says CDF co-spokesperson William Carithers. On the other hand, that configuration happens to be just what theorists expect to see if supersymmetry is real. In that case, as both of the papers suggest, the original collision could have created a pair of "selectrons"—the supersymmetric partners of electrons—which then decayed. Kane says his scenario also provides a supersymmetric explanation for the Z decay anomaly at LEP, along with predictions of several more possible supersymmetry signatures, which might already be hiding in the data at Fermilab or CERN.

Those interpretations rest on a foundation that could easily crumble, say CDF experimentalists. With only one event, it's effectively impossible to rule out the possibility of an extraordinarily rare glitch in their experiment, or some freak event from the Standard Model. Quite simply, says Carithers, one event is not enough to do an analysis, or at least not a meaningful one.

As for the last two anomalies, they include one that has no possible theoretical explanation, so that not even theorists believe it, and another that is still, and maybe forever, no more than a rumor. The first of these was made public by the Aleph collaboration at a recent conference in France and will be published in *Zeitschrift fuer Physik* C. The anomaly comes from data taken last fall when LEP ran for 3 weeks at energies up to 140 GeV (billion electron volts)—45 GeV higher than before—and the Aleph detector recorded nine to 12 events (depending on the method of analysis) marked by four jets of debris. While the Standard Model predicts that Z decays will occasionally generate four jets, it also predicts that Aleph should have seen at most one such event. The excess suggests, says Blondel, "that what is seen is either a very rare statistical fluctuation or pair production of new particles," which then decayed to produce the jets.

Aleph, however, was the only one of the four LEP experiments that saw the excess. The other three looked for it and came up empty. "If it's true, it calls for rather drastic consequences," says Altarelli. "But the general attitude at this moment is that the observation is so weak and so marginal that we [theorists] should not waste our imagination power on it."

The last anomaly is one that CDF physicists have tried hard to keep under wraps while they assess its potential reality, refusing even to discuss it at conferences. Despite their efforts, the rumors have spread far and wide. ("Sure I've heard of it," says Altarelli, for instance, "but they haven't announced it yet, so we'd better shut up. It's really bad taste to speak of rumors.") Physicists refer to it as "the Higgs bump" or the "rumored Higgs bump," even though it can't be the Higgs, because CDF has no sensitivity to the signature of a Standard-Model Higgs. This potentially nonexistent anomaly already has theorists speculating about top quarks decaying into the supersymmetric particles called stops, and, once again, the existence of a very heavy Z.

In the end, the data will win out, as they always do. In June, LEP will take another step up in energy, to 161 GeV, which should enable CERN experimentalists to confirm or eliminate the anomalies they have—and almost assuredly spark some new ones. At Fermilab, the Tevatron is being refitted to generate a 20-fold increase in the rate of collisions in its next run, scheduled for 1999, and CDF and D0 are upgrading their detectors accordingly. And the theorists will just speculate and hope.

"Out of many of these anomalies, we hope at least one will survive, and that's enough," says Altarelli. "I would like at least one of these things to be true. But maybe it's all nothing again."

–Gary Taubes

SCIENTIFIC MISCONDUCT

Panels Look for Common Ground

Although scientific misconduct may have dropped off the radar screen of the media and Congress, efforts to set federal policy on the subject are heating up. Last week a committee of government research officials began what they hope will be a 3-month effort to draft a definition of research misconduct and guidelines for all government agencies. As this effort was getting under way, another is winding up: Within a month, a working group at the Department of Health and Human Services (HHS) is expected to recommend misconduct policies for the department. And the National Academy of Sciences (NAS) has stepped into the fray with a letter harshly critical of some of the proposals being discussed.

The latest round of activity on a subject that has bedeviled the scientific community for more than a decade was kicked off last November by a report from the HHS Commission on Research Integrity (*Science*, 1 December 1995, p. 1431). The 12-member panel, created at Congress's behest and headed by Kenneth Ryan, a reproductive biologist at Brigham and Women's Hospital in Boston, recommended replacing the widely used standard of "falsification, fabrication, and plagiarism" with the terms "misappropriation, interference, and misrepresentation." Any definition, it added, should uphold "the fundamental principle that scientists be truthful and fair in the conduct of research and the dissemination of its results."

Last month the NAS Council sent a letter to HHS science adviser William Raub, who is leading the HHS working group, arguing that such a definition could generate investigations into "every accusation of untruthfulness and unfairness." The council urged the government to revisit suggestions an NAS panel made in 1992 which, it said, preserve the "creative process" in the laboratory. "We don't need all of this [additional language]," says NAS Council member Donald Brown of the Carnegie Institution of Washington.

"If they don't like the report ... I would challenge them to do better."

—Kenneth Ryan

Ryan defends the commission's 18-month effort and notes that even the NAS Council calls its recommendations "a well-intentioned attempt to address a problem." And he adds, "If [NAS Council members] don't like the commission's report ... I would challenge them to do something better."

Much of the same criticism has been leveled by officials of the Federation of American Societies for Experimental Biology, which is sponsoring a meeting next week in Washington featuring Raub and Ryan. But not everyone has been so quick to reject the Ryan panel's arguments. The Association of American Medical Colleges' Committee on Research Integrity, for example, concurs with much of the report, including the idea that institutions have primary responsibility for investigations, but would like to revise the panel's definition of misconduct.

Raub's working group is expected to send its recommendations to HHS Secretary Donna Shalala sometime next month. Meanwhile, last week a committee of the president's National Science and Technology Council (NSTC) held its first meeting to craft a governmentwide definition of research misconduct. The group considers the Ryan report to be "one of several inputs," says a senior White House official. The interagency group, headed by NASA science adviser France Cordova, hopes to submit its report to NSTC's Committee on Fundamental Science by 1 July. Given the contentiousness of the issue, however, such an accelerated pace may be optimistic.

–Jocelyn Kaiser