

Team 07 – The Caffeinators

Site Survey Wifi Tag

Project Recap

- Site surveys are time consuming and tedious
- Xirrus requested a small deployable tag that can autonomously report wireless statistics
- Requested statistics
 - Signal strength
 - Signal:Noise ratio
- Requested capabilities
 - 802.11 a/b/g/n
 - Dual 2.4/5GHz band capabilities

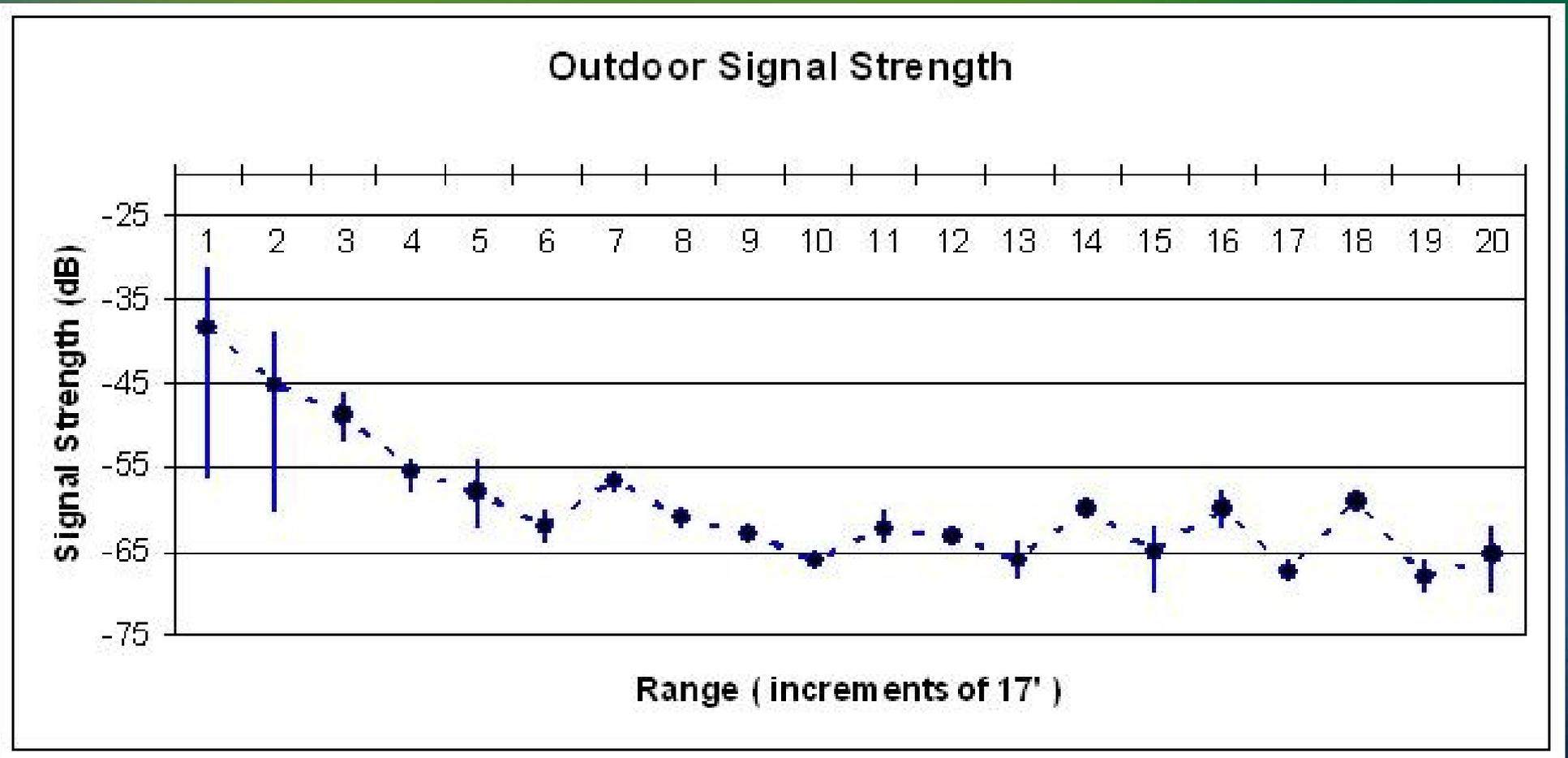
Mid Semester Status/Goals

- Accomplished
 - Board booting Debian linux
 - Connected board to network via LAN
- Goals
 - Setup cross-compilation toolchain
 - Compile wifi drivers
 - Detect/analyze/communicate with array

