Tutorial Micro-Doppler 2

A radar on board of UAV is working at a carrier frequency 24GHz.

The UAV stops in front of a vibrating Dam and measures its micro-Doppler. The maximum micro-Doppler is 5Hz. How much is the vibrating amplitude of the Dam if the measured vibrating period is 1 s?

Sketch the micro-Doppler signature of the Dam assuming a PRF of 1000 Hz;

Sketch the micro-Doppler signature of the Dam when the UAV moves towards it at 1.5 m/s;

Sketch the micro-Doppler signature of the Dam when the UAV accelerates from 1.5m/s to 3 m/s in 4 seconds.