Status of L2MU

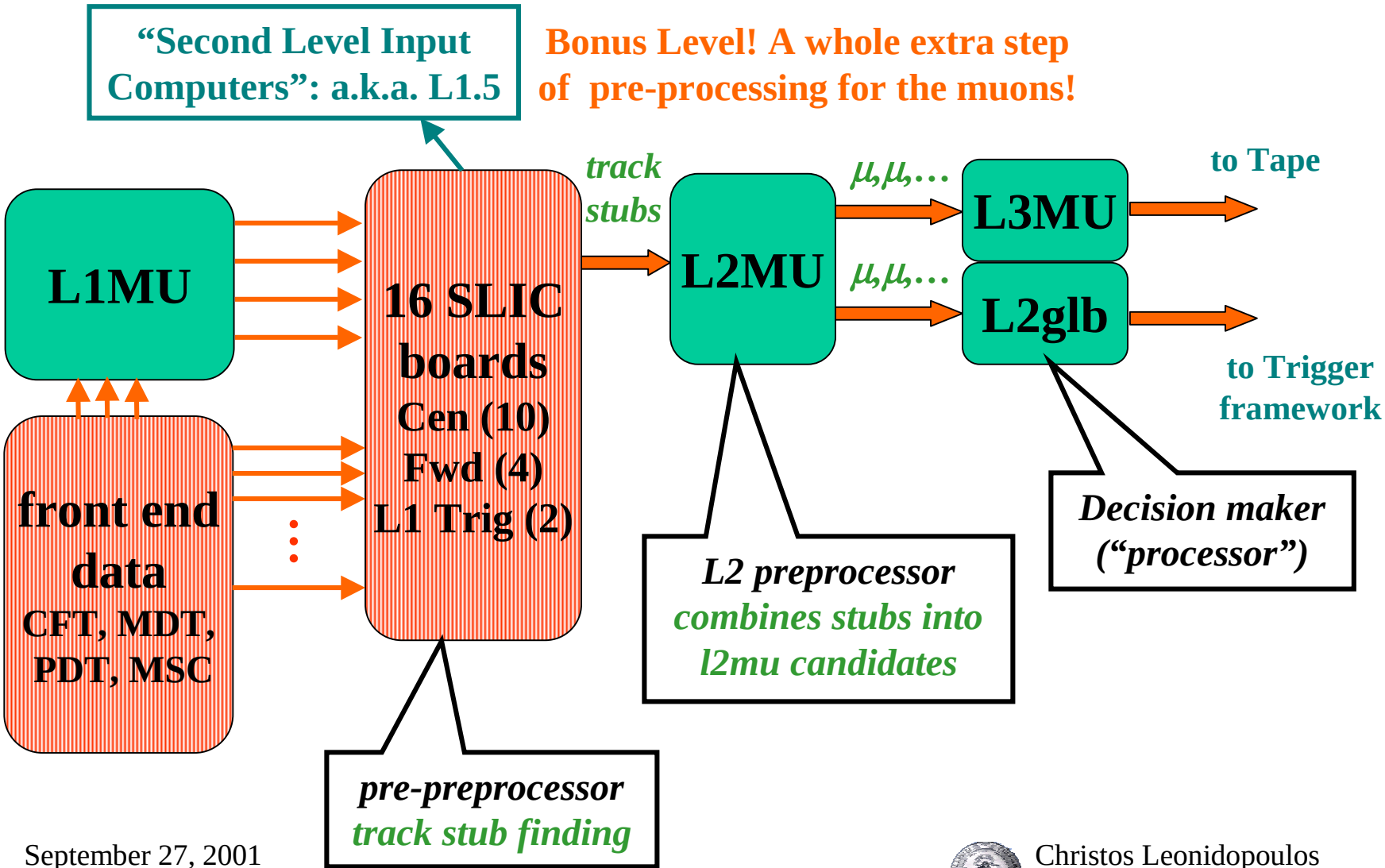
Columbia/Nevis, Fermilab (CD), LMU Münich, NIU

Christos Leonidopoulos

Columbia University

September 27, 2001

Muon Trigger: 3+1 Modules



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Columbia University

L2MU projects

- **on-line only**
- **sim & on-line**

C & Assembly

- SLIC Driver (VME)
- DSP OS
  - Boot, Interface w/ VME, Interrupts, handshakes, monitoring requests
  - Internal data I/O, Memory Mgmt, Error handling
- Physics Algorithms
  - Cen (A, BC, L1)
  - Fwd (A, BC, L1)

SLICs

L2MU (α)

