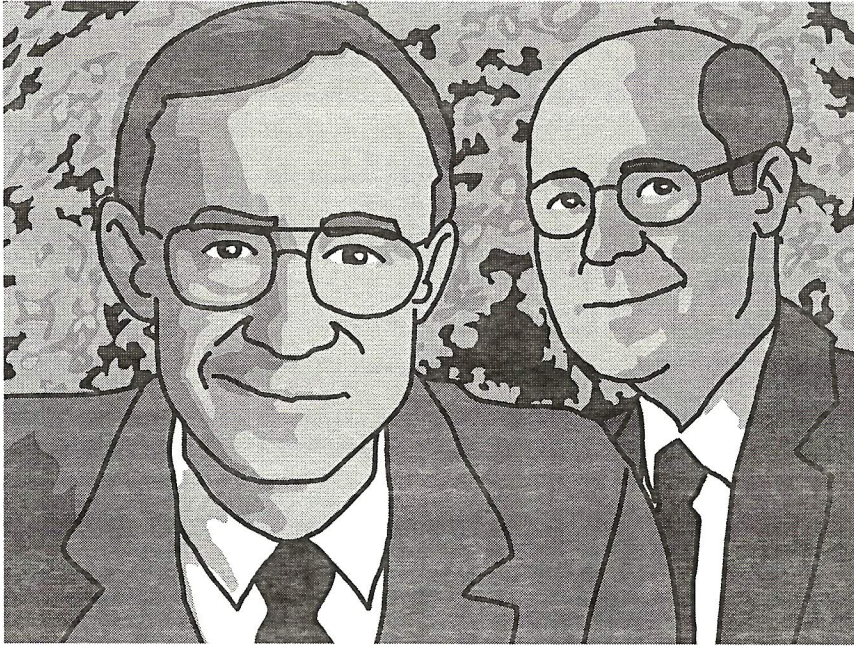


THE FINAL FRONTIER



One of the best pieces of evidence supporting the Big Bang theory is the presence of something called the **cosmic microwave background radiation** (usually abbreviated CMB). It was discovered in 1965, when two young scientists named Arno Penzias and Robert Wilson (pictured, left to right) were experimenting with a radio antenna at a lab in New Jersey.

The antenna they were working with was incredibly sensitive and designed to pick up electromagnetic signals originating from space. When they first tested it, they kept hearing this weird, unexplained static. It didn't

seem to come from any object in space, but it had the same wavelength, frequency, and energy no matter which way they directed the antenna. For the life of them they couldn't figure out where the static was coming from.

Finally, another team of scientists stepped in to help out. They realized that the noise Penzias and Wilson were hearing was actually the cosmic microwave background. The cosmic microwave background is located everywhere throughout the universe and has a temperature of only 2.7 degrees Kelvin—just a hair over absolute zero. For their efforts, Penzias and Wilson received the 1978 Nobel Prize!