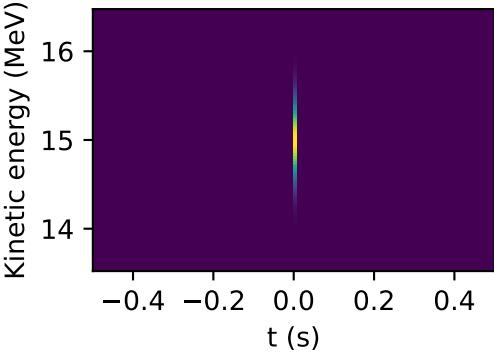
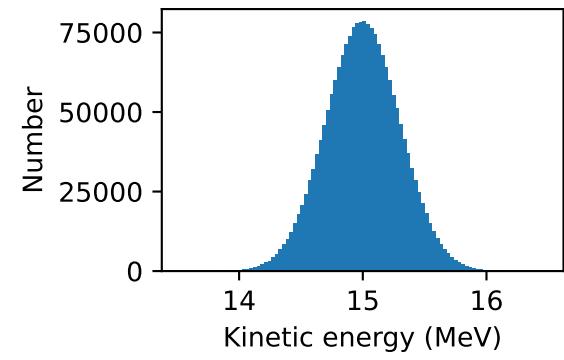
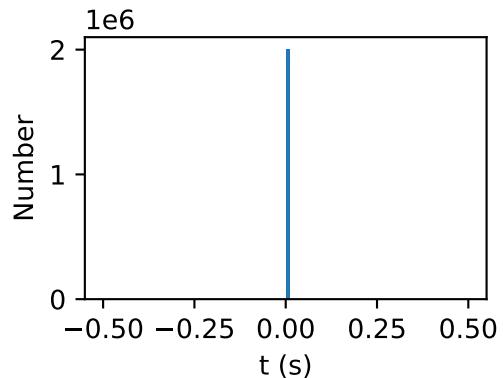
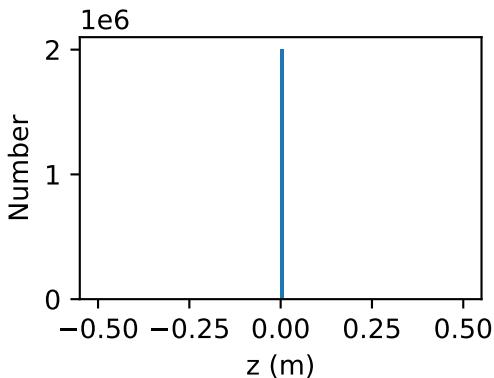
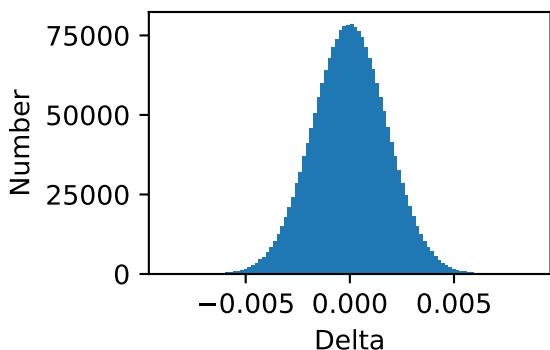
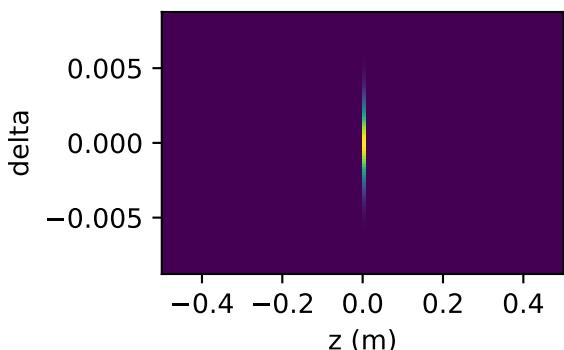
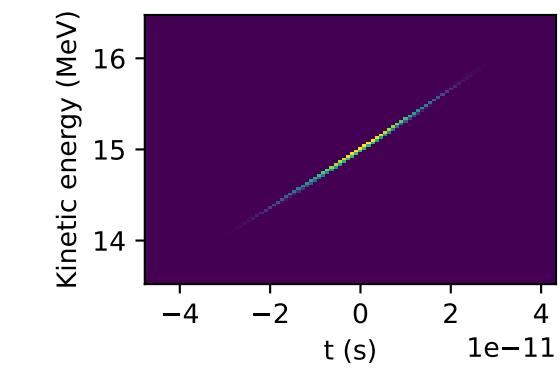
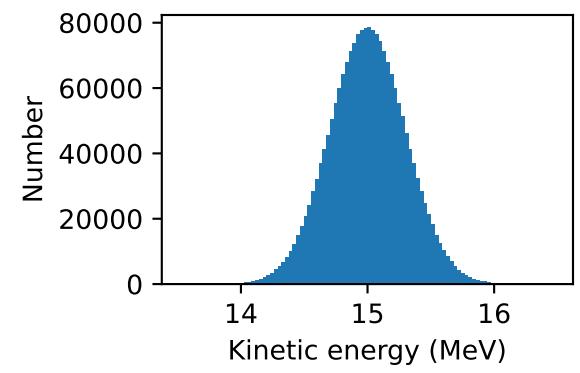
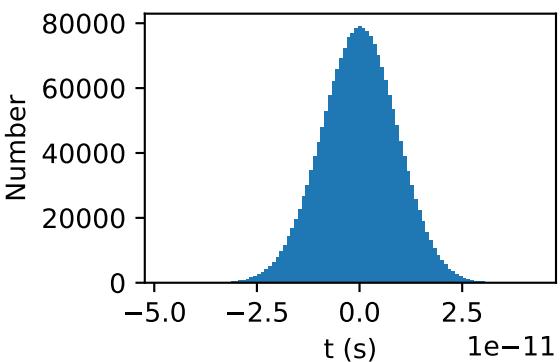
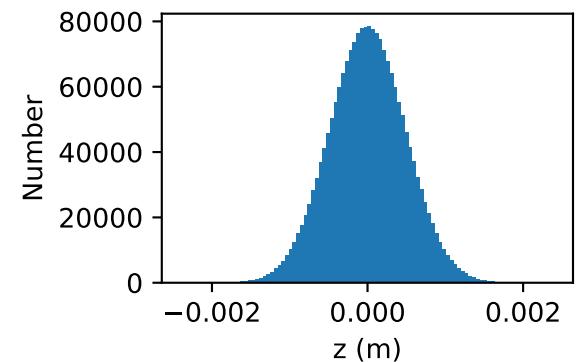
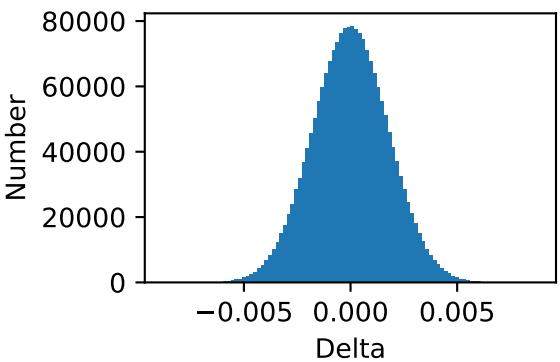
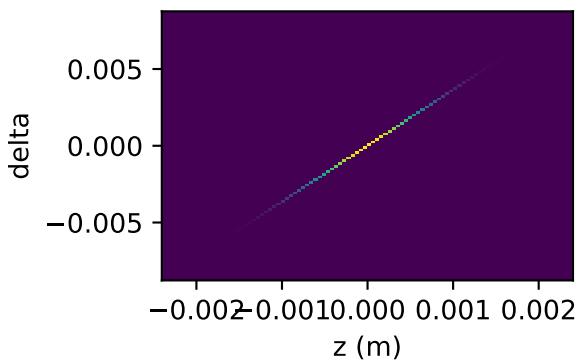


Stage	Section	Element	Type	Parameter	Value	Unit	Comment
0	Facility	Global	Name	Name	LhARA		
0	Facility	Global	Reference particle	Kinetic energy	15	MeV	
0	Facility	Global	Vacuum chamber	Mother volume radius	0.5	m	
1	Source	Source	Parameterised TNSA	SourceMode	1		Gaussian kinetic energy
1	Source	Source	Parameterised TNSA	SigmaX	0.000004	m	Gaussian width, x
1	Source	Source	Parameterised TNSA	SigmaY	0.000004	m	Gaussian width, y
1	Source	Source	Parameterised TNSA	MeanEnergy	15	MeV	Mean of guassian kinetic energy
1	Source	Source	Parameterised TNSA	SigmaEnergy	0.3	MeV	Sigma of guassian kinetic energy
1	Source	Source	Parameterised TNSA	MinCTheta	0.998		Minimum theta for flat cos theta
1	Interface	Drift		Length	0.05	m	Length of first, compensated, drift
1	Interface	Aperture	Circular	Radius	0.002	m	Inner bore of entry to nozzle
1	Interface	Drift		Length	0.05	m	Length of first, compensated, drift
1	Interface	Aperture	Circular	Radius	0.00287	m	Inner bore of exit from nozzle
1	Capture	Drift		Length	0.15	m	Drift to solenoid
1	Capture	Solenoid	Length, strength	Length	0.857	m	Length of solenoid
1	Capture	Solenoid	Length, strength	Strength	2.491695	rad/m	ks
1	Capture	Drift		Length	0.15	m	Drift out of solenoid
1	Capture	Drift		Length	0.15	m	Drift to next solenoid
1	Capture	Solenoid	Length, strength	Length	0.857	m	Length of solenoid
1	Capture	Solenoid	Length, strength	Strength	1.018747	rad/m	ks
1	Capture	Drift		Length	0.15	m	Drift out of solenoid
1	Energy selection	Drift		Length	0.183783	m	Drift before first cavity
1	Energy selection	Cavity	Cylindrical	Gradient	5	MV/m	Gradient
1	Energy selection	Cavity	Cylindrical	Frequency	200	MHz	Frequency
1	Energy selection	Cavity	Cylindrical	Phase	0	degrees	Phase of reference particle
1	Energy selection	Drift		Length	0.183783	m	Drift after first cavity
1	Energy selection	Drift		Length	0.15	m	Drift to next solenoid
1	Energy selection	Solenoid	Length, strength	Length	0.857	m	
1	Energy selection	Solenoid	Length, strength	Strength	1.448565	rad/m	
1	Energy selection	Drift		Length	0.15	m	Drift out of solenoid
1	Energy selection	Drift		Length	1.771	m	Drift to energy-selection collimator
1	Energy selection	Drift		Length	0.005	m	Space for energy-selection collimator
1	Energy selection	Aperture	Circular	Radius	0.0025	m	Collimator
1	Energy selection	Drift		Length	0.005	m	Space for energy-selection collimator
1	Energy selection	Drift		Length	0.06461	m	
1	Energy selection	Drift		Length	0.13539	m	
1	Energy selection	Drift		Length	0.01	m	Space for energy-selection collimator?
1	Energy selection	Drift		Length	0.0546	m	
1	Energy selection	Drift		Length	0.183783	m	Drift before second cavity
1	Energy selection	Cavity	Cylindrical	Gradient	5	MV/m	Gradient
1	Energy selection	Cavity	Cylindrical	Frequency	200	MHz	Frequency
1	Energy selection	Cavity	Cylindrical	Phase	0	degrees	Phase of reference particle
1	Energy selection	Drift		Length	0.183783	m	Drift after second cavity
1	Matching	Drift		Length	0.15	m	Drift to next solenoid
1	Matching	Solenoid	Length, strength	Length	0.857	m	
1	Matching	Solenoid	Length, strength	Strength	1.788859	rad/m	
1	Matching	Drift		Length	0.15	m	Drift out of solenoid
1	Matching	Drift		Length	0.3	m	
1	Matching	Drift		Length	0.15	m	Drift to next solenoid
1	Matching	Solenoid	Length, strength	Length	0.857	m	
1	Matching	Solenoid	Length, strength	Strength	1.60434	rad/m	
1	Matching	Drift		Length	0.15	m	Drift out of solenoid
1	Matching	Drift		Length	2.5	m	
1	Matching	Drift		Length	0.15	m	Drift to next solenoid
1	Matching	Solenoid	Length, strength	Length	0.857	m	
1	Matching	Solenoid	Length, strength	Strength	1.244814	rad/m	
1	Matching	Drift		Length	0.15	m	Drift out of solenoid
1	Matching	Drift		Length	0.3	m	
1	Matching	Drift		Length	0.15	m	Drift to next solenoid
1	Matching	Solenoid	Length, strength	Length	0.857	m	
1	Matching	Solenoid	Length, strength	Strength	1.165967	rad/m	
1	Matching	Drift		Length	0.15	m	Drift out of solenoid
1	Arc	Drift		Length	0.2	m	
1	Arc	Dipole	Sector (Length, angle)	Length	0.8	m	
1	Arc	Dipole	Sector (Length, angle)	Angle	45	degrees	
1	Arc	Drift		Length	0.2	m	
1	Arc	Dquad		Length	0.1	m	
1	Arc	Dquad		kq	22.544	m^{-2}	
1	Arc	Drift		Length	0.4	m	
1	Arc	Fquad		Length	0.1	m	
1	Arc	Fquad		kq	31.3768	m^{-2}	
1	Arc	Drift		Length	0.2	m	
1	Arc	Dquad		Length	0.1	m	
1	Arc	Dquad		kq	31.5123	m^{-2}	
1	Arc	Drift		Length	0.195	m	
1	Arc	Drift		Length	0.01	m	
1	Arc	Drift		Length	0.195	m	
1	Arc	Dquad		Length	0.1	m	
1	Arc	Dquad		kq	31.5123	m^{-2}	
1	Arc	Drift		Length	0.2	m	
1	Arc	Fquad		Length	0.1	m	
1	Arc	Fquad		kq	31.3768	m^{-2}	
1	Arc	Drift		Length	0.4	m	
1	Arc	Dquad		Length	0.1	m	
1	Arc	Dquad		kq	22.544	m^{-2}	
1	Arc	Drift		Length	0.2	m	
1	Arc	Dipole	Sector (Length, angle)	Length	0.8	m	
1	Arc	Dipole	Sector (Length, angle)	Angle	45	degrees	
1	Arc	Drift		Length	0.2	m	
1	Arc	Dquad		Length	2	m	

