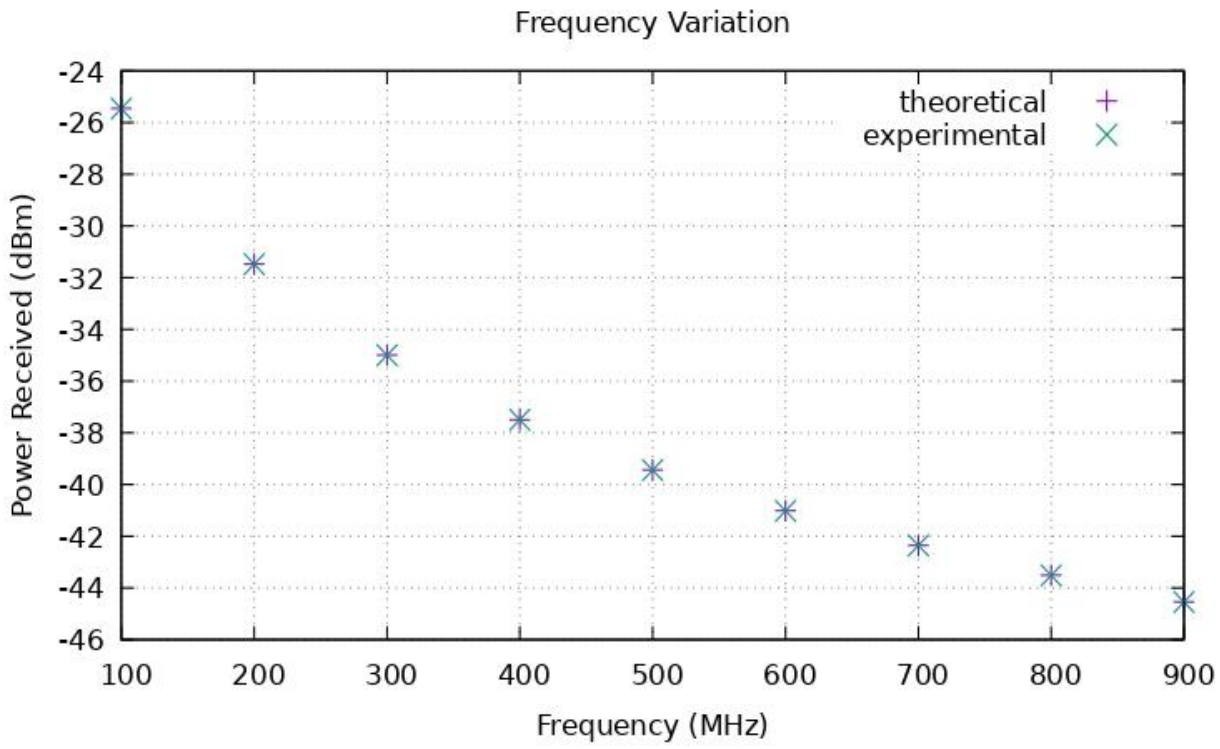
ASSIGNMENT-2
CS6120

3.1.Free Space Propagation Model:

Isotropic Antenna:

