

- 产生50000MC

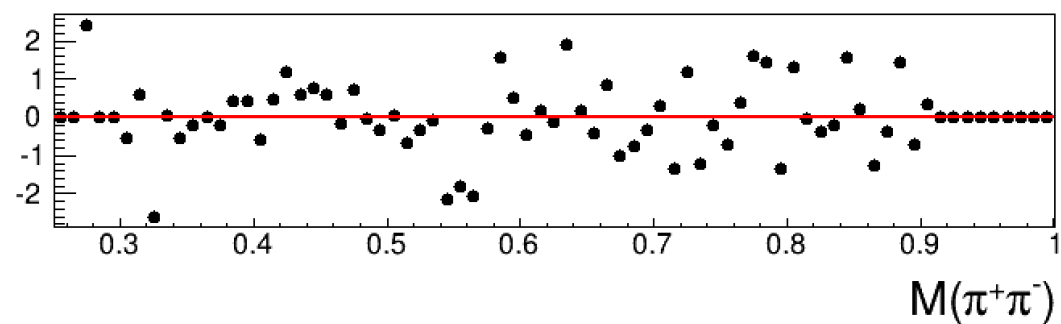
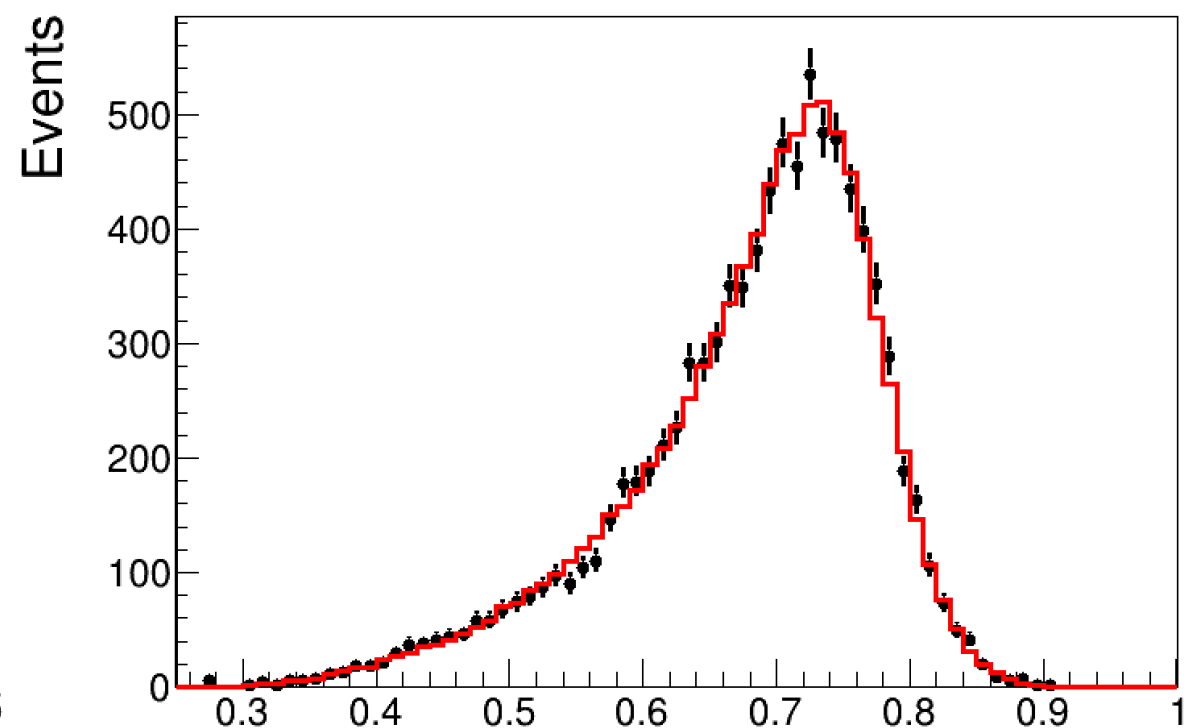
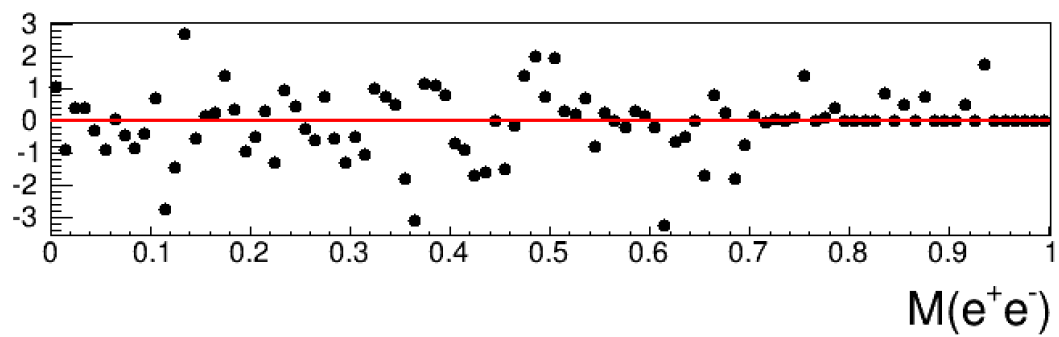
