Simulation Tests of AlmaLinux-9 Operating System

Motohiko Tanaka, PhD, Japan
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Settings and tests of simulations

Install the linux, AlmaLinux-9, Mar. 2024
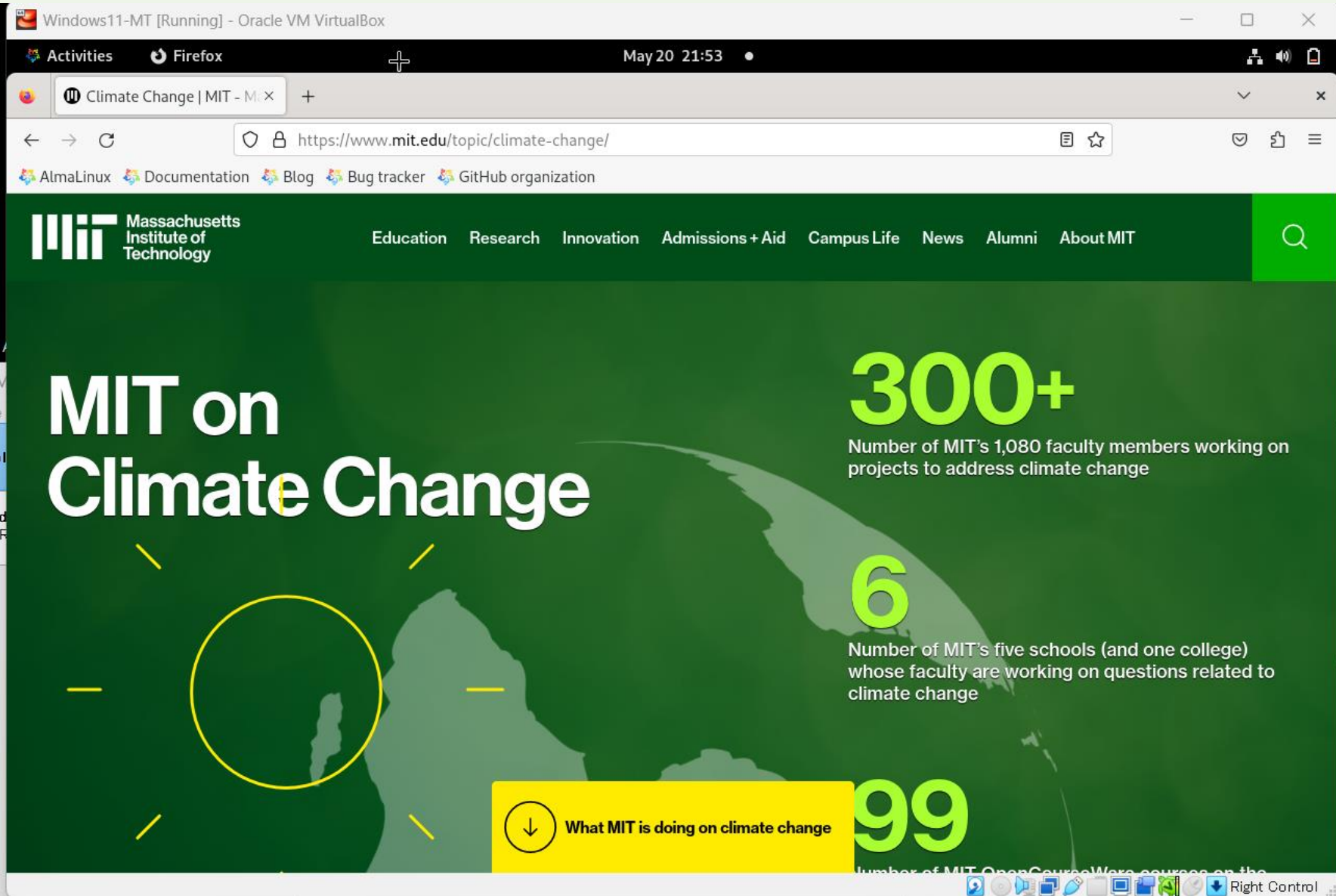*Use the Windows 11, VirtualBox 7.0.14*
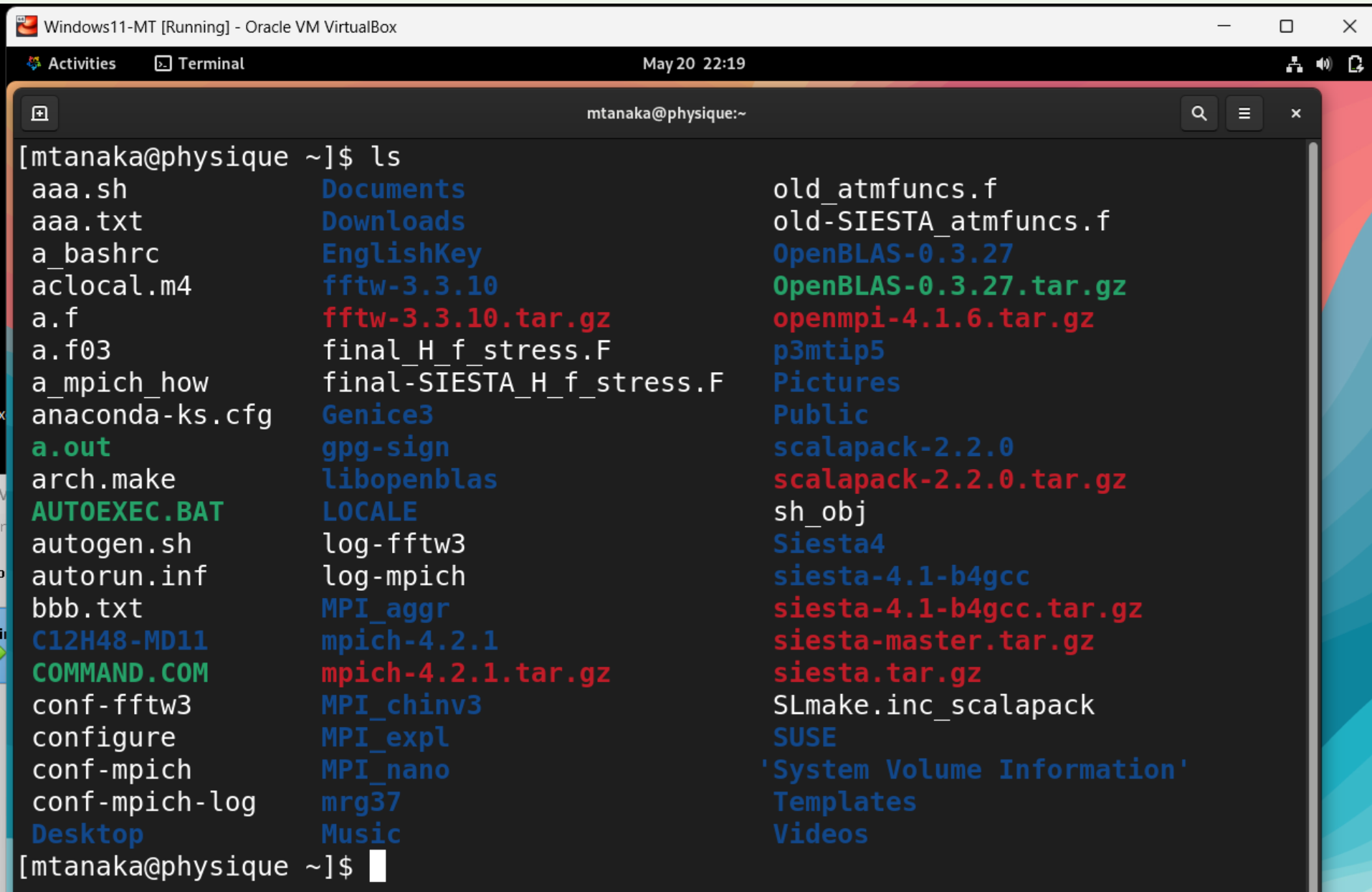*Open gfortran and pip packages*

