

KIC 008847349

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})
008847349-01	OBS	No	0.732996	132.014693	12.3	5.500	9.2	6.3	4.30	7241	1.54	0.00
008847349-02	OBS	No	32.995091	163.160117	374.8	3.842	14.5	12.6	4.30	7241	8.52	727.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008847349-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
008847349-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

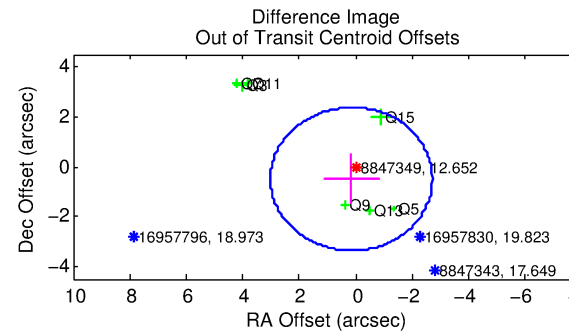
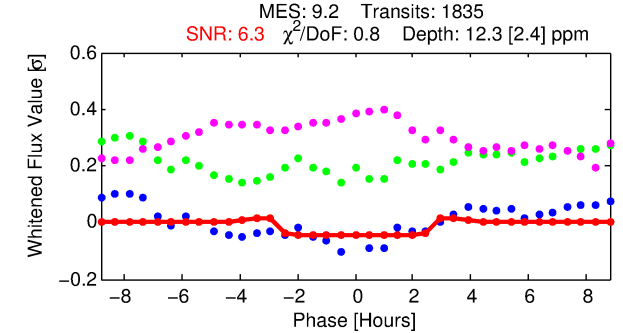
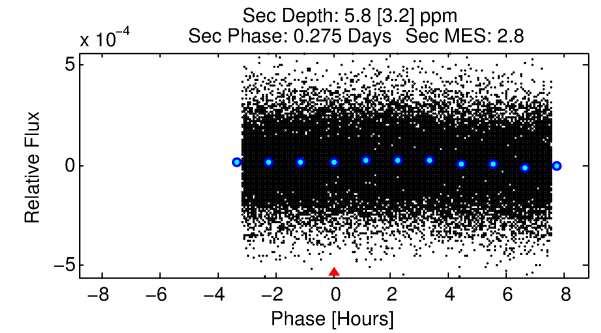
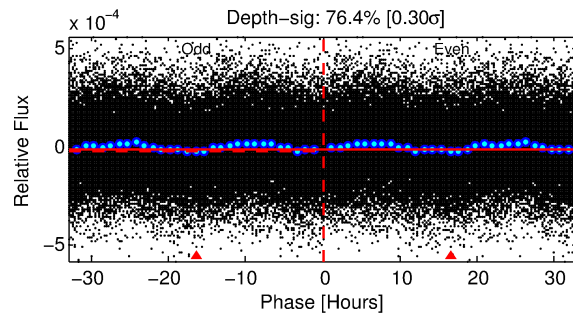
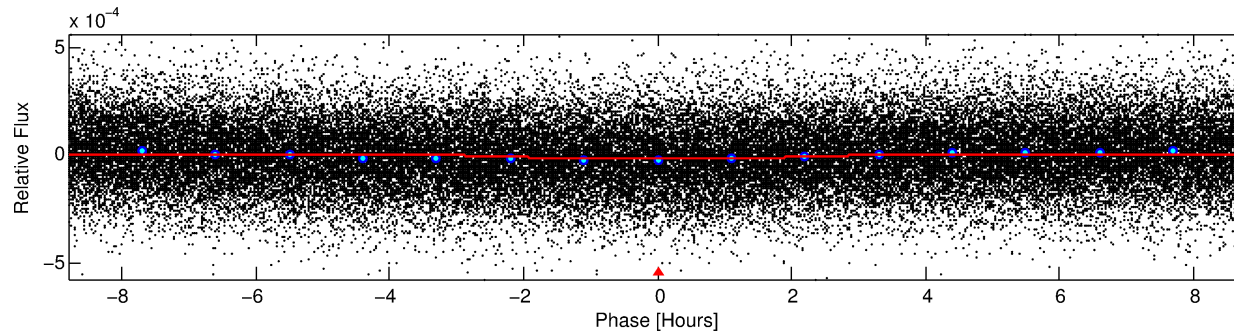
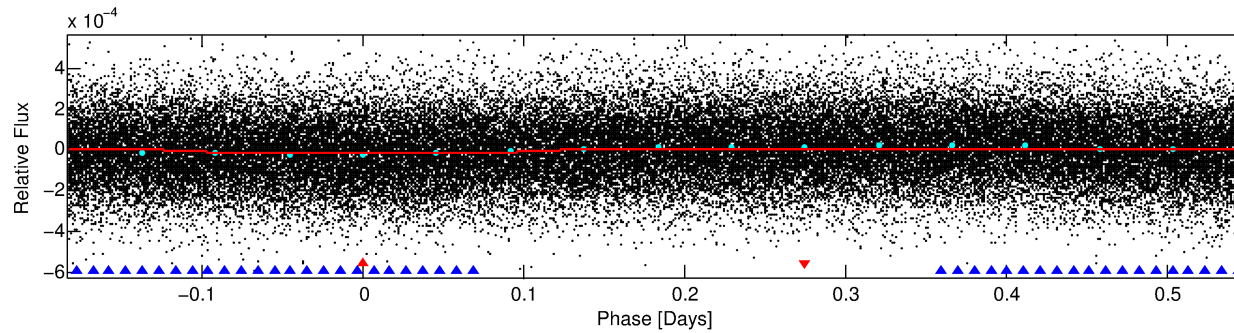
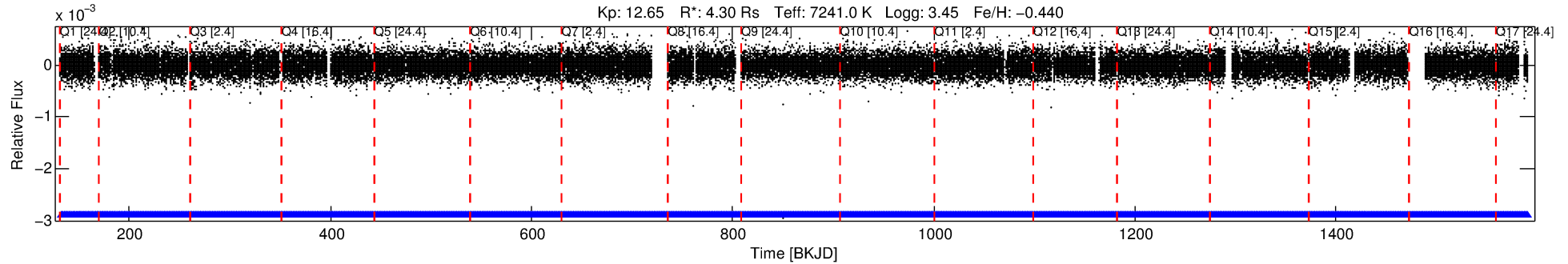
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008847349-01

No Significant Match Found

DV One-Page Summary

KIC: 8847349 Candidate: 1 of 2 Period: 0.733 d



DV Fit Results:

Period = 0.73300 [0.00002] d
Epoch = 132.0147 [0.0056] BKJD
Rp/R* = 0.0033 [0.0027]
a/R* = 1.18 [1.52]
b = 0.38 [10.49]
Seff = N/A
Teq = N/A
Rp = 1.54 [1.63] Re
a = N/A
Ag = N/A
Teffp = N/A

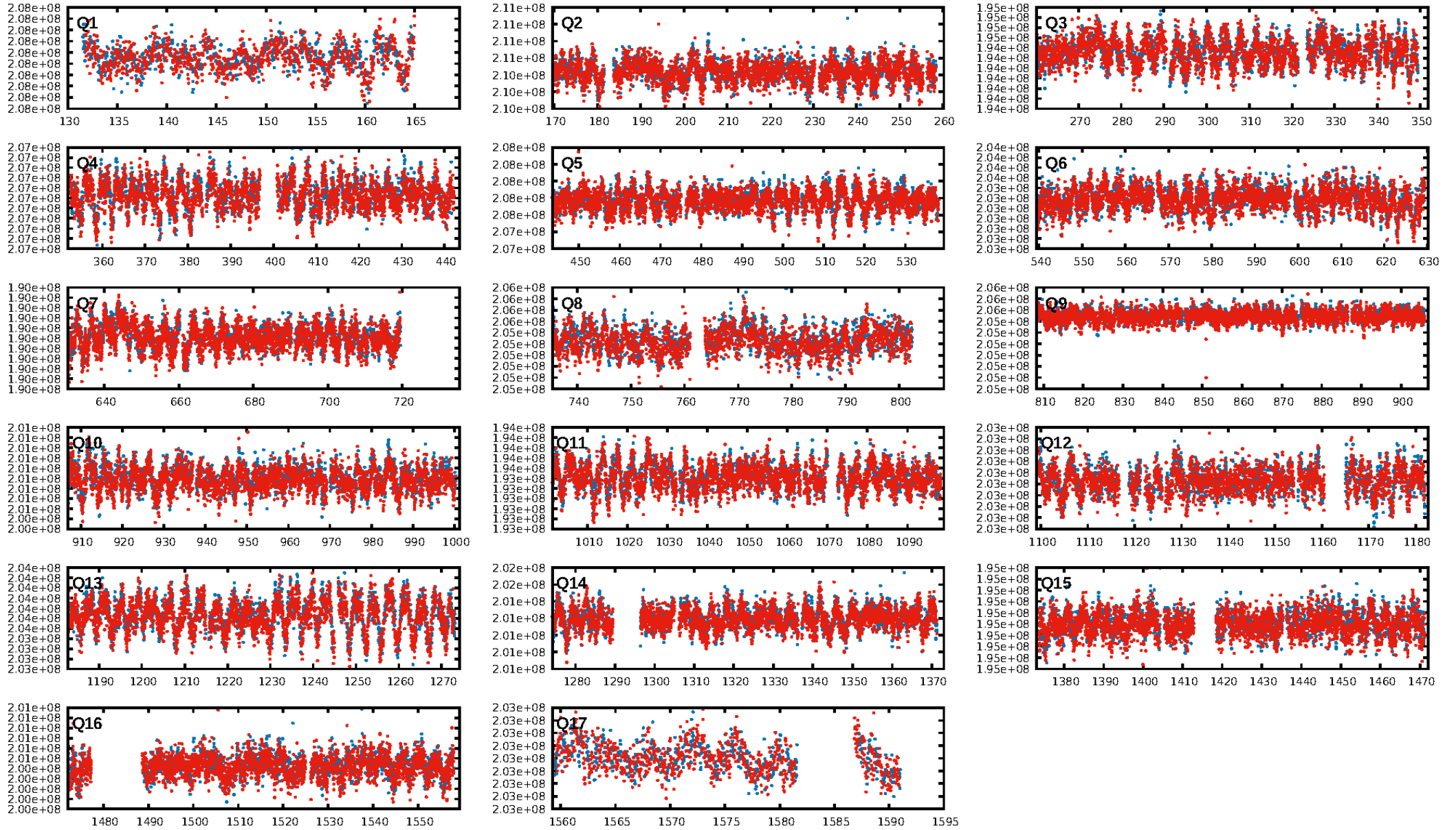
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [115.42σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.11e-17
RollingBand-fgt: 1.00 [1752/1752]
GhostDiagnostic-chr: 2.322
Centroid-sig: 13.6%
Centroid-so: 0.959 arcsec [0.90σ]
OotOffset-rm: 0.521 arcsec [0.55σ]
OotOffset-st: 0/4/0/3 [7]
KicOffset-rm: 0.518 arcsec [0.54σ]
KicOffset-st: 0/4/0/3 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 1.00 [17/17]

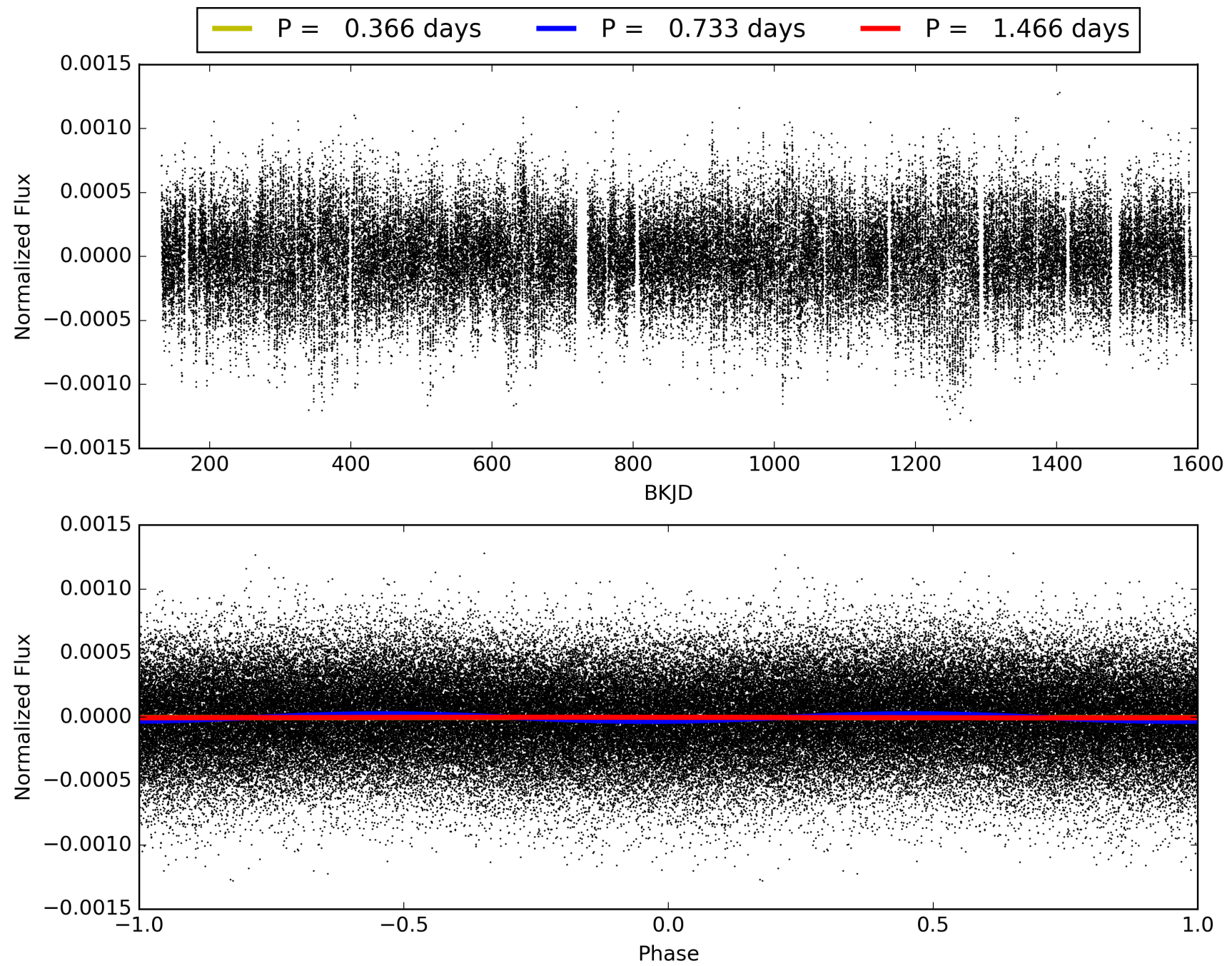
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:29:45 Z

