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Titolo	Eclipsed Suns, the Solar Corona and Exoplanets : From Concorde 001 to Telescopes in Space / / by Pierre Léna, Serge Koutchmy
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Nota di contenuto	PART I The longest total eclipse ever observed -- Opening -- Chapter 1. Of eclipses and men -- Chapter 2. Concorde, a dream that takes flight -- Chapter 3. This dark light that falls from the stars -- Chapter 4. Towards the longest total eclipse in history -- Chapter 5. No need to be alarmed, it's simply an eclipse -- Chapter 6. What harvest of science after these 74 minutes? -- Epilogue to Part I -- PART II Solar corona, total eclipses and exoplanets -- Chapter 7 The solar corona (K and F) -- Chapter 8 Debris disks, exoEarths and coronagraphy -- Conclusion -- Appendix 1 How total eclipses occur -- Appendix 2 The Concorde plane.
Sommario/riassunto	This is the unique story of observing a total solar eclipse for no less than 74 consecutive minutes. On the summer morning of June 30, 1973, the Sun rises on the Canary Islands. But it is strangely indented by the Moon. The eclipse of the century has just begun. From the west, the lunar shadow rushes to the African coast at a velocity of over 2000 kilometers per hour. Astronomers on the ground will enjoy seven short minutes of total eclipse to study the solar corona - too short for Pierre Léna and seven scientists who board the Concorde 001 prototype, an

extraordinary plane to become the first commercial supersonic aircraft. With André Turcat as chief pilot and his crew of five, at 17000 m altitude, the aircraft remains in the lunar shadow for 74 minutes, a record time of scientific observations allowing for exceptional measurements and not yet beaten. Science, technology, aviation and history combine in the story of a unique human adventure aboard a legendary aircraft, illustrated with a rich and original iconography. It reflects the wonderful domains that science and technology can open, and the passion in the professions they offer. Fifty years after this flight, the Sun's corona has yet to reveal all its secrets. A tenuous cloud of gas and dust, it influences the Earth, creates the aurora borealis, affects communications and can endanger satellites. To better understand it, we need to decipher its images. This enlarged second edition adds two full chapters dedicated to the solar corona and its plasma and its dust. In a final chapter the authors make the link to today's great adventure of astrophysics: the search for exoplanets, Earth's twin sisters, around stars not too far from the Sun, which are detected and studied through eclipses of their host stars. This book testifies to the horizons of science and the unprecedented emotions it can bring to us all. A must read for every eclipse chaser and fan of true scientific adventures. Pierre Léna is emeritus professor at Paris Observatory, Serge Koutchmy (1940-2023) was a recognised solar astronomer and eclipse specialist.
