



沈阳航空航天大学  
SHENYANG AEROSPACE UNIVERSITY



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# INTRODUCTION TO THE AEROSPACE

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# Introduction

- World aviation history
- China aviation history
- The feature of aviation and spaceflight
- The classification of aircraft

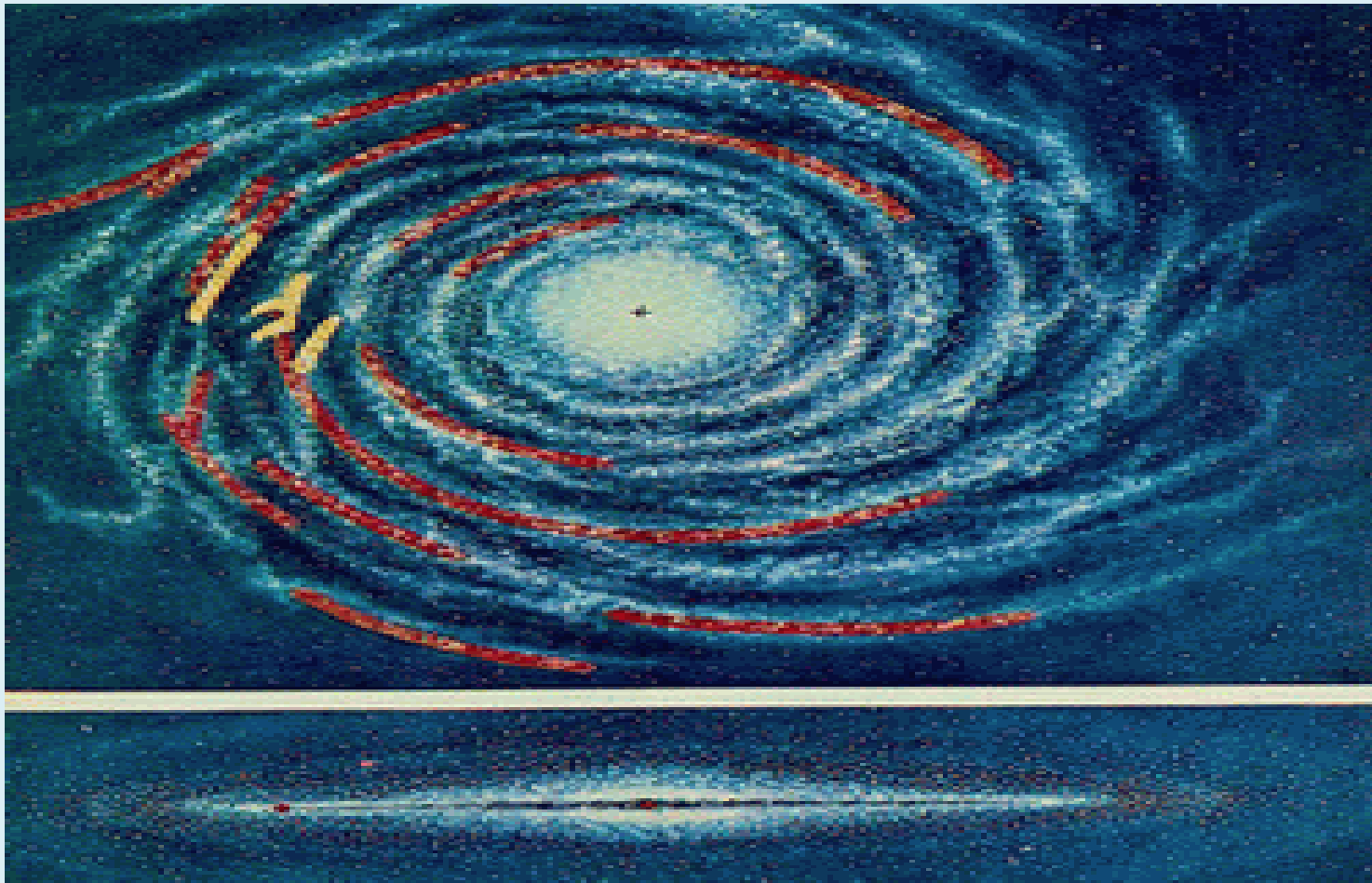


# World aviation history

- Definition of aviation
- Fling activities inner the atmosphere such as fire balloon、 power boat、 plane and so on
- Definition of spaceflight
- Fling activities outer the atmosphere such as artificial satellite、 rocket、 missile and so on