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

TCE 008847349-01, PDC Light Curves

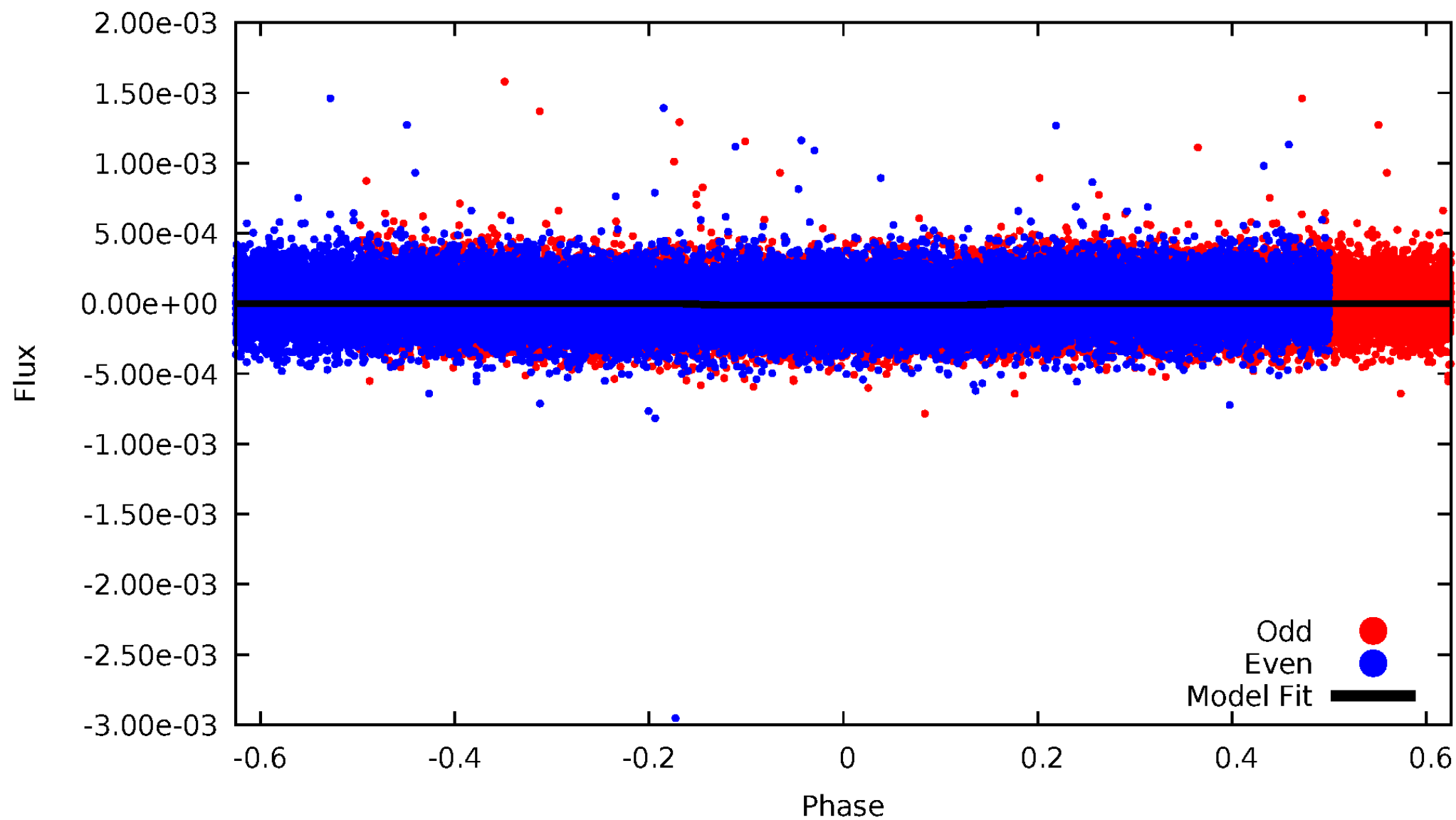


TCE 008847349-01



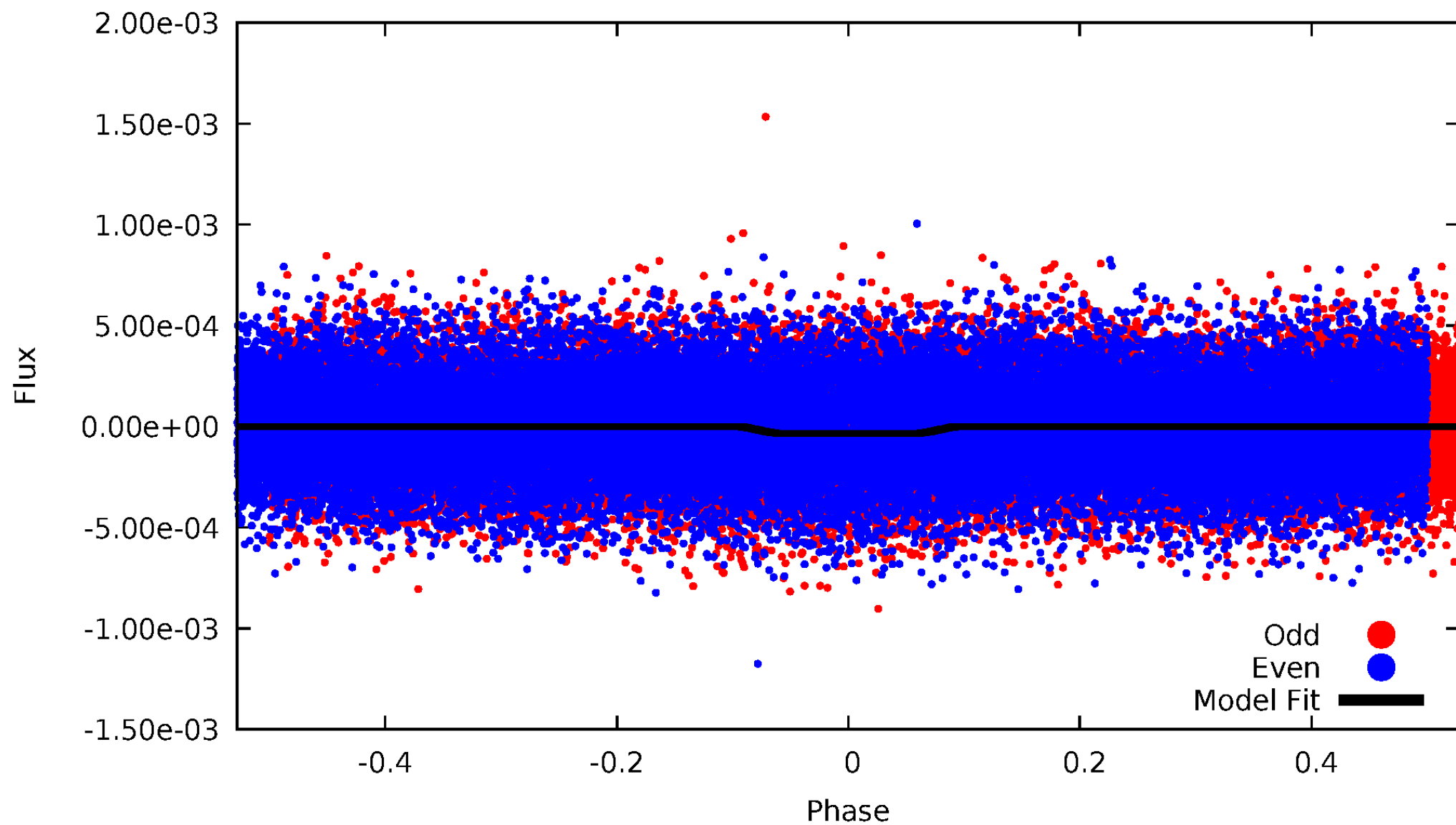
DV Odd/Even

TCE 008847349-01



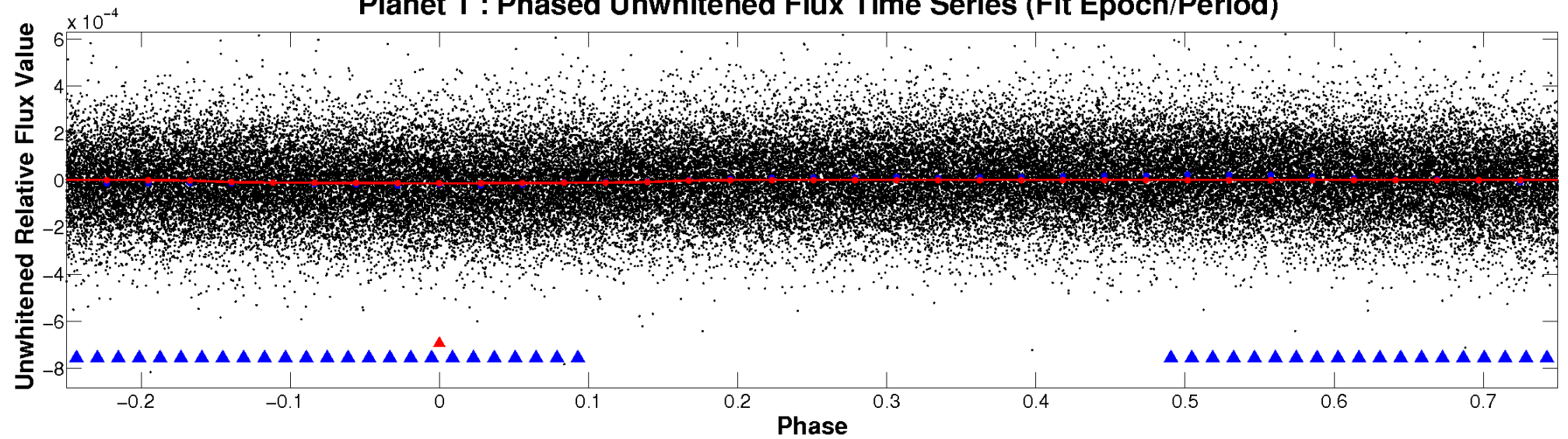
ALT Odd/Even

TCE 008847349-01

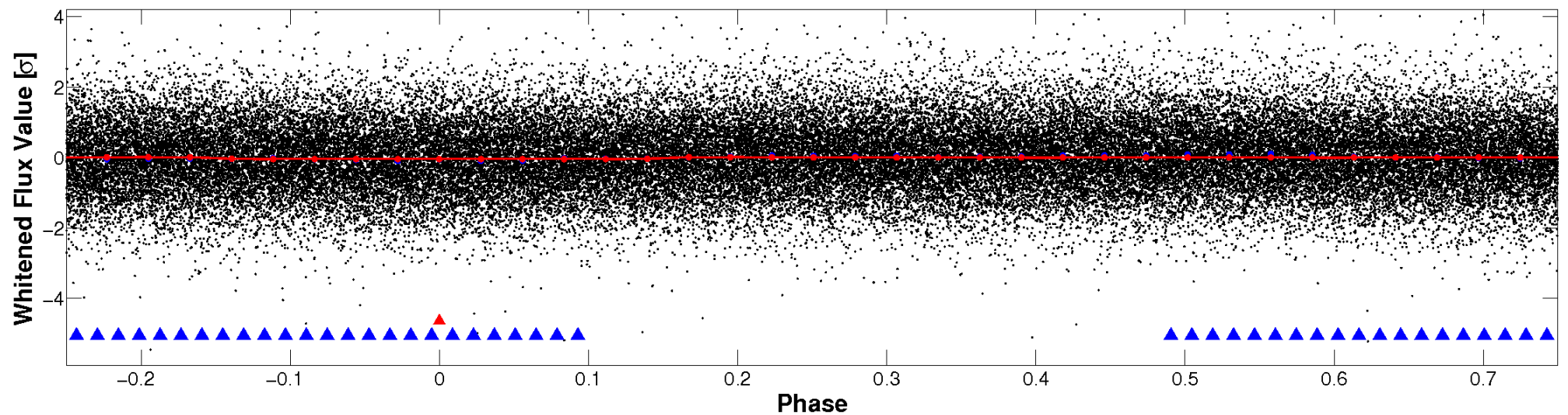


Non-Whitened Vs. Whitened Light Curve

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

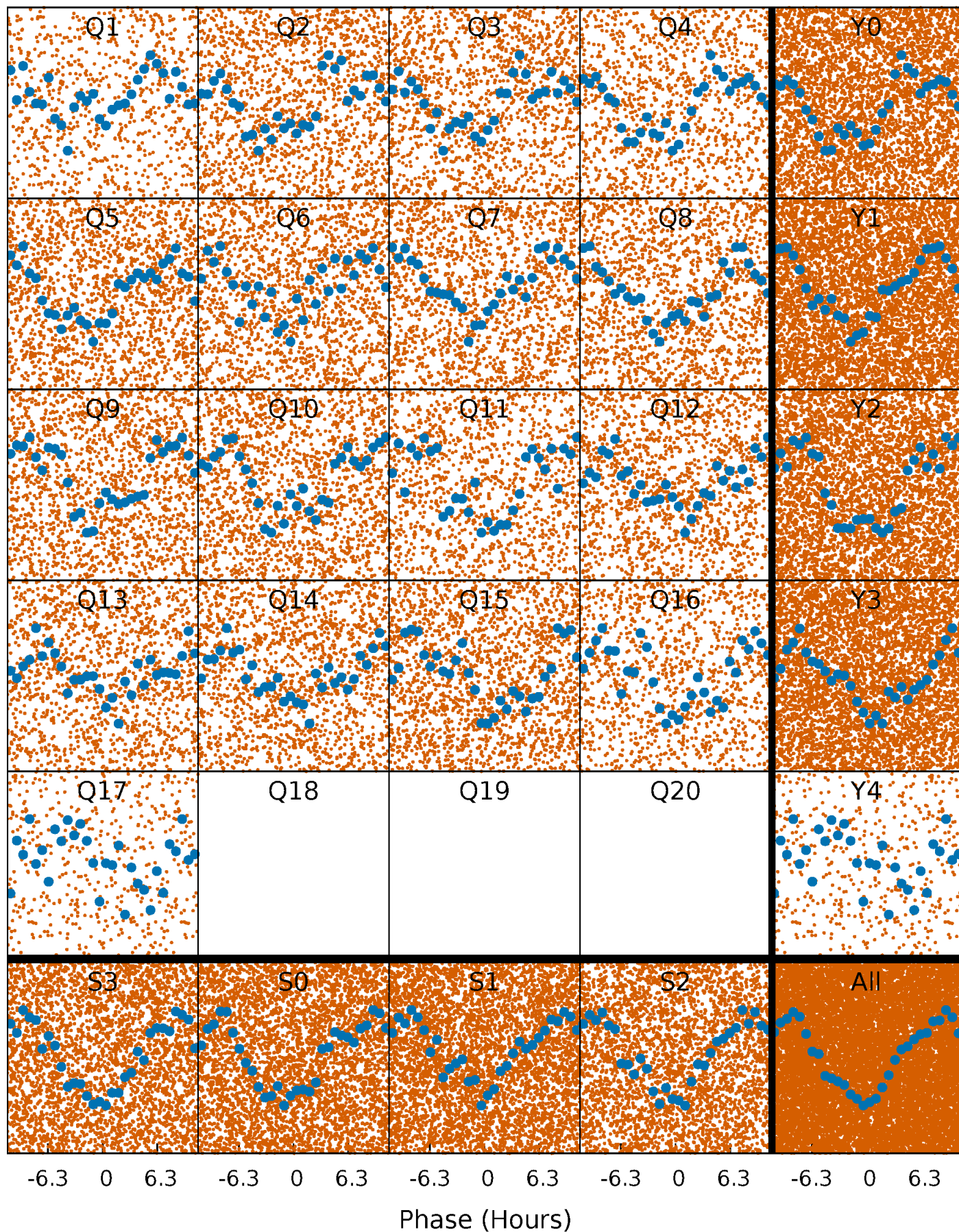


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



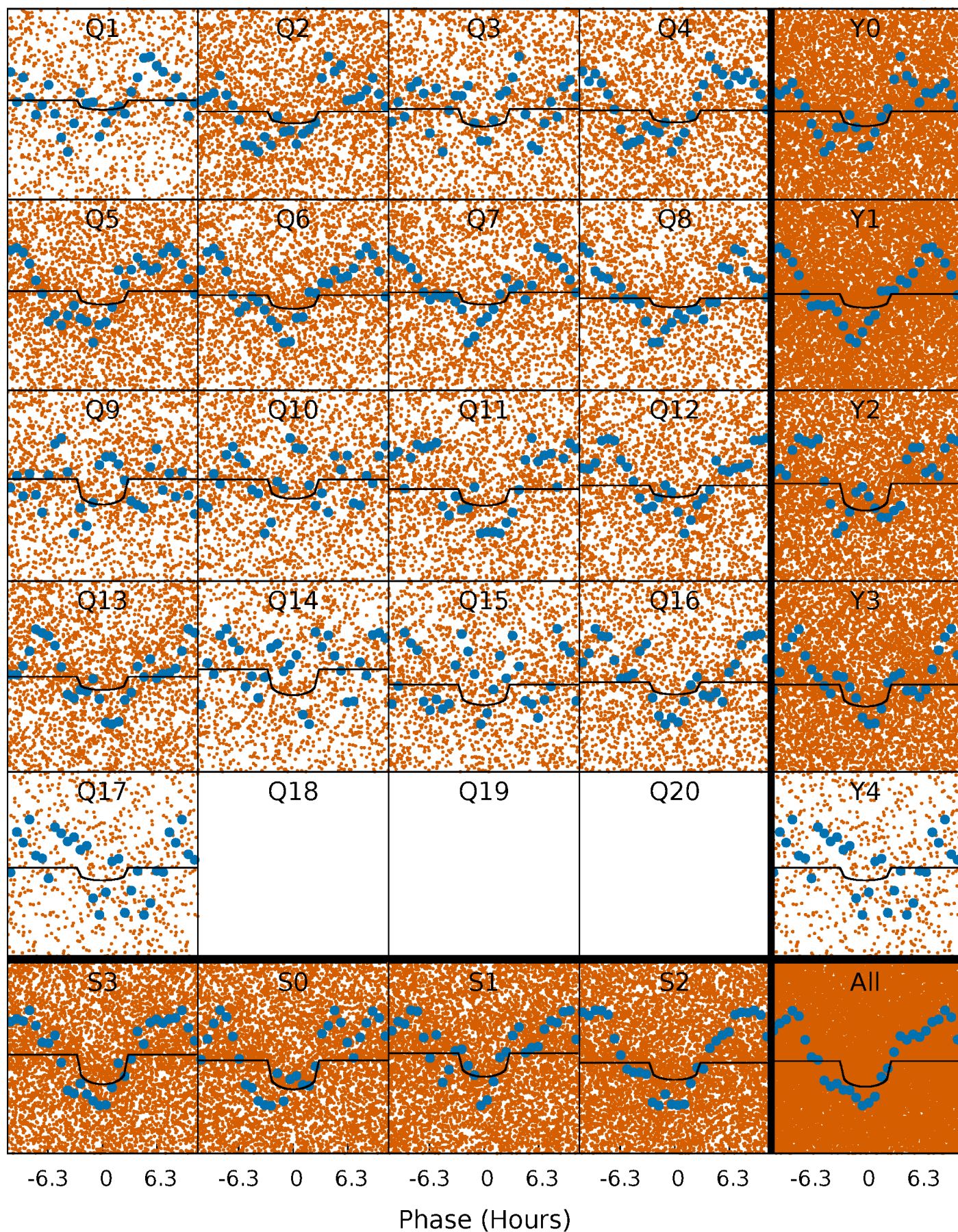
PDC Quarter-Phased Transit Curves

TCE 008847349-01 P= 0.732996 Days $T_0=132.014693$ (BKJD)



