

KIC 010581918

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})
010581918-01	OBS	No	1.801871	131.578702	774790.8	2.500	14021.2	-1.0	2.32	7479	70.09	12985.57
010581918-02	OBS	3807.01	1.801858	132.488277	8409.9	3.000	2031.7	-1.0	2.32	7479	21.61	12985.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010581918-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
010581918-02	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

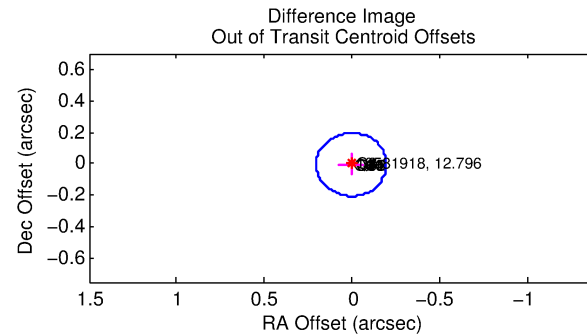
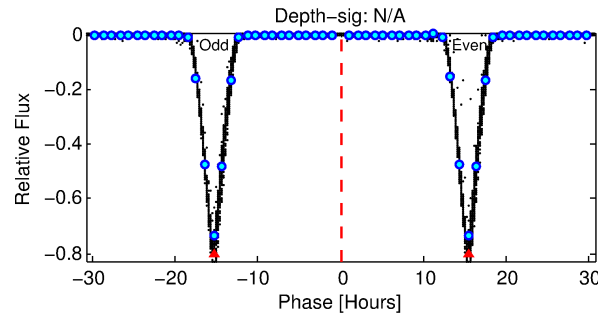
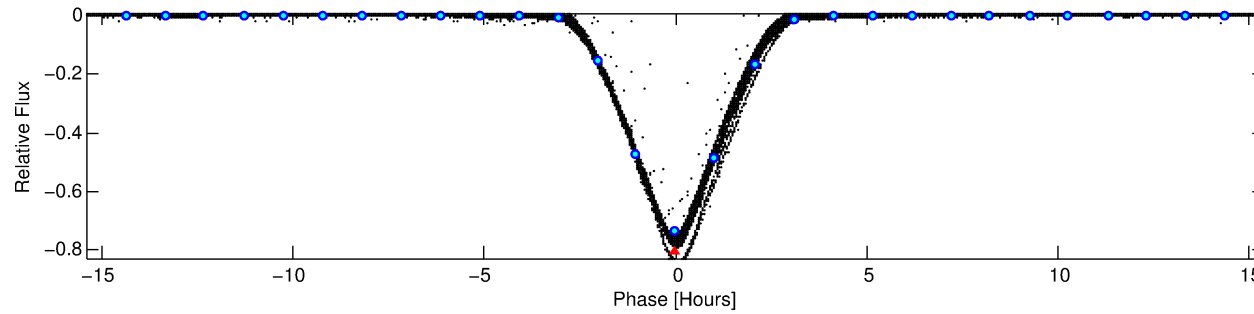
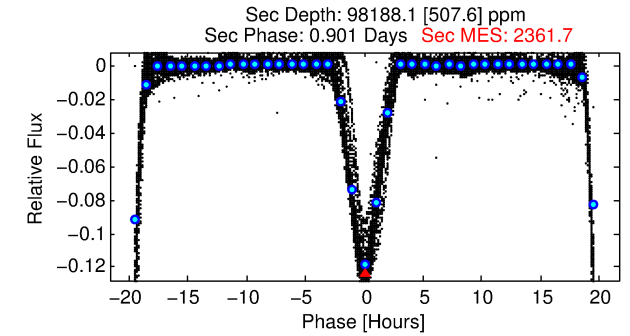
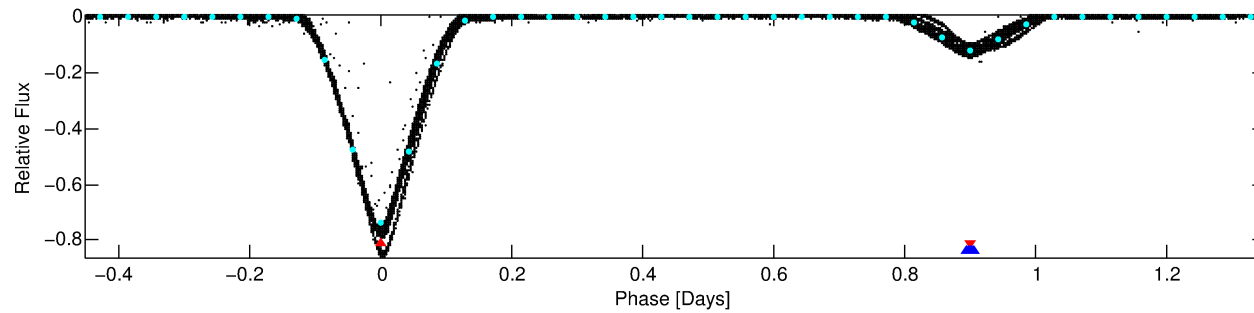
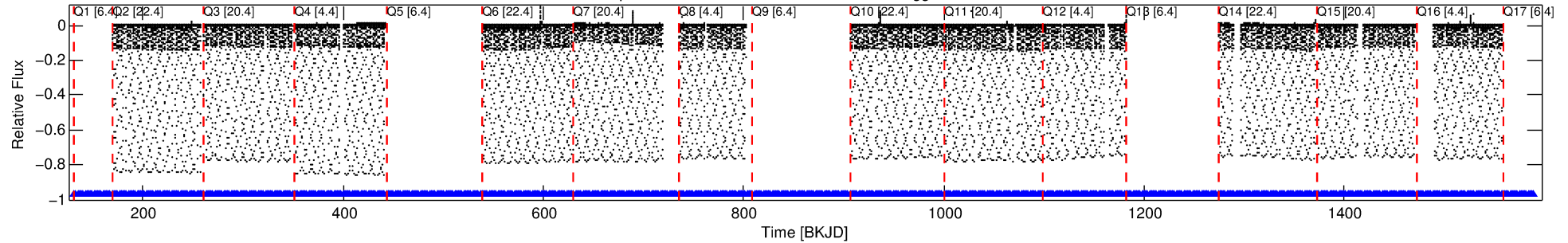
Ephemeris Match Information For 010581918-01

No Significant Match Found

DV One-Page Summary

KIC: 10581918 Candidate: 1 of 2 Period: 1.802 d
KOI: K03807 Corr: No Ephemeris Match

Kp: 12.80 R*: 2.32 Rs Teff: 7479.0 K Logg: 3.92 Fe/H: -0.300



TPS TCE Results:

Period = 1.80187 d
Epoch = 131.5787 BKJD

DV fit results are unavailable

DV Diagnostic Results:

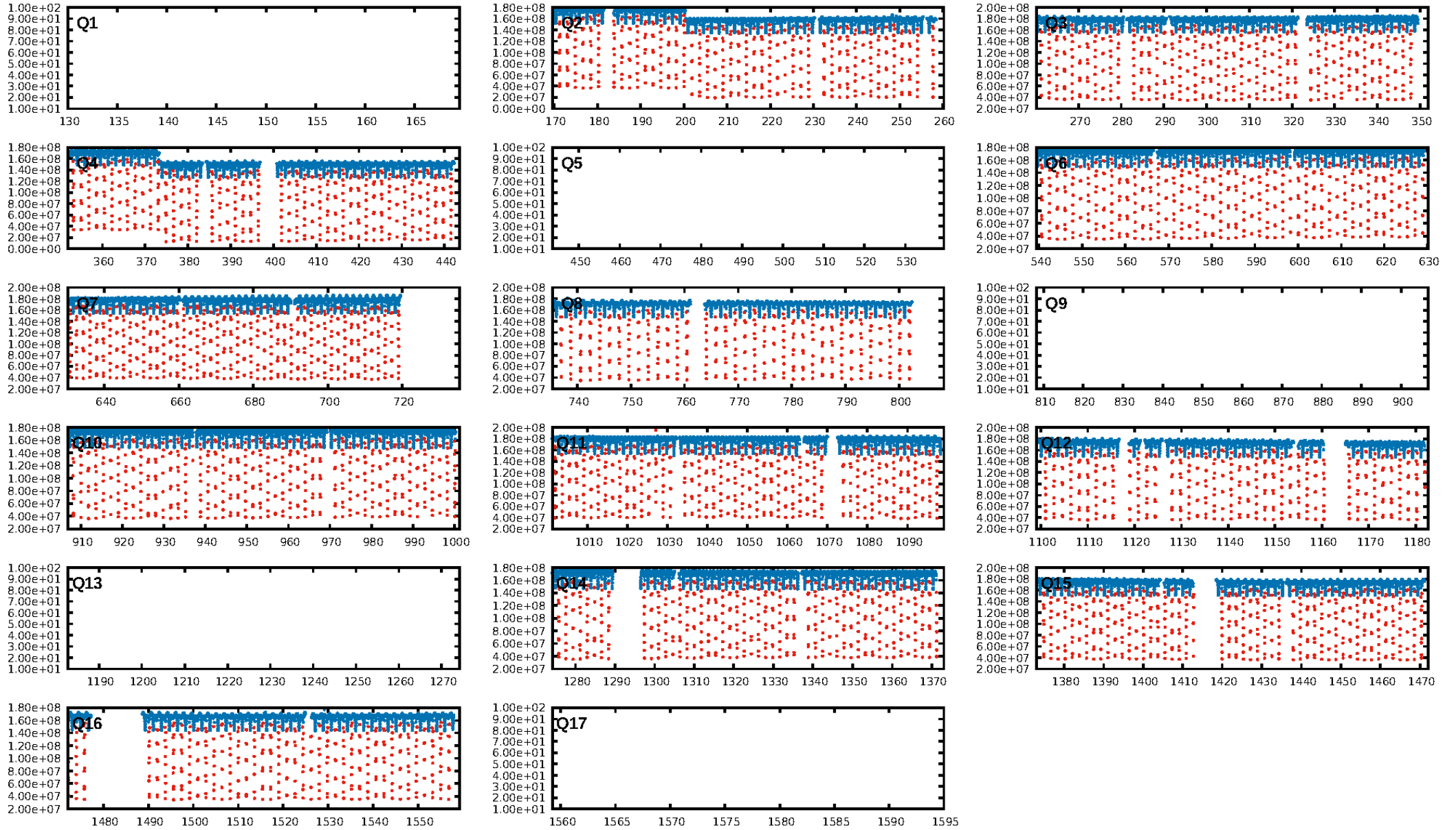
ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [558/558]
GhostDiagnostic-chr: 0.7699

Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.007 arcsec [0.11σ]
KicOffset-rm: 0.164 arcsec [2.36σ]
OotOffset-st: 4/4/4/0 [12]
KicOffset-st: 4/4/4/0 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [12/12]

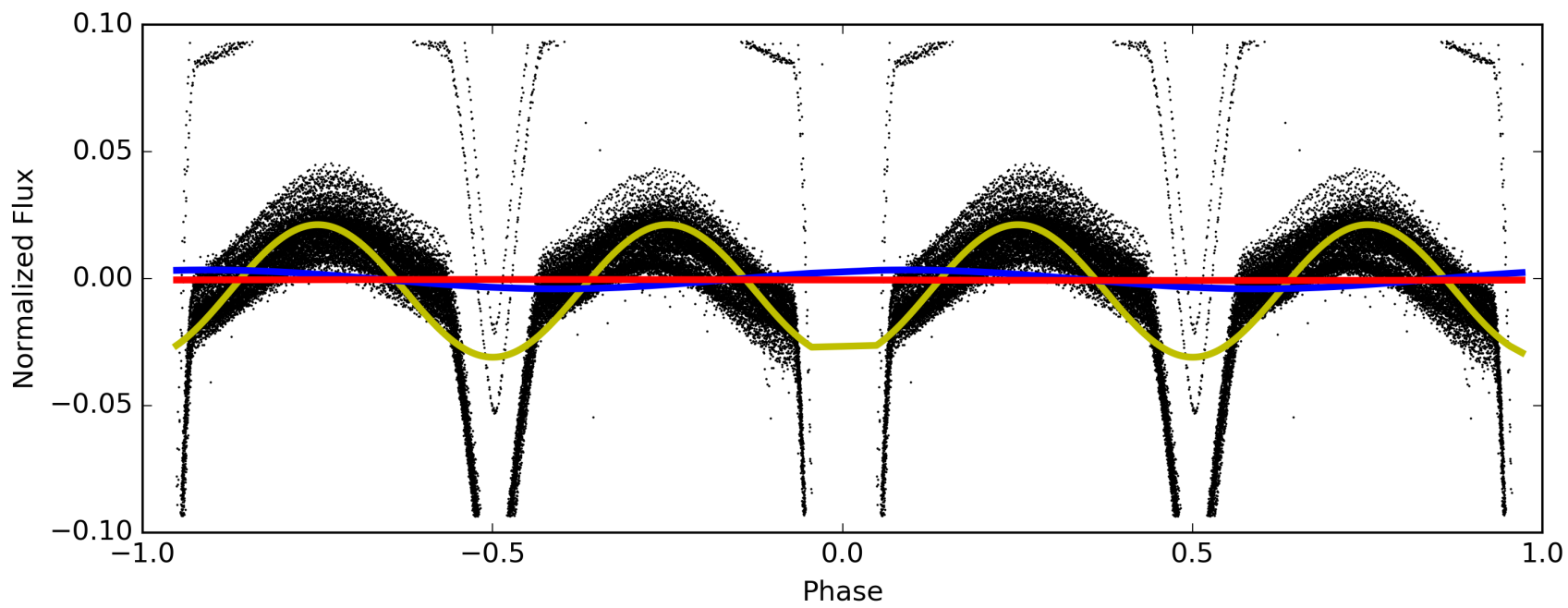
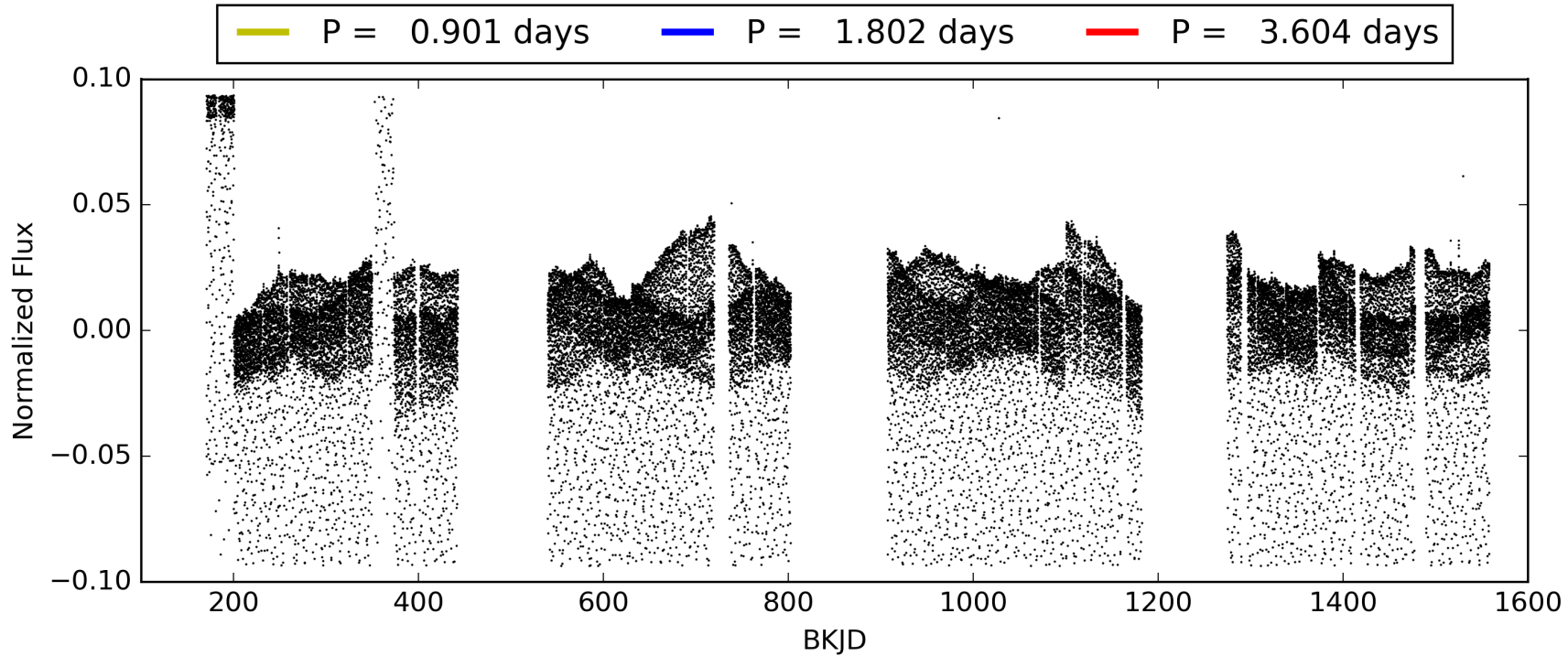
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 12:09:36 Z

