



# Type IV Cryomodule Design Status

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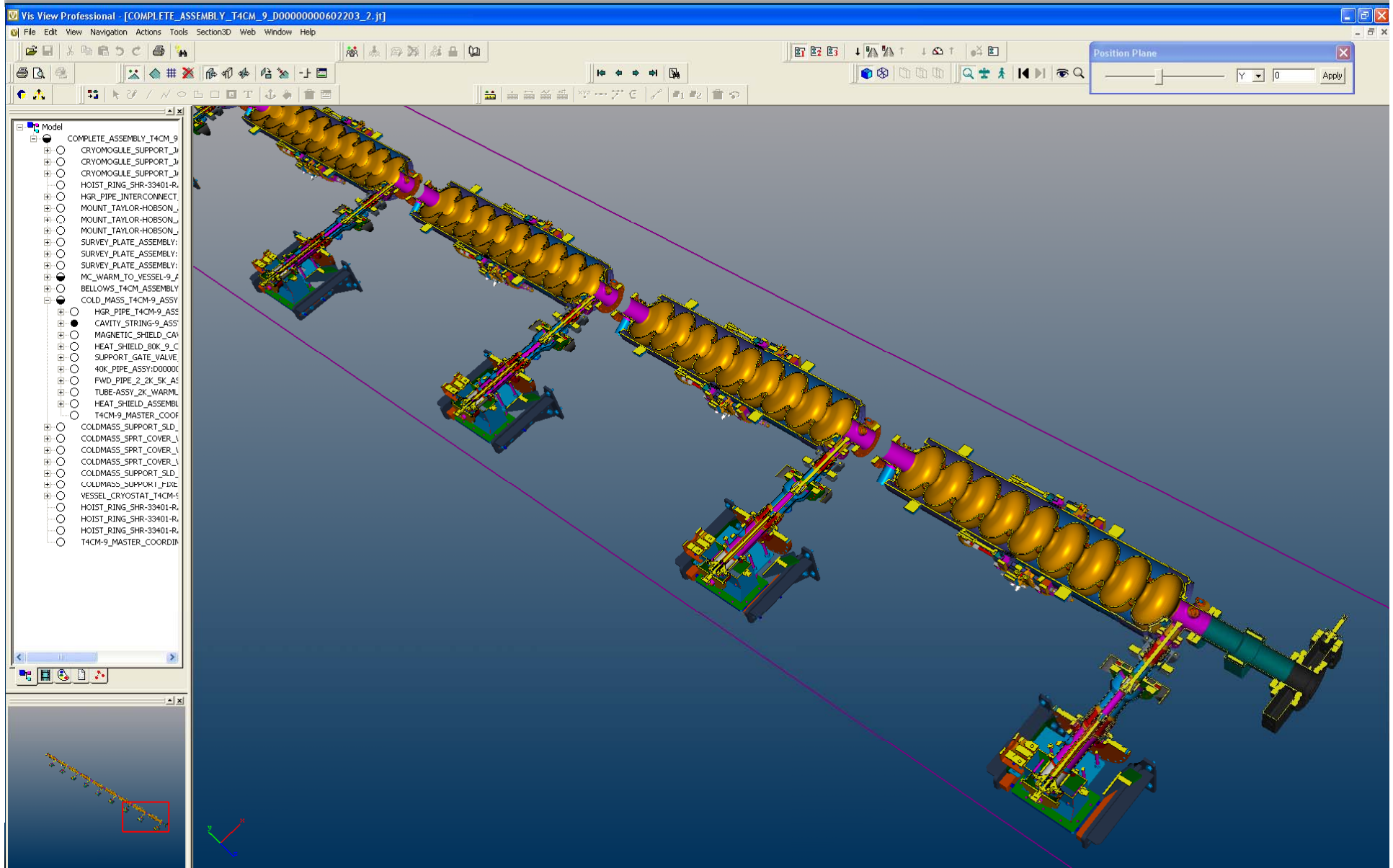


