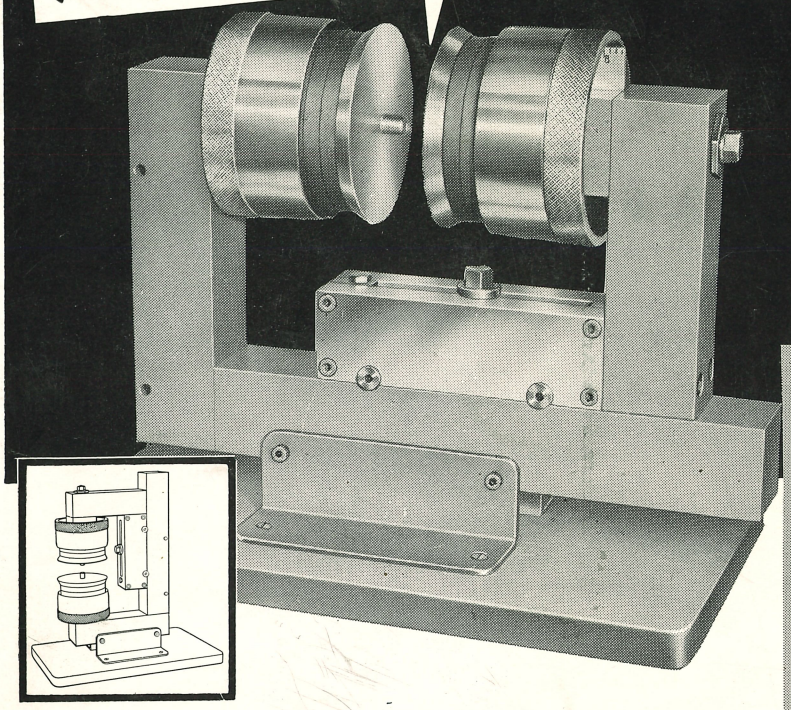
An entirely *new* idea...

VARIFLUX®

A VARIABLE FIELD PERMANENT MAGNET*



Exclusive Features:

1. Continuously variable field over a 20:1 ratio FOR ANY CHOSEN GAP
2. Graduated scales permit repeatable field settings
3. Easily changed pole faces and variable gap
4. Vertical or horizontal mounting
5. ARMCO magnetic ingot iron throughout
6. Oriented ceramic magnets highly resistant to demagnetization

* The *VARIFLUX* is a unique magnet possessing the inherent stability and zero power consumption of a permanent magnet . . . combined with the field variation capabilities formerly associated only with an electromagnet. A simple rotation of the knurled shunt rings permits the magnetic field to be continuously varied over a range of approximately 20-to-1 *for any chosen gap setting*. The field for any chosen pole face and gap is always smoothly and repeatably related to the scales that indicate the rotational positions of the shunt rings.

To make the *VARIFLUX* adaptable to a broad range of experiments, the gap can be adjusted over a wide range, and the pole faces easily interchanged. Further, by first "turning off" the magnetic field, the changing of the poles faces—or gap settings—presents no problem. Very accurate parallelism between pole faces can be readily obtained by a set of adjustment screws. The *VARIFLUX* will retain its full strength indefinitely provided it is not disassembled, or subjected to large reverse magnetic fields.

The *VARIFLUX Magnet* is a precision-built instrument, designed to produce a substantial field for a wide range of research and instructional applications.

