



行走南极：探索地球 最南端的奥秘











南极终年积雪，98%的大陆表面均被冰雪覆盖



南极是世界上最寒冷的大陆，最低温度为 -89.2°C



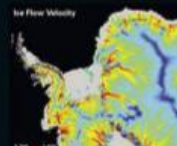
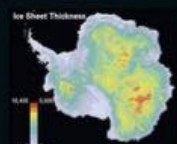
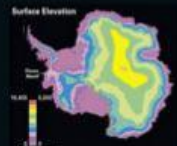
南极是世界上风最大的大陆，最大风速达100米/秒

ANTARCTICA

A NEW AGE OF EXPLORATION

NATIONAL GEOGRAPHIC

Extrêmes of climate and terrain found on no other continent confront all who venture to Antarctica. Almost a century ago iron men named Amundsen, Shackleton, and Scott raced exhaustion, starvation, frostbite, and each other to the South Pole. Planting Norway's flag, Amundsen won. Today's goal is knowledge. Satellite and ground-based observations help scientists understand the continent and its global climate impacts. The scope and detail achieved by Radarsat's recent Antarctic mapping missions "was once unimaginable," according to Ghassan Abtar, NASA's associate administrator for earth science. "Scientists and engineers have literally created new ways to see the remotest reaches of the planet."



ELEVATION OF THE ICE SHEET
While elevation contours reveal the continent's topography, satellite altimetry provides a more precise picture of the ice sheet's surface. The ice sheet's surface is not flat, but covered in a complex network of ridges and valleys. The highest elevations are found in the interior, where the ice sheet is thickest. The lowest elevations are found along the coast, where the ice sheet is thinning. The ice sheet's surface is also covered in a complex network of cracks and crevasses, which are formed by the weight of the ice above.

MEASUREMENTS OF A PARADOX
Nearly a century of ice sheet research has revealed a paradox: the ice sheet is losing mass, but the ice sheet is also gaining mass. The ice sheet is losing mass because of ice melt and ice discharge into the ocean. The ice sheet is gaining mass because of snowfall and ice accumulation. The ice sheet's mass is also affected by ice flow velocity and ice sheet thickness. The ice sheet's mass is a complex balance of these factors, and scientists are still trying to understand it.

ICE ON THE MOVE
Ice flow velocity is a key factor in understanding the ice sheet's mass balance. Ice flow velocity is the speed at which ice moves from the interior of the ice sheet towards the coast. Ice flow velocity is affected by ice sheet thickness and ice sheet surface elevation. Ice flow velocity is also affected by ice sheet surface temperature and ice sheet surface wind speed. Ice flow velocity is a complex balance of these factors, and scientists are still trying to understand it.

ULTIMATE WINDS
Wind patterns and speeds are a key factor in understanding the ice sheet's mass balance. Wind patterns and speeds are affected by ice sheet surface elevation and ice sheet surface temperature. Wind patterns and speeds are also affected by ice sheet surface wind direction and ice sheet surface wind speed. Wind patterns and speeds are a complex balance of these factors, and scientists are still trying to understand it.

Radarsat Fills in the Blanks

Major Antarctica expeditions, from the 19th century to the present, have mapped the continent's surface features, but radar altimetry has revealed hidden details. Radar altimetry is a remote sensing technique that uses radio waves to measure the surface of the ice sheet. It can penetrate the ice and measure the surface elevation with high accuracy. Radar altimetry has revealed the ice sheet's surface topography, including the location of ice divides and ice streams. It has also revealed the ice sheet's surface roughness, which is a measure of the ice sheet's surface irregularities. Radar altimetry has provided a new way to study the ice sheet and its role in global climate change.

A DREAMT WORLD

The continent's interior is a vast, flat expanse of ice. The ice sheet is a complex system of ice streams and ice divides. The ice sheet's surface is covered in a complex network of cracks and crevasses. The ice sheet's surface is also covered in a complex network of ridges and valleys. The ice sheet's surface is a complex balance of these factors, and scientists are still trying to understand it.

THE LONGEST WINTER

Over a year of darkness is experienced in the interior of the continent. The longest winter is in the interior, where the sun is never seen. The longest winter is a complex balance of these factors, and scientists are still trying to understand it.

AS COLD AS IT GETS

The ice sheet's surface is a complex balance of these factors, and scientists are still trying to understand it.

Shifting Shorelines

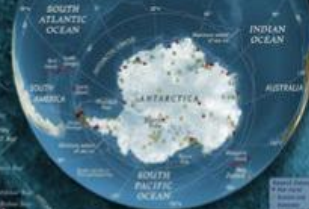
The ice sheet's surface is a complex balance of these factors, and scientists are still trying to understand it.

APPLICATION BENEFITS

The ice sheet's surface is a complex balance of these factors, and scientists are still trying to understand it.

CONTINENT FOR COOPERATION

The ice sheet's surface is a complex balance of these factors, and scientists are still trying to understand it.



Continent for Cooperation
The treaty that governs Antarctica, known as the Antarctic Treaty, was signed in 1959. It is a unique international agreement that sets aside territorial claims and dedicates the continent to peaceful purposes. The treaty is a complex balance of these factors, and scientists are still trying to understand it.

南极大陆

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中国地质科学院地质力学研究所南极考察历史分布图

长城站

第29次南极考察队(赵越/刘晓春)
 第32次南极考察队(赵越/张拴宏/裴军令)
 第31次南极考察队(刘建民/高亮)
 第29次南极考察队(赵越/刘晓春)
 第26次南极考察队(赵越)

第32次南极考察队(赵越/张拴宏/裴军令)
 第31次南极考察队(赵越/张拴宏/裴军令)
 第29次南极考察队(赵越/刘晓春)

第32次南极考察队(赵越/张拴宏/裴军令)
 第31次南极考察队(赵越/张拴宏/高亮)

中山站

第31次南极考察队(刘晓春/刘健/陈虹)
 第29次南极考察队(胡健民/王伟)
 第24次南极考察队(刘晓春/刘健/崔建军)
 第21次南极考察队(刘晓春/徐刚)
 第30次南极考察队(王伟)
 第26次南极考察队(韦利杰/陈虹)
 第22次南极考察队(胡健民)
 第15次南极考察队(刘晓春)

