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## SOLAR RADIATION.

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DIFFERENT PROPERTIES OF SOLAR RADIATION PRODUCING OR PREVENTING A DEPOSIT
OF MERCURY ON SILVER PLATES COATED
WITH IODINE, OR ITS COMPOUNDS WITH
BROMINE OR CHLORINE, MODIFIED BY COLORED GLASS MEDIA AND THE VAPORS OF THE
ATMOSPHERE. BY A. CLAUDET, ESQ.
COMMUNICATED BY SIR DAVID BREWSTER,
FR.S., &C.\*

From the commencement of Photography thas been known that the red, orange, and rellow rays exert but a very feeble Photography end can end influence on the Daguerreotype plate. The experiments of several philosophers, specially those of Sir J. Herschel on Photogenic papers, published in February, 1840, tove that this action is more particularly of the dismatic spectrum, commencing from the simulation is greater than the same found covered by the blue rays and without the extremity of the violet, and the same times even beyond it.

In 1839, Sir J. Herschel observed that the rays exercised on several Photogenic pers an antagonistic action to the Photogenic rays, modifying their effect. Conary to this, in 1841, M. Ed. Becquerel prented to the Paris Academy of Sciences a

memoir, in which he anabunced that the red, orange, and yellow rays were endowed with the property of continuing the action commenced by the Photogenic rays; these latter he called exciting rays; to the first he gave the name of continuing rays.

M. Ed. Becquerel made his experiments on Photogenic papers, and added that he had observed the same effects on the iodized silver plate.

Dr. Draper, of New York, published—inthe Philosophical Magazine for November,
1842, some remarks on a class of rays,
which he supposed to exist in the light of
the brilliant sun of Virginia, and which
had the property, when separated, of entirely suspending the action of the diffused
light from the sky; these anatagonistic rays
extended from the blue to the extremity of
the red, and appeared to be almost as active in preventing the decomposition of the
iodine of silver as the blue rays were in producing it.

In January, 1845, a memoir was read by me at the Society of Arts, London, in a part of which I recommended opticians to construct object-glasses in which they should particularly correct the cromatic aberration of the long Photogenic space of the solar spectrum, even at the cost of the achromatism of the less refrangible rays. This, however, had been already indicated, without my being aware of it at the time, by Sir J. Herschel; but I added that the greater

From the Philosophical Transactions for part II.; having been received by the Royal laty, June 10, and read June 17, 1847.