

§ 25.280 Inclined orbit operations.

(a) Satellite operators may commence operation in inclined orbit mode without obtaining prior Commission authorization provided that the Commission is notified by letter within 30 days after the last north-south station keeping maneuver. The notification shall include:

- (1) The operator's name;
- (2) The date of commencement of inclined orbit operation;
- (3) The initial inclination;
- (4) The rate of change in inclination per year; and
- (5) The expected end-of-life of the satellite accounting for inclined orbit operation, and the maneuvers specified under § 25.283 of the Commission's rules.

(b) Licensees operating in inclined-orbit are required to:

- (1) Periodically correct the satellite attitude to achieve a stationary spacecraft antenna pattern on the surface of the Earth and centered on the satellite's designated service area;
- (2) Control all electrical interference to adjacent satellites, as a result of operating in an inclined orbit, to levels not to exceed that which would be caused by the satellite operating without an inclined orbit;
- (3) Not claim protection in excess of the protection that would be received by the satellite network operating without an inclined orbit; and
- (4) Continue to maintain the space station at the authorized longitude orbital location in the geostationary satellite arc with the appropriate east-west station-keeping tolerance.

[69 FR 54587, Sept. 9, 2004]

§ 25.281 Transmitter identification requirements for video uplink transmissions.

(a) Earth-to-space transmissions carrying video information with analog modulation must be identified through use of an Automatic Transmitter Identification System (ATIS) with an analog identifier or a direct sequence spread spectrum signal.

(1) Use of an analog identifier must be in accordance with the following requirements:

- (i) The ATIS signal must be a separate subcarrier that is automatically

activated whenever any radio frequency signal is transmitted.

(ii) The ATIS message must continuously repeat.

(iii) The ATIS subcarrier signal must be generated at a frequency of 7.1 MHz $\pm$ 25 kHz and modulate the uplink radio frequency carrier at a level no less than -26 dB (referenced to the unmodulated carrier).

(iv) ATIS subcarrier deviation must not exceed 25 kHz.

(v) The ATIS message protocol must be International Morse Code keyed by a 1200 Hz $\pm$ 800 Hz tone representing a mark and a message rate of 15 to 25 words per minute. The tone must frequency-modulate the subcarrier signal with the ATIS message.

(vi) The ATIS message must include the FCC-assigned call sign of the transmitting earth station, a telephone number providing immediate access to personnel capable of resolving interference or coordination problems, and a unique serial number of ten or more digits programmed into the ATIS message in a permanent manner so that it cannot be readily changed by the operator on duty. Additional information may be included in the ATIS data stream provided the total ATIS message length does not exceed 30 seconds.

(2) Use of a direct sequence spread spectrum ATIS signal must be in accordance with the requirements in paragraphs (b)(1) and (2) of this section.

(b) As of September 3, 2016, transmissions of fixed-frequency, digitally modulated video signals with a symbol rate of 128,000/s or more from Satellite News Gathering vehicles or other temporary-fixed earth stations must be identified through use of an ATIS in accordance with the following requirements:

- (1) The ATIS message must be modulated onto a direct sequence spread spectrum signal in accordance with the DVB-CID standard, ETSI TS 103 129 (2013-05), "Technical Specification, Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation of a carrier identification system (DVB-CID) for satellite transmission." This document is incorporated by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51 and approved by the Director of the

§ 25.282

Federal Register. The ETSI document may be obtained from ETSI, 650 Route des Lucioles, 06921 Sophia Antipolis Cedex, France and by email to webstore@etsi.org and a copy can be downloaded from <http://www.etsi.org>. You may inspect a copy at the Federal Communications Commission, 445 12th Street SW., Washington, DC 20554, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(2) The ATIS message must continuously repeat.

(c) ATIS equipment must be integrated into the uplink transmitter chain with a method that cannot easily be defeated.

[79 FR 8325, Feb. 12, 2014; 81 FR 33601, May 31, 2016]

§ 25.282 Orbit raising maneuvers.

A space station authorized to operate in the geostationary satellite orbit under this part is also authorized to transmit in connection with short-term, transitory maneuvers directly related to post-launch, orbit-raising maneuvers, provided that the following conditions are met:

(a) Authority is limited to those tracking, telemetry, and control frequencies in which the space station is authorized to operate once it reaches its assigned geostationary orbital location;

(b) In the event that any unacceptable interference does occur, the space station licensee shall cease operations until the issue is rectified;

(c) The space station licensee is required to accept interference from any lawfully operating satellite network or radio communication system.

[69 FR 54587, Sept. 9, 2004]

§ 25.283 End-of-life disposal.

(a) *Geostationary orbit space stations.* Unless otherwise explicitly specified in an authorization, a space station authorized to operate in the geostationary satellite orbit under this part shall be relocated, at the end of its useful life, barring catastrophic failure

47 CFR Ch. I (10–1–16 Edition)

of satellite components, to an orbit with a perigee with an altitude of no less than:

$36,021 \text{ km} + (1000 \cdot C_R \cdot A/m)$

where C_R is the solar radiation pressure coefficient of the spacecraft, and A/m is the Area to mass ratio, in square meters per kilogram, of the spacecraft.

(b) A space station authorized to operate in the geostationary satellite orbit under this part may operate using its authorized tracking, telemetry and control frequencies, and outside of its assigned orbital location, for the purpose of removing the satellite from the geostationary satellite orbit at the end of its useful life, provided that the conditions of paragraph (a) of this section are met, and on the condition that the space station's tracking, telemetry and control transmissions are planned so as to avoid electrical interference to other space stations, and coordinated with any potentially affected satellite networks.

(c) *All space stations.* Upon completion of any relocation authorized by paragraph (b) of this section, or any relocation at end-of-life specified in an authorization, or upon a spacecraft otherwise completing its authorized mission, a space station licensee shall ensure, unless prevented by technical failures beyond its control, that stored energy sources on board the satellite are discharged, by venting excess propellant, discharging batteries, relieving pressure vessels, or other appropriate measures.

(d) The minimum perigee requirement of paragraph (a) of this section shall not apply to space stations launched prior to March 18, 2002.

[69 FR 54588, Sept. 9, 2004, as amended at 78 FR 8431, Feb. 6, 2013; 81 FR 55349, Aug. 18, 2016]

§ 25.284 Emergency Call Center Service.

(a) Providers of Mobile-Satellite Service to end-user customers (part 25, subparts A–D) must provide Emergency Call Center service to the extent that they offer real-time, two way switched voice service that is interconnected with the public switched network and utilize an in-network switching facility