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Nota di contenuto	Bibliography; Preface; Acknowledgements; Contents; 1 Low Energy Neutron Beams; 1.1 Production of Slow Neutrons; 1.2 Neutron Guides; Bibliography; 2 Particle Properties of the Neutron: A Summary; 2.1 Mass of the Neutron; 2.2 Studies of Neutron Properties with Cold Neutrons; 2.3 Studies of Neutron Properties with Ultra Cold Neutrons; Bibliography; 3 High Resolution Spectroscopy at the Institut Laue Langevin; 3.1 The Neutron Capture Reaction; 3.2 Gamma Ray Emission Following Neutron Capture; 3.3 Primary Gamma Rays; 3.3.1 The PN4 Facility at the ILL 3.4 Secondary Gamma Rays Following Thermal Neutron Capture 3.4.1 The Crystal Spectrometers GAMS at the ILL; 3.4.2 The Curved Crystal Spectrometers GAMS1 and GAMS2/3; 3.5 Internal Conversion Electrons; 3.5.1 The Conversion Electron Spectrometer BILL at the ILL; 3.6 Construction of Level Schemes; 3.7 The Flat Crystal Spectrometers GAMS4 and GAMS5; 3.7.1 Lifetime Measurements Using the GRID Technique; 3.7.2 Study of Atomic Motion in Single-Crystal Metals; 3.7.3 Neutrino Induced Recoil; 3.7.4 Precision Measurements of High Energy Gamma Rays; 3.8 Nuclear Physics Studies 3.8.1 Studies of Light Mass Nuclei 3.8.2 Empirical Manifestation of New

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Sommario/riassunto

The reactor-based laboratory at the Institut Laue-Langevin is recognized as the world's most productive and reliable source of slow neutrons for the study of low energy particle and nuclear physics. The book highlights the impact of about 600 very diverse publications about work performed in these fields during the past more than 30 years of reactor operation at this institute. On one hand neutrons are used as a tool to generate nuclei in excited states for studying their structure and decay, in particular fission. Uniquely sensitive experiments can tell us a great deal about the symmetry character
