

ICRANet Scientific Committee
Ninth Meeting
December 18th - 20th, 2013

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The meeting starts at 2:30 pm of the 18th of December 2013 in the URCA meeting room at CBPF in Rio de Janeiro (Brazil). The following members are present:

Felix Aharonian (representative of Armenia)
Carlo Luciano Bianco (Representative of ICRA, via Skype connection)
João Braga (Representative of Brazil, Chairman)
Massimo Della Valle (Representative of Italy, Co-Chairman)
Gabriele Gionti (Representative of the Vatican State, via skype connection)
Jorge Rueda with proxy by David Arnett (Representative of Arizona University)
Paul Worden with proxy of John Mester (Representative of Stanford University, via skype connection)
Remo Ruffini (Director of ICRANet)

Also in attendance:

Federica Di Berardino (Head of ICRANet Secretariat)
Cinzia Di Niccolò (Pescara ICRANet secretariat)

The meeting is chaired by Prof. João Braga and the minutes are taken by the Director.

The Director presents the three volumes of his report to the Committee.

The presentation of the report by the Director starts at 2:45am. The Director specifically illustrates:

- the status of the Staff, visiting scientists and graduate students at the Pescara Center;
- the Major role that Brazil is acquiring in the ICRANet activities; as examples, he illustrates three major points: a) the starting of the CAPES-ICRANet program for PhD students, Post-Doc Researchers and Visiting professors; b) the further development of the Brazilian Science Data Center (BSDC), and c) the Cooperation Agreement signed with FAPERJ (Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro);
- the completion of the restructuring of the ICRANet seat in Nice (Villa Ratti) and the starting of the activities of the ICRANet Seats in Armenia (Yerevan) at the National Academy of Sciences and in Brazil (Rio de Janeiro) at CBPF;
- the teaching activities held in September in Nice, as well as the Second Bego Scientific Rencontre, Nice, France, May 16-31, 2013; the 2013 yearly ICRANet Scientific Meeting on Relativistic Astrophysics, Pescara, Italy, June 3-21, 2013; the first URCA meeting on Relativistic Astrophysics, Rio de Janeiro, Brazil, June 24-29, 2013; the 13th Italian-Korean Meeting, Seoul, South Korea, July 15-19, 2013.
- the new and pre-existent Agreements with ASI (Italian Space Agency, Italy), BSU (Belarusian State University, Belarus), CAPES (Brazilian Fed. Agency for Support and Evaluation of Grad. Education), CBPF (Brazil), Ceará State (Brazil), ENEA (National Agency for new technologies, energy and the economic sustainable development, Italy), FAPERJ (Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro, Brazil), GARR (Italy), ICTP (The Abdus Salam International Center for Theoretical Physics, Italy), IHEP (Institute of High Energy Physics, Chinese Academy of Sciences, China), IHES (Institut des Hautes Études Scientifiques, France), INPE (Instituto Nacional de Pesquisas Espaciais, Brasil), INFN (National Institute for Nuclear Physics, Italy), ITA (Instituto Tecnológico de Aeronáutica, Brazil), LeCosPa (Leung Center for Cosmology and Particle Astrophysics, Taiwan), NASB (National Academy of Sciences, Belarus), NAS RA (National Academy of Science, Armenia), Nice University Sophia Antipolis (France), Pescara University "D'Annunzio" (Italy), Physics Department of University of Rome "Sapienza" (Italy), SCSA (State Committee of Science of Armenia), UERJ (Rio de Janeiro State University, Brazil), UFPB (Universidade Federal da Paraíba, Brazil), UIS (Universidad Industrial de Santander, Colombia), UNAM (Universidad Nacional Autónoma De México), UNIFEI (Universidade

Federal de Itajubá, Brazil), University of Rome "Sapienza" (Italy), UNS (Universidad Nacional del Sur, Argentina);

- the large number of Students and the growth of the International Relativistic Astrophysics PhD Program (IRAP PhD), promoted by ICRANet with the academic support of AEI – Albert Einstein Institute – Potsdam (Germany), Bremen University (Germany), Carl von Ossietzky University of Oldenburg (Germany), CBPF – Brazilian Centre for Physics Research (Brazil), Ferrara University (Italy), IHES (France), Indian centre for space physics (India), INPE (Instituto Nacional de Pesquisas Espaciais, Brasil), Nice University Sophia Antipolis (France), Observatory of the Côte d'Azur (France), Rome University – "Sapienza" (Italy), Savoie University (France), Shanghai Astronomical Observatory (China), Stockholm University (Sweden), Tartu Observatory (Estonia);
- that the IRAP PhD has grown and obtained the official recognition of the Erasmus Mundus program of the European Commission and has seen the registration of 37 additional students within this new framework. In this new extended activity it has been involved also with the Indian Center for Space Physics (India) and the Shanghai Astronomical Observatory (China);
- that, following the Memorandum of Understanding signed in 2012 with CAPES, it started in 2013 the CAPES-ICRANet Program on Relativistic Astrophysics and Cosmology to promote the Collaboration between Brazilian and European scientists, and that the first PhD Students, Senior European scientists, Senior Brazilian scientists and Post-doctoral fellows have been recruited;
- the project for the ICRANet Center at the Casino de Urca in Rio de Janeiro (Brazil) further developed;
- that they took place the first contacts to start the procedures for the adhesion of South Korea and of Hungary to ICRANet.

