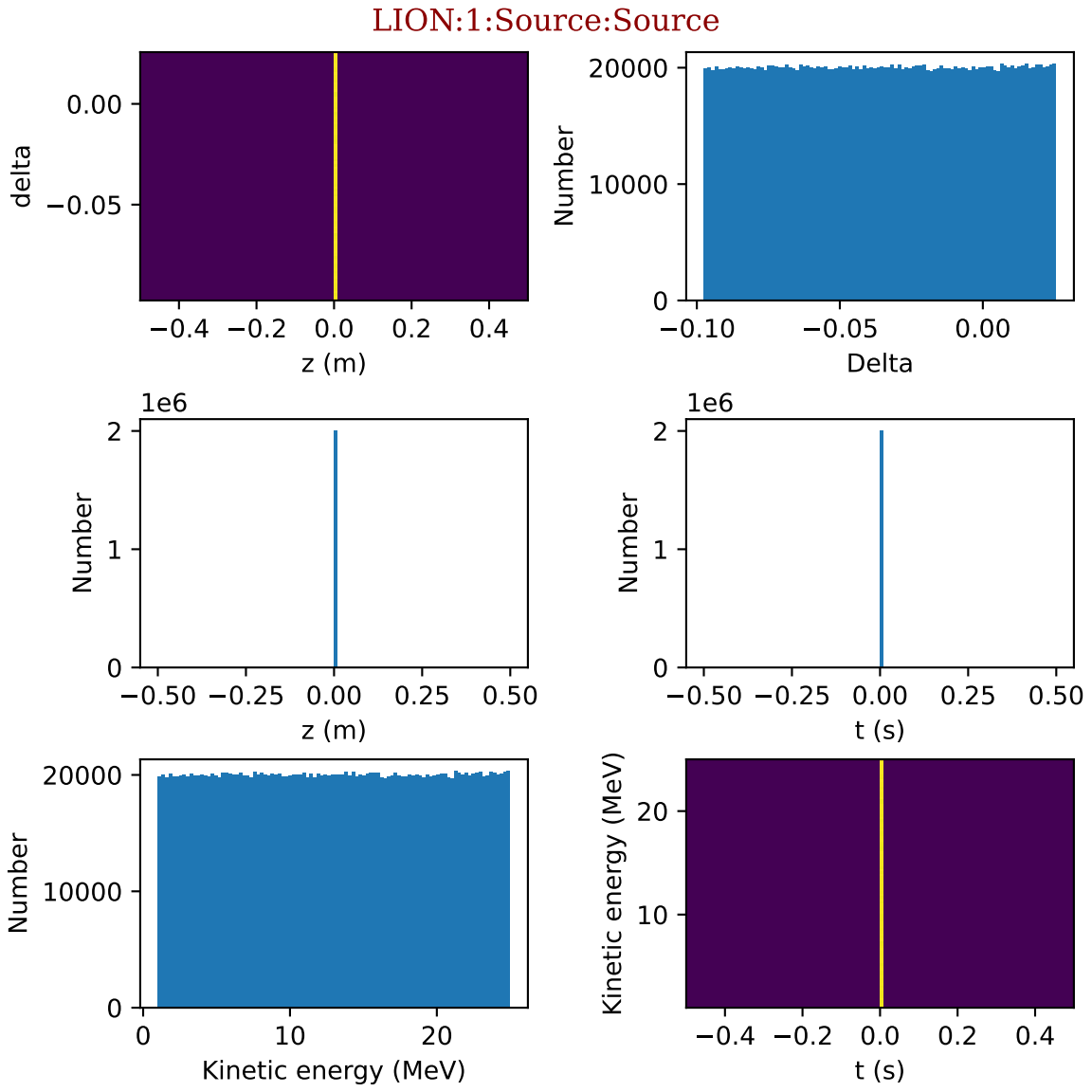
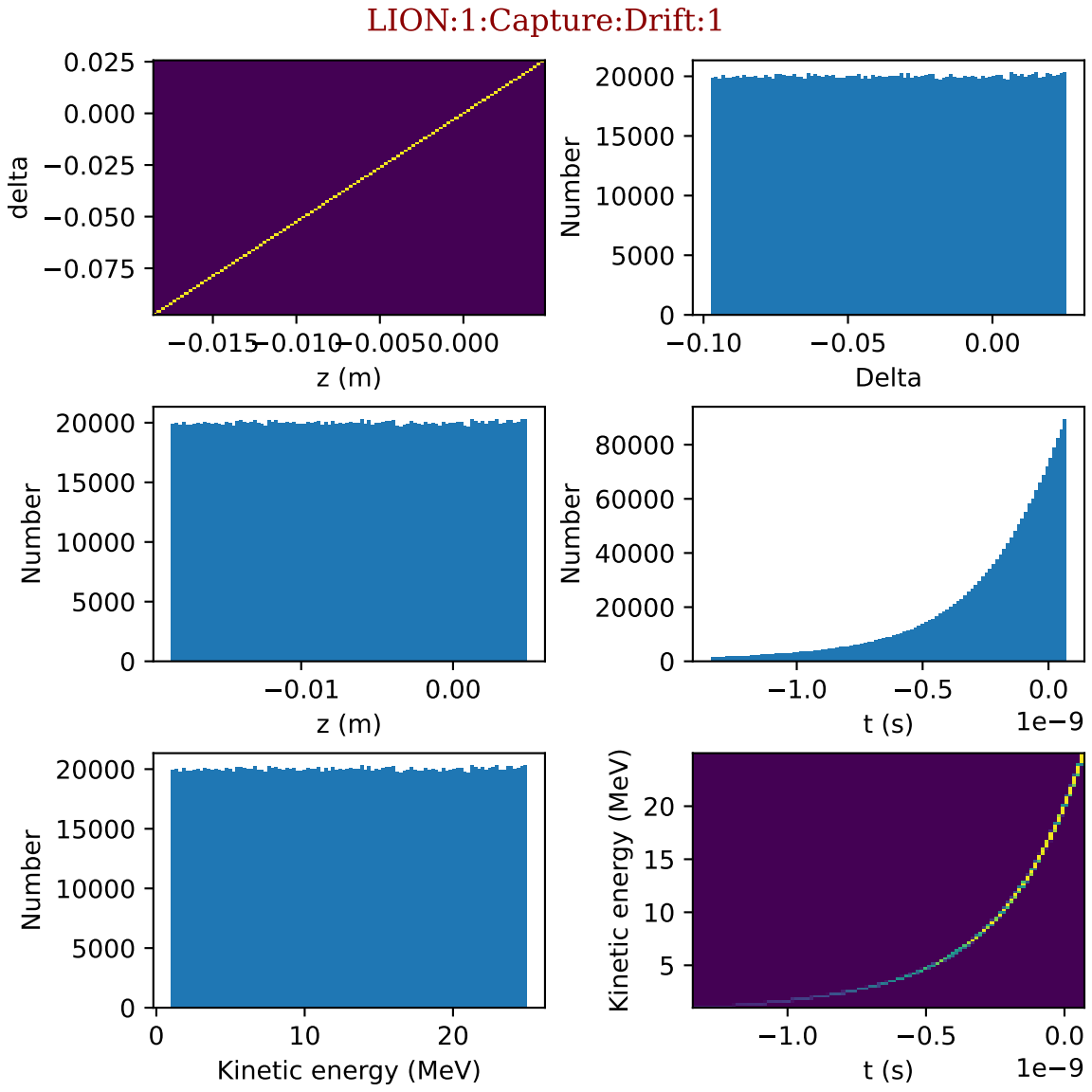
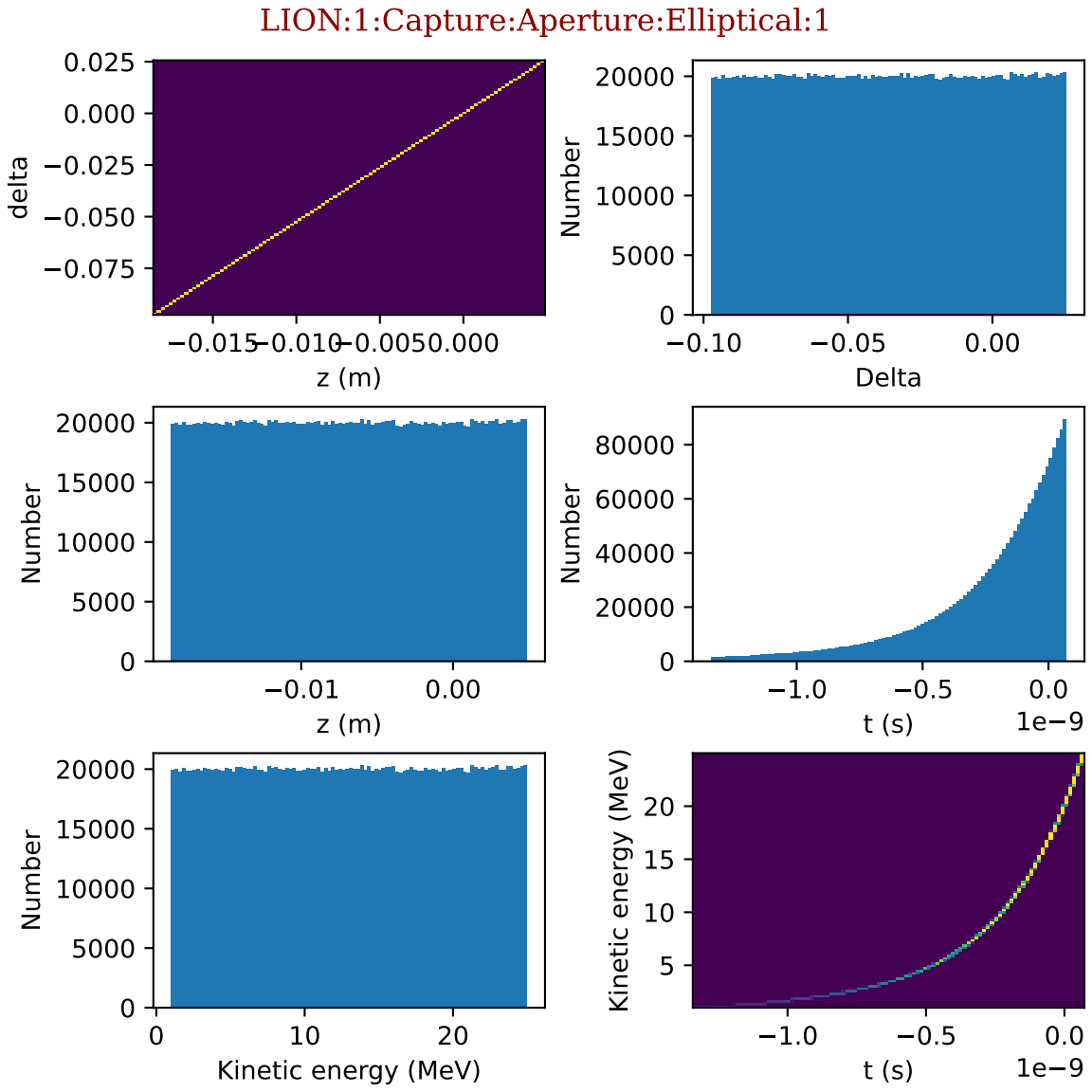
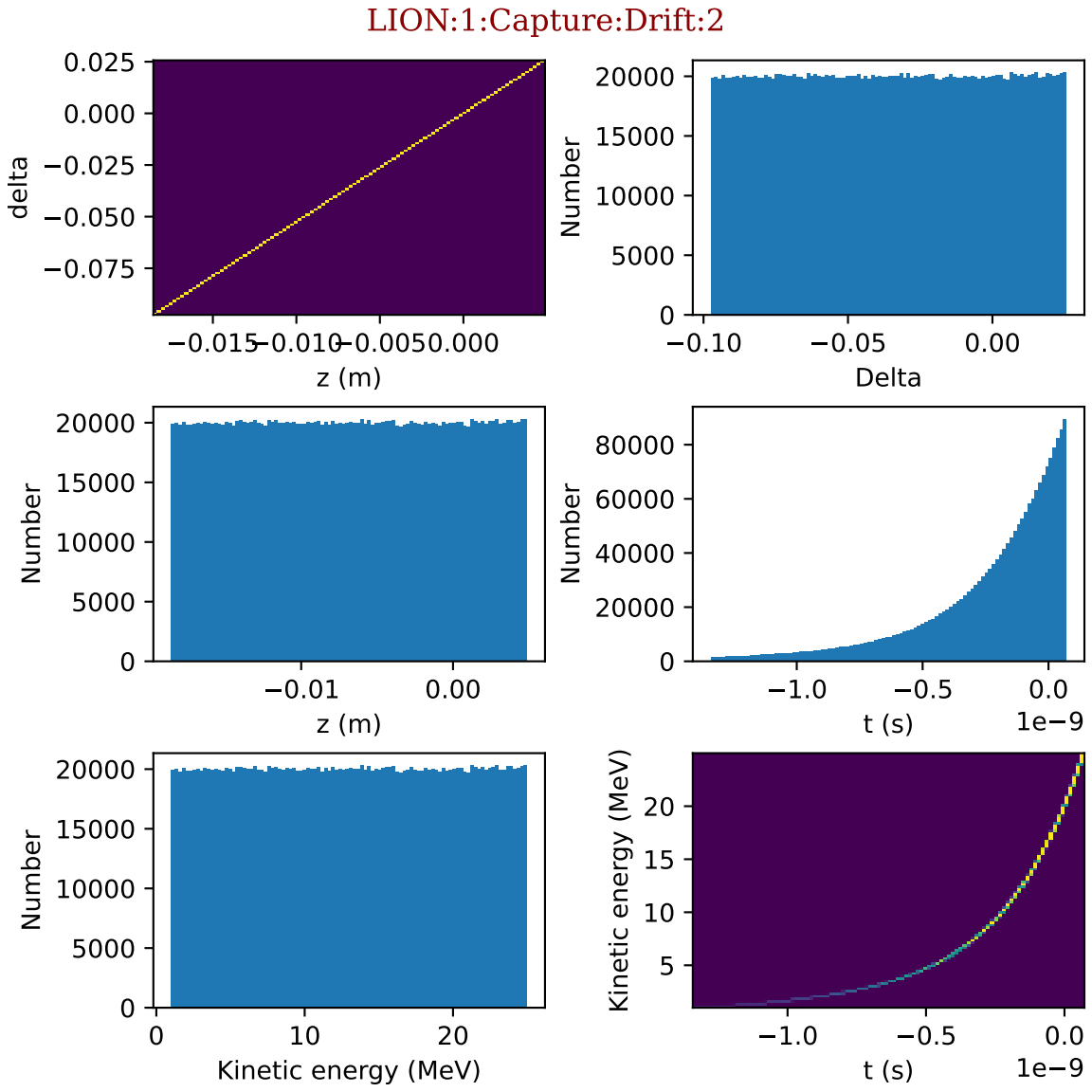
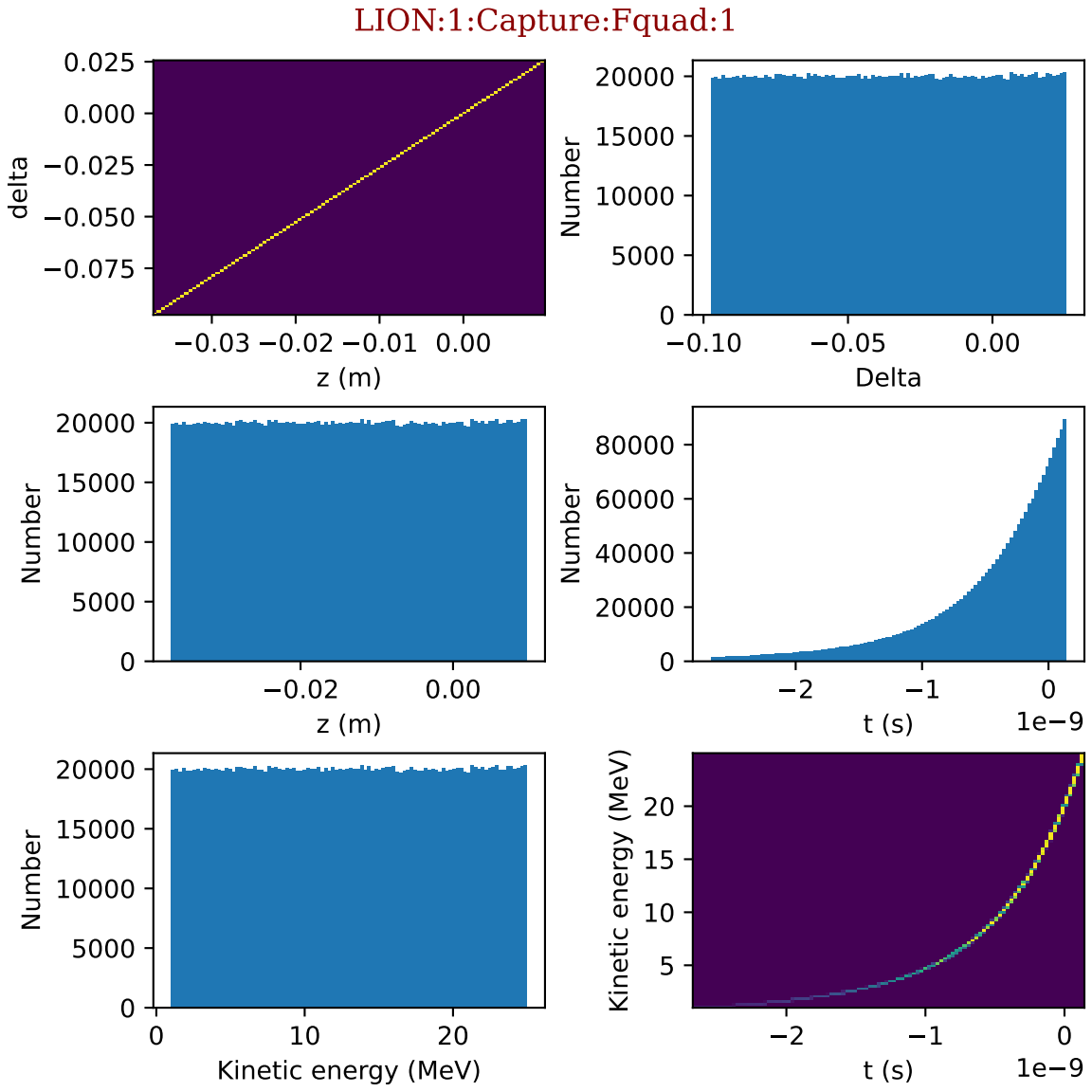
Stage	Section	Element	Type	Parameter	Value	Unit	Comment
0	Facility	Global	Name	Name	LION		
0	Facility	Global	Reference particle	Kinetic energy	20	MeV	
0	Facility	Global	Vacuum chamber	Mother volume radius	0.5	m	
1	Source	Source	Flat	SourceMode	2		Gaussian kinetic energy
1	Source	Source	Flat	SigmaX	0.000004	m	Gaussian width, x
1	Source	Source	Flat	SigmaY	0.000004	m	Gaussian width, y
