

Enclosure 9

Introduction

The International Center for Relativistic Astrophysics Network, ICRANet, is an international organization promoting research activities in relativistic astrophysics (see Agreement on the Establishment and Statute of ICRANet). The Members of ICRANet are Armenia, Brazil, Italy, the State of Vatican City, Stanford University, the University of Arizona in Tucson as well as the International Center for Relativistic Astrophysics (ICRA).

The relativistic astrophysics is a relatively new field of research that uses the most advanced technologies both from earth- and space-based instruments which aims to the understanding of the astrophysical events in the entire Universe on the basis of the Einstein equations. The most successful researches, related to the understanding of the gravitational collapse, the neutron stars and the black holes, have guided the formation of a vast number of young researchers that are gaining the understanding of the signals detected by the greatest telescopes in the earth (e.g. in Latin America) and in space.

The collaboration with Colombia in the field of relativistic astrophysics dates back to 1984 with the joint organization, between ICRA in Rome and the Centro Internacional de Física – CIF in Bogotá, of the “First Equatorial School of Relativistic Astrophysics on Galactic Structures”, held from 13 to 24 February 1984. To keep memory of this important event, there were published the proceedings “Galaxies, Quasars and Cosmology”, as a special volume of the “Advanced Series in Astrophysics and Cosmology”, edited by Prof. L. Z. Fang and Prof. R. Ruffini, and published by World Scientific of Singapore. Many of the participants, then students, are now professors of the most important Colombian universities, and became the force driving the development of the relativistic astrophysics in Latin America not only in the topics of this school but also in new avenues of research.

An intense collaboration with professors of Universidad de Antioquia and Universidad Nacional de Colombia in Medellín was developed between 1986 and 2002 that resulted in about twenty publications in the most important international scientific journals, in topics such as structure and stability of galaxies, cosmology and the large structure of the universe, and opening a new collaboration with ICRA at Università Campus Biomedico di Roma.

More recently, from 2006 until today, a new wave of prolific scientific collaboration has occurred, with the participation of six students in the International Relativistic Astrophysics Ph.D Program, the IRAP PhD. One of the promoters of this collaboration is a young Professor of ICRANet, Jorge Rueda, whom after obtaining his PhD in Rome, has obtained some of the most important results in relativistic astrophysics at world level. It has been established an enormous collaboration with about twenty professors from the most important universities in Colombia from the north to the south of the national territory. It is important to mention as well the participation of scientist and students from Colombia in the MGXIV in 2015 which witnessed the participation of more than 1200 scientists from more than 50 nations, as well as the joint organization between ICRANet and Colombian universities of the “First Colombia-ICRANet Julio Garavito Armero Meeting” in 2015. There have been also signed cooperation agreements with major Colombian universities.

Based on the aforementioned premises, one of the main scopes now is to express to the Government of Colombia the opportunity for Colombia to become Member State of ICRANet.

Meeting and Conferences Organized by ICRANet in Colombia

It is worth to mention the joint organization between ICRANet and Colombian universities of the “First Colombia-ICRANet Julio Garavito Armero Meeting” (1JG), held in Bucaramanga from 23 to 25 November 2015 at Universidad Industrial de Santander (UIS) and on November 27 in Bogotá at Universidad Nacional de Colombia (UNAL), as part of the celebrations by ICRANet, within the International Year of Light promoted by UNESCO, of the Centenary of the Einstein equations of the theory of General Relativity and the Golden Jubilee of Relativistic Astrophysics. The goal of the conference was to bring together leading scientists working in theoretical and observational aspects of neutron stars, black holes, supernovae, gravitational waves, high-energy astrophysics and cosmology, to review the current status and to discuss further directions in gravity and relativistic astrophysics. The 1JG meeting was also the appropriate occasion to discuss with the Colombian astrophysics community the status and prospects of the ICRANet projects in Latin America, with special emphasis in Colombia. The 1JG meeting was also the occasion for several Colombian institutions to join in the organization, for the first time in Colombia, of an international conference on relativistic astrophysics with the aid of an international organization like ICRANet. The co-organizers Colombian institutions were: UIS, UNAL, Universidad de Los Andes (Uniandes), Universidad del Valle (Univalle), Universidad de Antioquia (UdeA), Planetario de Bogotá, Observatorio Astronómico Nacional, and CIF. For more details see: <<http://www.icranet.org/1jg/>>. The 1JG meeting was described in the ResearchItaly resource: “Colombia, un convegno per i 100 anni delle equazioni einsteiniane.” <<https://www.researchitaly.it/innovitalia/eventi/colombia-un-convegno-per-i-100-anni-delle-equazioni-einsteiniane/>>

CELEBRATING THE 100TH ANNIVERSARY OF THE EINSTEIN EQUATIONS
THE GOLDEN JUBILEE OF RELATIVISTIC ASTROPHYSICS

CELEBRATED in 2015 by MGXIV and SATELLITE MEETINGS in: BRAZIL (9CL), CHINA (GX4), COLOMBIA (1JG), MEXICO (ISV) and USA

The 1st Colombia-ICRANet Julio Garavito Armero Meeting on Relativistic Astrophysics

INTERNATIONAL ORGANIZING COMMITTEE
 Alvaro Ramírez García (UIS) - Eduardo Posada Flórez (CIF) - Jorge Rueda (ICRANet)
 Nathalia Rippe (Planetario de Bogotá) - Remo Ruffini (chair) (ICRANet)
 Juan Manuel Tejero Sarmiento (UNAL)

LOCAL ORGANIZING COMMITTEE
 Pedro Bargeño (Uniandes) - Leonardo Castañeda (UNAL, OAN)
 Guillermo Gonzalez (UIS) - William Herrera (UNAL) - Edison Montoya (UIS)
 Luis Nuñez (chair) (UIS) - Leonardo Pachón (UdeA)
 Giovanni Pinzón (UNAL, OAN) - Eduardo Rodríguez (UNAL)
 César Valenzuela (Univalle) - Santiago Vargas (UNAL, OAN)

November 23-25: Universidad Industrial de Santander - Bucaramanga

The Julio Garavito's reluctance to accept the new concepts of the Einstein's theory based on non-Euclidean geometries witnesses how the Einstein's message did not reach the astronomical community in the world in the first 50 years of his theory. On the contrary, in the next 50 years, general relativity became one of the most mathematically elegant existent physical theories and a significant milestone of astronomy, astrophysics, and physics in general. This satellite meeting of the MGXIV in Rome is part of the ICRANet celebrations of the International Year of Light by UNESCO, as well as the 100 Anniversary of the Einstein Equations and the Golden Jubilee of Relativistic Astrophysics. This meeting also celebrates the recent signature of the scientific cooperation agreement between UIS and ICRANet. The topics cover theoretical and observational aspects of neutron stars, black holes, supernovae, gravitational waves, high-energy astrophysics and cosmology. The status and prospects of the ICRANet projects in Latin America especially in Colombia, will be also discussed.

