ENR 3.3.2.2 三亚飞行情报区海洋空域缩小垂直间隔标准的政策和程序

1. RVSM 空域

1. RVSM 空域
1.1 三亚飞行情报区海洋空域内实施 RVSM 的航路包括 A1、 L642、 M771 和 N892。其中 L642， M771，N892 航路的 RVSM 高度层为: FL310、FL320、FL350、FL360、FL390 和 FL400。A1 航路的 RVSM 高度层为: 向东飞行 -FL290，FL330，FL370，FL390 和 FL410；向西飞行 -FL280，FL300，FL340，FL380 和 FL400。RVSM 空域水平范围与海洋飞行区域一致。

2. 航空器适航和运行审批和监督

2.1 批准手续
运营人必须取得适当的注册国或运营人所属国的适航和运行批准，方可实施 RVSM 运行。有关要求参见中国民用航空局相关的 RVSM 适航和飞标政策。

2.2 航空器的监督
要求运营人应当参加 RVSM 航空器监控项目。这是 RVSM 实施计划的一个重要组成部分，因为它可以确认航空器是否符合高度保持性能标准。亚太地区审批注册和监控组织（APARMO）将处理监控的结果。有关 RVSM 监控的进一步信息，可登陆 APARMO 网站

(a) 进入 FAA RVSM 网站的 “RVSM Documentation” 部分并点击 APARMO 网站的链接，或
(b) 使用网址:
http://www.tc.faa.gov/niaab/act500/rvsm/aparmo_intro.html

2.2.1 其它地区的监控结果可用来满足亚太地区的监控要求。APARMO 将与其它监控机构协调以获取该信息。运营人可按下面的地址与 APARMO 监控承包人联系，询问亚太地区的监控服务:

电话：+1 202 863 2175
传真：+1 202 862 2398
电子邮件：monitor@cssiinc.com

3. ACAS II 与应答机的装备

ENR 3.3.2.2 RVSM Policy and Procedures in the Oceanic Airspace of Sanya FIR

1. Identification of RVSM Airspace

1. dentification of RVSM Airspace
1.1 The RVSM routes in the Oceanic airspace of Sanya FIR include: A1, L642, M771 and N892. The RVSM levels for L642, M771, N892 would be FL310, FL320, FL350, FL360, FL390 and FL400. The RVSM levels for A1 would be FL290, FL330, FL370, FL390 and FL410 for eastbound traffic or FL280, FL300, FL340, FL380 and FL400 for westbound traffic.
The boundary of the RVSM airspace is the same with the Oceanic airspace of Sanya FIR.

2. Airworthiness and Operational Approval and Monitoring

2.1 Approval process
Operators must obtain airworthiness and operational approval from the State of Registry or State of the Operator, as appropriate, to conduct RVSM operations. Relevant requirements will be contained in CAAC RVSM airworthiness and flight standards policies.

2.2 Aircraft monitoring
Operators are required to participate in the RVSM aircraft monitoring program. This is an essential element of the RVSM implementation program in that it confirms that the aircraft altitude-keeping performance standard is being met. The Asia Pacific Approvals Registry and Monitoring Organization (APARMO) will process the results of monitoring. For further information on RVSM monitoring, the APARMO web site can be accessed by:
(a)Accessing the “RVSM Documentation” section of the FAA RVSM website and clicking on the link to the APARMO website or...
(b)Using this Internet address:
http://www.tc.faa.gov/niaab/act500/rvsm/aparmo_intro.html

2.2.1 Monitoring accomplished for other regions can be used to fulfill the monitoring requirements for the Asia/Pacific region. The APARMO will coordinate with other monitoring agencies to access this information. For monitoring services in the Asia/Pacific region, operators should contact the APARMO monitoring contractor as follows:
Phone:+1 202 863 2175
Fax:+1 202 862 2398
Email: monitor@cssiinc.com

3. ACAS II and Transponder Equipage

3.1 ICAO 亚太地区 RVSM 实施工作组建议装备有 ACAS 并在 RVSM 空域飞行的航空器装备 ACAS II（具有 7.0 版本的 TCAS 系统符合 ICAO ACAS II 标准）。

3.1 The ICAO Asia/Pacific RVSM Implementation Task Force recommends that those aircraft equipped with ACAS and operated in RVSM airspace be equipped with ACAS II. (TCAS II systems with Version 7.0 incorporated meet ICAO ACAS II standards).

3.1.1 营运人应当按照中国 AIP 中的有关要求，安装符合要求的 ACAS II。

3.1.1 Operators shall equip their aircraft with ACAS II as required by AIP China.

3.2 国际通用航空（IGA）应答机装备
ICAO 附件六第二部分阐明：自 2000 年 1 月 1 日起，IGA 飞机必须装备有被适当的国家当局认证为符合国际民航组织附件十规定的气压高度报告应答机。

3.2 INTERNATIONAL GENERAL AVIATION (IGA) TRANSPONDER EQUIPAGE.
ICAO Annex 6, Part II, states that, starting 1 January 2000, IGA airplanes shall be equipped with a pressure altitude reporting transponder certified by the appropriate State authority as meeting the provisions of Annex 10.

4. RVSM 空域中的飞行程序

4. In-flight Procedures within RVSM Airspace

4.1 在进入 RVSM 空域之前，飞行员应当检查所要求设备的状况。（有关飞行员的 RVSM 程序，见民航飞发 [1999]144 号文件第 12.d 条或 FAA IG 91-RVSM 的附件 4）。下列设备应当工作正常：
(a) 两套主用高度测量系统；
(b) 一套自动高度保持装置；及
(c) 一套高度告警装置。

4.1 Before entering RVSM airspace, the pilot should review the status of required equipment (see 12.d of CAAC flight standards [1999] Doc 144, or Appendix 4 of FAA IG 91-RVSM for pilot RVSM procedures). The following equipment should be operating normally:
(a) two primary altimetry systems;
(b) one automatic altitude-keeping device; and
(c) One altitude-alerting device.

4.2 有关在应急情况中飞行员和管制员的行动，参见 ENR3.3.2.2- 附件 A 或 FAA IG 91-RVSM 的附件 5。当航空器处于以下情况时，飞行员必须通知 ATC：
(a) 由于设备失效，不再继续执行 RVSM；或
(b) 失去高度测量系统的冗余；或
(c) 遇上影响保持高度能力的颠簸。

4.2 See ENR3.3.2.2-Attachment A or Appendix 5 of FAA IG 91-RVSM for pilot and controller actions in contingencies. The pilot must notify ATC whenever the aircraft:
(a) Is no longer RVSM compliant due to equipment failure; or
(b) Experiences loss of redundancy of altimetry systems; or
(c) Encounters turbulence that affects the capability to maintain flight level.

4.3 飞行高度层间的过渡
在许可的高度层间进行过渡时，航空器在指定的高度层上改平不得提前或滞后超过 150 英尺（45 米）。

4.3 Transition between FL's
During cleared transition between levels, the aircraft should not overshoot or undershoot the assigned FL by more than 150 ft (45 m).

