



HEP 2013
Stockholm
18-24 July 2013



Contribution ID: 20

Type: **Talk presentation**

Higher Spin Contributions to Holographic Hydrodynamics

Saturday, 20 July 2013 11:00 (23 minutes)

We calculate the graviton's β -function in AdS string-theoretic sigma-model, perturbed by vertex operators for Vasiliev's higher spin gauge fields in AdS_5 . The result is given by $\beta_{mn} = R_{mn} - 8T_{mn}(g, u)$ (with AdS radius set to 1 and the graviton polarized along the AdS_5 boundary), with the matter stress-energy tensor T_{mn} given by that of conformal holographic fluid in $d = 4$, evaluated at the gauge with the temperature given by $T = \frac{1}{\pi}$. The We show that the gradient expansion in hydrodynamics and the appropriate new transport coefficients are controlled by the higher spin operator algebra.

Primary author: Prof. POLYAKOV, Dimitri (CQUEST, Sogang University)

Presenter: Prof. POLYAKOV, Dimitri (CQUEST, Sogang University)

Session Classification: Non-perturbative QFT and String Theory

Track Classification: Non-perturbative QFT and String Theory