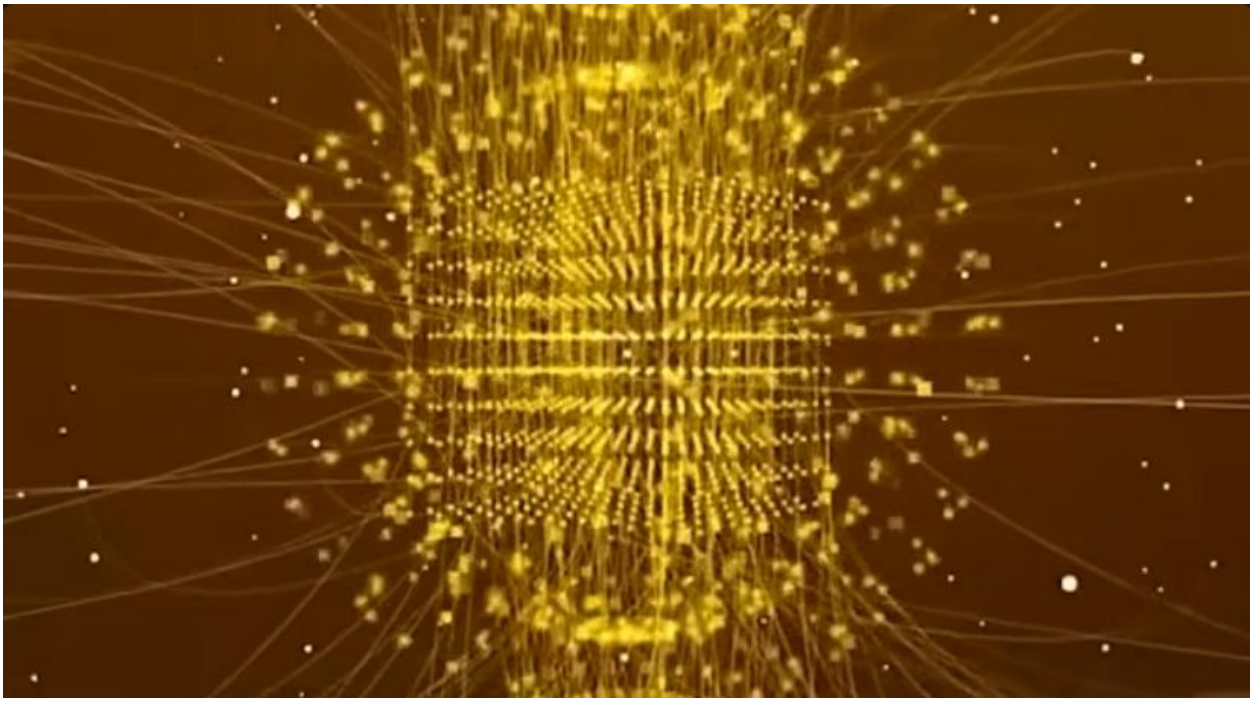
PEERING INTO OTHER WORLDS

MOOG-HOBERMAN TECHNOLOGY

SCIENCE FICTION SOON TO BE FACT

Moog-Hoberman Variflex Sphere Design is a globular XR unit with advanced 102 Technology Kopin-Jepsen free-standing holographics project three-dimensional images into your mind, with coherent light beam protons, and Bose-Einstein condensates, around a classified Moog company psychic waveguide amplification-cartography interface control chaise unit. With this technology, you will see across the universe, on a time delay, dependent on the integrity of the interstellar aetherspace outlink communications network, and the astronomical position along the sender's and receiver's navigational flight path.