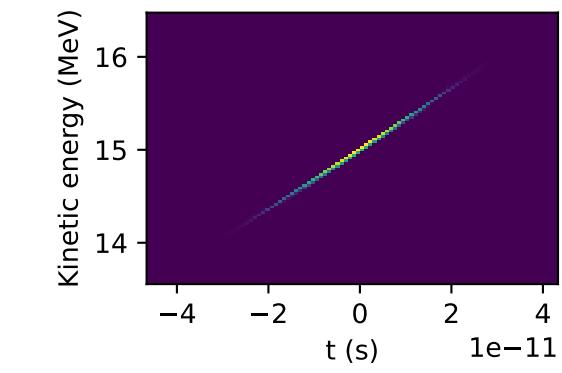
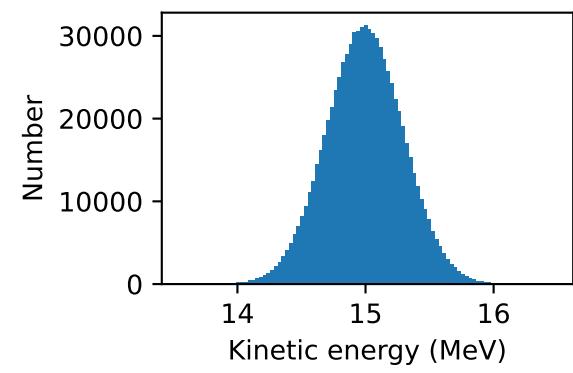
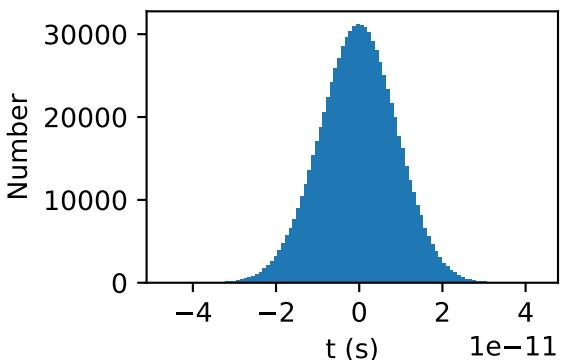
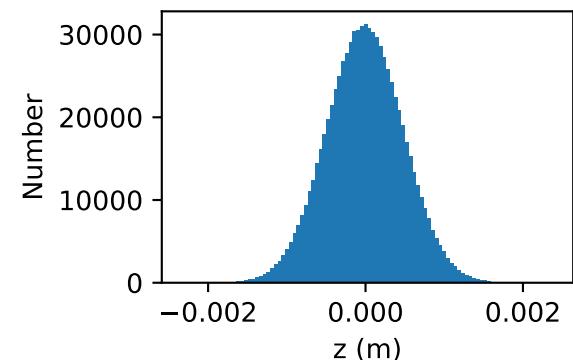
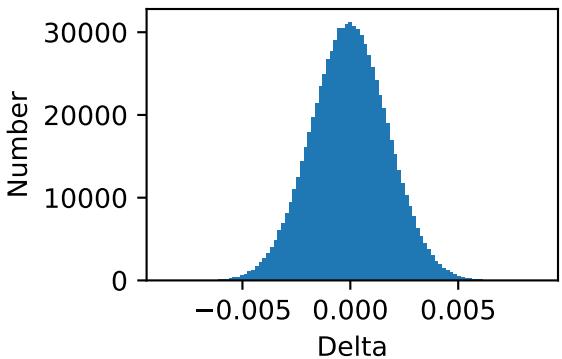
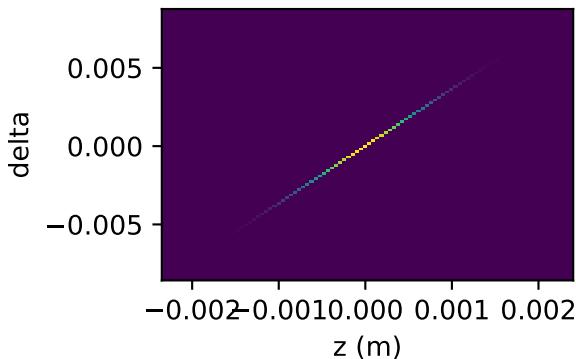
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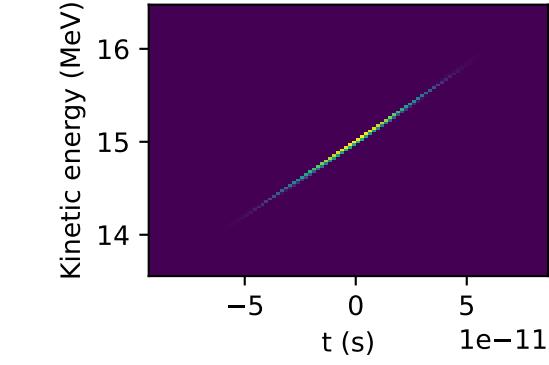
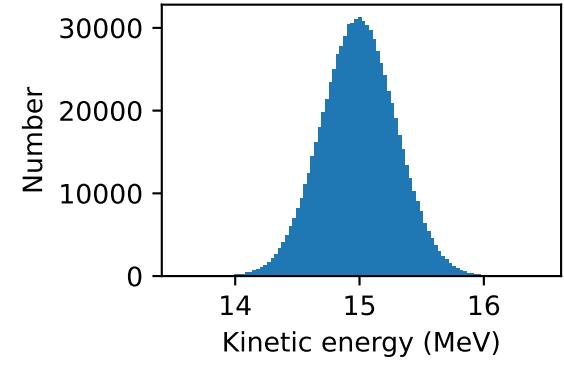
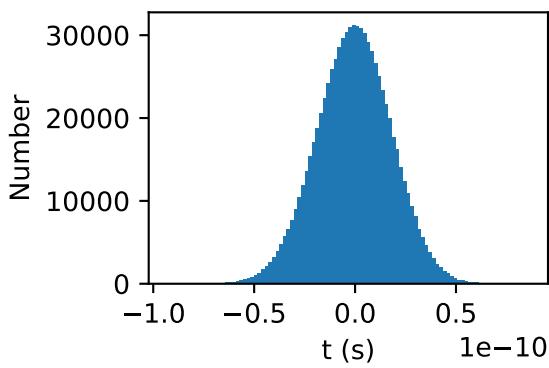
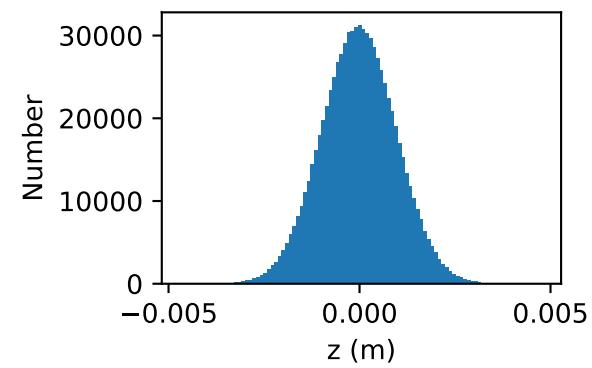
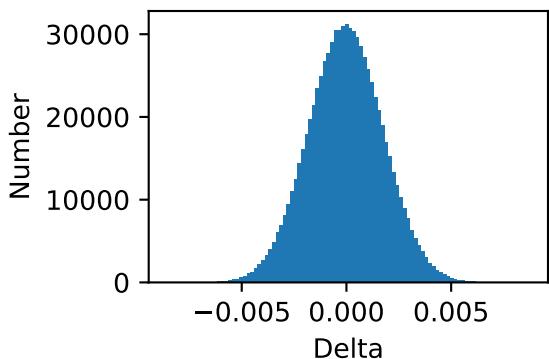
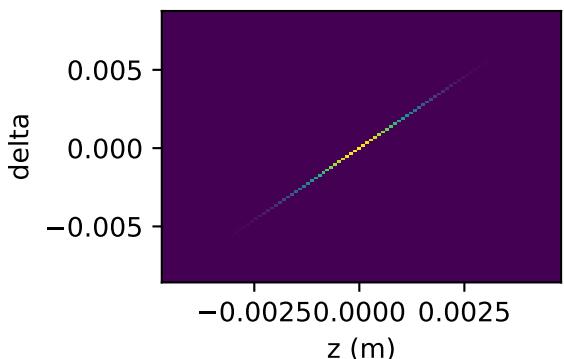
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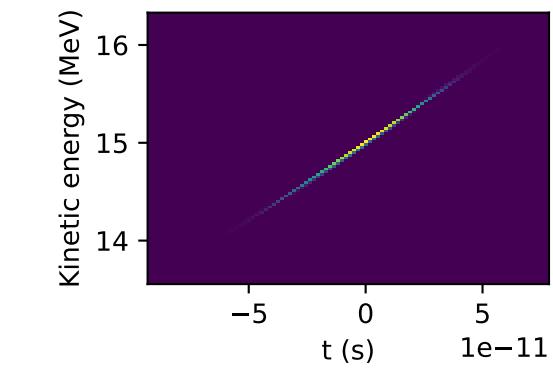
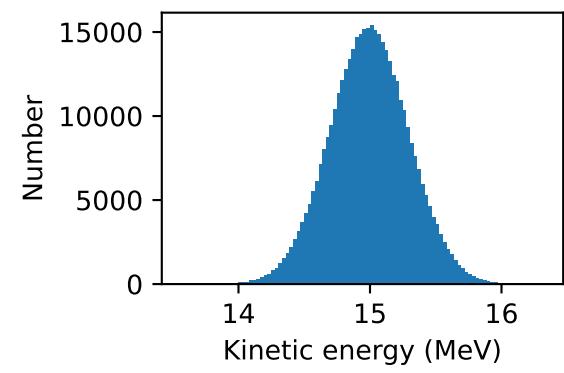
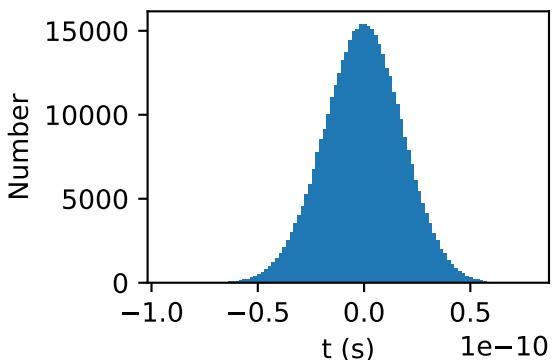
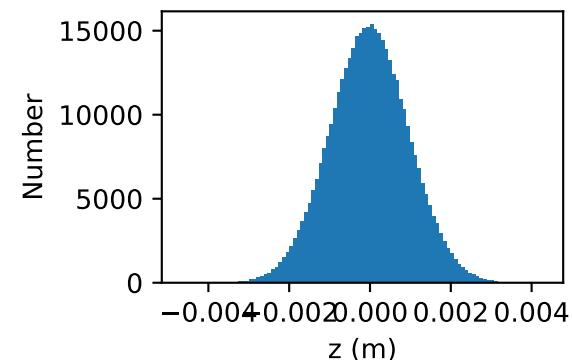
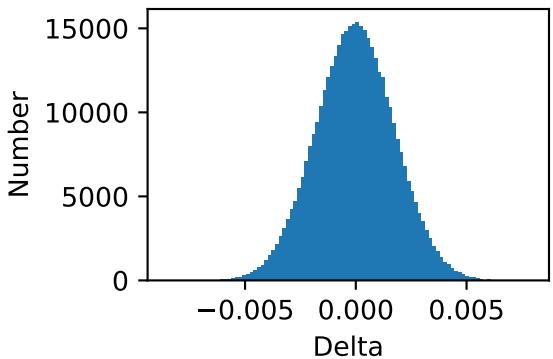
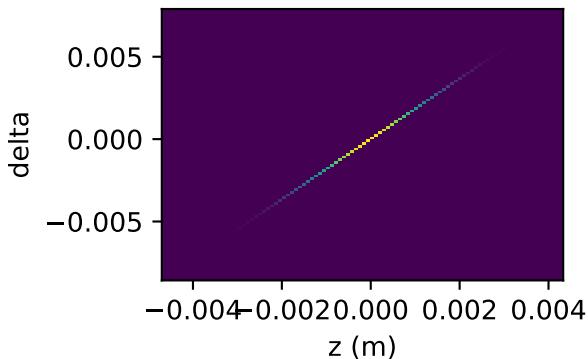
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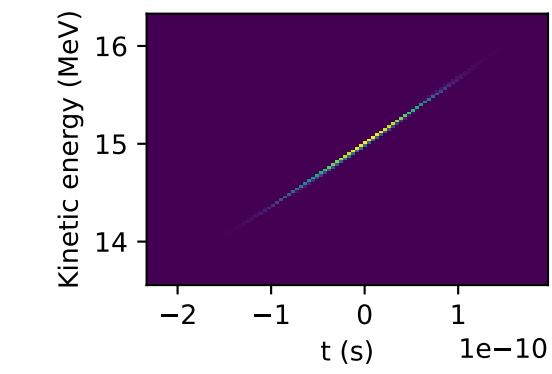
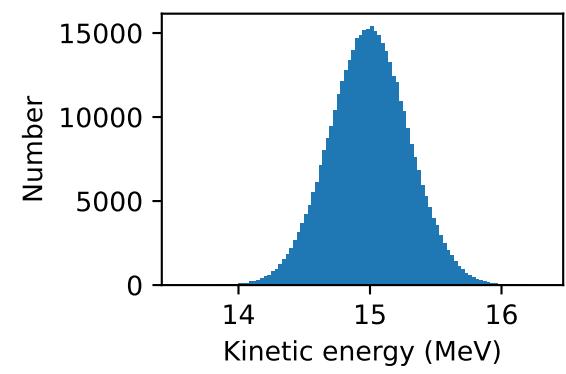
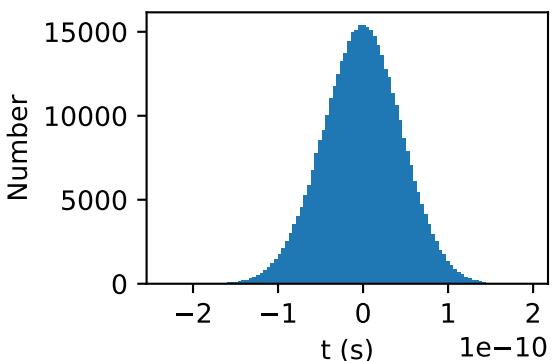
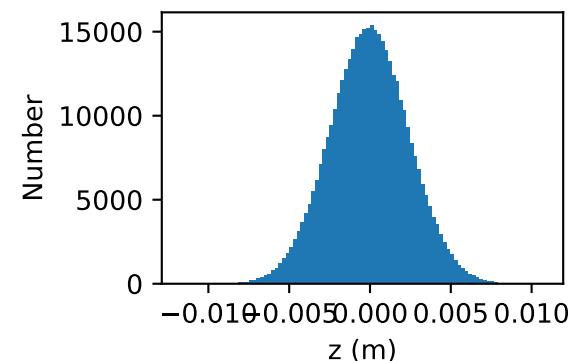
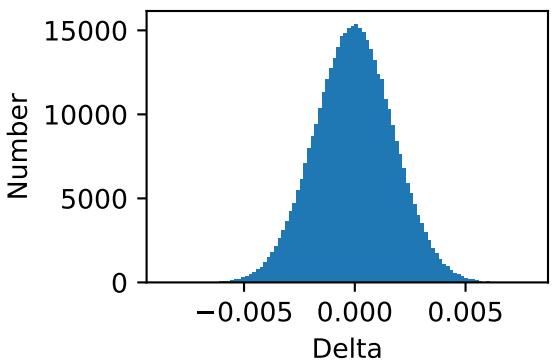
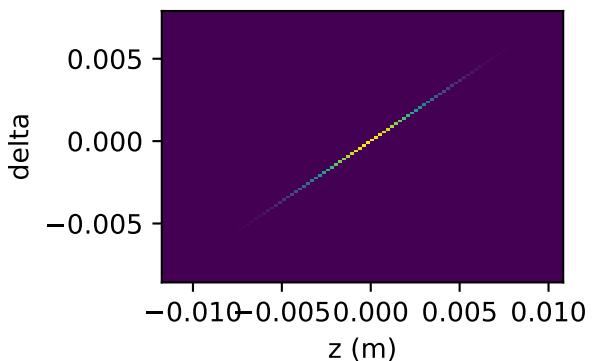
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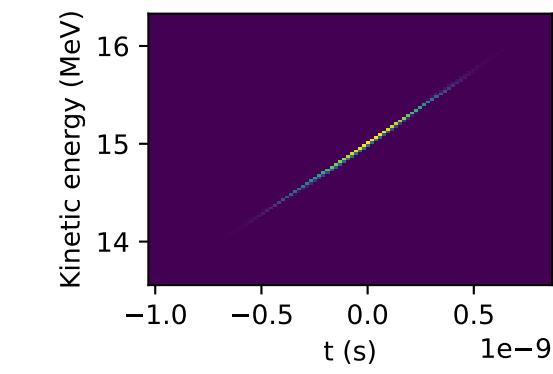
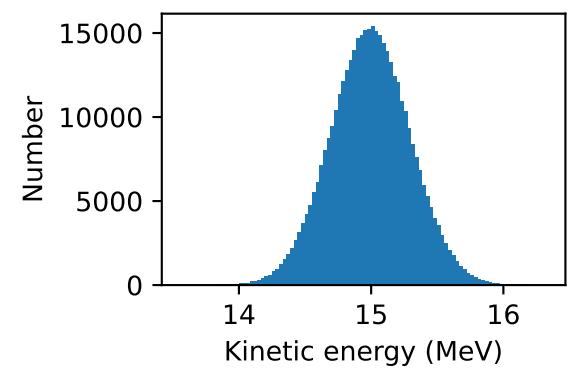
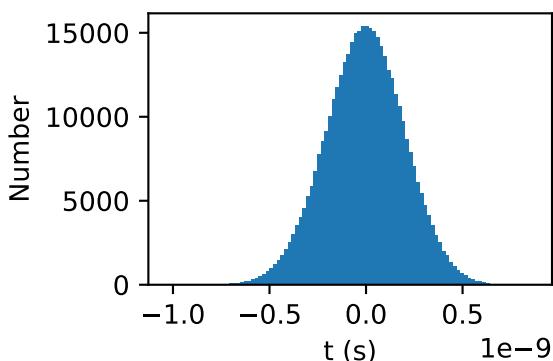
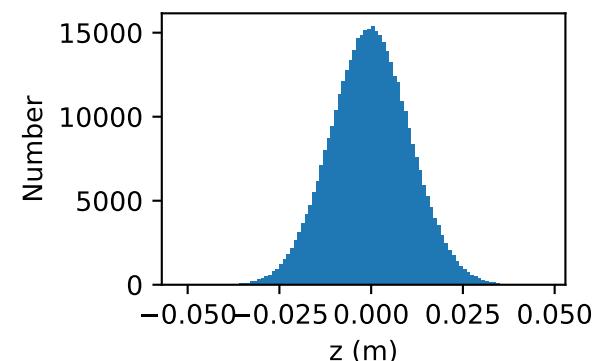
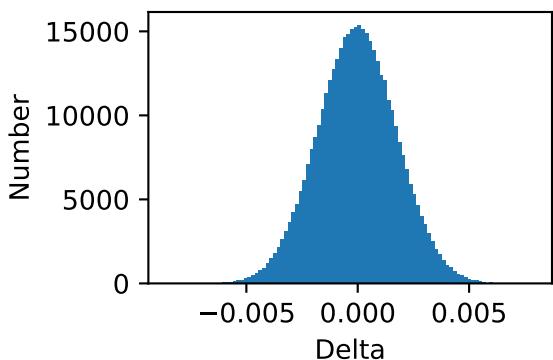
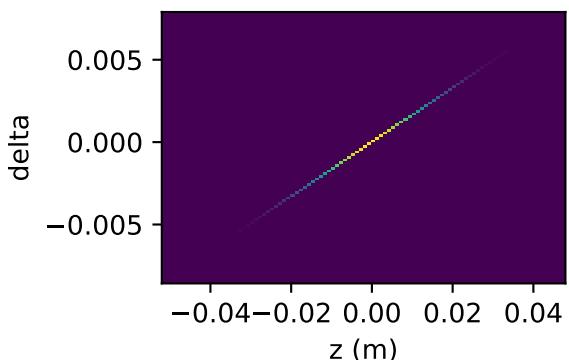
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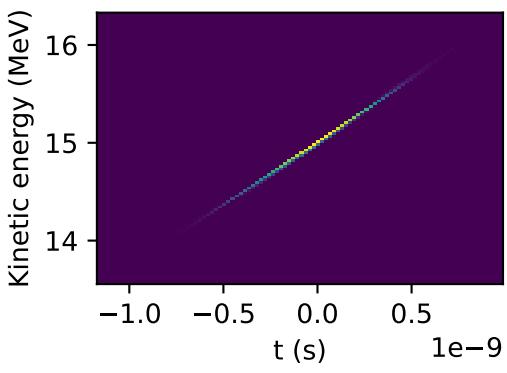
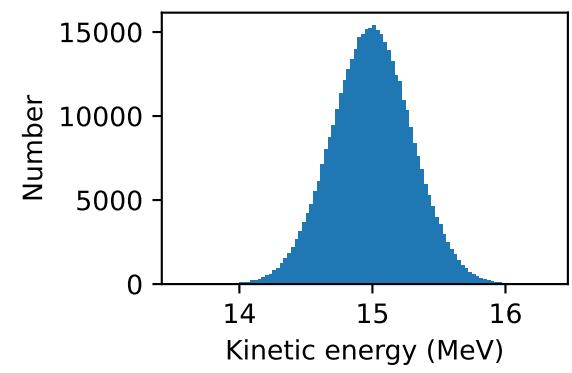
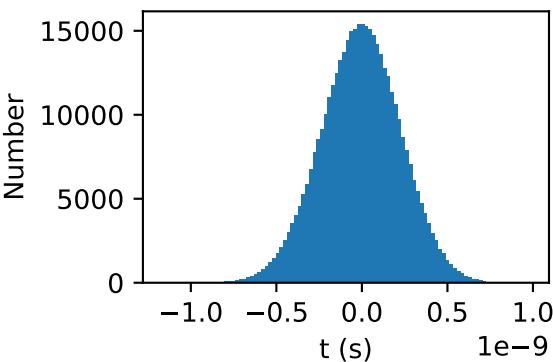
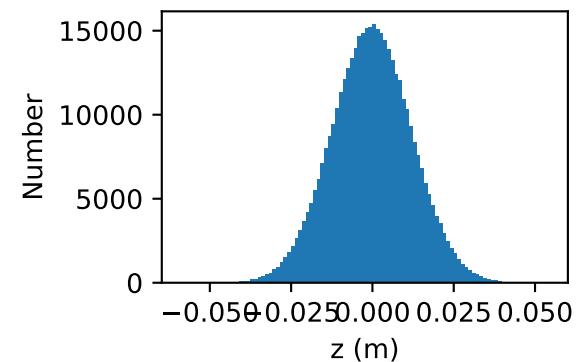
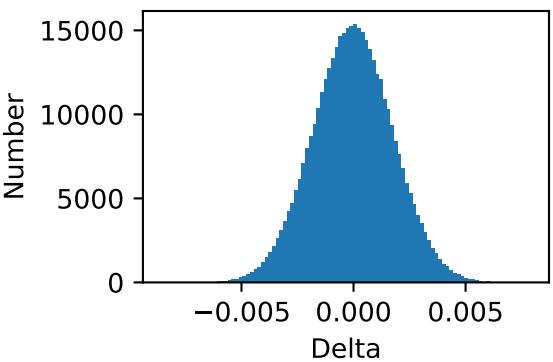
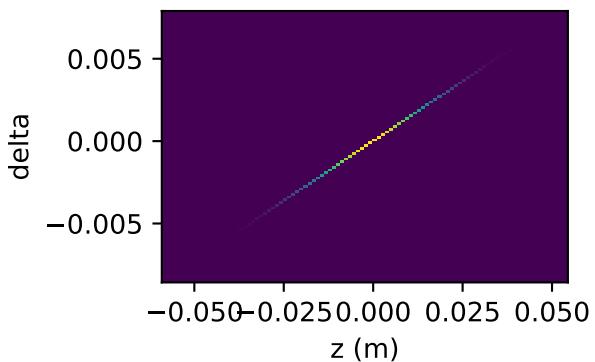
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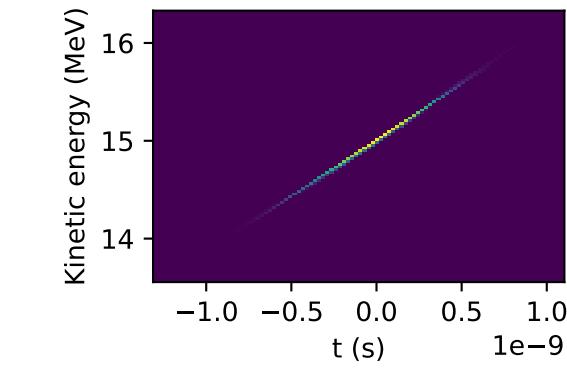
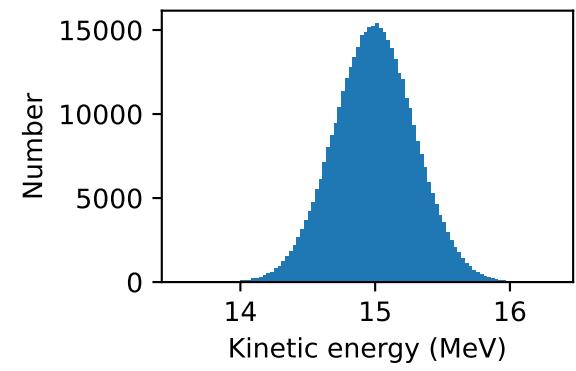
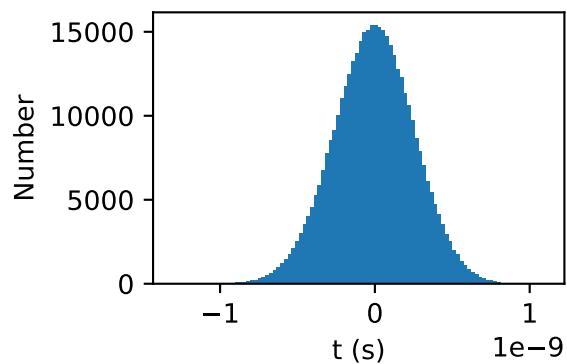
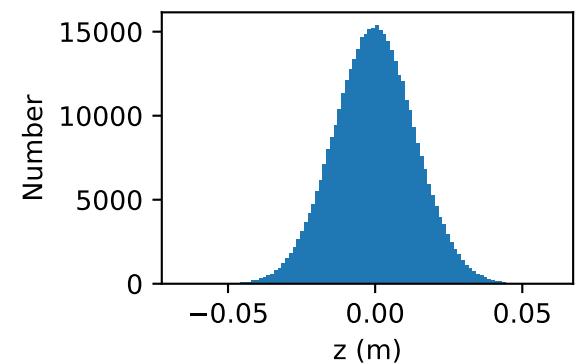
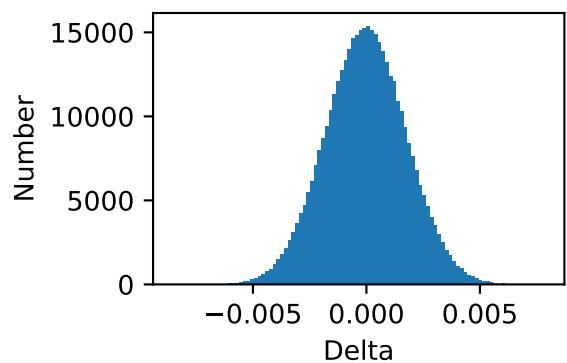
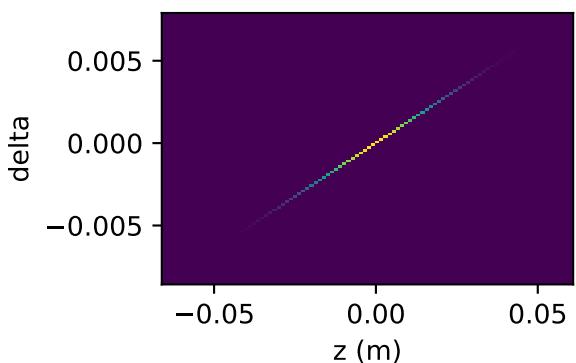
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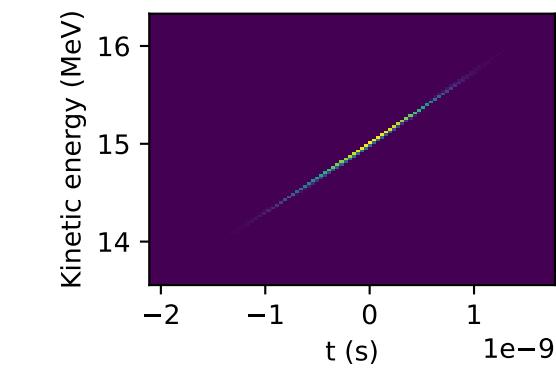
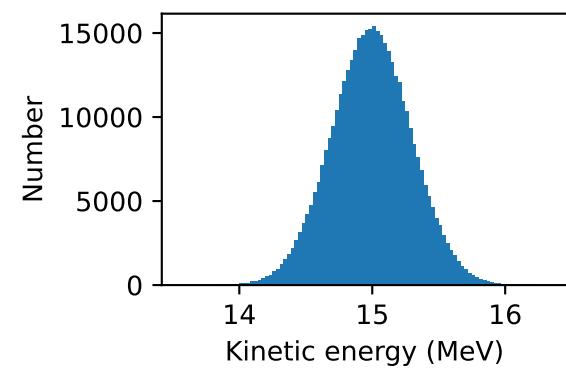
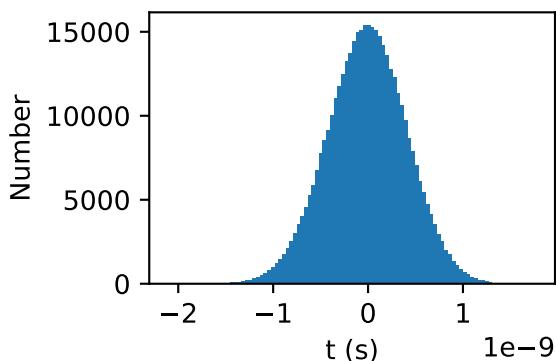
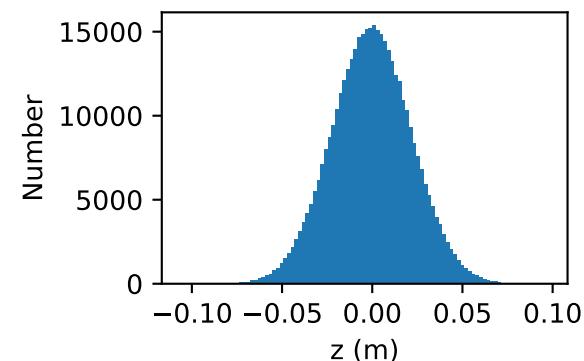
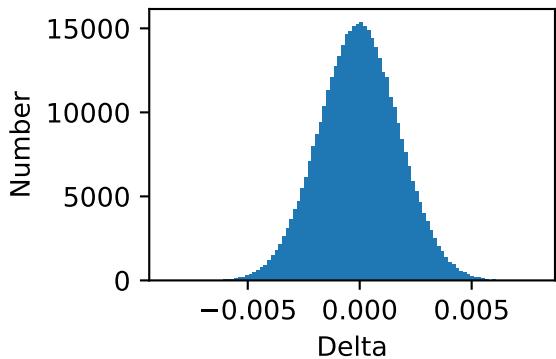
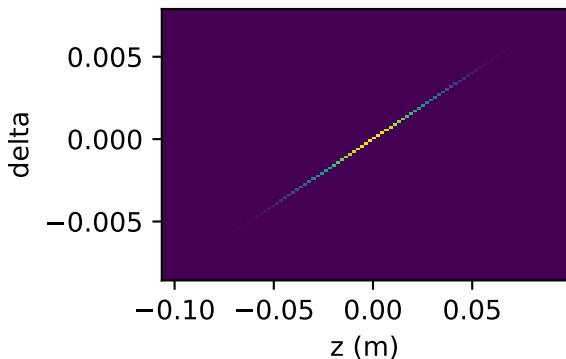
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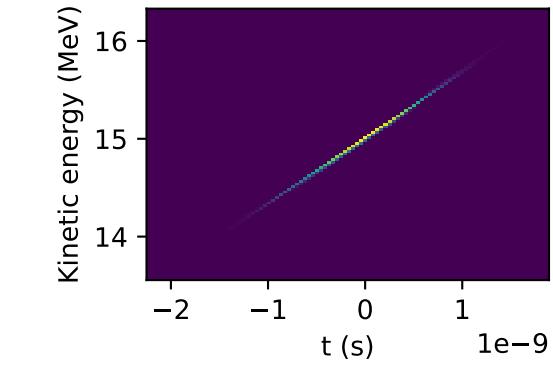
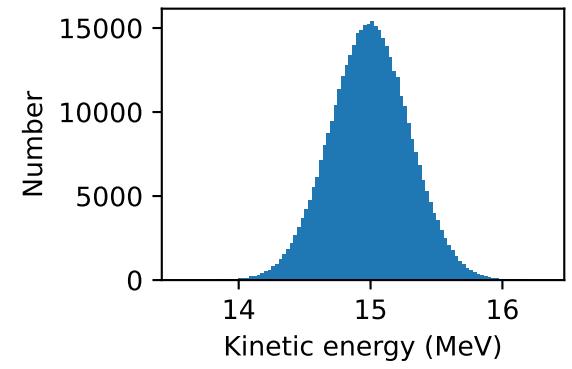
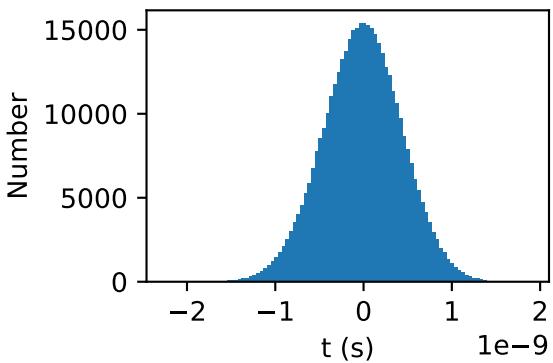
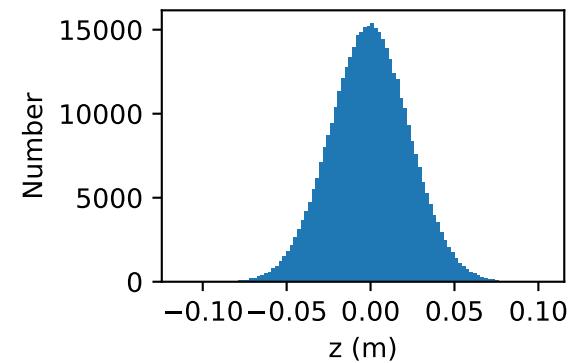
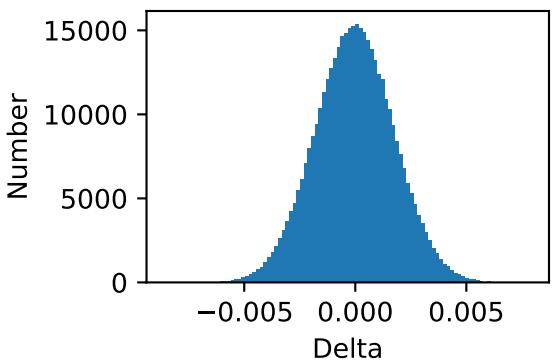
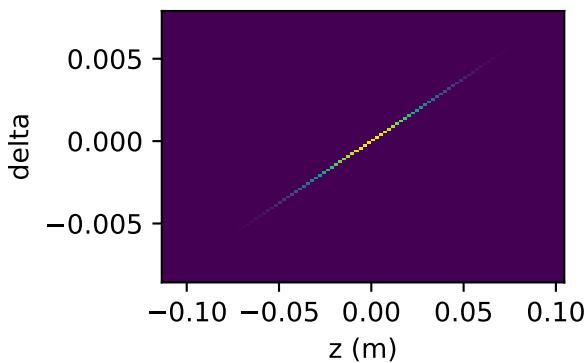
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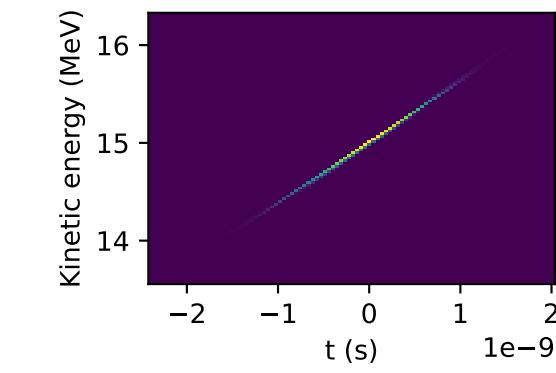
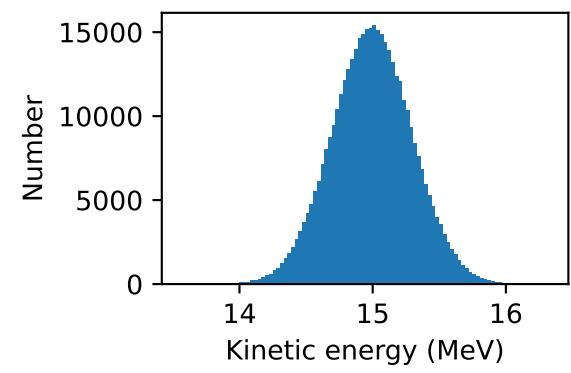
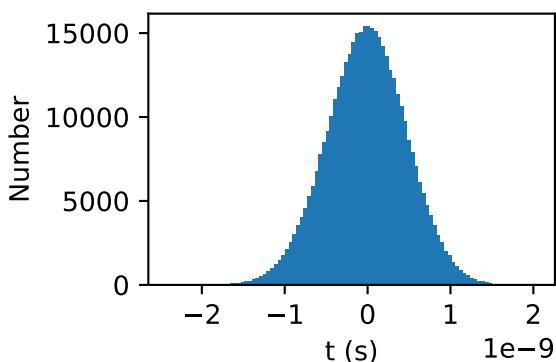
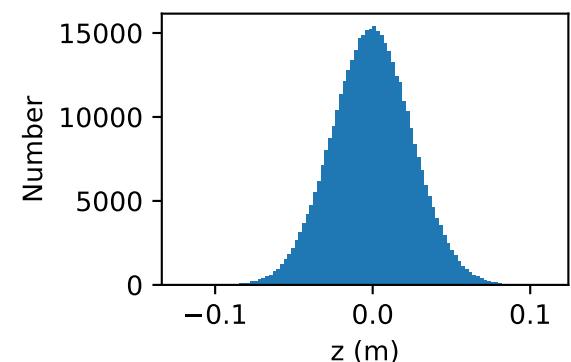
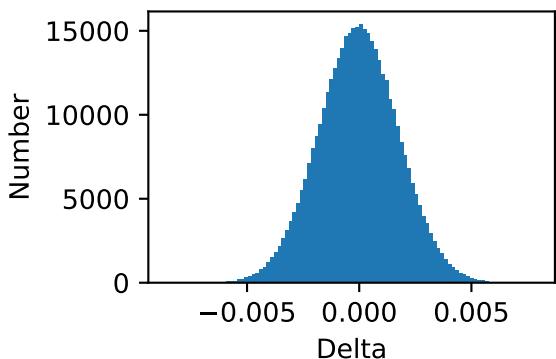
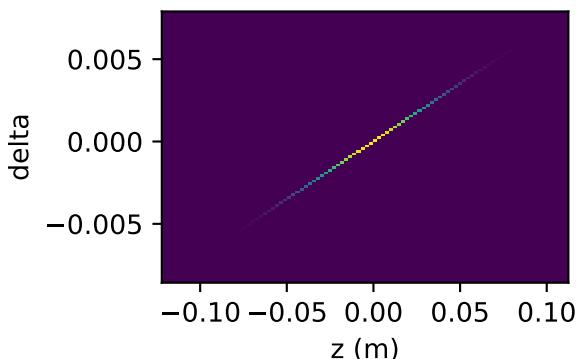
LhARA:1:Capture:Solenoid:2



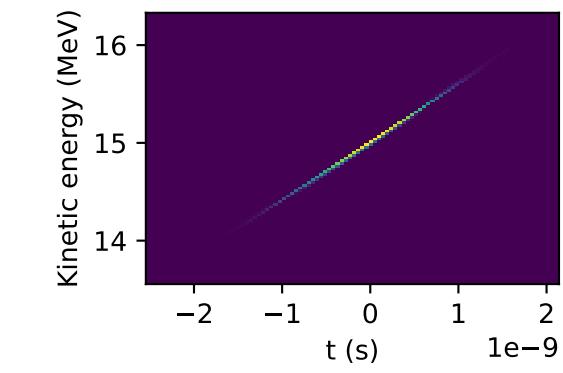
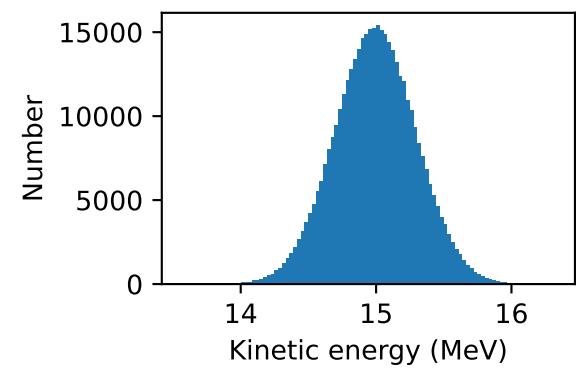
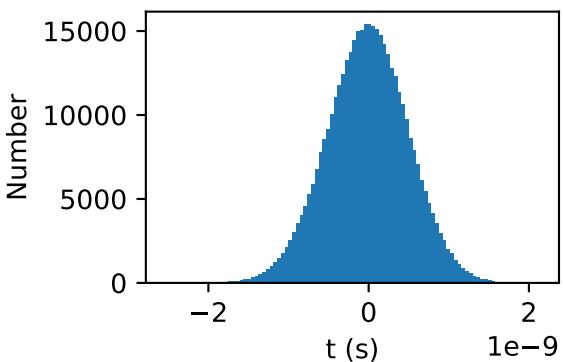
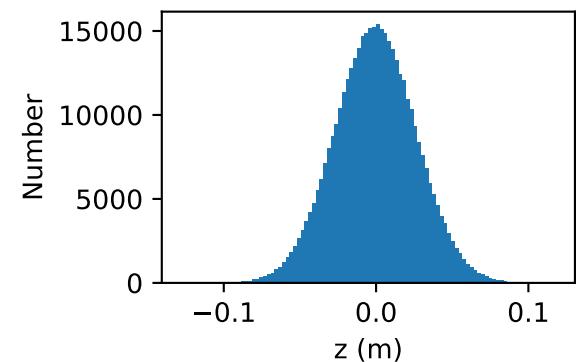
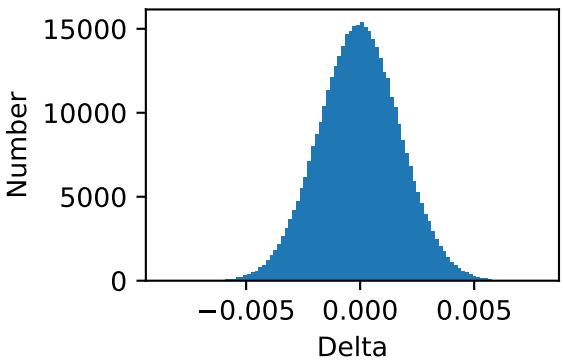
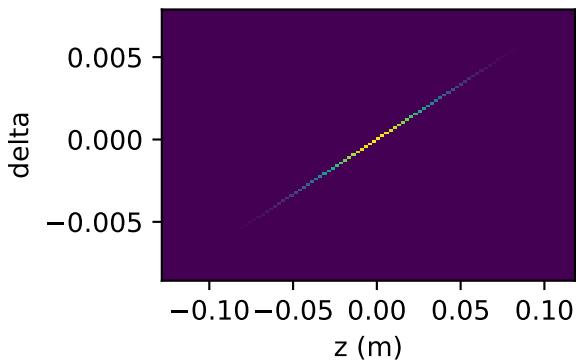
LhARA:1:Capture:Drift:4



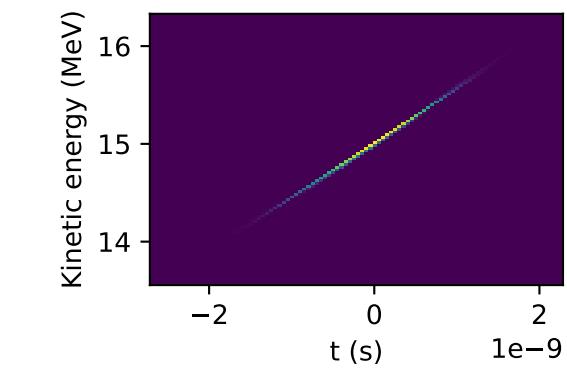
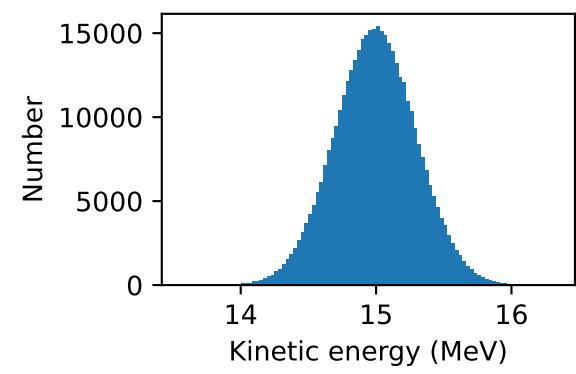
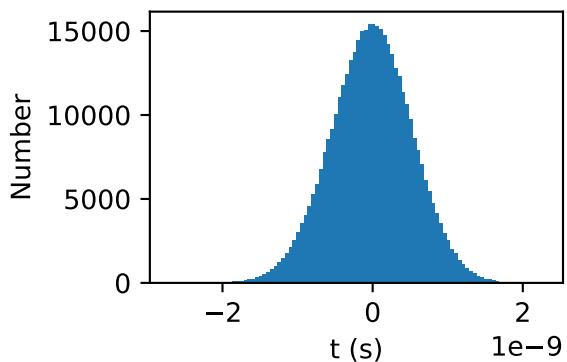
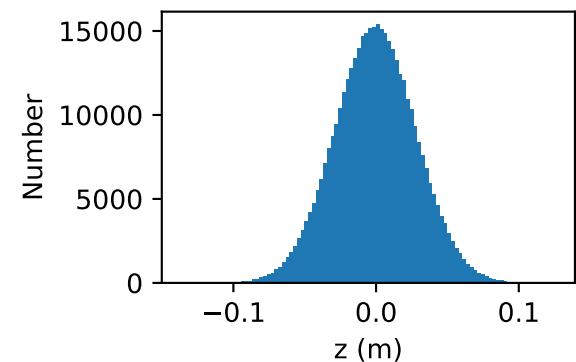
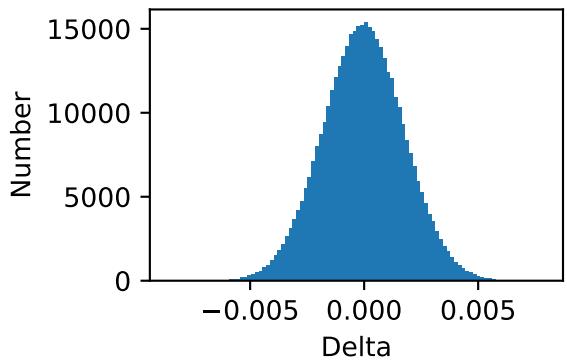
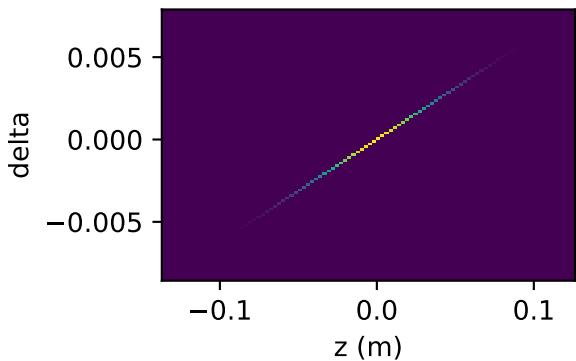
LhARA:1:Energy selection:Drift:1



