

FCC Form 442 Question #6 Exhibit

Nature of project:

Various experiments utilizing the reduced gravity of sub-orbital trajectory rocket flights which may include: atmospheric sampling, particle dynamics experiments, fluid dynamics experiments, radio propagation etc. In addition the effects of the rocket plume attenuation effects upon the telemetry RF signal will be investigated.

Communications Required:

Uplink and downlink communication paths are necessary for command and control of the launch vehicle from preparation to final recovery along with telemetry of vehicle dynamics during flight. In addition, a downlink data path to monitor the experiment(s) on board may be utilized.

Existing Facilities:

Current facilities include ISM systems operating in the 2.4GHz and 900MHz allotted bands. These are typically low power (1W) and inadequate for distances up to and beyond 100km (62.5miles) line of sight and through the additional attenuation of the rocket plume (hot ionized gas)