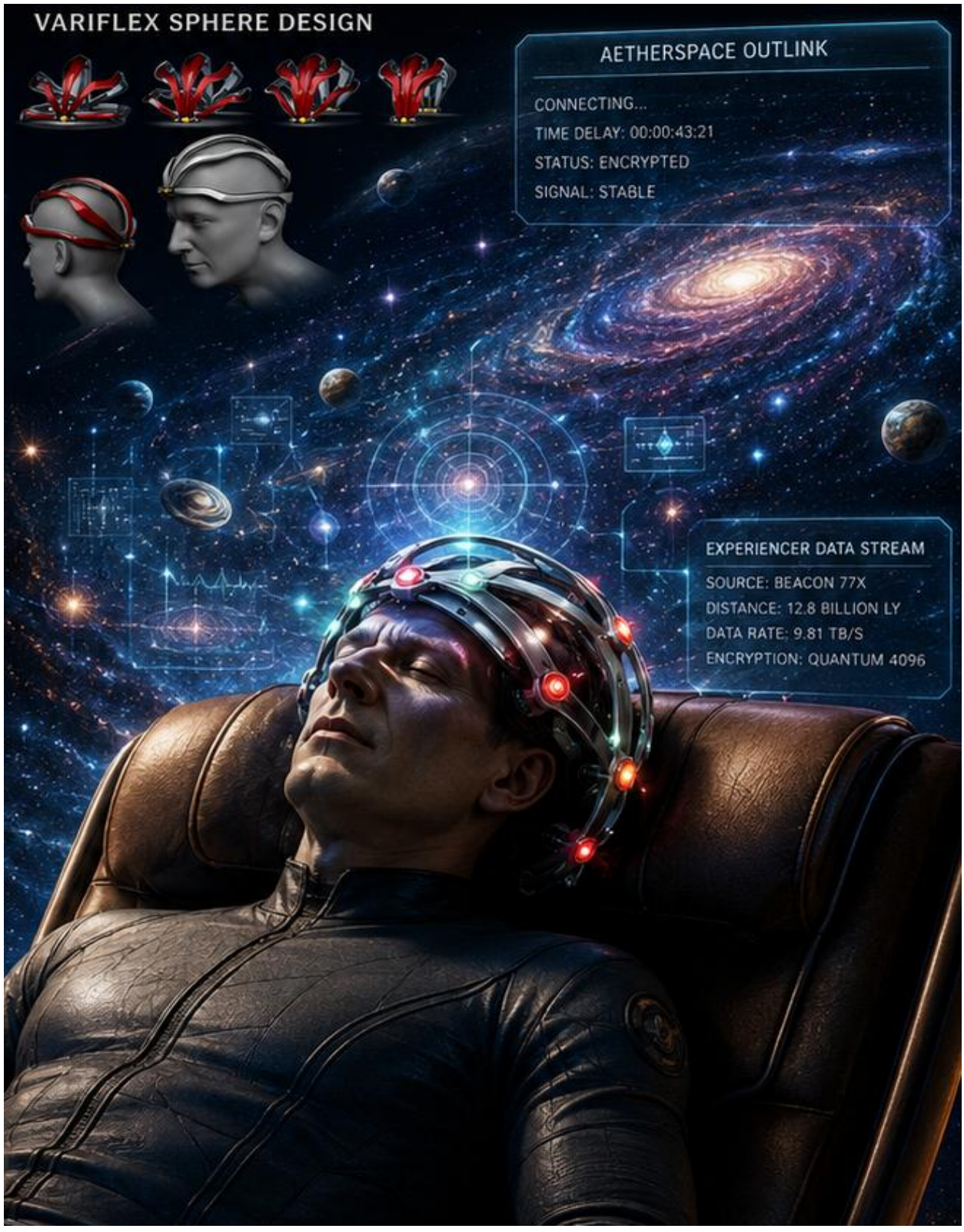


The Moog-Hoberman modified unit, with its strange helmet-shaped biometric and psychometric open scaffold, encephalon-electrodes apparatus, and its blinking syncopated diodes flashing red, green, yellow, and blue, sits at the top of the padded headrest of the zero-gravity design space chaise lounge. It is constructed of temperature-controlled, closed-cell memory foam padding, covered in moisture-absorbing, saddle brown, soft composite leather. Sitting on the chaise, it feels very comfortable, inviting you to recline on it fully, resting your head on the pillow within the scaffolding apparatus.

