



AST SpaceMobile's BlueWalker 3 on Target to Deliver the First and Only Space-Based Cellular Broadband

December 14, 2022

AST SpaceMobile provides interim operational update on its ongoing space-based cellular broadband satellite programs

MIDLAND, Texas--(BUSINESS WIRE)--Dec. 13, 2022-- [AST SpaceMobile, Inc.](#) ("AST SpaceMobile") ([NASDAQ: ASTS](#)), the company building the first and only space-based cellular broadband network accessible directly by standard mobile phones, provides an operational update on the BlueWalker 3 (BW3), Block 1 BlueBird and next-generation BlueBird programs.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20221213005989/en/>



"The achievements to date for BlueWalker 3 validate the design roadmap for our BlueBirds, including deploying and flying the largest-ever commercial communications array in low Earth orbit, a key fundamental and patented technology to deliver space-based cellular broadband directly to unmodified phones," said Abel Avellan, Chairman and CEO of AST SpaceMobile. "On the back of the successful deployment of BW3's communications array, we look forward to initiating testing with our mobile network operator partners starting early in the first quarter of 2023."

Update on BlueWalker 3 on-orbit activities, the largest-ever commercial communications array deployed in low Earth orbit

- *Achievements with nominal*

AST SpaceMobile, Inc., provided today an operational update on the BlueWalker 3 (BW3), Block 1 BlueBird and next-generation BlueBird programs. (Photo: Business Wire)

operations on BW3 satellite over the last 3 months

- Built TT&C (Tracking, Telemetry & Control) network on Earth, with teams monitoring 24/7 BW3 orbit via earth stations in Maryland, Colorado and Australia
- Achieved nominal operations for guidance, navigation and control of BW3 over the last 3 months at an altitude of ~515km and sustained velocity of ~17,000 mph
- Upgraded onboard flight control software to incorporate BW3 on-orbit learnings and control the deployed communications array
- Deployed the 693 square foot communications array, from stowed configuration, in November 2022
- Powered the communications array in preparation for mobile network operator testing
- Tested patented doppler and delay hardware and software solution on the ground with Rakuten Mobile and Nokia baseband technology
- Completed installation of ground network for end-to-end testing in Texas, Hawaii and Japan
- Received test licenses via partner mobile network operators from relevant regulatory bodies in the United States, Japan, Colombia, Kenya, Nigeria, Philippines, and Indonesia in advance of mobile network operator testing
- Updated ground Space Operations Center (SOC) system and processes to support planned low Earth orbit operations
- *Transition to testing of direct-to-cell satellite capabilities beginning in Q1 2023, supporting mobile network operator partners to interconnect with BlueWalker 3 and prepare for future commercial service with BlueBird satellites*
 - Integrate with mobile network operator core networks, including AST SpaceMobile patented doppler and delay system, starting as early as January
 - Conduct initial 4G LTE and 5G end-to-end connectivity starting from communications array as early as January
 - Report speed test data in coordination with mobile network operator partners

Update on BlueBird programs, targeting launch of first 5 commercial satellites in late 2023

- Confirmation of BW3 mechanical deployment system and system architecture expected to be used for first 5 Block 1 BlueBird satellites
- Confirmation of main BW3 subsystems expected to be used for first 5 Block 1 BlueBird satellites, including guidance, navigation and control system in use on BW3
- Assembly and production lines designed, and equipment ordered and partially installed, with significant flexibility to meet expected 2023 production needs in our 185,000 square foot Texas manufacturing facilities
- Expect to begin initial chip production during 2023 of custom AST 5000 ASIC for future generation, higher capacity BlueBird satellites

Planned testing of the BW3 test satellite with mobile network operators may be delayed, may not prove successful, or may not be completed at all due to various factors, including, but not limited to, equipment failure, or other technical issues.