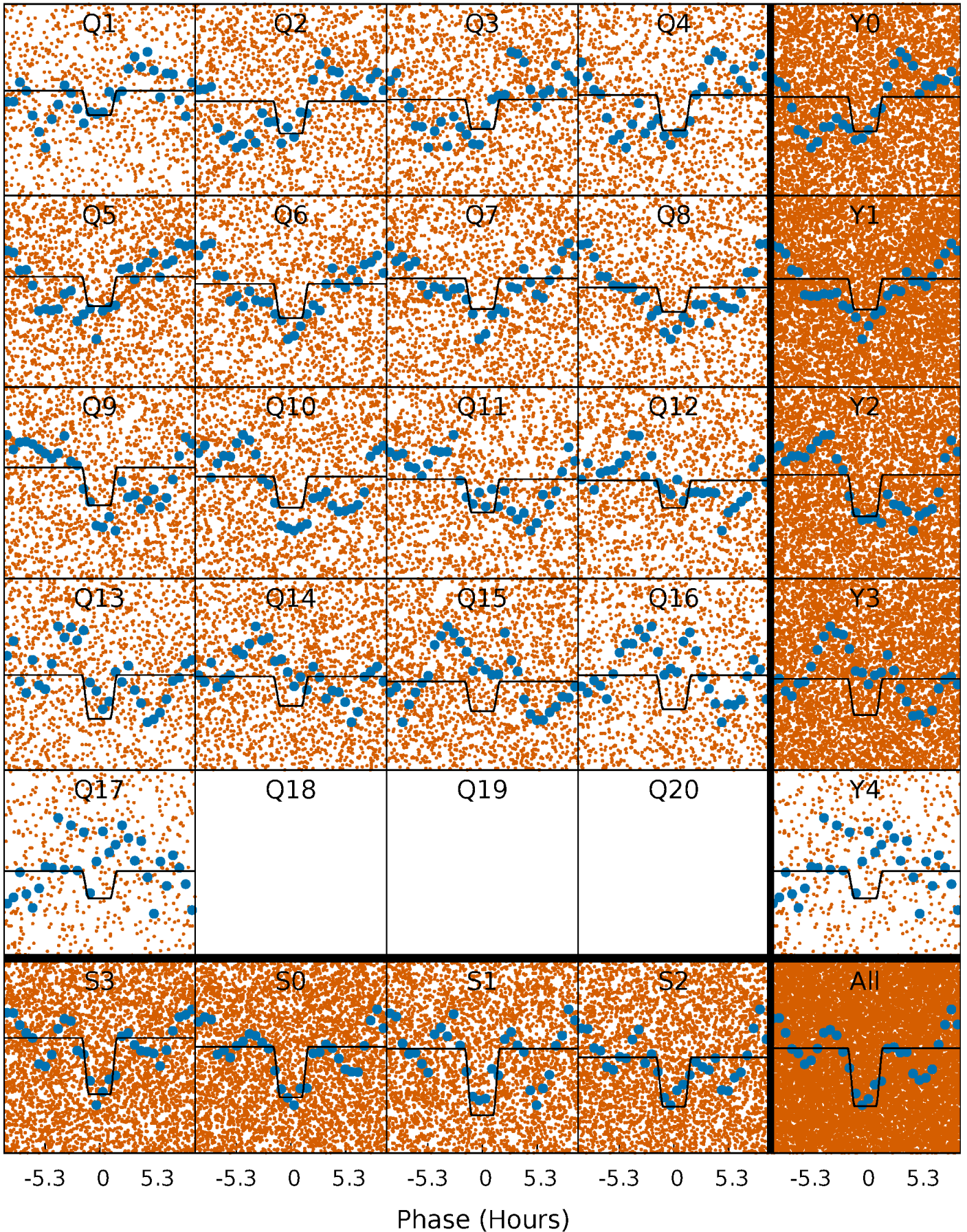
DV Quarter-Phased Transit Curves

TCE 008847349-01 P= 0.732996 Days $T_0=132.014693$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

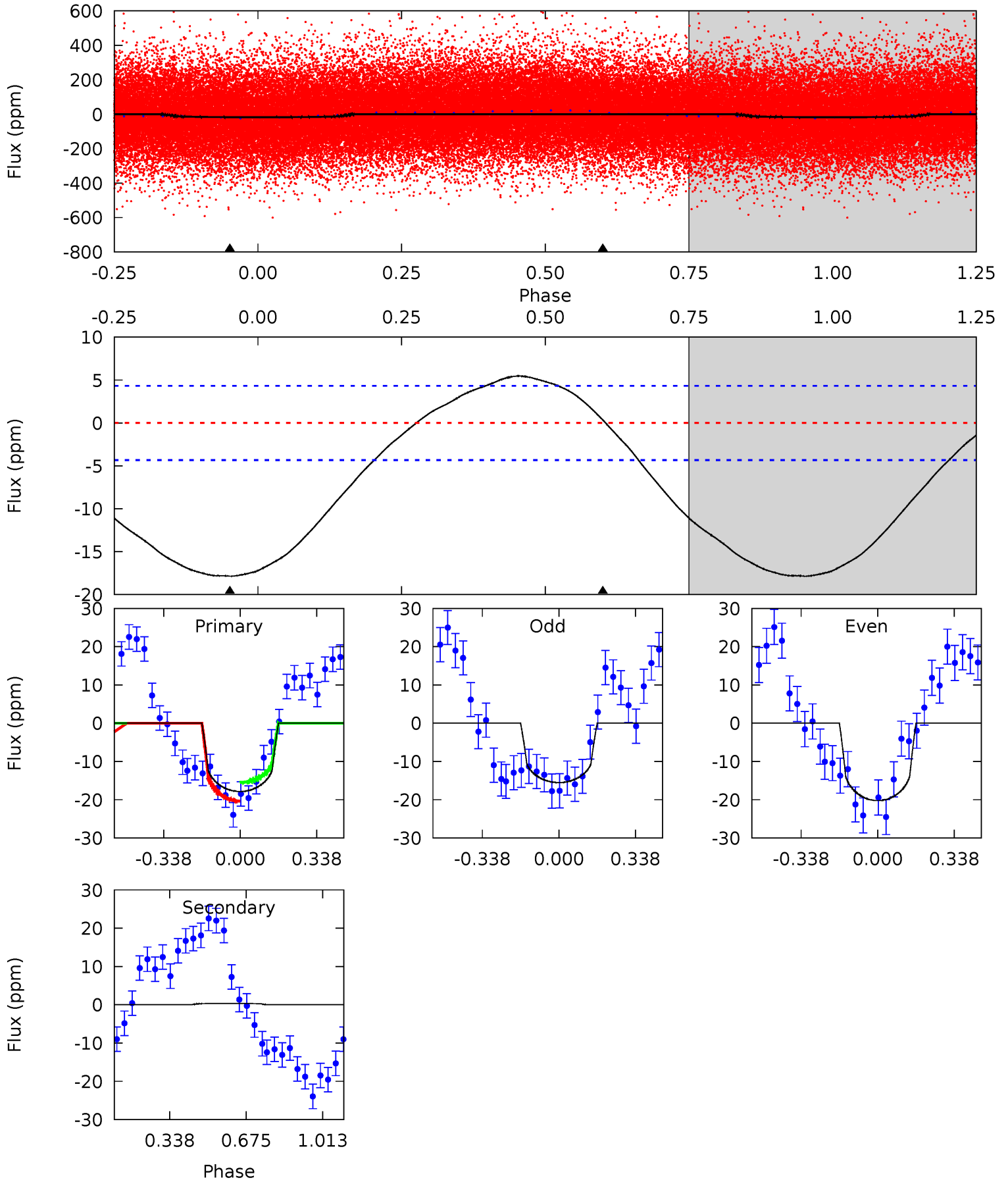
TCE 008847349-01 P= 0.732846 Days $T_0=132.072499$ (BKJD)



DV Model-Shift Uniqueness Test

008847349-01, P = 0.732996 Days, E = 131.281697 Days

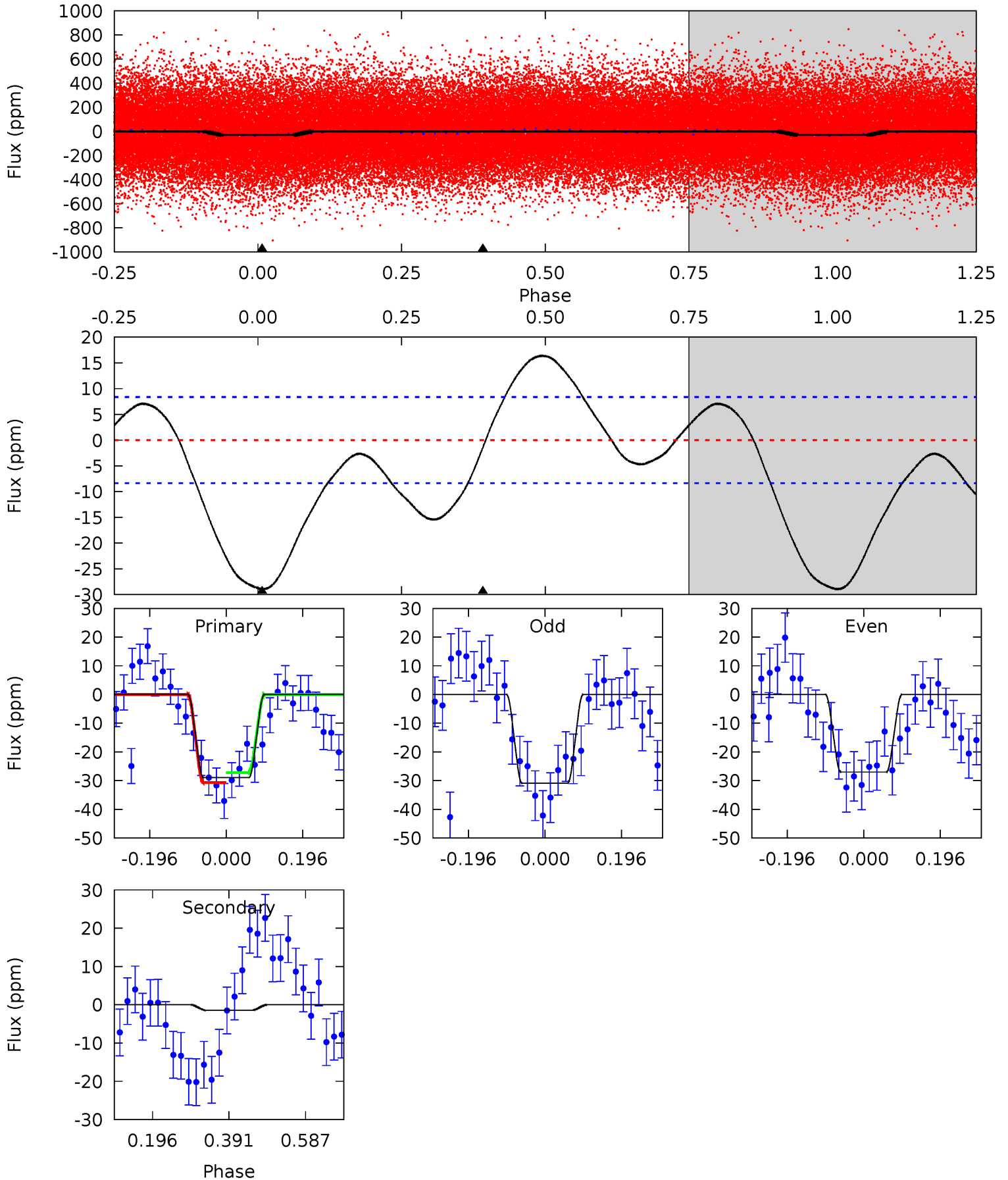
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	-0.36	0	0	4.30	0.96	1.47	17.7	17.7	-0.36	-0.36	2.34	1.05	0.23	2.45



Alt Model-Shift Uniqueness Test

008847349-01, P = 0.732846 Days, E = 131.339653 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	0.77	0	0	4.42	1.29	2.13	15.3	15.3	0.77	0.77	1.01	0.92	0.36	0.89



Stellar Parameters For KIC 008847349

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7241^{+228}_{-304}	$3.454^{+0.702}_{-0.078}$	$-0.440^{+0.300}_{-0.300}$	$4.304^{+0.311}_{-2.801}$	$1.923^{+0.082}_{-0.698}$	$0.034^{+0.446}_{-0.009}$
	+3%/-4%	+20%/-2%	+68%/-68%	+7%/-65%	+4%/-36%	+1312%/-26%
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 008847349-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1	$1.47^{+1.21}_{-0.96}$	6380^{+440}_{-1072}	-5345^{+1051}_{-639}	$-0.023^{+0.080}_{-0.242}$
Alt.	-1 ± 2	$2.31^{+1.39}_{-1.19}$	6364^{+437}_{-998}	-4917^{+1528}_{-530}	$0.047^{+0.189}_{-0.063}$

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 $A_{obs} \gg 1.0$

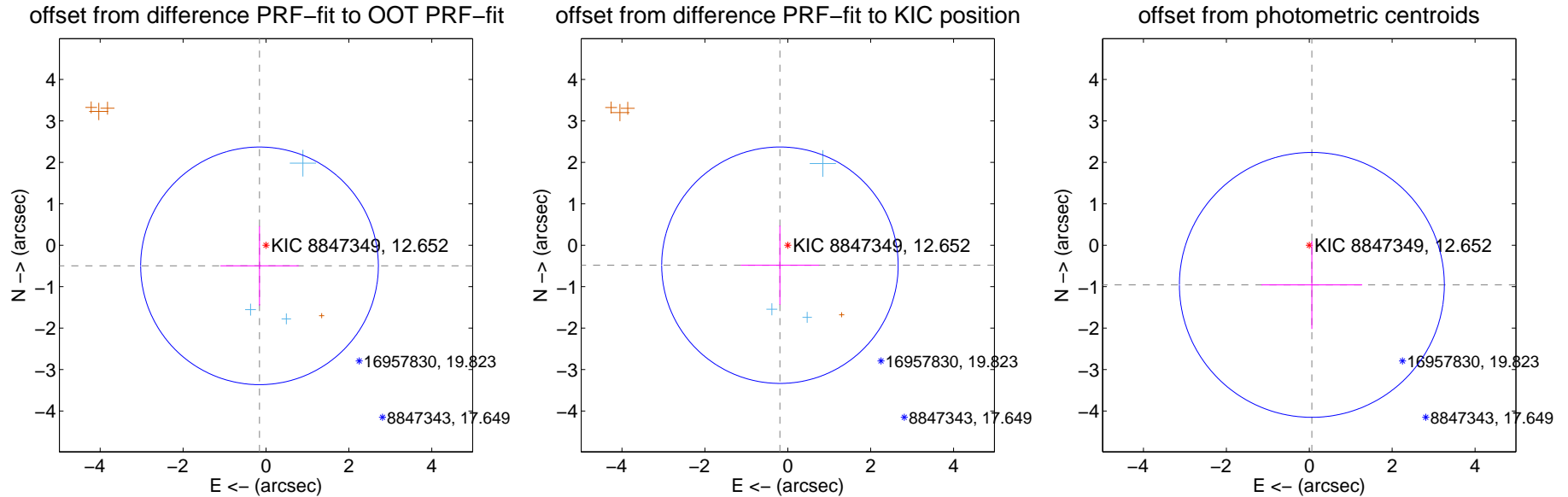
DV Centroid Data

Supplemental centroid analysis for 008847349-01. Kepler magnitude: 12.65. Transit SNR 6.25