## Outline:

1. T4CM Design Status
2. T4CM JT files demonstration and discussion

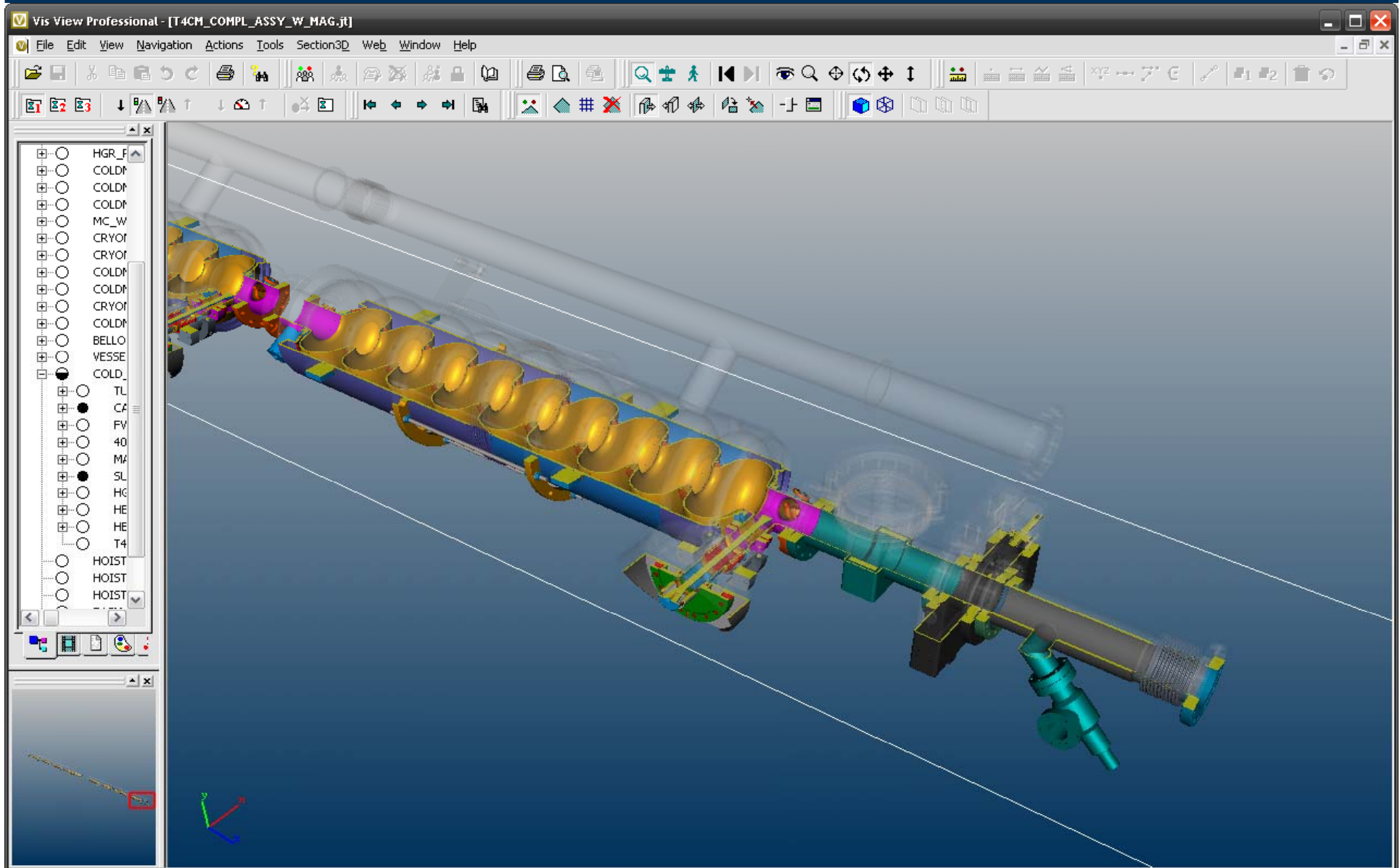


# T4CM Design. CRYOMODULE WITH 9 CAVITIES





# T4CM Design. CRYOMODULE WITH QUAD





## T4CM Cryomodule Design Status

Two T4CM Cryomodules Locate at Desy data base: Type 4 cryomodule design/CAD Main Assemblies

- ▶ T4CM\_9\_CAVITIES\_NEW\_COMPL\_ASSY, D00000000608303, version 7 (\*)  
COLD\_MASS\_T4CM-9\_CAVITIES\_ASSY, D00000000613373, version 4
- ▶ T4CM\_W-MAG\_COMPLETE\_ASSEMBLY, D00000000556493, version 18 (\*)  
COLD\_MASS\_T4CM\_W\_MAG\_ASSY, D00000000611633, version 14

(\*) not include COLD MASS ASSEMBLY!



