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Descrizione fisica	1 online resource (XIII, 314 p. 159 illus., 122 illus. in color.)
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Nota di contenuto	Chapter 1: Life Support Systems Basics -- Chapter 2: Space Physiology: A Primer -- Chapter 3: Life Support Systems and Sub-Systems -- Chapter 4: Evolution and Development -- Chapter 5: ISS Systems and Sub-Systems -- Chapter 6: EVA Equipment and Protocols -- Chapter 7: Exercise and other countermeasures -- Chapter 8: Closing in on a Closed Life Support System -- Chapter 9: Future Life Support Concepts -- Index.
Sommario/riassunto	Life support systems are an integral part of crewed spacecraft designs and habitation systems. This textbook introduces the LSS capabilities that sustain humans who live and work in space, and it is written at a level appropriate for both undergraduate and postgraduate students. The book begins with the basics of space physiology before detailing the features that make up different kinds of life support systems. It includes concise descriptions of how atmospheric pressure is monitored, how oxygen levels are maintained, how waste management is achieved and how water is recycled, and also describes the processes of fire detection and suppression. Several chapters are devoted to chronicling the evolution of life support systems through the decades. Each chapter includes a list of learning objectives, summary sections and review questions. Additionally, various analogs for spaceflight life support systems are examined, including nuclear submarines and our

natural life support system here on Earth! Overall, this book serves as an approachable primer for any student seeking to understand the intricacies of spacecraft life support systems.