

# Multiple Scattering Update msc95 – msc96

László Urbán

Geant4 Associates International

24 October 2012

Only one difference between msc95 and msc96 presently:  $\theta_0$   
(central part of angular distribution).

Form of  $\theta_0$  in both model

$$\theta_0 = C \frac{\sqrt{y}}{\beta_{cp}} \text{corr} \quad (1)$$

where  $y = \log\left(\frac{t}{X_0}\right)$ , corr - correction factor.

msc95:  $\text{corr} = \text{corr}(y, Z)$

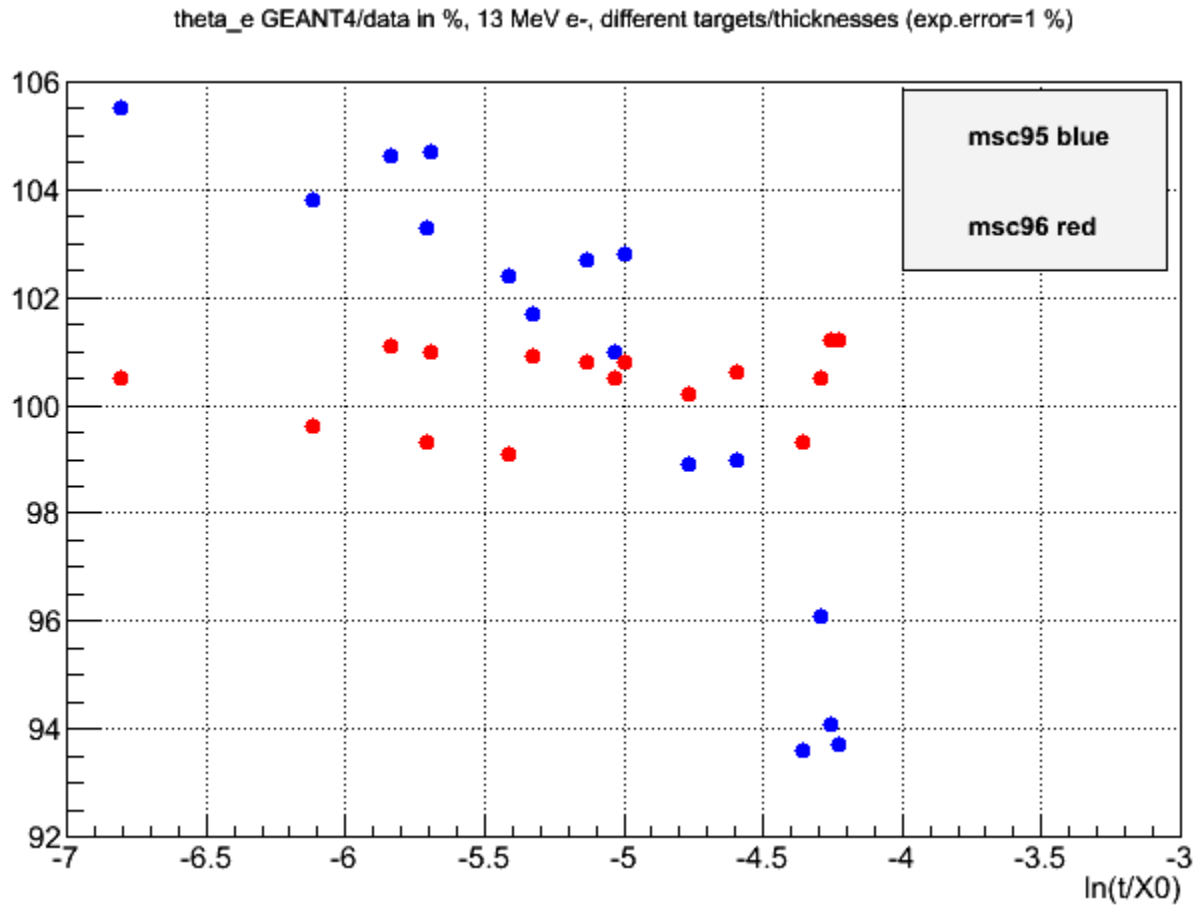
msc96:  $\text{corr} = \text{corr}(y, v)$

where  $Z$  - atomic number,  $v = \log\left(\frac{X_0}{\lambda}\right)$ . in msc95 corr is tuned  
from old 2.25 MeV and 15.7 MeV scattering data

