



# CMS RPC Endcap Status Report

## 2005 Milestones

- **Production**

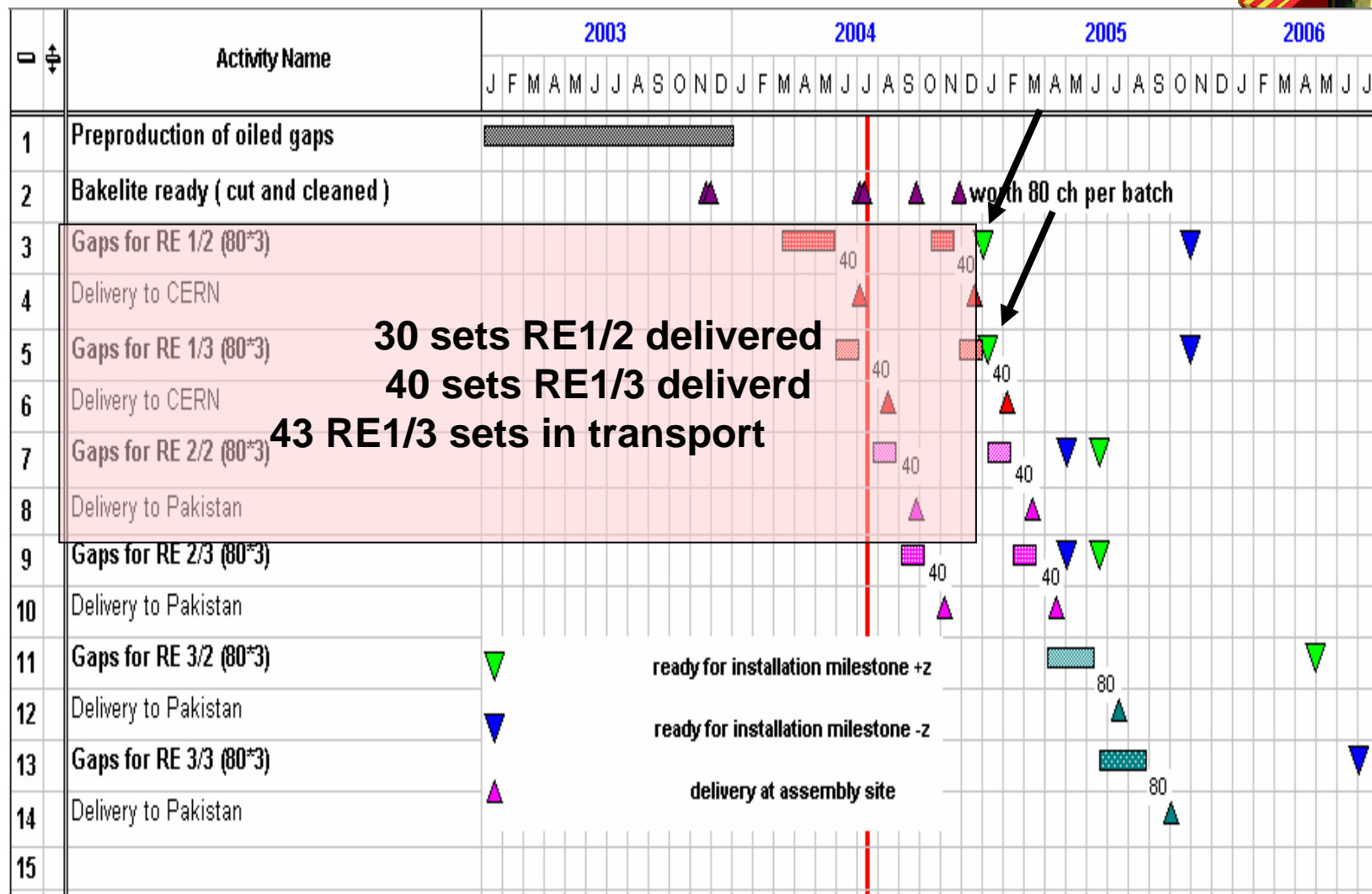
**18 RE1/2 and 18 RE1/3 Installation  
April end**

