Short Term Scientific Mission of **Dr. Paulo Limão-Vieira**
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15 – 17 April 2004

Scientific report:

The proposed visit follows last year first stay in May in Bratislava, where I have been involved in the preparation of an experiment to look at radicals. We are particularly interested to look at bio related molecular species, e.g., water, carbon dioxide, ozone, and biomaterials as well. In this experiment, the radicals of those molecular species formed in a Corona discharge cell developed by Jan Skalny will be mass spectrometric analysed. It is extremely important to study the properties and dynamics of those radicals from the point of view of their intrinsic correlation with the bio molecules.

During my stay at the Comenius University I have been:

1 – checking and testing the newly installed quadrupole mass spectrometer and probing its capabilities to perform data acquisition/analysis together with one of Jan Skalny's students. New routes for the experiments and future joint collaboration have been planned and results are expected shortly;

2 – invited to present a talk on "On the role of atmospheric and plasma etching molecules in stratospheric ozone depletion and global warming".

From the point of view of other future collaborations, I had a chance to see again the newly assembled electron attachment machine under the supervision of Dr. Stefan Matejcik and we agreed to prepare a research purpose to apply for a joint collaboration. The joint research interests are extremely important, since I'm setting up at my University in Lisbon, a newly experiment on charge transfer experiments (by atom-molecule collisions) for biomolecules.

Lisbon, May 7th 2004