Best of Last Week – Possible signal from dark matter, a robo-cook and a switchboard in our brains

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A robot carries food to customers in a restaurant in Kunshan on August 13, 2014

The big news in physics last week was the discovery of a faint line of gas elements in x-ray data that came from studying the space between galaxies—it didn't correspond to any known element. The team believes it's possible that it's a signal from dark matter. If proved true, it would be a major breakthrough. In other space news, another team discovered van

der Waal forces were at play with a near-Earth asteroid—a finding, the team reports, that could have implications for developing a means for protecting our planet from collisions. And yet another team has found that seven tiny grains captured by the Stardust spacecraft are likely visitors from outside of our solar system, which would make them the first actual samples ever collected of interstellar dust.

It was a pretty good week for new technology development, too—a restaurant in China began deploying robots able to cook and deliver food to customers. While their skills are still somewhat limited, they do seem to offer a pretty clear picture of what is coming. Also collaboration between universities in Japan led to development of the world's fastest camera—it has a frame interval of 4.4 trillion frames per second.

Biology was in the news last week as well as a team of researchers found evidence that suggests gut bacteria may be ruling our minds—the little microbes may be what's behind both mood swings and cravings, food for thought? Along completely different lines, a team of researchers used nanoparticles of gold to kill tumor cells in a patient's brain. More research will be needed, but thus far, it appears the technique works to treat one of the most aggressive forms of brain cancer.

And finally, a team of researchers has found a small part of a mouse's brain that appears to operate as a switchboard of sorts, allowing the brain to switch between focusing on external stuff and internal musings. If it exists in humans, the team surmises, it might be used to study the ability to move between the two states, such as daydreaming during a meeting versus paying attention—a skill that could perhaps be honed to prevent embarrassment when in the wrong state at the wrong time.

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