DESY THEORY WORKSHOP
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HELMHOLTZ
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**Fundamental physics in the cosmos:
The early, the large and the dark Universe**

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Regge limit of scattering amplitudes from an anomalous dimension.

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We study massive scattering amplitudes in N=4 super-Yang-Mills in the planar limit, where the mass is generated through a Higgs mechanism. The scattering amplitudes we consider are those of massless gauge bosons interacting through loops of massive W bosons. In such a model it is known that at leading power, both the Regge limit, as well as the soft divergences are controlled by the anomalous dimension of a Wilson loop with a cusp. We show that in the Regge limit the first power suppressed term is governed by a single power law. Furthermore we provide perturbative evidence at two loop accuracy that the exponent of this power law is given by the anomalous dimension of a Wilson loop with a scalar operator inserted at the cusp.

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