

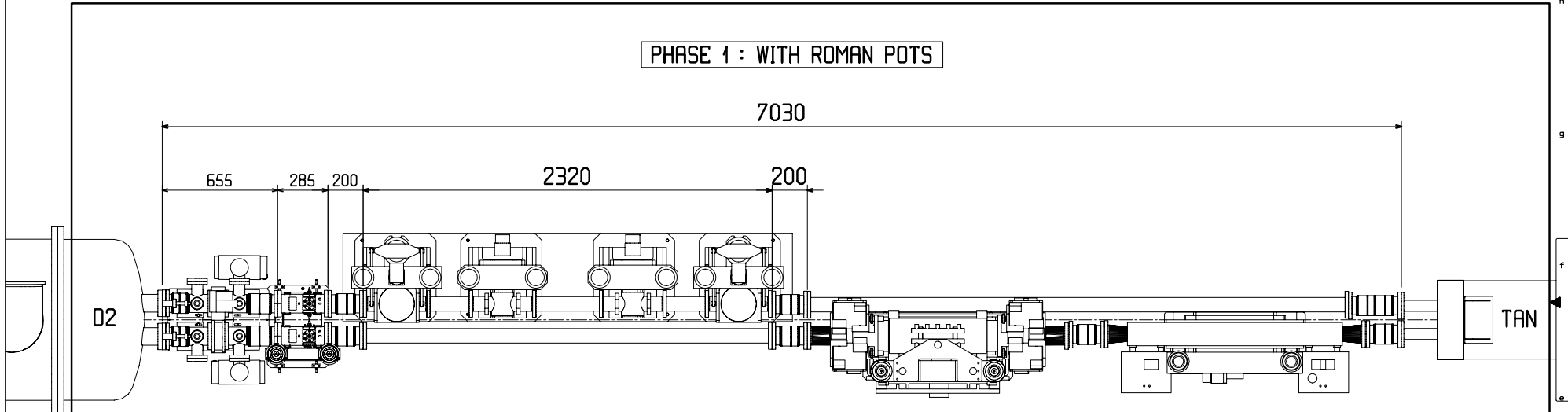
Integration issues of collimator pumping modules

C. Rathjen, AT/VAC

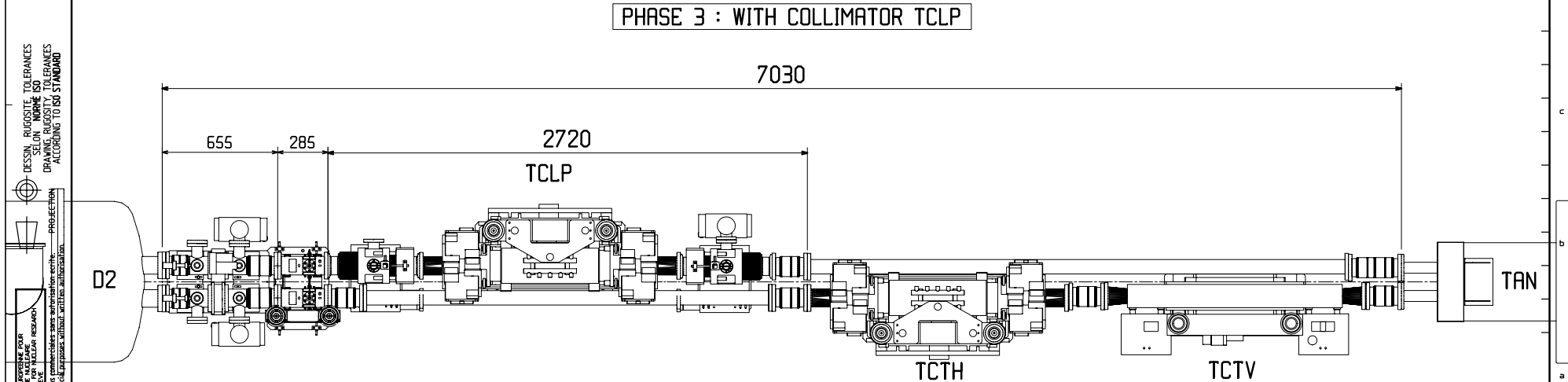
Slides partly taken from presentation at 2nd
RPTB meeting, 2. 3. 2005

