

ICRANet Scientific Committee
Thirteenth Meeting
December 9th - 11th, 2015

The meeting starts at 10:30 am of the 9th of December 2015 in the ICRANet Headquarters in Pescara (Italy).

The following members are present:

Felix Aharonian (Representative of Armenia)

Carlo Luciano Bianco (Representative of ICRA)

Massimo Della Valle (Representative of Italy, Co-Chairman)

Chris Fryer (Representative of the Arizona University)

John Mester (Representative of Stanford University)

Remo Ruffini (Director of ICRANet)

She-Sheng Xue with the proxy of Gabriele Gionti (Representative of the Vatican State)

The following members are absent

Representative of Brazil (not yet nominated)

The meeting is chaired by Prof. Felix Aharonian and the minutes are taken by the Director.

The Director is given the word and starts by presenting the three volumes of his report to the Committee.

The presentation of the report by the Director starts at 10:30am. The Director specifically illustrates:

- On February 13th, 2015, the signature of the Seat Agreement for ICRANet in Armenia, by the Director of ICRANet, Prof. Remo Ruffini, and the Ambassador of Armenia in Rome, H.E. Sargis Gazharyan. The agreement entered in force on November 24th, 2015.
- The status of the Staff, visiting scientists and graduate students at the Pescara Center;
- The collaboration with Brazil has been characterized by a successful program with graduate students, researchers, post-docs, and senior visitor scientists both in Europe and in Brazil. It includes the initiative to establish the ICRANet Brazilian Science Data Center (BSDC). Agreements have been signed between ICRANet and fifteen Universities and Research Centers in Brazil;
- The first PhD Students, Senior European scientists, Senior Brazilian scientists and Post-doctoral fellows recruited in the CAPES – ICRANet program are advancing in their activities;
- The project for the ICRANet Center at the Cassino da Urca in Rio de Janeiro (Brazil) has further developed.
- In 2015 ICRANet actively participated to the celebration of the International Year of Light under the aegis of UNESCO celebrating the 100th Anniversary of the Einstein Equations and the Golden Jubilee of Relativistic Astrophysics. The main event was represented by the MG XIV Meeting held at the University of Rome “La Sapienza” from the 12th to the 18th of July 2015, with the participation of 1200 scientists from more than 50 Countries. A series of satellite meetings was organized as well: the 2nd César Lattes Meeting, Brazil, April 13 – 22, 2015; the 4th Galileo-Xu GuangQi Meeting, Beijing, China, May 4 – 8, 2015; the 1st Colombia-ICRANet Julio Garavito Armero Meeting, Bugaramanga – Bogotá, Colombia, November 23 – 27, 2015; the 1st Sandoval Vallarta Caribbean Meeting, Mexico City, Mexico, December 1 – 5, 2015.

- The procedure for having Colombia formalizing its request to join ICRANet is ongoing and close to completion, also thanks to the great success of the above mentioned 1st Colombia-ICRANet Julio Garavito Armero Meeting.

Despite these positive results:

- During the Steering Committee meeting held on February 13th, 2015, MAECI informed the Steering Committee of a reduction of Euro 150.000,00 to the Italian contribution for the year 2015.
- The Director was informed only a few days ago that the possibility of a further cut of 1.400.330,00 for 2017 and 2018 is currently under discussion by the Italian Parliament.
- The Director immediately informed both the ICRANet Steering Committee and the Scientific Committee, as well as all the Ambassadors of the ICRANet Member States, of this unexpected situation.
- In parallel, the most Honorable Sammarco presented to the Italian Parliament an amendment (AC. 3444) to delete the proposal of the cuts for the years 2017 and 2018.
- Prof. Francis Everitt, Chairman of the ICRANet Steering Committee, immediately called an extraordinary meeting of the Steering Committee to take the appropriate actions. The meeting was held in the ICRANet headquarters in Pescara on December 10th, 2015, while the present ordinary meeting of the Scientific Committee was ongoing, and a resolution was approved and transmitted to the Italian Government (see Enclosure).

