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SEMAINE DU LUNDI 2 OCTOBRE 1978

No.40/78

WEEK MONDAY 2 OCTOBER 1978



Le CERN à Annecy

Du 29 septembre au 9 octobre, le CERN présente un stand à la Foire d'Annecy, que vient inaugurer le Premier ministre français, Raymond Barre. Cette foire annuelle, qui accueille plus de 100000 visiteurs, compte pour la région parmi les plus importantes du genre et offre une excellente occasion de présenter notre Laboratoire et ses activités à nos voisins savoyards. A ce stand, conçu par le Groupe des Publications, le visiteur est accueilli pendant toute la durée de la foire par les guides CERN attachés au Service des visites et, rapidement, il est informé sur l'existence des particules par les traces apparaissant dans une grande chambre à sillage lumineux. Ce stand se divise en trois parties: une première partie initie à la physique des particules, la deuxième fait connaître le CERN (aussi bien l'Organisation que ses installations) et la troisième présente le Laboratoire d'Annecy-le-Vieux de physique des particules (LAPP). Si vous êtes à Annecy au cours des dix prochains jours, passez au Parc des Sports et visitez la foire. Vous y découvrirez peut-être quelque chose de nouveau sur le CERN...

CERN at Annecy

From 29 September to 9 October CERN will have a stand at the Foire d'Annecy, which is being opened by the Prime Minister of France, M. Raymond Barre. This Annual Fair is among the biggest of its type in the region, receiving well over 100,000 visitors, and is an excellent opportunity to present our Laboratory and its work to our 'voisins savoyards'. The stand has been conceived and built by the Publications Group and will be manned throughout the Fair by the guides who help the Visits Service. At the entrance, visitors will be introduced to the existence of particles via tracks in a large streamer chamber. The stand itself is divided into three sections—the first projecting particle physics, the second projecting CERN (both as an Organization and in terms of its research facilities), the third projecting the Laboratoire d'Annecy de Physique des Particules (LAPP). If you find yourself in Haute Savoie during the next 10 days, call in at the Foire d'Annecy at the Parc des Sports. You may find out something new about CERN yourself!

COMMUNICATIONS OFFICIELLES

Les membres du personnel sont censés avoir pris connaissance des communications officielles ci-après.

OFFICIALNEWS

Members of the personnel shall be deemed to have taken note of the news under this heading

NEW PHYSICS CO-ORDINATOR FOR THE SYNCHRO-CYCLOTRON

Dr H. RAVN (EP Division) will assume the functions of Physics Co-ordinator for the Synchro-Cyclotron for a period of one year, with effect from 1 October 1978.

L. Van Hove Research Director-General

SEMINARS SEMINAIRES

MONDAY 2 OCTOBER

BEBC USERS' GROUP MEETING - eleventh meeting at 13.45 hrs - Council Room

Agenda:

- 1. Election of the BUG chairman
- Progress reports: SPSC, SPS, BEBC, Beams, EMI, GGM
- Status of HYDRA-PATCHY-PAM FILE organization etc.
- Status of experiments WA24, WA30, WA31 (BEBC TST)

ISR SEMINAR

at 14.30 hrs - ISR Auditorium top floor of building 30

"Questions and answers on LEP"

by E. Keil, W. Schnell, C.J. Zilverschoon CERN

TUESDAY 3 OCTOBER

WORKSHOP ON PHOTON PHYSICS AT HIGH ENERGY

at 9.00 hrs - ISR Conference Room Bldg 30 - 7th floor

To help the SPSC in deciding the future direction of photon physics at the SPS, a whole day workshop on photon physics at high energy is being organized.

Agenda

- 9.00 Programme at FNAL (present and future) by W.Y. Lee
- $\sim~10.00~\text{Vector Mesons}$ at $\leqslant~3~\text{GeV}$
 - 14.00 Inclusive hadron production (small and large p_T including jets)
- \sim 15.00 Charm and beyond.

Anyone who would like to present ashort communication on unpublished results or unconventional ideas is welcome to do so and should contact A. Scribano, EP Division, tel. 6411.

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs - Auditorium *

"Observation of the T' resonance at 10.02 GeV in e⁺e⁻ annihilations"

by B. Pietrzyk/University of Heidelberg and CERN

Abstract : The T' state has been observed as a narrow resonance at $M(T') = 10.02 \pm 0.02$ GeV in e e annihilations, using a NaI and lead glass detector in the DORIS storage ring at DESY. The ratio $\Gamma_{ee}\Gamma_{had}/\Gamma_{tot}$ of electronic, hadronic, and total widths has been measured to be 0.32 $\frac{+}{-}$ 0.13 keV. The parameters of the T particle have also been determined to be $M(T) = 9.46 \stackrel{+}{=} 0.01$ and $\Gamma_{ee}\Gamma_{had}/\Gamma_{tot}$ = 1.04 $\stackrel{+}{-}$ 0.28 keV. The mass difference is $M(T') - M(T) = 0.56 \stackrel{+}{-} 0.01$ GeV. These resonances have been interpreted as bound states of a new quark and its antiquark. What can we learn about the charge of the new quark and about the quark-antiquark potential? What message is contained in the jet parameters? Are they in agreement with QCD ?...

(*) Note: Those attending this seminar are cordially invited to the Salle des Pas Perdus (just outside the Council Chamber) at 16.00 to meet the speaker and for informal discussions Tea and coffee will be provided.

