

KIC 002305372

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})
002305372-01	OBS	6264.01	1.404679	131.551861	683128.4	3.500	18140.4	-1.0	1.86	6230	78.42	6216.59
002305372-02	OBS	No	0.702393	131.612464	54526.4	8.429	840.9	152.6	1.86	6230	43.56	15663.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002305372-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
002305372-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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 002305372-01

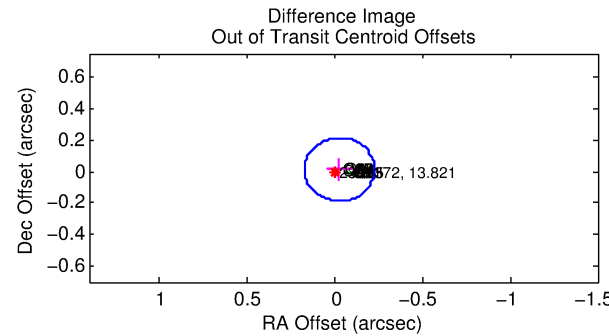
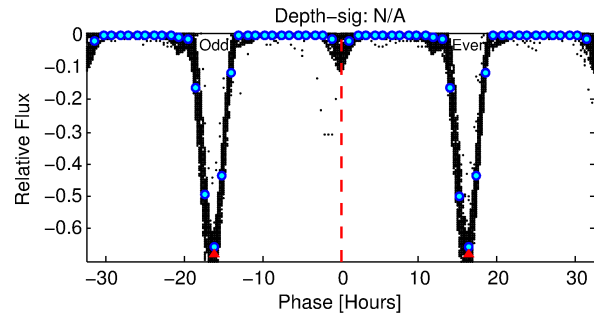
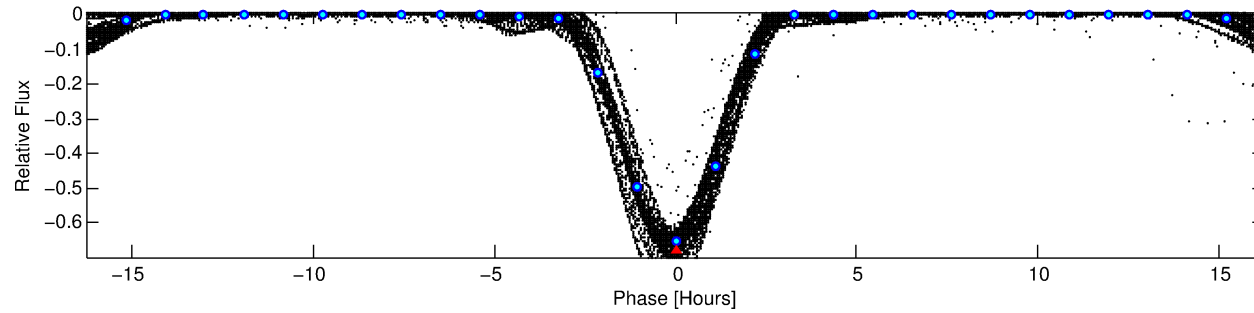
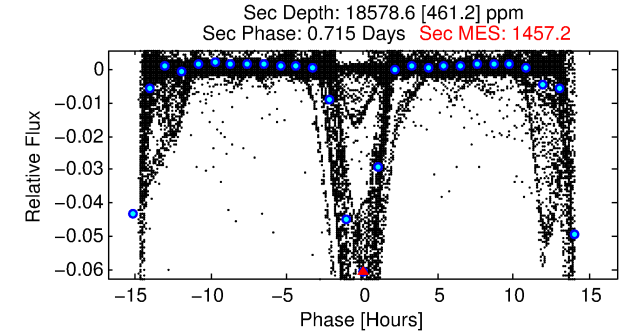
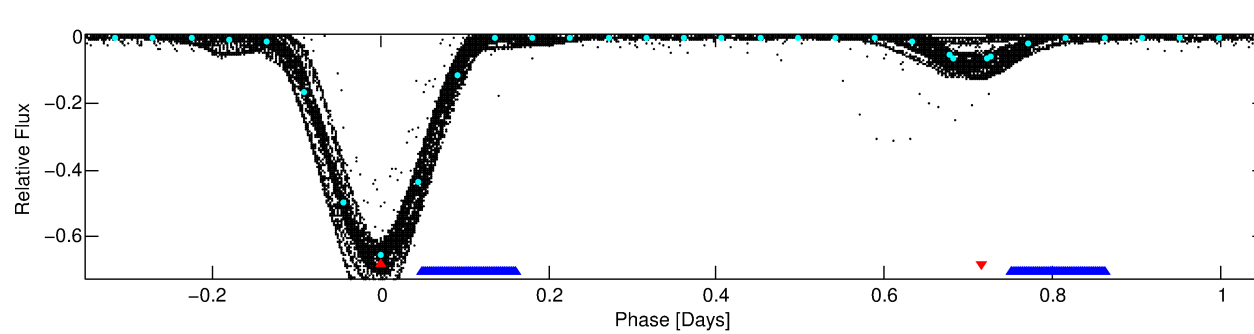
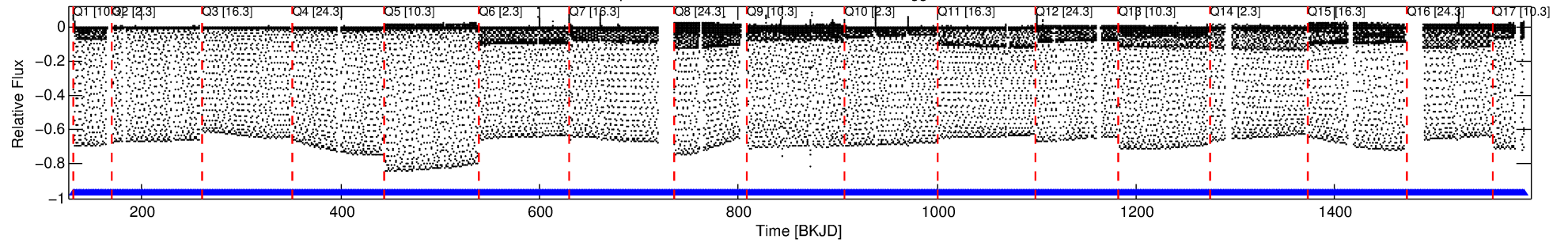
No Significant Match Found

DV One-Page Summary

KIC: 2305372 Candidate: 1 of 2 Period: 1.405 d

KOI: K06264 Corr: No Ephemeris Match

Kp: 13.82 R*: 1.86 Rs Teff: 6230.0 K Logg: 4.04 Fe/H: 0.220



TPS TCE Results:

Period = 1.40468 d
Epoch = 131.5519 BKJD

DV fit results are unavailable

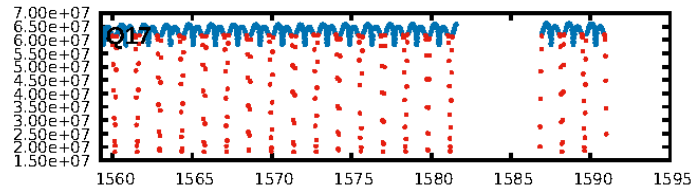
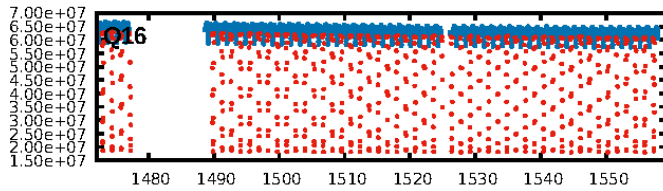
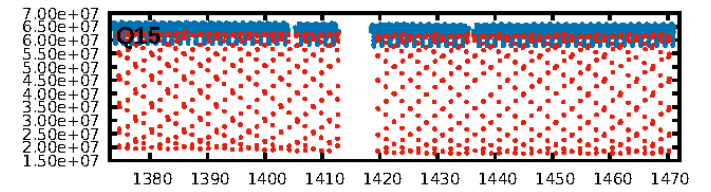
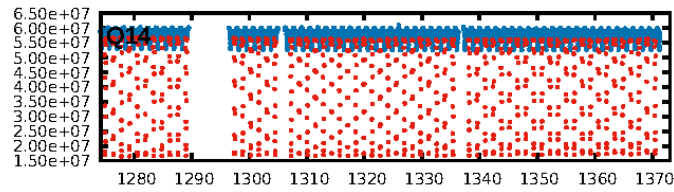
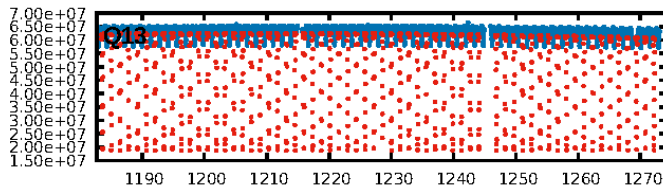
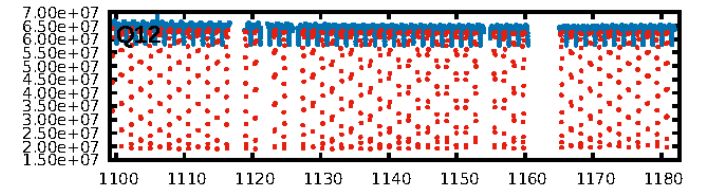
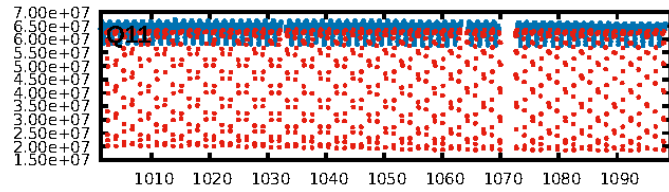
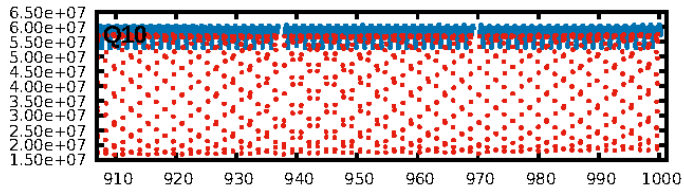
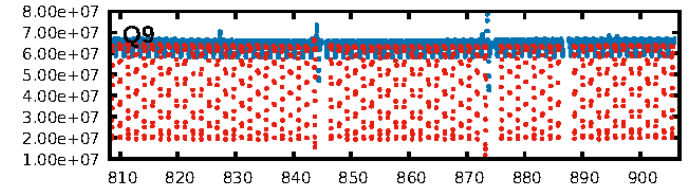
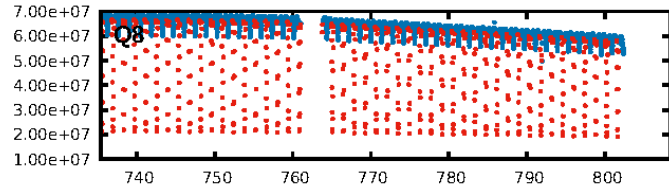
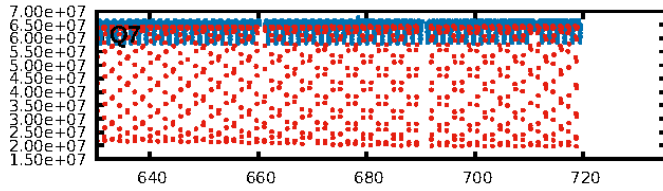
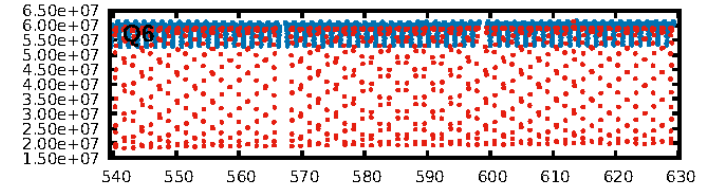
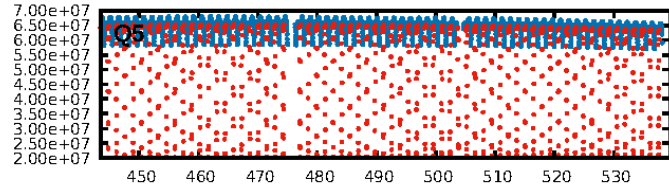
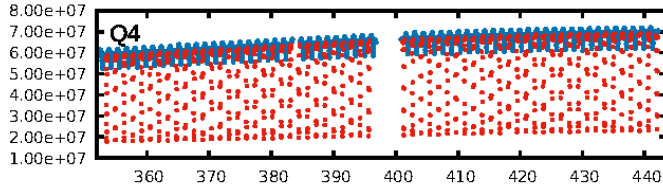
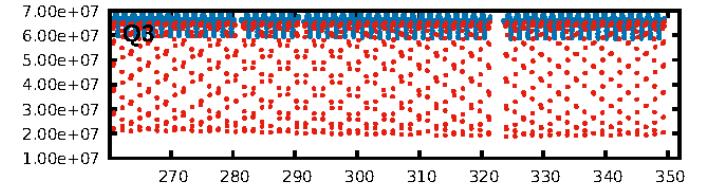
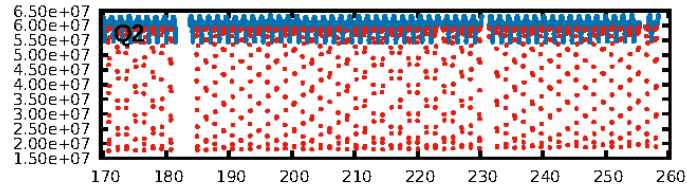
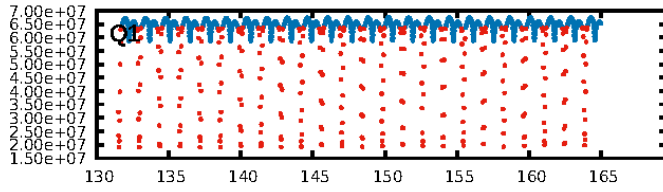
DV Diagnostic Results:

ShortPeriod-sig: 93.5% [1.85 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [918/918]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.031 arcsec [0.46 σ]
KicOffset-rm: 0.060 arcsec [0.87 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]

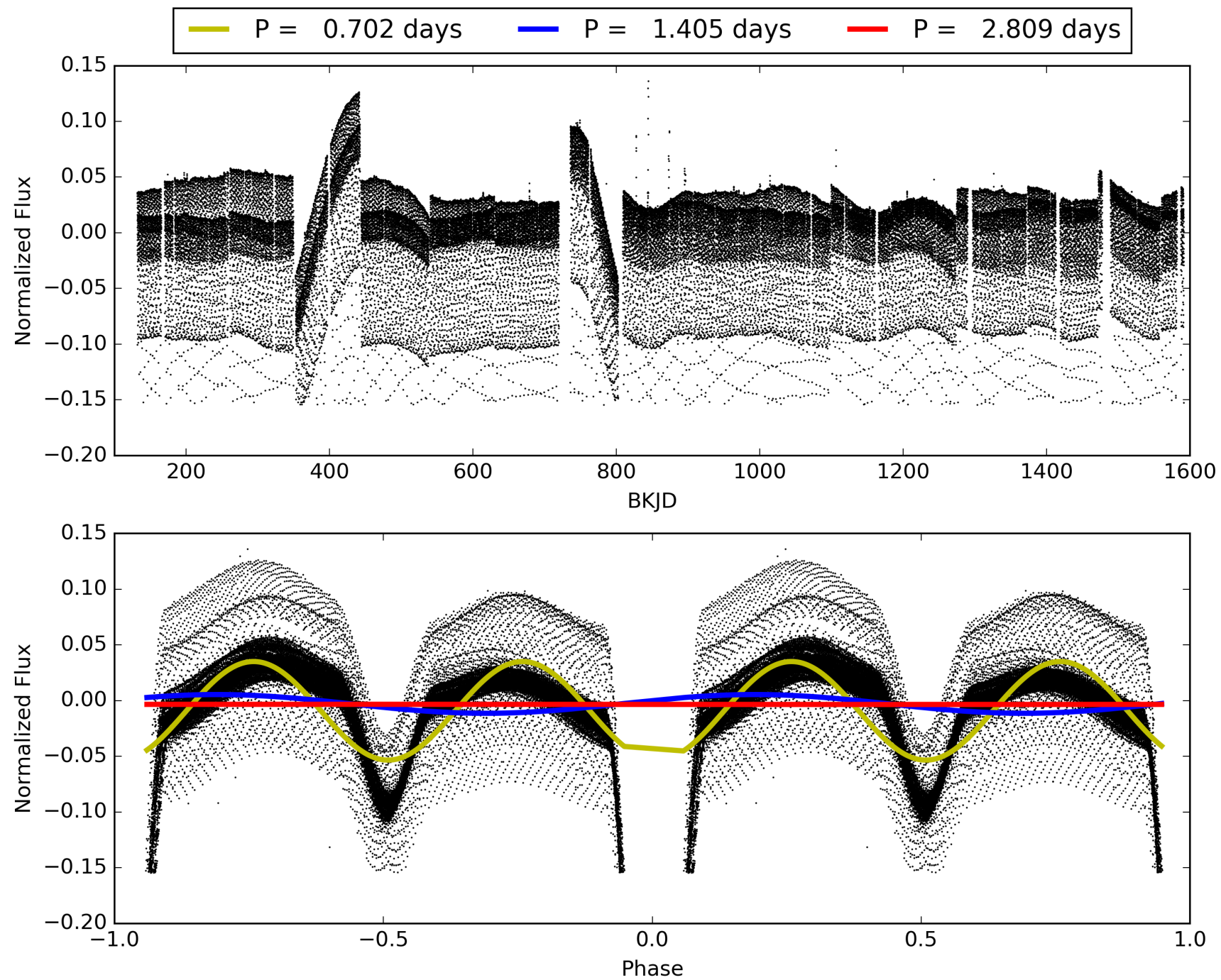
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:57:24 Z