There are 3 quarters with good PRF difference image offsets

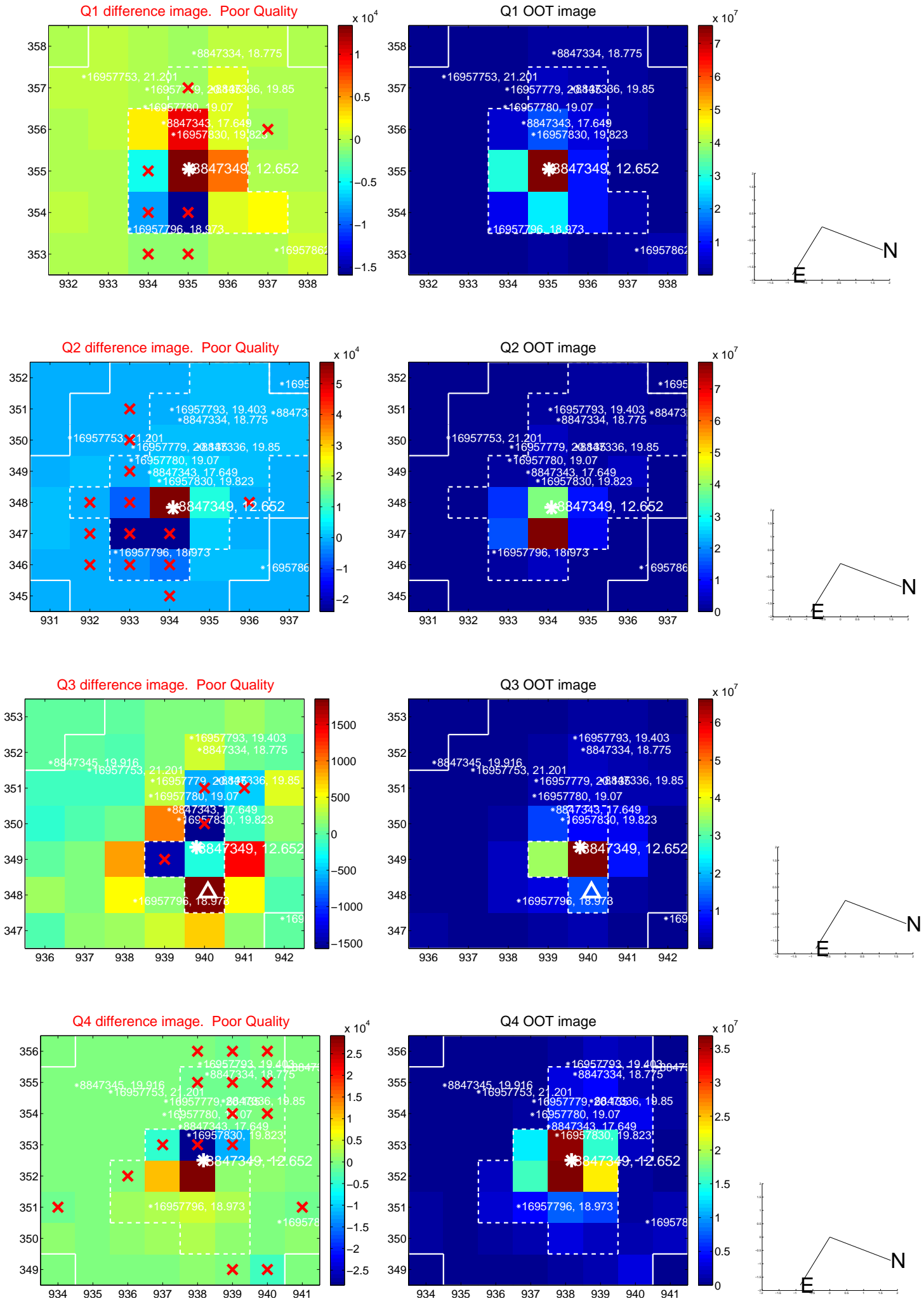
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.521 ± 0.956	0.55	0.156 ± 0.945	-0.497 ± 0.957
PRF-fit source offset from KIC position	0.518 ± 0.951	0.54	0.189 ± 0.944	-0.482 ± 0.952
photometric centroid source offset	0.96 ± 1.07	0.90	-0.06 ± 1.22	-0.96 ± 1.06

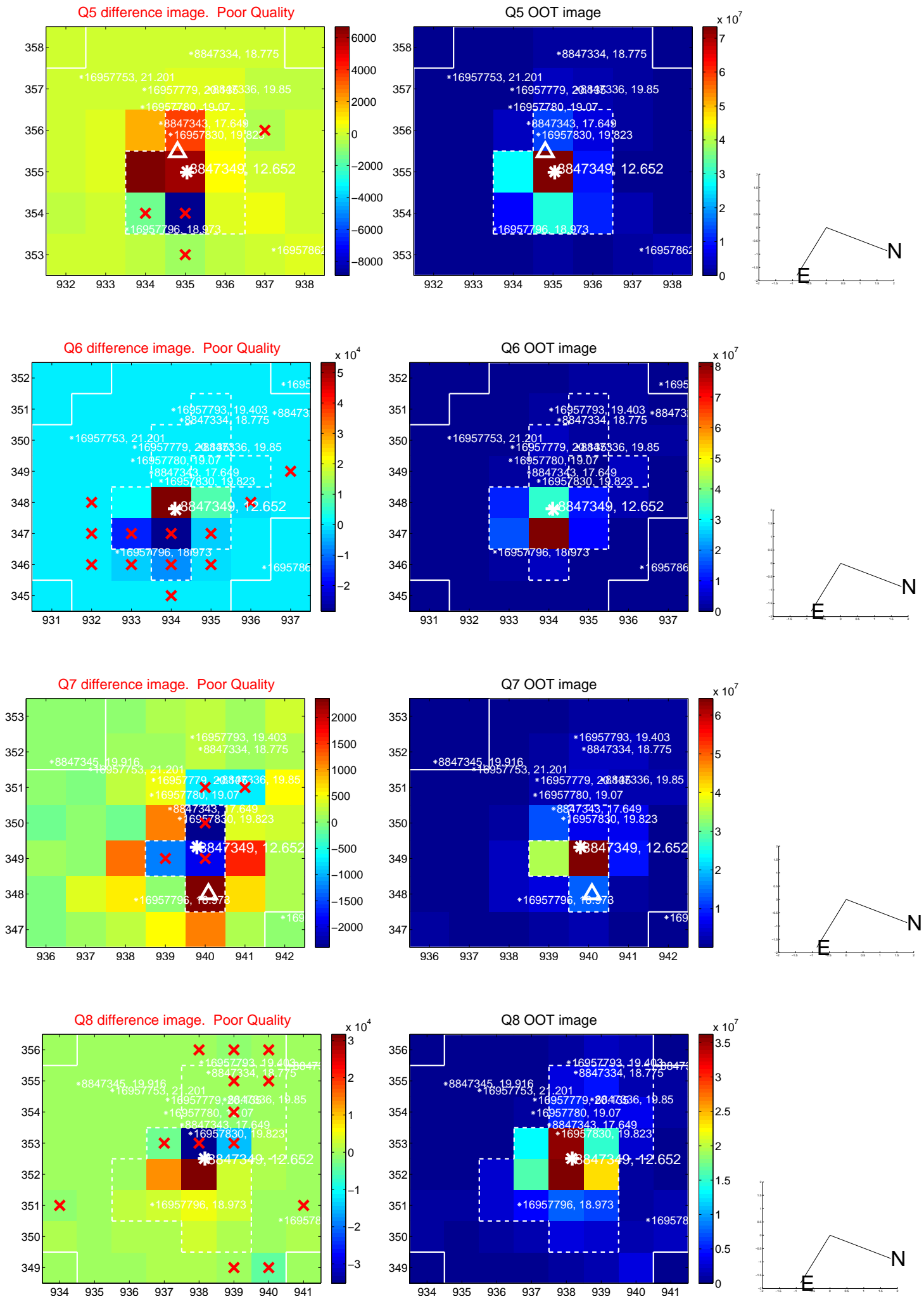


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

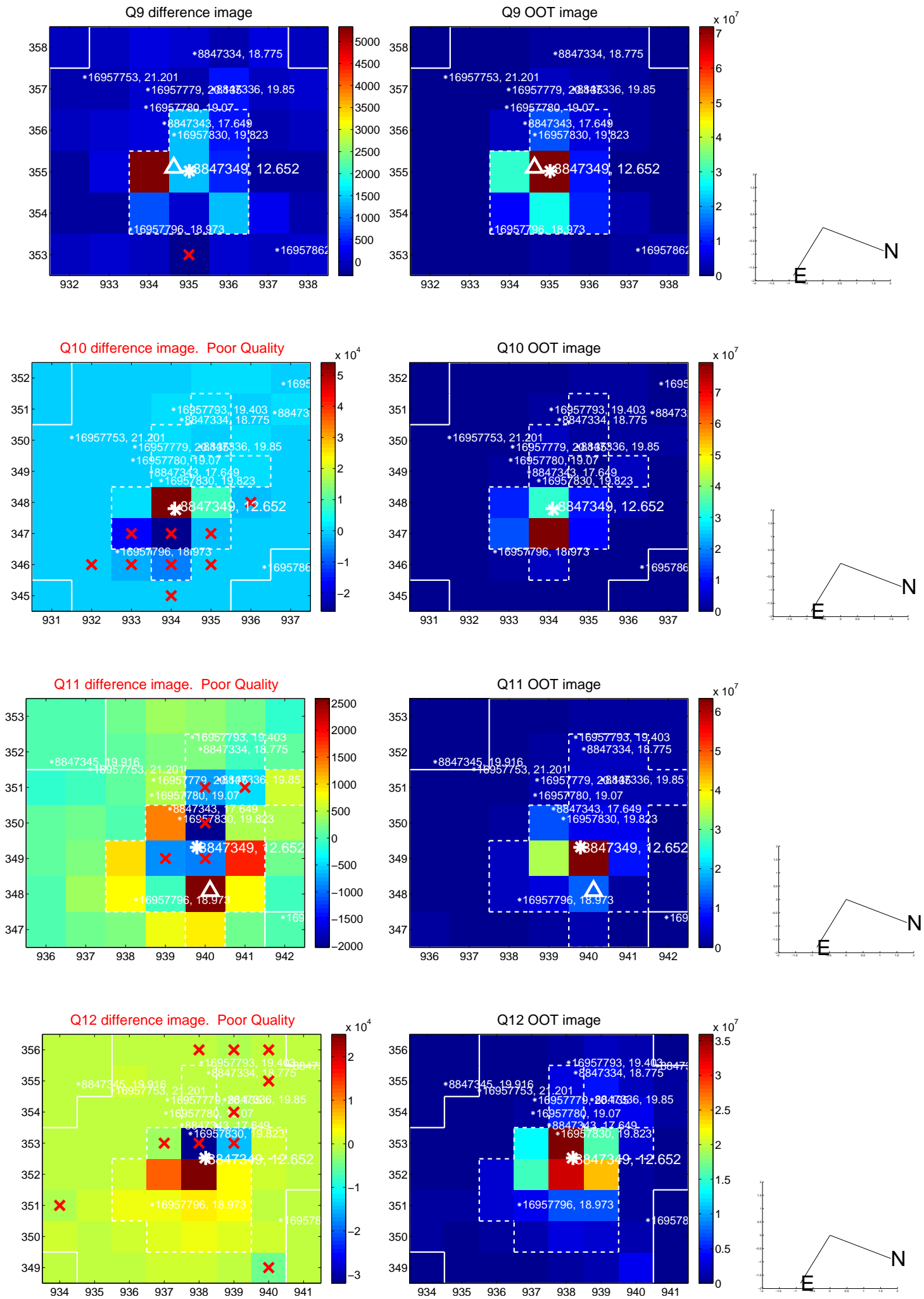
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



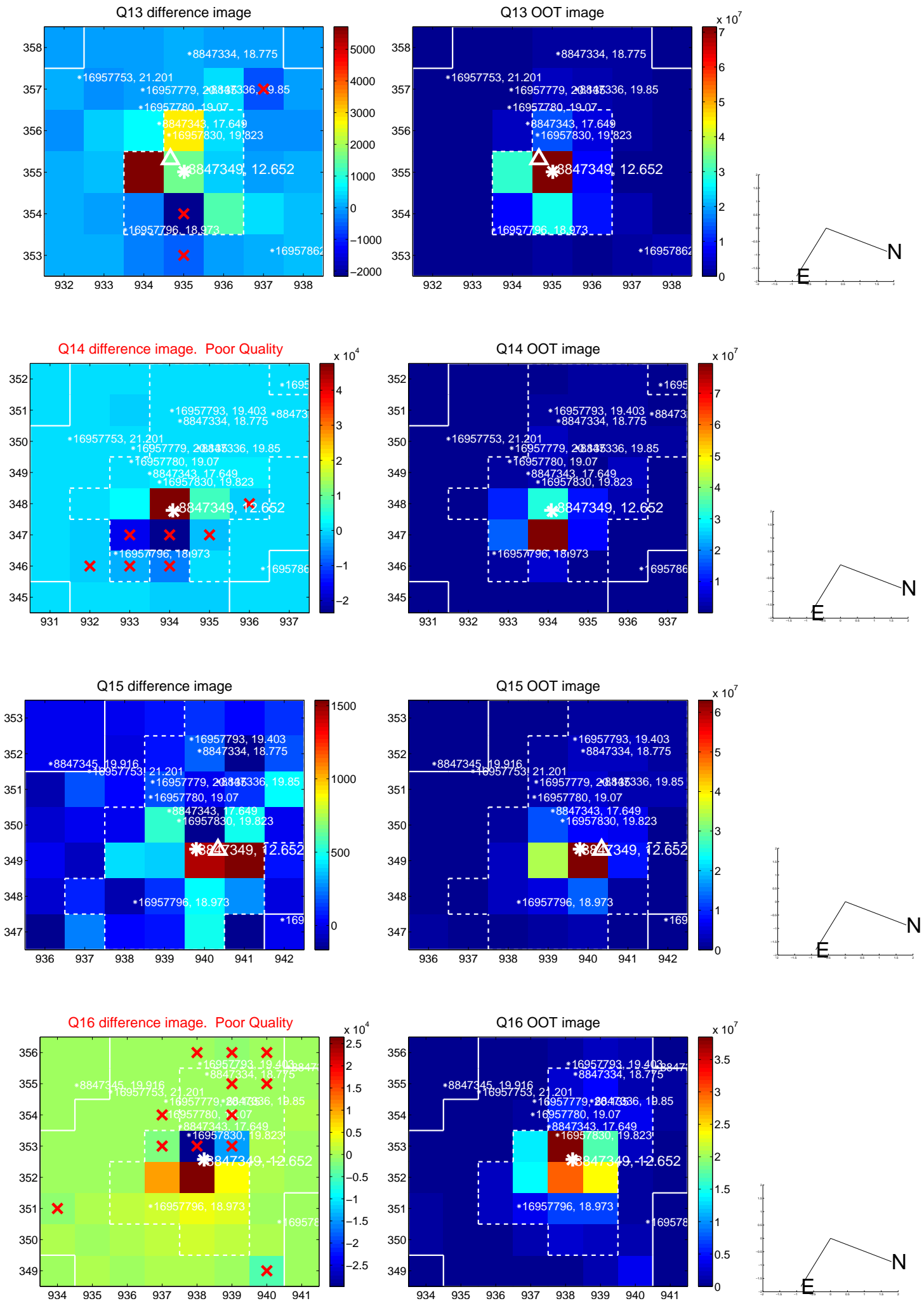
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



