Enclosure 4

MG13 STOCKHOLM 1-7 JULY 2019

THIRTEENTH MARCEL GROSSMANN MEETING

on Recent Developments in Theoretical and Experimental General Relativity, Astrophysics, and Relativistic Field Theories

MG13 will take place at the Stockholm University. The plenary lectures will be held in the Aula Magna lecture hall and the parallel sessions at the AlbaNova University Center, both easily reachable by public transportation from the city center.

The MG meetings were founded in 1975 by Remo Ruffini and Abdus Salam with the aim of reviewing developments in gravitation and general relativity with major emphasis on mathematical foundations and physical predictions. The dedication to Marcel Grossmann celebrates the merging of the mathematical ideas of Ricci and Levi Civita with the physics world, made possible by the genius of Albert Einstein.

The main objective of these meetings is to bring together scientists from diverse backgrounds in order to deepen our understanding of space-time structures and review the status of experiments testing Einstein's theory of gravitation. The range of topics is broad: from more abstract classical gravitational theories, quantum gravity, and string theories all the way to relativistic astrophysics and an outlook towards future observational missions.

The first two meetings were held in Trieste, Italy, MG3 in Shanghai, China, MG4 in Rome, Italy, MG5 in Perth, Australia, MG6 in Kyoto, Japan, MG7 in Stanford, USA, MG8 in Jerusalem, Israel, MG9 in Rome, Italy, MG10 in Rio, Brazil, MG11 in Berlin, Germany and MG12 in Paris, France.

Interested participants may inquire directly by email to the conference email account or contact members of any of the three organizing committees:
International Organizing Committee;
International Coordinating Committee;
Local Organizing Committee.

website: http://www.icra.it/MG/mg13

email: mg13@icra.it

PROGRAM

Monday morning, July 2nd, 2012

Stockholm University - Aula Magna Plenary Hall

09:00 - 09:35
Welcome message by Prof. Kåre Bremer
President of Stockholm University

Opening of the 13th Marcel Grossman Meeting

Chairperson: Remo Ruffini

Presentation of the Marcel Grossmann Awards

Institutional Award

AlbaNova University Center – recipient Kåre Bremer

Individual Awards

David Arnett, Vladimir Belinski, Isaak Khalatnikov, Filippo Frontera

Plenary Session: Mathematics and Relativity

Chairperson: Vladimir Belinski

09:35 - 10:10 Hermann Nicolai
Hidden symmetries: from BKL to Kac-Moody

10:10 - 10:45 Claes Uggla
Spacetime singularities: Recent developments

10:45 - 11:05 coffee break

11:05 - 11:40 Sergiu Klainerman
Recent developments in mathematical GR

11:40 - 12:15 Harvey Reall
Black holes in higher dimensions

20:30 - 22:00 Monday evening Public Lecture by:
Mario Livio *"The greatest scientific achievements of the Hubble space telescope"*

