

Pioneer Venus 1



The Pioneer Venus 1 (also known as the Pioneer Venus orbiter) was the first of a two-spacecraft orbiter-probe combination designed to conduct a comprehensive investigation of the atmosphere of Venus. It was the first American spacecraft to enter orbit around Venus, about three years after the Soviets accomplished the same feat.

The orbiter spacecraft was launched May 20, 1978. The spacecraft was a solar-powered cylinder about 8.3 feet (250 centimeters) in diameter.

It went into orbit around Venus on Dec. 4, 1978. The orbiter peered through the clouds and produced the first radar topographic map of most of the surface, at a resolution of 47 miles (75 kilometers). It found a relatively smooth planet, with the highest point, Maxwell Montes, at about seven miles (11 kilometers) above the surface. The orbiter's cameras also detected continuous lightning.

The spacecraft confirmed that Venus has little if any magnetic field.

Because of the nature of its orbit, Pioneer Venus 1 passed through the planet's bow shock twice per revolution, and using its magnetometer, scientists were able to observe how the planet's ionosphere interacted with the solar wind.

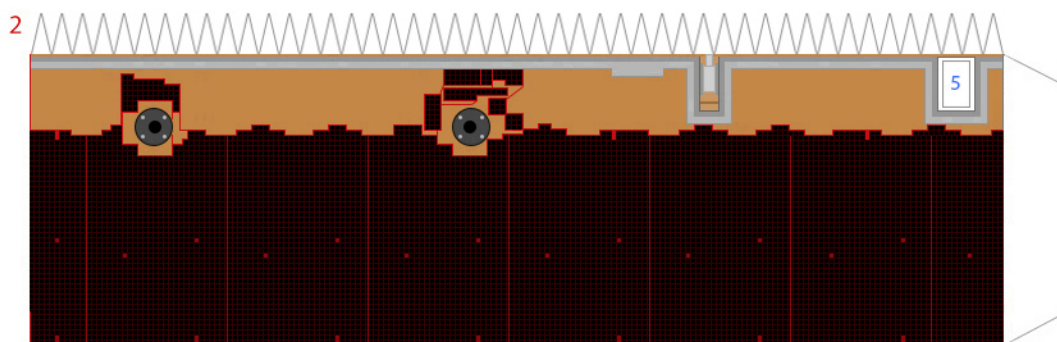
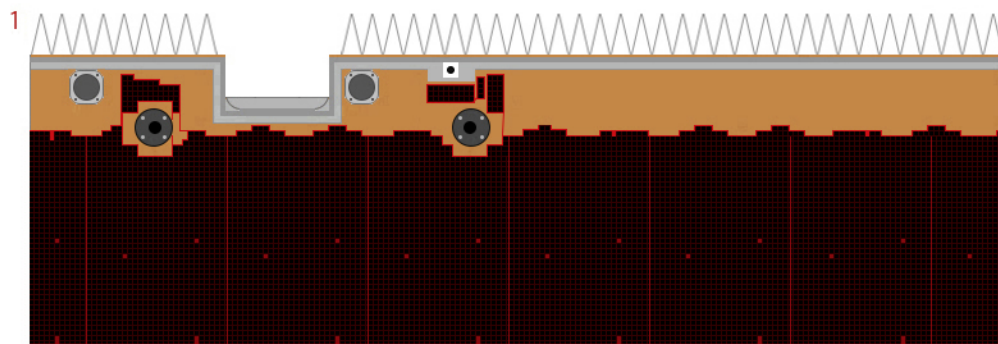
The mapping radar was switched off March 19, 1981, after having mapped 93 percent of the band between 74 degrees north latitude and 63 degrees south latitude. It was reactivated in 1991, 13 years after launch, to explore the previously inaccessible southern portions of the planet.

In May 1992, Pioneer Venus 1 began the final phase of its mission, maintaining its periapsis between 93 and 155 miles (150 and 250 kilometers) until propellant depletion.

