

Diffuse aurora

Diffuse [aurora](#) are found on the equatorward part of [auroral oval](#), in the region of the so-called central [plasma sheet](#) (CPS) precipitation most likely mapping to inner plasma sheet, where [magnetic field](#) is almost dipolar (see [isotropic boundary](#)). The precipitating particles are drifting around [Earth](#), electrons to the east and protons to the west. The strongest diffuse auroras are found on the post-midnight sector, i.e., they are produced mainly by electrons. Proton precipitation is important especially in the pre-midnight sector.

Note that even diffuse aurora are not without any discrete structures: they are just so weak and difficult to observe. First space observations were by Lui and Anger (1973).

The [pulsating aurora](#) are also located within the diffuse region, as often also [black aurora](#). In addition, when [ring current](#) particles come into play, diffuse [low-latitude aurorae](#) appear.

References

- Lui, A. T. Y., and C. D. Anger, A uniform belt of diffuse auroral emissions seen by the Isis-2 scanning photometer, Planet. Space Sci., 21, 809, 1973.