

'src/grid2fits.c'



Tuesday, May 23, 2023

4:16 PM

5/24/23

I am going to start removing unused functions, starting with those located in the unused source files. A list of the unused functions as of 5/23/23 is located at ~/code/sublmed1dc_profile/unused_fxns_2.txt. My approach will be to locate where other than the original source file the function is declared and remove it from that location, checking with each deletion that the code still outputs the same.

✓ • function openFITSFileForWrite

```
(base) kdarnell@gs691-kdarnell sublmed1dc_profile % grep 'openFITSFileForWrite' src/*
src/grid2fits.c:openFITSFileForWrite(char *outFileName){
Binary file src/grid2fits.gcno matches
src/grid2fits.h:fitsfile *openFITSFileForWrite(char*);
src/gridio.c: fptr = openFITSFileForWrite(outFileName);
```

- No changes made, only found in files I want to delete

✓ • function closeFITSFile

```
(base) kdarnell@gs691-kdarnell sublmed1dc_profile % grep 'closeFITSFile' src/*
src/grid2fits.c:closeFITSFile(fitsfile *fptr){
src/grid2fits.c: closeFITSFile(fptr);
Binary file src/grid2fits.gcno matches
src/grid2fits.h:void closeFITSFile(fitsfile*);
src/gridio.c: closeFITSFile(fptr);
```

- No changes made, only found in files I want to delete

✓ • function writeKeywordsToFITS

```
(base) kdarnell@gs691-kdarnell sublmed1dc_profile % grep 'writeKeywordsToFITS' src/*
src/grid2fits.c:writeKeywordsToFITS(fitsfile *fptr, struct keywordType *kwds\
Binary file src/grid2fits.gcno matches
src/grid2fits.h:void writeKeywordsToFITS(fitsfile*, struct keywordType*, const int);
src/gridio.c: writeKeywordsToFITS(fptr, kwds, numKeywords);
```

- No changes made, only found in files I want to delete

✓ • function defineAndLoadColumns

```
(base) kdarnell@gs691-kdarnell sublmed1dc_profile % grep 'defineAndLoadColumns' src/*
src/grid2fits.c:defineAndLoadColumns(fitsfile *fptr, struct gridInfoType gridInfo\
src/grid2fits.c: allColNames - This is returned to remove what would otherwise be a hard-
wired dependence that the column ordering was the same in the present routine as in
defineAndLoadColumns(). With this vector, the present routine can search for a column name in it
and then use the returned vector index to access (from the next vector) the number of the column
in the (smaller) sequence of valid columns.
src/grid2fits.c: defineAndLoadColumns(fptr, gridInfo\
Binary file src/grid2fits.gcno matches
src/grid2hdf5.c:_defineAndLoadColumns(struct gridInfoType gridInfo\
src/grid2hdf5.c: allColNames - This is returned to remove what would otherwise be a hard-
wired dependence that the column ordering was the same in the present routine as in
defineAndLoadColumns(). With this vector, the present routine can search for a column name in it
and then use the returned vector index to access (from the next vector) the number of the column
```

```
and then use the returned vector index to access them from the next vector, the number of the column
in the (smaller) sequence of valid columns.
src/grid2hdf5.c: _defineAndLoadColumns(gridInfo, dataFlags, STRLEN_KCHAR, &allColNames\
src/grid2hdf5.h: _defineAndLoadColumns(struct gridInfoType gridInfo\
```

Located in:

- Src/grid2fits.c - want to remove anyway, no change
 - Src/grid2hdf5.c
 - Src/grid2hdf5.h
- Function removed, hcn.pop output remains unchanged.



