

NASA launches Soil Moisture Active Passive satellite

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On January 29, NASA launched the Soil Moisture Active Passive (SMAP) instrument, a satellite that will collect soil moisture data to enhance climate modeling and improve lives by predicting floods and droughts. SMAP's active radar will transmit microwaves and measure their reflected signals; slight shifts in the reflective energy will indicate soil moisture levels. Separately, its passive radiometer will receive and measure microwaves generated by Earth's ions and electrons; strong signals will indicate dry ground and muffled signals will indicate the presence of water in soil.

The data relayed by SMAP will not only assist scientists with updating climate modeling, but will also allow for more accurate flood predictions by providing soil moisture levels prior to rain storms and earlier and more accurate assessments of droughts. SMAP covers a wider territory than any previous soil assessment strategy and will be the first Earth orbiter of its kind, measuring soil across the world every two to four days.

Source: E&E News, NASA, Popular Science

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