



Mandate and Functions of the CMS Gas Systems Coordinator

This document describes the role and functions of the Gas Systems Coordinators for the CMS experiments.

Mandate

The CMS Gas System Coordinator ensures the coordination between the CMS projects utilizing gas systems (e.g., Muon Systems, Dry Gas Flushing Systems), the CMS Technical Coordination (CMS TC), and the EP-DT group responsible for the development, implementation, and maintenance of these systems. The coordinator acts as a link person to facilitate communication, streamline information flow, and monitor the status of the gas systems, including their performance and consumption, particularly for recirculation and recuperation systems.

The Gas System Coordinator is not directly responsible for technical implementation but rather focuses on enabling efficient coordination and avoiding scattering of information.

Functions

- **Coordination and Communication:**
 - Maintain continuous communication between CMS sub-detectors utilizing gas systems, CMS TC, and EP-DT team.
 - Serve as the primary point of contact for gas-related matters across the CMS experiment.
 - Relay messages, requests, and updates among stakeholders, ensuring consistency and clarity in communication.
 - Regularly report to CMS TC and EP-DT on the status and performance of the gas systems, highlighting any issues or areas for improvement.
- **Support and Facilitation:**
 - Facilitate discussions between sub-detectors and EP-DT to address specific needs or challenges.
 - Assist EP-DT and BE-EA in gas consumption estimation and monitoring.
 - Assist in prioritizing tasks and aligning them with CMS general goals.
 - Provide inputs to EP-DT and CMS TC to guide decision-making related to upgrades, maintenance, and operation.
- **Documentation and Record-Keeping:**
 - Ensure that all relevant technical and operational documentation for gas systems is maintained and updated.
 - Assist in compiling reports on gas consumption, performance metrics, and sustainability efforts for internal and external stakeholders.

Specific Tasks

- Gather and consolidate information about the requirements and performance of gas systems from all CMS sub-detectors.



- Collect from EP-DT experts information related to the gas usage and together with EP-DT and sub-systems identify opportunities for optimization, including minimizing greenhouse gas emissions.
- Coordinate efforts to address any issues affecting the operation of gas systems, ensuring timely resolution.
- Act as an intermediary to prevent duplication of efforts and scattering of information among sub-detectors and EP-DT.
- Promote sustainable practices in the operation of gas systems, with particular attention to the efficiency of recirculation and recuperation systems.

Resources

The CMS Gas System Coordinator does not manage a dedicated technical team but works in close collaboration with:

- EP-DT experts responsible for gas system development and maintenance.
- CMS TC for planning and integration of gas systems within the broader experimental framework.
- Representatives from CMS sub-detectors to address specific needs and challenges.