Monday afternoon, July 2nd 2012 Parallel Sessions

AlbaNova University Center, 14:00–18:30

AN1a	Post-Newtonian and Analytic Approximations (Luc Blanchet)	FB42
AN2 **AN3**	Interfacing Analytical and Numerical Relativity (Alessandra Buonanno, Alessandro Nagar); Gravitational Self-Force and Astrophysical Binaries of small mass ratios (Leor Barack)	A3:1003
AP1	DAMA and Related Experiments (Rita Bernabei)	FP41
AT1	Higher dimensional General Relativity (Harvey Reall)	FA31
AT2a	Extended Theories of Gravity (Salvatore Capozziello)	FD51
BH4	Black Hole Evaporation, Holographic Principle, and Entropic Gravity (Pisin Chen)	FB41
CM1	Inflation (Misao Sasaki)	FD41
CM2a	Dark Energy and the Accelerating Universe (Alexei Starobinski, David Polarski)	FD5
CM4	Quantum Cosmology and Quantum Effects in the Early Universe (Paulo Moniz)	FB55
EG1	Experimental Gravitation (Claus Laemmerzahl)	132:028
GRB2	First Minutes of GRBs: physics of prompt emission, central engine, and progenitor (Bing Zhang, Pawan Kumar)	FA32
GT2	Cosmological Singularities and Asymptotics (Spiros Cotsakis)	A5:1003
GT3a	Theoretical Issues in GR (Dieter Brill)	FB52
GT4	Exact Solutions (Physical Aspects) (Susan Scott)	FB53
GT5	Quantum Fields (Vladimir Belinski)	FB51
GW1	Sources of Gravitational Waves (Andrew Melatos)	A4:1003
OC1	Supernova Cosmology and the Accelerating Universe (Ariel Goobar, Jesper Sollerman)	FR4
QG2a	Quantum Gravity Phenomenology (Giovanni Amelino-Camelia)	FB54
SF1	Origin and physics of Soft Gamma-ray Repeaters and Anomalous X-ray Pulsars (Sandro Mereghetti, Manuel Malheiro)	122:026
ST1	Planckian and Transplanckian Physics (Dmitri Galtsov)	BC A5:1041
TC1	Supermassive Black Holes in Cosmic Structure Formation: Nature and Origin (Lucio Mayer)	AC A5:1041

Tuesday morning, July 3rd, 2012

Stockholm University - Aula Magna Plenary Hall

Plenary Session: Quantum and Gravity

Chairperson: Hagen Kleinert

09:00 - 09:35 Frederik Denef
String Glasses

09:35 - 10:10 Jan Ambjorn
Lattice gravity: overview and recent progress

10:10 - 10:30 coffee break

10:30 - 11:05 Petr Horava
Gravity with Anisotropic Scaling and the Multicritical Universe

11:05 - 11:40 Martin Reuter
QEG: Towards an Asymptotically Safe Quantum Theory of Gravity

11:40 - 12:15 Zvi Bern
Perturbative Quantum Gravity as a Double Copy of Gauge Theory and Implication for UV Properties

19:00 Reception at Stockholm City Hall

Tuesday afternoon, July 3rd 2012 Parallel Sessions

AlbaNova University Center, 14:00–18:30

AN1b	Post-Newtonian and Analytic Approximations (Luc Blanchet)	FB42
AP2	Active Galactic Nuclei at High Energies (Paolo Giommi, Felix Aharonian)	FB55
AT2b	Extended Theories of Gravity (Salvatore Capozziello)	FD51
BH2	Magneto-Plasma Processes in Relativistic Astrophysics (Gennady Bisnovaty-Kogan, Sergej Moiseenko)	132:028
CM2b	Dark Energy and the Accelerating Universe (Alexei Starobinski, David Polarski)	FD5
EG2	Variation of Fundamental Constants (Victor Flambaum)	FP41
EG4	Self-Gravitating System (David Merritt)	FR4
GRB3	Observations vs. Theory in the Swift Era (Sergio Campana, Massimo Della Valle)	FB52
GT3b	Theoretical Issues in GR (Dieter Brill)	FB51
GW2	Gravitational Wave and Multimessenger Astronomy (Fulvio Ricci, Szabolcs Marka)	A4:1003
OC2	Observational Gravitational Lensing [Microlensing] (Philippe Jetzer)	A5:1003
QG1a	Loop Quantum Gravity, Quantum Geometry, Spin Foams (Jerzy Lewandowski)	FA32
QG2b	Quantum Gravity Phenomenology (Giovanni Amelino-Camelia)	FA31
SF2	Nuclear Physics and Astrophysics (Johann Rafelski, Jorge Rueda)	FB53
SG1/2	GR around the Earth and the Sun (Roberto Peron, Neil Ashby)	122:026
SN1	Two-Dimensional Codes for Supernova Explosions (David Arnett, Casey Meakin)	FB54
SO3	Observations from High Energy Astrophysics Satellites (Norbert Schulz, Elena Pian)	A3:1003
ST3	Multivalued Fields for Defects in Spacetime and Gravity (Hagen Kleinert, Mikhail Katanaev)	FD41
TC2	Supermassive Black Holes in Cosmic Structure Formation: Coalescence and Effect on Galaxy Formation (Lucio Mayer)	FB41