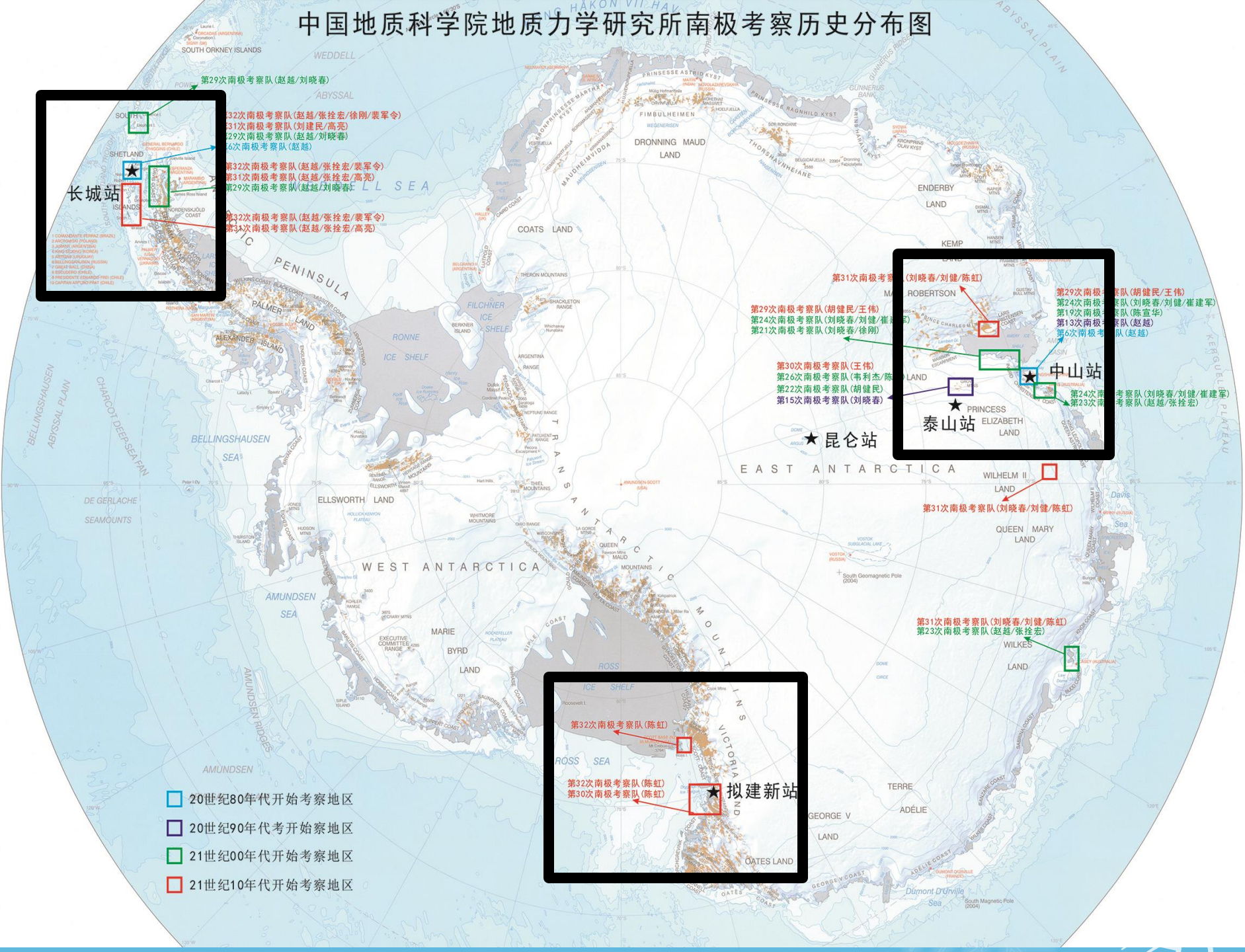
第29次南极考察队(胡健民/王伟)
 第24次南极考察队(刘晓春/刘健/崔建军)
 第19次南极考察队(陈宣华)
 第13次南极考察队(赵越)
 第6次南极考察队(赵越)

第24次南极考察队(刘晓春/刘健/崔建军)
 第23次南极考察队(赵越/张拴宏)

拟建新站

第32次南极考察队(陈虹)
 第32次南极考察队(陈虹)
 第30次南极考察队(陈虹)

- 20世纪80年代开始考察地区
- 20世纪90年代开始考察地区
- 21世纪00年代开始考察地区
- 21世纪10年代开始考察地区



ANTARCTICA

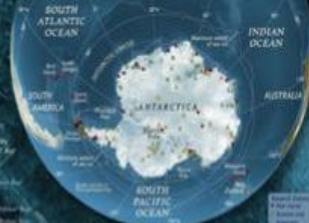
A NEW AGE OF EXPLORATION

NATIONAL GEOGRAPHIC

Extrêmes of climate and terrain found on no other continent confront all who venture to Antarctica. Almost a century ago iron men named Amundsen, Shackleton, and Scott raced exhaustion, starvation, frostbite, and each other to the South Pole. Planting Norway's flag, Amundsen won. Today's goal is knowledge: Satellite and ground-based observations help scientists understand the continent and its global climate impacts. The scope and detail achieved by Radarsat's recent Antarctic mapping missions "was once unimaginable," according to Ghassem Asrar, NASA's associate administrator for earth science. "Scientists and engineers have literally created new ways to see the remotest reaches of the planet."

Radarsat Fills in the Blanks

Most of Antarctica's interior was previously blank on the world's satellite maps, but that's no longer the case. The Canadian Space Agency's RADARSAT satellite has produced the first satellite-derived surface images of the continent's interior. The satellite's synthetic aperture radar (SAR) can "see" through clouds and darkness, allowing it to map the continent's interior. The satellite's SAR can "see" through clouds and darkness, allowing it to map the continent's interior. The satellite's SAR can "see" through clouds and darkness, allowing it to map the continent's interior.



Continent for Cooperation

The remote continent of Antarctica, once the domain of a few explorers, is now being studied by scientists from many nations. The continent's unique environment, including its ice sheets and glaciers, is being studied to understand its role in global climate change. The continent's unique environment, including its ice sheets and glaciers, is being studied to understand its role in global climate change.

