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Finding an optimal grid resolution

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Creating an interpolated gridded map based on local measurements is commonly done in a straightforward way using IDW or kriging. The chosen output resolution is usually the same as the resolution of a field to be compared with (i.e. interpolated rain gauges and radar) or it is defined by the required parameters of a model. But how to choose an optimal resolution based on the input data? We developed a general technique based on the locations of the measurd variable (microwave link or rain gauge locations) and the variograms of the variable being assessed (rain rate), where the user defines what quality level is required. The results allow estimation of the optimal resolution as well as the possibility of adding quality flags to each grid cell of the final gridded Product.

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