XRP integration between TAN and D2 @ IR 5

PHASE 1 : WITH ROMAN POTS



PHASE 3 : WITH COLLIMATOR TCLP

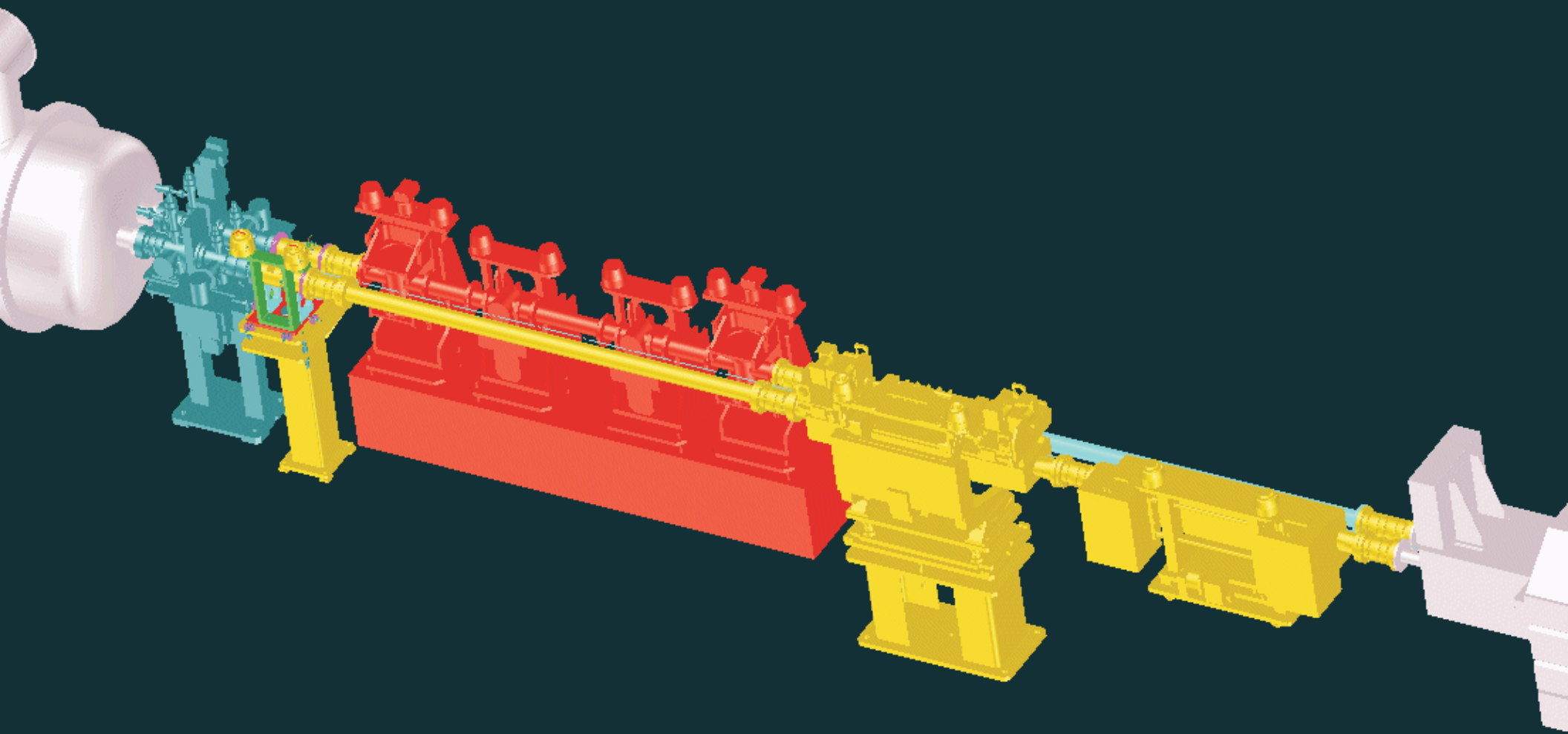


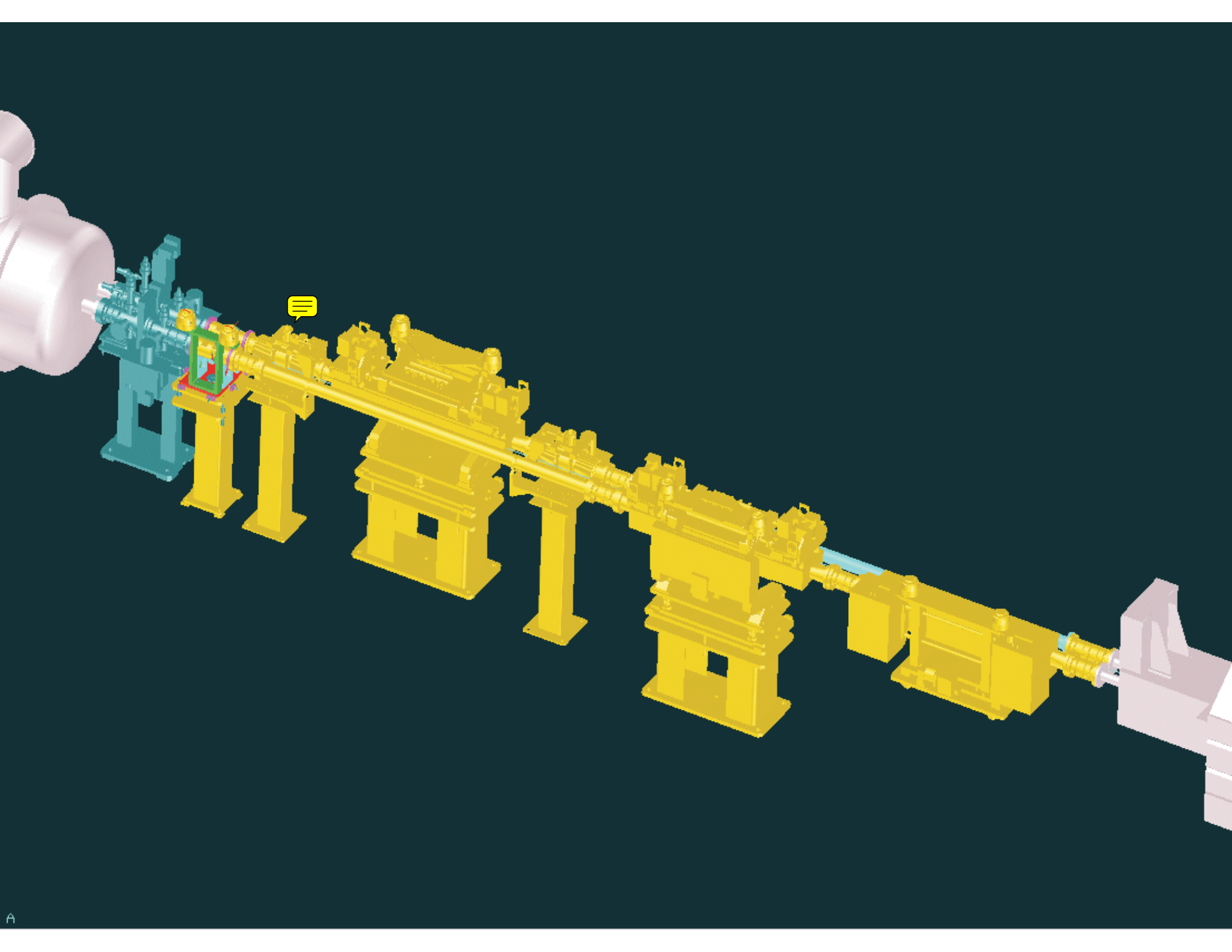
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IND.	DATE	NOM/NAME	ZONE	MODIFICATION
11				
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Roman Pot (TOTEM) - Mechanical		ECHELLE	DES/DRA.	J. CORSO	2004-11-30
HALF-CELL C4L5 LAYOUT 6.5		SCALE	CONTROLLED		
PHASE 1 AND 2		1:15	RELEASED		
DEMI-CELLULE C4L5 LAYOUT 6.5			APPROVED		
PHASES 1 ET 2			LHCL_J_1_S1_3DINTP5000_0311.031214-0PL		
			REPLACE/REPLACES		
NON VALABLE POUR EXECUTION NOT VALID FOR EXECUTION		OAC	LHCXRP__0097		
			SIZE	IND.	
			2		



