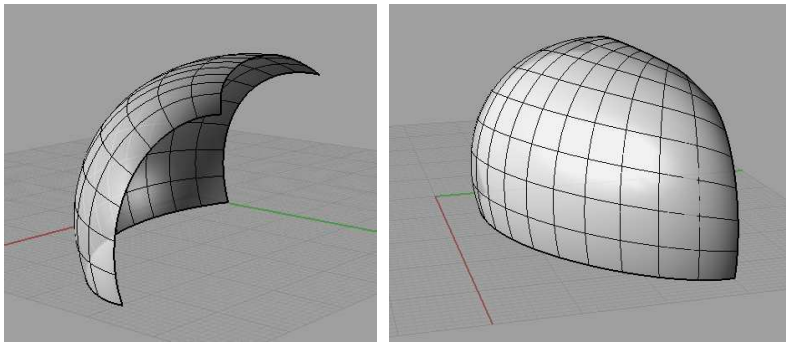



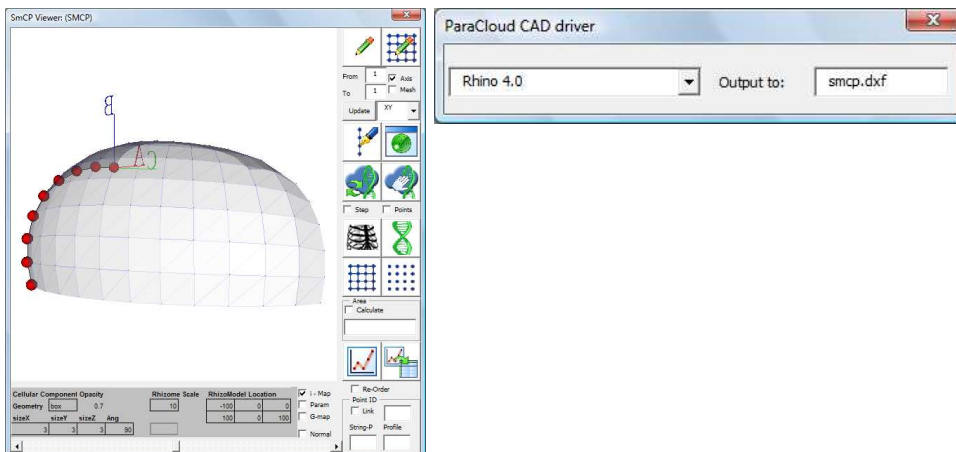
Using Ecotect results with ParaCloud Modeler


The following example demonstrates the procedure of converting solar data from Autodesk Ecotect into ParaCloud Modeler as solar numeric matrix.

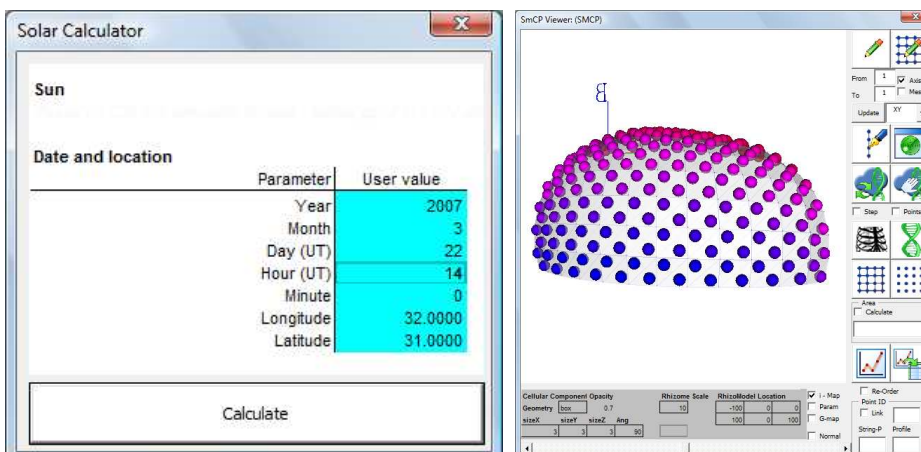
Create a surface in Rhino.



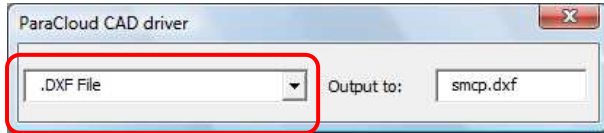
Press the  button from the main console and capture the surface into ParaCloud Modeler.




Press the  button from the main console to generate solar analysis.



