

KIC 008737796

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})
008737796-01	OBS	1252.01	1.771431	132.735074	85.5	2.130	86.1	26.6	10.40	5487	11.97	0.00
008737796-02	OBS	No	1.771489	131.829944	1391.1	2.000	123.4	-1.0	10.40	5487	38.52	56801.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008737796-01	OBS	FP	0.00	1	0	1	0	MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008737796-02	OBS	FP	0.00	1	0	0	0	MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—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 008737796-01

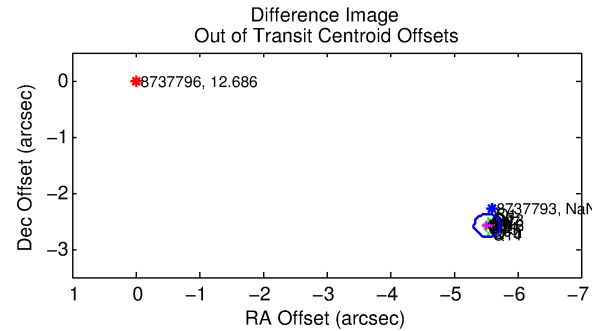
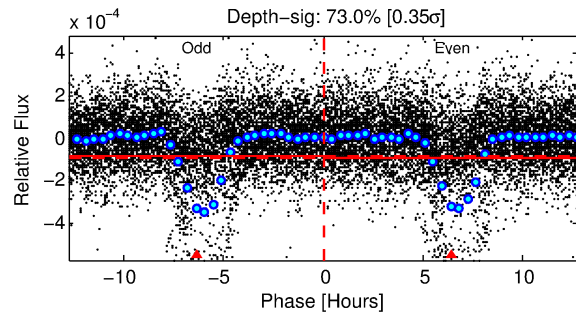
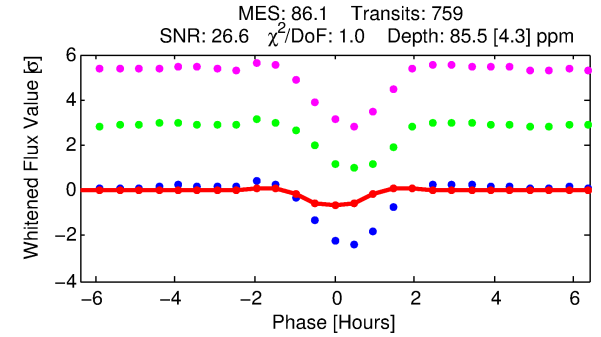
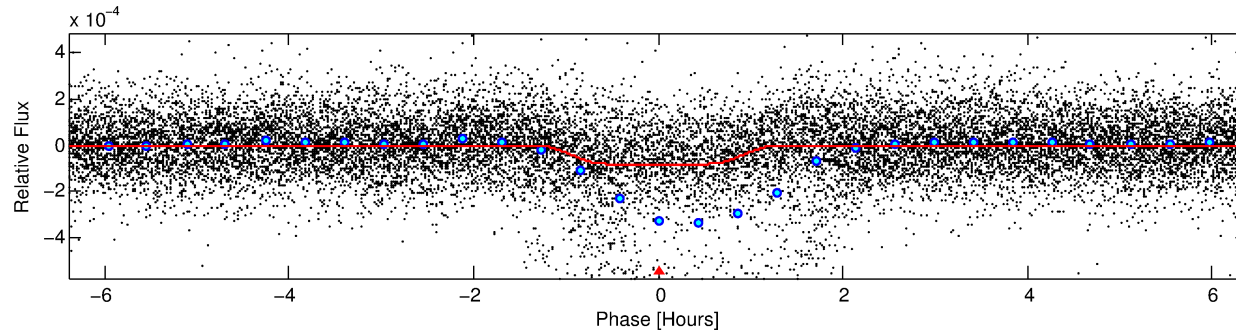
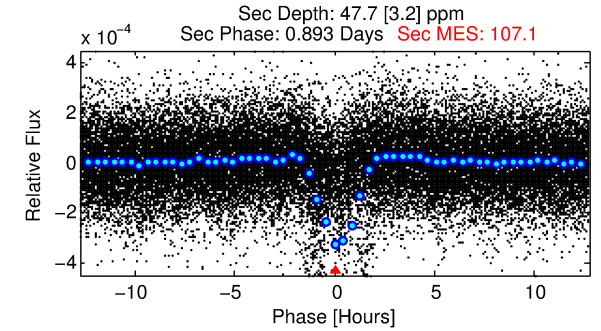
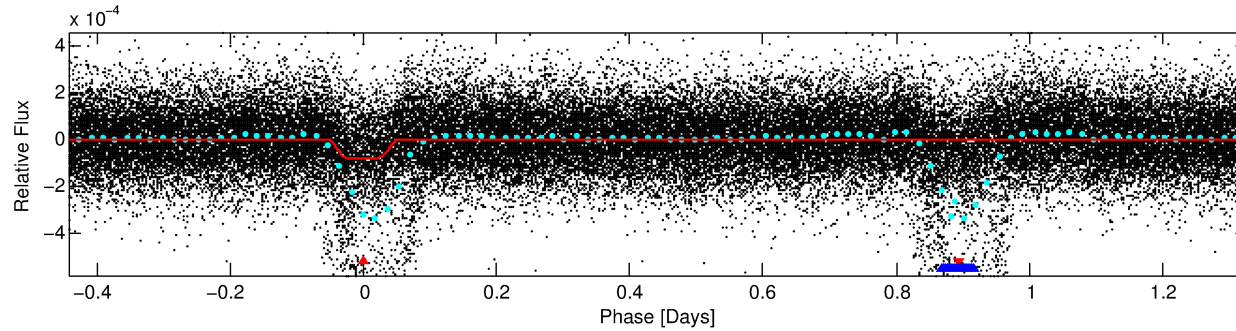
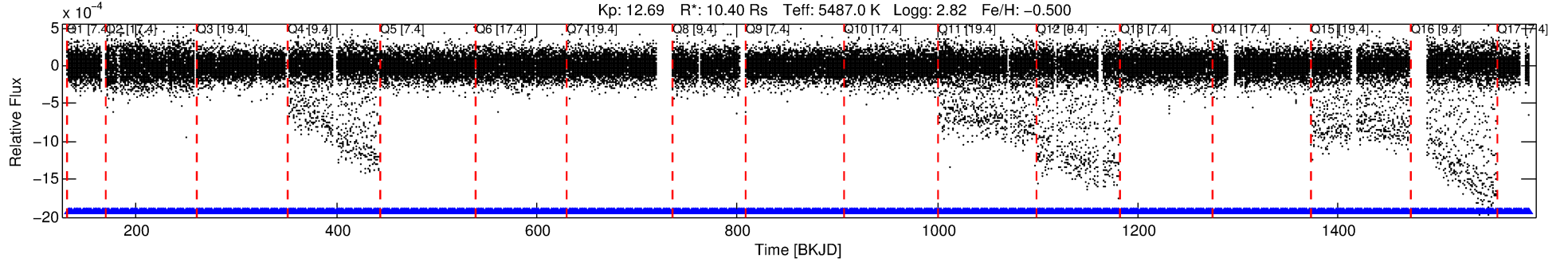
No Significant Match Found

DV One-Page Summary

KIC: 8737796 Candidate: 1 of 2 Period: 1.771 d

KOI: K01252 Corr: No Ephemeris Match

Kp: 12.69 R*: 10.40 Rs Teff: 5487.0 K Logg: 2.82 Fe/H: -0.500



DV Fit Results:

Period = 1.77143 [0.00000] d
Epoch = 132.7351 [0.0011] BKJD
Rp/R* = 0.0106 [0.0018]
a/R* = 2.55 [1.87]
b = 0.94 [0.11]
Seff = N/A
Teq = N/A
Rp = 11.97 [6.96] Re
a = N/A
Ag = N/A
Teffp = N/A

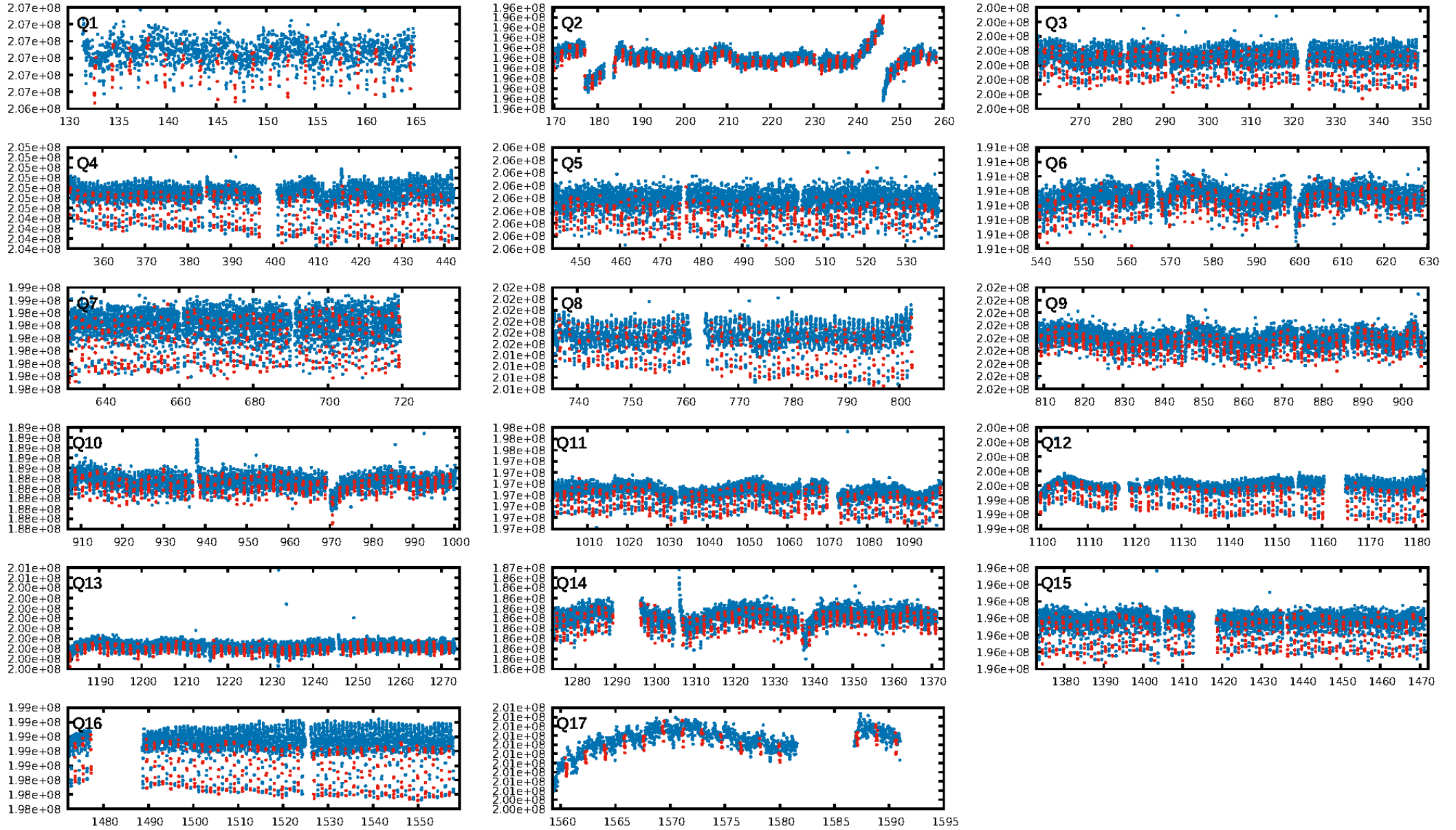
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [725/725]
GhostDiagnostic-chr: -0.6046
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 6.097 arcsec [89.70σ]
KicOffset-rm: 6.111 arcsec [89.78σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

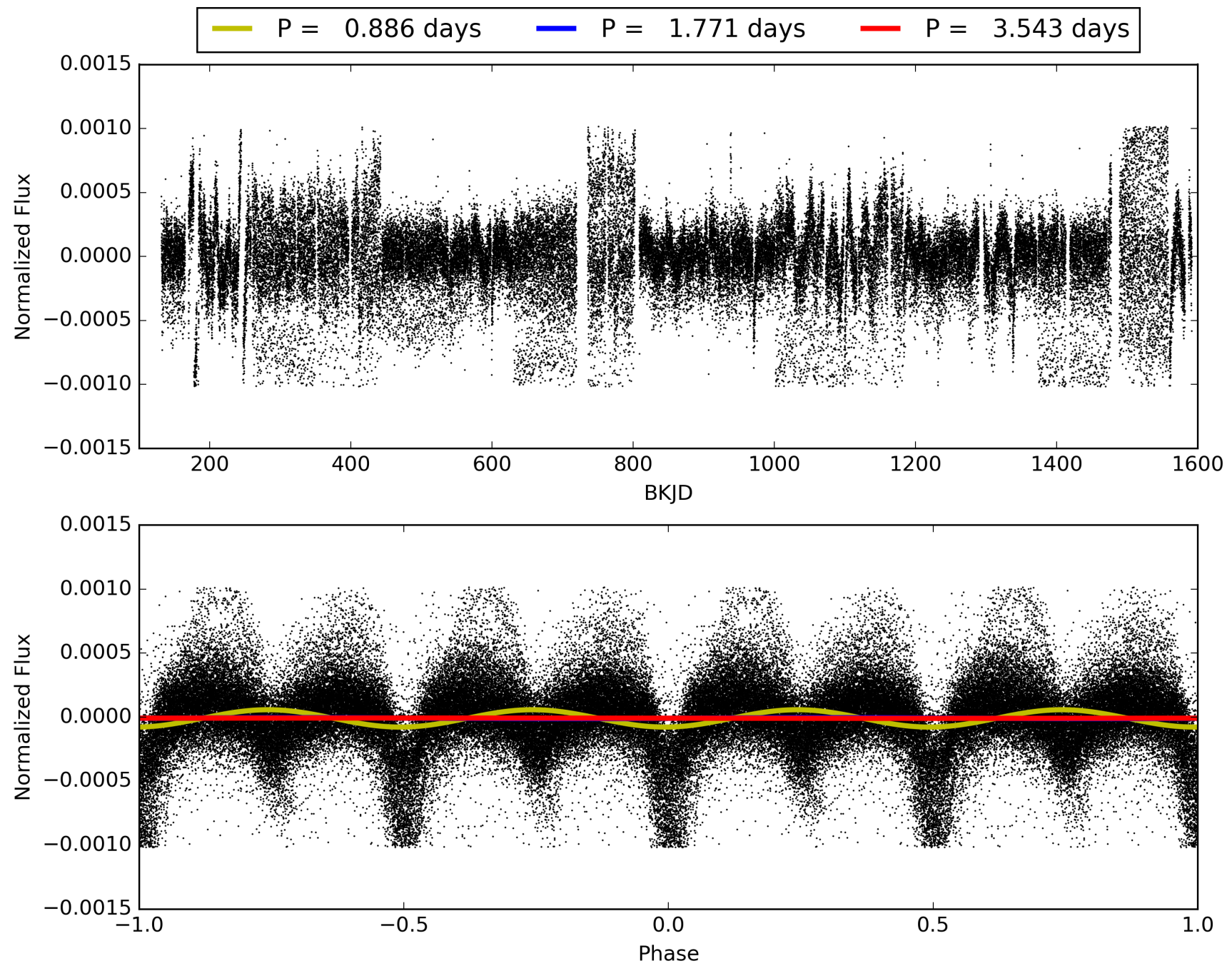
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008737796-01, PDC Light Curves

