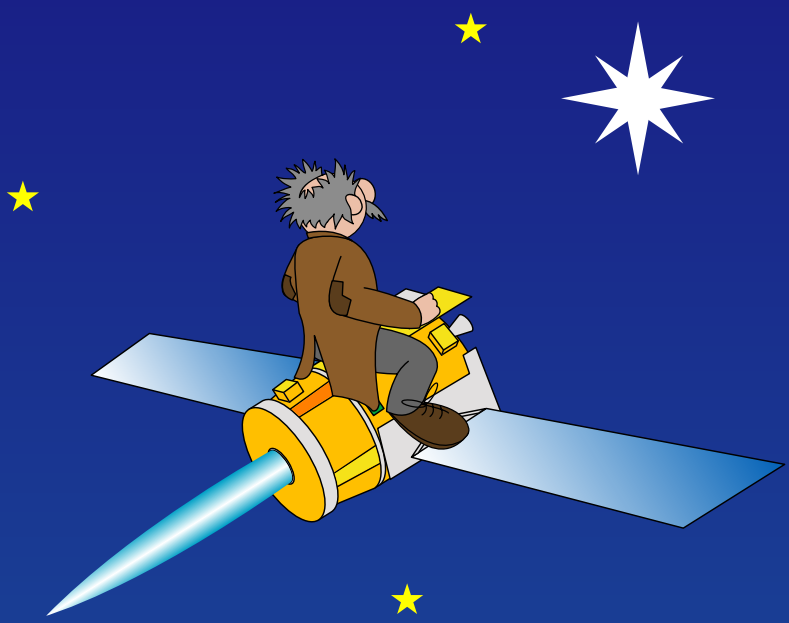
National Aeronautics and Space Administration

Professor Starr's Dream Trip:

or, how a little technology goes a long way



The story of NASA's New Millennium Program and how it makes scientists' dreams come true

Story by Diane K. Fisher
Illustrations by Alexander Novati

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Professor Starr, astronomer,
And all his students too
Gather 'round their telescope,
The universe in view.
Although bright light is all around
White, red, blue and green—
From planets, stars, and galaxies,
And dusty clouds between—

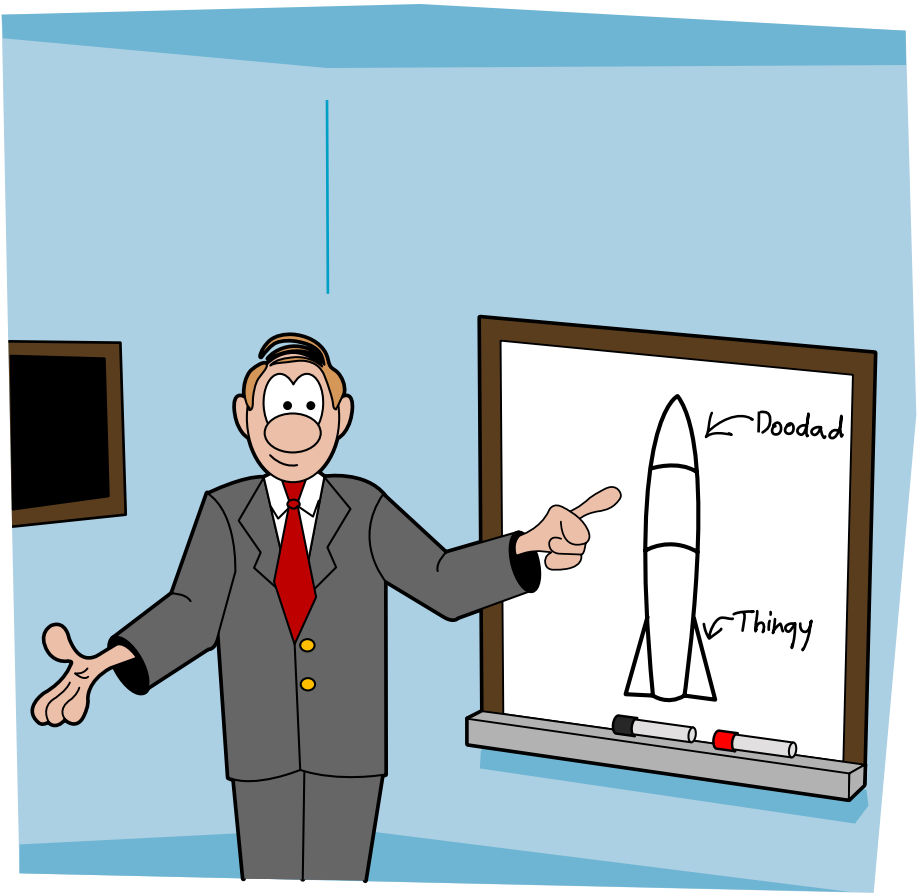
To see small things like asteroids
And comets, Pluto too,
A telescope stuck on the ground,
Though good—alas!—won't do.
"We need to get up close, fly by ...
Or orbit! That's the key!
We need some low-cost, smart, and nimble
New tech-nol-o-gy!

