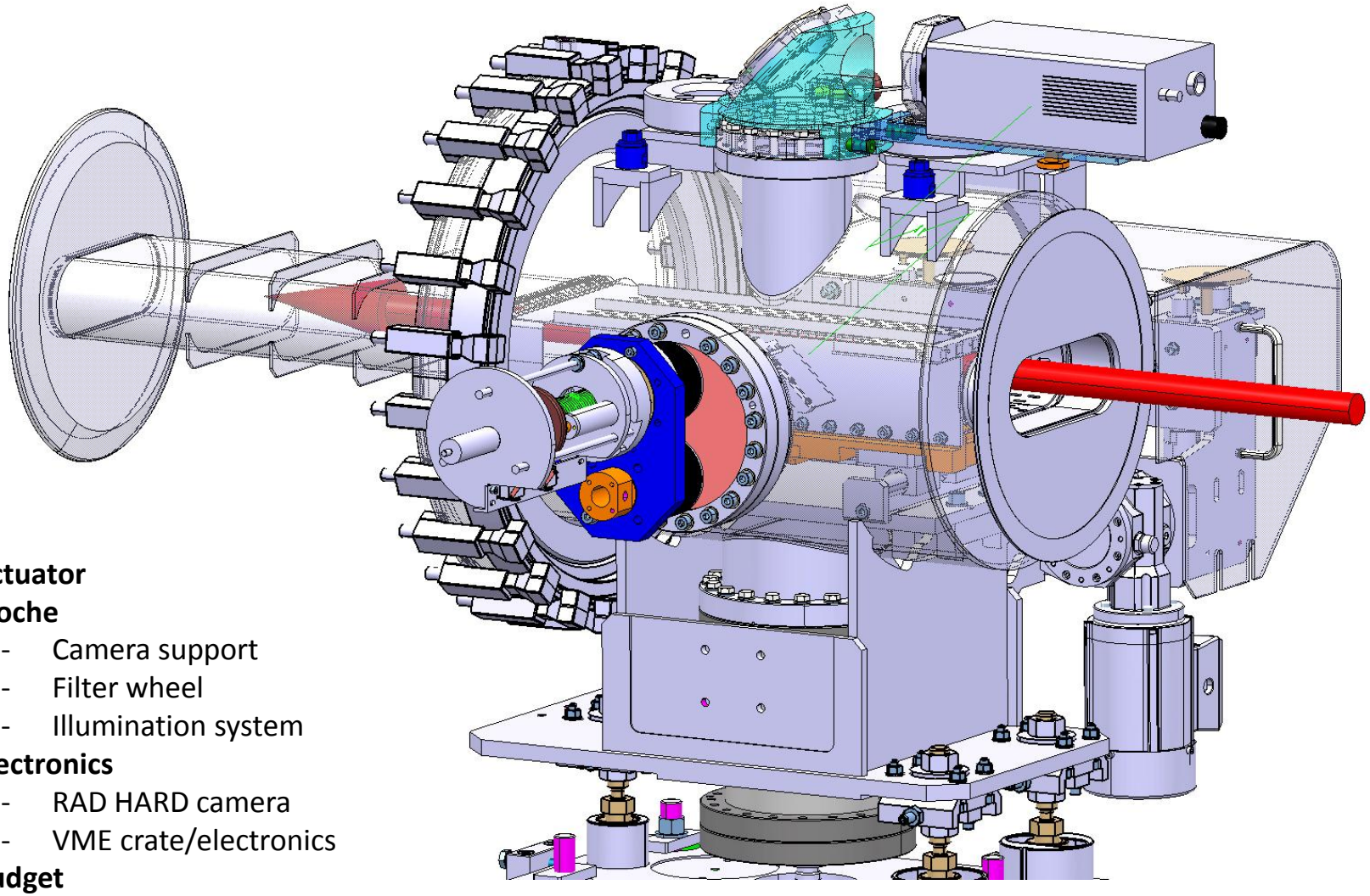
BTV SEPTUM DUMMY_15 STATUS 2013_05_16



- **Actuator**
- **Cloche**
  - Camera support
  - Filter wheel
  - Illumination system
- **Electronics**
  - RAD HARD camera
  - VME crate/electronics
- **Budget**

