Hands on VESTA

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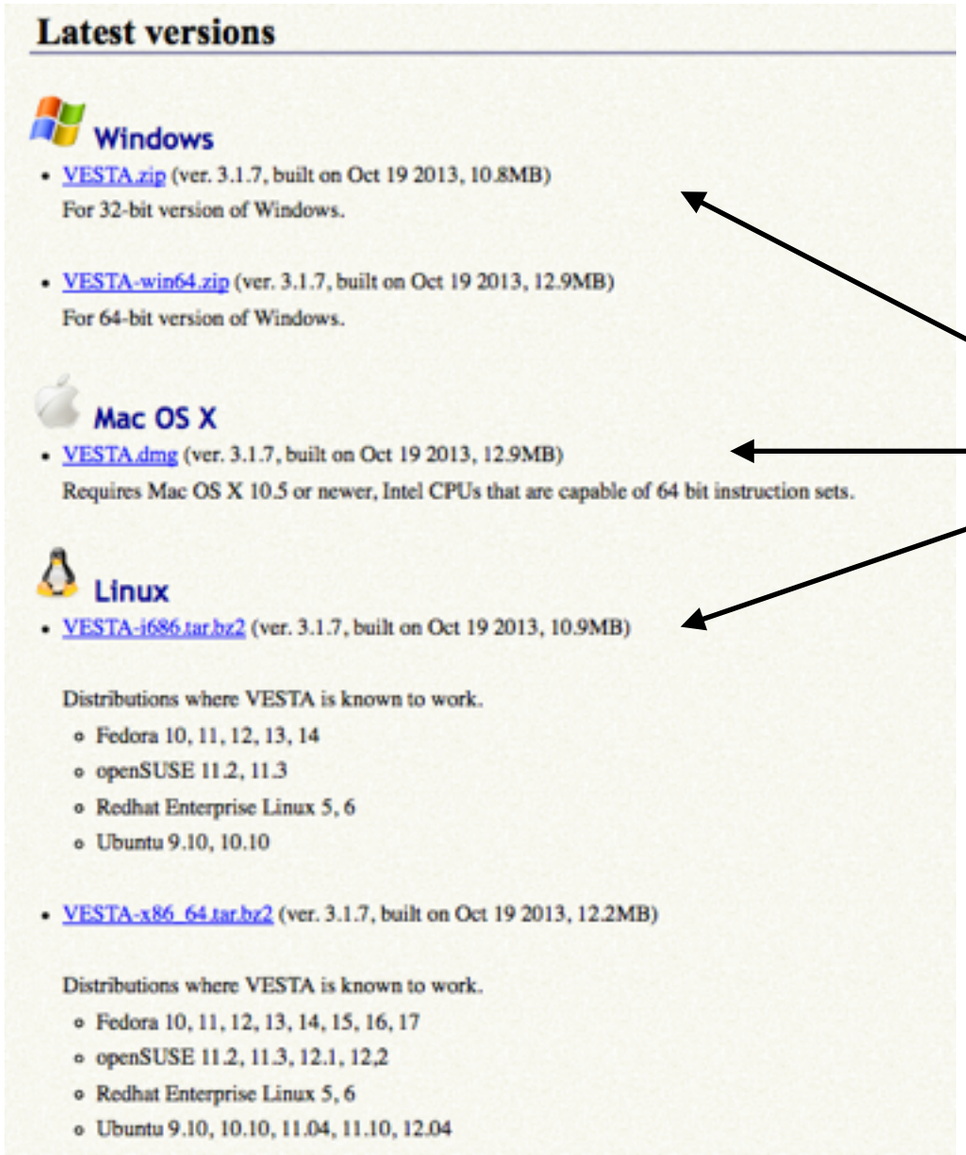
Install Vesta

Visit the *download* section on http://jp-minerals.org/vesta/en/



Latest versions

Windows

- VESTA.zip (ver. 3.1.7, built on Oct 19 2013, 10.8MB)
  For 32-bit version of Windows.
- VESTA-win64.zip (ver. 3.1.7, built on Oct 19 2013, 12.9MB)
  For 64-bit version of Windows.

Mac OS X

- VESTA.dmg (ver. 3.1.7, built on Oct 19 2013, 12.9MB)
  Requires Mac OS X 10.5 or newer, Intel CPUs that are capable of 64 bit instruction sets.