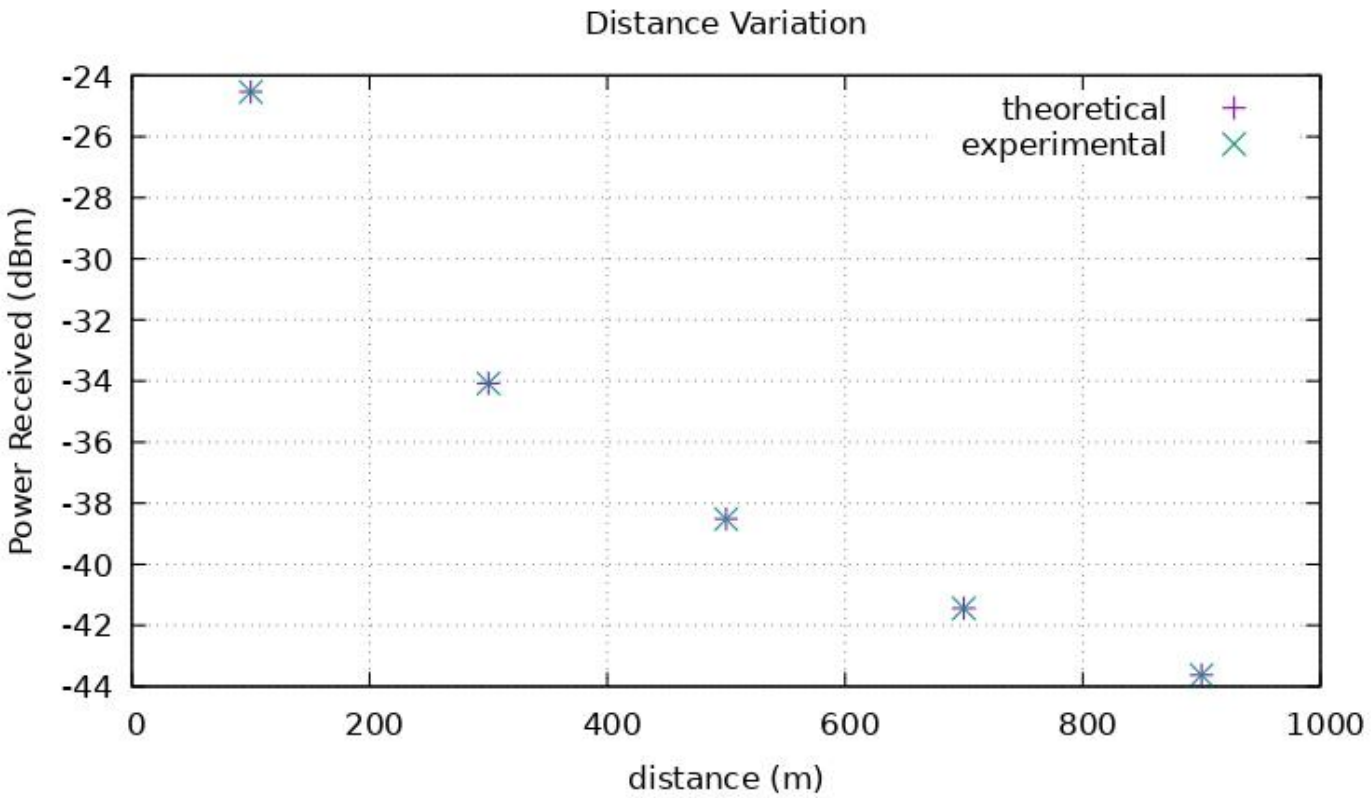
A.Varying Frequency (100MHz-900MHz)(StepSize=100)



Inferences:

Experimental and Theoretical results are almost equal. Received power decreases as frequency is increased

