

People and things

1. Gersh Budker photographed while giving a seminar on the work of his Institute of Nuclear Physics during a visit to CERN in 1967.

(CERN 356.4.67)

2. Ben Lee at a press conference during the Chicago meeting of the American Physical Society in February.

(Photo American Institute of Physics)

Gersh Budker and Ben Lee

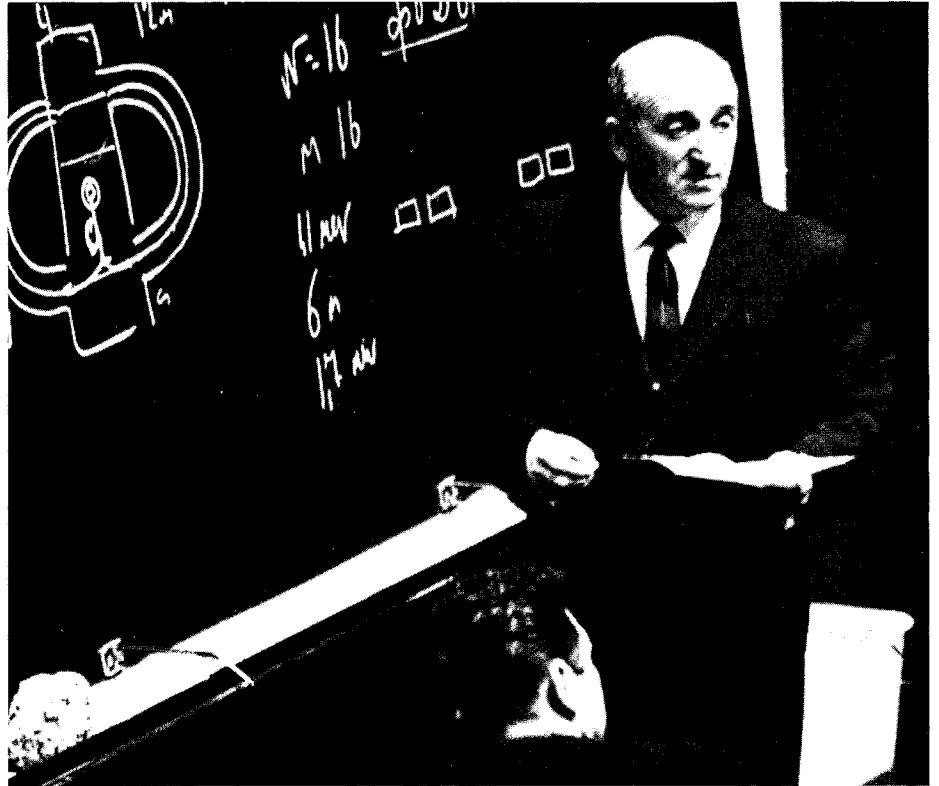
High energy physics has lost two of its prominent personalities — Gersh Budker, one of the greatest accelerator physicists, and Ben Lee, an outstanding particle physics theorist.

Gersh Itskovich Budker, Director of the Institute of Nuclear Physics of the Siberian Branch of the Soviet Academy of Sciences, died on 5 July at the age of 59. Budker moved from Dubna to take over the Institute of the newly founded science city of Akademgorodok just outside Novosibirsk in 1957 and established there a very individual and independent style of designing and building accelerators and, particularly, electron positron storage rings.

His powerful personality and ability drew many talented young physicists to the Institute, which now has one of the most able accelerator teams in the world. In 1967, Budker and several of his colleagues received the high honour of the Lenin prize for their contributions to 'the study of the colliding beams method of high energy physics research'. They have been a prolific source of new ideas in accelerator technology, many of them stemming from Budker himself. One of the latest to come to fruition is the idea of electron cooling of antiproton beams which is being taken up by CERN and Fermilab.

Not all of Budker's ideas will have lasting impact in machine technology but it has been a stimulus over the past two decades to have a character of his individual genius around and the accelerator world will be less rich without him.

Benjamin W. Lee, Head of the Theoretical Physics Department at Fermilab, was killed in a traffic accident on 16 June at the age of 42. Ben Lee moved to the USA from Korea in 1956, taking American citizenship in 1968, and earned a high reputation as author of over 100 papers in the field



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1. Chris Quigg, new Head of the Theoretical Physics Department of Fermilab.
2. Percy Bowles who retires as Chief Engineer at Rutherford.
3. Hildred Blewett on the night of first operation of the CERN PS.

of particle physics. He was particularly prominent in the development of gauge theory and the linking of weak and electromagnetic phenomena which has been one of the highlights of recent years.

Ben Lee held appointments in many Institutes prior to settling at Fermilab in 1971 where he also held a joint appointment as Professor at Chicago University. He took full part in the life of the Laboratory, helped to create and stimulate a Theory Department of high quality, and communicated with great enthusiasm his love of physics.

The Fermilab and particle physics in general have lost an outstanding colleague who still, potentially, had a great deal to contribute.

Reorganization at Karlsruhe

Some administrative changes have been made at the Gesellschaft für Kernforschung (GfK), Karlsruhe, in the high energy physics and accelerator sections. The Institut für Experimentelle Kernphysik (IEKP) in which these activities became concentrated had become the largest unit within GfK. To streamline management, it has been split into two smaller Institutes — the Institut für Kernphysik (IK) and the Institut für Technische Physik (ITP). IK is under the joint Directorship of A. Citron and a new Director to be nominated from the experimental nuclear physics field. Prof. Citron will supervise the

continuing development of superconducting r.f. techniques, in close collaboration with CERN and DESY, while the second Director will be concerned with high energy physics experiments, particularly the participation in the CERN and DESY programmes. ITP is under the Directorship of W. Heinz. It specialises in the study and applications of type-II superconductors. Basic research will continue while technical applications are investigated in close cooperation with industry. Special emphasis is being put on the possibility of plasma confinement in fusion devices by means of superconducting magnets. ITP will continue to participate in the activities of the Group on European Superconducting Systems Studies (GESSS).

