



New websites for CEPC & AGORA

Shanzhen Chen
Institute of High Energy Physics · CAS · Beijing

Three websites deployed



CEPC public pages

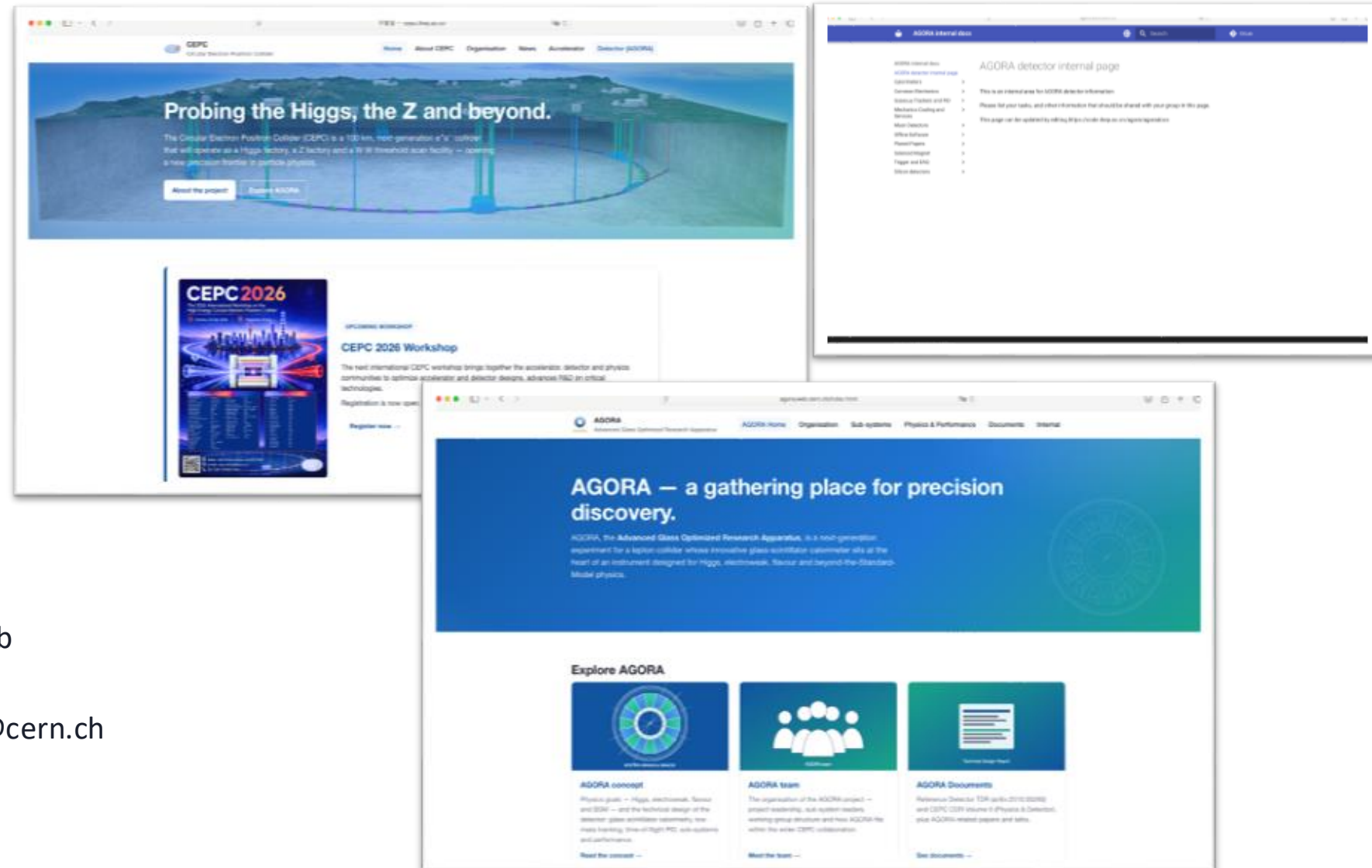
- <http://cepc.ihep.ac.cn>
- IHEP server

