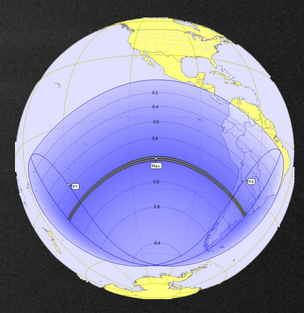
TOTAL ECLIPSE CHILE 2019:

THE CORONA AND CHROMOSPHERE



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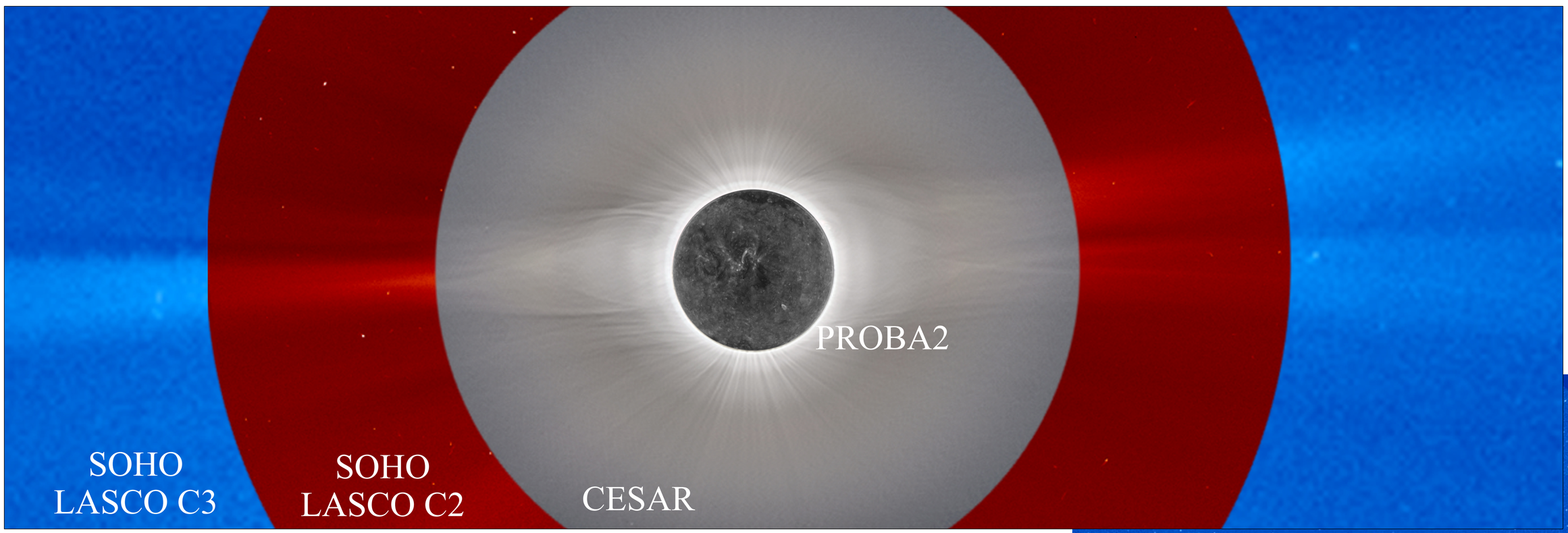
THE SOLAR CORONA BY SOHO, CESAR and PROBA-2

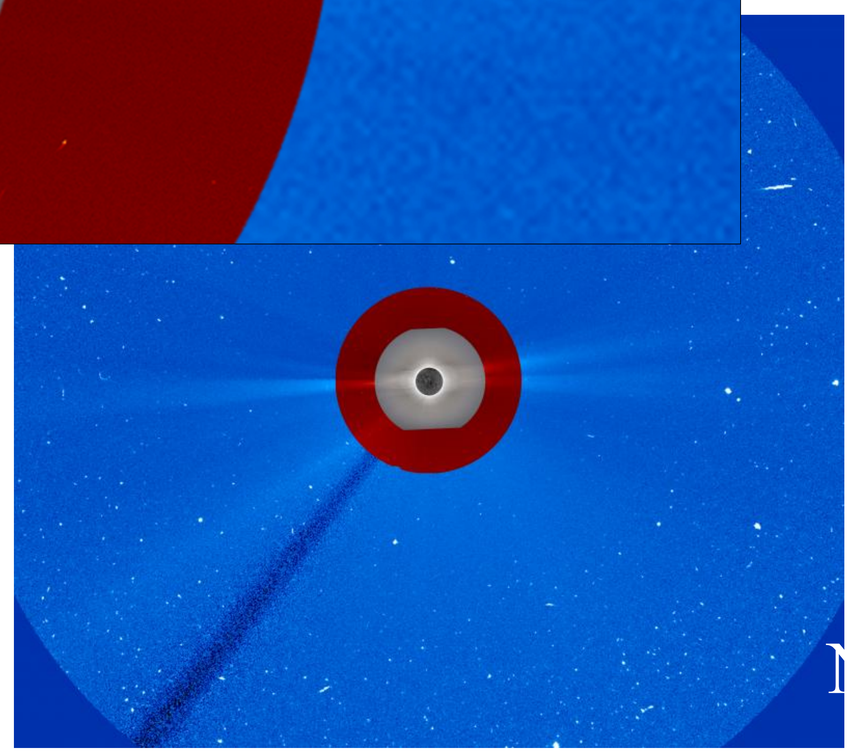
The solar corona is the highest layer of the Sun atmosphere and it extends over millions of kilometers into space. Although the temperature reaches over 1.000.000K the density is incredibly low compared to other layers.