Linux

- VESTA-i686.tar.bz2 (ver. 3.1.7, built on Oct 19 2013, 10.9MB)

  Distributions where VESTA is known to work.
  - Fedora 10, 11, 12, 13, 14
  - openSUSE 11.2, 11.3
  - Redhat Enterprise Linux 5, 6
  - Ubuntu 9.10, 10.10

- VESTA-x86_64.tar.bz2 (ver. 3.1.7, built on Oct 19 2013, 12.2MB)

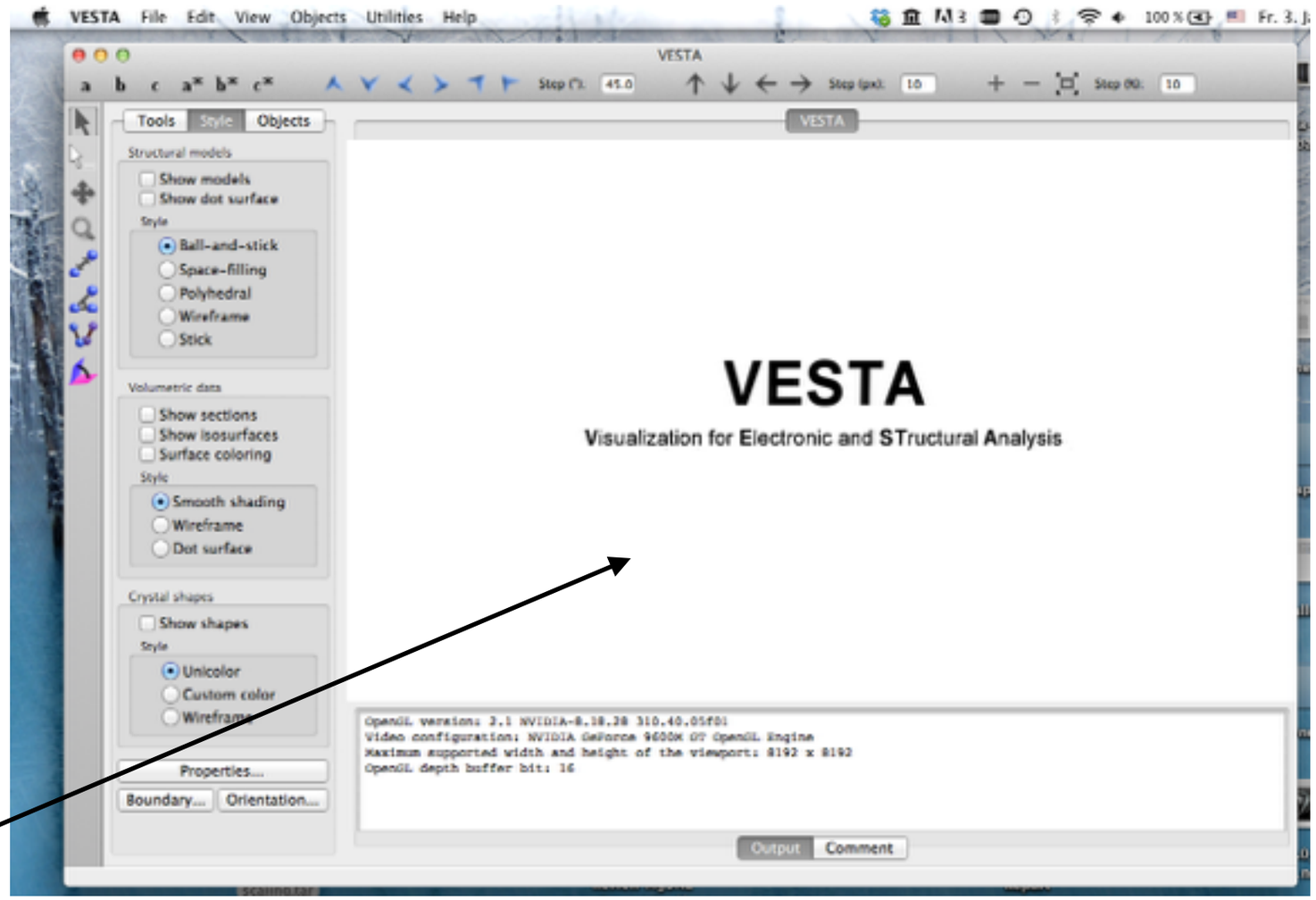
  Distributions where VESTA is known to work.
  - Fedora 10, 11, 12, 13, 14, 15, 16, 17
  - openSUSE 11.2, 11.3, 12.1, 12.2
  - Redhat Enterprise Linux 5, 6
  - Ubuntu 9.10, 10.10, 11.04, 11.10, 12.04

choose the VESTA version for your OS and follow the install instructions or extract the files

