

KIC 007597703

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})
007597703-01	OBS	6891.01	4.608932	133.986860	386824.8	5.000	20355.2	-1.0	0.76	5938	41.19	243.19
007597703-02	OBS	No	4.608800	135.018755	8923.9	15.000	876.5	-1.0	0.76	5938	7.15	243.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007597703-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
007597703-02	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.

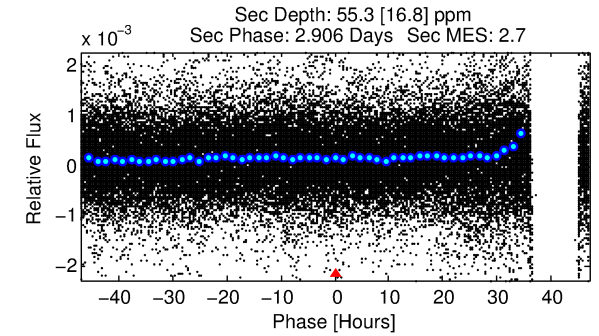
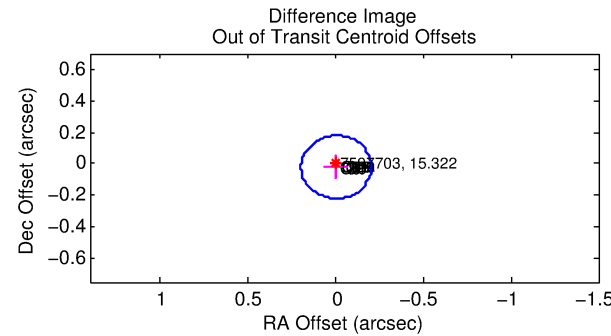
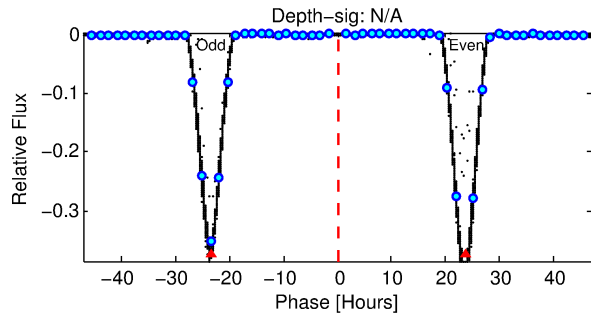
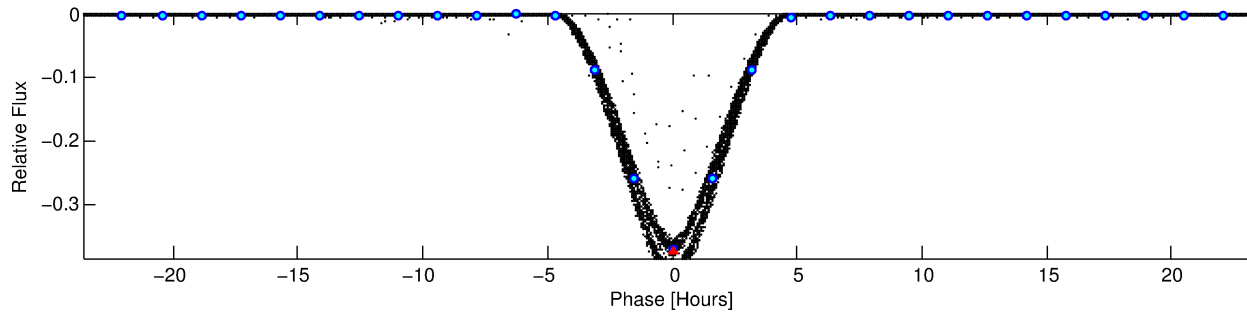
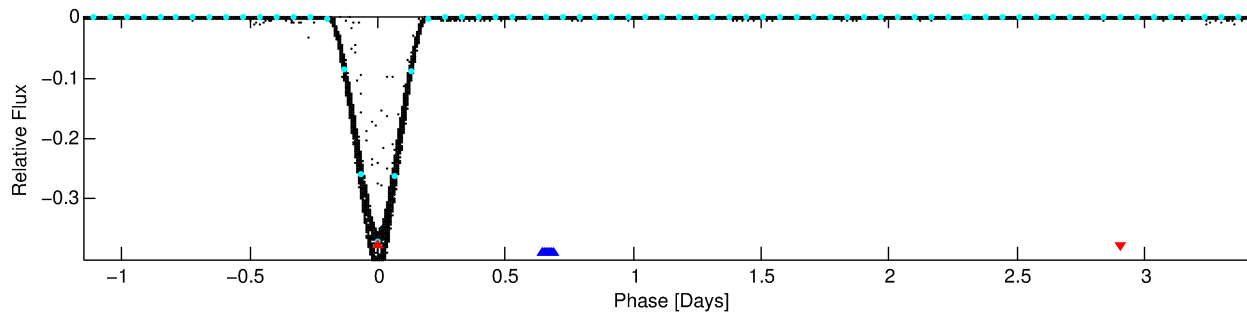
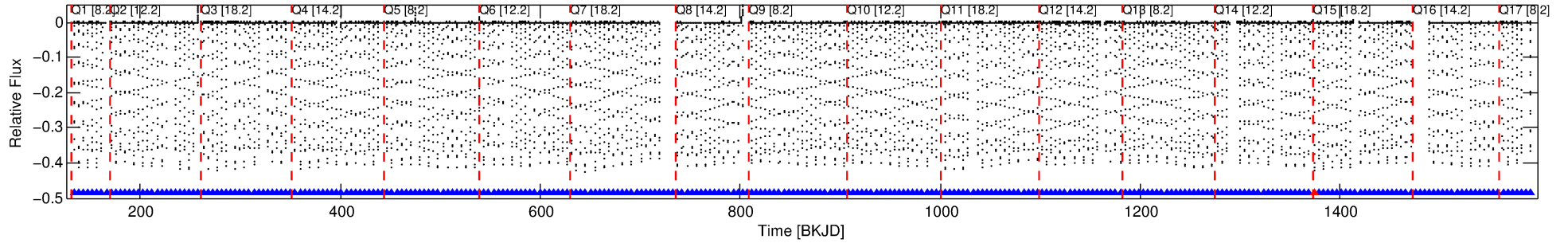
Ephemeris Match Information For 007597703-01

No Significant Match Found

DV One-Page Summary

KIC: 7597703 Candidate: 1 of 2 Period: 4.609 d
KOI: K06891.01 Corr: 0.754

Kp: 15.32 R*: 0.76 Rs Teff: 5938.0 K Logg: 4.61 Fe/H: -0.740



TPS TCE Results:

Period = 4.60893 d
Epoch = 133.9869 BKJD

DV fit results are unavailable

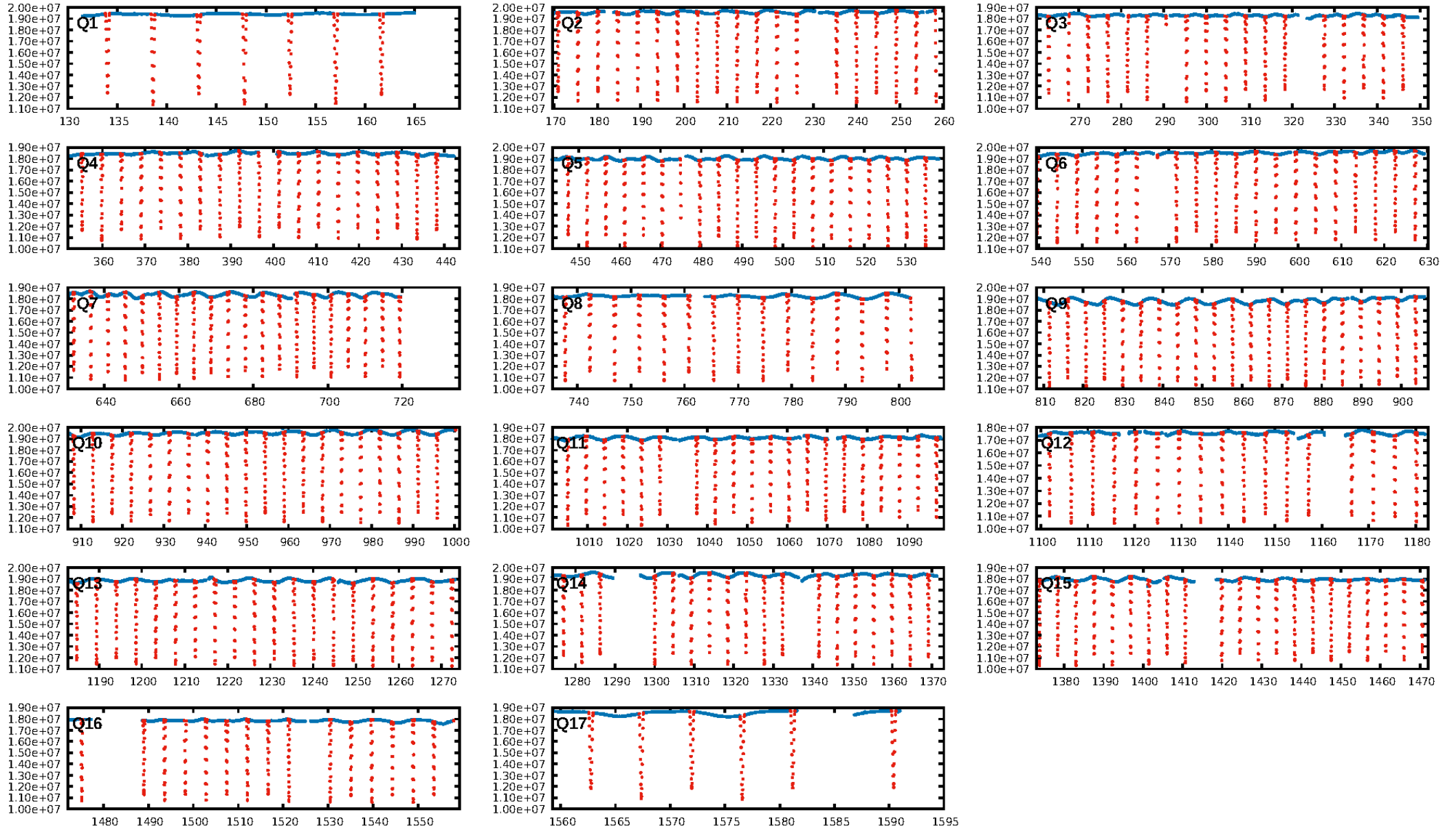
DV Diagnostic Results:

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 [280/281]
GhostDiagnostic-chr: 0.6335
Centroid-sig: 0.0%
Centroid-so: 0.094 arcsec [149.65 σ]
OotOffset-rm: 0.020 arcsec [0.31 σ]
KicOffset-rm: 0.172 arcsec [2.53 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

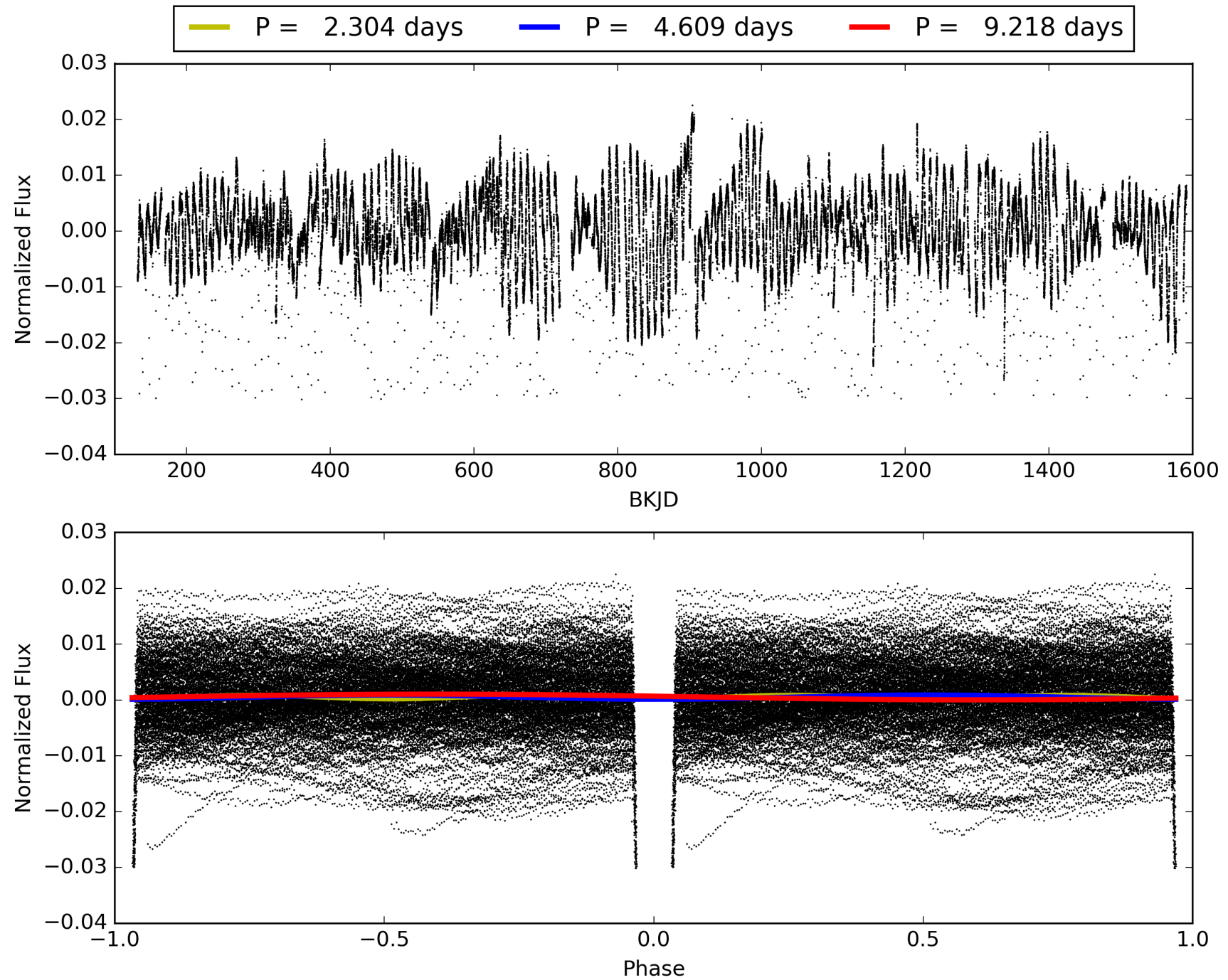
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:26:05 Z