B. Varying Distance (100m – 1000m) (stepsize=200)

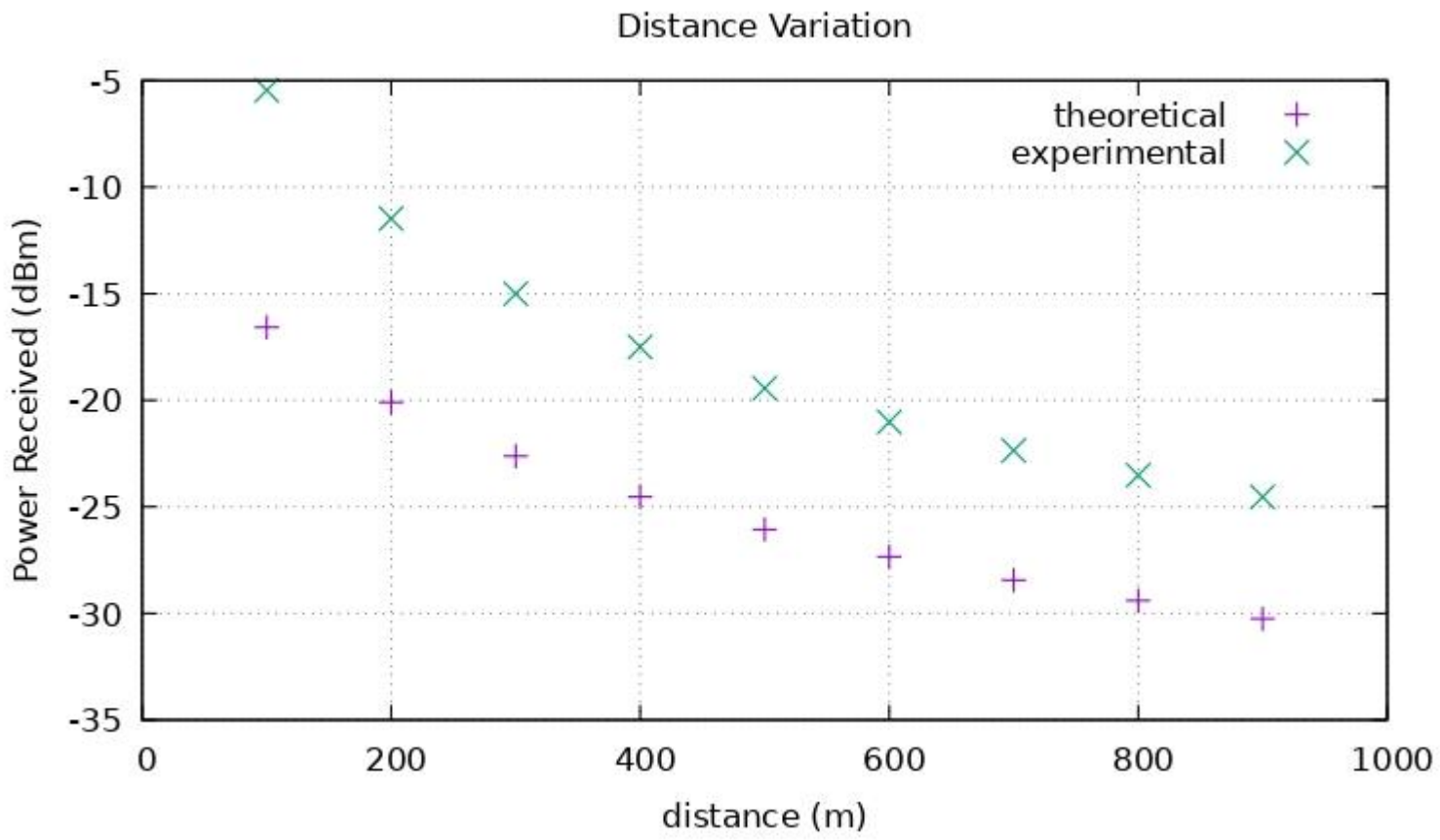


Inferences:

Experimental and Theoretical results are almost equal. Received power decreases as distance is increased

Parabolic Antenna:

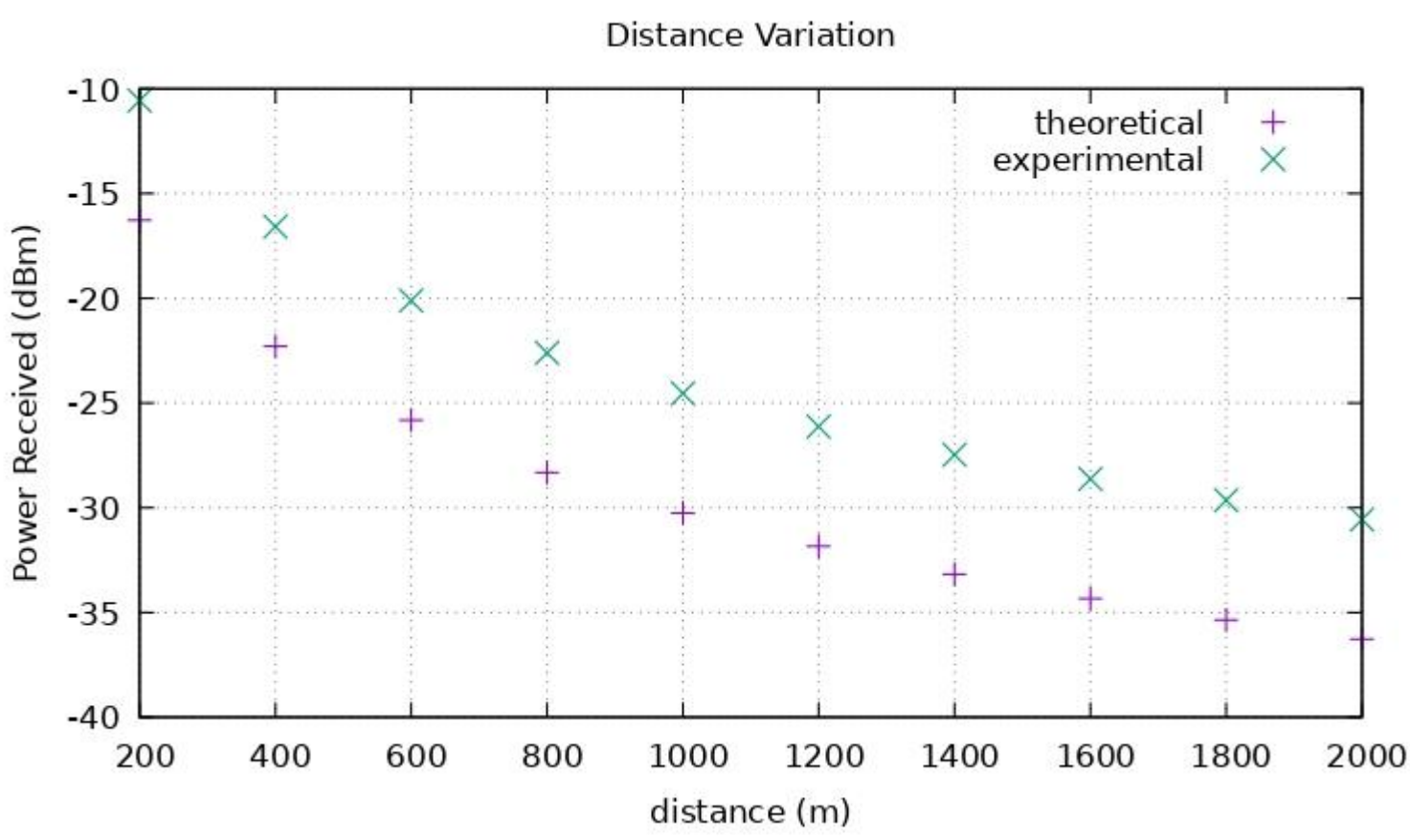
A. Varying Frequency - 100MHz – 900MHz (stepsize=100)



