The maximum beam intensity reachable by the PS is limited by coupled bunch instabilities appearing after transition crossing. The unwanted longitudinal oscillations would induce large beam losses and bunch-by-bunch intensity and longitudinal emittance variations, not compatible with the requirements of the future LHC-type beams.

In the frame of the LIU-PS, the aim of the study is to determine the maximum intensity that could be provided to the LHC respecting the quality requirements.

The goal of the MD is to observe the coupled-bunch motion using both the old feedback system which uses the 10MHz cavity as longitudinal kicker and new digital feedback system with the new installed Finemet cavity to substantiate the extrapolations and predictions for the future HL-LHC-type beams.

In week 41, we prepared and verified the cycle and its mapping to the PSB, we selected the correct observable for next MDs and we started to use the longitudinal blow-up and the longitudinal feedback (old back-up) to excite and damp the instability.

CPS.USER.MD8 > MD\_coupledbunch\_LHC25   
  
PSB.USER.MD1> MD\_coupledbunch\_LHC25A   
  
PSB.USER.MD3 > MD\_coupledbunch\_LHC25B

<http://elogbook.cern.ch/eLogbook/eLogbook.jsp?shiftId=1057877>