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

TCE 007597703-01, PDC Light Curves

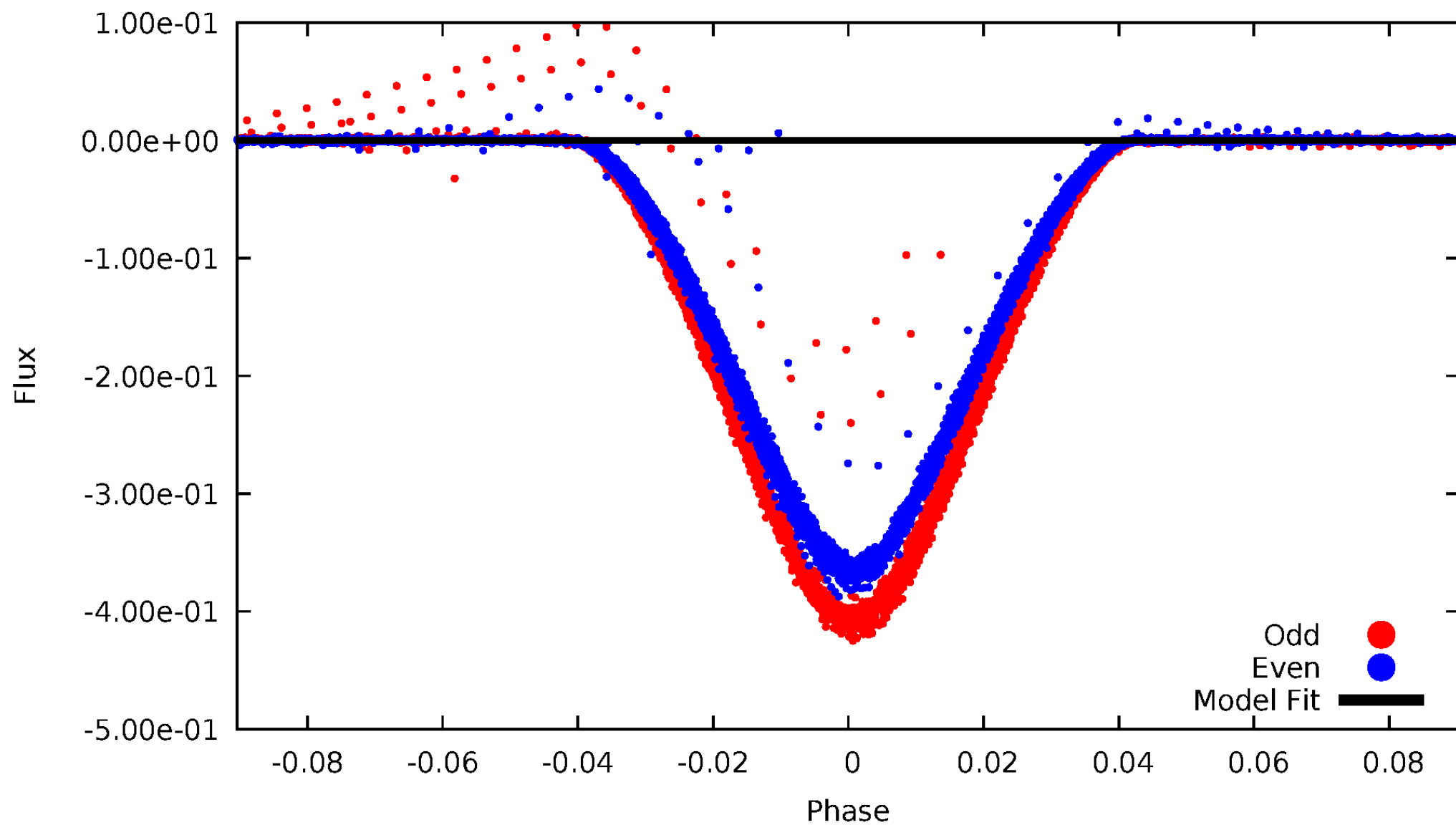


TCE 007597703-01



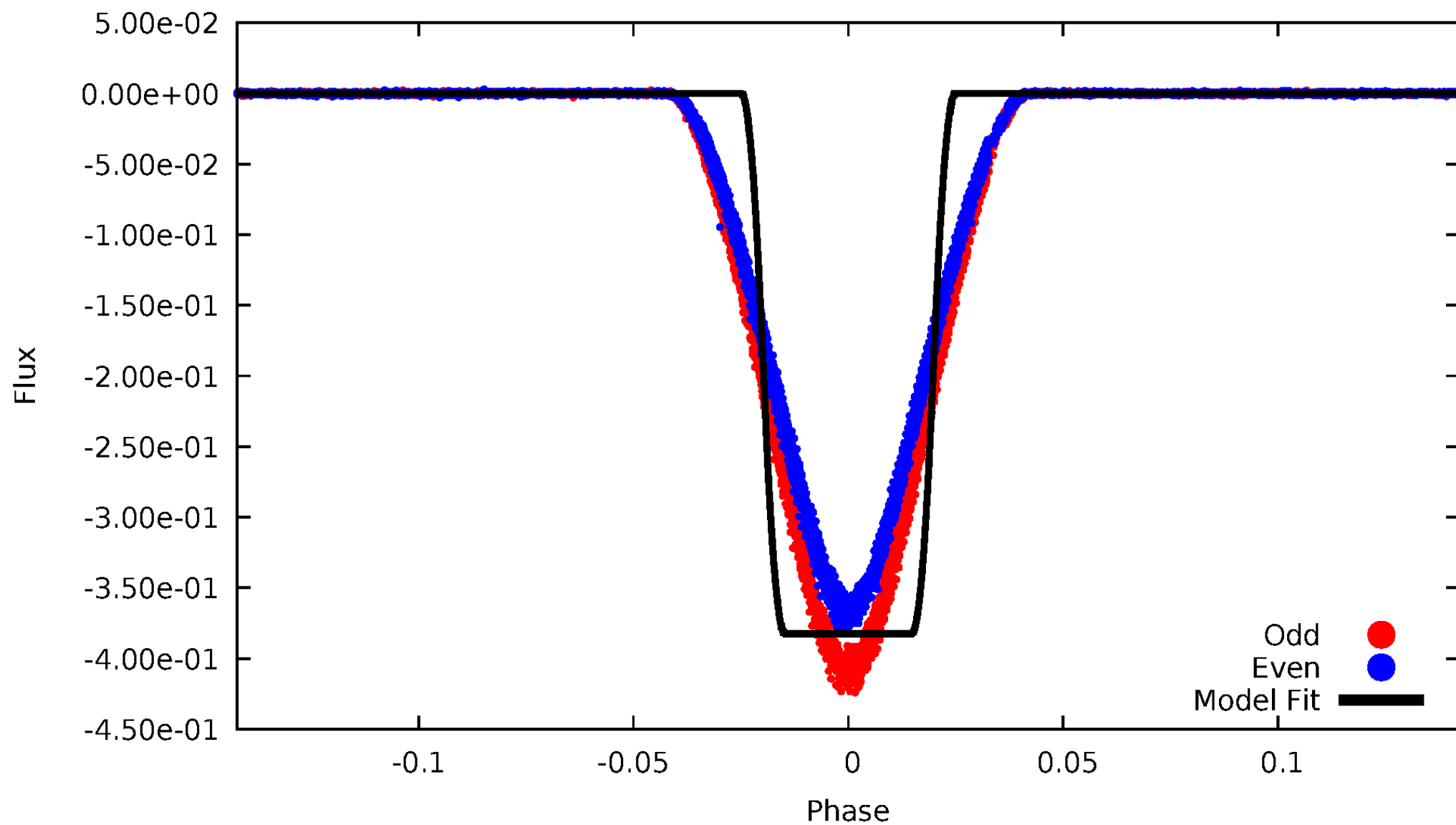
DV Odd/Even

TCE 007597703-01



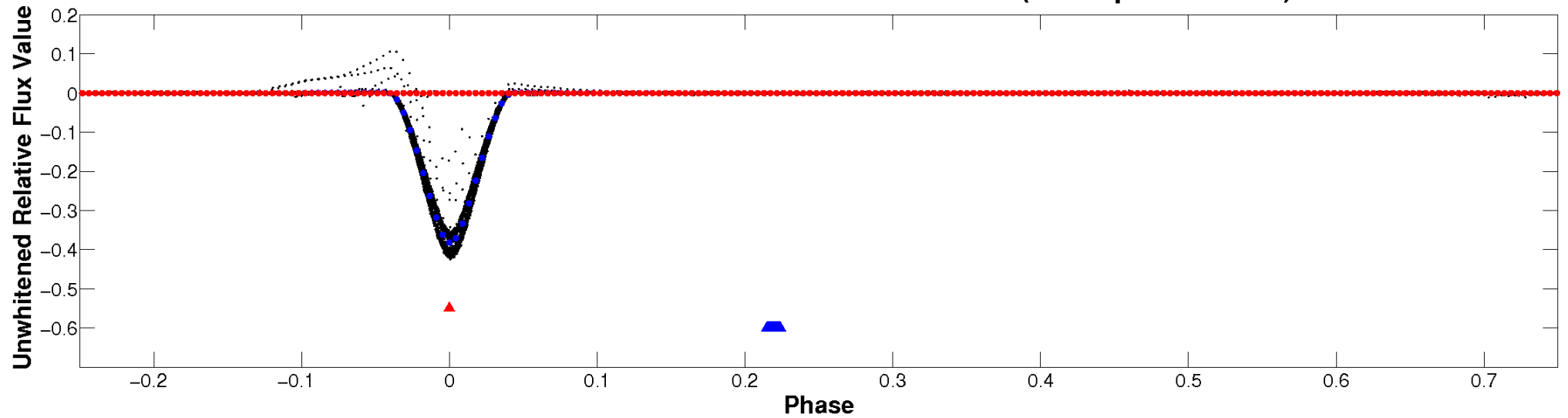
ALT Odd/Even

TCE 007597703-01



Non-Whitened Vs. Whitened Light Curve

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

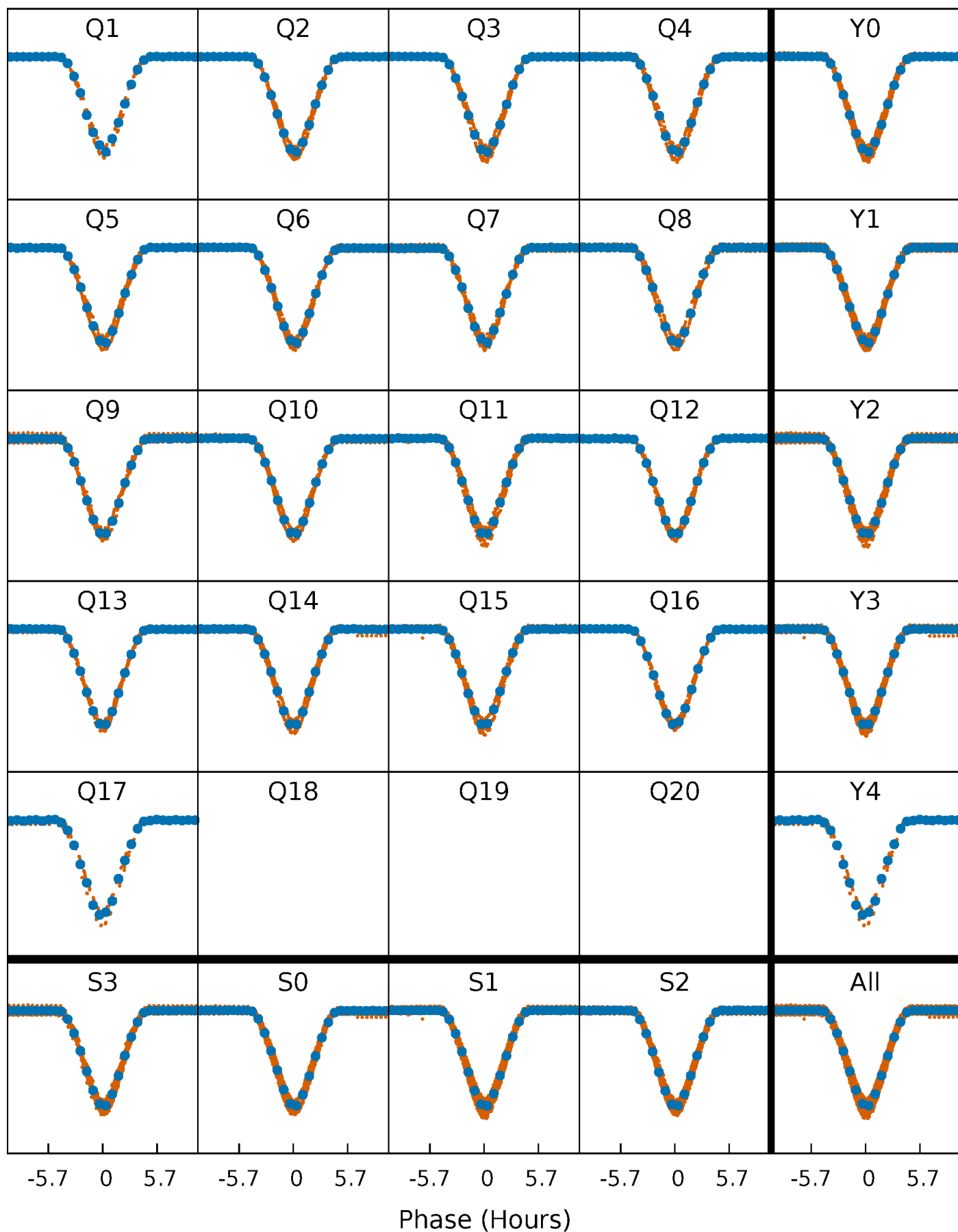


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



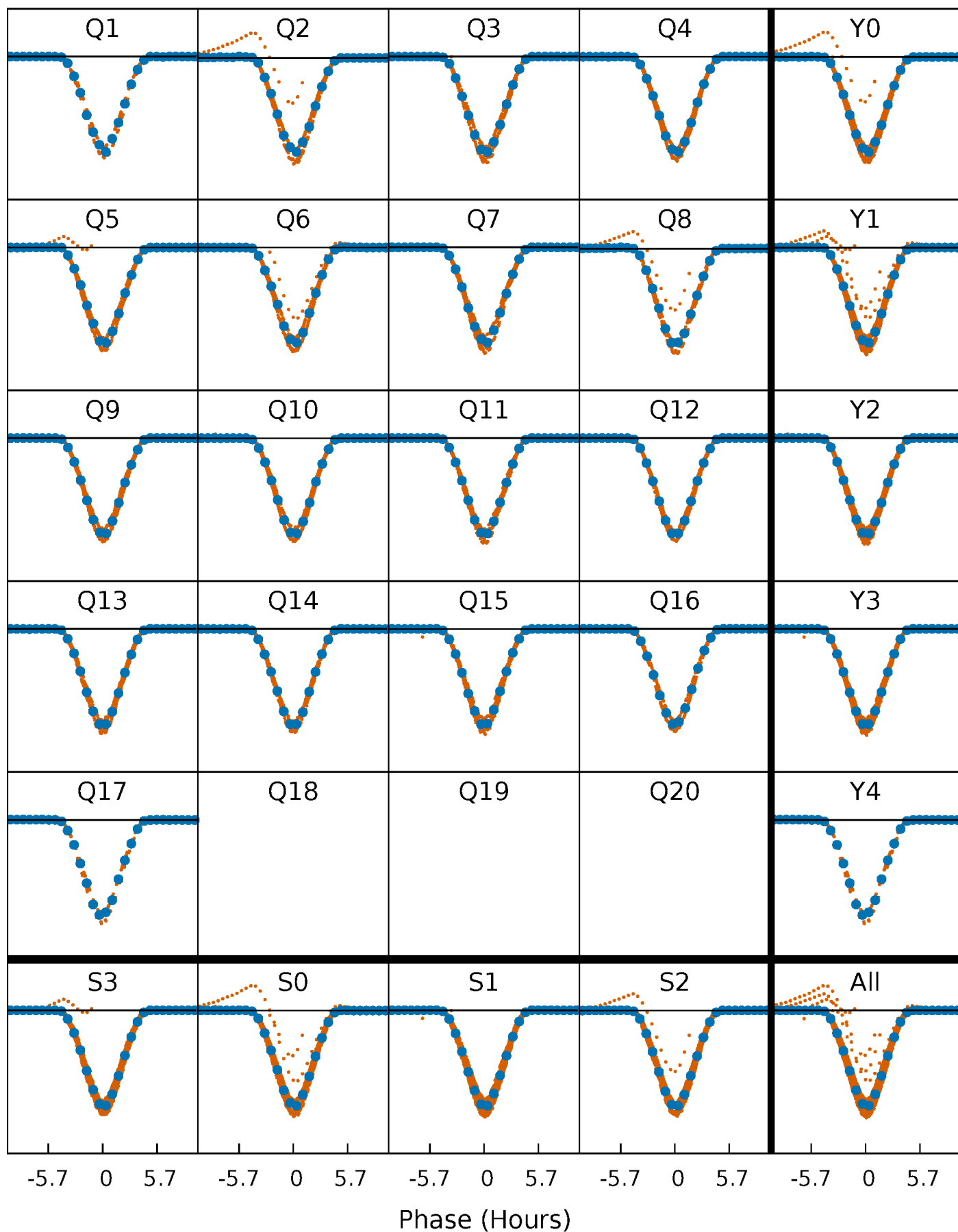
PDC Quarter-Phased Transit Curves

TCE 007597703-01 P= 4.608932 Days $T_0=133.986860$ (BKJD)



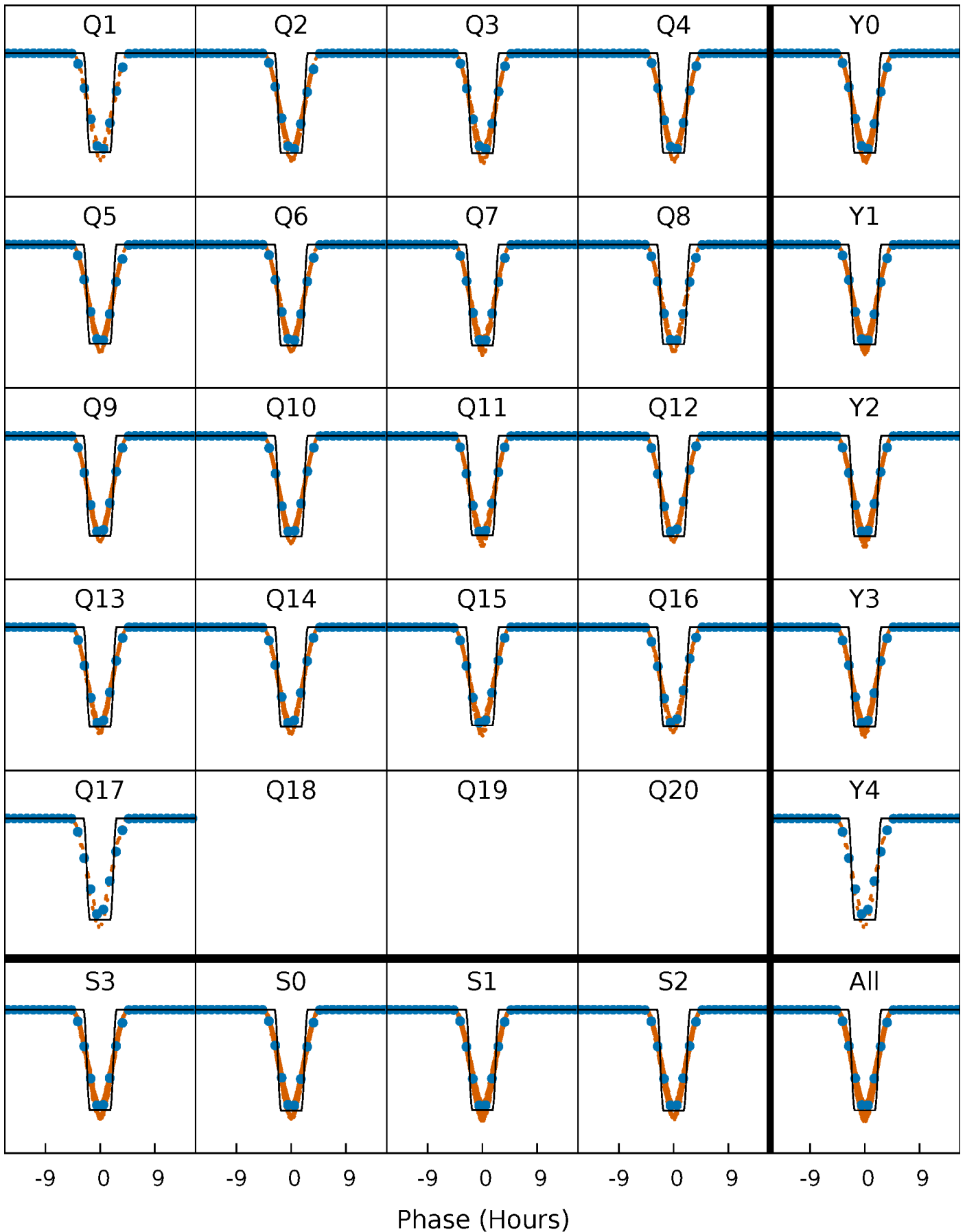
DV Quarter-Phased Transit Curves

TCE 007597703-01 P= 4.608932 Days $T_0=133.986860$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

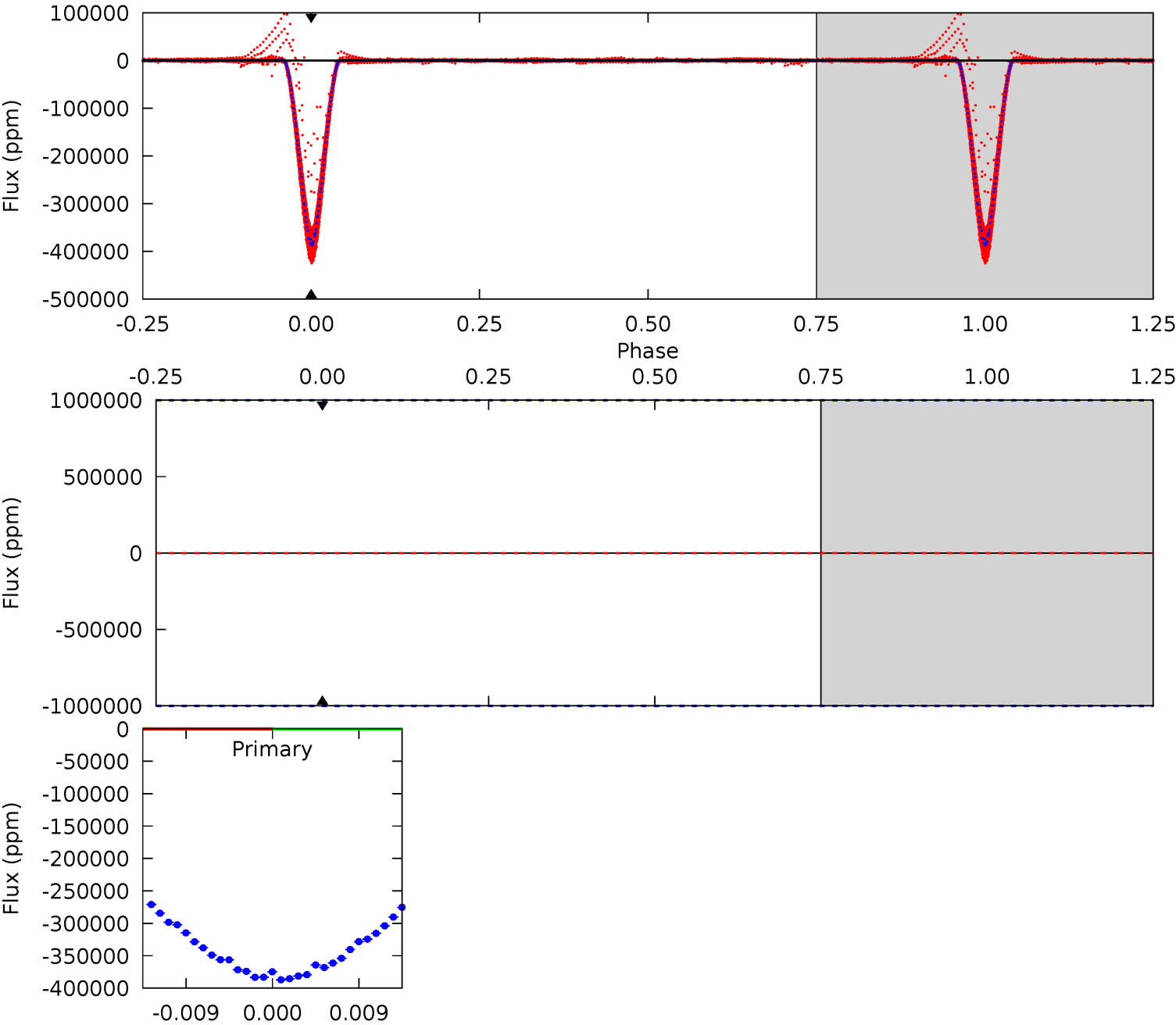
TCE 007597703-01 P= 4.608932 Days $T_0=133.989978$ (BKJD)



DV Model-Shift Uniqueness Test

007597703-01, P = 4.608932 Days, E = 129.377928 Days

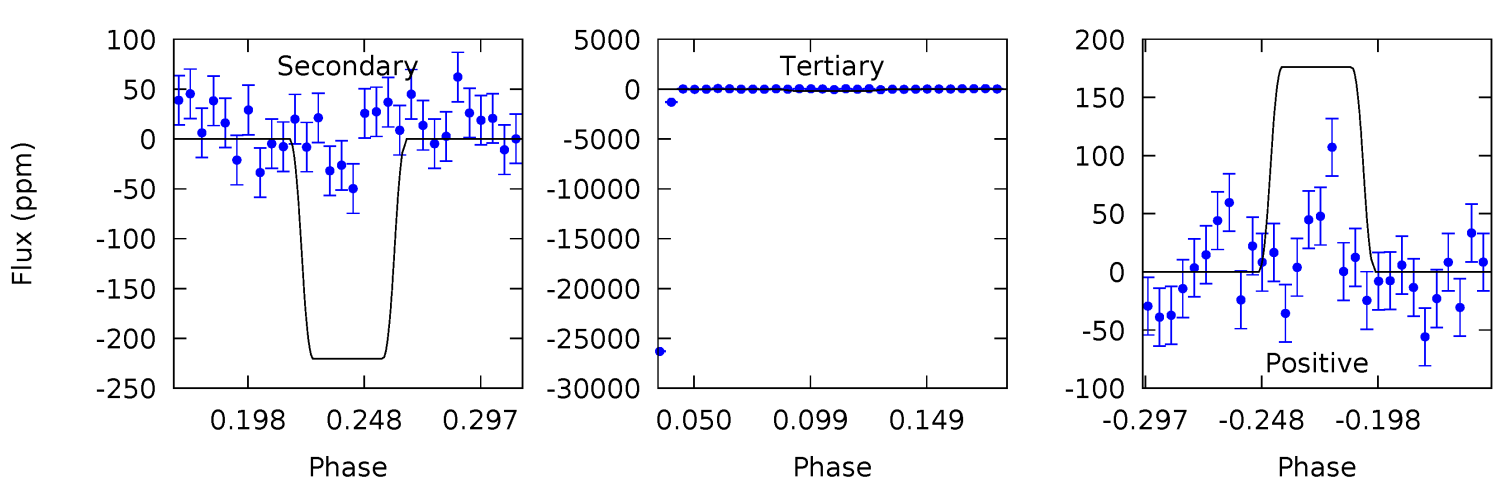
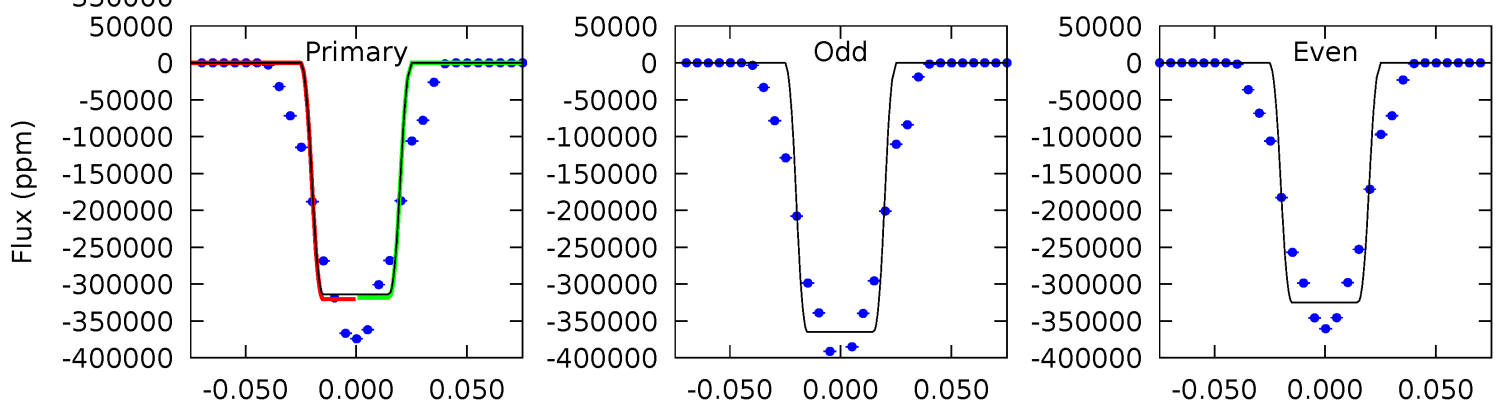
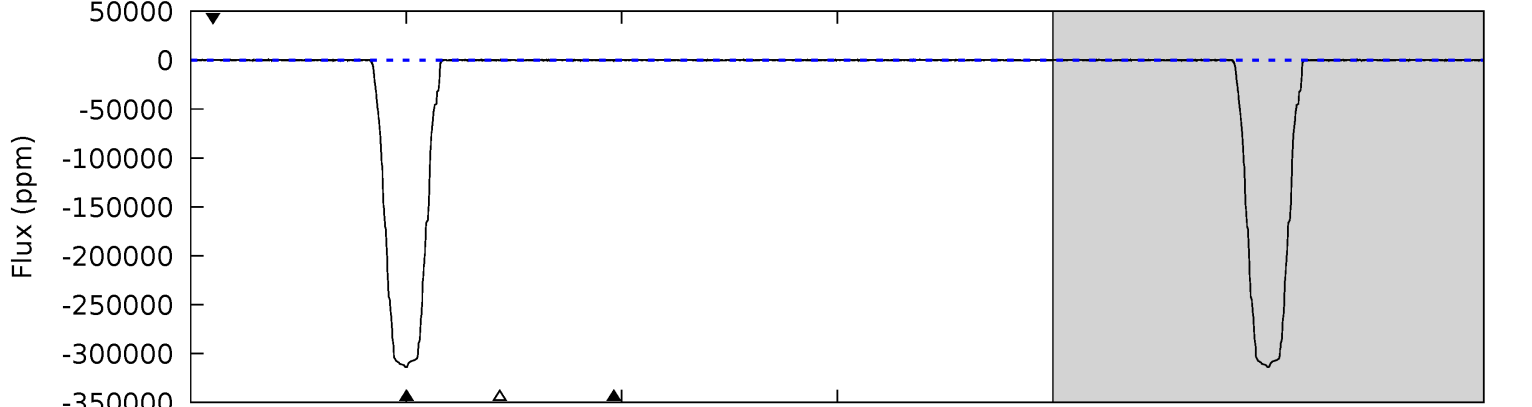
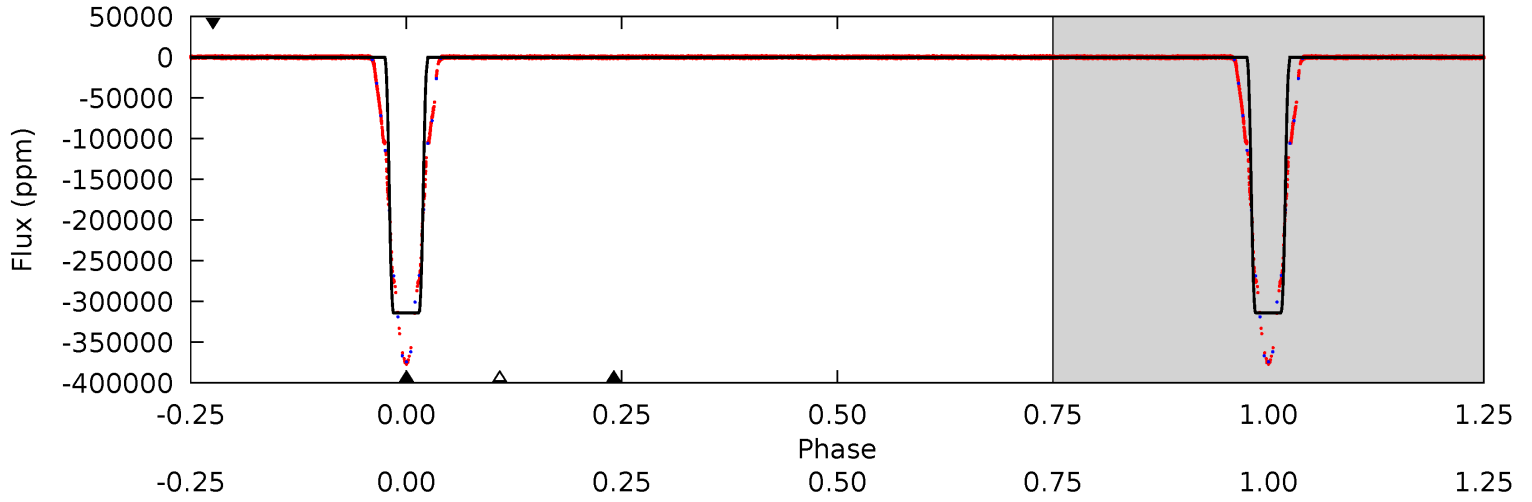
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007597703-01, P = 4.608932 Days, E = 129.381046 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7133	5.01	4.28	4.00	4.71	1.96	1.29	7128	7129	0.73	1.01	939.3	1.02	0.00	0



