Accidental war, 382
Adenauer, Konrad, 31
Administrative Council, proposed by USSR, 330
Administrator (Control of Organization), 302; manner of appointment, 322, 326; privileges and immunities of, 313-14; replacement by “troika,” 272-73, 276; two to five deputy administrators, 324-27
Afghanistan, 419
African states, 22, 268, 284, 419
Afro-Asian Solidarity Conference, 34
Ahmed, M. Samir, 359n
Air Force Technical Applications Center, 178
Akalovsky, Alexander, 452n
Alamogordo, New Mexico, 3
Albania, 419, 465
Algeria, French underground nuclear explosion in, 384
Allen, George V., 86
Alpert, J. L., 186n
American Embassy in Moscow, 98
American Friends Service Committee, 25
American Unitarian Association, 25
Anderson, Clinton P., 35, 243-45, 251
Antarctica Treaty, 211
Antimissile weapons, 146, 360
ANZUS, 103
Apt, Clark C., 334n
Argentina, 418
Argus experiments, 192
Arms control, link to world order, 7-9, 493
Arms Control and Disarmament Agency, 388, 445, 476
Arms limitation, in agreed area of Europe, 167
Arms race, 340-41
Artificial earth and solar satellites, 190-92
Artsimovitch, L. A., 425n
Asian states, 268, 419
Atmospheric tests, opposition to resumption of, 381-82; plans for announced by Kennedy (Nov. 2, 1961), 344; Soviet plans for new series, 370
Atomic Energy Act of 1954, amended (July 2, 1958), 36, 175; amendment considered, 30-31, 265, 271
Atomic Energy Commission, US (AEC), 29, 35, 43-45, 70, 88n, 91-92, 172, 178-79, 377-78, 381; approval of atmospheric tests with limitations, 345-48; Chairman of, 85-86; limitation on test ban recommended, 157-58; position on proposed treaty and Control Organization, 327; scientific panel, 45
Australia, 22, 418, 421
Austria, 105, 206-7, 268, 419

