BESIII Remote Shift Guide

Overview:

The BESIII Remote Shift system provide collaborators the ability to serve shifts from their home institution rather than traveling onsite for a normal shift. A remote shifter serves an 8-hour shift just as onsite shifters.

Collaborators are encouraged to take site shift. Remote shift only be opened for ordinary shifters who have the difficulty in travel to Beijing. The ordinary shifter without travel difficulty and the chief shifters can only select on-site shift.

The Remote Shift system provides web-based tools for access to the DAQ and DCS systems (monitor mode only, by default), Checklist tools for performing hourly and shift checks, and communication tools.

Requirements:

To serve a remote shift, you must satisfy the following requirements:

- **Computer**: Any reasonably modern computer will suffice. More screen real estate will be better. There is no OS restriction.

- **Network**: Shifters must check their network performance before signing up for a remote shift.

- **Browser**: *Chrome* or *Edge* is the preferred, tested, and recommended browser.
- **Unified IHEP authentication account**:
    - Register a unified IHEP authentication account if you have no. The URL is https://login.ihep.ac.cn/. Please select BES3 group.
    - Login in the VPN system using your unified IHEP authentication account, the URL is http://ssl.ihep.ac.cn
    - Then, you can visit the remote shift webpage http://bes3run.ihep.ac.cn

- **ZOOM**: Shifters must download and install the zoom client. You can open the meeting link https://zoom.com.cn/j/4508676615 to download and install the client when you first using the zoom client.

- **Instructions & Training**: No formal training is required, but you must read all instructions and test your full setup (browsers, computer, network, etc.) **before** your shift starts.
- **Contact Information**: Remote shifters must provide contact information (Email, ZOOM ID, Phone Number, etc.) so that they can be contacted during their shift.

Handoff Process:

Because Remote Shifters will not be in the same Control Room, an effective and deliberate handover at the beginning and end of a Remote Shift is required. Some overlap (5-15 minutes) between shifters will be required. Remote shifters should show up early to ensure enough time for the transfer of information and launching of necessary tools.

- ZOOM Meeting Room: launch your zoom application, then join the meeting (ID: 4508676615, Password:123456) or click on this link https://zoom.com.cn/j/4508676615 (meeting password: 123456) to join the meeting. Keep it open for the duration of your Remote Shift. Handoff of the shift in the zoom can include Chat, Voice, Video, or

Desktop sharing. This interaction substitutes for the conversation that occurs in the onsite Control

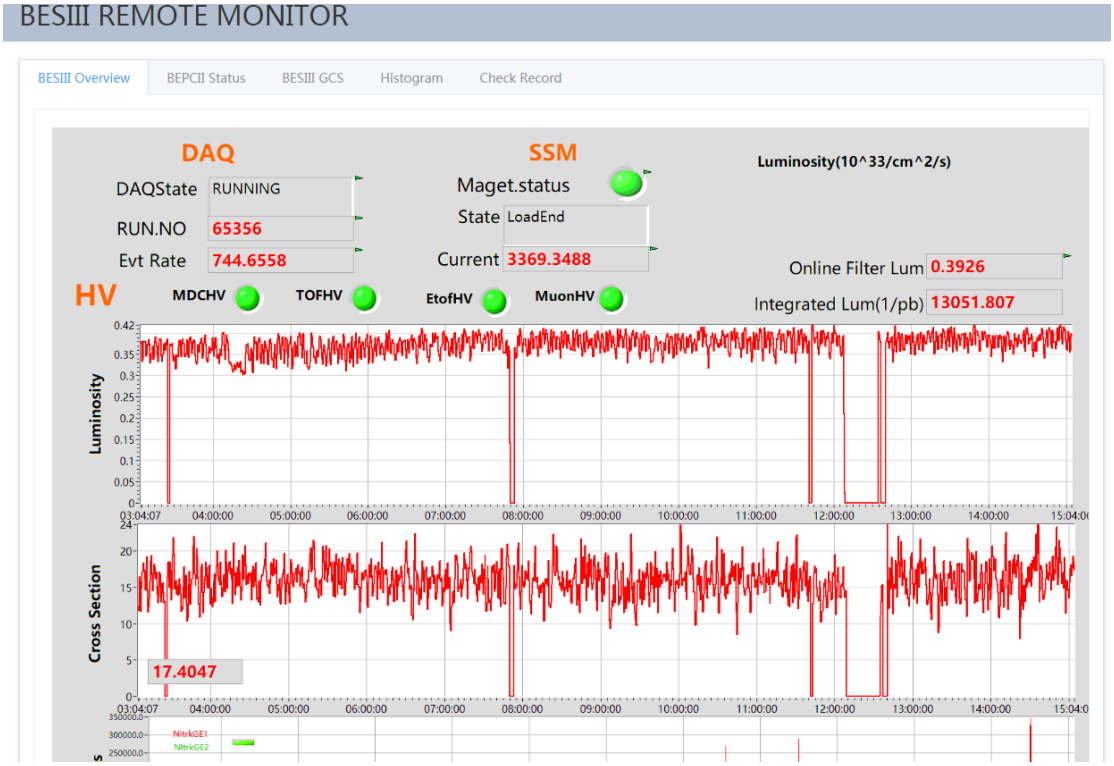
- The remote shifter should effectively communicate with the onsite chief shifter through ZOOM meeting room.
- The new Remote Shifter should logon to the Remote web pages: http://bes3run.ihep.ac.cn/ . For now, it is monitor-only. So, hand-off of DAQ control is not necessary.

