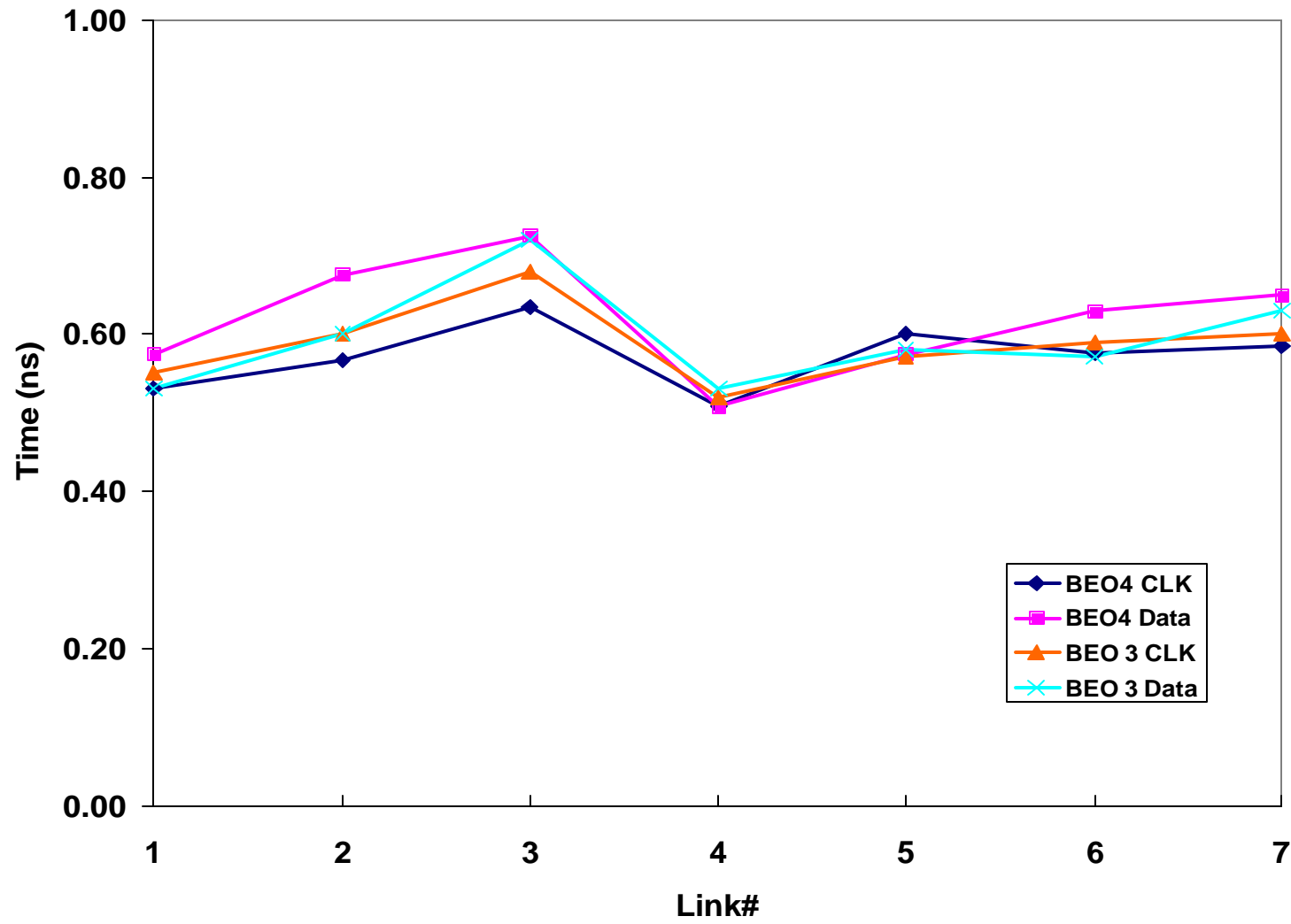
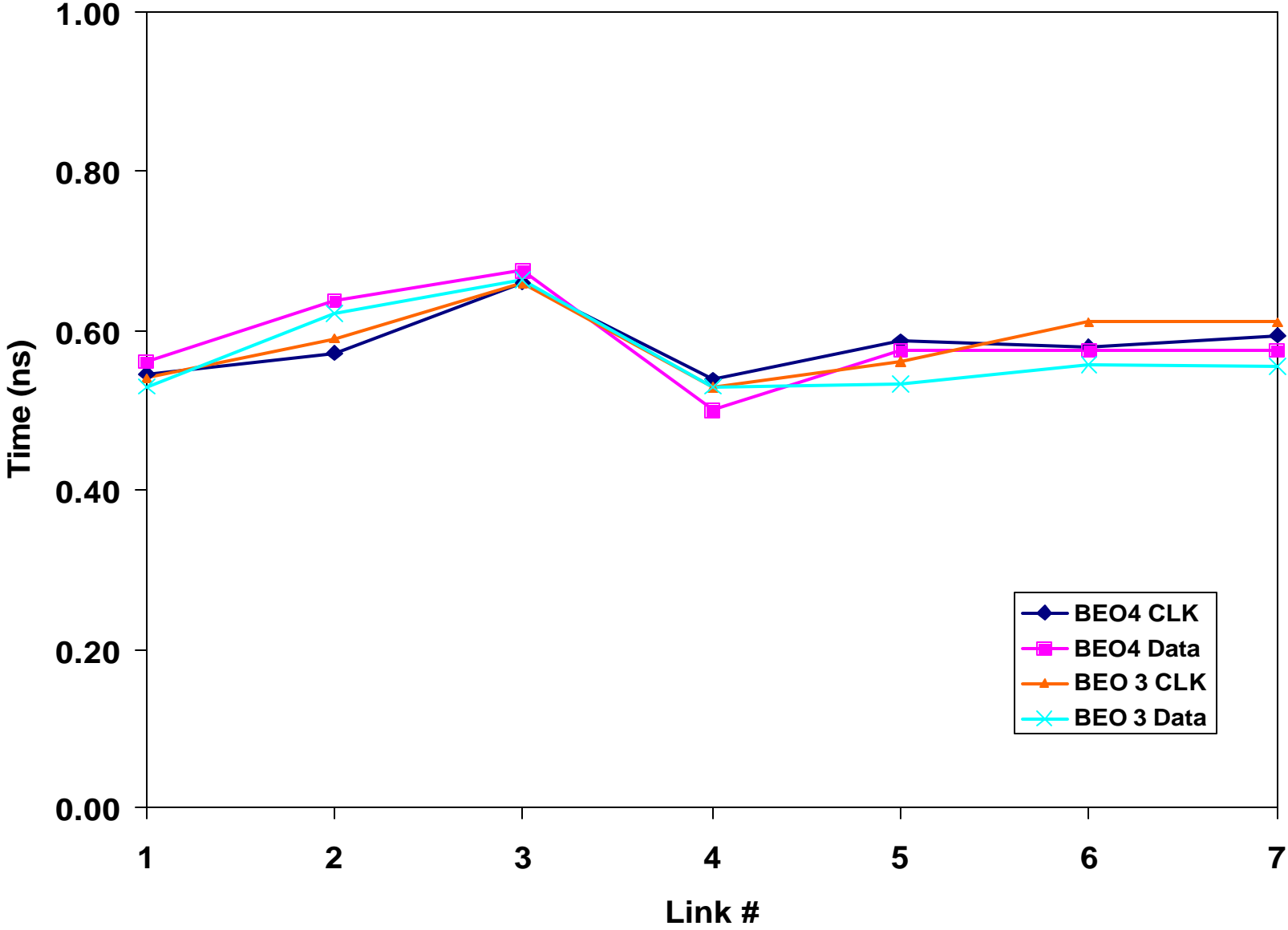


