$\boxed{\text{A P1}}$ A platform independent, parallel version of Atlas12

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Opacity sampling with Atlas12, the stellar atmosphere code developed by R. Kurucz, cannot always be carried out with the desired frequency or depth resolution because of the limited computing power of even the fastest monoprocessors. There are also known problems of portability which make it difficult to run Atlas12 with various compilers on different operating systems.

We have first established a Fortran77 version that can be compiled using the g77 compiler, a useful feature for astronomers having no access to VMS compatible Fortran compilers. In a further step, Atlas12 was successfully ported to Ada95, an object-oriented parallel language. Atlas12 is now platform independent, split up in modules and running in parallel on multi-processor machines. Any limitations as to the maximum number of depth and frequency grid-points and the number of lines that can be treated have been pushed far beyond what is possible with the original version.

We intend to incorporate the continuous opacity routines of Atlas12 in our new CAMAS code for magnetic atmospheres (but also in the existing COSSAM and CARAT codes) in order to be able to compare our results with R. Kurucz's de facto stellar atmosphere standard.