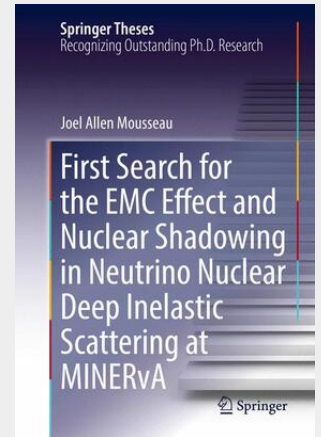


Mousseau

## First Search for the EMC Effect and Nuclear Shadowing in Neutrino Nuclear Deep Inelastic Scattering at MINERvA

This thesis details significant improvements in the understanding of the nuclear EMC effect and nuclear shadowing in neutrino physics, and makes substantial comparisons with electron scattering physics. Specifically, it includes the first systematic study of the EMC ratios of carbon, iron and lead to plastic scintillator of neutrinos. The analysis presented provides the best evidence to date that the EMC effect is similar between electrons and neutrinos within the sensitivity of the data. Nuclear shadowing is measured systematically for the first time with neutrinos. In contrast with the data on the EMC effect, the data on nuclear shadowing support the conclusion that nuclear shadowing may be stronger for neutrinos than it is for electrons. This conclusion points to interesting new nuclear physics.

This thesis details significant improvements in the understanding of the nuclear EMC effect and nuclear shadowing in neutrino physics, and makes substantial comparisons with electron scattering physics. Specifically, it includes a world's first systematic study of the EMC ratios of carbon, iron and lead to plastic scintillator of neutrinos. The analysis presented provides the best evidence to date that the EMC effect is similar between electrons and neutrinos within the sensitivity of the data. Nuclear shadowing is measured systematically for the first time with neutrinos. In contrast with the data on the EMC effect, the data on nuclear shadowing support the conclusion that nuclear shadowing may be stronger for neutrinos than it is for electrons. This conclusion points to interesting new nuclear physics.



**106,99 €**

99,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

**Artikelnummer:** 9783319448404

**Medium:** Buch

**ISBN:** 978-3-319-44840-4

**Verlag:** Springer International Publishing

**Erscheinungstermin:** 01.11.2016

**Sprache(n):** Englisch

**Auflage:** 1. Auflage 2017

**Serie:** Springer Theses

**Produktform:** Gebunden

**Gewicht:** 3731 g

**Seiten:** 147

**Format (B x H):** 160 x 241 mm