WEDNESDAY 4 OCTOBER

SPS EXPERIMENT COMMITTEE - fifty-seventh meeting
at 9.00 hrs - Auditorium
OPEN SESSION

Agenda:

- 1. Introductory remarks by L. Van Hove.
- Addendum to the proposal for the European Hybrid Spectrometer, Part B: Charged particle identification (Aachen-Brussels-CERN-Mons-Oxford-Rutherford-Stockholm collaboration; W.W. Allison; SPSC/78-91/P42/Add.5).
- Study of m⁻p interactions with neutral final states (IHEP-IISN-LAPP collaboration; F.G. Binon; SPSC/78-95/P110 and 78-96/P110/Add.1).
- Proposal to search for direct evidence for charm production in hadronic interactions at the SPS (CERN-Rutherford collaboration; C. Fisher; SPSC/78-103/P113).

at 11.00 hrs - Conference Room - 6th floor Administration Building CLOSED SESSION

PRESENTATION TECHNIQUE

de 09h00 à 17h00 Parking PTT - Bât. 63 - D/3 plan CERN

MATERA AG (CH) expose les matériels suivants: connecteurs coaxiaux MINLEIT (D) et BELLING & LEE (UK), potentiomètres de précision OHMAG (CH) et THERMEL (F), potentiomètres industriels MATERA (F) et HOFFMANN (D), outil wire-wrap STANDARD PNEUMA-TIC (UK), boîtiers et socles pour CI et CED ARIES, interrupteurs miniatures CONTROLS (US), ligatures de câbles BURNDY (I), tiroirs châssis 19" HAEWA (D), distribution des circuits auxiliaires MEMN (F), porte fusibles, connecteurs BELLING & LEE (UK).

Langues: allemand, français

Renseignements: M. Diraison/FI/4585

THEORETICAL SEMINAR

at 14.00 hrs - TH Conference Room
"Compact variables and path integrals"
by G. West/Los Alamos

DD SEMINAR

à 16h00 - DD Amphithéâtre bâtiment 31 - 3ème étage

"Comment utiliser un système informatique important lors du développement de logiciel pour microprocesseurs"

par J. Montuelle

Abstract: Dans l'environnement du CERN, il est logique d'essayer d'utiliser les facilités offertes par les systèmes informatiques déjà existants pour supporter le développement de logiciel pour microprocesseurs (ou même miniordinateurs). Comme le nombre de combinaisons possibles entre machines supports et machines supportées peut être grand, l'ensemble des services proposés doit être conçu sans faire référence à une machine particulière, toutes les fois que cela est possible. Les principes généraux d'une telle conception et leurs conséquences seront décrits lors de ce séminaire.

(The seminar will be given in French)

THURSDAY 5 OCTOBER

PRESENTATION TECHNIQUE

de 09h30 à 16h30 - Salle 17-1-007 - plan CERN F-6

COSENDAI COMPUTER PRODUCTS (CH) expose une gamme de matériel périphérique informatique: printer/plotter PRINTRONIX (NL), imprimante à aiguille Binder (D), imprimante à marguerite (NL), lecteurs/perforateurs Rodata (CH), consoles visuelles Perkin Elmer, terminal intelligent Ontel, floppy disk et unités de disk pack Calcomp (USA). (Certains seront couplés à un miniordinateur PDP 11). - Alimentations à découpage DC/DC et AC/DC Melcher (CH).

<u>langues</u>: allemand, anglais, français renseignements: M. Diraison/FI/4585

ESO ASTROPHYSICS SEMINAR

at 14.00 hrs - DD Conference Room Bldg 31 - 3rd floor

"Clusters of galaxies"

by R.J. Dickens/Royal Greenich Observatory Herstmonceux, U.K.

Abstract: Optical and x-rays aspects will be discussed.

CERN SEMINAIRE SUR L'ENERGIE

à 16h30 - Amphithéâtre *

"L'utilisation de l'énergie au CERN"

par O. Barbalat

Résumé: Une enquête sur l'utilisation de l'énergie au CERN a été effectuée au cours de ces derniers mois. Dans ce séminaire, on analysera la manière dont l'énergie est employée au CERN. On passera en revue les économies qui ont été faites dans le passé, ainsi que les actions de rationalisation et d'amélioration qui sont en cours ou pourraient être entreprises dans l'avenir.

(*) <u>Note</u>: Les personnes qui ont l'intention de suivre ce séminaire sont cordialement invitées à la Salle des Pas Perdus (face à la Salle du Conseil) à 16.00 heures pour rencontrer et discuter avec l'orateur. Thé et café seront servis.

FRIDAY 6 OCTOBER

CERN SPECIAL PARTICLE PHYSICS SEMINAR

at 15.00 hours (please note starting time) Auditorium *

"Review of the Tokyo Conference -Part II"

by H. Fritzsch/Universities of Wuppertal & Berne : Present status of weak interaction theories

K. Tittel/University of Heidelberg: Neutrino interactions

E. Gabathuler/CERN : Electromagnetic interactions (e⁺e⁻, γp , $\mathcal{l}^+ p$...)

(*) Note: Those attending this seminar are cordially invited to the Salle des Pas Perdus (just outside the Council Chamber) at 14.30 hrs to meet the speakers and for informal discussions. Tea and coffee will be provided.

MONDAY 9 OCTOBER

CERN NUCLEAR PHYSICS SEMINAR

at 11.00 hrs - Theory Conference Room
"Nuclear polarizabilities"

by R. Leonardi/CERN

EP SEMINAR

at 11.00 hrs - EF Conference Room Bldg 13-2-005

"EGS - a versatile, 'user-oriented' Monte Carlo program for the simulation of electromagnetic cascades"

by Walter R. Nelson/CERN and SLAC

'BRITAIN AT CERN'

CERN-MEYRIN, October 9-13, 1978 - ADMINISTRATION BUILDING, 1st FLOOR

EXHIBITION OF BRITISH INSTRUMENTATION, COMPONENTS AND EQUIPMENT

OPENING HOURS: 10.00 a.m. - 5.30 p.m. (closing Friday at 12.00 a.m.)

Twenty-three British firms will be presenting their latest technology at the 'Britain at CERN' Exhibition. This exhibition is being organized by the British Electrical and Allied Manufacturers' Association (BEAMA) on behalf of the Group of Associations of Manufacturers of British Instrumentation, Control and Automation (GAMBICA)* under joint venture arrangements with the British Overseas Trade Board (BOTB).

