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United States Government **Department of Energy**

memorandum

DATE: APR 11 1989

REPLY TO ATTN OF: ER-11

SUBJECT: Update on Cold Fusion

TO: Robert O. Hunter, Jr., ER-1

The most recent (April 10, 1989) announcement by the Georgia Institute of Technology claims to have measured neutron radiation from an electrolytic cell of palladium being charged with deuterium. A background of 60 neutrons/hour was increased to 200 neutrons/hour after one hour and saturated at about 500 neutrons/hour. The palladium was first vacuum annealed to supposedly drive off the residual hydrogen. The Texas A&M results announced on April 10, 1989, claimed a 60% increase in energy over the energy input as measured calorimetrically. This was after several hours of charging.

It should be noted that the two types of experiments, radiation measurement and calorimetry, apparently differ in the quantity of energy evolved by factors as much as 10^9.

A number of laboratories have announced that they have seen "something" including: Texas A&M (heat); Georgia Tech (neutrons); University of Debrecen, Hungary (neutrons); and the University of Birmingham, U.K. (neutrons).

Other laboratories that we know of that are carrying out experiments include: AT&T Bell Labs, Los Alamos, Brookhaven, Oak Ridge, Argonne, Harwell (England), Sandia, MIT, Lawrence Livermore, and Max Planck Institute, which all believe it is too early to make a definite statement.

A paper has been submitted to Phys. Rev. Letters claiming to explain the low level of radiation output on the basis of cosmic rays and muon catalyzed fusion. There is no satisfactory explanation to date of the large heat evolution seen in some experiments.

Congressman Wayne Owens said at a hearing today that Secretary of Interior Lujan was told by a LANL official that Los Alamos had confirmed the University of Utah results. However, we have determined that LANL has not made such a statement.

Louis C. Ianniello
Deputy Associate Director
for Basic Energy Sciences
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ER-11

Update on Cold Fusion

Robert O. Hunter, Jr., ER-1

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Original signed by
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ER-11:LCIanniello:caf:3-3081:4/11/89 C:LCI:UPDATE

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FROM: Tom Donnelly ER-11 3-30 81
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This transmittal consists of 1 pages (Excluding Cover Sheet)

Comments

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VERIFICATION

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DATE: 4/12

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Comments