

Nobel nightmares

This year's Nobel Prize in physics was awarded to John Mather and George Smoot, for the Cosmic Background Explorer (COBE) observations of the spectrum of and the primordial fluctuations in the cosmic microwave background radiation. This is a well-deserved and long-predicted prize. The COBE discovery changed the way we've done cosmology ever since.

It put aside scepticism that primordial fluctuations would ever be observed, and unleashed a powerful new tool for investigating the Universe. Dozens of experiments have since begun to explore the cosmic microwave background, the latest being the Wilkinson Microwave Anisotropy Probe, which has so far pinned down almost all of

the fundamental parameters in cosmology. The probe was named for the late David Wilkinson, a pioneer and leader in the field, who would probably have been the third recipient of the prize with Mather and Smoot. I wish they could leave an empty chair for him on the stage in Stockholm.

At NASA — where COBE was created and housed — a public-relations officer removed discussion of the Big Bang from their website this year because of the same religious concerns that made school boards censor evolution. I imagine a NASA press release today saying, "We are thrilled with this award to a NASA experiment, but the Big Bang is still only a theory!"

The real tragedy is that this prize underscores the almost



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complete demise of exciting science at NASA in favour of a white elephant, called the International Space Station, and an expensive race to put humans back on the Moon.

When NASA has done science, it has done so with unmanned missions. The satellites developed to carry on this work — including discovering primordial gravitational waves from the Big Bang — have been delayed or cancelled as NASA shifted \$2 billion from science into the manned space programme. A nation with the wealth of the US can surely take on the challenge of putting humans into space and still do great science.

Lawrence M. Krauss