**60 RE1/2 & 60 RE1/3**

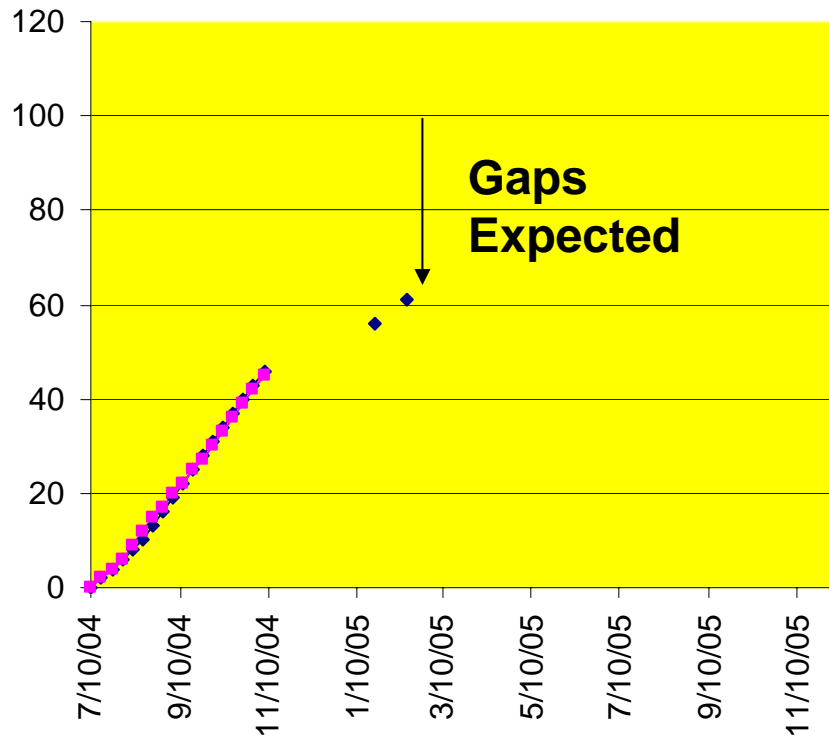
**Installation October-November**

- **Configuration & Conditions DB  
should be ready for Magnet Test**

# Gap production on schedule



# RE 1 assembly @ ISR lab



**Focus on Dec 05 – Jan 05  
Preparation**

**gas pipes – 120 chambers  
Cables – 60 chambers  
Mechanics ..  
Cover closing Alu plates**

**Chamber production rate  
Expected > 6 per week**

**March 20 RE1/2  
mass production re-launch  
GOAL: May 30 RE1/2 complete**

**April end RE1/3 Gaps expected  
mass production re-launch  
GOAL: September 30 RE1/2 complete**

# Chamber QC

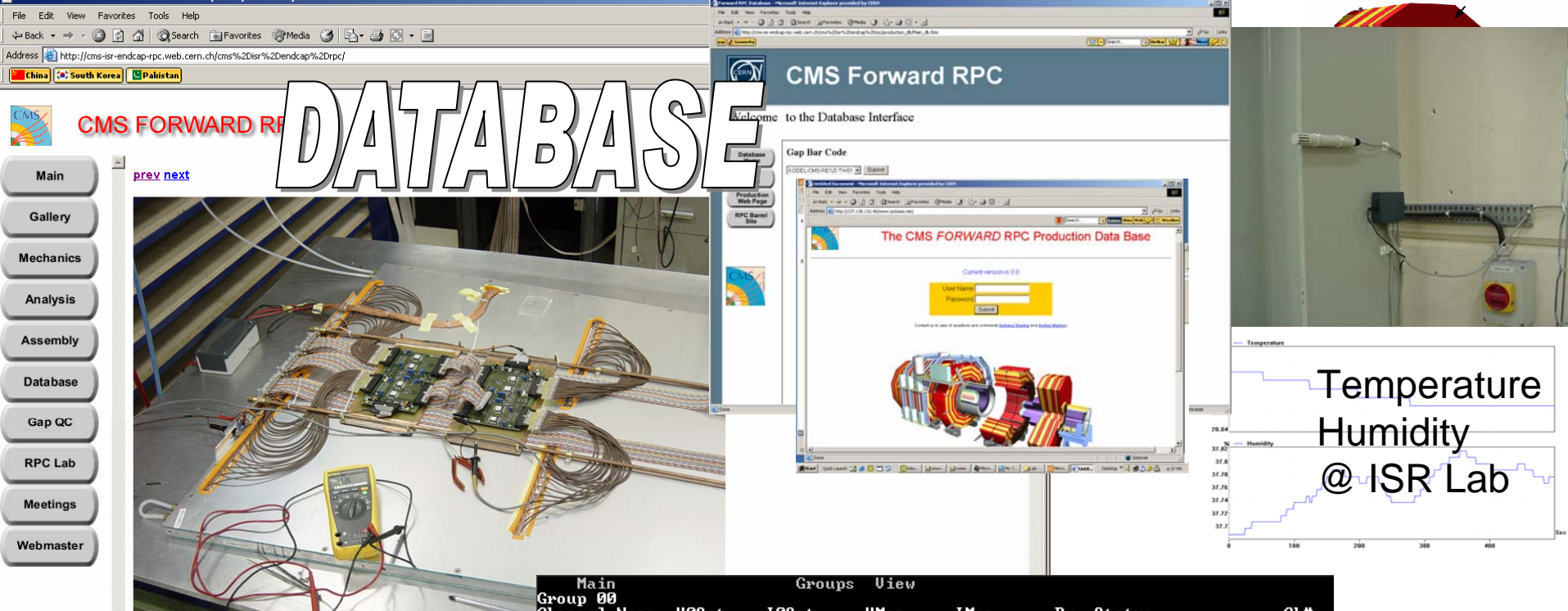


## 4 Checklists

At different stages of production  
RE1/3 ready for tests

Cosmic Tests :  
See Andrey's talk





- Online**
- HV monitoring and QC IV data storage
  - Searchable tracking for individual Gaps / Chambers
  - Production QC procedures
  - Mechanics
  - Cosmic Tests

