

DCMIX Workshop with the European Space Agency at MU

Oct 17, 2013

14 international laboratories are taking part on this meeting. They are going to design new experimental procedures to study and determine the thermodiffusion, molecular diffusion and Soret coefficients in multicomponent mixtures.

The experimental determination of these coefficients will be performed in microgravity conditions, in the SODI device at the International Space Station (ESA). The Fluids laboratory of the Faculty of Engineering at Mondragon Unibertsitatea will measure experimentally these coefficients in terrestrial conditions, using the thermogravitational and the Sliding Symmetric Tubes techniques. The results will be compared with those determined by other purely non convective experimental techniques such as the Thermal Diffusion Forced Rayleigh Scattering technique and the Laser Beam Deflection technique.

The experimental determination of these coefficients is necessary to fix an unified validity criteria for current theoretical models for non-equilibrium thermo-hydrodynamic transport phenomena in multicomponent liquid mixtures. Likewise an international scale Benchmark will be carried out in order to present the results obtained for the coefficients measured both in terrestrial and microgravity conditions.



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