VARIFLUX MAGNET with wood base and spanner $425

(Does not include special pole faces—see below)

INQUIRIES INVITED ON LARGER MODELS

ONE MAGNET FOR MANY JOBS

- Nuclear and electron resonance experiments
- Beta-ray spectrometers
- Mass spectrometers
- Bending or deflection of charged particles
- Illustration of Ampere's, Faraday's, Lenz's Laws

SPECIFICATIONS:

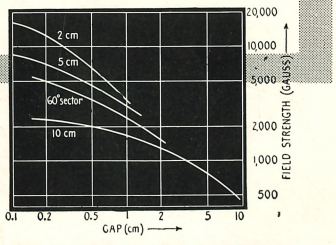
H: 12", W: 9", L: 16", Wt: 60#
Yoke: 2"x2" bar
Basic pole: 4 ¼" dia.
Gap adj.: 0-4 ¼"
Finish: Chrome and blue hammertone
Maximum flux: 250,000 lines

TYPICAL MAXIMUM FIELDS:

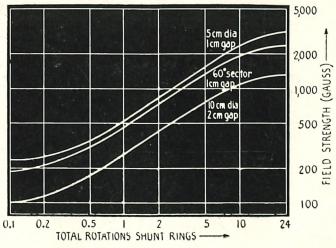
(See graphs below)

10 cm dia. flat field pole faces	1600 g at 1 cm 1200 g at 2 cm 700 g at 5 cm
5 cm dia. high field pole faces	4500 g at ½ cm 3000 g at 1 cm
10 cm 60° sector pole faces	3000 g at ½ cm 2200 g at 1 cm

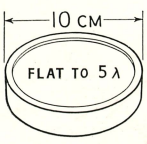
FIELD STRENGTH VS. GAP FOR VARIOUS POLE TIPS



FIELD STRENGTH VS. TOTAL ROTATIONS SHUNT RINGS FOR VARIOUS POLE TIPS

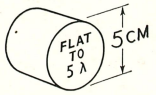


SHIMMED FLAT FIELD POLE FACES



Set of 2..... $55

HIGH FIELD POLE FACES



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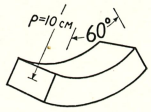
60° SECTOR POLE FACES



Set of 2..... $55

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INTRODUCING

THE VARIFLUX® MAGNET

For the first time . . .

A VARIABLE FIELD PERMANENT MAGNET

with characteristics equal to those of the most versatile electromagnet

FOR PHYSICS AND CHEMISTRY INSTRUCTION AND RESEARCH

FOR INSTRUCTION

THE VARIFLUX plus a set of 5 cm poles: give an impressive demonstration of Ampere's Law, Faraday's Law and Lenz's Law.

THE VARIFLUX vertically mounted with 4½" gap setting and small continuous cloud chamber between poles: show deflection of charged particles in a magnetic field, and prove existence of positrons. Use weak sources of Sr^{90} and Na^{22} for curvature of 6 cm.

THE VARIFLUX plus a set of 10 cm shimmed flat field poles: demonstrate nuclear resonance phenomena. 10 cm poles at 2.2 cm gap give a field uniformity of 1-part-in-10,000 over 5 cm diameter; much higher over smaller regions.

THE VARIFLUX plus a set of 10 cm poles at 2 cm gap: use for a β-ray spectrometer to resolve β-ray spectra to 1.2 Mev. Special 20 cm poles at 3 cm gap: resolve spectra to 1.0 Mev.

THE VARIFLUX plus a set of 10 cm 60° sector poles at 1 cm gap: use for a mass spectrometer. Focus 500 ev ions to mass 45.

FOR RESEARCH

Use THE VARIFLUX MAGNET in experiments on the following:

- Nuclear magnetic resonance
- Electron paramagnetic resonance
- Microwave absorption
- Hall effect
- Magnetic susceptibility
- Magneto-optical rotation
- Beta ray spectra
- Mass spectra
- Beam deflection and separation

Special sizes and shapes of pole faces available on order, including axial access poles, conical poles, shimmed poles, lapped poles, segment poles, flanged poles, etc.

THE VARIFLUX MAGNET is now an integral part of the scientific equipment being used in over 100 of the leading universities and commercial laboratories throughout the United States and many foreign countries. Compare the dollar-for-dollar value of THE VARIFLUX with any other magnet; re-orders from many customers (names on request) is our best testimony. Order now for earliest possible delivery.