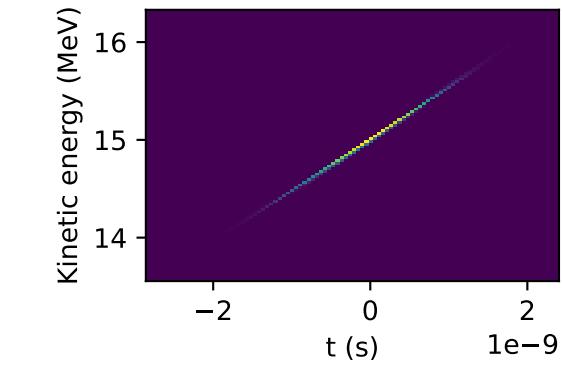
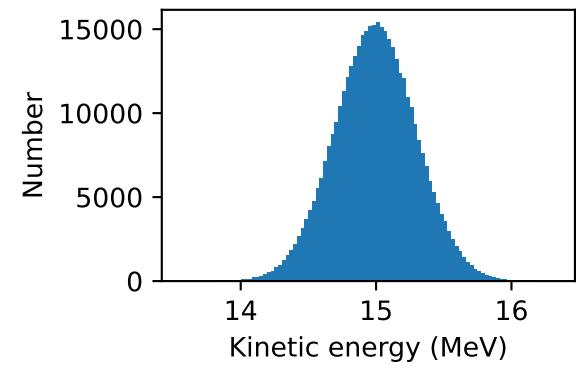
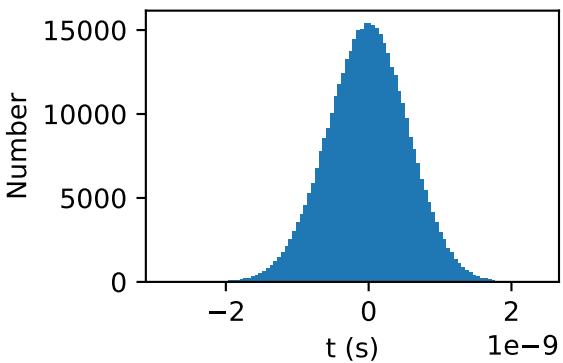
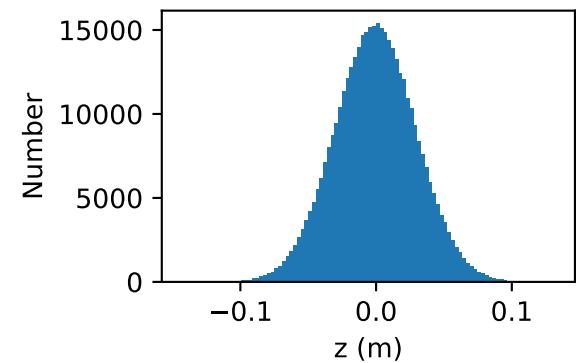
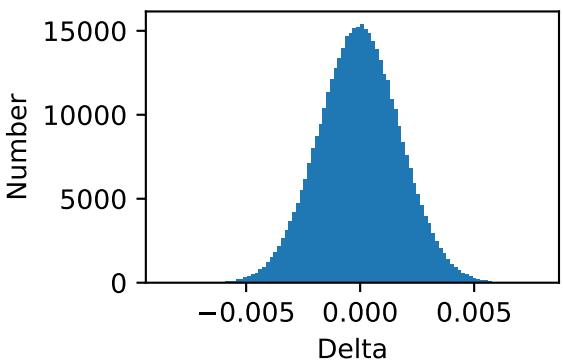
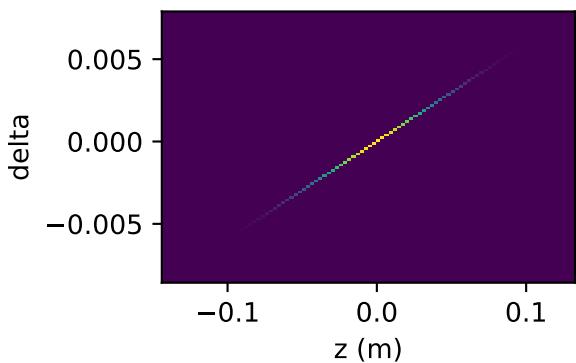
LhARA:1:Energy selection:Cavity:1



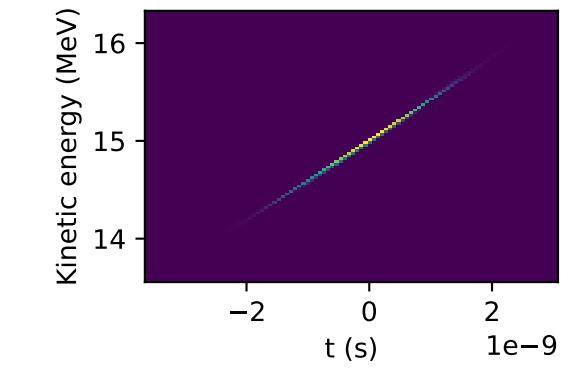
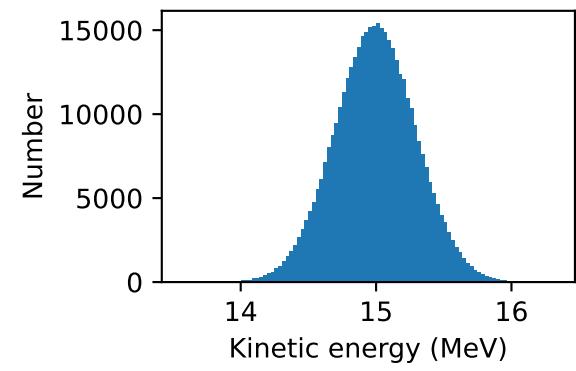
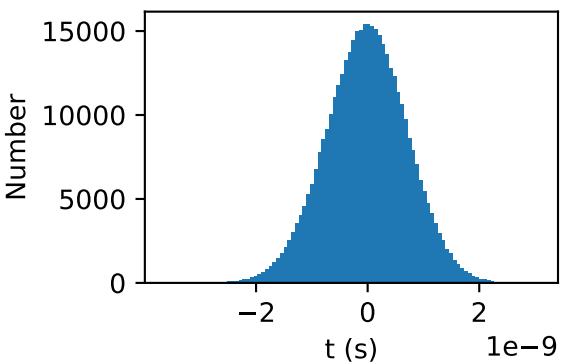
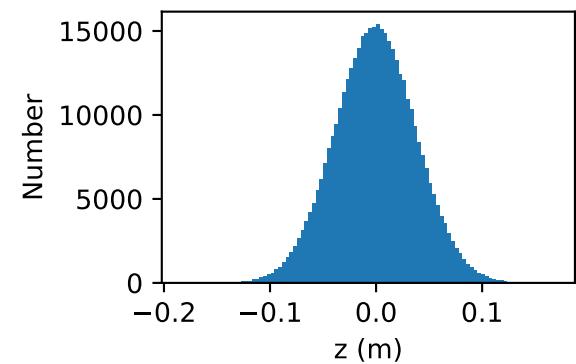
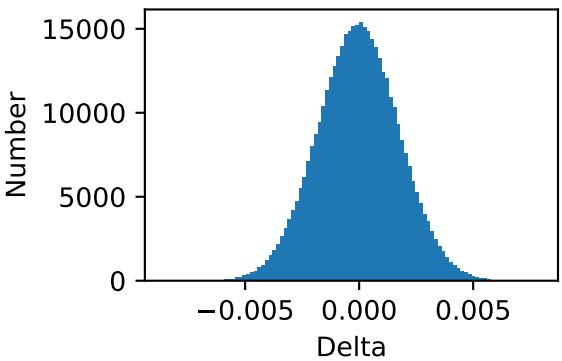
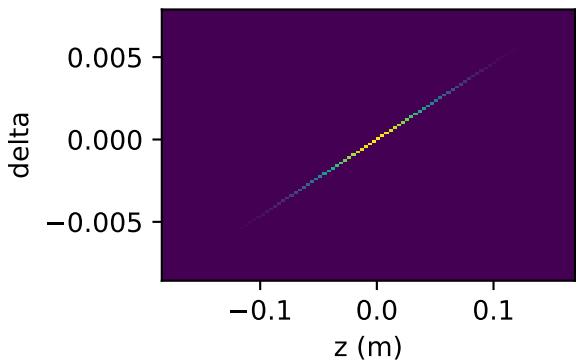
LhARA:1:Energy selection:Drift:2



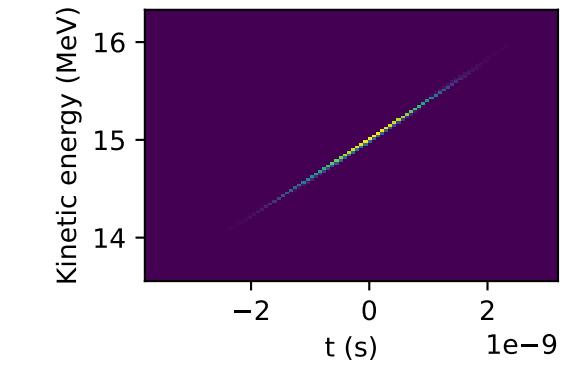
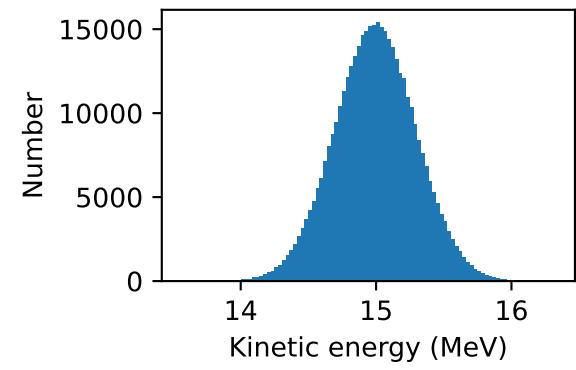
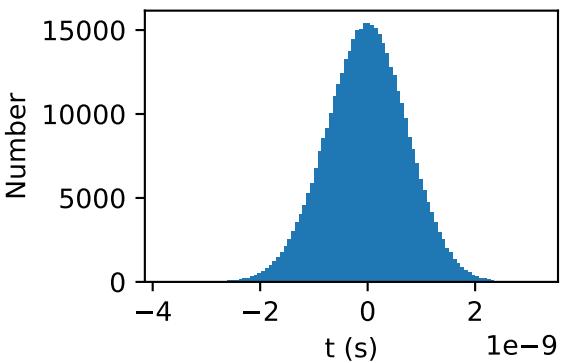
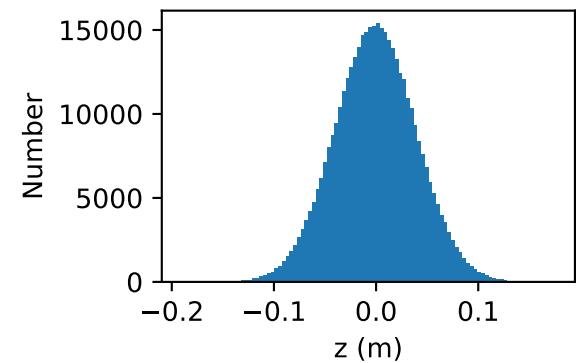
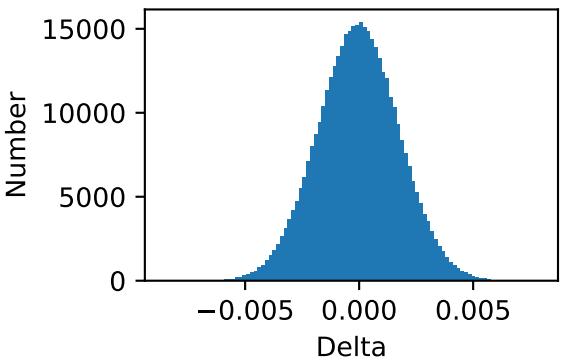
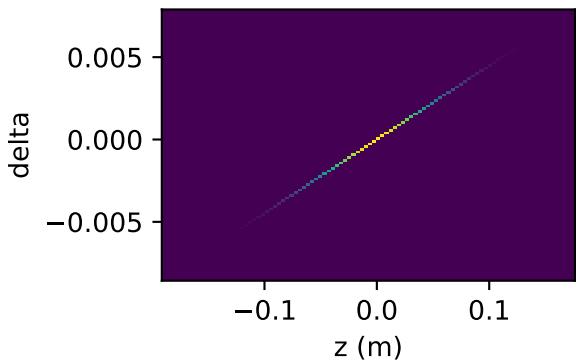
LhARA:1:Energy selection:Drift:3



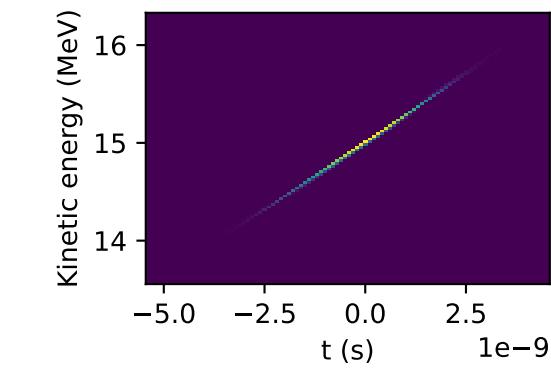
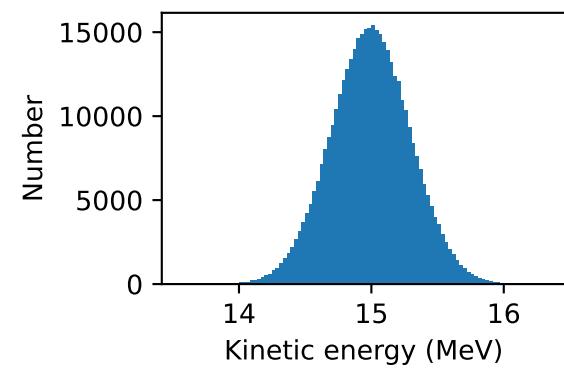
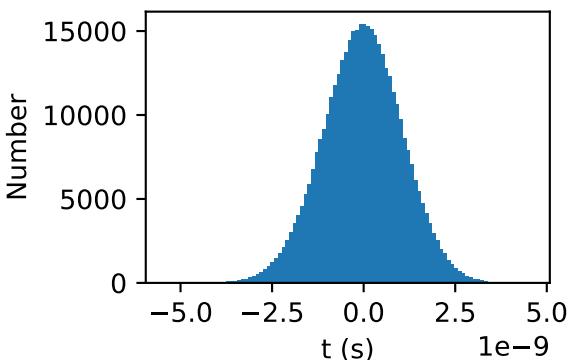
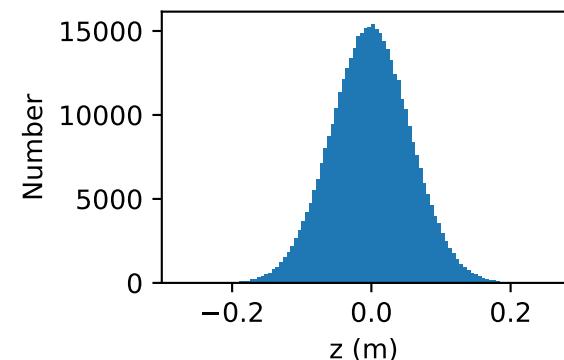
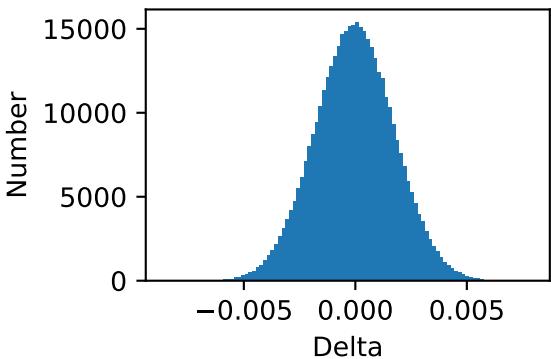
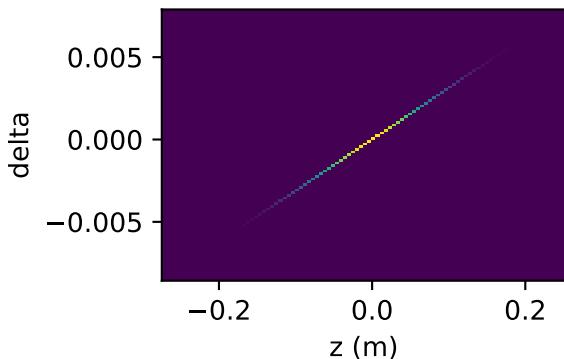
LhARA:1:Energy selection:Solenoid:1



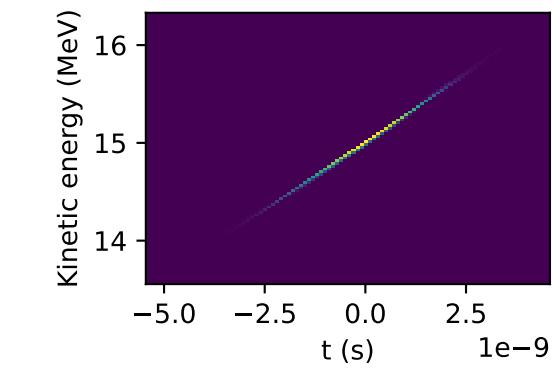
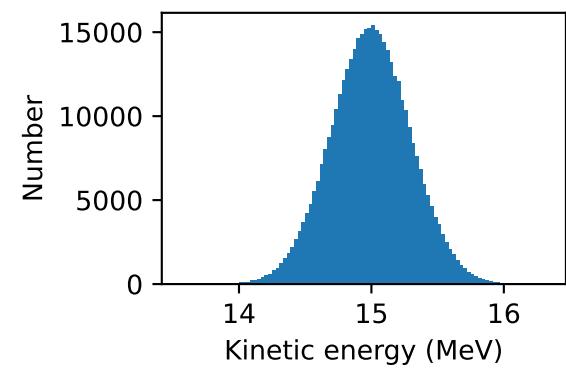
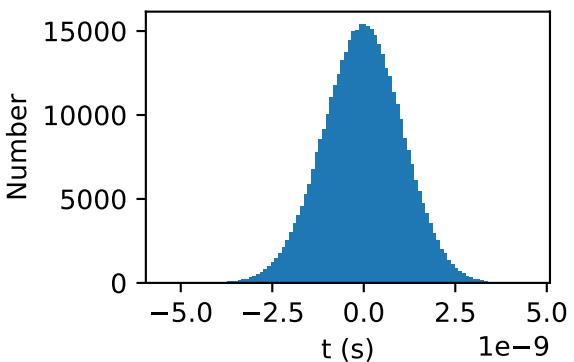
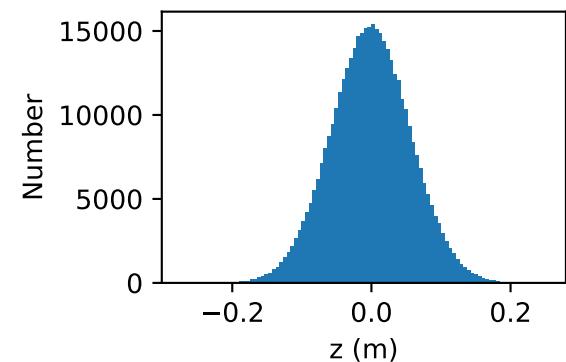
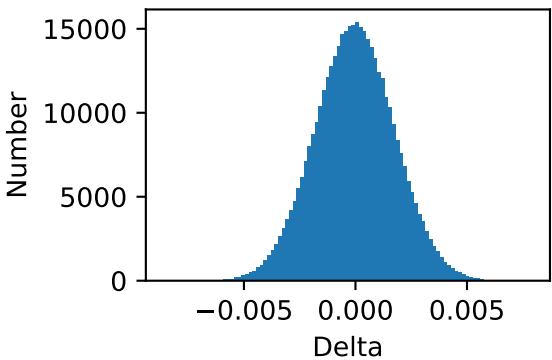
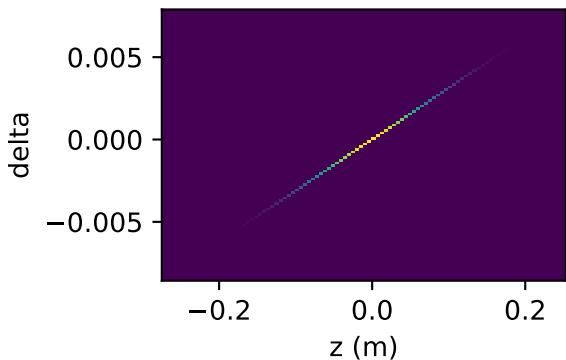
LhARA:1:Energy selection:Drift:4



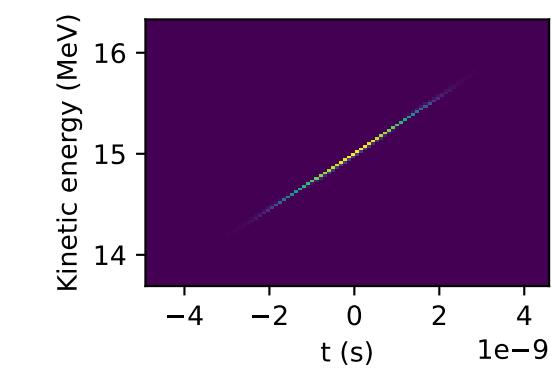
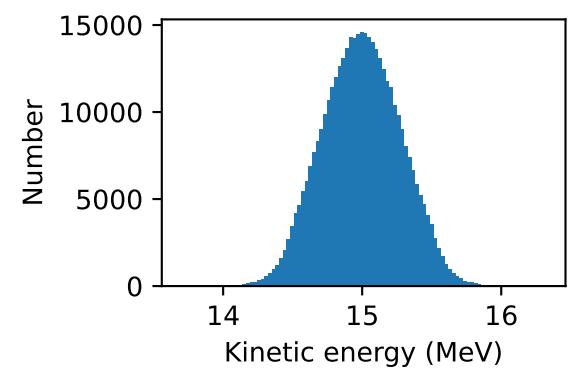
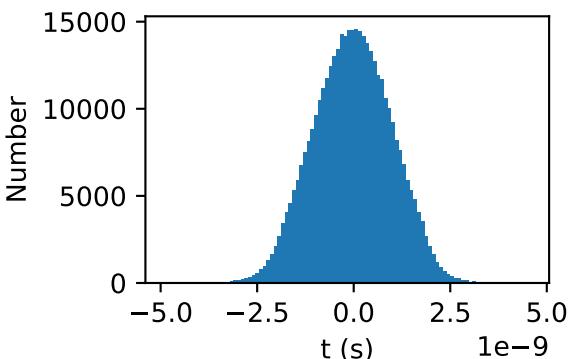
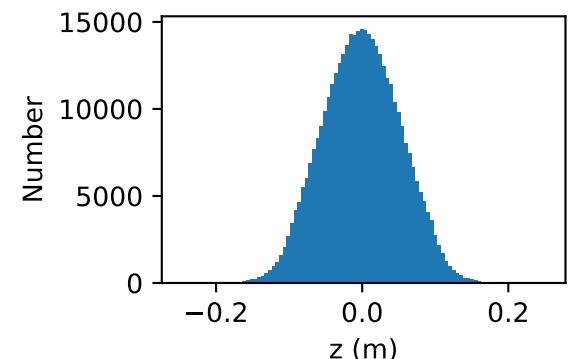
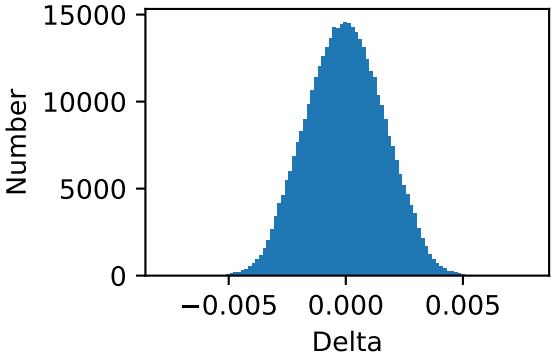
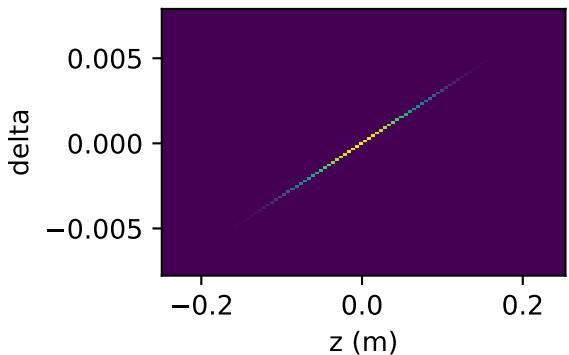
LhARA:1:Energy selection:Drift:5



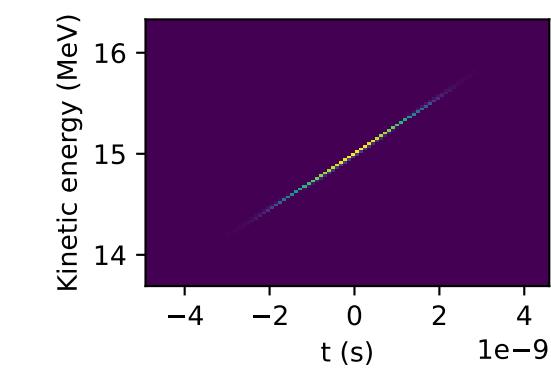
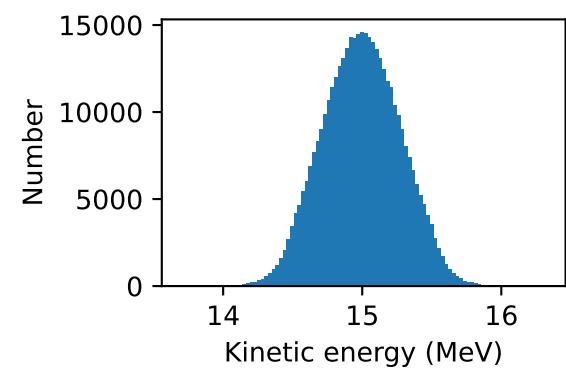
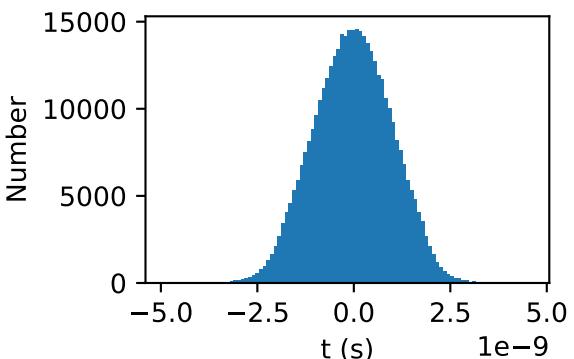
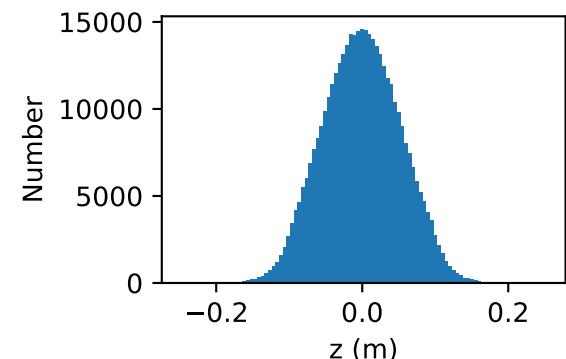
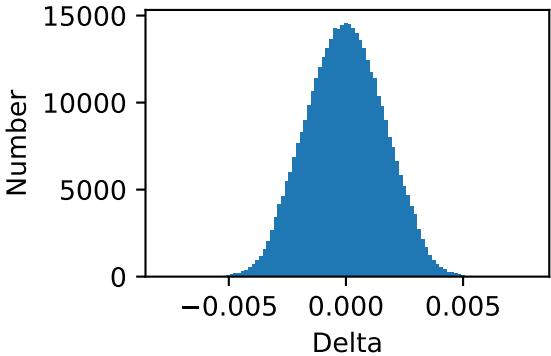
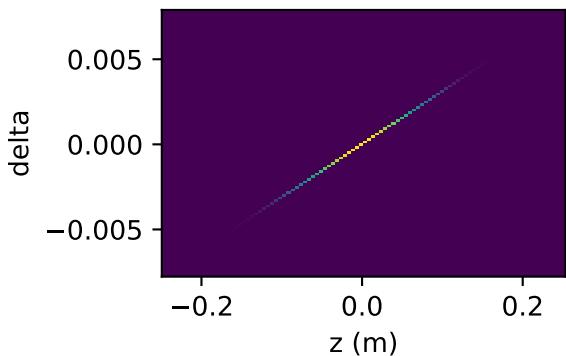
LhARA:1:Energy selection:Drift:6



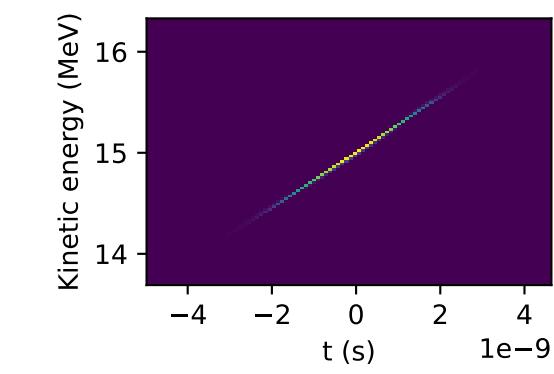
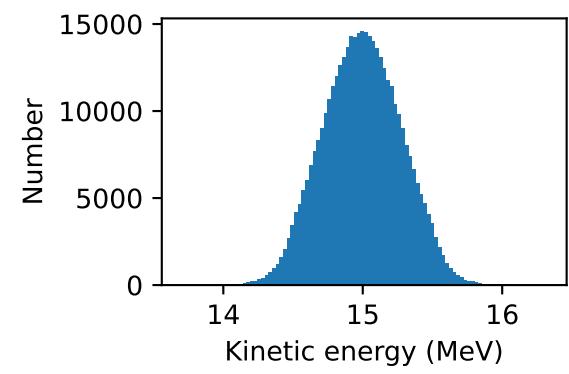
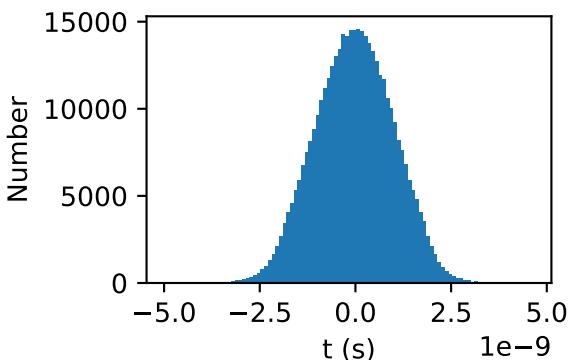
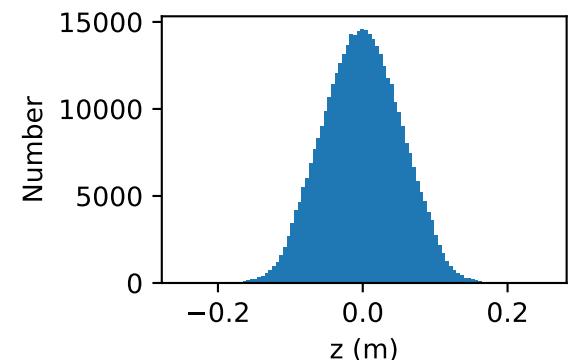
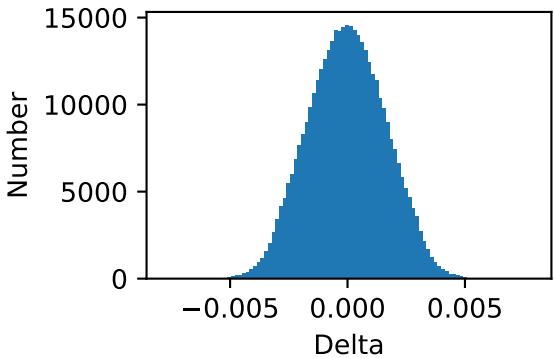
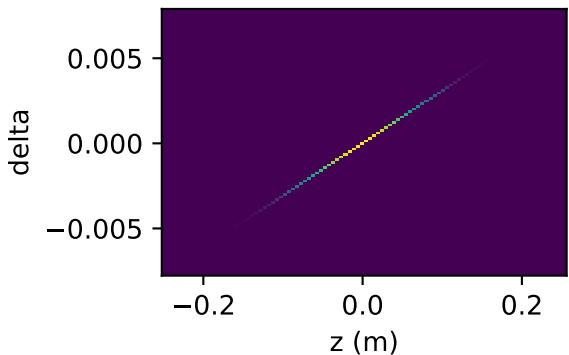
LhARA:1:Energy selection:Aperture:Circular:1



