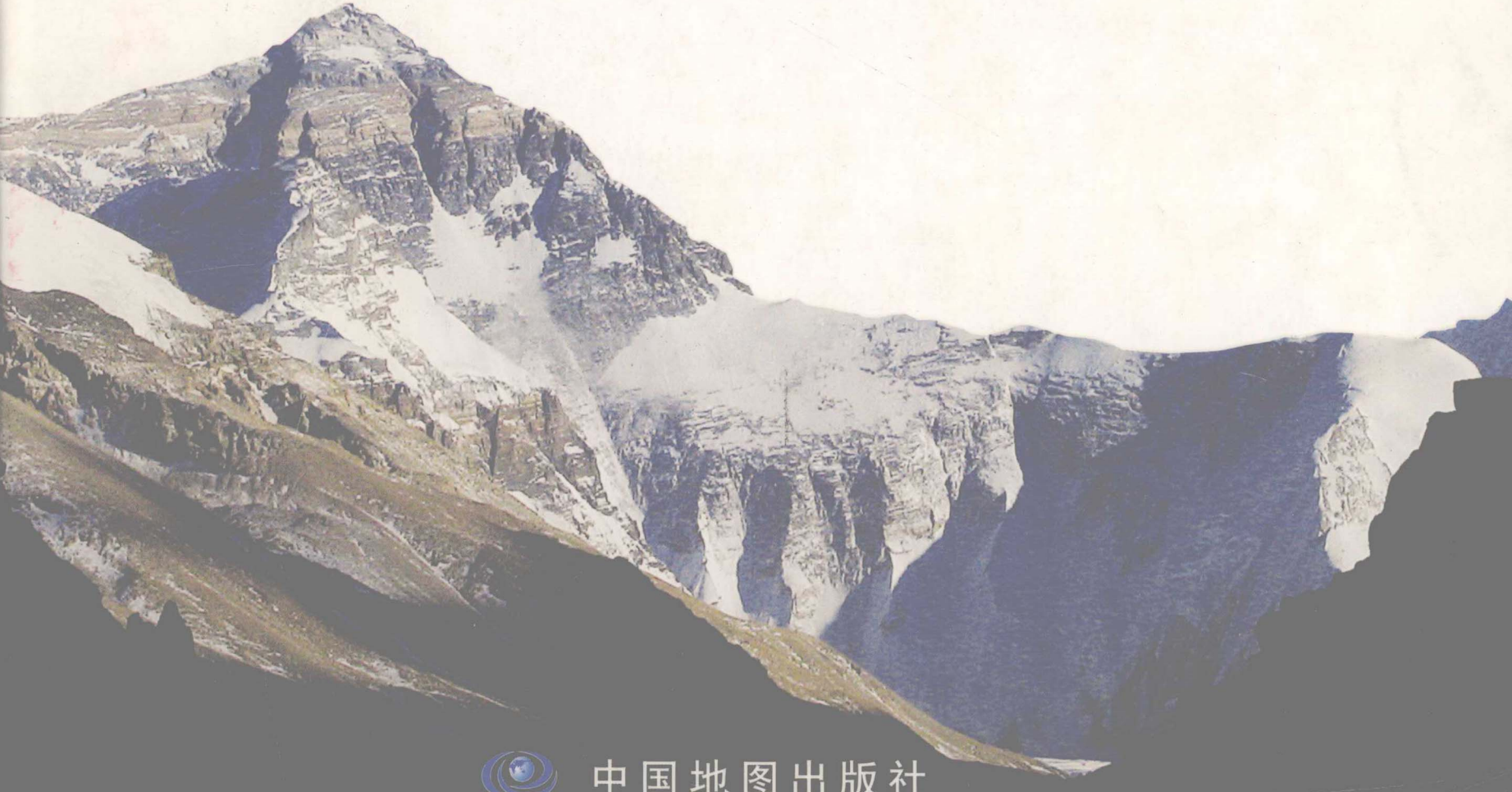
# 再测珠峰

Re-Measurement of Qomolangma Feng

## 2005珠峰测量的足迹

Tracing of 2005 Measurement of Qomolangma Feng



中国地图出版社

# 再测珠峰

Re-Measurement of Qomolangma Feng

## 2005珠峰测量的足迹

Tracing of 2005 Measurement of Qomolangma Feng

**图书在版编目（CIP）数据**

再测珠峰：2005珠峰测量的足迹／中国测绘宣传中心编．—北京：中国地图出版社，2005.10
ISBN 7-5031-4053-4

Ⅰ.再…　Ⅱ.中…　Ⅲ.珠穆朗玛峰－测量－摄影集　Ⅳ.P942-64

中国版本图书馆CIP数据核字（2005）第116695号

责　　编：金　君
美　　编：徐海燕　吴　江
英文翻译：陈　平
英文终审：白　泊
封面设计：吴　广

**再测珠峰**
**2005珠峰测量的足迹**

中国测绘宣传中心　　编
中国地图出版社出版发行
地址：北京市西城区复外三里河路50号　　邮编：100045
电话：（010）68512386　68531558　　网址：www.sinomaps.com
北京华联印刷有限公司印刷
新华书店经销
开本：787×1092　1/12　　印张：17 1/3　字数：300千字
2005年10月第1版
2005年10月北京第1次印刷
印数：0001—8000册
ISBN 7-5031-4053-4/K·2341
定价：280.00元

## 编委会

主 任 委 员：国家测绘局副局长　李维森
顾　　问：中国科学院院士　陈俊勇
副主任委员：中国测绘宣传中心主任　何　锋
　　中国地图出版社社长　白　泊
委　　员：国家测绘局办公室副主任　李　烨
　　国家测绘局国土测绘司副司长　辛少华
　　国家基础地理信息中心副主任　张燕平
　　陕西测绘局副局长　李朋德
　　中国测绘宣传中心副主任　徐永清
摄　　影：中国西藏登山队
　　及(按姓氏笔划排序)王新光　王　鹏　白天路　任秀波　刘西宁
　　李志刚　李　烨　吴　江　陈　杰　张江齐　张燕平　张　蓉
　　岳建利　周　社　柏华岗　徐永清　殷海荣　蒙海波
撰　　稿：徐永清　吴　江

## Editorial Committee

**Chairman:**
LI Weisen, Deputy Director General, State Bureau of Surveying & Mapping (SBSM)