A composite of space and ground-based observations: **SOHO, CESAR and Proba-2**.

- Surface (dark grey): extreme-UV image of the Sun surface by **SWAP** instrument in ESA **Proba-2**.
- Inner corona (light grey): **CESAR** ground-based obs, 10-cm refractor from ESO's La Silla.
- Outer corona (red): white-light LASCO-C2 coronagraph aboard NASA/ESA **SOHO**
- Extended corona (blue) white-light LASCO-C3 coronagraph aboard **SOHO**.

The composite image provides an overall view of the Sun and its surrounding corona, with several streamers – elongated structures that extend from the solar surface far out into space. It shows the power of combining ground-based observations of the corona, which provide fine details of the inner corona and can only be obtained during a total eclipse, with the broader context yielded by coronographs like those on SOHO, which can observe the wider corona.

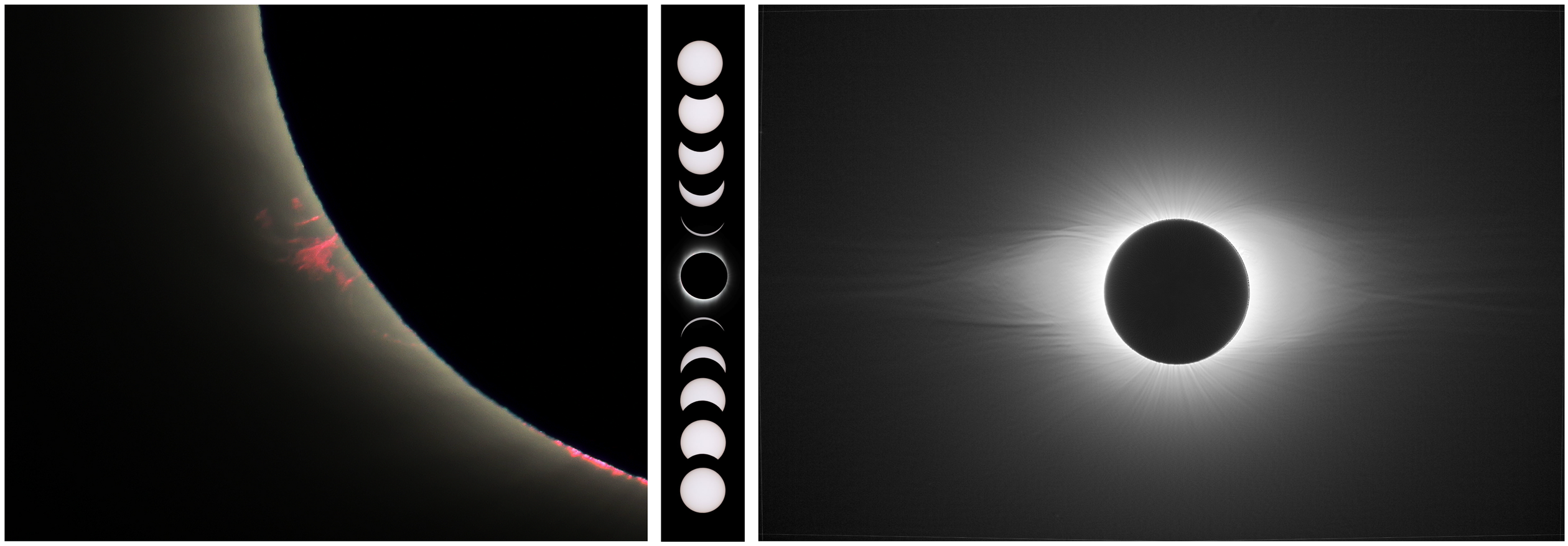


CHROMOSPHERE

Right above the photosphere, the chromosphere shows interesting features such as prominences and spicules. A few secs before totality, these features can be photographed without any filter using short exposure times. A big prominence can be seen on the left image. The red color is due to the H-alpha line at 6562.8Å.

CORONA in HDR

The corona in a combined images for High Dynamic Range.



http://cesar.esa.int/index.php?Section=Total_Eclipse_2019