Bacher, Robert F., vii, 33n, 54-55, 114
Background radiation, 191
Backscatter radar, 192, 194, 271
Baker, Vincent, 114n
Baker, William O., 33n, 277n
Ball, George, 453
Baraz, Robert G., 114n
Barrington, James, 360, 371, 375, 413
Bartlett, Len., 448n
Bechhoefer, Bernhard G., viii, 6n, 15n, 17n, 24, 111n, 289n, 357n
Belgium, 421
Belgrade meeting, nonaligned states, 278, 283
Benedict, Stephen, 114n
Benioff, Hugo, 151n
Bennett, Wallace F., 463n
Berkner, Lloyd V., 33n, 151
Berkner Panel (on Seismic Improvement), 151, 154, 159-62, 164, 168, 178, 184, 317-18; members, 151n; summary of conclusions, 173
Berlin, 277, 280, 340
Bermuda meetings (Kennedy-Macmillan), 344-45
Bethe, Hans A., vii, 33n, 45, 47-49, 54, 55n, 56, 63, 73, 114n, 151n, 153, 156, 161, 164, 212n, 217, 219, 242-43, 245, 250-53, 269n, 277n, 460, 483; calculations, 153; lecture at Ithaca, 342
Bethe Panel, 46-49, 58-59, 61-62, 93; majority view, 47; members of, 47; presentation of conclusions to NCSC, 63; questions to study, 47
Bethe-Teller, debate, 251-52
Betts, Austin W., 269n
Bikini Atoll, 19, 343
Bipolarity, decline of, 500
"Black boxes," 424, 437, 441; Soviet and U.S. position on, 428-29, 434; see also Seismic recording stations
Blackett, P. M. S., 499, 500n
Blanca shot, 148-49, 155, 220, 227
Boyer, Carlton M., 254n
Bradbury, Norris E., 277n, 343n, 460
Bravo shot, 342; US largest, 348
Brazil, 380, 418, 421, 427; delegate to ENDC, 394-95; ENDC, 357-58
Brekhovski, L., 163-65
Brennan, Donald G., 33n
Brent, Darcey, 114n
Brewster, Daniel B., 448n
Brock, Detlev W., 33n
Brown, Allen, 346n
Brown, Harold, 47n, 55n, 73-74, 76, 114n, 212n, 270n, 460
Brown, Harrison, 44, 62
Budgetary matters, veto on annual budget accepted by West, 328
Bulganin, Nikolai A., 25, 39, 40-42
Bulgaria, 419; Ten-Nation D.C. (ENDC), 357
Bundy, McGeorge, 86, 345
Burdick, Quentin N. 448n
Burke, Arleigh Albert, 461
Burma, 419, 421, 427; ENDC, 357-58
Byerly, Perry, 55n
Byrd, H.F., 463n
Byrd, R.C., 463n, 464
Camp David talks, 169, 171, 204-5, 246
Canada, 52, 359n, 418, 420-21, 427; opposition to nuclear tests, 366; Ten-Nation Disarmament Commission, 357
Carey, James B., 158
Case, Clifford P., 245, 448n
Cash, Frank E., 452n
Central Committee (USSR), 31
Central Europe, plan for disengagement in, 176; ground forces, 341
Central Intelligence Agency, 172, 381; director of, 85-86; move for more openness into Soviet society, 88
Ceylon, 419
Chemical explosions, 247, 264
China, 51, 65, 125, 418, 421
China, Nationalist, 95, 458
Chinese Communists, 95, 274, 328-29, 406, 433, 465; see also Communist China; People's Republic of China
Chinese-Indian border fighting, 424
Chou En-lai, 251
Church, Frank, 158, 448
Christmas Island, 344-45
Citizens Committee for a Nuclear Test Ban, 463
Civilian control of policy in U.S., 11
Clandestine testing, 61, 64, 66, 73, 120n, 152, 172, 189, 192, 226-27, 234, 277, 333-34, 388, 440; in outer space, 194; see also Decoupling
Clark, Joseph S., 448
"Clean" nuclear weapons, 27, 30, 35, 38-39
Cleveland, Harlan, 285
Cockroft, Sir John, 54
Coiner, Richard, 47n
Cold War, 112, 265
Cole, Sterling, 26
Colgate, Sterling, 186n
College Station, Fairbanks, Alaska, 59
Collett, Charles E., 114n
Colombia, 418
Columbia University's Institute of War and Peace Studies, 44
Committee of Deputies; see Committee of Principals
Committee of Principals, 85-87, 115-16, 169, 180, 182, 203, 213, 389; Chairman of Joint Chiefs of Staff as member, 451; committee of deputies consider draft treaties (1962), 389; membership changes, 327
Communication, network, 70; scientists with Dulles, 63
Communist China, accession to Treaty, 328-29; acquisition of nuclear capability, 200; agreement with USSR on new technology (1957), 95-96; USSR discontinues nuclear assistance, 200; see also China; Chinese Communists; People's Republic of China
Comprehensive Nuclear Test Ban Treaty, 127, 171, 231, 237, 415, 444, 448, 451, 466; agreed draft articles, 130-32, 134-35, 212, 301-3, 310-17; Preamble, 308-9; USSR draft (Oct. 31, 1958), 122-24, 454; USSR draft (Nov. 28, 1961), 286, 454-55; Western draft (April 18, 1961), 286, 326-29, 386; Western draft (Aug. 27, 1962), 389, 397-409, 455; see also Control Organization
