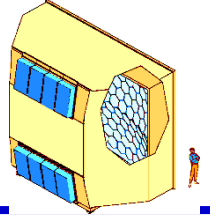
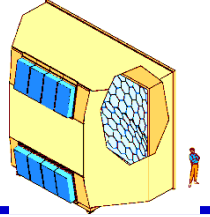


RICH preparation,

STATUS



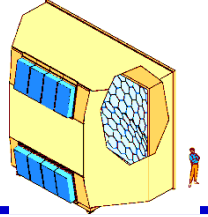
TEAM

- Almost all the work <u>to be done at CERN</u>
- Difficulties for personnel at CERN in the pandemic emergency

PLANNING CONCERNING RICH PREPARATION for period Sept-Dec 2020 (TB 4/9/2021):

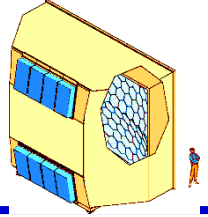
A part Stefano and Fulvio (both part-time on RICH):

- 20 man-week of technical personnel → 8 man-weeks
- 11 man-week of PhDs & post-docs → 6 man-weeks
- 18 man-week of physicists for Dry Run → 4 man-weeks
  - In total 21 / 120 shifts, 10 of them from remote



RADIATOR GAS,

where most of the future needs are

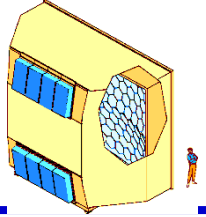


THE GAS HARDWARE, cont.

Discussion and planning
Started with Stephane Barry

- **Consolidation of the radiator gas system**
  - major interventions, partially requiring the assistance of Stephane Berry
    - second pressure gauge
    - second controller
    - new connections to the controllers
    - split of the main input line with commuting valves
    - second pneumatic valve to be installed
    - 4 man-weeks needed (technical personnel) + availability Berry
    - to be organized and done

- ***Fast circulation turbo pump***
  - Maintenance to be performed on site
  - to be organized

