
```

function outputMatrix=oxcalDistribute_NOGIA(sampleID,noObsToGenerate)

%read in distribution
cd('/Location of individual OXCAL distributions/');
%read our database data in
strIn=strcat(num2str(sampleID),'.csv');
customDate=csvread(strIn,0,0);

%here we don't know what type of distribution this is
%we have to fit it.

%turn it into cumulative distribution
for x=2:size(customDate,1)
customDate(x,3)=(customDate(x-1,1)-customDate(x,1))*customDate(x,2);
end

%check customDate for rows that are very similar
%else get rows and rows of data that contain zeros
customDate(:,4)=cumsum(customDate(:,3));
for y = 2:size(customDate,1) ;
    if customDate(y,4)-customDate(y-1,4)<=0.000000005;
        customDate(y,5)=1;
    else
        customDate(y,5)=0;
    end
end
end

customDate=customDate(customDate(:,5)==0,1:4);

%col 1 are the times, col 4 is the CDF

sampleNos=rand(noObsToGenerate,1);

%sample it and return
outputMatrix=((interp1(customDate(:,4),customDate(:,1),...
    sampleNos))/1000);
%outputMatrix=((interp1(customDate(:,4),customDate(:,1),...
%    sampleNos))-1950)/1000); -format of OXCAL output dependent
%previous *-1
end

```

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