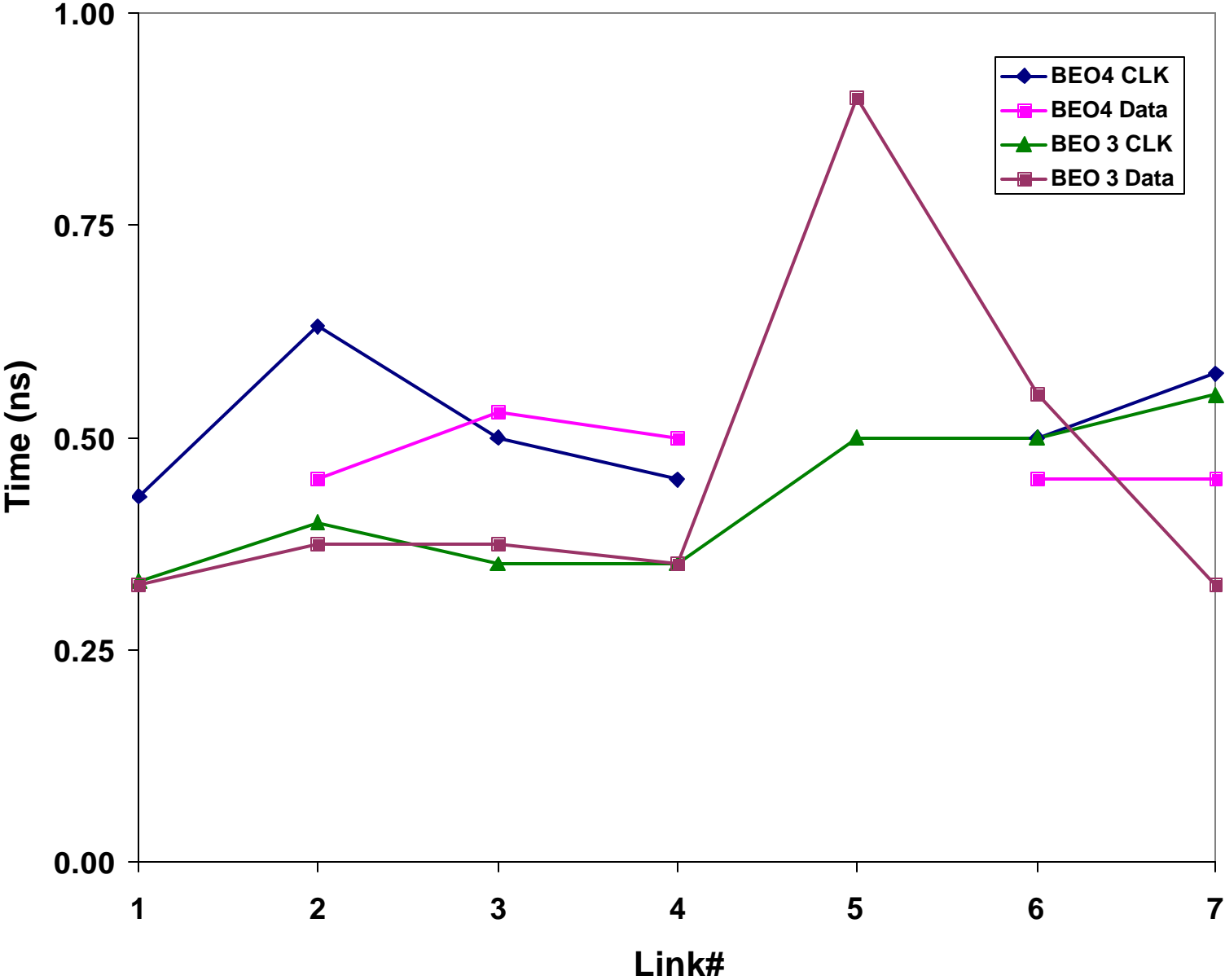
# LVDS Rise Time



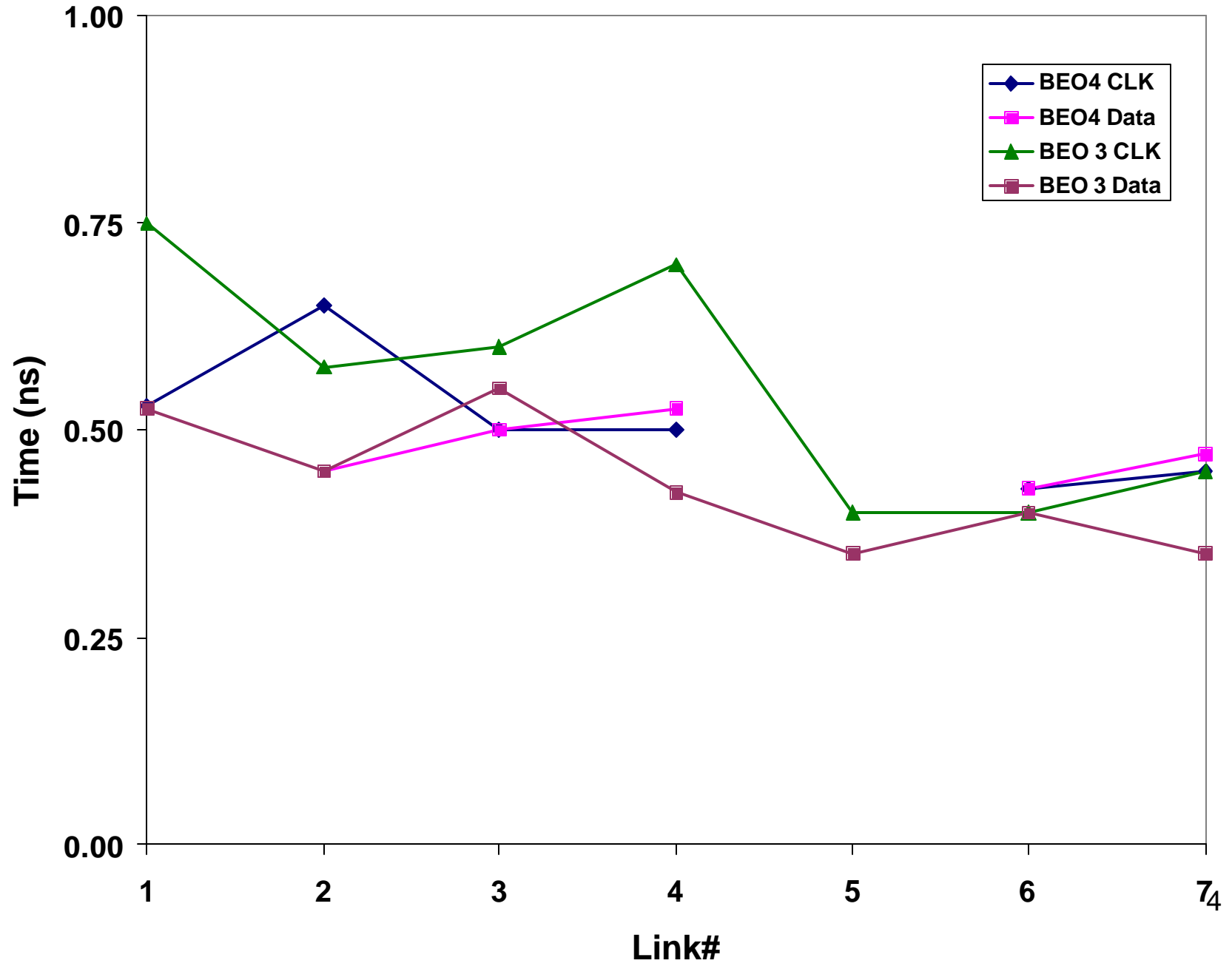
# LVDS Fall Time



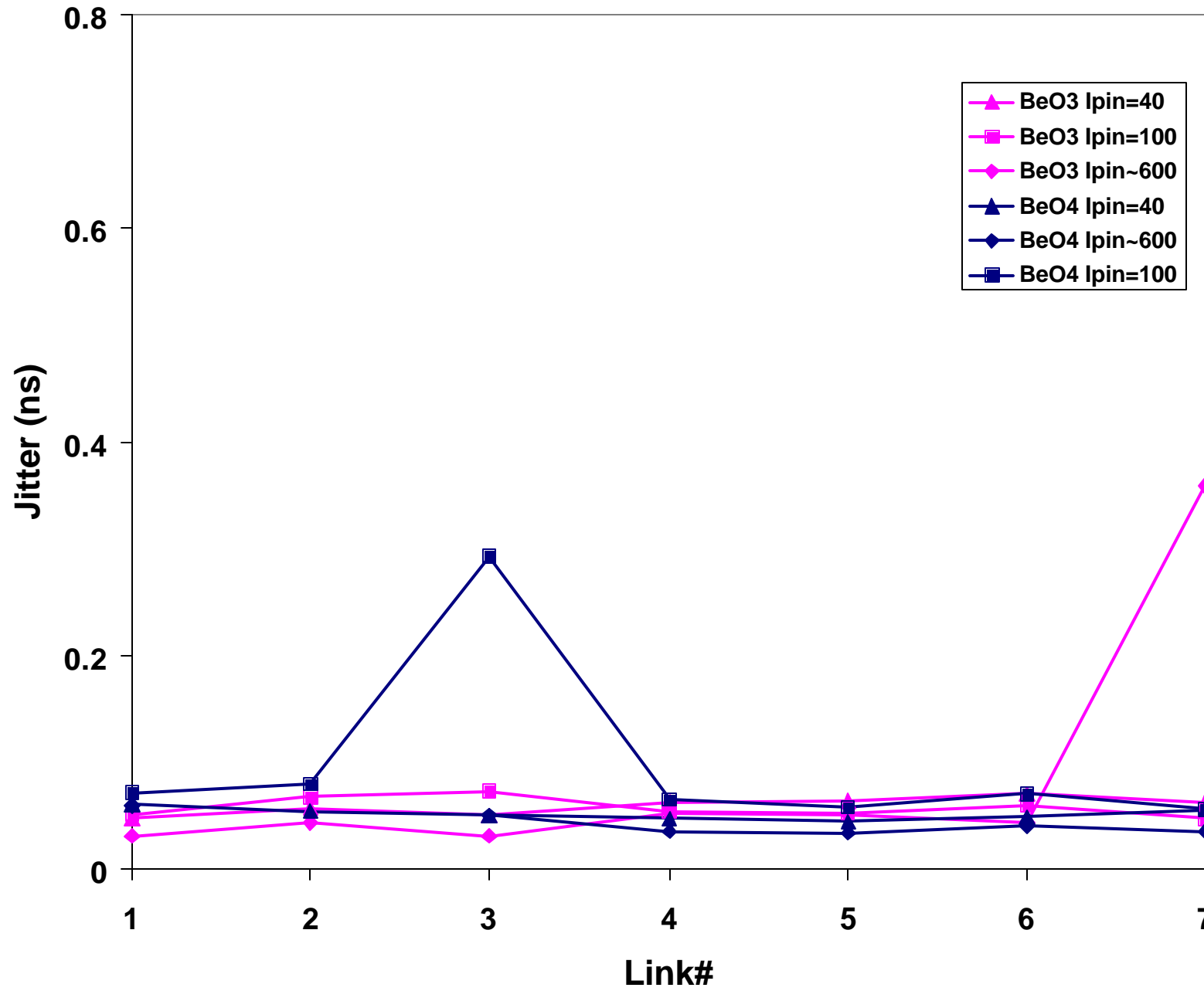
# Optical Rise Time



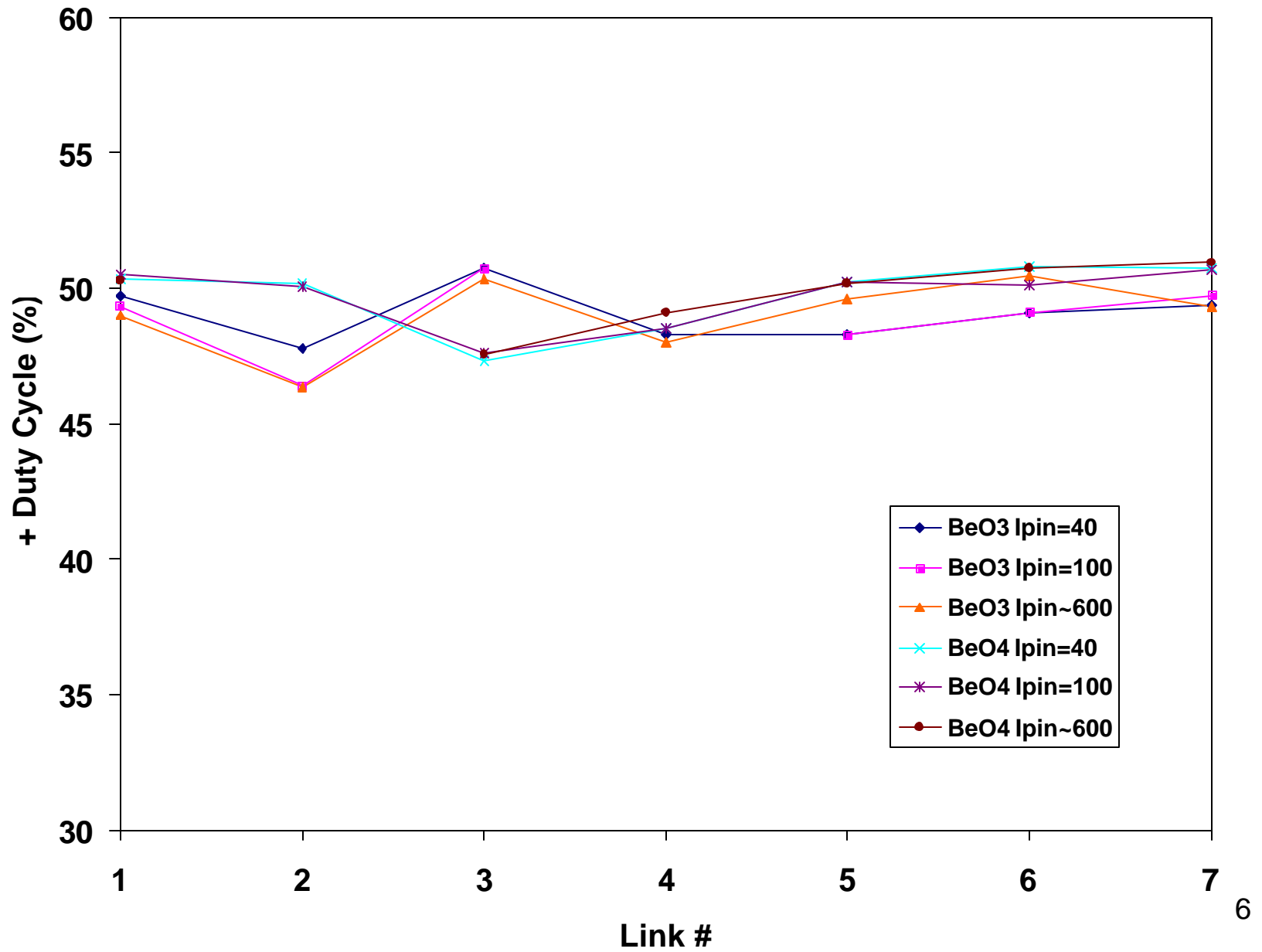
