

# MICE Constitution

## 1. General

The goal of the MICE Collaboration is to build and operate the MICE setup for the study of muon ionization cooling at the Rutherford Appleton Laboratory (RAL). The experiment is described in the proposal (<http://mice.iit.edu/micenotes/public/pdf/MICE0021/MICE0021.pdf>).

The basic structure of the collaboration assumes four geographical regions: Continental Europe, Asia, the United Kingdom and the United States of America.

The **organisational structure** of the MICE Collaboration contains the following key elements:

The Collaboration Board

The Executive Board

The International Project Board

The Experiment Management Board

The Oversight Committee

Details of these boards are given under separate headings below.

## Membership of the Collaboration

Member Institutes of the Collaboration are all those Institutes that have been accepted as such by the Collaboration Board. Any physicist, engineer or graduate student belonging to one of the Institutes, and spending a significant fraction of his research time in MICE, may become a Member of the Collaboration.

## New Members of the Collaboration

The candidature of new Institutes is first considered by the Executive Board. Once the Executive Board decides that sufficient information is available on the intended participation, the Executive Board presents the candidature to the Collaboration Board for a vote. For Institutes joining the Collaboration after the construction of (part of) the MICE detector, an appropriate financial contribution to the MICE Common Fund, to be fixed by the Collaboration Board, will be required.

## Plenary Meeting

The full collaboration holds Collaboration Meetings at least two times a year.

The general forum, the MICE Plenary Meeting, assembles at these occasions.

The Plenary Meeting is open to everyone in the Collaboration and is the forum for discussion within the Collaboration.

All major issues concerning the physics aims of MICE, the design of MICE components and all other important matters are presented to and discussed by the Plenary Meeting.

Decisions taken by the Collaboration Board, Executive Board, International Project Board and Experiment Management Board shall be reported to the Plenary Meeting.

Plenary Meetings shall normally be organised and chaired by the Spokesperson, but these tasks may be delegated at the Spokesperson's discretion.

## **2. The main officers of the Collaboration**

### **The Spokesperson**

MICE has one Spokesperson who is the leader of the collaboration.

The Spokesperson is responsible to the Collaboration Board for the execution of the MICE project.

The Spokesperson represents the MICE Collaboration to the scientific committees, to the RAL management, and to the outside world.

The Spokesperson chairs the Executive Board.

The Spokesperson shall not represent any country, institution, or activity within MICE.

The Spokesperson or Deputy Spokesperson must be resident at, or close to, RAL during the data taking phase.

### **Election**

The Spokesperson is nominated by members of the Collaboration Board and is elected by a vote of the Collaboration Board unless there is consensus on a single candidate.

The election takes place no later than six months before the termination of the current Spokesperson's term of office.

Candidates should be presented by at least two members of the Collaboration Board and their names should be announced at least one month before the election.

The Spokesperson can be dismissed by a vote of more than two-thirds of the Collaboration Board.

### **Tenure**

The term of office is nominally three years with the possibility of re-election.

Towards completion of the experiment, the spokesperson will retain the position for the lifetime of MICE if the following tenure were likely to be less than one year.

### **The Deputy Spokesperson**

The Deputy Spokesperson will assist the spokesperson and act for him/her as necessary.

Either the Spokesperson or Deputy Spokesperson must be resident at, or close to, RAL during the data-taking period of the experiment.

The Deputy Spokesperson is to have delegated authority to make decisions in the absence of the Spokesperson. The Deputy Spokesperson shall not represent any country, institution, or activity within MICE.

The Deputy Spokesperson is an *ex-officio* member of the Collaboration Board, the International Project Board, the Experiment Management Board and is expected generally to attend the meetings of the Oversight Committee.

### **Appointment**

The choice of Deputy Spokesperson is proposed by the Spokesperson and approved by the Collaboration Board.

It would be expected that this person would not be from the same geographical region as the Spokesperson.

The Deputy Spokesperson can be dismissed by a vote of more than two-thirds of the Collaboration Board.

## **The Project Manager**

The Project Manager is responsible for coordinating all technical and financial activities including construction, installation, financial and schedule planning.

The Project Manager chairs the International Project Board and is an ex officio member of the Collaboration Board and the Executive Board.

The Project Manager shall be resident at, or close to, RAL during his/her period of office.

### **Appointment**

The Project Manager is chosen by the Executive Board in collaboration with RAL and the appointment must be approved by the Collaboration Board.

The Project Manager can be dismissed by a vote of more than two-thirds of the Collaboration Board.

