Business

ROCKET LAB

Rocket Lab's Electron was launched from New Zealand on Sunday. The 56-foot-tall rocket can carry a 500-pound payload. On this flight it carried a clutch of tiny satellites.

Starting small in space

Company's modest mission is seen as a giant leap for private rocket enterprises

BY KENNETH CHANG

A small rocket from a little-known company lifted off on Sunday from the east coast of New Zealand, carrying a clutch of tiny satellites. That modest event — the first commercial launching by an American-New Zealand company known as Rocket Lab — could be the beginning of a new era in the space business, where countless small rockets take off from spaceports around the world. This miniaturization of rockets and spacecraft places outer space within reach of a broader swath of the economy.

The rocket, called the Electron, is a mere sliver compared with the giant rockets that Elon Musk, of SpaceX, and Jeffrey P. Bezos, of Blue Origin, envisage using to send people into the solar system. The Electron is just 56 feet tall and can carry only 500 pounds into space.

But Rocket Lab is aiming for markets closer to home.

"We're FedEx," said Peter Beck, the New Zealand-born founder and chief executive of Rocket Lab. "We're a little man that delivers a parcel to your door."

Behind Rocket Lab, a host of start-up companies are also jockeying to provide transportation to space for a growing number of small satellites. The payloads include constellations of telecommunications satellites that would provide the world with ubiquitous internet access.

The payload of this mission, which Rocket Lab whimsically named "It's Business Time," offered a glimpse of this future: two ship-tracking satellites for Spire Global; a small climate- and environment-monitoring satellite for GeoOptics; a small probe built by high school students in Irvine, Calif., and a demonstration version of a drag sail that would pull defunct satellites out of orbit.

BUSINESS IS GETTING SMALLER

Rockets are shrinking because satellites are shrinking.

In the past, hulking telecommunications satellites hovered 22,000 miles above the Equator in what is known as a geosynchronous orbit, where a satellite continuously remains over the same spot on Earth. Because launching a satellite was so expensive, it made sense to pack as much as possible into each one.

Advances in technology and computer chips have enabled smaller satellites to perform the same tasks as their predecessors. And constellations of hundreds or thousands of small satellites, orbiting at lower altitudes that are easier to reach, can mimic the capabilities once possible only from a fixed geosynchronous position.

"It's really a shift in the market," Mr. Beck said. "What once took the size of a car is now the size of a microwave oven, and with exactly the same kind of capabilities."

Some companies already have launched swarms of satellites to make observations of Earth. Next up are the promised space-based internet systems like OneWeb and SpaceX's Starlink.

Until now, small spacecraft typically hitched a rocket ride alongside a larger satellite. That trip is cheaper but inconvenient, because the schedule is set by the main customer. If the big satellite is delayed, the smaller ones stay on the ground, too. "You just can't go to business like that," Mr. Beck said.

The Electron, Mr. Beck said, is capable of lifting more than 60 percent of the spacecraft that headed to orbit last year. By contrast, space analysts wonder how much of a market exists for a behemoth like SpaceX's Falcon Heavy, which had its first spectacular launch in February.

A Falcon Heavy can lift a payload 300 times heavier than a Rocket Lab Electron, but it costs $90 million compared with the Electron's $5 million. Whereas SpaceX's standard Falcon 9 rocket has no shortage of customers, the Heavy has only announced a half-dozen customers for the years to come.

The United States military — a primary customer for large launch vehicles — is also rethinking its spy satellites. The system would be more resilient, some analysts think, if its capabilities were spread among many smaller satellites. Smaller satellites would be easier and quicker to replace, and an enemy would have a harder time destroying all of them.

PIT STOPS IN THE SPACE RACE

SpaceX could have cornered this market a decade ago.

Its first rocket, the Falcon 1, was designed to lift about 1,500 pounds. But after two successful launches, SpaceX abandoned it, focusing on the much larger Falcon 9 to serve NASA's needs to carry cargo and, eventually, astronauts to the International Space Station.

Jim Cantrell, one of the first employees of SpaceX, said he did not understand that decision and left the company. In 2015, he started Vector Launch Inc., with headquarters in Tucson, Ariz. Its goal is to make the Model T of rockets — small, cheap, mass-produced.

Vector claims that it can send its rockets into orbit from almost any place it can set up its mobile launch platform, which is basically a heavily modified trailer. That trailer was inspired by Mr. Cantrell's hobby, auto racing, and many of the company's employees come from the racing world, too.

ROCKETS, PAGE 9

Big day for Alibaba, but party may not last

SHANGHAI

Yearly shopping festival could be hurt by slowing of China economic growth

BY RAYMOND ZHONG

After 24 hours of frenzied buying and selling and weeks of advertising and promotions, the Alibaba Group announced that its sales hit another titanic high on Singles Day, the Nov. 11 shopping festival that the Chinese e-commerce behemoth cooked up a decade ago.

But this time, with China's vast economy slowing, the party was held with icebergs in sight from the deck.

