



Rockefeller (D. Miller)

UNIVERSIDADE DE SÃO PAULO
FACULDADE DE FILOSOFIA, CIÊNCIAS E LETRAS
Departamento de Física

N.

São Paulo (Brasil) de de 19.....

(Department of Physics, S. Paulo University)
(copy)

The experimental researches in progress in our Laboratory can be divided into the following groups:

Researches on Cosmic Rays.

Researches on Fission and Artificial Radioactivity.

Spectroscopic Analysis.

The greatest part of our work lies in the first group. There are in progress researches on:

Showers of Mesotrons.

Latitude Effect and Cosmic Rays properties in equatorial regions.

Penetrating Showers in depth and at high altitude.

The situation of the Laboratory in equatorial regions gives a special opportunity for some of this work.

Several experiments are delayed, some not even began, because of lack of instruments. For instance, we need:

To build some apparatus for multiple coincidence and anticoincidence circuits, with improved technique elaborated by Prof. M.D.Sousa Santos, and some transportable sets for work outside the Laboratory.

To provide a magnetic field and a source of illumination for a Wilson Chamber built by Prof. G. Occhialini.

To build a group of small Wilson Chambers of simplified design for field work. It would be our intention to carry one of them on the top of the Andes for continuous work. A Permanent Magnet for this particular one would allow us to make a comparison between our results and the ones in temperate regions.

To buy 3 (three) tons of Lead.

To build new special counters for Cosmic Rays, for Beta Rays and for highly ionizing particles (proportional counters).

Conferência
de Ciências
e Letras

Supplementary notice
~~about~~ ^{and prices} on instruments and
 materials needed for research work
 in this laboratory:

	Unit price	Total
3 tons of lead	3:000 \$/ton	9:000 \$/000
8 gas pressure lamps for Wilson chamber (Philips)	1:000 \$/000	8:000 \$/000
2 Raytheon voltage stabilisers for 115 volts and 500 watts	3:000 \$/000	6:000 \$/000
1 Inductron Furnace (to be built to the lab.)		2:000 \$/000
(1) ← 20 ^{small} Geiger-Müller β -counters (alcohol filled) (probably available from Bartol Institute of Physics in Lancaster or from Chicago)	300 \$/000	6:000 \$/000
20 Cenco impulse-counters (Cenco-Company, N.Y.)		~ 5:000 \$/000

Several devices as {transformers, ^{capacitors} high voltage condensers,
 tubes, oscilloscopes, neon lamps for building special
 coincidence-sets for cosmic-ray researches inside
 and outside the laboratory, and material

for building of 2 small Wilson chambers of simplified design
 materials available in S. Paulo) ~ 20:000 \$/000
 of Indrane Steel Company U.S.A.

(1) Permanent magnet for a small Wilson chamber
 and 2 Km of ^{copper-} wire for 20 Ampere-current

(2) (we do not know the price and our guess is that
 it would be difficult to get this in the
 present time from the U.S.A.)

All the pieces are approximated, and all
 material is at present time available in Brazil
 except these

FACULDADE DE FILOSOFIA, CIÊNCIAS E LETRAS
DA UNIVERSIDADE DE SÃO PAULO

DEPARTAMENTO DE FÍSICA

Av. Tiradentes, 11

(DEPARTMENT OF PHYSICS - SÃO PAULO UNIVERSITY - BRAZIL).

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DA UNIVERSIDADE DE SÃO PAULO

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SUPPLEMENTARY NOTICE

ON SOME SPECIAL INSTRUMENTS AND MATERIALS NEEDED FOR RESEARCH WORK IN THIS LABORATORY.

		UNIT PRICE	TOTAL.
Material available in Brasil	3 tons of lead	3:000\$000	9:000\$000
	8 gas pressure lamps for Wilson Chamber (Philips)	1:000\$000	8:000\$000
	2 Raytheon voltage stabilizers for 115 Volts and 500 Watts.	3:000\$000	6:000\$000
	1 Industrial furnace (to be built in our Laboratory)	2:000\$000	2:000\$000
	20 Genco impulse-counters (Genco Company - New York)		5:000\$000

Several devices as: transformers, batteries, high voltage condensers, tubes, oscilloscopes, neon lamps for building special coincidence sets for cosmic-ray researches inside and outside the laboratory, and material needed in the building of 2 small Wilson Chambers for field work.

Material available only in U.S.A.	20 Small Geiger-Müller Beta counters (Alcohol filled) - Probably available from Bartol Institute of Physics in Swarthmore - or from Chicago.-	300\$000	6:000\$000
	Permanent magnet from Indiana Steel Company, U.S.A. for a small Wilson Chamber of simplified design, and 2 Km. of copper wire for 20 Ampere current. (We do not know the price and our guess is that it may be difficult to get this latter at the present time from the U.S.A.)		

(All the prices given above are only approximated)

Cópia do relatório enviado
ao Dr. Miller.

(DEPARTMENT OF PHYSICS - SÃO PAULO UNIVERSITY - BRAZIL).

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	20 Geoco impulse-counters (Geoco Company - New York)		5:000\$000

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