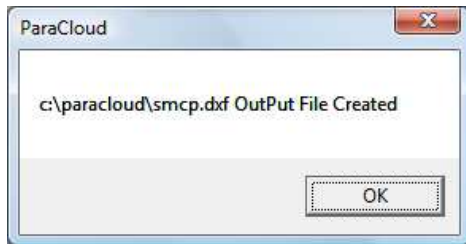
Set the CAD Link to 'DXF' using the  button.



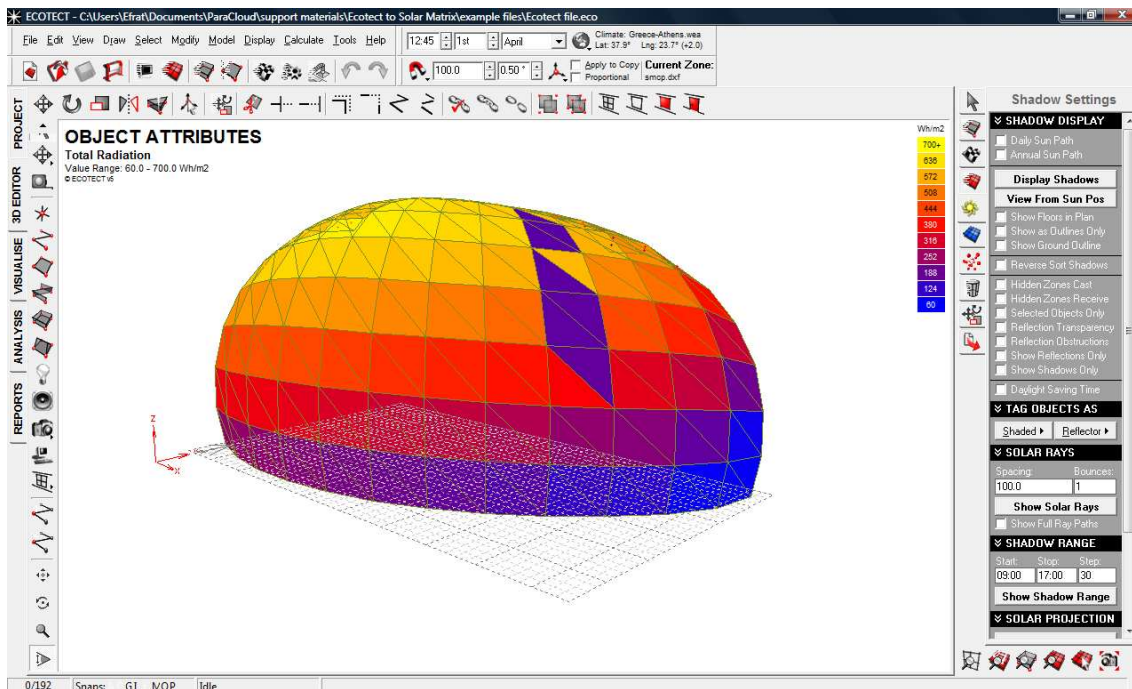
Press the  button and select the '4-sided 1" option.



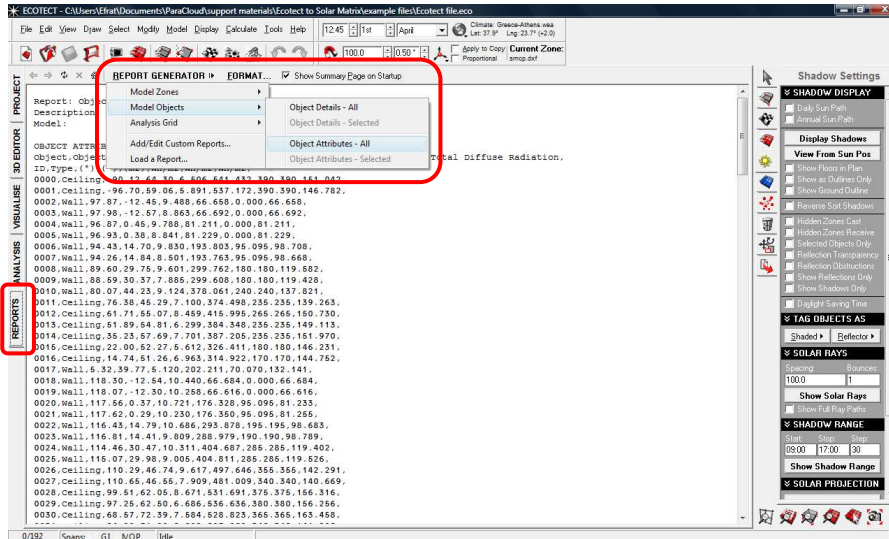
The exported DXF file is saved in C:\ParaCloud folder.