# Optical Fall Time



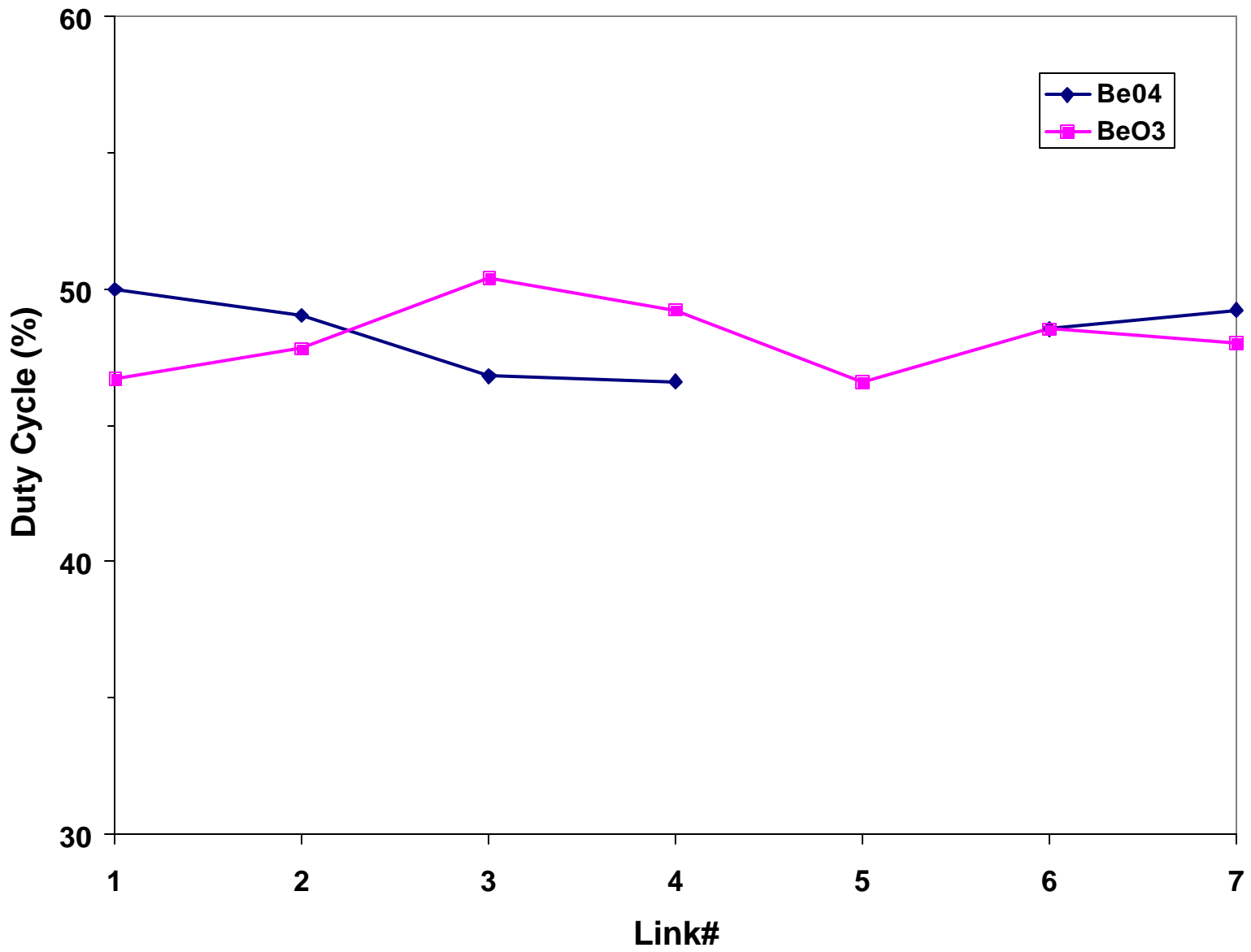
# LVDS Jitter



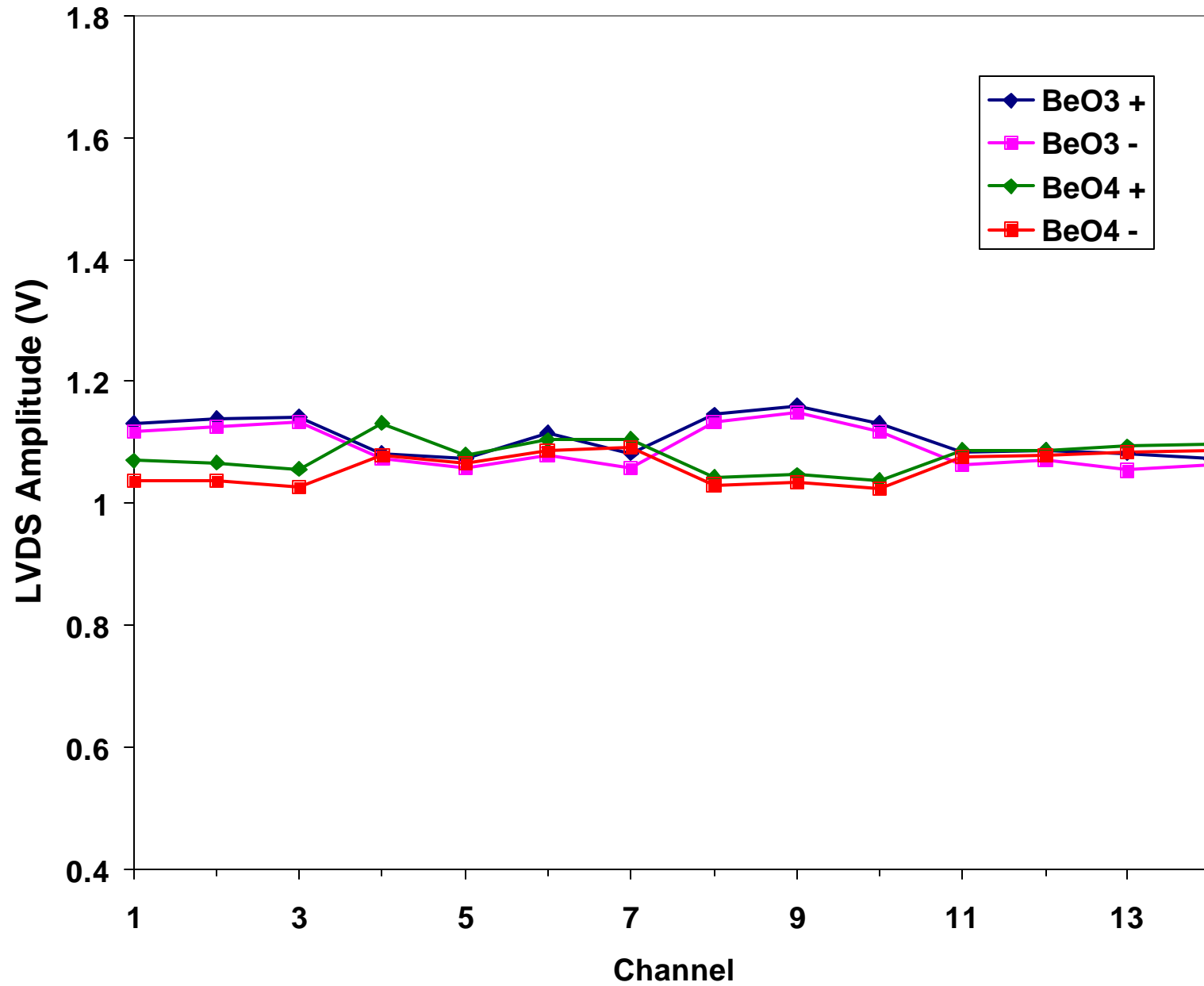
# LVDS + Duty Cycle



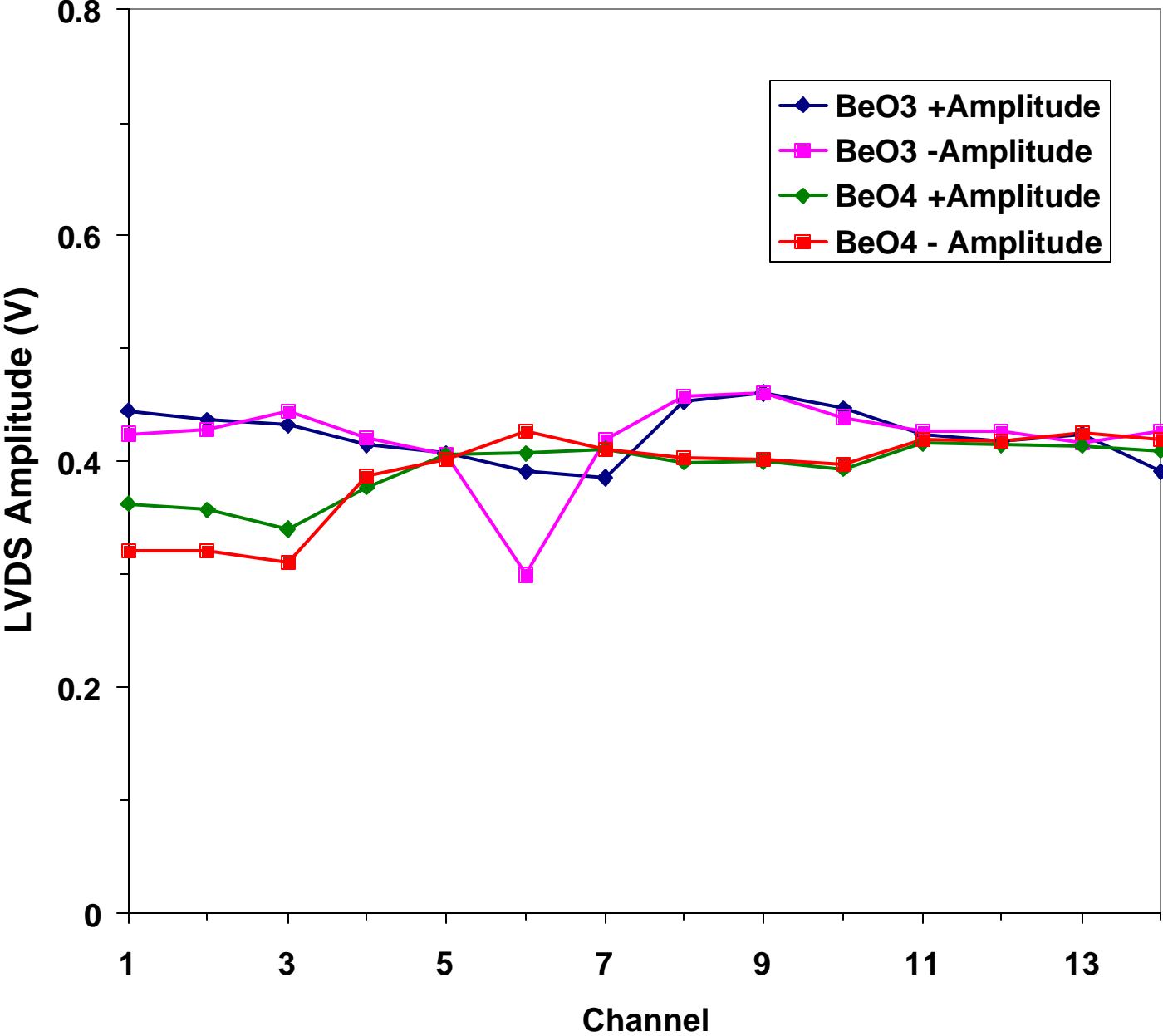