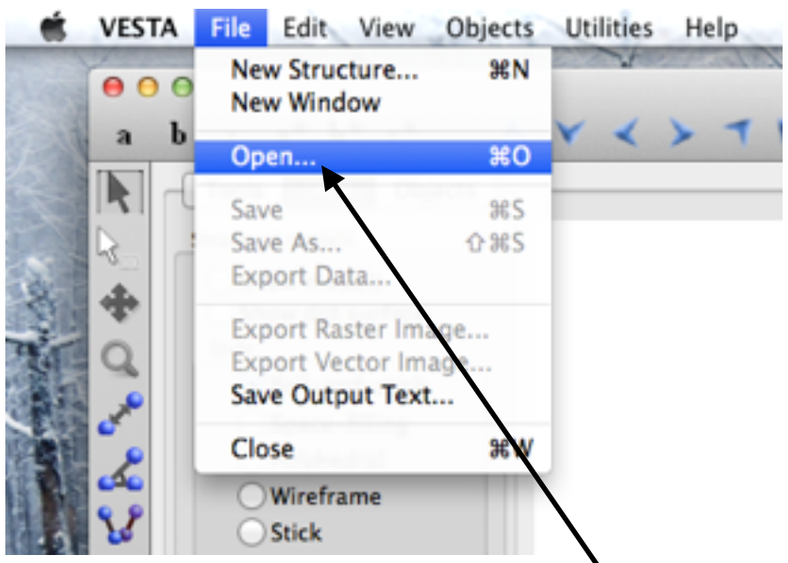
Open Vesta

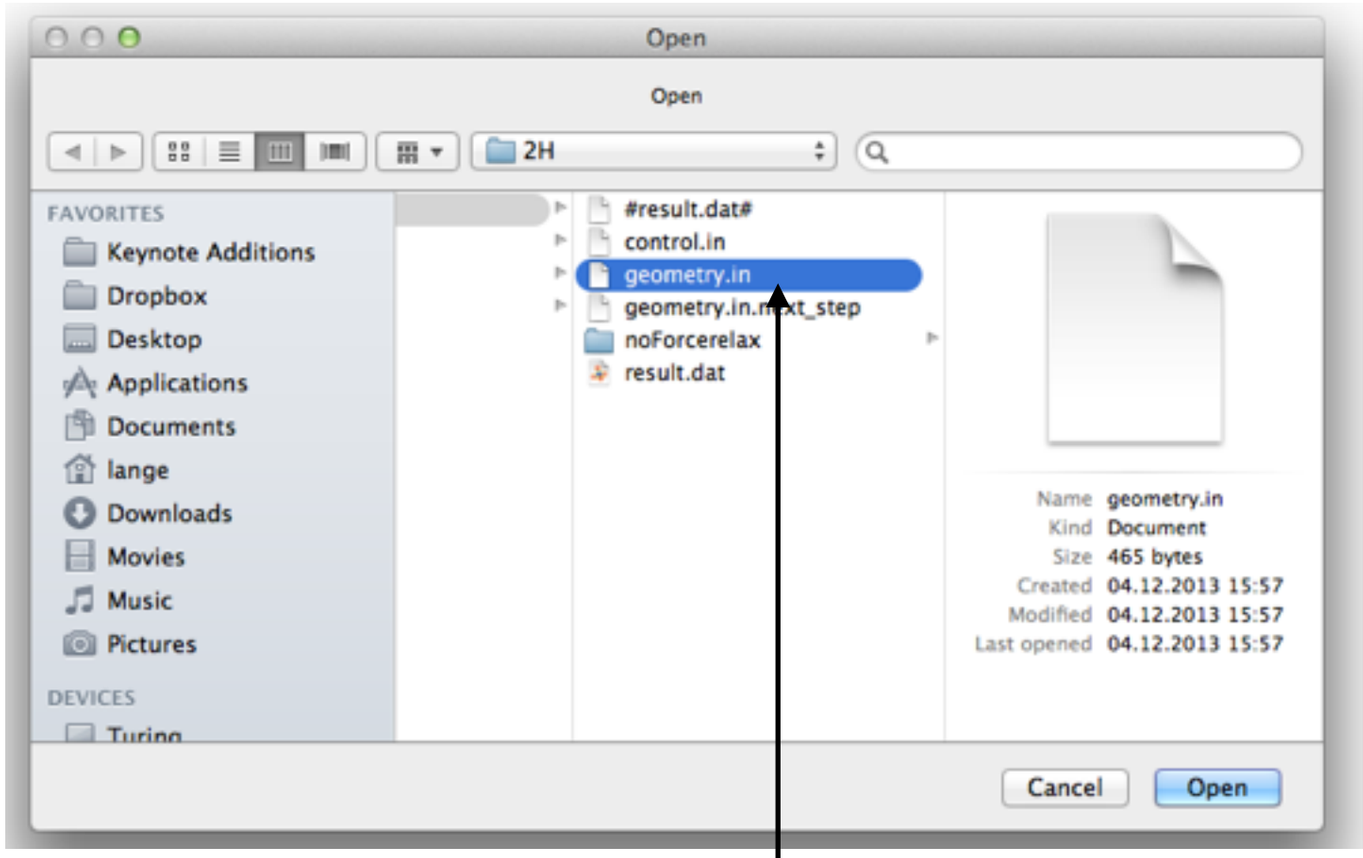
When installed, open VESTA by clicking on the icon or open a console, change to the VESTA directory and execute the binary