1	Source	Source	Flat	Emin	1	MeV	Minimum of energy distribution
1	Source	Source	Flat	Emax	25	MeV	Maximum of energy distribution
1	Source	Source	Flat	MinCTheta	0.999691		Maximum theta for flat cos theta
1	Capture	Drift		Length	0.04034	m	Length of first drift
1	Capture	Aperture	Elliptical	RadiusX	0.003	m	Half aperture in x of elliptical colimator
1	Capture	Aperture	Elliptical	RadiusY	0.0015	m	Half aperture in y of ellipseof elliptical colimator
1	Capture	Drift		Length	0	m	Gap between colimator and first quad
1	Capture	Fquad		Length	0.04	m	Length of focusing quad
1	Capture	Fquad		Strength	332	T/m	Strength of focusing quad
1	Capture	Aperture	Circular	Radius	0.005	m	Aperture of quad
1	Capture	Drift		Length	0.02577	m	Gap between colimator first (F)quad and second (D)quad
1	Capture	Dquad		Length	0.02	m	Length of defocusing quad
1	Capture	Dquad		Strength	318.5	T/m	Strength of defocusing quad
1	Capture	Aperture	Circular	Radius	0.005	m	Aperture of quad
1	Delivery	Drift		Length	1.728652	m	Main drift from last quad to kapton/aluminium foils
1	Delivery	Drift		Length	0.015	m	Drift from kapton/aluminium foils to collimator
1	Delivery	Aperture	Circular	Radius	0.0015	m	Collimator before "end station"
1	Delivery	Drift		Length	0.02	m	Final drift