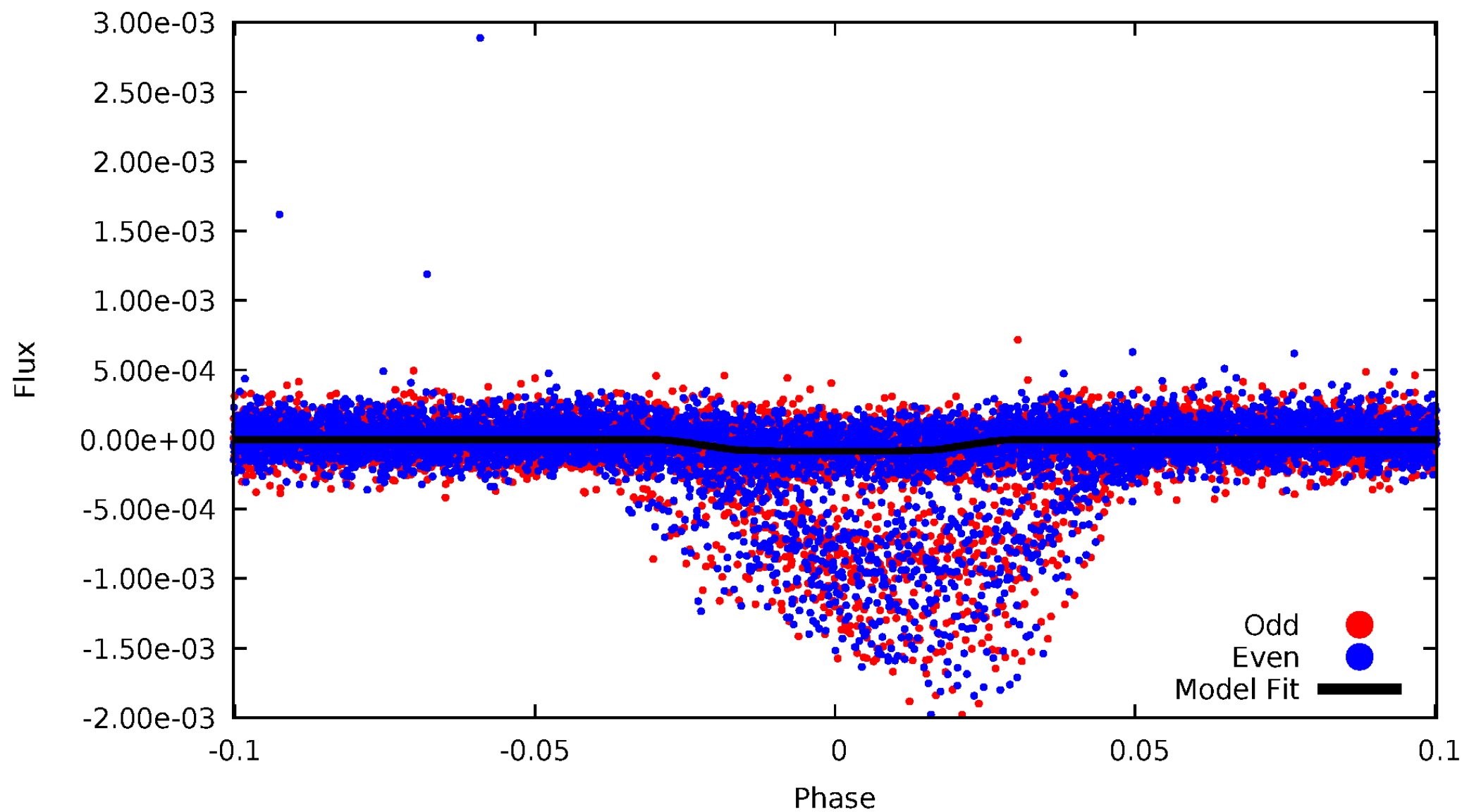


TCE 008737796-01



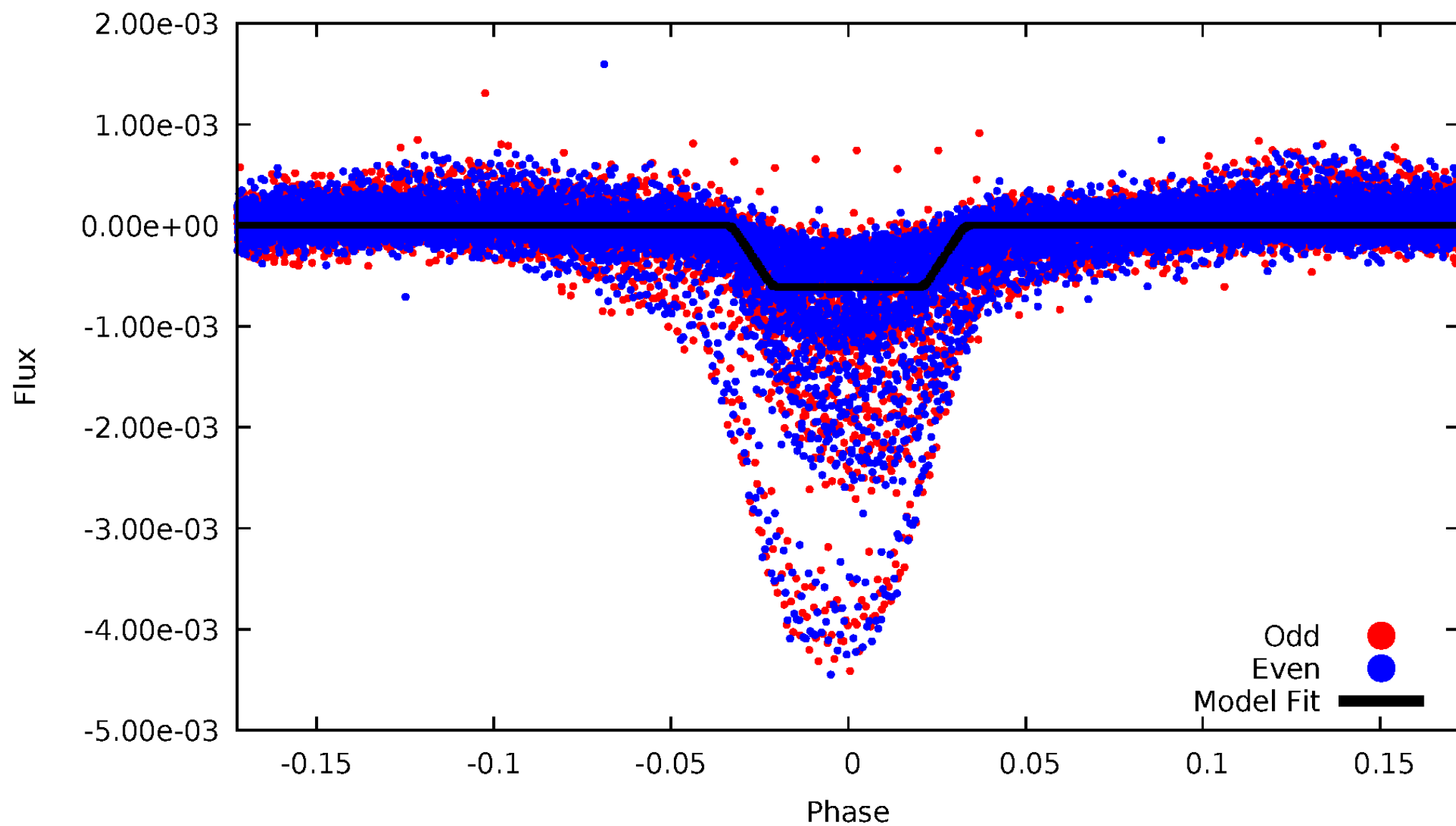
DV Odd/Even

TCE 008737796-01



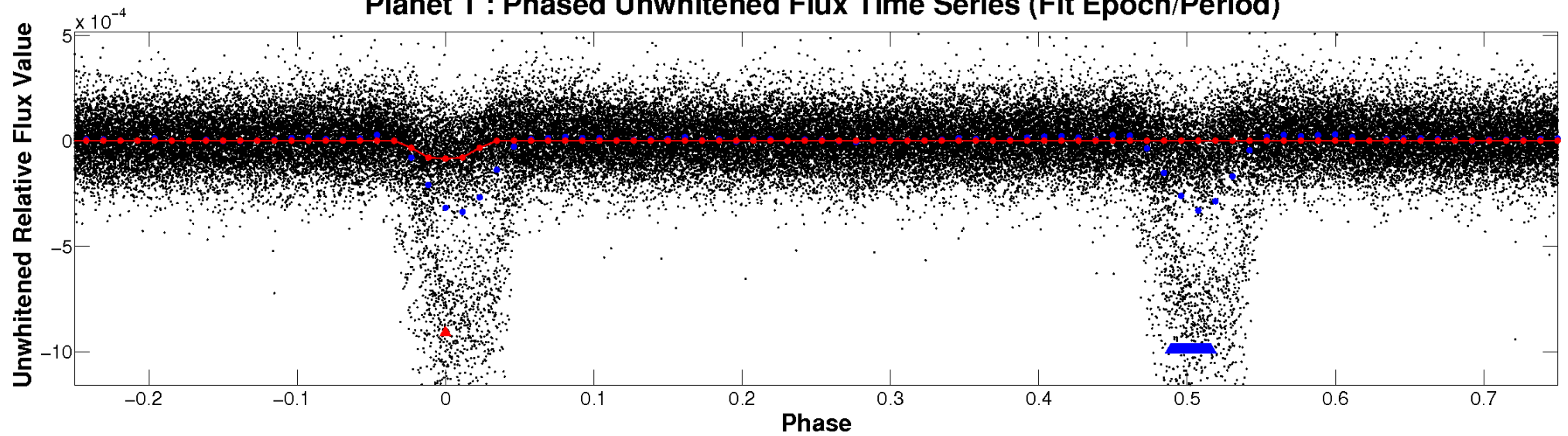
ALT Odd/Even

TCE 008737796-01

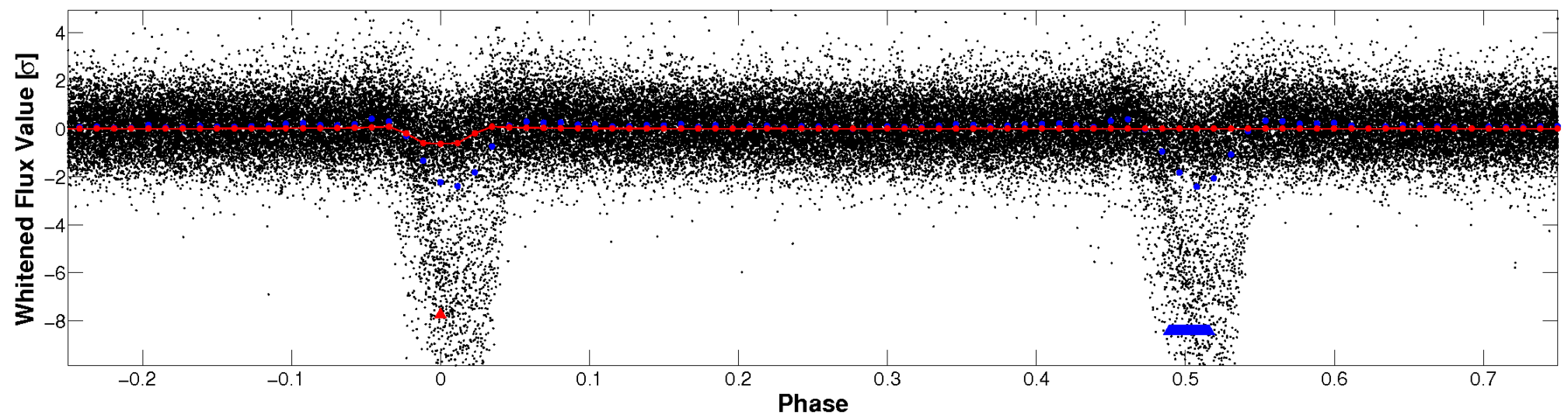


Non-Whitened Vs. Whitened Light Curve

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

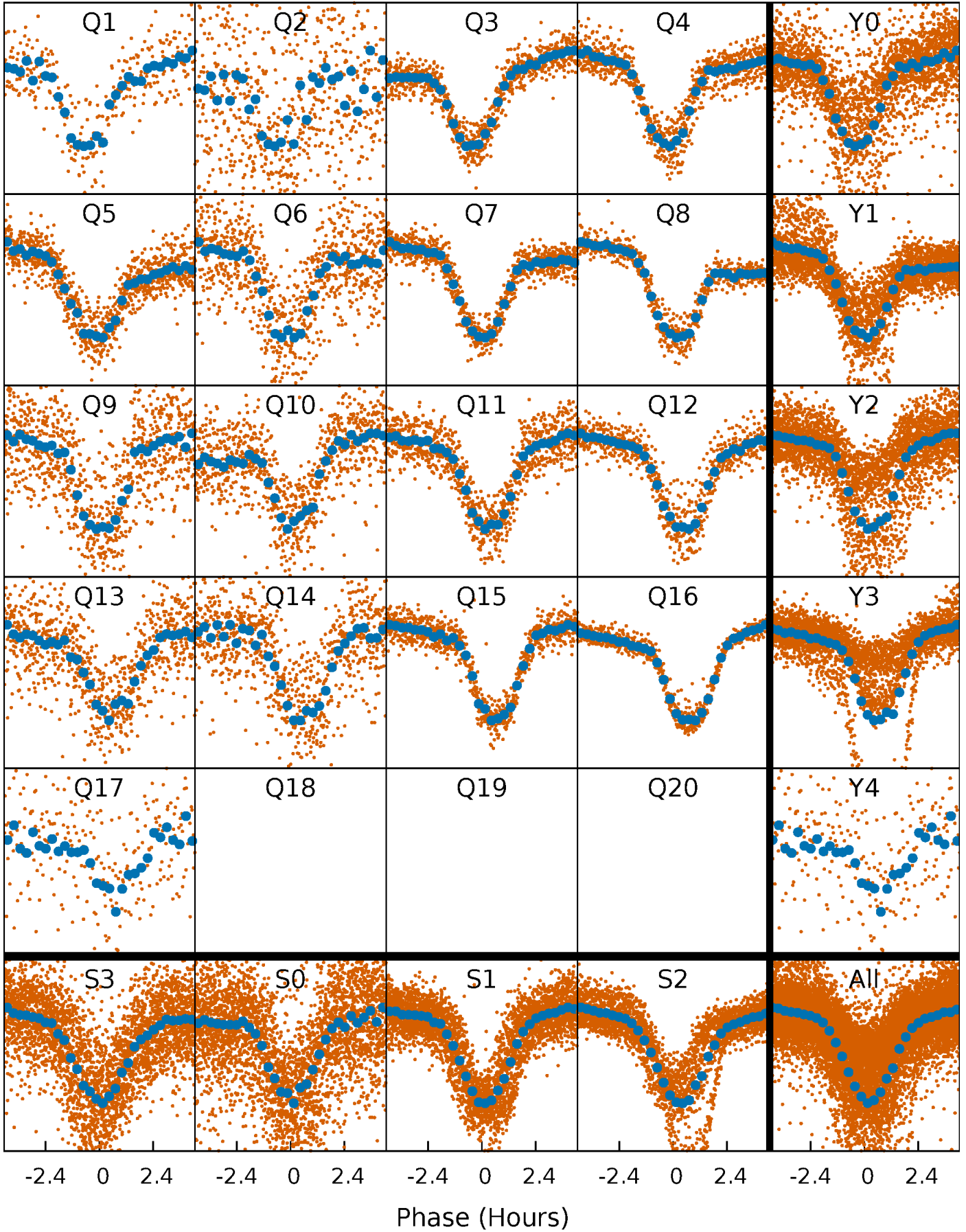


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



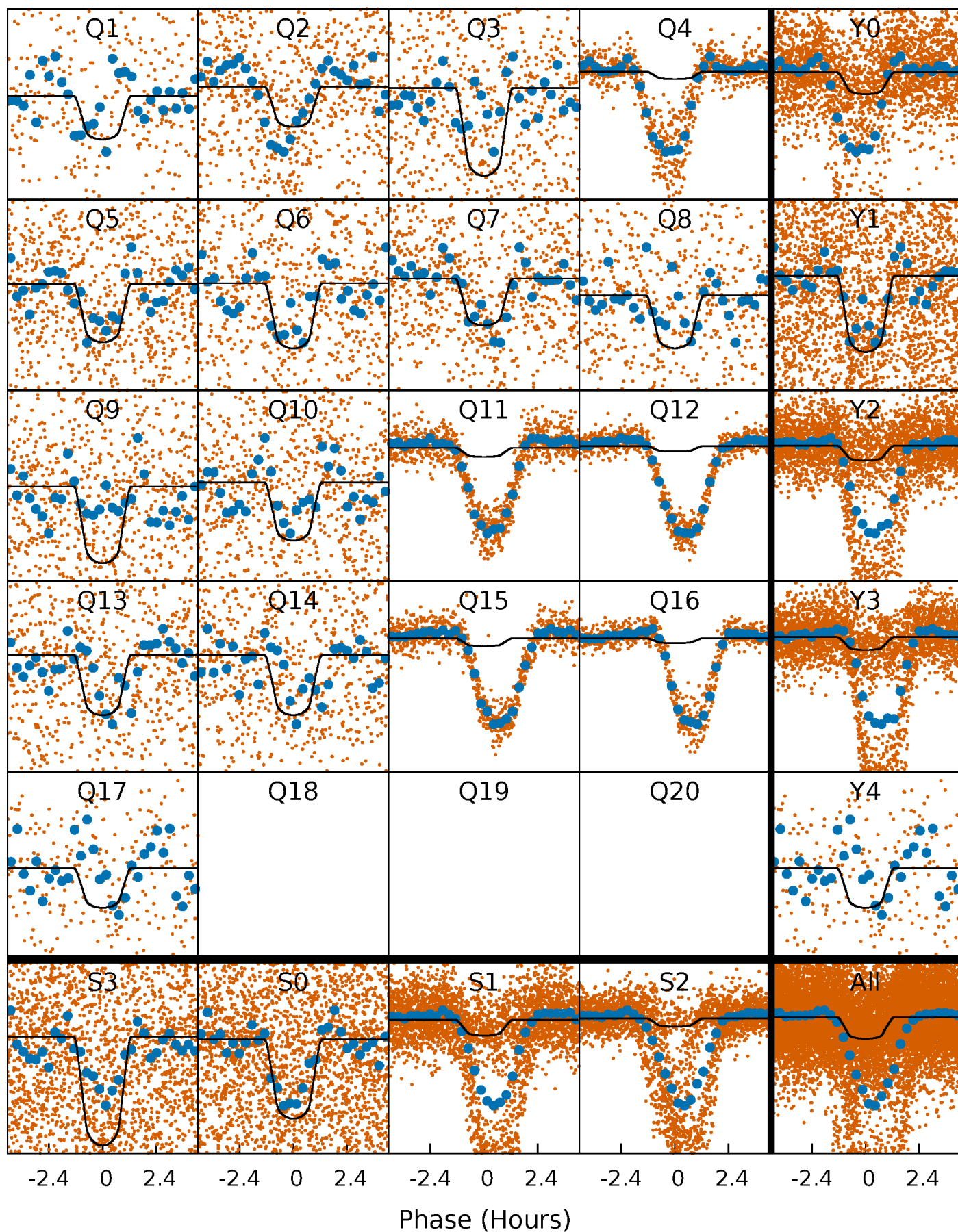
PDC Quarter-Phased Transit Curves

TCE 008737796-01 P= 1.771431 Days $T_0=132.735074$ (BKJD)



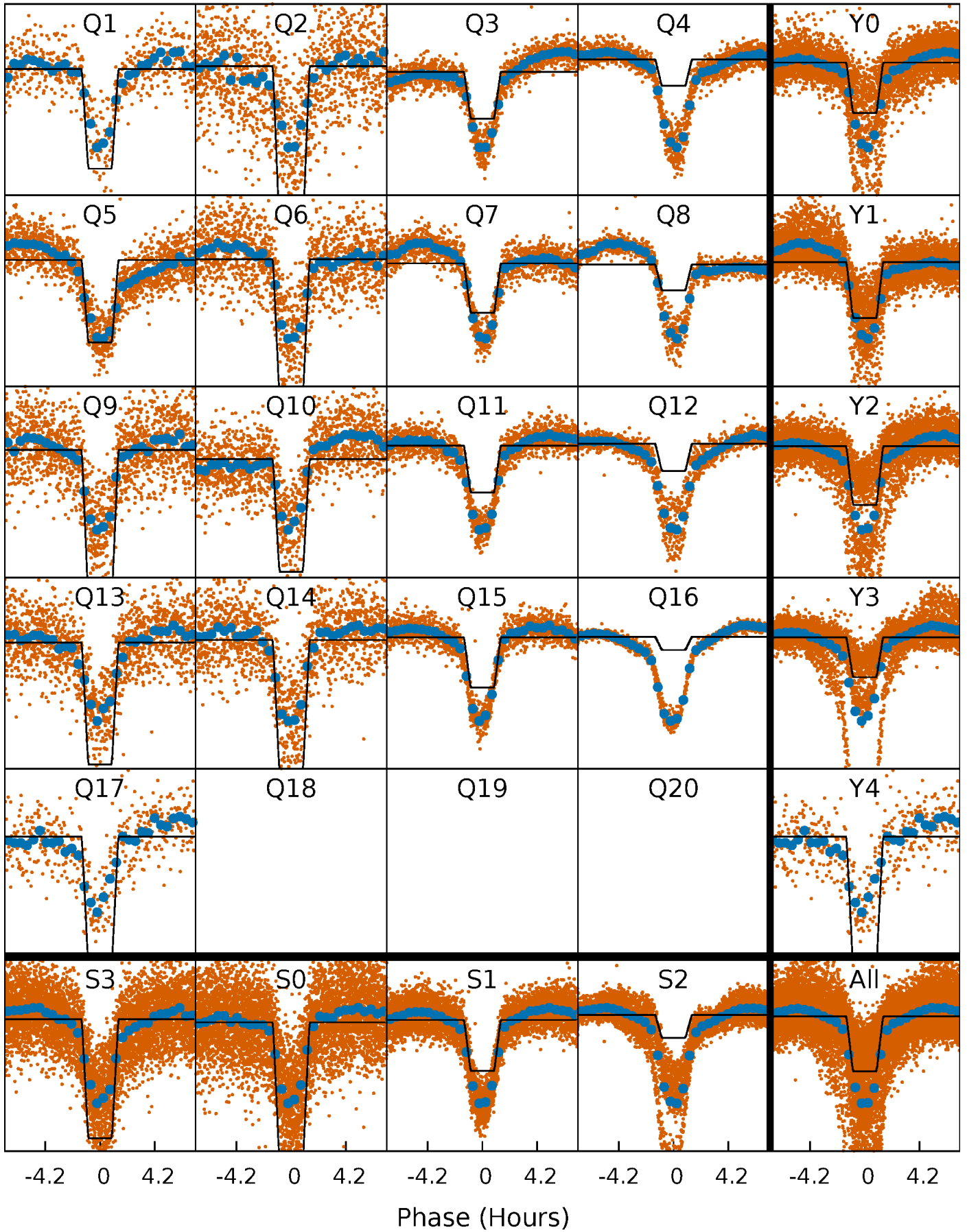
DV Quarter-Phased Transit Curves

TCE 008737796-01 P= 1.771431 Days $T_0=132.735074$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

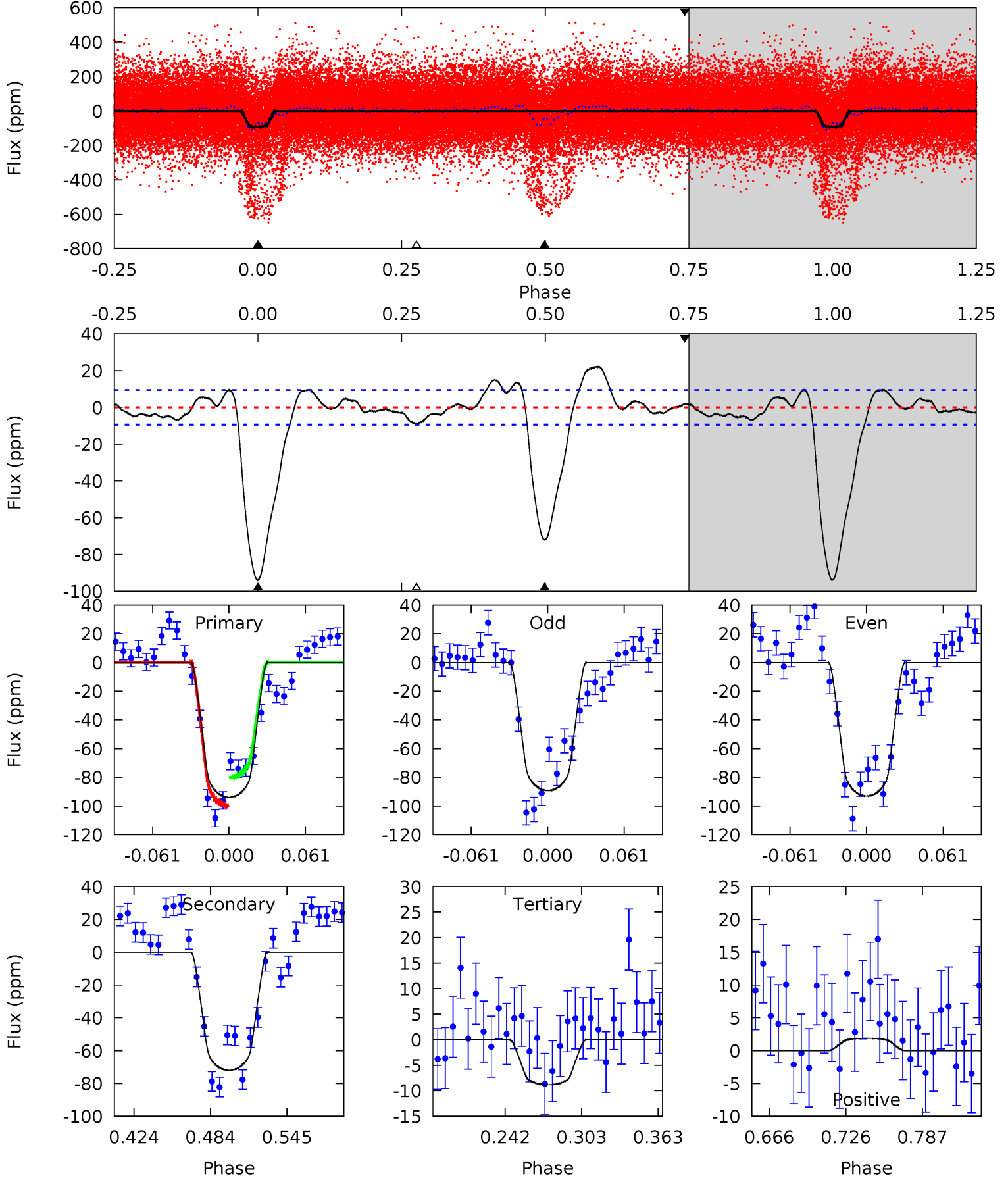
TCE 008737796-01 P= 1.771513 Days $T_0=132.707085$ (BKJD)



