

The New Star

Artist statement: "The creation of a new star is wonderful."

At the cyclotron in Berkeley, California, an experiment was underway. Gold and iron powder were dissolved in acid, then released as nanoparticles. They were invisible, a line of one million would only span a millimeter. This seemed small, but was just the right size for a spin in the cyclotron. It was loaded up to launch at a tin target. The cyclotron was turned on, the iron-gold mixture was loaded in, and the machine spun it swiftly. The mixture was spinning in wider and wider circles, until it finally exited the cyclotron and smashed into the tin. Bits of molten gold, iron and tin flew off in every direction, releasing an extreme heat. Inside the tin was a glowing red dot. It became a red sphere the size of a lemon. It was hot, too hot to approach; it was bright, too bright to look at; but it was wonderful nonetheless.

The scientists, who ran the cyclotron, waited for the collision room to cool down before heading inside and investigating the sphere. But it did not cool down. A scientist threw a piece of paper in the room. It burst into flame, triggering an emergency water sprinkler. The water vaporized, but the room was not cooled. The scientists saw why. There was a new star in that room. The scientists needed to get it out of the lab before it melted the expensive equipment. Knowing that stars need hydrogen to fuse, they closed all the ways that this gas could enter the room. As the star weakened, the scientists were busy loading the piece of tin it had settled on into a hydrogen-proof container. They carried it to a building that would become a future power plant. When the lid to the container was removed, the new star instantly went to work fusing hydrogen and making electricity. Prices were lowered—there was no stopping that star, which was named Alpha Berkely after the place it was first made. This is the story of the smallest star produced by people. Not to mention, the only one.

The End