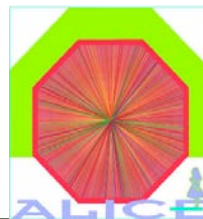


ALICE - Silicon Drift Detector

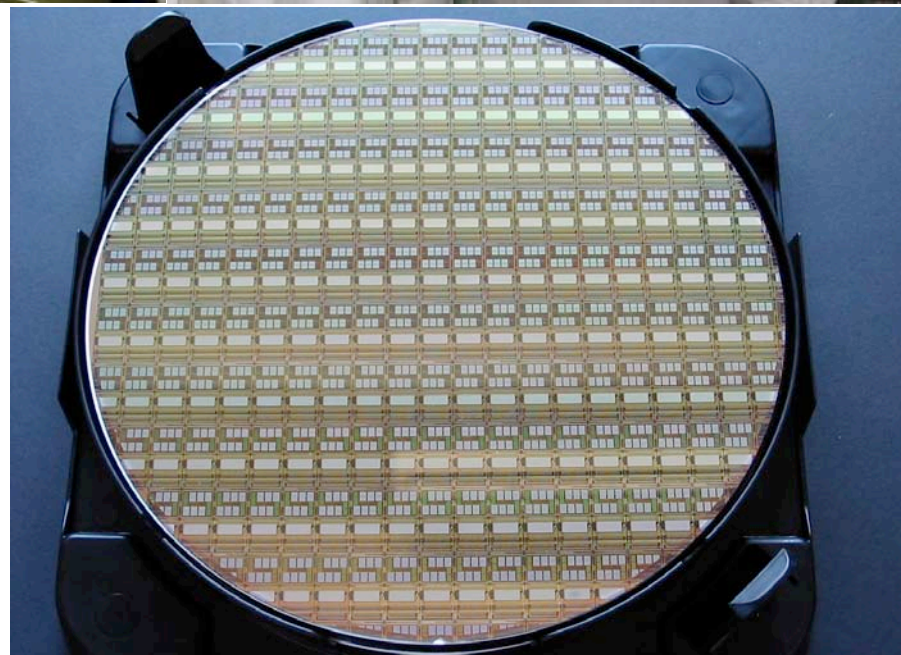


Roma "CL100 Clean Room"



Roma SDD Group

S. Di Liberto
M.A. Mazzoni
F. Meddi
G.M. Urciuoli
A.Ruggeri (techn.)
S.Sestito (techn.)



The **Probe Station** **CASCADE MICROTECH REL-6100**
connected to **Logic Analyzer** **AGILENT 16702B** (S/W: **LABVIEW**)

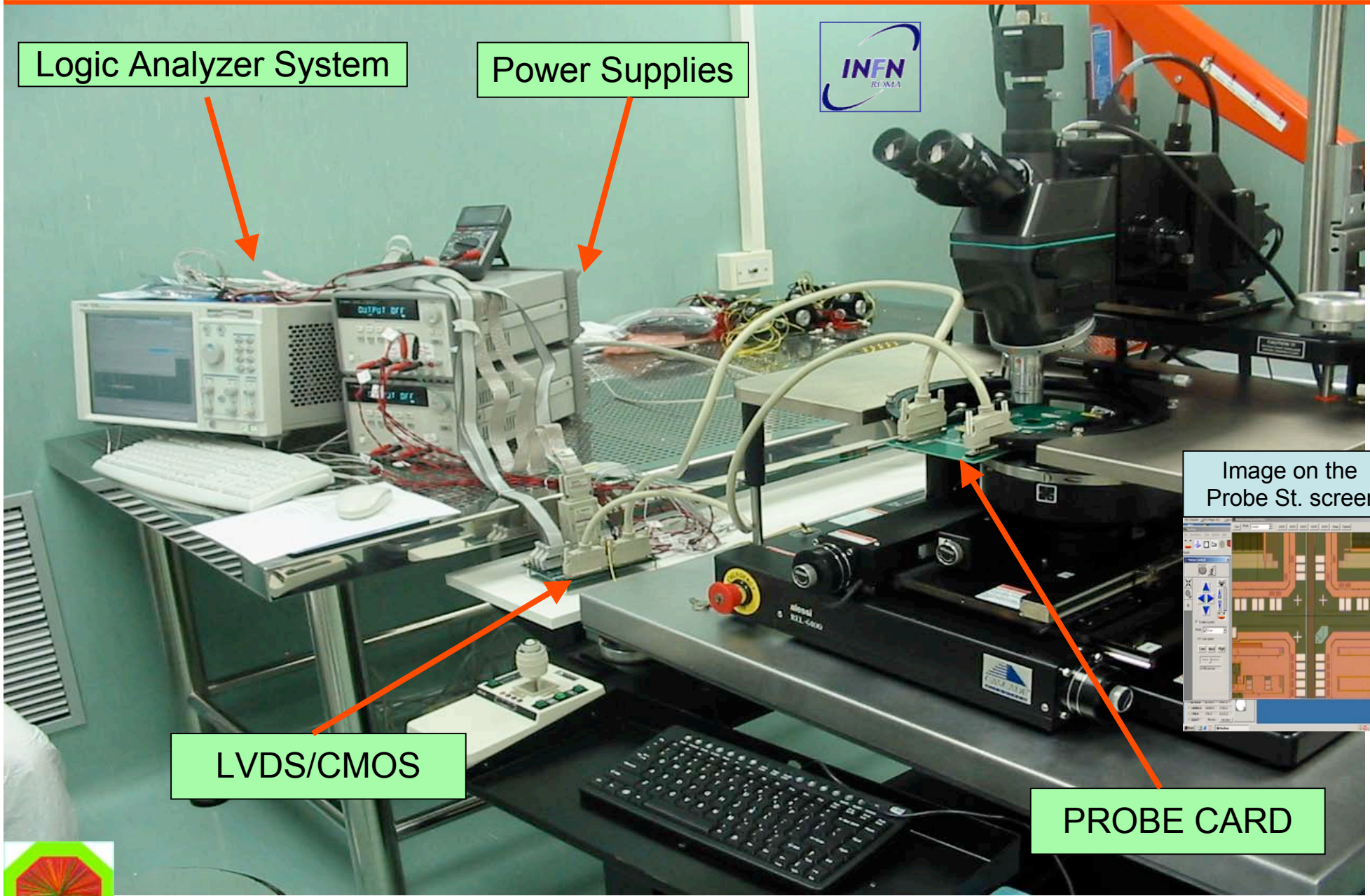
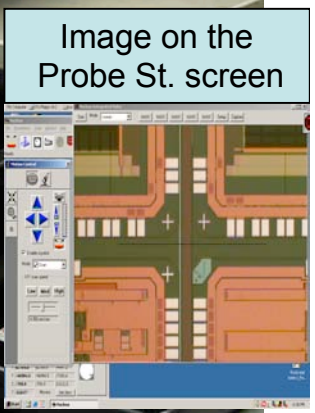


