

Code For RockSat-X Payload - Hephaestus

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Abstract

The osu RockSat-X team shall be named Hephaestus. The progress of our project shall be outlined in this document. The mission requires that the payload, an autonomous robotic arm, perform a series of motions to locate predetermined targets. The hardware shall be capable of performing the motions to reach the targets. The software shall determine the targets and send the commands to the hardware to execute the motion. The combination of the hardware controlled by the software shall demonstrate Hephaestus's ability to construct small parts on orbit.



Hephaestus Mission Logo

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1 Pre-Processing

1.1 CSpace_Mapping.ino

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1.2 parser.cpp

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o

1.3 convert.cpp

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o

1.4 pathing.cpp

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o

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2 Data Storage

2.1 SDRead.py

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2.2 telemetry.c

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3 Main

3.1 RSXAVRD.c

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o

3.2 main.c

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3.3 phases.c

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3.4 Modes of Operation

3.4.1 idle.c

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3.4.2 observation.c

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3.4.3 science.c

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3.4.4 retract.c

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3.4.5 safety.c

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3.4.6 off.c

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