# Optical Duty Cycle



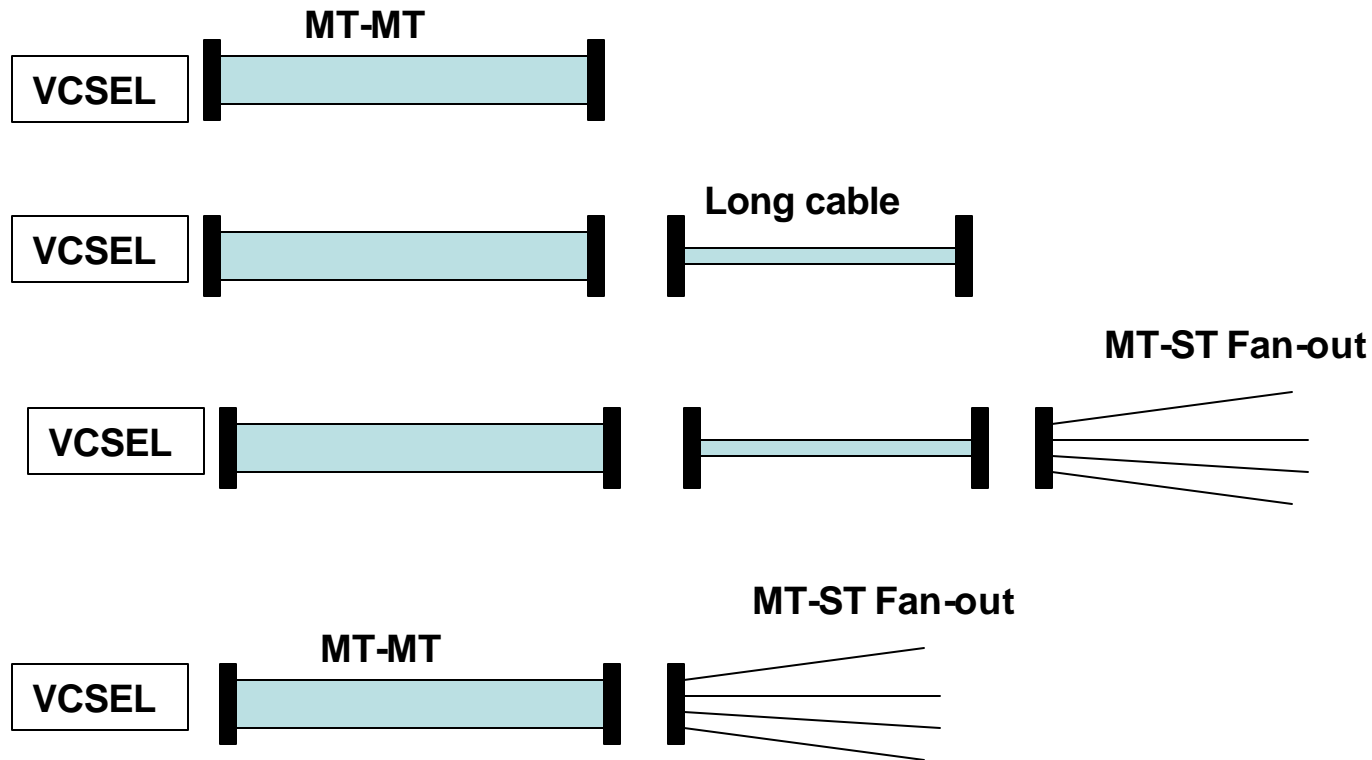
# LVDS Average



# LVDS Amplitude

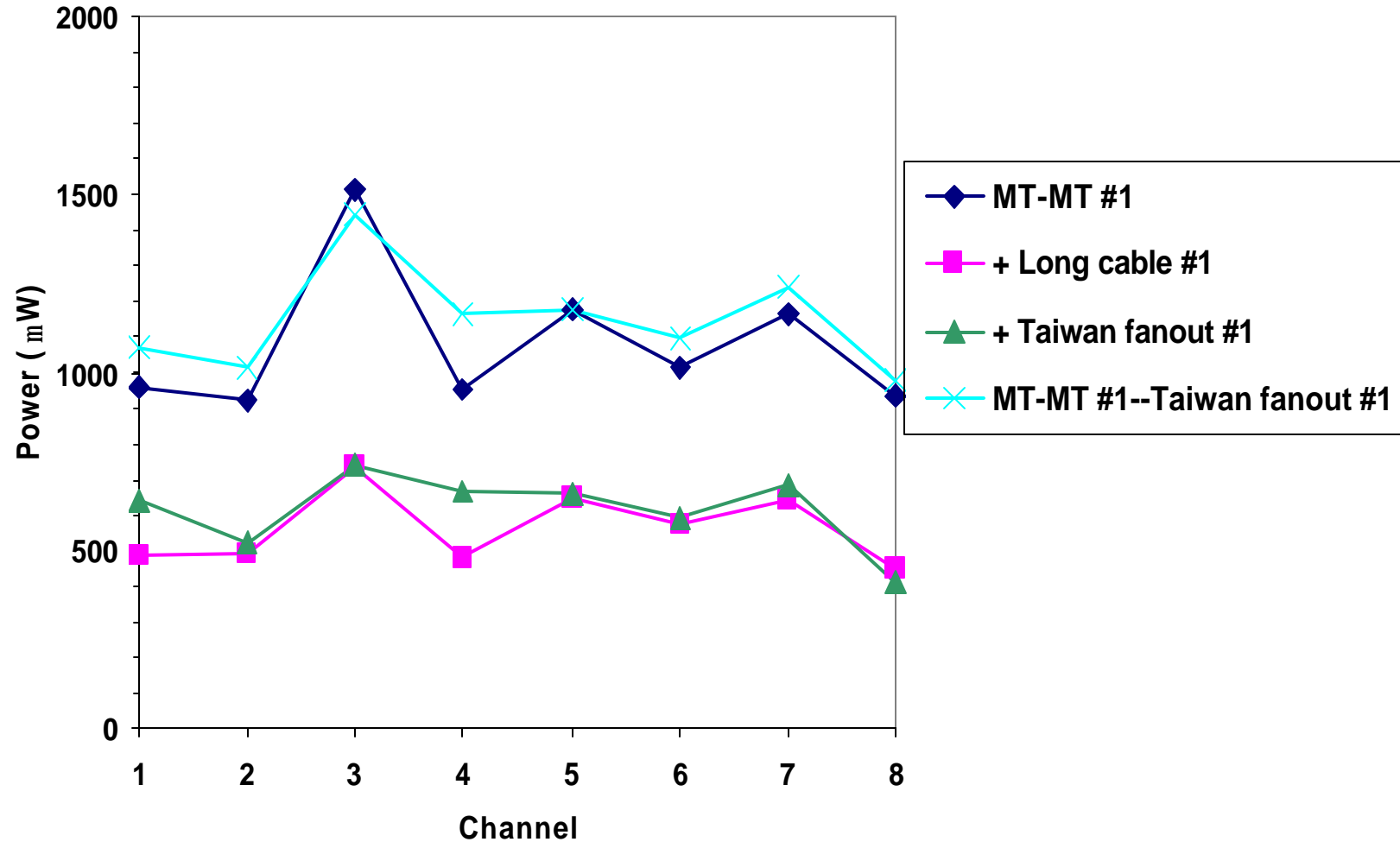


# Long cable characterization setup