Vesta will welcome you with with this screen



Open a geometry file



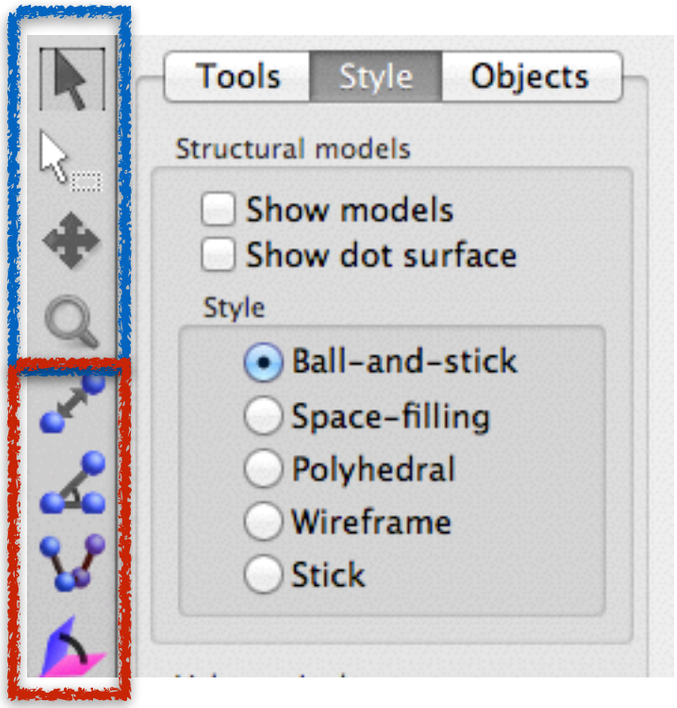


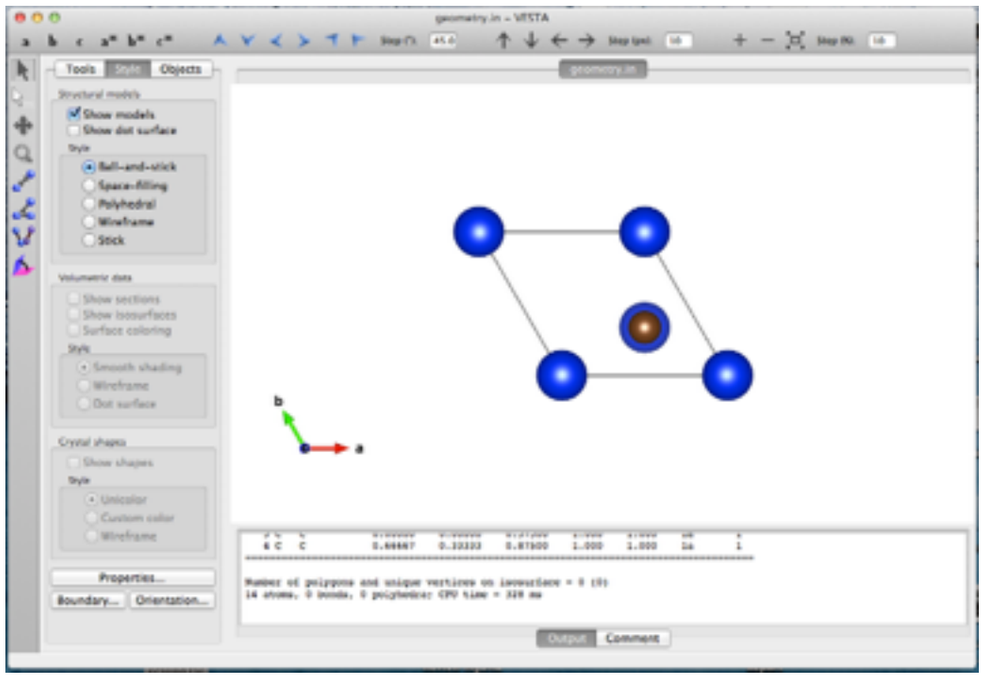
To load a geometry file, click on the **open** command in the **File** section and choose your prepared geometry.in file

