

Detector Control System for 2012 Run

DCS phones: 164872, 77076

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1 PCs Identification

The DCS uses two main Linux PCs:

- **pccompass07**, main computer, located in the control room.
- **pccompass04**, located in the control room.

4 other Linux PCs are used for front-ends (CAEN control using SLiC/DIM):

- **pclip05** (BMS barrack),
- **pclip07** (DCS & Saclay barrack),
- **pclip09** (RICH barrack),
- **pclip010** (Trigger barrack).

3 other Windows PCs are used for front-ends (all controls from OPC servers):

- **pccompass03**,
- **pccompass06**,
- **pccompass08**,

all located in the DCS & Saclay barrack, in the left racks.

The Linux PCs pccompass04, pccompass07 and the 3 Windows PCs are connected to **UPS units**. In case of a **power cut**, these units start powering the PCs, while producing a “bip” sound. Automatic procedure of stopping PVSS and safe shutdown of the PCs occurs in the following minutes. DCS experts should be called when the power is back, to restart the PCs and the DCS project.

2 PCs Accounts

All the DCS PCs are in the **COMPASS domain**. To access them from outside, one must first log in to one of the following gateways (**pccogw01**, **pccogw02** or **pccogw03**), using the personal lxplus usernames/passwords. Each computer is then accessible via ssh, using the accounts given below.

The main PC **pccompass07** has 3 local accounts:

- **dcs** (for use of all COMPASS members – for DCS visualization, detector experts access, etc). The password is the old “onl” password.
- **compassdcs** (for exclusive use of the DCS group – for project development only).
- **root** (for exclusive use of the DCS group – for system maintenance only).

A session on the **dcs** account is to be opened at all times in **pccompass07** for use of the shift crew during the Run. A new control room was set in building 892 and will replace the one in 888 as the de facto control room this year; when this happens, the Linux PC **pccorc36**, located in 892, will replace **pccompass07** as the one having a DCS UI open at all times.

The Front-end Linux PCs for SLiC have only one local account **root**. These are to be accessed by the DCS group only.

The Front-end Windows PCs for OPC have 1 local account with administration rights: **compassdcs**. These are to be accessed by the DCS group only.

3 DCS Project Visualization

The DCS project is running in the main computer **pccompass07**. During the Run, a **dcS login session** (with the old “onl” password) must be always open, and the PVSS User Interface (UI) must be running.

If you don’t see any UI window opened (and it is not minimized – check in the horizontal menu bar, on the bottom of the screen), start it from a terminal window, by typing in the prompt:

>dcSUI.

Alternatively, click on the COMPASS DCS logo on the taskbar, on the bottom of the screen

A PVSS login window should open. Choose

Username: **operator** Password: **[EMPTY]**



Figure 1: COMPASS DCS login window.

The entrance panel of the DCS project opens.

If the login panel does not open when typing “dcSUI”:

- Check first if PVSS is running, by typing in the prompt of a terminal window:
>ps -ef | grep PVSS
There should be as answer a long list of PVSS processes running, like: PVSS00data, PVSS00event, PVSS00ctrl, PVSS00rdb, etc.
- If at least the above mentioned processes are not shown, it means that the DCS project was stopped, and no equipments are being controlled anymore. In this case, call a DCS expert: **#164872**. The restart of the project must be done by a DCS expert only.