More details at: <http://www.icranet.org/1jg>

Logos of participating institutions: Universidad de los Andes, Universidad Nacional de Colombia, FAPERJ, UNAL, UIS, Planetario de Bogotá, CIF, Observatorio Astronómico Nacional, Farnesina, BRASIL, ICRANet, 45 años, Idartes, BOGOTÁ.

Poster of the 1JG Meeting held in Colombia from 23-25 November 2015 in the city



Group picture of the 1JG Meeting held in Bogotá from 25-27 November 2015. Place: Auditorio “Ciencia y Teconología CyT” at Universidad Nacional de Colombia.

It is also expected the participation of ICRANet in the “Segundo Simposio Andino de Astrofísica Relativista” to be held at UIS at El Socorro on July 26-28, 2017. This meeting, also supported by the “Nodo Andino” of the International Astronomical Union (IAU), will be attended by students from the Andean region, namely Venezuela, Colombia, Ecuador, Peru, Bolivia and Chile.

Colombian students in the International Relativistic Astrophysics Ph. D. Program

One of the most important activities promoted by ICRANet is the International Relativistic Astrophysics Ph. D. Program, the IRAP-PhD. Since 2005 ICRANet co-organizes the IRAP-PhD together with: AEI – Albert Einstein Institute - Potsdam (Germany), CBPF - Brazilian Center for Physics Research (Brazil), Indian Center for Space Physics (India), INPE (Instituto Nacional de Pesquisas Espaciais, Brazil), Institut Hautes Etudes Scientifiques - IHES (France), Observatory of the Côte d'Azur (France), Observatory of Shanghai (China) Observatory of Tartu (Estonia), University of Bremen (Germany), University of Oldenburg (Germany), University of Ferrara (Italy), University of Nice (France), University of Rome “La Sapienza” (Italy), and the University of Savoy (France). The IRAP PhD program grants the first joint Ph.D. degree among the participating institutions, and has been a part of the prestigious Erasmus Mundus program of the European Commission.

Particular attention is going to be devoted in the forthcoming years, within the IRAP PhD program, to Universities of Latin America who have signed a collaboration agreement with ICRANet.

Currently, there is a massive participation of Colombian students within the IRAP-PhD. To date, the IRAP-PhD has seen the enrollment of 103 students: 1 from Albania, 2 from Argentina, 5 from Armenia, 1 from Austria, 2 from Belarus, 11 from Brazil, 5 from China, 6 from Colombia, 1 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 Serbia, 1 from Sweden, 1 from Switzerland, 1 from Taiwan, 2 from Turkey, 1 from Ukraine.

The six Colombian enrolled in the IRAP-PhD are:

- Juan David Uribe (from Universidad de Los Andes, Bogotá): enrolled in the IRAP-PhD in 2015.
- José Fernando Rodríguez (from Universidad Industrial de Santander, Bucaramanga): enrolled in the IRAP-PhD in 2014.
- Luis Gabriel Gómez (from Universidad Industrial de Santander, Bucaramanga): enrolled in the IRAP-PhD in 2013.
- Laura Marcela Becerra (from Universidad Industrial de Santander, Bucaramanga): enrolled in the IRAP-PhD in 2013.
- Diego Cáceres Uribe (from Universidad Nacional de Colombia, Bogotá): enrolled in the IRAP-PhD in 2011.
- Jorge A. Rueda (from Universidad Industrial de Santander, Bucaramanga): enrolled in the IRAP-PhD in 2006.

Exchange of Colombian students and Professors

Colombian students visiting ICRANet at Pescara and Rome

- Wilmer Daniel Pardo (PhD student from UDEA-Medellín): 6 month visit from November 2016-April 2017.
- Alexander Gallego (PhD student from UDEA-Medellín): 6 month visit from November 2016-April 2017.
- Ana Maria Navarro (Master student from UIS-Bucaramanga): 1 week visit in July 2015 during the MGXIV meeting.
- Laura Marcela Becerra (Master student from UIS-Bucaramanga): three month visit from April-June 2013.

Professors from Colombian universities visiting ICRANet at Pescara and Rome

- Prof. Luis A. Nuñez (from UIS-Bucaramanga): 15 days visit expected in June 2017.
- Prof. Antonio Enea Romano (from UDEA-Medellín): 15 days visit in January 2017.