We include here a summary of the products which will be on show or demonstrated by the companies' technical staff.

AEI SEMICONDUCTORS LIMITED - Stand 16 Carholme Road Lincoln LN1 1SG England

Contact: D.J.D. Westgarth
Telephone: 0522 29992 - Telex: 56163

BECKMAN INSTRUMENTS LIMITED - Stand 8
Queensway
Glenrothes, Fife KY7 5PU
Scotland

Contact : M. Peterschmitt MEGEX (CH)

Telephone: 0592 753 881 - Telex: 72135

BELIX COMPANY LIMITED - Stand 19
175 Hook Road
Surbiton
Surrey
England

Contact : D.H. Norris Telephone : 01-397 0921 - Telex 8951747

BENNEY ELECTRONICS LIMITED - Stand 6
1A Telford Road
Ferndown Industrial Estate
Wimborne
Dorset BH21 7QN
England

Contact : K.F. Benney
Telephone : 0202 892130 - Telex : 47588

AEI Semiconductors have been a regular exhibitor at previous British exhibitions at CERN, and this year will be featuring large diameter silicon thyristors with distributed amplified gates. Other exhibits will include fast recovery rectifier diodes, and water and air cooled solid assemblies.

The exhibits include range of precision potentiometers; turns-counting dials; single and dual in-line resistor networks; planar gas discharge and liquid crystal displays; hybrid microcircuits manufactured by Beckman and marketed through the Glenrothes, Scotland, International Office, and by subsidiaries and dealers in all major European countries.

The Belix Company Limited, manufacturers of low-voltage stabilised power supplies, will be showing some of their products as detailed below.

New! CERN standard stores issue blocks to CERN specification 222. Switch mode and linear regulated. Seven output ratings ranging from 5 to 24 volts, 0.5 to 20 amperes. CERN standard NIM type plug-in supplies. A selection of 5 units from the complete range. Standard catalogue switch mode and linear power supplies. Showing 19 units from the range varying from 5 to 500 volts, 100 mA to 60 amperes. Belix also specialize in producing a wide range of single and multioutput units to customer specifications.

The company's activities include the supply of temporary skilled personnel, both in the UK and overseas. Also, they are manufacturers of NIM Bins and Modules (Nuclear Instrument Modules) and CAMAC Modules. Their new portable Mini-NIM-Bins will be exhibited, with various power supplies incorporated. Other new products will include timers (plug-in and process), counters and gas detectors. Temporary personnel are available outside the UK include engineers, technicians, wiremen/women, draughtsmen/women, illustrators, tracers, fitter-machinists, inspectors, computer,

BRENTFORD ELECTRIC LIMITED - Stand 14
Manor Royal
Crawley
West Sussex RH10 20F
England

Contact : G.H. Hildreth

Telephone: 0293 27755 - Telex: 87252

COUTANT ELECTRONICS LIMITED - Stand 20 Trafford Road Reading Berkshire England

Contact : M.C. Pee1 Telephone : 0734 55391 - Telex : 847519

DATA LABORATORIES LIMITED - Stand 12 28 Wates Way Mitcham Surrey CR4 4HR England

Contact: R. Widenka Telephone: 01-640 5321 - Telex: 947680

EDWARDS HIGH VACUUM - Stand 10 Manor Royal Crawley West Sussex RH10 2LW England

Contact: M. Jenkins Telephone: 0923 28844 - Telex: 87123 secreterial and typing categories (bi- and multilingual). Addresses of local officies can be obtained from the exhibition stand.

The 'BONIFACE'* exhibit is the development prototype of a fundamentally new type of self-contained precision dc laboratory standard for calibration of high accuracy dc transducers. Its salient characteristics are:

Measurement Range: + 5kA through zero to - 5kA Linearity and Repeatability errors: Each 1 x 10^{-6} full scale

Setting Time: Several seconds

Temperature Range: Water to 25° C, ambient to 35° C Display: Digital readout with constant multiplier Supplies Needed: 220/240 V, ac single phase, 50Hz, town water (15 l/min).

The instrument is transportable and requires no Weston cells, precision potentiometer, galvanometers or other calibrated instructions. Production models will have digital print out and IEEE data bus facilities.

* BONIFACE = Brentford/Oxford Nmr Instrument For Accurate Current Evaluation.

Specialists in power units, Coutant will be showing examples of their latest additions to an already well-established range of stabilized units. Single and multi-output modular supplies from the 'A' series and 'ESM' systems range will be available together with the latest 'H' series open frame construction linear units offering excellent value for money. Switch mode power units being shown include the 'SOL' range of direct off mains switching units and the 'SRP' switching regulators. For laboratory use Coutant have a range of continuously-variable, metered units providing well-regulated and reliable outputs.

Datalab will be showing a comprehensive range of digital waveform storage and processing equipment including the DL922 20MHz recorder and the new DL2800 high-resolution multichannel recording system. The new unit may be configured to a maximum of 30 channels with readout to any oscilloscope, chart recorder or digital computer. The datalab DLmicro4 system for signal averaging applications and the generation of other statistical signal-processing functions will also be on show. This now incorporates a microprocessorbased module for off-line arithmetic operations, display manipulation and Fourier transforms.

Edwards High Vacuum will be exhibiting a wide selection of products from their range, including direct drive and belt-drive high-vacuum pumps, vacuum-measuring equipment, new vacuum valves, and vacuum oils. The unique Diffstak pumping system, which combines clean, fast pumping with compactness, convenience and economy, will also be shown. In addition, the LT104 mass spectroneter leak detector, and a 306 vacuum coater for electron microscope specimen preparation will be on display. Edwards products are available from stock from N. Zivy et Cie SA, of Obervil-Basel (Tel. 061 54 23 83), who also provide a full pre-sales and after-sales service in Switzerland.

