

## Information Missing Puzzle, Where Is Hawking's Error?

*Friday 5 July 2019 15:50 (20 minutes)*

We will discuss in our talk a picture for blackholes' inner structure and microscopic state in which matters falling into the horizon or consisting of them are oscillating around instead of accumulating statically on their central point, thus resolving the Schwarzschild singularity naturally. After quantizing, this picture not only blurs the horizon remarkably, but also provides an interpretation for the Bekenstein-Hawking entropy as measures of the number of consisting matters' oscillation modes. Since each microscopic blackhole has its own dynamic mass distribution and special  $r_h$ - $t$  curve when evaporating and distinguishable from each other, thermal features of the Hawking radiation are only averaged description of many such objects with equal mass and symmetry. As conclusion, we claim that Hawking' error in the information missing puzzle lies in taking the averaged ensemble behavior of many microscopic blackholes with equal mass and symmetry as features of a special microscopic one.

**Author:** ZENG, Ding-Fang

**Presenter:** ZENG, Ding-Fang

**Session Classification:** Beyond V