During the Shift:

During the shift, the Remote Shifter is required to be available for contact through the zoom, and/or phone for the entire 8-hour shift.

Remote Webpage:

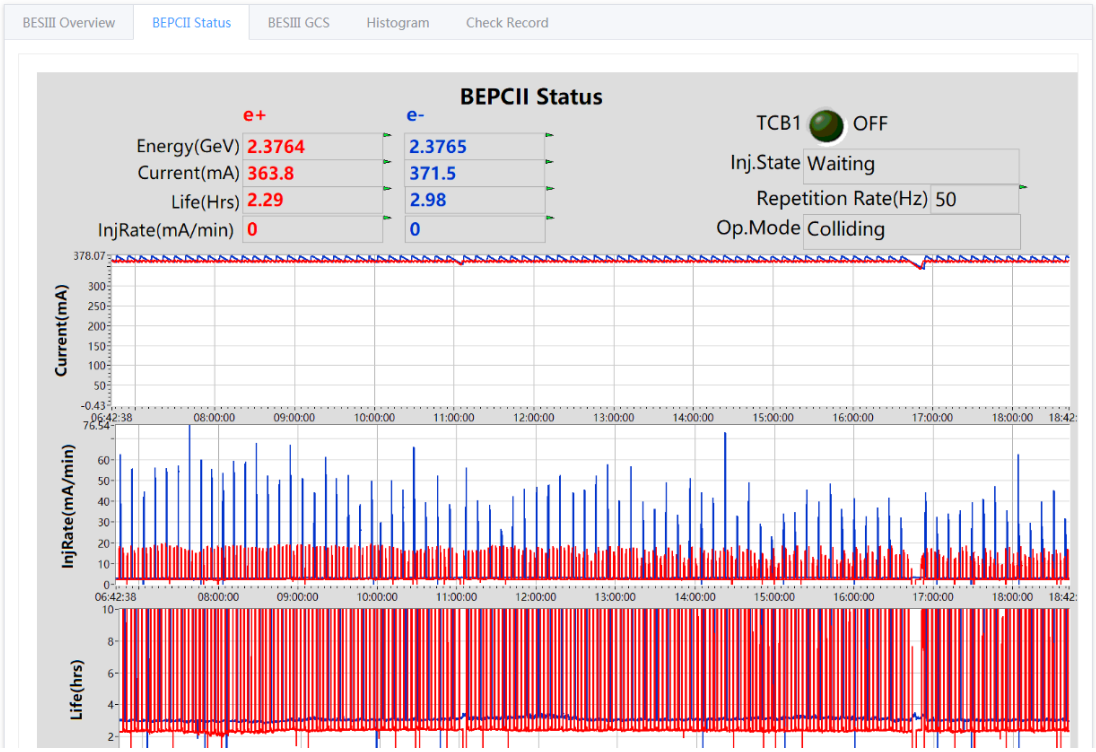
(1) BESIII Overview



This page shows the information as below:

- Online filter luminosity
- Integrated luminosity
- Cross section
- Status of DAQ
- Status of superconducting solenoid magnet (SSM)
- Status of high voltage (HV) of each sub-detector

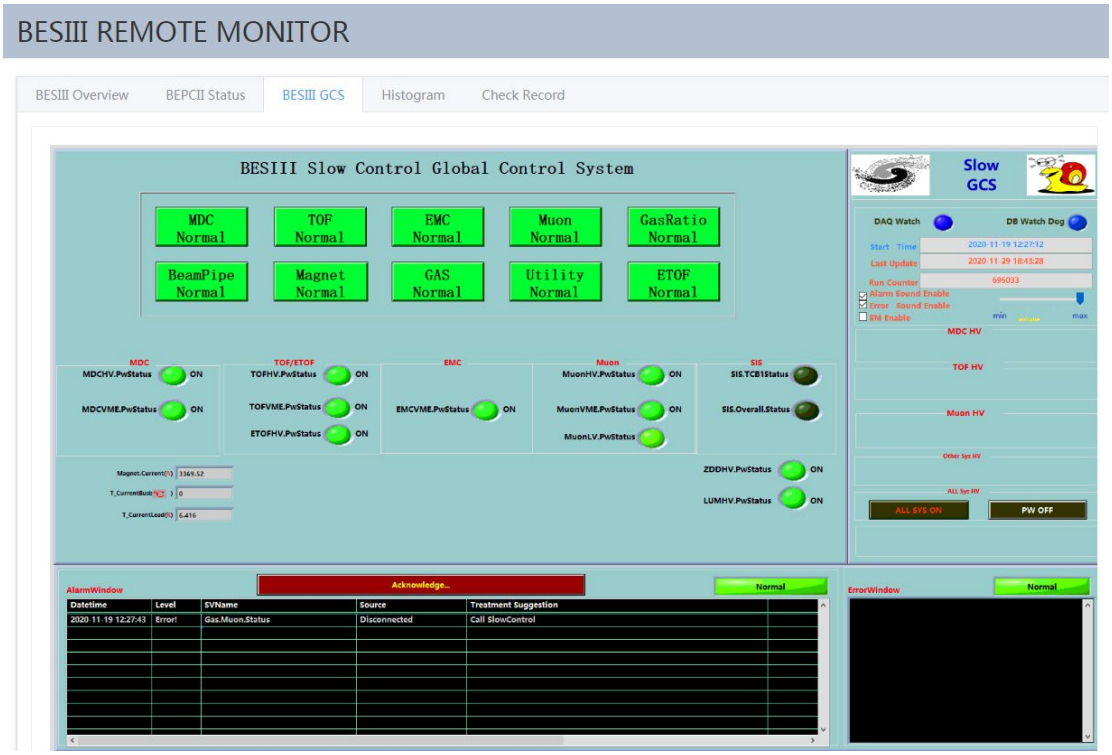
(2) BEPC Status



This page shows the information from the machine:

- Beam energy of e+and e-
- Beam current of e+and e-
- Beam life
- Injection rate
- Injection state (if the machine is injecting beam, the light of TCB1 will become green.)

(3) BESIII GCS



This page shows the information from BESIII slow control system:

- Status of each sub-detector (MDC, BTOF, EMC, MUC, ETOF)
- Status of other systems (Gas Ratio, Beam Pipe, SSM, Gas, Utility)

