## Head north for an out-of-this world adventure!

#### What makes the MSS Model so special?

- This is a scavenger hunt on a grand scale.
- The model allows you to get a sense of the scope of our solar system by driving it mile by mile.
- This tourist attraction won't be shut down or cancelled and is social distancing-friendly!

### **Drive the Maine Solar System Model**

Traveling north: set your odometer to zero when leaving the Houlton Information Center. Traveling south: set your odometer to zero when leaving the U-shaped driveway in front of Preble Hall.

mi	km	Object/Location* D	iameter n inches	mi	km
0.0	0.0	Sun, west, UMPI flagpole	598.0	40.0	64.4
0.3	0.5	<b>Mercury</b> , east, Griffith's Dealership	1.1	39.7	63.9
0.6	1.0	Venus, west, Chamber of Commerce	5.2	39.4	63.4
1.0	1.6	Earth, east, Percy's Auto Sales	5.5	39.0	62.8
1.4	2.3	Mars, east, "Welcome to Presque Isle" sign	2.9	38.6	62.1
2.5	4.0	<b>Ceres</b> , east, Kingdom Hall of Jehovah's Witness	es 0.4	37.5	60.4
5.2	8.4	Jupiter, west, across from farm	61.4	34.8	56.0
9.7	15.6	Saturn, east, near top of hill	51.9	30.3	48.8
20.7	33.3	<b>Uranus</b> , east, Bridgewater	22.0	19.3	31.1
31.7	51.0	Neptune, west, Littleton	21.3	8.3	13.4
33.0	53.1	Pluto (present), west, S. Aroostook Ag. Museum	1.0	7.0	11.2
40.0	64.4	Pluto (average), Houlton Tourist Info Center	1.0	0.0	0.0
94.6	152.2	Eris, east, Topsfield, near Veterans Memorial	1.0		

east/west refers to which side of the road the planet is located

1 mile = the distance from the Earth to the Sun, known as the "astronomical unit"



### We built this model

The MSS Model was constructed without formal sponsors or grants, and essentially on a zero budget. It is a tribute to the hard work and community ethic of the People of Northern Maine.

Built between 1999 and 2003 as a community project, the model was established with the help of over 700 volunteers. Work included everything from fabricating the steel and fiberglass planets and moons, to creating the posts on which they sit, to constructing their bases and installing them. For the full listing of those involved, please see the History section of our MSS Model website.

When originally built, the MSS Model included nine planets and seven moons. It was expanded to include three dwarf planets in 2008. Improvements for the Sun and an expansion including two additional dwarf planets are planned.

> Promotional materials made possible by a grant from the Maine Office of Tourism



Check out www.visitmaine.com for additional statewide information.



www.mainesolarsystem.com 207-768-9452

Please do not climb or hang from models. Do not park on emergency lanes.

### **ONE OF THE WORLD'S LARGEST SCALE MODELS**

The Maine Solar System MODEL



SYST

BUILT BY THE COMMUNITY OF NORTHERN MAIN IN COOPERATION WITH THE UNIVERSITY OF MAINE AT PRESQUE ISLE

Discover the Maine Solar System Model, the largest 3-D scale model of the solar system in the western hemisphere.

If you've ever wanted to experience space travel and a sense of just how big our solar system is, all you need to do is take a drive to Aroostook County. Northern Maine is the proud home of the Maine Solar System Model. Just travel along U.S. Route 1-all celestial bodies, except the Pluto model located in the Houlton Tourist Information Center and the Sun, are visible from the road. The model extends for nearly 100 miles from the Sun at the University of Maine at Presque Isle to the dwarf planet Eris in Topsfield.

If you take in the whole solar system, you'll see the Sun, nine planets, seven moons, and three dwarf planets. Each mile along the way equals 1 astronomical unit (distance from the Earth to Sun, or 93 million miles).

Since the MSS Model was unveiled in 2003. it has served as an educational resource and attracted tourists from all over the country, and even the world, to Aroostook County. The model has been featured in national media and publications such as Smithsonian, Air and Space, National Public Radio, Science, and AAA New England Journey. The installation stands as a testament to northern Maine and its commitment to education, community, and the can-do attitude that made the model possible.

### The Sun

Our Sun is a typical star, in its middle age. Temperatures in the Sun are hot enough to sustain fusion, which is where hydrogen atoms combine to form helium in a process that also releases energy in the form of light and heat.

### Mercury

This small planet revolves about the Sun in 88 Earth days and rotates on its axis in 59 Earth days. Mercury has no atmosphere and is pock-marked by meteorite craters. The planet's surface is extremely hot because of its proximity to the Sun.

Venus

Venus, our nearest planetary neighbor, is also similar in size to Earth. The surface of Venus, shown in our model, is not visible by telescopes because of the planet's thick cloud cover. The atmospheric conditions are inhospitable to humans.

# Earth & Moon

Earth is perhaps the System's most interesting planet. Atmospheric conditions allow for frequent movement of water in all three phases—solid, liquid, gas. The planet's 23-degree tilt produces seasonal changes. Continents move about over a somewhat liquid interior. Mountains form and are eroded. Earth makes 365 <sup>1</sup>/<sub>4</sub> rotations in one revolution about the Sun. Earth has a rather large Moon which revolves about the planet in 29 1/3 Earth days. The Moon also has a 29 1/3 day rotation, so that one hemisphere always faces the Earth. The Moon does not have an atmosphere.

### Mars

Mars is about half the diameter of Earth but has a more Earthlike atmosphere than any other planet in the System. The atmosphere is fairly thin and includes clouds. The surface may have small amounts of ice and water. Mars has two moons. Phobos and Deimos, but they are too small to be readily visible at the scale of our Solar System model.

### Jupiter, with four moons

Jupiter, the largest planet in the System, has a mostly gaseous composition. The atmosphere shows many storms, the most visible known as the Great Red Spot. There are many moons and a ring, but only the four Galilean Moons are readily visible at the scale of the Solar System model

#### Saturn, with Titan

Saturn, like Jupiter, is mostly a gaseous planet. The most visible feature is a prominent set of rings, which are thought to be made of ice. Saturn has many moons, but only one, Titan, is large enough to be easily shown in the Solar System model.

### Uranus

Uranus is an unusual planet. The axis is tilted so far that it is pointed roughtly towards the Sun. The moons of Uranus are too small to be easily illustrated by our Solar System mode

#### Neptune

Neptune has pronounced storm activity, including a Great Dark Spot that is similar to Jupiter's Great Red Spot. Neptune's many moons are too small for the scale of this model.

### **Dwarf Planets**

The dwarf planets, Ceres, Pluto, and Eris, are positioned at their present distances from the sun. Other dwarf planets will be added when formally recognized by the International Astronomical Union. A second Pluto is located at its average distance from the sun to show the extent of its elliptical orbit. Pluto's moon, Charon, is illustrated in the Solar System model despite its small size.

### **Dwarf Planets: Did you know?**

Ceres, the largest object in the asteroid belt, was discovered on January 1, 1801 (first day of the 19th century) by Giuseppe Piazzi, at the Academy of Palermo, in Sicily.

Pluto was discovered by Clyde Tombaugh at the Lowell Observatory in Flagstaff, Arizona, in 1930. Pluto has at least five moons, the largest of which, Charon, is included in the two Pluto models. The orbit is highly elliptical.

Eris is the most massive trans-Neptune object presently known, about 27% more massive than Pluto although only slightly larger. It was discovered in January, 2005 at the Palomar Observatory, and has one moon.







