

ICRANet Scientific Committee
Fifteenth Meeting
January 10th - 29th, 2018

The meeting extended over the period 10th of January to 29th of January 2018 in Rome, Pescara and Rio de Janeiro was concluded on the 29th of January after electronic verification with all members.

The following members are present:

Ulisses Barres de Almeida (Representative of Brazil, ad interim)

Carlo Luciano Bianco (Representative of ICRA)

Massimo Della Valle (Representative of Italy, Chairman)

Gabriele Gionti (Representative of the Vatican State)

John Mester (Representative of Stanford University, via Skype)

Jorge Rueda with the proxy of Chris Fryer (Representative of the Arizona University)

Remo Ruffini (Director of ICRANet)

Narek Sahakyan (Representative of Armenia)

The meeting is chaired by Prof. Massimo Della Valle and the minutes are taken by the Director.

The report of the Director includes:

- After recalling the initial establishment of ICRA (1985) and of ICRANet (2005), he recalls how the 2017 has been one of the most productive years both in the history of ICRA and of ICRANet.
- Particular important has been the presentation on June 23rd 2017 by Prof. Remo Ruffini and Prof. Roy Patrick Kerr (Yevgeny Mikhajilovic Lifshitz ICRANet Chair Professor, recipient of the Crafoord Prize 2016 in Astronomy by the Royal Swedish Academy of Sciences) of the latest results of ICRANet research to Prof. Stephen Hawking in Cambridge, England, at the Institute DAMTP and at the Institute of Astronomy of the University of Cambridge in England.
- From the scientific point of view, he recalls the 2 press releases corresponding to outstanding scientific contributions of ICRANet scientists. In particular, he recalls the milestone of understanding the nature of Gamma Ray Bursts (GRBs), which was presented in the first issue of the prestigious Astrophysical Journal in 2018 by scientists of ICRA/ICRANet at the University “Sapienza” and shows how GRBs originates in the most complex system ever studied in physics and astrophysics and energetically the most powerful in the Universe.
- He recalled three new books published by ICRANet faculty members in 2017: Hagen Kleinert, “Collective Classical and Quantum Fields”, World Scientific; G.V. Vereshchagin and A.G. Aksenov, “Relativistic Kinetic Theory”, Cambridge University Press; V. Belinski and Marc Henneaux “The Cosmological Singularity”, Cambridge University Press; and four volumes of the proceedings of the 14th Marcel Grossmann Meeting (MGXIV), World Scientific.
- Prior to the traditional illustration of the 16 lines of research of ICRANet and recent developments, he underlines the special progress in the ICRANet Armenia Center, the Brazilian major effort toward the Universities collaborating with ICRANet, as well as the establishment of two new ICRANet Centers, one at the National Academy of Sciences in Minsk (Belarus) and one at the University of Isfahan in Iran.
- In addition to the above new ICRANet Centers, a special mention is dedicated to the activities in Bosnia and Herzegovina, Serbia toward a major ICRANet expansion in

Balkan countries as well as in Hungary. New collaboration agreements have been signed.

- He recalls as well the Scientific Meetings organized, by ICRANet: the 1st ICRANet-Minsk workshop on high energy astrophysics in Minsk, Belarus, April 26-28, 2017 (in collaboration with National Academy of Sciences of Belarus); 5th Bego Scientific Rencontre, Nice, France, May 15-29, 2017; The 2017 Annual meeting of the Division of Gravitation and Relativistic Astrophysics of the Chinese Physical Society / The Fifth Galileo-Xu Guangqi Meeting, June 25 -30, 2017 Chengdu, China (in collaboration with the Chinese physical society) and XIII International Conference on Gravitation, Astrophysics and Cosmology / 15th Italian-Korean Symposium on Relativistic Astrophysics / A joint meeting, Seoul, South Korea, July 3 – 7, 2017 (in collaboration with the Korean physical society).
- Particular important has been participation of ICRANet in an initiative, dedicated to the science and technology cooperation activities between the two countries with the aim of creating scientific, technological and commercial partnerships in the innovative research-entrepreneurial system, promoted by the Ministry of Science and Technology of China and from the Italian side by the Ministry of Education, University and Research - MIUR in cooperation with the Ministry of Foreign Affairs and International Cooperation – MAECI. and the "Agreement on joint Chinese-Italian activities in the field of relativistic astrophysics" between ICRANet and the Shanghai Astronomical Observatory of the Chinese Academy of Sciences.
- Concerning the outreach program, he recalls the ICRANet participation to the event “European Researchers’ Night” in Pescara, and the successful conclusion of an outreach program dedicated to the high school students of Pescara. Particularly he mentioned a very successful exhibition organized by ICRANet at the Marco Besso Foundation in Rome with titles: “Einstein Fermi and Heisenberg and the birth of Relativistic Astrophysics” and “ICRANet and China” from 12 of December 2017 to 12 of January 2018.