4 DCS Entrance Panel

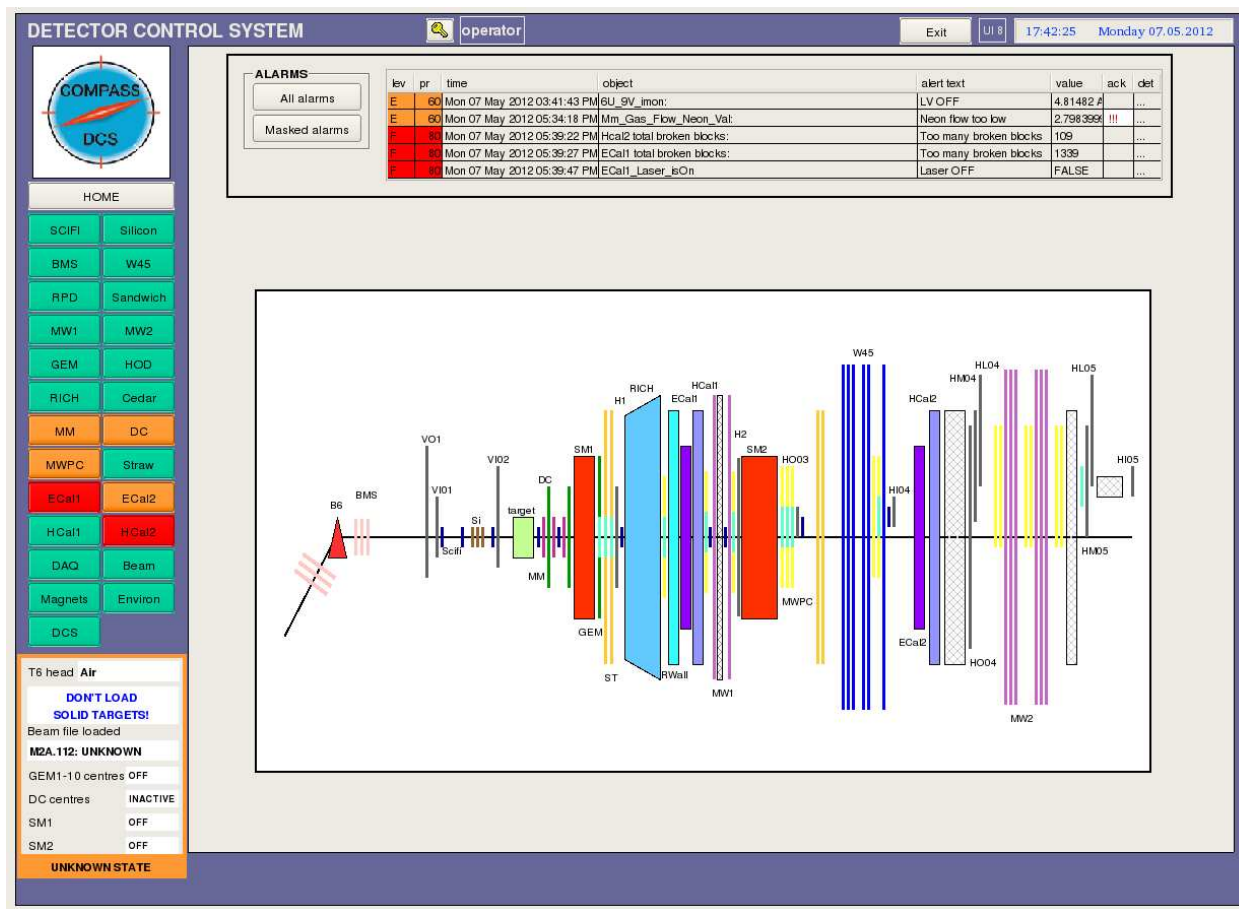


Figure 2: DCS entrance panel.

The UI opens with the main COMPASS control panel.

On the top center, the UI ownership is shown – usually it is “**operator**”. Click the yellow key to change UI ownership (for example if you are a detector expert and want to change settings). If this area is showing “NO USER” in red, click the key and login to regain “operator” ownership.

On the top right there is an “**EXIT**” button. Use it to close the UI – then, restart the UI with the command “dcsUI” from the prompt of a terminal window. The DCS UI panel should be opened at all times in pccompass07.

On the left there are buttons to access the detectors information and a summary of COMPASS actual status. The color of the detector buttons is

inherited from the equipments belonging to the respective detector subsystems that are controlled/monitored by the DCS. The color code is as follows¹:

- **GREEN**: all OK
- **ORANGE**: some alert is present
- **RED**: some fatal alert is present
- **DARK GREY**: an alert has come, but state went back to normal again. The grey color is displayed until a user “**acknowledges**” the alert.
- **LIGHT GREY**: no alert limits defined, or they exist but the alerts were masked.
- **WHITE**: no alert limits defined.

On the center top there is the **alerts table**. It shows the most recent 5 alerts in the system. If more than 5 alerts are active at the moment (which is probable), they can be viewed in detail from the **All alarms** button: “All alarms”: choose “Time range: Current” and check that “filter” has “alert state: All” and “Dpe filter: *” (or blank) selected. The **Masked Alarms** button opens a list of all the alarms that are presently masked in the system (thus, if one of these will be in alert state, it will not show up, neither in the detector buttons color, nor as a line in the alerts table), nor will it trigger a sound alarm (“cuckoo”).