EMI ELECTRON TUBES - Stand 2 A Division of EMI Industrial Electronics Ltd 243 Blyth Road Hayes Middlesex UB3 1HJ England

Contact : L.M. Sargent

Telephone: 01-573 3888 - Telex 935261

EXACTA CIRCUITS LIMITED - Stand 15 Shawburn Factory Selkirk Scotland

Contact: J. Pinkney

Telephone: 0750 21601 - Telex 72501

GRENSON ELECTRONICS LIMITED - Stand 11
High March
Daventry
Northants
England

Contact: S.G. Taylor

Telephone: 032 72 5521 - Telex: 311245

HUGHES MICROELECTRONICS LIMITED - Stand 8
Fullerton Road
Queensway Industrial Estate
Glenrothes
Scotland

Contact: M. Peterschmitt MEGEX (CH)

Telephone : 592 754 311 - Telex : 72148

IMHOF BEDCO STANDARD PRODUCTS LIMITED Ashley Works
Ashley Road
Uxbridge
Middlesex UB8 2SQ
England

Contact : P.S. Buxton

Telephone: 89 37123 - Telex: 24177

The EMI photomultiplier-tube range includes fast-response types from 19mm to 130mm diameter versions with high first dynode gain, wide choice of spectral response and different basing configurations. These are primarily intended for use with fast scintillators or Cerenkov counters, where parameters such as high gain, single electron resolution, high quantum efficiency, or good linearity are important. A comprehensive range of general purpose tubes is also available as well as a capability for individual tube selection and development of custom designed tubes. Samples of the latest developments in EMI image intensifiers, silicon avalanche photodiodes and camera tubes will also be on display.

Exacta Circuits Limited specialise in the design and manufacture of high-quality printed circuits boards to the stringent standards demanded by the professional sectors of the electronics industry. With a work-force of 400 people and customers including leading manufacturers of computers and computer peripherals, of defence and aerospace equipment, of business systems and of industrial electronics equipment, Exacta is naturally the major manufacturer of its kind in the UK. Exacta will be exhibiting high-density through hole plated, multilayer and flexible-rigid printed circuit boards together with microwave-bonded packages.

Grenson Electronics Limited are manufacturers of stabilized power supplies and specialize in the production of NIM and CAMAC powered crates and power supplies. These are available in several different configurations with a variety of power outputs. The power supplies in the powered crates are all plug-in to facilitate replacement and removal for servicing. They are also agents for Wallis Electronics Limited who are specialists in the manufacture of High Voltage Power Supplies, both rack mounting and modular for incorporation in the user's equipment. Voltages up to 100kV and power outputs up to 100W are available using solid-state and RF technique designs for CRT, photomultiplier and insulating testing applications.

Hughes will be featuring CAMAC connectors, tantalum capacitors, MOS, with special emphasis on COMIC, and hybrids.

Imhof-Bedco are showing their new modular subrack system, Inta-Euro. This has been developed to cater for three alternative specifications within the one system, including Eurocard. The other specifications are both intended to allow more of the available height within the frame to be used. Frames are offered in 4 heights with a choice of 3 depths and the front aperture may be either 427mm or 432 mm. The system provides a wide range of optional plug-in modules with a variety of different connector mounting methods which cater for most popular makes and models including connectors to DIN 41612.

MICRO MEASUREMENTS LIMITED - Stand 13
a Member of the AI Group of Companies
London Road
Pampisford
Cambridge CB2 4EF
England

Contact : C.T. Dodkin

Telephone: 0223 834420 - Telex: 817536

MUIRHEAD VACTRIC COMPONENTS LIMITED - Stand θ Garth Road Morden Surrey SM4 4LL England

Contact : E.M. Binyon

Telephone: 01-337 6644 - Telex: 27796

NUCLEAR ENTERPRISES LIMITED - Stand 3 Sightill Edinburgh EH11 4EY Scotland

Contact : E.K.S. Grant (Miss)
Telephone : 031 443 4060 - Telex : 72333

OXFORD INSTRUMENTS - Stand 17 Osney Mead Oxford OX2 ODX England

Contact : D. Shaw

Telephone: 0865 41456 - Telex: 83413

OPTOMAX is a modular designed, television scanning image analysis system providing a high speed capacity for measurement. Input to the system is via either a microscope or macro-viewer and regions of interest in the image are selected according to grey level. Measurements available are typically area, length (in a defined direction) and positions of a selected feature in a field of view, a count of the total number of selected features in a field of view is also provided. Extensions to the system for the measurement of particle size distributions and a wide range of other parameters are available. The AI Group of Companies also embodies AI Industrial, specialists in all aspects of Leak Detection. A comprehensive range of portable instruments is available to answer the many and varied leak detection problems experienced throughout industry. Minute component flaws or leaks may be located easily, accurately and with no mess. Tailor-made automatic and semi-automatic leak detection systems are also available for overall quality control testing of components on production lines.

Exhibited will be a wide range of servo and control components which includes: synchros, resolvers, ac and dc servo motors, motor tachometers, dc torque motors and precision gearheads, optical shatt encoders, synchro to digital and digital to synchro converters, servo amplifiers, fully packaged servo systems. Also on show will be a new range of industrial type stepping motors including size 13 and the new size 11&15 optical shaft encoders.

The Nuclear Enterprises exhibit will include the following latest developments in its NIM and CAMAC modular ranges. NE 4694 is a simple inexpensive 1024-channel analyser, with built-in ADC, designed for monitoring signals in large dedicated nuclear electronic systems. It is ideally suited for teaching. NE 4800 multichannel high voltage system is basically for use with scintillation detector arrays utilising large numbers of photomultipliers. High voltage to each photomultiplier may be set anywhere in the range 300V to 3000V. A data logging system demonstrating the versatility of CAMAC microprocessor developments includes two examples of the 9081/9089 combination. One occupying the control station and the other a normal station, are operating independently in one CAMAC crate but communicating with each other by means of the auxiliary control bus.

