

KIC 009101279

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})
009101279-01	OBS	5614.01	1.811479	132.920909	910923.6	4.500	14113.7	-1.0	3.03	8572	89.75	33102.10
009101279-02	OBS	No	1.811458	132.026619	7846.5	2.500	484.7	-1.0	3.03	8572	27.31	33102.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009101279-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
009101279-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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

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

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

Ephemeris Match Information For 009101279-01

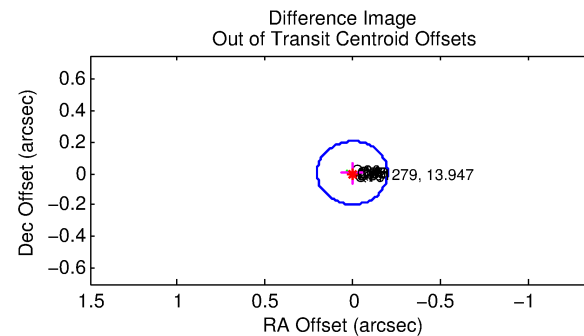
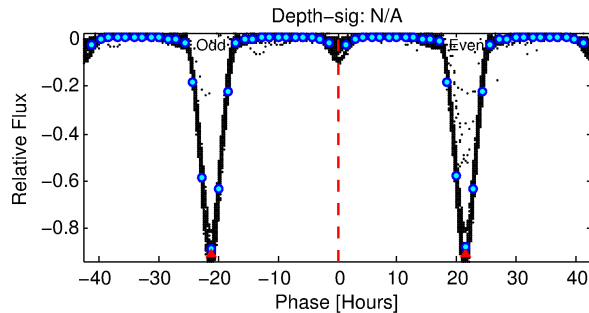
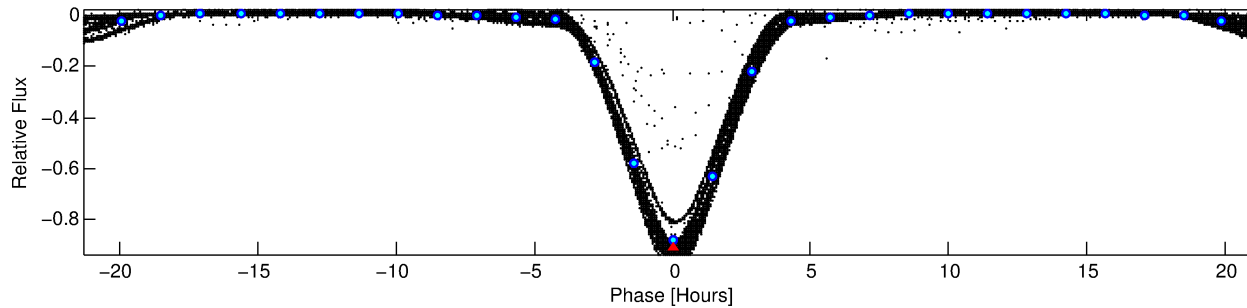
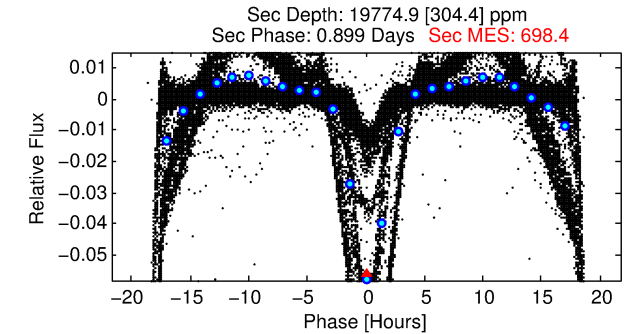
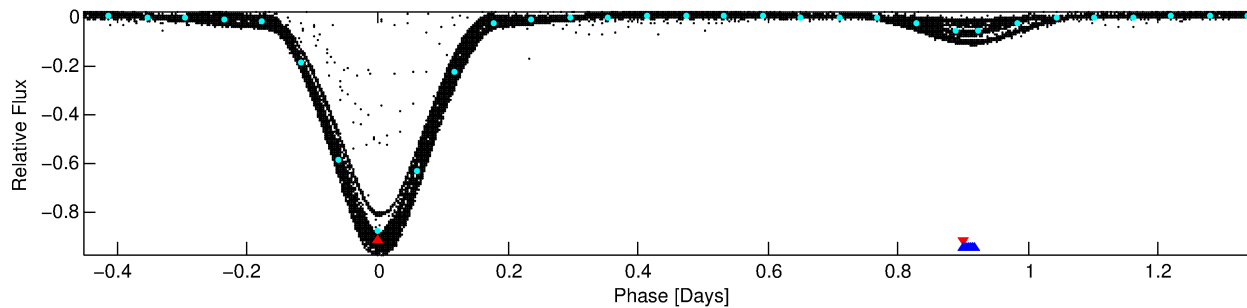
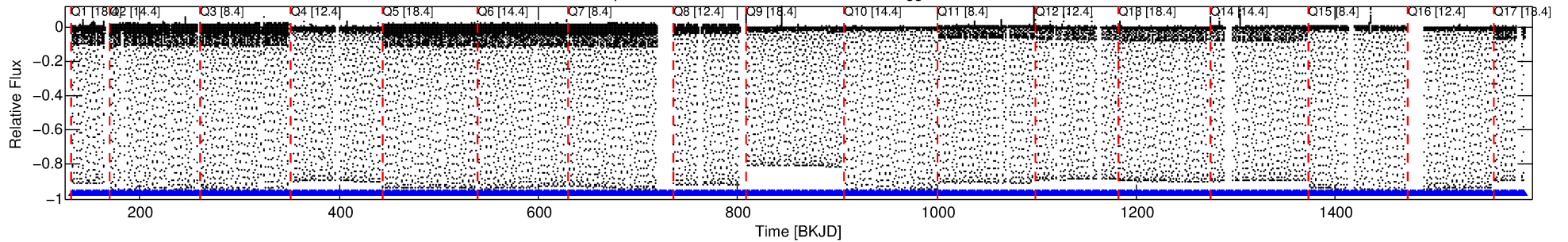
No Significant Match Found

DV One-Page Summary

KIC: 9101279 Candidate: 1 of 2 Period: 1.811 d

KOI: K05614 Corr: No Ephemeris Match

Kp: 13.95 R*: 3.03 Rs Teff: 8572.0 K Logg: 3.78 Fe/H: -0.200



TPS TCE Results:

Period = 1.81148 d
Epoch = 132.9209 BKJD

DV fit results are unavailable

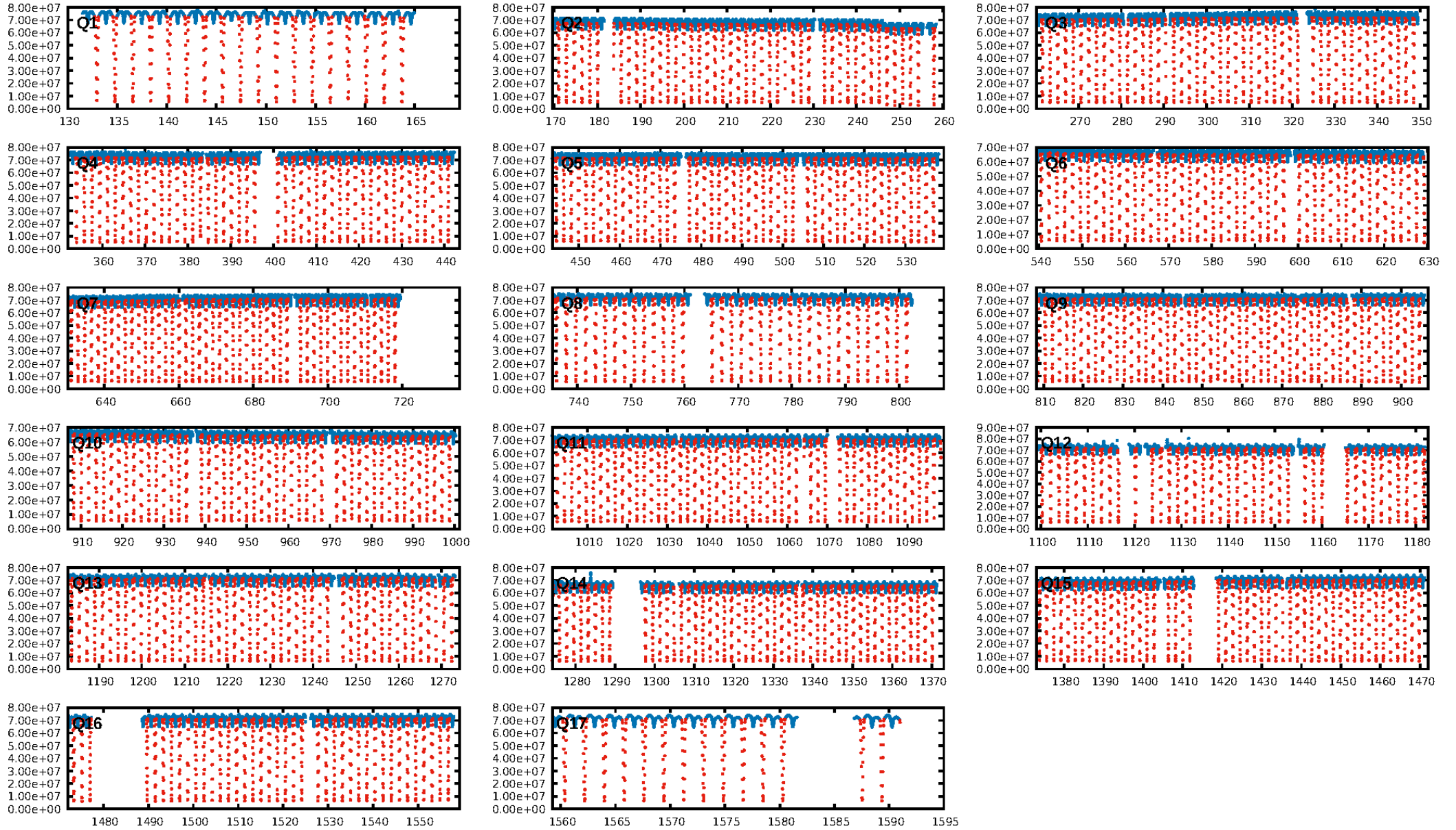
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [706/706]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 0.063 arcsec [221.66 σ]
OotOffset-rm: 0.007 arcsec [0.10 σ]
KicOffset-rm: 0.134 arcsec [1.89 σ]
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]

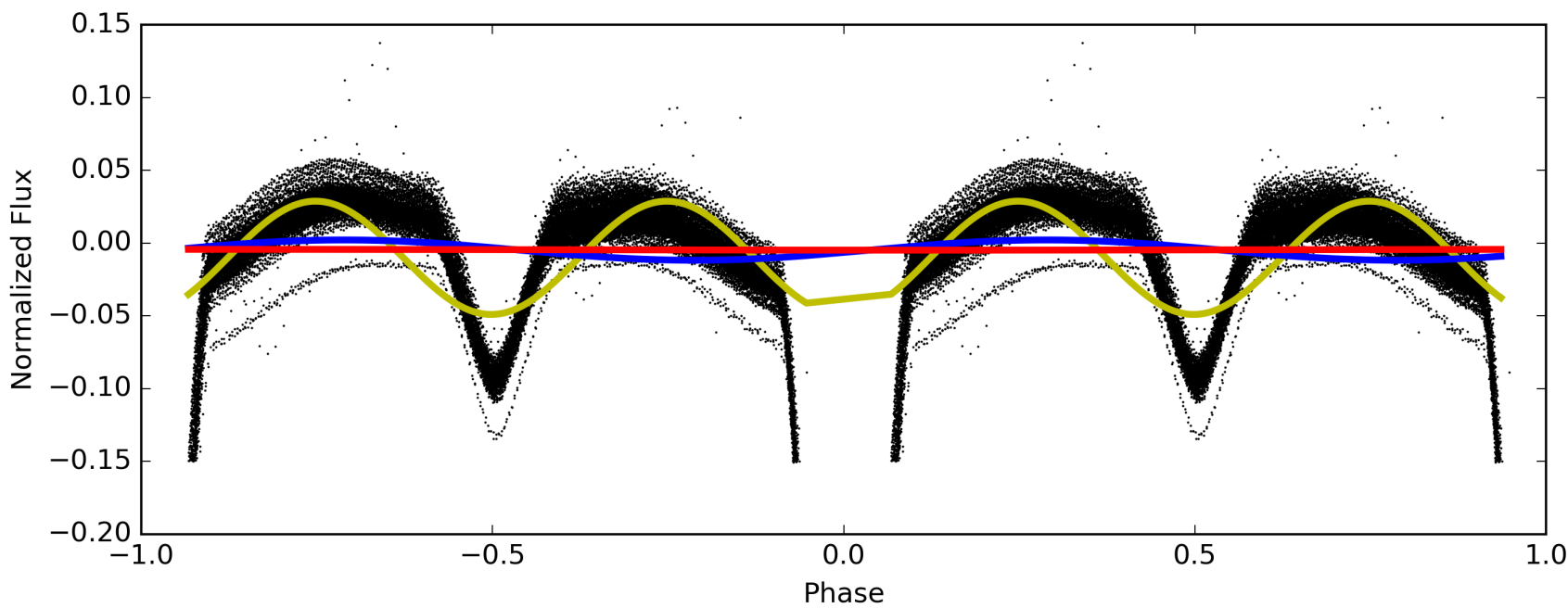
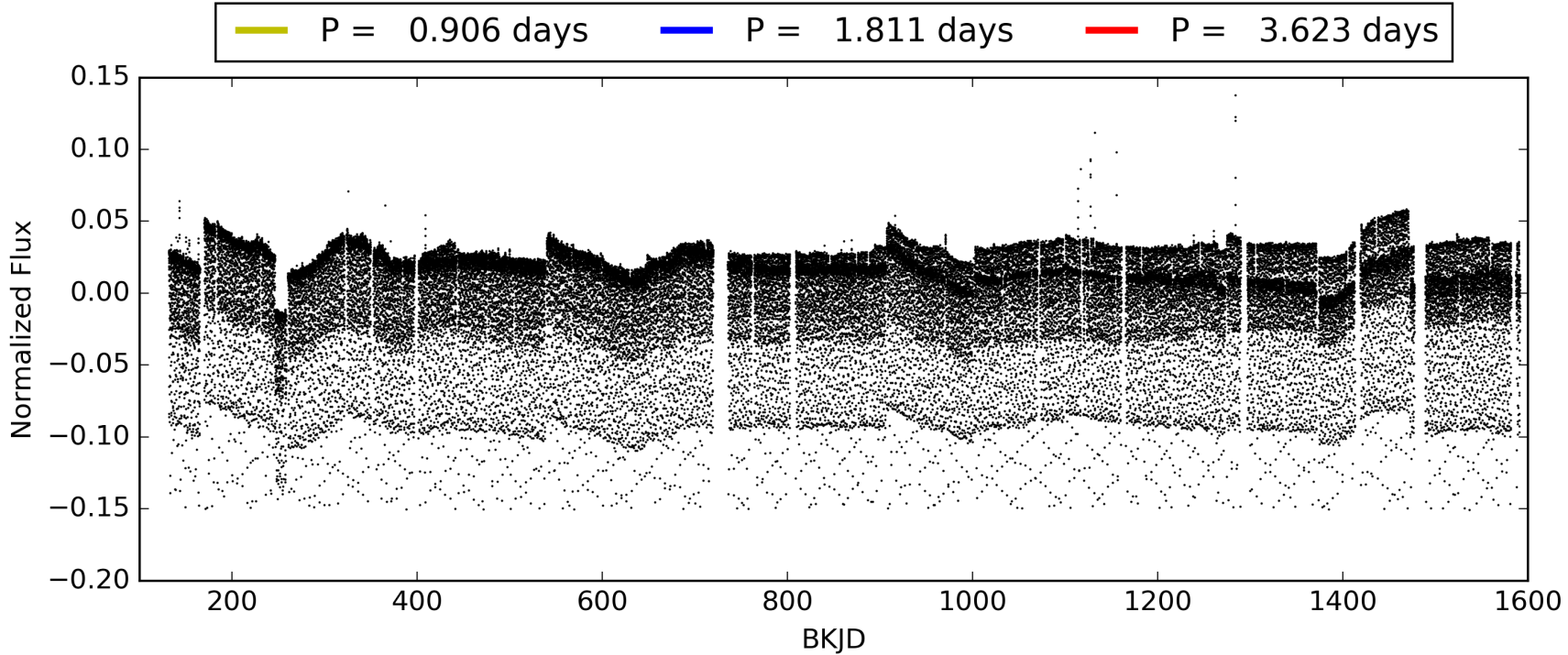
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 10:56:48 Z