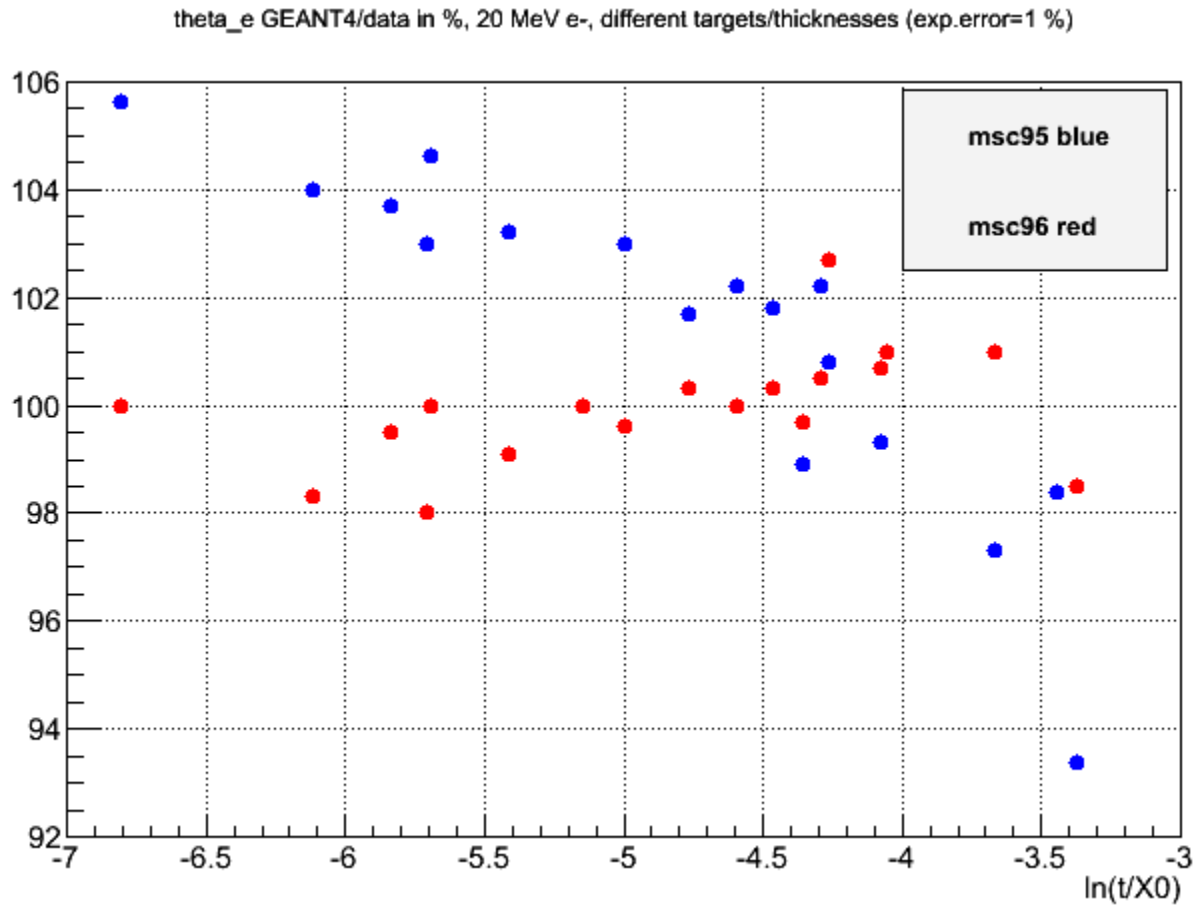
in msc96 corr is tuned from old data plus from the recent 13/20  
MeV data.

to the last plot: corr in msc96 contains a small  $Z$ -dependent  
correction for low energy ( $T \leq 5$  MeV) electrons. (Not committed  
yet).