Wednesday morning, July 4th, 2012

Stockholm University - Aula Magna Plenary Hall

Plenary Session: Supernovae and their outcomes

Chairperson: David Blair

09:00 - 09:35 Ariel Goobar
Supernova Cosmology: Past and future

09:35 - 10:10 Robert Kirshner
The accelerating universe: a Nobel surprise

10:10 - 10:45 David Arnett
Stellar turbolence and why we should care

10:45 - 11:05 coffee break

11:05 - 11:40 Jorge Rueda
Strong, Weak, Electromagnetic and Gravitational Interactions in Neutron Stars

11:40 - 12:15 Luciano Rezzolla
Using numerical relativity to explore fundamental physics and astrophysics

12:15 - 12:50 David Reitze
Ground-based Gravitational-wave Astronomy Using Interferometers: Past and Future

19:30 Official Banquet at "Solliden Restaurant" at Skansen

Thursday morning, July 5th, 2012

Stockholm University - Aula Magna Plenary Hall

Plenary Session: Cosmology and Gamma Ray Bursts: Neutron Stars and Black Holes

Chairperson: Roy Kerr

09:00 - 09:35 Tsvi Piran
Electromagnetic Signals from Neutron Star Mergers

09:35 - 10:10 Bing Zhang
Open Questions in GRB Physics

10:10 - 10:45 Remo Ruffini
GRBs and the Supernova-Neutron-Star-Black-Hole Sequence

10:45 - 11:05 coffee break

11:05 - 11:40 Michael Kramer
Precisions tests of theories of gravity using pulsars

11:40 - 12:15 Piero Madau
Connecting the Dark and Light Side of Galaxy Formation

20:30 - 22:00 Thursday evening Public Lecture:

"Fang Li Zhi and Relativistic Astrophysics"

Thursday afternoon, July 5th 2012 Parallel Sessions

AlbaNova University Center, 14:00–18:30

AN4/5	Numerical Simulations of Binary Black Holes (Pablo Laguna); Numerical Analysis of Coalescing Binaries (Masaru Shibata)	132:028
AT3a	Gravitational Fields with Sources, Regular Black Holes, Quasiblack Holes, and Analog Black Holes (José Lemos, Paolo Pani)	FB42
AT4a	Modified Gravity (Fawad Hassan, Shinji Mokuhyama)	FD5
BH1	Black Holes in Higher Dimensions (Black Rings and Black Strings) (Jutta Kunz)	A5:1041
BH3a	Black Holes (Roy Kerr, Jacob Bekenstein)	FR4
CB1/2a	CMB Experiments (Silvia Masi, Paolo De Bernardis); Astrophysics from the radio to submillimetre - Planck Mission (Carlo Burigana, Hans-Ulric Noorgard-Nielsen)	FA32
EG3	Compact Binaries and Strong-Field Tests of Gravity (Michael Kramer)	FA31
GRB4	GRB: correlations and central engine (Sergio Campana, Massimo Della Valle)	FD51
GW3	Status of the Gravitational Wave Detectors (David Blair, Jean-Yves Vinet)	FB51
OC4a	New developments in the study of the large scale structure of the Universe (Enn Saar, Rien van de Weygaert)	FP41
QG1b	Loop Quantum Gravity, Quantum Geometry, Spin Foams (Jerzy Lewandowski)	FB53
QG3	Asymptotic Safeness and Symmetry Breaking in Quantum Gravity (Eckehard Mielke)	FB54
QG4a	Loop quantum gravity: cosmology and black holes (Jorge Pullin, Parampreet Singh)	FB52
SF3	Strong Fields and High Energy Astrophysical events (Christian Ghezzi, She-Sheng Xue)	122:026
SG3	Lisa Pathfinder and Space-Borne Gravitational Wave Detectors (Stefano Vitale)	FB55
SG4	GP-B and Lense-Thirring Measurements (Turki Al-Saud)	FB41
SN3	Supernova Explosions and Neutron Star Oscillations (Kostas Kokkotas, Ewald Mueller)	A4:1003
SO1	Spectral and timing Properties of Astrophysical Black Holes (Sandip Chakrabarti)	A5:1003
SO4	White Dwarf Pulsars and Rotating White Dwarf Theory (Yukikatsu Terada)	A3:1003
ST2	String Theory (Mans Henningson)	A5:1069
TC3	Inhomogeneous Cosmologies, Averaging and Back Reaction (Alan Coley, David Wiltshire)	FD41

