25 February 2016

Memorandum of Understanding

for Construction and Running of the SHiP Experiment

between

The EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH, “CERN”,
an Intergovernmental Organization having its seat at Geneva, Switzerland,
as Host Laboratory

on the one hand,

and

the Collaborating Institutions/Funding Agencies of the SHiP Collaboration

Collaborating Institute/Funding Agency 1

Collaborating Institute/Funding Agency 2

…

on the other hand.

WHEREAS

(a) A group of institutes from CERN Member and non-Member States, and CERN, ("the Collaborating Institutions"), listed in **Annex 1**, have proposed to CERN to carry out an experiment ("the Experiment") which consists of a general purpose fixed target facility at the SPS to search for hidden particles as predicted by a large number of recent Hidden Sector models. For this purpose, it has been agreed to form the SHiP Collaboration ("the Collaboration"). The experimental apparatus ("the Detector") comprises a number of particle detection systems and their auxiliary equipment (severally "the Sub-Detectors", jointly "the Equipment");

(b) On the basis of a Technical Proposal ("the Technical Proposal") submitted in April 2015 (CERN-SPSC-YYYY-XXX), and a detailed review of the scientific merits of the Experiment, the technological feasibility and estimates of the resources needed, the SPS Committee (SPSC) has recommended approval of the Experimental Proposal to the CERN Research Board (minutes of the XXXth meeting of the SPSC held on DDth–DDth Month Year);

(c) The execution of the Experiment is subject to the General Conditions applicable to Experiments at CERN ("the General Conditions"). The General Conditions define the representation of the parties involved in the Experiment and the basic documents that govern its execution, and set out in general terms the organisation of the Collaboration, CERN's obligations as Host Laboratory and the obligations of the Collaborating Institutions. They also address the questions of liability and dispute resolution, as well as matters related to intellectual property. The General Conditions are an integral part of the MoU and the current version, dated 20 February 2008, is attached as **Annex 7**;

(d) As provided for in the General Conditions, agreement on the construction and installation of the Equipment shall be effected through this Memorandum of Understanding (MoU) between CERN as Host Laboratory, and the Collaborating Institutions (including CERN), represented for the purpose of signature, as the case may be, by their Funding Agencies;

IT IS HEREWITH UNDERSTOOD AS FOLLOWS

Article 1. Parties to the MoU

1.1 The parties to the MoU are CERN as Host Laboratory, and the Collaborating Institutions listed in **Annex 1** ("the Parties"). **Annex 2** lists the Funding Agencies of the Collaboration. A Funding Agency may be a Collaborating Institution or a body acting on behalf of one or more Collaborating Institutions in the conclusion of the MoU.

Article 2. Purpose of the MoU

2.1 The MoU defines the structure of the Equipment and the organizational structure of the Collaboration. It also sets out organizational, managerial and financial guidelines to be followed by the Collaboration.

2.2 It sets out the technical participation of the Collaborating Institutions in the construction and installation of the Equipment, as well as the associated timetable. It provides a breakdown of the financial contributions to the Equipment by each Funding Agency.

Article 3. CERN's Obligations as Host Laboratory

3.1 CERN's general obligations as Host Laboratory are set out in the General Conditions.

3.2 The Equipment and Collaboration

3.3 The Equipment is described in detail in the Technical Proposal. It consists of a number of Sub-Detectors and Equipment as listed in **Annex 3**.

3.4 The names of the scientists currently participating in the Collaboration ("the Members") are listed in **Annex 4** by Country and by Collaborating Institution.

3.5 The management structure of the Collaboration is defined in **Annex 5.1**. Persons currently holding management positions are listed in **Annex 5.2**.

3.6 The technical participation of each Collaborating Institution in the construction of the Equipment is set out in **Annex 3**.

3.7 Any institute that wishes to join the Collaboration prior to the completion of the construction and installation shall make an appropriate contribution thereto (including to the Common Fund Account – see Article 6 below). In the event that the construction and installation are already fully funded, the institute shall make a special contribution. Such contributions shall be negotiated by the Collaboration and endorsed by the Collaboration Board.

Article 4. Programme of Work for the Construction and Installation, and Sharing of Responsibilities for its Execution

4.1 **Annex 6** gives a breakdown of the Detector by Sub-Detector and the deliverables committed to by each Funding Agency.

4.2 The Collaborating Institutions, if applicable supported by their Funding Agencies, shall make their best efforts to design, produce final prototypes, construct, calibrate, transport, assemble, install and commission the deliverables listed in Annex 6 within the limits of their funding, and based on a conceptual design report to be written during the year following signature of the present MoU and approved by the Collaboration Board.

4.3 Any cost overruns that cannot be accommodated internally shall be reported by the Collaborating Institution(s) concerned to the Collaboration. The Collaboration shall propose ways of addressing such overruns (e.g. by cost-savings, asking for additional funds or, if other ways cannot be found, by de-scoping or staging).

Article 5. Common Fund Account

5.1 To support the costs of the experimental effort at CERN a Common Fund Account ("the Common Fund") has been set up for SHiP. Each Collaborating Institution shall contribute annually to the Common Fund according to the table in Annex 6, starting from 2017. The amount of this contribution may be changed by unanimous decision of the Country Representatives Board to adapt to future needs of the experimental program.

5.2 These funds will be available to cover all incidental expenses at CERN, including, but not limited to, electronic pool charges, material cost, telephone charges, services performed by

CERN or by outside contractors on the CERN site, fabrication charges from internal and external machine shops, and other expenses incurred by Members of the Collaboration in operating the Experiment at CERN, as well as for some common equipment.

5.3 Signature authority for the Common Fund shall rest with the Spokesperson and Deputy Spokesperson of the Experiment, as well as the Technical Coordinator. Expenses of Currency XXXX or more shall be announced to and approved by the Collaboration Board in advance.

Article 6. Specific Rights and Obligations of the Collaborating Institutions

6.1 The Collaborating Institutions are entitled to join the exploitation phases of the Experiment and to participate in the scientific exploitation of the data acquired.

6.2 The publication policy of the Collaboration foresees that all Collaborating Institutions are entitled to sign publications that rely on data that has been acquired by the SHiP apparatus or subcomponents of it. Publications stemming from a subcomponent of the apparatus prior to integration on site are under the sole responsibility of the corresponding Collaborating Institution. Each Collaborating Institution's representative defines the list of signing authors from her/his Institution. Any Collaborating Institution can decline to sign a common publication, which will nevertheless be in the name of the Collaboration. Any publication using data obtained by means of the SHiP apparatus can only be submitted if a majority of the Collaboration Board give their agreement. In case of tie, the Director of Research of CERN will be asked to mediate and, if no agreement can be reached, will have the final vote.

