

KIC 007125636

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})
007125636-01	OBS	6832.01	6.490662	132.067617	194135.7	3.490	6639.1	4077.8	0.56	4448	30.25	35.33
007125636-02	OBS	No	3.245336	132.001165	161468.1	3.447	5777.4	4000.3	0.56	4448	33.66	89.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007125636-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
007125636-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—HALO_GHOST

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 007125636-01

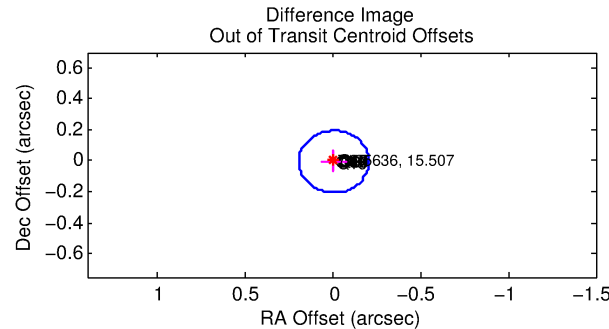
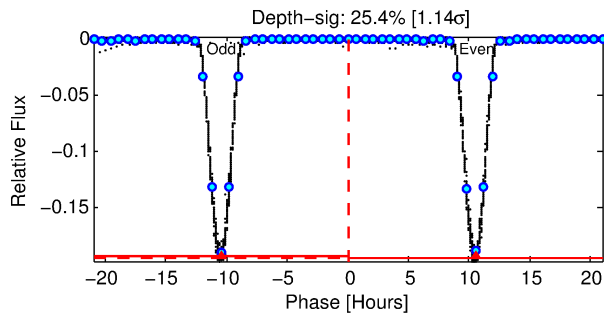
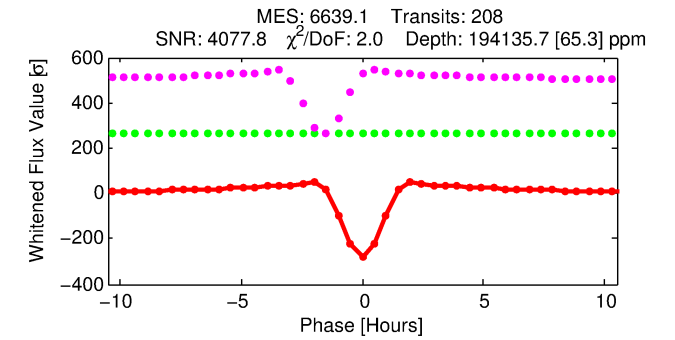
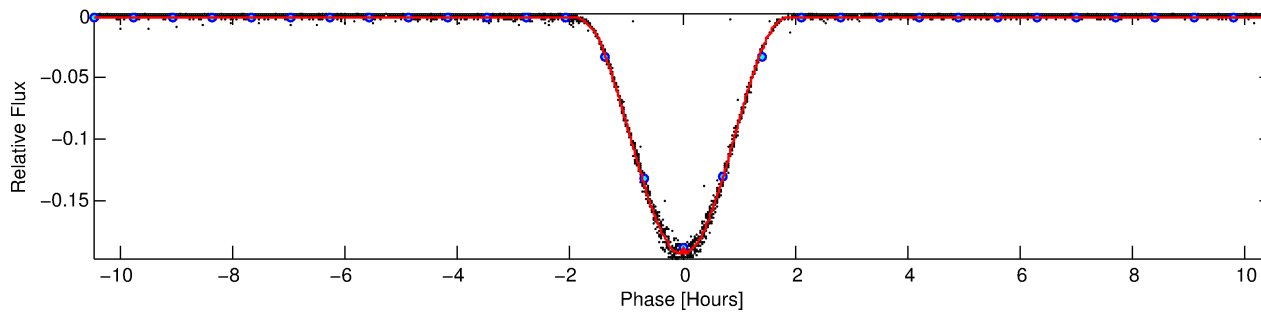
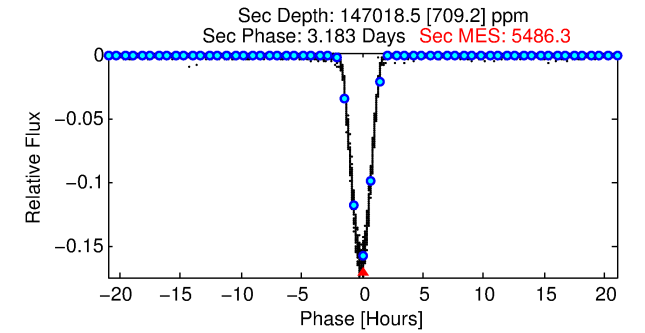
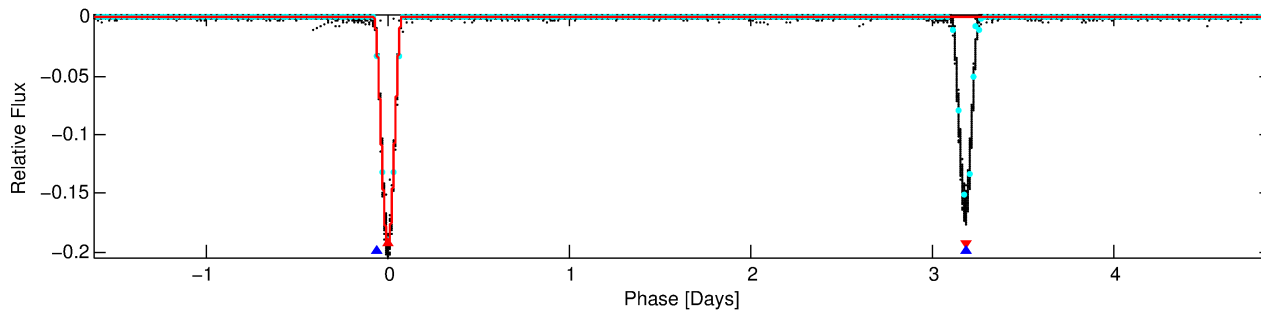
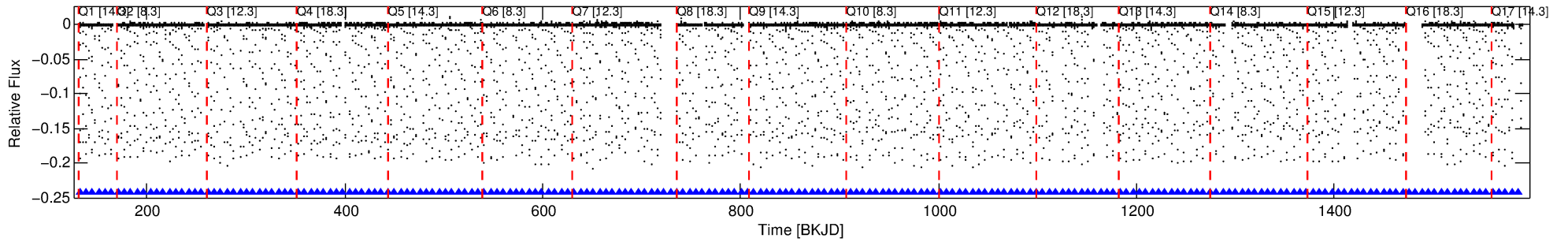
No Significant Match Found

DV One-Page Summary

KIC: 7125636 Candidate: 1 of 2 Period: 6.491 d

KOI: K06832.01 Corr: 0.998

Kp: 15.51 R*: 0.56 Rs Teff: 4448.0 K Logg: 4.68 Fe/H: -0.720



DV Fit Results:

Period = 6.49066 [0.00000] d
Epoch = 132.0676 [0.0000] BKJD
Rp/R* = 0.4923 [0.0068]
a/R* = 18.63 [0.02]
b = 0.72 [0.01]
Seff = 35.33 [5.39]
Teq = 622 [24] K
Rp = 30.25 [2.45] Re
a = 0.0561 [0.0037] AU
Ag = 278.17 [27.83] [9.96σ]
Teffp = 3925 [120] K [27.07σ]

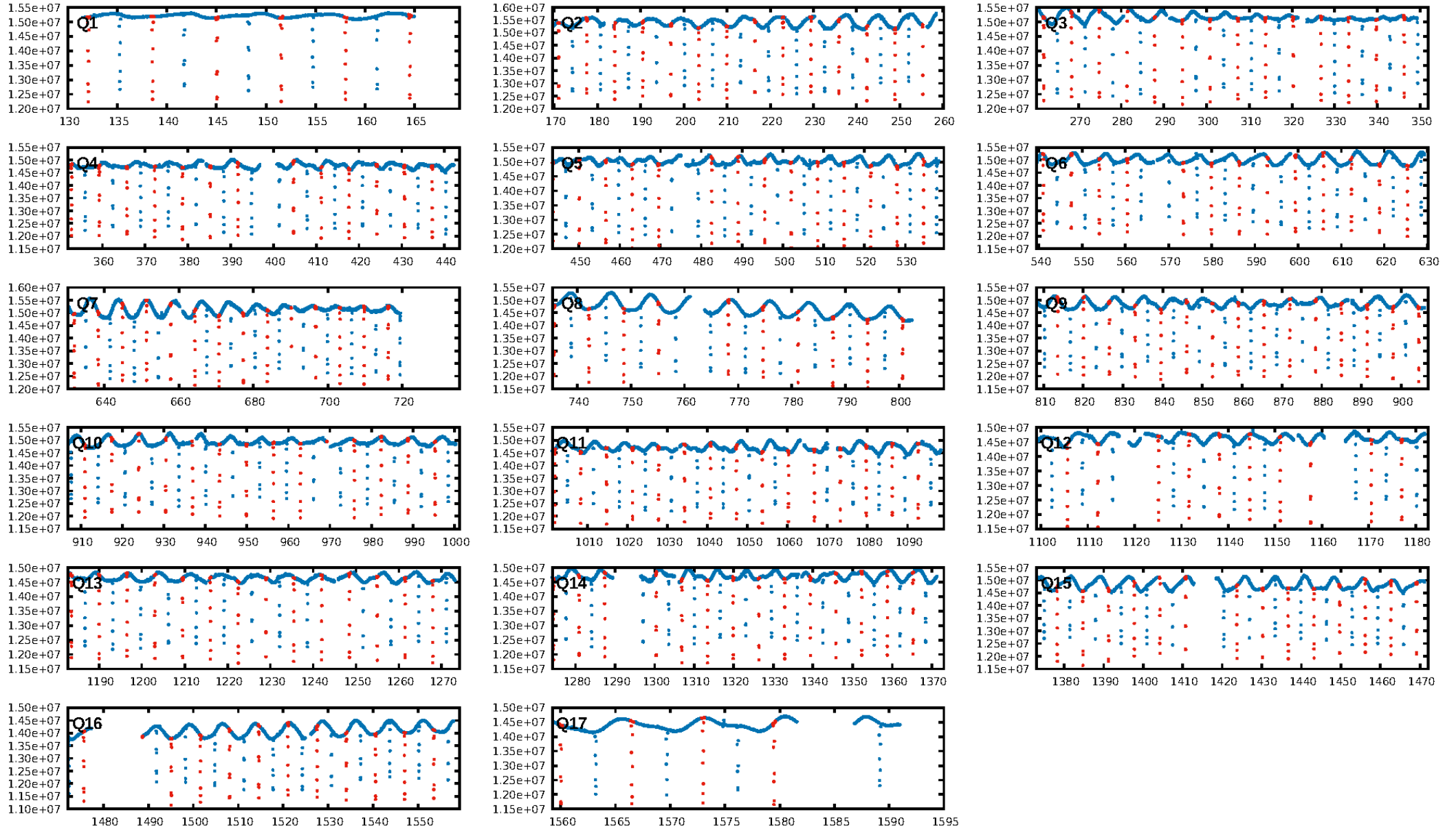
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [15.88σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [198/198]
GhostDiagnostic-chr: 10.53
Centroid-sig: 0.0%
Centroid-so: 0.117 arcsec [80.78σ]
OotOffset-rm: 0.008 arcsec [0.12σ]
KicOffset-rm: 0.134 arcsec [1.85σ]
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]

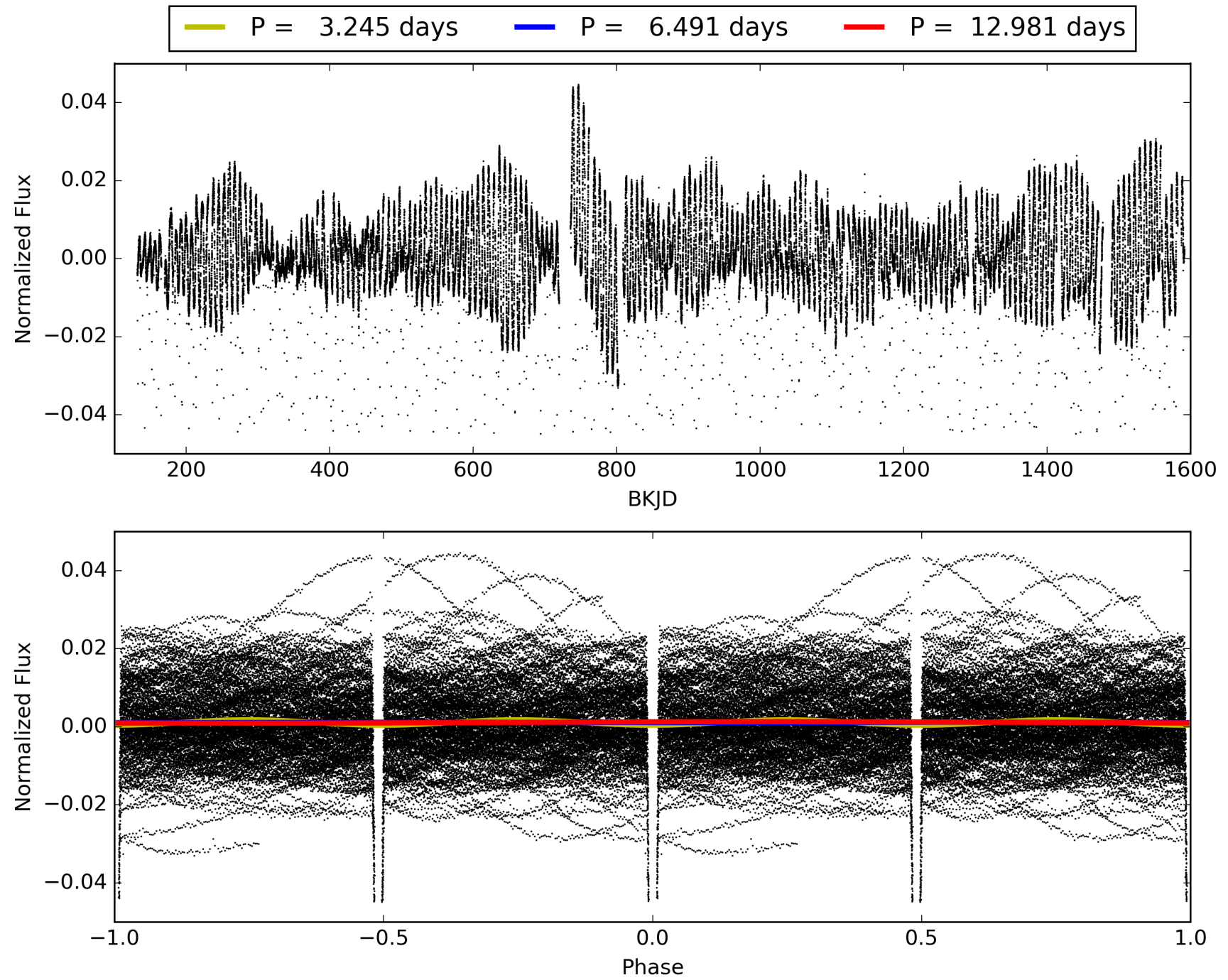
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:48:33 Z

