Contribution ID: **28** Type: **not specified**

Single-cut spinor integration and tadpole coefficients

Tuesday 14 September 2010 15:15 (30 minutes)

I report on work done in collaboration with Ruth Britto. I will present the extension of the spinor integration formalism for one-loop amplitudes from
the double-cut to the single-cut case. I will show how this technique can be
applied for the computation of tadpole coefficients, which arise in a master integral expansion if massive particles circulate in the loop.
When massive particles are present in the loop, single-cut spinor integration
can be used for the full reconstruction of the cut-constructible part of the one-loop amplitudes. Indeed, double (and optionally triple and quadruple) cuts
fix the coefficients of box, triangle and bubble integrals but cannot determine
the tadpole coefficients, which are free of cuts in physical channels.

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Session Classification: Afternoon I