

Exploring the Solar System I – Robots on Mars



Exploring the Solar System I

Robots on Mars

Mars and Martians

Landers and Rovers

What Have They Found?

What Next?



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Landers and Rovers

	Landers	Rovers
1976	Viking	
1997	Pathfinder	Sojourner
2004		Spirit
2004		Opportunity "Oppy"
2008	Phoenix	
2012		Curiosity
2018	Insight	
2020		Perseverance "Percy"

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Viking 1976

 First colour images

Carl Sagan provides scale for a model of the Viking lander

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Perseverance Launch

To get Perseverance to Mars needed a small Atlas rocket.

Apollo missions to the Moon in the 1960s needed the much larger Saturn V rocket. 

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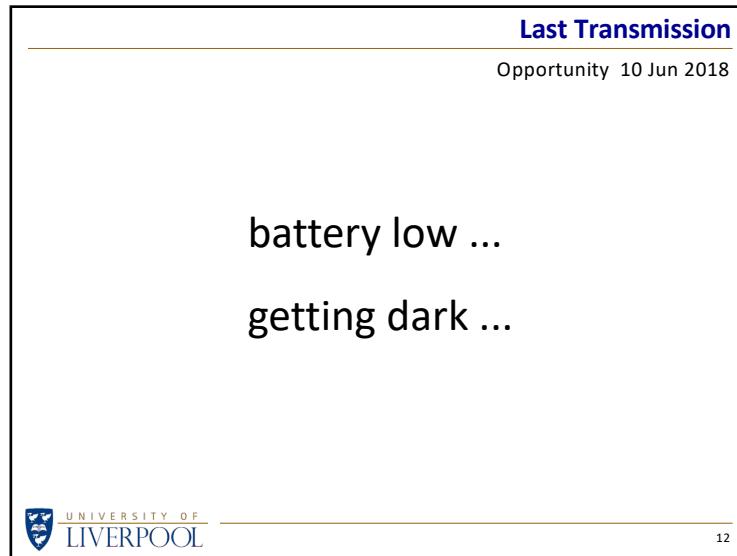
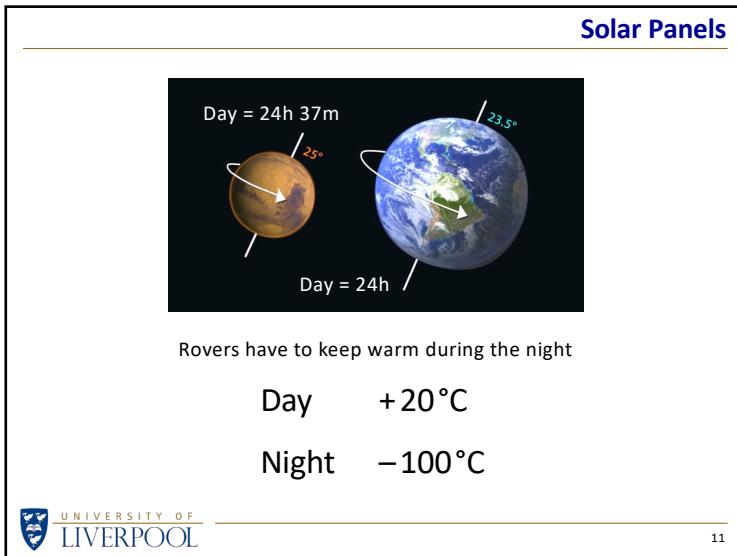
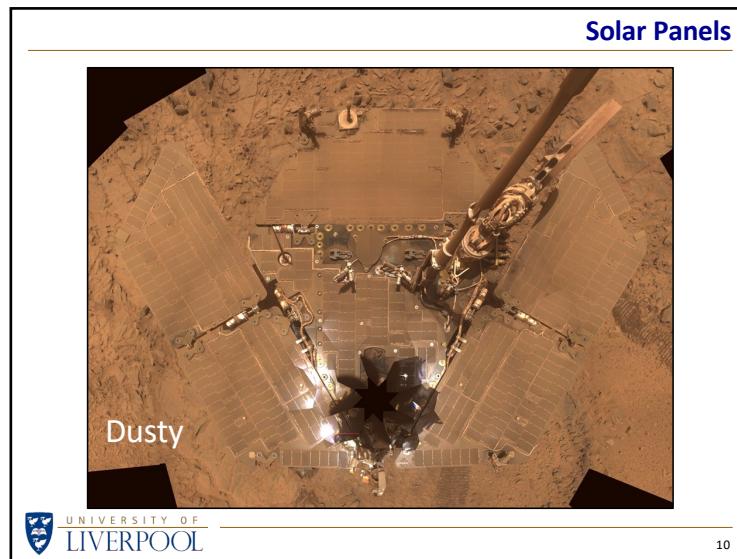
Spirit and Opportunity