The **!!!** in some lines of the alerts panel indicates that this alert is waiting for **acknowledgement**. The shift crew can do it by clicking on it. This should be done after evaluation of the cause of alert and report to the expert of the corresponding detector (if judged necessary).

The center area of the Entrance Panel shows the current detector selected. Use the **HOME** button on the left to go back to the spectrometer view in the central area of the panel.

¹**PURPLE** superimposes to other colors in cells displaying values of individual parameters but is not related to alarms, and therefore doesn’t propagate in the nodes hierarchy. It is instead related to the fact that there are no updated values of that parameter or the data was flagged as “invalid” by some other reason (desynchronization, corruption of data, etc.).

5 Alert Handling

Alerts are displayed as a **color**, and also as a “**cuckoo**” **sound** (sound only in the control room).

In general, fatal alerts are displayed in **RED**, and require human intervention. This is the case for HV channels trips, losses of communication with HV or LV equipment, RICH vessel alerts, and DCS computers and/or managers stopped.

Gas system alerts, RICH vessel, GEM HV and DAQ alerts also send **sms messages** to detector experts.

Some alerts require “**acknowledgement**”, meaning that even if the alert state condition is no longer present, the alert will remain as DARK GREY color, until acknowledged. This is the case for gas system alerts. Acknowledgement can be done either from the alerts table, by clicking in the **!!!** marks; or from the specific detector subsystem panel, by clicking the “**A**” button (sometimes also called “**Action**” button), and clicking “Acknowledge”.

Masking is used to avoid too many alerts being displayed at the same time, a situation that can distract the shift crew from new important alerts. Alerts can be masked, by clicking the “**A**” button (also called “**Action**” button), and clicking “**Mask**”. Unmasking can be done with the same process. Only the shift crew or detector expert should mask alerts, if the alert reason is already known and is being taken care of. A comment should be written in the Run Logbook. A button “Masked alarms” in the Entrance Panel can be used to view and print the list of currently masked items – this list should be printed twice per shift.

In case a new alert has come but no “**cuckoo**” sound was produced, this can be due to another alert of the same type for the same detector subsystem being already present (this situation is then a normal behaviour). If this is not the case, check that the **loud speakers** are ON. If they are ON, go to the “main menu” (left bottom corner of the screen), select “Multimedia”, then “Kmix”, and check that “Master” and “PCM” are not at minimum level.