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

TCE 002305372-01, PDC Light Curves

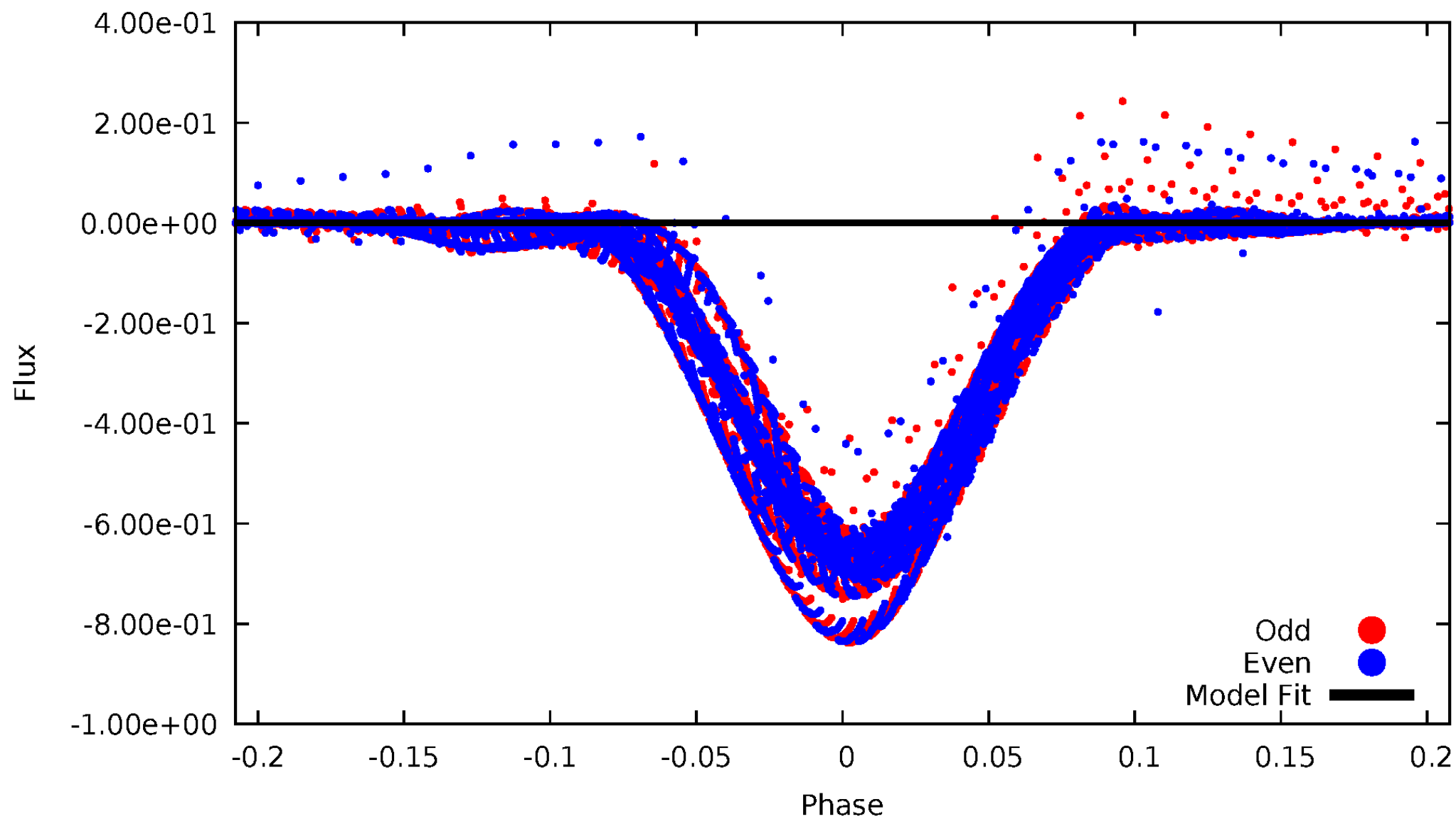


TCE 002305372-01



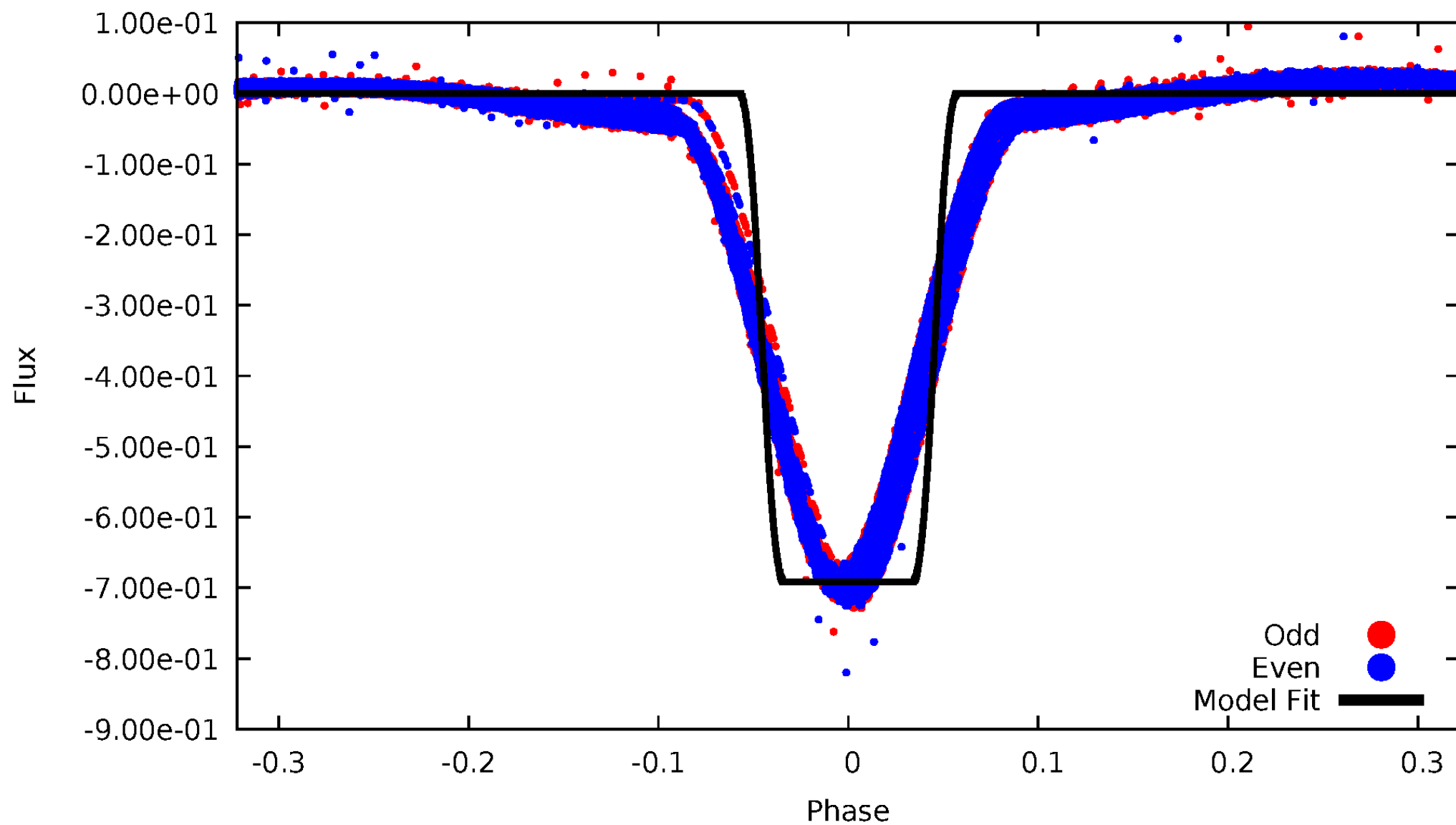
DV Odd/Even

TCE 002305372-01



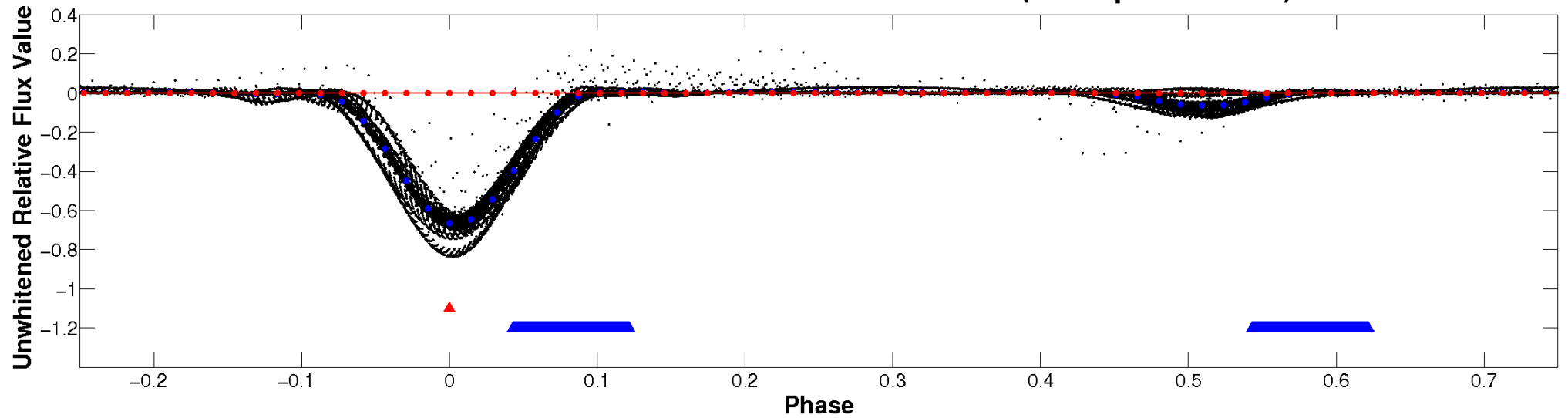
ALT Odd/Even

TCE 002305372-01



Non-Whitened Vs. Whitened Light Curve

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

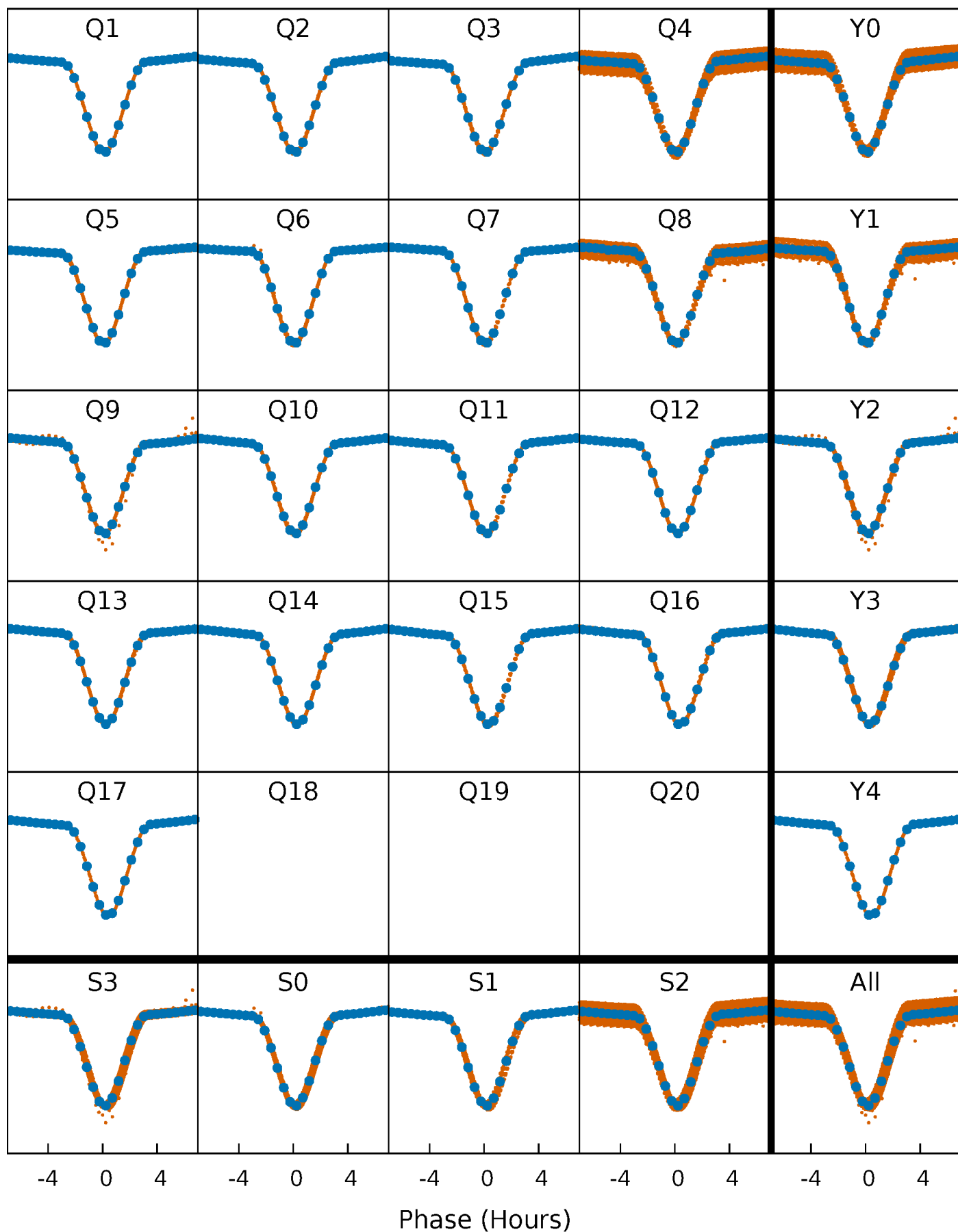


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



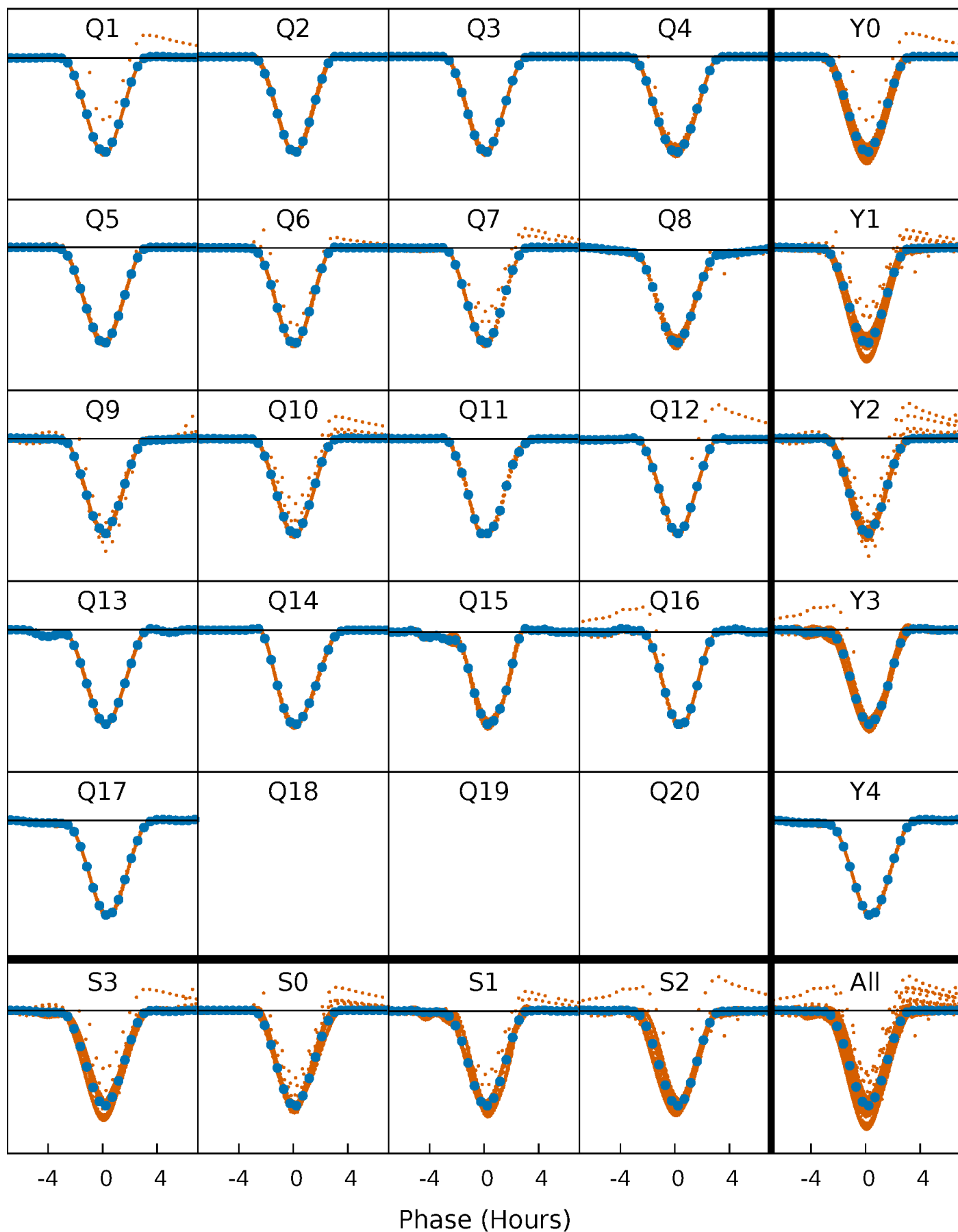
PDC Quarter-Phased Transit Curves

TCE 002305372-01 P= 1.404679 Days $T_0=131.551861$ (BKJD)



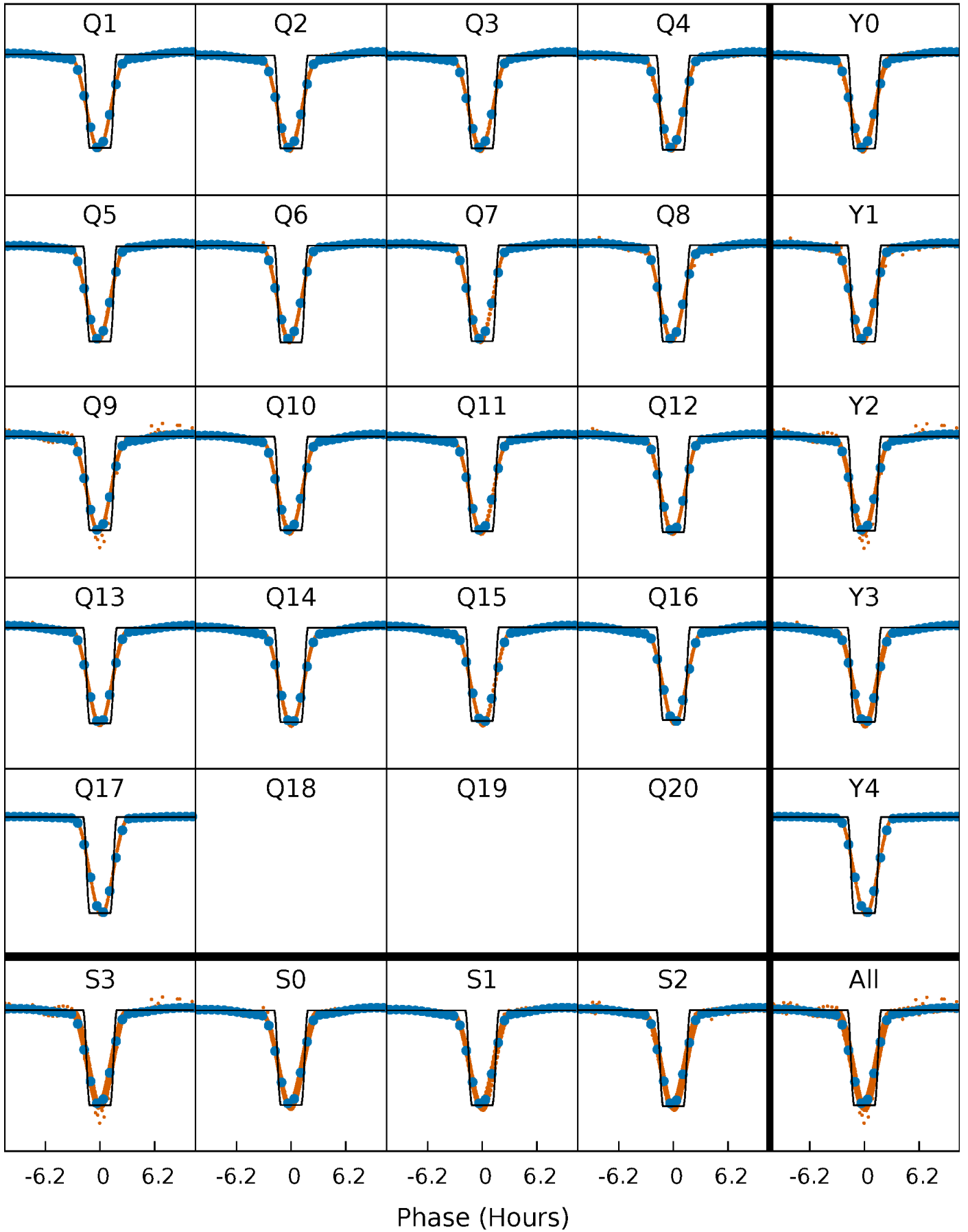
DV Quarter-Phased Transit Curves

TCE 002305372-01 P= 1.404679 Days $T_0=131.551861$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

