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The AME2016 Atomic Mass Evaluation

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The Atomic Mass Evaluation (AME) has been serving the research community with the most reliable source for comprehensive information related to the atomic masses since 1950s. It provides the best values for the atomic masses and their associated uncertainties by evaluating all available experimental data from nuclear reactions, radioactive decays and direct mass measurements using a weighted, least-squares method approach. The last atomic mass evaluation, AME2012, was published in December 2012 [1,2] and the main aspects of AME2012 have been presented at the last ARIS conference [3].
Since the publication of AME2012, the experimental knowledge of atomic masses has been continuously expanding along two main directions, including: measurements aimed at high-precision mass values and at the most exotic nuclei far from the stability. The AME2016 will be published in March, 2017. At this conference, the AME2016 will be presented and compared with the previous AME2012 evaluation. The impact of new mass measurements will be reviewed and discussed.
References:
[1] G. Audi, M. Wang, A.H. Wapstra, F.G. Kondev, M. MacCormick, X. Xu, B. Pfeiffer, Chinese Physics C, Vol. 32, (2012) 1287-1602.
[2] M. Wang, G. Audi, A.H. Wapstra, F.G. Kondev, M. MacCormick, X. Xu, B. Pfeiffer, Chinese Physics C, Vol. 32, (2012) 1603-2014.
[3] M. Wang, G. Audi, F.G. Kondev, M. MacCormick, X. Xu, JPS Conference Proceedings, V6 (2015)010001.

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