On People

The Max Planck Medal of the German Physical Society has been awarded this year to Walter Thirring of the University of Vienna. Professor Thirring, who was for two years Head of the Theoretical Physics Department at CERN, received this honour for his extensive contributions to theory in particle physics and in gravitation. He will receive the award at a Society meeting in Karlsruhe on 21 September.

Chris Quigg has been appointed head of the Theoretical Physics Department at Fermilab in succession to Ben Lee.

Chris joined Fermilab from Stony Brook in 1974 and is also visiting scholar at Chicago University. He is the author of more than 70 scientific papers. It is intended to seek out senior theorists, with a competence and eminence similar to Ben Lee, to work in the Fermilab Theory Department during the next years.

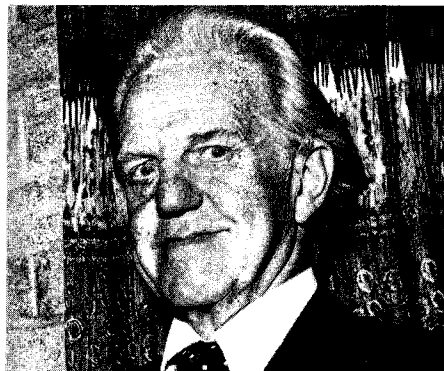
At the end of July, P.J. Bowles retired from the post of Chief Engineer at Rutherford Laboratory, a position he had held throughout the Laboratory's life. He moved to Rutherford from the UK Atomic Energy Authority to oversee the engineering side of the construction of the Nimrod proton synchrotron. Percy Bowles will be remembered for his high professional ability and for the gentlemanliness of his relations with all who came into contact with him.

Hildred Blewett retired from the CERN ISR Division in July. Hildred is well known throughout the accelerator world and was involved in the bringing into operation of a large number of machines — the Brookhaven Cosmotron and AGS, the CERN PS and ISR, the Argonne ZGS. She will be remembered for her devotion to our field of research (and perhaps particularly to the ideals of CERN) and for the thoroughness and competence of her work.

At its meeting on 23-24 June the CERN Council took leave of M. Pihl from Copenhagen University who has for many years been Danish delegate



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On 15 June, Fermilab celebrated the 10th anniversary of the date when the first Laboratory staff met to begin the design of the accelerator. The photograph shows Director, Bob Wilson, alongside the anniversary cake.

(Photo Fermilab)

Mining for superheavies

Several meteorites have been carried down a salt mine by the group of G.N. Flerov from Dubna to study spontaneous fission in this shielded environment. They have evidence for the fission of nuclei yielding many more neutrons (between four and ten) than emerge from known heavy nuclei. In general the number of neutrons per fission increases with the mass of the nucleus and this is another tantalising hint that the long searched-for superheavy nuclei may be present.

God versus Pauli

Vicky Weisskopf in one of his lectures on 'Particles and Symmetries' to summer students at CERN, recounted the following apocryphal tale about the late Wolfgang Pauli who was noted for his intolerant attitude to new ideas which did not have a solid foundation. On arriving in heaven, Pauli was greeted by the Deity who congratulated him on his life's work and asked if there was anything he would like to know, now that he was freed from the need to strive for further understanding of the Universe. 'I would like to comprehend why the fine structure constant has the value that it has', replied Pauli. (The fine structure constant relates the magnitude of the charge on the electron to other natural constants and so governs the scale of the electromagnetic phenomena which make up much of our immediate experience of the world.) The Deity summoned a celestial theoretician who, on paper of finest gold and with a pencil of pure platinum exposed the argument. 'Wrong', bellowed Pauli storming off in disgust.

to the Council and is also Chairman of the Council for Research and Planning in Denmark. Council appointed A. Rousset and reappointed A. Dalitz as members of the Scientific Policy Committee for the next three years. Erwin Gabathuler was appointed to succeed Emilio Picasso as Leader of the CERN Experimental Physics Division as from 1 January next year.

Meetings

The second session of the ISR Workshop (see November 1976 issue page 394 for an account of the first session) will be held at CERN from 14 to 21 September. It will concentrate on options for the research programme at the storage rings for the next five years. Secretary for the Workshop is Maurice Jacob of the CERN Theory Division.

Synchrotron radiation experts will be attracted to the Physical Sciences Laboratory of the University of Wisconsin on 24-25 October for the 10th Annual Synchrotron Radiation Users Group Meeting and to Stanford University on 27-28 October for the Stanford Synchrotron Radiation Project Users Group Meeting. Contacts are Ed Rowe at Wisconsin and Herman Winick at Stanford.

Bits and Pieces

The refrigeration system for the superconducting power transmission

project, led by Eric Forsyth, has operated successfully at Brookhaven. The 500 watt helium refrigerator has achieved a temperature of 7 K. It is now to be connected to 100 m of cryogenic envelope which will surround superconducting cable.

On 16 June the proton synchrotron at the KEK Laboratory in Japan topped 10^{12} protons per pulse for the first time, accelerating a beam of 1.2×10^{12} to 8 GeV.

On 19 June a 40 ton superconducting magnet was airlifted from Chicago to Moscow for use in joint USA-USSR experiments on a magneto-hydrodynamic project. It was built at Argonne where considerable experience in large-scale superconducting magnets has been accumulated with the magnets for the Argonne 12 foot and Fermilab 15 foot bubble chambers. The MHD magnet is 4.4 m long and 2 m in diameter, generating a field of 5 T.

Over 2000 panels of double-sided copper clad epoxy laminate of very large dimensions (12 foot by 8 foot) have been furnished by Norplex UK Division to the group of Paul Murphy at Manchester University for the drift chambers to be used in the JADE experiment (see November issue 1976) of a Daresbury / DESY / Hamburg / Heidelberg / Lancaster / Manchester / Tokyo collaboration at the DESY electron-positron storage ring PETRA.