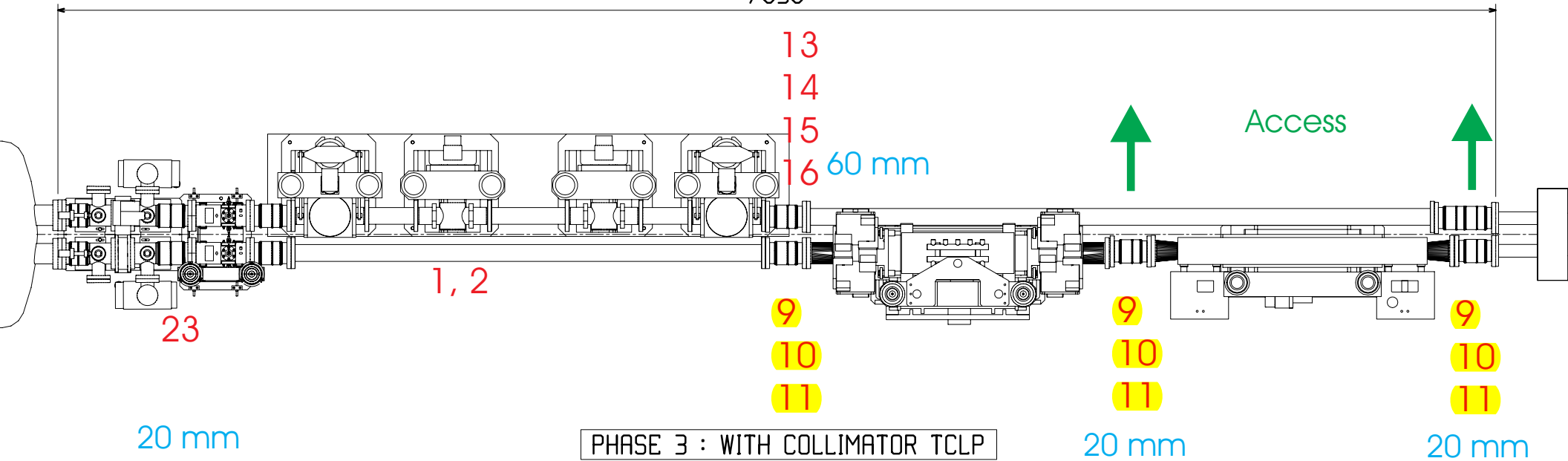


Integration D2-TAN @ IR5: Open Issues

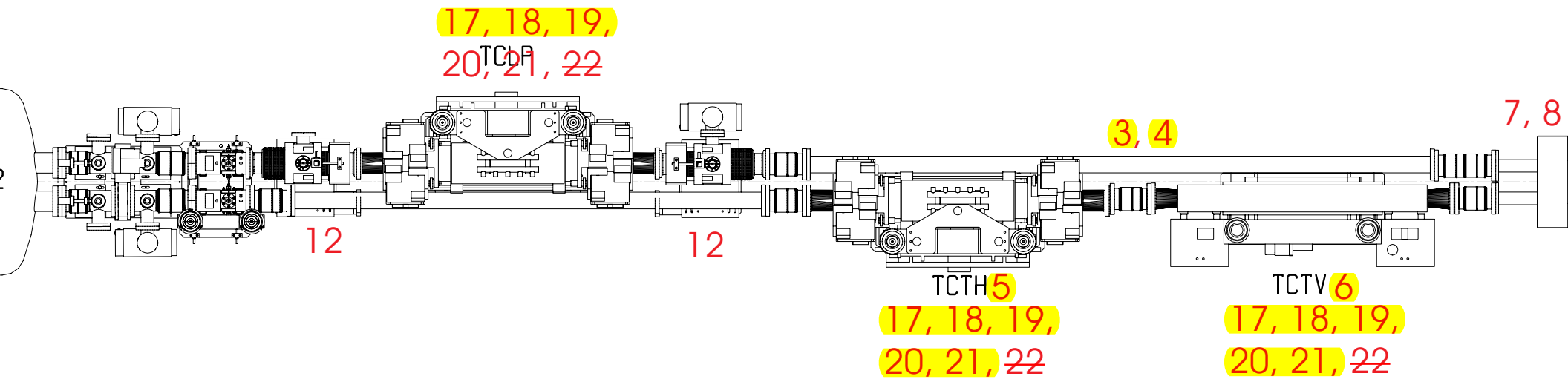
Item	Component	Issue
1	Adjacent chamber to XRP	Support in case of absence of XRP and TCLP
2		Diameter reduction required for TCLP tank
3	Adjacent chamber to TCTH/TCTV	Support
4		Diameter reduction required for TCTH tank
5	TCTH	Collimator tank movement: allowed/ possible
6	TCTV	Collimator tank movement: allowed/ possible
7	TAN chamber	Expansion: fixed point where; range
8		Lateral forces: allowed/ possible
9	Bellows modules between TCTH and TCTV	Installation in free state: 20 mm length reduction possible
10		Collimator tank movement: special modules required
11		Recoiling for collimator replacement: tooling required
12	TCLP collimator pumping module support	Floor drilling: before XRP installation
13	XRP Bellows module	Displacement towards TAN: possible gain for XRP
14		Flange: infringement with TCTH flange
15		Flange: infringement with TCTH module chain clamp
16		Replacement with tube for TCLP installation
17	All collimators	Bakeout: how?
18		Interventions: to be studied
19		Chain clamps: by hand or with mechanism?
20		Tank movement: by hand?
21		Lateral position: official confirmation - who?
22		BPMWB separation: official confirmation
23	VAB bellows	Installation in relaxed state possible? (if yes 20 mm gain for XRP)