DV Model-Shift Uniqueness Test

008737796-01, P = 1.771431 Days, E = 130.963643 Days

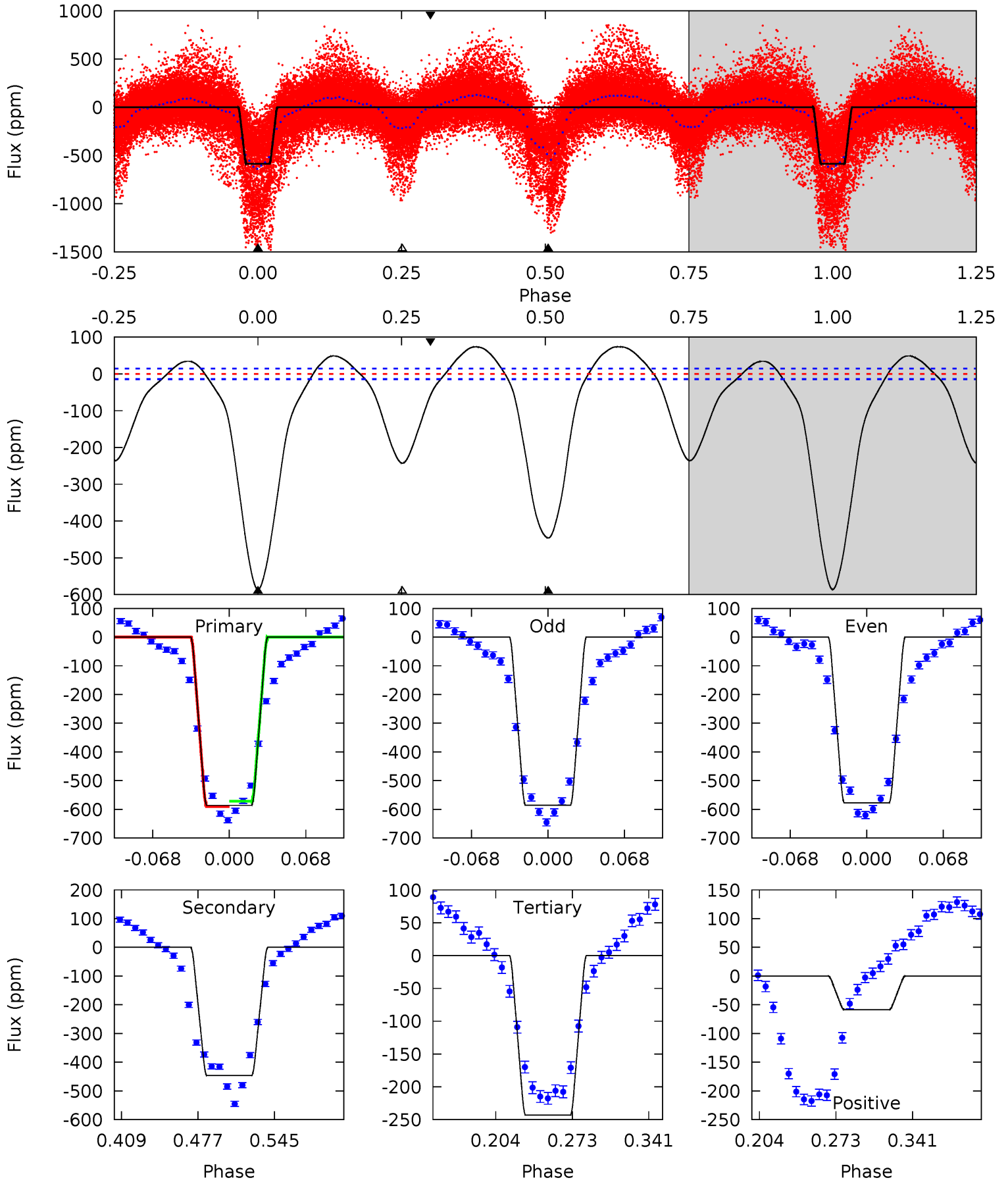
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.5	35.6	4.37	0.93	4.67	1.88	3.30	42.2	45.6	31.2	34.7	0.93	3.05	0.19	4.91



Alt Model-Shift Uniqueness Test

008737796-01, P = 1.771513 Days, E = 130.935572 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
188.1	143.2	78.0	-18.8	4.64	1.82	29.1	110.1	206.9	65.2	162.0	1.30	1.49	0.11	0



Stellar Parameters For KIC 008737796

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5487^{+120}_{-313}	$2.816^{+0.378}_{-0.162}$	$-0.500^{+0.200}_{-0.300}$	$10.396^{+2.474}_{-5.773}$	$2.581^{+0.155}_{-1.393}$	$0.003^{+0.013}_{-0.002}$
	+2%/-6%	+13%/-6%	+40%/-60%	+24%/-56%	+6%/-54%	+388%/-50%
Source	PHO1	FLK73	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 008737796-01 / KOI 1252.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-72 ± 2	$11.29^{+3.29}_{-3.02}$	5346^{+494}_{-620}	3980^{+743}_{-6819}	$0.453^{+0.337}_{-0.166}$
Alt.	-446 ± 3	$27.38^{+4.70}_{-7.46}$	5379^{+432}_{-610}	4214^{+480}_{-638}	$0.498^{+0.330}_{-0.128}$

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

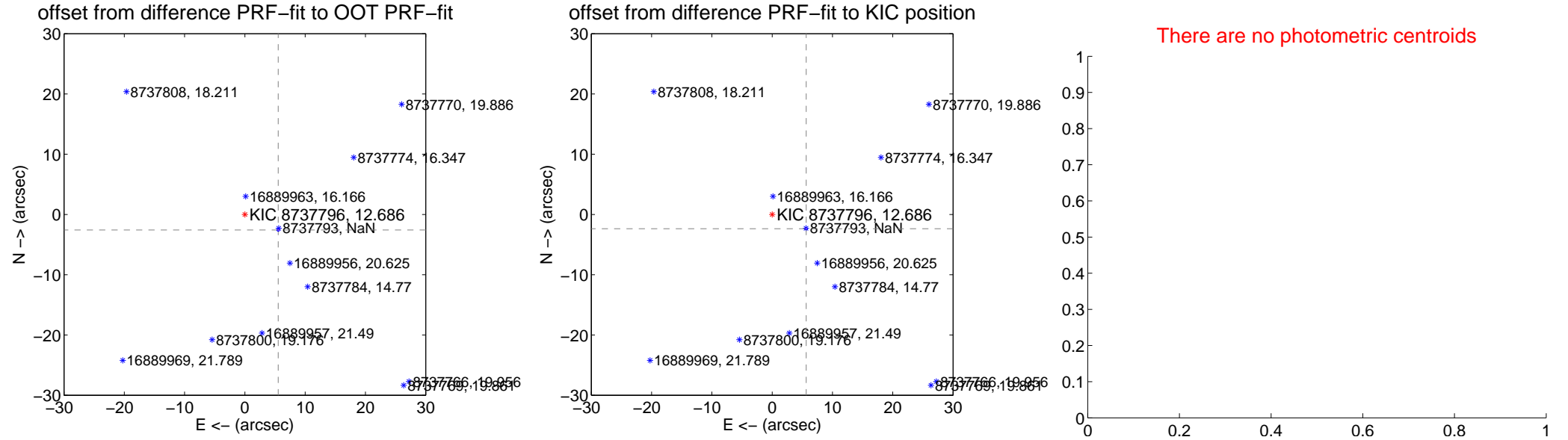
DV Centroid Data

Supplemental centroid analysis for 008737796-01. Kepler magnitude: 12.69. Transit SNR 26.60

There are 17 quarters with good PRF difference image offsets

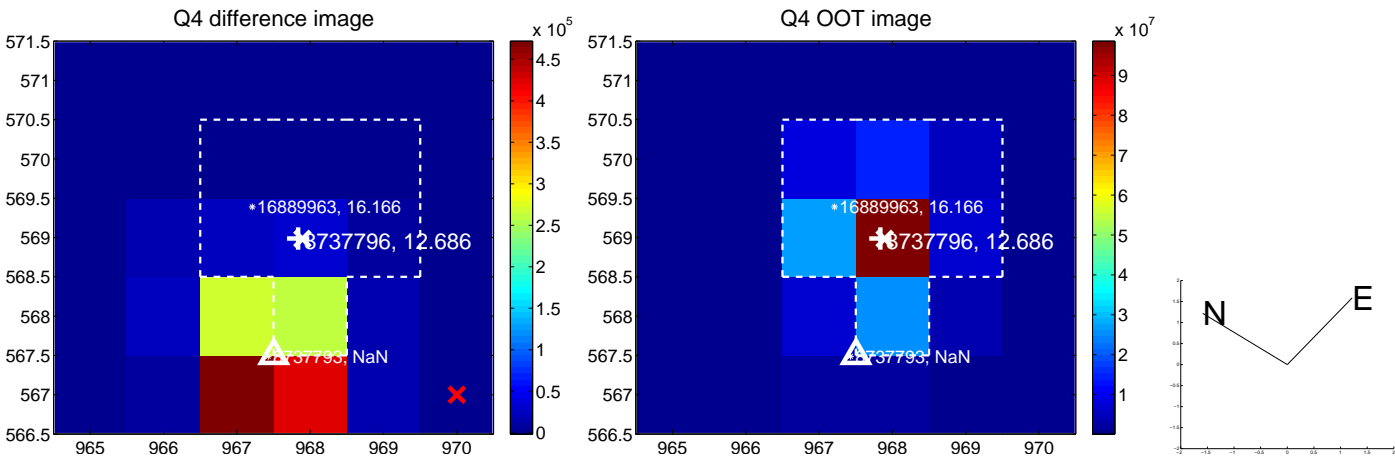
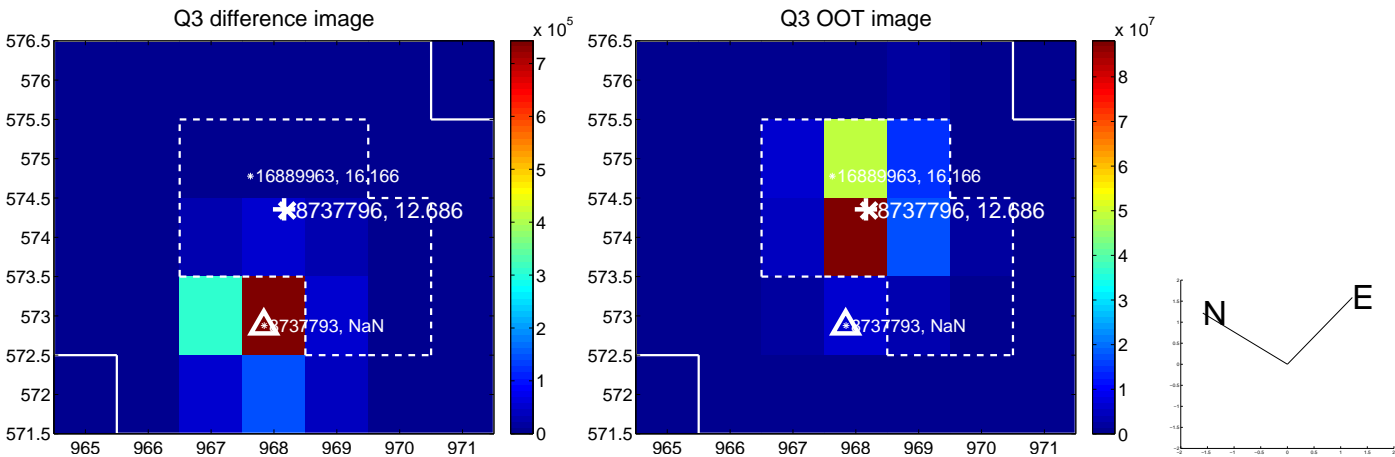
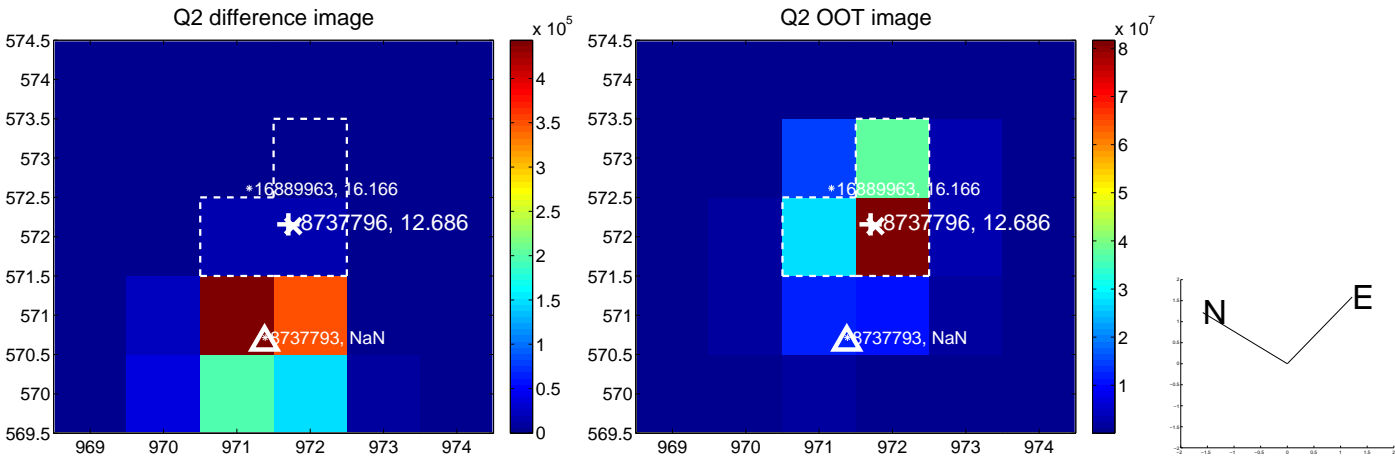
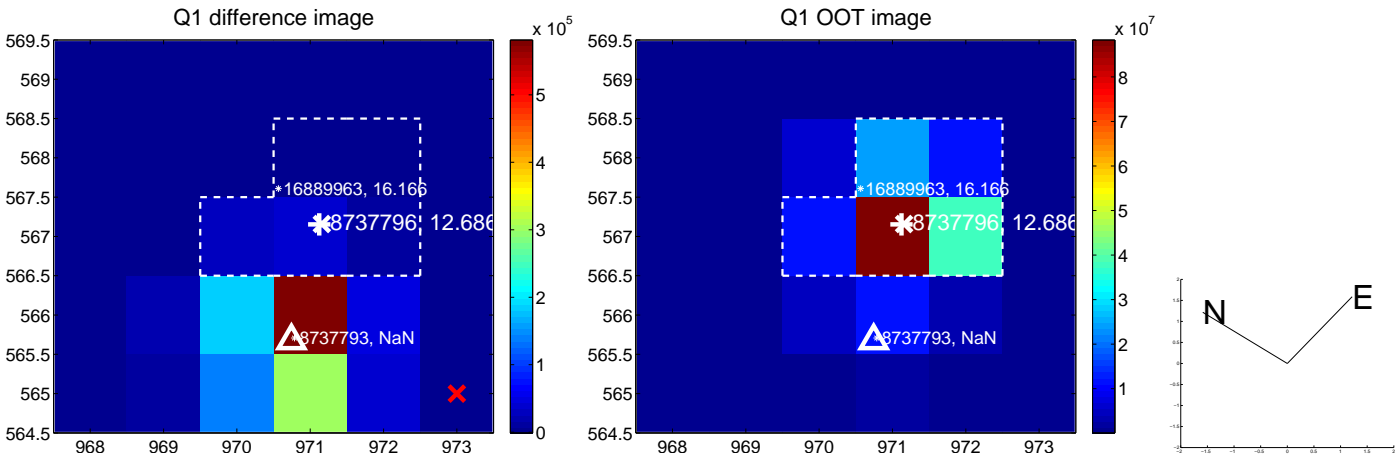
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.097 ± 0.068	89.70	-5.523 ± 0.067	-2.581 ± 0.071
PRF-fit source offset from KIC position	6.111 ± 0.068	89.78	-5.637 ± 0.068	-2.360 ± 0.067
photometric centroid source offset	—	—	—	—

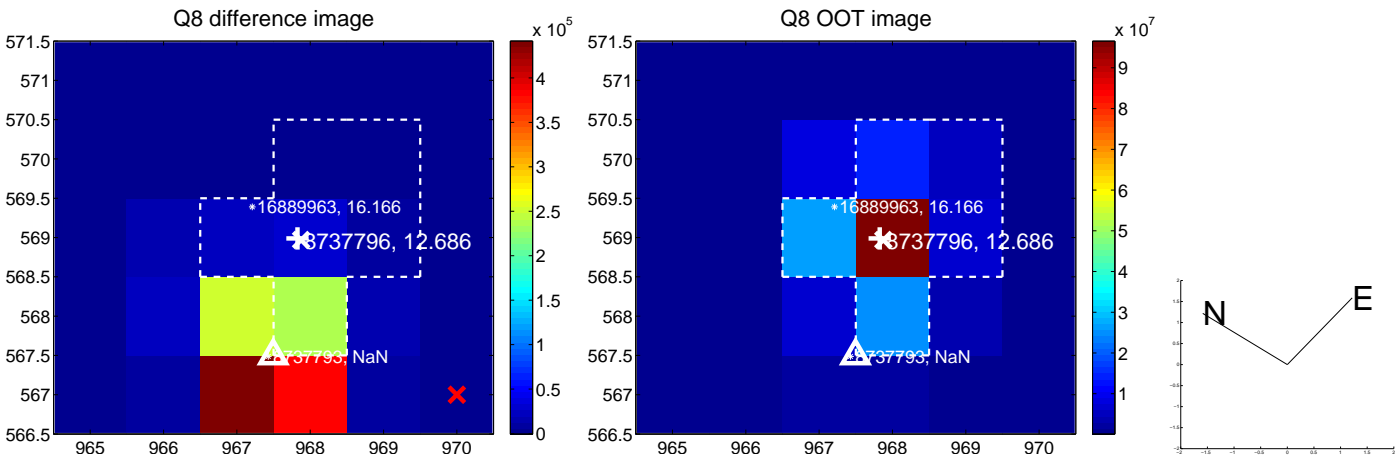
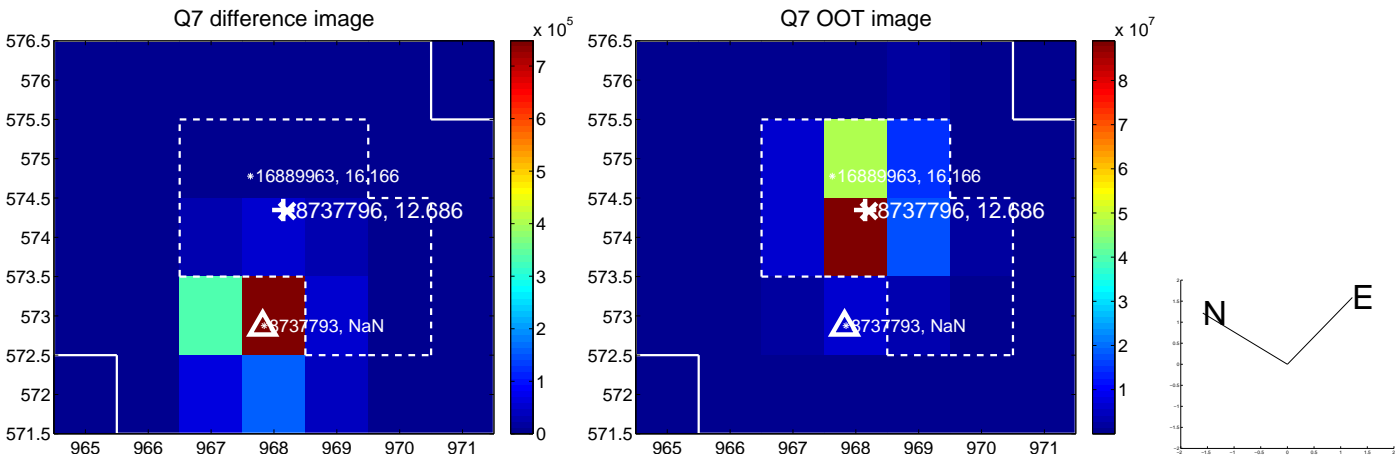
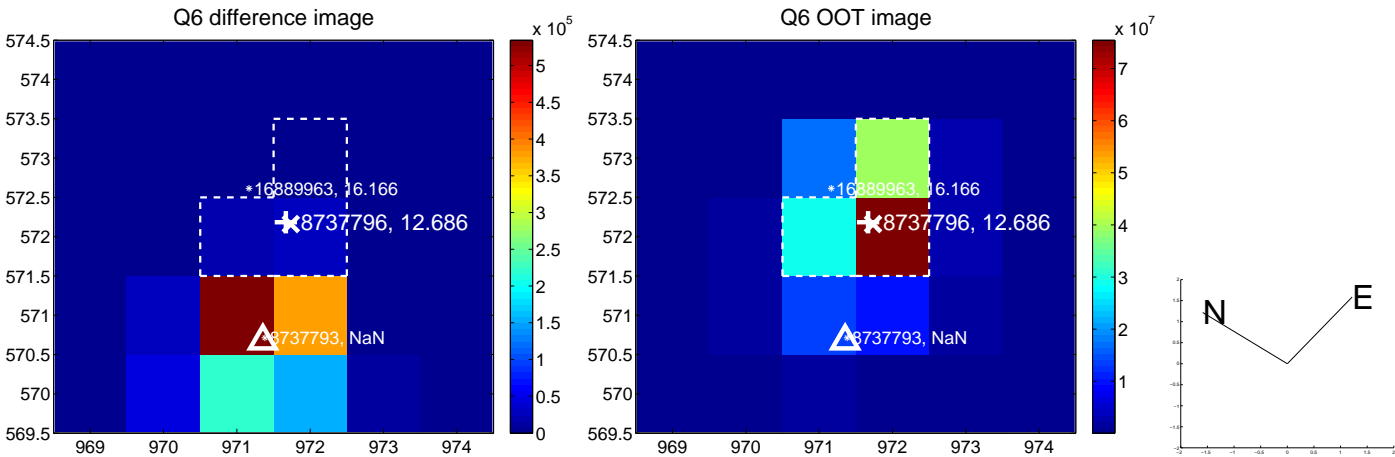
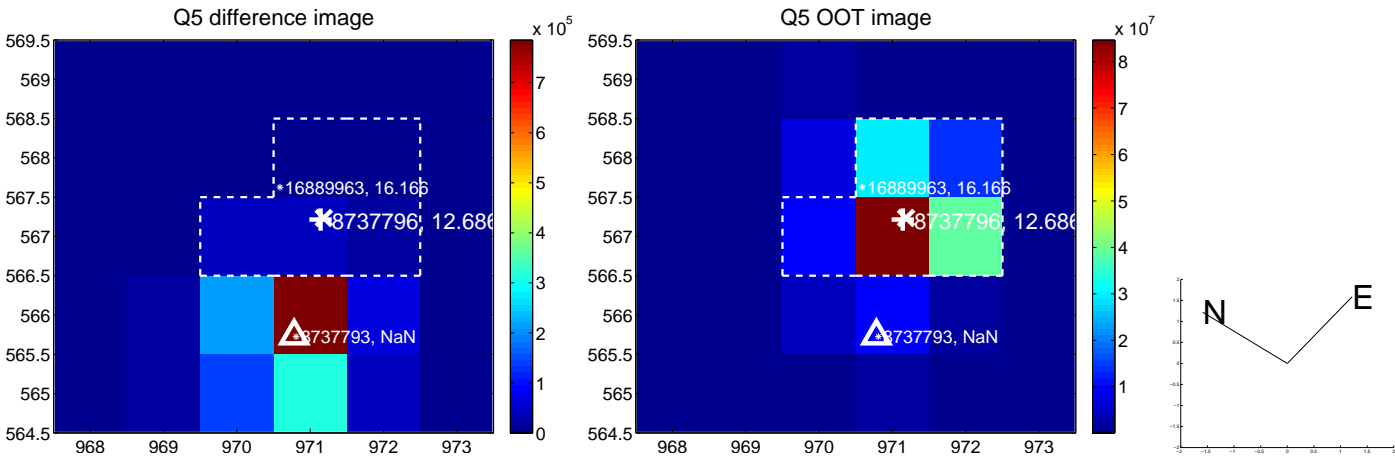