4.4 飞行员高度层报告
在 RVSM 空域内除有 ADS 或雷达管制的条件外，飞行员到达任何指定高度，都必须报告。

4.4 Pilot level call
Except in an ADS or radar environment, pilots shall report reaching any altitude assigned within RVSM airspace.

4.5 应急程序
下列 5、6、7 和 8 各段中包含有已根据 RVSM 运行进行更新后的飞行中应急程序。在海洋飞行中应当应用 5 至 6 中的应急程序和 8 中的偏离程序。7 中的绕飞天气程序可适用于本区的所用空域。

4.5 Contingency procedures
Paragraphs 5, 6, 7 and 8 below contain procedures for in-flight contingencies that have been updated for RVSM operations. The contingency procedures in paragraphs 5-6 and the offset procedures in paragraph 8 should be applied in Oceanic operations. The weather deviation procedures in paragraph 7 may be applied in all airspaces in the region.

5. 三亚飞行情报区海洋空域内飞行中应急情况的处置程序

5. Special procedures for In-flight contingencies in Oceanic Airspace in the Sanya FIR

通用程序

General procedures

5.1 下列通用程序仅作指导之用，它们适用于亚音速和超音速两种航空器。它们尽管不能涵盖所有可能的应急情况，却提供有由于以下原因不能保持高度的情况：
(a) 天气；
(b) 航空器性能；
(c) 增压失效；及
(d) 与高空超音速飞行相关的故障。

5.2 本程序主要适用于要求迅速下降及/或返航或备降的情况。飞行员应根据对特定情况的判断而最终决定如何先后采取多种行动。

5.3 如果航空器不能按照空中交通管制许可继续飞行，在采取任何行动之前应当尽可能获取修订的 ATC 许可，必要时可使用遇险或紧急信号。

5.4 如果航空器驾驶员不能事先获得许可，采取行动之后应当及早获取 ATC 许可；在收到修改的许可之前，飞行员应当：
(a) 如有可能，偏出有组织的航迹或航线系统；
(b) 在现用的频率及 121.5 MHz 频率上以（或者，作为备份手段，在飞行员之间的空对空 VHF 频率 123.45 MHz 上），以合适的时间间隙、用广播方式与附近航空器建立联系并对它们进行警告，内容包括：航班号、飞行高度层、航空器位置（包括 ATS 航线名称或航迹代号）和意图；
(c) 目视或参照 ACAS（如果装备有）观察冲突活动；并
(d) 打开航空器所有外部灯光（要符合必要的运行限制）。

5.1 The following general procedures apply to both subsonic and supersonic aircraft and are intended as guidance only. Although all possible contingencies cannot be covered, they provide for cases of inability to maintain assigned level due to:
(a) Weather;
(b) Aircraft performance;
(c) Pressurization failure; and
(d) Problems associated with high-level supersonic flight.

5.2 The procedures are applicable primarily when rapid descent and/or turn-back or diversion to an alternate airport is required. The pilot's judgment shall determine the sequence of actions to be taken, taking into account specific circumstances.

5.3 If an aircraft is unable to continue flight in accordance with its air traffic control clearance, a revised clearance shall, whenever possible, be obtained prior to initiating any action, using a distress or urgency signal as appropriate.

5.4 If prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time and, until a revised clearance is received, the pilot shall:
(a)If possible, deviate away from an organized track or route system;
(b)Establish communications with and alert nearby aircraft by broadcasting, at suitable intervals: flight identification, flight level, aircraft position, (including the ATS route designator or the track code) and intentions on the frequency in use, as well as on frequency 121.5 MHz (or, as a back-up, the VHF inter-pilot air-to-air frequency 123.45 MHz);
(c)Watch for conflicting traffic both visually and by reference to ACAS (if equipped); and
(d)Turn on all aircraft exterior lights (commensurate with appropriate operating limitations).

6. 三亚飞行情报区海洋空域内要求迅速下降、返航或备降的亚音速航空器的飞行中应急程序

起始行动

6.1 航空器如果不能按照5.3中的规定获得修改的ATC许可，如果可行，应当右转或左转 90 度，离开其指定航线或航迹。转弯的方向应当根据航空器相对于有组织的航线或航迹系统的位置确定（例如：航空器是位于系统之外，系统的边缘，或是系统之内）。其它应当考虑的因素还有：超障余度和分配给相邻航线或航迹的高度层。

随后行动

6.2 航空器可以保持高度层
可以保持指定高度层的航空器，应当获取并保持一个距指定航线或航迹左右两侧侧向间隔为 25 NM 的航迹，在建立偏离航迹后，上升或下降 500 英尺（150 米）。

6. In-flight Contingency Procedures for Subsonic Aircraft Requiring Rapid Descent, Turn-Back or Diversion in Oceanic Airspace in the Sanya FIR.

Initial action

6.1 If unable to comply with the provisions of paragraph 5.3 to obtain a revised ATC clearance, the aircraft should leave its assigned route or track by turning 90 degrees right or left whenever this is possible. The direction of the turn should be determined by the position of the aircraft relative to any organized route or track system (for example, whether the aircraft is outside, at the edge of, or within the system). Other factors to consider are terrain clearance and the levels allocated to adjacent routes or tracks.

Subsequent action

6.2 Aircraft able to maintain level
An aircraft able to maintain its assigned level should acquire and maintain in either direction a track laterally separated by 25 NM from its assigned route or track and once established on the offset track, climb or descend 500 ft (150m).

6.3 航空器不能保持高度层
不能保持指定高度层的航空器，在转弯获取并保持一个距指定航线或航迹左右两侧侧向间隔为 25NM 的航迹过程中，如果可行，应当将下降率控制为最小。之后应当选取与正常使用的高度层相差 500 英尺（150 米）的飞行高度层。

6.3 Aircraft unable to maintain level
An aircraft NOT able to maintain its assigned level should, whenever possible, minimize its rate of descent while turning to acquire and maintain in either direction a track laterally separated by 25 NM from its assigned route or track. For subsequent level flight, a level should be selected which differs by 500 ft (150 m) from those normally used.

6.4 改航穿越相邻的航线
航空器在开始改航穿越相邻的航线之前，应当保持偏离中心线 25NM，加速上升或下降到大多数航空器飞行的各高度层之上或之下（例：到 FL400 之上或 FL290 之下），然后保持与正常使用的高度层相差 500 英尺（150 米）的高度层。然而，如果飞行员不能或不愿进行大幅度上升或下降，在获得新 ATC 许可之前，航空器应当在正常使用的各飞行高度层之上或之下 500 英尺（150 米）处的高度层飞行。

6.4 Diversion across the flow of adjacent traffic
Before commencing a diversion across the flow of adjacent traffic, the aircraft should, while maintaining the 25 NM offset, expedite climb above or descent below levels where the majority of aircraft operate (e.g. to a level above FL400 or below FL290) and then maintain a level which differs by 500 ft (150 m) from those normally used. However, if the pilot is unable or unwilling to carry out a major climb or descent, the aircraft should be flown at a level 500 ft above or below levels normally used until a new ATC clearance is obtained.