Logic Analyzer System

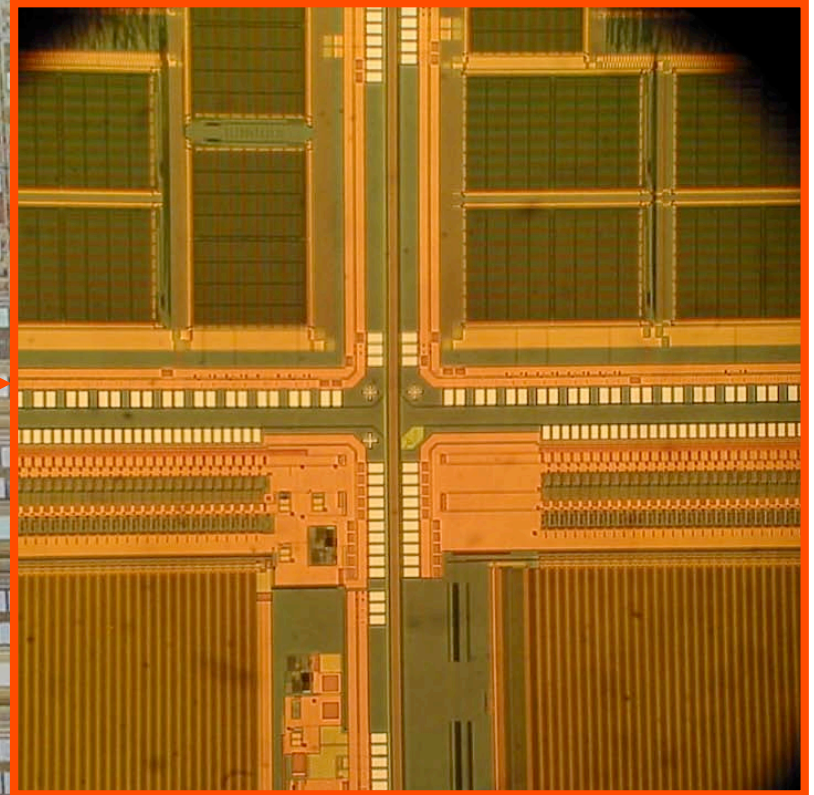
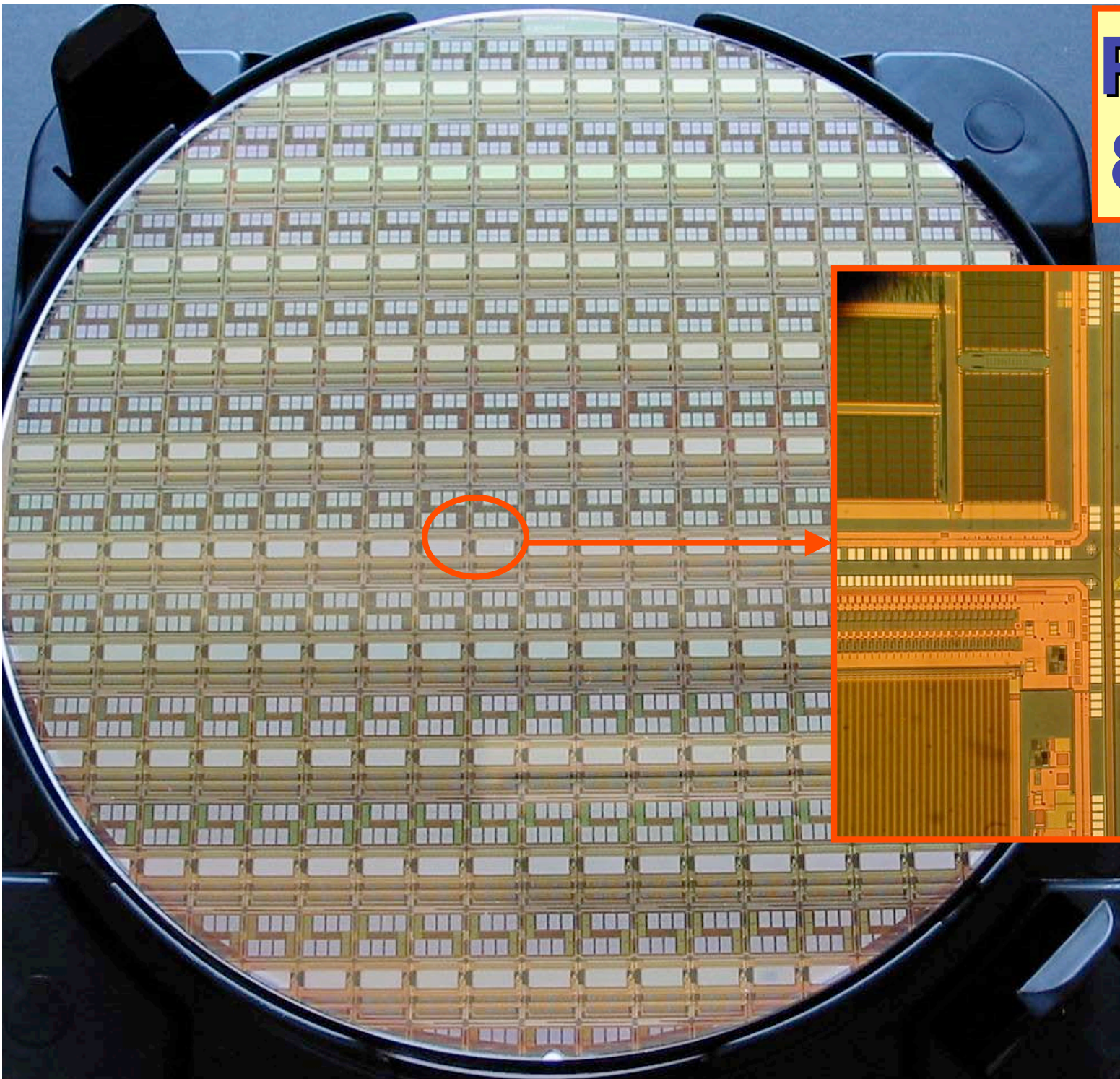
Power Supplies

