Then there are the trap-jaw ants of the genusOdontomachus, which prefer—oh, I don’t know— not blowing themselves to pieces. As their name would suggest, these ants have remarkable mandibles, huge things that cock back and fire off at up to145 miles per hour. The strike lasts a mere .13 milliseconds and generates so much force that an attacker can find itself tumbling through the air end over end as the ant makes its retreat. And if it finds itself outmatched, the ant will point its face at the ground and blast itself out of danger.

Here’s how those jaws work. The ant uses muscles to pull back the mandibles until a latch snaps into place, locking the jaws at 180 degrees. “And then [the ants] turn on closer muscles really intensely,” says biologist Sheila Patek of Duke University, “but the jaws don’t close because there are these little latch mechanisms that are blocking them.” When the ant wants to fire the jaws, it triggers muscles that pull out the latches, releasing a tremendous amount of stored energy.

The ant can set off the whole mess manually—say, to bite the ground to fire itself off—or automatically. Lining the insides of the mandibles are sensory hairs, so all the ant has to do is bump into its prey for the jaws to snap shut. Interestingly, these hairs are wired right to the jaw muscles, so the signal doesn’t have to waste time traveling to the brain for processing. It may seem like overkill, but when the ant is hunting blazingly fast insects like springtails, every teenytiny fraction of a second counts. It’s so quick that should a toad set its eyes on a trap-jaw and fire its tongue, the ant can launch itself clear out of danger before the tongue can fully unravel out of the toad’s face.

**Notice: Translating this second part is NOT mandatory, but can be considered as extra point.**

Tests at a fusion reactor in China have hit a major milestone. The experiments have created plasma with a temperature of 90 million degrees Fahrenheit —hotter than the core of our Sun—and sustained the state for over a minute and a half.

The experiments were carried out in the Experimental Advanced Superconducting Tokamak— known as EAST. Its design uses a donut-shaped reactor in which incredibly hot plasma resides. Careful control of intense magnetic fields allows the plasma to be contained in a tight ring running through the center of the donut’s circular cross section—which means that the walls of the structure are never directly exposed to the high temperatures of the plasma.

Ensuring those temperatures can be sustained for long enough is essential to creating energy— the long-term goal of such fusion reactors. We’d need the reactions to run for long periods of time because getting them started requires a huge input of energy: If they stall too soon, the reaction is net negative in energy terms. But controlling such intense heat is difficult, because such high energies causes great instabilities that are hard to confine. So running an experiment at such temperatures for 102 seconds is a positive step indeed.

The news comes on the back of successful tests at the Max Planck Institute in Greifswald just last week, where hydrogen fuel was used for the first time in its Wendelstein 7-X stellarator.

It’s not the hottest temperature ever created on Earth. That accolade goes to the scorching conditions created by the LHC, which managed to create a plasma “soup” of sub-atomic gluons and quarks with an estimated temperature of 10 trillion degrees. That’s somewhere in the region of 250,000 times hotter than the center of the Sun. But those conditions last for the merest flicker of time, which is useless for actually creating energy.

Indeed, most scientists suggest that the long-yet-intense burn required for fusion needs to be around 180 million degrees—so we still have some way to go. The consensus seems to suggest that it’ll be a decade or more before one of these rigs is capable of actually producing electricity for us.

But for now, we can celebrate a positive week for fusion science. Let’s hope there are many more.