**Document ISO/IEC/JTC 1/SC 22/WG 23 N1277**

 **10 April 2023**

**Document submitted by J. Reid to demonstrate the use of Fortran asynchronous variables.**

**4.10.6 Asynchronous variables**

At the end of the section add

“For example, in the code

 real :: buf(100, 100)

 . . . *code that involves buf.*

 block

 asynchronous :: buf

 call MPI\_Irecv(buf,. . . req, . . . )

 . . . *code that does not involve buf.*

 call MPI\_Wait(req, . . . )

 end block

 . . . *code that involves buf.*

MPI\_Irecv initiates input communication and can return while the communication (reading values into buf) is still underway. The code between MPI\_Irecv and MPI\_Wait can execute without waiting for this communication to complete provided it does not involve buf. Similar code with the call of MPI\_Irecv replaced by a call of MPI\_Isend is asynchronous output communication.