AGORA public pages

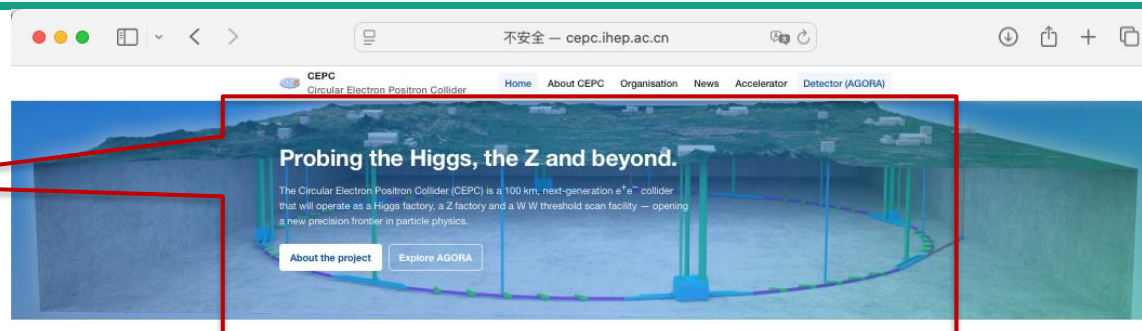
- <https://agora.web.cern.ch>
- CERN server

AGORA internal pages

- <https://agora.docs.cern.ch>
- Website hosted on CERN server
- Contents maintained in IHEP gitlab
- Only accessible by members in `fcc-ped-detectorconcepts-agora@cern.ch`



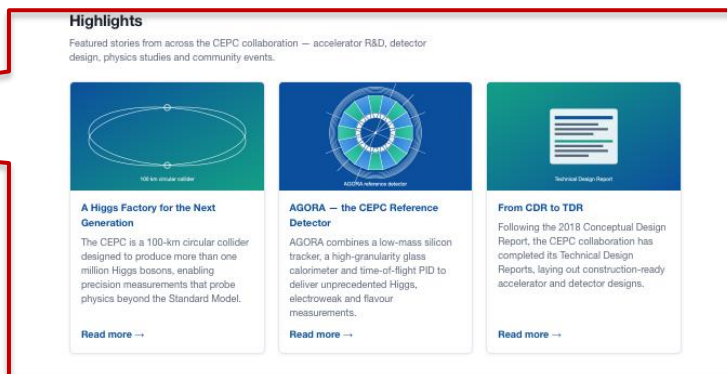
Top banner – One sentence introduction



Upcoming events



Highlighted stories



Latest News

Project milestones, workshops, publications and announcements. See all activities ->

2026年4月7日 2026 CEPC International Workshop held in Lisbon

Latest news

Latest News

Project milestones, workshops, publications and announcements. [See all activities](#) →

- 2026年4月7日** **2026 CEPC International Workshop held in Lisbon**
The 2026 CEPC International workshop held from 7 to 10 April in Lisbon brought together physicists from Europe and China to discuss the future of particle physics and next-generation collider projects
- 2025年11月17日** **2025 CEPC International Workshop opens in Guangzhou**
The 2025 International Workshop on the Circular Electron Positron Collider opened in Guangzhou on 17 November, gathering accelerator, detector and physics communities from around the world.
- 2025年10月17日** **CEPC releases the Reference Detector Technical Design Report — collider R&D reaches world-leading level**
On 17 October the CEPC collaboration released its Reference Detector TDR (arXiv:2510.05260), marking that the project's R&D programme has reached an internationally leading level.

Documents

Foundational reports of the CEPC project — Conceptual and Technical Design Reports.

- | | |
|---|---|
| TDR - 2025
CEPC Reference Detector TDR
The Technical Design Report for the AGORA reference detector — 1503 authors, 385 institutes, 47 countries. | ACCELERATOR TDR - 2023
CEPC Accelerator TDR
The Accelerator Technical Design Report. After the technical design phase, CEPC is now entering its EDR phase. |
| CDR - 2018
CEPC CDR Volume I - Accelerator
The Conceptual Design Report (2018) — the foundational document that established the CEPC baseline. | CDR - 2018
CEPC CDR Volume II - Physics & Detector
The Conceptual Design Report (2018) — the foundational document that established the CEPC baseline. |
| PRE-CDR - 2015
CEPC Pre-CDR Volume I - Physics & Detector
The pre-Conceptual Design Report (2015) — the first integrated technical description of the project, setting the stage for the CDR. | PRE-CDR - 2015
CEPC Pre-CDR Volume II - Accelerator
The pre-Conceptual Design Report (2015) — the first integrated technical description of the project, setting the stage for the CDR. |