Friday morning, July 6th, 2012

Stockholm University - Aula Magna Plenary Hall

Plenary Session: Cosmic Background Radiation

Chairperson: Paolo De Bernardis

09:00 - 09:35 Charles Bennett
WMAP

09:35 - 10:10 Nazzareno Mandolesi
Planck and fundamental Physics

10:10 - 10:45 Jean-Loup Puget
High energy Planck Mission

10:45 - 11:05 coffee break

11:05 - 11:40 Sunyaev Rashid
Unavoidable CMB spectral features and Black Body Photosphere of our Universe

11:40 - 12:15 John Carlstrom
Cosmology with the thermal and kinetic Sunyaev-Zel'dovich effects

12:15 - 12:50 David Spergel
Connecting the Dark and Light Side of Galaxy Formation

20:30 - 22:00 Thursday evening Public Lecture by:

Carlos Frenk *"Everything from nothing: how our universe was made"*

Friday afternoon, July 6th 2012 Parallel Sessions

AlbaNova University Center, 14:00–18:30

AP3	Ultra High Energy cosmic rays (Karl-Heinz Kampert, Cao Zhen)	132:028
AP4	News from LHC (Carlo Dionisi, Luciano Maiani)	FB42
AT3b	Gravitational Fields with Sources, Regular Black Holes, Quasiblack Holes, and Analog Black Holes (José Lemos, Paolo Pani)	FD41
AT4b	Modified Gravity (Fawad Hassan, Shinji Mokuhyama)	FD51
BH3b	Black Holes (Roy Kerr, Jacob Bekenstein)	FR4
CB1/2b	CMB Experiments (Silvia Masi, Paolo De Bernardis); Astrophysics from the radio to submillimetre - Planck Mission (Carlo Burigana, Hans-Ulric Noorgard-Nielsen)	FA32
CM2c	Dark Energy and the Accelerating Universe (Alexei Starobinski, David Polarski)	FD5
CM3	Nonsingular Cosmology (Nelson Pinto-Neto)	FB41
GRB1	Photospheric Emission in GRBs (Felix Ryde, Gregory Vereshchagin)	FB52
GRB5	Models for GRBs (Shiho Kobayashi, Tsvi Piran)	FB53
GT1	Exact Solutions in Four and Higher Dimensions: Mathematical Aspects (Georgy Alekseev)	FB55
GW4	Underground Gravitational Wave Detectors (Harald Luck, Albert Lazzarini)	A5:1003
HR1	History of Relativity and Cosmology (Christian Bracco)	A3:1003
OC3	Cosmology from GRBs (Lorenzo Amati, Daisuke Yonetoku)	FB54
OC4b	New developments in the study of the large scale structure of the Universe (Enn Saar, Rien van de Weygaert)	FP41
QG4b	Loop quantum gravity: cosmology and black holes (Jorge Pullin, Parampreet Singh)	FA31
SF4	Relativistic MHD Flows and Electron-Positron Plasma (Yu-Qing Lou)	A4:1003
SO2	Spectral and Timing Properties of Astrophysical Black Holes (Sandip Chakrabarti)	FB51
SO5	Future Experiments and Missions in X and Gamma Ray (Filippo Frontera, Shuangnan Zhang)	122:026

Saturday morning, July 7th, 2012

Stockholm University - Aula Magna Plenary Hall

Plenary Session: The Frontiers

Chairperson: Kjell Rosquist

09:00 - 09:35 Roy Kerr

09:35 - 10:10 Francis Everitt

10:10 - 10:45 Paolo De Bernardis

10:45 - 11:05 coffee break

11:05 - 11:25 Chiara Mariotti
Recent searches of the Standard Model Higgs within CMS