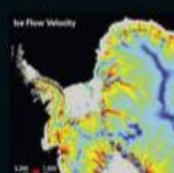
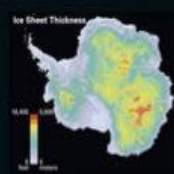
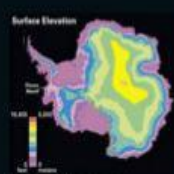
★ 长城站

★ 中山站

★ 泰山站

★ 昆仑站

★ 新站



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MEASUREMENTS OF A PARADOX
Many portions of the world's ice and 70 percent of the world's fresh water are locked in Antarctica. The satellite's SAR can "see" through clouds and darkness, allowing it to map the continent's interior.

ICE ON THE MOVE
The ice sheet in Antarctica is not static. It is constantly moving and changing. The satellite's SAR can "see" through clouds and darkness, allowing it to map the continent's interior.

ULTIMATE WINDS
Antarctica's interior is a harsh and desolate place. The satellite's SAR can "see" through clouds and darkness, allowing it to map the continent's interior.

ANTARCTIC PENINSULA

WEST ANTARCTICA

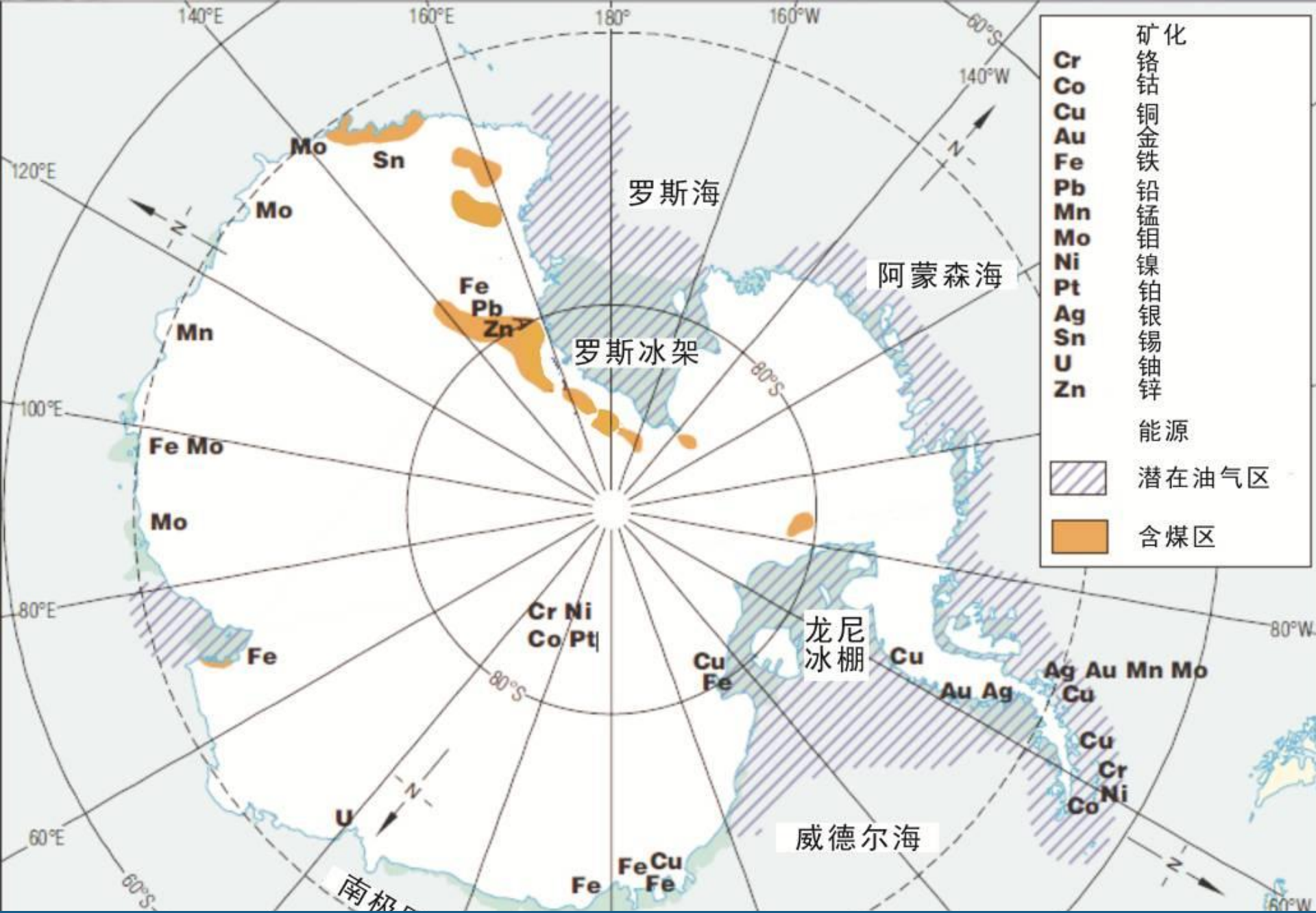
EAST ANTARCTICA

ICE SHEET

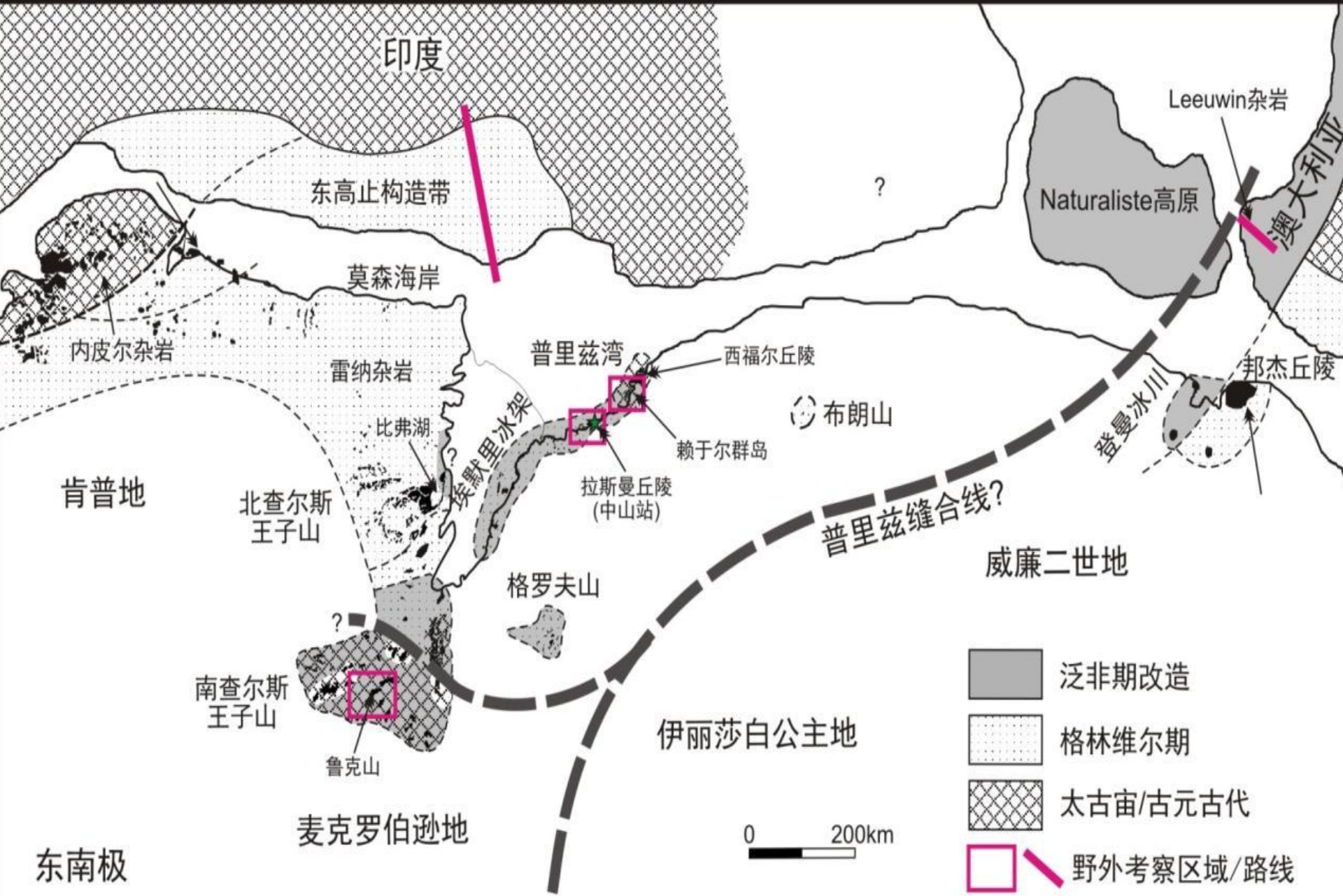
ICE FLOW VELOCITY

ULTIMATE WINDS

ICE SHEET THICKNESS



南极大陆矿产与能源



最早识别出东南极大陆泛非期构造热事件



新华社:中国南极陨石拥有量世界第三

2016-04-16 09:20:37 来源: 科技日报社·中国科技网(北京)

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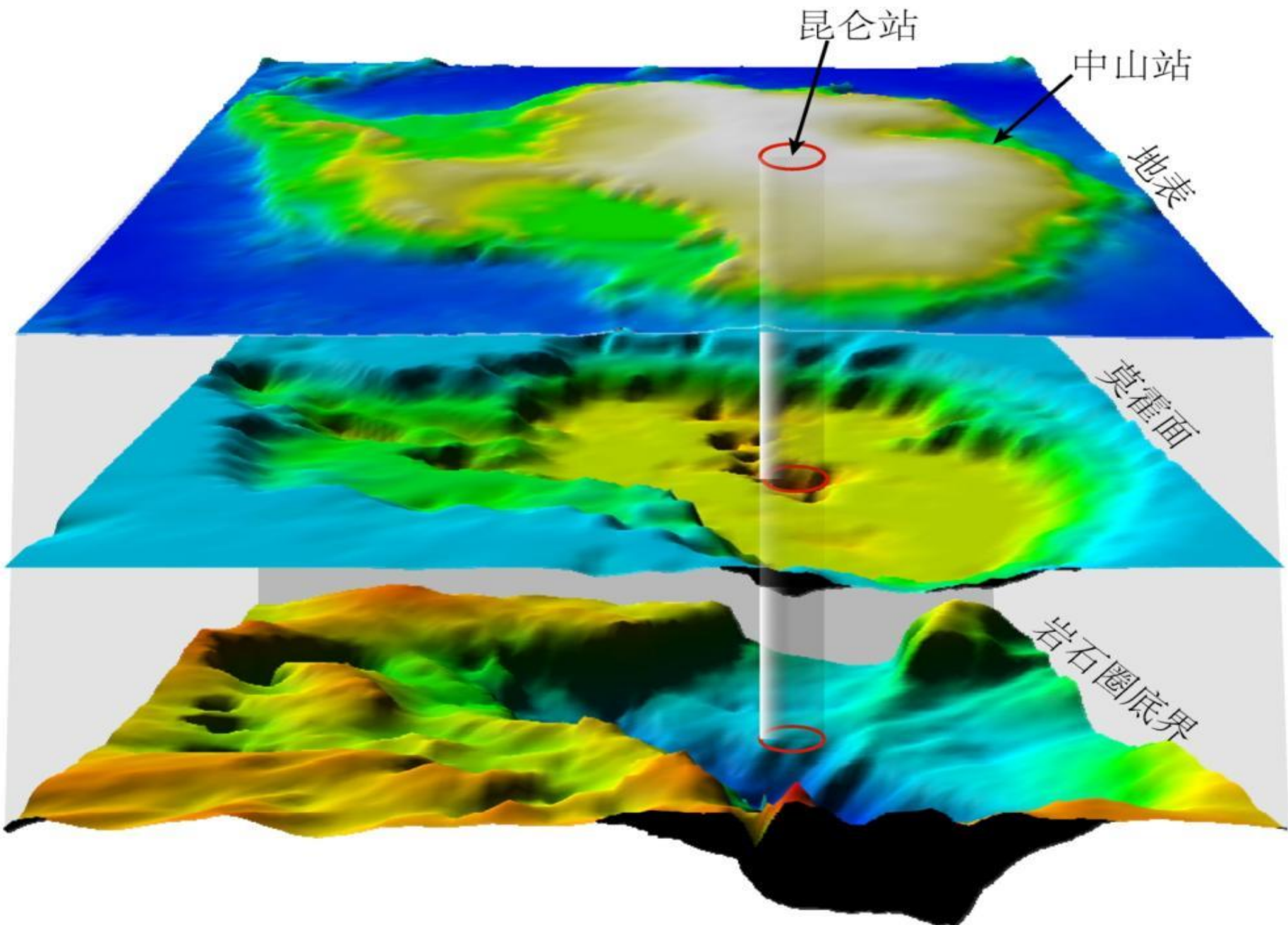
(原标题:我国南极陨石拥有量达12665块 居世界第三)