6 DCS Panel

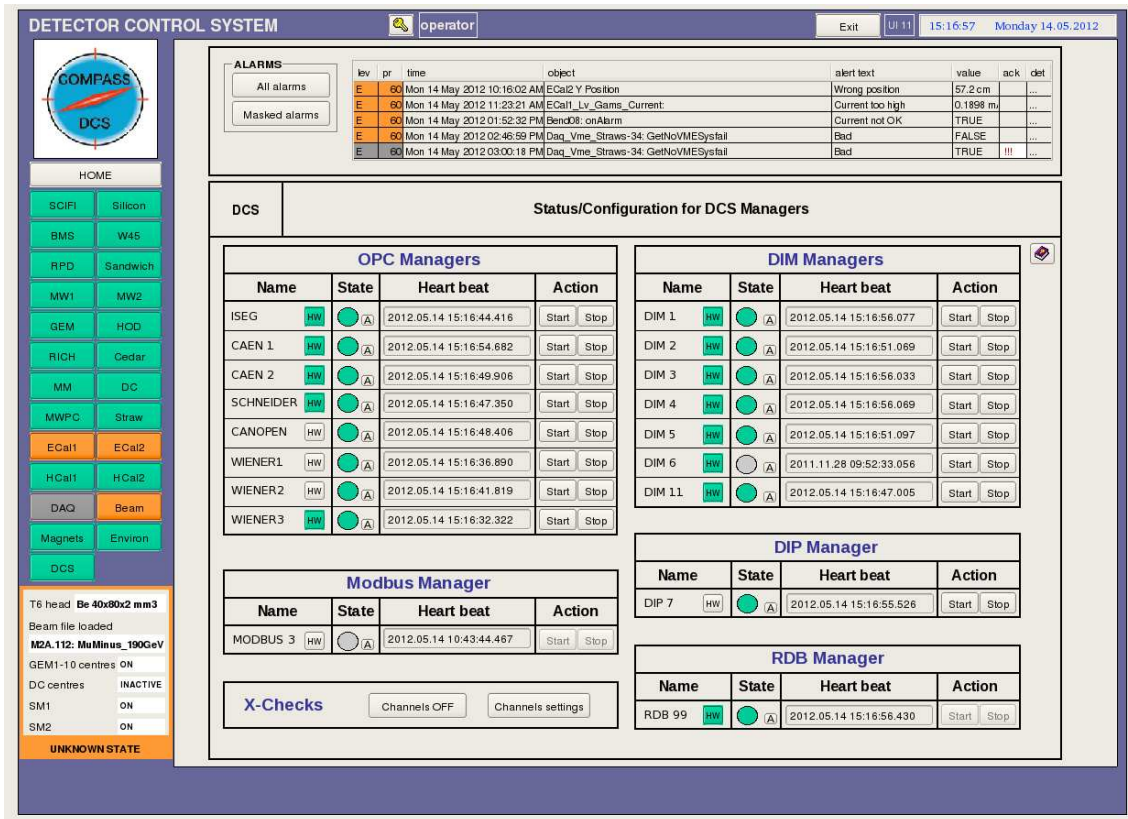


Figure 3: DCS panel.

The DCS panel, accessible by clicking the “DCS” button on the left, shows the state of the servers used for monitoring/control of equipments (**GREEN**: running; **RED**: stopped). “**Start/Stop**” buttons can be used by the shift crew to restart managers that stopped for some reason. One should wait a few minutes until the manager is restarted and the circle turns **GREEN**. If it does not work, call a DCS expert (**#164872**).

The correspondence between managers and equipments they control is:

- OPC Managers
 - ISEG: Straws HV and Silicons HV (@pccompass03)
 - CAEN1: RICH PMTs, RPD, Silicons LV (@pccompass03)
 - CAEN2: PixelMMs HV (@pccompass08)

- SCHNEIDER: all detectors gas systems and the RICH vessel pressure (@pccompass06, from PLCs 1, 2 and 3)
- CANOpen: detectors and environment temperatures and humidities, atmospheric pressure, magnets fields (B6 and SM1), LV of MW1, MW2, W45, MWPC and ECal2 (@pccompass08, from ELMbs)
- WIENER1: DAQ VME crates (@pccompass08)
- WIENER2: RICH LV (@pccompass06)
- WIENER3: Straws LV (@pccompass03)
- DIM Managers
 - DIM 1: BMS (@pclip05)
 - DIM 2: Trigger and Veto (@pclip010)
 - DIM 3: SciFis 5 and 8 (Germany) HV; MW2 HV; MWPC 7 to 11 HV (@pclip010)
 - DIM 4: GEMs 5 to 11 HV, LV and Centre voltages; PixelGems 2 and 3 HV and centre; W45 HV; MWPC 2 to 6 HV; MW1 HV (@pclip07)
 - DIM 5: GEMs 1 to 4 HV, LV and Centre voltages; PixelGem 1 HV and centre; Silicons LV; SciFi 1 (Japan) HV; RICH Wall HV; MWPC 1 HV (@pclip09)
 - DIM 6: RICH PDs HV (@pclip09)
 - DIM 11: DAQ machines temperatures and disks
- MODBUS 3: Silicons cryogenics
- DIP 7: Beam line data, CEDARs data and some Silicons cryogenics
- RDB 99: connection to CERN Oracle DB

At the bottom of the DCS Panel, there is an area for “**Cross-checks**”. A button **OFF Channels** is available, to provide the list of all the CAEN and ISEG HV and LV channels that are presently OFF, as well as the Wiener crates that are OFF.

There is also a button **Channels Settings**, to compare the settings from reference files and the readback values of settings from hardware. Only items with differences greater than some percentage (limits are shown in the panel) are displayed.

From the “**HW**” **buttons**, it is possible to access panels with a description of the hardware monitored by each manager. For some of the managers of HV and LV, it is possible to know the state of communication of the equipment with the PVSS project, which is shown as a color (**GREEN** means the communication is OK; **RED** or **PURPLE** means the communication with the equipment has been lost or that the values received cannot be trusted).

7 Trends

Trends (graph of values as a function of time) can be accessed from the buttons displaying a graph. On the top of the trend panel there is a line with tabs for commands. In the big central area, the graph is displayed. And in the bottom, a legend of the displayed trend appears, with the name of the channel, the present value, and the timestamp of the reading.