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

TCE 009101279-01, PDC Light Curves

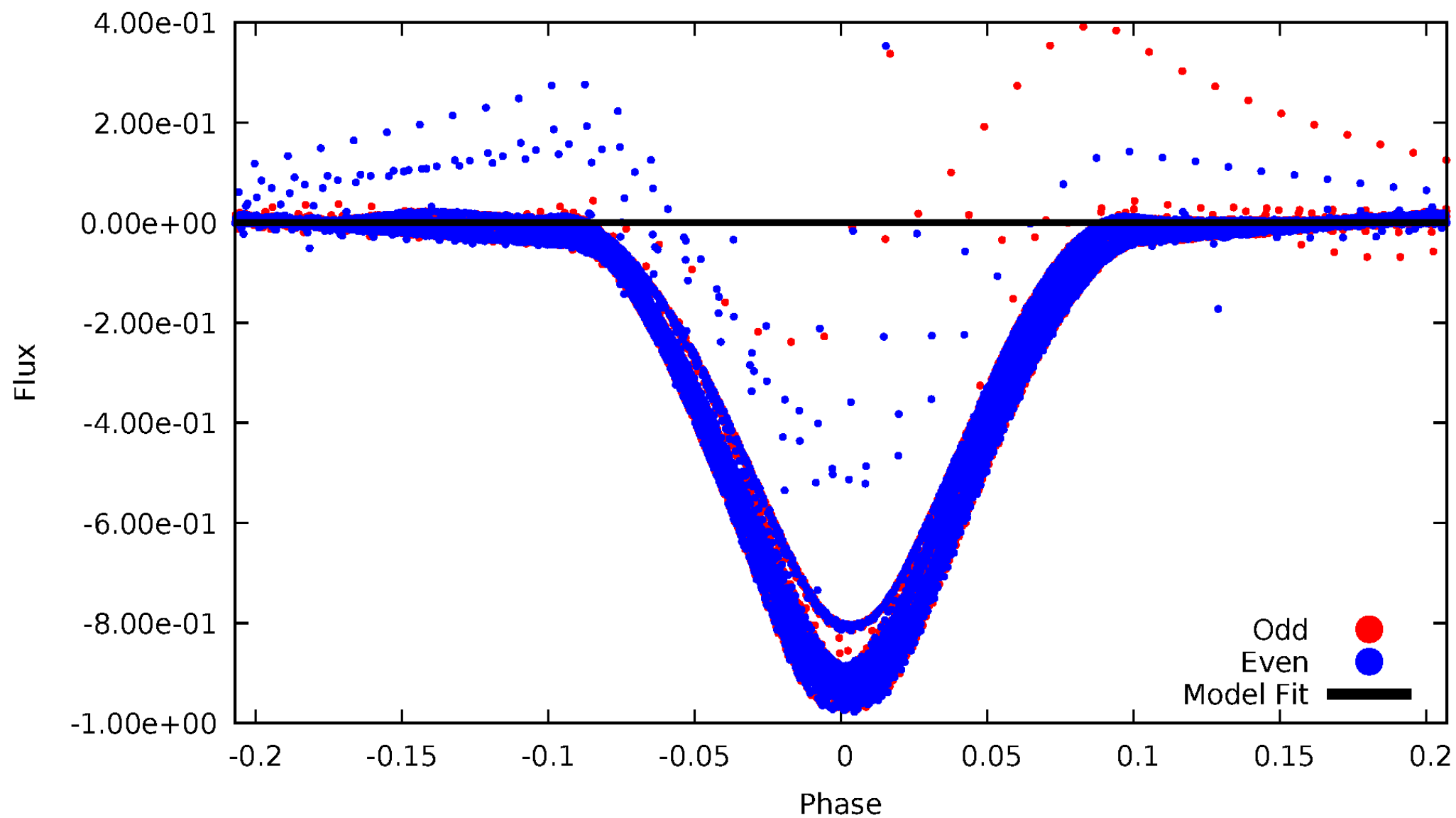


TCE 009101279-01



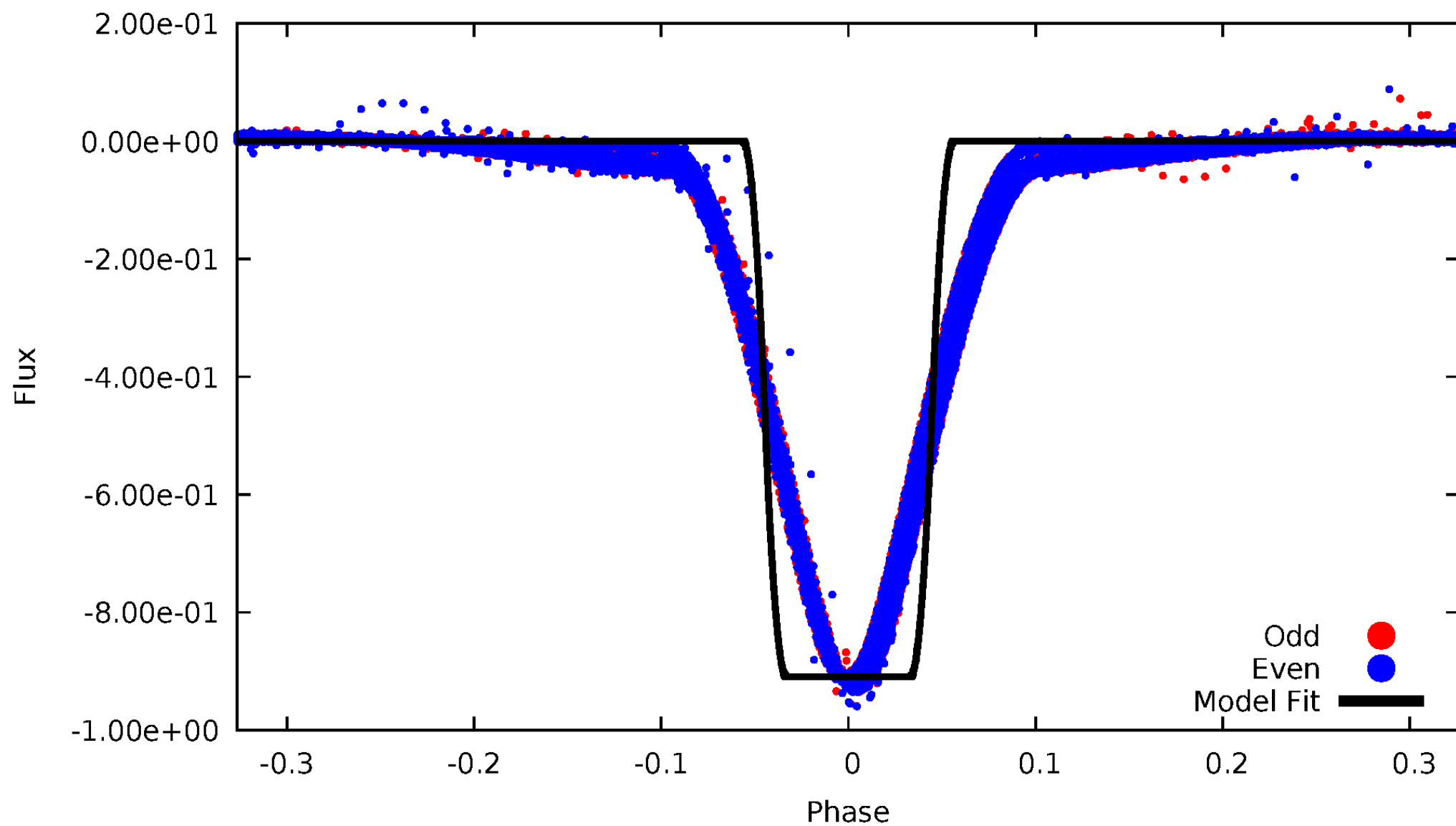
DV Odd/Even

TCE 009101279-01



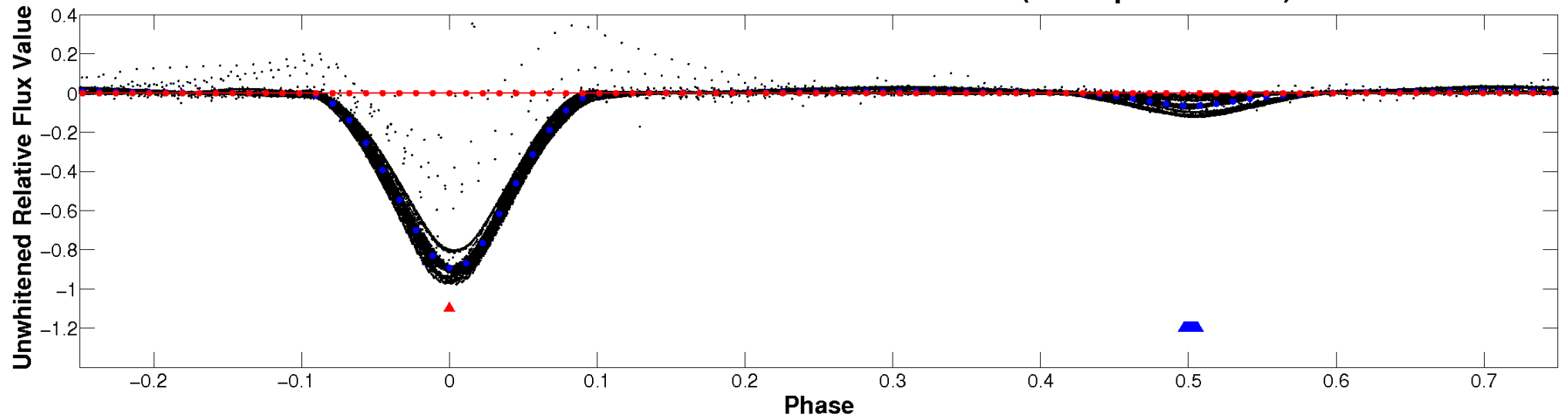
ALT Odd/Even

TCE 009101279-01

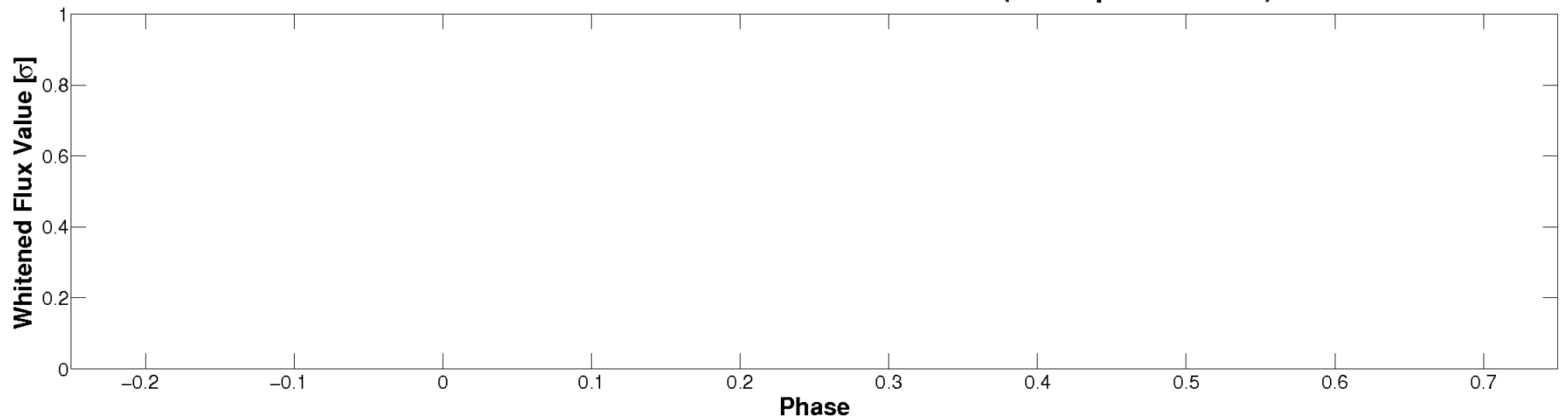


Non-Whitened Vs. Whitened Light Curve

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

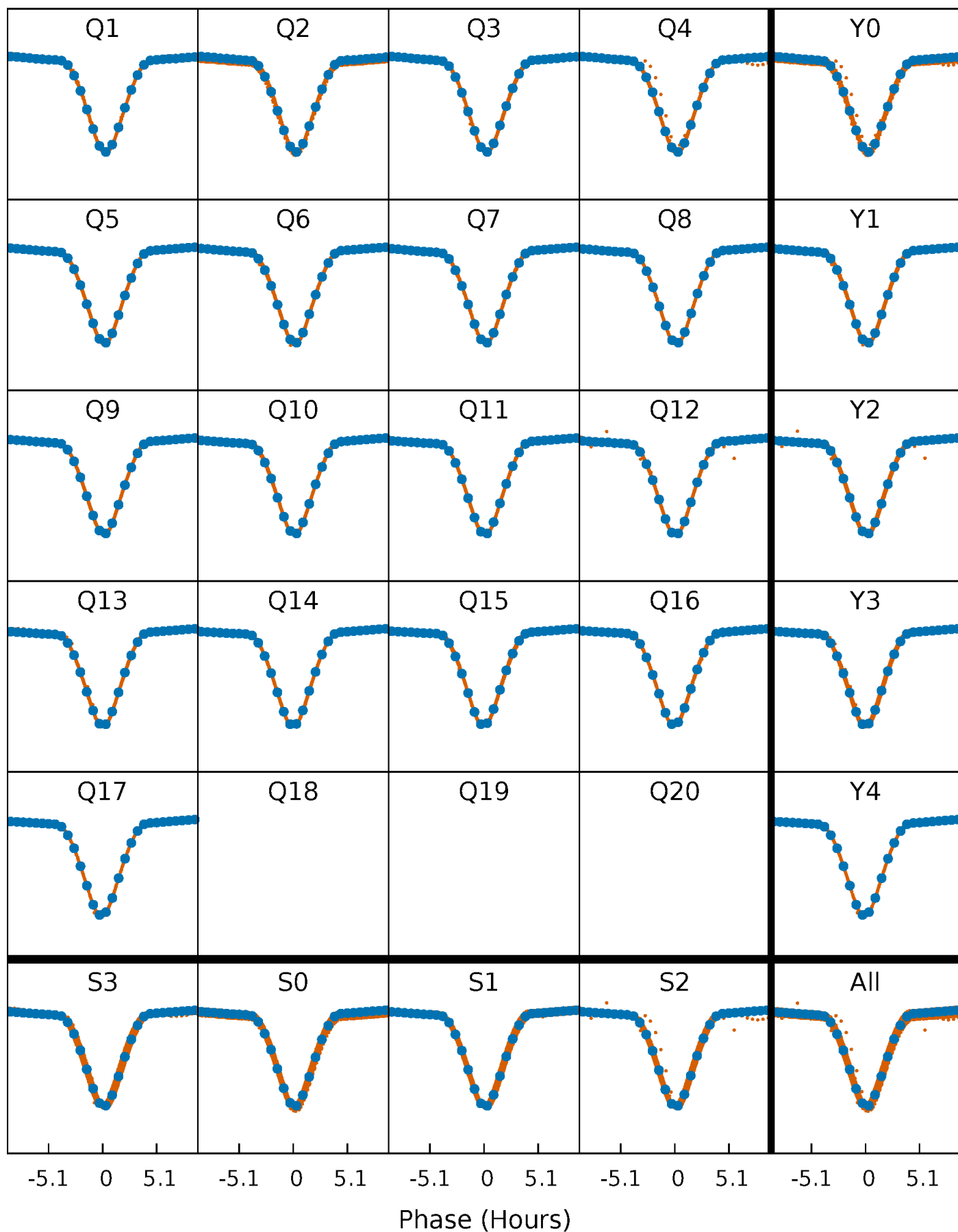


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



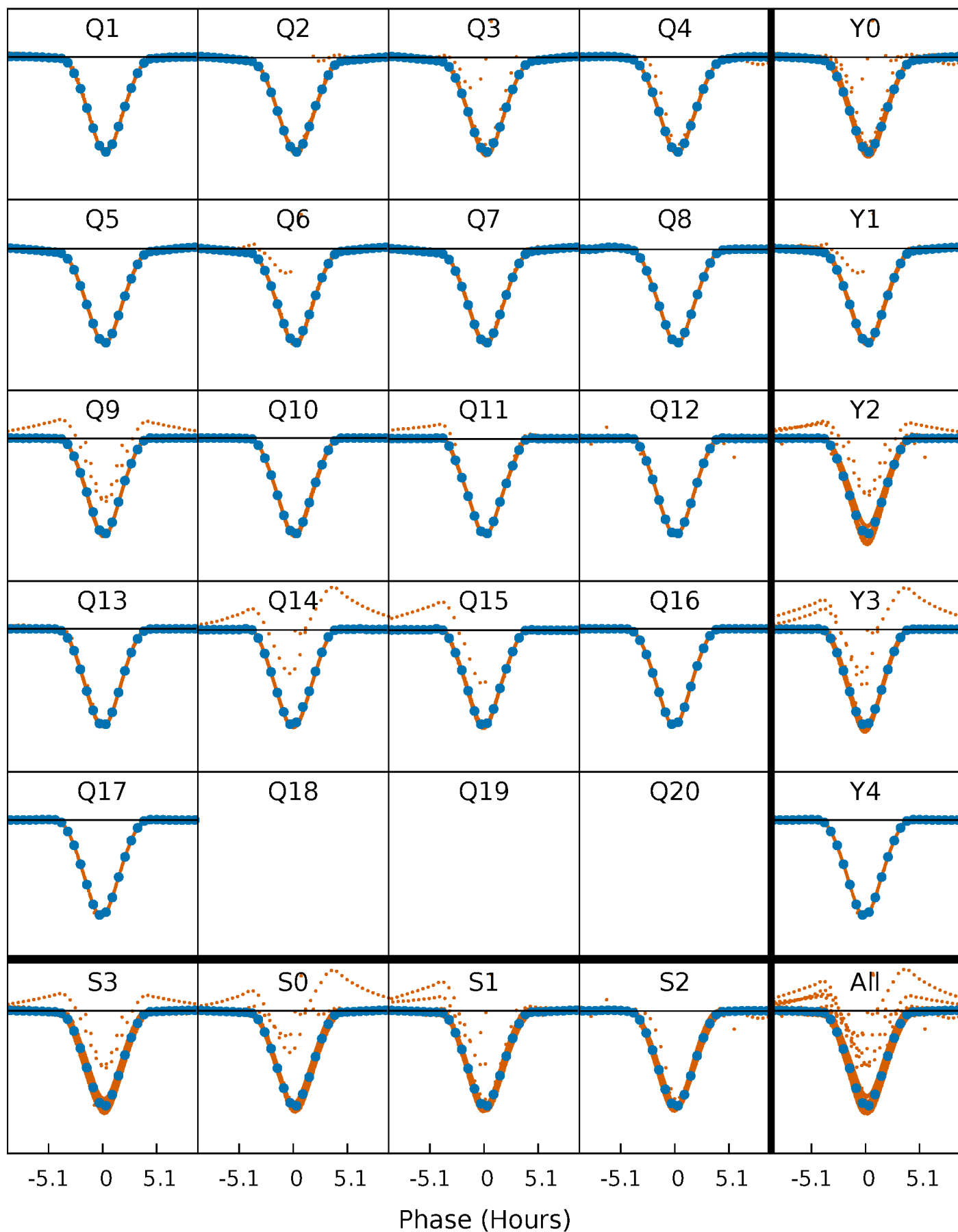
PDC Quarter-Phased Transit Curves

TCE 009101279-01 P= 1.811479 Days $T_0=132.920909$ (BKJD)



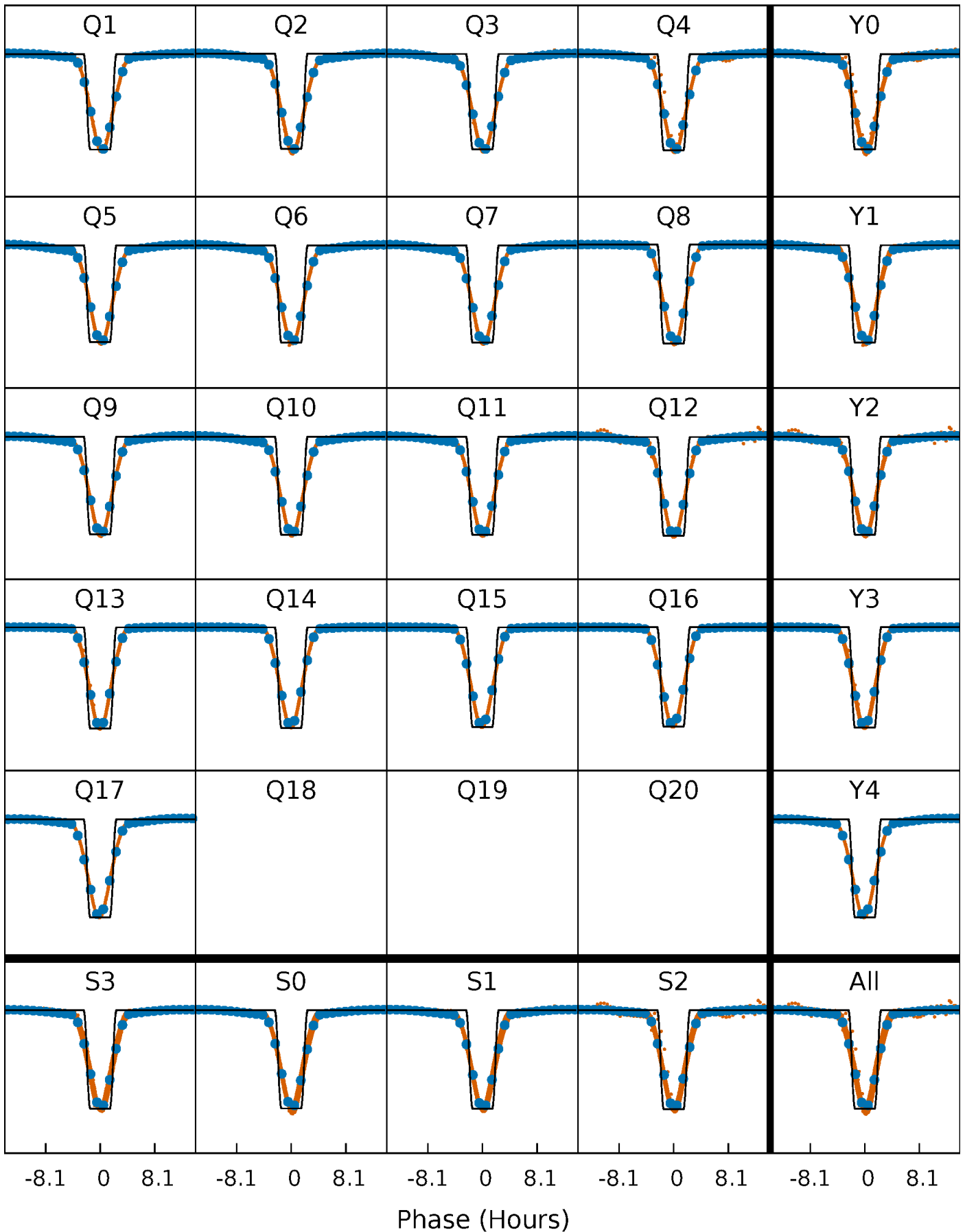
DV Quarter-Phased Transit Curves

TCE 009101279-01 P= 1.811479 Days $T_0=132.920909$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

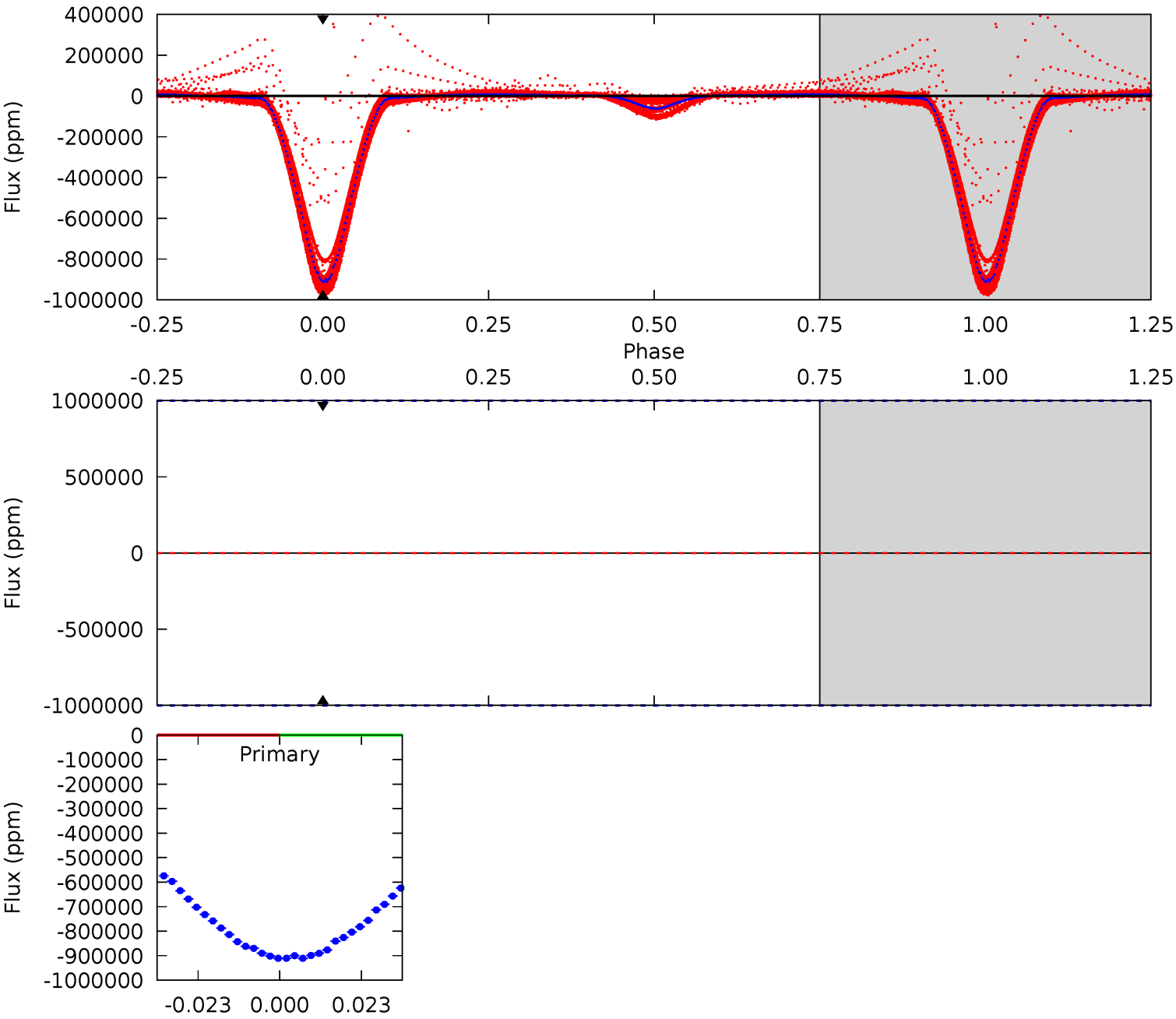
TCE 009101279-01 P= 1.811479 Days $T_0=132.922066$ (BKJD)