11:25 - 11:45 Domizia Orestano
Search for the Standard Model Higgs with the ATLAS detector

11:45 - 12:05 Luciano Maiani
LHC High-lights

12:05 - 12:40 Remo Ruffini
Concluding Remarks

IRAP PH ERASMUS MUNDUS SCHOOL 2012

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IRAP Ph.D. Erasmus Mundus school
September 3rd - 21st, 2012

Program **Speakers** **Location**

Program of the IRAP PhD School, Nice, September 2012

First week

	Monday 3	Tuesday 4	Wednesday 5	Thursday 6	Friday 7
9.00	Registration	Kleinert	Kleinert	Kleinert	Siutsou
9.45		Bianco	Bianco	Bianco	Vereshchagin
10.30		Belinski	Belinski	Belinski	Belinski
11.15		Xue	Xue	Vereshchagin	Vakili
12.00		Pelster	Pelster	Pelster	Pelster
15.00		Penacchioni	Penacchioni	Vereshchagin	Visit to Nice
15.45		Wu	Gruber	Pisani	Calerne
16.30		Fraga	Arguelles	Siutsou	observatory
17.15		Gruber		Beguè	
18.00				Benedetti	

Second week

	Monday 10	Tuesday 11	Wednesday 12	Thursday 13	Friday 14
9.00		Lammerzhal	De Bernardis	De Bernardis	Aharonian
9.45		Kunz	Kunz	Di Pippo	Kleinert
10.30	Kunz	Mavromatos	Mavromatos	Mavromatos	Jullo
11.15	Lammerzhal	Giommi	Masi	Kibble	Kibble
12.00	Giommi	Izzo		Masi	
15.00	Suvendu	Frontera	Frontera	Frontera	Covone
15.45	Baranov	Izzo	Amati	Covone	Jullo
16.30	Dutta	Amati	Orlandini	Amati	Aharonian
17.15	Sversut	Orlandini	Orlandini	Orlandini	Sahakyan
18.00	Mavromatos	Orlandini	Muccino	Orlandini	*Villa Ratti*
18.45				Dutta	

Third week

	Monday 17	Tuesday 18	Wednesday 19	Thursday 20	Friday 21
9.00	Ruffini	Rueda	Rueda	Rueda	Rueda
9.45	Ruffo	Ruffo	(Stockholm)	(Savoie)	(Berlin)
10.30	Bernardini		Damour	Damour	Damour
11.15	Rosquist		(Stockholm)	(Berlin)	Ruffini
12.00		Rosquist	(Stockholm)	(Nice)	TBD
15.00	Izzo	Damour	Lombardi	Haney	Haney
15.45	Pereira	Valsan	Gregoris	Dereli	Baranov
16.30	Boshkayev	Boshkaev		Benetti	Iyyani
17.15	Martins	Martins			Benetti
18.00					

- AHARONIAN, Felix: 1. “Gamma Ray Production in AGN: sites, acceleratioin and radiation processes, challenges” 2. “Gamma-rays from AGN -cosmological implications”
- AMATI, Lorenzo: “"Introduction on Cosmology with GRBs”
- ARGUELLES, Carlos: 1- “Semi-degenerate Self-gravitating system of fermions as Dark Matter in Galaxies II: Core & Halo description” 2- “Einstein clusters and Dark Matter”
- BEGUE, Damien: “Photospheric emission in GRBs from Monte-Carlo simulations of Compton scattering”
- BENEDETTI, Alberto: “Boltzmann equations with anisotropic momentum distributions and transparency of GRB plasma”
- BERNARDINI, Maria Grazia: "The prompt-afterglow connection: a universal scaling for short and long GRBs"
- BIANCO, Carlo Luciano: "Gamma-Ray Bursts"
- BOSHKAYEV, kUANTAY: 1- “Non-rotating and slowly rotating stars in the Newtonian gravitational theory (Hartle’s approach)” 2- “Non-rotating and slowly rotating relativistic stellar models and their applications”
- COVONE, Giovanni: 1. “Introduction to Gravitational Lensing” 2. “Gravitational Lensing evidence for Dark Matter in Galaxies and Clusters of Galaxies”;
- DAMOUR, Thibault: "Gravitational Waves" (4 talks)
- DE BERNARDIS, Paolo – MASI, S.: “Cosmic Microwave Background Observations”