Article 7. Theses

7.1 One copy of any Ph.D. thesis or similar academic document relating to the Experiment must be sent by the Collaborating Institution(s) concerned to the CERN Library for inclusion in its collection.

Article 8. Observance of the MoU and the General Conditions

8.1 Save for the provisions of the General Conditions, the MoU is not legally binding, but the Parties recognise that the success of the Collaboration depends upon their adherence to its provisions. Any default under its provisions shall be dealt with by the Collaboration in consultation with the CERN Management.

Article 9. Duration of the MoU and its Extension

9.1 This MoU is valid for the construction period of the SHiP Experiment from the date of signing to a date not earlier than 1 January 2017. The actual termination date will be set by the Country Representatives Board no later than DD Month YYYY.

9.2 The MoU may be extended at any time by mutual agreement of the Parties.

Article 10. Withdrawal of Funding Agencies or Collaborating Institutions

10.1 Any Funding Agency may withdraw its support from the Collaboration by giving not less than twelve months notice in writing to the Collaboration and the Director-General of CERN. In such an event, reasonable compensation to the Collaboration shall be negotiated through CERN and confirmed by the Collaboration Board.

10.2 Any Collaborating Institution may withdraw from the Collaboration in accordance with the General Conditions, the procedures agreed by the Collaboration and by giving notice in writing to its Funding Agency.

Article 11. Participation of additional institutes

11.1 Subject to the agreement of the Parties, additional institutes may join the Collaboration at any time during the lifetime of the MoU. Each such event shall give rise to an **Addendum** to the MoU setting out the specific terms of collaboration for the institute(s) concerned and with explicit mention that the terms of the MoU (including all existing Addenda and Amendments) apply. The terms of collaboration shall be negotiated by the Collaboration (which reserves the right to request additional contributions from such institutes). The Addendum shall be signed by CERN as Host Laboratory, by the Spokesperson as representative of the Collaboration, and by the institute(s), for the purposes of signature represented, as the case may be, by their Funding Agency/Agencies.

Article 12. Amendments

12.1 The MoU may be amended at any time in accordance with the General Conditions.

Article 13. Annexes

13.1 All the Annexes are an integral part of this MoU. They are understood to be the planning basis for the construction of the Equipment. The Collaboration Management shall keep up-to-date the information contained therein.

This MoU is produced in XX original documents, each pair signed by CERN as Host Laboratory and by a Collaborating Institution.

Done in Geneva

on_____

For CERN

_____

Sergio Bertolucci

Director of Research and Scientific Computing

Done in _____

on_____

For

_____

ANNEXES

1. **Collaborating Institutions in the Collaboration and the names of their Contact Persons**

2. **Funding Agencies of the Collaboration and their Representatives**

3. **Sub-Detector Structure and Technical Participation of the Collaborating Institutes of the Experiment**

4. **Current Members of the Collaboration by Country and Collaborating Institution (postdoc or above)**

5. **The Organizational Structure of the Collaboration**

6. **Overview of the Financial Participation of the Funding Agencies in Equipment Construction**

7. **General Conditions applicable to Experiments at CERN**

Annex 1 Collaborating Institutions in the Collaboration and the names of their Contact Persons

Country	**Institute**	**Contact**
Bulgaria	University of Sofia	**R. Tsenov**
Chile	UTFSM (Universidad Técnica Federico Santa Maria), Valparaiso	**H. Hakobyan**
Denmark	NBI (Niels Bohr Institute), CopenHagen University	**S. Xella**
France	LAL Orsay	S. Barsuk
France	LPNHE Univ. Paris 6 et 7	**J. Chauveau**
Germany	Humboldt University of Berlin	**H. Lacker**
Germany	University of Hamburg	C. Hagner
Italy	Istituto Nazionale di Fisica Nucleare (INFN), Sezione di Bari	S. Simone
Italy	Istituto Nazionale di Fisica Nucleare (INFN), Sezione di Bologna	M. Villa
Italy	Istituto Nazionale di Fisica Nucleare (INFN), Sezione di Cagliari	**W. Bonivento**
Italy	Istituto Nazionale di Fisica Nucleare (INFN), Sezione di Ferrara	W. Baldini
Italy	Lab. Naz. Gran Sasso	N. D'Ambrosio
Italy	Lab. Naz. Frascati	G. Lanfranchi
Italy	Istituto Nazionale di Fisica Nucleare (INFN), Sezione di Napoli	G. De Lellis
Italy	University of Rome La Sapienza	G. Rosa
Japan	Aichi University of Education	K. Kodama
Japan	Kobe University	S. Aoki
Japan	Nagoya University	**M. Komatsu**
Japan	Nihon University	S. Mikado
Japan	Toho University	H. Shibuya
Korea	Gyeongsang National University	C.S. Yoon
Russia	Joint Institute of Nuclear Research (JINR) Dubna	S. Movtchan
Russia	Institute for Theoretical and Experimental Physics (ITEP), Moscow	V. Egorychev
Russia	Institute for Nuclear Research (INR), Moscow	Y. Kudenko
Russia	P.N. Lebedev Physical Institute of the Russian Academy of Sciences (LPI), Moscow	**N. Polukhina**
Russia	National Research Centre (NRC) "Kurchatov Institute", Moscow	**V. Shevchenko**

Russia	Institute for High Energy Physics, Protvino	S. Donskov
Russia	Petersburg Nuclear Physics Institute (PNPI), St. Petersburg	V. Kim
Russia	Moscow Engineering Physics Institute (MEPhI)	M. Skorokhvatov
Russia	Skobeltsyn Institute of Nuclear Physics of Moscow State University	T. Roganova
Russia	Yandex School of Data Analysis	A. Ustyuzhanin
Sweden	Stockholm University	**D. Milstead**
Sweden	Uppsala University	R. Brenner
Switzerland	CERN	**H. Dijkstra**
Switzerland	University of Geneva	P. Mermod
Switzerland	Ecole Polytechnique Federale de Lausanne (EPFL)	M. Shaposhnikov
Switzerland	University of Zurich	**N. Serra**
Turkey	Middle East Technical University (METU), Ankara	**A. M. Güler**
Turkey	Ankara University	A. Ulvi Yilmazer
UK	Imperial College London	M. Patel
UK	University College London	**M. Campanelli**
UK	Rutherford Appleton Laboratory (RAL)	V. Bayliss
UK	Bristol University	K. Petridis
UK	Warwick University	G. Barker
Ukraine	University of Kyiv	**I. Kadenko**
USA	Florida University	**G. Mitselmakher**