Oxford Instruments is one of the world's leading companies in the field of cryogenics, and specializes in applications using superconducting magnets. The company offers a standard range of cryostats, working down to liquid helium temperatures, for use with all spectroscopic techniques, examples of which will be exhibited. Major field of activity at the moment is in the production of highly homogenous magnets with fields to 10.8 Tesla for high resolution NMR, and closed cycle coolers for use with infra-red and gamma ray detectors. Oxford Instruments has a group of skilled engineers who are prepared to undertake indivudual projects.

*(Nuclear Magnetic Resonance)

PLESSEY CONTROLS LIMITED - Stand 9
Sopers Lane
Poole
Dorset BH17 7ER
England

Contact : W.D. Waterhouse

Telephone: 020 13 5161 - Telex: 41272

RACAL-DANA INSTRUMENTS LIMITED - Stand 18
Duke Street
Windsor
Berkshire SL4 1SB
England

Contact : C.J. Norris

Telephone: 07535 69811 - Telex: 847013

SE LABS (EMI) LIMITED - Stand 4
North Feltham Trading Estate
Feltham
Middlesex
England

Contact : D. Ashby

Telephone: 01-890 1477 - Telex: 23995

SOLARTRON ELECTRONIC GROUP LIMITED - Stand 5 Victoria Road Farnborough Hants England

Contact : J.D. Shaw

Telephone : 0252 42512 - Telex : 858245

Plessey Controls Limited have developed in the United Kingdom read out circuits for multi-wire proportional chambers based on custom silicon circuits and custom surface acoustic wave devices. Prototype devices have been manufactured and evaluated. Designs have been revised to enhance performance and sample assemblies manufactured to introduce the potential user to the benefits gained by custom monolithic integration. Plessey integrated circuit technology in particular "Bipolar Process III" is well suited to the task of producing a fast, accurate discriminator combined with strobed memory on a single chip. The surface acoustic wave technology provides precise high-stability delay with good pulse resolution in a small physical size and with low power consumption.

Racal-Dana is an international instrumentation group with production and marketing facilities in the USA, the UK and France, specializing in the design and manufacture of high technology test and measurement equipment. Of prime interest is the wide selection of digital voltmeters ranging from handheld, battery operated multimeters for service engineers to premium performance dvm's for standards laboratories or calibration centres. Also on view are test instruments for the radio communications industry including an RF Millivoltmeter together with a range of microwave counters for frequencies up to 20GHz.

SE Labs (EMI) Limited is exhibiting a selected group of instruments from its range of data recording, data products and instrumentation products. The SE 7000 portable instrumentation magnetic tape recorder offers a standard of performance hitherto obtained only with laboratory installations. The Irig compatible SE7000 range offers up to 42 track capability on 1 inch tape. Other exhibits include pressure transducers, signal conditioning equipment, the SE6150 6 inch UV recorder and the new SE6300 combination UV recorder covering both 8 inch and 12 inch applications. Computer peripheral equipment to be shown includes SE1004 electrostatic printer/plotter and the SE8000 digital tape transport.

Solartron will be exhibiting their microprocessor voltmeter with scale length of 14,000,000 digits as well as their microprocessor voltmeter which offers data processing facilities in addition to the normal measurement facilities such as dc volts, ac volts and resistance. This microprocessor voltmeter will be shown working with a visual display unit via an RS 232 link. Also on display will be the new multimeter type 7045 which brings microvolt integrity to the field of portable multimeters. Featured on the stand will be the very latest computer controlled data acquisition system which may be used with up to 4000-channels of input signal.

UNION CARBIDE UK LIMITED - Stand 1
Redworth Way
Aycliffe Industrial Estate
Co Durham
England

Contact : P. Berry

Telephone: 0325 312581 - Telex: 58401

WILLSHER & QUICK LIMITED - Stand 8 Walrow Highbridge Somerset TA9 4QA England

Contact : M. Peterschmitt

MEGEX (CH)

Telephone: 0278 783371 - Telex: 46145

Union Carbide UK Limited, Cryogenics, will be exhibiting their range of cryogenic containers for the storage and handling of liquefied gases, together with a complete range of accessories.

Willsher & Quick manufacture a range of enclosures and equipment for the electronics and electrical industries. The standard range of products includes 19" racking systems, subracks and cases for PCB's and modules, rack cooling modules and instrument trolleys. On display will be an example of the Ultima SR range of 19" racks and accessories — all available ex stock in flat pack or assembled form. Twenty-four models are available in the standard range. Rack cooling modules are high performance single fan units providing effective cooling of electronic instrumentation mounted in rack. Completing the display will be instrument trolleys and a selection of steel enclosures for electrical applications.

* GAMBICA
Group of Associations of Manufacturers
of British Instrumentation, Control and
Automation
8 Leicester Street
London WC2H 7BN
England

Telephone : 01-437 0678 - Telex : 263536

GAMBICA represents the trade associations of British instrumentation, control and automation. Constituent associations are British Industrial Measuring and Control Apparatus Manufacturers' Association (BIMCAM), Control and Automation Manufacturers' Association (CAMA), and Scientific Instrument Manufacturers' Association of Great Britain Limited (SIMA) all of which are members of the BEAMA Federation.

GAMBICA combines the resources of the three associations on issues of common interest while each retains its full autonomy. The combined membership of the three constituent associations is some 240 firms with an annual turnover of £1000 million of which over 50 per cent is exported.

Inquiries: M. DIRAISON / FI / 4585

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TRAINING AND EDUCATION ENSEIGNEMENT

WEDNESDAY 4 - THURSDAY 5 OCTOBER

ACADEMIC TRAINING

at 11.00 hrs - Theory Conference Room Bldg 4

"Theory of perturbation of the point spectrum" by W. Thirring/University of Vienna

JEUDI 5 OCTOBRE

ENSEIGNEMENT GENERAL

de 13h00 à 13h30 - Amphithéâtre "Science pour tous" par R. Carreras

INFORMATIONS GENERALES GENERAL INFORMATION

ALIMENTATION EN ELECTRICITE - Site MEYRIN

Du 1undi 2 octobre 1978 à 7h00 au mardi 10 octobre à 17h00, la liaison électrique 130 kV sera mise hors tension pour effectuer des travaux dans les sous-stations de VERBOIS et du CERN des Services Industriels.