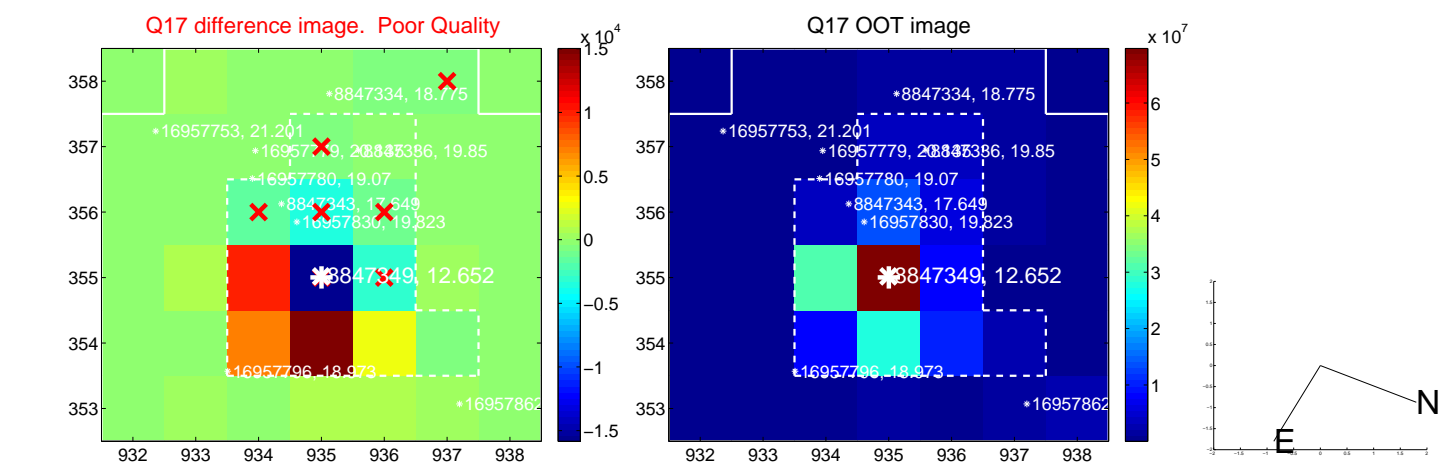
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



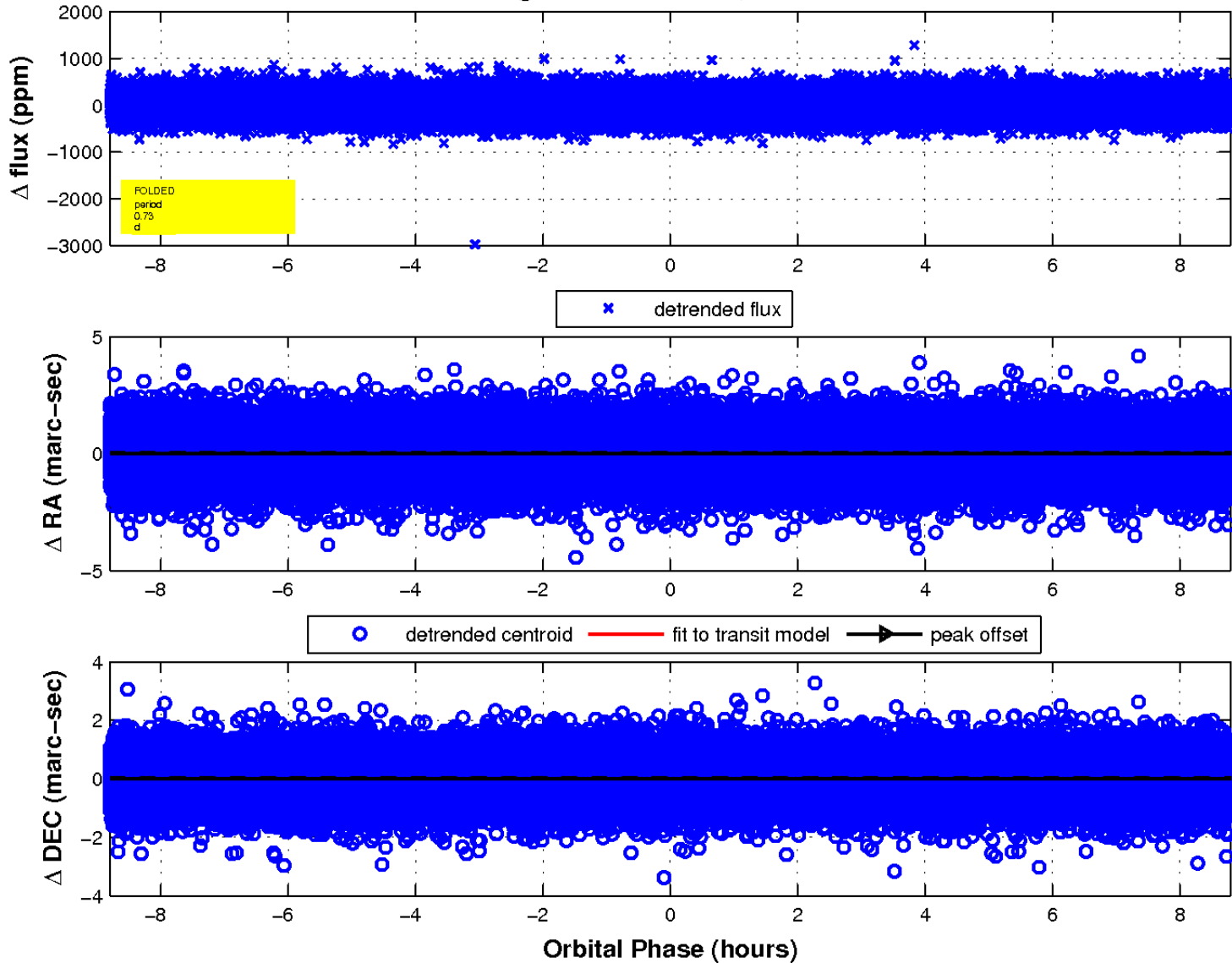
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



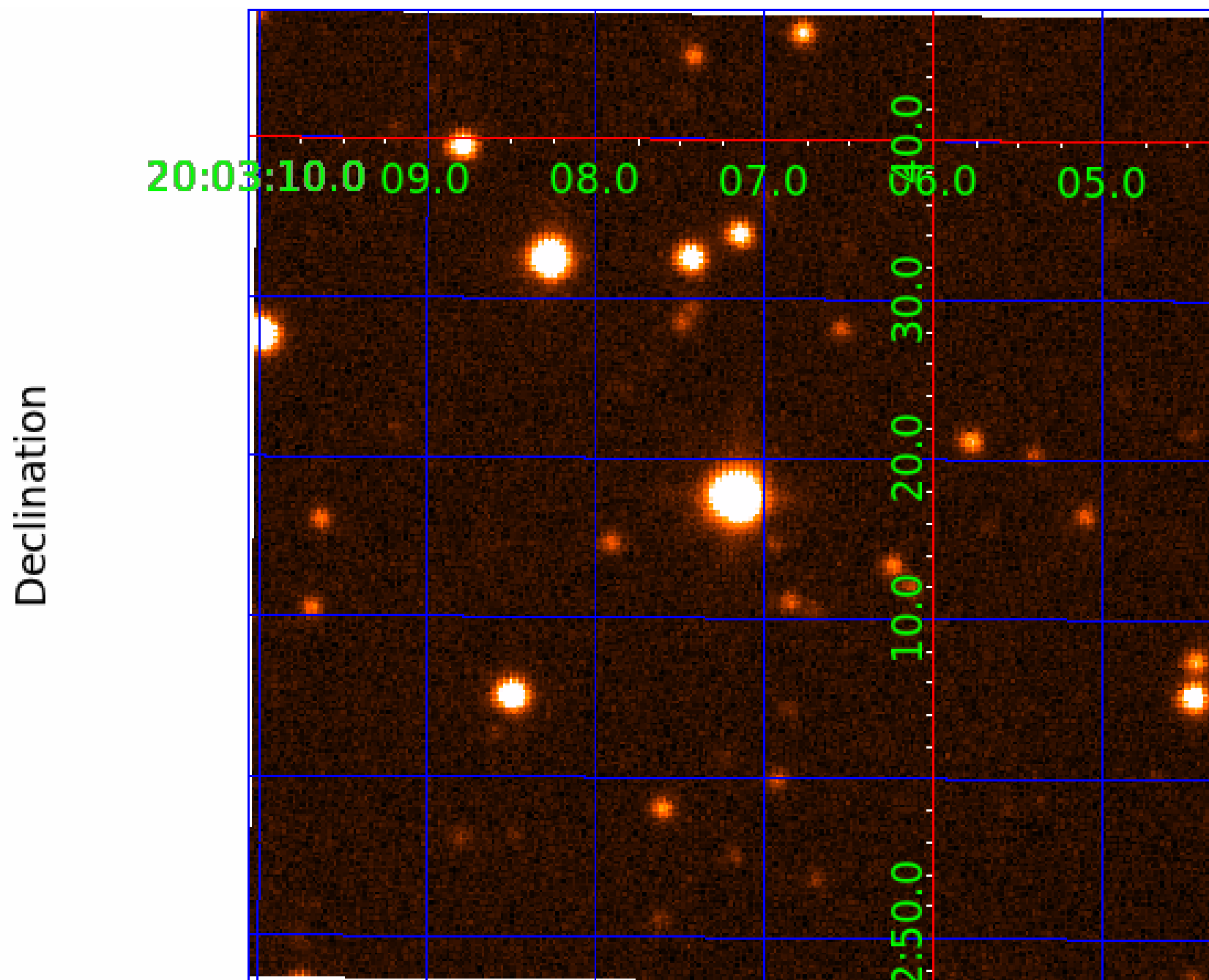
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 2



UKIRT Image



KIC 008847349

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})
008847349-01	OBS	No	0.732996	132.014693	12.3	5.500	9.2	6.3	4.30	7241	1.54	0.00
008847349-02	OBS	No	32.995091	163.160117	374.8	3.842	14.5	12.6	4.30	7241	8.52	727.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008847349-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
008847349-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV

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

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

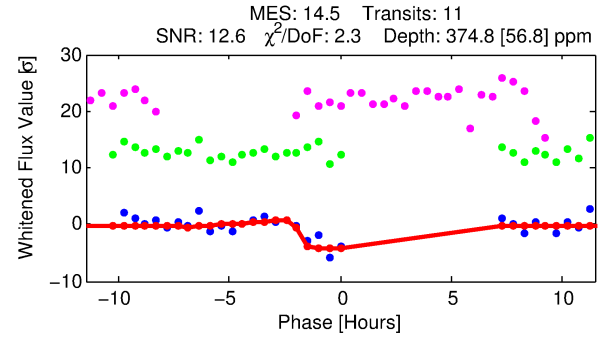
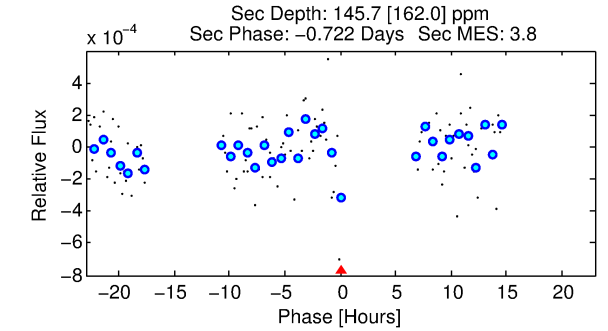
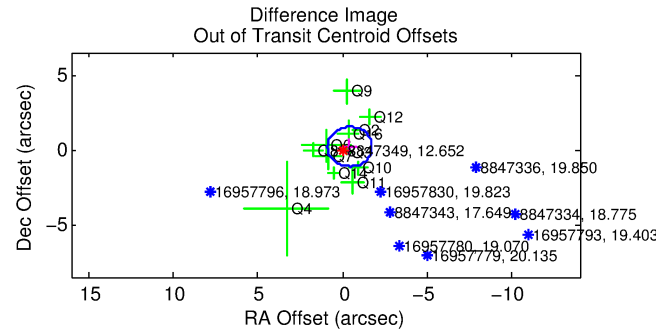
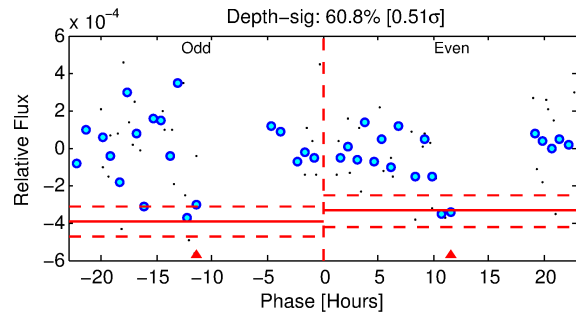
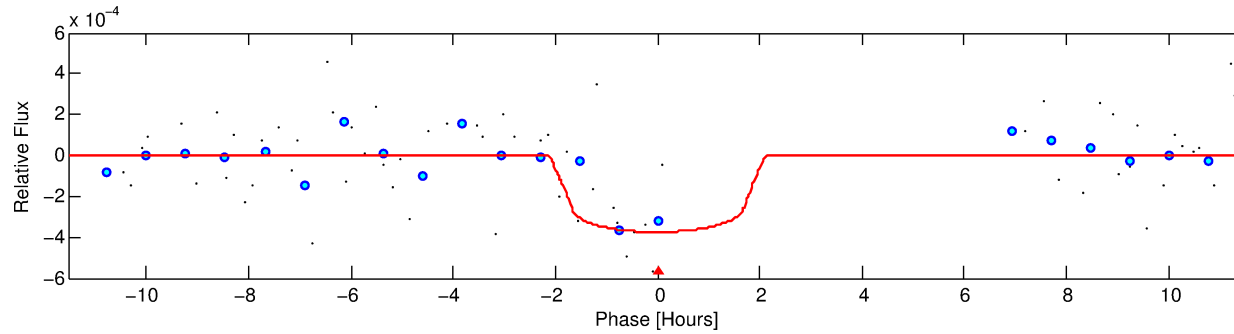
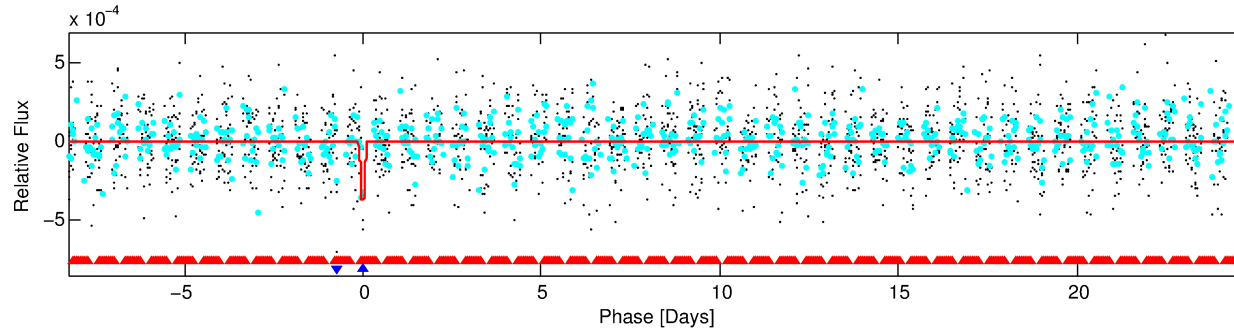
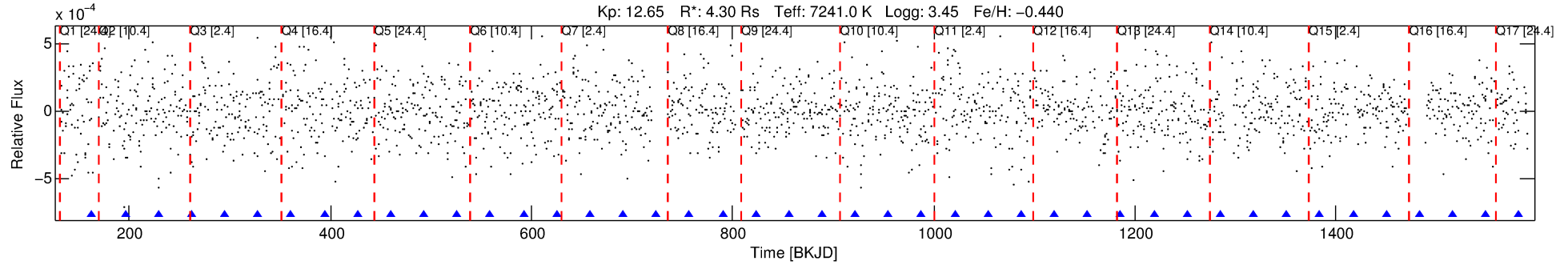
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008847349-02

No Significant Match Found

DV One-Page Summary

KIC: 8847349 Candidate: 2 of 2 Period: 32.995 d



DV Fit Results:

Period = 32.99509 [0.00258] d
Epoch = 163.1601 [0.0229] BKJD
Rp/R* = 0.0181 [0.0260]
a/R* = 61.81 [483.57]
b = 0.39 [17.50]
Seff = 727.90 [854.37]
Teq = 1324 [389] K
Rp = 8.52 [13.43] Re
a = 0.2504 [0.1732] AU
Ag = 69.21 [227.70] [0.30 σ]
Teffp = 5906 [4552] K [1.00 σ]

