

Introduction

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PAL

In PLS, (2.0 GeV)

- Coupled Bunch Instabilities by HOMs limited beam current by 120mA
- We have installed improved rf-cavity temperature controller (1997)
- By temperature adjustment (trial and error) we stored <180mA
- Quantitative HOM measurement performed recently. Based on Trieste **ELLISTRA** report, ~~and~~ could manage some HOMs by temperature shift.
- We could store beam current up to 240mA without feedback. Yet unstable.
- With Feedback System (^{SLAC}LFS), we stored 240mA stably. Above 240mA, transverse modes excit. (We need transverse feedback: finished)
in Jan.
- Beam size reduced ($187\mu\text{m} \rightarrow 169\mu\text{m}$; $12\text{nmrad} \rightarrow 8.8\text{nmrad}$)

- Lifetime also reduced from 22hr → 15hr (?)
- *Users are happy*
- Other problems are
 - Unstable rf control electronics
 - frequent circulator and vacuum trips

2.5GeV operation,

- No CBI observed
- Longer lifetime: 40 hrs, Higher x-ray flux
- *Users are happier*
- We normally operate at 2.5GeV