Les alimentations de remplacement qui sont mises en service durant toute cette période permettent d'assurer une puissance strictement limitée.

Le programme d'utilisation de la puissance disponible a été discuté et approuvé au sein du groupe de travail des responsables des alimentations électriques (G.R.E.C.).

Sauf imprévu, ces restrictions ne devraient pas avoir de répercussion sur nos activités. Il est cependant très important de respecter les consignes pour éviter, par exemple, une coupure générale intempestive de notre alimentation électrique suite à l'enclenchement non programmé d'une installation de forte puissance.

Nous attirons l'attention de tous les utilisateurs sur cette information.

Pour tous renseignements complémentaires, adressez-vous à :

- J. GOLLIET - Tél. 3146

- R. Razurel - Tél. 2177 - 2201

Division SB

AVIS DE DECES

Nous avons le regret d'annoncer le décès de Monsieur Walter Wünsche, survenu le 21 septembre 1978 à la suite d'une longue maladie.

Monsieur Wünsche travaillait à la Division PS depuis le ler février 1955. Monsieur Wünsche laisse une veuve et trois enfants.

Les Directeurs généraux ont envoyé un message de condoléances de la part du personnel du CERN à la famille.

Division du Personnel

MERCREDI 4 octobre 1978 à 14 heures Amphithéâtre - Bâtiment de l'Administration

DESENFUMAGE LORS D'INCENDIE DANS DES LOCAUX INDUSTRIELS

(Durée 1h30 environ - langue : français)

Exposé avec projection par des représentants de COLT International GmbH.

Division HS Groupe Activités Divisionnaires

WEDNESDAY 4 October 1978 at 14.00 hr Auditorium - Administration Building

SMOKE EXTRACTION IN INDUSTRIAL BUILDING FIRES

(Duration approximatively 1 1/2 hour - language : French)

Illustrated talk by representatives of COLT International GmbH.

HS Division Divisional Activities Group

ON RECHERCHE

un colis en provenance de la maison AUTOPHON et qui contient l Vidicon 20 PE 20.

La personne qui le détient est priée de prendre contact avec M. Schellenberg, Réception des Marchandises - tél. 4583.

REINTEGRATION - Sécurité sociale française

La prochaine permanence de la Sécurité sociale française aura lieu :

mardi 3 octobre de 14h00 à 15h00 salle de conférence No 2 - Div. EP ler étage - Bât. 5

Les personnes intéressées sont priées de prendre rendez-vous en téléphonant au Secrétariat des Affaires sociales, interne 4201.

Plats du jour des restaurants

semaine du 2 au 6 octobre 1978

Midi/Lunch Time Prix	No. 1 Bâtiment Administratif Administration Building Meyrin (CH)	No. 2 Bâtiment 504 Building 504 Meyrin (CH)	No.3 Bâtiment 866 Building 866 Prévessin (F)
LUNDI/ MONDAY	I Ravioli au jambon II Steack haché Pommes frites Haricots verts	I Longeole aux lentilles II Steack grillé Frites Légumes	Vol-au-vent Riz Salade
MARDI/ TUESDAY	I Schubling grillé II La soupe des pêcheurs	I Attriaux à la genevoise II Sauté d'agneau aux légumes Riz Pilaw	Escalope de porc panée Frites Haricots verts
MERCREDI/ WEDNESDAY	I Spaghetti napolitaine II Attriaux genevois Pommes mousseline Petits pois cassés	I Croquettes de poisson II Langue de boeuf Sauce aux câpres Pommes boulangère Légumes	Filets de poissons provençale Pommes nature Petits pois
JEUDI/ THURSDAY	I Oeufs durs bourguignonnes II Boeuf en daube Knopfli Petits pois	I Boulettes napolitaine II Quiche lorraine Légumes	Foie de génisse Spaghetti Légumes
VENDREDI/ FRIDAY	I Riz albufera II La marée du jour garnie	I Assiette de thon niçoise II Cabillaud à la normande Pommes persillées Légumes	Steack grillé Pommes purée Légumes
RESTAURANT 3 SPS	ouvert jusqu'à 20.00 h 2. Dès le lundi 16 octobr	ctobre, le bar du Restauran 1. re, à titre d'essai, un ser lundi au vendredi entre 18	vice de restauration

CERN BULLETIN ASSOC

ASSOCIATION DU PERSONNEL STAFF ASSOCIATION

COMITE EXECUTIF

Le Comité Exécutif a rappelé que les propositions de modifications des Statut et Règlement doivent être considérées comme un tout. Dans cette optique, les aspects financiers ne peuvent être dissociés des aspects sociaux.

Le Comité Exécutif soutient la position des délégués à la Commission de recours : les recommandations de la Commission doivent être indépendantes des quotas.

EXECUTIVE COMMITTEE

The Executive Committee stressed that the proposed amendments to the Staff Rules and Regulations should be regarded as a package and that the financial aspects could not be separated from the social aspects.

The Executive Committee supported the view of the Staff Association representatives on the Joint Advisory Appeals Board that the Board's recommendations should be independent of the quotas.

CLUBS

SKI CLUB

RAPPEL AUX MEMBRES DU CLUB

Seuls les responsables de commissions sont autorisés à téléphoner du CERN en officiel au nom du Ski-Club.

RANDOMNEES PEDESTRES

ATTENTION: Changement de date et de lieu.

La prochaine sortie aura lieu à l'Aiguillette (via les Houches) dans la merveilleuse région de Chamonix, le dimanche 15 octobre 1978.

Durée : 3h30 environ. Responsable : R. OBERLI

Rendez-vous Parking MIGROS - Cité Satellite MEYRIN à 7h30.

