

KIC 008719897

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})
008719897-01	OBS	7081.01	1.575726	131.686319	163782.6	7.151	12051.1	5007.5	4.29	5017	250.63	0.00
008719897-02	OBS	No	345.047905	423.758580	386.9	7.500	17.5	-1.0	4.29	5017	8.19	8.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008719897-01	OBS	FP	0.00	0	1	0	0	PLANET_IN_STAR—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED
008719897-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

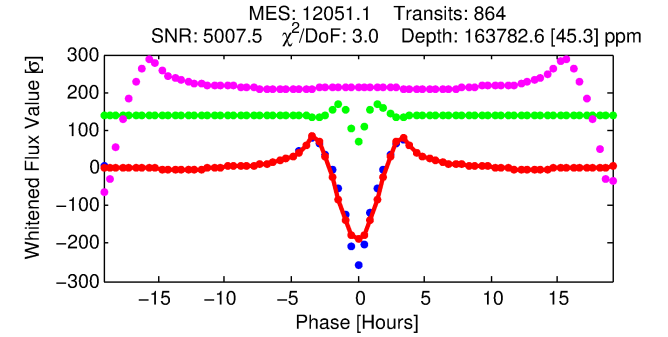
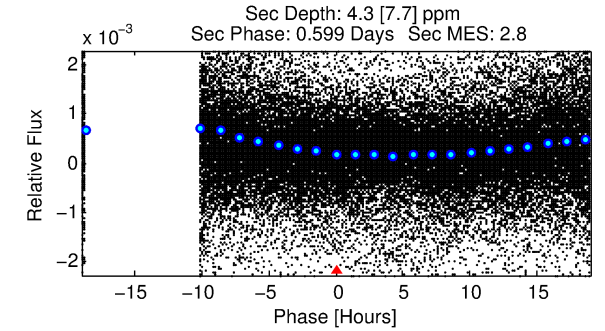
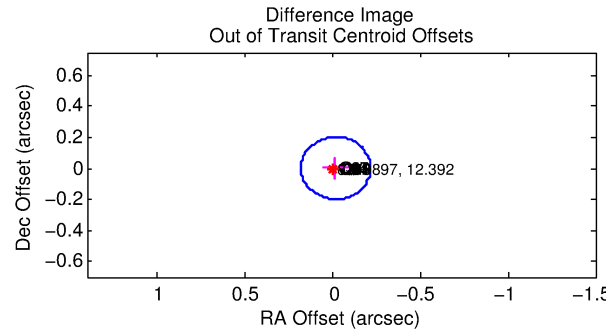
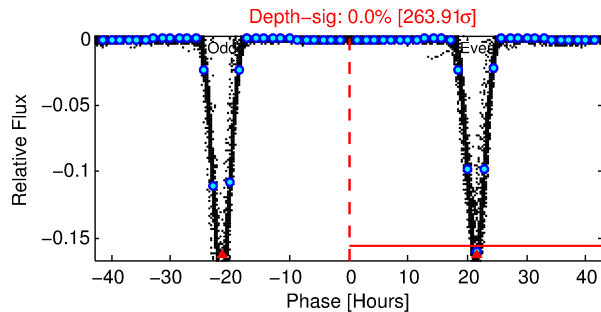
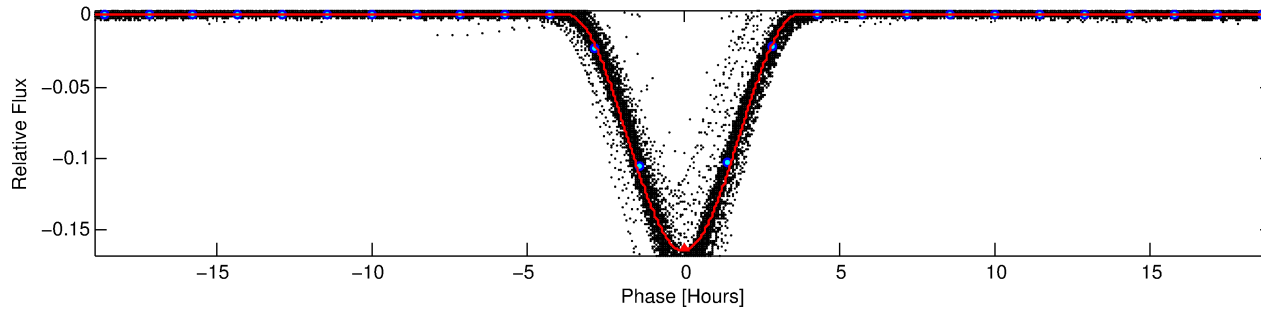
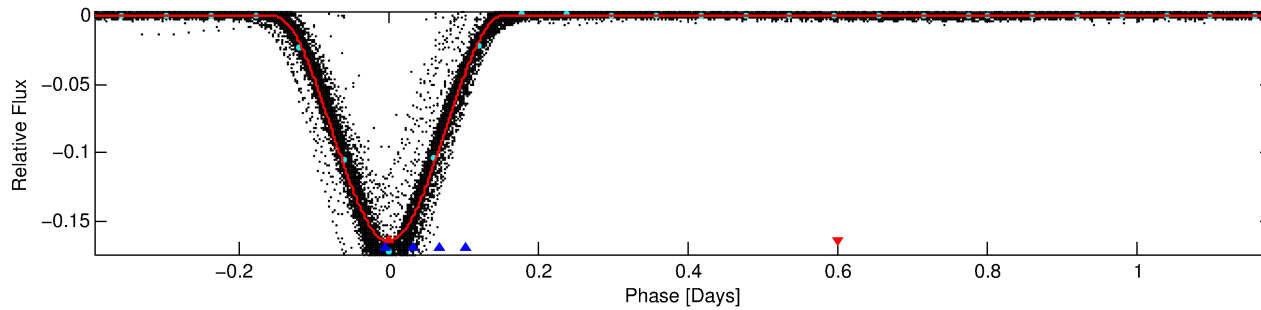
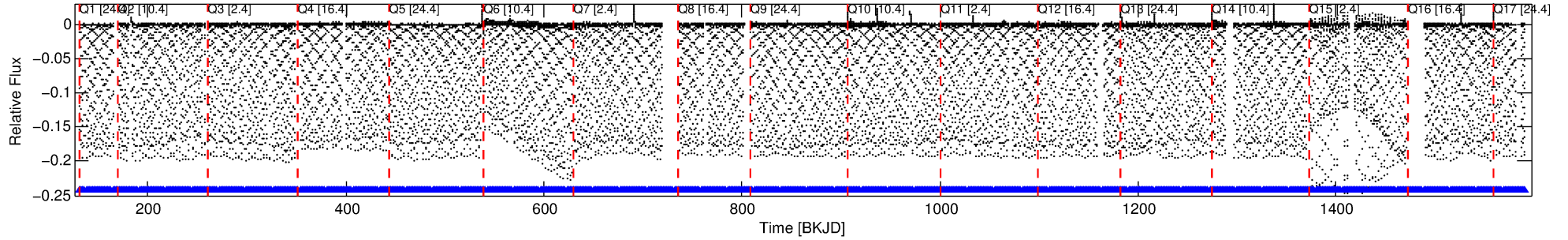
Ephemeris Match Information For 008719897-01

No Significant Match Found

DV One-Page Summary

KIC: 8719897 Candidate: 1 of 2 Period: 1.576 d
KOI: K07081.01 Corr: 0.976

Kp: 12.39 R*: 4.29 Rs Teff: 5017.0 K Logg: 3.35 Fe/H: 0.020



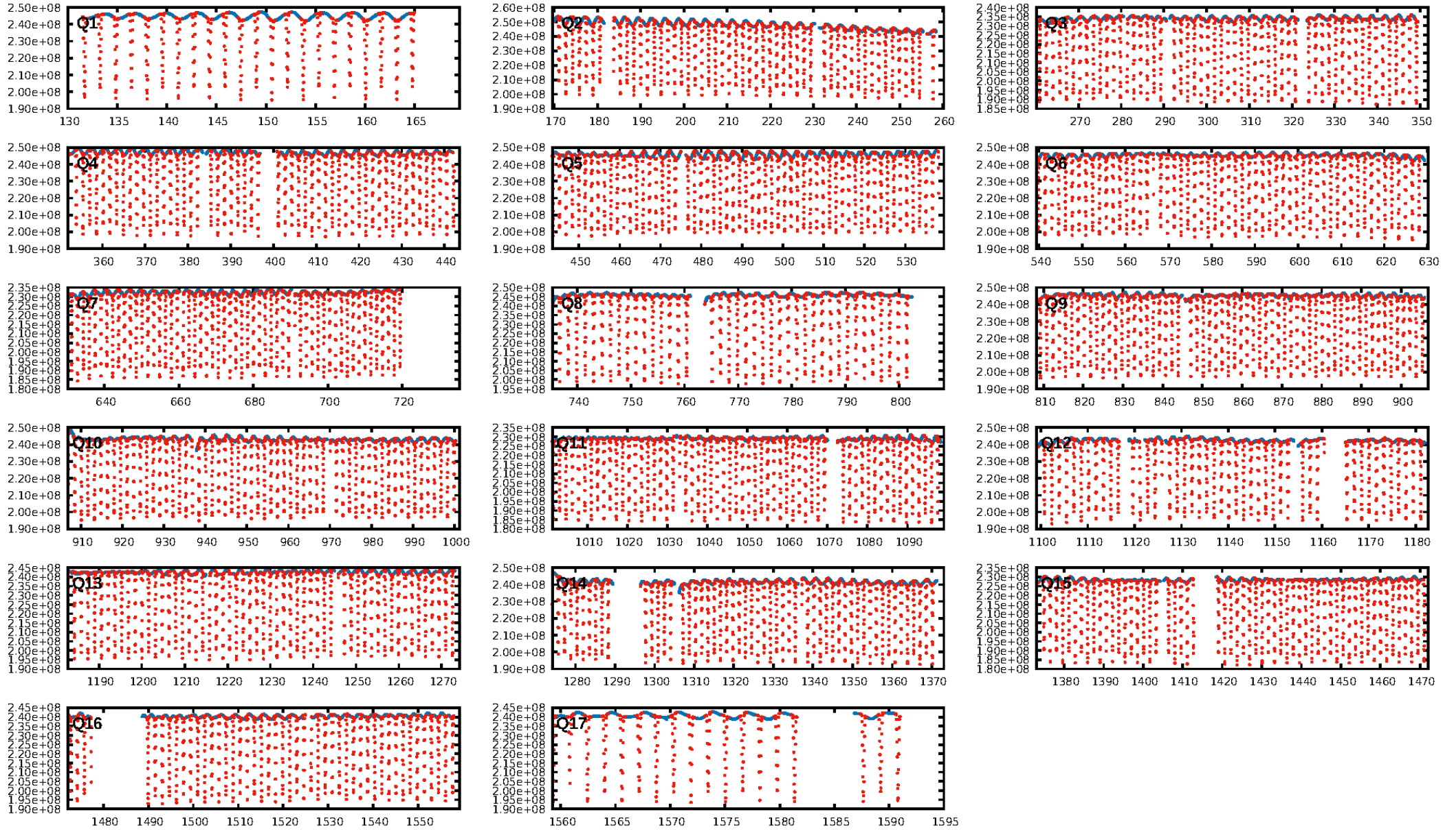
DV Fit Results:

Period = 1.57573 [0.00000] d
Epoch = 131.6863 [0.0000] BKJD
Rp/R* = 0.5350 [0.0083]
a/R* = 2.42 [0.01]
b = 0.87 [0.01]
Seff = N/A
Teq = N/A
Rp = 250.63 [68.88] Re
a = N/A
Ag = N/A
Teffp = N/A

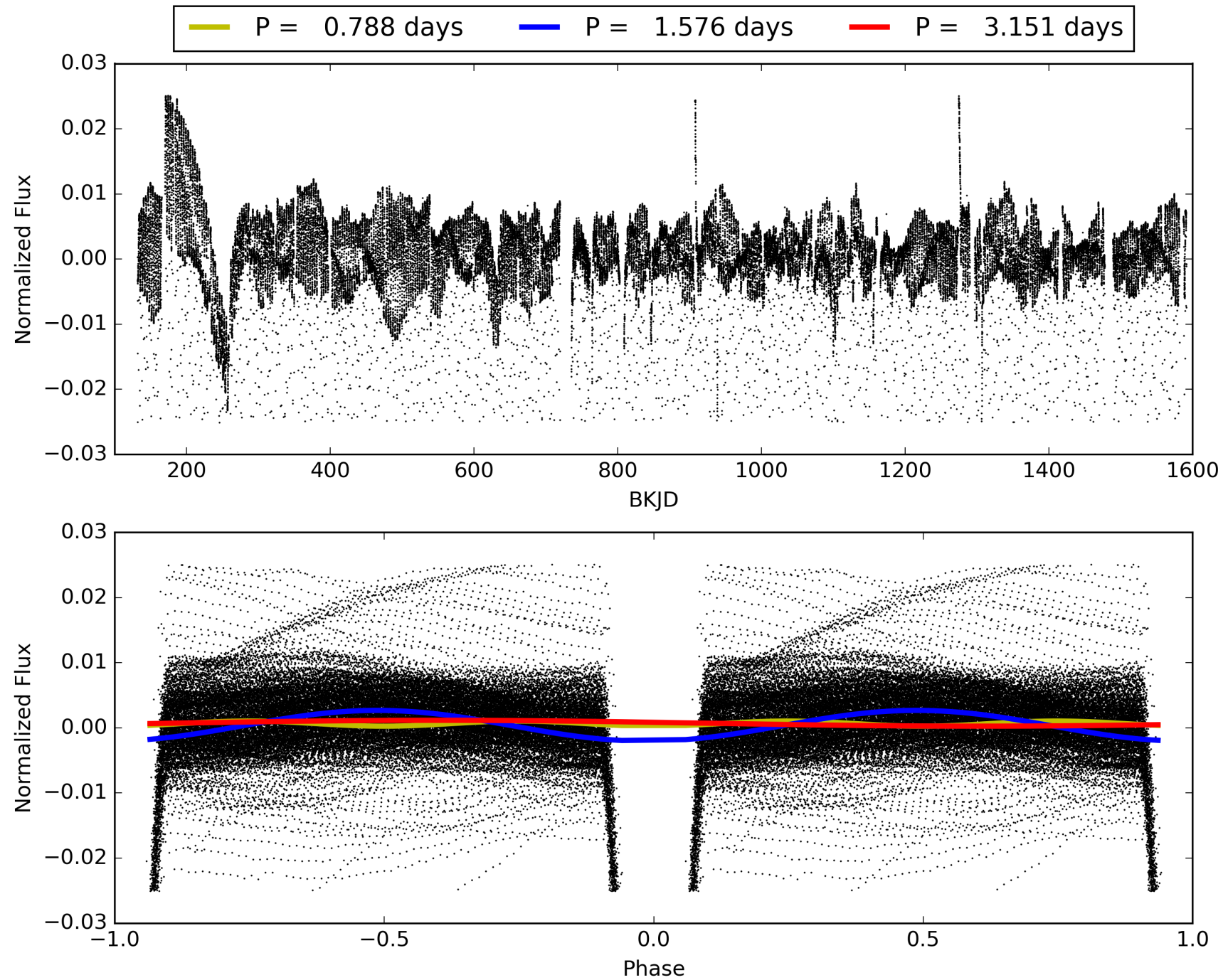
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [795.48σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [824/824]
GhostDiagnostic-chr: 1.193
Centroid-sig: N/A
Centroid-so: 0.031 arcsec [104.15σ]
OotOffset-rm: 0.018 arcsec [0.27σ]
KicOffset-rm: 0.085 arcsec [1.27σ]
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]