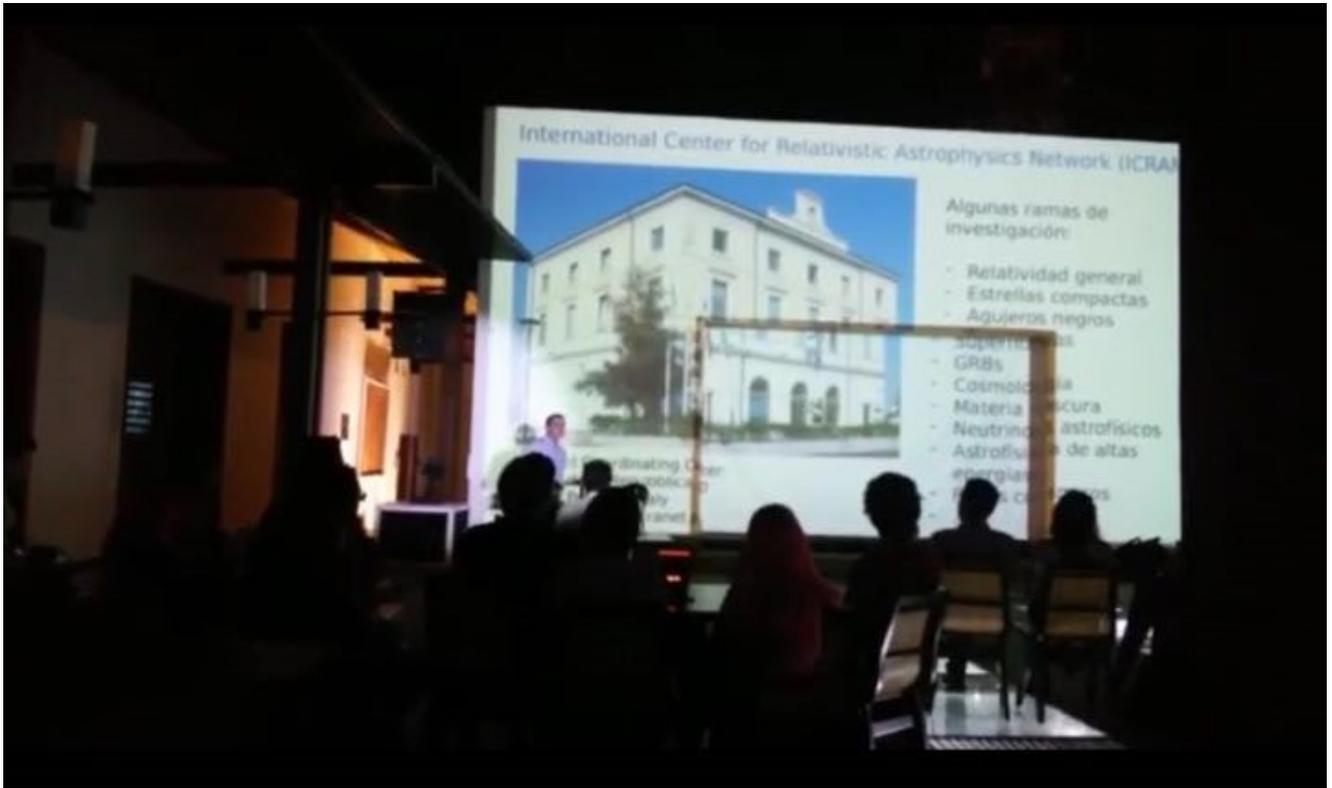
ICRANet Professors visiting Colombian universities

- Prof. Jorge A. Rueda: 1 week visit in 2017 to UIS-El Socorro. During this visit it will be delivered a short 6 h course on Neutron Stars at the “Segundo Simposio Andino de Astrofísica Relativista” to be held at UIS-El Socorro on July 26-28, 2017.
- Prof. Jorge A. Rueda: 1 week visit in 2016 to UIS-Bucaramanga. During this visit Prof. Rueda received the Distinguished Former Student Award by UIS, delivered a short 8 h course at UIS on the Physics and Astrophysics of White Dwarfs and Neutron Stars, and delivered a n Invited Lecture at the “III Jornadas Científicas Escuela de Física UIS” and a Public Lecture “Vida después de la muerte: los cataclismos más potentes del Universo” at the event “Café Científico” organized by Casa del Libro Total in Bucaramanga.

Link to the video of the Public Lecture at the Casa del Libro Total in Bucaramanga.:

<https://www.youtube.com/watch?v=Xs2rSYzwbvA>

- Prof. Remo Ruffini: 1 week visit in 2015 during the 1JG meeting at Bogotá. Prof. Ruffini visited UNAL, the Planetario de Bogotá, CIF, and COLCIENCIAS.
- Prof. Jorge A. Rueda: 2 week visit in 2015 during the 1JG meeting at Bucaramanga and Bogotá. Prof. Rueda visited UIS-Bucaramanga, UNAL-Bogotá, the Planetario de Bogotá, CIF, and COLCIENCIAS.



Public Lecture by Prof. Jorge Rueda at the event "Café Científico" held at Casa del Libro Total on December 15, 2016, in Bucaramanga.

Cooperation Agreements

ICRANet has signed agreements of scientific cooperation with two major universities in Colombia.

- On April 2013 ICRANet signed a cooperation agreement with the Universidad Industrial de Santander (UIS) located in the city of Bucaramanga. UIS is recognized to have one of the most important research groups in relativistic astrophysics in Colombia.

Link to the agreement ICRANet-UIS:

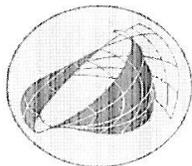
<http://www.icranet.org/documents/Agreement%20ICRANet-UIS%20signed.pdf>

- On September 2016 with Universidad de Antioquia (UDEA) located in the city of Medellín. UdeA is the only university in Colombia to deliver degree in Astronomy.

Link to the agreement ICRANet-UDEA:

<http://www.icranet.org/documents/agreementICRANet-UDEA.pdf>

Additional cooperation agreements with COLCIENCIAS, with the Colombian Academy of Natural and Physical Sciences, with Universidad de Los Andes in Bogotá and with Universidad Nacional de Colombia at Bogotá are expected to be signed soon.



COOPERATION AGREEMENT
BETWEEN
UNIVERSIDAD INDUSTRIAL
DE
SANTANDER AND ICRANET

ICRANet is an International Center for Relativistic Astrophysics Network, composed by four Members States and three Universities and Research Centers: the Republic of Armenia, the Federal Republic of Brazil, the Republic of Italy, the Vatican State, the University of Tucson (USA), the Stanford University (USA) and ICRA (Italy). The Establishment and the Statute (signed on March 19th, 2003) have been officially recognized by law by the Italian Parliament on the 10th of February 2005 and published on Gazzetta Ufficiale n.53 of March 5th, 2005. Its Director and legal representative is Prof. Remo Ruffini and its headquarters are located in Italy in Pescara, Piazza della Repubblica 10.

The present Agreement has as its main objective to regulate activities aimed at strengthening academic cooperation between the Universidad Industrial de Santander (UIS) and the International Center for Relativistic Astrophysics Network (ICRANet), in accordance with the following clauses:



ACUERDO DE COOPERACIÓN
ENTRE LA UNIVERSIDAD
INDUSTRIAL DE
SANTANDER E ICRANET

La Universidad Industrial de Santander - UIS, ente universitario autónomo del orden departamental, creada mediante Ordenanzas 41 de 1940 y 83 de 1944 de la Asamblea Departamental de Santander, reglamentada por el Decreto 1300 de Junio 30 de 1982 de la Gobernación de Santander, Institución de Educación Superior reconocida por el Ministerio de Educación Nacional mediante Decreto 583 de 25 de Febrero de 1947, con NIT. 890.201.213-4 y domicilio principal en la ciudad de Bucaramanga, representada en este acto por su Rector y Representante Legal Prof. Álvaro Ramírez García, mayor de edad, vecino de Bucaramanga, identificado con la cédula de ciudadanía número 13'817.869 expedida en Bucaramanga, todo lo cual consta en el Acuerdo No. 001 de febrero 15 de 2013 del Consejo Superior.