The image displays a collection of 48 electronic components, organized into four rows of twelve. Each component is a black printed circuit board (PCB) with various electronic components mounted on it. The components are labeled with part numbers and descriptions, such as:

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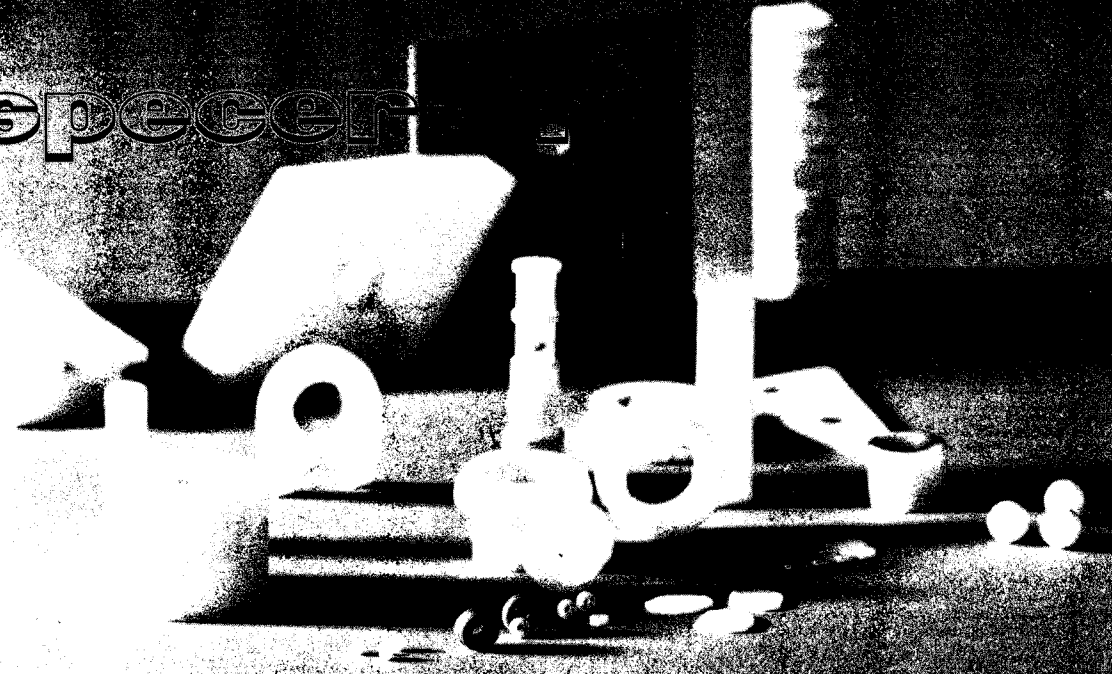
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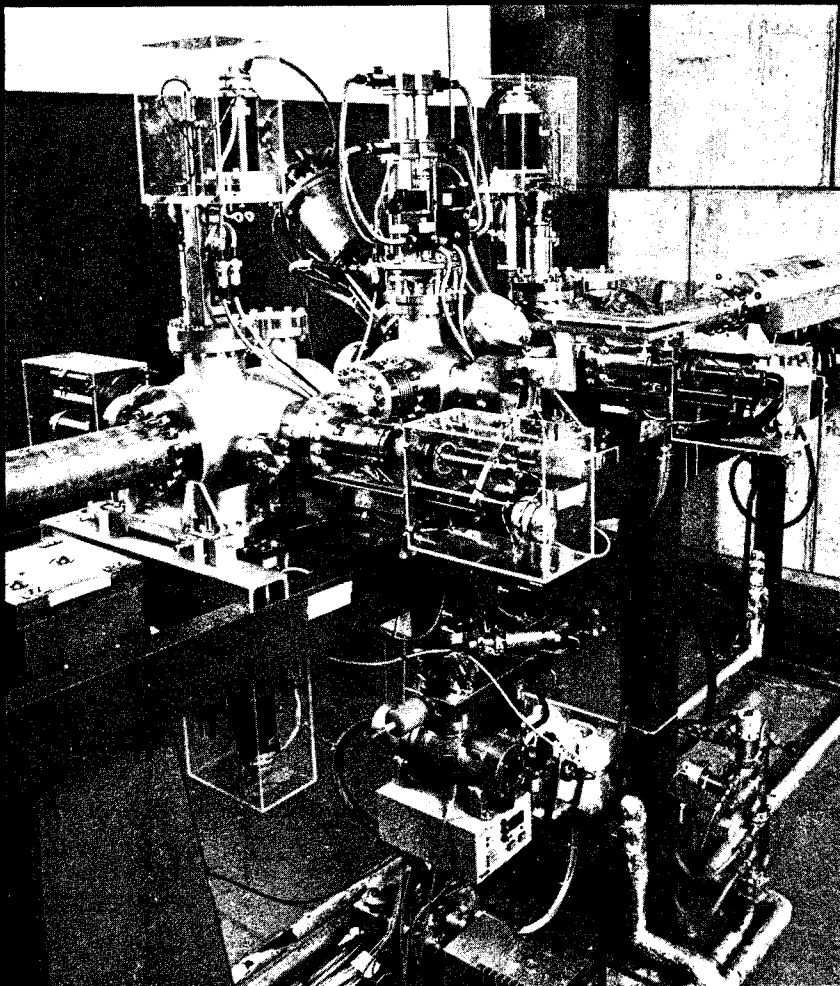
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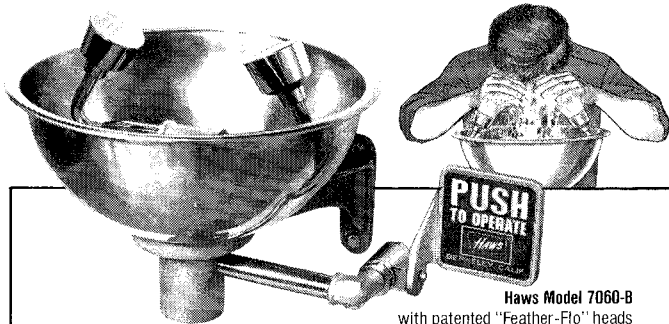
