**Title:** Leptonic CP violation

**Author(s):** Branco, G. C.[1,2]; **Gonzalez Felipe, R.**[2,3]; Joaquim, F. R. [2]

**Source:** Reviews Physics of Modern Physics
**Volume:** 84 **Issue:** 2 **DOI:** 10.1103/RevModPhys.84.515 **Published:** Apr 26 2012

**Abstract:** Several topics on CP violation in the lepton sector are reviewed. A few theoretical aspects concerning neutrino masses, leptonic mixing, and CP violation will be covered, with special emphasis on seesaw models. A discussion is provided on observable effects which are manifest in the presence of CP violation, particularly, in neutrino oscillations and neutrinoless double beta decay processes, and their possible implications in collider experiments such as the LHC. The role that leptonic CP violation may have played in the generation of the baryon asymmetry of the Universe through the mechanism of leptogenesis is also discussed.

**Document Type:** Article

**Language:** English

**KeyWords Plus:** Doubble-Beta-Decay; Neutrino-Oscillation Experiments; Minimal Flavor Violation; Long-Base-Line; Triplet Seesaw Mechanism; Electric-Dipole Moment; Right- Handed Neutrinos; Nuclear-Power-Reactor; Quark Mass Matrices; Majorana Neutrinos

**Reprint Address:** Branco, GC (reprint author), CERN, Div Theoret Phys, CH-1211 Geneva 23, Switzerland.

**Addresses:**
1. CERN, Div Theoret Phys, CH-1211 Geneva 23, Switzerland
2. Univ Tecn Lisboa, Inst Super Tecn, Ctr Fisa Teor Particulas, P-1049001 Lisbon, Portugal
**3. Inst Super Engn Lisboa, P-1959007 Lisbon, Portugal**

**E-mail Address:** gbranco@ist.utl.pt; ricardo.felipe@ist.utl.pt; filipe.joaquim@ist.utl.pt

**Publisher:** Amer Physical Soc
**Address Publisher:** One Physics Ellipse, College PK, MD 20740-3844 USA

**IDS Number:** 931SO

**ISSN:** 0034-6861