# The space



**Milky Way galaxy**



# The space



**Solar system**



# The space



**Astrospace**



# World aviation history

**Three phases  
of aviation**

**The appear of the  
first airplane**

**The appear of the  
first piston plane**

**The appear of the  
first jet plane**



# Archaian Flight attempt



**Fig1** rudiment of aircraft -Kite





# Archaian Flight attempt



**Fig 2**



# Archaian Flight attempt



**Fig 3**



# Archaian Flight attempt

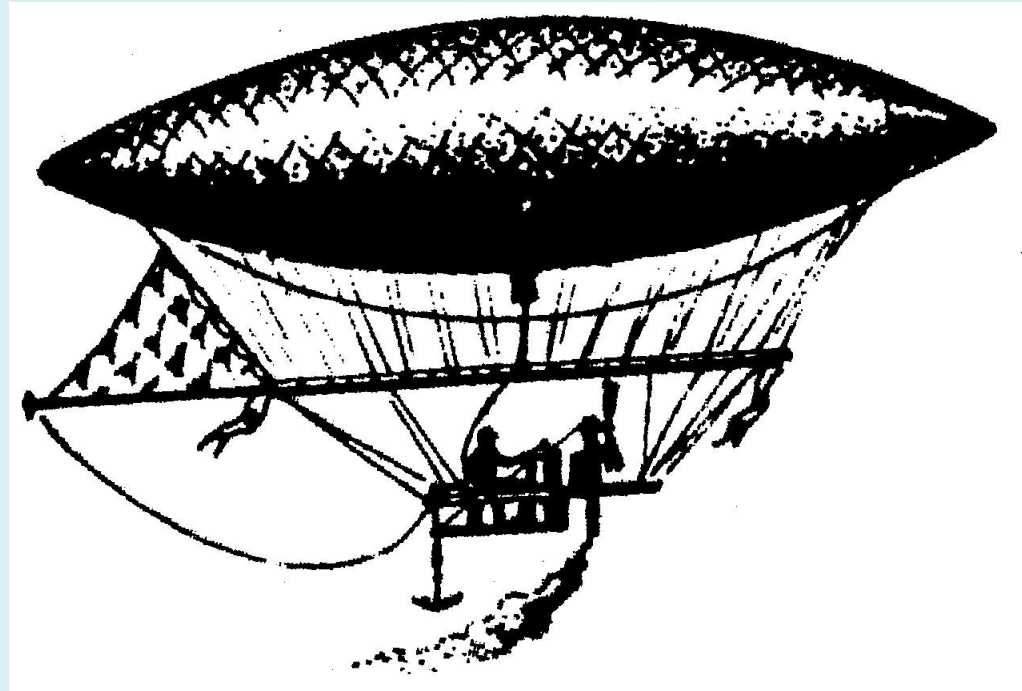


**Fig 4 Fire balloon**

1783.6.5



# Archaian Flight attempt



**Fig 5** aerobot



# The first plane



**Fig 6 The first plane**

1903.12.17,203m