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

TCE 010581918-01, PDC Light Curves

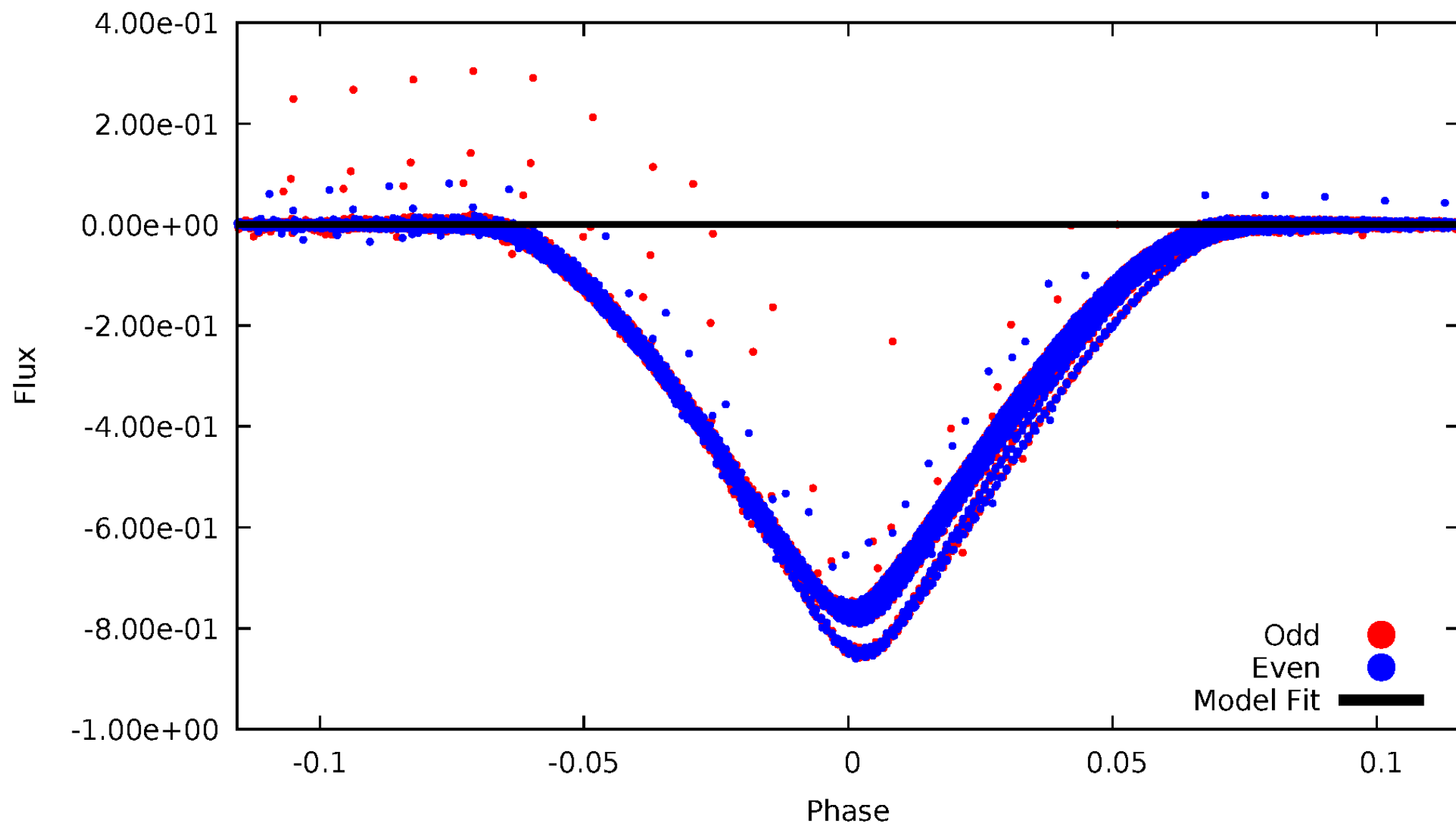


TCE 010581918-01



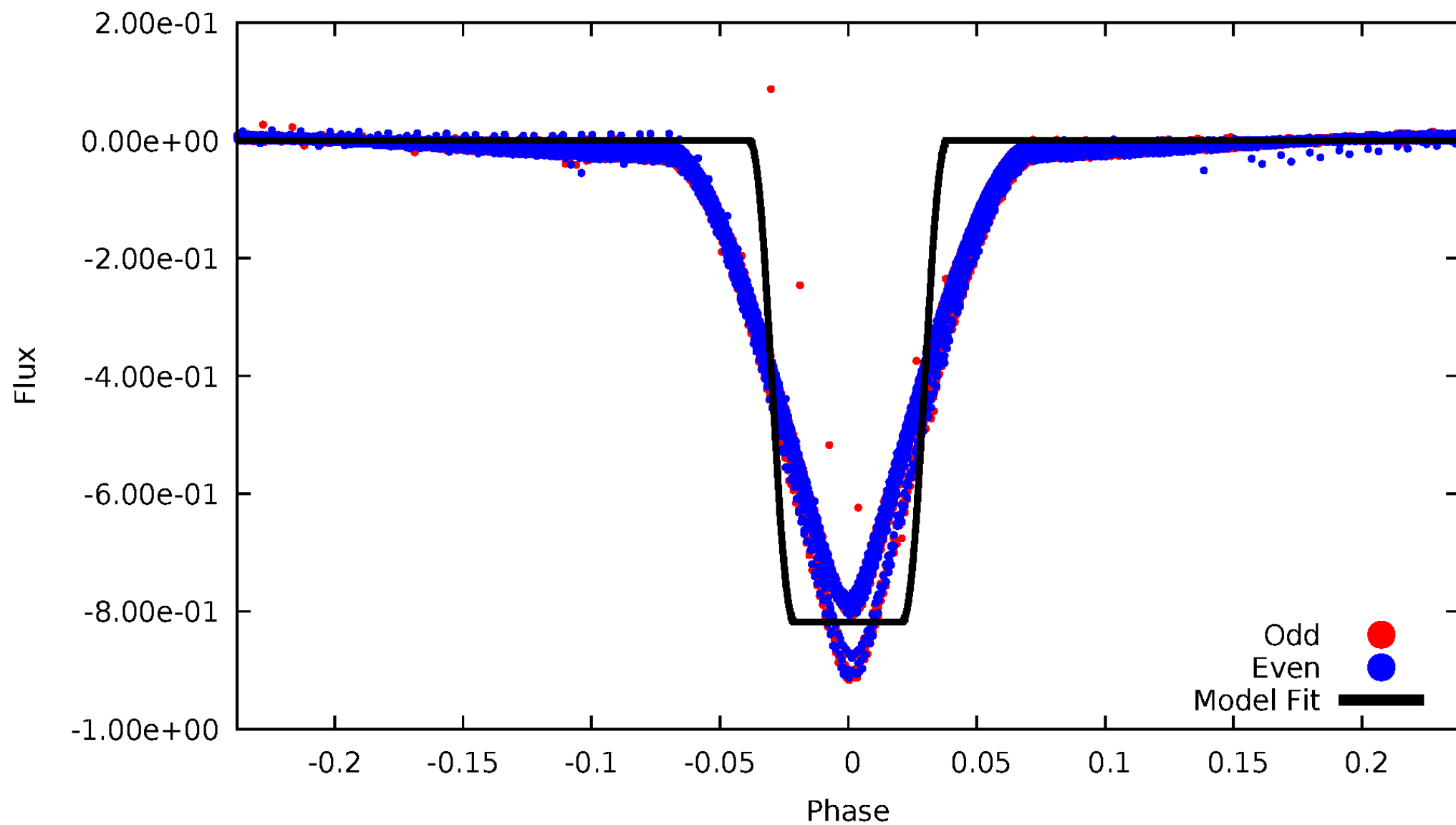
DV Odd/Even

TCE 010581918-01



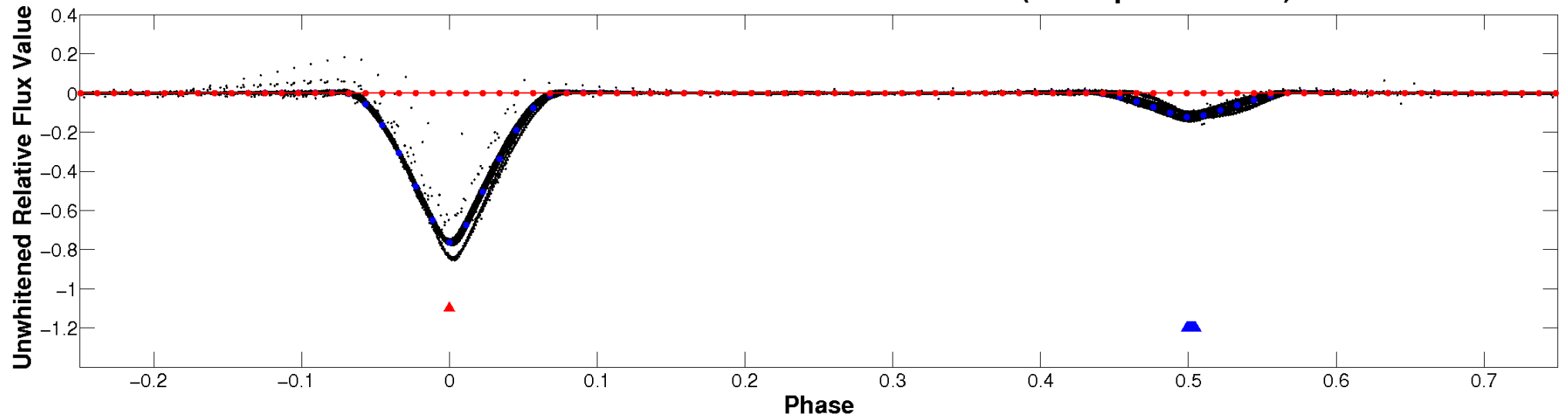
ALT Odd/Even

TCE 010581918-01



Non-Whitened Vs. Whitened Light Curve

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

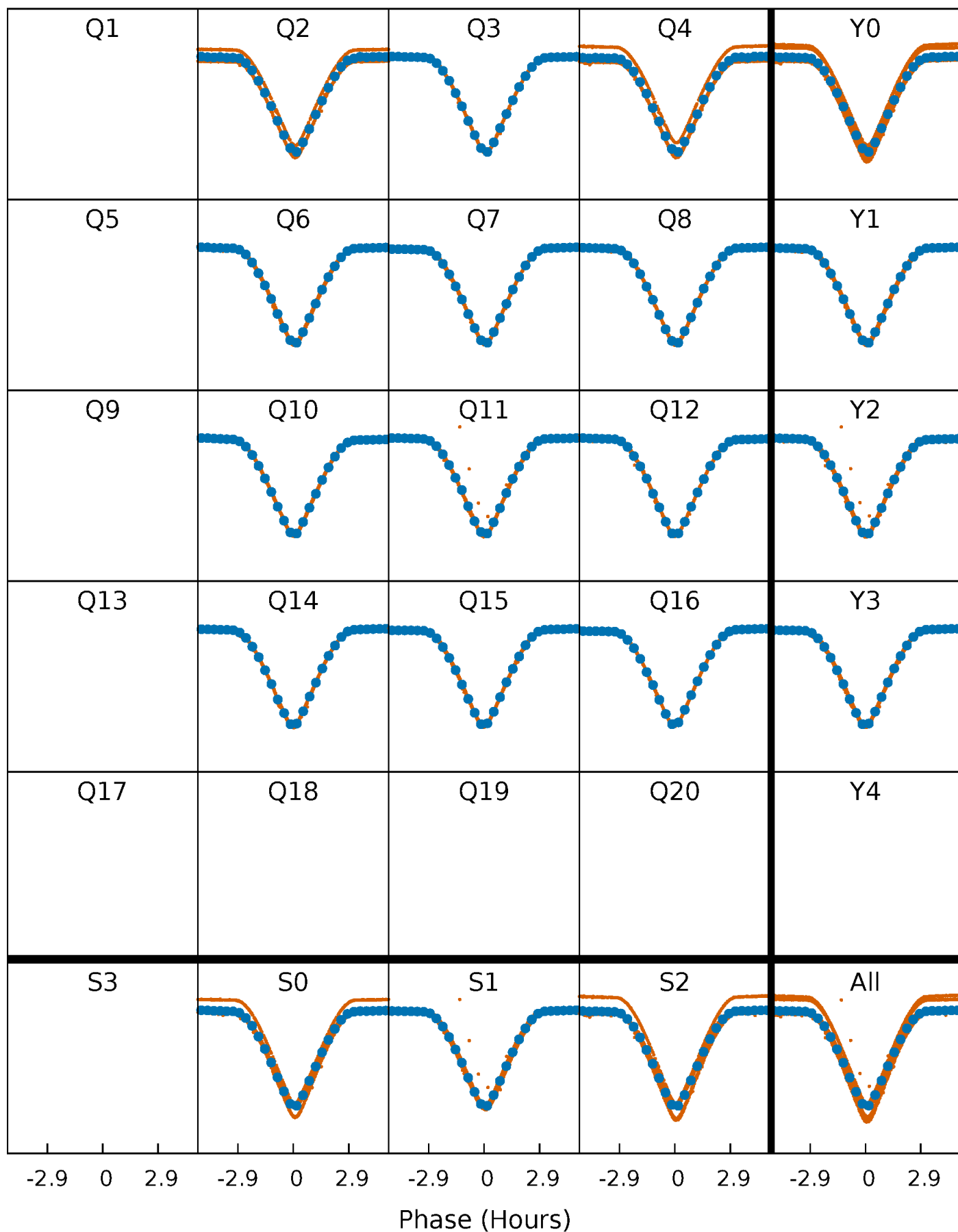


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



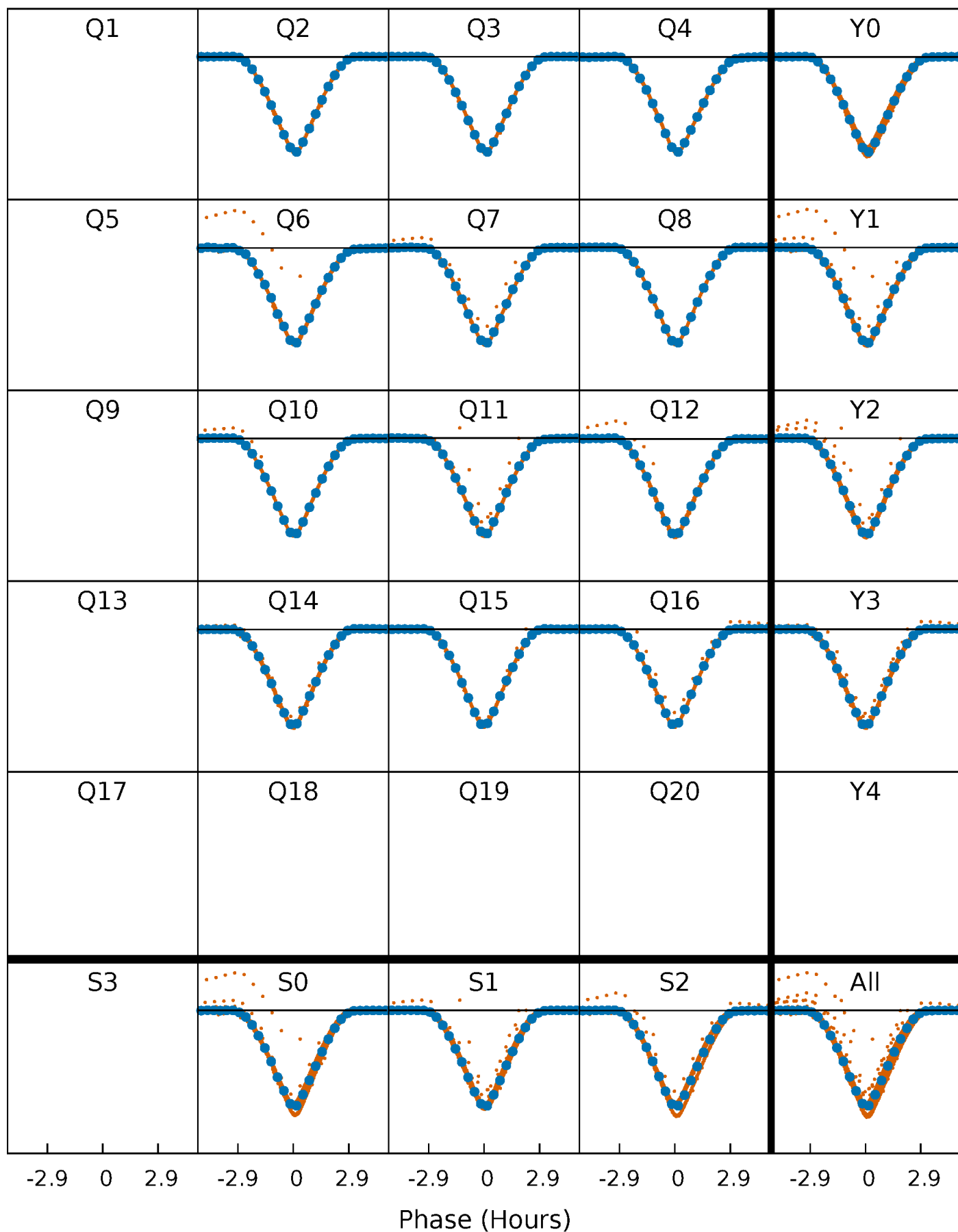
PDC Quarter-Phased Transit Curves

TCE 010581918-01 P= 1.801871 Days $T_0=131.578702$ (BKJD)



