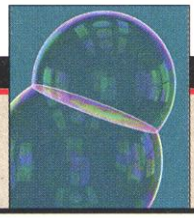
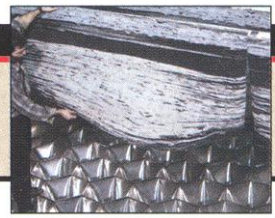




won't work for all." Adds Pui-Yan Kwok of Washington University in St. Louis: "It is not a surefire approach by any means."

Despite the uncertainties, official enthusiasm for SNPs seems undiminished. NIH and the SNP Consortium are about to embark on a 3-month project to sequence massive amounts of DNA to help finish the genome project. That effort should turn up a half-million or more SNPs, says Collins. The Japanese government, too, is embarking on an effort to find 200,000 SNPs. Within a year or two, there should be enough SNPs around to figure out whether they will live up to their advance billing. **–LESLIE ROBERTS**

SCIENTIFIC COMMUNITY

Oxford Wins a Crown Synchrotron Jewel

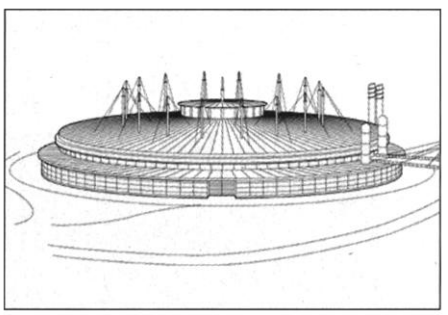
In this tale of two cities, one rejoices while the other pines for what might have been. On 13 March U.K. science minister David Sainsbury announced that DIAMOND, an $880 million synchrotron project that will allow scientists to probe the atomic structure of everything from proteins to ceramics, will be set at the Rutherford Appleton Laboratory (RAL) near Oxford. Losing out was the heir apparent—the Daresbury laboratory near Manchester, the site of the U.K.'s current synchrotron facility. Many scientists are denouncing the selection. "This is a crazy decision," says University of Liverpool physicist Peter Weightman, a longtime synchrotron user. "It's a triumph of finance over scientific arguments."

Soon after the British government proposed DIAMOND in 1993, financing problems put the project on hold. Five years later, a pair of strange bedfellows came to the rescue. The Wellcome Trust, Britain's largest medical charity, offered to put $184 million toward DIAMOND, and the French government pledged $56 million up front and up to $13 million a year in operating costs (*Science*, 6 August 1999, p. 819).

Then the political circus began. Wellcome officials lauded the benefits of DIAMOND at RAL, citing the ease of collaborations with an existing neutron source and a huge research community in the "golden triangle" formed by Oxford, Cambridge, and London. Secretary of State Stephen Byers talked up Daresbury, while his own advisers were touting RAL. Whatever tipped the scales toward RAL, the U.K. government isn't telling. "The decision was arrived at behind closed doors rather than through open discussions," contends crystallographer Paul Barnes of Birkbeck College in London. A spokesperson for the U.K.'s Department for Trade and Industry suggests that the preferences of Wellcome and the French were key. "If there hadn't been anyone else involved, [Daresbury] would have been an option," he says.

To soften the blow, Sainsbury also announced a boost for science in England's Northwest, including Manchester, pledging $80 million in new science spending in the region. But the consolation prize may not halt Daresbury's decline. The government has promised to keep Daresbury's synchrotron running until 2 years after DIAMOND comes online, at least another 7 years from now. "I imagine the whole thing will shut down in the long run because the synchrotron really defines Daresbury," says physicist Bob Cernik, Daresbury's trade union representative. Four of Daresbury's 270-strong synchrotron staff have left in the last few months, and Cernik fears the brain drain will accelerate.

–MICHAEL HAGMANN



A synchrotron built for one. Schematic of DIAMOND, a future landmark on Oxford's skyline.

ASTRONOMY

Distorted Galaxies Point to Dark Matter

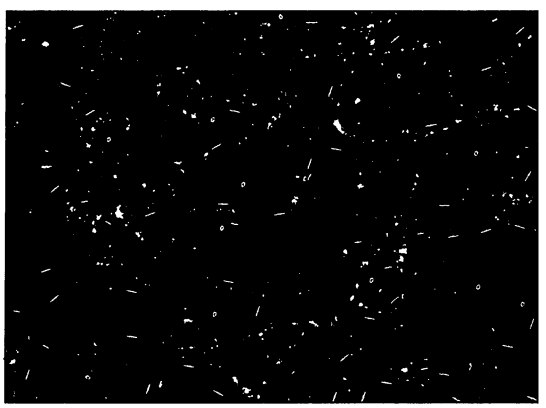
Never have so many astronomers been so eager to claim they can't see straight. Groups working with three different telescopes have detected weak lensing, a distortion of distant galaxies that reveals dark matter strewn across deep space. The results provide a first direct glimpse of the vast tangle of massive, invisible stuff that astronomers and astrophysicists believe makes up most of the mass of the universe.

Almost as interesting as the results themselves is how the researchers chose to make them public: Within days, all three groups rushed their findings into print—or, rather, into preprint—on Astro-Ph, an unrefereed Web server maintained by Los Alamos National Laboratory in New Mexico. Two did so with some misgivings, to avoid being scooped.

Such posting frenzies are becoming common, says Tony Tyson, an astrophysicist with Lucent Technologies' Bell Labs in Murray Hill, New Jersey, and leader of one of the teams. "Various groups have their results in various stages, and then somebody jumps in [with a preprint], and then everybody jumps in." A team working with the Canada-France-Hawaii Telescope (CFHT) in Hawaii made the first splash, followed by a group working with the William Herschel Telescope in the Canary Islands. Tyson's group, working at the Cerro Tololo Inter-American Observatory's Blanco Telescope in Chile, was the third to post its results.

Pricking the three groups' heels was the knowledge that weak lensing may prove the best tool for studying the colossal dark matter infrastructure of the universe. Researchers hope to use the technique to measure the distribution of the ripples and undulations in the intergalactic tangle of dark matter—information that would tell cosmologists precisely how the universe grew up after its birth in the big bang.

To glimpse dark matter, the three teams studied light from galaxies billions of light-years away. Such galaxies appear as faint luminous ellipses in the sky; gravity from intervening dark matter deflects their light, slightly squashing the ellipses in any small patch of sky so that, like schooling fish, neighboring ellipses tend to point in the



Stellar lineup. Dark matter bends light, making distant galaxies appear to be aligned.

CREDITS: (TOP TO BOTTOM) CLRC-DARESBURY LABORATORY; S. COLOMBI/INSTITUT D'ASTROPHYSIQUE DE PARIS