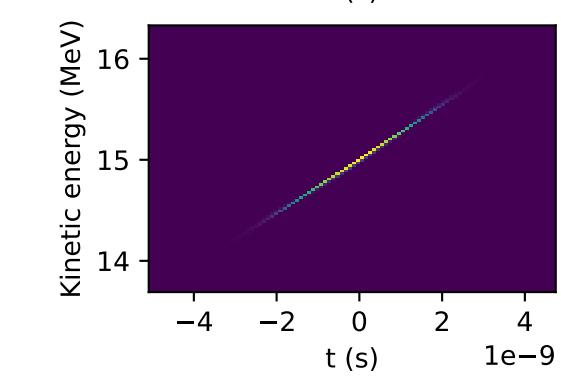
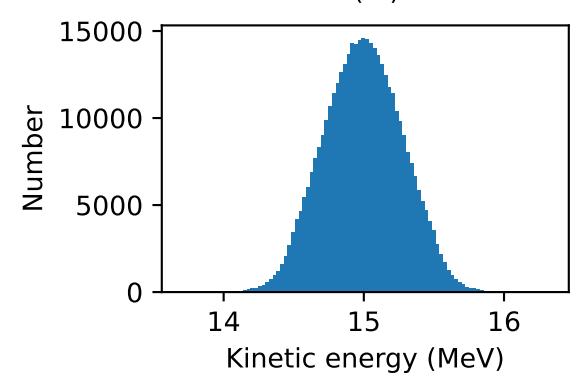
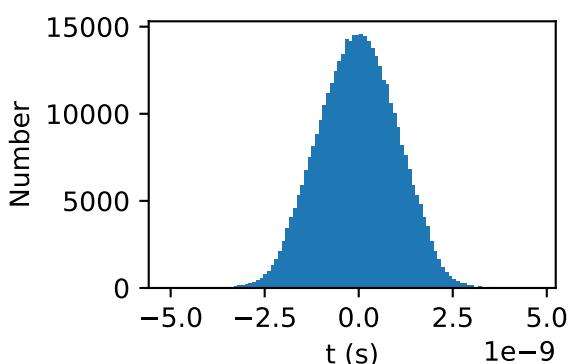
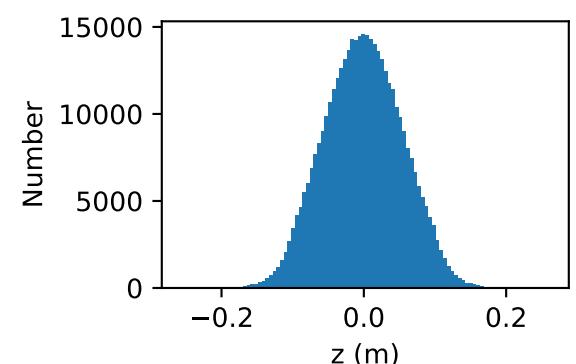
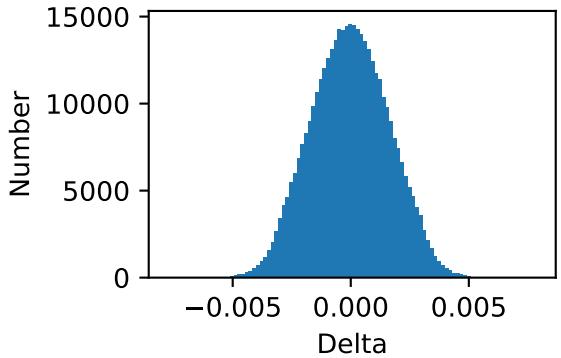
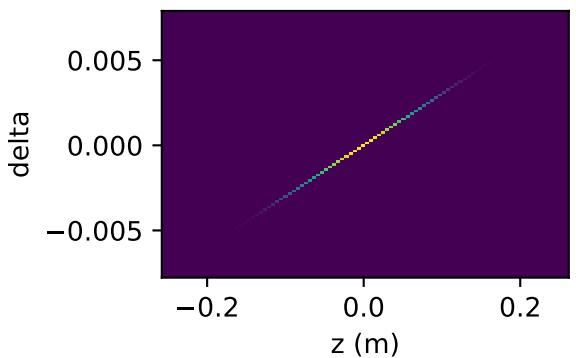
LhARA:1:Energy selection:Drift:7



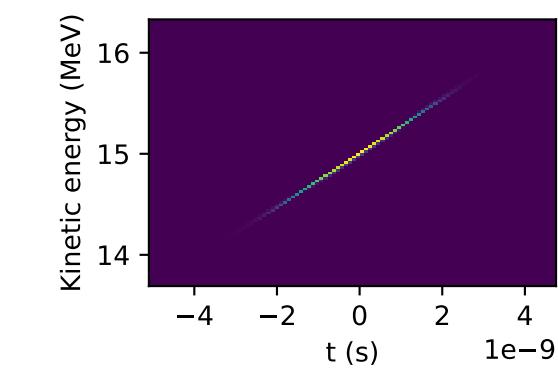
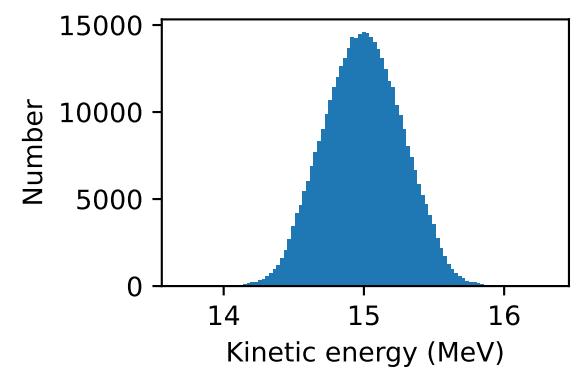
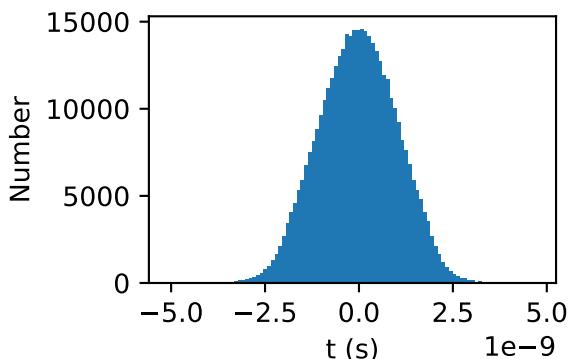
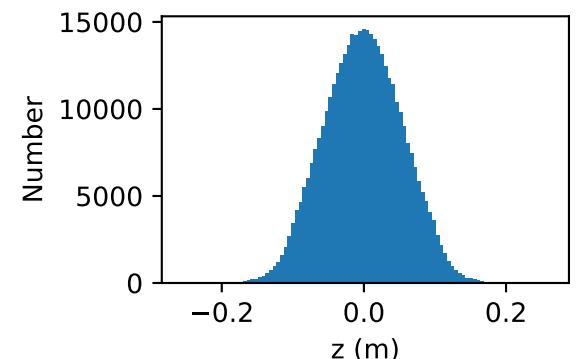
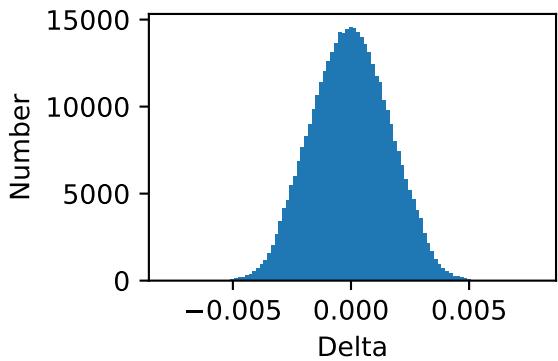
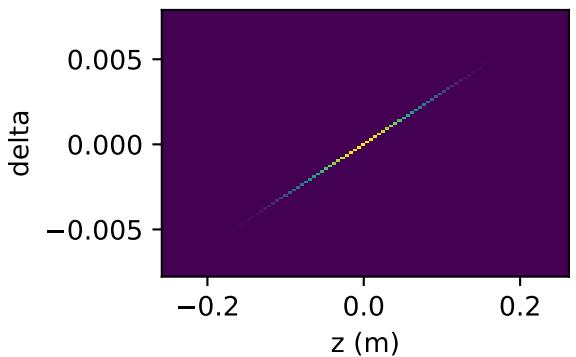
LhARA:1:Energy selection:Drift:8



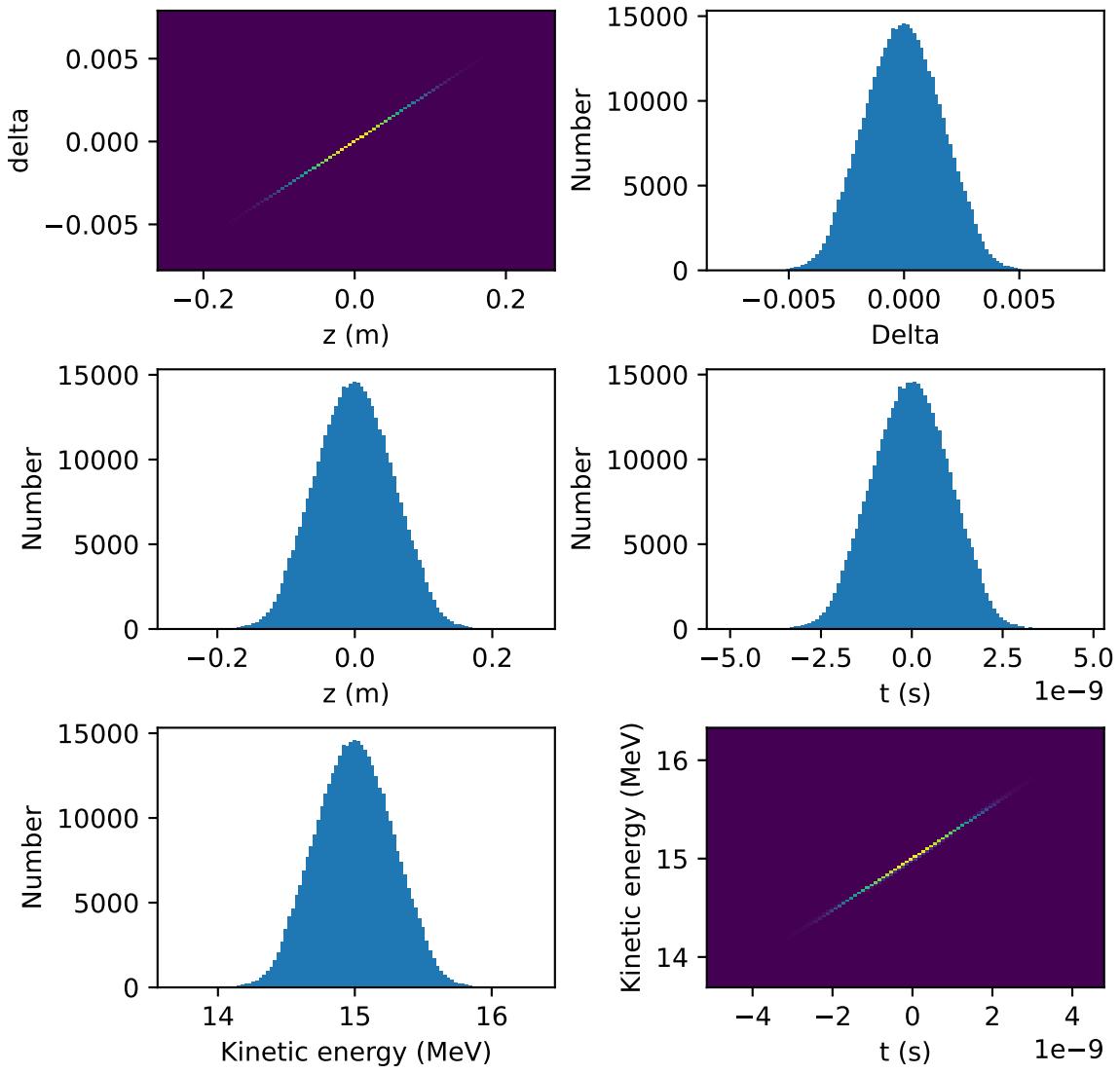
LhARA:1:Energy selection:Drift:9



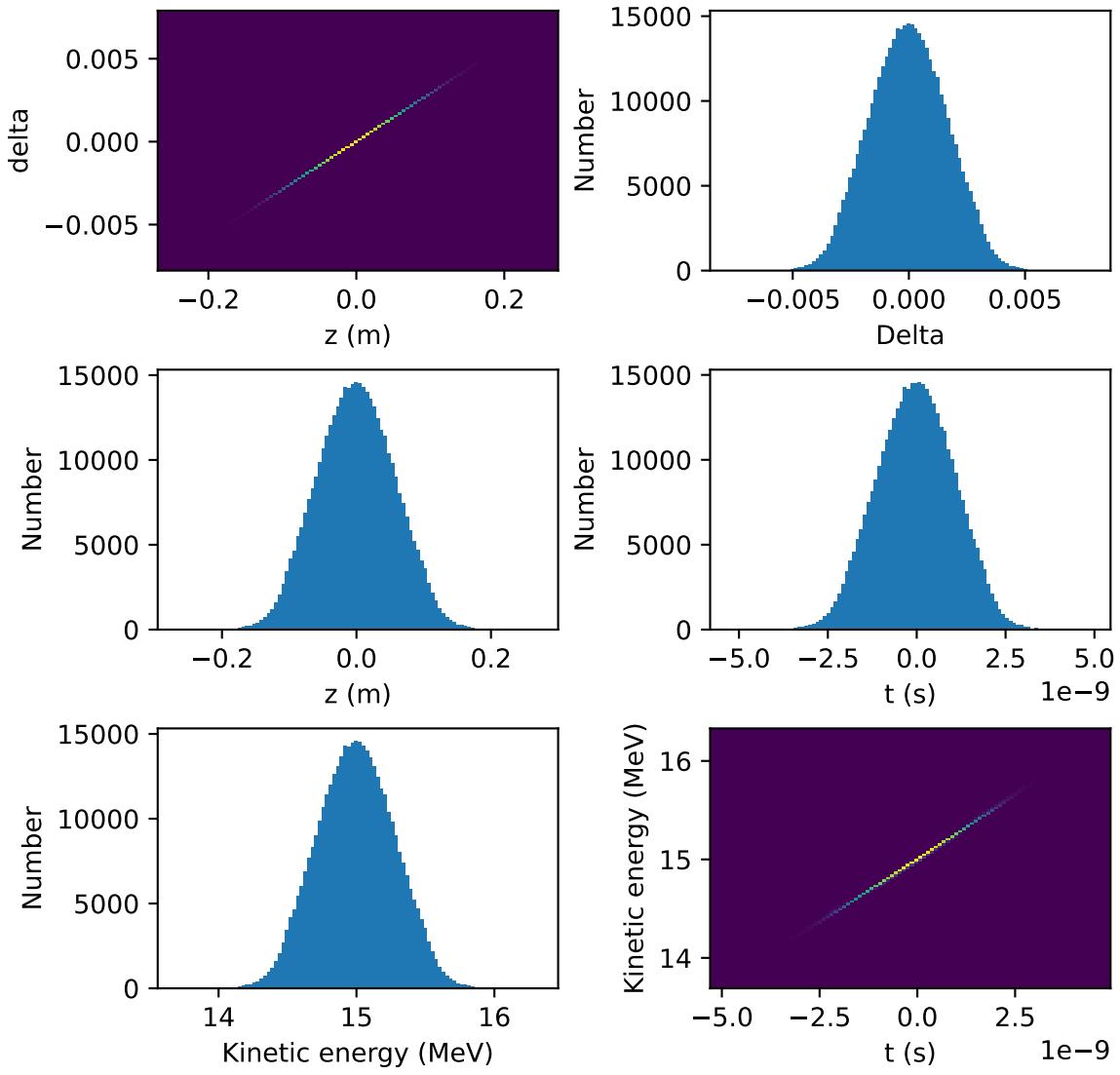
LhARA:1:Energy selection:Drift:10



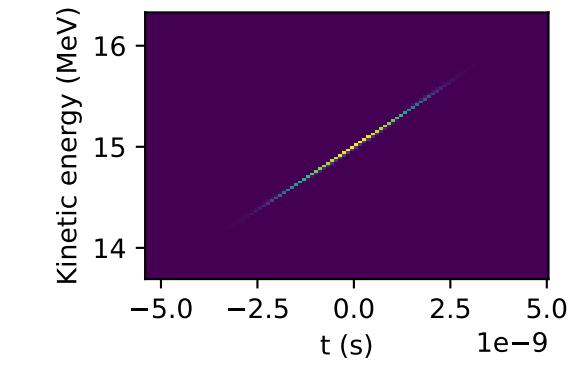
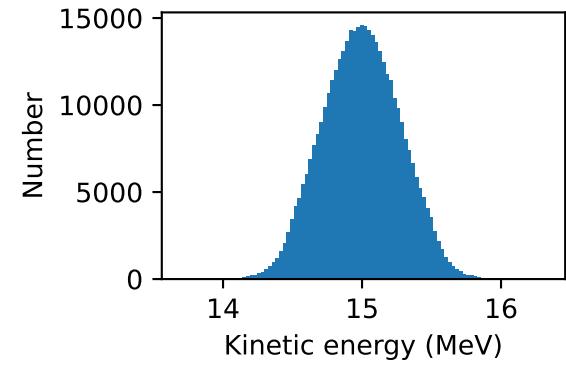
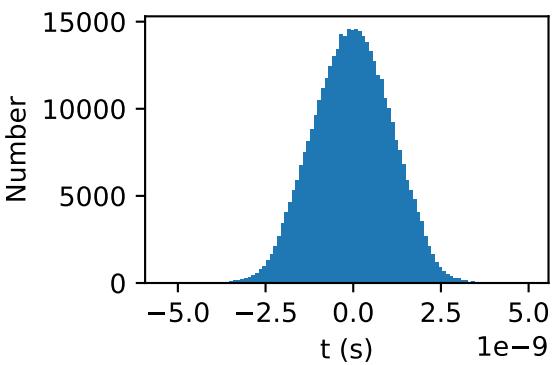
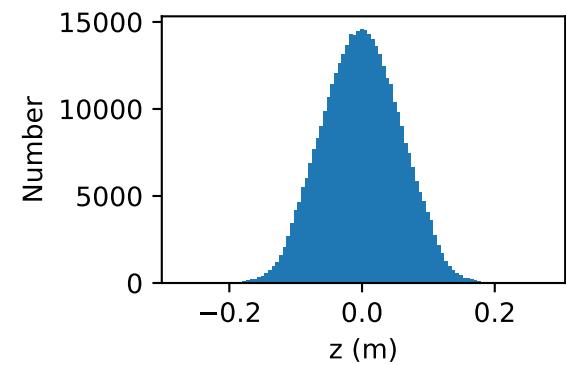
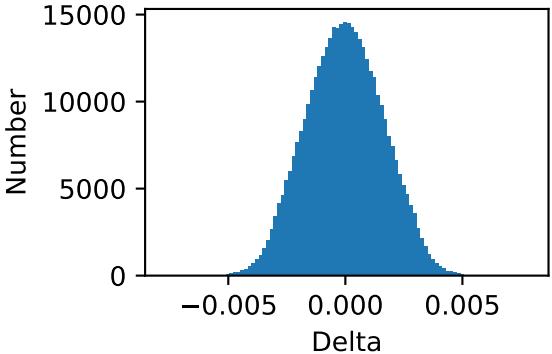
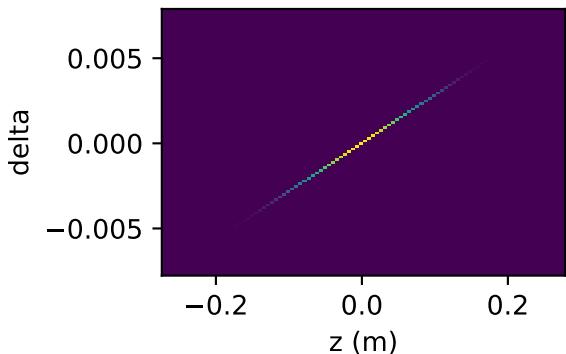
LhARA:1:Energy selection:Drift:11



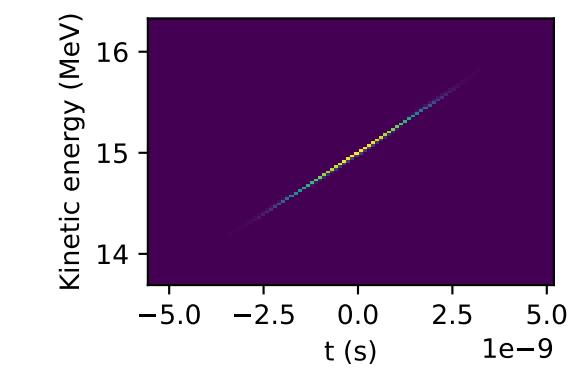
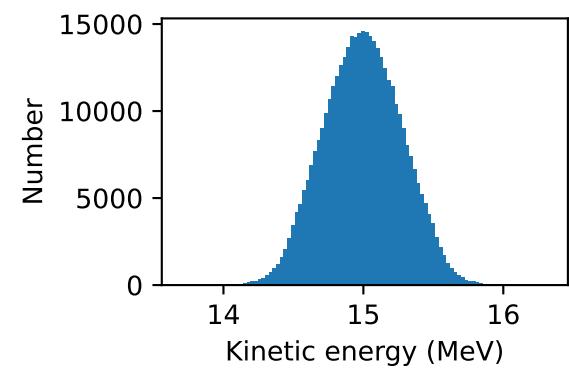
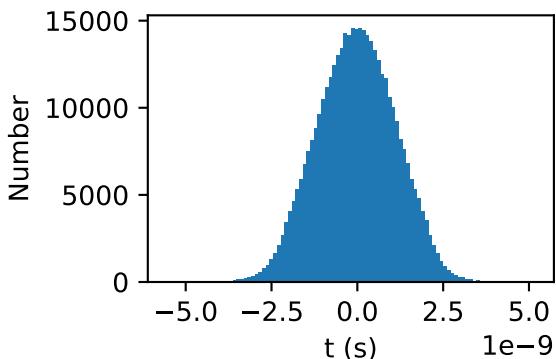
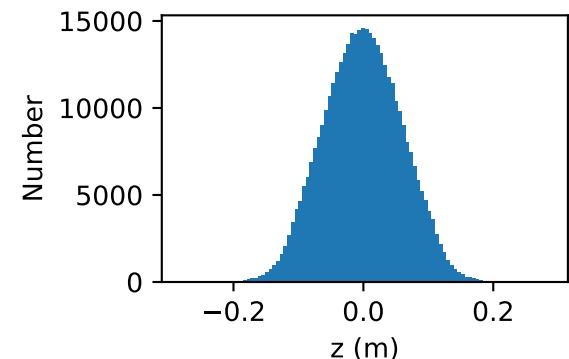
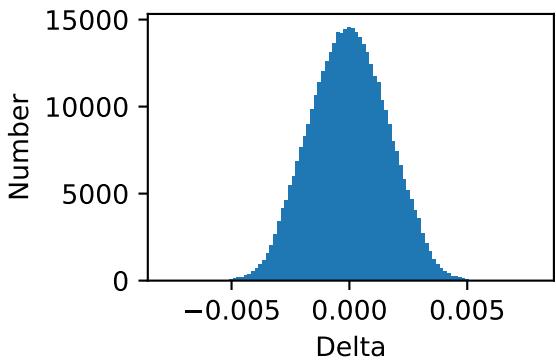
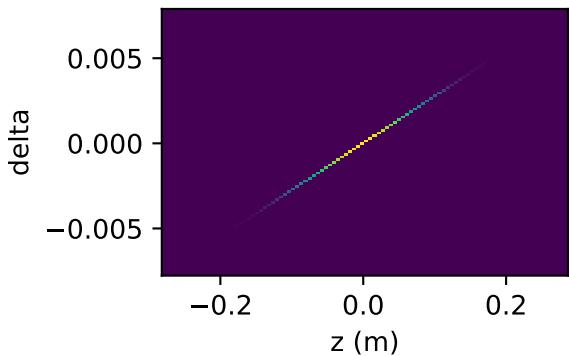
LhARA:1:Energy selection:Drift:12



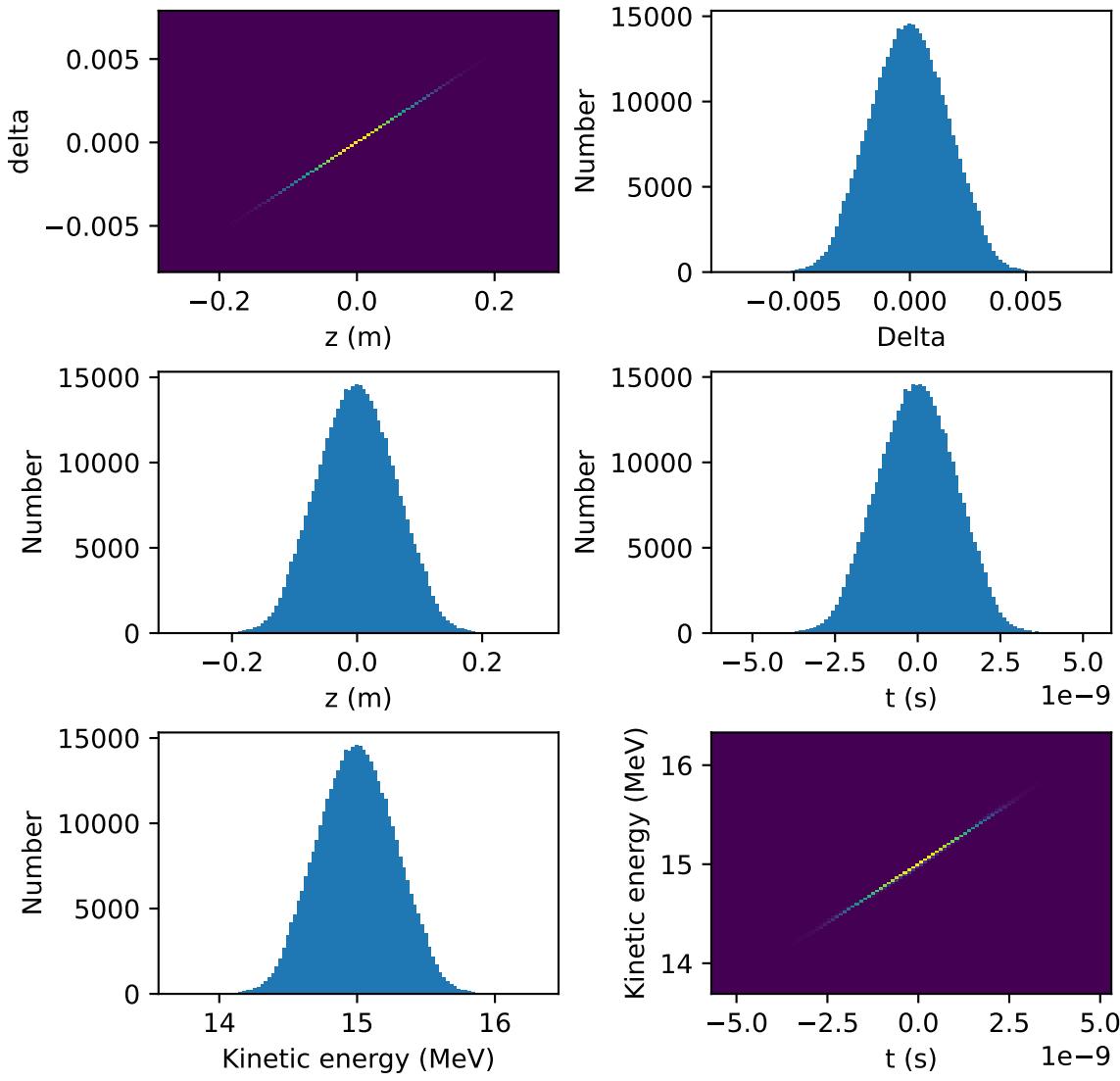
LhARA:1:Energy selection:Cavity:2



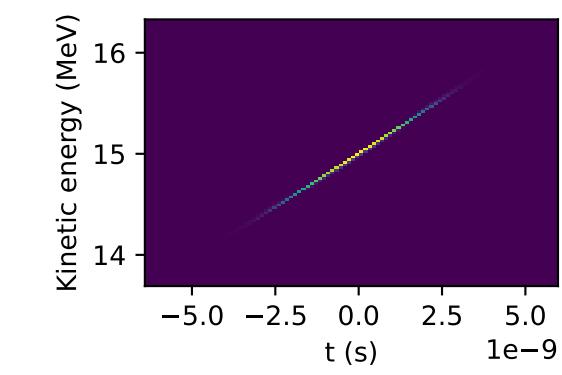
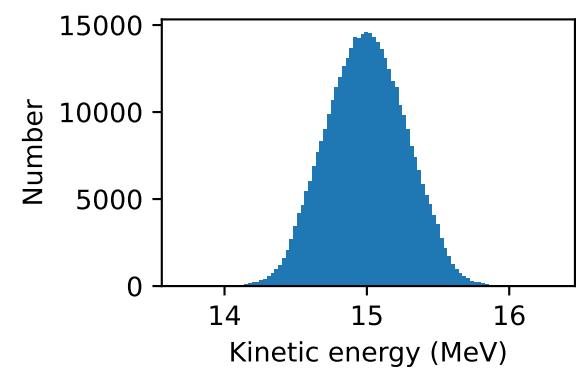
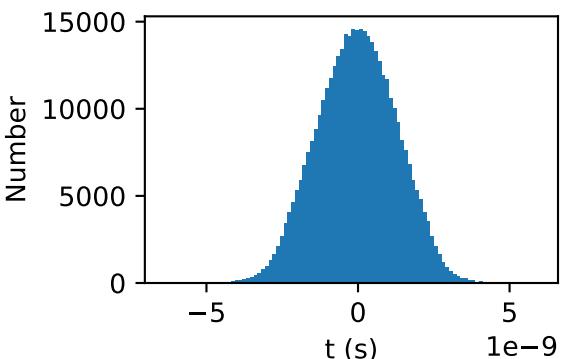
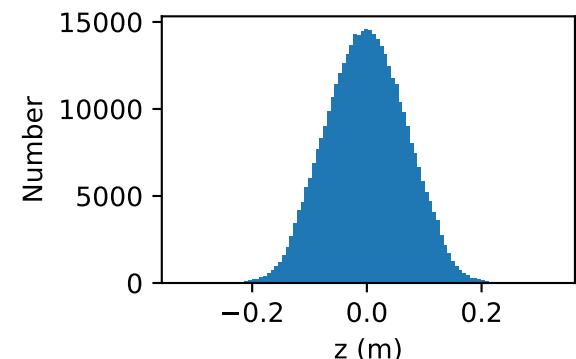
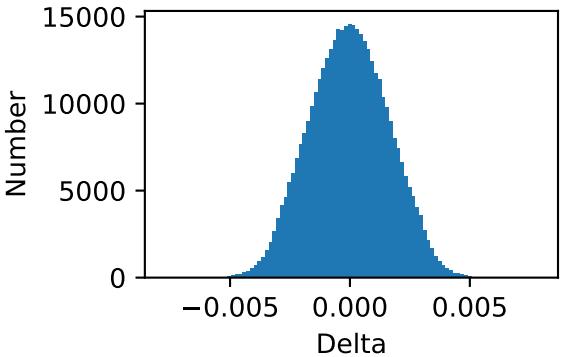
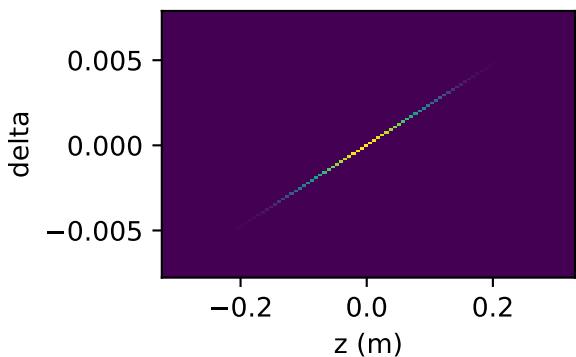
LhARA:1:Energy selection:Drift:13



