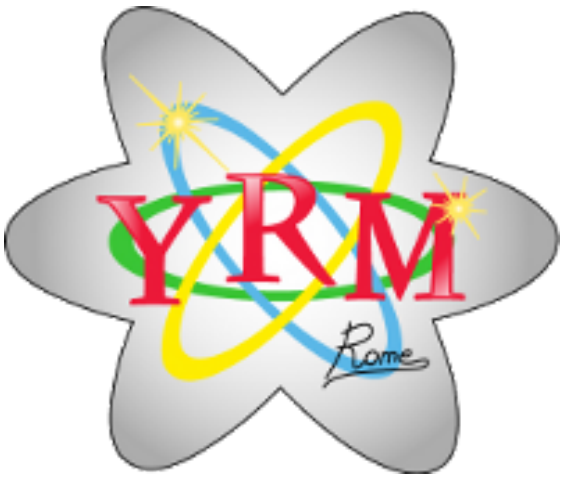
Young Researchers Meeting In Rome 2012



Report of Contributions

https://agenda.infn.it/e/4557

Contribution ID: **0** Type: **not specified**

Welcome

Friday, 20 January 2012 09:00 (20 minutes)

Primary authors: FUCITO, Francesco (ROMA2); SANTONICO, Rinaldo (RM2)

Session Classification: Opening Session

Contribution ID: **1** Type: **not specified**

Vacua of Maximal Supergravity and the cosmological constant

Friday, 20 January 2012 09:20 (20 minutes)

I will discuss recent developments in the construction of supergravity models in four dimensions with gauge interactions and in the identification of their vacua. The issue of stability of these solutions will be addressed and a link between gauge interactions and allowed values of the cosmological constant will be discussed. I will also outline an interesting structure that arises among the different new theories and vacua that have been found.

Primary author: INVERSO, Gianluca (Università di Roma "Tor Vergata")

Session Classification: Session - I : Theoretical and Particle Physics

Contribution ID: **2** Type: **not specified**

Extra U(1) and Asymmetry

Friday, 20 January 2012 09:40 (20 minutes)

Among the possible beyond the standard model (BSM) physics extra neutral gauge Z's are theoretically one of the well motivated. The measurement of the asymmetry at the LHC has been showed to be very important to detect this Z's and to point out some of their properties.
We have calculated the asymmetry at the LHC for a model in which the MSSM is extended by an extra U(1) gauge symmetry (MiAUMSSM) whose related anomalies are cancelled by the Green-Schwarz (GS) mechanism. We have performed the calculation of the asymmetry related to the process pp → e+e- for different definitions of the asymmetry at the LHC. Then we have studied its dependence on the charges of the model, giving suitable fits after having optimized the results.

Primary author: MAMMARELLA, Andrea (ROMA2)

Session Classification: Session - I : Theoretical and Particle Physics

Contribution ID: **3** Type: **not specified**

A Model Independent General Search for New Physics in ATLAS

Friday, 20 January 2012 10:00 (20 minutes)

The start of the Large Hadron Collider in 2009 has opened a new window for high energy physics. It is expected to provide answers to some of the long-standing questions in particle physics; namely the details of the electroweak symmetry breaking mechanism in the Standard Model, and the possibility of new and exotic physics at the TeV-scale.
In this talk preliminary results of a novel model independent general search for new physics with the ATLAS detector are presented.
In contrast to specific "model-driven"searches this analysis follows an orthogonal approach. Instead of concentrating on a specific sub-model of new physics, the ATLAS data is systematically searched for deviations from the Standard Model predictions with a model-independent approach; with the only assumption that new physics will appear in high transverse momentum events.
Events containing leptons (μ, e), jets and missing transverse energy, ETmiss, are considered and subdivided into exclusive classes according to their final states. At this point a merging algorithm is employed to reduce the potentially infinite number of classes to a finite number without loosing discovery potential.
As a second step in each class a search algorithm is used to find the region in the Meff distribution showing the largest discrepancy with the MC expectations; taking into account both statistical and systematics uncertainties. The significance for such a deviation to occur is than corrected for the trial factors, both for the individual channel and for all channels combined. Preliminary results over 2.052 fb-1 of 2011 data are reported with a good overall agreement observed in most of the event classes.