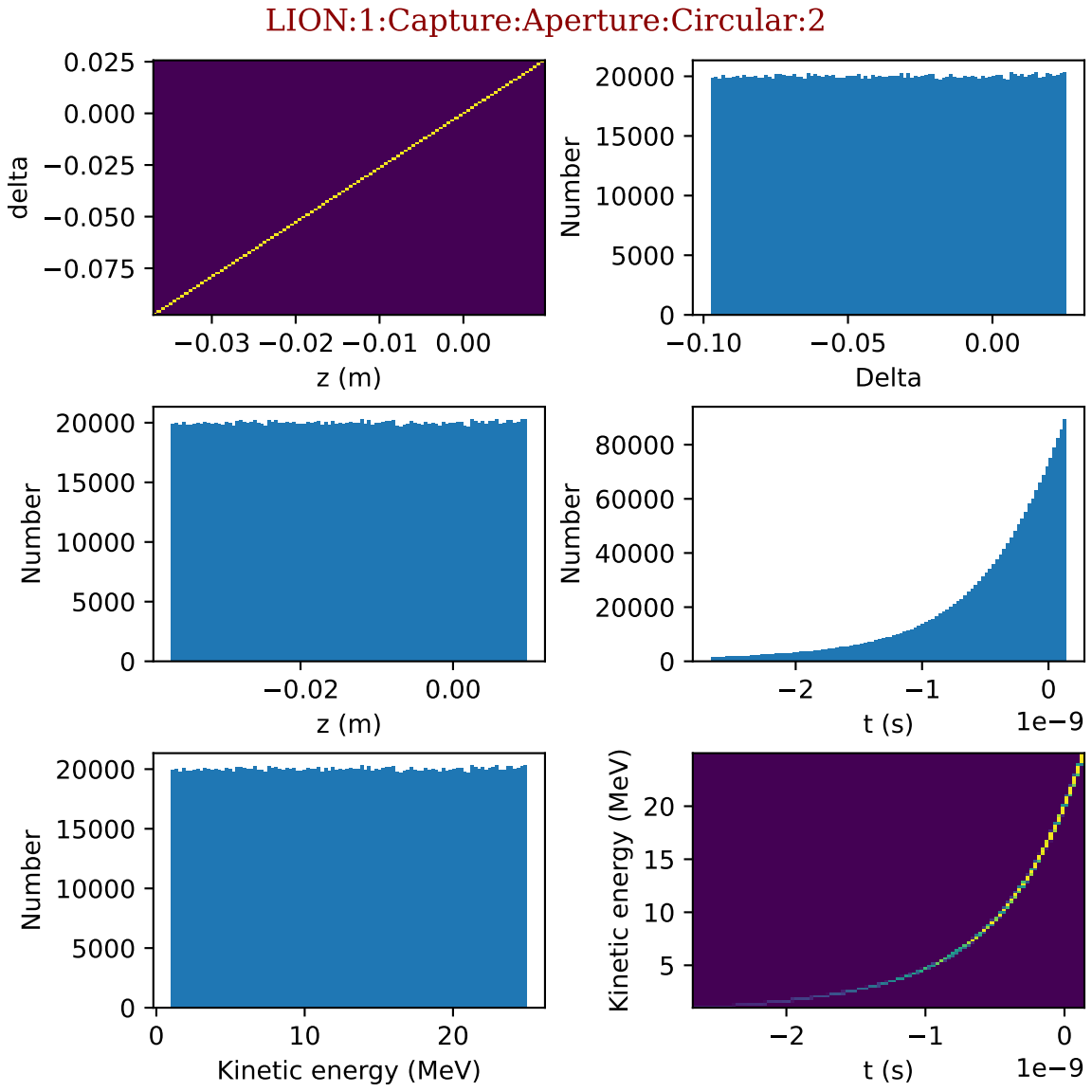

LION:1:Source:Source
delta
0.00
−0.05
−0.4
−0.2
0.0
0.2
0.4
z (m)
Number
20000
10000
0
−0.10
−0.05
0.00
Delta
1e6
Number
2
1
0
−0.50
−0.25
0.00
0.25
0.50
z (m)
1e6
Number
2
1
0
−0.50
−0.25
0.00
0.25
0.50
t (s)
Number
20000
10000
0
0
10
20
Kinetic energy (MeV)
Kinetic energy (MeV)
20
10
−0.4
−0.2
0.0
0.2
0.4
t (s)