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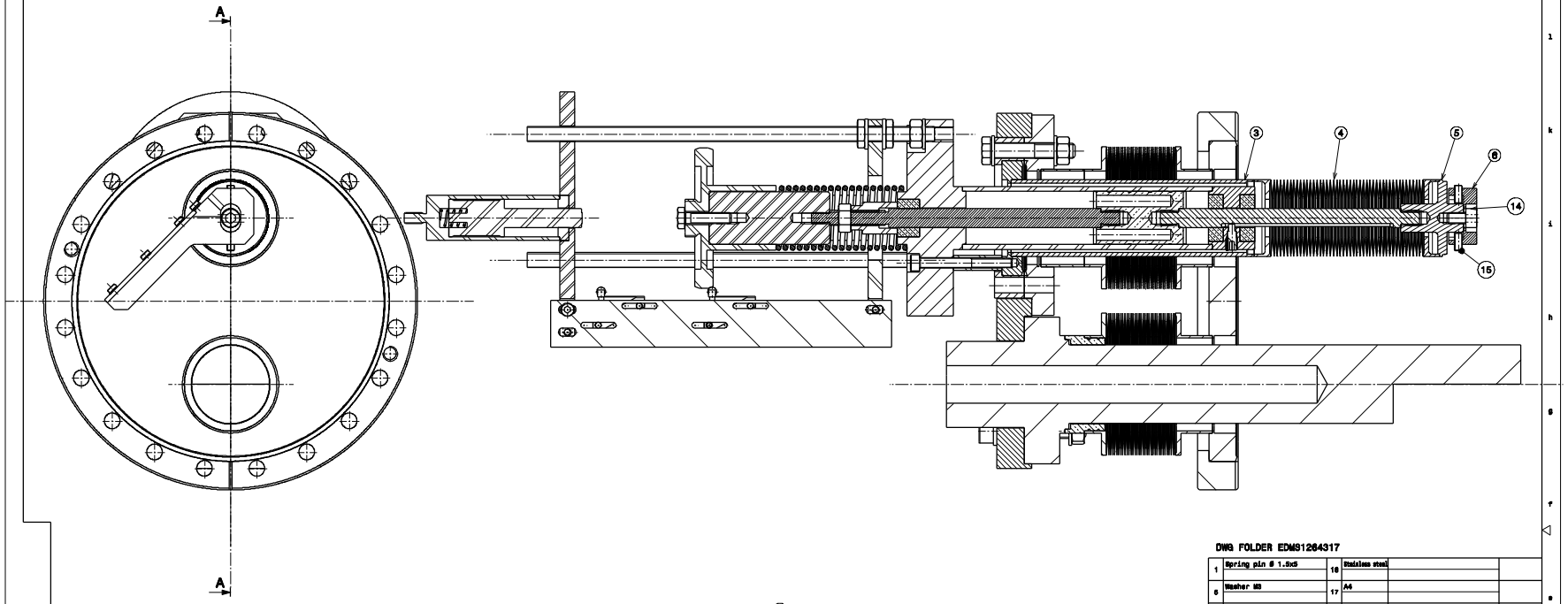
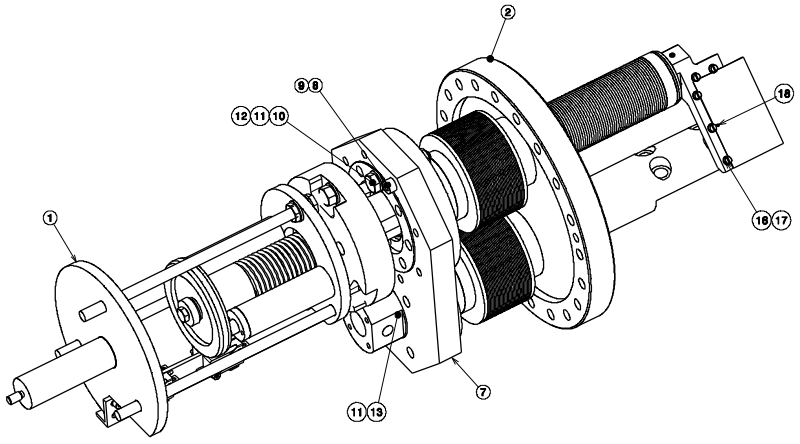
Actuator: Screen pneumatic movement

