# PROTON SOURCE

- $\boxed{\text{For 4 TeV c-of-m and } \mathcal{L} = 10^{35}\,\text{cm}^{-2}\text{s}^{-1}}$

| | **30GeV** | **10GeV** | |
|---|---|---|---|
| Rep.Rate | 15 | 30 | Hz |
| Protons | $10^{14}$ | $10^{14}$ | /pulse |
| Bunches | 4 | 2 | at target |
| Protons | $2.5 \times 10^{13}$ | $5 \times 10^{13}$ | /bunch |

One possible proton driver consists of:

| | | | | |
|---|---|---|---|---|
| 600 MeV Linac | (BNL | SNS) | | |
| 3.6 GeV Booster | (BNL | SNS | lower | f) |
| 30 GeV Driver | (JHP & KAON) | | | |

- $\boxed{\text{For 0.5TeV c-of-m and } \mathcal{L} = 10^{33}\,\text{cm}^{-2}\text{s}^{-1}}$

| | | | |
|---|---|---|---|
| AGS | 30 GeV | $10^{14}$ | 2.5Hz |
| FNAL | 8 GeV | $3 \times 10^{13}$ | 15Hz |

## Important Issues in a Proton Driver*

- Production of short bunches (1 ns)

- Stability

* $\mu^+\mu^-$ COLLIDER