On The Bounce

Modelling of a Bouncing Droplet

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- **Droplet impacts have many applications, such as with rain drops hitting the ground, leaves and bird feathers.**
- **This has been studied for over 100 years.**
- **As technology developed, experiments showed the event of droplets bouncing on liquid baths.**
- **In 2005, it was shown that droplets can bounce on for multiple days if the bath is oscillated.**

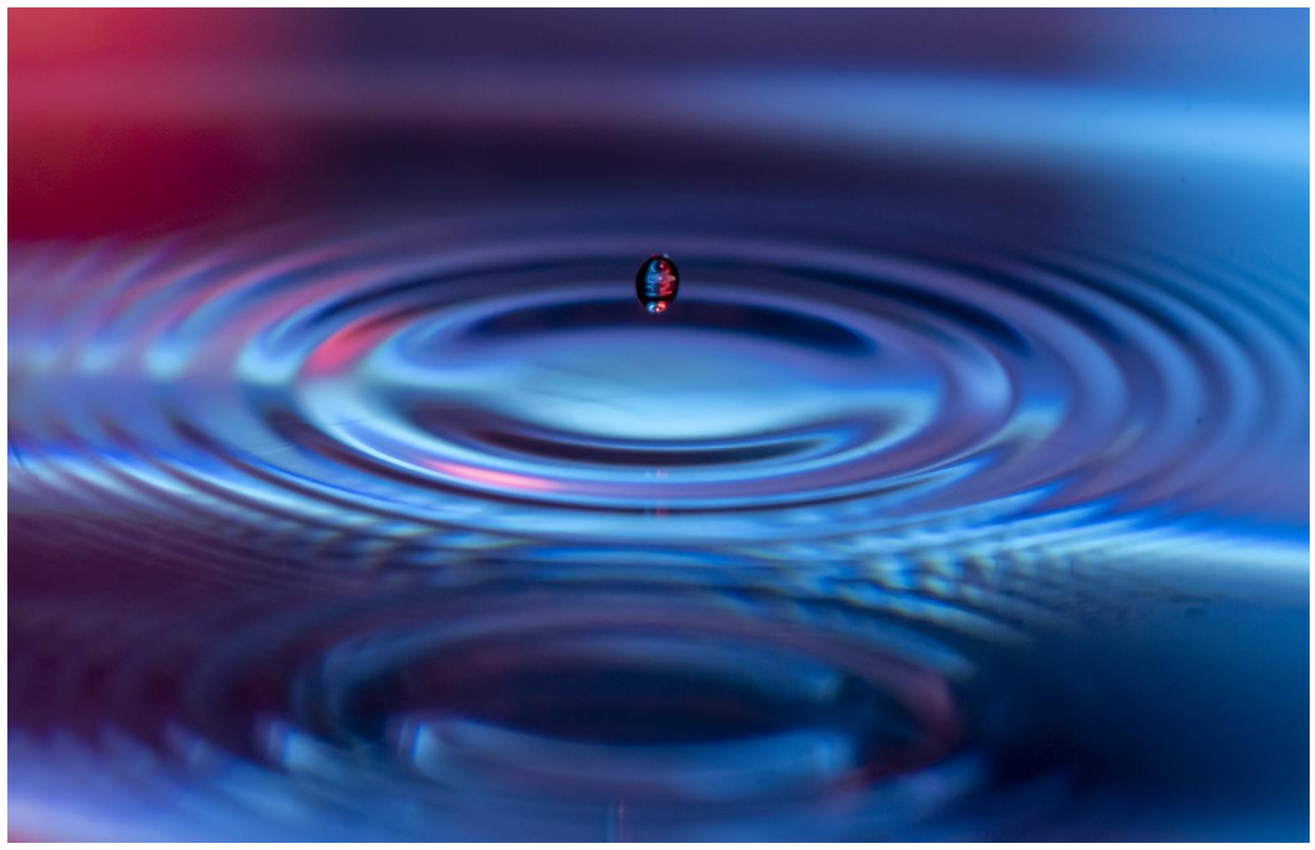


Figure 1 of Alventosa, L., Cimpeanu, R., & Harris, D. 2023. Inertio-capillary rebound of a droplet impacting a fluid bath. Journal of Fluid Mechanics, 958, A24.

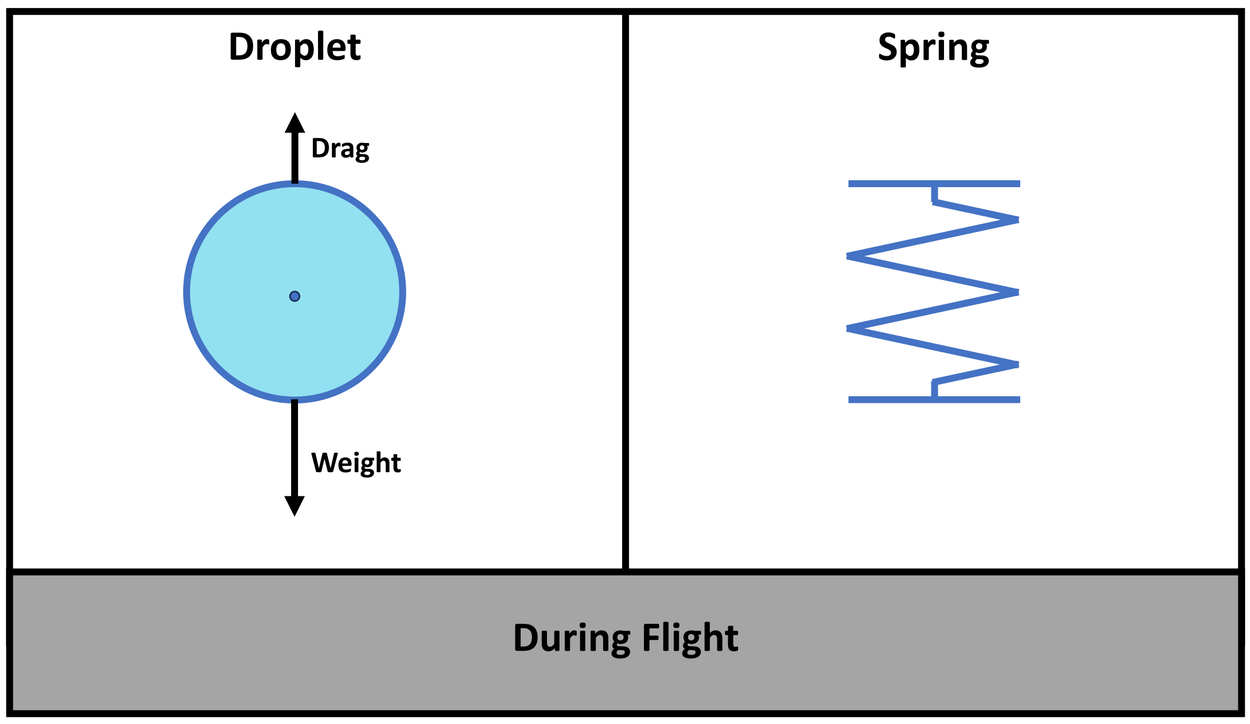
What is a Model?

A model is a tool used to describe things we see in the real world, taking out the unnecessary details.

Find Out More!

Below, you can find more details about the model, results, the code, and a cool animation of the bounce!

The Model



We treat the droplet like a spring and separate into the cases of the droplet in flight and in contact.