

COMPLIANCE WITH 25.203(k)

In this application, DIRECTV requests modify an existing Ka-band earth station authorization to add Ka-band ALSAT as a point of communication, pursuant to the *Ka-Band ALSAT Order* adopted by the Commission.¹ This earth station will transmit in the 29.25-29.5 GHz band, which is allocated on a co-primary basis to both GSO/FSS and NGSO/MSS feeder links. As required under Section 25.203(k) of the Commission's rules, and as directed in footnote 31 to the *Ka-Band ALSAT Order*, DIRECTV demonstrates below that the operation of this earth station with an ALSAT designation will not cause interference to co-primary, co-frequency feeder link operations.

In 2011, DIRECTV applied for and received Ka-band ALSAT authority for several earth station antennas.² In the applications to modify the licenses for those antennas, DIRECTV included an extensive analysis that showed that there would not be unacceptable interference to co-frequency NGSO MSS feeder link operations from the operation of those antennas. In order to demonstrate that operation of the currently applied-for earth station will not cause unacceptable interference to co-primary, co-frequency feeder link operations, DIRECTV notes the following points:

- The earth station antenna that is the subject of this application is even larger than the DIRECTV Ka-band ALSAT earth station antennas that were licensed in 2011, meaning that it will have an even narrower main beam.
- The DIRECTV Ka-band antennas previously licensed with an ALSAT designation are located approximately 175-200 km from the closest NGSO MSS feeder link site. The antenna that is the subject of this application is more than 3600 km away from the nearest NGSO MSS feeder link site.
- As is stated in Recommendation ITU-R S.1419, "Interference mitigation techniques to facilitate coordination between non-geostationary-satellite orbit Mobile-Satellite Service feeder link and geostationary-satellite orbit Fixed-Satellite Service networks in the bands 19.3-19.7 GHz and 29.1-29.5 GHz," geographical separation of approximately 225 km between GSO FSS and NGSO MSS earth stations is generally considered sufficient to ensure compatible GSO/NGSO operations.
- The Ka-band antenna that is the subject of this application is already authorized to operate in the subject frequency bands and is located at a site where DIRECTV is already licensed for, and has been successfully operating, other Ka-band antennas in the same frequency band for several years without incident³.

¹ See 2006 Biennial Regulatory Review – Revision of Part 25, 25 FCC Rcd. 1542 (2010) ("*Ka-Band ALSAT Order*").

² See IBFS File Nos. SES-MFS-20111104-01314, -01315, -01317, -01320, -01322, -01324.

³ See e.g. Call sign E080028

Taken together, the above factors demonstrate that the operations of the applied-for Ka-band ALSAT earth station antenna will not cause interference to co-primary, co-frequency feeder link operations.