

# Budget Justification

UConn - Jefferson Lab Contract 2012-2013  
Contract P.I. Richard Jones, Physics

## **Labor :**

Support is included for 2 months of summer support for one graduate student with a salary of \$5500 per summer. During the first summer this student will oversee construction of the tagger microscope and active collimator detectors, and the associated electronics. During the second summer this student will assist with installation of the detector and associated shielding in the tagger hall at Jefferson Lab, and check-out of the detector in-place using cosmic rays and the internal calibration system.

Support is included for one undergraduate student to assist with construction of the tagger microscope detector. The hourly pay rate for these students will be \$12/hr. The effort level averaged between summer months and the academic year will be 30%, with approximately half of this taking place during the summer of 2013. Undergraduate labor support extends to the end of month 15 under the project, when the detector is delivered to Jefferson Lab for installation.

Support is included for a part-time laboratory technician who will be the primary person responsible for construction of the tagger microscope detector at UConn, and its delivery and installation at Jefferson Lab. The technician will also oversee the work of undergraduate workers. The salary for the technician is computed on the basis of \$15/hr at 20hr/wk for the full duration of the project.

Support is included for machinist labor, for fabricating parts required for the construction of the tagger microscope detector. Wages are computed on the basis of \$45/hr and a total of 13 weeks of machinist labor. Machinist labor is only requested during the first 15 months of the contract, during construction of the tagger microscope.

These labor allocations are in addition to the "university contributed labor" that UConn has already committed to the GlueX project under the "Memorandum of Understanding between Jefferson Science Associates, LLC., Thomas Jefferson National Accelerator Facility and The Experimental Nuclear Physics Group at the University of Connecticut", signed July 1, 2011.

## **Fringe Benefits :**

Fringe benefits for graduate student summer stipends, for the part-time laboratory technician specialist, and for the part-time machinist are fixed by the University of Connecticut at the level of 7.0% for FY12-13 and 6.7% for FY13-14. Fringe benefits for undergraduate student labor are computed at the University of Connecticut standard rates.

**Equipment :**

The budget includes \$3000 for the low-voltage power supplies (WBS 15512170) and associated controls and monitoring system for the tagger microscope. Included in this cost are the power supplies themselves, and a detector-mounted computer equipped with a simple data acquisition system to control and monitor the supplies, as well as the internal pulser calibration system of the microscope. The budget also includes \$6000 (WBS 1553065) for the purchase of the remaining preamplifiers and associated electronics for the active collimator. It does not include the cost of parts, manufacturing, and assembly of the tagger microscope electronics boards (WBS 15512137) which will be purchased directly by the Jefferson Lab electronics group. It also does not include the cost of the tungsten wedges for the active collimator (included in WBS 1553065). Equipment purchased under this contract is not subject to UConn F&A costs.

**Materials and supplies :**

A total of \$7000 is requested for tooling, materials, and supplies for construction of the tagger microscope (WBS 15512126, 15512127), and for incidentals (connectors, cables, mounting hardware) required for assembly of the active collimator (WBS 1553065, 1553070). This amount also includes the costs of packaging and shipping of completed detector components from UConn to Jefferson Lab (WBS 15512165).

**Indirect costs (F&A) :**

Work performed under this contract will be carried out partly at the Storrs campus of the University of Connecticut and partly at Jefferson Lab. As stated in the "Memorandum of Understanding between Jefferson Science Associates, LLC., Thomas Jefferson National Accelerator Facility and The Experimental Nuclear Physics Group at the University of Connecticut", signed July 1, 2011, this contract will be subject to the intermediate F&A rate of 32% (Sect. 5.4, para. 1).