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Volker Perlick* (perlick@zarm.uni-bremen.de), ZARM, University of Bremen, 28359 Bremen, Germany, and **Oleg Yu. Tsupko** and **G. S. Bisnovatyi-Kogan**. *Influence of a plasma on the shadows of black holes.*

If a black hole, or another compact dark object, is seen against a backdrop of light sources the observer sees a black disc in the sky which is known as the "shadow". In this talk I discuss how the boundary curve of the shadow is analytically determined for (a) spherically symmetric objects and (b) a Kerr black hole. It is assumed that the light rays are influenced by a plasma, i.e., they are not lightlike geodesics but rather solutions to a set of Hamilton's equations that involves the plasma density. The plasma is assumed pressureless ("cold") and non-magnetised. (Received September 19, 2018)