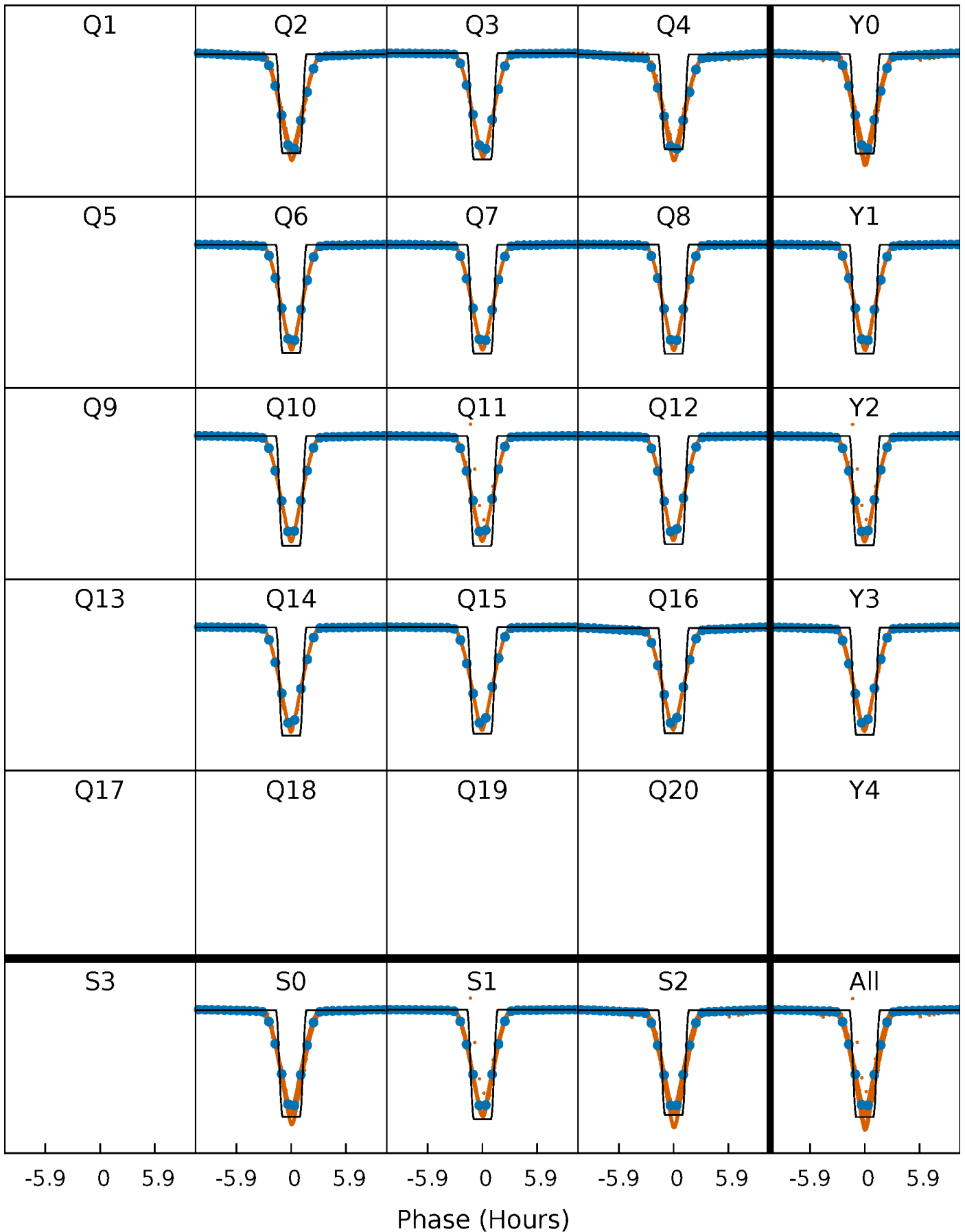
DV Quarter-Phased Transit Curves

TCE 010581918-01 P= 1.801871 Days $T_0=131.578702$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

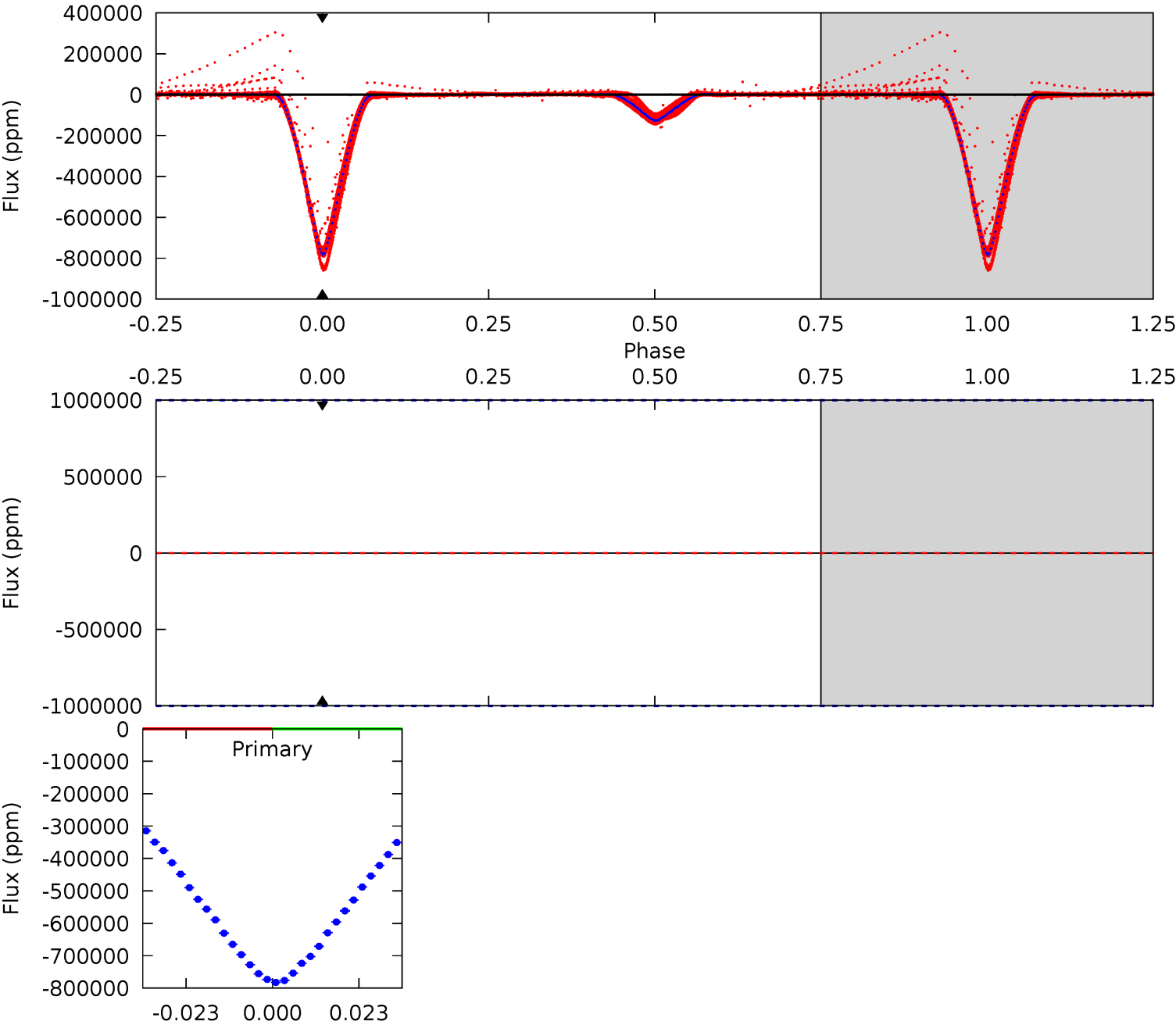
TCE 010581918-01 P= 1.801871 Days $T_0=131.580093$ (BKJD)



DV Model-Shift Uniqueness Test

010581918-01, P = 1.801871 Days, E = 131.578702 Days

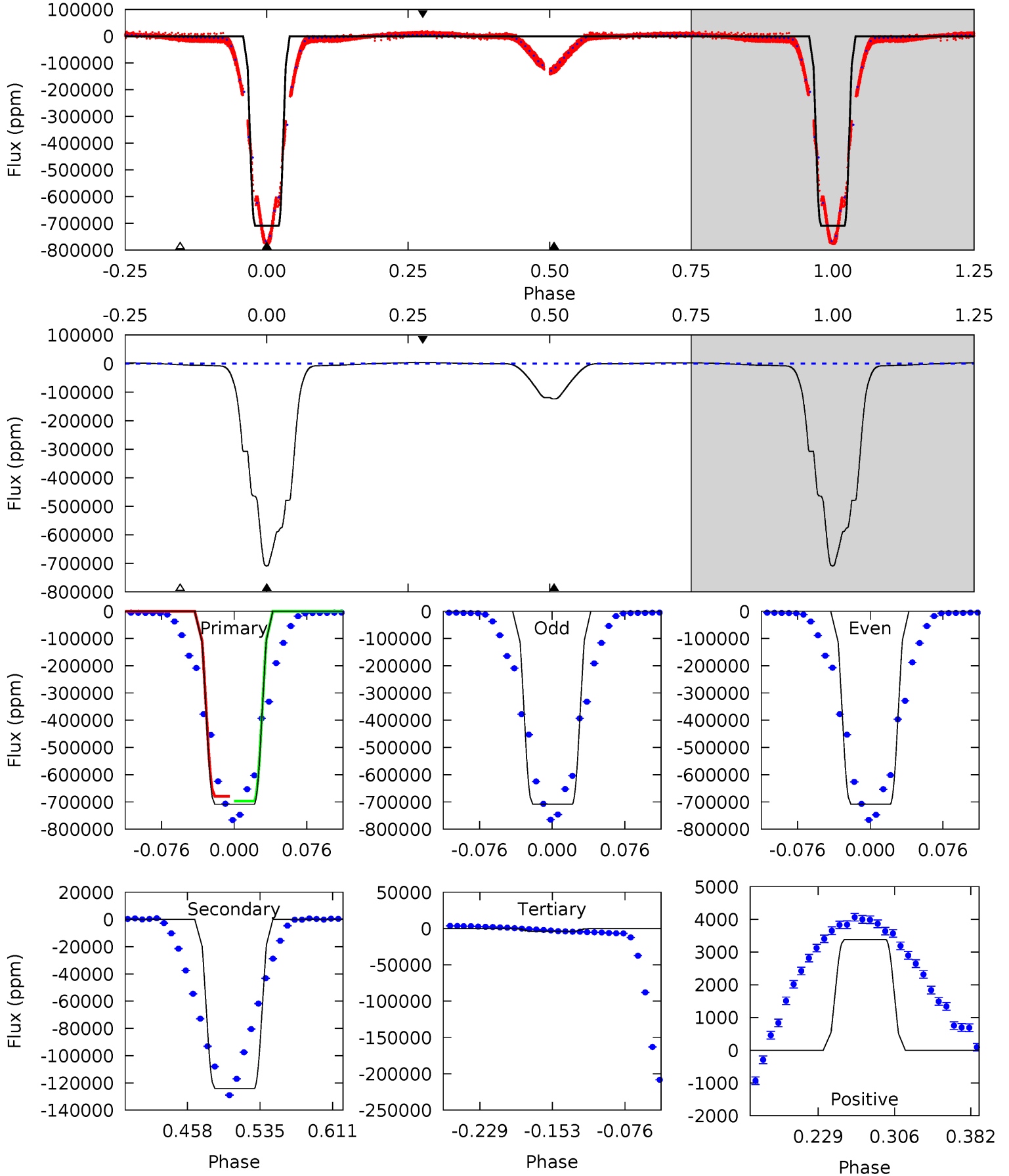
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010581918-01, P = 1.801871 Days, E = 131.580093 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5667	992.3	31.1	27.1	4.62	1.77	27.4	5636	5640	961.2	965.2	0.56	1.01	0.00	0



Stellar Parameters For KIC 010581918

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7479^{+235}_{-314}	$3.919^{+0.308}_{-0.132}$	$-0.300^{+0.250}_{-0.350}$	$2.324^{+0.472}_{-0.876}$	$1.634^{+0.182}_{-0.363}$	$0.183^{+0.394}_{-0.070}$
	+3%/-4%	+8%/-3%	+83%/-117%	+20%/-38%	+11%/-22%	+215%/-38%
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 010581918-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$63.98^{+27.02}_{-23.25}$	3730^{+278}_{-348}	4036^{+4759}_{-12264}	$1.076^{+17.365}_{-15.982}$
Alt.	-124126 ± 125	$220.01^{+46.25}_{-43.73}$	3748^{+248}_{-341}	4692^{+293}_{-292}	$1.892^{+0.917}_{-0.588}$

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

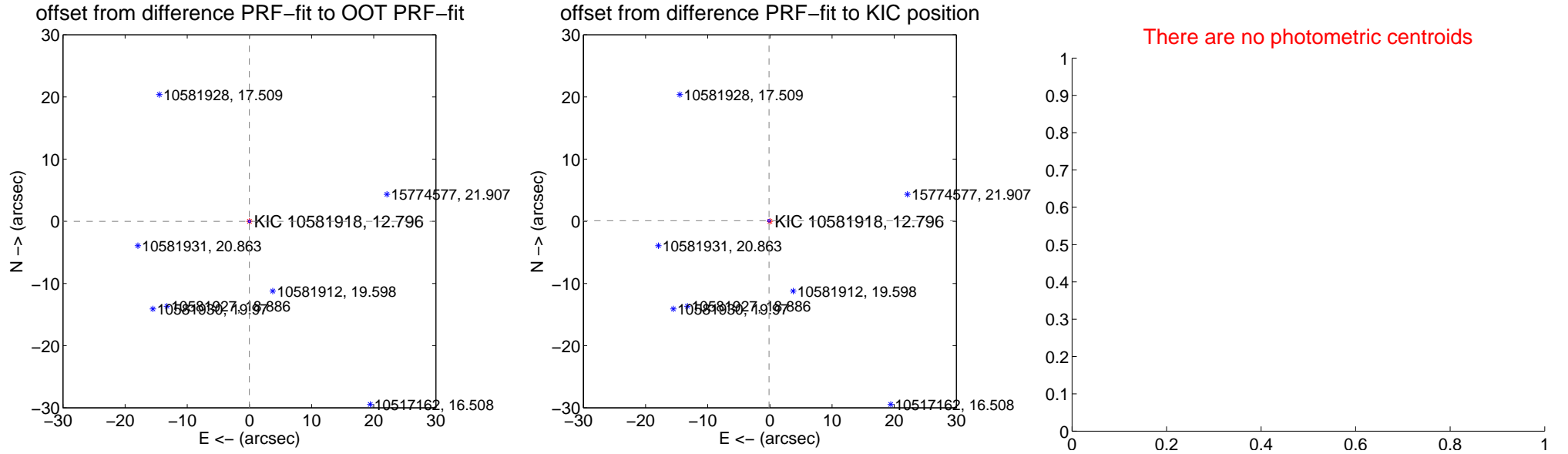
DV Centroid Data

Supplemental centroid analysis for 010581918-01. Kepler magnitude: 12.80. Transit SNR -1.00