## **The Chairperson of the Collaboration Board**

The Chairperson organises meetings of the Collaboration Board.

The Chairperson shall ensure that any major decision, which the Spokesperson or Executive Board wishes to take, appears as an agenda item for discussion in the Collaboration Board.

The Chairperson is an *ex-officio* member of the Executive Board, the International Project Board and the Experiment Management Board. Within the Executive Board, he/she shall represent the interests of the Collaboration Institutes.

In the event of an urgent decision, which cannot await a Collaboration Board meeting, the Chairperson can instigate an email vote of the Collaboration Board.

If necessary the Chairperson can act on behalf of the Collaboration Board but this must later be ratified at the next Collaboration Board meeting.

### **Appointment**

The Collaboration Board Chairperson is nominated and elected by the Collaboration Board, using the same voting principle as for the Spokesperson. The period of office is two years **with/without** possibility of re-election.

The appointment of the Collaboration Board Chairperson can be terminated at any time by a vote of more than two-thirds of the Collaboration Board.

## **3. The Collaboration Board**

The Collaboration Board represents the ultimate authority in the MICE organisation and represents the interests of the collaborating institutes. It is the body through which all major decisions of the MICE Collaboration management are to be endorsed, and it has the power to modify the constitution.

### **The Role of the Collaboration Board**

It makes all major decisions on Collaboration policies and procedures.

It makes all decisions on the application and termination of institute membership.

It elects the Spokesperson and ratifies the appointments of the Deputy Spokesperson, Project Manager and the Subsystem Coordinators.

It approves the MICE detector options and the distribution of responsibilities for the detector among the participating institutes, as proposed by the MICE Management.

It ratifies major technical decisions.

Each year it will ratify proposals for the MICE budget, common fund and maintenance & operations costs and its sharing between collaborating institutes. Under exceptional circumstances, the Collaboration Board may allow a reduction of the financial contribution for a particular Institute or allow a replacement of the financial contribution by an alternative contribution (e.g. manpower or material). Such exceptional contributions need a yearly approval by the Collaboration Board.

### **Working Procedures and Practices**

The Collaboration Board shall strive to reach consensus whenever possible.

The agenda for the Collaboration Board is prepared by the Chairperson in collaboration with the Spokesperson and the Deputy Spokesperson and is circulated to each Collaboration Board member at least one week in advance. Any member of the Collaboration Board may request additional topics to be included. The agenda shall also be made available to the Collaboration on the MICE website.

Each voting member can send another MICE member of his/her institute to represent that institute at a Collaboration Board meeting if he/she cannot participate. Alternatively he/she may nominate another member of the board to act as proxy in any votes at the meeting. The nomination of a replacement or proxy shall be communicated in advance to the Chairperson of the Collaboration Board.

The proceedings of the Collaboration Board are recorded in minutes written by the Secretary. Draft minutes are circulated to members of the Collaboration Board for approval at the next meeting. A summary of the meeting shall also be made available to the Collaboration on the MICE website.

### **Chair**

The Collaboration Board is chaired by a Chairperson elected by its members from within the Board's ranks.

### **Membership**

One person representing each Voting Institute and chosen by the Institute. (A Voting Institute must have at least two members and contribute to the Common Fund. Smaller Institutes may merge to fulfil the above conditions and thus be represented.)

Spokesperson

Deputy Spokesperson

Project Manager

RAL (ISIS) Group representative

Coordinators for the main subsystems: tracker, absorbers, rf, software, DAQ, analysis, etc.  
The coordinators may also be Institutional Representatives.

Secretary, appointed by the Chairperson.

The Chairperson, Spokesperson, Deputy Spokesperson and Project Manager do not represent their Institute. Subsystem Coordinators and the Secretary may represent their Institute by prior agreement with the Chairperson.

The Chairperson of the Collaboration Board can invite non-voting guests to attend a particular meeting as appropriate.

## **Meetings**

The Collaboration Board meets once per MICE Collaboration week and as necessary in an emergency.

## **Voting**

Only Institute representatives vote, with one vote per Institute.

The Chairperson, Secretary, Spokesperson, Deputy Spokesperson, Project Manager and RAL (ISIS) Group representative are non-voting members on the Collaboration Board (unless the Secretary represents his/her institute). However, the Chairperson may cast a vote in the event of a tie.

## **Elections in the Collaboration Board**

The Collaboration Board shall always strive to reach consensus in any decision it makes. However, if a situation shall arise when a consensus cannot be reached, the issue shall be decided by a vote.