By positioning the mouse pointer on top of some data point in the graph, and clicking with the middle wheel button, one obtains the timestamp of the measurement, as well as the exact value.

The tab for commands on top starts with a button “**Time Range**”, which allows to modify the timescale. By default this is set to 8 hours. An option for “user specified” timescale is also available. The time range of the plot can also be changed by placing the mouse pointer on the x-axis and moving the mouse wheel to compress/expand the scale.

The tab “**Y Axis**” offers the possibility to display or not the y scale in the graph. By default, only the scale for the first curve is displayed. If there is more than one curve superimposed in the graph, the following ones will be normalized with respect to the first. Use the tab to display also other curves scales.

The tab “**Other**” allows to select the “**Plot configuration**” option, from where an absolute scale for the graph can be set (by inserting values in the **Y axis: Min** and **Y axis: Max** fields). This tab offers also a “**Print plot**” option.

All the modifications done to the display of a trend will be lost when the trend panel is closed. Some permanent modifications can be done by DCS experts, on request.

8 HV Systems

The DCS for HV systems of each detector provides tables with the set voltage (**v0**), monitored voltage (**vMon**), monitored current (**iMon**), ON/OFF state (**isOn**) and hardware alarms (**HwAlarms**) for channels in the group. The 2 last columns have alerts defined. **isOn** displays **GREEN** color if the requested state equals the readback state from the channel; it displays **ORANGE** color otherwise. The **HwAlarms** is a summary of the possible hardware alarms for HV channels: OverVoltage, OverCurrent, UnderVoltage and Trip (all displayed in **ORANGE**, except for trip, displayed in **RED**).

Note: For Straws HV and Silicons HV (ISEG equipments), the “isOn” column shows always the **ORANGE** color when the channels are switched OFF. 2 additional columns are displayed in the table: the maximum allowed voltage of the channel (**vMax**) and the current trip limit (**i0**).

If a channel trips, one will see the alarm in the “isOn” column (requested state $\neq$ readback state); and usually also the “Trip” information in the “HwAlarms” column. In this case, the channel must be ramped up by a shift crew action.

The **PURPLE** color in the “v0”, “vMon” and “iMon” columns of the table means the reading of the item from the hardware was not succesful (in this case, the value displayed is the last value the system could read). If all cells in these columns are **PURPLE** simultaneously for all channels, it means the SLiC server or the OPC server for this control stopped. If this happens, call a DCS expert (**#164872**).

More details on a channel can be obtained by double-clicking in the corresponding table line. A new panel opens, with more information on settings, etc for that channel. The channel can be put **ON/OFF** from the corresponding buttons in the panel. Channel settings can be changed (by detector experts only) by clicking the corresponding “**Settings**” cell. Alarms can be masked/unmasked from the “**Action**” button on top. A button to “**Load settings from hardware**” (to import the readback setting values in the crate into the DCS system) is also available for detector experts use.

Together with the channels summary table in each HV group, there are some **Group operation** buttons: “ON/OFF”, “settings” (only for detector experts), “Trends” (not implemented yet) and “Pop window”. The Group operation will act in the selected channels of the table. To select channels, click in a line to mark it, then press “Ctrl” key and click with mouse in other lines to select them also. If no line selection was done in the table, the Group operation will act in ALL the channels of the table. The “Pop window” button is used to open the table in a separate window, from where printing is possible.

If a crate, or some modules in the crate, lost its settings, this will show in the channels summary table as $v0 = 0$ in the first column. By double-clicking one of the lines with $v0 = 0$, one can see, in the right-hand side table, the column for PVSS settings (1st column) with the last value set, and the column for readback settings from hardware with $v0 = 0$. In this case, you should contact the detector expert for this detector. On his advice, you can recover the standard settings for this detector by importing the corresponding Reference recipe. To do this, from the detector panel on top, in the area with buttons for stations voltages, click the “tools” button, and a panel for export/import will open. As you have login “operator”, only limited actions are available. You can view the contents of the saved recipes for the detector (including the Reference recipe), but you cannot modify its contents. You can also import the Reference recipe. By doing this, you will send the settings from the recipe into the hardware. After this, you should go back to the channels summary table and check that the readback settings are $v0 \neq 0$.

