



Contribution ID: 415

Type: **Talk**

## Backreaction of voids in a Friedman background with constant $w$ equation of state.

*Saturday 5 December 2015 14:42 (21 minutes)*

I introduce new exact solutions of the Szekeres-Szafron type describing voids on a Friedmann-Robertson-Walker background with  $w=\text{constant}$  equation of state. At least in the linear regime the inhomogeneities can be thought of as large scale perturbations of the background. Using these exact solutions the averaged quantities of the Buchert scheme can be calculated exactly. I show that in general the late-time evolution is dominated by the voids: these back-react in such a way that the average expansion is significantly different from the background one, I will describe how.

**Author:** BRUNI, Marco (University of Portsmouth)

**Presenter:** BRUNI, Marco (University of Portsmouth)

**Session Classification:** 02 - Exact solutions