Simulations
>> three-dimensional ES p3m code, with tip5,
*   Ewald sum*
>> Siesta-4.1b, with mpich, fft3w, OpenBLAS,
*   Scalapack*

Firefox works for showing AlmaLinux and MIT sites
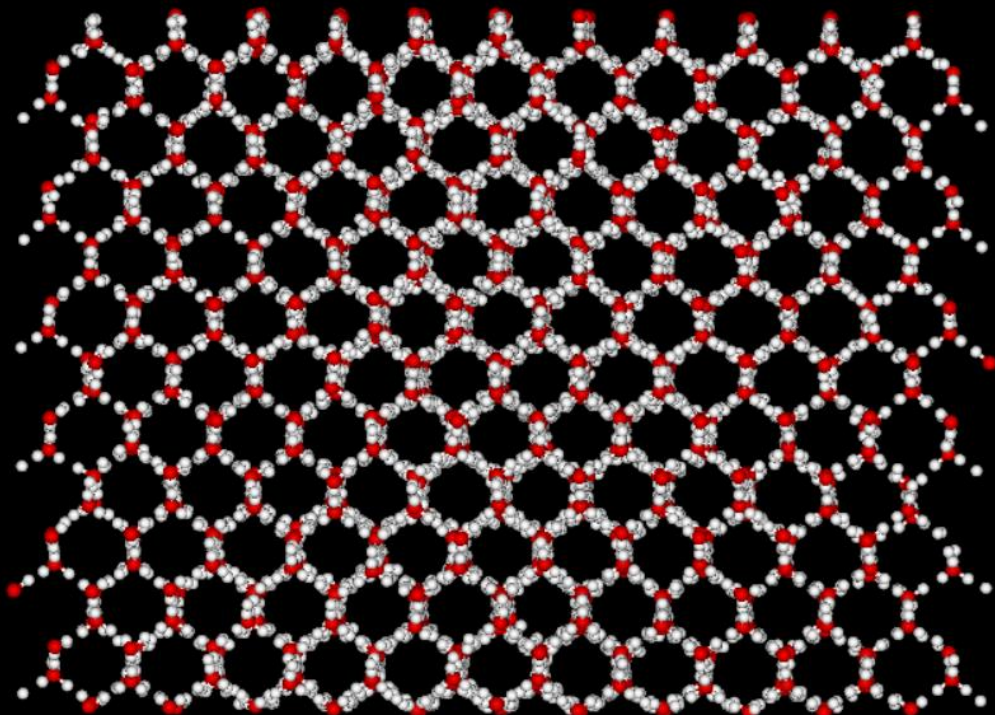
Terminal showing mpich-4, fftw-3 and Siesta-4.1

Test of @p3mtip5p07a.f03   H2O 8640 atoms


```
t=      30.0  1.7385E+00  2.0207E-01  0.0000E+00 -1.6976E+02  3.0940E+01  5.4725E
-04 -1.3688E+02      9.692D+02  1.117D-01  0.000D+00  1.006D-03  1.169D-04      8.1
82D-01    3.394D-04    8.099D-01    7.924D-03
    Final: t8, it, tmax=   30.224999999999351                1210    30.0000000000000
00
 Final write(12) at t8=   30.224999999999351

 *ipar, wall_time(sec)=            1   976.62514873099997

% 4 cpu on HP
```

Test of Siesta-4.1b

In the arch.make, the keyword -fallow-argument-mismatch is added of AlmaLinux-9 to avoid non-necessary errors.

```
Siesta Version  : v4.1-b4
Architecture    : gfortran-MPI
Compiler version: GNU Fortran (GCC) 4.8.5 20150623 (Red Hat 4.8.5-44)
Compiler flags  : mpifort  -O2 -fPIC -ftree-vectorize -march=native
PP flags        : -DMPI -DFC_HAVE_ABORT
Libraries       :  -lgomp -L/opt/openblas/lib -lopenblas_omp  -L/opt/sc
alapack-2.2.0/lib -lscallapack
PARALLEL version

* Running on 6 nodes in parallel
>> Start of run:  10-MAY-2024  17:39:33
```

```
                    ***********************
                    *  WELCOME TO SIESTA  *          its
                    ***********************          /Bohr**3
                                                     /Ang**3
reinit: Reading from c12h48.fdf                      ar

        (Free)E+ p_basis*V_orbitals  =       -2615.811579
        (Free)Eharris+ p_basis*V_orbitals  =       -2615.811579

        dhscf: Vacuum level (max, mean) =    -0.569553    -0.682007 eV
        >> End of run:  10-MAY-2024  17:40:33
        Job completed
```