The Director also recalls:

- the ICRANet seat in Nice (Villa Ratti), where an open lecture space in the surrounding park is currently being created; the starting of the activities of the ICRANet Seat in Armenia (Yerevan) at the National Academy of Sciences, thanks to the entrance in force of the Seat Agreement; and the ICRANet Seat in Brazil (Rio de Janeiro) at CBPF, where the corresponding agreement is currently being renovated;
- the meetings and PhD schools organized: “2nd Cesar Lattes Meeting”, Brazil, April 13 – 22, 2015; “4th Galileo-Xu GuangQi Meeting”, Beijing, China, May 4 – 8, 2015; “XIV Marcel Grossmann Meeting”, Rome, Italy, July 12 – 18, 2015; “14th Italian-Korean Symposium”, Pescara, Italy, July 20 – 24, 2015; “1st Colombia-ICRANet Julio Garavito Armero Meeting”, Bugaramanga – Bogotá, Colombia, November 23 – 27, 2015; “1st Sandoval Vallarta Caribbean Meeting”, Mexico City, Mexico, December 1 – 5, 2015;
- the new and already existing Agreements with Universities and Research Centers, including Al-Farabi Kazakh National University (Kazakhstan); ASI (Italian Space Agency, Italy), BSU (Belarusian State University, Belarus), CAPES (Brazilian Fed. Agency for Support and Evaluation of Grad. Education), CBPF (Brazil), State Government of Ceará (Brazil), CNR (National Research Council, Italy), 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), IFCE (Instituto Federal de Educação Ciência e Tecnologia do Ceará, Brasil), IHEP (Institute of High Energy Physics, Chinese Academy of Sciences, China), IHES (Institut des Hautes Études Scientifiques, France), INFN (National Institute for Nuclear Physics, Italy), INPE

(Instituto Nacional de Pesquisas Espaciais, Brasil), 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), SCSA (State Committee of Science of Armenia), UAM (Universidad Autónoma Metropolitana, México), UERJ (Rio de Janeiro State University, Brazil), UFF (Universidade Federal Fluminense, Brazil), UFPB (Universidade Federal da Paraíba, Brazil), UFPE (Universidade Federal de Pernambuco, Brazil), UFRGS (Universidade Federal do Rio Grande do Sul, Brazil), UFSC (Universidade Federal de Santa Catarina, Brazil), UIS (Universidad Industrial de Santander, Colombia), UNAM (Universidad Nacional Autónoma De México), UnB (Universidade de Brasília, Brazil), 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); Indian centre for space physics (India); INPE (Instituto Nacional de Pesquisas Espaciais, Brasil); Institut Hautes Etudes Scientifiques – IHES (France); Inst. of High Energy Physics of the Chinese Academy of Science – IHEP-CAS, China; Max-Planck-Institut für Radioastronomie – MPIfR (Germany); 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 through the official recognition of the Erasmus Mundus program of the European Commission and has seen until today the registration of 114 Ph.D. students from all over the world (1 from Albania, 3 from Argentina, 5 from Armenia, 1 from Austria, 2 from Belarus, 16 from Brazil, 5 from China, 9 from Colombia, 2 from Croatia, 5 from France, 4 from Germany, 8 from India, 4 from Iran, 34 from Italy, 2 from Kazakhstan, 1 from Mexico, 1 from Pakistan, 3 from Russia, 1 from Saudi Arabia, 1 from Serbia, 1 from Sweden, 1 from Switzerland, 1 from Taiwan, 2 from Turkey, 1 from Ukraine); 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 took place the first contacts to start the procedures for the adhesion of Argentina, France, Germany, Kazakhstan, and South Korea to ICRANet.

The Director also 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 has been globally of 5,768,200.00 Euros for the years 2010-2017;
- The contribution of eight positions (three professors, 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 increase in the voluntary contribution of Brazil for Euro 485.000, unanimously voted by the Board for 2014, has not yet been adopted by MCTI. This contribution should be in any way inserted in the 2016 budget request, bringing the annual contribution for 2016 to Euro 785.000,00;
- As of today the nominations of the representatives of the MCTI of Brazil in the ICRANet Board and Scientific Committee are still pending.

