

1. Record Nr.	UNINA9910784818003321
Titolo	Neutrino physics [[electronic resource] ] : proceedings of Nobel Symposium 129 : Haga Slott, Enkoping, Sweden, August 19-24, 2004 / editors, L. Bergstrom ... [et al.]
Pubbl/distr/stampa	New Jersey, : World Scientific, c2005
ISBN	981-277-390-8
Descrizione fisica	1 online resource (192 p.)
Collana	Physica scripta ; ; v. T121
Altri autori (Persone)	BergstromL (Lars)
Disciplina	539.7/215
Soggetti	Neutrinos Neutrino interactions Solar neutrinos
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Recognised by the European Physical Society."
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Contents ; John N. Bahcall (1934-2005) ; Preface ; List of Participants ; Committees ; Nobel Symposium on Neutrino Physics-Program ; The History of Neutrino Oscillations ; 1. Introduction ; 2. B. Pontecorvo ; 3. Z. Maki M . Nakagawa and S. Sakata 4. B. Pontecorvo and collaborators 5. Conclusion ; References ; Super-Kamiokande Results on Neutrino Oscillations ; 1. Super-Kamiokande ; 2. Atmospheric neutrinos ; 3. Solar neutrinos ; 4. Super-Kamiokande II and III ; 5. Future of Super-Kamiokande ; References Sudbury Neutrino Observatory Results 1. Introduction ; 2. Resolving the solar neutrino ""Problem"" ; 3. The Sudbury Neutrino Observatory ; 4. SNO measurements to date ; 5. Future SNO and SNOLAB measurements ; References ; Results from KamLAND Reactor Neutrino Detection 1. Introduction 2. KamLAND detector ; 3. Detector performance ; 4. Reactor anti-neutrino detection ; 5. Data analysis ; 6.

Neutrino oscillation analysis ; 7. Conclusions  
; References ; New Opportunities for Surprise  
; 1. Five clues and ideas ; 2. Why accelerator beams?  
3. One example surprise: what if LSND is correct?  
4. An example explanation: sterile neutrinos  
; 5. Pursuing these questions: MiniBooNE and beyond  
; 6. Conclusions ; References ; Solar Models and  
Solar Neutrinos ; 1. Introduction ;  
2. Solar model fluxes  
3. Recent developments regarding the solar surface composition

---

Sommario/riassunto

Nobel Symposium 129 on Neutrino Physics was held at Haga Slott in Enköping, Sweden during August 19-24, 2004. Invited to the symposium were around 40 globally leading researchers in the field of neutrino physics, both experimental and theoretical. The dominant theme of the lectures was neutrino oscillations, which after several years were recently verified by results from the Super-Kamiokande detector in Kamioka, Japan and the SNO detector in Sudbury, Canada. Discussion focused especially on effects of neutrino oscillations derived from the presence of matter and the fact that three differen

---