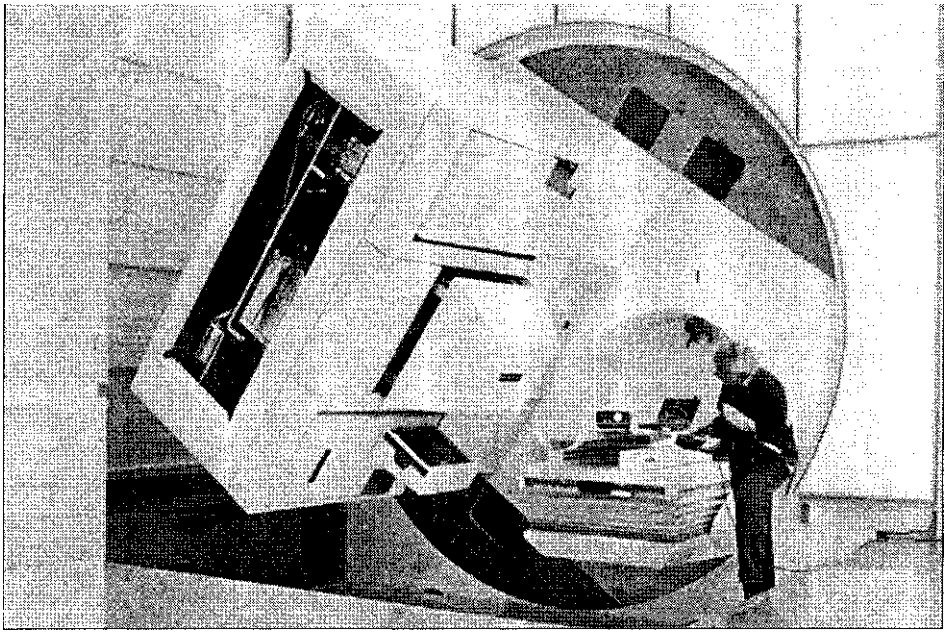
bulletin

Week Monday 9 **September** **no** 37/96 **Semaine du lundi** 9 **septembre**

Guérir par les hadrons

L'emploi des hadrons en médecine a fait bien du chemin depuis que le premier directeur du laboratoire Fermi, Bob Wilson, s'est rendu compte il y a 50 ans du potentiel des protons pour détruire les tumeurs cancéreuses. Cette semaine, le personnel et les utilisateurs du CERN ont la possibilité de s'informer des derniers progrès dans ce domaine à l'occasion du second symposium international sur la thérapie hadronique. Pendant deux jours, les 12 et 13 septembre, le symposium discutera au CERN de sujets à la frontière de la physique et de la médecine et **LES SESSIONS SONT OUVERTES AU PERSONNEL ET AUX UTILISATEURS DU CERN.**

La thérapie hadronique est une nouvelle radiothérapie qui s'appuie sur la technologie des accéléra-teurs de particules. Il s'agit de détruire les cellules cancéreuses en bombardant les tumeurs à l'aide d'un faisceau de particules. La radiothérapie traditionnelle utilise des électrons ou des photons, adéquats pour fournir l'énergie nécessaire, mais qui n'atteignent pas leur cible avec toute la précision souhaitable. Il y a donc un risque de léser des tissus sains aussi bien que les cellules cancéreuses, de sorte que le traitement de tumeurs proches d'organes sensibles est exclu.



La thérapie hadronique utilise des protons ou des ions d'un accélérateur de particules au lieu des électrons ou photons, ce qui permet d'atteindre la tumeur-cible avec une précision dix fois meilleure qu'auparavant. Protons et ions sont plus faciles à diriger qu'électrons ou photons et ils perdent l'essentiel de leur énergie à l'extrémité de leur parcours dans le corps. Cela signifie qu'en réglant soigneusement l'énergie du faisceau, on peut faire en sorte que la profondeur à laquelle les protons ou les ions perdent leur énergie, détruisant ainsi les cellules cancéreuses, coïncide avec la tumeur au millimètre près. Les protons et les ions chargés gardent mieux leur forme de faisceau étroit que des particules neutres comme les photons, de sorte que la technique est idéale pour traiter des tumeurs proches d'organes

Hadrons for Health

The use of hadrons in medicine has come a long way since Bob Wilson, Fermilab's first director, realised the potential of protons to kill cancer tumours 50 years ago. This week, **CERN** staff and users have the opportunity to learn latest developments in the field when the Second International Symposium on Hadrontherapy comes to the Laboratory. For two days on 12 and 13 September, the symposium will discuss issues at the frontier of physics and medicine, and **THE SESSIONS ARE OPEN FOR ALL CERN STAFF AND USERS TO ATTEND.**

Hadrontherapy is a new kind of radiotherapy rooted in particle accelerator technology. It works by killing cancer cells by bombarding tumours with a beam of particles. Traditional radiotherapy uses electrons or photons, which are good at delivering the energy needed, but difficult to target accurately. This means that there is a risk of damaging healthy tissue as well as cancer cells, and rules out treatment of tumours close to sensitive organs.

Hadrontherapy uses protons or ions from a particle accelerator instead of electrons or photons and allows tumours to be targeted ten times more accurately than before. Protons and ions are easier to aim than electrons or photons, and most of their energy is dissipated at the end of their paths through the body. This means that by carefully adjusting the energy of the beam, the depth at which the protons or ions lose their energy, thereby killing cancer cells, can be made to coincide with the tumour with millimetre precision. Charged protons and ions are easier to contain in a narrow beam than uncharged particles like photons, making the technique ideal for treating tumours close to critical organs such as eyes, brain, or spinal cord.

Ions combine all the advantages of protons with an ability to deliver a dose with more energy density to the tumour, and thereby kill it more effectively. For this microscopic property, light ions promise to be very effective in the control of radio-resistant tumours which are insensitive to both x-rays and protons. Carbon ions have been identified

critiques tels que les yeux, le cerveau ou la colonne vertébrale.

Les ions possèdent les mêmes avantages que les protons et permettent de plus de délivrer une dose munie de davantage de densité d'énergie dans la tumeur et ainsi de la détruire plus efficacement. Pour cette propriété microscopique les ions légers promettent d être très efficaces pour contrôler les tumeurs radio-résistantes qui sont insensibles aux rayons X et aux protons. On a déterminé que les ions carbone sont les plus efficaces à cet égard et déjà plus de 150 patients ont été traités avec des ions carbone dans un nouveau centre au Japon et le Laboratoire GSI de Darmstadt va prochainement commencer à traiter 70 patients par an.

Les compétences du CERN en technologie des accélérateurs font du laboratoire un partenaire naturel des pionniers de la thérapie hadronique. Depuis 1992, la fondation italienne TERA pour l'hadronthérapie oncologique travaille avec le CERN et en 1996 une nouvelle collaboration rassemblant le CERN, la fondation TERA, le laboratoire GSI de Darmstadt et le projet autrichien AUSTRON a commencé des travaux sur la conception d'un synchrotron proton/carbone pour la thérapie hadronique. Les résultats de ces études seront à la libre disposition de tous ceux qui voudrait construire un centre basé sur un synchrotron de ce type.

Il est bien naturel que, 50 ans après qu'il se soit initialement rendu compte de la possibilité d'utiliser les protons pour traiter les tumeurs profondes, Bob Wilson soit l'invité d'honneur de la réunion. Son allocution d'ouverture promet d'être l'un des moments forts.

as the best for the task, and already over 150 patients have been treated with carbon ions at a new centre in Japan and the GSI laboratory in Darmstadt will soon start to treat about 70 patients a year.

CERN's expertise in accelerator technology makes the Laboratory a natural partner for hadrontherapy pioneers. Since 1992, the Italian TERA foundation for oncological hadrontherapy has been working with CERN, and in 1996, a new collaboration bringing together CERN, the TERA foundation, GSI, and the Austrian AUSTRON project began work on the design of a proton/carbon synchrotron for hadrontherapy. The results of their studies will be freely available for anybody who wants to build a centre based on such a synchrotron.

It is fitting that 50 years since he first realised that protons could be used to treat deep sited tumours, Bob Wilson should be guest of honour at the meeting. His opening talk promises to be one of the highlights.

II International Symposium on Hadrontherapy

All talks in B500 Auditorium

Thursday 42-September-1996

Time	Speaker	
9.00	C. *Llewellyn Smith* Director General European Laboratory for Particle Physics-CERN	Welcome address
9.15	*R.R. Wilson* Guest of Honour	A paper of fifty years ago: radiological use of fast protons
9.40	*S. Dische* Mount Vernon Hospital, Northwood, UK	Status and future directions of tumour therapy
10.20	*/. Castro* Lawrence Berkeley Laboratory and UCSF, Berkeley, California	Clinical programmes: a review of past ancl existing hadrontherapy protocols, their results and future perspectives
11.00	*Coffee break*	
11.30	*B. Larsson* Institut fur Medizinische Radiobiologie-IMR, Zurich, CH	Boron Neutron Capture Therapy: a review of the Zurich meeting
12.10	G *Kraft* Gesellschaft fur Schwerionenforschung-GSI, Darmstadt, D	What radiobiology should be done in a hadrontherapy centre ?
12.50	*hunch*	
14.30	*P. Zanella* European Bioinformatics Institute, Cambridge, UK	Advances in computings and trends in bioinformatics
15.10	D. *Sendall* European Laboratory for Particle Physics-CERN	The invention of WWW and future developments in world-wide networks
15.50	*Coffee break*	

16.20	M. *Goitein* Massachusetts General Hospital-MGH, Boston, USA	Technology of hadrontherapy: a review of the existing technologies, their pluses and minuses
17.00	*ROUND TABLE :* Chairman: II. *Amaldi* European Laboratory for Particle Physics-CERN	*TECHNOLOGICAL DEVELOPMENTS IN HADRONTHERAPY*
18.30	INAUGURATION OF THE EXHIBITION *"HADRONS FOR HEALTH "*	

Time	**Speaker**	
9.00	F. *Sauli* European Laboratory for Particle Physics-CERN	Recent developments in radiation detectors
9.40	G. *Bachy* European Laboratory for Particle Physics-CERN	Advances in large and precise mechanical structures
10.20	O. *Ratib* Hôpital Cantonal, Université de Genève, Geneva, CH	Medical applications of computers and networks
11.00	*Coffee break*	
11.30	*POSTER SESSION*- Chairman : H. Blattmann -PSI	
12.45	*Lunch at CERN Restaurant N° 1*	
14.30	*J. Yarnold* Royal Marsden Hospital, Sutton, UK	Impact of modern biology on clinical radiotherapy
15.10	*D.E. Thrall* College of Veterinary Medicine- University of Carolina, Raleigh, USA	The role of animals in cancer research
15.50	*Coffee break*	
16.20	*SESSION ON PROFFERED PAPERS* *ON PATIENT ALIGNMENT*	
17.20	*}. Bernier* Ospedale San Giovanni, Bellinzona, CH	Clinical trials and ethical issues in cancer research
18.00	*A. Wambersie* Université Catholique de Louvain, Bruxelles, B	Concluding remarks

Un prototype de la chambre à dérive pour muons de l'expérience CMS, construit au RWTH d'Aix-la-Chapelle, dans le faisceau d'essais des muons H2; c'était au CERN en juillet dernier.