TCE 008719897-01, PDC Light Curves

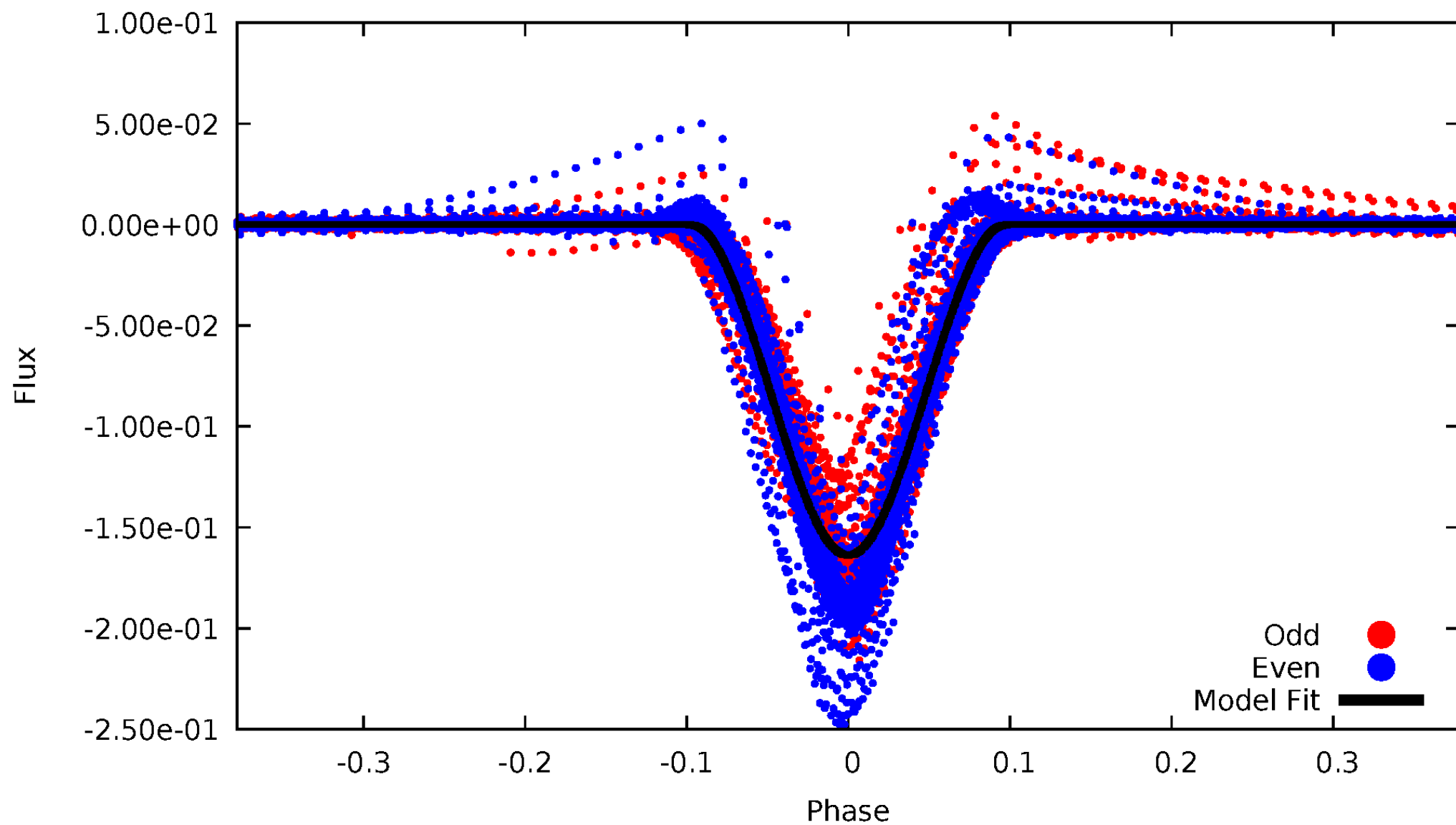


TCE 008719897-01



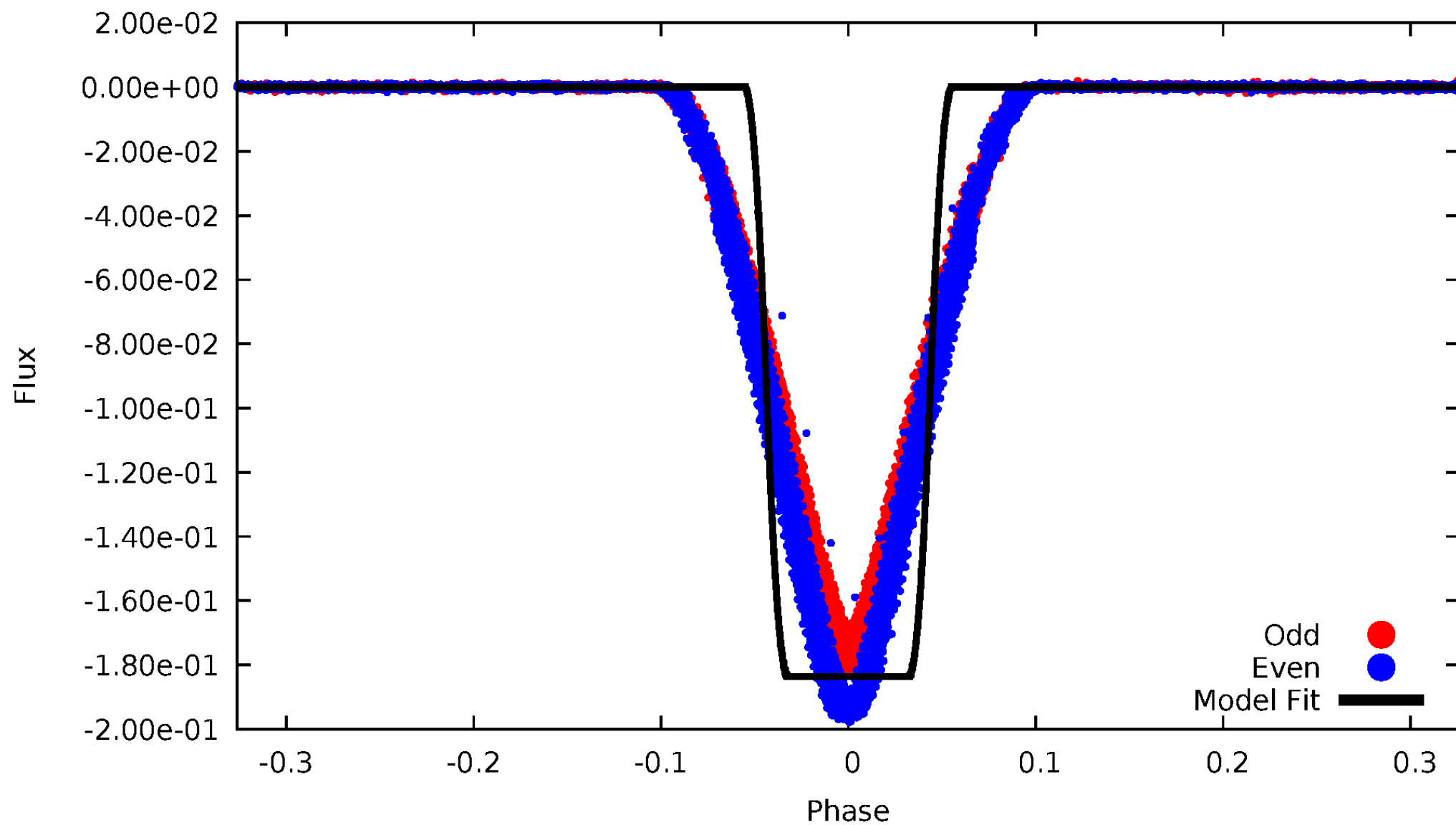
DV Odd/Even

TCE 008719897-01



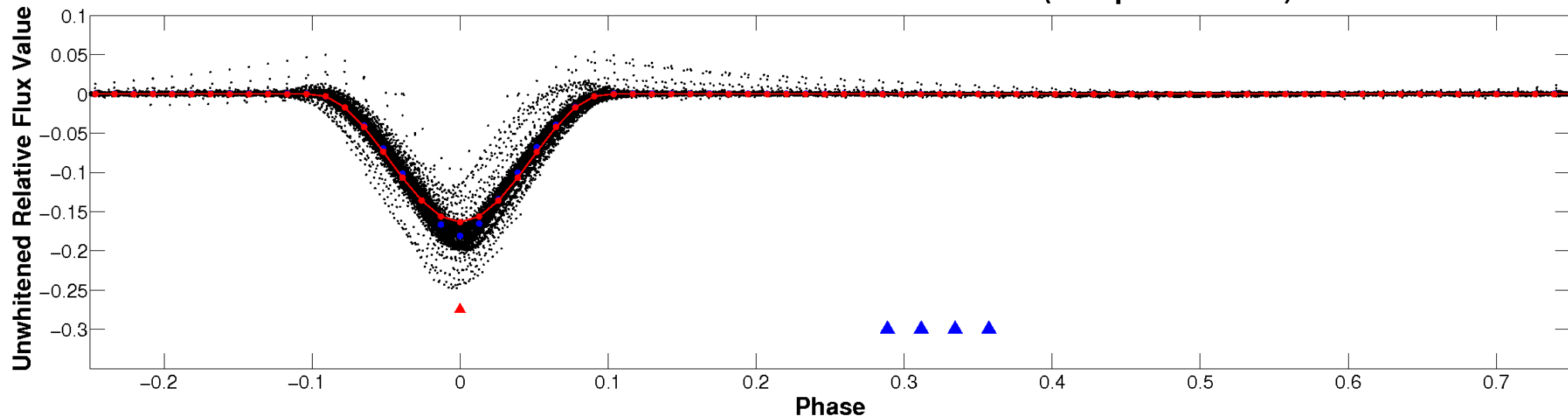
ALT Odd/Even

TCE 008719897-01

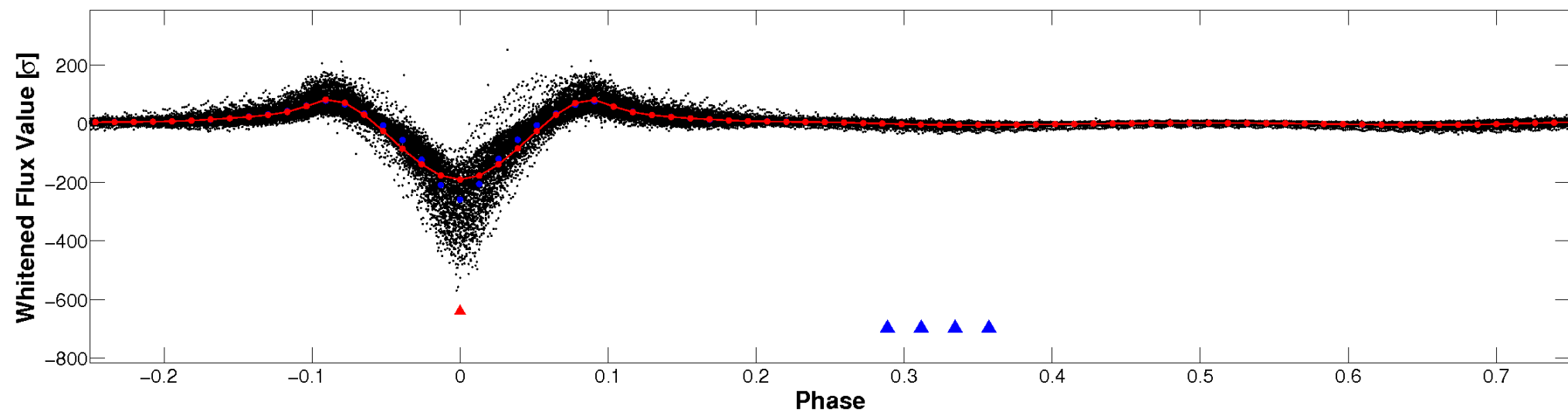


Non-Whitened Vs. Whitened Light Curve

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

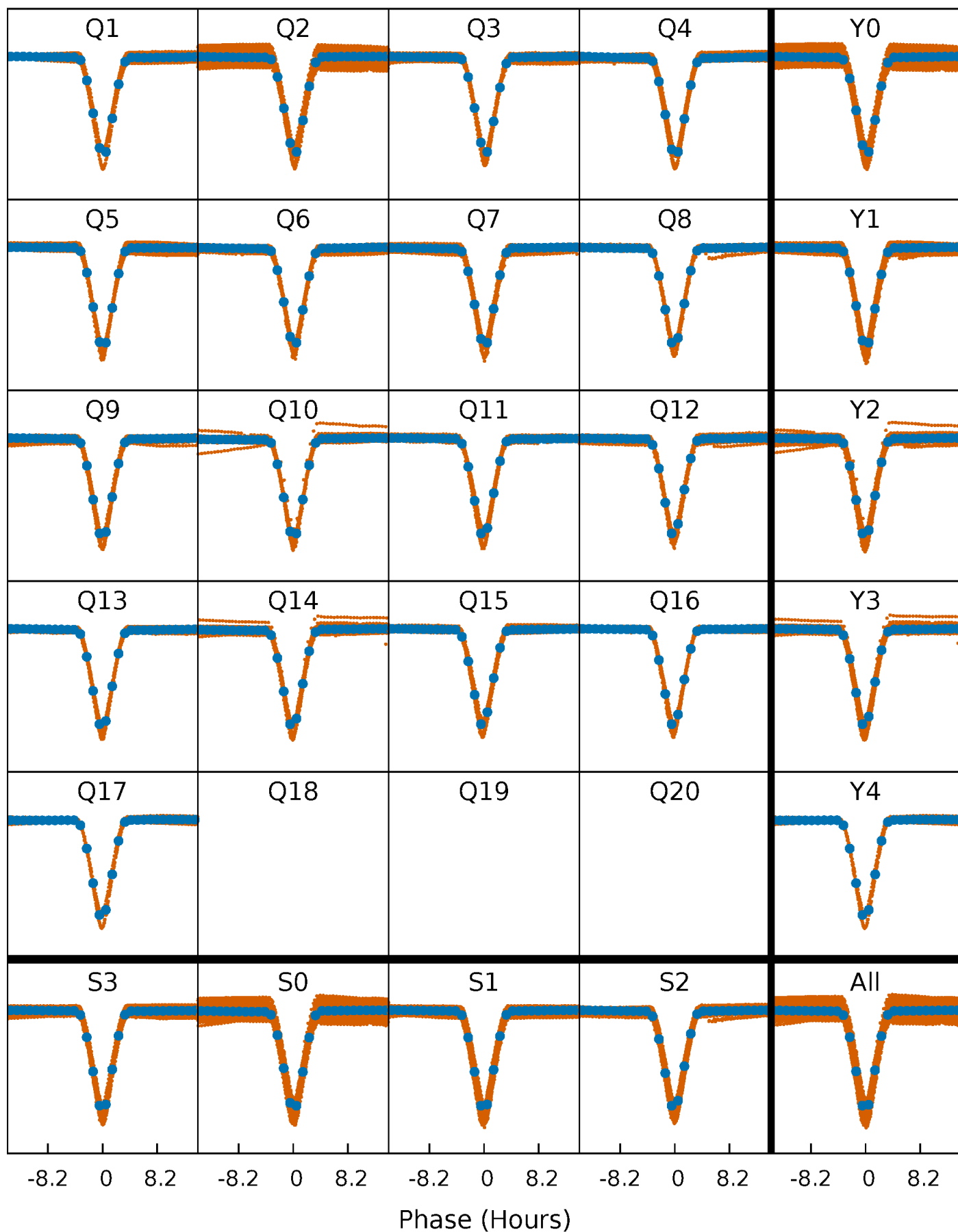


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



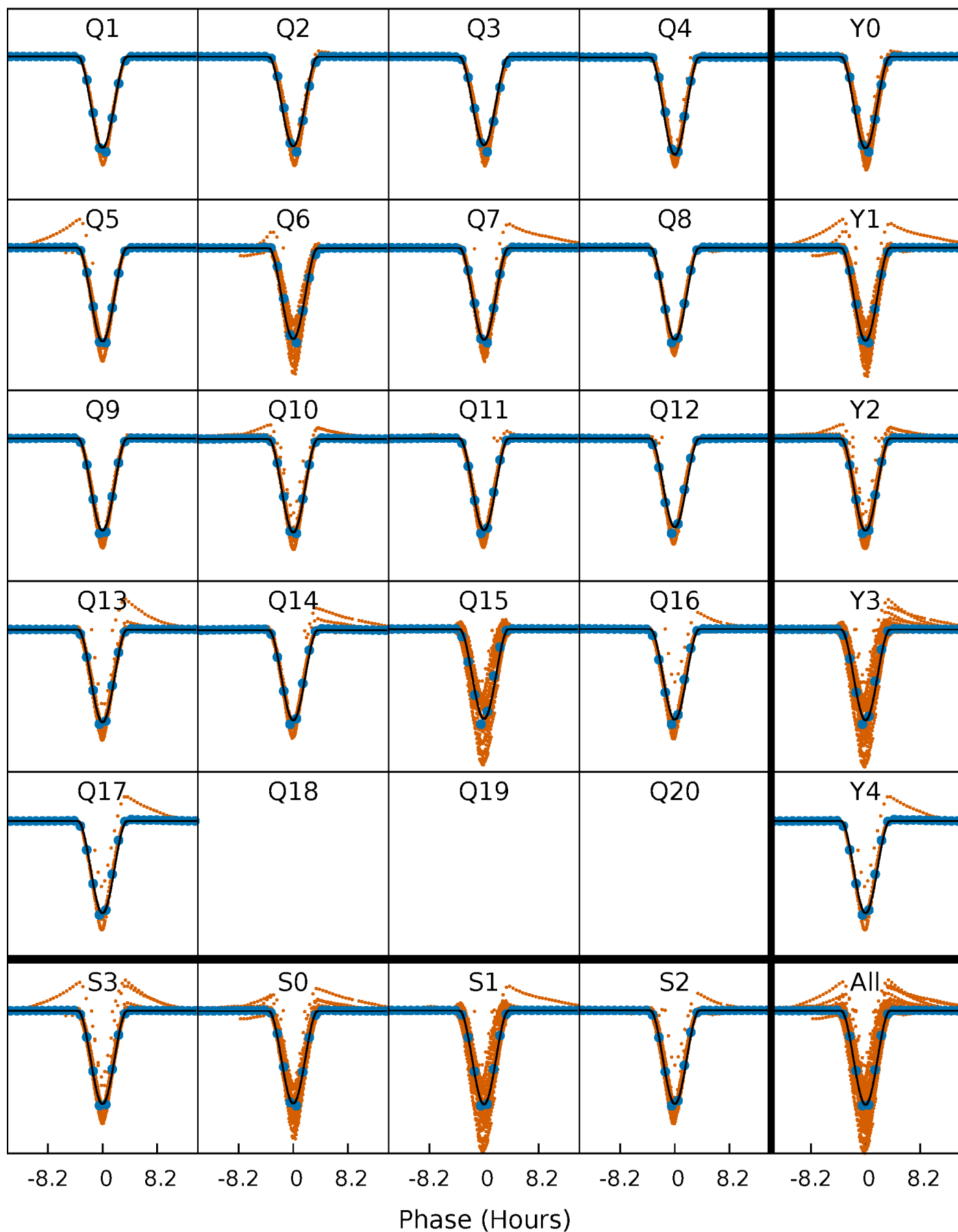
PDC Quarter-Phased Transit Curves

TCE 008719897-01 P= 1.575726 Days $T_0=131.686319$ (BKJD)