6.5 延程飞行（ETOPS）航空器
如果双发航空器由于发动机关车或 ETOP 关键系统失效使用本应急程序，飞行员应当将情况尽快告知 ATC，提醒 ATC 所涉及的航空器类型并请求迅速处置。

6.5 Etops aircraft
If these contingency procedures are employed by a twin-engine aircraft as a result of an engine shutdown or a failure of an ETOPS critical system, the pilot should advise ATC as soon as practicable of the situation, reminding ATC of the type of aircraft involved and requesting expeditious handling.

7. 三亚飞行情报区海洋空域的绕飞天气程序

7. Weather Deviation Procedures in the Oceanic Airspace of Sanya FIR.

通用程序

7.1 下列程序旨在提供指导，并不涵盖所有可能发生的情况。飞行员的判断应最终决定如何先后采取的行动；管制员必须尽一切可能提供协助。

General procedures

7.1 The following procedures are intended to provide guidance. All possible circumstances cannot be covered. The pilot's judgment shall ultimately determine the sequence of actions taken and ATC shall render all possible assistance.

7.2 如果航空器有必要偏离航线绕飞天气，且不能事先获得许可，之后应当尽早获取空中交通管制许可。同时航空器应当遵循 7.9 中的详细程序。

7.2 If the aircraft is required to deviate from track to avoid weather and prior clearance cannot be obtained, an air traffic control clearance shall be obtained at the earliest possible time. In the meantime, the aircraft shall follow the procedures detailed in paragraph 7.9 below.

7.3 当不再需要绕飞或绕飞结束并返回到原许可航线的中心线时，飞行员应当告知 ATC。

7.3 The pilot shall advise ATC when weather deviation is no longer required, or when a weather deviation has been completed and the aircraft has returned to the centerline of its cleared route.

7.4 当飞行员联系 ATC 时，讲明 “WEATHER DEVIATION REQUIRED” 可以获得迅速回答；这表示期望在频率上通信和 ATC 回答时予以优先。

7.4 When the pilot initiates communications with ATC, rapid response may be obtained by stating "WEATHER DEVIATION REQUIRED" to indicate that priority is desired on the frequency and for ATC response.

7.5 飞行员还可以选择使用紧急呼叫通信 “PAN PAN”，以警示收听各方这是需要特殊处置的情况，以优先获得 ATC 发布许可或协助。

7.5 The pilot still retains the option of initiating the communications using the urgency call "PAN PAN" to alert all listening parties to a special handling condition, which may receive ATC priority for issuance of a clearance or assistance.

7.6 在建立管制员与飞行员的联络时，飞行员应当告知 ATC 并请求偏离航迹的许可；如有可能，同时告知希望绕飞的范围。 ATC 将采取下列行动之一:
(a) 如果在水平范围内没有冲突活动，ATC 将发布偏离航迹的许可；或
(b) 如果在水平范围内有冲突活动，ATC 将建立垂直间隔进行调配；如果不能建立垂直间隔， ATC 将:
i) 告知飞行员不能发布其申请绕飞的许可
ii) 告知飞行员冲突活动
iii) 询问飞行员意图
术语样例:
“Unable (申请的绕飞), traffic is (呼号、位置、高度、方向), advise intentions.”

7.6 When controller-pilot communications are established, the pilot shall notify ATC and request clearance to deviate from track, advising, when possible, the extent of the deviation expected. ATC will take one of the following actions:
(a) If there is no conflicting traffic in the horizontal dimension, ATC will issue clearance to deviate from track; or
(b) If there is conflicting traffic in the horizontal dimension, ATC will separate aircraft by establishing vertical separation or, if unable to establish vertical separation, ATC shall:
i) Advise the pilot unable to issue clearance for requested deviation
ii) Advise pilot of conflicting traffic
iii) Request pilot's intentions
SAMPLE PHRASEOLOGY:
“Unable (requested deviation), traffic is (call sign, position, altitude, direction), advise intentions.”

7.7 飞行员将采取以下行动:
(a) 以可用的、最迅速的方式将意图告知给 ATC。
(b) 遵照已发布的空中交通管制许可，或
(c) 执行以下 7.9 中的程序（ATC 将为所有受影响的航空器发布重要交通情报）。
(d) 如有必要，可与 ATC 建立话音通信，以加速有关情况的对话。

7.7 The pilot will take the following actions:
(a)Advise ATC of intentions by the most expeditious means available.
(b)Comply with air traffic control clearance issued or…
(c)Execute the procedures detailed in 7.9 below (ATC will issue essential traffic information to all affected aircraft).
(d)If necessary, establish voice communications with ATC to expedite dialogue on the situation

无法获得修订的空中交通管制许可时应当采取的行动

Actions to be taken if a revised air traffic control clearance cannot be obtained

7.8 当从安全考虑认为绝对必要时，依据飞行员可以背离空中规则（例: 沿航线或航迹中心线飞行的要求，ATC 另有指示除外）的条款，飞行员可以采取以下所列的行动。

7.8 The pilot shall take the actions listed below under the provision that the pilot may deviate from rules of the air (e.g., the requirement to operate on route or track center line unless otherwise directed by ATC), when it is absolutely necessary in the interests of safety to do so.

7.9 如果无法获得修改的空中交通管制许可并且必须偏离航迹避开天气时，飞行员应当采取以下行动:
(a) 如果可能，偏离有组织的航迹或航线系统;
(b) 在现用的频率及 121.5 MHz 频率上（或者，作为备份手段，在飞行员之间的空对空 VHF 频率 123.45 MHz 上），以合适的时间间隙、用广播方式与附近航空器建立联系并对它们予以告警，内容包括: 航班号、飞行高度层、航空器位置（包括 ATS 航线名称或航迹代号）和意图（预计偏离的程度）;
(c) 目视或参照 ACAS（如果装备有）观察冲突活动; 并
(d) 打开航空器所有外部灯光（符合相关的操作限制）;
(e) 偏离小于 10NM 时，航空器应当保持 ATC 指定的高度;
(f) 偏离大于 10NM 时，当航空器距航迹大约 10NM 时，按照以下准则改变高度层:

7.9 If a revised air traffic control clearance cannot be obtained and deviation from track is required to avoid weather, the pilot shall take the following actions:
(a) If possible, deviate away from an organized track or route system;
(b) Establish communication with and alert nearby aircraft by broadcasting, at suitable intervals: flight identification, flight level, aircraft position (including the ATS route designator or the track code) and intentions (including the magnitude of the deviation expected) on the frequency in use, as well as on frequency 121.5 MHz (or, as a back-up, the VHF inter-pilot air-to-air frequency 123.45 MHz).
(c) Watch for conflicting traffic both visually and by reference to ACAS (if equipped);
(d)Turn on all aircraft exterior lights (commensurate with appropriate operating limitations);
(e)For deviations of less than 10NM, aircraft should remain at the level assigned by ATC;
(f)For deviations of greater than 10NM, when the aircraft is approximately 10 NM from track, initiate a level change based on the following criteria:

航线中心线航迹 Route center line track	偏离大于 10NM Deviations >10 NM	高度层改变 Level change

东向 EAST 000° -179° 磁航迹 magnetic	左 LEFT	下降 300 英尺 Descend 300 ft
	右 RIGHT	上升 300 英尺 Climb 300 ft
西向 WEST 180° -359° 磁航迹 magnetic	左 LEFT	上升 300 英尺 Climb 300 ft
	右 RIGHT	下降 300 英尺 Descend 300 ft

注：以上 7.9 中 b）和 c）要求飞行员：广播航空器的位置；识别冲突活动；并与附近航空器建立空对空联络。如果飞行员确定在同一高度层及其附近有可能冲突的另一架航空器，飞行员应当根据需要调整航空器路径避免冲突。

(g) 如果在偏离之前未建立联系，继续设法与 ATC 建立联系并获取许可。如果已建立联系，随时将意图告知给 ATC 并获取重要交通情报。
(h) 返回航迹过程中，当航空器距中心线约 10NM 时，保持指定的飞行高度层。

Note: 7.9 (b) and (c) above calls for the pilot to: broadcast aircraft position and pilot's intentions, identify conflicting traffic and communicate air-to-air with near-by aircraft. If the pilot determines that there is another aircraft at or near the same FL with which his aircraft might conflict, then the pilot is expected to adjust the path of the aircraft, as necessary, to avoid conflict.

(g) If contact was not established prior to deviating, continue to attempt to contact ATC to obtain a clearance. If contact was established, continue to keep ATC advised of intentions and obtain essential traffic information.
(h)When returning to track, be at its assigned flight level, when the aircraft is within approximately 10NM of centerline.

8. 三亚飞行情报区的海洋空域内减缓尾流影响和航空器系统警告干扰程序

8.1 下列特殊程序适用于在亚太地区应用 RVSM 的空域内减缓尾流影响和航空器系统警告（例：ACAS、近地警告系统（GPWS））干扰:
注: 在下列应急情况中，ATC 将不发布侧向偏离许可，一般也不对飞行员采取的行动做出反应。

8.2 遇上尾流或受到航空器系统警告干扰的航空器应当告知 ATC 并申请改变飞行高度层、航迹或速度，以避免这种情况。然而，在这些改变不可能或不可行的情况下，飞行员可以主动执行以下临时偏离程序，但应当尽可能早地返回中心线:

(a) 如果可能，在适当的 VHF 飞行员之间空对空频率 - 123.45 MHz 上与其它航空器建立联络，并
(b) 其中一架（或双方）可主动进行距指定航迹不超过 2NM 的侧向偏离，但要求:
i) 偏离航空器应当尽快通知 ATC 它已采取侧向偏离，并说明缘由（ATC 一般不会做出回答）；并且
ii) 当重新建立指定航线或航迹时，偏离航空器应当尽快通知 ATC（ATC 一般不会做出回答）

8. Special Procedures to Mitigate Wake Turbulence Encounters and Distracting Aircraft System Alerts in the Oceanic Airspace of the Sanya FIR.

8.1 The following special procedures are applicable to mitigate wake turbulence or distracting aircraft system alerts (e.g., ACAS, Ground Proximity Warning System (GPWS)) in Asia and Pacific airspace where RVSM is applied:
NOTE: in the contingency circumstances below, ATC will not issue clearances for lateral offsets and will not normally respond to actions taken by the pilots.

8.2 An aircraft that encounters wake vortex turbulence or experiences distracting aircraft system alerts shall notify ATC and request a flight level, track or speed change to avoid the condition. However, in situations where such a change is not possible or practicable, the pilot may initiate the following temporary lateral offset procedure with the intention of returning to center line as soon as practicable:
(a) The pilot should establish contact with other aircraft, if possible, on the appropriate VHF inter-pilot air to air frequency; 123.45 MHz, and
(b) One (or both) aircraft may initiate lateral offset(s) not to exceed 2 NM from the assigned track, provided that:
i)As soon as practicable to do so, the offsetting aircraft notify ATC that temporary lateral offset action has been taken and specify the reason for doing so (ATC will not normally respond); and
ii)The offsetting aircraft notify ATC when re-established on assigned route(s) or track(s) (ATC will not normally respond).

9. 过渡区域

9. Transition Areas

9.1 三亚飞行情报区海洋空域相邻的香港飞行情报区和胡志明飞行情报区都为 RVSM 空域，故没有设立 RVSM 过渡区域。

9.1 The adjacent Hongkong FIR and Ho Chi Minh FIR are also RVSM airspace, so no RVSM Transition areas are established.

10. 飞行计划要求

10.1 除按以下有特殊安排外，在指定的 RVSM 空域内飞行，要求航空器取得 RVSM 批准。运营人必须确定有关国家当局已经给予他们 RVSM 运行准许并且满足填报的飞行航线与计划的备份航线的 RVSM 要求。在 ICAO 标准飞行计划的第 10 项（设备）中应当填入字母“W”，表示航空器和运营人都已取得 RVSM 批准。

10.2 其他飞越三亚飞行情报区的飞行计划要求，见 CHINA AIP ENR2.1.4。

10. Flight Planning Requirements

10.1 Unless special arrangement is made as detailed below, RVSM approval is required for operators and aircraft to operate within designated RVSM airspace. The operator must determine that the appropriate State authority has granted them RVSM operational approval and they will meet the RVSM requirements for the filed route of flight and any planned alternate routes. The letter “W” shall be inserted in item 10 (Equipment) of the ICAO standard flight plan to indicate that both the aircraft and operator are RVSM approved.

10.2 Other flight planning requirements for flying over Sanya FIR are indicated in CHINA AIP ENR2.1.4.

11. RVSM 空域中不符合 RVSM 运行的航空器的运行程序

11.1 飞行优先权
应当注意到：在高度层分配时，符合 RVSM 运行的航空器将获得优于不符合 RVSM 运行的航空器。

11.2 应用的间隔
在 RVSM 层内飞行的不符合 RVSM 运行的航空器与所有其它航空器之间的垂直间隔标准为 2 000 英尺。

11.3 术语
在 RVSM 层内飞行的不符合 RVSM 运行的航空器应当使用附件 B 中的术语。

11.4 不符合 RVSM 运行的航空器连续上升下降通过 RVSM 空域
可以许可不符合 RVSM 运行的航空器上升至 FL410 并在此高度层以上飞行，或者下降至 FL290 并在此高度层以下飞行，但航空器：
(a) 不得以小于航空器的正常上升下降率上升或下降，并
(b) 在通过 RVSM 层当中，不得在中间的高度层上改平。

11. Procedures for Operation of Non-RVSM Compliant Aircraft in RVSM Airspace

11.1 Flight priority
It should be noted that RVSM approved aircraft will be given priority for level allocation over non-RVSM approved aircraft.

