

# Type 4 Cryomodule Collaboration Workshop

- ▶ Welcome to our 4<sup>th</sup> engineering workshop
- ▶ Our Focus:
  - ▶ Establish and publish the T4CM design intent. (Why are we building this cryomodule?)
  - ▶ Freeze the 3-D design.
  - ▶ Walk through all of the sub-assemblies and come to an agreement on the design. (Is it fine now, or does it need a modification?)
- ▶ Wed-Thurs: Sub-assembly discussions
- ▶ Friday: Working sessions

# Agenda

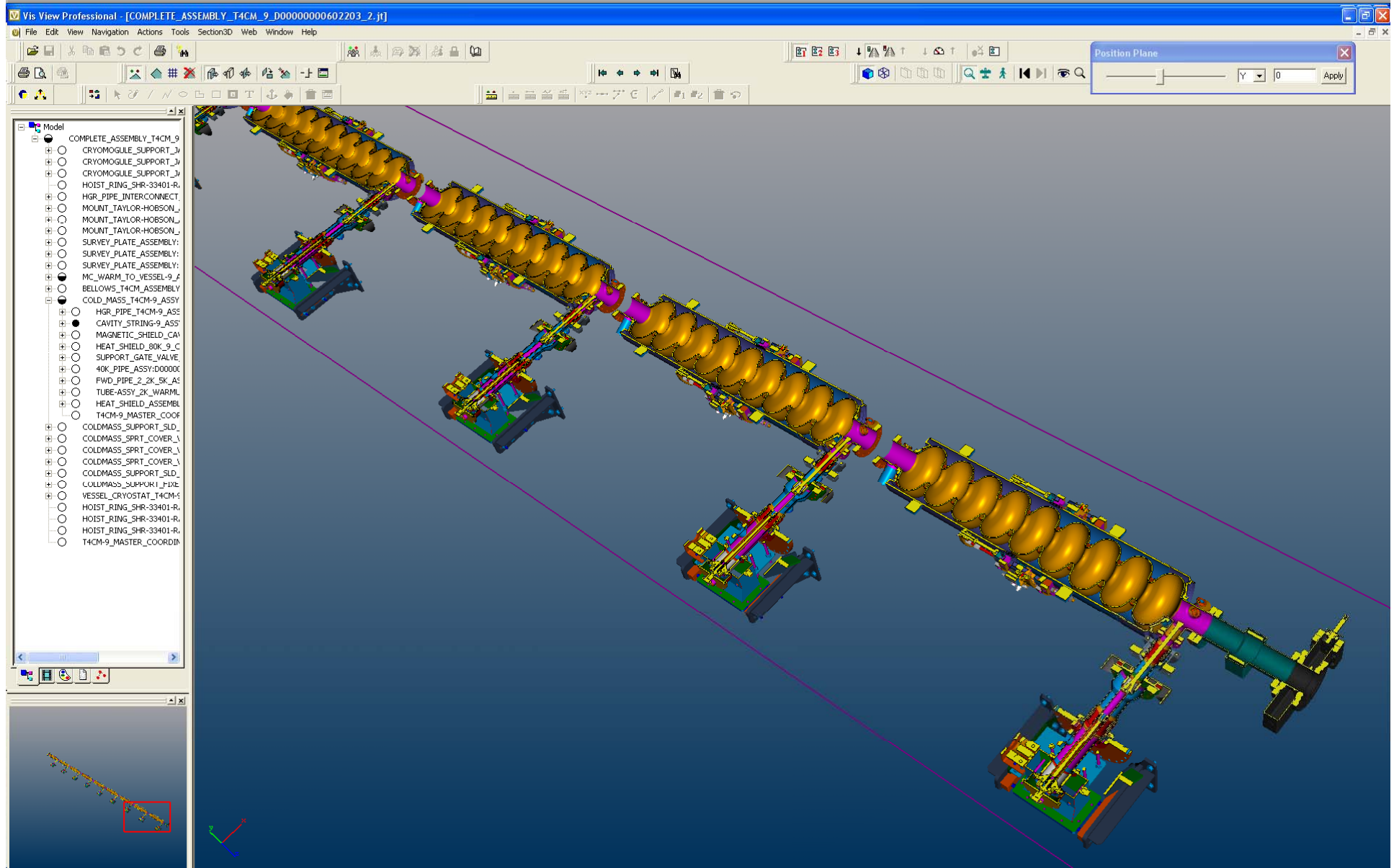


## T4CM Engineering Workshop Agenda Fermilab



Wednesday, 18 July, 2007 (ICB, 2 <sup>nd</sup> floor, Hermitage)	
8:45 am to 9:00 am	Arrival: FNAL, Hermitage Conference Room, Technical Division, ICB-2 <sup>nd</sup> floor
9:00 am to 9:15 am	Welcoming comments, Agenda & focus - Mitchell
9:15 am to 10:00 am	Cryomodule design status - <a href="#">Orloy</a>
10:00 am to 10:15 am	Cavity design status - Mitchell / <a href="#">Pagani</a>
10:15 am to 10:30 am	Break
10:30 am to 11:00 am	Cavity interconnect bellows and flanges - <a href="#">Bedeschi</a>
11:00 am to 12:00 pm	Helium vessel design & future possibilities - Grimm
12:00 pm to 1:30 pm	Lunch
1:30 pm to 2:00 pm	Bi-metallic transitions - INFN, Pisa (probably not used on T4CM)
2:00 pm to 2:45 pm	Blade tuner & Slim tuner - INFN, Milan
2:45 pm to 3:15 pm	Magnetic Shielding, external - Grimm
3:15 pm to 5:00 pm	Tours of CAF, ICB High Bay, Meson Detector Building
Thursday, 19 July, 2007 (Wilson Hall, 10 <sup>th</sup> Floor, Hornet's Nest)	
9:00 am to 9:30 am	BPM Development and status - Mitchell for Manfred Wendt
