

Standardised Component Names for the COMET Experiment

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Purpose

The aim of this document is to standardise the names of components, primarily for the offline software, but this should also be standardised across the collaboration. This should lead to less confusion during discussions as well as leading to better coherence between the experiment and the software used to study it. Once these names are agreed they should not be changed although additional names can be added as needed.

Overview

The following tables break the experiment down into its components. The first table divides the experiment up based on a combination of geometrical size and the division between working groups. The next table then lists common subcomponents that require standardised names.

Because of the phased approach used in COMET, it is important that we have a way of differentiating which components will be used for Phase-I and/or Phase-II. Some components may change between phases, but keep the same functionality. In these cases, we suggest appending P2 to refer to the Phase-II specific version of the component. E.g. the matching solenoid section after the first 90° bend may have two versions: the Phase-I version would be called Tor1ToTor2; and the Phase-II version would be called Tor1ToTor2P2.

Major Components

Long	Short	Phase	Description
ProtonBeamLine	ProtonBL	1,2	The entire beam line within the experimental hall that delivers the proton beam to the edge of the production target cryomodule.
ProductionTargetSection	ProdTgtSec	1,2	The cryomodule that contains the production target, solenoid and shielding and the capture solenoids.
ProductionToTorus1	ProdToTor1	1,2	Placeholder for a section that may be inserted between the production target section and the first 90° torus. This may include a solenoid, detector or collimator.
Torus1	Tor1	1,2	The first 90° torus.
Torus1ToTorus2	Tor1ToTor2	1,2	The section between the two toruses.
Torus2	Tor2	2	The second 90° torus.
Torus2ToStoppingTarget	Tor2ToStopTgt	2	Placeholder for a section that may be inserted between the second torus and the stopping target.
StoppingTarget	StopTgt	2	Cryomodule that contains the stopping target and solenoid.
StoppingTargetToElectronSpectrometer	StopTgtToElSpec	2	Placeholder for a section that may be inserted between the stopping target and the electron spectrometer.
ElectronSpectrometer	ElSpec	1,2	The electron spectrometer.
ElectronSpectrometerToStrECAL	ElSpecToStrECAL	1,2	Placeholder for a section that may be inserted between the electron spectrometer and the StrECAL.
CylindricalDriftChamber	CDC	1	The drift chamber detector for Phase-I. This will also contain the stopping target.
CherenkovTriggeringHodoscope	CTH	1	The Cherenkov triggering hodoscope.
CylindricalDetector	CyDet	1	Cylindrical detector is the combination of the CDC, CTH and solenoid.
StrawTubeTracker	StrawTrk	1,2	The straw tube tracker.
ECAL	ECAL	1,2	The ECAL.
StrECAL	StrECAL	1,2	The combination of the StrawTrk, ECAL and solenoid.
EndBeamLine	EndBL	1,2	Placeholder for the beam line after the detectors.
CosmicVetoDetector	CosmicVeto	1,2	The cosmic ray veto counter.

Common Subcomponents (Ongoing)

The table below lists the names of subcomponents that will be common to many components and therefore need to be standardised. These subcomponent names can be appended to the component name, e.g. CylindricalDetectorSolenoid or CyDetSol for short.

Long	Short	Phase	Description
Solenoid	Sol	1,2	The solenoid cryostat that encloses the coils and coil support structure.