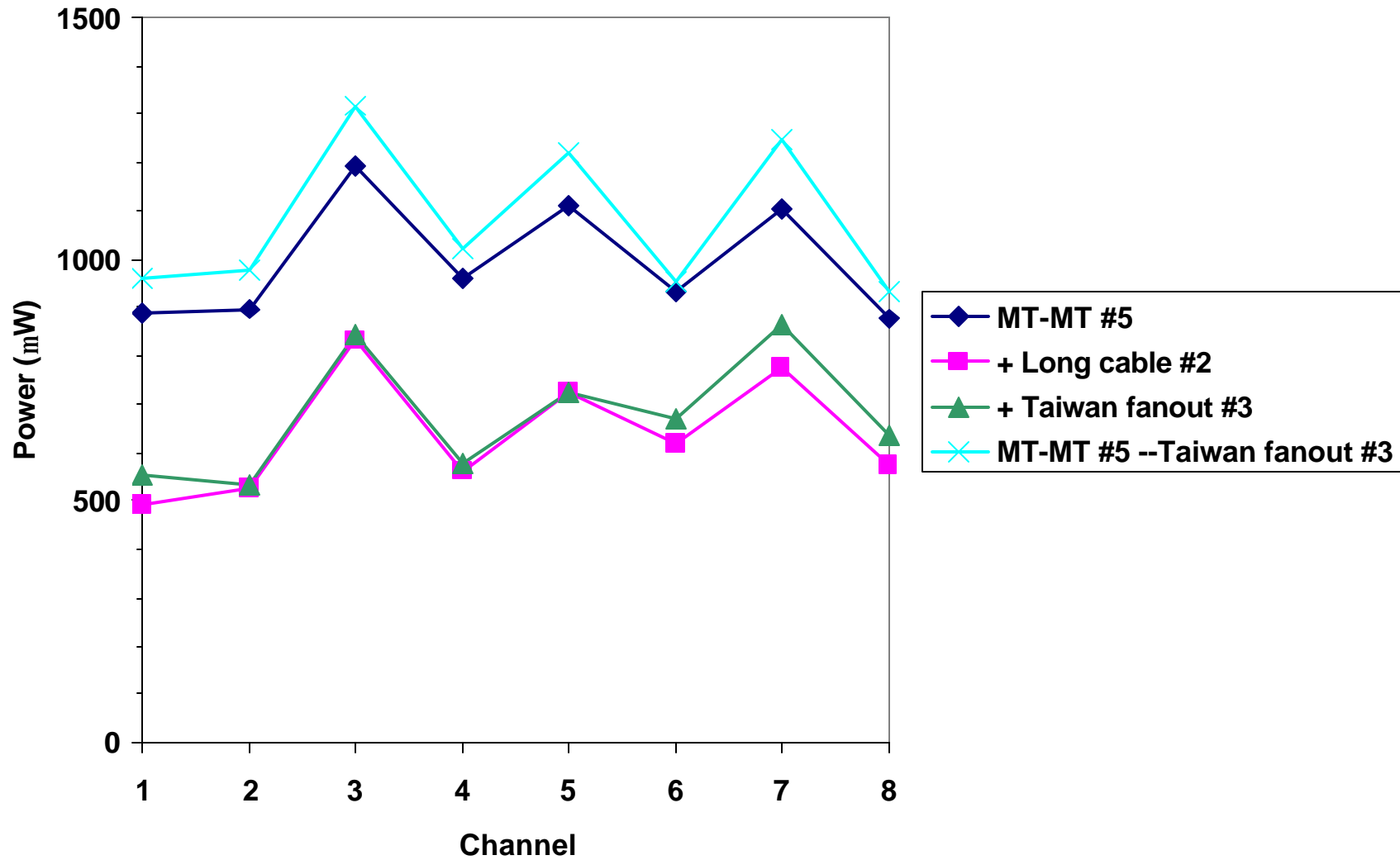
- measure powers with opto-meter
- repeat measurements three times per link
- most of the fiber setup the same as CERN
- The long cable is four bundles each with 8 fibers