8.1 MM/DC HV monitoring

The **HV System of the MM and the DCs** are monitored but not controlled in the DCS. Alarms are displayed for trips and for cases where the monitored voltages have a difference with respect to the set voltages $\Delta V > 7$ V, in case the monitored voltages are $V > 5$ V. Also the history of voltages and currents is archived and can be viewed in trending plots. The HV channels of the new

prototype PixelMM (MM0) are monitored and controlled in the DCS since 2012. The thresholds of the DCS are also monitored in the DCS.

8.2 ECals and HCals monitoring

The DCS has an **indirect monitoring of the HV System of ECal1, ECal2, HCal1 and HCal2**, based on the calibration signals of a Laser System or a LED System. The responses from each calorimeter block are read from a MySQL database which is filled by the online filter program Cinderella, when the option “scaler-ecalmon” is set in the DAQ. If more than a certain number of blocks (defined by the detector experts) are shown as “bad” or “broken”, an alarm appears in the alerts table and propagates to the buttons of the detector and subsystem.

If more than a certain threshold of blocks have old timestamps (displayed in **PURPLE**), this also raises an alarm. This can happen because the front-ends attached are off, Cinderella is not running with “scaler-ecalmon” option (or “scaler-ecalmon-artificial”, when using artificial spill structure), the monitoring system (trigger, laser, LEDs) is not working or there is a problem with the MySQL database. In such cases, inform the ECals or DAQ experts about it.

9 WIENER Control: DAQ VME Crates and LV Units

By clicking the **DAQ** button, a summary table with all the VME crates used for the data acquisition is shown. The columns show the current for each voltage channel. There is also a column “Power On”; and a column “Alarms”, grouping all the hardware alarms for the voltage channels. Only the “Alarms” column has alert handling defined. It will show the **ORANGE** color in case of alarm from a channel, from the power supply or from the fan tray. It will also show the **ORANGE** color in case the crate is switched OFF (and voltage settings $\neq 0$ – in that case, the voltages monitored and set will differ, thus triggering alarm). The column will show **GREEN** color if no alarm is present. By double-clicking one line (i.e. one crate), a detailed panel for the specific crate will be displayed. For some crate types, the monitoring of fan tray parameters is not possible, and in that case the fan trays fields will display the **PURPLE** color.

The **PURPLE** color indicates that either the reading of the parameters failed (loss of communication), or a bad quality flag was assigned to the item by the server, for some reason. Cells in the summary table that show occasionally the **PURPLE** color, alternating with white is a normal condition. If you observe persistent **PURPLE** color for an entire line (crate) in the summary table, inform a DCS expert.

The implementation of WIENER fan trays and LV units in the DCS does not allow to change settings, but only switch ON/OFF crates, reset them, and monitor their parameters. The change of settings can be done by a DCS expert, on request, by using a different OPC client.

10 ELMBs

The **ELMBs** monitor temperatures, humidities, pressures, magnetic fields, gas flows (if not connected to PLCs), some LVs, etc. Access these measurements from the detector buttons in the Entrance Panel.

Value fields with WHITE background color indicate that no alert limits were defined for this measurement. **GREEN** color indicates the value is within the defined alert limits. **ORANGE** and **RED** indicate it exceeded the limits and is in alert state. **LIGHT GREY** indicates an alarm is defined but was masked – it can be unmasked from the “A” button next to the value field. The **PURPLE** color indicates the last reading was not successful (loss of communication), or that a bad quality was assigned to this item by the server.

If all the value fields show the **PURPLE** color, check in the DCS panel if the OPC manager “CANOpen” is running. If it is not running, restart it clicking the “Start” button. In case this doesn’t work, call a DCS expert (**#164872**).

11 Beam and CEDARs Monitoring

The monitoring of the beam in the DCS is done using two sources of data: a CERN DIP server (for beam line magnet currents, T6 intensity and symmetry and ionization chambers counts) or COMPASS's MySQL database "beamdb2011" running in the server pccodb00. The monitoring of the CEDARs is done by subscribing data from a CERN Dip server. In addition, some data related to the CERN infrastrucutre associated to the Silicons cryogenic system are monitored via DIP.

