Contribution ID: **116**   Type: **Oral**

General formulation of the sector improved residue subtraction

Tuesday, 2 September 2014 14:25 (25 minutes)

The main theoretical tool to provide precise predictions for scattering
cross sections of strongly interacting particles is perturbative QCD.
Starting at
next-to-leading order (NLO) the calculation suffers
from unphysical IR-divergences that cancel in the final result. At NLO
there exist general subtraction algorithms to treat these divergences
during a calculation. Since the LHC demands for more precise theoretical
predictions, general subtraction methods at next-to-next-to-leading order
(NNLO) are needed.
This talk is about the four-dimensional formulation of the sector improved
residue subtraction. I explain how the subtraction scheme STRIPPER can
be extended to arbitrary multiplicities. Therefore, it furnishes a general
framework for the calculation of NNLO cross sections in perturbative QCD.

Primary author: HEYMES, David (RWTH Aachen)

Presenter: HEYMES, David (RWTH Aachen)

Session Classification: Computations in Theoretical Physics: Techniques and Methods

Track Classification: Computations in Theoretical Physics: Techniques and Methods