Conference of Experts to Study Methods of Detecting Violations of a Possible Agreement on the Suspension of Nuclear Tests, Geneva, July 1-Aug. 21, 1958, 14, 34-81, 93, 109-10, 124-26, 136, 162-63, 182-91, 198, 212, 252-53, 260-61, 352, 354-55, 364; agenda, 68; composition of, 52; concern at being outside the UN, 52; considered as fixed document by Soviet scientists, 188; controversy on collection of radioactive debris and overflights, 70-73; detection of high altitude explosions, 73; disagreement on recording seismic signals, 72-73; Eastern panel members, 56-58; elaboration of control system, 74-78; instructions to U.S. delegation, 64-66; preparation for, 54-67; public communique, 79-80; public opinion regarding, 65; report, 79; technical preparations of U.S. delegation, 58-61; technological assumptions invalid, 149-50, 152, 154; UK component, 56, 66-67; USSR does not accept report, 286; Western panel, 54-66
Conference of Experts to Study
Conference of Experts (continued)
Helpful Measures for Preventing
Surprise Attack, Geneva, Nov.
10-Dec. 18, 1958; see Surprise
attack, Conference
Conference of Heads of State and
Government of Nonaligned
Countries, recommendation for
representation in disarmament
talks, 357
Conference on the Discontinuance
of Nuclear Weapon Tests, see
Geneva Conference on the Dis­
continuance of Nuclear Weapon
Tests, Comprehensive Nuclear
Test Ban Treaty; Moscow Treaty
Congo crisis, 268
Congress, U.S., role in consensus­
buidling, 475-77; to circumvent
consent of, by word “agree­
ment,” 125; hearings, 475-76;
see also Joint Committee on
Atomic Energy, Senate, Com­
mittee on Armed Services, Sen­
ate, Committee on Foreign Re­
lations
Consensus-building, 10
Continued testing (1962), 422-23
(US and USSR)
Control Commission, 183, 193,
280; composition of, 319-20,
327-28, 331; privileges and immu­nities of representatives, 313;
right to dismiss Administrator,
331; to conduct research, 235;
voting procedures (veto), 317,
320-23; voting procedures not
determined, 135; see also Con­
trol Organization
Control of the press in Communist
countries, 118
Control Organization, 121, 142-44,
248; Annex I (Detection and
Identification System) 165, 329;
Annex II, adopted, 310-17 (see
also Privileges and Immunities);
Annex III, adopted, 212, 303-10
(see also Preparatory Commissi­
on); Administrative Council
instead of Administrator, 330;
administrative staff, 141; admin­
istrator, 309, 313-18; agree­ments on duration of treaty,
withdrawal rights, periodic re­
view of control system, 301;
budgetary matters, 328; chief
executive officer, 133-34; Com­
misssion, 133-35 (see also Con­
trol Commission); compromises
and controversies 1959-60, 304­
26; conference of parties, 133­
34, 305-6; controversies con­
cerning, 288-335; Detection and
Identification System, 133-34;
differences between concepts,
298-301; disagreements on staff­
ing of control posts, 317-19; on
composition of Control Commissi­
ion, 302, 317, 319-20, on voting
in Control Commission, 317,
320-23, and on role and struc­
ture of executive authority, 317,
323-26; East-West compromises,
301-3; financial arrangements
(like those of UN), 312; “for­
eign controllers,” international
staff, 141; formulation by Orms­
by-Gore, 134; headquarters,
309; influence of basic assump­
tions about societies affected,
289; influence of experience in
UN, 289; legal capacity of, 307;
legal personality and capacity of,
313; need for clarification of,
181-83; not part of UN, 307;
officers and functions, 309; op­
posing concepts of, 292-303;
Preparatory Commission, Annex
III, 212, 309-10; privileges and
immunities, Annex II, 310-16;
privileges and immunities of
personnel, 307 (see also Privi­
leges and Immunities); provision
for settlement of disputes ab­
sent, 313; right to exchange cur­
currency, 312; Soviet concept of
manning control posts, veto,
headquarters, violation, 133,
295-301; Soviet proposals on
unresolved issues, 212; Soviet
Control Organization (continued) view, 242-43; U.K., greater sense of independence on matters of, 290; value of negotiations on, 332-35; Western concept of, 133-35, 292-95; see also Administrative Council, Administrator, Control Commission

