

10 June 21

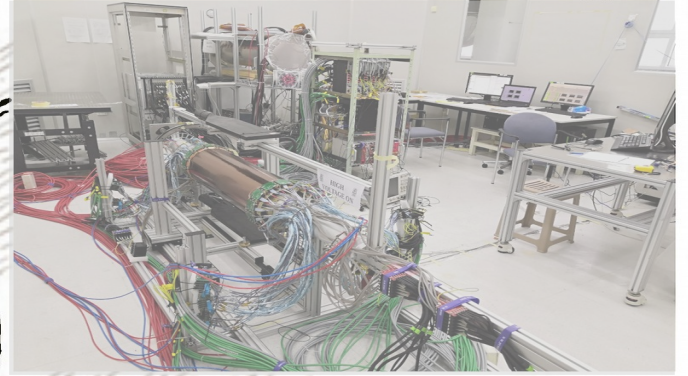
## CGEM operations

for the BESIII Italy Meeting

- **WHAT:** Detector & Plans
- **WHO:** Experts & Shifter
- **WHEN:** Since November
- **WHERE:** Beijing

# Detectors

- L1 & L2 together
- They are kept OK as much as possible
- Few checks are requested at people on-site
- Continuous checks on T&P, chiller and gas with the detector OK

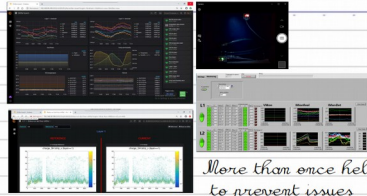


# Detectors Safety: Shifts

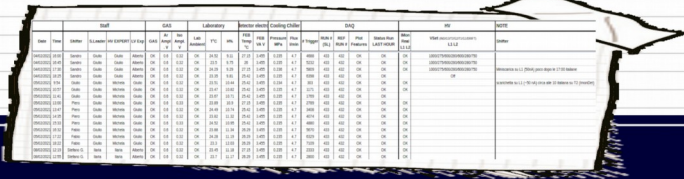
## Detectors Safety: Shifts

### CHECKS

Gas,  
Temperature, Humidity,  
EBB Temperature and Voltages,  
Chiller Pressure and Flow,  
DAC Triggers and Plots,  
KV plots



More than once helped  
to prevent issues !



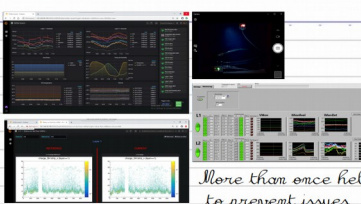
DATE	TIME	TEMP	HUMID	GAS	EBB	CHILLER	DAC	KV	...
2014-05-27	08:00	22.5	55	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	09:00	22.8	56	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	10:00	23.0	57	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	11:00	23.2	58	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	12:00	23.5	59	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	13:00	23.8	60	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	14:00	24.0	61	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	15:00	24.2	62	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	16:00	24.5	63	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	17:00	24.8	64	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	18:00	25.0	65	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	19:00	25.2	66	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	20:00	25.5	67	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	21:00	25.8	68	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	22:00	26.0	69	1.0	1.2	1.5	1.8	2.0	...
2014-05-27	23:00	26.2	70	1.0	1.2	1.5	1.8	2.0	...
2014-05-28	00:00	26.5	71	1.0	1.2	1.5	1.8	2.0	...
2014-05-28	01:00	26.8	72	1.0	1.2	1.5	1.8	2.0	...
2014-05-28	02:00	27.0	73	1.0	1.2	1.5	1.8	2.0	...
2014-05-28	03:00	27.2	74	1.0	1.2	1.5	1.8	2.0	...
2014-05-28	04:00	27.5	75	1.0	1.2	1.5	1.8	2.0	...
2014-05-28	05:00	27.8	76	1.0	1.2	1.5	1.8	2.0	...
2014-05-28	06:00	28.0	77	1.0	1.2	1.5	1.8	2.0	...
2014-05-28	07:00	28.2	78	1.0	1.2	1.5	1.8	2.0	...
2014-05-28	08:00	28.5	79	1.0	1.2	1.5	1.8	2.0	...

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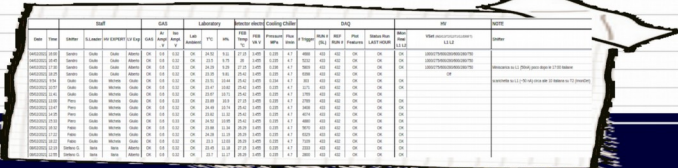
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**CHECKS**

- Gas
- Temperature, Humidity
- EB Temperature and Voltages
- Chiller Pressure and Flow
- DAQ Triggers and Plots
- RV plots

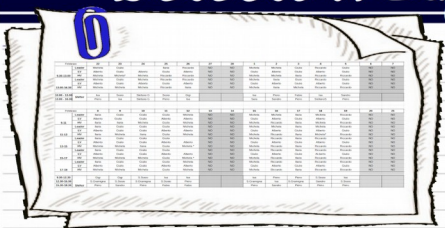


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4

## Detectors Safety: Shifts



**PEOPLE**

Experts (2020,2021):

