

Abstract Submitted
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The Nuclear Pairing Gap - How Low Can It Go?¹ ALEX BROWN,
National Superconducting Cyclotron Laboratory and Department of Physics and
Astronomy, Michigan State University, East Lansing, Michigan 48824-1321 — The
pairing gap for ^{53}Ca obtained from new experimental data on the masses of $^{52-54}\text{Ca}$
[F. Wienholtz et al., Nature **346**, 498 (2013)] has the smallest value yet observed.
This is explained in the framework of the nuclear shell model with schematic and
realistic Hamiltonians as being due to shell gaps around the low- j orbital $1p_{1/2}$ at
 $N = 33$. I will also show comparisons of experiment and theory for the oxygen
isotopes that have a small pairing gap at $N = 15$ due to shell gaps around the low- j
orbital $1s_{1/2}$. Minima in the pairing gaps for all nuclei are shown and discussed.

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Alex Brown
National Superconducting Cyclotron Laboratory and
Dept of Physics and Astronomy, Michigan State University,
East Lansing, Michigan 48824-1321

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