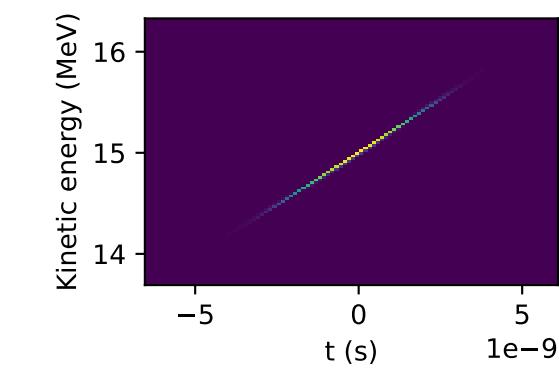
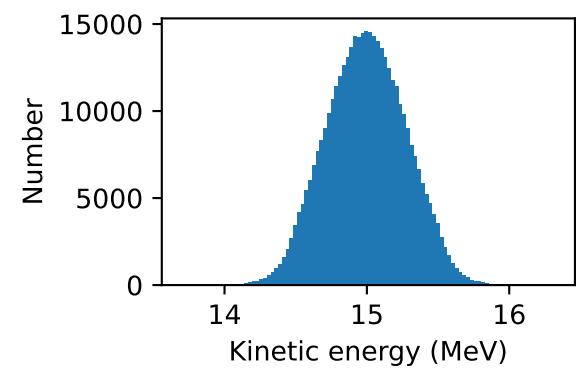
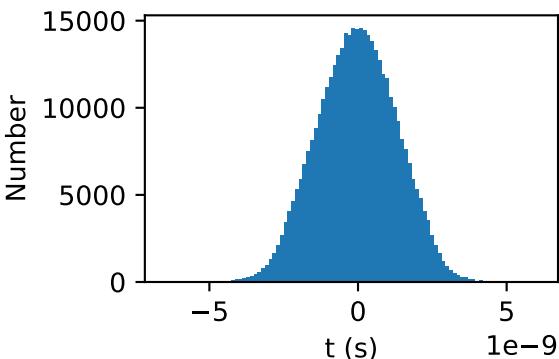
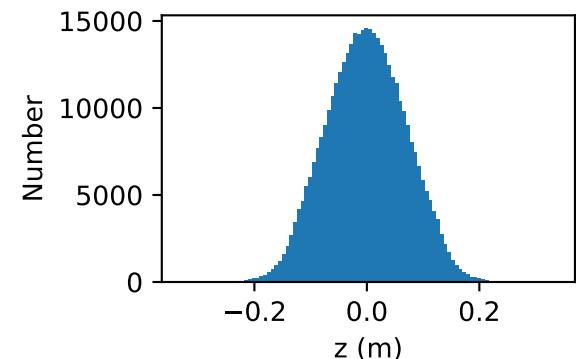
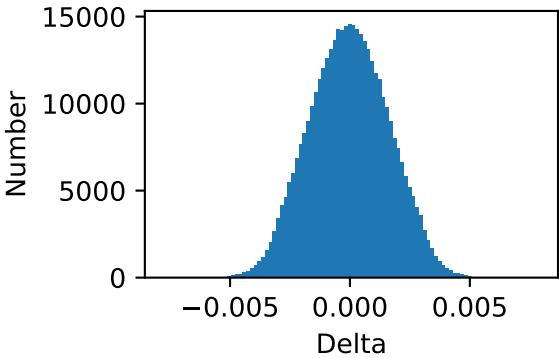
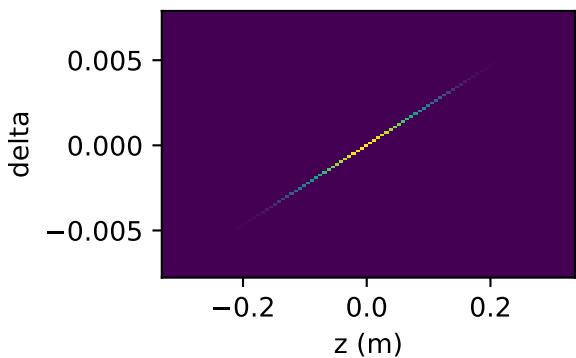
LhARA:1:Matching:Drift:1



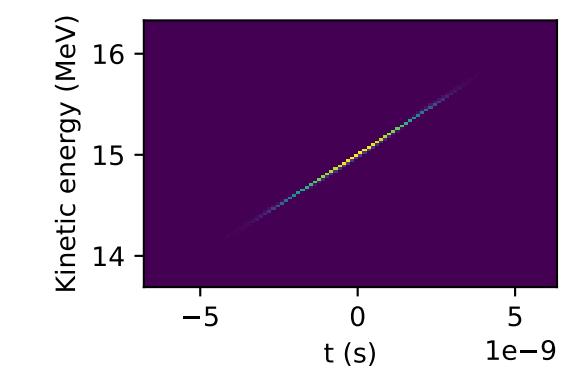
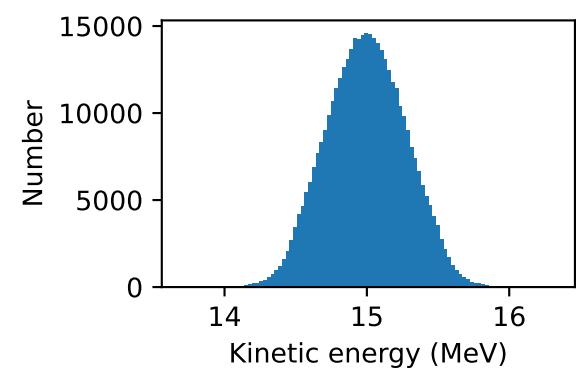
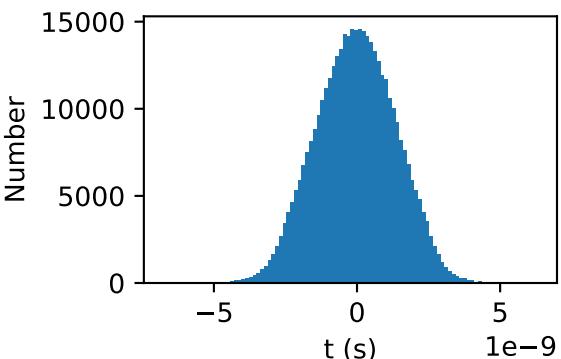
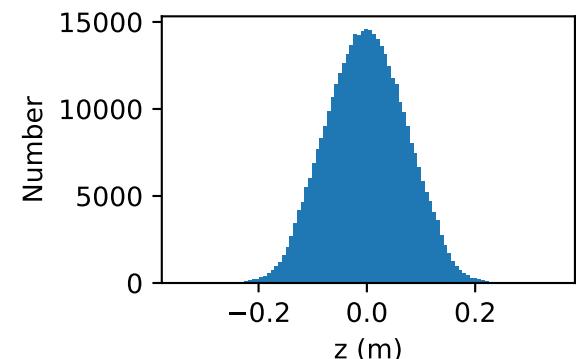
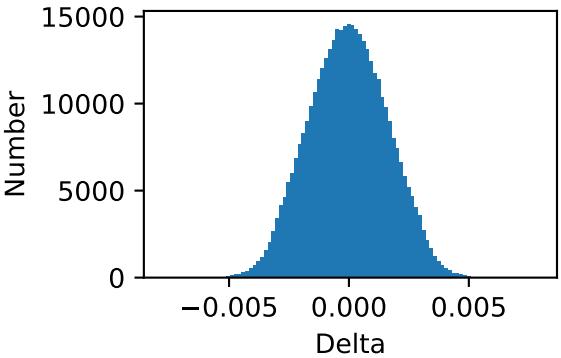
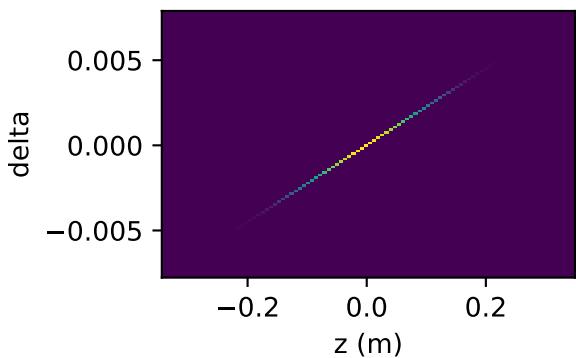
LhARA:1:Matching:Solenoid:1



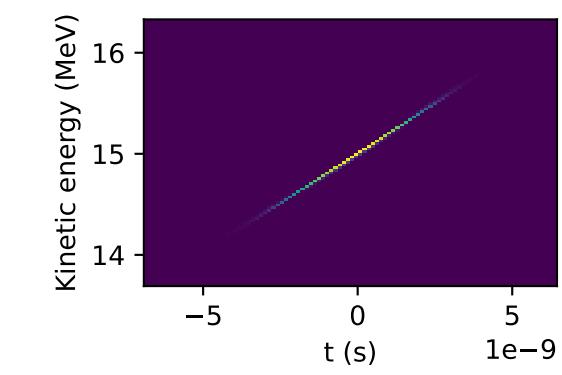
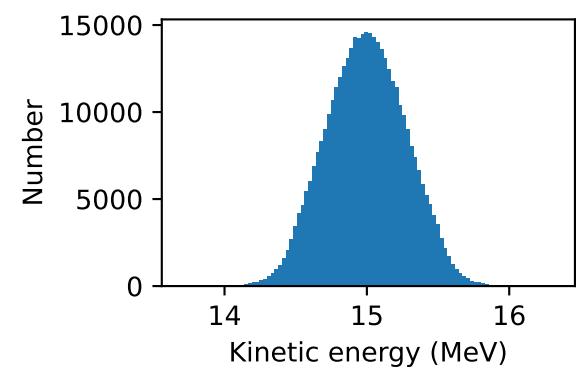
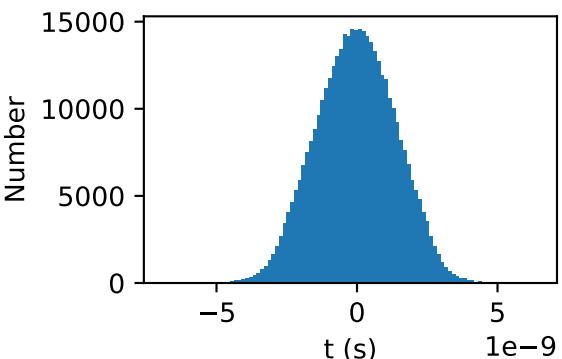
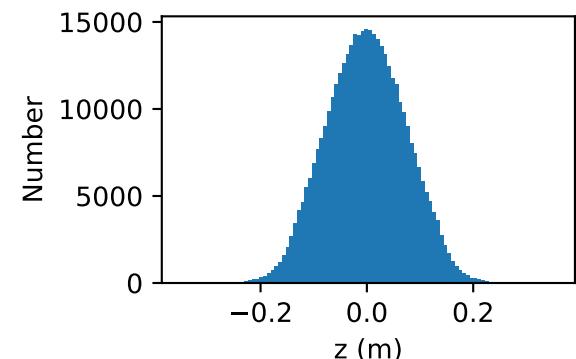
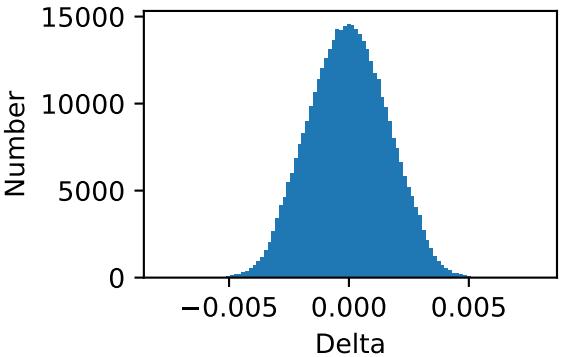
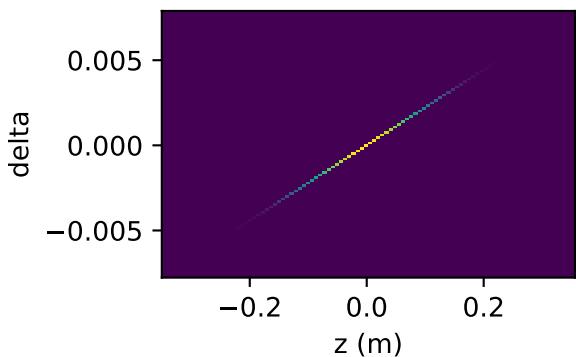
LhARA:1:Matching:Drift:2



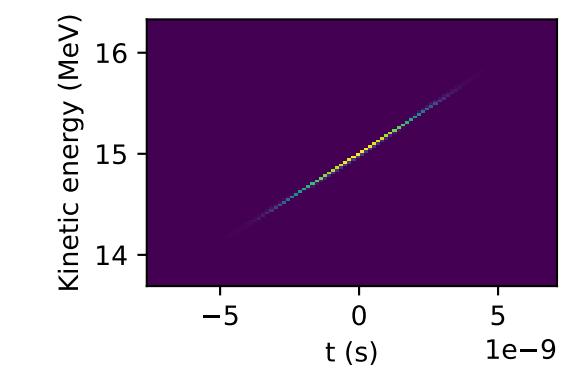
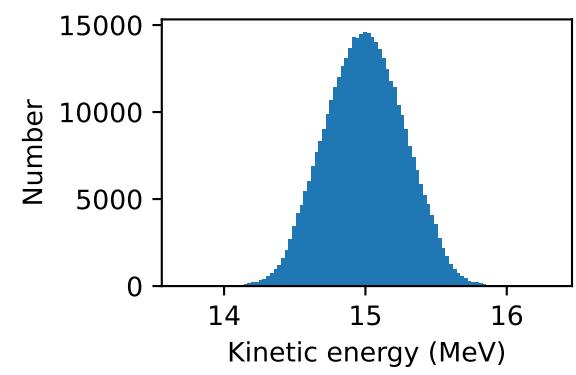
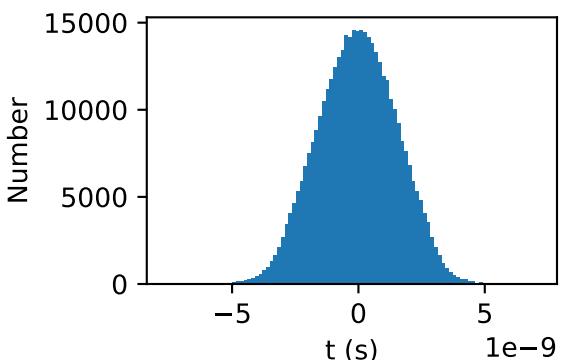
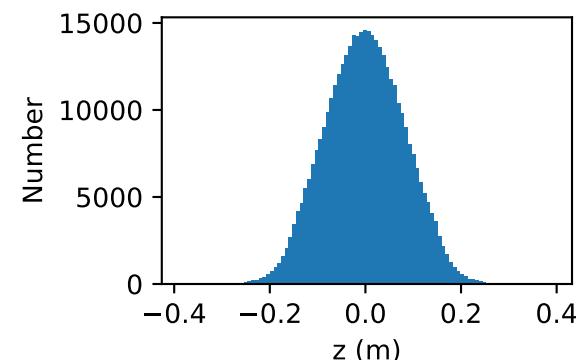
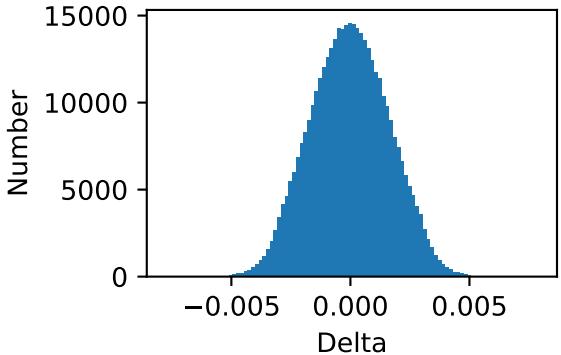
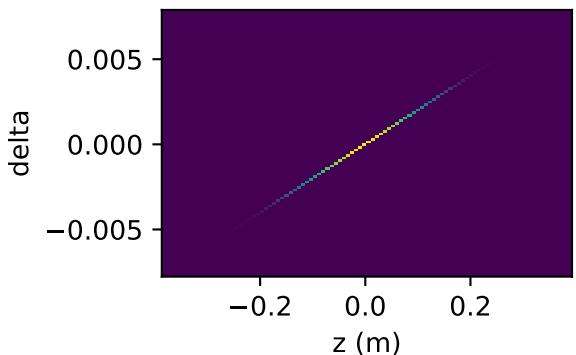
LhARA:1:Matching:Drift:3



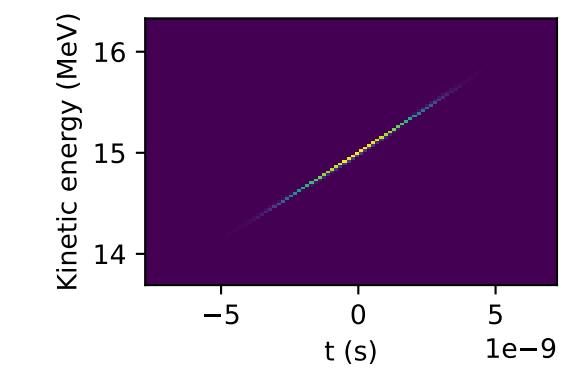
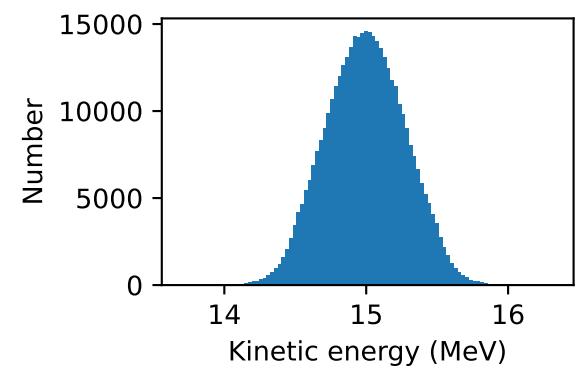
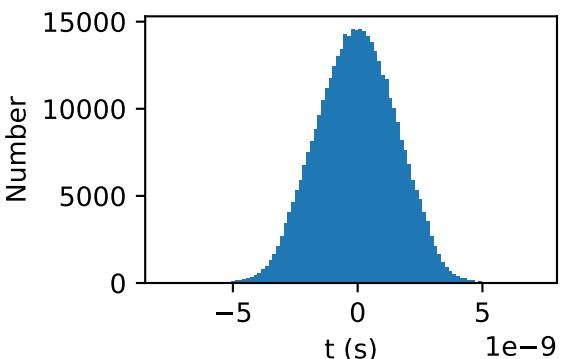
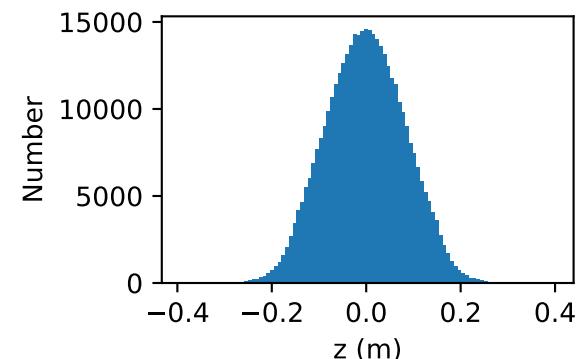
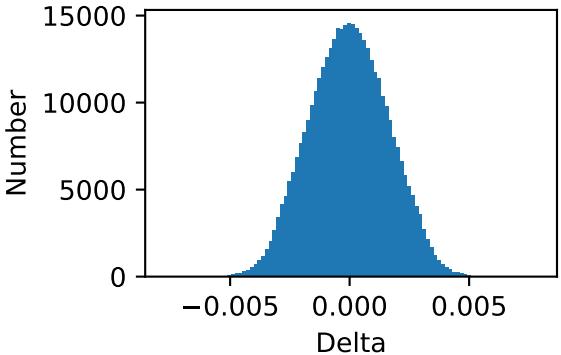
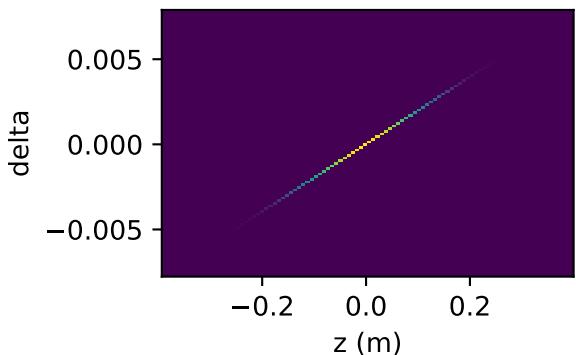
LhARA:1:Matching:Drift:4



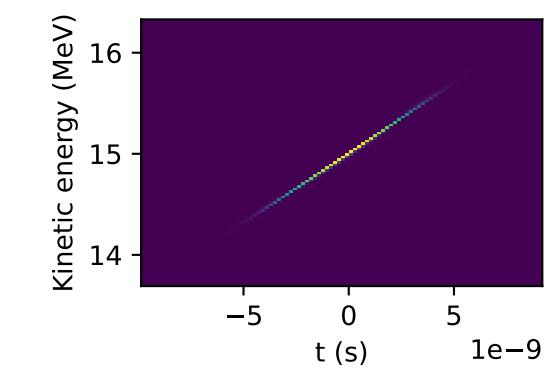
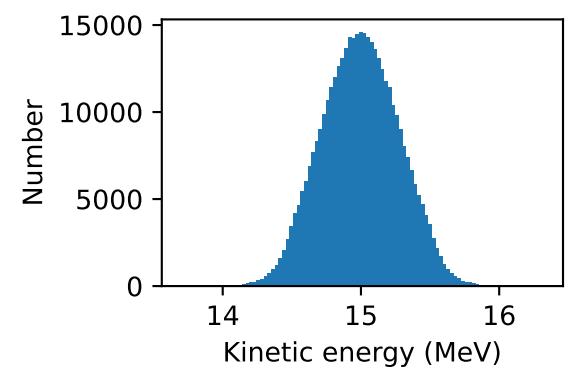
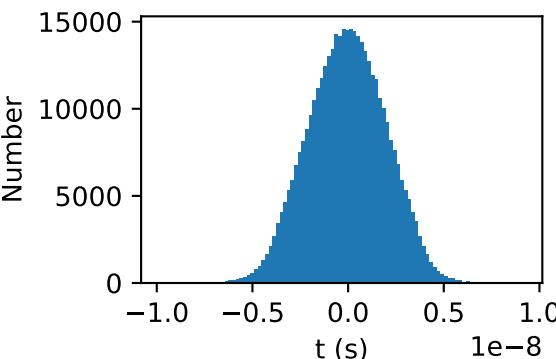
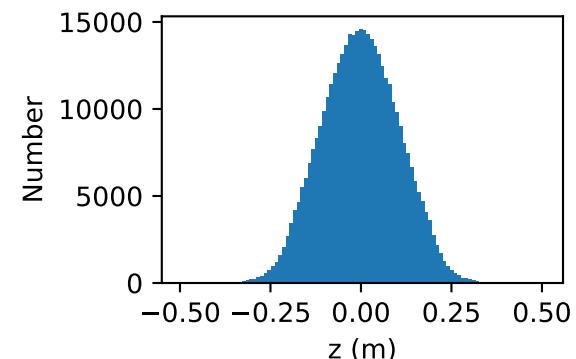
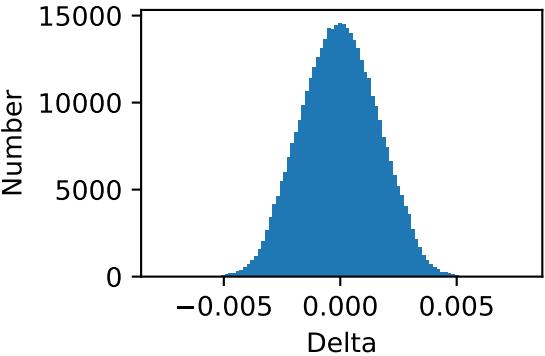
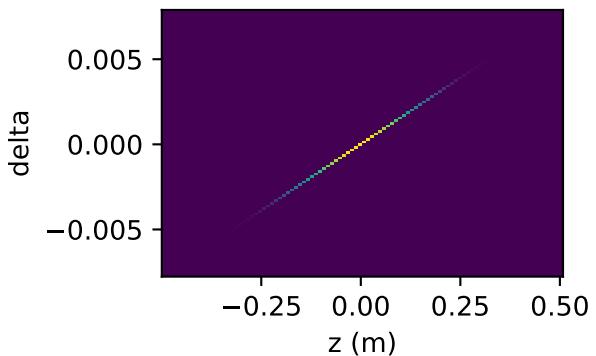
LhARA:1:Matching:Solenoid:2



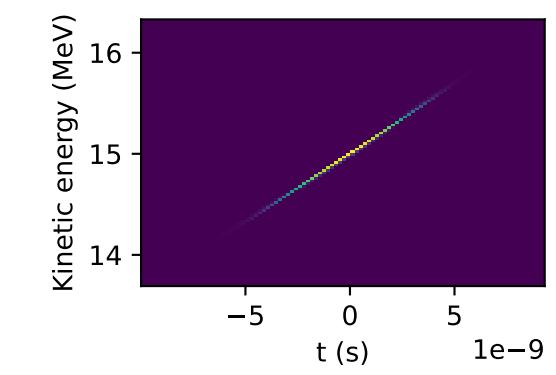
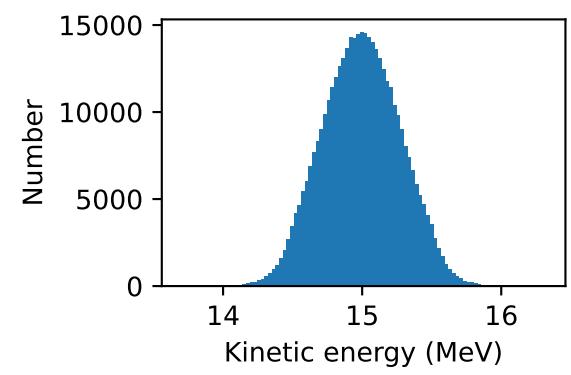
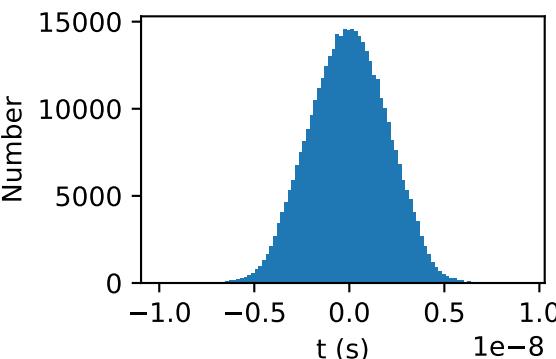
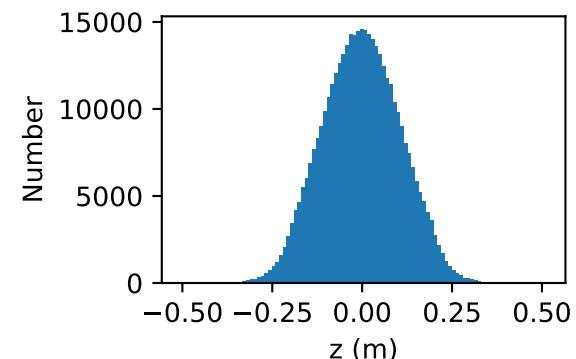
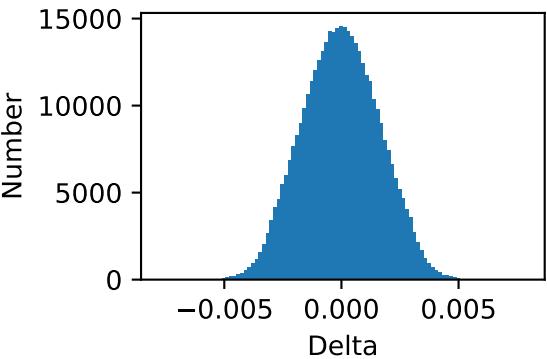
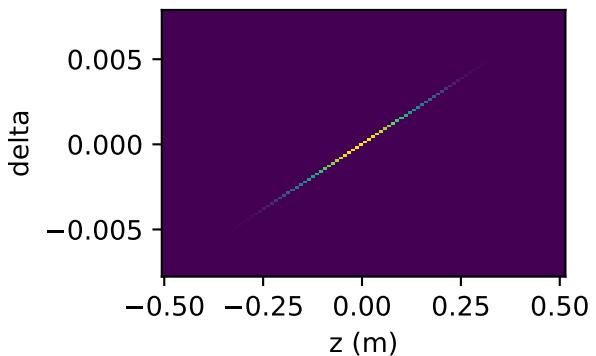
LhARA:1:Matching:Drift:5



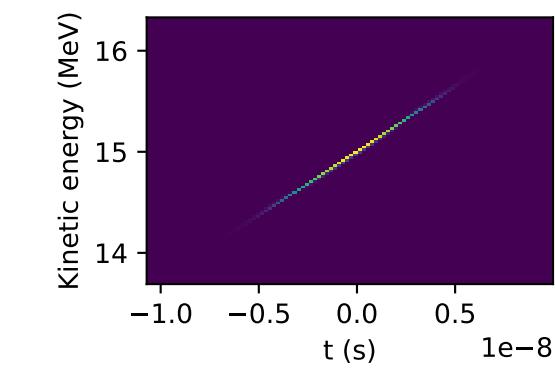
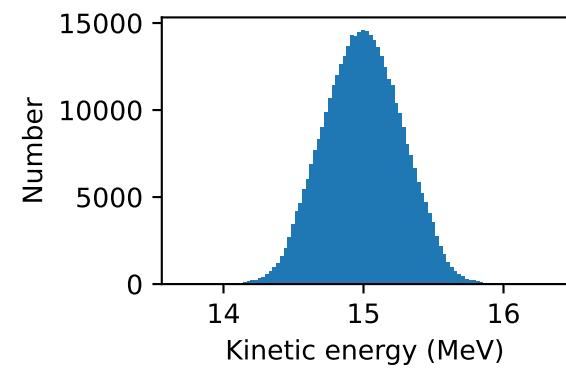
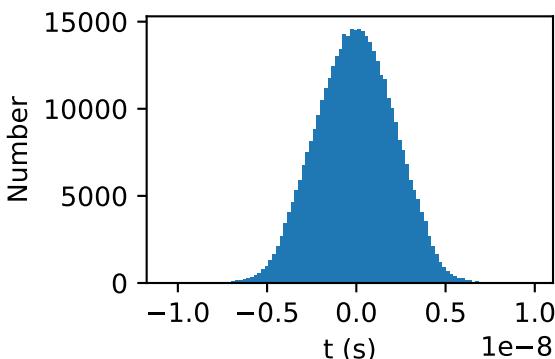
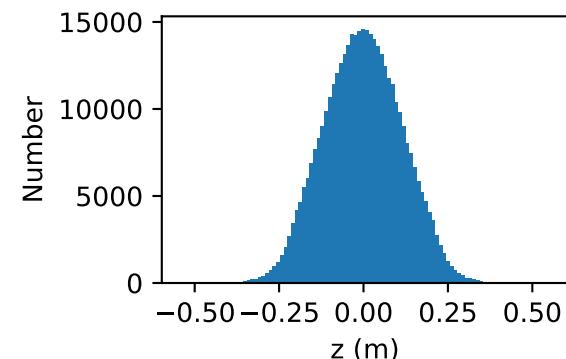
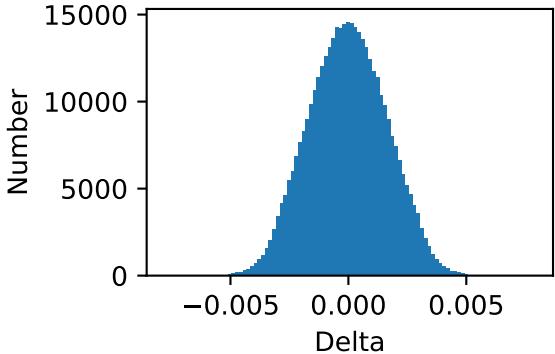
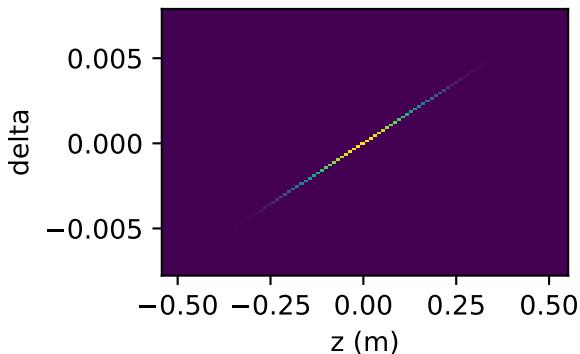
LhARA:1:Matching:Drift:6