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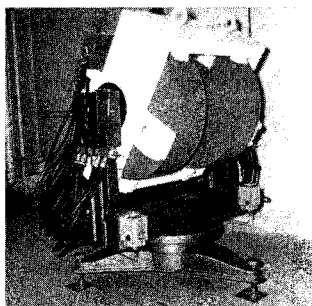
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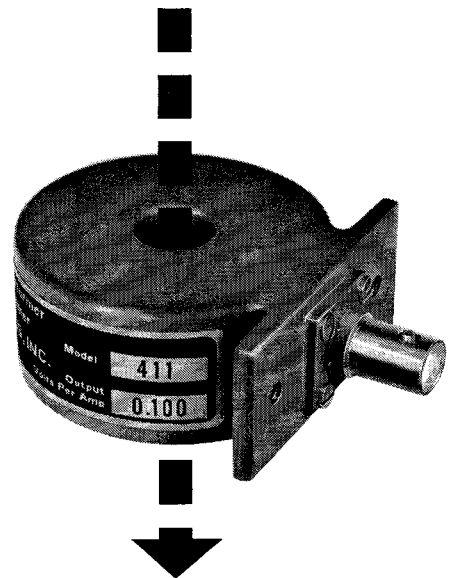
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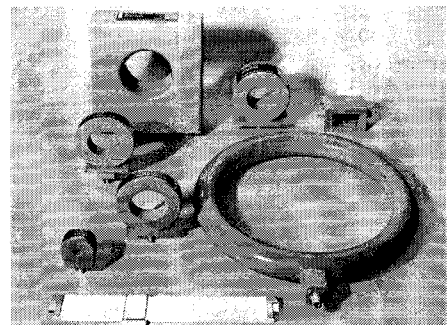
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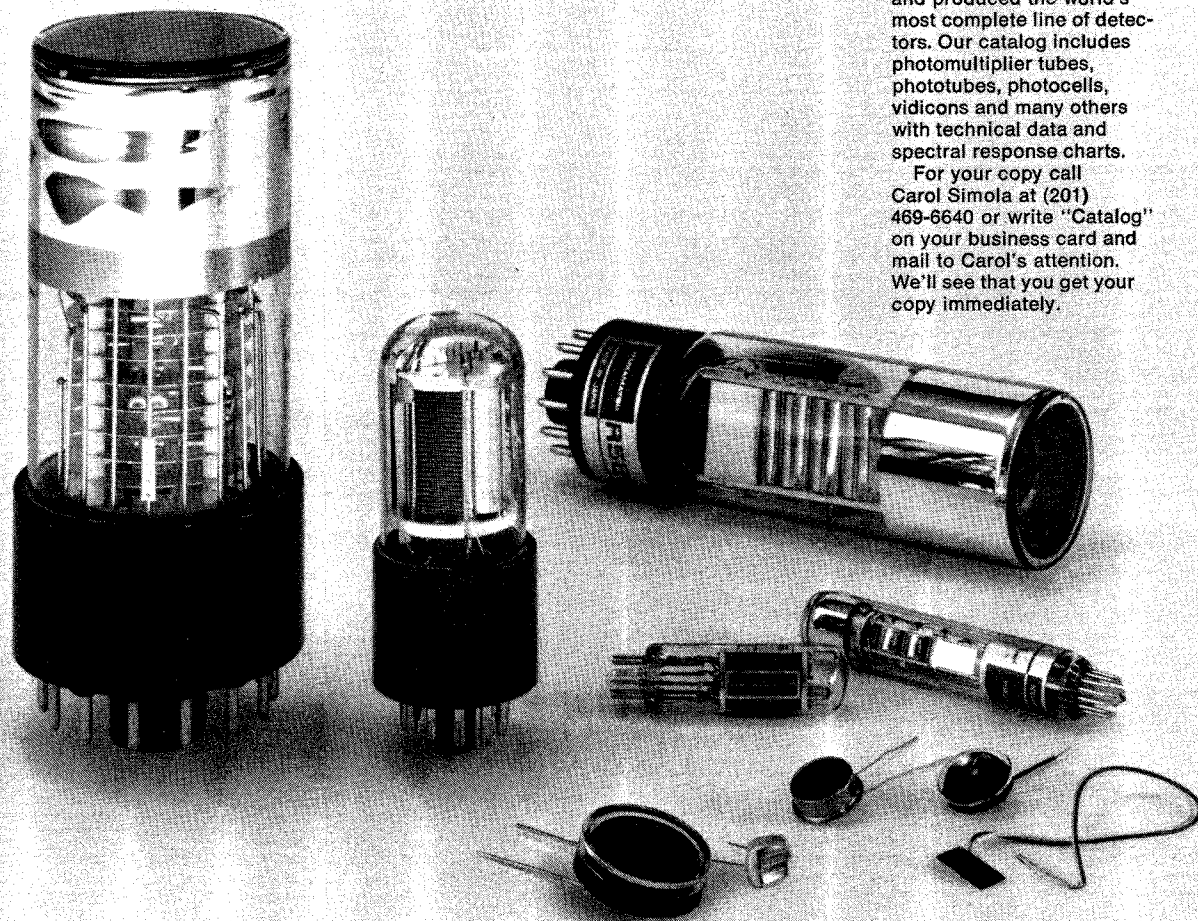
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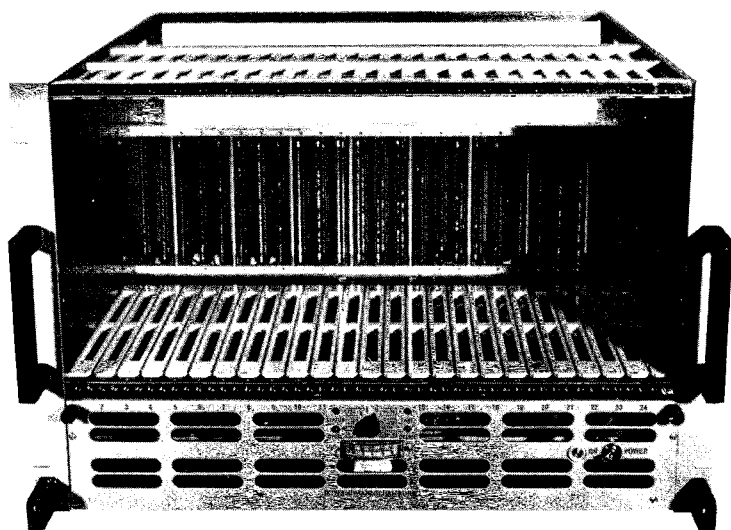