**Advisor:**
CHEN Junyong, Academician of Chinese Academy of Sciences
**Vice-Chairman:**
HE Feng, Director of Chinese Propagation Centre of Surveying & Mapping
BAI Bo, President of SinoMaps Press
**Members:**
LI Ye, Deputy Director of General Administration Office of SBSM
XIN Shaohua, Deputy Director of National Land Survey Dept. of SBSM
ZHANG Yanping,Deputy Director of National Geomatics Centre of China
LI Pengde, Deputy Director of Shaanxi Bureau of Surveying & Mapping
XU Yongqing, Deputy Director of Chinese Propagation Centre of Surveying & Mapping
**Photographers:**
China Tibet Mountaineering Team.
WANG Xinguang, WANG Peng, BAI Tianlu, REN Xiubo, LIU Xining,
LI Zhigang, LI Ye, WU Jiang, CHEN Jie, ZHANG Jiangqi,
ZHANG Yanping, ZHANG Rong, YUE Jianli, ZHOU She, BAI Huagang, XU Yongqing,
YIN Hairong, MENG Haibo
**Composer:**
XU Yongqing, WU Jiang

人类勇往直前的精神

. . . . . .

**Human spirit of striving forward**

. . . . . .

# 序

珠穆朗玛峰是世界最高峰，其高程历来为世人所瞩目。精确测量珠峰高度，是人类认识地球、探索科学的重要活动，对于研究珠峰及其临近地区的地壳运动，对于地球动力学研究、地震预报、防灾减灾等方面具有十分重要的意义。

经国务院领导同志同意，2005珠峰高程测量于2005年2月启动。5月22日，登山和测绘队员成功完成了登顶测量，标志着珠峰高程测量取得了决定性胜利。而后，随即对测量数据进行了科学、严密的分析和计算，珠峰高程测量成果于7月份通过专家验收。10月份，2005珠峰高程测量成果经国务院审批向国内外公布。