About AST SpaceMobile

AST SpaceMobile is building the first and only global cellular broadband network in space to operate directly with standard, unmodified mobile devices based on our extensive IP and patent portfolio. Our engineers and space scientists are on a mission to eliminate the connectivity gaps faced by today's five billion mobile subscribers and finally bring broadband to the billions who remain unconnected. For more information, follow AST SpaceMobile on [YouTube](#), [Twitter](#), [LinkedIn](#) and [Facebook](#). Watch [this video](#) for an overview of the SpaceMobile mission.

Forward-Looking Statements

This communication contains "forward-looking statements" that are not historical facts, and involve risks and uncertainties that could cause actual results of AST SpaceMobile to differ materially from those expected and projected. These forward-looking statements can be identified by the use of forward-looking terminology, including the words "believes," "estimates," "anticipates," "expects," "intends," "plans," "may," "will," "would," "potential," "projects," "predicts," "continue," or "should," or, in each case, their negative or other variations or comparable terminology.

These forward-looking statements involve significant risks and uncertainties that could cause the actual results to differ materially from the expected results. Most of these factors are outside AST SpaceMobile's control and are difficult to predict. Factors that may cause such differences include, but are not limited to: (i) expectations regarding AST SpaceMobile's strategies and future financial performance, including AST's future business plans or objectives, expected functionality of the SpaceMobile Service, anticipated timing and level of deployment of satellites, anticipated demand and acceptance of mobile satellite services, prospective performance and commercial opportunities and competitors, the timing of obtaining regulatory approvals, ability to finance its research and development activities, commercial partnership acquisition and retention, products and services, pricing, marketing plans, operating expenses, market trends, revenues, liquidity, cash flows and uses of cash, capital expenditures, and AST's ability to invest in growth initiatives; (ii) the negotiation of definitive agreements with mobile network operators relating to the SpaceMobile service that would supersede preliminary agreements and memoranda of understanding; (iii) the ability of AST SpaceMobile to grow and manage growth profitably and retain its key employees and AST SpaceMobile's responses to actions of its competitors and its ability to effectively compete; (iv) changes in applicable laws or regulations; (v) the possibility that AST SpaceMobile may be adversely affected by other economic, business, and/or competitive factors; (vi) the outcome of any legal proceedings that may be instituted against AST SpaceMobile; and (vii) other risks and uncertainties indicated in the Company's filings with the SEC, including those in the Risk Factors section of AST SpaceMobile's Form 10-K filed with the SEC on March 31, 2022.

The planned testing of the BW3 test satellite may not be completed due to a variety of factors, which could include loss of satellite connectivity, destruction of the satellite, or other communication failures, and even if completed as planned, the BW3 testing may indicate adjustments that are needed or modifications that must be made, any of which could result in additional costs, which could be material, and delays in commercializing our service. The production and launch of our BlueBird satellites may not be completed as currently contemplated due to a variety of factors, which could include results of BW3 testing, challenges in completing our assembly and production facility, launch difficulties, or supply chain shortages, any of which could result in additional costs or delays, which could be material. If there are delays or issues with our testing of BW3 or production and launch of BlueBird satellites, it may become more costly to raise capital, if we are able to do so at all.

AST SpaceMobile cautions that the foregoing list of factors is not exclusive. AST SpaceMobile cautions readers not to place undue reliance upon any forward-looking statements, which speak only as of the date made. For information identifying important factors that could cause actual results to differ materially from those anticipated in the forward-looking statements, please refer to the Risk Factors incorporated by reference into AST SpaceMobile's Form 10-K filed with the SEC on March 31, 2022. AST SpaceMobile's securities filings can be accessed on the EDGAR section of the SEC's website at www.sec.gov. Except as expressly required by applicable securities law, AST SpaceMobile disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise.

View source version on [businesswire.com](https://www.businesswire.com/news/home/20221213005989/en/): <https://www.businesswire.com/news/home/20221213005989/en/>

Investors:

Scott Wisniewski
investors@ast-science.com

Media:

Brandyn Bissinger
press@ast-science.com
 +1 866 845 6521

Source: AST SpaceMobile, Inc.