Stellar Parameters For KIC 007597703

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5938^{+161}_{-161}	$4.605^{+0.036}_{-0.153}$	$-0.740^{+0.300}_{-0.300}$	$0.755^{+0.158}_{-0.053}$	$0.844^{+0.071}_{-0.087}$	$2.760^{+0.390}_{-1.129}$
	+3%/-3%	+1%/-3%	+41%/-41%	+21%/-7%	+8%/-10%	+14%/-41%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007597703-01 / KOI 6891.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$42.44^{+9.21}_{-9.08}$	1429^{+72}_{-54}	-2710^{+7684}_{-2062}	$-2.099^{+91.190}_{-72.579}$
Alt.	-221 ± 44	$53.33^{+9.77}_{-8.94}$	1433^{+74}_{-56}	-2038^{+80}_{-65}	$0.110^{+0.054}_{-0.035}$

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 $A_{obs} \gg 1.0$

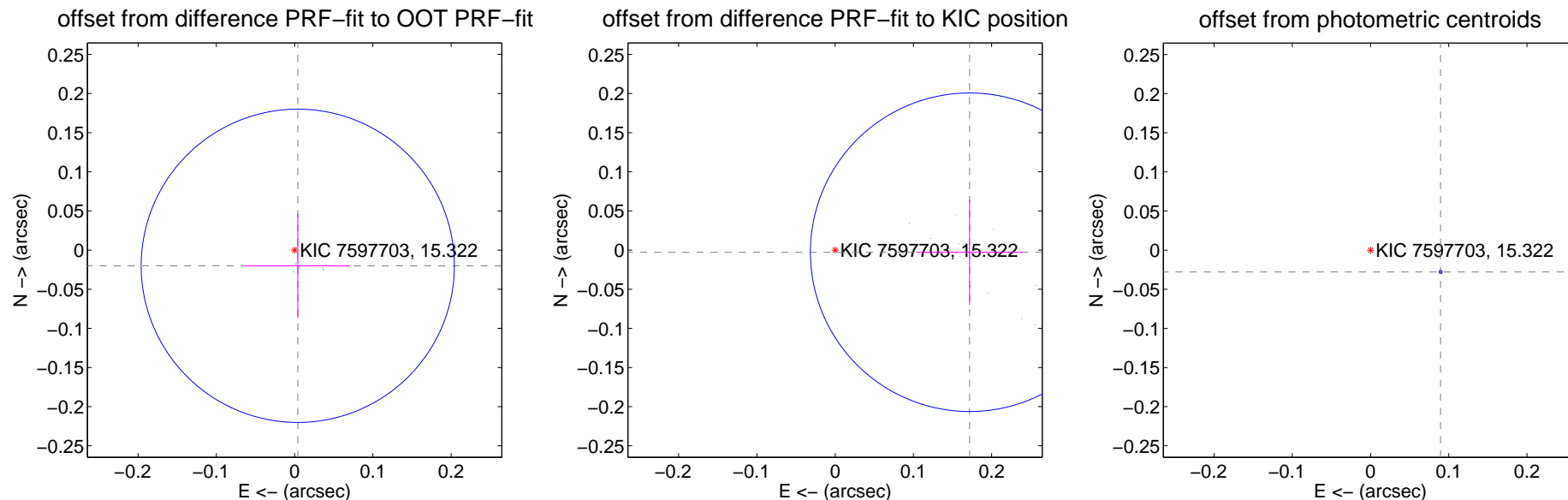
DV Centroid Data

Supplemental centroid analysis for 007597703-01. Kepler magnitude: 15.32. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

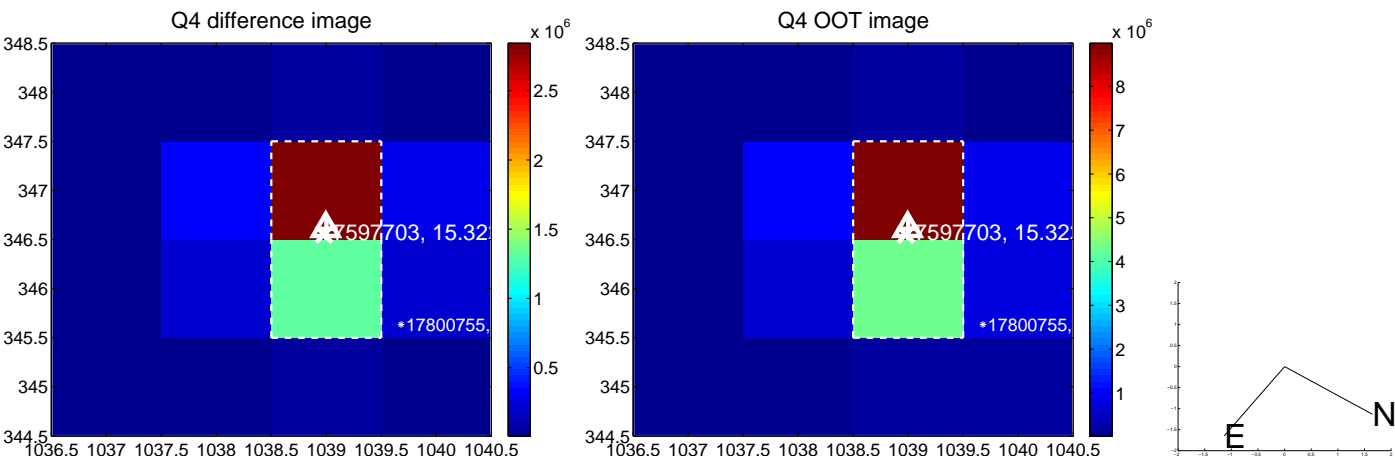
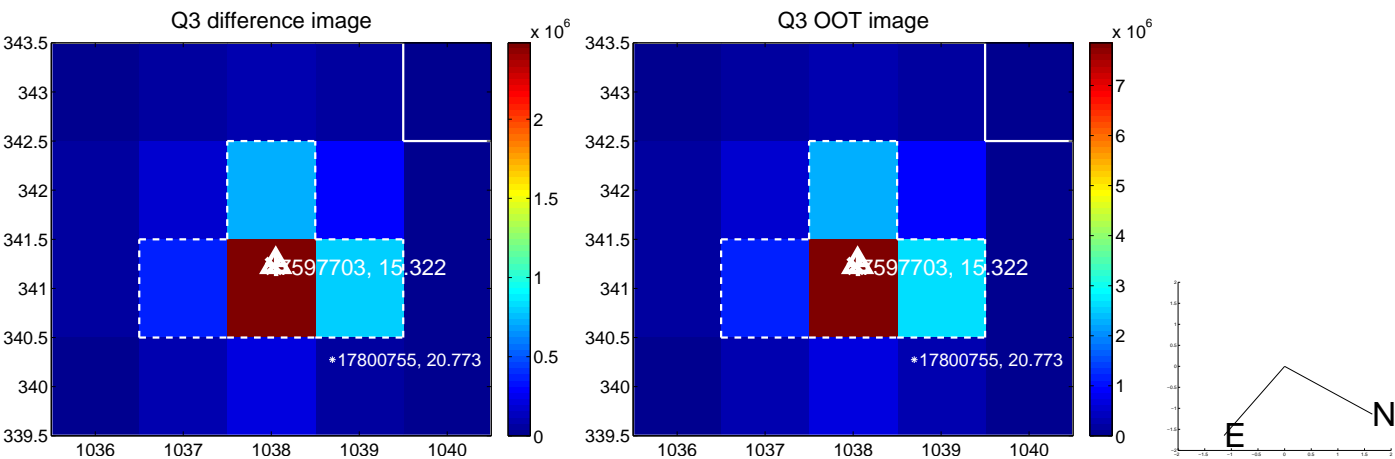
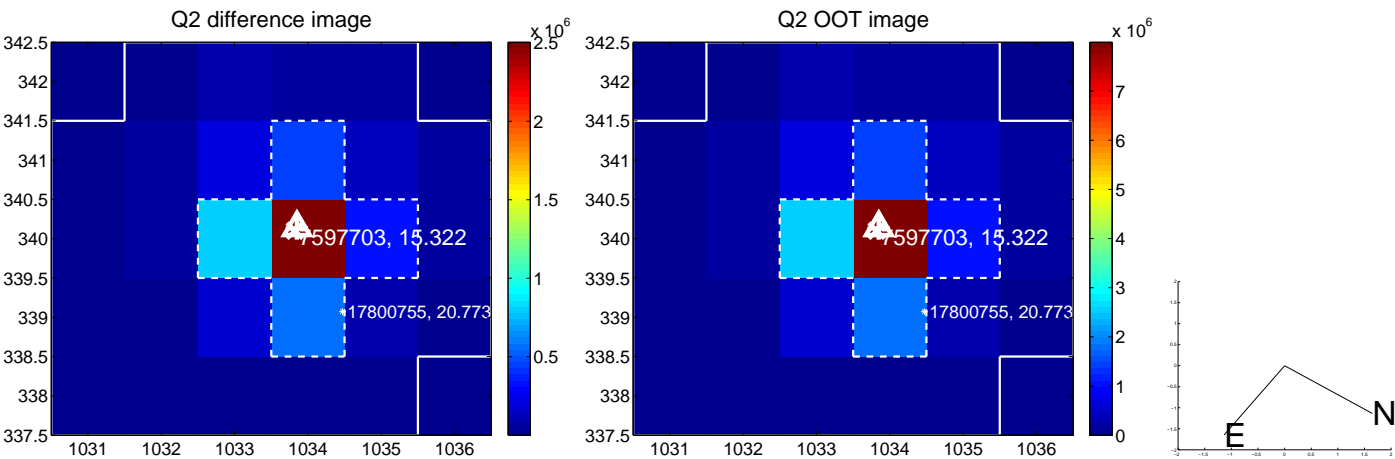
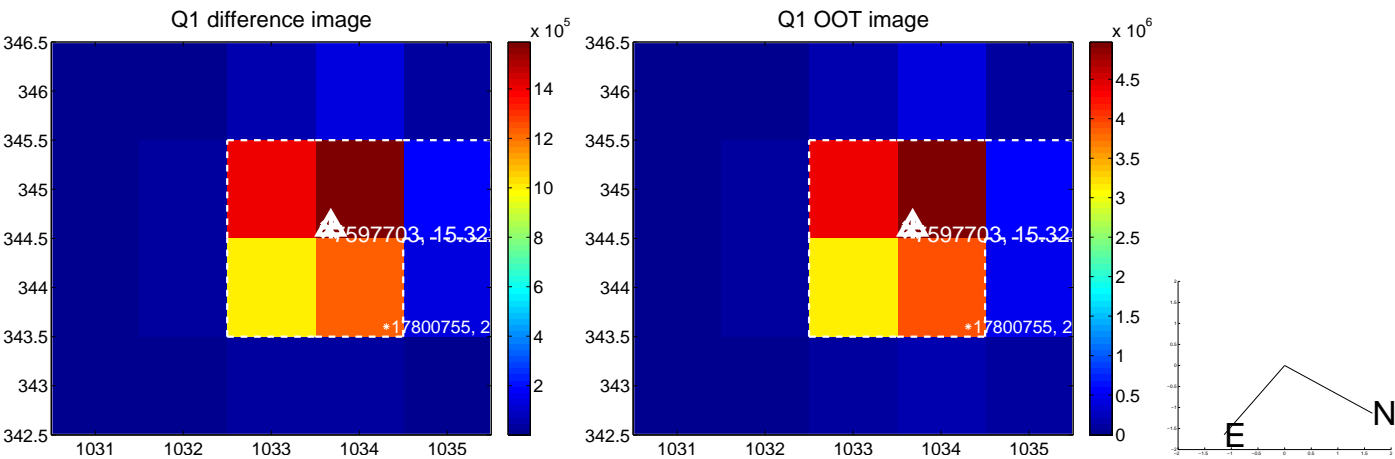
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.020 ± 0.067	0.31	-0.004 ± 0.067	-0.020 ± 0.067
PRF-fit source offset from KIC position	0.172 ± 0.068	2.53	-0.172 ± 0.068	-0.003 ± 0.067
photometric centroid source offset	0.09 ± 0.00	149.65	-0.09 ± 0.00	-0.03 ± 0.00