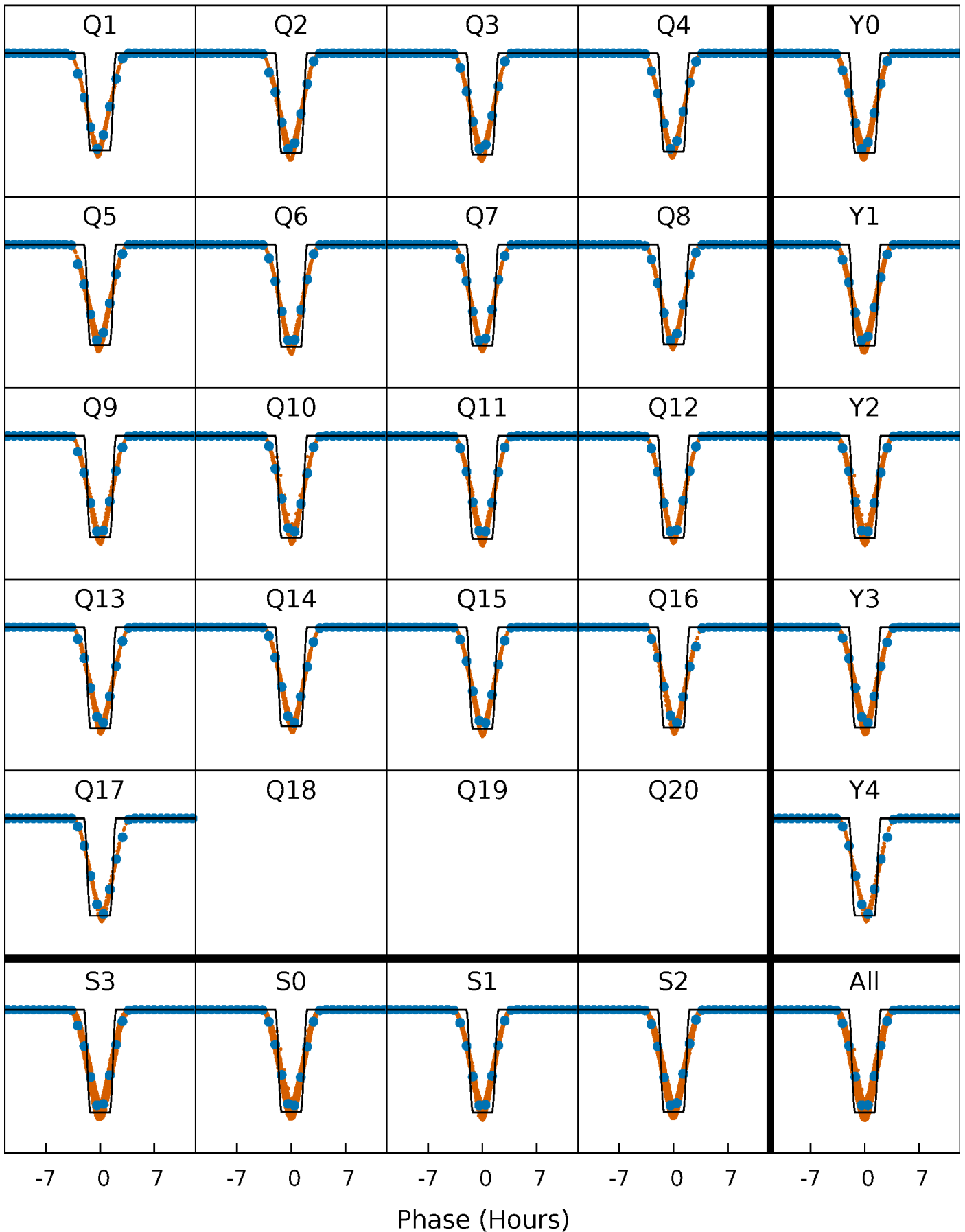
DV Quarter-Phased Transit Curves

TCE 008719897-01 P= 1.575726 Days $T_0=131.686319$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

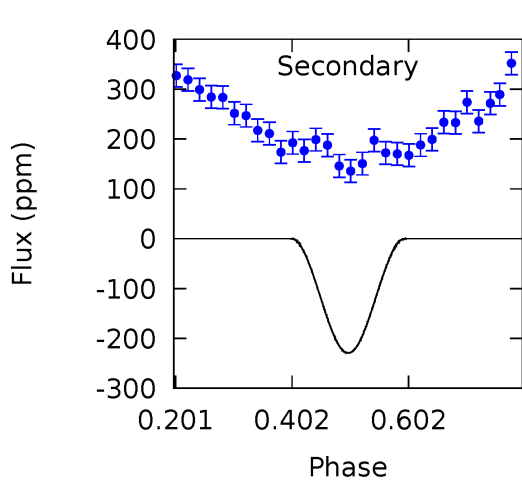
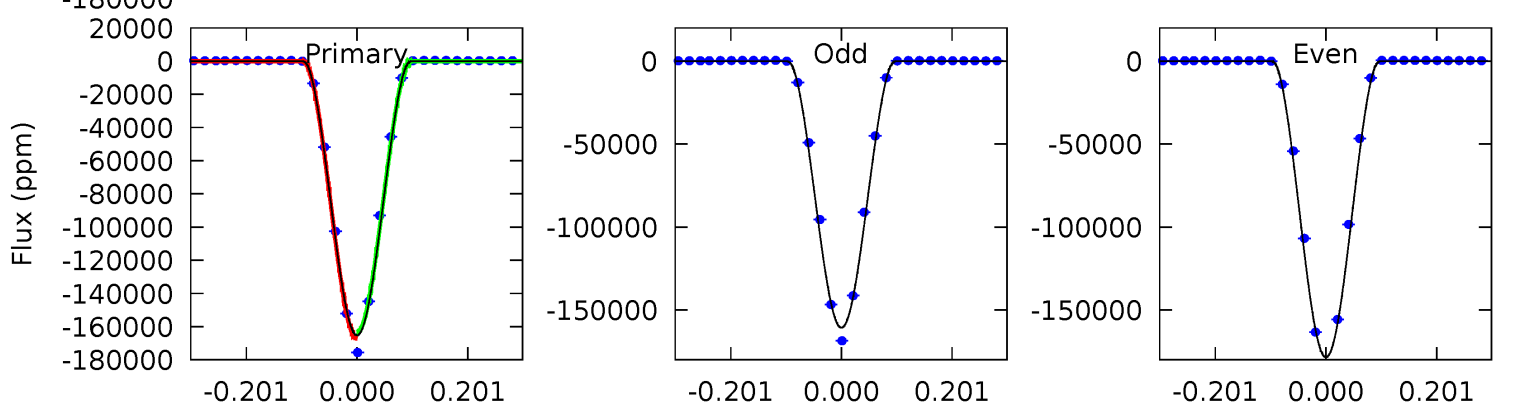
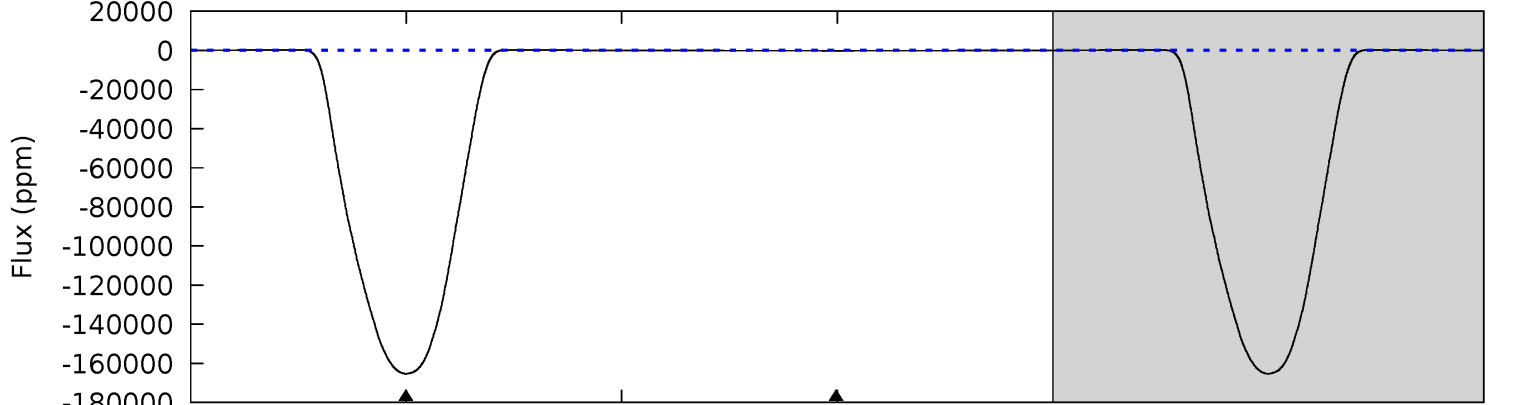
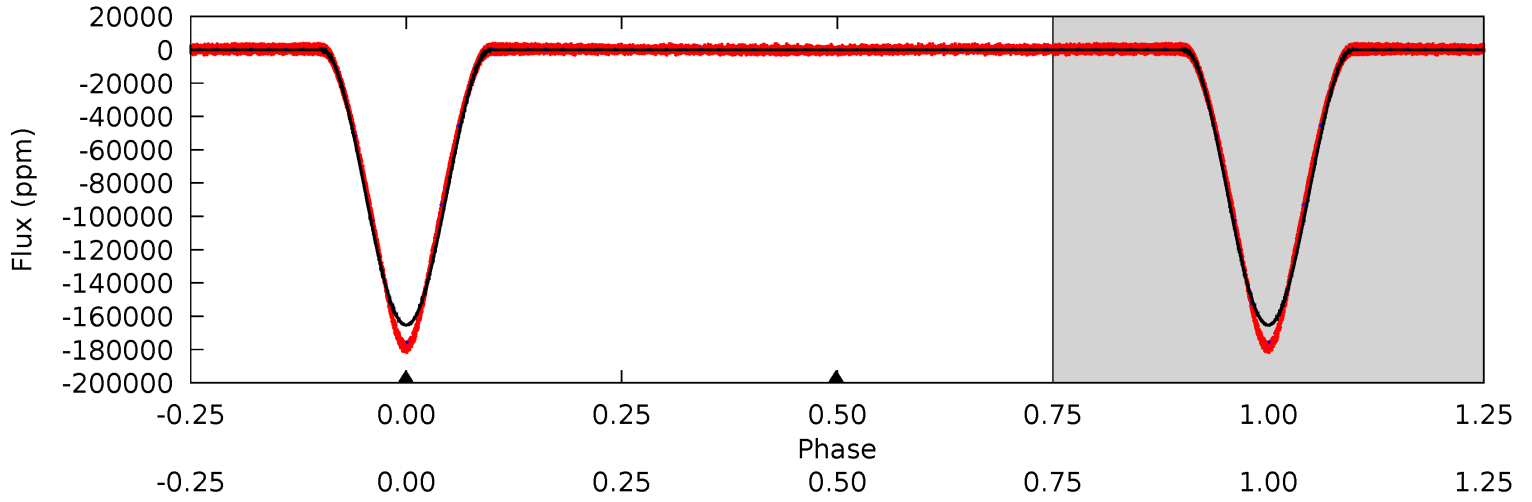
TCE 008719897-01 P= 1.575695 Days $T_0=131.699876$ (BKJD)



DV Model-Shift Uniqueness Test

008719897-01, P = 1.575726 Days, E = 130.110593 Days

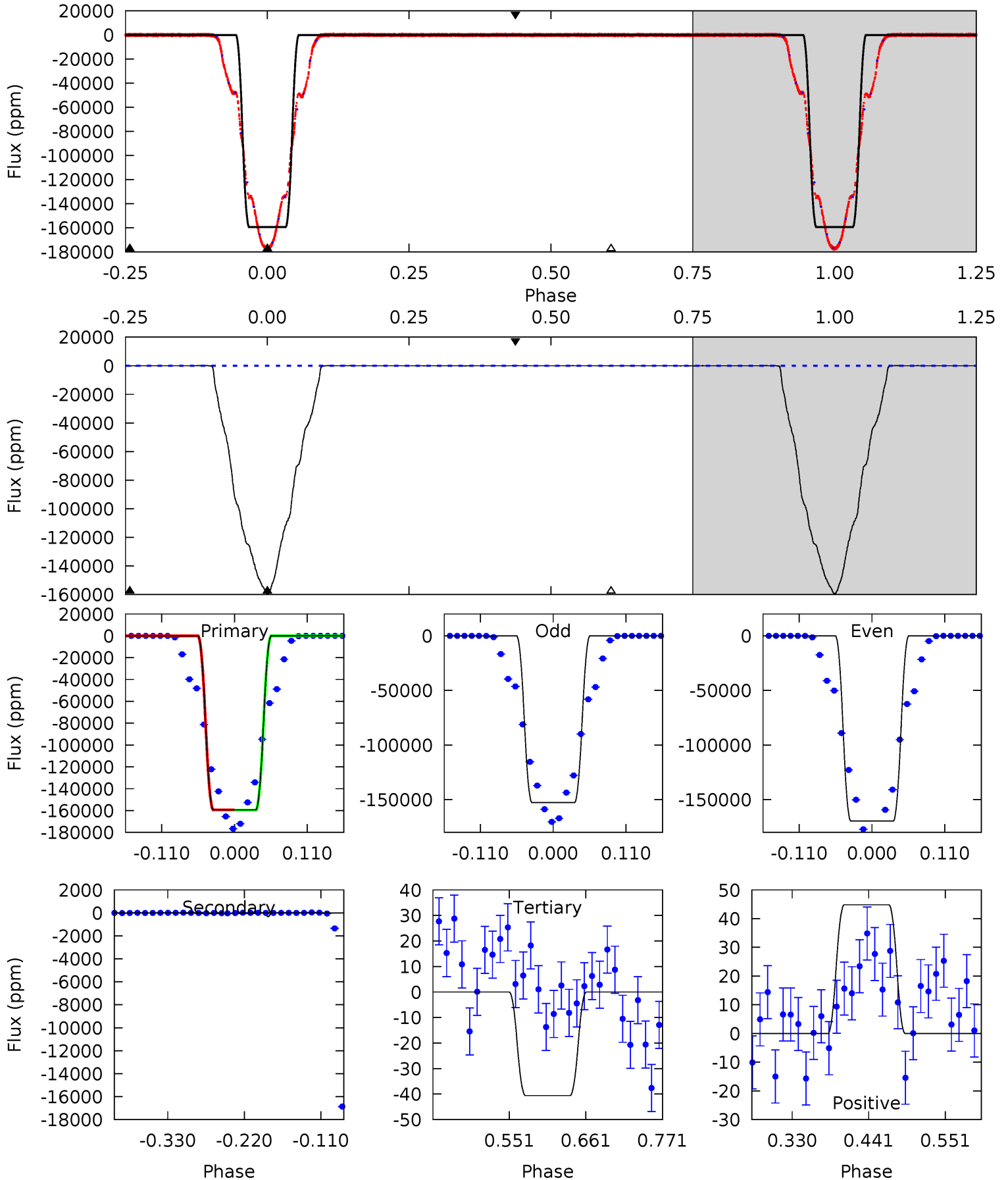
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13558	18.8	0	0	4.42	1.28	3.91	13558	13558	18.8	18.8	756.9	1.00	0.00	0



Alt Model-Shift Uniqueness Test

008719897-01, P = 1.575695 Days, E = 130.124181 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14387	5.19	3.66	4.05	4.54	1.60	1.48	14383	14383	1.53	1.14	872.2	1.00	0.00	0



Stellar Parameters For KIC 008719897

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5017^{+52}_{-89}	$3.350^{+0.168}_{-0.112}$	$0.020^{+0.100}_{-0.150}$	$4.293^{+0.634}_{-1.178}$	$1.505^{+0.204}_{-0.408}$	$0.027^{+0.027}_{-0.008}$
	+1%/-2%	+5%/-3%	+500%/-750%	+15%/-27%	+14%/-27%	+99%/-31%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 008719897-01 / KOI 7081.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-229 ± 12	$251.42^{+24.19}_{-35.24}$	3657^{+161}_{-213}	-3443^{+130}_{-101}	$0.002^{+0.000}_{-0.000}$
Alt.	-57 ± 11	$201.54^{+20.53}_{-30.33}$	3654^{+183}_{-223}	-3446^{+134}_{-109}	$0.001^{+0.000}_{-0.000}$

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 $A_{obs} \gg 1.0$

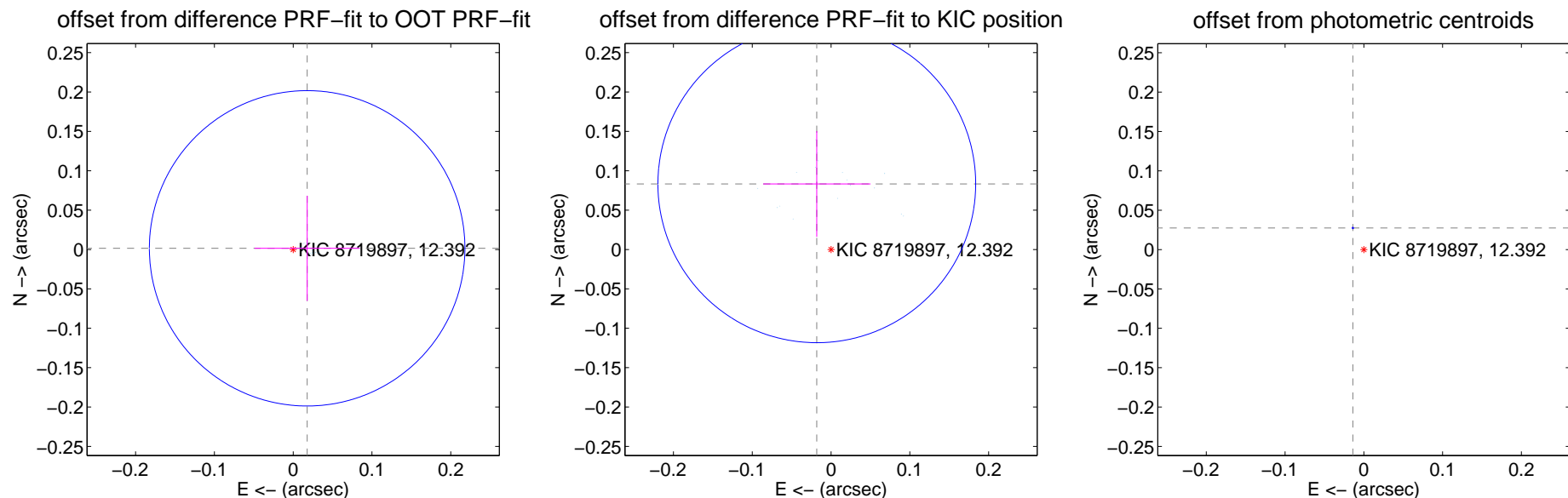
DV Centroid Data

Supplemental centroid analysis for 008719897-01. Kepler magnitude: 12.39. Transit SNR 5007.47

