```
void toyLineShape(double Mix_c = 0.5, double Mix_d = 0.5, double C = 0.5, int NBin = 30, int NTOT = 10000){
        /* Parameters of the Simulation */
int Nbin = NBin;                  // Number of Bins
int Ntot = NTOT;                  // Number of Total Events
double Ncosmic = (0.492 * Nbin);// Number of Cosmic Events
double pWall_c = Mix_c;           // Weight annihilation on walls for pdf1 (transition c -> b)
double pWall_d = Mix_d;           // Weight annihilation on walls for pdf2 (transition d -> a)
double c = C;                     // Percentage of division two datasets
        /*                                */

double d = 1 - c; double Nc = Ntot*c; double Nd = Ntot*d;
double pGas_d = 1 - pWall_d; double pGas_c = 1 - pWall_c;
```

0.492 expected rate per bin.

The amount of events is splitted in two dataset, Nc for transition c to b and Nd for transition d to a.