

Institut Henri Poincaré  
11 rue Pierre et Marie Curie, 75231 Paris cedex 05  
**String Theory in Greater Paris**

**Rencontres Théoriciennes**  
**“Supergravité, théorie des cordes et théorie M”**

*Jeudi 16 Janvier 2025, 10:00*

**Celine Zwikel**

*Perimeter Institute*

**Symmetries of the gravitational scattering in the absence of peeling**

*The asymptotic structure of spacetime with a vanishing cosmological constant is central to discussing gravitational radiation and gravitational scattering. In asymptotically flat spacetimes, the peeling property prescribes a decay rate for the Weyl tensor as one approaches the null boundary. However, there are compelling motivations for relaxing this peeling condition, leading to a polyhomogeneous rather than polynomial expansion in Bondi gauge. In this talk, I will review these motivations and explore the implications of introducing logarithmic terms into the asymptotic expansion. I will discuss how these modifications affect the symmetry structure of such spacetimes and the consequences on soft theorems. Furthermore, I will present new logarithmic evolution equations and flux-balance laws, which point to the existence of an infinite hierarchy of subleading logarithmic soft graviton theorems.*

**Institut Henri Poincaré, salle 314, 3<sup>ème</sup> étage**

Retrouvez les activités de la communauté parisienne de théorie des cordes sur  
<http://string.lpthe.jussieu.fr>  
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