It also includes some information in detail

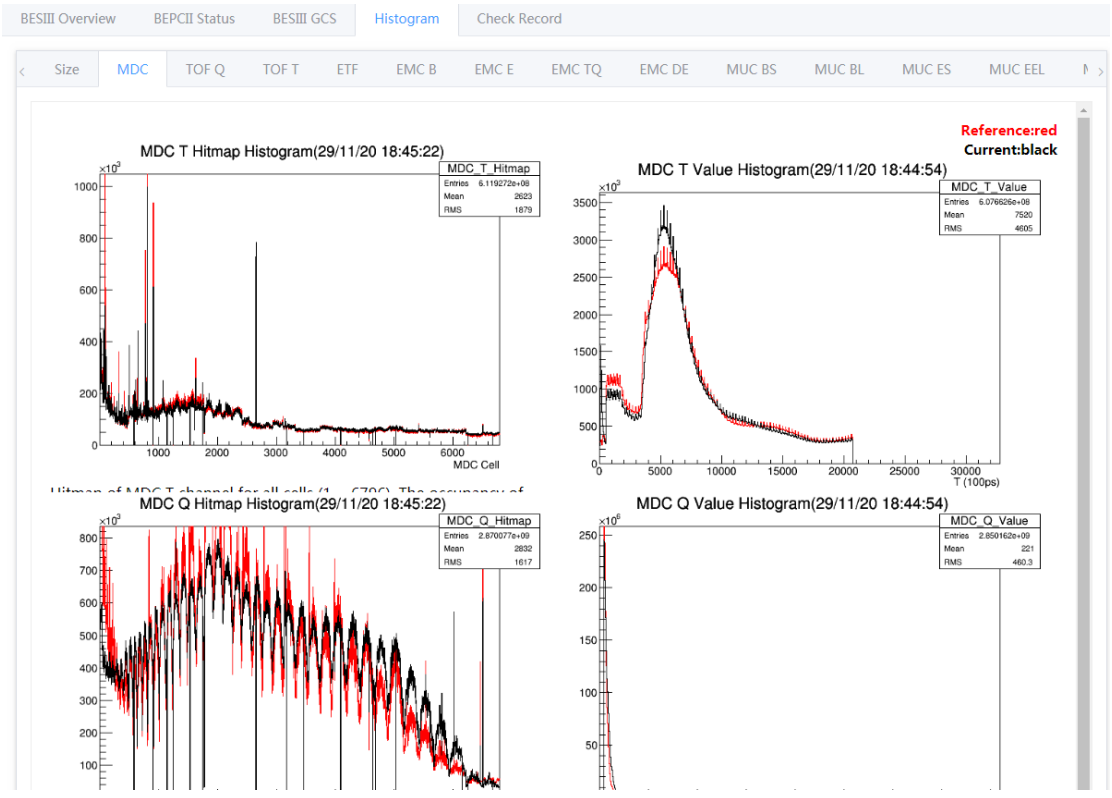
- Status of MDC HV and VME crates
- Status of TOF(ETOF) HV and VME crates
- Status of EMC VME crates
- Status of MUC HV, LV and VME crates

- Status of HV of ZDD and small angle luminosity detector

There are two windows at the bottom (alarm window and error window)

- If there is an alarm, one or a few of the green lights will become red, and the alarm information will be shown in the alarm window in detail
- The problems of the software itself will be shown in the error window