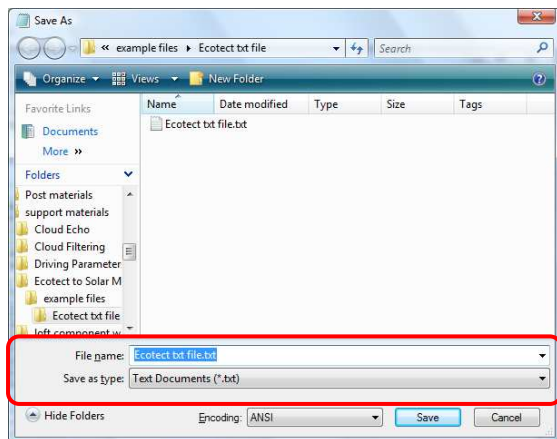
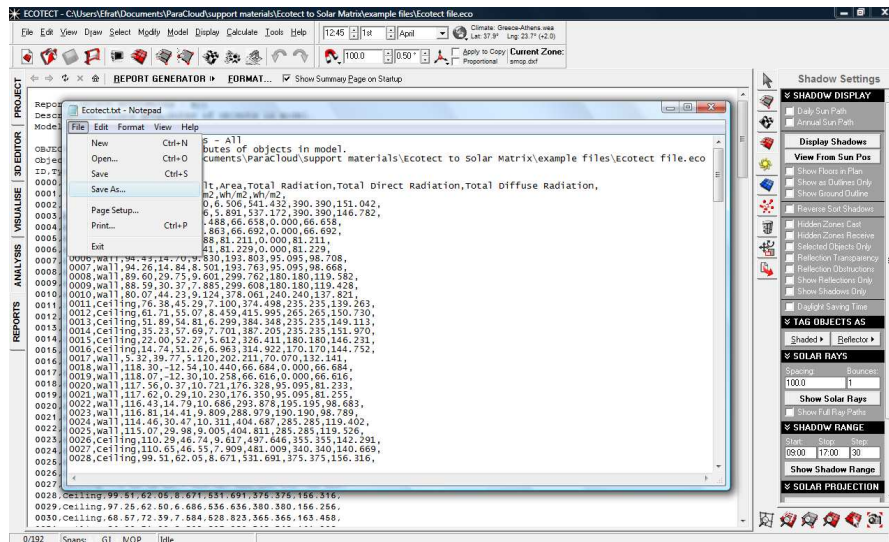
Import the DXF file into Ecotect and generate a solar Access Analysis from the calculation menu.



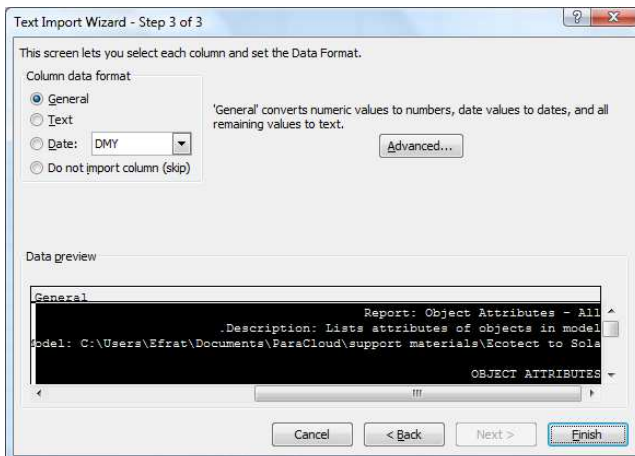
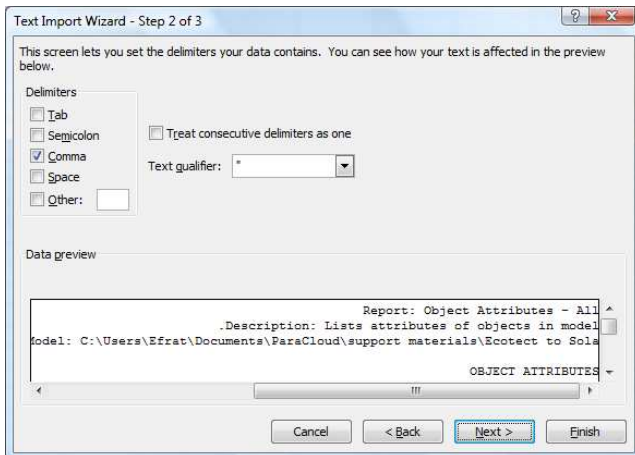
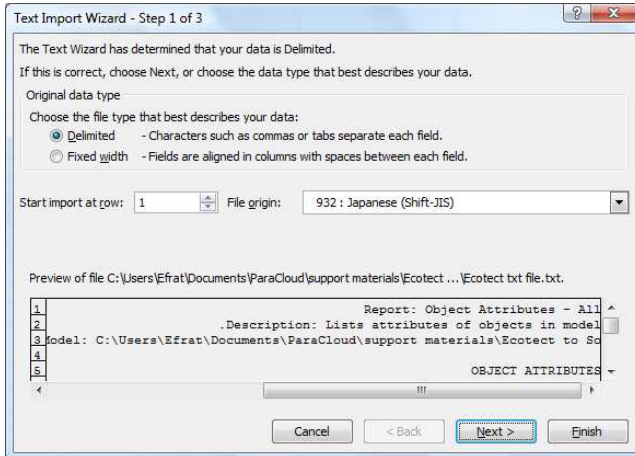
Open the Reports tab and extract the numeric data of the solar calculation process using the 'Object Attributes – All' option from the Report Generator menu.



