

EXPERIMENTS AT FRASCATI

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I shall give a list of the experiments which are being performed at the Frascati Electronsynchrotron. In fig. 1 a map of the experimental hall is shown. I shall label each experiment with a number, the same which labels the experimental apparatus on this map.

1 - Search for the decay $\pi^0 \rightarrow 3\gamma$.

(G. Barbiellini, R. Del Fabbro, G. De Zorzi, E. Di Capua, L. Tau; Frascati + Rome)

Counters + spark chambers. The aim is to put an upper limit 10^{-7}

to the ratio $\frac{\Gamma_{\pi^0 \rightarrow 3\gamma}}{\Gamma_{\pi^0 \rightarrow 2\gamma}}$.

2 - Photodisintegration of He^3 .

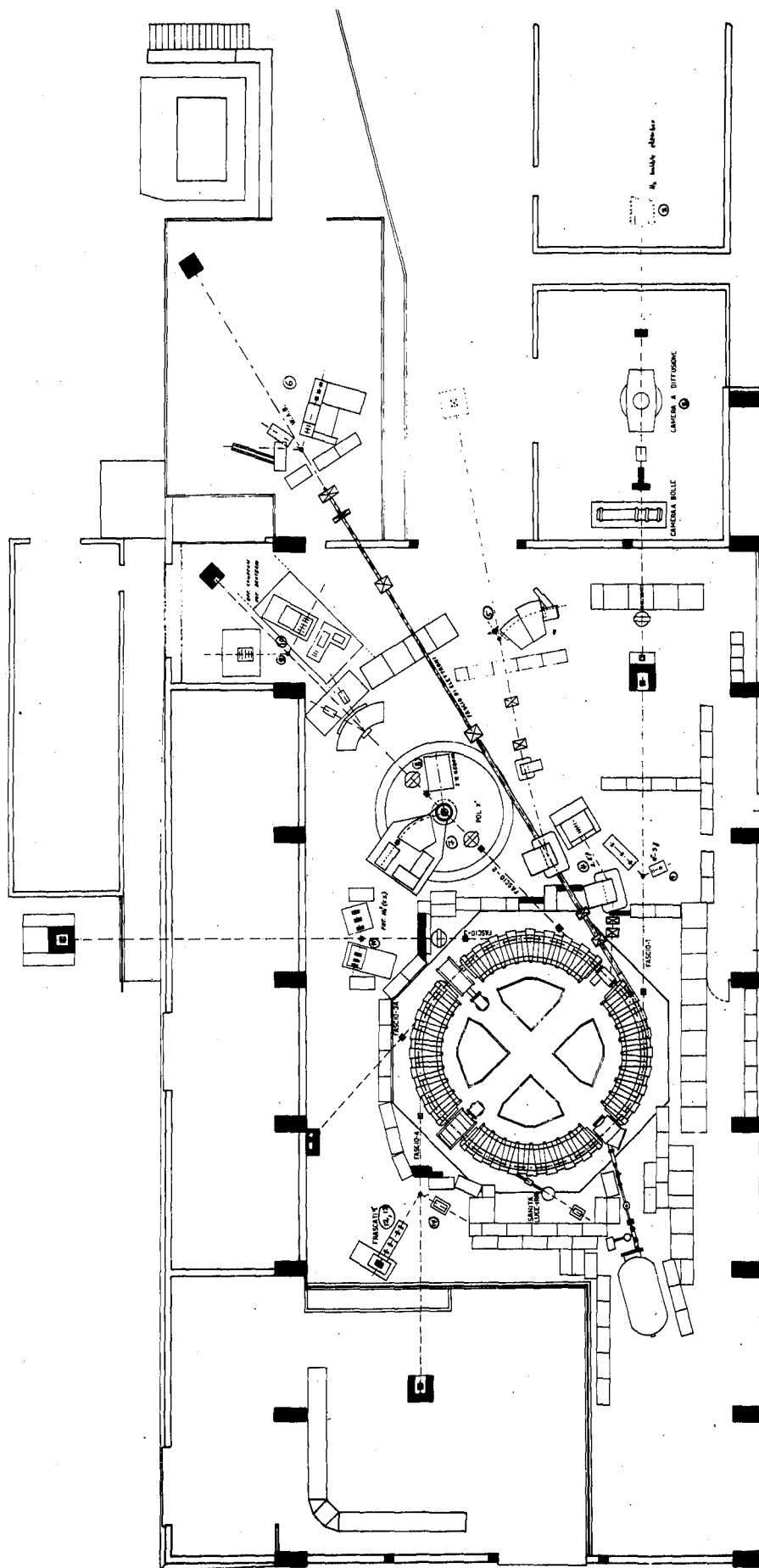
(P.E. Argan, G. Goggi, G.C. Mantovani, A. Piazza, A. Piazzoli, D. Scannicchio; Frascati + Napoli + Roma)

Diffusion cloud chamber.

