



Contribution ID: 466

Type: **Talk**

## Precision determination of the Wilson-flow scale $w_0$

*Friday 2 August 2024 15:55 (20 minutes)*

I will present a precise determination of the  $\Omega$  baryon mass in lattice units at seven lattice spacings down to a  $\sim 0.048$  fm with  $N_f=2+1+1$  staggered quarks, including QED and strong-isospin corrections. We perform these measurements by solving the Generalized Eigenvalue Problem, adapted to staggered fermions to fully resolve the negative parity and excited states. The measurements are then used to determine the value of the Wilson-flow scale  $w_0$ , in the continuum limit at physical quark masses, with unprecedented precision.

**Primary author:** WANG FOR THE BMW COLLABORATION, Gen (Centre de Physique Theorique)

**Presenter:** WANG FOR THE BMW COLLABORATION, Gen (Centre de Physique Theorique)

**Session Classification:** Standard Model parameters

**Track Classification:** Particle Physics Beyond the Standard Model