

WHOI Underwater Optical Communication Tests

DESSC
June 2009

Maurice Tivey, Paul Fucile, Enid Sichel, Norm Farr

- Field tests:
 - 1) Low power underwater optical communicator
 - 2) High power underwater optical system
- *Alvin* Dive Program, July 28 – Aug 13, 2008



Funding: NSF Grant OCE-0527466



WHOI Low Power Optical Communicator

- LED is the light source (blue wavelength)
- Silicon photodiode is the detector
- IrDA communication protocol
- Underwater optimized optics
 - $\pm 45^\circ$ cone, near field (1-5 m)
- Small size / low power (9V)
 - Easily incorporated into underwater sensors/devices, ICL compatible

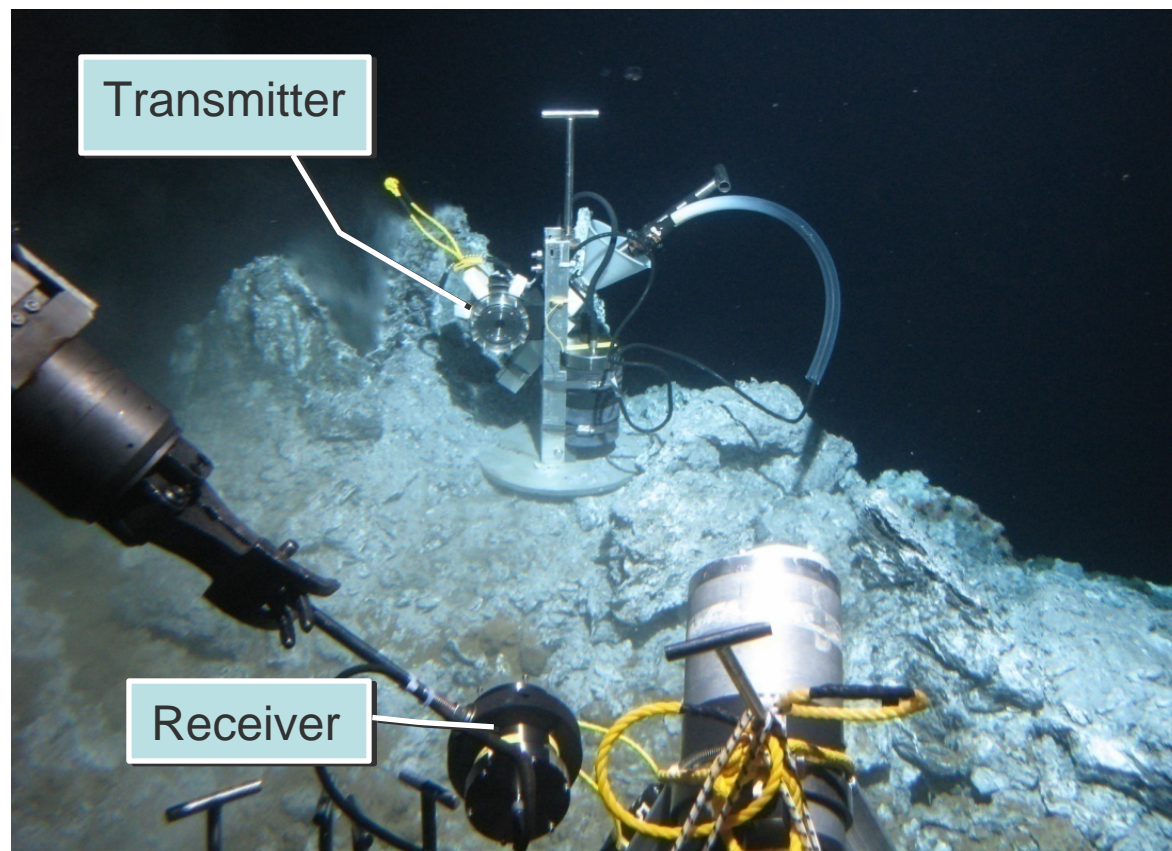


Alvin Field Tests with High-T Probe

T-probe



Puppy Dog Vent, Middle Valley





Transmitted Optical Comms Data

Puppy Dog Vent : Opt. Link Data