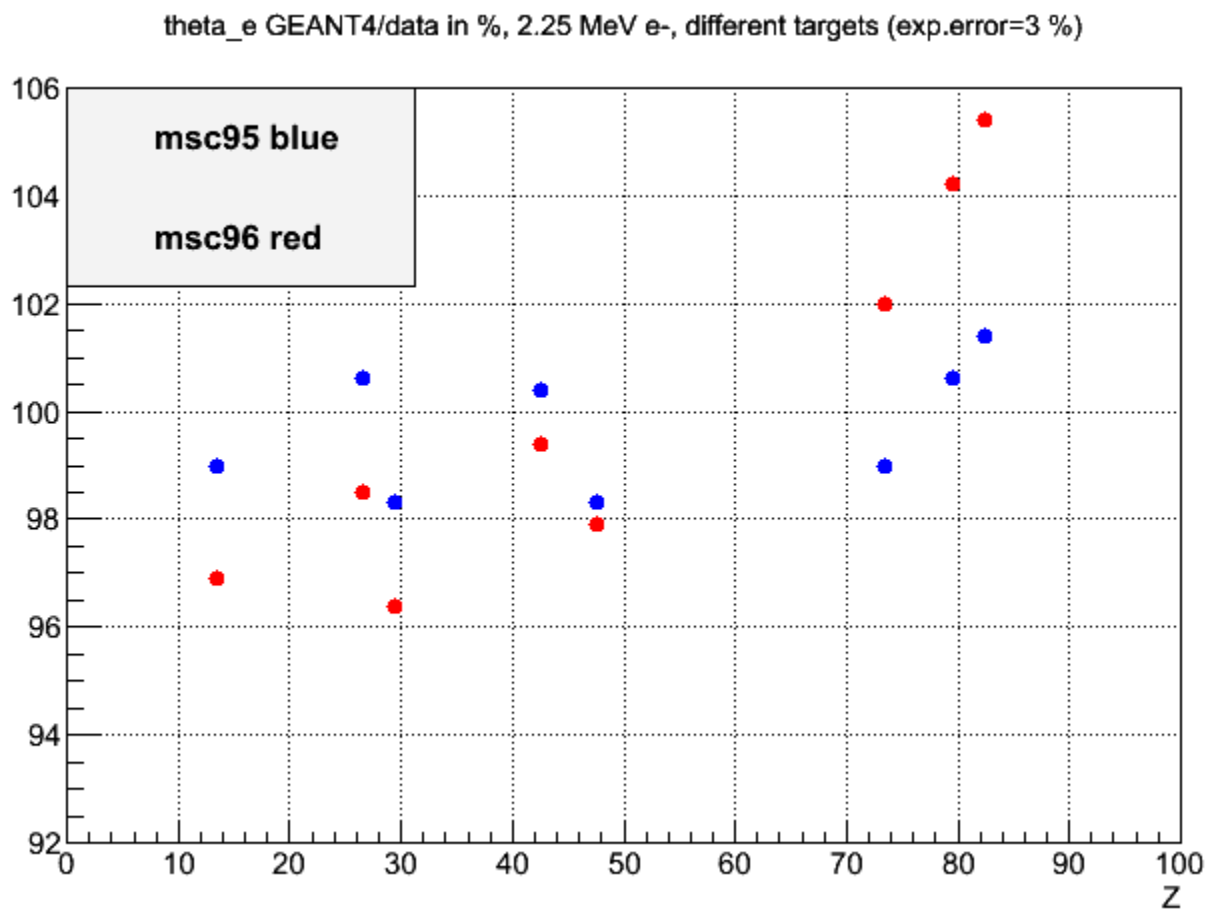
# Tunning to scattering data



# Tunning to scattering data



# Current tuning for 2.25 MeV data, no Z-dependent correction



# Extra Z-dependent correct

