

## Warm-up question 1

Which statements about parity and C parity are correct?

- A) The combined P-parity of a fermion-anti-fermion pair is always 1
- B) All fully neutral particles transform under charge parity operation as  $\mathbf{C} \left| \psi_0 \right\rangle = + \left| \psi_0 \right\rangle$
- C) The  $\pi_0$  decay into three photons is not allowed since it does not conserve charge parity.
- D) The C-parity of ortho-positronium ( $S=1$ ) is similar to its P-parity

## Warm-up question 2

Which statements about nuclear pressure-water reactors are correct?

- A) The reactor should not be operated in chain reaction because it is not controllable in this state.
- B) The water is kept under pressure in order to avoid it from boiling away.
- C) Usually the fast neutrons from nuclear fission are directly absorbed again by the next nucleus.
- D) The only purpose of the water is to cool the core.