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

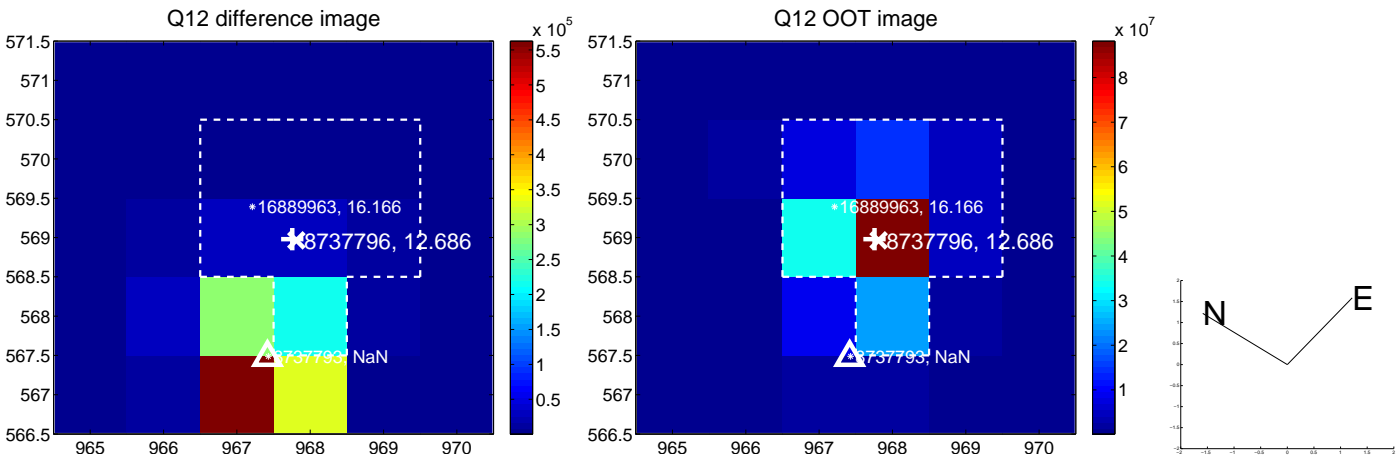
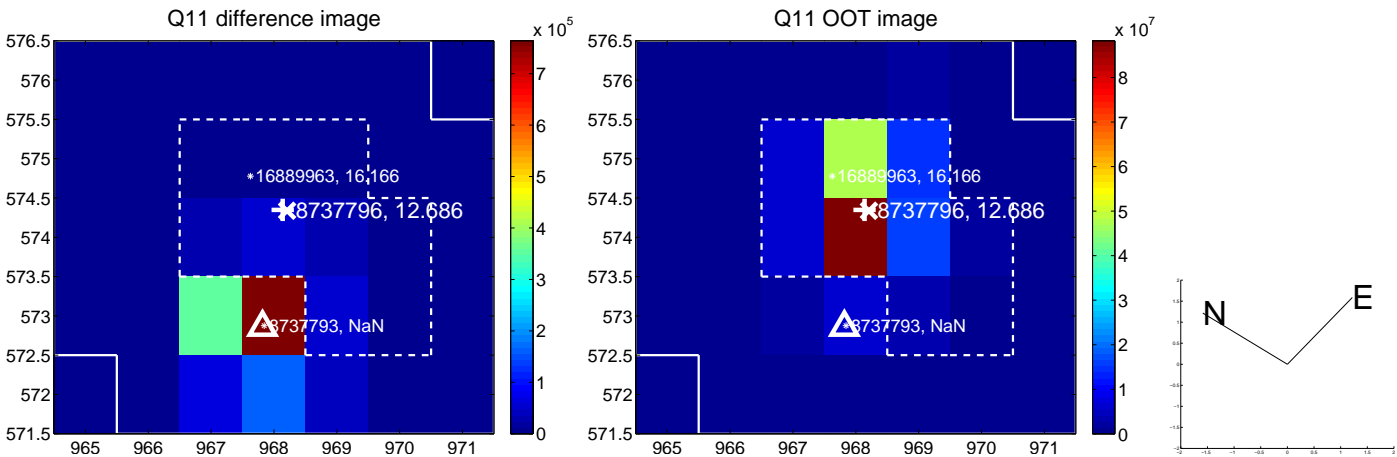
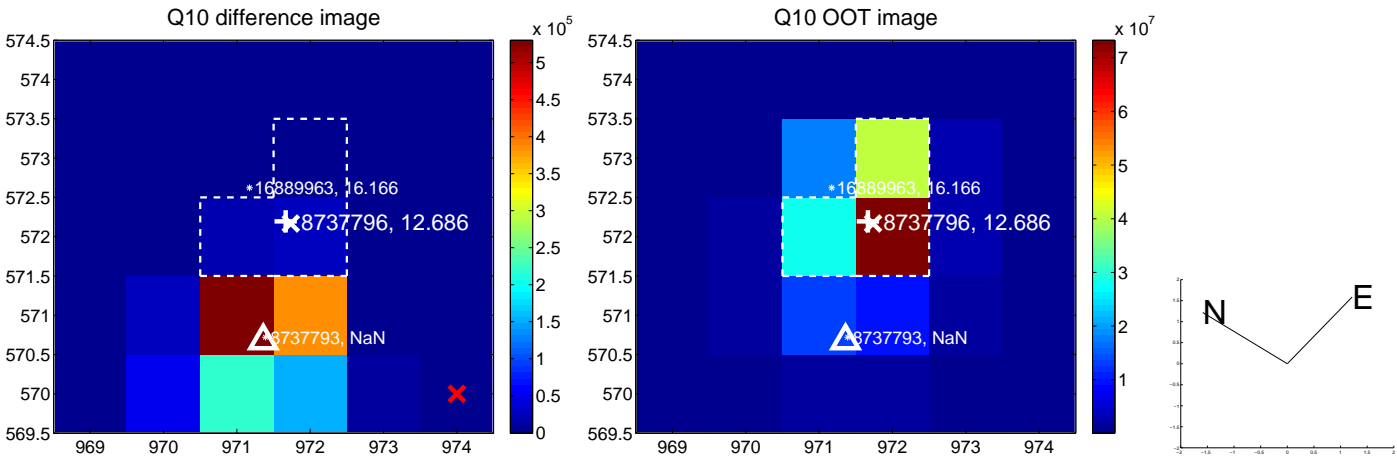
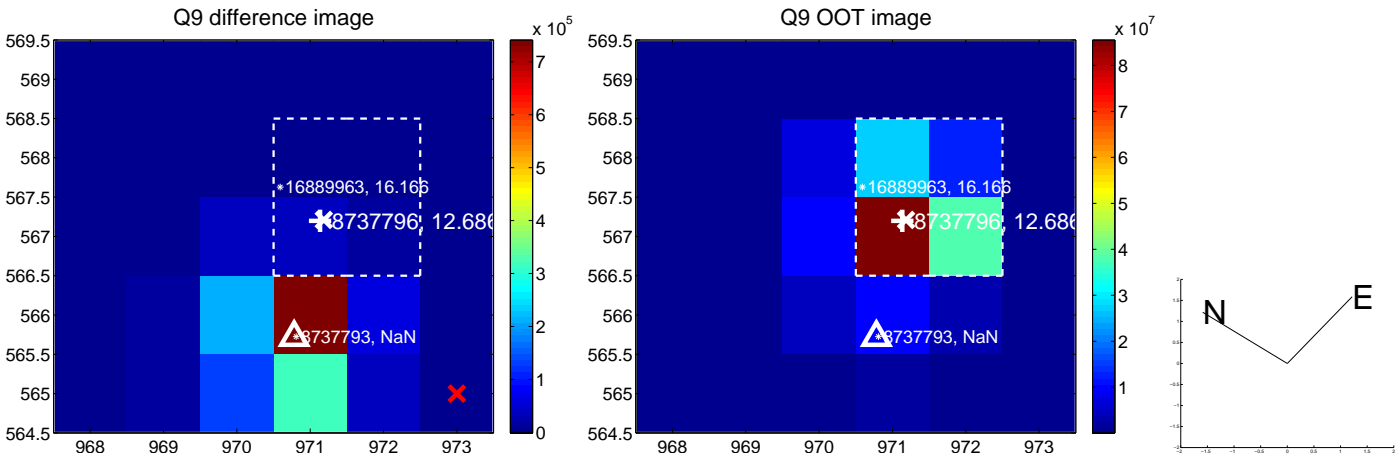
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



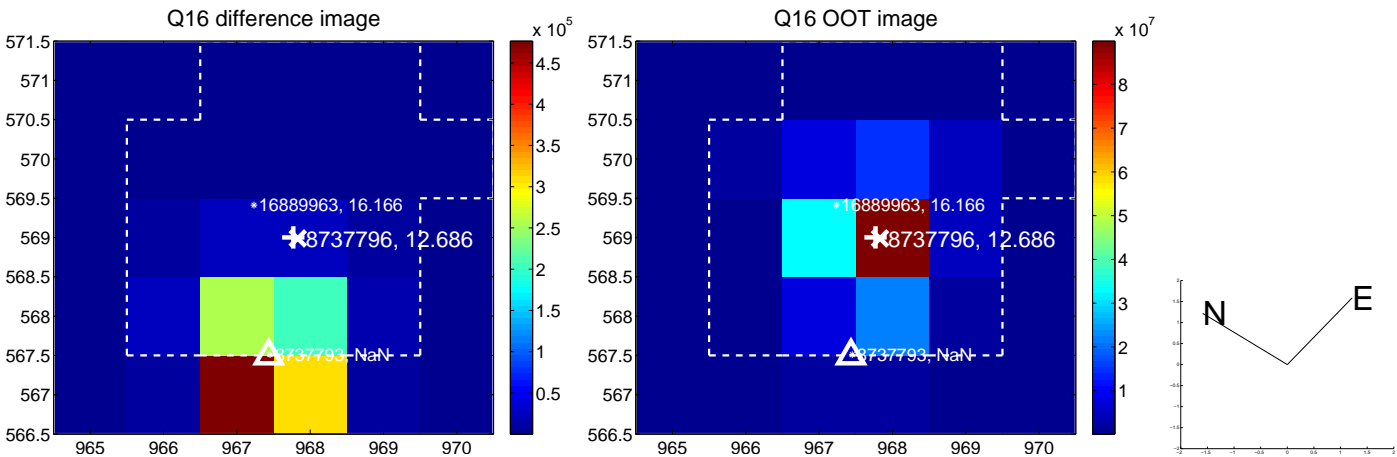
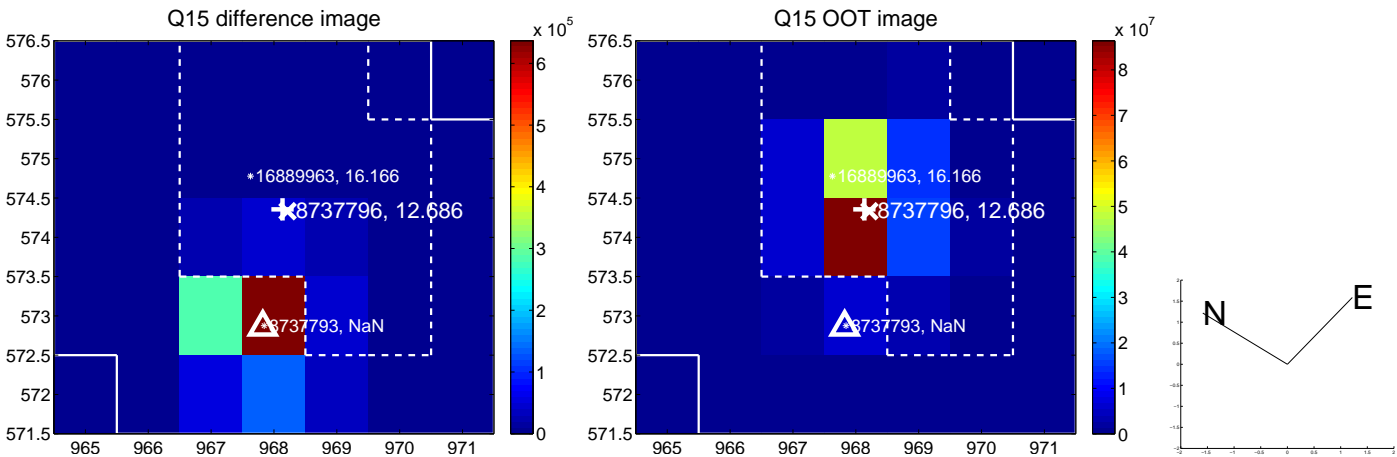
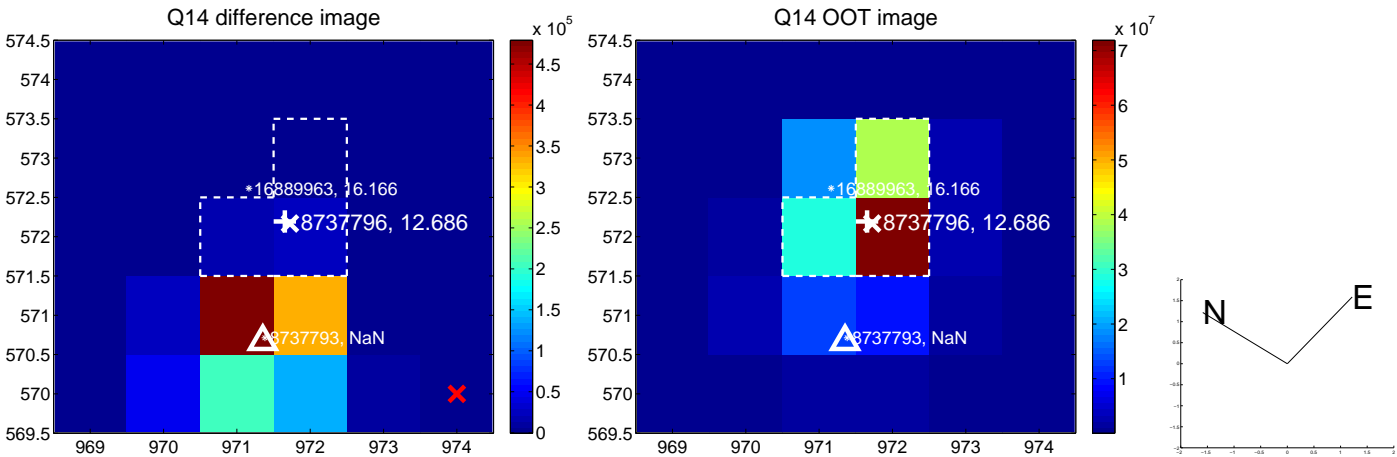
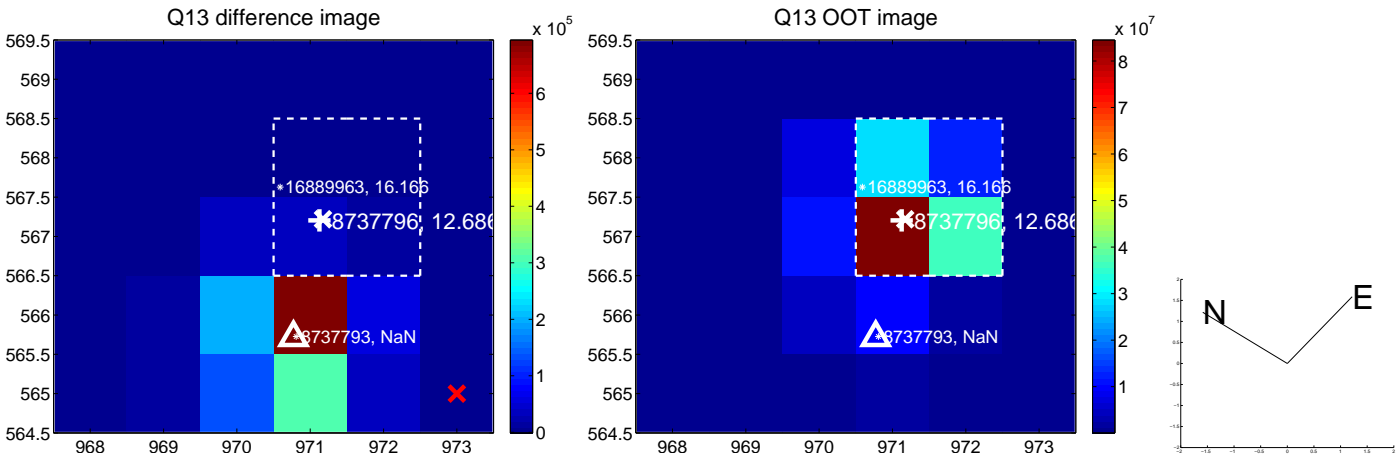
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



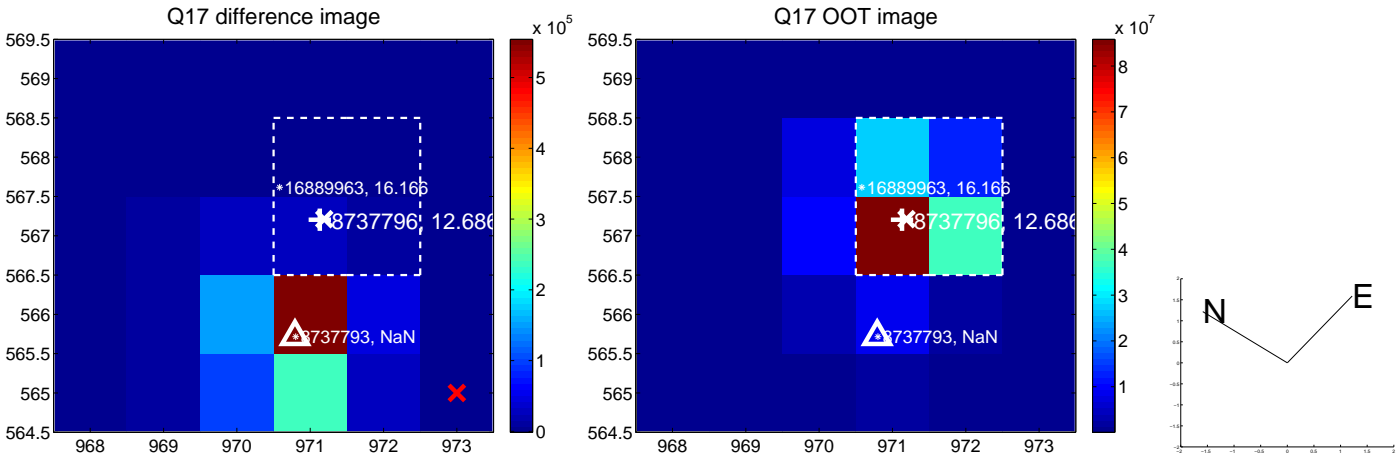
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



