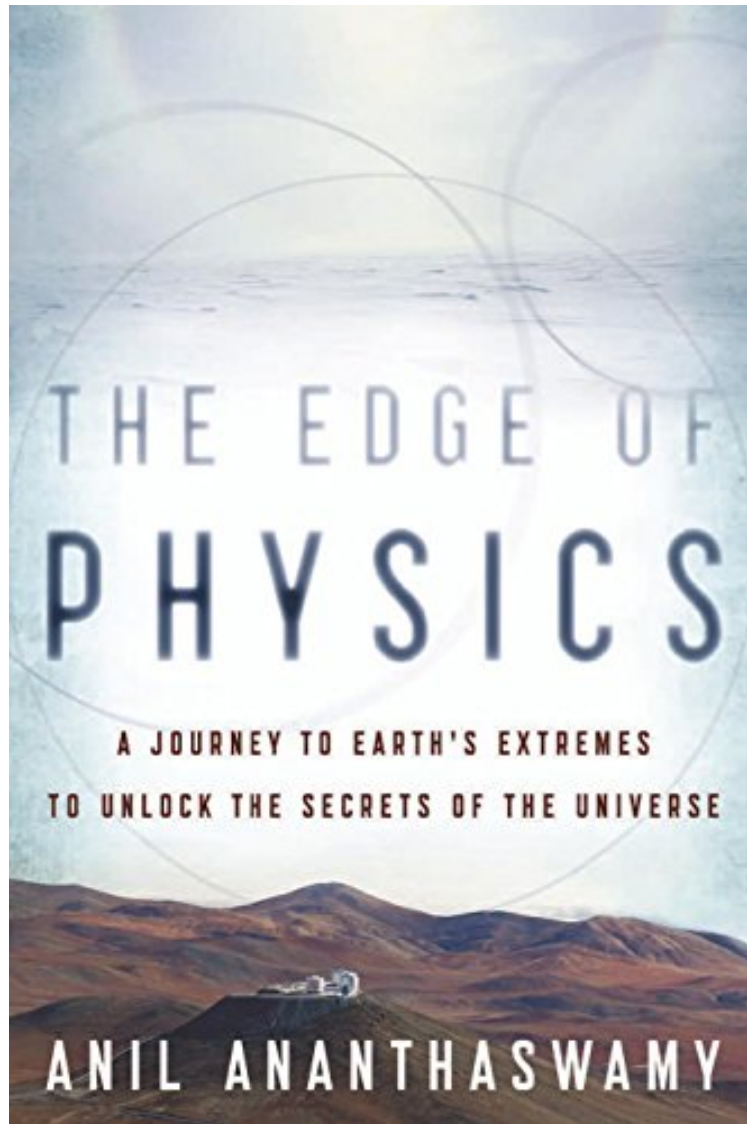


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The Edge of Physics: A Journey to Earth's Extremes to Unlock the Secrets of the Universe

Von Anil Ananthaswamy

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Physics: A Journey to Earth's Extremes to Unlock the Secrets of the Universe:

KurzbeschreibungIn this deeply original book, science writer Anil Ananthaswamy sets out in search of the telescopes and detectors that promise to answer the biggest questions in modern cosmology. Why is the universe expanding at an ever faster rate? What is the nature of the "dark matter" that makes up almost a quarter of the universe? Why does the universe appear fine-tuned for life? Are there others besides our own? Ananthaswamy soon finds himself at the ends of the earth in remote and sometimes dangerous places. Take the Atacama Desert in the Chilean Andes, one of the coldest, driest places on the planet, where not even a blade of grass can survive. Its spectacularly clear skies and dry atmosphere allow astronomers to gather brilliant images of galaxies billions of light-years away. Ananthaswamy takes us inside the European Southern Observatory's Very Large Telescope on Mount Paranal, where four massive domes open to the sky each night "like dragons waking up." He also takes us deep inside an abandoned iron mine in Minnesota, where half-mile-thick rock shields physicists as they hunt for elusive dark matter particles. And to the East Antarctic Ice Sheet, where engineers are drilling 1.5 miles into the clearest ice on the planet. They're building the world's largest neutrino detector, which could finally help reconcile quantum physics with Einstein's theory of general relativity. The stories of the people who work at these and other dramatic research sites—from Lake Baikal in Siberia to the Indian Astronomical Observatory in the Himalayas to the subterranean lair of the Large Hadron Collider—make for a compelling new portrait of the universe and our quest to understand it. An atmospheric, engaging, and illuminating read, *The Edge of Physics* depicts science as a human process, bringing cosmology back down to earth in the most vivid terms.

