

Abstract

We are working to design and build an apparatus to produce excited positronium (bound state electron and its anti-particle, positron) with a defined spin state. A spin-polarized positronium beam will permit with the correct detector to measure the entanglement in polarization of the annihilation gammas of positronium as a possible way to transmit information in a quantum system.





 $Q_{N2} = 5.58 SCCM \& Q_{SF6} = 0.023 SCCM$



mission

– Hiesmayr B. C. et al, Scientific Reports 7, 15349 (2017) <u>https://doi.org/10.1038/s41598-017-15356-y</u>