Superconducting Mag-Lev Track

Magnetic levitation can eliminate the friction which makes it so difficult to move cars or trains.

WHAT TO DO

Observe the Quantum Levitator disk as it floats above and perfectly follows the track of powerful magnets. *[Warning- never grab or hold the disk as it is extremely cold, but you may very gently tap the disk with your fingertip to make it move.]*

WHAT'S HAPPENING?

Inside the quantum levitator disk is a thin film of Yttrium-Barium-Copper-Oxygen on sapphire that has been cooled to more than -300°F with liquid nitrogen so that it becomes superconducting (zero electrical resistance) causing it to levitate above and follow a track of powerful Neodymium-Iron-Boron magnets for about 2 minutes until it warms up and gently lands on the track. But wait- if we flip everything upside-down the disk is just as happy floating along beneath the magnetic track!