High radiation level meaning minimum maintenance

- Special design of the actuator:
- **without sealing**
- **system following the blade movement to guaranty that the screen is always located at the same position with respect to the blade** (prevent crash - no interlock needed)
- design office study (G. Foffano), N. Jurando (BI) & M. Hourican collaboration)
- was given to CERN workshop in march(?)
  - should be delivered in April - **1 month delay**
  - delivery next week
  - expected tests results before **mid June**
- Once design validated by tests:
  - CERN workshop will build the entire instruments (mounting below, flange, screen, etc…)
  - Detailed planning will be known at that time
- **Critical components (belows) already at CERN**





DWG FOLDER EDMS1264317

QUA	DESCRIPTION	POS	MAT.	OBSERVATIONS	REF.OBRM
1	Spring pin ø 1.5x5	18	Stainless steel		
6	Washer M3	17	A4		
5	S1 cheese hd screw M3x5	16	A4		
2	Hdless screw M4x10	15	A4		
1	Skt hd cap screw M3x10	14	A4		
4	Skt hd cap screw M6x35	13	A4		
6	Nut M3	12	A4		
20	Washer M3	11	A4-100		
6	Hex hd screw M3x45	10	A4-100		
6	Washer M5	9	A4		
6	Skt hd cap screw M5x30	8	A4		
1	GUIDING PLATE - -	7		PS_BTVPL0020	
1	SCREEN SUPPORT - -	6		PS_BTVPL0022	
1	SOCKET BELLOW TO SCREEN - -	5		PS_BTVPL0026	
1	BELLOW Ø41/21 - -	4		PS_BTVPL0016	
1	ACTUATOR COMPENSATOR - LINK TUBE - -	3		PS_BTVPL0017	
1	BELLOWS ASSEMBLY - -	2		PS_BTVPL0004	
	ACTUATOR ASSEMBLY - -	1		PS_BTVPL0002	

ENG/ASS — S.ENG/S.ASS

Beam observation TV Pneumatic Linear

ASSEMBLY

SCALE 1:1

DRAWN: Q. PDFFAMO 2013-01-29
CHECKED
RELEASED
APPROVED
CDD Document Number ST0476B11_03
REPLACED

DRAFT FOR DISCUSSION
NOT VALID FOR EXECUTION

NON VALABLE POUR EXECUTION
NOT VALID FOR EXECUTION

QAC -

PS_BTVPL0001

SIZE 1 IND.