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

TCE 007125636-01, PDC Light Curves

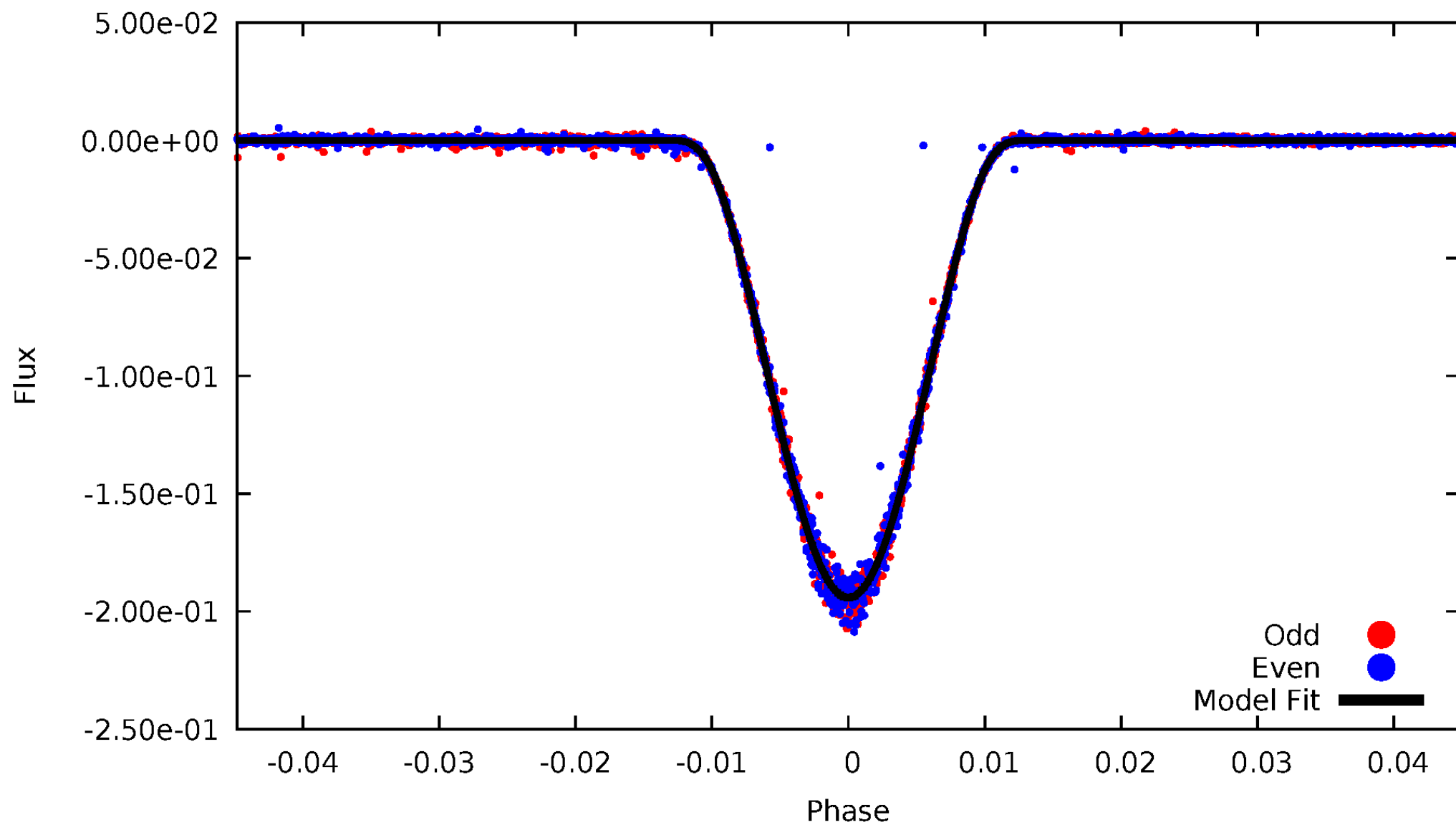


TCE 007125636-01



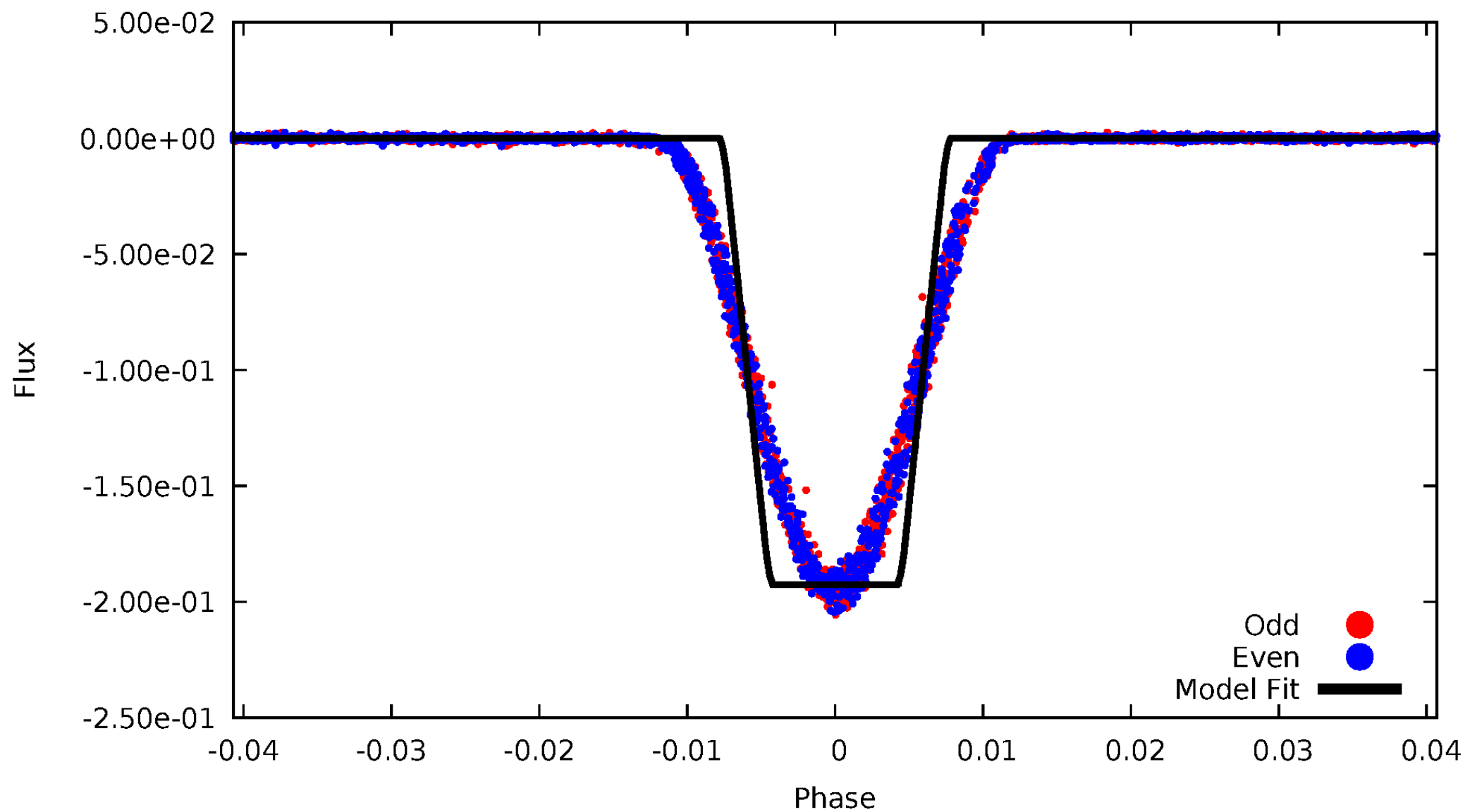
DV Odd/Even

TCE 007125636-01



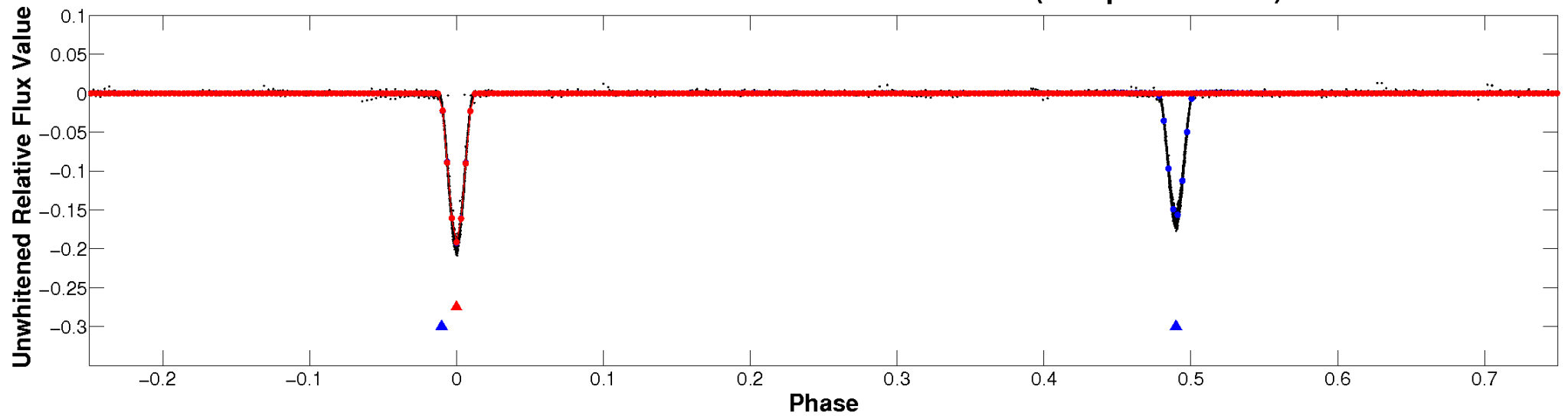
ALT Odd/Even

TCE 007125636-01

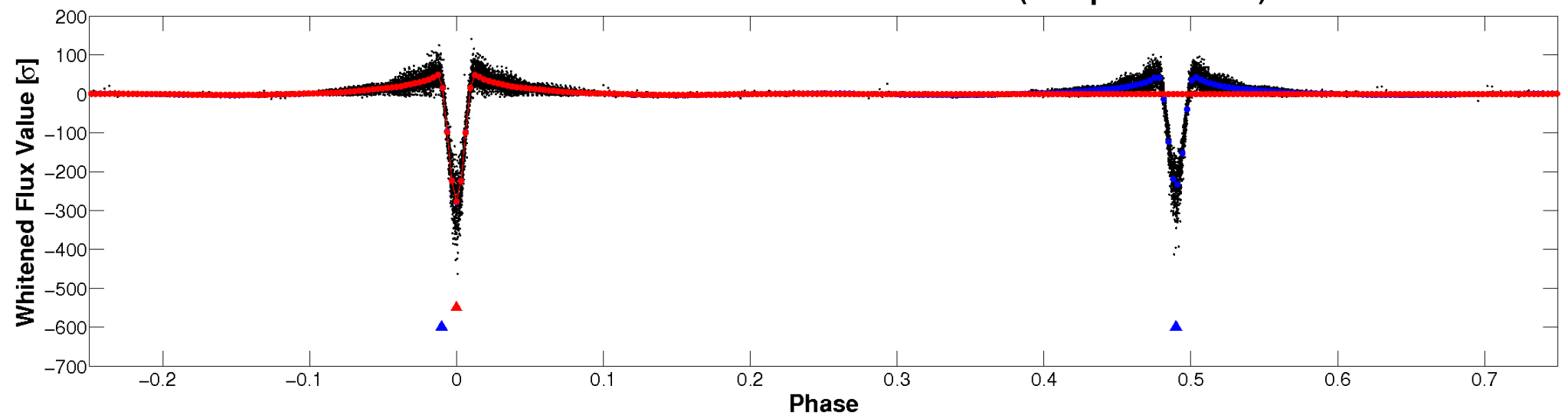


Non-Whitened Vs. Whitened Light Curve

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

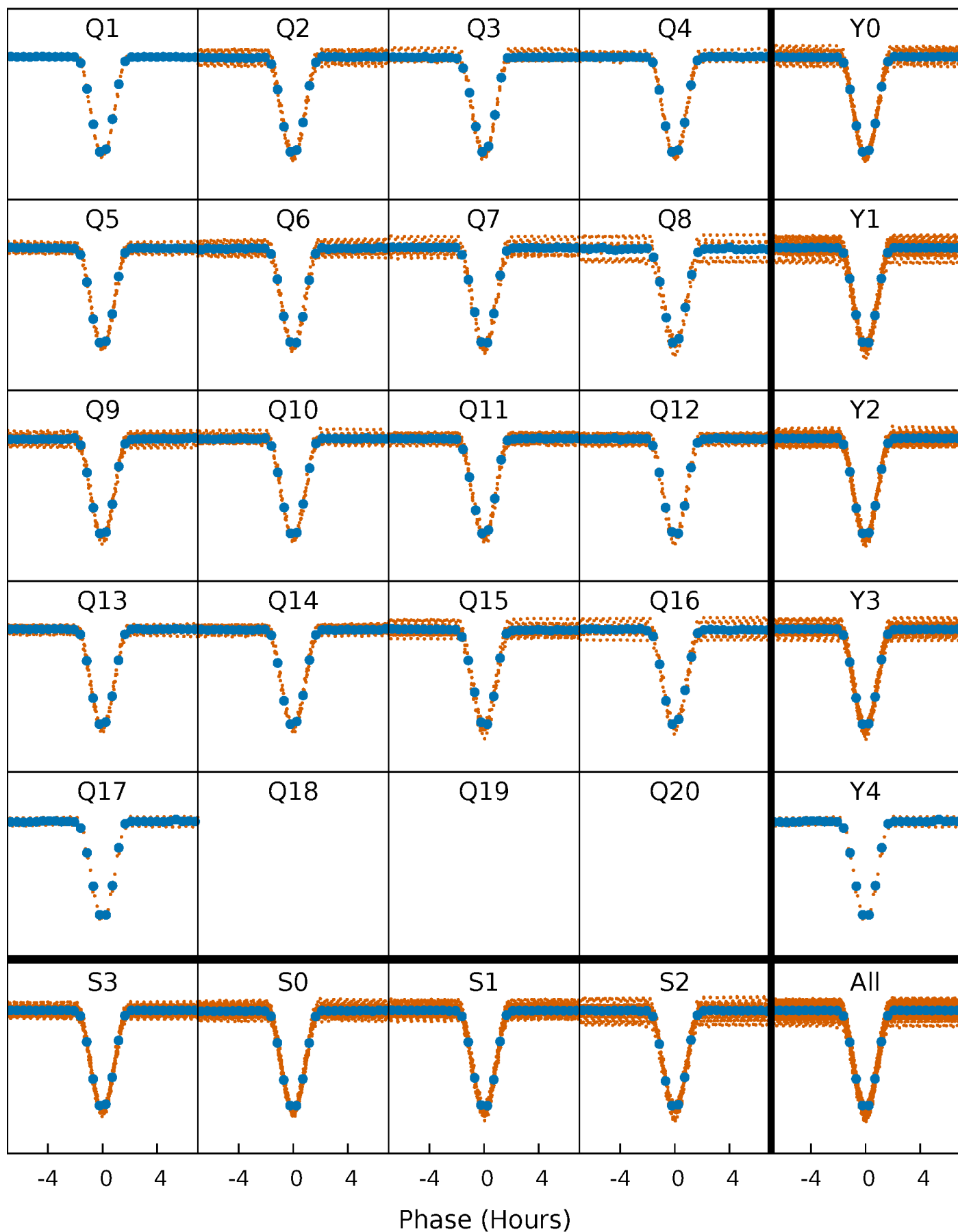


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



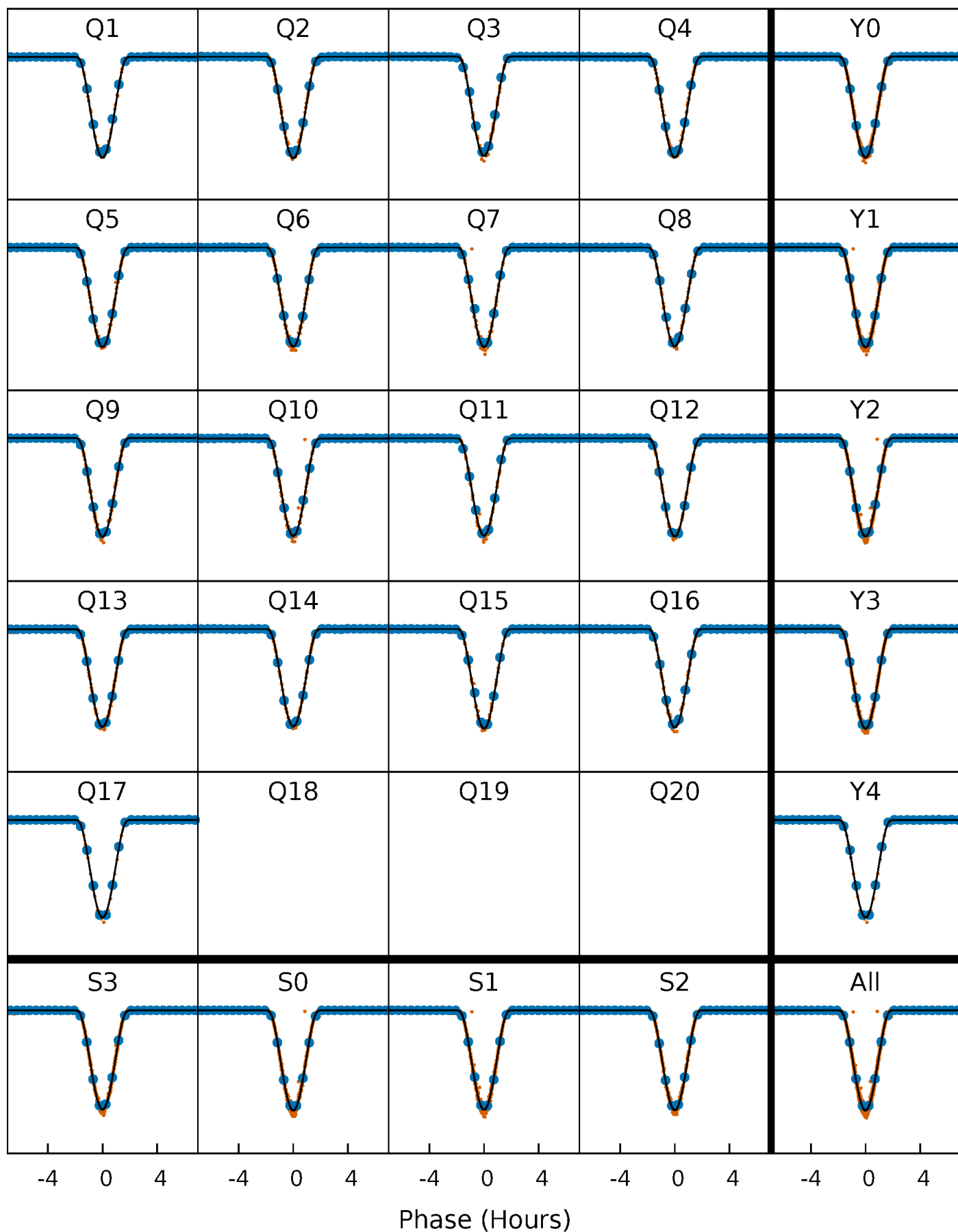
PDC Quarter-Phased Transit Curves

TCE 007125636-01 P= 6.490662 Days $T_0=132.067617$ (BKJD)



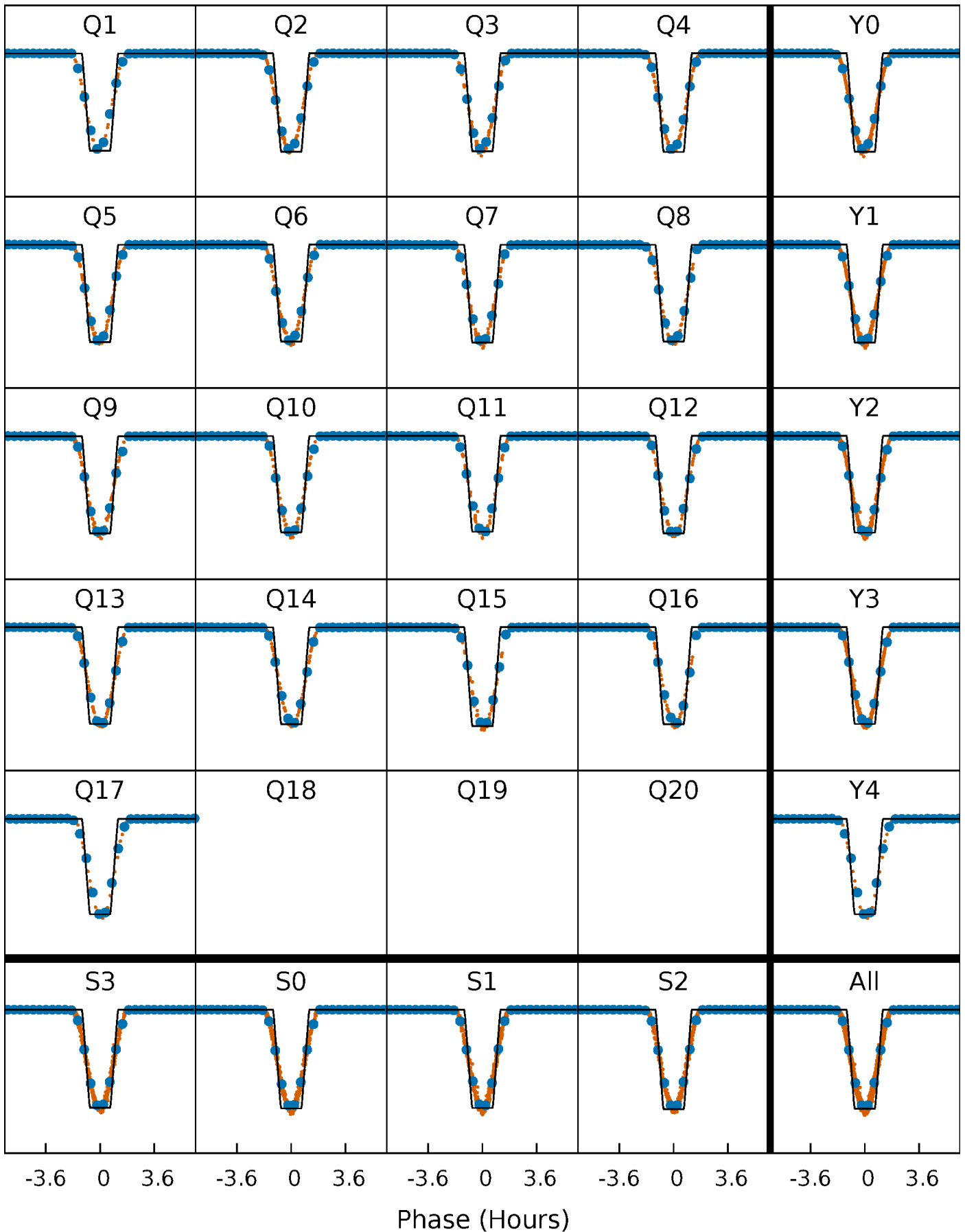
DV Quarter-Phased Transit Curves

TCE 007125636-01 P= 6.490662 Days $T_0=132.067617$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