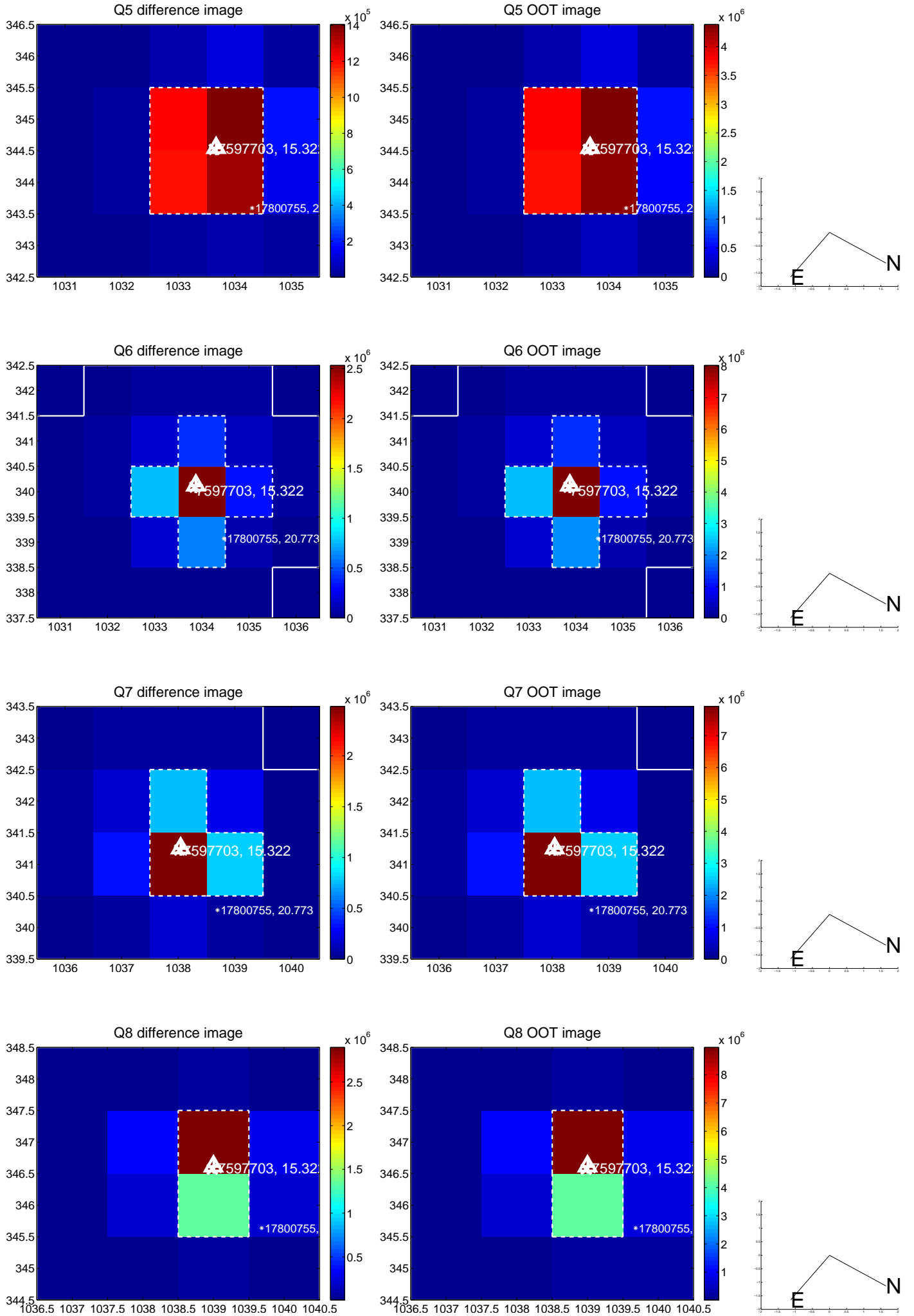


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

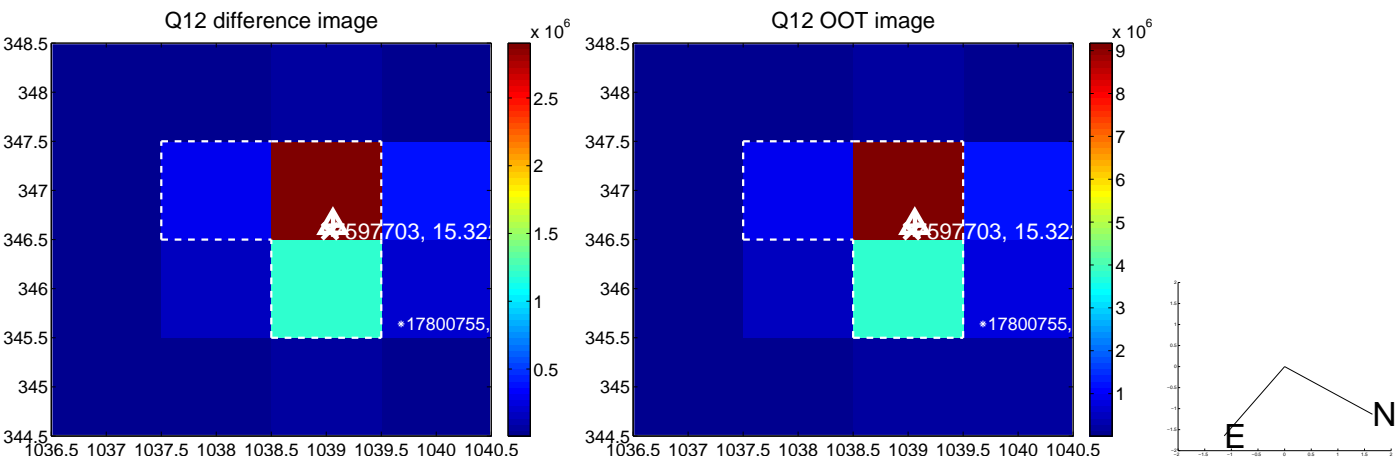
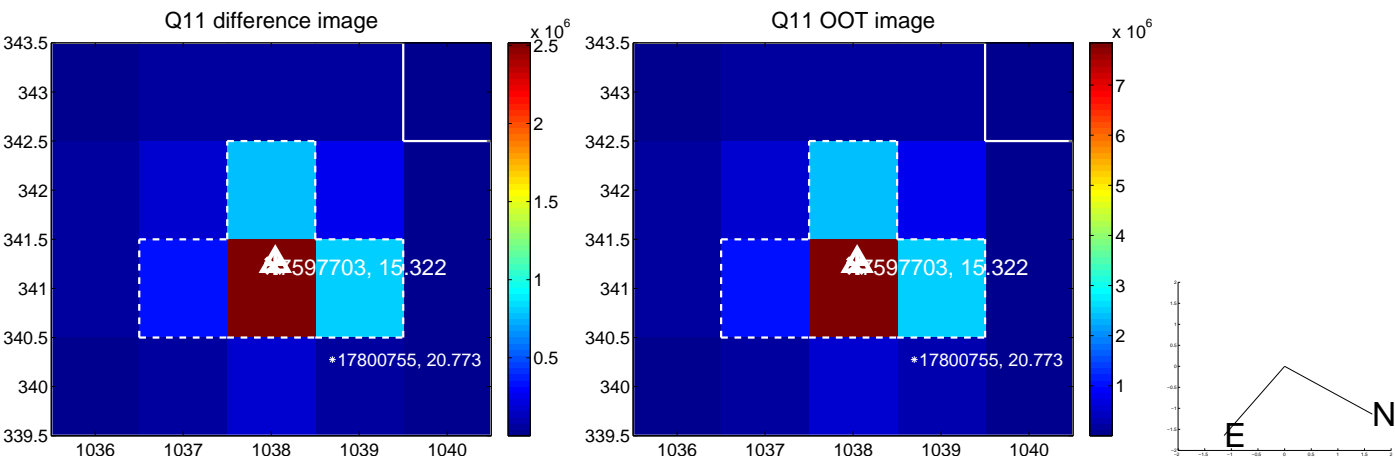
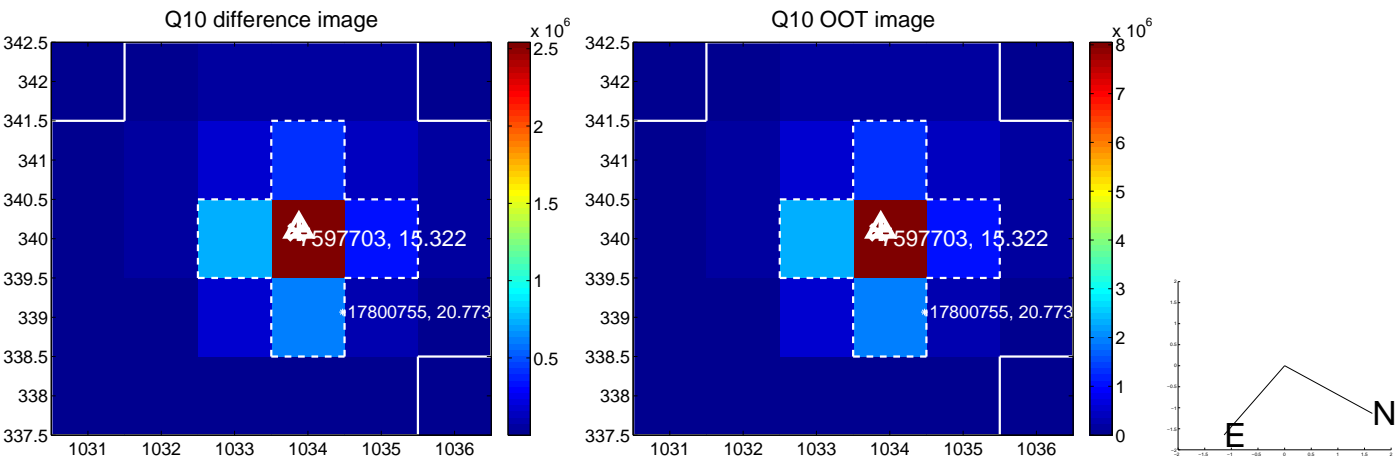
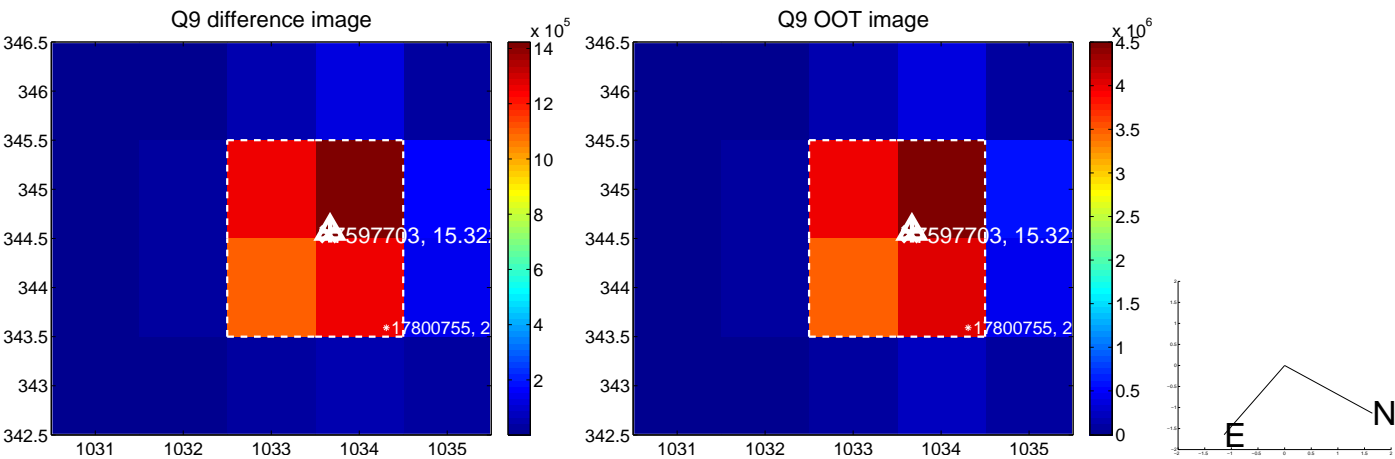
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



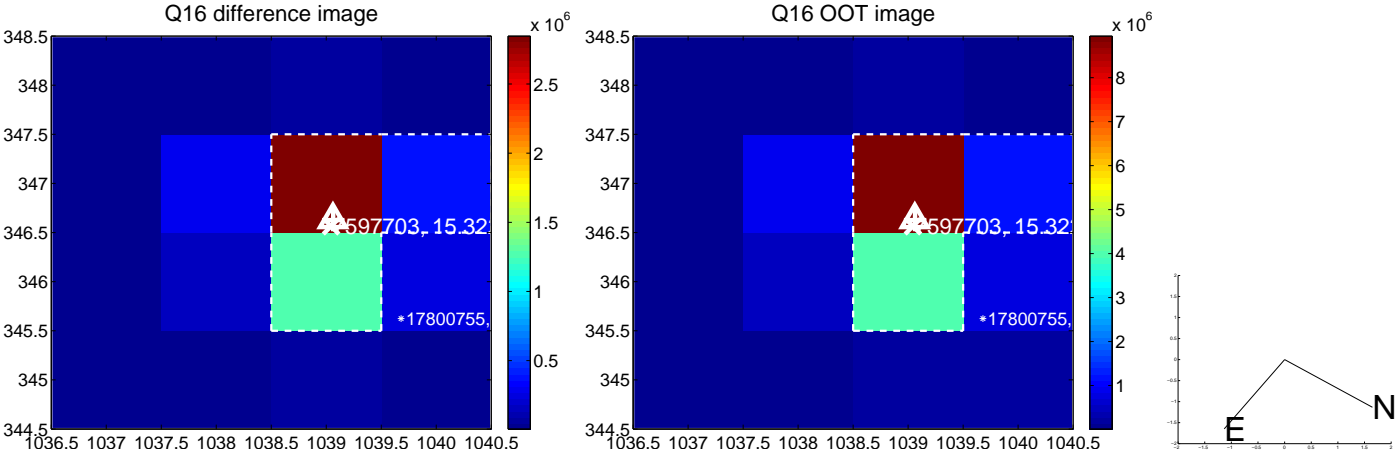
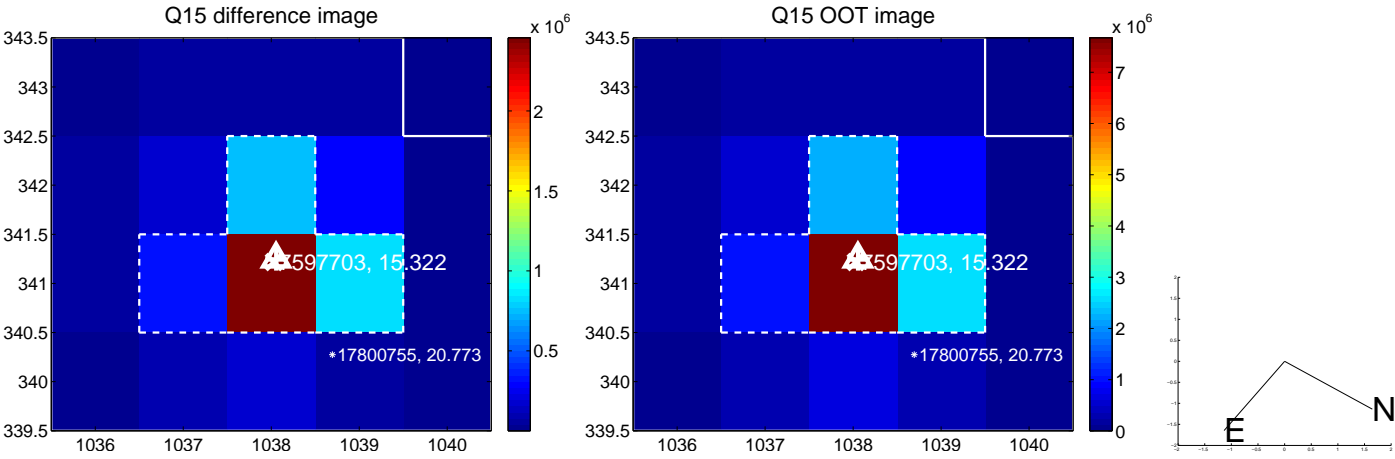
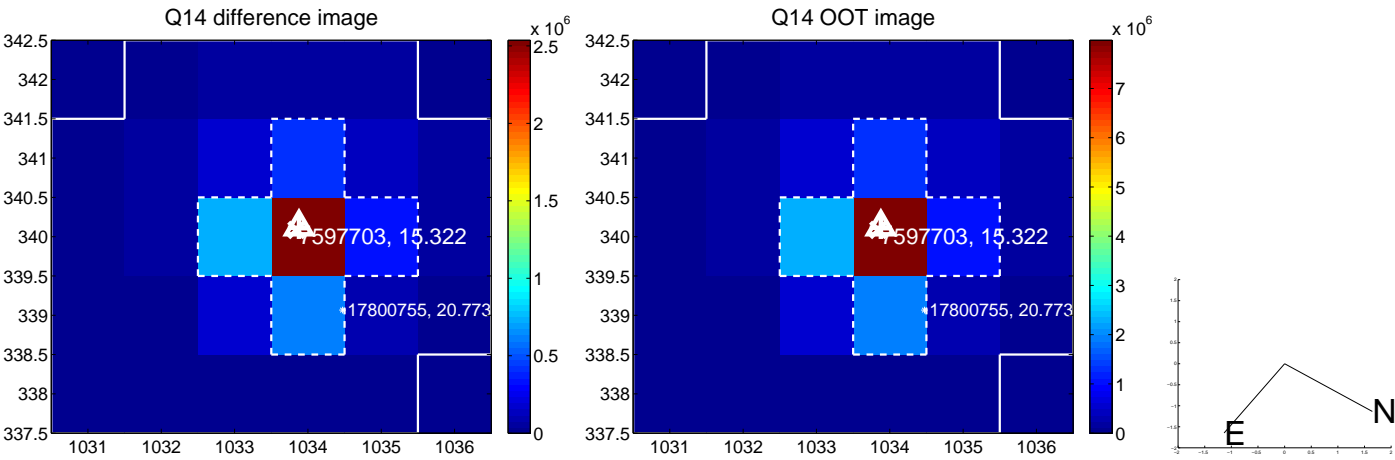
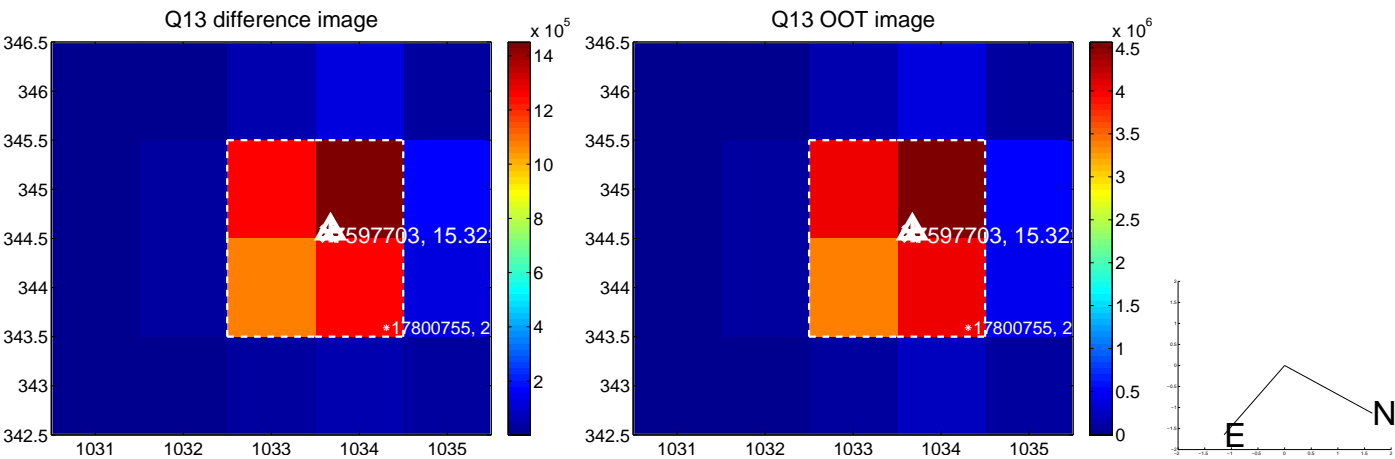
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



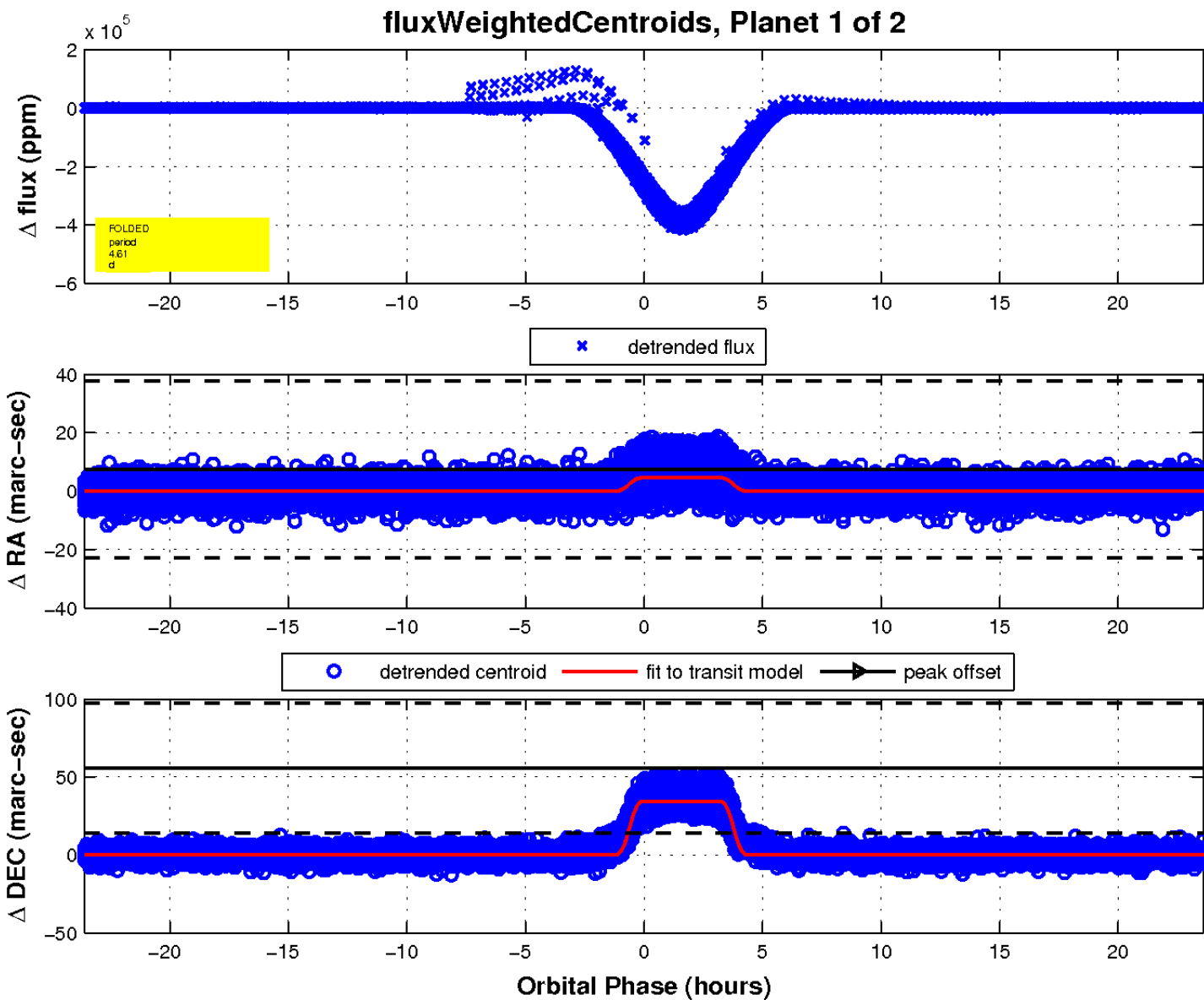
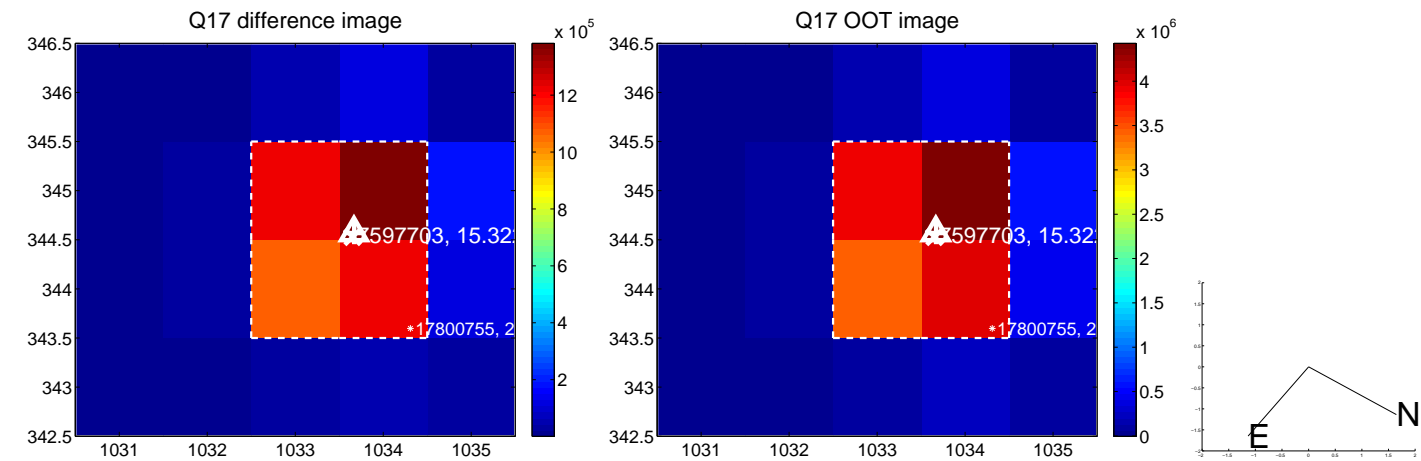
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

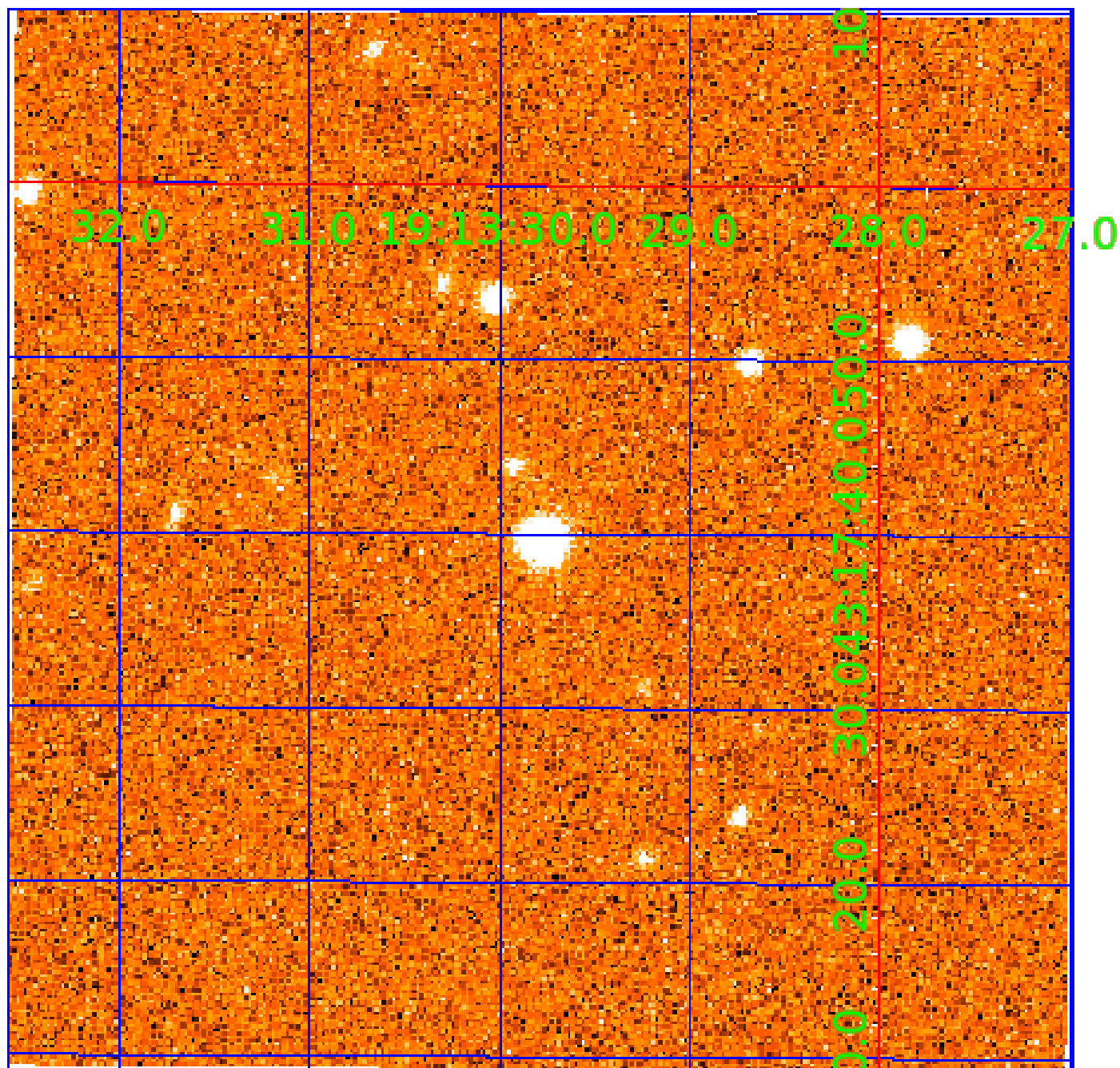


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007597703

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})
007597703-01	OBS	6891.01	4.608932	133.986860	386824.8	5.000	20355.2	-1.0	0.76	5938	41.19	243.19
007597703-02	OBS	No	4.608800	135.018755	8923.9	15.000	876.5	-1.0	0.76	5938	7.15	243.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007597703-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
007597703-02	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 007597703-02