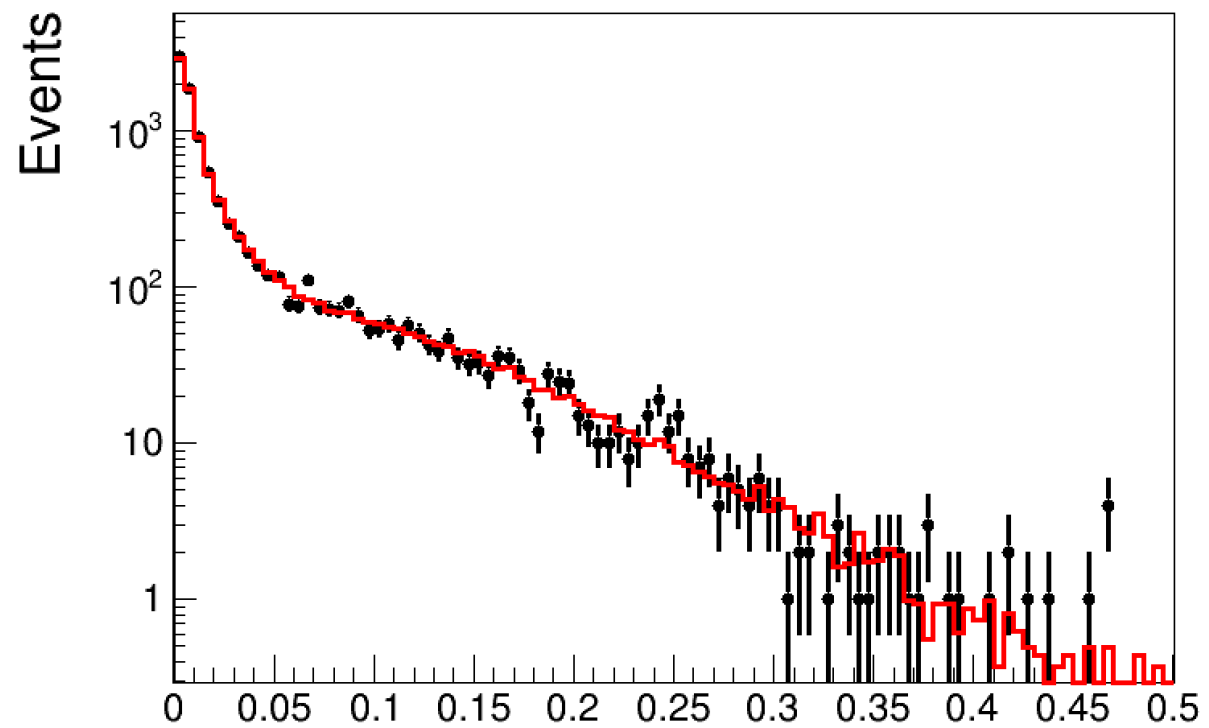
Par.	Input
$m_\nu(\text{MeV})$	771.79
$m_\omega(\text{MeV})$	779.15
$\beta(10^{-3})$	7.60
θ	1.52
$c_1 - c_2$	1
c_3	1