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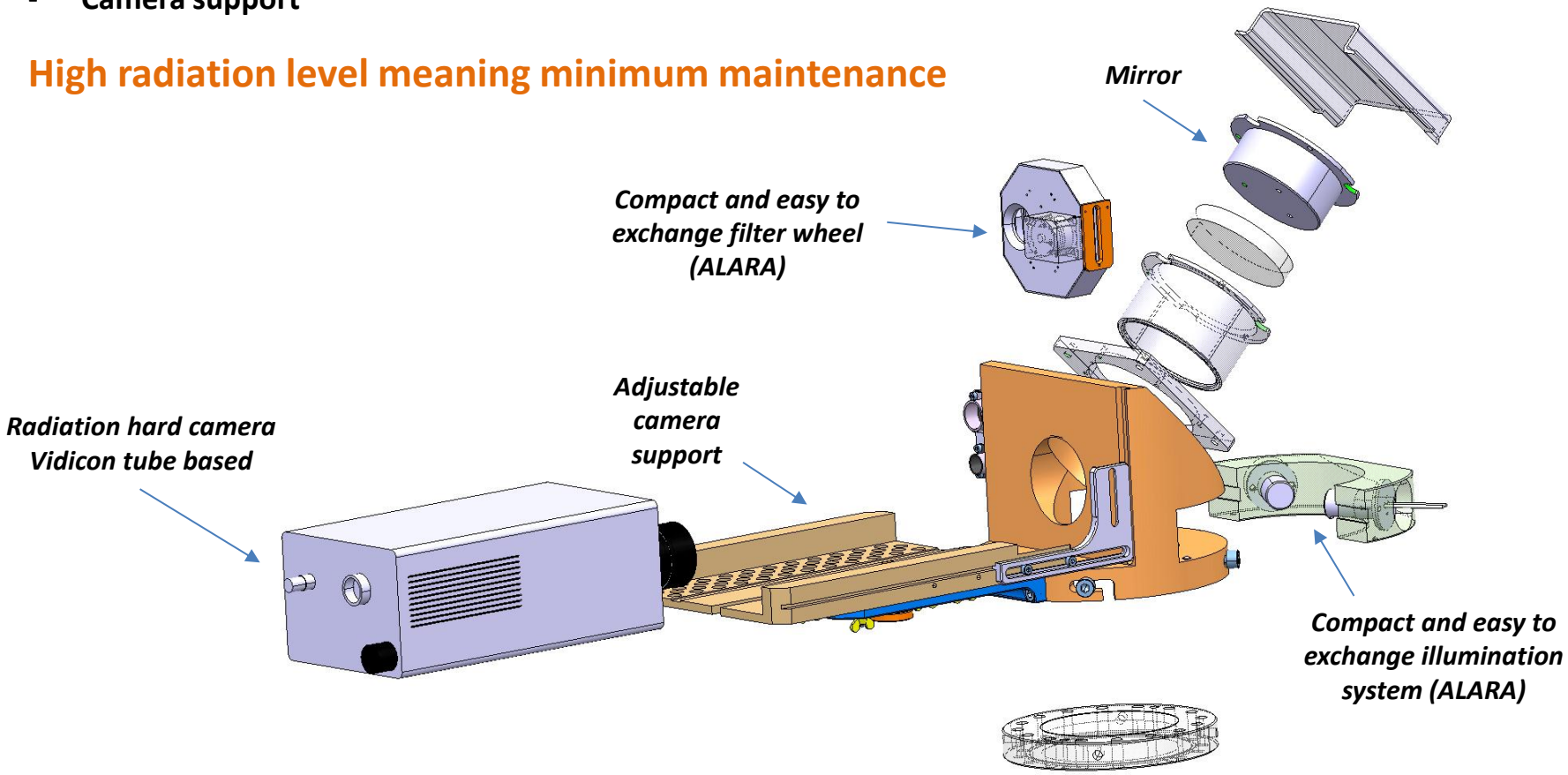
This 'CLOCHE' consists of a:

- **Mirror at 45 degres to redirect the image**
- **Filter wheel to avoid saturation for measurements**
- **Illumination system for calibration and observation**
- **Camera support**

High radiation level meaning minimum maintenance



Exploded view of a cloche (principle – the design to be used for the septum dummy_15 is shown next slide)