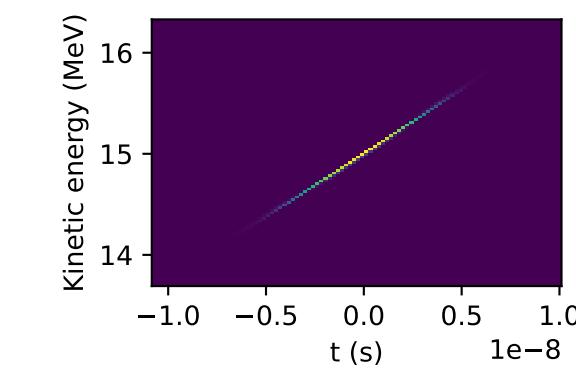
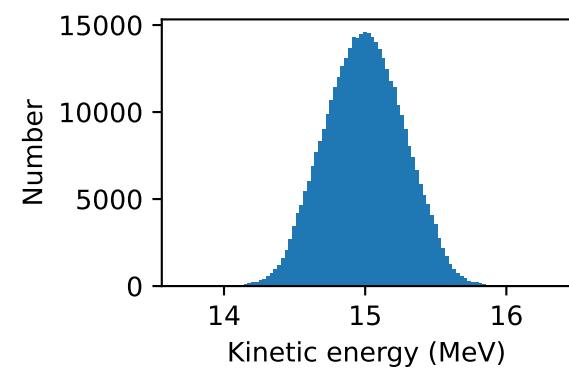
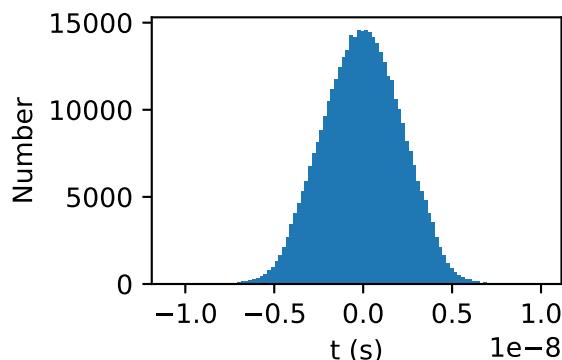
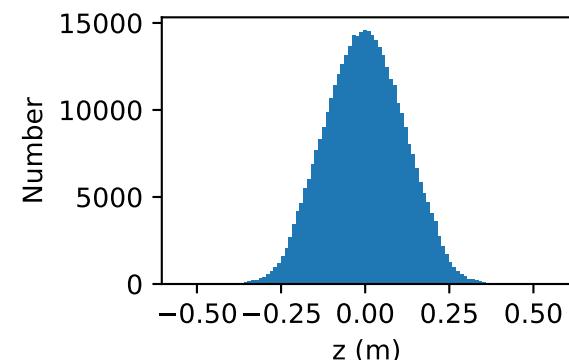
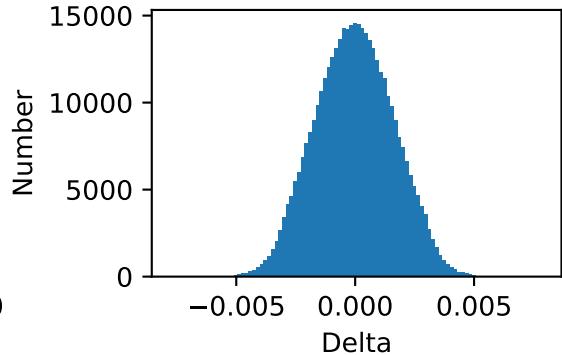
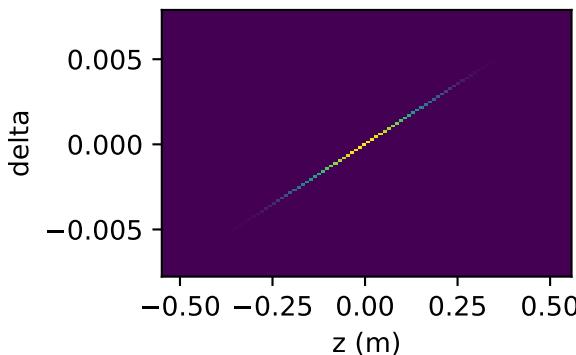
LhARA:1:Matching:Drift:7



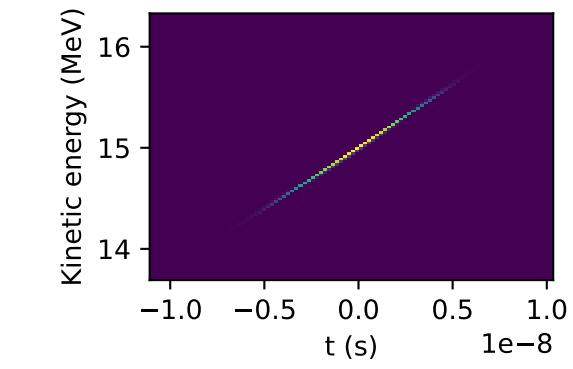
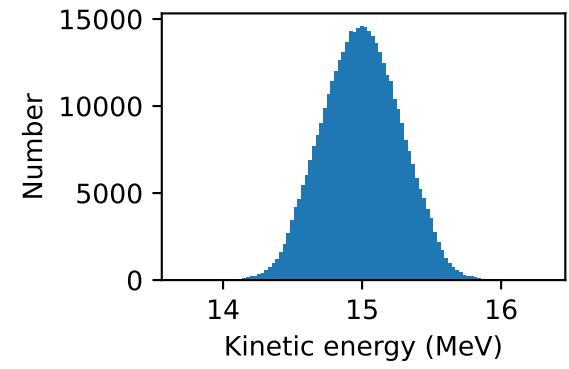
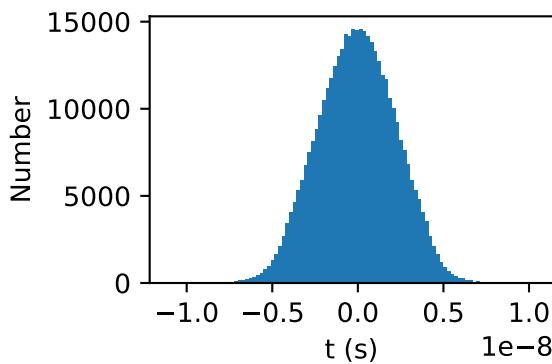
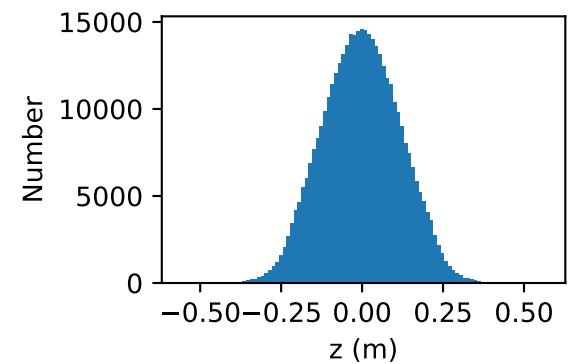
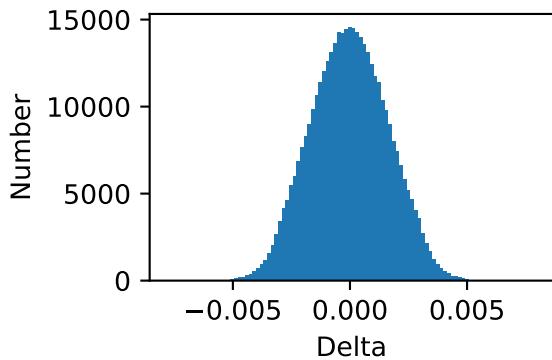
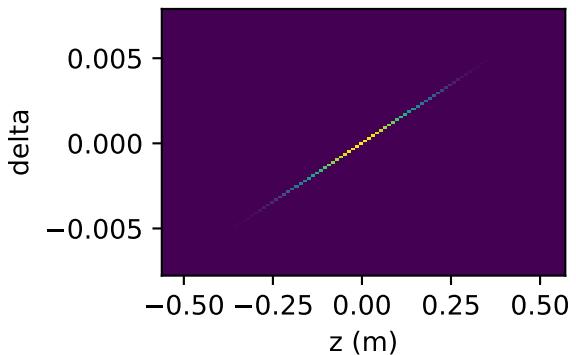
LhARA:1:Matching:Solenoid:3



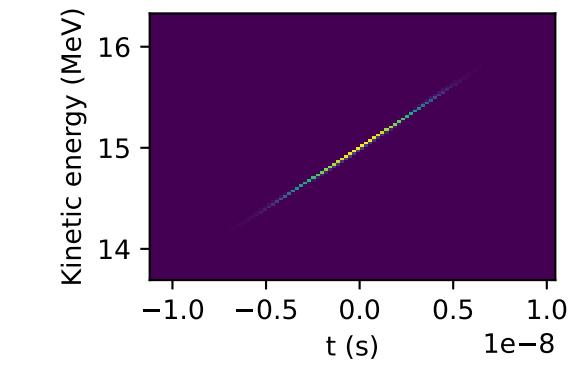
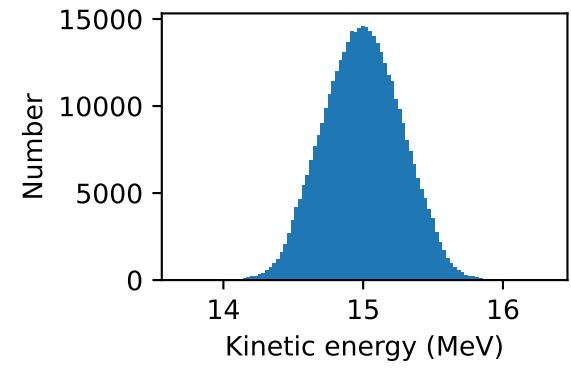
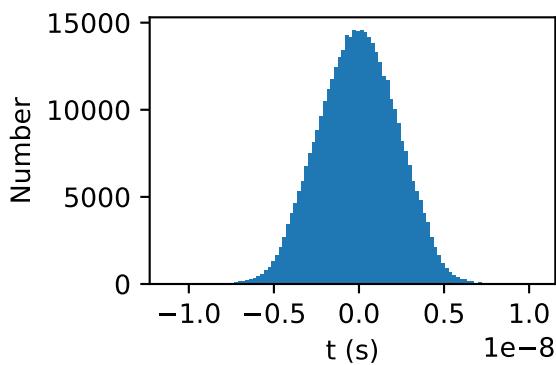
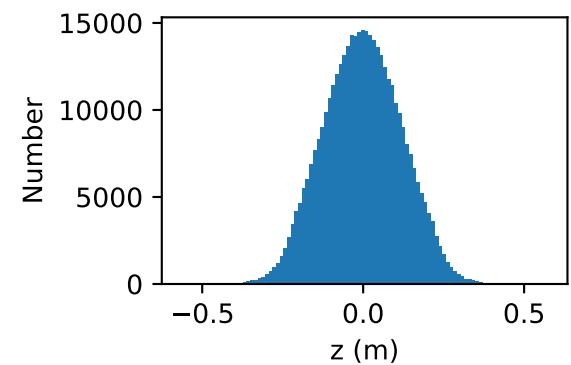
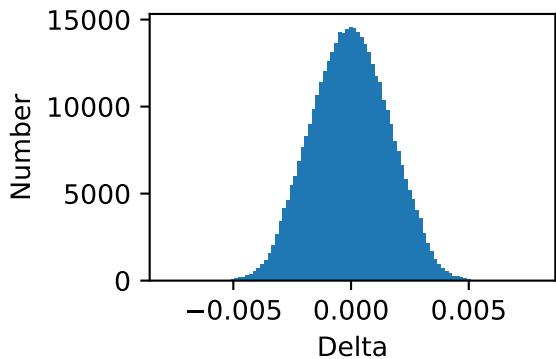
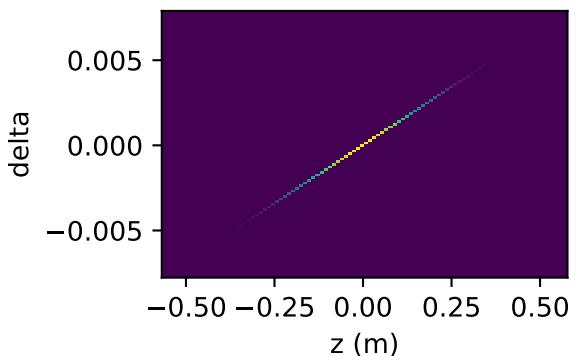
LhARA:1:Matching:Drift:8



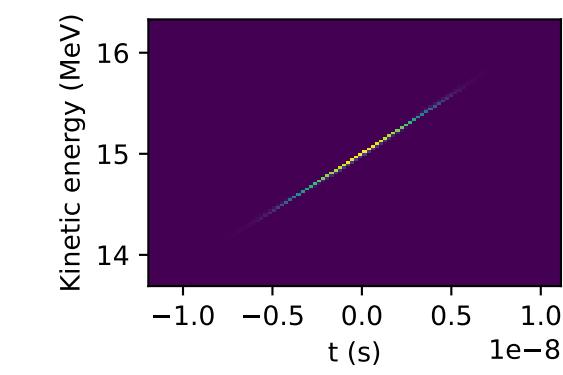
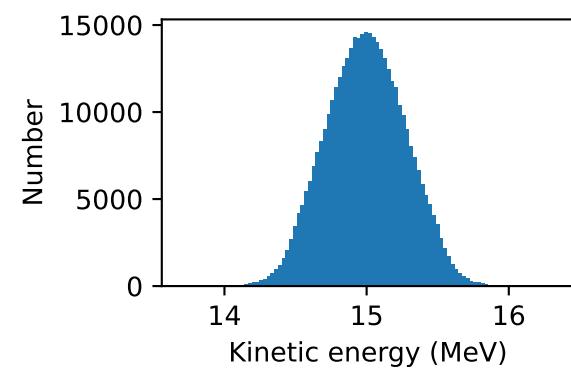
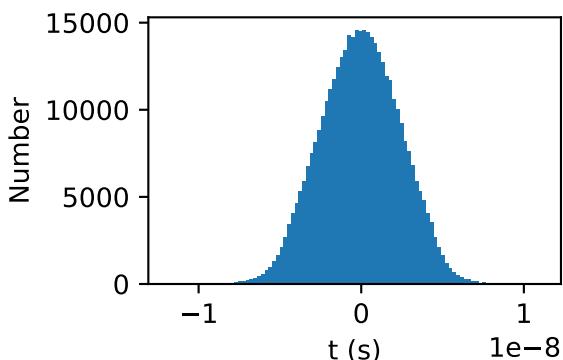
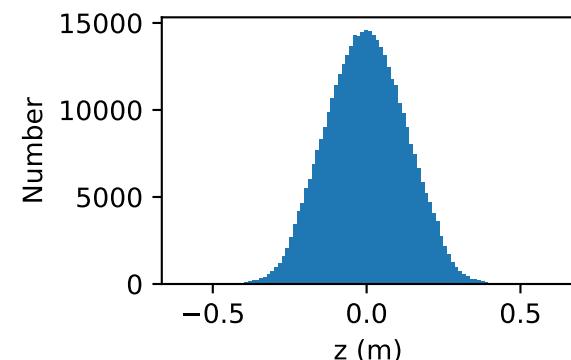
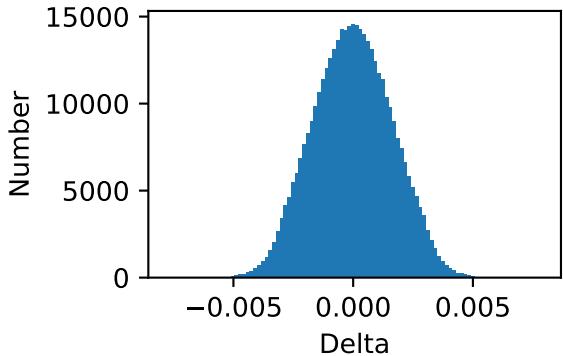
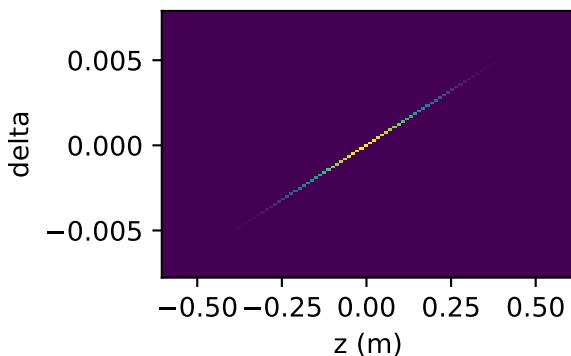
LhARA:1:Matching:Drift:9



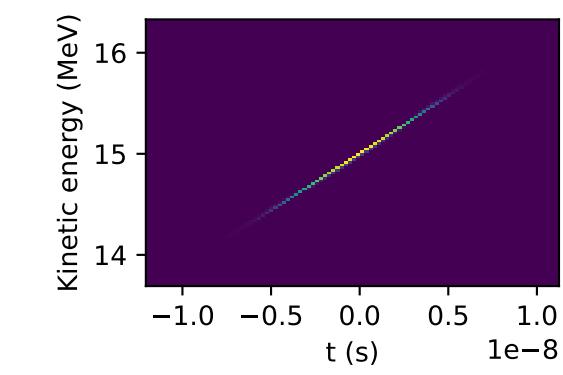
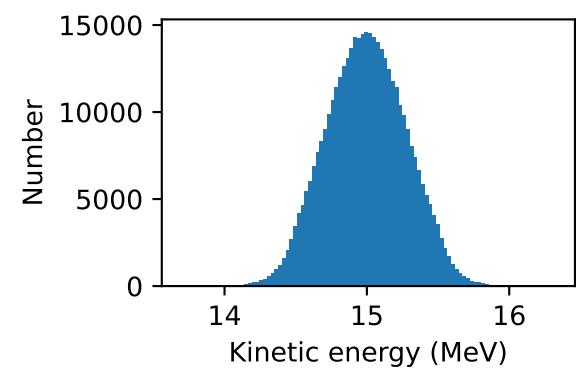
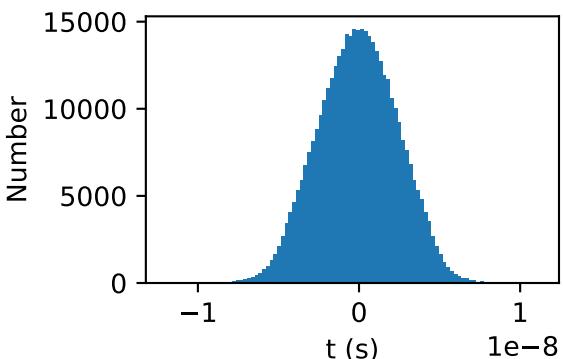
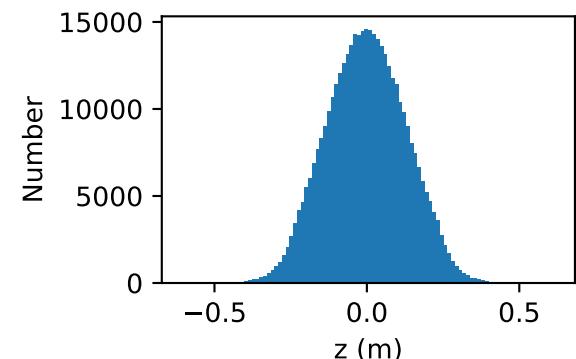
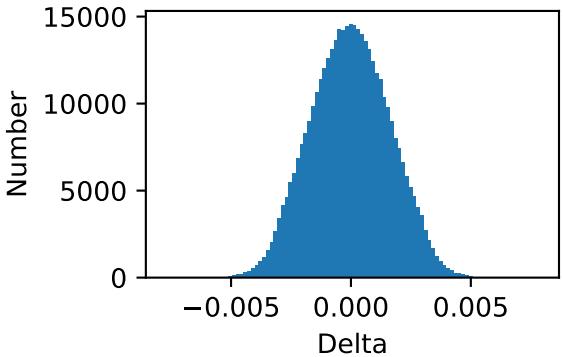
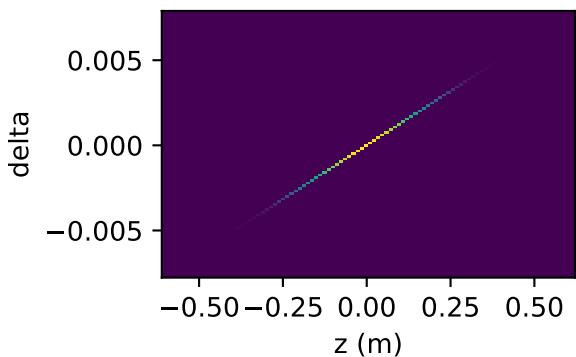
LhARA:1:Matching:Drift:10



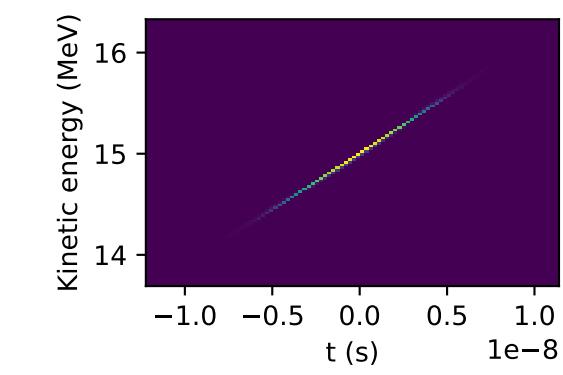
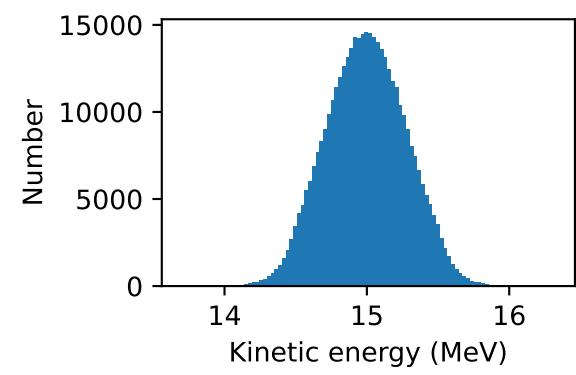
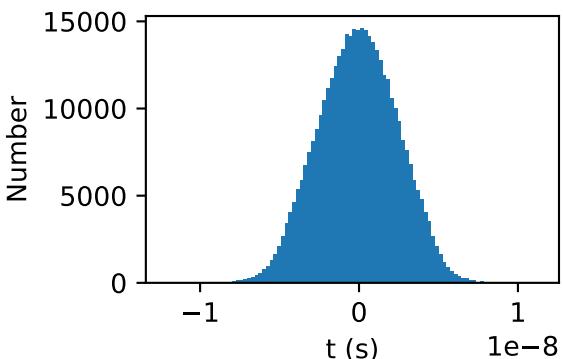
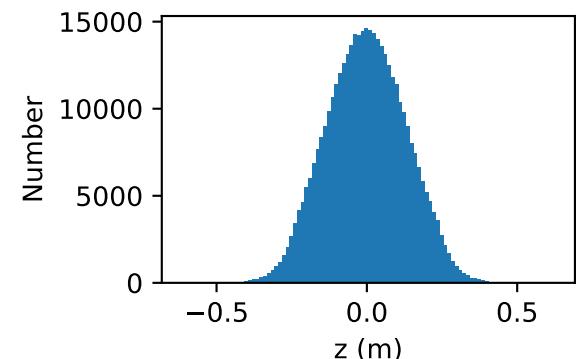
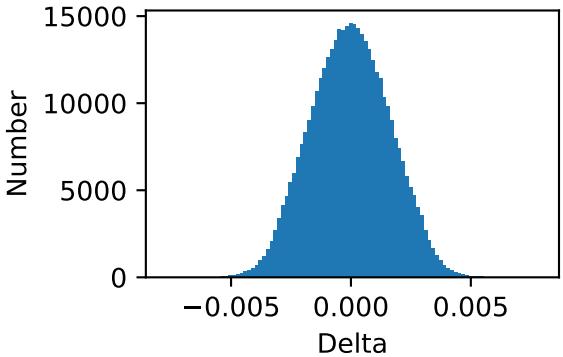
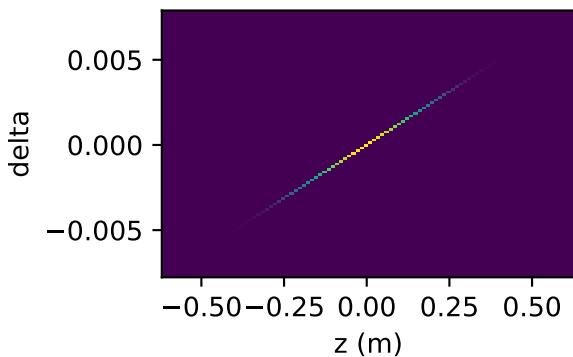
LhARA:1:Matching:Solenoid:4



LhARA:1:Matching:Drift:11

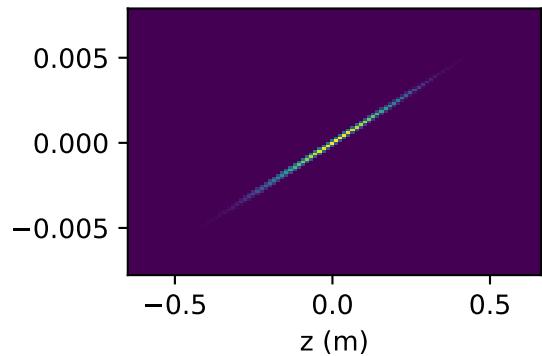


LhARA:1:Arc:Drift:1

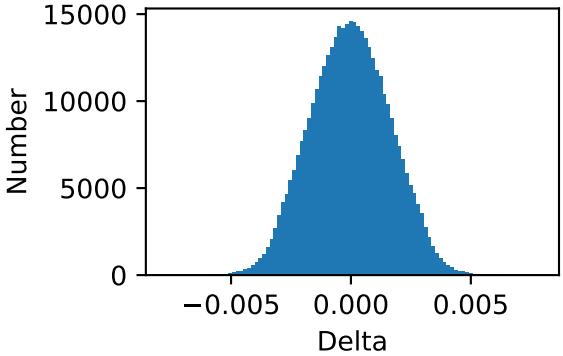


LhARA:1:Arc:Dipole:1

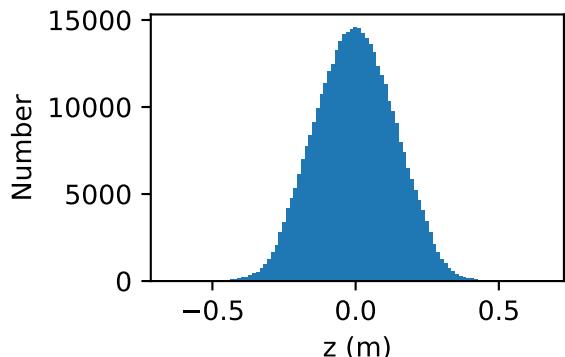
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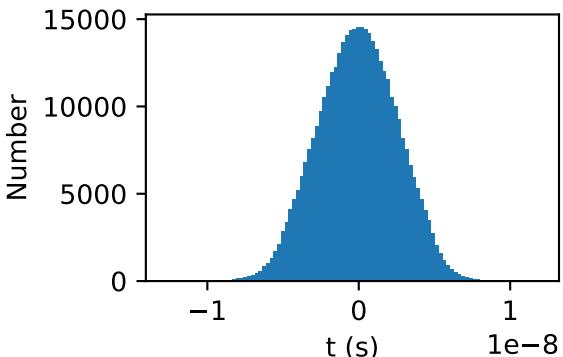
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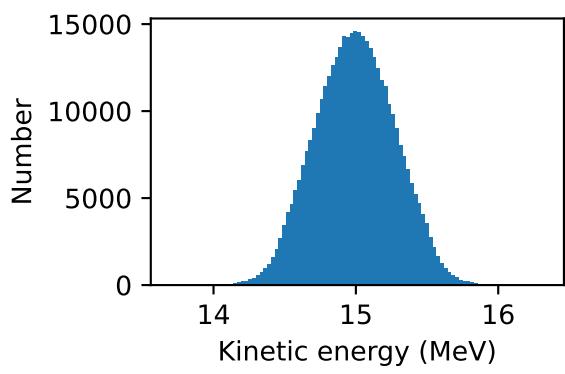
Number



Number

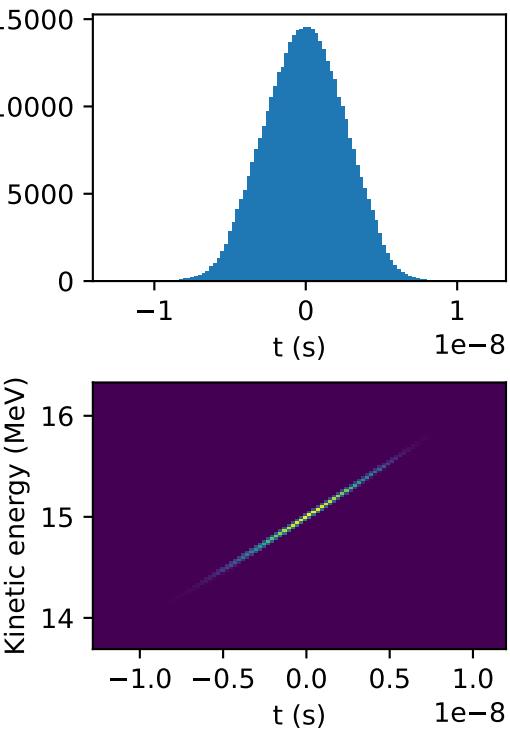


Number



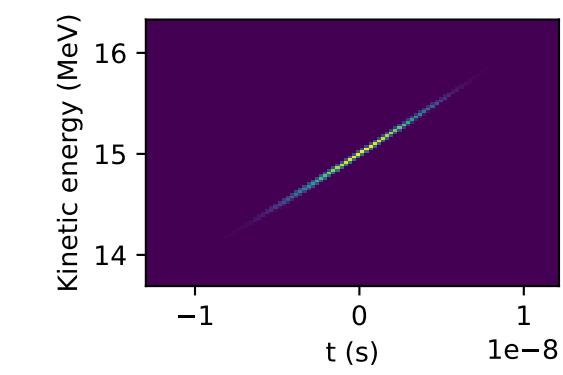
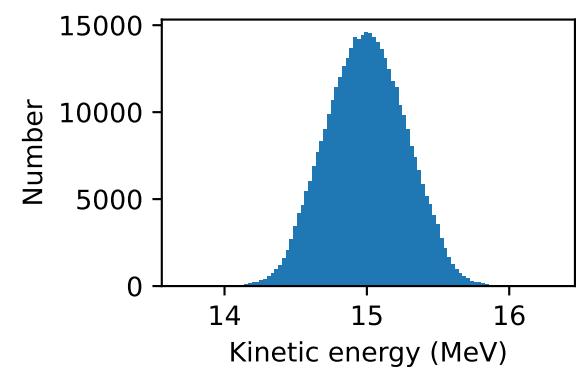
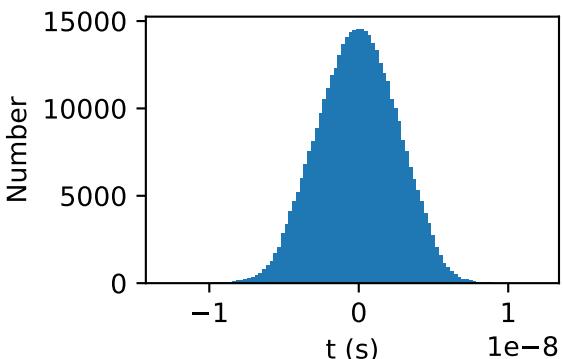
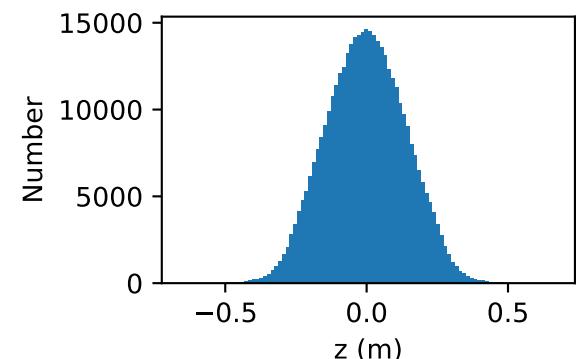
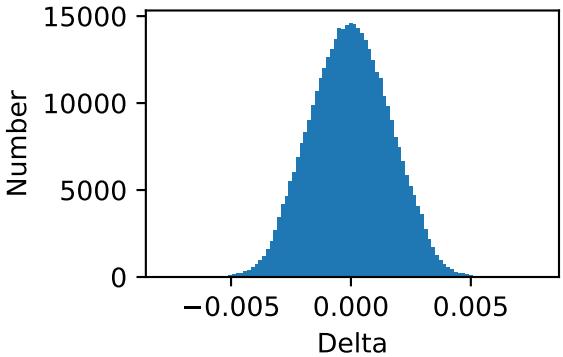
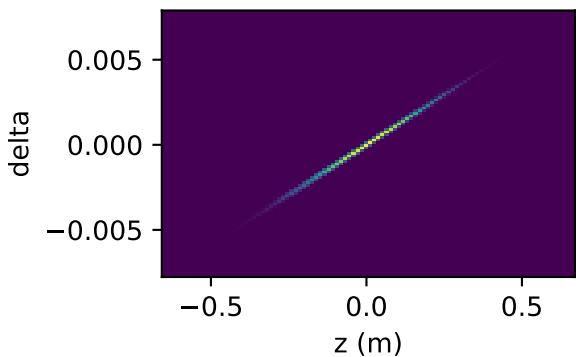
Kinetic energy (MeV)

Number



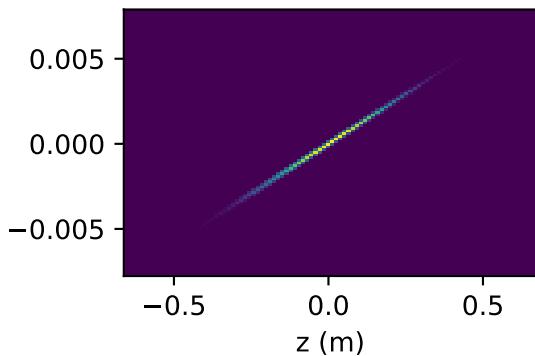
t (s)

