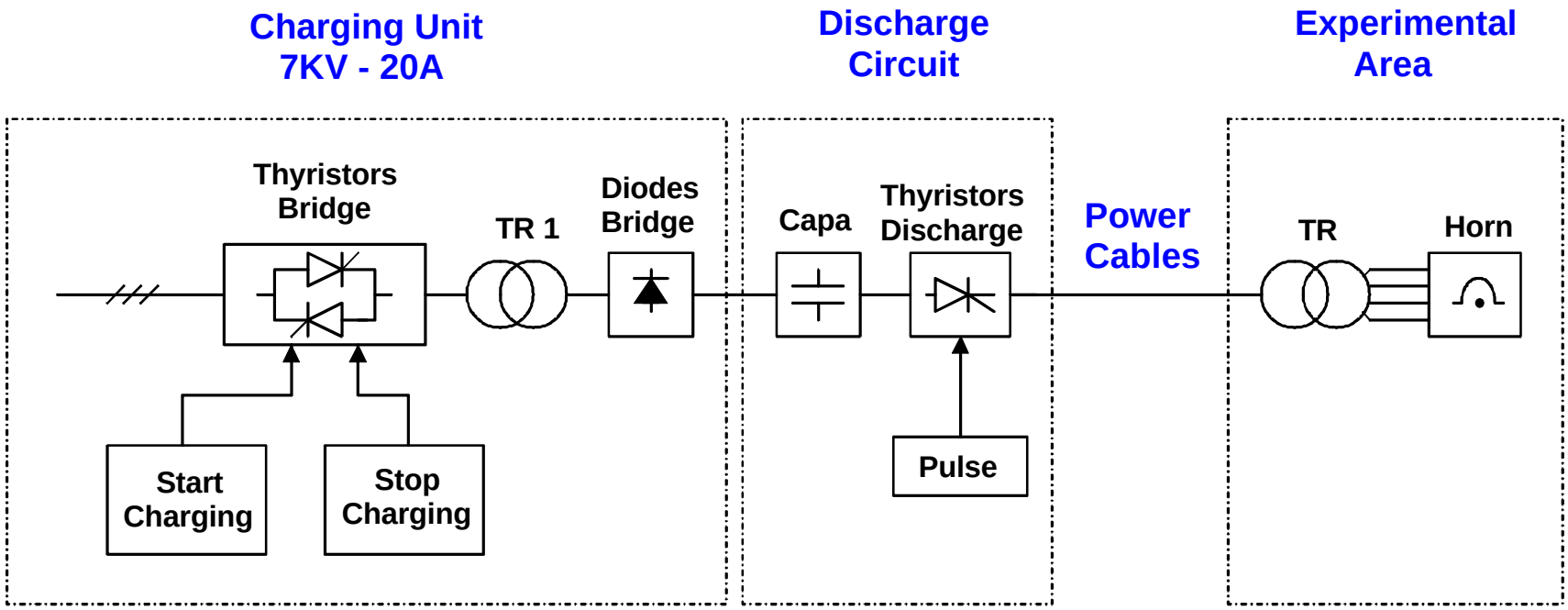
Electrical Circuit

2nd International Workshop on Neutrino Beams and Instrumentation. FERMILAB, Chicago, 6 - 9 September 2000

Gilles.Maire@cern.ch

Single Pulse



- Existing WANF circuits : one for Horn and one for Reflector.
- Available for tests and to be reconditioned for final CNGS experiment.

+ and -

- +++

  Primary current divided by *n* allows

  Long cable line between TR and Horn (~800m)

  Low voltage across Horn (~500v)

