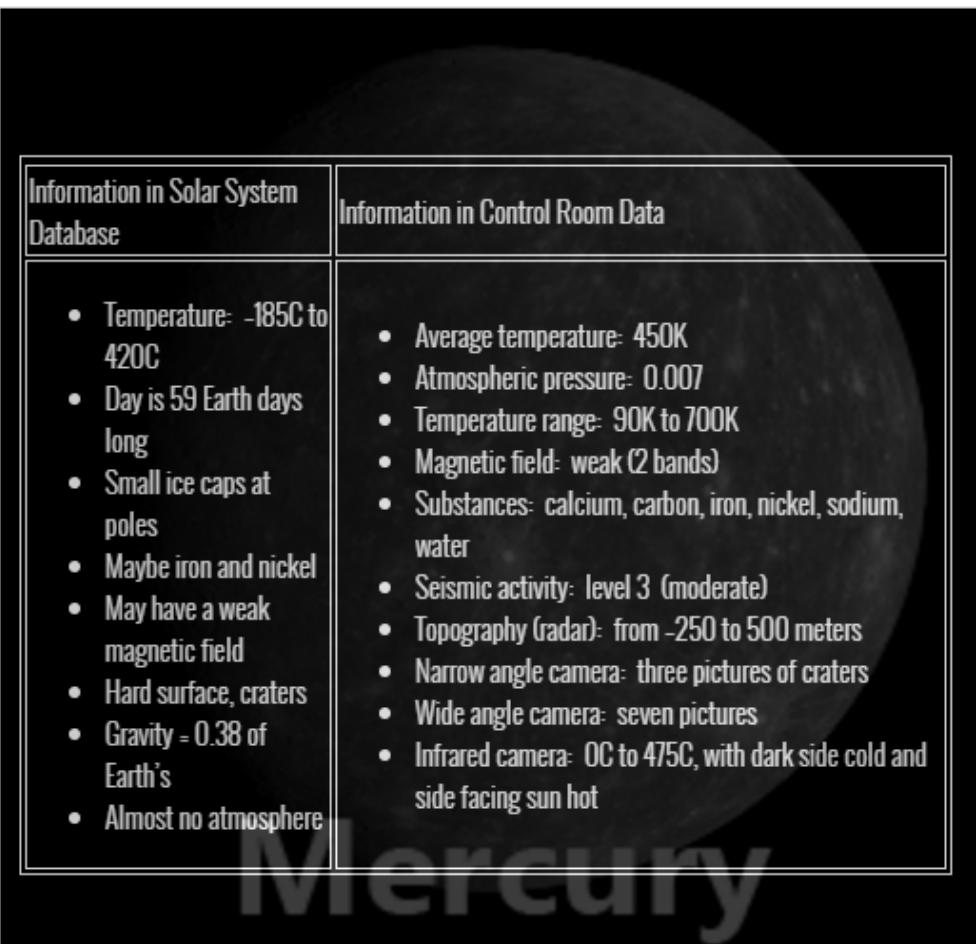


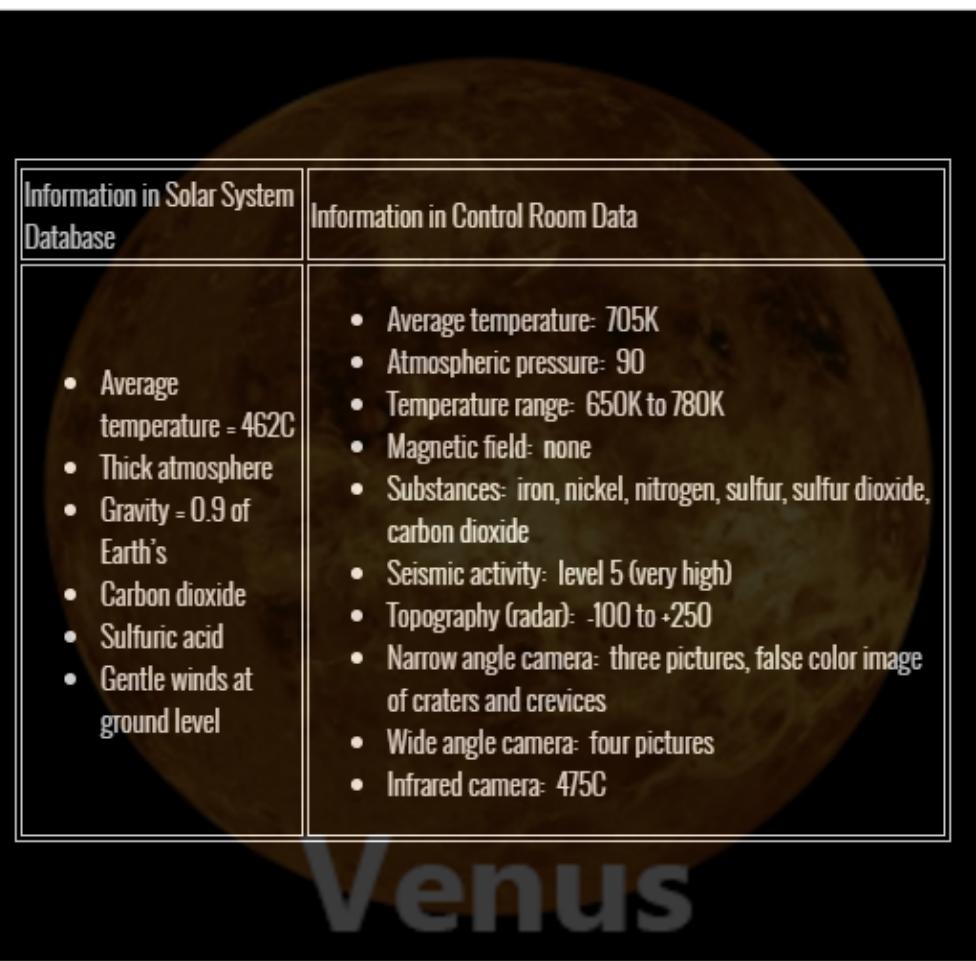
# Information about Worlds in our Solar System

