

Comenius Project

Nuclear Energy

- The excursion of 15 students to the technological centre of **Skoda Works** in Pilsen – May 2011.
- A special exhibition - **Nuclear Days**.
- The students could watch the model of **nuclear reactor** and **nuclear rods**.
- They were informed about safe disposal and isolation of **used nuclear fuel** from reactors.
- They were discussing biological effects of **radiation**.



Students made the presentations about nuclear energy.

Dukovany:

- ČR
- Provozovatel: ČEZ
- Čtyři reaktory. Všechny jsou v provozu.



Asco:

- Španělsko
- Provozovatel:
Association Nuclear Asco
- Dva reaktory v provozu.
První postaven 1974,
druhý o rok později.



RADIOACTIVITY



Karel Kubíček

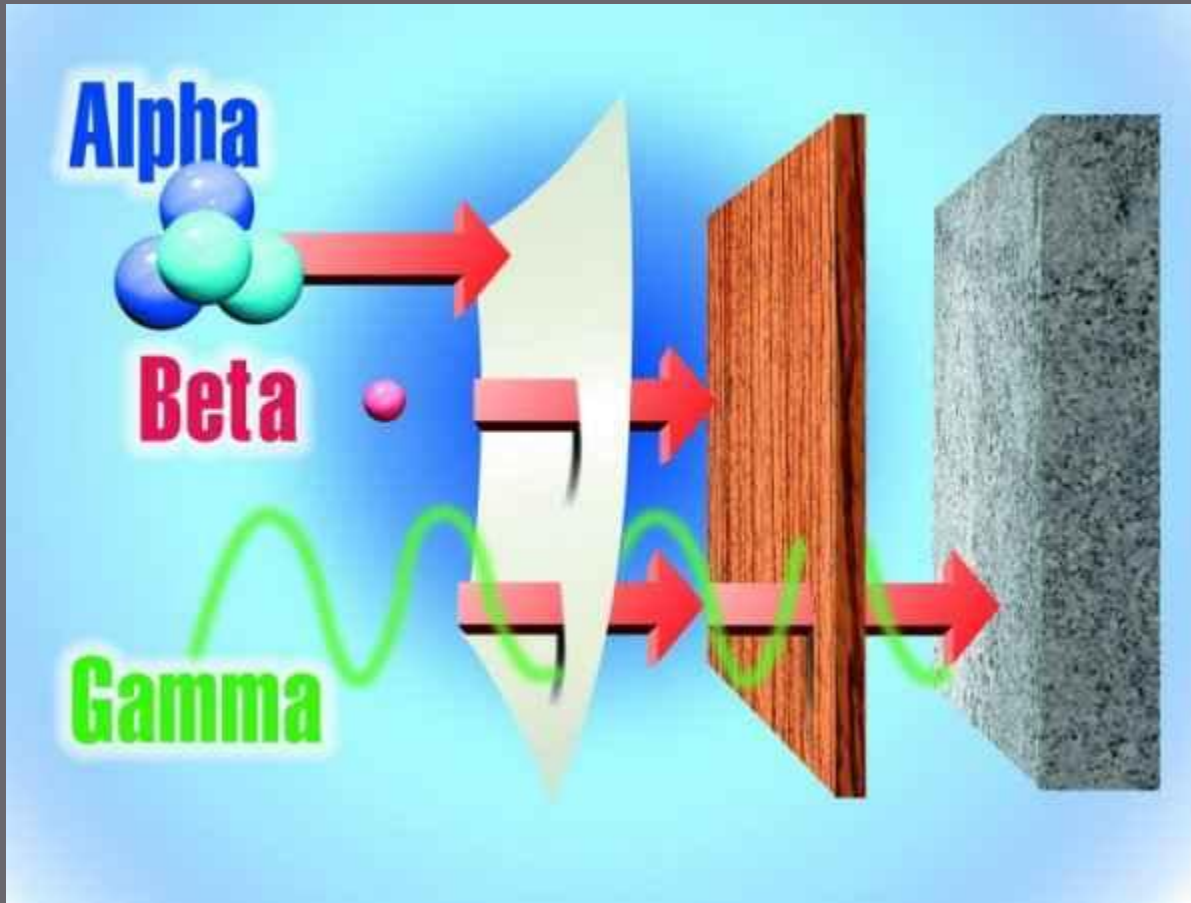
What is radioactivity ?

