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Update on W mass measurement studies

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Improving the accuracy of the W mass measurement at or beyond the theoretical prediction would be a crucial test of the overall consistency of the SM and any deviation might reveal the emergence of new physics. With more than 2×10^8 W pairs produced at the W threshold energy and above, the FCCee collider will be a W factory and will allow for W mass measurement with unparalleled precision.

With enough statistics in lepton collisions, the W mass can be directly measured at and above threshold from the kinematic reconstruction of the W-pair decay products. In addition, e+e- collisions offer the possibility to derive the W mass from the WW cross-section measured at the pair-production threshold. The update of the measurement of the W mass and width, with both methods, is presented. The other opportunities linked to the W decay physics at FCCee are also discussed.

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