Alibaba, China's biggest online shopping company, kicked off the country's biggest shopping day with its usual ostentation. Its Saturday night gala event in Shanghai featured the singer Mariah Carey, the retired basketball star Allen Iverson and Miranda Kerr, the Australian supermodel. A Chinese girl group performed a song called "Wanna Buy Wanna Buy" as backup dancers pushed shopping carts bearing the logo of Aldi, the German discount grocer.

Alibaba said it had racked up $30.8 billion in sales, as measured by its own homegrown metric, gross merchandise value. That handily topped last year's $25.3 billion.

But all around China, gloom and uncertainty are the word.

Economic growth is slowing, and the country's hundreds of millions of middle-class shoppers seem to be holding on more tightly to their pocketbooks. Tech companies are antsy about the government's more interventionist attitude toward big business. The tariff fight with the United States is casting a pall not simply over trade, but over China's future writ large. This month, Alibaba cut its sales forecast for the year ending in March by around 5 percent, citing the wobbly economy and the trade war.

Meanwhile, some young Chinese shoppers seem less enthusiastic this year about celebrating manic consumerism.

Yang Sun, a 26-year-old from Xi'an, said that the Singles Day discounts were no longer good enough to persuade her to wait all year to buy the things she wanted.

Wang Xin, 24, an engineer in Shanghai, said he had rediscovered the joys of shopping offline. "Singles Day just doesn't hold that much appeal for me," Mr. Wang said.

Asked about the current mood among Chinese consumers, Joseph C. Tsai, Alibaba's executive vice chairman, told reporters on Sunday that Alibaba should be understood in the context of the epochal rise of China's middle class. "That trend is not going to stop, trade war or no trade war," he said. "Any kind of short-term economic effects, we believe, will be cyclical."

Alibaba is not like Amazon in that it is not a retailer. It merely provides the digital shelves and aisles for other merchants to sell their goods. But in its relentless ambition, Alibaba may be Amazon's only global equal. Both companies want to fulfill their customers' every desire and need.

Already, people order dinner on Alibaba's takeout app, buy groceries from Alibaba's supermarkets, watch movies produced by Alibaba, navigate with Alibaba's smartphone maps and rent computing power from Alibaba's servers. And the company wants to do more. It recently opened an unstaffed hotel. It is making its own computer chips. It wants to promote African economic development and end world hunger.

The business case for all this empire-building, Alibaba says, is that the company's pools of commercial data give it a leg up in anything that requires understanding customers or merchants.

But Wall Street is still waiting for results and has grown skeptical in the meantime of the costs of expanding into new areas. Alibaba's shares have lost nearly one-third of their value since June.

Singles Day 2018 showed that Alibaba remains, if nothing else, China's king of hype. During the broadcast event, the M.C.s periodically encouraged people watching at home to open up their phones and check out the great deals. As acrobats with Cirque du Soleil twirled in midair, the logo of Kukahome, a Chinese furniture maker, shone brightly behind them.

At one point, the performer Liu Wei rapped out the specs of a new model of Skoda sport utility vehicle.

Anna Lin, a 25-year-old who works in finance in Shanghai, said she was feeling more lukewarm about the whole thing than in years past. Singles Day is now just one of many big shopping festivals each year, she said.

Plus, Ms. Lin said, the Singles Day promotions have become increasingly baroque. This year, there were coupons for specific items and brands, coupons that were available only at certain times of day, and coupons that appeared randomly and could be grabbed only by playing a game. Gathering friends into a team could help you collect even more coupons.

"That's too much work," Ms. Lin said. "It also isn't worth it when you realize that after you've done all that, all you've got is 10 to 15 percent off, or even less."

The comedian Papi Jiang captured the feeling in a video skit that went viral last year. In the sketch, Ms. Jiang tries to wade through a mess of convoluted Singles Day promotions. She scribbles formulas on heaps of paper and a blackboard. She throws her phone on the floor multiple times. She tries to do the calculations on an abacus, before realizing that she doesn't know how to use an abacus.

"My time is more valuable than that," Ms. Lin said. "I honestly think all the math is a way to hide the fact that there isn't much of a discount."

Singles Day 2018 showed that Alibaba remains, if nothing else, the undisputed king of hype in the country.

Alibaba does not lack for other methods of subtle persuasion on Singles Day. If you had opened your Taobao shopping app on Sunday, you would have seen how your spending that day ranked against that of other people in your area.

The company's methods for ginning up excitement have come under scrutiny before.

Two years ago, Alibaba said that the United States Securities and Exchange Commission was investigating the company for the way it reports Singles Day sales. The company's preferred metric, gross merchandise value, is supposed to represent the amount of money that changes hands on its platforms. But there is no standardized way of calculating it.

The company has since de-emphasized the number. But the episode illustrated the way that Alibaba sees itself — as a company that breaks the mold.

Ever since Alibaba listed its shares in New York four years ago, the company has used a sense of manifest destiny to beguile investors, stock analysts and an eager news media. China was on the long road to middle-class prosperity, the company said, and Alibaba had the biggest tollbooth. A bet on Alibaba was a bet on China itself.