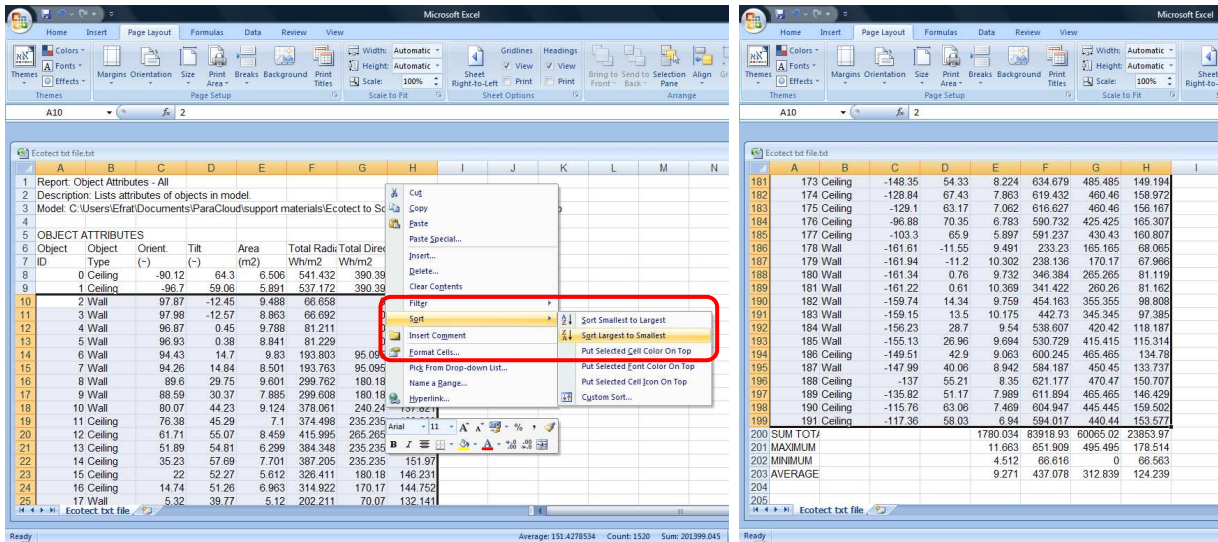
Save the data from the dialog box as a text file.