11.2 Vertical separation applied
The vertical separation minimum between non-RVSM aircraft operating in the RVSM stratum and all other aircraft is 2 000 ft.

11.3 Phraseology
Non-RVSM compliant aircraft operating in RVSM airspace should use the phraseology contained in Attachment B.

11.4 Continuous climb/descent of non-compliant aircraft through RVSM airspace
Non-RVSM compliant aircraft may be cleared to climb to and operate above FL410 or descend to and operate below FL290 provided that they:
(a) Do not climb or descend at less than the normal rate for the aircraft and
(b) Do not level off at an intermediate level while passing through the RVSM stratum.

11.5 不符合 RVSM 运行的航空器在 RVSM 空域做巡航飞行的特殊协调程序
不符合RVSM运行的航空器不得计划在RVSM空域内FL290和FL410（含）之间飞行，但下列情况除外：
(a) 该飞机正在被起始交付给注册国或运营人的航空器（见：12 中的附加详细资料）；或
(b) 该飞机以前取得了 RVSM 批准，但在经历设备失效之后，为了满足 RVSM 要求或取得批准，正在飞往维修设施进行修理的航空器；或
(c) 该飞机正在运送机翼下加装的发动机的航空器；或
(d) 该飞机正在用作慈善或人道主义目的的航空器；或
(e) 国家航空器（用作军事、海关和公安服务的航空器被认作为国家航空器）。

11.5 Special coordination procedures for cruise operation of Non-RVSM compliant aircraft in RVSM airspace
Non-RVSM compliant aircraft may not flight plan between FL 290 and FL410 inclusive within RVSM airspace, except for the following situations:
(a) The aircraft is being initially delivered to the State of Registry or Operator (see Paragraph 12 for additional details and information); or
(b) The aircraft was RVSM approved but has experienced an equipment failure and is being flown to a maintenance facility for repair in order to meet RVSM requirements and/or obtain approval; or
(c) The aircraft is transporting a spare engine mounted under the wing; or
(d) The aircraft is being utilized for mercy or humanitarian purposes; or
(e) State aircraft (those aircraft used in military, custom and police services shall be deemed state aircraft)

11.5.1 上段所述的不符合 RVSM 运行的航空器飞行高度层的分配按照管制指令执行，航空器运营人应当在 ICAO 飞行计划中第 18 字段中填写 “STS/ 任务性质 (即 FERRY/ HUMANITARIAN/MILITARY/CUSTOMS/ POLICE)/NON-RVSM COMPLIANT”。

11.5.1 The assignment of cruising levels to non-RVSM compliant aircraft listed in paragraph 11.5 (a) to (e) shall be subject to an ATC clearance. Aircraft operators shall include the “STS/ Category of operations (i.e. FERRY/HUMANITARIAN/ MILITARY/CUSTOMS/POLICE)/NON-RVSM COMPLIANT” in Field 18 of the ICAO Flight Plan.

11.5.2 必要时，可以与有关单位联系，地址为：
中国民航局空管局运行中心
AFTN: ZBBBZGZX
电传：(86-10) 65135983

三亚区域管制中心
电话：(86-898) 88289756
AFTN: ZJSYZRZX
电传：(86-898) 88289785

11.5.2 Where necessary, the unit or Air Traffic Control Centre may be contacted as follows:
The Operational Center of ATMB of CAAC:
AFTN: ZBBBZGZX
FAX: (86-10) 65135983

Sanya Area Control Center
Telephone: (86-898) 88289756
AFTN: ZJSYZRZX
FAX: (86-898) 88289785

11.5.3 本批准手续仅供以上指明的目的，不得用作逃避正常批准手续的手段。

11.5.3 This approval process is intended exclusively for the purposes indicated above and not as a means to circumvent the normal RVSM approval process.

12. 交付符合 RVSM 要求的航空器时的交付飞行

12.1 符合 RVSM 要求的航空器，在交付时，可在 RVSM 空域飞行，但机组必须经过空域内有关的 RVSM 政策和程序的培训，并且有关国家为运营人颁发有准许运行的批准书。国家应当以书信、电子邮件或传真形式通知 APARMO，为该一次性飞行出具证明文件。其中应当包括：计划飞行日期，飞行识别，注册号和机型 / 系列等。

12. Delivery Flights for Aircraft that are RVSM Compliant on Delivery

12.1 An aircraft that is RVSM compliant on delivery may operate in RVSM airspace provided that the crew is trained on RVSM policies and procedures applicable in the airspace and the responsible State issues the operator a letter of authorization approving the operation. State notification to the APARMO should be in the form of a letter, e-mail or fax documenting the one-time flight. The planned date of the flight, flight identification, registration number and aircraft type/series should be included.

13. RVSM 的暂停程序

13. Procedures for Suspension of RVSM

13.1 当飞行员报告有中度以上颠簸时，空中交通服务将考虑在三亚飞行情报区海洋空域受影响的区域内暂停 RVSM 程序。在 RVSM 程序被暂停的区域内，所有航空器之间的垂直间隔标准为 2 000 英尺。高度层分配时，在六条主要的 RVAV 航路 L642、 M771、 N892、L625、N884 和 M767 上飞行的航空器将优先，其它与这六条主要航路交叉的航路，在其上飞行的航空器的高度层分配要经过与受影响的 FIR 协调。

13.1 Air traffic services will consider suspending RVSM procedures within affected areas of the Oceanic Airspace of Sanya FIR when there are pilot reports of greater than moderate turbulence. Within areas where RVSM procedures are suspended, the vertical separation minimum between all aircraft will be 2 000 ft. In the assignment of levels, aircraft operating on the six major RNAV routes (viz L642, M771, N892, L625, N884 and M767) would have priority. Aircraft operating on routes that cross the six major routes would be assigned levels, subject to coordination with the affected FIRs.

14. 航空器系统故障或遇上中度以上颠簸情况下，管制员和飞行员的行动指导

14.1 在这些情况下的指导，见 ENR3.3.2.2- 附件 A。

14. Guidance for Pilots and Controllers for Actions in the Event of Aircraft System Malfunction or Turbulence Greater than Moderate

14.1 See ENR3.3.2.2-Attachment A for guidance in these circumstances.

15. 陆空通信失效程序的处置程序

15.1 结合中国 AIP，按照 ICAO 空中导航服务程序空中交通管理-4444 文件中所规定的陆空通信失效程序。

15. Procedures for Air-Ground Communication Failure

15.1 The air-ground communication failure procedures specified in ICAO PANS-ATM Doc 4444 should be applied, in conjunction with AIP China.

应急情形

以下各段总结了在一些应急情况下飞行员减小与其它航空器潜在冲突可能性的行动。在查看这些行动时，应当参照含有扩展的应急情况的附件A-扩充的设备失效和遇上颠簸的情形，在其中有附加的技术和运行细节。

情形 1：飞行员：1）由于主高度测量系统失效或等级降低，不知航空器的垂直位置，或 2）由于颠簸或所有自动高度控制系统失效，不知是否有能力保持许可的飞行高度层

Contingency scenarios

The following paragraphs summarize pilot actions to mitigate the potential for conflict with other aircraft in certain contingency situations. They should be reviewed in conjunction with the expanded contingency scenarios detailed on Attachment A-Expanded equipment failure and turbulence encounter scenarios, which contain additional technical and operational detail.