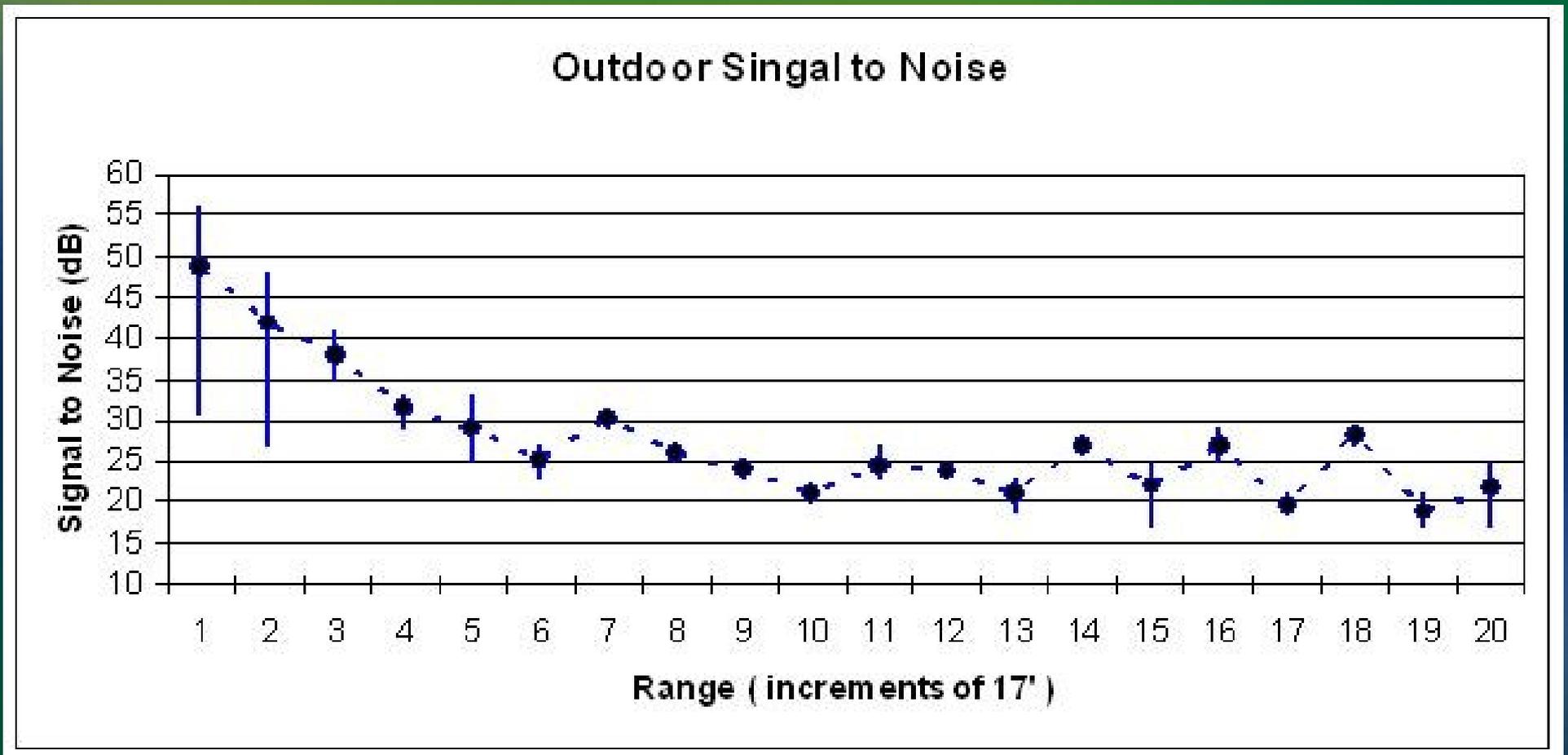
Current Status

- Toolchain installed
- Drivers compiled
- Communication with array via UDP established
- Fully automated boot/connect/transmit process implemented