DV Model-Shift Uniqueness Test

009101279-01, P = 1.811479 Days, E = 131.109430 Days

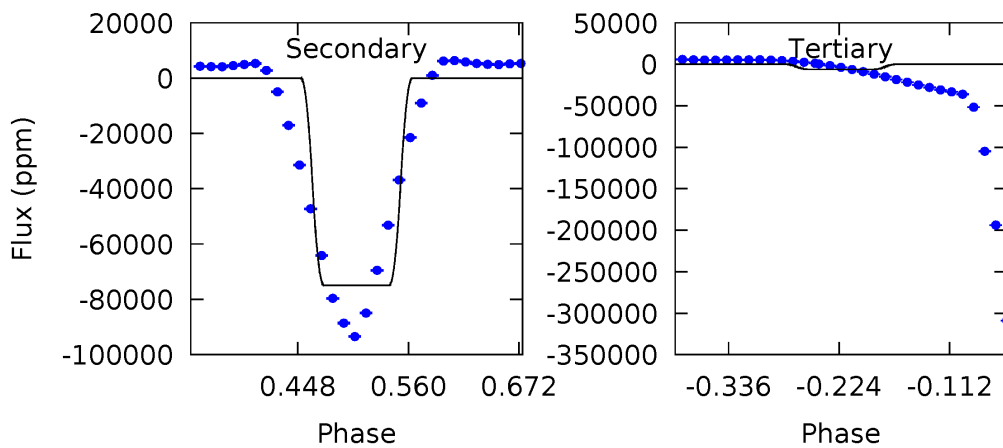
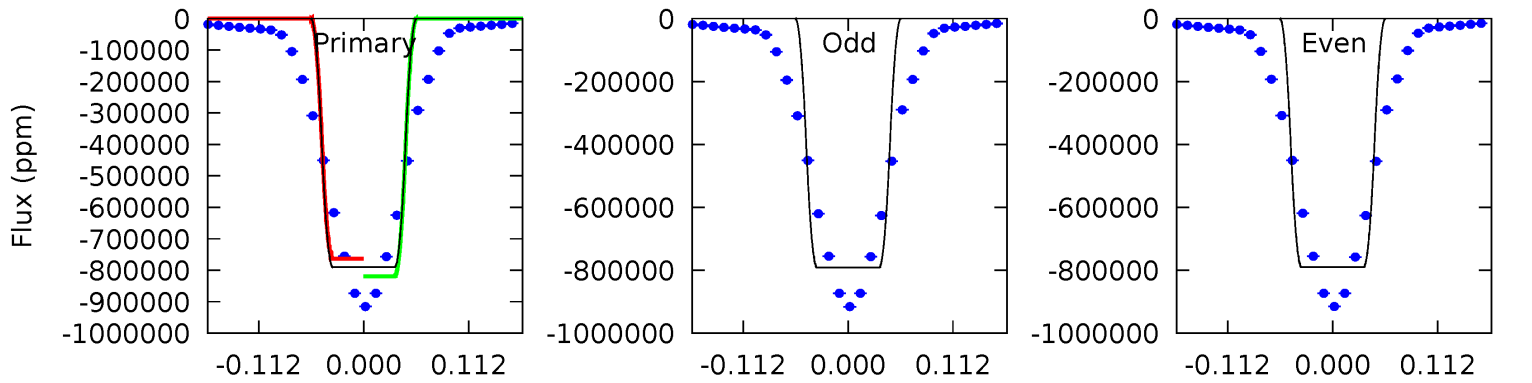
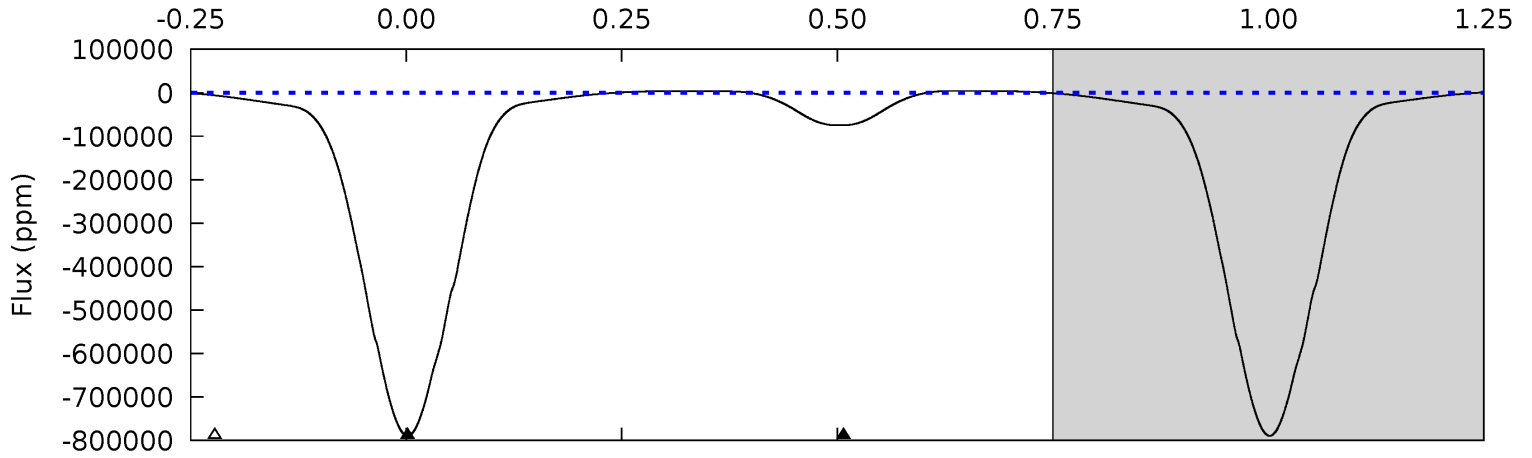
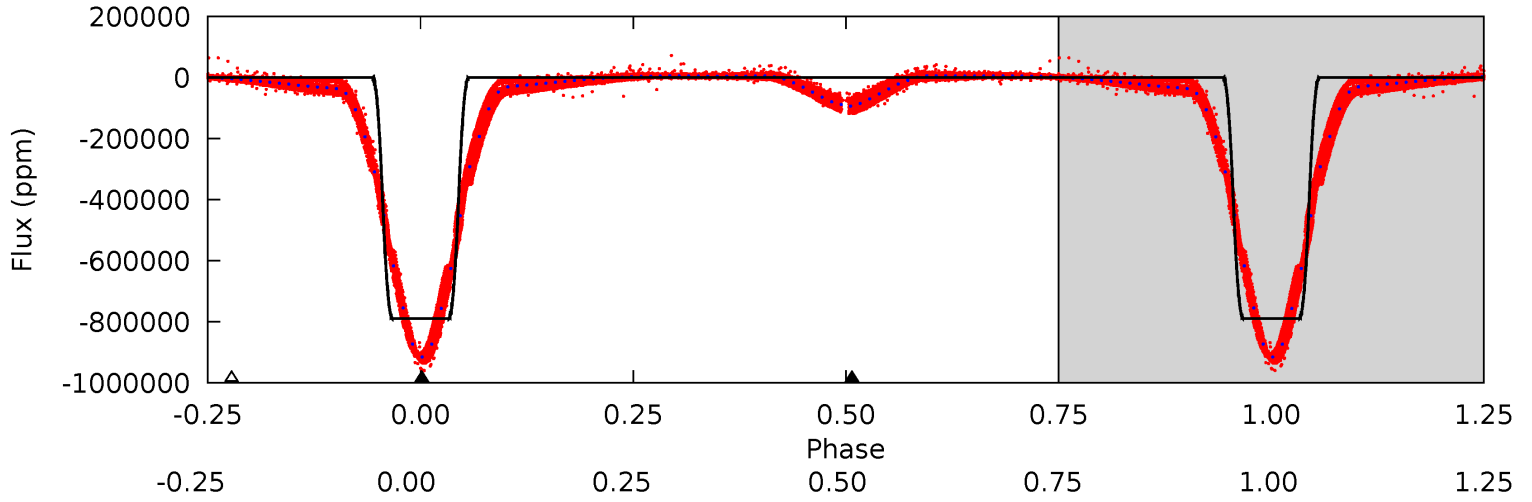
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

009101279-01, P = 1.811479 Days, E = 131.110587 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4592	435.7	35.7	0	4.54	1.59	74.9	4557	4592	400.0	435.7	3.54	1.00	0.01	161.1



Stellar Parameters For KIC 009101279

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8572^{+238}_{-374}	$3.776^{+0.412}_{-0.137}$	$-0.200^{+0.350}_{-0.350}$	$3.034^{+0.770}_{-1.431}$	$2.009^{+0.342}_{-0.471}$	$0.101^{+0.399}_{-0.043}$
	+3%/-4%	+11%/-4%	+175%/-175%	+25%/-47%	+17%/-23%	+394%/-42%
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 009101279-01 / KOI 5614.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$83.55^{+41.07}_{-33.33}$	4708^{+370}_{-563}	-4866^{+14619}_{-4816}	$-0.502^{+13.376}_{-11.303}$
Alt.	-74880 ± 172	$298.33^{+66.20}_{-71.94}$	4677^{+407}_{-555}	4144^{+349}_{-437}	$0.664^{+0.433}_{-0.200}$

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

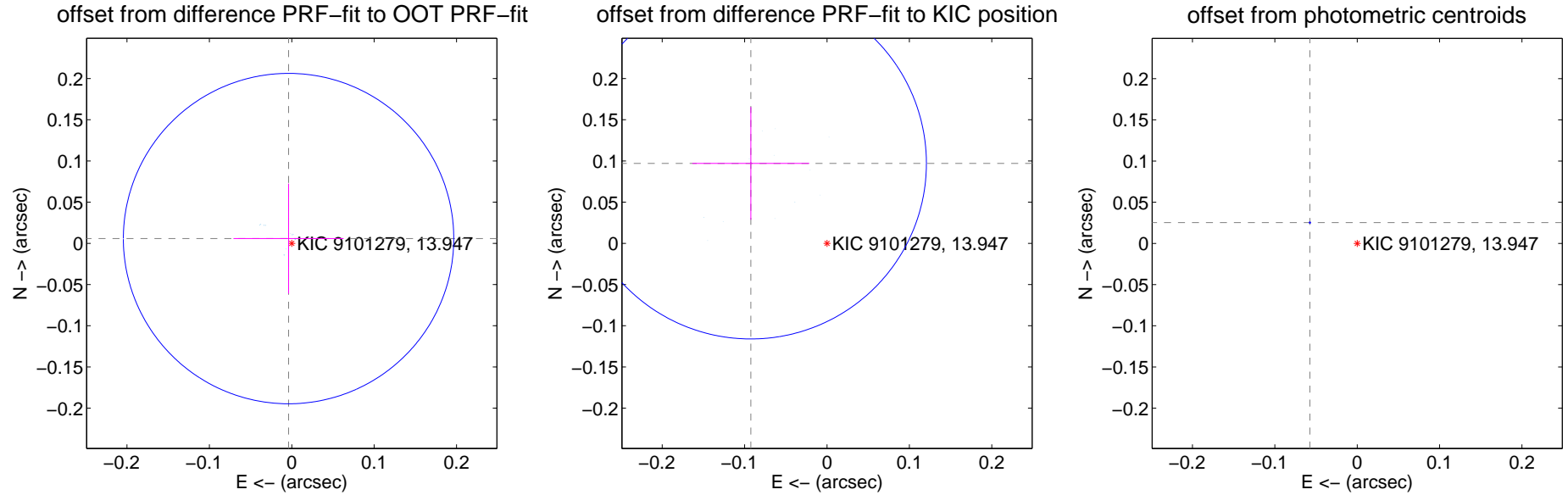
DV Centroid Data

Supplemental centroid analysis for 009101279-01. Kepler magnitude: 13.95. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

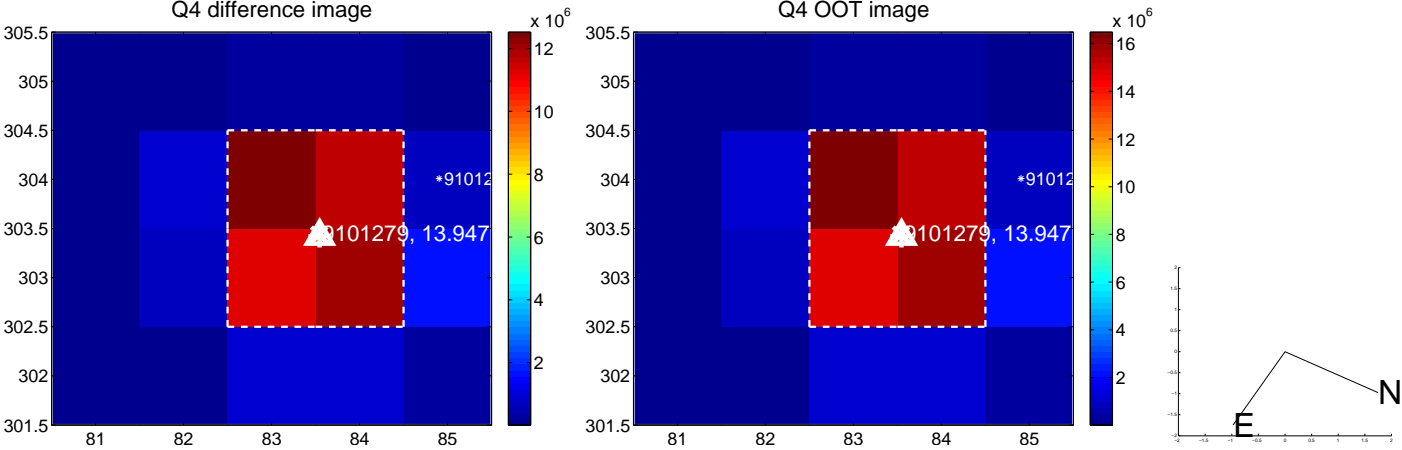
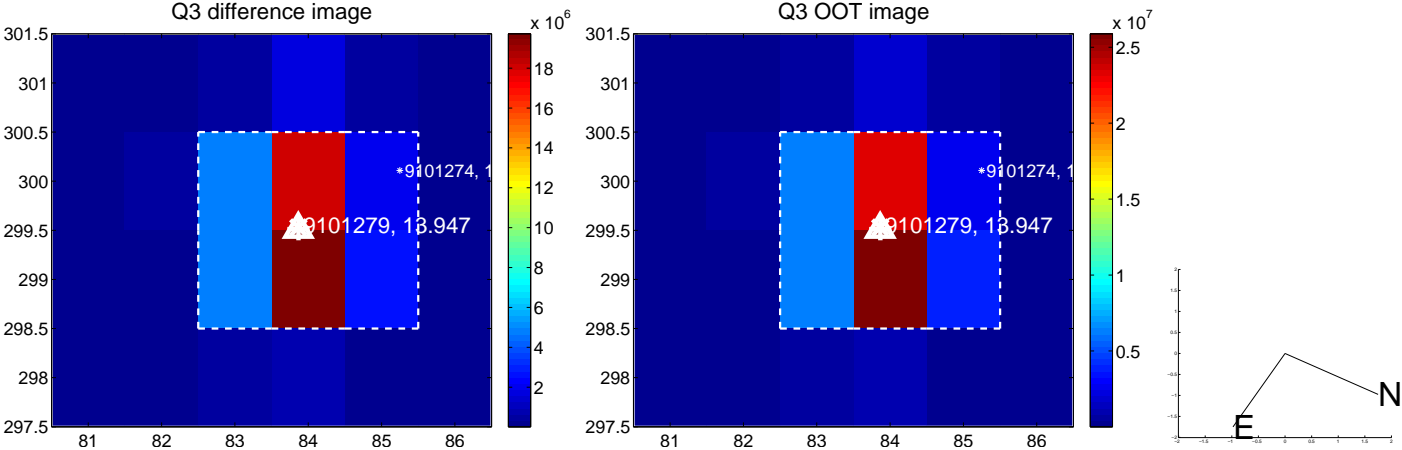
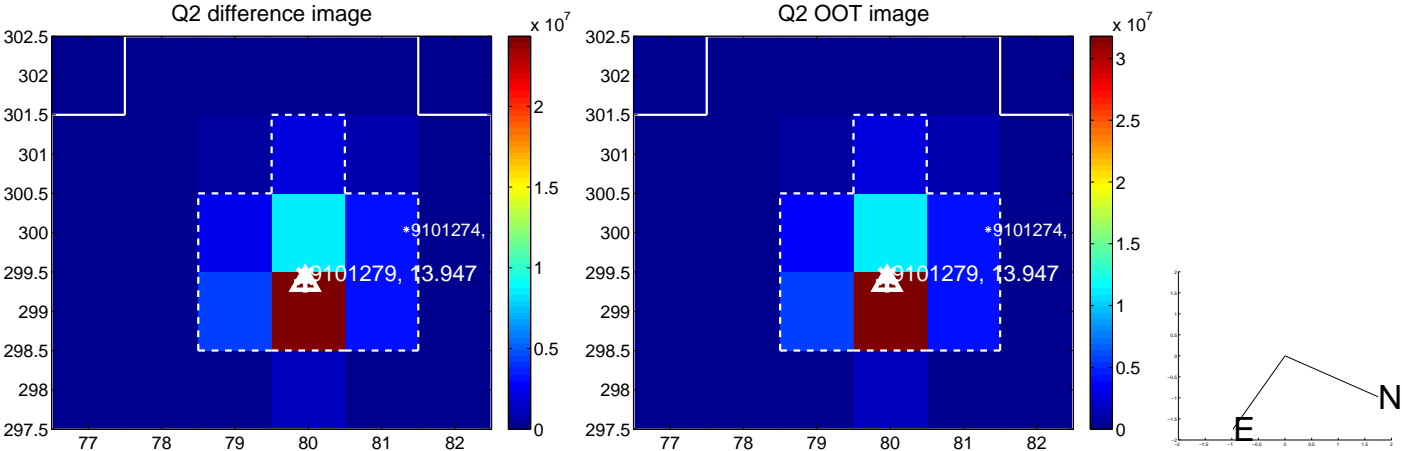
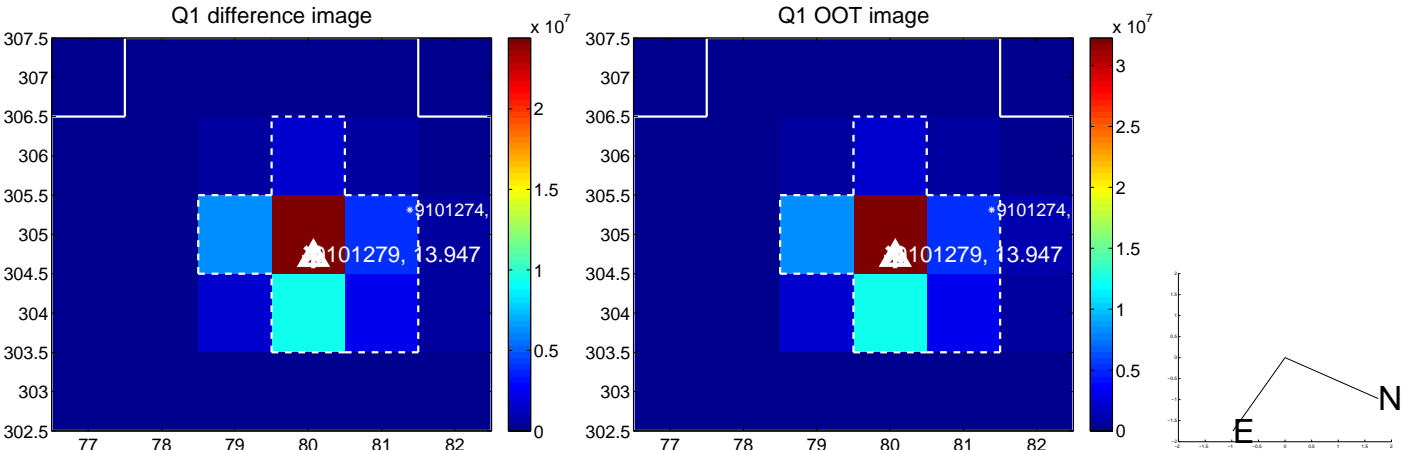
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.007 ± 0.067	0.10	0.004 ± 0.067	0.006 ± 0.067
PRF-fit source offset from KIC position	0.134 ± 0.071	1.89	0.092 ± 0.071	0.097 ± 0.068
photometric centroid source offset	0.06 ± 0.00	221.66	0.06 ± 0.00	0.03 ± 0.00