*Scenario 1: The pilot is: 1) unsure of the vertical position of the aircraft due to the loss or degradation of all primary altimetry systems, or 2) unsure of the capability to maintain cleared flight level (CFL) due to turbulence or loss of all automatic altitude control systems.

飞行员应当： The Pilot should:	可期待 ATC: ATC can be expected to:
在评估情况的同时保持 CFL Maintain CFL while evaluating the situation;	
目视或参照 ACAS(如果装备有) 观察冲突活动 Watch for conflicting traffic both visually and by reference to ACAS, if equipped;	
如果认为必要，用以下方式警告附近航空器： 1) 充分使用外部灯光； 2) 在 121.5MHz 上 (作为备份手段，可使用飞行员之间的空对空 VHF 频率 123.45), 广播位置、飞行高度层和意图。 If considered necessary, alert nearby aircraft by 1)making maximum use of exterior lights; 2)Broadcasting position, FL, and intentions on 121.5 MHz (as a back up, the VHF inter-pilot air-to-air frequency, 123.45MHz, may be used).	

将情况和打算采取的行动告知 ATC。可能采取的行动包括 : Notify ATC of the situation and intended course of action. Possible courses of action include:	获取飞行员的意图 ; 发送重要交通情报。 Obtain the pilot's intentions and pass essential traffic information.
1) 如果 ATC 能够提供侧向、纵向或常规的垂直间隔 , 保持 CFL 和航线 1)Maintaining the CFL and route provided that ATC can provide lateral, longitudinal or conventional vertical separation.	1) 如果飞行员打算继续在 RVSM 空域中飞行 , 评估交通情况并确定可否为该航空器配备侧向、纵向或常规的垂直间隔 ; 如果可以 , 应用恰当的标准。 1)If the pilot intends to continue in RVSM airspace, assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so, apply the appropriate minimum.
2) 如果航空器无法保持 CFL 并且 ATC 无法建立与其它航空器足够的间隔 , 申请上升到 RVSM 空域之上或下降到它之下的 ATC 许可。 2)Requesting ATC clearance to climb above or descend below RVSM airspace if the aircraft cannot maintain CFL and ATC cannot establish adequate separation from other aircraft.	2) 如果飞行员申请脱离 RVSM 空域 , 如果可能 , 迅速安排。 2)If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously, if possible.
3) 如果无法获得 ATC 许可并且航空器无法保持 CFL, 执行 5 和 6 中所述的应急机动飞行 , 偏出指定航迹和飞行高度层。 3)Executing the contingency maneuver shown in paragraphs 5 and 6 to offset from the assigned track and FL, if ATC clearance cannot be obtained and the aircraft cannot maintain CFL.	3) 如果无法保持足够的间隔并且不可能允许飞行员脱离 RVSM 空域的申请 , 告知附近其它航空器并继续监视情况。 3)If adequate separation cannot be established and it is not possible to comply with the pilot's request for clearance to exit RVSM airspace, advise the pilot of essential traffic information, notify other aircraft in the vicinity and continue to monitor the situation.
	4) 将情况告知邻近的 ATC 单位 / 扇区 4)Notify adjoining ATC facilities/sectors of the situation.

情形 2: 一套主用高度测量系统失效或失准（例: 两套主用高度表相差大于 200 英尺）	Scenario 2: There is a failure or loss of accuracy of one primary altimetry system (e.g., greater than 200 foot difference between primary altimeters)

飞行员应当 : The Pilot should
对照检查备用高度表 , 证实主用高度表系统的准确性并告知 ATC 失去冗余。如果不能证实主用高度表系统的准确性 , 遵照前一情形中所列出的飞行员行动。 Cross check standby altimeter, confirm the accuracy of a primary altimeter system and notify ATC of the loss of redundancy. If unable to confirm primary altimeter system accuracy, follow pilot actions listed in the preceding scenario.

扩充的设备失效和遇上颠簸的情形	**Expanded equipment failure and turbulence encounter scenarios.**
运营人可考虑用本材料作培训科目。	Operators may consider this material for use in training programs.
情形 1: 所有自动高度控制系统失效（例: 自动高度保持）	*Scenario 1: All automatic altitude control systems fail (e.g., Automatic Altitude Hold).

飞行员应当 : The Pilot should	可期待 ATC: ATC can be expected to
起始 Initially	
保持 CFL Maintain CFL	

评估航空器通过人工操纵保持高度的能力。 Evaluate the aircraft's capability to maintain altitude through manual control.	
随后 Subsequently	
目视或参照 ACAS(如果装备有) 观察冲突活动 Watch for conflicting traffic both visually and by reference to ACAS, if equipped.	
如果认为必要 , 用以下方式警告附近航空器 : 1) 充分使用外部灯光 ; 2) 在 121.5MHz 上 (作为备份手段 , 可使用飞行员之间的空对空 VHF 频率 123.45), 广播位置、飞行高度层和意图。 If considered necessary, alert nearby aircraft by 1)making maximum use of exterior lights; 2)Broadcasting position, FL, and intentions on 121.5MHz (as a back-up, the VHF inter-pilot air-to-air frequency, 123.45MHz, may be used.)	
将失效情况和打算采取的行动告知 ATC。可能采取的行动包括 : Notify ATC of the failure and intended course of action. Possible courses of action include:	
1) 如果航空器能保持高度 , 保持 CFL 和航线 1)Maintaining the CFL and route, provided that the aircraft can maintain level.	1) 如果飞行员打算继续在 RVSM 空域中飞行 , 评估交通情况并确定可否为该航空器配备侧向、纵向或常规的垂直间隔 ; 如果可以 , 应用恰当的标准。 1)If the pilot intends to continue in RVSM airspace, assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so, apply the appropriate minimum.
2) 如果航空器无法保持 CFL 并且 ATC 无法建立侧向、纵向或常规垂直间隔 , 申请上升到 RVSM 空域之上或下降到它之下的 ATC 许可。 2)Requesting ATC clearance to climb above or descend below RVSM airspace if the aircraft cannot maintain CFL and ATC cannot establish lateral, longitudinal or conventional vertical separation.	2) 如果飞行员申请脱离 RVSM 空域 , 如果可能 , 迅速安排。 2)If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously, if possible.
3) 如果无法获得 ATC 许可并且航空器无法保持 CFL, 执行 5 和 6 中所述的应急机动飞行 , 偏出指定航迹和飞行高度层。 3)Executing the contingency maneuver shown in paragraphs 5 and 6 to offset from the assigned track and FL, if ATC clearance cannot be obtained and the aircraft cannot maintain CFL.	3) 如果无法保持足够的间隔并且不可能允许飞行员脱离 RVSM 空域的申请 , 告知附近其它航空器并继续监视情况。 3)If adequate separation cannot be established and it is not possible to comply with the pilot's request for clearance to exit RVSM airspace, advise the pilot of essential traffic information, notify other aircraft in the vicinity and continue to monitor the situation.
	4) 将情况告知邻近的 ATC 单位 / 扇区 4)Notify adjoining ATC facilities/ sectors of the situation.