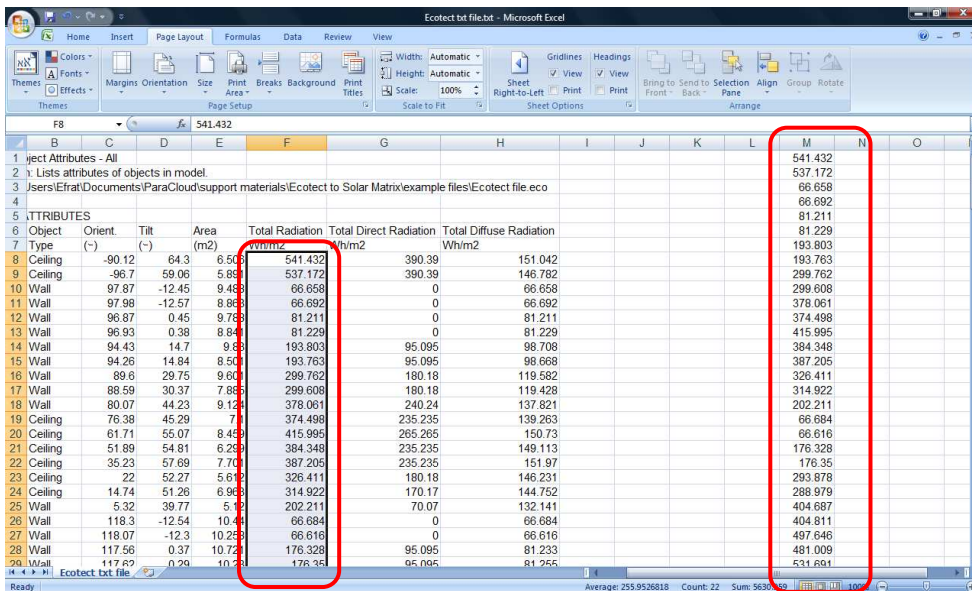
Import the text file into Excel spreadsheet as a CSV file. Toggle the Delimited option and the comma separate option.



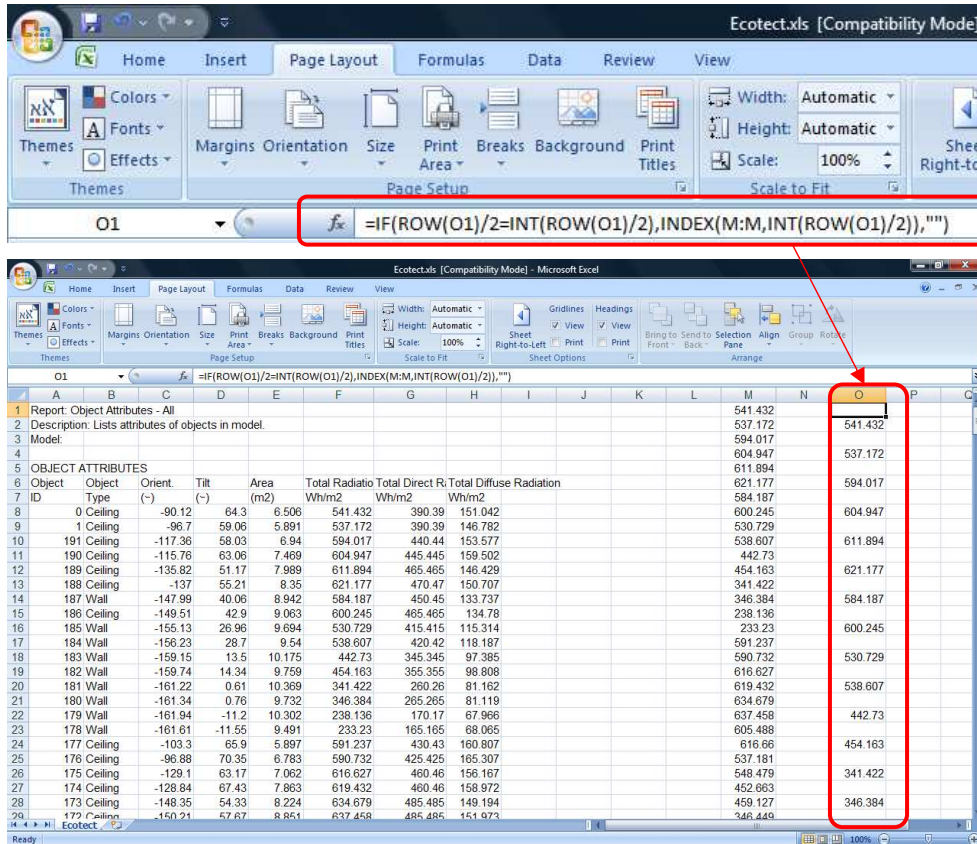
Ecotect sorts the triangular faces starting with the first two (0 and 1) and then reverse the order. In order to match the data order to ParaCloud, select the rows starting from triangle #2 without the sum and Min / Max rows (as shown in the following example). Press right-click and sort data from largest to smallest.



Copy the Ecotect results (Total radiation in this example – F Column) and paste them into a blank column (in this example - M column).



An Excel indexing equation is used for inserting spacing into the data column to match the ParaCloud format. Copy the formula for the whole column until '0' value appears.