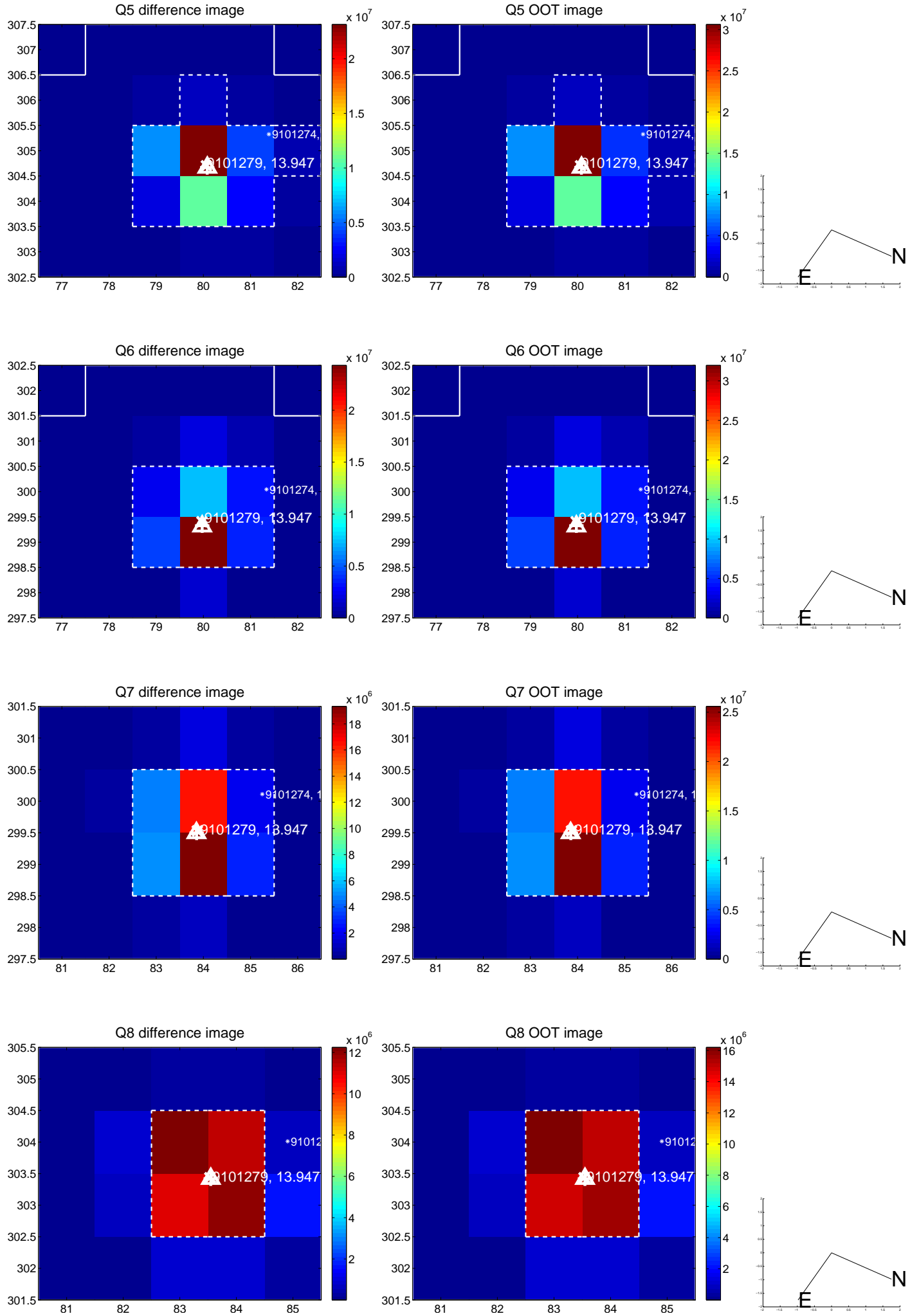


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

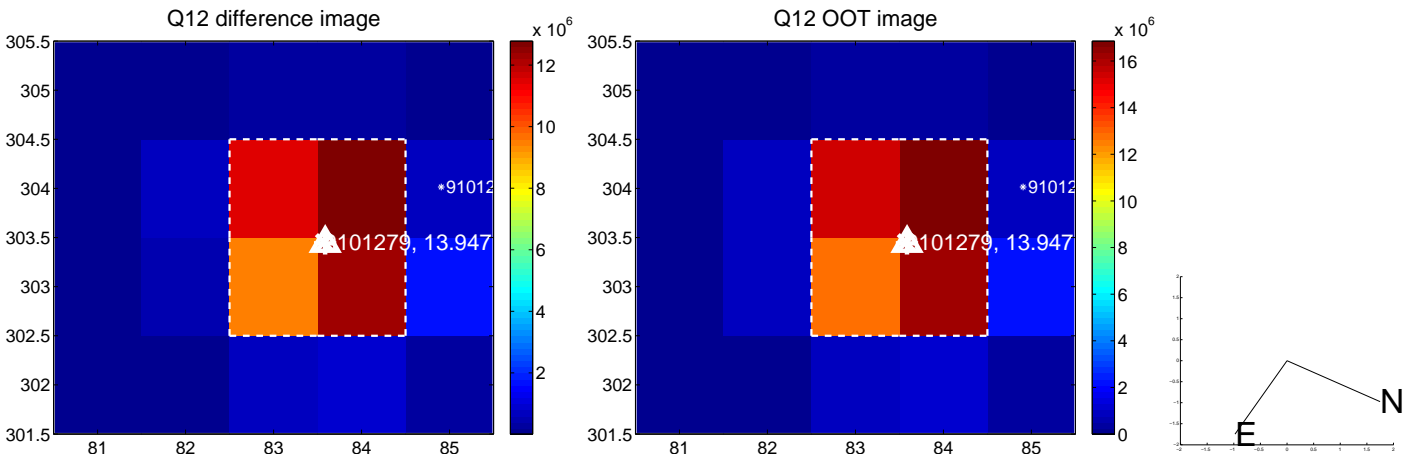
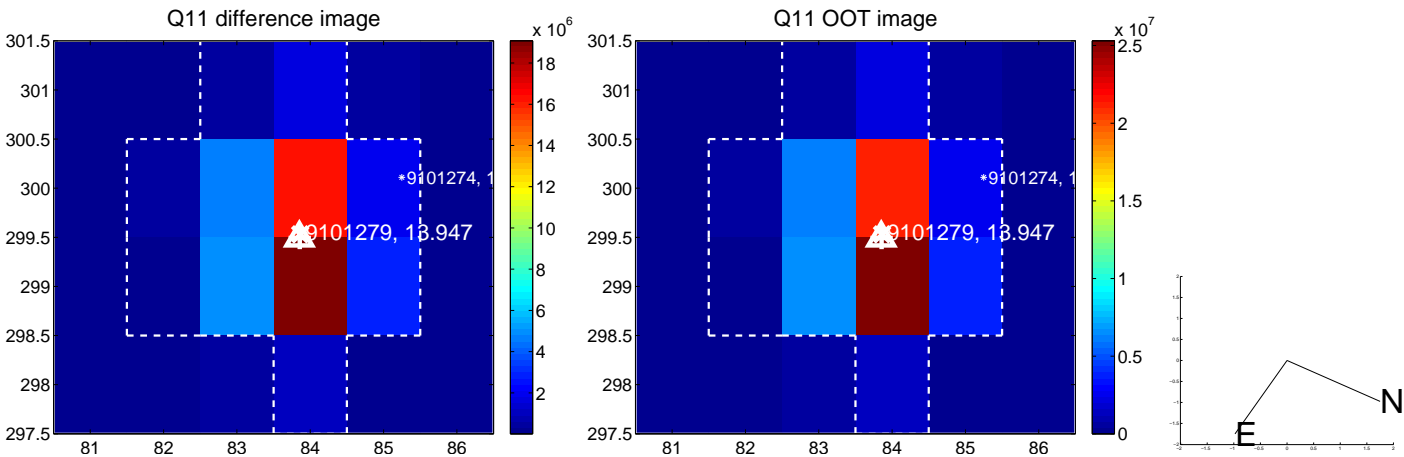
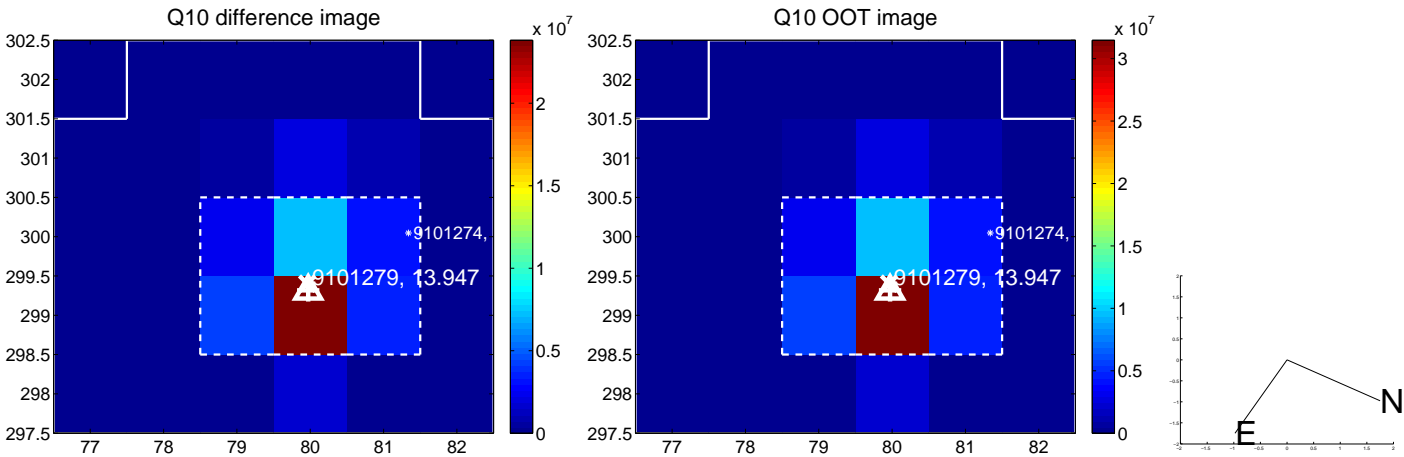
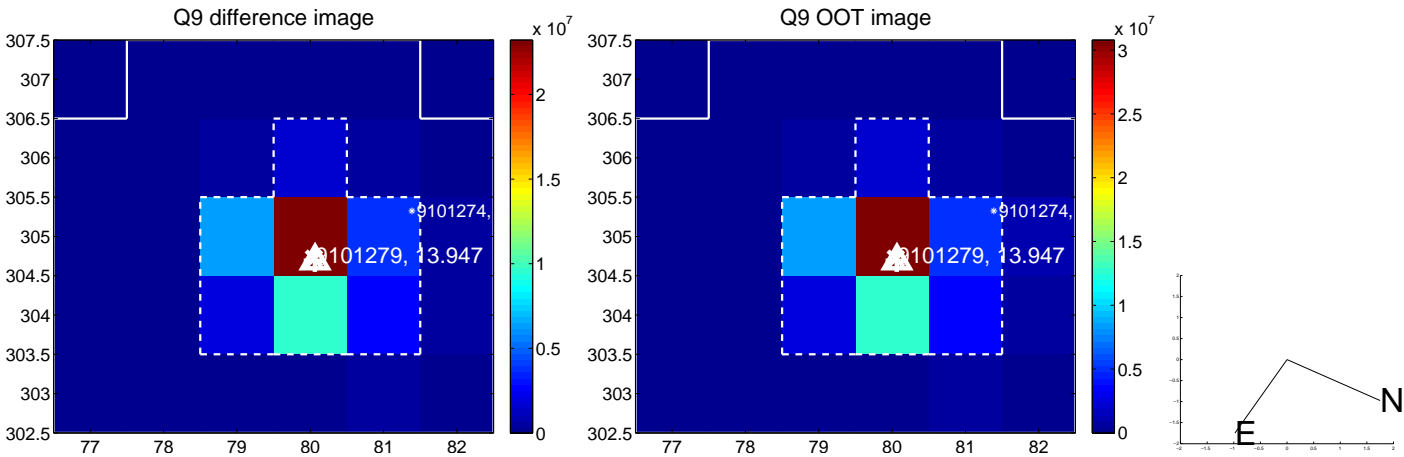
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



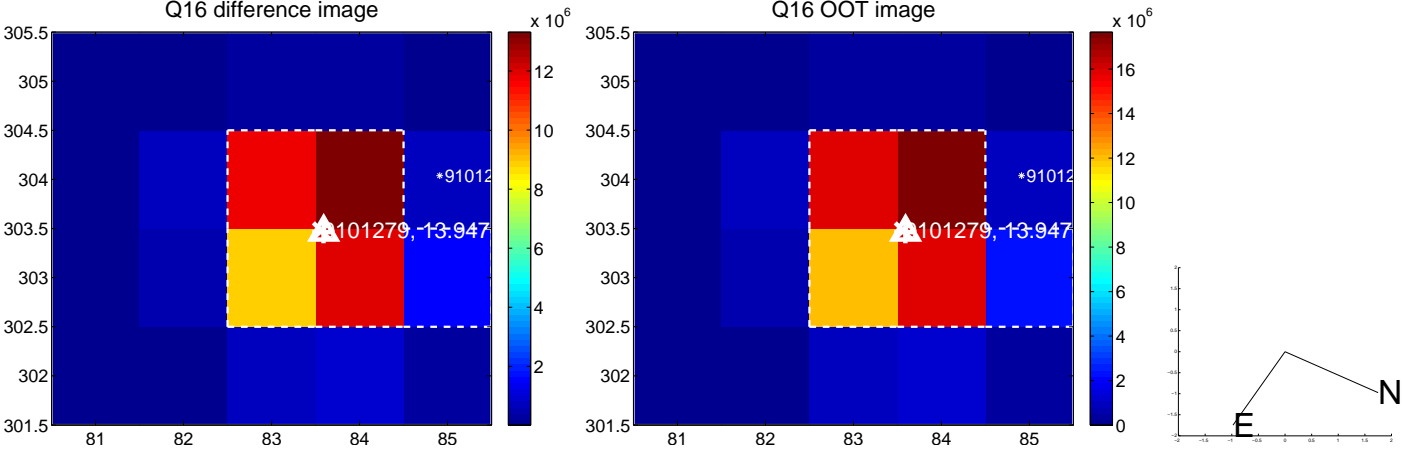
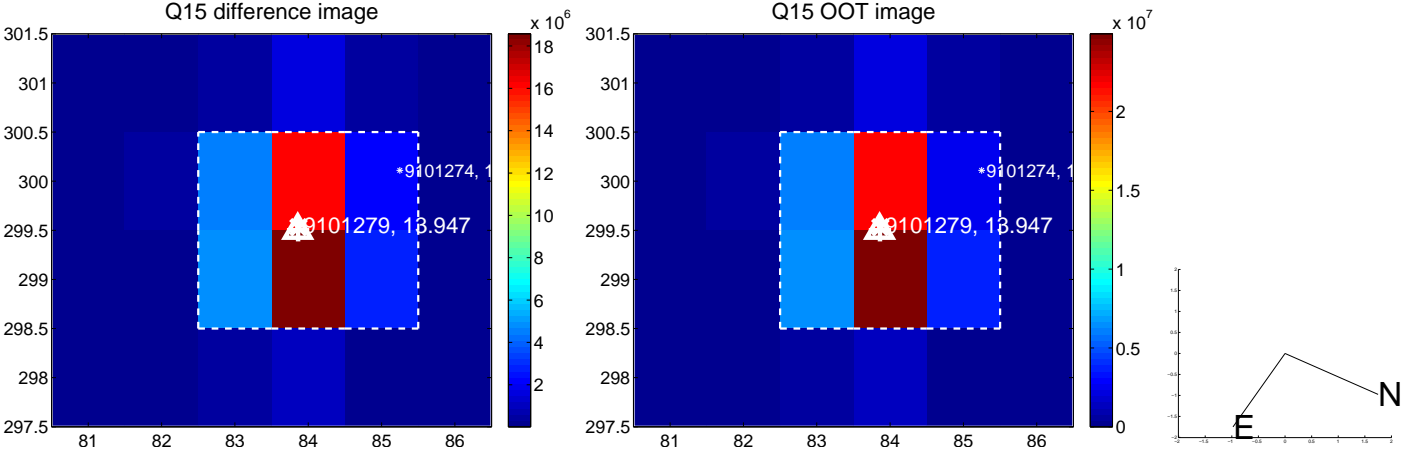
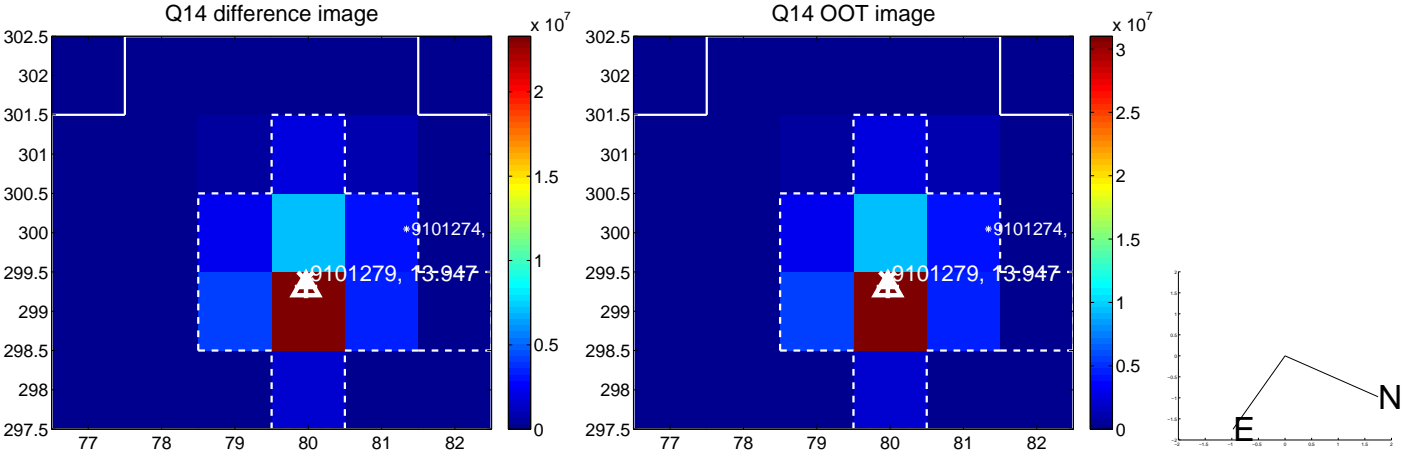
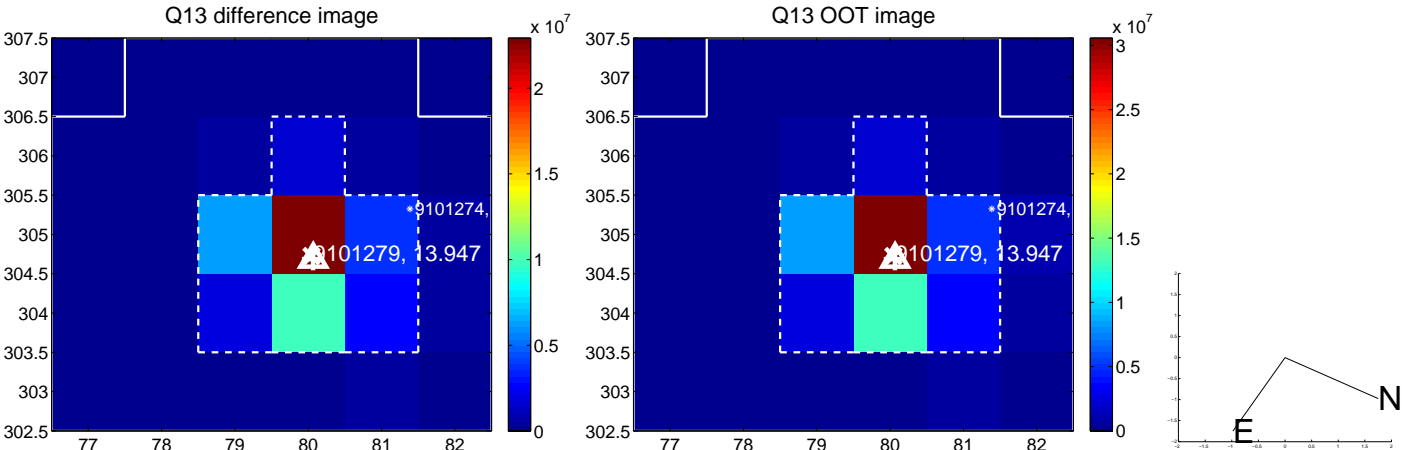
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



