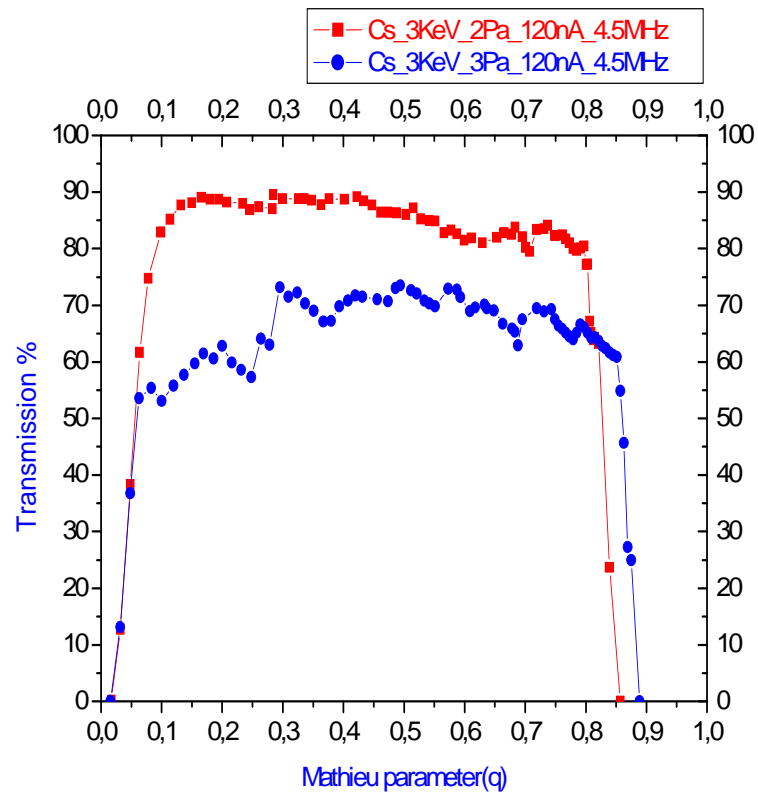


SPIRAL II HIGH INTENSITY COOLER STATUS OCT 2011

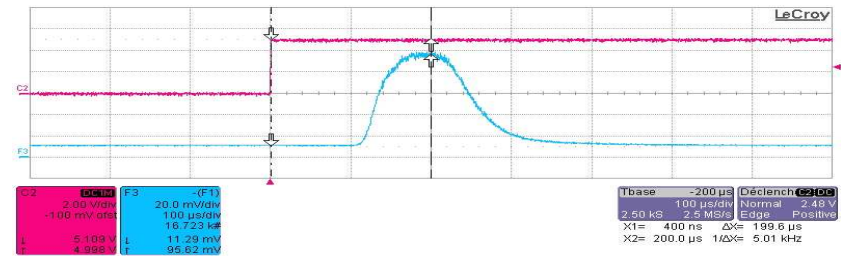
- The cooler is complete and setup at LPC
- Intensive tests are carried out →
 - Transmission (Faraday cups)
 - Beam purity after the cooling process (TOF identification)
 - Emittance (Commercial pepper pot emittance meter)

Systematics tests with different pressures, frequencies and high-voltages

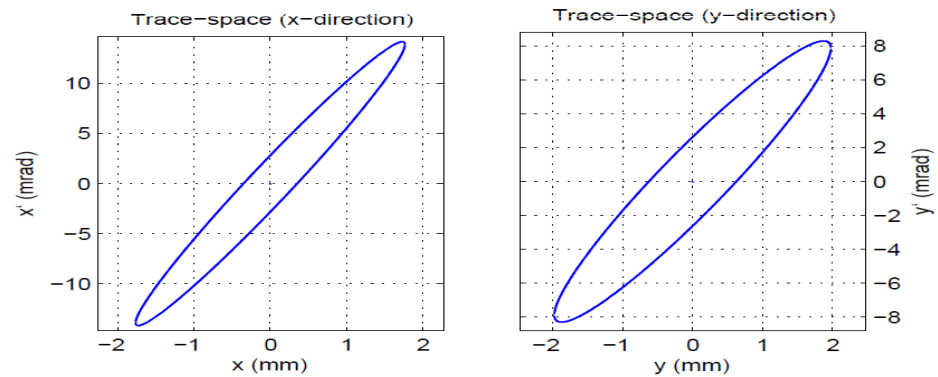
Only with Cs ions, low current (100 nA) max at the moment



Transmission within specs
at best 90%



With Cs ion only CS after cooling



Emittance measurement in the range
of 5π mmmrad, higher than specs but the
measurement is not reliable (see problems)

- Some problems so far with the tests
 - Source does not perform as expected, cannot reach the μA anymore and only a few data with high current ($> 100 \text{ nA}$)
→ supplier will provide another one, still some delay with the high current tests
 - The commercial emittancemeter gives weird results
 ε is changing with the triplet focus (??) uncertainty very large
→ under investigation

- Future plans

- Solve the problems...
- Other ions (K → chemistry inside the cooler cannot be fully investigated...)
- Vacuum study (pressure vs mass...)
- Final cooling results expected in early 2012

Development of the final cooler is moving slowly due to the lack of nuclear environment specifications from SPIRALII