The scientific activities of ICRANet have already been presented in full details in the meeting in Pescara from the 3rd to the 21st of June, 2013 (see enclosed program; the full talks can be downloaded from the web link:

<http://www.icranet.org/index.php?option=com_content&task=view&id=733>)

The Committee:

- thanks the Director for his presentation and congratulates him for the clear scientific success and achievements of ICRANet accomplished under his leadership;
- recognizes the ample expansion of topics of Scientific Research at the highest international levels and the many results obtained; particularly important are the developments in the traditional fields of research, such as the Physics and Astrophysics of Neutron Stars, White Dwarfs and Black Holes.
- notices as well a promising opening of scientific interests in the field of high redshift cosmology and the large scale structure of the Universe; equally important is the progress toward field theories in extreme relativistic conditions made possible by the confrontation with data from X and Gamma ray satellites and Earth-based observatories in all wavelengths from the optical to the UHE gamma rays;
- recognizes the contributions of the Governments of Armenia, Brazil, Italy and Vatican State, as well as from Stanford University, the University of Arizona at Tucson, and ICRA for the creation of ICRANet as an international organization, operating in one of the most advanced fields of research, and is also grateful to the Italian government for granting the extraterritorial Status to the Seat in Pescara;
- witnesses the widening of scientific interest made possible by the geographical expansion of the ICRANet activities in Armenia, Brazil, China, France; it welcomes the action by the

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Director to obtain funding, local premises and support of the local Authorities, which adds a substantial increase to the assets of ICRANet;

- recognizes the strategic value of the activities in Brazil with the development in the ICRANet Center in Rio of the BSDC (Brazilian Science Data Center), specially devoted to the acquisition, storage, classification and analysis of astrophysical data;
- welcomes as well the signature of the agreement with University of Joao Pessoa and encourages the signature of an agreement with INPE (Instituto Nacional de Pesquisas Espaciais), especially in view of the possible Italian collaborations with Brazil for the future development of astrophysical satellites;
- expresses gratitude for the project of installing the Brazilian ICRANet Center at the Casino de Urca and expresses the support to the Ministry of Science in Brazil to realize such a project in the near future;
- is pleased about the full enforcement of the Seat agreement for the Pescara Center unanimously approved by the Italian Parliament, and recommends that similar actions will be made in order to obtain the same status in the territories hosting the other Seats of ICRANet, especially the ones in Rio de Janeiro and in Yerevan;
- asks the Director to address the attention of the Foreign Ministers of the ICRANet Members States on obtaining the Seat agreement for the Center in Villa Ratti in Nice; the entrance of France in ICRANet should be also considered with priority in view of the many common scientific interests with ICRANet;
- underlines the activities in the organization of international meetings: especially remarkable has been the XIII Marcel Grossmann Meeting in Stockholm (Sweden) and the program of biannual meetings between Italy and Korea sponsored by the Italian Foreign Ministry, as well as all the many PhD schools organized in Italy and in France;
- recognizes the strong commitment of teaching at graduate-student level, promoted by ICRANet in establishing the IRAP PhD in connection with some of the leading Astrophysical and Physical research Institutions of Europe, directly related to the activities encouraged by ICRANet in Brazil, China and India;
- recognizes that, in order to keep pace with these scientific developments and with its scientific goals, as well as with the teaching to a vast number of IRAP PhD students all over the world, an expansion of the Faculty, visitors and research Members; both in Europe and in Brazil, is necessary and recommends the Director to open new appointments;

The Director notes:

- the contributions obtained in kind for the ICRANet Centers by the Municipalities of Pescara and Nice, and by the CBPF in Rio de Janeiro, as well as by the Academy of Science of Armenia in Yerevan;
- the support given by the Erasmus Mundus program of the European Commission to the IRAP PhD program of 1,300,000.00 Euros per year;
- the contribution given by the Brazilian Government for 2013 of 310,000.00 Euros;
- the contribution by CAPES for fellowships and exchange of scientists and students for 550,434.00 Euros for 2014;
- the expected contribution of FAPERJ of approximately 300,000.00 Euros for 2014;
- the contribution of the MCTI of 300,000.00 Euros for 2013 and 2014 for the further development at CBPF of the BSDC following the agreement between ICRANet, INPE, and ASI;
- the contribution of five positions (three researchers, one technician, and one secretary) of the State Committee of Science of Armenia.