There are 17 quarters with good PRF difference image offsets

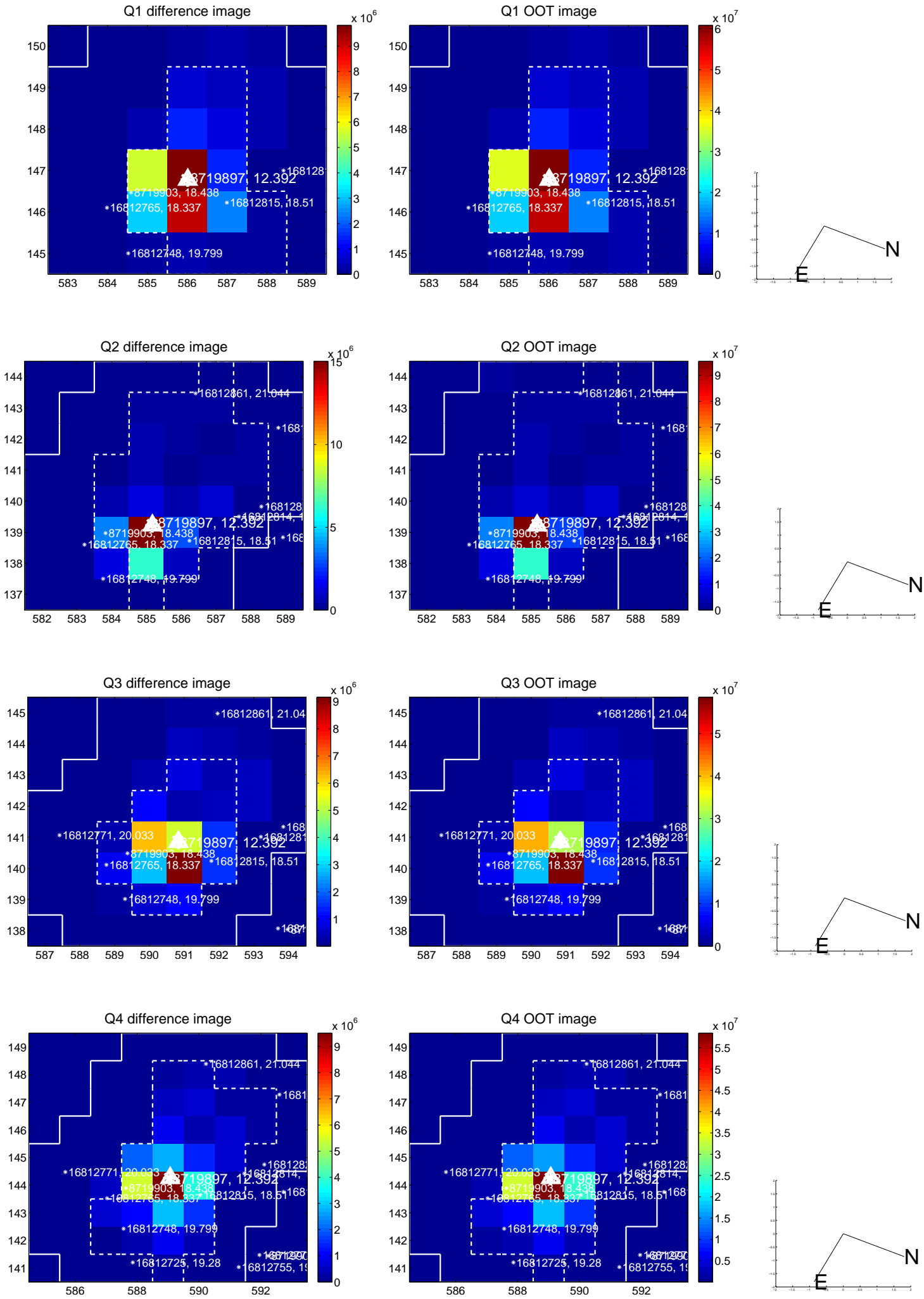
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.018 ± 0.067	0.27	-0.018 ± 0.067	0.002 ± 0.067
PRF-fit source offset from KIC position	0.085 ± 0.067	1.27	0.018 ± 0.068	0.083 ± 0.067
photometric centroid source offset	0.03 ± 0.00	104.15	0.01 ± 0.00	0.03 ± 0.00

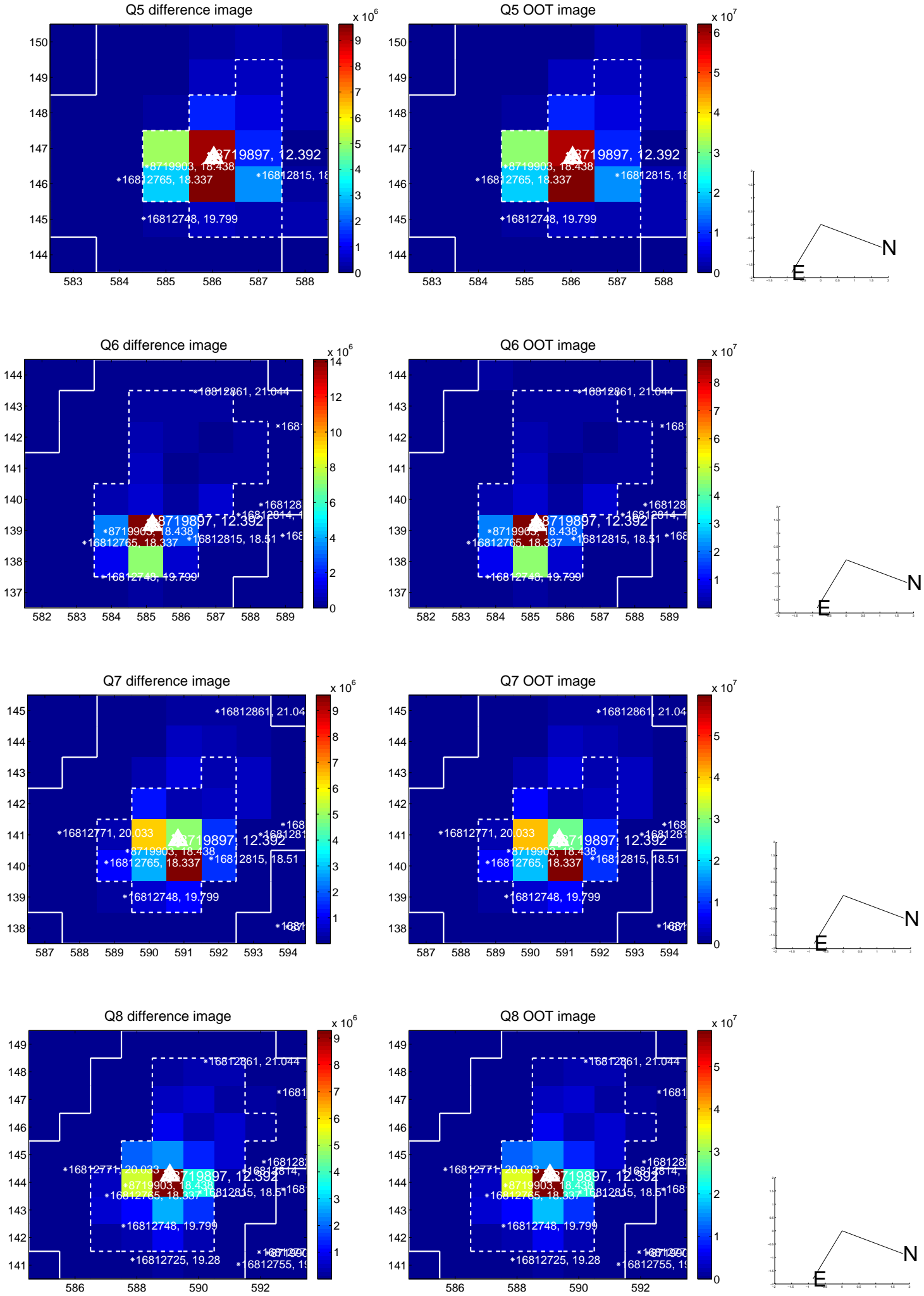


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

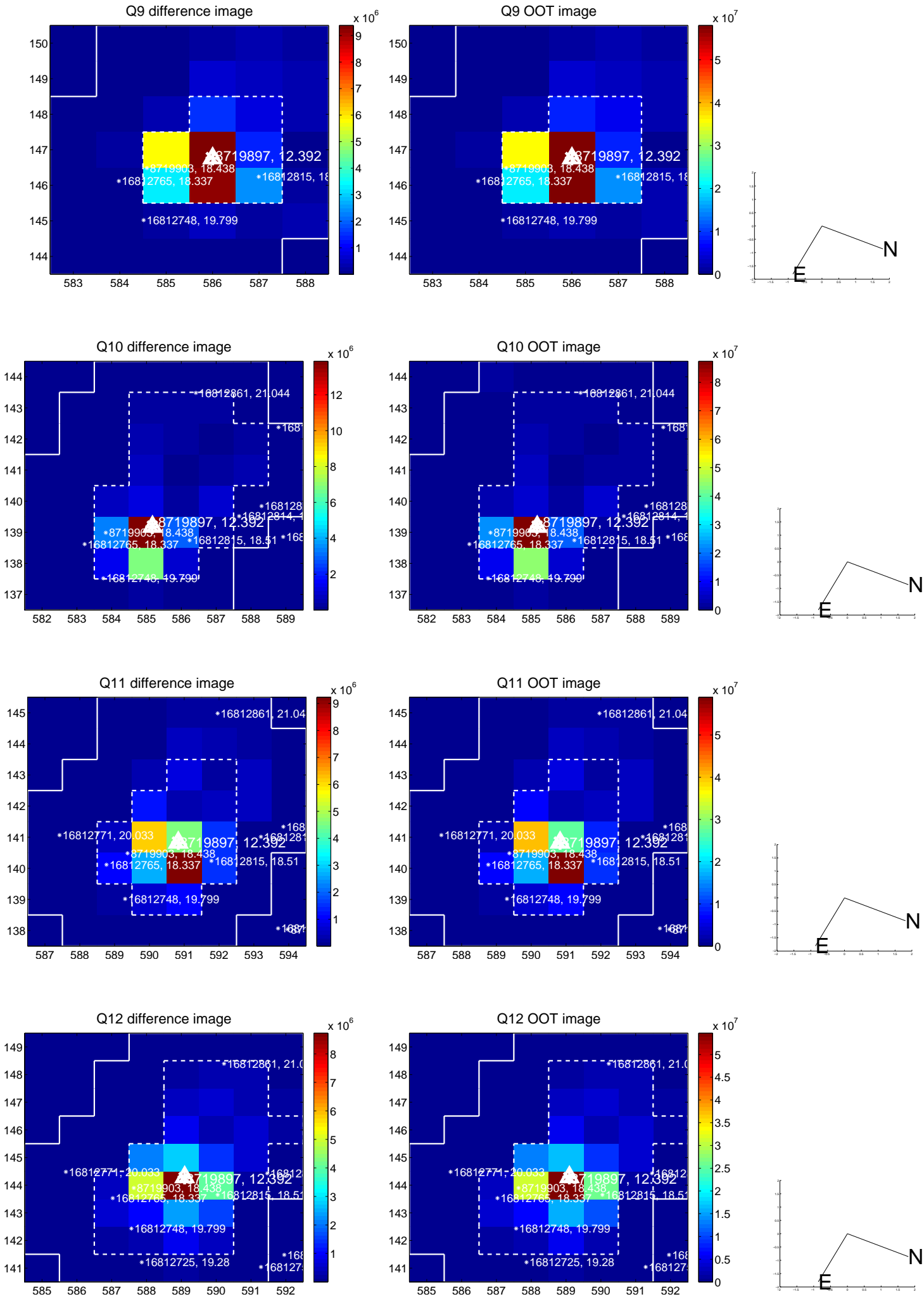
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



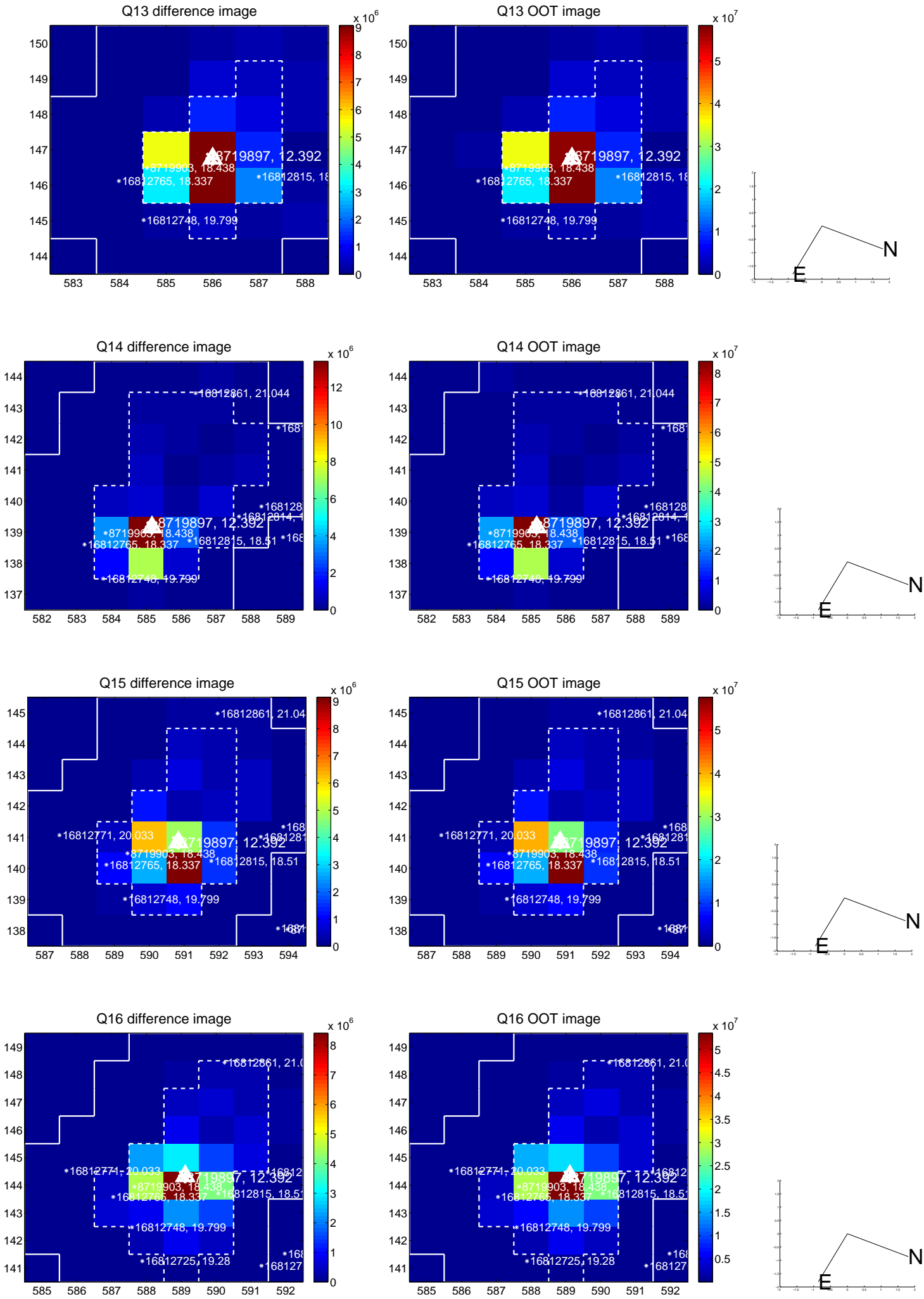
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



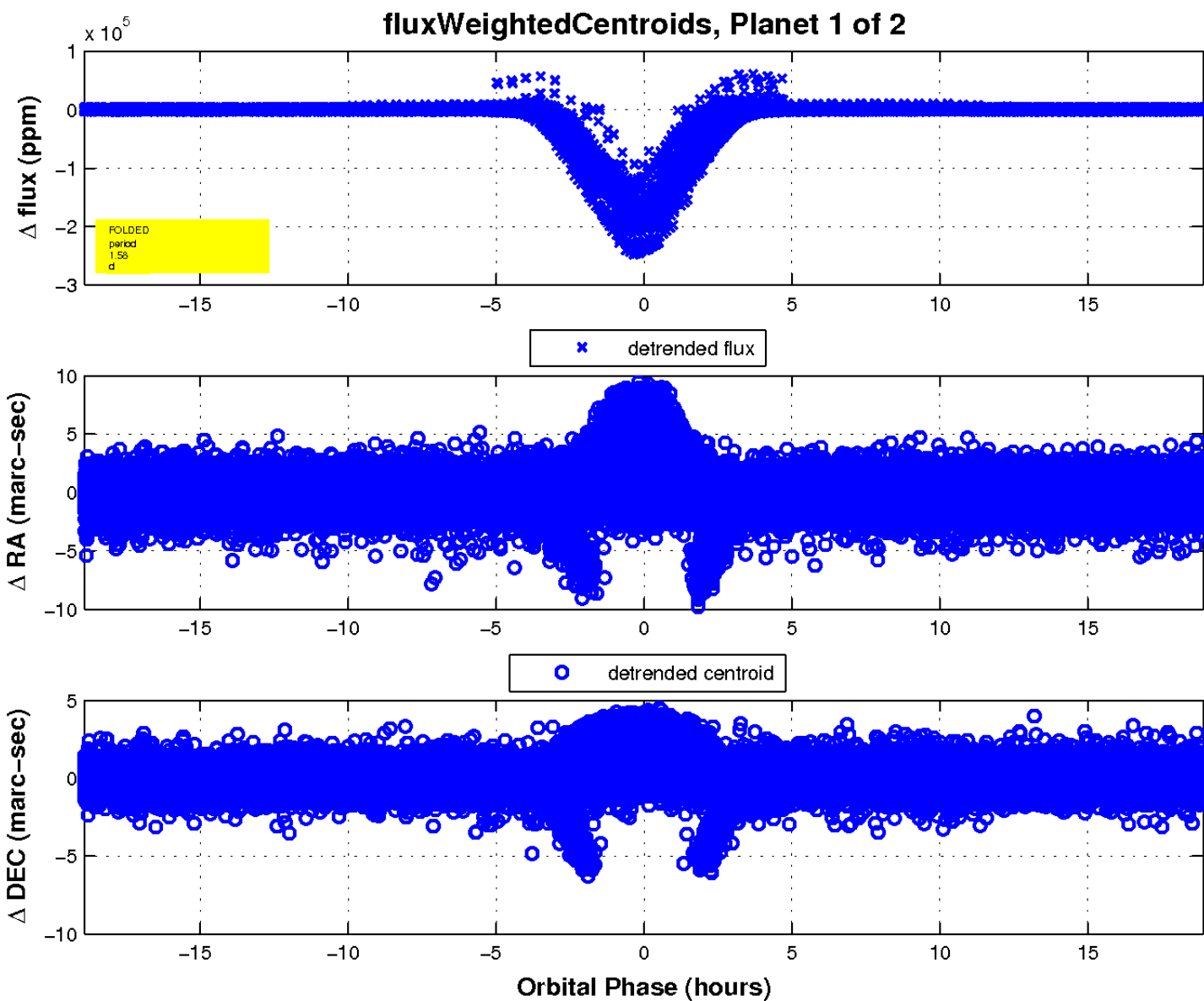
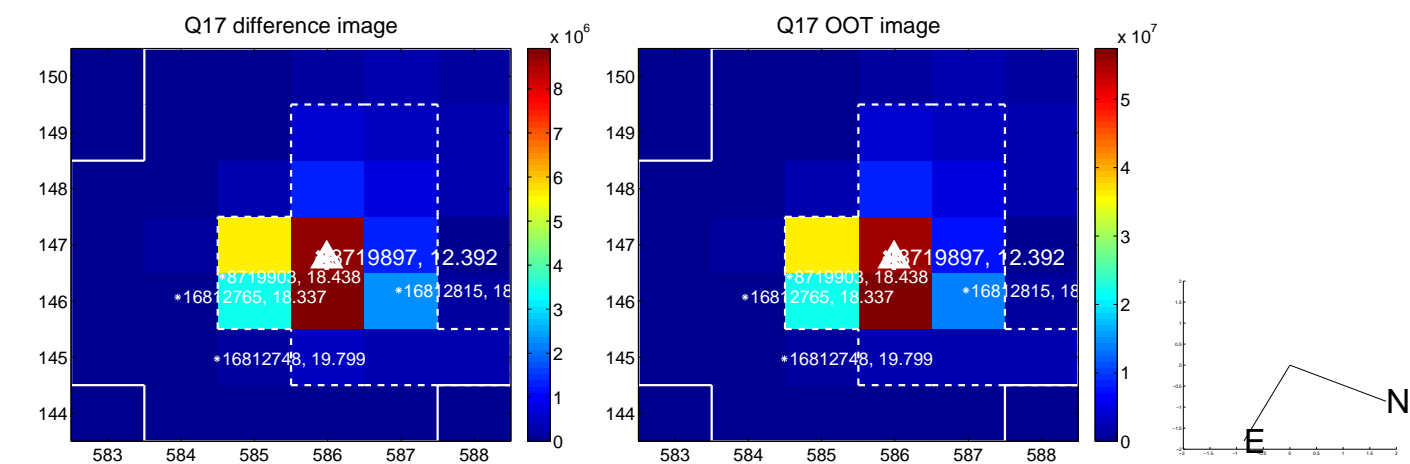
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

