

## IBEX Educational Materials

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Created by [Michelle Nichols](#) Last updated 10/23/2013

Informal education materials from the IBEX spacecraft mission

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### IBEX: Search for the Edge of the Solar System

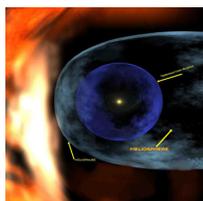
**Notes:** This is the planetarium show created by the IBEX Education and Public Outreach team. It provides a great overview of the mission and the science behind the mission. It is available in full-dome and flat-screen formats.

**AAAS Benchmarks:** [4A/H3](#), [4D/M8](#), [4D/M9](#)

**More info:** <http://www.nasawavelength.org/resource/nw-000-000-002-810>

**Resource URL:** <http://ibex.swri.edu/planetaria/ibexshow.shtml>

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### IBEX Electronic Resource for Museum Educators

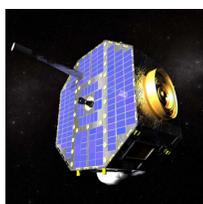
**Notes:** This comprehensive PowerPoint is for any informal education professionals - not just museum-based educators - who want to learn about the IBEX spacecraft, its mission, and the science of the mission. There is a section at the end that highlights some of the science results from the mission, as well.

**AAAS Benchmarks:** [4A/H3](#), [4D/M8](#), [4D/M9](#)

**More info:** <http://www.nasawavelength.org/resource/nw-000-000-002-811>

**Resource URL:** [http://www.ibex.swri.edu/planetaria/IBEX\\_PowerPoint.zip](http://www.ibex.swri.edu/planetaria/IBEX_PowerPoint.zip)

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### Interstellar Boundary Explorer Lithograph

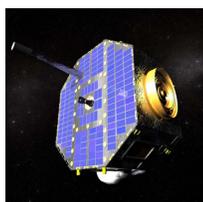
**Notes:** The lithograph provides a broad overview of the IBEX mission.

**AAAS Benchmarks:** [4A/H3](#)

**More info:** <http://www.nasawavelength.org/resource/nw-000-000-003-469>

**Resource URL:** <http://www.ibex.swri.edu/planetaria/IBEXLitho4.pdf>

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### Explorador de la Frontera Interestelar Lithograph

**Notes:** The lithograph provides a broad overview of the IBEX mission. It is a Spanish translation of the English version.

**AAAS Benchmarks:** [4A/H3](#)

**More info:** <http://www.nasawavelength.org/resource/nw-000-000-003-152>

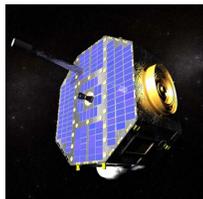
**Resource URL:** [http://www.ibex.swri.edu/planetaria/IBEX\\_litho4\\_spanish.pdf](http://www.ibex.swri.edu/planetaria/IBEX_litho4_spanish.pdf)

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### IBEX: Exploring the Edge of Our Solar System

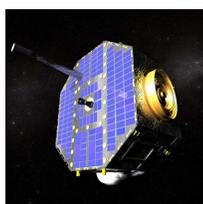
**Notes:** The back of this poster provides a very comprehensive overview of the IBEX spacecraft and the IBEX mission, with an artist's rendition of the spacecraft on the front.

**AAAS Benchmarks:** [1B/H1](#), [4A/H3](#)

**More info:** <http://www.nasawavelength.org/resource/nw-000-000-003-228>

**Resource URL:** [http://www.ibex.swri.edu/planetaria/IBEX\\_missionposter.pdf](http://www.ibex.swri.edu/planetaria/IBEX_missionposter.pdf)

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### IBEX: Explorador de la Frontera Interestelar

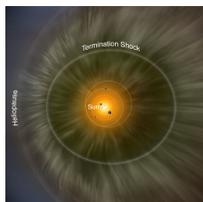
**Notes:** The back of this poster provides a very comprehensive overview of the IBEX spacecraft and the IBEX mission, with an artist's rendition of the spacecraft on the front. This is a Spanish translation of the English version.

**AAAS Benchmarks:** [1B/H1](#), [4A/H3](#)

**More info:** <http://www.nasawavelength.org/resource/nw-000-000-003-229>

**Resource URL:** [http://www.ibex.swri.edu/planetaria/IBEX\\_mission\\_spanish.pdf](http://www.ibex.swri.edu/planetaria/IBEX_mission_spanish.pdf)

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### The Heliosphere

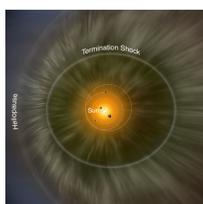
**Notes:** This lithograph highlights our heliosphere, the bubble in space "blown" by our Sun's solar wind as it pushes outward against the interstellar medium. It also has an excellent - and very inexpensive! - activity on the back that illustrates our heliosphere using streaming water plus the artist's rendition on the front of the lithograph.