Design reports

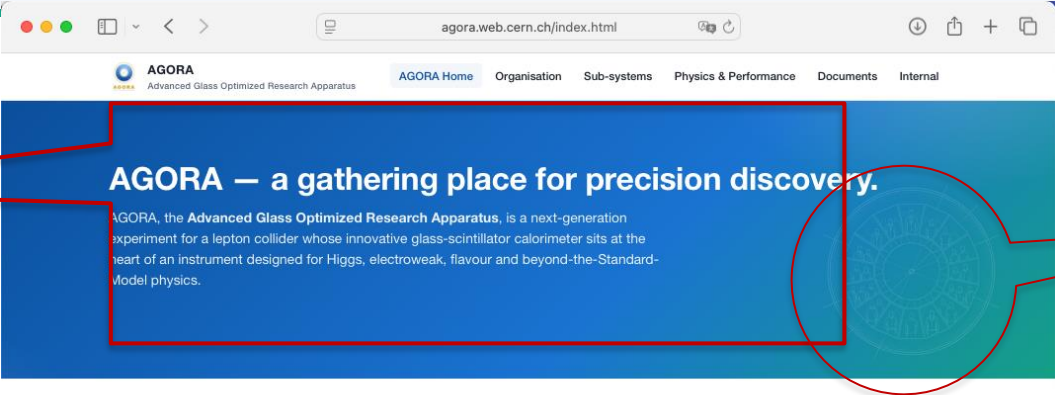
Job opportunities

Get involved

Resources for students, researchers, communicators and visitors.

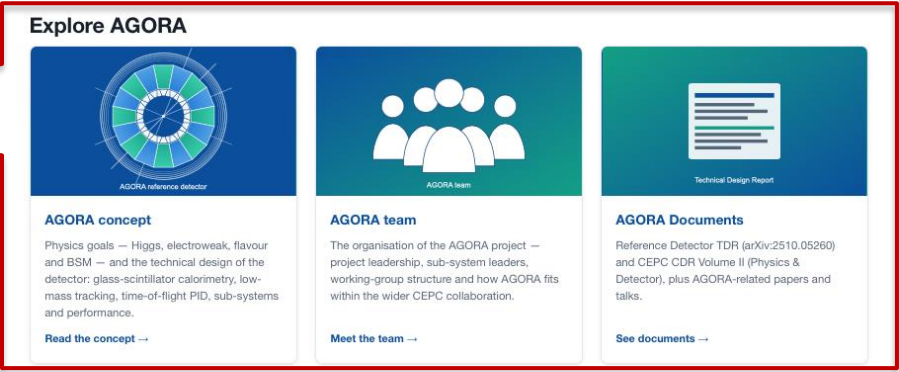
- Job opportunities**
Open positions for PhD students, postdocs, engineers and staff scientists within the CEPC collaboration and partner institutes.