El presente Acuerdo tiene como principal objetivo regular las actividades destinadas a fortalecer la cooperación académica entre la Universidad Industrial de Santander (UIS) y la red del Centro Internacional de Astrofísica Relativista (ICRANet), de acuerdo con las siguientes cláusulas:

Cláusula 1
Actividades

Clause 1
Activities

The activities to be developed within the scope of the present cooperation Agreement will consist of joint actions including:

I -the institutional exchange of faculty members, researchers, graduate and post-graduate students;

II -the development of teaching and/or research activities, related to the areas in which UIS and ICRANet act;

III -the organization of seminars, conferences, workshops or short courses in those areas;

IV-the support of technical-scientific and cultural events and activities open to the public;

Las actividades que se desarrollen en el ámbito del presente acuerdo de cooperación consistirán en acciones conjuntas incluyendo:

I -el intercambio institucional de profesores, investigadores, estudiantes de pregrado y estudiantes de posgrado;

II -el desarrollo de actividades de enseñanza y/o de investigación, relacionados con las áreas en las que la UIS e ICRANet actúan;

III-la organización de seminarios, conferencias, talleres o cursos de corta duración en esas áreas;

IV-el apoyo técnico-científico y eventos culturales y actividades abiertas al público;



V-the development of opportunities to form university teachers and researchers, by means of specialized advanced high-level courses;

VI -the organization of training and recycling courses, and the development of inter-institutional research areas associated to local

VII -joint publications;

VIII -public conferences and other actions aiming at the popularization of science;

IX -exchange of information concerning teaching and research activities in each institution.

Clause 2
Addenda

The implementation of the activities envisaged by the contracting parties will be specified by means of Additional Terms to the present cooperation agreement. These will be signed by the contracting parties at the time of defining common projects, areas of research or education, or any other activities of mutual interest. The Addenda must include: a research project with time schedule, human and material resources and individuals responsible for the planned activities.

V-el desarrollo de oportunidades para la formación de profesores universitarios e investigadores, por medio de cursos avanzados especializados de alto nivel;

VI-la organización de cursos y el desarrollo interinstitucional de las áreas de investigación relacionadas a los programas de posgrado local;

VII -publicaciones conjuntas;

VIII-conferencias públicas y otras acciones con miras a la popularización de la ciencia;

IX-intercambio de información sobre enseñanza y actividades de investigación en cada institución.

Cláusula 2
Adenda

La ejecución de las actividades previstas por las partes contratantes será especificada por medio de Términos Adicionales del acuerdo de cooperación presente. Esta será firmada por las partes contratantes en el momento de la definición de proyectos comunes, áreas de investigación o educación, o cualquier otra actividad de interés mutuo. La Adenda debe incluir: un proyecto de investigación programado, los recursos humanos y materiales y las personas responsables de las actividades previstas.



Clause 3
Commitments

Both Institutions must adopt, as a general principle within their respective budget constraints, the financing of the academic activities derived from this agreement. The party that sends faculty members or technicians can cover their transportation costs. The party that receives them can cover their living expenses during their stay. The faculty members must seek funding from national and/or international support agencies and institutions.

Sole paragraph: It is the responsibility of the students, the technical and administrative staff, the professors and the researchers, involved in exchange activities obtain health insurance valid for the period of their activities.

Clause 4
Academic
Products

When activities originating from the present instrument of cooperation result in products, improvements or innovations subject to rights, both parties will establish, according to proper regulatory legislation and by means of specific instruments, the conditions that will regulate property rights, in accordance with the law and proportionately to the contribution of each institution.

Cláusula 3
Compromisos

Ambas instituciones deben adoptar, como principio general, dentro de sus limitaciones presupuestarias respectivas, la financiación de las actividades académicas derivadas de este acuerdo. La parte que envía profesores o técnicos pueden cubrir sus costos de transporte. La parte que se beneficia de ellos pueden cubrir sus gastos de manutención durante su estancia. Los profesores deben buscar fondos nacionales y/o organismos internacionales e instituciones de apoyo.

Párrafo único: Es responsabilidad de los estudiantes, el personal técnico y administrativo, los profesores y los investigadores, involucrados en actividades de intercambio de obtener un seguro médico válido para el período de sus actividades.

Cláusula 4
Productos
académicos

Cuando las actividades provenientes del presente instrumento de cooperación resultan en productos, mejoras o innovaciones sujetos a derechos, ambas partes establecerán, de acuerdo con la legislación reguladora adecuada y por medio de instrumentos específicos, las condiciones que regulan los derechos de propiedad, de acuerdo con la ley y en proporción a la contribución de cada institución.



Clause 5
Executors

The activities developed within the scope of this Cooperation Agreement will be carried out by members of both parties, appointed by each institution, according to the nature of the activities in each case, the parties being allowed to rely upon the support of external organizations.

An operational Standing Committee composed by two members of each of the signing Institutions will be nominated in the First Addendum of this Agreement. The Committee will meet at least once a year to draw plans for the joint events and collaborations. The meeting can occur by electronic means (such as e-conference).

Clause 6
Duration

The present instrument will be valid for 5 (five) years, starting from the date of its signature.

Clause 7
Cancellation

This present cooperation Agreement may be canceled by any of the parties, by means of notification at least 60 (sixty) days in advance - which may be waived if both parties come to a consensual agreement- being advisable, however, to see that ongoing activities are maintained.

Cláusula 5
Ejecutores

Las actividades desarrolladas en el ámbito de este Acuerdo de Cooperación se llevarán a cabo por miembros de ambas partes, designados por cada institución, de acuerdo con la naturaleza de las actividades en cada caso, a las partes se les permita contar con el apoyo de organizaciones externas. Un Comité Permanente operativo compuesto por dos miembros de cada una de las instituciones firmantes será nombrado en el Anexo Primero de este Acuerdo. El Comité se reunirá al menos una vez al año para elaborar planes para la organización de actos conjuntos y colaboraciones. La reunión puede darse por medios electrónicos (tales como e-conferencias)

Cláusula 6
Duración

El presente instrumento tendrá una vigencia de 5 (cinco) años, a partir de la fecha de su firma.