$$\varepsilon = \frac{9247}{50000} = 18.49\%$$

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FCN=-83425.2 FROM HESSE  STATUS=OK      29 CALLS   221 TOTAL
          EDM=3.0072e-08  STRATEGY= 1  ERROR MATRIX ACCURATE
EXT PARAMETER          INTERNAL  INTERNAL
NO. NAME  VALUE      ERROR   STEP SIZE  VALUE
 1 mv     7.70765e-01  1.50209e-03  1.07566e-04 -2.31292e-01
 2 mo     7.72319e-01  1.61325e-03  1.31517e-04 -2.29696e-01
 3 beta   5.66655e-03  2.43699e-03  2.26473e-03 -1.42010e+00
 4 theta   5.48620e-09  2.65590e-01  8.18894e-02 -1.57086e+00
          WARNING - - ABOVE PARAMETER IS AT LIMIT.
          ERR DEF= 0.5
EXTERNAL ERROR MATRIX.  NDIM= 25  NPAR= 4  ERR DEF=0.5
 2.256e-06 -4.339e-09 -1.779e-06 5.996e-09
-4.339e-09 2.603e-06 6.089e-08 1.341e-08
-1.779e-06 6.089e-08 5.941e-06 -1.039e-08
5.996e-09 1.341e-08 -1.039e-08 5.912e-09
PARAMETER CORRELATION COEFFICIENTS
NO. GLOBAL  1  2  3  4
 1 0.48648 1.000 -0.002 -0.486 0.052
 2 0.11025 -0.002 1.000 0.015 0.108
 3 0.48710 -0.486 0.015 1.000 -0.055
 4 0.12538 0.052 0.108 -0.055 1.000
Minimum = -83425.1523495528          0.0000000301

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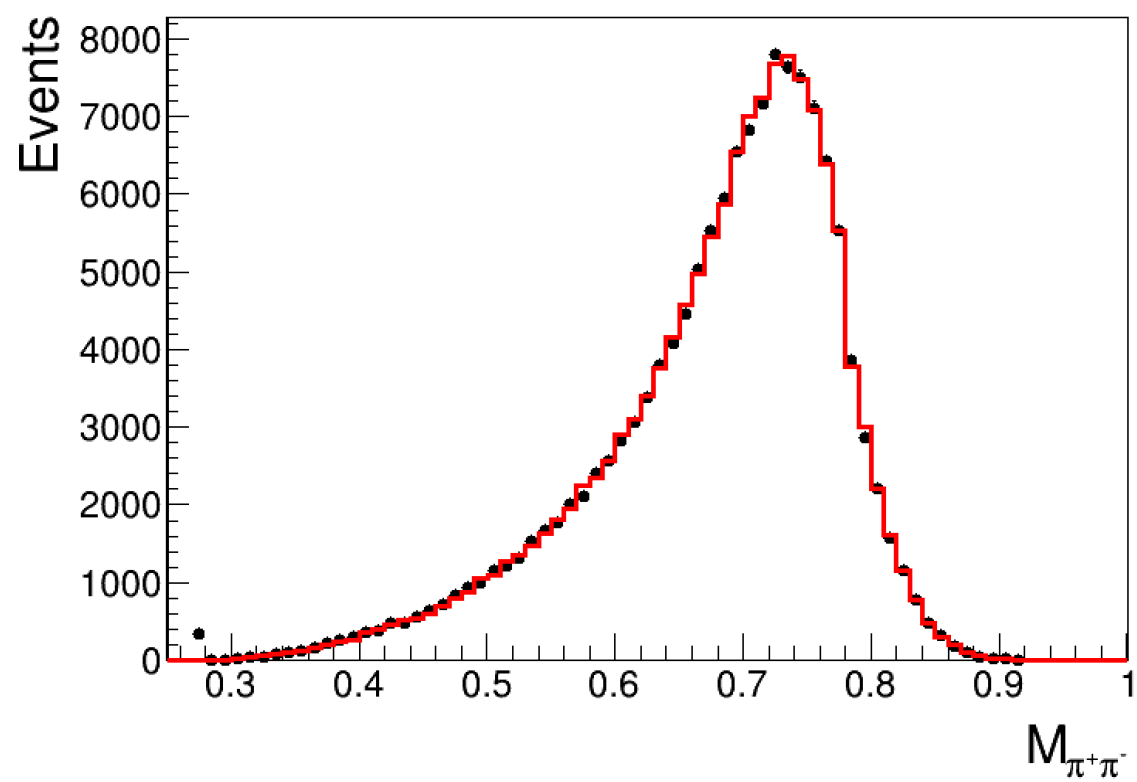
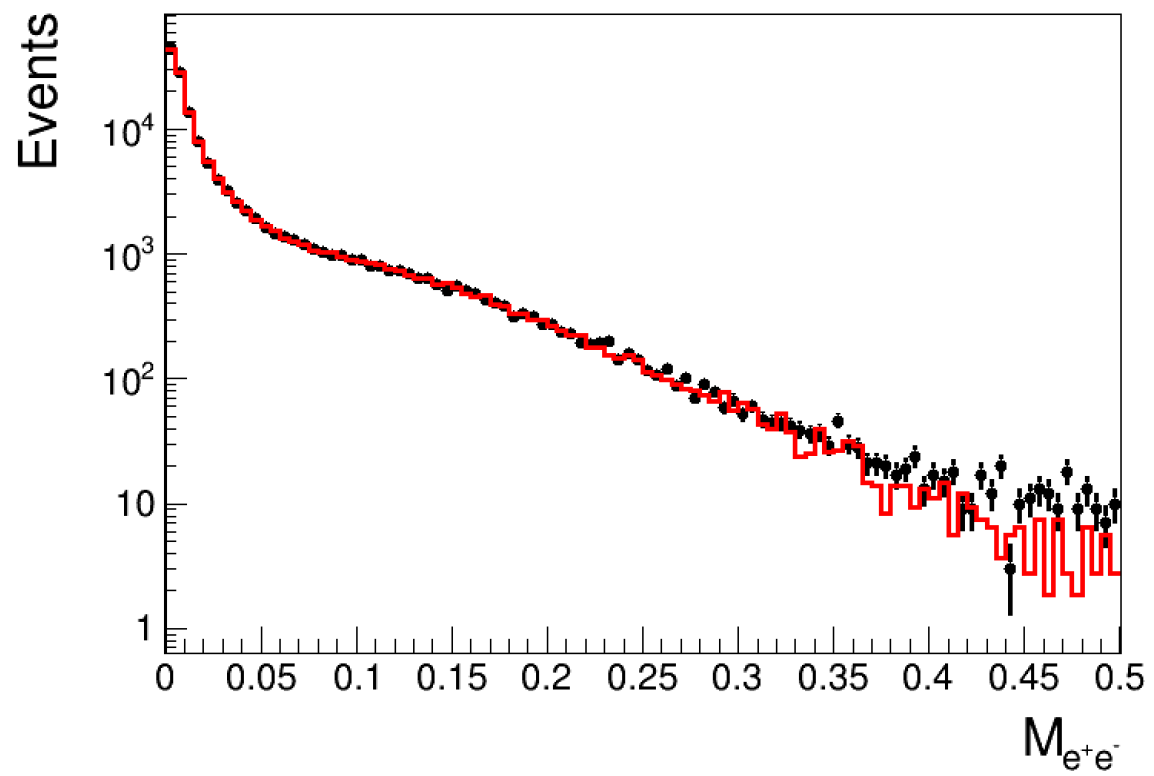
- 产生760000MC