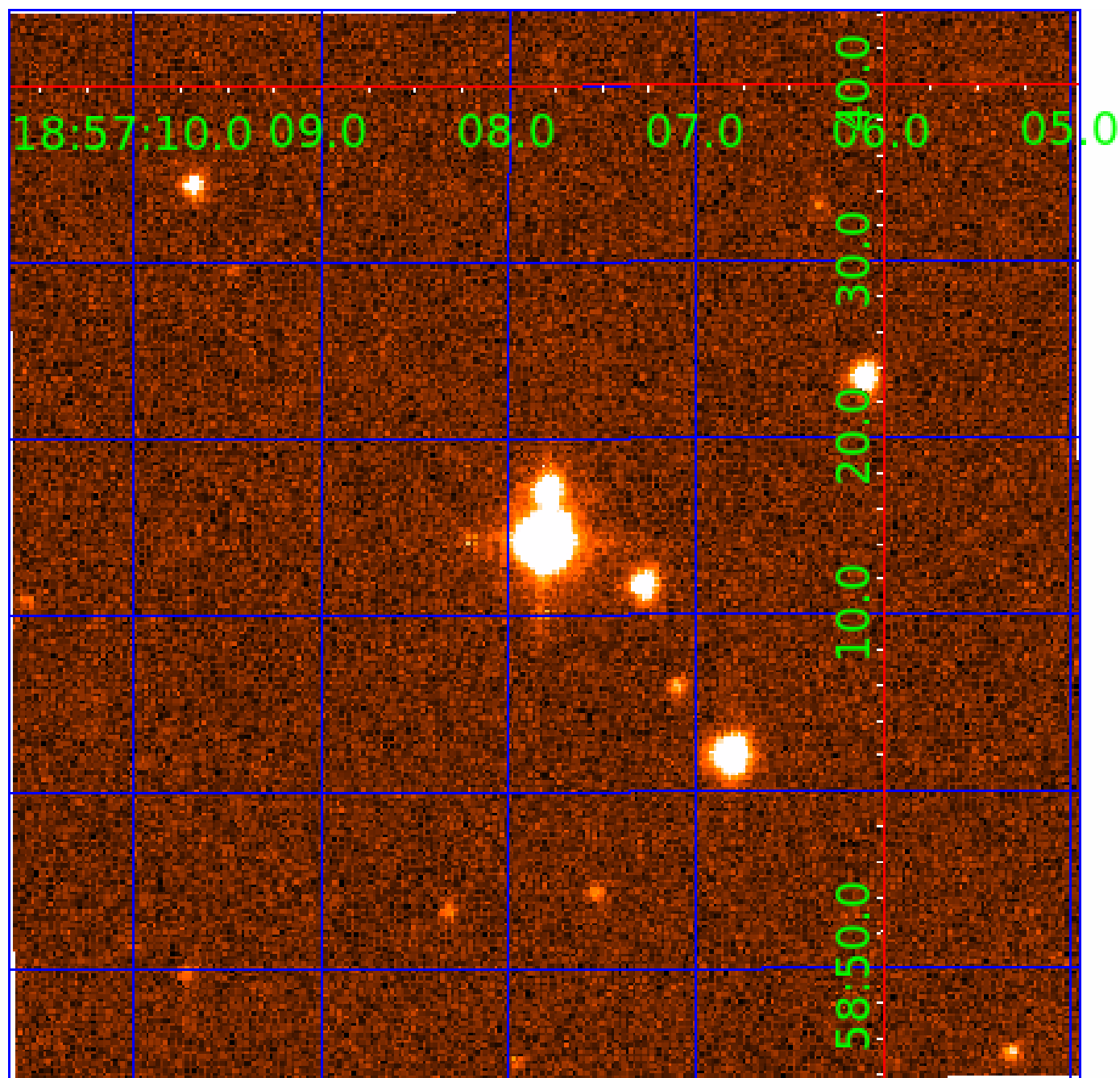
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008737796

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})
008737796-01	OBS	1252.01	1.771431	132.735074	85.5	2.130	86.1	26.6	10.40	5487	11.97	0.00
008737796-02	OBS	No	1.771489	131.829944	1391.1	2.000	123.4	-1.0	10.40	5487	38.52	56801.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008737796-01	OBS	FP	0.00	1	0	1	0	MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008737796-02	OBS	FP	0.00	1	0	0	0	MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—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.

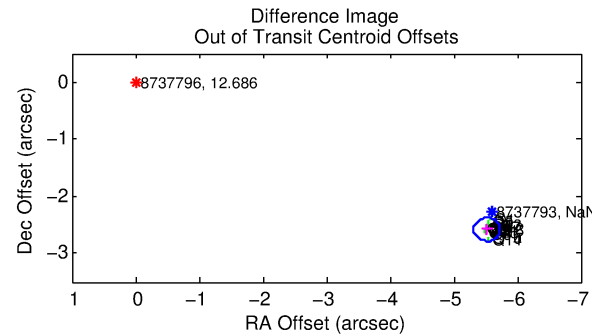
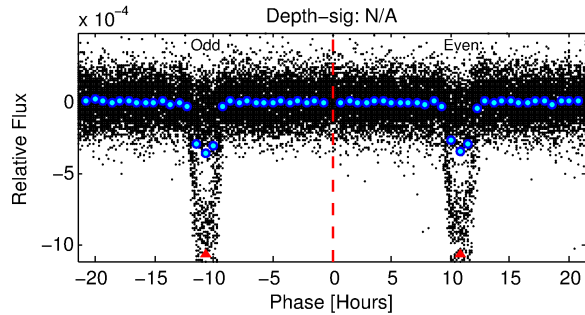
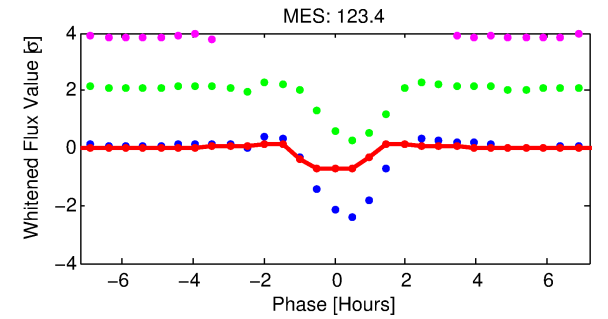
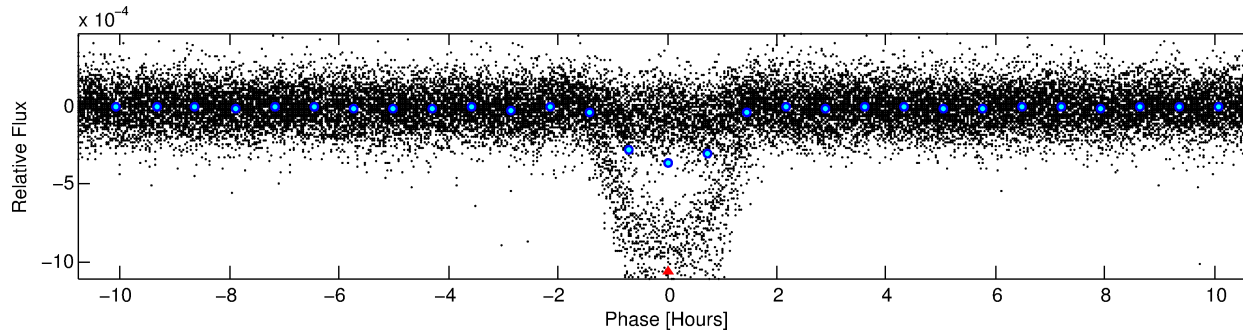
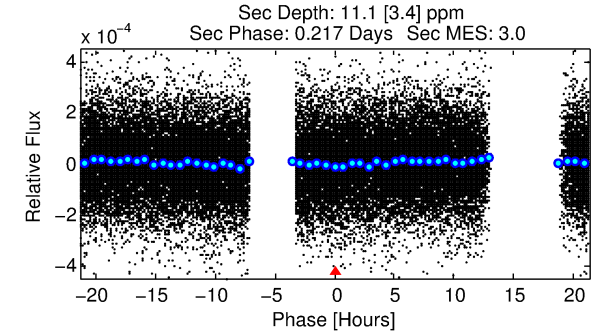
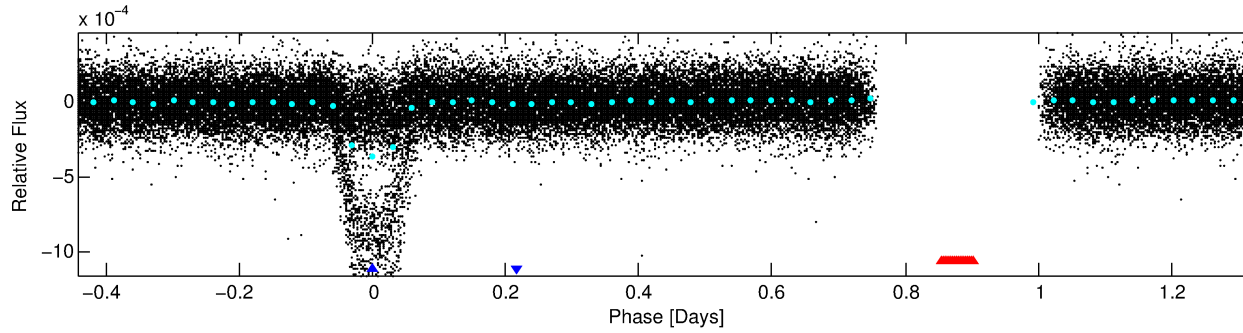
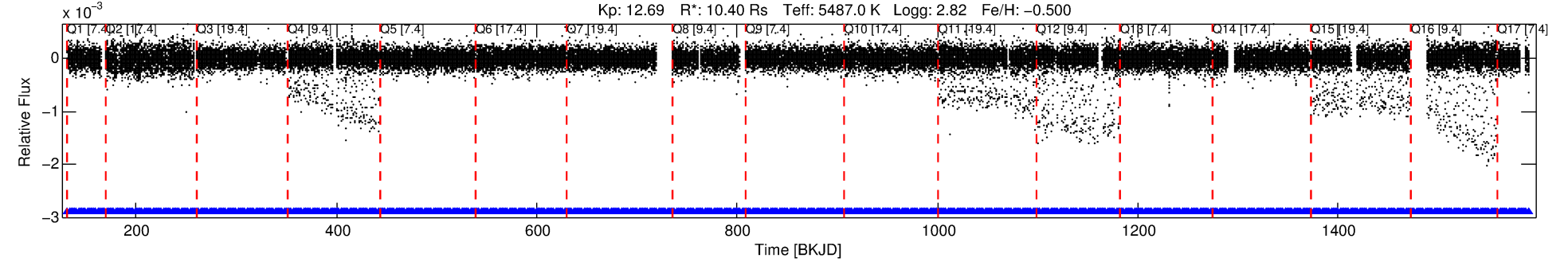
Ephemeris Match Information For 008737796-02

No Significant Match Found

DV One-Page Summary

KIC: 8737796 Candidate: 2 of 2 Period: 1.771 d
KOI: K01252 Corr: No Ephemeris Match

Kp: 12.69 R*: 10.40 Rs Teff: 5487.0 K Logg: 2.82 Fe/H: -0.500



TPS TCE Results:

Period = 1.77149 d
Epoch = 131.8299 BKJD

DV fit results are unavailable

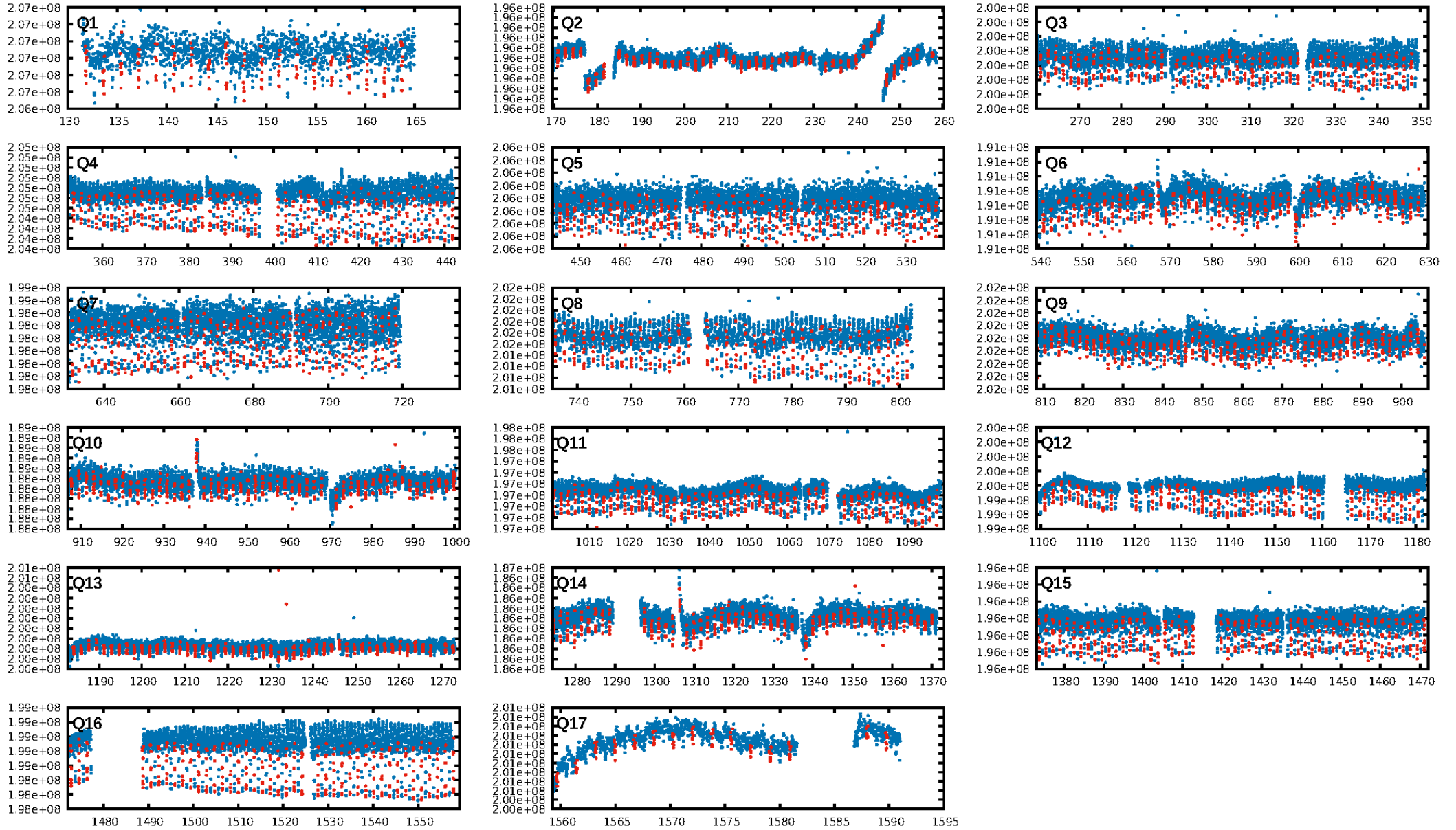
DV Diagnostic Results:

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 [724/724]
GhostDiagnostic-chr: -0.6012
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 6.098 arcsec [89.60σ]
KicOffset-rm: 6.117 arcsec [90.01σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
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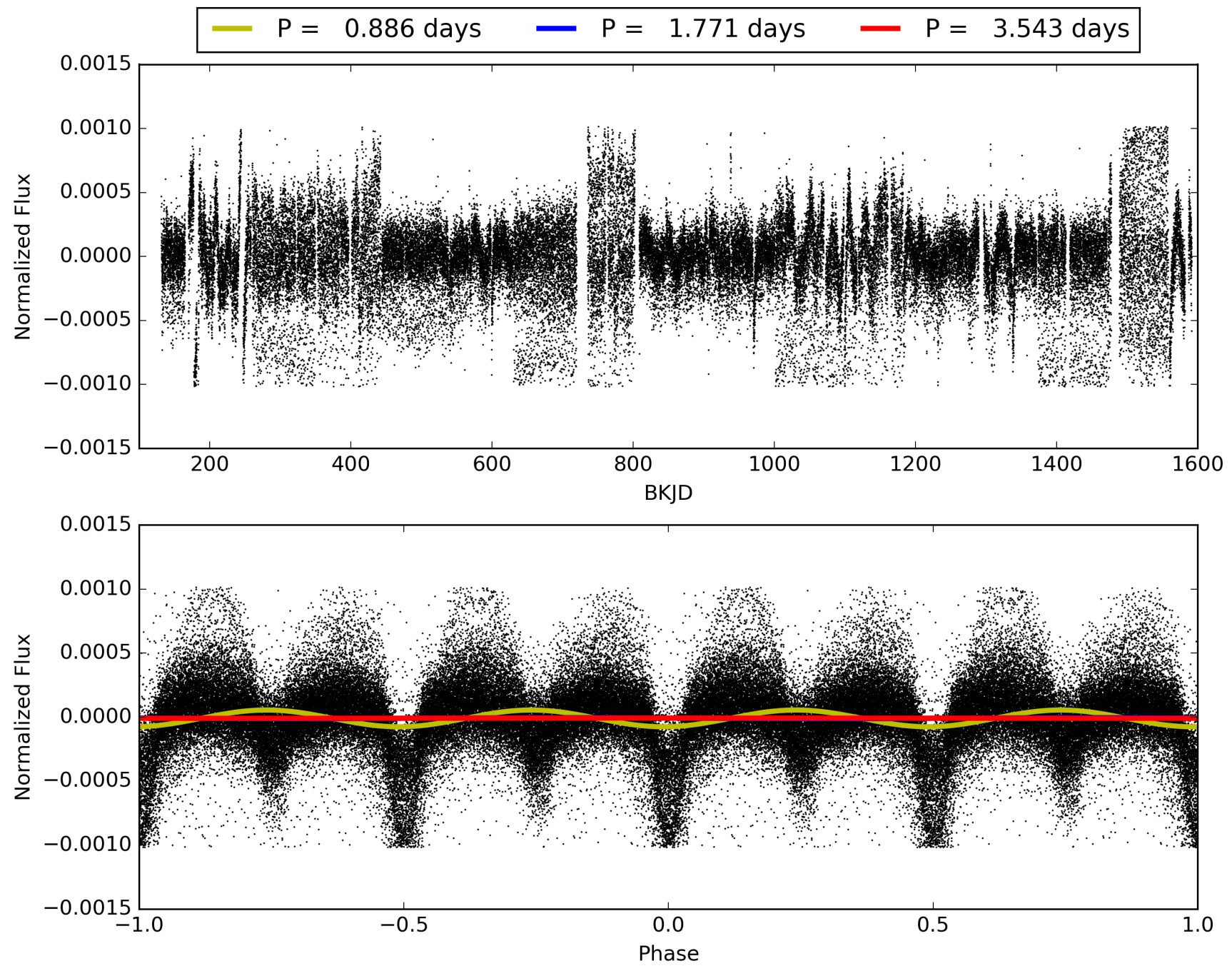
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 10:14:45 Z