Inferences:

Experimental and Theoretical results vary. Received power decreases as frequency is increased

B. Varying Distance - 200m – 2000m (stepsize=200)



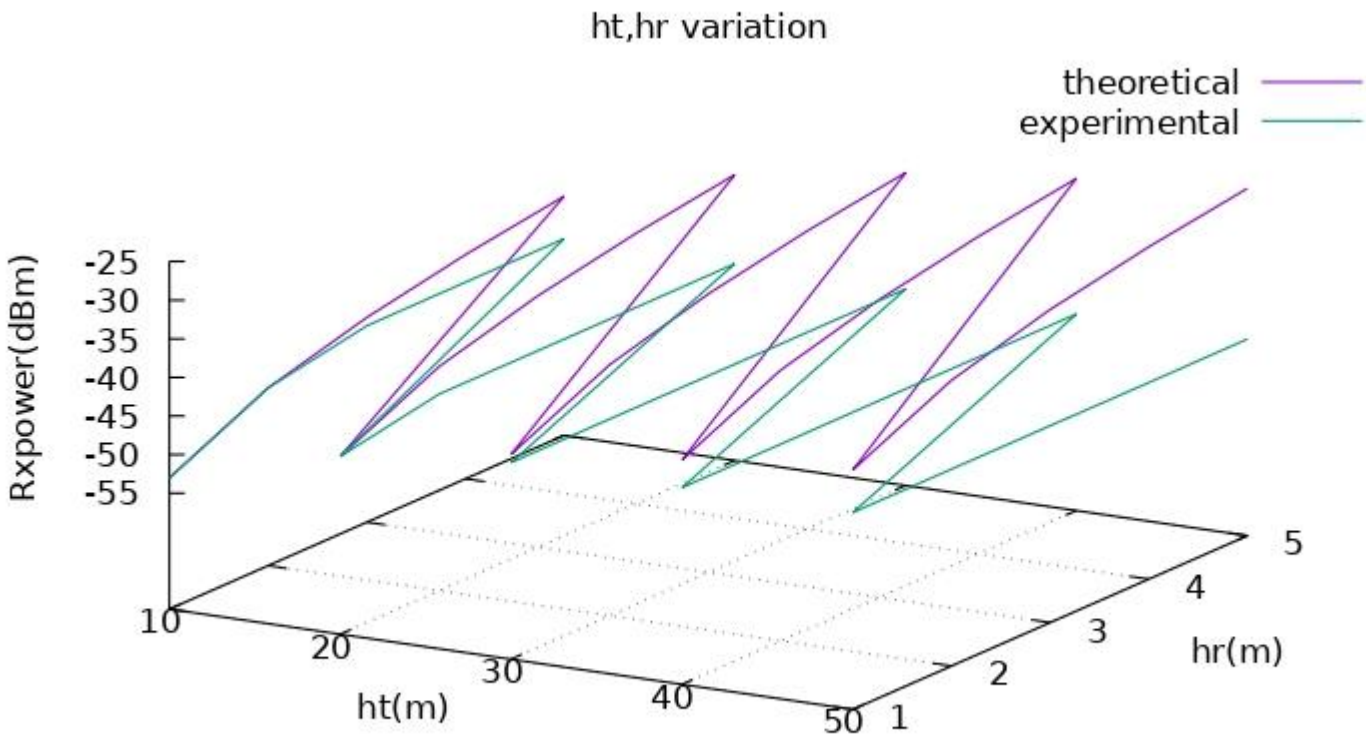
Inferences:

Experimental and Theoretical results vary. Received power decreases as distance is increased

3.2 Two Ray Propagation Model:

Isotropic Antenna:

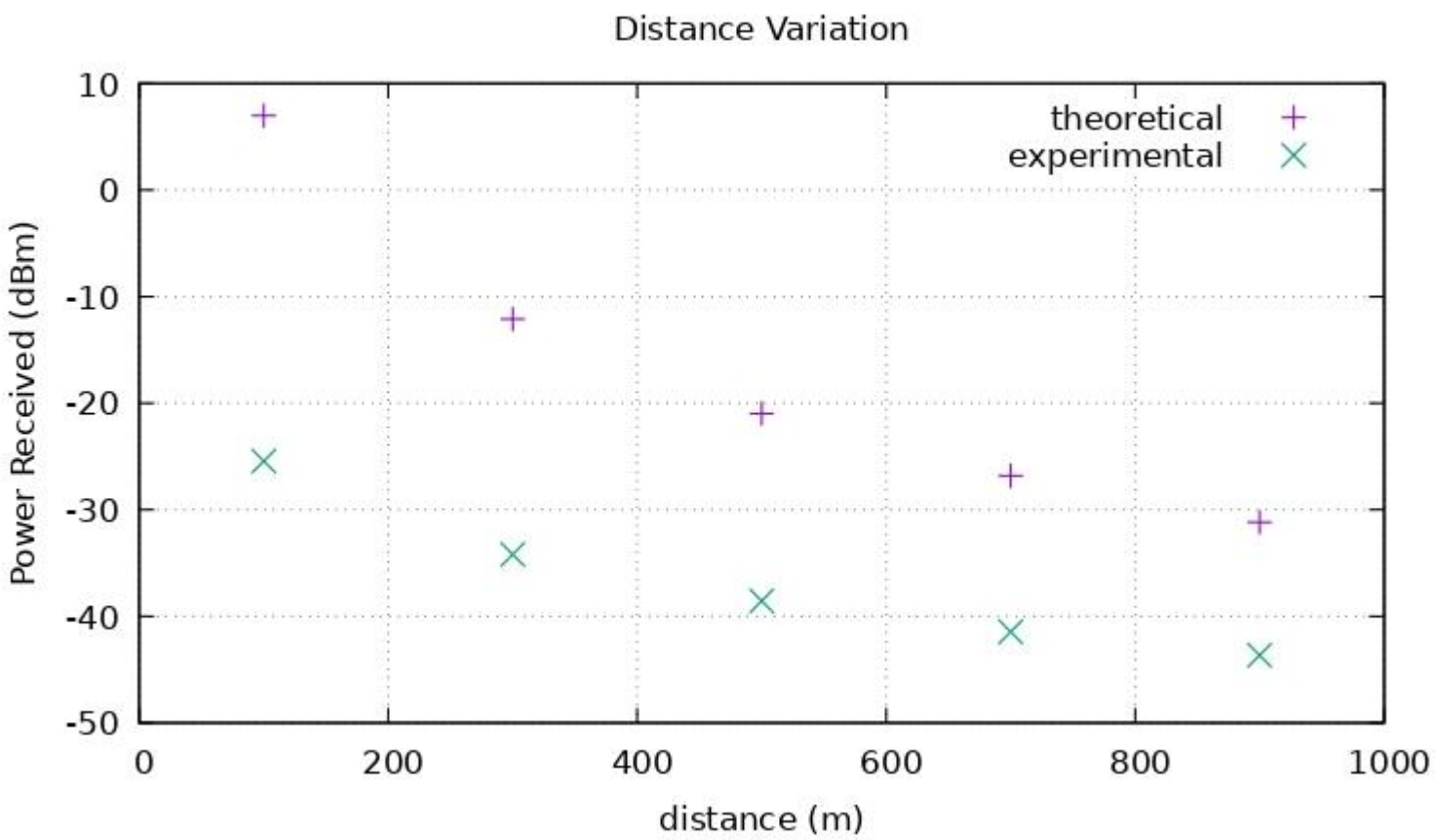
A. Varying Ht (10m-50m (stepsize=10m)) and Hr(1m-5m(stepsize=1m))