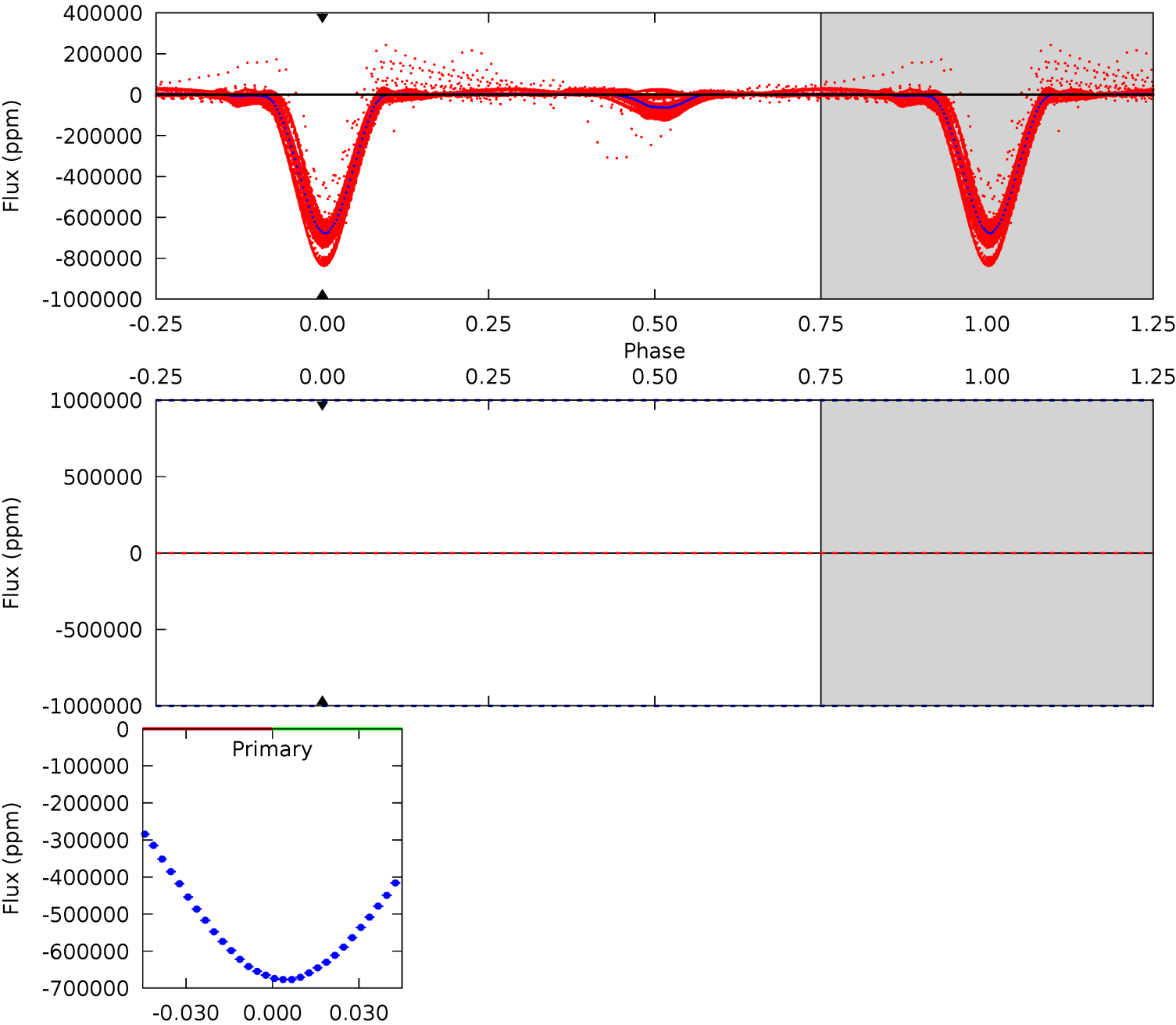
TCE 002305372-01 P= 1.404679 Days $T_0=131.562790$ (BKJD)



DV Model-Shift Uniqueness Test

002305372-01, P = 1.404679 Days, E = 130.147182 Days

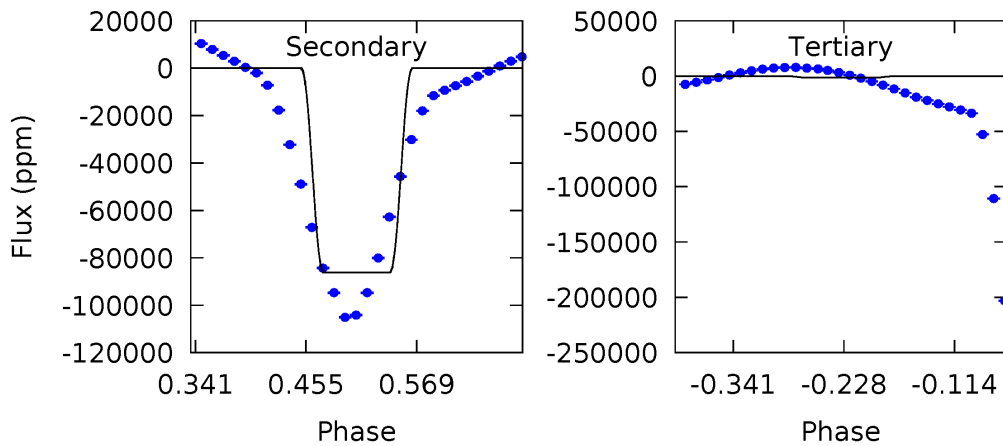
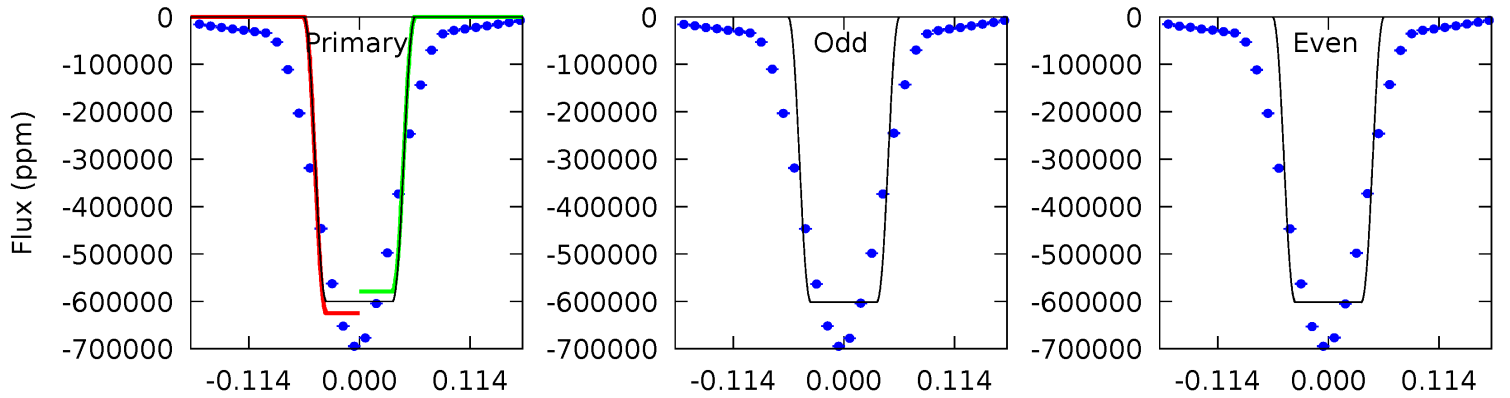
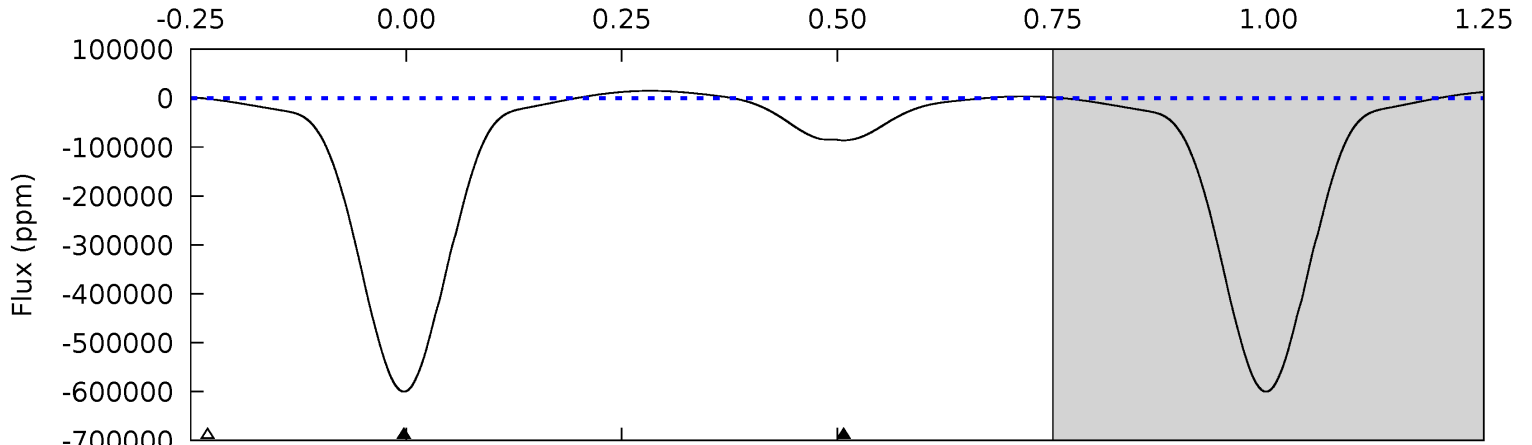
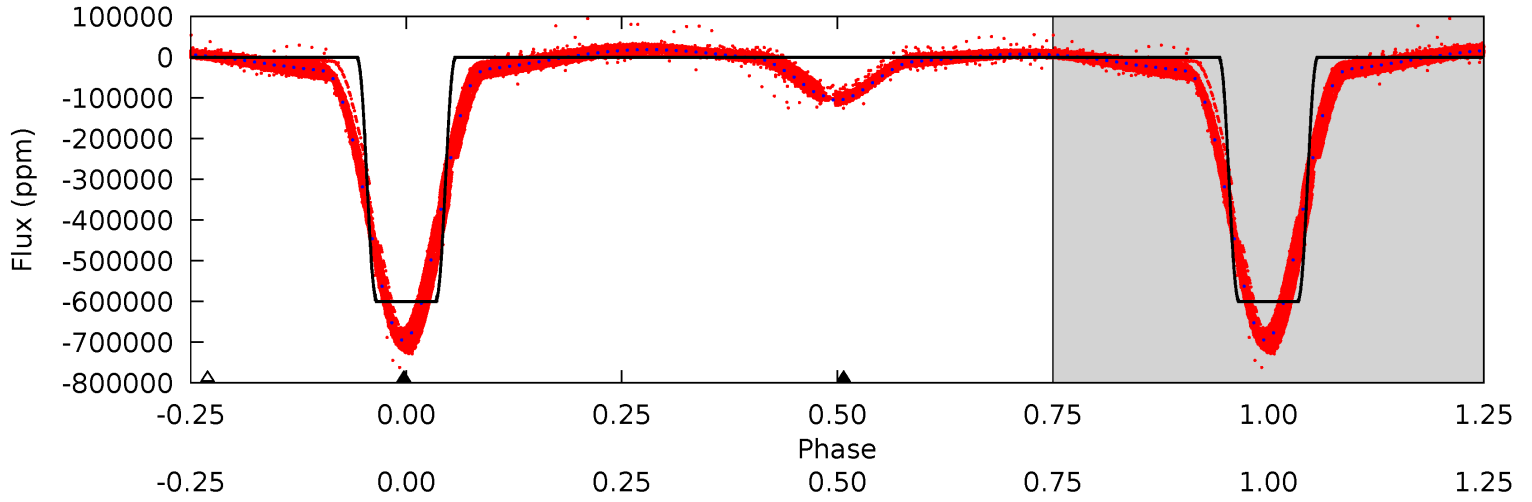
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

002305372-01, P = 1.404679 Days, E = 130.158111 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3548	509.7	8.17	0	4.54	1.58	76.9	3540	3548	501.5	509.7	0.61	1.00	0.02	132.5



Stellar Parameters For KIC 002305372

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6230^{+75}_{-87}	$4.043^{+0.180}_{-0.120}$	$0.220^{+0.150}_{-0.150}$	$1.863^{+0.346}_{-0.423}$	$1.396^{+0.122}_{-0.167}$	$0.304^{+0.300}_{-0.113}$
	+1%/-1%	+4%/-3%	+68%/-68%	+19%/-23%	+9%/-12%	+99%/-37%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 002305372-01 / KOI 6264.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$77.29^{+21.37}_{-22.46}$	3143^{+177}_{-174}	-3101^{+8972}_{-2647}	$0.063^{+8.477}_{-7.158}$
Alt.	-86216 ± 169	$166.99^{+28.86}_{-26.10}$	3151^{+165}_{-175}	3911^{+207}_{-202}	$1.396^{+0.532}_{-0.360}$

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 $A_{obs} \gg 1.0$

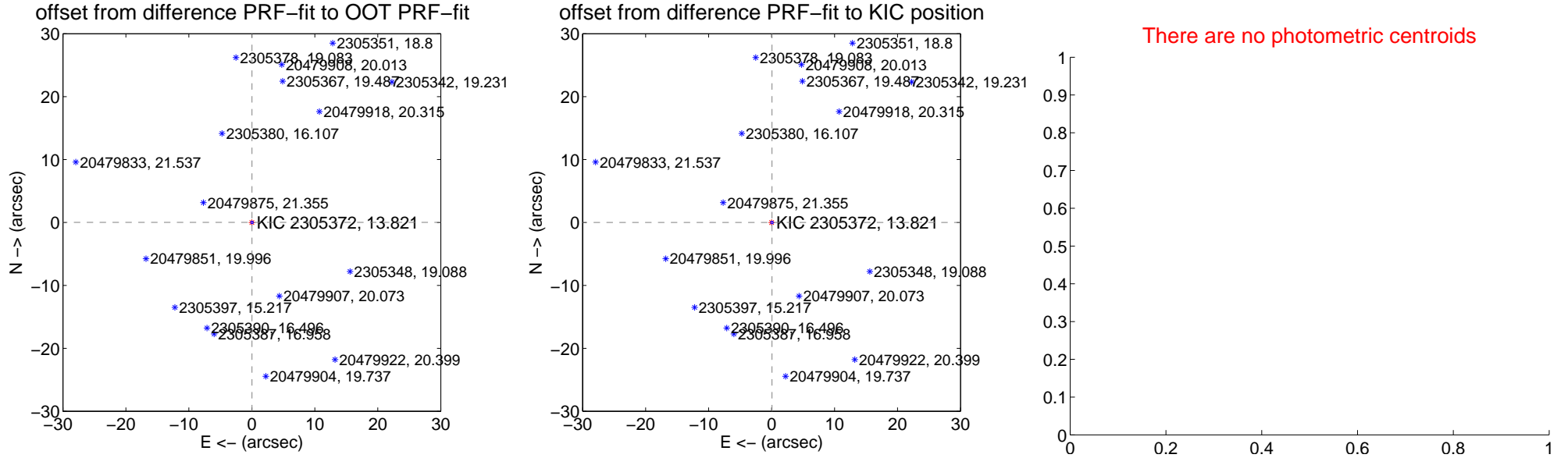
DV Centroid Data

Supplemental centroid analysis for 002305372-01. Kepler magnitude: 13.82. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

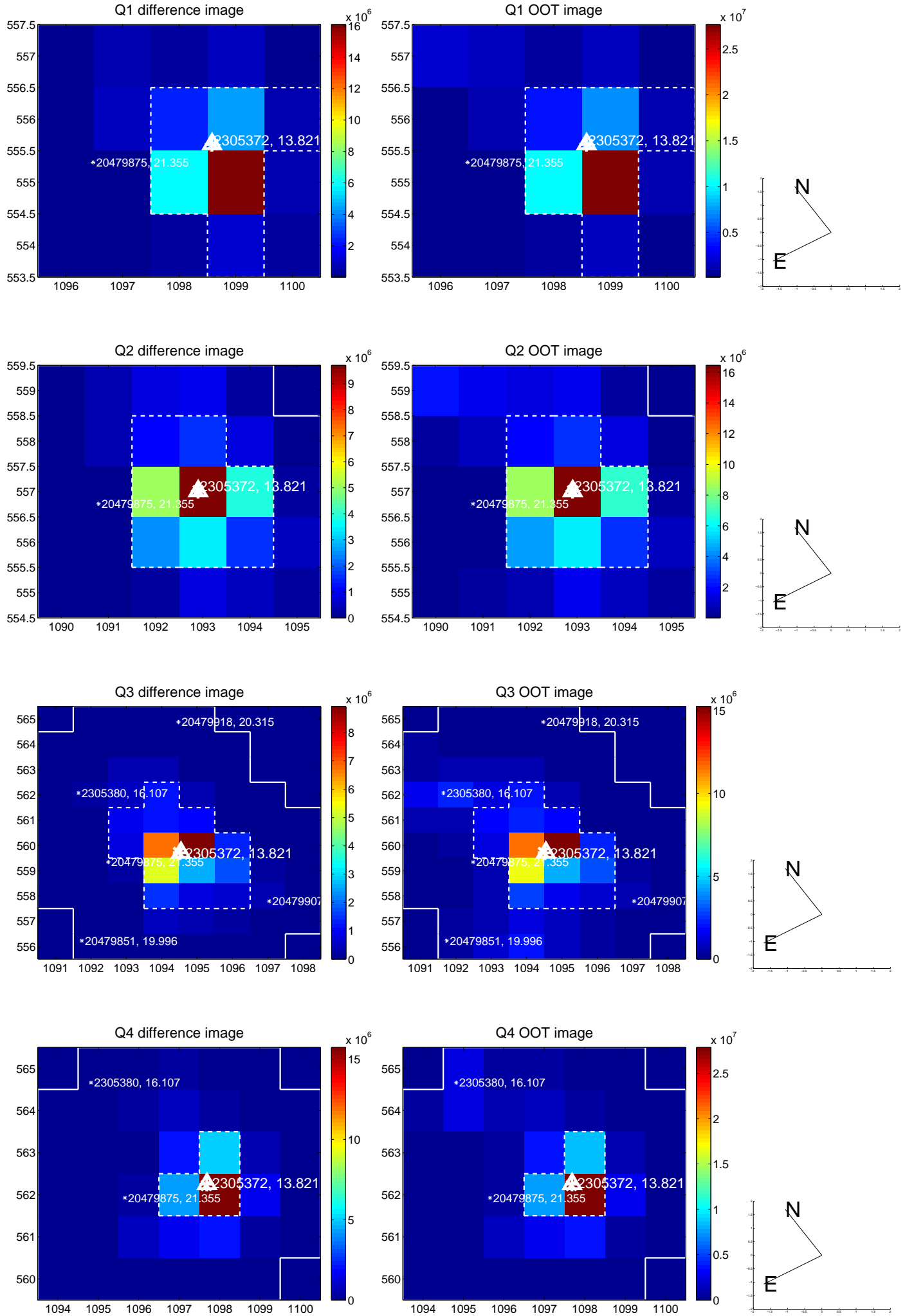
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.031 ± 0.067	0.46	-0.027 ± 0.067	0.015 ± 0.067
PRF-fit source offset from KIC position	0.060 ± 0.069	0.87	-0.060 ± 0.069	0.000 ± 0.069
photometric centroid source offset	—	—	—	—

