# L2 Header

- **B0** # objects (NOT IN HEADER)  
  [note 255 max!]
- **B1** Header Length in 4B words (1B)  
  [=3 for default]
- **B2** Object Length in 4B words (1B)  
  [ALL same size!]
- **B3** Header/Trailer Format # (hi 3 bits)  
  [ONLY changes if new format]
  Object Format # (lo 5 bits)  
  [ONLY changes if new format]
- **B4** Data Type # (1B)  
  [unique in all L2 MBT inputs]
- **B5** Bunch # (1B)
- **B6-7** Rotation # (2B)  
  [B6 is LSB of rotation]
- **B8** Algorithm Major Version (1 B)  
  [e.g. 7 from Version 7.1]
- **B9** Algorithm Minor Version (1B)  
  [e.g. 1 from 7.1]
  or Processor Specific Bits (1B)  
  [esp. if hardware data source]
- **B10** Processor Specific Bits (1B)
- **B11** Status Bits  
  [b7 on means some error]
  [some standard for L2 Proc]
Standard Status Bits
b7, b0 for all; others if L2proc

7  error on event (any kind): use at own risk
6  no processing attempted (none required)
5  object list truncated (any reason)
4  Receiver error on some input physical trailer
3
2
1  more data-type info (processor-specific)
   other test modes; unbiased-sample data...
0  0 for real data, 1 for MC data
L2 Trailer

B0  Bunch # (1B)  = B5 of Header
B1  Data Type # (1B)  = B4 of Header
   (Swapped even/odd from Header)
B2  Longitudinal Parity of even Bytes
B3  Longitudinal Parity of odd Bytes
   or--if parity too slow to calculate, Turn # (B6-7 of Header)
   MBT Out, SLIC, FIC will append physical trailer with 8-bit
   hardware-generated longitudinal parity

Zero padding to 16 B group FOLLOWS trailer, before End of Event
L2 Physical Trailer

- **FIC, SLIC, MBT Out**: add a physical 2B trailer
  - after logical trailer, before End Event
    - This BREAKS 16B boundary, but handled by MBT
  - **B0**: 8 bit longitudinal parity of received data
  - **B1**: Status Bits [b7 on if any receive error]
    - not included longitudinal parity!
    - b0, b1 are type ID: 0 = FIC, 1 = SLIC, 2 = MBT

- **MBT inputs** place this in B0, B1 of 16B physical trailer
  - adds B14, its own longitudinal parity of everything received
  - **B15**: its own Error Bits [b7 on if any receive error]
  - reserves 4B for incoming, may give error locations in B4-13
  - MBT Outs produce 2B physical trailer like FIC