A Big Earth Data Platform for Three Poles

**Data set of dual CMOS infrared in situ stereo camera in Qilian Mountain National Nature Reserve (August 2020)**

1、Description

This data set contains the data set of wildlife infrared stereo camera deployed in Qilian Mountain reserve, Zhangye City, Gansu Province. A total of 3 sets of stereo camera equipment are deployed near Sidalong in Qilian Mountain reserve. The coordinate positions are 38 ° 28 ′ 17 ″ n, 99 ° 53 ′ 53 ″ E and 3160m above sea level. The stereo camera is placed on the tree and behind the solar panel respectively, and the solar panel is used for power supply. The data acquisition time is August 2020, with a total of 82 images, including 42 pairs of left and right matching image pairs. The data acquisition method is to acquire the data parameters jointly with the UAV of Northwest Academy of Sciences of Chinese Academy of Sciences. Because the installation position is in the non signal area, other data are saved and not taken out from the internal memory card of the camera.  
The stereo camera uses infrared induction trigger to obtain wild animal images. The camera is in sleep for a long time. In this state, only the infrared sensor is in working state. When the sensor senses infrared thermal information, the stereo camera is aroused to take photos and collect. The size of the collected image sheet is 2592 × 1944, the data format is jpg. A pair of effective data includes the left and right images. After correction, the left and right images can obtain the parallax map. According to the parallax map, the size information and distance information of the target of interest in the image can be obtained. Through the long-term analysis and research of the obtained animal size information.  
1. Wild animals haunted at the installation site of Hunchun tiger and leopard park. When wild animals appear within the detection range of the stereo camera, acquisition and photographing are triggered once.  
2. Data source: "development of terrestrial vertebrate monitoring equipment", 2016yfc0500104, completed by: Institute of semiconductors, Chinese Academy of Sciences, raw data, unprocessed.  
3. The photo data is divided into a pair of effective data, including the left image and the right image. After correction, the left and right images can obtain the parallax map. According to the parallax map, the size information and distance information of the target of interest in the image can be obtained. Through the long-term analysis and research of the obtained animal size information.  
4. This data can be used to record the population and body size of wild animals in a certain area, establish a real wild animal body size database, obtain the animal body size data information under different regions, ages and genders, and provide supporting data for wildlife research.

2、Keywords

Theme：Infrared stereo camera,Others,Binocular camera,Wild animal size  
Discipline：Others  
Places：Qilian Mountain National Nature Reserve  
Time：2020

3、Data details

1.Scale：None

2.Projection：

3.Filesize：125.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.28 | - |
| west：99.53 | - | east：99.53 |
| - | south：38.28 | - |

5、Time frame:2020-08-19 16:00:00+00:00--2020-08-30 03:59:59+00:00

6、Reference method

References to data:

ZHOU Yan. Data set of dual CMOS infrared in situ stereo camera in Qilian Mountain National Nature Reserve (August 2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Ecolo.tpdc.2718182021

References to articles:

7、Supporting project information

Innovative development of equipments and internet-of-things techniques for ecosystem monitoring and its demonstration

8、Data resource provider

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