A prototype of the muon drift chambers for the CMS experiment, built at RWTH Aachen, placed in the HI muon test beam at CERN last July.

CMS et les muons

Après plusieurs années d'une R&D générique sur les techniques d'expérimentation au LHC, les collaborations LHC se concentrent maintenant sur la préparation de leurs détecteurs. Cette semaine nous jetons un coup d'oeil sur les progrès réalisés par CMS dans la construction de certains éléments du détecteur de muons de la partie tonneau de l'expérience.

Des groupes d'Aix-la-Chapelle, Bologne, Madrid et Padoue se partagent la responsabilité des chambres à dérive de ce détecteur particulier et ils en ont déjà testé plusieurs prototypes de différentes tailles et dispositions dans les faisceaux de muons et de hadrons du CERN. Le plus grand prototype mesurait 3 x 1 m^2 et comprenait la totalité des douze couches de cellules de dérive prévues dans le détecteur final. Il a été mis à l'épreuve en juillet dernier dans le faisceau H2 du hall nord de Prévessin au CERN pendant deux semaines.

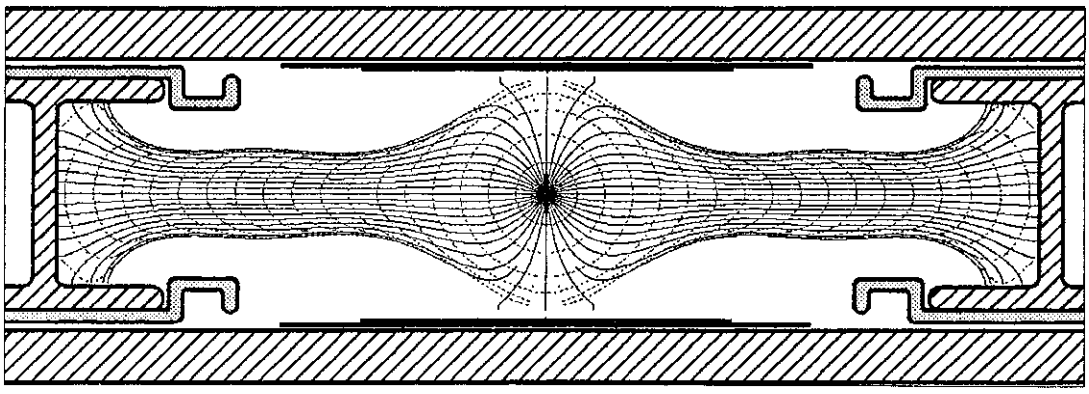
Dans l'expérience CMS, 240 chambres à dérive au total - comprenant 200,000 cellules de dérive - complétées par un nombre équivalent de chambres à plaques résistives,

Muons for CMS

After several years of generic R&D into LHC experimental techniques, LHC collaborations are now focusing their attention on preparing detectors for their experiments. This week, we take a look at progress being made in CMS towards building part of the experiment's Barrel Muon Detector.

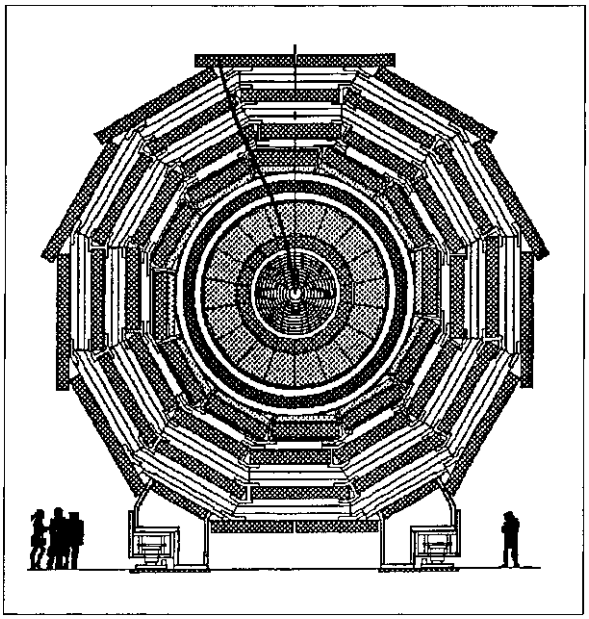
CMS groups from Aachen, Bologna, Madrid, and Padova are responsible for the drift chambers of the Barrel Muon Detector, and have already tested several drift chamber prototypes of different sizes and arrangements in muon and hadron beams at CERN. So far the largest prototype was 3 x 1 m^2 and consisted of the full 12 layers of drift cells foreseen for the final detector. Last July it was tested in the CERN H2 beam in the Prévessin North Hall for a two-week period.

In the CMS experiment, a total of 240 drift chambers with 200,000 drift cells, complemented by a similar number of resistive plate chambers, will be used to measure emerging muons in the barrel region. Each muon will cross up to four such drift chambers. In order to measure the small



Détail de la cellule de dérive de 40 mm de largeur. *Detail of the 40 mm wide drift cell.*

Dans la région tonneau du détecteur CMS, les chambres à muons s'intercalent avec les -plaques de la culasse de retour de l'aimant.



The muon chambers in the barrel region of the CMS detector are interspaced with layers of the magnet yoke.

serviront à mesurer les muons émergeant de la zone du tonneau. Chaque muon traversera jusqu'à quatre de ces chambres à dérive. Afin de mesurer la faible courbure magnétique des muons de haute énergie, la position de ceux-ci sera déterminée dans chaque chambre avec une précision d'une centaine de micromètres.

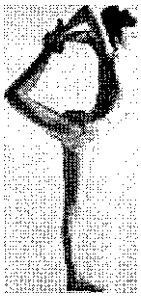
Bien que les longues recherches déjà effectuées aient produit des résultats encourageants, un test crucial reste à réaliser. Au LHC, les chambres à muons devront faire face à un flux élevé continu de particules sur toute leur surface. Il n'existe pas actuellement au CERN de faisceau capable de simuler cet environnement. Le montage d'un faisceau d'essais adéquat a récemment été approuvé par le CERN, cette "installation d'essais pour muons" sera disponible au printemps de 1997.

La collaboration CMS se réunit régulièrement au CERN et tient ailleurs une rencontre plénière annuelle. Cette année, c'est au tour d'Aix-la-Chapelle d'être l'hôte de CMS pendant une semaine; la rencontre débute le lundi 9 septembre. La partie tonneau du détecteur de muons ne sera que l'un des sujets d'un ordre du jour chargé.

magnetic bending of high energy muons, their position will be measured with a precision of around 100 microns in each chamber.

Although extensive studies carried out up to now have produced encouraging results, one essential test remains to be done. At the LHC, the muon chambers will have to cope with a sustained high rate of particles over their entire area. Presently there is no beam at CERN which can simulate this environment. The installation of an adequate beam test facility has recently been approved by CERN. This "muon test facility" will be available in spring 1997.

The CMS collaboration holds regular meetings at CERN, and one full collaboration meeting each year outside CERN. This year, it is the turn of Aachen to play host to a CMS week, and the meeting starts on Monday 9 September. The Barrel Muon Detector will be just one item on a busy agenda.



La rentrée est là ....
... restons zen !

Une histoire de yoga ...

L'origine du yoga remonte à la nuit des temps. C'est en Asie qu'il voit le jour, il y a près de 5000 ans. Au départ, c'est une science divine de la vie révélée aux sages illuminés dans leur méditation. La pratique de cette gymnastique est étroitement liée à une certaine philosophie de la vie flirtant avec la religion. Cette connaissance très ancienne a évolué de différentes manières selon les pays, vers les arts martiaux (Japon), le Kung-Fu et le Taï-chi (Chine) et le yoga (Inde). Les vertus thérapeutiques du yoga ont été reconnues des sages occidentaux. Cette gymnastique a donc été importée d'Asie il y a une quarantaine d'années. Elle est arrivée au CERN en 1972 par la création d'un club : le club de yoga.

The holidays are over ....
... stay Zen !

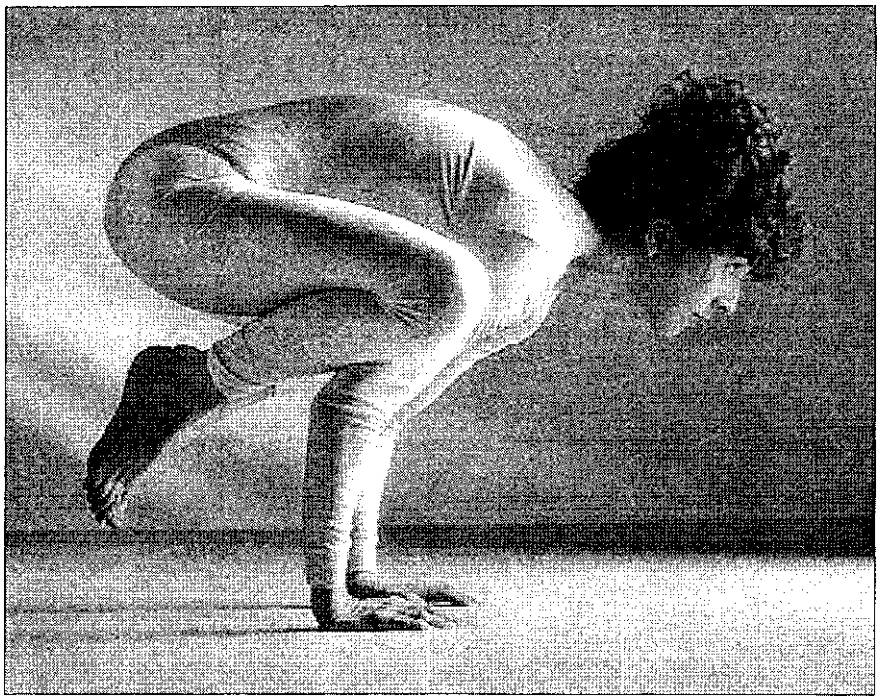
About yoga...

