

Supplementary Figure SF1. Ne isotope ratios measured in all heating steps for all core samples. Ellipses are 68% confidence regions. The black dot is the isotope composition of atmospheric Ne and the black lines show the atmospheric-cosmogenic mixing line (Niedermann, 2000; the separation of the lines reflects the uncertainty in the isotope composition of cosmogenic Ne). The color-coding reflects extraction temperature: light blue, <500°C; light purple, 500-1000°; light red, 1000°. The data in the two panels are the same; only the axis limits differ. Note that although some of the uncertainty ellipses do not overlap the cosmogenic-atmospheric mixing line, the ellipses are supposed to be 68% uncertainty regions. Thus, if they are drawn correctly and the true isotope compositions of all heating steps do, in fact, line on the mixing line, then we expect 32% of the ellipses, or 62 of 185 ellipses shown here, to fail to overlap with the mixing line. In fact, only 23 ellipses do not overlap with the mixing line, which suggests that variance of isotope ratios around the mixing line is due to measurement error alone and also that measurement uncertainties may have been slightly overestimated.



