

# Discussion

Beloved-of-the-Gods, King Piyadasi, honors both ascetics and the householders of all religions, and he honors them with gifts and honors of various kinds.[22] But Beloved-of-the-Gods, King Piyadasi, does not value gifts and honors as much as he values this -- that there should be growth in the essentials of all religions.[23] Growth in essentials can be done in different ways, but all of them have as their root restraint in speech, that is, not praising one's own religion, or condemning the religion of others without good cause. And if there is cause for criticism, it should be done in a mild way. But it is better to honor other religions for this reason. By so doing, one's own religion benefits, and so do other religions, while doing otherwise harms one's own religion and the religions of others. Whoever praises his own religion, due to excessive devotion, and condemns others with the thought "Let me glorify my own religion," only harms his own religion. Therefore contact (between religions) is good.[24] One should listen to and respect the doctrines professed by others. Beloved-of-the-Gods, King Piyadasi, desires that all should be well-learned in the good doctrines of other religions.

**King Ashok 250 BC**

# Time scale of study

- How do we accomplish something by June ?
  - Need to make small groups and assign tasks.
- What else is going on
  - DUSEL process
  - NUSAG process
  - proton plan at FNAL
  - International scoping study

# Groups ?

# Open issues on physics

- Systematic errors on backgrounds. what to use ?
- How to push backgrounds down ?
- Second maximum for nova, signal/bck

# Detector R&D

- Lot of R&D on tracking detectors, NOVA-style
- Some R&D on liquid Argon
  - can we make further list
- Very little R&D on Water Cherenkov counters
  - can we make further list

# Open issues on beam

- What is the correct proton energy and power level from FNAL
- What is the cost of a new beam
- To get intensity at low energies must have ~4 meters diameter tunnel. I have length of 200 meters to get the spectra in this talk.
- How should we tailor the spectrum for maximum signal/noise ?
- If tunnel is wide WE CAN ALWAYS RUN OFFAXIS by moving and tilting the horn/target. (upto 1 deg.)
- What is the time sequence ? Proposal on next slide.

# Time sequence for Homestake or Henderson

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- Possible time sequence at Henderson:
  - 443 kT+ 0.5 MW(60GeV) => 300 evts/day
- Possible time sequence at Homestake:
  - 100 kT + 0.5 MW (60GeV)=> 68 evts/day
  - 200 kT + 1 MW (30GeV) => 180 evts/day
  - 200 kT + 2 MW (30 GeV)=> 360 evts/day

# Open issues on detector at DUSEL(Hmstk/Hndrsn)

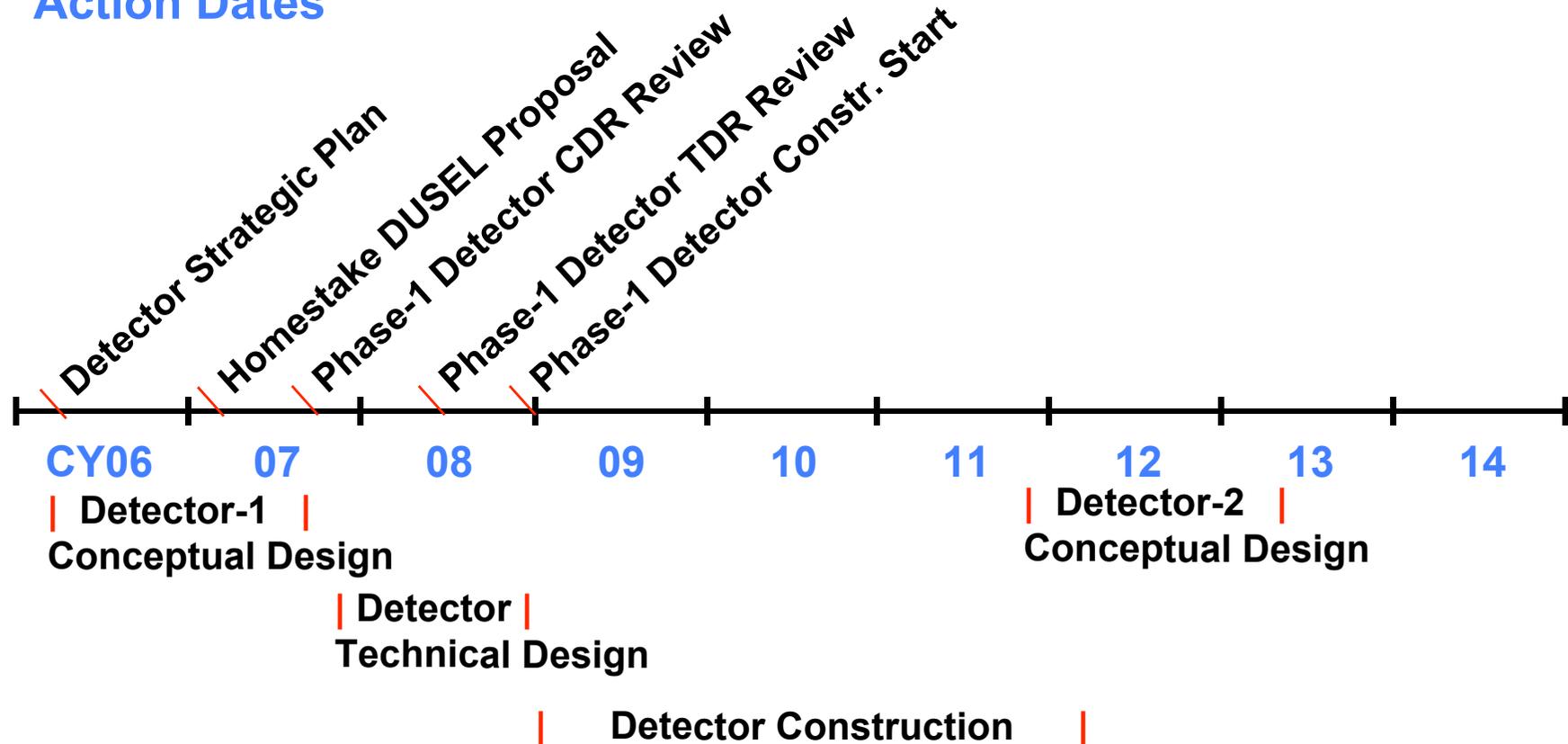
- Depth and veto counter - has cost, schedule and physics implications. Perhaps only the first module is built without veto-counter for a fast start.
- Fiducial volume. If SK cut good enough => 75 kT.
- PMT coverage: 20 % adequate from SK experience. 40% if very low threshold is needed.
- PMT size: 13 inch versus 20 inch. Greater number of pixels will give better pattern recognition.
- Size of detector: very difficult to increase span. If made bigger has cost and schedule implications. 50 meter span seems adequate to contain beam events.

