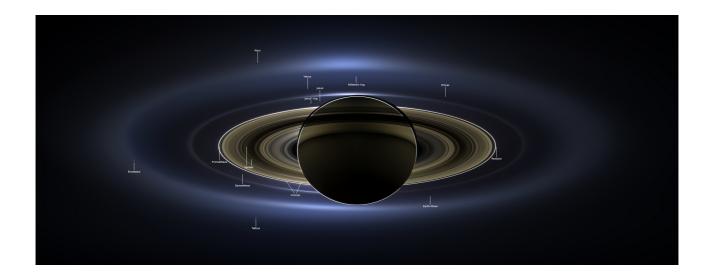


Publication Year	2017
Acceptance in OA@INAF	2020-09-03T11:39:44Z
Title	The day the Earth smiled
Authors	FILACCHIONE, GIANRICO
DOI	10.1038/s41550-017-0255-5
Handle	http://hdl.handle.net/20.500.12386/27094
Journal	NATURE ASTRONOMY
Number	1



A mosaic of Saturn, its rings, seven moons and three planets (Earth, Mars and Venus) shot on July 19, 2013, while Cassini was flying in the shadow of Saturn's disk, with the Sun shining behind the planet. This unique view, impossible from an observer on the Earth, allows to observe the sunlight scattered by icy particles within the tenuous E ring, continuously resupplied by Enceladus plumes. Close to the rings appears a pale dot, our planet Earth, more than 1.4 billions of km far away. Looking at this remarkable image come in mind the prophetic words of Arthur C. Clarke [1] written well-before Cassini arrived at Saturn in 2004: *However long you look at Saturn, and fly in and out among its moons, you can never quite believe it. Every so often you find yourself thinking: "It's all a dream, a thing like that can't be real." And you go to the nearest view-port – and there it is, taking your breath away.*

You must remember that, altogether apart from our nearness, we were able to look at the rings from angles and vantage points that are quite impossible from Earth, where you always see them turned towards the Sun. We could fly into their shadow, and then they no longer gleam like silver – they would be a faint blaze, a bridge of smoke across the stars. And most of the time we could see the shadow of Saturn lying across the full width of the rings, eclipsing them so completely that seemed as if a great bite had taken out of them... This is where the angels have parked their halos." Among the numerous images returned by Cassini, this is the one which for me better collects the richness of Saturn's system.

[1] The Collected Stories of Arthur C. Clarke: Volume III. The Star. Rosetta Books LLC, New York, 2000.

Gianrico Filacchione INAF-IAPS, Rome, IT.