**MUSE Basis of Estimate**

**Travel for USC Group WBS 7**

I. General Information

Task Name: Travel for USC Group

Unique ID Number

Date of Estimate: 12/19/2015

Estimate Generator: Steffen Strauch

Cost Category:

X M&S

SWF

Comments:

Vendor Quote Number if Applicable:

Drawing Reference Number or Attachment:

Costing Method: estimate based on actual expenses in 2012-2015

Total Task Cost: $60,349

Total Contingency: $8,449

II. Cost Estimate Breakdown

Cost of each element, along with justification

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item** | **Trips Year 1** | **Trips Year 2** | **Description** | **Total Price USD** |
| 1 | 1 | 1 | BV Meeting at PSI | $5,010 |
| 2 | 1 | 1 | Collaboration meetings in DC | $2,719 |
| 4 | 3 | 2 | Test beam time | $15,624 |
| 3 | 0 | 3 | Detector installation and commissioning | $17,841 |
|  |  |  | **Sub total** | **$41,194** |
|  |  |  | Indirect cost (46.5%) | $19,155 |
|  |  |  | **Total** | **$60,349** |

To successfully complete this construction project, we expect the following travels: Travel to PSI User Meetings (BV), item 1 in Table 2; travel to MUSE Collaboration meetings in Washington, DC (item 2); travel to summer and winter test beam times at PSI for members of the group (item 3); and travel to detector installation and commissioning at PSI for three members of the group (item 4).

Travel-cost estimates for trips to PSI are based on an average of $1,700 for airfare from Columbia, SC to Zürich and local travel costs, $70 accommodation per day, $60 meals per day, and for some members of our group $100 cost for visa (for stays over 8 days). Travel-cost estimates for trips to DC are based on an average of $500 for airfare from Columbia, SC to Washington, DC and local travel costs, $250 accommodation per day, and $32 meals per day. We have included a 2% increase of travel cost per year.

III. Contingency and risk analysis

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Technical | Design | Cost | Schedule | Contingency |
| Travel | 2 | 0 | 4 | 6 | 14% |

IV. Time Estimates and contingency on time

Time estimate is (optimistic+pessimistic+4\*most-likely)/6.

Sigma is (pessimistic-optimistic)/6.

Be sure to indicate if work days or calendar days.



Comments: No estimate yet.

