

MEMORANDUM

To: G. Mallot /EP
cc.: G.V. Goggi, H. Taureg /EP, M. Tavlet /TIS
From: H. Schönbacher /TIS
Re: **Derogation for the use of PVC insulated cables in COMPASS**

Referring to our memo dated 22.05.2000, I confirm, in agreement with your Division Leader and the DSO the extension of the derogation for the use of PVC insulated cables in COMPASS until the reconfiguration of the Electromagnetic Calorimeter.

H. Schönbacher



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Votre référence / Your reference
Notre référence / Our reference: EP/NA

Geneva, February 9th, 2001

Dear Giorgio,

We would like to come back to the important question of cables connected to our calorimeters in the COMPASS experiment. As you know, we had obtained the permission to use old cables not conform to CERN standard for the use in the year 2000. This permission had been necessary since the replacement of the existing cables would amount to about 250,000- SFr, money not available neither to the groups responsible for the detectors nor within the collaboration. We understand the safety concern and are ready to undertake all possible safety measures necessary to allow the use of these cables, mandatory to ensure physics studies with a hadron beam in 2001. Following your last letter we would like to ask you to support the following scenario.

COMPASS asks the permission for the use of about 4000 cables for ECAL 2 (typically 70m length), bought about 15 years ago for the GAMS spectrometer. The cables are specially fabricated for the calorimeter to guarantee low damping of the signal, particularly important for the high rate environment of the COMPASS experiment.

In order to fulfil the requirements of fire protection the cables are rolled up inside a metal box with Burndy-connectors mounted inside the walls. If required, the boxes will be painted with fire resistant paint.

The boxes are presently stored on top of the shielding wall in building 888, separating the COMPASS experiment and the barracks for the physicists. New cables are making the connections to the detectors and to the read-out electronics.

We hope that an agreement with TIS can be found acceptable to all parties, which allows us to make use of ECAL2. Of course we stay at your disposal for any further questions.

With best regards

Stephan Paul (Co-Spokesperson)

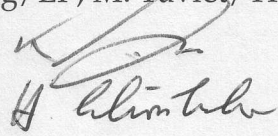
Gerd Mallot (GLIMOS)



MEMORANDUM

To : G. Mallot/EP

cc : C. Ferrari/SL, H. Taureg/EP, M. Tavlet/TIS

From : G. V. Goggi /EP
H. Schönbacher/TIS 

Subject : **Derogation for the use of PVC insulated cables in COMPASS**

We authorize the use of PVC insulated cables in the COMPASS experiment, as requested in your memorandum of 15 May 2000, for the test run in the year 2000 only and under the following conditions:

- the PVC insulated cables are placed in a metal box,
- the cable connectors are mounted on the wall of the box,
- the box has at least five compartments,
- the compartments and the box are made as gas-tight as possible
- the separations of the compartments and the outside of the box are covered with an intumescent paint,
- the efficiency of the fire detection in hall 888 is checked before installing the PVC insulated cables,
- the cables are removed and disposed of immediately after the run.

Cables conform with Safety Instruction 23 have to be used for the final installation.

Ref:

Date: 15 May 2000

MEMORANDUM

Mallot

From/De : G.K. Mallot/EP
To/à : G. Goggi/EP
Subject/Sujet : Derogation for the usage of non-conform signal cables in COMPASS
Copies : H. Taureg/EP

