

# MAT

## MAT

MAT-files are a binary file format, used to store data in multiple variables or structures in MATLAB. These files use the .mat extension, and can be loaded and saved in matlab using the LOAD and SAVE functions respectively. MAT-files are [HDF5](#) compliant, so they are compact and organized. For more information, see [MAT-File Versions](#) in the [MATLAB documentation](#). Here's a description of the format: [http://www.mathworks.com/help/pdf\\_doc/matlab/matfile\\_format.pdf](http://www.mathworks.com/help/pdf_doc/matlab/matfile_format.pdf). MAT-files can be also created and read by other programming languages such as Python, Java, etc.

MAT files are used to supply data from complex and scalar data products with varying internal structures. MAT-files contain variables names and data. The variable names are generally self-documenting, however we supply data-product-specific documentation on the structure and variable names of all ONC MAT files. One structure is generally consistent for all MAT-files: the metadata structure. Of which there are two types, documented in the following child pages: [MAT file Metadata structure - Scalar](#), [MAT file Metadata structure - Complex](#).

We use the latest MAT-file format, which is version 7.3, which has remained the latest version since 2006. We recommend users have MATLAB R2009a or better installed. Anything older will not run on most modern operating systems or computers.