

ENR 1.7 高度表拨正程序

ENR 1.7 ALTIMETER SETTING PROCEDURES

1. 介绍

中国高度表拨正程序基本与国际民用航空组织 8168 文件第一卷第六部分相一致，详见以下规定。
仪表进近图、仪表进场图和仪表离场图提供过渡高度或过渡高和过渡高度层。
用以确定足够地形超障高度的机场修正海平面气压 (QNH) 或机场场面气压 (QFE) 报告和温度通过气象广播提供，并可向空中交通服务单位申请得到。QNH 或 QFE 值的单位为百帕。

2. 高度表拨正值的规定

2.1 航路飞行

航路飞行的高度表拨正值为 1013.2 百帕。

2.2 机场塔台管制区域飞行

2.2.1 在规定过渡高度和过渡高度层的机场：

在机场高度表拨正区域内规定的过渡高度及其以下飞行，高度表拨正值为机场修正海平面气压；在过渡高度层及其以上飞行，为 1013.2 百帕。

2.2.2 在规定过渡高和过渡高度层的机场：

在机场高度表拨正区域内规定的过渡高及其以下飞行，高度表拨正值为机场场面气压；在过渡高度层及其以上飞行，为 1013.2 百帕。

2.2.3 在没有规定过渡高度或过渡高和过渡高度层的机场

详见 ENR 1.7 第 3.1.3 款。

2.2.4 高原机场

高原机场的飞行使用 1013.2 百帕。

3. 高度表拨正程序

3.1 航空器起飞或降落时，高度表拨正程序按照下列规定进行：

3.1.1 规定过渡高度和过渡高度层的机场

航空器起飞前，应当将机场修正海平面气压的数值对正航空器上气压高度表的固定指标；航空器起飞后，上升到过渡高度时，应当将航空器上气压高度表的气压刻度 1013.2 百帕对正固定指标；当航空器在下降过程中穿越过渡高度层时，应当将机场修正海平面气压的数值对正航空器上气压高度表的固定指标。

1. Briefing

China's altimeter setting procedures in use basically conform to those contained in ICAO Doc 8168, Vol. I, Part 6, with details as follows:

Transition altitudes or transition heights and transition levels are given on the instrument approach charts and STAR/SID charts. QNH or QFE reports and temperature information for use in determining adequate terrain clearance are provided in MET broadcasts and are available on request from the air traffic services. QNH or QFE values are given in hectopascals.

2. Altimeter settings to be used

2.1 En-route flight

The altimeter setting for en-route flight is 1013.2hPa.

2.2 Flights within aerodrome tower control areas

2.2.1 At aerodromes where transition altitudes and transition levels are established:

QNH shall be used for flights at or below the transition altitude specified in the aerodrome Altimeter Setting Regions; 1013.2hPa shall be used for flights at or above the transition level.

2.2.2 At aerodromes where transition heights and transition levels are established:

QFE shall be used for flights at or below the transition height specified in the Aerodrome Altimeter Setting Regions; 1013.2hPa shall be used for flights at or above the transition level.

2.2.3 At aerodromes where transition altitudes or transition heights and transition levels are not established

Ref. subsection ENR 1.7, item 3.1.3 for details.

2.2.4 At aerodromes of high elevation 1013.2hPa shall be used for flight operations.

3. Altimeter setting procedures

3.1 When an aircraft is taking off from or landing at an aerodrome, the following altimeter setting procedures are to be observed:

3.1.1 At aerodromes where transition altitudes and transition levels are established

Before take-off, the aircraft altimeter subscale shall be set to QNH of the aerodrome; after take-off, upon reaching the transition altitude the altimeter subscale shall be set to 1013.2hPa; when an aircraft is passing through a transition level during descent, the altimeter subscale shall be set to QNH of the aerodrome.

3.1.2 规定过渡高和过渡高度层的机场

航空器起飞前,应当将机场场面气压的数值对正航空器上气压高度表的固定指标;航空器起飞后,上升到过渡高时,应当将航空器上气压高度表的气压刻度 1013.2 百帕对正固定指标。
当航空器在下降过程中穿越过渡高度层时,应当将机场场面气压的数值对正航空器上气压高度表的固定指标。

3.1.3 没有规定过渡高度或过渡高和过渡高度层的机场

航空器起飞前,应当将机场场面气压的数值对正航空器上气压高度表的固定指标;航空器起飞后,上升到 600 米高时,应当将航空器上气压高度表的气压刻度 1013.2 百帕对正固定指标。在机场塔台管制区域内的下降过程中,航空器应根据空中交通管制员的指令开始调表。

3.1.4 高原机场

航空器起飞前,当航空器上气压高度表的气压刻度不能调整到机场场面气压的数值时,应当将气压高度表的气压刻度 1013.2 百帕对正固定指标(此时所指示的高度为零点高度)。
航空器降落前,如果航空器上气压高度表的气压刻度不能调整到机场场面气压的数值时,应当按照降落机场空中交通管制员通知的假定零点高度(航空器着陆时所指示的高度)进行着陆。