Main		Groups		View	
Group 00					
Channel Name	U0Set	I0Set	UMon	IM	CM
ch1_A		U 10.00	uA	4	U
ch1_B	9200	U 10.00	uA	0	U
ch1_C	9200	U 10.00	uA	1	U
LONG_BOX	9000	U 20.00	uA	1	U
LONG_BOX	9000	U 20.00	uA	4	U
LONG_BOX	9000	U 20.00	uA	1	U
BOX_1	9400	U 10.00	uA	9398	U
BOX_1	9400	U 10.00	uA	9401	U
BOX_1	9400	U 10.00	uA	9399	U
Channel_04	9000	U 10.00	uA	2	U
Channel_05	9000	U 10.00	uA	1	U
Channel_06	9000	U 10.00	uA	1	U
BOX_3	9400	U 10.00	uA	9398	U
BOX_3	9400	U 10.00	uA	9398	U
BOX_3	9400	U 10.00	uA	9397	U
CHANNEL03	9400	U 10.00	uA	9395	U
CHANNEL04	9400	U 10.00	uA	9396	U
CHANNEL05	9400	U 10.00	uA	9399	U
BOX_4	9400	U 10.0	uA	9399	U
BOX_4	9400	U 10.0	uA	9402	U

**VISIBLE  
SEARCHABLE  
WORLDWIDE**

CMS FORWARD RPC			
Gap Id	Leak Rate mb/min	Spacer Popped*	Observation/Comment
0020	0.07	2	Some spacers popped while increasing pressure between 10 to 20 mib
0021	0.04	None	
0022	0.04	None	
0026	0.01	16	Some spacers popped successively over two hours.
0027	0.06	ok	
0028	0	ok	
0029	0	14	Spacers popped at 20 mbars

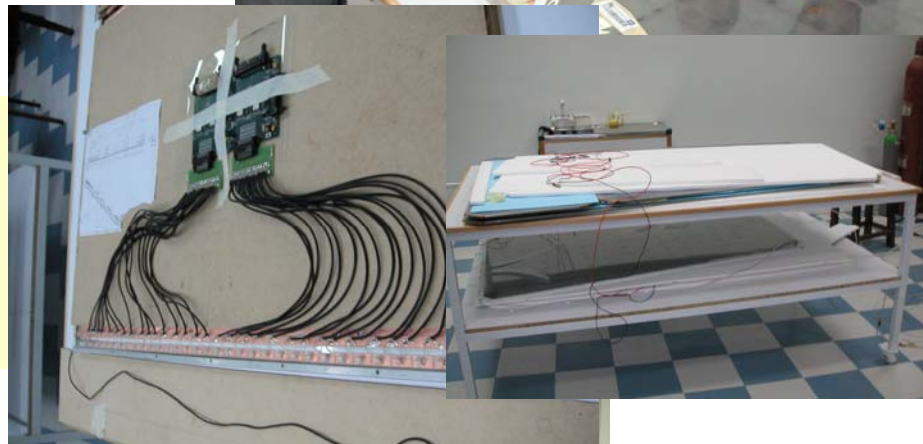
**In Operation**  
Since Jun '04

A. Sharma



# RE2/2, 2/3 Pakistan Production site

Require  
36 (+4) RE2/2  
36 (+4) RE2/3





Waiting for Final Destination: Point 5

2005 3 11



# Barrel and Forward (Endcap) RPC's Configuration and Condition database requirements for CMS Core DB Team

**Document history** - Following DB Workshop Jan 24-28



Version Number	Description	Author	Date
0.1	First draft about RPC sub-detector description and related database requirements after having discussion with Frank Glege, Anil Kumar, Saima Iqbal and Marcello Abbrescia	Archana + Sharma	31-JAN-2005
0.2	Initial draft provided by Archana Sharma is edited to add the configuration database requirements jointly for Forward (Endcap) RPC (requirements given by Archana Sharma) and for Barrel (given by Marcello Abbrescia) and on the basis of discussions with Frank Glege, Andrew Branson and Norbert Zoltan Toth.	Saima Iqbal	14-Feb-2005
0.3	Comments to v0.2 by Archana	Saima + Archana	15-Feb-2005
0.4	Comments to v0.3 by Marcello	Saima + Marcello	17-Feb-2005
0.5	Ambiguities mentioned in v0.2 resolved. Add Configuration database schema (Initial version is provided after editing discussion based on requirements among Norbert, Andrew, Saima and Marcello ) and add condition database schema requirements as provided by Marcello	Saima	06-Mar-2005
0.6	Question mentioned in V0.5 are resolves	Saima	13-Mar-2005





# Summary and Conclusions

- Initial RE system “tailored” to available budget
- First priority Station 1 since mated behind ME1
- Mass production gas gaps Korea full steam
- Assembly RE 1 ramped up @ ISR lab and has reached 5-6 chambers per week chamber electronics boards; manpower ready
- The first final RE 1/2 RPC has been mated to ME 1/2
  - The mechanical mating was flawless
  - The chamber performance meets CMS requirements

**RE 1 assembly in full swing expect to meet the CMS master schedule for its installation and commissioning**

**RE 2 assembly starting up**