# Bundle #1



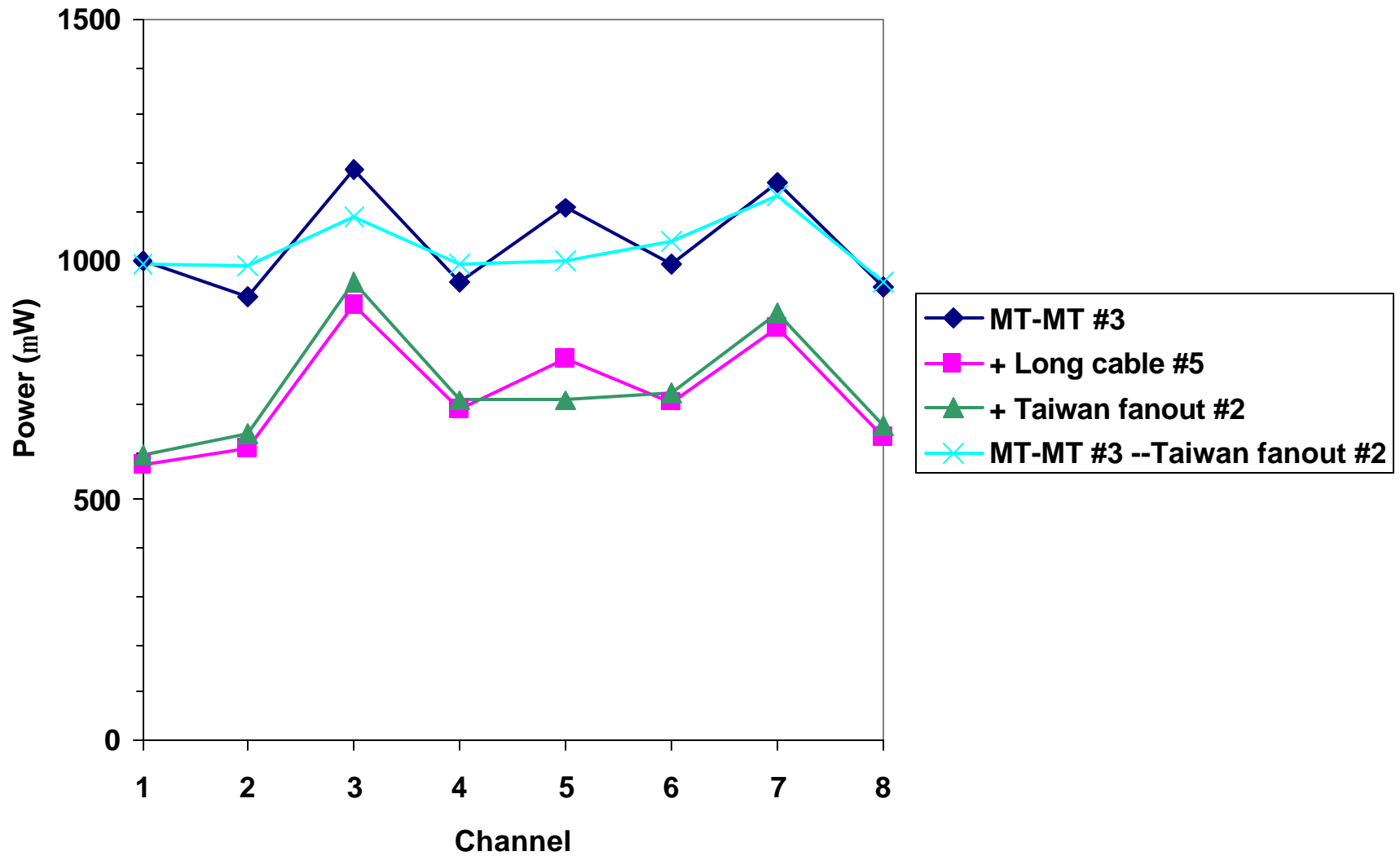
- ~ 48% loss with the long cable 1 (50 micron GRIN)
- No loss with the Taiwan fan-out (62 micron GRIN)
- min and max loss of 43% and 52%

