



☰ Simulations for KLF

Software Meeting



Stuart Fegan
University of York
May 2nd, 2024

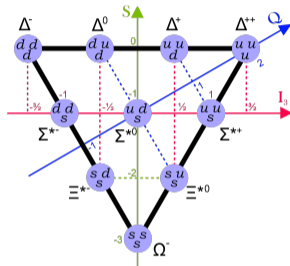
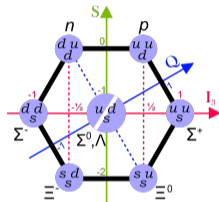
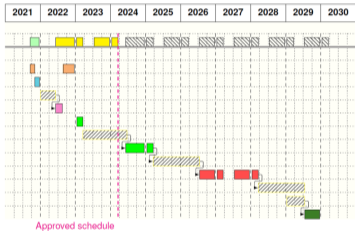




Hall D plans

Assumed beam availability

- E12-10-011 PrimeX- γ Run
- E12-19-003 SRC/CT Run
- Installation of CPP
- E12-13-008 CPP/NPP Run
- Installation of FCAL2
- E12-12-002A GlueX-II+JEF Run
- Installation of KLF
- E12-19-001 KLF Run
- Restoration of photon beam
- Installation of REGGE
- E12-20-011 REGGE Run



- We need to be ready
- Not just beamline and hardware, but software too
- Need extensive simulation of reactions of interest



KLGenerator_hddm

- https://github.com/sdobbs/KLGenerator_hddm_V3 (forked from https://github.com/nickzachariou/KLGenerator_hddm_V3)
- Seems to date back to York's Edinburgh days
- Covers a reasonably comprehensive range of K_{Long} reaction channels on both proton and neutron
- Tunable K_{Long} beam parameters
- Can also generate γp and np events



Status

- Generator compiled and running (using KLF singularity image of Hall D software stack)
- Reconstruction and smearing steps have ran, and produced output files
- Currently assessing some analysis plugins from Nick, they date back to our Edinburgh days, so current issues are with contemporary compiler environments

