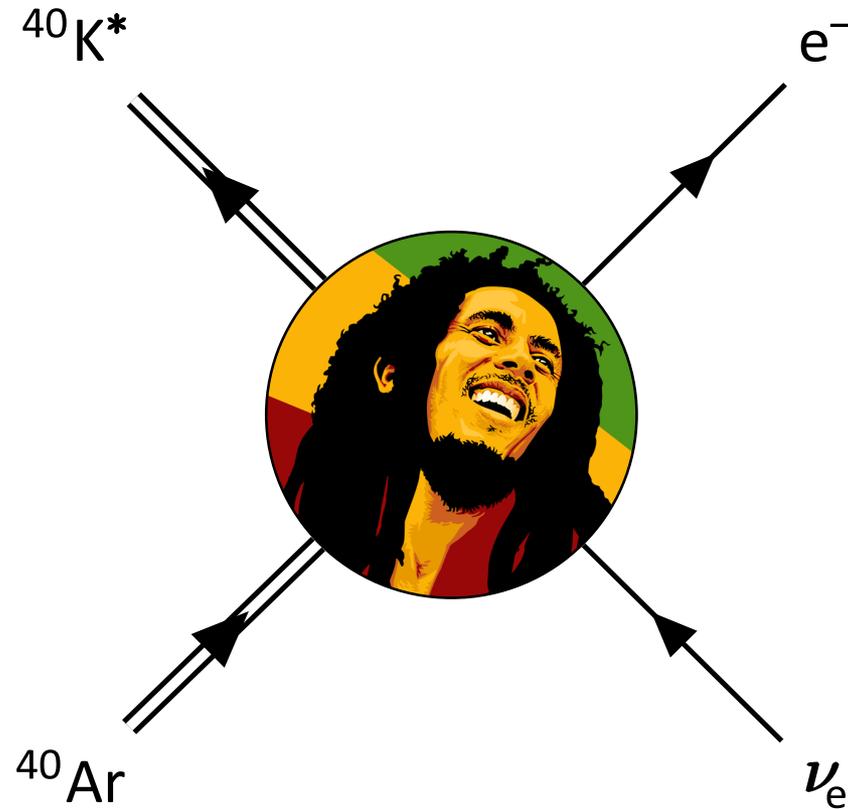


MARLEY β v0.9.0 Release on the FNAL dunegpvm nodes



Steven Gardiner
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Using the code



- Access to the dunegpvm nodes requires a FNAL computing account (due 6/10 for the hack days)

- Upon logging in, simply run the command

```
source /dune/app/users/gardiner/marley/setup_marley.sh
```

to set up the correct environment variables

- If all goes well, running

```
marley --version
```

should give the following output

```
MARLEY (Model of Argon Reaction Low Energy Yields) v0.9.0
```

- Quickstart guide: `/dune/app/users/gardiner/marley/README`

Thoughts on the current LArSoft workflow



- MARLEY events are currently loaded into “vanilla” LArSoft using HEPEvt format text files
- A direct Geant4 interface exists, but there are some subtleties involved in creating a dedicated LArSoft module
 - C++11 STL <random> (MARLEY) vs. CLHEP (LArSoft)
- LArSoft needs some tweaks out of the box for SN events
 - Low energy EM + neutron HP physics
 - MC truth trajectories are abbreviated
 - True stepwise ionization and scintillation yields hard to obtain
- I have some code to address these issues, but it needs to be integrated into the existing LArSoft codebase (hack days project?)
- Work on MARLEY is ongoing as well
 - Arbitrary incident ν directions needed

Conclusion



- MARLEY is available on the dunegpvm nodes at FNAL. We encourage you to give it a test drive.
- Feature requests, bug reports, and general feedback are very welcome.
- Support requests and other feedback may be sent to me directly or to support@marleygen.org