新华社上海电(记者张建松朱基钺)记者从近日召开的中国第32次南极考察队新闻发布会上获悉,我国在南极“格罗夫山宝库”新发现630块陨石,使我国南极陨石拥有量达到12665块,仅次于日本和美国。

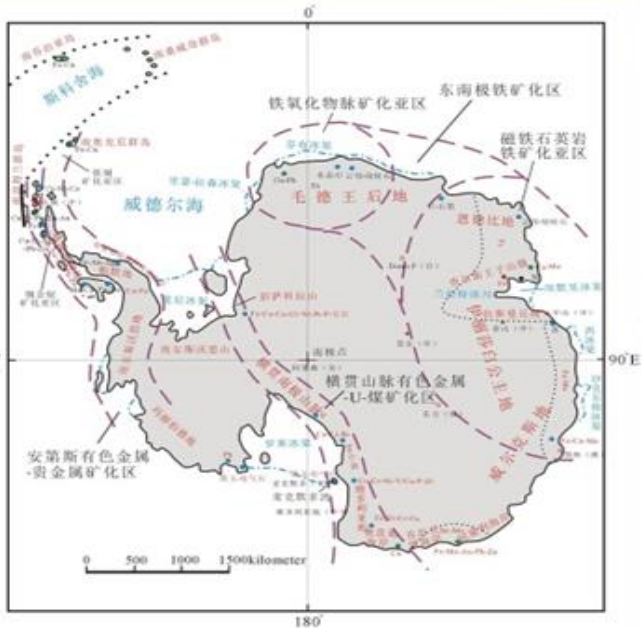
我国南极陨石拥有量世界第三

新华社上海4月12日电(记者张建松朱基钺)记者从12日召开的中国第32次南极考察队新闻发布会上获悉,我国在南极“格罗夫山宝库”新发现630块陨石,使我国南极陨石拥有量达到12665块,仅次于日本和美国。

