

A Nichrome Burn Wire Release Mechanism for CubeSats

<https://www.nrl.navy.mil/PressReleases/2014/AMS%20Paper%20-%20A%20Nichrome%20Burn%20Wire%20Release%20Mechanism%20for%20CubeSats%20-%20Final%20-%20Adam%20Thurn.pdf>

- Thorough design, explanation and list of material specs and costs

Suitability of Nickel Chromium Wire Cutters as Deployable Release Mechanisms on CubeSats in Low Earth Orbit

https://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=1023&context=phys_capstoneproject

Mouse Trap Triggering using a resistor and fishing line

https://www.youtube.com/watch?v=bA_hGJV03DY&feature=youtu.be

Launch Tie-Down and Release Mechanism for CubeSat Spacecraft

<https://www.techbriefs.com/component/content/article/tb/techbriefs/mechanics-and-machinery/24810>

Vectran

- 400 denier weight
- 140 lbf
- 0.036" diameter

Nichrome

- 0.010" diameter

Mechanism

- 1.6 amps
- 5-10 seconds

- 10 lbf tension?
- 0.24" travel

Works in ambient conditions as well as vacuum at -60 C and +125 C. The nichrome wire is spring loaded so that it can move as it heats up... should we do this?