1 Charm Production in Diffractive Scattering

The study of charm production in diffractive scattering is a crucial part of the investigation of the diffractive process and the underlying mechanism responsible for diffraction. This is because charm production occurs predominantly in gluon-driven interactions and the models make substantially different predictions for the behaviour of gluons in diffractive interactions.

The analysis of charm in diffraction is performed by reconstructing $D^{*\pm}(2010)$ mesons in diffractive interactions. This analysis has been performed principally by members of the UK group and is nearing completion. A paper draft has been written and is waiting for the completion of the second analysis, after which the editorial board process can begin. This is expect to happen early in 2002. The definitive measurement of charm production in diffraction will be possible with upgrade data, due to the increased statistics and the improved non-diffractive background rejection.