Primary author: AMOROSO, Simone (University of Freiburg)

Session Classification: Session - I : Theoretical and Particle Physics

Contribution ID: **4** Type: **not specified**

Measurement of Z-boson forward-backward asymmetry in the muon channel with the ATLAS experiment at the LHC

Friday, 20 January 2012 10:20 (20 minutes)

The V-A nature of the electroweak current leads to an asymmetry in the lepton polar angle distribution in the rest frame of Z/γ* boson: the measurement of such a quantity, around the Z pole, can provide a precise determination of the weak mixing angle of the Standard Model. In this contribution, the asymmetry measurement in the muon channel will be presented with data collected with the ATLAS experiment during 2011.

Primary author: Mr GROSSI, GIULIO CORNELIO (ROMA2)

Session Classification: Session - I : Theoretical and Particle Physics

Contribution ID: **5** Type: **not specified**

Introduction to poster session

Contribution ID: **6** Type: **not specified**

Kaonic atoms measurements at the DAFNE collider: the SIDDHARTA experiment

Friday, 20 January 2012 11:40 (20 minutes)

Kaonic Hydrogen and Helium X-ray measurements play nowadays a fundamental role in testing the reliability of the Chiral Perturbation Theory as a different realisation of Quantum Chromodynamics at low energies. Dictated by both electromagnetic and strong interaction, X-ray transitions at lower energy levels of these complex bound systems offer indeed the unique opportunity to perform a threshold measurements of zero-energy meson-nucleon scattering. Nowadays the SIDDHARTA experiment at DAFNE collider is the only apparatus which can provide such kind of measurements with the high precision needed to disentangle different theoretical calculation scenarios. After a review on the physics of Light Kaonic Atoms with a focus on the so-called internal and external processes to understand measurement difficulties, in this work I present the peculiarity of the SIDDHARTA experiment and its results. A detailed discussion about Silicon Drift Detectors wich allow the implementation of a kaon-trigger mechanism and the use of gaseus target are presented to better understand SIDDHARTA performances and its results, nowadays the best available.

Primary author: RIZZO, Alessandro (LNF - INFN & Università di Roma "Tor Vergata")

Session Classification: Session - II : Nuclear and Astroparticle Physics

Contribution ID: **7** Type: **not specified**

Monte Carlo simulations of microbeam radiation therapy with carbon ions for an interleaved irradiation geometry

Friday, 20 January 2012 12:00 (20 minutes)

Microbeam Radiation Therapy (MRT) uses an array of parallel microbeams in order to spare normal tissue and preferentially damage tumors. In this study, dose-distribution calculations for interleaved microbeam radiation therapy were performed with carbon ions, using the Monte Carlo code MCNPX. The dose was calculated in a rabbit head model to study brain-cancer treatment using ion microbeams. Depth-dose profile, beam broadening and peak-to-valley dose ratios were calculated for interleaved carbon microbeams.

Primary author: FOIS, Giovanna Rosa (CA)

Session Classification: Session - II : Nuclear and Astroparticle Physics

Contribution ID: **8** Type: **not specified**

The ALTEA and ALTEA-Shield experiment onboard the International Space Station

Friday, 20 January 2012 12:20 (20 minutes)