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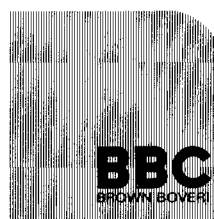
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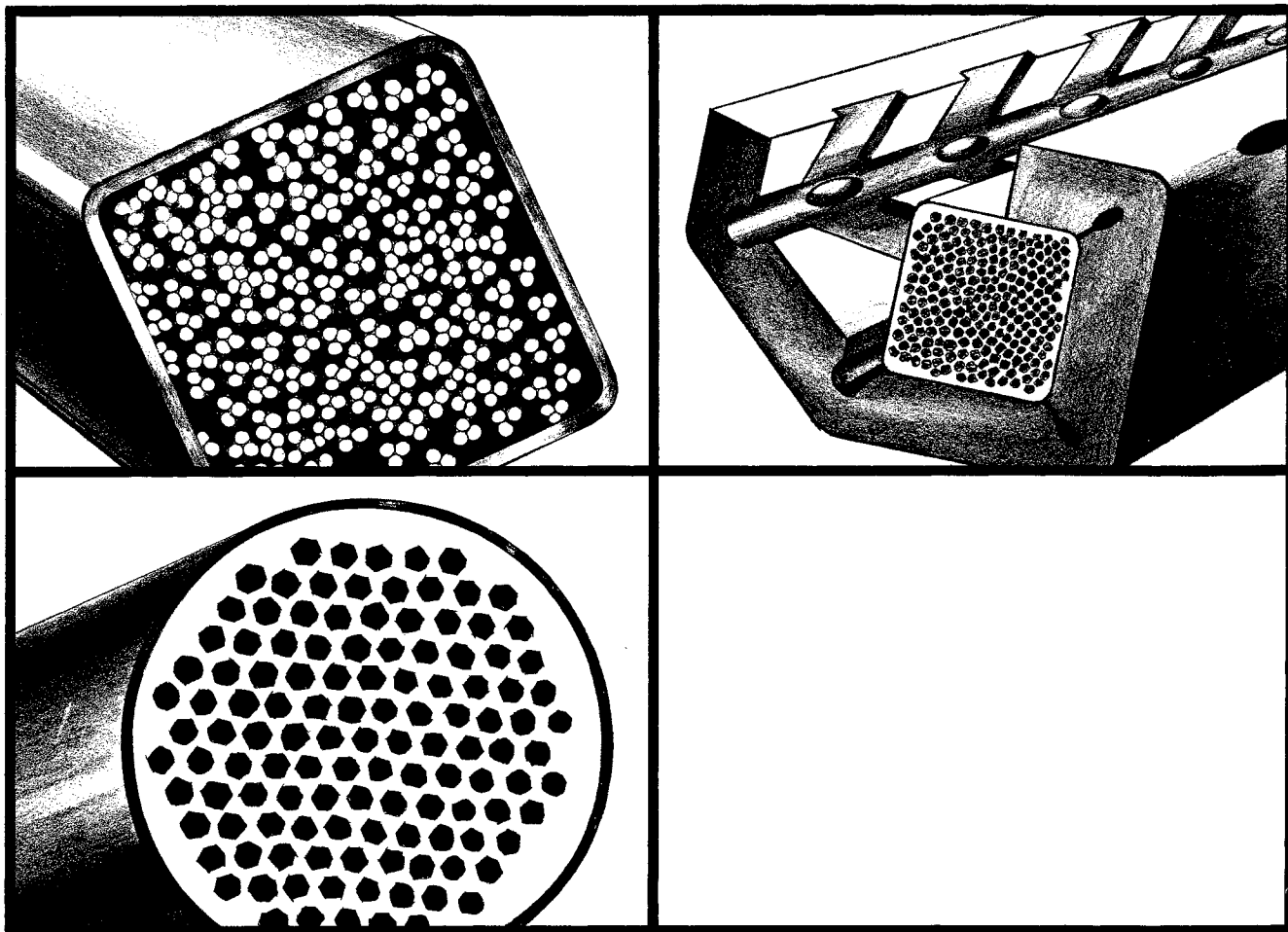
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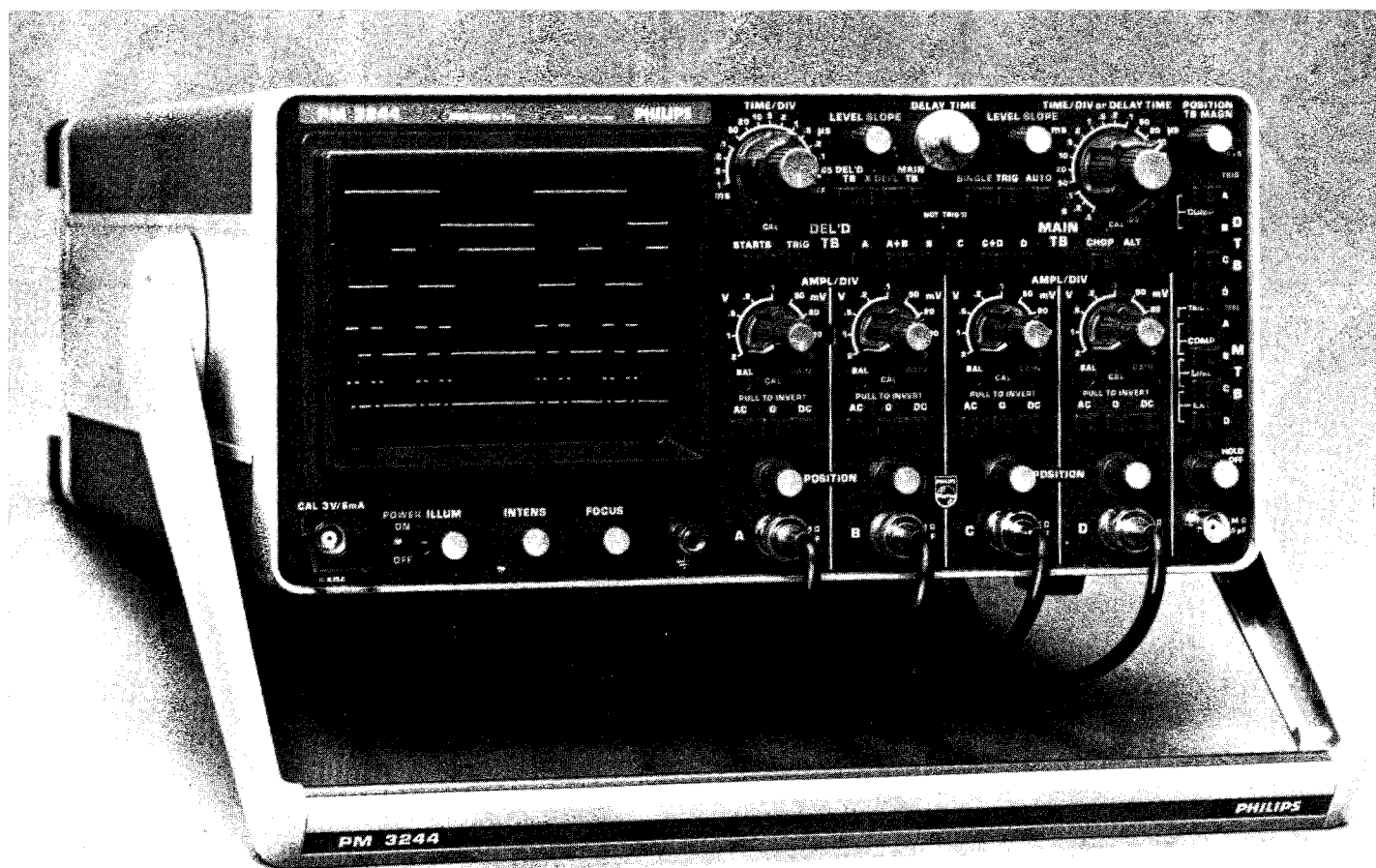