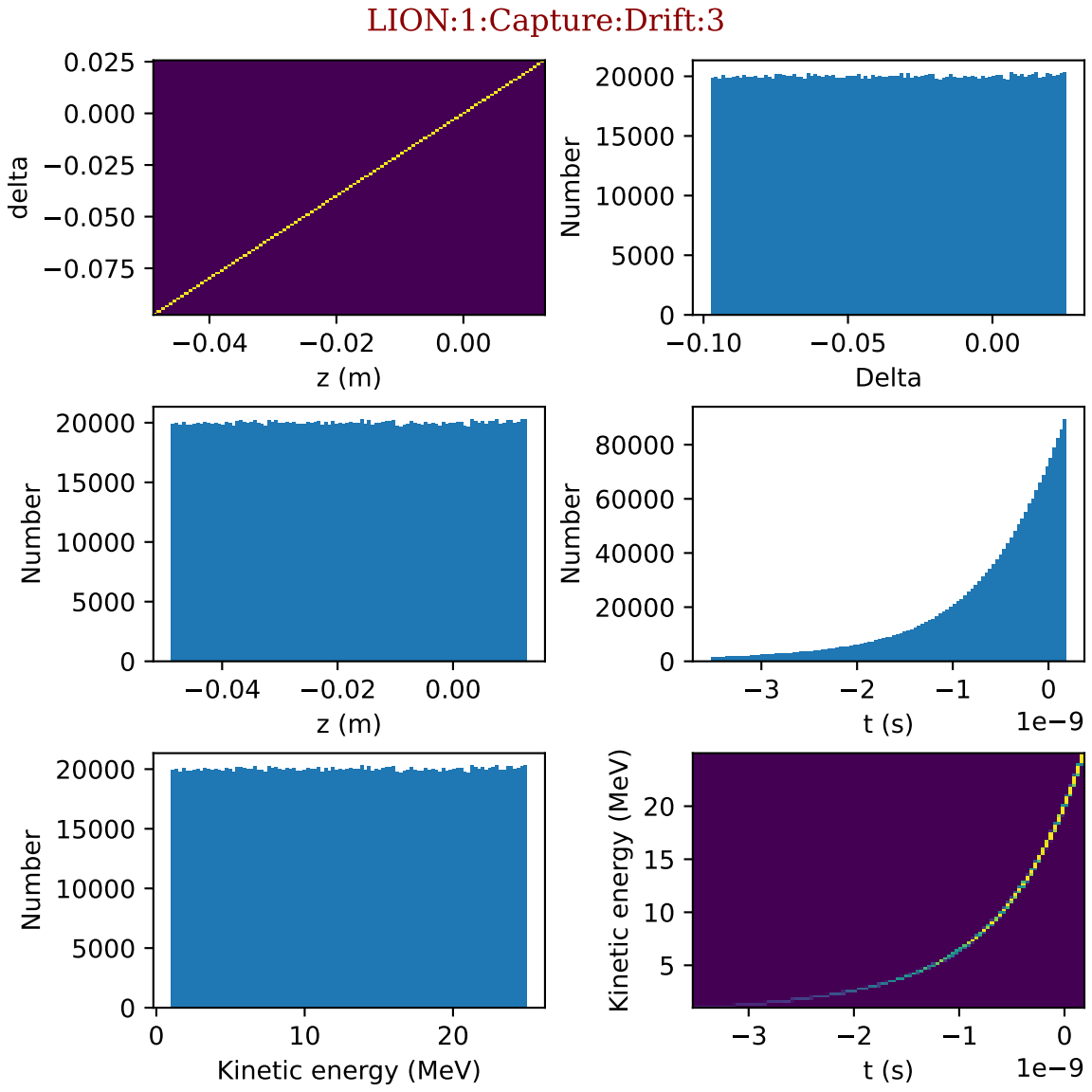

LION:1:Capture:Drift:1
delta
z (m)
Number
Delta
Number
z (m)
Number
t (s)
1e−9
Number
Kinetic energy (MeV)
Kinetic energy (MeV)
t (s)
1e−9

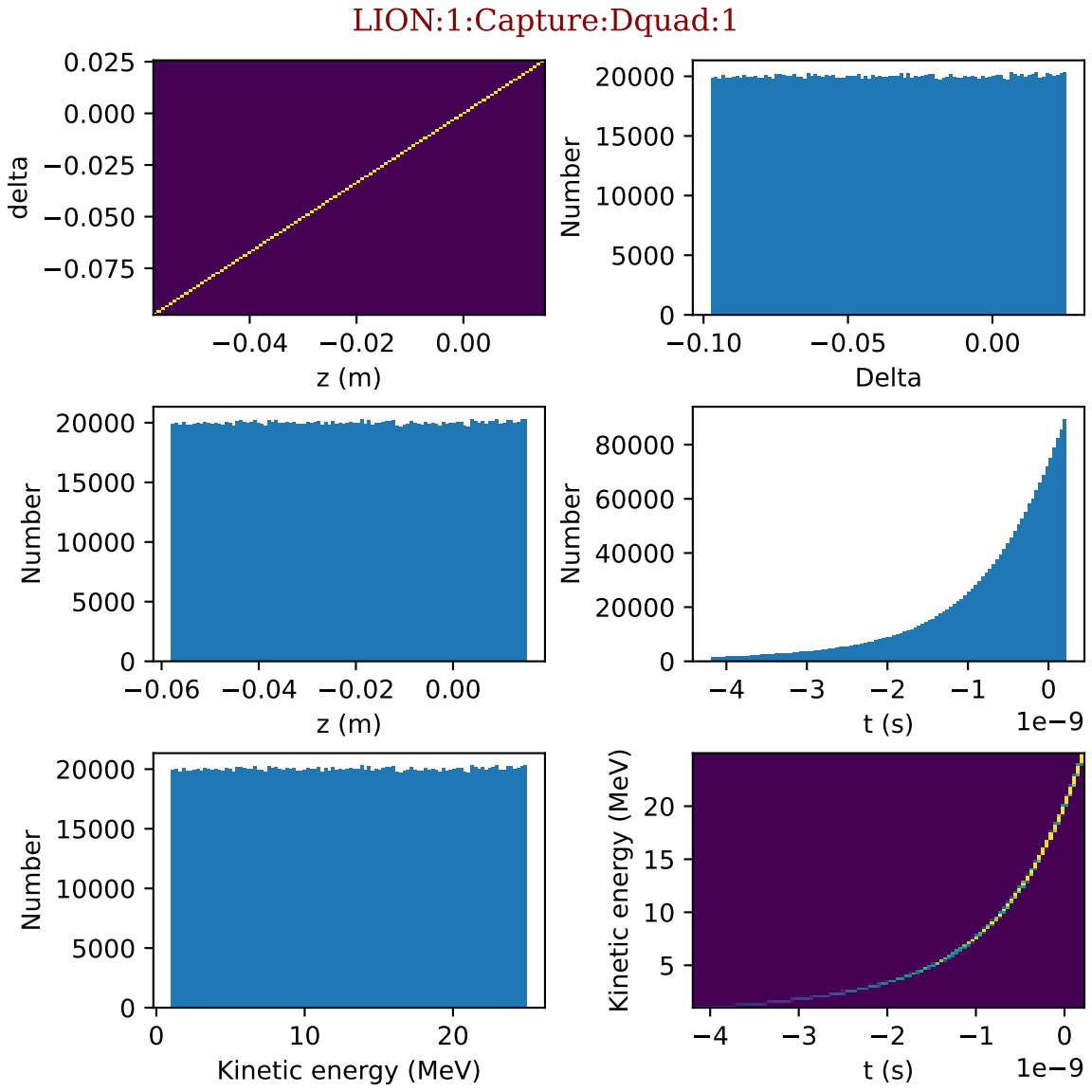

LION:1:Capture:Aperture:Elliptical:1
delta
z (m)
Number
Delta
Number
z (m)
Number
t (s)
1e−9
Number
Kinetic energy (MeV)
Kinetic energy (MeV)
t (s)
1e−9

