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Self-organized maps for tagging b jets associated with heavy neutral MSSM Higgs bosons

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B tagging is an important tool for separating the LHC Higgs events with associated b jets from the Drell-Yan background. We extend standard neural network (NN) approach using multilayer perceptron in b tagging [1] to include self-organizing feature maps. We demonstrate the use of the self-organizing maps (SOM_PAK program package) and the learning vector quantization (LVQ_PAK). A background discriminating power of these NN tools are compared with standard tagging algorithms.

[1] A. Heikkinen and S. Lehti, Tagging b jets associated with heavy neutral MSSM Higgs bosons. Proceedings of ACAT 2005, May 22 - 27, DESY, Zeuthen, Germany.

Primary author: Mr HEIKKINEN, Aatos (Helsinki Institute of Physics)

Co-author: Dr LEHTI, Sami (Helsinki Institute of Physics)

Presenter: Mr HEIKKINEN, Aatos (Helsinki Institute of Physics)

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