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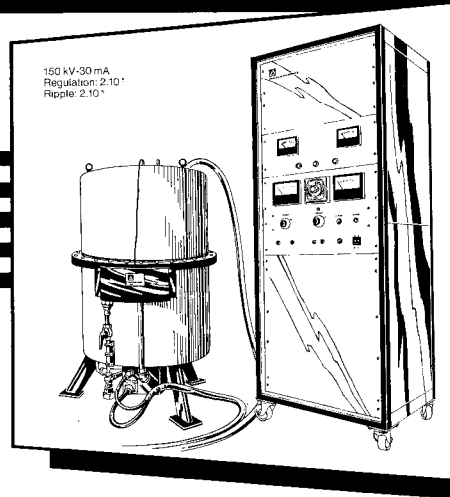
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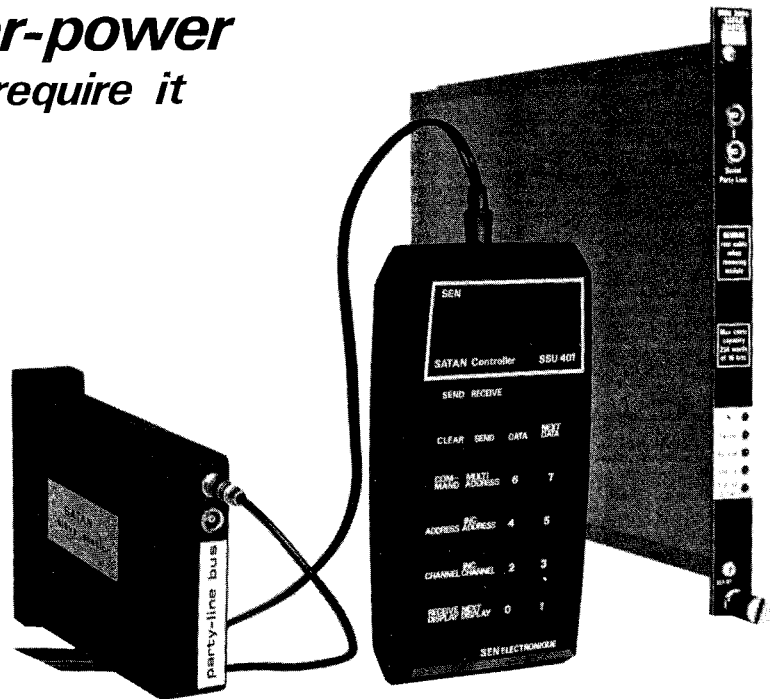
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1 pocket calculator for local insertion of data (SSU 401)