This short course on "Cosmic Microwave Background Observations" focuses on CMB observables, on the fundamental limits of these measurements, and on the methods to extract CMB information from overhelming disturbance of astrophysical, environmental and instrumental origin. After the necessary description of the related physics, and of the status of the art, we conclude on the newest trends. The course is organized as follows:

Lecture 1: de Bernardis 12/09 9:00
CMB Observables (spectrum, anisotropy, polarization, quantum fluctuations,environment)

Lecture 2: Masi 12/09 12:00
How to detect CMB photons (fundamental limits, detectors, telescopes, polarimeters)

Lecture 3: de Bernardis 13/09 9:00
Extraction methods (environment problems, modulation/demodulation techniques, cryogenics, space, current experiments)

Lecture 4: Masi 13/09 12:00
The future of CMB research (current status of the field, new targets and
methods, including B-modes and CMB spectroscopy)

- DERELI, Hüsne: 1- “"The Type IIb SN 2004ex: spectral and light curve evolution” 2- “ Template analysis of observational data dedicated to the association between GRBs and Supernovae”
- FRAGA, Bernardo: “Self gravitating system of fermions as Dark Matter on galaxies”
- GIOMMI, Paolo: 1) “Blazars: recent multi-frequency results and a new approach to classification” 2) NuSTAR: the first operational hard-Xray imaging telescope
- GREGORIS, Daniele: “"Friction forces in general relativity"
- GRUBER, Christine: 1-"Bose-Einstein condensation in compact astrophysical objects" 2- "Dark Energy from the vacuum energy of quantum fields"
-

  I will give a historical account of the developments leading up to the unification of weak and electromagnetic interactions, as I saw them from a viewpoint in Imperial College. This will cover theoretical particle physics in the years after the second world war, early gauge theories, obstacles to unification, especially the Goldstone theorem, the development of the idea of spontaneous symmetry breaking in gauge theories, and the construction of the unified electroweak model, together with a brief discussion of later developments.

- IYYANI, Shabnam: “Photospheres in prompt emission of GRBs - spectral analysis of GRB110721A"
- JULLO, Eric: 1. Modeling of gravitational lensing systems 2. Cosmological parameters with gravitational lensing
- KIBBLE, Tom (Imperial College): “Genesis of electroweak symmetry breaking”
- KUNZ, Jutta: “Gravitating solitons and black holes”
- LAEMMERZAHL, Claus: "The Equivalence principle"
- MAVROMATOS, Nikolaos: “ Neutrinos and the Universe”