3 - Double pion photoproduction on protons.

(S. De Schryver, L. Fiore, S. Focardi, G. Gialanella, V. Rossi, B. Stella, G. Susinno; Bologna + Frascati + Roma)

32 cm ϕ H_2 Bubble Chamber.



4 - Study of reactions (e, e'p).

(U. Amaldi Jr., G. Campos-Venuti, G. Cortellezza, E. De Sanctis, S. Frullani, R. Lombard, P. Salvadori; Istituto Superiore Sanita) Phys. Rev. Letters 13, 341 (1964); Phys. Letters 22, 593 (1966).
Magnets + counters.

5 - Electroproduction of pions.

(E. Amaldi, M. Balla, B. Borgia, G.V. Di Giorgio, A. Giazotto, P. Pistilli, S. Serbassi, G. Stoppini; Pisa + Roma)
The proposal of the experiment is available under request.
Magnet + counters.

6 - Wide angle bremsstrahlung on protons.

(C. Bernardini, F. Felicetti, G.L. Meneghetti-Vitale, G. Penso, R. Querzoli, V. Silvestrini, S. Vitale; Frascati + Napoli + Roma)
Proposal available.
Counters + Spark Chambers.

7 - Positive pion photoproduction by linearly polarized γ -rays.

(M. Grilli, M. Nigro, E. Schiavuta, F. Soso, P. Spillantini, V. Valente; Frascati + Padova)
See LNF-66/68 (Internal Report).
With essentially the same experimental apparatus a measurement of π^+ photoproduction cross section by unpolarized photons has been performed ($E_\gamma = 500-800$ MeV)
(M. Beneventano, M. Grilli, L. Paoluzi, F. Sebastiani, M. Severi; Frascati + Roma)
First results presented at the 1967 Dubna Conference.
Magnets + counters.

8 - Double photoproduction of pions.

(G. Diambrini, I. Giannini, F. Grianti, A. Santroni, G. Sette;
Genova)

Magnet + counters + Spark chambers. Mainly in situations of the
type $\gamma + p \rightarrow N^* + \pi$ ($N^* = 3/2, 3/2$, isobar).

9 - Photodisintegration of the deuteron by polarized γ -rays.

(G. Barbiellini, C. Bernardini, F. Felicetti, G.P. Murtas; Frascati)
LNF-66/4 and LNF-66/35. To be published in the Phys. Rev.
Counters + Spark Chambers.

10 - Compton effect on protons by polarized γ -rays.

(G. Barbiellini, G. Capon, G. De Zorzi, G.P. Murtas; Frascati)
Presented at the Congresso della Società Italiana di Fisica,
October 1966, Trieste.
Counters + Spark Chambers.

11 - Photodisintegration of He^3 .

(P.E. Argan, G. Goggi, A. Piazzoli, P.E. Picozza, D. Scannicchio,
C. Schaerf, R. Scrimaglio; Frascati + Napoli + Pavia)
Counters + Spark Chambers.

12 - Photoproduction of π^0 's.

(C. Bacci, C. Mencuccini, G. Penso, A. Reale, G. Salvini, V. Silves-
trini, M. Spinetti, B. Stella; Frascati + Roma)
LNF-66/65. To be published in the Phys. Rev.
Counters + Spark Chambers.

13 - Photoproduction of η 's.

(C. Bacci, C. Mencuccini, G. Penso, G. Salvini, V. Silvestrini;
Frascati + Roma)

Nuovo Cimento 45, 983 (1966); Phys. Rev. Letters 16, 157, 384 (1966).
Counters + Spark Chambers.

14 - Photoproduction of η 's near threshold.

(C. Bacci, R. Baldini-Celio, A. Reale, G. Salvini, M. Spinetti,
A. Zallo; Frascati + Roma)

Counters (only γ 's detected). Proposal available.