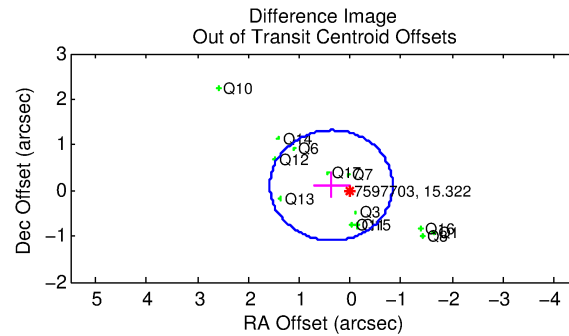
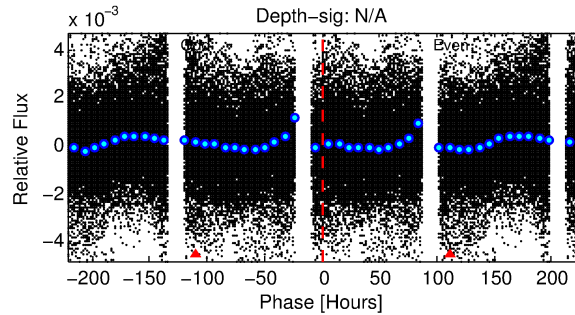
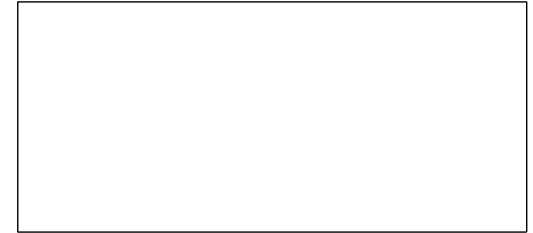
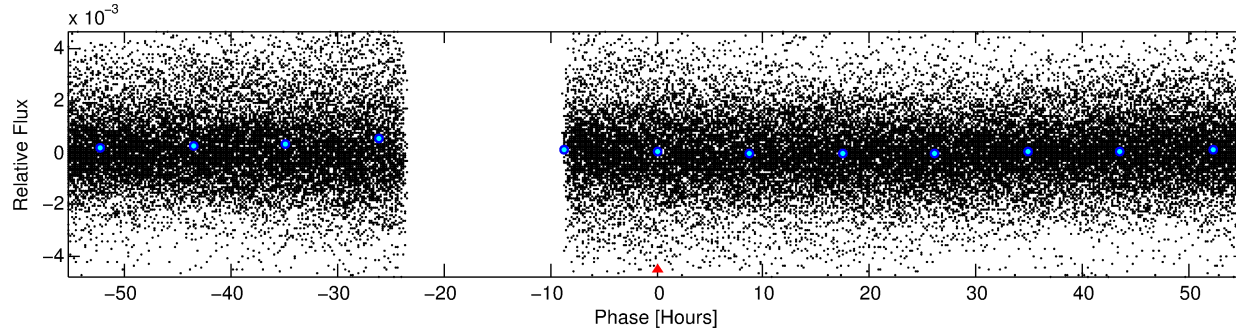
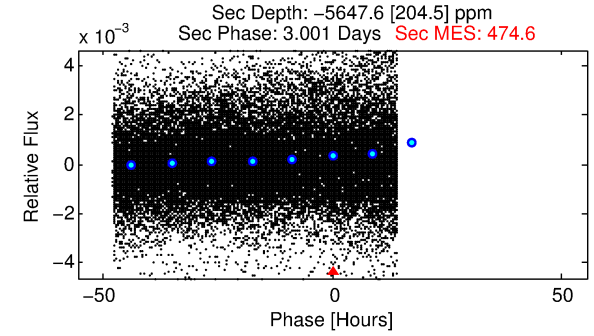
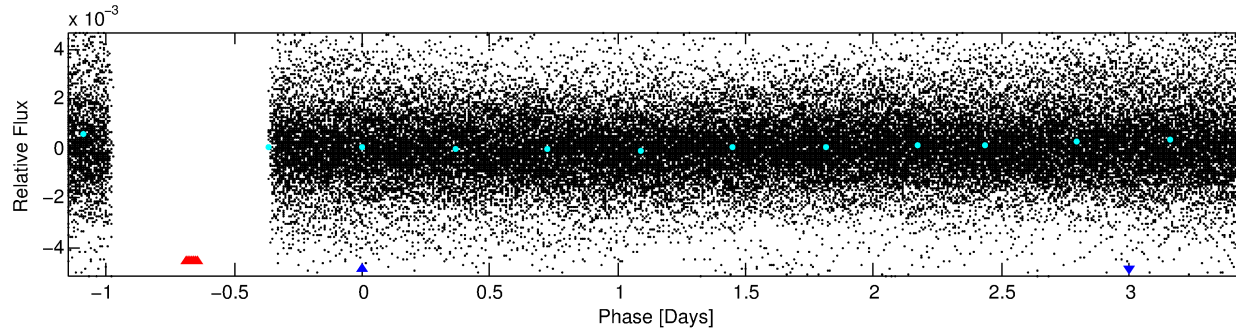
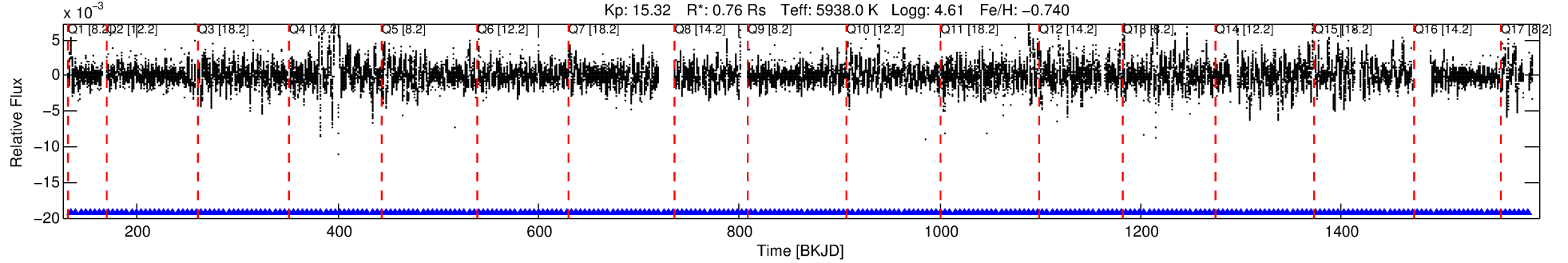
No Significant Match Found

DV One-Page Summary

KIC: 7597703 Candidate: 2 of 2 Period: 4.609 d

KOI: K06891 Corr: No Ephemeris Match

Kp: 15.32 R*: 0.76 Rs Teff: 5938.0 K Logg: 4.61 Fe/H: -0.740



TPS TCE Results:

Period = 4.60880 d
Epoch = 135.0188 BKJD

DV fit results are unavailable

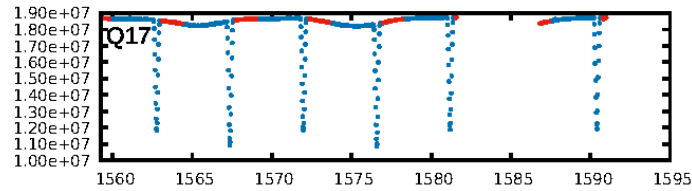
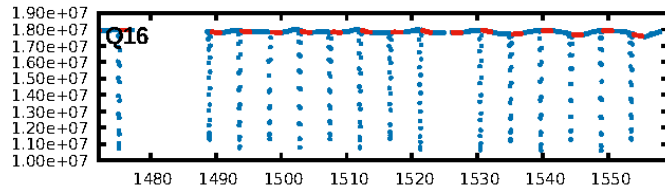
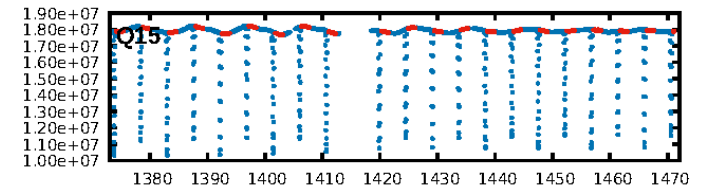
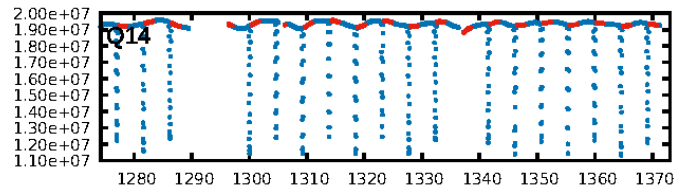
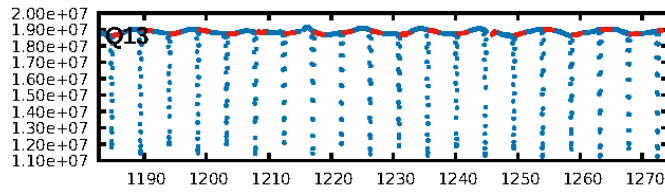
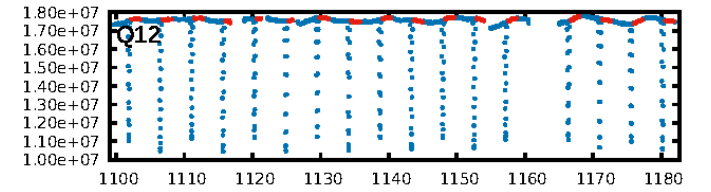
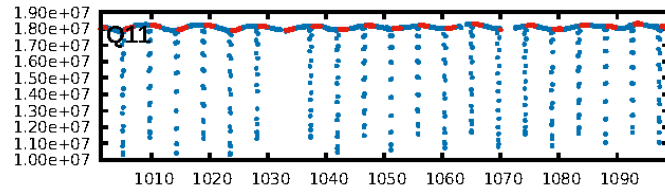
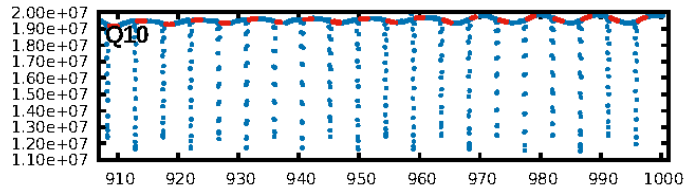
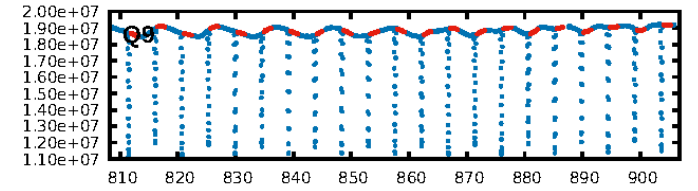
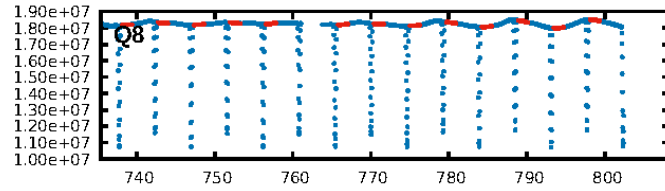
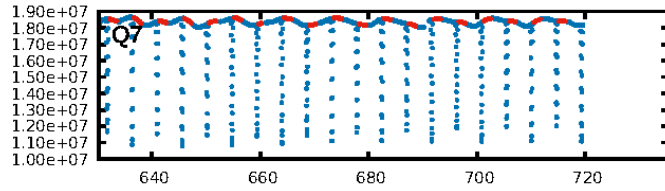
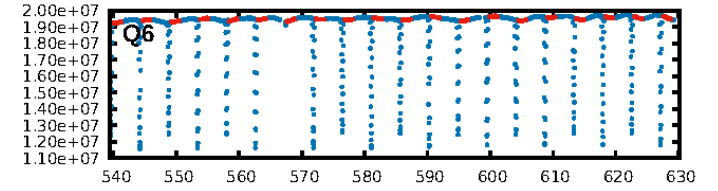
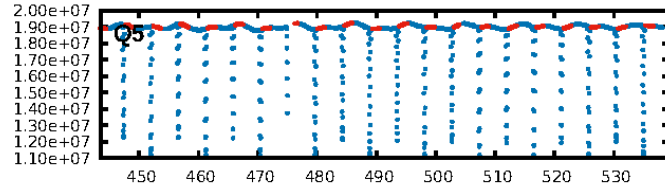
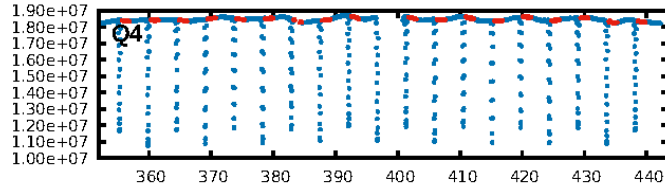
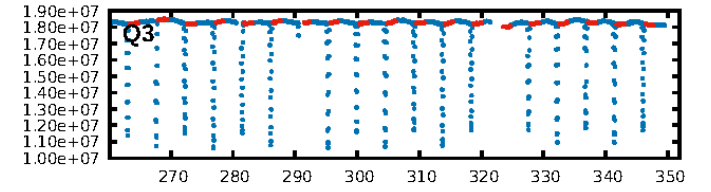
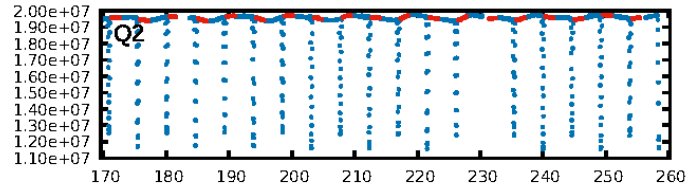
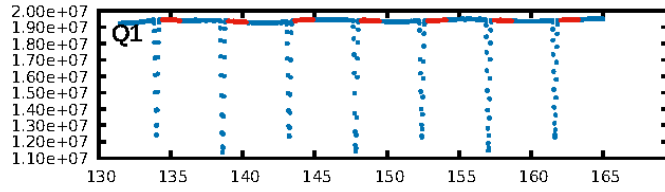
DV Diagnostic Results:

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 [285/285]
GhostDiagnostic-chr: -4.509
Centroid-sig: 1.2%
Centroid-so: 2.129 arcsec [1.93σ]
OotOffset-rm: 0.386 arcsec [0.96σ]
KicOffset-rm: 0.269 arcsec [0.62σ]
OotOffset-st: 3/4/3/3 [13]
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DiffImageOverlap-fno: 0.00 [0/17]

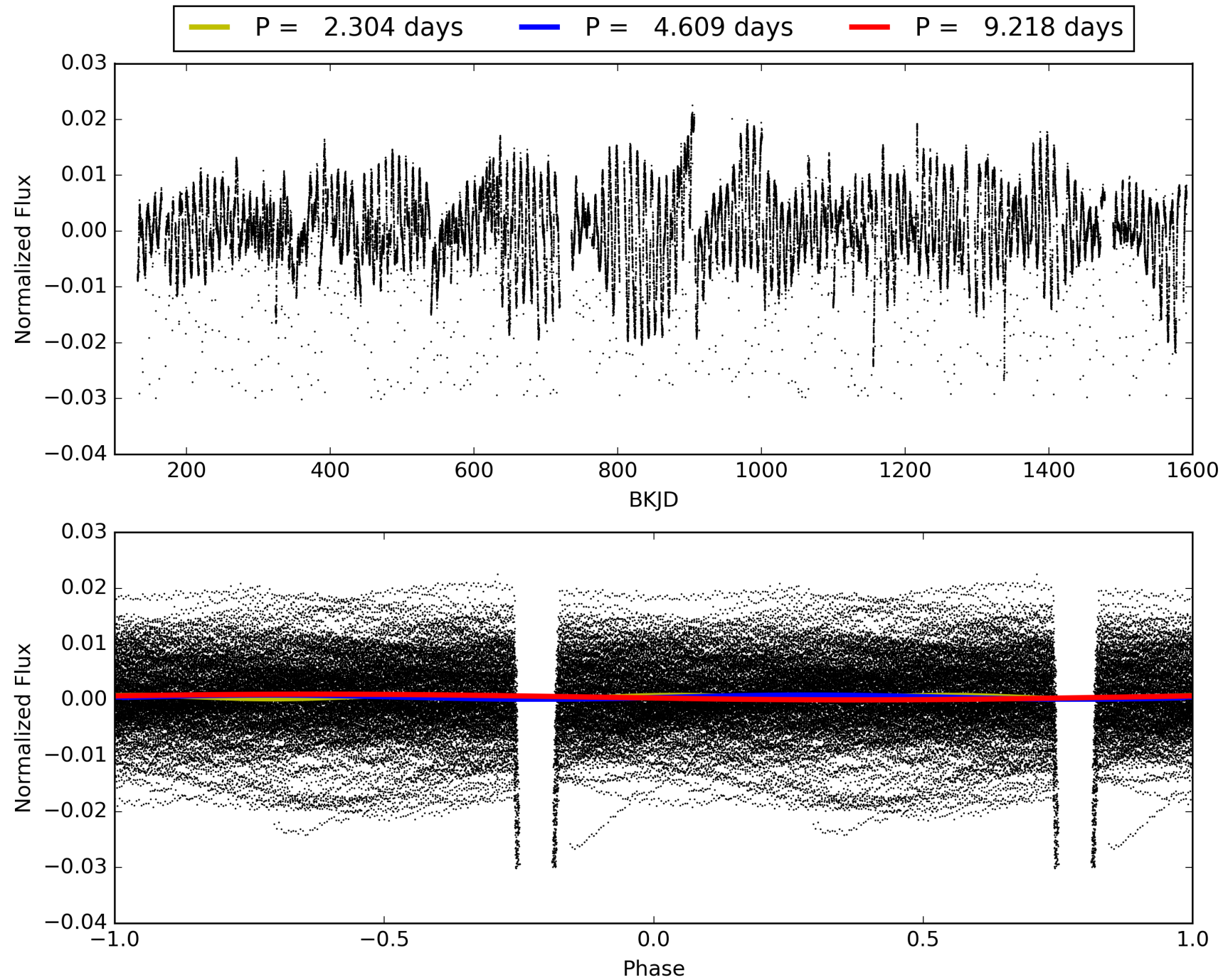
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:26:17 Z