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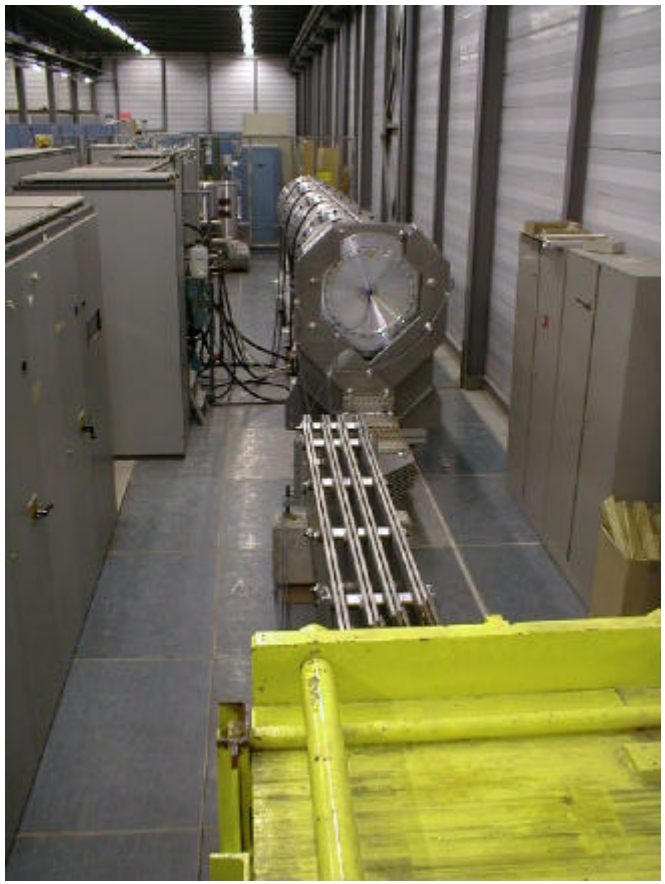
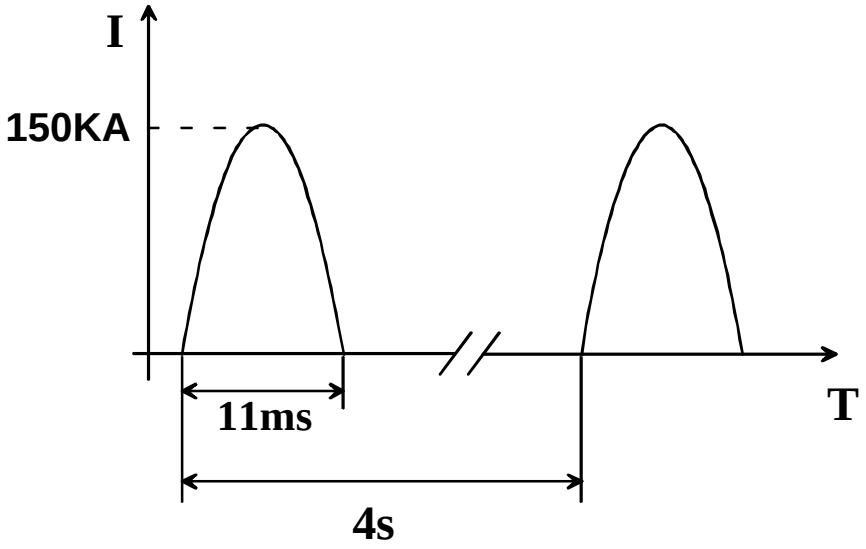
  TR expensive.