Anomalous Long Term Effects in Astronaut's Central Nervous System (ALTEA) is a helmet-shaped device holding six silicon particle detectors that has been used to measure the effect of the exposure of crewmembers to cosmic radiation on brain activity and visual perception, including astronauts' perceptions of light flashes behind their eyelids as a result of high-energy radiation. Because of its ability to be operated without a crewmember, it is also being used as a dosimeter to provide quantitative data on high-energy radiation particles passing into the ISS. ALTEA capabilities are also used to give additional information on the exposure of crewmembers to radiation during their stays on ISS for use in health monitoring.
The ALTEA experiment was designed by the Italian Space Agency (ASI) in collaboration with a science team led by Professor L. Narici of Tor Vergata University, Rome. The experiment onboard the International Space Station since July 2006 and it has been used as operative instrument by the Space Radiation Analysis Group (SRAG) of NASA.
Since September 2010 ALTEA detectors are used on a different support for the ESA experiment ALTEA-Shield, which is designed to assess radiation flux in different positions inside the UsLab module. ALTEA-Shield will also provide data about radiation shielding effects by a variety of special materials.
A description of the experiment and a summary of the main results obtained by ALTEA and ALTEA-Shield investigation will be presented.

Primary author: DI FINO, Luca (Università di Roma "Tor Vergata")

Session Classification: Session - II : Nuclear and Astroparticle Physics

Contribution ID: **9** Type: **not specified**

Direct proof of Cosmic Ray acceleration by Supernova Remnants with the AGILE satellite

Friday, 20 January 2012 12:40 (20 minutes)

On behalf of AGILE team, I present our work on cosmic-ray acceleration by the some Supernova Remnants, focusing on the SNR W44. Recent analyses suggest that several SNR observations can be understood in terms of hadrons accelerated in correspondence of the SNR forward shock. Until now, however, the leptonic contribution can not be definitely excluded. In the gamma energy band, Fermi/LAT satellite can give only data at energies > 200 MeV because its sensitivity is no so good at lower energies. In the case of W44, AGILE extends the Fermi/LAT spectrum (Abdo et al., 2010) at energies < 200 MeV, showing clearly a low energy decrease. This feature allows us, assuming three different particle distributions, to exclude definetely for the first time the leptonic origin of the gamma-ray emission from a SNR and to show that the hadronic scenario is the only one that can model the W44 broad band energy spectrum. We give an unambiguous proof of the cosmic-ray origin from Supernova Remnants.

Primary author: CARDILLO, Martina (INAF-IASF Roma & Università di Roma "Tor Vergata")

Session Classification: Session - II : Nuclear and Astroparticle Physics

Contribution ID: **10** Type: **not specified**

Distance and Geometry of the Magellanic Clouds using the Period Wesenheit Relations of Classical Cepheids

Friday, 20 January 2012 14:20 (20 minutes)

