Muon Department

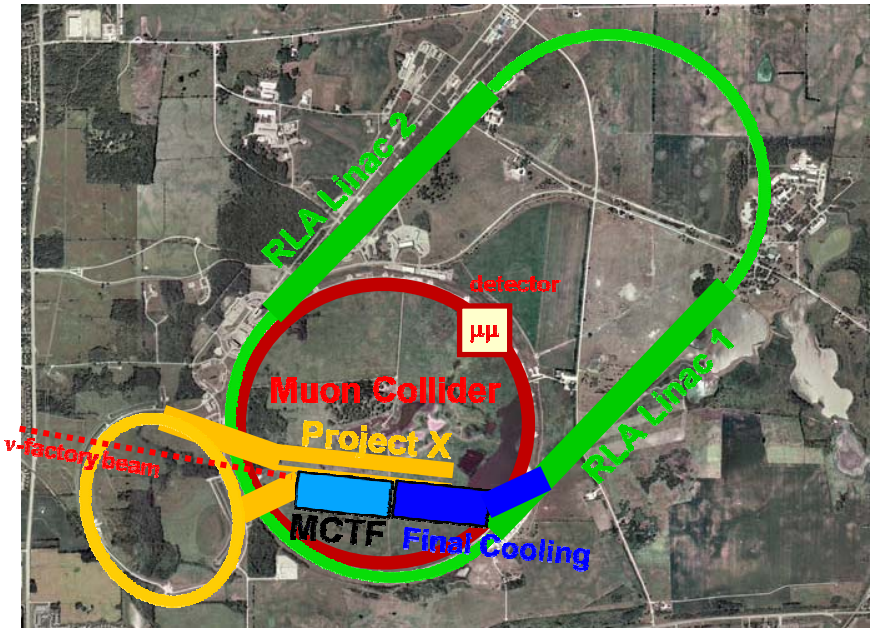
MISSION: To develop the concepts & technologies that will enable future accelerator facilities using high intensity muon sources.

PRESENT FOCUS: Muon Colliders and Neutrino Factories, with a hardware (M&S) emphasis on developing the technologies needed for a muon ionization cooling channel.

ORGANIZATION: Two Groups

Muon Collider Task Force Group (A. Jansson, ldr)

Neutrino Factory & Muon Collider Collaboration Group (A. Bross, ldr)



Our task is to make this real

Muon Department Activities

NFMCC (Alans Talk):
Priorities include: MICE experiment & rf testing in the MUCOOL Test Area .. *crucial for understanding viability of a muon cooling channel*.

MCTF (Andreas Talk):
Priorities include: High Pressure rf test in new MTA beam & Helical Cooling Channel (HCC) development & simulations … *crucial for understanding whether a HCC is viable for a Muon Collider*.

OTHER Activities: (not covered by Andreas or Alan)

- Muon Collider Physics & Detector studies
(collaboration with our theorists & N. Mokhovs group)

- Low energy Neutrino Factory Physics & Detector Studies
(with a handfull of international partners)

- Beam cleaning R&D for mu2e (US/J collaboration)

Muon Department Summary

Within the Muon Dept. we have formulated a challenging R&D program with a high payoff potential:

- High intensity muon beams for next- and next-but-one generation low energy muon experiments
- Neutrino Factories
- Muon Colliders

With limited resources we are focusing on the most challenging aspects of Muon Collider design.

Alan and Andreas will show you that we have some exciting activities in hand … but our ambitions are much larger than the scope of present activities.