

## FSI's Solar-powered AUV (SAUV) to be used in tectonic plate monitoring

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FSI announced today it has supplied a Solar-powered Autonomous Underwater Vehicle (SAUV) to the University of Tokyo for use in monitoring tectonic plate movement. The SAUV was delivered through SEA Corporation, FSI's representative in Japan.

The SAUV is a compact, man-portable AUV designed for autonomous operation for long periods (weeks to months) without requiring maintenance, servicing, or recharging. The vehicle can be pre-programmed to submerge to depths down to 500 meters, to transit to designated waypoints, or to operate on the surface during conditions suitable for battery charging via solar energy input. With a square meter of solar panels, the SAUV can collect from 300 to 900 Watt-hours per day and carries 2.4KWHr on-board, rechargeable batteries, providing sufficient power for extended missions with large user payloads and frequent communications.

For this project, the SAUV has been equipped with a specialized transducer to receive precise slant range data from seabed-mounted transponders along with an RTK GPS, IXSEA PHINS motion reference unit and a TRDI WorkHorse ADCP. The SAUV provides the large payload capacity and stability that make this project possible. The combination of precise data from the underwater transponders, RTK GPS, and IXSEA MRU will allow researchers to monitor tectonic plate movements on the scale of millimeters per kilometer.

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