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LAMD-311

FAMILY COMMITTEE
Minutes of Tenth Meeting
May 17, 1950.

ADWD-139

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Unique Document #

A. Attendance.

The tenth meeting of the Family Committee was held Wednesday, May 17th, 1950 at 1:15 PM in Room B-117. Those present were

N. E. Bradbury	E. R. Jette
F. G. Brickwedde	D. P. MacDougall
S. W. Burriss	D. P. MacMillan
F. de Hoffmann	J. C. Mark
D. K. Froman	J. C. Potts
R. W. Goranson	R. L. Spaulding
D. B. Hall	R. F. Taschek
E. F. Hammel	E. Teller, Chairman
M. G. Holloway	J. A. Wheeler

B. Minutes of the Ninth Meeting.

The Committee unanimously adopted the minutes of the Ninth Meeting reported in ADWD-136 with the following correction:

On page 5, the word HOW" should have been HOW' wherever it appears in the fifth paragraph.

In response to a question, Teller elaborated on the energy level determination in the FLUNEX experiment. He remarked that in principle there were two methods of obtaining a rough indication of the energy level from FLUNEX. These are

(1) Observing the shape of the curve in the fission phase and observing at what point on the time scale it departs from the constant alpha region. By means of calculations, one will then be able to establish the absolute energy level, similar to the old alpha Rossi experiment--except that in the latter case distortion due to other effects played a considerable role.

(2) If FLUNEX works better than one has hoped, one may be able to get an absolute value for the amount of fluorescence created.

DOE b(3)

Teller emphasized that it was much more likely that one would be able to achieve possibility (1) rather than possibility (2).

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Some discussion ensued concerning the second paragraph of Section I. It was agreed that the figure 42" would be taken as a tentative design figure but that by about July 1st enough detailed information should be available about the experiments to be performed at the tests so that a definite figure can be frozen on.

C. TENEX and FLUNEX.

In view of the fact that Harold Agnew and Harold Argo were examining these and other possible schemes to back up DINEX, the Committee agreed to postpone discussion of this item until after such time as Argo and Agnew had rendered their report.

D. Detonator Initiator.

Spaulding reported on the progress to date. The present design is essentially that shown in Figure 1 of the minutes of the Seventh Meeting with only minor modifications. Mockups containing all contemplated components except for the polonium have been fabricated. Several of these have been fired and it is seen that rather complete destruction of the beryllium takes place.

A test box strong enough to withstand about twice the contemplated explosive charge has been fabricated and weighs about one ton. Preliminary tests show satisfactory performance of this test box. The program for the immediate future is to continue testing out the test box. This should be completed within about two weeks. The detonator initiator will then be ready for neutron counting tests with polonium present in the initiator. It is not contemplated that any static neutron counting following the shots will be made since the volume of the box is so great that the dilution of the polonium will be very great--thus giving rise to a counting rate much lower than the true one for a working initiator.

MacMillan reported that Group W-3 would expect to make time dependent tests sometime in July and possibly by June. At present W-3 is very busy with the test program for Abner and they would like to carry along this program to a sufficient extent before embarking on the test program for the detonator initiator.

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is a developmental job and it is not expected that the early experimental detonator initiators will have such a low background.

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Some doubt was expressed concerning the advisability of tying the two vacuum systems together particularly in view of possible troubles with moisture in the York system, although it was realized that these might be overcome.

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Hence the group agreed that an arrangement of type (b) as close to the middle as practicable to be most desirable. This is the arrangement shown shhematically in Figure 1. Discussions ensued

concerning the depth to which the spots should be recessed. It was agreed that in any case it would be nice to have the two spots as similar as possible and to have them recessed the same amount.

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Teller stated that if at all possible the diameter of the recess should be at least 1-1/2 times to twice as big as the depth of the recess so that hydrodynamics should not interfere with the X-ray observation.

DOE b(3)

Dave Hall remarked that an arrangement such as that sketched in Figure 1 would not be very bad from the point of view of the DINEX experiment.

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F. Next Meeting.

The following people will be invited to the next meeting:

E. Konopinski
N. Metropolis
J. M. Taub
J. A. Wheeler

Frederic de Hoffmann
Executive Secretary

Distribution:

1A N. E. Bradbury
2A W. D. Bright
3A S. W. Burriss
4A J. C. Clark
5A D. K. Froman
6A R. W. Goranson
7A A. C. Graves
8A G. K. Hess
9A M. G. Holloway
10A E. R. Jette
11A " " "
12A J. M. B. Kellogg
13A E. Konopinski
14A D. P. MacDougall
15A " " "
16A D. P. MacMillan
17A J. H. Manley
18A H. C. Mark
19A H. C. Paxton
20A F. Reines
21A " "
22A " "
23A A. R. Sayer
24A R. F. Taschek
25A E. Teller
26A " "
27A " "
28A " "
29A " "
30A J. von Neumann
31A J. A. Wheeler
32A Document Room
33A " "
34A " "
35A " "
36A " "
37A " "
38A " "
39A J. M. Keller
40A R. W. Spence
41A A. C. Graves
42A R. C. Smith

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FIG. 1

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