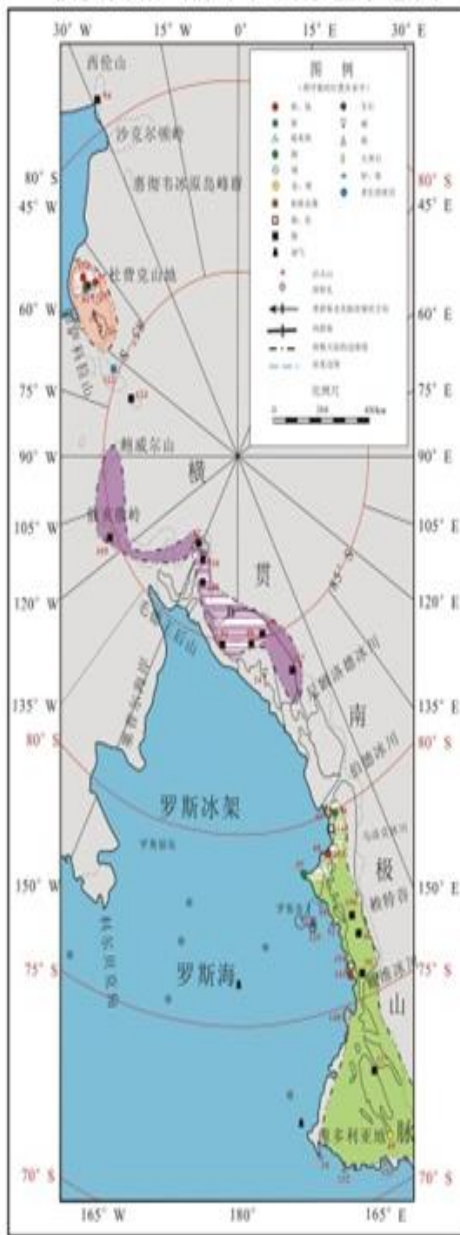
回收了我国第一块南极陨石



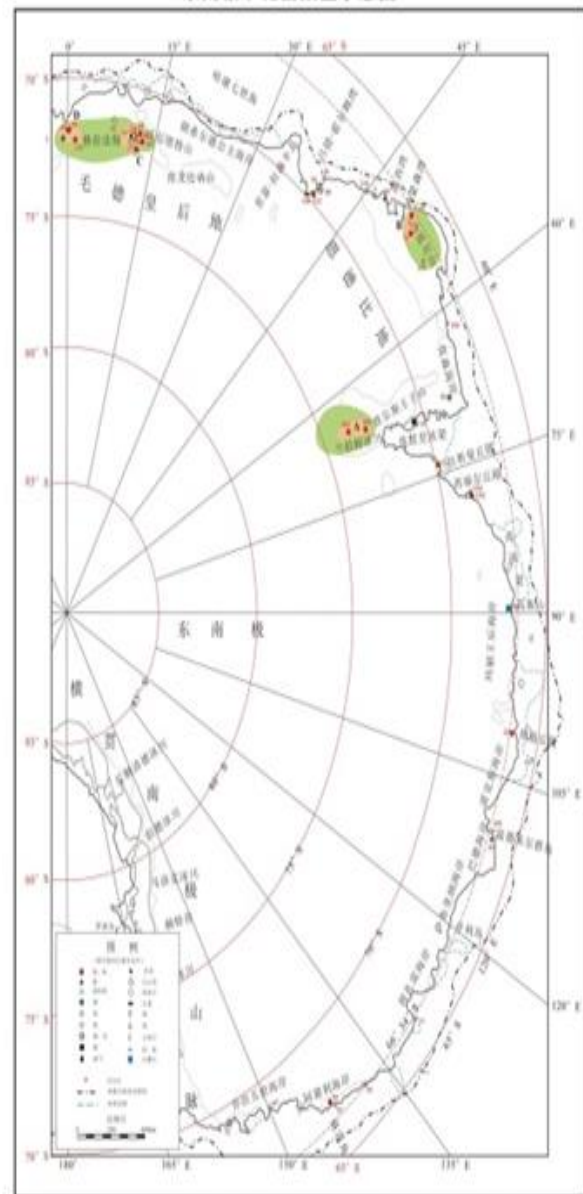
全世界首次绘制南极板块岩石圈厚度图、地壳厚度图等



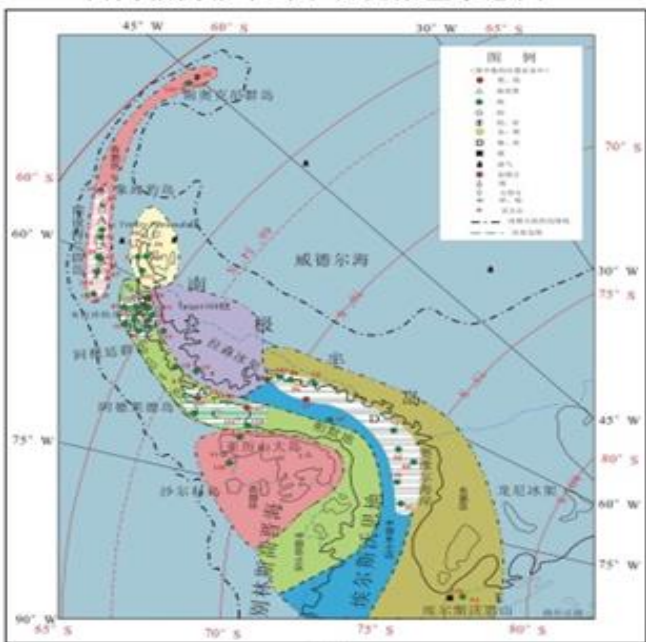