9:30 am to 10:00 am	Quad / Steering magnet development - Vladimir <a href="#">Kashikan</a>
10:00 am to 10:30 am	Cavity String layout - Mitchell / <a href="#">Orloy</a>
10:30 am to 10:45 am	Break
10:45 am to 11:15 am	KEK Internal Magnetic Shielding - Chuchi
11:15 am to 12:00 pm	HGRP design and fabrication - <a href="#">Orloy</a> / Grimm / <a href="#">Barbanotti</a>
12:00 pm to 1:00 pm	Lunch
1:00 pm to 1:15 pm	Needle bearings & alignment tolerances - Mitchell
1:15 pm to 2:00 pm	Heat shields - <a href="#">Orloy</a>
2:00 pm to 2:30 pm	Vacuum Vessel - <a href="#">Orloy</a>
2:30 pm to 3:00 pm	Vibration studies - McGee (FNAL)
3:00 pm to 3:15 pm	Break
3:15 pm to 4:00 pm	Vibration studies - <a href="#">Basti</a> (INFN, Pisa)

# The Type 4 Cryomodule (T4CM)



## More than just a design!

- ▶ We are creating a T4CM design but at the same time, we are building a team and a process.
  - ▶ Sharing data across the world with EDMS
  - ▶ Collaborating with tools such as VisView and WebEx
  - ▶ Creating complete and accurate 3-D models
  - ▶ Providing training and guidance to our members
- ▶ This is not easy to do. However, it is critical that we succeed. The ILC program must learn how to work as a real collaboration in real time.
- ▶ We have been pioneering tools and techniques to make this a reality.

## Our tools

- ▶ I-DEAS 3-D, 2-D, and FEA
- ▶ UGNX 3-D and 2-D
- ▶ Ansys FEA
- ▶ PDF file creation for 2-D drawing viewing (Adobe Acrobat 3-D coming soon)
- ▶ VisView for 3-D model viewing and on-line collaboration
- ▶ WebEx for real-time user support from DESY

# A Small Demo

