Sampling

1. Given the probability distribution function for z, P(z)= ze-z ,the inverse transformation method was used to sample the values of z.
2. Cumulative Frequency Distribution Function(CDF) was calculated. Equating the function with the uniform distribution, the inverse function was found.
3. After sampling the z values, corresponding DMIGM was calculated from the formula,(the formula ss). To generate randomness in the DMIGM values , normal distribution was assumed, N(DMIGM,100 pc cm-3).
4. DMHG,loc was generated assuming normal distribution, N(100 pc cm-3,20 pc cm-3).
5. Corresponding DME was calculated using the formula

DME = DMIGM +DMHG,loc/(1+z)