When dealing with observations of aurora or other atmospheric light phenomena, one cannot avoid encountering descriptions of sightings made by early settlers in, and around, what we today call the auroral zone areas, and preferentially the inhabited areas in the northern hemisphere. Thus, even a short historical review or description of auroral observations and research will include a short glimpse into people's perceptions of these majestic, mystic and even frightening bright marvels of nature.

The earliest scientific studies of aurora and auroral phenomena seem to have been associated with polar expeditions for basically other reasons than for observations of aurora. For historical reasons some of the pioneering auroral studies and observations involving Finnish participation are intimately connected to Sweden and can be called Finnish mainly when considering the birthplace of the researchers involved in these expeditions. Some of these early optical observations associated with polar expeditions will be described. Reference will also be made to early development of optical instruments used, as well as to associated observations of magnetic and ionospheric disturbances.

The initiation of the first Polar Year 1882-83 deserves special attention as it was the first attempt to coordinate geophysical observations using instruments located in suitably distributed observatories in the Northern Arctic Regions, and marks the beginning of international systematic global observations of geophysical phenomena.