Annex 2 Funding Agencies of the Collaboration and their Representatives

Country	**Agency**	**Represented by**
Bulgaria		R. Tsenov
Chile		H. Hakobyan
Denmark		S. Xella
France	IRFU, IN2P3	J. Chauveau
Germany	BMBF, DFG	H. Lacker
Italy	INFN	W. Bonivento
Japan		M. Komatsu
Korea	National Research Foundation of Korea	C.S. Yoon
Russia	Ministry of Education and Science, RSF, RFBR	N. Polukhina, V. Shevchenko
Sweden	Swedish Research Council	D. Milstead
Switzerland	CERN	H. Dijkstra
Switzerland	Swiss National Science Foundation	N. Serra
Turkey	TAEK	A.M. Güler
UK	STFC	M. Campanelli
Ukraine		I. Kadenko
USA		G. Mitselmakher

Annex 3 Sub-Detector Structure and Technical Participation of the Collaborating Institutions of the Experiment *(The first institute in the list, in bold letters, takes*

responsibility for accomplishiong the task, while the other institutes participate to the task)

Sub-Detector Structure:

1) **Beam line**
2) **Infrastructure**
3) **Hidden Sector detector**
    a) **Vacuum vessel**
    b) **Spectrometer**
        i) **Magnet**
        ii) **Tracker**
    c) **Calorimeters**
        i) **Electromagnetic calorimeter**
        ii) **Hadronic calorimeter**
    d) **Muon detector**
    e) **Surround background tagger**
    f) **Timing detector**
4) **ν_τ detector**
    a) **Neutrino target**
        i) **Emulsion target**
        ii) **Target tracker**
    b) **Muon magnetic spectrometer**
        i) **Magnet**
        ii) **RPC tracking system**
        iii) **Drift tube tracking system**
5) **Data handling**
    a) **Online**
    b) **Offline**
6) **MC simulation**

Deliverables	Institutes
1) Beamline	CERN
2) Infrastructure	CERN (general and active muon shield), IC, RAL
3.a) Vacuum vessel	NRC KI
3.b.ii) Tracker	CERN, JINR (strawtubes), MEPhI, PNPI (optimization)
3.c.i) ECal	ITEP (construction), Orsay, IHEP (design), INFN-Bologna
3.c.ii) Hcal	ITEP, IHEP, INFN-Bologna, Stockholm (readout)
3d) Muon detector	INFN-Bologna, INFN-Cagliari, INFN-Lab.Naz.Frascati, INFN-Ferrara, INR RAS, MEPhI (R&D),
3.e) Surround background tagger	Berlin, LPNHE (muon veto photoproduction), MEPhI (liquid scintillator)
3.f) Timing detector	Zurich, Geneva, INFN-Cagliari, Orsay, LPNHE
4.a.i) ν_τ detector emulsion target	INFN-Naples, INFN- Bari, INFN- Lab.Naz.Gran Sasso, Nagoya, Nihon, Aichi, Kobe (production), Moscow SU, Lebedev (scanning), Toho (CES), Middle East Technical University, Ankara University
4.a.ii) ν_τ detector target tracker	NRC KI (scintillating fibres), INFN-Lab.Naz.Frascati (GEM)
4.b.i) ν_τ detector magnet	INFN-Lab.Naz.Frascati, INFN-Bari, INFN-Naples, INFN-Roma
4.b.ii) ν_τ tracking system (RPC)	INFN-Lab.Naz.Frascati, INFN-Bari, INFN- Lab.Naz.Gran Sasso, INFN-Naples, INFN-Roma
4.b.iii) ν_τ tracking system (drifttubes)	Hamburg
5.a) Online computing	CERN (trigger & DAQ), Niels Bohr (trigger & DAQ), Uppsala (trigger & DAQ), UCL, YSDA, LPNHE
5.b) Offline computing	CERN (overall software framework), YSDA
6) MC Simulation	CERN, Sofia, INFN-Cagliari, INFN-Lab.Naz.Frascati (GEM), INFN-Naples, Zurich Geneva and Lausanne (sensitivity & background), Valparaiso (neutrino induced background), Berlin (neutrino induced background), PNPI, NRC KI (muon system background), SINP MSU (neutrino beams), MEPhI, YSDA

	(production facility), Middle East Technical University, Ankara University, Bristol, Imperial College, Florida, Kyiv

Country	Institute	Members
Bulgaria	University of Sofia	R. Tsenov, D. Kolev, G. Kirilova, M. Bogomilov, R. Matev, V. Lyubovitskij, A. Chumakov
Chile	UTFSM (Universidad Técnica Federico Santa Maria), Valparaiso	J.C. Helo, C. Dib, S. Kovalenko, H. Hakobyan, M.A. El Alaoui, J. Miller
Denmark	NBI (Niels Bohr Institute), CopenHagen University	S. Xella
France	LAL Orsay	S. Barsuk, D. Breton
France	LPNHE Univ. Paris 6 et 7	J. Chauveau, J.-M. Levy, F. Vannucci, H. Lebbolo
Germany	Humboldt University of Berlin	H. Lacker, J. Dietrich, M. Franke
Germany	University of Hamburg	C. Hagner, J. Ebert, W. Schmidt-Parzefall, D. Bick
Italy	Istituto Nazionale di Fisica Nucleare (INFN), Sezione di Bari	M. De Serio (staff), R.A. Fini (staff), G. Iaselli (staff), A. Marrone (staff), L. Paparella (Ph.D. student), A. Pastore (staff), S. Simone (staff)
Italy	Istituto Nazionale di Fisica Nucleare (INFN), Sezione di Bologna	L. Bellagamba (staff), D. Bonacorsi (staff), M. Bruschi (staff), M. G. Dallavalle (staff), F. Fabbri (staff), L. Fabbri (staff), B. Giacobbe (staff), A. Montanari (staff), T. Rovelli (staff), R. Spighi (staff), M. Villa (staff), A. Zoccoli (staff)
Italy	Istituto Nazionale di Fisica Nucleare (INFN), Sezione di Cagliari	W. Bonivento (staff), A. Lai (staff), S. Cadeddu (staff), C. Cicalo (staff), G. Puddu (staff), G. Saitta (staff)
Italy	Istituto Nazionale di Fisica Nucleare (INFN), Sezione di Ferrara	W. Baldini (staff)
Italy	Lab. Naz. Gran Sasso	N. D'Ambrosio (staff), N. Di Marco (staff)
Italy	Lab. Naz. Frascati	M. Anelli (tech), G. Bencivenni (staff), M. Bertani (staff), A. Calcaterra (staff), A. Cecchetti (tech), C. Capoccia (tech), P. Ciambrone (staff), D. Domenici (staff), G. Felici (staff), G. Lanfranchi (staff), A. Paoloni (staff), M. Poli-Lener (postDoc), G. Morello (postDoc), F. Pupilli (postDoc), A. Saputi (tech), M. Spinetti (retired)
Italy	Istituto Nazionale di Fisica Nucleare (INFN), Sezione di Napoli	G. De Lellis (staff), M.C. Montesi (staff), A. Lauria (staff), V. Tioukov (staff), S. Buontempo (staff), A. Di Crescenzo (postDoc), A. Buonaura (Ph.D. student), G. Galati (Ph.D. student), M. Iacovacci (staff), L. Lista (staff), P. Strolin (staff), A. Aleksandrov (postDoc INFN)
Italy	University of Rome La Sapienza	G. Rosa (staff), P. Loverre (staff), P. Monacelli (staff)
Japan	Aichi University of Education	K. Kodama
Japan	Kobe University	S. Aoki, S. Takahashi
Japan	Nagoya University	N. Kitagawa, M. Komatsu, M. Miyanishi, K. Morishima, N. Naganawa, T. Naka, M. Nakamura, T. Nakano, H. Rokujo, O. Sato
Japan	Nihon University	S. Mikado

