



Univerza v Mariboru

*Fakulteta za naravoslovje in
matematiko*

ODDELEK ZA FIZIKO FNM UM VABI NA PREDAVANJE

ITER: the largest Fusion Project on Earth

Dr. Alexander Vostner

ITER International Organisation, Saint-Paul-lez-Durance, France

Nuclear fusion offers a great potential to cover the energy demand for the future. Among the different principles of fusion, the magnetic confinement seems to be the most attractive candidate. Several experimental machines all around the world have provided the knowledge for designing ITER: the final step to demonstrate and confirm the capability of nuclear fusion in producing energy in a clean and controllable way. ITER is a joint international research and development project that aims to demonstrate the scientific and technical feasibility of fusion power. The partners in the project - the ITER Parties - are the European Union, Japan, the People's Republic of China, India, the Republic of Korea, the Russian Federation and the USA.

The core of ITER is the Tokamak where the plasma is maintained and the energy generated. The Tokamak machine weights more than 23 000 tons, is 29 m high and has a diameter of about 28 m. The main components are (i) the vacuum vessel, where the plasma is contained, (ii) the superconducting magnet system, which provides the magnetic confinement, (iii) the first wall and divertor, which transfers the energy and the cryostat which provides the cryogenic environment required for the superconducting coils. The goal of ITER is to produce a fusion power of 500 MW by providing only 50 MW for heating of the plasma.

**Predavanje (v angleškem jeziku) bo v četrtek, 22. decembra 2011 ob 13h v
predavalnici 0/46.2 Oddelka za fiziko, Fakultete za naravoslovje in matematiko
Univerze v Mariboru, Koroška 160, 2000 Maribor**

Dr. Alexander Vostner was born in 1973 in Germany. He studied in Vienna at the University of Technology where he graduated in 1998 and he defended his PhD thesis in Physics in 2001. From 2002 until 2009 he was working for the European Fusion Research Programme in the field of magnets first in Germany and then in Spain. Since the end of 2009 he works at the ITER International Organisation in France.

