

Proton Driver (June 6)

**ISIS as a proton driver for a neutrino factory
by C. Prior (RAL)**

**150 MeV FFAG
by J. Nakano (KEK)**

**SCL for 1MW AGS upgrade
by A.G.Ruggiero (BNL)**

ISIS as a proton driver for a neutrino factory

by C. Prior (RAL)

- **MW upgrade**
 - + **new sychrotrons: 3GeV 50Hz or 8GeV 16.7Hz**
 - + **new injector: two booster synchrotrons and linac**
 - + **two main synchrotrons at 25Hz each give 5MW**
- **Bunch compression experiment on ISIS**
 - + **bunch length from 100ns to 5-10ns**
 - + **40% of full current is phase rotated, 2.5ns (rms)**
- **Funding bids have been prepared to UK and EC**

150 MeV FFAG

by J. Nakano (KEK)

- **Prototype FFAG is constructed.**
 - + **scaling FFAG**
 - + **return yoke free magnets**
 - + **2% duty cycle, 40nA average current (design)**
- **Injection study is going on.**
 - + **a beam is circulating one turn, 30 -> 25nA.**
 - + **installing septum and bump magnets**
- **Acceleration study is ready to go.**

SCL for 1MW AGS upgrade

by A.G.Ruggiero (BNL)

- **Increase Rep. rete: 1/3 to 2.5Hz with a bit more proton**
 - + **beam power goes from 0.1MW to 1MW.**
 - + **B field goes up in 0.2s and down in 0.2s.**
 - + **direct injection to AGS from linac of 1.2GeV.**
- **Reasons to choose superconducting linac**
 - + **SNS uses SCL to 1GeV**
 - + **real estate is limited**
 - + **average current is low, 0.179% duty**
- **About 100M US\$ project**
- **Detector is in Homestake mine at 2540km away**
 - + **production target is located at the top of hill**