Japan	Toho University	H. Shibuya, S. Ogawa
Korea	Gyeongsang National University	C.S. Yoon, K.Y. Lee, S.H. Kim, B.D. Park
	Jeju National University, Assoc. to Gyeongsang	Jong-Kwan Woo
	Gwangju National University of Education, Assoc. to Geyongsang	
	CSU, Assoc. to Geyongsang	K.Y. Choi
Russia	Joint Institute of Nuclear Research (JINR) Dubna	S. Movtchan, A. Kolesnikov, T. Enik
Russia	Institute for Theoretical and Experimental Physics (ITEP), Moscow	V. Egorychev, D. Golubkov, I. Korolko, M. Prokudin, I. Rostovtseva, P. Shatalov, Y. Zaitsev
Russia	Institute for Nuclear Research (INR), Moscow	D. Gorbunov, O. Mineev, A. Khotjansev, A. Shaykhiev, D. Bondarenko, Y. Kudenko, N. Yershov
Russia	P.N. Lebedev Physical Institute of the Russian Academy of Sciences (LPI), Moscow	N. Polukhina, N. Starkov, M. Vladymyrov, T. Tshchedrina, M. Chernyavskiy, R. Mingazheva, A. Bagulya, N. Konovalova
	National University of Science and Technology "MISIS", Assoc. to LPI, Moscow	I.E. Bulyzhenkov, I.V. Ermoline, O. N. Solovyev
Russia	National Research Centre (NRC) "Kurchatov Institute", Moscow	V. Shevchenko, A. Malinin, B. Obinyakov, A. Etenko, A. Orlov, D. Druzhkin, M. Petrushin, S. Koretskiy, N. Nurakhov
Russia	Institute for High Energy Physics, Protvino	S. Donskov, G. Khaustov, Yu. Mikhaylov, V. Polyakov, V. Samoylenko
Russia	Petersburg Nuclear Physics Institute (PNPI), St. Petersburg	V. Kim, E. Kuznetsova, V. Murzin, V. Oreshkin, A. Egorov
Russia	Moscow Engineering Physics Institute (MEPhI)	M. Skorokhvatov, A. Romaniouk, V. Samsonov, S. Smirnov, P. Teterin, V. Sosnovtsev
Russia	Skobeltsyn Institute of Nuclear Physics of Moscow State University	T. Roganova, L. Dedenko, G. Fedorova, A. Chepurnov, A. Lukiashin
Russia	Yandex School of Data Analysis	A. Ustyuzhanin, A. Rogozhnikov, A. Baranov

Sweden	Stockholm University	D. Milstead, S. Silverstein
Sweden	Uppsala University	R. Brenner, N. Bingefors
Switzerland	CERN	G. Conti, H. Dijkstra, M. Ferro-Luzzi, E. van Herwijnen, R. Jacobsson, F. Rademakers, T. Ruf, D. Treille
	CERN Taskforce	B. Goddard, M. Fraser, J. Borburgh, J. Bauche, D. Tommasini, E. Solodko, A. Sanz Ull, G. Arduini, K. Cornelis, M. Calviani, D. Horvath, A. Marcone,
Switzerland	University of Geneva	A. Blondel, A. Chatterjee, P. Mermod, E.N. Messomo, A. Korzenev
Switzerland	Ecole Polytechnique Federale de Lausanne (EPFL)	A. Bay, M. Shaposhnikov, O. Ruchayskiy
Switzerland	University of Zurich	B. Kilminster, E. Graverini, N. Serra, B. Storaci
Turkey	Middle East Technical University (METU), Ankara	A.M. Guler (staff), M. Kamiscioglu (Ph.D. student), K. Ocalan (staff), M. Yalvac (Ph.D. student)
Turkey	Ankara University	A. U. Yilmazer (staff), D. Yilmaz (staff), C. Kamiscioglu (Ph.D. student)
UK	Imperial College London	A. Golutvin, U. Egede, M. Patel, F. Redi, Y. Shitov
UK	University College London	M. Campanelli, N. Brook
UK	Rutherford Appleton Laboratory (RAL)	S. Ricciardi, V. Bayliss, T. Bradshaw, M. Courthold (staff), T. Rawlings (staff)
UK	Bristol University	K. Petridis
UK	Warwick University	J.J. Back, G.J. Barker
Ukraine	Taras Shevchenko National University of Kyiv	I. Kadenko, O. Bezshyyko, L. Golinka-Bezshyyko, O. Boyarsky, K. Bondarenko
USA	Florida University	G. Mitselmakher, L. Shchutska

Annex 4 Current Members of the Collaboration by Country and Collaborating Institution (postdoc or above)

Annex 5 The Organizational Structure of the Collaboration

5.1 The Management Plan and Structure of the Collaboration

Subject to the terms of this MoU, all persons who are members of the Collaboration shall have equal status in conducting the Experiment, including full voting rights and the right to be considered for appointment to official functions related to the Experiment.

The Experiment shall be managed by the Country Representatives Board, which shall comprise the Spokesperson, the CERN local Contact Person, the Chairperson, the Secretary and one representative per country. The Country Representatives Board shall be actively involved in the preparation and running of the Experiment. The Country Representatives Board will act as steering, conference and publication committee.