Pressestimmen'A travelogue that celebrates the blood, sweat and tears that drive our understanding of the universe' - Guardian. 'An excellent book. The author has a great knack of making difficult subjects comprehensible. I thoroughly enjoyed it' - Sir Patrick Moore. 'A remarkable narrative that combines fundamental physics with high adventure' - New Scientist. 'Ananthaswamy displays a writer's touch for the fascinating detail... whether he is in an abandoned iron mine in Minnesota's Mesabi Range or the frigid Siberian expanse of Lake Baikal, he finds intrepid physicists and explains to us why these weird places are the only locations on the planet where these experiments could be done' - Washington Post. "'The Edge of Physics"... is, quite simply, the ultimate physics-adventure travelogue... as an adventure story and a fly-on-the-wall account of remote places that most of us will never visit, "The Edge of Physics" is brilliant' - PhysicsWorld. 'A grand tour of modern day cosmology's sacred places... evocative... engaging - refreshing... a taste of science in the heroic mode' - Sky At Night magazine. 'Smoothly weaves together the stories of people who help push science forward, from principal investigators to research institute gardeners, with exquisitely clear explanations of the questions they hope to solve - and why some research can be done only at the edge of the world' - ScienceNews. 'Ananthaswamy's investigation of current experiments in physics bypasses the mathematics of the field, making it easier for the average reader to dig in and enjoy the amazing discoveries and research methods that he encounters. The author has a knack for intertwining an overview of the purpose of these experiments with a finely balanced dose of related history and trivia. He also exhibits poetic touches here and there as he shares colorful vignettes from each of his destinations' - Curled Up With A Good Book.com. 'While Ananthaswamy... focuses heavily on the science, "The Edge of Physics" reads like a travel-adventure story or a work of fiction' - Failure Magazine. 'From the top of Hawaii's Mauna Kea to Switzerland's Large Hadron Collider and more, Ananthaswamy paints a vivid picture of scientific investigations in harsh working conditions... even for readers who don't know a neutrino from Adam, these interesting tales of human endeavor make "The Edge of Physics" a trip worth taking' - The BookPage. 'Clean, elegant prose, humming with interest' - Robert MacFarlane, author of "The Wild Places". 'An accomplished and timely overview of modern cosmology and particle astrophysics' - Nature. 'A stirring, scenic narrative... Ananthaswamy journeys to several geographically and scientifically extreme outposts, and returns not only with engaging portraits of the men and women who work there, but also a vibrant glimpse of how cutting-edge research is actually performed. Part history lesson, part travelogue, part adventure story, "The Edge of Physics" is a wonder-steeped page-turner' - Seed magazine. 'Physicists are trying to understand the furthest reaches of space and the furthest extremes of matter and energy. To do it, they have to trek to some of the furthest places on Earth - from deep underground, to forbidding mountains, to the cold of Antarctica. Anil Ananthaswamy takes us on a thrilling ride around the globe and around the cosmos, to reveal the real work that goes into understanding our universe' - Sean Carroll, Caltech physicist, author of "From Eternity to Here". 'Ananthaswamy's juxtaposition of extreme travel and extreme science offers a genuinely novel route into the story of modern cosmology... A well written and genuinely accessible tale of what it takes to push past the edge of human knowledge' - Thomas Levenson, author of "Newton and the Counterfeiter".

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