2005珠峰高程测量项目的成功实施，彰显了我国测量珠峰高程的权威性，激发了全国人民的爱国热情，凝聚了参与珠峰高程测量的人们的智慧和汗水，体现了我国测绘工作者奋斗不息、勇攀高峰的科学探索精神。珠峰高程测量项目的实施以及珠峰最新高程这一重要地理信息的发布，促成了测绘与社会的最佳结合点，创造了一个前所未有的让社会认知测绘、使测绘融入社会、扩大测绘工作社会影响的机遇。

这部纪念画册，通过大量真实、生动、感人的摄影图片，再现了2005珠峰高程测量的全过程，向世人展示了我国测绘工作者敢于挑战极限的非凡勇气、精湛娴熟的测绘技术及良好的精神风貌，对大力宣传测绘工作，讴歌珠峰测量中的典型人物和感人事迹，进一步弘扬“爱祖国，爱事业，艰苦奋斗，无私奉献”的测绘精神，将会起到很好的推动作用。

## Preface

Qomolangma Feng is the highest peak in the world, and its altitude has always been attracting worldwide attention. The precise measurement of the height of Qomolangma Feng is one of the important activities of the humankind understanding the earth and studying the nature, and is of significant value for studying the crust movement in Qomolangma Feng and its adjacent areas, as well as for geodynamics research, for earthquake forecasting and the disaster prevention.

The 2005 Qomolangma Feng Measurement was launched in February 2005 as approved by the State Council of China. On May 22, 2005, the mountaineers and surveyors successfully reached the top of Qomolangma Feng and completed the measurements, which indicated that the 2005 Qomolangma Feng Measurement had greatly succeeded. Immediately followed were successful and precise analysis and calculation of the survey data. The result of the height of Qomolangma Feng was checked and accepted by an expert team in July, 2005. As approved by the State Council of China, in October 2005, the height figure of Qomolangma Feng was declared officially to the public.

The successful implementation of the 2005 Qomolangma Feng Measurement provided an authentic data for the altitude of Qomolangma Feng, which has greatly aroused Chinese people's patriotism, condensed the wisdom and sweat of the participators, and demonstrated the spirit of scaling new height and continuous searching in scientific exploration. The implementation of Qomolangma Feng Measurement and the declaration of this important geographical information provided a best combination between Chinese Surveyors and the public, and created an unprecedented opportunity for a better cognition, understanding and acceptance of surveying and mapping work by the society.

This commemorative photo book relives the entire process of the 2005 Qomolangma Feng Measurement, by featuring a large number of real, vivid and inspiring pictures. It shows people the great courage and the advanced skills of Chinese Surveyors. Furthermore, this book will surely be of great help to eulogize the typical characters and events in the 2005 Qomolangma Feng Measurement, and further uphold the surveying and mapping spirit of "loving the motherland, loving the profession, striving hard, dedicating selflessly".

国家测绘局局长

2005年10月于北京

**CHEN Bangzhu**
Director General
State Bureau of Surveying and Mapping
October, 2005, Beijing

# 前　言

珠穆朗玛峰位于喜马拉雅山脉中部，中国、尼泊尔边界线上，巍峨宏大，气势磅礴，是世界第一高峰。其海拔高程，素为世人瞩目。公元1975年，中国测绘工作者对珠穆朗玛峰高程进行测量，测定高程为8848.13米。

公元2005年2月至6月，国家测绘局再次组织珠穆朗玛峰高程测量。测绘工作者采用多种现代测绘技术手段，对珠穆朗玛峰及周边地区开展大规模控制测量。5月22日，中国测量登山队队员登上了珠穆朗玛峰顶峰，竖立测量觇标，运用经典大地测量方法、GPS测量方法和雷达探测等技术手段，成功地进行了峰顶测量。随后，测绘工作者对大量观测数据做了缜密分析和计算处理。

