

# Our Future Nuclear Data Needs

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## Keywords

keywords, separated by comma, no full stop, lowercase

## Abstract

Abstract text, approximately 150 words.

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## 1. INTRODUCTION

Please begin the main text of your article here.

## 2. FIRST-LEVEL HEADING

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### 2.1. Second-Level Heading

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**2.1.1. Third-Level Heading.** This is dummy text. This is dummy text. This is dummy text. This is dummy text.

**2.1.1.1. Fourth-Level Heading.** Fourth-level headings are placed as part of the paragraph.

## 3. ELEMENTS OF THE MANUSCRIPT

### 3.1. Figures

Figures should be cited in the main text in chronological order. This is dummy text with a citation to the first figure (**Figure 1**). Citations to **Figure 1** (and other figures) will be bold.

### 3.2. Tables

Tables should also be cited in the main text in chronological order (**Table 1**).

### 3.3. Lists and Extracts

Here is an example of a numbered list:

### 3.4. Sidebars and Margin Notes

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**Term A:** definition

**Term B:** definition

**Term C:** definition

---

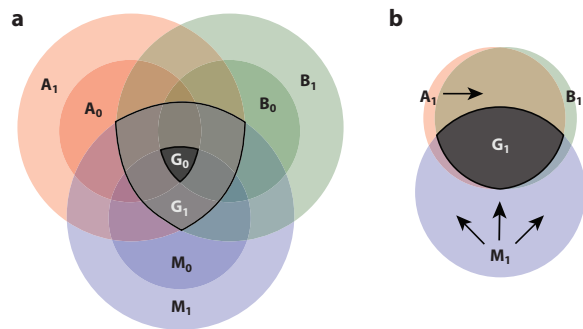


Figure 1: Figure caption with descriptions of parts a and b

Table 1: Table caption

Head 1 (units) <sup>a</sup>	Head 2	Head 3	Head 4	Head 5 (units)
Column 1	Column 2	Column3 <sup>b</sup>	Column4	Column
Column 1	Column 2	Column3	Column4	Column
Column 1	Column 2	Column3	Column4	Column
Column 1	Column 2	Column3	Column4	Column

<sup>a</sup>Table footnote; <sup>b</sup>second table footnote.

## SIDEBARS

Sidebar text goes here.

### Sidebar Second-Level Heading

More text goes here.

**Sidebar third-level heading.** Text goes here.

## 3.5. Equations

$$a = b \text{ ((Single Equation Numbered))} \quad (1)$$

Equations can also be multiple lines as shown in Equations 2 and 3.

$$c = 0 \text{ ((Multiple Lines, Numbered))} \quad (2)$$

$$ac = 0 \text{ ((Multiple Lines, Numbered))} \quad (3)$$

## SUMMARY POINTS

1. Summary point 1. These should be full sentences.

2. Summary point 2. These should be full sentences.
3. Summary point 3. These should be full sentences.
4. Summary point 4. These should be full sentences.

#### FUTURE ISSUES

1. Future issue 1. These should be full sentences.
2. Future issue 2. These should be full sentences.
3. Future issue 3. These should be full sentences.
4. Future issue 4. These should be full sentences.

### DISCLOSURE STATEMENT

If the authors have nothing to disclose, the following statement will be used: The authors are not aware of any affiliations, memberships, funding, or financial holdings that might be perceived as affecting the objectivity of this review.

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### References

1. Glashow SL. *Nucl. Phys.* 22:579 (1961)
2. Weinberg S. *Phys. Rev. Lett.* 19:1264 (1967)
3. Salam A. In *Elementary Particle Theory: Relativistic Groups and Analyticity. Proceedings of the 8th Nobel Symposium*, ed. N Svartholm, p. 367. Stockholm: Almqvist & Wiksell (1968)
4. Fritzsche H, Gell-Mann M, Leutwyler H. *Phys. Lett. B* 47:365 (1973)
5. Gross DJ, Wilczek F. *Phys. Rev. Lett.* 30:1343 (1973)
6. Politzer HD. *Phys. Rev. Lett.* 30:1346 (1973)
7. Kronfeld AS, Quigg C. *Am. J. Phys.* 78:1081 (2010)
8. Langacker P. *The Standard Model and Beyond. Series in High Energy Physics, Cosmology, and Gravitation*. Boca Raton: CRC/Taylor & Francis (2010)
9. Quigg C. *Gauge Theories of the Strong, Weak, and Electromagnetic Interactions*. Princeton, NJ: Princeton Univ. Press. 2nd ed. (2013)
10. Schwartz MD. *Quantum Field Theory and the Standard Model*. Cambridge, UK: Cambridge Univ. Press (2013)

11. Donoghue JF, Golowich E, Holstein BR. *Dynamics of the Standard Model*. Cambridge, UK/New York: Cambridge Univ. Press. 2nd ed. (2014)