

§22. Archival Studies on the Nuclear Fusion Research at Universities in Japan (II)
 –NIFS Nuclear Fusion Archives
 Chronology–

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Two kinds of chronological tables were edited, based on the archives; table 1 shows chronology of nuclear fusion researches in Japan concerning research policy, meetings, committees, projects, establishment of new institute or center, etc. Important international events are also added for information.

Table 2 shows the history of magnetic fusion research in the world. Starting with the early history in UK and USSR, then a wide range of researches in Japan, leading to the recent machines including ITER are summarized from a view point of development of machines for high temperature plasma research. The history shows us that a wide range of trial is the key to the challenge to the utilization of the energy source of the sun and the stars. The period from 1928 to 1975 was considered, while the following is a part of its chronology. (Presented at a fusion division meeting of the Institute of Electrical Engineers of Japan by Kitsunezaki, A., on Sept. 9, 2003, titled "Trial and Errors of High Temperature Plasma Confinement in the History of Magnetic Fusion Device Development.")

Table 1. Chronology of nuclear fusion research in Japan

Date of event	1*	2	3	4	5	6	7	event
1953.12.8							0	D. Eisenhower: a proposal at the United Nations General Assembly "Atoms for Peace"
1954.03								First Budget for Atomic Energy 2.35 million yen (at the Diet)
1954.4.27					0			The 17th General Meeting, An Appeal "Three Rules in Atomic Energy Research: Democracy, Independence, Openness"
1955.08							0	The 1st International Conference on Peaceful Uses of Atomic Energy (Geneva), H. Bhabha's opening address
1955.1	0							A workshop on nuclear reactions in stars (Kyoto Univ. Research Institute for Fundamental Physics (RIFP))
1955.10.					0			Special Committee of Atomic Power established
1955.11.30			0					JAERI(Japan Atomic Energy Research Institute) established

* 1. University 2. Ministry of Education 3. Science, Technology Agency 4. Atomic Energy Commission

5. SCJ 6. Academic Society 7. International event

Table 2. History of magnetic fusion research in the world

year	JPN	US	UK	USSR	other	content	reference
1928					x	Rd'E. Atkinson and F.G. Houtermans "Energy source of the star is nuclear fusion" (West G.)	(S) Z.Phys. 54 1928 p.656
1932				x		Bukharin asked Gamov to be a leader of controlled nuclear fusion, he denied	(S)
1944-46		x				Teller, an idea of nuclear fusion reactor with spherical copper blanket and magnetic field	(S)
1946			x			G.P. Thomson: Toroidal Pinch (500kA, 9MW reactor)	(BR)
1949			x			Cousin & Ware (Imperial College) Betatron called Wiebelrohr, got 27kV, first recorded pinches	(BR)
1949			x			Thonemann: 2kA with copper torus. (Cherwell and Cockcroft were impressed.	(BR)

(S): Shafranov, (BR): Braams, C. M. and Stott, P. E., Nuclear Fusion, Half a Century of Magnetic Confinement Fusion Research, IOP Publishing Ltd. 2002