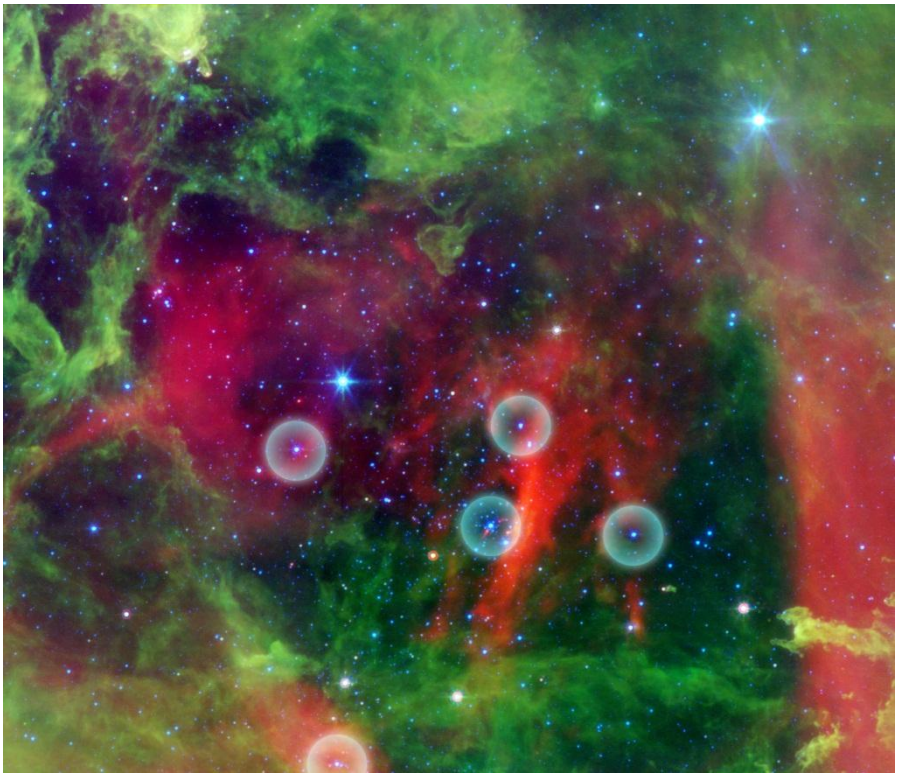
lecture 1: Neutrino properties : types of masses, see-saw mechanism for neutrino mass generation, structure of the
neutrino mixing matrix and CP symmetry constraints , Neutrino Oscillations in vacuum and in dense matter
lecture 2: Neutrinos and the Baryon Asymmetry in the Universe: Leptogenesis / Baryogenesis
lecture 3: Neutrinos and the Dark sector of the Universe
lecture 4: Neutrinos in curved geometries of the early universe and CPT violation as alternative scenarios for baryogenesis/leptogenesis without the need of sterile neutrinos

- PELSTER, Axel: “Ultracold Quantum Gases – A Fascinating Playground for Basic Research in Physics”
- PENACCHIONI, Ana: Tuesday 3: "GRB 111228 and Supernova association: a binary system?"; Wednesday 4: "GRB 110709B as a new member of the proto-back hole family"
- ROSQUIST, Kjell: “Inhomogeneous cosmology”
- RUEDA, Jorge: "Fundamental interactions in White Dwarfs and Neutron Stars"
- SAHAKYAN, Narek: 1. “High energy gamma rays from Centaurus A radio galaxy” 2. “High energy photons and neutrinos from thin and thick sources”
- SIUTSOU, Ivan: “Radiative transfer in relativisic outflows with application to GRBs”
- SUVENDU, Rakshit: "Differential Interferometry of BLR of 3C273"
- VAKILI, Farrokh: “Introduction to optical interferometry and high angular resolution astrophysics: state of art, results and future prospects”
- VERESHCHAGIN, Gregory: “Photospheric emission in Gamma Ray Bursts”

Lecture 1. Hydrodynamics and thermodynamics of relativistic plasma and GRBs
The problem: first light from initially optically thick relativistic plasma
Energy-momentum and baryonic number conservation
Expanding GRB plasma: winds versus shells
Equations of motion in fireball and fireshell models
Proper Gamma Ray Burst and photospheric models
Transparency and the baryonic loading
The role of the rate equation for electron-positron pairs
Analogies with cosmology and “black body photosphere”
Lecture 2. Photospheric emission in GRBs
Mean free path and optical depth in media with relativistic motion
Laboratory vs. comoving reference frames
Invariant definition of the optical depth
Optical depth and transparency (photospheric) radius
Photon thick and photon thin asymptotics
Lecture 3. Diffusion in space and diffusion in energy
Photon escape from relativistically expanding plasma
Diffusion in stellar astrophysics and in GRBs
Diffusion radius and photon thin asymptotics
Kompaneets equation
Diffusion approximation for Compton scattering in expanding medium
Comparison with previous works

- WU, Yuanbin: “Surface tension of neutron star matter”
- XUE, Shesheng: “Electron and positron pair production in strong electric fields”

