

Can we observe the evidence of superstring(or M) theory in our real world?

(Celestial Holography)

Changhyun Ahn

Kyungpook National University

A quantum gravity is an outstanding open problem in the current modern physics. The complete theory of quantum gravity would provide the microscopic structure underlying systems whose long distance behavior is described by the general relativity of Einstein's theory. Celestial holography studied during last ten years provides a new approach to quantum gravity in four dimensional asymptotically flat spacetimes by looking at its holographic correspondence. Celestial holography proposes a duality between gravitational scattering in four dimensional asymptotically flat spacetimes and a conformal field theory living on the two dimensional celestial sphere.

I will present the basic concept of celestial holography and eventually this will provide the way to observe directly (or indirectly) the evidence of superstring (or M) theory in our real world.