Classical Cepheids play a key role in constraining the astronomic distances. They are very bright variable stars, so they can be observed at great distances, and they obey to a well known Period Luminosity Relation (PL), so we can use the measured pulsation period and the observed magnitude to estimate the absolute magnitude.
According to theoretical models the PL relation is expected to depend on metallicity of Cepheids. This dependence seems to be negligible for Period-Wesenheit (PW) relations.
In order to delineate these relations, we collected the largest sample of Cepheids observed in the Magellanic Clouds, thanks to the OGLE - III project, which includes ~ 3000 Cepheids in the LMC and ~ 4000 in the SMC. The data set includes accurate optical (V and I bands) from the optical catalog OGLE- III CVS and NIR data (J H Ks bands) from the IRSF/SIRIUS Catalog.
Our results show that the PW relations are an excellent standard candle being metallicity insensitive in both slope and zero-point and at the same time being reddening insensitive and showing the least internal dispersion.Classical Cepheids play a key role in constraining the astronomic distances and are tightly connected with the Hubble constant determination. They are very bright variable stars, so they
can be observed at great distances, and they obey to a well known Period Luminosity Relation (PL), so we can use the measured pulsation period and the observed magnitude to estimate
the absolute magnitude.
Cepheids are intermediate-mass stars in the evolutionary stage of central Helium (He) and Hydrogen (H) shell burning. The evolutionary tracks of intermediate-mass stars follow a blue loop
in the HR diagram. These loops are extended enough to cross the instability strip, a region in the HR diagram where the H and He ionization zones, being in specific layers of the stellar
envelope, are able to induce stable radial pulsation in the star.
The finite width (in temperature) of the Instability strip introduces a scatter in the statistical PL relation for the Cepheids in the same galaxy, but this scatter is reduced if we use a PeriodLuminosity-Color (PLC) relation, that take into account the temperature effect. If we use the near infrared (NIR) bands J H Ks
the scatter in the PL relation is lower, since the width of the Instability Strip is reduced. Moreover, according to theoretical models the PLC relation is expected to depend on metallicity of Cepheids [Bono et al. 2010]. This dependence seems to be negligible for Period-Wesenheit (PW) relations.
The Wesenheit parameters are reddening-free magnitude that can be defined from multiband photometric data, assuming a reddening law [Cardelli, Clayton, and Mathis 1989]. The slope of the PW
relations seems to be independent of the Cepheid metallicity and chemical composition, according to theoretical models and empirical results. We can then calibrate the PW relation with
the HST parallaxes measurements of Galactic Cepheids and use them as standard candle.
Data.We collected the largest sample of Cepheids observed in these galaxies, thanks to the OGLE - III project, which includes ~ 3000 Cepheids in the LMC and ~ 4000 in the SMC. The data set includes accurate optical (V and I bands) from the optical catalog OGLE- III CVS and NIR data (J H Ks bands) from the IRSF/SIRIUS Catalog. We also adopt the position of each Cepheid, the luminosity

amplitude and the phase of maximum from the optical catalog OGLE- III CVS .
Results. We conclude that there are evidence for an universal PW relation and we give the zero point and slope for optical and NIR bands. We found the LMC distance modulus (1) $\mu_0 = 18.46 \pm 0.003$ (random error only) and LMC-SMC relative distance modulus (2) $\Delta\mu_0 = 0.437 \pm 0.003$ (random error only), that implies dLMC = 49.2 ± 0.2kpc and dSMC = 60.3 ± 0.3kpc.. If the PW adopted can be used as a universal standard candle, we can estimate the individual distances of Cepheids in the MCs. From the
study of the three-dimensional distributions of the Cepheid we can infer the thickness of the LMC disc: hdisk = 7 ± 1kpc and the length of the SMC bar: lbar = 14 ± 1kpc, that is is longer than previous estimates.The LMC has a complex vertical structure along the line of sight, with evidence of a non-planar matter distribution. The SMC is more homogeneous than the LMC, with a line-of-sight depth that increases moving away from us, like a comet tail. In order to obtain more detailed informations
we plan to produce the mass distribution and the age distribution of Cepheids. We plan also to study the kinematics of the Cepheids in the sample. Moreover, with the GAIA mission, it will became possible to perform an independent calibration with geometric methods in order to reduce the systematic errors affecting the Cepheids distance scale.

Primary author: INNO, Laura (Università di Roma "Tor Vergata")

Session Classification: Session - III : Astrophysics

Contribution ID: **11** Type: **not specified**

Optical identifications of celestial high energy sources with the Telescopio Nazionale Galileo

Friday, 20 January 2012 14:40 (20 minutes)

To ascertain the nature of celestial high energy sources, it is crucial to identify their optical counterparts.
However, the currently available astronomical public optical databases do not provide an adequate support for a systematic high energy sources identification work. In particular, the optical limiting magnitude represents a severe limitation since the deepest flux limits reached by X-ray surveys require of course similarly deeper optical catalogs to homogeneously sample the available parameter space.
Nonetheless, dedicated spectroscopic campaigns are being carried out successfully with the Telescopio Nazionale Galileo (TNG), a 4-m class telescope. To set up a winning observational campaign, the first and most important step is to define a strong science case, as it will allow for selections of good targets for observations: the key is to increase the identification efficiency while keeping down the required telescope time.
In this context, as the Principal Investigator, I will give an overview of the first spectroscopic campaign carried out at the TNG to identify Swift X-ray serendipitous sources, and I will show the valuable results achieved with only one night of observations.
As a second example, I will review the strategy for the northern-sky classification of candidate blazars associated to unidentified Fermi gamma-ray sources, and I will show the results coming from the related observational campaigns at TNG I have been involved during the last two years.