LVDS/CMOS

PROBE CARD



Pasc/Am 8" wafer

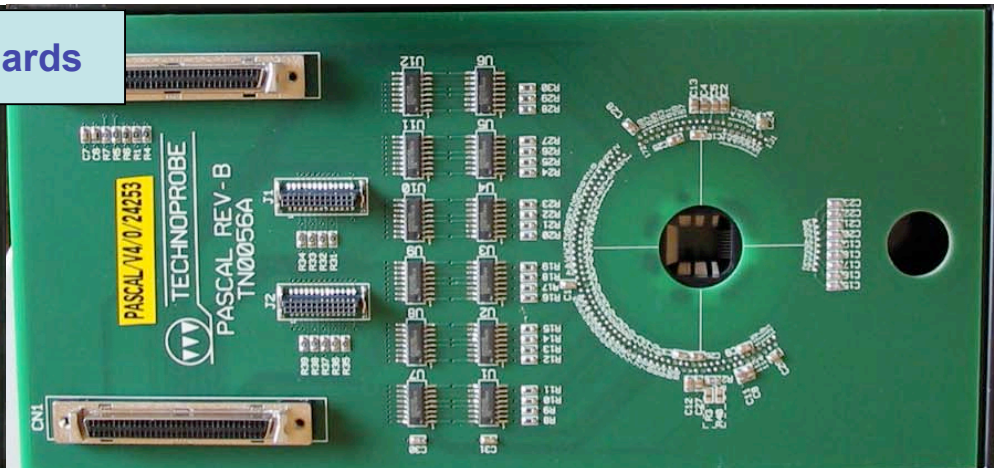
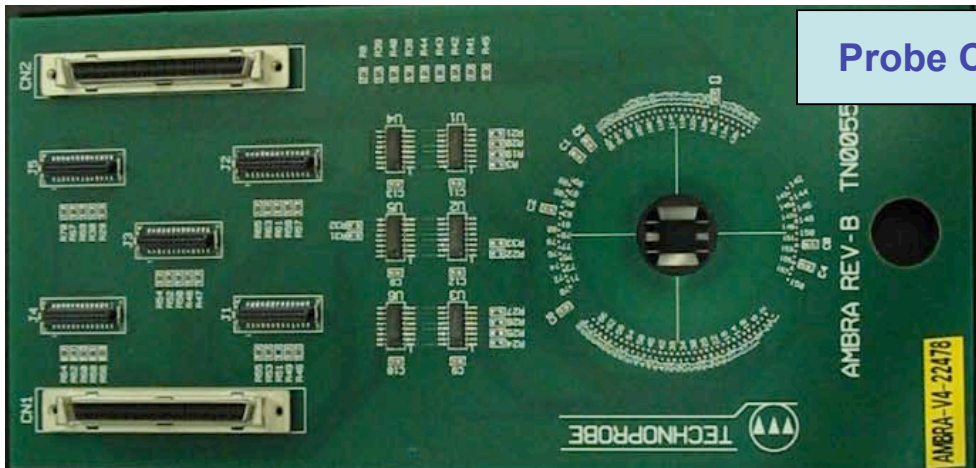
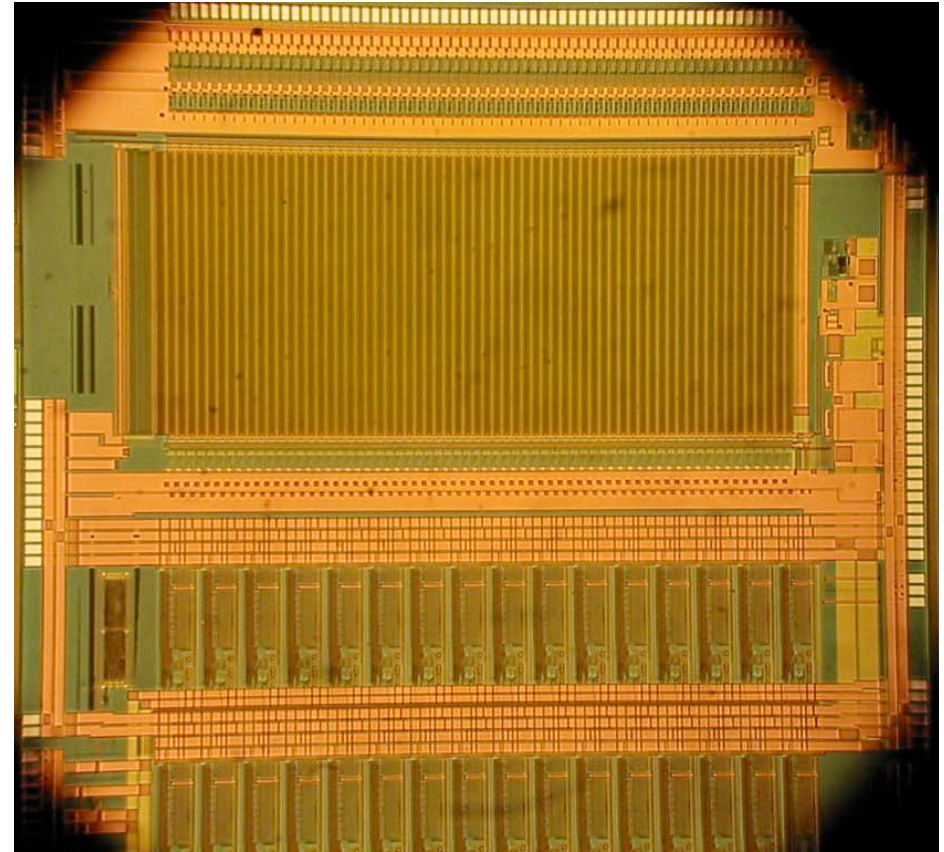
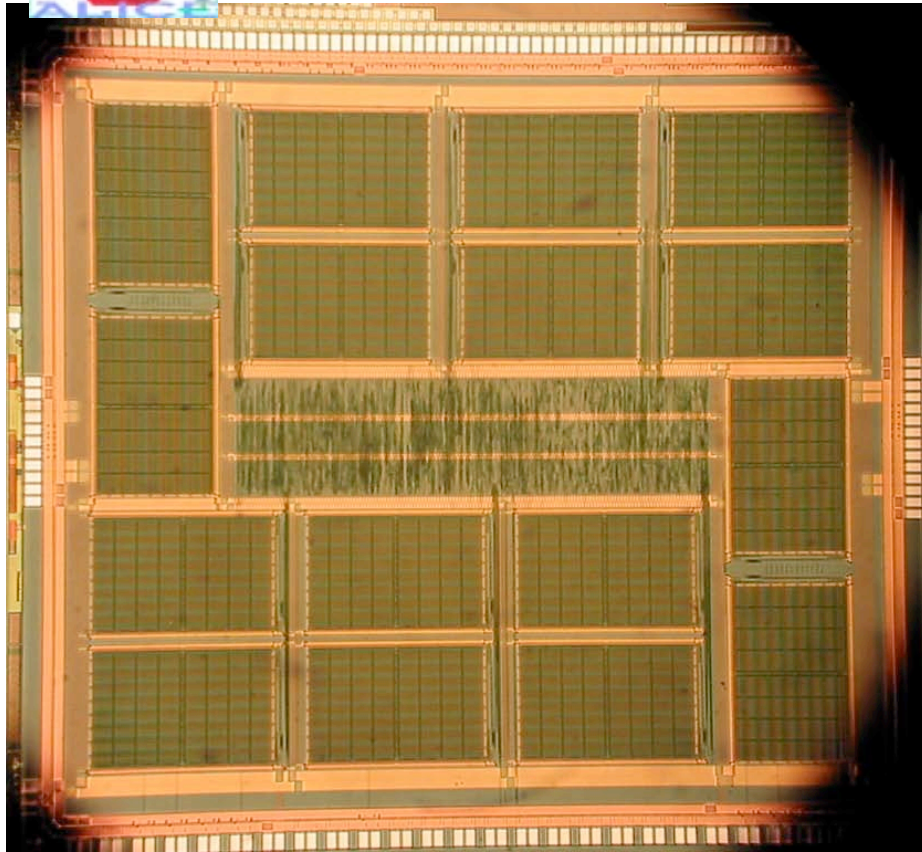