There are 12 quarters with good PRF difference image offsets

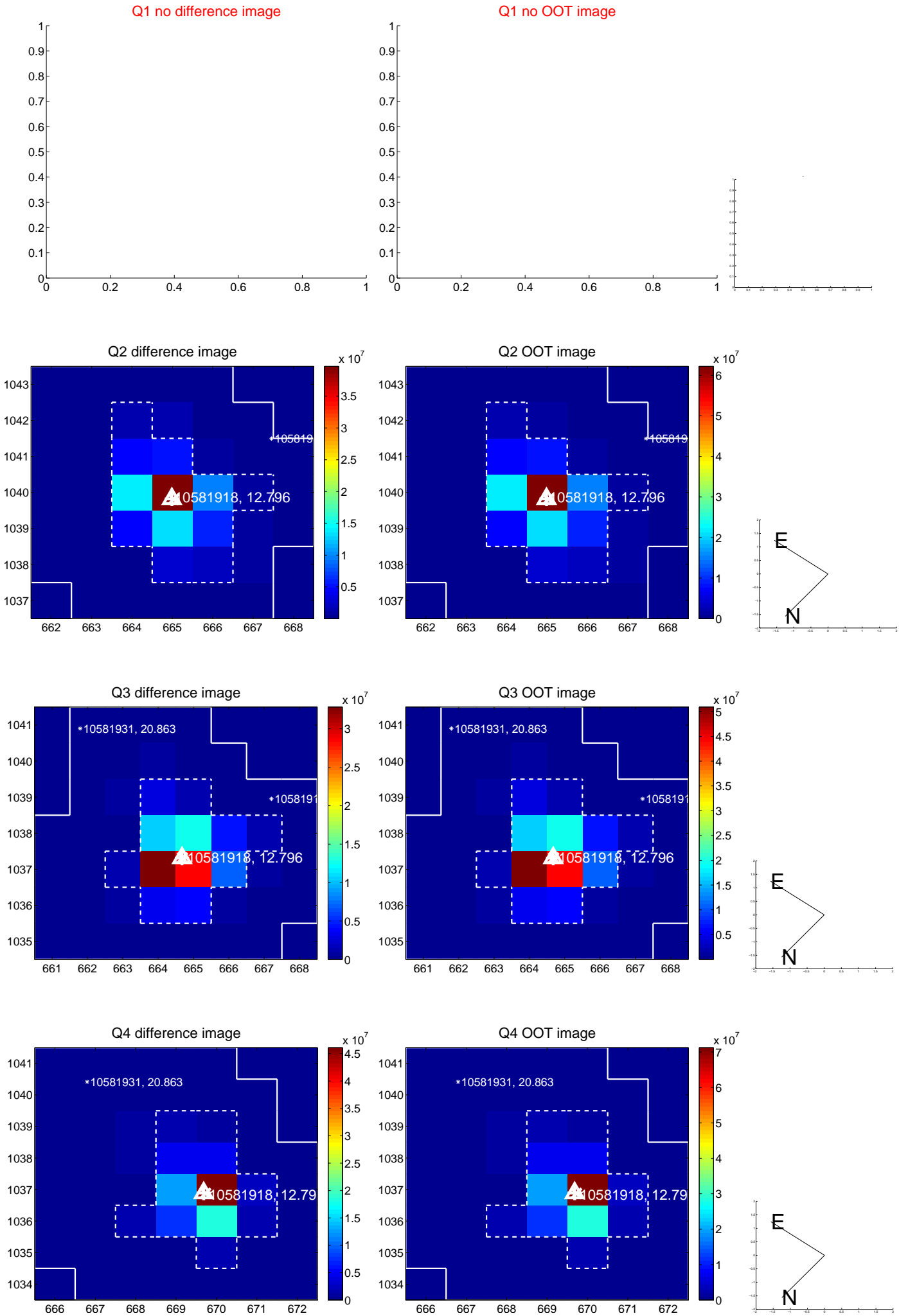
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.007 ± 0.067	0.11	0.005 ± 0.067	-0.005 ± 0.067
PRF-fit source offset from KIC position	0.164 ± 0.069	2.36	0.139 ± 0.069	0.086 ± 0.068
photometric centroid source offset	—	—	—	—

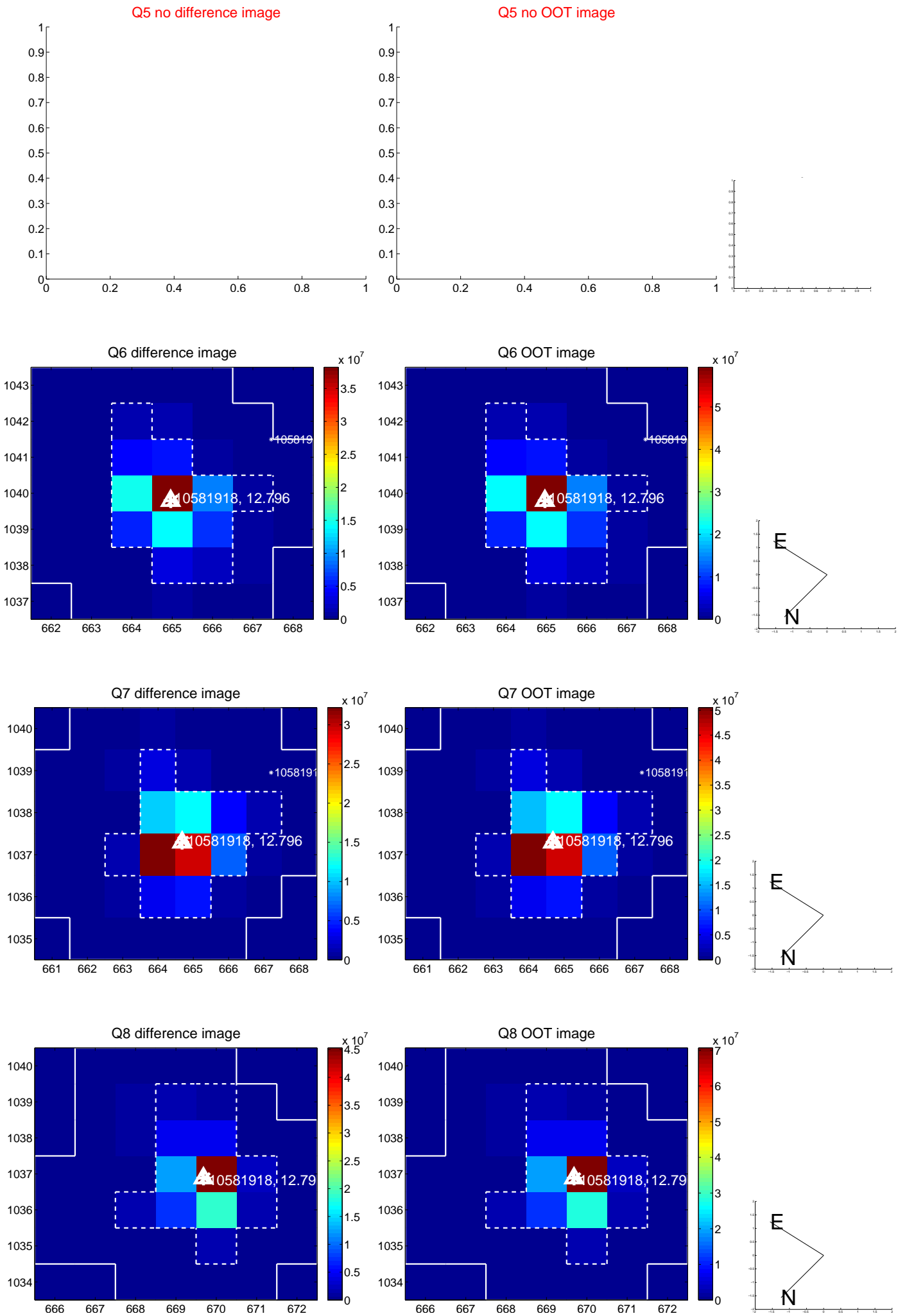


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

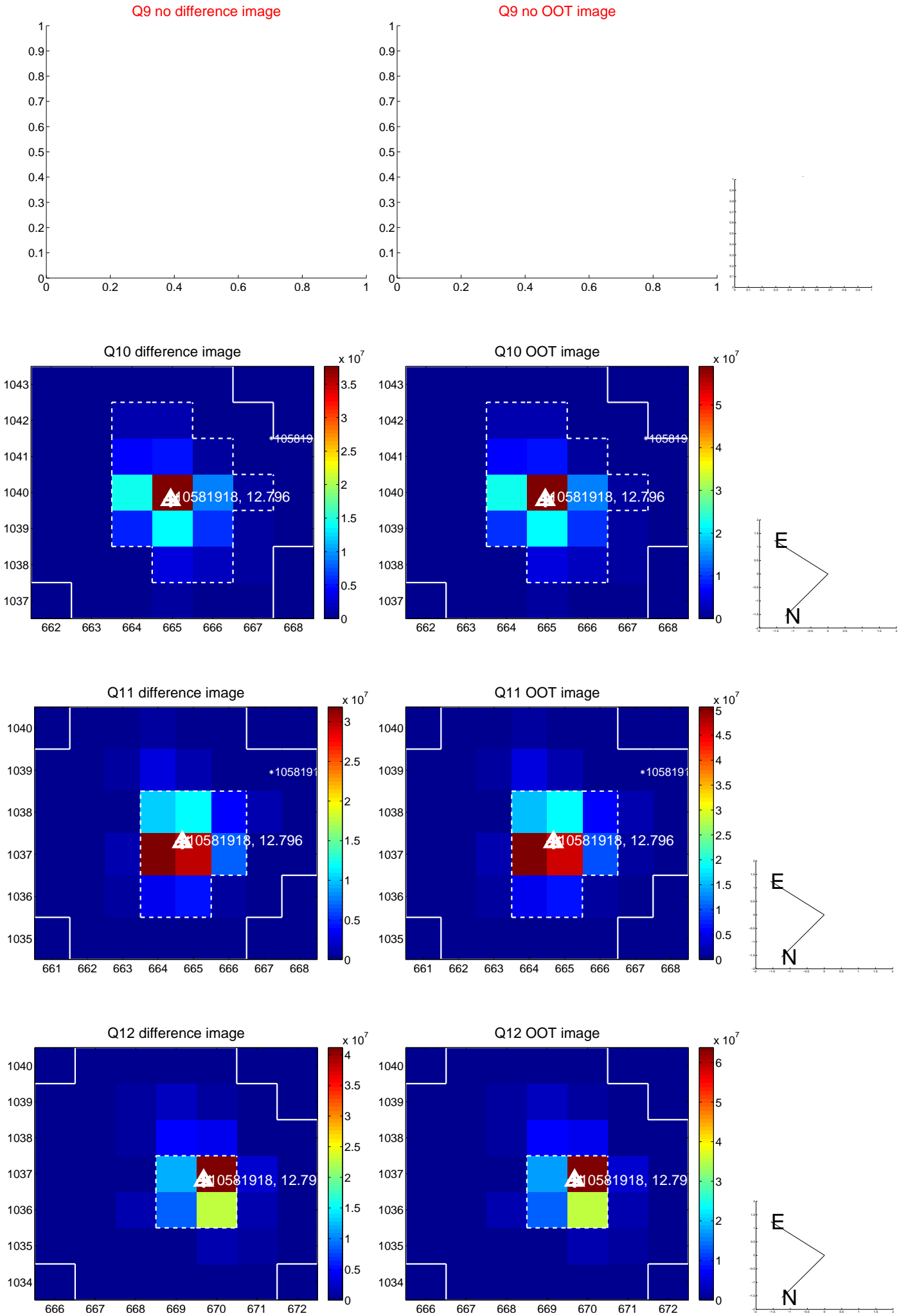
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



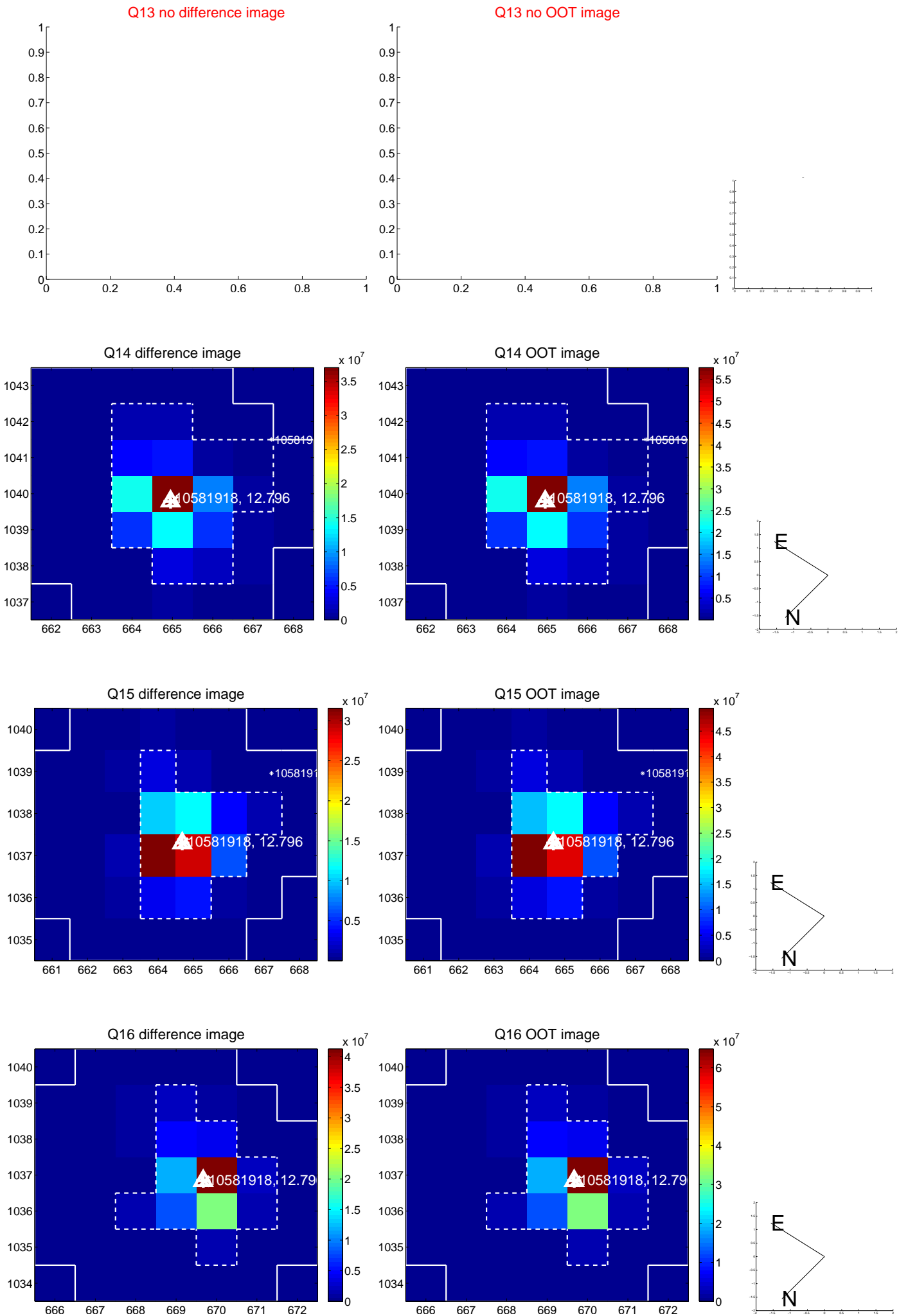
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