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

TCE 007597703-02, PDC Light Curves

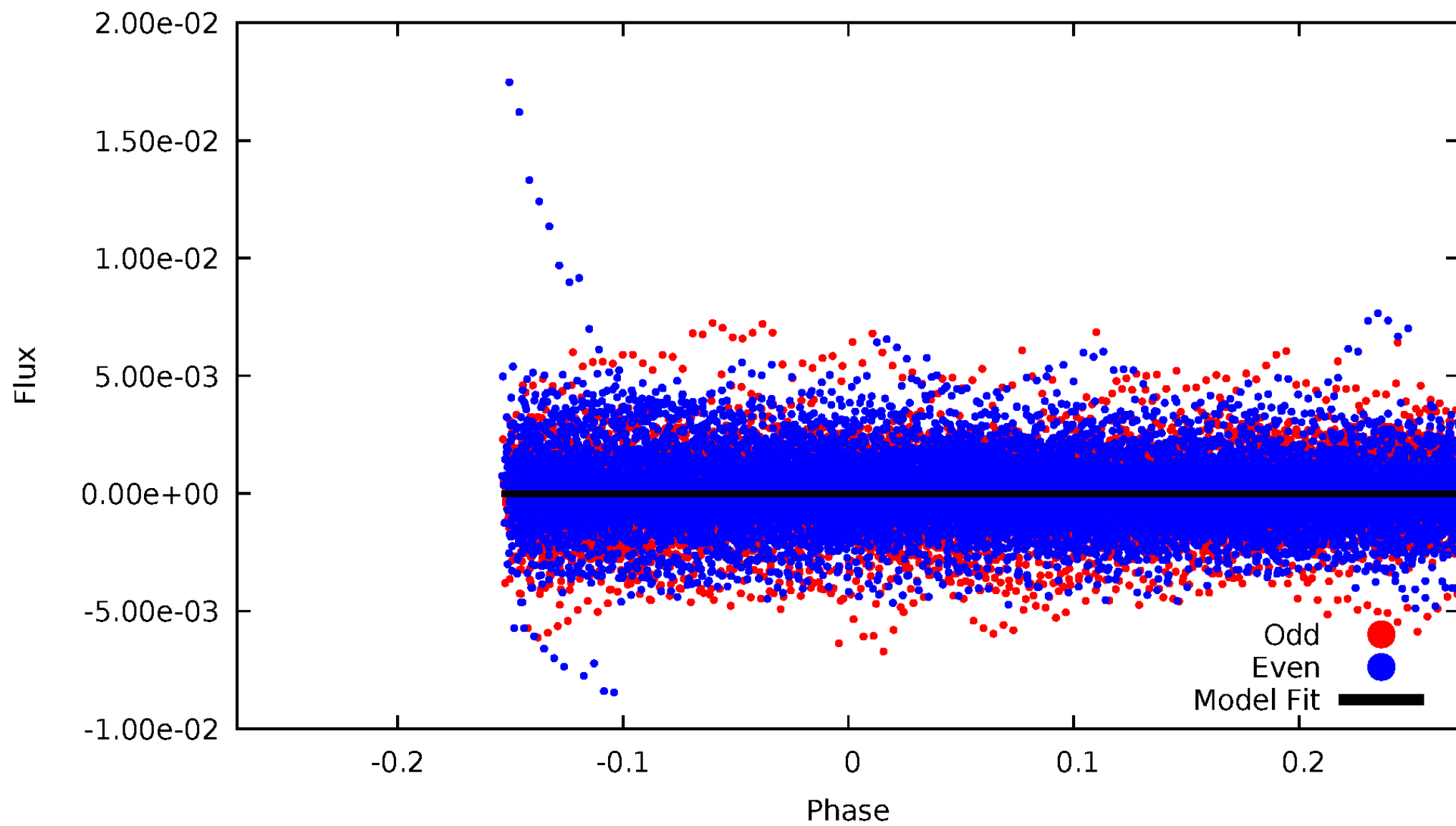


TCE 007597703-02



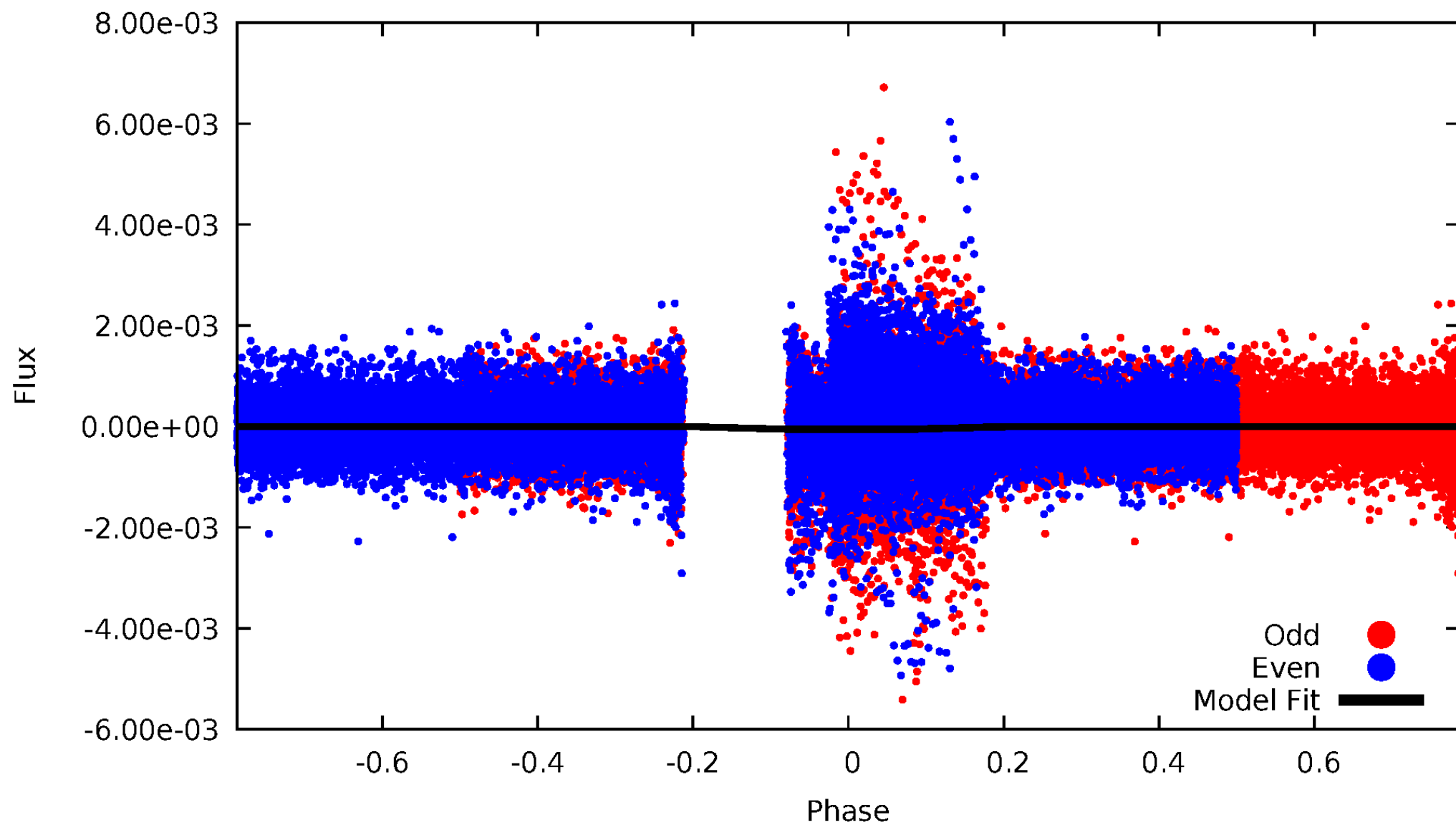
DV Odd/Even

TCE 007597703-02



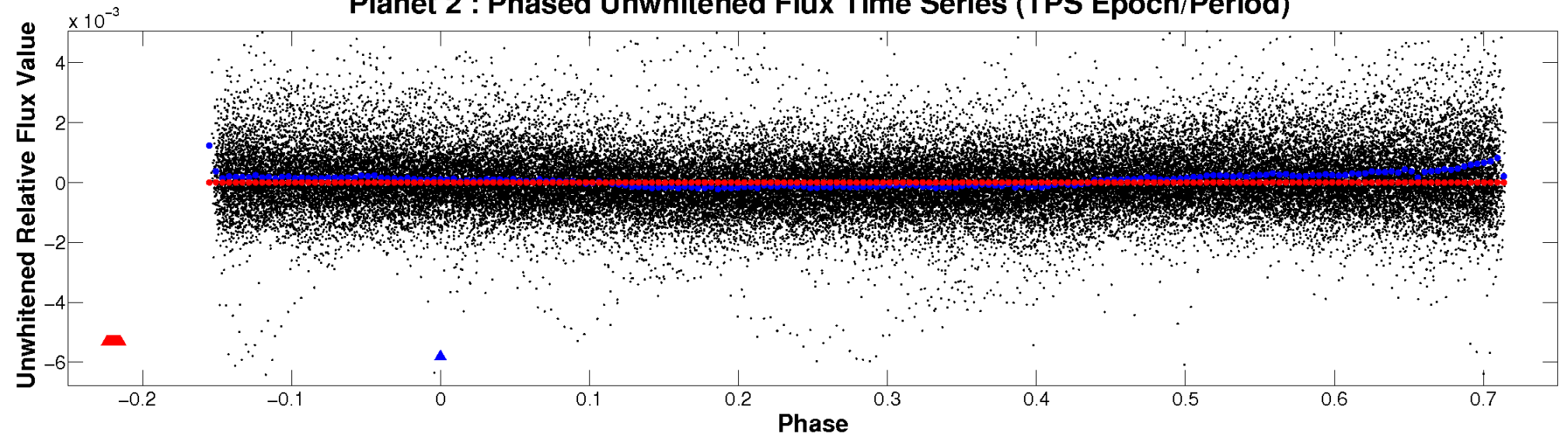
ALT Odd/Even

TCE 007597703-02



Non-Whitened Vs. Whitened Light Curve

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

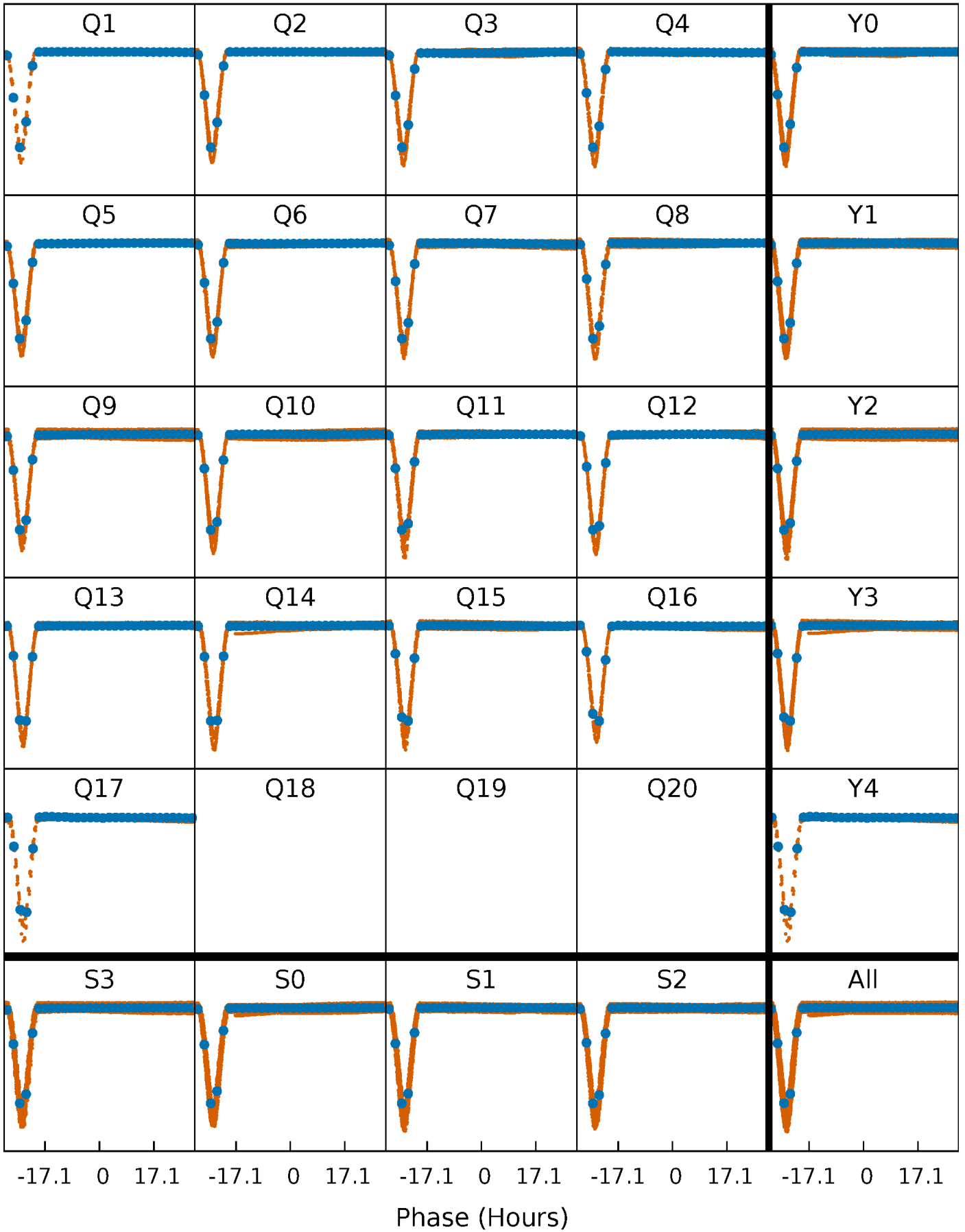


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



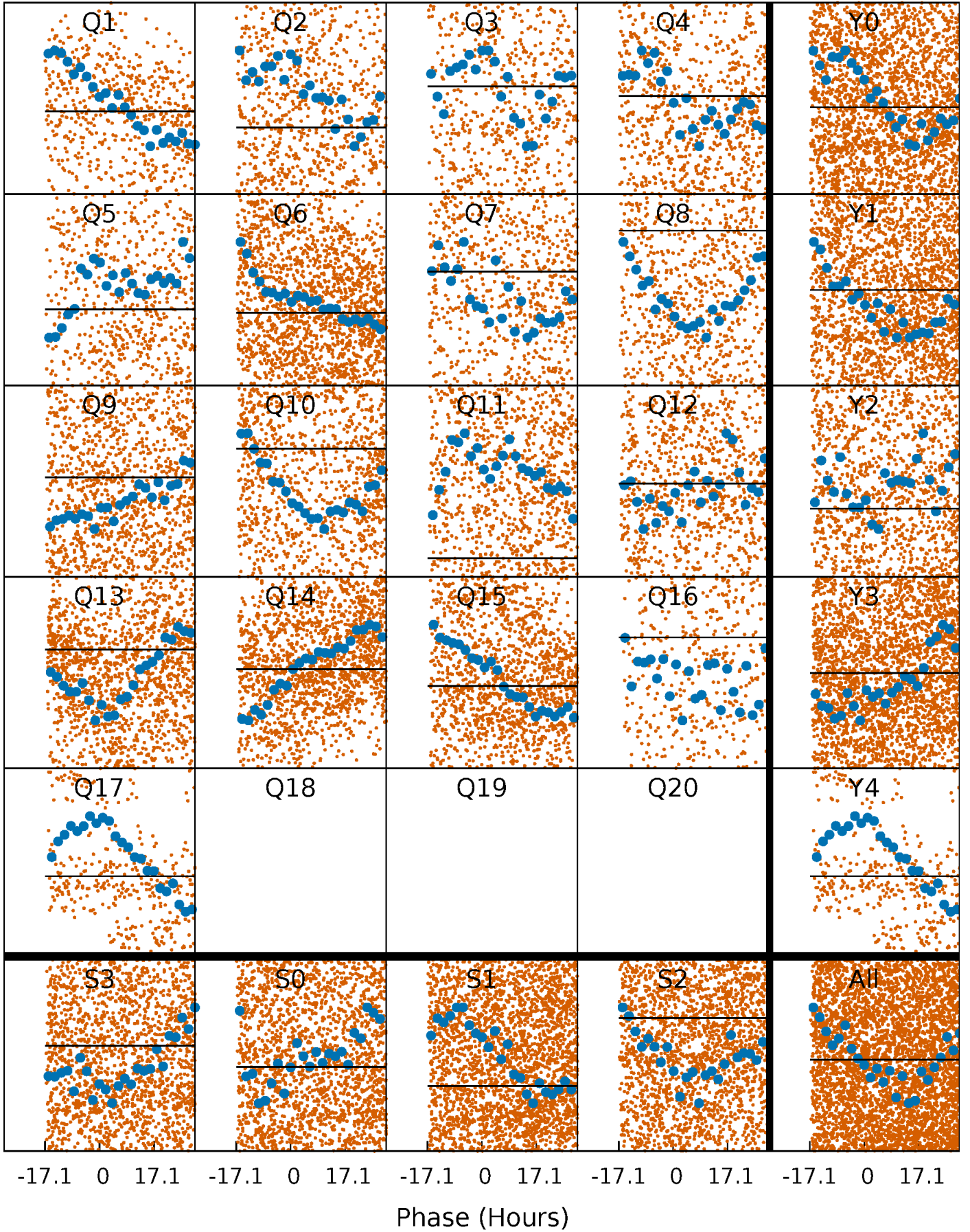
PDC Quarter-Phased Transit Curves

TCE 007597703-02 P= 4.608800 Days $T_0=135.018755$ (BKJD)



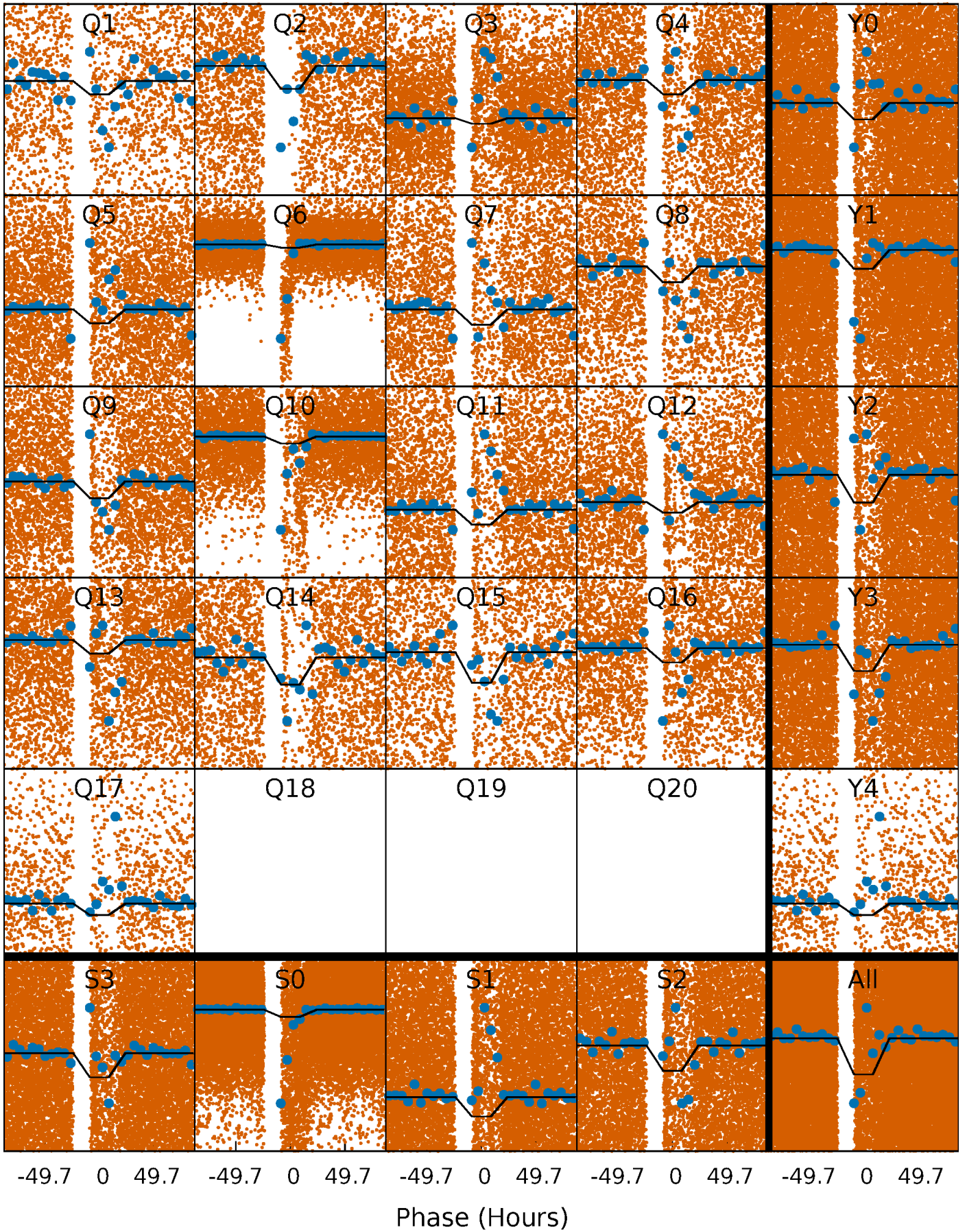
DV Quarter-Phased Transit Curves

TCE 007597703-02 $P = 4.608800$ Days $T_0 = 135.018755$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

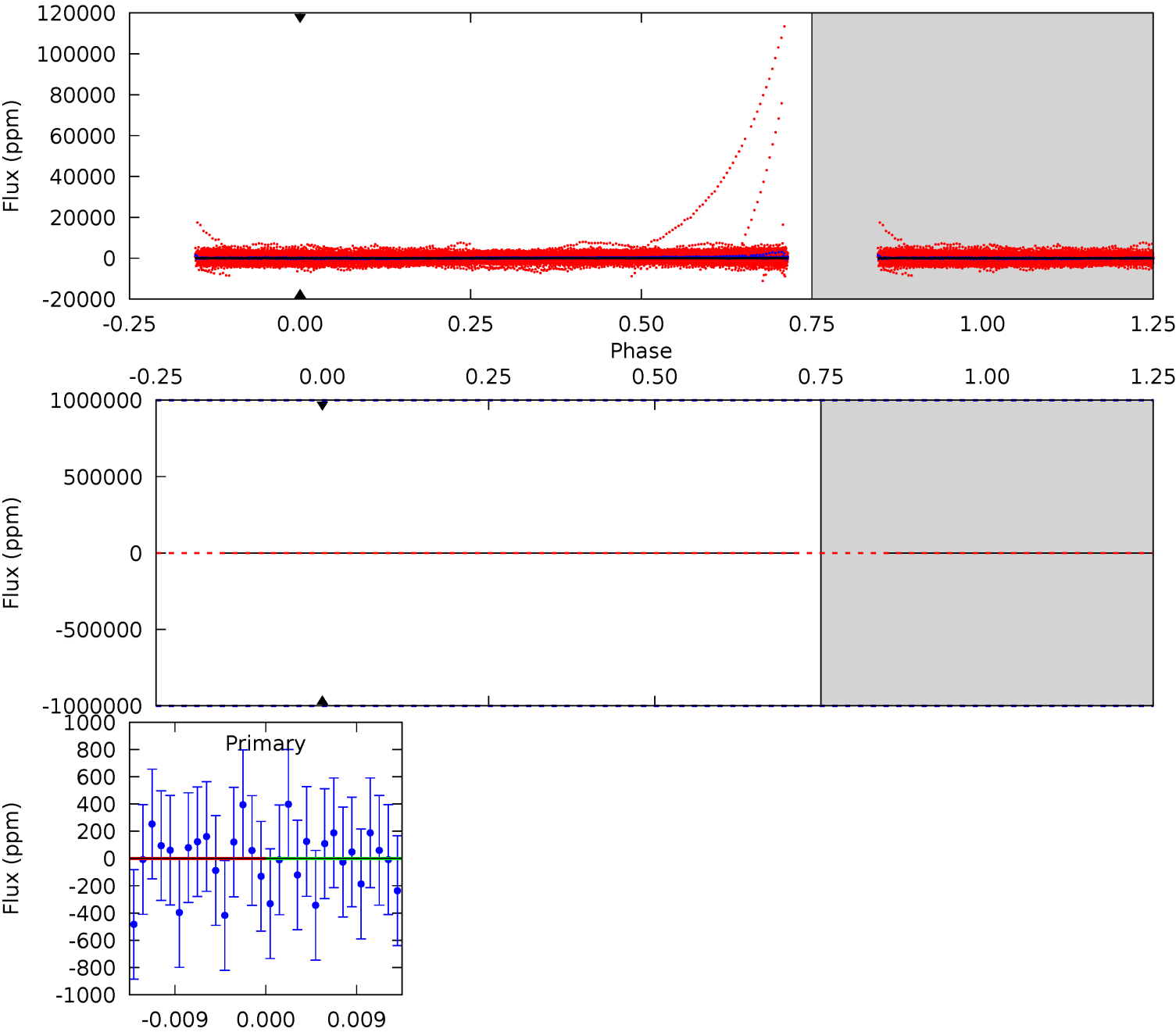
TCE 007597703-02 P= 4.608800 Days $T_0=134.678526$ (BKJD)



DV Model-Shift Uniqueness Test

007597703-02, P = 4.608800 Days, E = 130.409955 Days

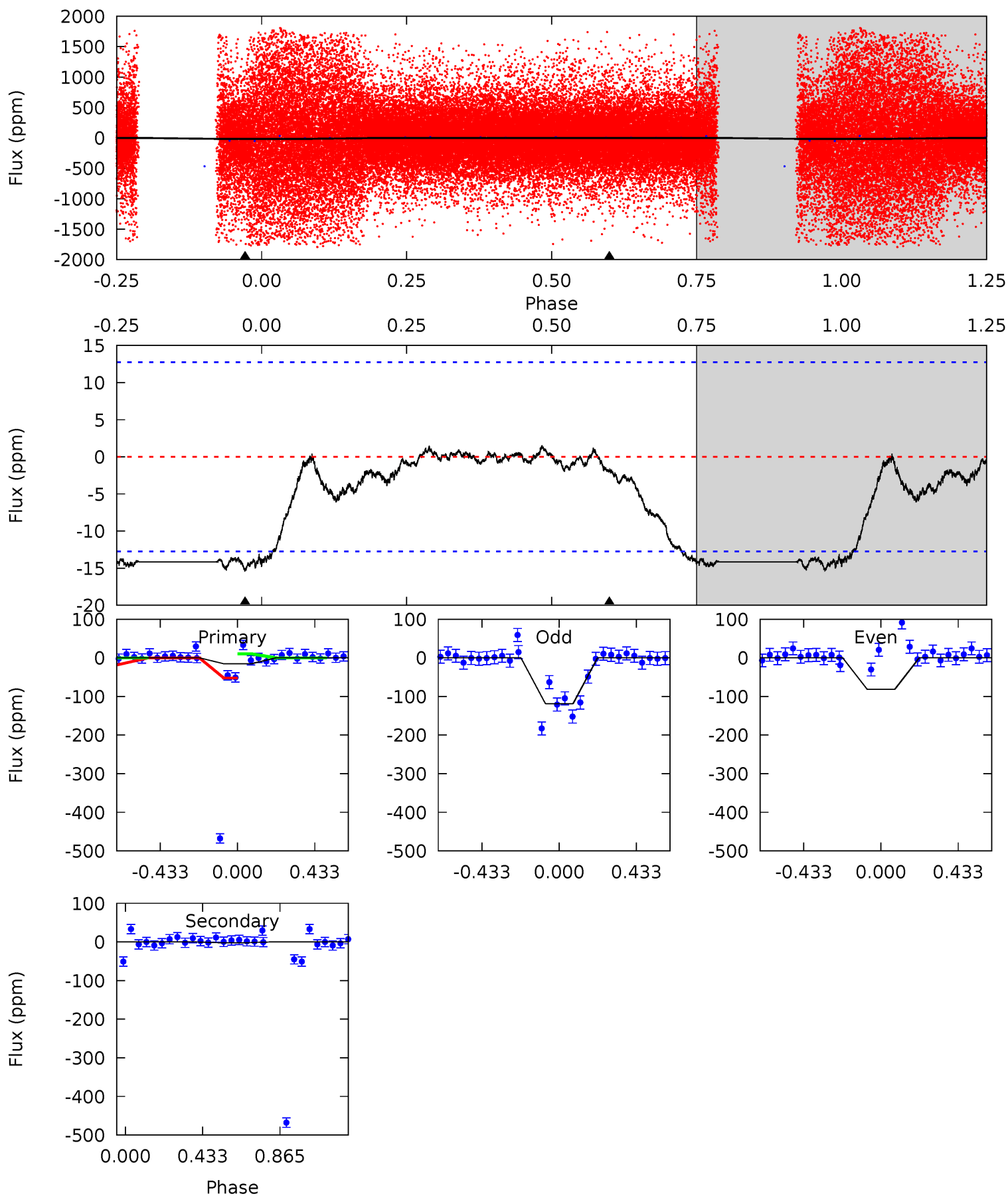
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007597703-02, P = 4.608800 Days, E = 130.069726 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.11	0.68	0	0	4.25	0.78	0.22	5.11	5.11	0.68	0.68	5.70	1.17	0.09	4.44