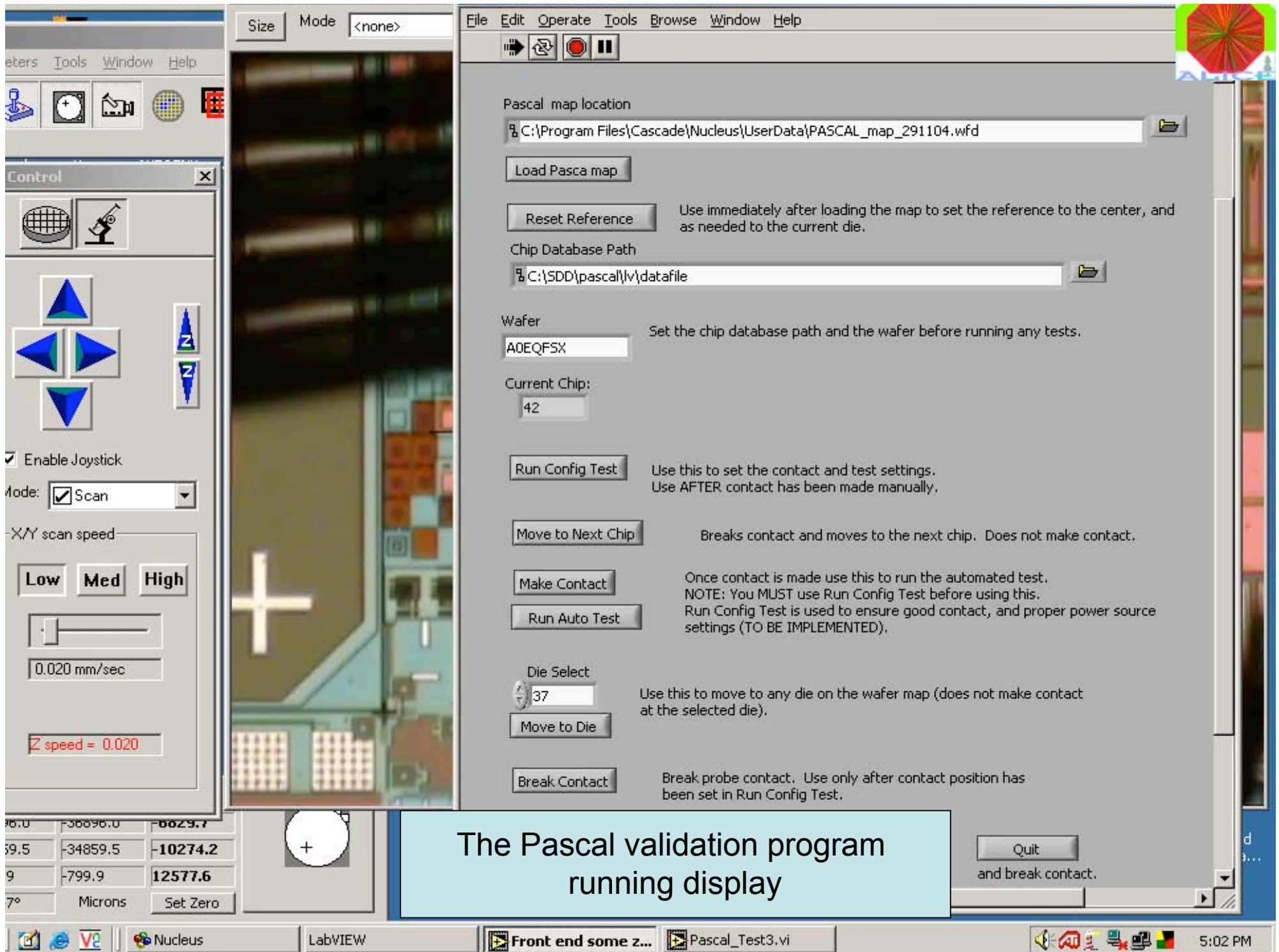
AMBRA

SDD - FrontEnd chips

PASCAL



Probe Cards



The Pascal validation program
running display

96.0	F30096.0	0029.7
39.5	-34859.5	-10274.2
9	-799.9	12577.6
7°	Microns	Set Zero



Quit
and break contact.



La Sapienza
Università degli Studi di Roma



Dipartimento
di Fisica



Summary of the ROMA-SDD activity for the Ambra/Pascal chips validation (february 2005 - november 2006)

	MEAS	GOOD	GREY	BAD	$\frac{GOOD}{MEAS}$ (%)	$\frac{GREY}{MEAS}$ (%)	$\frac{BAD}{MEAS}$ (%)	N. of half WAFERS
PASCAL	4883	<u>4330</u>	341	212	<u>89</u>	7	4	<u>34</u>
AMBRA	4597	<u>3608</u>	392	597	<u>78</u>	9	13	<u>32</u>

