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„Die Nacht der Wissenschaft“, Podiumsdiskussion mit Prof. André Linde, Prof. Harald Lesch, Prof. Hans Jörg Fahr, Ranga Yogeshvar (Leitung)

The expansion of the universe: Is the universe or the "big bang cosmology" going to collapse?

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Edwin Hubble, seduced by the voices of his contemporary astronomical colleagues, in 1929 published his data on redshifts of nearby galaxies in a highly suggestive form, namely as saying the world would explode in a homologous manner yielding, independent of direction, higher object escape velocities with larger distances. Though the huge mass of cosmology-relevant data collected in the times after Hubble's important message from 1929 in the majority of cases, honestly said, did not strictly support his early prediction, astronomers since that time had started to faithfully live with his "celestial message" as with the holy mystery of our universe. This created the era of the "big bang cosmology" lasting up to the present: If the universe expands, then it should have started out this expansion from a Big- Bang.

All observational facts in astronomy since that time were turned such that they fitted into this cosmic ideology. Thus Alexandre Friedman different from Albert Einstein who first was proud to describe a static universe with his general field equations, tried to modify these equations until they finally could describe an expanding universe. Then the cosmic background radiation at microwaves was detected and, inspired by the threatening views of atomic bomb explosions, was immediately celebrated as an echoe of these early hot phases of the exploding universe: Everything in astronomy thereafter appeared to be settled, solidified like the interior structure of a concrete building, comparable to times in physics before Max Planck detected that nature was discontinuous. Do we possibly have to face an upcoming time when standard Big-Bang cosmology will collapse?