

## SUMMARY OF CHANGES

### W911NF-18-S-0009 Amendment 01 SuperCables

1. Table 1 in Section A.2.2 is revised to read as follows:

**Table 1. SuperCables Program Goals and Metrics**

Metric	Goals			
	Units	Threshold	Objective	Stretch
Energy per bit at 4 K, EO device only	aJ/bit	25	5	1
Energy per bit at 4 K for gain element (if required) between stimulus unit and EO device	aj/bit	32,500	325	0
Total system energy per bit at RT	fJ/bit	32,500	325	3
Bit error ratio(BER), raw	-	$10^{-6}$	$10^{-8}$	$10^{-10}$
Channels per chip area	cm <sup>-2</sup>	10	100	10,000
Data rate per channel	Gbit/s	10	50	100
Latency (EO device)	ns	200	50	10

2. Item 2.c in Section A.2.2 has been deleted

~~Fixed gain semiconductor amplifier at 4 K: Assume a 3 dB gain with energy cost of 6.7 fJ/bit, or 26 dB gain with energy cost of 200 fJ/bit, both at 30 Gb/s data rates. This amplifier can be optimally matched to the superconducting data source and have 50 ohm output impedance. This amplifier power is expended continuously in time, so the energy per bit is inversely proportional to the data rate and must be scaled accordingly.~~

3. Response dates in Section I, A, 6 has been revised to read as follows:

**Proposals: 4:00 PM Eastern Daylight Savings Time on: 31 July 2018** See Section II, D, 4 for additional information.

4. Submission Dates and Times in Section II, D, 4 is revised to read as follows:

**Proposals:**

Proposals transmitted to be considered for award must be received by Grants.gov **no later than 4:00 PM Eastern Daylight Savings Time on 31 July 2018.**

(End of Summary of Changes)