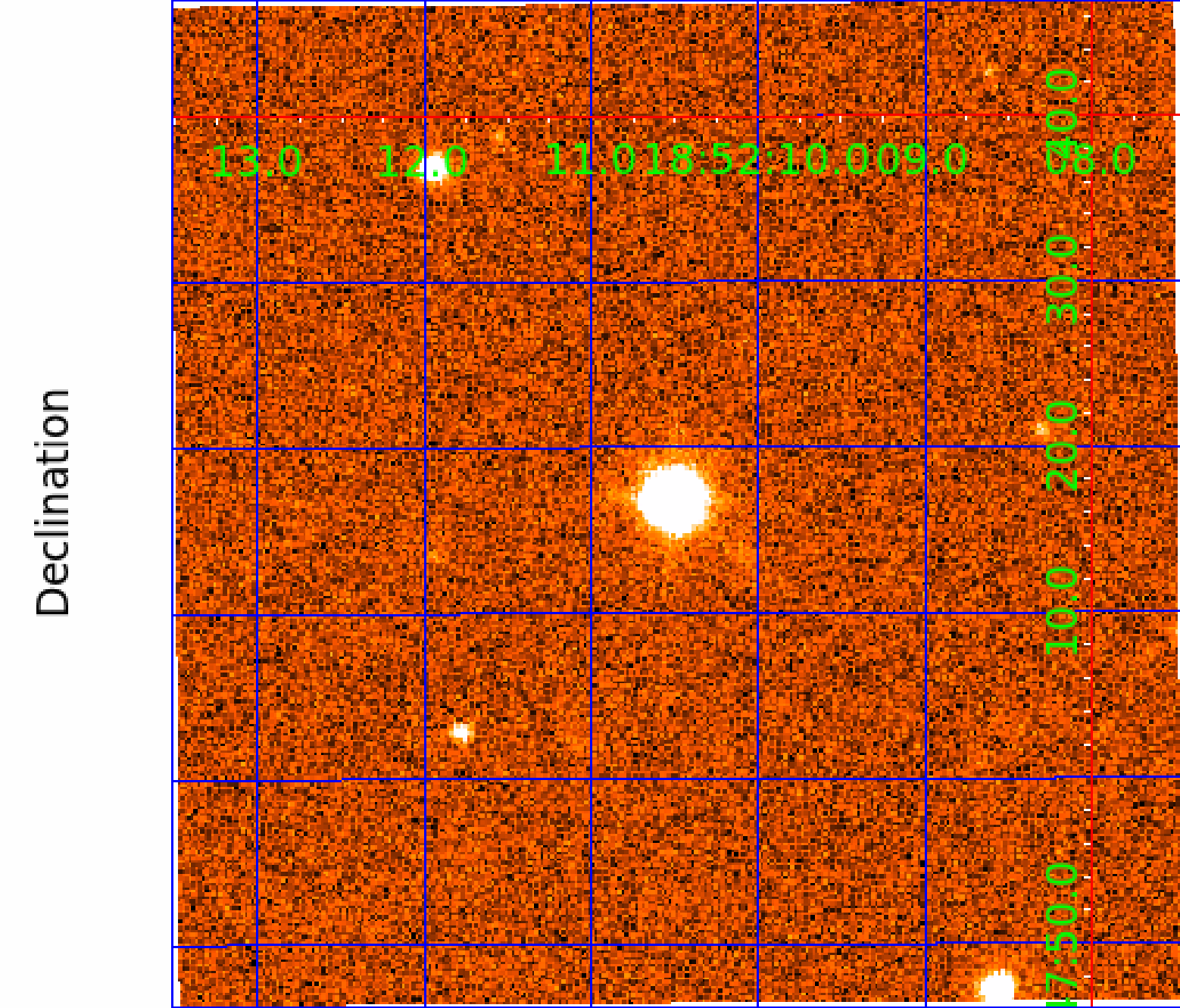


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image



KIC 010581918

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})
010581918-01	OBS	No	1.801871	131.578702	774790.8	2.500	14021.2	-1.0	2.32	7479	70.09	12985.57
010581918-02	OBS	3807.01	1.801858	132.488277	8409.9	3.000	2031.7	-1.0	2.32	7479	21.61	12985.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010581918-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
010581918-02	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

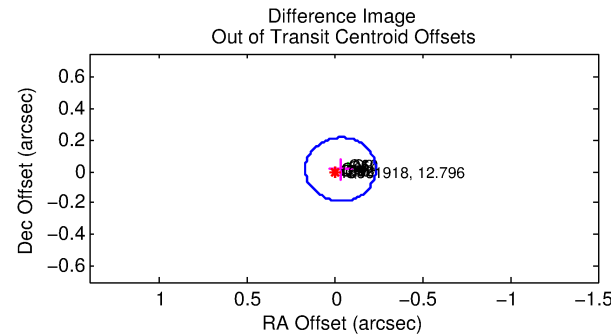
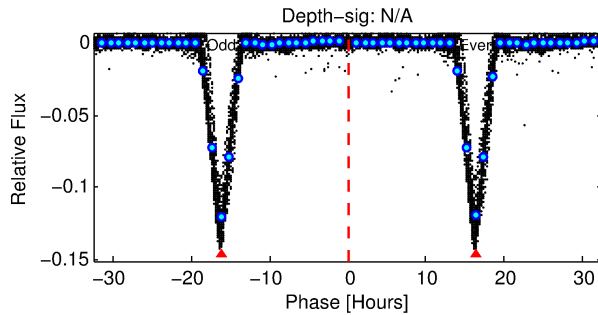
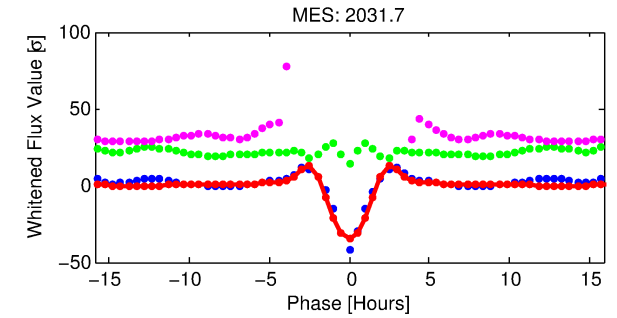
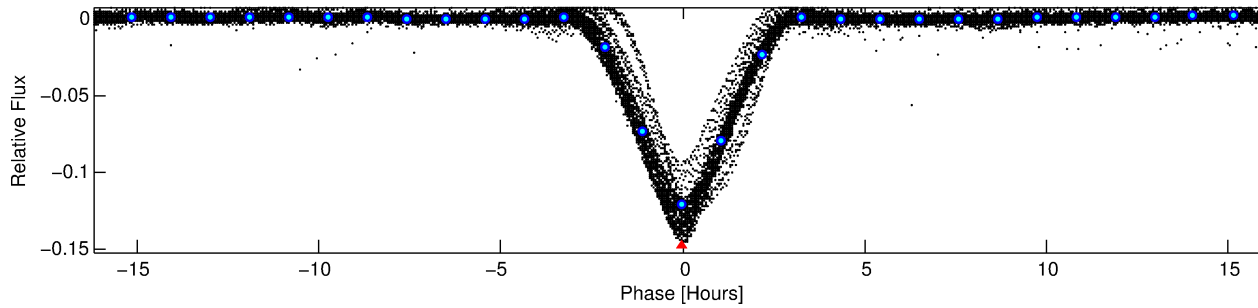
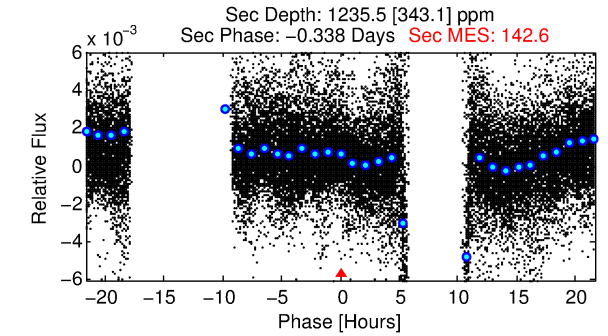
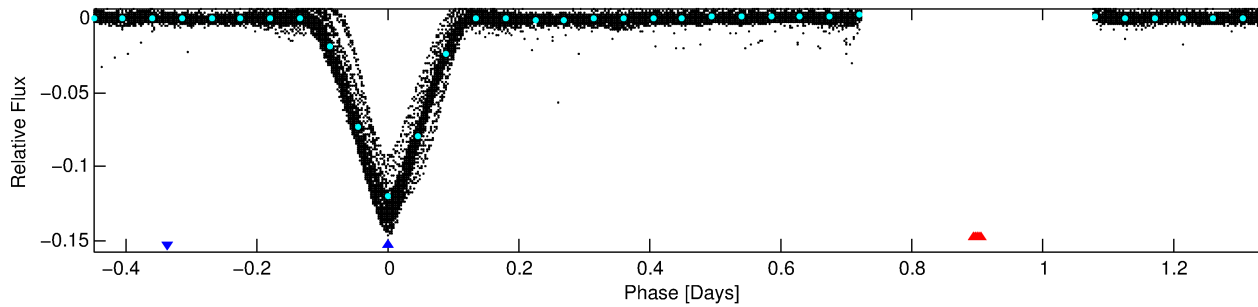
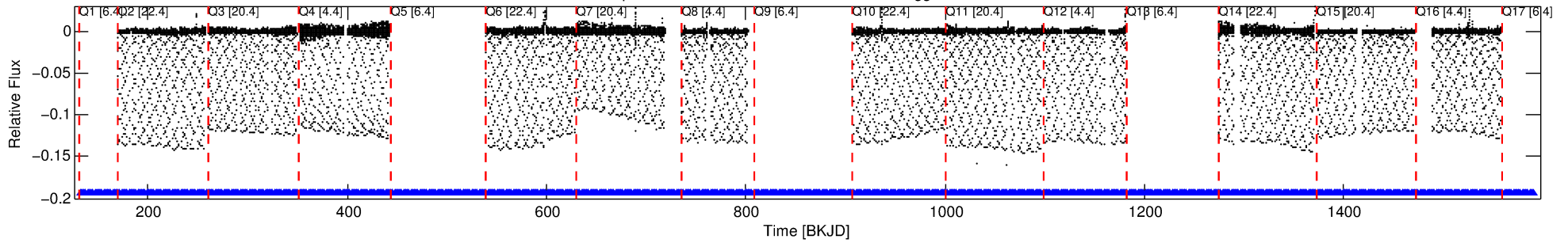
Ephemeris Match Information For 010581918-02

No Significant Match Found

DV One-Page Summary

KIC: 10581918 Candidate: 2 of 2 Period: 1.802 d
KOI: K03807 Corr: No Ephemeris Match

Kp: 12.80 R*: 2.32 Rs Teff: 7479.0 K Logg: 3.92 Fe/H: -0.300



TPS TCE Results:

Period = 1.80186 d
Epoch = 132.4883 BKJD

DV fit results are unavailable

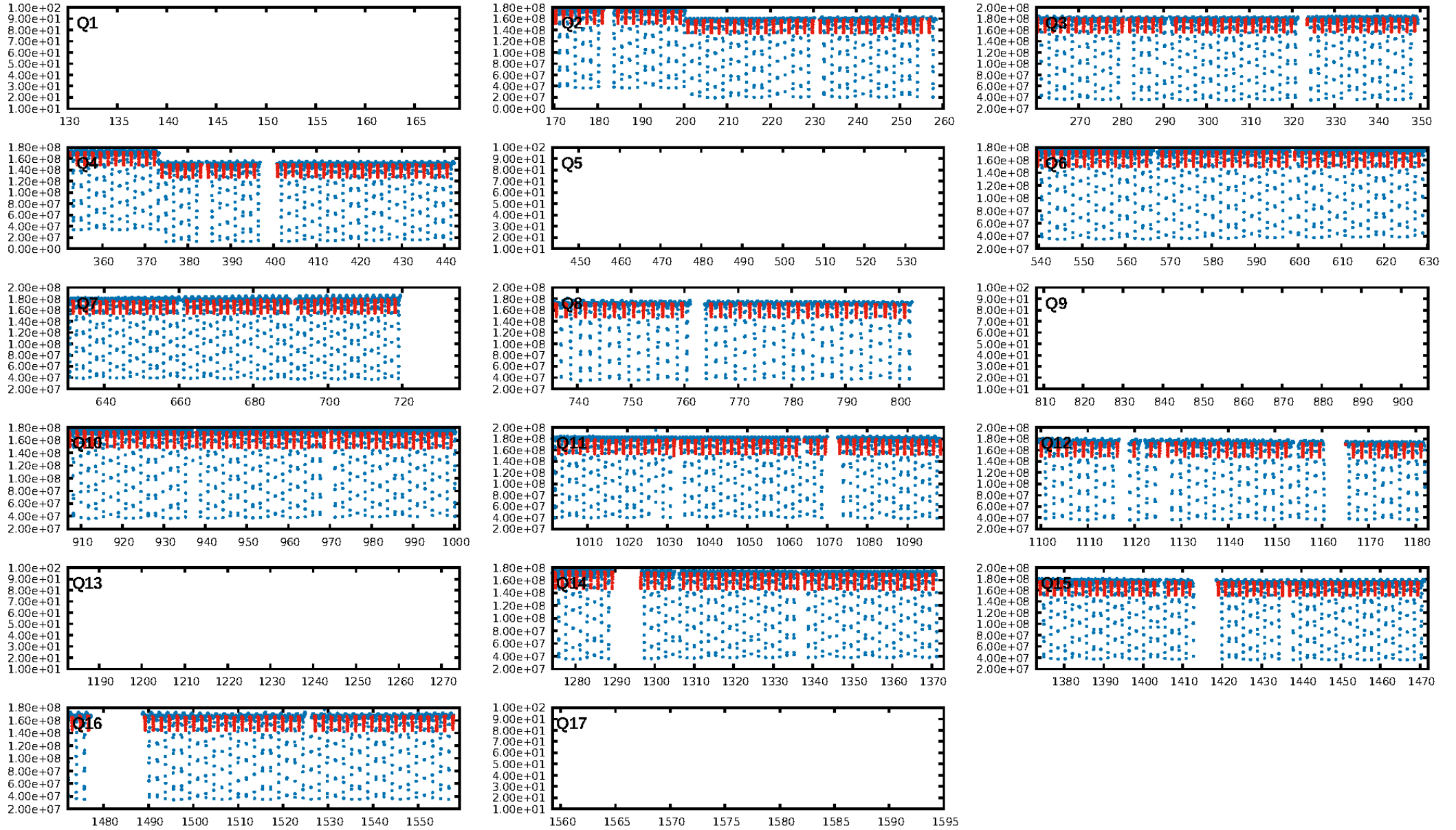
DV Diagnostic Results:

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 [552/552]
GhostDiagnostic-chr: 0.9529
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.036 arcsec [0.54σ]
KicOffset-rm: 0.145 arcsec [2.12σ]
OotOffset-st: 4/4/4/0 [12]
KicOffset-st: 4/4/4/0 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [12/12]

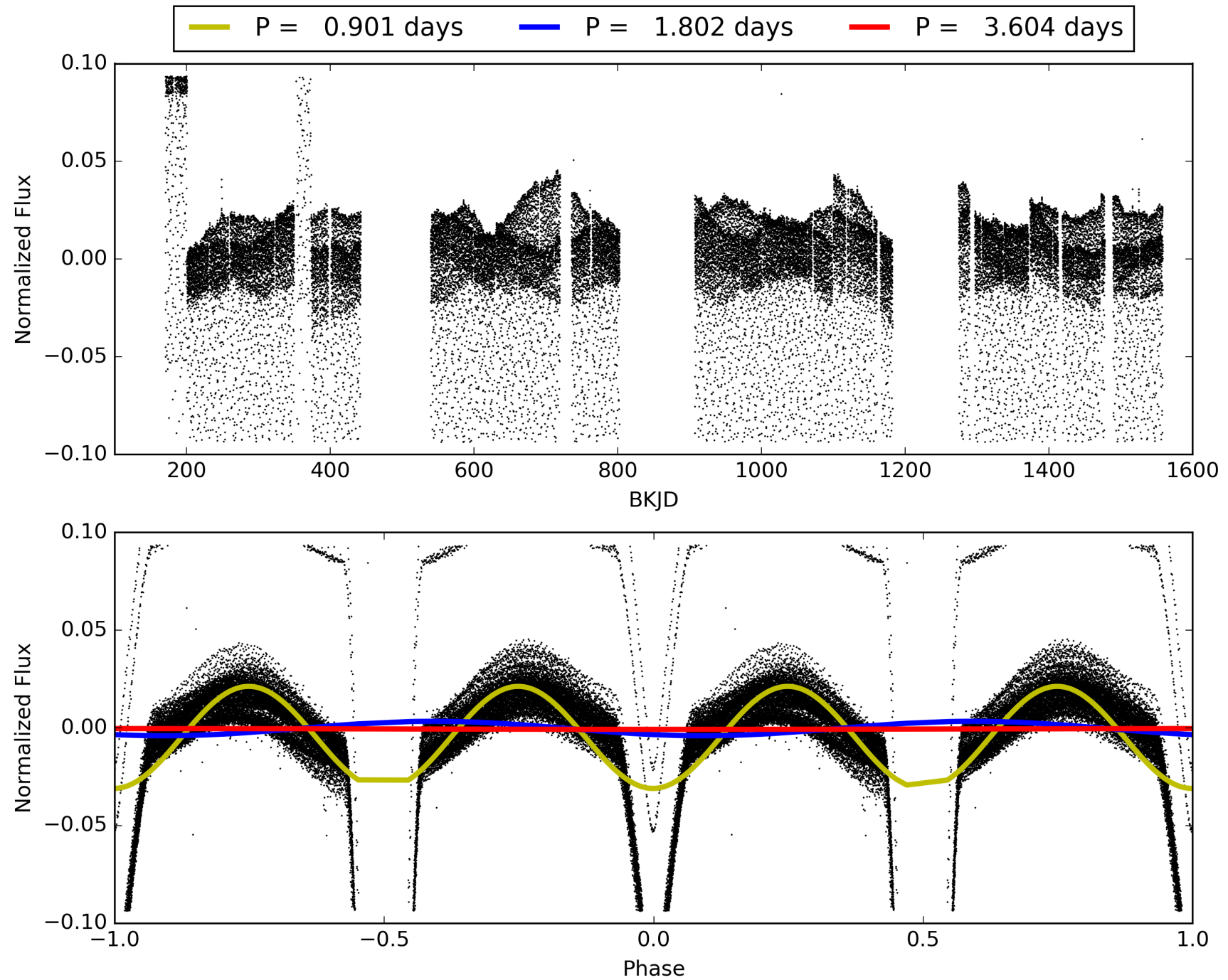
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 12:09:43 Z