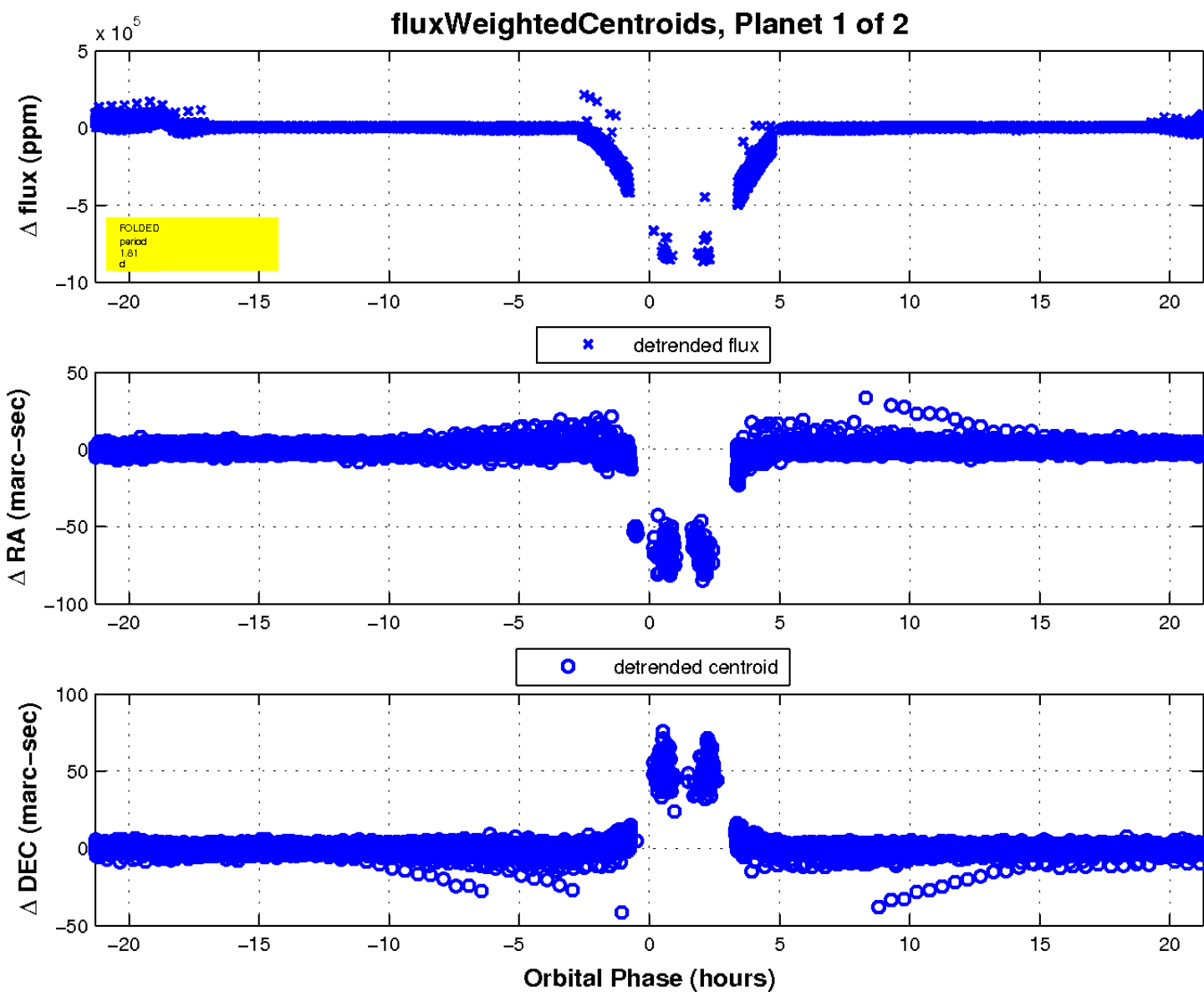
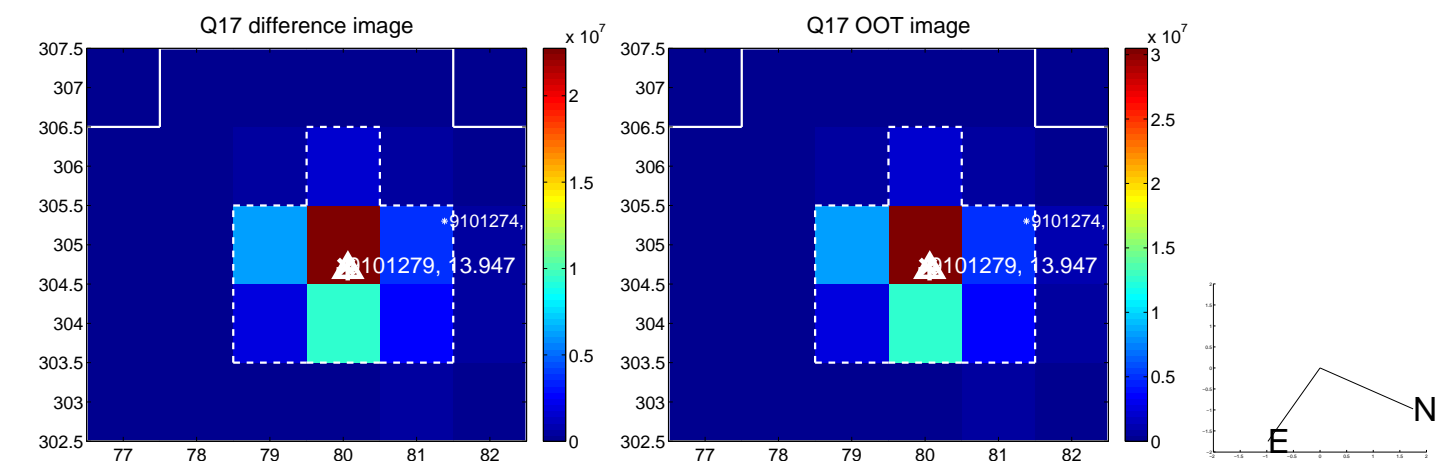
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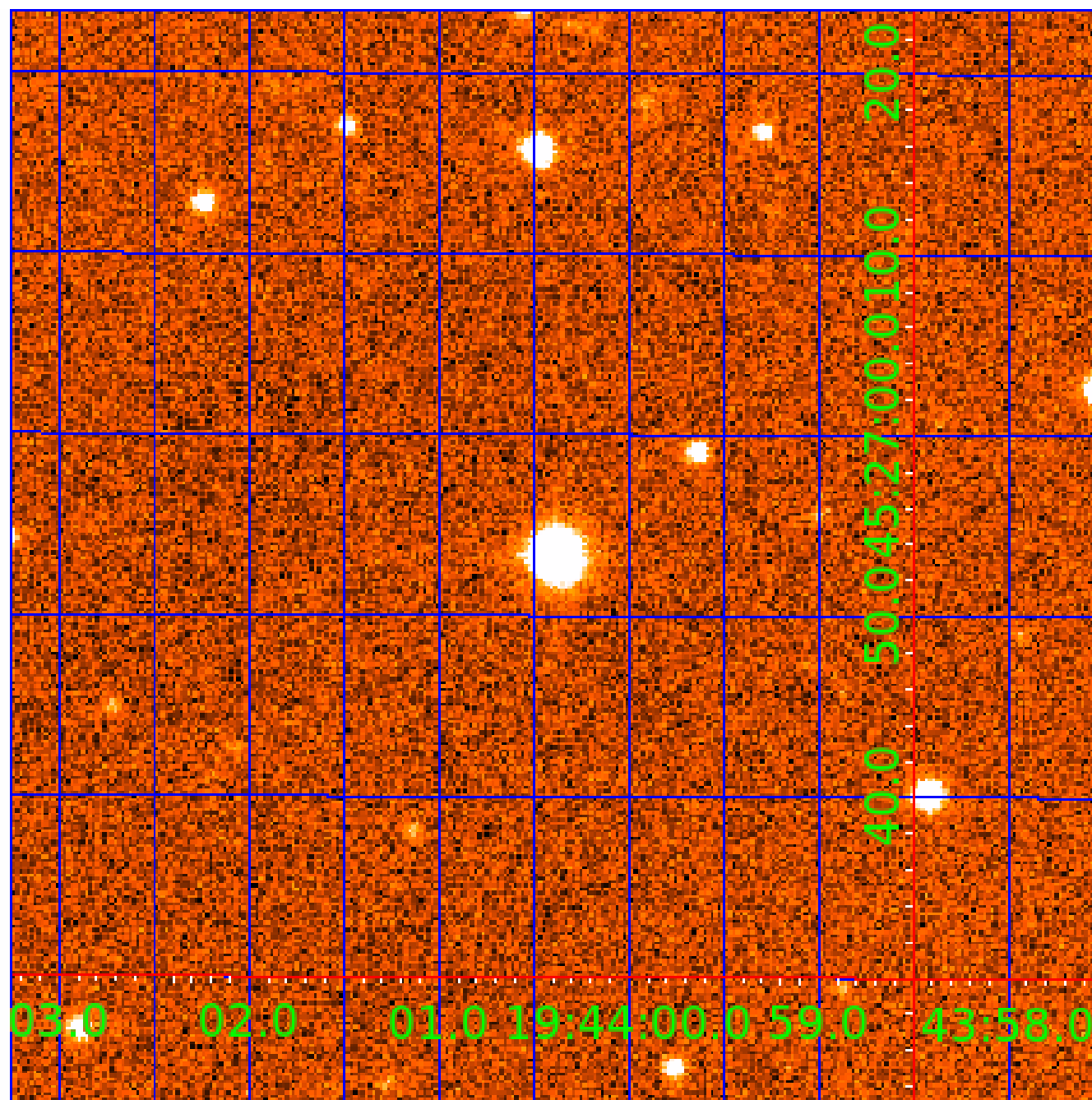


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009101279

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009101279-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
009101279-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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

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

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

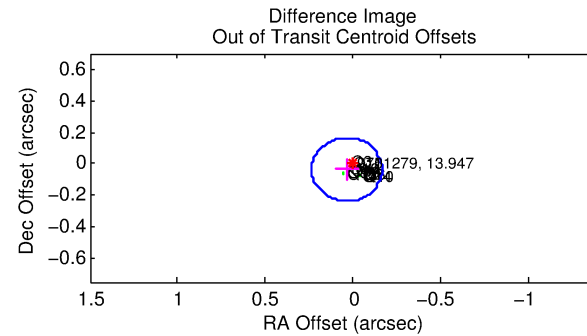
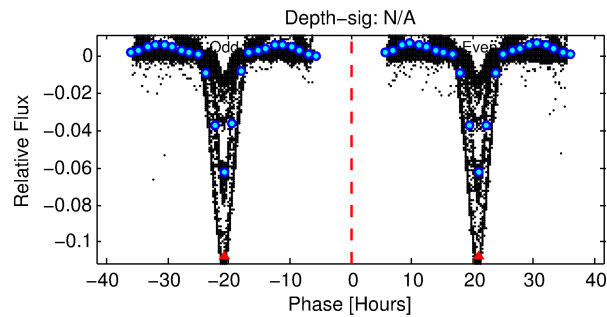
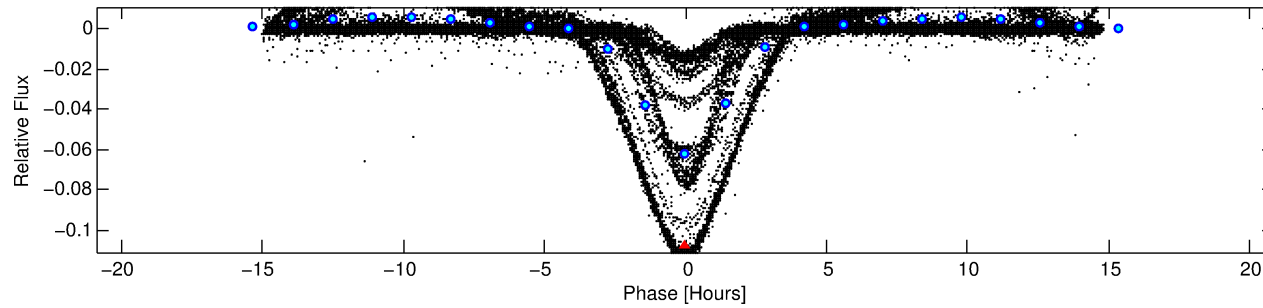
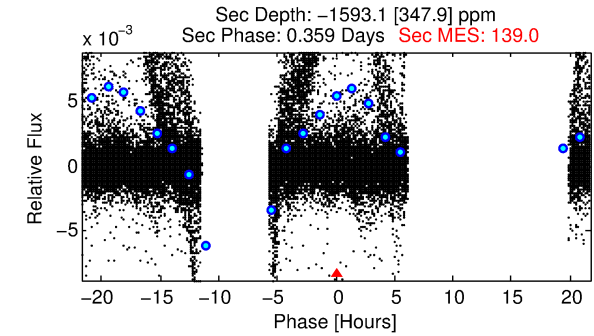
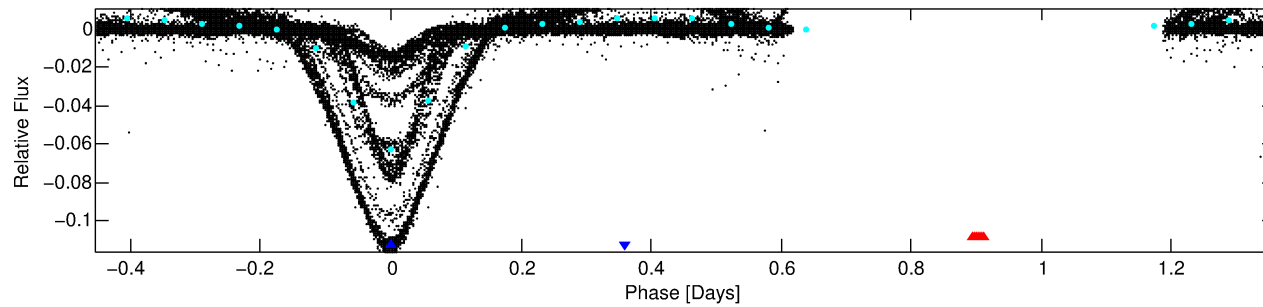
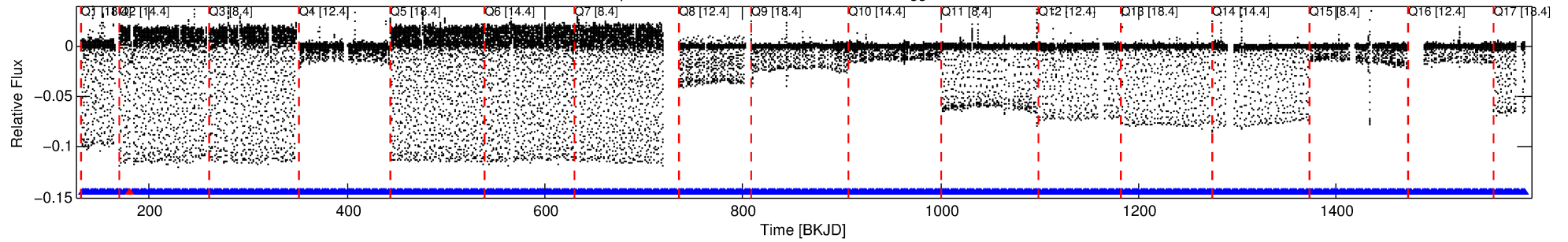
Ephemeris Match Information For 009101279-02

No Significant Match Found

DV One-Page Summary

KIC: 9101279 Candidate: 2 of 2 Period: 1.811 d
KOI: K05614 Corr: No Ephemeris Match

Kp: 13.95 R*: 3.03 Rs Teff: 8572.0 K Logg: 3.78 Fe/H: -0.200



TPS TCE Results:

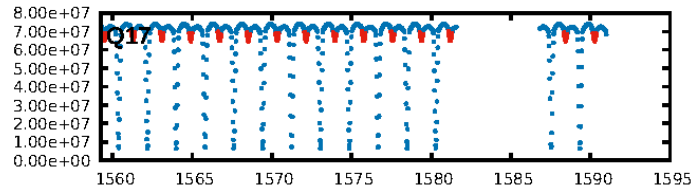
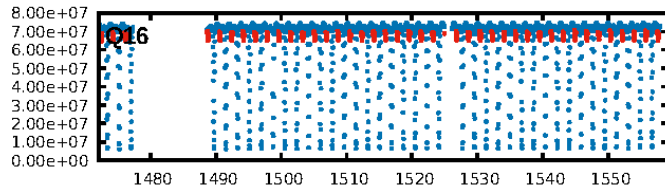
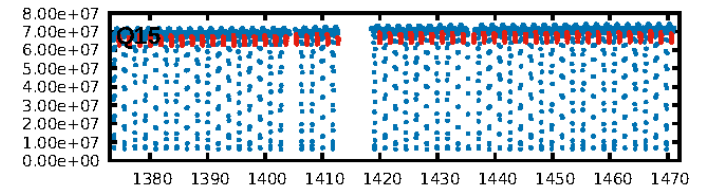
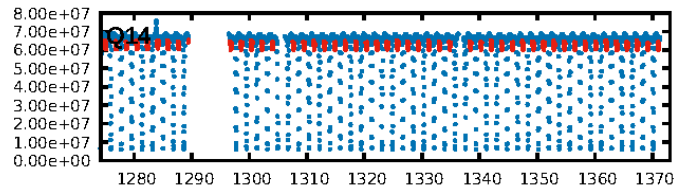
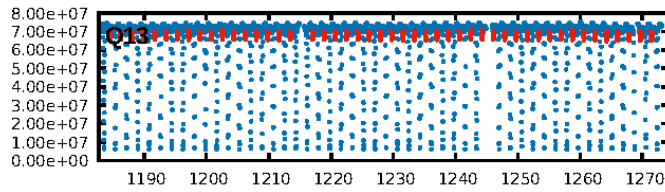
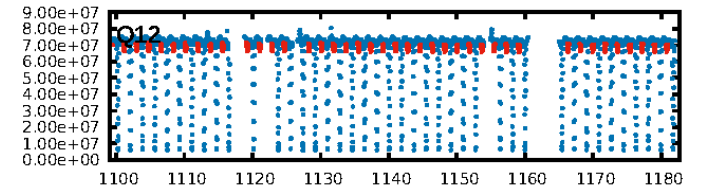
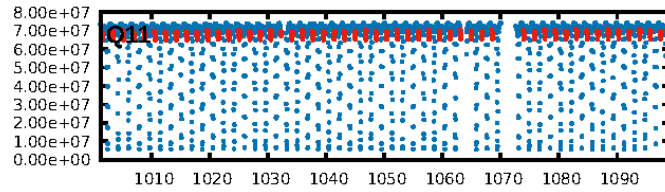
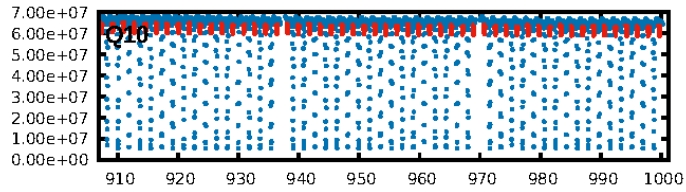
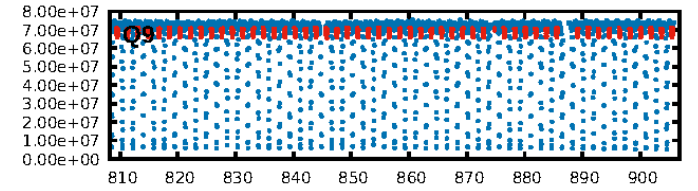
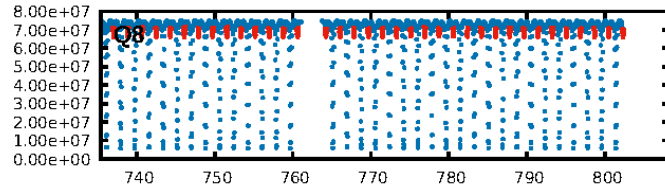
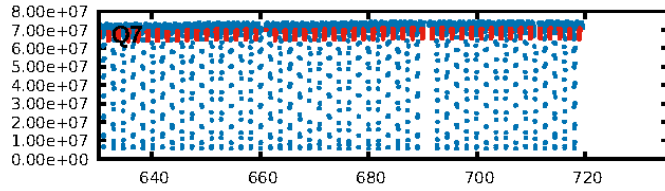
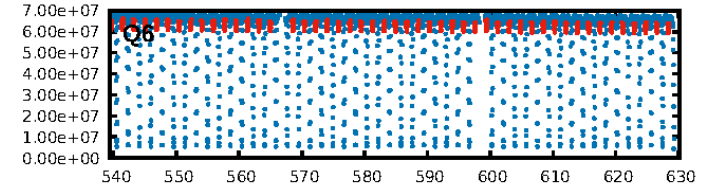
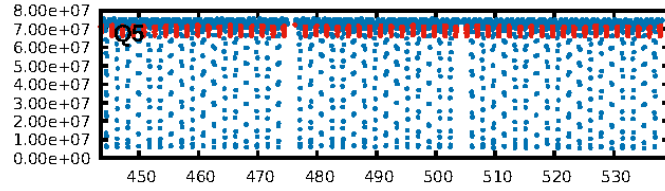
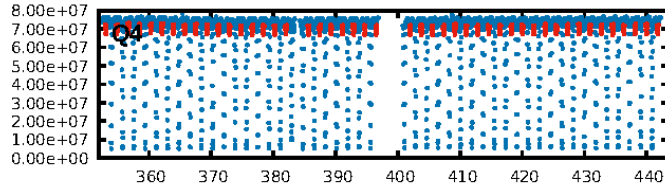
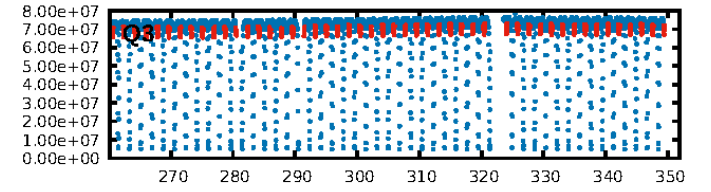
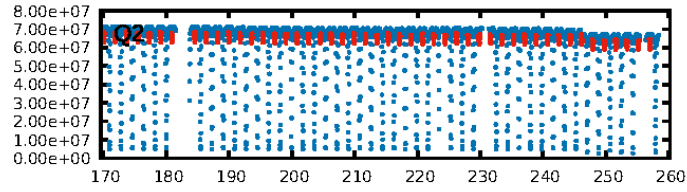
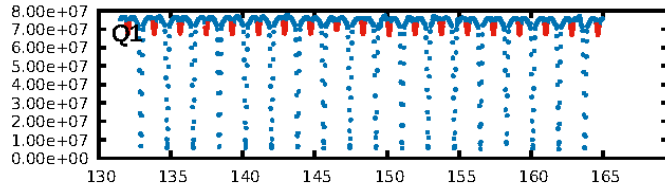
Period = 1.81146 d
Epoch = 132.0266 BKJD