TR, SL and Horn

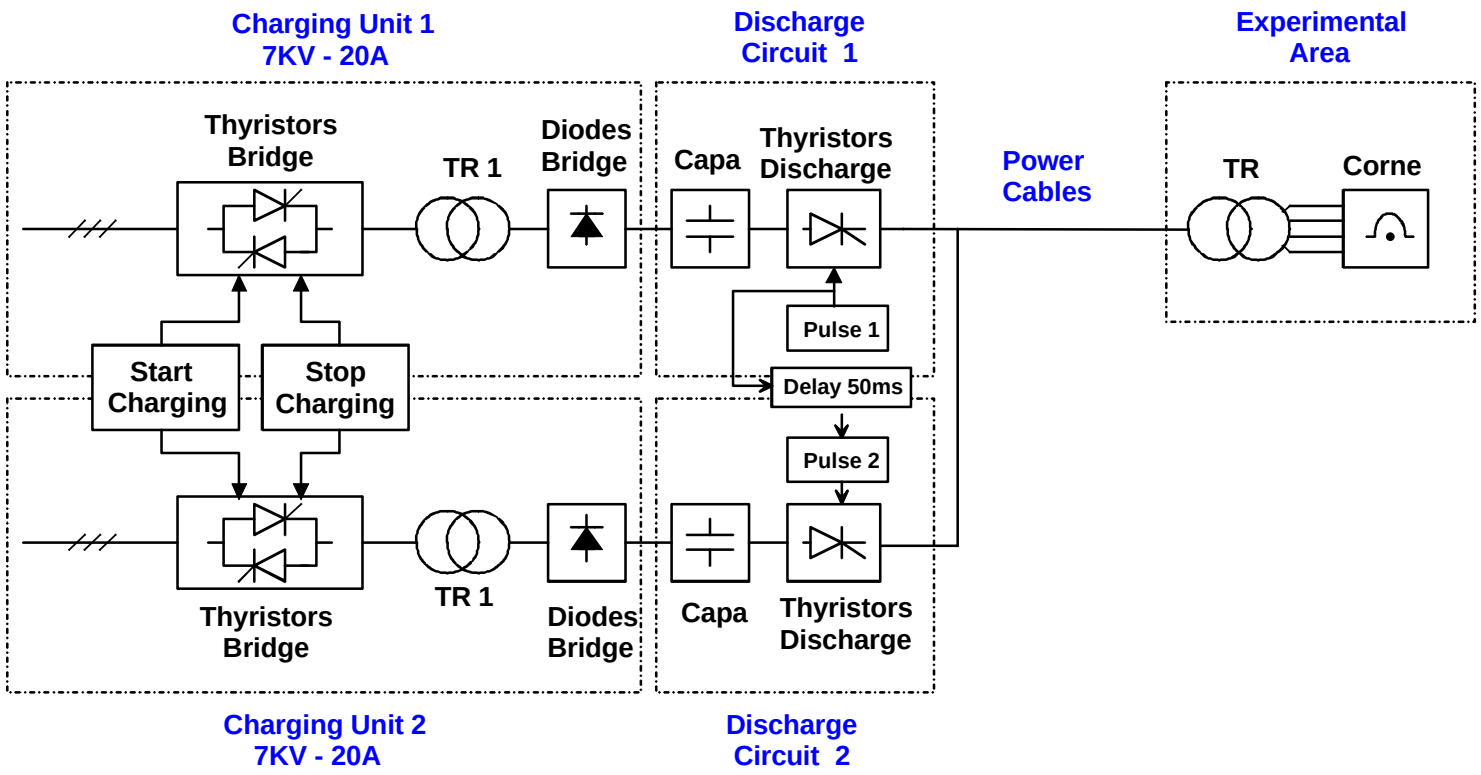


First Test



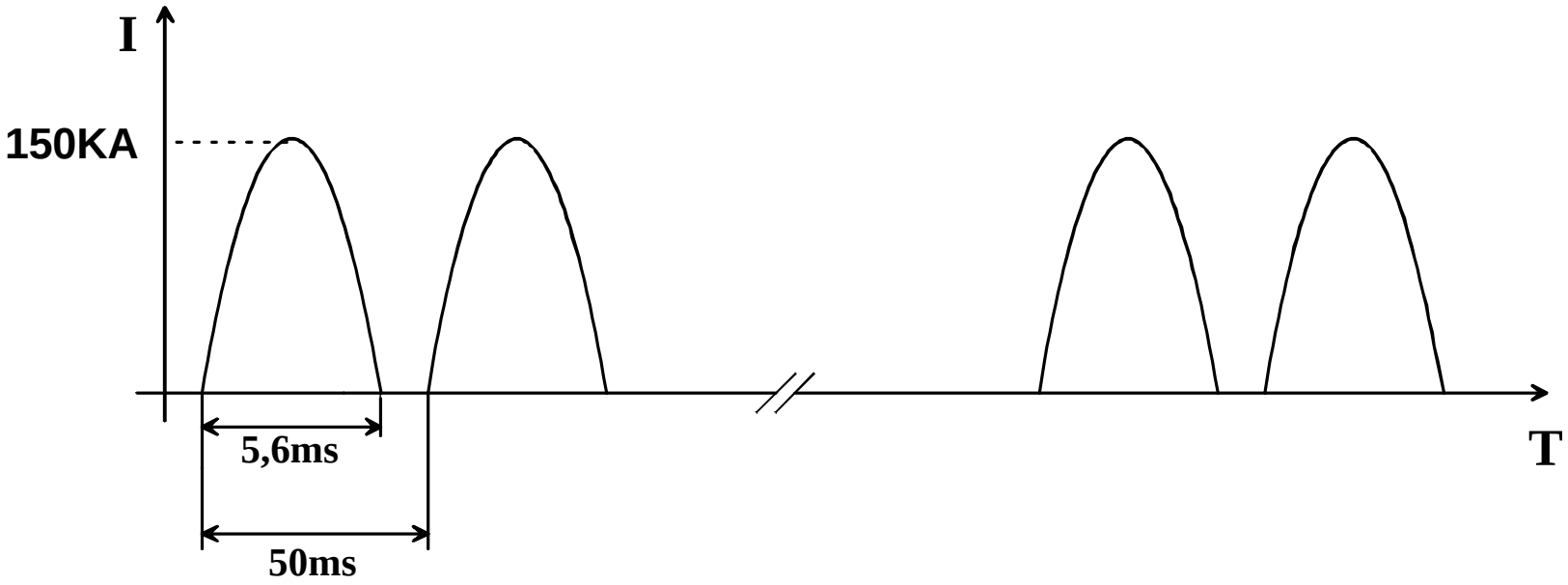
- First Horn fatigue test.
- $1{,}5 * 10^6$ Pulses in single mode (m = 32).