情形 2: 主用高度测量系统的失去冗余

*Scenario 2: Loss of redundancy in primary altimetry systems

飞行员应当 : The Pilot should	可期待 ATC: ATC can be expected to
如果剩余高度测量系统工作正常 , 将该系统与自动高度控制系统耦合 , 告知 ATC 失去冗余并注意高度的保持。 If the remaining altimetry system is functioning normally, couple that system to the automatic altitude control system, notify ATC of the loss of redundancy and maintain vigilance of altitude keeping.	表示收到情况的报告并继续监视进展情况。 Acknowledge the situation and continue to monitor progress.

情形 3: 所有的主用高度测量系统都被认为是不可靠的或失效的

Scenario 3: All primary altimetry systems are considered unreliable or fail

飞行员应当： The Pilot should	可期待 ATC: ATC can be expected to
参照备用高度表 (如果航空器装备有) 保持 CFL Maintain CFL by reference to the standby altimeter (if the aircraft is so equipped).	
如果认为必要 , 用以下方式警告附近航空器 : 1) 充分使用外部灯光 ; 2) 在 121.5MHz 上 (作为备份手段 , 可使用飞行员之间的空对空 VHF 频率 123.45), 广播位置、飞行高度层和意图。 Alert nearby aircraft by 1)making maximum use of exterior lights; 2)Broadcasting position, FL, and intentions on 121.5 MHz (as a back up, the VHF inter-pilot air-to-air frequency, 123.45MHz, may be used).	
考虑宣布紧急情况 , 将失效情况和打算采取的行动告知 ATC。可能采取的行动包括 : Consider declaring an emergency. Notify ATC of the failure and intended course of action. Possible courses of action include:	获取飞行员的意图 ; 发送重要交通情报。 Obtain pilot's intentions, and pass essential traffic information.
1) 如果 ATC 能够提供侧向、纵向或常规的垂直间隔 , 保持 CFL 和航线 1)Maintaining CFL and route provided that ATC can provide lateral, longitudinal or conventional vertical separation.	1) 如果飞行员打算继续在 RVSM 空域中飞行 , 评估交通情况并确定可否为该航空器配备侧向、纵向或常规的垂直间隔 ; 如果可以 , 应用恰当的标准。 1)If the pilot intends to continue in RVSM airspace, assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so, apply the appropriate minimum.
2) 如果 ATC 无法建立与其它航空器足够的间隔 , 申请上升到 RVSM 空域之上或下降到它之下的 ATC 许可。 2)Requesting ATC clearance to climb above or descend below RVSM airspace if ATC cannot establish adequate separation from other aircraft.	2) 如果飞行员申请脱离 RVSM 空域 , 如果可能 , 迅速安排。 2)If the pilot requests clearance to exit RVSM airspace, accommodate expeditiously, if possible.
3) 如果无法获得 ATC 许可 , 执行 5 和 6 中所述的应急机动飞行 , 偏出指定航迹和飞行高度层。 3)Executing the contingency maneuver shown in paragraphs 5 and 6 to offset from the assigned track and FL, if ATC clearance cannot be obtained.	3) 如果无法保持足够的间隔并且不可能允许飞行员脱离 RVSM 空域的申请 , 告知飞行员重要交通情报 , 通知附近其它航空器并继续监视情况。 3)If adequate separation cannot be established and it is not possible to comply with the pilot's request for clearance to exit RVSM airspace, advise the pilot of essential traffic information, notify other aircraft in the vicinity and continue to monitor the situation.
	4) 将情况告知邻近的 ATC 单位扇区 4)Notify adjoining ATC facilities/sectors of the situation.

情形4: 主用高度测量系统之间相差200英尺(60米)以上

Scenario 4: The primary altimeters diverge by more than 200ft (60m)

飞行员应当： The Pilot should
使用确立的故障排除程序并且 / 或者比较主用高度表与备用高度表 (如果必要 , 按修正卡进行修正) 的偏差设法断定故障系统。 Attempt to determine the defective system through established trouble-shooting procedures and/or comparing the primary altimeter displace to the standby altimeter (as corrected by the correction cards, if required).

如果可以断定故障系统 , 将工作正常的高度表系统与高度保持装置耦合。 If the defective system can be determined, couple the functioning altimeter system to the altitude-keeping device.
如果无法断定故障系统 , 遵循情形 3 种的所有主用高度表的高度指示失效或不可靠的指导。 If the defective system cannot be determined, follow the guidance in Scenario 3 for failure or unreliable altimeter indications of all primary altimeters.

情形 5: 飞行员确信会影响航空器保持飞行高度层的颠簸情况 （中度以上）

*Scenario 5: Turbulence (greater than moderate) which the pilot believes will impact the aircraft's capability to maintain flight level.

飞行员应当 : The Pilot should	可期待 ATC: ATC can be expected to
目视或参照 ACAS (如果装备有) 观察冲突活动 Watch for conflicting traffic both visually and by reference to ACAS, if equipped.	
如果认为必要 , 用以下方式警告附近航空器 : 1) 充分使用外部灯光 ; 2) 在 121.5MHz 上 (作为备份手段 , 可使用飞行员之间的空对空 VHF 频率 123.45), 广播位置、飞行高度层和意图。 If considered necessary, alert nearby aircraft by: 1)making maximum use of exterior lights; 2)Broadcasting position, FL, and intentions on 121.5 MHz (as a back up, the VHF inter-pilot air-to-air frequency, 123.45MHz, may be used).	
将打算采取的行动尽快告知 ATC。可能采取的行动包括 : Notify ATC of intended course of action as soon as possible. Possible courses of action include:	
1) 如果 ATC 能够提供侧向、纵向或常规的垂直间隔 , 保持 CFL 和航线 1)Maintaining CFL and route provided ATC can provide lateral, longitudinal or conventional vertical separation.	1) 评估交通情况并确定可否为该航空器配备侧向、纵向或常规的垂直间隔 ; 如果可以 , 应用恰当的标准。 1)Assess traffic situation to determine if the aircraft can be accommodated through the provision of lateral, longitudinal, or conventional vertical separation, and if so, apply the appropriate minimum.
2) 如有必要 , 申请改变飞行高度层 2)Requesting flight level change, if necessary.	2) 如果不能提供足够的间隔 , 告知飞行员重要交通情报并询问飞行员的意图。 2)If unable to provide adequate separation, advise the pilot of essential traffic information and request pilot's intentions.
3) 如果无法获得 ATC 许可并且航空器无法保持 CFL, 执行 5和6中所述的应急机动飞行,偏出指定航迹和飞行高度层。 3)Executing the contingency maneuver shown in paragraphs 5 and 6 to offset from the assigned track and FL, if ATC clearance cannot be obtained and the aircraft cannot maintain CFL.	3) 告知附近其它航空器并监视情况。 3)Notify other aircraft in the vicinity and monitor the situation.
	4) 将情况告知邻近的 ATC 单位 / 扇区 4)Notify adjoining ATC facilities/sectors of the situation.