The Spokesperson and his/her Deputy represent the Collaboration to the outside and lead the Collaboration in all day-to-day matters. They are elected by absolute majority of the Country Representatives Board and shall act within the framework of this MoU and such instructions as the Country Representatives Board may give. Where the Spokesperson is not stationed full-time at CERN, the Collaboration shall also appoint a Contact Person at CERN.

The Spokesperson is elected for a term of 3 years and he/she can be re-elected several times.

The Technical Coordinator is appointed by the Country Representatives Board. The Technical Coordinator will take care in particular of the interfaces between the different parts of the apparatus until completion of the construction of the experiment. He will also be responsible for the supervision of the upgrades of the apparatus and its maintenance.

The Leader of the CERN Department responsible for the physics programme of which the Experiment is part shall appoint a Group Leader in Matters of Safety (GLIMOS), on the proposal of the Spokesperson. The rights and responsibilities of the GLIMOS are defined in the document “Safety Policy at CERN - SAPOCO/42”.

5.2 Persons currently holding Management and other senior positions within the Collaboration

Interim Spokesperson	A. Golutvin
CERN local contact person/GLIMOS	R. Jacobsson
Interim Chairman of the Country Represenatives Board	E. van Herwijnen

Conveners:

Theoretical Support	M. Shaposhnikov D. Gorbunov
Experimental facility	R. Jacobsson
Muon shield	M. Patel
Tracking in the decay volume	M. Ferro-Luzzi
Tracking in the emulsion based spectrometer	G. De Lellis
PID	W. Bonivento

Muon detector	G. Lanfranchi
Calorimetry	M. Villa V. Egorychev
Timing and front tagger	B. Storaci
Background tagger	H. Lacker
Vacuum vessel	A. Malinin
Online & trigger	H. Dijkstra
Physics performance	N. Serra
Computing and software	F. Rademakers
Simulation	T. Ruf

Annex 6 Overview of the Financial Participation of the Funding Agencies

As stated in article 9.1, the MoU is not legally binding. However, concerning financial involvement, it is a commitment for each participating institute to search for the funding corresponding to its share of tasks.

The estimations in the table below are the manpower (FTE, or full time equivalent) and costs for R&D for the CDR, for the 3 years from 2016 to 2019. It takes into account prototypes or investments for demonstration of parts of SHiP.

The theorists who participate in the Experiment will not contribute directly to the construction, but will have a role in developing schemes that will be applied to the Experiment.

In case a Collaborating Institution cannot fund a part of the hardware under its responsibility, the Collaboration will seek among its collaborators the means to cover the missing amount and possibly search for other collaborators.

Please note that the figures in this provisional 'money-matrix' are subject to approval by the various funding agencies.

Country	Commitment	Institutes	Manpower	Resources
Bulgaria	Simulation and analysis tools (NTD)		1 master student	
CERN	Coordination (beamline, target, infrastructure)		4	20 kCHF
	mu-shield		1	10 kCHF
	straws		0.5	60 kCHF
	online		0.5	10 kCHF
	Offline		3	0
	Simulation		3	0
	Total		12	100
Denmark	DAQ		0.7 FTE + students	4 kCHF
France	PID/CALO		1 FTE in 2016	Concrete commitments expected in June
	PRS/CALO/TRD		required	
	STD		senior engineer consultant	
Italy	Muon (HS)	LNF,BO,FE	3+3	65 k€
	CALO (HS)	BO	1.2+0.6	43.5 k€
	Timing/PRS (HS)	CA	5+0.5	35 k€
	EMU target (NTD)	NA,RM1,BA	12+6	108 k€

	Tracker target (NTD)	LNF	1 (6+4 shared with CMS)	30 k€
	RPC (NTD)	NA,BA	6.6+3.6	97 k€
	Total		30.8+13.7	378,5 k€+204k€ (travel)
Japan	EMU detector		6+3	60k CHF
Korea	EMU scanning	4 institutes	7+2 students	travel available
Russia	straw tracker	JINR	JINR SHiP group	
UK	mu- shield magnet design	IC,UCL,WA,BR, RAL		
	Background monitoring in the hall			
	Readout electronics			

Annex 7 General Conditions applicable to Experiments at CERN
Laboratoire Européen pour la Physique des Particules European Laboratory for Particle Physics

GENERAL CONDITIONS

APPLICABLE TO

EXPERIMENTS AT CERN

20 February 2008

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Article Title Page

GENERAL CONDITIONS

applicable to

Experiments at CERN

(*Terms with a particular meaning in the context of this document are defined at the end – their first occurrence in the document is indicated with a reference number thus:* term[n]*).*

The mission of the European Organization for Nuclear Research ("*CERN*") is to sponsor international scientific research in high-energy physics.

This document (the "*General Conditions*") sets out the rules and procedures in organisational, managerial and financial matters, which apply to the participation by Universities and Research Institutions (the "*Collaborating Institution(s)*") in experiments at CERN. The Collaborating Institutions jointly constitute the "*Collaboration*". They provide, and are responsible for, the Visiting Research Teams[1] (the "*Team(s)*") carrying out the experiment.

The General Conditions also define CERN's role as Host Laboratory of the experiment, which must be distinguished from its role as a Collaborating Institution, as the case may be.

Any reference made in the General Conditions to a specific document shall be to its most recent version.

1. SCOPE OF APPLICATION

The General Conditions apply to Approved Experiments[2] (the "*Experiment(s)*") carried out on the CERN site[3]. They do not apply to Recognised Experiments[4].

2. PARTIES AND THEIR REPRESENTATION

2.1. The parties involved in the Experiment (the "*Party*" or the "*Parties*") are:

-CERN as Host Laboratory;

-The Collaborating Institutions (including, as the case may be, CERN).

2.2. Each Party shall have a representative:

-CERN as Host Laboratory shall be represented by its Director of Research**,** acting on behalf of the Director-General;

-The Collaboration shall appoint a Spokesperson, who shall represent the Collaboration to the outside, including to CERN as Host Laboratory, and co-ordinate its work. Where the Spokesperson is not stationed full-time at CERN, the Collaboration shall also appoint a Contactperson at CERN;

-Each Collaborating Institution shall appoint a Team Leader who shall represent it in its relations with CERN as Host Laboratory. The Team Leader's responsibilities are detailed in the "Appointment of Team Leader" form (available on the Users' Office Web site – see Article 5.7).

2.3. Each Collaborating Institution shall ensure that the members of its Team (the "*Team Member(s)*") comply with the General Conditions.

