

Microwave and Millimetre-wave in Space

The first thing that come to one's mind when relating spacecraft and micro/millimetre-wave is certainly radio links which is indeed the "umbilical cord" to any man made space vessel. Many people also know about the first satellite (Sputnik in 1957) that was a simple radio frequency transmitter . Nowadays, radio frequency technologies play a key role in telecommunications satellites which is certainly the commercial market for space but also in lesser known applications like Earth Observation or Space Science. Indeed, radio wave can provide imaging that is pretty much complementary to more conventional visible light imaging. It is also worth noting that the widely used global positioning system (GPS) is also fully relying on radio frequencies.

François DEBORGIES
RF Technology Advisor
TEC-ETT, ESA-ESTEC