

## Electromagnetic interactions of massive neutrinos and neutrino oscillations

Electromagnetic properties of massive neutrinos [1,2] and their effects on neutrino oscillation phenomena are brought into focus. The searches for neutrino millicharges, charge radii and magnetic moments in astrophysics and laboratory measurements are outlined [2,3]. Prospects of probing these neutrino characteristics with JUNO are discussed.

[1] C. Giunti and A. Studenikin, *Neutrino electromagnetic interactions: A window to new physics*, Rev. Mod. Phys. **87**, 531 (2015).

[2] C. Giunti, K. A. Kouzakov, Y.-F. Li, A. V. Lokhov, A. I. Studenikin, and S. Zhou, *Electromagnetic neutrinos in laboratory experiments and astrophysics*, Ann. Phys. (Berlin) **528**, 198 (2016).

[3] K. A. Kouzakov and A. I. Studenikin, *Electromagnetic properties of massive neutrinos in low-energy elastic neutrino-electron scattering*, Phys. Rev. D **95**, 055013 (2017).

**Primary authors:** GIUNTI, Carlo (INFN - National Institute for Nuclear Physics); KOUZAKOV, Konstantin (Lomonosov Moscow State University); LI, Yufeng (Institute of High Energy Physics, Chinese Academy of Sciences); LOKHOV, Alexey (MSU); STUDENIKIN, Alexander (Moscow State University); XING, Zhi-zhong (Chinese Academy of Sciences); Dr ZHOU, Shun (IHEP, CAS, Beijing)

**Presenters:** GIUNTI, Carlo (INFN - National Institute for Nuclear Physics); KOUZAKOV, Konstantin (Lomonosov Moscow State University); STUDENIKIN, Alexander (Moscow State University)

**Session Classification:** Poster Session

**Track Classification:** Neutrinos