



2020 China SCAGI Report

To the Standing Committee on Antarctic Geographic
Information of SCAR

Online Zoom Meeting

2020-07-29&31



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1. China SCAGI Members

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2. Polar Surveying and Mapping

During the 36th Chinese National Antarctic Research Expedition (CHINARE), the fixed wing aircraft (Xueying 601) was used to investigate the subsurface conditions around Amery ice-shelf and Princess Elisabeth Land. This work was led by Polar Research Institute of China (PRIC), and many institutes were involved, including international cooperation.

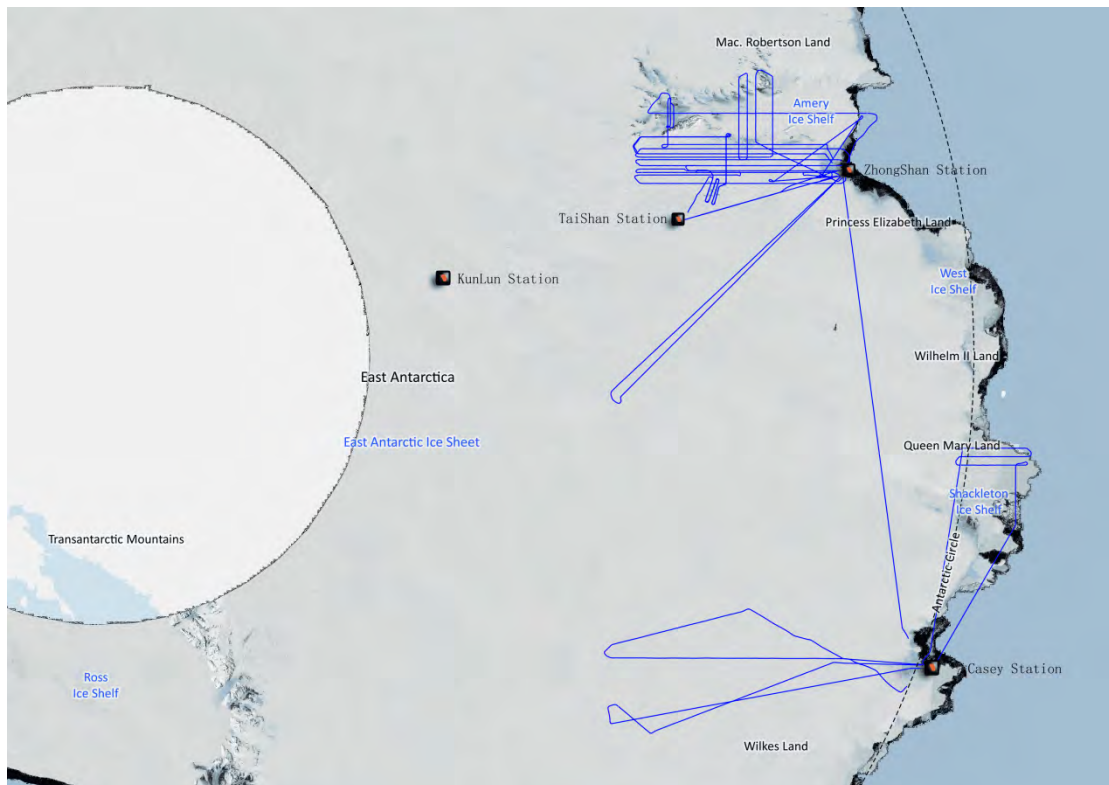
With the radio echo sounding of multi-year aero-geophysical flights over this specific polar area, a new bed topography of Princess Elisabeth Land (PEL) in East Antarctica was presented.



