1. Record Nr. UNINA9910450815803321

Titolo	ASAP 2002 [[electronic resource]] : astrophysics, symmetries, and applied physics at spallation neutron sources / / editors, Paul E. Koehler ... [et al.]
Pubbl/distr/stampa	Singapore ; ; River Edge, N.J., : World Scientific, c2002
ISBN	981-277-624-9
Descrizione fisica	1 online resource (264 p.)
Altri autori (Persone)	KoehlerPaul E (Paul Edward)
Disciplina	539.7213
Soggetti	Nuclear astrophysics Nuclear physics Spallation (Nuclear physics) Neutron sources Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	The Workshop on Astrophysics, Symmetries, and Applied Physics at Spallation Neutron Sources was held at the Oak Ridge National Laboratory, Mar. 2002.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Contents ; Preface ; Schedule for the Workshop on ASAP ; Participant List ; Neutron Capture Nucleosynthesis: Astrophysical Processes and Laboratory Approaches ; 1 Introduction ; 2 The Observed Abundances ; 3 Neutron Capture Scenarios ; 4 The Case of the s Process 5 s Process Models 6 s-Process Branchings ; 7 Neutron Data for Astrophysics: Status and Needs ; 8 Summary ; References ; The Detector for Advanced Neutron Capture Experiments at LANSCE ; 1 Introduction ; 2 Neutron Source ; 3 Preliminary Data with C6D6 Scintillators 4 DANCE Design 5 Summary and Future Plans ; References ; Astrophysics Program at the CERN n_TOF Facility ; 1 Introduction ; 2 Priority measurements for nuclear astrophysics

; 3 Conclusion and perspectives ; Acknowledgments ; References
Recent Astrophysics Results from ORELA and Possible Future Experiments at ORELA and SNS
1 Introduction ; 2 Recent ORELA Results and the Need for New Measurements ; 3 The Need for the SNS ; Acknowledgements ; References
Sensitivity of Isotope Yields to Reaction Rates in the Alpha Rich Freezeout 1 Introduction ; 2 The calculations ; 3 Web-based data display ; 4 Examples ; 5 Conclusion ; Acknowledgements ; References
; Neutron Reactions of Light Nuclei from Astrophysics & Nuclear Physics Interest
1 Introduction

Sommario/riassunto

The spallation neutron source (SNS) being built at the Oak Ridge National Laboratory (ORNL) will be by far the highest flux pulsed source of epithermal neutrons in the world when it comes on line in 2006. Although the main thrust of the science program at the SNS will be materials science, the facility could provide outstanding opportunities for research in nuclear astrophysics, fundamental symmetries, and applied nuclear physics. To review the current status of these fields and to begin to assemble the scientific case and the community of researchers for future experiments at the SNS, a work