mean →

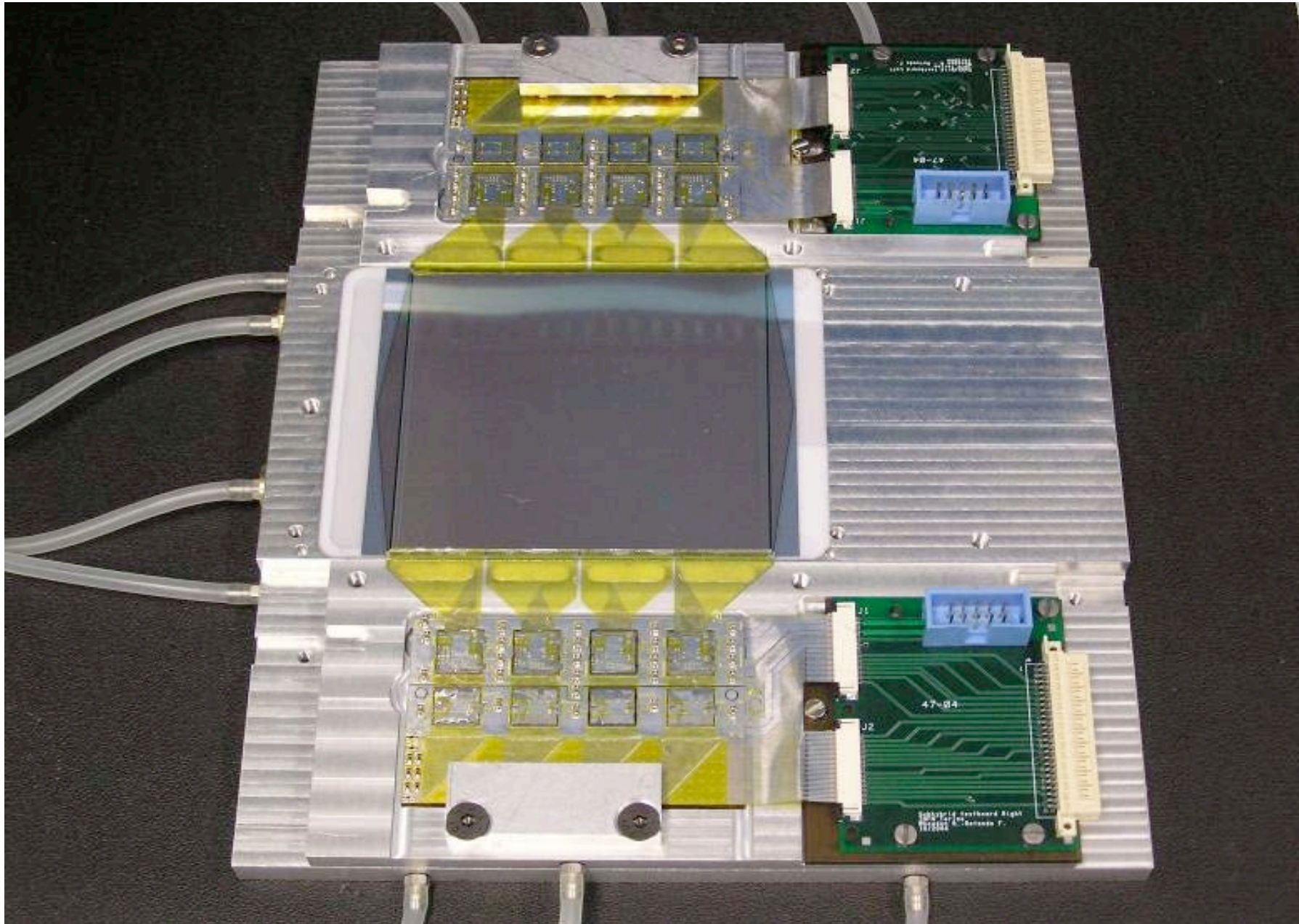
1 Wafer : **127** Pascal + **113** Ambra GOOD

