

PAUL SCHERRER INSTITUT



# Particle Theory Seminar

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*PSI*

“Electroweak Precision at the LHC”

Thursday, February 28, 2008, 11:30

OFLA/002

**Abstract:**

For selected processes the anticipated high experimental accuracy as well as the good theoretical understanding of QCD corrections make the LHC sensitive to electroweak radiative corrections. As the most prominent example, we discuss the calculation of electroweak corrections for the Drell–Yan-like production of electroweak gauge bosons. We emphasize their impact on the precise measurements of the W-boson mass and the LHC luminosity as well as on searches for new physics. Furthermore, the electroweak corrections for Higgs-boson production in vector-boson fusion and in association with bottom quarks are addressed within the standard model and the MSSM, respectively.