

Service des Accélérateurs, de Cryogénie et de Magnétisme
SÉMINAIRE

Mercredi 29/07/2015, 10h00-11h00

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Heat transfer by superfluid Helium through
micro-channels

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The present experiment aims to study the heat transfer by superfluid helium through micro-channels that are an approximation to the spaces through which there is helium flow in superconducting magnets. The finality of this study is to discover if the existing models for heat transfer in superfluid helium are valid for this extremely reduced geometry. For that end, an experiment of superfluid helium heat transfer in microchannels with hydraulic diameter of 2,2 micrometers was conducted, a finite element program based on the program FreeFem++ was created to try and simulate the two fluid model for superfluid helium and finally, the Ansys Fluent software was used to simulate phase change from superfluid to normal helium and then to gas state.

Le cafe sera servi 10 minutes avant

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http://irfu.cea.fr/Sacm/Phocea/Vie_des_labos/Seminaires/index.php