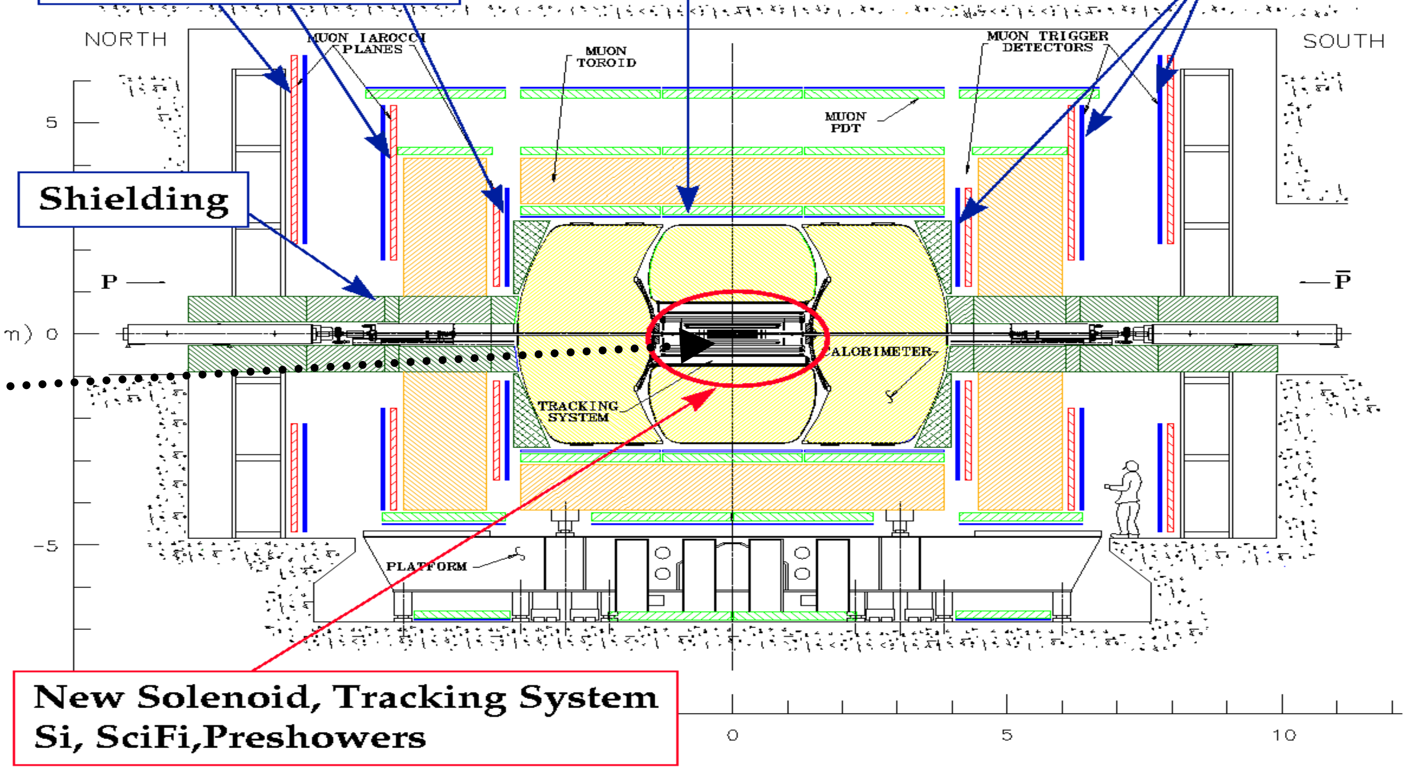
D0 Run II Détecteur


NORTH
SOUTH
MUON IAROCCI PLANES
MUON TOROID
MUON TRIGGER DETECTORS
MUON PDT
P
P̄
CALORIMETER
TRACKING SYSTEM
PLATFORM
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m) 0
-5
0
5
10