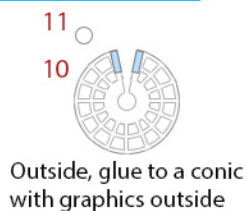
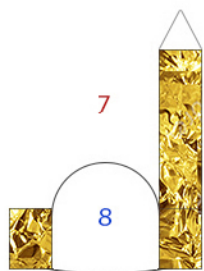
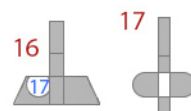
The last transmission was received at 19:22 UT Oct. 8, 1992, as its decaying orbit no longer permitted communications.

The spacecraft burned up the atmosphere soon after, ending a successful 14-year mission that was planned to last only eight months.

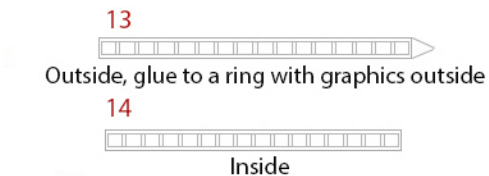
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Cut two (2) plastic broom straws the same length as the line below, colored white for the antennas.

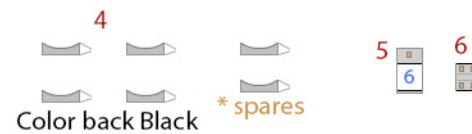


Cut plastic broom straw the same length as the line below, colored light grey or silver

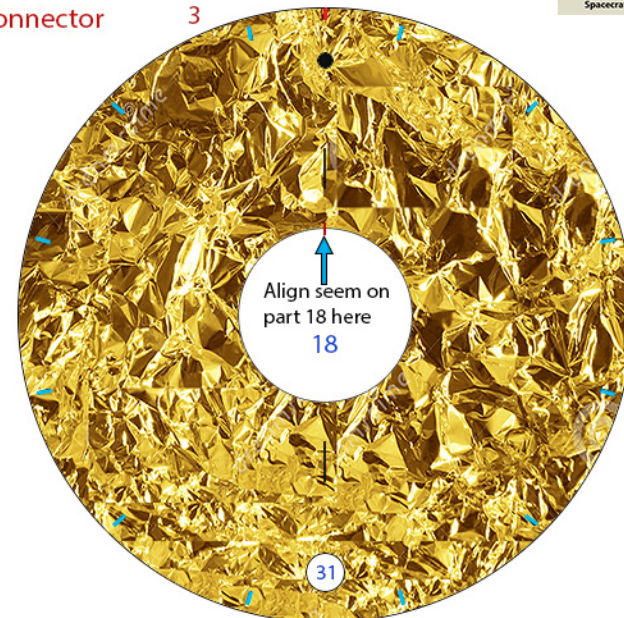


Color back light grey or silver

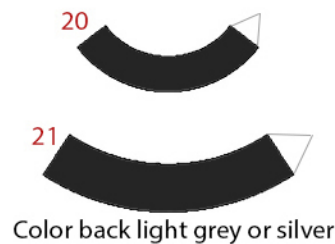
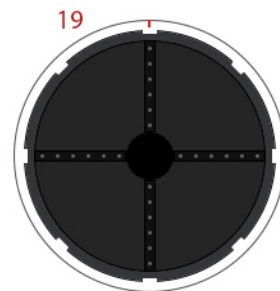
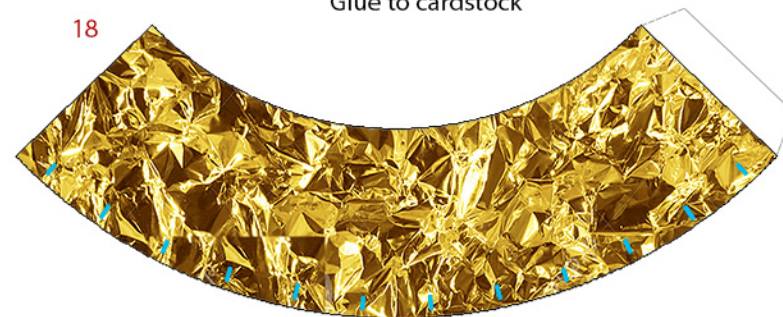
Glue Part 1 here
Glue Part 2 here



