

Rocket to Mars? Why not New York-to-Shanghai in 39 mins

By MARCIA DUNN
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CAPE CANAVERAL, Fla. — SpaceX chief Elon Musk’s elaborate plan for a mega-rocket to carry astronauts to Mars may have some down-to-Earth applications.

At a conference in Australia on Friday, Musk said if you build a ship capable of going to the moon and Mars, why not use it for high-speed transport here at home. He proposes using his still-in-the-design phase rocket for launching passengers from New York to Shanghai in 39 minutes flat.

Los Angeles to New York, or Los Angeles to Honolulu in 25 minutes. London to Dubai in 29 minutes.

“Most of what people consider to be long-distance trips would be completed in less than half an hour,” Musk said to applause and cheers at the International Astronautical Congress in Adelaide.

A seat should cost about the same as a full-fare economy plane ticket, he noted later via Instagram.

Friday’s address was a follow-up to one he gave to the group last September in Mexico, where he unveiled his grand scheme for colonizing Mars.

He described a slightly scaled-down 348-foot-tall rocket and announced that the private space



This artist’s rendering made available by Elon Musk on Friday. Shows SpaceX’s new mega-rocket design on the Earth’s moon. Musk announced that his private space company aims to launch two cargo missions to Mars in 2022.

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“That’s not a typo,” he said, pausing, as charts appeared on a large screen. “Although it is aspirational.”

Two more cargo missions would follow in 2024 to provide more construction materials, along with two crewed flights. The window for launching to Mars occurs every two years.

For the approximately six-month, one-way trips to Mars, the SpaceX ships would have 40 cabins, ideally with two to three

people per cabin for a grand total of about 100 passengers. Musk foresees this Mars city growing, and over time “making it really a nice place to be.”

Scott Hubbard, an adjunct professor at Stanford University and a former director of NASA’s Ames Research Center, calls it “a bold transportation architecture with aspirational dates.” A demonstration of some sort in the 2020s will add to its credibility, he said in an email. And while more details are needed for life-support systems, “Kudos to Elon and SpaceX for

keeping the focus on humans to Mars!”

Former NASA chief technologist Bobby Braun, now dean of the college of engineering and applied science at the University of Colorado at Boulder, also sees Musk’s plan as a step in the right direction, building on technologies SpaceX already has demonstrated, like reusable rockets.

“While the timeline and capabilities are certainly ambitious, I’m bullish on U.S. industry’s ability to carry out challenging and far-reaching goals,” Braun wrote in an email. “It’s great to see the private sector lead in this way, and I hope we see more of it.”

NASA is charting its own path to what it calls the “Deep Space Gateway,” beginning with expeditions in the vicinity of the moon in the 2020s and eventually culminating at Mars. The space agency has handed much of its Earth-orbiting work to private industry, including SpaceX, Orbital ATK and Boeing.

Earlier Friday in Adelaide, Lockheed Martin presented its vision for a “Mars Base Camp” in partnership with NASA. Astronauts could be on their way in about a decade, the company said. This first mission would orbit the red planet, rather than land.

Musk intends to finance his \$10 billion Mars endeavor by using a rocket that’s smaller than the one outlined last year. Fewer engines would be needed: 31 versus the originally envisioned 42. Its lift capability would be 150 tons, more than NASA’s old moon rocket, the Saturn V.

He wants one type of booster and spaceship that can replace the company’s current Falcon 9 rocket, the soon-to-fly Falcon Heavy rocket designed for heavier satellites, and the Dragon capsule presently used to deliver cargo to the International Space Station, and, as soon as next year, station astronauts.

That way SpaceX can put all its resources toward this new system, Musk said. Revenue from launching satellites, and sending supplies and crews to the space station, could pay for the new rocket, he said.

Musk said the same spaceship for moon and Mars trips — long and cylindrical with small shuttle-like wings — could fly to the space station. He said the mega-rocket could be used to establish a lunar settlement, with spaceships being refueled in Earth orbit versus creating a vital fuel depot at Mars.

The mega-rocket doesn’t have a name but for now is called BFR. The B is for big; the R for rocket. As for the F, well, you get the idea.

UNION: OEA executive sees case as an attack against workers’ rights

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unions and filed an amicus brief against another “right-to-work” case last year.

The nation’s four largest public sector unions, AFSCME, AFT, NEA and SEIU, criticized the court’s acceptance of the case.