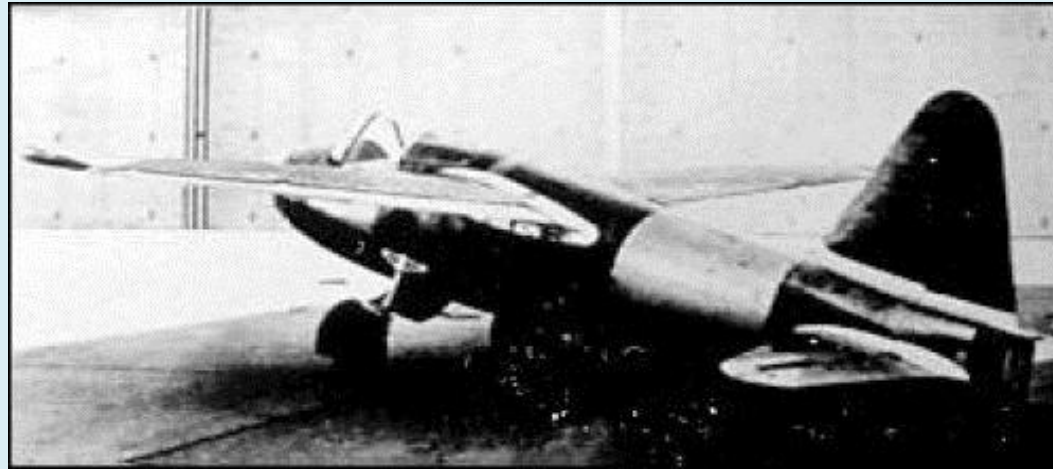
# The development of piston plane



**Fig 7** The first generation battleplane



# The development of jet plane



**Fig 8 He—178**



**Fig 9 E28 / 39**



# The development of jet plane



**Fig 10 x - 1**



**Fig 11 F-100**





# The development of jet plane



**Fig 12 SR-71**



# The development of jet plane



**Fig 13A The second generation battleplane**



# The development of jet plane



**Fig 13B The third generation battleplane**



# The development of jet plane



**Fig 13C The fourth generation battleplane**



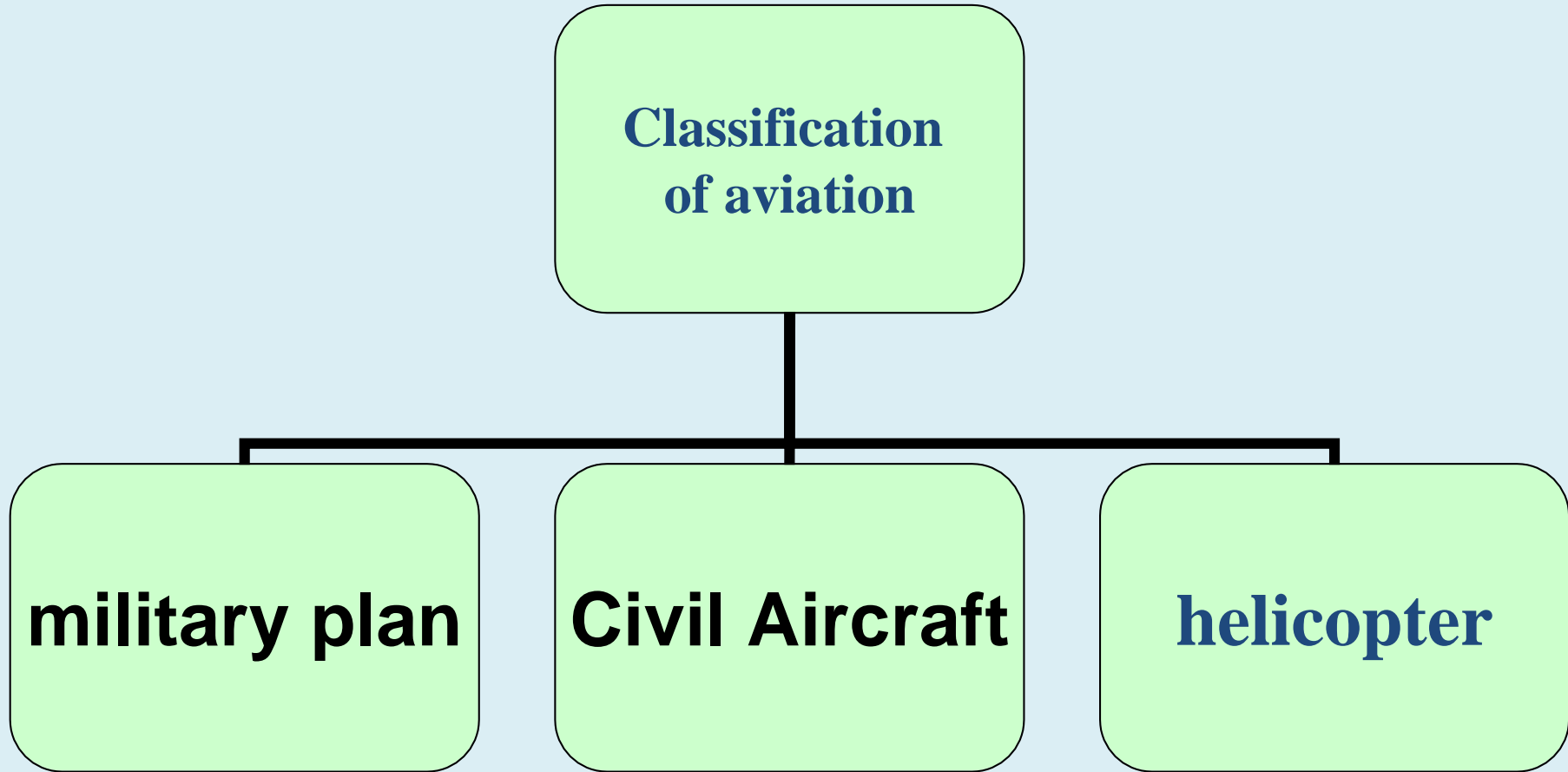
