

Dear students

I wish you all the best for your time at our school. Videos in **green** are obligatory. The other videos add additional information and can be viewed voluntarily. Please note down the questions that you have. We can discuss them during our time together or you can send me an email anytime (Helmut.Vincke@cern.ch)

Best regards

Helmut

## Overview of the videos for the lecture Radiation Protection at CERN

<b>Video_1_ESIPAPfinal.mp4:</b>	Introduction to CERN, its accelerator chain up to the LHC and the energies stored in particle beams. (19 minutes)
<b>Video_2_ESIPAPfinal.mp4:</b>	Important radiation protection quantities and introduction to the nature of radiation fields at CERN (17 minutes)
<b>Video_3_ESIPAPfinal.mp4:</b>	Impact and consequences of ionizing particles, radiation fields behind thick shielding (30 minutes)
<b>Video_4_ESIPAPfinal.mp4:</b>	Induced radioactivity produced by particle accelerators: introduction to radioactivity (13 minutes)
<b>Video_5_ESIPAPfinal.mp4:</b>	Induced radioactivity produced by particle accelerators: introduction to activation and their production mechanisms in accelerators (18 minutes)
<b>Video_6_ESIPAPfinal.mp4:</b>	Induced radioactivity produced by particle accelerators: General formalism to describe of radioactivity production including isotope decay (11 minutes). Only first 5 minutes obligatory.
Video_7_ESIPAPfinal.mp4:	Activation calculation mechanisms: analytic methods versus Monte Carlo methods. Monte Carlo activation calculation example for the CMS detector operation (LHC detector). (8 minutes)
<b>Video_8_ESIPAPfinal.mp4:</b>	Radiation detector systems used to measure mixed particle fields at CERN (16 minutes)
Video_9a_ESIPAPfinal.mp4:	Overview of radiation protection at CERN part 1 (16 minutes).
Video_9b_ESIPAPfinal.mp4:	Overview of radiation protection at CERN part 2 (5 minutes).
Video_10a_ESIPAPfinal.mp4:	Cosmic radiation environment + radiation protection aspects in space (5 minutes)
Video_10b_ESIPAPfinal.mp4:	Cosmic radiation environment + radiation protection aspects in space (12 minutes)