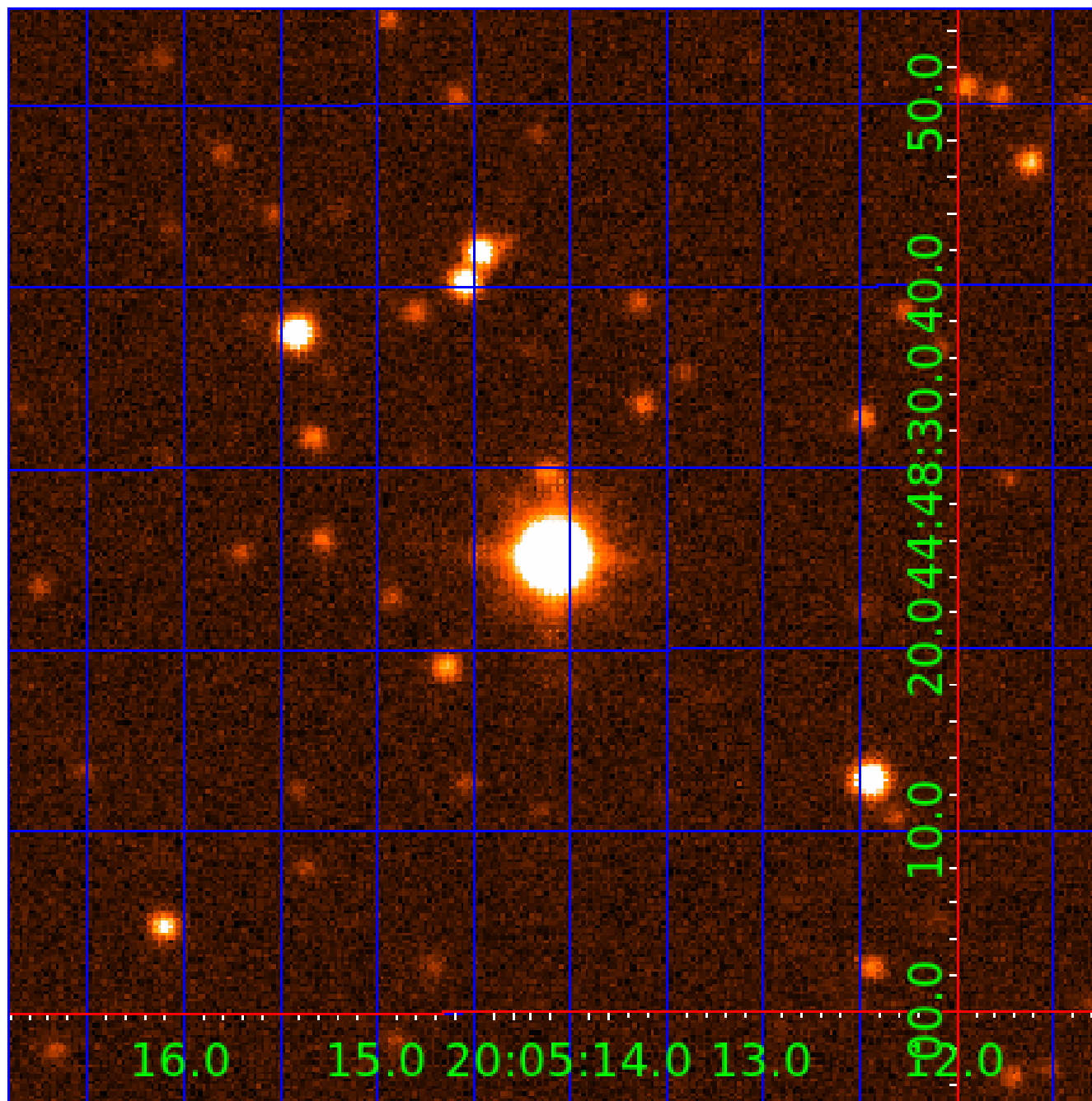


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008719897

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})
008719897-01	OBS	7081.01	1.575726	131.686319	163782.6	7.151	12051.1	5007.5	4.29	5017	250.63	0.00
008719897-02	OBS	No	345.047905	423.758580	386.9	7.500	17.5	-1.0	4.29	5017	8.19	8.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008719897-01	OBS	FP	0.00	0	1	0	0	PLANET_IN_STAR—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED
008719897-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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 008719897-02

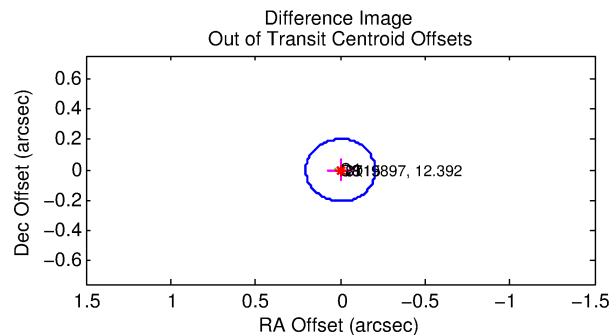
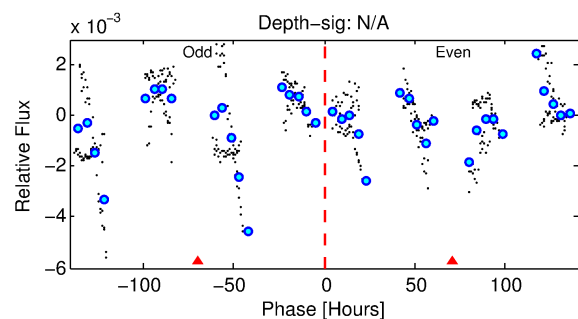
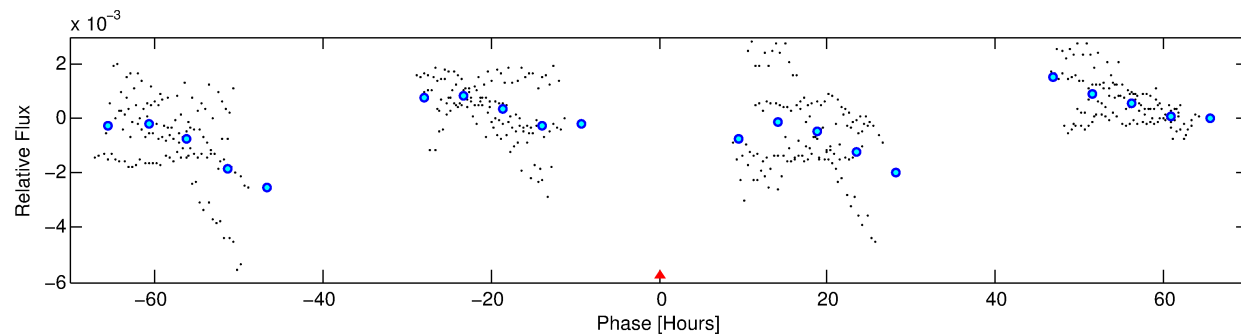
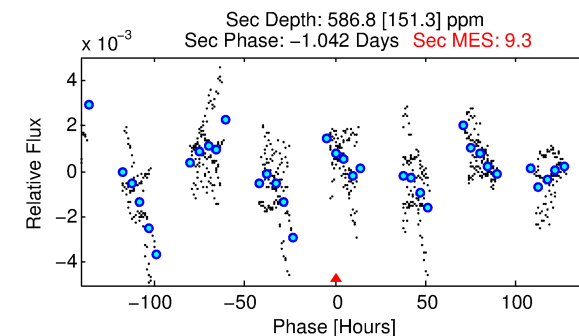
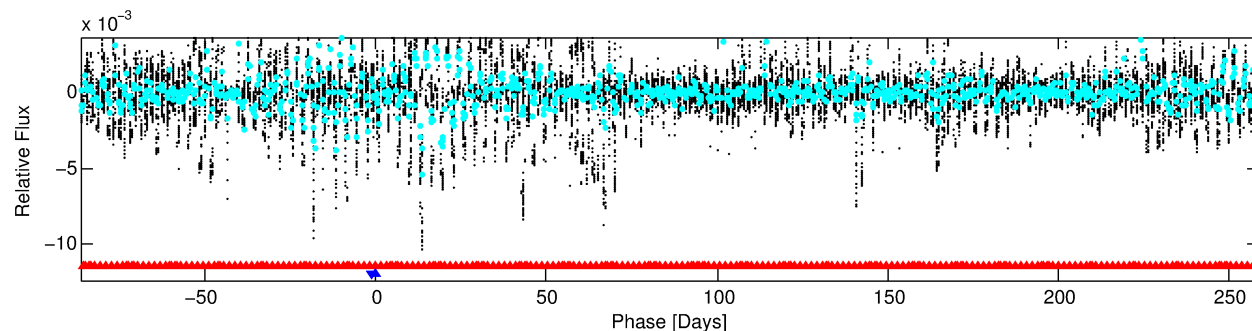
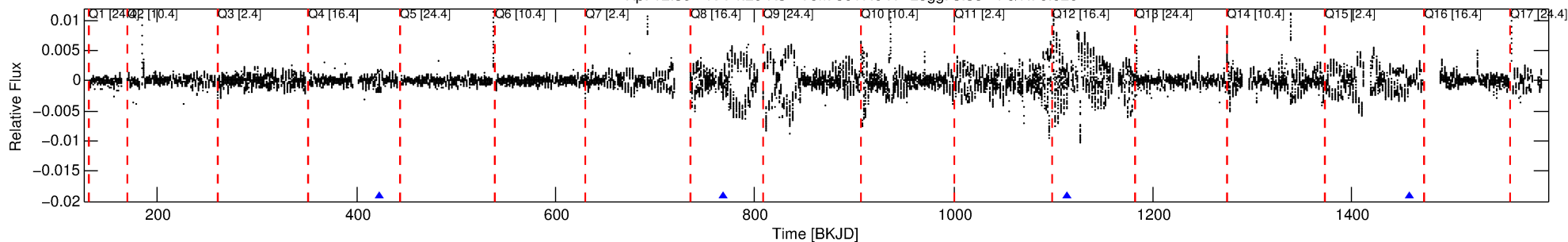
No Significant Match Found

DV One-Page Summary

KIC: 8719897 Candidate: 2 of 2 Period: 345.048 d

KOI: K07081 Corr: No Ephemeris Match

Kp: 12.39 R*: 4.29 Rs Teff: 5017.0 K Logg: 3.35 Fe/H: 0.020



TPS TCE Results:

Period = 345.04791 d
Epoch = 423.7586 BKJD

DV fit results are unavailable

DV Diagnostic Results:

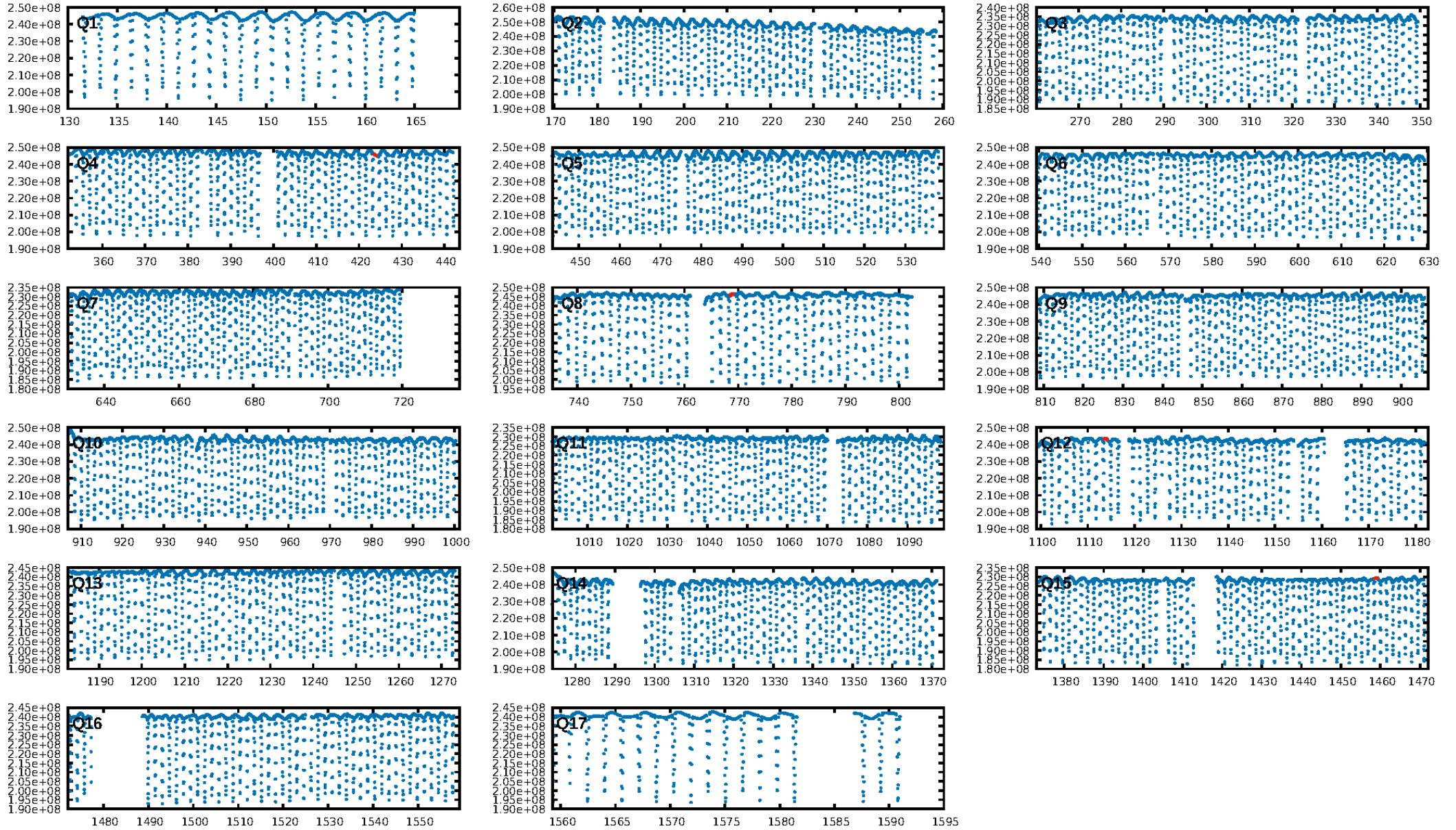
ShortPeriod-sig: 100.0% [795.48 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.081

Centroid-sig: N/A
Centroid-so: 0.015 arcsec [0.54 σ]
OotOffset-rm: 0.004 arcsec [0.06 σ]
KicOffset-rm: 0.098 arcsec [1.40 σ]
OotOffset-st: 0/1/2/0 [3]
KicOffset-st: 0/1/2/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.00 [0/3]