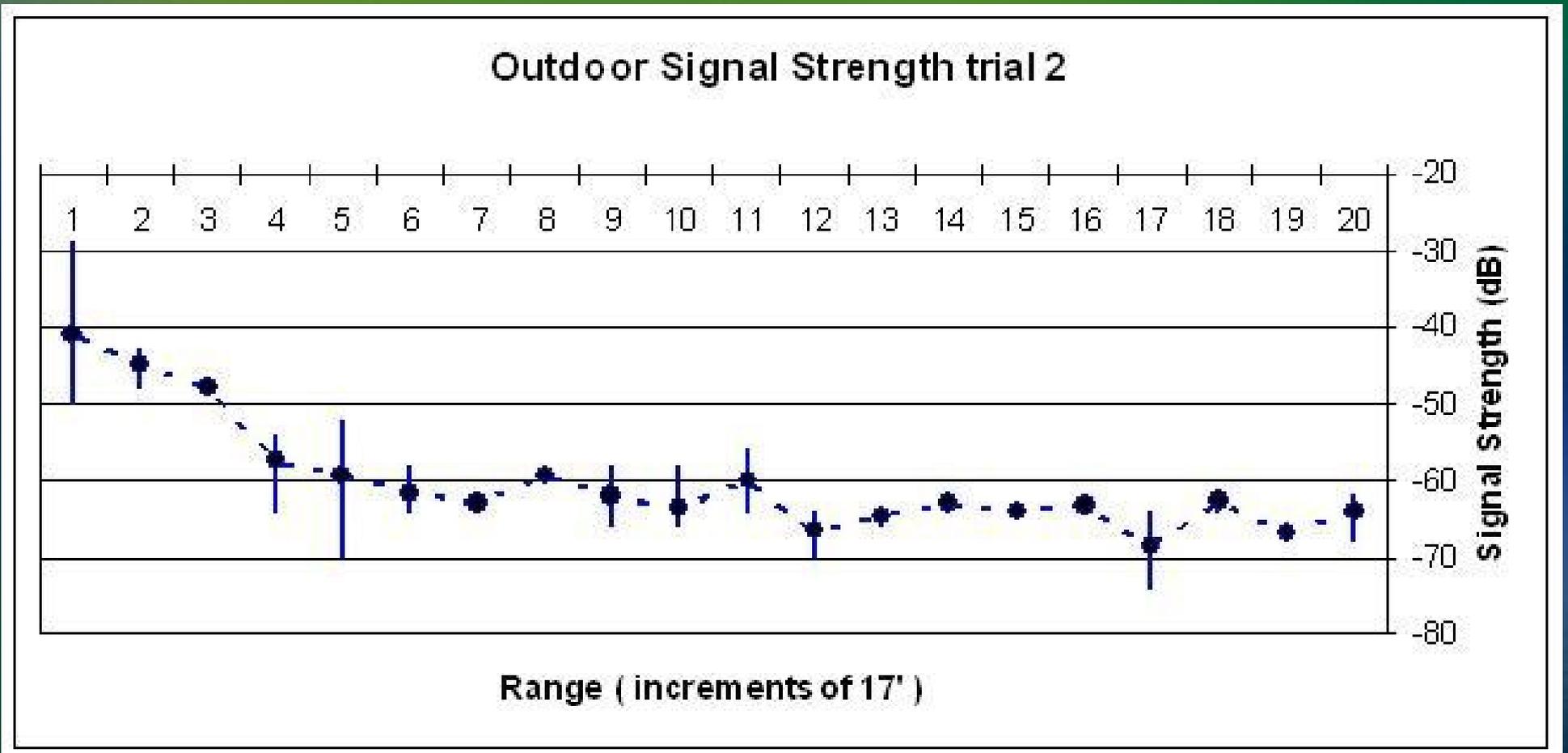
Outdoor Testing



Outdoor Testing

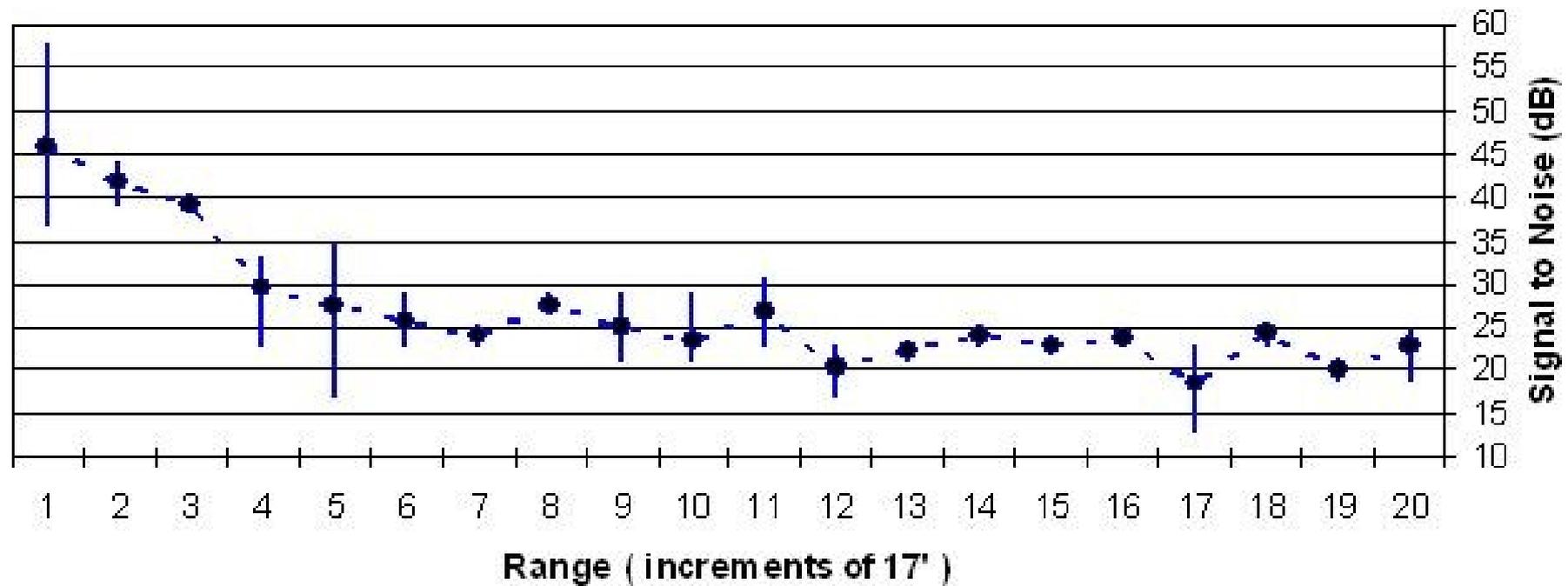


Outdoor Testing #2



Outdoor Testing #2

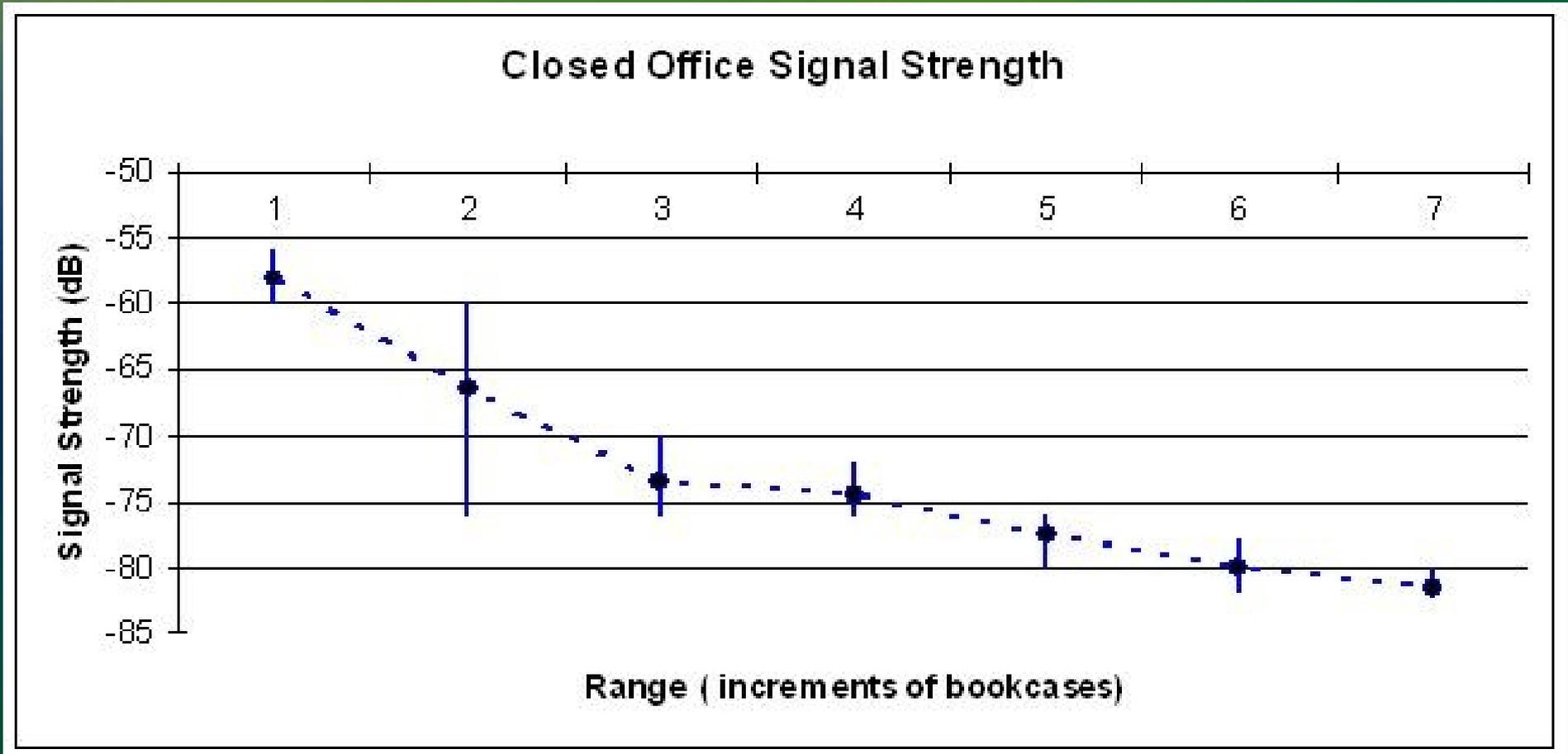
