

Table of Contents

Introduction to the HDF APIs	RM-1
1.1 Overview of the HDF Interfaces	RM-1
1.2 The Low-Level Interface	RM-1
1.2.1 The H Interface	RM-2
1.2.2 The HDF Interface	RM-2
1.2.3 The HE Interface	RM-2
1.3 Single-File Application Interfaces	RM-2
1.3.1 8-bit Raster Image Sets: The DFR8 Interface	RM-2
1.3.2 Palettes: The DFP Interface	RM-2
1.3.3 24-bit Raster Image Sets: The DF24 Interface	RM-3
1.3.4 Scientific Data Sets: The Single File DFSD Interface	RM-3
1.3.5 Annotations: The DFAN Interface	RM-3
1.4 Multi-File Application Interfaces	RM-3
1.4.1 Scientific Data Sets: The SD Interface	RM-4
1.4.2 Multifile Annotations: The AN Interface	RM-4
1.4.3 General Raster Images: The GR Interface	RM-4
1.4.4 Scientific Data Sets: The netCDF Interface	RM-4
1.4.5 Vdata: The VS Interface	RM-4
1.4.6 Vdata Query: The VSQ Interface	RM-4
1.4.7 Vdata Fields: The VF Interface	RM-5
1.4.8 Vgroups: The V Interface	RM-5
1.4.9 High-Level Vdata/Vgroups: The VH Interface	RM-5
1.4.10 Vgroup Inquiry: The VQuery Interface	RM-5
1.5 Fortran-77 and C Language Issues	RM-5
1.5.1 Fortran-77-to-C Translation	RM-5
1.5.2 Case Sensitivity	RM-6
1.5.3 Name Length	RM-6
1.5.4 Header Files	RM-6
1.5.5 Data Type Specifications	RM-6
1.5.6 Array Specifications	RM-7
1.5.7 Fortran-77, ANSI C and K&R C	RM-7
1.6 Error Codes	RM-7
 HDF Routine Reference	 RM-11
2.1 Reference Section Overview	RM-11
ANannlen/afannlen	RM-13
ANannlist/afannlist	RM-14
ANatypet2tag/afatypetag	RM-16
ANcreate/afcreate	RM-17
ANcreatet/affcreate	RM-18
ANdestroy	RM-19
ANend/afend	RM-20
ANendaccess/afendaccess	RM-21
ANfileinfo/affileinfo	RM-22
ANget_tagref/afgettagref	RM-23
ANid2tagref/afidtagref	RM-24
ANnummann/afnummann	RM-25
ANreadann/afreadann	RM-27
ANselect/afselect	RM-28
ANstart/afstart	RM-29

ANtag2atype/aftagatype	RM-30
ANtagref2id/aftagrefid	RM-31
ANwriteann/afwriteann	RM-32
d2scomp	RM-33
d2sjpeg	RM-34
d8scomp	RM-35
d8sjpeg	RM-36
DFgetcomp	RM-37
DFputcomp	RM-38
DF24addimage/d2aimg	RM-39
DF24getdims/d2gdims	RM-40
DF24getimage/d2gimg	RM-41
DF24lastref/d2lref	RM-42
DF24nimages/d2nimg	RM-43
DF24putimage/d2pimg	RM-44
DF24readref/d2rref	RM-45
DF24reqil/d2reqil	RM-46
DF24restart/d2first	RM-47
DF24setcompress/d2scomp	RM-48
DF24setdims/d2sdims	RM-50
DF24setil/d2setil	RM-51
DFANaddfds/daafds	RM-52
DFANaddfid/daafid	RM-53
DFANclear/daclear	RM-54
DFANgetdesc/dagdesc	RM-55
DFANgetdesclen/dagdlen	RM-56
DFANgetfds/dagfds	RM-57
DFANgetfdslen/dagfdsl	RM-58
DFANgetfid/dagfid	RM-59
DFANgetfidlen/dagfidl	RM-60
DFANgetlabel/daglab	RM-61
DFANgetlablen/dagllen	RM-62
DFANlablist/dallist	RM-63
DFANlastref/dalref	RM-64
DFANputdesc/dapdesc	RM-65
DFANputlabel/daplab	RM-66
DFKNTsize	RM-67
DFPaddpal/dpapal	RM-68
DFPgetpal/dpgpal	RM-69
DFPlastref/dplref	RM-70
DFPnpals/dpnnpals	RM-71
DFPputpal/dpppal	RM-72
DFPreadref/dprref	RM-73
DFPrestart/dprest	RM-74
DFPwriteref/dpwref	RM-75
DFR8addimage/d8aimg	RM-76
DFR8getdims/d8gdims	RM-77
DFR8getimage/d8gimg	RM-78
DFR8getpalref	RM-79
DFR8lastref/d8lref	RM-80
DFR8nimages/d8nims	RM-81
DFR8putimage/d8pimg	RM-82

