

## Subatomic Physics EEC Approval Process

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The Subatomic Physics EEC approval process has two approval processes available, depending on whether your proposal is a:

### **Letter of Intent (LOI):**

Describes the intent to carry out a certain experiment or scientific program for which a substantial extension of the facility capabilities is needed. These extensions include development of certain beams with sufficient intensities and purities, and new experimental capabilities, such as major new equipment or new techniques. LOIs should provide an estimate of the amount of beam time necessary to carry out this program. In particular, for long term programs that would require large amounts of beam time it is important for TRIUMF and the EEC to be aware of such needs.

The EEC evaluates the scientific and technical merit and judges - with input from the facility - the general feasibility of the proposed research, explicitly taking into account the approximate amount of beam time required.

For experimental or beam production facility upgrades that have a significant impact on TRIUMF, either during the upgrade or in subsequent operation, a [Project Charter Sheet](#) should be submitted. The LOI and EEC report would be part of the input to the Gate Review process.

The EEC may **endorse the LOI with high or medium priority (1 and 2 respectively) OR not endorse the LOI** which is deemed technically unfeasible or if the scientific case does not have sufficient merit.

The endorsement of a LOI signals that the EEC and TRIUMF support the general experimental program proposed and expects that competitive proposals for this program will be submitted on the timeline presented in the LOI. Any beam development needs for the proposed program will be entered into the beam development plan (see below) the proponents are encouraged to seek funding for and complete any planned technical developments. There will be no direct communication with the spokespersons to alert them of a successful beam development. The proponents are expected to submit proposals for experimental shifts once readiness of beam(s) and experimental equipment has been established.

Please note that the endorsement of a LOI does not guarantee the acceptance of proposals based on the developments proposed in the LOI but these proposals will be judged on their scientific merit at the time of submission and in comparison to

other submissions. **TRIUMF management will communicate the support for an endorsed LOI to NSERC and other funding agencies, as required.** Once LOIs have been reviewed there is no follow-up directly related to the LOI. New proposals related to the LOI will individually obtain experiment numbers that are not connected to the LOI. Reference to the LOI can and should be made in the proposals where appropriate.

**Proposal:**

Proponents ask for allocation of a number of shifts for a clear scientific case on the basis of the best estimate of achievable beam intensities. Beam should be expected with reasonable certainty to be available within 2 years, i.e. no major new developments needed. Technically the experiment should be convincingly mature to successfully run. New equipment should have been successfully commissioned. If it uses only well-established standard technologies an explicit commissioning may not be needed. The EEC will review proposals and either: **approve with high or medium priority** and allocate a certain number of shifts (please note that the medium-high category has been abandoned); **not approve** if deemed technically unfeasible, if the scientific case has not sufficient merit; or if beam time is limited and the scientific case is less compelling than that of other proposals submitted the EEC may **defer** the experiment if the EEC feels that the information presented is not sufficient or the EEC feels it has not sufficient expertise to judge the case and as a result recommends that an external expert review is conducted.

**After 2 years** the proponents must submit a progress report if they have not run the experiment and the proposal expires unless the EEC sees a special reason to keep it active. The maximum number of RIB shifts approved per EEC meeting is 50% of the maximum RIB beam time delivered per year.

**RIB beam developments:**

The Beam Strategy Committee has developed and published a [Beam Development Plan](#) based on the EEC recommendations for approved proposals and endorsed LOIs the technical difficulties associated with the developments a mid-term strategy for the development of new target materials, ion sources, purification methods, as well as the target module refurbishing plan.

RIB beam developments and yield measurements will be performed on the basis of the plans agreed upon by the Beam Development Strategy Committee. Written reports on the measured yields will be submitted to the chair of the Beam Priorities Committee. The measured yields will be posted in the ISAC yield database and in updates of the Beam Development Plan.

The Beam Development Strategy Committee will report regularly to the SAP-EEC on the achievements of the beam developments. The success of developments will be measured against the beam development plan. Reports on beam developments will also be given to the TUG at their AGM.

For 2013 major development efforts will concentrate on the implementation of a RILIS-RFQ system to suppress surface ionized contaminants, the further development of clean high-mass accelerated RIBs, as well as the development of high intensity Ne and F beams.

The Beam Development Plan is published online and updated regularly, at least after every SAP-EEC to include the new EEC recommendations. The current version of the Beam Development Plan can be found at:

<http://www.triumf.ca/research-program/planning-experiments/resources-while-planning>

For a list of beams available, please visit:

[http://www.triumf.info/facility/research\\_fac/beam/yield.php?choose=element](http://www.triumf.info/facility/research_fac/beam/yield.php?choose=element)