3. BASIC DOCUMENTS GOVERNING THE EXECUTION OF THE EXPERIMENT

3.1. The following documents shall constitute the formal basis for the Experiment:

3.1.1. the ***EXPERIMENTAL PROPOSAL***, after its approval by the CERN Research Board on the recommendation of the Experiment Committee dealing with the appropriate part of the physics programme (the "*Experiment Committee*");

3.1.2. the ***TECHNICAL DESIGN REPORTS***, where appropriate;

3.1.3. the ***MEMORANDUM OF UNDERSTANDING*** (the ***"MoU"),*** which sets out the detailed arrangements specific to the Experiment and which shall be agreed and signed by CERN as Host Laboratory and the Collaborating Institutions, for the purpose of signature represented, as the case may be, by their Funding Agencies[5]. Through the signature of the MoU, the Collaborating Institutions accept its terms;

3.1.4. the ***GENERAL CONDITIONS***.

Contents of the MoU

3.2. The MoU may be a single document setting out the arrangements for construction, installation, maintenance and operation, or it may comprise two documents, one for construction and installation and the other for maintenance and operation. As a guide, the essential parts of the MoU are the following:

a) a list of the Collaborating Institutions responsible for the Teams carrying out the Experiment;

b) a list of the Funding Agencies of the Collaboration;

c) details of the persons with specific responsibilities in the Experiment;

d) the obligations of the Parties for:

i) construction and installation

- the obligations for construction and installation of the detector components and the auxiliary equipment (jointly the "*Equipment*");
- a breakdown of the funding requirements for the Equipment, together with the contributions of the Parties;
- a timetable for the construction and installation of the Equipment;

ii) maintenance and operation

- the obligations for maintenance and operation of the Equipment;

e) an explicit statement that the General Conditions apply;

f) references to any specific agreements and Protocols relevant to the Experiment, copies of which shall be included as Appendices to the MoU.

4. ORGANISATION OF THE COLLABORATION

Internal autonomy and co-ordination with CERN as Host Laboratory

4.1. In its internal relations, the Collaboration shall be free to take such organisational decisions as deemed necessary, always subject to the terms of the MoU and the General Conditions. Any financial arrangements between CERN as Host Laboratory and the Collaboration shall be subject to the Financial and Administrative Provisions for Visiting Research Teams.

Co-ordination in matters of safety

4.2. The Leader of the CERN Department responsible for the physics programme of which the Experiment is part shall appoint a Group Leader in Matters of Safety (GLIMOS), on the proposal of the Spokesperson. The rights and responsibilities of the GLIMOS are defined in the document "Safety Policy at CERN -SAPOCO/42".

Finance Review Committee/Resources Review Board

Initial Decision

4.3. For Experiments involving large capital investments, a Finance Review Committee (FRC) or a Resources Review Board (RRB) may be set up by agreement of CERN as Host Laboratory and the Collaboration.

Membership

4.4. The FRC/RRB shall consist of one representative of each Funding Agency, along with the Managements of CERN and the Collaboration. It shall be chaired by the CERN Director of Research.

Terms of reference

4.5. The role of the FRC/RRB includes:

-reaching agreement on the MoU;
-approving any modification of, or addition to, the Experiment that would require amending the MoU;
-monitoring the supply of Equipment according to the agreed schedule;
-monitoring the Common Projects[6] and the use of the Common Funds[7];
-monitoring the general financial and manpower support;
-approving a maintenance and operation procedure and monitoring its functioning;
-approving the annual construction and installation budgets as well as those for maintenance and operation.

4.6. The Collaboration Management reports to the FRC/RRB on technical, managerial, financial and administrative matters, and on the composition of the Collaboration.

5. CERN'S OBLIGATIONS AS HOST LABORATORY

PRINCIPLES

Installation

5.1. The Collaboration shall ensure that the Equipment and counting rooms meet the CERN Safety Rules. Provided that this is the case, CERN shall agree in writing to their installation in the appropriate experimental area.

Duration

5.2. CERN shall agree to keep the Equipment on-site during the data-taking for the experimental programme approved by the CERN Research Board.

Network connections

5.3. CERN shall agree that computers and peripherals belonging to the Collaboration, which are needed for the operation of the Equipment, may be connected to the CERN computer network, provided they meet its compatibility and security standards, including as set out in the document "Operational Circular No 5 – Use of CERN Computing Facilities" and subsidiary rules.

Insurance

-Property

5.4. CERN shall at its expense insure against the risks of fire, explosion, natural disaster and water damage all items belonging to the Collaboration or a Collaborating Institution, once they have been delivered to the CERN site, added to the Ownership Inventory (Article 6.10) and accepted in writing by CERN. CERN shall not insure such items against the risks of transport, crane or rigging accidents. It may however offer the possibility that such insurance is taken out at the expense of the Collaborating Institution(s) concerned.

-Third party liability

5.5. CERN shall at its expense insure the members of the Collaborating Institutions against third party liability incurred by them at CERN in the execution of the Experiment.

-Limitation of coverage

5.6. The insurance covers defined in Articles 5.4 and 5.5 are subject to the provisions, including the specified deductibles, exclusions and limits, of CERN's insurance policies. Any risk or amount not covered by such policies shall be for the exclusive account of the Collaboration. CERN does not warrant or accept liability as to the sufficiency of its insurance policies in relation to the risks incurred by the Collaboration.

SERVICES

User support, Users' Office and ACCU

5.7. CERN operates a Users' Office as a point of contact with the user community. Documentation for users is maintained on the Users' Office Web site, which can

be accessed through the CERN home page (http://www.cern.ch). CERN shall provide access to its services, as described in the "CERN Guide for Newcomers" (available from the Users' Office Web site). The Users' Office provides assistance on questions concerning access to the services provided by CERN.

The Advisory Committee of CERN Users (ACCU) promotes links between CERN Management and the User Community and advises CERN Users on the working conditions and the arrangements for technical support.