Top banner – One sentence introduction

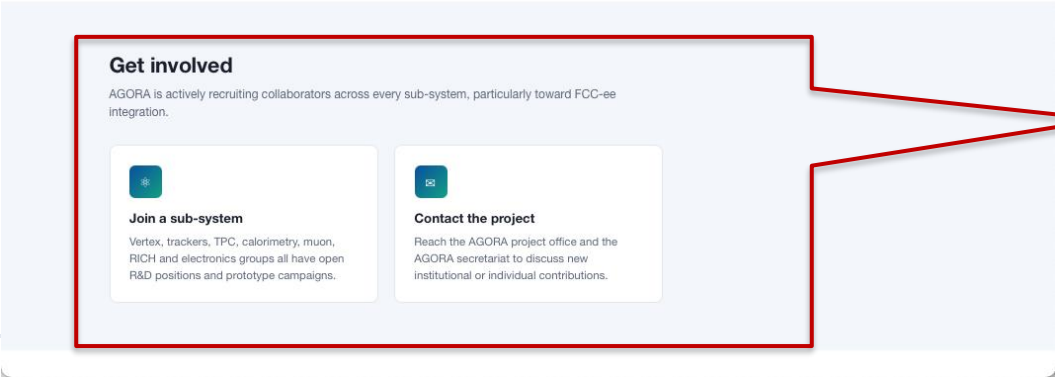


AGORA logo

Explore AGORA



How to get involve



agora.web.cern.ch/pages/agora-subsystems.html

AGORA

Advanced Glass Optimized Research Apparatus

AGORA Home Organisation **Sub-systems** Physics & Performance Documents Internal

AGORA sub-systems

AGORA is delivered as a coherent set of sub-detectors and cross-cutting systems. Each is coordinated by a dedicated working group with its own technical leadership, R&D plan and integration schedule.

Choose a sub-system

Click through to the working group pages for the sub-system introduction, the technology choices, and the team delivering it.

Silicon Detectors

Vertex detector and silicon trackers — stitched CMOS MAPS and 55 nm HV-CMOS monolithic pixels for micron-level pointing precision.

[Explore →](#)

Gaseous Trackers and PID

Time Projection Chamber, drift-chamber R&D and Cherenkov detectors — continuous tracking and particle identification across the central and forward regions.

[Explore →](#)

Calorimeters

Crystal-bar ECAL (BGO/BSO) and the glass-scintillator hadronic calorimeter that gives AGORA its name.

[Explore →](#)

Muon Detectors

Plastic-scintillator strip system with SiPM readout — muon identification and tail-catcher functionality outside the solenoid.

[Explore →](#)

Common Electronics

Shared front-end and back-end ASICs, powering, timing and slow control — a unified electronics platform across all sub-detectors.

[Explore →](#)

Trigger and DAQ

Trigger-less streaming front-ends, feeding an ATCA-based back-end shared with TDAQ, together with distributed parallel processing and advanced trigger R&D.

[Explore →](#)

Solenoid Magnet

3 T LTS Al-stabilised NbTi solenoid — the magnetic backbone of AGORA and the reference for tracking performance.

[Explore →](#)

Mechanics, Cooling and Services

Support structures, low-mass cooling, cabling, alignment and integration — the invisible infrastructure that lets every sub-system reach its performance.

[Explore →](#)

Offline Software

AGORA offline stack on Gaudi with Key4HEP / EDM4hep — simulation, reconstruction, particle-flow, analysis tools and Monte Carlo production infrastructure.

[Explore →](#)

agora.web.cern.ch/pages/agora-silicon-detectors.htm

AGORA

Advanced Glass Optimized Research Apparatus

AGORA Home Organisation **Sub-systems** Physics & Performance Documents Internal

Silicon Detectors

The vertex detector, inner silicon tracker and AC-LGAD outer tracker — AGORA's silicon tracking chain, delivering micron-level pointing resolution for flavour tagging and precision vertex reconstruction, and complementing the gaseous tracker with a fast timing layer for time-of-flight PID.

Introduction

The Silicon Detectors working group covers three sub-detectors that share technology and integration challenges:

- The **Vertex Detector (VTX)** — four bent layers of stitched CMOS Monolithic Active Pixel Sensors (MAPS), the innermost layer sitting just 11.1 mm from the interaction point on the beryllium beam pipe. Each layer delivers $\sim 5 \mu\text{m}$ single-point resolution while carrying only $\sim 0.8\%$ X_0 of material.
- The **Inner Silicon Tracker (ITK)** — three barrel layers plus four pairs of endcap disks of 55 nm HV-CMOS monolithic pixel sensors, extending the silicon coverage out to the TPC inner wall while preserving low mass.
- The **Outer Tracker (OTK)** — an AC-LGAD strip layer ($\sim 85 \text{ m}^2$) wrapping the TPC in the barrel and covering the endcaps, driven by the LATRIC ASIC. AC-LGAD sensors deliver $\sim 10 \mu\text{m}$ spatial resolution together with $\sim 50 \text{ ps}$ time resolution, providing a time-of-flight measurement that extends particle identification well beyond the reach of dN/dx alone and adds a fast timing layer to the tracking chain.