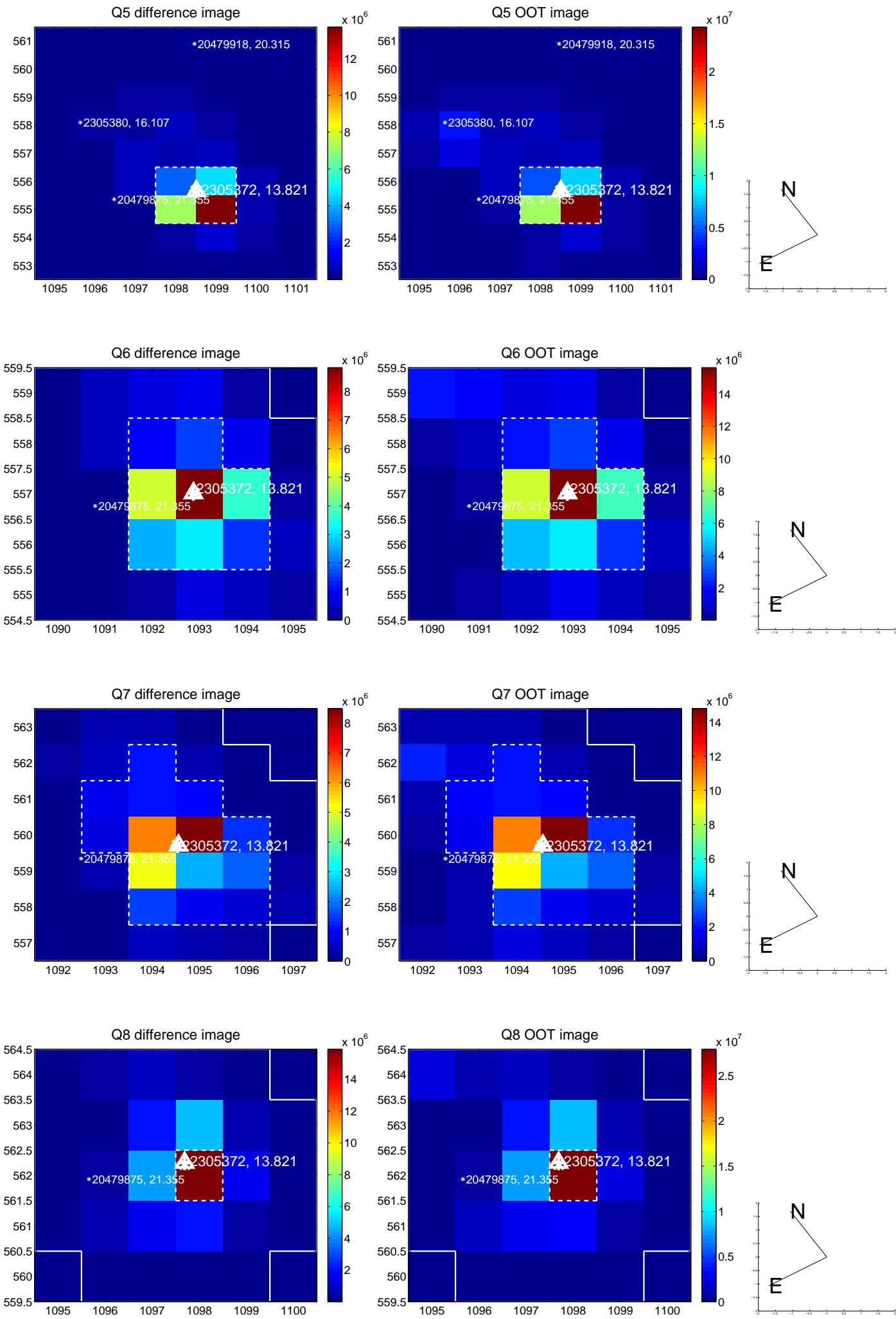


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

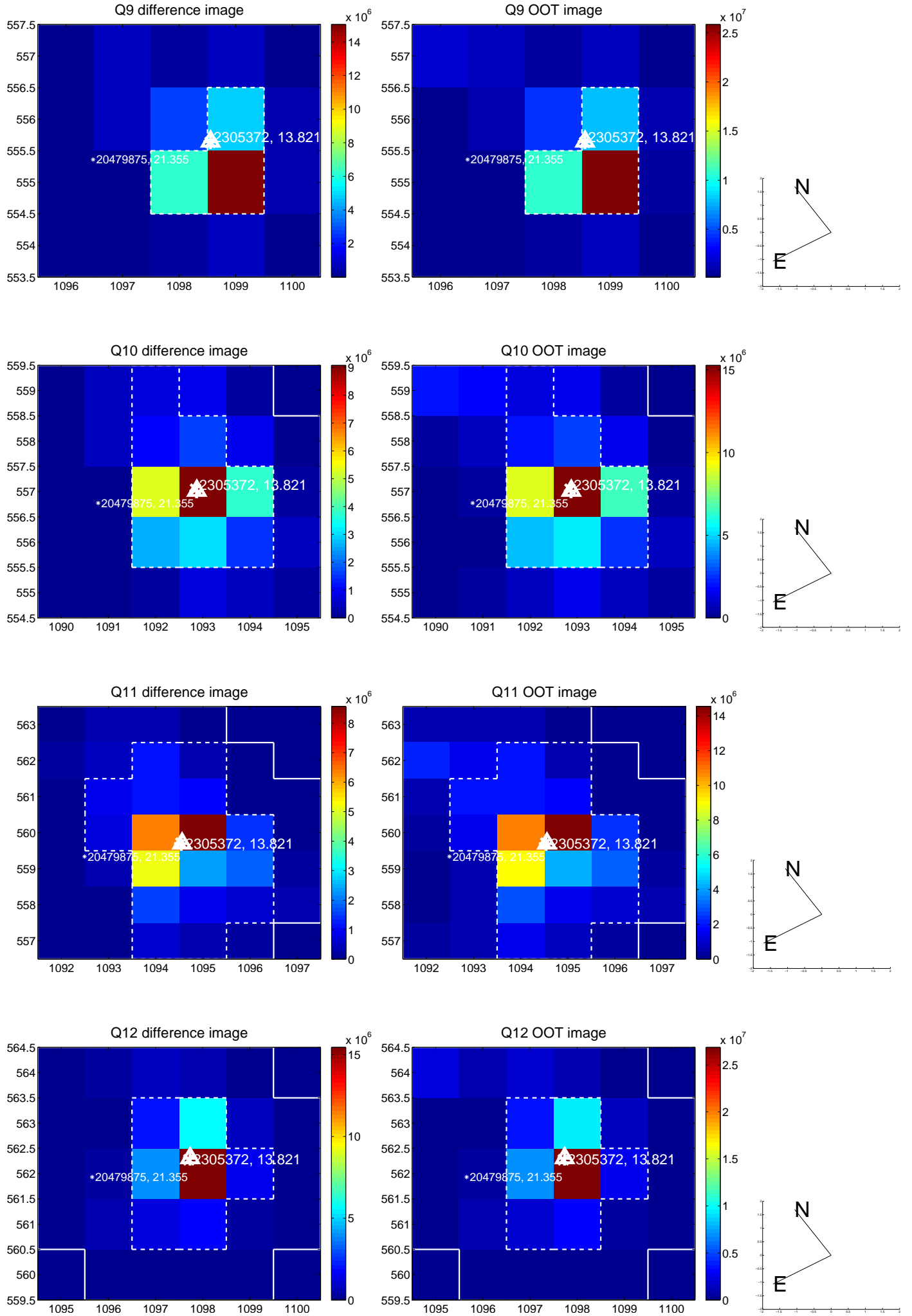
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



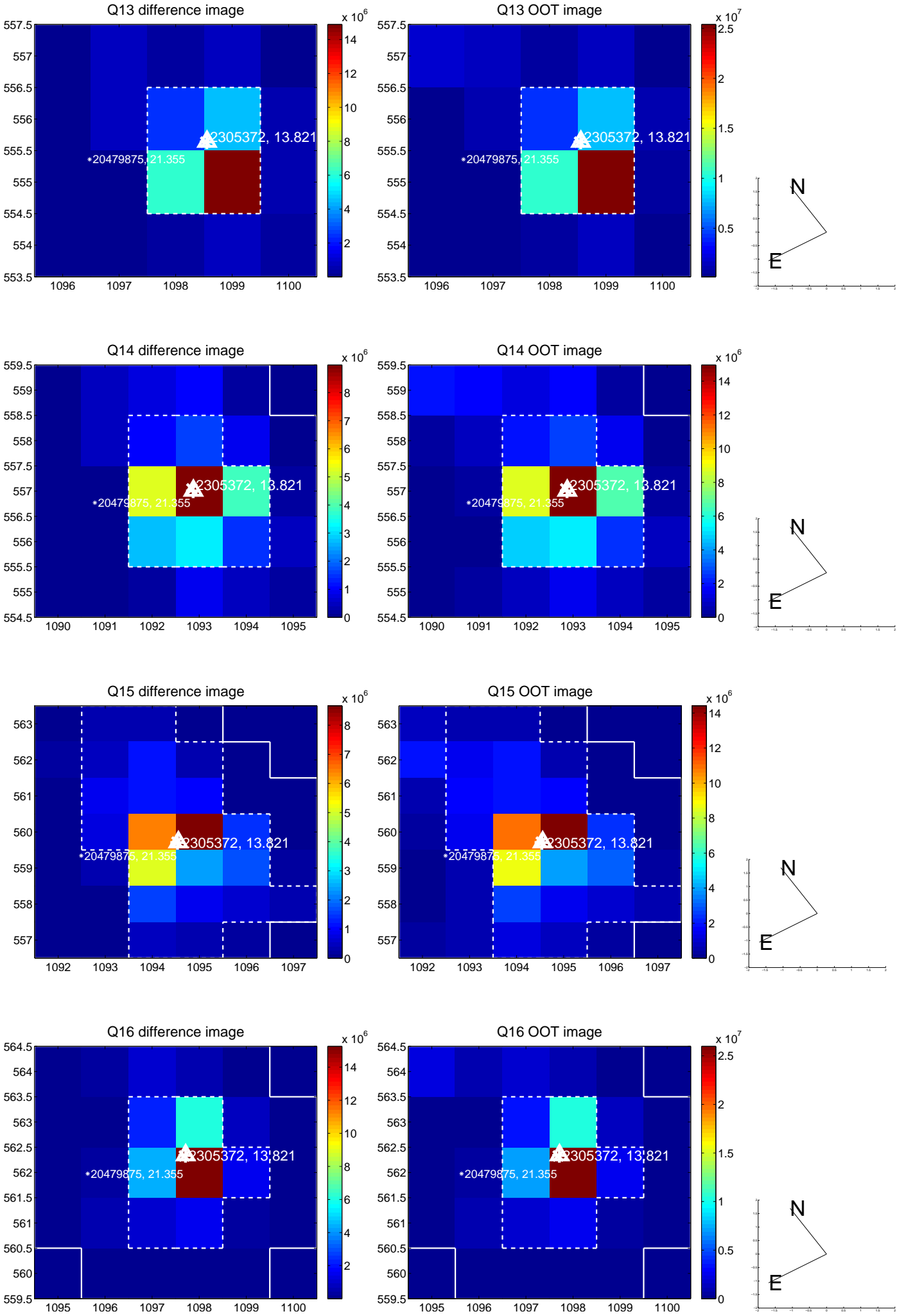
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



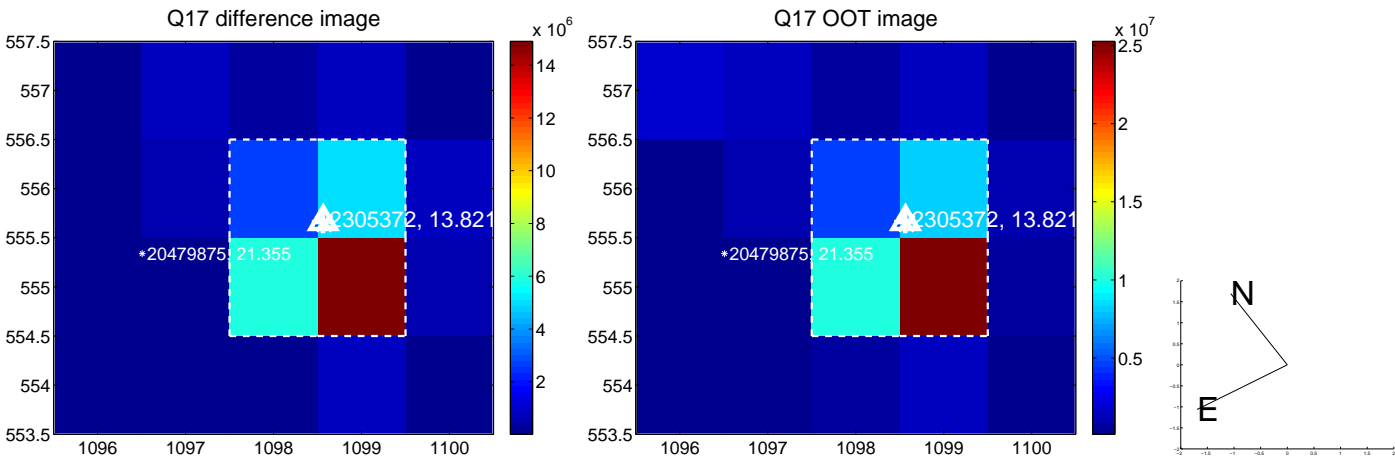
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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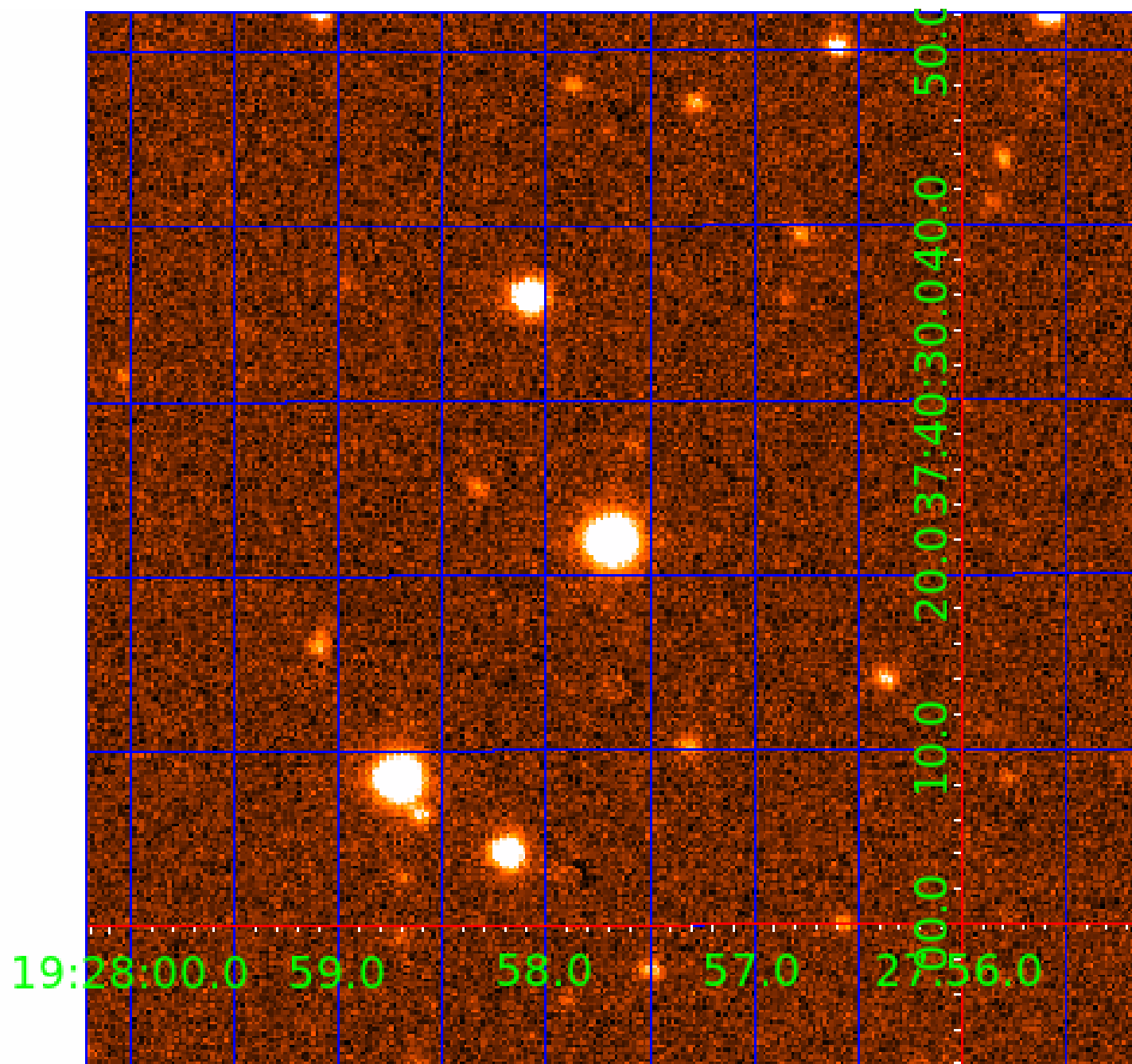
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 002305372

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

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002305372-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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.