Standard services and facilities

5.8. CERN normally provides, free of charge and within the limits and constraints imposed by the available resources and schedules of accelerators, the following standard services and facilities for the duration of the Experiment:

Particle beams and equipment

a) particle beams and related shielding, monitoring equipment and standard communication with the accelerator control rooms;

b) beam time allocation and scheduling, in accordance with the recommendations of the Experiment Committee;

c) test-beam time for testing prototypes and calibrating final detector components, subject to the applicable scheduling and allocation procedures;

Space

d) floor space in the experimental area(s) for the Equipment;

e) laboratory and hall space for construction, testing and assembly of the Equipment;

f) temporary short-term storage space for spare parts, handling and assembly tools and Equipment that is awaiting installation or removal. CERN reserves the right to charge the cost of longer-term storage of the above items to the Collaborating Institution(s) concerned;

g) office space, equipped with standard furniture and infrastructure facilities including network connections, telephones and electricity;

Supplies and installations at the Experiment

h) assistance with the installation and removal of the Equipment, such as the provision of crane and rigging services, geometrical survey and alignment, as well as transport of the Equipment on and between the parts of the CERN site and inside the experimental areas;

i) mechanical infrastructure, local infrastructure for the supply of mains electricity, raw cooling water, compressed air and standard connections to the CERN communication network;

Computing

j) central computing resources for the Collaboration, in amounts to be decided in accordance with the applicable CERN allocation procedures;

Transport of persons

k) basic transportation for personnel between the main parts of the CERN site, including the experimental areas;

Safety services

l) access to its safety services for advice, inspection and verification, and first aid or other emergency help;

Administrative services

m) access to its administrative services to assist the Collaboration in financial matters, in accordance with the Financial Rules and the Financial and Administrative Provisions for Visiting Research Teams;

Purchasing services

n) access to its purchasing services to assist the Collaboration in placing purchase orders and contracts for its account, in accordance with the CERN Financial Rules and the CERN Purchasing Procedures. In such cases there is immediate automatic transfer of ownership to the Collaborating Institution(s) for which the purchase is made. This(These) Institution(s) shall hold CERN free and harmless from liability arising from such assistance;

Maintenance and operation

o) the resources needed to operate and maintain the standard infrastructure and other equipment supplied by CERN as Host Laboratory.

Special services

5.9. A variety of services other than those specified above may be provided to the Collaboration on request, subject to the availability of resources. Such services shall be charged according to the applicable conditions.

Special equipment

5.10. Any additional infrastructure equipment to be provided by CERN, as well as the obligations of CERN and the Collaborating Institutions with regard to the construction, installation, maintenance and operation of such equipment, shall be explicitly mentioned in the MoU.

6. OBLIGATIONS OF THE COLLABORATING INSTITUTIONS

Basic obligations

6.1. In their capacity as members of the personnel of CERN[8], the Team Members shall be subject to the authority of the Director-General of CERN and shall comply with the rules and regulations in force at CERN. Items brought onto the site by the Collaboration are subject to the rules and regulations in force at CERN.

Status of personnel

6.2. Each Collaborating Institution shall ensure that its Team Members shall for the duration of their Contract of Association[9] with CERN (the "*Contract of Association*") remain employed by, and receive a salary from, their Collaborating Institution. It is understood that where they are students, the Team Members shall remain enrolled at their Collaborating Institution, and where they have a sponsor, they shall remain under contract with, and continue to be financed by, their sponsor.

6.3. Each Collaborating Institution shall ensure the provision of adequate social and third party liability insurance cover to its Team Members and the members of their family accompanying them. The social insurance must include cover against the financial consequences of illness and accidents that is adequate in the Host States of CERN for the duration of the Contract of Association.

6.4. Each Collaborating Institution shall be liable to CERN for any cost or expense resulting from the situation where its Team Members have insufficient insurance cover.

Medical surveillance and certificates

6.5. Each Collaborating Institution shall remain responsible for the medical surveillance of its Team Members and, in the case of Team Members who are to work in conditions which are deemed to pose special risks (e.g. radiation controlled areas), shall supply to the CERN Medical Service a certificate of medical fitness, for the first time on registration of the Team Member at CERN and then every two years thereafter (a form for such certificates is available on the Users' Office Web site – Article 5.7).

Safety briefings and inspections

6.6. The Collaborating Institutions, in conjunction with the CERN Department responsible for the physics programme of which the Experiment is part, shall ensure the safety of the Team Members and the Equipment. The Collaborating Institutions shall participate in safety meetings and studies of the Experiment. They shall ensure compliance by the Team Members with the CERN Safety Rules.

Each Team Member has specific safety responsibilities and obligations, as defined in the document "Safety Policy at CERN -SAPOCO/42". The Team Members shall attend the CERN safety course(s) for newcomers, any compulsory CERN safety course, and all specific safety courses deemed necessary by the Collaboration.

The CERN safety personnel shall be entitled to carry out safety visits, checks and inspections as well as other safety measures set out in the document "Safety Policy at CERN - SAPOCO/42".

Supply of Equipment

6.7. The Collaborating Institutions shall make available on the CERN site, according to an agreed timetable and in working order, the Equipment that they have undertaken to supply and commission. The Spokesperson shall promptly inform the CERN Director of Research of any material failure to meet the agreed schedule. For experiments with an FRC/RRB, this body shall monitor such matters.

Transport, installation and dismantling of Equipment

6.8. Each Collaborating Institution supplying Equipment shall be responsible for its delivery to and removal from the CERN site, always in compliance with applicable export laws and restrictions. All such Equipment shall be properly documented to indicate its ownership status (Article 6.10) handling requirements and any potential hazards that it may pose. The Collaborating Institutions shall be collectively responsible for the installation and dismantling of the Equipment.

Ownership of Equipment

6.9. Except as may be agreed in writing by the owner and CERN as Host Laboratory, the delivery of Equipment to the CERN site or its handling on the CERN site shall not affect its ownership. The owner and CERN as Host Laboratory may agree in writing to transfer to CERN the ownership of Equipment which is no longer required by the Collaboration.

Ownership inventory

6.10. As a condition of coverage by CERN's insurance policy, the Collaboration shall provide CERN with a list of the Equipment which it brings on the CERN site, specifying for each item the owning Collaborating Institution(s) or joint ownership by the Collaboration. It shall keep the list up-to-date and inform CERN promptly of any modifications.

Maintenance and operation of Equipment

6.11. The Collaborating Institutions shall be collectively responsible for the maintenance and operation of the Equipment, and for providing the resources necessary to carry out the experimental programme.

Assignment of Equipment

6.12. Any Collaborating Institution providing Equipment shall continue to make it available to the Collaboration until the Experiment has been declared completed (Article 8.2).

Early removal of Equipment

6.13. The Collaboration may request the removal from the CERN site under the responsibility of the owning Collaborating Institution(s) of any Equipment which in the opinion of the Collaboration is no longer required for the Experiment.

Release of space

6.14. Space allocated for construction and assembly shall be released when these activities have terminated. As Host Laboratory, CERN reserves the right to change the space allocation during the lifetime of the Experiment. As soon as the Experiment has been declared completed (Article 8.2), all space used by the Collaboration, including office and laboratory space, and the space used for testing and running the Experiment, shall be made available to CERN for reallocation.

