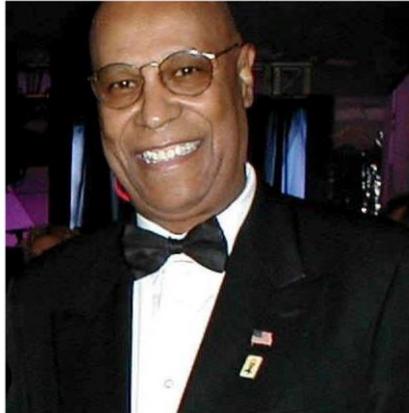


Pioneer of Laser Technology, Hildreth “Hal” Walker Jr., Launches Next Generation Lasers, Electronics & Optics (LEO) Laboratories

— *From environmental science & engineering to quantum computing, the LEO Labs will focus on research, product development and workforce training*



Laser Scientist Prof. Hildreth (Hal) Walker

(Irvine, California and Cape Town, South Africa) March 1, 2021 – **P3 Innovation Center Inc. and the Cape Town Space Society** announced today the launch of the first two labs in an international network of laboratories that will be focused on integrated applications of lasers, electronics and optical technology. In addition to applied research, product development and technology test & certification services, the LEO Labs will offer paid apprenticeships to community college and university students as well as a variety of workforce training and youth outreach programs in STEAM: Science, Technology, Engineering, Arts and Mathematics.

Hildreth “Hal” Walker Jr., president of the Cape Town Space Society, is a true pioneer of lasers, electronics and optical technology. After serving in the U.S. Navy as an electrician’s mate aboard the aircraft carrier *U.S.S. Rendova* where he became an expert in power electronics, Hal Walker was hired in the 1960s by Ted Maiman, the inventor of the laser and founder of KORAD Lasers in Santa Monica, Calif. While at KORAD, Walker served as the firm’s field operations manager in 1969 during the Apollo 11 mission’s Lunar Laser-Ranging Experiment (LURE), becoming the first man to successfully fire a high-powered ruby laser at retro-reflector mirrors placed on the lunar surface by Neil Armstrong; thus using lasers to accurately measure the distance between the Earth and Moon . Walker served as a NASA / Jet Propulsion Laboratory *Solar System Ambassador* for 20 years.

Throughout his career Hal Walker worked at Douglas Aircraft, Radio Corporation of America, and retired from Hughes Electro-Optical and Data Systems Group to form his own laser consultancy. In 1991, Prof. Hal Walker and his wife Dr. Bettye Walker launched an after-school education organization known as A-MAN Inc., offering STEM programs to under-served populations in the Los Angeles area. Then, in 1997, the Walkers organized a journey to Cape Town along with some of their program's secondary school students where the group met with South Africa's president Nelson Mandela. Mandela was so impressed with the students that he asked the Walkers to bring their A-MAN programs to South Africa. In addition to their long-standing International STEM Discovery programs, the Walkers co- founded the Cape Town Space Society in February 2019 with the mission of *working to create a spacefaring civilization*.

<http://www.capetownspacesociety.org.za/>

The new LEO Labs in Irvine and Cape Town will be officially named the *Hildreth "Hal" Walker Jr. Lasers, Electronics & Optics Labs*. The LEO Labs in Irvine will be located at the P3 Innovation Center for People, Planet & Prosperity, a nonprofit organization dedicated to achieving the United Nations' Social Justice and Sustainable Development Goals (SDGs). Brian Hagerty, founder and co-executive director of the P3 Innovation Center, will serve as lead program director for the LEO Labs. Hagerty graduated from the University of California at Irvine with a degree in physics and mathematics, then began a career in semiconductors, terrestrial and satellite communications, and embedded systems engineering, working for firms like Beckman Instruments and on consulting projects at NASA's Jet Propulsion Labs, among others. As part of his doctoral research in engineering and applied mathematics, Mr. Hagerty met the Walkers in 2011 and began a now decade-long science, engineering and education collaboration that has led to the launch of the Hildreth Hal Walker Jr. LEO Labs.

The LEO Labs will have a three-fold business model for economic and workforce development, referred to as the *Professionals, Majors and Minors Communities of Practice* — a cross-disciplinary development model created by Hagerty as part of his doctoral work and rolled out over ten years with various partners; the model is now being incorporated into the Walker LEO Labs. The "Professional" practices will consist of industry-driven applied research, engineering product design, and technology test and certification services in the sectors of clean energy and environment, earth and space physics, health and life sciences, computing and communications technology, and advanced manufacturing of "quantum effect" devices — all, of course, involving applications of lasers, electronics and optics.

The LEO Labs “Majors” Communities of Practice will focus on adult students of any age pursuing certificates or degrees of any nature related to LEO applications. In particular, the LEO Labs will partner with colleges and universities to create service-learning programs, registered apprenticeships, degree apprenticeships and graduate research apprenticeships, thus providing students the opportunity to work with industry mentors on real-world science and engineering projects.

Likewise, the LEO Labs “Minors” Communities of Practice will be focused on connecting industry professionals and student majors with youth outreach programs such as NASA’s GLOBE: *Global Learning & Observations to Benefit the Environment*, and IEEE’s EPICS: *Engineering Projects In Community Service*. In fact, P3 Innovation Center’s CELESTE: *Centers for Experiential Learning in Environmental Science, Technology & Engineering* currently includes a network of after-school programs that will participate in the LEO Labs, such as the Walker’s A-MAN Centers, the Institute for Earth Observations’ Environmental Nature Center, Listo America’s Creative Tech Learning Centers, and Bytes & Bots Labs.

“Growing up in the 1960s, watching the Apollo 11 lunar landing, and reading about lasers and physics as a boy, then joining the industry myself,” Hagerty said, “makes it a privilege and a special honor to be working with Professor Walker on the launch of the new Lasers, Electronics & Optics Labs.”

“Especially at this time,” Professor Walker said, “with the global challenges of climate change, public health, job creation and social justice, the mission of the LEO Labs aligns with the missions of A-MAN Inc. and the Cape Town Space Society, providing a tremendous opportunity for economic and workforce development as well as for inspiring new generations to imagine, to innovate and to serve.”

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