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# DES & Planck survey: Galaxy group-tSZ cross correlation

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Stacking Sunyaev-Zeldovich map of groups and clusters is powerful tool to find average distribution of hot gas in these systems. The goals of this work are to estimate the redshift evolution of SZ signal and average bias weighted electron pressure of the universe. We stack SZ signal from Planck at all the detected redmapper groups from year 1 Dark Energy Survey data. We use groups at different redshift and mass to find the average pressure profile of these systems. We show that the detected signal can be modeled by a halo model using Battaglia pressure profile. After the modeling we show that there is an evolution in the pressure profile in the groups and we estimate the average thermal energy of the universe.

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