Get in touch with your structure

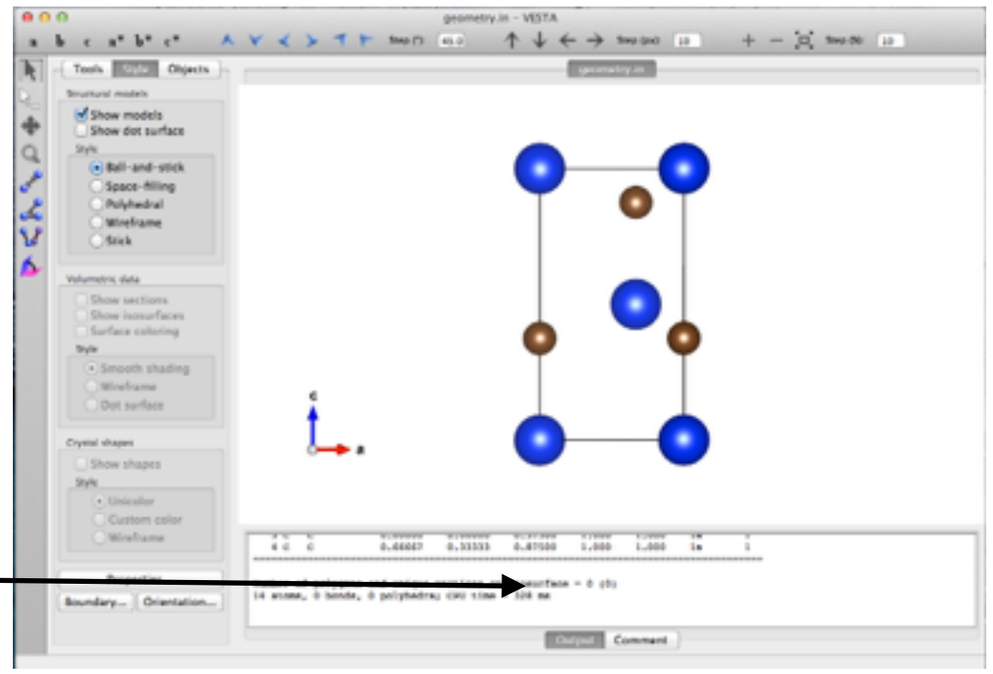
Visual manipulation tools

Measurement tools



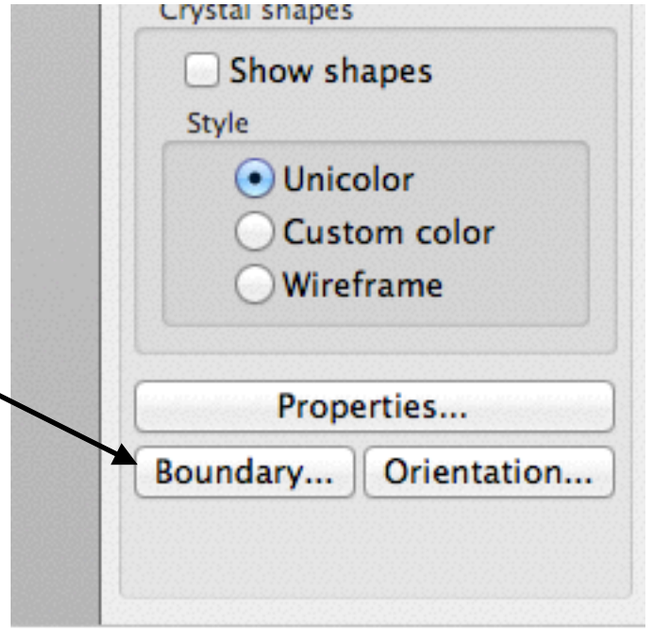


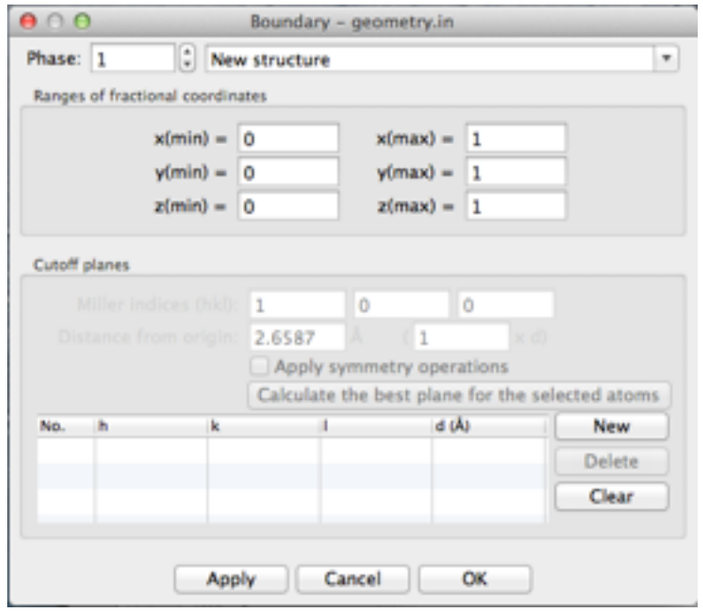
In the upper left corner you find the **Visual manipulation tools** and the **Measurement tools**.
You can try to rotate your structure or magnify it.
Also, you can measure the distance between two atoms or measure angles.
Results of measurements are shown in the output region.