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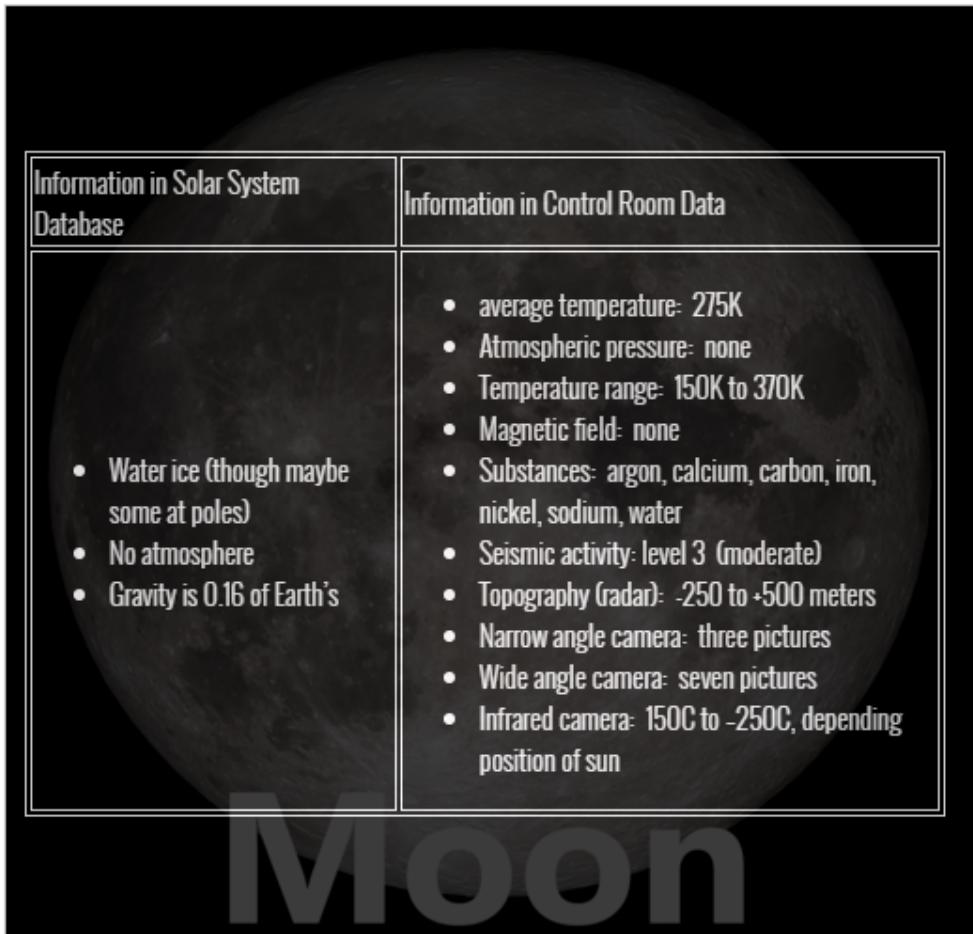
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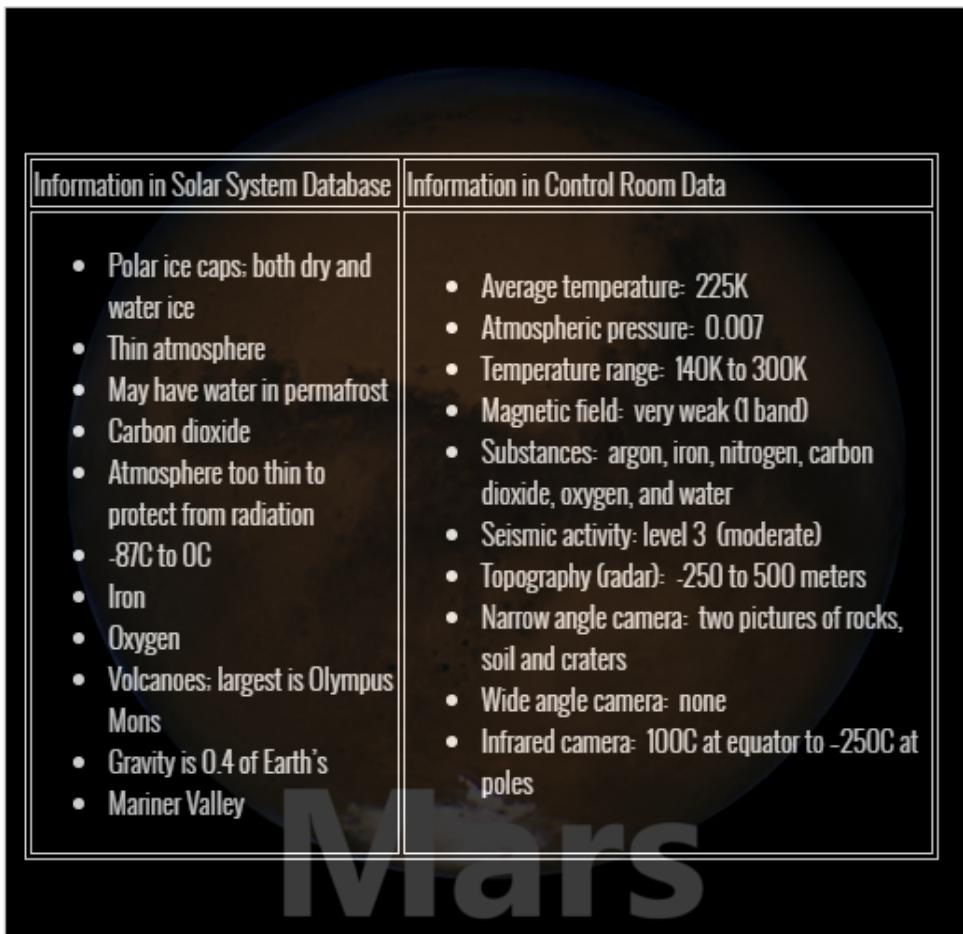
Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• Temperature: -185C to 420C</li> <li>• Day is 59 Earth days long</li> <li>• Small ice caps at poles</li> <li>• Maybe iron and nickel</li> <li>• May have a weak magnetic field</li> <li>• Hard surface, craters</li> <li>• Gravity = 0.38 of Earth's</li> <li>• Almost no atmosphere</li> </ul>	<ul style="list-style-type: none"> <li>• Average temperature: 450K</li> <li>• Atmospheric pressure: 0.007</li> <li>• Temperature range: 90K to 700K</li> <li>• Magnetic field: weak (2 bands)</li> <li>• Substances: calcium, carbon, iron, nickel, sodium, water</li> <li>• Seismic activity: level 3 (moderate)</li> <li>• Topography (radar): from -250 to 500 meters</li> <li>• Narrow angle camera: three pictures of craters</li> <li>• Wide angle camera: seven pictures</li> <li>• Infrared camera: 0C to 475C, with dark side cold and side facing sun hot</li> </ul>



Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• Average temperature = 462C</li> <li>• Thick atmosphere</li> <li>• Gravity = 0.9 of Earth's</li> <li>• Carbon dioxide</li> <li>• Sulfuric acid</li> <li>• Gentle winds at ground level</li> </ul>	<ul style="list-style-type: none"> <li>• Average temperature: 705K</li> <li>• Atmospheric pressure: 90</li> <li>• Temperature range: 650K to 780K</li> <li>• Magnetic field: none</li> <li>• Substances: iron, nickel, nitrogen, sulfur, sulfur dioxide, carbon dioxide</li> <li>• Seismic activity: level 5 (very high)</li> <li>• Topography (radar): -100 to +250</li> <li>• Narrow angle camera: three pictures, false color image of craters and crevices</li> <li>• Wide angle camera: four pictures</li> <li>• Infrared camera: 475C</li> </ul>



Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• Water ice (though maybe some at poles)</li> <li>• No atmosphere</li> <li>• Gravity is 0.16 of Earth's</li> </ul>	<ul style="list-style-type: none"> <li>• average temperature: 275K</li> <li>• Atmospheric pressure: none</li> <li>• Temperature range: 150K to 370K</li> <li>• Magnetic field: none</li> <li>• Substances: argon, calcium, carbon, iron, nickel, sodium, water</li> <li>• Seismic activity: level 3 (moderate)</li> <li>• Topography (radar): -250 to +500 meters</li> <li>• Narrow angle camera: three pictures</li> <li>• Wide angle camera: seven pictures</li> <li>• Infrared camera: 150C to -250C, depending position of sun</li> </ul>



Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• Polar ice caps: both dry and water ice</li> <li>• Thin atmosphere</li> <li>• May have water in permafrost</li> <li>• Carbon dioxide</li> <li>• Atmosphere too thin to protect from radiation</li> <li>• -87C to 0C</li> <li>• Iron</li> <li>• Oxygen</li> <li>• Volcanoes: largest is Olympus Mons</li> <li>• Gravity is 0.4 of Earth's</li> <li>• Mariner Valley</li> </ul>	<ul style="list-style-type: none"> <li>• Average temperature: 225K</li> <li>• Atmospheric pressure: 0.007</li> <li>• Temperature range: 140K to 300K</li> <li>• Magnetic field: very weak (1 band)</li> <li>• Substances: argon, iron, nitrogen, carbon dioxide, oxygen, and water</li> <li>• Seismic activity: level 3 (moderate)</li> <li>• Topography (radar): -250 to 500 meters</li> <li>• Narrow angle camera: two pictures of rocks, soil and craters</li> <li>• Wide angle camera: none</li> <li>• Infrared camera: 100C at equator to -250C at poles</li> </ul>

Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• Gravity = 0.0008 of Earth's</li> <li>• No atmosphere</li> <li>• Dry</li> <li>• Cracks in surface may contain water ice</li> </ul>	<ul style="list-style-type: none"> <li>• Average temperature: 230K</li> <li>• Atmospheric pressure: none</li> <li>• Temperature range: 140K to 420K</li> <li>• Magnetic field: none</li> <li>• Substances: carbon, iron, nickel, sodium, water</li> <li>• Seismic activity: level 2 (low)</li> <li>• Topography (radar): 150 to -250 meters</li> <li>• Narrow angle camera: two pictures of craters</li> <li>• Wide angle camera: four pictures of craters and rocks</li> <li>• Infrared camera: malfunction</li> </ul>