If in the DCS panels you see a **RED** alarm in the "DCS" button, coming from "DIP 7" manager, and an indication of "DIP_7: TimeAlarm" in the alerts panel of the DCS (on top), do:

- Wait approx. 10 minutes. If the alarm disappears, no more action is needed. Just check that there are new points appearing in the trending plots (value vs. time) of CEDARs, or T6 and ION1 readings in the DCS.
- If the alarm does not disappear after 10 minutes, call the CCC control room and inform the operator that there is a problem with the **dipGwInjectors** server. After a while, the alarm should disappear, and new updates should be visible in the trending plots.

The adjustment of CEDARs pressure is done in the CESAR program available in Control Room, according to the shift instructions for the CEDARs.

12 For Detector Experts

Some actions, like changing parameter settings, exporting and importing settings from/to recipe, or loading settings from the hardware, can only be done with a detector expert login, except for the Reference recipes that can be imported by the shift crew (user “operator”). Use the yellow key button on the top of the Entrance Panel to login as expert.

If you are a detector expert, but were not given a password yet, contact a DCS expert to obtain one, or check with your colleagues if this password PixelGems 2 and 3 HV; was given to one of them. It is recommended that the detector expert password remains secret, and it is the responsibility of the expert to decide to whom he gives it. In case you forget your password, the DCS experts can reset it for you.

After you finished expert actions in the DCS system, do not forget to **logout**, by clicking the yellow key, and giving ownership of the UI back to “operator”.

COMPASS members can open remote sessions of the DCS project, both for viewing the status of the DCS (login with username: “guest” and password: [EMPTY]) or for changing settings (login as detector expert, with detector password). Opening remote sessions with login “operator” outside the control room is also possible, but not recommended. To open a remote session, login first in the COMPASS gateway, with your lxplus username. Afterwards, do:

```
>ssh -l dcs pccompass07  
>dcsUI
```

and login to the DCS with detector expert username and password (or guest, without password). Remote sessions expire after 1 hour, after which the DCS UI asks you to insert again your password, for security reasons. If no password is inserted, the UI remains open, but without most of the privileges (“NO USER”).

12.1 Settings of HV and LV Equipment

Detector experts can change settings for their detector only, from the “**Settings**” button in the Group operation, or by clicking in the specific setting

cell of a table when viewing a single channel. When using Group operation always check that only the channels you want to modify are included in the table for changes. Insert the new set value and press the “Set” button. Check in the table that all the values you wanted are readback – if they are not, wait until you see them in the table, or press the “Set” button again.

After you have changed settings, save the new values into a file, for security and reference. To save HV and LV settings into a file, click the “Tools” button for **export/import of settings**, located on the top of the detector entrance panel.

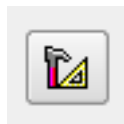


Figure 4: “Tools” button for export/import of settings.

To export the settings to a recipe, which can later be imported by the shift crew in case the hardware loses its settings, simply click the “Start” button. If you want to save some special settings, change the name of the recipe in the name field (keep the file extension=[detector name] as proposed), then click the “Start” button.

You can edit or view the contents of any of the saved recipes for your detector from the “Edit” area. Click the yellow “folder” button to choose the recipe, then click the white “editor” button to view/modify it.

If the equipment (for example, a crate) lost its settings, these can be imported from the Reference recipe, and sent as commands to the devices using the “**import settings**” functionality. Special settings can also be imported from recipe and sent as commands to the equipment (by detector experts only), from this “import” area.

12.2 Settings of Alarm Limits

To export alarm limits into a recipe, click the “Alarm limits” button for **export/import of alarm limits**, located on the top of the detector entrance panel, and simply click the “Start” button.

You can edit or view the contents of any of the saved recipes for your detector from the “Edit” area. Choose the recipe from the combo box, then click the



Figure 5: “Alarm limits” button for export/import of alarm limits.

white “editor” button to view/modify it. You can also print the content of a recipe by clicking the “print” button or delete a recipe simply clicking the “delete” button.

Recipes for alarm limits can be imported using the “**import settings**” functionality (see next section).

13 Instructions for Recipes

Recipes are sets of parameters (limits for alarm) that can be saved, viewed, edited and loaded from the PVSS project to and from a dedicated database. The procedures to perform each of these operations are described in the following sections.

13.1 Instructions for Alarm Limits Recipes

13.1.1 Export a Recipe (only for detector experts)

- In the “Export” section, choose the name of the recipe and click the “Start” button.
- Select the devices to include in the recipe.
 - Clicking the “All” button will select all devices from the list.
 - Clicking the “None” button will unselect all devices from the list.
- Insert a description for the recipe. (optional)

13.1.2 Visualise a Recipe

- In the “Edit/Visualise” section, select a recipe from the combo box and click the “Edit/View” button.
- In the next panel, double click the items you want to view.