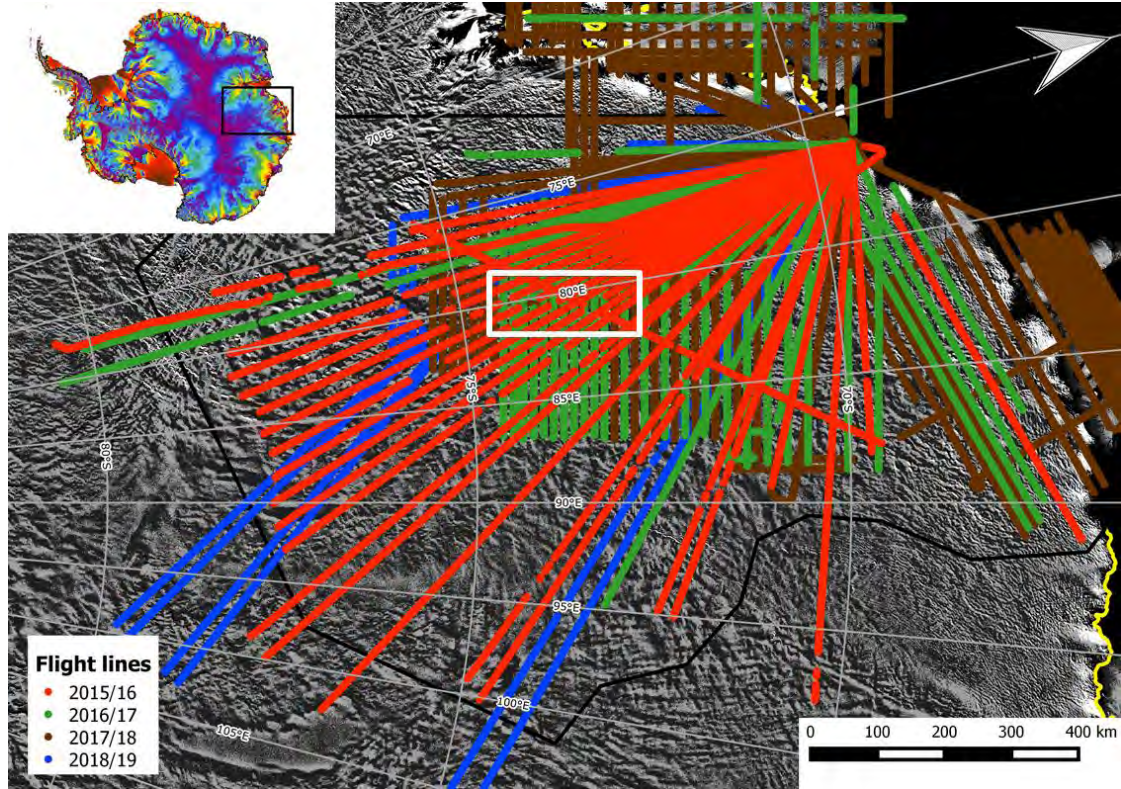
Xueying (Snow Eagle) 601 airplane operated by the Polar Research Institute of China for the Chinese National Antarctic Research Expedition (CHINARE) program