The machine instantly whirs to life. Subtle low-frequency Schuman resonance soundscapes fill your auditory senses; they flow directly into your mind. You enter into a morphogenic state, then reopen your mind's eye, and look into another world, billions of light-years away, whenever you make contact with the encrypted transmissions from the network of communication and navigation beacons along the sender’s journey, relaying encrypted experiencer data, your eyes would open in a glazed trance as his mind processed the data. The Moog-Hoberman transmits a burst laser-encrypted compressed digital audio signal and records every message made.

You look up towards the heavens. Your eyes open wide with astonishment at the lightning speed and scope of the euphoric knowledge and images newly disseminated from aetherspace; ancient knowledge of the universe and its arc of sentient life throughout. Knowledge is passed on to your mind out of time, ancient, transcendent knowledge. You appear to anyone

observing, you to be in a trance while looking into another dimension. So, never allow anyone to observe you processing the transmissions.



With its strange helmet-shaped open scaffold, encephalon-electrodes apparatus, and blinking syncopated diodes flashing red, green, yellow, and blue, at the top of the padded headrest, the Moog-Hoberman would record and transmit a burst laser encrypted compressed digital visual/audio signal of every message made to and from the InterWorld Council, of discovery and diplomacy. The system transmitted at 274.750, 310.920, and 377.550 megahertz using a scattered quantum encrypted binary hyperburst FTL subspace signal. This was the standard communications system used by the InterWorld Council member civilizations, and colony worlds throughout the Milky Way Galaxy and neighboring galaxies.

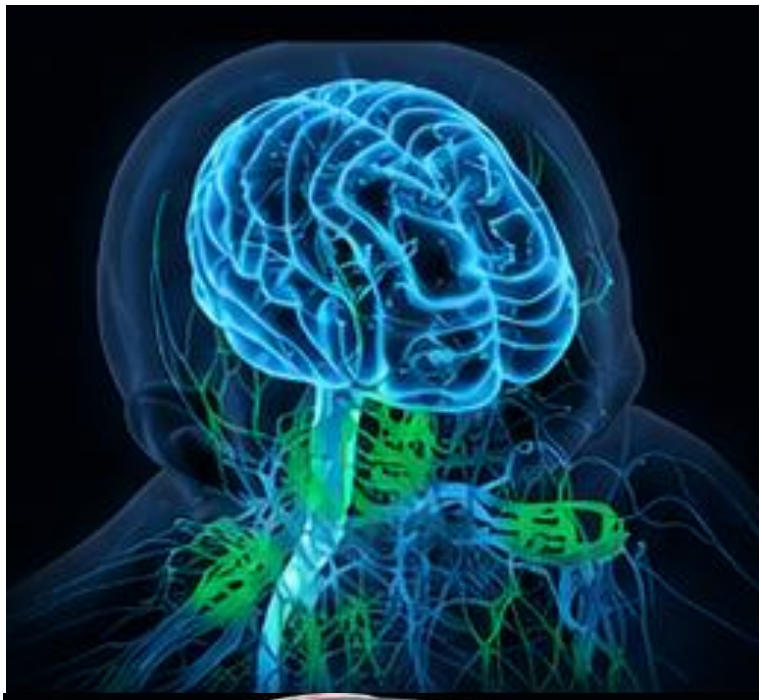
The Moog-Hoberman system also was upgraded to function using Dimensional Headset (DH) Technology. Similar to VR or virtual reality, users can walk around extra-dimensional environments and interact with them while joined by other people from anywhere in the world. A powerful mobile A.I. processor runs an onboard operating system that allows the user to peer into another world directly from the headset without the need for intracranial implants.

Derived from Laser Porting, and Project Looking Glass Technologies, the headset works by creating a highly coherent energy vortex or torsion field, allowing an individual to receive information by non-physical means. This is essentially describing the ability to use it as a peering portal, wherein an individual can become cognizant of objects or locations using

mind-clearing techniques and theta states of consciousness. It can see different aspects of the future, as well as the past.

