

Data Formats and MIME Types

The following list is gathering all mime-types that are listed in various interoperability projects and standard protocols.

Row Color Coding
The red labelled rows are proprietary formats that should be avoided
The green labelled rows are preferred formats for IVOA tools (that we use in VESPA).
The white labelled rows are formats to be assessed during the VESPA project

See here for extra types: <https://tika.apache.org/1.12/formats.html>

MIME-type	Shortname	Extension	Definition	Source datamodel
application/fits	fits	.fit, .fits	Any generic FITS file	obscure
application/x-pds	pds	.qub, .dat, etc...	Binary PDS files	epncore
application/x-pds-zip	pds	...	PDS files compressed (set of files in the PSA)	epncore
application/x-pds3-detached-zip	pds	.img, etc	PDS3 file with detached label, gzipped (tentative!)	epncore
image/x-pds	pds	.imq	PDS images	epncore
application/gml+xml	gml	.gml, .xml	Geography Markup Language (GML)	ogc
application/json	json	.json	JavaScript Object Notation (JSON) file	epncore
application/octet-stream	bin	.bin, .dat	Binary Data	spase
application/octet-stream	idl	.idl, .sav	Interactive Data Language (IDL) save set. IDL is a proprietary format.	spase
application/octet-stream	envi	.dat, .img	ENVI format, binary with detached header. ENVI a proprietary format.	?
application/octet-stream	matlab4	.mat	MATLAB Workspace save set, version 4. MAT-files are double-precision, binary, MATLAB format files. MATLAB is a proprietary product of The MathWorks.	spase
application/octet-stream	matlab6	.mat	MATLAB Workspace save set, version 6. MAT-files are double-precision, binary, MATLAB format files. MATLAB is a proprietary product of The MathWorks.	spase
application/octet-stream	matlab7	.mat	MATLAB Workspace save set, version 7. MAT-files are double-precision, binary, MATLAB format files. Version 7 includes data compression and Unicode encoding. MATLAB is a proprietary product of The MathWorks.	spase
application/pdf	pdf	.pdf	Any PDF file	obscure
application/postscript	ps	.ps, .eps, .ai	A page description programming language created by Adobe Systems Inc. that is a device-independent industry standard for representing text and graphics.	spase
application/vnd.geo+json	geojson	.json	GIS file format in json	ogc
application/vnd.google-earth.kml+xml	kml	.kml	Keyhole Markup Language	epncore
application/vnd.google-earth.kmz	kmz	.kmz	Keyhole Markup Language in a zipped file	epncore

