

Bush Space Plan

Perspectives from The Mars Society – 2 March 2004

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Estimated Costs in 2004 Dollars

	First Decade (2004-2014)	Second Decade (2014-2024)	Third Decade (2024-2034)
BASIC TECHNOLOGY	2004 - 2008: <u>Reallocated</u> funding -- 11B New funding -- 1B		
SPACE VEHICLES	Crew Exploration Vehicles -- 20B Service Modules -- 5B		
MOON	Lander, Habitat, Rover – 20B	Development & 30 Missions – 75B	Gov't Moon Operations – 15B NEO & Asteroid Operations – 15B Commercial & Research -- <u>private</u>
MARS		Incremental Development -- 12B 2 Missions – 8B	5 Missions – 20B
Decade Cost	40B	95B	50B
30-Year Cost	190B		

Individual costs are probable maximums for NASA-managed work.

Our total of \$190B compares favorably with NASA's initial estimate of \$170B.

NASA's current annual budget is \$15.5B.

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Source of Misinformation on Costs of a Human Mars Mission

Space Exploration Initiative (90 Day Report): 1989. \$450 billion over 30 years.

- President George H. W. Bush proposed a long range, continuing commitment to space exploration which included an orbiting space station, a return to the moon, and a manned mission to Mars.
- NASA was set to the task of designing this mission. Three months later they presented their report, calling for a 30-year build up of space infrastructure and a price tag of \$450 billion (1989 dollars).
- This is **not** the plan that is currently proposed, but this is where the inaccurate \$\$ figures reported for a Human Mars Mission are coming from, translating to almost \$1 trillion in current dollars.

Counter-Proposals to the 90 Day Report – Alternate Cost Figures for a Human Mars Mission

Mars Direct: Developed in 1990. \$40 billion over 20 years. See <http://www.nw.net/mars/>.

- Conceived by a team of engineers at Martin Marietta led by Dr. Robert Zubrin.
- Development costs of \$30 billion.
- Recurrent mission costs on the order of \$2-3 billion each.

NASA Design Reference Mission (Mars Semi-Direct): Developed in 1992. \$55 billion over 20 years.
See <http://exploration.jsc.nasa.gov/marsref/contents.html>.

- When the Mars Direct plan was presented to NASA, they liked the idea but expanded and redesigned it (6 astronauts instead of 4; bigger spacecraft; 3 launches per mission instead of 2).
- The same government agency that estimated the 90 Day Report (in 1989 at \$450 billion) estimated this plan at \$55 billion.