The origin of yoga can be traced back to the dawn of civilisation. When it first appeared in Asia nearly 5,000 years ago it was a divine science of life revealed to enlightened sages during meditation. The practice of yoga is closely linked to a philosophy of life on the fringes of religion. This age-old knowledge evolved in different directions in different countries, giving rise to the martial arts in Japan, kung-fu and taï-chi in China, and yoga in India. The therapeutic virtues of yoga were recognised by Western sages and the practice was imported from Asia some forty years ago. Its arrival at CERN was marked by the establishment of the CERN Yoga Club in 1972.

Le Cobra, un remède contre le stresssss ?!...

Dans nos sociétés occidentales gagnées par le stress, le besoin de se détendre est un souci permanent. Encore un autre!... Nos activités intellectuelles ou physiques consomment notre énergie, elles épuisent... La pratique du yoga permet de récupérer de l'énergie physique et mentale, de retrouver détente et mieux-être. Ainsi, il permet d'aboutir dans cette perpétuelle quête (non, pas celle du Graal !, elle est un peu obsolète) de quiétude et **d**'apaisement du corps et de l'esprit.

Souvent le yoga effraie car nous n'en voyons que ces postures étranges que seuls les gens très souples ou pratiquant le yoga depuis de nombreuses années, arrivent à accomplir. Mais le yoga est une gymnastique qui s'adapte aux possibilités de chaque individu. La pratique du yoga développe la souplesse et les capacités respiratoires et procure aux yogis un apaisement physique et moral. Les médecins le disent eux-mêmes, les tensions physiques sont souvent liées à des tensions morales : soucis relationnels ou de travail, stress, etc. Et cette gymnastique consiste à effectuer un exercice physique en cohésion avec un rythme respiratoire en concentrant son esprit sur l'effort effectué de façon à dégager l'esprit de toute autre préoccupation. Les exercices sont donc effectués en détente et l'individu reste à l'écoute de son corps en évitant toute tension. Ainsi, il est possible de rester dans la posture du Lion, du Corbeau, du Lotus, du Cobra ou encore du Cadavre (la plus simple, vous l'auriez deviné !) sans souffrir. Les postures inverses, par exemple, permettent de masser et de ventiler certaines parties du corps qui sont le berceau de nos inquiétudes : l'estomac pour n'en citer qu'un! Il est **d**'ailleurs reconnu que le yoga prévient des ulcères à l'estomac. Ainsi, ces exercices physiques agissent non seulement sur la structure du corps mais aussi sur l'ensemble des organes.



La posture du Corbeau *The Crow posture*

Le principe fondamental du yoga est donc de relaxer et de tonifier le corps en apaisant le mental. C'est pourquoi toute série **d**'Asanas (postures) **est** précédée **d**'une séance de relaxation et de respiration complète.

Le yoga du CERN est accessible à tous

Fondé en 1972, le club de yoga a toujours bien fonctionné, recevant un nombre croissant de demandes d'adhésion. Il y a actuellement environ 120 yogis (pratiquants de yoga) au CERN, répartis dans une dizaine de cours hebdomadaires. Le yoga pratiqué au CERN est une forme simple **d**'exercice physique qui consiste à effectuer quelques exercices pour se détendre et se remettre en forme. On peut ainsi éliminer de nombreux petits maux qui nous ennuient tels que les maux **de** tête, de reins, de dos ou **d**'estomac. Et, on acquiert

The Cobra position, a remedy against stresssss?!...

In our stress-plagued Western societies, the need to relax is a constant concern...one among many! After our energy is consumed and exhausted by our intellectual and physical activities, yoga enables us to replenish our physical and mental powers and abide in a state of relaxation and well-being. It advances us in our eternal quest (not for the Holy Grail, that's old hat) for peace and tranquillity of body and mind.

With its bizarre postures that can only be achieved by the most supple or by those who have practised it for many years, yoga can often intimidate. In actual fact, it is an exercise that adapts to each person's individual capabilities. The practice of yoga helps develop suppleness and respiration, allowing yogis to achieve restfulness and tranquillity. As doctors themselves say, physical tension is often linked to mental tension such as problems with relationships and at work, or stress, etc. The aim of yoga is to perform a physical exercise in harmony with one's breathing and, by focusing on the physical effort, dispel all other preoccupations from one's mind. Exercises are therefore done in conditions of relaxation, where the individual listens to his body and avoids any stress. In this way, it is possible to maintain the posture of the Lion, the Crow, the Lotus, the Cobra or even the Corpse (no prizes for guessing how this simplest of all postures is done!) without suffering. The upside-down postures, for example, allow you to massage and ventilate those regions of the body where anxieties are seated - the stomach to name but one! Indeed, it is no secret that yoga can help prevent stomach ulcers. So these physical exercises act not only on the body structure but on all our bodily organs.

The fundamental principle of yoga is therefore to repose and tone one's body by relaxing one's mind. For this reason, every session of Asanas (postures) is preceded by a period of relaxation and breathing exercises.

CERN yoga classes are open to all

The Yoga Club has flourished ever since it was founded in 1972, and the number of membership applications is on the rise. CERN currently has around 120 yogis (yoga adepts), who practise a simple form of yoga based on a small number of physical exercises designed to relax the body and renew one's energy. This technique can eliminate many of those irksome little aches and pains such as headaches, backache and stomach ache, and at the same time increase our powers of concentration. From September onwards the yoga classes will be supplemented by 2 weekly sessions of sophrology (see Bulletin 35/96). The techniques of

également de la concentration. De plus, les cours de yoga pourront être complétés, dès le mois de septembre, par ceux de sophrologie (cf Bulletin n°35/96), à raison de 2 séances par semaine. Les techniques de la sophrologie, pratiquées, tout comme le yoga, en état de relaxation, permettent plus spécifiquement de gérer le stress, la tension et d'apprendre à rester calme en toute circonstance et surtout de devenir plus positif et plus confiant.

La panacé du yoga est de redonner de l'énergie par la suppression des tensions et la respiration adaptée à l'effort. C'est pourquoi les cours du club de yoga sont nombreux à être dispensés à la mi-journée Cela permet d'effectuer une pause dans son travail et d'appréhender positivement les obligations de l'après-midi. La pratique du yoga ne fera pas de vous un ascète mais vous rendra positif quoiqu'il arrive et vous redonnera du punch !

Quelques détails pratiques...

Le Club dispense 3 formes de yoga :

- Le viniyoga (yoga progressif et adapté, appui sur la respiration) se pratique en 3 cours hebdomadaires avec Danielle Fahy.
- Le yoga inspiré des yoga égyptiens et chinois se pratique en 2 cours hebdomadaires avec Marie-Claude Pihet.
- Le stretching postural et le Hatha yoga se pratique en 6 cours hebdomadaires avec Michel Cohen.
- Ces cours peuvent être complétés par ceux de sophrologie dont les leçons dispensées par Danielle Doll ont lieu le jeudi midi.

Les cours de yoga se répartissent sur deux semestres, début septembre/fin janvier et début février/fin juin.

Tous les élèves ou futurs élèves peuvent s'inscrire directement auprès du professeur lors du premier cours. Le prix pour un semestre (environ 20 leçons) est fixé à 175.- CHF, une cotisation annuelle au Club de Yoga du CERN de 5.- CHF sera perçue au moment de l'inscription. Le club dispose en outre d'une bibliothèque accessibles aux membres du club.

Les cours ont lieu dans la salle des clubs de l'Association du personnel, près du Restaurant N°2, bâtiment 504 ... une belle salle dont la moquette verte est très confortable. Mais attention, il ne s'agit pas de s'y endormir sous prétexte de s'y détendre !

Venez donc essayer chaque type de yoga, gratuitement, afin de différencier les formes qui existent et trouver celle qui vous conviendra !

Contact : Jean-Claude Perréard, tel 75148.

sophrology, like yoga, are practised in a state of relaxation, but more specifically they are a means of managing stress and tension, teaching oneself to remain calm in all situations and, above all, to be more positive and confident.

The panacea of yoga is to regenerate energy by eliminating stress and adapting one's breathing to one's efforts. That is why many of the classes organised by the CERN Yoga Club take place in the middle of the day, giving people a break from their work and time to consider their afternoon's duties in a positive frame of mind. The practice of yoga will not turn you into an ascetic, but it will make you think more positively in any kind of situation and give you a renewed dose of vitality!

Some practical details...

The Club offers classes in 3 forms of yoga:

- Viniyoga (a gradual, breathing-based technique, adapted to the individual) is taught three times a week by Danielle Fahy.
- Egyptian and Chinese-inspired yoga is taught twice a week by Marie-Claude Pihet.
- Postural stretching and Hatha yoga are taught 6 times a week by Michel Cohen.
- The above can be supplemented by sophrology classes, led by Danielle Doll on Thursday lunch times.

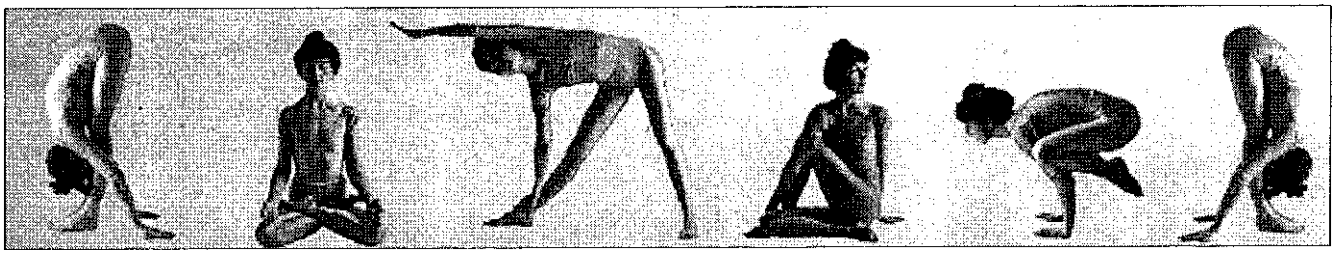
The yoga classes are spread over two semesters, from the beginning of September to the end of January, and the beginning of February to the end of June.