"What shall we do? Where shall we look?
How shall we get attention?
We need some clever brainwork,
Some techno-intervention!"
One spunky girl jumps up and shouts,
"I have a brilliant flash!
Let's call NASA! They've no doubt got
A technologic stash!"

"You're right! They must,
I've heard that said,"
Professor Starr looks brighter.
"We've got to find a way to make
Our techno-burden lighter!"
And so he visits NASA Central,
In Washington, DC,
Finds "New Millennium Program,"
For short, just "NMP."

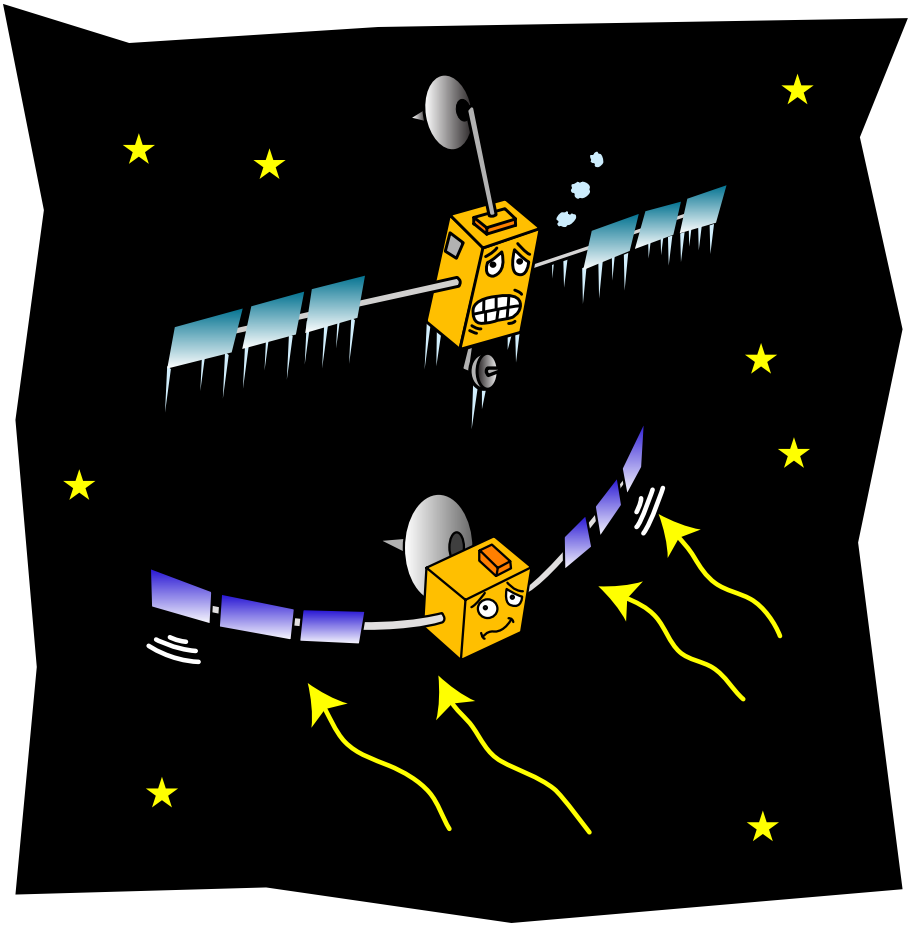
He pleads, "Please help! We've great ideas
For missions to explore
Some little objects out in space
Too special to ignore.
But don't know how to get there
And don't know how to stop
Don't know how to start again
For another planet hop."

