

Black hole information paradox has been a concomitant of realizing these objects/solutions as thermodynamic systems. The paradox can be explained as: in the semi-classical regime which gravity is dealt classically, black hole evaporation is not a unitary process. A famous resolution to this paradox was presented in 1993, which is called "black hole complementarity". This resolution can be roughly explained as: the set of observers standing outside of the black hole and the set of observers falling freely into it should be considered complement to each other. One can not see the world from the point of view of both sets of observers. Using this complementarity, the information paradox has been considered to be resolved. But, according to recent investigations, it has been shown that black hole complementarity yields another paradox which is known as "firewall paradox". In this talk, we will review this paradox and some resolutions to it.