1 CAMAC interface for computer control (SMU 2084)

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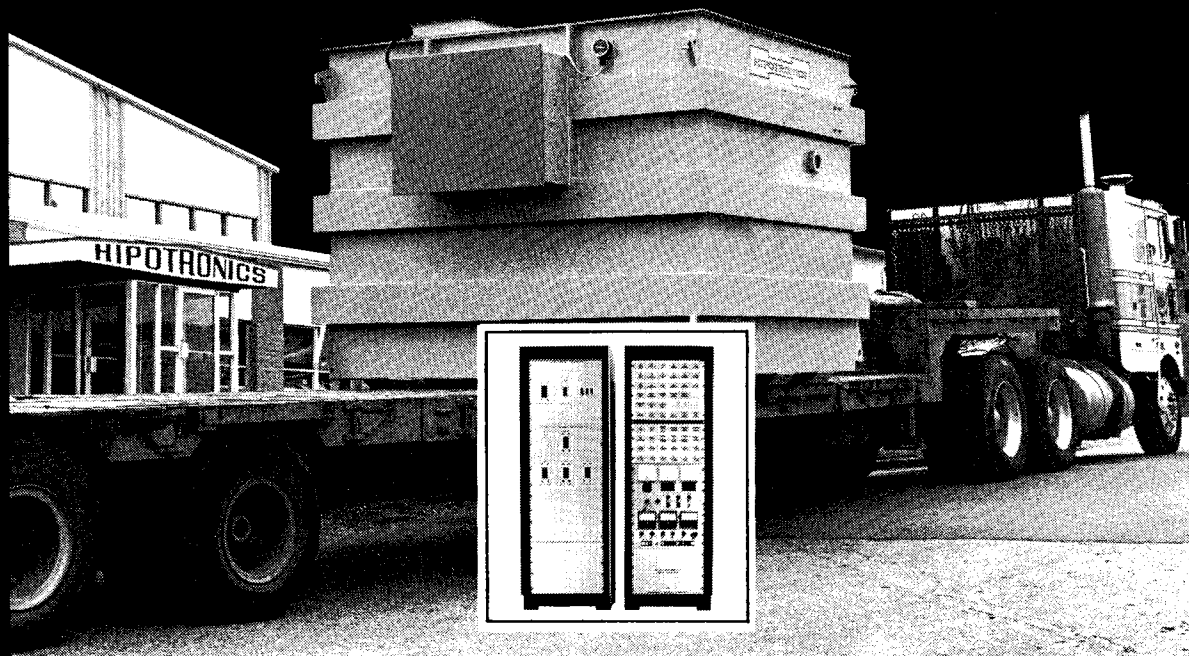
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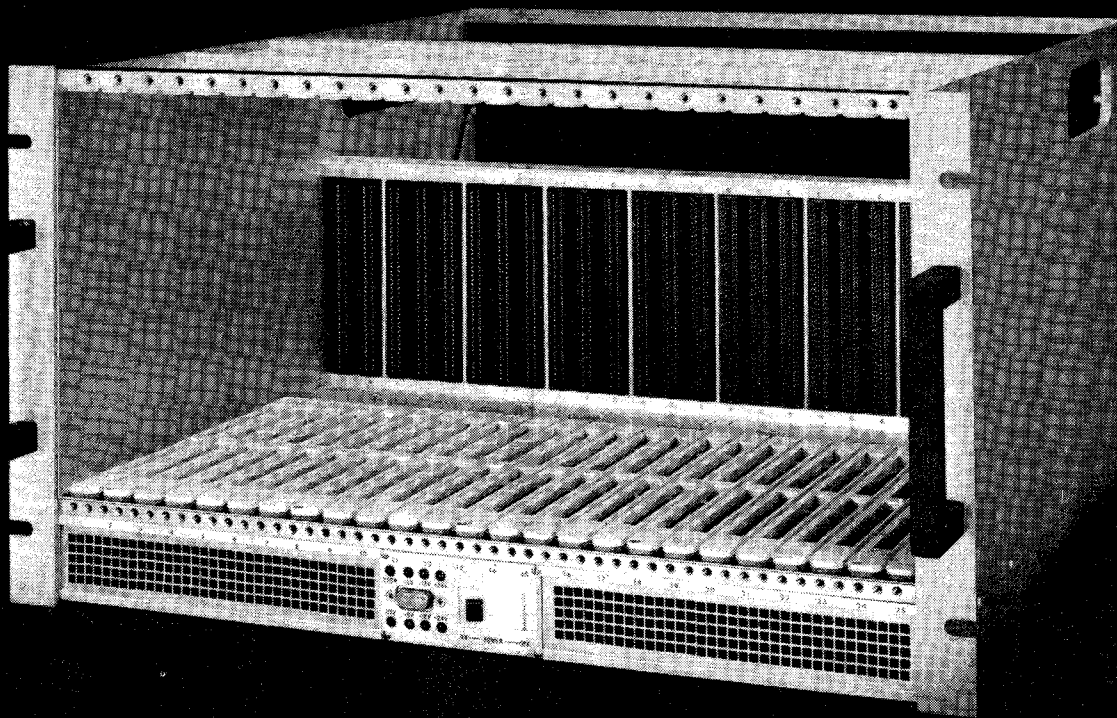
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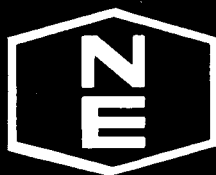
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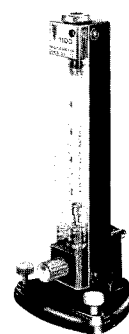