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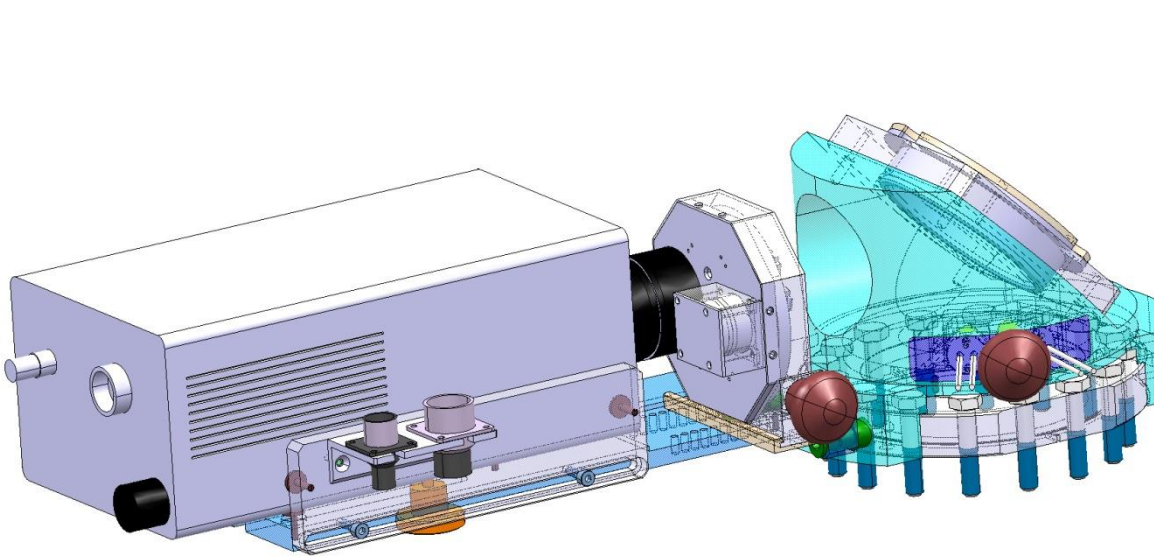
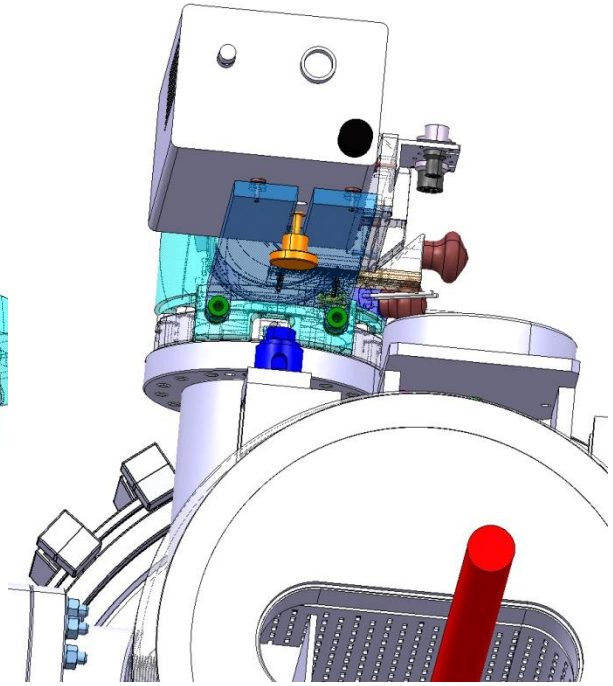
Design shared constraints of this project and of the BTV/stripping foil project
→ share the cost of design study and production x8 instead of x2)





Design is 90% finished.
Production for end of summer.

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Electronics

new VME crate
VME BTV board / Transition module
Specific power supply
→ Material already available

Location: RA303 in building 269

Cabling installation this summer

Camera/Optics

Radiation hard camera (Vidicon based)
Radiation hard camera lens (focal = 50mm)
→ Material already available

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Budget

60KCHF asked
32KCHF spent mainly for mechanical study and prototype

Still to be paid:

- Complete screen actuator device (+ spare) machining
  - → detailed budget after test validation
- Cloche machining + spare
  - → to be defined with quantity after prototype 100% complete
- Crate/Electronics/camera
  - → 8 to 12KCH

→ Difficult to establish if the budget will be exceeded yet…