• function getColIndex

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % grep 'getColIndex' src/*
src/grid2fits.c:getColIndex(char **allColNames, const int maxNumCols, char *colName){
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, "ID")];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, colName)];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, "IS_SINK")];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, "NUMNEIGH")];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, "FIRST_NN")];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, "VEL1")];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, colName)];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, "DENSITY1")];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, colName)];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, "ABUNMOL1")];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, colName)];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, "TURBDPLR")];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, "TEMPKNTC")];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, "TEMPDUST")];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, "B_FIELD1")];
src/grid2fits.c:  colI = allColNumbers[getColIndex(allColNames, maxNumCols, colName)];
Binary file src/grid2fits.gcn matches
src/grid2hdf5.c:_getColIndex(char **allColNames, const int maxNumCols, char *colName){
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, "ID")];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, colName)];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, "IS_SINK")];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, "NUMNEIGH")];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, "FIRST_NN")];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, "VEL1")];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, colName)];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, "DENSITY1")];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, colName)];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, "ABUNMOL1")];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, colName)];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, "TURBDPLR")];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, "TEMPKNTC")];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, "TEMPDUST")];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, "B_FIELD1")];
src/grid2hdf5.c:  colI = allColNumbers[_getColIndex(allColNames, maxNumCols, colName)];
src/grid2hdf5.h:_getColIndex(char **allColNames, const int maxNumCols, char *colName);
```

Located in:

- Src/grid2hdf5.c
 - Src/grid2hdf5.h
- Function removed, hcn.pop output remains unchanged.



• function writeGridExtToFITS

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % grep 'writeGridExtToFITS' src/*
src/grid2fits.c:writeGridExtToFITS(fitsfile *fp, struct gridInfoType gridInfo\
Binary file src/grid2fits.gcn matches
src/grid2fits.h:void writeGridExtToFITS(fitsfile*, struct gridInfoType, struct grid*,
unsigned int*, char**, const int);
src/gridio.c: writeGridExtToFITS(fp, gridInfo, gp, firstNearNeigh, collPartNames, dataFlags);
```

- No changes made, only found in files I want to delete



• function writeNnIndicesExtToFITS

✓ - function writeNnIndicesExtToFITS

```
(base) kdarnell@gs691-kdarnell sublmed1dc_profile % grep 'writeNnIndicesExtToFITS' src/*
src/grid2fits.c:writeNnIndicesExtToFITS(fitsfile *fptr, struct gridInfoType gridInfo\
Binary file src/grid2fits.gcno matches
src/grid2fits.h:void writeNnIndicesExtToFITS(fitsfile*, struct gridInfoType, struct
linkType*);//, struct linkType*);
src/gridio.c: writeNnIndicesExtToFITS(fptr, gridInfo, nnLinks);
```

- No changes made, only found in files I want to delete

✓ • function writeLinksExtToFITS

```
(base) kdarnell@gs691-kdarnell sublmed1dc_profile % grep 'writeLinksExtToFITS' src/*
src/grid2fits.c:writeLinksExtToFITS(fitsfile *fptr, struct gridInfoType gridInfo\
Binary file src/grid2fits.gcno matches
src/grid2fits.h:void writeLinksExtToFITS(fitsfile*, struct gridInfoType, struct
linkType*);
src/gridio.c: writeLinksExtToFITS(fptr, gridInfo, links);
```

- No changes made, only found in files I want to delete

✓ • function writePopsExtToFITS

```
(base) kdarnell@gs691-kdarnell sublmed1dc_profile % grep 'writePopsExtToFITS' src/*
src/grid2fits.c:writePopsExtToFITS(fitsfile *fptr, struct gridInfoType gridInfo\
Binary file src/grid2fits.gcno matches
src/grid2fits.h:void writePopsExtToFITS(fitsfile*, struct gridInfoType, const unsigned
short, struct grid*);
src/gridio.c: writePopsExtToFITS(fptr, gridInfo, speciesI, gp);
```

- No changes made, only found in files I want to delete

✓ • function openFITSFileForRead

```
(base) kdarnell@gs691-kdarnell sublmed1dc_profile % grep 'openFITSFileForRead' src/*
src/grid2fits.c:openFITSFileForRead(char *inFileName){
src/grid2fits.c: fptr = openFITSFileForRead(inFileName);
Binary file src/grid2fits.gcno matches
src/grid2fits.h:fitsfile *openFITSFileForRead(char*);
src/gridio.c: fptr = openFITSFileForRead(inFileName);
```

- No changes made, only found in files I want to delete

✓ • function countColsBasePlusInt

```
(base) kdarnell@gs691-kdarnell sublmed1dc_profile % grep 'countColsBasePlusInt' src/*
src/grid2fits.c:countColsBasePlusInt(fitsfile *fptr, char *baseName){
src/grid2fits.c: gridInfoRead->nSpecies = (unsigned short)countColsBasePlusInt(fptr,
"ABUNMOL");
src/grid2fits.c: gridInfoRead->nDims = (unsigned short)countColsBasePlusInt(fptr, "X");
src/grid2fits.c: gridInfoRead->nDensities = (unsigned short)countColsBasePlusInt(fptr,
"DENSITY");
src/grid2fits.c: if(countColsBasePlusInt(fptr, colName)!=gridInfoRead->nDims)
src/grid2fits.c: numDensities = countColsBasePlusInt(fptr, "DENSITY");
Binary file src/grid2fits.gcno matches
```