The DH Technology can look backward and forward in time, putting the consciousness of the operator in a quantum entanglement state.

The headset acts as a sort of resonator for in-streaming energies from the point of focus maintained by the operator. The data can also be collected and projected onto holographic monitors, to reveal discernible images. The operator would sit and interface with their consciousness or quantum entanglement state directly at the targeted site.



When the device is turned on, strong toroidal fields of energy cycled with the operator at the center.

At the target site, the quantum entanglement state is engaged and appears to anyone on site as a small ball of light energy. The headset gives the viewer 360 degrees of observation.

Revolutionary wearable device uses light to safely scan the brain

A lightweight headset called Kernel Flow could make advanced brain imaging widely accessible, shrinking bulky lab systems into wearable technology. (CREDIT: Kernel)

Peering into the human brain has never been easy. For decades, neuroscientists have relied on heavy, expensive machines to measure blood flow and oxygen levels that reveal how the brain works. These tools, while powerful, have been confined to labs and hospitals, limiting access to only a small circle of researchers and patients.

Los Angeles–based neurotechnology company Kernel is poised to change that, shrinking the power of advanced brain imaging into a lightweight, wearable headset.

A Breakthrough in Brain Imaging

Kernel Flow, is based on time-domain functional near-infrared spectroscopy, or TD-fNIRS. Unlike older methods that shine a steady stream of light into the head, TD-fNIRS uses ultrafast pulses—on the order of trillionths of a second. By measuring how these pulses scatter and are absorbed, scientists can track oxygen levels in the brain and see how blood flow changes as someone thinks, moves, or learns.

Kernel Flow shrunk the power of advanced brain imaging into a lightweight, wearable headset. (CREDIT: Kernel)

Until now, systems capable of this level of detail have been bulky, costly, and difficult to use. Most clinics and research

centers could not justify the investment, leaving TD-fNIRS on the sidelines despite its promise. Kernel Flow addresses this barrier by packaging the technology into a 2.05-kilogram headset that runs from a USB-C cable, making it portable and practical without losing accuracy.

How the Headset Works

Kernel Flow1 is built from 52 modules arranged in plates that wrap around the head, giving full coverage of the brain's major regions. Each module functions like a miniature scanner, with two lasers—one emitting light at 690 nanometers and the other at 850 nanometers. These wavelengths are ideal for penetrating human tissue.

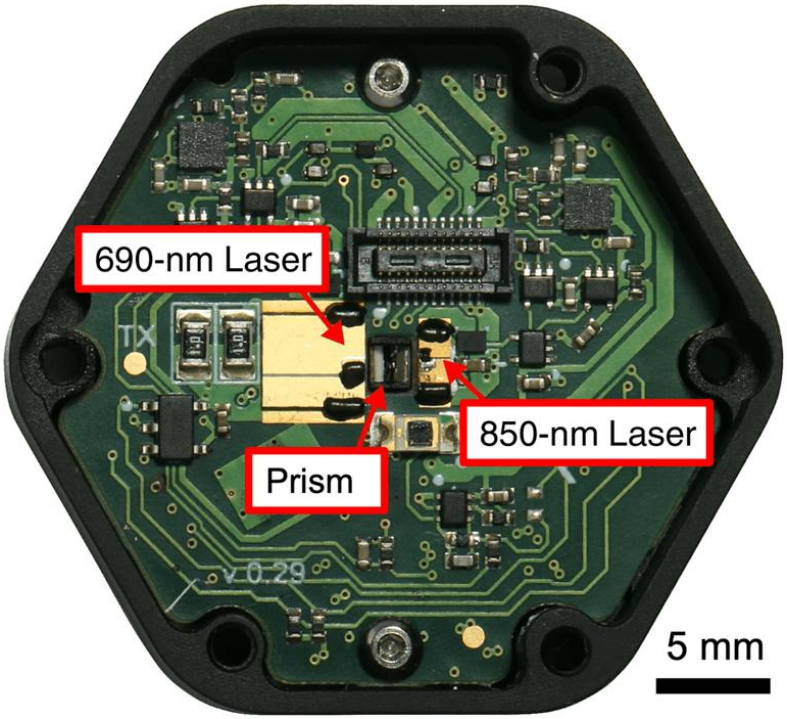
Surrounding the lasers are six detectors arranged in a hexagon. Light travels between the lasers and detectors through spring-loaded pipes that maintain steady contact with the scalp, even if the wearer shifts position.