横贯南极山脉矿化富集区示意图



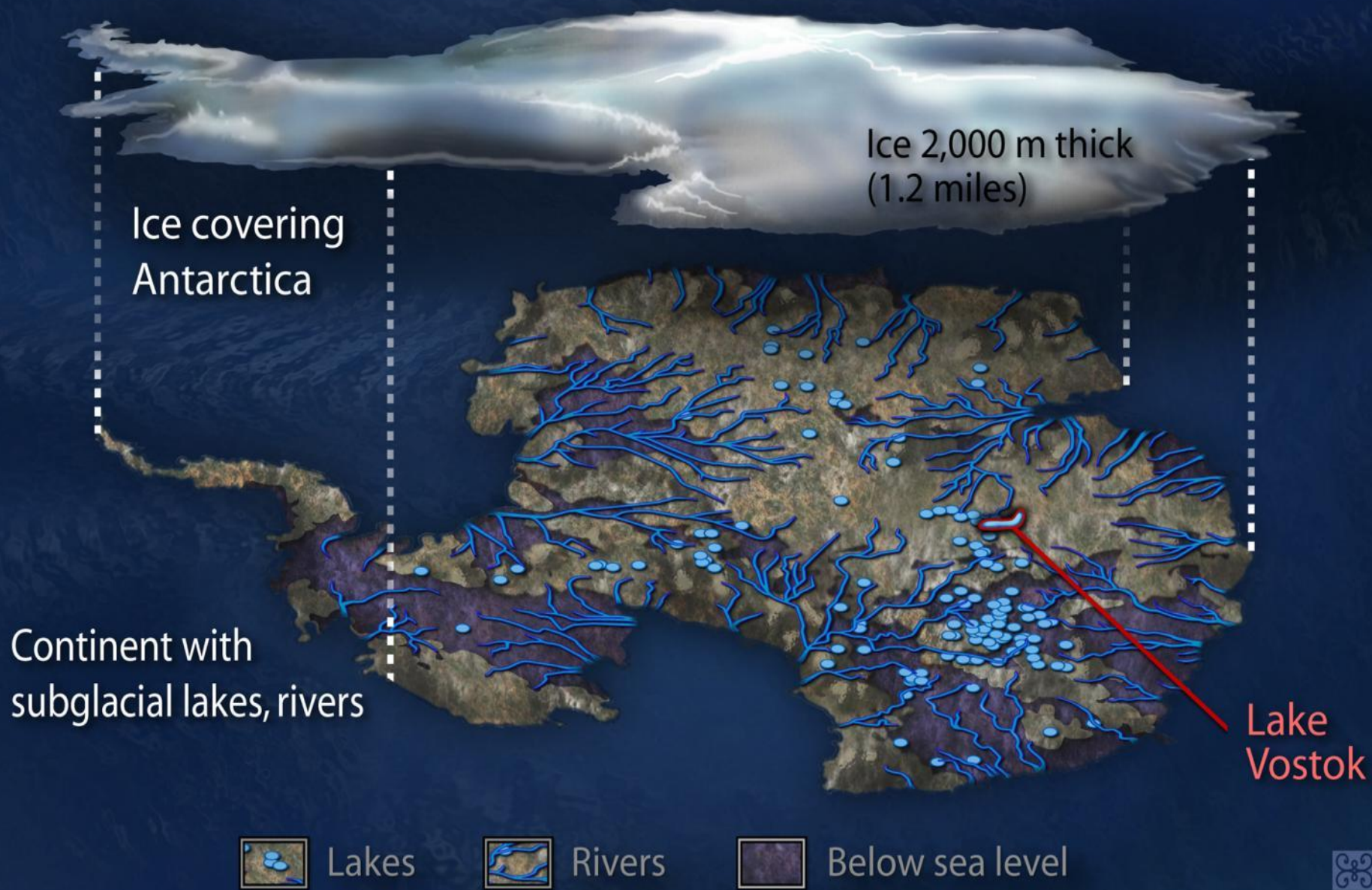
东南极矿化富集区示意图



西南极南极半岛矿化富集区示意图

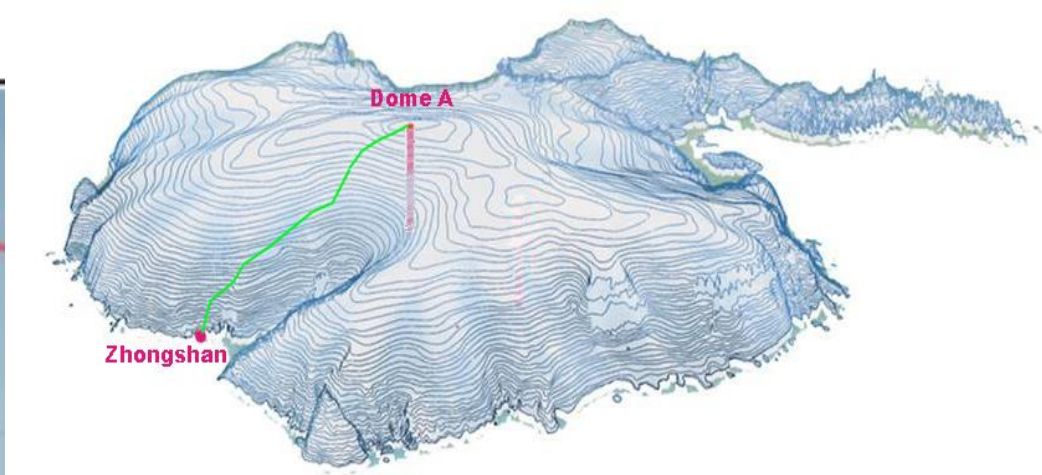
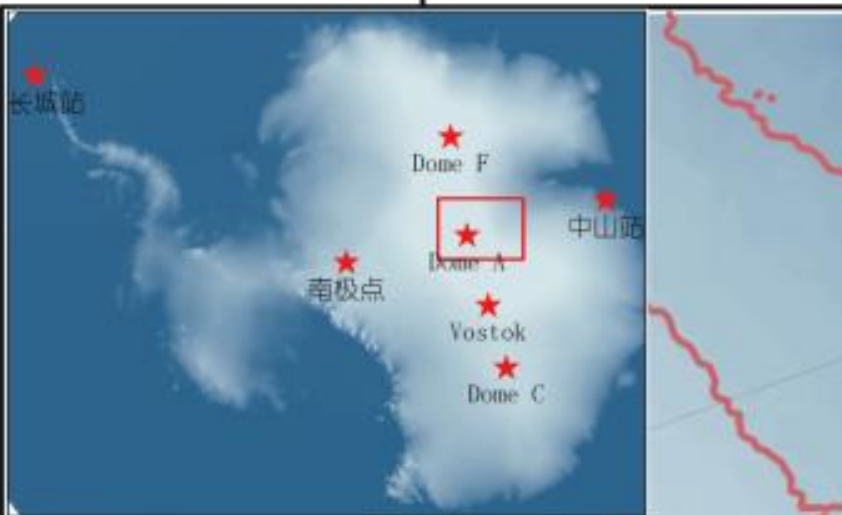