A quorum of more than half of the possible voting members is required for a vote to be valid.

If an Institute cannot be present when a vote will be taken and has not nominated another representative as proxy they can appoint the Chairperson to vote on their behalf. In this case they must specify how this proxy vote will be used.

Except as stipulated elsewhere in this Constitution, decisions will be taken with a simple majority vote.

Any member of the Collaboration Board, seconded by another, can request a vote on any issue of the agenda, if that member feels that consensus has not been reached.

On a request from any member, voting in the Collaboration Board will be secret; otherwise it will be open or secret at the Chairperson's discretion.

In exceptional circumstances (e.g., the need to vote on an urgent issue that cannot await a Collaboration Board meeting), the Collaboration Board Chairperson can instigate an email vote of the Collaboration Board.

## **Voting to Appoint the Spokesperson and Collaboration Board Chairperson**

Approximately nine months before the end of the current holder's office the Collaboration Board Chairperson will appoint a Search Committee to establish whether there is a consensus within the collaboration about the next Spokesperson or Collaboration Board Chairperson.

The Search Committee will be:

- Collaboration Board Chairperson (Chair) – unless there is a conflict of interest;
- One representative of each region.

If the committee decides there is a consensus this name will be submitted to the Collaboration Board for approval.

If consensus is not possible the Collaboration Board chair will solicit nominations and the choice will be made by a secret vote in the Collaboration Board.

A candidate who has received more than half of the votes is elected. If no candidate receives this majority, the two candidates with the largest number of votes will participate in a second election round.

The election will be conducted by the Collaboration Board Chairperson unless that person is directly involved in the election. In the latter case the Collaboration Board Chairperson will

nominate another member of the Collaboration Board to conduct the election. In the extreme circumstance that there is to be an election for a new Collaboration Board Chair following the dismissal of the current one, the election will be conducted by a member of the Collaboration Board nominated by the Spokesperson.

#### **Voting to terminate the tenure of one of the senior officers**

The vote to terminate the tenure of Spokesperson, Deputy Spokesperson, Project Manager or Collaboration Board Chair will require agreement of more than two-thirds of the votes cast.

#### **Voting to change the Constitution**

This will require support by more than two-thirds of the votes cast.

#### **Voting for changes to the member institutes of the collaboration**

New institutes are voted into MICE at a meeting of the Collaboration Board and require support of more than two-thirds of the votes cast.

The participation of an institute in the MICE Collaboration can be terminated at any time by a vote of the Collaboration Board, with support of more than two-thirds of the votes cast.

## **4. The Collaboration Management**

### **The Executive Board**

The Executive Board has the executive power within the Collaboration and is the effective day-by-day power in the Collaboration. It has overall responsibility for managing the finances and the detector construction, installation, operation and analysis. It is an advisory body for the Spokesperson, who makes the final decisions. It also represents the Collaboration in its relations with outside bodies.

It is formally responsible to the Collaboration for all managerial and administrative matters relating to MICE.

The Executive Board shall work closely together to respond to day-to-day demands while bringing relevant issues, as appropriate, to the attention of the Collaboration Board.

All major decisions of the Executive Board shall be reported to the Collaboration Board.

The Executive Board shall organise the resources (money and manpower) and prepare the MICE budget and proposal for Common Fund to present to the Collaboration Board and to the funding agencies via the Oversight Committee.

The Executive Board shall recommend the Subsystem Coordinators to the Collaboration Board for approval.

The Executive Board can create “Task-Force” working groups when necessary.

Brief minutes of Executive Board meetings will be released to the Collaboration Board highlighting decisions taken.

### **Chair**

Spokesperson

### **Membership**

Deputy Spokesperson

Project Manager

Collaboration Board Chair

Software Coordinator

Analysis Coordinator

Eight Regional Representatives—Two from each of Continental Europe, Asia, UK, USA

RAL (ISIS) representative

Others by invitation.

The Spokesperson seeks approval of the Executive Board membership by the Collaboration Board.

### **Meetings**

Frequently, typically once per month.

## **The International Project Board**

The MICE International Project Board is responsible for all technical aspects of the MICE construction project and serves as an advisory body for the Executive Board. (Coordination of construction, operations and maintenance activities is ensured by cross membership with the Experiment Management Board.)

The design, coordination and technical execution of the experiment construction are discussed and agreed upon in the International Project Board. Technical decisions having important implications for the MICE setup must be presented to the Collaboration Board and through the Executive Board to the RAL Particle Physics Division Director for endorsement.