Together the three systems anchor the whole tracking chain: the VTX pins down the primary and secondary vertices needed for c - and b -tagging at the per-mille level, the ITK provides the precision seed points for full-length track reconstruction through the TPC, and the OTK closes the tracker with a precision spatial and timing measurement that feeds directly into the combined TOF + dN/dx PID.

Technology highlights

- Stitched CMOS MAPS wafers to produce large-area, low-mass, curved sensors with a single readout chain per layer.
- 55 nm HV-CMOS process for radiation-tolerant, low-power pixels with in-pixel timing.
- AC-LGAD strip sensors with the LATRIC ASIC — combining $\sim 10 \mu\text{m}$ spatial resolution and $\sim 50 \text{ ps}$ timing to enable a time-of-flight measurement in the outer tracker.
- Air-cooled or micro-channel low-mass cooling for the vertex region, aligned with the ECFA DRD 3 R&D programme.

R&D is coordinated with sister efforts at ALICE ITS3, FCC-ee reference detectors and the Belle II VXD upgrade, so results and prototypes are shared across the community.

agora.web.cern.ch/pages/agora-subsystems.html

AGORA

Advanced Glass Optimized Research Apparatus

AGORA Home Organisation Sub-systems Physics & Performance Documents Internal

AGORA sub-systems

AGORA is delivered as a o
a dedicated working group

agora.web.cern.ch/pages/agora-silicon-detectors.htm

AGORA

Advanced Glass Optimized Research Apparatus

AGORA Home Organisation Sub-systems Physics & Performance Documents Internal

Silicon Detectors

The vertex detector, inner silicon tracker and AC-LGAD outer tracker — AGORA's silicon tracking chain.

R&D is coordinated with sister efforts at ALICE ITS3, FCC-ee reference detectors and the Belle II VXD upgrade, so results and prototypes are shared across the community.

Choose a sub-

Click through to the workin
and the team delivering it.

Silicon Detectors

Vertex detector and silicon
CMOS MAPS and 55 nm
monolithic pixels for micro
precision.

Explore →

Muon Detectors

Plastic-scintillator strip ap
readout — muon identific
functionality outside the

Explore →

Solenoid Magnet

3 T LTS Al-stabilised NbTi
magnetic backbone of Al
reference for tracking per

Explore →

CEPC/AGORA public pages maintainer team

- CEPC project activities updates: Yaru, Shanzhen
- Accelerator activities updates: Lin Bian, Song Jin,
- Physics and detector (AGORA) updates: Zhaoru, Shanzhen
- Framework and techniques: Shanzhen

What need to be updated	File to edit
Add or edit a news item	data/news.json
Change front-page highlight cards	data/highlights.json
Update talk list	data/talks.json
Update paper list	data/paper.json
Add a new news article page	pages/news-YYYY-MM-DD-*.html

data/news.json

```
{
  "date": "2025-10-17",
  "title": "CEPC releases the Reference
           Detector Technical Design Report",
  "summary": "On 17 October the CEPC
             collaboration released its Reference
             Detector TDR (arXiv:2510.05260)...",
  "link": "/pages/news-2025-10-17-
           reference-detector-tdr.html"
}
```

site.js sorts by date, formats the day, and renders the same list on both the home page (top-3) and the full news page.