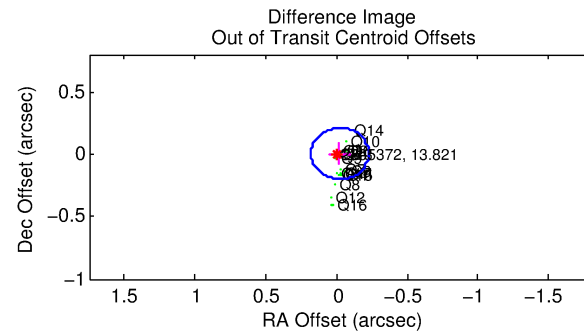
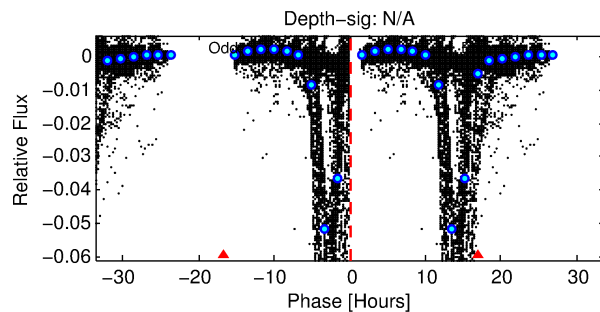
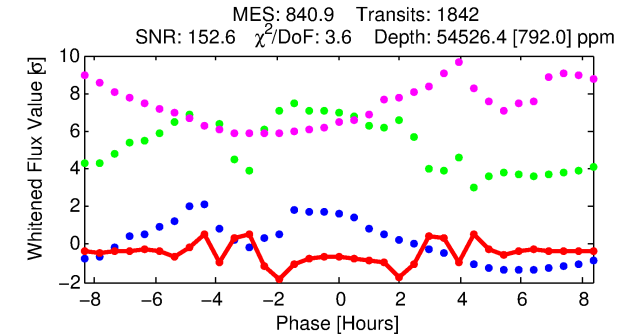
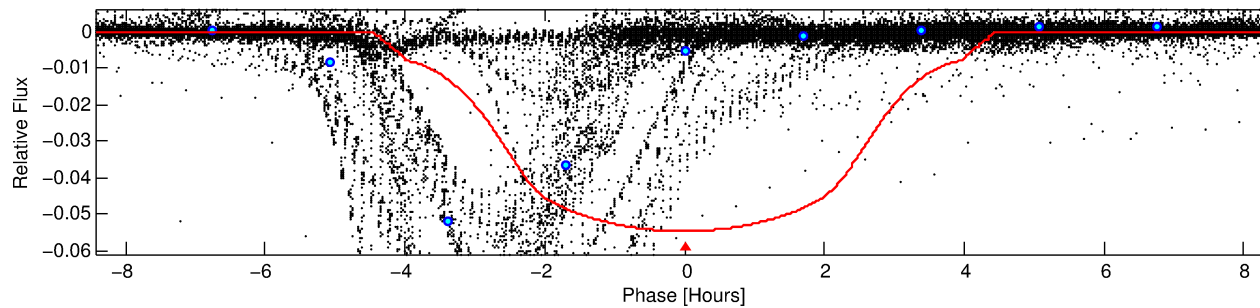
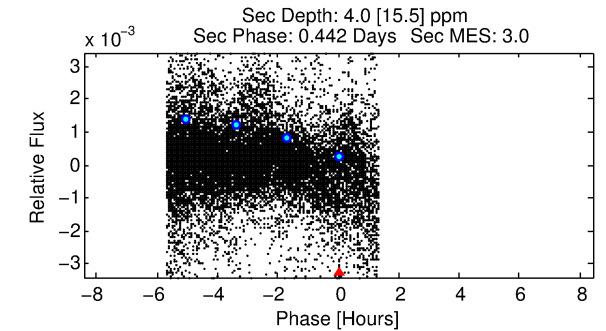
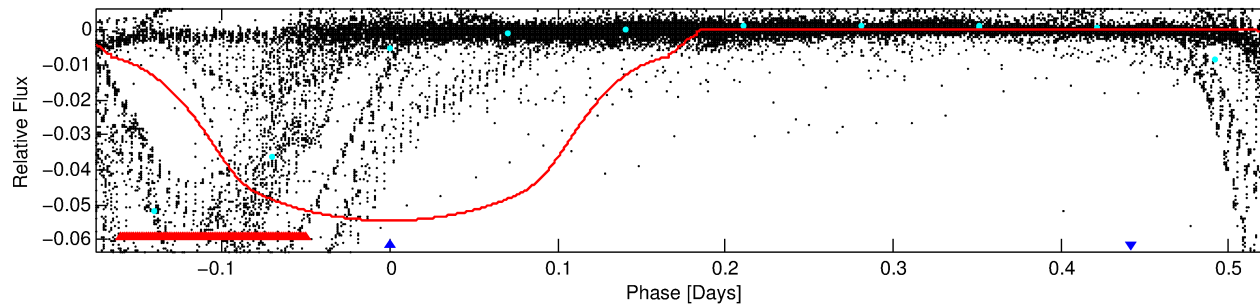
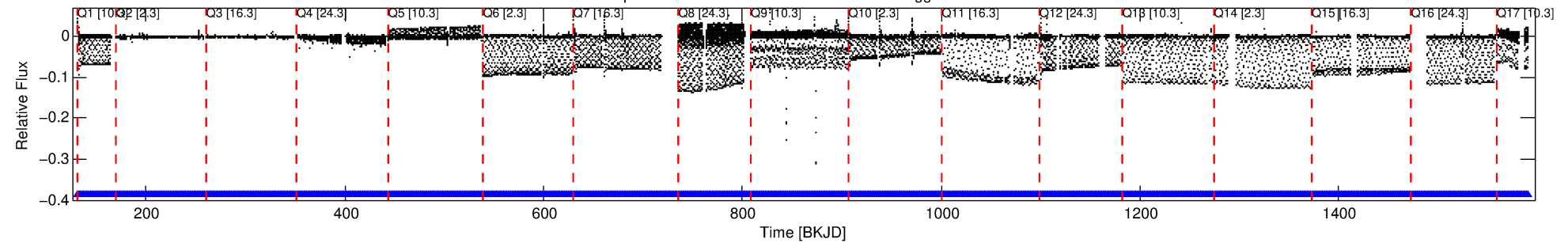
Ephemeris Match Information For 002305372-02

No Significant Match Found

DV One-Page Summary

KIC: 2305372 Candidate: 2 of 2 Period: 0.702 d
KOI: K06264 Corr: No Ephemeris Match

Kp: 13.82 R*: 1.86 Rs Teff: 6230.0 K Logg: 4.04 Fe/H: 0.220



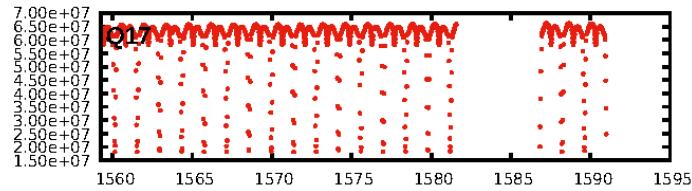
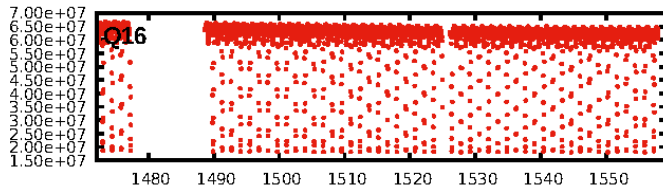
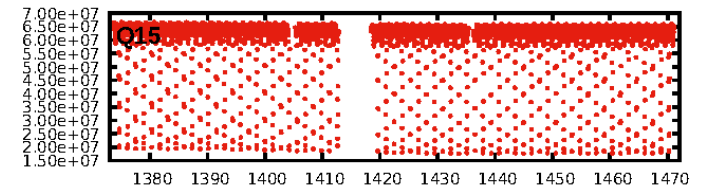
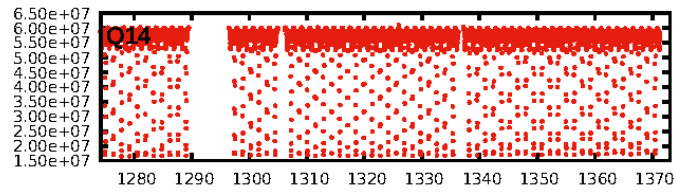
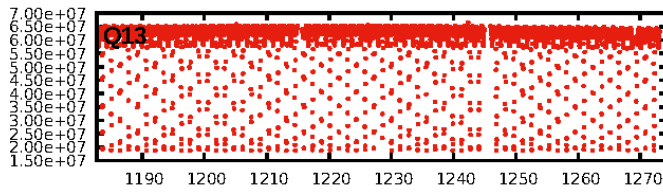
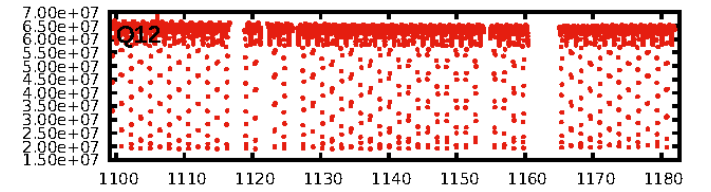
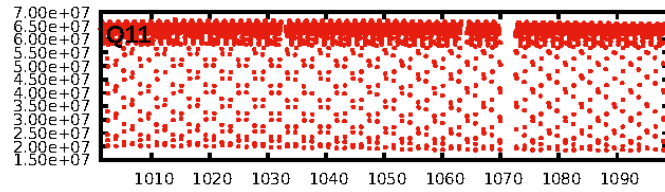
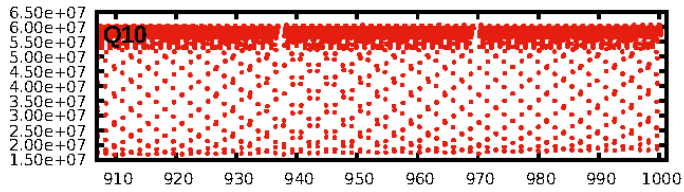
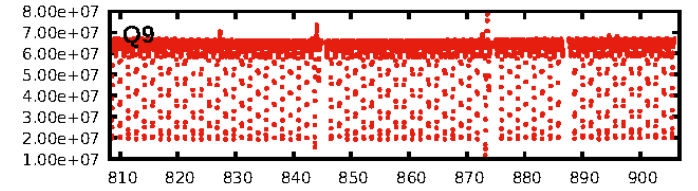
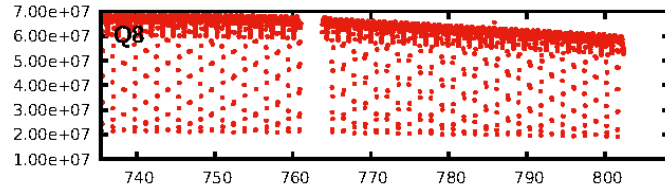
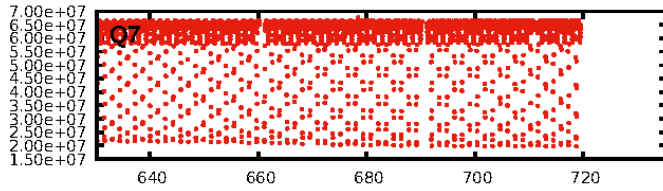
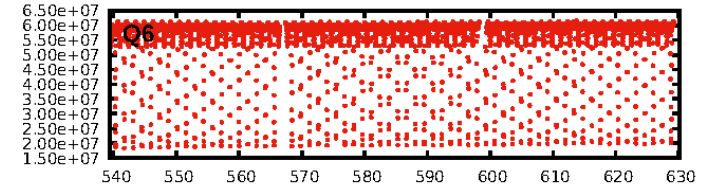
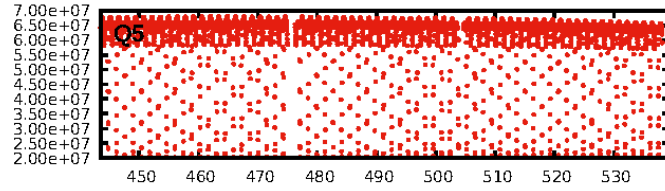
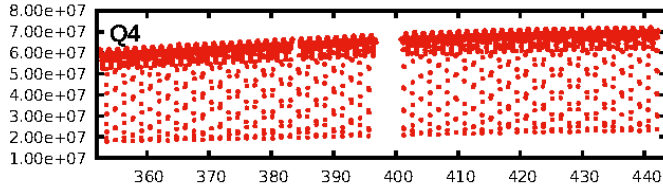
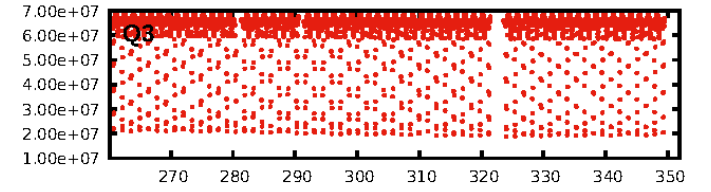
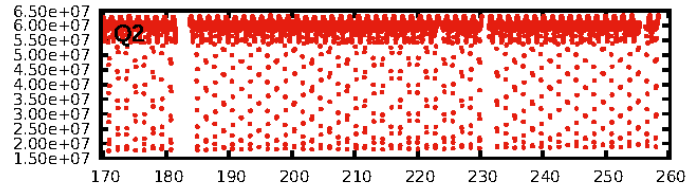
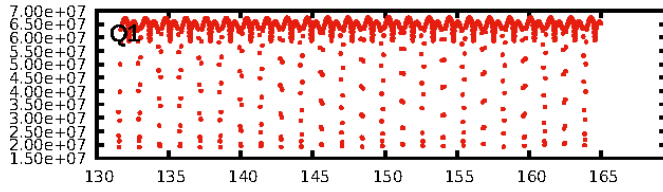
DV Fit Results:

Period = 0.70239 [0.00000] d
Epoch = 131.6125 [0.0002] BKJD
Rp/R* = 0.2143 [0.0014]
a/R* = 1.09 [0.00]
b = 0.10 [0.05]
Seff = 15663.25 [5011.75]
Teq = 2853 [228] K
Rp = 43.56 [9.89] Re
a = 0.0173 [0.0035] AU
Ag = 0.00 [0.00] [-742.76σ]
Teffp = 602 [582] K [-3.60σ]

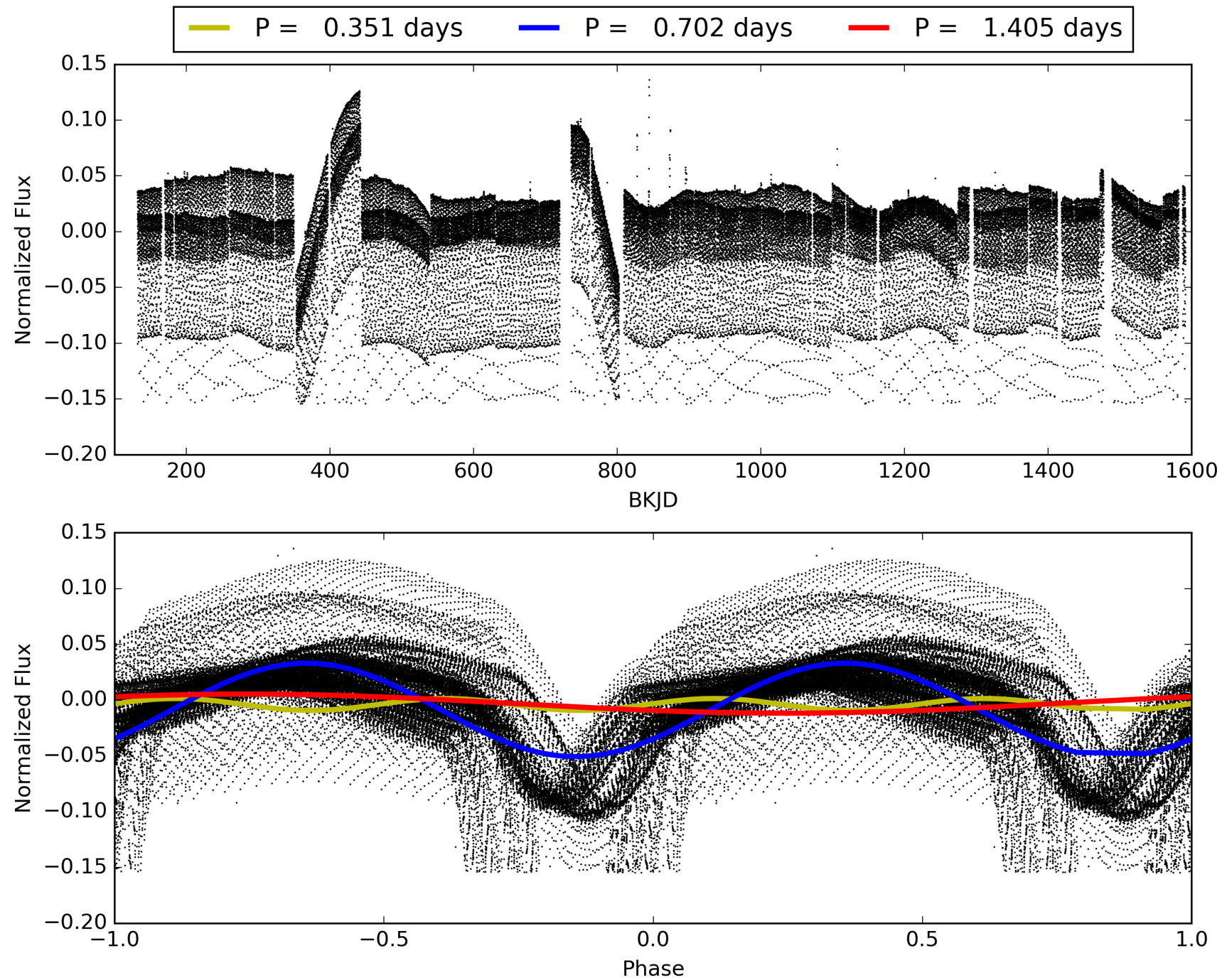
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 93.5% [1.85σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1760/1760]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.024 arcsec [0.35σ]
KicOffset-rm: 0.032 arcsec [0.43σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.88 [15/17]