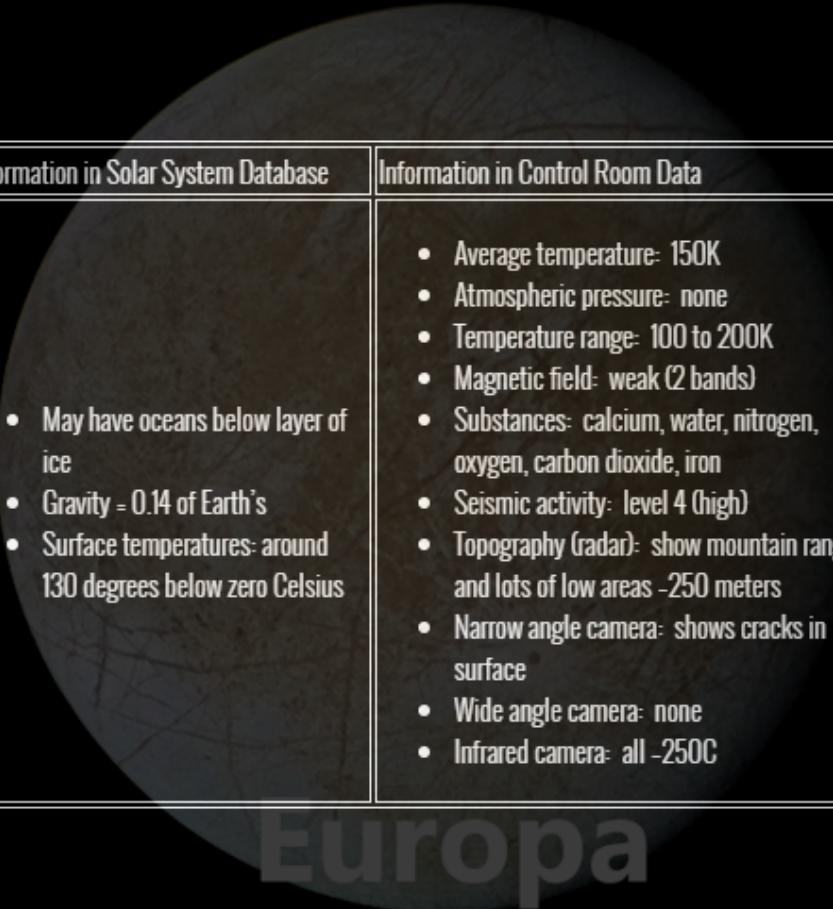
**Phobos**

Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• No atmosphere</li> <li>• Gravity = 0.0003 of Earth's</li> </ul>	<ul style="list-style-type: none"> <li>• Average temperature: 225K</li> <li>• Atmospheric pressure: none</li> <li>• Temperature range: 140K to 380K</li> <li>• Magnetic field: none</li> <li>• Substances: carbon, nickel, iron, and sodium</li> <li>• Seismic activity: level 1 (very low)</li> <li>• Topography (radar): 200 to -250 meters</li> <li>• Narrow angle camera: one picture of craters</li> <li>• Wide angle camera: 6 pictures of rocks</li> <li>• Infrared camera: 100C to -250 C, depending on position of sun</li> </ul>

**Deimos**

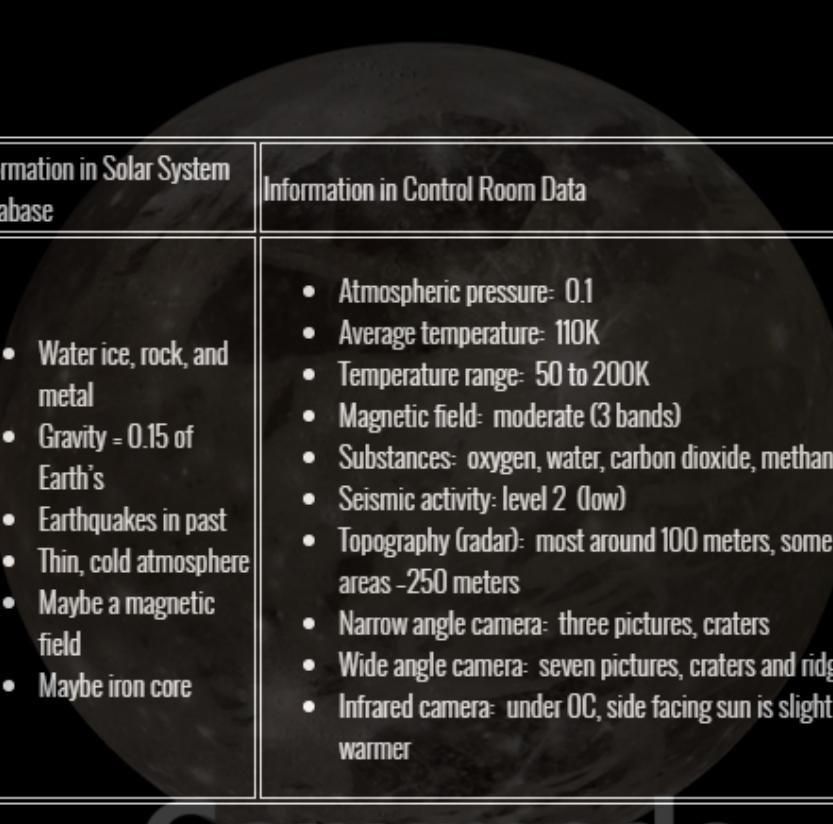
Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• Gravity = 2.54 of Earth's</li> <li>• Core temperature = 24,000C</li> <li>• High atmospheric pressure</li> <li>• Cloud top temperature = -120C</li> <li>• Fast winds, storms</li> <li>• Hydrogen, helium, methane, and ammonia</li> <li>• Strong magnetic field</li> </ul>	<ul style="list-style-type: none"> <li>• Average temperature: N/A</li> <li>• Atmospheric pressure: 600</li> <li>• Temperature range: rises as you fall through atmosphere</li> <li>• Magnetic field: very strong (9 bands)</li> <li>• Substances: lots of hydrogen, helium, some methane</li> <li>• Seismic activity: malfunction</li> <li>• Topography (radar): whole range -250 to 500 meters</li> <li>• Narrow angle camera: three pictures</li> <li>• Wide angle camera: eight pictures, lightning</li> <li>• Infrared camera: all between -100 and -250C, does not show Great Red Spot</li> </ul>

Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• Gravity = 0.19 of Earth's</li> <li>• Active volcanoes</li> <li>• Sulfur</li> <li>• Thin atmosphere</li> <li>• Sodium, sulfur dioxide</li> <li>• 500C in some places, colder in others</li> </ul>	<ul style="list-style-type: none"> <li>• average temperature: 200K</li> <li>• Atmospheric pressure: 0.05</li> <li>• Temperature range: 150 to 280K</li> <li>• Magnetic field: weak (2 bands) substances: iron, nickel, sodium, sulfur, sulfur dioxide</li> <li>• Seismic activity: level 5 (very high)</li> <li>• Topography (radar): shows mountain ranges, great variety, -250 to 500 meters</li> <li>• Narrow angle camera: three pictures</li> <li>• Wide angle camera: six pictures, volcanic activity</li> <li>• Infrared camera: shows hot spots around volcanoes, but much is well below -100C</li> </ul>



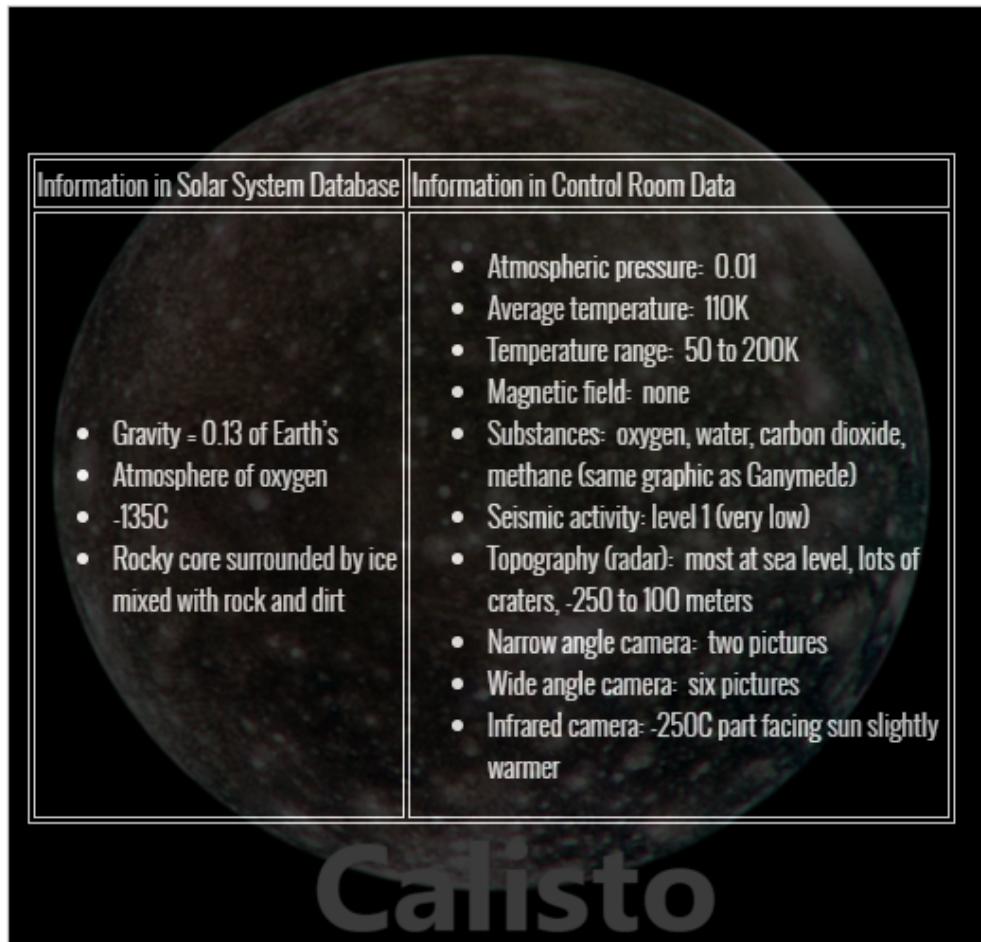
Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>May have oceans below layer of ice</li> <li>Gravity = 0.14 of Earth's</li> <li>Surface temperatures: around 130 degrees below zero Celsius</li> </ul>	<ul style="list-style-type: none"> <li>Average temperature: 150K</li> <li>Atmospheric pressure: none</li> <li>Temperature range: 100 to 200K</li> <li>Magnetic field: weak (2 bands)</li> <li>Substances: calcium, water, nitrogen, oxygen, carbon dioxide, iron</li> <li>Seismic activity: level 4 (high)</li> <li>Topography (radar): show mountain ranges and lots of low areas -250 meters</li> <li>Narrow angle camera: shows cracks in surface</li> <li>Wide angle camera: none</li> <li>Infrared camera: all -250C</li> </ul>

