

Vissani Francesco



Position: Senior INFN researcher.

Head of Gran Sasso Theory group since 2006.

ICRANet lecturer since October 2009

Period covered: 2009

I Scientific Work

Models of neutrino signal from gravitational collapse. Connection with gravity wave search.
Very high energy neutrinos from supernova remnants.

II Conferences and educational activities

Conferences and Other External Scientific Work

April: Incontri di Fisica delle Alte Energie, Bari; talk on: Sugli obiettivi della astronomia neutrinica.
VESF Council Meeting, Osservatorio di Monte Porzio Catone; talk on: Neutrinos from supernovae as trigger for GW search.

June: ICTP Summer School on particle physics in the era of LHC. Course on: ``Neutrinos'

September: Commissione Scientifica Nazionale II, INFN, Rome, rounda table on on perspets of neutrino astronomy; talk on : A candidate for observations: RX J1713.7-3946

October: The sun, the stars, the universe and general relativity, first Galileo-Xu Guangqi meeting), Shanghai, China; talk on Potential of neutrino detectors as monitors of gravitational core collapses

Work With Students

Advisor of Giulia Pagliaroli. PhD thesis on supernova neutrinos, defended with success on April 2009 at L'Aquila University. Since December, Giulia will join the theory group of Gran Sasso with a postdoc contract.

Begun to follow the student Andrea Alami (Rome 3) for a diploma thesis on electroweak reactions.

Six months visit of Fernando Rossi Torres, PhD student at Campinas University, Brasil, to collaborate on supernova neutrinos.

III Service activities

Proceedings of
MEASUREMENT OF NEUTRINO MASS

Ed. C. Brofferio, F. Ferroni, F. Vissani
CLXX Varenna International School of Physics,
Jun 2008. Published on 2009 by SIF Bologna and IOS Amsterdam.

V Other

SIF referent person at LNGS since 2009.
Coordinator for LNGS of the Virgo-EGO Science Forum (VESF) since April 2009.

2009 List of Publications

NEUTRINI DALLO SPAZIO (in Italian)
G. Pagliaroli, F.L. Villante, F. Vissani.
Nuovo Saggiatore 25, no.3-4 (2009), 5-19.

THE LIKELIHOOD FOR SUPERNOVA NEUTRINO ANALYSES.
A. Ianni, G. Pagliaroli, A. Strumia, F.R. Torres, F.L. Villante, F. Vissani.
Phys.Rev.D80 (2009) 043007

NEUTRINOS FROM SUPERNOVAE AS A TRIGGER FOR GRAVITATIONAL WAVE
SEARCH.
G. Pagliaroli, F. Vissani, E. Coccia, W. Fulgione.
Phys.Rev.Lett.103 (2009) 031102

IMPROVED ANALYSIS OF SN1987A ANTINEUTRINO EVENTS.
G. Pagliaroli, F. Vissani, M.L. Costantini, A. Ianni.
Astropart.Phys.31 (2009) 163

FEATURES OF KAMIOKANDE-II, IMB AND BAKSAN OBSERVATIONS AND THEIR
INTERPRETATION IN A 2-COMPONENT MODEL FOR THE SIGNAL.
Francesco Vissani and Giulia Pagliaroli.
Astronomy Letters 35 (2009) 1.