**SLAC National Accelerator Laboratory**

**FACET-II PROPOSAL**

 Date:

**A. EXPERIMENT TITLE:**

**B. PROPOSERS & REQUESTED FACILITY:**

|  |  |
| --- | --- |
| Principal Investigator:  |  |
| Institution:  |  |
| Contact Information: | Phone: Email: |
| Experiment Members: |  |
| Collaborating Institutions: |  |
| Funding Source (optional) |  |
| Approximate Duration: |  |

**C. EXPERIMENT:**

1. Science justification (one paragraph).
2. Description of science goals (~ 1 page). For each goal, indicate the approximate timeline (e.g. 6 months into experiment, 1 year, 3 years etc.) and define success.
3. Beam parameters needed based on the table below. This helps assess the appropriateness of the facility requested.
4. A concise statement defining overall success of the experiment to help the facility director and the program advisory committee judge progress.
5. Potential future evolution of the experiment (one paragraph)

**D. Experimental Apparatus:**

Give a description of the experimental apparatus (approximate maturity level expected is 30%), including as appropriate:

* + - Sketch of the planned layout with dimensions
		- Diagnostics required and expected observables
		- Facility hardware/capabilities that are required
		- Description of the DAQ system coming with the experiment and what additional DAQ will be needed from SLAC
		- Other electronics components (HV supplies, scopes, etc.)
		- Cooling or gas supply needs
		- Radioactive sources
		- Computing infrastructure needs
		- Any other aspect which might be of importance
		- Support needed from SLAC: riggers, technicians, DAQ systems, cooling, gas lines, etc.

**E. EXPERIMENT LOGISTICS:**

Give details of the logistics for the experiment, including as appropriate:

* Space Requirements (include sketch)
* Special Requirements (vacuum, cooling water, gasses, electricity, magnets, detectors, etc)
* Estimated timeline to complete planning and be ready for installation
* Estimated duration for installation effort
* Duration of Test and Shift Utilization
* Desired Calendar dates
* Any other aspect of Importance

**USEFUL FACILITIES INFORMATION**

(do not include in proposal)

**A. Proposal Submission:**

Go to <https://facet.slac.stanford.edu/proposals>
for information on how to submit proposals and for contact information.

**B. FACET-II Parameters:**

|  |
| --- |
| **Electron Beam** |
| Beam Type | e- |
| Beam energy (GeV) | 10 |
| Repetition Rate (Hz)(range) | 101 - 30 |
| Bunch Charge (nC)(range) | 20.5-3 |
| Bunch Length (** , **m)(range) | 201-100 |
| Beam Spot size (** , **m)(range) | 105-200 |
| **Experimental Laser** |
| Pulse Energy (µJ)(range) | 30010-800 |
| Pulse Duration (fs)(range) | 7050-500 |