

48. HIGH ENERGY ASTROPHYSICS (L'ASTROPHYSIQUE DE GRANDE ÉNERGIE)

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In view of the broad range of topics covered by Commission 48, and the consequent inevitable overlap with other commissions, it is not feasible to produce a comprehensive self-contained report. The commission therefore decided to restrict its report to a selected list of accessible recent review articles and conference reports, wherein up-to-date summaries of various topics can be found. Such a list is given below:

1. REVIEW ARTICLES

- Baym, G.: 1975, 'Neutron Stars', *Ann. Rev. Nuclear Sci.* **25**, 75.
Blumenthal, G. R. and Tucker, W. H.: 1974, 'Compact X-ray Sources', *Ann. Rev. Astron. Astrophys.* **12**, 23.
Canuto, V.: 1974, 'Equation of State at Ultrahigh Densities, I', *Ann. Rev. Astron. Astrophys.* **12**, 167.
Canuto, V.: 1975, 'Equation of State at Ultrahigh Densities. II', *Ann. Rev. Astron. Astrophys.* **14**, 335.
Culhane, L.: 1975, 'X-Ray Astronomy', *Vistas Astron.* **19**, 1.
Daniel, R. R. and Stephens, S. A.: 1975, 'Propagation of Cosmic Rays in the Galaxy', *Space Sci. Rev.* **17**, 45.
Eardley, D. M. and Press, W. H.: 1975, 'Astrophysical Processes near Black Holes', *Ann. Rev. Astron. Astrophys.* **13**, 381.
Fowler, W. A., Coughlan, G. R., and Zimmerman, B. A.: 1975, 'Thermonuclear Reaction Rates. II', *Ann. Rev. Astron. Astrophys.* **14**, 69.
Ginzburg, V. L. and Zheleznyakov, V. V.: 1975, 'On the Pulsar Emission Mechanisms', *Ann. Rev. Astron. Astrophys.* **14**, 511.
Hayakawa, S.: 1974, 'Properties of Cosmic X-Ray Sources', *Space Res.* **14**, 487.
Peterson, L. E.: 1975, 'Instrumental Techniques in X-Ray Astronomy', *Ann. Rev. Astron. Astrophys.* **14**, 423.
Reeves, H.: 1974, 'On the Origin of the Light Elements', *Ann. Rev. Astron. Astrophys.* **12**, 437.
Schramm, D. N.: 1974, 'Nucleo-Cosmochronology', *Ann. Rev. Astron. Astrophys.* **12**, 383.
Silk, J.: 1973, 'Diffuse X- and Gamma-Radiation', *Ann. Rev. Astron. Astrophys.* **11**, 269.
Trimble, V. L.: 1975, 'Origin and Abundance of the Chemical Elements (Report on NATO Advanced Study Institute, Cambridge, England, July-August 1974)', *Rev. Mod. Phys.* **47**, 877.
Tsyтович, V. N.: 1973, 'Interaction of Fast Particles with Waves in Cosmic Magnetoactive Plasma', *Ann. Rev. Astron. Astrophys.* **11**, 363.
Wentzel, D. G.: 1974, 'Cosmic Ray Propagation in the Galaxy: Collective Effects', *Ann. Rev. Astron. Astrophys.* **12**, 71.

2. CONFERENCE PROCEEDINGS, ETC.

- Context and Status of Gamma Ray Astronomy: Proc. 9th ESLAB Symposium, June 1974. Ed. B. G. Taylor (ESRO publication).
Experimental Gravitation: Proc. E. Fermi Summer School, ed. B. Bertotti (Academic Press, N.Y.).
Proc. 7th International Conference on General Relativity and Gravitation, Tel-Aviv, June 1974. Ed. G. Shaviv and J. Rosen (Wiley, N.Y.).
Proc. 16th Solvay Conference, Sept. 1973. Ed. R. Debever (Brussels).
Ondes et Radiations Gravitationnelles: proceedings of Paris conference, June 1973. Ed. Y. Choquet-Bruhat (CNRS, Paris).
Quantum Gravity. Ed. C. Isham, R. Penrose and D. W. Sciama (Oxford University Press).

Origin of Cosmic Rays: Proc. NATO Advanced Study Institute, Durham, Sept. 1974. Ed. J. L. Osborne and A. W. Wolfendale (Reidel, Holland).

Proc. 13th International Cosmic Ray Conference. Denver, August 1973.

Proc. 14th International Cosmic Ray Conference. Munich, August 1975.

Gravitational Radiation and Gravitational Collapse: *Proc. IAU Symp.* 64. Ed. C. De Witt-Morette (Reidel, Holland 1974).

Proc. IAU/COSPAR Symposium on 'Fast Transients in X-Ray and Gamma-Ray Astronomy', *Astrophys. Space Sci.* (in press).

Proc. 6th Texas Conference on Relativistic Astrophysics, *Ann. N.Y. Acad. Sci.* 224, (1973).

Proc. 7th Texas Conference on Relativistic Astrophysics, *Ann. N.Y. Acad. Sci.* 262, (1975).

Research Goals for Cosmic Ray Astrophysics in the 1980's: Proc. ESRO Workshop Meeting, Frascati, Oct. 1974. Ed. V. Manno (ESRO publications).

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