Inferences:

Experimental and Theoretical results are initially the same. They differ after because in ns3, a threshold is set and it is reached. So Received power became constant in ns3.

B.Varying Distance - 100m – 1000m (stepsize=200):

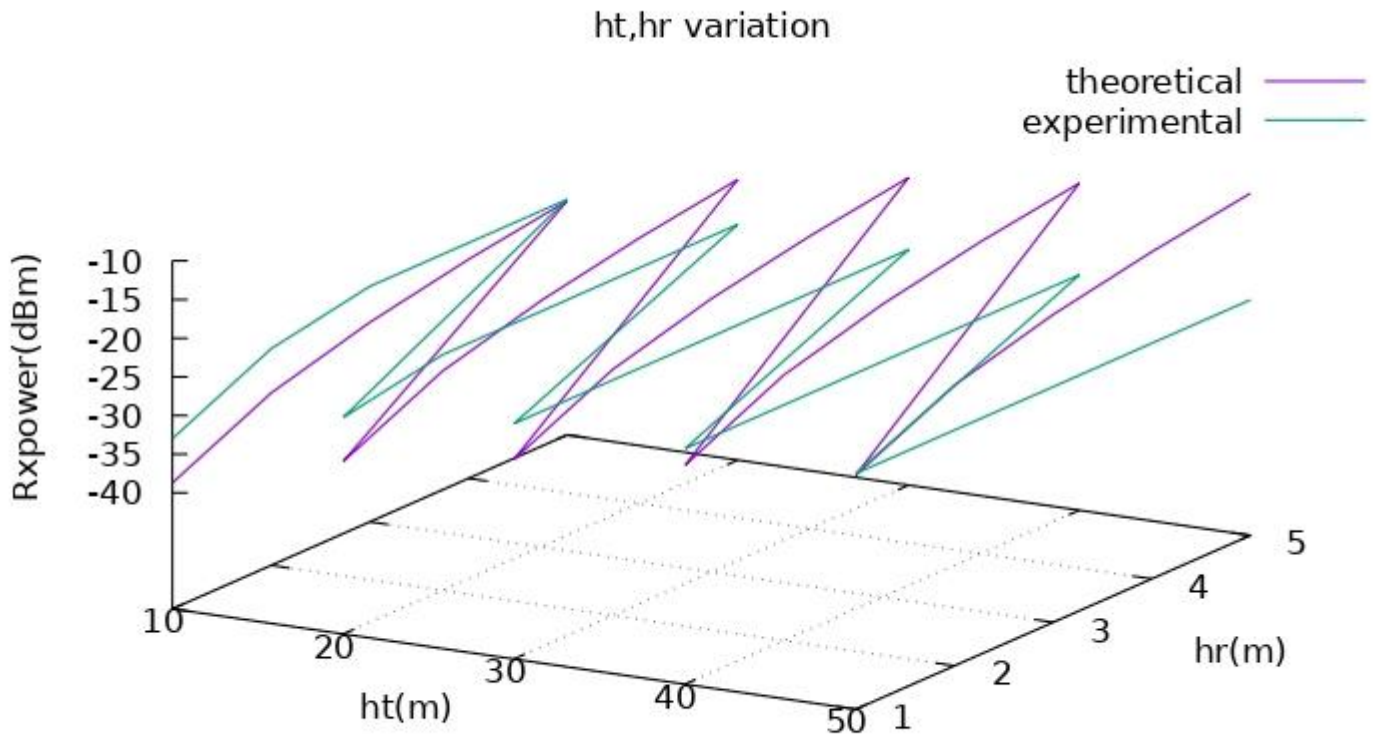


Inferences:

Experimental and Theoretical results vary. Experimental and Theoretical results vary. Received power decreases as distance is increased.