DFR8readref/d8rref	RM-83
DFR8restart/d8first	RM-84
DFR8setcompress/d8scomp	RM-85
DFR8setpalette/d8spal	RM-87
DFR8writeref/d8wref	RM-88
DFSDadddata/dsadata	RM-89
DFSDclear/dsclear	RM-90
DFSDendslab/dseslab	RM-91
DFSDendslice/dseslc	RM-92
DFSDgetcal/dsgcal	RM-93
DFSDgetdata/dsgdata	RM-94
DFSDgetdatalen/dsgdahn	RM-95
DFSDgetdatastrs/dsgdast	RM-96
DFSDgetdimlen/dsgdiln	RM-97
DFSDgetdims/dsgdims	RM-98
DFSDgetdimscale/dsgdisc	RM-99
DFSDgetdimstrs/dsgdist	RM-100
DFSDgetfillvalue/dsgfill	RM-101
DFSDgetNT/dsgnt	RM-102
DFSDgetrange/dsgrang	RM-103
DFSDgetslice/dsgslc	RM-104
DFSDlastref/dsoref	RM-106
DFSDndatasets/dsnum	RM-107
DFSDpre32sdg/dsp32sd	RM-108
DFSDputdata/dspdata	RM-109
DFSDputslice/dspslc	RM-110
DFSDreadref/dsrref	RM-112
DFSDreadslab/dsrslab	RM-113
DFSDrestart/dsfirst	RM-114
DFSDsetcal/dsscal	RM-115
DFSDsetdatastrs/dssdast	RM-117
DFSDsetdims/dssdims	RM-118
DFSDsetdimscale/dssdisc	RM-119
DFSDsetdimstrs/dssdist	RM-120
DFSDsetfillvalue/dssfill	RM-121
DFSDsetlengths/dsslens	RM-123
DFSDsetNT/dssnt	RM-124
DFSDsetrange/dssrang	RM-125
DFSDstartslab/dsss lab	RM-126
DFSDstartslice/dsss lc	RM-127
DFSDwriteref/dswref	RM-128
DFSDwriteslab/dswslab	RM-129
DFUfptoimage/duf2im	RM-130
GRattrinfo/mgatinf	RM-132
GRcreate/mgcreat	RM-133
GRend/mgend	RM-134
GRrendaccess/mgendac	RM-135
GRfileinfo/mgfinfo	RM-136
GRfindattr/mgfndat	RM-137
GRgetattr/mgnatt/mggcatt	RM-138
GRgetiminfo/mggiinf	RM-139
GRgetlutid/mgltid	RM-140

GRgetlutinfo/mgglinf	RM-141
GRidtoref/mgid2ref	RM-142
GRluttoref	RM-143
GRnametoindex/mgn2idx	RM-144
GRreadimage/mgrdimg/mgrcimg	RM-145
GRreadlut/mgrdlut/mgrclut	RM-147
GRreftoindex/mgr2idx	RM-148
GRreqimageil/mgrimil	RM-149
GRrequtil/mgrltil	RM-150
GRselect/mgselct	RM-151
GRsetaccesstype/mgsactp	RM-152
GRsetattr/mgsnatt/mgscatt	RM-153
GRsetcompress	RM-155
GRsetexternalfile/mgsxfil	RM-156
GRstart/mgstart	RM-157
GRwriteimage/mgwrimg/mgwcimg	RM-158
GRwritelut/mgwrlut/mgwclut	RM-160
Happendable	RM-162
Hbitappendable	RM-163
Hbitread	RM-164
Hbitseek	RM-165
Hbitwrite	RM-166
Hcache	RM-167
Hclose/hclose	RM-168
Hdeldd	RM-169
Hdupdd	RM-170
Hendaccess	RM-171
Hendbitaccess	RM-172
Hexist	RM-173
Hfidinquire	RM-174
Hfind	RM-175
Hgetbit	RM-176
Hgetelement	RM-177
Hgetfileversion	RM-178
Hgetlibversion	RM-179
Hinquire	RM-180
Hishdf	RM-181
Hlength	RM-182
Hmpget	RM-183
Hmpset	RM-184
Hnewref	RM-185
Hnextread	RM-186
Hnumber/hnumber	RM-187
Hoffset	RM-188
Hopen/hopen	RM-189
Hputbit	RM-190
Hputelement	RM-191
Hread	RM-192
Hseek	RM-193
Hsetaccesstype	RM-194
Hsetlength	RM-195
Hshutdown	RM-196

