XLIV National Congress of the Italian Society for the History of Physics and Astronomy



Contribution ID: 32 Type: not specified

At Home in a Super-Copernican Cosmos: The Nature of the Observer and Wheeler's 'It from Bit'

Wednesday 18 September 2024 11:30 (20 minutes)

In the previous congress we outlined the genesis of John Wheeler's "participatory universe" in the early 1970s and explained the meaning of the enigmatic expression "super-Copernican", which refers to the effect that, according to Wheeler, the community of observers across spacetime (not limited by "now-centeredness") is supposed to have on cosmogony itself. If we then focus on the late 1970s and the 1980s, it is possible to notice a series of subtle shifts in his ideas, which however seem to be characterized by a double tendency. On the one hand, when the "observer" is placed within the context of quantum foundations, Wheeler was clearly leaving behind a Wigner-like conscientialism (as well as a form of anthropomorphism), which had some influence on him in the early 1970s. On the other hand, however, consciousness and mankind are not demoted or downgraded to a marginal accident in the economy of the universe, but are a crucial link in what Wheeler now called "the meaning circuit". In the light of his papers and notebooks, we will contextualize and clarify these tensions and, at the same time, get better insights on the slogan that would summarize Wheeler's late vision: "it from bit".

Primary authors: FURLAN, Stefano; PULEIO, Daniele (Pontificia Università Lateranense)

Presenter: PULEIO, Daniele (Pontificia Università Lateranense)

Session Classification: History of Physics and Astronomy (20th century)

Track Classification: SISFA 2024