**Europa**



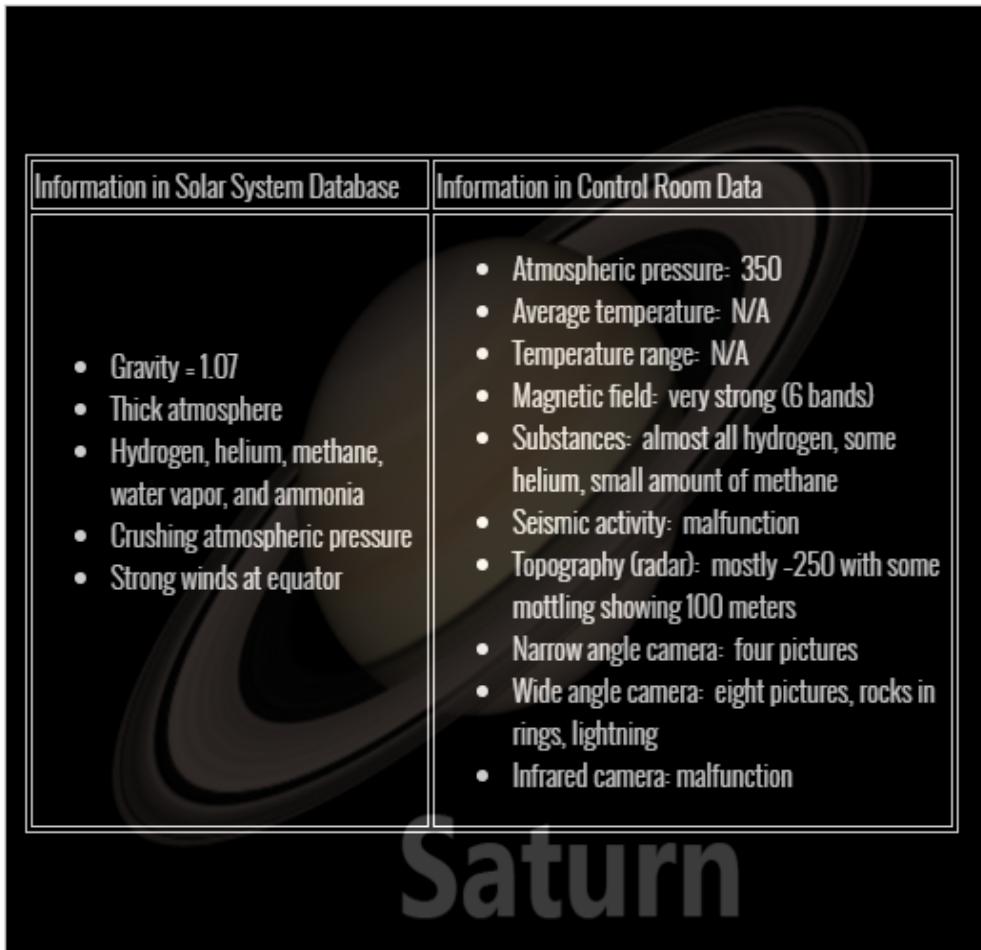
Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>Water ice, rock, and metal</li> <li>Gravity = 0.15 of Earth's</li> <li>Earthquakes in past</li> <li>Thin, cold atmosphere</li> <li>Maybe a magnetic field</li> <li>Maybe iron core</li> </ul>	<ul style="list-style-type: none"> <li>Atmospheric pressure: 0.1</li> <li>Average temperature: 110K</li> <li>Temperature range: 50 to 200K</li> <li>Magnetic field: moderate (3 bands)</li> <li>Substances: oxygen, water, carbon dioxide, methane</li> <li>Seismic activity: level 2 (low)</li> <li>Topography (radar): most around 100 meters, some areas -250 meters</li> <li>Narrow angle camera: three pictures, craters</li> <li>Wide angle camera: seven pictures, craters and ridges</li> <li>Infrared camera: under 0C, side facing sun is slightly warmer</li> </ul>

