



10 DOWNING STREET

From the Private Secretary

16 April 1980

Dear Brian,

MAJOR GENERAL KEEGAN

Major General George Keegan called on the Prime Minister on the evening of Wednesday 12 March. As I have told you on the telephone, I have not hitherto sent you a letter about the conversation because General Keegan agreed to let the Prime Minister have a written account of the points he had put to her. Moreover, the Prime Minister had asked that I should not take a note during the discussion. However, a month has now elapsed without anything having been received from General Keegan. I understand that, in view of the Prime Minister's continuing interest in some of the points made by General Keegan, you are having a paper produced on the subject. You may therefore find it useful to have a summary account of the principal arguments advanced by General Keegan.

General Keegan was not on this occasion principally concerned with the effort to demonstrate that Soviet capability in the field of high energy particle beams and lasers is significantly more advanced than the military establishments in the West are prepared to admit. His argument was rather that scepticism about the feasibility of energy beam weapons had begun to collapse in the US and that there was a real chance that one or two such weapons would be developed there within the foreseeable future - with all that this would imply for other more conventional weapons systems.

General Keegan claimed that a technical breakthrough had been achieved with the demonstration of a "self-resonating collective accelerator". This made it possible to use a chemically generated proton beam which would probably be conducted to its target in a laser carrier beam - thereby obviating problems with aiming and atmospheric resistance. The basic research work was being carried out at two locations. A research programme at Livermore (the Cher-Heritage (?) programme) was investigating an aircraft carrier based system designed to defeat cruise missile attacks and had already demonstrated the feasibility of the system. A research programme at Los Alamos (under Dr. Kraft) was developing a satellite

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system designed to defeat a ballistic missile attack. The same system would have a ground attack capability: General Keegan referred to experiments which suggested that the system's pulse beam would release energy on impact equivalent to some 3 megatons. According to General Keegan, the system could be deployed within two years of authorisation and at a very low cost. He mentioned a figure of \$50 million!

According to General Keegan, Congress had voted \$315 million to fund continued research into relevant areas. The programme was under the general direction of Dr. Ruth Davies and had recently been transferred from the Department of Defense to the Department of Energy. There were a number of signs that people in positions of authority were taking the matter more seriously. A committee of investigation had been established (I do not recall at whose instigation but it would presumably be the responsibility of the Department of Defense) under the Chairmanship of a Dr. Frank. General Keegan claimed that it was largely staffed with academic experts who were hostile to the idea that particle beam weapons had a military application. RCA were seriously considering involving themselves in the field.

Finally, General Keegan said that the campaign to alert American public opinion to the threat posed by the Soviet acquisition of a new generation of weapons had made considerable progress recently. This was in part because a number of distinguished military figures, including Admirals Moorer and Zumwalt and General Stillwell, had joined in.

I apologise for any inaccuracies or solecisms in the foregoing. My unfamiliarity with the concepts and names is complete!

I am sending a copy of this letter to David Wright (Cabinet Office).

*Yours sincerely*

*Michael Alexander*

Brian Norbury, Esq.,  
Ministry of Defence.

*KRB*