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

TCE 008737796-02, PDC Light Curves

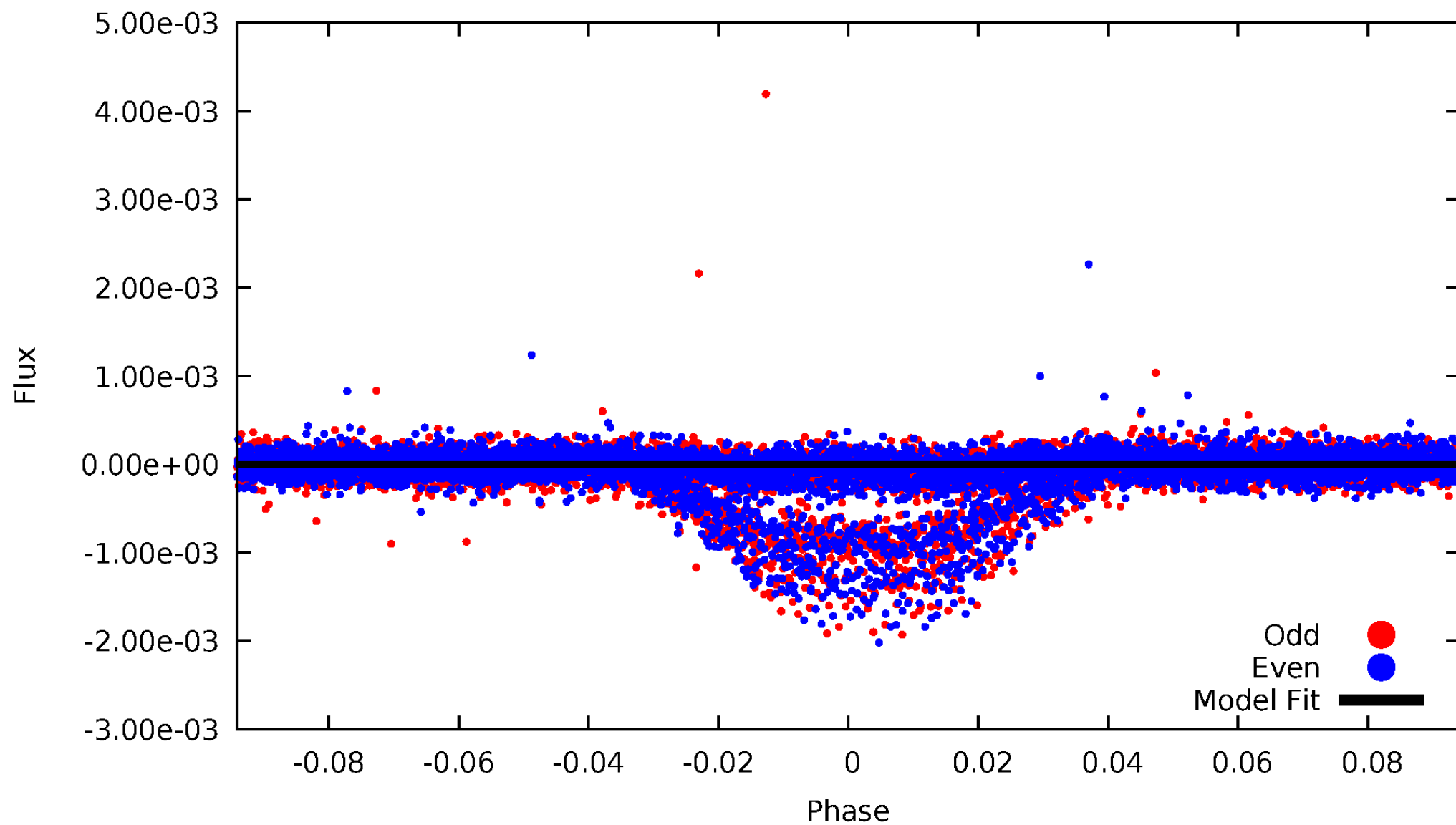


TCE 008737796-02



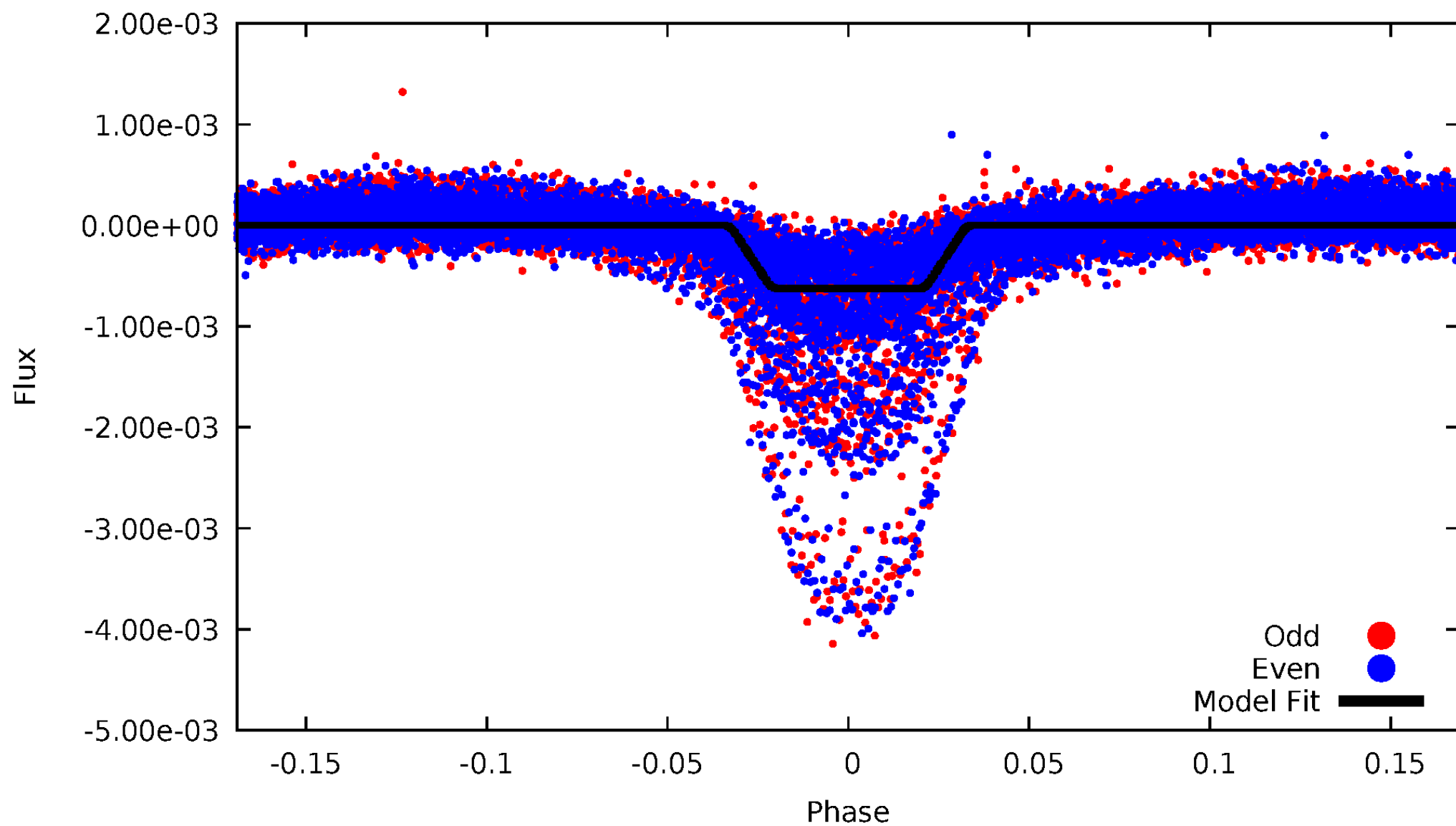
DV Odd/Even

TCE 008737796-02



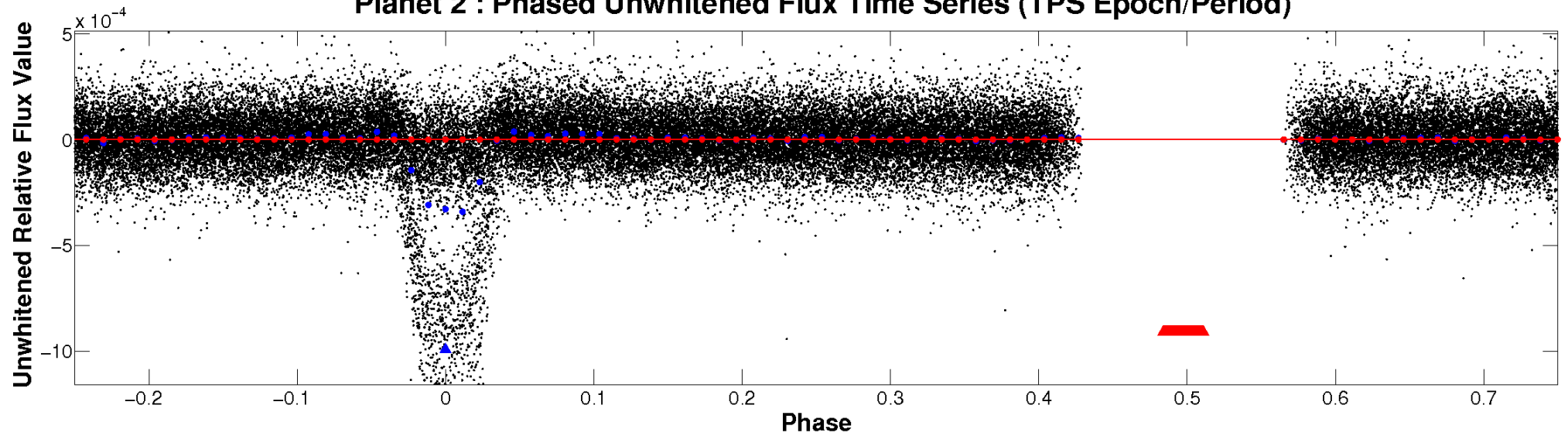
ALT Odd/Even

TCE 008737796-02

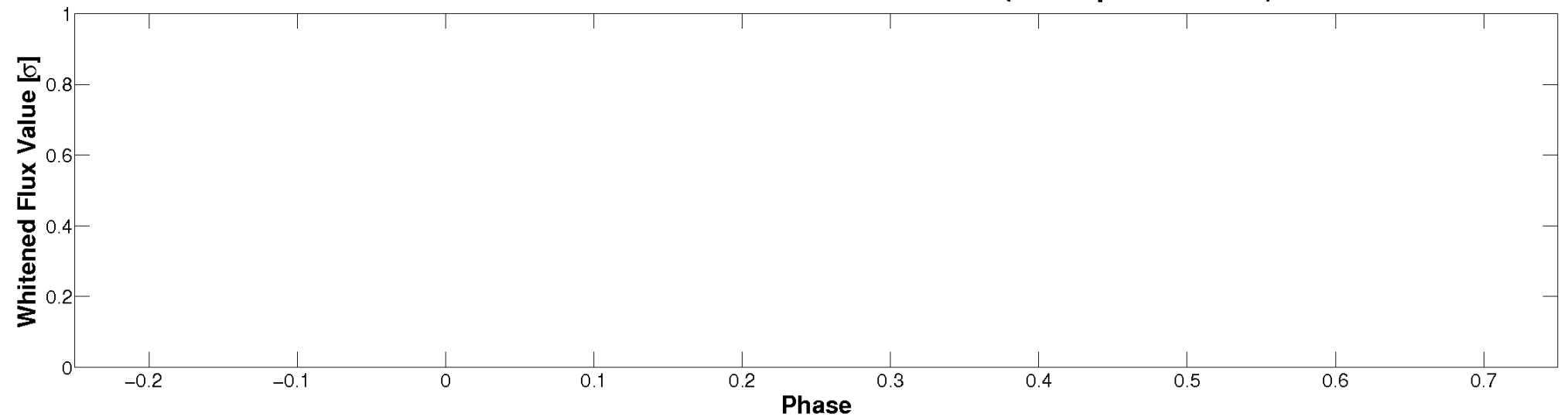


Non-Whitened Vs. Whitened Light Curve

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

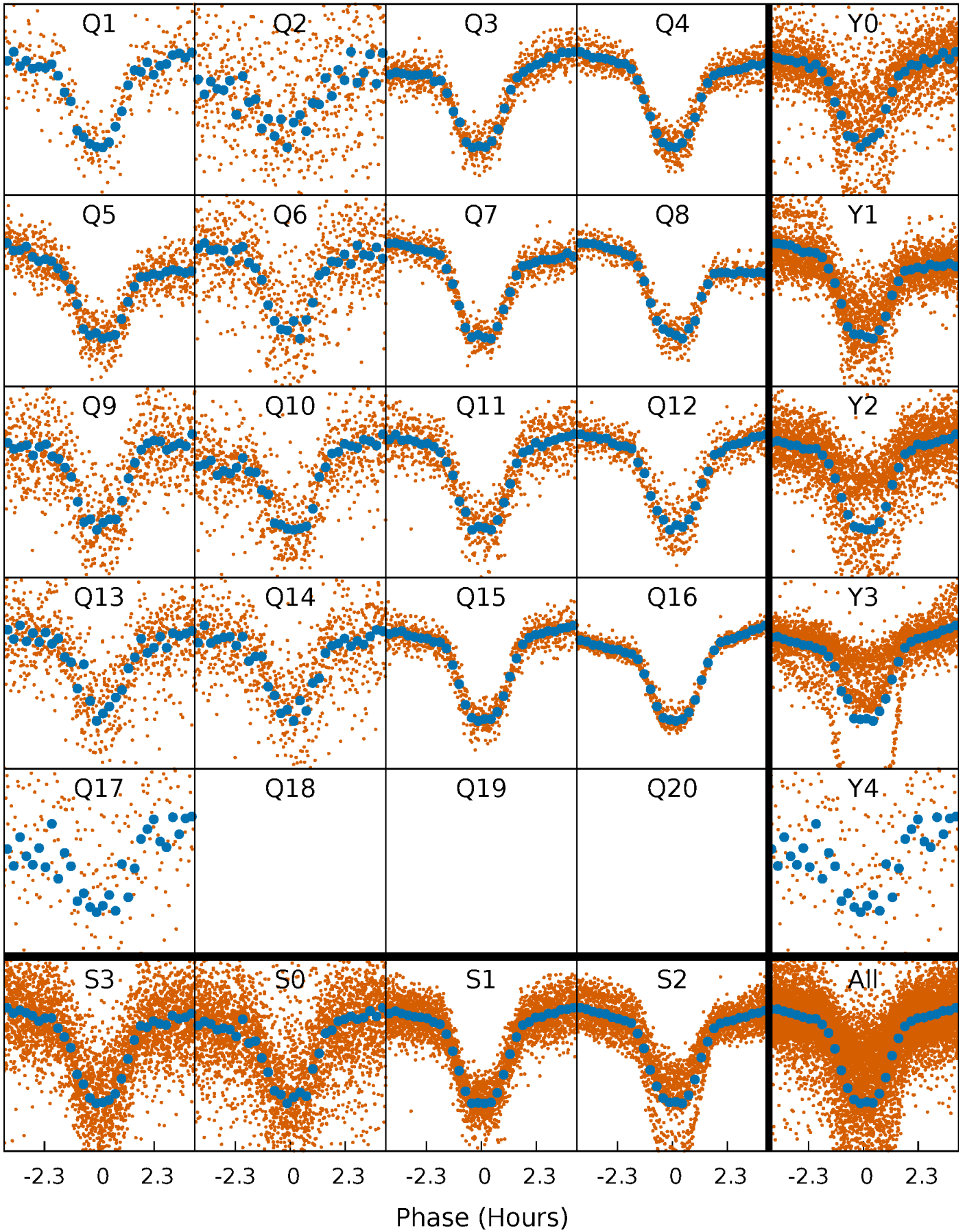


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



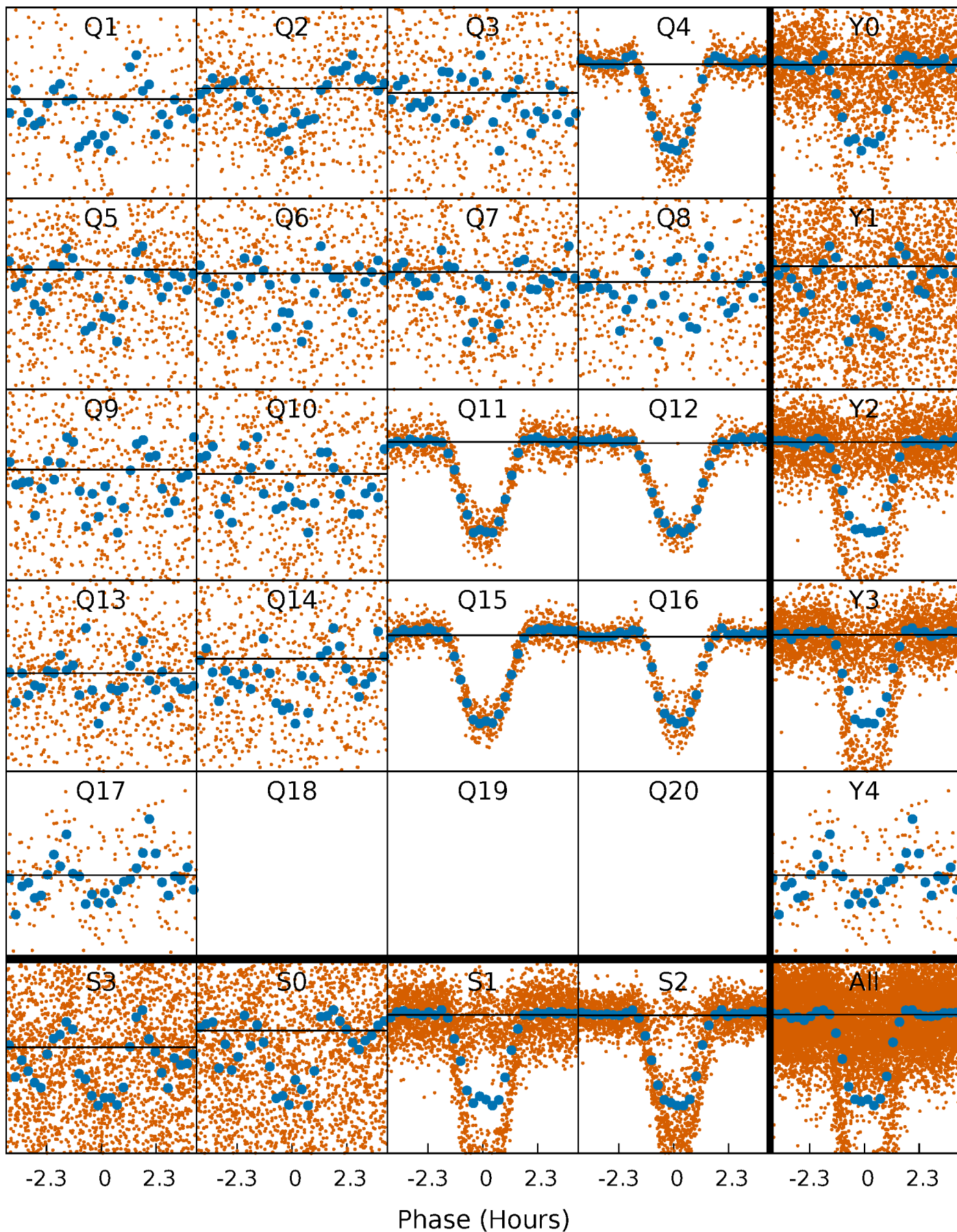
PDC Quarter-Phased Transit Curves

TCE 008737796-02 P= 1.771489 Days $T_0=131.829944$ (BKJD)



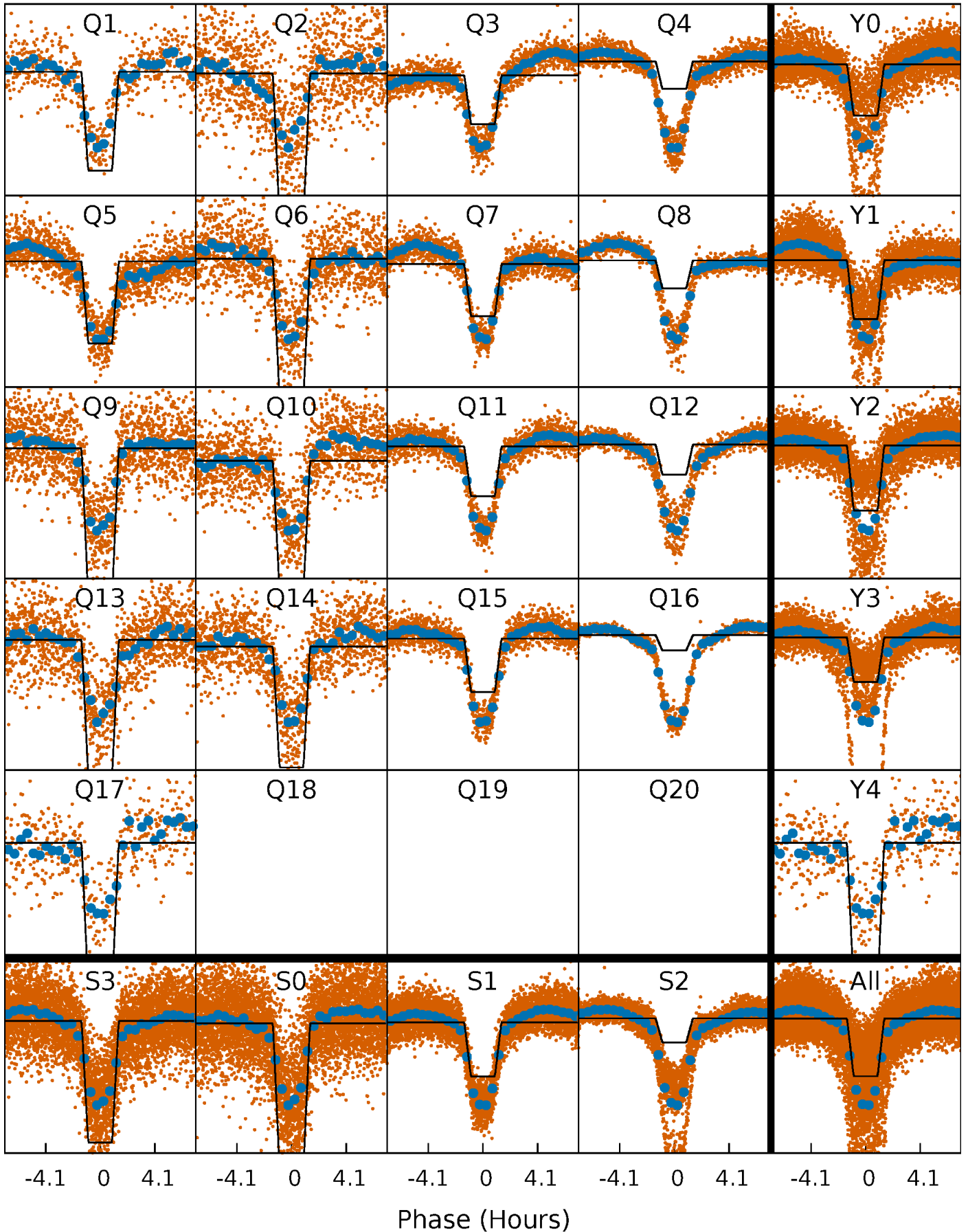
DV Quarter-Phased Transit Curves

TCE 008737796-02 P= 1.771489 Days $T_0=131.829944$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