3.1.5 为了安全实施高度表拨正,在机场地区划设了高度表拨正区域。要求低于过渡高度飞行的航空器,在进出高度表拨正区域的水平边界时或根据空中交通管制员的指示开始调整高度表,该水平边界详见 ENR 1.7 第 4 款。

3.2 航路飞行的垂直间隔,按照飞行高度层配备。飞行高度层按照以下标准划分:

- 真航线角在 0 度至 179 度范围内,高度由 900 米至 8 100 米以及 8 900 米至 12 500 米,每隔 600 米为一个高度层;高度在 12 500 米(不含)以上,每隔 1 200 米为一个高度层。
- 真航线角在 180 度至 359 度范围内,高度由 600 米至 8 400 米以及 9 200 米至 12 200 米,每隔 600 米为一个高度层;高度在 13 100 米以上,每隔 1 200 米为一个高度层。
- 飞行高度层根据标准大气压条件下假定海平面计算,真航线角从航线起点和转弯点量取。

飞行高度层的具体配备标准见飞行高度层配备示意图(见图 1.7-1、表 1.7-1)。

4. 高度表拨正区域

详见第三部分-机场(AD)。

5. 适用于经营人的程序

飞行中将要使用的高度层必须在飞行计划中说明:

- 如果在过渡高度层或者其上飞行,使用飞行高度层;
 - 如果在机场附近或在过渡高度之下飞行,使用高度。
- 注:有些机场使用高而不使用高度。

3.1.2 At aerodromes where transition heights and transition levels are established

Before take-off, the aircraft altimeter subscale shall be set to the atmospheric pressure at the aerodrome elevation; after take-off, upon reaching the transition height the altimeter subscale shall be set to 1013.2hPa; when an aircraft is passing through a transition level during descent, the altimeter subscale shall be set to the atmospheric pressure at the aerodrome elevation.

3.1.3 At aerodromes where transition altitudes or transition heights and transition levels are not established

Before take-off, the aircraft altimeter subscale shall be set to the atmospheric pressure at the aerodrome elevation; after take-off when the aircraft has reached a height of 600m, the altimeter subscale shall be set to 1013.2hPa. During the process of descending in the aerodrome tower control area, the aircraft shall start altimeter setting by the instruction of air traffic controller.

3.1.4 At aerodromes of high elevation

When the aircraft altimeter subscale cannot be set to the atmospheric pressure at the aerodrome elevation, it will then be set to 1013.2hPa before take-off, with the indicated altitude interpreted as zero altitude.

When the aircraft altimeter subscale cannot be set to the atmospheric pressure at the aerodrome elevation, landing is to be made with the assumed zero altitude notified by the air traffic controller before landing.

3.1.5 For the safe execution of altimeter setting, Aerodrome Altimeter Setting Regions are defined. An aircraft below the transition altitude is required to start its altimeter setting when entering or leaving the lateral boundary of Altimeter Setting Region or by following the instruction of the air traffic controller. For details of lateral boundaries, please refer to subsection ENR 1.7, item 4.

3.2 En-route vertical separations are based on flight level allocation. Flight levels are determined by the following criteria:

- For a true track between 0° - 179°, a flight level at every 600m from 900m up to 8 100m and 8 900m up to 12 500m; a flight level at every 1 200m above 12 500m.
- For a true track between 180° - 359°, a flight level at every 600m from 600m up to 8 400m and 9 200m up to 12 200m; a flight level at every 1 200m above 13 100m.
- The flight level shall be calculated on the basis of presumed sea level under standard atmospheric pressure conditions. True track shall be measured from the starting or turning point of the air route.

For specific flight level allocation criteria, see diagram of flight levels allocation (See Figure 1.7-1, Table 1.7-1).

4. Description of altimeter setting regions

Ref. Part III-aerodrome (AD) for details.