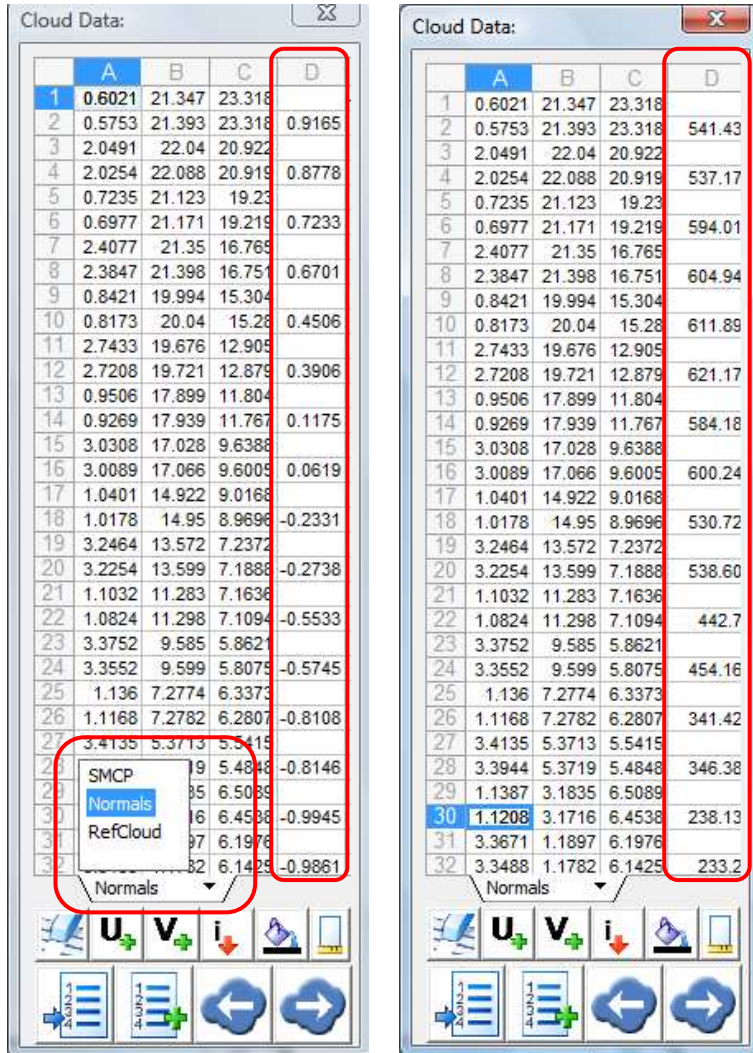
`=IF(ROW(O1)/2=INT(ROW(O1)/2),INDEX(M:M,INT(ROW(O1)/2)), "")`

The equation checks for odd row numbers and insert the Ecotect result data in even rows and spaces in odd rows.

- `INDEX(M:M,INT(ROW(O1)/2))` = True values expression
- `""` = place an empty cell when False.

Copy the new distributed values from O column.

In the Cloud Data Panel, select the Normals tab. Paste the values from the above example to the D column, overwriting the existing data.