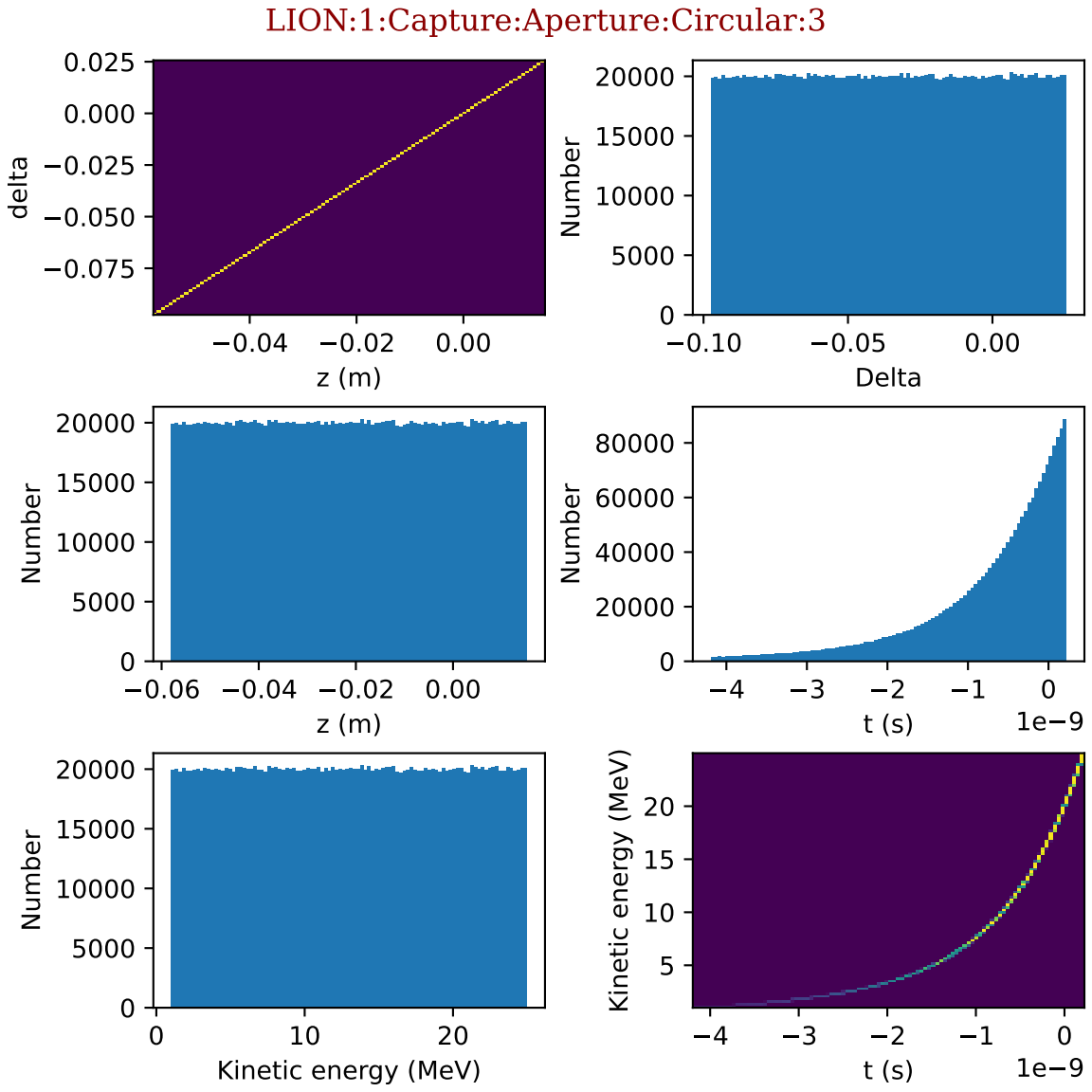

LION:1:Capture:Drift:2
delta
z (m)
Number
Delta
Number
z (m)
Number
t (s)
1e−9
Number
Kinetic energy (MeV)
Kinetic energy (MeV)
t (s)
1e−9

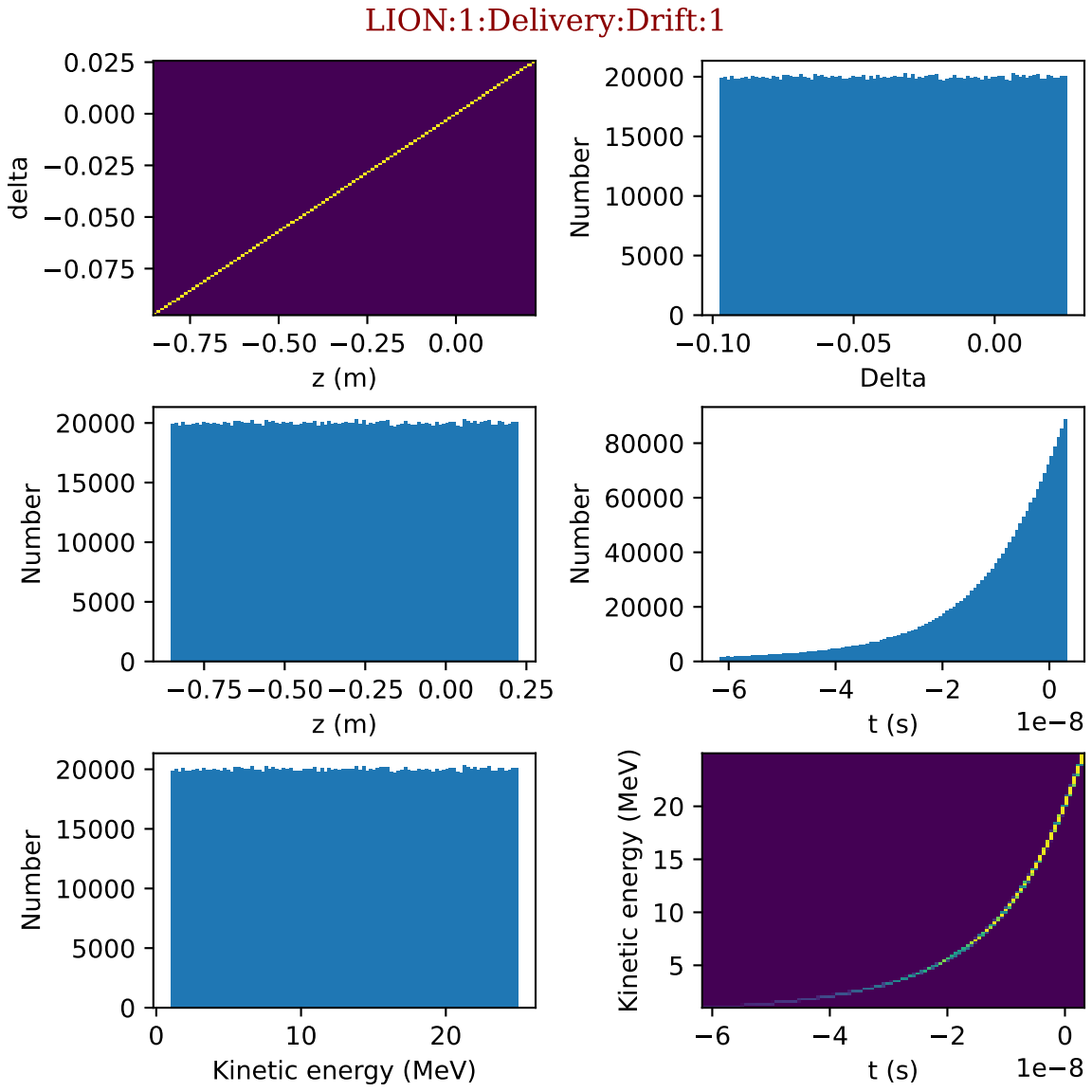

LION:1:Capture:Fquad:1
delta
0.025
0.000
−0.025
−0.050
−0.075
−0.03 −0.02 −0.01 0.00
z (m)
Number
20000
15000
10000
5000
0
−0.10
−0.05
0.00
Delta
Number
20000
15000
10000
5000
0
−0.02
0.00
z (m)
Number
80000
60000
40000
20000
0
−2
−1
0
t (s)
1e−9
Number
20000
15000
10000
5000
0
0
10
20
Kinetic energy (MeV)
Kinetic energy (MeV)
20
15
10
5
−2
−1
0
t (s)
1e−9