PHASE 1 : WITH ROMAN POTS

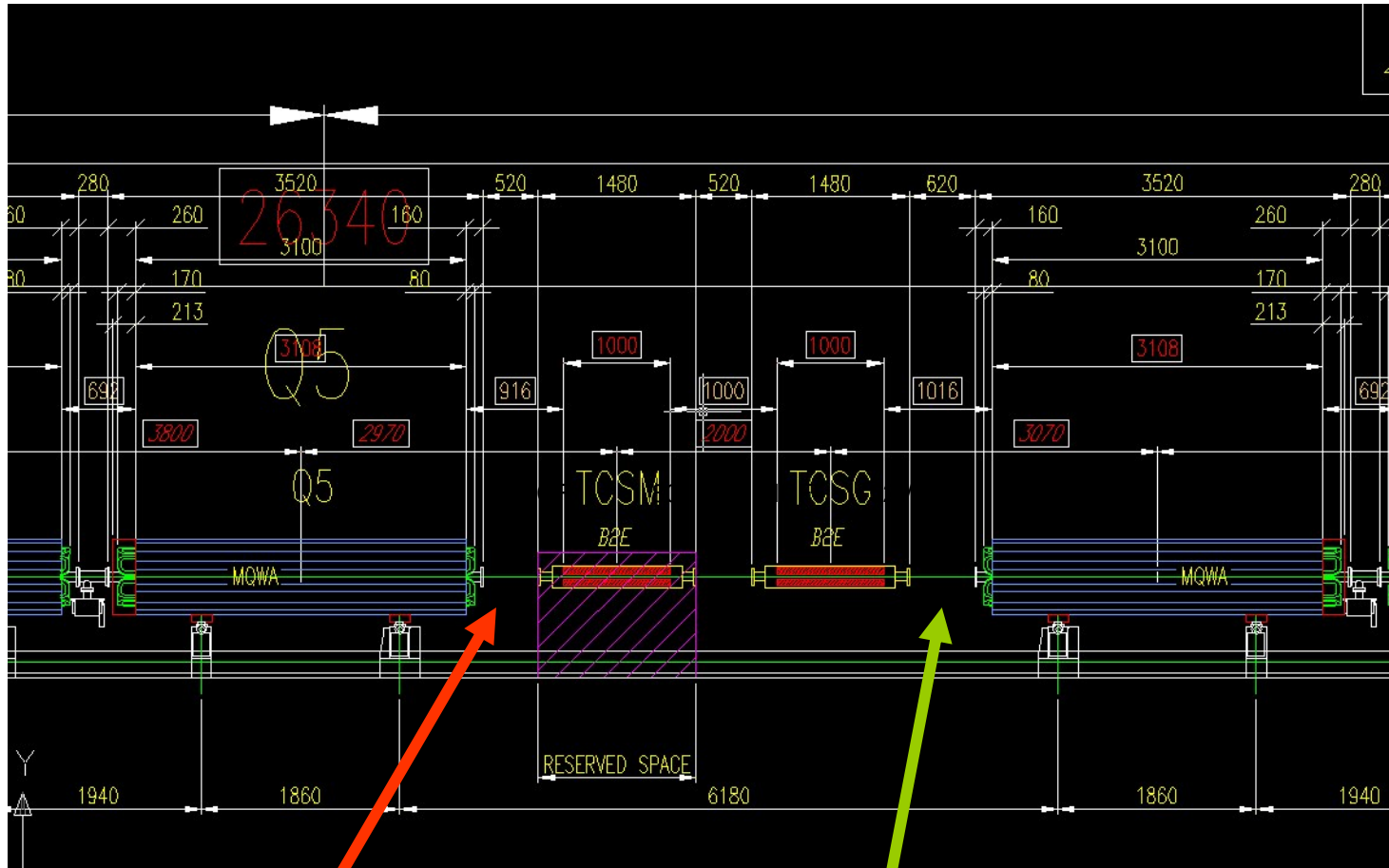
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PHASE 3 : WITH COLLIMATOR TCLP



Special pumping modules for collimators: IR 3



VMTNV:

- Elliptical transition to round
- standard flange to magnet
- difficult magnet replacement

VMTIB + 100 mm transition piece

Alternatives

- Shifting of 6 MQW (out of 24) by 100 mm
-> best integration, best standardization, best interventions
- Shifting of two collimator by 50 mm and transition pieces on both sides with 30 degree angle
-> second best choice, but: is 30 degree possible????
If not can collimators have 50 mm transitions inside????
- Reduction of interconnect space between collimators by 100 mm
-> improved intervention on magnets, but still 4 special modules are required (semiautomatic handling possible??); no pumping between collimators