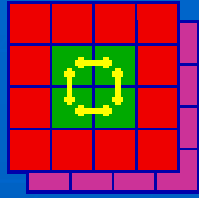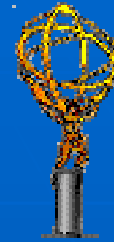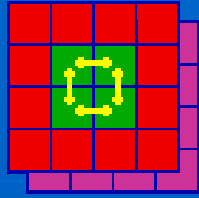# L1Calo ROD Status

*The little boy laughed
to see such fun ..*

# Overview

- **Firmware(2)**
- **Hardware**
- **Tests with real modules**
- **Process**
- **Connectors**

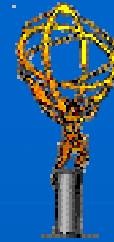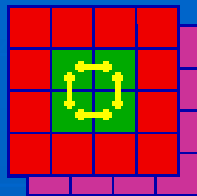# Firmware (1/2)

- **JEM Data : Problem Report 19**
  - **JEM-Slice-1**: Multi-slice operation fails   pending
- **Cp-Cmm Data : Problem Report 20**
  - **CpCmm-Slice-1**: Various Bit field errors. Data as assembled into S-Link record corrupt.   pending
- **JEM RoI : Problem Report 21**
  - **Jem-RoI-1**: Zero suppression fails. PE (bit 11) set in S-Link record on zero data.   pending
- **CP Data : Stable**   good
- **CP RoI :   Under re-evaluation**   testing
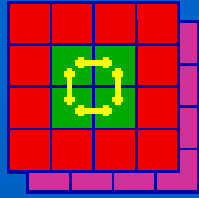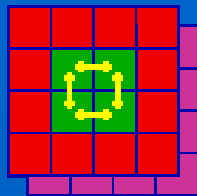
Firmware (2/2)

- **Except:**
  - Cp-Cmm Data
    - Firmware tacitly updated to v. 3
      - Performance different but not better, showing other faults. Suggested Engineer revert to v.2 where extensive testing had taken place – then debug…
  - Controller (common to all designs)
    - Tacitly updated to v. 14
      - No change in behaviour? … just complicates analysis of module behaviour.

Hardware

- Now have 2 setups again:
  - Common TTCvi/vx
  - Still suffering from flaky TTCDec on ROD
    - New TTCDec Card anticipated for ROD
  - Difficulty maintaining
    - f/w, s/w h/w intercoupling

Tests with real modules

- **Firmware:**
  - Need to deal with specification ambiguities which don't affect Dss/Rod only tests:
    - Cp-Data bit 23 problem
    - Jem /Cmm: Crate / module ids should be taken from ROD registers, not data stream
      - And anyway, the spec assumed by the ROD should be the same as the spec implemented in the JEM, CMM, CPM, etc...
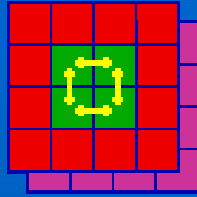
Process

- Specification:
  - Development Cycle
    - Should include iteration between implementation and specification, when implementation has made assumptions not detailed in spec.
    - Feedback from testing when spec is violated.
- Bug Tracking and development:
  - Release of new f/w should trigger:
    - Verification testing
    - Notification by e-mail to individuals involved of availability and details of new feature set!
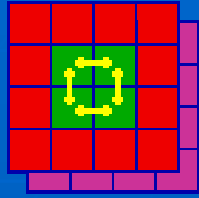
Connectors

- We are using new connectors:
  - For TTCDec
    - Lemo 00-like 2 pin
  - For G-Link
    - Lemo 00

- Questions:
  - Are these connectors adequate –
    - This question prompted by some recent discussion during oscilloscope evaluations.
  - Should their intended use not have sparked a certification effort?