

# SLUSH Search for Life Using Submersible Heated drill

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**Need** Robust technology development focused on penetration approaches tailored specifically to the Ocean World environments capable of reaching the target depth within a few year mission.

**Solution** SLUSH is a thermo-mechanical probe that combines:

1. mechanical drill to break the formation
2. melting to remove the cuttings

However, instead of melting an entire volume of ice, SLUSH melts just a fraction of it to form slush.

**Advantages** Slush behaves like liquid but is still partially frozen, this enables significant reduction in power draw. Since, the mechanical approach generates high penetration rates, SLUSH can also reach the ocean in much shorter time.