$$\frac{(\# PASCAL\ Good)}{(\# needed)} = \frac{4330}{2080} \cong 2.08$$

$$\frac{(\# AMBRA\ Good)}{(\# needed)} = \frac{3608}{2080} \cong 1.73$$

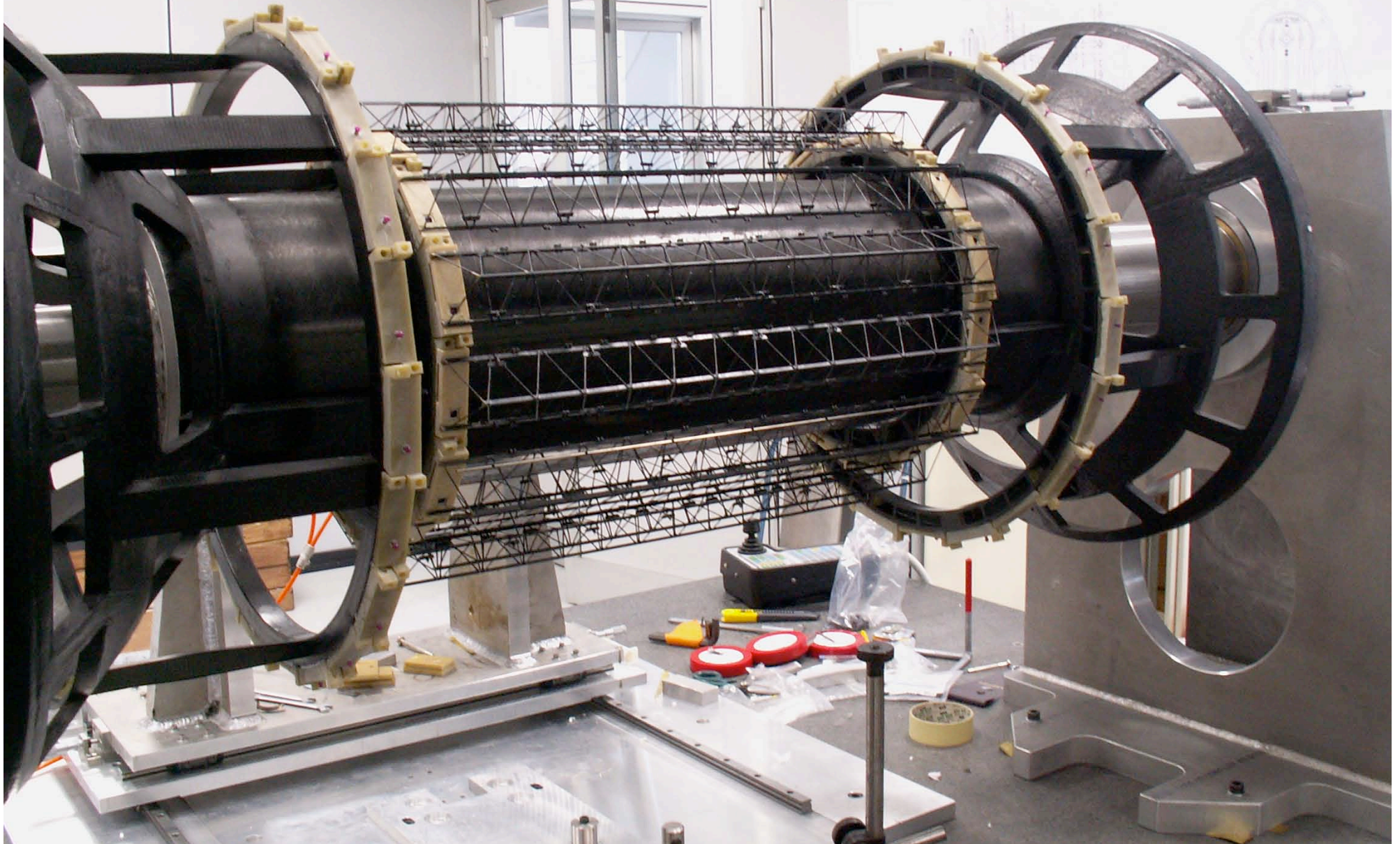


a **SDD** module: a Silicon Drift chamber equipped with 4 + 4 Pascal/Ambra pairs