$$\varepsilon = \frac{140043}{760000} = 18.43\%$$

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FCN=-1.25775e+06 FROM HESSE  STATUS=OK      25 CALLS   204 TOTAL
          EDM=6.72537e-07  STRATEGY= 1  ERROR MATRIX ACCURATE
EXT PARAMETER              INTERNAL  INTERNAL
NO. NAME  VALUE      ERROR  STEP SIZE  VALUE
1 mv      7.73033e-01  4.84748e-04  1.09809e-05  -2.28962e-01
2 mo      7.80304e-01  1.49466e-03  1.88057e-05  -2.21503e-01
3 beta    7.35364e-03  6.07505e-04  2.13818e-04  -1.39908e+00
4 the     1.68742e+00  2.16665e-01  8.59676e-04  -4.82856e-01
          ERR DEF= 0.5
EXTERNAL ERROR MATRIX.  NDIM= 25  NPAR= 4  ERR DEF=0.5
2.350e-07  4.312e-07  6.873e-08  7.248e-05
4.312e-07  2.234e-06  1.592e-07  2.972e-04
6.873e-08  1.592e-07  3.691e-07  2.645e-05
7.248e-05  2.972e-04  2.645e-05  4.704e-02
PARAMETER CORRELATION COEFFICIENTS
NO. GLOBAL  1  2  3  4
1 0.70200  1.000  0.595  0.233  0.689
2 0.91818  0.595  1.000  0.175  0.917
3 0.23983  0.233  0.175  1.000  0.201
4 0.93414  0.689  0.917  0.201  1.000
Minimum = -1257751.8484134357          0.0000006725

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- 产生30组MC(100,000)
- 将各参数拟合结果画成高斯分布

Model	Par.	Input	Output
$c_1 - c_2 = c_3 = 1$	$m_V(\text{MeV})$	771.79	
	$m_\omega(\text{MeV})$	779.15	
	$\beta(10^{-3})$	7.60	
	θ	1.52	
	$c_1 - c_2$	1	
	c_3	1	