- No changes made, only found in files I want to delete

✓ • function countKeywords

```
(base) kdarnell@gs691-kdarnell sublmed1dc_profile % grep 'countKeywords' src/*
src/grid2fits.c:countKeywords(fitsfile *fptr, char *baseName){
src/grid2fits.c: *numCollPartRead = countKeywords(fptr, "COLLPAR");
Binary file src/grid2fits.gcno matches
```

- No changes made, only found in files I want to delete

✓ • function readKeywordsFromFITS

```
(base) kdarnell@gs691-kdarnell sublmed1dc_profile % grep 'readKeywordsFromFITS' src/*
src/grid2fits.c:readKeywordsFromFITS(fitsfile *fptr, struct keywordType *kwd\
Binary file src/grid2fits.gcno matches
src/grid2fits.h:void readKeywordsFromFITS(fitsfile*, struct keywordType*, const int);
```

```
src/grid2fits.h:void readKeywordsFromFITS(fitsfile*, struct keywordType*, const int*);  
src/gridio.c: readKeywordsFromFITS(fp_ptr, kwds, numKeywords);
```

- No changes made, only found in files I want to delete

✓ • function readGridExtFromFITS

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % grep 'readGridExtFromFITS' src/*  
src/grid2fits.c:readGridExtFromFITS(fitsfile *fp_ptr, struct gridInfoType *gridInfoRead)  
Binary file src/grid2fits.gcno matches  
src/grid2fits.h:void readGridExtFromFITS(fitsfile*, struct gridInfoType*, struct  
grid*, unsigned int*, char**, int*, int*);  
src/gridio.c: readGridExtFromFITS(fp_ptr, gridInfoRead, gp, firstNearNeigh
```

- No changes made, only found in files I want to delete

✓ • function readLinksExtFromFITS

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % grep 'readLinksExtFromFITS' src/*  
src/grid2fits.c:readLinksExtFromFITS(fitsfile *fp_ptr, struct gridInfoType *gridInfoRead)  
Binary file src/grid2fits.gcno matches  
src/grid2fits.h:void readLinksExtFromFITS(fitsfile*, struct gridInfoType*, struct  
grid*, struct linkType*, int*);  
src/gridio.c: readLinksExtFromFITS(fp_ptr, gridInfoRead, gp, links, dataFlags);
```

- No changes made, only found in files I want to delete

✓ • function readNnIndicesExtFromFITS

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % grep 'readNnIndicesExtFromFITS' src/*  
src/grid2fits.c:readNnIndicesExtFromFITS(fitsfile *fp_ptr, struct linkType *links)  
Binary file src/grid2fits.gcno matches  
src/grid2fits.h:void readNnIndicesExtFromFITS(fitsfile*, struct linkType*, struct  
linkType**, struct gridInfoType*, int*);  
src/gridio.c: readNnIndicesExtFromFITS(fp_ptr, links, nnLinks, gridInfoRead, dataFlags);
```

- No changes made, only found in files I want to delete

✓ • function checkPopsFITSExtExists

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % grep 'checkPopsFITSExtExists' src/*  
src/grid2fits.c:checkPopsFITSExtExists(fitsfile *fp_ptr, const unsigned short speciesI){  
Binary file src/grid2fits.gcno matches  
src/grid2fits.h:_Bool checkPopsFITSExtExists(fitsfile*, const unsigned short);  
src/gridio.c: *blockFound = checkPopsFITSExtExists(fp_ptr, speciesI);
```

- No changes made, only found in files I want to delete

✓ • function readPopsExtFromFITS

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % grep 'readPopsExtFromFITS' src/*  
src/grid2fits.c:readPopsExtFromFITS(fitsfile *fp_ptr, const unsigned short speciesI)  
Binary file src/grid2fits.gcno matches  
src/grid2fits.h:void readPopsExtFromFITS(fitsfile*, const unsigned short, struct grid*,  
struct gridInfoType*);  
src/gridio.c: readPopsExtFromFITS( fp_ptr, speciesI, gp, gridInfoRead);
```

- No changes made, only found in files I want to delete

✓ • function countDensityColsFITS

```
(base) kdarnell@gs691-kdarnell sublimed1dc_profile % grep 'countDensityColsFITS' src/*  
src/grid2fits.c:countDensityColsFITS(char *inFileName){  
Binary file src/grid2fits.gcno matches  
src/grid2fits.h:int countDensityColsFITS(char *inFileName);  
src/gridio.c: *numDensities = countDensityColsFITS(inFileName);
```

- No changes made, only found in files I want to delete

- The only src files that now contain references to the above functions are
src/grid2fits.h src/grid2fits.c and src/gridio.c