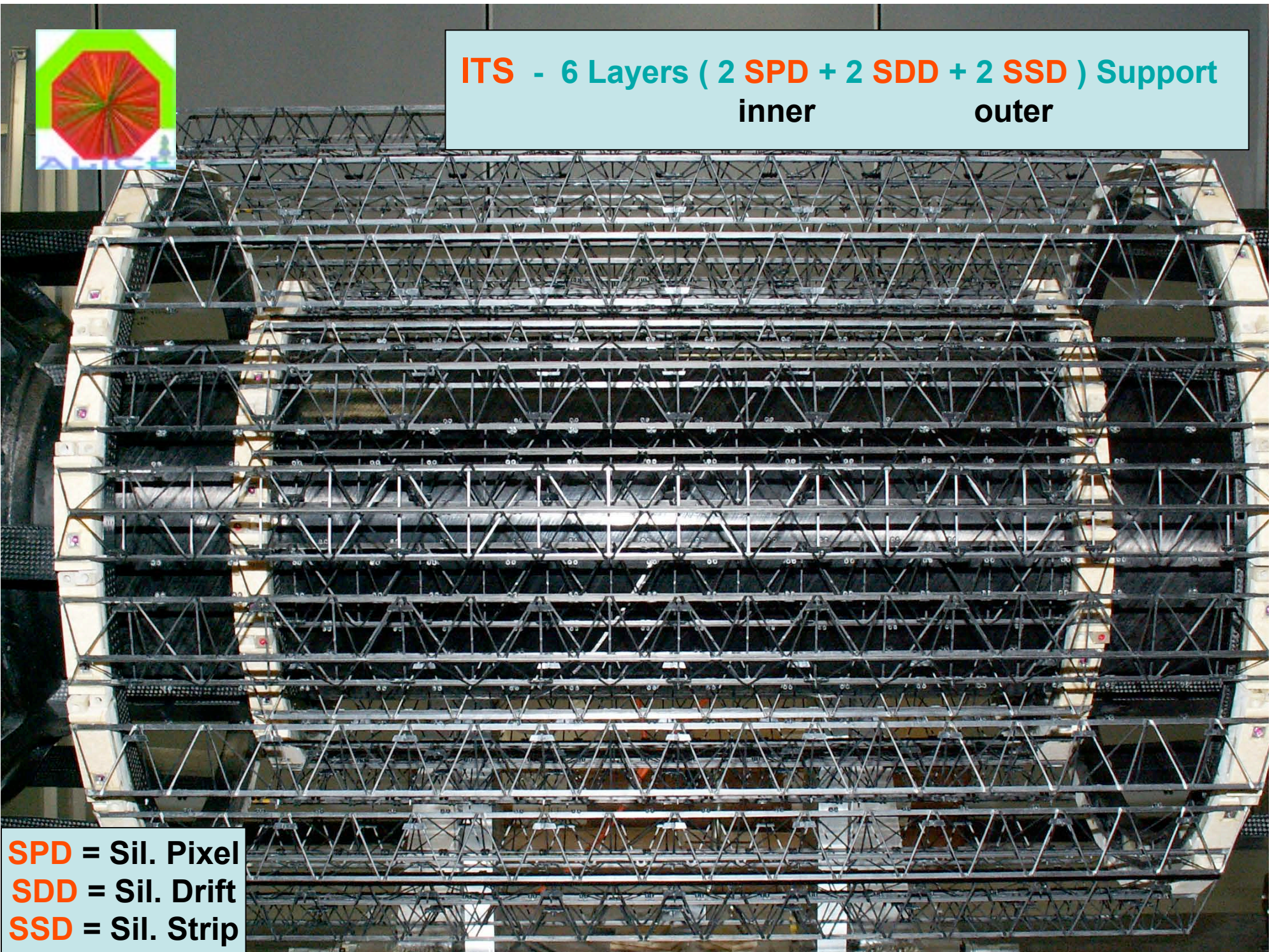
Inner Tracker System (ITS) Mechanics Support





ITS - 6 Layers (2 SPD + 2 SDD + 2 SSD) Support
inner outer

SPD = Sil. Pixel
SDD = Sil. Drift
SSD = Sil. Strip



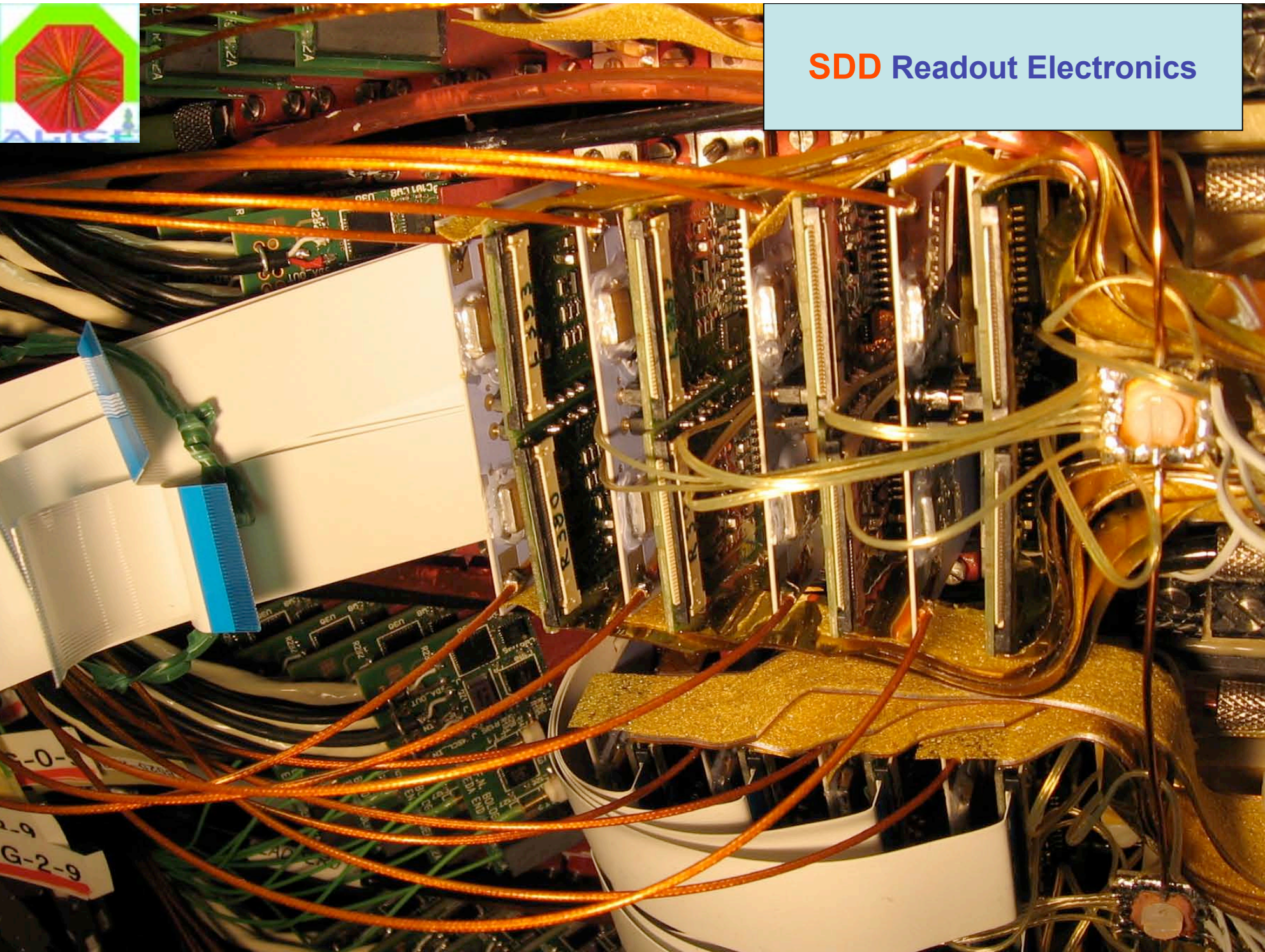
SDD - Layer 4 (22 Ladders)