LION:1:Capture:Aperture:Circular:2
delta
z (m)
Number
Delta
Number
z (m)
Number
t (s)
1e−9
Number
Kinetic energy (MeV)
Kinetic energy (MeV)
t (s)
1e−9

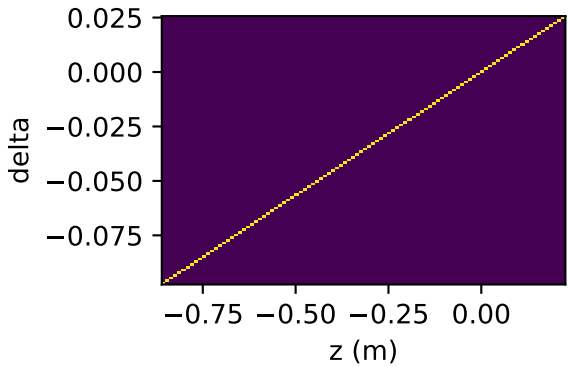

LION:1:Capture:Drift:3
delta
z (m)
Number
Delta
Number
z (m)
Number
t (s)
1e−9
Number
Kinetic energy (MeV)
Kinetic energy (MeV)
t (s)
1e−9

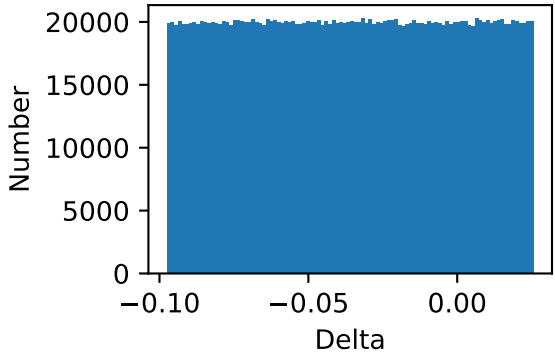

LION:1:Capture:Dquad:1
delta
z (m)
Number
Delta
Number
z (m)
Number
t (s)
1e−9
Number
Kinetic energy (MeV)
Kinetic energy (MeV)
t (s)
1e−9

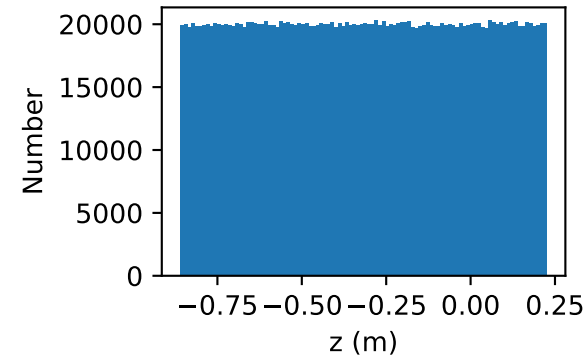

LION:1:Capture:Aperture:Circular:3
delta
z (m)
Number
Delta
Number
z (m)
Number
t (s)
1e−9
Number
Kinetic energy (MeV)
Kinetic energy (MeV)
t (s)
1e−9

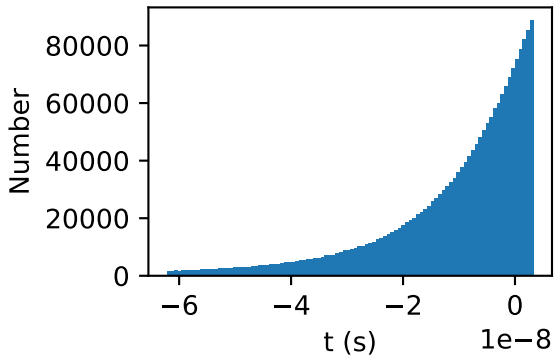

LION:1:Delivery:Drift:1
delta
z (m)
Number
Delta
Number
z (m)
Number
t (s)
1e−8
Number
Kinetic energy (MeV)
Kinetic energy (MeV)
t (s)
1e−8