# The development of jet plane



**Fig 13D The fourth generation battleplane**

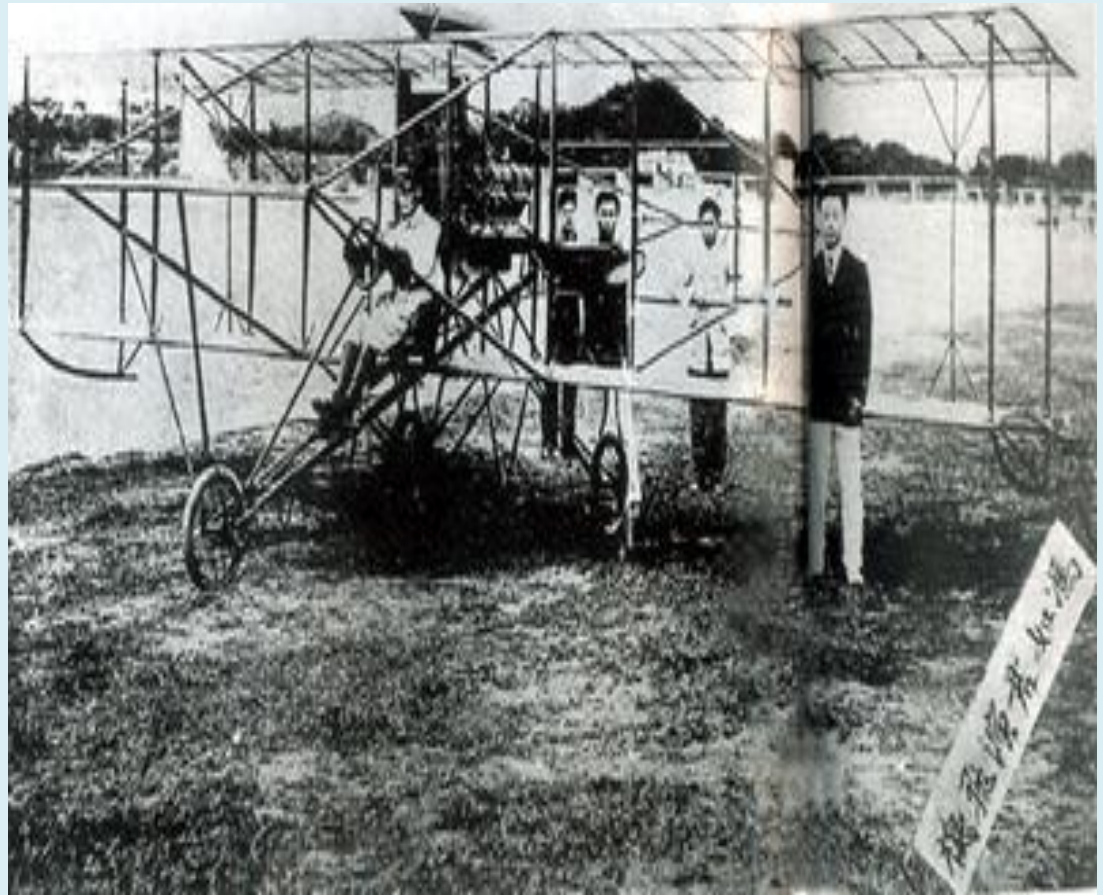


# The aviation of China





# The first plane of China



In 1910

**Fig 14 Feng ru and his plane**



# China avion



Fig 15 chu jiao 5 (Training plane)





# China avion



**Fig 16 J-5 (Fighter plane)**



# China avion



Fig 17 J-6 (Fighter plane)



# China avion



Fig 18 J-7 (Fighter plane)



# China avion



Fig 19 J-8 (Fighter plane)



# China avion



Fig 20 J-8II (Fighter plane)



# China avion



**Fig 21 H-5(Bomb carrier)**



# China avion



Fig 22 FBC-1(Bomb and fighter plane)