13.1.3 Edit a Recipe (only for detector experts)

- In the “Edit/Visualise” section, select a recipe from the combo box and click the “Edit/View” button.
- Edit the content of the recipe.
- In the next panel, double click the items you want to edit.
 - Click “OK” to save the changes.
 - Click “Cancel” to cancel the changes.

- Click “OK” to save the changes.
- Click “Cancel” to cancel the changes.
- Change the name of the recipe. (optional)
 - Insert a description for the recipe if you inserted a new name for the recipe. (optional)

13.1.4 Import a Recipe

- In the “Import” section, select a recipe from the combo box and click the “Start” button to apply it. The user “operator” can only import the last created Reference recipe.

14 List of DCS login users

Silicon

Trigger

Straws

W45

Mw2

Rwall

Mwpc

Scifiw

Gem

Scifig

Mw1

Rich

Drift

Rpd

Sandwich

Ecal1

Ecal2

Cedar

Tgt

Mm

Hcal1

Hcal2

15 F.A.Q.**1. What does a dark gray color in a detector button mean?**

The DCS showed an important alarm (“Fatal”, red color), but the condition for the alarm has disappeared in the mean time. Still, the alarm should be acknowledged by the shift crew, by pressing the “!!!” cell in the Alerts Table, or the “Action” button next to the value field in alarm. This is to ensure that the alarm did not pass unnoticed and that any needed action was taken.

2. What does the purple color in a cell mean?

It means that the value displayed is “invalid”. The invalid condition may be due to no new values received (client/server stopped) or because the values are not to be trusted for some reason (corruption in the data received, desynchronization, etc).

3. There are red alerts in the “DCS” panel. What do they mean?

It means there are alerts in the DCS panel, due to a failure in some part of the monitoring. For the manager showing the alarm, see if the “Heart beat” is updating the timestamp. If it is, there is a problem with the equipment being monitored (which can be identified by pressing the “HW” button). If not, check which kind of alarm is displayed in the Alerts Table: “ManagerDisconnected” or “TimeAlarm”. For “ManagerDisconnected”, click the respective “Start” button and wait for some time; if the alarm persists and there are no new values for the heart beat, call a DCS expert. For “TimeAlarm”, wait for some time; if it’s DIP7, check section “DIP server restart (for Beam monitoring)” of these instructions, otherwise, if it does not disappear in 5 minutes, call a DCS expert.

4. There was an alarm seen in the Alerts Table, but no “cuckoo” was heard. Why?

Either there was an alarm already present for the same subsystem of the same detector, or the loudspeaker was off, or was set to a low volume. If this is the case, please correct it.

5. The “ON”/“OFF” buttons (for HV/LV channels) are disabled. Why?

To have these buttons enabled, one must be logged in as “operator”. If they are disabled, probably a detector expert logged off but forgot to login again as “operator”. Check it in the center top of the main window.

6. The DCS UI in the Control Room shows the login panel every hour, without apparent reason. Why?

Only the UI #1 doesn't have auto-logout after one hour. Therefore, if there are auto-logouts each hour, the UI has a different number. You can try to recover the UI #1 by exiting the current UI and opening a new UI. If, after one hour, the problem persists, call a DCS expert.

7. Where did the DCS UI go?

Maybe someone minimised it? If you don't see any UI window opened, start it from a terminal window, by typing in the prompt:

>dcsl

A PVSS login window should open. Choose

Username: **operator** Password: **[EMPTY]**

8. The HV channels of Straws or Silicons are orange. Why?

These are Iseg modules, and it was requested by detector experts to have different rules for this kind of equipment: everytime they are off, they are in alarm.

9. The v0 (readback set voltage) column is displaying zeroes. Why?

The equipment lost its settings!!!

If you're the detector expert, don't “Load Settings from hardware”! (This would only cause the loss of settings also in PVSS.) Instead, put the settings back to the equipment from a set previously saved in PVSS, by importing a recipe.

10. I am a detector expert and I need to change settings/alarm limits, but I cannot remember my username/password. What should I do?

Before asking a DCS expert to reset the password, please check that no other element of the group knows the password.