The New Millennium boss replies,
"We greet and welcome YOU
For our job's to experiment
With gizmos bold and new.
So what new thing will boost your goal,
Will serve to fill your need?
More power from the sunlight?
New cameras? More speed?

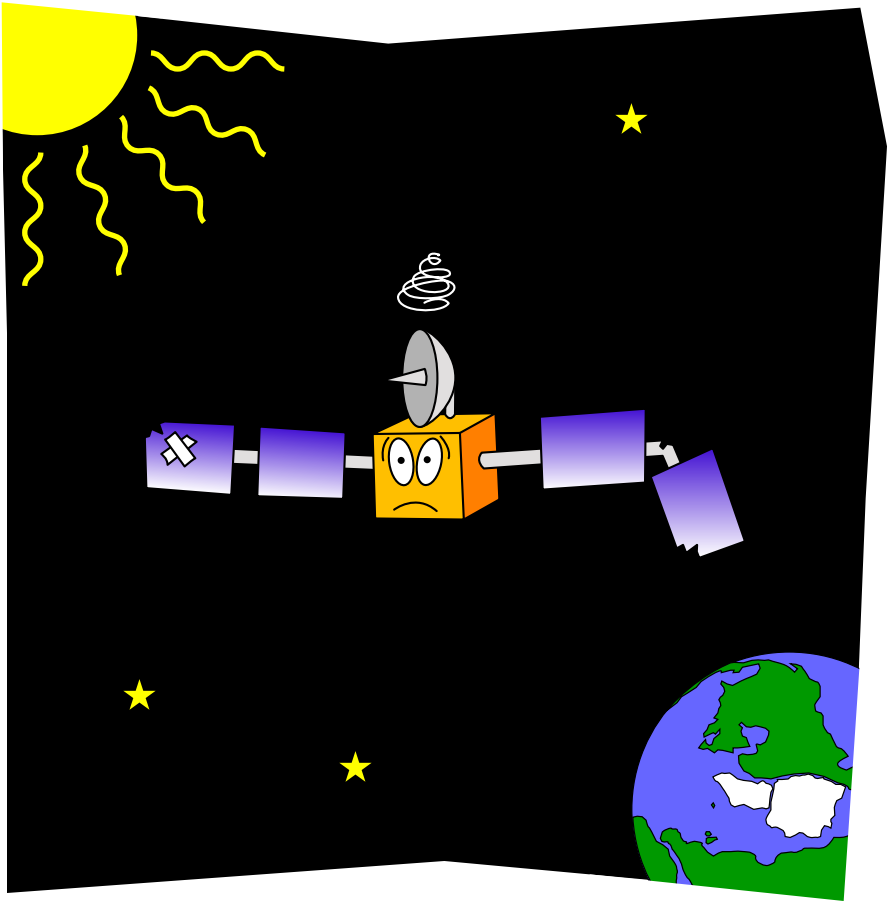


"Perhaps a spacecraft small and light
That doesn't cost a ransom
To launch above the atmosphere,
Now wouldn't that be handsome?
A computer with a program
To decide all by itself
What pictures are worth keeping?
Or a computer off-the-shelf

