

Welcome to International NodeBots day 2015!

Your challenge is to build a NodeRover to explore the asteroid Flora 8.

Here are some ideas for programming your bot:

- Display the temperature on the digit display
- Display the light reading on the digit display
- Use buttons to toggle what is displayed
- Beep when an obstacle is detected using the ultrasonic sensor
- Program your bot to drive around an area autonomously, using the ultrasonic sensor to avoid obstacles

Rover Build instructions: <https://t.co/x3j8m10ddu>

Code samples: <https://gist.github.com/AnnaGerber/e5f897b745e5f96da463>

Flora

8 Flora is a large, bright main-belt asteroid. It is the innermost large asteroid. Flora may be the residual core of an intensely heated, thermally evolved, and magnetically differentiated planetesimal which was subsequently disrupted. Flora is the parent body of the Flora family of asteroids, and by far the largest member, comprising about 80% of the total mass of this family. Nevertheless, Flora was almost certainly disrupted by the impact(s) that formed the family, and is probably a gravitational aggregate of most of the pieces.

Flora's spectrum indicates that its surface composition is a mixture of silicate rock (including pyroxene and olivine) and nickel-iron metal. Flora, and the whole Flora family generally, are good candidates for being the parent bodies of the L chondrite meteorites. This meteorite type comprises about 38% of all meteorites impacting the Earth.

Physical characteristics	
Dimensions	136×136×113 km ^[a] <div>128 km (mean)</div> 145×145×120 km ^[a]
Mass	8.47×10 ¹⁸ kg ^[a] <div>4.3×10¹⁸ kg^{[a][b]}</div>
Mean density	3.13±1.43 g/cm ³ ^[a] <div>~3.3 g/cm³^[a]</div>
Surface gravity	~0.045 m/s²
Escape velocity	~0.081 km/s
Rotation period	0.533 d (12.799 h) ^[a]
Albedo	0.243 (geometric) ^[a]
Temperature	~180 K <div>max: 276 K (+3 °C)</div>
Spectral type	S-type asteroid ^[1]
Apparent magnitude	7.9 ^[a] to 11.6
Absolute magnitude (<i>H</i>)	6.49 ^[a]
Angular diameter	0.21" to 0.053"

From Wikipedia https://en.wikipedia.org/wiki/8_Flora
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