

## Disclose Identity of the Phenomenon, "Smartphone's Hat"

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We were interested in the atmospheric optical phenomenon, especially focusing on a Brocken specter. A Broken specter is magnified shadow of an observer that happens when there is mist that is lit by sunlight. A ring of rainbow colors can be seen around the shadow. In the middle of the study, we discovered that when we direct the light of the smartphone to the screen, we can see a circle of rainbow-colored light similar to the Brocken specter around the smartphone. Originally, Brocken specter can be made on the screen, and the place where the rainbow-colored ring can be seen in this new phenomenon is different from a Brocken specter. We named this phenomenon “Smartphone’ s Hat” and started experiments to disclose identity of "Smartphone's Hat"

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