

# **“ply2SPHERA\_perimeter v.1.0”: documentation file**

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It is also mandatory to cite the use of “ply2SPHERA\_perimeter v.1.0 (RSE SpA)” in all the related publications, reports and dissemination tools and media, by means of the following citation:

“The minor tool “ply2SPHERA\_perimeter v.1.0” is realised by RSE SpA thanks to the funding “Fondo di Ricerca per il Sistema Elettrico” within the frame of a Program Agreement between RSE SpA and the Italian Ministry of Economic Development (Ministero dello Sviluppo Economico).”

## **3. Acknowledgments**

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## **4. Description and references**

“ply2SPHERA\_perimeter v.1.0” (RSE SpA) is a minor pre-processing tool of the SPH code SPHERA v.8.0 (RSE SpA). It deals with the format conversion from “.ply” to the format of the sections “VERTICES” and “FACES” of SPHERA main input file to describe the perimeter of a 3D zone (for 3D simulations) or a 2D zone (for 2D simulations). With Copyright 2016 (RSE SpA), “ply2SPHERA\_perimeter v.1.0” is written by Andrea Amicarelli (email address: andrea.amicarelli@rse-web.it).

“ply2SPHERA\_perimeter v.1.0” is free software released under the GNU General Public License (Free Software Foundation).

## **5. Notes**

The “.ply” input file is located in the same folder of the executable file of “ply2SPHERA\_perimeter v.1.0”. Here, there is also the main input file of ply2SPHERA\_perimeter v.1.0: ply2SPHERA\_perimeter.inp. This is composed by 3 lines, with the following structure:

```
<integer_1> <integer_2> <integer_3> ! perimeter_first_vertex_ID (ID of the first vertex of the perimeter);  
perimeter_first_face_ID (ID of the first face of the perimeter); perimeter_ID (ID of the perimeter)  
<real> ! z_offset (offset of the z-coordinate)  
<character> ! ply_file_name (name of the .ply input file)
```