# China avion



**Fig 23 FC-1(Fighter carrier)**





# China avion



**Fig 24 J-10(Fighter carrier)**



# China civil aviation



**Fig 25 Y-5(Transporter)**



# China civil aviation



**Fig 26 Y-8(Transporter)**



# China civil aviation



**Fig 26 Y-10(Aerobus)**



# Helicopter



**Fig 27 Yanan-2**



# Helicopter



**Fig 28 Zhi-8**



# Helicopter



Fig 29 Zhi-9



# Helicopter



**Fig 30 Zhi-11**





# China spaceflight

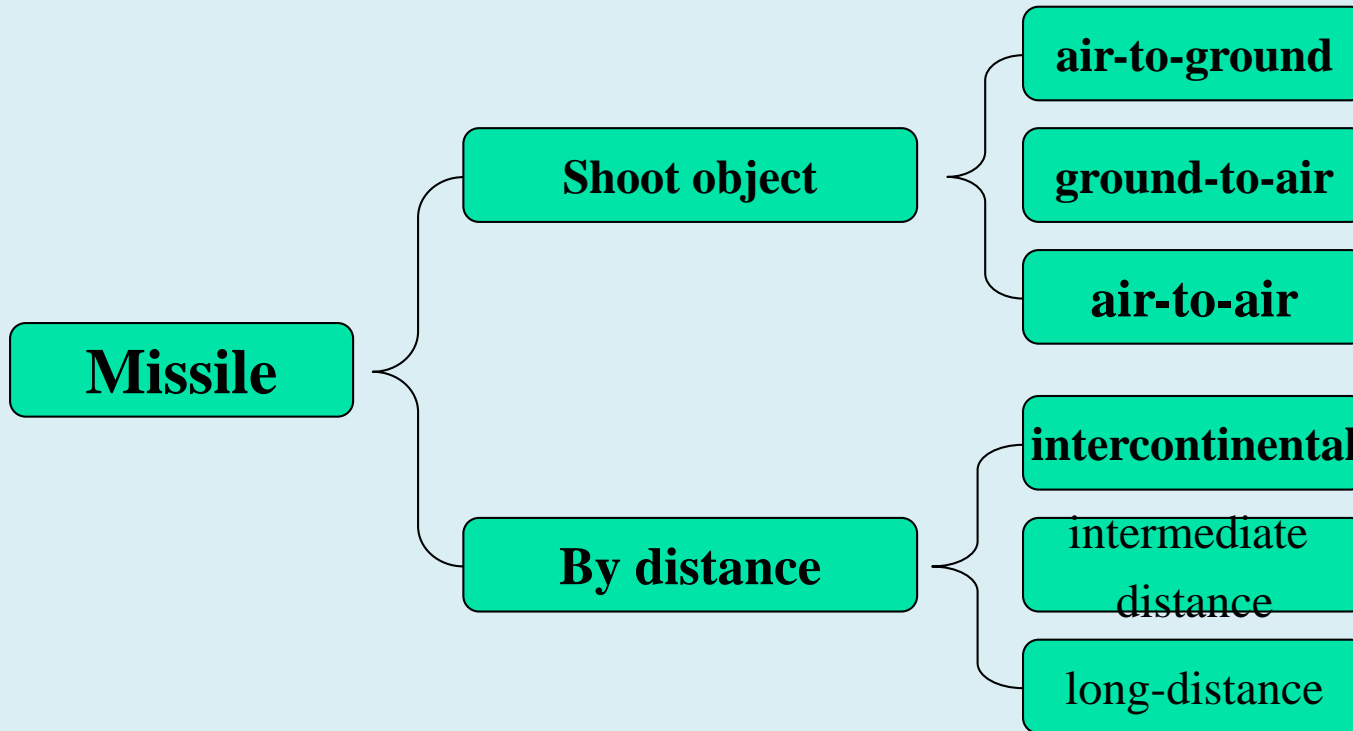


Fig 31A The **classification** of missile



# China spaceflight



**Fig 32** intermediate distance missile



**Fig 33** ground-to-air



# China spaceflight



**Fig 34** long-distance missile



**Fig 35** intercontinental missile



# China spaceflight



Fig 36 air-to-air missile



# China spaceflight



Fig 37 air-to-ground missile



# China spaceflight

on 1964,10,16, the first atomic bomb of China blast successfully.  
Which means that China has ability to produce nuke



a ground-to-ground missile  
taking nuclear warhead



# China spaceflight



Fig 39 changzheng-1



Fig 40 changzheng-2

Rocket



# China spaceflight



Fig 41 changzheng-3



Fig 42 changzheng-4

Rocket





# China spaceflight

In 1957,10 ,the first artificial satellite was send to outer space successfully and in 1970 the first artificial satellite of china which was named dengfanghong 1 was send to outer space successfully.