- ⦿ Radioactivity is a physical effect
- ⦿ Radioactivity is dangerous for people
- ⦿ Different types and intensity of radiation
- ⦿ Carcinogenic

Types of radiation

- ⦿ **Radiation alfa** – the biggest particle
- ⦿ **Radiation beta** – big particle
- ⦿ **Radiation gama** – the most danegrous, small particle

Types of radiation



Use of radioactivity

- ⦿ Medicine
- ⦿ Food
- ⦿ Paleontology
- ⦿ Nuclear power plants
- ⦿ Nuclear weapons

Nuclear power plants in the Czech Republic

Temelín

- two blocks
- **Reactor** - VVER 440V 213



Dukovany

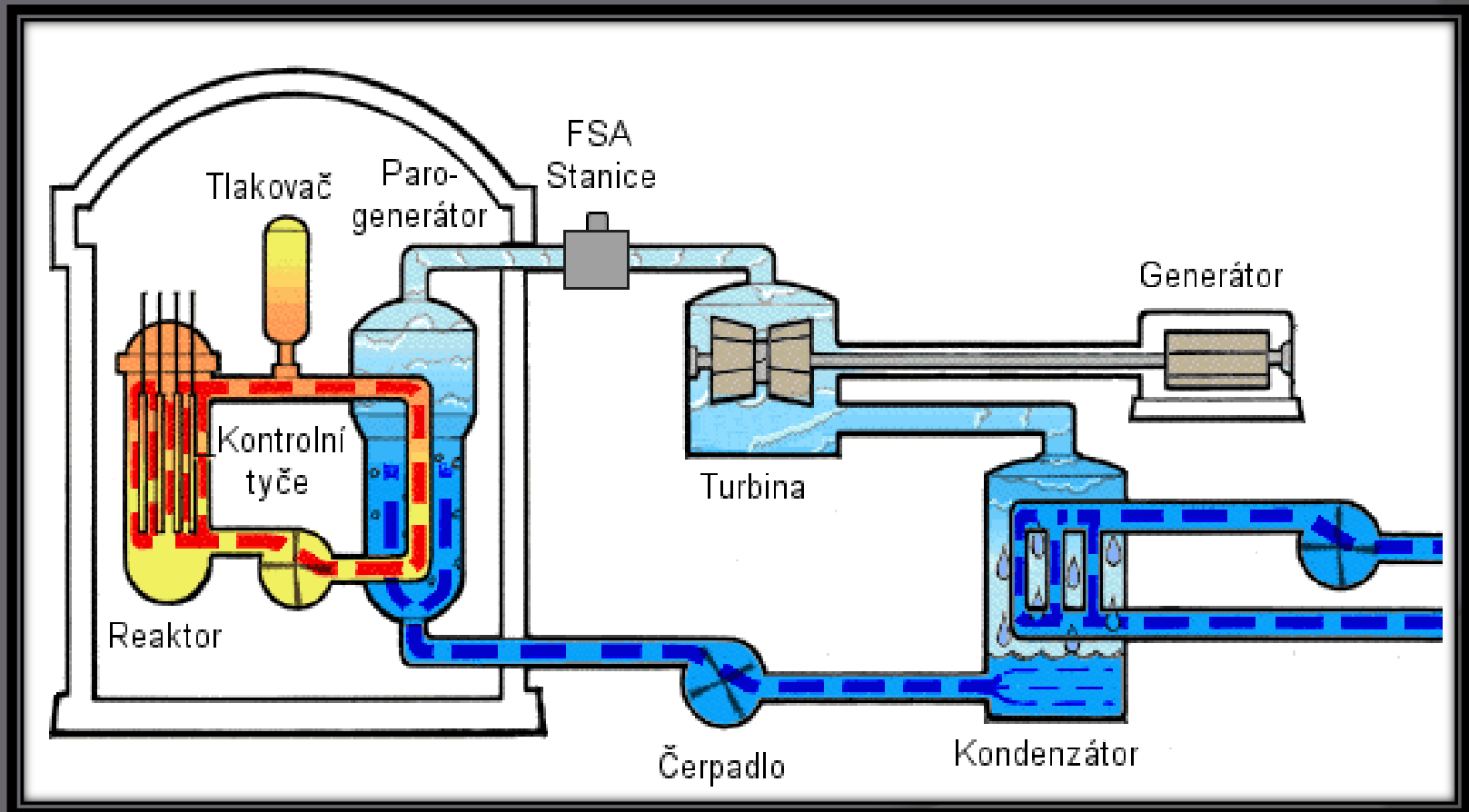
- four blocks
- **Reactor** - VVER 1000



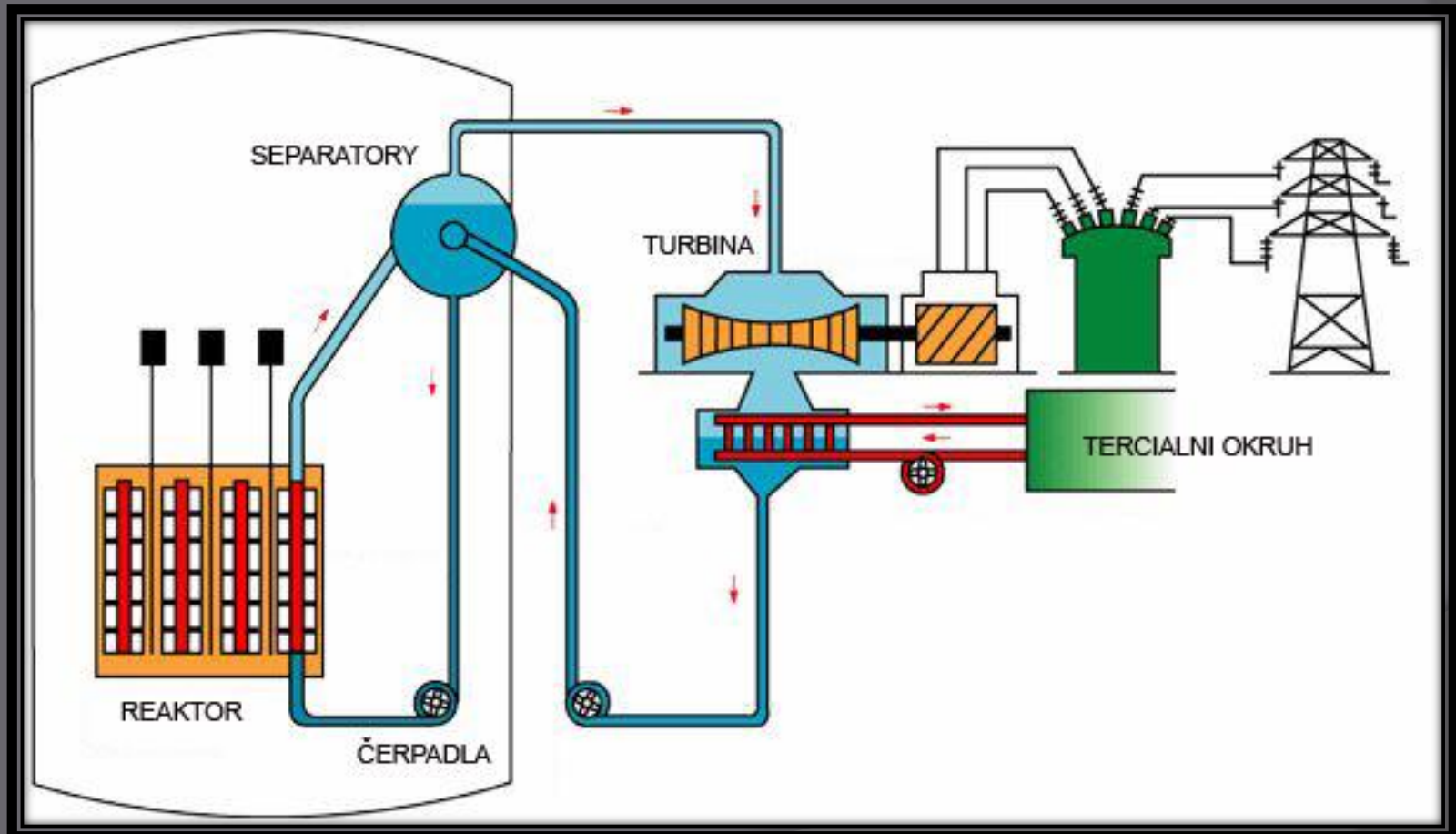
Types of nuclear power plants

- ◎ **Two types:** - **Single-circle**
- **Dual-circle**
- ◎ **Single-circle** - only one circle
- ◎ **Dual-circle** - primary circle and secondary circle with steam generator.