Control posts, 72, 149, 236, 280, 302; staffing, controversy over "third-third," 319, 327; detection of high altitude nuclear explosions, 190; international staff, Western concept, 141; land-based, on ships, 77-78; national, internationally coordinated and standardized for comprehensive ban, 388; number in USSR, US, and UK, 252, 426; required, estimate of Brown and Latter, 76; required in USSR, 62; Soviet agreement to some foreign controllers, 318; Soviet position on staffing of, 317-19; Soviet suggestion for location of, 239; timetable for establishment of, 329; US confusion over necessity of in USSR, 389-90; Western position on staffing of, 317-19

Control system, 125, 157, 242; capability of, in US-UK draft comprehensive test ban treaty, 408-9; cost of, 191; detection and identification, 249, 369; East-West agreement on aspects of, 434; elaborated by Conference of Experts, 74-78; identification of violation, 193-94; improvement of, 225; information on missile launchings, 193-94; obligation of the parties, 306-7; treaty articles adopted, 306-7; See also Control Organization, Control posts

Conventional forces, 38, 110; Soviet superiority in, 16

Coolidge, Charles A., 202

Coolidge Committee, 232

Council of the Federation of American Scientists, 25, 34

Cousins, Norman, 158, 426, 433n, 449

Couve de Murville, Maurice, 89

Cowboy series, 242

Cuba, 206, 419-21, 462, 465; crisis, 423-24; 446; vote in UN, 284

Curtis, Carl T., 463n, 464

Cutler, Robert, 86

Cut-off on nuclear weapons production, 41, 91-92; policy of USSR, 43

Czechoslovakia, 40, 52, 57, 419; Ten-Nation Disarmament Commission, ENDC, 357

Dallin, Alexander, 300n, 335n, 496n

Dantas, F. C. de San Thiago, 365-66

Davey Crockett, 147

Davis, Saville R., 33n


Dean, conversations with Kuznetssov, 426, 431-32, 438-39

Decoupling, 151-54, 161, 179, 252-53, 333, 445; theory of, 216, 218-19, 223-24, 242, 256, 352; see also Clandestine testing

Defense Research Organization in Stockholm, 360

Denmark, 418, 421

Denuclearization of Germany, 112

Department of Defense (US), 45, 71, 92, 172, 178-79, 377-78, 381; favoring resumption of testing in atmosphere, 345

Department of State (US), 45, 50, 92-93, 172, 381, 476

Department of State, Office of the Special Assistant for Disarmament and Atomic Energy Affairs, 93

Department of State, opposition
Department of State (continued) to resumption of testing in atmosphere, 345
Deputy Administrator; see Administrator
Detection and Identification System, 188, 190, 192; veto on, 193; Western draft, 329; see also Comprehensive Nuclear Test Ban Treaty, US-UK draft, of 1962; Control Organization
Detection of explosions at high altitude, 138; underground, 138
Detection of nuclear explosions, four methods examined by Conference of Experts, 68-73
Détente, 232, 234, 424, 433
Deterrence, doctrine of, 234
Detonations for peaceful purposes, 91; see also Project Plowshare
Diefenbaker government, 359n
Dirksen, Everett M., 462
Disarmament, general and complete; See General and Complete Disarmament
Disarmament Commission (UN), 202; controversy over composition of, 23-24; Soviet refusal to participate in, 34
Dodd, Thomas J., 158, 444-45, 447, 450, 477
Dominick, Peter H., 448n
Donovan, Allen F., 186n
Doolittle, James H., 33n
Douglas, James H., 246
Douglas, Paul H., 448n
Dribble experimental program planning for tamped and decoupled shots, 355
Dulles, Allan W., 86, 246, 473
Dupré, J. Stefan, 33n
Duration of treaty on ban on nuclear testing, 129, 142-43
Dyson, Freeman J., 244

Earthquakes, 75, 199; Distinguishing from explosions, 136; number per year, 79, 136; table of, 160; unidentified, 253; in USSR, 384-85; see also Entries under Seismic
East Germany, 40, 329, 458, 462
Eastland, James O., 463n
Edberg, R., 372n
Eight-Nation Memorandum, 370-78, 386, 419, 427; interpretation of, 376
Eight nations, reaction to Western draft treaties of August 1962, 414-16; suggestions of, 394-97
Eighteen-Nation Disarmament Committee (ENDC), 287, 349, 381, 388, 498; creation of, 356; deadlock in, 363-65; debate in full Committee 365-68; draft treaty on general and complete Disarmament (USSR), April 15, 1962, 360; eight states added to Ten-Nation Disarmament Committee, 357-58; first meetings (March 1962), 360; link with UN, 356; reconvened in Geneva, July 1962, 389; reconvened, November 26, 1962, 426-28; reconvened, February 12, 1963, 438-42; report to, from Subcommittee, 365; resumed, March 28, 1962, 368-70; Subcommittee on a Treaty for the Discontinuance of Nuclear Weapon Tests, deadlock in, 363-65; US resumption of atmospheric tests supported in, 377
Eisenhower (continued)

viet appeal, April 1958, 46; exchange of letters with Bulganin (1957-58), 39-42; impressed by reports of scientists, June 1957, 28; informed of new seismic data, 155; joint declaration with Macmillan, 246-47; letter to Nehru, December 15, 1957, 40-41; meetings with Khrushchev, 204-5; plans for trip to USSR, 232; presidential campaign (1956), 24-26; qualified endorsement of treaty, 460; reply to Bulganin, January 12, 1958, 41; reply to Khrushchev, April 8, 1958, response to Stevenson's proposal, 25; restated U.S. position, 48; statement of August 22, 1958, 89-90; statement of December 29, 1959, on moratorium, 233; suggested technical talks to Khrushchev, April 28, 49-53