The Committee:

- thanks the Director for his presentation and appreciates the scientific achievements of ICRANet;
- expresses its concerns for the possible cut of the Italian annual contribution in the years to come, thanks the Director for his firm and timely reaction, and confidently look to the ongoing discussion in the Italian Parliament for a successful composition of this problem;
- recognizes the ample expansion of topics of Scientific Research at the highest international level and the many results obtained. Particularly important are the developments in the traditional fields of research, such as the Physics and Astrophysics of white dwarfs, neutron stars, and black holes;
- takes note of the very large number of scientific publications from ICRANet scientists in high impact factor international scientific Journals, as evidenced in the concluding remarks of the Volume 1 of the scientific report;
- 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;
- witnesses the broadening of scientific activities in Argentina, Armenia, Brazil, China, Colombia, France, Germany, Italy, Kazakhstan, Mexico; it welcomes the action by the 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), promoting its ramification in all other fifteen Partner Institutions, after they are consulted;
- welcomes as well the signature of the agreement with IFCE (Instituto Federal de Educação Ciência e Tecnologia do Ceará, Brasil) and with UnB (Universidade de Brasília, Brazil).
- expresses gratitude for the preliminary project of the Brazilian ICRANet Center at the Cassino da Urca;
- 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 Colombia, France, Germany and Kazakhstan in ICRANet should be

also considered with priority in view of the many common scientific interests with ICRANet;

- takes note of the large scientific return in publications, following the organization of international meetings: especially the XIV Marcel Grossmann Meeting in Rome (Italy) with all its satellite meetings, and the program of biannual meetings between Italy and Korea;
- 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, India and Mexico;
- 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.

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 scientific achievements of ICRANet, led by its Director, in advancing in all the planned research topics and goals;
- acknowledges the contributions by the Minister of Foreign Affairs of Italy and the Minister of Science, Technology and Innovation of Brazil, and welcomes the new participation of Science State Committee of Armenia, for their continuous support of ICRANet;
- recognizes the significance of the action of the President of the Republic of Armenia, of the Ministry of Foreign Affairs of Armenia, of the Deputy Ministry of Foreign Affairs of Armenia, and of the Ambassador of Armenia in Rome for their joint efforts to the final signature and entrance in force of the Seat Agreement for the ICRANet Seat in Yerevan.
- looks forward to reaching full operation of the ICRANet Centers in Brazil and in Yerevan;
- supports the Director on the establishment of a stronger and wider link with the fifteen Universities and Research Centers in Brazil;
- supports the development of the BSDC, which will become a cornerstone for the activities of ICRANet in Brazil possibly to be extended to other South and Latin American Countries;
- supports further contacts with Belarus, China, Hungary, India, Singapore, South Korea;
- supports the ICRANet activities within the IRAP-PhD and supports the possibility to extend the IRAP-PhD to some Brazilian and Mexican Universities;
- Recalls how the presence of students from Albania, Argentina, Armenia, Belarus, Brazil, China, Colombia, France, Germany, India, Italy, Russia, Serbia, Sweden, and Turkey has fostered the scientific atmosphere in the Pescara Center and their participation in many of the scientific reports has been very positive;
- urgently requests the designation of the Brazilian MCTI representatives in the ICRANet Board and in the Scientific Committee;

- in view of the existing expectations of students and scientists in Europe and Brazil, is equally requesting a meeting of the updated standing committee between CAPES and ICRANet, which by norm includes the Brazilian representatives in the Board and in the Scientific Committee, also with the participation of other Members of the ICRANet Board and of the Scientific Committee, in order to clarify the apparent misunderstanding and present the support and needs of all the participating Centers in Brazil with their agreement on the identified goals;
- convincingly supports the decisions of the ICRANet Board regarding the unanimously voted financial commitments and expects that they will be duly fulfilled;
- 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 follow up to its recommendations of last year.

The meeting ends at 4:00 pm on the December 11th 2015 after the reading and unanimous approval of this report.



Prof. Felix Aharonian
Chair of meeting for the Scientific Committee

Prof. John Mester
Representative of Stanford University



Prof. Remo Ruffini
Director of ICRANet