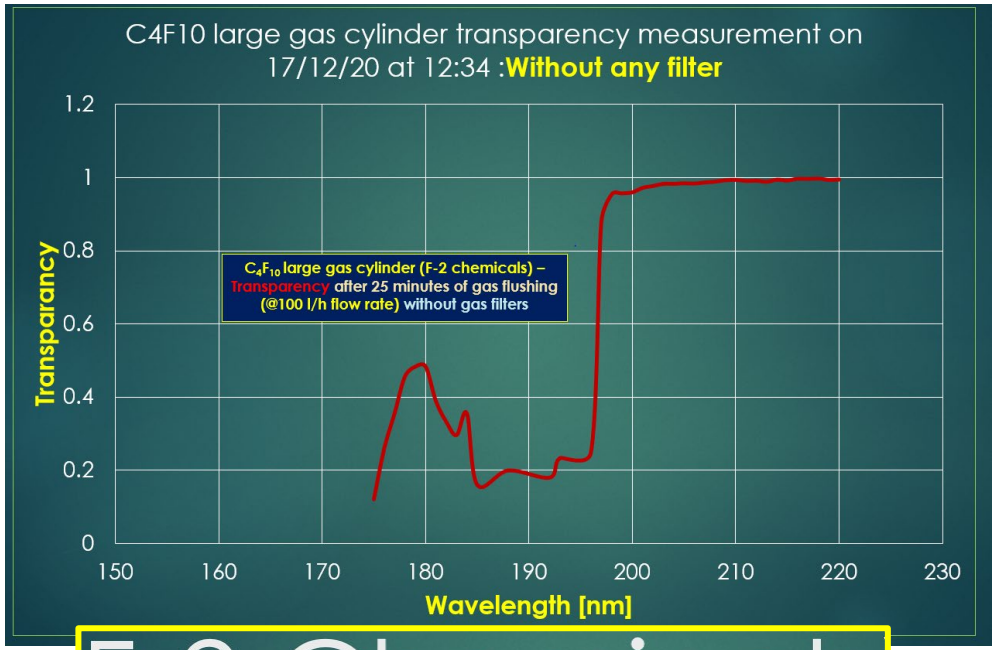


THE RADIATOR GAS

- ***630 kg of C4F10 from F2 Chemicals***
  - **Purchasing now procedure completed (Oct 2019)**
  - **Delivered: end Sept 2020**
- ***500 kg of C4F10 by 3 M (old batch, good quality) from LHCb***
  - **For this purpose, dedicated measurements of the transparency of our "bad" sample in the visible domain performed (2017) and report written**
  - **Upon LHCb request, a report about the characterization of F2 Chemical gas now written**
  - **positive feedback from LHCb in Oct 2020**
  - **Transferred: Dec 2020**
- ***C4F10 cleaning***
  - **Time estimate: 3-4 months continuous working at CERN**
  - **To be started as soon as possible (Feb 2021 ?)**

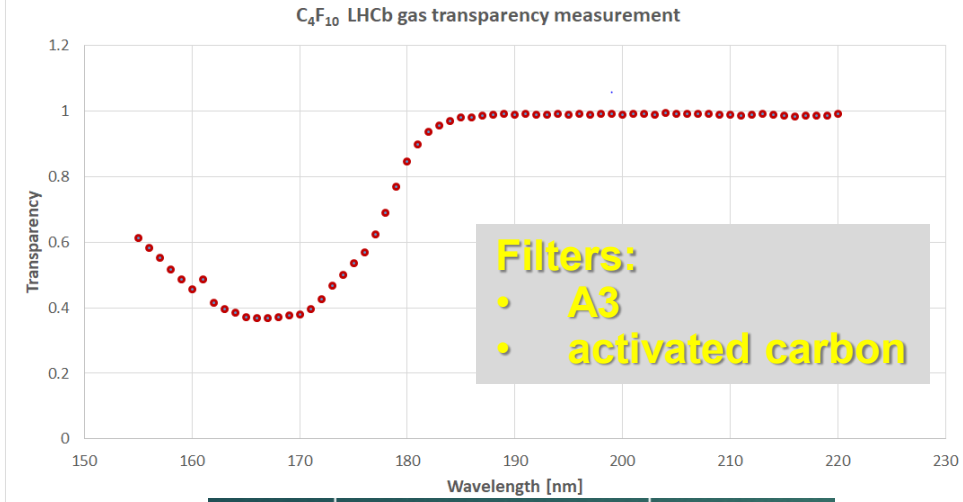
C4F10 QUALITY

Explorative checks

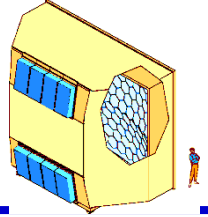


F-2 Chemicals

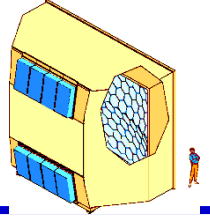
LHCb gas transparency measurement



Transparency is around 37% with gas filters @167 nm after 90 minutes : LHCb Gas



PHOTON DETECTORS



In summary

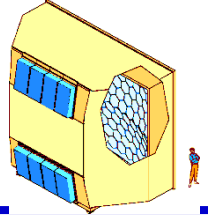
VERY LARGE PROGRESS

Available for DR:

- ***LV (partially new)***
- ***HV (partially new for MWPC including P,T system and software control)***
- ***Cooling, completely refurbished***
- ***Novel read-out fibers in place***
- ***All detectors read-out (only 50% promised!)***

To be done

- ***Check the UV transparency of new methane in use at CERN***
- ***Complete the diagnostic of the DR data to cure not properly working r-o channels (gaseous detectors and MAPMTs)***



APPENDIX

- ***Trieste contribution (mechanics) to H1 refurbishing***
  - **Limited mechanical works for the new supporting system to be done at CERN**
  - **Mainly waiting for the new scintillators to mount them onto the new support**