TCE 002305372-02, PDC Light Curves

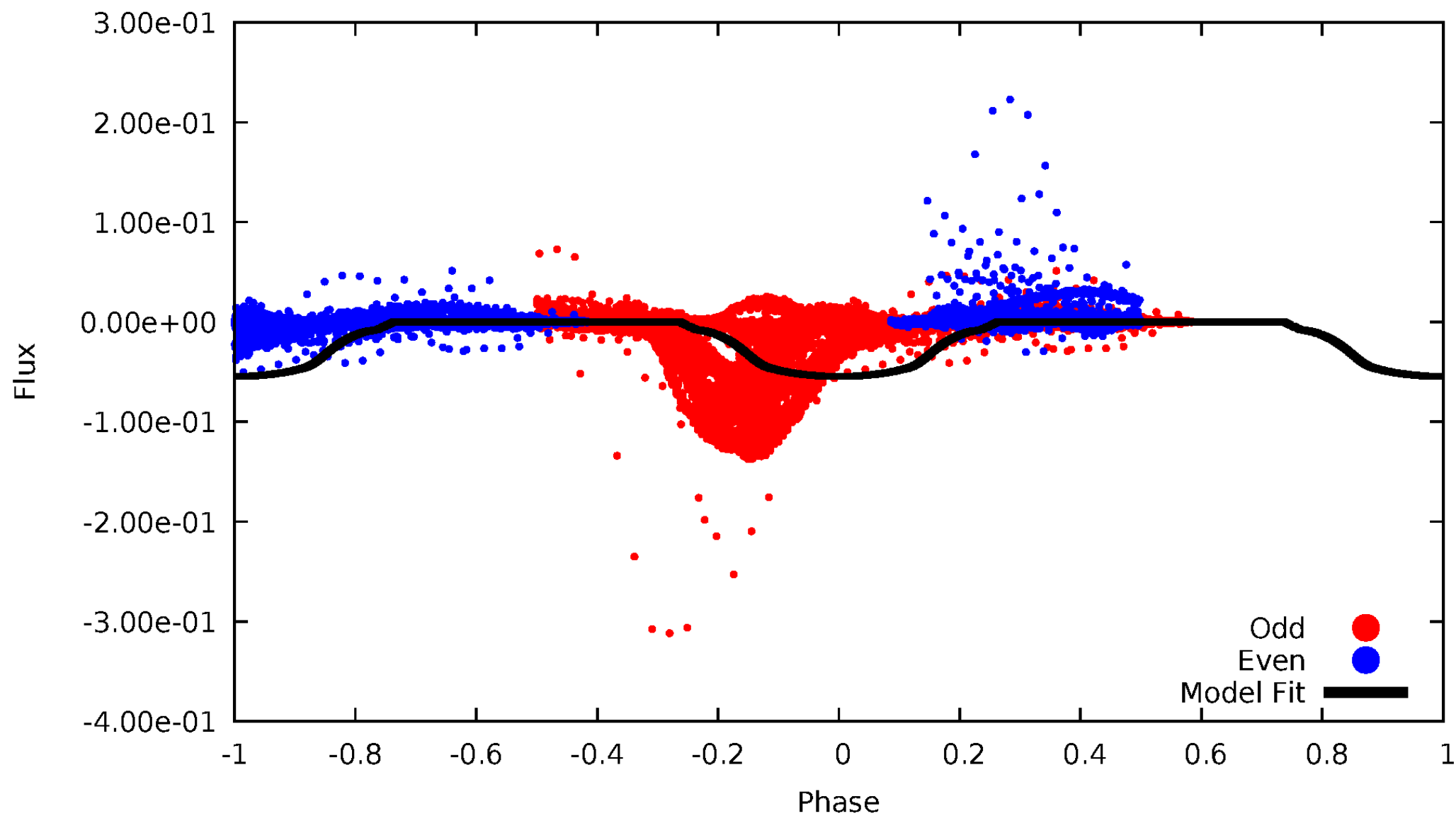


TCE 002305372-02



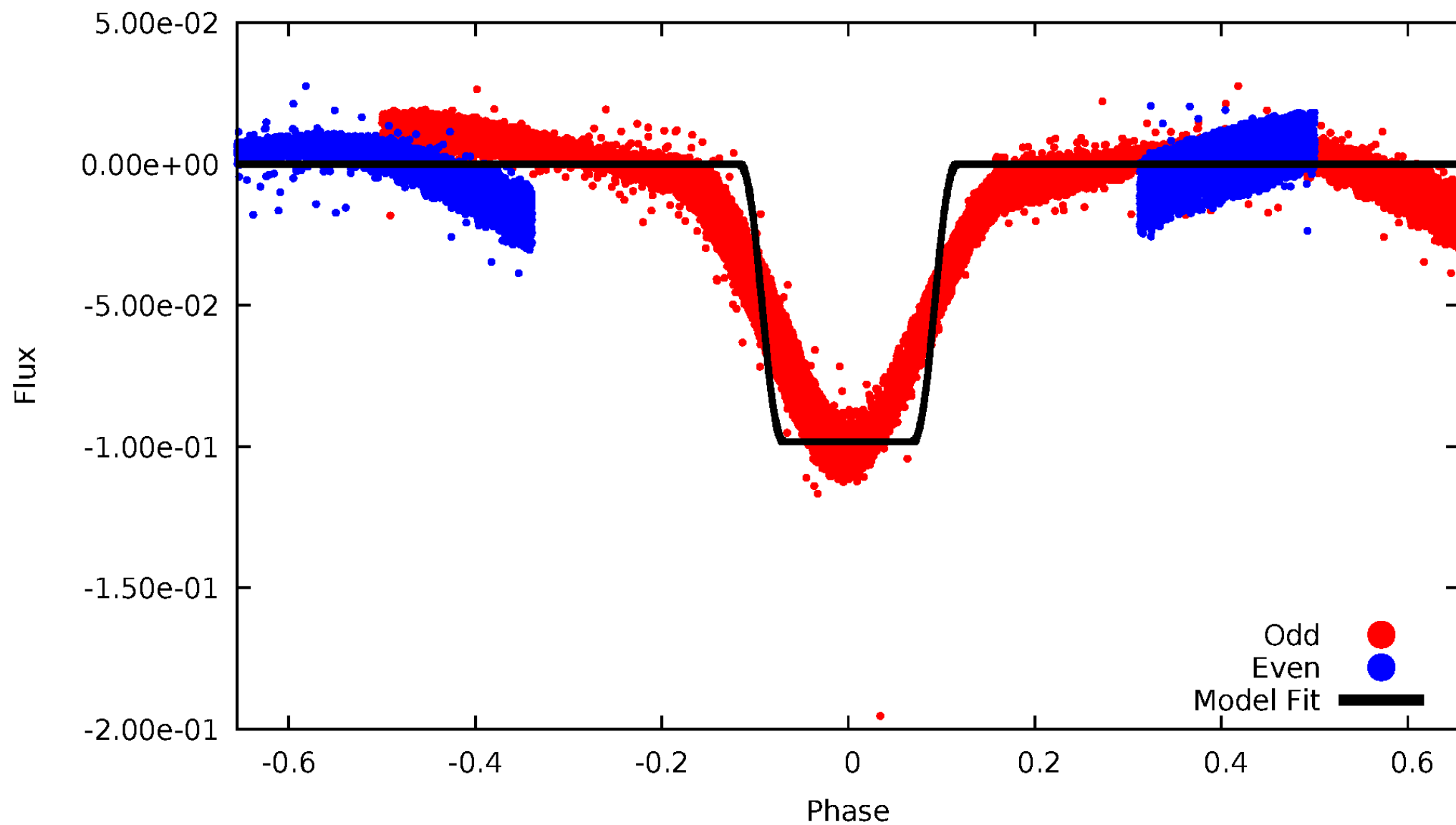
DV Odd/Even

TCE 002305372-02



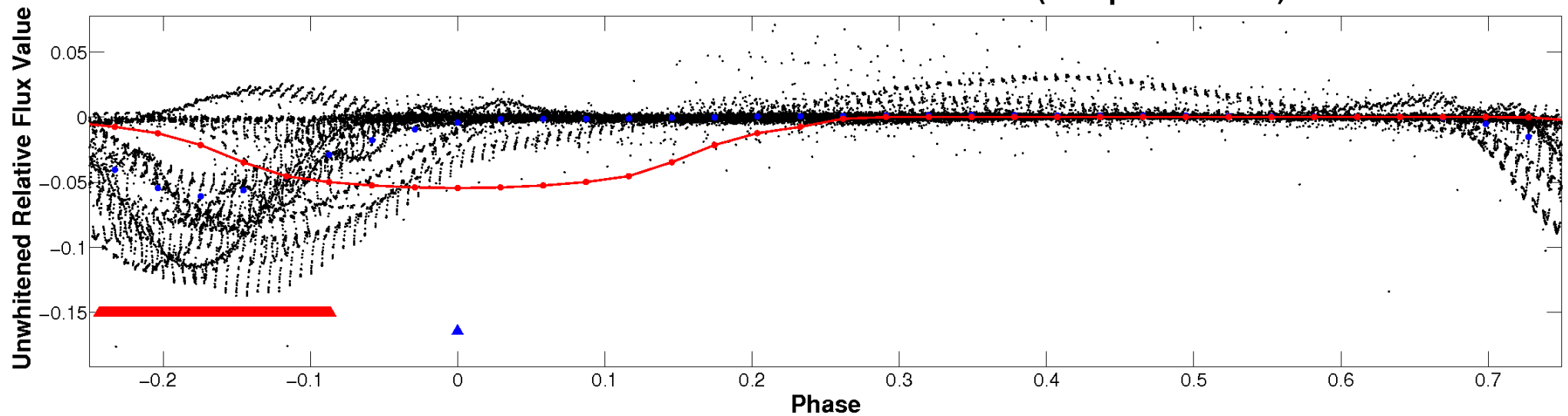
ALT Odd/Even

TCE 002305372-02

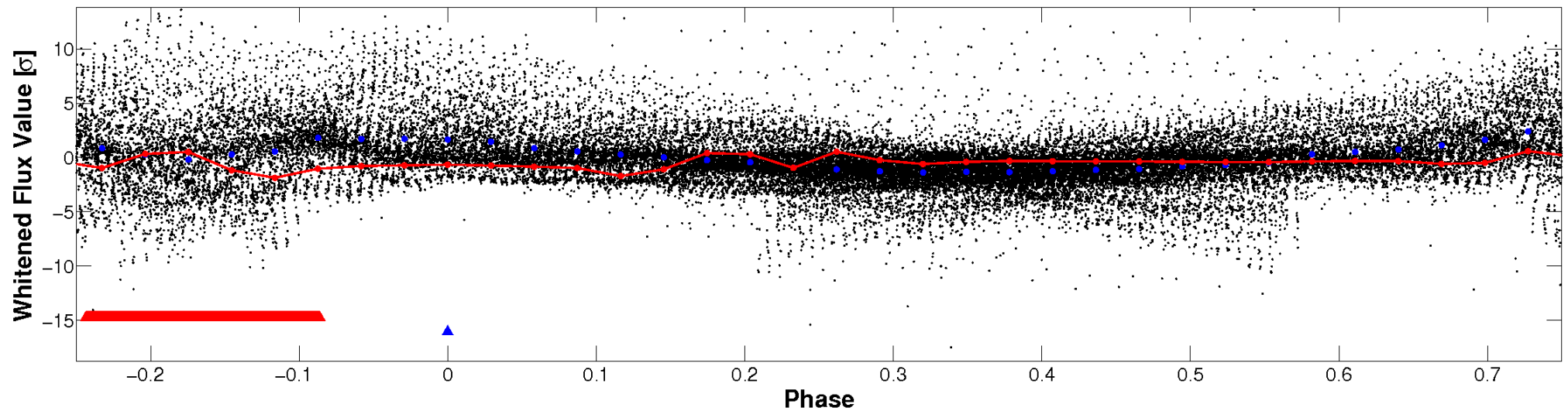


Non-Whitened Vs. Whitened Light Curve

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

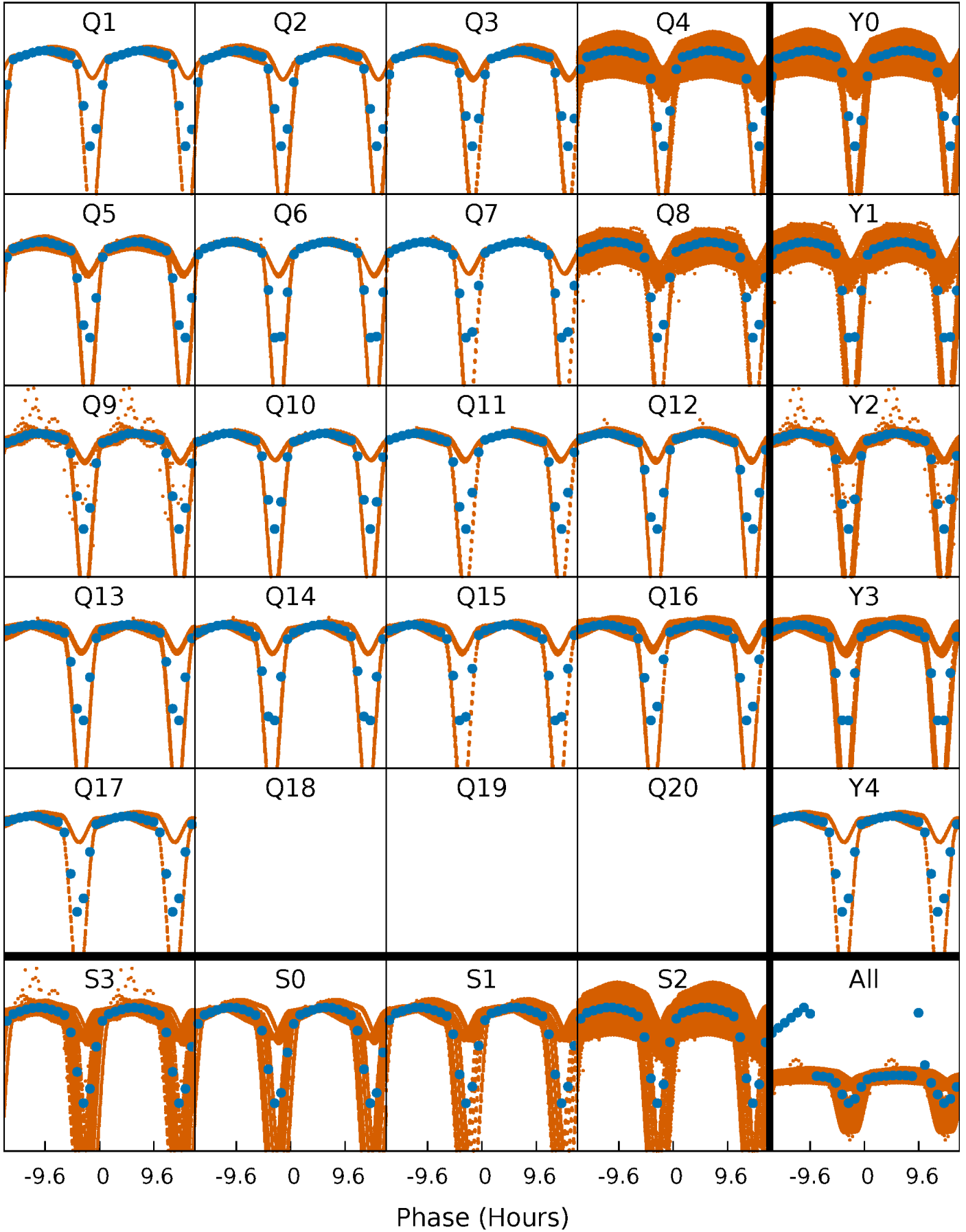


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



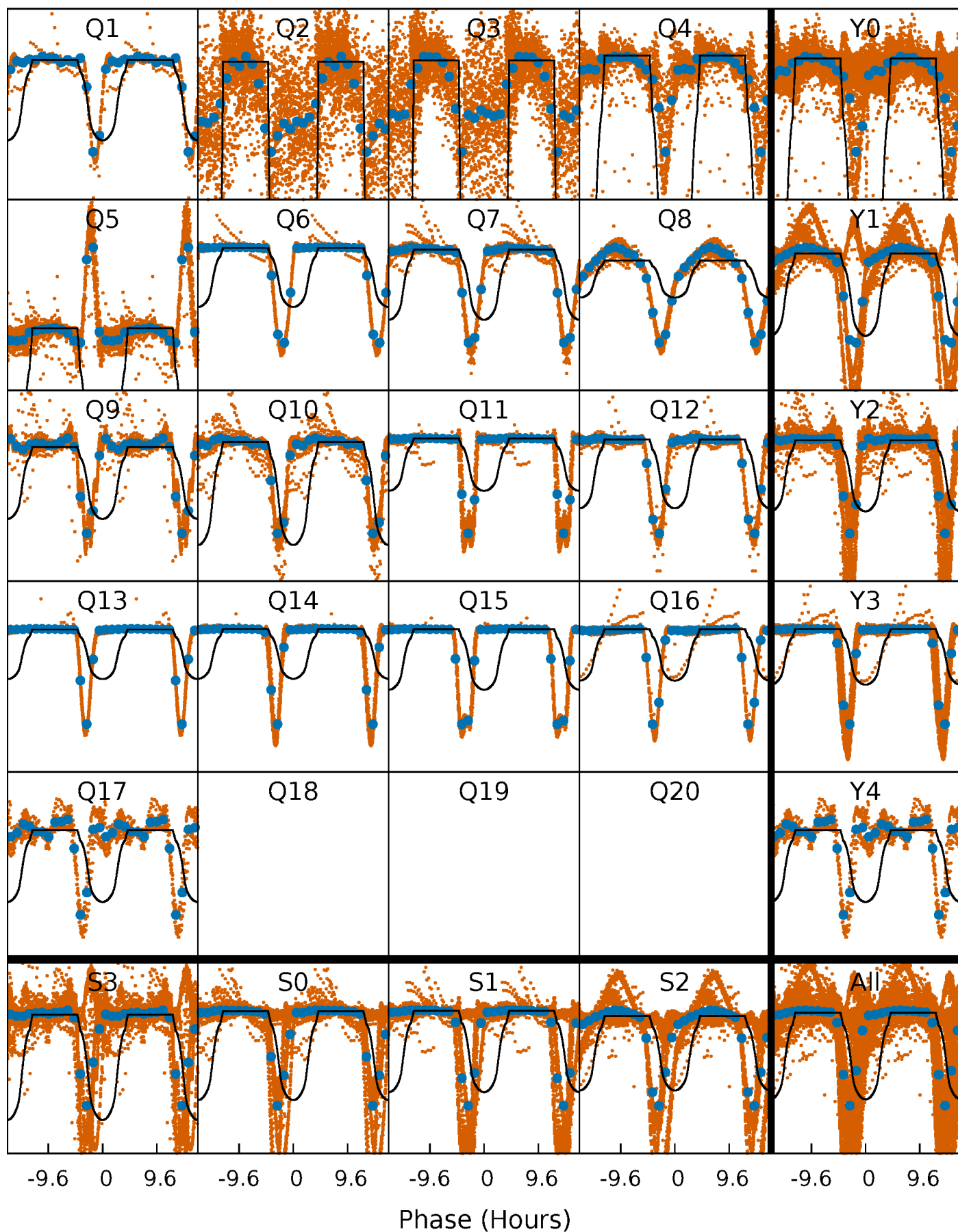
PDC Quarter-Phased Transit Curves

TCE 002305372-02 $P = 0.702393$ Days $T_0 = 131.612464$ (BKJD)