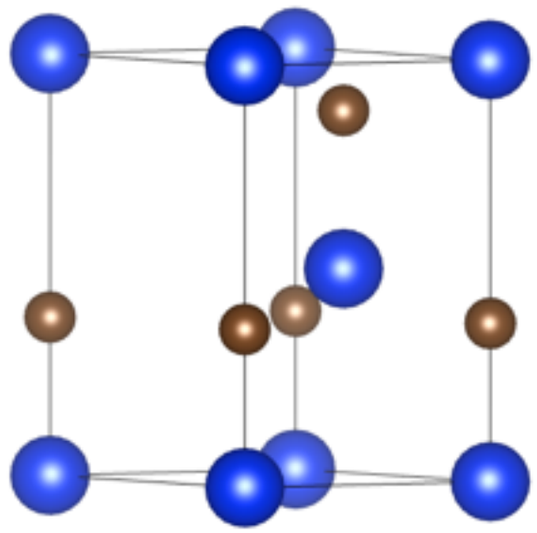


Apply periodic conditions

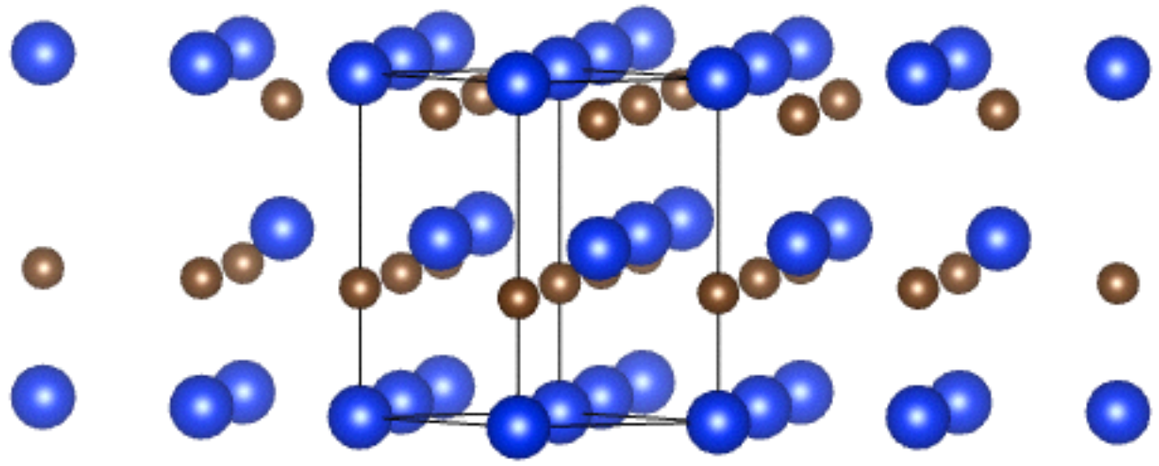
In the **Boundary** section, you can multiply your structure periodically. Increase the range of fractional coordinates to do so. The range can also be a fractional number.





