

Unlocking secrets about the origin of the universe

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by Ming Xiong Liu

Ever step out at night and stare into all those tiny dots splattered across the sky's vast canvas? Ever wonder how those stars and everything else came to be?

Everything has its origin, even the universe. And although there are many myths and legends about the universe's creation, it was Belgian priest, physicist and astronomer Georges Lemaître who in 1927 attempted to explain scientifically how the universe was formed. Lemaître believed that the universe began from a tiny, single point and he postulated that a cataclysmic explosion triggered its expansion through the millennia. As enormous as the universe is today, it's still expanding.

Los Alamos researchers are contributing to the project by designing an advanced tracking detector based on a new type of sensor system called MAPS, short for Monolithic Active Pixel Sensor. When the collider produces quark-gluon plasma in the sPHENIX experiment in several years, a new tracking detector will be there to capture the first measurements of the plasma's internal structure using heavy quarks.

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