## Bundle #2



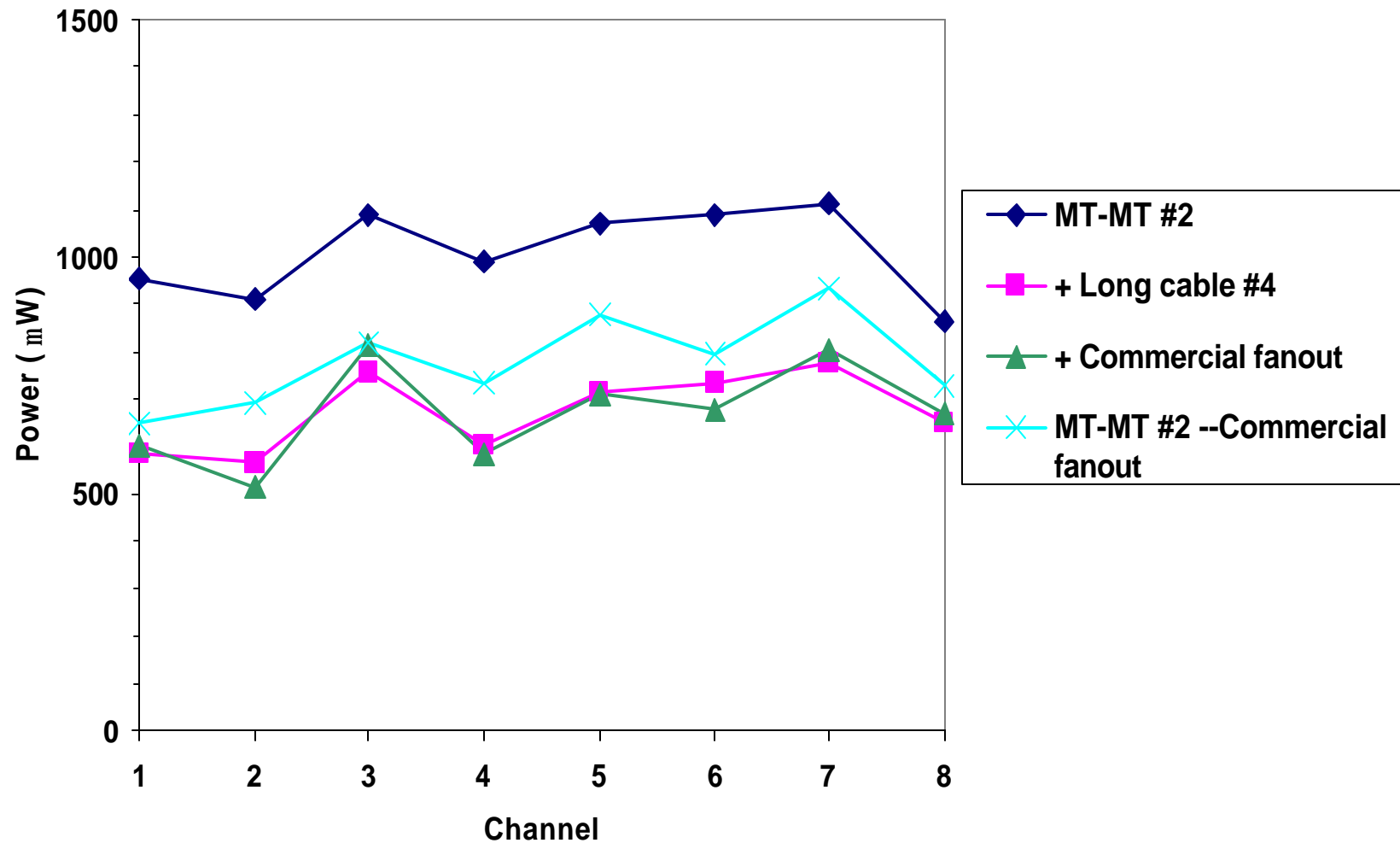
- ~36% loss with the long cable 2
- min and max loss of 30% and 45%

# Bundle #5



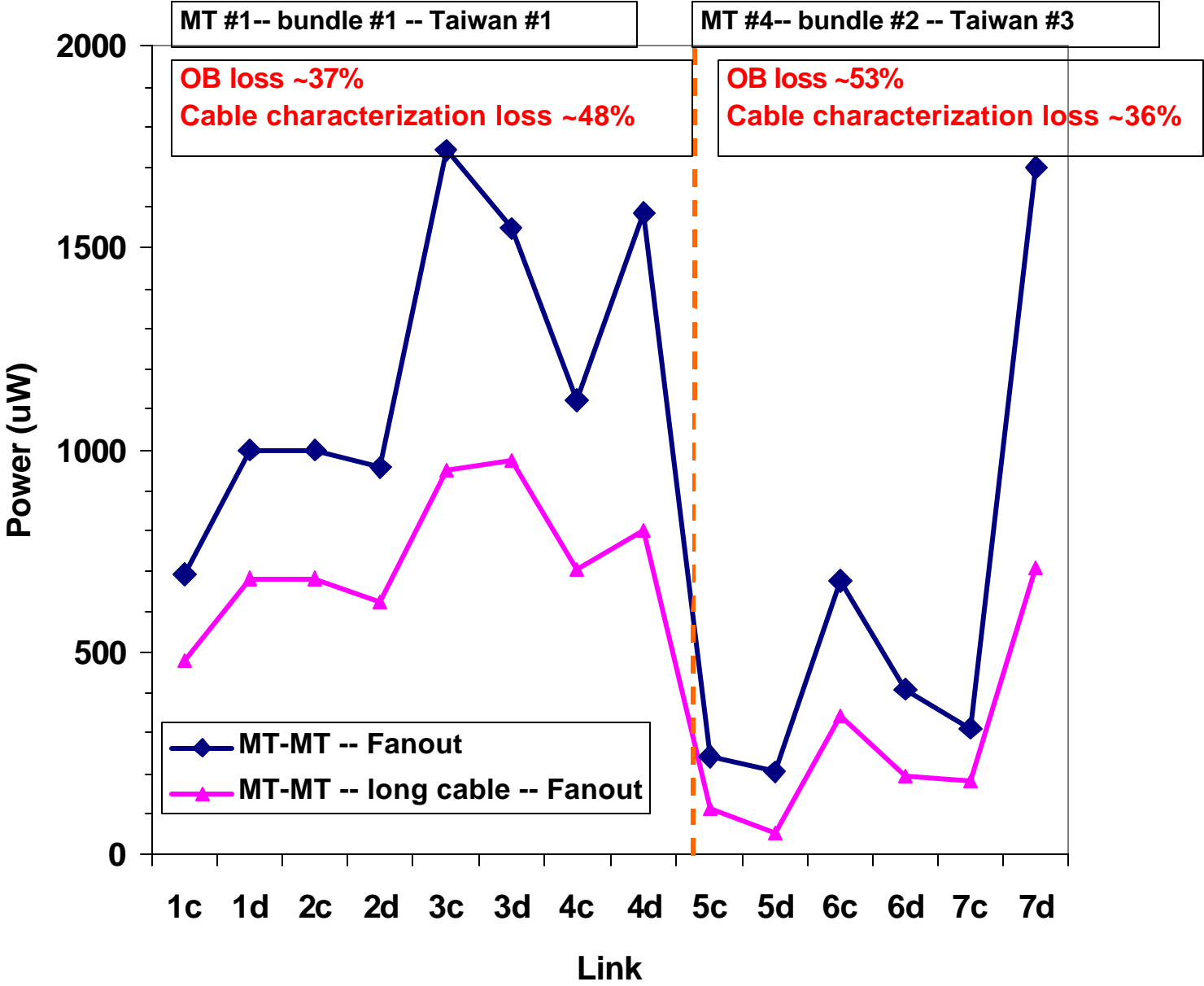
- 31% loss with the long cable 5
- min and max loss of 25% and 43%

