



Cold and Arid Regions Science Data Center

HiWATER: Dataset of infrared temperature in Zhanye
Airport desert

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HiWATER: Dataset of infrared temperature in Zhanye Airport desert

Abstract

Zhanye Airport desert observation system can offer in situ calibration data for TASI, WiDAS and L band sensor used in aerospace experiment.

Observation Site: This point is located in a large, homogeneous and flatten desert near by Zhanye Airport. The main vegetation type is Sparse and low shrub. The coordinates of this site: 38° 41' 41.30" N, 100° 41' 48.10" E.

Observation Instrument: The observation system consists of two SI-111 infrared radiometers (Campbell, USA), one installed vertically downward to land surface, another face to south of zenith angle 35°. SI-111 sensor installed at 4.0 m height.

Observation Time: This site operates from 10 June, 2012 to today. Observation data laagered by every 5 seconds uninterrupted. Output data contained sample data of every 5 seconds and mean data of 1 minute.

Accessory data: Land surface infrared temperature (by SI-111), sky infrared temperature (by SI-111) can be obtained. Dataset is stored in *.dat file, which can be read by Microsoft excel or other text processing software (UltraEdit, et. al). Table heads meaning: TarT_Atm, Sky infrared temperature @ facing south of zenith angle 35° (); SBT_Atm, body temperature of SI-111 sensor () measured sky; TarT_Sur, land surface infrared temperature @ 4.0 m height; SBT_Sur, body temperature of SI-111 sensor () measured land surface.

Dataset is stored day by day, named as: data format + site name + interval time + date + time. The detailed information about data item showed in data header introduction in dataset.

Keywords

Theme: radiometric calibration, calibration measurement, land surface temperature,

Place: the artificial oasis experimental area, Zhanye Airport, Heihe River Basin,

Temporal: 2012, 2012-06-10, 2012-09-27,

Discipline: remote sensing,

Statrum:

ISO 19115 Category

Category: geoscientificInformation

Detail

Project: +proj=longlat +datum=WGS84 +no_defs

Data Volume(MB): 50

Data Format: *.dat

Position and Thumbnail

N:38.7781

E:100.697

W:100.697

S:38.7781

Temporal Range

Start: 2012-09-27

End:

Citation

1. Li X, Liu SM, Xiao Q, Ma MG, Jin R, Che T, Wang WZ, Hu XL, Xu ZW, Wen JG, Wang LX. A multiscale dataset for understanding complex eco-hydrological processes in a heterogeneous oasis system. *Scientific Data*, 2017, 4: 170083. doi:10.1038/sdata.2017.83.

Recommended Publications

DOI

10.3972/hiwater.028.2013.db

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1. National Natural Science Foundation of China : (No: 91125004)

Limitation

1. The dataset is generated from the "Heihe Watershed Allied Telemetry Experimental Research (HiWATER)". User must have a clear statement in the article of the original data source and cite the dataset and papers in the Citation section.

Online Resources

1. <ftp://ftp2.westgis.ac.cn>
2. <http://card.westgis.ac.cn>

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