Present and future pupils can enrol directly with the teacher at the first class. The price for one semester (approx. 20 classes) is 175 CHF on top of the CERN Yoga Club annual membership fee of 5 CHF, to be paid upon enrolment. The club also has a library, which is open to all members.

Classes take place in the Staff Association's clubroom, near Restaurant N°2 in building 504...a very nice room with an extremely comfortable green carpet. But beware, falling asleep when you're supposed to be relaxing is not the idea!

So why don't you come along and try some yoga? You don't have to pay straight away, so feel free to try each technique on offer and decide which one suits you best.

Contact: Jean-Claude Perréard, tel 74399



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FINANCEMENT DU CERN
Message du Directeur général

Dans une lettre en date du 27 août adressée au Président du Conseil du CERN, au Président du Comité des finances et à moi-même, la Délégation allemande a demandé une réduction de la contribution de l'Allemagne au budget du CERN. Un bon nombre d'entre vous auront déjà eu connaissance de cette demande par des articles parus dans la presse *(Nature* 382: 285 - 25 juillet, et 379 & 387 - 1er août), articles repris par diverses publications.

Il appartient au Conseil du CERN de décider de la suite à donner à cette demande qui sera discutée à la prochaine réunion du Comité du Conseil le 25 septembre. Tant que le Conseil n'aura pas arrêté sa réponse, la Direction du CERN ne pourra faire aucun commentaire. Je peux dire, cependant, que la demande de l'Allemagne soulève potentiellement de très graves problèmes pour le CERN et que le Directoire fait tout son possible pour réduire au minimum les répercussions que cela pourrait avoir sur le programme du Laboratoire. Il va de soi que je continuerai à vous tenir informés de la situation.

FUNDING OF CERN
Message from the Director-General

In a letter dated 27th August, addressed to the President of the CERN Council, the Chairman of the Finance Committee and myself, the German Delegation has requested a reduction in the German contribution to the CERN budget. Many of you will already have learned that such a request was being formulated from Press reports (Nature 382 : 285 - 25th July; and 379 & 387 - 1st August), which were subsequently reported in various publications.

It is for the CERN Council to decide how to deal with this request which will be discussed when the Committee of Council next meets on 25th September. Until the Council has decided how to respond, the CERN Management cannot comment. I can say, however, that the German request potentially poses very serious problems for CERN, and the Directorate is doing everything possible to minimise the repercussions on the CERN programme. I will, of course, continue to keep you informed of the situation.

CONSEIL D'ADMINISTRATION DE LA CAISSE DE PENSIONS

GOVERNING BOARD OF THE PENSION FUND

PENSION FUND
ACTUARIAL REVIEW AS AT 31.12.1994/01.01.1995
CoST OF THE POLICY OF EARLY DEPARTURES FROM 1988 TO 1994
(CERN/FC/3834)

Given the importance of the actuarial review to determining the financial balance of the CERN Pension Fund, which is the only social protection system for the Organization's staff covering retirement, disability and death, the Governing Board decided it was necessary to inform the Fund's members and beneficiaries of the main results of this review, via the Weekly Bulletin, and to state its position and recommendations vis-à-vis the review, which were submitted to the Finance Committee meeting in December 1995.

At its Two-hundred-and-fifty-eighth Meeting (13 December 1995), the Finance Committee heard a presentation of the actuarial review by the Chairman of the Pension Fund Governing Board, Mr. P. Levaux, who emphasised to delegates that "despite the inevitable lack of precision in the projections, it was clear that the Pension Fund was not in a fully balanced actuarial situation". The Management, for its part, requested clarification of certain calculations relating to the effects of the reduction in staff numbers. The Finance Committee took note of the report and of the Governing Board's recommendations and invited the Management to prepare its written observations on the actuarial review, in consultation with the Governing Board, with a view to the matter being discussed by the Standing Concertation Committee and then TREF, prior to further discussion at the Finance Committee.

In accordance with the request of the Finance Committee delegations, discussion of the actuarial review and related questions (effect of the number of Fellows, decrease in the number of Fund members, promotions after the age of 50, transfer value rates, etc.) is scheduled to resume in September.

Principles governing the actuarial reviews

To determine the Fund's state of health, it is essential to take the technical balance sheets as a starting point. Such an examination makes it possible to see whether the current rate of contributions at the time of the review is still capable of ensuring the financial balance and/or whether the accumulated assets are sufficient to ensure the continued financing of the social security system on the basis of a number of assumptions - demographic (personnel policy of the participating organisations), biométrie (life expectancy, disability rate) and financial (return on assets, inflation, technical rate, salary increases).

Every three years the actuary must therefore make a dynamic assessment of the financial balance of the Fund by comparing assets (current overall assets and future contributions and yield) with commitments (transfer values, pensions in payment and future pensions). From the technical point of view, the review uses models of commitments and income and simulations of the anticipated development of this model over a thirty-year period.

In this context, the Governing Board wishes to emphasise that the term "technical deficit" must not be interpreted as an accounting loss already suffered which could give rise to a debt, but as a shortfall on the assets side of the balance sheets and/or a total level of contributions which is inadequate to cover the Fund's future commitments.

Successive actuarial reviews

The economic parameters are those adopted by the CERN Council: 3.0% average pension adjustment linked to an identical assumption of average inflation in Geneva, corresponding to the 3.5% average salary adjustment and a 6.0% average gross return on assets (CERN/CC/1815/Rev.2-CERN/FC/3333/Rev. 2,22 November 1990).

The actuarial review as at 31.12.1994/01.01.1995 is the third to be carried out for the CERN Pension Fund by Mr M. Pittet, the consulting actuary. The health and future changes in the technical deficit of the Pension Fund can thus be assessed in perspective over a period of eleven years. Over the three reviews, which cover the period from 1st January 1984 to 1st January 1995, one of the recurrent factors affecting the technical balance sheet has noticeably been the impact of CERN's personnel policy.

The first report (actuarial review as at 31.12.88) was a response to a specific request to identify the contribution rate needed to obtain a technical balance. The review concluded that the rate of 23.5% of the reference salary was inadequate and should rise to 30.0%, based on a stable staff complement of 3500.

The second report (actuarial review as at 1.1.92) took into account more up-to-date mortality tables and introduced two changes in the assumptions: an initial reduction in the maximum staff complement from 3500 to 3100 (the lowest variant), and a more realistic rate of early departures based on the actual situation at that time.

In his conclusion, the actuary stated that: "Great attention should be paid in future to the course of salary increases over people's careers and early retirements. Any new programme of early retirement incentives should include suitable financial compensation (in accordance with a CERN Council decision taken on 31 October 19851...)".

The third report (actuarial review as at 1.1.95) introduced two changes in the assumptions to give a more realistic picture. The first was a greater reduction in the staff complement ceiling. In this review, a new variant of the reduction in the CERN staff number ceiling has been taken into account with the forecasts associated with the LHC project.

With the inclusion of a slight increase in ESO staff numbers, the number of active members of the CERN Pension Fund should fall to 2550 after 2007. The second change related to another increase in the number of early departures. The assumption postulates that those who became members of the Fund prior to 1st July 1987 would leave CERN as soon as they reached the age of 60 with 35 years of membership. This assumption seems to correspond to the trend noted between 1988 and 1995, whether the departures were spontaneous or encouraged by incentive measures taken by CERN under the early retirement programmes.

The actuary concluded that: "[...] the Organization's personnel policy can considerably affect the financial balance of the Fund. Here, we are more particularly referring to the successive changes of objective concerning the staff ceiling, the early departure policy pursued (an impact study is under way) and late promotions. [...] We feel it important that special attention should be paid to these various problems in future so that everything is done to ensure the Fund's medium- and long-term financial balance."

Quantification of the factors affecting the technical deficit

In 1992, at the time of the second review, the gradual increase in the contribution rate combined with the lowering of the ceiling of Fund members to 3100 active members, as compared to 3500 at the time of the first review, and the increase in the early retirement rate had already caused an increase in the technical deficit. In 1995, as compared to the ceiling of 3100, the lowest variant of the 1989-1992 review, the actuary's calculation showed that a reduction to 2550 could, if it took place, produce a technical deficit approximately 100 million francs higher then the one quoted in the previous review.

Regarding future early departures, until the effects are felt of the step taken by Council in 1986 to apply actuarial reduction factors to members entering the Fund after 1st July 1987 in the event of early departure, the Fund will see a high number of early departures for at least a further ten years which, according to the actuarial review, will result in an additional technical deficit of some 50 million francs.

Given the impact of the lowering of the staff complement ceiling and the early departures, the Governing Board of the Fund wished to draw the attention of CERN's Finance Committee and Council to the additional technical deficit of 150 MCHF (100 million for the decrease in staff numbers and 50 million for the early departures) which the Organization will be required to cover and requests that account be taken of that in good time and progressively as compensation is scheduled in accordance with the principle of the Council's decision taken in 1985.

Although personnel policy does have a considerable impact on the rise of the technical deficit from one review to the next, it is not the only cause. Other factors also contribute to explaining that over the past three years the technical deficit has increased from 200 to 293 MCHF and that the contribution rate needed to balance the Fund in thirty years' time has risen from 32.7 % to 33.9 %.

Some of these are "one-off" factors, such as the gradual instead of immediate increase in contributions over five years, the inadequate yield from investments in 1994 due to the weakness of financial markets (the poor 1994 performance accounts for approximately 50 MCHF of the extra deficit noted) and recurrent factors which are due, in particular, to the rise in life expectancy and the self-increasing technical deficit. On the last point, it should be noted that no compensation is made for the technical deficit from one survey to the next, which means that the Fund's assets are lower than they should be and there is a steadily increasing shortfall. The actuary has estimated the amount deriving from the self-increasing nature of the technical deficit at 31 MCHF, representing the interest on the 1992 technical deficit capitalised at 6%.

Salary and pension **adjustments**

Concerning the effect of salary and pension adjustments on the technical balance, it clearly emerged that in future the balance of the Fund will be much more sensitive to pension adjustments than to salary adjustments owing to the fall in the number of active members and the rise in the number of pensioners. This effect, which was expected to be felt around the year 2000, has been further brought forward. This is one of the consequences of the early departures policy.

