

LETTER FROM PARIS



One more for the 300 GeV

**French assurance makes
brighter prospect for
Europe's large accelerator**

by Noah Hardy

France has suffered serious economic problems, and the retirement of General de Gaulle has left the French Government free to do what he would not permit: deal with the problems in the traditional way. Once free of de Gaulle, the Government devalued the franc.

Budgetary retrenchments usually follow such a devaluation, and in recent months there were indications that one of the victims of such cutting might be French participation in the European project to build a 300-billion-electron-volt (GeV) proton accelerator, now being prepared by the existing European physics laboratory, CERN.

But even French retrenchment has its limits, and the French have now indicated that in spite of their financial difficulties they will honor their previously given commitment to come into the project. The French decision to participate involves a contribution of 550 million francs (about \$100 million), which is about one third of the total cost.

French participation gives the accelerator a chance of being built; a French pullout, after Britain's defection last year (SN: 7/13/68, p. 30), would have left the project virtually dead.

The British had originally been expected to contribute about a quarter of the cost of the machine. But financial problems, and indications that the construction site in eastern England that the British Government had proposed was out of the running, caused the British to withdraw.

The other partners continue to hope for a British return. They have even made a Briton, Dr. J. B. Adams, leader of the project.

The remaining partners rallied around and began to consider ways of making the project less expensive. One that has been under serious consideration is to start with a machine whose capacity would be 200-billion-electron volts. This would be planned so that it could be scaled up to 500 GeV as the financial situation of member nations improved.

Such a plan has similarities to the United States National Accelerator Laboratory, which will start at 200 GeV and eventually be built up to 400 GeV. But the United States project is already under construction, while the Europeans are still scrabbling around trying to get the requisite number of countries signed up. Several of the smaller nations are waiting for the big powers to become firmly committed be-

fore they give their consents. A French withdrawal would have left West Germany, Italy and Belgium as the major contributors, and these three together had been counted on for less than half of the original potential.

The dithering in the chancelleries of Western Europe alarms some European physicists who see the project as insurance to keep European particle physicists at home. They are beginning to fear that if the project is not soon begun, by the time it is completed it will be like paying the premium after the house has burned.

Something may happen soon. A meeting of the CERN Council is scheduled for December. The new accelerator is on the agenda, and with French participation now assured, the council may get down to some serious planning.

The first necessity is still to decide on a location. Many observers believe that the French decision was influenced by a conviction that the French site proposal, Le Luc in Provence, will be chosen. The French are not alone in so believing. The idea that Le Luc was the favorite influenced the British Government's decision to withdraw.

Certainly Le Luc has many advantages as a prospective site. It is geographically central to the member nations and near enough to the present CERN laboratory at Geneva to make shuttling of equipment and personnel convenient. Located in a high plain part of Provence some distance back from the Mediterranean coast, it has an equable climate and plenty of room.

The economic benefit to the region would be considerable. Le Luc is too far inland to participate in the tourist bonanza of the Riviera, and like much of rural France lately, has been having economic problems. The French Government expects that the project would stimulate local industry in the same way that related industries in Geneva were stimulated by the construction of the present CERN laboratory there.

But the French will have to pay a little extra for the extra benefit. If the site at Le Luc is chosen, the French Government will have to put up about 200 million francs (\$38 million) to buy the land and ready it for construction. But this has not caused them any hesitations. As one French commentator puts it: "Should we relinquish all the advantages of the installation of the accelerator on French soil just to save the price of 25 kilometers of super-highway?"