He further notes:

- that the contribution of the Italian Government has been kept constant since the beginning of the ICRANet activities started in 2005, not taking into account any effect of inflation;
- that the Board of ICRANet has unanimously reiterated a request for the increase of funding for the Italian contributions;
- that the request by the Italian Foreign Minister to the Italian Government of an increase of 700,000.00 Euros for the years 2011 and following has not been granted;
- that the annual contribution of 300,00.00 Euros for ICRA has not been supplied by the Minister of University of Research of Italy in the last two years;

In view of all the above very significant positive developments, of the commitments toward international partners in teaching and research, as well as in the difficulties encountered above, he will:

- have, with the representatives of Brazil in the ICRANet Board (Prof. Mario Novello) and in the Scientific Committee (Prof. João Braga), meetings in Brazil with the Minister of Foreign Affairs (Itamaraty), with the Minister of Science and Technology, the Minister of Planning, as well as with representatives of the scientific and technological community. This action is directed to formulate the ICRANet program for Brazil, following the presentation in the current report, leading to an increment of the yearly contribution by Brazil of 800,000.00 Euros;
- have meetings with the representatives of the Italian Ministries of Foreign Affairs, of Treasury, and of University and Research in order to convey the unanimous and urgent request by all Members to guarantee the continuation of the current scientific activities, in view of the fact that no residual funds are any longer available in ICRANet. This common action of all Members should lead to a request to be discussed in the next Board meeting in February 2014 for an increase of the Italian annual contribution of 1,000,000.00 Euros for the years 2014 and following;
- have meetings with the Ministers of Foreign Affairs of Armenia and Brazil to facilitate the final approval and enter into force of the Seat Agreements. A similar action leading to the entrance into ICRANet of Germany and France should be pursued with an urgent request to the French Government to obtain the Seat Agreement in Villa Ratti in Nice.

In conclusion given the strength of the Organization, the Committee is pleased to comment on their results with the intent of driving for excellence:

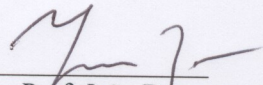
- ▲ takes note of the clear success of the ICRA/ICRANet group, led by its Director, in advancing in all the planned research topics and in accomplishing their goals,
- ▲ acknowledges the contributions by the Minister of Foreign Affairs of Italy and the Minister of Science, Technology and Innovation of Brazil for the continuous support of ICRANet.
- ▲ recognizes the great significance of the action of the Ministry of Foreign Affairs of Brazil and of Armenia for drafting the Seat Agreements, and looks forward to the reaching the full operation of the ICRANet Center in Rio de Janeiro and in Yerevan;
- ▲ supports the Director on the establishment of a stronger and wider link with Brazil, Armenia and Central Asia, with specific plans for expansion of the facilities as well as of the Faculty, the Scientists and the Administrative Staff; all the positions will be open to international participants;
- ▲ supports the development of the BSDC, which may become a cornerstone for the activities of ICRANet in Brazil possibly to be extended to all South and Latin America;
- ▲ supports further contacts with South Korea, Hungary and fostering of the collaborations with Singapore and India;
- ▲ is particularly pleased by the ICRANet activities within the IRAP-PhD by CAPES, the Erasmus Mundus, and FAPERJ programs jointly with the Universities in the European Union and Brazil, Armenia, China and India; the presence of students from Albania, Argentina, Armenia, Belarus, Brazil, China, Colombia, France, Germany, India, Italy, Russia, Serbia,

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Sweden, and Turkey. This has fostered the scientific atmosphere in the Pescara Center and their participation in many of the scientific reports has been extremely encouraging;

- ▲ notes with great satisfaction, in this difficult period for the development of research in science, the progress and consolidation of ICRANet scientific activities, successfully overcoming the current difficulties in funding;
- ▲ unanimously endorses the above mentioned request by the Director, on behalf of all Members, for the increase of the Italian annual contribution due to the current needs of research and teaching activities;
- ▲ finally recognizes the continuously improving tone and content of the scientific discussions and it must credit the Director, Prof. Remo Ruffini, and his staff with the creative follow up to its recommendations of last year.

The meeting ends at 4:00 pm on the December 20th 2013 after the reading and unanimous approval of this report.



Prof. João Braga
Chairman of the ICRANet Scientific Committee