# Bundle #4

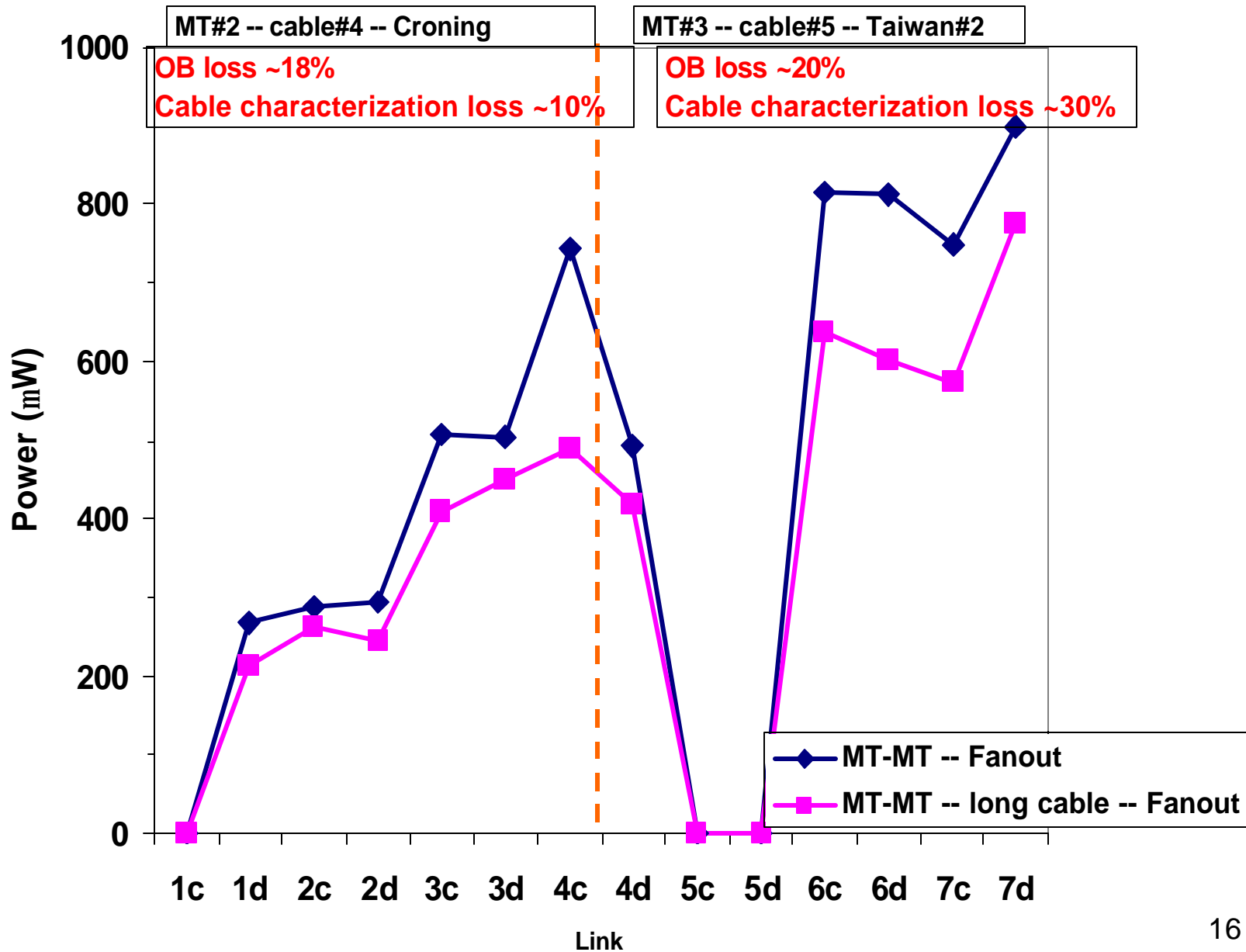


- ~33% loss with the long cable 1
- ~23% loss with the Croning fan-out (Commercial, 50 micron GRIN)
- min and max loss of 25% and 40%

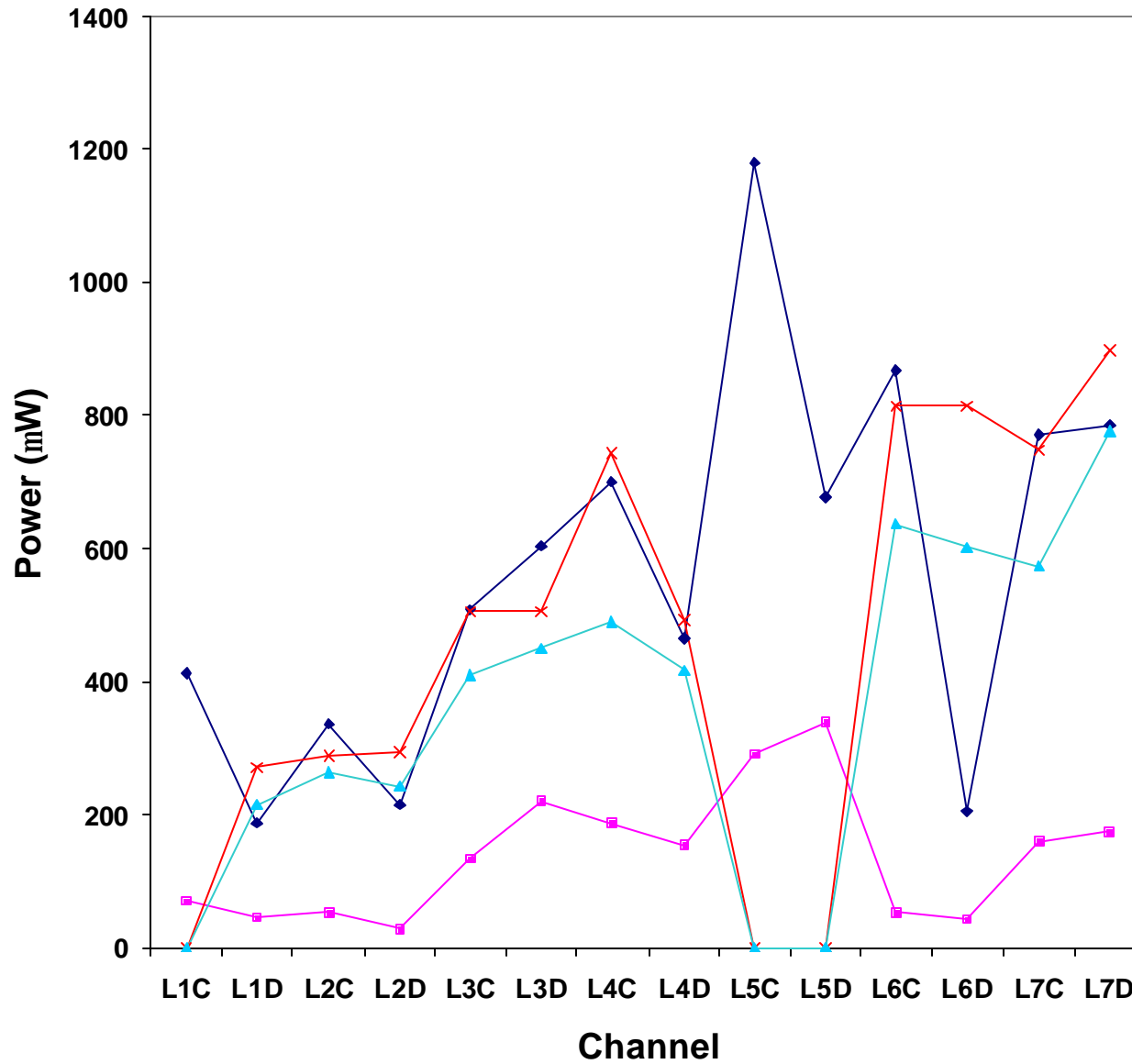
# BeO#3 powers with and without the long cable



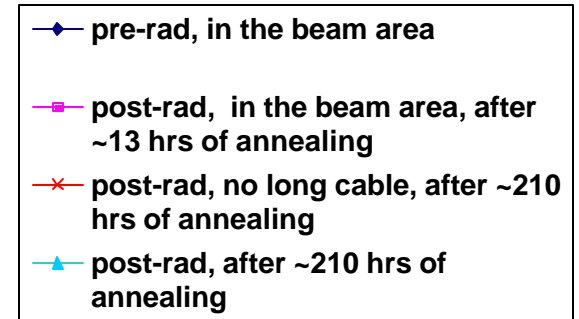
# BeO#4 powers with and without the long cable



# BeO4 Summary



• All powers are measured with long cables unless otherwise stated



# BeO3 Summary

