

SS2S ROBOT PROJECT



GOAL OF THE SS2S PROJECT

The primary goal of the Sugar Shot to Space program is to loft a rocket powered by "sugar propellant" into Space, officially defined as 100 km (62 miles) above the earth's surface, and to safely recover the vehicle. For more information visit: <http://sugarshot.org/>

GOAL OF THE **SS2S** ROBOT PROJECT

The primary goal of the Sugar Shot to Space robot project is to send a small humanoid robot into Space, using the eXSShot rocket.

The main idea is that not the raw data of the robots sensor devices are send back to Earth; the data are rather processed into human impressions and the according generated expressions then transmitted. So the ground station actually doesn't receive pitch, roll, acceleration or image data from the robot, but rather spoken statements just like a real astronaut would be sitting in the rocket capsule and commenting the surrounding scene.

ROBOT OVERVIEW

Principle dimension:

- Height approx. 170 mm
- Width approx. 80 mm
- Depth approx. 80 mm

Weight:

- 400 g

Spoken Language:

- English

Primary equipment:

- Camera for recording and image processing
- Stereo microphone
- Ultrasonic ranger to evaluate capsule dimension
- 2 DOF head with stress sensors on the joints
- Silicon rubber skin with integrated force sensors (pain receptors)
- Accelerometer/gyroscope
- Natural language processing and voice
- SD card