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

TCE 010581918-02, PDC Light Curves

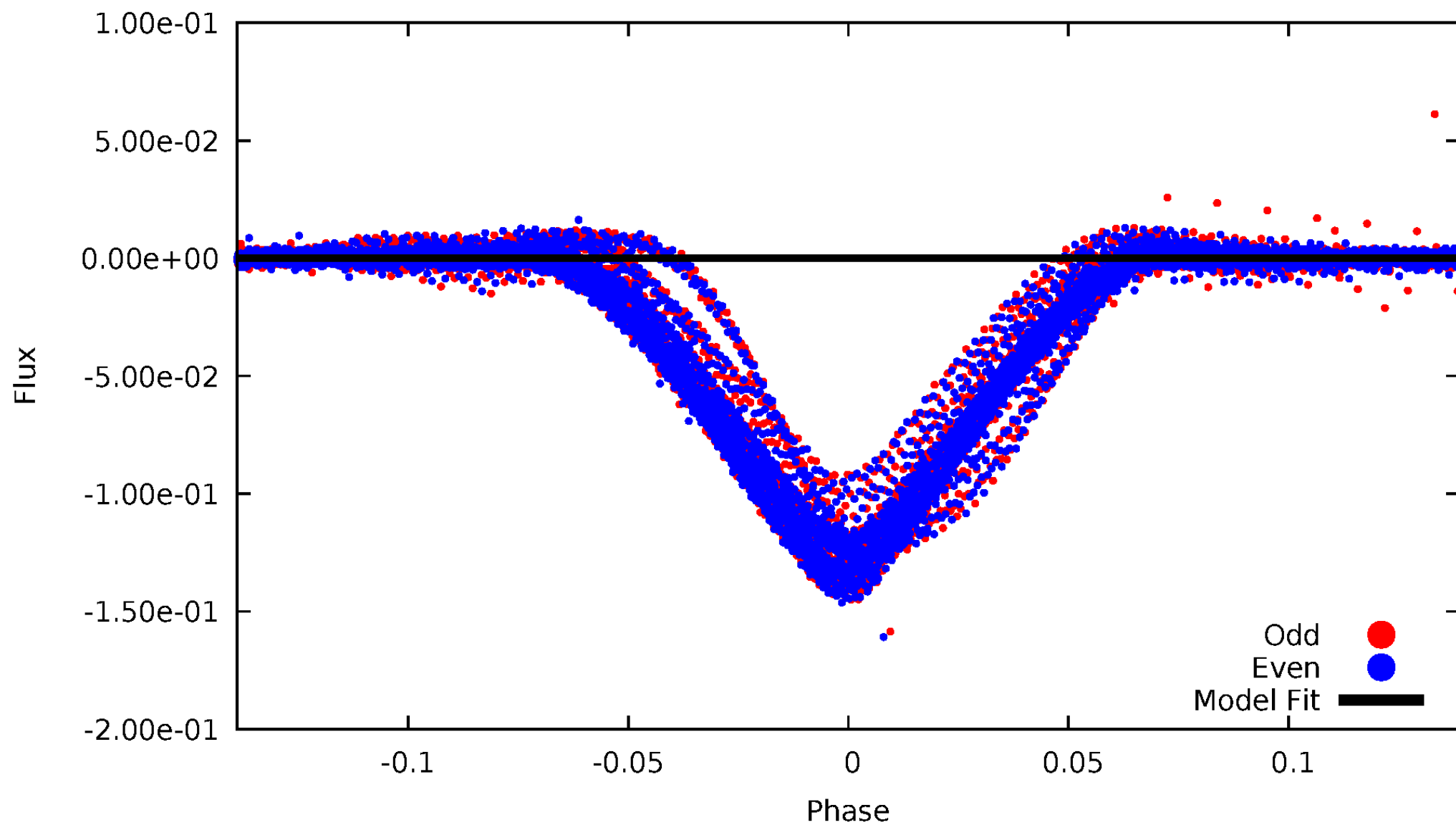


TCE 010581918-02



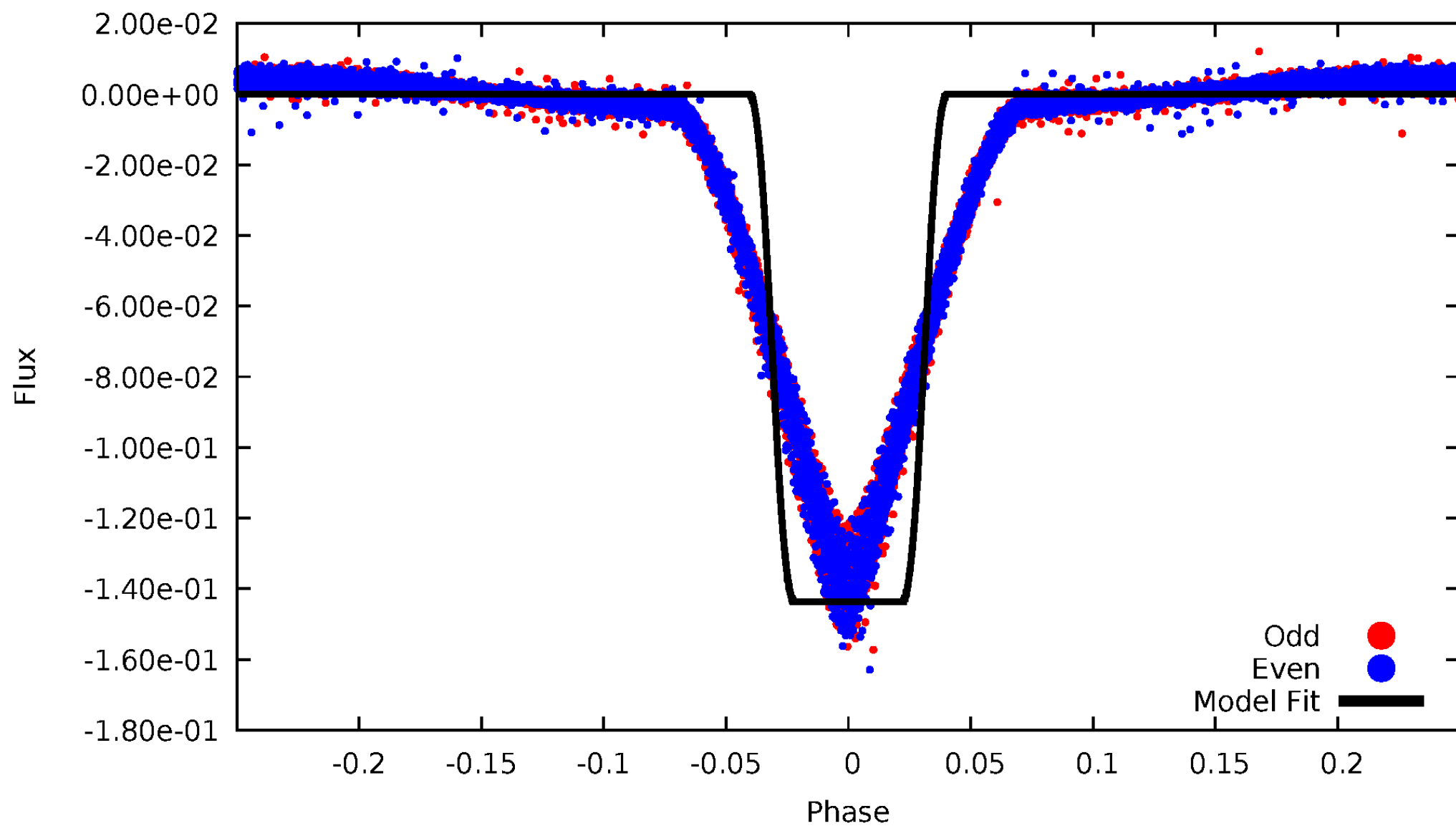
DV Odd/Even

TCE 010581918-02



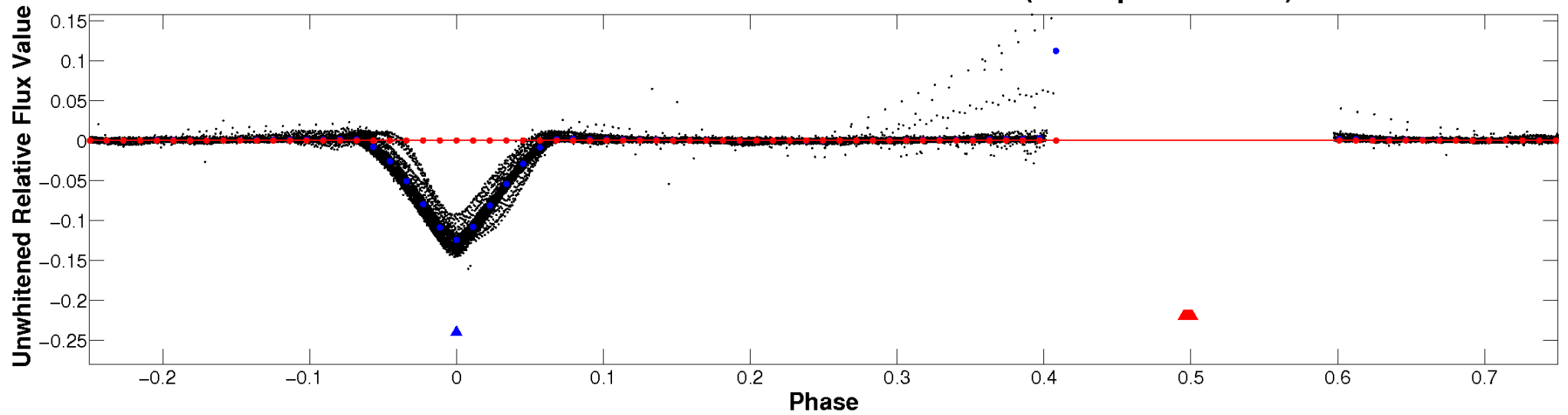
ALT Odd/Even

TCE 010581918-02



Non-Whitened Vs. Whitened Light Curve

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

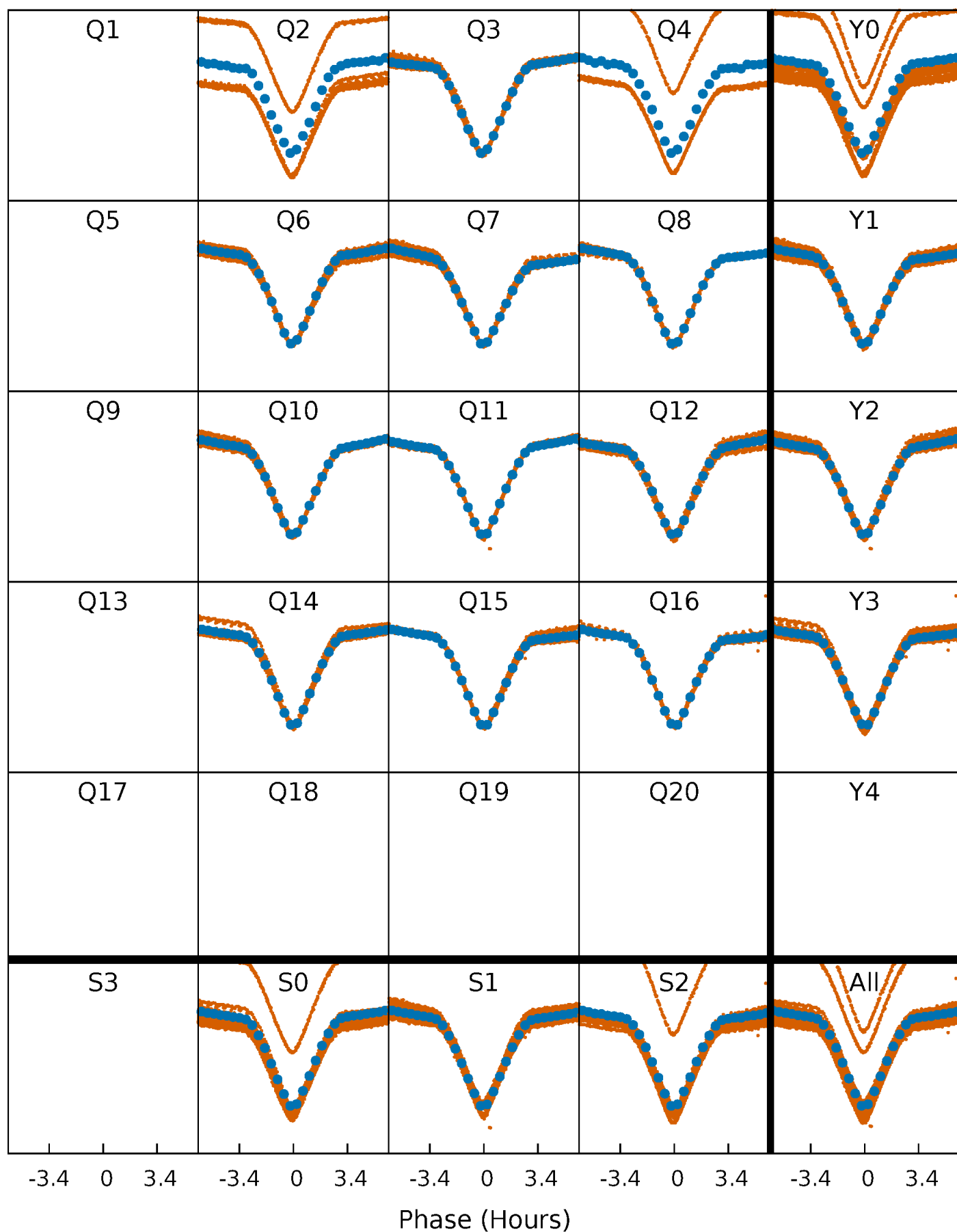


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



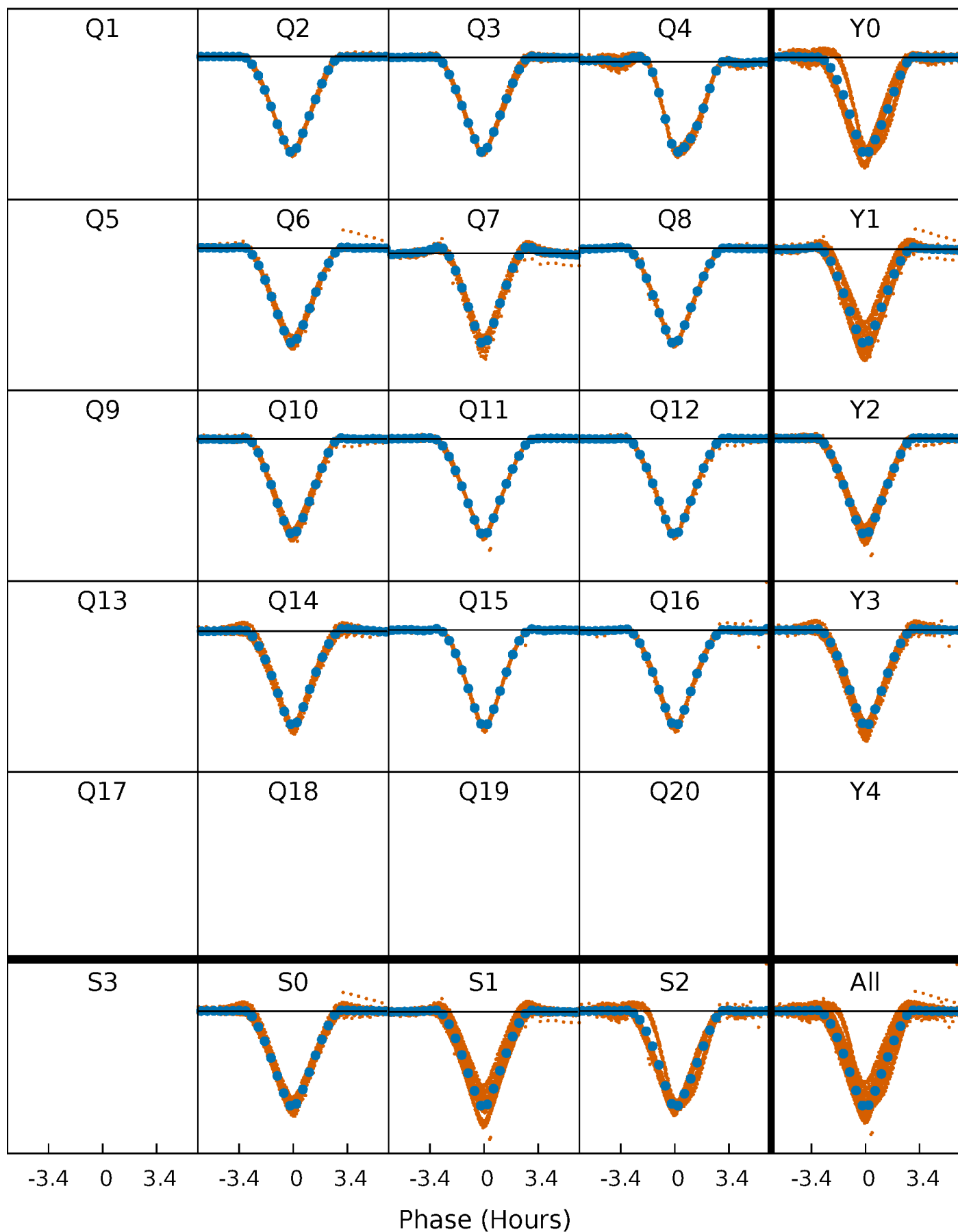
PDC Quarter-Phased Transit Curves

TCE 010581918-02 P= 1.801858 Days $T_0=132.488277$ (BKJD)



