### ESOcast Light 215

[Visual starts]

**New ESOcast intro**

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**Title: Interstellar Thread of One of Life’s Building Blocks Revealed**

1. Phosphorus is *essential for life*, but how it arrived on Earth is a *mystery*.

2. Astronomers have traced the *journey of phosphorus* from regions where new stars and planetary systems form to comets.

3. Using ALMA to look into a star-forming region they revealed how and where *phosphorus-bearing molecules form*.

4. They also found that the main carrier of phosphorus is the molecule *phosphorus monoxide*.

5. The team then turned to *comet 67P*. Comets are thought to have delivered *life-essential molecules* to Earth.

6. Using data from the ROSINA instrument on board ESA’s Rosetta, the team found phosphorus monoxide on a comet for the *first time*.

7. The study reveals an *interstellar thread of phosphorus* where phosphorus monoxide plays the lead role...

8. ...from star-forming regions to comets and eventually planets like Earth where *life can begin*.

**[Outro]**

*Produced by ESO, the European Southern Observatory.*

*Reaching new heights in Astronomy.*