



Cold and Arid Regions Science Data Center

WATER: Dataset of LAS (Large Aperture Scintillometer)
observations at the A'rou freeze/thaw observation
station

UUID: e1da9ebc-c170-4012-848d-655faba3ee94



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Abstract

The dataset of LAS (Large Aperture Scintillometer: BLS450, made in Germany) observations was obtained at the A'rou freeze/thaw observation station from Mar. 11 to Jul. 11, 2008. The transmitter (E100° 28' 16.4", N38° 03' 24.3", 11.2m) and the receiver (E100° 27' 25.9", N38° 02' 18.1", 11.5m) were 2390m away from each other and the operating altitude was 9.5m. The observation item was the atmospheric refractive index structural parameters (Cn2). The transmitting frequency was 5HZ and the data were output per minute. The processed data were archived in a 30 minutes cycle.

The data were named after WATER_LAS_A'rou_yyyymmdd-yyyymmdd.csv (yyyymmdd-yyyymmdd for observation time). The missing data were marked "None".

Keywords

Theme: surface energy balance, evapotranspiration, sensible heat flux, meteorology and hydrology, the large aperture scintillometer,

Place: the Heihe River Basin, A'rou freeze/thaw observation station, A'rou foci experimental area, the cold region hydrology experimental area,

Temporal: 2008-07-11, 2008-03-11,

Discipline:

Statrum:

ISO 19115 Category

Category: climatologyMeteorologyAtmosphere

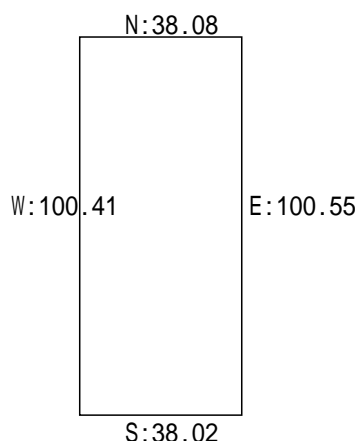
Detail

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

Data Volume(MB): 0.53

Data Format:

Position and Thumbnail



Temporal Range

Start: 2008-03-11

End: 2008-07-11

Citation

1. Li X, Li XW, Li ZY, Ma MG, Wang J, Xiao Q, Liu Q, Che T, Chen EX, Yan GJ, Hu ZY, Zhang LX, Chu RZ, Su PX, Liu QH, Liu SM, Wang JD, Niu Z, Chen Y, Jin R, Wang WZ, Ran YH, Xin XZ, Ren HZ. Watershed Allied

Telemetry Experimental Research. Journal of Geophysical Research, 2009, 114(D22103), doi:10.1029/2008JD011590.

2. Liu SM, Li X, Xu ZW, Che T, Xiao Q, Ma MG, Liu QH, Jin R, Guo JW, Wang LX, Wang WZ, Qi Y, Li HY, Xu TR, Ran YH, Hu XL, Shi SJ, Zhu ZL, Tan JL, Zhang Y, Ren ZG. The Heihe Integrated Observatory Network: A basin-scale land surface processes observatory in China. Vadose Zone Journal, 2018, 17:180072. doi:10.2136/vzj2018.04.0072

Recommended Publications

1. Liu SM, Xu ZW, Wang WZ, Bai J, Jia Z, Zhu M, Wang JM. A comparison of eddy-covariance and large aperture scintillometer measurements with respect to the energy balance closure problem. Hydrology and Earth System Sciences, 2011, 15(4): 1291-1306. doi:10.5194/hess-15-1291-2011.
2. Xu T, Liu S, Xu L, Chen Y, Jia Z, Xu Z, Nielson J. Temporal Upscaling and Reconstruction of Thermal Remotely Sensed Instantaneous Evapotranspiration. Remote Sensing. 2015, 7(3):3400-3425. doi:10.3390/rs70303400
3. Xu TR, Liu SM, Xu ZW, Liang SL, Xu L. A dual-pass data assimilation scheme for estimating surface fluxes with FY3A-VIRR land surface temperature. Sci. China Earth Sci., 2015, 58(2), 211-230, doi: 10.1007/s11430-014-4964-7.
4. Li Y, Sun R, Liu SM. Vegetation Physiological Parameters Setting in the Simple Biosphere Model 2 (SiB2) for alpine meadows in upper reaches of Heihe River. SCIENCE CHINA, 2014, doi:10.1007/s11430-014-4909-1

DOI

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Limitation

1. The dataset is generated from the "Watershed Airborne Telemetry Experimental Research (WATER) ", the user must have a clear statement in the article of the original data source and adopt the reference style providing by the metadata in the References section.

Online Resources

1. metadata link <http://westdc.westgis.ac.cn/data/e1da9ebc-c170-4012-848d-655faba3ee94>
2. WATER Website <http://water.westgis.ac.cn>
3. Digital Heihe Website <http://heihe.westgis.ac.cn>
4. Environmental and Ecological Science Data Center for West China <http://westdc.westgis.ac.cn>
5. 数据总体报告 <http://westdc.westgis.ac.cn/doc/数据总体报告v1.pdf>
6. 航空遥感试验数据专题报告 <http://westdc.westgis.ac.cn/doc/航空遥感试验数据专题报告v1.pdf>

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