# SSHCZO Metadata Worksheet

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| Data File Name | **LRRT \_Dielectric.csv** |
| Date Prepared | 2018-11-01; updated 2019-02-05 |
| Descriptive Title | Soil Real and Imaginary Dielectric Data LRRT Pit |
| Update Frequency | Continuous – data transmitted every 3 hours |
| Abstract | The Ground Hydrological Observation Gear (GroundHOG) sites in the Susquehanna Shale Hills Critical Zone Observatory provide integrated observation of water, energy, and temperature in the Garner Run field sites within the greater Shavers Creek watershed. Real and imaginary dielectric properties are measured at 3 depths; 10, 20, and 40 cm. Each of these measurements are made using HydraProbes from Stevens Instruments. |
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| Data Value Descriptions | * COL1: label = TmStamp, TimeZone=UTC. * COL2: label = RecNum * COL3: label = R\_Dielec\_10\_Avg, TimeSupport= 10 min, Offset = -10 cm * COL4: label = R\_ Dielec \_20\_Avg, TimeSupport= 10 min, Offset = -20 cm * COL5: label = R\_ Dielec \_40\_Avg, TimeSupport= 10 min, Offset = -40 cm * COL6: label = I\_ Dielec \_10\_Avg, TimeSupport = 10 min, Offset = -10 cm * COL7: label = I\_ Dielec \_20\_Avg, TimeSupport = 10 min, Offset = -20 cm * COL8: label = I\_ Dielec \_40\_Avg, TimeSupport = 10 min, Offset = -40 cm * COL9: label = R\_D\_T\_10\_Avg, TimeSupport = 10 min, Offset = -10 cm, Temperature corrected real dielectric * COL10: label = R\_D\_T\_20\_Avg, TimeSupport = 10 min, Offset = -20 cm, Temperature corrected real dielectric * COL11: label = R\_D\_T\_40\_Avg, TimeSupport = 10 min, Offset = -40 cm, Temperature corrected real dielectric * COL12: label = I\_D\_T\_10\_Avg, TimeSupport = 10 min, Offset = -10 cm, Temperature corrected imaginary dielectric * COL13: label = I\_D\_T\_20\_Avg, TimeSupport = 10 min, Offset = -20 cm, Temperature corrected imaginary dielectric * COL14: label = I\_D\_T\_40\_Avg, TimeSupport = 10 min, Offset = -40 cm, Temperature corrected imaginary dielectric |
| Keywords | Soil, water, hydrology, hydropedology, soil science, dielectric constant |
| Methods | Real and imaginary dielectric constants are measured at each site with Stevens Hydra Probe II ([www.stevenswater.com](http://www.stevenswater.com)). Sensors are wired to a Campbell Scientific CR1000 data logger using SDI-12 protocol. The data logger is wired in series using MD-485 devices to allow cellular data transmission from the ridge top. Data are measured every 10 minutes. |
| Sites | Sites:   * Garner Run: Leading Ridge Ridge Top Pit  |  |  | | --- | --- | | Latitude | 40.694 | | Longitude | -77.9186 | |
| Publications | none |
| Citation | The following acknowledgment should accompany any publication or citation of these data: Logistical support and/or data were provided by the NSF-supported Susquehanna Shale Hills Critical Zone Observatory. |
| Data Use Notes | The user of Susquehanna Shale Hills 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 Susquehanna Shale Hills CZO investigators) of published material that makes use of previously unpublished Susquehanna Shale Hills CZO data agree to provide the Susquehanna Shale Hills CZO data manager with four (4) copies (preferably reprints) of that material for binding as soon as it becomes available. The user of Susquehanna Shale Hills 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. |