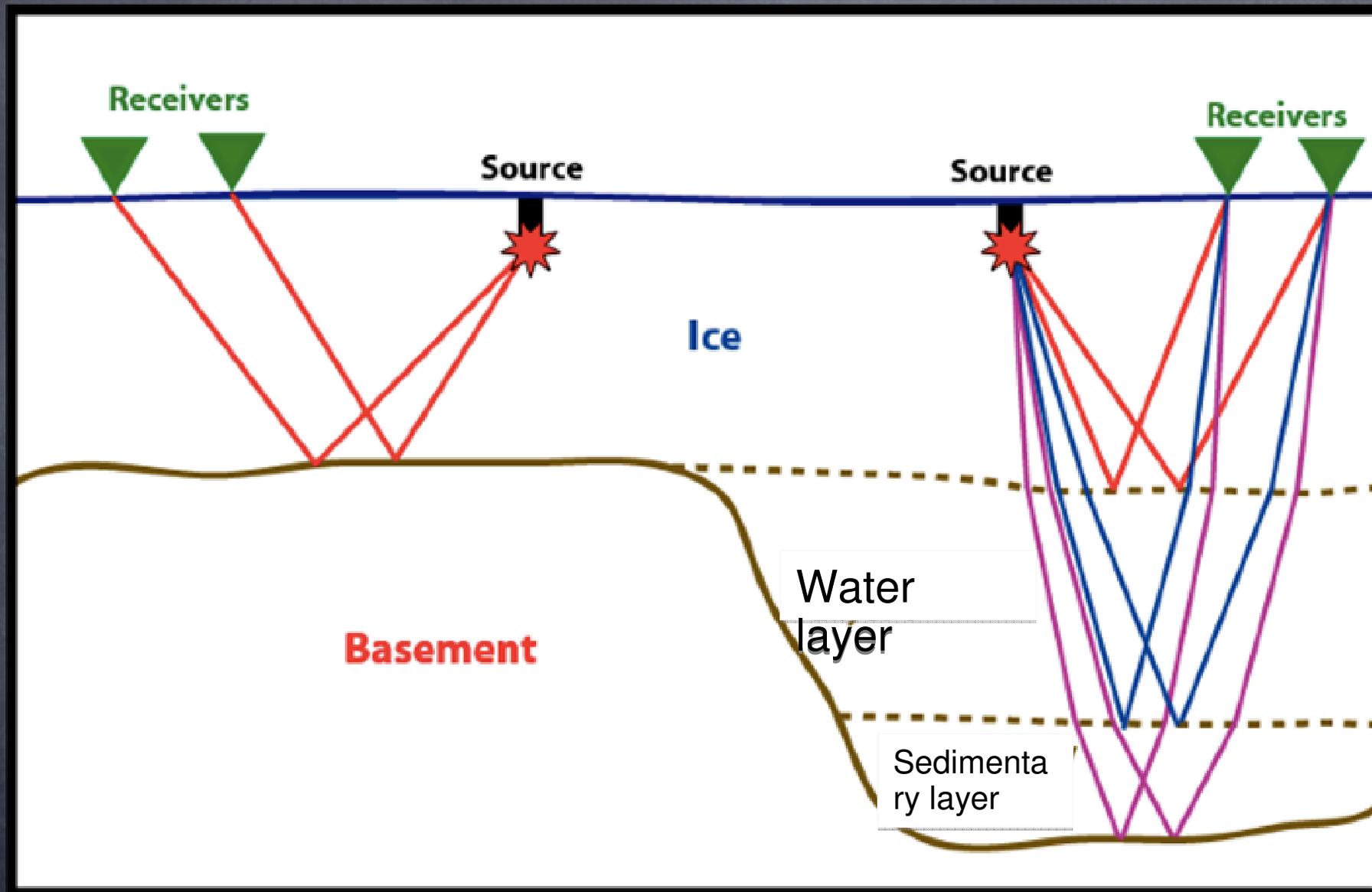


# Using seismology and radar to explore the ice shelf

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# Goals

- Determine how the ocean cavity underneath the glacier looks like
- Measure the properties of the sea bed rocks
- Monitor melting underneath the ice shelf
- Measure strain rate and seismicity caused when the glacier advances
- Use radar to determine crevassing and snow accumulation.



# Exploring the ocean cavity

- Seismic imaging of cavity regions unexplored by the underwater vehicle
- Three dozen test sites
- First priority: Line of test sites between drill sites (to decide where to set 2nd drill site)
- Next: Other sites upstream on the glacier and elsewhere on the ice shelf

# Determining melt rates underneath the ice shelf

- Repeated radar measurements can determine melt rates at the base of the ice shelf
- First priority: Region around the drilling sites
- Next: Other sites away from the drilling sites

# Radar

- Operational - search for crevasses and determine safe location for drilling
- Accumulation - radar can detect layering that reflects changes in snowfall in the past few years