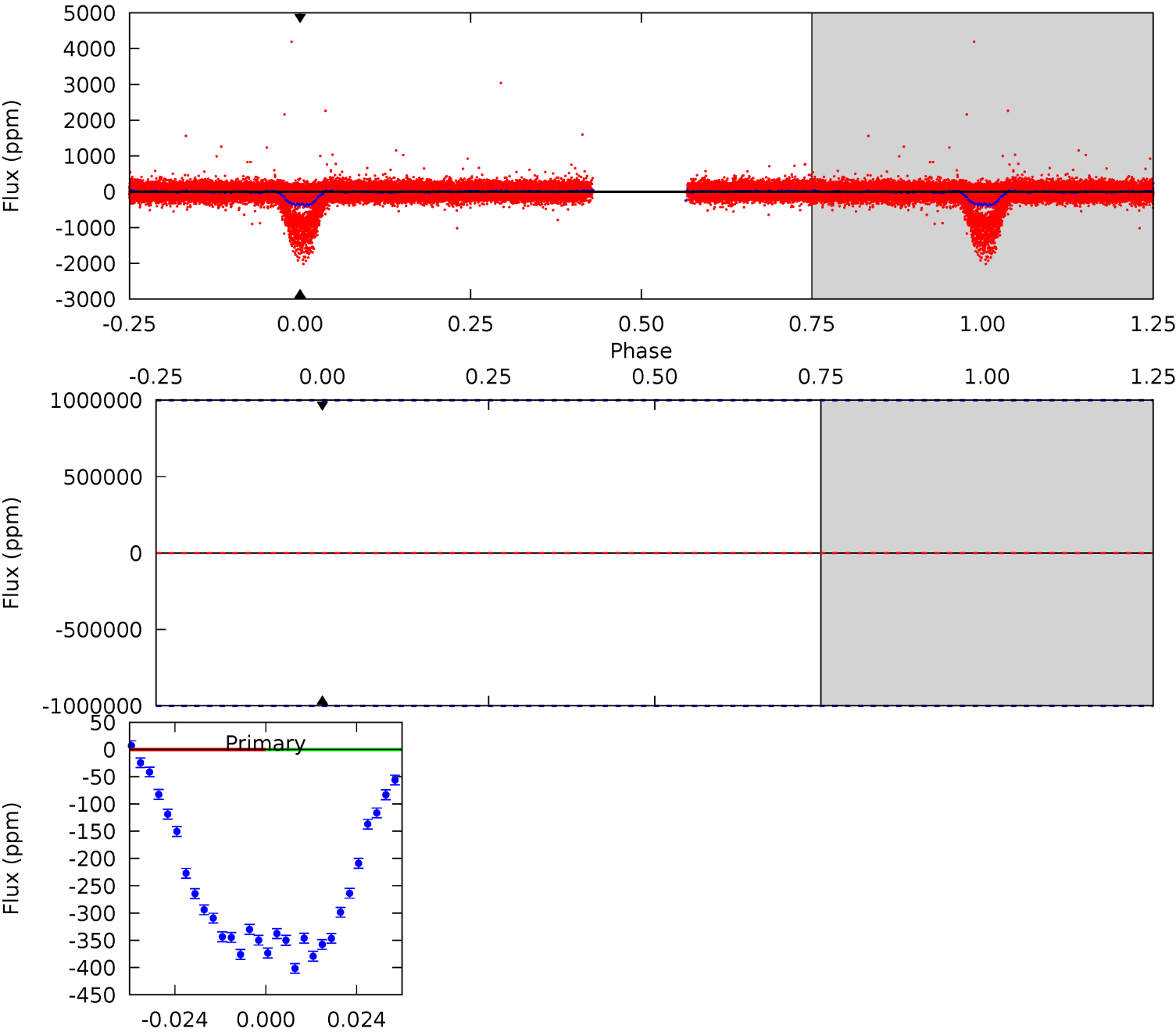
TCE 008737796-02 P= 1.771489 Days $T_0=131.831667$ (BKJD)



DV Model-Shift Uniqueness Test

008737796-02, P = 1.771489 Days, E = 130.058455 Days

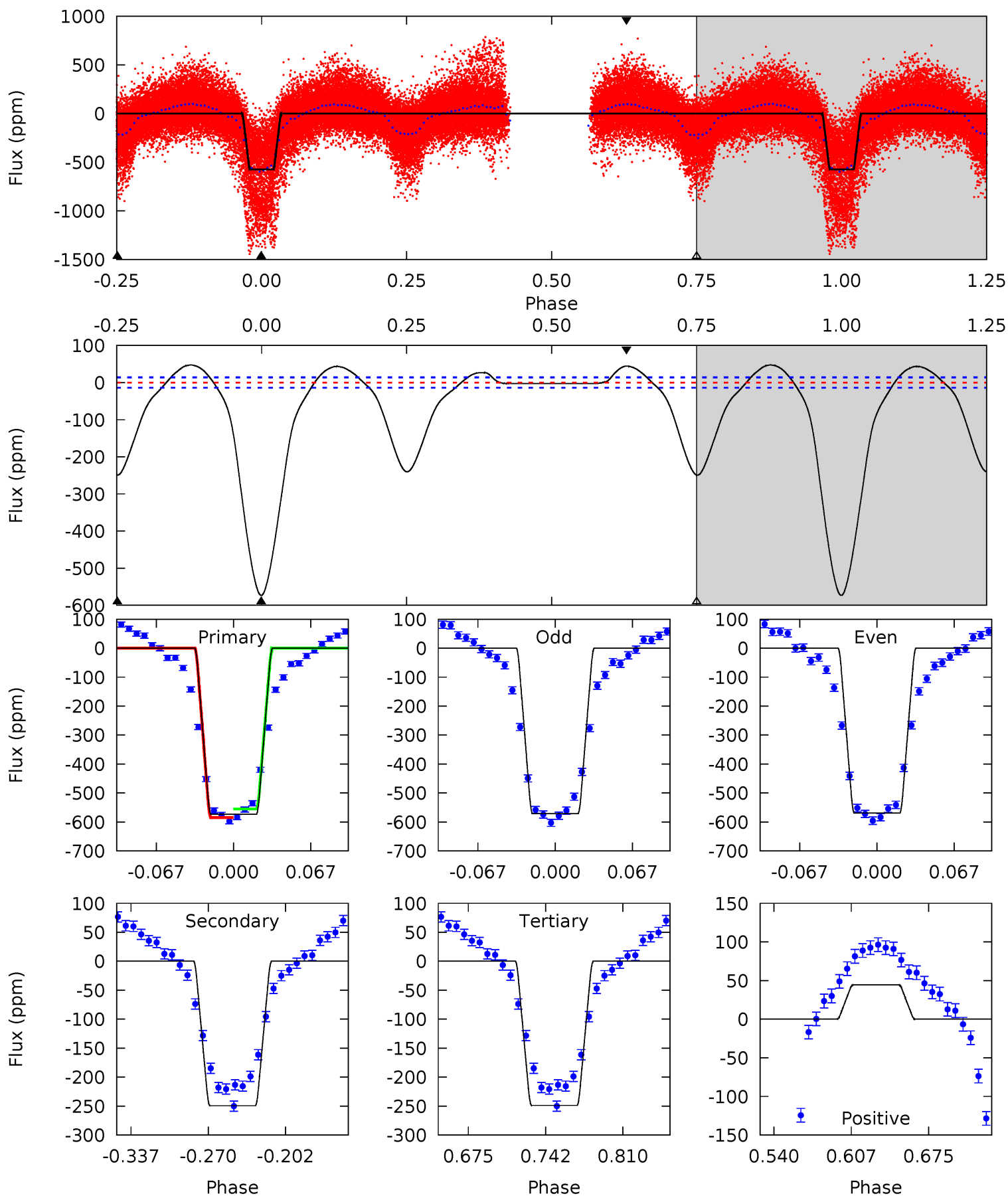
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008737796-02, P = 1.771489 Days, E = 130.060178 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
192.9	83.9	83.8	15.0	4.65	1.83	27.4	109.2	177.9	0.14	68.9	0.35	1.43	0.08	4.91



Stellar Parameters For KIC 008737796

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5487^{+120}_{-313}	$2.816^{+0.378}_{-0.162}$	$-0.500^{+0.200}_{-0.300}$	$10.396^{+2.474}_{-5.773}$	$2.581^{+0.155}_{-1.393}$	$0.003^{+0.013}_{-0.002}$
	+2%/-6%	+13%/-6%	+40%/-60%	+24%/-56%	+6%/-54%	+388%/-50%
Source	PHO1	FLK73	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 008737796-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$82.33^{+97.66}_{-58.67}$	5337^{+468}_{-644}	-4332^{+23342}_{-10335}	$0.107^{+24.594}_{-19.262}$
Alt.	-249 ± 3	$81.89^{+90.55}_{-57.91}$	5378^{+497}_{-683}	-4312^{+7401}_{-449}	$0.029^{+0.303}_{-0.022}$

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 $A_{obs} \gg 1.0$

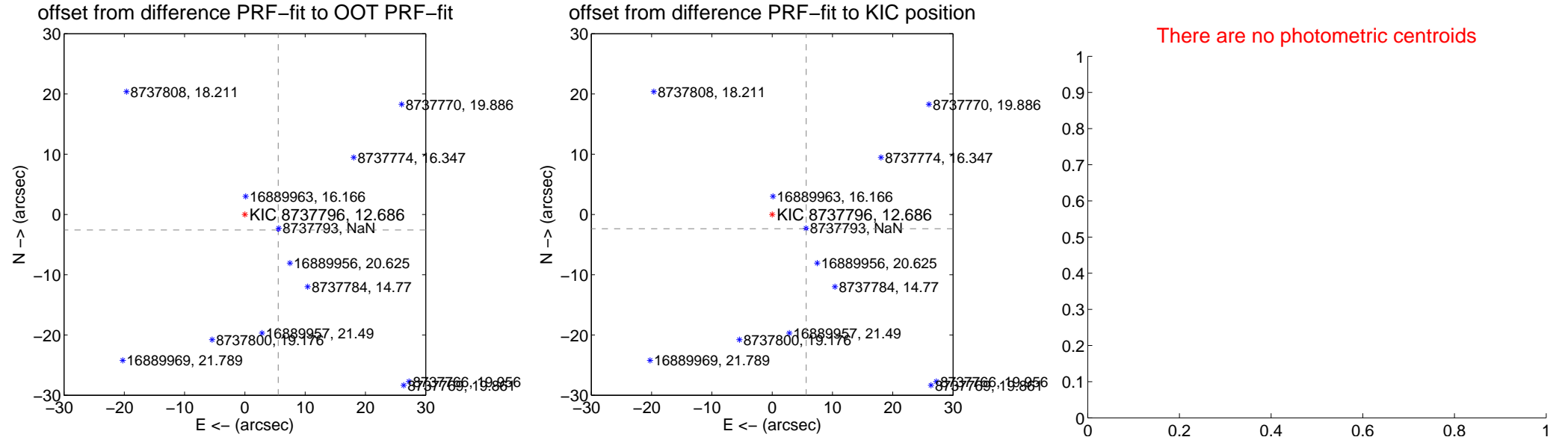
DV Centroid Data

Supplemental centroid analysis for 008737796-02. Kepler magnitude: 12.69. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

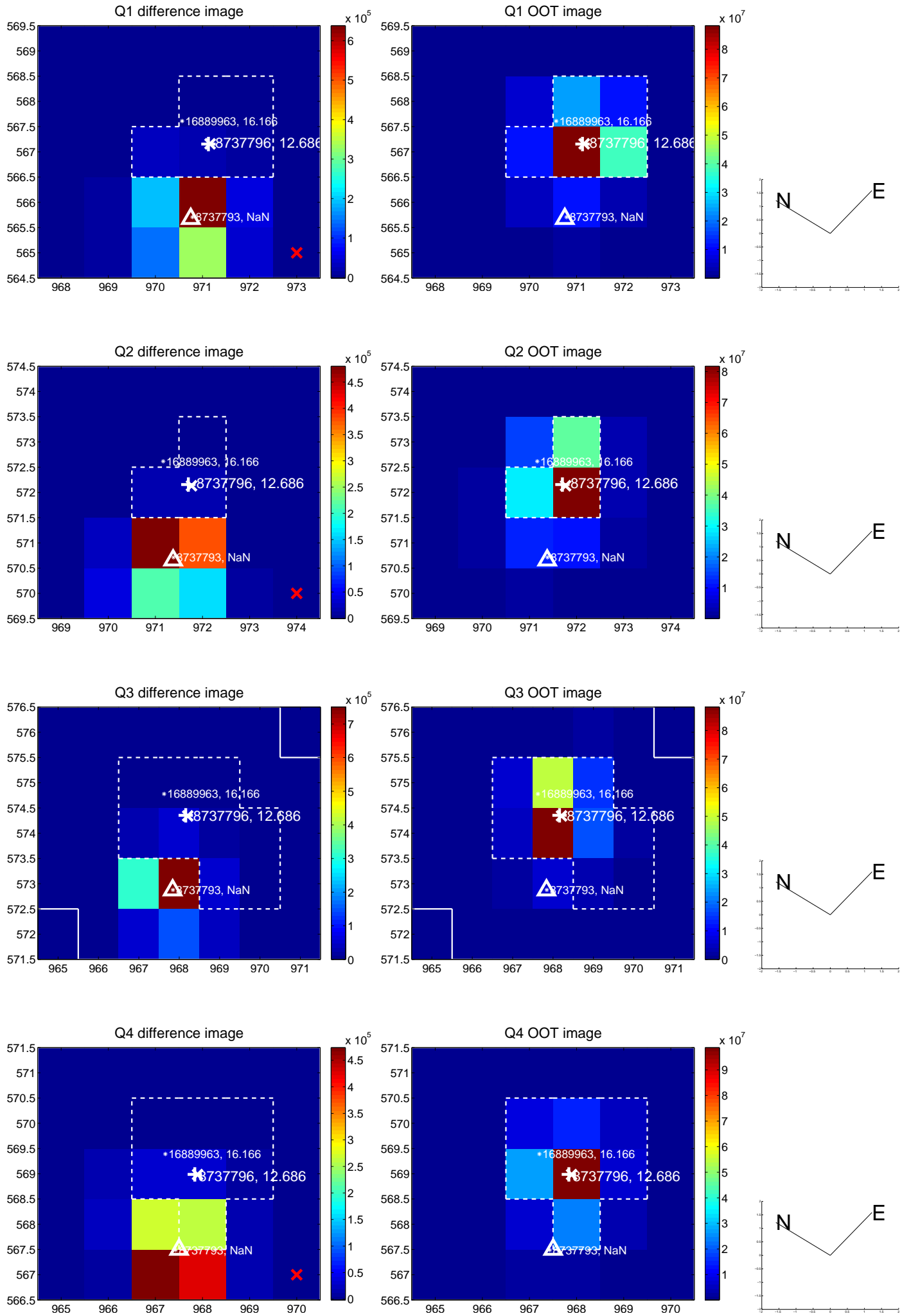
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.098 ± 0.068	89.60	-5.525 ± 0.067	-2.581 ± 0.072
PRF-fit source offset from KIC position	6.117 ± 0.068	90.01	-5.644 ± 0.068	-2.359 ± 0.067
photometric centroid source offset	—	—	—	—

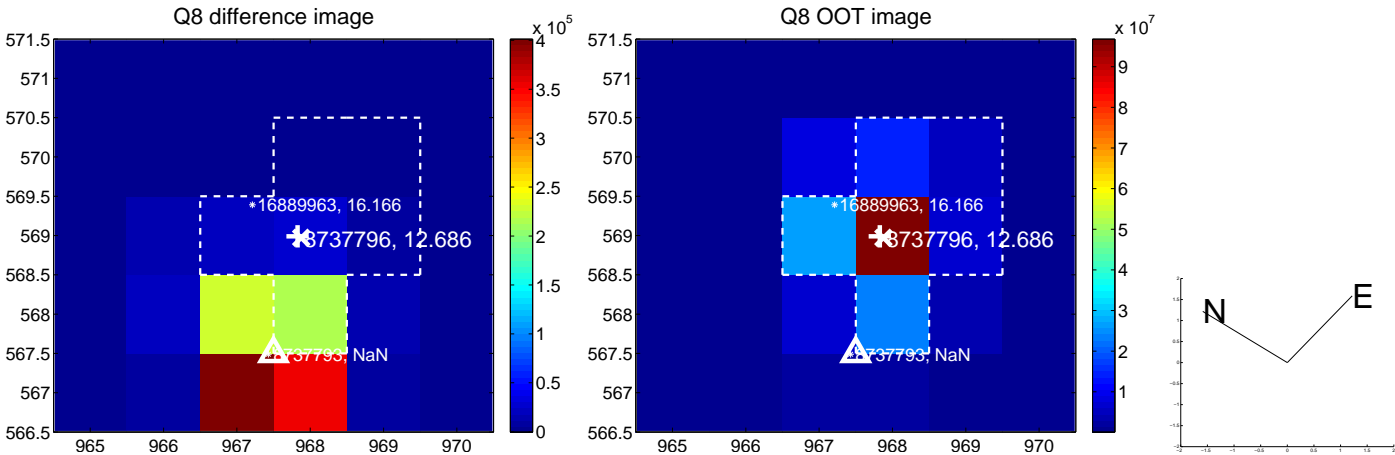
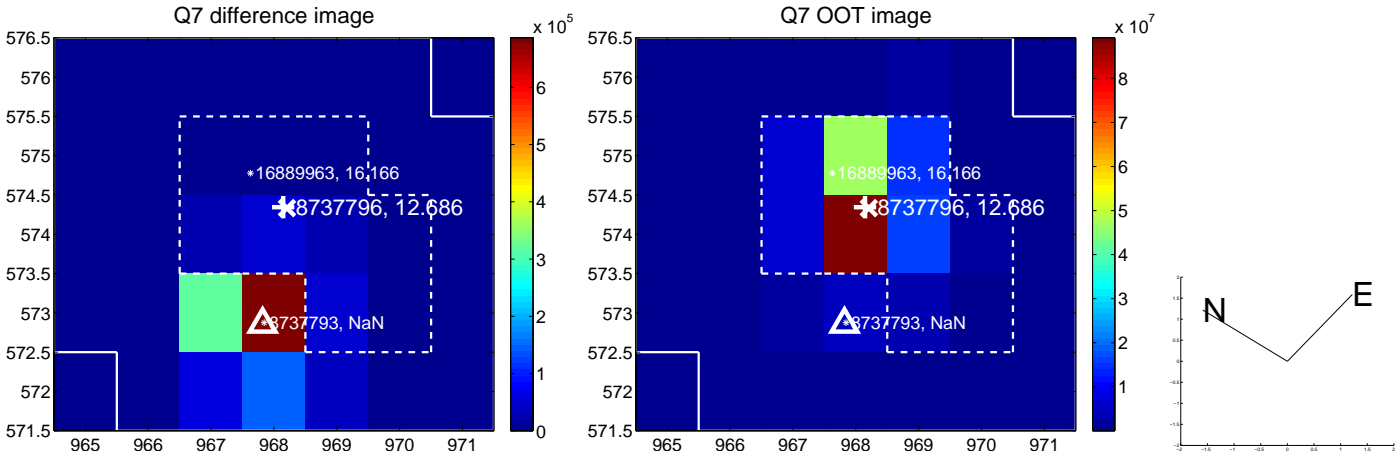
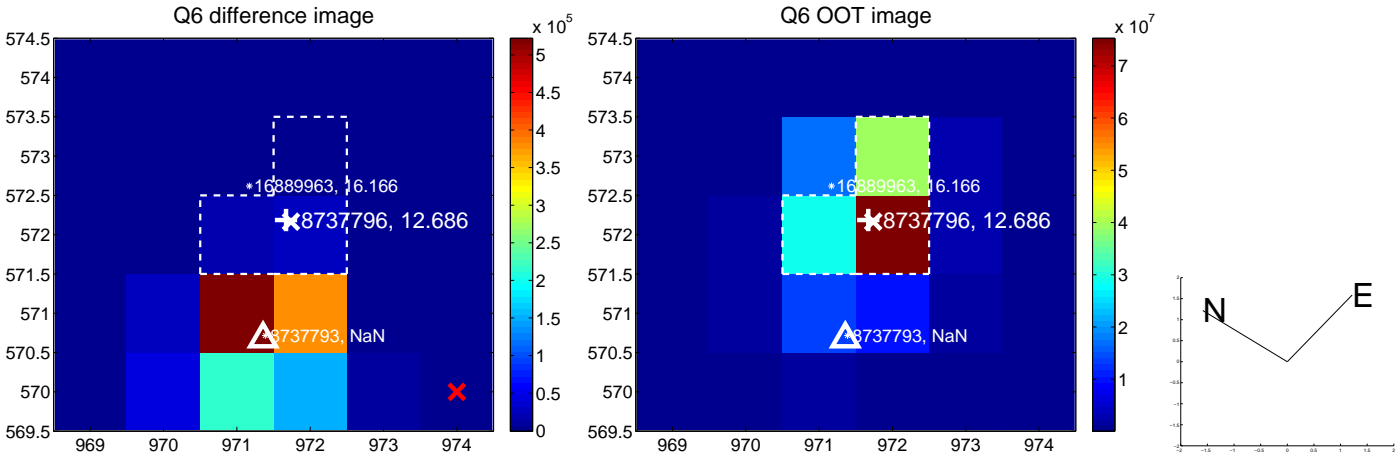
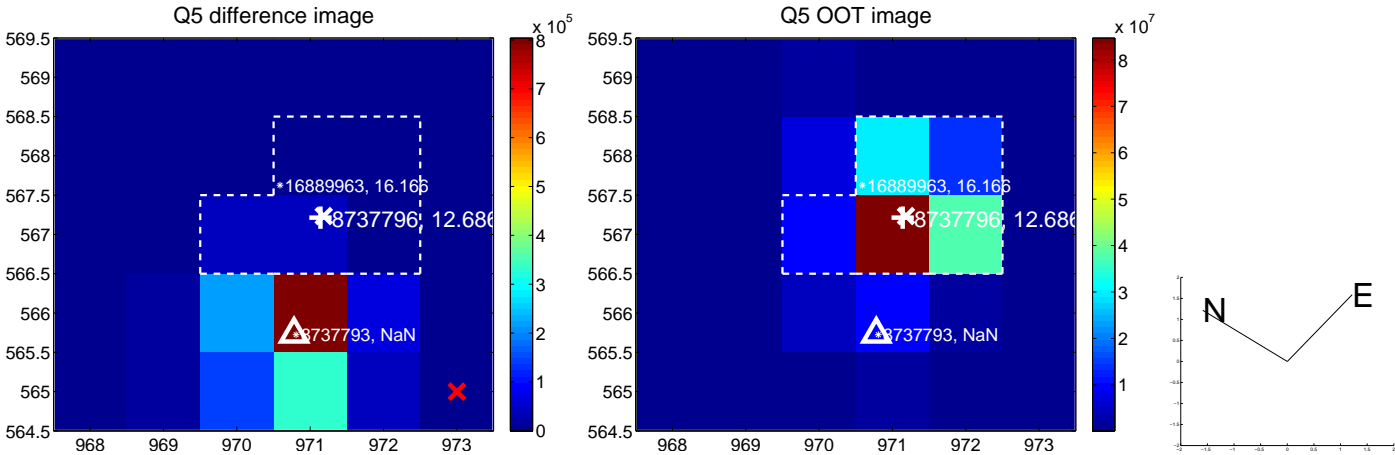


