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This COSMIX kit includes two Cesium Iodide (CsI) logs, of the same type as the logs of the calorimeter of the gamma-ray space telescope Fermi-LAT. The detectors are powered by a USB cable (included). A SD microcard is plugged in the Arduino shield slot (on top of the USB socket) and stores the detector counts as well as the GPS and altimeter data.

Usage

It is described at the following URL (in french): <u>http://www.cenbg.in2p3.fr/COSMIX-Compter-les-muons</u> For a quick basic experiment: open the case, connect the USB socket to a laptop USB port (or any USB power supply) via the cable. The detector is now working! The counting starts on the display and the analog pulses can be visualized with an oscilloscope using the BNC sockets. Do a coincidence counting ($C1 \cap C2$ on the display) with C1 and C2 lying next to each other and another one with C2 lying on top of C1 (avoid grabbing C2 by the log).

Menus described briefly on the back of this page allow access to acquisition configuration parameters.

During counting, be careful not to touch the detectors as the induced noise could generate fake events in the very sensitive electronics.

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Layout of the different elements

Make sure that :

Before closing the case

- the counter C2 is fixed on its socket with the two large black screws ;
- the USB cable and the SD card are stowed in the case ;
- the plastic foam protections are in place.

Contact/Help cosmix@cenbg.inp3.fr

Initialisation



Control buttons

Start Stop Stop Reset	Start stop	Start/stop counting
	►	Move the cursor to the right
	Stop reset	Stop counting/reset
	◀	Move the cursor to the left
	▲ ▼	Scroll through the menu options. Increase/Decrease (Duration) BEEP (Start/Stop)
	Select	Select configuration menus

Menus

Counting	Duration	BEEP
Temperature/Pressure	GPS	Information
Temp: 17.1 °C Press: 101309 Pa	GPS_Info -999.8/-999.8	COSMIX Info 2015/10/13