2005珠穆朗玛峰高程测量运用多种测量方式，通过严谨的技术设计方案和精心的组织实施，得出高精度的珠穆朗玛峰高程数据，是我国测绘科学技术进步的鲜明标志。

2005珠穆朗玛峰高程测量彰显了中国测量珠穆朗玛峰高程的权威性、法定性，激发和凝聚了中国人民的爱国热情，通过新闻媒体的宣传报道，在全社会引起巨大反响。

2005珠穆朗玛峰高程测量展现了中华民族勇攀高峰、坚韧不拔的顽强精神，同时也体现了几千年来人类探索、认知自然的精神。

2005珠穆朗玛峰高程测量弘扬了“爱祖国，爱事业，艰苦奋斗，无私奉献”的测绘精神，展现了测绘工作者可歌可泣的风貌，为促进中国测绘事业发展、树立中国测绘形象写下了动人篇章。

公元2005年10月下旬，国务院授权国家测绘局发布2005珠穆朗玛峰高程测量数据：

珠穆朗玛峰峰顶岩石面海拔高程为8844.43米。

谨以这部画册，献给中国测绘史上辉煌的一页——2005珠穆朗玛峰高程测量。

2005年10月

## Foreword

Qomolangma Feng, the highest peak in the world, located in the mid part of Mount Himalayas between the border of China and Nepal, is of power and grandeur and is majestic and significant. The altitude of Qomolangma Feng has attracted close attention worldwidely. In 1975, Chinese surveyors carried out a measurement for the height of Qomolangma Feng and determined its altitude as 8848.13 m.

From February to June, 2005, the State Bureau of Surveying and Mapping (SBSM) organized a re-measurement of the height of Qomolangma Feng. The surveyors carried out control surveys in large scale at Qomolangma Feng and its adjacent areas by utilizing various modern surveying and mapping technologies. On May 22, Chinese mountaineering surveyors ascended the top of Qomolangma Feng, and set up a surveying target, and successively conducted surveys and measurements by classic geodetic survey, GPS survey and radar detection. The massive observation data was in turn meticulously analyzed, rigorously computed and carefully processed.

The precise height of Qomolangma Feng was determined through different surveying methods, and with strict technical scheme and careful implementation, which marks the striking progress of surveying and mapping technology in China.
The 2005 Qomolamgma Feng Measurement provided an authentic and legal data for the altitude of Qomolangma Feng, which has greatly aroused people's patriotism and received highly favorable responds from the society through the propagation by various news media.

The 2005 Qomolangma Feng Measurement demonstrates Chinese spirit of seeking new challenges and keeping striving, and illustrates the human spirit of understanding the earth and recognizing the nature.
The 2005 Qomolangma Feng Measurement has upheld the spirit of Chinese surveyors -- "loving the motherland, loving the profession, striving hard, dedicating selflessly", demonstrated the recommendable style and feature of Chinese surveyors, and added an illustrious chapter to the development of surveying and mapping in China.

On October 9, 2005, State Bureau of Surveying and Mapping officially declared the result of the 2005 Qomolangma Feng Measurement, authorized by the State Council of China:
The height of the peak rock of Qomolangma Feng is 8844.43 m above the sea level.

This photo book is specially dedicated to the 2005 Qomolangma Feng Measurement -- a new splendid page of surveying and mapping history in China.

October , 2005

# 背景篇

# Chapter of Background

认知珠穆朗玛峰的历史是一部测量的历史。人类一轮又一轮的追寻，获得一个又一个"答案"，让珠穆朗玛峰愈加神秘莫测、魅力四射。测量珠穆朗玛峰，已经成为人类探索、认识自然的标志性行动。我国对珠穆朗玛峰的高程多次进行过测量并开展了深入的科学研究。国家测绘局所属测绘队伍1966年至1998年数次参加对珠穆朗玛峰高程的测量，积累了大量丰富的观测分析数据，具备测量珠穆朗玛峰的宝贵经验和雄厚实力。2005珠穆朗玛峰高程测量，是我国继1975年之后开展的又一次对珠穆朗玛峰进行的大规模综合测量活动。

The history of humankind understanding Qomolangma Feng is a history of surveying. Different "Answers" obtained in different round of surveys impel Qomolangma Feng miraculous, unpredictable and charming. Survey of Qomolangma Feng is remarkable campaign of studying, recognizing the nature by humankind. China has undertaken measurements of the height of Qomolangma Feng for many times and carried out a long-term study and research. Stote Bureall of Surveying and Mapping organized surveying teams to participate in the measurement of the height of Qomolangma Feng for several times from 1966 to 1998, and collected a great deal of observation and analysis data, and obtained rich experience and abundant strength for measurement of Qomolangma Feng. The measurement of the height of Qomolangma Feng in 2005 is another large-scale comprehensive survey campaign to Qomolangma Feng after 1975 undertaken by China.