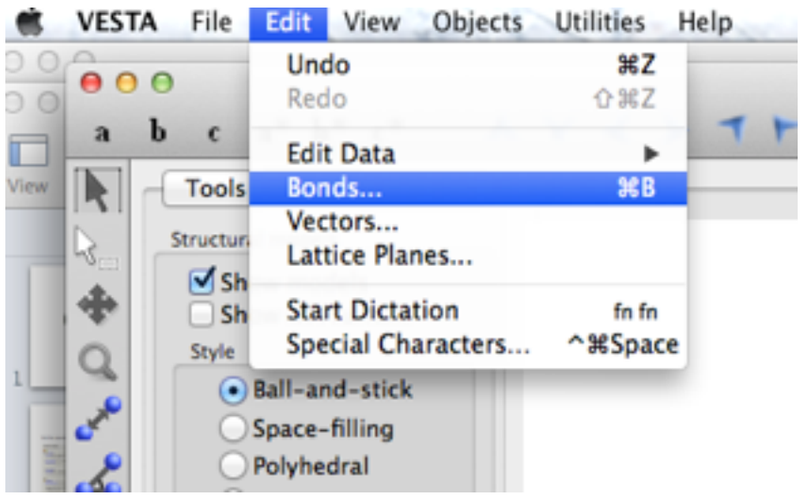


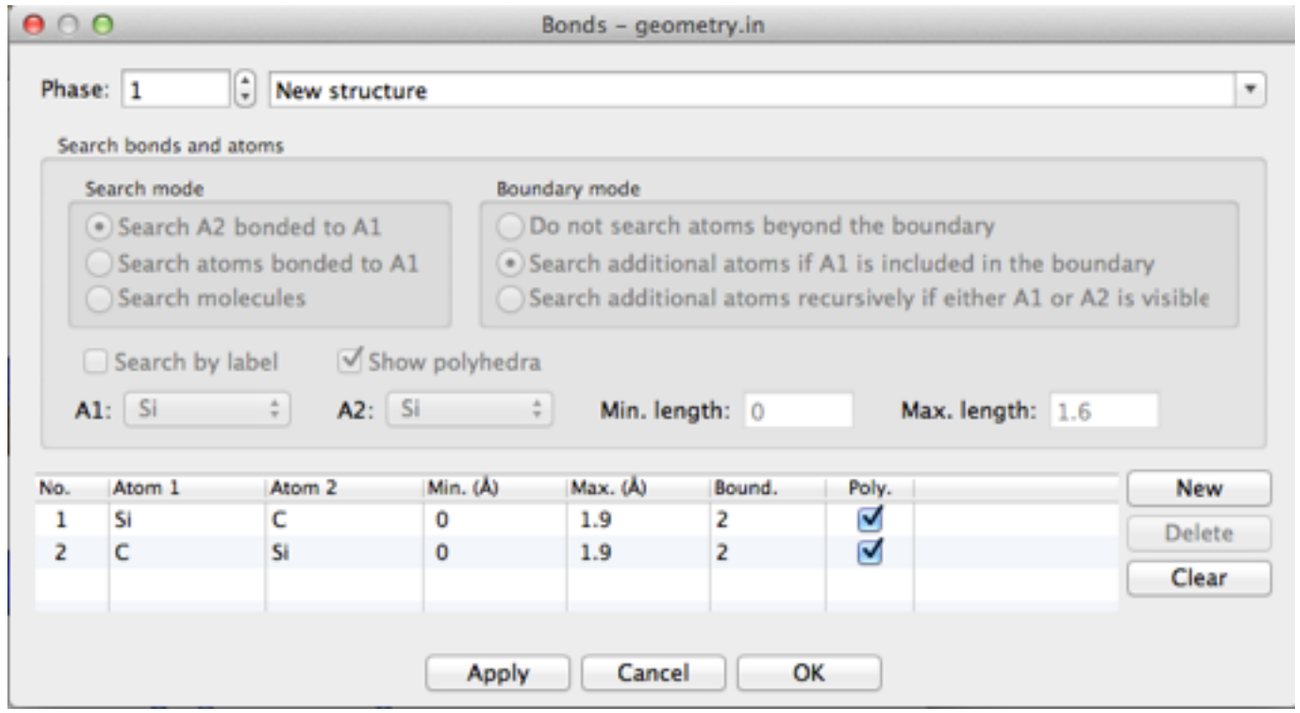
SiC 1x1x1



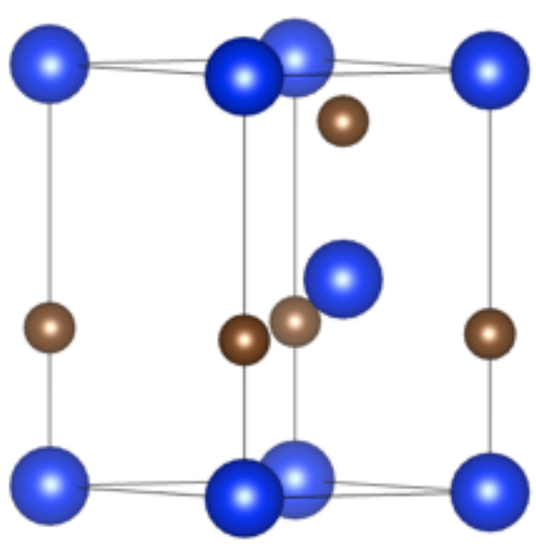
SiC 3x3x1

Draw bonds

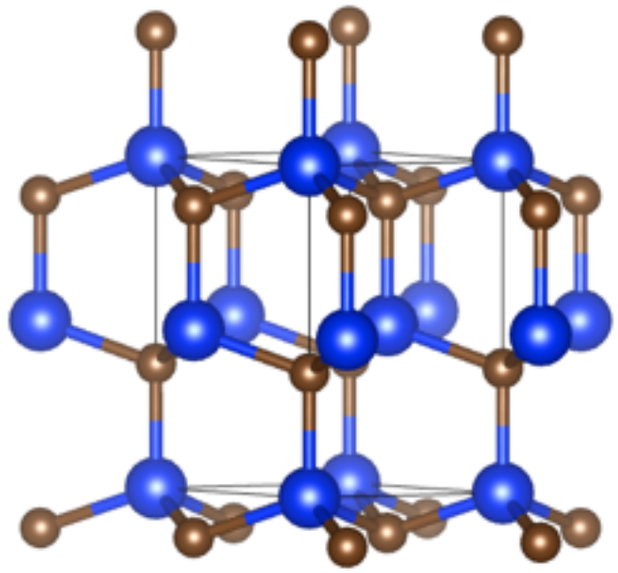




Bonds in the **Edit** section allows you to draw bonds between atoms. Specify the atom types and a range in which the atoms are considered to form a bond.
The **boundary mode** allows you to show also bonds to atoms, which are not shown in the current cell



SiC no bonds



SiC with Si-C bonds