Cláusula 7
Cancelación

Este acuerdo de cooperación podrá ser cancelado por cualquiera de las partes, mediante notificación por lo menos 60 (sesenta) días de antelación -lo cual podrá excusarse si ambas partes llegan a un acuerdo consensual- siendo aconsejable, sin embargo, ver que las actividades en curso se mantengan.



Sole paragraph: This instrument will be automatically extinguished if any circumstances foreseen in legislations ruling either one or both parties prevent the observance of its validity.

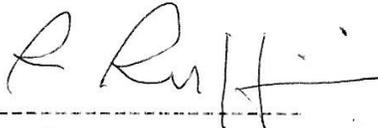
Clause 8
Jurisdiction

The parties consent to the jurisdiction of an appropriate court located in the city of Bucaramanga for any controversy or claim arising out of this Cooperation Agreement.

All terms having been agreed upon, the representatives of the parties signed the present instrument, with two copies of the same document to ensure legal effect.

For ICRA Net:

Date 16/05/2013



Prof. Remo Ruffini
Director

Párrafo único: Este instrumento será automáticamente anulado cuando las circunstancias previstas en las legislaciones gobernantes en una o ambas partes impidan el cumplimiento de su validez.

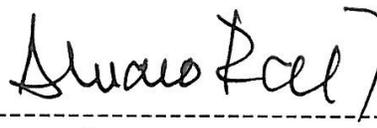
Cláusula 8
Jurisdicción

Las partes aceptan la jurisdicción de un tribunal competente ubicado en la ciudad de Bucaramanga para cualquier controversia o reclamo que surja de este Acuerdo de Cooperación.

Todos los términos han sido acordados, los representantes de las partes suscriben el presente instrumento, con dos copias del mismo documento para garantizar un efecto legal.

Por UIS:

Fecha 12, Abr 2013



Prof. Álvaro Ramírez García
Rector





ICRANet



UNIVERSIDAD
DE ANTIOQUIA

**SPECIFIC COOPERATION
AGREEMENT 21401601-233**

BETWEEN

**UNIVERSITY OF ANTIOQUIA
(FACULTY OF EXACT AND NATURAL
SCIENCES)**

AND

ICRANET

**ACUERDO ESPECÍFICO DE
COOPERACIÓN 21401601-233**

ENTRE LA

**UNIVERSIDAD DE ANTIOQUIA
(FACULTAD DE CIENCIAS EXACTAS Y
NATURALES)**

E

ICRANET

ICRANet is an International Center for Relativistic Astrophysics Network. The Establishment and the Statute (signed on March 19th, 2003) have been officially recognized by law by the Italian Parliament on the 10th of February 2005 and published on *Gazzetta Ufficiale* n.53 of March 5th, 2005. Its Director and legal representative is Prof. Remo Ruffini.

The University of Antioquia (UDEA) is an institution of Higher Education which provides a public service guided by principles of academic excellence and ethical responsibility. Nora Egeria Restrepo Sánchez, bearer of citizen identity card number 66.812.679, who in his position as Dean of the School of Exact and Natural Sciences, duly authorized by the Superior Agreement 419 of 2014 and Superior Resolution 1993 of 2015, is designated to represent the University of Antioquia, an autonomous institution of higher education with special legal status, created by Act 71 of 1878 of the ex - Sovereign State of Antioquia, granted legal status by Act 153 of 1887, and governed by Act 30 of 1992 and other legal provisions applicable in accordance with its special legal status. Henceforth it shall be referred to as UDEA.

ICRANet is an international research network on relativistic astrophysics, composed by four

ICRANet es un Centro Internacional para el trabajo en red en Astrofísica Relativística. El establecimiento y sus estatutos (firmados en marzo 19 de 2003) han sido oficialmente reconocidos por ley por el Parlamento Italiano el 10 de febrero de 2005 y publicados en la *Gazzetta Ufficiale* n.53 de marzo 5, 2005. Su director y representante legal es el profesor Remo Ruffini.

La Universidad de Antioquia (UDEA), desarrolla el servicio público de la Educación Superior con criterios de excelencia académica, ética y responsabilidad. Nora Restrepo Sánchez, mayor de edad, identificada con cédula de ciudadanía 66.812.679, en su calidad de Decana de la Facultad de Ciencias Exactas y Naturales, debidamente facultada por el Acuerdo Superior 419 de 2014 y Resolución Superior 1993 de 2015, actúa en nombre y representación de la Universidad de Antioquia, ente universitario autónomo con régimen especial, cuya creación fue determinada por la Ley 71 de 1878 del Estado Soberano de Antioquia, y con personería jurídica que deriva de la Ley 153 de 1887, regida por la Ley 30 de 1992 y demás disposiciones aplicables de acuerdo a su régimen especial, que en adelante se denominará UDEA.

ICRANet es una red de investigación internacional conformada por cuatro Estados



ICRANet



UNIVERSIDAD
DE ANTIOQUIA

Members States and three Universities and Research Centers: the Republic of Armenia, the Federal Republic of Brazil, the Republic of Italy, the Vatican State, the University of Tucson (USA), Stanford University (USA) and ICRA (Italy).

The Physics Institute of the Faculty of Exact and Natural Sciences of the University of Antioquia, develops research in the relativistic astrophysics area, generating publications in high impact international journals, and holds scientific collaboration with prestigious centers such as CERN in Switzerland, YITP in Japan, LECOSPA in United Kingdom and Turin University in Italy.

The present Agreement has as its main objective to regulate activities aimed at strengthening academic cooperation between the University of Antioquia (UDEA) and the International Center for Relativistic Astrophysics Network (ICRANet), in accordance with the following clauses:

Clause 1
Activities

The activities to be developed within the scope of the present cooperation Agreement will consist of joint actions including:

- I - the institutional exchange of faculty members, researchers, graduate and post-graduate students;
- II - the development of teaching or research activities, related to the areas in which UDEA and ICRANet act;
- III - the organization of seminars, conferences, workshops or short courses in those areas;

miembro y tres Universidades y Centros de Investigación: La República de Armenia, la República Federal de Brasil, la República de Italia, el Estado del Vaticano, la Universidad de Tucson (EEUU), Universidad de Stanford (EEUU) e ICRA (Italia).