# 目录

# CONTENTS



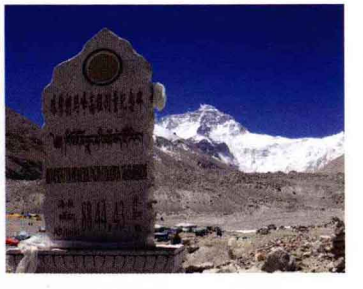
人类认知珠穆朗玛峰的历史是一部测量的历史。人类一轮又一轮地追寻，获得一个又一个“答案”，让珠穆朗玛峰神秘莫测而又魅力四射。测量珠穆朗玛峰，已经成为人类探索、认识自然的标志性行动。

The history of humankind understanding Qomolangma Feng is a history of surveying. Different "Answers" obtained in different round of surveys impel Qomolangma Feng to be more miraculous, unpredictable and charming. Qomolangma Feng Measurement has been a remarkable campaign of studying, recognizing the nature by humankind.

## 测量篇 036-165
## Chapter of Surveying

测量地球之巅的过程，是艰苦卓绝而又壮丽辉煌的过程，是人类认识地球、了解自然的过程，也是人类检验科技水平、探索科技发展的过程，更是人类不断进取、挑战自我的过程。

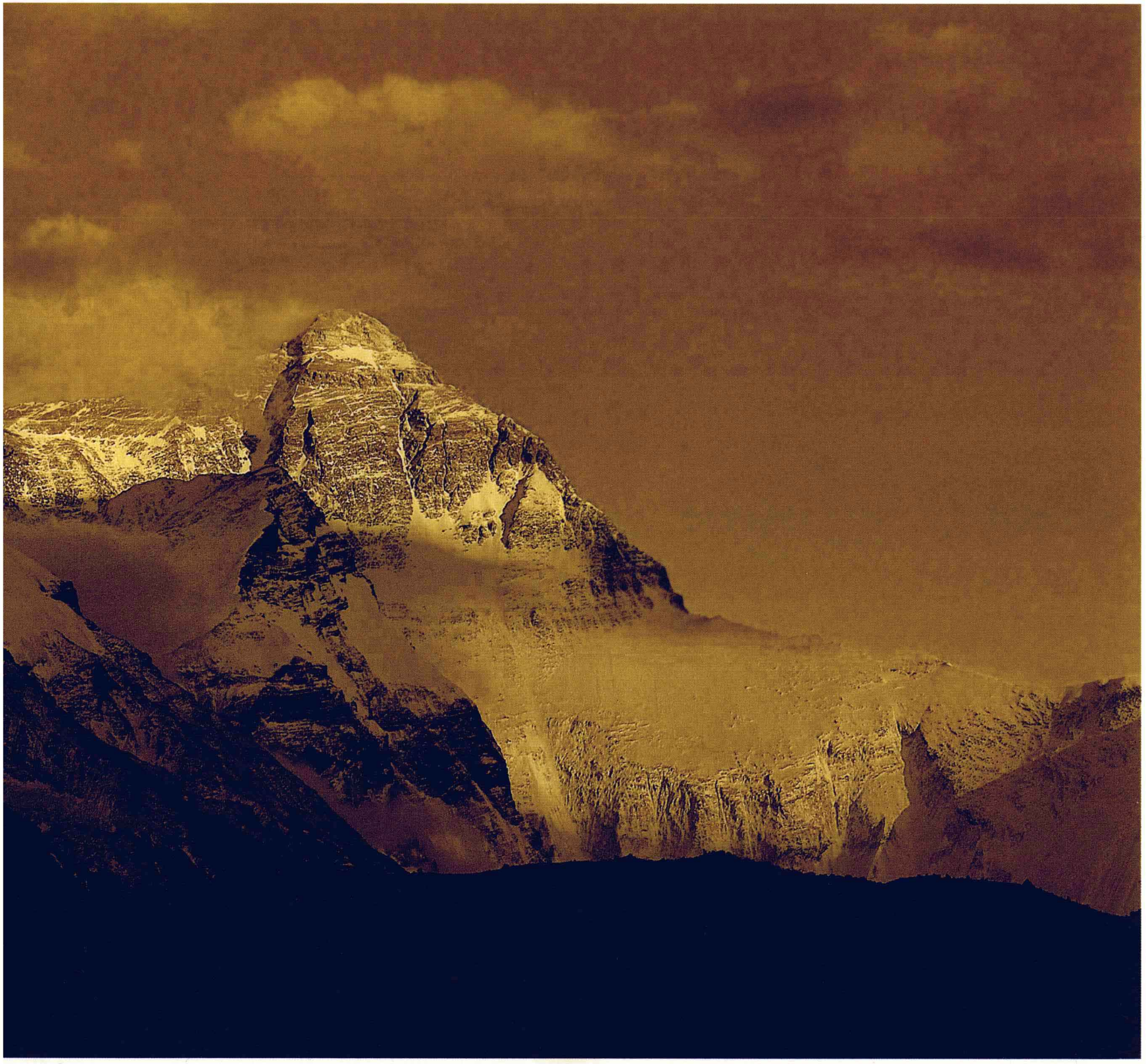
Re-measurement of the summit of the earth is a procedure of overcoming difficulties and obstacles by humankind, is a procedure of understanding the earth and recognizing the nature by humankind, is a process of humankind testing scientific and technical level, and searching technical development, and is a procedure of humankind continuously progressing and self-challenging.

