

TJNU Large-scale Multimodal Ground-based Cloud Database, 12K Samples Agreement

Introduction

The TJNU Large-scale Multimodal Ground-based Cloud Database, 12K samples (LMGCD-12K) is collected in Tianjin, China from 2017 to 2025. It contains 12000 multimodal ground-based samples which are divided into seven sky types: 1) cumulus, 2) altocumulus and cirrocumulus, 3) cirrus and cirrostratus, 4) clear sky, 5) stratocumulus, stratus and altostratus, 6) cumulonimbus and nimbostratus, 7) mixed cloud. The LMGCD-12K is composed of 5000 training samples and 7000 test samples from seven classes, and each sample comprises one ground-based cloud image and a set of multimodal cloud information which are one-to-one correspondence. The cloud images are captured by a sky camera with fisheye lens and stored in JPEG format with the pixel resolution of 1024×1024. The multimodal cloud information collected by a weather station includes temperature, humidity, pressure and wind speed, and is stored in a vector with four elements. All the samples are cooperatively annotated by the meteorologists and the ground-based cloud researchers. The LMGCD-12K will be provided free of charge to cloud-related researchers in order to promote research. This agreement is granted by the providers in College of Electronic and Communication Engineering, Tianjin Normal University, Tianjin, China, and Meteorological Observation Centre, China Meteorological Administration, Beijing, China.

Content

The researcher(s) agrees to the following restrictions and requirements on the TJNU Large-scale Multimodal Ground-based Cloud Database, 12K samples (LMGCD-12K):

- 1. Redistribution:** Without prior approval from the providers, the LMGCD-12K, in whole or in part, will not be further distributed, published, copied, or disseminated in any way or form whatsoever, whether for profit or not. This includes further distributing, copying or disseminating to a different facility or organizational unit within the requesting university, organization or company.
- 2. Modification:** Without prior approval from the providers, the LMGCD-12K, in whole or in part, will not be modified.
- 3. Commercial Use:** Without prior approval from the providers, the LMGCD-12K, in whole or in part, will not be used for commercial use. Any commercial use of the database is strictly prohibited.
- 4. Publication Requirements:** In no case should the samples be used in a way that could reasonably cause the original subject embarrassment or mental anguish.

5. Acknowledgment: In all documents and papers that report experimental results based on the LMGCD-12K, a citation of this dataset should be added into the references or acknowledged in the acknowledgement.

6. Indemnification: Researcher agrees to indemnify, defend and hold harmless Tianjin Normal University, Tianjin, China, and Meteorological Observation Centre, China Meteorological Administration, Beijing, China, and their officers, employees and agents, individually and collectively, from any and all losses, expenses, damages, demands and/or claims based upon any such injury or damage (real or alleged) and shall pay all damages, claims, judgements or expenses resulting from researcher's use of the LMGCD-12K.

7. Legal Disclaimer: The LMGCD-12K is granted without any warranty. The providers shall not be held responsible for any damage (physical, financial or otherwise) caused by the use of the database. The providers shall not be held responsible of any illegal or criminal use of the database by the End-User. Any illegal or criminal use of the database by the End-User is strictly prohibited.

8. Access: The End-User warrants that they have read and understood all elements contained herein and that the signature apposed hereunder is the result of a fully aware decision. The End-User may only use the LMGCD-12K after this Agreement has been signed and returned to the providers. The EndUser must return the signed and dated Agreement by email, in PDF format to the providers at the following address: shuangliu.tjnu@gmail.com or s.liu@tjnu.edu.cn. The database will be accessible online using a URL and password that are given by the providers.

End-User (Authorized Signatory)

Organization Name (Institute, University, etc):	
Organization Address:	
Full Name:	
Title / Function:	
Email:	
Date:	
Signature:	

*The table can be filled in English or Chinese.

*Scan and send to email shuangliu.tjnu@gmail.com or s.liu@tjnu.edu.cn