This modular approach solved two problems that have long plagued brain imaging. First, it reduced the overall size of the device. Second, it made maintenance easier, since individual modules can be replaced if needed instead of servicing the entire system. The adjustable headset can also fit different head shapes and sizes, a practical feature for everyday use.

Inside each module, three main parts—lasers, detectors, and optics—work together to collect photons and record the exact time each one arrives. This timing is critical because it allows the system to distinguish between light scattered by deeper brain structures and light reflected from surface tissue. The result is a more precise reading of brain activity.

Testing in the Lab

To prove Kernel Flow1 could perform as well as traditional machines, the team first tested it using "phantoms." These are physical models that mimic the way human tissue absorbs and scatters light. The researchers applied a set of standardized protocols, including MEDPHOT, which measures how light passes through simulated tissue, and Basic Instrument Performance, which assesses sensitivity and response speed.



Laser subassembly showing the two different wavelengths of edge-emitting lasers, which are pulsed into a silver-coated prism to combine them into the same source light pipe. The PCB assembly is secured to an aluminum base that holds the prism in place and also serves as a heat sink for the laser diodes. (CREDIT: Journal of Biomedical Optics)

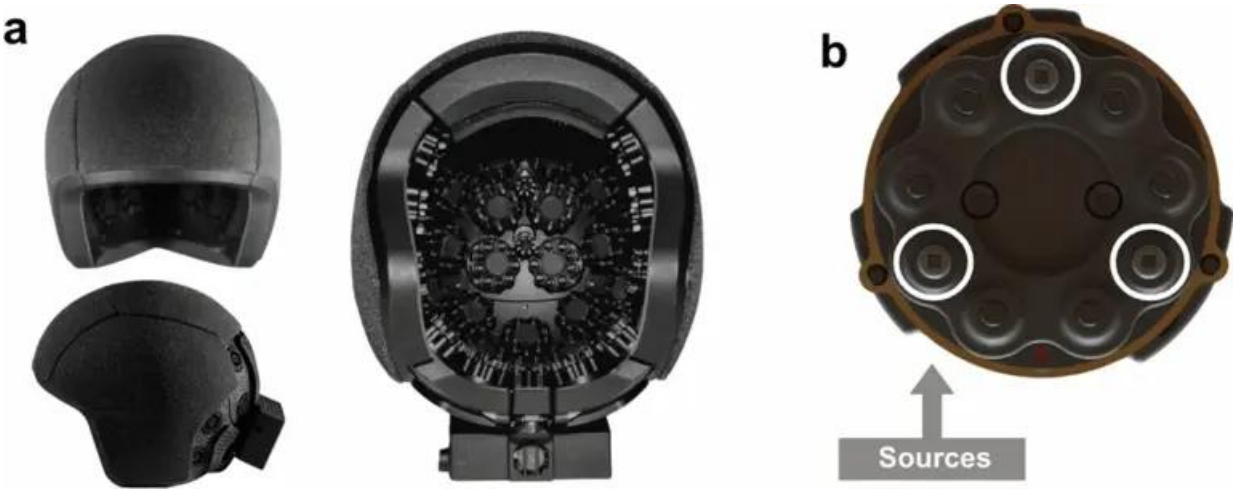
The results showed that Kernel Flow1 matched or even surpassed benchtop systems in accuracy. In other words, the compact headset could deliver the same high-quality data as larger, far more expensive equipment.

Putting the Device to the Test

The next step was to see whether the headset could measure brain activity in real people. For this, researchers turned to a classic neuroscience experiment: finger tapping. When a person taps their finger, blood flow increases in the motor cortex, the brain area responsible for movement.

