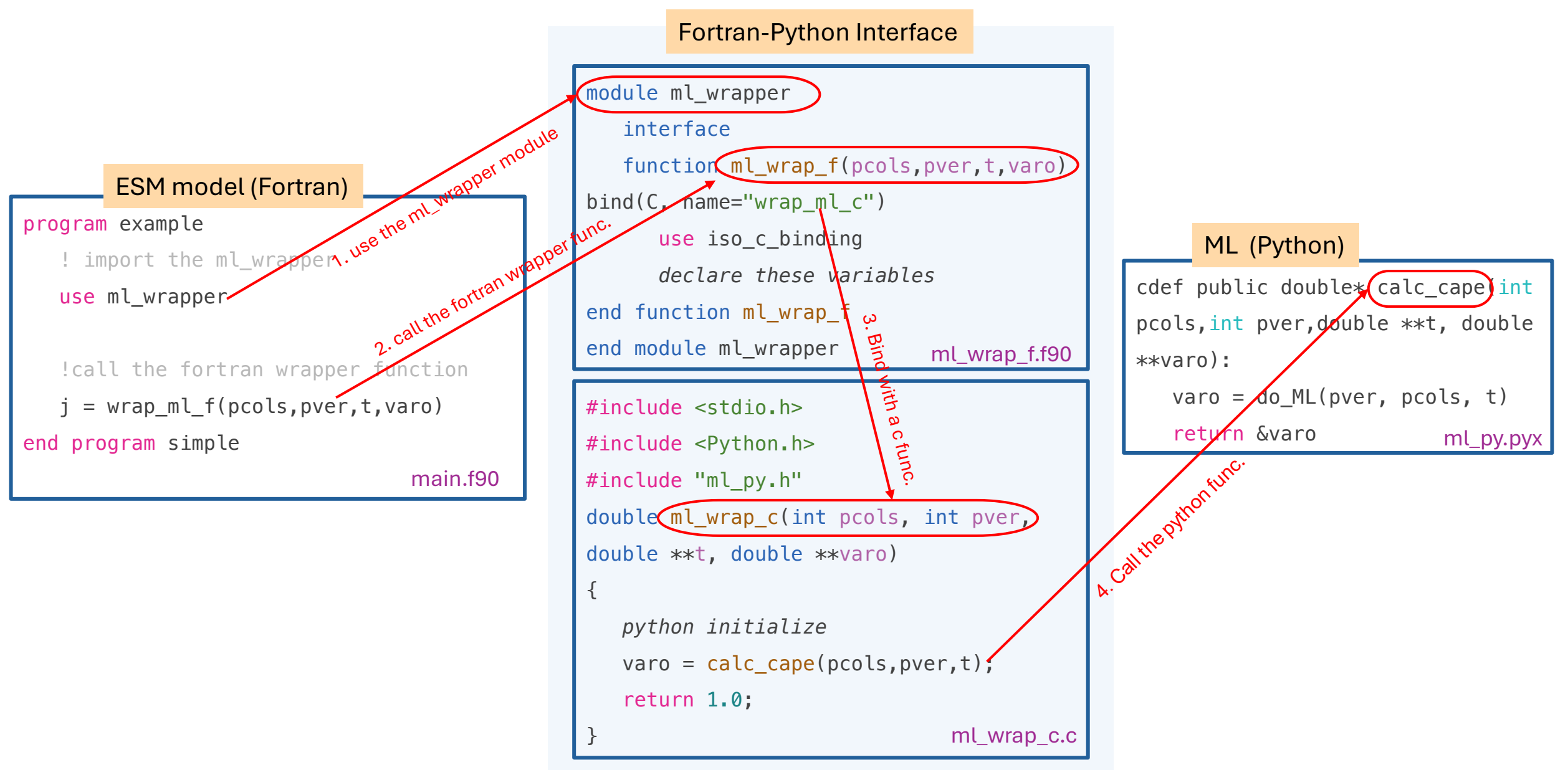
Fortran-Python Interface
ESM model (Fortran)
program example
! import the ml_wrapper
use ml_wrapper
!call the fortran wrapper function
j = wrap_ml_f(pcols,pver,t,varo)
end program simple
main.f90
1. use the ml_wrapper module
2. call the fortran wrapper func.
module ml_wrapper
interface
function ml_wrap_f(pcols,pver,t,varo)
bind(C, name="wrap_ml_c")
use iso_c_binding
declare these variables
end function ml_wrap_f
end module ml_wrapper
ml_wrap_f.f90
3. Bind with a c func.
#include <stdio.h>
#include <Python.h>
#include "ml_py.h"
double ml_wrap_c(int pcols, int pver,
double **t, double **varo)
{
python initialize
varo = calc_cape(pcols,pver,t);
return 1.0;
}
ml_wrap_c.c
4. Call the python func.
ML (Python)
cdef public double* calc_cape(int
pcols,int pver,double **t, double
**varo):
varo = do_ML(pver, pcols, t)
return &varo
ml_py.pyx