

The gas systems for the CERN Gamma Irradiation Facility

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on behalf of the CERN Gas Systems Team (EP-DT-FS)

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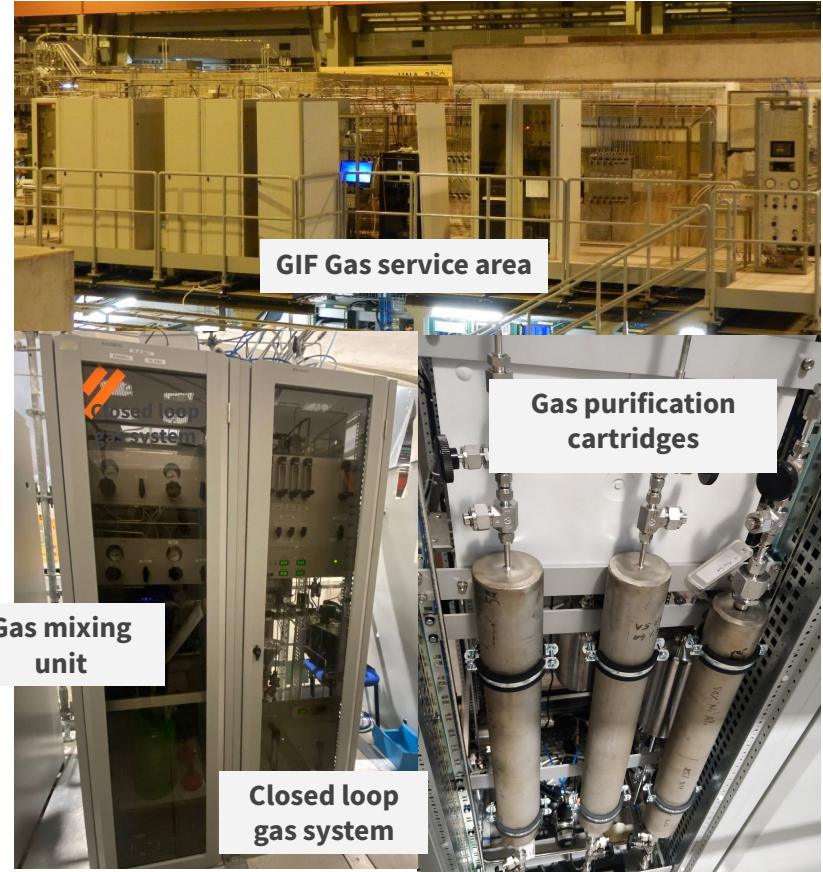


EP-DT
Detector Technologies

Gas modules at GIF++

The gas systems at GIF++ modules consists of

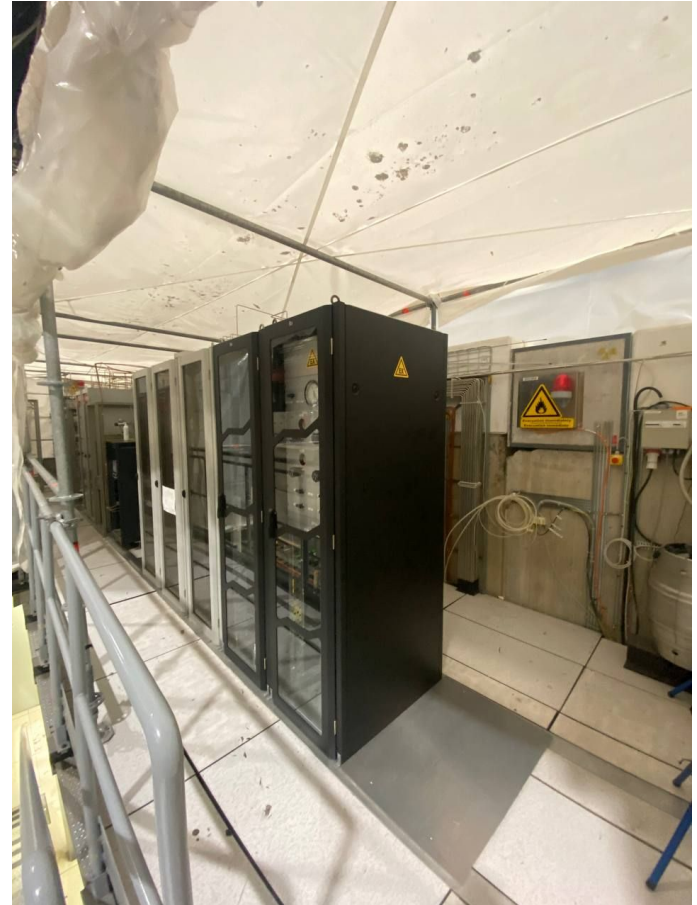
- 7 mixers
- (3+1) gas recirculation systems
 - Small replicas of LHC-like gas system
 - 1 gas system yet to be commissioned
- 2 infrared analyzer
- ~10 analyzers for O₂ and H₂O
- More than 20 gas panels



Gas team maintenance and operation

Gas team is contacted for the development, maintenance and operation of the gas systems

- Regeneration of purifier cartridges
- Refilling of humidifiers
- Development and installation of new gas systems
- Development of control systems and interlock signal specific to gas systems conditions
- Special gas requests/help (e.g. training on GC usage, calibration of analyzers, ISE measurements)



■ Main interventions in 2024

For support, open an entry in:

<http://eloggifpp.cern.ch/GasSystemSupport/>

Main interventions in 2024:

- Gas Supply line intervention (entry [82](#))
- Refill of humidifier (entry [83](#),
- Safety valve replacement (entry [84](#))
- Installation of new rotameter for ATLAS RPC (entry [85](#))
- Help with the TGC gas system (entry [92](#), [93](#), [94](#), [95](#))
- Regeneration of purifier cartridge for CMS-CSC gas system (entry [86](#))
- Installation of ATLAS RPC mixer inside ECOGAS rack (entry [87](#))
- Refill of CMS RPC Humidifier (entries [88](#), [89](#))

Conclusions

- The overall GIF++ gas system infrastructure can be compared to that of a mid-size experiment
- Several small interventions performed over the year
 - Frequent changes related to normal R&D activities are very demanding
- Future needs and requests should be discussed as soon as possible for optimal organization
 - Gas team has limited resources