Forward Mini-drift chambers

Central Scintillator

Forward Scintillator

Shielding

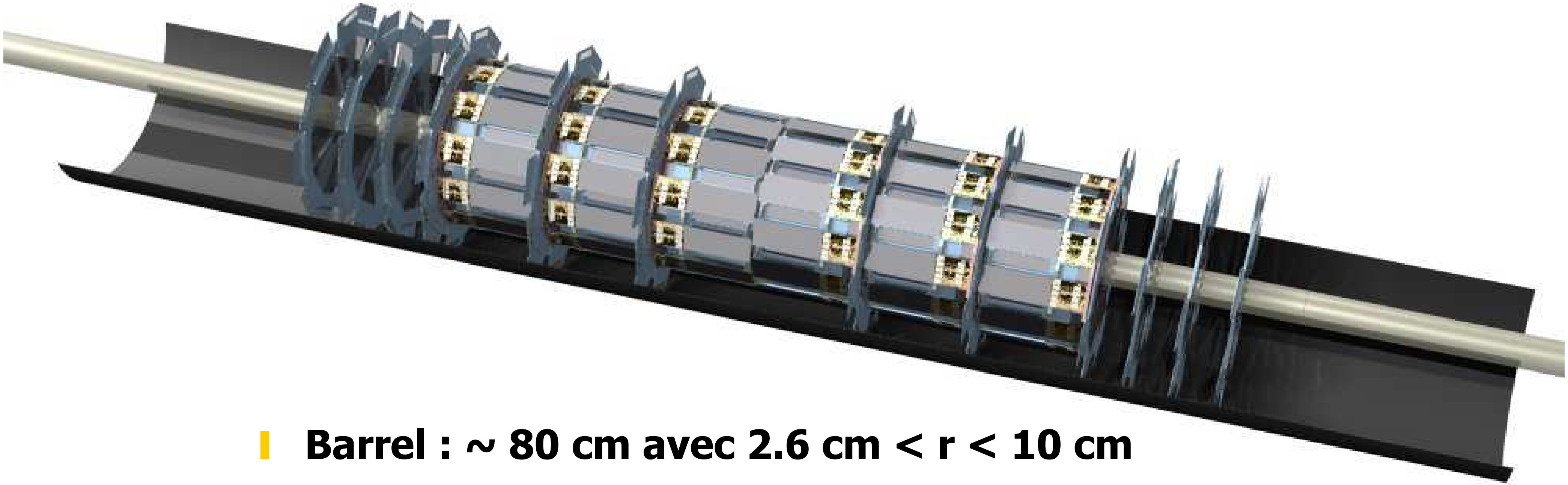
New Solenoid, Tracking System Si, SciFi,Preshowers

+ New Electronics, Trig, DAQ

Détecteur de vertex :

