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**ABOUT SCIENCE & TECHNOLOGY FOR PUBLIC EAN SPACE AGENCY FOR ED** 

### **5CIENCE & TECHNOLOGY SCI-FT**

**All Missions** 

### TECHNOLOGY READINESS LEVEL (TRL)

The ESA Science Technology Development Route

14-Jun-2017 17

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### **1issions Office**

### iction to the

Instruments and spacecraft sub-systems technical maturity with respect to a specific space application are classified according to a "Technology Readiness Level" (TRL) on a scale of 1 to 9. ESA is utilising the ISO standard 16290 Space systems - Definition of the Technology Readiness Levels (TRLs) and their criteria assessment.

Shortcut URL http://sci.esa.int/ m?oid=50124

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## ental Physics

### **ISO**

### **Technology Readiness Level Summary**

Images And Vide

# Technology

Readiness Level

### stem & Robotic ion Missions

### **Level Description** TRL

### Instruments

- 1 Basic principles observed and reported
- 2 Technology concept and/or application formulated

### Technology nc

- 3 Analytical and experimental critical function and/or characteristic proof-of-concept
- 4 Component and/or breadboard functional verification in laboratory environment
- ogy Preparation logy

7

8

5 Component and/or breadboard critical function verification in relevant environment

oment ire missions

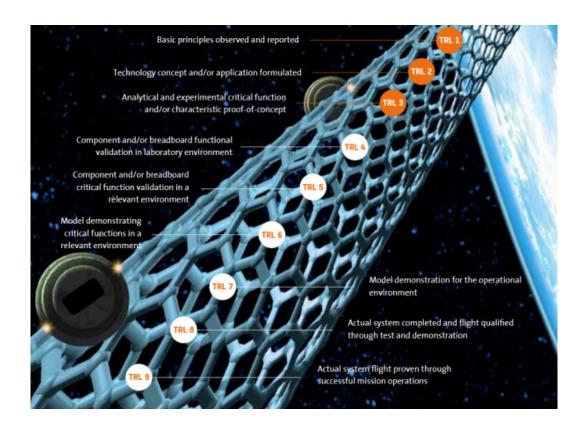
6 Model demonstrating the critical functions of the element in a relevant environment

logy Plan for : Exploration Model demonstrating the element performance for the operational environment

- Actual system completed and accepted for flight ("flight qualified")
- logy Readiness
- 9 Actual system "flight proven" through successful mission operations
- ogy Reference

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Technology Readiness Levels. Credit: ESA

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**TERMS AND COND**