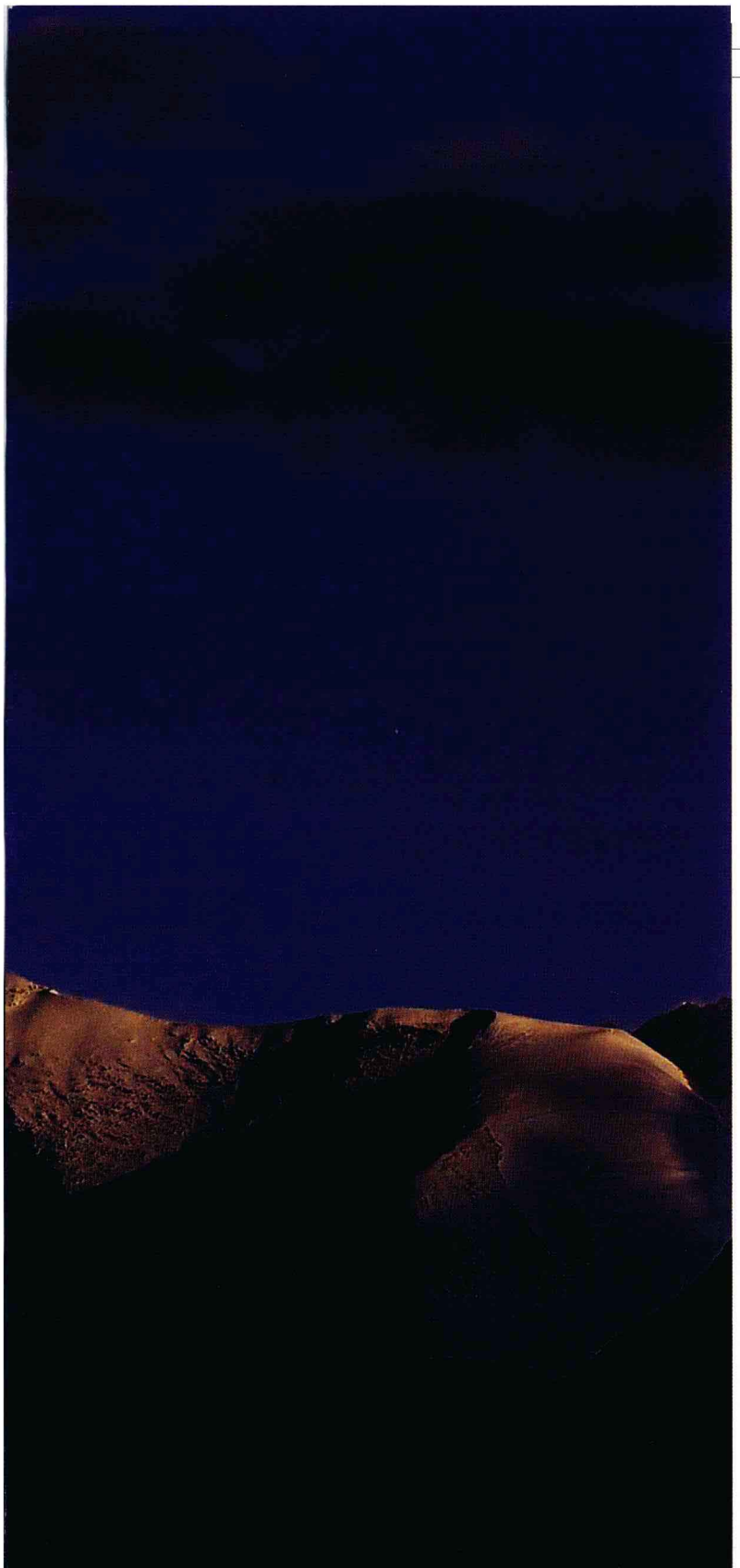


## 成果篇 166-197
## Chapter of Achievement

诞生于公元2005年的珠穆朗玛峰高程数据，是当代高新科技的结晶，中国综合国力的体现。它凝聚着中国测绘人的智慧和汗水，传承着勇攀高峰、不断探索、无私奉献的精神。

The height of Qomolangma Feng declared in 2005, is a crystallization of modern science and high technology, and is a reflection of the comprehensive state power of China. It condenses the wisdom and the sweat of Chinese surveyors, and demonstrates the spirit of scaling new heights, continuous searching and selfless contribution.





万山之等
地球之巅

珠穆朗玛峰，是喜马拉雅山的主峰，为世界第一高峰。珠峰地处中国、尼泊尔边界东段，北坡在我国西藏自治区的定日县境内，南坡在尼泊尔王国境内。整个山体地形极为险峻，气象瞬息万变。珠穆朗玛在藏族神话中被认为是五位仙女中的第三女神。

Qomolangma Feng, the main peak of Mount Himalayas, is the highest peak in the world, which stands in the east part of the border between China and Nepal. The north slope of Qomolangma Feng is in Tingri country, Tibet Autonomous Region, China, and the south slope is in the Kingdom of Nepal. The peak is perilous and cliffy and with changeable weather. Qomolangma is the name of the "third goddess" of the five fairies in Tibetan mythology.