Parabolic Antenna:

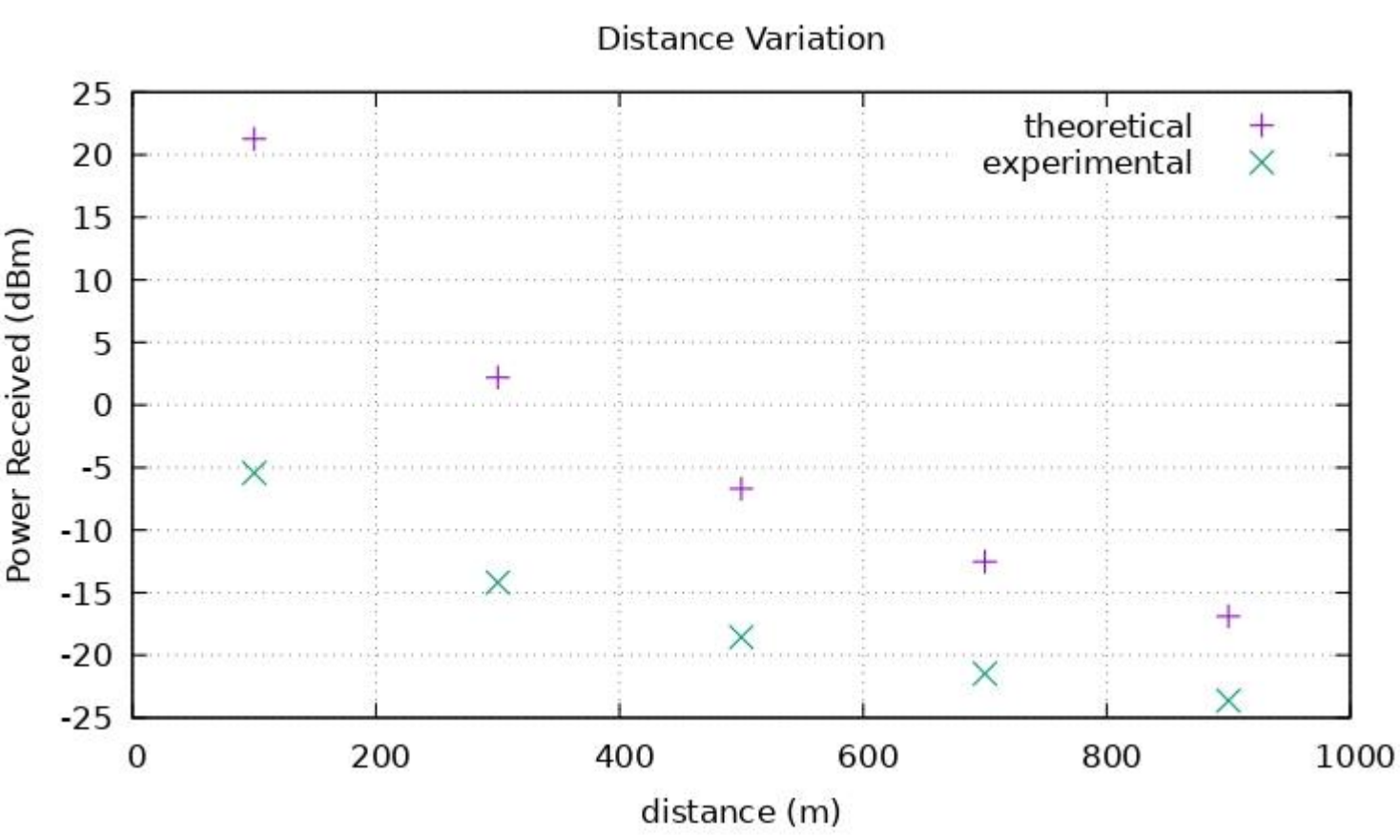
A. Varying ht (10m-50m (stepsize=10m)), hr(1m-5m(stepsize=1m))



Inferences:

Experimental and Theoretical results Vary.

B. Varying Distance - 100m – 1000m (stepsize=200)



Inferences:

Experimental and Theoretical results vary. Received power decreases as distance is increased.