Table 7.1-1: NTN scenarios versus delay constraints, Source [2]

NTN scenarios	A	B	C1	C2	D1	D2
	GEO transparent payload	*GEO regenerative payload*	*LEO transparent payload*		*LEO regenerative payload*	
Satellite altitude	35786 km		600 km			
Relative speed of Satellite with respect to earth	negligible		7.56 km per second			
Min elevation for both feeder and service links	10° for service link and 10° for feeder link					
Typical Min / Max NTN beam foot print diameter (note 1)	100 km / 3500 km		50 km / 1000 km			
Maximum propagation delay contribution to the Round Trip Delay on the radio interface between the gNB and the UE	541.46 ms (Worst case)	270.73 ms	25.77 ms		12.89 ms	
Minimum propagation delay contribution to the Round Trip Delay on the radio interface between the gNB and the UE	477.48 ms	238.74 ms	8 ms		4 ms	
Maximum Delay variation as seen by the UE (note 2)	Negligible		Up to +/- 40 µs/sec (Worst case)		Up to +/- 20 µs/sec	

NOTE 1: The beam foot print diameter are indicative. The diameter depends on the orbit, earth latitude, antenna design, and radio resource management strategy in a given system.

NOTE 2: The delay variation measures how fast the round trip delay (function of UE-satellite-NTN gateway distance) varies over time when the satellite moves towards/away from the UE. It is expressed in µs/s and is negligible for GEO scenario

NOTE 3: Void

NOTE 4: Speed of light used for delay calculation is 299792458 m/s.