Un deuxième rendez-vous, pour les retardataires, est prévu à 9h. à la gare SNCF des Houches. Comme toujours prévoyez de bonnes chaussures de marche et un pique-nique.

GROUPE COMPETITION

Le Groupe Compétition Alpine organise sa réunion d'automne le <u>dimanche 8 octobre 1978</u> - à Praz de Lys (Haute-Savoie).

Les personnes intéressées par la compétition alpine et désirant des renseignements sur cette activité peuvent contacter B. GAY PS/ML Tel 2199.

RUGBY

Résultats

Ie samedi 23 septembre en match de championnat CERN I a battu le Sporting de Genève par 19 à 6. Le même jour CERN II gagnait **le** match contre RC MONTHEY sur un score de 40 à 3.

Prochains matchs

Le samedi 30 octobre CERN I jouera contre Stade Lausanne en championnat à Lausanne. CERN II se déplacera le dimanche ler octobre à Morez pour un match amical. Entraînement de l'école de Rugby le samedi 30 à 13h. suisse.

FOOT-BALL

Résultats de la Coupe :

1/4 de finale : DD - GIS 3/0 (Forfait)

SP2 - EPF 3/1 SPS - FI 2/0 ECS - BOOSTER 2/0

1/2 finale : DD - SPS 3/3

(après prolongations. SPS qualifié aux corners).

SP2 - ECS 4/2

La finale opposera l'équipe SP2 à l'équipe SPS. Ce match aura lieu le SAMEDI 7 OCTOBRE à 10H00 sur le terrain CERN.

Venez nombreux encourager les finalistes. Après la rencontre, APERITIF au RESTAURANT No3 (situé sur le sîte de Prévessin) au cours duquel, les COUPES et RECOMPENSES pour la saison 1978 seront remises.

PHOTO CLUB

CONCOURS ANNUEL

L'exposition des épreuves du concours annuel aura lieu dans la semaine du 9 au 13 novembre. Le règlement du concours 1978, inchangé, sera envoyé à tous les membres du Photo-Club. Les non-membres intéressés pourront l'obtenir auprès de J.C TARLE - tél. 4716. Du débutant à l'expérimenté, ce concours est ouvert à tous grâce aux différentes catégories, de plus, le sujet est libre..... Les travaux seront à remettre à J. COLLOMBET/HS ou à J.C TARLE/EP, le MARDI 7 NOVEMBRE au plus tard.

COURS LABORATOIRE

Un cours de laboratoire est ouvert aux débutants et aux personnes désirant consolider certaines pratiques de base (développement de film, agrandissement monochrome, film trait....). Il aura lieu chaque jeudi soir de 18h à 22h. du 12 octobre au 30 novembre.

Ce cours sera donné par A. VAN PRAAG/DD, auprès duquel vous pourrez obtenir le programme et le calendrier détaillés.

L'inscription est de 75FS pour les membres du Photo-Club, et de 90FS pour les non-membres. LE NOMBRE DES ELEVES EST LIMITE.

CRICKET CLUB

24/9/78 v. Geneva C.C. at Stade de Richemont CERN 101 all out, Geneva 102 for 4. Geneva won by 6 wickets.

BRIDGE CLUB

Last week's winners were :

1st. PARA and FURMANSKI 30 Positive IMPS.

11

2nd. KOOIJMANN and RUDGE 28 3rd. KEMP and Mc READIE 5

Next tournament - everybody welcome. Please send to A. RUDGE /EP Division

I shall be playing Wednesday 4th October.

Name.....Partner.....

Tortella's canteen 7.55 p.m. sharp.

CERN WOMEN'S CLUB

Drawing group meets Thursday evening with model from 8 - 10 p.m. in Tortella Clubrooms. Fees very low; call Dot BOURQUIN for further information (tel. 823424). Everyone welcome.

Keep fit (on music)

Thursday evening from 6 - 7 p.m. For information tel 982029 (Mrs. VAN HOLTEN).

CLUB DES CERNOISES

Le groupe "dessin" - avec modèle - se réunit le jeudi soir de 8 à 10h. à la salle des clubs (Tortella). Faibles frais de participation. Pour plus d'informations, téléphoner à : Dot BOURQUIN, 823424. Cuvert à toutes.

Gymastique (avec musique)

Le jeudi soir de 6 à 7h. Pour plus de détails, téléphoner à Mme VAN HOLTEN, 982029.

ENGLISH BOOK CLUB NEWS

We have bought more than 150 books so far this year, and new orders are on their way. Suggestions to John Nicholls (DG/TM).

You aren't yet a member? Apply to the Treasurer -Alastair Mathewson (ISR) - if you wish to join (preferably by mail). For more information, ask any member of the committee: Susannah Tracy, Kitty Wakley, Derek Ball, Les Petty, Frank James, Mattheus Van Rocy, John Nicholls and Jack Freeman.

Ordering books for yourself: we are frequently asked for advice, and can now recommend a new firm which dispatches rapidly from a small but well-chosen list of titles. They publish a catalogue three times a year, and will send a sample copy to any of our members on request. A copy of the catalogue ("The Good Book Guide") is in our "New Books" cupboard, together with further information and request forms.

COOPERATIVES

COOPIN

BAISSE sur les prix des sèche-cheveux, rasoirs, réveils à pile, cuisinières, réfrigérateurs, lave-linge, lave-vaisselle.

Baisse également sur les appareils photos et radios, chaines HIFI et certains calculateurs de poche.

Nous avons en action un modèle de calculateurs de poche jusqu'à épuisement du stock.

FOR INFORMATION

OXFAM BARBECUE

The OXFAM BARBECUE held on 2.9.1978 resulted in a record profit of FS 3.250.- being sent to OXFAM, U.K.

The organisers thank everybody who contributed and remind them that the next project will be the sale of Christmas Cards.

