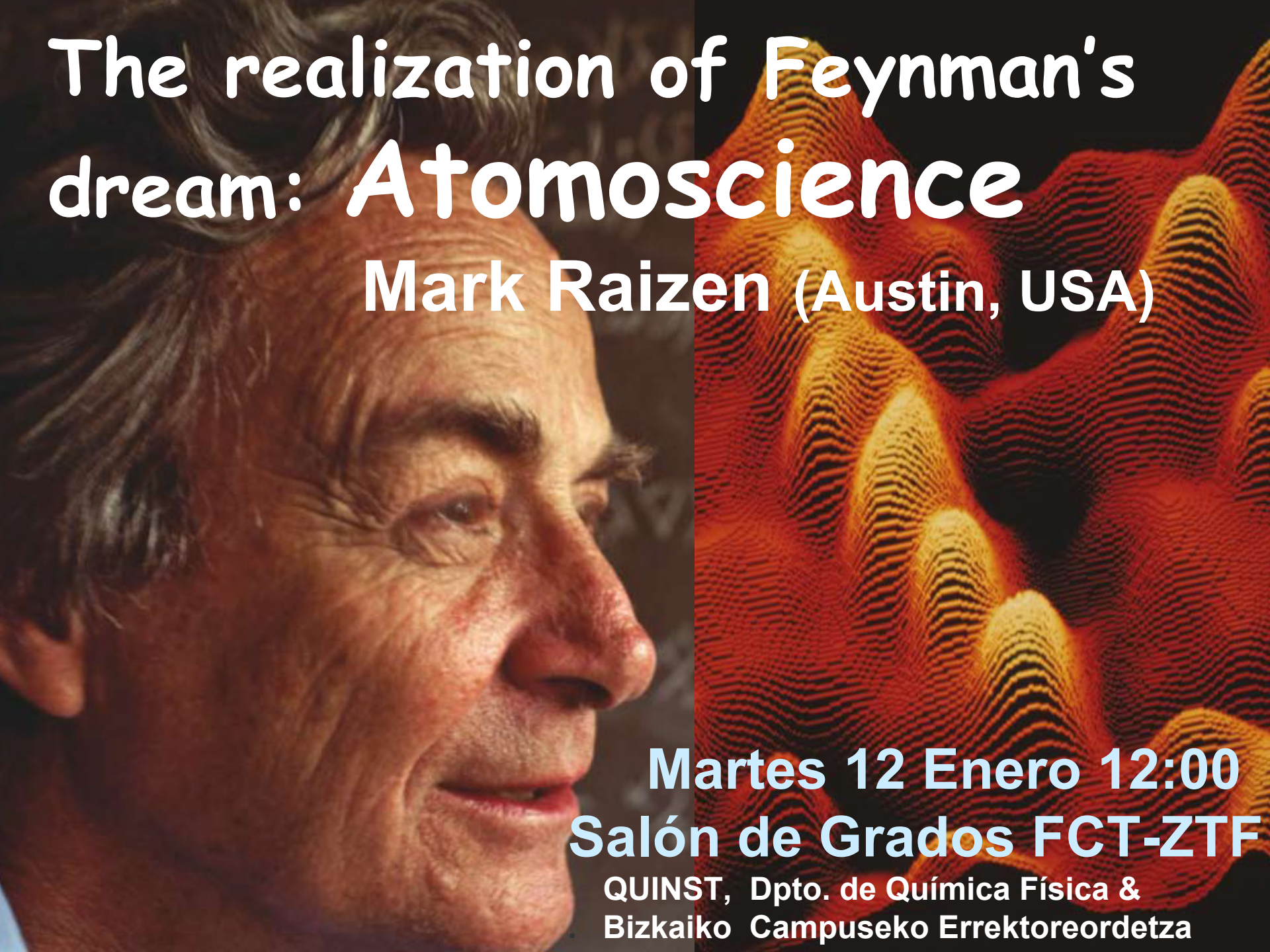


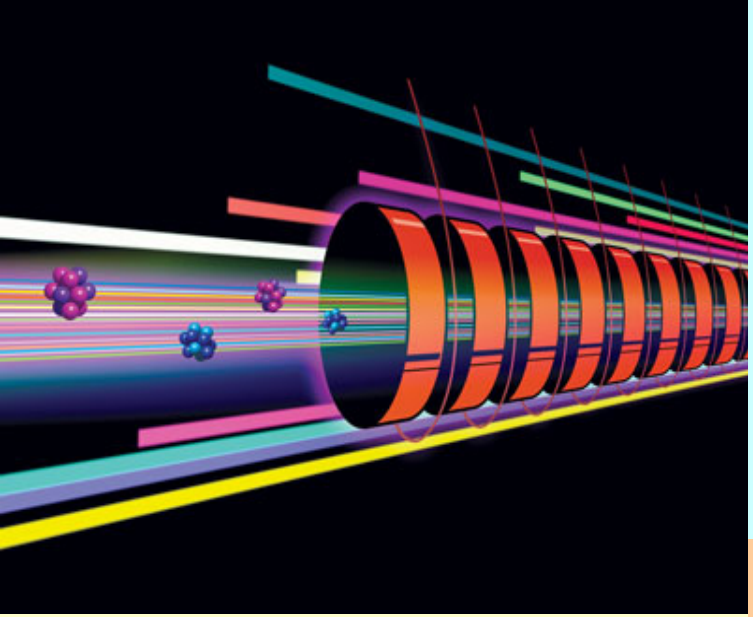
The realization of Feynman's dream: Atomoscience

Mark Raizen (Austin, USA)

Martes 12 Enero 12:00

Salón de Grados FCT-ZTF

QUINST, Dpto. de Química Física &
Bizkaiko Campuseko Errektoreordetza



Fifty years ago, **R. Feynman** gave a famous and imaginative talk about manipulating and controlling things on a small scale.

M. Raizen and his group have realized parts of this vision by developing methods to control atomic motion in gas phase.

Mark Raizen and his group can now stop over 85 percent of the atoms in the periodic table and many molecules with an atomic coilgun

Atoms and molecules that are magnetically trapped can be further cooled with a new method based on a "one-way wall of light“, a realization of Maxwell’s demon.
An intended application is an experiment to determine the neutrino rest mass, a pressing question in modern physics.

Mark Raizen completed his Ph.D. in 1989 under the supervision of F. W. Kimble and S. Weinberg. In his graduate work, Mark was instrumental in one of the first experiments that measured squeezed light. In his postdoctoral position with Wineland at NIST he developed the first linear ion trap which has become the basis for quantum information with trapped ions. He is in The University of Texas at Austin since 1991 and, among other prizes and awards he has received the Willis E. Lamb Award (2008), the Max Planck Award (2002), and the Rabi Prize (1999).