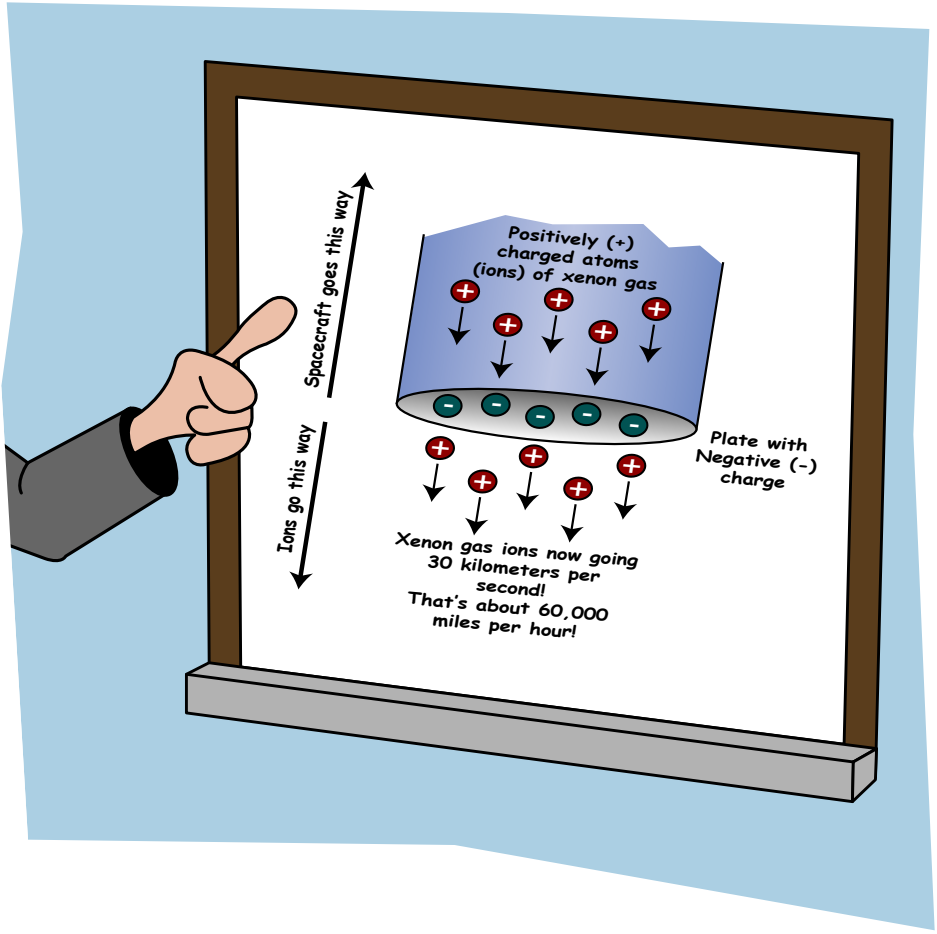
"That, with a little fixing up,
Could handle all the stresses
Of working hard in outer space
With all its harsh excesses?"
Professor Starr, with knitted brow,
Asks, "Aren't you too ambitious?
How can such fantastic stuff
Survive in space? It's vicious!