Two volunteers wore the Kernel Flow1 headset while performing this task. The device captured increases in oxygenated blood and decreases in deoxygenated blood in the motor cortex, producing the same patterns other established imaging systems have documented. In total, the experiment collected data from more than 2,000 channels across the brain.

“Our miniaturized device demonstrated performance similar to benchtop systems, validated by phantom protocols and human neuroscience results,” said Ryan Field, Kernel’s Chief Technology Officer. These exciting results lead to the development of Kernel Flow2.



Kernel Flow2, second-generation Kernel whole-head TD-fNIRS system. (a) Schematic of front, side and inside view of the Flow2 headset. Note the individual modules located throughout the headset thus providing whole-head coverage. (b) Schematic of a module, which consists of 3 sources (marked by white circles) and 6 detectors. (CREDIT: Scientific Reports)© The Brighter Side of News

What's the difference Between Flow1 and Flow2

Kernel Flow 2 isn't just an incremental update—it's a major leap in hardware and software capability. Similar to the Kernel Flow1 device, Kernel Flow2 is a portable, noninvasive headset that measures brain function using infrared light. By tracking changes in hemoglobin levels and other brain activity signals, it offers a way to study brain function without surgery.

Differential upgrades and features include:

· **Multimodal Expansion** – Flow2 integrates TD-fNIRS + EEG, while Flow1 only offered TD-fNIRS. This makes Flow2 capable of capturing both hemodynamic and electrophysiological brain signals.

・**Coverage Upgrade** – Flow1 provided limited or partial head coverage, whereas Flow2 uses a dense modular array that enables full cortical coverage.

・**Modular Units** – Flow2 supports up to 40 modular units, each with 3 sources and 6 detectors, creating thousands of measurement channels

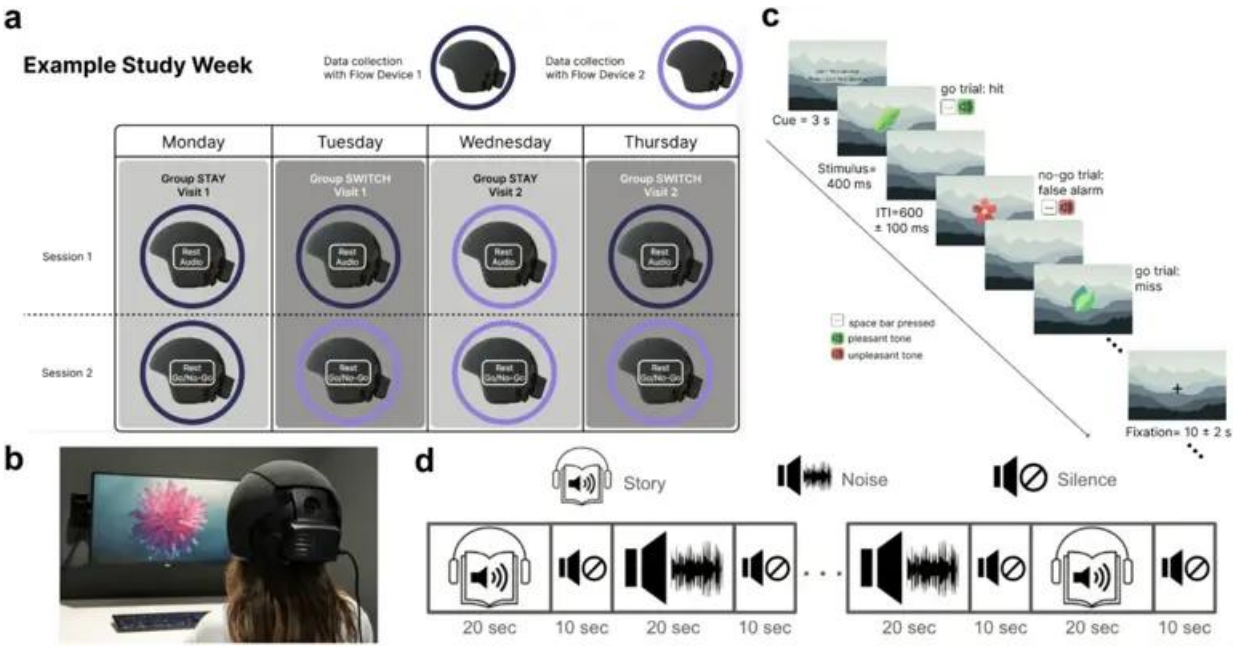
・**Sampling Rate Optimization** – Flow1 supported up to ~200 Hz per detector, but Flow2 standardizes recording at ~3.76 Hz system-wide, tuned for fast, whole-head hemodynamic imaging.