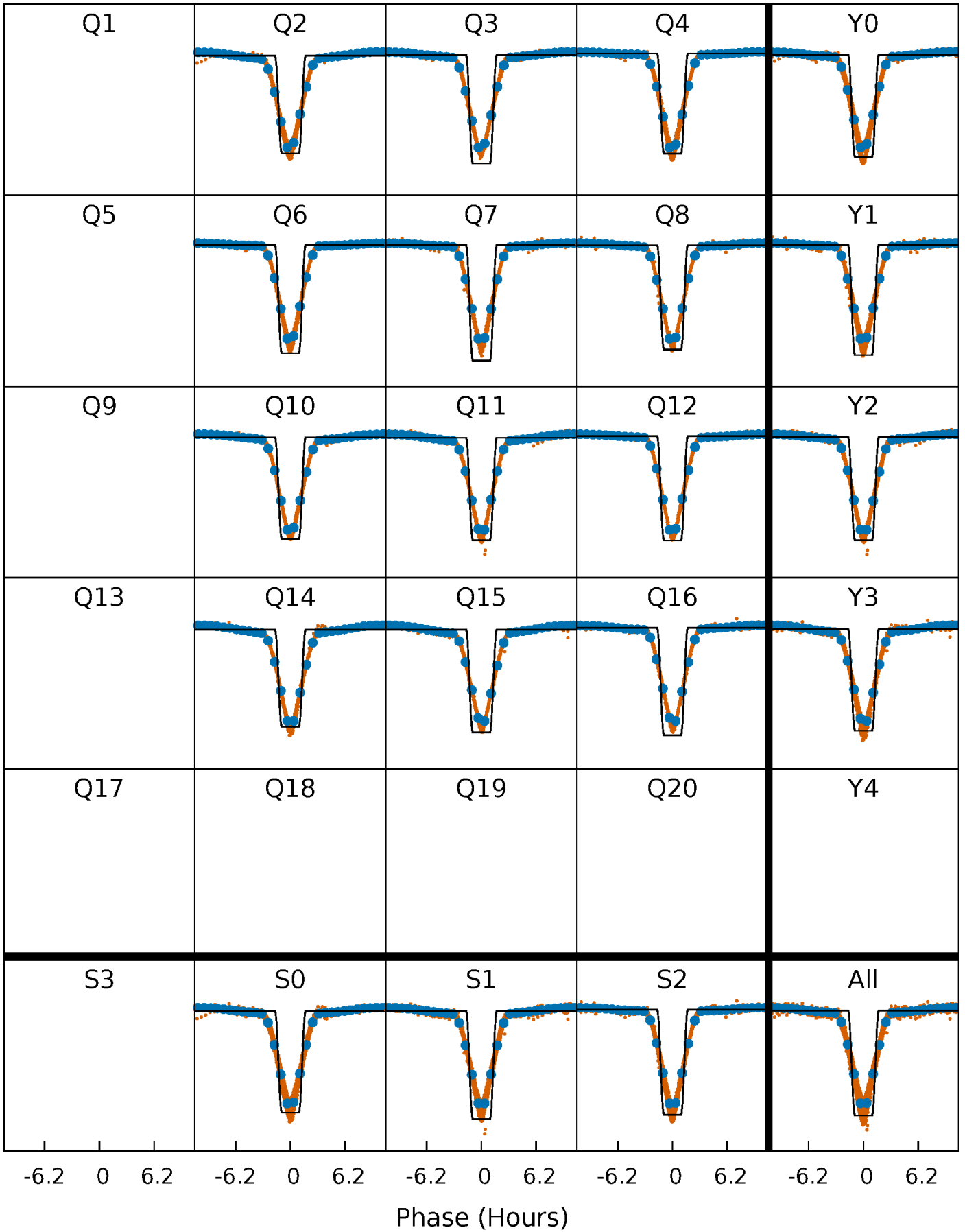
DV Quarter-Phased Transit Curves

TCE 010581918-02 P= 1.801858 Days $T_0=132.488277$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

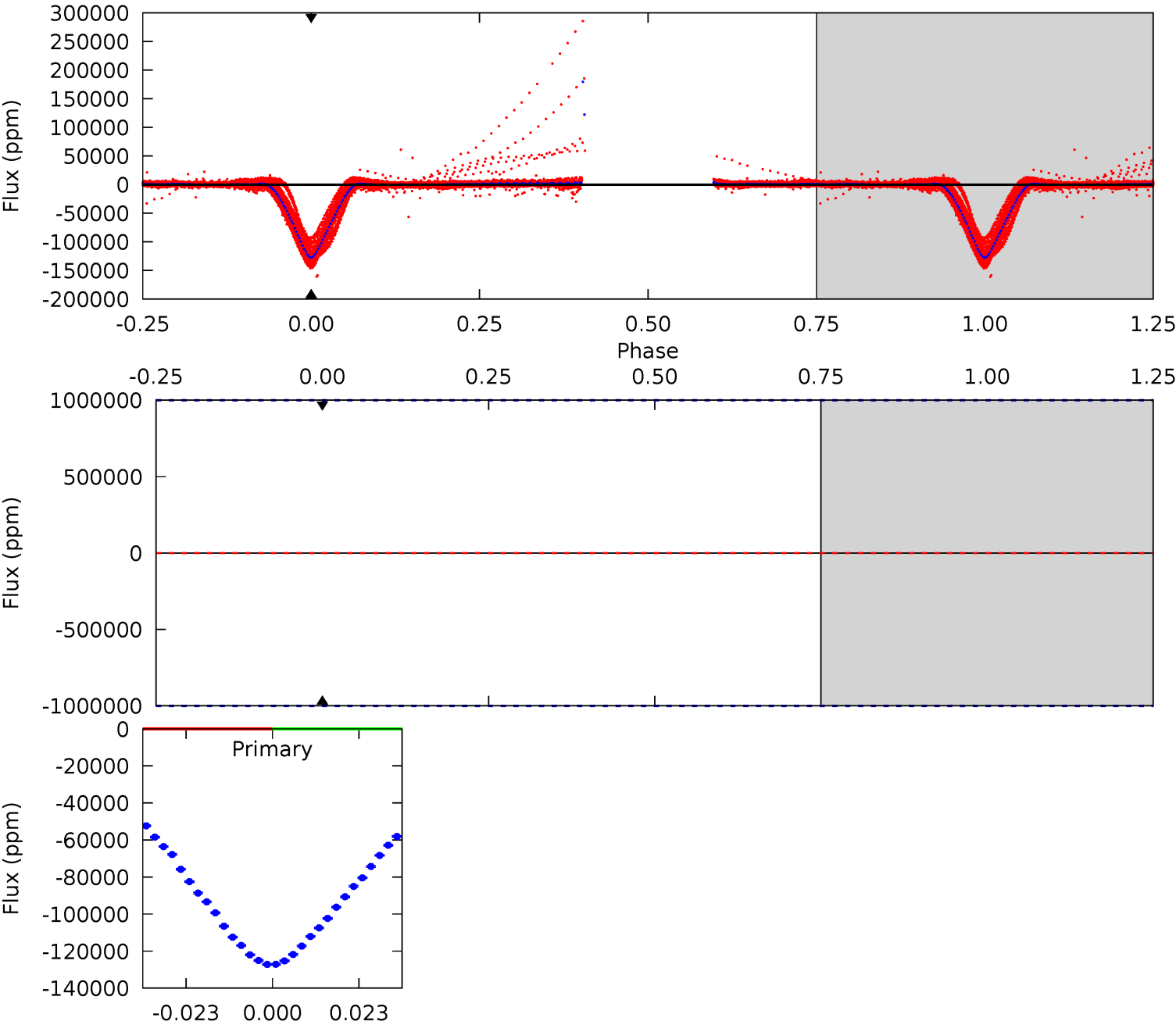
TCE 010581918-02 P= 1.801858 Days $T_0=132.486987$ (BKJD)



DV Model-Shift Uniqueness Test

010581918-02, P = 1.801858 Days, E = 132.488277 Days

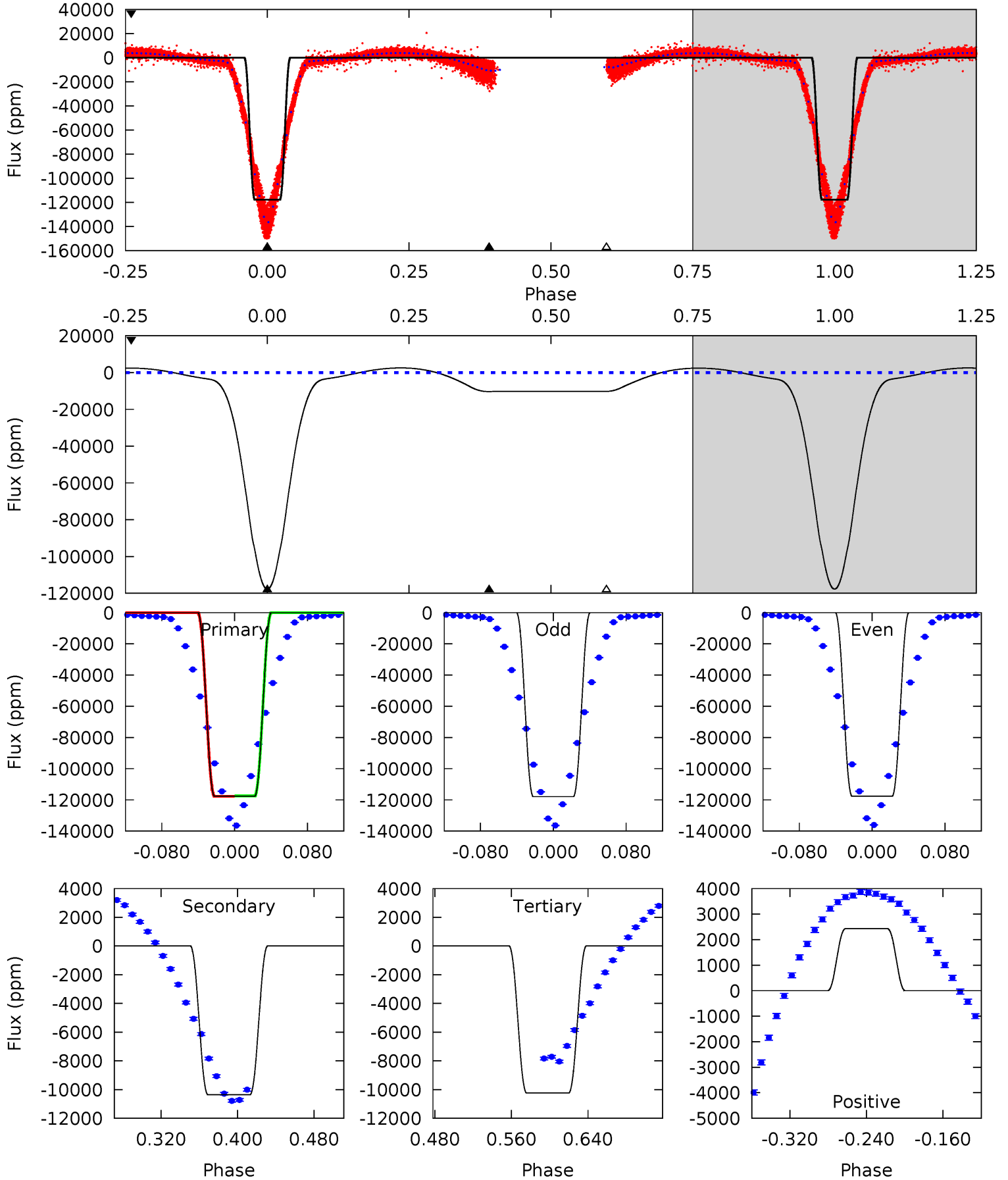
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010581918-02, P = 1.801858 Days, E = 132.486987 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2022	177.9	175.8	41.7	4.61	1.75	54.7	1847	1981	2.06	136.2	2.00	1.00	0.02	2.73



Stellar Parameters For KIC 010581918

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7479^{+235}_{-314}	$3.919^{+0.308}_{-0.132}$	$-0.300^{+0.250}_{-0.350}$	$2.324^{+0.472}_{-0.876}$	$1.634^{+0.182}_{-0.363}$	$0.183^{+0.394}_{-0.070}$
	$+3\%/-4\%$	$+8\%/-3\%$	$+83\%/-117\%$	$+20\%/-38\%$	$+11\%/-22\%$	$+215\%/-38\%$
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 010581918-02 / KOI 3807.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$25.17^{+23.79}_{-16.22}$	3752^{+255}_{-383}	-4658^{+26124}_{-19257}	$-1.176^{+154.633}_{-178.613}$
Alt.	-10352 ± 58	$89.89^{+31.93}_{-27.14}$	3746^{+275}_{-363}	3790^{+607}_{-601}	$0.824^{+0.795}_{-0.373}$

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

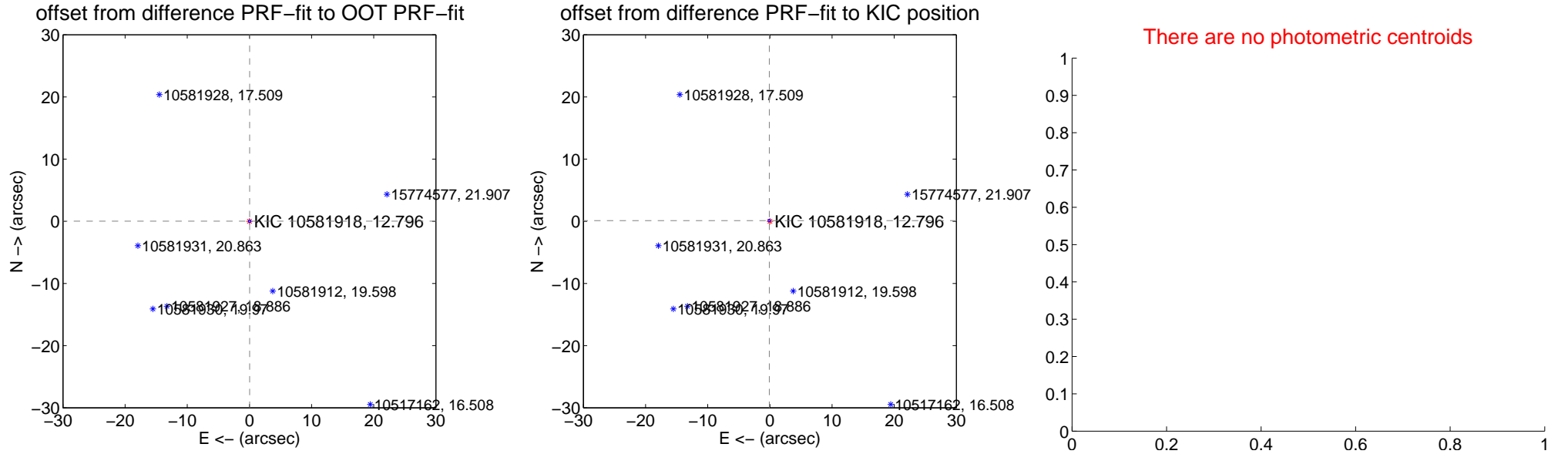
DV Centroid Data

Supplemental centroid analysis for 010581918-02. Kepler magnitude: 12.80. Transit SNR -1.00

