Electron dump system and safety issues

In this talk, a preliminary beam dump design for the collider including a dilution system is introduced. The maximum temperature rise in the dump is simulated for Z, WW, Higgs, and ttbar operations. For Linac, dump design is based on CDR parameters; space size needed for the dump local shielding, which is used to reduce the prompt dose rate below 5.5mSv/h, is proposed.

Another key theme is synchrotron radiation. In order to evaluate its impact on the magnets and tunnel environment, FLUKA simulations were performed for Z, WW, Higgs, and ttbar operations. It is shown that the lead shielding scheme can reduce the absorbed dose of coils.

The dose distribution in the circular and Linac tunnel is also obtained.