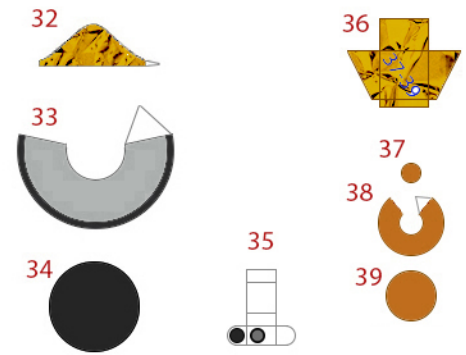
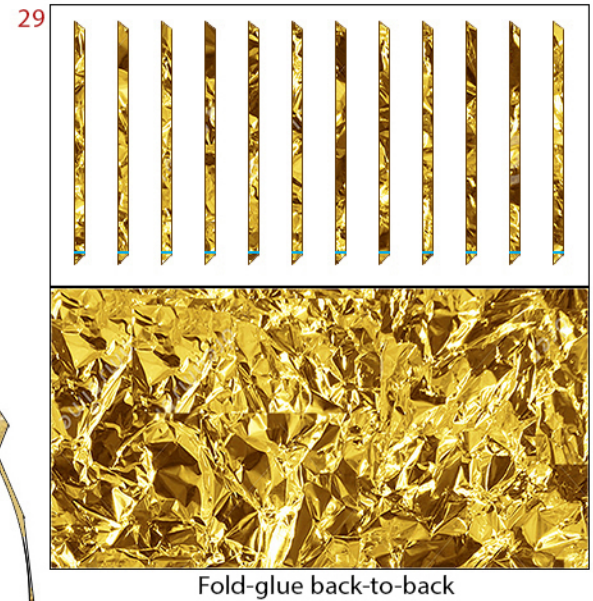
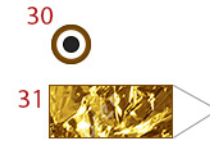
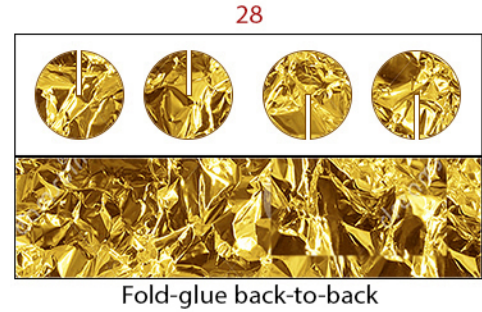
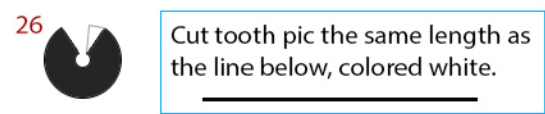
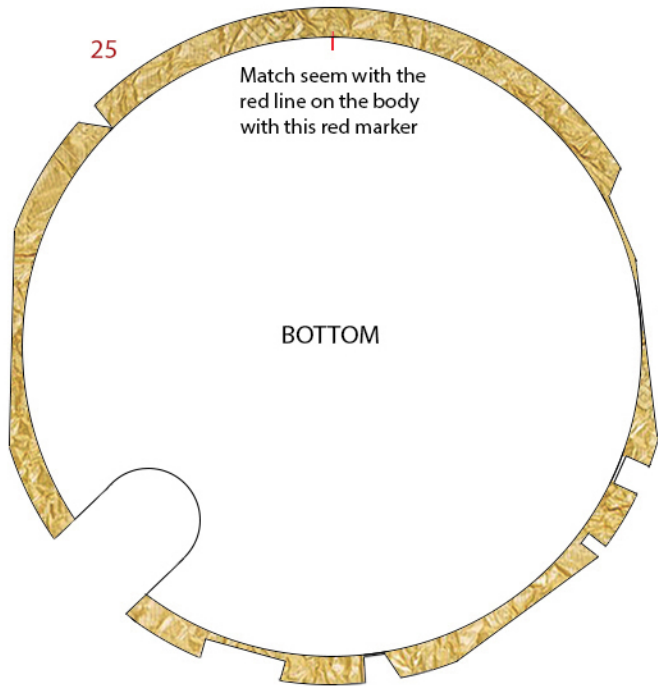
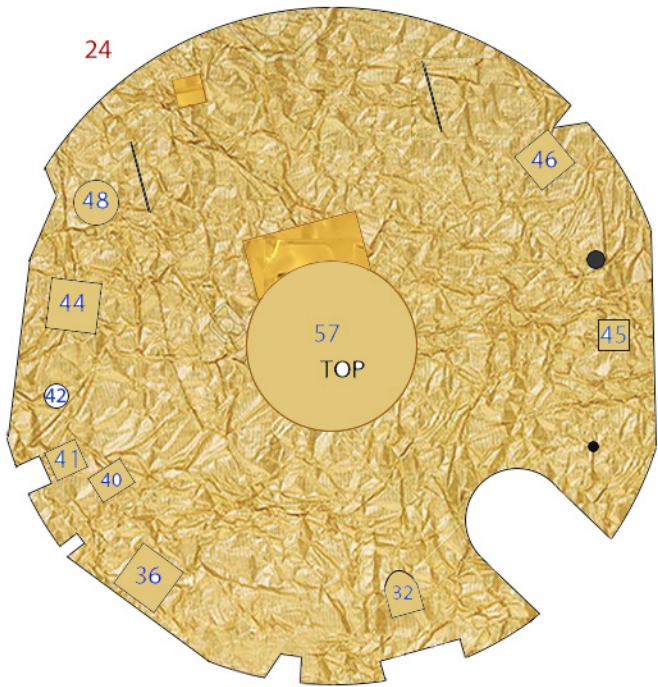
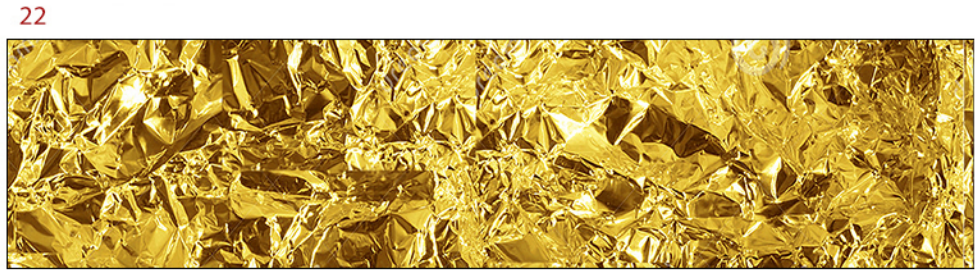
1 to 2
Connector



Glue to cardstock



Pioneer Venus 1



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40

Glue to
cardstock

41



42

Glue to
cardstock

43

color back Black

44



45

Glue to
cardstock

46



47



48



49



49



Glue each pair
back-to-back

50

glue to two
layers of
cardstock

51



52



53



Detailed version - roll each to a long-narrow conics, then glue together

50

glue to two
layers of
cardstock

54



55



Easy version - glue one of these to cardstock, then
back-to-back with the other one.

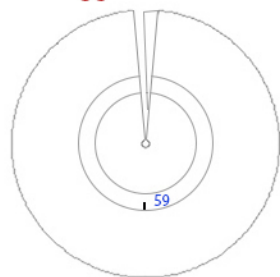
poke small hole on the black
dot to help the rod in place.

65



Cut acrylic rod or similar material that is
around 1.6 mm diameter the same
length as the line below, colored white.

58



59



60



61



63



62



64



68



69



fold-glue
back-to-back

71

Cut out the
blue dot

70

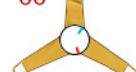


Fold-glue
back-to-back

72



66



Outside

67



inside

Glue back-to-back

56



57

