

# 中子加速器館簡介

為

物理系建加速館，就好比一個大家庭裏娶媳婦一樣，是件天大的喜事。雖然說起來那只不過是一間十公尺見方的小房子，全部經費亦不過區區一百七十萬台幣而已。但這對經費絀據的台大物理系而言，無疑的可說是今年來的最大新聞。最起碼，日後系內的實驗內容將會更充實些，台大物理系的畢業生也不再會被稱為：動腦不動手了。這些都是教授們幾年來辛苦耕耘的成果，但願我每一位在校同學都能充分地利用它。

下面我們將系裏即將採用的中子加速器做一個

下表是模型之A-1001數據

## MODEL A-1001 NEUTRON GENERATOR SPECIFICATIONS

### PERFORMANCE DATA

MEASURED NEUTRON OUTPUT

10" 14.3 Mev neutrons/second

NEUTRON FLUX

$2 \times 10^{10}$  neutrons/cm<sup>2</sup>/second

TYPE OF OUTPUT

Continuous

### SPECIFICATIONS

Accelerator Assembly

Dimensions

12" diameter at dome, 2-3/8" diameter at target, 61" long

Type

Positive Ion

Source

P. I.G. Type

Potential

0-205 KV

Beam Current

0-1.2 ma

Focus

Adjustable from 1/4-1" diameter

Vacuum System

Type

Sputter Ion Pump

Pumping Rate

140 Liters Per Second for H<sub>2</sub>

Static Pressure

Less than 10<sup>-8</sup> mm Hg

Operating Pressure

Approximately 3 × 10<sup>-6</sup> mm Hg

Roughing Pump

Initial Pump down to 10<sup>-3</sup> mm Hg

Power Supply

Type

Voltage Doubler

Input

110 volts a-c, 60 cps, single phase, 30 amperes

Output

0-205 KV d-c 5.5ma

Ripple

1-5% RMS

Target Assembly

Type

Drift tube mounted, isolated for target current measurement

Target

Tritiated TiTanium, 1-1/2" diameter, 4 curies/in