Eisenhower Administration, 233, 342; consensus building in 471-73; divisions of opinion, 472

Eisenhower-Macmillan correspondence, letter to Mr. Khrushchev, 171, 174; new Western position, 173; statement, 248

Elections, in US, 291; in UK, 291

Engle, Clair, 448n

English, Spofford G., 43-44

Eniwetok, 343

Epicenter of seismic events, difficulty of locating, 352

Espionage, 198, 334, 364, 370

Ethiopia, 419, 421, 427; ENDC, 357-58; Foreign Minister of, Ato Kelema Yifru, 367

Euratom, 307

European Common Market, 307

Evans, R. M., 254n

Ewing, W. Maurice, 151n

Executive Office of the President (US), 381

Extraterritoriality, right of, 310

Fallout, 36, 58, 110, 127, 346-47, 382, 387, 414, 502; scientific analysis of effect, 346

Farley, Philip J., viii, 156-57, 213

Federal Republic of Germany, 21, 40, 51, 112, 125, 175, 280, 436, 443; denuclearization of, 112


Finkelstein, Lawrence S., 295n, 299n

"Finite deterrent" concept, 383

Finland, 352

Fisher, Adrian S., vii, 381, 445, 452n

Fisk, James B., vii, 33n, 54, 56, 68, 77, 80-81, 85, 154, 212, 215-17, 219, 224, 227-29, 269, 277n

Fissionable materials; transfer from weapons stockpiles, 92

Foose, Richard, 212n

Foreign Affairs, 31

Foreign military bases, 42, 106-7

Foreign Ministers, meetings in Geneva (July 13, 1959), 202; representing governments at ENDC meetings, 350

Fortune, 184

Foster, John S., 277n, 278, 343n, 460

Foster, William C., 347, 385, 386n, 387, 432, 437, 439-41, 446, 453

Fox, Alfonzo P., 114n

France, 52, 95, 104-5, 125, 406, 421-22, 465; abstained from voting UN General Assembly (1959), 207; development of nuclear capacity and weapons, 16, 250-51, 351; explosions caused by simple devices, 274; independent weapons development program, 30, 250-51; nuclear testing, 205-6, 208, 238, 251, 275, 280, 284, 384, 443; opposition to test ban, 89, 132; position on MLF, 436; Soviet
France (continued)
view on French testing, 273;
Ten-nation disarmament conference, 357; see also de Gaulle, Charles
Frye, William R., 63n
Fukien Province, 95
Fukurya Maru, 20
Fulbright, J.W., 158

