function celldata = R\_event(filename,dec\_adjustment)

%READ\_EVENT Reads event data and computes widths of Voronoi tessellaton

% Opens and reads a data set into a variable "event" and sorts the

% event array. After sorting and calculating the length of the event

% array, the widths of a Voronoi tessellation is calculated and also

% outputs "celldata".

fid=fopen(filename, 'r');

event=fscanf(fid,'%f',[1 inf]);

fclose(fid);

if nargin<2

dec\_adjustment=0;

end

event=(10^dec\_adjustment)\*event;

%for 'event-data.txt', input dec=adjustment=15

event=sort(event);

L=length(event);

%Calculates the width of each cell of the Voronoi tessellation. The first

%term is the midpoint of the first two data points (which is the length

%from 0 to that midpoint). The second term defines the widths for the 2nd

%to the N-1 cell of the tesellation. The last term is the last cell that is

%defined as the midpoint of the last 2 points to the last point.

celldata=[(event(1)+event(2))/2 (event(3:L)-event(1:L-2))/2 (event(L)-event(L-1))/2];

end