



So You Want to Build A Cloud Chamber

An Annotated Bibliography by:
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Sources

- ◉ “How to Build A Cloud Chamber” by Andy Foland
 - > <http://www.ins.cornell.edu/~adf4/cloud.html>
 - > Also referenced on CERN’s website at
 - <http://teachers.web.cern.ch/teachers/document/cloud-final.pdf>
- ◉ “How to Build a Cloud Chamber at Home” by Hamish Johnston
 - > <http://blog.physicsworld.com/2011/03/08/how-to-build-a-cloud-chamber-a/>
- ◉ “How to Build a Cloud Chamber!” by JeffersonLab
 - > <http://www.youtube.com/watch?v=pewTySxfTQk>
- ◉ “How to Build a Cosmic-Ray Cloud Chamber” by Jeremy Paschke and Anne Mary Teichert
 - > http://quarknet.fnal.gov/resources/QN_CloudChamberV1_4.pdf

Containers

- ◉ Most suggested a clear container with an open top. QuarkNet's page recommends making your own using glass and aquarium sealant.
- ◉ One said to use a round sealed container with clear sides and a metal bottom. I couldn't tell what they had used from the video posted.
- ◉ A smaller example was made using a Petri dish, though that source was using the chamber to look at a radioactive source. I'm not sure how well it would work for cosmic rays.

Cooling Methods

- Most sources suggest using dry ice as a relatively inexpensive and fairly easily accessible cooling method.
- One source instead used an air duster can containing difluoroethane and sprayed that on the bottom of their container to cool it.

Other Materials

- Some sources recommend a projector as a light source (which should be easily accessible in a school environment) though some used an LED flashlight.
- All of the sources and most of the websites I looked at used pure isopropyl alcohol and felt.
- Most materials used to assemble the cloud chamber seemed to be along the lines of whatever you can get your hands on that will work. (Electrical tape, binder clips, etc.)