Gaitskell, Hugh, 348
Gardner, Richard N., 7n
Garwin, Richard L., 212n
Gates, Thomas S., Jr., 86, 246
de Gaulle, Charles, 37, 67, 250,
351, 465; address before Joint
Session of Congress, 251; corre-
respondence with Khrushchev, 351
Gehron, William J., 304n
General Assembly, UN, 21-23, 42,
52, 202, 289-90, 422, 498; resolu-
tion on studying feasibility of
using existing facilities for moni-
toring nuclear tests, 395-96;
Twelfth Session, First Commit-
tee, 208; Resolution 1148 (XII),
22n; Thirteenth Session (1958),
42, 100; Fourteenth Session
(1959), 202-9; Fifteenth Session
(1960), debate on cessation of
tests, 267-68; Sixteenth Session
(1961), 278, 283-85; resolution
requesting USSR to abstain from
atmospheric tests, 284; Resolution
1722 (XVI), 356; Resolution
1629 (XVI), 367, 372;
Resolution 1648 (XVI), re-
questing states to refrain from
testing, 358, 366; Seventeenth
Session (1962), 416-22; Resolu-
tion 1762A (XVII), 427, 432,
438; Resolution 1762B (XVII),
421n; Eighteenth Session
(1963), 465-66
General and Complete Disarma-
ment: 110, 276; UN Resolu-
tion on, 422; general disarmament
proposal (Khrushchev),
204-5, 276; USSR draft treaty
Geneva Conference on the Dis-
continuance of Nuclear Weapon
Tests, 113, 288, 331; opening
date, Oct. 31, 1958, 14, 116-
17; adoption of Annex II on
Privileges and Immunities (Oct.
14, 1960), 258; agenda, contro-
versy over, 121-22; delegates:
US, 113-14, UK, 114-15, USSR,
115; opening controversies,
116-19; position paper, US,
115-16, 147, 149, 163; talks
resumed Jan. 5, 1959: intro-
duction of new data (US), 136-
39; Conference recessed May
12, 1960, 248; Conference, end
of, without agreement, 286-87,
363; final session Nov. 28, 1961-
Jan 29, 1962 (adjourned);
Western insistence on considera-
tion of new data, 195; see also
Technical talks
Geneva Conference, Eighteen-Na-
tion Disarmament Committee;
see Eighteen-Nation Disarma-
ment Committee
Geneva Conference, Ten-Nation
Disarmament Committee; see
Ten-Nation Disarmament Com-
mittee
George, Theodore A., 445n
German Federal Republic; see
Federal Republic of Germany.
Gerrard, John, 151n
Ghana, 358, 419; subamendment,
420
Gilpin, Robert, 9n, 25n, 48n, 88n,
89n, 91n, 246n, 479n, 487
Glasstone, Samuel, 27n
Gnome experiments, 369-70, 385-
86
Goder, J., 369, 402-3
Goldwater, Barry, 463 and n
Gore, Albert, 114, 126-30, 131n,
157, 159, 172, 282, 386, 472,
476-77; private memorandum to
Eisenhower, 126-27
Graves, Allen, 186n, 187
Hahn, Otto, 21
Hailsham (Lord), 452, 456
Hamilton, Jack H., 151n
Hammarskjöld, 268, 331; activities in Congo, 331; attack on (by Khrushchev), 268
Hardtack II, 147-51, 214, 218-25, 228
Harriman, W. Averell, 452, 456
Harris, George, 344n
Hart, Phillip, 448n
Hartke, Vance, 448n
Haskel, Norman, 55n
Haskins, Caryl P., 33n
Headquarters Agreement, 311n
Henkin, Louis, 63n
Herter, Christian, 86-87, 159, 188, 205, 212-14, 216, 243, 246
Herz, John H., 4n
Hickenlooper, Bourke B., 114, 476
High altitude nuclear explosions, danger of false alarms in detection of, 191; detection and identification, 61, 73, 171, 196
Hill, M., 254n
Hilsman, Roger, 10n
Hiroshima, 3, 19
Holborn, Hajo, 4n
Holifield, Chet, 26, 28, 94, 251; recommendation on halting tests of high-yield weapons, 26
Home (Lord), 456
Horelick, Arnold L., 424n
Hosmer, Craig, 436-37, 445
“Hot line,” 446-47
Hsieh, Alice Langley, 95n, 96n, 274n, 329n
Hulme, H.R., 186n, 218n, 254
Humphrey, Hubert H., 26, 35, 44,
Kennedy Administration (cont.)
institutional changes and new drive, effect on test ban, 473-75; less sanguine on limited nuclear war, 382; personnel changes, 270; reappraisal of American position (early 1961), 269-72; rebuttal of domestic criticisms, 444-46; reconsideration of Western position, Jan. 1961, 326-27
Kennedy and Macmillan, letter to Khrushchev, February 7, 1962, 349; letter to Khrushchev, April 24, 1963, 447
Killian, James R., Jr., 32-33, 47, 86, 151, 154, 178, 187
Kissinger, Henry A., 109-11
Kistiakowsky, George B., 33n, 86, 246, 277n, 461
Kondorskaya, N., 418n
Koslov, Frol R., 199
Kramish, Arnold, 35n
Kuznetsov, V. V., 23n, 426, 431-32, 438-40
Lakoff, Sanford A., Science and the Nation, 33n
Lall, Arthur S., 359n, 360, 371, 373-75, 377, 393n, 420, 424, 428, 442n
Land, Edwin H., 33n
Lapp, Ralph E., 158, 284n
Larson, Thomas B., 55
Latin American states, 418-19
Latter, Albert L., 36, 151-54, 161, 179, 212n, 219, 223-25, 242, 255, 351n, 483; decoupling theory, 491
Latter, Richard, 73-74, 76, 114n, 186, 252-53, 254n, 267, 270n, 351n, 355n
Lausche, Frank J., 448n, 463n, 464
Lawrence, Ernest O., 28, 54-56, 151
Lay, Dent L., 186n
Legacy of Hiroshima, 346
Leighorn, R. S., 425n
LeMay, Curtis, 342, 459
Leonard, Byron P., 195
Leypunsky, O. I., 57, 186
Libby, Willard F., 44, 461
Lie, Trygve, 325
Limited test ban; see Partial Nuclear Test Ban Treaty
“Link” between test ban and other arms control measures, 41-45, 94, 102; debate February-March 1958, 42-45, 157; dropping of “link,” 140-43; with weapons production cut-off, 41
Lloyd, Selwyn, 17-18, 168, 205
Lodge, John Cabot, 206, 208
Logan shot, 148-49, 155, 220, 227, 351-52
Long, Franklin A., 381, 412, 446, 452n
Long, Russell B., 462, 463n
Loper, Herbert B., 47n, 270n
Lovett, Robert, 389
Lunik I, January 2, 1957, 146
Luxembourg, 421

