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The Carrington event from August 28 to September 5, 1859 : impact on communications, atmospheric chemistry and economy from the historical record.

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The beginning of September 1859 was the occasion of the first and unique observation of a giant solar white light flare, auroral displays were observed at low latitudes and geomagnetic observatories recorded an exceptional storm.
The intention of this communication is to review the impact of the event on the telegraphic network as it was described by various authors at the time including Adolphe Quételet in Brussels. The techniques used by the operators to mitigate the effects will be described. An attempt to quantify the phenomenon will be made in terms of induced currents on the telegraphic lines. The economic consequences at the time will be assessed from a press review.
The scientific literature indicates also effects on atmospheric “ozone” measured with the techniques of the time. The values of these observations and what they could teach us on the chemical changes associated with the event will be discussed.
Comparisons with later solar flare events will be attempted on the basis of the record and the consequences of an event of comparable magnitude to the 1859 set of flares will be discussed.