5. Procedures applicable to operators (including pilots)

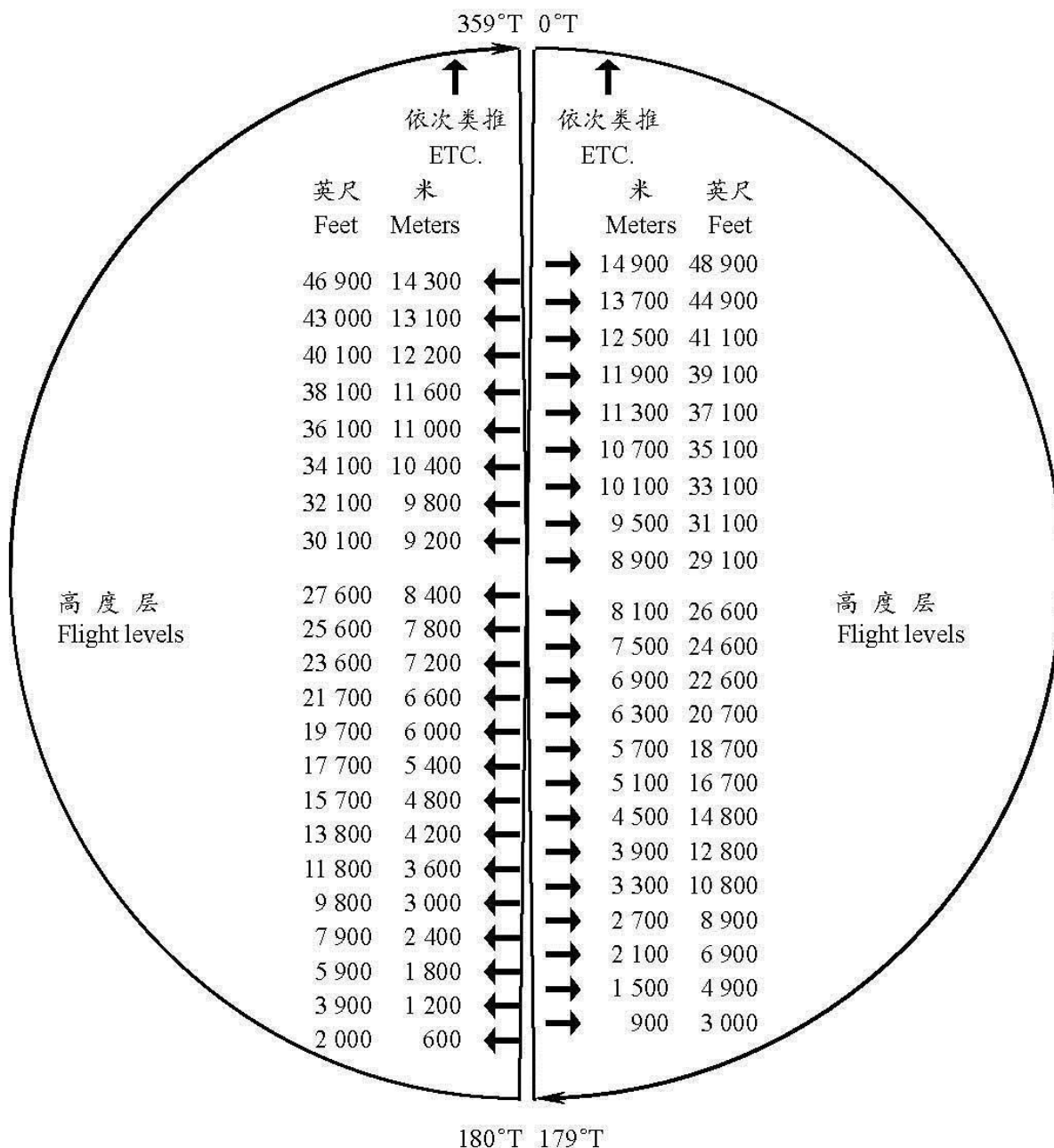
The level at which a flight is to be conducted shall be specified in a flight plan:

- In term of flight levels, if the flight is to be conducted at or above the transition level, and
 - In terms of altitudes, if the flight is to be conducted in the vicinity of an aerodrome and at or below the transition altitude.
- Note: Height is used instead of altitude at some aerodromes.

图/Figure 1.7-1

飞行高度层配备示意图

Diagram of Flight Levels Allocation



注：管制员将发布米制飞行高度层指令。航空器驾驶员应当根据中国民航飞行高度层配备标准示意图（表）来确定对应的英制飞行高度层。航空器应当飞对应的英制飞行高度层。航空器驾驶员应当知晓公英制转换带来的差异，驾驶舱仪表显示的米制高度与管制指令的米制高度不一定完全一致，但存在的差异不会超过30米。

Note: ATC will issue the Flight Level clearance in meters. Pilots shall use the China FLAS Diagram to determine the corresponding flight level in feet. The aircraft shall be flown using the flight level in FEET.

Pilots should be aware that due to the rounding differences, the metric readout of the onboard avionics will not necessarily correspond to the cleared Flight Level in meters however the difference will never be more than 30 meters.

表 #20:1.7-1 飞行高度层配备标准表
Table 1.7-1 Table of Flight Levels Allocation

180° - 359° T				000° - 179° T			
Flight Levels				Flight Levels			
	m	ft			m	ft	
	ETC. ↑	ETC. ↑			ETC. ↑	ETC. ↑	
	15500	50900			14900	48900	
	14300	46900			13700	44900	
	13100	43000					
					12500	41100	
	12200	40100			11900	39100	
	11600	38100			11300	37100	
	11000	36100			10700	35100	
	10400	34100			10100	33100	
	9800	32100			9500	31100	
	9200	30100			8900	29100	
	8400	27600			8100	26600	
	7800	25600			7500	24600	
	7200	23600			6900	22600	
	6600	21700			6300	20700	
	6000	19700			5700	18700	
	5400	17700			5100	16700	
	4800	15700			4500	14800	
	4200	13800			3900	12800	
	3600	11800			3300	10800	
	3000	9800			2700	8900	
	2400	7900			2100	6900	
	1800	5900			1500	4900	
	1200	3900			900	3000	
	600	2000			-	-	
	m	ft			m	ft	