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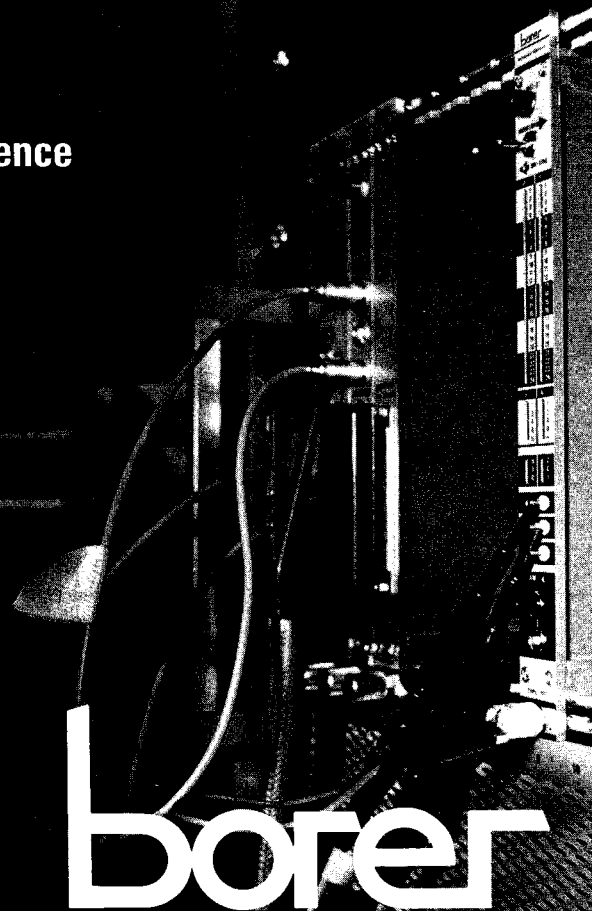
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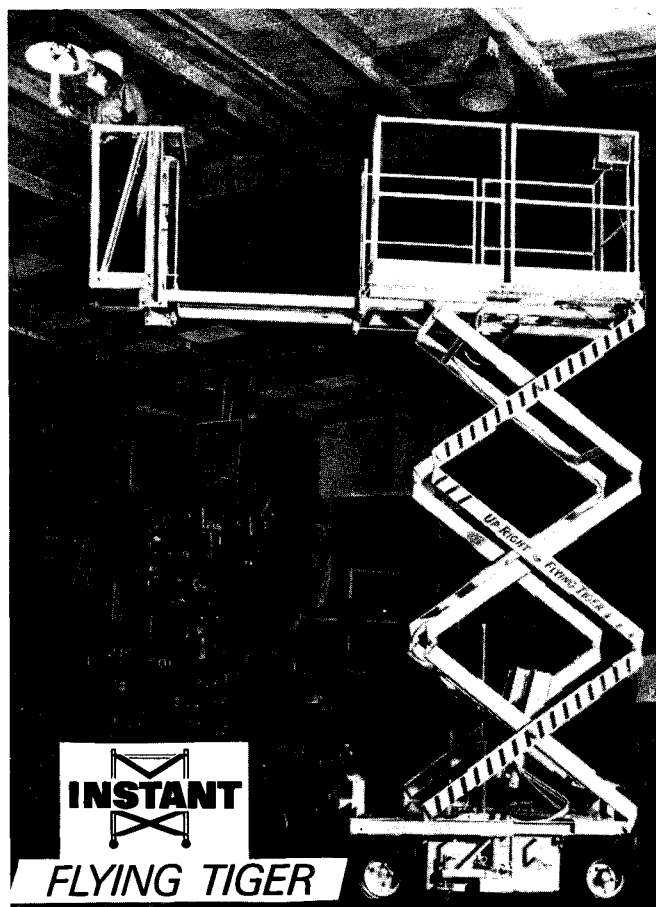
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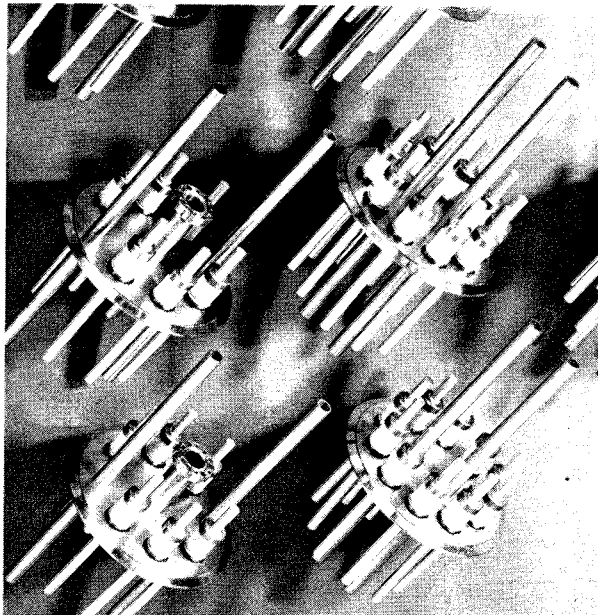
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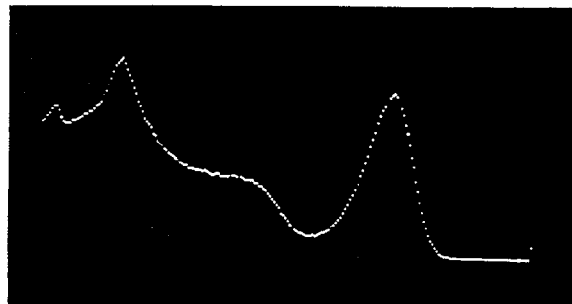
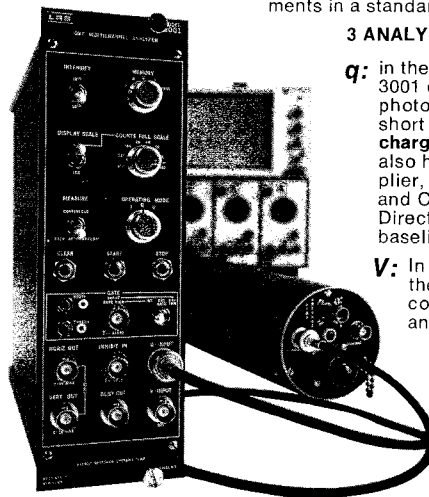
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