El Instituto de Física de la Facultad de Ciencias Exactas y Naturales de la Universidad de Antioquia, desarrolla investigación en el área de astrofísica relativística, generando publicaciones en revistas internacionales de alto impacto, y mantiene relaciones de colaboración científica con prestigiosos centros internacionales como el CERN en Suiza, el YITP en Japón, el LECOSPA en Taiwan, el King's College London en Reino Unido y la Universidad de Turin en Italia.

El presente Acuerdo tiene como principal objetivo regular las actividades destinadas a fortalecer la cooperación académica entre la Universidad De Antioquia (UDEA) y la red del Centro Internacional de Astrofísica Relativista (ICRANet), de acuerdo con las siguientes cláusulas:

Cláusula 1
Actividades

Las actividades que se desarrollen en el ámbito del presente acuerdo de cooperación consistirán en acciones conjuntas incluyendo:

- I - el intercambio institucional de profesores, investigadores, estudiantes de pregrado y estudiantes de posgrado;
- II - el desarrollo de actividades de enseñanza o de investigación, relacionados con las áreas en las que UDEA e ICRANet actúan;
- III - la organización de seminarios, conferencias, talleres o cursos de corta



CERANet



UNIVERSIDAD
DE ANTIOQUIA

IV - the support of technical- scientific and cultural events and activities open to the public;

V - the development of opportunities to form university teachers and researchers, by means of specialized advanced high-level courses;

VI - the organization of training and recycling courses, and the development of inter-institutional research areas associated with local programs;

VII - joint publications;

VIII -public conferences and other actions aiming at the popularization of science;

IX - exchange of information concerning teaching and research activities in each institution.

Clause 2 Addenda

The implementation of the activities envisaged by the contracting parties will be specified by means of Additional Terms to the present cooperation agreement. These will be signed by the contracting parties at the time of defining common projects, areas of research or education, or any other activities of mutual interest. The Addenda must include: a research project with time schedule, human and material resources and individuals responsible for the planned activities.

duración en esas áreas;

IV - el apoyo técnico-científico y eventos culturales y actividades abiertas al público

V - el desarrollo de oportunidades para la formación de profesores universitarios e investigadores, por medio de cursos avanzados especializados de alto nivel;

VI - la organización de cursos y el desarrollo interinstitucional de las áreas de investigación relacionadas a los programas de posgrado local;

VII - publicaciones conjuntas;

VIII - conferencias públicas y otras acciones con miras a la popularización de la ciencia

IX - intercambio de información sobre enseñanza y actividades de investigación en cada institución.

Cláusula 2 Adenda

La ejecución de las actividades previstas por las partes contratantes será especificada por medio de Términos Adicionales del acuerdo de cooperación presente. Esta será firmada por las partes contratantes en el momento de la definición de proyectos comunes, áreas de investigación o educación, o cualquier otra actividad de interés mutuo. La Adenda debe incluir: un proyecto de investigación programado, los recursos humanos y materiales y las personas responsables de las actividades previstas.



PERANES



UNIVERSIDAD
DE ANTIOQUIA

**Clause 3
Commitments**

Both Institutions must adopt, as a general principle within their respective budget constraints, the financing of the academic activities derived from this agreement. The party that sends faculty members or technicians can cover their transportation costs. The party that receives them can cover their living expenses during their stay. The faculty members must seek funding from national or international support agencies and institutions.

Sole paragraph: It is responsibility of the students, the technical and administrative staff, the professors and the researchers, involved in exchange activities obtain health insurance valid for the period of their activities

**Clause 4
Academic Products**

When activities originating from the present instrument of cooperation result in products, improvements or innovations subject to rights, both parties will establish, according to proper regulatory legislation and by means of specific instruments, the conditions that will regulate property rights, in accordance with the law and proportionately to the contribution of each institution.

**Clause 5
Executors**

The activities developed within the scope of this Cooperation Agreement will be carried out by members of both parties, appointed by each institution, according to the nature of the activities in each case, the parties being allowed to rely upon the support of external

**Cláusula 3
Compromisos**

Ambas instituciones deben adoptar, como principio general, dentro de sus limitaciones presupuestarias respectivas, la financiación de las actividades académicas derivadas de este acuerdo. La parte que envía profesores o técnicos pueden cubrir sus costos de transporte. La parte que se beneficia de ellos pueden cubrir sus gastos de manutención durante su estancia. Los profesores deben buscar fondos nacionales U organismos internacionales e instituciones de apoyo.

Párrafo único: Es responsabilidad de los estudiantes, el personal técnico y administrativo, los profesores y los investigadores, involucrados en actividades de intercambio de obtener un seguro médico válido para el período de sus actividades

**Cláusula 4
Productos Académicos**

When activities originating from the present instrument of cooperation result in products, improvements or innovations subject to rights, both parties will establish, according to proper regulatory legislation and by means of specific instruments, the conditions that will regulate property rights, in accordance with the law and proportionately to the contribution of each institution.

**Cláusula 5
Ejecutores**

Las actividades desarrolladas en el ámbito de este Acuerdo de Cooperación se llevarán a cabo por miembros de ambas partes, designados por cada institución, de acuerdo con la naturaleza de las actividades en cada caso, a las partes se les permita contar con el



PERANAL



UNIVERSIDAD
DE ANTIOQUIA

organizations.

An operational Standing Committee composed by two members of each of the signing institutions will be nominated in the First Addendum of this Agreement. The Committee will meet at least once a year to draw plans for the joint events and collaborations. The meeting can occur by electronic means (such as e-conference).

Clause 6 Contracting

As a general rule, those individuals participating in activities covered by this agreement shall remain bound by their contract with their institution of origin, and will not therefore enter into a contract with the Host university.

Clause 7 Duration

The present instrument will be valid for 5 (five) years, starting from the date of its signature.

Clause 8 Cancellation

This present cooperation Agreement may be canceled by any of the parties, by means of notification at least 60 (sixty) days in advance - which may be waived if both parties come to a consensual agreement- being advisable, however, to see that ongoing activities are maintained.

Sole paragraph: This instrument will be automatically extinguished if any circumstances foreseen in legislations ruling either one or both parties prevent the observance of its validity.

apoyo de organizaciones externas.

