

# INTERNATIONAL APPEAL

## Stop 5G on Earth and in Space

Sign the Appeal: [www.5gSpaceAppeal.org](http://www.5gSpaceAppeal.org)



### UPDATE ON SATELLITES

On Wednesday, March 24, 2021, both the number of satellites in low orbit around the earth, and the volume of data they transmit, increased significantly. On Wednesday morning (4:28 a.m. EDT, 8:28 UTC), SpaceX launched another 60 satellites. On Wednesday evening (10:47 p.m. EDT, 14:47 UTC), OneWeb launched another 36 satellites. And people who already have satellite Internet from SpaceX on a trial basis reported a sudden increase in their Internet speed on Wednesday to up to 430 Mbps.

This could explain the reports I am beginning to receive of sudden illness that began on Wednesday. I myself was unable to sleep at all Wednesday night, and my body hurt, and itched, all over. I was very ill all day Thursday, and still do not feel well. I have received similar reports from other people in the United States, Canada, Norway, Australia and South Africa. I would like to find out how widespread this is. Some people are reporting that they have not felt well for a couple of weeks, but that they suddenly got much sicker Wednesday or Wednesday night.

Please reply to this email if you have experienced something similar.

### ***Current Players and Their Plans***

Here is a list of companies that are actively planning to launch and operate large constellations of satellites in low orbit around the earth. The purpose of these satellite networks is to provide Internet and/or cell phone service everywhere on

earth, as well as to facilitate the Internet of Things. All will shoot focused beams of radiation at the earth from phased array antennas.

### **SpaceX**

SpaceX, based in the United States, already has approval to operate 12,000 satellites and has filed applications for 30,000 more. More than 1,300 have already been launched. At least initially, these satellites are for Internet only and will not communicate directly with cell phones. Subscribers will purchase a small rooftop dish and a WiFi router. Beta testing by an estimated 10,000 subscribers in the U.S., Canada, U.K., Germany and New Zealand is already happening.

### **OneWeb**

OneWeb, based in the United Kingdom, has already launched 148 satellites, and plans to begin providing service after it has 250 satellites in orbit. Initial service will be to northern latitude regions, including the UK, Europe, Greenland, Canada, and Alaska. OneWeb plans to provide cell phone as well as Internet service. Subscribers will purchase a small user terminal that will function as a small cell, able to connect to any mobile device in its vicinity. OneWeb has scaled back its planned number of satellites from 49,000 to 7,088. It does not plan to compete directly with SpaceX. Instead it will market its service to airlines, businesses and governments.

### **Telesat**

Telesat, based in Canada, has increased its planned number of satellites from 117 to 1,671. It, too, is marketing its service to businesses. Its customers will include cruise ships, airlines, and governments. Telesat intends for its satellites to replace terrestrial fiber networks for long-distance communication. "We're basically deploying a big space-based mesh IP network," said its CEO Dan Goldberg.

### **AST & Science**

This company, based in the U.S., is designing its satellites to communicate directly with cell phones. But instead of selling its service directly to cell phone users, it will partner with existing cell phone service providers, so that when a cell phone user travels out of range of any cell towers, the cell phone's signal will automatically be handed off to a satellite. While this company does not plan to have as many satellites as its competitors, the power levels of its communicating beams will be much greater. Its application to the FCC specifies a maximum EIRP (effective radiating power) of up to 79.2 dBW, or more than 83,000,000 watts per beam.

## Omnispace

This company, partnering with Lockheed Martin and the U.S. military, is also designing its satellites to communicate directly with cell phones. Its brochure boasts that it will “enable the Internet of Things on a massive new scale.” “Omnispace is honored to have been selected to work with the U.S. Navy and Marines to demonstrate 5G capability from space,” said Campbell Marshall, Vice President for Government and International Markets in a March 15, 2021 interview. Omnispace has an experimental license from the FCC and has not revealed how many satellites it plans to operate.

## Amazon

Amazon’s application to operate 3,236 satellites was approved by the FCC last July. Like SpaceX, it plans to sell small user terminals to its customers for mounting on rooftops and vehicles.

## Lynk

Like Omnispace and AST & Science, Lynk is designing its satellites to communicate directly with cell phones. Like AST & Science, Lynk has an experimental license from the FCC and has not revealed how many satellites it plans to operate.

## Facebook

Facebook is planning to launch a constellation of small, 150-pound satellites, called cubesats. It too has an experimental license from the FCC and has not revealed how many satellites it plans to operate.

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***The last 15 newsletters, including this one, are available for downloading and sharing on the [Newsletters page](#) of the Cellular Phone Task Force. Some of the newsletters are also available there in German, Spanish, Italian and French.***