Outdoor Singal to Noise trial 2



Outdoor Testing

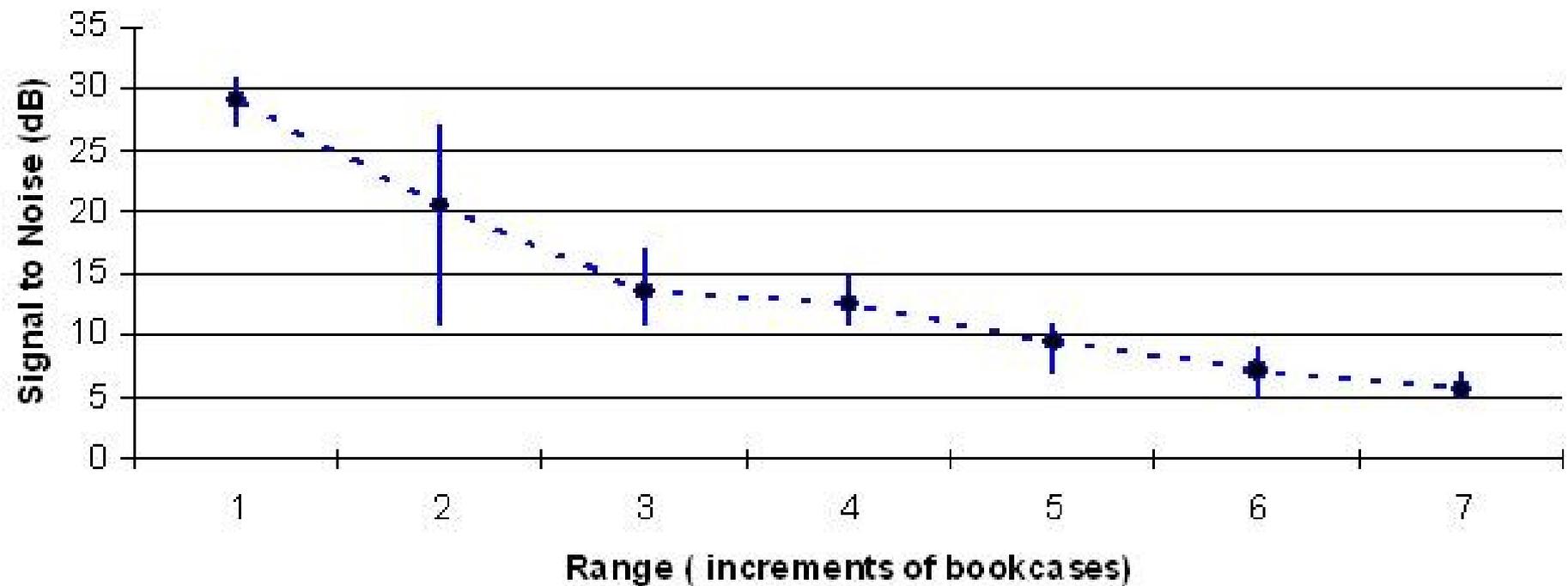
- Signal degrades with increasing range as expected
- Readings exhibit expected stability
- Stable readings even at long range (~ 340')

Closed Office Testing



Closed Office Testing

Closed Office Signal to Noise



Closed Office Testing

- Very tightly enclosed setting
- Large number of students increases interference
- Signal degrades rapidly, as expected