Un Comité Permanente operativo compuesto por dos miembros de cada una de las instituciones firmantes será nombrado en el Anexo Primero de este Acuerdo. El Comité se reunirá al menos una vez al año para elaborar planes para la organización de actos conjuntos y colaboraciones. La reunión puede darse por medios electrónicos (tales como e-conferencias).

Cláusula 6 Exclusión de Relación Laboral

Exclusión de Relación Laboral: Como regla general, las personas que participen de las actividades que se realicen al amparo de este convenio, como regla general, mantienen en todo momento su vínculo con su institución de origen, y por ende no adquieren relación laboral con la institución anfitriona.

Cláusula 7 Duración

El presente instrumento tendrá una vigencia de 5 (cinco) años, a partir de la fecha de su firma.

Cláusula 8 Cancelación

Este acuerdo de cooperación podrá ser cancelado por cualquiera de las partes, mediante notificación por lo menos 60 (sesenta) días de antelación - lo cual podrá excusarse si ambas partes llegan a un acuerdo consensual- siendo aconsejable, sin embargo, ver que las actividades en curso se mantengan.

Párrafo único: Este instrumento será automáticamente anulado cuando las circunstancias previstas en las legislaciones gobernantes en una o ambas partes impidan el cumplimiento de su validez.



ICRANet



UNIVERSIDAD
DE ANTIOQUIA

1888

**Clause 9
Conflict Resolution**

The two parties hereby agree to exhaust every means of resolving conflicts in a friendly manner without resorting to legal action. Any conflict or doubt that may emanate from this agreement should therefore be settled by using available mechanisms of direct conflict resolution, such as extra-judicial conciliation, informal conciliation and compromise settlements.

All terms having been agreed upon, the representatives of the parties signed the present instrument, with two copies of the same document to ensure legal effect.

**Clause 10
Addresses**

The parties hereby state their respective addresses to be as follows:
UDEA Calle 67 No. 53 - 108, Medellín, Colombia.
ICRANet Piazza della Repubblica 10, Pescara, Italia.

Date 20 Feb, 2016

Prof. Remo Ruffini
Director and Legal Representative
ICRANet


Dr. Nora Restrepo Sánchez
Dean
Faculty of Exact and Natural Sciences
University of Antioquia

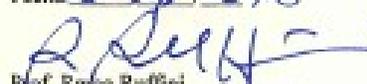
**Cláusula 9
Solución de Controversias**

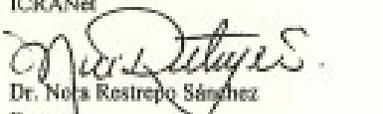
Las partes convienen en agotar todos los medios para resolver amistosamente, sin litigios, cualquier controversia o duda que pudiera suscitarse con motivo de este convenio, para tal efecto, acudirán preferentemente, al empleo de mecanismos de solución directa de controversias.

Todos los términos han sido acordados, los representantes de las partes suscriben el presente instrumento, con dos copias del mismo documento para garantizar un efecto legal.

**Cláusula 10
Domicilio**

Las partes establecen que su domicilio será el siguiente:
UDEA Calle 67 No. 53 - 108, Medellín, Colombia.
ICRANet Piazza de la República 10, Pescara, Italia.

Fecha 20 Feb, 2016

Prof. Remo Ruffini
Director y Representante Legal
ICRANet


Dr. Nora Restrepo Sánchez
Decana
Facultad de Ciencias Exactas y Naturales
Universidad De Antioquia

Entrance of Colombia in ICRANet

The 1JG meeting held in Bogotá from 25-27 November 2015 was the appropriate framework to discuss with the Colombian astrophysics community the possibility for Colombia to enter into ICRANet as Member State. On November 26 2015 the Director of ICRANet, Prof. Remo Ruffini and the ICRANet Faculty Professor Jorge A. Rueda, were invited to the Centro Internacional de Física (CIF) located at Universidad Nacional de Colombia at Bogotá, to discuss aspects of the entrance of Colombia into ICRANet with a group of people representing different Colombian institutions.

There were present in the meeting: the President of CIF, Prof. Eduardo Posada Flórez, the President of the Colombian Academy of Natural and Physical Sciences, Prof. Enrique Forero, the Director of Observatorio Astronómico Nacional, Prof. José Gregorio Protilla, as well as professors from Universidad Nacional de Colombia, Universidad de Los Andes, Universidad Industrial de Santander, Universidad Antonio Nariño, Universidad Sergio Arboleda, and representatives of the Red de Astronomía de Colombia (RAC). Representing the Government of Colombia there were present from the Ministry of Foreign Affairs, Dr. Stiven Calle, and from COLCIENCIAS, Dr. Carlos Ladino.

As a byproduct of this meeting, a Letter of Intent was redacted and signed. In the Letter the Colombian scientific community expresses the necessity of the participation of Colombia in ICRANet and asks the full support of the Government of Colombia to this initiative.



Meeting at CIF-Bogotá with Colombian scientific community to discuss the possible entrance of Colombia into ICRANet.



CENTRO INTERNACIONAL DE FÍSICA

ICRANet

LUGAR:

FECHA:

OBJETO / TEMA:

NOMBRE	ENTIDAD	CARGO	CELULAR	CORREO ELECTRÓNICO	FIRMA
Enrique Forero	Acad. Col CS Ex Fis Net	Presidente	3175868628	enriqueforero203@yahoo.co	<i>Enrique Forero</i>
Carlos Aronave	Univ. Antonio Nariño	Vice Rector C.T.E.I	3015409910	vcarrechr.cti@unm.edu.co	<i>Carla</i>
Walter Campo	Red Astronómica Colombia-RAE	Vocal	3159210120	astromia.colombia.rae@gmail.com	<i>Walter Campo</i>
Raúl Joya	Universidad Sergio Arboleda	Director	3102697341	raul.joya@us.edu.co	<i>Raúl Joya</i>
STIVEN CALLE	CAUCILERIA	SECRETARIO	3004200433	stiven.calle@caucileria.gov.co	<i>Stiven Calle</i>
Jaime Forero	Univ. Andes	Profesor	3108515762	jefero@unandes.edu.co	<i>Jaime Forero</i>
Cristian Góez f.	Red de Astr. de Colombia	Vocal	3012955958	crisgotezoo@hotmail.com	<i>Cristian Góez f.</i>
Carlos Iadino	Colciencias Universidad Nacional de Colombia-Obra Social del Abanico Páez	Cta	3016503558	coladino@colciencias.gov.co	<i>Carlos Iadino</i>
José Gregorio Páez	ICRANet	Director	3013391611	jpaez@icranet.edu.co	<i>José Gregorio Páez</i>
JORGE A. RUEDA H.	ICRANet	Profesor	3044347283 +39 3381245442	jorge.rueda@icranet.it	<i>Jorge A. Rueda H.</i>
Luis A. Nuñez	Univ. Indust Santander	Profesor	3183062194	lnunez@uis.edu.co	<i>Luis A. Nuñez</i>
Renzo Ruffino	ICRANet	Profesor	+39339445266	rruffino@icranet.it	<i>Renzo Ruffino</i>