ParaCloud solar direction Analysis Ecotect solar Analysis values

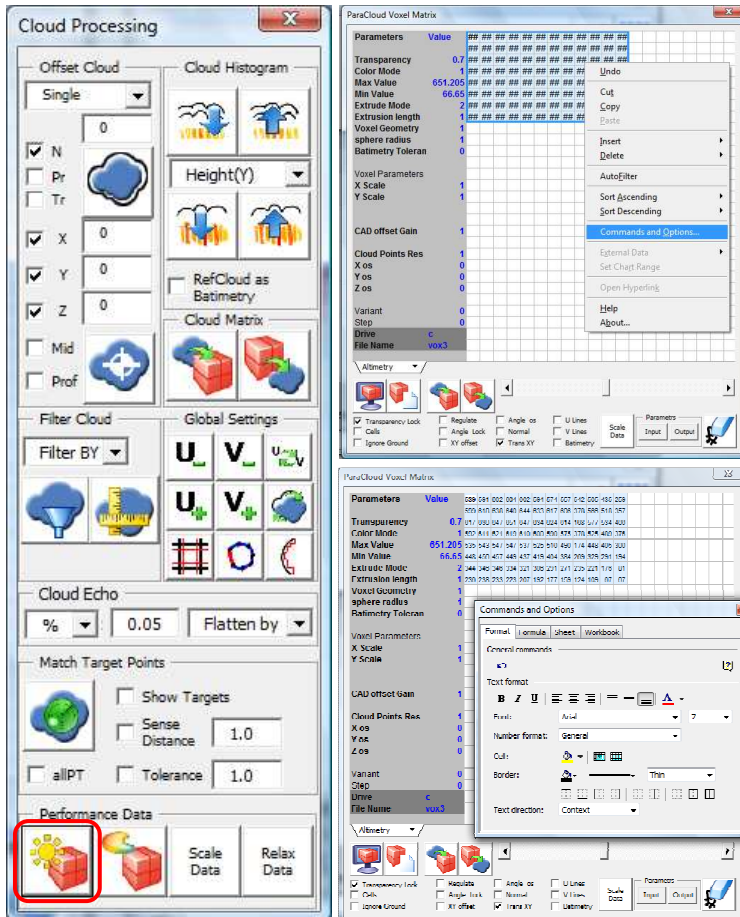


Press the button to open the Cloud Processing toolbox. Press the



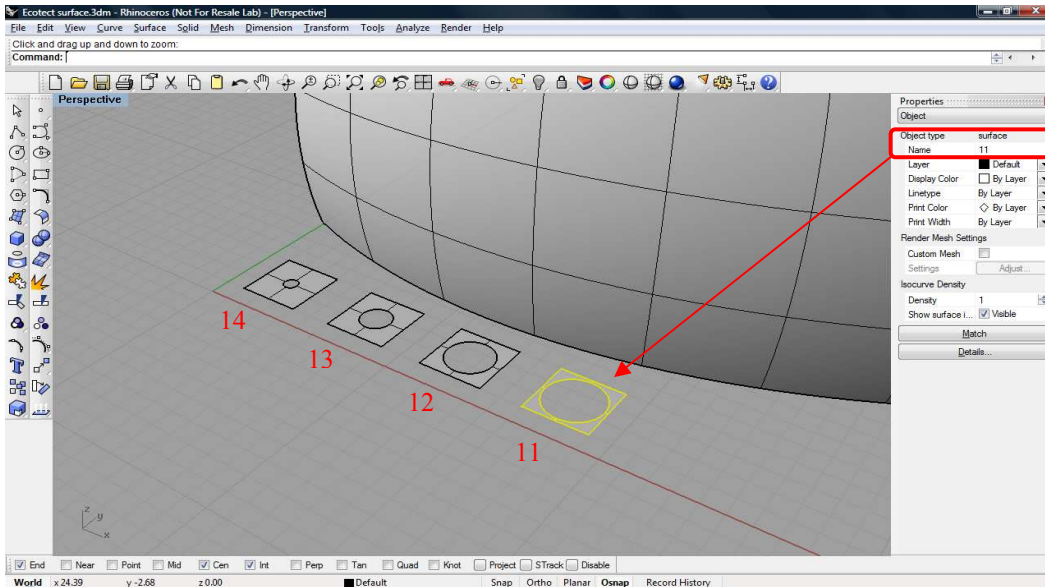
button to generate a numeric matrix of the Ecotect values.


Select the matrix, and change the font size from the commands and option dialog box (Right-Click Menu).

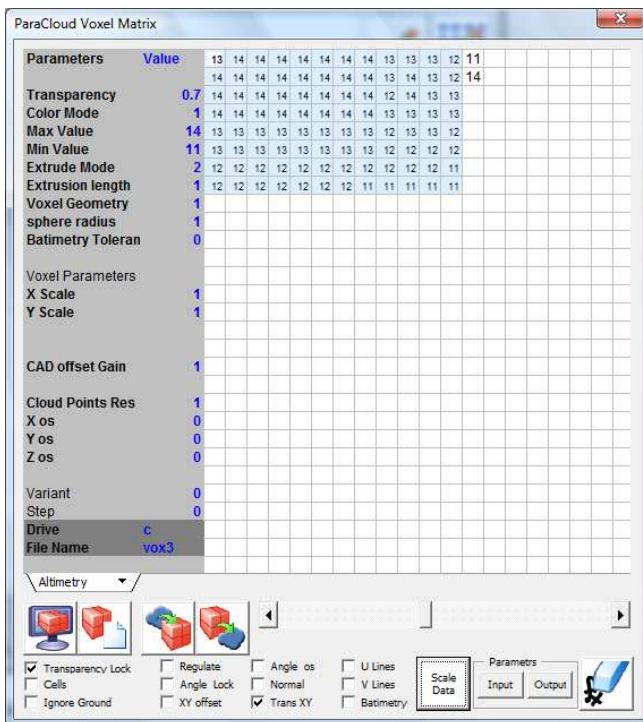


The matrix data can be used as a population matrix or as driving parameters values. The data can be rescaled using the scale data button as shown in the following example.