・**Signal & Power Efficiency** – Flow2 improves signal-to-noise ratio (SNR) and reduces power consumption compared to Flow1, enhancing overall usability.

・**Standardized Data Format** – Flow1 relied on custom/proprietary formats, while Flow2 outputs in SNIRF, making it compatible with open neuroimaging standards.

・**Software Ecosystem** – Flow1 used conventional fNIRS tools, but Flow2 ships with a user-friendly UI, automated quality reports, SDK support, and real-time capabilities.

・**Clinical Applications** – Flow1 was mainly for research, while Flow2 has been purpose-built for clinical studies, including depression and MCI biomarker research.



Participants in STAY or SWITCH groups completed two visits, each with a resting state plus either a passive auditory or Go/No-Go task. The Flow2 headset was used during a 7-minute audiovisual rest session, then removed between stages. Tasks included alternating blocks of story/noise with silence or response-inhibition trials. (CREDIT: Scientific Reports)© The Brighter Side of News

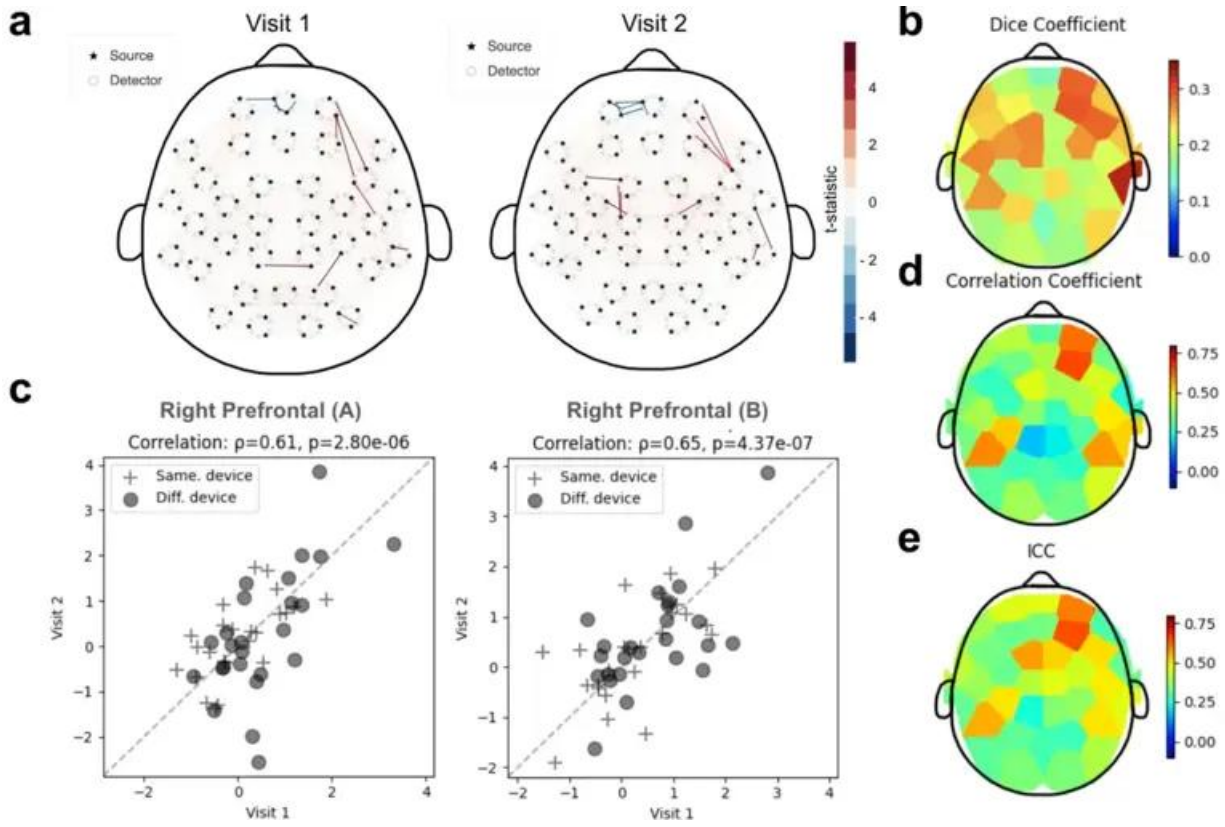
Kernel Flow2 Study

Researchers tested whether its readings remain consistent across repeated sessions, different headsets, and varied conditions. The study involved 49 healthy adults, averaging 44 years old, who attended two sessions each. They completed measurements at rest, while listening to sounds, and during a cognitive control task called the Go/No-Go. This design allowed the team to compare results both within the same day and across separate visits, while also evaluating performance across different Flow2 devices.

At rest, the device produced reliable measurements of hemoglobin concentration, light transmission, slow brainwave fluctuations, and functional connectivity.

Only prefrontal connectivity showed weaker reliability, likely due to factors like sleepiness or mood. Even so, further analysis found no systematic drift, confirming stable device performance.

During tasks, the device consistently detected brain activity in expected regions: auditory areas during sound exposure and the right prefrontal cortex during response inhibition. Statistical tests confirmed high reliability, even when switching headsets, and behavioral results were stable across visits. Together, these findings suggest Flow2 can deliver dependable brain activity measurements in both rest and task settings.