Primary author: TURRIZIANI, Sara (Università di Roma "Tor Vergata")

Session Classification: Session - III : Astrophysics

Contribution ID: **12** Type: **not specified**

Galaxy clusters mass measurements techniques

Friday, 20 January 2012 15:00 (30 minutes)

Galaxy clusters are the largest gravitationally bounded objects in the Universe. They are massive structures (M = 10^13 - 10^15 M_sun) containing tens to hundreds of galaxies interacting in a common potential well. Observations show that 10-20% of the total mass is made by hot (T=10^7-10^8 K) and diffuse ne= 10^(-4) - 10^(-2) cm^(-1) called IntraClusterMedium(ICM), emitting in the X-Ray band by thermal Bremsstrahlung.
Stars and galaxies form only 3% of the total mass, so the main contribute to mass (80%) is given by non baryonic matter called dark matter.
The Cold Dark Mattermodel suggests that galaxy clusters, as observed today, are formed by hierarchical clustering of smaller structures. In this context, studying galaxy cluster mass function is crucial to trace the expansion history of the Universe and the cosmological structure formation, allowing us to constrain cosmological parameters.

In order to determine the cluster mass function, galaxy cluster mass measurements on large cluster samples are required. Two widely used approaches to do this are based on the weak gravitational lensing effect and on the X-ray emission for thermal Bremsstrahlung from ICM. Weak gravitational lensing is a unique technique that allows to probe the distribution of dark matter in the Universe. Mass determination uses measurements of small distortions in the shape of background galaxy images, caused by the relativistic curvature of space-time due to foreground mass structures. We present the weak lensing analysis of the cluster Abell 2219, describing the technique used to obtain accurate measurements of the shape as well as the removal of the systematic effects.

An accurate mass estimation requires also a careful selection of background galaxies to not include unlensed sources which lead to a dilution, underestimating the signal up to a factor 3 in the inner region. To this aim we select galaxies using the Cosmos photometry and photometric redshifts to identify where low and high redshift galaxies lie in color-color diagrams. The weak lensing technique has the advantage that does not require assumptions on morphology or dynamical state of the cluster, although it gives a measurement of projected mass instead of the three dimensional one and is sensible to projection effects. Complementary, the X-Ray emission measures the 3D mass but strongly depends on assumptions made on the models. In this framework we present a volume limited sample of 51 clusters observed by Chandra and XMM-Newton.

The data are used to derive X-ray brightness surface and 2-D temperature proles. These proles are deprojected and used to estimate the hydrostatical total mass and gas mass profiles. The innovation of our analysis technique is the use of a new particle background models for both Chandra and XMM observations. In particular we present the Chandra ACIS-I camera particle background. We studied particle background behavior for the continuum and lines obtaining an analytical model that predicts the spatial variation of the background to better than 1% on the continuum and 5% on the lines. This accuracy allow us to separate background from signal also up to the outskirts of the cluster where thermal Bremsstrahlung emission is very low.

We use our data to investigate the effect on the mass measurements due to cross calibration between Chandra and XMM-Newton instruments. Furthermore, X-ray mass profiles are compared with gravitational lensing mass estimates to investigate the bias differences, predicted by numerical N-body simulations, of the two mass measurements techniques.

