

CRV-Mu2eII R&D

CalTech Workshop

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Mu2e-II Cost

- Let's take a very rough estimate of the cost for Mu2e-II to be **~\$150M**.
- Of this, a complete rebuild of the CRV is included as **~\$11M**.
- As a rule of thumb, let's say ~15% of the project cost to reach full design.
 - This is funding that should be available before the project starts.
 - To get to a conceptual design, it is significantly less than this. Maybe ~5% ?
 - So, maybe it is reasonable to hope for a budget of ~\$500k for CRV R&D work to reach a conceptual design.

Some ideas for R&D (Y. Oksuzian and C. Dukes)

CRV prototype* \$120,000.00 2 CRV prototypes to be installed during shutdown
0.25 FTE Simulation, fabrication and installation efforts

Improved counter \$50,000.00 R&D to improve the profile of counter extrusions
\$100,000.00 R&D to improve coating reflectivity
\$20,000.00 R&D to fill fiber holes
0.5FTE Aging studies

Shielding prototype* Procure high-Z shielding few small blocks to be installed at the
\$20,000.00 Mu2e hall
0.10 FTE Communication with the vendor and installation at Mu2e
0.2 FTE Optimize the shielding design

Tracker \$50,000.00 Feasibility study of low-Z silicon-based tracker at Mu2e-II

Total: ~\$400k + ~1FTE (seems to fit with our estimate of what is reasonable)

*Note: Some of these will actually benefit Mu2e along the way - so, added value!

References

1. [Mu2e-II CRV LOI](#)

Discuss!