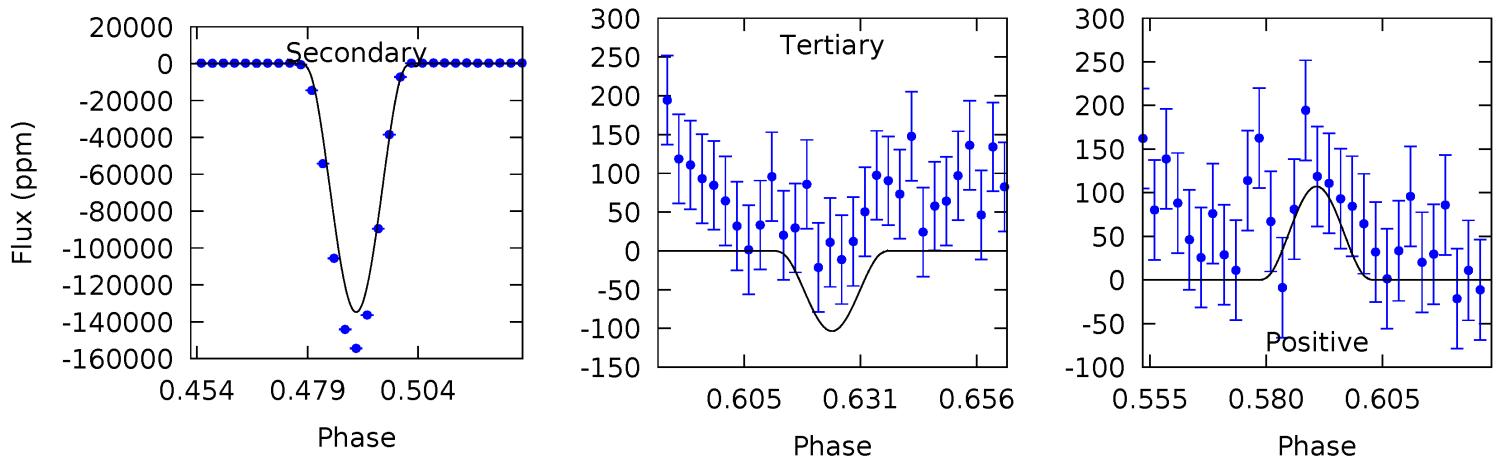
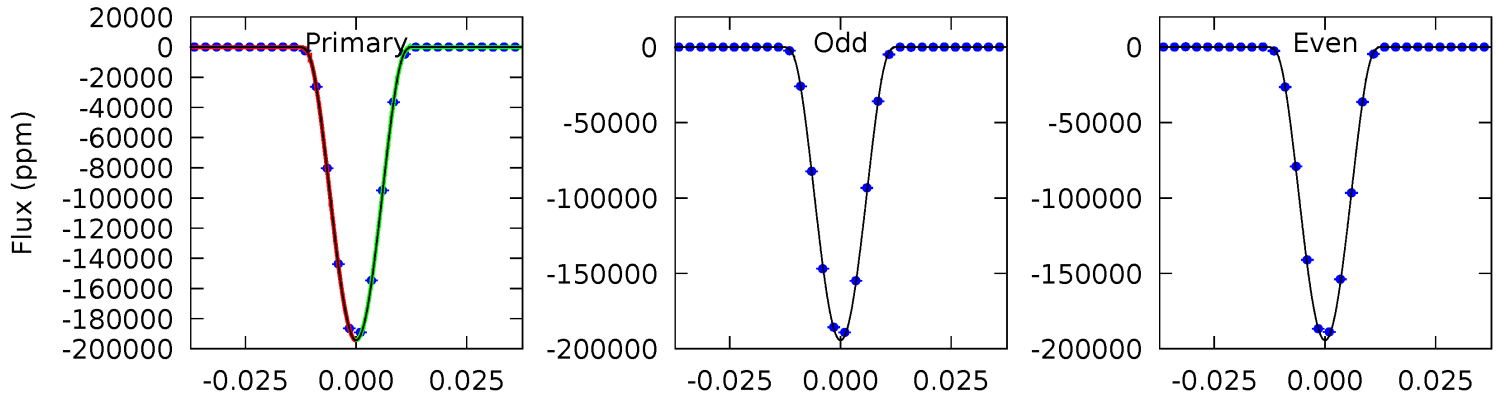
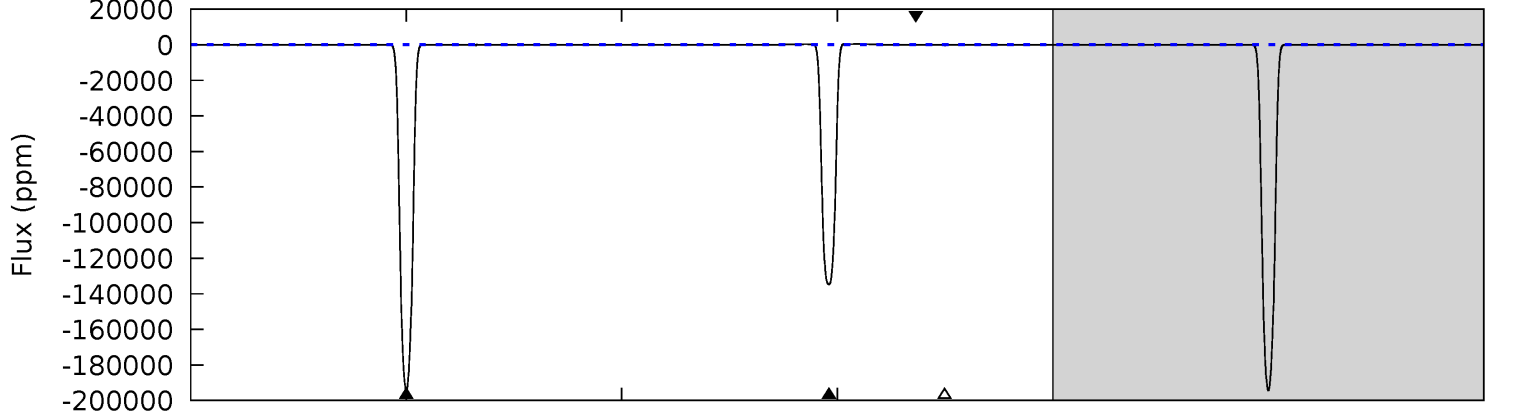
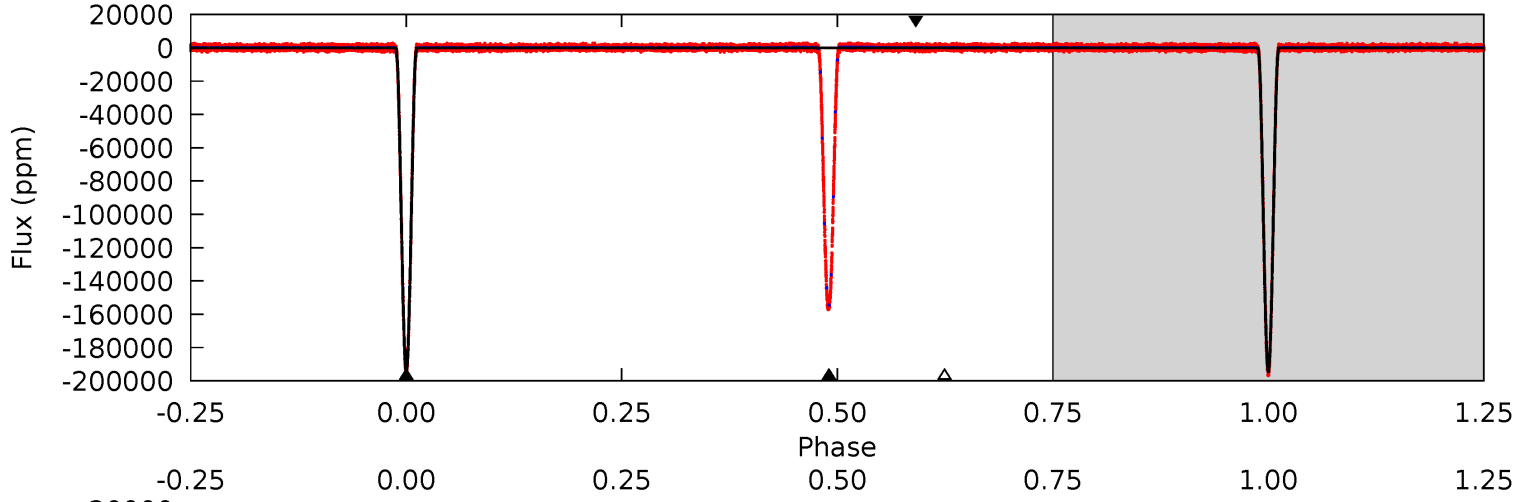
TCE 007125636-01 P= 6.490628 Days $T_0=132.071400$ (BKJD)



DV Model-Shift Uniqueness Test

007125636-01, P = 6.490662 Days, E = 125.576955 Days

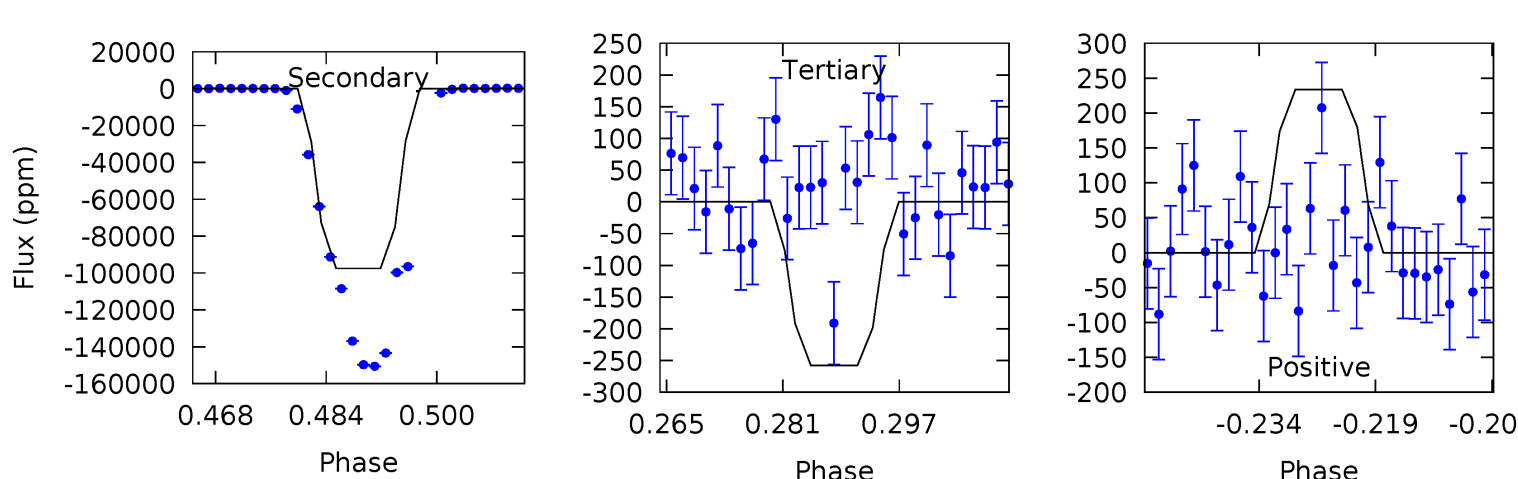
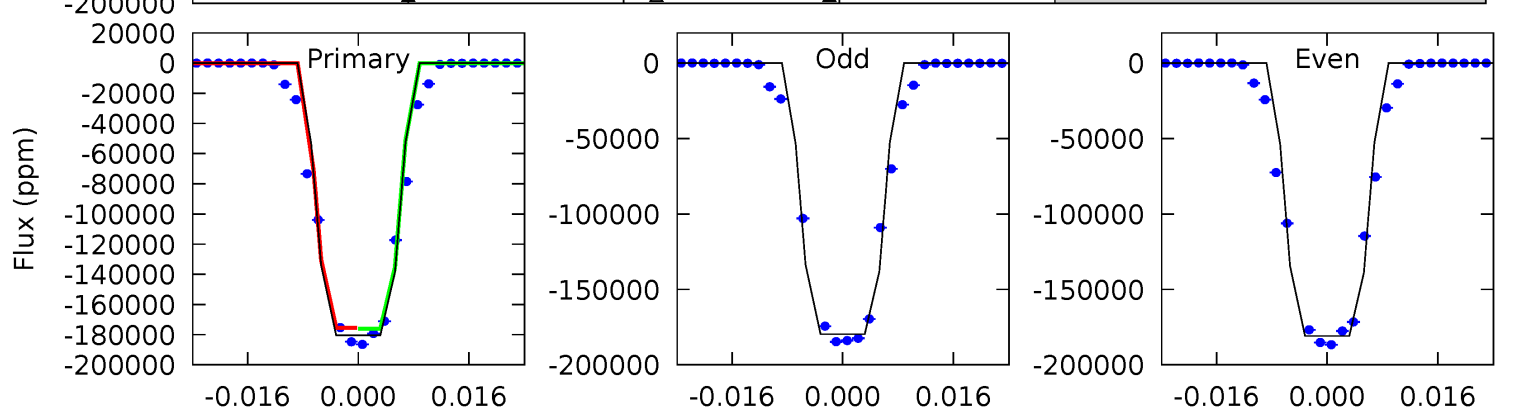
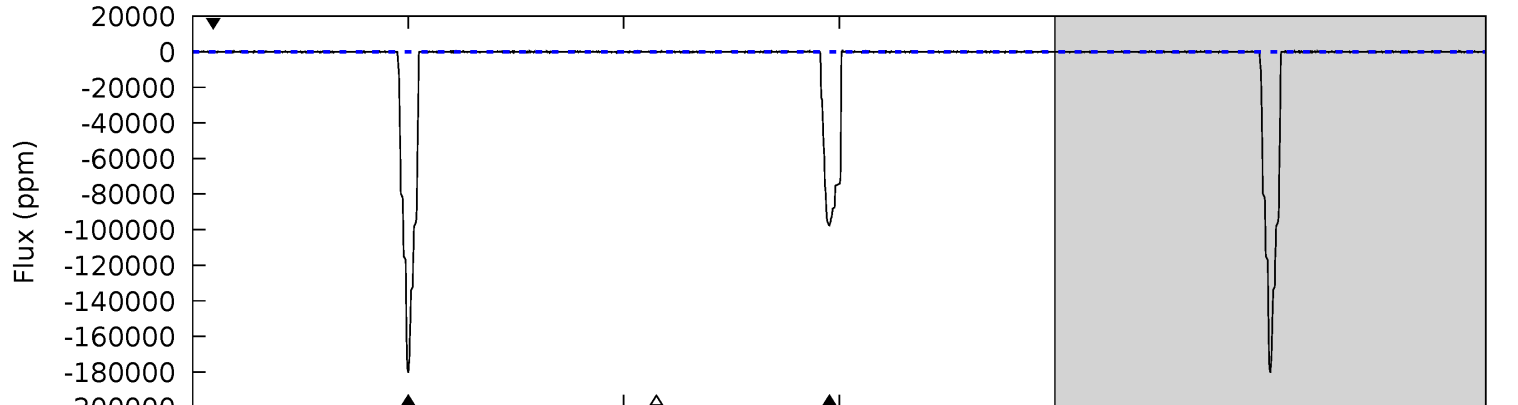
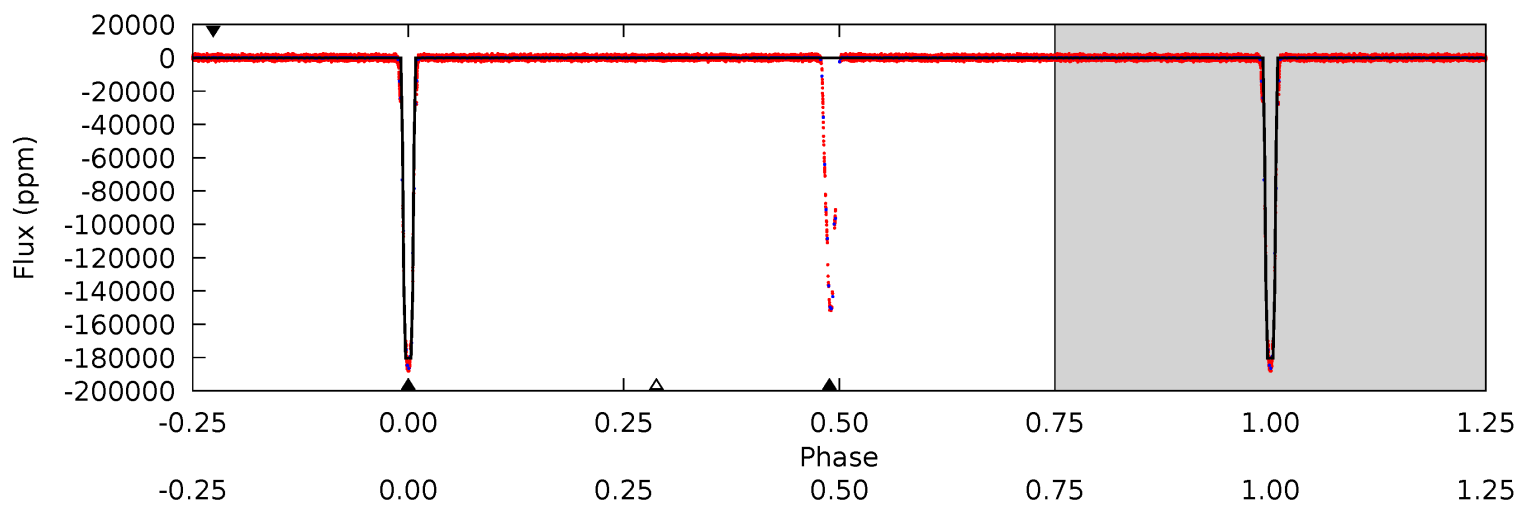
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9853	6831	5.24	5.44	4.85	2.24	4.75	9848	9847	6826	6826	1.01	0.99	0.00	0



Alt Model-Shift Uniqueness Test

007125636-01, P = 6.490628 Days, E = 125.580772 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3043	1645	4.35	3.94	4.94	2.42	1.21	3038	3039	1640	1641	10.2	1.00	0.00	0



Stellar Parameters For KIC 007125636

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4448^{+132}_{-132}	$4.684^{+0.052}_{-0.032}$	$-0.720^{+0.300}_{-0.300}$	$0.563^{+0.045}_{-0.045}$	$0.558^{+0.052}_{-0.033}$	$4.397^{+1.005}_{-0.563}$
	+3%/-3%	+1%/-1%	+42%/-42%	+8%/-8%	+9%/-6%	+23%/-13%
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 007125636-01 / KOI 6832.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-134752 ± 20	$30.18^{+1.31}_{-1.36}$	863^{+32}_{-29}	4093^{+113}_{-125}	298^{+24}_{-20}
Alt.	-97525 ± 59	$26.89^{+1.28}_{-1.29}$	866^{+30}_{-30}	4001^{+113}_{-118}	260^{+22}_{-19}

