

博士論文公聴会の公示(物理学専攻)

学位申請者：美澄 暢彦

論文題目： Double Soft Limits of Cosmological Correlation Functions and
Observability of Graviton Exchange

(宇宙論的相関関数の二重軟極限と重力子交換の観測可能性)

日時：2016年 2月3日(水) 10:30-12:00

場所：理学研究科H棟7階セミナー室(H701号室)

主査：大野木哲也

副査：窪田高弘、尾田欣也、深谷英則、長峯健太郎

論文要旨:

We derive the double soft limits relations with internal tensor perturbation, using the background wave method, and independently, using Ward-Takahashi identity. These identities relate correlation function of two long modes with several short modes to lower order correlation function. The tensor contributions to these relations are negligible in higher order correlation functions. In four point correlation function, the tensor part has the same order contribution compared to the scalar only parts. This provides the possibility that we may observe the quantum effect of graviton.