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Autoscala: an aid for different ionosondes

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Autoscala is a software to automatically scale ionospheric characteristics from an ionogram. It is based on an image recognition technique, it can operate without polarization information, and from the early stage of its development it was thought to be applied to any kind of ionosonde.
Initially it was only applied to the ionograms recorded by the AIS-INGV ionosondes installed at Rome (41.8° N, 12.5° E), Gibilmanna (37.9° N, 14.0° E), Italy, and Tucumán (26.9° S, 294.6° E), Argentina, that are not able to record the polarization of the received echo.
Recently Autoscala was also applied to the ionograms recorded by the AIS-Parus ionosonde installed at Moscow (55.5° N, 37.3° E), Russia, that is not able to tag the received echo in terms of polarization, and by the VISRC2 ionosonde installed at Warsaw (52.2° N, 21.1° E), Poland, that is instead able to perform the polarization tagging of the ordinary and extraordinary echoes.
This work shows different examples of ionogram elaborations and illustrates the state of art of the Autoscala algorithm by highlighting its strong points and weaknesses.