LhARA:1:Arc:Drift:2

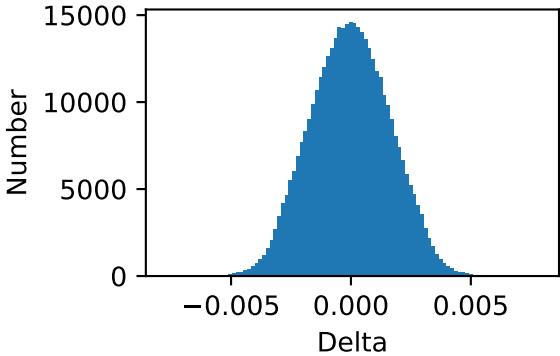


LhARA:1:Arc:Dquad:1

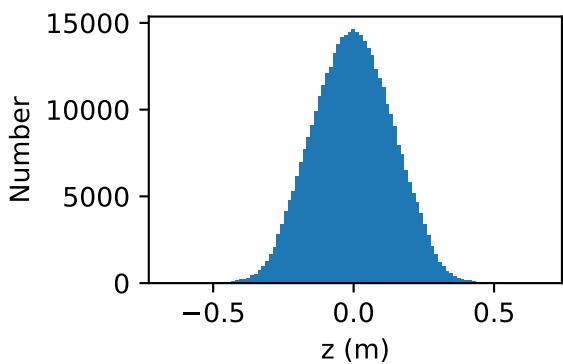
delta



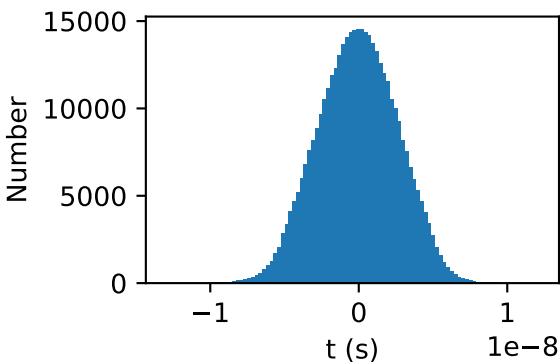
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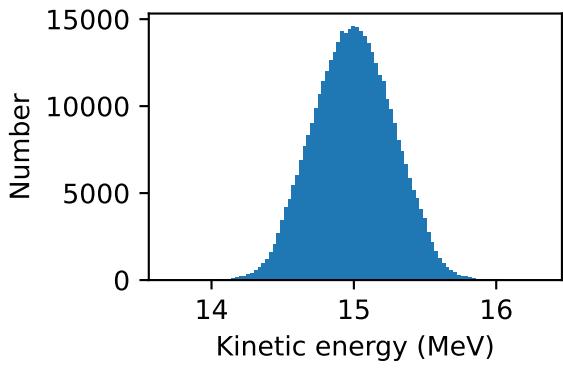
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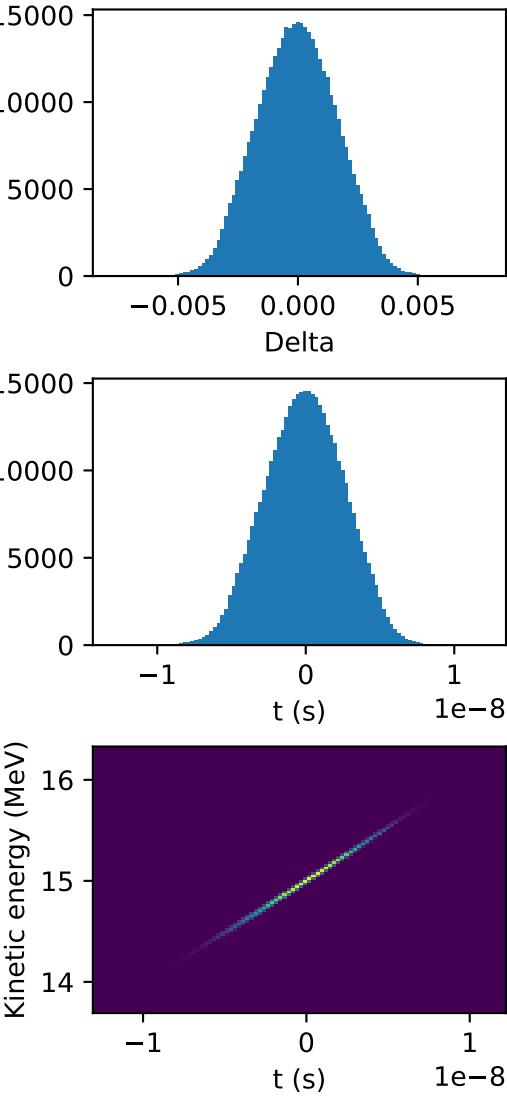
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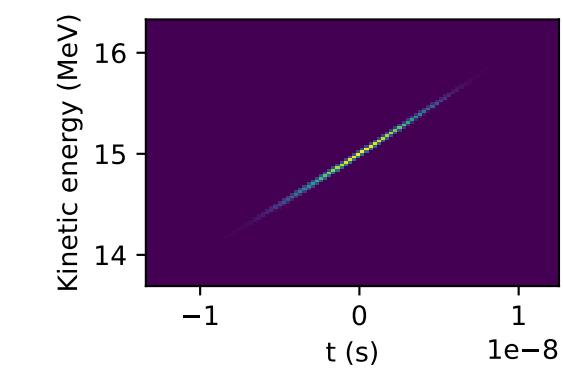
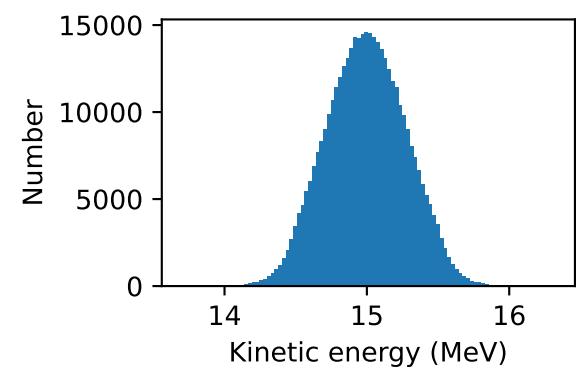
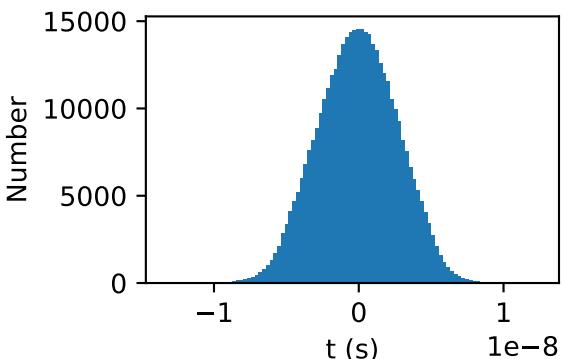
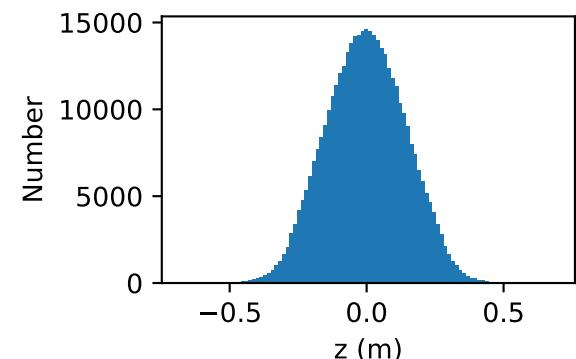
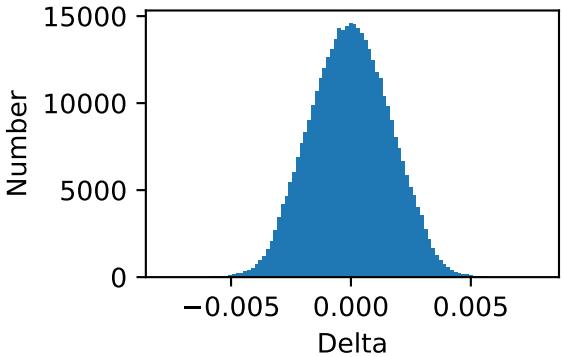
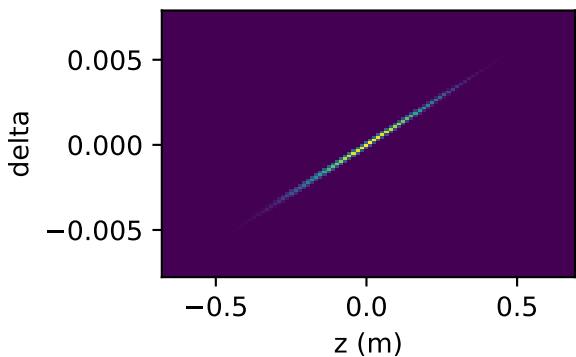
Number



Kinetic energy (MeV)

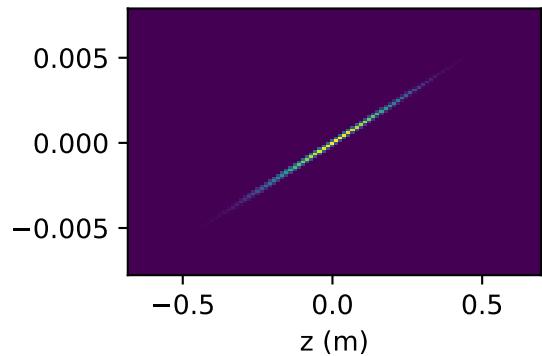


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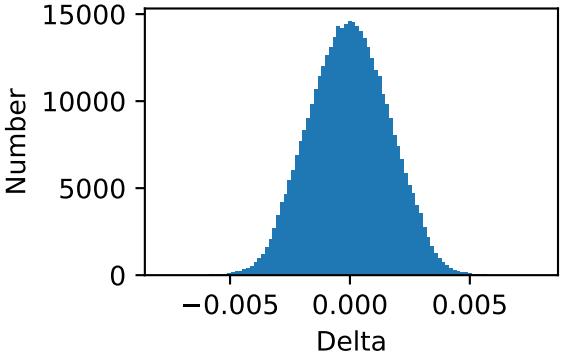


LhARA:1:Arc:Fquad:1

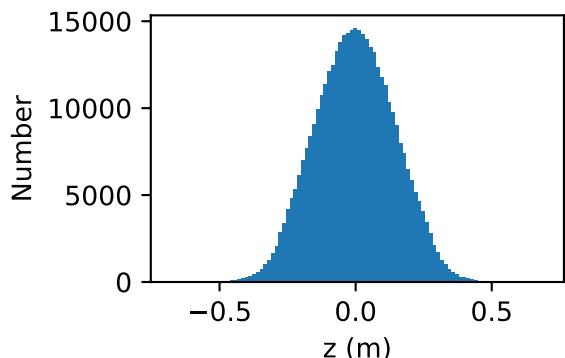
delta



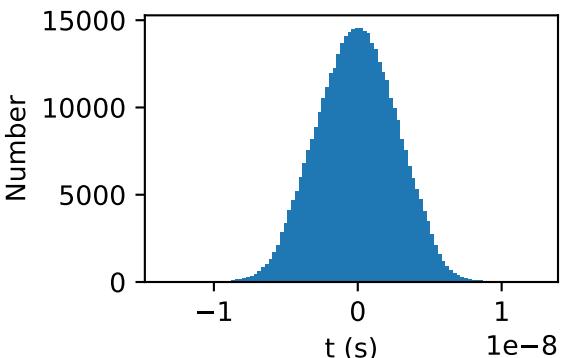
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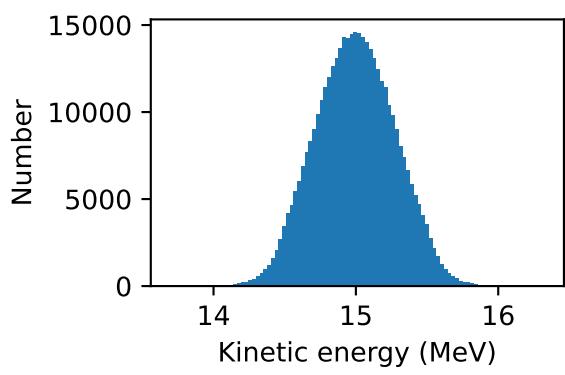
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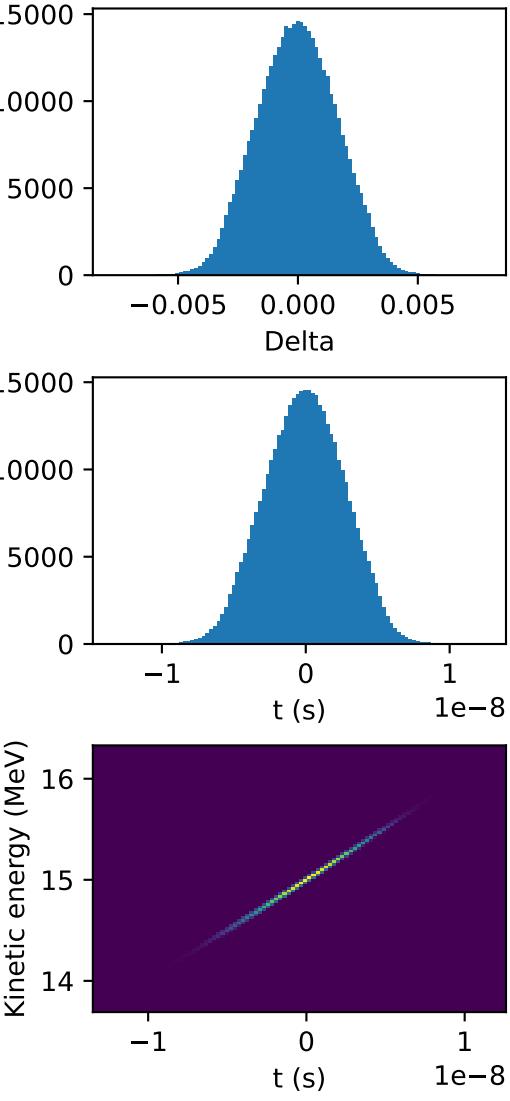
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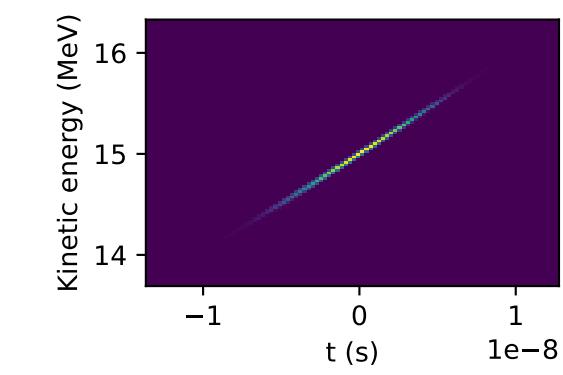
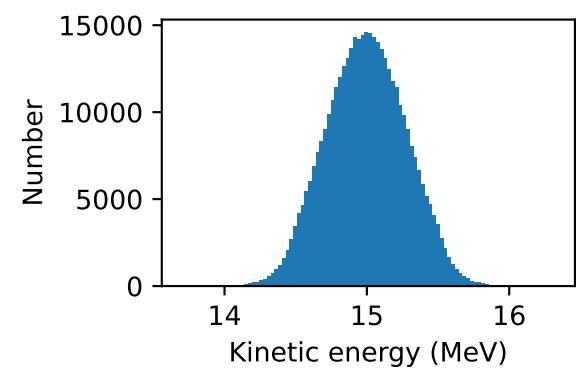
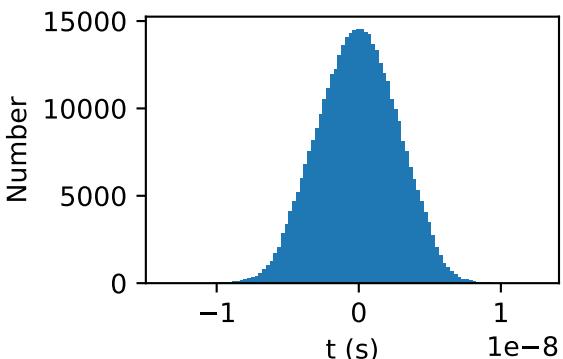
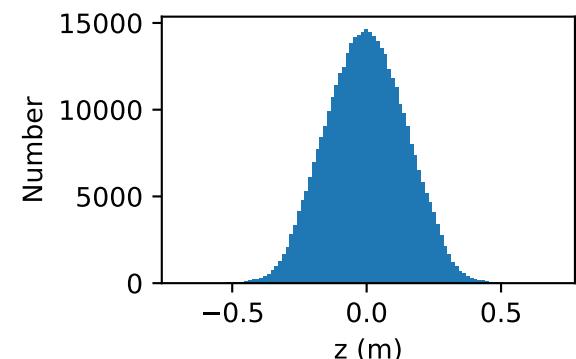
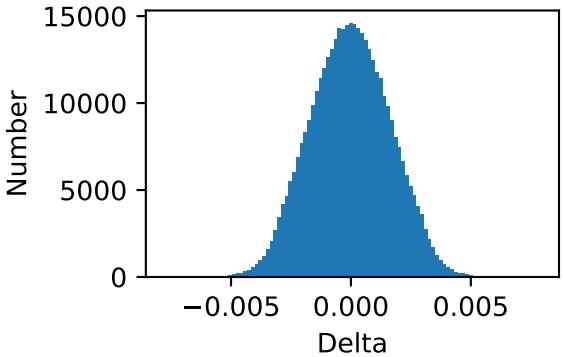
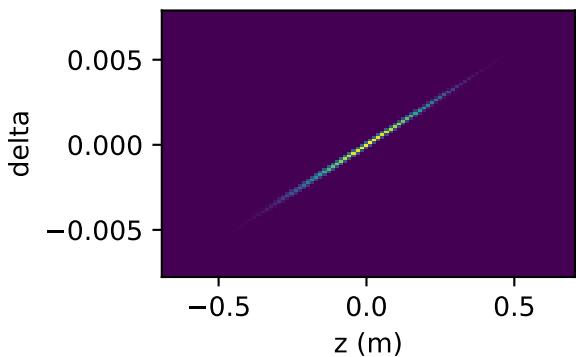
Number



Kinetic energy (MeV)

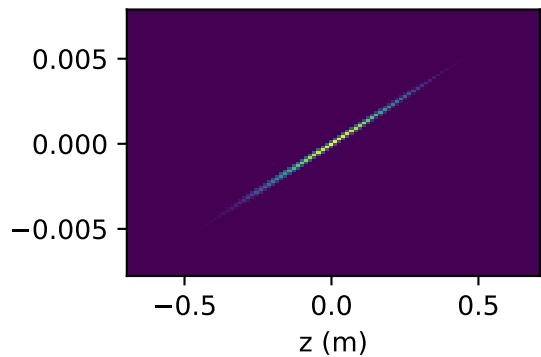


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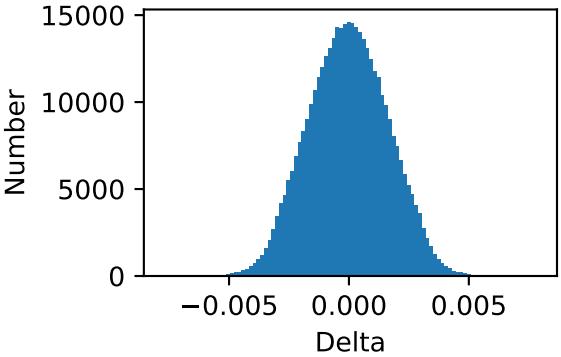


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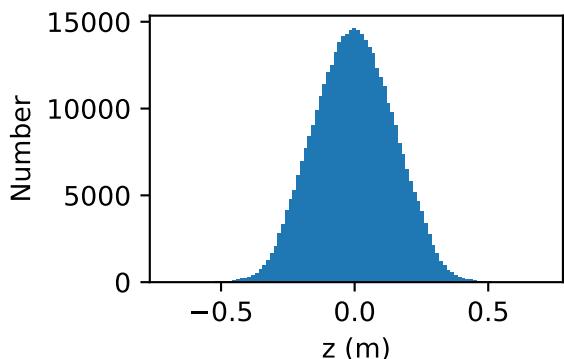
delta



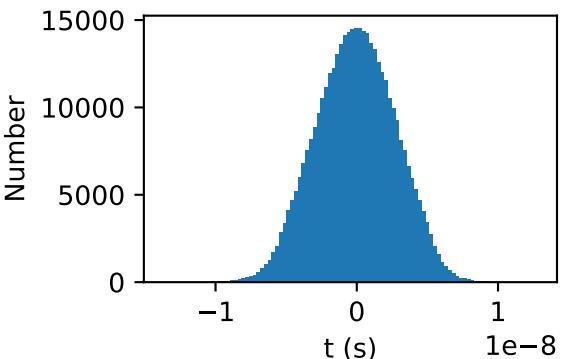
Number



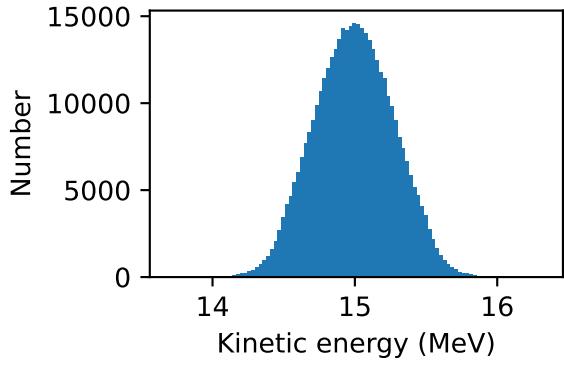
Number



Number



Number



Kinetic energy (MeV)

15000

10000

5000

0

16

15

14

-1

0

1

$1e-8$

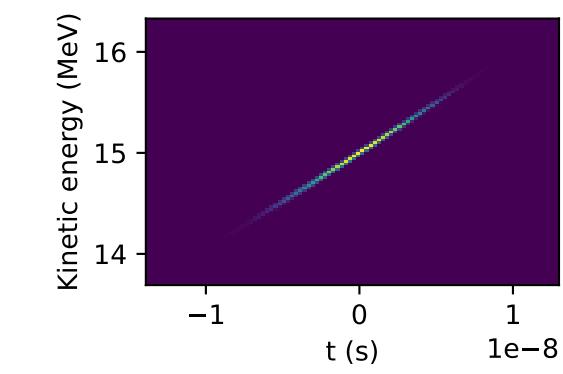
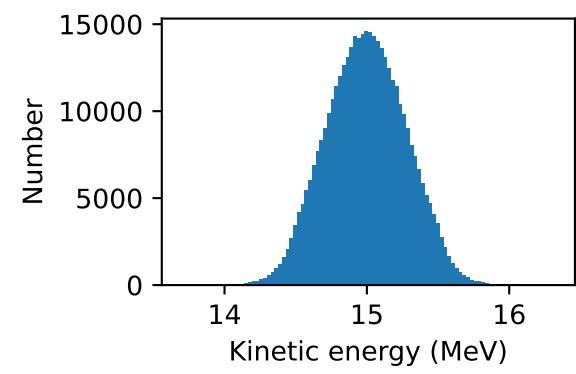
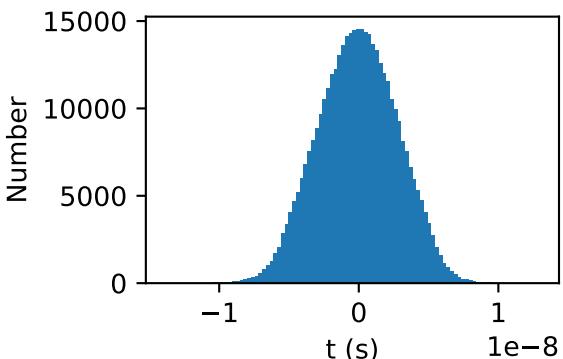
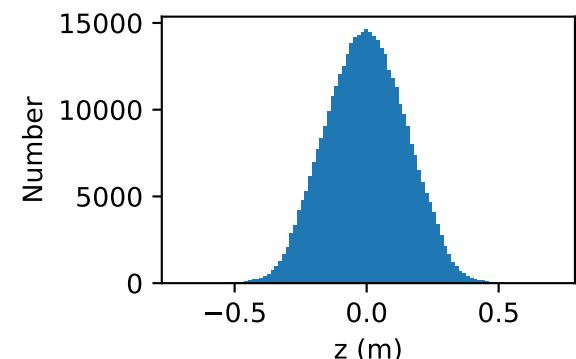
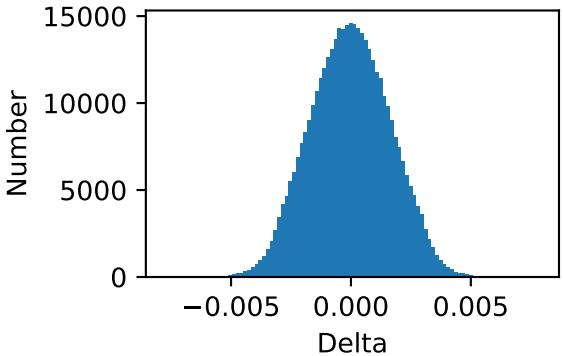
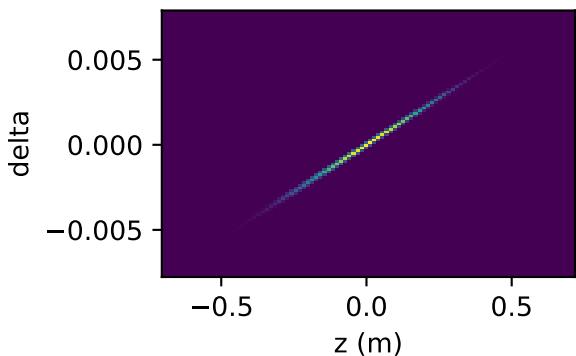
$1e-8$

Kinetic energy (MeV)

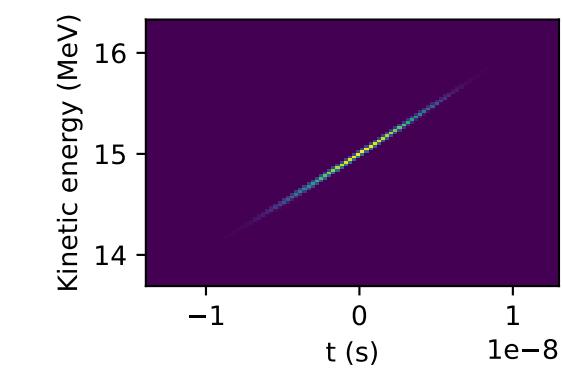
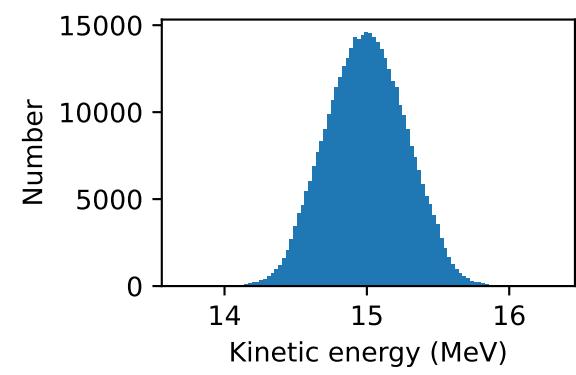
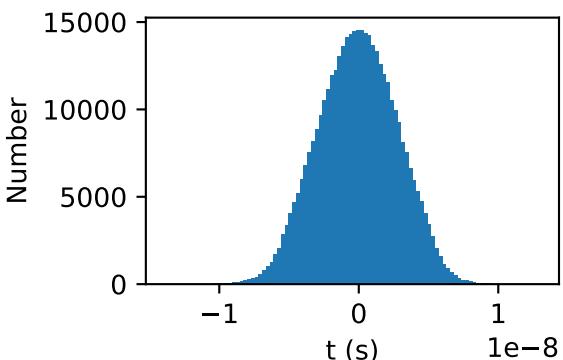
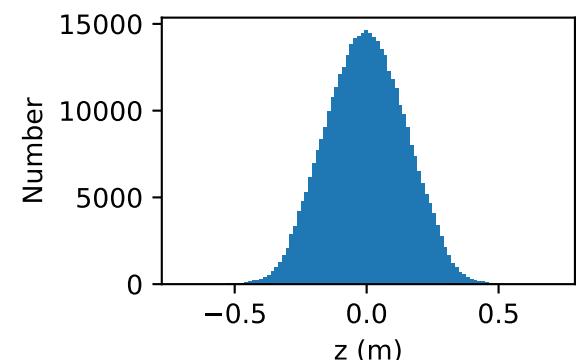
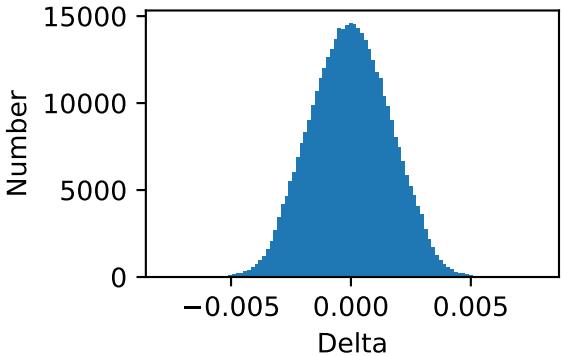
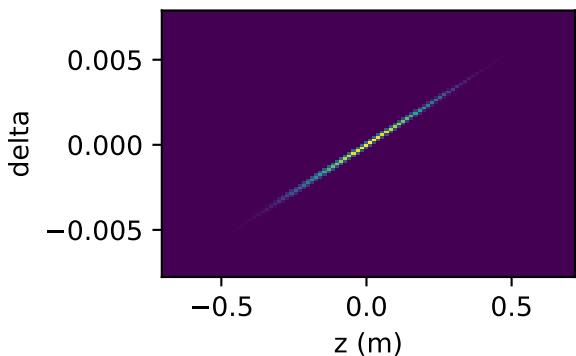
t (s)

$1e-8$

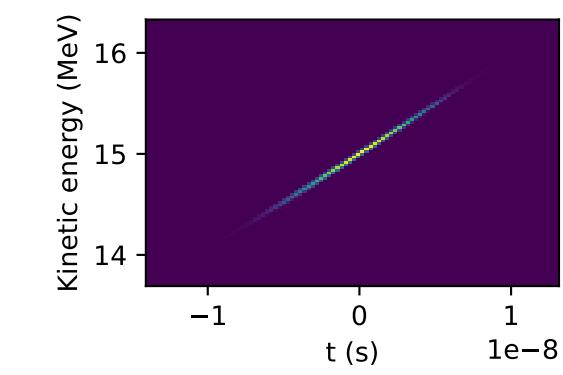
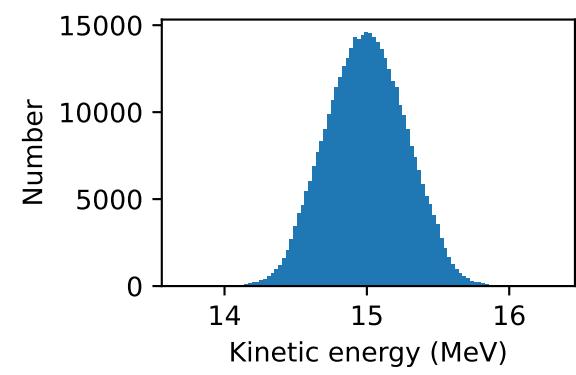
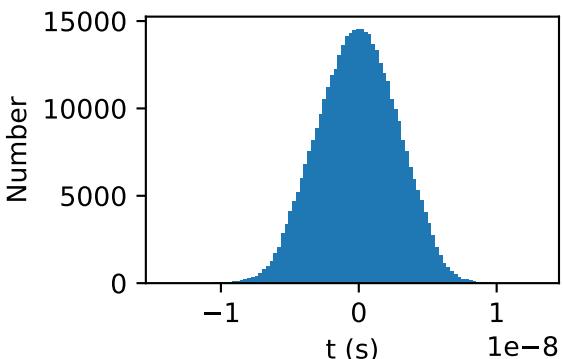
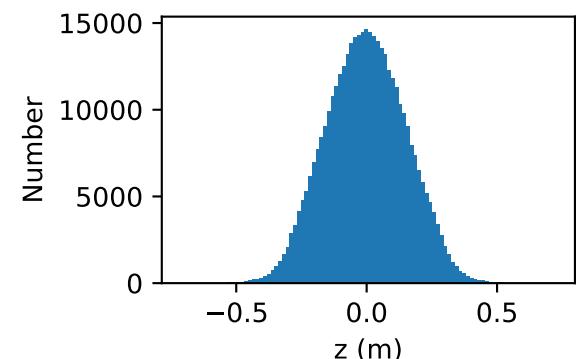
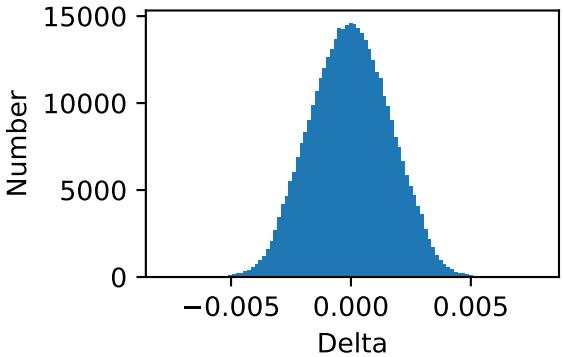
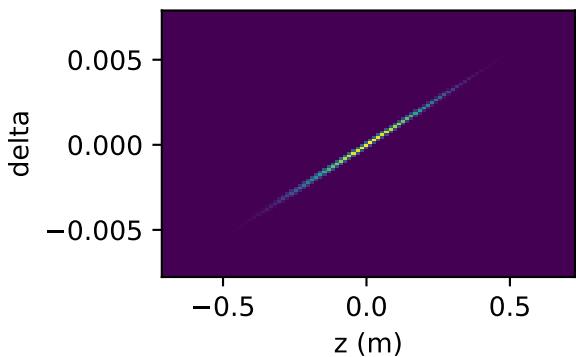
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LhARA:1:Arc:Drift:6