1 Ladder = 8 Modules



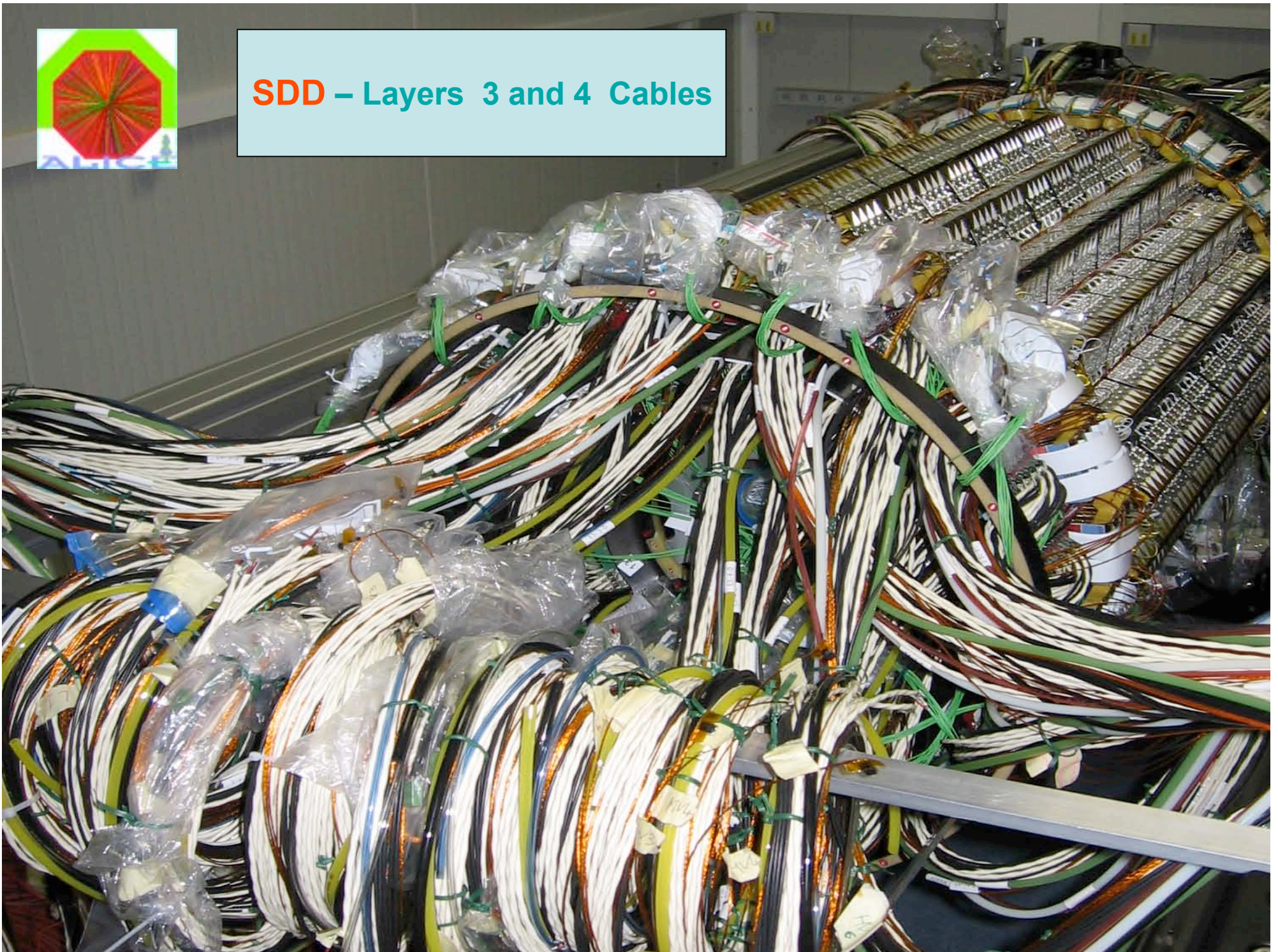


SDD Readout Electronics

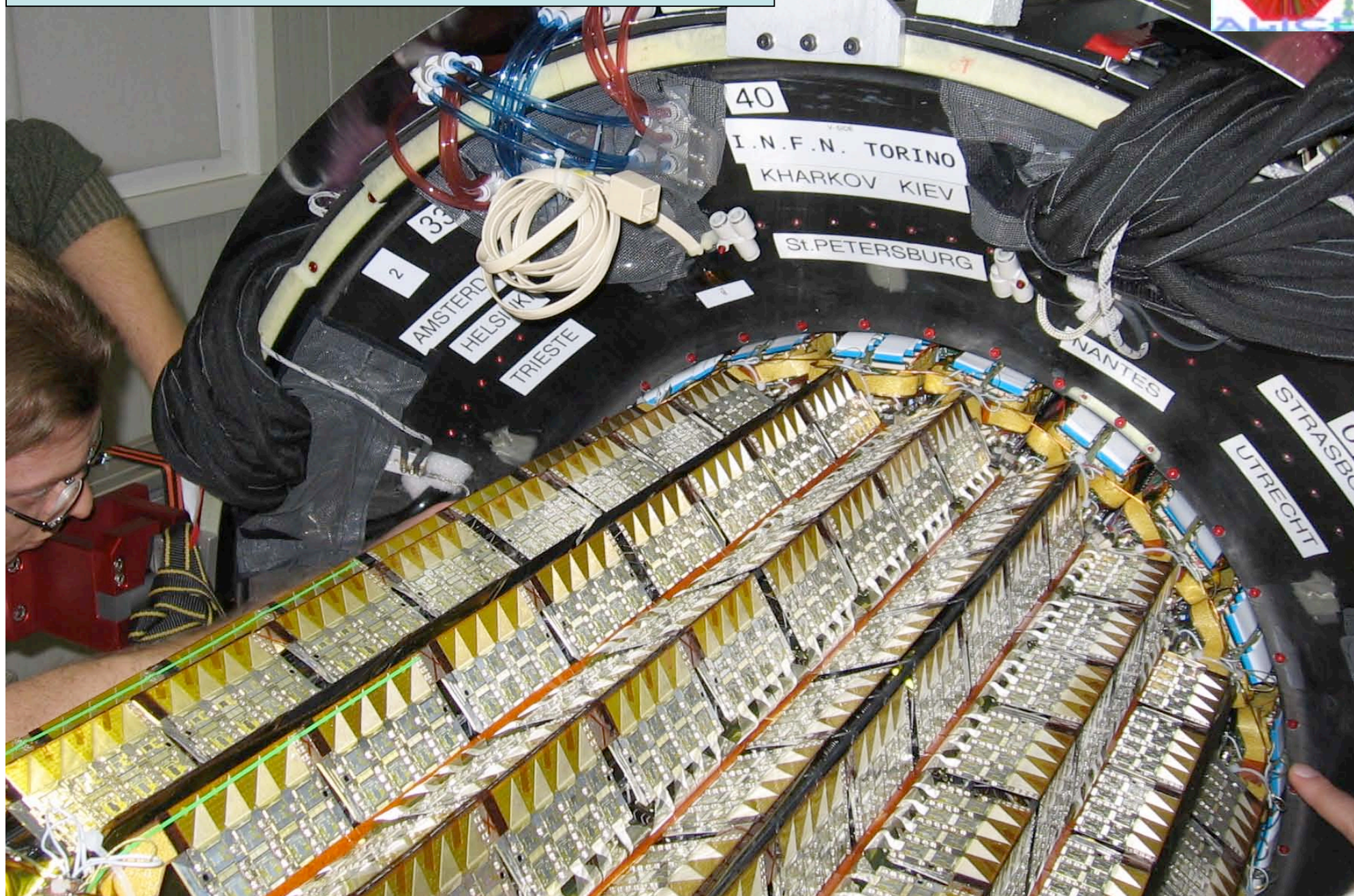




SDD – Layers 3 and 4 Cables



SDD (Layers 3 and 4) inside **SSD** (Layers 5 and 6)



SDD integrated inside ITS

february 2007

SDD groups: Italy (**AL, BO, RM, TO, TS**),
Czech Rep., Russia, Ukraine





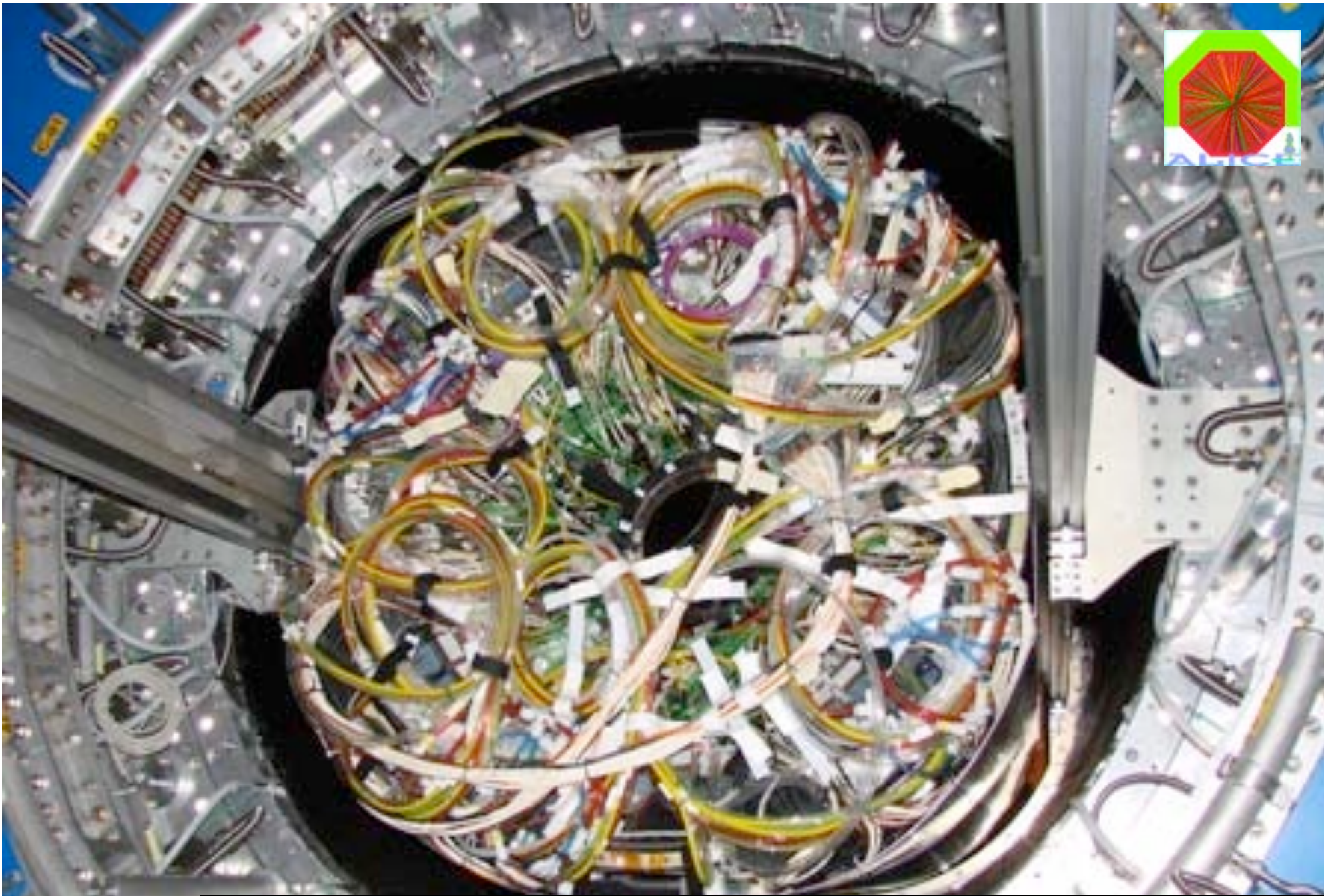
ALICE Pit : work in progress



ITS getting down / 1



ITS getting down / 2



ITS integrated inside **ALICE**

March 2007