Current Issues on Relativistic Astrophysics
상대론 천체물리학의 현안에 관한 한-이 국제학술회의



Rosette nebula © nasa

Organized by Astrophysics Division of KPS, IEU (Ewha), Inje U
주최: 한국물리학회 천체물리분과 주관: 이화여대 초기우주과학기술연구소
후원: 인제대학교

Date: 5-6 November, 2012
Venue: Rm. 606, Ewha-Samsung Education Culture Building
& Rm. 111, Humanities Building, Ewha Womans University
일시와 장소: 11월 5일(월) 이화-삼성 교육 문화관 606호
11월 6일(화) 인문관 111호

KPS 한국물리학회 The Korean Physical Society Institute for the Early Universe 仁濟大學校 INJE UNIVERSITY

Current Issues on Relativistic Astrophysics, 2012

Organized by Astrophysics Division of KPS, IEU (Ewha), Inje U

Date: 5-6 November, 2012
Venue: Rm.606, Ewha-Samsung Education Culture Building &
Rm. 111, Humanities Building, Ewha Womans University

Organizing committee :

Prof. Sung-Won Kim (Ewha Womans University)
Prof. Jongmann Yang (Ewha Womans University)
Prof. Hyung Won Lee (Inje University)
Prof. Remo Ruffini (ICRA)

Local organizing committee :

Prof. Sung-Won Kim (Ewha Womans University, Chair)
Prof. Jongmann Yang (Ewha Womans University)
Prof. Changrim Ahn (Ewha Womans University)
Prof. Hyung Won Lee (Inje University)
Prof. Chulhoon Lee (Hanyang University)
Prof. Hyunkyu Lee (Hanyang University)
Dr. Doo Jong Song (KASI)
Prof. Sang pyo Kim (Kunsan Nat'l University)
Prof. Bumhoon Lee (Sogang University)
Prof. Hyung Mok Lee (Seoul Nat'l University)
Prof. Myeong-Gu Park (Kyungpook Nat'l University)
Dr. Gungwon Kang (KISTI)

This Italian-Korean meeting is held within the program "Korea-Italy collaboration on Relativistic Astrophysics", PGR 00306, sponsored by the Italian Ministry of Foreign Affairs. It will be especially devoted to the opening of an ICRANet seat at EWHA University.

KPS 한국물리학회 The Korean Physical Society Institute for the Early Universe 仁濟大學校 INJE UNIVERSITY

Program

5 Nov., 2012 Rm. 606, Ewha-Samsung Edu. & Cul Buil.

9: 00 Registration

Session I Chair: Hyung Won Lee (Inje)

9:30 Remo Ruffini (ICRA & Rome U)

10:05 Sung-Won Kim (Ewha)

10:40 She-Sheng Xue (ICRA)

11:05 Coffee break

11:25 Ana Virginia Penacchioni (ICRA)

11:50 Bernardo Machado de Oliveira Fraga (ICRA)

12:25 Lunch

Session II Chair: Changrim Ahn (Ewha)

14:30 Giovanni Battista Pisani (ICRA)

14:55 Kuantay Boshkayev (ICRA)

15:20 Hyung Mok Lee (SNU)

15:45 Coffee break

16:05 Donghan Yeom (Sogang)

16:30 Riccardo Belvedere (ICRA)

16:55 Hyun Kyu Lee (Hanyang)

17:20 Sheyse Martins De Carvalho (ICRA)

6 Nov., 2012 Rm. 111, Humanities Building

Session III Chair: Myeong-Gu Park (Kyungpook)

9:30 Sang Pyo Kim (Kunsan NU)

9:55 Carlos Raul Arguelles (ICRA)

10:20 Maxime Enderli (ICRA)

10:45 Coffee break

11:05 Eckhard Raimund Strobel (ICRA)

11:30 Hyung Won Lee (Inje)

11:55 Closing

- Map around Ewha

http://www.ewha.ac.kr/english/html/002/002005001001.html

- Campus map of Ewha

http://www.ewha.ac.kr/english/html/campusmap_eng/Map.html#

Ewha-Samsung Education Culture Building is No. 27 & Humanities Building is No. 40 in the building list