SETI Institute-Unistellar Partnership Promises to Revolutionize Amateur Astronomy

July 18, 2017 Mountain View, CA, USA and Marseille, France — The SETI Institute and French startup Unistellar, announced a partnership today to commercialize a new telescope that promises to deliver an unparalleled view of the cosmos to amateur astronomers, and provide the opportunity to contribute directly to cutting-edge science.

Unistellar's new *eVscope™* , which leverages "Enhanced Vision" imaging technology will now provide three unique features never before offered in a compact mass-market instrument thanks to this partnership:

Enhanced Vision, which produces extremely sharp, detailed images of even faint astronomical objects by accumulating their light and projecting it into the telescope's eyepiece. The Enhanced Vision technology mimics the light gathering capability of significantly larger reflector telescopes, thus delivering unprecedented views of night-sky objects previously inaccessible to amateur astronomers.

Autonomous Field Detection (AFD) powered by GPS, which enables the eVscope to pinpoint celestial objects of interest without complicated alignment procedures nor expensive equatorial mounts. Thanks to AFD intelligent pointing and tracking, astronomers from novice to expert, can spend more time observing and always know precisely what they are looking at. This system is also able to name any object the user is watching thanks to a coordinates database of tens of millions of stars.

And **Campaign Mode,** a revolutionary and exciting feature developed at SETI Institute. It takes advantage of the telescope's advanced imaging technology and allows its users around the world to participate in observing campaigns to image and collect data on objects of special interest to researchers. In Campaign Mode, image data is automatically sent to a data repository at the SETI Institute's headquarters in Silicon Valley. The international scientific community can then access unprecedented volumes of image data for specific objects, from thousands of telescopes around the world, at different dates and times. This in turn, can enable new discoveries and enhance our understanding of the universe around us.

“Classical high-end telescopes are a wonderful tools for observing the four main planets. But they are generally disappointing for viewing fainter and more distant objects, which remain inaccessible to amateur astronomers,” said Laurent Marfisi, Unistellar CEO. “Our telescope will revolutionize amateur astronomy by allowing people to see in real time, celestial objects that until now have only been available as images in books or online. Our compact 4.5-inch telescope allows observers to see objects fainter than Pluto and achieve sensitivity equivalent to a one-meter telescope!”

“We are extremely excited to partner with Unistellar to bring advanced imaging technology to amateur astronomy and thus enable impactful new research through global citizen science,” said SETI Institute President and CEO Bill Diamond. “Images collected from the worldwide network of telescopes will be automatically downloaded to our database and analyzed by researchers using the latest machine-learning algorithms to facilitate new discoveries and detect new events.”

Franck Marchis, Senior Scientist at the SETI Institute and Chief Science Officer at Unistellar, shares that excitement: “Unistellar’s eVscope is a powerful new instrument that can generate important data about transient events of interest to astronomers, including supernovae, near-Earth asteroids, and comets. There is much to be gained from continuous observations of the night sky using telescopes spread around the globe, and by coordinating observations by sending alerts to users in order to study faint objects like comets or supernovae” said Marchis. “Another exciting feature of our Campaign Mode, is that our users will be able to witness the phenomena they are collecting data for, in real time” Added Marfisi,

A prototype of the Unistellar telescope has been delivered to the SETI Institute for testing and development of the Campaign Mode data network. Amateur astronomers will have a chance to help fund further development of the device by purchasing it for less than $1000 in a crowdfunding campaign set to launch in the Fall of 2017. Initial delivery of commercial telescopes is anticipated in mid 2018.

About the SETI Institute

The mission of the SETI Institute is to explore, understand, and explain the origin and nature of life in the universe and to apply the knowledge gained to inspire and guide present and future generations. Our research, education

and outreach programs explore the wonder of the universe and celebrate the excitement of exploration and the joy of discovery for all humankind.
http:///www.seti.org

About Unistellar SAS
Unistellar is reinventing popular astronomy through the development of the Enhanced Vision Telescope™: a smart combination of optics, electronics, and proprietary image-processing technology that aims to make astronomy interactive. Unistellar is completely dedicated to its popular ambition, but its technology has already garnered attention from established institutions like ONERA (the French aerospace agency) and Drone Imaging.
http://unistellaroptics.com/

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Images:
Unistellar's telescope will be available in Fall 2017 for its presales crowdfunding campaign.
https://www.dropbox.com/s/cmywf4juwc5boas/Unistellar%27s%20Enhanced%20Vision%20Telescope.jpg?dl=0

Observations of Dumbbell Nebula Messier 27, Whirlpool galaxy Messier 51 and the Eagle Nebula Messier 16 using a Unistellar telescope from Observatoire des Baronnies Provençales, France. This observation can be seen by the user directly in the lens and an image can later be generated for storage in the Unistellar database at the SETI Institute.
https://www.dropbox.com/s/mi8cnl7xst0kry0/M27p.tif?dl=0
https://www.dropbox.com/s/twopawkojo5xmix/M51p.tif?dl=0
https://www.dropbox.com/s/40g5ey2q0fxe7c3/M16p.tif?dl=0

From left to right: Franck Marchis (CSO and SETI Institute astronomer), Arnaud (Chairman and CTO), Laurent (CEO) and the demo prototype shown at Aix-en-Provence, France in June 2017
https://www.dropbox.com/s/3nh01gcenyq2pg1/Spectateur.jpeg?dl=0

Video:
Unistellar experience
https://www.dropbox.com/s/h31h9vkkciuc3y7/Vue%20Oeilleton_V4_2017_01_05.mp4?dl=0

Demo of the Unistellar prototype at the Observatoire de Marseille on July 1 2017
https://youtu.be/wbNH1JmXstE