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Spire Global to Enhance AI-Driven Weather Prediction in Collaboration with NVIDIA

VIENNA, Va.--(BUSINESS WIRE)-- Spire Global, Inc. (NYSE: SPIR) (“Spire” or “the Company”), a global provider of space-based data, analytics and space services, has announced a collaboration with NVIDIA to advance AI-driven weather prediction. Through this collaboration, Spire’s Radio Occultation (RO) data and proprietary data assimilation (DA) capabilities will be integrated with NVIDIA Earth-2 Cloud APIs to leverage AI to accelerate climate and weather predictions.

The field of weather prediction is changing rapidly due to advances in AI. Spire’s multipurpose constellation of satellites, utilizing RO technology, offers unmatched global coverage of precise vertical profiles of temperature, pressure, and humidity across the globe, including under-observed areas and remote regions. By combining this dataset and Spire’s proprietary DA analyses with NVIDIA's advanced AI platforms and APIs, this collaboration aims to usher in a new era of accuracy in weather forecasting.

“As our world grapples with dynamic shifts in climate, anticipating and mitigating the impact of extreme-weather events poses escalating challenges for companies, individuals, and communities,” said Michael Eilts, general manager of weather and climate at Spire. “Aligning Spire’s proprietary data and unmatched global weather coverage with NVIDIA’s cutting-edge technology and expertise positions us to markedly elevate the accuracy of weather prediction. This collaboration will help ensure our customers are not just informed but empowered to proactively address the evolving climate landscape.”

Through this collaboration, Spire aims to deliver differentiated forecast products that are computationally infeasible using traditional NWP models. This includes rapidly updating global forecasts extending into the sub-seasonal timeframe, large ensemble systems capturing the entire range of possible weather outcomes, and generative AI downscaling models resolving fine forecast details over local areas. These capabilities will enhance Spire’s core products, such as the DeepVision™ weather risk mitigation platform, maritime route optimization, and renewable energy power forecasts. The Company will provide its customers in various sectors, including energy, commodity hedging and trading, maritime, aviation, supply-chain, insurance, transportation, defense and more, with lower latency, extended lead times and heightened forecast accuracy.

The NVIDIA Earth-2 platform includes the physical simulation of numerical models like ICON and IFS; neural network models such as FourCastNet, GraphCast, and Deep Learning Weather Prediction through the NVIDIA Modulus framework; and data federation and visualization with NVIDIA Omniverse technologies. Earth-2 aims to provide a path to simulate and visualize the global atmosphere at unprecedented speed and scale.

Spire’s suite of weather and climate solutions, including its recently launched High-

Resolution Weather Forecasts, DeepVision™ platform, global weather forecasts, proprietary data sources like ocean winds and soil moisture, and additional atmospheric weather datasets, aims to serve customers across various industries, including energy, logistics, utilities, agriculture and more. Learn more about Spire's AI Weather Forecasting.

About Spire Global, Inc.

Spire (NYSE: SPIR) is a global provider of space-based data, analytics and space services, offering unique datasets and powerful insights about Earth so that organizations can make decisions with confidence in a rapidly changing world. Spire builds, owns, and operates a fully deployed satellite constellation that observes the Earth in real time using radio frequency technology. The data acquired by Spire's satellites provides global weather intelligence, ship and plane movements, and spoofing and jamming detection to better predict how their patterns impact economies, global security, business operations and the environment. Spire also offers Space as a Service solutions that empower customers to leverage its established infrastructure to put their business in space. Spire has nine offices across the U.S., Canada, UK, Luxembourg, Germany and Singapore. To learn more, visit spire.com.

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For Media:
Sarah Freeman
Communications Manager
Sarah.Freeman@spire.com

For Investors:
Benjamin Hackman
Head of Investor Relations
Benjamin.Hackman@spire.com

Source: Spire Global, Inc.