

Bug in *SpharmonicKit* 2.7, *S2kit* 1.0 and *SOFT* 2.0: Error in malloc statement

A user recently brought to our attention an error which occurs in the source file `cospmls.c`. A malloc statement in the function `SemiNaiveNaivePmlTable()`, which is used to generate the precomputed Legendre functions for the forward spherical transform, is incorrect. Even though slightly different versions of this file are distributed with *SpharmonicKit* 2.7, *S2kit* 1.0 and *SOFT* 2.0, the fix is identical for all three distributions.

We apologize for any problems this may have caused. Unfortunately, the errors did not reveal themselves during our tests. But fortunately, the cure is easy - editing a single line of code.

Currently, the line reads

```
seminaive_naive_table = (double **) malloc(sizeof(double) * (bw+1));
```

The `sizeof()` argument is incorrect. The line should instead read

```
seminaive_naive_table = (double **) malloc(sizeof(double *) * (bw+1));
```

We give in the table below, for each of the three distributions, the line number where the offending code is located. (Note that in *SOFT* 2.0, `cospmls.c` resides in the subdirectory `lib0/`.)

Distribution	Line # in <code>cospmls.c</code>
<i>SpharmonicKit</i> 2.7	1008
<i>S2kit</i> 1.0	724
<i>SOFT</i> 2.0	685