data/highlights.json

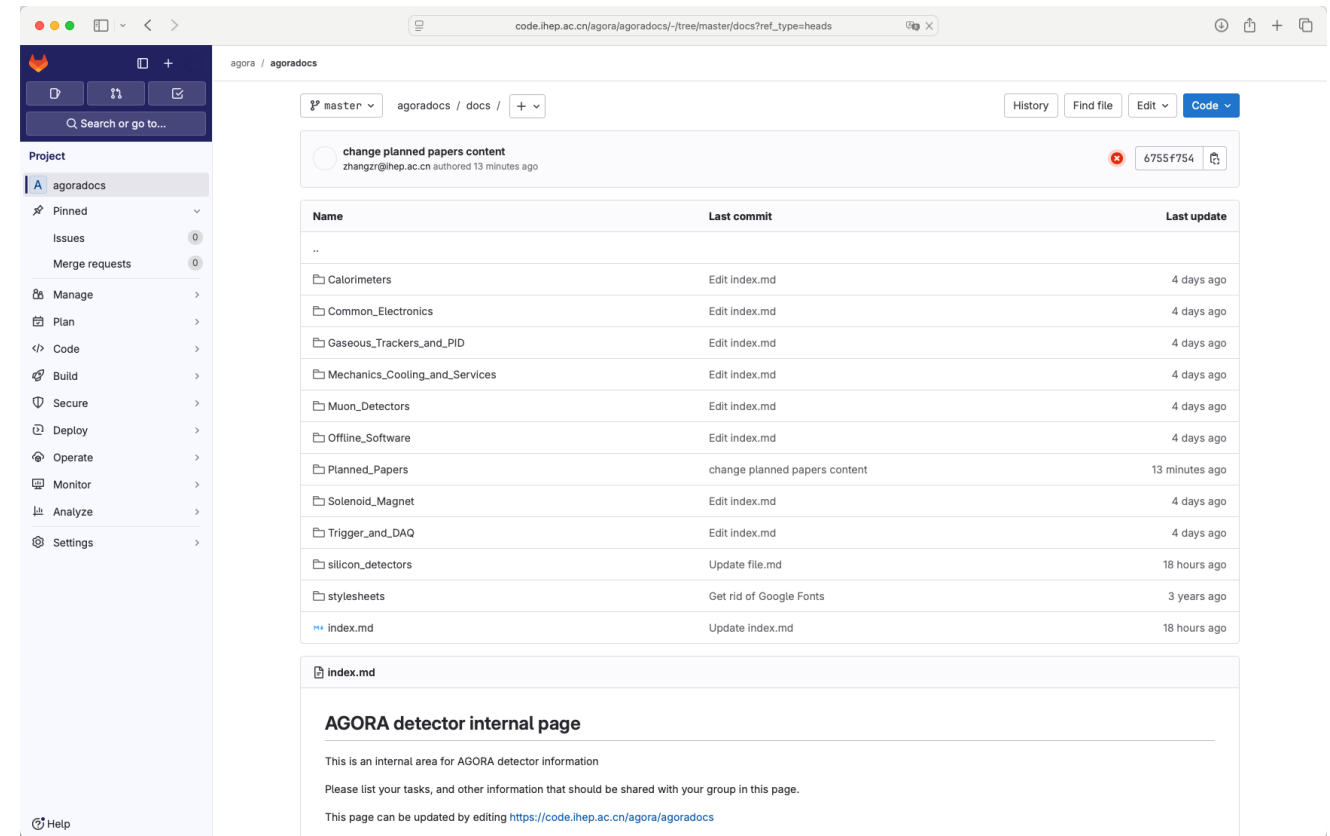
```
{
  "title": "AGORA – the CEPC Reference Detector",
  "text": "AGORA combines a low-mass silicon
          tracker, a high-granularity glass calorimeter
          and time-of-flight PID to deliver Higgs,
          electroweak and flavour measurements.",
  "image": "/assets/img/hero-detector.svg",
  "link": "/pages/detector.html"
}
```

Add or reorder cards on the home page by editing this list — three cards render as a responsive 3-column grid.

Same for published paper and talks

AGORA internal pages hosted on IHEP gitlab

- Everyone who need to update internal pages can edit contents in <https://code.ihep.ac.cn/agora/agoradocs>
- Contents on Markdown format
- Any updates will be automatically pulled by CERN server and being compiled every 30 minutes
- We have reserved spaces for each sub-system
- We also reserve a place to list planed papers



Name	Last commit	Last update
..		
Calorimeters	Edit index.md	4 days ago
Common_Electronics	Edit index.md	4 days ago
Gaseous_Trackers_and_PID	Edit index.md	4 days ago
Mechanics_Cooling_and_Services	Edit index.md	4 days ago
Muon_Detectors	Edit index.md	4 days ago
Offline_Software	Edit index.md	4 days ago
Planned_Papers	change planned papers content	13 minutes ago
Solenoid_Magnet	Edit index.md	4 days ago
Trigger_and_DAO	Edit index.md	4 days ago
silicon_detectors	Update file.md	18 hours ago
stylesheets	Get rid of Google Fonts	3 years ago
index.md	Update index.md	18 hours ago