# China spaceflight

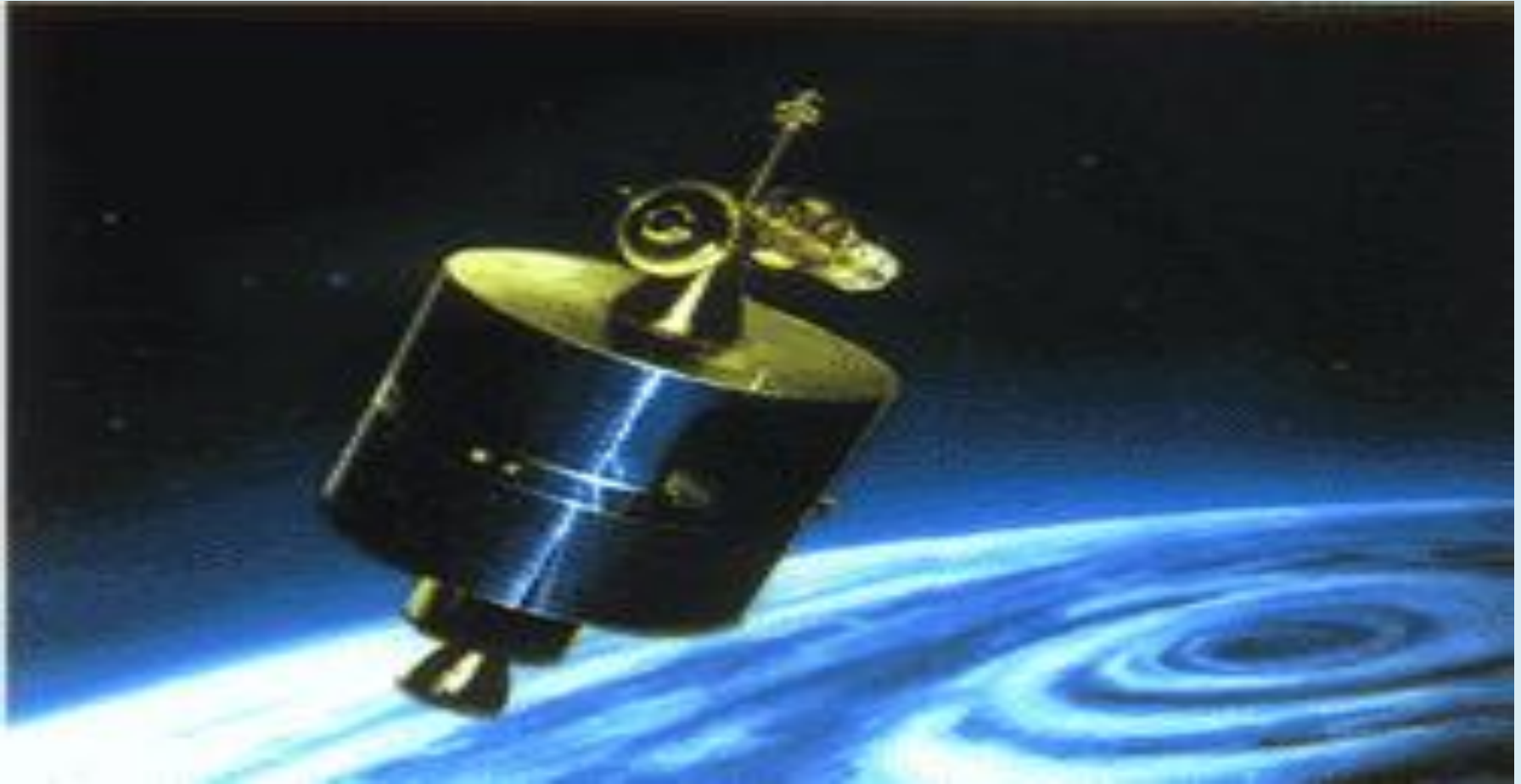


Fig 44 FY-2 meteorologic satellite



# China spaceflight

On 1961,4,12



Fig 44 JLin



# China spaceflight



cosmonaut named  
YIW

major general



Fig 45 ShenZHou5

on 2003,10,15



# China spaceflight



**Fig 46 Shen six**

By now the countries having ability to send the cosmonaut to the outer space are America, Russia and China.