Double Pulse



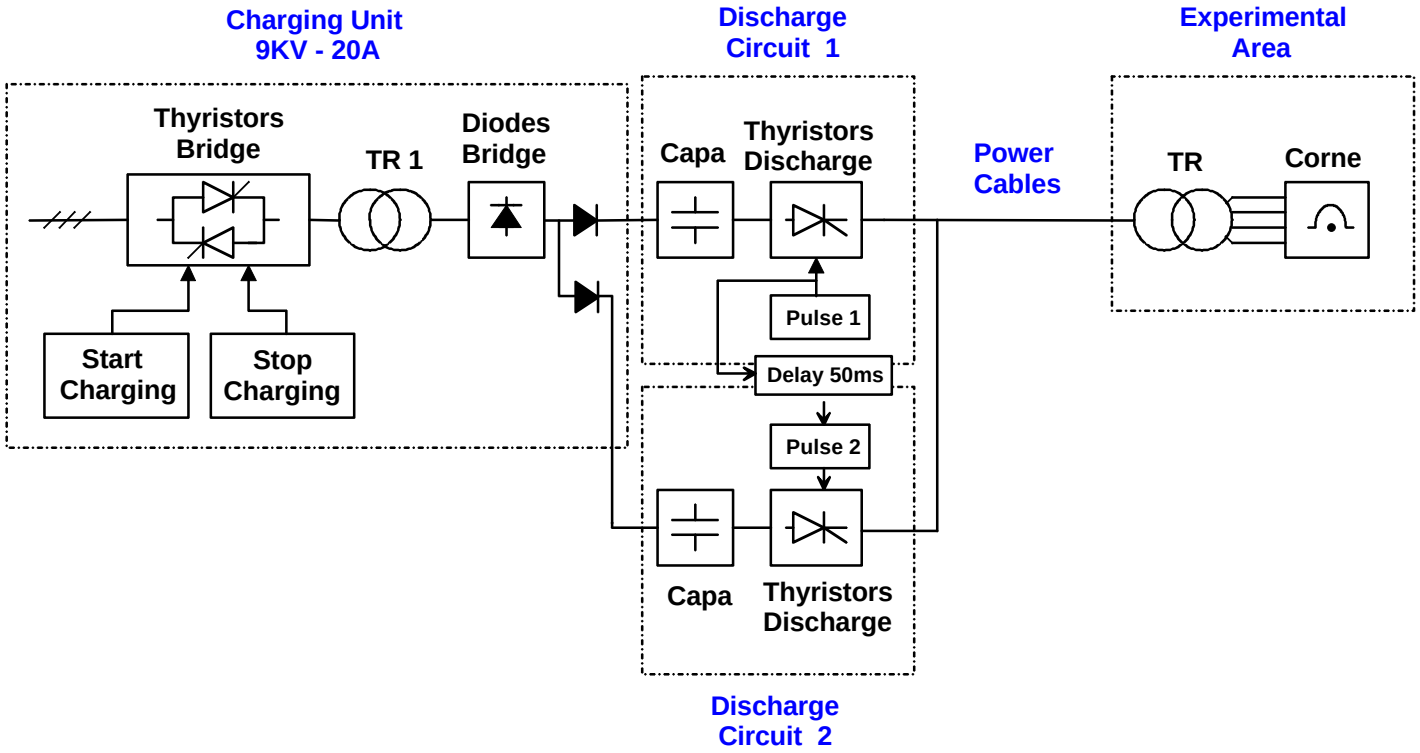
- Second Horn test starting now (closer to final parameters, $m = 20$).

Second Test



- Adapt recuperation circuit to double pulses.

Third Test



- To start In April 2001.
- Simulate power cables with additional coil (m = 20 instead m = 16).
- Validate final electrical parameters.
- Continue fatigue test

Conclusions

- $1{,}5*10^6$ single pulse fatigue test successful.
- First pulse in double pulses mode recorded.
- Tuning of recuperation circuit done.
- Inductance of capacitors bank, discharge circuit, 800m power line and Strip Lines to be minimized.
- 180KA double pulses under study.