

**TABLE A Relative U.S./USSR Standing in the Twenty  
Most Important Basic Technology Areas\***

BASIC TECHNOLOGIES	U.S. SUPERIOR	U.S./USSR EQUAL	USSR SUPERIOR
1* AERODYNAMICS/FLUID DYNAMICS		X	
2 COMPUTERS AND SOFTWARE	← X		
3 CONVENTIONAL WARHEAD (Including all Chemical Explosives)		X	
4 <u>DIRECTED ENERGY (Laser)</u>		<u>X</u>	
5 ELECTRO-OPTICAL SENSOR (Including Infrared)	X →		
6 GUIDANCE AND NAVIGATION	X →		
7 LIFE SCIENCES (Human Factors; Genetic Engineering)	X		
8 MATERIALS (Lightweight, High Strength, High Temperature)	X →		
9 MICRO-ELECTRONIC MATERIALS AND INTEGRATED CIRCUIT MANUFACTURING	X →		
10 NUCLEAR WARHEAD		X	
11 OPTICS	X →		
12 POWER SOURCES (Mobile) (Includes Energy Storage)		X	
13 PRODUCTION/MANUFACTURING (Includes Automated Control)	X		
14 PROPULSION (Aerospace and Ground Vehicles)	X →		
15 RADAR SENSOR	X →		
16 ROBOTICS AND MACHINE INTELLIGENCE	X		
17 SIGNAL PROCESSING	X		
18 SIGNATURE REDUCTION (Stealth)	X		
19 SUBMARINE DETECTION	X		
20. TELECOMMUNICATIONS (Includes Fiber Optics)	X		

- \*1 The list is limited to 20 technologies, which in aggregate were selected with the objective of providing a valid base for comparing overall U.S. and USSR basic technology. The list is in alphabetical order. These technologies are "on the shelf" and available for application. (The technologies are not intended to compare technology level in currently deployed military systems.)
2. The technologies selected have the potential for significantly changing the military capability in the next 10 to 20 years. The technologies are not static; they are improving or have the potential for significant improvements; new technologies may appear on future lists.
3. The arrows denote that the relative technology level is changing significantly in the direction indicated.
4. The judgments represent consensus within each basic technology area.

(Source: Undersecretary of Defense (R&E), Washington, D.C.  
20301, (c) 202-695-6462)