Macmillan and Kennedy, correspondence with Khrushchev, 349, 371, 447

Maddock, I., 186n, 218n

Malaya, 419, 421; vote in UN, 284

Malenkov, G. M., 31

Mali, 419, 421; vote in UN, 284

Malinovsky, R. Y., 96

Mansfield, Mike, 25, 462

Mao, Tse-tung, 96

Margolis, Emanuel, 20

Mark, J. Carson, 47n, 55n, 212n, 270n

Marshall Islands, 19

Matador rockets, 176

Matsu, bombardment of, 94-97

Matsushita, Masatetsu, 21

McCarthy, Eugene, 448n

McClellan, John L., 463n

McCloy, John J., 269, 279, 281, 389, 460, 474

McCone, John A., 86, 88n, 157-58, 173, 178, 180-81, 200-1, 244-45, 249, 327, 453, 473

McDougal, Myers S., 20n

McElroy, Neil H., 861

McGee, Gale W., 448n

McGovern, George, 448n

McMillan, W., 351n

McNamara, Robert S., 86, 270, 340n, 345, 382-83, 440, 453, 461; address at University of Michigan, 382

McNaughton, John T., vii, 349, 386, 452n

Mechem, Edwin L., 463n

Melman, Seymour, 44n, 59n, 61n, 92n, 299n

Menon, V. K. Krishna, 360, 367, 373, 424

Metcalf, Lee, 448n

Mexico, 379, 421, 427; ENDC, 357-58

Middle East, crisis in, 67, 87

Military forces, reduction of in Europe, 112

Mills, Mark M., 28

Missile controls, 92

Missiles, anti-intercontinental ballistic, 342; ballistic, 38; ballistic Soviet superiority, 341; controls of, linked to delivery vehicles, 92; other measures of arms control, 112; for selected NATO countries, 36; intercontinental ballistic, 42, 281; launching of, 92; long-range (USSR), 341; nuclear warheads for in Europe, 40; operational long-range, 340; operational (USSR), 340; Redstone, to be stationed in West Germany, 38; Skybolt Polaris, 435; US offer to Britain to replace Skybolt with Polaris, 435, in France, 436; Soviet advances, 51; Thor, for United Kingdom, 38; to NATO countries, 174-76; USSR lead in ballistic, 32