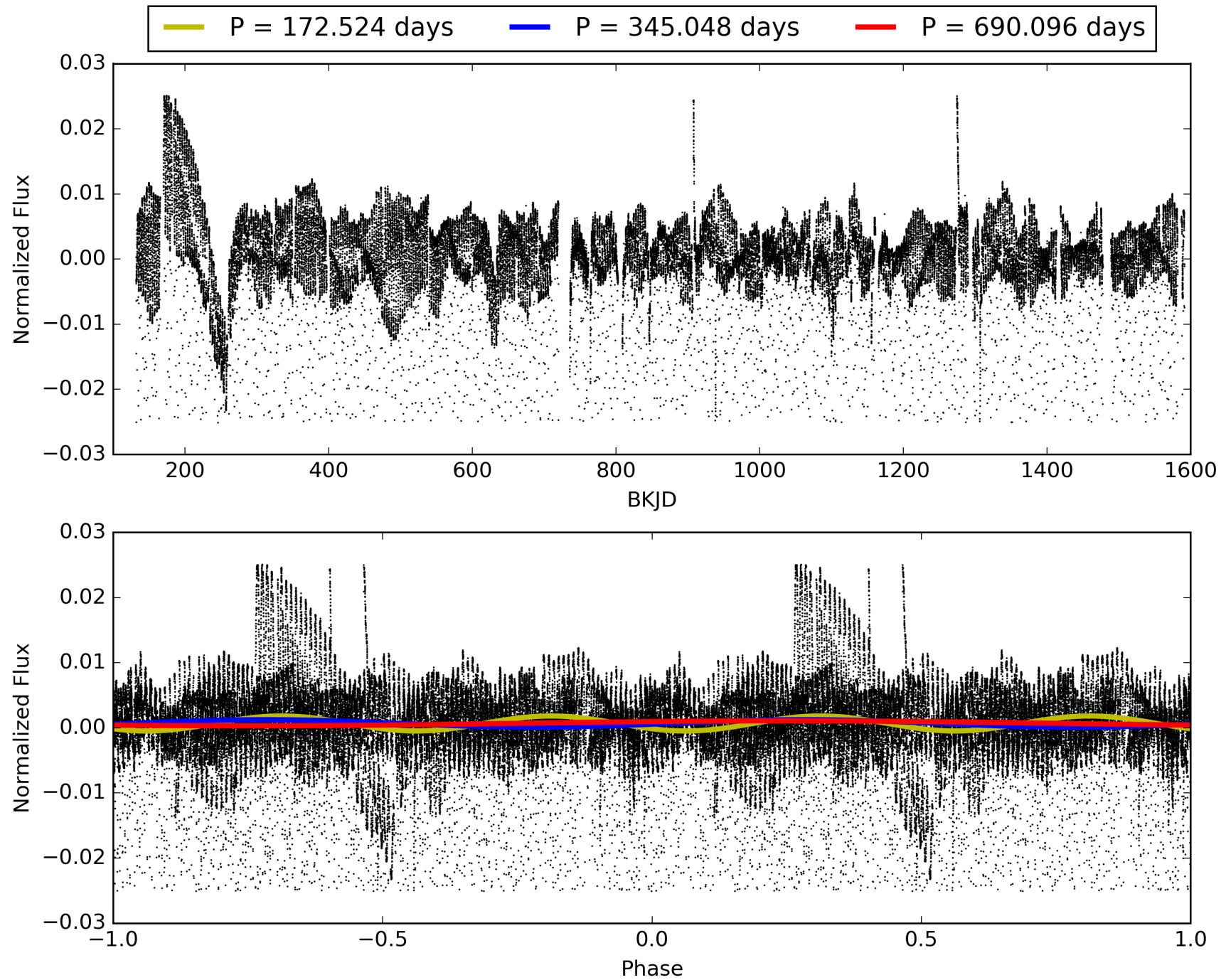
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:55:09 Z