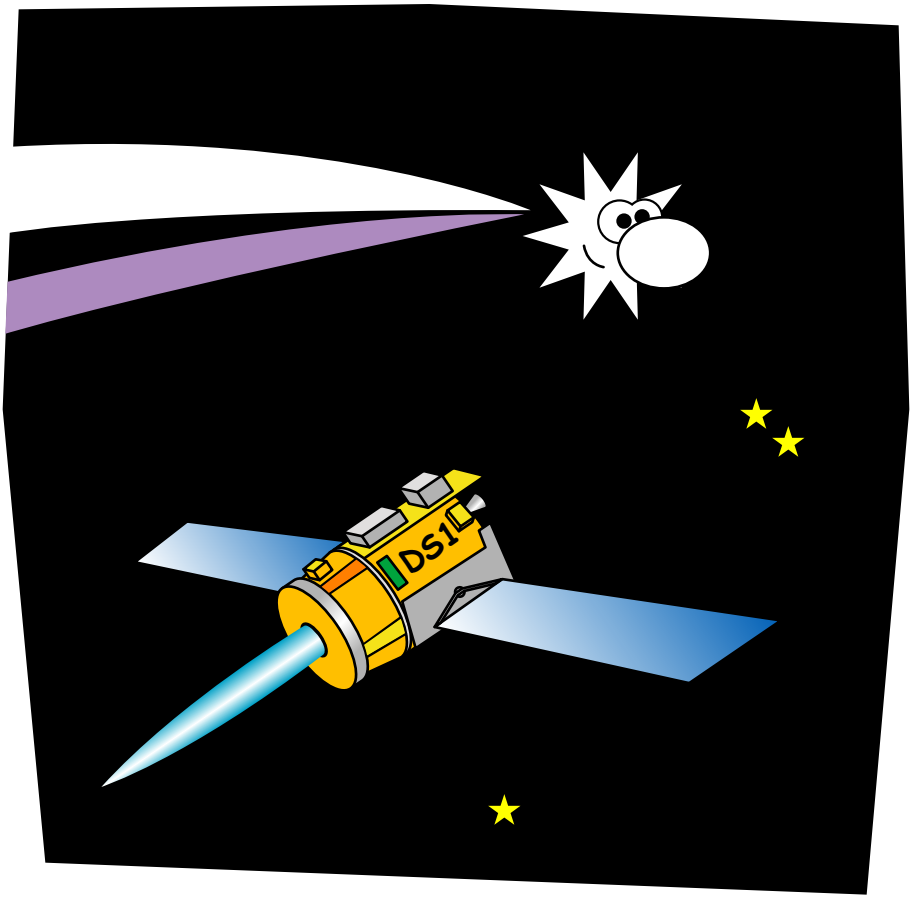
"There's heat and cold and Sun that blasts
All objects in its way,
The zero-g, no gravity!
A Galactic Cosmic Ray!
And what about the vacuum?
To say nothing of the shocks
Of blasting off from Mother Earth,
The rattles, and the knocks!



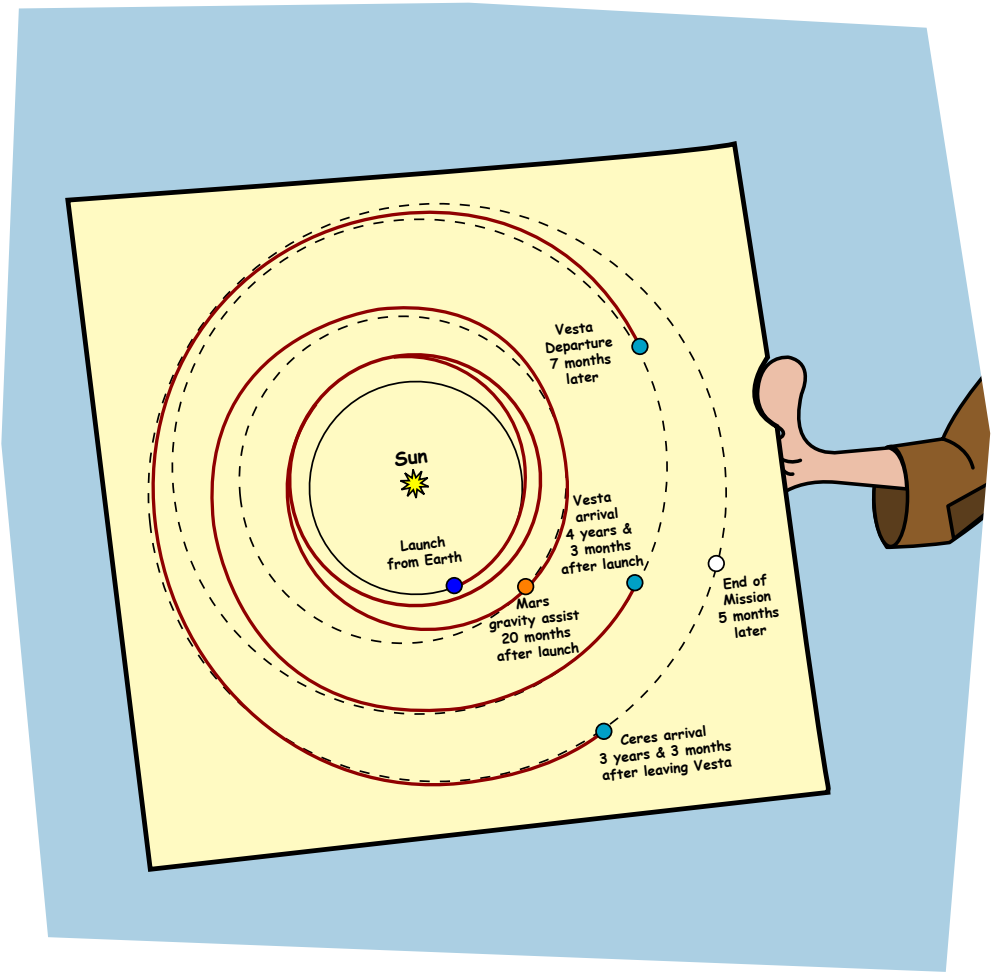
"We scientists don't want to risk
Our research—just in case—
Our gadgets that do fine on Earth
Don't work too well in space."
"Don't worry, sir," they reassure,
"We'll help your wish come true.
We'll test the right technology
To make it work for you!"