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 $A_{obs} \gg 1.0$

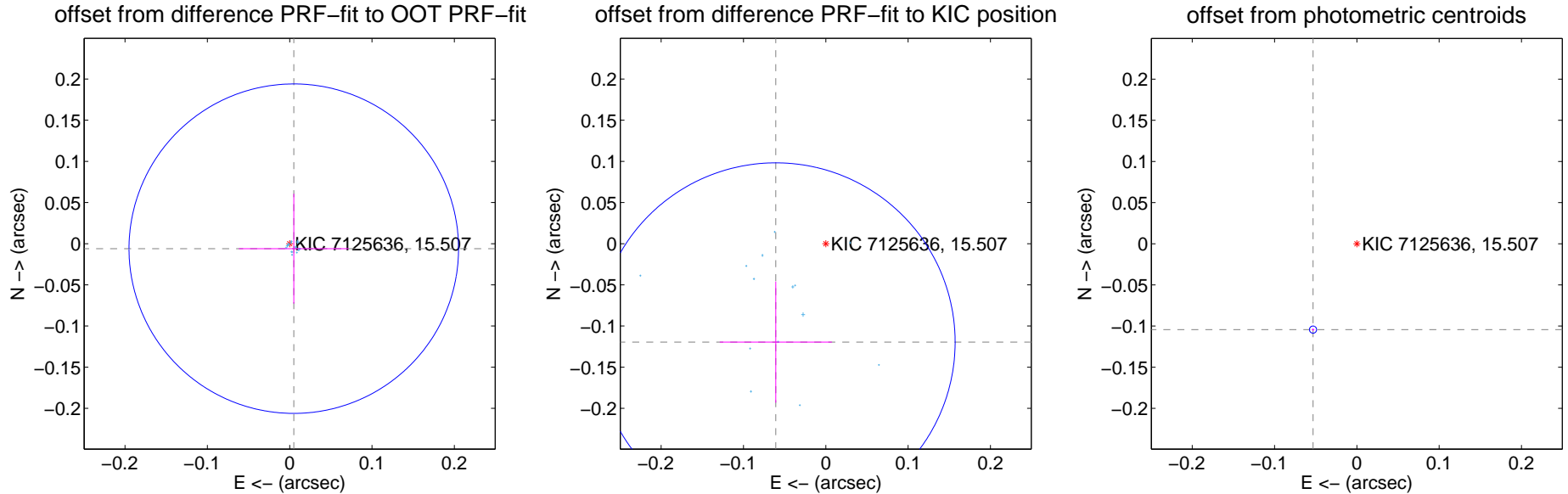
DV Centroid Data

Supplemental centroid analysis for 007125636-01. Kepler magnitude: 15.51. Transit SNR 4077.85

There are 17 quarters with good PRF difference image offsets

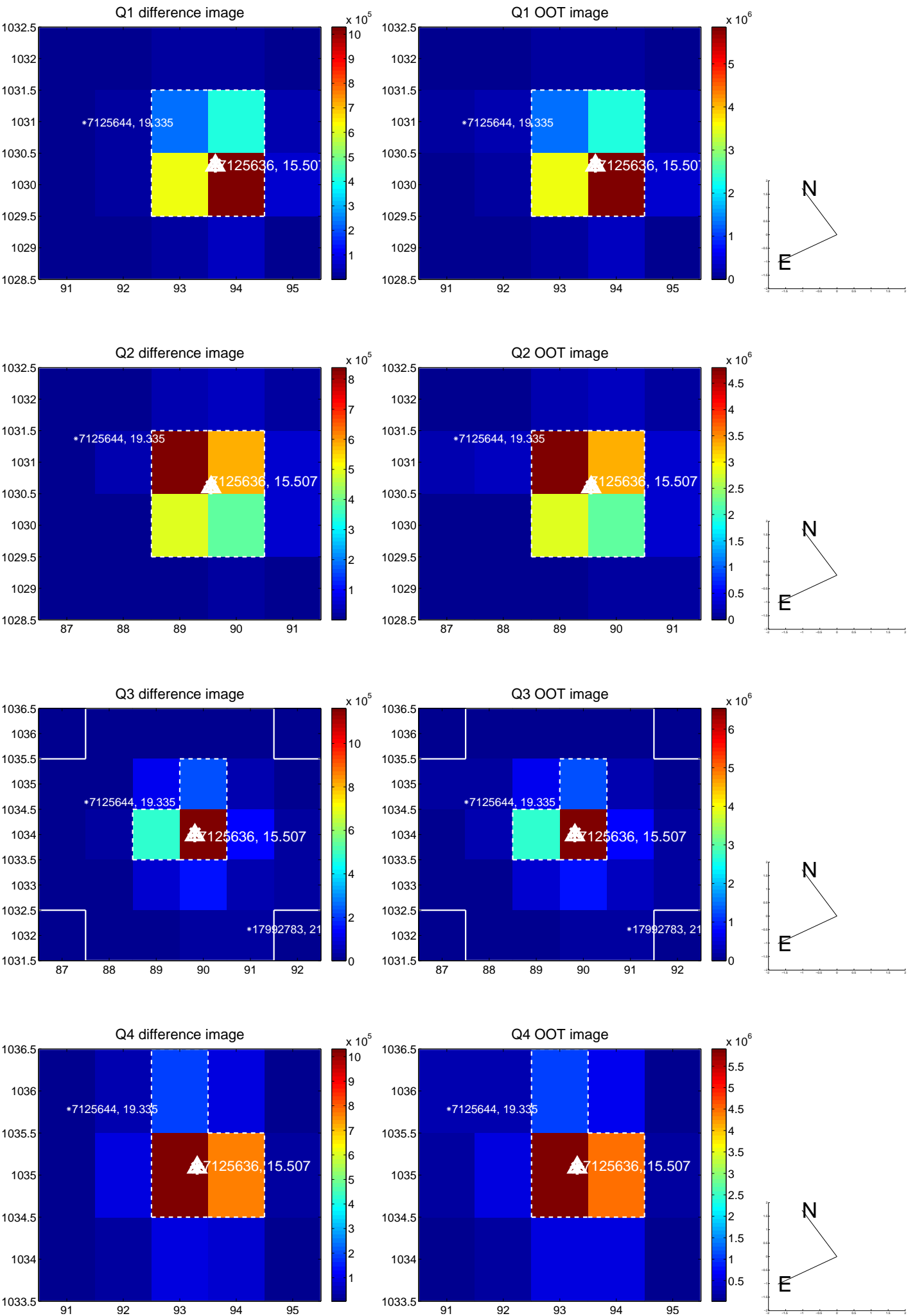
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.008 ± 0.067	0.12	-0.005 ± 0.067	-0.006 ± 0.067
PRF-fit source offset from KIC position	0.134 ± 0.073	1.85	0.061 ± 0.068	-0.120 ± 0.074
photometric centroid source offset	0.12 ± 0.00	80.78	0.05 ± 0.00	-0.10 ± 0.00

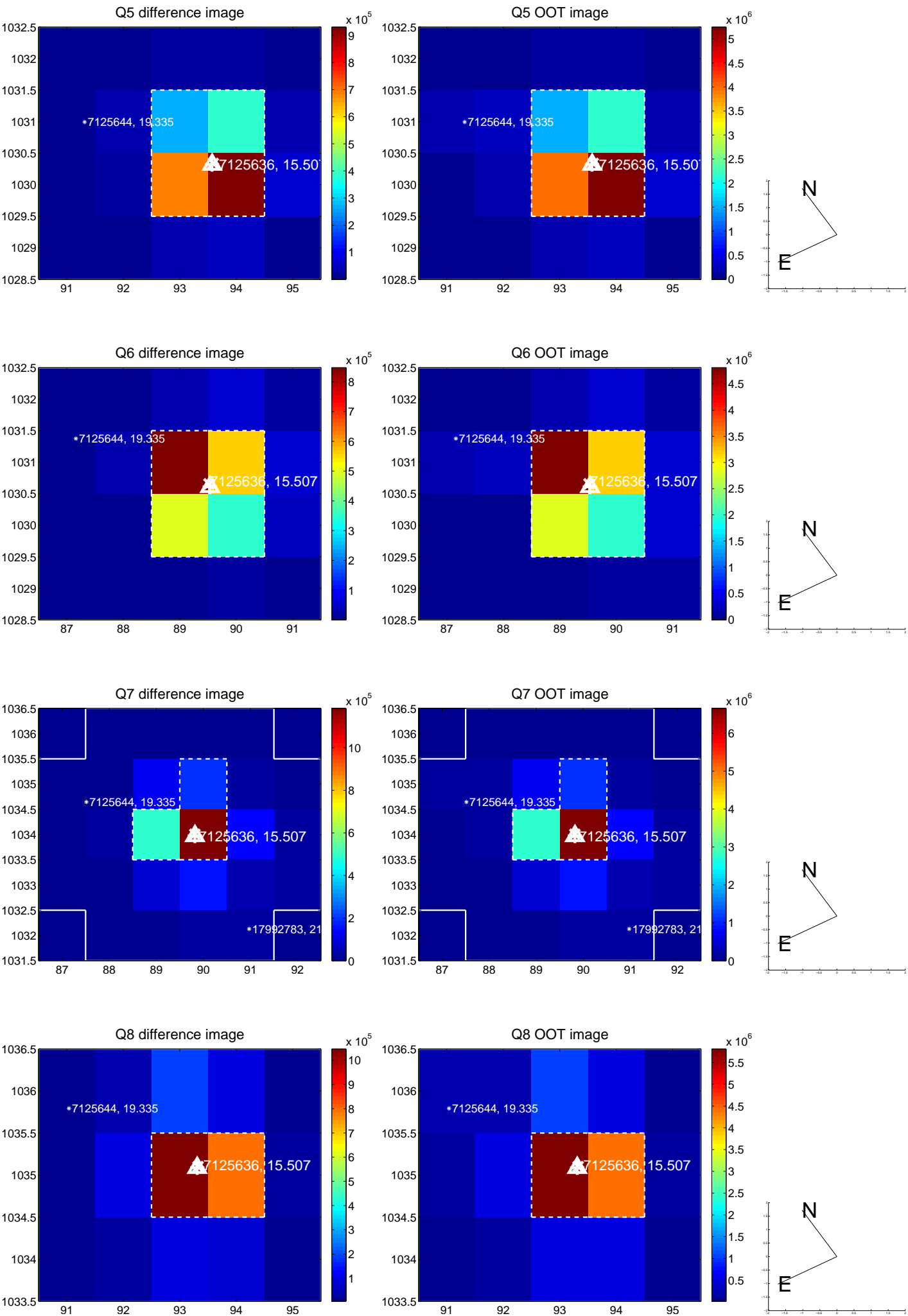


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

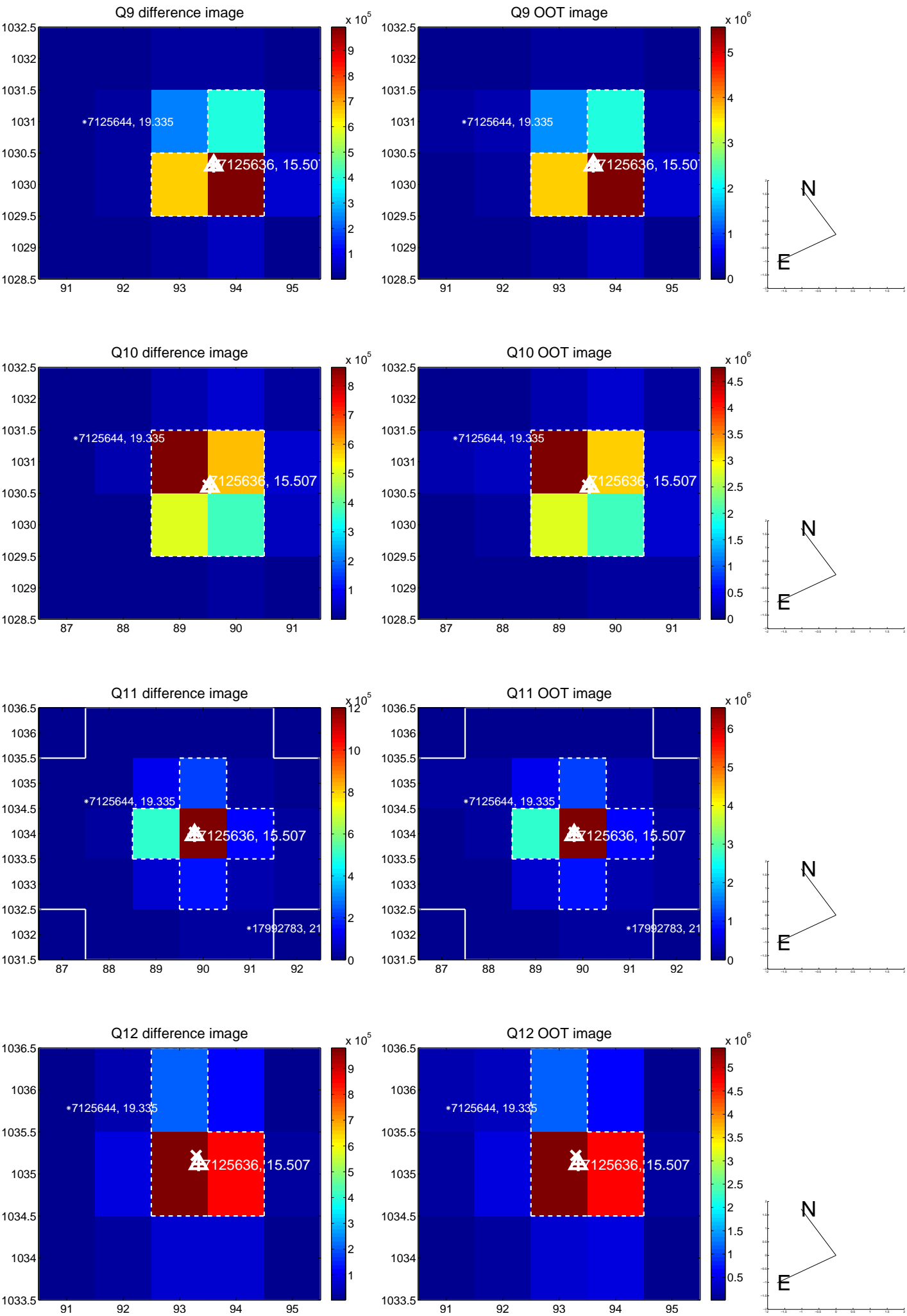
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



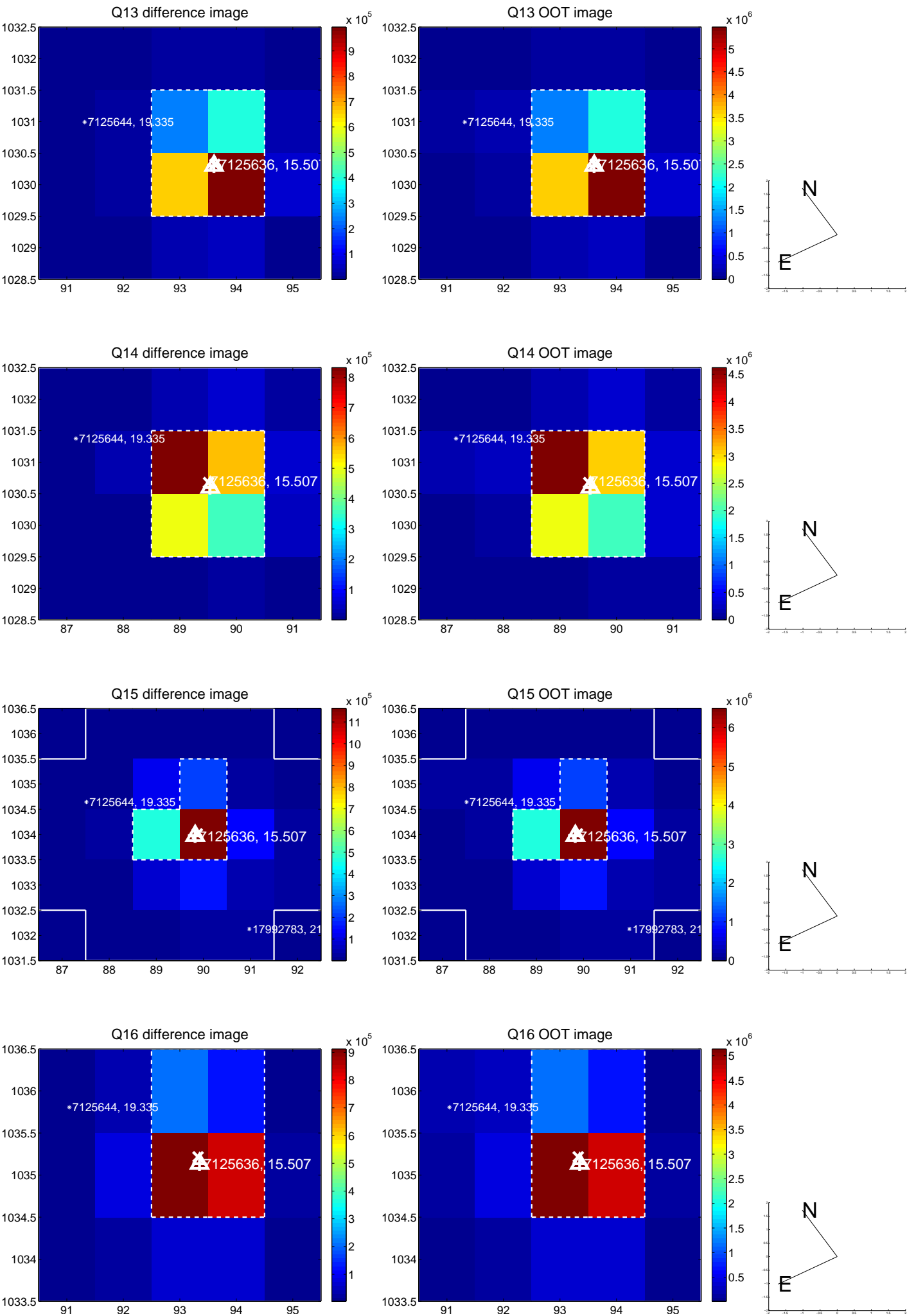
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