With regard to differentiated pension and salary adjustment policies, the actuary has stressed that: "We find that the adjustment rate applied to salaries has been lower than that applied to pensions since 1st January 1993. This practice should not be allowed to become the rule in future. [...] In our view, it would be desirable for both adjustments to be aligned in the future."

The Governing Board favours following this proposal. It requests the Finance Committee and Council to approve the principle of pension adjustments designed to maintain the purchasing power of the pensioners, while ensuring equal treatment for pensioners and active members of the Fund with regard to inflation.

Special additional actuarial review of the cost of early departures from 1988 to 1994

In view of the effect of early departures on the financial situation of the Fund, the Governing Board asked the actuary to conduct a special additional review for each case individually of the costs borne by the Fund from 1988 to the end of 1994 for all early departures and to draw up a balance sheet in relation to the financial compensation provided by the Organization for these departures.

It must be pointed out that the early departures between January 1988 and December 1994 are now finished, and their costs may be precisely quantified. It is possible in this context to determine the actual cost per person which the Fund has to bear and compare it with the compensatory amounts paid by the Organization. In the present case, the inadequacy of the compensatory amounts paid by the Organization in relation to the cost of the departures constitutes an actual deficit recorded in the mathematical reserves needed to pay the pensions concerned.

The Fund recorded 559 departures during this period. These 559 departures include those taken under the 1988 scheme, those taken under the subsequent one ("Refuseniks"), those taken in consequence of the award of additional periods of membership of the Pension Fund to shift workers, for which the Fund received compensatory sums (partial in the case of the "Refuseniks"), and all the departures, many of them recent, not belonging to the abovementioned categories.

In order to take stock of the overall situation for each early departure between 1988 and 1994, the actuary calculated the difference between the pension actually paid (including any family allowances) and the pension that should have been paid from an actuarial viewpoint (including any family allowances) if, for each case, account had been taken of the actuarial reduction factors applicable between ages 60 and 65. In his reports the actuary notes that the statutory retiring age is set at 65 and that the people recruited by the

Organization before July 1987 are not subject to actuarial pension reductions between the ages of 60 and 65.

The actuary's calculations show that the actuarial cost of all the early departures recorded between 1988 and 1994 is 128.4 MCHF (without any indexation after age 65), from which must be deducted the compensation of 76.2 MCHF paid by CERN. The resultant actual deficit for the Fund, updated to the end of 1994, would thus amount to 62.3 MCHF.

Aware that this situation meets the desire to reduce CERN's staff numbers but results in considerable actual costs for the Fund not covered by the Organization, for which the actuary has given a total figure of 62.3 million Swiss francs, the Governing Board requests the Organization's Finance Committee and Council to approve the principle of the financial compensation of these costs by a procedure to be determined.

Conclusion

The Governing Board is concerned at the gradual slippage of the technical deficit. In order to halt and, if possible, reverse this trend, the Governing Board is aware of the need to take action on all the parameters open to it. With this in mind, it is naturally endeavouring to improve the results of the Fund's investments but emphasises that only a comprehensive policy taking all the measures that can be envisaged into account will, in the long term, have any chance of redressing the balance.

Any Fund members wishing to obtain a copy of the actuarial review at 31.12.1994/01.01.1995 should apply to the Fund Administration (Tel. 767 2742 - 767 2738).

1) ***"... whenever the Organization wishes to apply a staff policy measure which might have an effect on the Fund, the consequences should be made clear to Council and an actuarially determined sum covering the cost should be paid into the Fund."*** **(CERN/1587/Add.)**

SEMINARS
SEMINAIRES

Tuesday 10 September

SPS AND LEAR EXPERIMENTS COMMITTEE

at 09.00 hrs - Auditorium

Open session

1. Study of strange and multistrange particles in ultrarelativistic nucleus-nucleus collisions (SPSLC 96-40 / P300) : F. Antinori.
2. Very recent progress toward cold antihydrogen and q/m to 1 part in 10^{10} : G. Gabrielse.

Closed session

at 10.30 hrs, to be continued at 14.00 hrs, 6th floor Conference Room.

Tuesday 10 September

TECHNICAL PRESENTATION

at 10.00 hrs - CN Auditorium, bldg 31 /3-004-5

AVANZA : The Alcatel strategy for switched networks integrating services

by P. Giry DELOISON, J.-P. LAGASSE & J.-C. SÉNÉCHAL

We have pleasure in inviting anyone interested to an Alcatel Telecom presentation with 3 key people from Alcatel Data Network, Paris. They will visit CERN on Tuesday 11 September. CERN has just ordered a new networked telephone system of 8*000 lines based on the Alcatel 4400, one of the most modern system available in the World. Alcatel Telecom, CERN's phone system supplier for more than 10 years, is also a major player and manufacturer in the field of switched networks with service integration (data, multimedia, voice.) Alcatel is also the only company in Europe developing its own ATM technology.
The speakers will give the audience a short business review of Alcatel TELECOM, an outlook of the strategy called AVANZA, a product review and development plan update. There will be time for a Q & A session after their presentations.

Organiser : S. Cannon / CN/5036

Wednesday 11 September

TECHNICAL PRESENTATION

at 10.00 hrs - CN Auditorium, bldg 31/3-004-5

Digital's IP Switching Solution

by Walter DEY / Senior Consultant, Digital Equipment Corp. Switzerland

Switches have proven to be higher performance and less expensive than routers. However, switches are often too limited in the network topology they support. IP switching combines the best features of switching for optimised network cost/performance and scalability for the Internet Protocol (IP). Digital and Ipsilon Networks have formed a partnership, develop and bring to market an IP Switching Solution, delivering millions of IP packets per second throughput while maintaining full compatibility with existing IP networks.
The product called GIGAswitch/IP is based on Digitals ATM switch GIGAswitch/ ATM. Digitals strategy is to incorporate IP switching directly into existing network products such as the GIGAswitch family, DEChub 900 MultSwitch, host network interfaces for Windows/NT, Digital Unix and OpenVMS.

Organiser : S. Cannon / CN /5036

Wednesday 11 September

THEORETICAL SEMINAR

at 14.00 hrs - TH Conference Room

Life, the universe and nothing: the case for a cosmological constant

by Lawrence KRAUSS / Case Western Reserve University, Cleveland

I will begin by describing why a very small, yet non-zero cosmological constant is, from the point of view of fundamental microphysical theory, perhaps the strangest possibility imaginable. Yet, as I will describe, data from a wide variety of independent cosmological and astrophysical observations combine together to suggest just such a possibility. If this is the case, then the energy density of the universe today is dominated by empty space! I will close by briefly describing possible implications for particle theory if the cosmological constant is non-zero.

Thursday 12 September

SL SEMINAR

at 16.00 hrs - SL Auditorium, Prévessin, bldg. 864

The e-p option for the LHC

by Eberhard KEIL / CERN

The conceptual design of an e-p option for the LHC consists of a single path through a sequence of steps or assumptions, leading to an estimate of the luminosity. The design assumes the nominal LHC proton bunch parameters, standard beam-beam tune shift parameters for electrons and protons, and equal electron and proton beam sizes at the interaction point(s). The design of the e-p interaction region is discussed. The electron and proton beta-functions there are derived. The maximum number of bunches and the parameters of the electron ring, in particular the maximum energy and RF power are discussed.

** Coffee & tea will be served at 15.30 in front of the auditorium*

Friday 13 September

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs - TH Conference Room

The gluon distribution function, F_L and R = σ_L/σ_T as a function of F_2 and $dF_2/d\ln Q^2$ at small x

by A.V. KOTIKOV (speaker) / ENSLAPP, Annecy & JINR, Dubna and G. PARENTE / Santiago de Compostela

A set of formulae to extract the gluon distribution function G(x), the longitudinal deep inelastic structure function F_L and the ration $R = \sigma_L/\sigma_T$ from the transverse structure function F_2 and its derivative $dF_2/d\ln Q^2$ at small x, is given. The expressions are valid for any value of 6, the behaviour of the parton densities at low x being x^{-5}. Using F^2 HERA data, the values of G(x), F_L and R are obtained in the range $10^{-4} < x < 10^{-1}$.

Tuesday 17 September

TECHNICAL PRESENTATION

at 09.00 hrs - CN Auditorium, bldg 31/3-004-5

AutoDesk Presentation

by Ralf BRUGGER, Thomas FREDELIN & Martin von WARTBURG / AutoDesk

Organiser : S. Cannon / CN /5036

Thursday 19 September

LHC SEMINAR

at 16.00 - LHC Auditorium, bldg. 30 (7th fl.)

Beam Losses and Magnet Quenches at HERA

by K. WITTENBURG / Deutsches Elektronen Synchrotron DESY

EDUCATION *SERVICES*

EDUCATIFS

FORMATION EN LANGUES
LANGUAGE TRAINING

Françoise Benz	***73127***
Andrée Fontbonne	***72844***

• Autoformation en anglais

Un stage de mise en autonomie aura lieu du 23 au 27 septembre 1996 à raison de 4 heures par jour, de 08.30 à 12.30 h (soit 20 heures au total). Ce stage sera animé par Daphnee Goodfellow.

Si vous êtes intéressé(e) par cette formule d'apprentissage, vous pouvez envoyer dès maintenant votre "Demande de Formation" dûment complétée et signée au Secrétariat de la Formation en langues.

Pour toute information, veuillez contacter Mme Laurent : tél. 8143 ou M. Liptow : tél. 2957.

• Cours d'expression orale en anglais

Ce cours aura lieu du 23 au 27 septembre 1996 à raison de 3 heures par jour, de 14.00 à 17.00 h, soit 15 heures au total.

Prix: 290 CHF.

Pour les modalités d'inscription et des informations plus détaillées, voir ci-dessus.