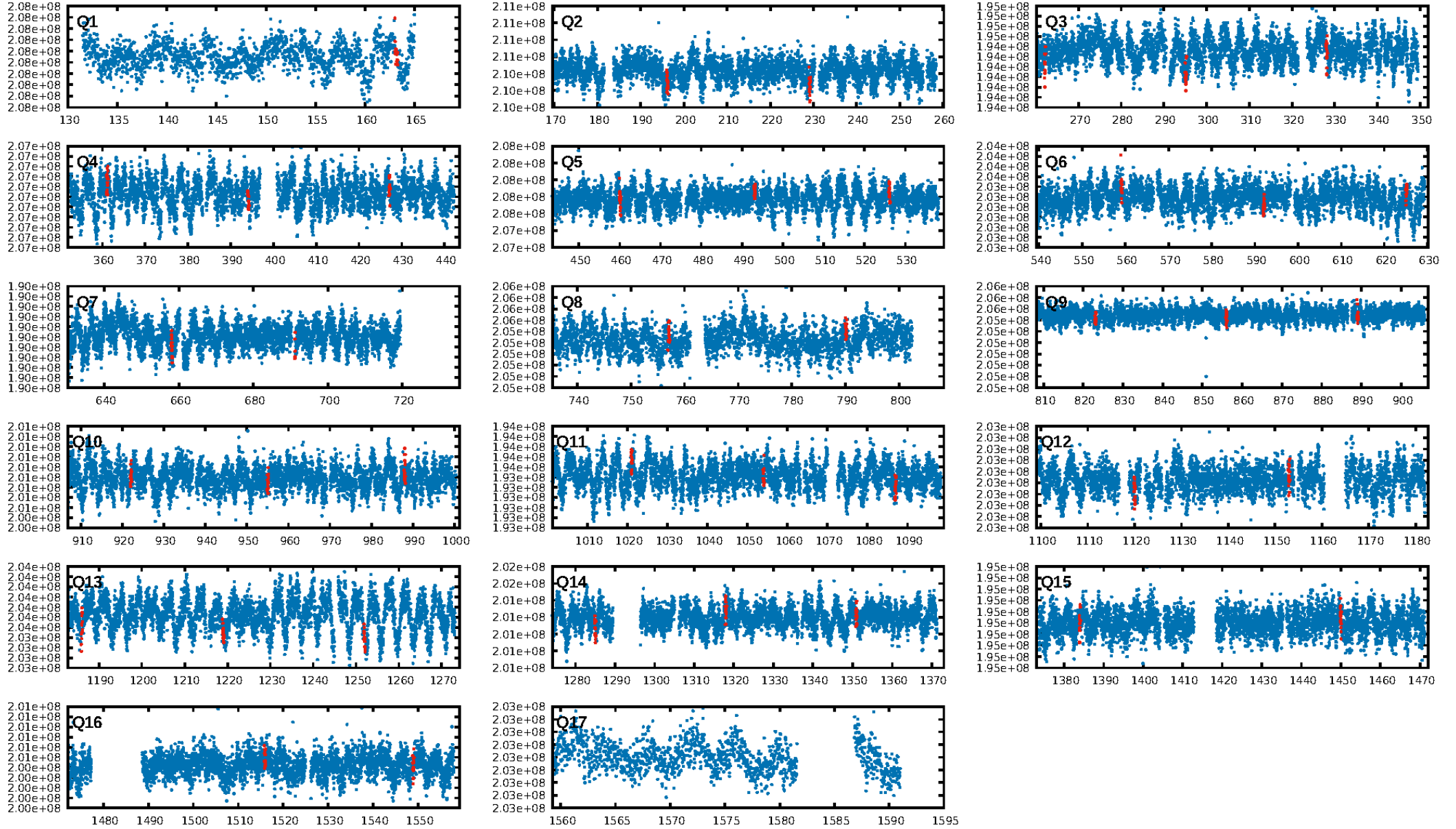
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [115.42 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.08e-22
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: -0.8346
Centroid-sig: 20.7%
Centroid-so: 0.637 arcsec [2.01 σ]
OotOffset-rm: 0.466 arcsec [1.06 σ]
KicOffset-rm: 0.460 arcsec [0.93 σ]
OotOffset-st: 4/3/4/1 [12]
KicOffset-st: 4/3/4/1 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 0.00 [0/16]

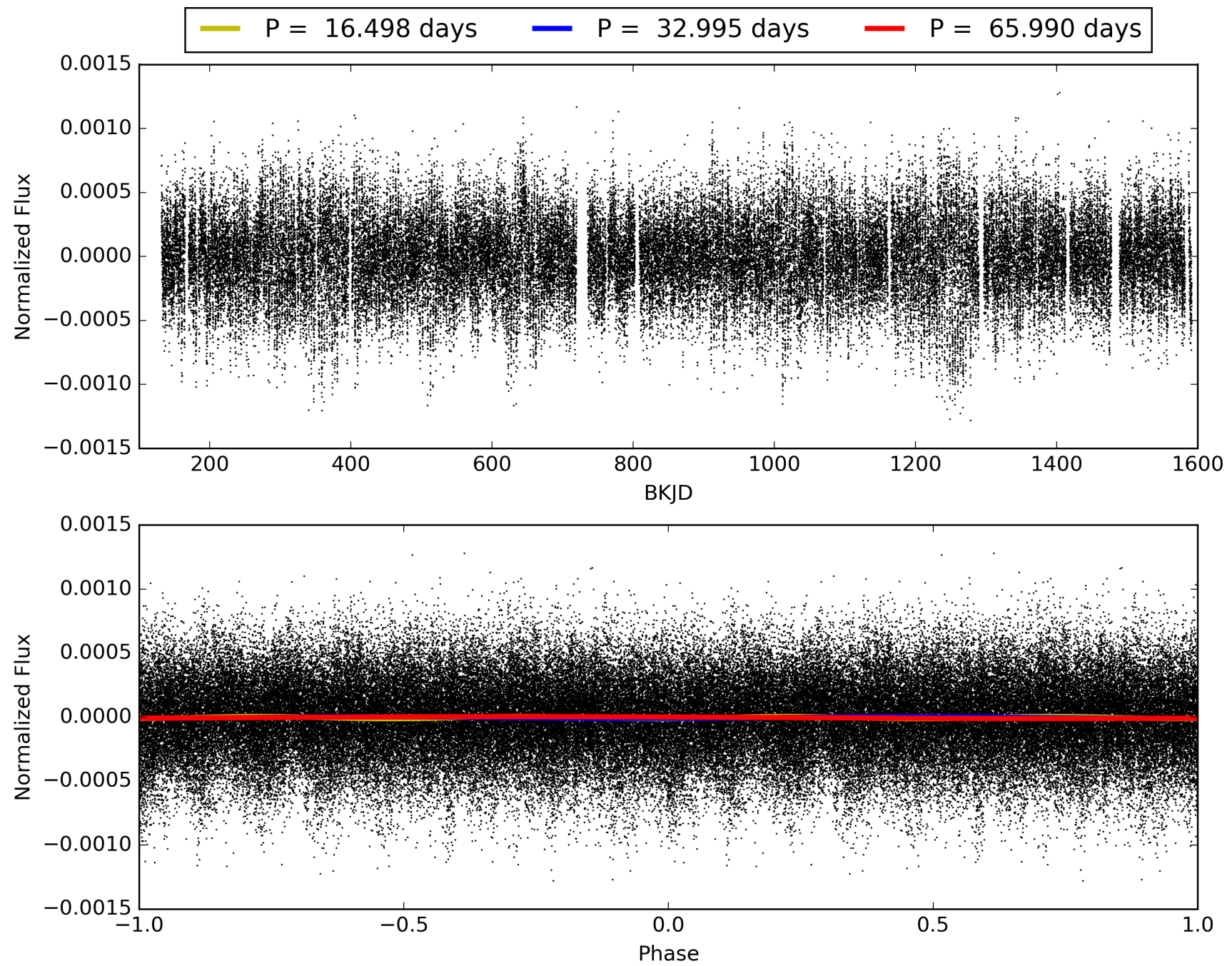
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:29:56 Z

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

TCE 008847349-02, PDC Light Curves

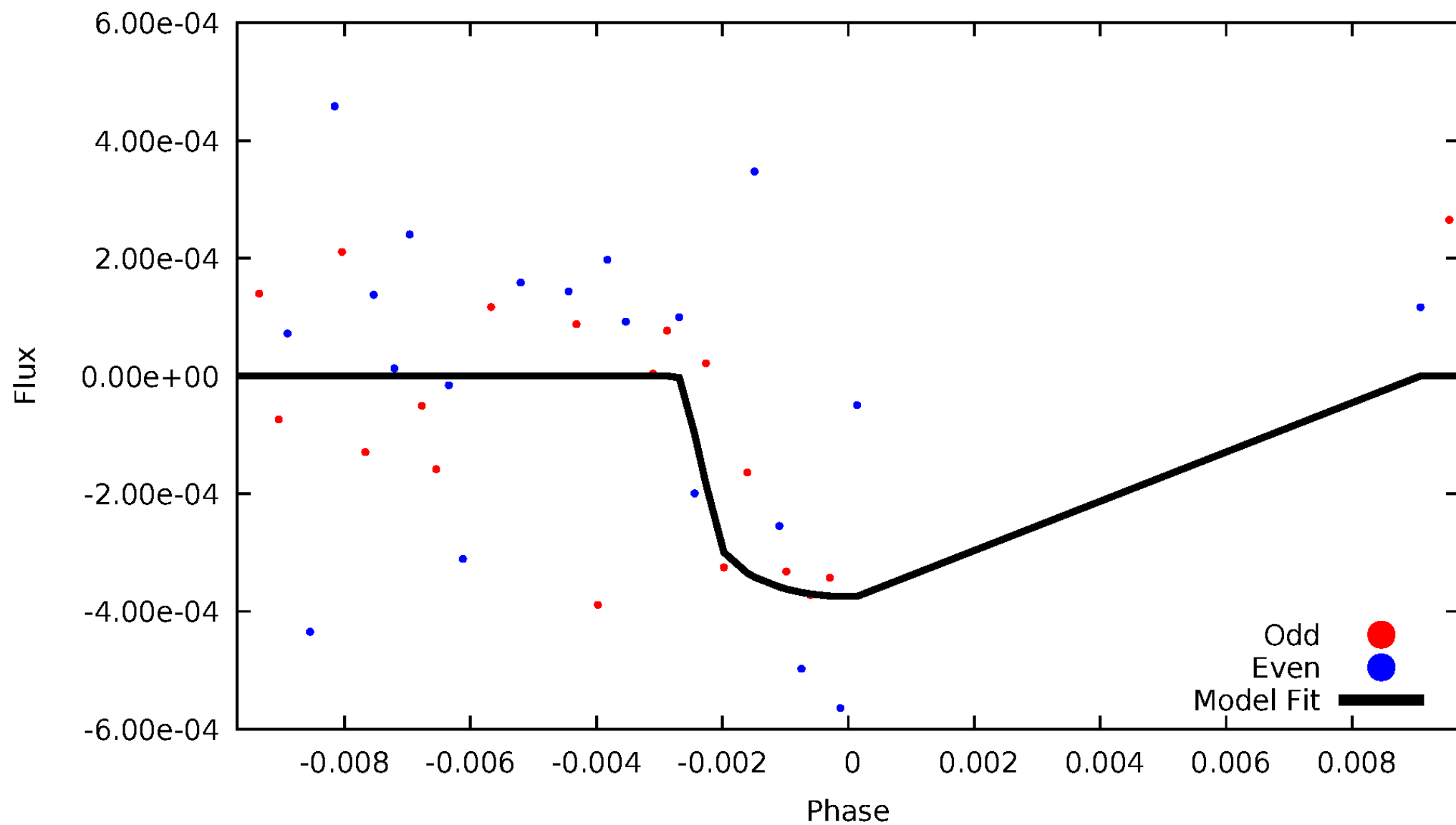


TCE 008847349-02



DV Odd/Even

TCE 008847349-02

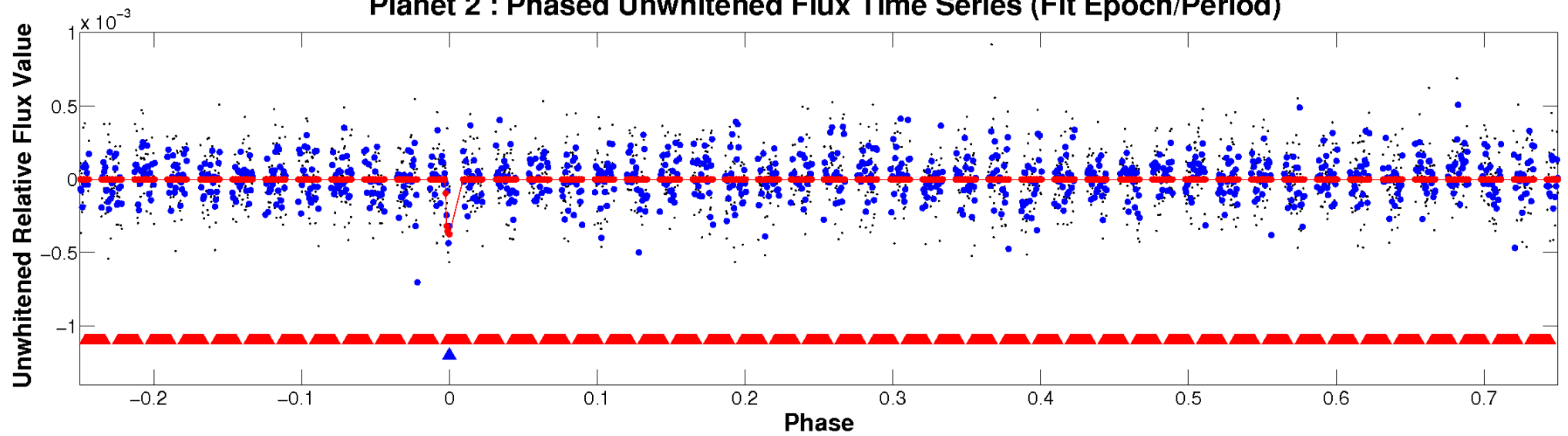


ALT Odd/Even

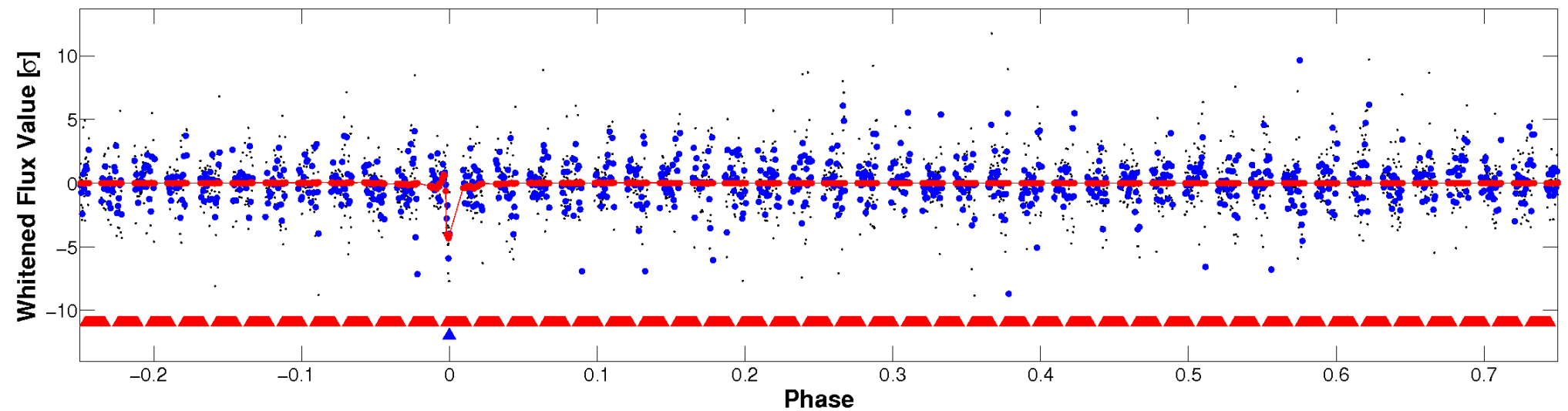
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