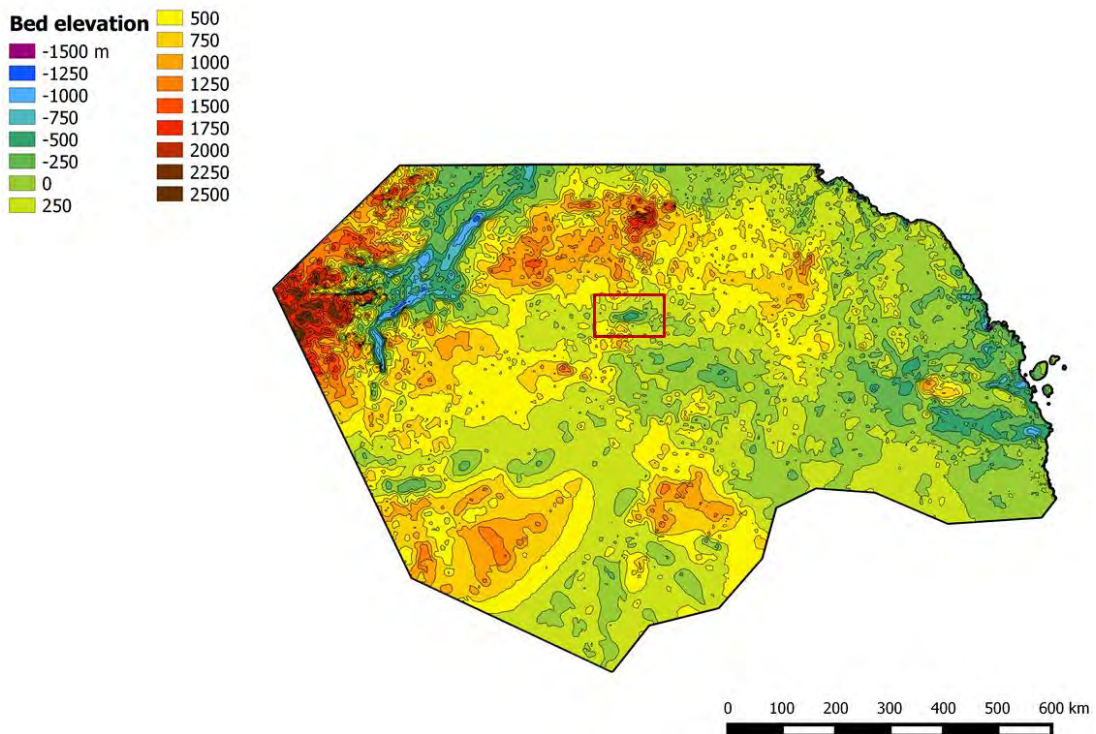
in-situ works of airborne survey in Antarctica using Xueying 601



flying tracks of Xueying 601 in 2019/2020



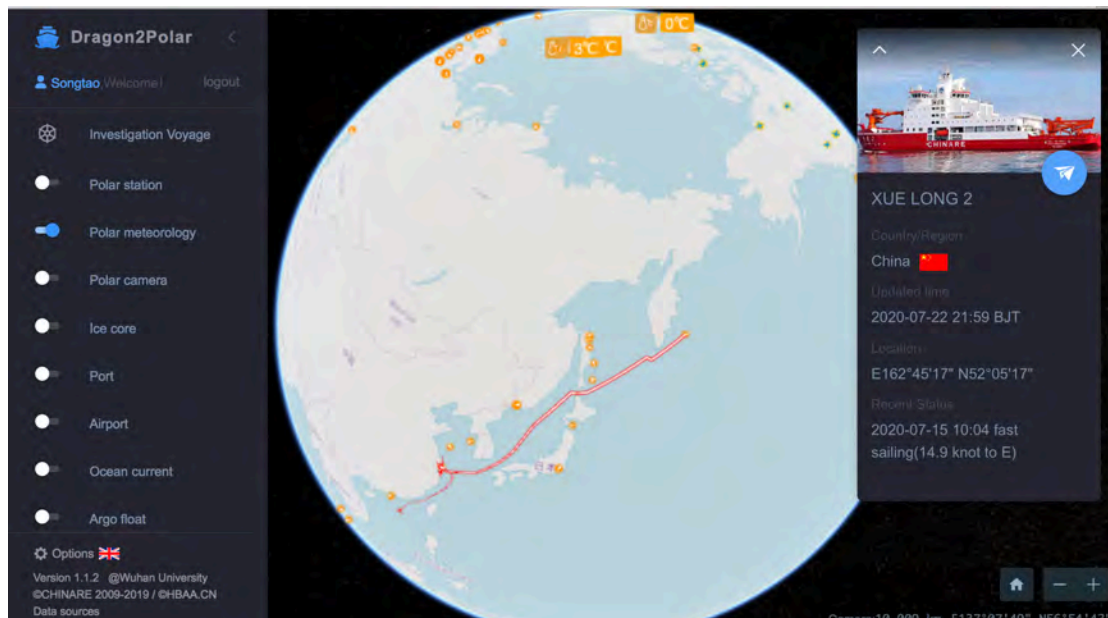
the Aero-geophysical flight lines surveyed by PRIC in four seasons which are 2015/16 (orange), 2016/17 (green), 2017/18 (red) 323 and 2018/19 (blue) across the PEL sector; the inset denotes location of the study region in East Antarctica. Both images are overlain by MODIS Mosaic of Antarctica 2008–2009 (Haran et al., 2014)



Hypsometry (area-elevation distribution) derived from the PEL bed elevation model

3. Web GIS platform developing

A 3D web GIS platform (Dragon2Polar) was developed and is online now (<http://x.hbaa.cn>). All the history tracks of Chinese icebreakers were published in this platform. Using AIS and ADSB data, some near real-time positions of polar vessels and aircrafts are also being updated in this platform. Not only the tracks, but also many other topics with publicly available data are integrated in this platform.

