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Experimental neutrino physics: latest results and a glimpse to future

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The precision era of neutrino physics has started in 2012 with the first measurement of the size of theta_13. Since then, we have witnessed major advances nearly every year. In this talk, I will review the most impressive achievements gathered in the last two years through a wealth of high-precision experiments. These experiments are based on artificial (accelerator and reactor neutrinos) and natural sources (solar and atmospheric neutrinos), and they are key to pinning down the lepton Yukawa sector of the Standard Model. I will discuss measurements of the most critical unknown parameters of this sector (CP violation, mass-ordering, and the octant of theta_23) and the experiments that will address them soon. The only parameters that cannot be accessed by neutrino oscillations are currently investigated by absolute mass measurements, observational cosmology, and neutrino-less double beta decay. I will review advances in this field and discuss the opportunity to test the Majorana nature of neutrinos in the decade to come.

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