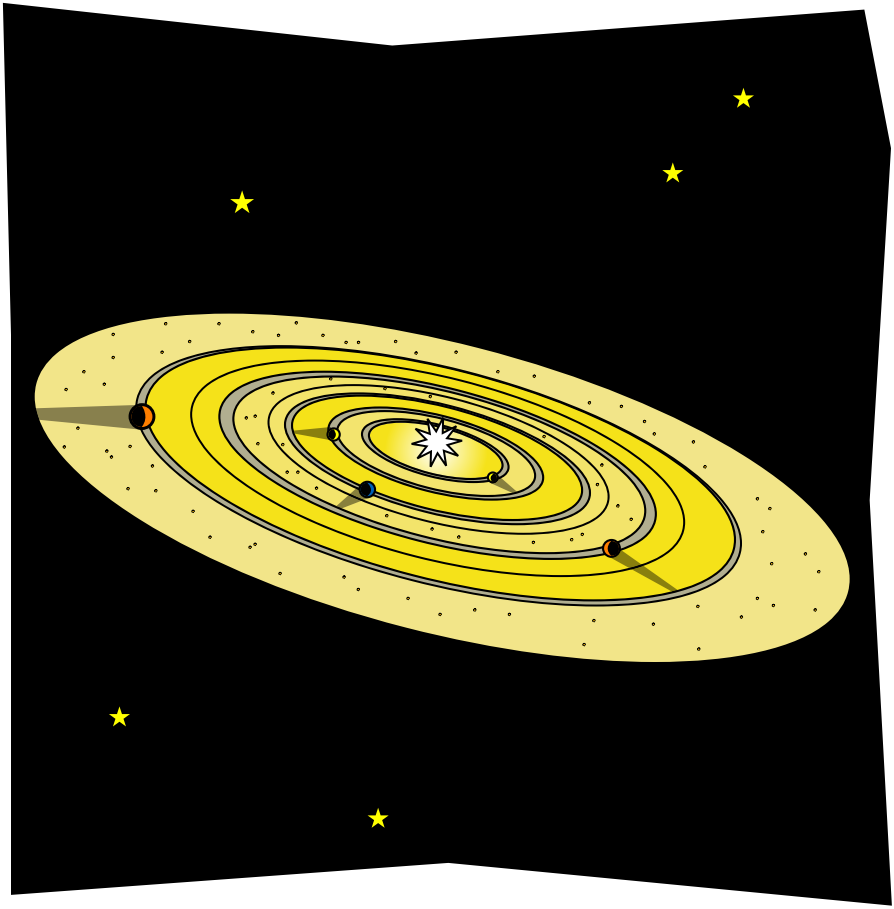
"An ion engine! That's the thing
Our dear friend Starr can use.
With its constant thrust on drops of fuel
His mission cannot lose!"
The NASA engineers run off
To test this innovation,
To find a spacecraft, plan the trip,
And pick a destination.



"Let's call the mission Deep Space One,
And send it into space,
We'll have it browse some asteroids,
And spy a comet's face!"
And so it does. It works just great!
The mission gets an A!
The ion engine's ready,
It is proven, it's OK!