# Open issues on Strategic issues

- Strategic issues: multipurpose versus purpose
- Cost: How much money to expect in next 5-10 yrs. \$100M/yr ?
- Manpower issues: how many H.E. physicists in the field in the next 5 years ?
- Time issues: how fast does this have to get started ? How long can we wait ?

# Homestake VLBNO Program Timeline

## Action Dates

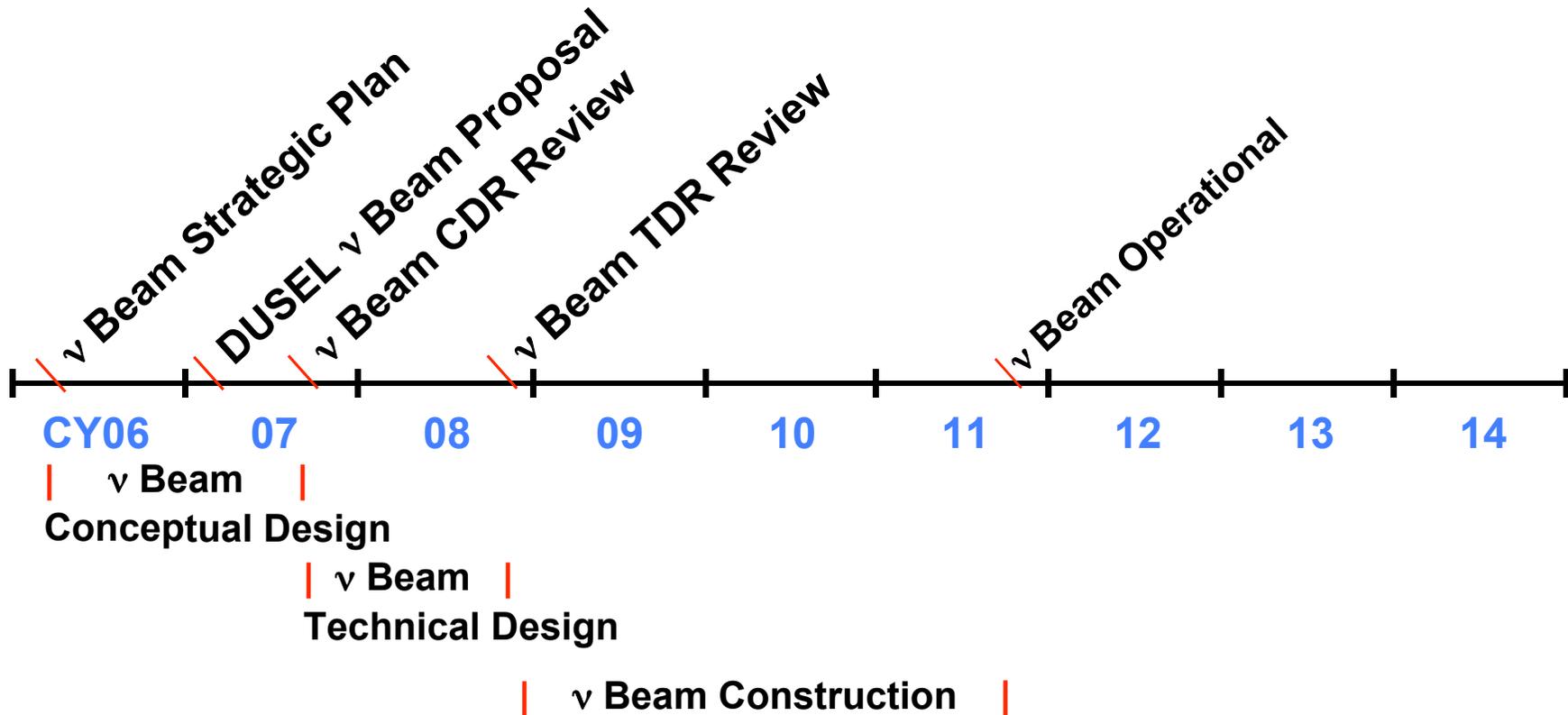


## Activities

from T. Kirk

# ν Beam Accelerator Program Timeline

## Action Dates



## Activities

from T. Kirk