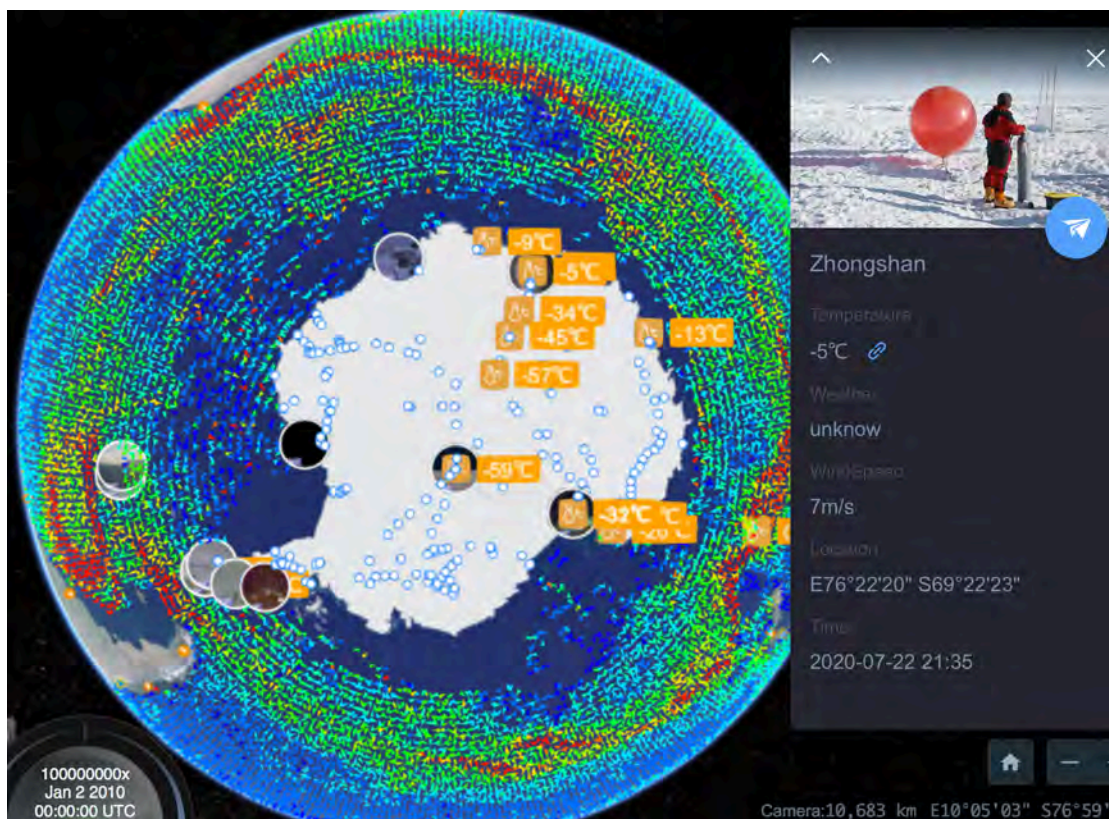


Real-time location of Chinese icebreaker Xuelong2 in web GIS platform

Dragon2Polar. Base map is from Open Street Map.



the near real-time and historical voyage line of Xuelong 2 in Dragon2Polar



images from web cameras, meteorological data, ice core and ocean currents

information presented in Dragon2Polar



4. Antarctic place naming progress

Chinese Arctic and Antarctic Administration is coordinating the Chinese institutions on Antarctic place naming. Some potential new place names will be proposed through in-situ Antarctic investigations of CHINARE, especially in the previously blank mapping area.