# China spaceflight

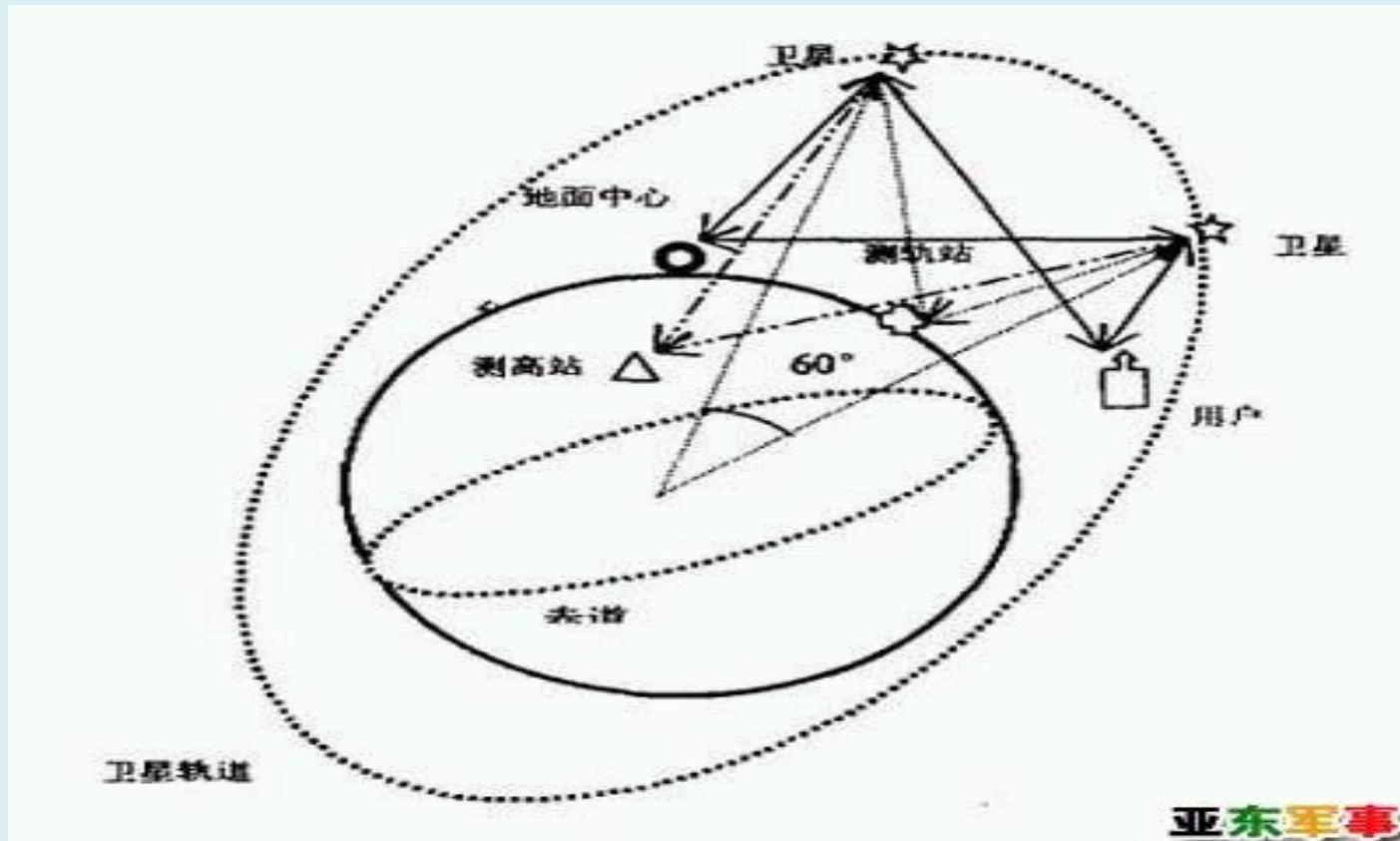


Fig 47 The Beidou Global Position System