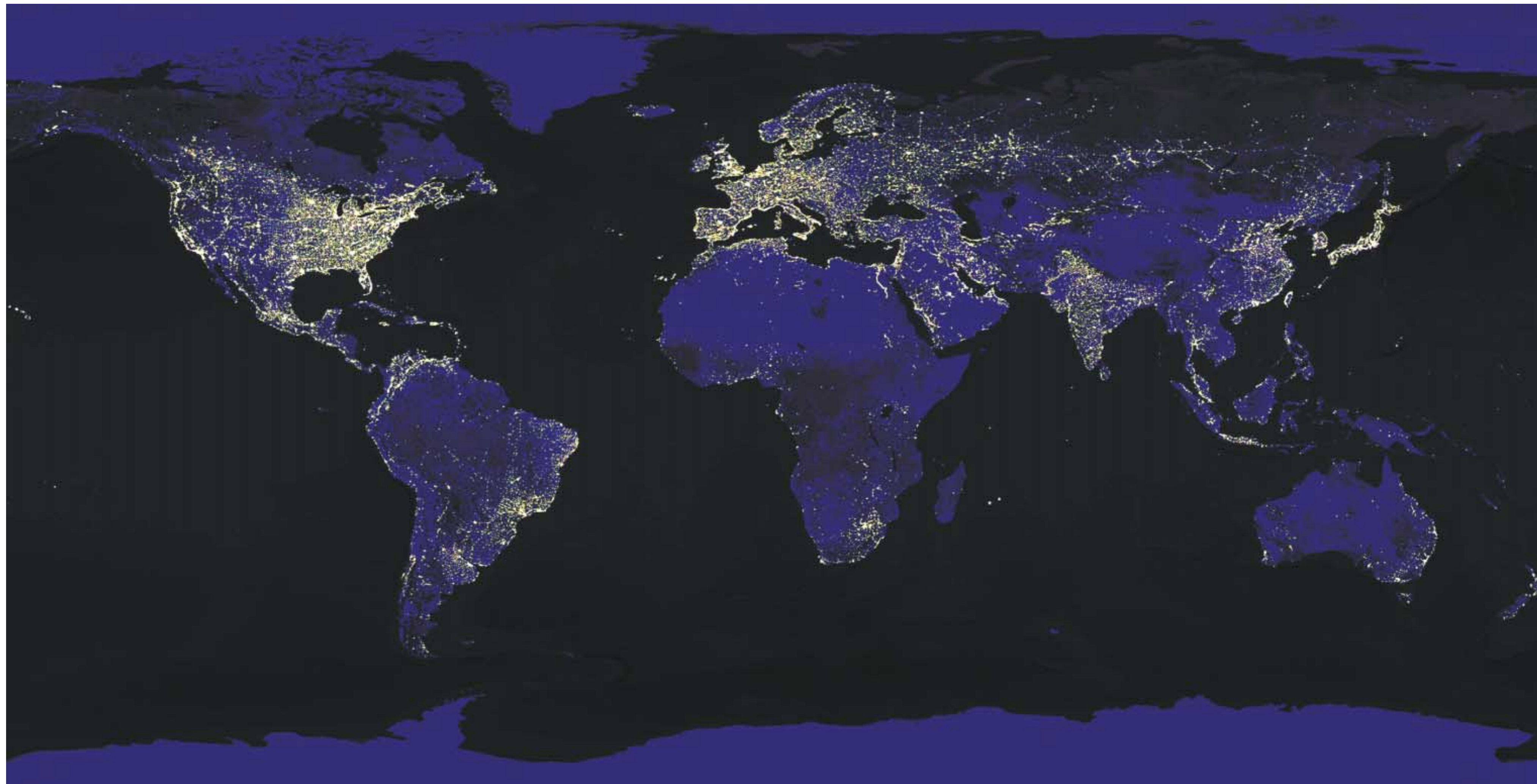


PHYSICS TODAY

APRIL 2002

EARTH AT NIGHT. Electric lights gleam around our planet in this composite satellite image. At a glance, one can see the industrialized and urbanized regions of the world, which consume prodigious amounts of energy. That energy—for example, from fossil fuel combustion, nuclear fission, and hydropower—not only keeps the lights on but also runs transportation, heats buildings, and powers industries. The global energy challenge is this: How, with an ever-dwindling supply of fossil fuels, can we find long-term solutions that meet the energy needs of developed nations and provide the energy required for sustainable economic growth for all nations, while being mindful of both environmental stewardship and geopolitical realities? Our special issue begins to examine this challenge on page 38. (For details of the image, see page 5.)



SPECIAL ISSUE: THE ENERGY CHALLENGE