## **BNL BUDGET JUSTIFICATION**

1. **Senior Personnel:**

Erin Sheldon

Associate Physicist

Brookhaven National Laboratory

Will develop software pipelines to measure gravitational shear,execute these on simulations and DES data, and analyse the results to constrain cosmology.

Salary?

1. **Other Personnel:**

Research Associate during each of the five years.

The RA will process data, develop measurement algorithms, and publish results on gravitational lensing effects in a cosmological setting.

Salary?

1. **Equipment:**

10 computers approximately $8,800 each, plus overhead.

This price is higher than standard due to the inclusion of two high performance

GPUs in each machine.

1. **Travel:**

Foreign One trip outside the US for a Dark Energy Survey collaboration meeting.

Domestic One trip inside the US for a Dark Energy Survey collaboration meeting. Three weeks spent at a summer institute such as the Aspen Institute for Physics. Travel to visit collaborators at the university of Pennsylvania and at SLAC.

***E.* Other Direct Costs:**

*Materials & Supplies, Publications, Consultant Services, Computer Services, Sub Contracts, Equipment or Facility Rentals etc.* –

***F.* Indirect Costs:**

*Materials Burden* – This burden is calculated at the rate of 7.5% on the total cost for materials, supplies, travel and subcontracts.

*Organizational Burden*: This burden is calculated at the rate of 12.6% of Total Salary plus Fringe Benefits. This expense covers the costs for Departmental Management, financial and business management support services and environmental safety and health facility support services.

*Space Charge*: This charge is a direct charge for office space determined by average square footage of an office. This expense covers the cost for the maintenance of building space and equipment.

*Electric Power*: The cost for electric power is calculated at the rate of 1.92% of Total Salary plus Fringe Benefits. Note: Electric Power is exempt from BNL G&A.

*General and Administrative (G&A) Overhead* is assessed on all BNL research activities as a percentage rate against total modified costs less electric power. G&A consists of the following segments: Traditional G&A (8.25%), Common Support G&A (29.9%), and LDRD burden (5%).