

THE JOURNAL OF THE ASTRONAUTICAL SCIENCES

SCOPE AND FORMAT

SCOPE—The Journal is an archival publication devoted to the sciences and technology of astronautics. Articles are published which present significant new results, important insights, or state of the art surveys in all areas of astrodynamics, celestial mechanics, atmospheric flight mechanics, navigation and guidance, and space related sciences. Authors are encouraged to submit papers on attitude dynamics, orbit determination, trajectory optimization, space mission analysis, numerical methods, maneuvering flight vehicles, dynamics and control of large flexible space structures, and space sciences related to new astronautical systems and their applications.

MANUSCRIPTS—Four copies of the complete manuscript should be sent to the Editor at the address listed on the inside front cover. The manuscript should be typed on one side of the paper, double spaced, with wide margins. Authors are responsible for obtaining security clearance of the manuscript by an appropriate agency.

TITLE AND ABSTRACT—The title should be brief, but should express adequately the subject of the paper. A footnote reference to the title should indicate any meeting at which the paper has been presented. The name of the author should be written beneath the title. A footnote reference should indicate the name of the organization with which the author is associated. The paper can be divided into principal sections as appropriate. A one paragraph abstract not exceeding 200 words covering the contents of the paper should precede the introduction. Headings or paragraphs are not numbered.

FIGURES—Drawings should be made with black ink on white paper or tracing cloth, and should be at least the width of a journal page. The width of the lines and the size of the lettering must allow for the necessary reduction. Reproducible glossy photographs are acceptable. However, drawings which are unsuitable for reproduction will be returned to the author for redrawing. The figure number should be marked with soft pencil in the margin or on the back of the drawing. Legends accompanying the drawings should be typewritten on a separate sheet, properly identified. References to figures in the text should be cited as Fig. 4 (or Figure 4 at the beginning of a sentence).

EQUATIONS—Whenever possible, formulas should be typewritten. Greek letters and other symbols not available on the typewriter should be carefully inserted in ink. Each such symbol should be identified unambiguously in pencil in the margin of the master copy the first time it appears. The distinction between capital and lower-case letters should be clearly shown. Avoid confusion between zero (0) and the letter O; between the number (1), the letter l, and the prime ('); between alpha and *a*, kappa and *k*, mu and *u*, nu and *v*, eta and *n*.

Each mathematical symbol employed should be defined in the text immediately preceding the place where it is first used. Do not include a nomenclature section.

The level of subscripts and exponents should be clearly indicated. Avoid subscripts on subscripts. Vectors will be set in boldface type. Authors should indicate this in their manuscripts by a wavy underscore.

Equations are centered, numbered, and referred to in the text as equation (2), not as Eq. (2). Complicated exponents and subscripts should be avoided or represented by special symbols. To save space, the solidus should be used for fractions. To avoid misunderstanding, the order of symbols should therefore be carefully considered. For example,

$$ab/(ef) \text{ is preferable to } \frac{ab}{ef}$$

$$(a + bx) \cos t \text{ is preferable to } \cos t(a + bx).$$

Particular attention should be paid to the proper use of braces, brackets, and parentheses (which should be used in this order). For example,

$$\{[a + (b + cx)] \cos ky\}^2$$

$$\text{is required rather than } ((a + (b + cx)) \cos ky)^2.$$

REFERENCES—References should be grouped together at the end of the text in the order in which they are first cited in the paper and should be typed double spaced. References in the text should be cited by means of the reference number in square brackets as [4] or [4, 5] or [4–6]. The following examples show the approved arrangements:

For books:

- [1] RAUCH, HERBERT E. (editor) *Control Applications of Nonlinear Programming*, Pergamon Press, New York, 1980, pp. 115–120.

For periodicals

- [2] BAHCALL, JOHN N. and O'DELL, C. R. "The Space Telescope Observatory," *Journal of the Astronautical Sciences*, Vol. 28, April-June 1980, pp. 107–121.

For technical reports:

- [3] SCHAECHTER, DAVID B. "Distributed Control of Large Space Structures," Jet Propulsion Laboratory, Pasadena, California, 81-15, May 1981.