**Ganymede**



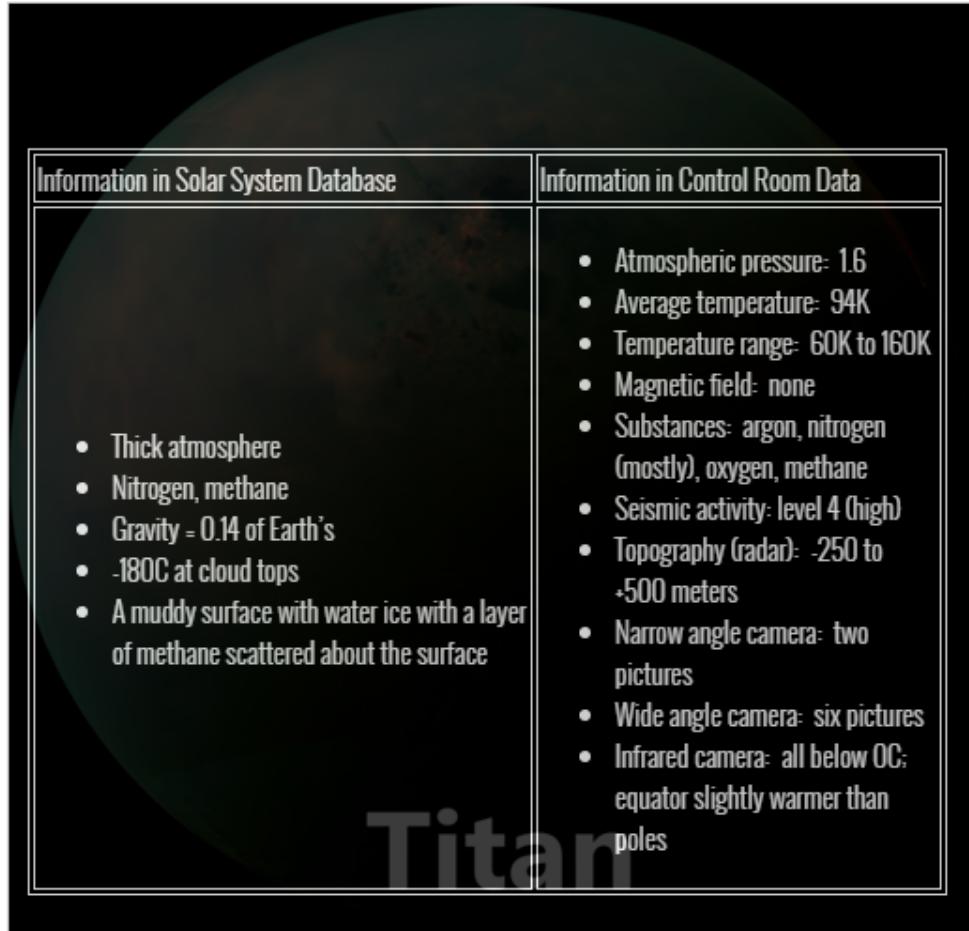
Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• Gravity - 0.13 of Earth's</li> <li>• Atmosphere of oxygen</li> <li>• -135C</li> <li>• Rocky core surrounded by ice mixed with rock and dirt</li> </ul>	<ul style="list-style-type: none"> <li>• Atmospheric pressure: 0.01</li> <li>• Average temperature: 110K</li> <li>• Temperature range: 50 to 200K</li> <li>• Magnetic field: none</li> <li>• Substances: oxygen, water, carbon dioxide, methane (same graphic as Ganymede)</li> <li>• Seismic activity: level 1 (very low)</li> <li>• Topography (radar): most at sea level, lots of craters, -250 to 100 meters</li> <li>• Narrow angle camera: two pictures</li> <li>• Wide angle camera: six pictures</li> <li>• Infrared camera: -250C part facing sun slightly warmer</li> </ul>

# Callisto

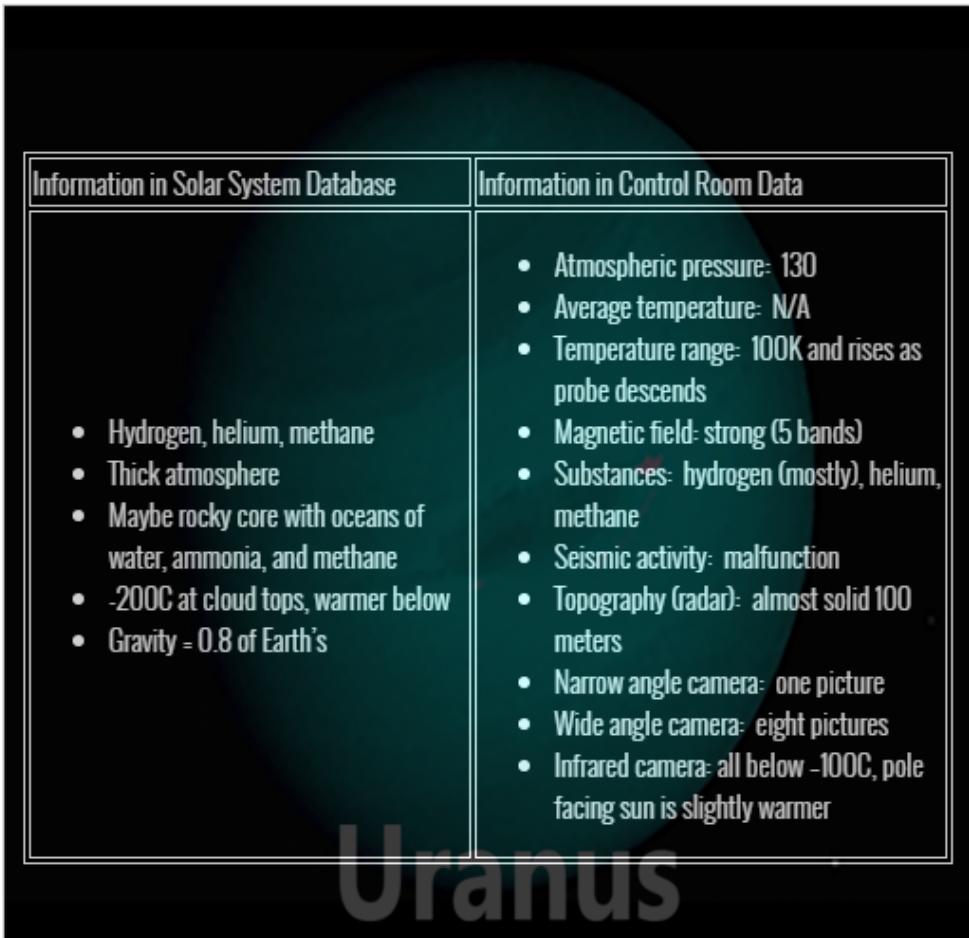


Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• Gravity - 1.07</li> <li>• Thick atmosphere</li> <li>• Hydrogen, helium, methane, water vapor, and ammonia</li> <li>• Crushing atmospheric pressure</li> <li>• Strong winds at equator</li> </ul>	<ul style="list-style-type: none"> <li>• Atmospheric pressure: 350</li> <li>• Average temperature: N/A</li> <li>• Temperature range: N/A</li> <li>• Magnetic field: very strong (6 bands)</li> <li>• Substances: almost all hydrogen, some helium, small amount of methane</li> <li>• Seismic activity: malfunction</li> <li>• Topography (radar): mostly -250 with some mottling showing 100 meters</li> <li>• Narrow angle camera: four pictures</li> <li>• Wide angle camera: eight pictures, rocks in rings, lightning</li> <li>• Infrared camera: malfunction</li> </ul>