There are 12 quarters with good PRF difference image offsets

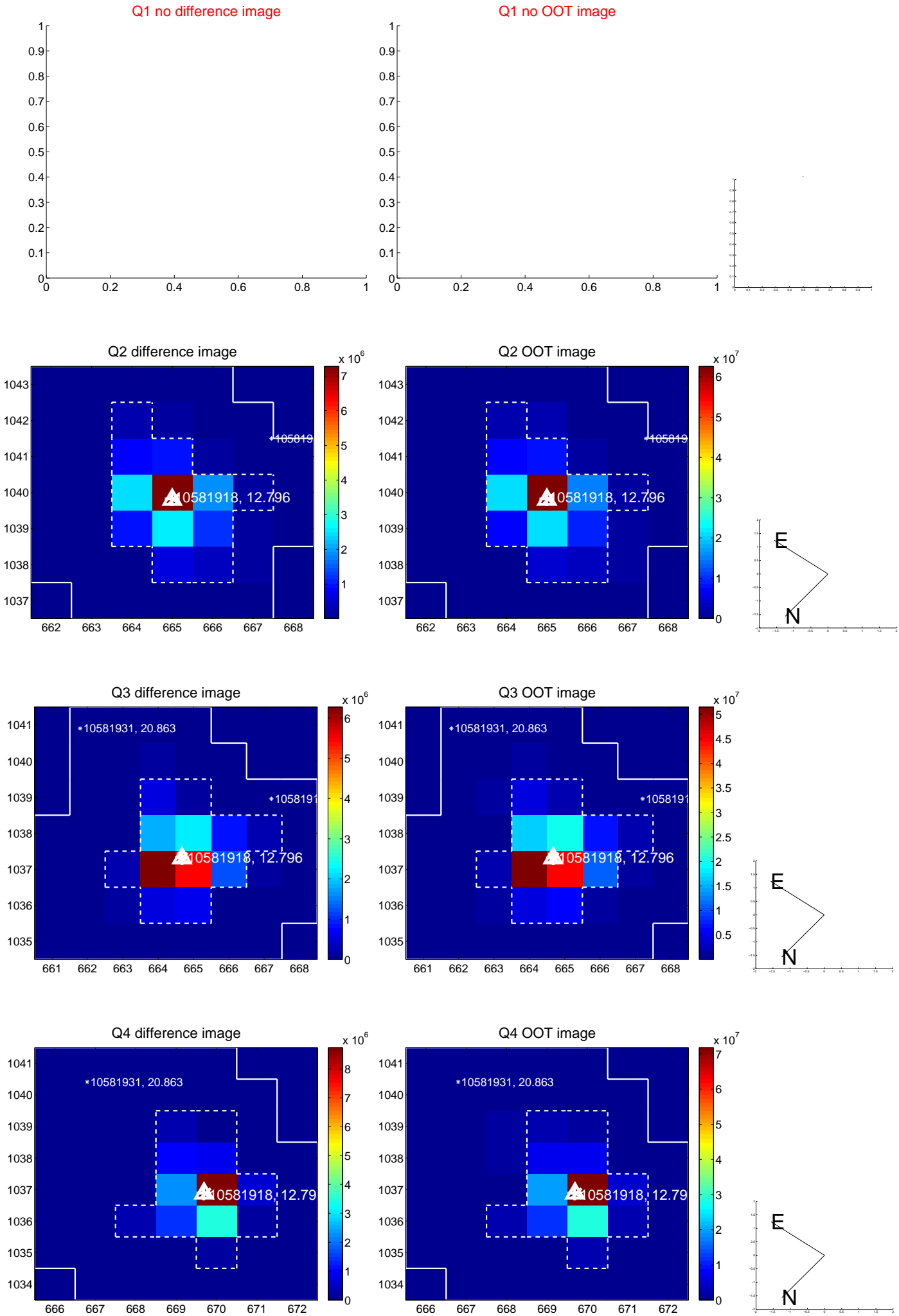
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.036 ± 0.067	0.54	-0.033 ± 0.067	0.015 ± 0.067
PRF-fit source offset from KIC position	0.145 ± 0.068	2.12	0.093 ± 0.068	0.112 ± 0.068
photometric centroid source offset	—	—	—	—

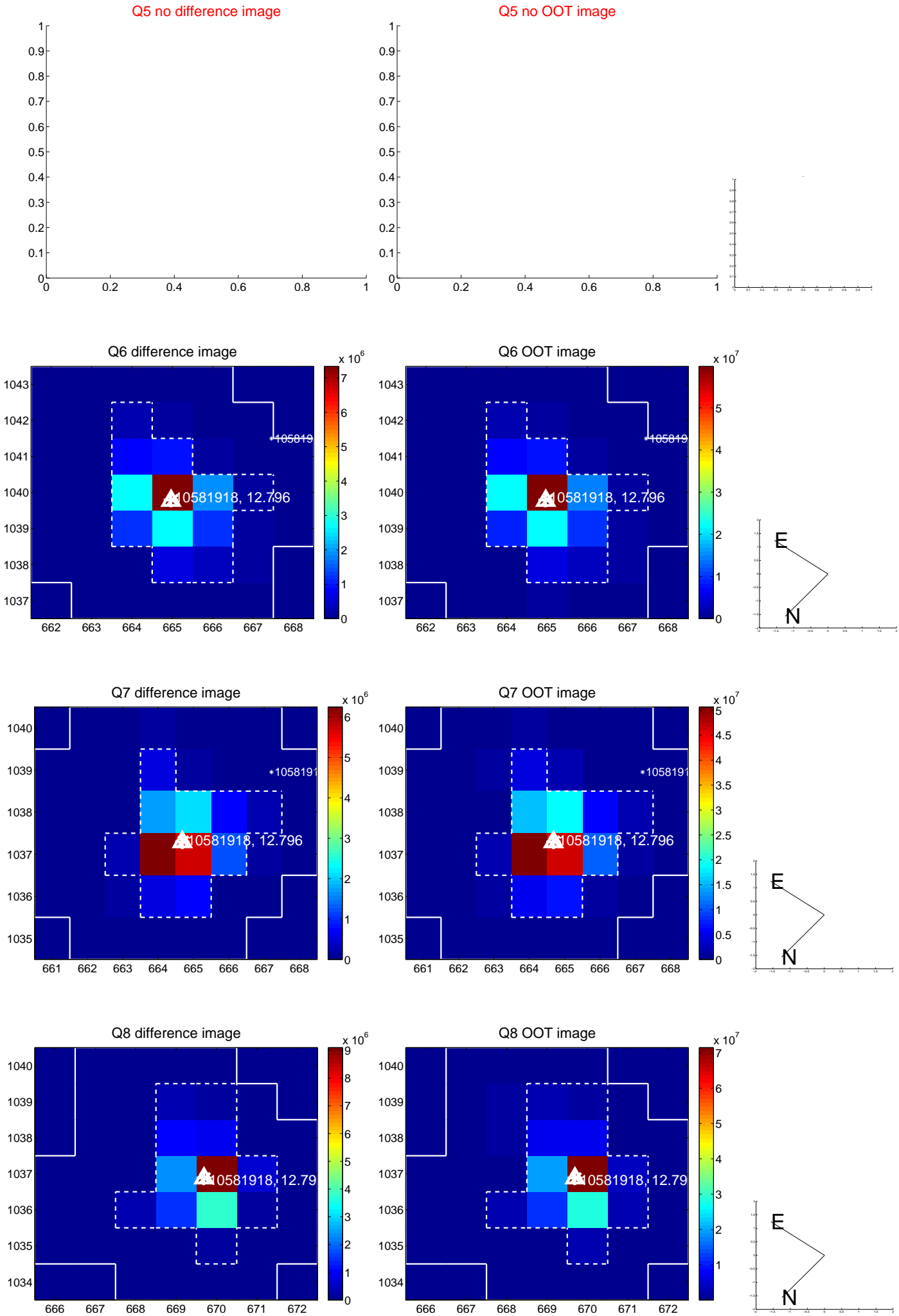


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

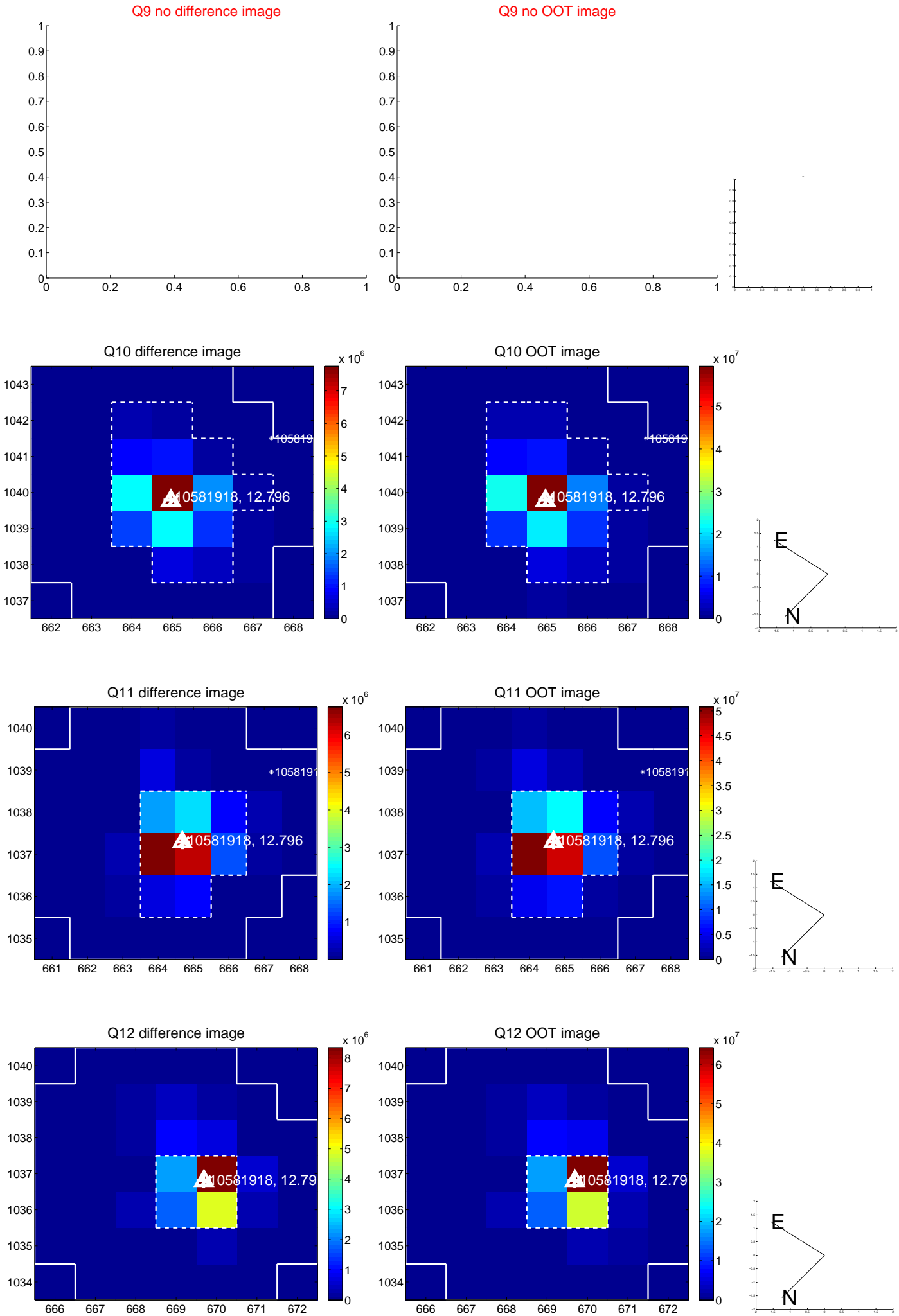
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



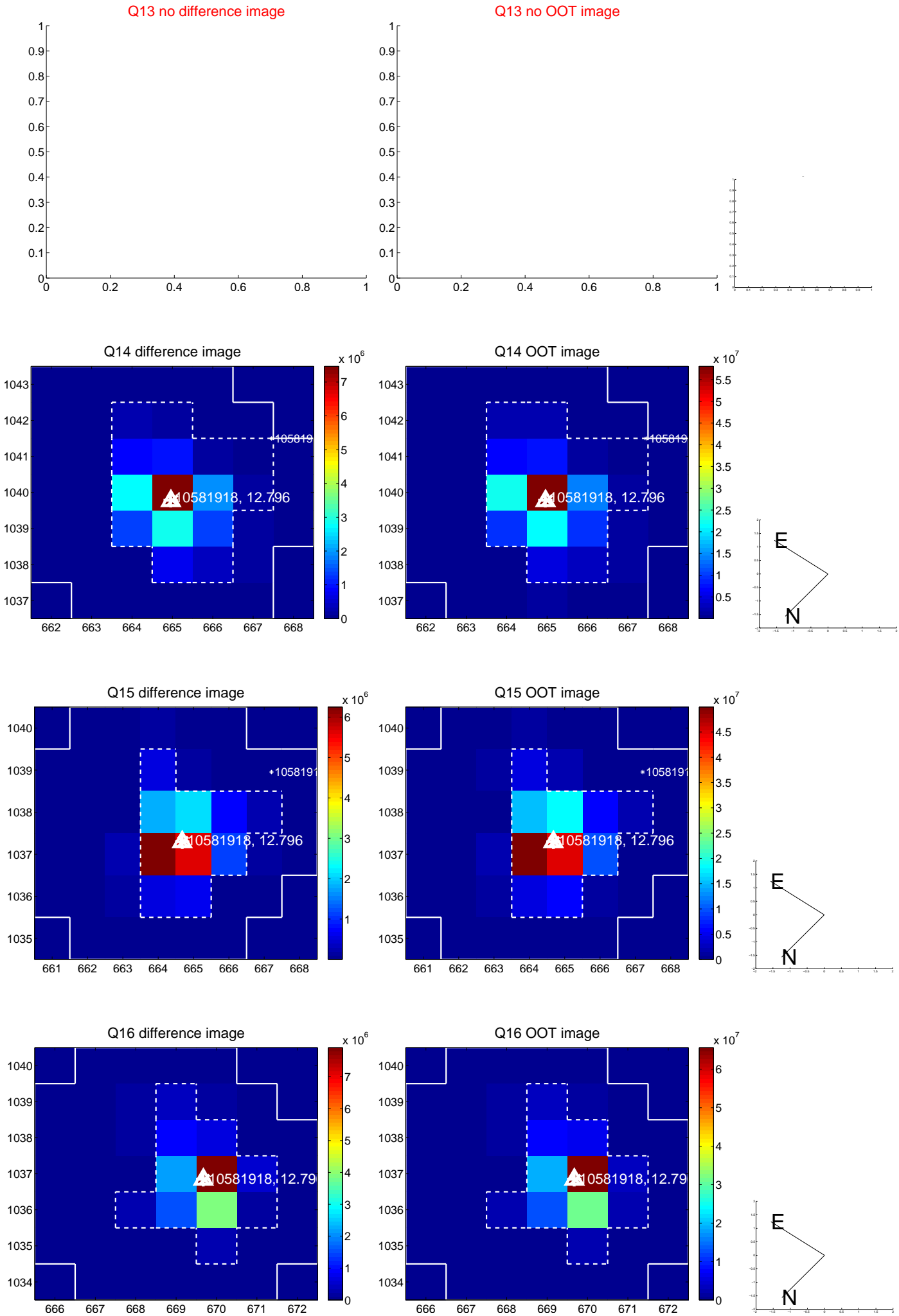
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folded centroid time series figure for this object.

UKIRT Image

Declination

