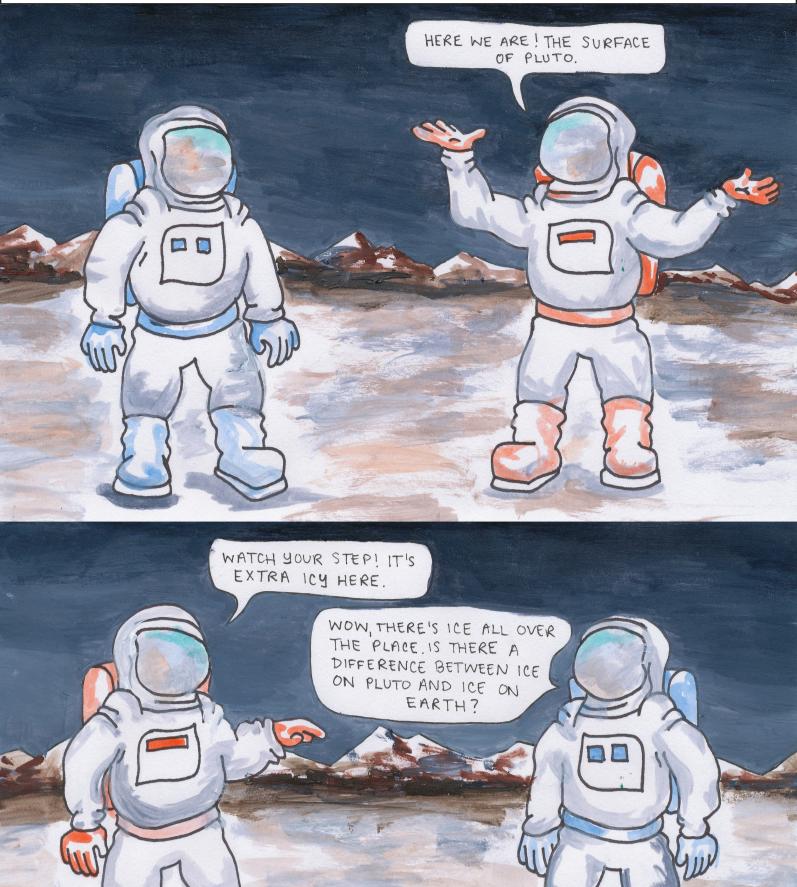
"What We've Learned About Pluto"

A journey two astronauts take across the surface of Pluto

Created & Illustrated by Kayla Byrnes April 11, 2016

(Disclaimer: We can't put astronauts on Pluto yet)



ON EARTH, ICE FREEZES SOLID. HERE ON PLUTO, NITROGEN, METHANE, AND CARBON DIOXIDE ALSO FREEZE SOLID.

> HOW COLD DOES IT HAVE TO GET FOR THAT TO HAPPEN?

EXTREMELY COLD! WE KNOW ICE HAS A MELTING POINT OF 273 KELVIN OR 32°F. NITROGEN'S MELTING POINT IS 63 K, WHICH IS AROUND - 346°F!

> CARBON MONOXIDE'S MELTING POINT IS 68 K AND METHANES IS 90 K.

DO YOU THINK PEOPLE WOULD BE SURPRISED IF THEY KNEW PLUTO HAD SO MANY ICE MOUNTAINS AND SNOWY NITROGEN-RICH PLAINS?

> YEAH, YOU'D EXPECT PLUTO TO LOOK LIKE A BALL WITH A BUNCH OF

CRATERS IN IT SINCE THE SUN IS THREE BILLION MILES AWAY AND DOESN'T PROVIDE MUCH ENERGY.

WHAT'S THAT MOUNTAIN OVER THERE? IT LOOKS LIKE A VOLCANO.

> IT'S CALLED WRIGHT MONS. IF NITROGEN FLOWS INTO THE INTERIOR OF PLUTO DEEP ENOUGH, IT MIGHT HEAT UP AND ERUPT LIKE AN ICE VOLCANO!

WRIGHT MONS IS HUGE, RISING ALMOST II,000 FEET AND SPANNING 90 MILES ACROSS.

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TO PUT THAT INTO PERSPECTIVE, EARTH'S LARGEST VOLCANO, MAUNA LOA, RISES 13,000 FEET AND SPANS 75 MILES ACROSS AT ITS MAXIMUM WIDTH.

WHAT'S THE ATMOSPHERE LIKE HERE?

> THE UPPER ATMOSPHERE IS MUCH COLDER AND NITROGEN IS ESCAPING MUCH SLOWER AT A