# T4CM Cryomodule Design Status

**My Items**

- I-DEAS
  - Model File C:\IDEAS\Model\_Files\NLC\YMO\_031807\_T4CM-9\_COMPL\_ASSY.mfl
    - Main
      - COLD\_MASS\_T4CM-9\_CAVITIES\_ASSY, D00000000613373, v5
      - T4CM-9\_CAVITIES\_NEW\_COMPL\_ASSY, D00000000608303, v8**

**Team Data**

- Teams for Orlov\_Youri\_FINAL
  - DESY-FNAL-CAD-Test
  - IPP\_Training
  - Type 4 Cryomodule Design
    - 1-3GHz CAVITY
      - CAD Main Assemblies
        - CAVITY\_STRING-9\_ASSY, D00000000602033, v16
        - CAVITY\_STRING-ASSY-T4CM\_NO-MAGH, D00000000563503, v3**
        - CAVITY\_STRING-T4CM-DELETE-ME, D00000000557733, v1
        - COLD\_MASS\_ASSY\_T4CM, D00000000556753, v23**
        - COLD\_MASS\_T4CM-9\_CAVITIES\_ASSY, D00000000613373, v4
        - COLD\_MASS\_T4CM\_VV\_MAG\_ASSY, D00000000611633, v14
        - COMPLETE\_ASSEMBLY\_T4CM-9, D00000000602203, v1**
        - HGR\_PIPE\_ASSY-T4CM\_NO-MAGH, D00000000563493, v4**
        - HGR\_PIPE\_T4CM-9\_ASSY, D00000000602003, v12**
        - T4CM-9\_CAVITIES\_NEW\_COMPL\_ASSY, D00000000608303, v7
        - T4CM\_COMPLETE\_ASSY\_NO-MAGH, D00000000563663, v12**
        - T4CM\_VV-MAG\_COMPLETE\_ASSEMBLY, D00000000556493, v18
        - VESSEL\_CRYOSTAT\_T4CM-9\_MACH, D00000000601903, v13**
      - CAD Working Data
      - CAD Working Data-No Magnet

**Item Details Table**

Name	Number	ItemType	Version	Status	Pr...
T4CM-9_CAVI...	D00000000608303	Assembly	8	Ck	-
BELLOWS_T4...	D00000000557123	Assembly	2	Rfl	
COLDMASS_...	D00000000603463	Assembly	2	Rfl	
COLDMASS_...	D00000000552763	Assembly	16	Rfl	
COLDMASS_...	D00000000552803	Assembly	16	Rfl	
JACK_STAND...	D00000000776912	Part	1	Rfl	
JACK_UP_SP...	D00000000733782	Part	1	Rfs	
MC_MOUNT_...	D00000000557603	Assembly	21	Rfl	
MC_WARM_A...	D00000000578523	Assembly	6	Rfl	
MOUNT_TAY...	D00000000605373	Assembly	2	Rfs	
REDUCING_TE...	D00000000613853	Assembly	1	Rfl	
RING_HOIST_...	D00000000746892	Part	1	Rfl	
SURVEY_PLA...	D00000000578763	Assembly	7	Rfl	
T4CM-9_HAR...	D00000000613943	Assembly	1	Rfl	
TEMP_T4CM-9...		Drawing			
VESSEL_CRY...	D00000000601903	Assembly	13	Rfl	

**My Teams** | My Subscribed Items

Details | Search Results

No Changes Required  
Ready...  
Delete 1 items from the model file





## T4CM Design Status

For Cryomodules Design use:

- ▶ Master EXCEL Spreadsheets
- ▶ Master Coordinate System
- ▶ Best Practice for part creation
- ▶ But, in the latest version of Cryomodules Assemblies "constrains" was removed



# T4CM Design Status

## Drawings for T4CM Cryomodule-9 Cavities:

T4CM-9 Cryomodule drawings (total)			
#	Assembly	Number of Drawings	done
1	T4CM Cryomodule Vessel (weldment & machining)	32	
2	T4CM HGR pipe (weldment & machining)	15	
3	HGR pipe Assembly stuff	15	
4	ColdMass Support Post	15	
5	80K Heat Shielding	30	
6	4K Heat Shielding	22	
7	ColdMass Supports (fix & sld)	19	
8	T4CM Piping (40K, 2K, 2,2K-5K)	21	
9	T4CM_Cryomodule Assy Stuff	50	
10	MC Mount to Vessel	27	
11	MC	~60	40%
12	Cavity Magnetic Sheld	~25	40%
	total (without cavity)	331 (?)	