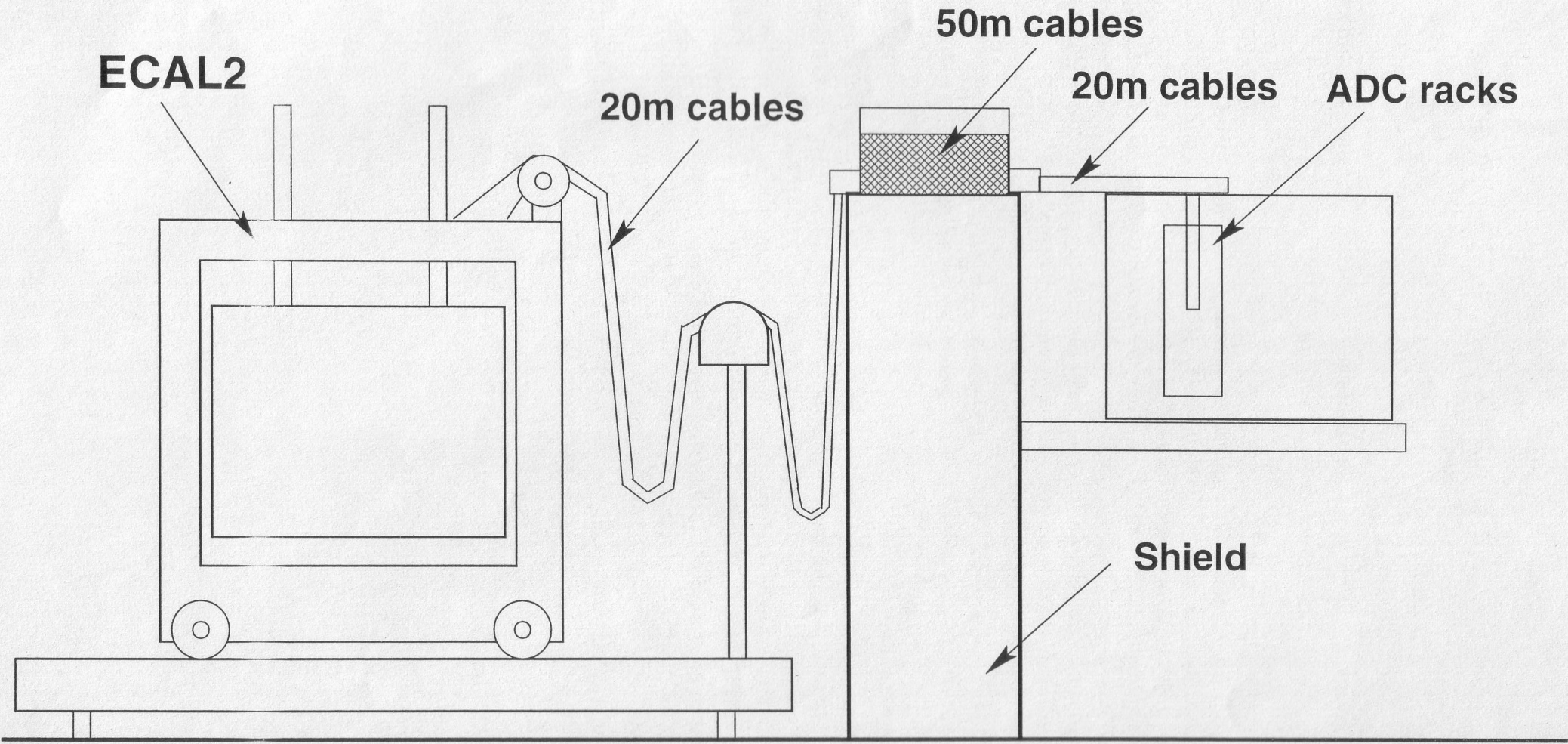
In the COMPASS proposal four calorimeters are foreseen with in total 8000 channels. The two hadron calorimeters HCAL1 (Dubna) and HCAL2 (Protvino) will be equipped with new signal cables. As ECAL2 the existing GAMS calorimeter (Protvino) will be used and is actually already assembled in EHN2. ECAL1 will only be installed for 2001 and the cable question is not yet settled completely. In the COMPASS Proposal and the Memorandum of Understanding it was foreseen to use GAMS together with the existing cables (type RG58), which do not conform to CERN regulations and contain halogens. Therefore no budget was foreseen to buy new cables, which only for GAMS would amount to about 280 kCHF.

For ECAL2 in total 4000 90-100 m long cables are needed, depending on the propagation time in the cable. We plan to install half of them, i.e. 2000 cables, for tests this year. The final installation for 2001 and beyond is still under discussion and we try to obtain further funding for more new cables.

The cables we intent to install in 2000 are made up by 3 pieces each, 20 m from detector to shielding wall including the length needed for movements of the detector, 50 m laid down on the top of the shielding wall, 20 m from shielding wall into the barracks (see attached figure). All 20 m pieces are cables which do conform to CERN regulations, while the 50 m pieces contain halogens. As preventive measure we plan to cover the bunch of 50 m cables by a metal box.

The partial commissioning of the electromagnetic calorimetry is an important step in the preparation of the COMPASS experiment, in particular the study of the calibration procedure with an electron beam. Electron beams were up to now not used in EHN2.

In order to proceed with installation we ask for a derogation from IS41 and for the permission to install the 2000 50 m cables of GAMS in EHN2 (888).



ECAL2

20m cables

50m cables

20m cables

ADC racks

Shield