Balossino, Bortoni, Fagnola, Greco, Mezzadri

Shifters (2021):

Calcaterra, Cibinetto, Cossio, Da Rocha Bolo, Garzia, Gramigna, Morgante, Sorio, Patteri

**TIME TABLE**

9.30 → 18.30 or 10.00 → 16.00

+ 2 times 30 minutes for the experts

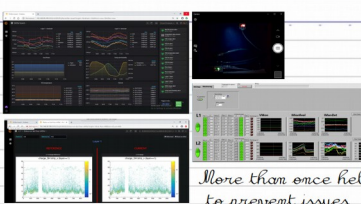
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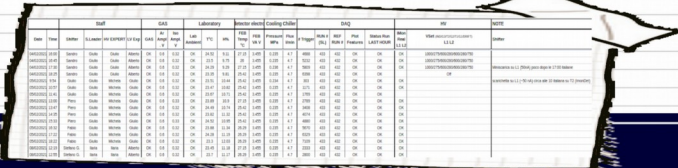
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**CHECKS**  
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 XV plots



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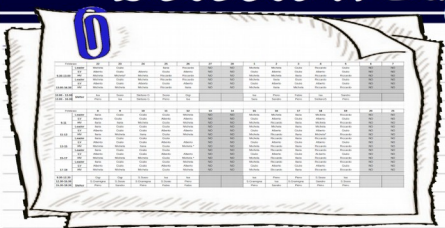


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We managed to involve some more people

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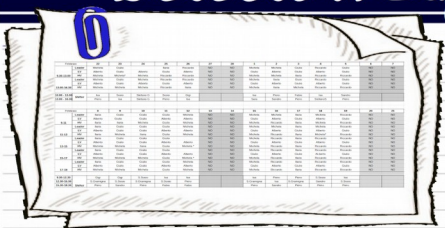
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THANKS TO ALL OF YOU

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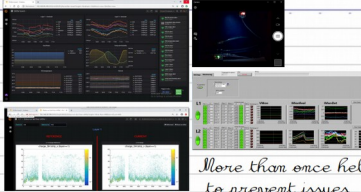
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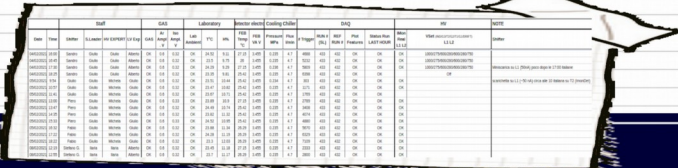
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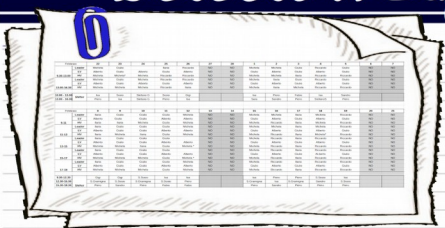


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We had to anticipate quite early the summer stop

*Very high humidity in Beijing*

# Detectors Safety: on-site

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- Gas Check / Change      Argon Change every two months,  
Isobutan less than once a year
- Chiller Check / Change      Chiller Refill lately every two month  
+ Chiller Temperature Check
- Clean room Checks      If the temperature increase too much  
→ It happened 3 times in 1 year
- PC Checks      If we loose communication  
→ It happens sometime (especially when updating Windows)

Communication (slow) through WECHAT and (sometimes) at the OPERATION MEETINGS

5

Cleaned the chiller vent clogged

Solved 2 maintenance alarm : VENT & PUMP

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Added an Ethernet Cable for DAQ/SC

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Tested L2 G1's current absorption:

Test for humidity residuals on-detector

Change of the Rad-Red cable

Test of LH-HV cable

Communication (slow) through WECHAT and (sometimes) at the OPERATION MEETINGS

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# Detectors Final setup

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### Setup in the BESIII Hall

4 FEBs  
1 GEMROC  
1 A2517

As it was

Prepared to be 'remotely' controlled

DAQ: TD scan test successful

2 FEBs  
1 GEMROC

As it can be improved

THR scan test under investigation

1 A1515  
1 Radial Redell

As we can start

SC

Started (and stop) some time ago

Preparation of documentation on-going

To be tested on real setup

Restored the GUF1 interface

Performed reference scans with GUF1

Testing the DAQ code

Restore the communication with SI MA

Prepare of the documentation on-going

# Plans for the future

- **FROM ITALY:**
  - Implement the interlock system
  - Investigate L2 H<sub>2</sub>'s current absorption
  - Wait the summer's humidity wave end
  - Restore the shifts and acquisition
- **ONCE IN BEIJING:** Maintenance, Integration and Commissioning

**L2's heatsinks  
Cooling System Test  
DAQ & SC**

*and many many other things*

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Thank you!

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