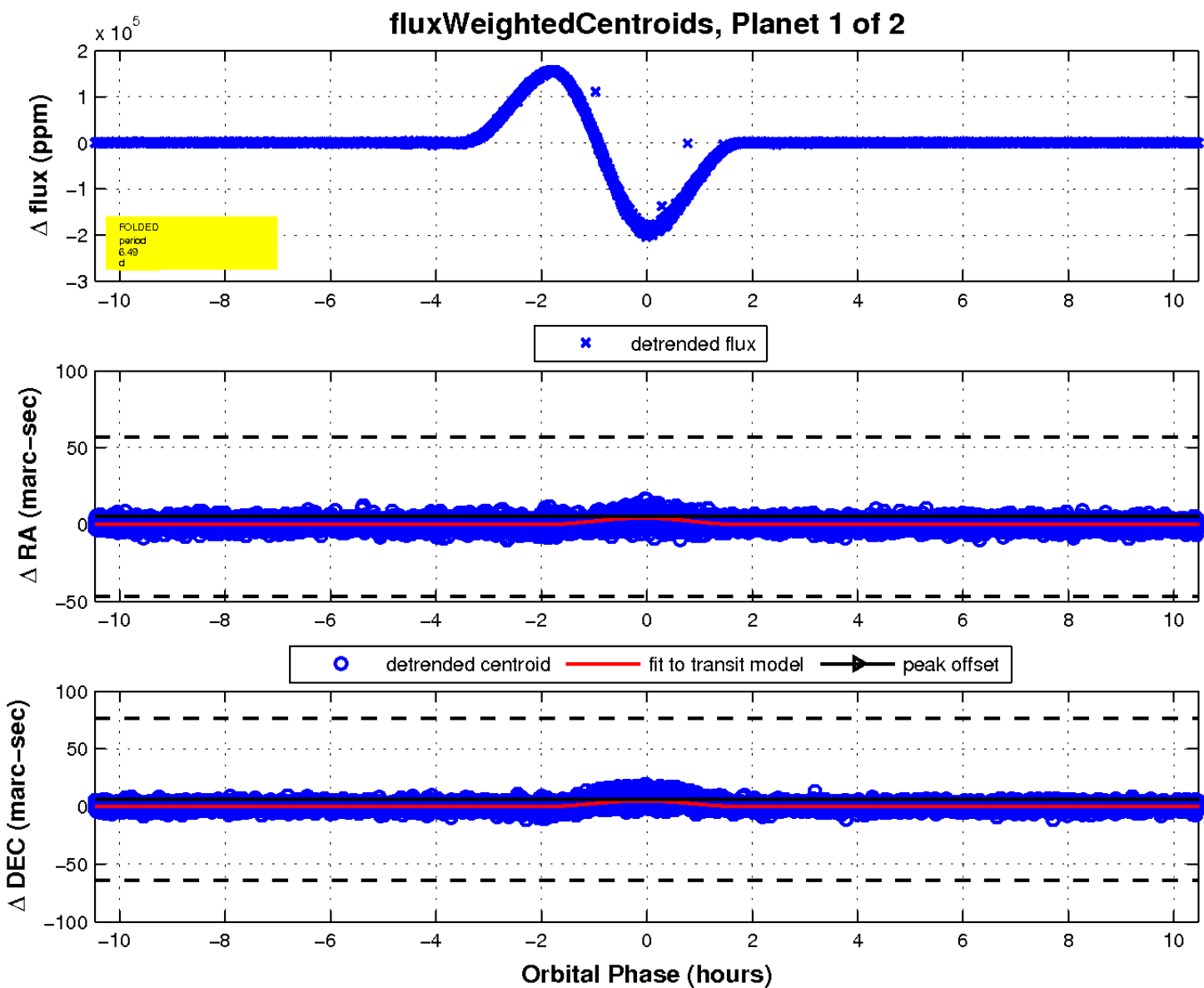
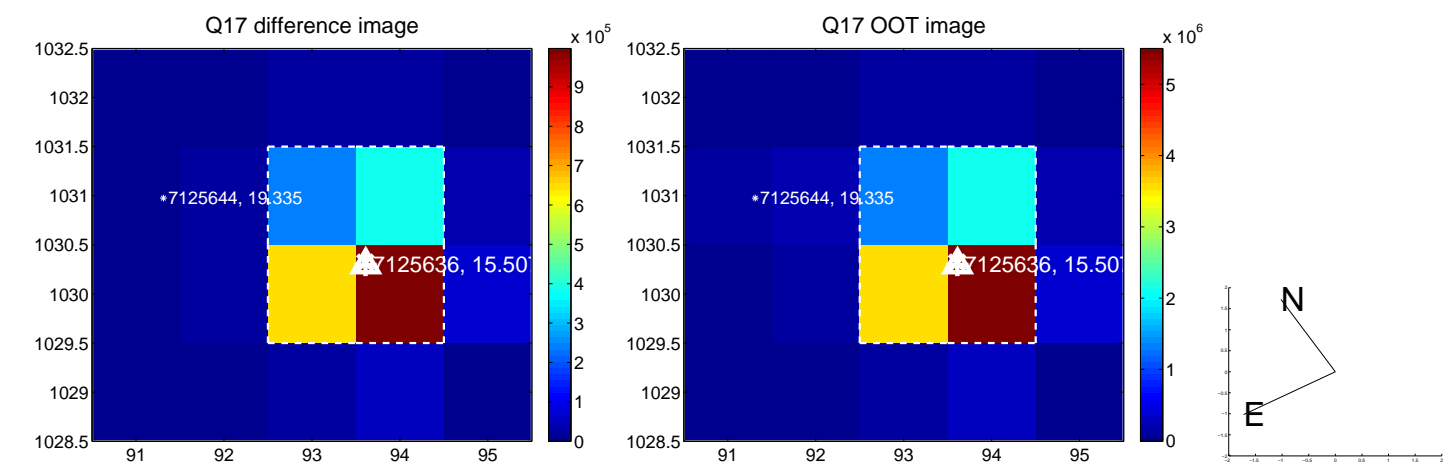
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

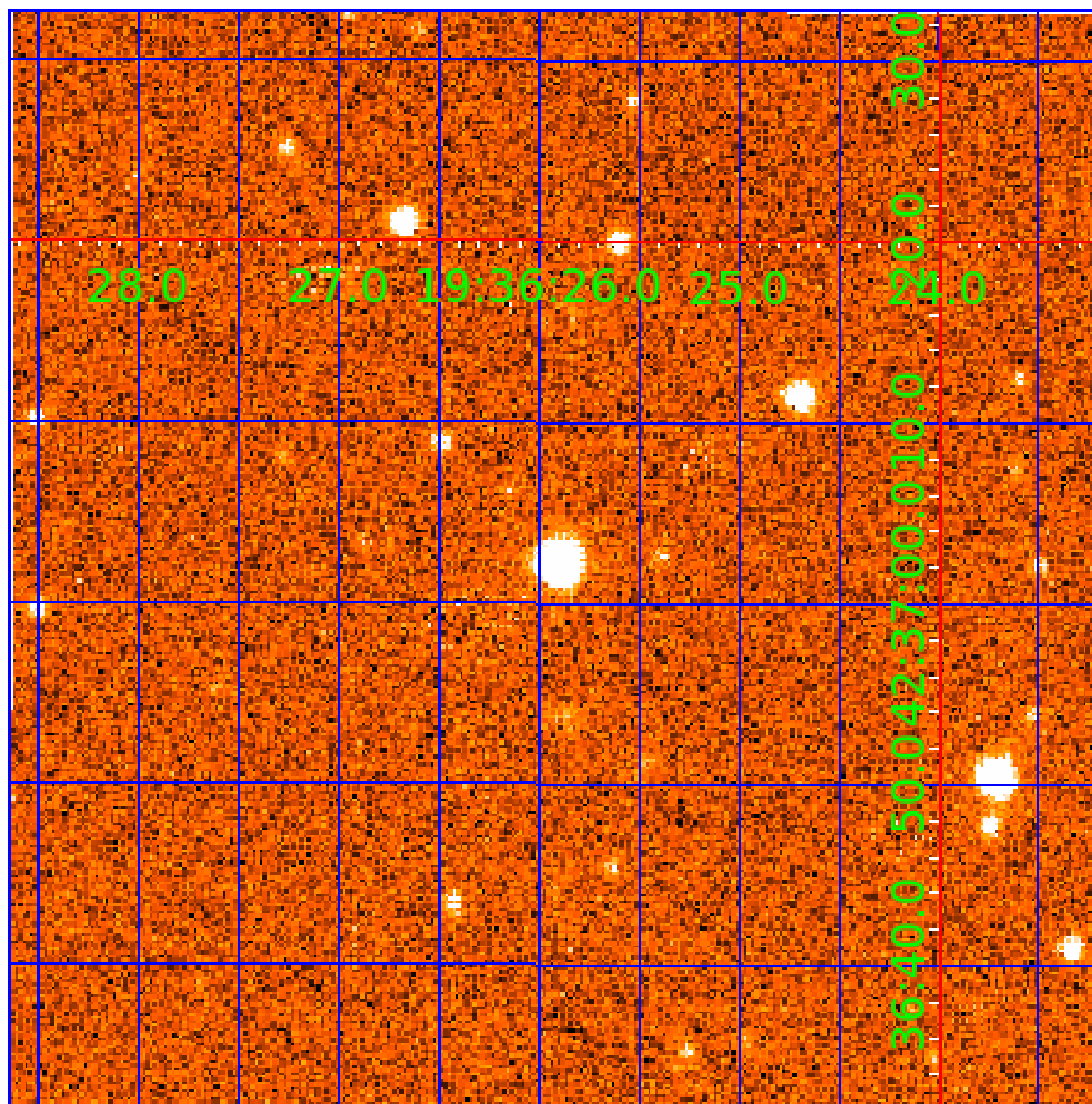


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007125636

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})
007125636-01	OBS	6832.01	6.490662	132.067617	194135.7	3.490	6639.1	4077.8	0.56	4448	30.25	35.33
007125636-02	OBS	No	3.245336	132.001165	161468.1	3.447	5777.4	4000.3	0.56	4448	33.66	89.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007125636-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
007125636-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—HALO_GHOST

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.

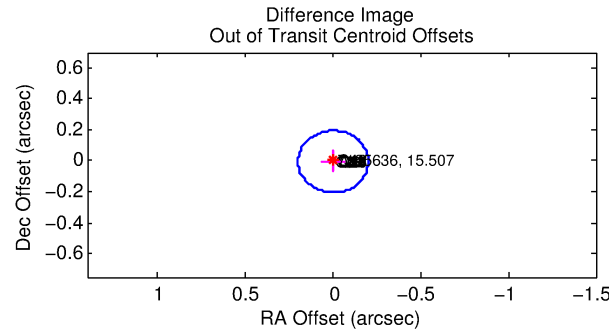
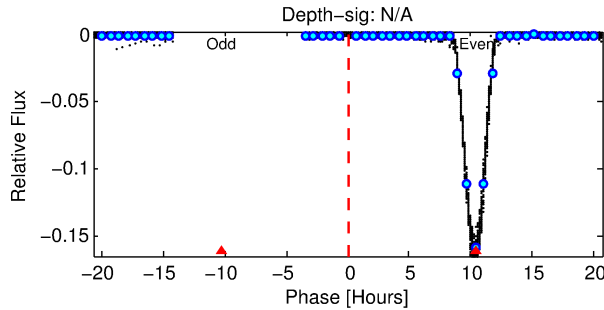
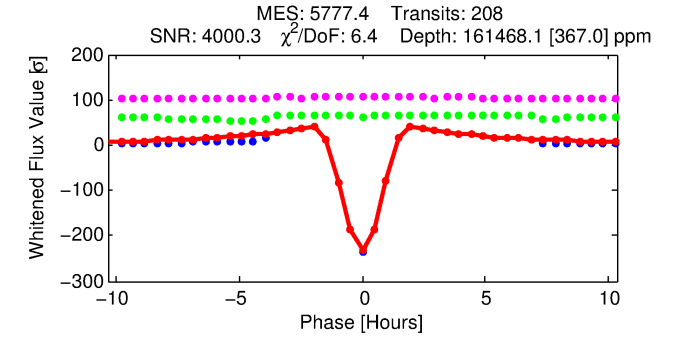
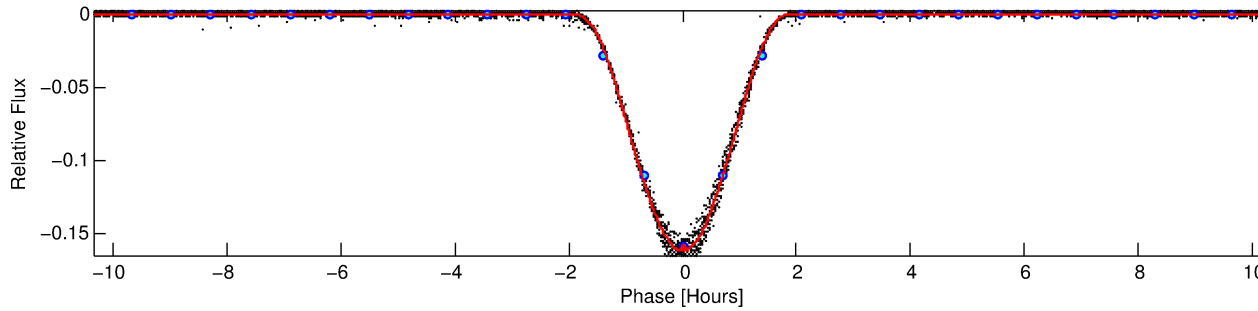
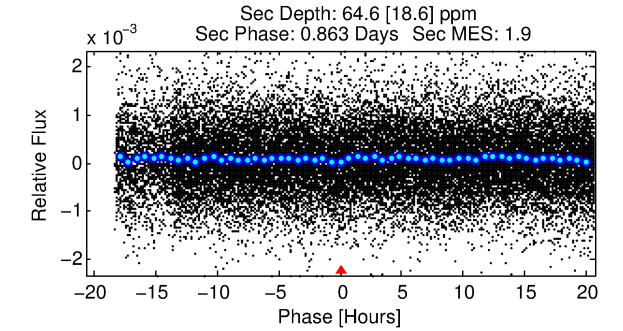
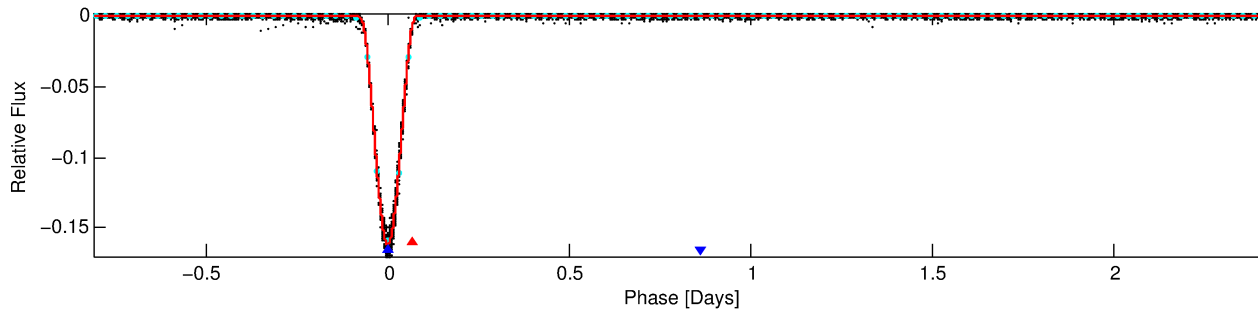
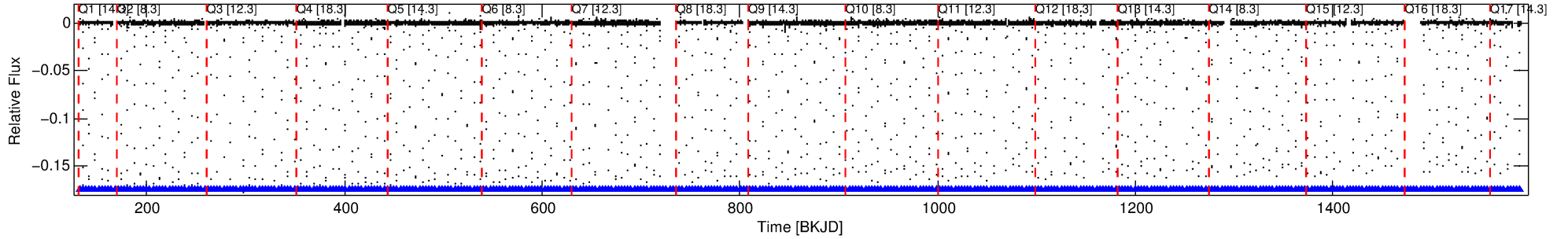
Ephemeris Match Information For 007125636-02

No Significant Match Found

DV One-Page Summary

KIC: 7125636 Candidate: 2 of 2 Period: 3.245 d
KOI: K06832 Corr: No Ephemeris Match

Kp: 15.51 R*: 0.56 Rs Teff: 4448.0 K Logg: 4.68 Fe/H: -0.720



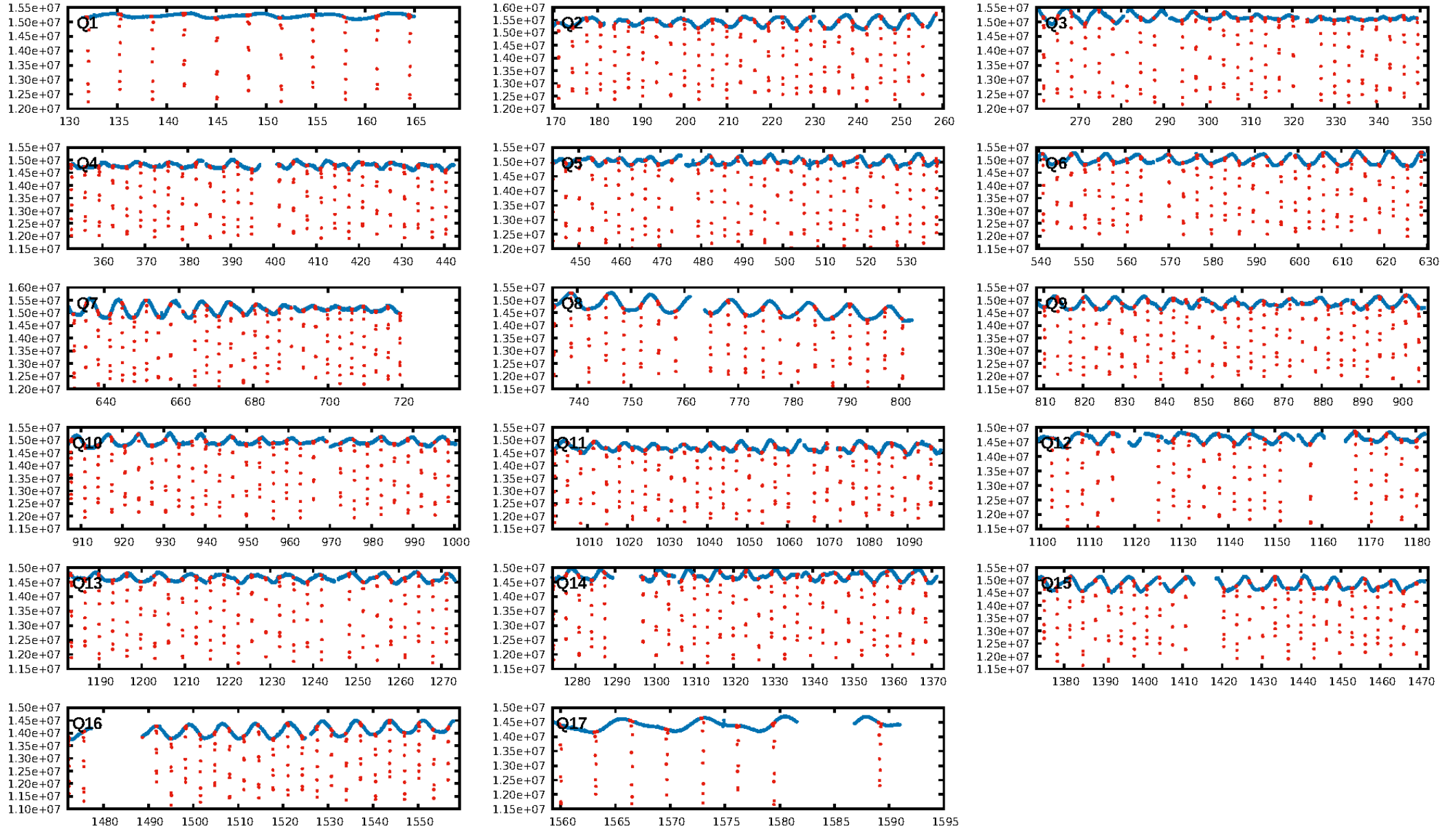
DV Fit Results:

Period = 3.24534 [0.00000] d
Epoch = 132.0012 [0.0000] BKJD
Rp/R* = 0.5479 [0.0753]
a/R* = 9.19 [0.16]
b = 0.89 [0.10]
Seff = 89.03 [13.59]
Teq = 783 [30] K
Rp = 33.66 [5.35] Re
a = 0.0353 [0.0024] AU
Ag = 0.04 [0.02] [-59.99σ]
Teffp = 539 [56] K [-3.86σ]

