# CZO Metadata Worksheet

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| Data File Name | RTH1\_Snow\_Level\_0 |
| Date Prepared | 2018-11-15 |
| Descriptive Title | Shale Hills CZO Snow Depths |
| Update Frequency | Continuous |
| Abstract | Snow depth is being measured with a Campbell Scientific SR50A Sonic Ranging Sensor. Measurements are averaged over a ten minute period and stored in the data table. The distance to the ground or snow level is temperature corrected using the nearby Campbell Scientific HMP45 air temperature/relative humidity sensor. Manual measurements will be used to verify readings when possible. |
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| Data Value Descriptions | * COL1: label=TmStamp; Timezone = UTC * COL2: label=RecNum; data logger record reference * COL3: label=Snow\_Depth\_Avg; Units = centimeters(cm); Average * COL4: label=TCDT; Temperature corrected Distance to Ground or Snow; Units = centimeters (cm) * COL5: label=Quality; internal sensor measurement quality * 0 = not able to read distance * 152 to 210 = Good measurement quality * 210 to 300 = Reduced echo signal strength * 300 to 600 = High measurement uncertainty |
| Keywords | Shale Hills, CZO, precipitation, snow |
| Methods | Snow depth measurements are made using a Campbell Scientific SR50A Sonic Ranging Sensor connected to a Campbell Scientific CR1000 data logger. The sonic sensor measures the distance to the ground that used a temperature compensation algorithm using temperature from a shielded Campbell Scientific HMP45 air temperature/relative humidity sensor.  The program has a built in quality controls. Eleven measurements are made during every measurement cycle that will eliminate any low or high values. A sensor measurement quality number is also assigned to each measurement to identify good, poor, or no measurement (see the Data Value Descriptions section).  Sensor was installed on November 15, 2018. |
| Citation | The following acknowledgment should accompany any publication or citation of these data: Logistical support and/or data were provided by the NSF-supported Shale Hills Susquehanna Critical Zone Observatory. |
| Publications | none |
| Data Use Notes | The user of Shale Hills Susquehanna CZO data agrees to provide proper acknowledgment with each usage of the data. Citation of the name(s) of the investigator(s) responsible for the data set, in addition to the generic statement above, constitutes proper acknowledgment. Author(s) (including Shale Hills Susquehanna CZO investigators) of published material that makes use of previously unpublished Shale Hills Susquehanna CZO data agree to provide the Shale Hills Susquehanna CZO data manager with four (4) copies (preferably reprints) of that material for binding as soon as it becomes available. The user of Shale Hills Susquehanna CZO data agrees not to resell or redistribute shared data. The user of these data should be aware that, while efforts have been taken to ensure that these data are of the highest quality, there is no guarantee of perfection for the data contained herein and the possibility of errors exists. These data are defined as either public or private, such that a password may be required for access. |