Stellar Parameters For KIC 007597703

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5938^{+161}_{-161}	$4.605^{+0.036}_{-0.153}$	$-0.740^{+0.300}_{-0.300}$	$0.755^{+0.158}_{-0.053}$	$0.844^{+0.071}_{-0.087}$	$2.760^{+0.390}_{-1.129}$
	+3%/-3%	+1%/-3%	+41%/-41%	+21%/-7%	+8%/-10%	+14%/-41%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007597703-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$9.39^{+7.84}_{-6.16}$	1434^{+68}_{-59}	-4113^{+18079}_{-9915}	$-35.714^{+2703.670}_{-2503.480}$
Alt.	-2 ± 3	$5.97^{+6.15}_{-4.16}$	1435^{+71}_{-59}	-2099^{+4261}_{-101}	$0.046^{+0.588}_{-0.077}$

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

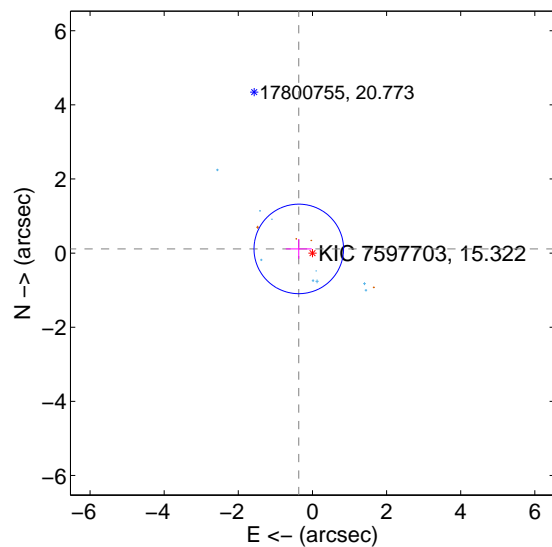
Supplemental centroid analysis for 007597703-02. Kepler magnitude: 15.32. Transit SNR -1.00

There are 9 quarters with good PRF difference image offsets

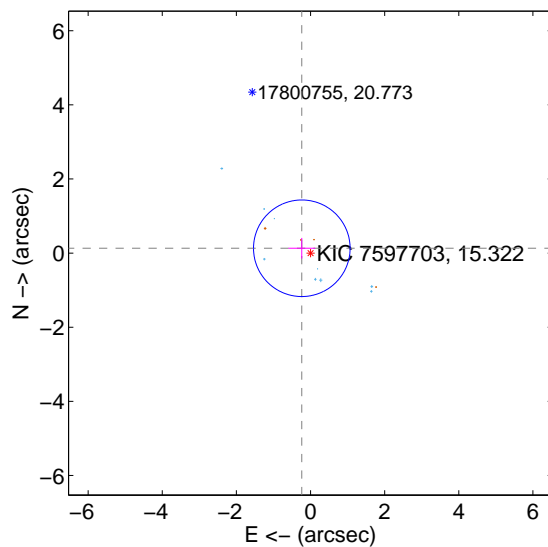
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.386 ± 0.403	0.96	0.369 ± 0.351	0.113 ± 0.264
PRF-fit source offset from KIC position	0.269 ± 0.434	0.62	0.235 ± 0.360	0.131 ± 0.278
photometric centroid source offset	2.13 ± 1.10	1.93	1.64 ± 1.09	-1.35 ± 1.12

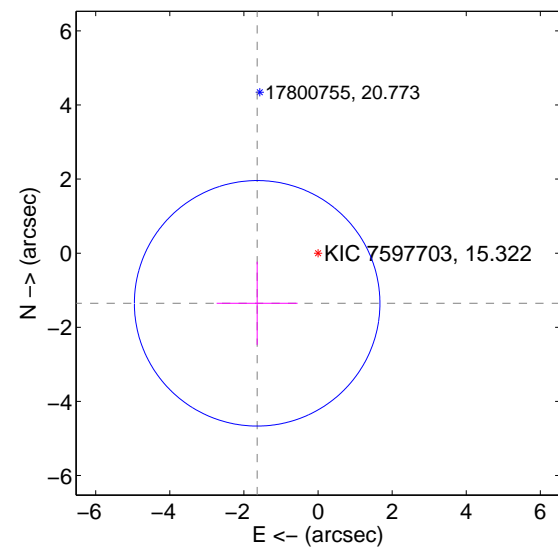
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

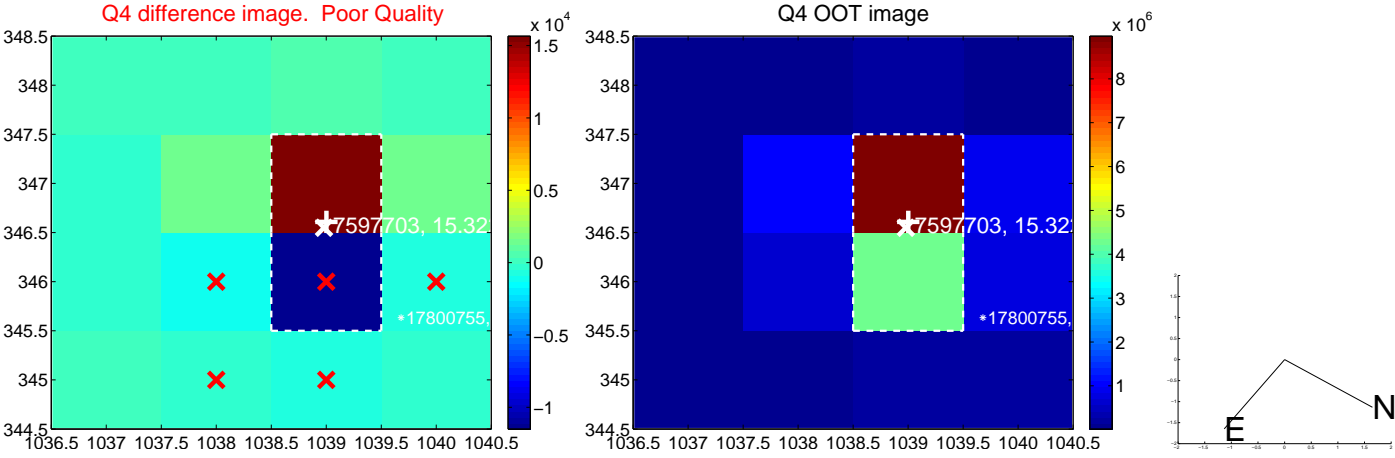
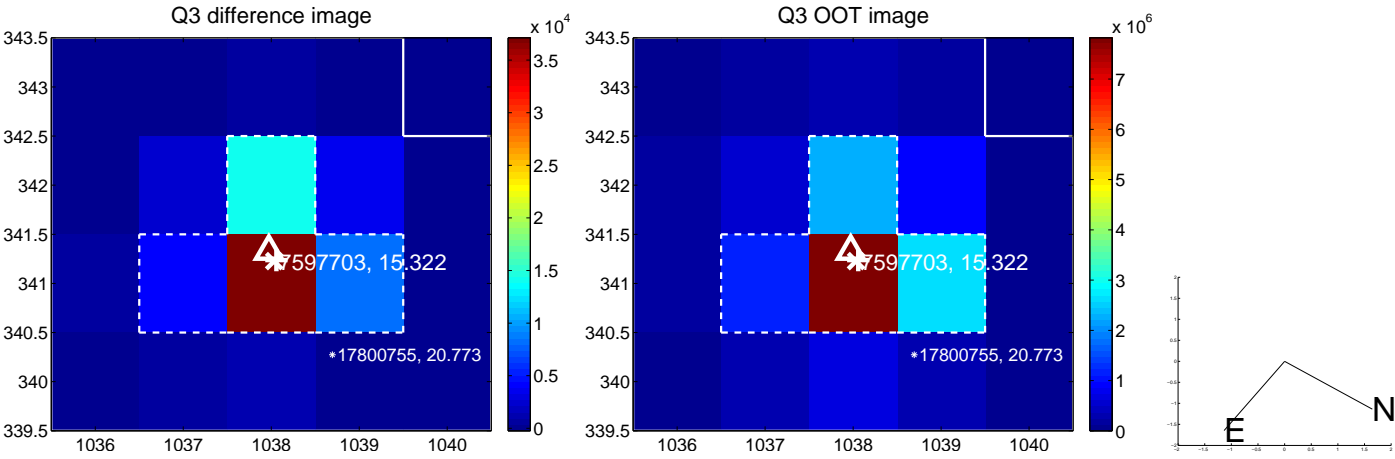
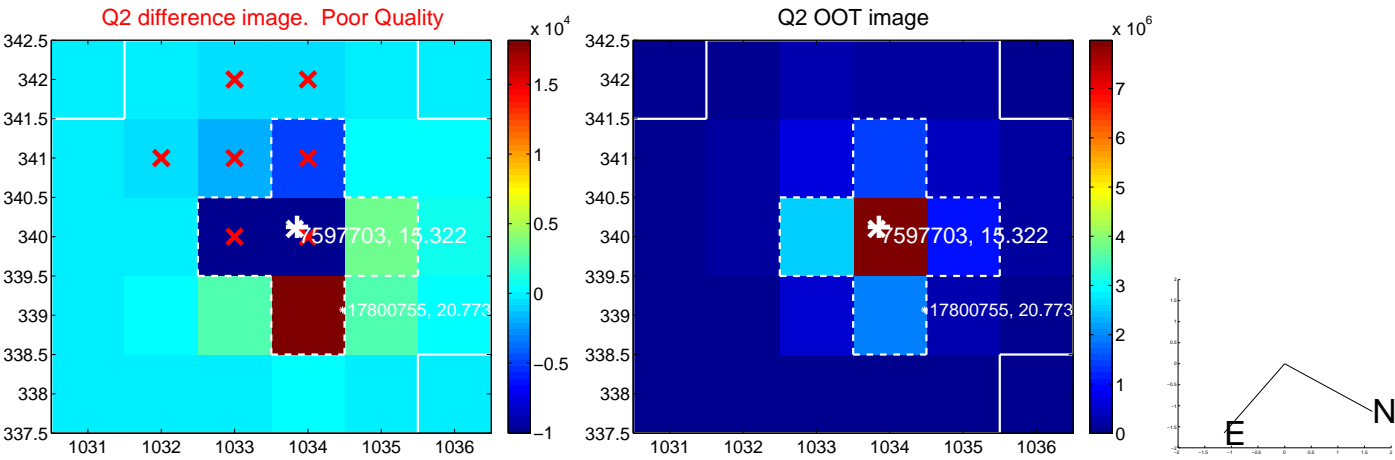
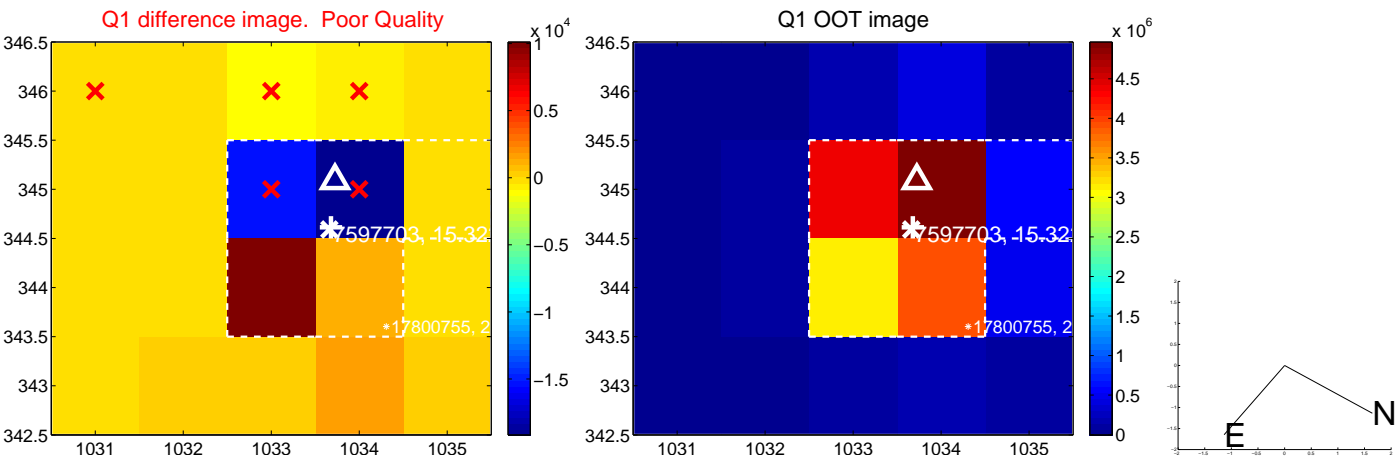


offset from photometric centroids

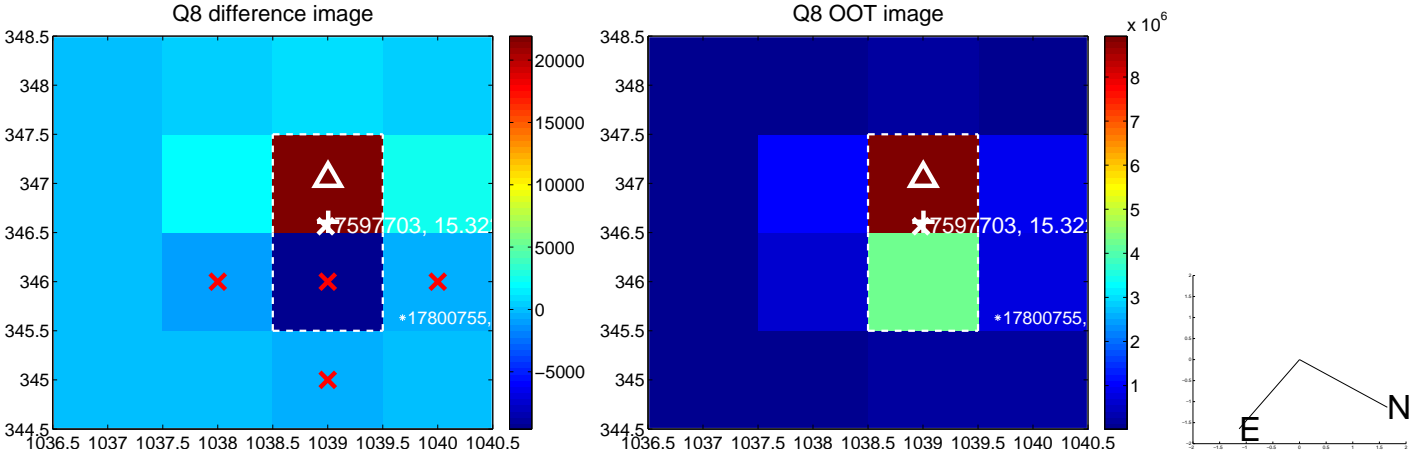
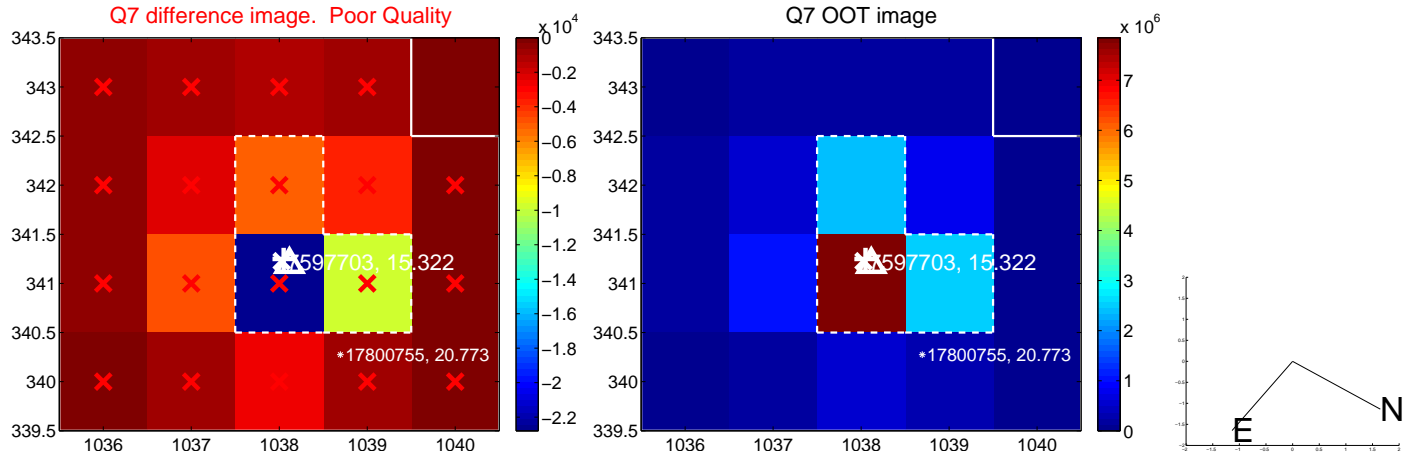
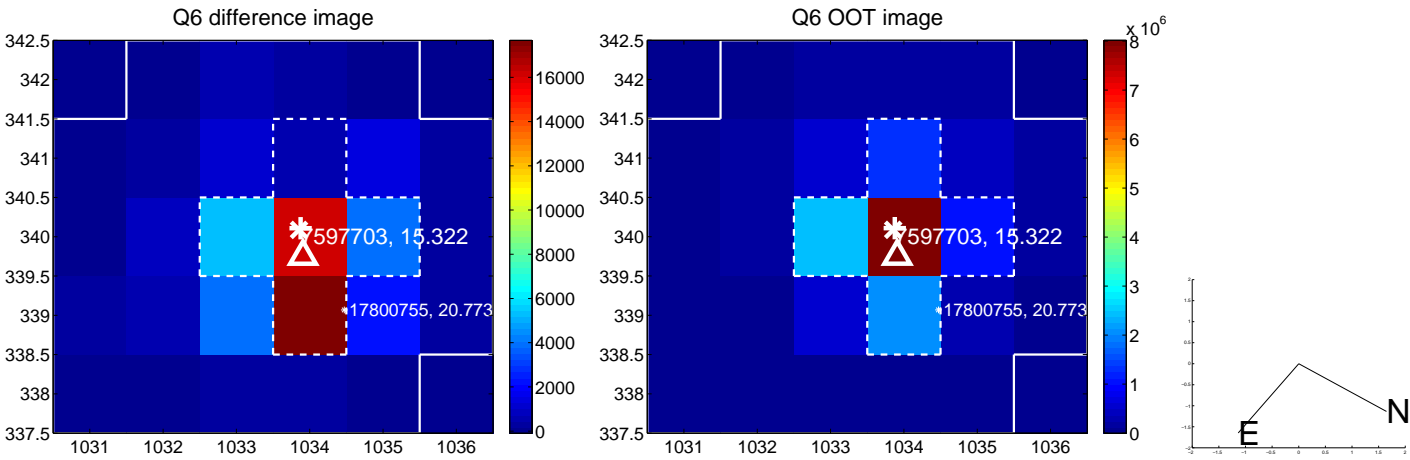
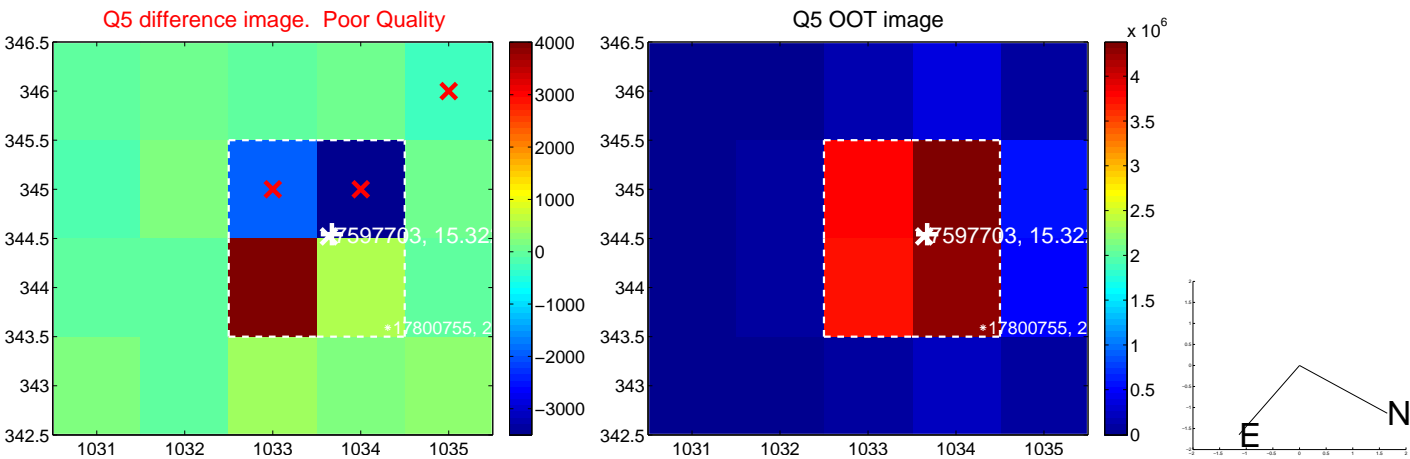