Despite these positive results, the Director recalls:

- the request for the reestablishment of the 150,000.00 Euro contribution cut in 2015 and 2016 by Italy,
- the extreme situation of the delay of the deposit of the voluntary contribution of Brazil for 2015, 2016¹,
- the missing appointment by MCTIC of its representative in the Scientific Committee of ICRANet.

¹ It is a generally accepted rule in an international organization that, when the voluntary funds are voted by the entire Board, including the positive vote of the country proposing the voluntary funds, they become mandatory. We give as an example the case adopted in CERN: CERN-Gran Sasso neutrino experiment is approved: <http://physicsworld.com/cws/article/news/1999/dec/20/cern-gran-sasso-neutrino-experiment-is-approved>

– In the specific case of Brazil as a Member State of ICRANet of course the contributions of Brazil have to be voluntary since spent for specific activities of Brazil. At the moment the voluntary funds for 2015 and 2016 subject also of a letter by the Minister Aldo Rebelo were unanimously voted in the Board, with the positive vote of the Brazilian representative. They have been inserted in the Budget, advanced by ICRANet and spent, and they have to be returned to keep the Budget in order.

The Director also recalls:

- the new and already existing Agreements with Universities and Research Centers;
- the large number of Students and the growth of the International Relativistic Astrophysics PhD Program (IRAP PhD), promoted by ICRANet;
- that the IRAP PhD has grown through the official recognition of the Erasmus Mundus program of the European Commission, and Armenia joined the French, German and Italian Universities in granting the degree;
- attention has been given to the procedures for the adhesion of Argentina, Belarus, China, France, Germany, Kazakhstan, Pakistan, 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 National Academy of Sciences of Republic of Armenia in Yerevan, by the National Academy of Sciences of Belarus in Minsk (Belarus) and by the University of Isfahan in Iran;
- 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 (One professor, three Ph.D.s, two students, one technician, and one secretary) of the State Committee of Science of Armenia.

The Committee:

- thanks the Director for his presentation and appreciates the scientific achievements of ICRANet;
- recognizes the importance and necessity of the nomination of the Brazilian representatives for the ICRANet committees;
- 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 well as books as evidenced in the concluding remarks of the Volume 1 of the scientific report;
- notices as well the great progress in the understanding of Gamma-Ray Bursts;
- witnesses the broadening of scientific activities in Argentina, Armenia, Belarus, Bosnia and Herzegovina, Brazil, China, Colombia, France, Germany, Hungary, Italy, Kazakhstan, Mexico, Serbia; 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, at the ICRANet Center in Rio, and in collaboration with CBPF, of the BSDC (Brazilian Science Data Center), including its potential collaborations with other BRICS countries;
- 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 Belarus, Colombia, France, Germany, Iran and Kazakhstan in

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

- 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 Argentina, Brazil, China, Colombia, 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, for its continuous support of ICRANet;
- acknowledges as well the contributions obtained in kind for the ICRANet Centers by the National Academy of Sciences of Armenia in Yerevan, by the National Academy of Sciences of Belarus in Minsk, by the CBPF in Rio de Janeiro, by the Municipalities of Pescara and Nice, and by the University of Isfahan in Iran;
- is thankful to the Members of the Italian Parliament elected from Abruzzi for their support to the ICRANet activities in the Pescara Centre;
- looks forward to reaching full operation of the ICRANet Centers in Isfahan;
- supports the Director on the establishment of a stronger and wider link with Universities and Research Centers in Brazil;
- supports the development of the BSDC, in collaboration with CBPF, as a cornerstone activity of ICRANet in Brazil, possibly to be extended to other South and Latin American Countries and to the BRICS countries, in particular, the Committee approves the document “The ICRANet activities on the Brazilian Science Data Center ICRANet — BSDC” <http://www.icranet.org/report2017/ICRANet-BSDC.pdf> to be submitted to the ICRANet Board on February 7th.
- supports further contacts with Argentina, Belarus, China, Colombia, 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, and Sweden has fostered the scientific atmosphere in the Pescara Center and their participation in many of the scientific reports has been very positive;
- recalls the importance of the designation of the Brazilian MCTIC representatives in the ICRANet Board and in the Scientific Committee;
- 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 recent years.

The meeting ends at 4:00 pm on the January 29th 2018 after the reading and unanimous approval of this report.

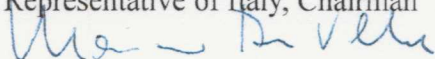


Prof. Ulisses Barres de Almeida
Representative of Brazil

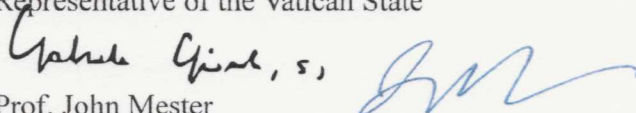
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Prof. Narek Sahakyan
Representative of Armenia