**AAAS Benchmarks:** [11B/M4](#)

**More info:** <http://www.nasawavelength.org/resource/nw-000-000-003-149>

**Resource URL:** [http://www.ibex.swri.edu/planetaria/IBEX\\_lithograph.pdf](http://www.ibex.swri.edu/planetaria/IBEX_lithograph.pdf)

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### La Heliosfera

**Notes:** This lithograph highlights our heliosphere, the bubble in space "blown" by our Sun's solar wind as it pushes outward against the interstellar medium. It also has an excellent - and very inexpensive! - activity on the back that illustrates our heliosphere using streaming water plus the artist's rendition on the front of the lithograph. This is a Spanish translation of the English version.

**AAAS Benchmarks:** [11B/M4](#)

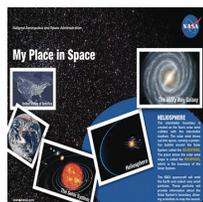
**More info:** <http://www.nasawavelength.org/resource/nw-000-000-003-231>

**Resource URL:** [http://www.ibex.swri.edu/planetaria/IBEX\\_lithograph\\_spanish.pdf](http://www.ibex.swri.edu/planetaria/IBEX_lithograph_spanish.pdf)

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## IBEX Educational Materials



### Postcards from Space

**Notes:** "Postcards from Space" is a writing activity using the science of the IBEX mission as the writing topic.

**AAAS Benchmarks:** [12D/E2](#), [12D/E7](#)

**More info:** <http://www.nasawavelength.org/resource/nw-000-000-003-235>

**Resource URL:** [http://www.ibex.swri.edu/planetaria/Postcards\\_from\\_Space.pdf](http://www.ibex.swri.edu/planetaria/Postcards_from_Space.pdf)



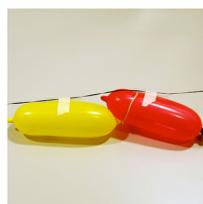
### Particle Detection

**Notes:** This is a unique participatory activity illustrating how the IBEX spacecraft collects and sorts particles coming from the edge of the Solar System.

**AAAS Benchmarks:** [4A/H3](#), [11B/M6](#)

**More info:** <http://www.nasawavelength.org/resource/nw-000-000-003-150>

**Resource URL:** [http://www.ibex.swri.edu/planetaria/Particle\\_Detection.pdf](http://www.ibex.swri.edu/planetaria/Particle_Detection.pdf)



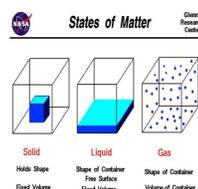
### Achieving Orbit

**Notes:** The multi-stage rocket that launched the IBEX spacecraft is illustrated using a two-stage rocket balloon activity that can be done as an informal education demonstration, an interactive activity, or even an engineering design challenge activity.

**AAAS Benchmarks:** [11B/M6](#)

**More info:** <http://www.nasawavelength.org/resource/nw-000-000-003-162>

**Resource URL:** [http://www.ibex.swri.edu/planetaria/Achieving\\_Orbit.pdf](http://www.ibex.swri.edu/planetaria/Achieving_Orbit.pdf)



### Four of the States of Matter

**Notes:** Participants start in this kinesthetic activity highlighting the solid, liquid, gas, and plasma states of matter and how the addition of energy causes the change from one state to another. This is a great activity for a small or large group in an informal education setting.

**AAAS Benchmarks:** [4D/M3cd](#), [4D/M8](#)

**More info:** <http://www.nasawavelength.org/resource/nw-000-000-003-163>

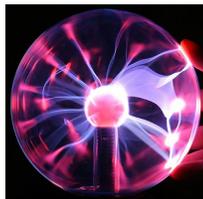
**Resource URL:** [http://www.ibex.swri.edu/planetaria/Four\\_of\\_the\\_States\\_of\\_Matter.pdf](http://www.ibex.swri.edu/planetaria/Four_of_the_States_of_Matter.pdf)





## IBEX Educational Materials

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### Mystery Matter

**Notes:** This interactive demonstration is good as a touch-table type of activity in an informal education setting.

**AAAS Benchmarks:** [4D/M8](#), [9C/M1](#), [11D/M1](#)

**More info:** <http://www.nasawavelength.org/resource/nw-000-000-003-234>

**Resource URL:** [http://www.ibex.swri.edu/planetaria/Mystery\\_Matter.pdf](http://www.ibex.swri.edu/planetaria/Mystery_Matter.pdf)

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