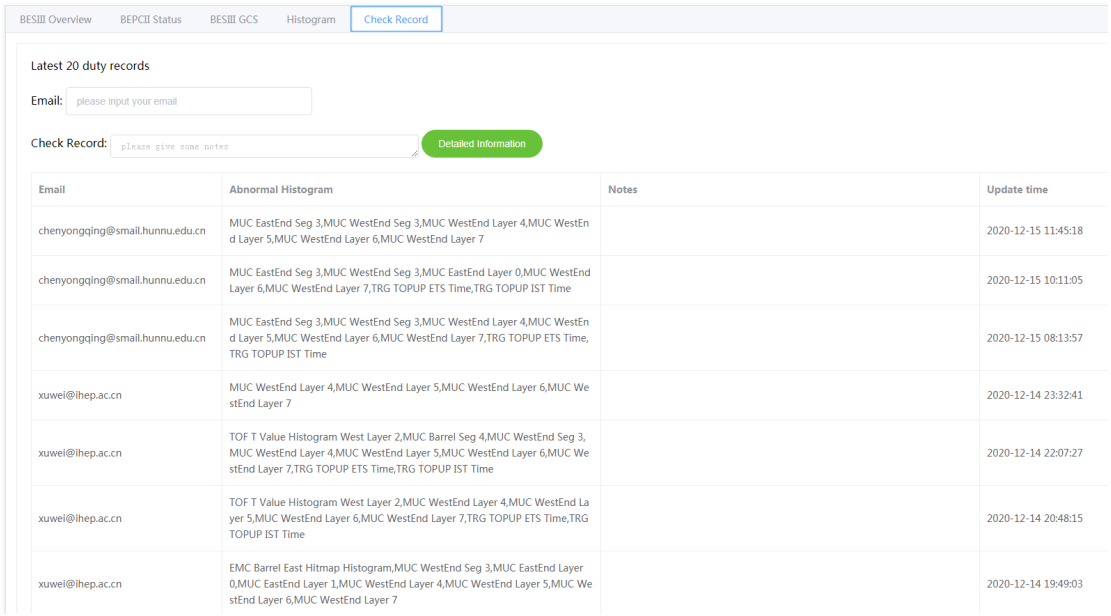
(4) Online histograms



This page shows the on-line histograms of each sub-system

- There are more than 100 histograms. In order to help the shifter to understand them well, some statements are added at the bottom of the figures
- In each figure, the black line represents the current values, and the red line stands for the reference values. Any abnormal figure should be reported to the chief shifter

(5) Check Record



Email	Abnormal Histogram	Notes	Update time
chenyongqing@smail.hunnu.edu.cn	MUC EastEnd Seg 3,MUC WestEnd Seg 3,MUC WestEnd Layer 4,MUC WestEnd Layer 5,MUC WestEnd Layer 6,MUC WestEnd Layer 7		2020-12-15 11:45:18
chenyongqing@smail.hunnu.edu.cn	MUC EastEnd Seg 3,MUC WestEnd Seg 3,MUC EastEnd Layer 0,MUC WestEnd Layer 6,MUC WestEnd Layer 7,TRG TOPUP ETS Time,TRG TOPUP IST Time		2020-12-15 10:11:05
chenyongqing@smail.hunnu.edu.cn	MUC EastEnd Seg 3,MUC WestEnd Seg 3,MUC WestEnd Layer 4,MUC WestEnd Layer 5,MUC WestEnd Layer 6,MUC WestEnd Layer 7,TRG TOPUP ETS Time,TRG TOPUP IST Time		2020-12-15 08:13:57
xuwei@ihep.ac.cn	MUC WestEnd Layer 4,MUC WestEnd Layer 5,MUC WestEnd Layer 6,MUC WestEnd Layer 7		2020-12-14 23:32:41
xuwei@ihep.ac.cn	TOF T Value Histogram West Layer 2,MUC Barrel Seg 4,MUC WestEnd Seg 3,MUC WestEnd Layer 4,MUC WestEnd Layer 5,MUC WestEnd Layer 6,MUC WestEnd Layer 7,TRG TOPUP ETS Time,TRG TOPUP IST Time		2020-12-14 22:07:27
xuwei@ihep.ac.cn	TOF T Value Histogram West Layer 2,MUC WestEnd Layer 4,MUC WestEnd Layer 5,MUC WestEnd Layer 6,MUC WestEnd Layer 7,TRG TOPUP ETS Time,TRG TOPUP IST Time		2020-12-14 20:48:15
xuwei@ihep.ac.cn	EMC Barrel East Hitmap Histogram,MUC WestEnd Seg 3,MUC EastEnd Layer 0,MUC EastEnd Layer 1,MUC WestEnd Layer 4,MUC WestEnd Layer 5,MUC WestEnd Layer 6,MUC WestEnd Layer 7		2020-12-14 19:49:03

This page shows a table for the remote shifter to record the run information and histograms that have been checked

- Please fill in the table every half an hour

- You should input you Email firstly, and then give some notes of the information and histograms you checked

(6) The final task of a Remote Shifter is to handoff responsibility for, and knowledge about the shift to the next Shifter.