

NSF MRI discussion

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From the solicitation

- The Major Research Instrumentation Program (MRI) serves to increase access to shared scientific and engineering instruments for research and research training in our Nation's institutions of higher education, museums, science centers, and not-for-profit organizations.
- ... the MRI program assists with the acquisition or development of shared research instrumentation that is, in general, too costly and/or not appropriate for support through other NSF programs. Instruments are expected to be operational for regular research use by the end of the award period. For the purposes of the MRI program, proposals must be for either acquisition or development of a single instrument or for equipment that, when combined, serves as an integrated research instrument (physical or virtual). The MRI program does not support the acquisition or development of a suite of instruments to outfit research laboratories/facilities or to conduct independent research activities simultaneously.
- Instrument acquisition or development proposals that request funds from NSF in the range \$100,000-\$4 million will be accepted from all eligible organizations. Proposals that request funds from NSF less than \$100,000 will also be accepted from all eligible organizations for the disciplines of mathematics or social, behavioral and economic sciences and from non-Ph.D.-granting institutions of higher education for all NSF-supported disciplines.
- Cost-sharing at the level of 30% of the total project cost is required for Ph.D.-granting institutions of higher education and for non-degree-granting organizations. Non-Ph.D.-granting institutions of higher education are exempt from the cost-sharing requirement. ²

In fewer words

- Funds a **shared** instrument for R&D
- Acquisition or **development**
- Text re: outfitting laboratories → think equipment buys for single university lab
- \$100k - \$4M
- **30% cost sharing**

Additional Details

- Max of 3 submissions / institution / year
 - if 3, one development proposal required
 - internal competitions:
11/27 UTA, 12/7 WM, your institution?
 - Full proposal: 1/26/2012
- Consortium rule: we need to be a consortium
- 20% rule: subawardees taking >20% of award count against submissions / institution
- USA, USA!!! rule: no \$\$\$ for foreign institutions

Cost Sharing

- 30% of the total project for most institutions
- Total matters: not everyone must provide 30%
- Example: \$1,000k project
 - Request to NSF is \$700k. \$300k cost shared
- Allowable cost shares (as far as I know):
 - Cold, hard CA\$\$\$\$H
 - Existing equipment / supplies
 - Non-federally funded labor (captive MT, EE)
 - “if you are not able to request funding for it in the proposal, it cannot be used as cost sharing”

Exercise: can we find it?

- 2m long detector, 3mm pitch, 3 views = 2k channels

Component	Total project cost	Cost share
Cold electronics (MSU) doc-820, extrapolated	2000 x \$150/chan + \$100k labor = \$400k	\$120k
Digitizer system (FNAL) doc-855 + priv. com.	\$150k (60% labor)	\$45k
DAQ system uBooNE estimate	\$40k	\$12k
TPC cage + HV system uBooNE estimate	\$180k	\$54k
Total	\$770k	\$231k

- August cost = \$793k, based on 100% uBooNE copy here $(40k+180k)/770k - 100\% = 29\%$ correlated

Discussion

- I am interested in your thoughts.
- Have I missed any cost sharing sources?
- Can you suggest a strategy?
- Is MRI appropriate for LARIAT-II?
- How does this compare to previous MRIs?
- How many institutional slots will we need to use?
- Does this seem viable, given Phase I progress?