DV fit results are unavailable

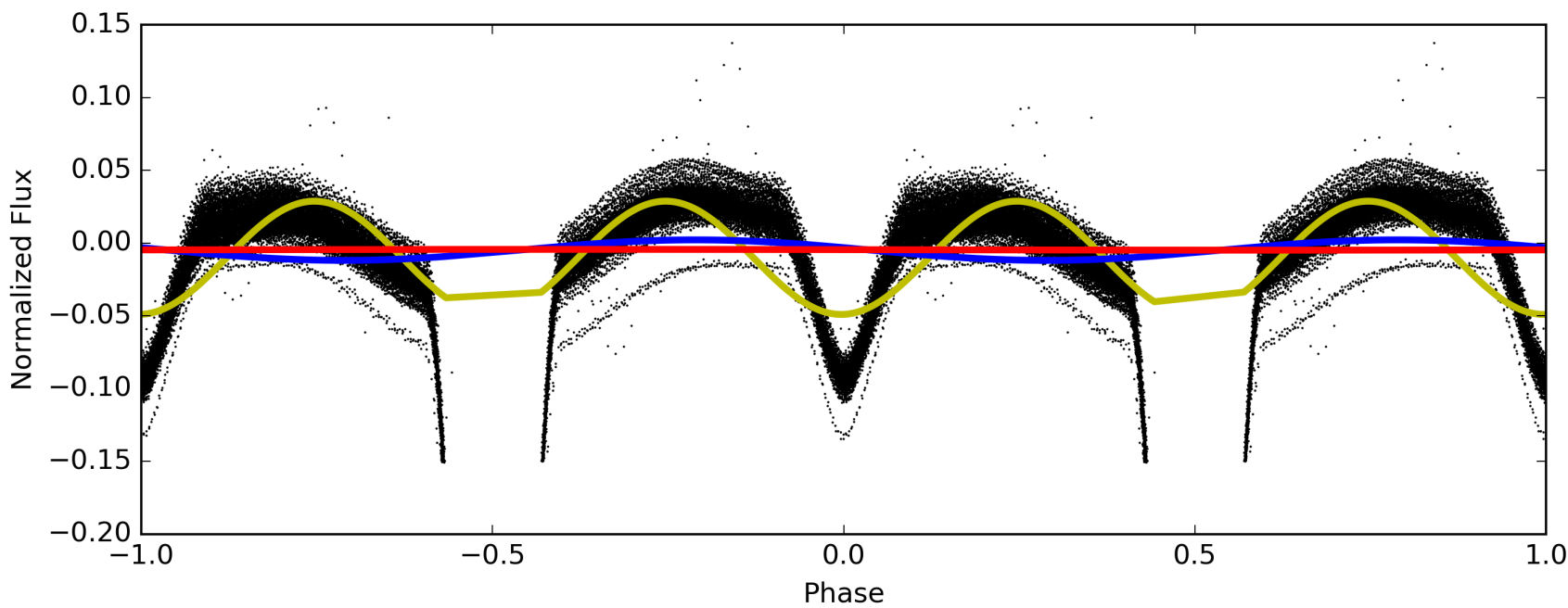
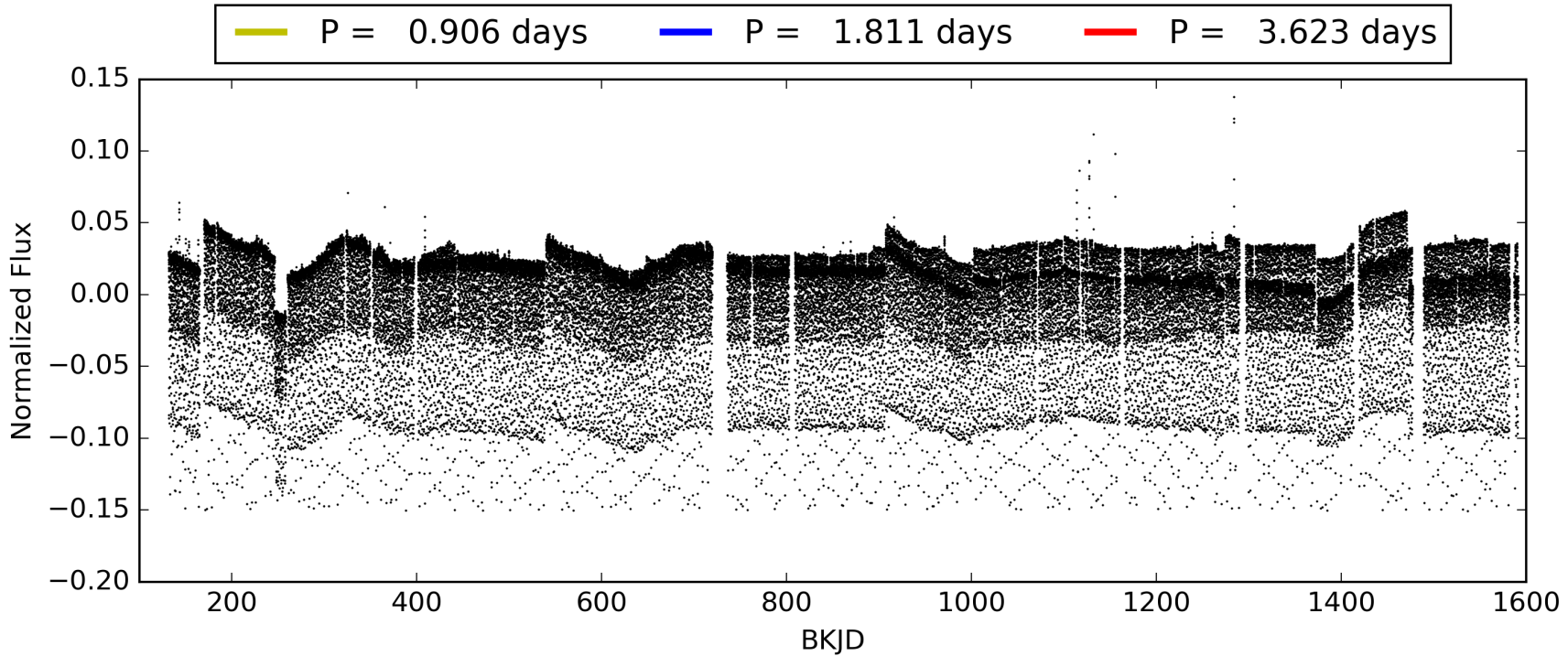
DV Diagnostic Results:

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 [712/713]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 0.065 arcsec [113.52σ]
OotOffset-rm: 0.051 arcsec [0.76σ]
KicOffset-rm: 0.144 arcsec [2.08σ]
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 009101279-02, PDC Light Curves

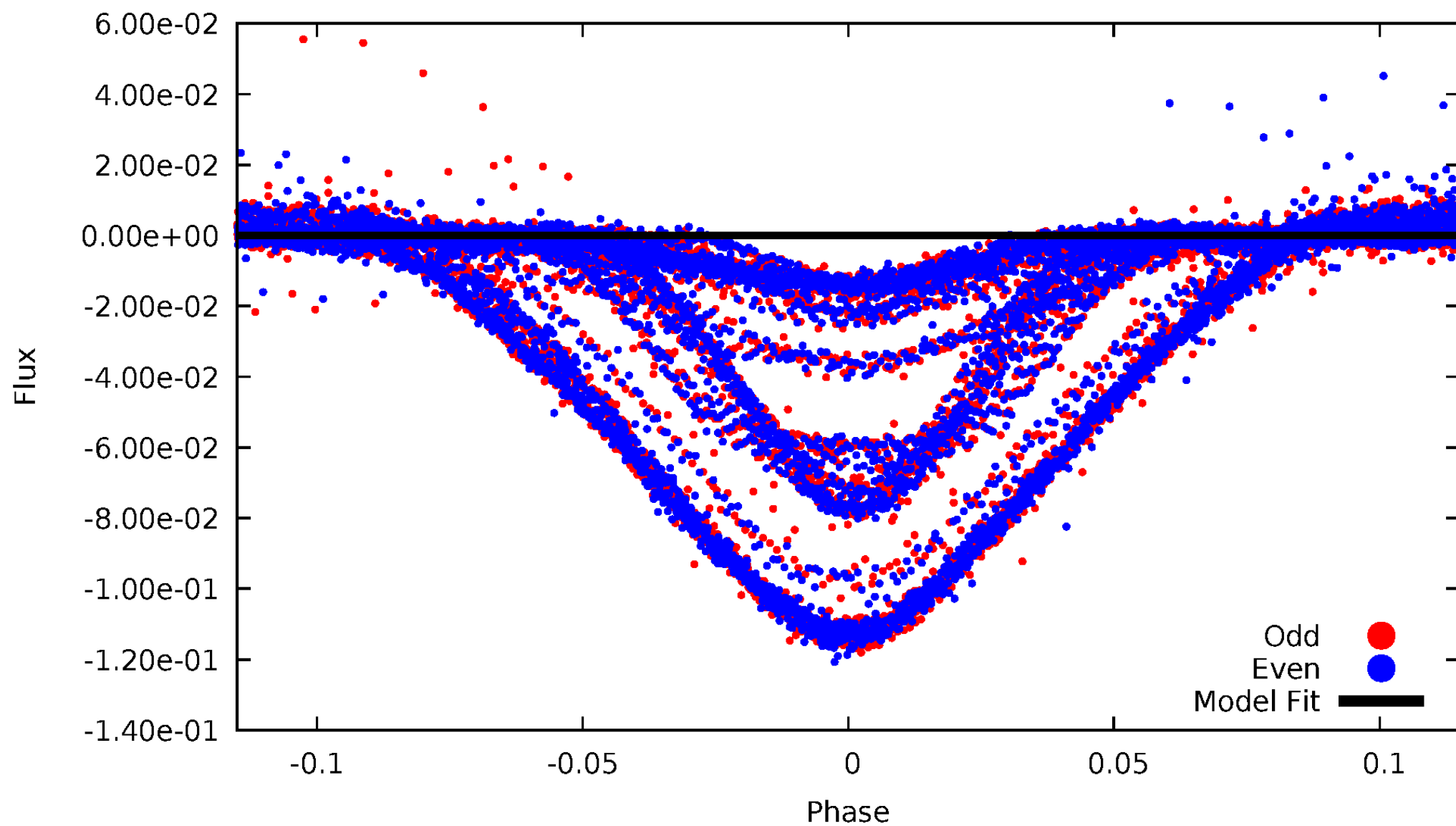


TCE 009101279-02



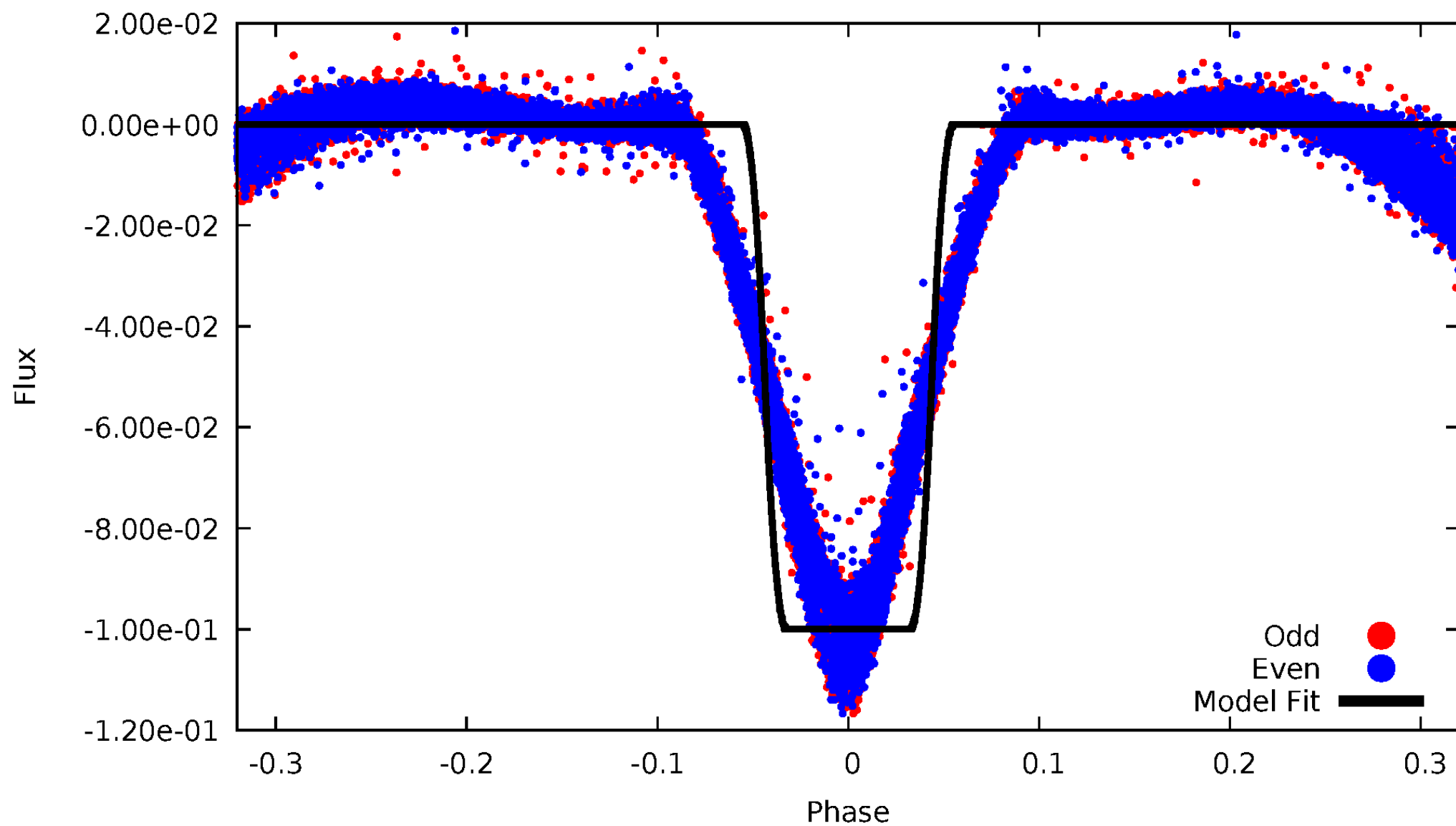
DV Odd/Even

TCE 009101279-02



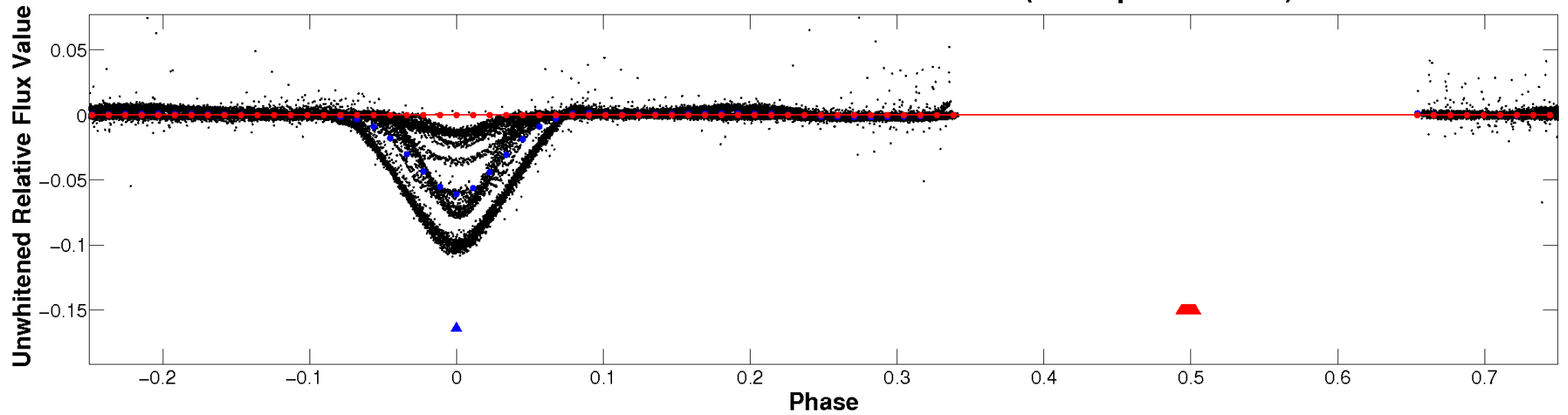
ALT Odd/Even

TCE 009101279-02

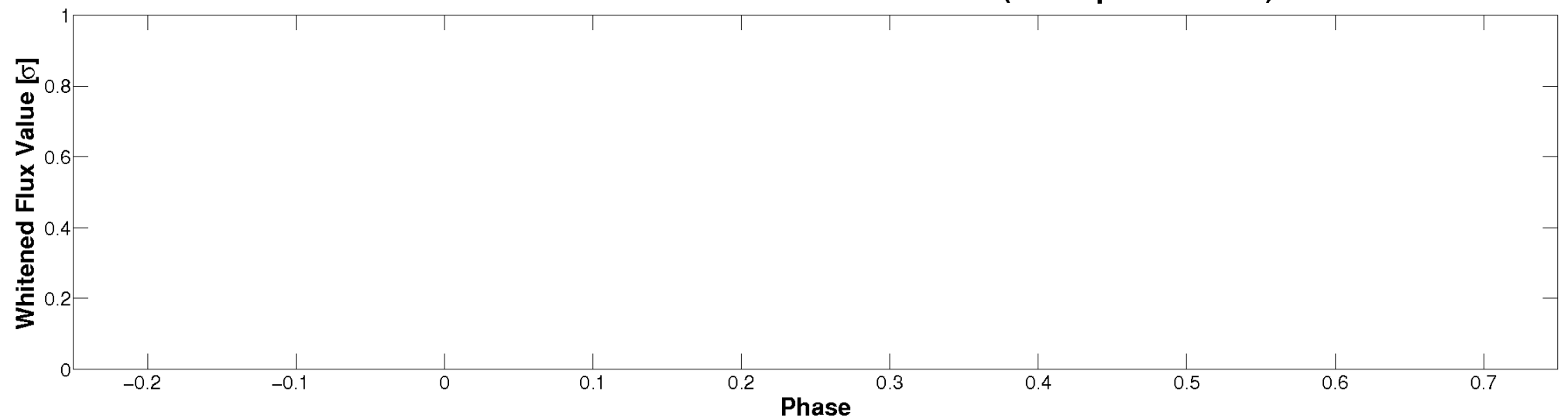


Non-Whitened Vs. Whitened Light Curve

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

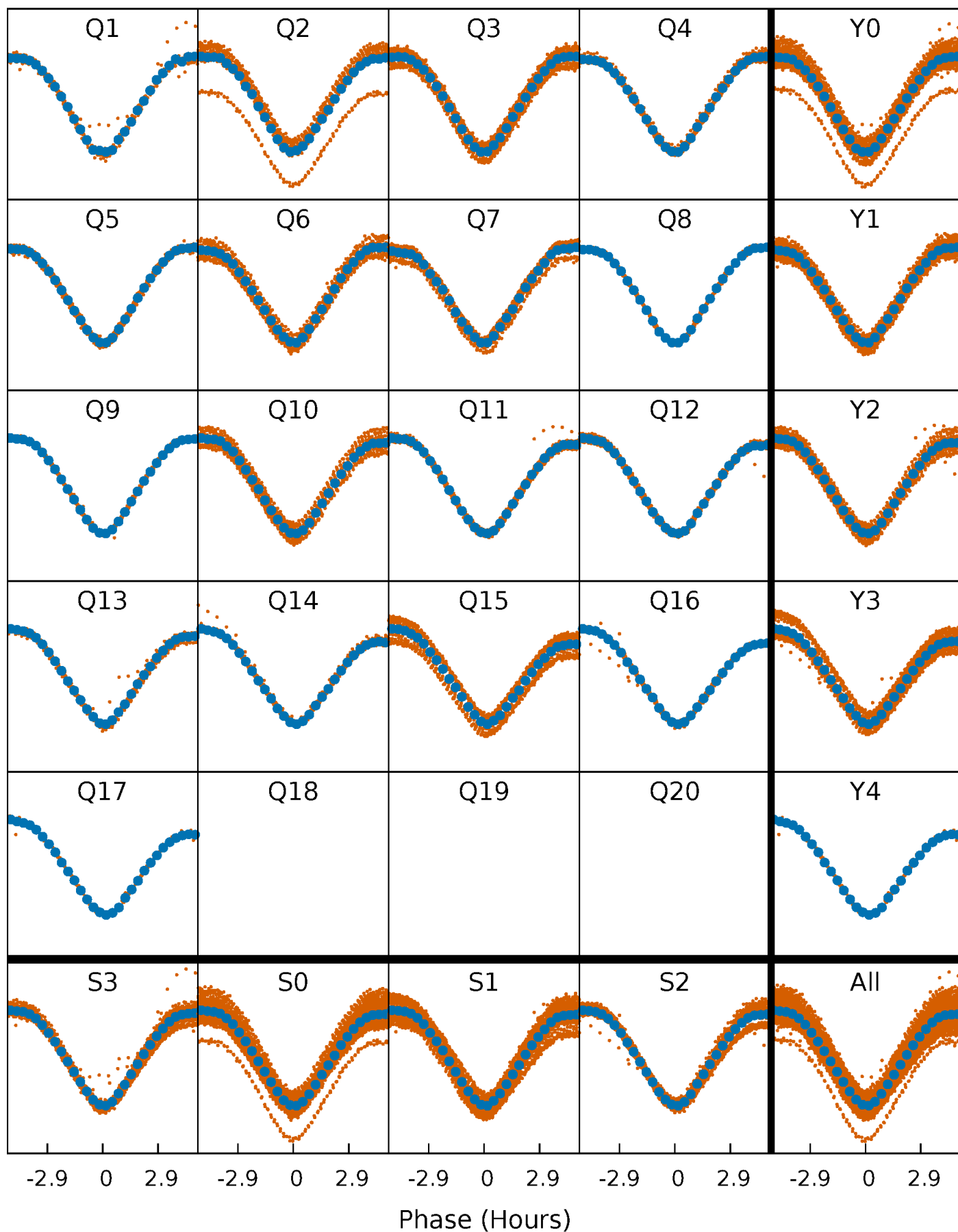


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



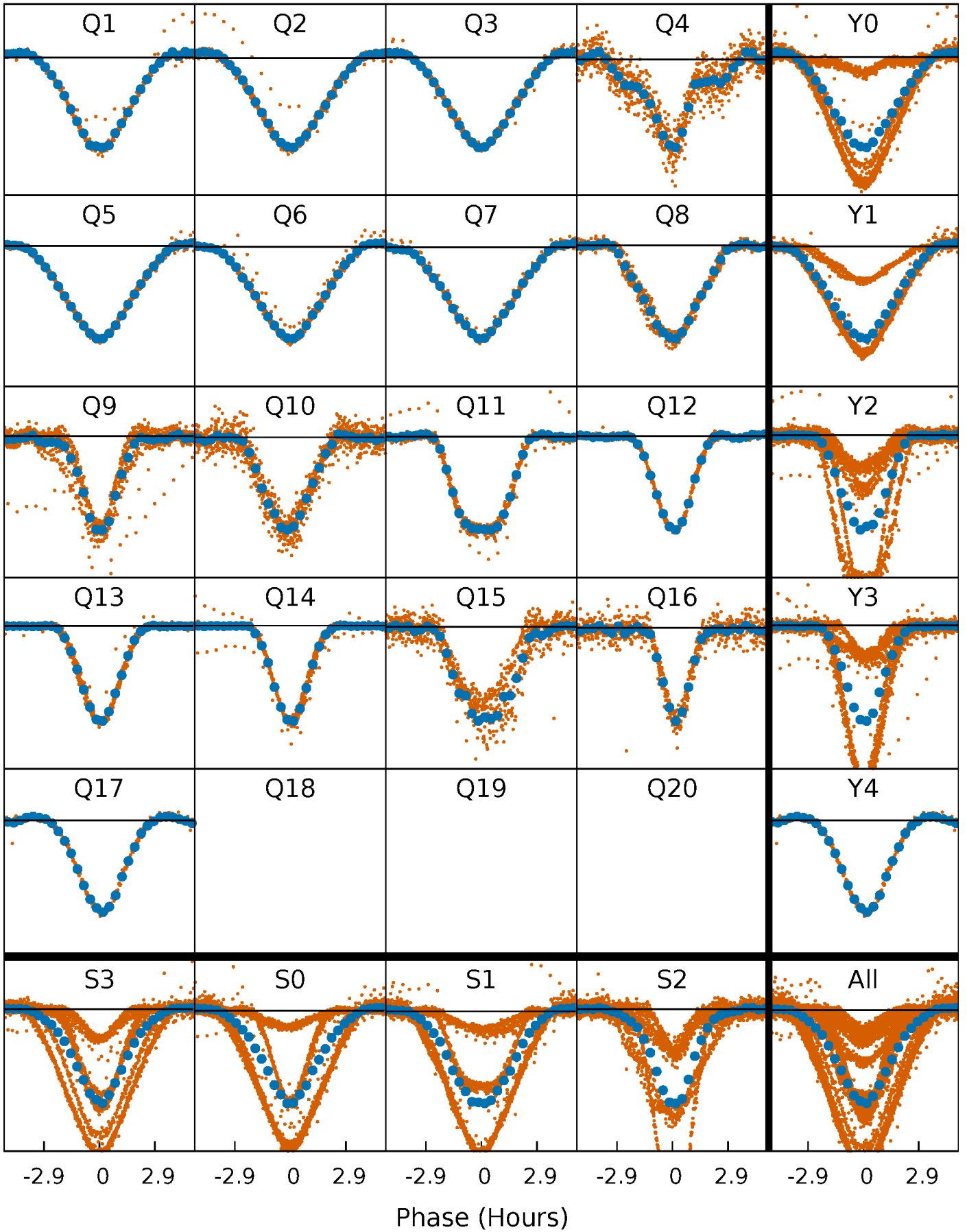
PDC Quarter-Phased Transit Curves

TCE 009101279-02 P= 1.811458 Days $T_0=132.026619$ (BKJD)