index.md

AGORA detector internal page

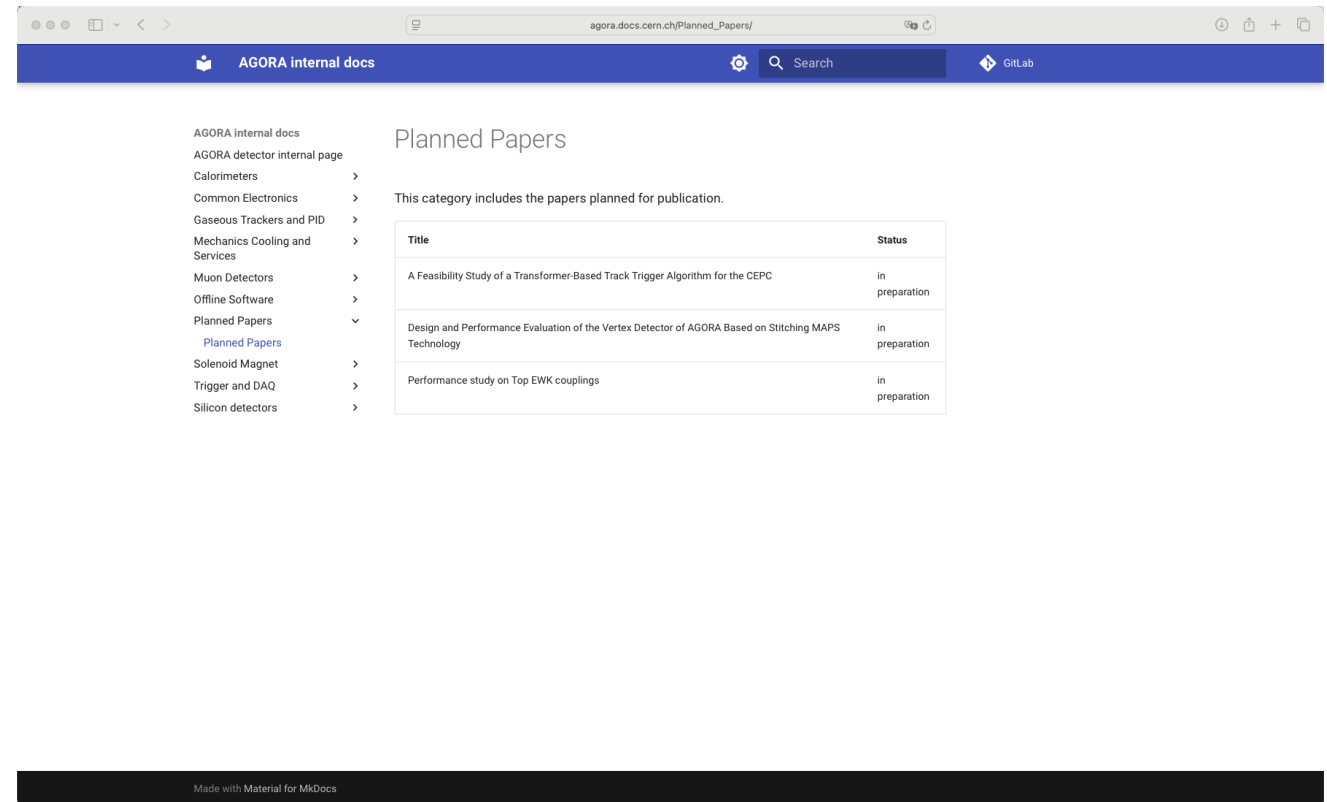
This is an internal area for AGORA detector information

Please list your tasks, and other information that should be shared with your group in this page.

This page can be updated by editing <https://code.ihep.ac.cn/agora/agoradocs>

AGORA internal pages hosted on IHEP gitlab

- Everyone who need to update internal pages can edit contents in <https://code.ihep.ac.cn/agora/agoradocs>
- Contents on Markdown format
- Any updates will be automatically pulled by CERN server and being compiled every 30 minutes
- We have reserved spaces for each sub-system
- We also reserve a place to list planed papers



Any further suggestions?

Thank you