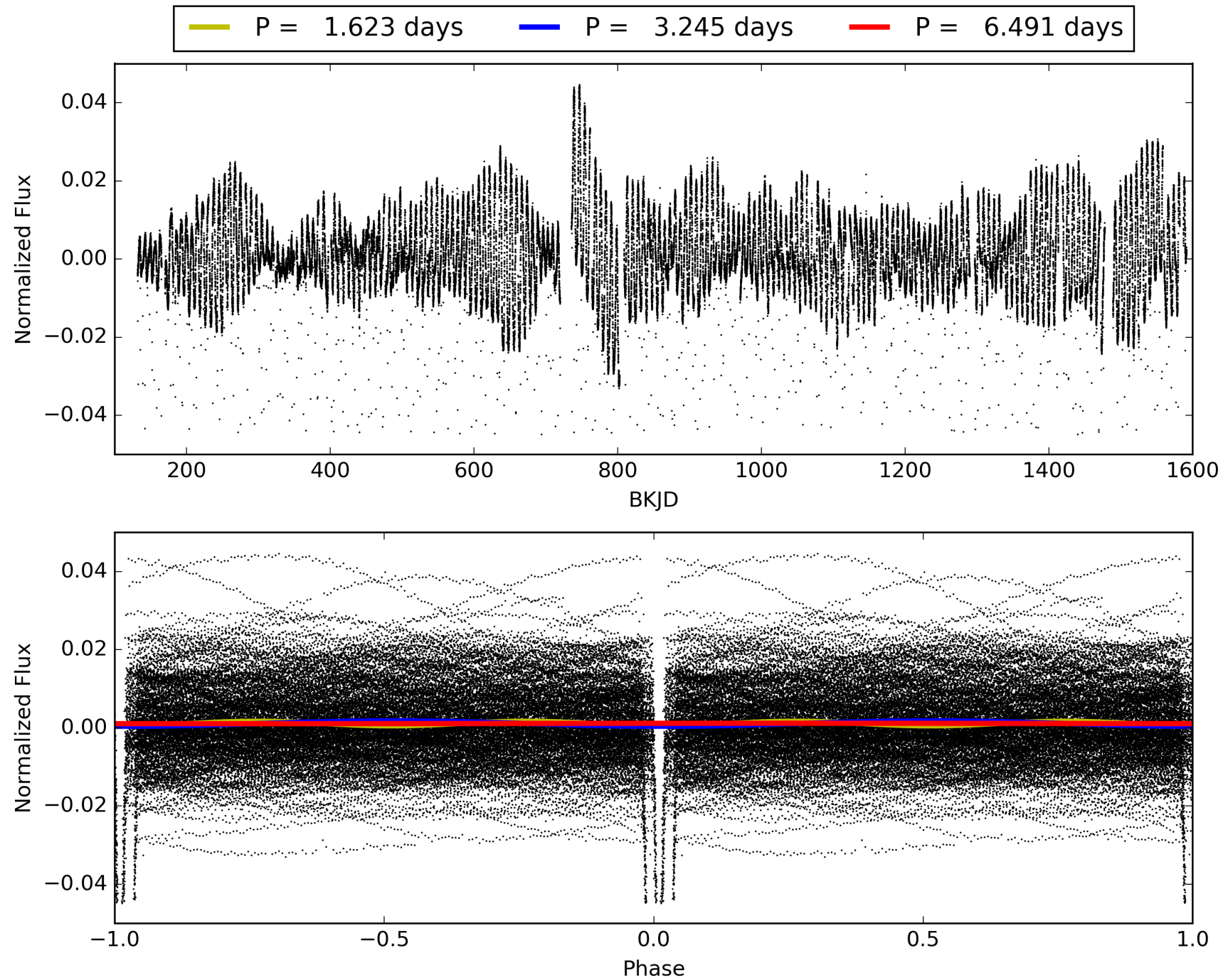
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [15.88σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [199/199]
GhostDiagnostic-chr: 0.1188
Centroid-sig: 0.0%
Centroid-so: 0.111 arcsec [88.08σ]
OotOffset-rm: 0.006 arcsec [0.09σ]
KicOffset-rm: 0.136 arcsec [1.88σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
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TCE 007125636-02, PDC Light Curves

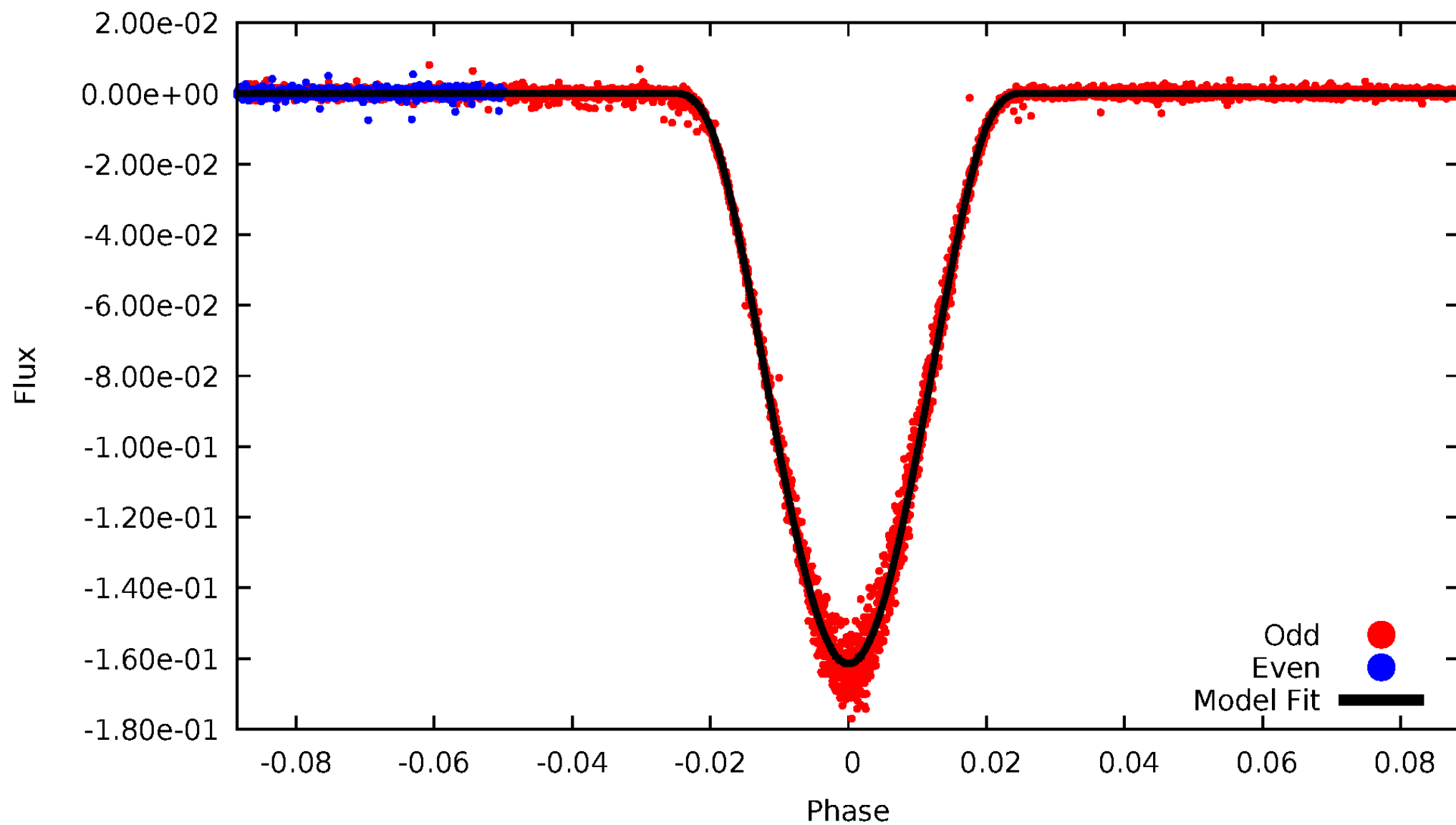


TCE 007125636-02



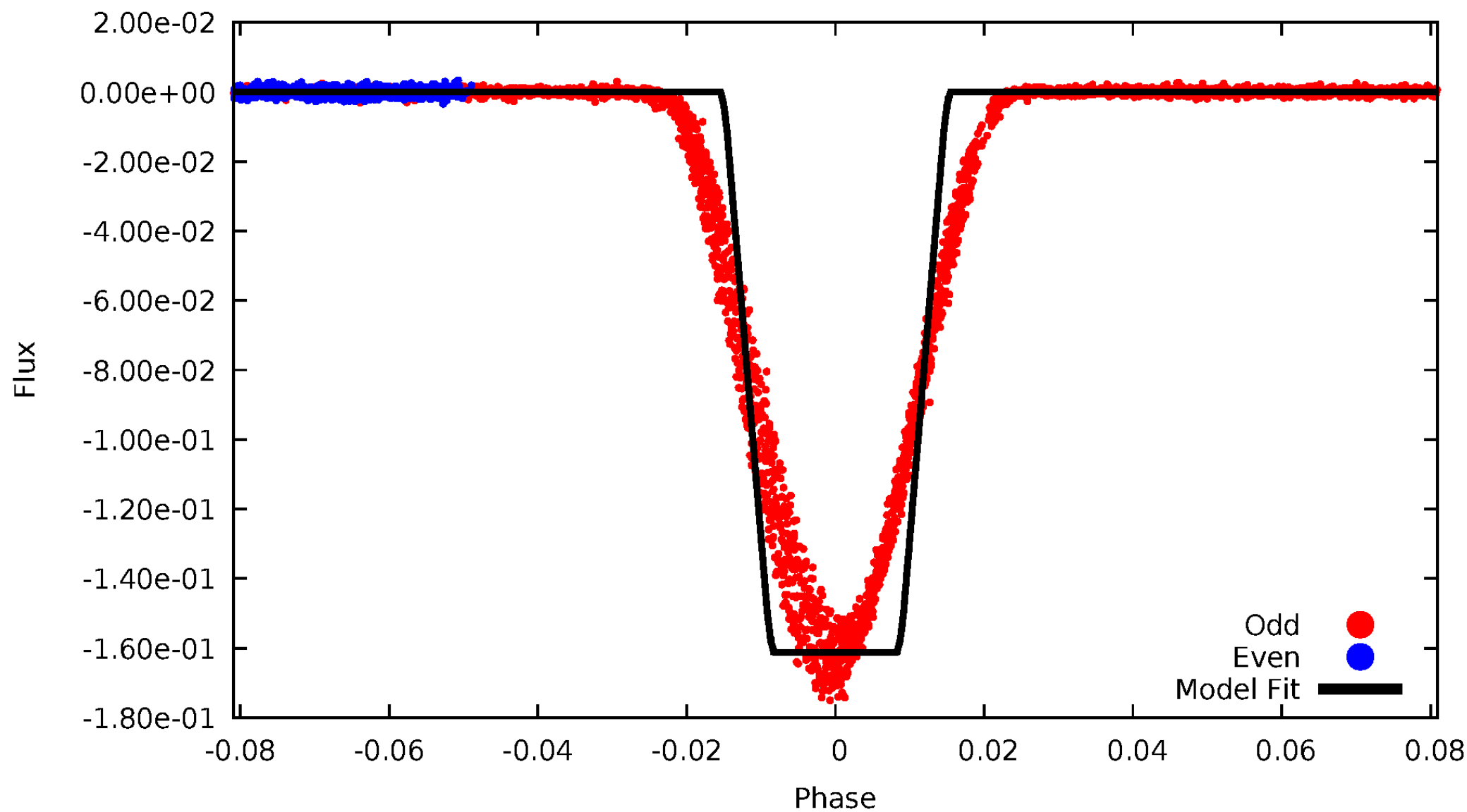
DV Odd/Even

TCE 007125636-02



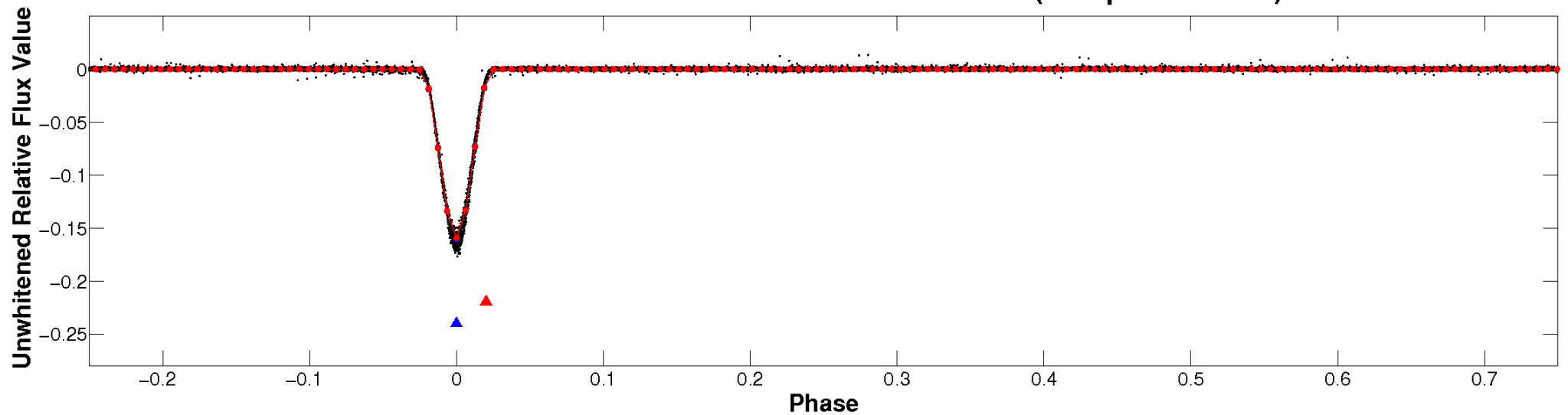
ALT Odd/Even

TCE 007125636-02

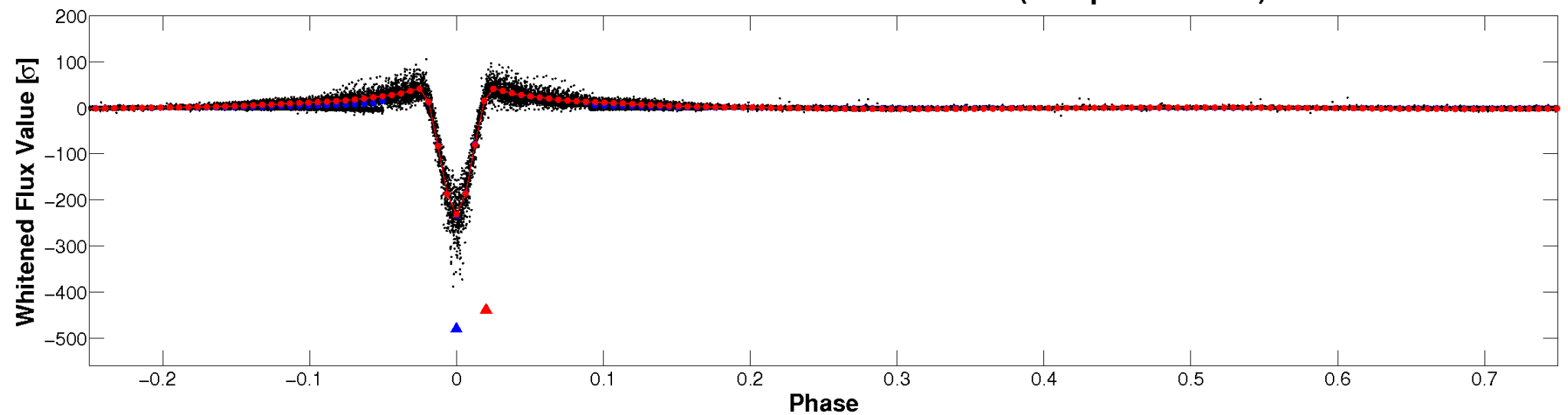


Non-Whitened Vs. Whitened Light Curve

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

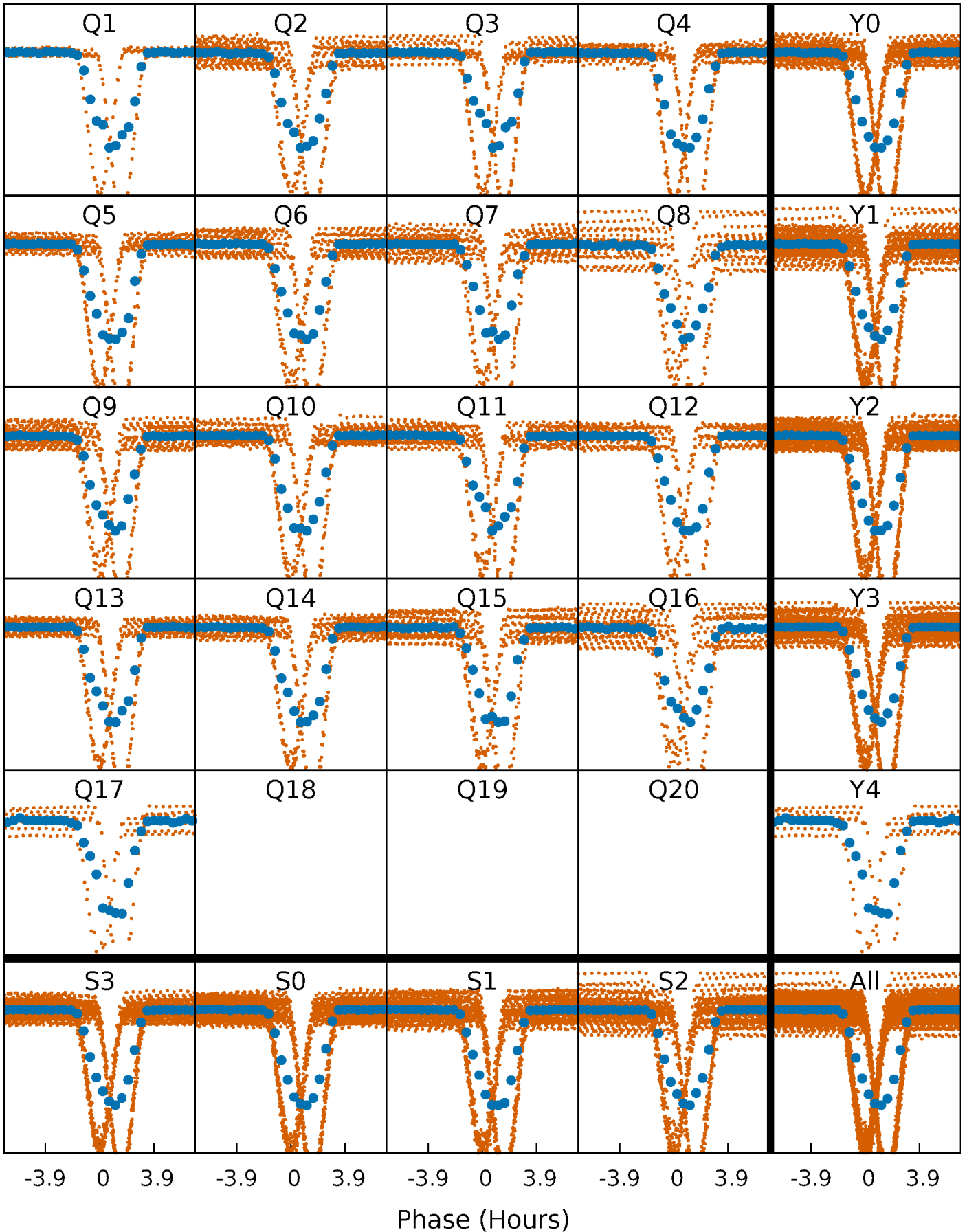


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



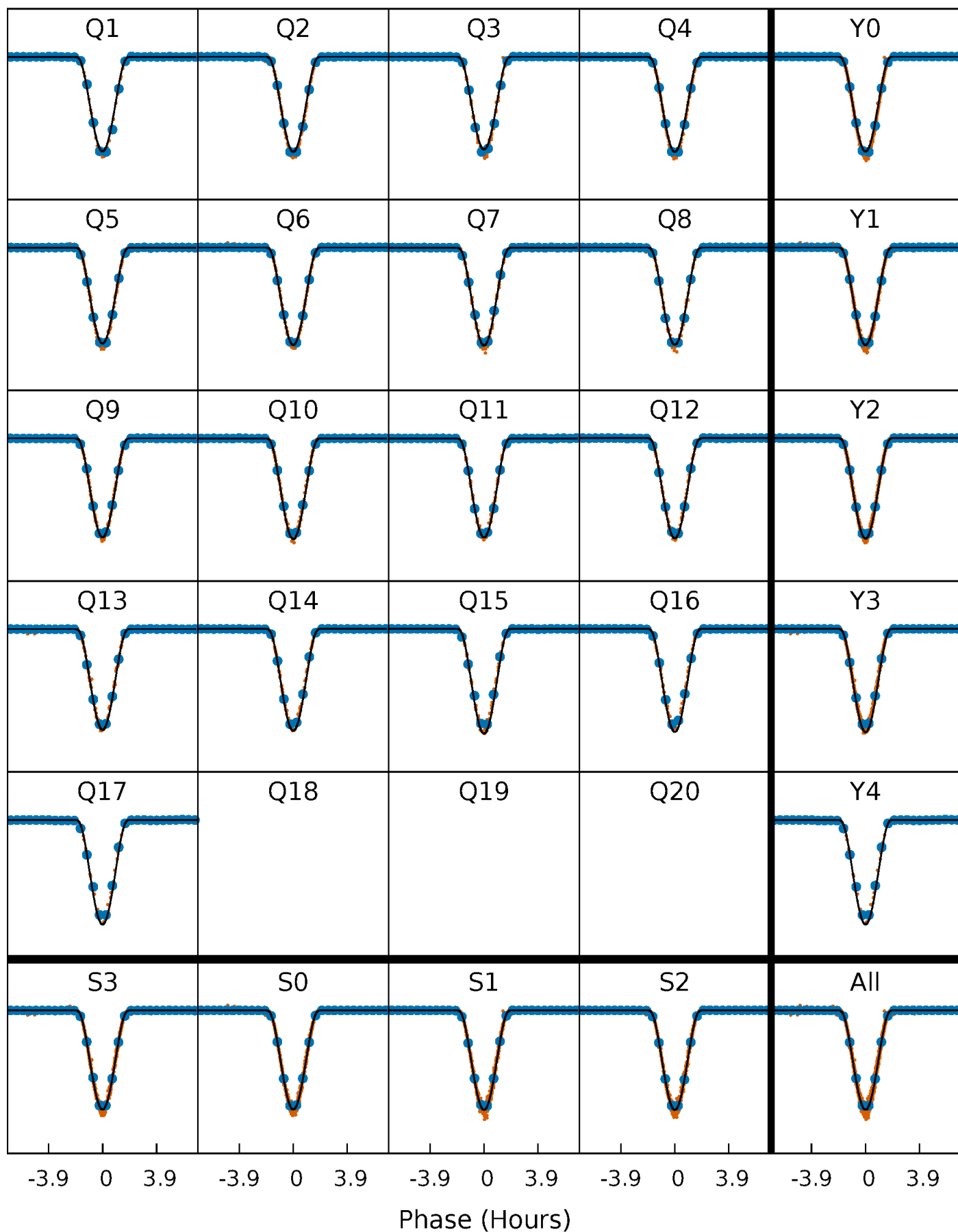
PDC Quarter-Phased Transit Curves

TCE 007125636-02 P= 3.245336 Days $T_0=132.001165$ (BKJD)