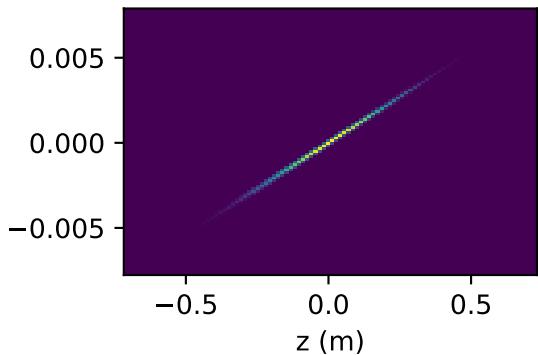


LhARA:1:Arc:Drift:7

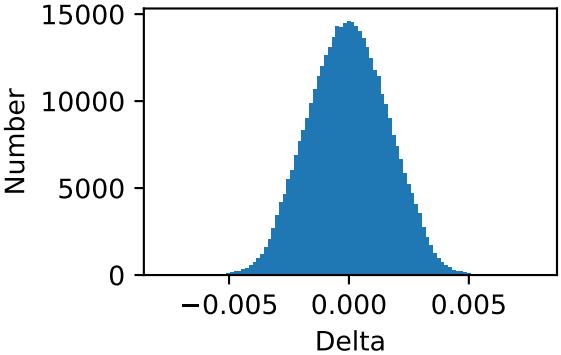


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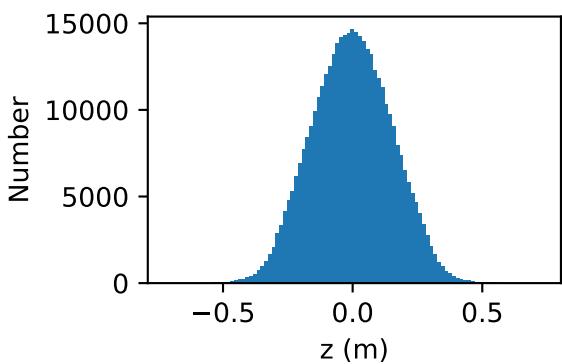
delta



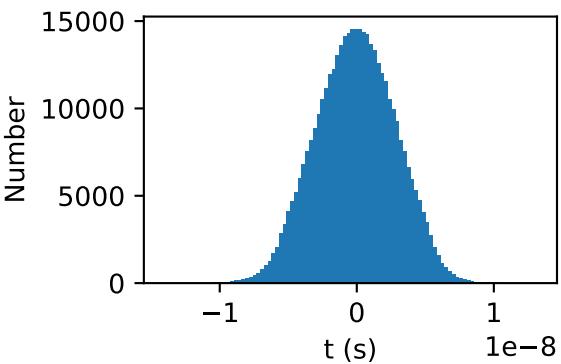
Number



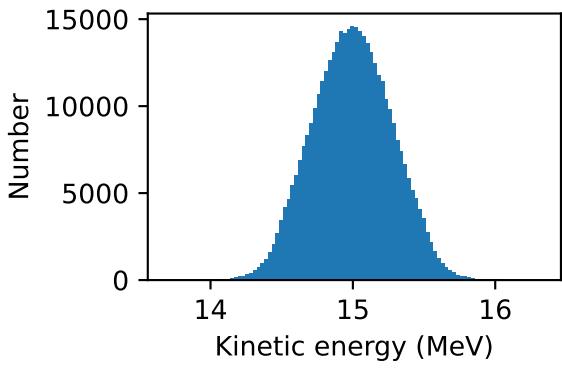
Number



Number



Number



Kinetic energy (MeV)

15000

10000

5000

0

16

15

14

-1

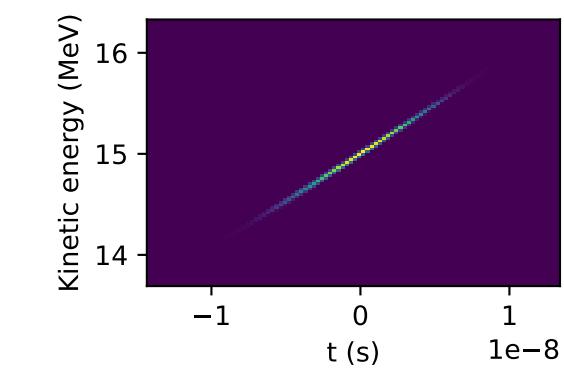
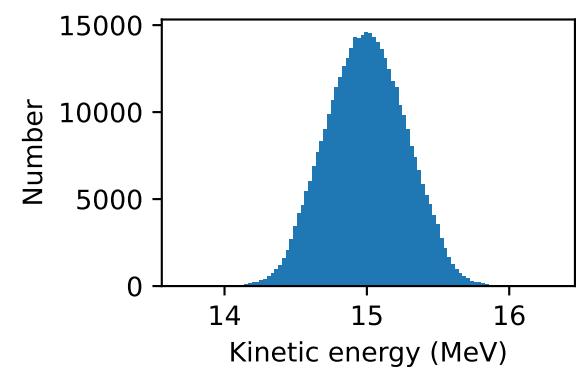
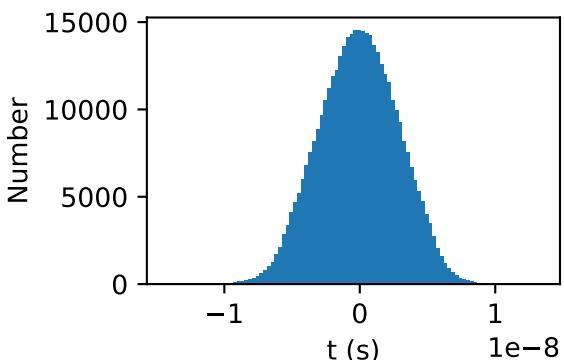
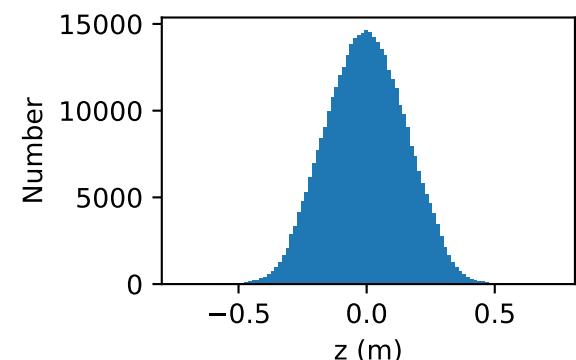
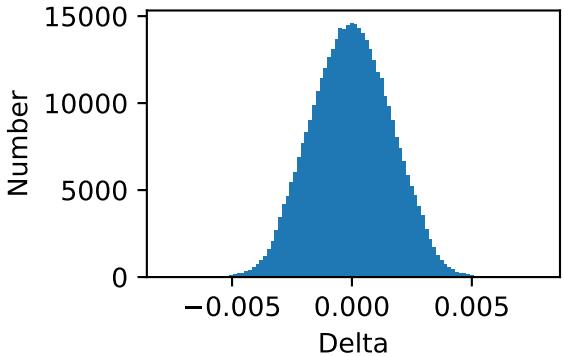
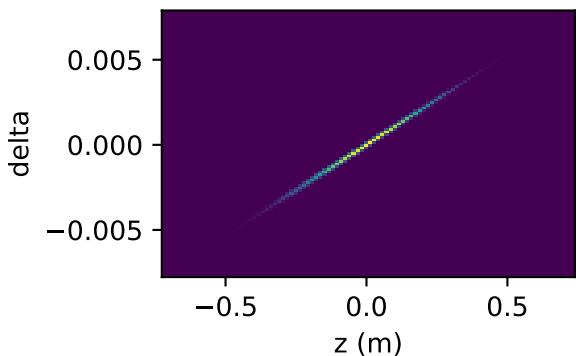
0

1

$1e-8$

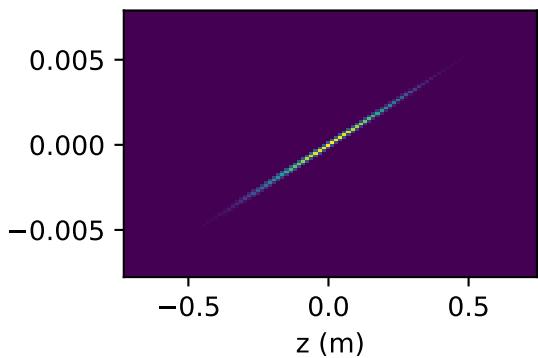
$1e-8$

LhARA:1:Arc:Drift:8

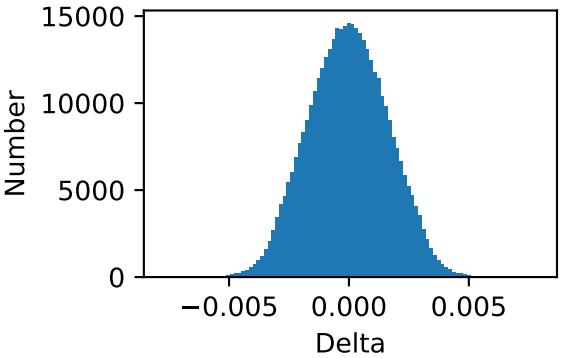


LhARA:1:Arc:Fquad:2

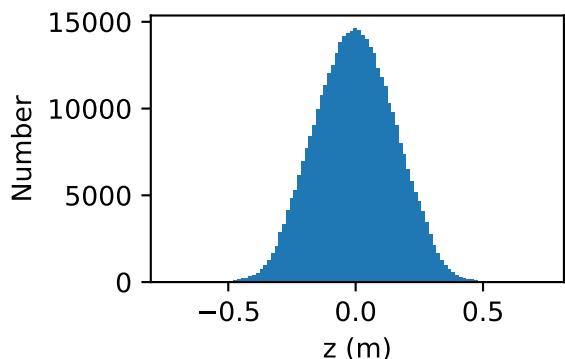
delta



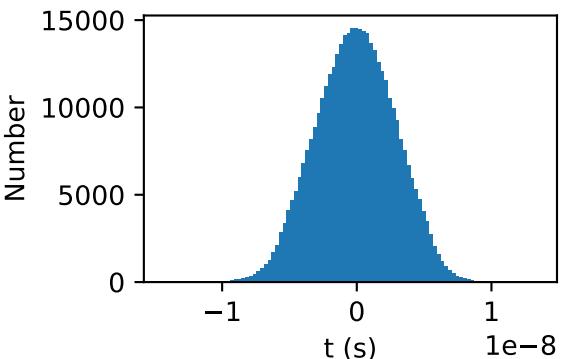
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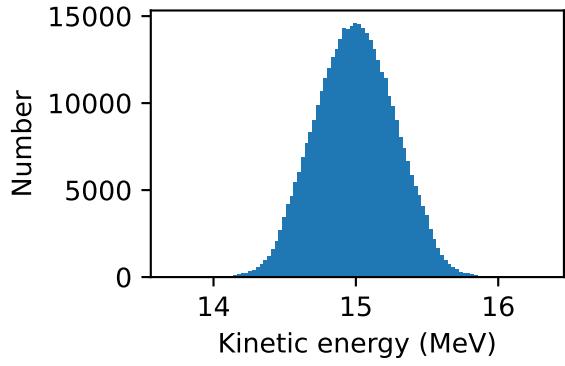
Number



Number



Number



Kinetic energy (MeV)

15000

10000

5000

15000

10000

5000

0

15000

10000

5000

0

15000

10000

5000

0

-0.005

0.000

0.005

Delta

-1

0

1

$1e-8$

-1

0

1

$1e-8$

Kinetic energy (MeV)

16

15

14

16

15

14

16

15

14

16

15

14

16

15

14

-1

0

1

$1e-8$

-1

0

1

$1e-8$

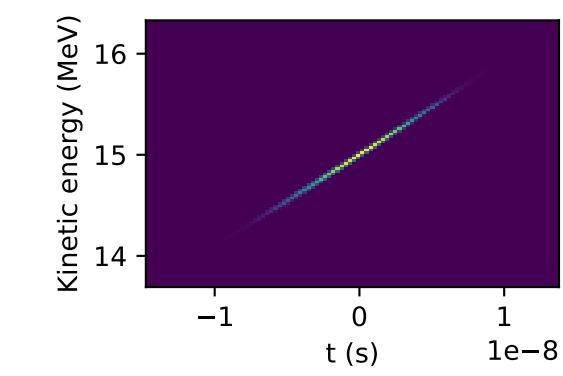
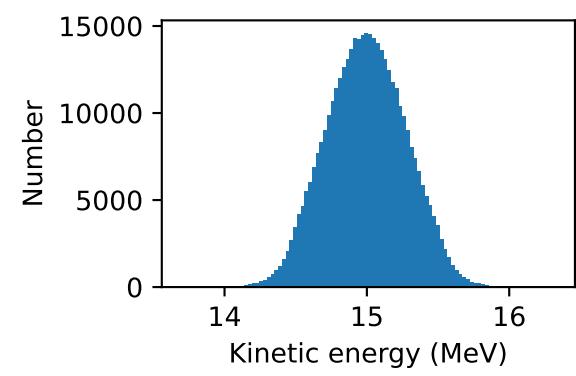
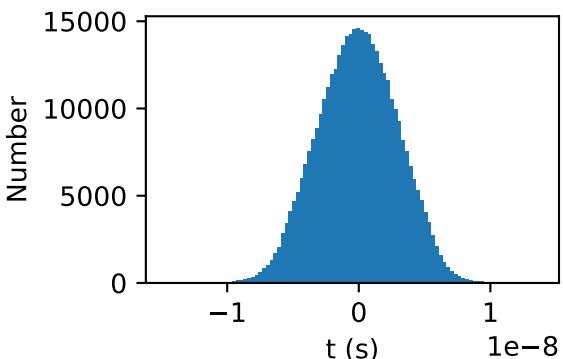
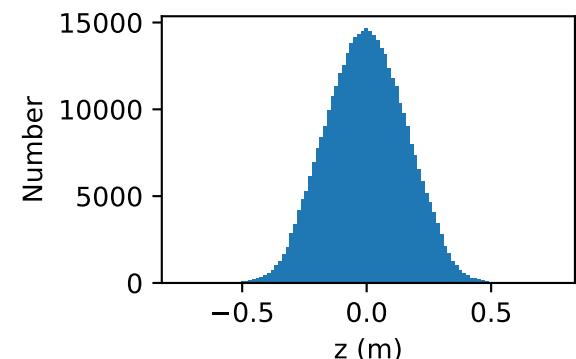
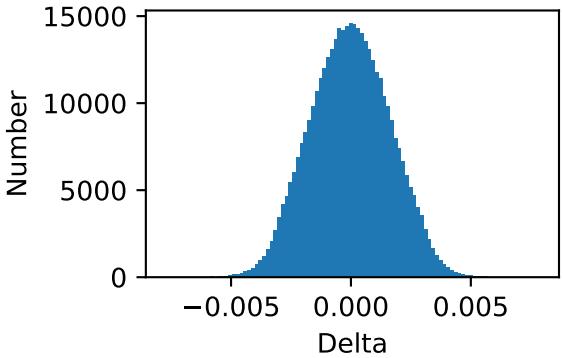
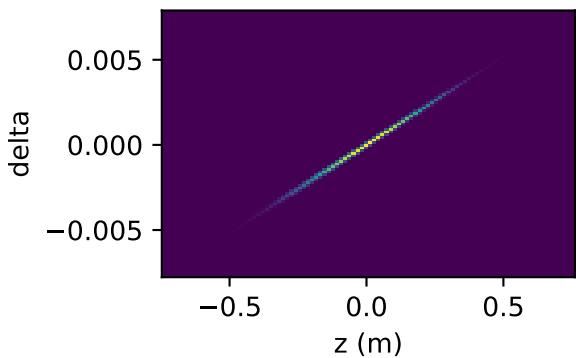
-1

0

1

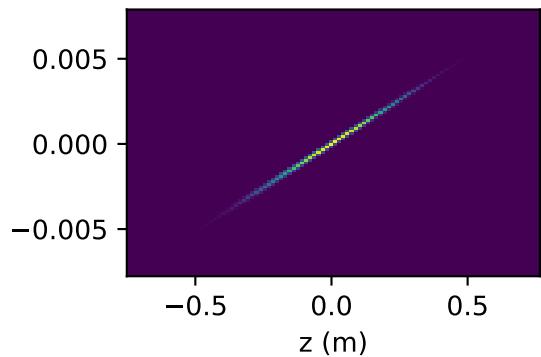
$1e-8$

LhARA:1:Arc:Drift:9

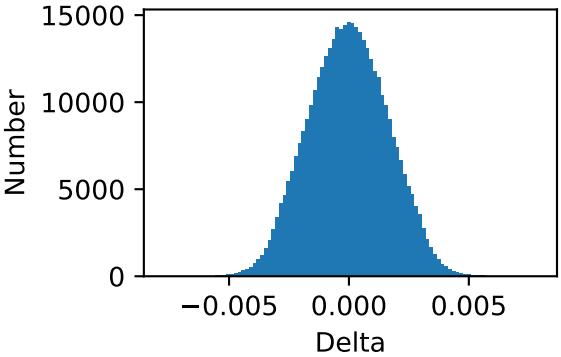


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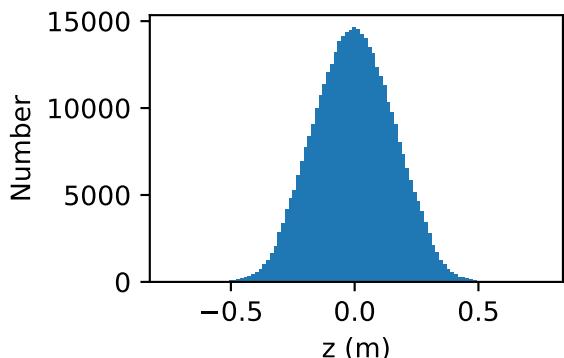
delta



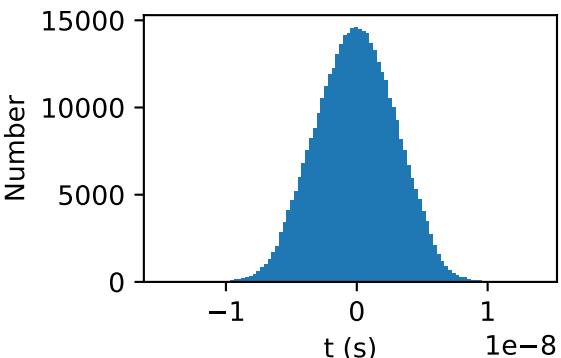
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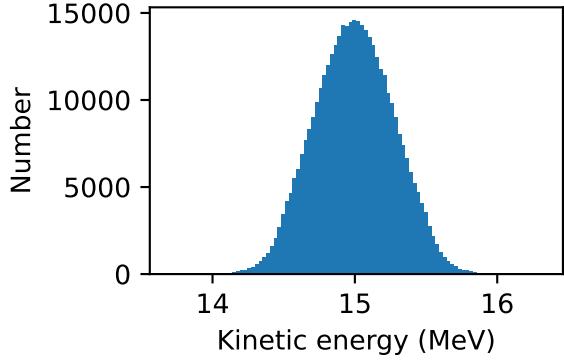
Number



Number



Number



Kinetic energy (MeV)

15000

10000

5000

0

16

15

14

-1

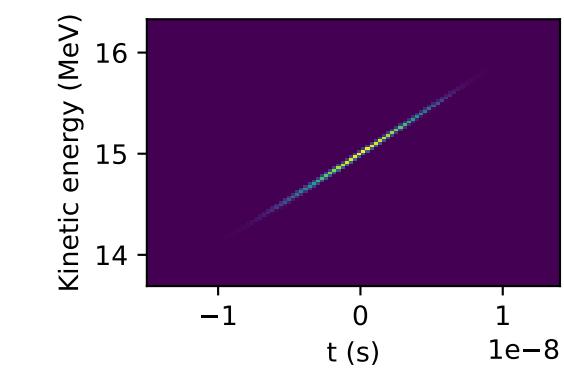
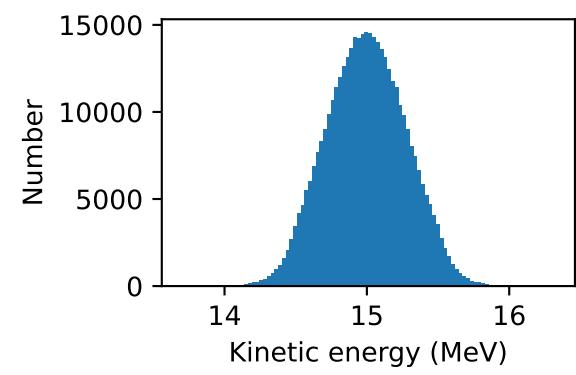
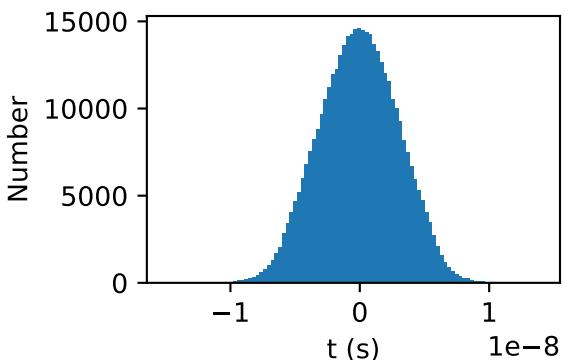
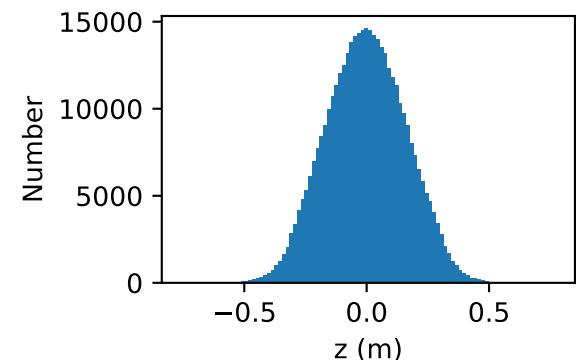
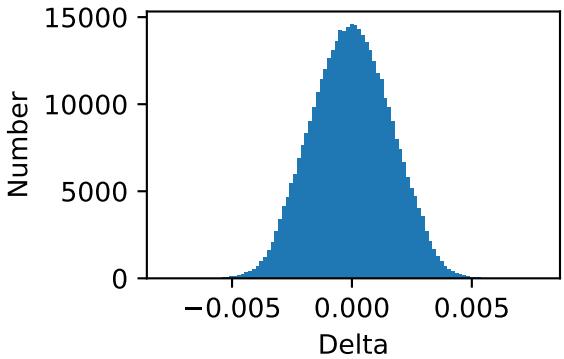
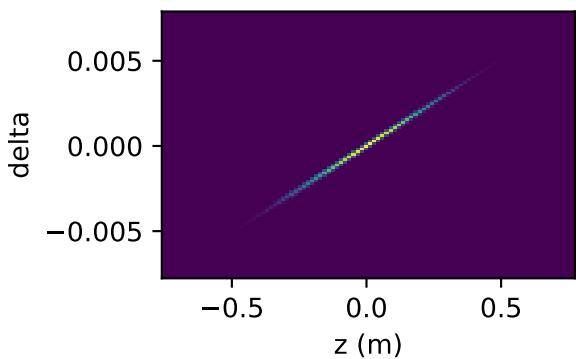
0

1

$1e-8$

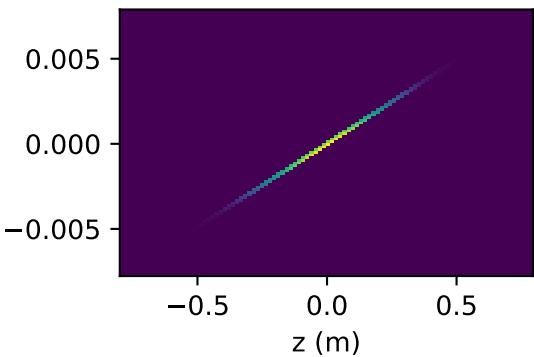
$1e-8$

LhARA:1:Arc:Drift:10

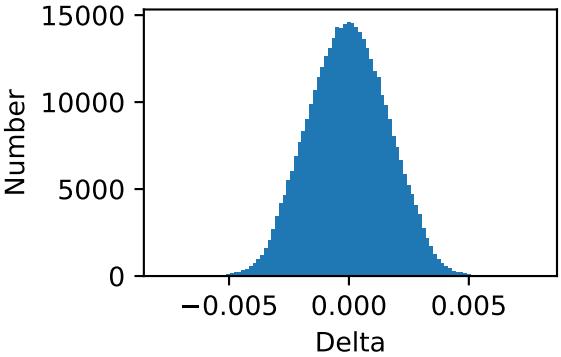


LhARA:1:Arc:Dipole:2

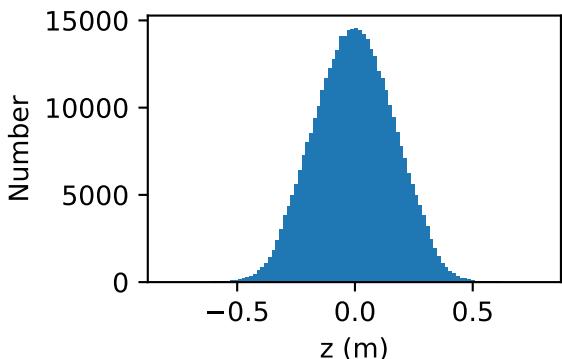
delta



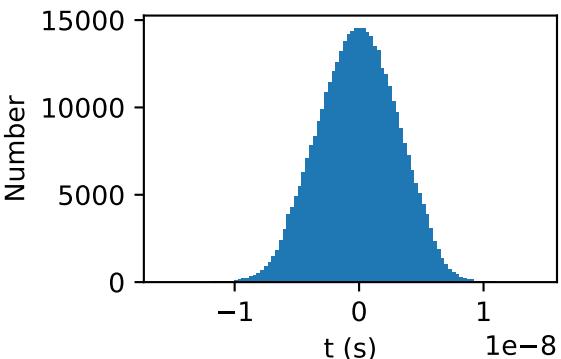
Number



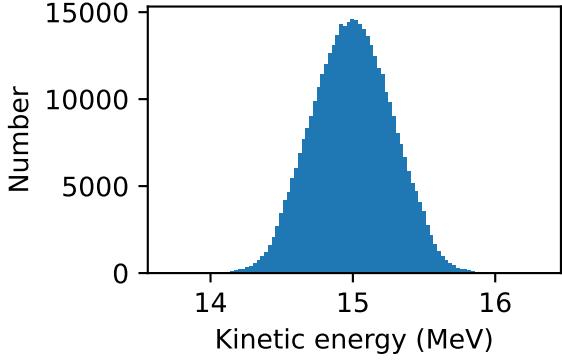
Number



Number



Number



Kinetic energy (MeV)

15000

10000

5000

0

15000

10000

5000

0

-1

0

1

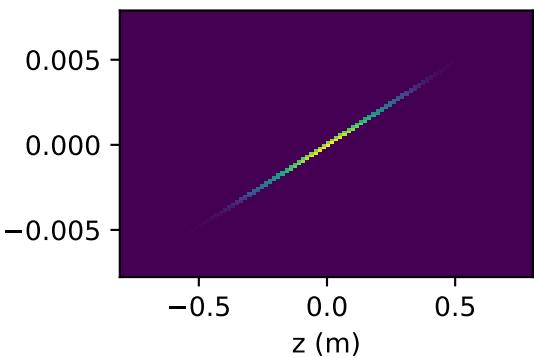
10^{-8}

t (s)

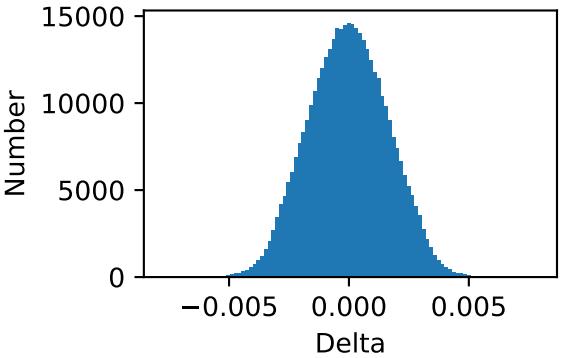
10^{-8}

LhARA:1:Arc:Drift:11

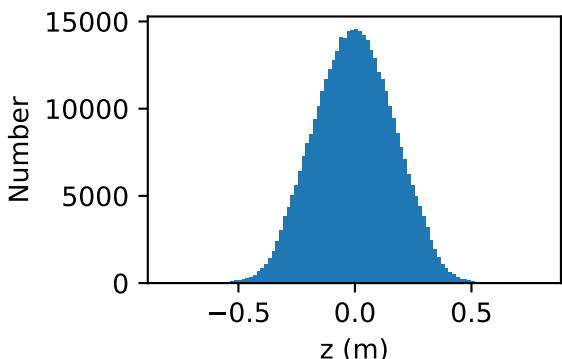
delta



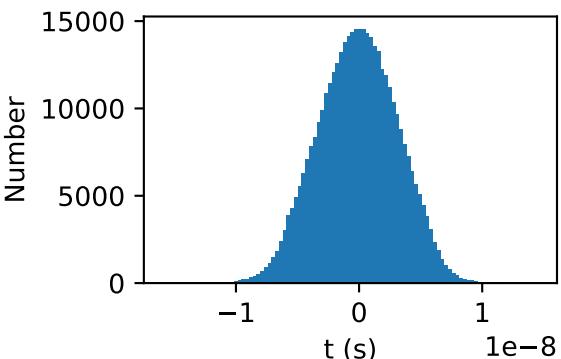
Number



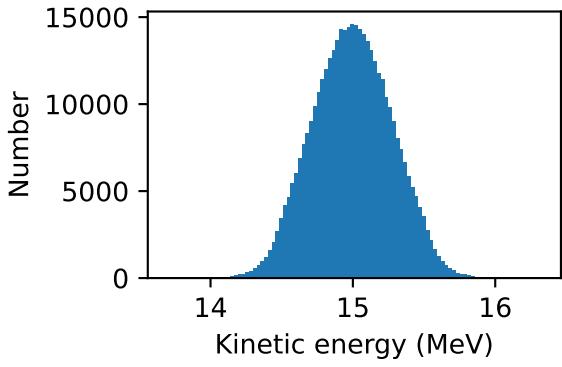
Number



Number



Number



Kinetic energy (MeV)

15000

10000

5000

0

-0.005

0.000

0.005

Delta

-0.005

0.000

0.005

-1

0

1

$1e-8$

-1

0

1

$1e-8$

16

15

14

Kinetic energy (MeV)

-1

0

1

$1e-8$

LhARA:1:Arc:Drift:12

