

NA62 - hardware

CEDAR/KTAG : Kaon identification in the un-separated beam line (kaons are ~5% of the beam)

Old gas vessel + new mechanics, optics, photo-detectors, front-end and readout

UK overall responsibility of KTAG

Birmingham responsible for front-end and readout - designed, assembled, tested in PB8 here;

Light boxes assembled and tested extensively here, then shipped to CERN to be installed;

Complete readout chain reproduced in PB8 and used for development and tests

Installation to be completed at end of September 2014

NA62 - responsibilities

- Hardware : CEDAR/KTAG - see before
Contribution to Trigger and DAQ tests and implementation
- Firmware : Muon Trigger, CEDAR/KTAG trigger
- Software : CEDAR/KTAG reconstruction, monitoring,
Simulation; detector alignment procedure

Overall experiment RunControl system

Software coordination and responsibility for experiment
offline software for simulation and event reconstruction

NA62 - analyses

Large portion of current NA48/NA62 analyses done here:

Search for heavy neutrinos with $K \rightarrow \mu \nu$

Search for heavy neutrinos with $K \rightarrow \pi \mu \mu$

$K \rightarrow e \nu \gamma$ branching ration and form factors

Dark photons

Pion dalitz form factor

LFV, LNV $K \rightarrow \pi \mu \mu, \pi e e, \pi \mu e$

NA62 - longer term plans

Maintain responsibility of maintenance and operation of the KTAG readout and trigger

Keep current responsibilities of CEDAR simulation and reconstruction software

Tonino's software coordination

RunControl responsibility linked to Nicolas

Evgueni's Grant linked to Muon responsibilities

Keep leading role in analyses of rare and forbidden decays