珠峰山体呈巨型金字塔状，地形极端险峻，环境异常复杂。在海拔5000米以上，坚冰和积雪终年不化，有数不清的冰雪陡坡和岩石峭壁，经常发生冰崩、雪崩和滚石现象。气象条件极为恶劣，几乎天天刮着七、八级的高空风，顶峰的风力常达10级以上。长期以来，人们把珠峰与地球上的南、北两极相提并论，称之为地球“第三极”。

The main body of Qomolangma Feng looks like a great pyramid. The peak all year long is covered with ice and snow at over 5000 meters above the sea level. The gale force here always achieves on scale of 7-8 almost every day. At the top of the peak, it often reaches on more than scale of 10. Qomolangma Feng is known as the Third Pole of the earth along with North Pole and South Pole.

在距离珠峰约80公里的遮古拉山口，如果天气好，能够看到南方4座8000米以上的雪山从左向右排成一列，景象极为壮观。它们依次是马卡鲁峰（海拔8463米，世界第五高峰）、洛子峰（海拔8516米，世界第四高峰）、珠穆朗玛峰（海拔8844.43米，世界第一高峰）和卓奥友峰（海拔8201米，世界第七高峰）。

Qomolangma Feng with other three snow peaks over 8000m above the sea level, from the left to the right: Makaru Feng (8463m, the fifth highest peak in the world), Lhoze Feng (8516m, the fourth highest peak in the world), Qomolangma Feng (8844.43m, the first highest peak in the world), and Qowowuyag Feng (8201m, the seventh highest peak in the world).

# 一峰高耸，

## 群峰竞秀

A peak stands tall among
a group of high hills