Hstartaccess	RM-197
Hstartbitread	RM-198
Hstartread	RM-199
Hstartbitwrite	RM-200
Hstartwrite	RM-201
Hsync	RM-202
Htagnewref	RM-203
Htell	RM-204
Htrunc	RM-205
Hwrite	RM-206
HCcreate	RM-207
HDc2fstr	RM-208
HDcalloc	RM-209
HDerr	RM-210
HDf2cstring	RM-211
HDfidtoname	RM-212
HDgetc	RM-213
HDgetNTdesc	RM-214
HDgettagdesc	RM-215
HDgettagnum	RM-216
HDgettagname	RM-217
HDinqblockinfo	RM-218
HDmalloc	RM-219
HDmemfill	RM-220
HDpackFString	RM-221
HDputc	RM-222
HDrealloc	RM-223
HDstrdup	RM-224
HDvalidfid	RM-225
HDFclose/hdfclose	RM-226
HDFopen/hdfopen	RM-227
HEclear	RM-228
HEprint/heprnt	RM-229
HEpush	RM-230
HEreport	RM-231
HEString	RM-232
HEvalue	RM-233
HLconvert	RM-234
HLcreate	RM-235
HVcreate	RM-236
HXcreate	RM-237
HXsetcreatedir/hxiscdir	RM-239
HXsetdir/hxisdir	RM-240
SDattrinfo/sfgainfo	RM-241
SDcreate/sfcreate	RM-242
SDdiminfo/sfgdinfo	RM-244
SDend/sfend	RM-245
SDendaccess/sfendacc	RM-246
SDfileinfo/sffinfo	RM-247
SDfindattr/sffattr	RM-248
SDgetcal/sfgcal	RM-249
SDgetchunkinfo	RM-250

SDgetdatastrs/sfgdtstr	RM-251
SDgetdimid/sfdimid	RM-252
SDgetdimscale/sfgdscale	RM-253
SDgetdimstrs/sfgdmstr	RM-254
SDgetfillvalue/sfgfill/sfgcfill	RM-255
SDgetinfo/sfginfo	RM-256
SDgetrange/sfgrange	RM-257
SDidtoref/sfid2ref	RM-258
SDiscordvar/sfiscvar	RM-259
SDisdimval_bwcomp/sfisdmvc	RM-260
SDisrecord	RM-261
SDnametoindex/sfn2index	RM-262
SDreadattr/sfrnatt/sfrcatt	RM-263
SDreadchunk	RM-264
SDreaddata/sfrdata/sfradata	RM-265
SDreftoindex/sfreff2index	RM-267
SDselect/sfselect	RM-268
SDsetaccesstype/sfsacct	RM-269
SDsetattr/sfsnatt/sfscatt	RM-270
SDsetblocksize	RM-272
SDsetcal/sfscal	RM-273
SDsetchunk	RM-275
SDsetchunkcache	RM-276
SDsetcompress	RM-277
SDsetdatastrs/sfsdstr	RM-278
SDsetdimname/sfsdmname	RM-279
SDsetdimscale/sfsdscale	RM-280
SDsetdimstrs/sfsdmstr	RM-281
SDsetdimval_comp/sfsdmvc	RM-282
SDsetexternalfile/sfsextf	RM-283
SDsetfillmode/sfsflmd	RM-284
SDsetfillvalue/sfsfill	RM-285
SDsetnbitdataset/sfsnbit	RM-286
SDsetrange/sfsrange	RM-288
SDstart/sfstart	RM-289
SDwritechunk	RM-290
SDwritedata/sfwdata/sfwedata	RM-291
Vaddtagref/vfadtr	RM-292
Vattach/vfatch	RM-293
Vattrinfo/vfainfo	RM-294
Vdetach/vfdtch	RM-295
Vend/vfend	RM-296
Vfind/vfind	RM-297
Vfindattr/vffdatt	RM-298
Vfindclass/vfncls	RM-299
Vflocate/vffloc	RM-300
Vgetattr/vfgnatt/vfgcatt	RM-301
Vgetclass/vfgcls	RM-302
Vgetid/vfgid	RM-303
Vgetname/vfgnam	RM-304
Vgetnext/vfgnxt	RM-305
Vgetttagref/vfgtr	RM-306