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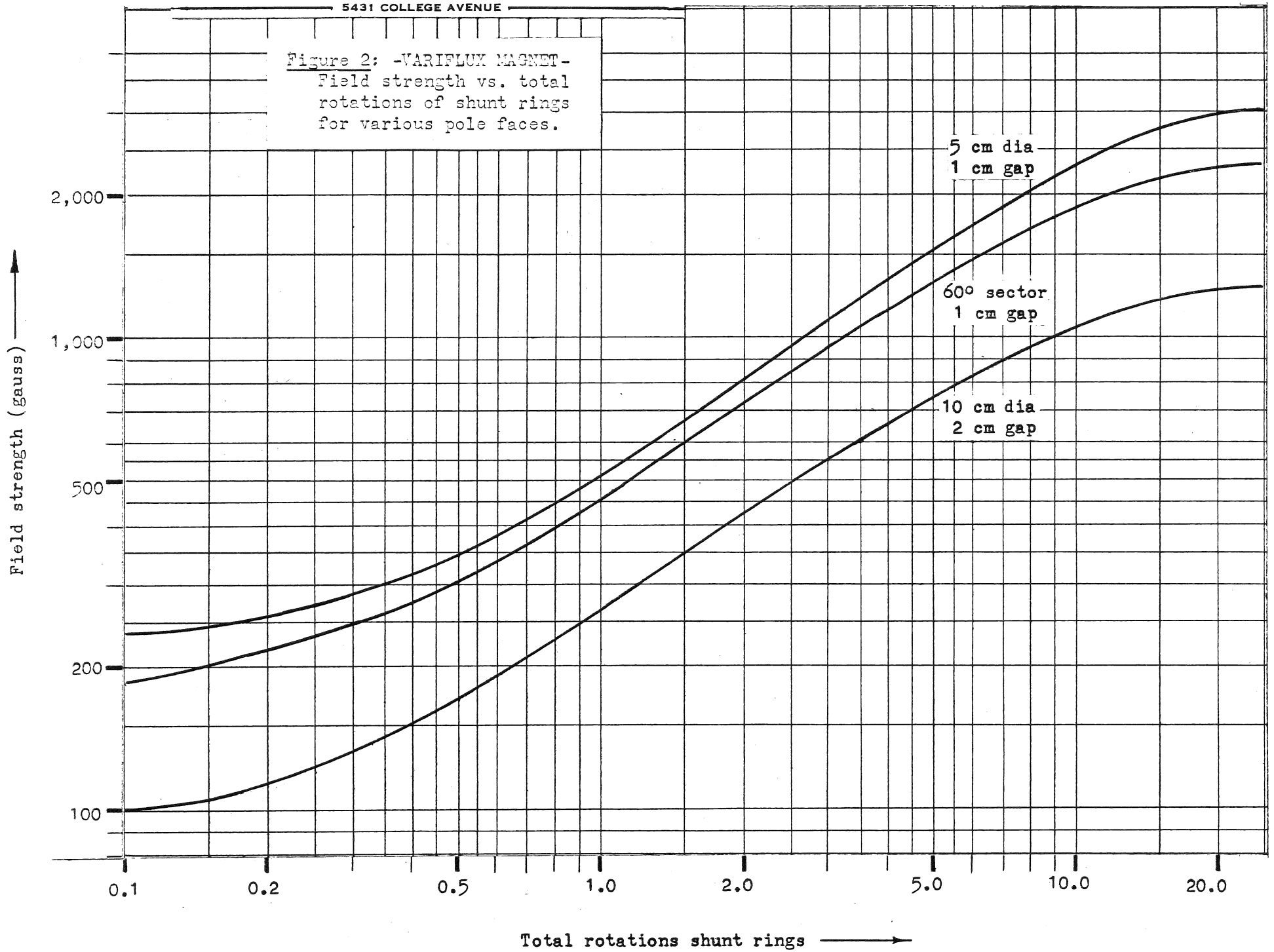

