

## The M-Sigma Problem Resolved: Negative Mass Supermassive Black Holes Appeared Early in the Universe Followed by Capture of Positive Mass to Reduce the Hole Size

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**Abstract:** Supermassive black holes were utilized in the early universe to eliminate redundant  $-H$  bosons after their use in transferring  $+mass$  fermions from the previous universe. The large initial masses of the holes later decreased as some of the  $+mass$  transferred was captured by the negative intrinsic mass  $H$  bosons, leaving previously active galaxies with smaller or no central black holes

A considerable mystery<sup>1</sup> is how the supermassive black holes seen at the centers of most spiral galaxies controlled galaxy growth, as evidenced by what is known as the M-sigma relation. I have published (viXra.org 1612.0175) concerning which particle was involved in forming the supermassive black holes ( $-H$  boson).  $-Z$  particles accompanied these particles and doubled in number (see viXra.org 1606.0057) but were not annihilated. Rather, they gathered around the black hole and formed “bars”. Formation of the bars required high particle velocities and this was the reason for the sigma notation. I did not know this at the time I wrote viXra.org 1606.0057, but now am pleased to realize how important M-sigma is to my theory of the evolution of the universe. It again makes clear the role of my predominately right-brained thinking.

“M-sigma” action to cosmologists is closely related to “mono-X particles” action by particle physicists. I have published about the latter with viXra.org 1607.0064. Mono-X particles here are supermassive dark matter  $-Z$  particles that

exhibit large transverse momentum hence again the sigma notation.

The ease of my cyclic universe E8 symmetry theory in yet again solving an important supermassive black hole problem brings up the fact that my theory also has solved many other problems dealing with the evolution of the universe for which it should be taken seriously.

1. Camille M. Carlisle, "Of black holes and galaxies", Sky and Telescope, pp. 18-25, February, 2017