GROUPE ASTRONOMIQUE DES FONCTIONNAIRES INTERNATIONAUX

MANIFESTATIONS PUBLIQUES Mercredi 11 Octobre 1978 (BIT)

L'EVOLUTION STELLAIRE ET LA NUCLEOSYNTHESE Conférence par M.A. MAEDER

Professeur-Assistant à l'Observatoire de Genève-Sauverny.

Les conférences ont lieu à 18heures.

	SUBSO	CRIPT	ION 1	FOR T	HE FI	NANCI	AL Y	EAR 19	78 /	1979					
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N.B.: Kindly return this form to the Staff Association Secretariat before September 29th, 1978.

COTISATION POUR L'EXERCICE 1978 / 1979

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N.B. : A retourner au Secrétariat de l'Association du Personnel avant le 29 septembre 1978.

CA	CALENDRIER HEBDOMADAIRE	OMADAIRE		1978			WEEKLY CALENDAR
LUNDI	or 2.10	MARDI 3.10 TUESDAY		MERCREDI 4.10	JEUDI THURSDAY 5.	5.10	VENDREDI 6.10 FRIDAY
		900 WORKSHOP ON PHOTON PHYSICS AT HIGH		900 SPS EXPENIMENTS COMMITTEE Fifty-seventh meeting Open session			
				900 PRESENTATION TECHNIQUE Maison MATERA AG (CH) Parking PTT - Bât. 63 - D/3 plan CERN	930 PRESENTATION COSENDAL CON Salle 17-1-C	PRESENTATION TECHNIQUE COSENDAL COMPUTER PRODUCTS (CH) Salle 17-1-007 - F/6 plan CERN	
					1100 ACADEMIC TRAINING Theory of perturb spectrum - by W. of Vienna - Lect.	ACADEMIC TRAINING Theory of perturbation of the point spectrum - by W. Thirring/University of Vienna - Lecture 2	
1345				1100 ACADEMIC TRAINING Theory of perturbation of the point spectrum - bw W. Thirring/University of Vienna - Lecture 1	1300 ENSEIGNEMENT GENERAL Science pour tous -	C GENERAL ur tous - eras	
		1400 REINTECRATION - Sécurité sociale <u>Française</u> - permanence jusqu'à 15h00 Salle de Conférence no 2 - Div. PE ler étage	00	1400 THEORETICAL SEMINAR Compact variables and path integrals by G. West/Los Alamos 1400 SMORE EXTRACTION IN INDUSTRIAL BUILDING FIRES Illustrated talk by representatives	1400 ESO ASTROPHYSICS Clusters of galan Royal Greenich Of Herstmonceux, UR Herstmonceux, US DD Conference Roy 3rd floor	ESO ASTROPHYSICS SEMINAR Clusters of galaxies - by R.J. Dickens Royal Greenich Observatory, Herstmonceux, UK DD Conference Room - Bldg 31 - 3rd floor	
Θ	questions and answers on the green by E. Keil, W. Schnell, C.J. Zilverschoon - CERN	1630 CERN PARTICLE PHYSICS SEMINAR Observation of the T'resonance at 10.02 GeV in e*e annihilations - by B. Pietrzyk/University of Heidelberg and CERN		t t	1630	CERN SEMINAIRE SUR L'ENERGIE L'Utilisation de l'énergie au CERN - par O. Barbalat/CERN	1500 CERN SPECIAL PARTICLE PHYSICS SEMINAR Periew of the Tokyo Conference — part II - by H. Fritzsch/Universities of Wuppertal & Berne, K. Tittel/University of Heidelberg, E. Gabathuler/CERN
⊗ 30	CINE CLUB "Das Kabinett des Doktor Caligari" (1920) - R. Wiene (v.o.) entrée libre	2030 GINE CLUB "Die Puppe" (1919) - E. L stum entrée libre	- E. Lubitsch -		2030 CINE CLUB Thr. Mabuse R. Wiene (v. entrée libre	der Spieler" (1922) o.)	2030 CERN CINE CLUB "Geheimnisse einer Seele"(1926) - G.W. Pabst - stumm entrée libre
	9.10	10.10		11.10		12.10	13.10
5 (E)	CERN NUCLEAR PHYSICS SEMINAR Nuclear polarizabilities - by R. Leonardi/CERN						
100	ECS - a versatile, 'user-oriented' Monte Carlo program for the simula- tion of electromagnetic cascades - by Walter R. Nelson/CERN and SLAC EF Conference Room - Bldg 13-2-005					T GENERAL	
					par R. Carreras/CERN	eras/CERN	
2030	CINE CLUB "Die Büchse der Pandora" (1928) G.W. Pabst (v.o., s.t. angl.) entrée libre	2030 CINE CLUB "Der Händler der vier Jahreszeiten" (A) (1973) R.W. Fassbinder (v.o., s.t. angl.) entrée libre	ıreszeiten" 7.0., s.t.		2030 CINE CLUB "Auch Zwerge (1969) W. He entrée libre	haben klein angefangen" rzog (v.o., s.t. angl.)	2030 CINE CLUB "Jagdszenen aus Niederbayern" (1968) P. Fletschmann (v.o., s.t. fr.) entrée libre
€	Amphichéáru/bát. Auditorium/bidg. 500	Salle Théorie/bái. Theory lecture room/bidg.		Such Floor Conference Room ADM bldg. (60) Salle de conference du sixième ét. bât. ADM	lieu selon indication place as indicated	ration led	Deadline for insertions: Twesday 12 hrs. Staff Association (Tel. 2819) SIS-PU (MJ. Blazianu – Tel. 4106)

Dernier délai pour insertions : mardi 12 h.00 Association du Personael (Tél. 2819) SIS-PU (M.-J. Blazianu – Tel. 4106)

SPS Auditorium - Prévessin/Bloc 1- 1st fl.
Amphitéâtre SPS - Prévessin/Bloc 1- 1st fl.

Amphithéátre des ISR/bát. 30-7e. ét. ISR Auditorium /bldg. 30-7th fl.

Salle du Conseil/bật.
Council Chamber/bldg.