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

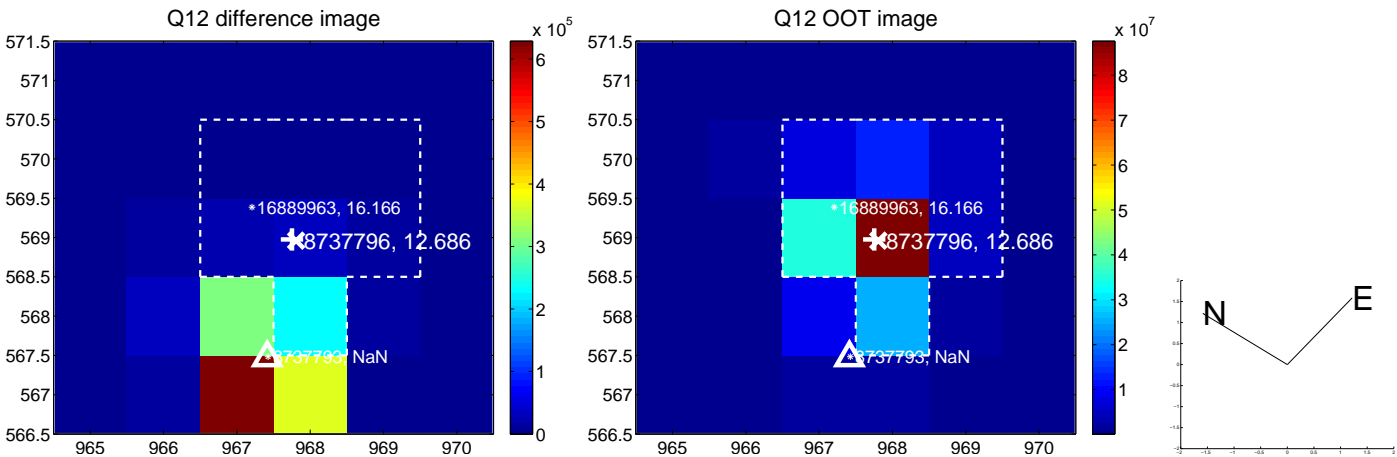
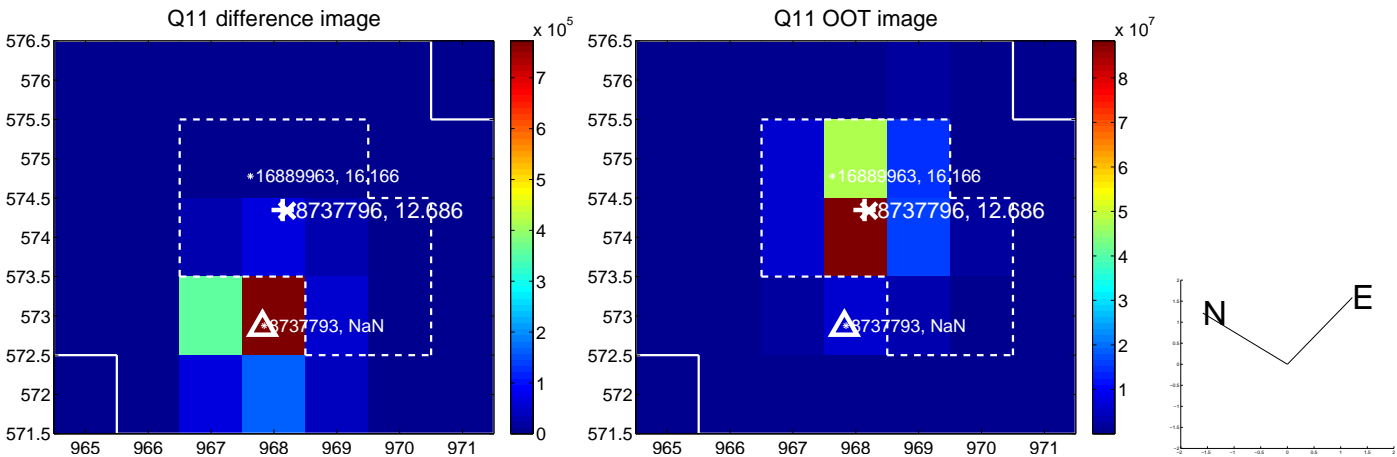
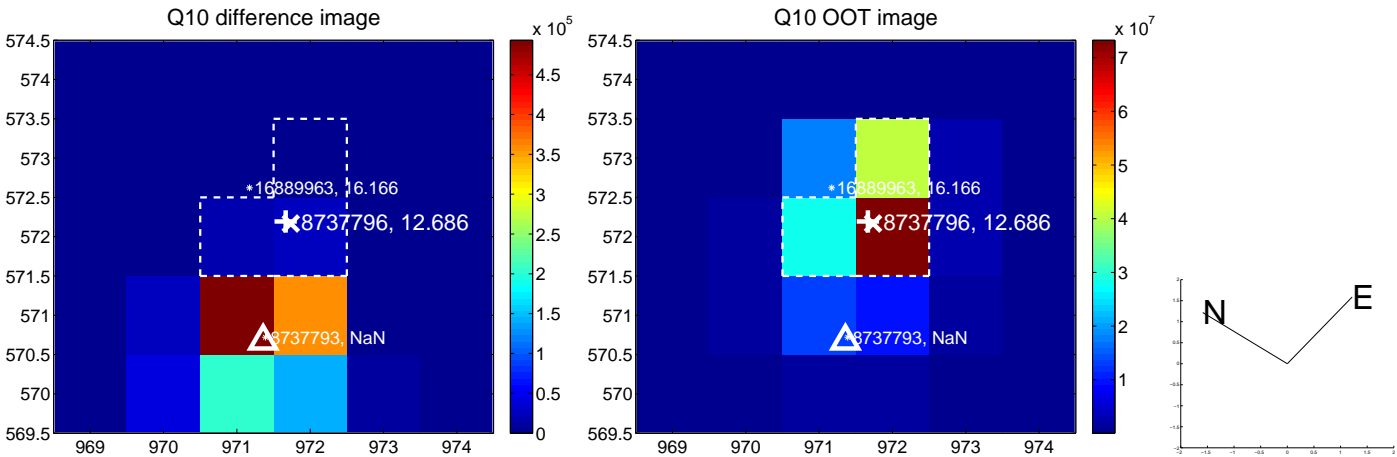
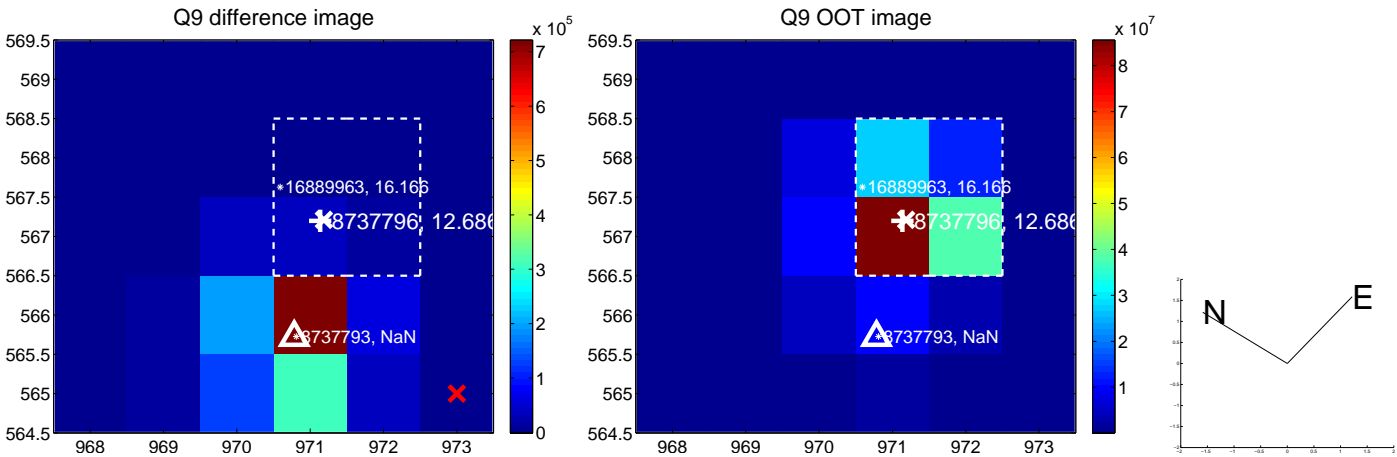
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



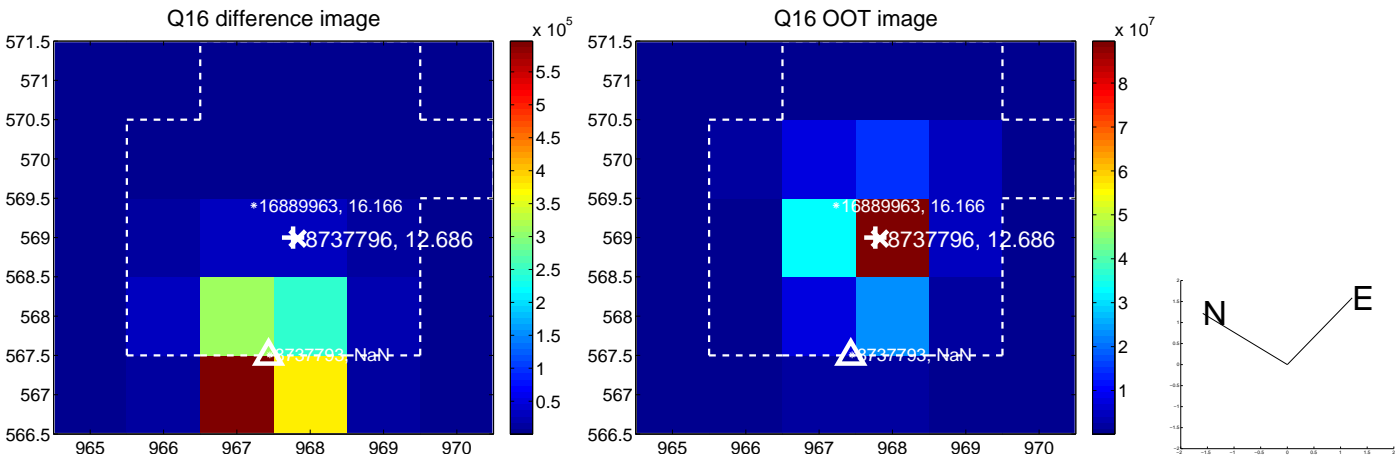
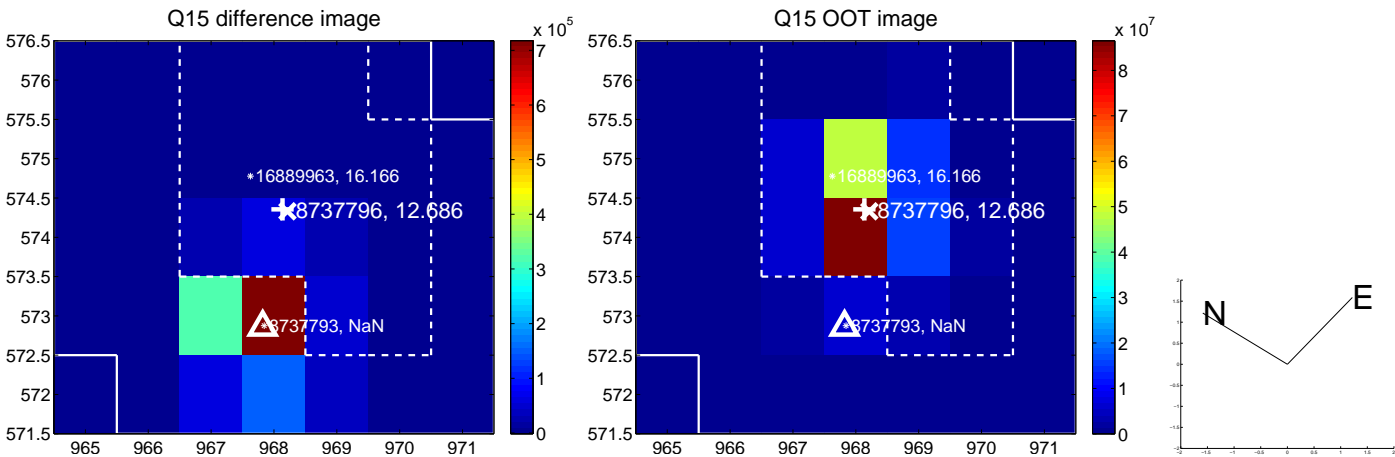
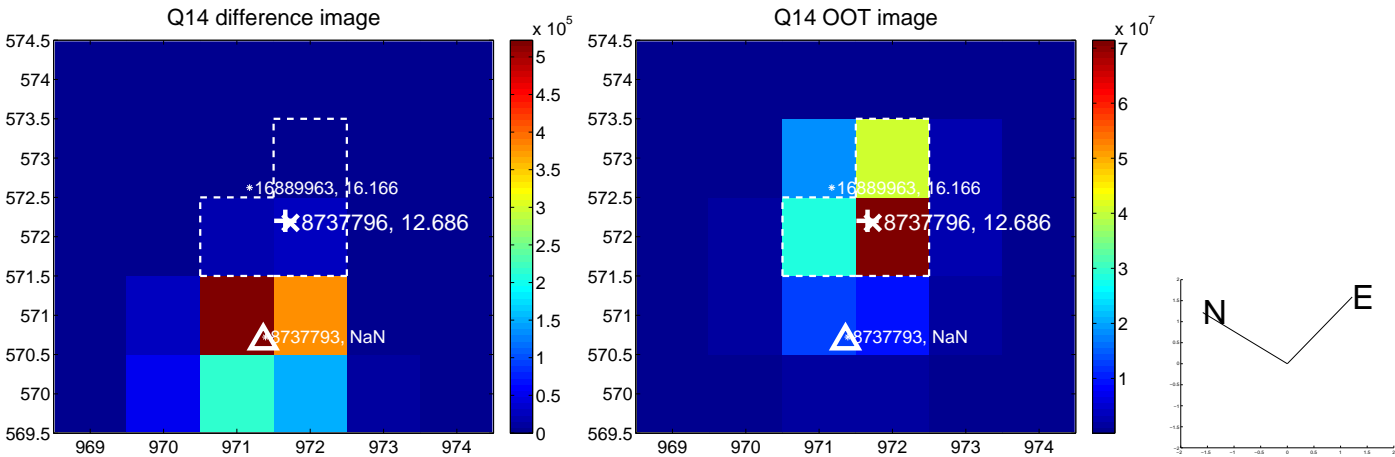
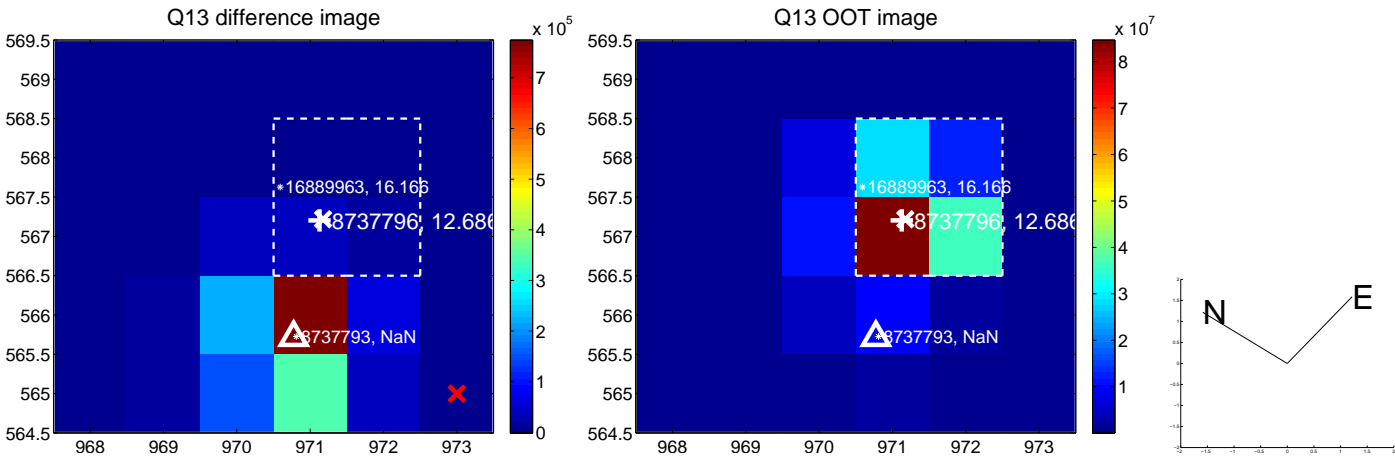
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



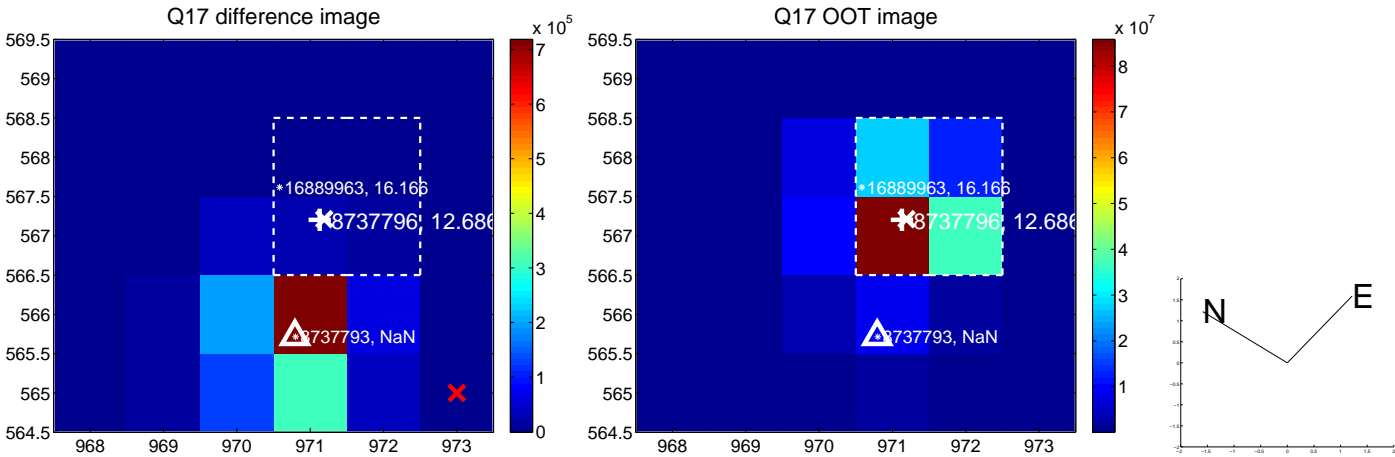
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

