Table 1

Experimental works of Soviet scientists on the search for extraterrestrial civilizations

The year of observation	The authors of the experiment	The place of observation	Telescope size	The objects observed	The character of the experiment and equipment parameters	References
1	2	3	4	5	6	7
1964–1965	Kardashev, Sholomitskij	Crimea, the Center of the Deep Space Communication	Eight 16-meter mirrors	2 quasars: CTA 21, CTA 102	Verification of the hypothesis of the artificial nature of CTA 21 and CTA 102 (search for variability). The frequency: 923 MHz, bandwidth 10 MHz, sensitivity 0.2–0.5 Jy at the 5σ level. The observational time 450 days, 209 records, the total duration 80 hours.	32, 33, 34
1968–1969	Troitsky, Gershtejn, Starodubtsev, Rakhlin	The Radio Astronomy Station of the Radiophysics Research Institute, Zimenki, Gorky Region	15 m	11 solar-type stars and the galaxy M31	Parallel-sequential spectrum analysis. The frequency range: 926–928 MHz. The 2-MHz band analysed consecutively with 20 filters with the bandwidth 100 kHz each; the 100-kHz band is covered by 25 narrow-band filters ($\Delta f = 13$ Hz), separated in frequency by 4 kHz; the continuous monitoring of the 100-kHz band is performed by the variation of the narrow-band filters frequency. The time of analysis of the 2-MHz band is 10 minutes. The total observational time is about 12 hours. Sensitivity $2\cdot10^{-21}$ W m^{-2}.	19
1969–1983	Troitsky, Bondar', Starodubtsev	Network of the Radiophysics Research Institute observational points: Pustyn', Zimenki, Purekh, Vasilsursk (Gorky Region); Kara-Dag (Crimea); Tuloma (Murmansk Region); Ussurijsk (Primorskij Region)	Dipole antennas	All-sky search for sporadic (pulse) emission	Synchronous observations at two (and more) points. The wave-length range: 50, 30, 16, 8, 3 cm. Sensitivity 10^4 Jy. In July-August 1972, besides the points in the Soviet territory, the observations were also carried out in the Atlantic equatorial waters, on board of the research ship "Academician Kurchatov". Starting from mid-1970s, the observations were in but one point – Crimea, Kara-Dag. The duration of observations: 1200 hours per year on the average.	23-28
1970–1972	Slysh	Nançay (France)	40 m x x 240 m	10 nearest stars	Observations at the frequency 1667 MHz between the observations of the main program of the study of OH sources	108, p.172–173.
1970–1972	Slysh, Pashchenko, Lekht, Rudnitskij et al.	Nançay (France)	40 m x × 240 m	OH maser sources: W3, W49, NGC6334A, Sgr B2, VY CMa	Investigation of the statistical structure of the signal of OH maser sources. The frequencies: 1665, 1667 MHz. Spectral resolution 4 kHz, 2 kHz. Total observational time about 2 hours.	39, 40, 41

Table 1 (continued)

1	2	3	4	5	6	7
1972	Kardashev, Popov, Soglasnov et al.	Crimea, RT-22	22 m	the Galactic Center	Analysis of fluctuations of intensity of the continuum emission of the Galactic Center at the wavelength 3.5 cm aiming to investigate the statistical structure of the signal.	42
1972-1974	Kardashev, Gindilis, Popov, Soglasnov, Spangenberg, Steinberg et al.	Network of observational points of the Space Research Institute: Caucasus-Pamir; Caucasus-Kamchatka; Caucasus-Kamchatka--Mars 7 spacecraft	Omnidirectional antennas	All-sky search for pulse signals	Synchronous observations in two and more points. The frequency range: 350-550 MHz (Caucasus-Pamir, 1972); 350-550, 60 ± 0.4, 38 ± 0.4 MHz (Caucasus-Kamchatka, 1973-1974); 60, 38, 30 MHz (Caucasus-Kamchatka-Mars 7 spacecraft, 1974). In the meter wavelength range, single-channel receivers were used; in the decimeter range - 4-channel receivers with the frequencies 371.5, 408, 458.5, 535 MHz ($\Delta f = 5$ MHz). Sensitivity 7.10^{-15}-2.10^{-16} W m^{-2}. Duration of synchronous observations 150 hours. The Mars 7 experiment was performed jointly with French scientists.	29, 30
1973-1974	Shvartsman, Tsarevskij, Mansurov, Demchuk, Evseev, Beskin et al.	Special Astrophysical Observatory of the Academy of Sciences of the USSR, Zeiss-600	0.6 m	X-ray sources, T Tau-type stars, "ROKOS"	Optical search for short pulses with duration from 10^{-7} to 10^{2} s as well as for narrow laser spectral lines $\Delta\lambda < 10^{-6}$ Å with the equipment complex MANIA.	52-58
from 1978 till now	Shvartsman, Beskin, Plakhotnichenko et al.	Special Astrophysical Observatory, BTA	6 m	"ROKOS", solar-type stars	Same as the previous search	58
1978	Makovetskij et al.	Zelenchukskaya, RATAN-600	7.4 m x x 450 m (one sector)	Barnard's star	Verification of P. V. Makovetskij's hypothesis /47/ on the synchronization of the signals emission by the flare of the Nova Cygni 1975.	110
1980-1981	Suchkin, Tokarev et al.	Radiophysics Research Institute, Gorky		Lagrange's points L_4, L_5 of the Earth-Moon system	Radar studies of the Lagrange's points L_4, L_5 in the Earth-Moon system, aiming to search for ETI probes in the vicinity of the libration points. The observations were carried out at the frequency 9.3 MHz. Effective power 25 MW. Twenty-five 40-minute sessions have been made.	72

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