



Contribution ID: 264

Type: **not specified**

An operator product expansion for null polygonal Wilson loops

Wednesday, June 30, 2010 2:30 PM (1 hour)

We consider polygonal Wilson loops with null edges in conformal gauge theories. We derive an OPE-like expansion when several successive lines of the polygon are becoming aligned.

The limit corresponds to a collinear, or multicollinear, limit and we explain the systematics

of all the subleading corrections, going beyond the leading terms that were previously considered.

These subleading corrections are governed by excitations of high spin operators, or excitations

of a flux tube that goes between two Wilson lines. The discussion is valid for any conformal gauge

theory, for any coupling and in any dimension.

For $N=4$ super Yang Mills we check this expansion at strong coupling and at two loops at weak coupling .

We also make predictions for the remainder function at higher loops.

We will also discuss aspects of the excitations around the relevant flux tube or “sea of derivatives”

Presenter: MALDACENA, Juan (IAS Princeton)