Reliability of the right prefrontal regions was observed in a Go/No-Go inhibitory control task. (CREDIT: Scientific Reports)© The Brighter Side of News

Kernel Flow2 Study Results

Overall, the findings, published in the journal Scientific Reports, show that Flow2 provides reliable, repeatable measurements of brain activity in both rest and task conditions. That matters because for brain-based biomarkers to be useful in real-world clinical settings—such as diagnosing disorders or monitoring treatment—they need to be both dependable and practical. The Flow2 headset's good performance supports its potential use in future medical and neurological research. However, the study noted one area needing more exploration: how the device performs across different hair types, since optical devices like this can be affected by hair texture. The researchers suggest future studies should investigate that.

Moreover, while the results are promising for healthy adults, more research will be needed to test the device's reliability and validity in clinical populations—people with neuropsychiatric or cognitive conditions—to fully unlock its diagnostic and monitoring potential. One of Kernel Flow's most notable qualities is how user-friendly it is compared to traditional machines. The spring-loaded light pipes ensure stable contact even when the wearer moves slightly. The headset is powered through a standard USB-C connection, eliminating the need for heavy batteries. At just over two kilograms, it is light enough to wear for extended sessions without discomfort.

Kernel's second generation neuro measurement system is powerful, reliable, easy-to-use, and built on decades of research. (CREDIT: Kernel)© The Brighter Side of News

The modular design also makes it scalable. Since the device can be manufactured in large numbers at a lower cost, it opens the door for broader use in classrooms, clinics, and even homes. This type of accessibility has been out of reach for TD-fNIRS technology until now. The development of Kernel Flow marks a major shift. Brain imaging that once required large, specialized labs can now be done with a portable headset that doesn't compromise on precision. It allows researchers to measure brain activity continuously, at speeds of up to 200 times per second, capturing subtle and fast changes that could deepen our understanding of cognition and behavior.