Vgettagrefs/vfgtrs	RM-307
Vgetversion/vfgver	RM-308
Vinqtagref/vfinqtr	RM-309
Vinquire/vfinq	RM-310
Vinsert/vfinsrt	RM-311
Visvg/vfisvg	RM-312
Visvs/vfisvs	RM-313
Vlone/vfalone	RM-314
Vnattrs/vfnatts	RM-315
Vnrefs/vnrefs	RM-316
Vntagrefs/vntrc	RM-317
Vsetattr/vfsnatt/vfscatt	RM-318
Vsetclass/vfscls	RM-319
Vsetname/vfsnam	RM-320
Vstart/vfstart	RM-321
VFfieldesize/vffesiz	RM-322
VFfieldsize/vffisiz	RM-323
VFfieldname/vffname	RM-324
VFfieldorder/vffordr	RM-325
VFfieldtype/vfftype	RM-326
VFnfields/vfnflds	RM-327
VHmakegroup/vhfmkgp	RM-328
VHstoredata/vhfsd/vhfscd	RM-329
VHstoredatam/vhfsdm/vhfscdm	RM-331
VQueryref/vqref	RM-333
VQuerytag/vqtag	RM-334
VSappendable/vsapp	RM-335
VSattach/vsfatch	RM-336
VSattrinfo/vsfainf	RM-337
VSdetach/vsfdtch	RM-338
VSelts/vsfelts	RM-339
VSfdefine/vssfdef	RM-340
VSfexist/vsfex	RM-342
VSfind/vsffnd	RM-343
VSfindindex/vsffidx	RM-344
VSfindattr/vsffdat	RM-345
VSfindclass	RM-346
VSfnattrs/vsffnas	RM-347
VSfpack/vsfcpak/vsfnpak	RM-348
VSgetattr/vsfgnat/vsfgcat	RM-350
VSgetclass/vsfgcls	RM-351
VSgetfields/vsfgfld	RM-352
VSgetid/vsfgid	RM-353
VSgetinterlace/vsfgint	RM-354
VSgetname/vsfgnam	RM-355
VSgetversion/vsgver	RM-356
VSinquire/vfinq	RM-357
VSiattr/vsfisat	RM-358
VSlone/vsfalone	RM-359
VSnattrs/vsfnats	RM-360
VSread/vsfrd/vsfrdc	RM-361
VSseek/vsfseek	RM-362

VSSetattr/vsfsnat/vsfscat	RM-363
VSSetclass/vsfsccls	RM-364
VSSetexternalfile/vsfsextf	RM-365
VSSetfields/vsfslfd	RM-366
VSSetinterlace/vsfshint	RM-367
VSSetname/vsfsnam	RM-368
VSSizeof/vsfssiz	RM-369
VSwrite/vsfwrt/vsfwrtc	RM-370
VSQuerycount/vsqfnelt	RM-372
VSQueryfields/vsqfflds	RM-373
VSQueryinterlace/vsqfintr	RM-374
VSQueryname/vsqfname	RM-375
VSQueryref/vsqref	RM-376
VSQuerytag/vsqtag	RM-377
VSQueryvsize/vsqfsiz	RM-378

HDF Definition List 379

3.1 Definition List Overview 379