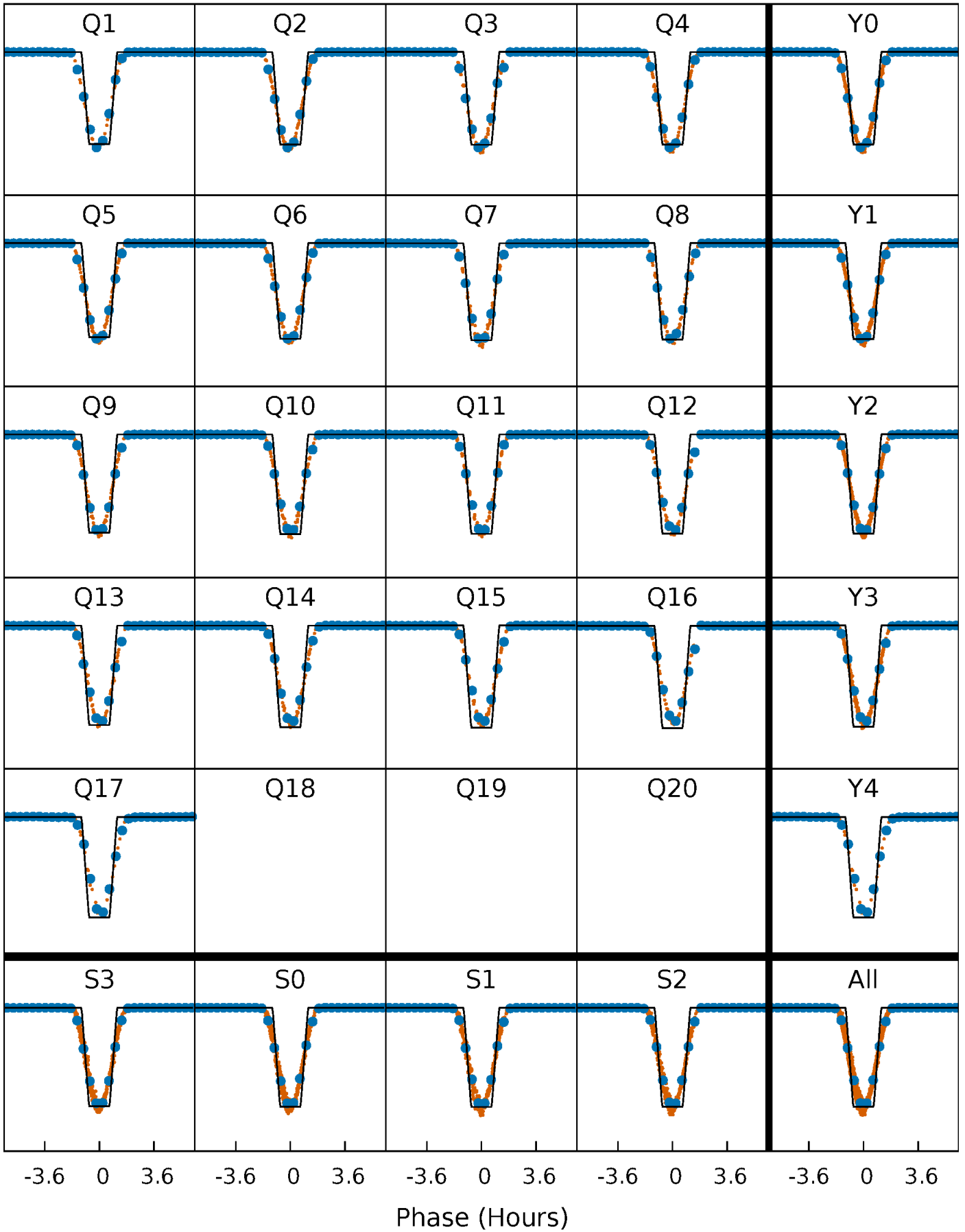
DV Quarter-Phased Transit Curves

TCE 007125636-02 P= 3.245336 Days $T_0=132.001165$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

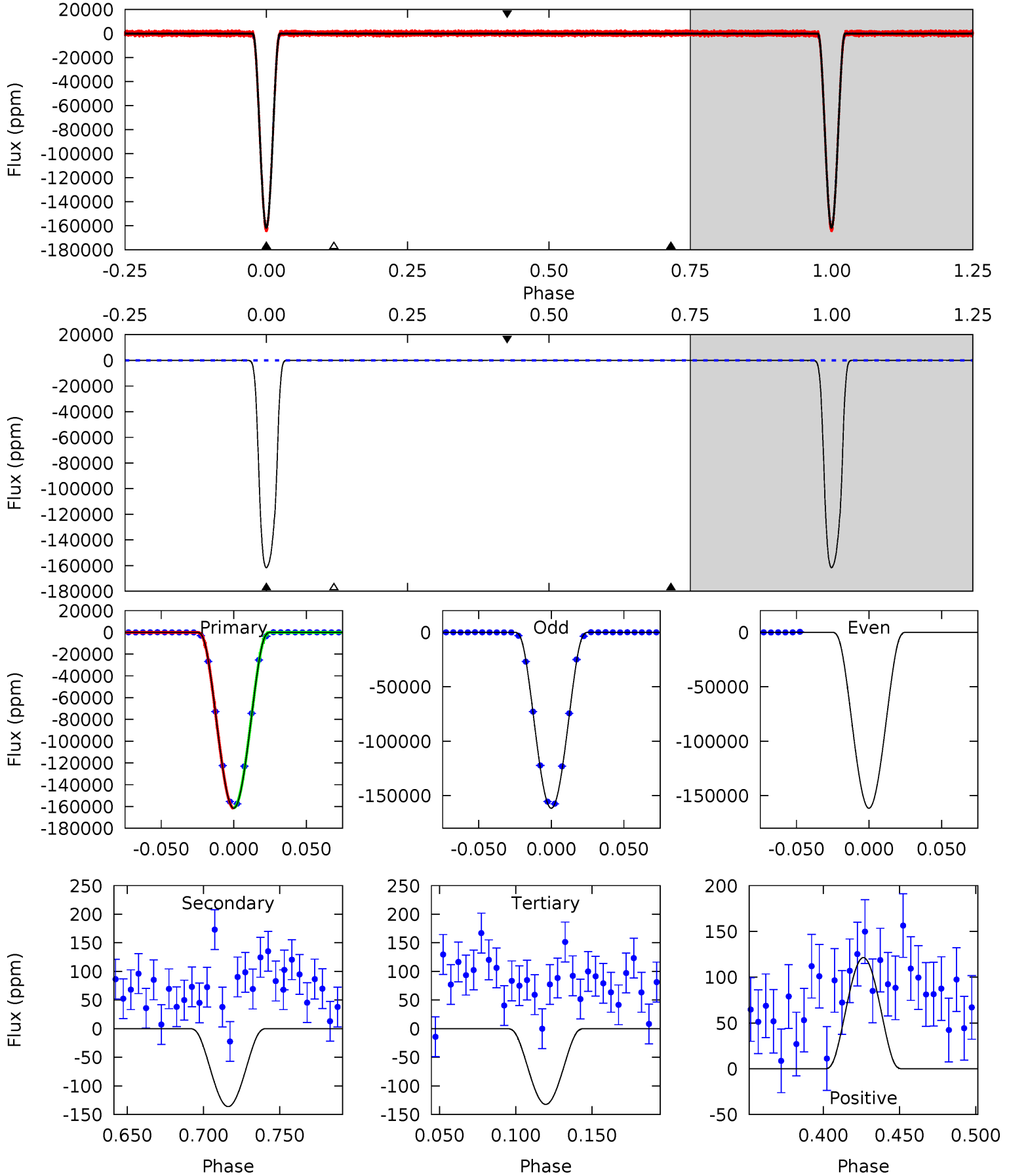
TCE 007125636-02 P= 3.245312 Days $T_0=132.006276$ (BKJD)



DV Model-Shift Uniqueness Test

007125636-02, P = 3.245336 Days, E = 128.755829 Days

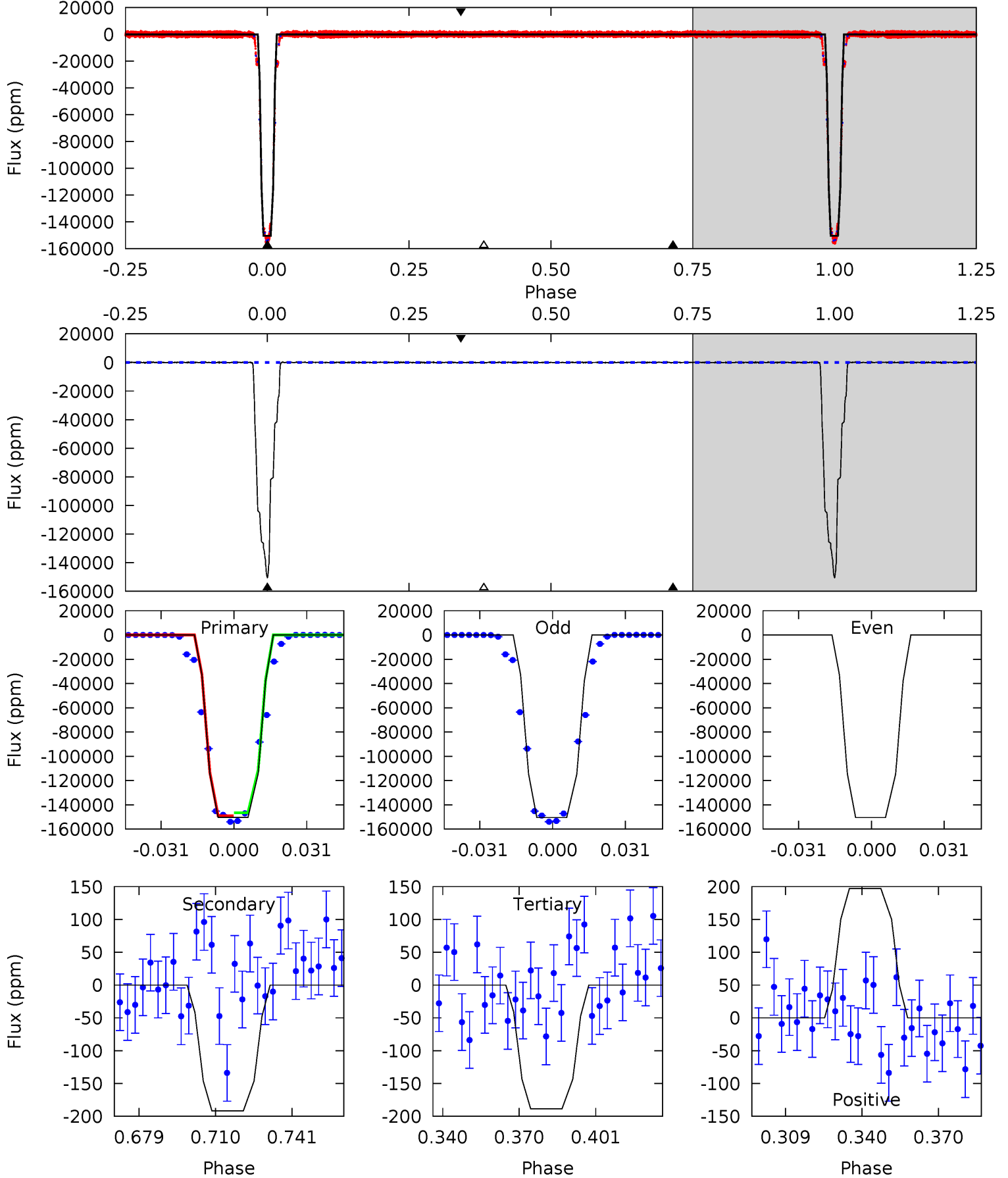
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7676	6.47	6.28	5.77	4.71	1.96	2.19	7670	7670	0.18	0.70	0	1.00	0.00	0



Alt Model-Shift Uniqueness Test

007125636-02, P = 3.245312 Days, E = 128.760964 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2769	3.53	3.47	3.63	4.81	2.16	1.10	2766	2766	0.06	-0.10	0	1.00	0.00	0



Stellar Parameters For KIC 007125636

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4448^{+132}_{-132}	$4.684^{+0.052}_{-0.032}$	$-0.720^{+0.300}_{-0.300}$	$0.563^{+0.045}_{-0.045}$	$0.558^{+0.052}_{-0.033}$	$4.397^{+1.005}_{-0.563}$
	+3%/-3%	+1%/-1%	+42%/-42%	+8%/-8%	+9%/-6%	+23%/-13%
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 007125636-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-136 ± 21	$33.09^{+5.01}_{-4.85}$	1089^{+39}_{-33}	-1819^{+43}_{-36}	$0.084^{+0.036}_{-0.022}$
Alt.	-192 ± 54	$24.57^{+4.49}_{-4.94}$	1090^{+38}_{-40}	-1658^{+3303}_{-115}	$0.218^{+0.153}_{-0.078}$

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

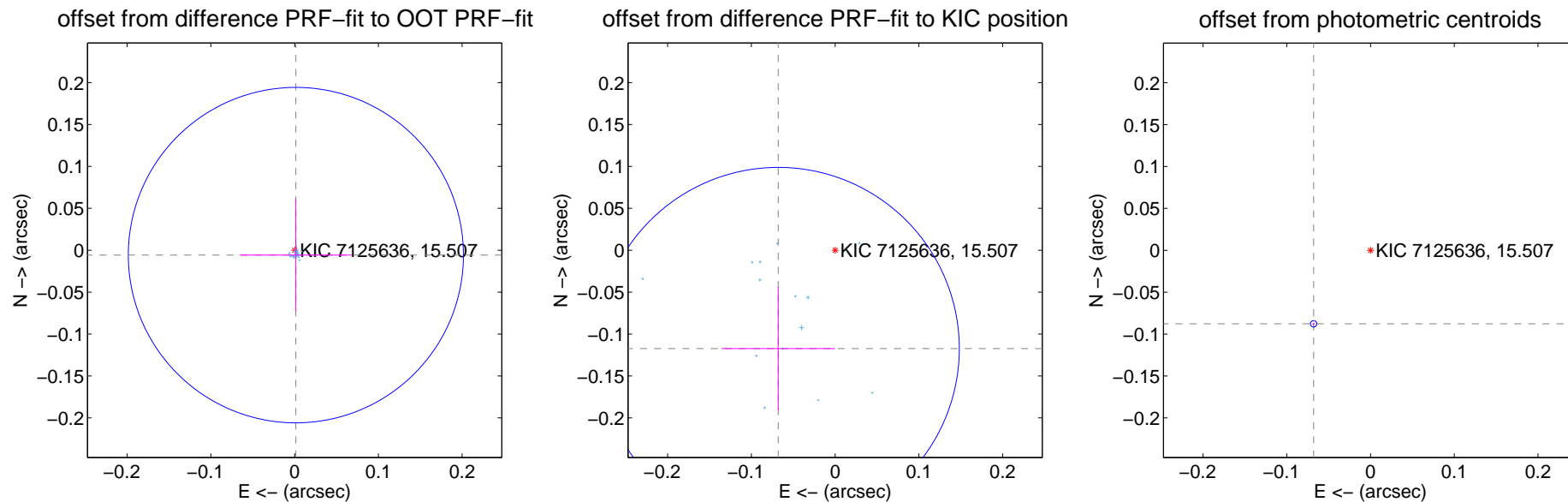
DV Centroid Data

Supplemental centroid analysis for 007125636-02. Kepler magnitude: 15.51. Transit SNR 4000.31