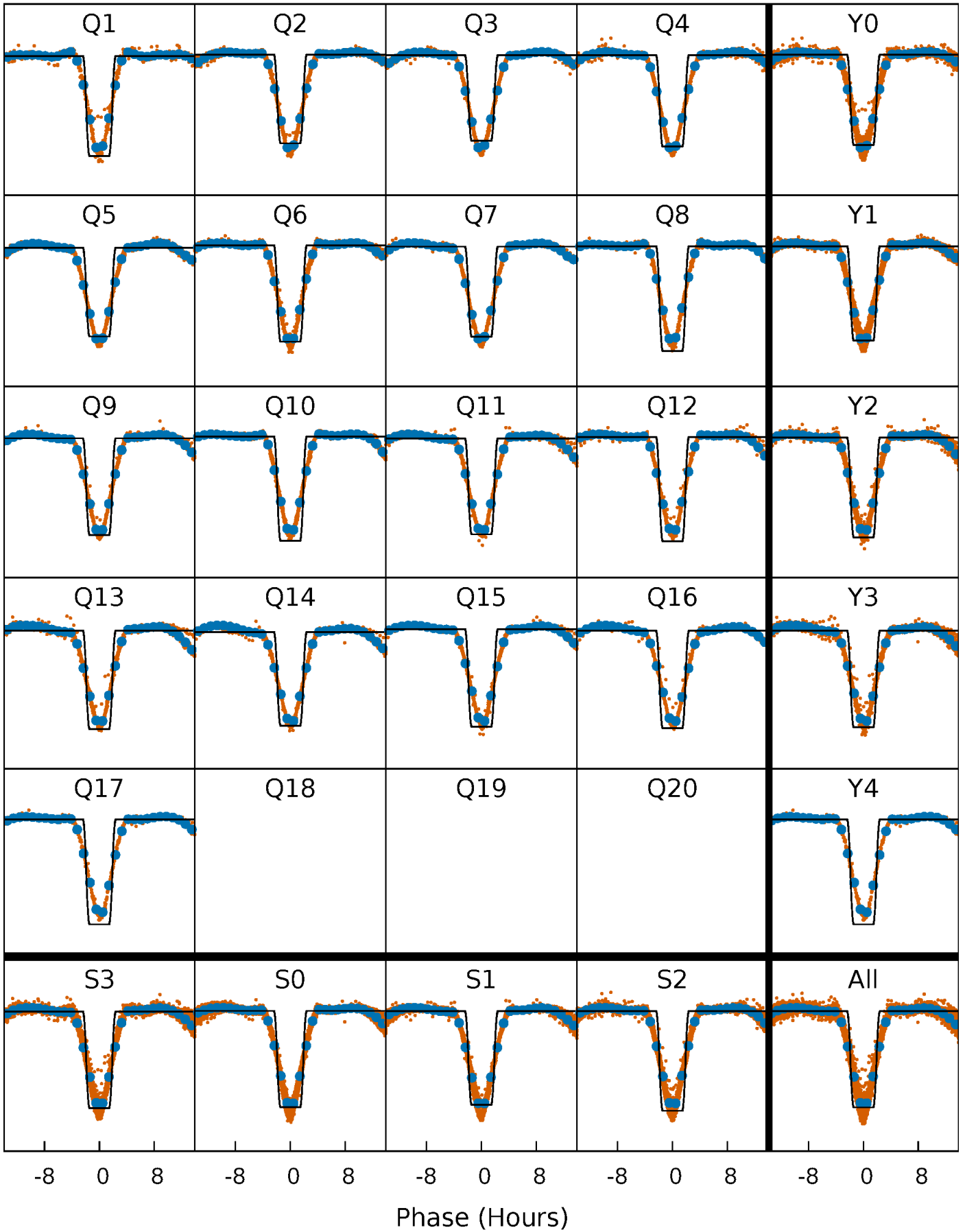
DV Quarter-Phased Transit Curves

TCE 009101279-02 P= 1.811458 Days $T_0=132.026619$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

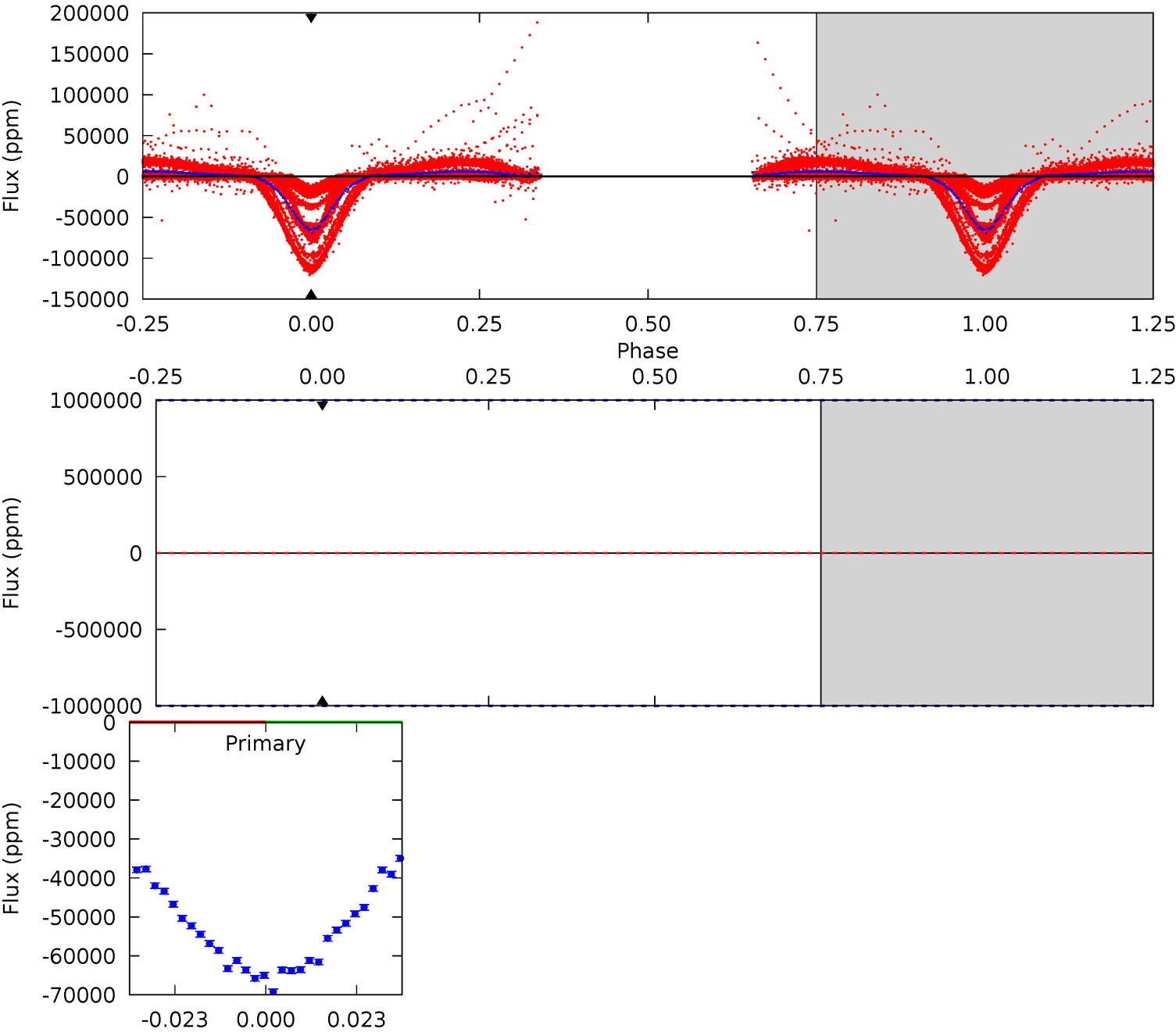
TCE 009101279-02 P= 1.811458 Days $T_0=132.027774$ (BKJD)



DV Model-Shift Uniqueness Test

009101279-02, P = 1.811458 Days, E = 130.215161 Days

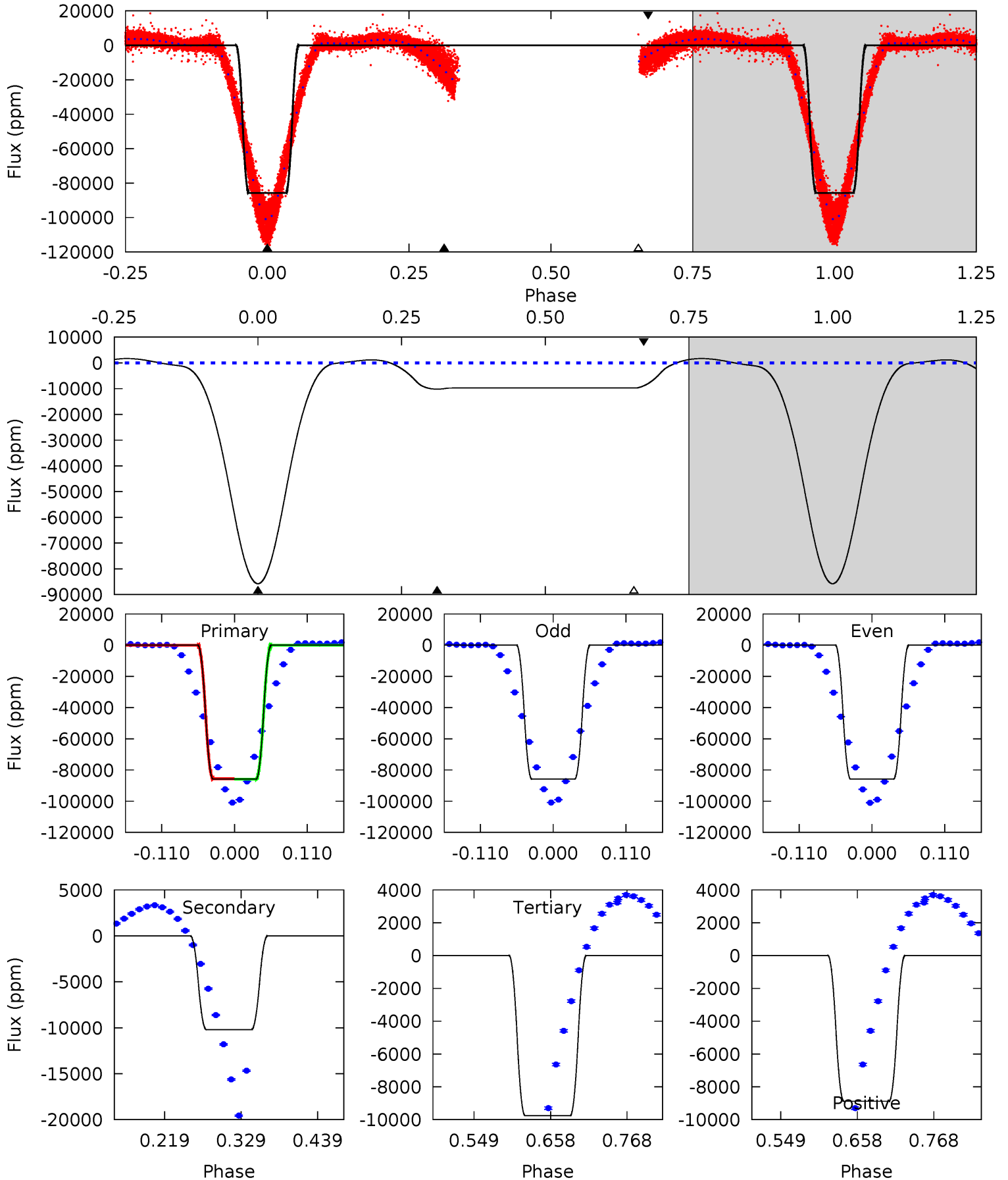
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

009101279-02, P = 1.811458 Days, E = 130.216316 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2154	256.1	245.2	-223.1	4.55	1.60	69.6	1909	2377	11.0	479.2	0.92	1.01	0.02	5.09



Stellar Parameters For KIC 009101279

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8572^{+238}_{-374}	$3.776^{+0.412}_{-0.137}$	$-0.200^{+0.350}_{-0.350}$	$3.034^{+0.770}_{-1.431}$	$2.009^{+0.342}_{-0.471}$	$0.101^{+0.399}_{-0.043}$
	+3%/-4%	+11%/-4%	+175%/-175%	+25%/-47%	+17%/-23%	+394%/-42%
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 009101279-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$34.26^{+28.98}_{-22.52}$	4687^{+372}_{-516}	3084^{+29127}_{-29425}	$0.364^{+112.838}_{-97.780}$
Alt.	-10199 ± 40	$95.45^{+40.55}_{-33.98}$	4702^{+361}_{-571}	4368^{+1039}_{-877}	$0.845^{+1.183}_{-0.426}$

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

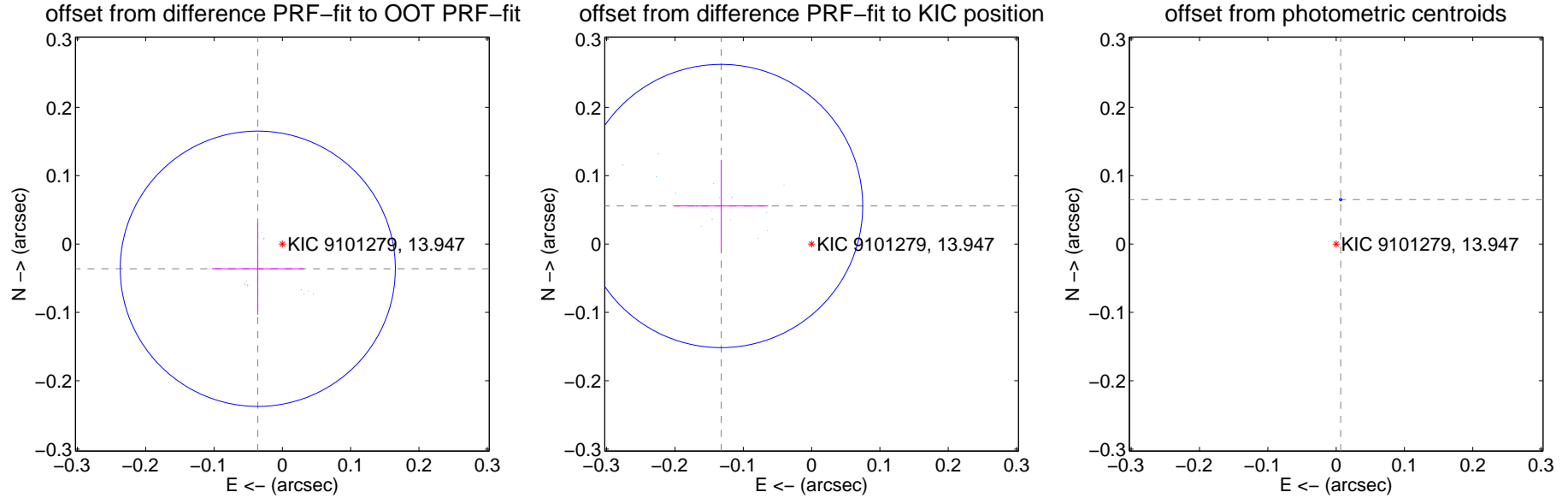
DV Centroid Data

Supplemental centroid analysis for 009101279-02. Kepler magnitude: 13.95. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

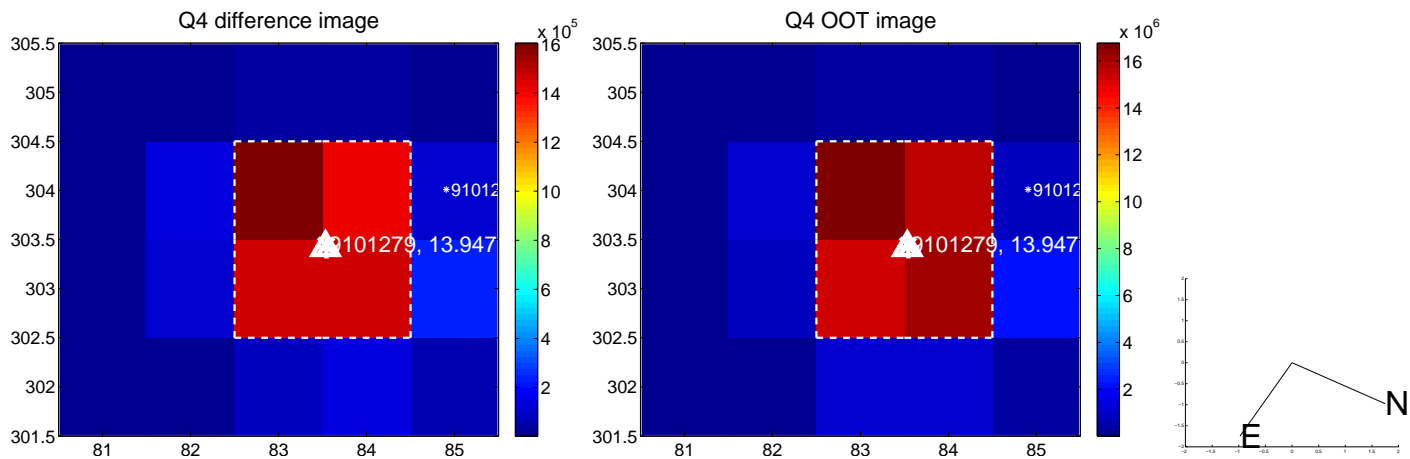
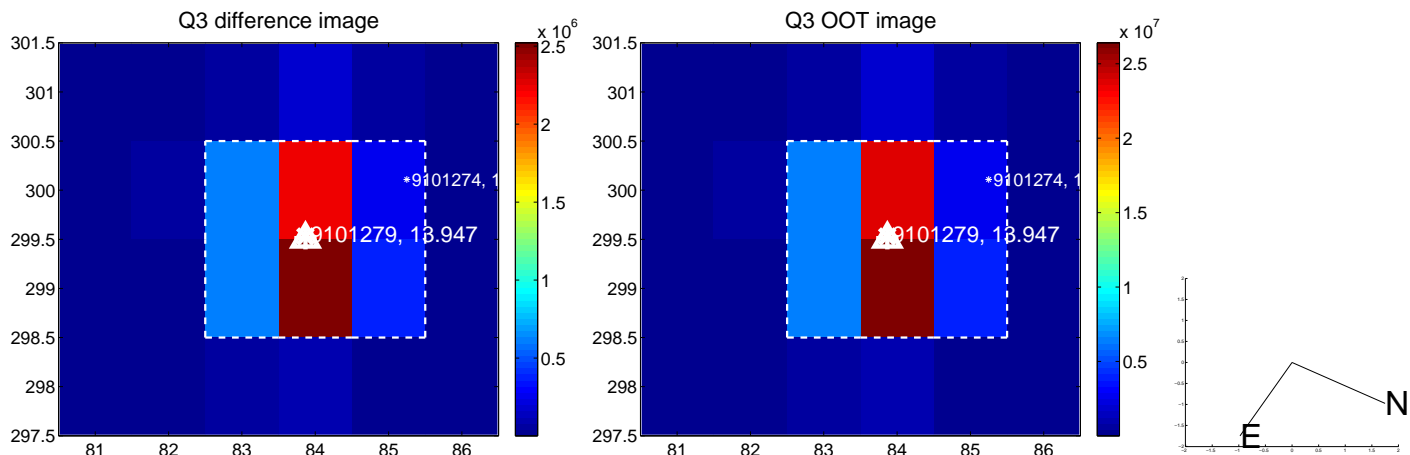
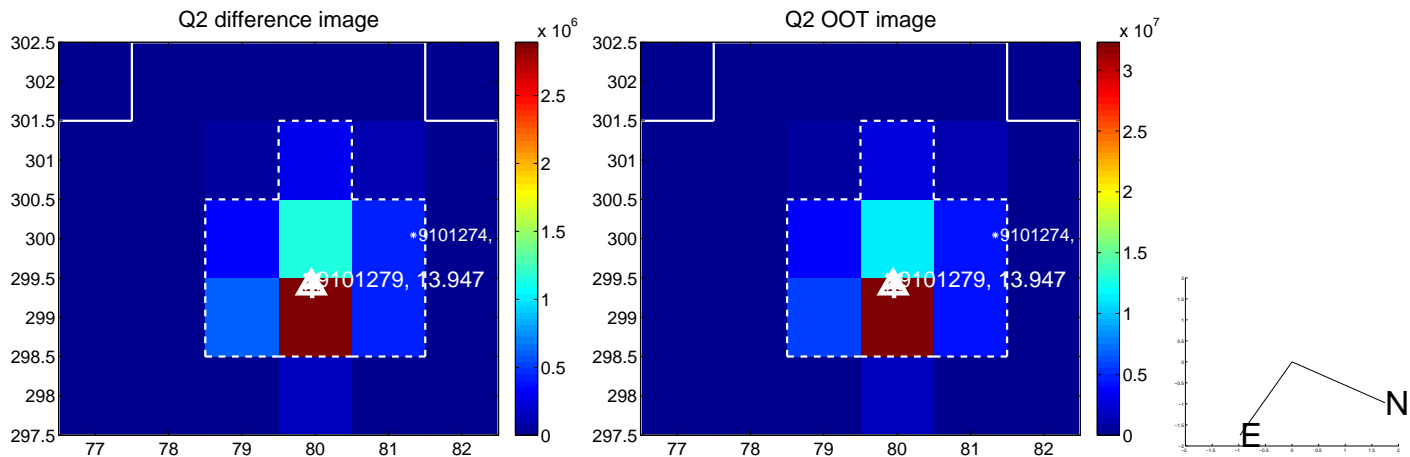
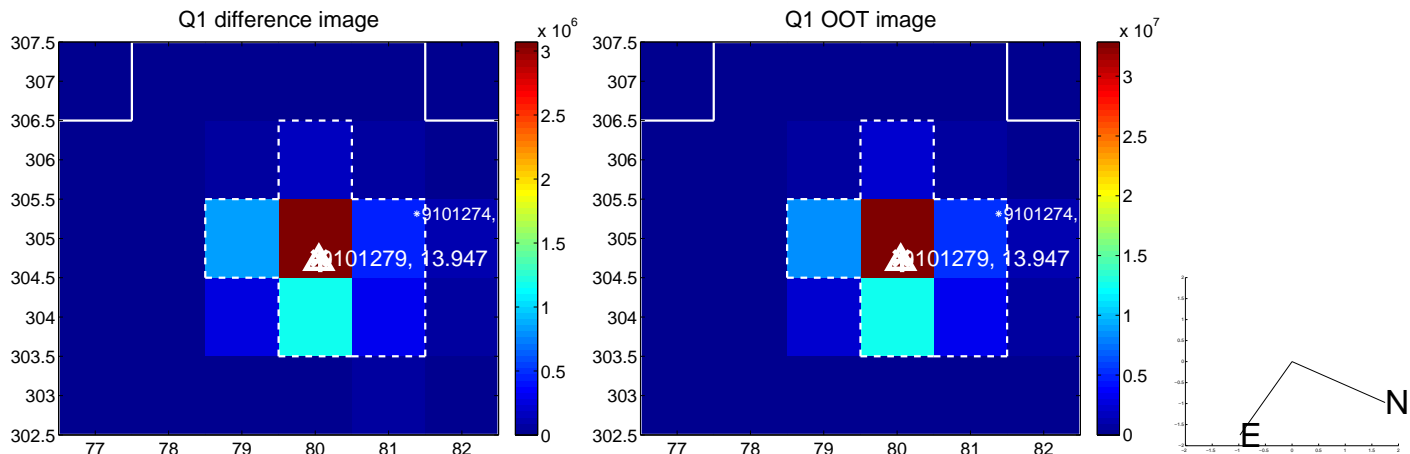
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.051 ± 0.067	0.76	0.036 ± 0.067	-0.036 ± 0.067
PRF-fit source offset from KIC position	0.144 ± 0.069	2.08	0.132 ± 0.069	0.056 ± 0.067
photometric centroid source offset	0.07 ± 0.00	113.52	-0.01 ± 0.00	0.06 ± 0.00