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

TCE 008719897-02, PDC Light Curves

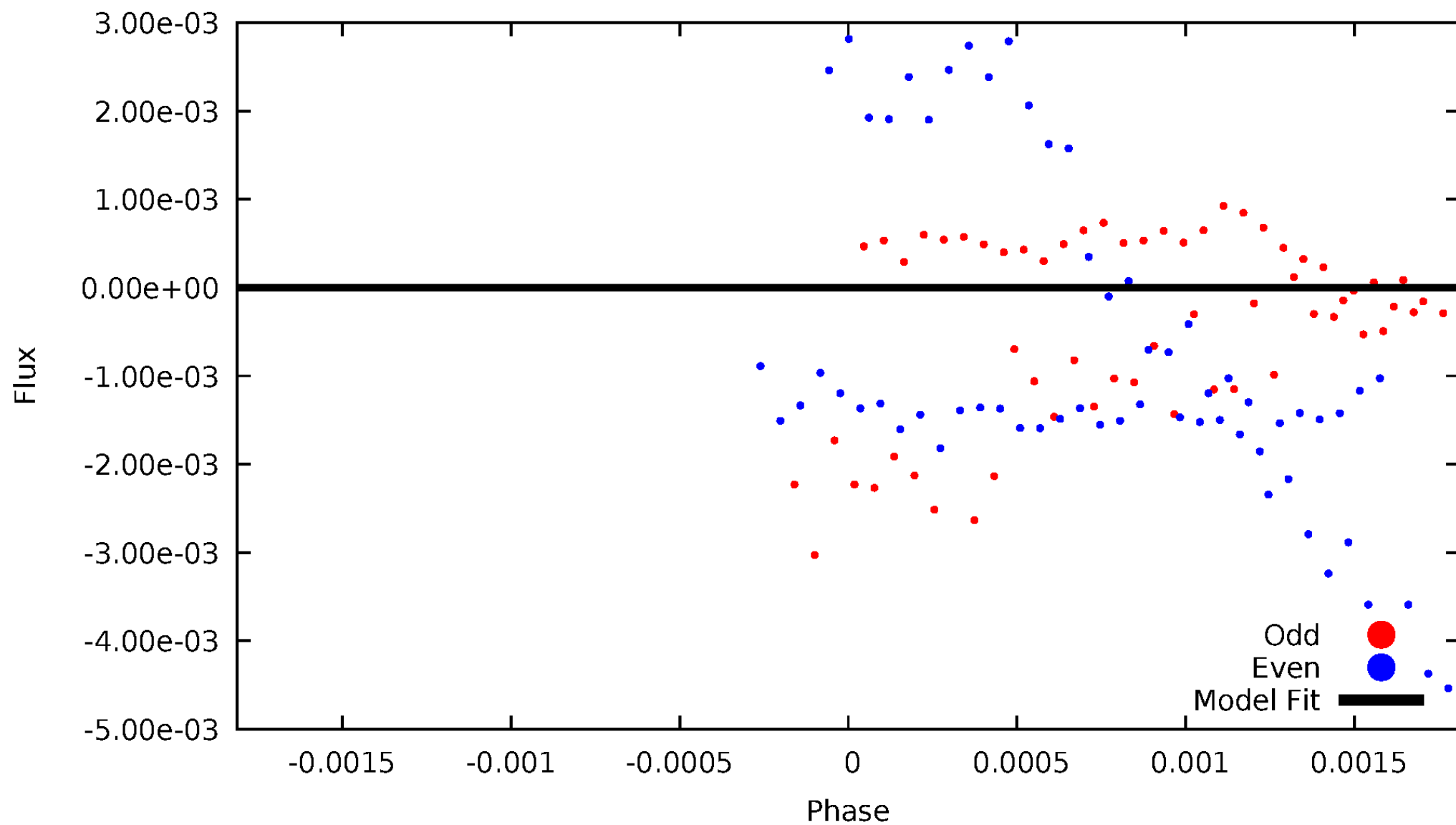


TCE 008719897-02



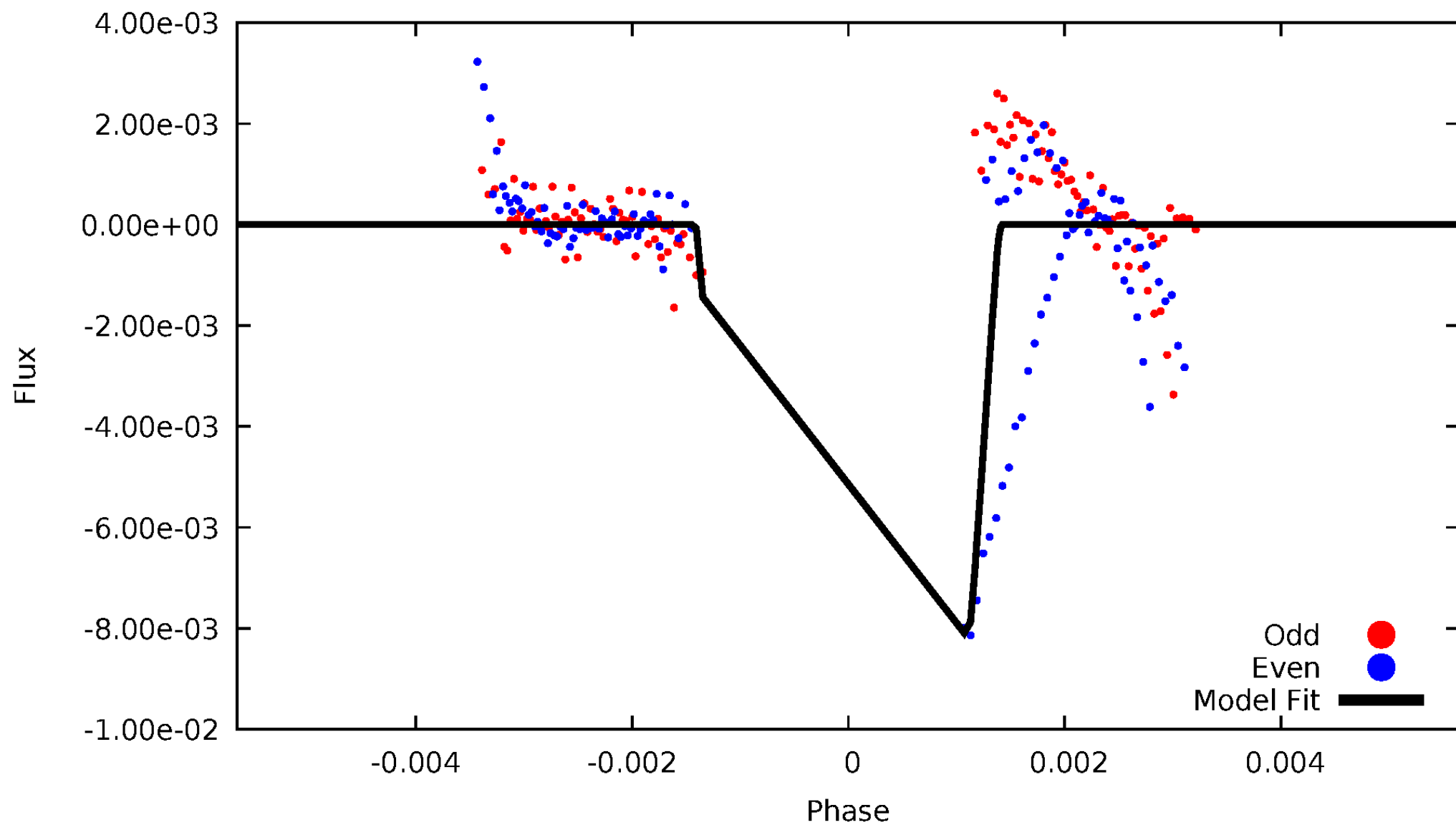
DV Odd/Even

TCE 008719897-02



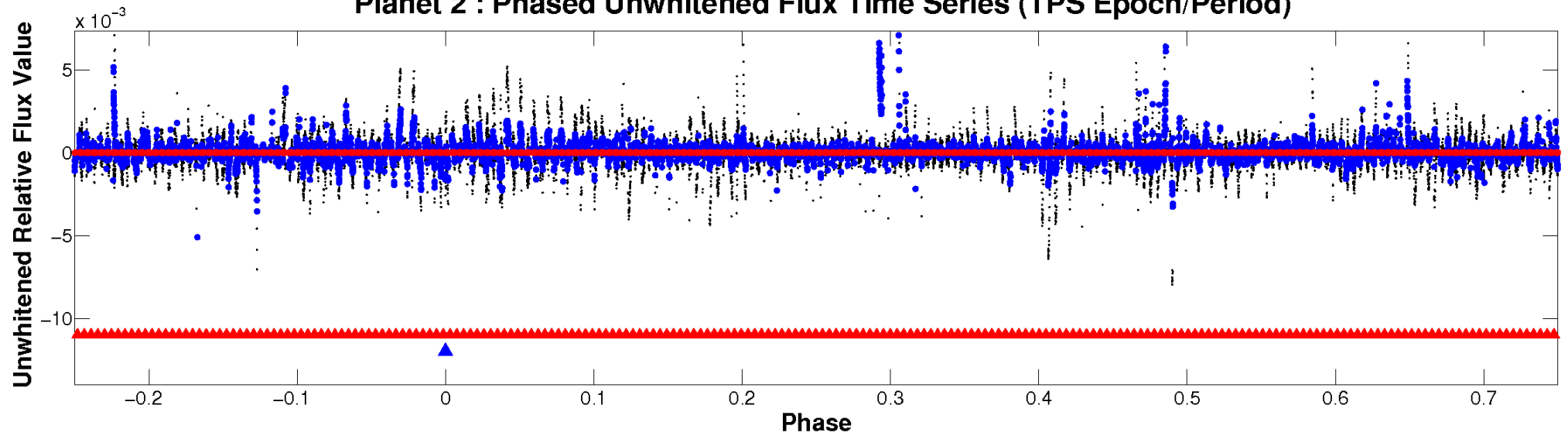
ALT Odd/Even

TCE 008719897-02

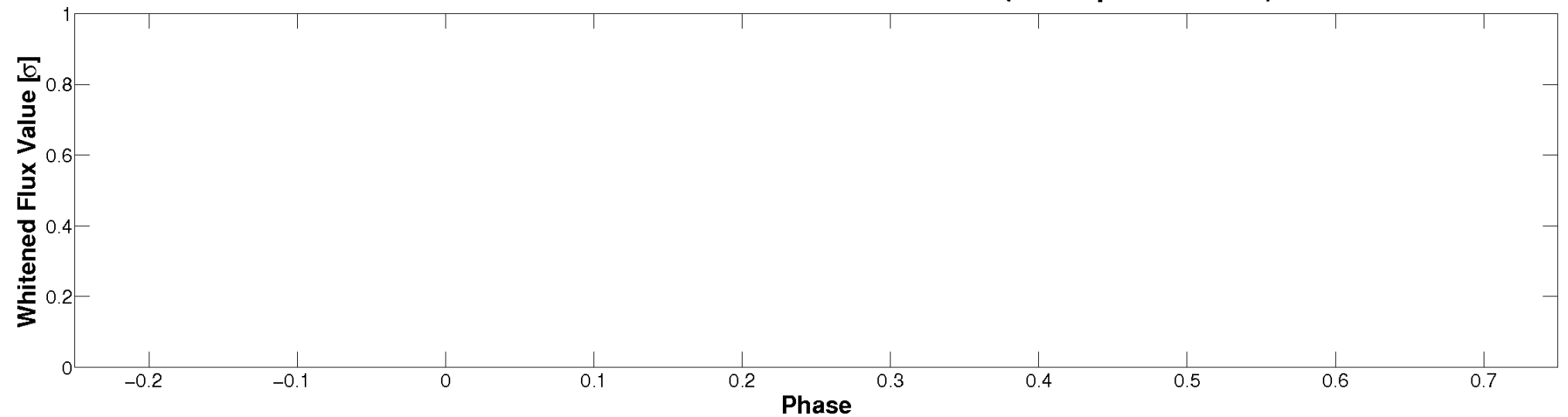


Non-Whitened Vs. Whitened Light Curve

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

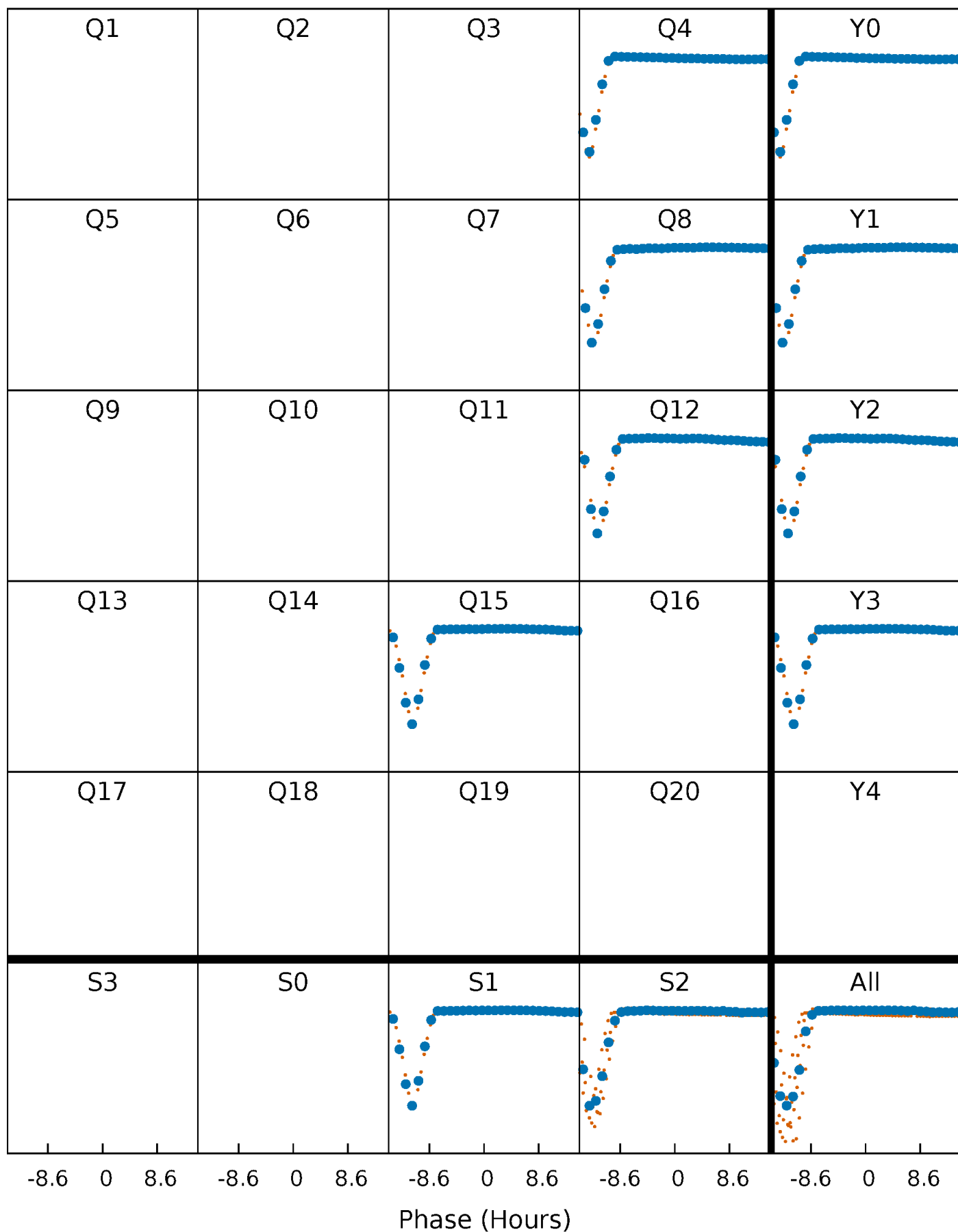


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



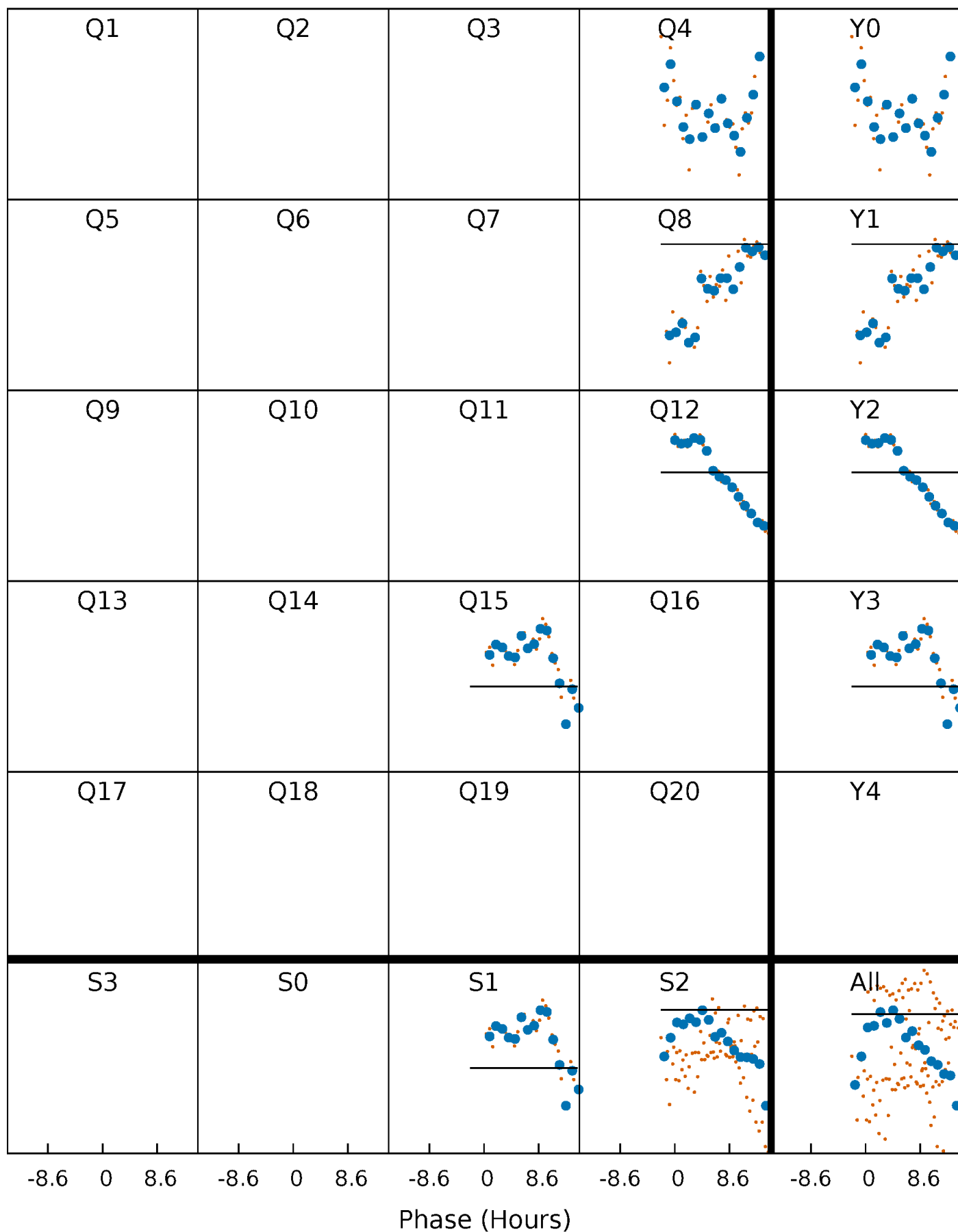
PDC Quarter-Phased Transit Curves

TCE 008719897-02 P=345.047905 Days $T_0=423.758580$ (BKJD)



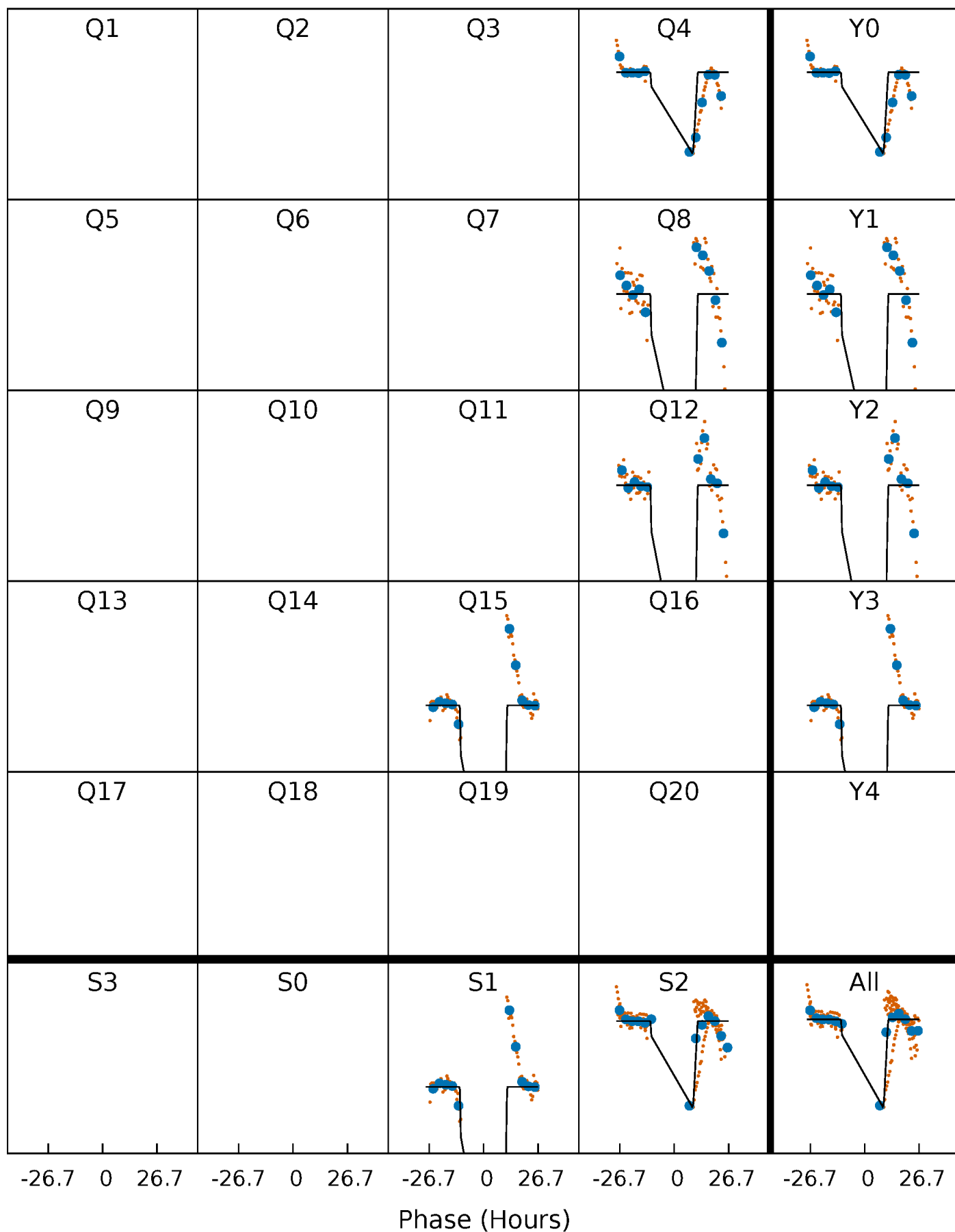
DV Quarter-Phased Transit Curves

TCE 008719897-02 $P=345.047905$ Days $T_0=423.758580$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

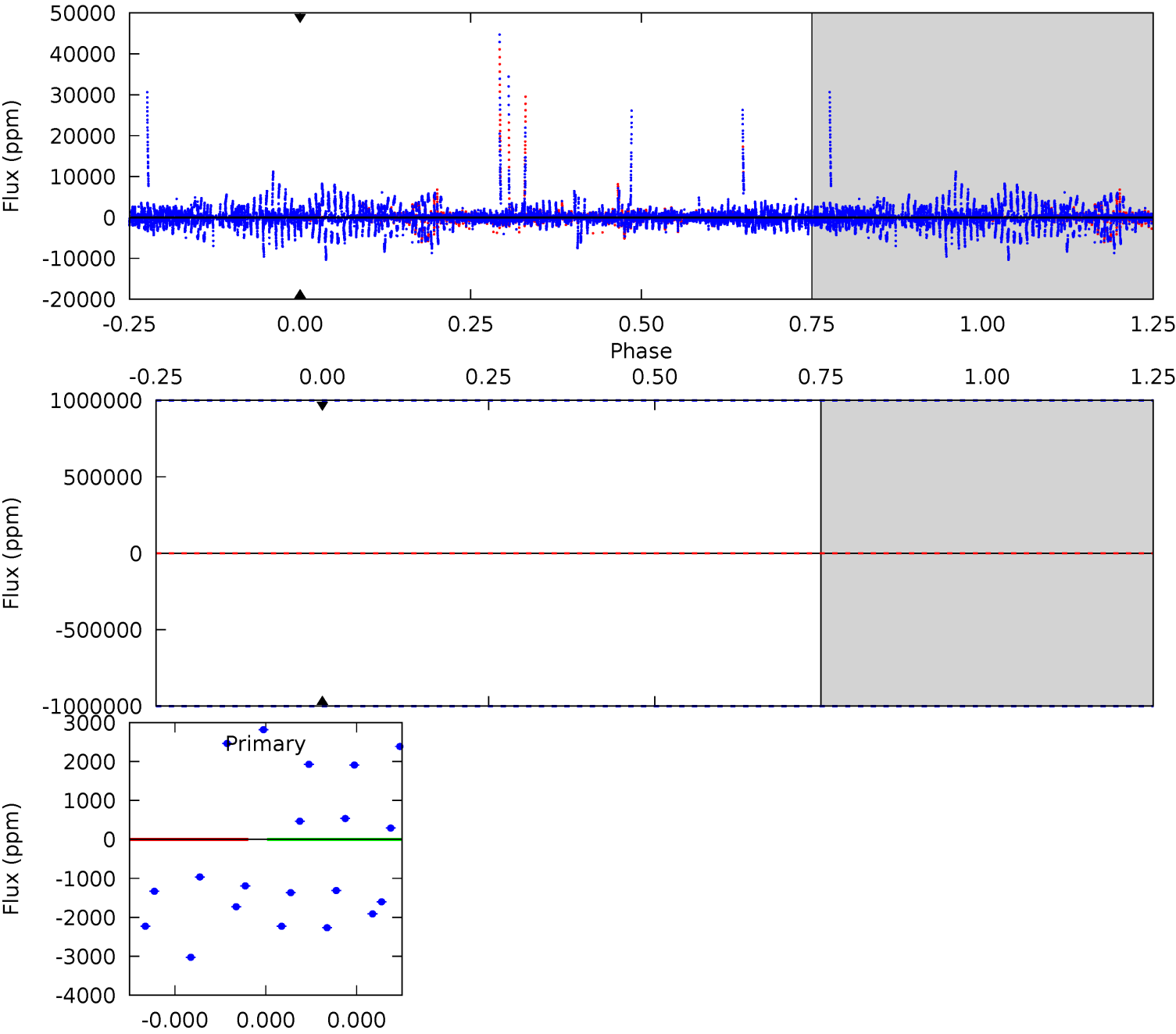
TCE 008719897-02 P=345.047905 Days $T_0=423.299287$ (BKJD)



DV Model-Shift Uniqueness Test

008719897-02, P = 345.047905 Days, E = 78.710675 Days

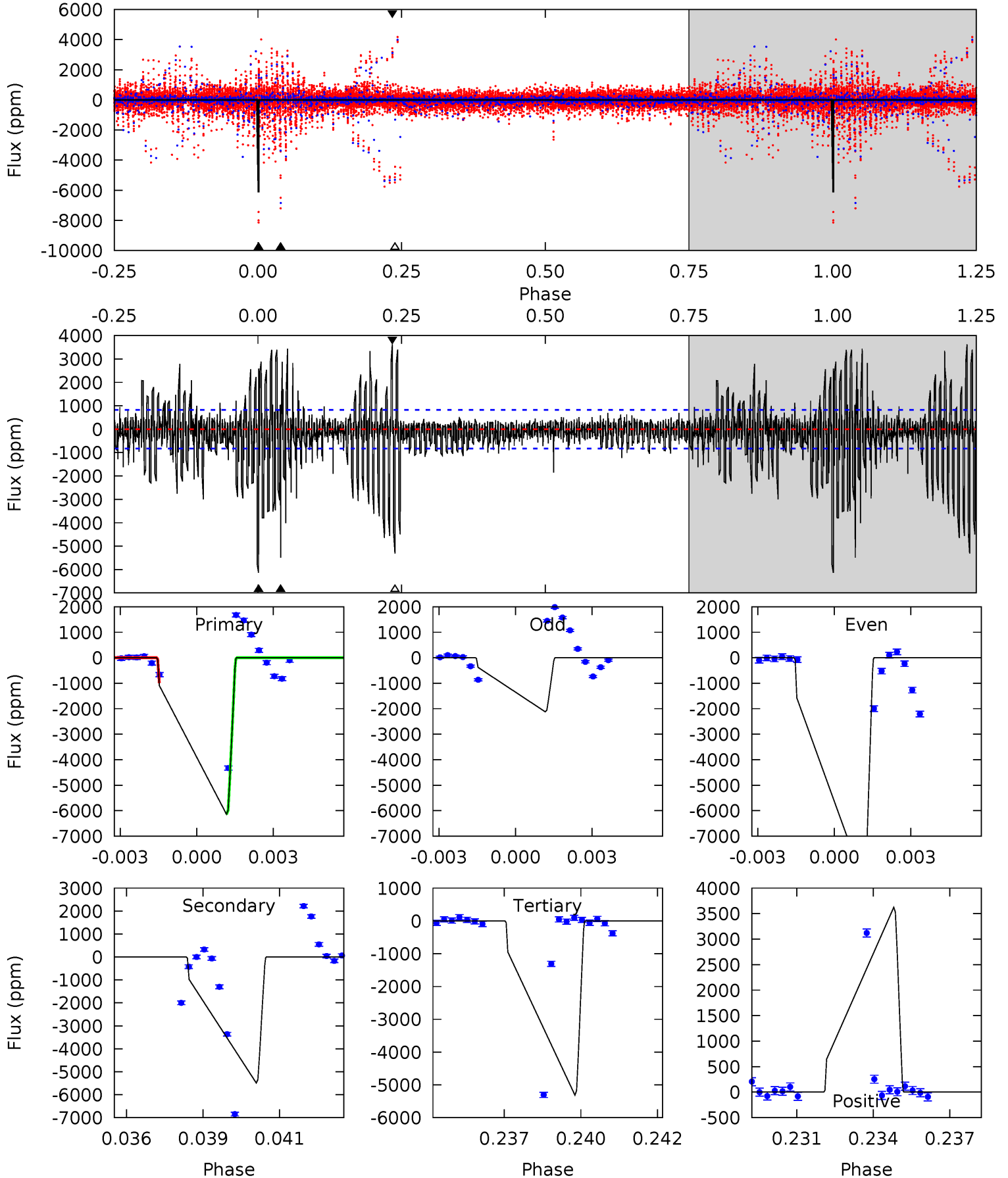
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008719897-02, $P = 345.047905$ Days, $E = 78.251382$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.2	35.1	34.0	23.1	5.27	2.99	2.48	5.25	16.1	1.11	11.9	20.3	-0.83	0.37	0.01



Stellar Parameters For KIC 008719897

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5017^{+52}_{-89}	$3.350^{+0.168}_{-0.112}$	$0.020^{+0.100}_{-0.150}$	$4.293^{+0.634}_{-1.178}$	$1.505^{+0.204}_{-0.408}$	$0.027^{+0.027}_{-0.008}$
	+1%/-2%	+5%/-3%	+500%/-750%	+15%/-27%	+14%/-27%	+99%/-31%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 008719897-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$33.38^{+34.37}_{-23.02}$	607^{+28}_{-35}	-2761^{+18366}_{-11154}	$-89.630^{+120450.247}_{-95633.730}$
Alt.	-5488 ± 156	$55.17^{+43.43}_{-36.20}$	607^{+25}_{-35}	4140^{+2460}_{-709}	1216^{+9457}_{-835}

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

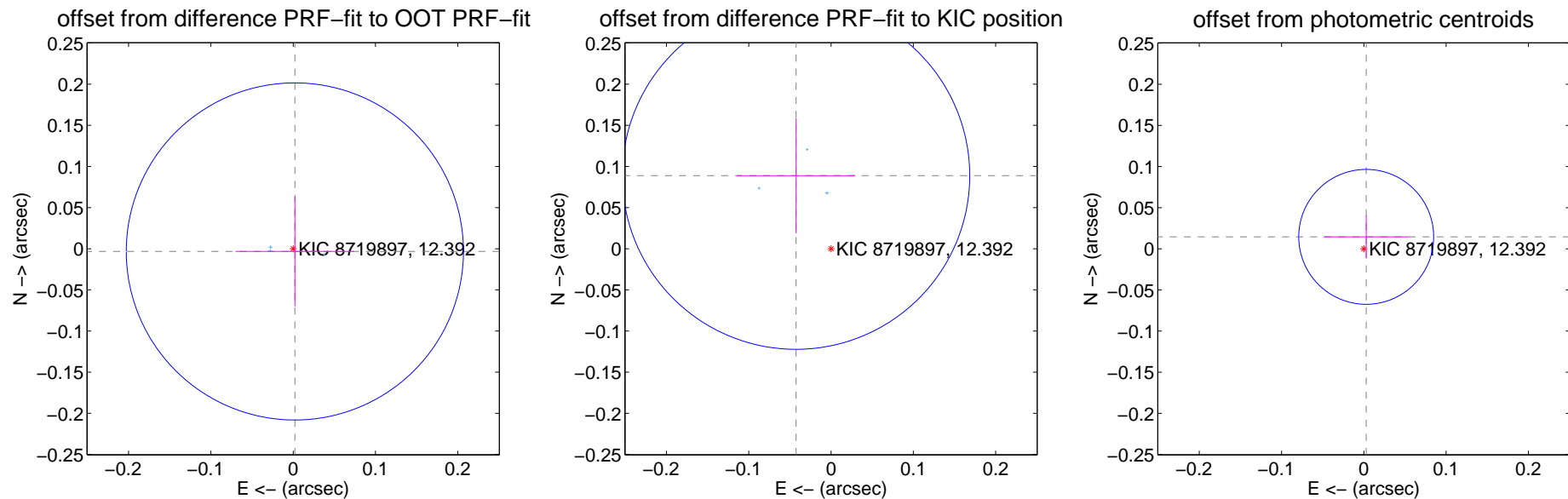
DV Centroid Data

Supplemental centroid analysis for 008719897-02. Kepler magnitude: 12.39. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