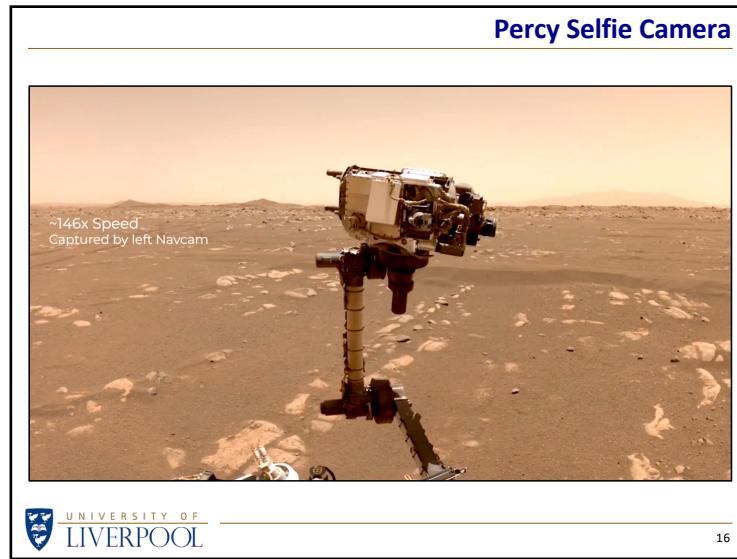
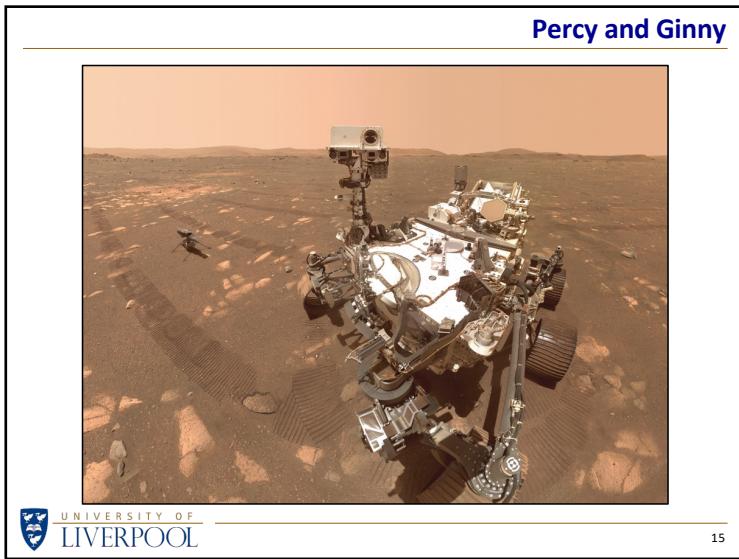
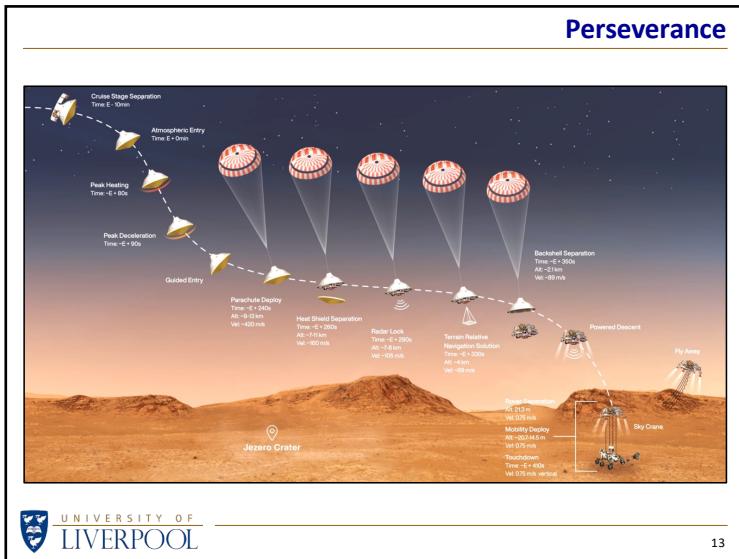
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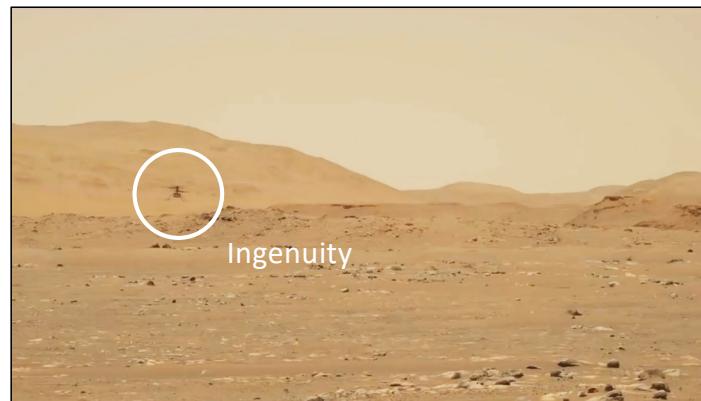
Percy Drops Ginny



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Flight of Ingenuity

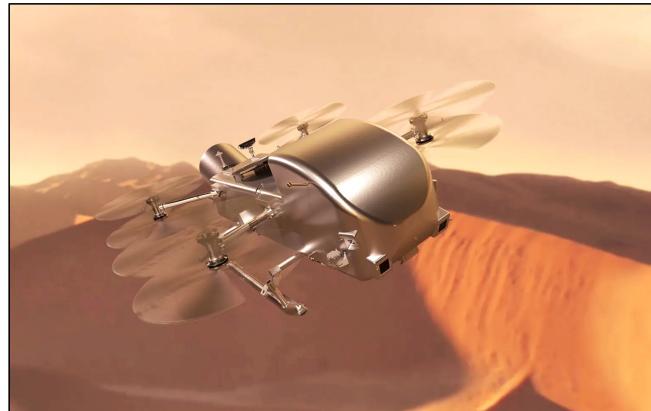


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Dragonfly on Titan



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Boarding Pass



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Exploring Mars

Why explore Mars?

To study its geology and climate

Does life exist, or did it ever exist?

To prepare for human exploration



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Mars Sample Return



Perseverance is collecting rock and atmosphere samples and leaving a trail of sample tubes behind as it explores the Martian surface.

How will we get these samples back to Earth for more detailed study?



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Mars Sample Return



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Mars Sample Return



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What's Next

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Airbus UK



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www.liverpool.ac.uk/~sdb/Talks



ROBOTS ON MARS

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RGS 27 Feb 2026