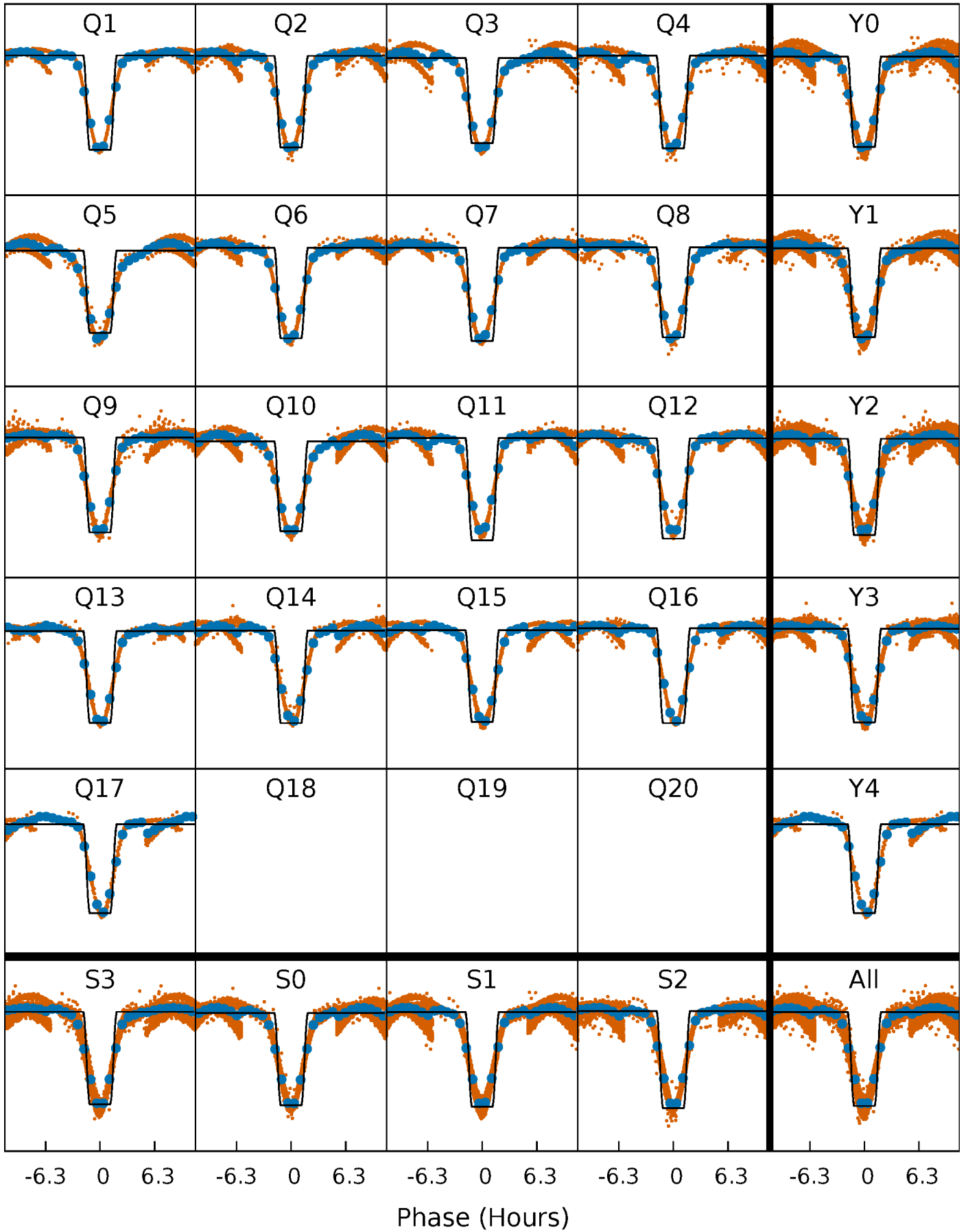
DV Quarter-Phased Transit Curves

TCE 002305372-02 P= 0.702393 Days $T_0=131.612464$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

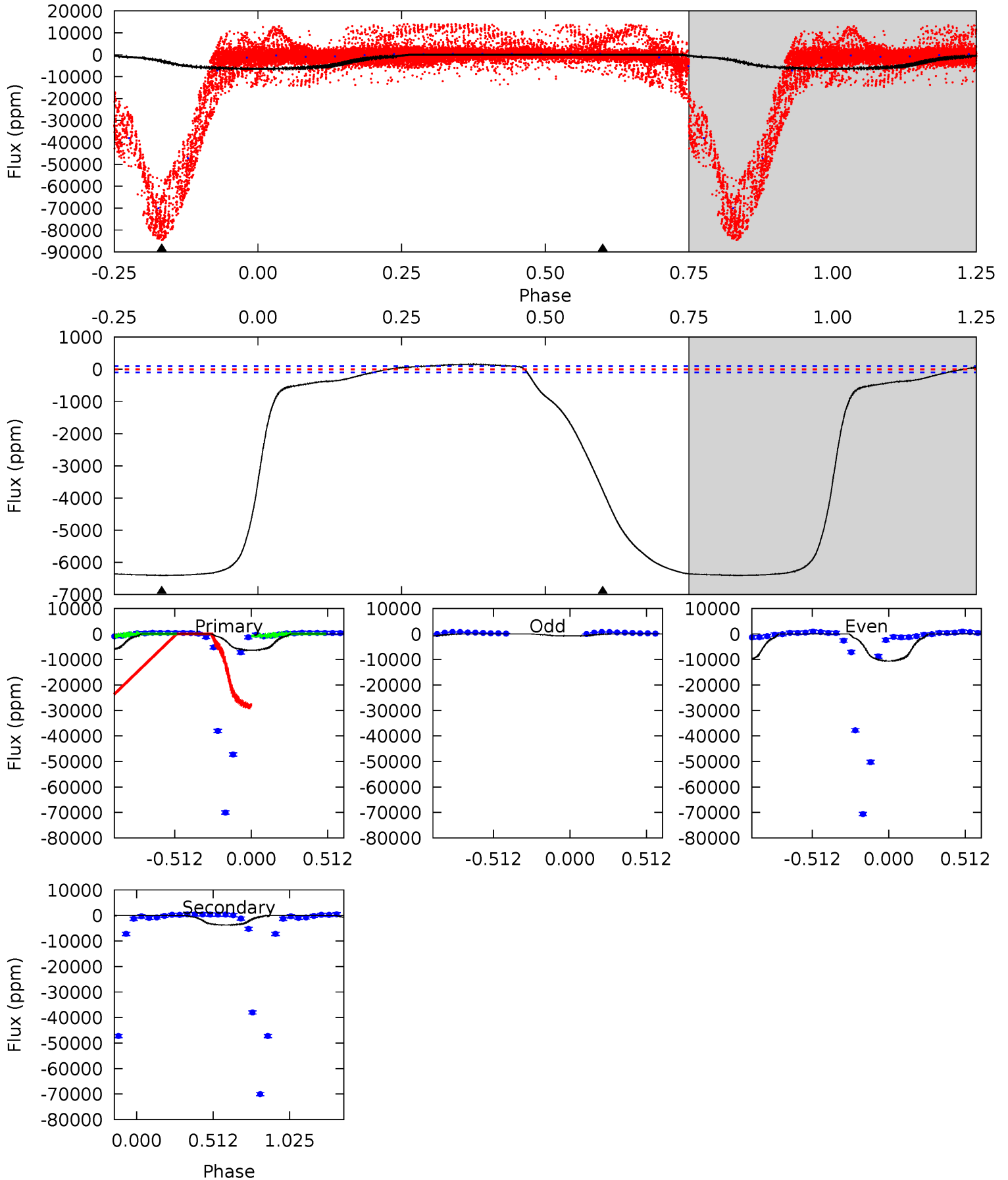
TCE 002305372-02 $P = 0.702339$ Days $T_0 = 131.561221$ (BKJD)



DV Model-Shift Uniqueness Test

002305372-02, P = 0.702393 Days, E = 131.612464 Days

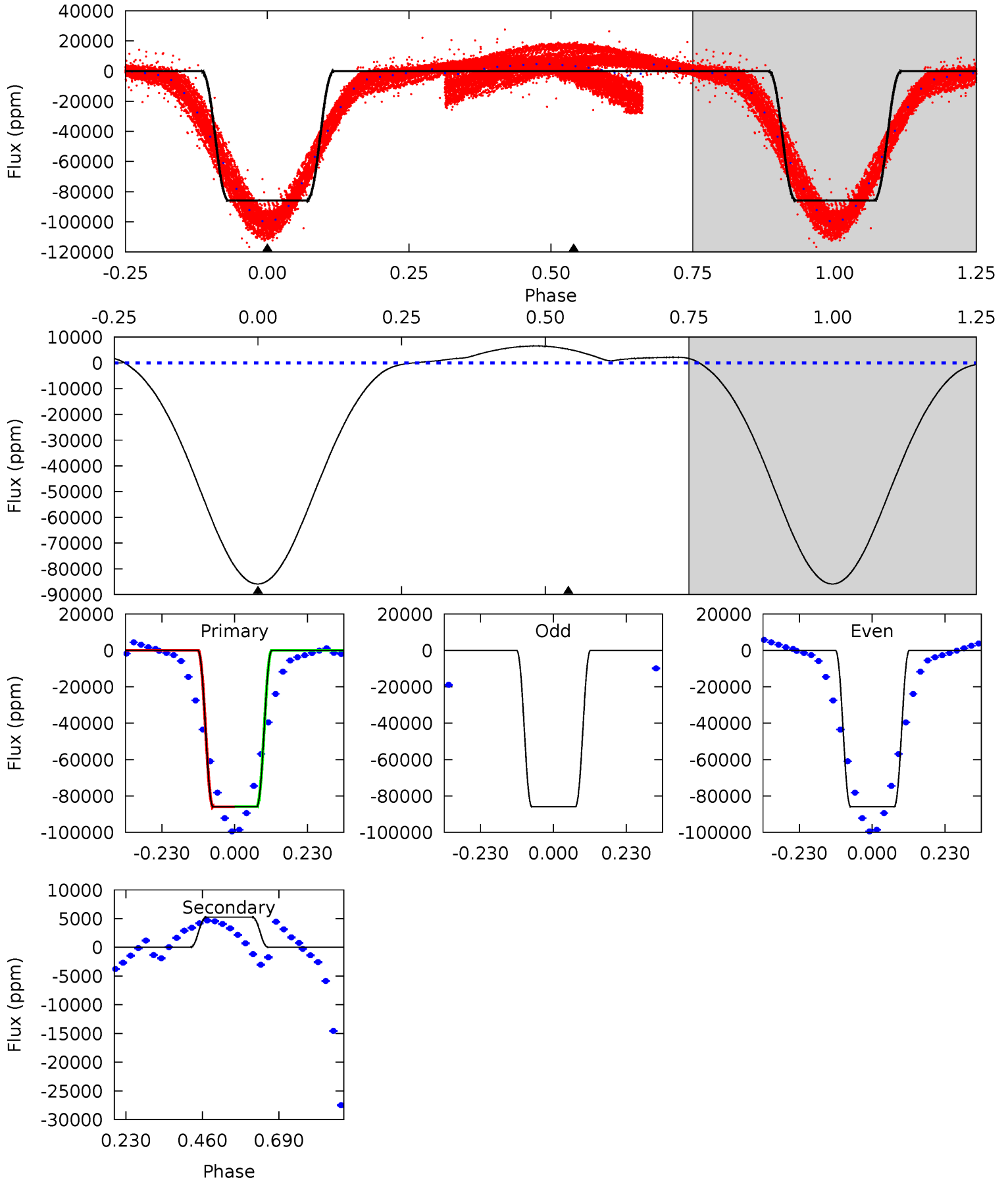
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
281.4	165.3	0	0	4.21	0.66	2.49	281.4	281.4	165.3	165.3	292.5	1.92	0.02	160.0



Alt Model-Shift Uniqueness Test

002305372-02, P = 0.702339 Days, E = 131.561221 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1819	-111.8	0	0	4.39	1.20	22.6	1819	1819	-111.8	-111.8	1.05	1.00	0.07	1.56



Stellar Parameters For KIC 002305372

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6230^{+75}_{-87}	$4.043^{+0.180}_{-0.120}$	$0.220^{+0.150}_{-0.150}$	$1.863^{+0.346}_{-0.423}$	$1.396^{+0.122}_{-0.167}$	$0.304^{+0.300}_{-0.113}$
	+1%/-1%	+4%/-3%	+68%/-68%	+19%/-23%	+9%/-12%	+99%/-37%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 002305372-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3760 ± 23	$43.26^{+4.70}_{-5.21}$	3967^{+206}_{-238}	2670^{+401}_{-5330}	$0.333^{+0.084}_{-0.060}$
Alt.	5278 ± 47	$63.47^{+6.53}_{-7.76}$	3972^{+189}_{-238}	-4032^{+97}_{-93}	$-0.216^{+0.038}_{-0.060}$

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 $A_{obs} \gg 1.0$

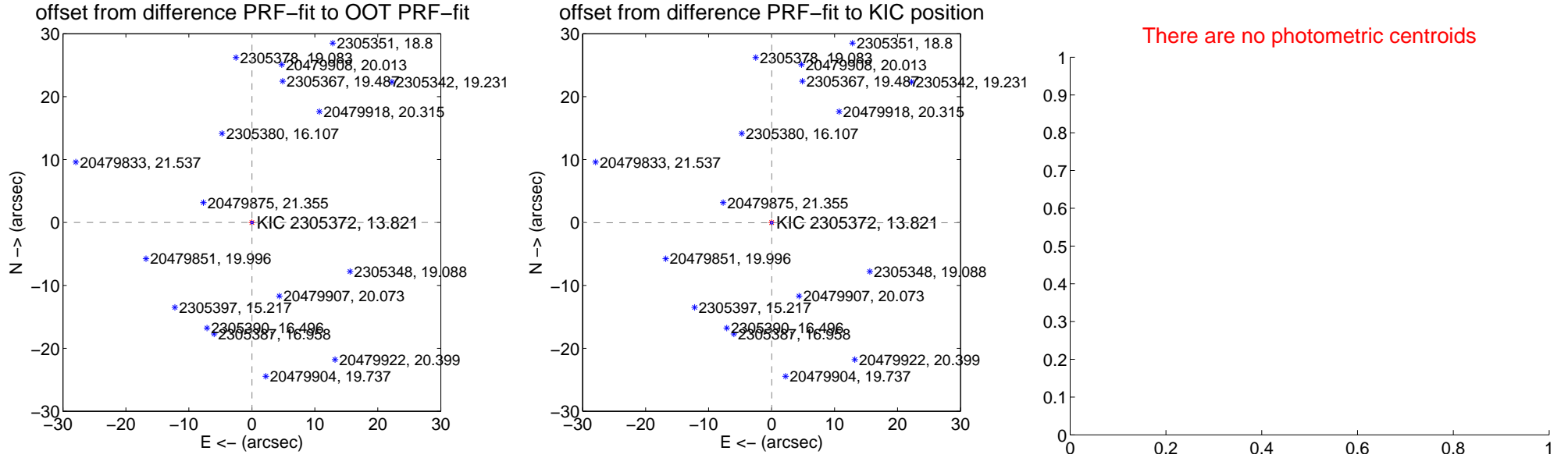
DV Centroid Data

Supplemental centroid analysis for 002305372-02. Kepler magnitude: 13.82. Transit SNR 152.55

There are 17 quarters with good PRF difference image offsets

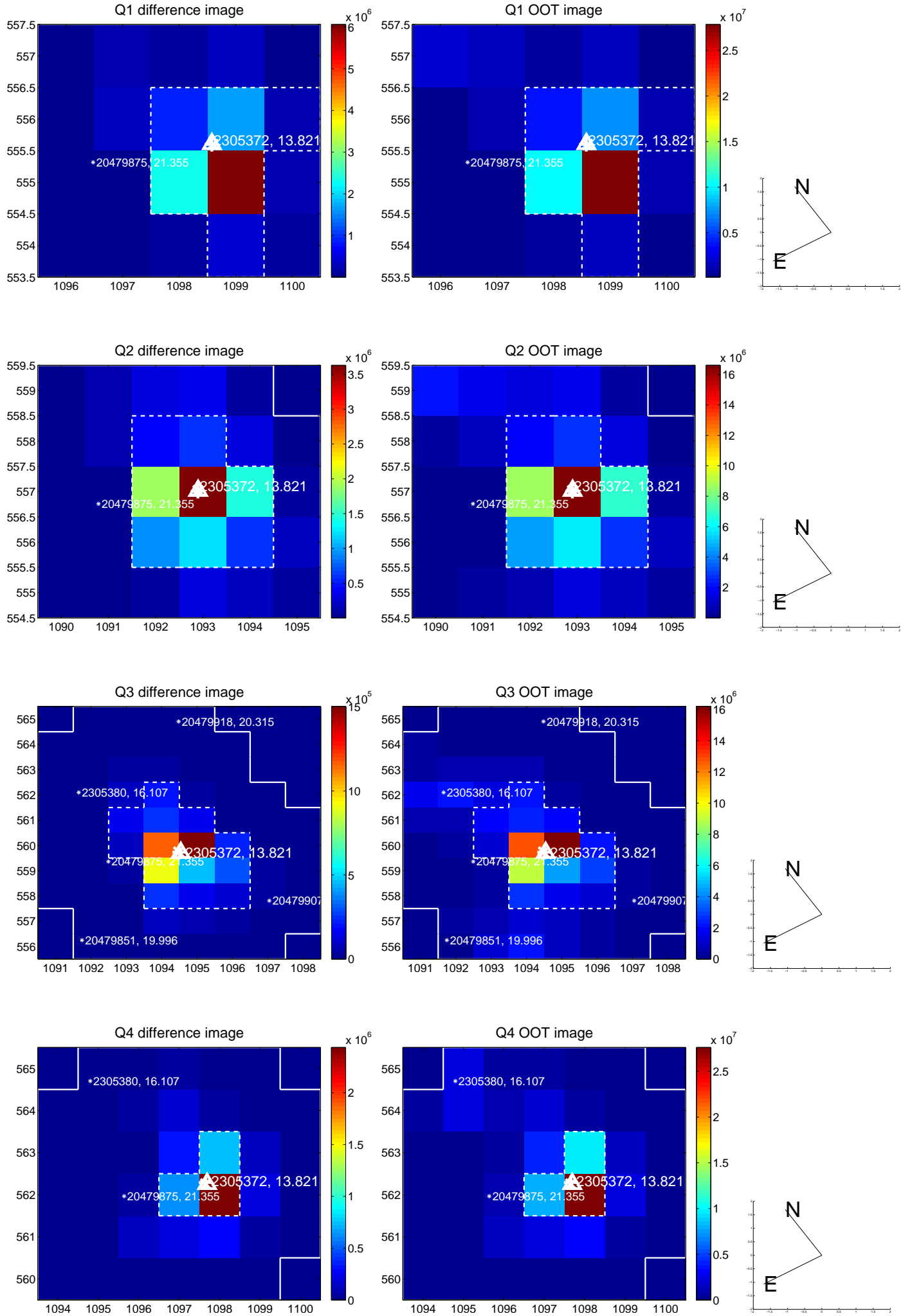
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.024 ± 0.068	0.35	-0.023 ± 0.067	0.004 ± 0.078
PRF-fit source offset from KIC position	0.032 ± 0.074	0.43	-0.015 ± 0.068	-0.028 ± 0.074
photometric centroid source offset	—	—	—	—

