

- Observation at CLIO with RT system for detector characterization. Lock acquisition, calibration and some software for data analysis. 13 hours data including 2 hours continuous lock.
- A new larger room at Kamioka Hokubu-kaikan for 7 racks RT system
- Visiting LIGO to see km scale control system, estimating the total number of RT PCs, IO chassis, electronics etc.



# Items for Real Time control

|                                | Stand alone system FY2010- | Small network test FY2011 | Large network test FY2012, 2013 | Full system FY2014~ |
|--------------------------------|----------------------------|---------------------------|---------------------------------|---------------------|
| Real time PC                   | 1                          | 2                         | ~7                              | ~25                 |
| IO chassis                     | 1                          | 0                         | ~7                              | ~25                 |
| Servers                        | 0                          | 1                         | 8                               | 8                   |
| ADC                            | 1                          | 2                         | ~10                             | ~70                 |
| DAC                            | 1                          | 0                         | ~10                             | ~35                 |
| Binary Output                  | 1                          | 0                         | ~10                             | ~100                |
| Long Reflective memory switch  | 0                          | 1                         | 3                               | 3                   |
| Short Reflective memory switch | 0                          | 1                         | 3                               | 5                   |
| DAQ memory switch              | 0                          | 1                         | 4                               | 4                   |
| Timing switch                  | 0                          | 1                         | 3                               | 3                   |
| IRIG-B switch                  | 0                          | 0                         | 1                               | 3                   |
| Data storage                   | 1TB                        | 2TB                       | ~20TB                           | ~500TB              |

Red: new items  
Green: increments

# Analog electronics made by AEL

- Timing injection ADC adapter x 20
  - Timing injection DAC adapter x 20
  - D-SUB – LEMO interface x 10
  - D-SUB – BNC interface x 10
  - 8ch AA/AI filter x 10
  - 32ch Binary Output interface x 10
  - RF PD for LSC x 10

## Next target: Whitening filter

