

Seeds of time from the cesium atom – A new standard in atomic clocks

Over the years there have been countless descriptions of time. A file that wears and makes no noise. The arbitrary division of eternity. A sandpile we run our fingers in. The life of the soul.

For centuries, men have sought the most accurate means to measure and monitor time. Their search has ranged from tracking the regular motions of heavenly bodies to probing the energies of atoms.

A significant advance in atomic timekeeping has lately been made in the Time and Frequency Section of the National Research Council of Canada's Division of Physics. A new cesium beam standard, Cs V, will soon begin operation as the world's most accurate clock.

Dr. Cecil Costain, Head of the Time and Frequency Section, tests apparatus from a planned new service for the distribution and maintenance of correct time. From anywhere in Canada, a commercial secondary clock can be linked by telephone line with the NRC laboratory from where its time will be corrected automatically via an electronic time code.

Le Dr Cecil Costain, chef de la section Temps et fréquence, essaye un appareil appartenant à un nouveau service prévu pour la diffusion et la conservation de l'heure exacte. Une horloge secondaire commerciale, où qu'elle soit au Canada, peut être reliée par ligne téléphonique au laboratoire du CNRC pour être corrigée automatiquement au moyen d'un code de temps électronique.

