

Code samples: https://gist.github.com/AnnaGerber/e5f897b7 https://gist.github.com/AnnaGerber/e5f897b7 45e5f96da463

Rover Build instructions: https://t.co/x3J8ml0ddU

to avoid obstacles

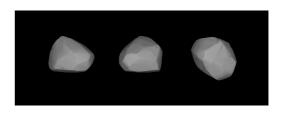
autonomously, using the ultrasonic sensor

- ultrasonic sensor Program your bot to drive around an area
- Beep when an obstacle is detected using the
 - Use buttons to toggle what is displayed
- Display the light reading on the digit display
- Here are some ideas for programming your bot:
 Display the temperature on the digit display

Your challenge is to build a NodeRover to explore the asteroid Astraea 5.

Welcome to International ModeBots day 2015!

Astraea (5)



system. Astraea is physically unremarkable but notable mainly because for 38 years (after the discovery of Vesta in 1807) it had been thought that there were only four asteroids. After the discovery of Astraea, thousands of other asteroids would follow. Indeed, the discovery of Astraea proved to be the starting point for the eventual demotion of the four original asteroids (which were regarded as planets at the time) to their current status, as it became apparent that these four were only the largest of a whole new type four were only the largest of a whole new type of celestial body.

5 Astraea is a large asteroid from the asteroid belt. Its surface is highly reflective (bright) and its composition is probably a mixture of nickeliron with silicates of magnesium and iron. It is an 5-type object in the Tholen classification

Physical characteristics 167×123×82 km^{[2][3]} 119 km (mean) 48 300 km^{2[4]} 882 000 km^{3[4]} 2.9×10¹⁸ kg^{[5][6]} (assumed)^[7] ~3.3 g/cm³ ~0.023 m/s² Surface gravity ~0.062 km/s Escape velocity 0.700 03 d (16.801 h)^[3] Rotation period 6.44 m/s^[4] rotation velocity 0.227 (geometric)[2] ~167 <u>K</u> **Temperature** max: 263 K (-10 °C) Spectral type S-type asteroid 8.74 to 12.89 Apparent magnitude 6.85 Absolute magnitude (H) 0.15" to 0.041" Angular diameter

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