# Saturn



Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• Thick atmosphere</li> <li>• Nitrogen, methane</li> <li>• Gravity = 0.14 of Earth's</li> <li>• -180C at cloud tops</li> <li>• A muddy surface with water ice with a layer of methane scattered about the surface</li> </ul>	<ul style="list-style-type: none"> <li>• Atmospheric pressure: 1.6</li> <li>• Average temperature: 94K</li> <li>• Temperature range: 60K to 160K</li> <li>• Magnetic field: none</li> <li>• Substances: argon, nitrogen (mostly), oxygen, methane</li> <li>• Seismic activity: level 4 (high)</li> <li>• Topography (radar): -250 to +500 meters</li> <li>• Narrow angle camera: two pictures</li> <li>• Wide angle camera: six pictures</li> <li>• Infrared camera: all below 0C; equator slightly warmer than poles</li> </ul>



Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• Hydrogen, helium, methane</li> <li>• Thick atmosphere</li> <li>• Maybe rocky core with oceans of water, ammonia, and methane</li> <li>• -200C at cloud tops, warmer below</li> <li>• Gravity = 0.8 of Earth's</li> </ul>	<ul style="list-style-type: none"> <li>• Atmospheric pressure: 130</li> <li>• Average temperature: N/A</li> <li>• Temperature range: 100K and rises as probe descends</li> <li>• Magnetic field: strong (5 bands)</li> <li>• Substances: hydrogen (mostly), helium, methane</li> <li>• Seismic activity: malfunction</li> <li>• Topography (radar): almost solid 100 meters</li> <li>• Narrow angle camera: one picture</li> <li>• Wide angle camera: eight pictures</li> <li>• Infrared camera: all below -100C, pole facing sun is slightly warmer</li> </ul>

Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>Hydrogen, helium, methane</li> <li>-200C at cloud tops</li> <li>Rocky core may be surrounded by water, ammonia, and methane</li> <li>Gravity = 1.2 of Earth's</li> <li>Thick atmosphere</li> </ul>	<ul style="list-style-type: none"> <li>Atmospheric pressure: 120</li> <li>Average temperature: N/A</li> <li>Temperature range: 100K and rises as probe descends</li> <li>Magnetic field: strong (5 bands)</li> <li>Substances: hydrogen (mostly), helium, methane, water</li> <li>Seismic activity: malfunction</li> <li>Topography (radar): mostly around 200 meters: has bands</li> <li>Narrow angle camera: two pictures of great dark spot</li> <li>Wide angle camera: seven pictures</li> <li>Infrared camera: all below -100C</li> </ul>

# Neptune

Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>Geysers</li> <li>Average temperature: -235C</li> <li>Thin atmosphere</li> <li>Nitrogen, methane</li> <li>Gravity = 0.08 of Earth's</li> </ul>	<ul style="list-style-type: none"> <li>Atmospheric pressure: 0.001</li> <li>Average temperature: 39K</li> <li>Temperature range: constant at 39K</li> <li>Magnetic field: none</li> <li>Substances: nitrogen, methane, argon, calcium, iron, nickel, oxygen</li> <li>Seismic activity: level 2 (low)</li> <li>Topography (radar): -250 to 500 meters</li> <li>Narrow angle camera: two` pictures</li> <li>Wide angle camera: eight pictures, ridges</li> <li>Infrared camera: almost solid -250C</li> </ul>

# Triton

Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• gravity = 0.07 of Earth's</li> <li>• May have a thin atmosphere of nitrogen, methane, and carbon monoxide</li> <li>• Icy surface</li> <li>• Surface temperature: -263C</li> </ul>	<ul style="list-style-type: none"> <li>• Atmospheric pressure: 0.01</li> <li>• Average temperature: 40K</li> <li>• Temperature range: 33-47K</li> <li>• Magnetic field: malfunction</li> <li>• Substances: carbon, iron, nickel, nitrogen, sodium, methane, water</li> <li>• Seismic activity: level 3 (moderate)</li> <li>• Topography (radar): shows variety, -250 to +300 meters</li> <li>• Narrow angle camera: two pictures</li> <li>• Wide angle camera: seven pictures, uneven surface</li> <li>• Infrared camera: almost solid -250C</li> </ul>

**Pluto**

Information in Solar System Database	Information in Control Room Data
<ul style="list-style-type: none"> <li>• Low gravity</li> <li>• Temperature is below -200C</li> <li>• Water crystals on the surface</li> </ul>	<ul style="list-style-type: none"> <li>• Atmospheric pressure: none</li> <li>• Average temperature: 63K</li> <li>• Temperature range: 53-73K</li> <li>• Magnetic field: none</li> <li>• Substances: carbon, iron, nitrogen, sodium, water, methane</li> <li>• Seismic activity: level 1 (very low)</li> <li>• Topography (radar): -250 to 100 meters; cratered</li> <li>• Narrow angle camera: one picture</li> <li>• Wide angle camera: five pictures, hilly</li> <li>• Infrared camera: almost all -250 C</li> </ul>

**Charon**