“The Janus case is a blatantly political and well-funded plot to use the highest court in the land to further rig the economic rules against everyday working people,” they wrote in a joint statement.

“The forces behind this case know that by joining together in strong unions, working people are able to win the power and voice they need to level the economic and political playing field. However, the people behind this case simply do not believe that working people deserve the same freedoms they have: to negotiate a fair return on their work,” they added.

With confirmation of conservative Justice Neil Gorsuch earlier this year, a reversal of existing case law appears likely. Last year, the Supreme Court could not reach a decision in a similar case, *Friedrichs v. California Teachers Association*. A 4-to-4 tie among the justices reverted the case to the Ninth Circuit Court of Appeals, which upheld its earlier ruling in favor of the teachers’ union.

“It’s extremely likely that

opponents of mandatory fees are going to prevail this time,” Cunningham-Parmeter said. “All of the tea leaves point to Justice Gorsuch providing the fifth vote to invalidate these ... mandatory fees.”

Public sector union officials refer to mandatory fees as “fair share” fees because the money pays for the cost of collective bargaining and pursuing grievances. Without mandatory fees, workers who decline to join the union would still reap the benefits of the union without paying any of the cost.

John Larson, executive director of the Oregon Education Association, said he sees the case as an attack on workers’ rights, but added that the success of unions ultimately depends on “how well can show them the value of our collective voice.”

In the 1977 case, *Abood v. Detroit Board of Education*, the Supreme Court held that public employees could be forced to pay dues for a union’s representational work, but could not be required to pay for political activity.

The Janus complaint contends that all public sector collective bargaining activities are inherently political and hence, mandatory dues amount to government-compelled speech in violation of the First Amendment, according to the Olympia, Washington-based Freedom Foundation, which has

supported other right-to-work efforts.

Oregon’s public sector workers are under no obligation to join the union, but they often have to take action to opt out of paying full dues in favor of paying lower “fair share” fees, Cunningham-Parmeter said. While dues might cover the cost of some of the union’s political activities, “fair share” fees are restricted to paying for collective bargaining, grievances and other non-political services, the law professor said.

Depending on the contract, some workers who decline to join the union still have to pay full dues upfront and then apply for a rebate for amount of the dues that would have gone toward the union’s political activities.

The Oregon Education Association, for instance, provides rebates usually within a month of when workers apply for a rebate. About 10 percent of its 43,000 eligible workers sought the rebate last year.

Public sector employees’ union membership averages 17 percent in states that ban mandatory fees compared with 49 percent in states, such as Oregon, that allow mandatory fees, according to the research by the social scientists who wrote in support of the California Teachers Association.

The court’s decision is due by June.

BRIEFLY

Moscow police keep opposition chief from rally

MOSCOW (AP) — Police in Moscow detained Russian opposition leader Alexei Navalny for most of the day Friday in an apparent bid to prevent him from joining a rally that he organized in another city, where several people were also detained.

Navalny had planned to travel to the Volga River city of Nizhny Novgorod where he was to lead a rally, the latest in a series of demonstrations he has organized across Russia, when he was detained early Friday. He was kept at a Moscow police station until late evening.

After he announced his presidential bid last year, Navalny, a top Kremlin foe and arguably Russia’s most popular opposition politician, inspired a grassroots campaign in Russian regions to support his nomination. The crackdown comes after he held rallies in six Russian cities, from Murmansk in the northwest to Khabarovsk on the border with China.

Navalny posted a video on his Instagram account early Friday of what he said were officers outside his home asking him to come to a police station. He said

he was held there without charges or any explanation why he had been detained.

The Interior Ministry said in a statement Friday that Navalny was detained because of his calls for unsanctioned rallies.

No increased danger after Yosemite rock fall

YOSEMITE NATIONAL PARK, Calif. (AP) — A geological analysis Friday found there was no more danger than usual of another giant rock fall after two huge slides, including one involving a slab of granite the size of a 36-story building, occurred this week on the famed El Capitan rock formation in Yosemite National Park.

One person was killed and two injured in the successive rock falls on Wednesday and Thursday at the climbing mecca.

“If we felt any area was unsafe we wouldn’t be allowing people in there,” Yosemite geologist Greg Stock said Friday.

He and a U.S. Geological Service geologist were studying the mountain after the rock falls that awed but did not deter people in the close-knit climbing community.

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