Brief minutes of International Project Board meetings will be released to the Collaboration Board highlighting decisions taken.

### **Chair**

Project Manager

### **Membership**

Project Engineer

MICE-UK Principal Investigator

US Muon Acceleration Program Director

Accelerator Integration Scientist

Experiment Integration Scientist

MICE-UK Capital Project Associate

MICE-US Construction Project Manager

Spokesperson

Chairperson, Collaboration Board

Deputy Spokesperson

Subsystem Coordinators

RAL infrastructure representative

MICE-US Financial Manager

The Project Manager can invite additional experts to attend an International Project Board meeting if required by the agenda or suggested by a board member.

## **Meetings**

As necessary, but at least once per month. The meetings are announced in advance to the Collaboration. A summary of the meeting is recorded and made available to the Collaboration on the MICE website.

## **The Experiment Management Board**

The Experiment Management Board is responsible for the delivery of the scientific programme of the experiment as defined by the Spokesperson in consultation with the Executive Board and the Collaboration Board. (Coordination of construction, operations and maintenance activities is ensured by cross membership with the International Project Board.) It reports to the Executive Board and Collaboration Board.

The Experiment Management Board is responsible for:

coordination of the maintenance and operation of the experiment to ensure the high-quality data required to deliver the scientific programme is delivered in a timely and efficient manner;

ensuring the smooth operation of the MICE Muon Beam and associated instrumentation, the MICE cooling cell, spectrometers and other instrumentation;

management of the analysis of the data from the experiment to ensure timely publication of high-quality results; and

coordination of the analysis and simulation activities, including the determination of alignment and calibration constants to allow analysis of data with the required precision.

Brief minutes of Experiment Management Board meetings will be released to the Collaboration Board highlighting decisions taken.

## **Chair**

Spokesperson

## **Membership**

Experiment Integration Scientist

Operations Coordinator

Physics Coordinator

Software Coordinator

Analysis Coordinator

Deputy Spokesperson

## **Working Procedures**

Technical decisions shall be taken in the subsystem groups wherever possible. Major technical decisions are expected to be prepared, and proposed, by the subsystem group and discussed in the International Project Board.

The International Project Board advises the Executive Board, which has the responsibility to make final decisions. The Project Manager reports on International Project Board business at the Plenary Meeting.



### **The Subsystem Coordinators**

The Coordinators of major subsystems are the formal contact persons for communication, via the International Project Board and Experiment Management Board, between the management and the people working on a given subsystem. They have the responsibility and authority to direct the work on that subsystem.

### **The Software Group**

Software is a subsystem and reports to the Experiment Management Board. However, in view of the different nature, the software coordinator is also a member of the Executive Board.

### **The Analysis Group**

Analysis is an effort equivalent to a subsystem and reports to the Experiment Management Board. The Analysis Coordinator is also a member of the Executive Board.

## **5. The Oversight Committee**

The Oversight Committee serves as a liaison with the funding agencies and RAL, to give an independent assessment of the project's progress, and to satisfy them that the project is keeping to financial and technical schedules. It is not formally part of the MICE Collaboration organization. Communication with this group shall be the responsibility of the Spokesperson and the Collaboration Board Chairperson.

## **6. Other Bodies**

The following bodies advise the Spokesperson and report to the Collaboration Board. Chairpersons and members are proposed by the Executive Board and approved by the Collaboration Board. The normal period of office will be two years; however appointments can be extended so that the bodies maintain continuity.

### **Editorial Board**

This body approves publications from the Collaboration. Two types of publications are foreseen:

#### **Collaboration Publications**

These publications are issued as 'MICE Collaboration' publications and it is expected that all active members of the collaboration will sign. All analysis results from the experimental data are expected to be in this category, as are descriptions of the experiment as a whole and its performance. These must be approved by the Editorial Board.

#### **Limited Publications**

Publications by a limited number of members of the collaboration concerning e.g. the construction and performance of specific subcomponents of the experiment fall in this category. They are not issued as 'MICE Collaboration' publications, however it is recommended that these papers are also submitted to the Editorial Board for approval so that the management is aware of them and can advise of any possible conflicts with other members that might occur.

## **Speakers Bureau**

The Speakers Bureau:

establishes at which conferences, workshops etc. talks about MICE would be relevant and contacts the organisers;

maintains a list of collaboration members who are appropriate and willing to give talks;

nominates speakers for collaboration talks.

This constitution was revised and amended by a decision of the MICE Collaboration Board at its meeting on.....