Density of minerals VI: The effect of structural H$_2$O

The previous pages in this series on the density of minerals have considered minerals without H$_2$O in their structure. This page uses the carbonate minerals to show that increasing H$_2$O content in minerals leads to lesser density. In fact, density of very hydrous minerals like natron approach the density of water itself.

In addition to considering the effect of structural H$_2$O, the plot shows minerals with and without OH$^-$. Comparison shows that presence of OH$^-$ has little effect on density, and some OH$^-$-bearing minerals are more dense than their OH$^-$-less analogues. That's a thought to which we'll return in Part VII of this series.