Primary authors: BARTALUCCI, Iacopo (Università di Roma "Tor Vergata"); FORMICOLA, Ilaria (Università di Roma "Tor Vergata"); MARTINO, Rossella (Università di Roma "Tor Vergata")

Session Classification: Session - III : Astrophysics

Contribution ID: **14** Type: **not specified**

Evolving X-ray Polarimetry towards high energy and solar science

Friday, 20 January 2012 15:50 (20 minutes)

The Sun is an astrophysical source with a strong emission in the X-ray band. The study of solar flares is a key point for understanding the behaviour of the magnetic field of our star. In literature there are a lot of theories about polarization predictions, for a wide range of solar flares models but observations in the X-ray band have never been exhaustive.
I will explore the possibility to employ the photoelectric polarimeter Gas Pixel Detector (GPD) to achieve X-ray polarimetric measurements up to 35 keV.
This instrument can be coupled with a Compton scattering polarimeter to extend the observable energy band to higher energies and cover a wide portion of the solar flares X-ray spectrum.

Primary author: FABIANI, Sergio (INAF-IAPS Roma & Università di Roma "Tor Vergata")

Session Classification: Session - III : Astrophysics

Contribution ID: **15** Type: **not specified**

The birth of ”Tor Vergata” Fabry-Pérot interferometer

Friday, 20 January 2012 16:40 (20 minutes)

Fabry-Pérot tunable filters are of great interest in high spectral resolution imaging for both ground-based and space astronomical observations. The prototype here presented has been developed as part of the study for the narrow band channel of the ADAHELI mission.
The ADvanced Astronomy for HELIophysics (ADAHELI) is a solar satellite designed to investigate the dynamics of solar atmosphere as part of the Italian Space Agency (ASI) program.
Fabry-Pérot narrow filters are of great interest for the study of extended astronomical sources, such as the solar photosphere. The high transparency of the instrument allows for the necessary high time-resolution for fast dynamic processes observations.

Primary author: GIOVANNELLI, Luca (Università di Roma “Tor Vergata”)

Session Classification: Session - IV : Astrophysics and Condensed Matter Applications

Contribution ID: **16** Type: **not specified**

Ultrafast optical spectroscopy techniques to study new nano-crystals materials for applications in optoelectronics and photonics

In this work I studied the functioning of new materials by means of ultrafast optical spectroscopy techniques. In particular, these new nanomaterials will emit or absorb light efficiently so that they can be used as LED, Lasers, photodetectors, solar cells and other similar applications of new concepts. For the characterization of these materials I have used the following experimental techniques: time-resolved photoluminescence by means streak camera at picoseconds and pump-probe transient absorption at femtosecond.

Primary author: ARESTI, Mauro (Università degli Studi di Cagliari - Dipartimento di Fisica)

Contribution ID: **17** Type: **not specified**

Structural, electronic and optical properties of the two isomers of Si(111)2x1

Friday, 20 January 2012 17:00 (20 minutes)

The Si(111)2x1 surface, which appears on cleaved surfaces at low and room temperature, has been among the most studied semiconductor surfaces ever.
Although apparently simple, it shows several intriguing and not completely understood features.
The atomic structure of the Si(111)2x1 surface has been known for decades to consist of Pandey chains [1], that can tilt with two possible directions, generating two almost degenerate structures called isomers: the Si(111)2x1 negative buckling and the Si(111)2x1 positive buckling.
Although it is currently believed that for a sample of Si(111)2x1 at room temperature the most stable configuration is the positive buckling structure[2], it has been recently shown by STS measurements that for highly n-doped Si(111)2x1, at low temperature, both positive and negative isomers may coexist on the surface [3].
A confirmation of this experimental observations could come from the study of optical properties of these two isomers.
In this talk I will show and discuss the results of our theoretical simulations for the calculation of structural, electronic and optical properties (RAS spectra [4]) of the two structures, obtained by ab-initio calculations within the most reliable state-of-the-art methods based on density functional theory and many-body perturbative techniques.