Last year, when the data firm CB Insights asked people to vote for the company they would invest in and hold for 10 years, Alibaba was the winner, beating out every American tech giant as well as Saudi Aramco and Goldman Sachs.

No one expects Alibaba to generate whopper Singles Day sales growth numbers every year for eternity.

At some point, when growth starts decelerating quickly, the event could change, to focus on one week's sales instead of one day's, or on something else entirely.

Alibaba's track record suggests that when the time comes, it will have no trouble pulling off another act of conjuring.

"I'm not worried about Alibaba at all," said Steven Zhu, an analyst in Shanghai with the research firm Pacific Epoch. "These guys are really good at creating things from nothing."

Carolyn Zhang contributed research.

MARK SCHIEFELBEIN/ASSOCIATED PRESS

An automated package sorter in Beijing. Alibaba racked up $30.8 billion in sales on Singles Day, as measured by its own metric, gross merchandise value.

Rule would cut workers in on gig economy riches

BY DAVID GELLES

The gig economy has created economic opportunities for millions of people. Uber and Lyft have empowered everyday drivers to become paid chauffeurs. Airbnb has made homeowners hoteliers. And TaskRabbit has opened new markets for handymen and other laborers.

But much of the wealth created by these companies is not passed along to workers through conventional wages, but to a small number of insiders who own stock.

Uber is eyeing an initial public offering that would value the company at $120 billion. Airbnb was valued at $31 billion last year. Lyft was recently valued at $15 billion. TaskRabbit was bought by Ikea last year for an undisclosed amount. In each case, employees and investors reap the vast majority of those profits, while the gig economy workers — arguably the ones creating much of the value for these companies — can't partake in those winnings. That's because they are contractors, not regular employees, and federal securities law restricts private companies from issuing shares to such workers.

That may soon change.

Earlier this year, the Securities and Exchange Commission requested public comments on potential updates to the American laws that govern who can receive stock in private companies.

Among the possible modifications to the law — known as Rule 701 — is a change that could have far-reaching implications for how gig economy workers are compensated.

In considering a change, the S.E.C. is tacitly acknowledging that for all the value gig economy companies are creating, they are also, in some ways, contributing to the stark income inequality that is roiling American society.

Though contractors provide much of the labor for these tech companies, the S.E.C. noted that gig economy workers were not traditional employees who enjoyed conventional benefits and wages.

"Individuals participating in these arrangements do not enter into traditional employment relationships, and thus may not be 'employees' eligible to receive securities," the S.E.C. wrote, going on to ask whether nonemployees should also be eligible to receive stock.

Companies were supportive of the idea. Uber, Airbnb and Postmates, a food delivery start-up, all chimed in, saying they would welcome the change.

"Providing equity would allow partners to share in the growth of the company, which could lead to enhanced earning and saving opportunities for the partner and for the generations ahead," Uber's head of federal affairs, Danielle Burr, said in a letter to the S.E.C.

Rob Chesnut, Airbnb general counsel, echoed the sentiments in his comments to the S.E.C. "As a sharing economy marketplace, Airbnb succeeds when these hosts succeed," he wrote. "We believe that enabling private companies to grant hosts and other sharing economy participants equity in the company from an earlier stage would further align incentives between such companies and their sharing economy participants to the benefit of both."

Postmates said it hoped it could grant equity to its contractors. "While we are proud that our fleet earns significantly higher than minimum wage across jurisdictions, we are also committed to the long term upward mobility of our Postmates," company executives wrote, using company jargon for its gig workers.

Even gig workers chimed in.

"Permitting Uber contractors to own stock in the firm would be another measure which would allow a large group of people on the lower economic rung of society to make significant strides toward the greater wealth and financial security enjoyed by the middle class," wrote Brian Sament, who identified himself as an "UberEats delivery guy."

Yet even if gig economy workers did have access to equity, there is no guarantee that it would solve their financial woes. Though it's not clear if such equity grants would replace or reduce wages, labor experts say that relying on private company stock is risky, especially for workers lacking financial security.

"Equity is not wages, it's risky," said Louis Hyman, a professor at Cornell University and author of "Temp," a recent book on the labor market. "For people who need to have a steady paycheck, this is not the answer."

Should the S.E.C. move ahead with such a plan, there are plenty of details still to be sorted out, including the tax treatment of such equity grants. If gig economy workers receive private company stock without any way to sell it, they could be liable for taxes on those gains, without having any easy way to pay those taxes. The S.E.C. could also need to modify other rules that stipulate that if companies distribute stock to more than 2,000 people who are not employees, such as accredited investors, they need to adhere to more rigorous public reporting requirements. And in one of the rare instances when a company tried to do something similar, it failed spectacularly.

Juno, an Uber competitor, offered its drivers restricted stock units that were supposed to convert into lucrative equity. But when Juno was sold to another company, Gett, last year, the program was scrapped, and the equity was virtually worthless. And even before that happened, Juno was considering whether its program might have to be voided because of scrutiny from the S.E.C.

JASON HENRY FOR THE NEW YORK TIMES

A Postmates contractor picking up an order in San Francisco. Postmates, a food delivery start-up, is among the companies that said they support giving workers equity.