

## **Budget Justification**

### **SENIOR PERSONNEL (\$15,966 total over a three year period)**

The project will be three years. Summer salary supports of 80 hours in each year are requested for the Principal Investigator (Dr. Ma). The amount of support is calculated based on the current salary rate with an anticipated 3% annual increase throughout the project. The University of Idaho has determined the salary year for senior personnel to be based on the calendar year. The PI will be responsible for the overall coordination of the project and will be the facilitator for the planned research tasks and outputs.

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### **POSTDOCTORAL RESEARCHER (\$105,560 total over a three year period)**

Full annual salary supports are requested for one postdoctoral researcher in years 1 and 2. The amount of support is calculated based on the current salary rate with an anticipated 3% annual increase. Prof. Ma will be the mentor of the postdoctoral researcher, who will work with the team to contribute to the research, education and outreach programs of this project.

### **RESEARCH ASSISTANTS (\$81,600 total over a three year period)**

The project will create one PhD research assistant position, which will be 780 semester hours and 320 summer hours per year for a period of three years. The stipend is calculated based on the current university rate (\$24/hour) with an anticipated 3% annual increase.

The project will create two undergraduate research intern positions, each with a stipend of \$2,400 per year for a period of three years.

### **FRINGE BENEFITS OF PERSONNEL (\$51,042 total over a three year period)**

Fringe benefits for faculty and staff members are charged at different rates approved by the university. For the faculty member, the fringe benefit rates will be 30.7% across all project years. For the staff member (i.e. postdoctoral researcher), the rates will be 41.8% across all project years. Fringe benefits for RAs are estimated at a rate of 2.1%, as approved by the university.

### **EQUIPMENT**

No support is requested for equipment with a price equaling to or over \$5,000.00 per unit.

### **TRAVEL (\$24,000 total over a three year period)**

Travel funds are requested for the project team members at Idaho (PI, postdoc and graduate student) to attend academic meetings or conferences, including the EarthCube Annual Meeting. The estimated average cost for a travel, including flights, hotel and per diem, for one person to one conference, will be approximately \$2,000. The project plans about 4 such conference travels per year over the period of three years.

Altogether, the amount of requested annual travel funds is \$8,000.00/year for year 1 to 3.

### **PARTICIPANT SUPPORT COSTS (\$20,000 total over a three year period)**

The project will organize two workshops in year 2 and 3 and will provide travel supports to five participants in each workshop. The estimated average cost of each travel support is \$2,000. Altogether, the amount of participant travel support is \$10,000.00/year for year 2 and 3.

**OTHER DIRECT COSTS (\$204,600 total over a three year period)**

The project will pay for software development services via a service contract to the Hudson Institute of Mineralogy. Services will cost \$66,900.00 in year 1, \$64,000.00 in year 2, and \$68,900 in year 3. The cost is for the development of data service architecture of the OpenMindat database, as well as the interface for data access and download. Detailed quotes of the service provided are listed as an attachment to the letter of collaboration from Anthony J. Nikischer.

Support is requested for open access publication. The project will deliver two of its publications as open-access journal papers. The publication fee will be \$2,400.00 per paper. The requested support will be \$2,400.00 per year for year 2 to 3.

**TUITION and FEES (\$39,152 total over a three year period)**

Support for the tuition and insurance of one PhD student research assistant is requested for a period of three years. The tuition and insurance will be charged at according rates (FY20-21 \$4,938/semester for tuition and \$951/semester for insurance) approved by the university, and both will increase 6% annually.

**INDIRECT COSTS (\$236,155 total over a three year period)**

A total of \$236,155 in indirect costs is requested. For the UI, modified total direct costs consists of all salaries and wages, fringe benefits, materials, supplies, services, travel and subgrants and subcontracts up to the first \$25,000 of each subgrant or subcontract (regardless of the period covered by the subgrant or subcontract). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, student tuition remission, participant support, rental costs of off-site facilities, scholarships, and fellowships as well as the portion of each subgrant and subcontract in excess of \$25,000.

**DIRECT AND INDIRECT COSTS IN TOTAL (\$792,475 total over a three year period)**

The total direct and indirect costs for the entire project are \$792,475.