un des enjeux du Run II

Silicon Microstrip Tracker



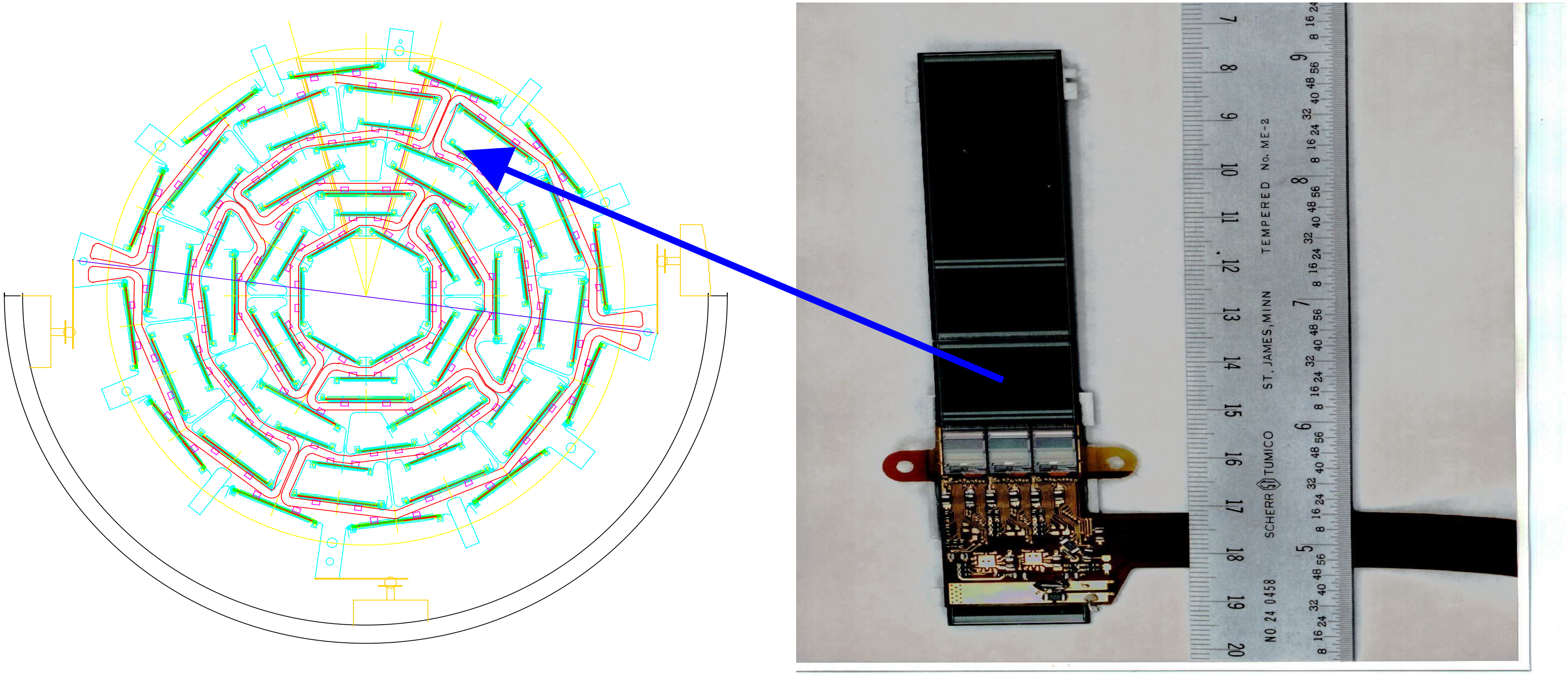
- **Barrel : ~ 80 cm avec 2.6 cm < r < 10 cm**
- **6 Barrels / 12 F-disques / 4 H-disques**
- **800,000 canaux environ**
- **Une paire de quarks top provoquera environ 2000 hits**
- **(** $\sigma_{hit} \approx 10\mu m$ **)**

Barrel

Silicon Microstrip Tracker

432 ladders

Strips ≈ 50 µm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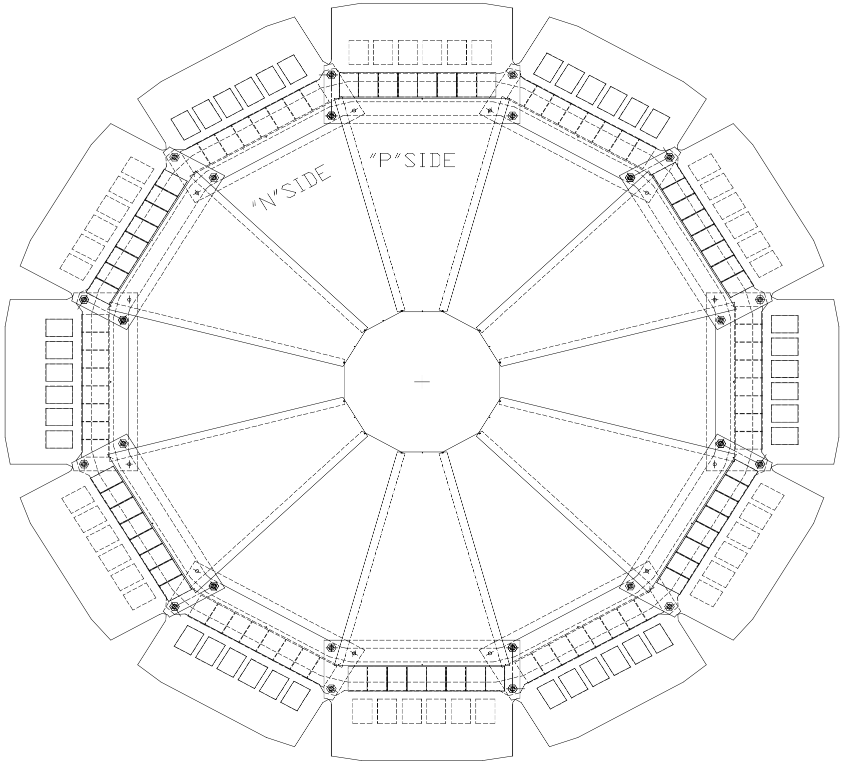
TEMPERED No. ME-2
ST. JAMES, MINN
SCHERR TUMICO
NO. 24 0458

