

1. Record Nr.	UNINA9910814865403321
Titolo	Acoustic and radio EeV neutrino detection activities : proceedings of the international workshop (ARENA 2005) : DESY, Zeuthen, Germany, 17-19 May 2005 // editors, Rolf Nahnauer, Sebastian Boser
Pubbl/distr/stampa	New Jersey, : World Scientific, c2006
ISBN	1-281-92496-2 9786611924966 981-277-379-7
Edizione	[1st ed.]
Descrizione fisica	1 online resource (314 p.)
Altri autori (Persone)	NahnauerRolf BoserSebastian
Disciplina	523.01/97215
Soggetti	Neutrino astrophysics Neutrinos
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction, history and theory. Early years of high energy neutrino physics in cosmic rays and neutrino astronomy (1957-1962) / I. Zheleznykh. Extremely energetic cosmic neutrinos: opportunities for astrophysics, particle physics, and cosmology / A. Ringwald. Comparison of GZK neutrino flux calculations* / D. Seckel et al. Investigation of event rates for different detector arrays and various extremely high energy models / J. K. Becker and W. Rhode (presented by J. K. Becker) -- Target material properties. Measurement of attenuation length for radio wave in natural rock salt samples concerning ultra high energy neutrino detection / M. Chiba et al. (presented by M. Chiba). Acoustic wave propagation in ice and salt* / B. Price. Experience on acoustic wave propagation in rock salt in the frequency range 1-100 kHz and conclusions with respect to the feasibility of a rock salt dome as neutrino detector / J. Eisenblatter et al. (presented by G. Manthei). Radio signals from photon beams in sand and salt / D. Williams et al. (presented by D. Williams). Broadband analysis of Askaryan pulses / P. Mioinovic -- Simulation and propagation of signals. Hybrid scheme of simulation of electron-

photon and electron-hadron cascades in dense medium at ultra-high energies / L. G. Dedenko et al. (presented by L. G. Dedenko). Structure function of excess charge in rock salt / Y. Watanabe et al. (presented by Y. Watanabe). Simulations of radio emission from electromagnetic showers in dense media / J. Alvarez-Muniz et al. (presented by J. Alvarez-Muniz). Monte Carlo simulations of radio emission from cosmic ray air showers / T. Huege and H. Falcke (presented by T. Huege). Simulation of radio signals from 1-10 TeV air showers using EGSnrc / R. Engel et al. (presented by A. A. Konstantinov) -- Signal processing and background reduction. Scaling of Askaryan pulses / D. Seckel. Signal processing for acoustic neutrino detection in water, ice and salt / S. Danaher. Experience from SAUND* / J. Vandenbroucke. An analysis approach to acoustic detection of extensive atmospheric showers / D. Zaborov -- Sensors and transmitters. Development of acoustic sensors for the ANTARES experiment / C. Naumann et al. (presented by C. Naumann). Measurements and simulation studies of Piezoceramics for acoustic particle detection / K. Salomon et al. Fiber laser hydrophones as pressure sensors / P. E. Bagnoli et al. (presented by C. Trono). Development of glaciophones and acoustic transmitters for ice / S. Boser et al. (presented by S. Boser). Preliminary results on hydrophones calibration with proton beam / A. Capone and G. de Bonis (presented by G. de Bonis) -- Experimental results I (acoustic). High frequency noise in Lake Baikal as a background for the acoustic detection of high energy neutrinos / V. M. Aynutdinov et al. (presented by N. M. Budnev). ITEP investigation of acoustic phenomena from high energy particles / V. S. Demidov et al. (presented by V. Lyashuk). Testing thermo-acoustic sound generation in water with proton and laser beams / K. Graf et al. (presented by K. Graf). Results from the SAUND I experiment* / J. Vandenbroucke. The NEMO acoustic test facility / G. Riccobene. First activities in acoustic detection of particles in UPV / M. Ardid et al. (presented by M. Ardid) -- Experimental results II (Cherenkov Radio). The upper limit to the EHE neutrino flux from observations of the moon with Kalyazin radio telescope / R. D. Dagkesamanskii et al. (presented by R. D. Dagkesamanskii). Using the Westerbork Radio Observatory to detect UHE cosmic particles interacting on the moon / J. Bacelar et al. (presented by J. Bacelar). Updated limits on the Ultra-High Energy (UHE) neutrino flux from the RICE experiment / Kravchenko et al. (presented by D. Besson). The ANITA cosmogenic neutrino experiment / P. W. Gorham et al. (presented by P. Miodinovic). Measuring the neutrino-nucleon cross section with SaSA / A. Connolly -- Experimental results III (Air Shower Radio). Radio detection of cosmic rays with LOPES / A. Horneffer et al. (presented by H. Falcke and A. Horneffer). Combined LOPES and KASCADE-GRANDE data analysis / A. Haungs et al. (presented by A. Haungs). Absolute calibration of the LOPES antenna system / S. Nehls et al. (presented by S. Nehls). CODALEMA: a cosmic ray air shower radio detection experiment / D. Ardouin et al. (presented by R. Dallier) -- Future projects I. The converted hydroacoustic array "MG-10M"- a basic module for a deep water neutrino-telescope / Y. Karlik and V. Svet (presented by V. Svet). A device for detection of acoustic signals from super high energy neutrinos / V. M. Aynutdinov et al. (presented by L. V. Pan'kov). The UK-ACoRNE group: present projects and future plans* / S. Danaher. ACoRNE simulation work / J. Perkin. Design considerations and sensitivity estimates for an acoustic neutrino detector / T. Karg et al. (presented by T. Karg) -- Future projects II. Study of acoustic ultra-high energy neutrino detection Phase II / N. Kurahashi. SPATS-a South Pole acoustic test setup / S. Boser et al. (presented by S. Boser). Integration of acoustic detection equipment

into ANTARES / R. Lahmann et al. (presented by R. Lahmann). Overview of the LORD experiment (Lunar Orbital Radio Detector) / V. A. Chechin et al. (presented by V. A. Tsarev). Concept of the LORD experiment / V. A. Chechin et al. (presented by V. A. Chechin). Advanced detection methods of radio signals from cosmic rays for KASCADE Grande and Auer / H. Gemmeke et al. (presented by H. Gemmeke) -- Future projects III. Neutrino detection in salt domes under LOFAR / A. M. van den Berg. Introduction to the SaLSA, a salt dome shower array as a GZK neutrino observatory (abstract only) / D. Saltzberg. Neutrino flavor identification in SaLSA / P. Miocpinovic. Simulation of a hybrid optical/radio/acoustic extension to icecube for EHE neutrino detection / J. A. Vandenbroucke et al. (presented by J. A. Vandenbroucke) -- Round table discussion. ARENA round table discussion summary / R. Nahnauer -- Conference summary. ARENA 2005 Conference summary / J. G. Learned. ARENA workshop pictures. List of participants.
*Contribution not received.
