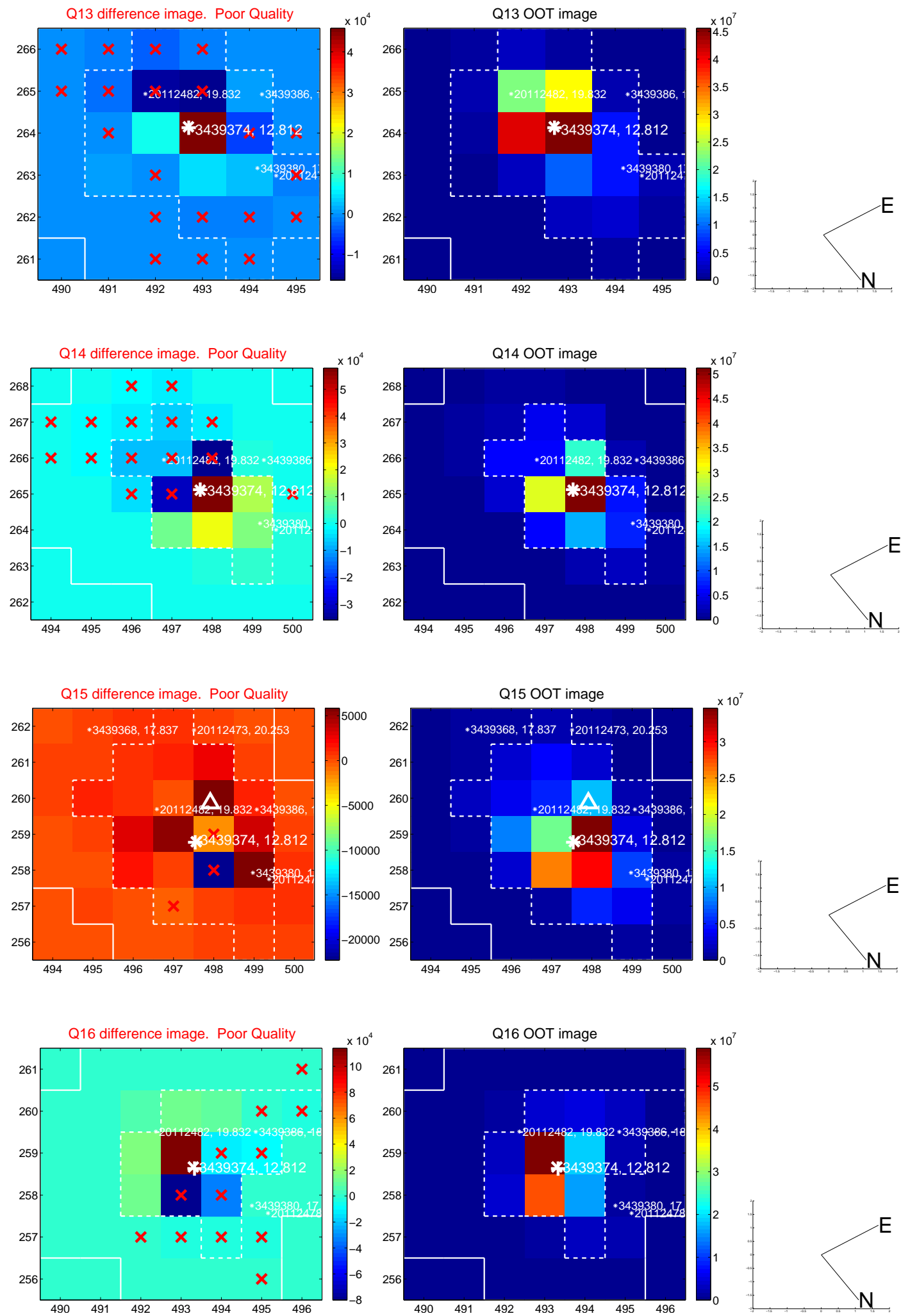
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



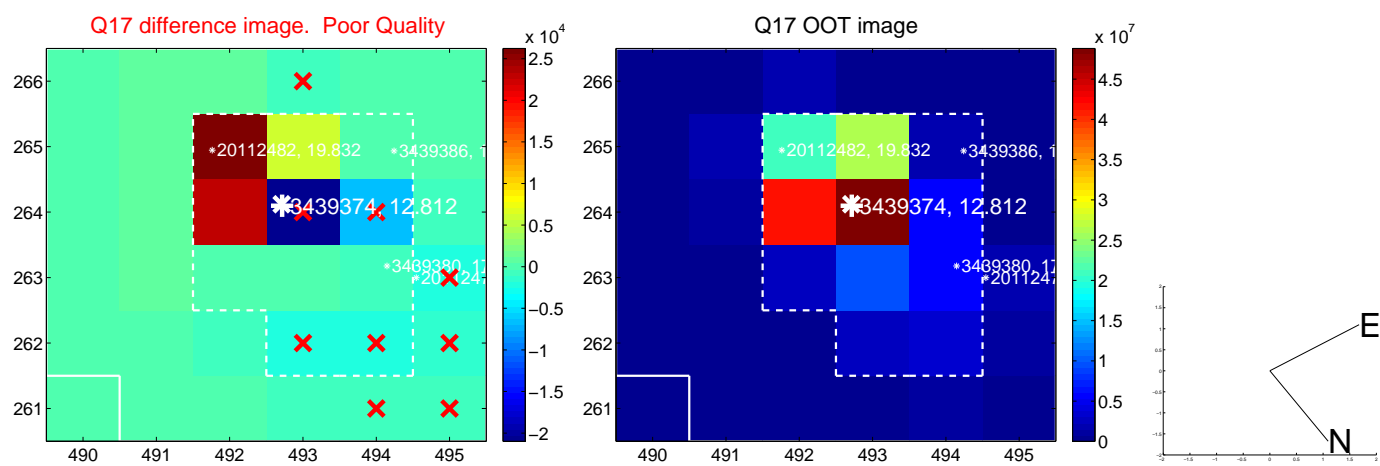
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