ACCU MEETING

DRAFT Agenda for the meeting to be held on Wednesday, 18 **September** 1996

At 10 **a.m. in the Director General's Conference Room** 6th. **floor, Main Building.**

1. Chairman's remarks
2. Adoption of the agenda
3. News from the CERN Management
4. Minutes of the previous meeting
5. Matters arising
6. News from Member States
7. Low cost accommodation
8. EPAC
9. WWW
10. CERN Exhibitions
11. Users'Office news
12. Any other business
13. Agenda for the next meeting

Anyone wishing to raise any points under item 12 is invited to send them to the Secretary in writing via the CERN Users' Office or by e-mail to
Bryan. Pattison@cern.ch

ACCU is the forum for discussion between the CERN Management and the representatives of CERN Users to review the practical means taken by CERN for the work of Users of the Laboratory. The User Representatives to ACCU are (CERN internal telephone numbers in brackets) :

Austria	G. Walzel (6592)
Belgium	G. Wilquet (4664)
Czech Republic	J. Bohm (8348)
Denmark	T.A. Fearnley (5941)
Finland	K. Huitu
France	B. Michel (6323)
	D. Vilanova (3975)
Germany	**G.** Herten (7188)
	B. Nellen (7389)
Greece	T. Papadopoulou (7306)
Hungary	**G.** Vesztergombi (3120)
Italy	V. Palladino (3541)
	P. Bagnaia (Chairman) (3832)
Netherlands	D. Toet (3645)
Norway	A. Read (4717)
Poland	Z. Hajduk (5917)
Portugal	J.C. Carvalho (4641)
Slovak Republic	J. Urban (8507)
Spain	J. Alcaraz (4534)
Sweden	V. Hedberg (5822)
Switzerland	M.-T. Tran (8986)
United Kingdom	J. Carter (6361)
Non-Member States	S. Komamiya (4091)
	D. Stickland (6578)
CERN	P. Bloch (3776)
	A. Schopper (3158)

CERN Management is represented by L. Foà and M. Robin (Directorate) and K.J. Peach / PPE with B. Pattison / PPE as Secretary. Personnel Division is represented by J. Salicio Diez and the CERN Staff Association by M. Vitasse. Other members of the CERN Staff attend as necessary for specific agenda items. Anyone interested in further information about ACCU is welcome to contact the appropriate representative, or the Chairman or Secretary (2923 or Bryan.Pattison@cern.ch).

RUSSIAN TRAINING 1996-1997

In September, Russian Language Courses (beginners / advanced) will be given at CERN. For details, please contact/ call the teacher, Mrs. Maria Mikhailova at 50 40 13 17 (after 19.00 hrs) in France. At CERN, please send an e-mail to Kukowka@mail.cern.ch or call Mr. Vladimir Mikhailov at 75721. A general briefing will take place Tuesday 10 September at 17.30 hrs in building 54, E-002.

VENTE AUX DIVISIONS

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A. Notari / **tel** 75782

RESTAURANTS

Plats conventionnés (déjeuner) semaine du **9** septembre

	No 1 - COOP Bât. 501 - Site Meyrin	No 2 - DSR Bât. 504 - Site Meyrin	No 3- Gén. de Rest. Bât. 866 - Site Prévessin
Lundi-vendredi Samedi Dimanche	Heures d'ouverture; 07h00-01h00 07h00 - 23h00 07h00 - 23h00 Repas servis: IIh30-14h00 18h00-20hÛ0 Prix (FS): a) 7.40 FS b) 8.70 FS	Heures d'ouverture: 06h30- 18h00 Fermé sauf groupes Fermé Repas servis: IIh30-I4h00 Prix (FS): a) 7.60 FS b) 8.70 FS	Heures d'ouverture: 07hÛ0-18h0û Fermé Fermé Repas servis: IIh30-14h00 Prix (FF): a) 21.50 FF b) 25.00 FF
Lundi	a) Cordon bleu de poulet Pommes frites Légumes diététiques b) Estouffade de bœuf Nouillettes Broccoli	a) Panaché de tagliatelle aux trois fromages Salade verte b) Sauté de porc aux pousses de bambou Riz thaï Légumes chinois ***PIZZA SAN PELLEGRINO***	a) Rissolette de veau Haricots verts b) Sauté de porc aux olives Pommes frites Gratin de choux-fleurs ***ENTRECÔTE GRILLÉE***
Mardi	a) Saucisse de veau Pommes boulangères Épinards b) Côte de porc aux chanterelles Courgettes sautées Spatzli	a) Filet de merlan meunière sauce niçoise Pommes Mont-d'Or Épinards au beurre b) Poitrine de veau roulée sauce poivrade Cornettes au beurre Tomate provençale	a) Steak de bœuf haché aux échalotes Gratin de courgettes b) Gigot d'agneau Flageolets Carottes Vichy
Mercredi	a) Vol au vent charcutière Riz blanc Salade verte b) Poulet rôti Pommes rissolées Jardinière de légumes	a) Vol-au-vent sauce reine Riz pilaf Salade verte b) Escalope de volaille panée - Pommes frites Choux-fleurs ***PIZZA SAN PELLEGRINO***	a) Omelette au fromage Épinards à Fail b) Saucisse de Toulouse Pommes mousseline Tomate provençale ***MANCHON DE CANARD AU COGNAC***
Jeudi	a) Tendrons de veau Pommes mousseline Carottes b) Filet de truites roses aux amandes Tomate au four Riz sauvage	a) Lasagne al forno Salade verte b) Fricadelle de bœuf sauce aux champignons Papillons au beurre Haricots verts à Tail ***PIZZA SAN PELLEGRINO***	a) Brochette de dinde au poivre vert Petits pois b) Bœuf bourguignon Coudes au beurre Navets à la tomate
Vendredi	a) Jambon chaud Gratin dauphinois Haricots verts b) Darne de cabillaud Endives braisées Pommes natures	a) Saucisse de Vienne en cage - Choix de garniture Salade verte b) Brochette de la mer sauce safranée Riz aux petits légumes Fenouil braisé ***PIZZA SAN PELLEGRINO***	a) Jambon bruni sauce aux champignons Choux-fleurs b) Filet de perche du Nil Riz Ratatouille de légumes

Fixed price main courses (lunch) week of **9** Septembe

	No 1 - COOP Bldg. 501 - Meyrin Site	No 2 - DSR Bldg. 504-MeyrinSite	No 3 - Gén. de Res Bldg. 866 - Prévessin S
Monday-Friday Saturday Sunday	Opening times: 07h00-01h00 07h00 - 23h00 07h00 - 23h00 Meals served: IIh30-14h00 18h00-20h00 Prices (CHF): a) 7.40 CHF b) 8.70 CHF	Opening times: 06h30- 18h00 Closed except for groups Closed Meals served: nh30-14h00 Prices (CHF): a) 7.60 CHF b) 8.70 CHF	Opening times: 07h00- 18h00 Closed Closed Meals served: IIh30-14h00 Prices (FRF): a) 21.50 FRF b) 25.00 F
Monday	a) Chicken "Cordon bleu" French fried potatoes Dietetic vegetables b) Beef stew Pasta Broccoli	a) Mixed tagliatelle in three cheese sauce Green salad b) Pork stew with exotic sauce Thaï rice Chinese vegetables ***PIZZA SAN PELLEGRINO***	a) Veal stew Green beans b) Pork stew with olives French fried potatoes Baked cauliflower ***GRILLED SIRLOIN STE***
Tuesday	a) Veal sausage Baked sliced potatoes Spinach b) Pork chop with mushrooms Sautéed courgettes Swiss potato pasta	a) Poached whiting fillet in vegetable sauce Mashed potatoes au grata Buttered spinach b) Breast of veal in pepper sauce - Buttered pasta Provençal-style tomato	a) Minced beef steak with shallots Baked courgettes b) Leg of lamb Flageolets Vichy carrots
Wednesday	a) Pork meat "Vol-au-vent" Rice Green salad b) Roast chicken Sautéed potatoes Diced vegetables	a) Puff pastry stuffed with mushrooms & Dumplings - Pilaf Green salad b) Breaded chicken fillet with lemon French fried potatoes Cauliflower	a) Omelet with cheese Spinach with garlic b) Toulouse sausage Mashed potatoes Provence-style tomato ***LEG OF DUCK WITH COGNAC***
Thursday	a) Veal tenderloin Mashed potatoes Carrots b) Fillet of pink trout with almonds Baked tomato Wild rice	a) Lasagne al fomo Green salad b) Fried minced beef in mushroom sauce Green beans with garlic Buttered pasta ***PIZZA SAN PELLEGRINO***	a) Turkey kebab with gre pepper Peas b) Beef stew in red wine sauce Buttered pasta Tomatoed turnips
Friday	a) Ham Baked sliced potatoes with cream Green beans b) Slice of cod Braised chicory Boiled Î| toes	a) Wienners in puff pastry Choice of vegetables Green salad b) Poached sea fish on skewer in saffron sauce Rice with vegetables Braised fennel ***PIZZA SAN PELLEGRINO***	a) Ham with mushroom sauce Cauliflower b) Nile perch fillet Rice Ratatouille

