

THE RULES

- 1) The mass of each radiation shield by itself (i.e., not including radiation sensor) must be *at least* 200 grams but *cannot exceed* 500 grams.
- 2) The radiation shield must completely enclose the radiation sensor on all sides. The sensor cannot be glued or permanently attached to any of the shielding material, must be easily removeable, and must face upward toward the sky during flight.
- 3) The radiation shield must fit within its payload box and be mounted securely to the box (preferably with zip ties) for the flight.
- 4) Shielding materials can be bent, folded, cut, molded, or otherwise altered, if done so in a safe manner that is approved by the International Advisor.
- 5) Only the materials and tools provided by the International Advisor may be used in the construction of the radiation shield.
- 6) Final payload assemblies must be tested and receive final approval from the International Advisor prior to the balloon flight.
- 7) Each space agency begins with a budget of \$300 million. Agencies can spend more than their budget, however doing so will incur a penalty.
- 8) (Optional) Agencies can earn up to an extra \$75 million in funding for their budget by gaining followers on their social media. This extra funding can only be earned before the balloon launch and must be approved by the International Advisor.

DETERMINING THE WINNER

The International Advisor will use five criteria to determine final scores (out of 100):

- (Up to 30 pts)** Design and performance of radiation shield.
- (Up to 20 pts)** Quality of Director Presentations.
- (Up to 20 pts)** Creativity and design of agency logo and name.
- (Up to 15 pts)** Quality of social media or website content (optional).
- (Up to 15 pts)** Finished under budget (subtract 1 point for every \$10 million over).

SPENDING & EARNING MONEY

Each space agency can purchase the materials listed below from the International Advisor. All sales are final once the payment slip is signed or stamped by the International Advisor. Materials do not have to be purchased all at once. Unless authorized, no other raw materials may be used in the construction and mounting of the radiation shield, except for miscellaneous items (e.g., tape, zip ties, hot glue). These, as well as common hand tools, may be used free of charge.

Purchasing Materials

Starting Budget: \$300 million

Shield Mass Limit: 500 grams

Raw Materials	Size (Thickness)	Mass	Cost	Purchase Limit
Lead*	4"×4" sheet (1/32")	88 g	\$60 million / sheet	4 sheets
Steel	4"×4" sheet (1/32")	56 g	\$50 million / sheet	4 sheets
Aluminum	4"×4" sheet (1/64")	15 g	\$40 million / sheet	4 sheets
Balsa Wood	4"×4" sheet (1/8")	6 g	\$30 million / sheet	4 sheets
Bubble Wrap	1 sq ft	7 g	\$25 million / sq ft	2 sq ft
Polyethylene	4"×4" sheet (1/16")	15 g	\$10 million / sheet	4 sheets
Mylar	1 sq ft	1.7 g	\$10 million / sq ft	3 sq ft

* Wear gloves and avoid touching mouth, nose, and eyes when handling lead sheets.

Social Media Earnings (Optional)

Each space agency can also earn up to an additional \$75 million (maximum) by gaining followers on their social media page (if one is created). This money can only be earned *before* the balloon launch and must be approved by the International Advisor:

- Earn \$10 million after the first 10 follows
- Earn another \$20 million after the first 50 follows
- Earn another \$45 million after the first 100 follows