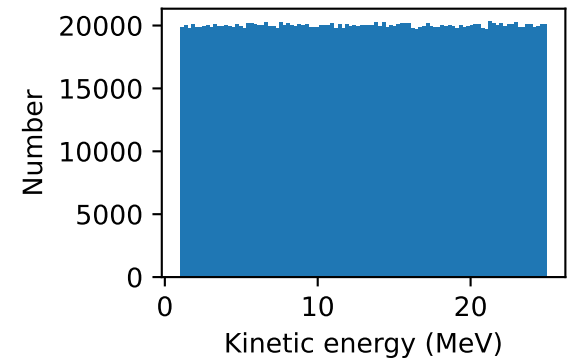
LION:1:Delivery:Drift:2

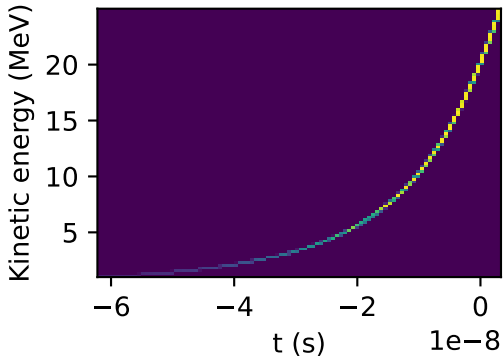


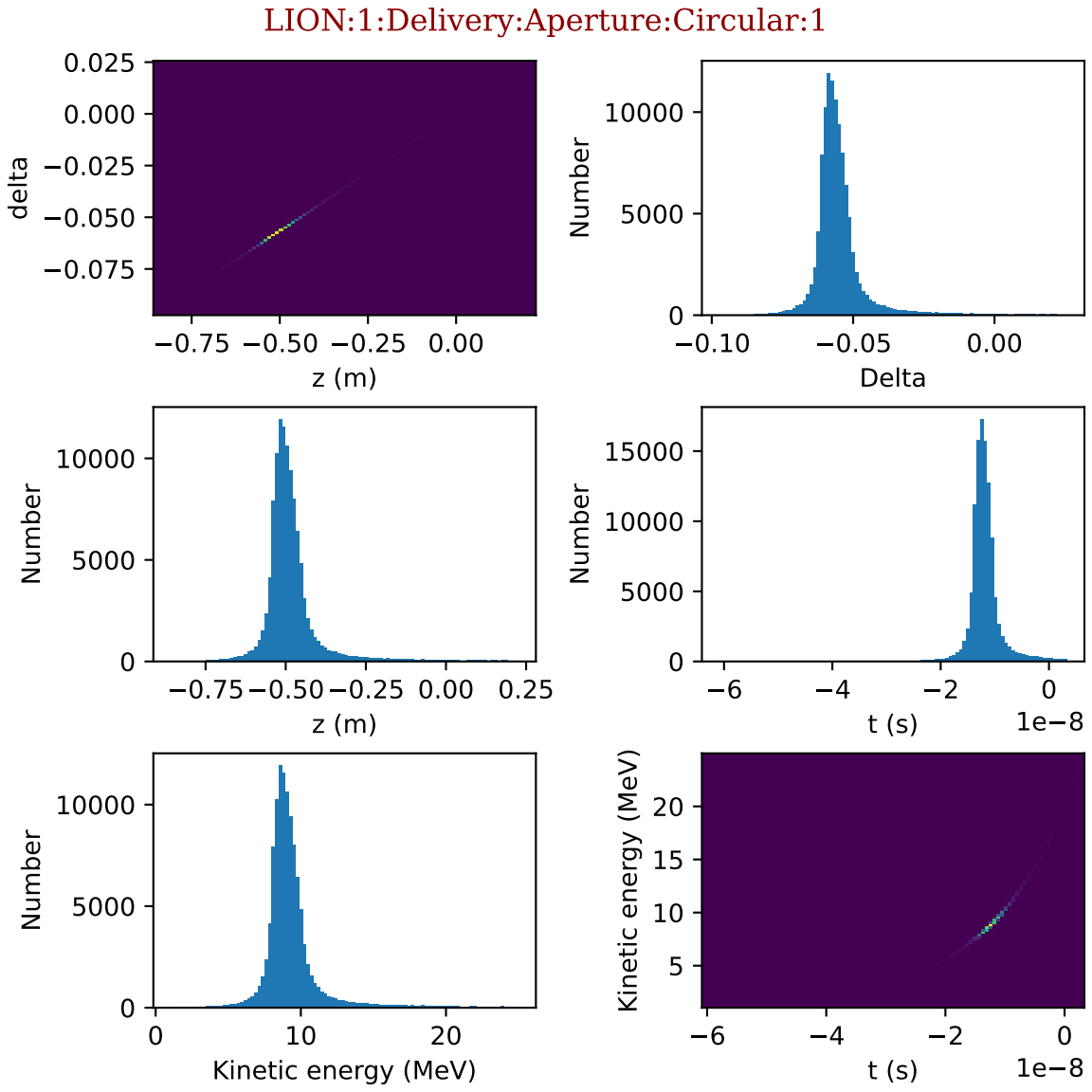


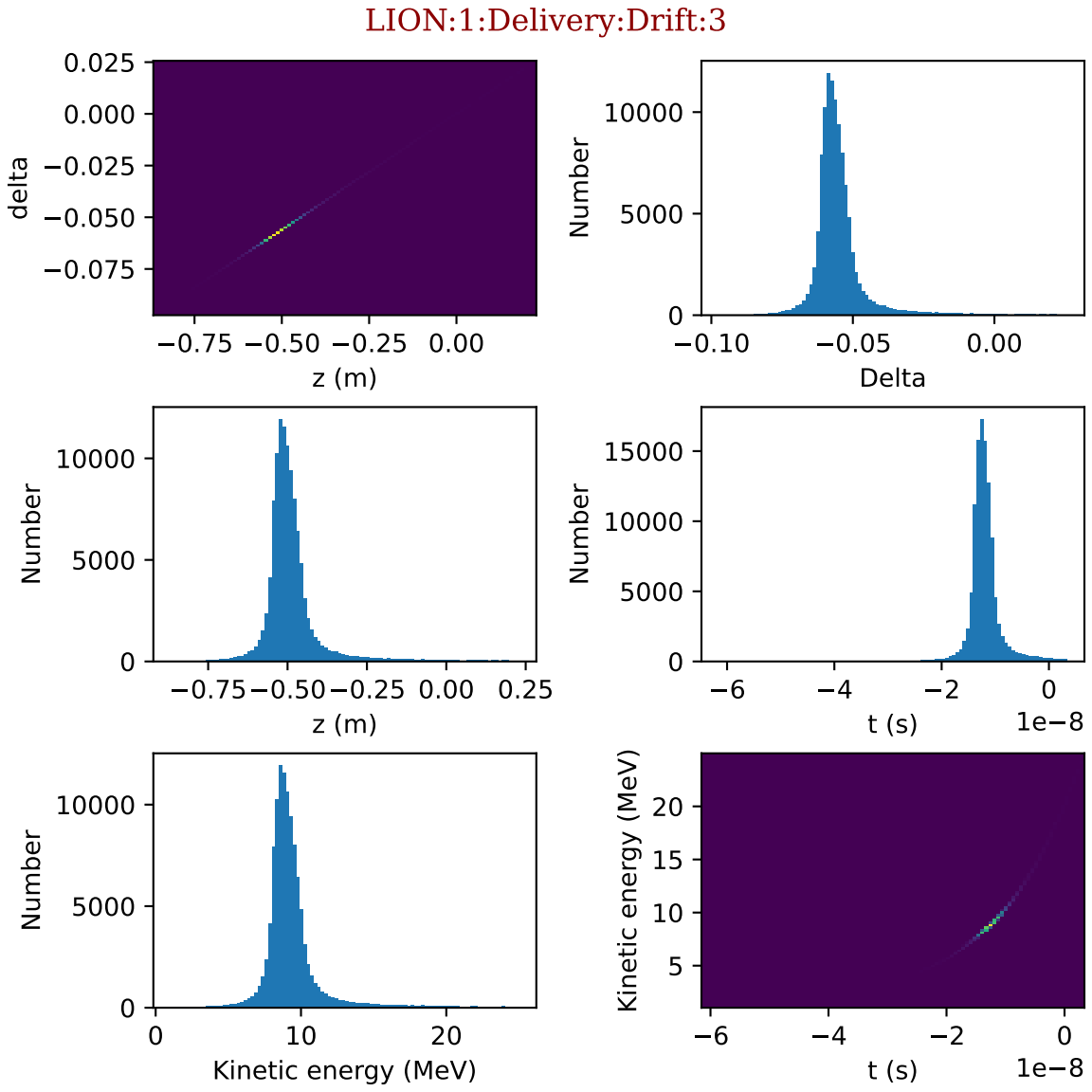









LION:1:Delivery:Aperture:Circular:1
delta
0.025
0.000
−0.025
−0.050
−0.075
−0.75 −0.50 −0.25 0.00
z (m)
Number
10000
5000
0
−0.10 −0.05 0.00
Delta
Number
10000
5000
0
−0.75 −0.50 −0.25 0.00 0.25
z (m)
Number
15000
10000
5000
0
−6 −4 −2 0
t (s)
1e−8
Number
10000
5000
0
0 10 20
Kinetic energy (MeV)
Kinetic energy (MeV)
20
15
10
5
−6 −4 −2 0
t (s)
1e−8


LION:1:Delivery:Drift:3
delta
z (m)
Number
Delta
Number
z (m)
Number
t (s)
1e−8
Number
Kinetic energy (MeV)
Kinetic energy (MeV)
t (s)
1e−8