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

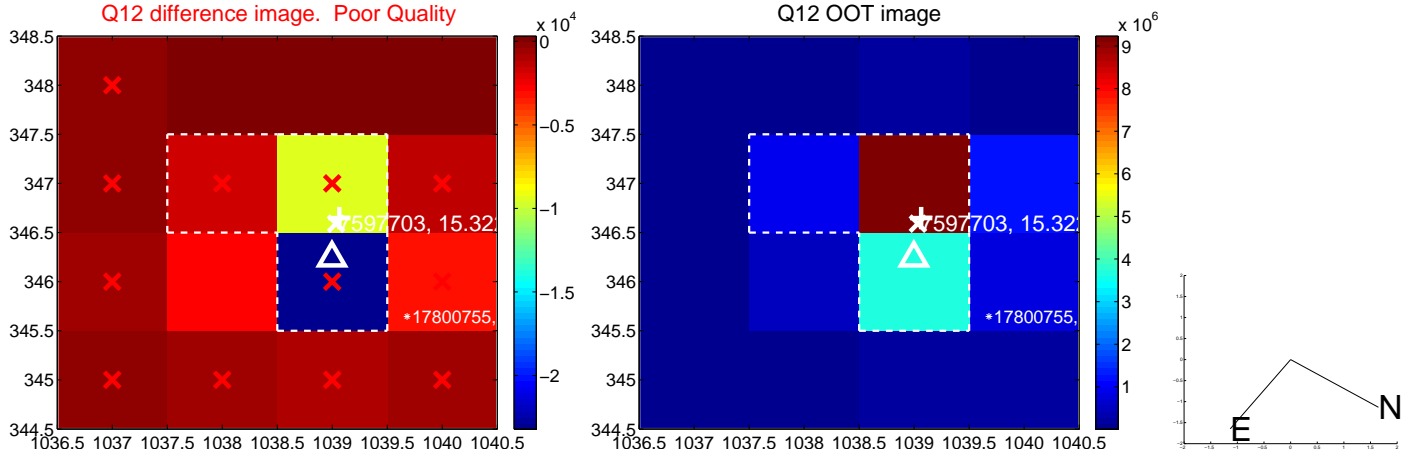
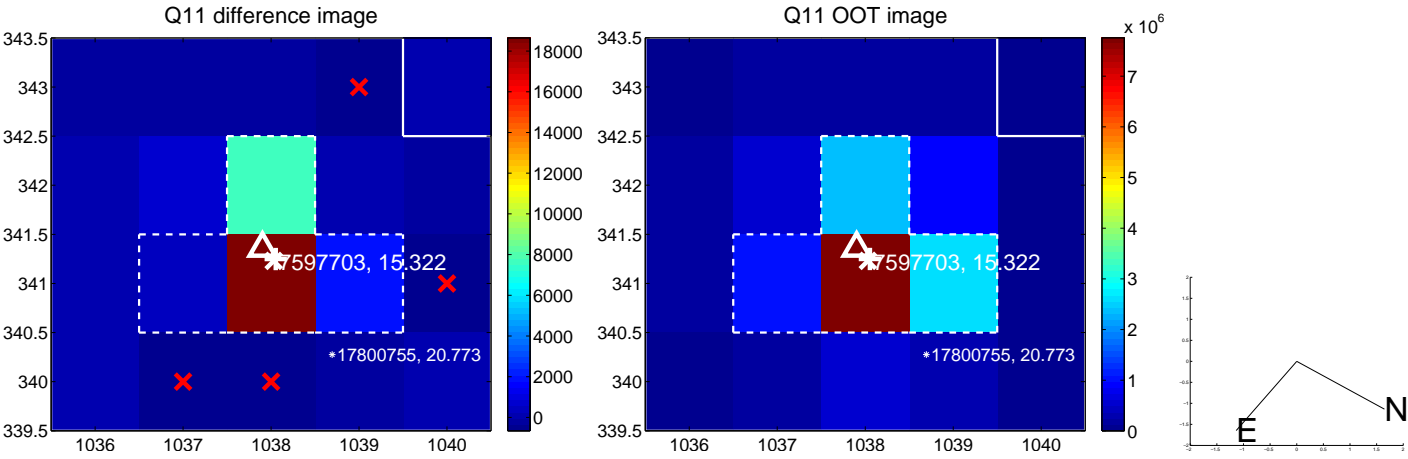
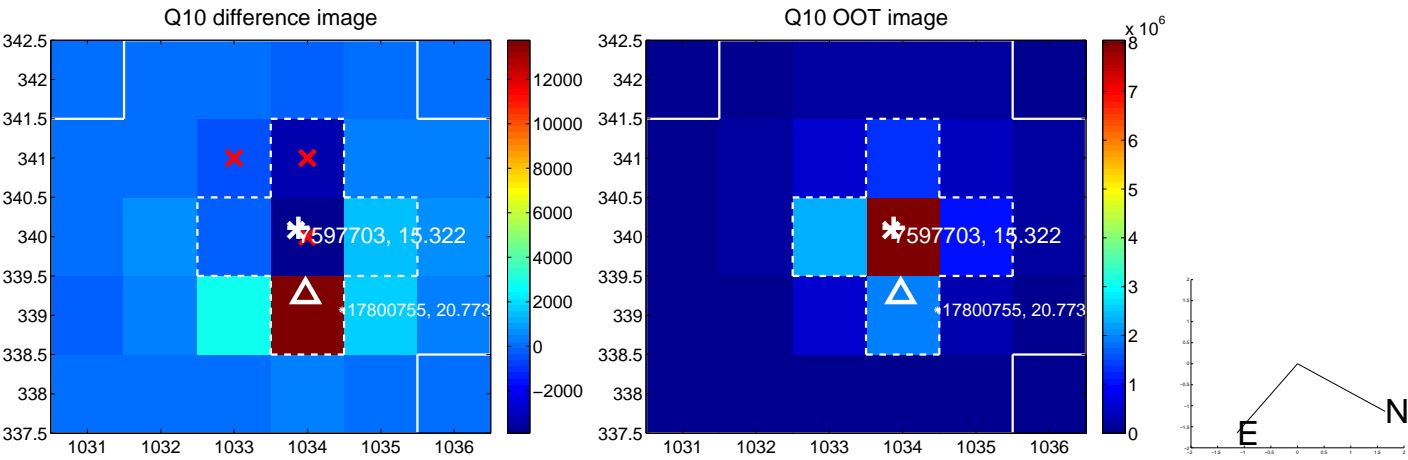
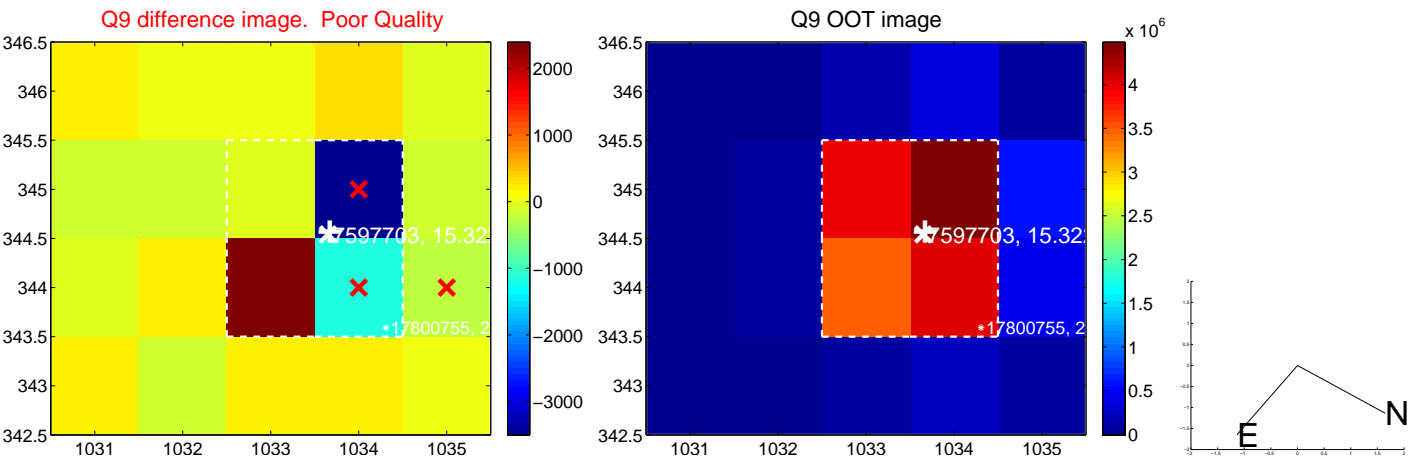
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



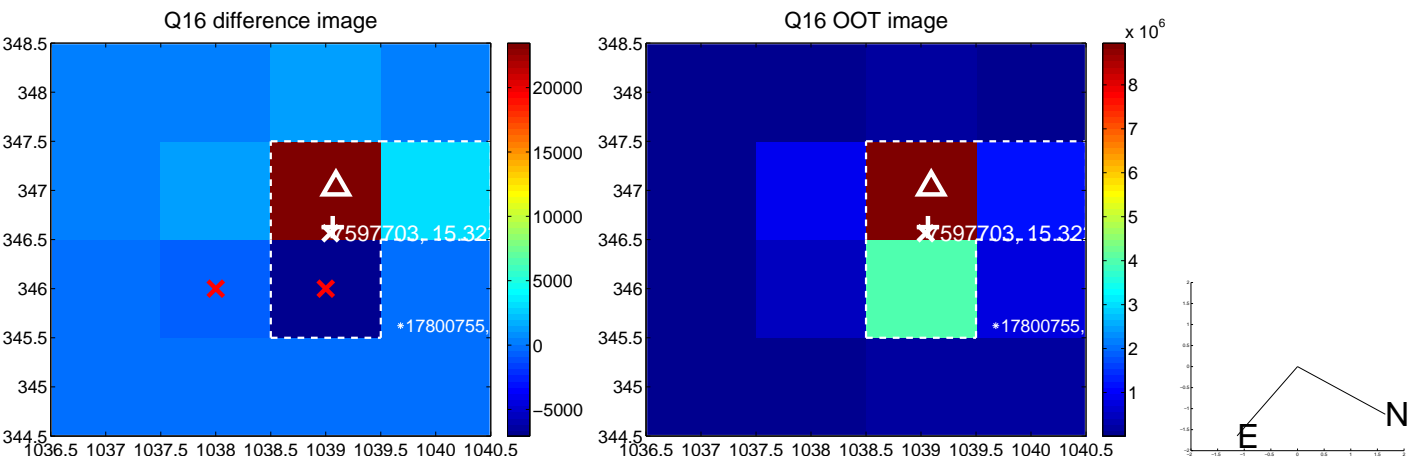
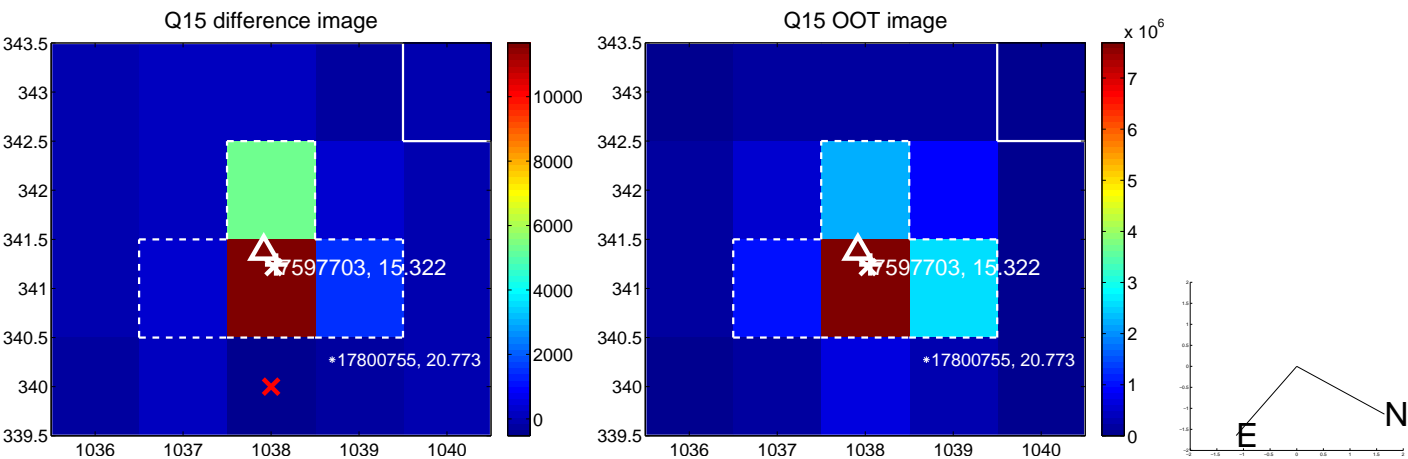
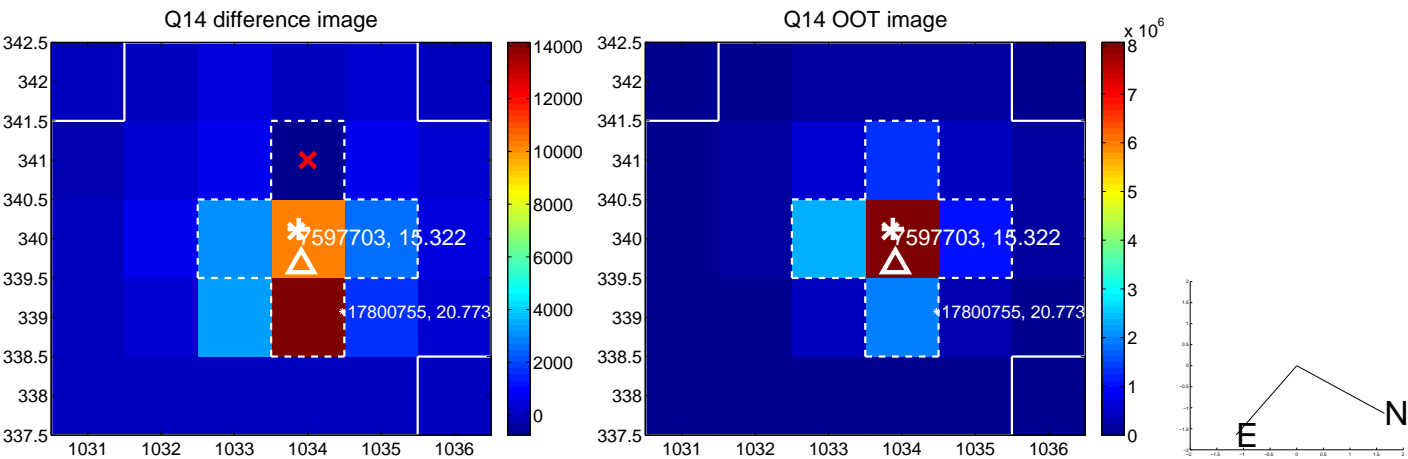
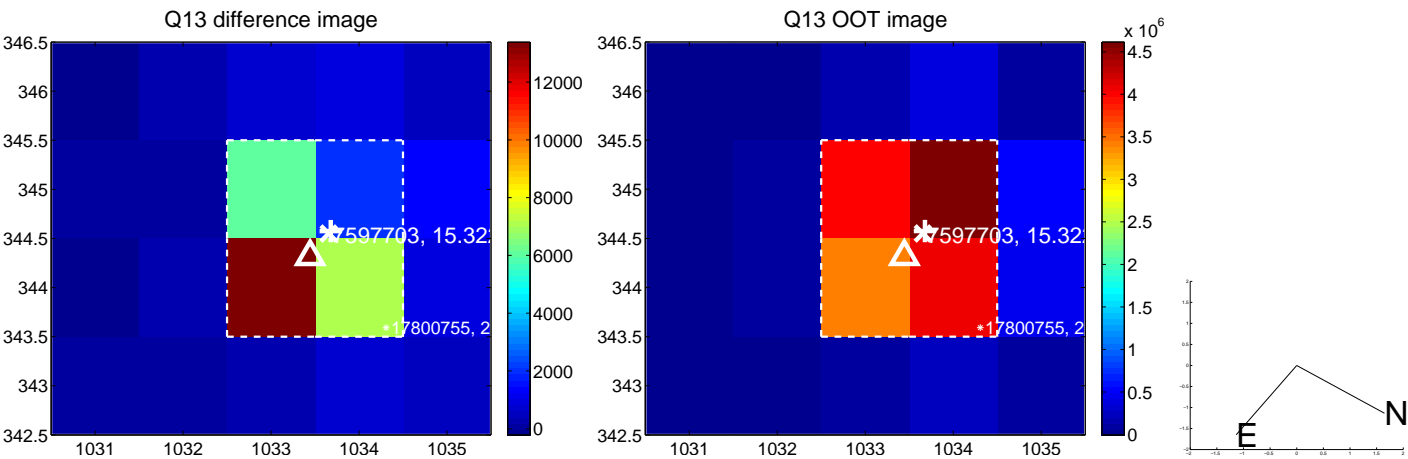
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



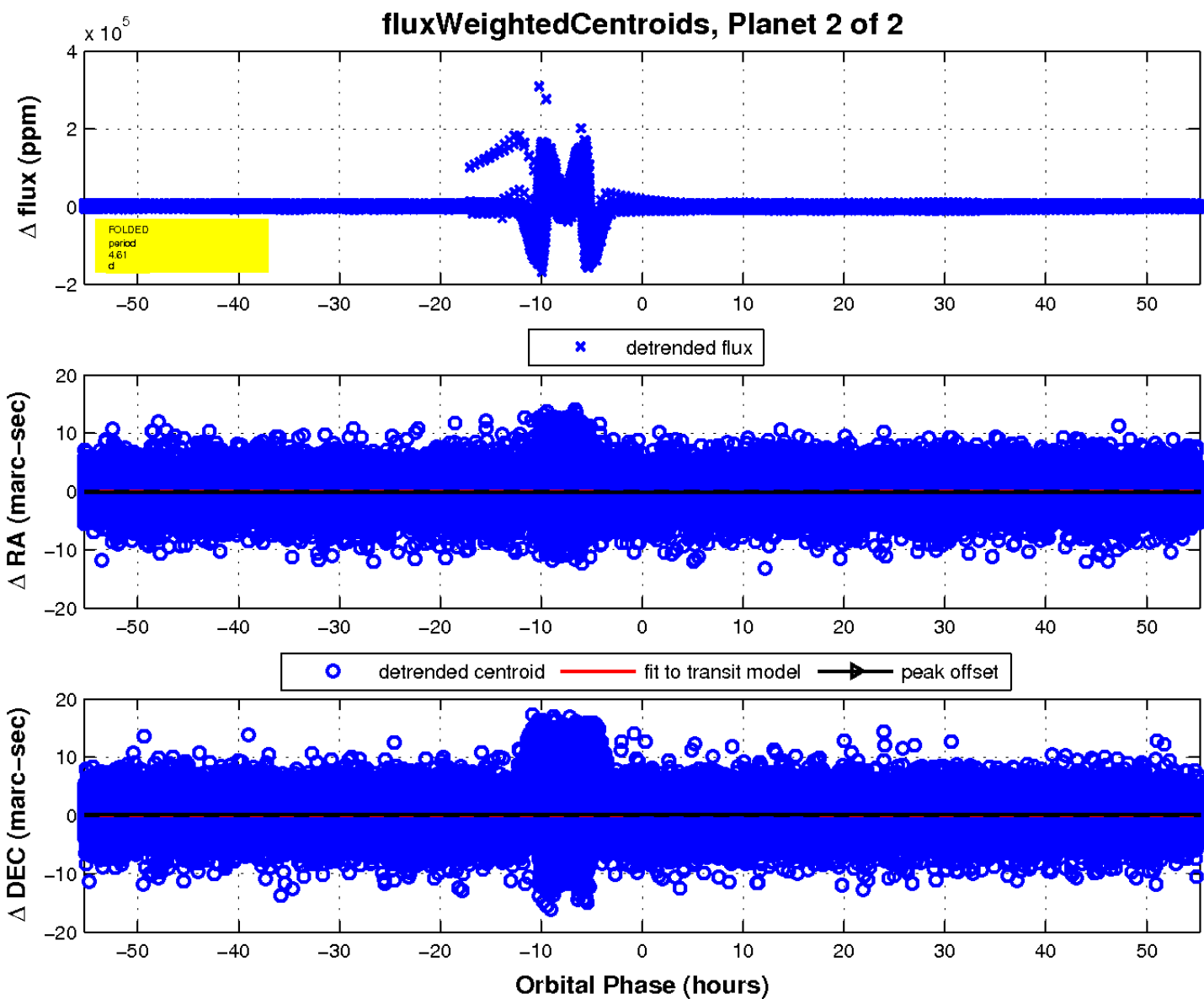
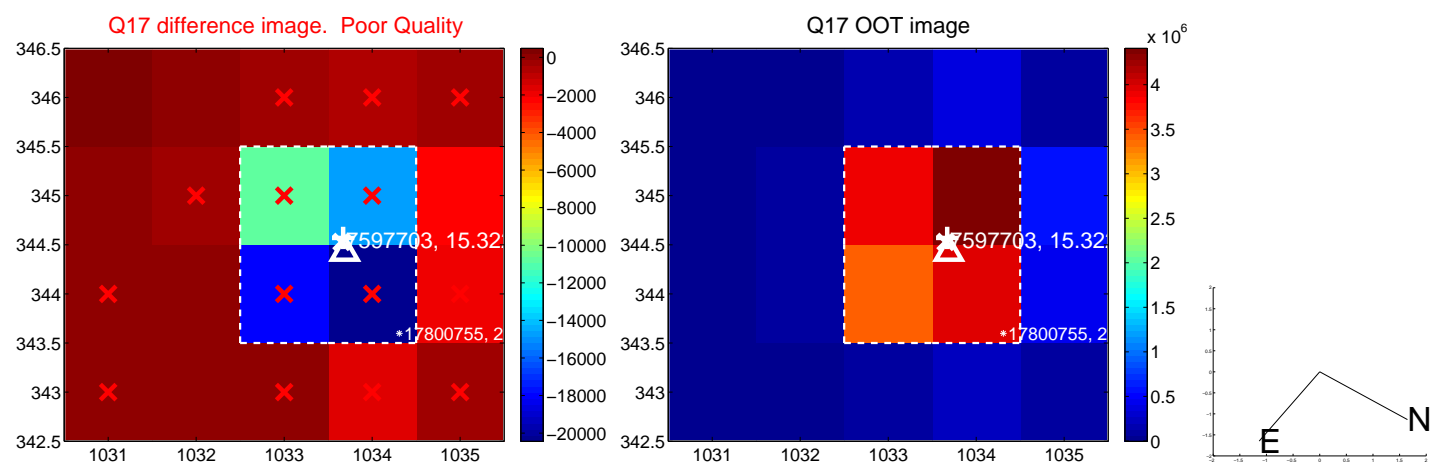
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