INFORMATION

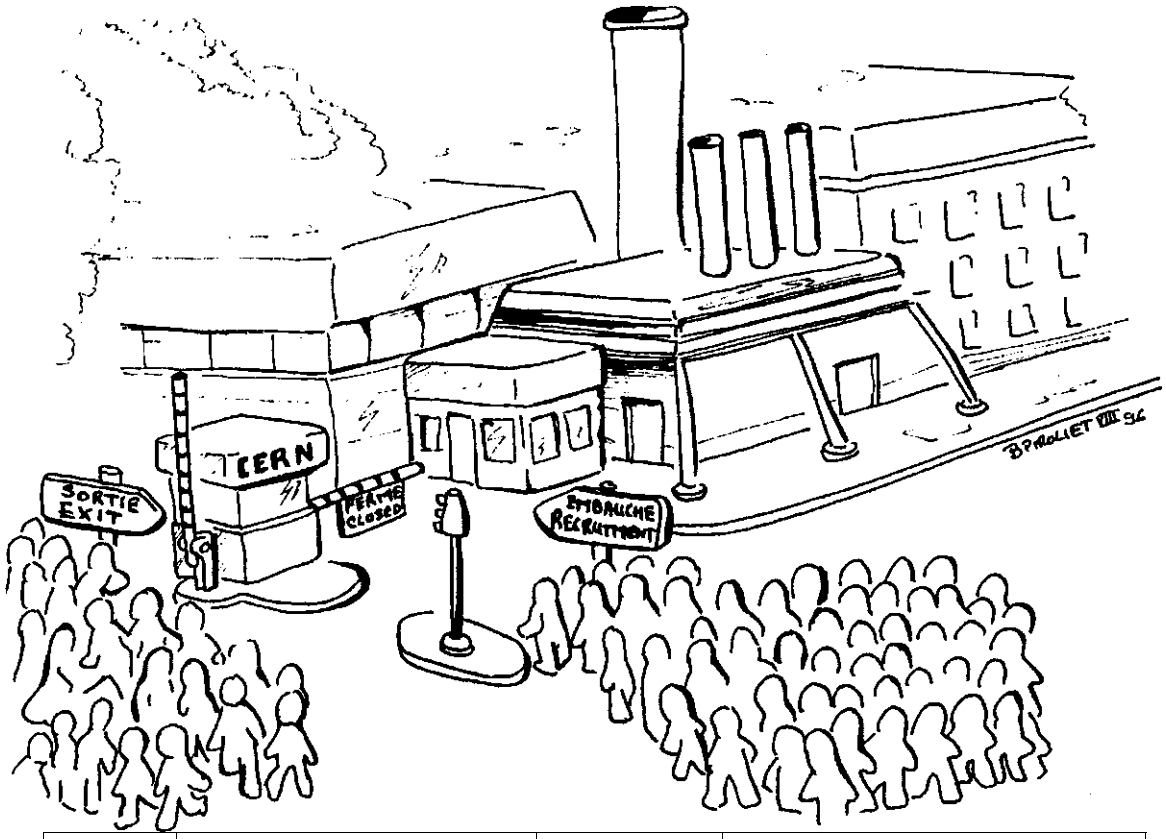
Association du Personnel CERN

Staff Association CERN

3TAFF_ASSOCIATION@MACMAIL.CERN.CHi

Adresse AP sur le WEB
http*y/www.cern.ch/CERN/Staff_Association

REUNIONS D'INFORMATION DU PERSONNEL DANS LES DIVISIONS



DIV.	JOUR ET DATE	HEURE	LIEU
PS	Lundi 9 septembre	9h.30	Amphi. PS
TIS	Mardi 10 septembre	10h.30	Amphi. Bât. 593
ECP	Mercredi 11 septembre	10h.30	Salle du Conseil
ST	Lundi 23 septembre	9b.30	Amphi. Serv. Enseignement
SL	Mardi 24'septembre	10h.30	Amphi. SL
CN		14h.30	Amphi CN
EST	Jeudi 26 septembre	9h.30	Amphi Bât. 30
DSU FI PE	Vendredi 27 septembre fllllllllf^	9h,30	Salle du Conseil
PPE		14h,30	Salle du Conseil
AS	Mardi 1er octobre	14h.00	Amphi Bât. Princip.
LHC	Jeudi 3 octobre	9h.30	Amphi. Bât. 30

CONSEIL DU PERSONNEL

La 381ème réunion du Conseil du personnel aura lieu:

MARDI 10 SEPTEMBRE 1996, à 14h00

Salle du Conseil - Bâtiment principal, 1er étage

Ordre du jour

1. **Election du Président de séance**
2. **Adoption de l'ordre du jour**
3. **Approbation du procès-verbal de la réunion du 7 août**
4. **Activités du Comité exécutif**
   - **Entreprises**
   - **Création d'emplois / Temps choisi**
   - **Protection sociale**
   - **Relations extérieures**
5. **Elections aux Comité et Commissions: présentation des candidats et distribution des bulletins de vote**

PAUSE

6. **Elections aux Comités et Commissions: vote**
7. **Préparation de rAssemblée générale: approbation de l'ordre du jour, élection du Président de séance, modifications aux Statuts, etc.**
8. **Divers**

Les réunions du Conseil sont publiques et vous pouvez y assister

CLUBS

VELO

Prochaines sorties :

SAMEDI 7 SEPTEMBRE

14h00 parking piscine Ferney Voltaire pour quelques kilomètres à votre choix,

SAMEDI 14 SEPTEMBRE

13h30, parking des drapeaux du CERN pour 72 kilomètres en compagnie des Cyclos d'Annemasse, n'oubliez les gâteaux, ils seront les bienvenus après l'effort lors de la petite collation offerte à tous les participants.

SKI

Nos séances de gymnastique débuteront le :

mardi 17 septembre, à 18h.00 et à 19h.00

Les cartes de participation seront en vente le :

jeudi 12 septembre de 17h.00 à 17h.30
à la Cafétéria du restaurant No.2
Bâtiment 504

Aucune carte ne sera vendue à l'avance. Si vous êtes absent ce jour là, veuillez déléguer un ami SVP. Merci

Freddy Streun

PHOTO

EXPOSITION

(1er étage du Hall du Bâtiment Principal)

du 15 au 20 septembre 1996

Jacques DUPONT
(portraits, paysages, photos animalières)

PETANQUE

Le club du CERN a organisé le jeudi 29 août 96 , son 5ème concours de pétanque ouvert à tous. Environ 30 joueurs étaient présents au moment du début du concours, le tirage au sort des doublettes à la mêlée, a donné lieu dès les premières confrontations, à des duels souvent indécis jusqu'à la dernière boule jouée, chacun voulant défendre sa place au classement individuel. La bonne ambiance était de rigueur, tout au long de la soirée, le concours se terminant autour d'un bon repas, avec proclamation des résultats.

1er du classement par points :

	DOMENICONI André
2 ème ex aequo:	**CUENCA Pierre**
	GOICOECHEA Bernard
4 ème :	**MACARI Claude**
5 ème :	**GUALCO Christian**

Merci à tous et à la prochaine rencontre sur les jeux de pétanque mi septembre.

CROQUET

The Advanced Swiss championship came to its climax on Saturday 24 August when the semi-finals (best of three games) were played. Ian Sexton, who had played many solid matches this season, becoming the first Swiss player to reach scratch handicap, won the first game convincingly and was well on course to take the second and reach the final when he stuck in a critical hoop. Peter Payne picked up the innings, went on to win the second and then the third games. Norman Eatough beat Dave Underhill 2 -0 in the other semi.

In Sunday's final, Norman won the first game 26 -12 with two 10-hoop breaks. Peter then struck back, playing some effective defensive croquet and levelled the score. In the final game, Norman narrowly missed a number of long shots; this made the difference and Peter went on to take the title of Swiss champion 1996. He gets the Swiss place in the 1997 World championship in Australia, Norman going to the European championship.

For further information on croquet, please contact:
Ian Sexton (75797) or
Norman Eatough (059 50 41 21 87)

FOLKLORE

Nous reprenons nos activités

VENDREDI 20 SEPTEMBRE à 19h00
Salle des Clubs, restaurant no2.

Chaque vendredi soir nous nous retrouvons pour apprendre des danses de différents pays dans une atmosphère gaie et amicale. Que vous soyez débutant ou connaisseur, avec ou sans partenaire, vous êtes bienvenu!

Actuellement nous apprenons principalement des danses d'Israël. Ce sont des danses légères et gaies qui se dansent en ronde, en ligne ou en couple sur des musiques populaires d'aujourd'hui.

Pour de plus amples renseignements téléphonez à:

Lennart 75125 ou à Use 023 - 50 42 95 50

ou venez simplement regarder et essayer un vendredi soir.

VENEZ APPRENDRE DES DANSES D'ISRAËL!

The activities will start on:

FRIDAY 20 SEPTEMBER at 19h00
in the Cubs Room Restaurant no 2

We meet Friday evenings to learn traditional dances from various countries in a cheerful and friendly atmosphere. Whether you are beginner or advanced, with or without partner, you are welcome!

Presently we have focused on Israeli dances. They are very light and cheerful and they are mostly danced in a circle or on a line - to modern popular music.

If you would like to know more please contact:

Lennart, 75125 or Use, 023 - 50 42 95 50

or simply come along one Friday evening to look and try.

COME ALONG AND LEARN
ISRAELI DANCES!

BASKET

Nous informons les personnes intéressées par la pratique du Basket Bail, que nos activités ont repris depuis le début septembre :

chaque mercredi, à 20h.00
Collège ROUSSEAU
16, Chemin du Bouchet

Les personnes qui désirent participer à ces entraînements sont les bienvenues. Ceux que la compétition intéresse, sont invités à ces mêmes entraînements, ou peuvent prendre contact avec :

Paolo GIACOMELLI:
Tél. 73294
E-mail (DXMINT::axoph2paolo)
Internet News (cern.basket)
WWW (http://macopg.cern.ch)

Nous vous rappelons que le fait de participer aux compétitions, nécessite une licence valable pour une saison, et qu'aucun match ne pourra être joué avant la signature de ce document. Une cotisation de CHF 60.- vous sera également demandée à ce moment là. Vous êtes donc invités à prendre vos dispositions dès les premiers entraînements au cours desquels une personne sera présente pour vos inscriptions.

ATTENTION
Premier match en Challenge mardi 17 septembre sur convocation.

Cette année nous pourrons jouer nos matches à domicile dans notre nouvelle salle à l'école d'ingénieur, rue de la Prairie (rue de Lyon). Cette salle est disponible chaque mardi de 20h.00 à 22h.00.

CERN WOMEN'S CLUB

WELCOME MEETING

FOR NEWCOMER'S WIVES

COFFEE MORNING
Tuesday, 10 September 96

•INFOMORNING"

Parting the new season the CERN WOMEN'S wLUB **would like to welcome newly arrived and old friends. Please come to our Coffee Morning which takes place every second Tuesday of a month in the Club Rooms, building 504 (restaurant No 2) 1st floor, from 9.00 to 11.00 a.m.**

On this first Coffee Morning of the season you can enrol for a lot of interesting courses and activities, get information and help from committee members, and of course have a cup of coffee and biscuits.

Your kids are welcome at all times. So do not be shy and come to see us. You will soon find new friends and most probably someone who speaks your mother-tongue.

See you next Tuesday!

CLUB DES CERNOISES

REUNION D'ACCUEIL POUR LES EPOUSES

DES NOUVEAUX ARRIVES

COFFEE MORNING
Mardi, 10 Septembre 1996

INFOMATIN'

Comme la nouvelle saison commence le CLUB DES CERNOISES aimerait bien saluer ses amies, anciennes et nouvelles venues. Rejoignez nous au Coffee Morning qui aura lieu le deuxième mardi de chaque mois dans les salles du Club, bâtiment 504 (restaurant no 2) 1er étage de 9h00 à llhOO.

Ce premier mardi de la saison vous pouvez vous inscrire à des différents cours et activités. Vous pouvez également obtenir des informations et de l'aide des membres du comité et bien sûr boire un café et déguster des biscuits.