有关 RVSM 运行的术语

Phraseology Related to RVSM Operations

管制员 - 飞行员术语:

Controller-pilot phraseology:

语义 Message	术语 Phraseology

用于管制员确认航空器的 RVSM 准许状况 : For a controller to ascertain the RVSM approval status of an aircraft:	(呼号 call sign) COMFIRM RVSM APPROVED
用于飞行员报告非 RVSM 准许状况 : i) 在 RVSM 空域的频率上首次呼叫 (管制员将复诵相同的短语), 及 ii) 在申请所有有关 RVSM 空域的飞行高度层的飞行高度层改变时 ; 及 iii) 在复诵所有有关 RVSM 空域的飞行高度层的飞行高度层许可时。 此外 , 除国家航空器外 , 飞行员在复诵涉及垂直穿越 FL 290 或 FL 410 的飞行高度层许可时应当包括该短语。 见下面的例子。 For a pilot to report non-RVSM approval status: i)on the initial call on any frequency within the RVSM airspace (controllers shall provide a readback with this same phrase), and ii)in all requests for flight level changes pertaining to flight levels within the RVSM airspace; and iii) In all read-backs to flight level clearances pertaining to flight levels within the RVSM airspace. Additionally, except for State aircraft, pilots shall include this phrase to read back flight level clearances involving the vertical transit through FL 290 or FL 410. See examples that follow.	NEGATIVE RVSM*
用于飞行员报告 RVSM 准许状况。 For a pilot to report RVSM approval status.	AFFIRM RVSM*
用于非 RVSM 准许的国家航空器的飞行员在回答短语 “(呼号)CONFIRM RVSM APPROVED” 时 , 报告非 RVSM 准许状况。 For a pilot of a non-RVSM approved State aircraft to report non-RVSM approval status, in response to the phrase (call sign) CONFIRM RVSM APPROVED.	NEGATIVE RVSM STATE AIRCRAFT*
用于拒绝进入 RVSM 空域 Denial of clearance into the RVSM airspace:	(呼号 call sign)UNABLE CLEARANCE INTO RVSM AIRSPACE, MAINTAIN [or DESCEND TO, or CLIMB TO] FLIGHT LEVEL (数字 number)
用于飞行员报告严重颠簸影响航空器保持 RVSM 的高度保持要求的能力 For a pilot to report when severe turbulence affects the aircraft’ s capability to maintain the height-keeping requirements for RVSM.	UNABLE RVSM DUE TURBULENCE*
用于飞行员报告航空器的设备等级已经降低到 RVSM 空域内飞行所要求的 MASPS 以下。 (该短语用来表示不符和 MASPS, 既用于起始时 , 也用于在问题消除之前或航空器脱离 RVSM 空域之前 , 在 RVSM 空域的侧向界限之内的所用频率上的首次联络时。) For a pilot to report that the aircraft’ s equipment has degraded enroute below that required for flight within the RVSM airspace. (See Attachment A) (This phrase is to be used to convey both the initial indication of the non-MASPS compliance, and henceforth, on initial contact on all frequencies within the lateral limits of the RVSM airspace until such time as the problem ceases to exist, or the aircraft has exited the RVSM airspace.)	UNABLE RVSM DUE EQUIPMENT*
用于在设备或与天气有关的应急情况之后 , 飞行员报告可恢复在 RVSM 空域飞行的能力。 For a pilot to report the ability to resume operations within the RVSM airspace after an equipment or weather-related contingency.	READY TO RESUME RVSM

用于管制员确认航空器已经再次取得RVSM准许的状况,或确认飞行员已经准备好恢复 RVSM 飞行。 For a controller to confirm that an aircraft has regained its RVSM approval status or to confirm that the pilot is ready to resume RVSM operations.	REPORT ABLE TO RESUME RVSM

例 1: 非 RVSM 准许的国家航空器，现在保持 FL 260, 随后申请上升到 FL 320。
Example 1: A non-RVSM approved aircraft, maintaining FL 260, subsequently requests a climb to FL 320.
Pilot: (call sign) REQUEST FL 320, NEGATIVE RVSM
Controller: (call sign) CLIMB TO FL 320
Pilot:(call sign) CLIMB TO FL 320, NEGATIVE RVSM
例 2: 非 RVSM 准许的国家航空器，现在保持 FL 260, 随后申请上升到 FL 430。
Example 2: A non-RVSM approved aircraft, maintaining FL 260, subsequently requests a climb to FL 430.
Pilot: (call sign) REQUEST FL 430, NEGATIVE RVSM
Controller: (call sign) CLIMB TO FL 430
Pilot: (call sign) CLIMB TO FL 430, NEGATIVE RVSM
例 3: 非 RVSM 准许的国家航空器，现在保持 FL 360, 随后申请上升到 FL 380。
Example 3: A non-RVSM approved aircraft, maintaining FL 360, subsequently requests a climb to FL 380.
Pilot:(call sign) REQUEST FL 380, NEGATIVE RVSM
Controller:(call sign) CLIMB TO FL 380
Pilot:(call sign) CLIMB TO FL 380, NEGATIVE RVSM
例 4: 非 RVSM 准许的民用航空器，现在保持 FL 280, 随后申请上升到 FL 320。
Example 4: A non-RVSM approved civil aircraft maintaining FL 280, subsequently requests a climb to FL 320.
Pilot: (call sign) REQUEST FL 320, NEGATIVE RVSM
Controller: (call sign) UNABLE CLEARANCE INTO RVSM AIRSPACE, MAINTAIN FL 280

ATS 部门之间的协调 **Coordination between ATS units**

段落 Para	语义 Message	术语 Phraseology
1	口头补充未能自动传输的第 18 项飞行计划信息的自动化预计电报交换 To verbally supplement an automated estimate message exchange which does not automatically transfer Item 18 flight plan information.	NEGATIVE RVSM or NEGAVIVE RVSM STATE AIRCRAFT [根据可应用性 as applicable]
2	口头补充非 RVSM 准许航空器的预计电报 To verbally supplement estimate messages of non-RVSM approved aircraft.	NEGATIVE RVSM or NEGAVIVE RVSM STATE AIRCRAFT [根据可应用性 as applicable]
3	交流有关航空器由于严重颠簸或严重的天气现象 [设备失效,根据可应用性] 造成的不能进行 RVSM 飞行的原因 To communicate the cause of a contingency relating to an aircraft that is unable to conduct RVSM operations due to severe turbulence or other severe weather-related phenomenon [or equipment failure, as applicable].	UNABLE RVSM DUE TURBULENCE [or EQUIPMENT, 根据可应用性 as applicable]