application/vnd.ms-excel	xls	.xls, .xlsx	A Microsoft spreadsheet format used to hold a variety of data in tables which can include calculations.	spase
application/x-asdm	asdm		ALMA science data model (final export format still TBD)	obscure
application/x-cdf	cdf	.cdf	Common Data Format (CDF) file	spase
application/x-cdf-istp	cdf	.cdf	Common Data Format (CDF) file compliant with ISTP	epncore
application/x-cdf-pds4	cdf	.cdf	Common Data Format (CDF) file compliant with PDS4	epncore
application/x-cef1	cef1	.cef	Cluster Exchange Format (CEF), version 1, is a self-documenting ASCII format designed for the exchange of data. The metadata contains information compatible with the ISTP recommendations for CDF.	spase
application/x-cef2	cef2	.cef	Cluster Exchange Format (CEF), version 2, is a self-documenting ASCII format designed for the exchange of data and introduced for Cluster Active Archive. Compared to version 1, the metadata description of vectors and tensors is different.	spase
application/x-directory	dir		Multiple files archive returned as a text list	obscure
application/x-fits-bintable	bintable	.fit, .fits	A FITS binary table (single BINTABLE extension)	obscure
application/x-fits-euro3d	euro3d		A FITS file in Euro3D format (multiobject spectroscopy)	obscure
application/x-fits-mef	mef		A FITS multi-extension file (multiple extensions)	obscure
application/x-geotiff	geotiff	.tif, .tiff	GeoTIFF is a public domain metadata standard which allows georeferencing information to be embedded within a TIFF file. The potential additional information includes map projection, coordinate systems, ellipsoids, datums, and everything else necessary to establish the exact spatial reference for the file. The GeoTIFF format is fully compliant with TIFF 6.0, so software incapable of reading and interpreting the specialized metadata will still be able to open a GeoTIFF format file.	ogc
application/x-wms	wms	.xml	WMS query, typically with GetCapability operation (returns an xml file)	ogc
application/geopackage+sqlite3	geopackage	.gpkg	GeoPackage is platform-independent SQLite database file for storing and transferring geospatial information, data and metadata tables.	
application/x-hdf	hdf	.hf4	Hierarchical Data Format 4	epncore
application/x-hdf	hdf	.hf5	Hierarchical Data Format 5	epncore
application/x-netcdf	nc	.nc	Network Common Data Format (NetCDF) file version 3	epncore
application/x-netcdf4	nc	.nc4, .nc	Network Common Data Format (NetCDF) file version 4	epncore
application/x-tar	tar	.tar	Multiple files archive in TAR format	obscure
application/x-tar-gzip	gtar	.tgz	A GZIP-compressed TAR file (x-gtar also sometimes used)	obscure
application/x-votable+xml	votable	.xml, .vot	Any generic VOTable file	obscure
application/x-voevent+xml	voevent	.xml	Any generic VOevent file	voevent
application/x-votable+xml;content=datalink	votable	.xml, .vot	(VOTable containing a DataLink URL) To be used if access_url provides a DataLink response	datalink /obscure

application/zip	zip	.zip	Multiple files archive in ZIP format	obscure
image/fits	fits	.fit, .fits	Any multidimensional regularly sampled FITS image or cube	obscure
image/gif	gif	.gif	Graphic Interchange Format (GIF) first introduced in 1987 by CompuServe. GIF uses LZW compression and images are limited to 256 colours.	spase
image/jpeg	jpeg	.jpg, .jpeg	A 2D JPEG graphic image (likewise for GIF, PNG, etc.)	obscure
image/png	png	.png	A digital format for still images. Portable Network Graphics (PNG)	spase
image/tiff	tiff	.tif, .tiff	A binary format for still pictures. Tagged Image Format File (TIFF). Originally developed by Aldus and now controlled by Adobe.	spase
image/x-fits-gzip	fits	.gz	A GZIP-compressed FITS image	obscure
image/x-fits-hcompress	fits		A FITS image using HCOMPRESS compression	obscure
text/csv	csv	.csv	Tabular data in comma separated values format	obscure
text/html	html	.htm, .html	Text in HTML format	obscure
text/plain	txt	.txt, .asc	Any generic text file	obscure
text/tab-separated-values	tsv	.tsv	Tabular data in tab separated values format	obscure
text/xml	xml	.xml	Any generic XML file	obscure
video/mpeg	mpeg	.mpeg, .mpg	A digital format for movies defined by the Motion Picture Experts Group	spase
video/quicktime	mov	.mov, .qt	A format for digital movies, as defined by Apple Computer.	spase
video/x-msvideo	avi	.avi	Audio Video Interleave (AVI)	spase
	idfs		Instrument Data File Set (IDFS) is a set of files written in a prescribed format which contain data, timing data, and meta-data. IDFS was developed at Southwest Research Institute (SwRI).	spase
	ncar		The National Center for Atmospheric Research (NCAR) format. A complete description of that standard is given in appendix C of the "Report on Establishment & Operation of the Incoherent-Scatter Data Base", dated August 23, 1984, obtainable from NCAR, P. O. Box 3000 Boulder, Colorado 80307-3000.	spase
	udf		Universal Data Format (UDF). The Optical Technology Storage Association's Universal Disk Format, based on ISO 13346. See < http://www.osta.org/specs/index.htm >	spase