Vos enfants seront toujours les bienvenues. Alors, n'hésitez pas et venez nous joindre. Vous trouverez facilement des nouvelles amies et très probablement quelqu'un qui parle votre langue maternelle.

A mardi prochain!

RUNNING

All runners and joggers are ED-rited to take part Lr_ the amual CEEN road race v.-hi eh *vriU* be held ever 3 laps uf a 1.3 km circuit in :Le "West Area en Wednesday 25th September., starting at 18h SO (6.-30 p.otj Memters of the personnel and dielr farailies !i: boro in 1&30 cr earlier! wishing to take part are asked to fill in the form below a r l return j-iemre 20tli September. If therein sufficient Lûterest. a 1 Lap race (1.8 kmj can be organised fcr children bom Ln 1B31 cr after.

As in. recent years the maio race v.'ill be run an a handicap basis, by staggering the start DE: toes. All runoers cover die same distance (5.4 tans) and those urhshuuf the course receive a medaL financed by a resdstratum fee of CHF &.

There are cups for the categories Ladies. Men and Yeteraos fbern Lr, 1&56 or earlierj, as ^vedL as mr £^'perforjDËDce aod for the best family f£ or mere members!.

Circuit: rues Gregory, Fermi, Arago, SehrodlD^er, Perrin, Gregory

Les coureurs â pied et 'j aggers' sont invités à prendre part à la course pédestre du CERN oui aura lieu le mercredi 2E ^epteoûre a lSh 30.

La distaocs est de 5,-1 >ar sur un ci ran* de 1,8 krn à parcourir £ mis. Les membres du persoDael et Leurs familles :^i nê(ej er L&Sû eu avantj trui déskent participer, sent pries de remplir le formulaire cl-le3souset]e retourner avant Le 20 septembre.

Si la demande est **suffisante, uoe course de 1,8** *km* **peut être organisée p^ur les eofants oe(ejs en 1381 ou après.**

Comme les armées procèdent es, la course principale aura heu sous forme d'une course handicap en e::holi;:miant les temps de départ.

Tous les coureurs effectuèrent Le parcours de *5A* **kms recevront une médaille à l arrivée. Les médailles sen^finaocees par un droit diaseripûon CHF &.**

Les challenges du Cross du CEEN sont remis eo coDipédcion **3D** plus **des catégories Darnes^. Hcmmes et Veterans (DOS er 1956 ou a^antj, ïl y aura UD classement par âgc'peidorm<u>ar.ee</u> et par famille (au moins 3 membres^**

[Please complete and return before 16 September to:
; Veuilles compléter ec retourner avant le IS septembre a:

îDavid DaJlman/ASteL. 7S32& or da 1 bram&:er: Lch:

Sirrnam&'Nonn :.....

First naoïe.'r'rénùm : . . . . . .

Year of birth/Anrée de naissance : . . . . . .

Cate^crj.'Catégijrie.....

Approximate time you expect- to ruo •'

Temps approximatif escompté à être réalisé .

Name of Diomber of personnel :

Xcm du membre dupersouoel : . . . .

Division.....**TeL. ore**-mail

COOPERATIVES

COOPIN (Bât. 563)

Heures d'ouverture du magasin :
lundi au vendredi de 13h.00 à 16h.30

S' **72864-73637**

Rayons
Parfumerie, droguerie, vin, alimentation, tabac, calculatrice, horlogerie, photo, jouet, textile, jumelles, cassettes.

Nouveautés BRAUN
Thermomètre auriculaire, nouvelle méthode pour prendre la température corporelle. Rapide (1 seconde), douce, précise et sûre. Idéal pour les ^enfants.

2 modèles de brosses à dents électriques BRAUN ORAL B plak contrôle ultra. Avec mouvements oscillatoires ultra rapides (3800t/min.). Tête de brosse "power tip" avec 3 groupes de poils extra-longs. Brosse système indicator dont les poils se décolorent lorsqu'il est temps de changer de brosse.

Rasoir BRAUN vario 3, de retour avec une nouvelle version. Modèle à 1 système de coupe.

De nouveau en stock, rasoirs BRAUN FLEX INTEGRAL.

Gagnez du ***temps,*** *pensez COOPIN*

INTERFON (Bât. 563)

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Séjour Hôtel Movenpick
Promotion LOUXOR
du 31 août au 21 septembre 1996
8 jours / 7 nuits
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Séjour Hôtel Frantour
Les Trois Ilets en Martinique
du 5 octobre au 24 octobre 1996
Forfait 9 jours / 7 nuits
au départ de Paris

Séjour Hôtel Sheraton
Offre spécial Maroc
du 5 octobre au 14 décembre 1996
Une semaine avec petit déjeuner
au départ de Lyon

Pour les départs de Province ou Genève, consultez l'Agence Gex-Voyages.

Secrétariat, heures d'ouverture :
du lundi au vendredi, de 13h.00 à 16h.30 BP 73339

Magasin, heures d'ouverture :
16h.30 - 19h.00 (sauf lundi)
9h.30 - 12h.00 le samedi - (059) 50 40 88 39

Adresse de notre Magasin :
649, Rue des Alpes, à Moëns

CERN CINE CLUB

JEUDI 12 SEPTEMBRE 1996, À 20H.30

THURSDAY 12 SEPTEMBER 1996, AT 8.30 P.M
Amphithéâtre Bâtiment Principal / Main Auditorium

VERTIGO

(SUEURS FROIDES)

de/of Alfred HITCHCOCK

Avec James STEWARD and Kim NOVAK

Scottie Ferguson, sujet au vertige à la suite d'un accident où il a vu mourir un collègue a quitté la police. Il est chargé par son ami Elster de surveiller son épouse Madeleine, belle blonde qui a des tentances suicidaires.

Un chef d'œuvre d'A. Hitchcock tant par la mise en scène, absolument parfaite, que par le scénario, complètement déroutant.

L'originalité de l'œuvre repose sur sa double fin, puisqu'aux deux tiers du film, on connaît la clé de l'énigme et l'histoire repart vers une nouvelle direction tout à fait inattendue. Tout le film baigne dans une atmosphère étrange, à la limite du fantastique, accompagnée par une sublime musique de Bernard Herrmann.

Suffering from vertigo following an accident in which he saw a colleague die, Scottie Ferguson left the police. He is asked by his friend Elster to observe the latter's wife Madeleine, a beautiful blond with suicidal tendencies.

A Hitchcock masterpiece supported as much by the absolutely perfect direction as by the totally disconcerting script.

The originality of the film resides in its double ending since at two-thirds of the film we know the key to the mystery but then the story diverges in a new and completely unexpected direction. The whole film is immersed in a strange atmosphere at the limit of the surreal accompanied by the sublime music of Bernar Hermann

English dialogue with French and German sub-titles
Version originale anglaise sous-titrées Français/Allemand

Entrance / Entrée FS 8.

Calendrier hebdomadaire 1996 Weekly Calendar

Lundi / Monday 9.9

Mardi / Tuesday 10.9

09.00 **A** **SPS AND LEAR EXPERIMENTS COMMITTEE**
Open session

10.00 **CN** **TECHNICAL PRESENTATION**
AVANZA : The Alcatel strategy for switched networks integrating services
by P. GIRY DELOISON, J.-P. LAGASSE, & J.-C. SENECHAL

Mercredi / Wednesday 11.9

10.00 **CN** **TECHNICAL PRESENTATION**
Digital's IP Switching Solution
by Walter DEY / Senior Consultant, Digital Equipment Corp. Switzerland

14.00 **TH** **THEORETICAL SEMINAR**
Life, the universe and nothing: the case for a cosmological constant
by Lawrence KRAUSS / Case Western Reserve

Jeudi / Thursday 12.9

09.00 **A** **II INTERNATIONAL SYMPOSIUM ON HADRONTHERAPY**
(see Programme pages 2 & 3)

16.00 **SL** **SL SEMINAR**
The e-p option for the LHC
by Eberhard KEIL / CERN

Vendredi / Friday 13.9

09.00 **A** **II INTERNATIONAL SYMPOSIUM ON HADRONTHERAPY**
(see Programme pages 2 & 3)

14.00 **TH** **MEETING ON PARTICLE PHYSICS PHENOMENOLOGY**
The gluon distribution function, FL
and R = ox/'T2''' action of F2
and dF2/dlnQ at small x
by A.V. KOTIKOV (speaker) / ENSLAPP, Annecy & JINR, Dubna and G. PARENTE / Santiago de Compostela

16.9

17.9

09.00 **CN** **TECHNICAL PRESENTATION**
AutoDesk Presentation
by Ralf BRUGGER, T. FREDELIN & Martin von WARTBURG / AutoDesk

18.9

10.00 **DG** **ACCU MEETING**

19.9

16.00 **LHC** **LHC SEMINAR**
Beam Losses and Magnet Quenches at HERA
by K. WITTENBURG / Deutsches Elektronen Synchrotron DESY

20.9

. Auditorium / bldg 500
^ Amphithéâtre / bât. 500

Council Chamber / bldg 503
Salle du Conseil / bât. 503

Theory Conference Room / bldg 4
Salle Théorie /bât. 4

T rr. LHC Auditorium / bldg 30,7th floor
Amphithéâtre LHC / bât. 30,7e étage

PS PS Auditorium / bldg 6,2-024
Amphithéâtre PS / bât. 6,2-024

£) Q 6th Floor Conference Room, bldg 60
Salle de conférence du 6e étage, bât. 60

M Microcosm Conference Room, bldg 33/R-09
Salle de Conférence Microcosm, bât. 33/R-09

SL SL Auditorium - Prévessin / bldg 864,1st fi.
Amphithéâtre SL - Prévessin / bât. 864,1er ét.

CN CN Auditorium - bldg 31/3-004 & 5
Amphithéâtre CN - bât. 31/3-004 & 5

place as indicated
lieu selon indication

ECP Conference Room, bldg 13/2-005
Salle de conférence ECP, bât. 13/2-005

Deadline for insertion : Tuesday 12.00 hrs
Staff Association : bldg 64/R-002, tel. 2819
Media & Publications (DSU) : bldg 50/1-034, tel. 3475
e-mail : *weekly_bulletin@niactnail*
staff_association@macniail
Dernier délai pour insertions : mardi 12.00 h
Association du Personnel : bât. 64/R-002, tél. 2819
Media & Publications (DSU) : bldg 50/1-034, tel. 3475