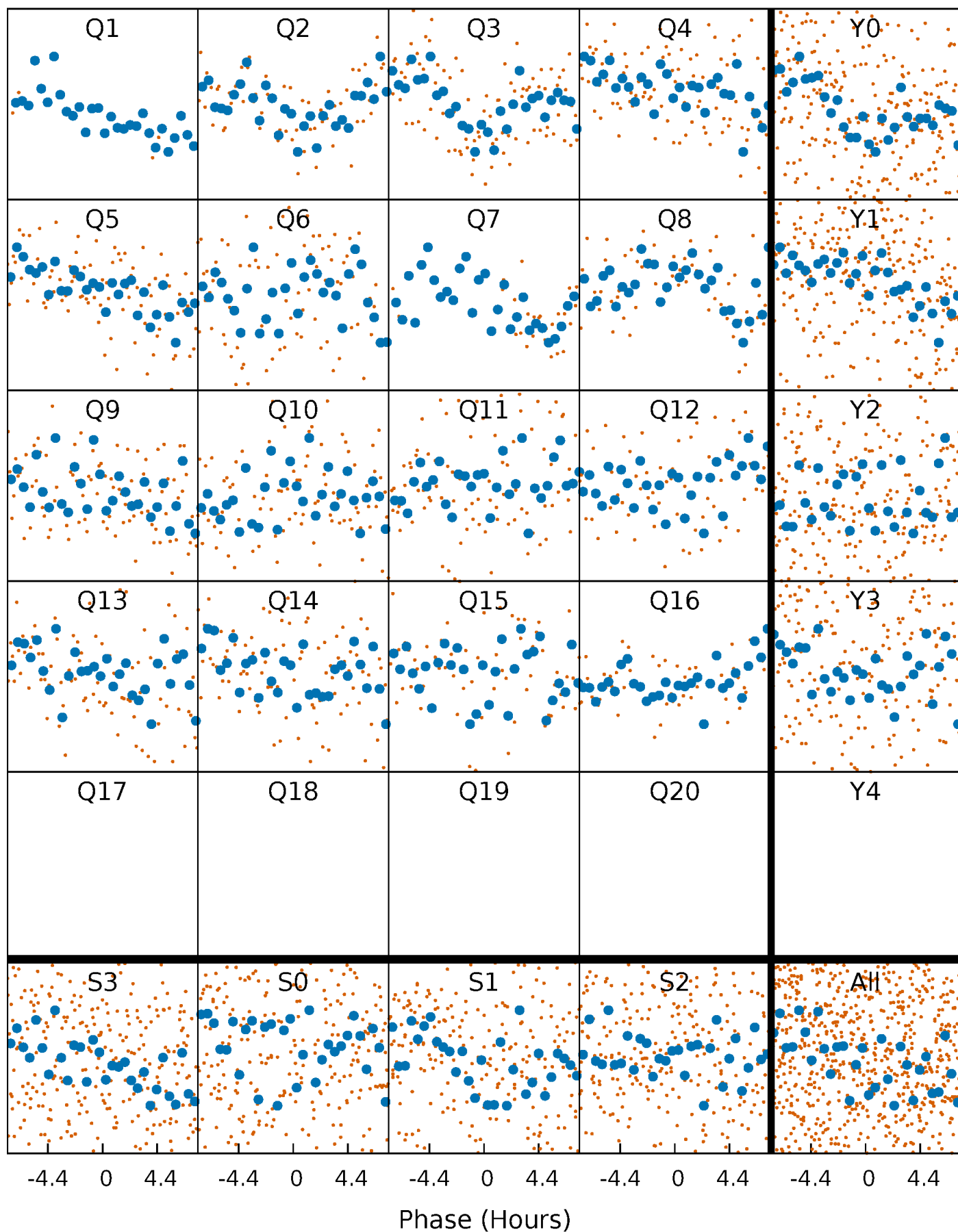


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



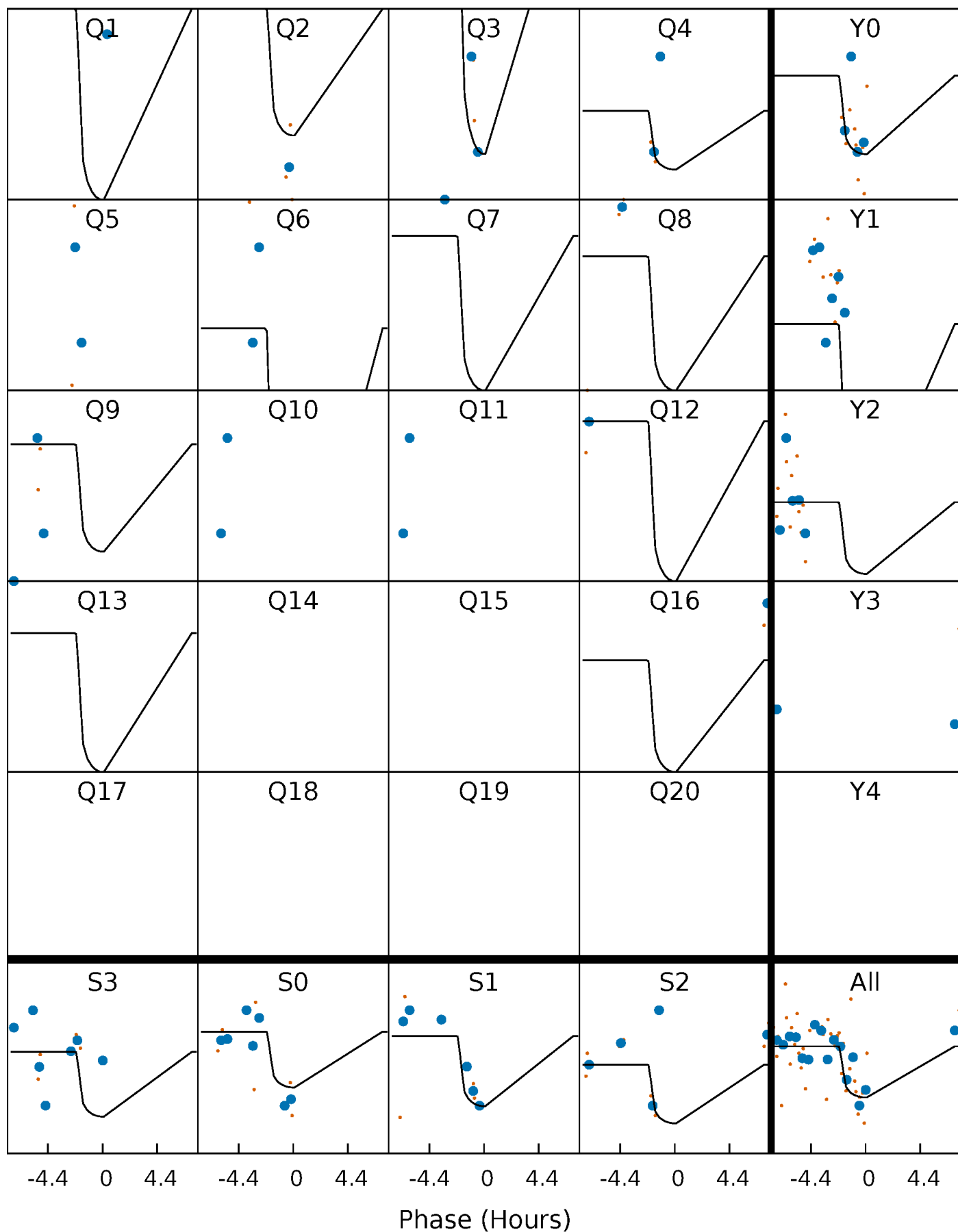
PDC Quarter-Phased Transit Curves

TCE 008847349-02 P= 32.995091 Days $T_0=163.160117$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008847349-02 P= 32.995091 Days $T_0=163.160117$ (BKJD)

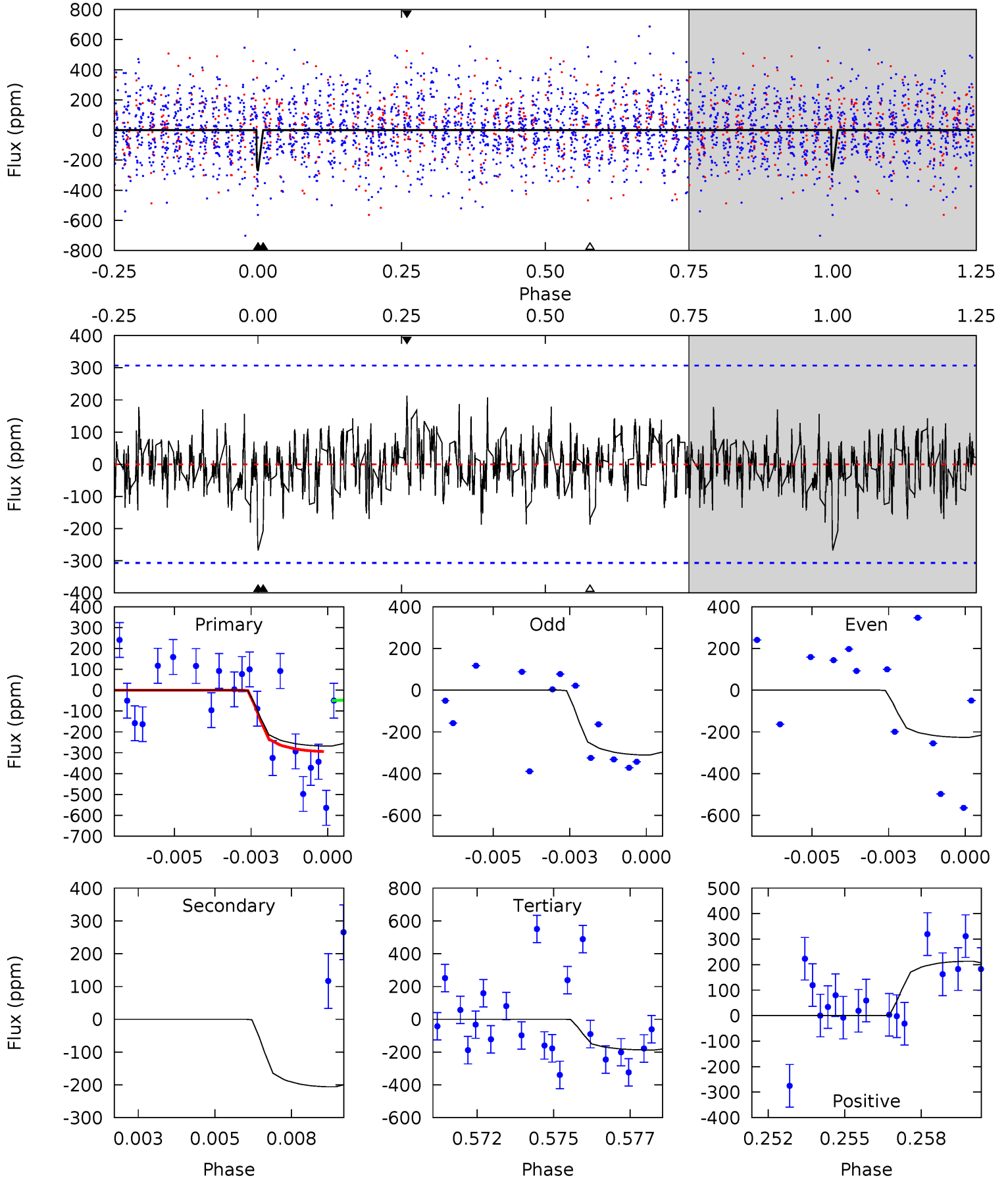


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

008847349-02, P = 32.995091 Days, E = 130.165026 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.61	3.55	3.23	3.67	5.28	3.01	1.06	1.38	0.94	0.32	-0.12	0.76	0	0.44	2.95



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 008847349

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7241^{+228}_{-304}	$3.454^{+0.702}_{-0.078}$	$-0.440^{+0.300}_{-0.300}$	$4.304^{+0.311}_{-2.801}$	$1.923^{+0.082}_{-0.698}$	$0.034^{+0.446}_{-0.009}$
	+3%/-4%	+20%/-2%	+68%/-68%	+7%/-65%	+4%/-36%	+1312%/-26%
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 008847349-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-206 ± 58	$10.00^{+9.94}_{-6.79}$	1791^{+119}_{-295}	5313^{+5096}_{-1189}	66^{+573}_{-49}
Alt.	N/A	N/A	N/A	N/A	N/A

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

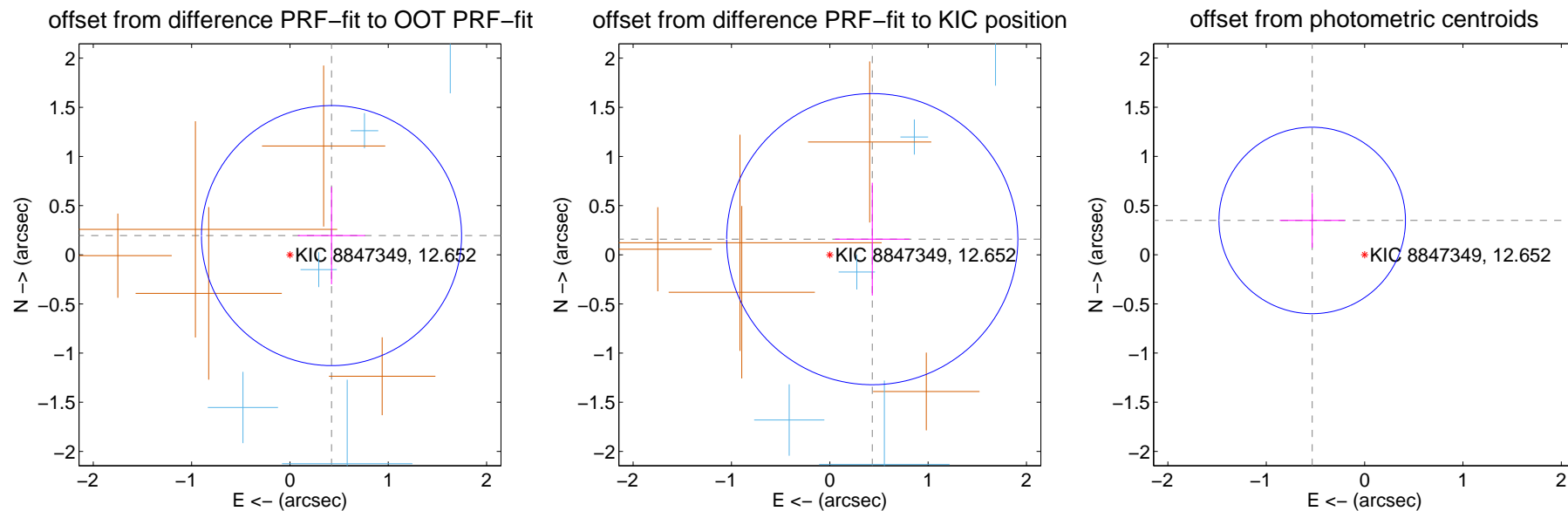
DV Centroid Data

Supplemental centroid analysis for 008847349-02. Kepler magnitude: 12.65. Transit SNR 12.61

There are 5 quarters with good PRF difference image offsets

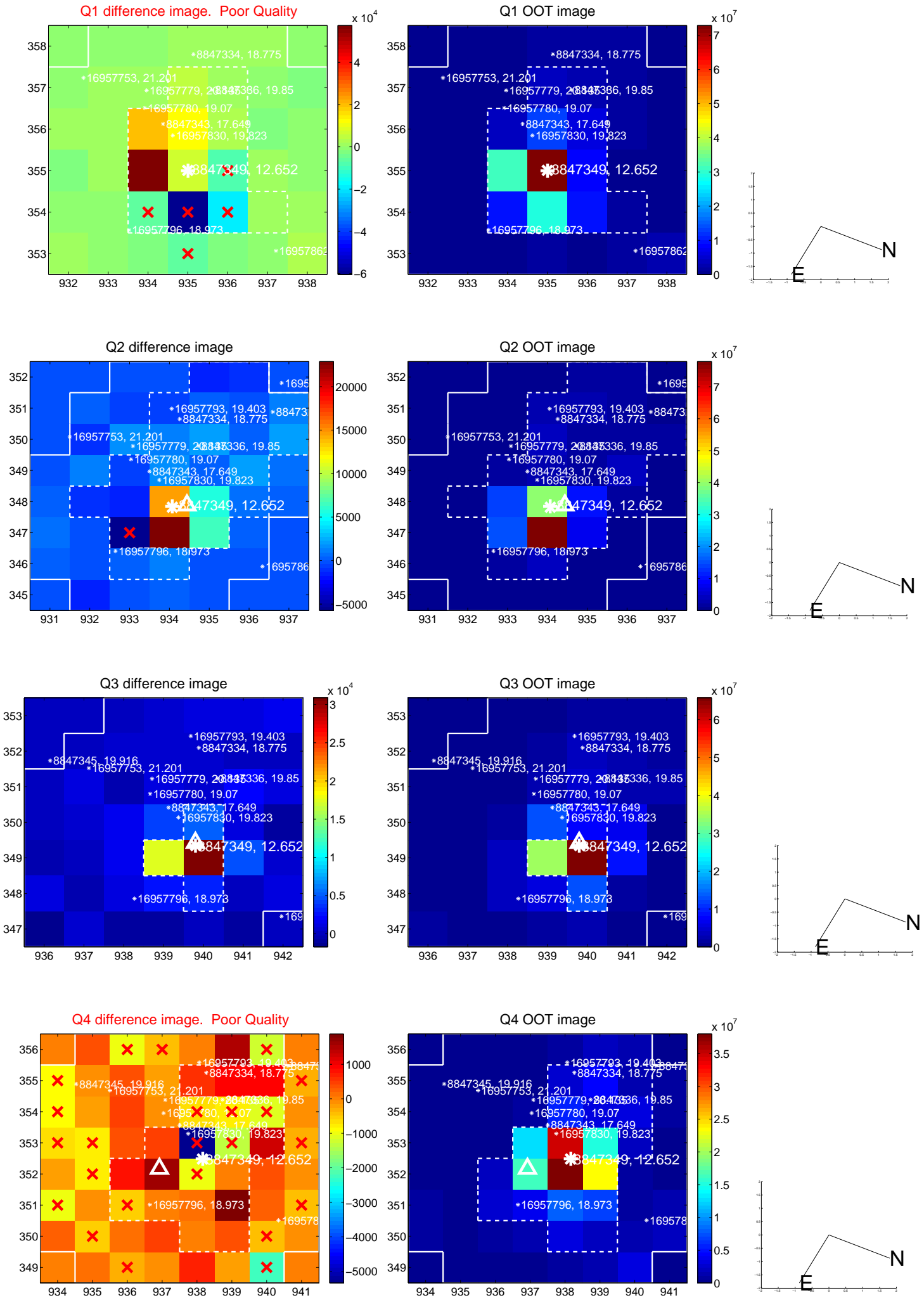
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.466 ± 0.441	1.06	-0.423 ± 0.342	0.195 ± 0.495
PRF-fit source offset from KIC position	0.460 ± 0.494	0.93	-0.432 ± 0.379	0.159 ± 0.574
photometric centroid source offset	0.64 ± 0.32	2.01	0.53 ± 0.33	0.35 ± 0.28

