



ID de Contribution: 26

Type: Non spécifié

## Recent measurements on neutron transfer reactions at deep sub-barrier energies with PRISMA

*mardi 15 novembre 2011 09:00 (30 minutes)*

Recent measurements performed in inverse kinematics at deep sub-barrier energies in the  $^{96}\text{Zr}+^{40}\text{Ca}$  system will be presented.

Target-like recoils have been fully identified with the large solid angle magnetic spectrometer PRISMA.

The experimental data for one and two neutron transfer channels have been compared with semiclassical microscopic calculations.

For the two neutron transfer channels it is found that the transition to the  $0^+$  state at  $\sim 6$  MeV, whose wavefunction is dominated by the two neutrons in the  $2p_{3/2}$  shell, is much larger than the ground state one. The comparison with the inclusive data reveals that transitions to states with high multipolarity and non-natural parity are important, suggesting

that more complex two-particle correlations have to be taken into account.

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