Removal of Equipment

6.15. Equipment shall be removed from the CERN site under the responsibility of the owning Collaborating Institution(s) within six months following a request from

the Leader of the CERN Department responsible for the physics programme of which the Experiment is part.

6.16. The dismantling and removal of the Equipment must respect the CERN Safety Rules and the laws of the countries through which the dismantled Equipment will transit during the removal, including the country of its final destination (e.g. transport, disposal, elimination of special or radioactive waste). Except as may be agreed in writing by the Collaboration and CERN, the associated costs shall be borne by the Collaboration.

7. INTELLECTUAL PROPERTY

Publication and use of data and knowledge

7.1. CERN is bound by its Convention to publish or otherwise make generally available the results of its experimental and theoretical work.

7.2. The Collaborating Institutions shall strive to publish any data and knowledge resulting from the experiment through Open Access[10] journals. Where the copyright in an article shall be transferred to the publisher, each Collaborating Institution shall ensure that it has the necessary internal authorisations to approve such a transfer.

7.3. Subject to Articles 7.4 and 7.5, each Collaborating Institution and CERN as Host Laboratory shall be entitled to use any data and knowledge resulting from the Experiment for its own scientific non-military purposes.

Contribution of proprietary information

7.4. A Collaborating Institution contributing proprietary information to the Collaboration shall ensure that it has or has procured the rights to use, and to contribute to the Collaboration for use by the other Collaborating Institutions, such proprietary information for the execution of the Experiment. The term "use" shall include any integration, modification, enhancement and redistribution. Where the use of proprietary information is subject to restrictions, the contributing Collaborating Institution shall disclose them in writing when making its contribution available to the Collaboration. The obligations defined in this article shall apply whether or not the proprietary information is pre-existing or developed in the execution of the Experiment, and whether or not it was developed individually or jointly with one or more other institution(s).

Use of proprietary information

7.5. The contribution by a Collaborating Institution of any proprietary information, including information protected by trademark, patent or copyright, shall not create any right in respect of such information for the other Collaborating Institutions, other than a free, irrevocable and non-exclusive licence to use such information in the execution of the Experiment.

Publication and disclosure of proprietary information

7.6. Subject to the intellectual property rights of the Collaborating Institutions having contributed the proprietary information and taking into account any potential for commercial exploitation, the Collaborating Institutions shall strive to publish and make publicly available all proprietary information contributed to the

Collaboration. In particular, they shall consider making any software available under Open Source licence conditions.

Limitation of liability

7.7. The Collaborating Institutions provide no warranties or representations of any kind to each other.

Each Collaborating Institution shall use the data and knowledge resulting from the Experiment and the proprietary information contributed to the Collaboration at its own risk.

The Collaborating Institutions shall have no liability to each other with respect to the subject matter of this Article 7.

8. FINAL PROVISIONS

Modification of the Experiment and amendment to the MoU

8.1. The Collaboration shall agree on any modification of or addition to the Experiment that would require amending the MoU and shall inform CERN as Host Laboratory of such changes. For experiments with an FRC/RRB, such changes shall also be approved by this body. Where the changes constitute a substantial change to the Experiment, they shall be submitted to the Experiment Committee for approval by the CERN Research Board and the Director-General. Any amendment to the MoU shall be signed by the representatives of the parties to the MoU.

Duration of applicability of the MoU

8.2. Unless another duration is specified in the MoU, the MoU shall remain in force until the CERN Director of Research, in agreement with the Spokesperson, has declared the Experiment completed, the Equipment has been dismantled and the arrangements for its disposal agreed in writing.

8.3. Notwithstanding the foregoing, the General Conditions shall remain in force.

Observance of the MoU and the General Conditions

8.4. The MoU is not legally binding but the parties to the MoU recognise that the success of the Collaboration depends upon their adherence to its provisions. Any default under its provisions shall be dealt with, in the first instance, by the Collaboration in consultation with the CERN Management and if necessary then by the FRC/RRB (where such a body exists).

8.5. Notwithstanding the foregoing, the provisions of the General Conditions are binding.

Liability

8.6. Except as specifically stipulated in the General Conditions, the Parties shall not be liable to each other for any loss or damage arising in connection with the Experiment.

Arbitration

8.7. If a dispute within the Collaboration or between the Collaboration and CERN as Host Laboratory cannot be resolved amicably, it shall be referred by any party to the dispute for arbitration to the President of the CERN Council, whose decision shall be binding and final, without right of revision or appeal.

Relevant documents

8.8. The following documents apply to the execution of the MoU:

-the CERN Guide for Newcomers; -Financial and Administrative Provisions for Visiting Research Teams; -Use of CERN Computing Facilities - Operational Circular No 5 (http://cern.ch/ComputingRules/); -the Safety Guide for experiments at CERN (http://cern.ch/SafetyGuide/); -the Safety Policy at CERN - SAPOCO/42; -Purchasing Rules and Procedures for Experiments at CERN

Definitions

1 **Visiting Research Team**: A Collaborating Institution's personnel involved in the Experiment.

2 **Approved Experiment**: An Experiment approved by the CERN Research Board and the Director-General after consideration of a written proposal submitted to the appropriate Experiment Committee, taking into account scientific interest, technical feasibility and the constraints imposed by available resources.

3 **CERN site**: All parts of CERN's fenced-in domain and all of its underground works.

4 **Recognised Experiment**: An experiment in fields allied to particle physics, such as astroparticle physics, the full definition of which was decided by the CERN Research Board (CERN/DG/RB 99-285). The conditions applicable to such experiments are decided by the CERN Research Board on a case-by-case basis.

5 **Funding Agency**: A body providing resources to one or more of the Collaborating Institutions for the purpose of participation in the Experiment. A Collaborating Institution may itself be a Funding Agency

6 **Common Project**: A project that the Collaboration has decided to manage jointly under the authority of the Collaboration Management.

7 **Common Funds**: Funds contributed by the Funding Agencies to joint accounts administered by the Collaboration Management.

8 **Member of the personnel of CERN**: All Team Members who are not employed by CERN are required to sign a Registration Form, in which they apply to become an associated member of the personnel of CERN.

9 **Contract of Association:** The contract defined in Article RI 2.04 of the Staff Rules and Regulations of CERN.

10 **Open Access**: The free, irrevocable, worldwide right of access to, and use of, a work in any digital medium for lawful purposes, subject to proper attribution of authorship.