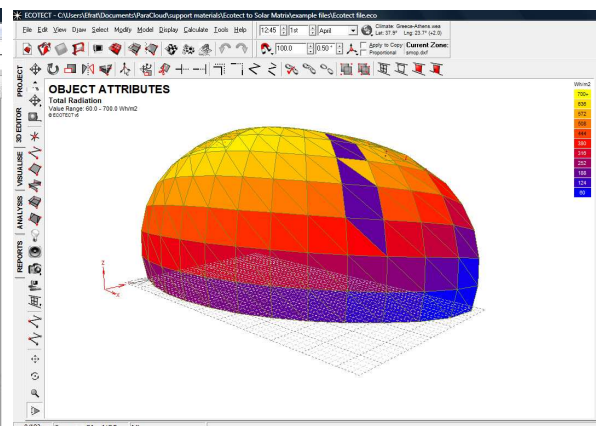
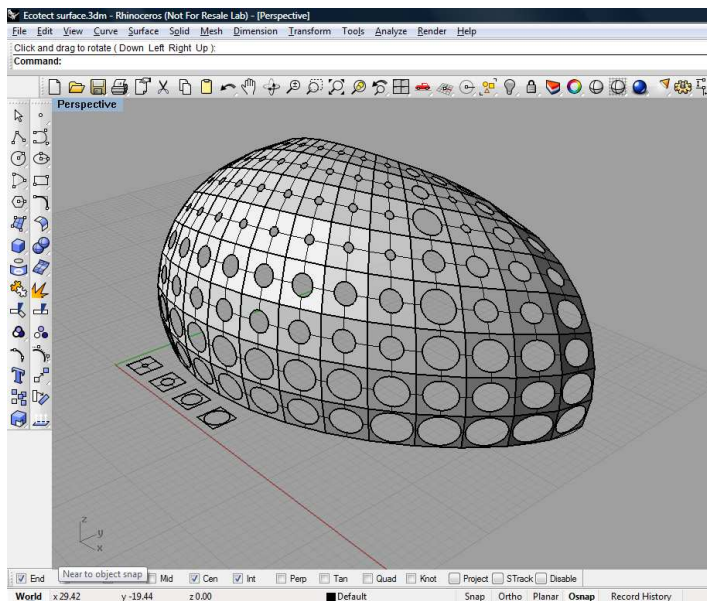
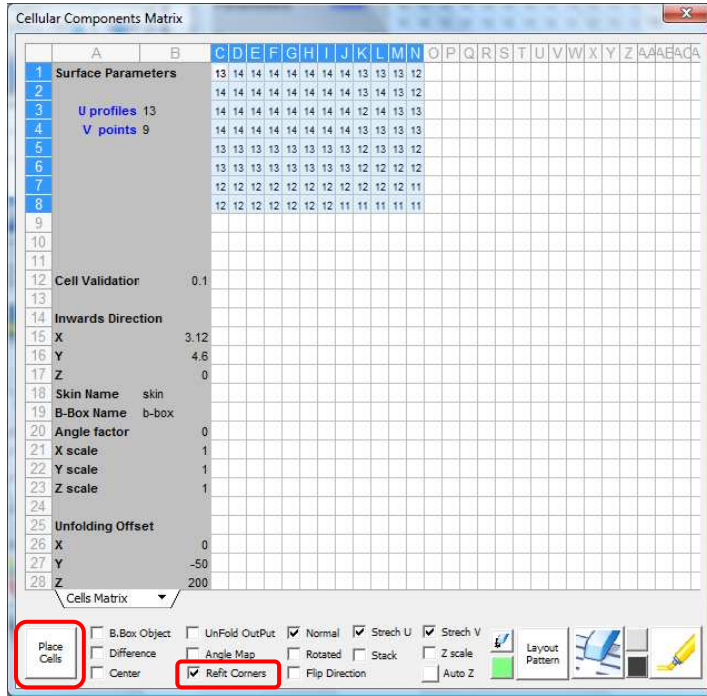
In Rhino, create four different components using 4-corner point surfaces with different opening trims. Use the properties to name the components in sequential order from 11 to 14.



Press the  button and rescale the imported matrix between 11 to 14 values using the scale data button to create a population matrix.



Copy the rescaled matrix into the Cellular components matrix. Toggle the Refit corner option and press the Place Cells button to plot the components back to Rhino.



The components with the small opening dimension were populated in the yellow zone and the components with the big opening dimension were populated in the blue zone, according to the Ecotect Solar calculation.