The GPM mission collects rain and snow data around the world every three hours. The GPM core satellite, shown here, carries two instruments—NASA’s GMI (GPM Microwave Imager) and Japan’s DPR (Dual-Frequency Precipitation Radar).

Ball Aerospace engineers and technicians designed and built GMI.

NASA staff installed GMI on the satellite. Can you spot it? (Hint: It’s folded up!)
The GPM mission is an international program consisting of nine satellites. All of these satellites gather precipitation data, which the GPM core satellite combines to provide a global view of Earth’s precipitation. NASA and the Japan Aerospace Exploration Agency (JAXA) launched the GPM satellite into space in 2014.

GPM carries one active sensor and one passive sensor. DPR is the active sensor, which means it transmits energy to measure weather features. DPR’s radar sends out radio waves that hit raindrops and then bounce back to the radar. DPR measures how fast that happens, and then it calculates how far away the rain or snow is falling.

Satellites such as GPM give us more precise rain and snow information than ground instruments can give.