SCIENCE POLICY

Clinton Picks His Science Adviser

John "Jack" Gibbons, a physicist-turned-Washington insider, has been tapped by President-elect Bill Clinton to be the next White House science adviser. Clinton said he chose Gibbons, who has been the director of the congressional Office of Technology Assessment (OTA) since 1979, because he has a proven track record in giving reliable science and technology advice to Congress and in soliciting it from the scientific community.

Changing clients. OTA head John Gibbons.

Gibbons' selection was made public on Christmas Eve along with the names of the last members of Clinton's Cabinet. It is the earliest an incoming president has picked a science adviser since John F. Kennedy created the forerunner to the White House Office of Science and Technology Policy (OSTP) in 1962. Clinton, according to aides who participated in Gibbons' selection, ranks the position on a par with the director of the Central Intelligence Agency and the national security adviser, and they say Clinton intended the early selection to send a signal that science and technology are high on his priority list.

One of Gibbons' strengths is expected to be his ability to work well with Vice President-elect Al Gore. Gibbons comes from Gore's home state of Tennessee and has known the Gore family for years. Clinton announced during the campaign that Gore would take over much of the Administration's policy making in science and technology. That suggests Gibbons will play more of an advisory role, much like the one he has played at OTA.

In an interview with *Science*, Gibbons described his new job as one with two hats and two masters. As science adviser to the president he will work mostly with Clinton, but as OSTP director, he expects his principal working relationship will be with Gore. He says he has spent only an hour with Clinton since the election, and no time at all with Gore, so he has had little opportunity to discuss the incoming Administration's plans for science and technology. But the advantage of such an early appointment, he says, is that it allows him to "get in while the concrete is still being poured."

Ellis Mottur, deputy political director for the Clinton transition team, suggests that Clinton also brought Gibbons on board early to give him a role in selecting other science and technology appointees. That could be a long list, Mottur says. "Clinton intends to bring in fresh people—I wouldn't expect too many [incumbents] to stick around," he adds. Clinton is expected to announce another seven or eight high-level science and technology appointments by the end of January.

Scientists, like almost everybody else, were caught off guard by the announcement. Gibbons was on few short lists and is not well known outside Washington. His career as a scientist was spent mostly at the Oak Ridge National Laboratory, where between 1954 and 1969 he did work on nuclear reactions and stellar evolution. He then largely gave up research to focus on environmental and energy conservation policy, a shift that eventually brought him to Washington and OTA.

In his 13 years at OTA, Gibbons developed a reputation as a nonpartisan straight-shooter. He took over the agency just 7 years after its establishment, a period during which it was still struggling to gain respect and avoid being co-opted by partisan politics. Representative George Brown (D–CA), the chairman of the OTA board, says Gibbons rescued OTA by resisting congressional pressure to take on global science and technology policy issues, focusing instead on specific advice on specific top ics. "He's been a pragmatist, and I think he'll be one in the White House, too," Brown says.

Richard Bradshaw, a Clinton adviser on science issues, notes that Gibbons, like Clinton, favors more federal involvement in industrial research and better linkages between basic and applied research. Gibbons' appointment "is sending a strong signal to the research community that this president is going to put an emphasis on technology," rather than more basic research, Bradshaw says. Researchers, he concedes, may find that threatening. "They may see [Gibbons] as a creation of Congress and there's a lot of paranoia about that," mostly due to Congress's recent push to get federal science agencies into more industrially relevant research. But he suggests that Gibbons' good congressional relations say a lot about his ability to steer clear of political minefields, something that bodes well for his ability to get along with—and retain access to—Clinton. "Jack's not headstrong," Bradshaw says. "He's a real team player. And that's right at the top of Clinton's agenda."

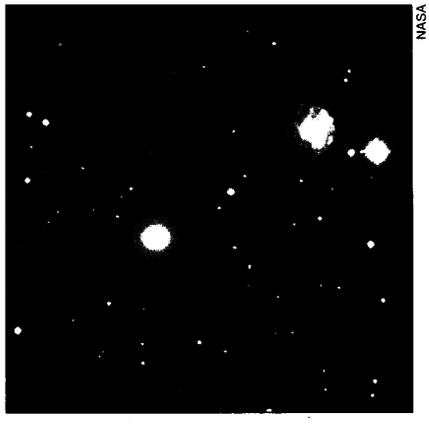
–Christopher Anderson

ASTRONOMY

A Cloud With a Strange Dark Lining

PHOENIX—Astronomers have learned to live with the idea that they can't see most of the universe—that it's made up of some kind of invisible dark matter, detectable only by its gravitational pull. A new x-ray observation of a vast cloud of hot gas surrounding a pair of galaxies may force them to get used to an even more unsettling idea. At this week's meeting of the American Astronomical Society here, the discoverers of the cloud argued that it is anchored by 10 to 30 times more mass than is visible. If other pairs and small groupings of galaxies also swim in that much dark matter, they say, the mysterious material may be made up not of the kinds of particles physicists are familiar with but of some sort of exotic particles whose nature can only be guessed at.

The observation, made with the x-ray satellite ROSAT, was announced by astronomers Richard Mushotzky of the NASA Goddard Space Flight Center and David Burstein of Arizona State University and two graduate students. They are not the first to suggest that the universe may contain more dark matter than can be explained by baryons—ordinary particles like protons and neutrons. And, as with earlier observations, some astronomers believe that this one too can be explained without resorting to hypothetical "nonbaryonic" particles. But Mushotzky thinks the ROSAT finding may be the strongest evidence yet for this sort of exotic dark matter.



NASA

Steadied by dark matter. A composite image shows ROSAT's hot cloud and nearby galaxies.

Evidence of some sort of unseen mass started coming in the 1970s, when Vera Rubin and Kent Ford of the Carnegie Institution of Washington discovered that the outer parts of galaxies rotate too fast for the visible matter of the galaxies to be holding them in orbit. Some sort of dark matter had to be present—maybe comets, dim stars, or planets. Later observations of clusters of galaxies, and of large flows