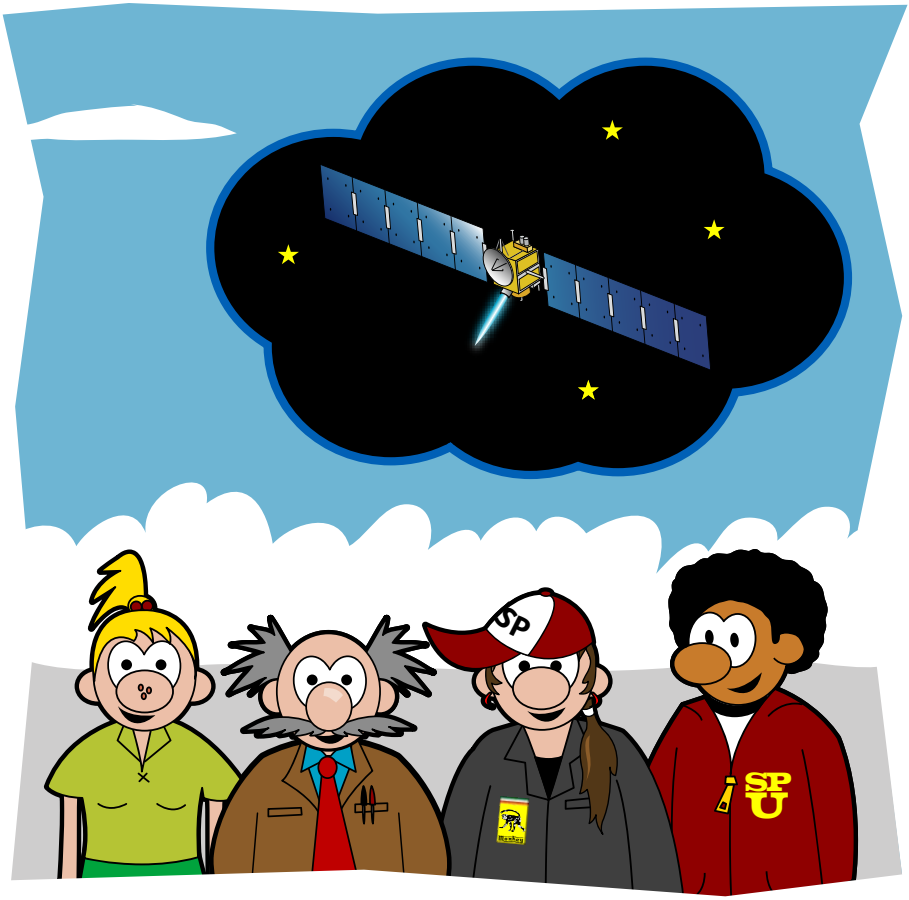


Professor Starr jumps right to work.
He knows just what to do!
He tells his students, "Let's just tour
An asteroid, or two.
We'll go to Vesta, Ceres too,
They're big, but not quite planets.
We'll orbit each, and stay awhile
And map it, sniff it, scan it.



"We'll call the mission Dawn because
It's going to explore
The dawning steps to planethood,
How planets were before.
We'll learn about their childhood.
We'll learn about their birth
And how the solar system made
A planet like our Earth."

Gladly for the Starr-y team,
Dawn's judged a worthy plan.
Technology has made it so,
Has soundly bridged the span
From dreamy wish to solid fact,
From visions into gold.
Now students of the stars will have
A way to plan more bold



Adventures using useful stuff,
Devices guaranteed,
Thanks to NASA's careful planning,
Much by NMP,
Listening, weighing, choosing, growing,
Testing, proving true.
"Just one last thing," says Starr, aglow,
"To NMP, thank you!"

THE END!

The New Millennium Program

NASA created the New Millennium Program to help space scientists explore space and our own home planet, Earth. With the scientists' advice, NMP decides what new technologies will help the most. Then, NMP finds ways to develop the technology for space, then test the new technology in space. This way, the scientists don't have to depend on risky technologies while doing their important science missions.

Learn about other technologies NMP has proven in space at:

nmp.nasa.gov/TECHNOLOGY/infusion.html.

For more information, visit:

nmp.nasa.gov
spaceplace.nasa.gov

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