C++

- OS/Framework
- α Algorithms
  - Cen
  - Fwd

ask Roger

Christos Leonidopoulos
Columbia University

SLIC & fwk code: status

Simulation

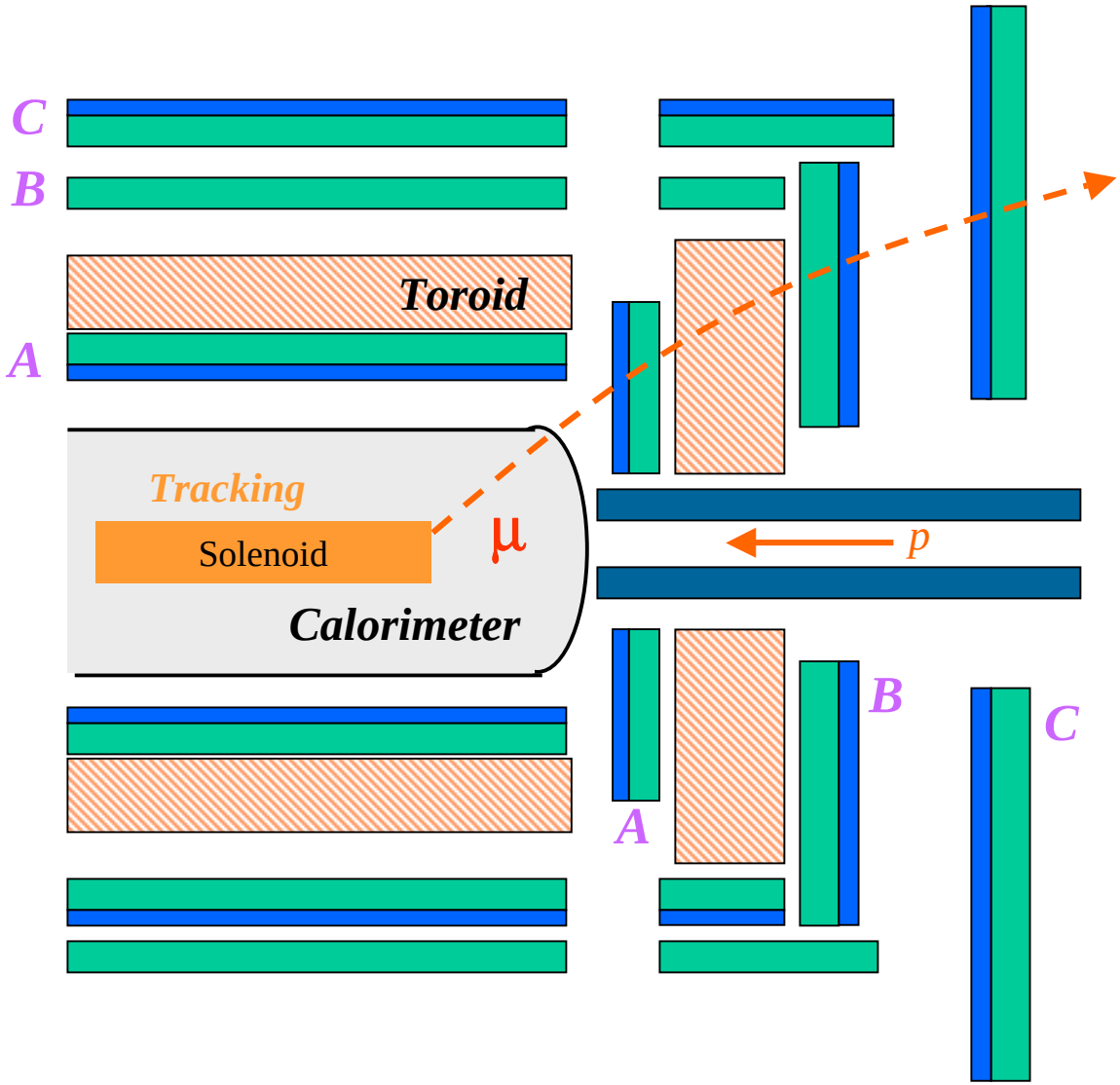
- **Working without problems; have been adding & tuning code (monitoring, error handling, etc)**

On-line

- **basic version tested ok**
- **ran into trouble with boot code (~32 kB to download on 64 kB memory chip; 32 kB FIFO);** ***work in progress***
- **running tests before going on-line (memory management: ok; formats: ok; timing: under way)**

Christos Leonidopoulos
Columbia University

SLIC algorithms: status



Simulation

- **Included:**

L1 cen, PDT (A&BC), A-ϕ (A, C), PIXEL (A & BC)

- **Missing:**

L1 fwd, MDT (A & BC)

On-line

Developing scintillator-only algorithms: ***work in progress***

Christos Leonidopoulos
Columbia University

L2MU algorithms: status

Simulation

- **First version of cen & fwd algorithms have been running in sim by default**

- **Good η & ϕ resolution**

- **Bug in toroid P_T calculation**

Christos Leonidopoulos
Columbia University

SLIC+L2MU algorithms: performance

Simulation

- **Efficiency: ~98% (single tracks)**
- **Need tuning tolerance and lookup tables**
- ***Need background studies***

Christos Leonidopoulos
Columbia University