There are 17 quarters with good PRF difference image offsets

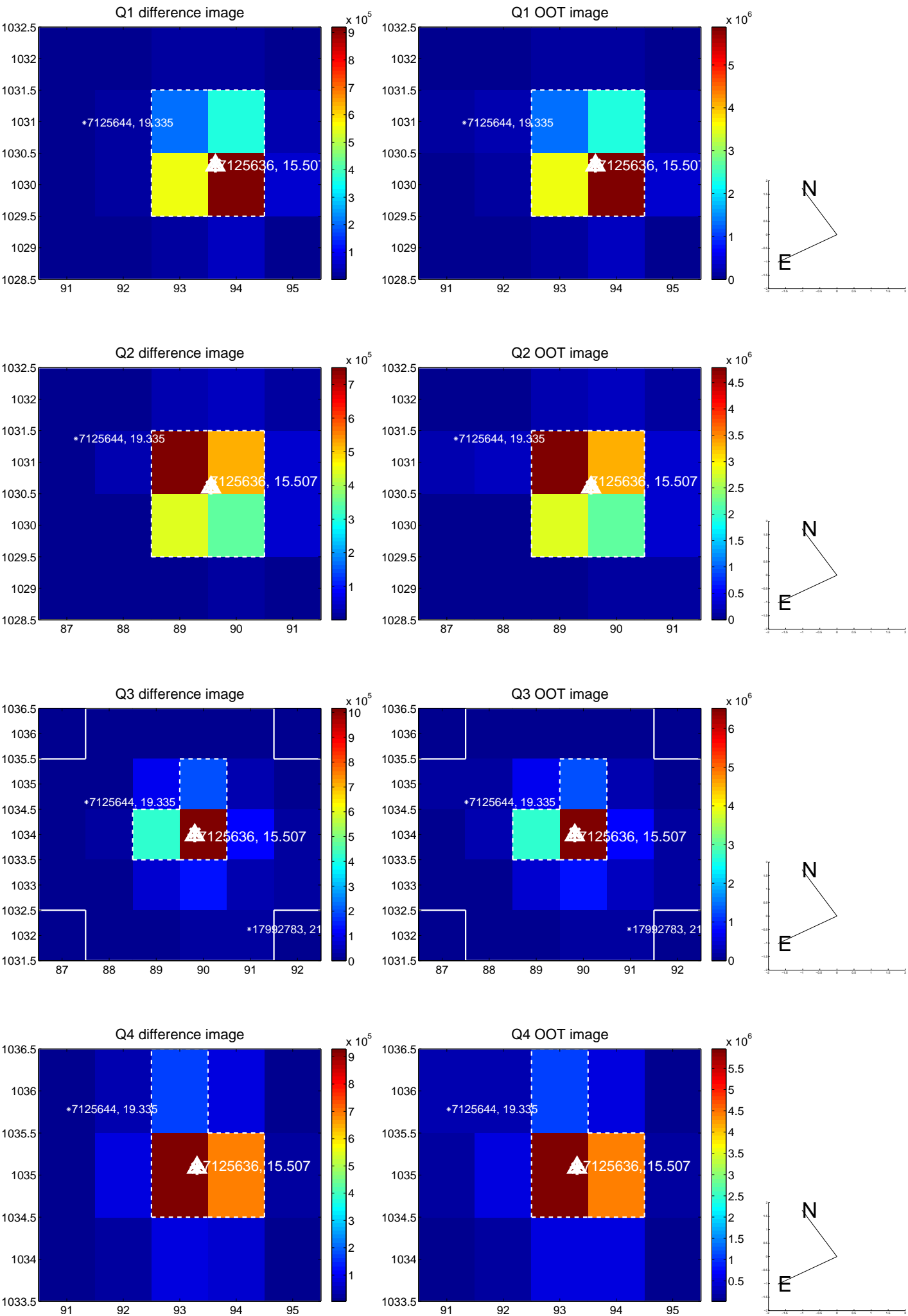
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.006 ± 0.067	0.09	-0.001 ± 0.067	-0.006 ± 0.067
PRF-fit source offset from KIC position	0.136 ± 0.072	1.88	0.068 ± 0.068	-0.117 ± 0.074
photometric centroid source offset	0.11 ± 0.00	88.08	0.07 ± 0.00	-0.09 ± 0.00

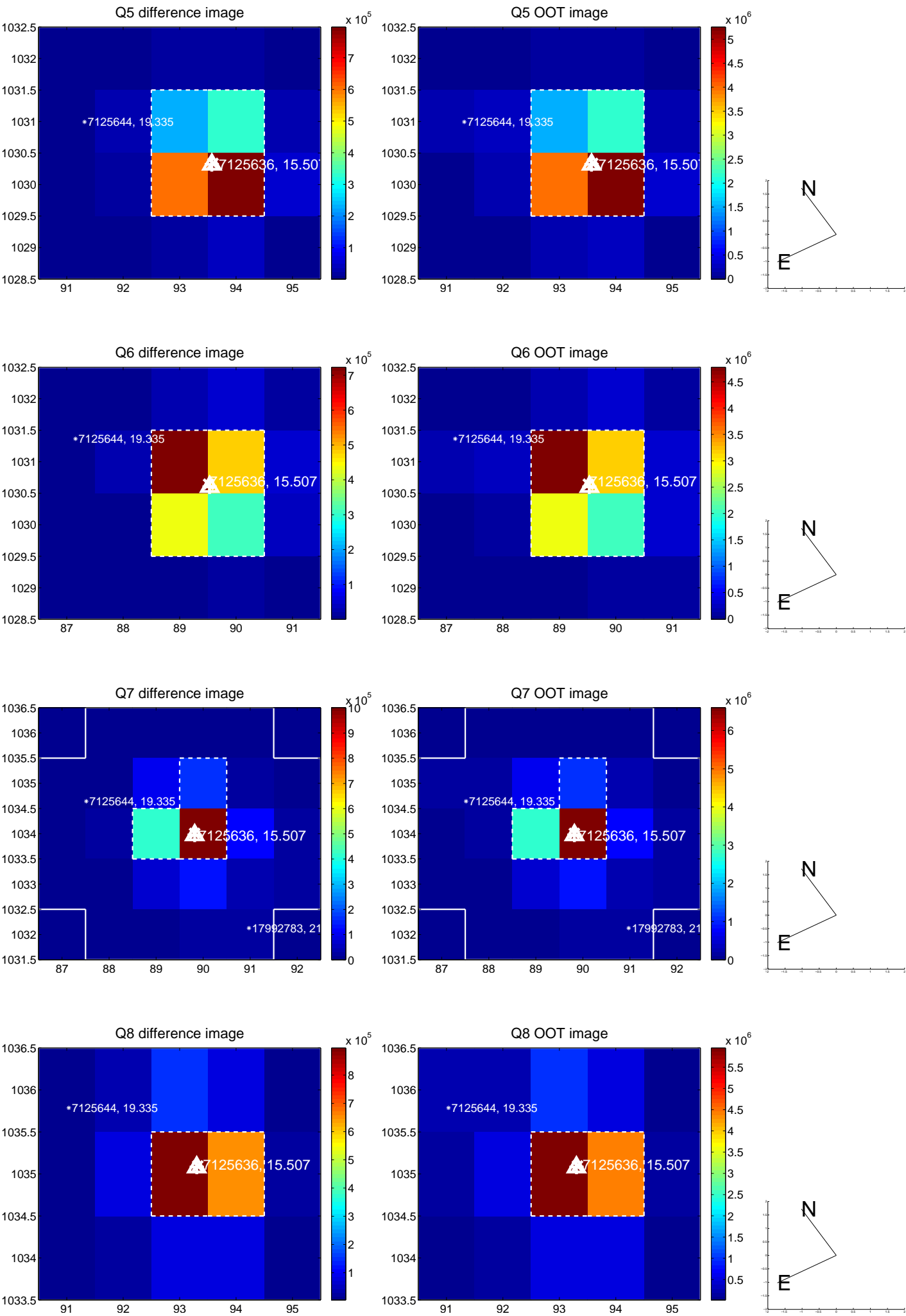


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

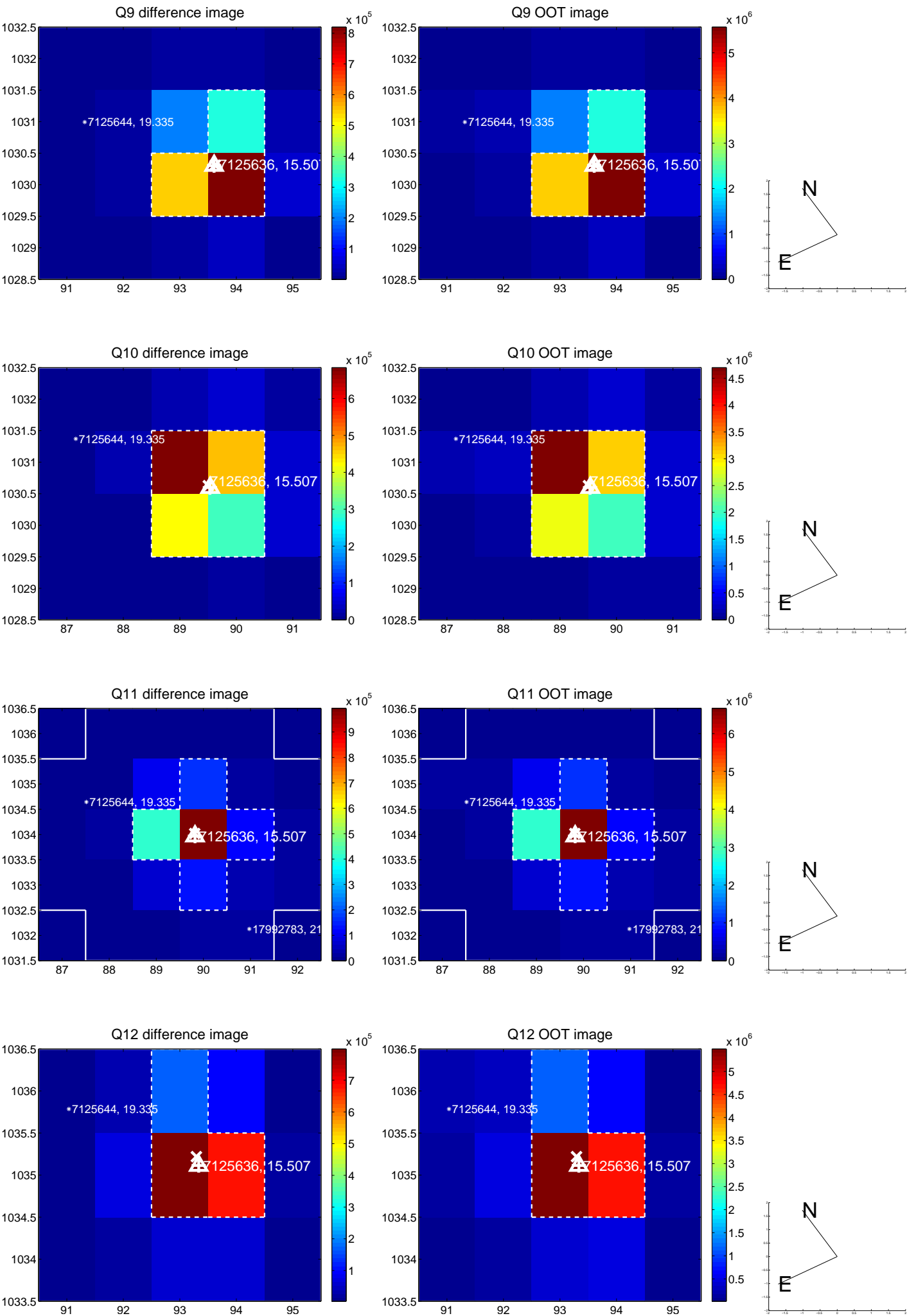
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



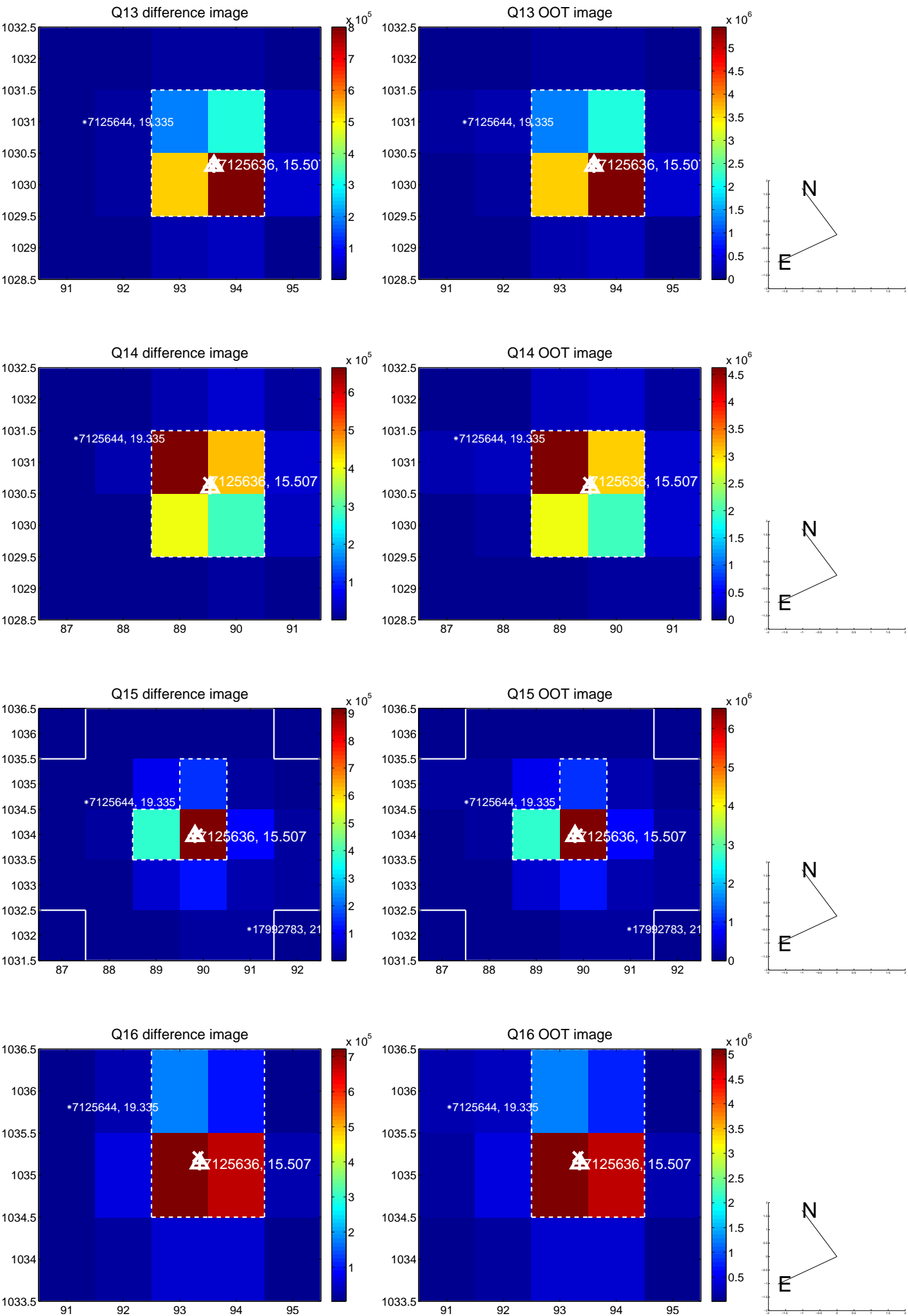
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



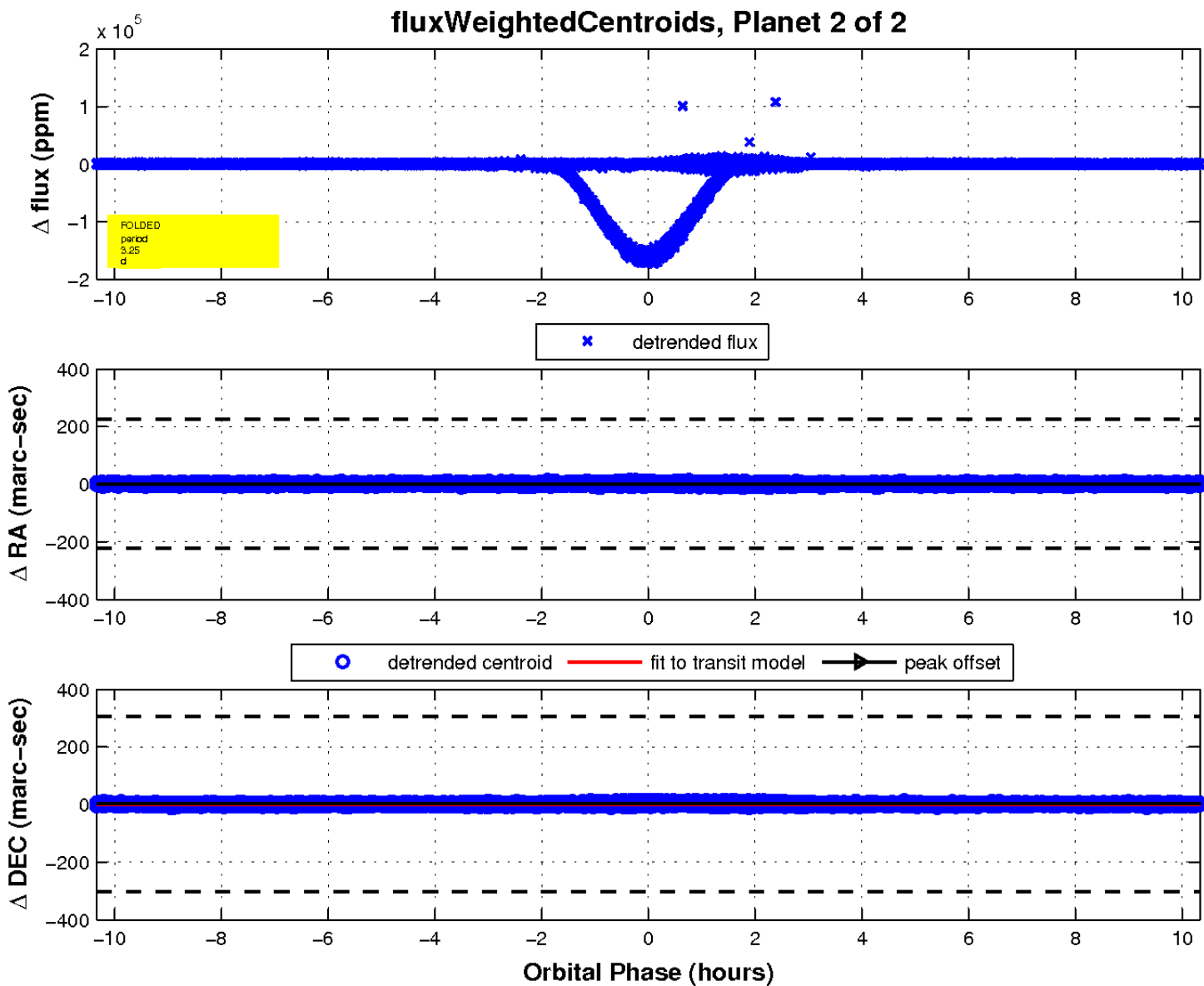
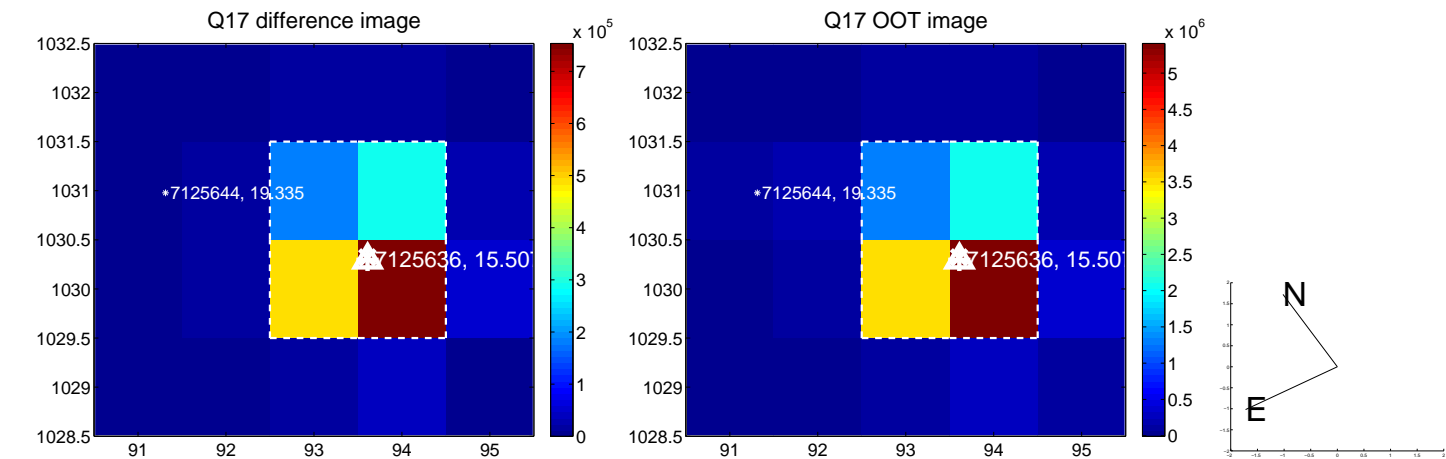
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UKIRT Image

Declination

