



Contribution ID: 617

Type: **not specified**

## Simple calculation of the Coulomb-nuclear corrections in $pp$ and $\bar{p}p$ scattering

*Tuesday 14 May 2024 16:15 (15 minutes)*

We present a very simple method for calculating the mixed Coulomb-nuclear effects in the  $pp$  and  $\bar{p}p$  scattering amplitudes, and illustrate the method using simple models frequently used to describe their differential cross sections at small momentum transfers. Combined with the pure Coulomb and form-factor contributions to the scattering amplitude which are known analytically from prior work, and the unmixed nuclear or strong-interaction scattering amplitude, the results give a much simpler approach to fitting the measured  $pp$  and  $\bar{p}p$  cross sections and extracting information on the real part of the forward scattering amplitudes than methods now in use.

### Mini Symposia (Invited Talks Only)

**Primary author:** Prof. DURAND, Loyal (University of Wisconsin-Madison)

**Co-author:** HA, Phuoc (Towson University)

**Presenter:** HA, Phuoc (Towson University)

**Session Classification:** QCD & Heavy Ion Physics

**Track Classification:** QCD & Heavy Ion Physics