对南极矿产资源潜力进行综合评价



冰下地质研究

60°0'0"E



谋划冰下山脉地质钻



筹划进入南查尔斯王子山



罗斯海地区新站



期待乘坐“海洋六号”去南极

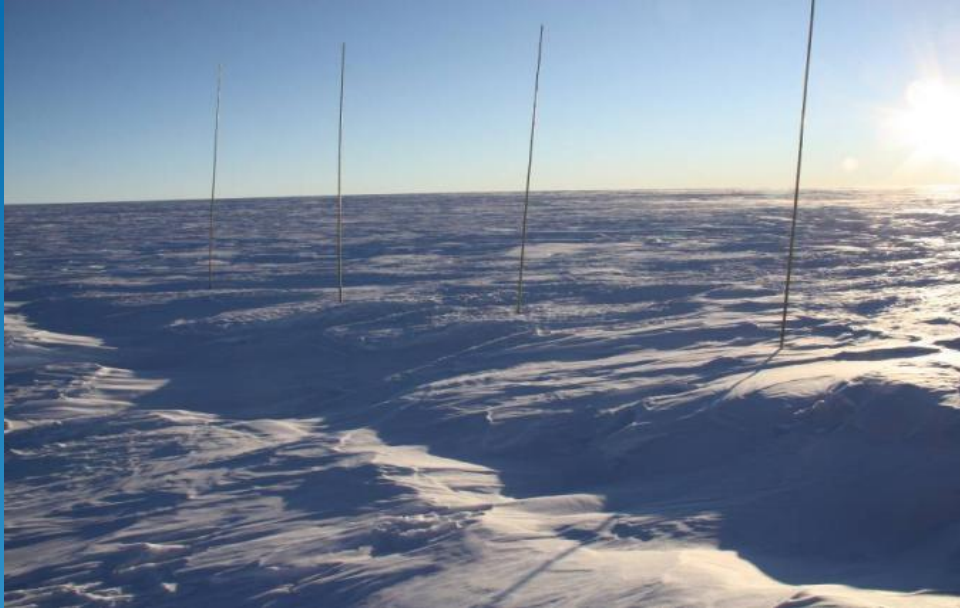




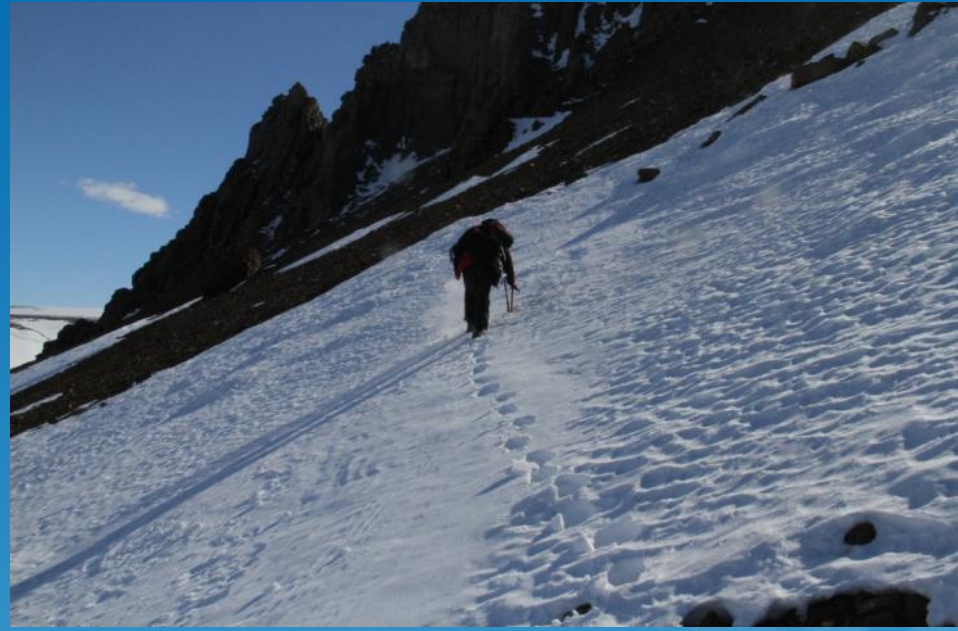
冰缝，最危险的敌人



南极内陆雪地车队



“你在格罗夫山的每一步，是你人生的第一步，也可能是最后一步。”



茫茫雪地



露头零散，路途遥远！



营救俄罗斯船只



雪龙船被困



冰山环绕



连续7个通宵监测



脱困瞬间的“闪电”



罗斯海新站选址



艰难行走



新华网

科技

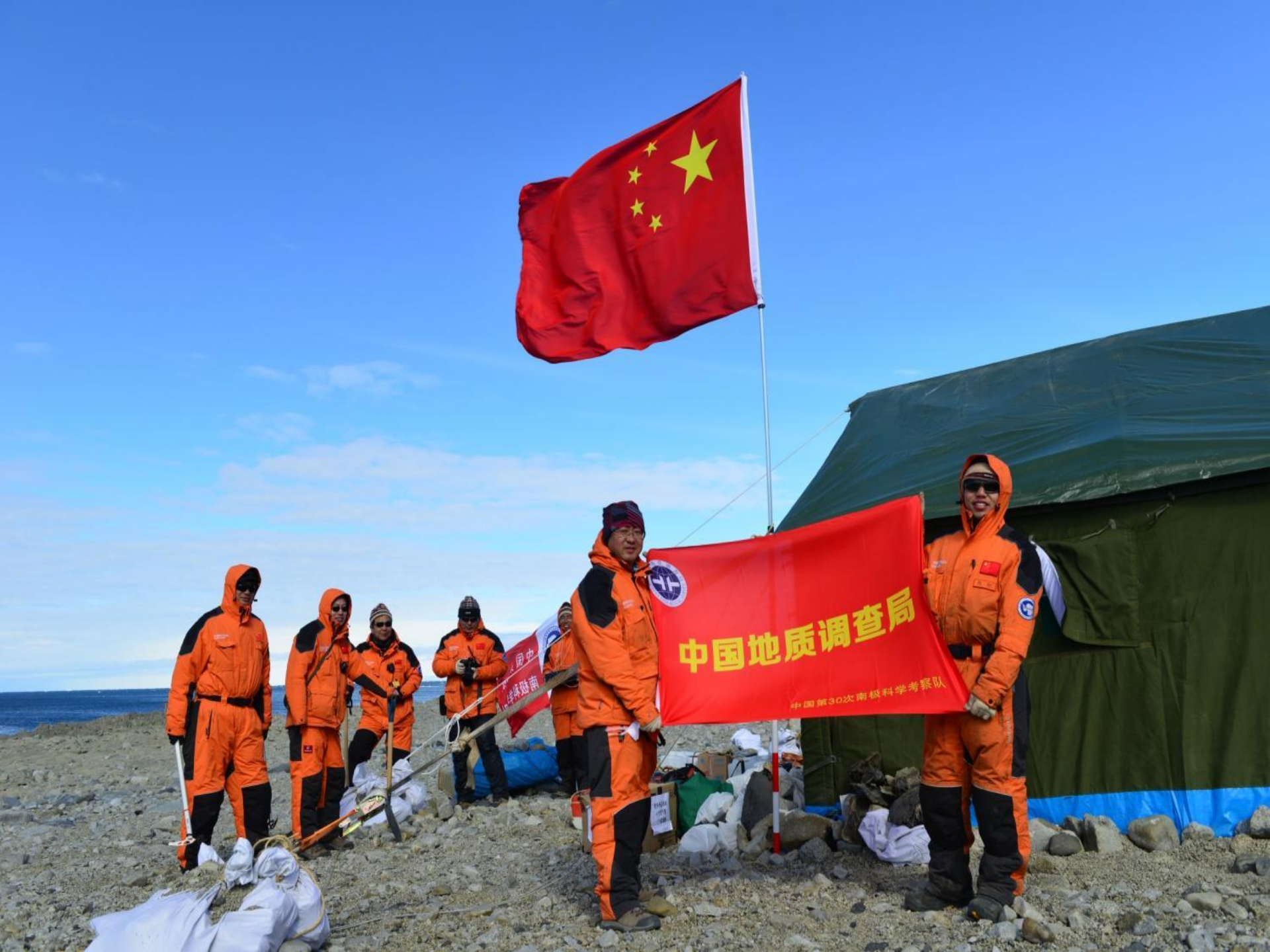
> 正文

特写：难言岛上的86小时“科考传奇”

2014年01月18日 18:40:47 来源：新华网



新华网“雪龙”号1月18日电（记者张建松）“雪龙”号因为援救俄罗斯被困船只及自身被困耽误了宝贵的科考时间，在我国新的南极科考站建站选址准备工作中，科考队员们不得不与时间赛跑，维多利亚地难言岛上原定8天的任务，仅用了86个小时就圆满完成。他们风餐露宿、昼夜拼搏，书写了一段“科考传奇”。



中国地质调查局
中国第30次南极科学考察队

中国地质调查局
中国第30次南极科学考察队



中国地质调查局
中国第31次南极考察队

Supreme

2019 2021
2019 2021



中国

1998 - 2002

第五次
梅罗大山考察队

队长 李登新
书记 王泽民
副队长 魏国海
队员 李登新 孙利军 (女)

