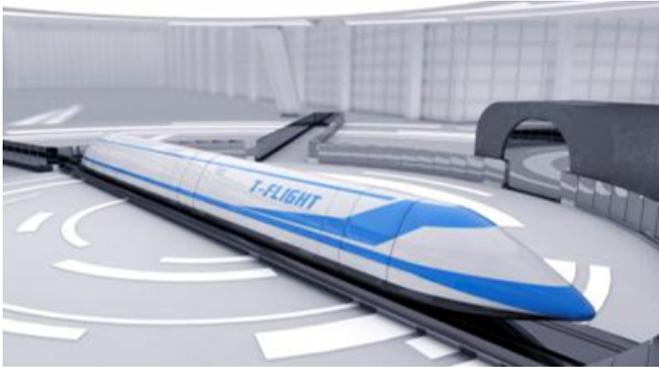


China hikes speed train ambition in three-phase plan

5 September 2017, by Nancy Owano



Credit: ECNS

(Tech Xplore)—You have heard the old saying hold on to your hats when moving at rapid speeds. In this case, you would imagine a scene of cartoon nature where Fright Mouse would hold on to its head, assuming its arms were still in their sockets.

That is, China is in an ambitious effort to see about trains as a superspeed transport mode of the future.

China Central Television (CCTV) is one of the sources reporting the announcement of plans to present a supersonic train that can reach maximum traveling speeds of 4000 km/h (2500 mph).

It was state-owned China Aerospace Science and Technology Corporation (CASIC) that made the announcement; the project is being developed by CASIC.

Ecns.cn is the official English-language website of China News Service (CNS), a state-level news agency; its story noted plus sides of the "flying" train as not consuming fossil energy, being [unaffected](#) by weather conditions and linking seamlessly with subways.

The concept involves introducing the train speeds in phases: intra-city, intra-region and third phase, the latter realizing 4000 km/h. In a video, the notes said that the T-flight supersonic train system will use magnetic levitation, low vacuum and a hypersonic configuration.

In the first phase they plan to reach the speed of 1000 km/h, said the presenter, for intra-city commuting.

Next phase: 2000 km/h for domestic intra-region traveling to link up economic zones of Beijing, Shanghai, Chengdu, Guangzhou and Wuhan.

The third phase will realize 4000 km/h.

As *railway-technology.com* reported: "The state-owned China Aerospace Science and Technology Corporation (CASIC) has announced plans to build a 'flying train' that will be able to [travel](#) at a speed of nearly 2,500mph."

CASIC talked about its [plans](#) to research a futuristic train network that would first run at 1000km per hour between cities, eventually developing to reach the top speeds of 4000km/h, said *South China Morning Post*. That target is well over 10 times faster than the maximum speed of existing bullet trains, it added.

Ecns.cn: "A train that can travel up to 4,000 kilometers an hour means the rail link could run five times faster than general passenger airplanes and 10 times quicker than traditional high-speed [bullet trains](#)."

What does "flying train" mean and why is flying in quotes? CASIC executive Liu Shiquan told media sources that the company's scientists planned to develop the new trains that could "fly on the ground," said *railway-technology.com*.

Eric Mack in CNET said China's "flying train" was

similar to a Hyperloop, "but promises far faster flinging." (The "supersonic near-ground flight" would be realized through superconducting maglev technology and a tube transport system, said *Ecns.cn*).

Mack said, "The flying train is the first serious (it seems) concept I've heard of, anywhere, for supersonic [ground](#) transportation."

If it works, it would be substantially faster than commercial jetliners as known today;

"The target speed of 4,000km/h also by far exceeds the maximum speeds of commercial passenger jets such as the Airbus A380 at 1,020km/h and the Boeing 787 at 954km/h," said *South China Morning Post*.

The project team is reported to be cooperating with research institutes and an industry alliance.

It will certainly be interesting to see how this works out. *South China Morning Post*: "Zhao Jian, a professor at Beijing Transport University, said the human body could only physiologically withstand acceleration to speeds of 4,000km/h for a very short amount of time."

As for this initiative, according to *Ecns.cn*, chief engineer Mao Kai said, "the vehicle's acceleration [speed](#) would be slower than a plane in taking off so passengers could be free of safety concerns."

More information:

www.ecns.cn/cns-wire/2017/08-31/271604.shtml

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APA citation: China hikes speed train ambition in three-phase plan (2017, September 5) retrieved 21 January 2022 from <https://techxplore.com/news/2017-09-china-hikes-ambition-three-phase.html>

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