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Weinberg

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(54) **SOLAR ARRAY SYSTEM**

FOREIGN PATENT DOCUMENTS

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60-164821 8/1985 (JP)

OTHER PUBLICATIONS

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

O'Sullivan and Weinberg, "The sequential switching shunt regulator S³R", proceedings of the Third ESTEC power conditioning seminar, pp. 123-131, 1977, No Month.

Teulings et al., "A maximum power point tracker for a regulated power bus", proceedings for the European Space Power Conference, pp. 93-97, Aug. 1993.

Poncin, A., "Advanced power conditioning using a maximum power point tracking system", Spacecraft Electrical Power Conditioning Seminar, Frascati, Italy, pp. 75-86, 1974, No Month.

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* cited by examiner

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(57) **ABSTRACT**

A solar array system is described having a solar array **31** divided into sections **33, 35, 37, 39** connected by switches **43, 45, 47, 49** to an output bus **51**. The switches can be opened and closed so the system operates at its maximum power point. The system can be used, for example, to power satellites.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 3,696,286 10/1972 Ule .
- 4,175,249 * 11/1979 Gruber .
- 4,186,336 1/1980 Weinberg et al. .
- 4,604,567 * 8/1986 Chetty 136/293
- 5,327,071 7/1994 Frederich et al. .

26 Claims, 10 Drawing Sheets