References:

[1] K. C. Pandey, Phys. Rev. Lett. 47, 1913 (1981)
[2] S. Nie et al., J. Vac. Sci. Technol. A 22(4), 1671 (2004)
[3] G. Bussetti et al., Phys Rev. Lett. 106, 67601 (2011)
[4] for a Review see for example P. Weightman, et al., Rep. Prog. Phys. 68, 1251

Primary author: VIOLANTE, Claudia (Università di Roma "Tor Vergata")

Session Classification: Session - IV : Astrophysics and Condensed Matter Applications

Contribution ID: **18** Type: **not specified**

Gibbs and Helmholtz ensembles for flexible and semiflexible polymers with elastic bonds

Friday, 20 January 2012 17:20 (20 minutes)

Stretching experiments on arbitrarily long single molecules opened the way for studying the statistical mechanics of small systems. In many cases in which the thermodynamic limit is not satisfied, different macroscopic boundary conditions, corresponding to different statistical mechanics ensembles, yield different macroscopic force-displacement curves, or constitutive equations. We formulate analytical expressions to quantitatively evaluate the difference between the behaviour of the Helmholtz and the Gibbs ensembles for a wide range of polymer models of biological relevance, including generalization of the freely jointed chain model and of the worm like chain model with extensible bonds.

Primary author: MANCA, Fabio (Università degli Studi di Cagliari - Dipartimento di Fisica)

Session Classification: Session - IV : Astrophysics and Condensed Matter Applications

Contribution ID: **19** Type: **not specified**

Final remarks

Friday, 20 January 2012 17:40 (20 minutes)

Session Classification: Closing Session

Contribution ID: **20** Type: **not specified**

VISTA for DREAMS-ExoMars 2016 / Venus cloud properties inferred by limb darkening curves

Friday, 20 January 2012 11:05 (5 minutes)

Primary author: LONGOBARDO, Andrea (IAPS-INAF and La Sapienza University of Rome)

Session Classification: Poster Session Introduction

Contribution ID: **21** Type: **not specified**

Planetary Waves in the Martian Atmosphere observed with PFS/MEX Data

Friday, 20 January 2012 10:40 (5 minutes)

Primary author: SINDONI, Giuseppe (IAPS-INAF and La Sapienza University of Rome)

Session Classification: Poster Session Introduction

Contribution ID: **22** Type: **not specified**

A spectroscopic view of the Carina dwarf Spheroidal galaxy

Friday, 20 January 2012 10:45 (5 minutes)

Primary author: FABRIZIO, Michele (Università di Roma "Tor Vergata")

Session Classification: Poster Session Introduction

Contribution ID: **23** Type: **not specified**

Exact solutions of Einstein and Einstein-Maxwell gravity minimally coupled to a scalar field

Friday, 20 January 2012 10:50 (5 minutes)

Primary author: SERRA, Matteo (Università degli Studi di Cagliari - Dipartimento di Fisica)

Session Classification: Poster Session Introduction

Contribution ID: **24** Type: **not specified**

”Computer aided measurement laser (CAML): Technique to quantify post-mastectomy lymphoedema

Friday, 20 January 2012 10:55 (5 minutes)

Primary author: TROMBETTA, Chiara (Università di Roma “Tor Vergata”)

Session Classification: Poster Session Introduction

Contribution ID: **25** Type: **not specified**

”Oximetry: a new non invasive method to detect metabolic effects induced by a local application of mechanical vibration

Friday, 20 January 2012 11:00 (5 minutes)

Primary author: FELLICI, Antonella (Università di Roma “Tor Vergata”)

Session Classification: Poster Session Introduction

Contribution ID: **26** Type: **not specified**

Registration

Contribution ID: **27** Type: **not specified**

(no title)

Contribution ID: **28** Type: **not specified**

Fisher constraints on isocurvature models: axion and curvaton scenarios

Friday, 20 January 2012 15:30 (20 minutes)

Session Classification: Session - III : Astrophysics