Silicon Microstrip Tracker

- F-disques Z = ± 55 cm

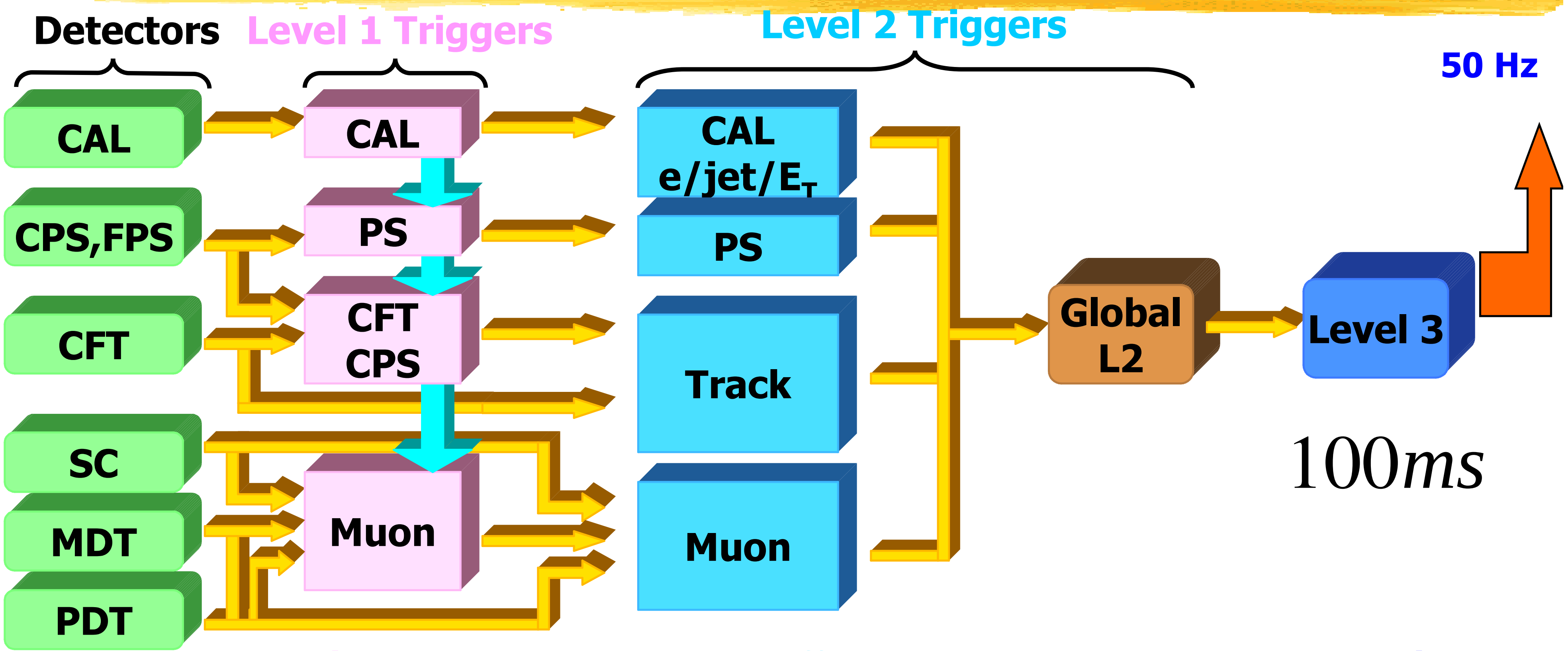


- H-disques Z = ± 94, 126 cm
- 9.5 cm < r < 20 cm

Le responsable de la production à D0 …

Eric Kajfasz

Système Trigger D0 pour le Run II



Detectors

- CAL
- CPS,FPS
- CFT
- SC
- MDT
- PDT

Level 1 Triggers

- CAL
- PS
- CFT CPS
- Muon

Level 2 Triggers

- CAL e/jet/E_T
- PS
- Track
- Muon

Global L2

Level 3

50 Hz

$100 ms$

- Retient data 32 croisements

- Hardware trigger
- 128 trigger bits
- 4.2 µs temps décision
- 10 kHz taux d'accept.

- 16 evts buffers
- 100 µs décision

- L2 Combine les Objects en e, µ ou jet
- 1 kHz

- Evts read out
- Reconstruction rapide des evts
- 50 Hz