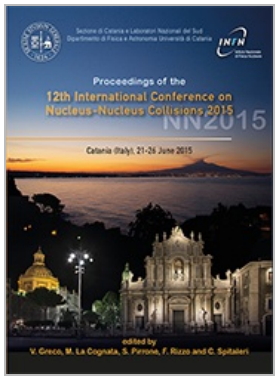
Editoria - aprile 2016

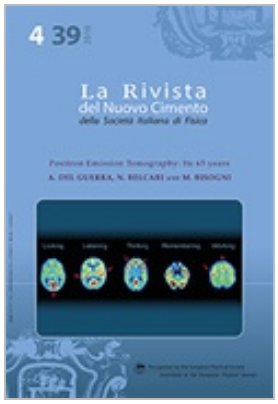
29-04-2016 http://www.primapagina.sif.it/article/420

Conference Proceedings / Atti di Conferenze, Vol. 109 (part 1 and part 2)



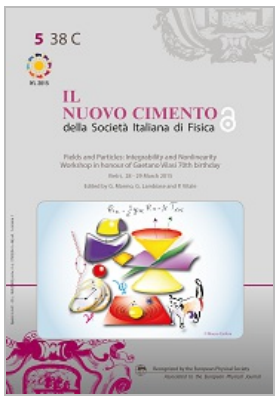
Proceedings of the 12th International Conference on Nucleus-Nucleus Collisions 2015
Edited by *V. Greco, M. La Cognata, S. Pirrone , F. Rizzo, and C. Spitaleri*
This volume collects the contributions to the 12th Conference of the triennal series on Nucleus-Nucleus Collisions held in Catania at Dipartimento di Fisica e Astronomia and at INFN-Laboratori Nazionali del Sud and Sezione di Catania, from 21 to 26 June, 2015. The program covered a rather broad range of topics relevant to nucleus-nucleus collisions with special emphasis on applied aspects. The papers presented are of very high level, always representing breakthrough in the respective research fields. Almost all contributions were received and due to their great number – 160 including invited talks, oral presentations and posters – these proceedings are published as two separate books, volume 109, part 1 and volume 109 part 2.
The electronic version is freely available as EPJ Web of Conferences, Vol. 117, 2016: http://epjwoc.epj.org

La Rivista del Nuovo Cimento, Vol. 39, N. 4 (2016)
Positron Emission Tomography: Its 65 years



A. Del Guerra, N. Belcari, M. Bisogni
Positron Emission Tomography (PET) is a well-established imaging technique for in vivo molecular imaging. In this review after a brief history of PET its physical principles are presented, together with the technology that has benn developed for bringing PET from a bench experiment to a clinical indispensable instrument. The limitations and performance of the PET tomographs are discussed, both as for the hardware and software aspects. The state of the art of clinical, pre-clinical and hybrid scanners (PET/CT and PET/MR) is reported. Finally the actual trend and the recent and future technological developments are fully illustrated.

Il Nuovo Cimento C, Vol. 38, N. 5 (2015)



This issue is dedicated to the proceedings of the Workshop "Fields and Particles: Integrability and Nonlinearity", which was organized in Vietri from 28 to 29 March 2015 in honour of Gaetano Vilasi's 70th birthday and testifies to Gaetano Vilasi's broad interests in physics and mathematics. The issue contains most of the talks which were delivered at the workshop and some additional contributions by other participants to the conference, who scientifically interacted with him during his career. The broad range of topics covered includes elementary particles, quantum field theory, non-linear equations and solitonic solutions, completely integrable systems, Lax pairs and recursion operators, general relativity and gravitational waves, spin-one solutions.

Since 2015, Il Nuovo Cimento C (Colloquia and communications in physics) is published in Open Access

EPJA – Topical Issue

Topical Issue on exotic matter in neutron stars

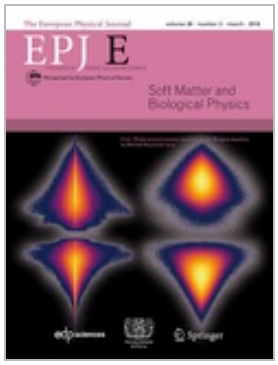
Guest Editors: *David Blaschke, Juergen Schaffner-Bielich and Hans-Josef Schulze*

The recent measurement of two-solar-mass pulsars has initiated an intense discussion on its impact on our understanding of the high-density matter in the cores of neutron stars. A number of pressing issues prompted by recent astrophysical observations include in particular the presence of quark matter in massive stars, and whether the occurrence of phases of exotic hadronic matter, such as hyperons, is still possible or can be excluded. This Topical Issue is a collection of contributions from leading experts in these fields, both from theory of dense matter and from groups providing recent observational astrophysical data and heavy-ion data. The possibility of pure quark stars, hybrid stars and the nature of the QCD phase transition are discussed and their observational signals delineated.

Read more

EPJE – Recent Highlights

Collective dynamics of diffusiophoretic motors on a filament



Mu-Jie Huang, Raymond Kapral

A variety of uses has been proposed for synthetic chemically powered nanomotors that exploit their autonomous directed motion. The collective dynamics of these and other active particles display features that differ from their equilibrium analogs, and the collective dynamics of chemically powered diffusiophoretic motors attached to a filament has been investigated.

Read more