

What is a snow pillow?

A snow pillow consists of approx. 3m diameter bladders containing antifreeze solution. As snow accumulates on the pillow, the weight of the snow pushes an equal weight of the antifreeze solution from the pillow up a standpipe in the adjacent instrument house. The weight of the water content of the snow is termed Snow Water Equivalent (SWE). The distance the antifreeze is pushed up the standpipe is recorded by a float connected to a shaft encoder.

As well as the vertical standpipe from the pillow, the instrument shelter contains the electronics, consisting of a Data Collection Platform (DCP), a shaft encoder which tracks the movement of the float in the standpipe from the pillow, 12 volt wet cell battery for powering the electronic equipment, and regulators for the externally mounted solar panel for recharging the batteries. The DCP contains a transmitter to send the recorded data by satellite to us. On the outside of the instrument shelter are the solar panels for the charging of the system, and an air temperature sensor.

AUTOMATED SNOW MONITORING

- **Snow pillow measures weight of snow pack**
- **All snow pillows have telemetry**
 - **12 mountain sites**
 - **2 prairie sites**

