Workshop on "Astrofisica Computazionale in Italia: risultati e prospettive"

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FOREWORD

On behalf of the Scientific Organizing Committee I want, first of all, to thank the people who helped us with the organization. In particular, I thank Alice Sossi and Federico Gasparo of the Local Organizing Committee (both from INAF Trieste) and Monica Arrabito and Corrado Perna (both from INAF Headquarters) for their contribution to the general organization. Thanks are due also to the INAF Sistemi Informativi Unit, that financially contributed to the positive realization of this meeting.

The Workshop has taken place in Rome at INAF (National Institute for Astrophysics) on March 12th 2008. The purpose of the Workshop was to present the main achievements obtained by the National computational Astrophyisics community in the past three years, the new collaboration agreement between INAF and CINECA, the new projects for large scale grid facilities and, in particular, to start a useful discussion on the perspectives of the Astrophysics community within the new scenarios emerging in the field of computational infrastructures.
The book reports the contribution of the most important talks, presented during the meeting, that offered very important suggestions for wide discussions among participants.

The Workshop was mainly divided into two complementary parts. The first was dedicated to the presentations of the new agreement between CINECA and INAF and to the main results of the old agreement in the last two years. The discussion was integrated with the strategies of new projects supported by the Italian Ministry of Research using EU funds of Objective 1 Area. The new grid projects (PI2S2, project of the Cometa Consortium; CYBERSAR project of the Cosmolab consortium), where INAF is directly involved, and the SCOPE project of the University of Naples were presented, with useful discussions on the new perspectives for implementing HPC capabilities on the grid infrastructure.
The second part of the Workshop was devoted to the scientific results obtained with the use of HPC resources mainly in CINECA. Many relevant results were obtained using the mechanisms of the so-called key projects within the INAF - CINECA agreement that allow our researchers to keep up with competitors in the international context. Other important results were obtained with the grid-based projects that represent the first usage of the grid for computational HPC.

I wish to thank the Director of the INAF Projects Department Gianpaolo Vettolani for the welcome address, and Giovanni Peres as chairman of the final discussion for his partecipation in the workshop and for the useful suggestions he gave to all of us. Special thanks go to Fabio Pasian for the introduction, the concluding remarks and the support in the organization of the workshop.

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