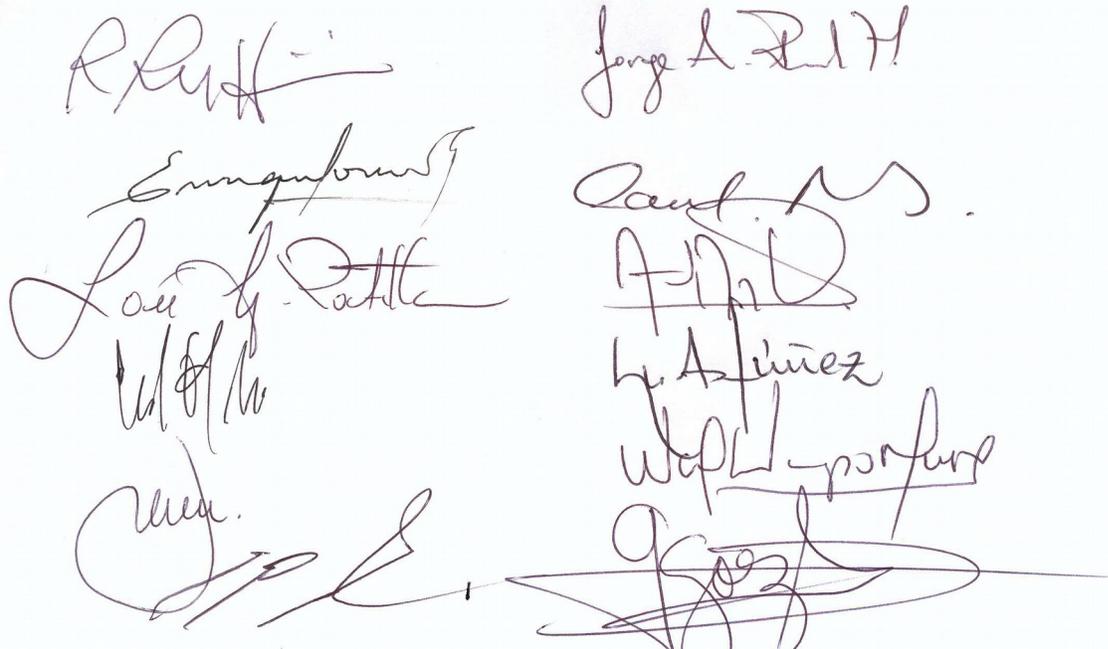
List of signatures of the attendants of the meeting held at CIF-Bogotá on November 26 2015 to discuss the possible entrance of Colombia into ICRANet.

26 de Noviembre de 2015

CARTA DE INTENCIONES ENTRADA DE COLOMBIA COMO ESTADO
MIEMBRO A ICRANET

Reunidos en el Centro Internacional de Física en la Ciudad Universitaria en Bogotá, Colombia luego de discutir el visible crecimiento de la comunidad de Astronomía y Astrofísica colombiana vemos como necesaria la participación de Colombia en la Red de Centros para la Astrofísica Relativista (ICRANet). Esta colaboración internacional requiere el apoyo directo del Gobierno central para el crecimiento científico, económico, tecnológico y la proyección internacional de Colombia. ICRANet es una institución científica de gran trayectoria y experiencia en colaboraciones internacionales tanto en el ámbito de investigación como de formación de recursos humanos altamente especializados.

Por ello expresamos nuestro más entusiasta interés de seguir el desarrollo de este proyecto y posiblemente participar en las reuniones de organización para contribuir en el éxito de esta iniciativa.



Bogotá XXVI. XI - MAR XV

Letter of Intent signed at CIF-Bogotá on November 26 2015 during the 1JG meeting. A representative part of the Colombian scientific community expresses the necessity of the entrance of Colombia into ICRANet and asks full support to the Government of Colombia.

Note by the Colombian Consul in Rome, Dr. Beatriz Helena Calvo Villegas, in her monthly message of November 2016 on ICRANet

The activities of ICRANet in promoting relativistic astrophysics in Colombia has been recently recognized by the Colombian Consul in Rome, Dr. Beatriz Helena Calvo Villegas, in her monthly message of November 2016, in which it was also mentioned the possibility of the entrance of Colombia into ICRANet as Member State. Original text of the Consul's message:

ACTIVIDADES CIENTÍFICAS DE COLOMBIANOS EN ITALIA

Me complace reportar la colaboración científica entre la Red del Centro Internacional para la Astrofísica Relativista (ICRANet por sus siglas en inglés) y profesores colombianos de varias universidades, facilitada por el establecimiento de acuerdos de colaboración, tales como el realizado con la Universidad Industrial de Santander (UIS), firmado en abril de 2013, y el más reciente con la Universidad de Antioquia, firmado el 20 de septiembre de 2016. Uno de los resultados más importantes de esta colaboración es que estudiantes colombianos han recibido becas para realizar sus estudios en Italia, en el doctorado internacional de astrofísica relativista. Actualmente 6 de ellos se encuentran en Roma y Pescara trabajando en sus investigaciones doctorales bajo la supervisión del Profesor Jorge Rueda, "Egresado Distinguido 2016" de la Facultad de Ciencias de la UIS.

De igual manera, dos estudiantes de doctorado de la Universidad de Antioquia realizan una pasantía de 6 meses en ICRANet, a partir del mes de noviembre y se registró un nuevo estudiante de doctorado colombiano, egresado de la Universidad de los Andes, con beca de Colciencias.

Existe la expectativa de una posible adhesión de Colombia como país miembro a ICRANet.