Dual-circle nuclear reactor



Single-circle nuclear reactor

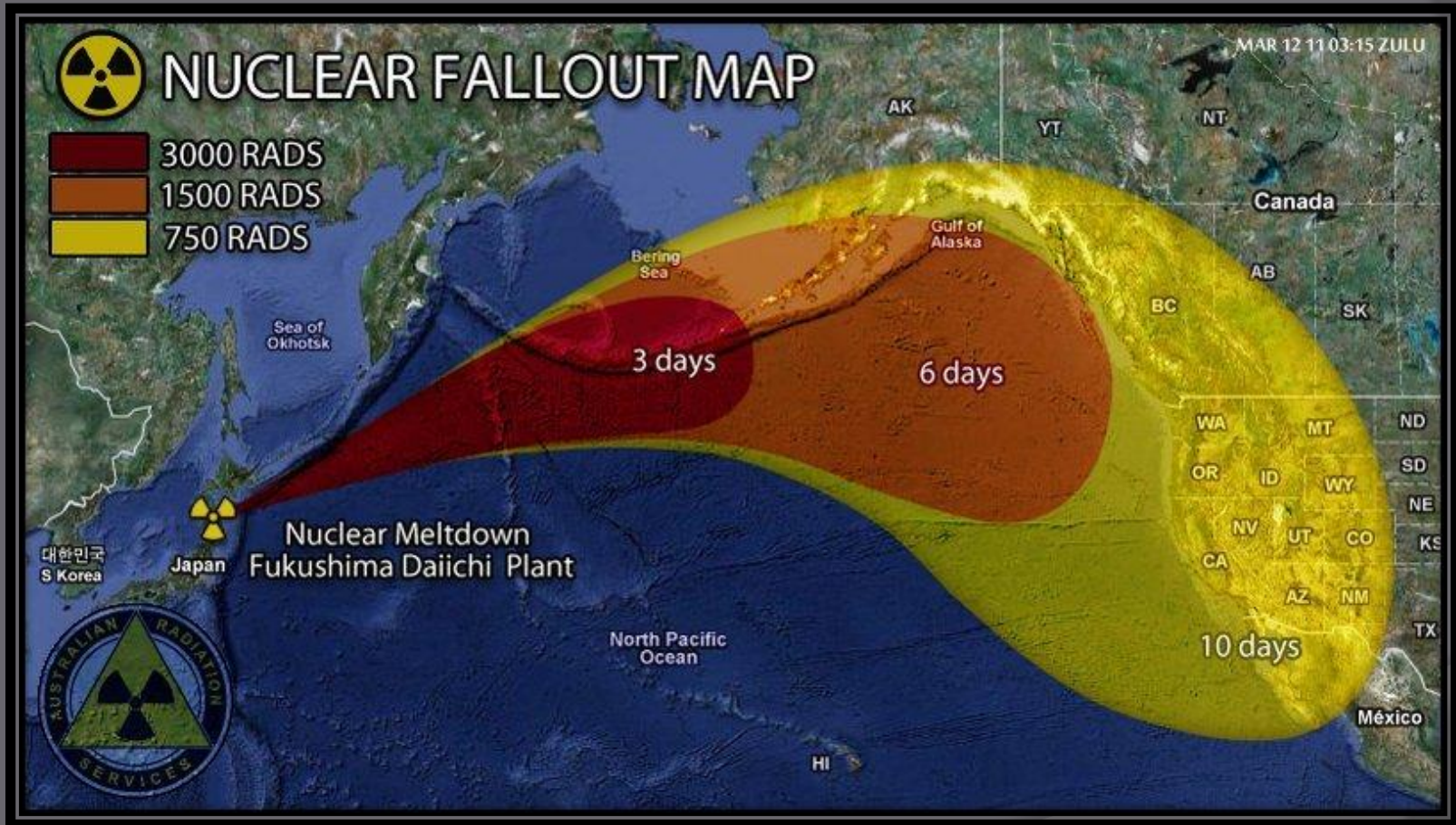


Chernobyl



- ⦿ **Nuclear catastrophe** - 26. April 1986 1:24 am
- ⦿ **Nuclear accident** - experiment

Fukušima



Nuclear weapons

- Atomic bomb
Used in Hiroshima
- Tzar bomb