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

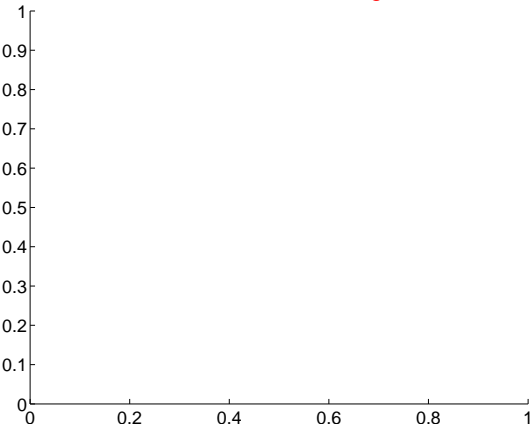
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.004 ± 0.068	0.06	-0.002 ± 0.072	-0.003 ± 0.067
PRF-fit source offset from KIC position	0.098 ± 0.070	1.40	0.043 ± 0.072	0.089 ± 0.070
photometric centroid source offset	0.01 ± 0.03	0.54	-0.00 ± 0.05	0.01 ± 0.03



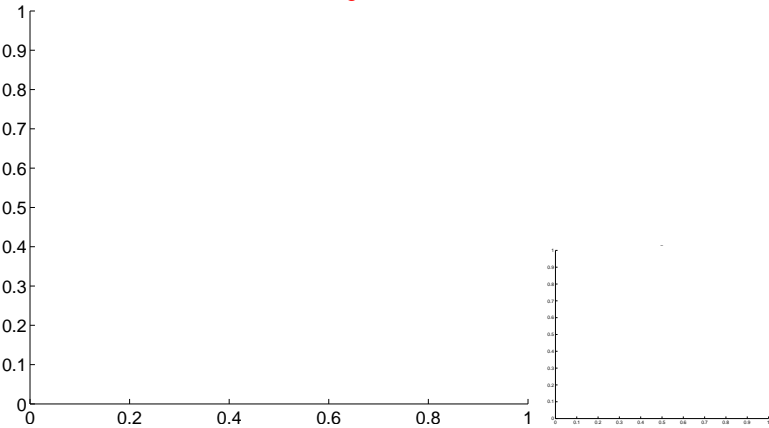
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

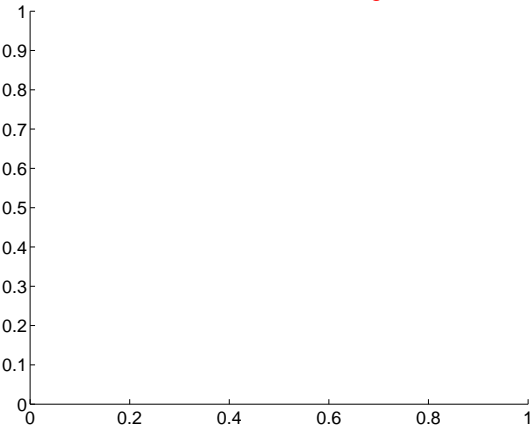
Q1 no difference image



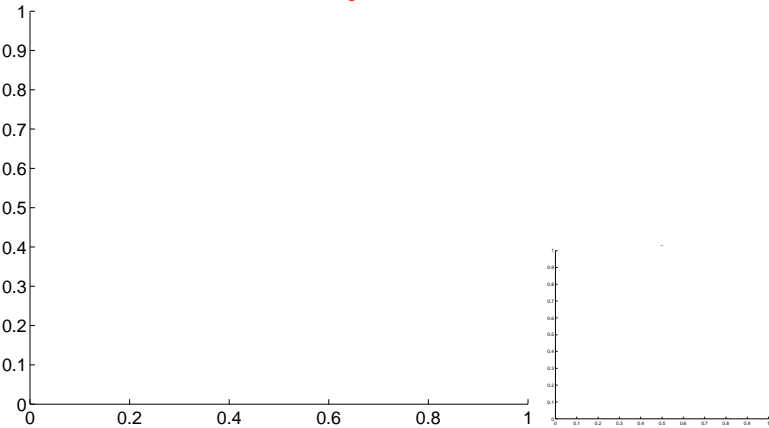
Q1 no OOT image



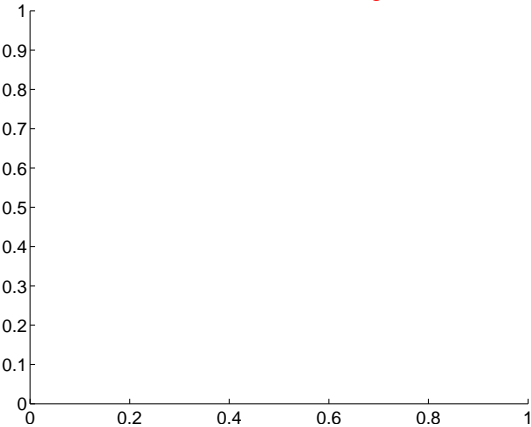
Q2 no difference image



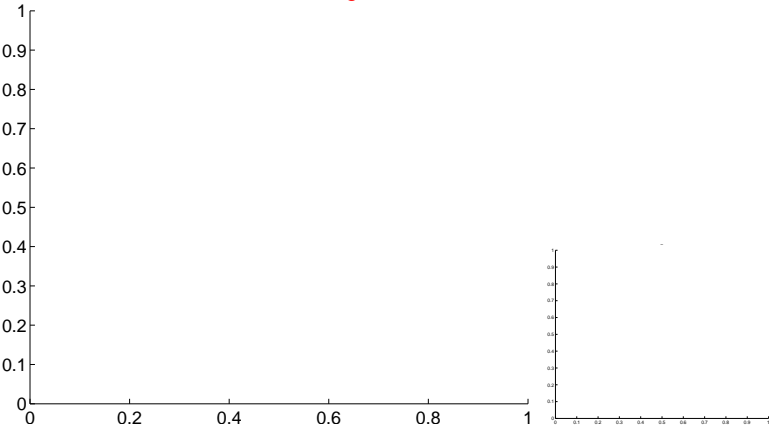
Q2 no OOT image



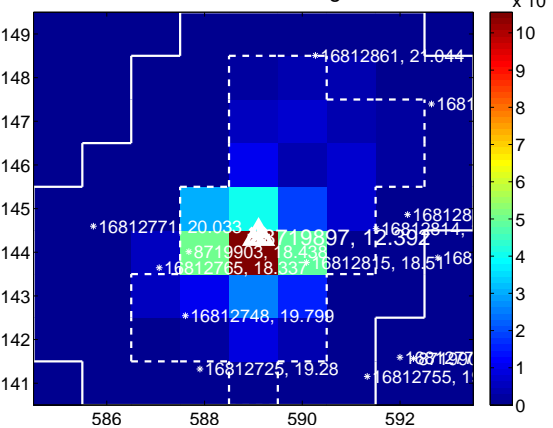
Q3 no difference image



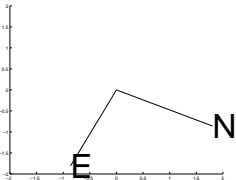
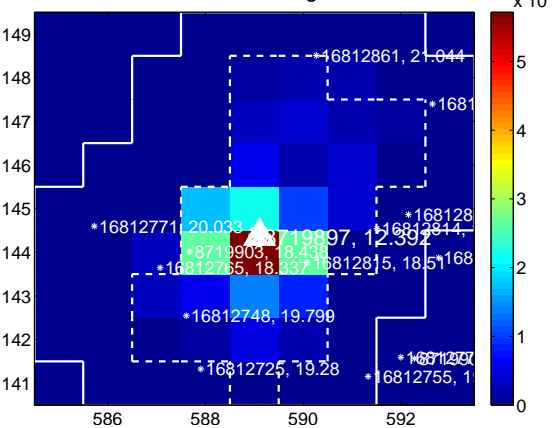
Q3 no OOT image



Q4 difference image



Q4 OOT image



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

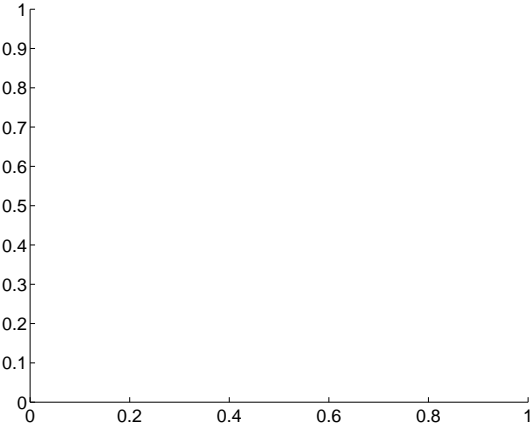
Q5 no difference image



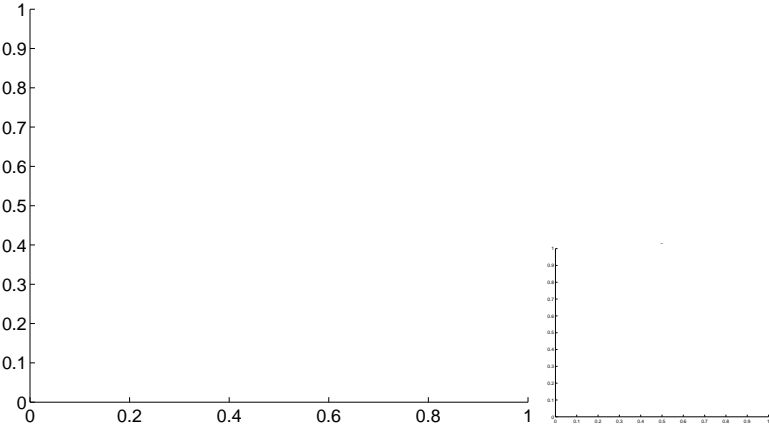
Q5 no OOT image



Q6 no difference image



Q6 no OOT image



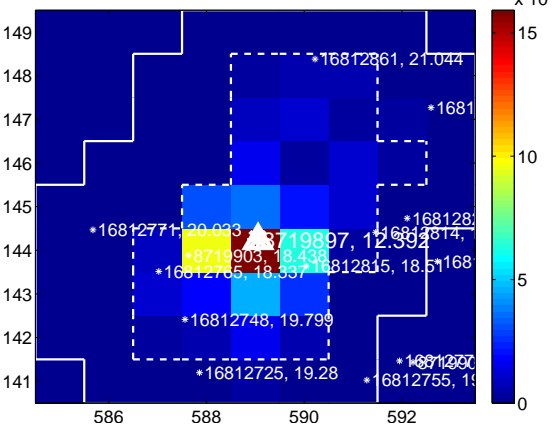
Q7 no difference image



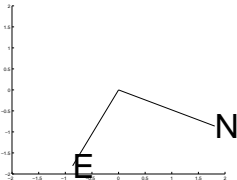
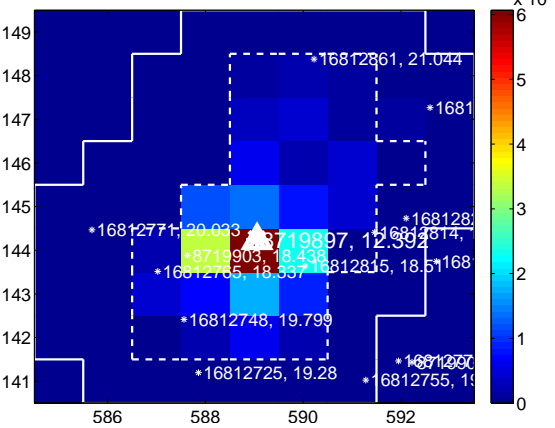
Q7 no OOT image



Q8 difference image



Q8 OOT image



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.

Q13 no difference image



Q13 no OOT image



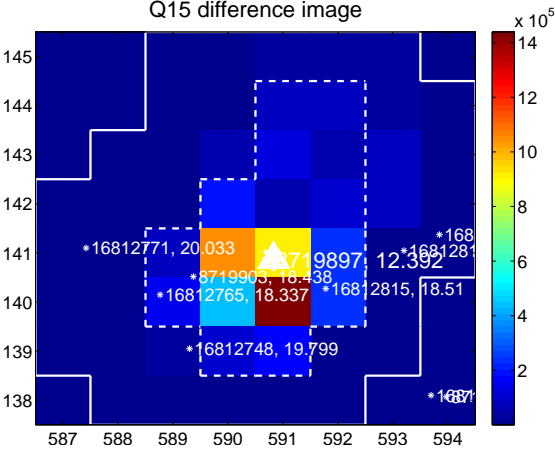
Q14 no difference image



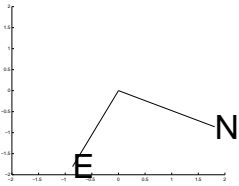
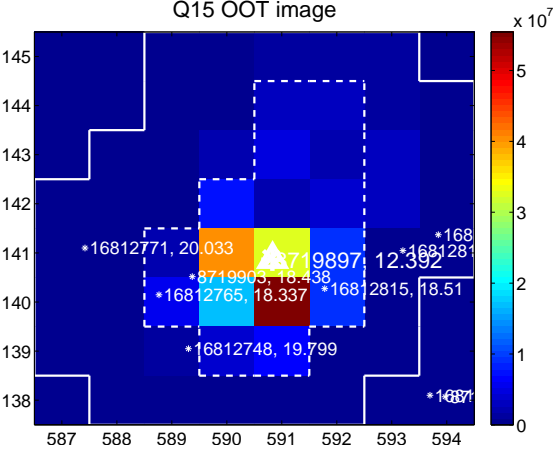
Q14 no OOT image



Q15 difference image



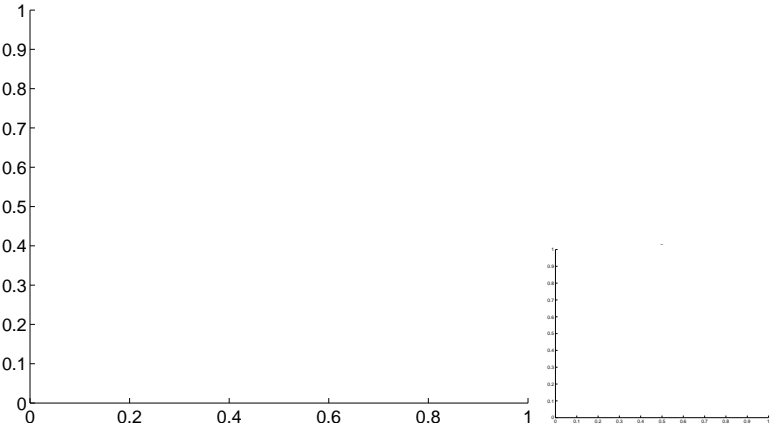
Q15 OOT image



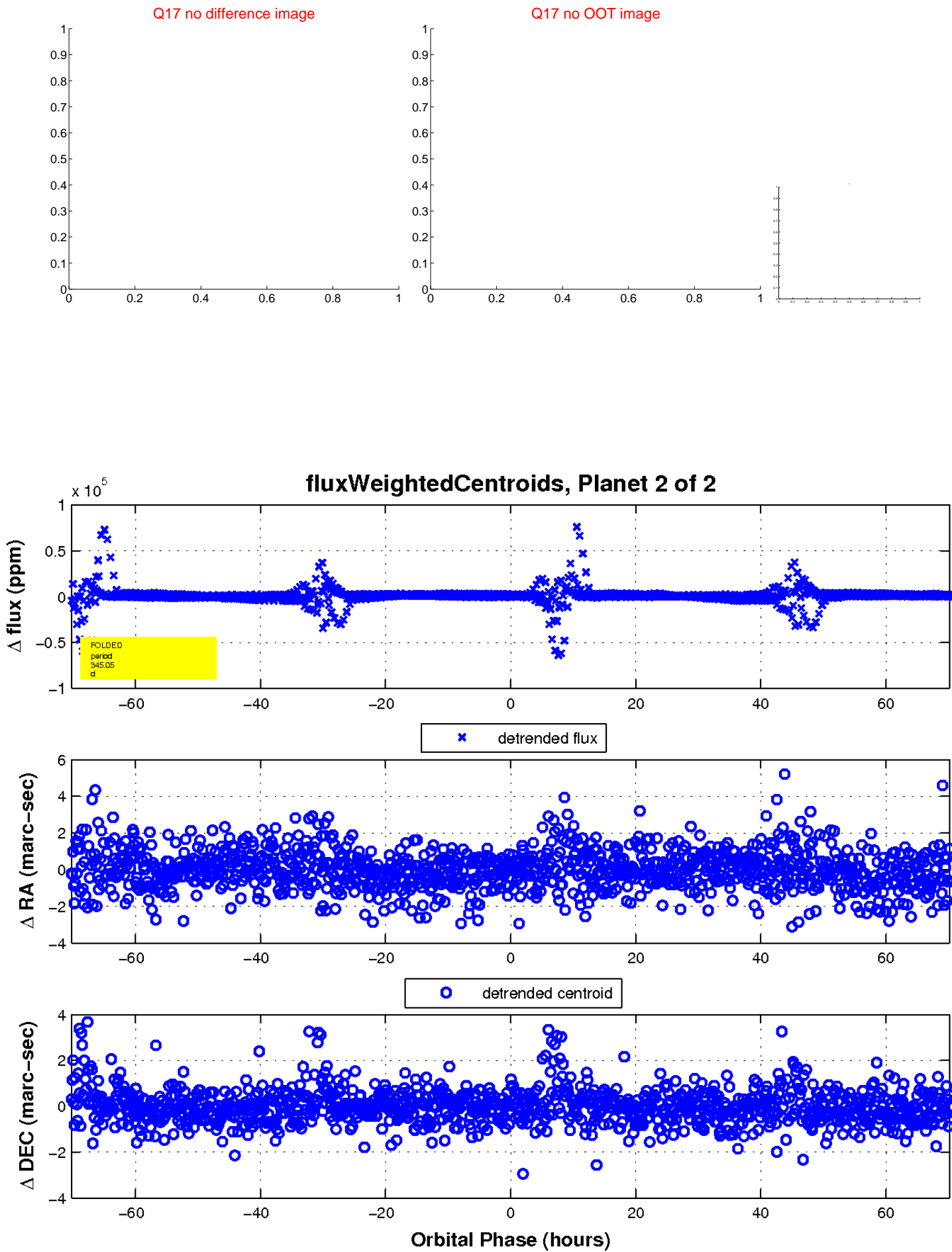
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