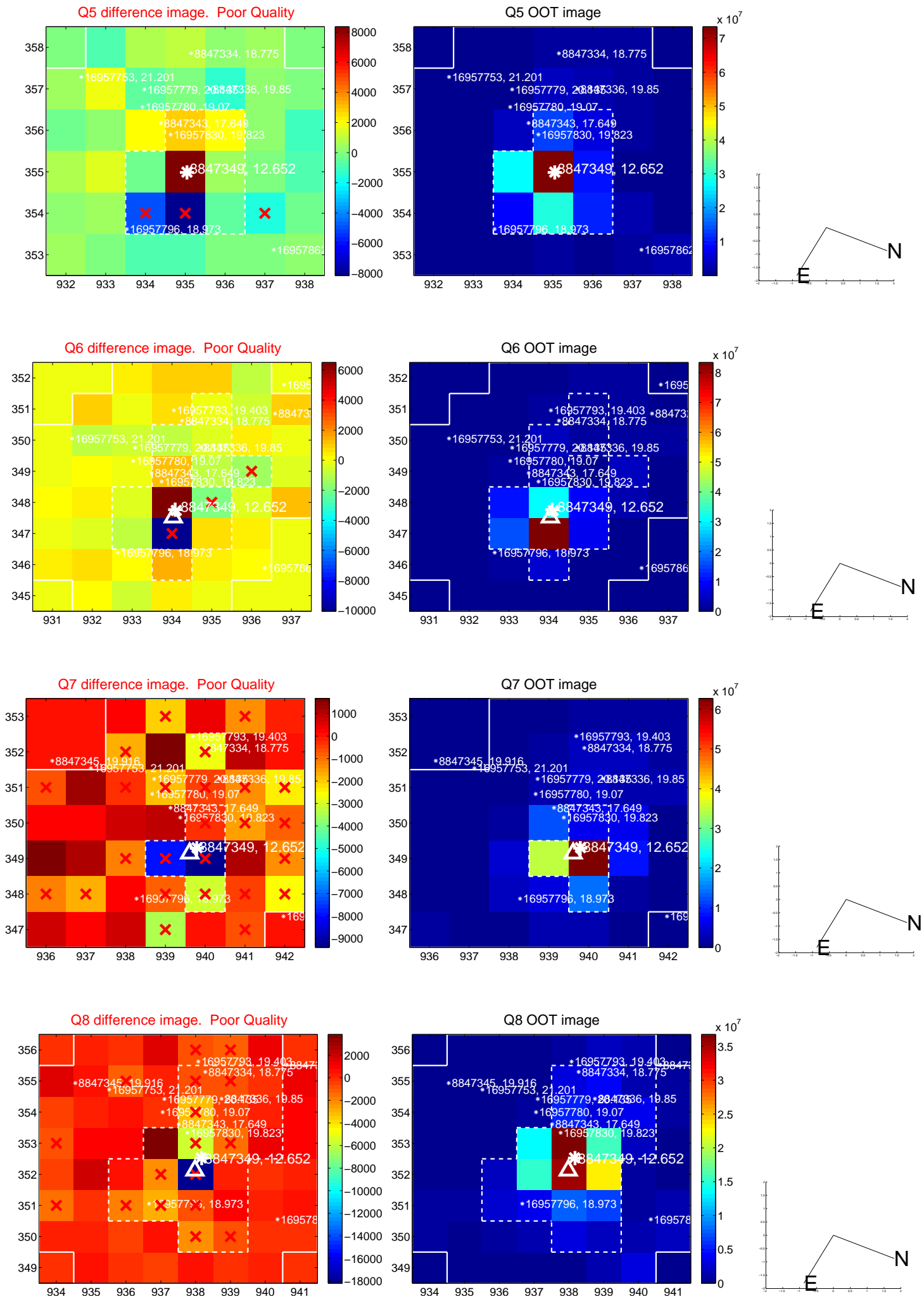


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

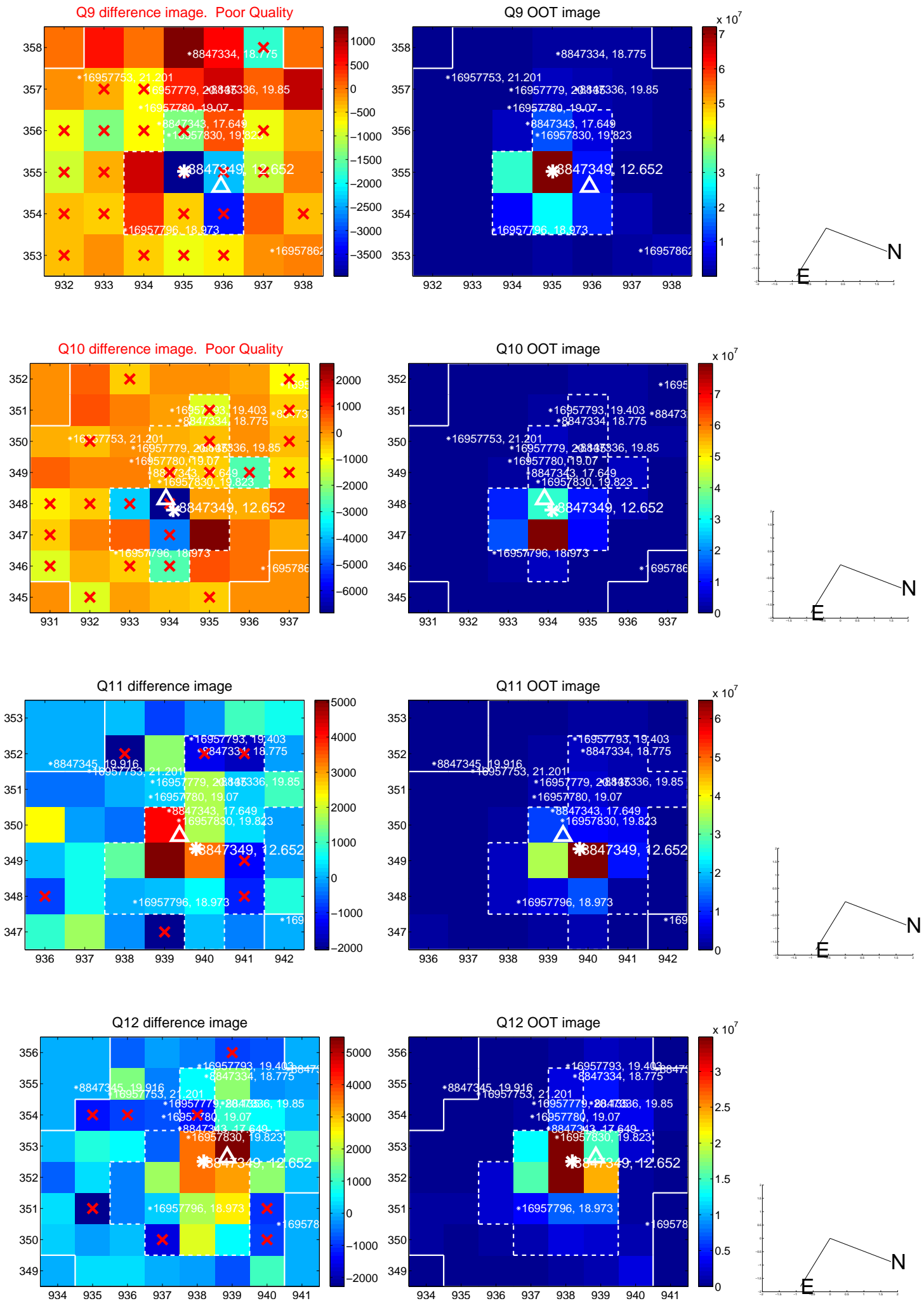
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



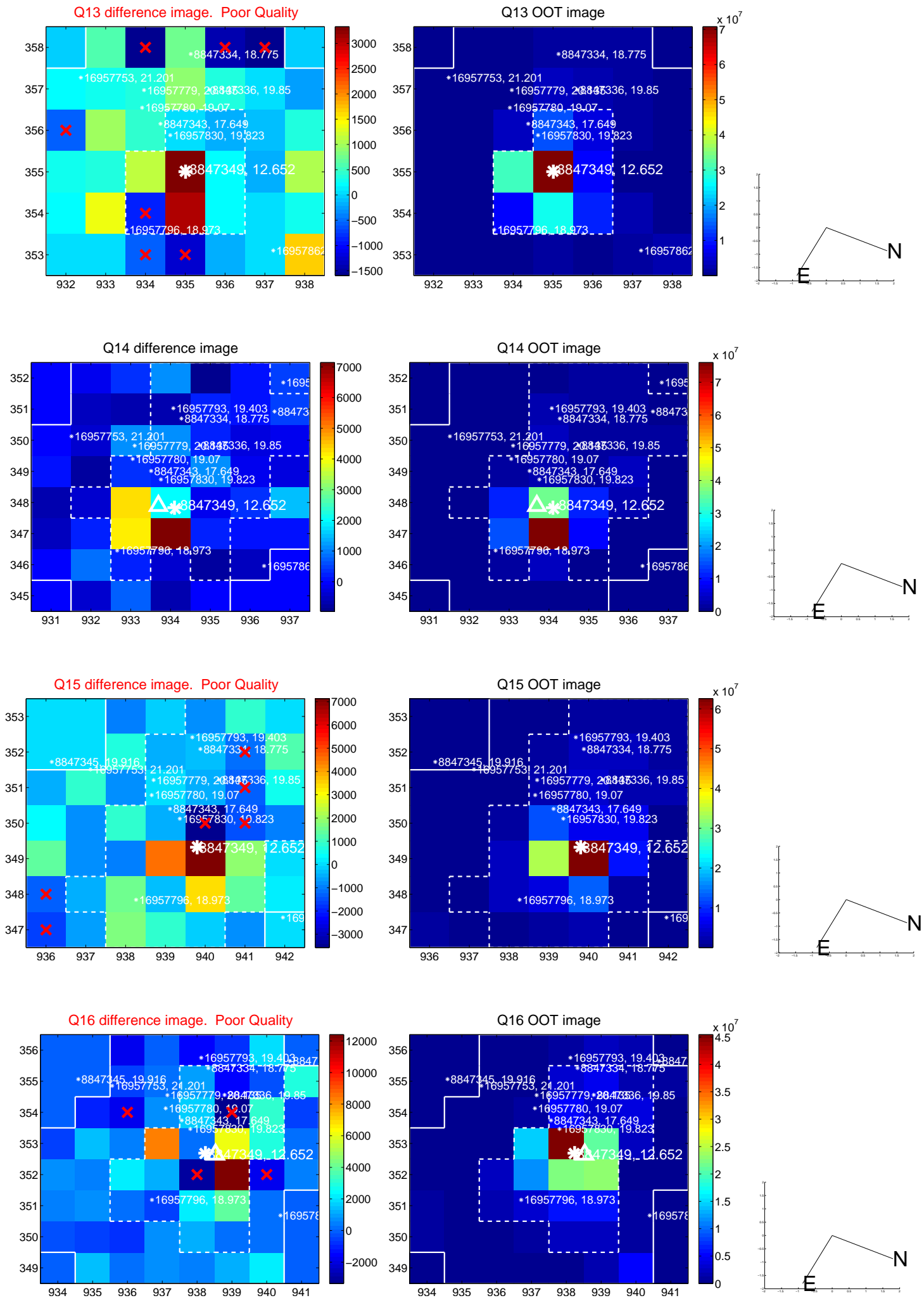
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



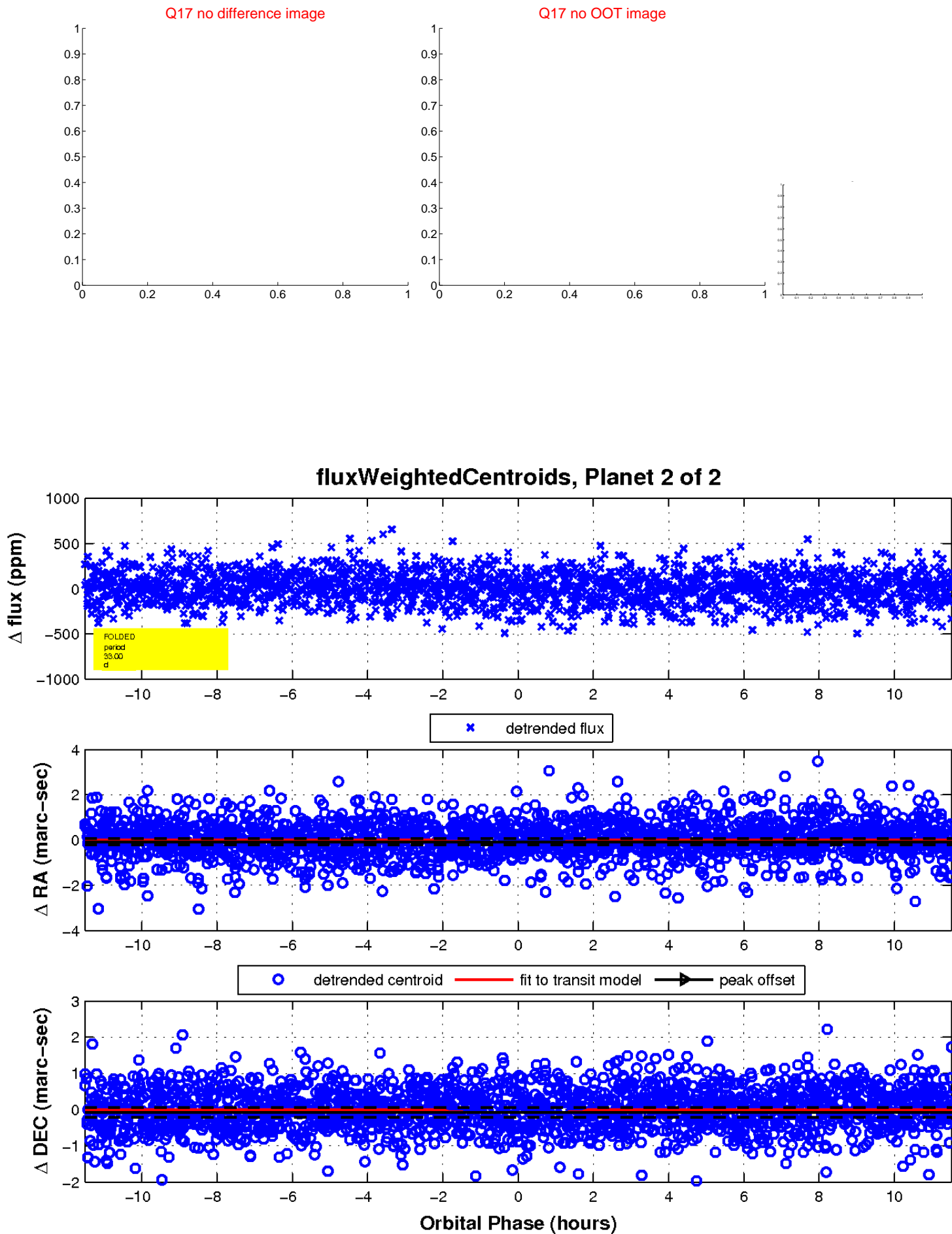
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