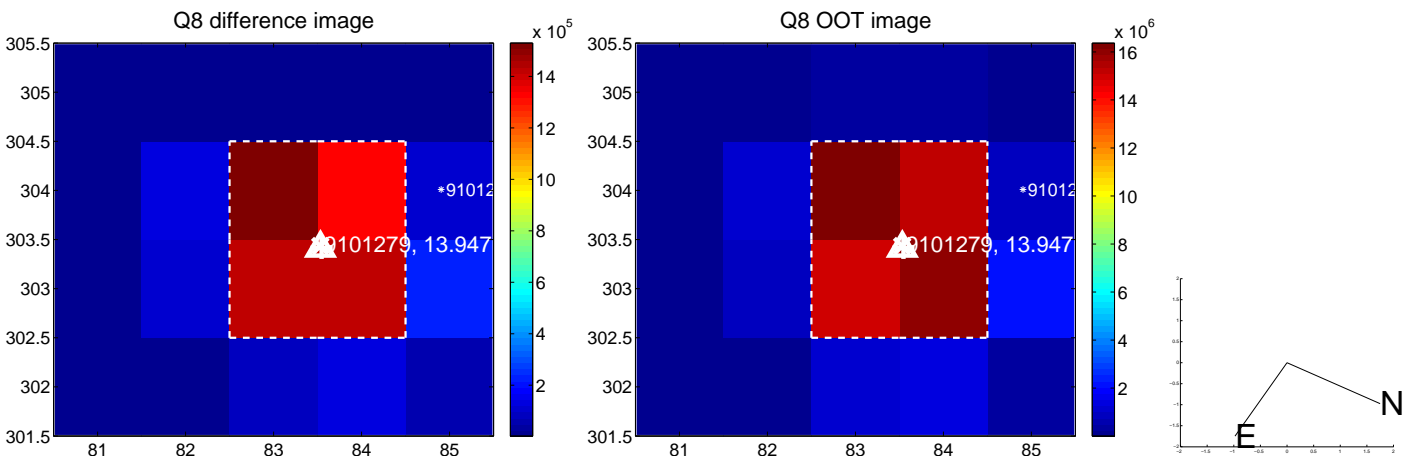
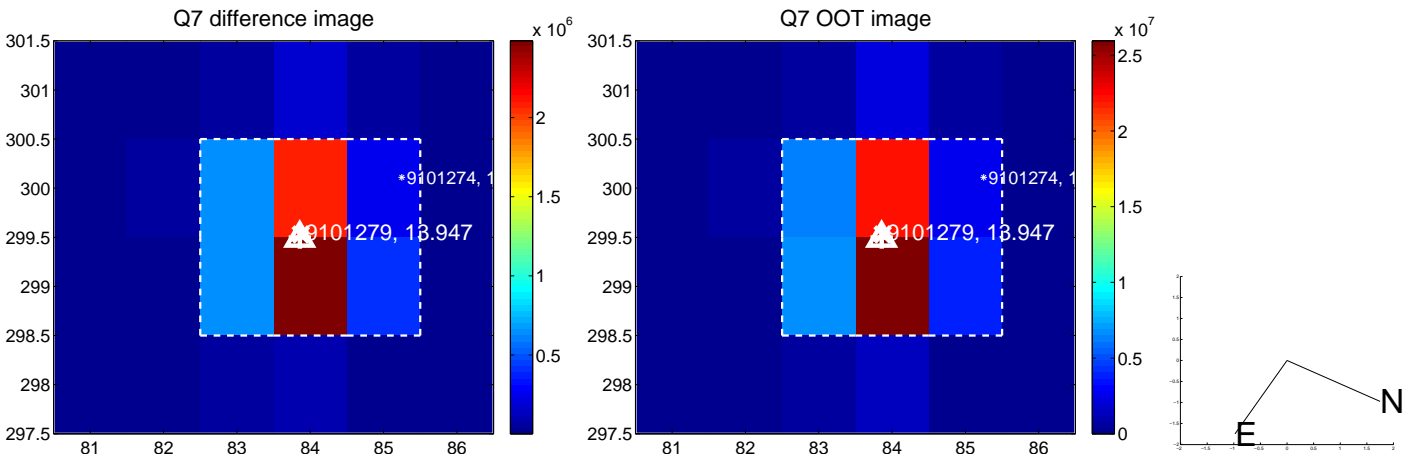
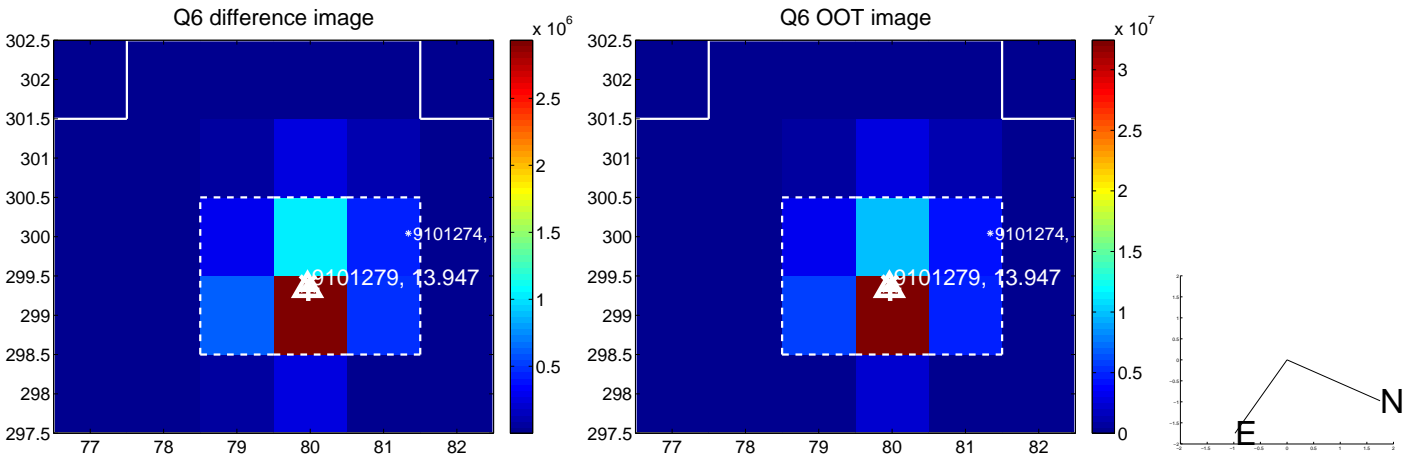
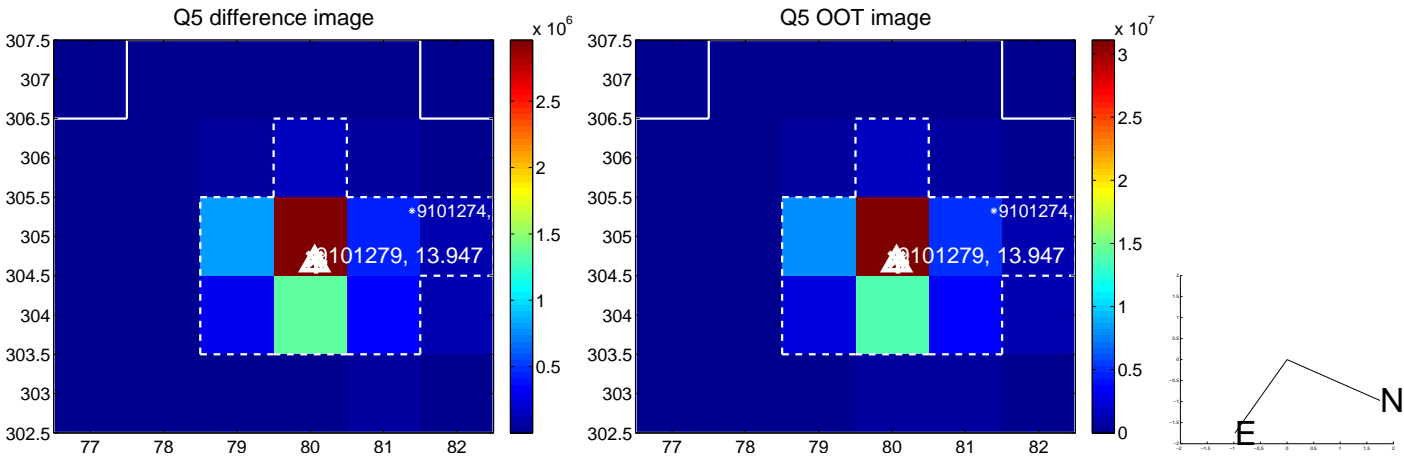


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

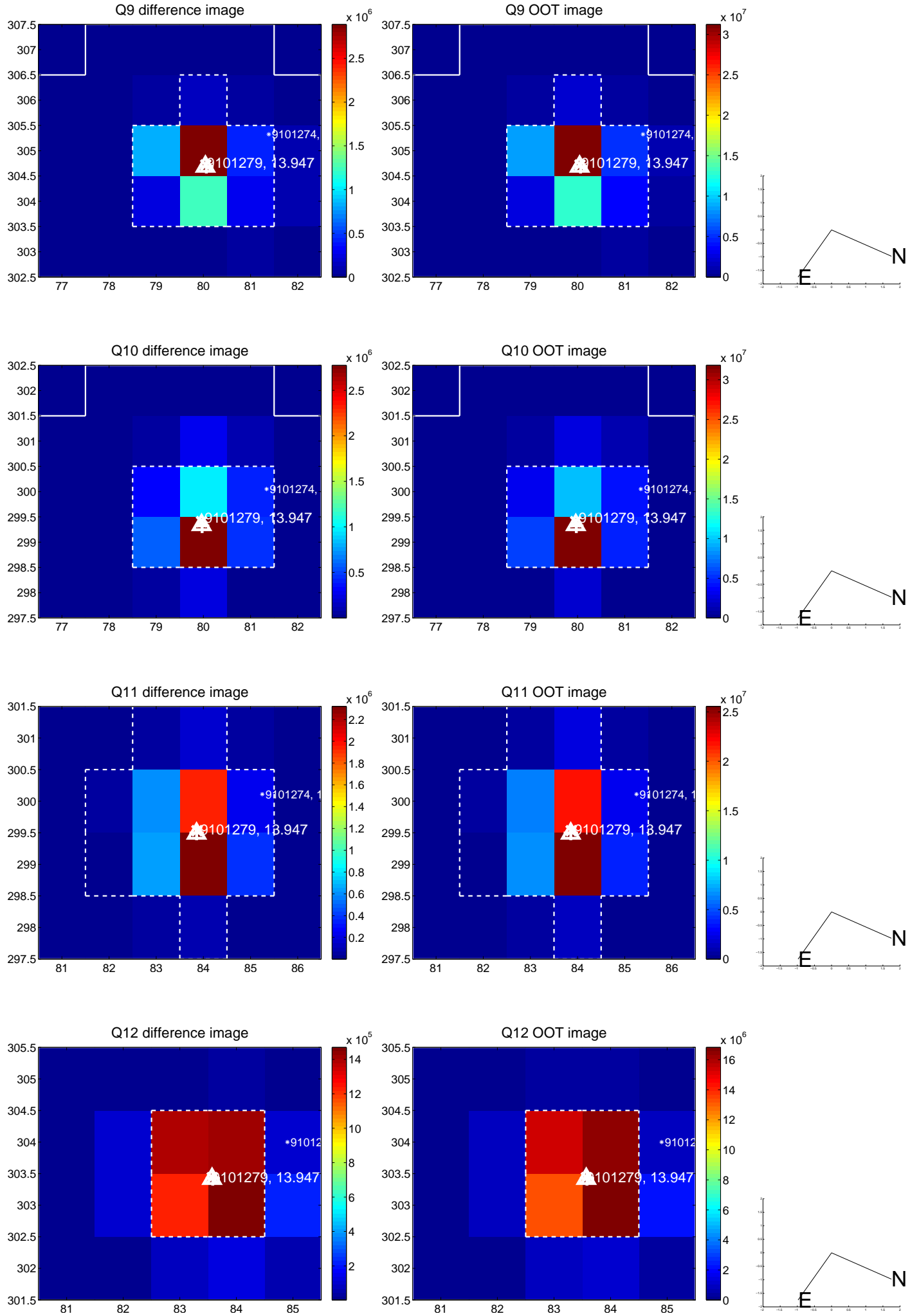
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



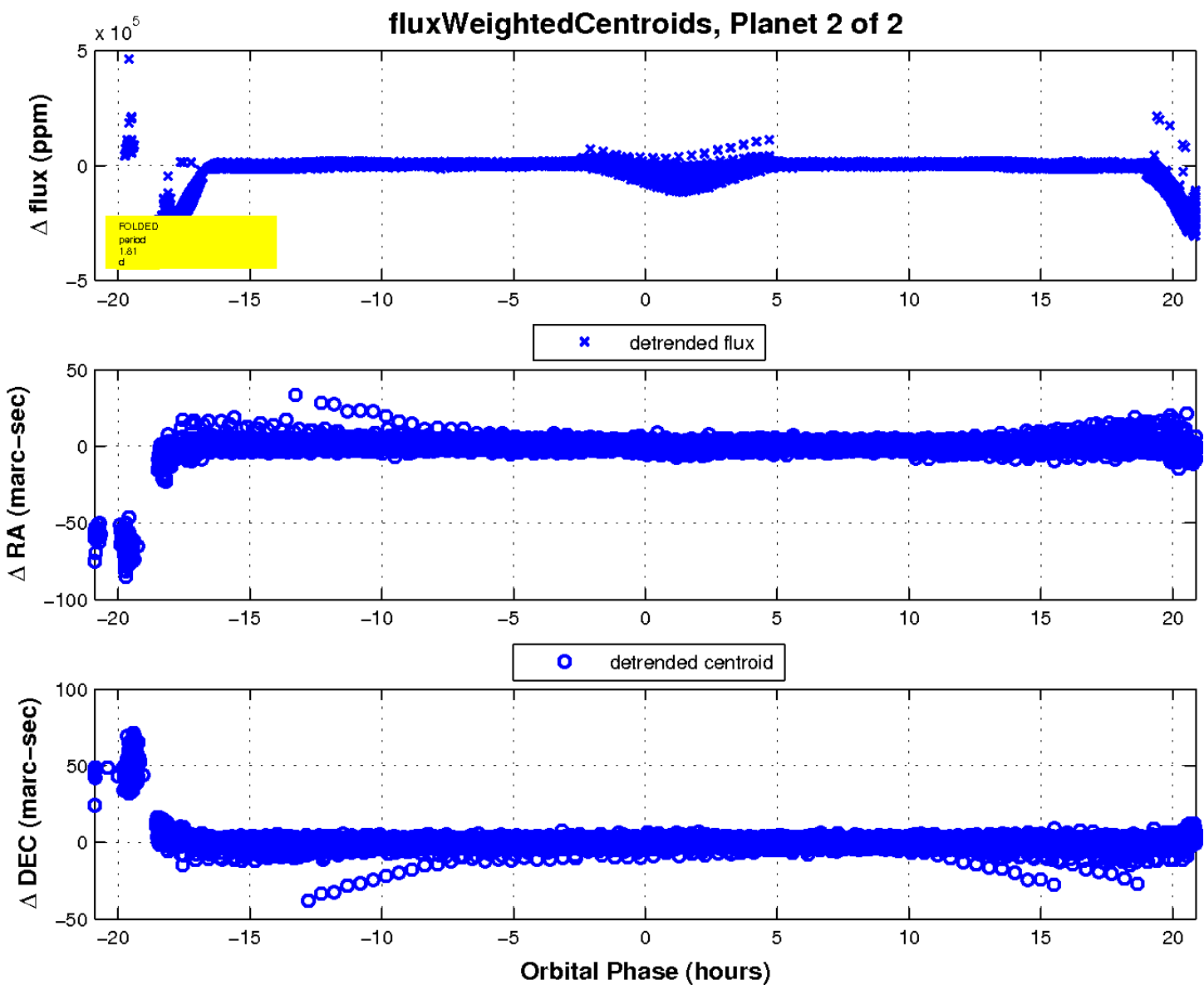
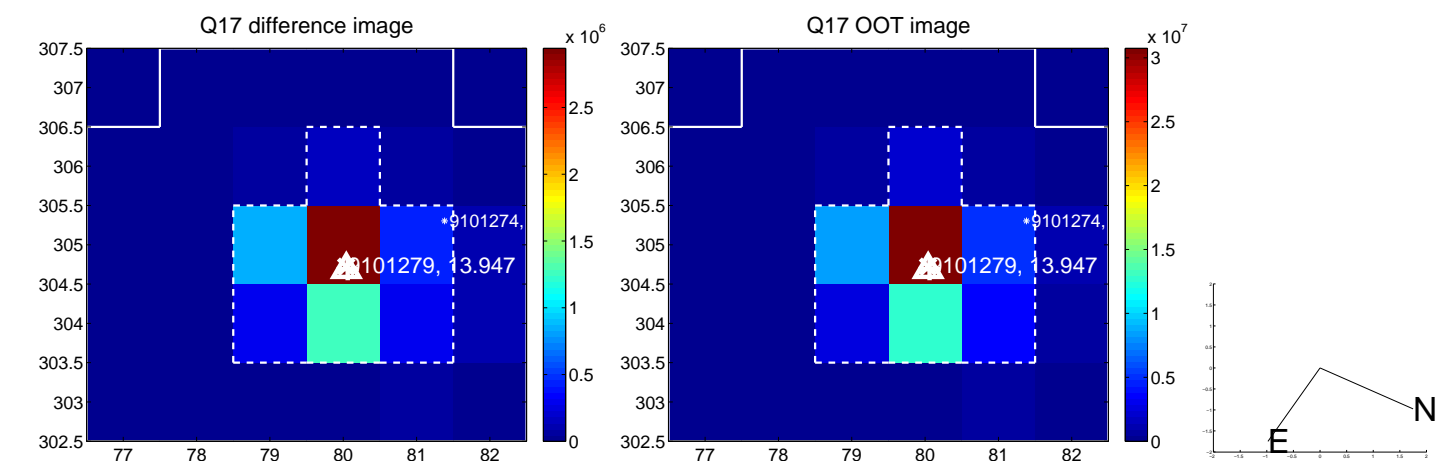
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