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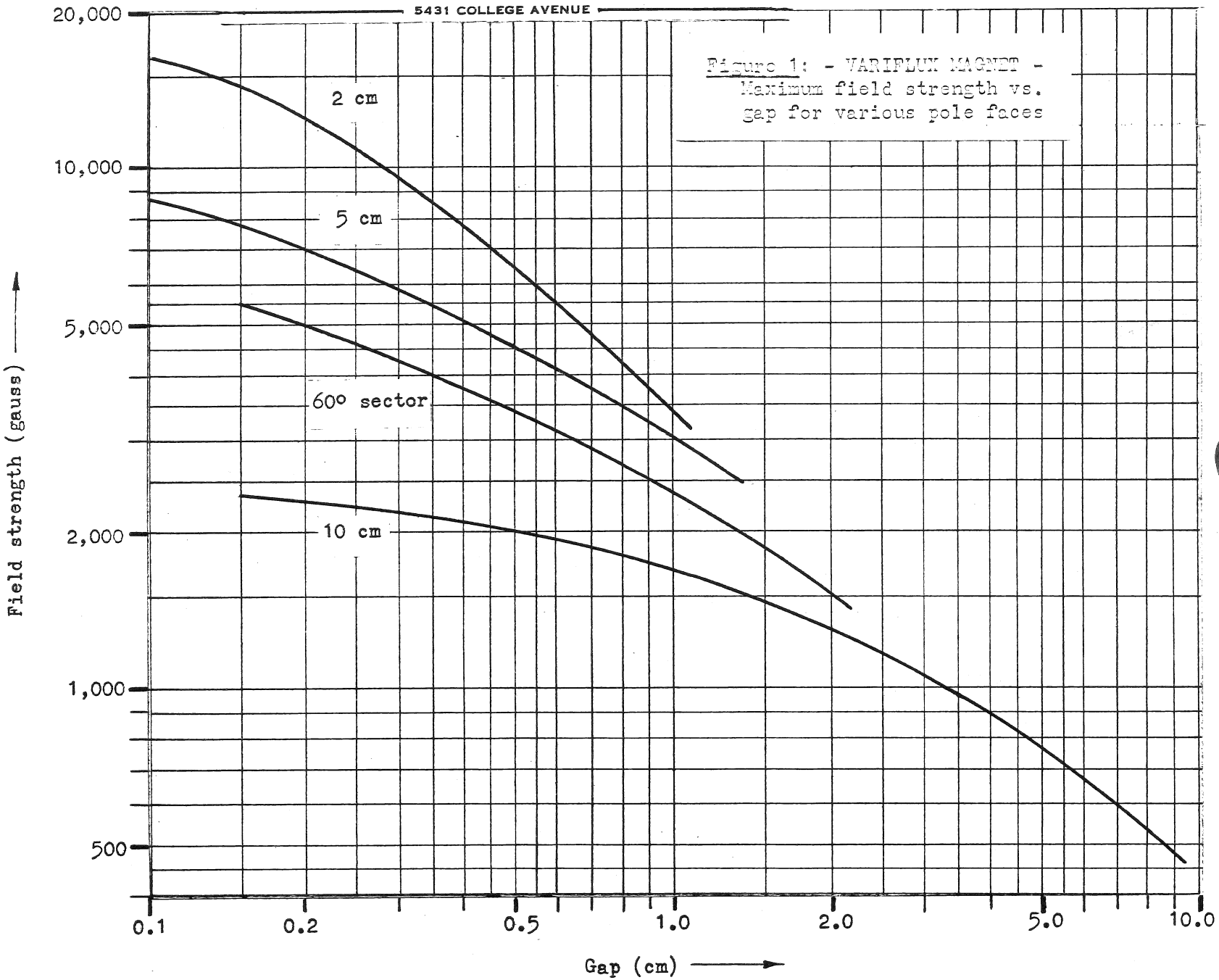

ADU. LABS Rm 404

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- VARIFLUX MAGNET -

Assembly drawing and pole box cutaway