

Managing Cryomodule Availability

reported by Akira Yamamoto, Aug. 12, 2009

- Current assumption (in Tom Himel's availability study):
 - one thermal cycle (warm-up and cool-down) per every 5 years (in average),
- Our common view:
 - It sounds reasonable,
 - It has been also supported by T. Peterson, H. Hayano, and N. Ohuchi
 - The unit of the thermal cycle may be divided to be each ~ 150 m, and the ILC has totally ~ 16 units along ML. It results in ~ 3 cryomodules are to be warmed up per each long shut down in a year. Normally, the thermal cycle period should be ~ 1 week including warm-up and cool-down (round trip thermal cycle only, except for the additional maintenance work).
- A little more detail comment:
 - Cryomodule condition in short time shut down; Keep 2K condition,
 - Cryomodule condition for a long shut-down: Keep < 80 K condition with keep the radiation shield cooled, (it contribute to save electrical power consumption),
 - It is basically recommended to keep the thermal shrinkage maintained.
- Further subjects to be studied; -
 - estimate for MTBF and maintenance/repair interval for tuner and coupler,
 - Homework with Akira to check it with experts (C. Pagani, S. Noguchi, others),