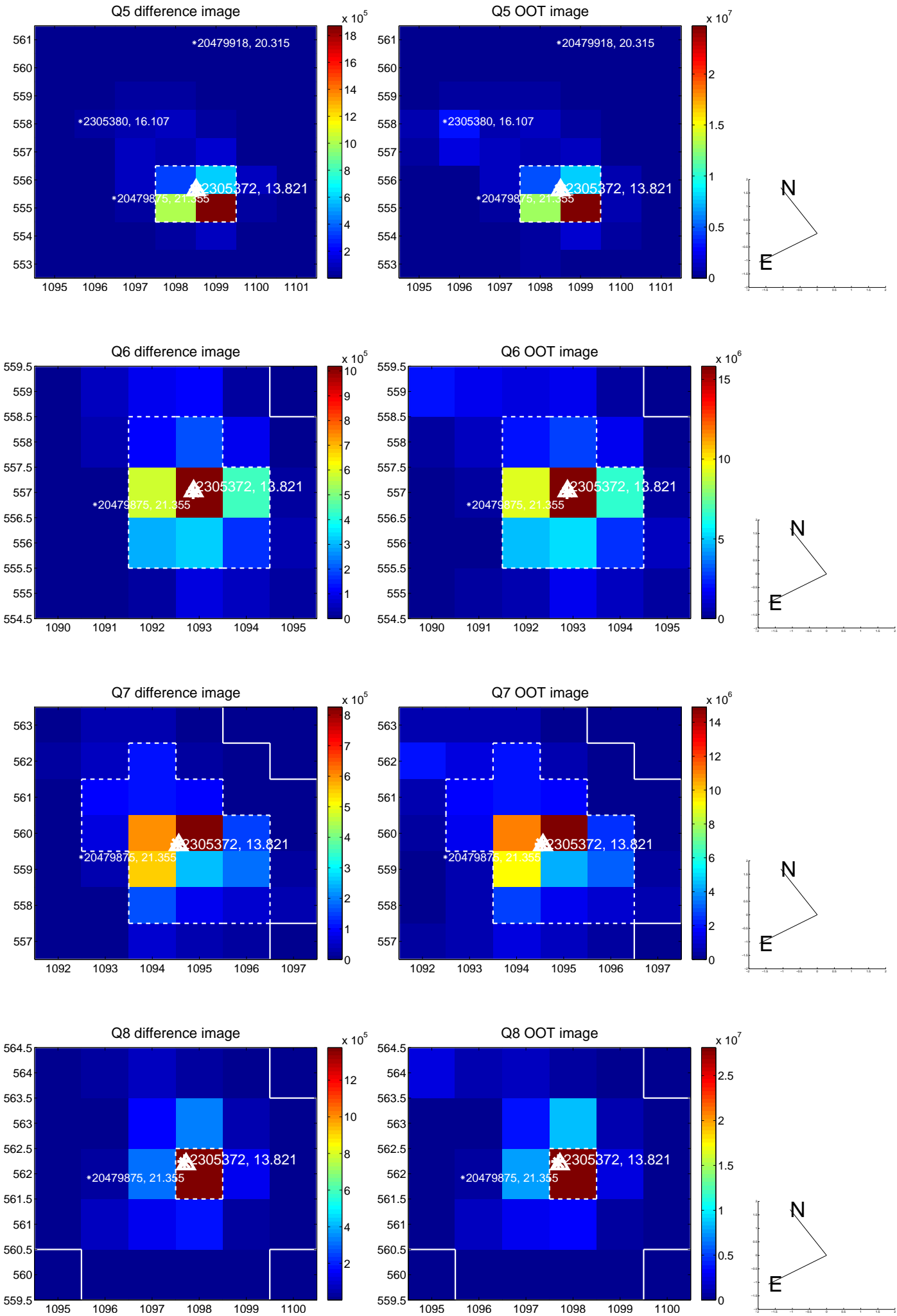


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

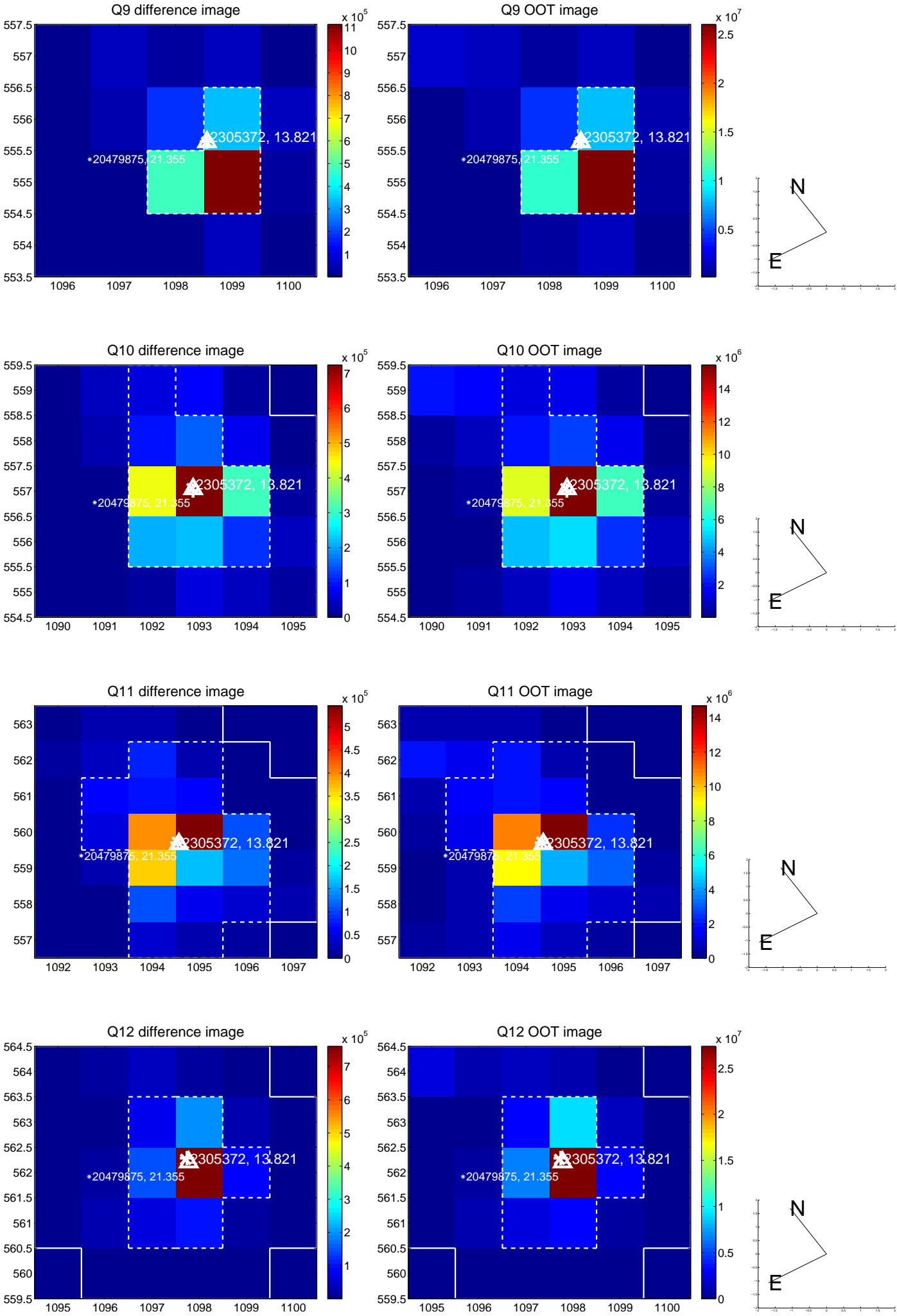
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



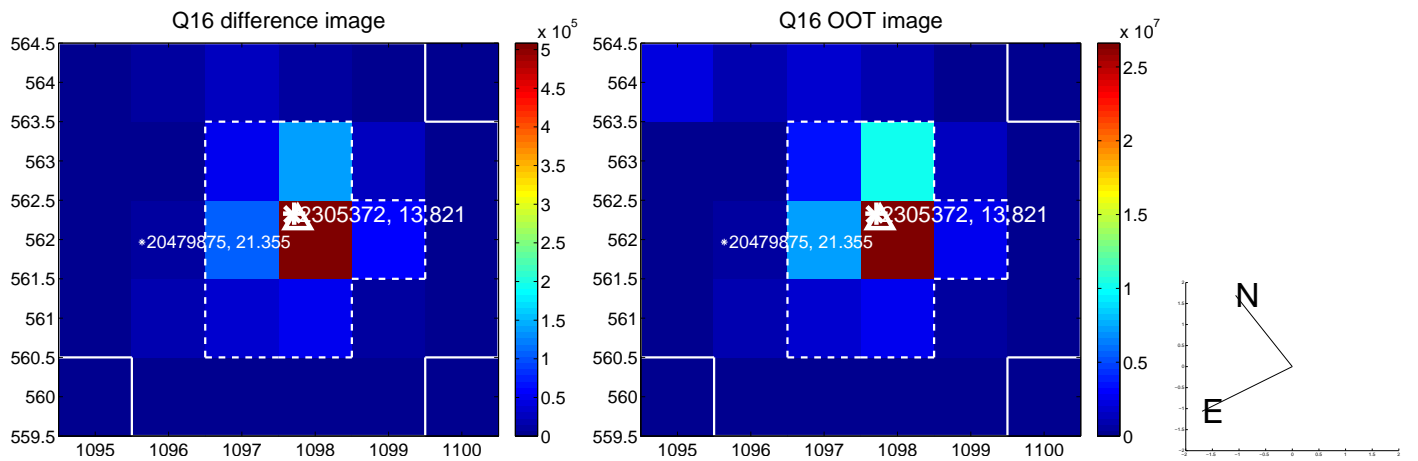
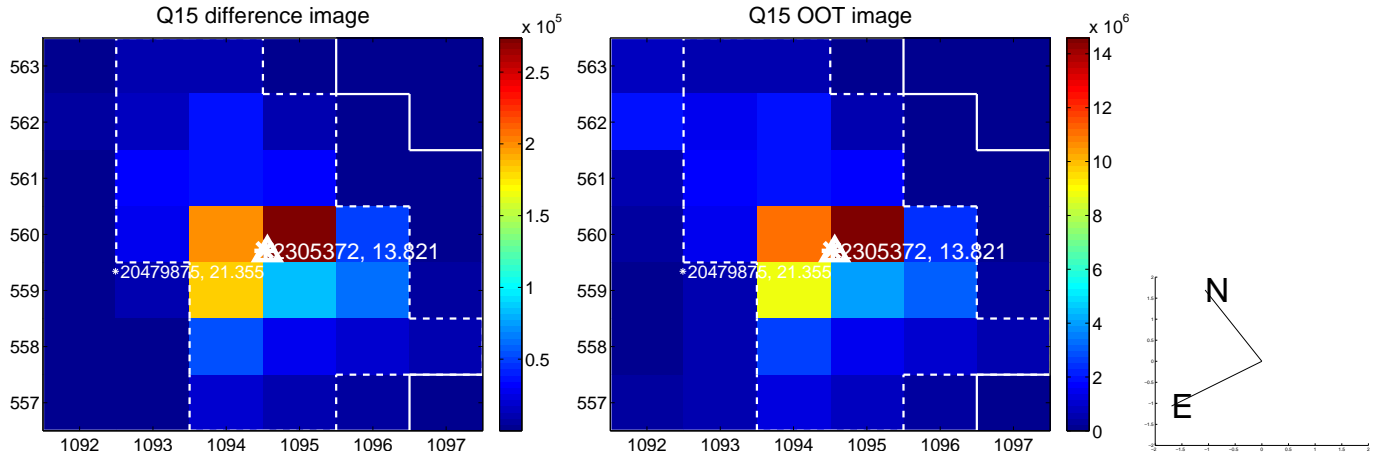
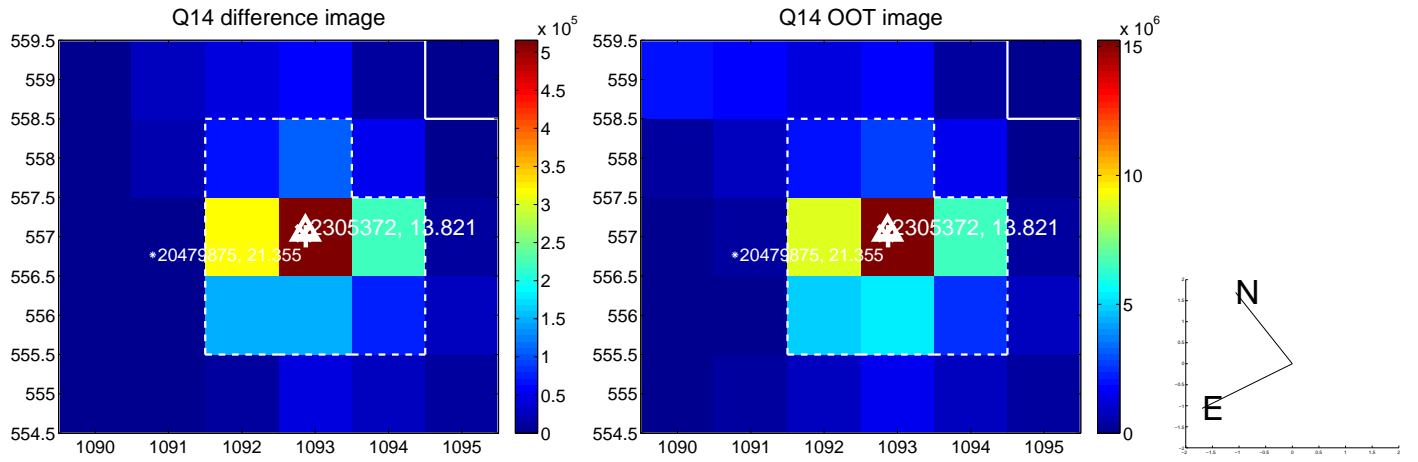
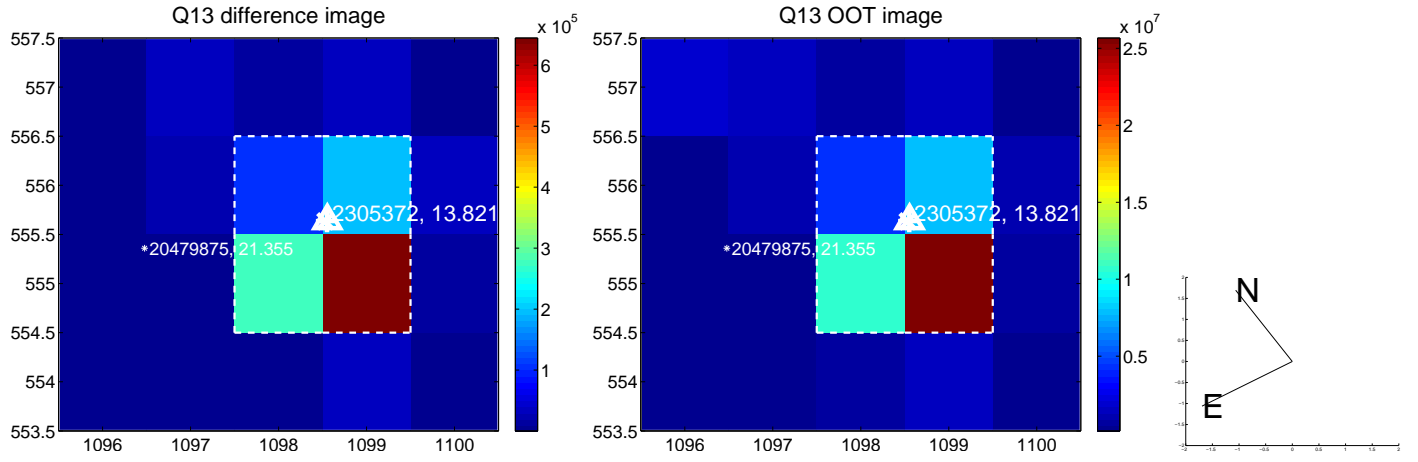
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



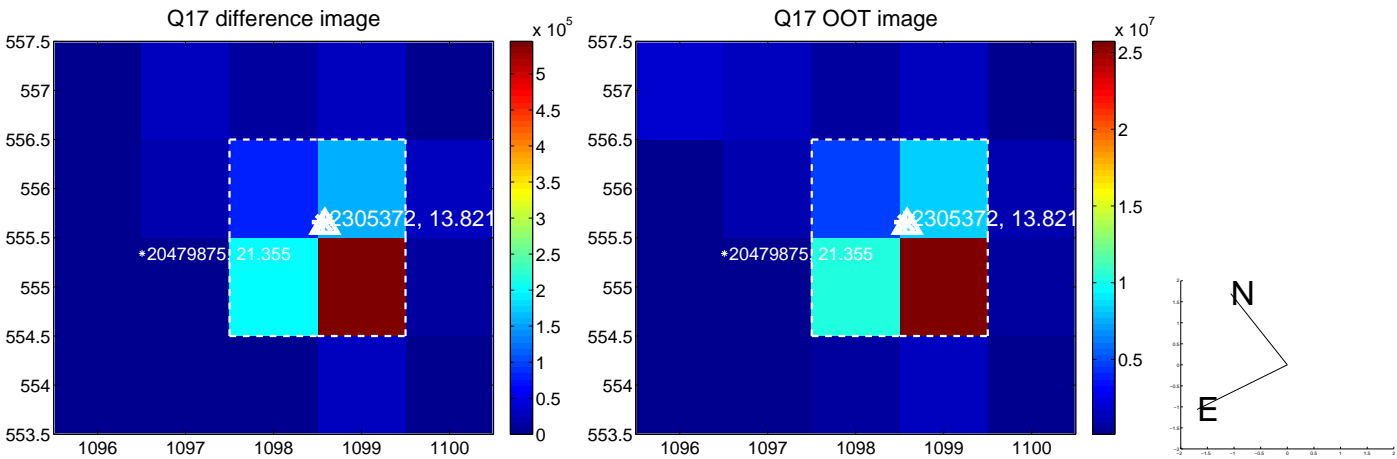
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



folded centroid time series figure for this object.

UKIRT Image

Declination