Moch, Jules, 208

Molnar, Julius P., 151n

Molotov, V. M., 31

Moore, Virgil L., 114n

Moratorium on nuclear testing, 45, 89, 90, 108, 110, 120, 135, 143, 147, 174, 247, 267, 290, 495; broken by USSR, Sept. 1, 1961, 280-81, 341, 356; debate on, in US, decision on resumption of atmospheric testing announced March 2, 1962, 345; Eisenhower declaration on voluntary, Dec. 1959, Khrushchev repeats pledge, Jan. 1960, 233; Eisenhower decision to continue, UK decision to continue, Soviet statement on, Aug. 1959, 201-3; Kennedy order for test resumption in laboratory and underground, 283; opposition by AEC, 91; opposition by Department of
Moratorium (continued)
Defense, 91; pledges to honor by Presidential candidates, 247; position of three powers at expiration of Spring 1960, 249; Soviet decision to discontinue tests, March 31, 1958, 45; Soviet ends, 119; Soviet proposal for (with partial treaty), March 19, 1960, 240; temporary, urged by USSR, 28; US, continued in summer of 1961, 279; US, resumes atmospheric testing, April 26, 1962, 377; unpolicied, 387; USSR for first time drops as condition to partial test ban
Morgan, H. T., 254n
Morocco, 208
Morris, Donald, 55
Morse, John H., Jr., viii, 54
Morse, Wayne, 448n
Morton, Louis, 5n
Moscow Treaty; see Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and Under Water
Moss, Frank E., 448n
Multilateral Nuclear Force (MLF), 435-36, 443, 461; see also North Atlantic Treaty Organization
Munk, Walter H., 151n
Murphy, Charles J. V., 28n, 46n, 48n, 63n, 155n, 160n
Murray, Thomas E., 25n, 29, 91n, 167n, 173, 269
Murrow, Edward R., 86, 281
Muske, Edmund S., 448n
Myrdal, Alva, viii, 395-96, 442n
Nagasaki, 19
Nathan, Robert R., 158
National detection systems, 69, 127, 172, 361, 363-68; for monitoring nuclear testing, 291
National stations, international supervision of, 434
Nehru, Jawaharlal, 20-21, 40-41
Netherlands, 421
Neuberger, Richard L., 448n
Neutral states, 125
Neutron bomb, 28, 30, 35, 39, 62, 147, 244, 347, 382
Nevins, Allan, 269
New seismic data; see Seismic data; Technology
New Zealand, 418, 421
Niger, 419
Nigeria, 421; ENDC, 357-58
Nitze, Paul H., 408-9, 412, 459
Nixon, Richard, 263
Nogee, Joseph L., 6n, 15n
Nonaggression pact between NATO and Warsaw Pact countries, proposed, 443
Nonaligned states, 413
Nongovernmental organizations, hearings granted to, 117
Non-nuclear powers, influence of, 12; transfer of nuclear weapons to, 16; see also Nth country problem
Nordness, Nedville E., 352n
North Atlantic Treaty Organization (NATO), 103, 110, 133, 273-74, 357, 383, 421; Agreement for Cooperation, US-UK, 37; Council meeting, 40, 175; crisis of strategic doctrine, 38; forces, strength of, 341; intelligence agents, 453; missiles for NATO countries, 174-76; Multilateral Nuclear Force (MLF), 443, 461; Multilateral Nuclear Force (MLF), plans for, 435-36; nuclear striking force, 110-11; pressure against test ban, 38; programs, 267; selected countries of, to receive missiles, 36; strategy of, in 1957, 29-31, 36-40; strategy, pressure for "clean" bomb and dispersal of nuclear weapons, 30-31; see also Privileges and Immunities
North Atlantic Treaty Organization and Warsaw Pact governments, discussion of nonaggression pact between, 455
Northrup, Doyle L., 47n, 55n, 73-74, 114n, 270n
Norway, 22, 418, 421
Nth country problem, 7, 16, 30-31, 51, 88, 103, 111, 125, 174, 200, 208-9, 237-38, 267-68, 273-75, 284, 371, 387, 411, 414, 436, 443, 446, 455, 457, 500; Communist China, 251; France, 38; France and Communist China, 455
Nuclear detonations for peaceful purposes, 156-58, 405; see also Project Plowshare
Nuclear explosions, at high altitudes, in outer space, 146, 189, 333, 344, 348
Nuclear test ban, linked to other measures of arms control and disarmament; see "Link"
Nuclear test ban negotiations, as case study, 11-13
Nuclear warheads, US, 340
Nuclear weapons, "clean"; cut-off on production, 17; development of, versus control, 5-7; existing stockpiles, no control possible of, 43-44; high yield, 342; largest tested (USSR), 342; new tasks for, 26-29; prohibition of, resolution in 16th UN General Assembly, 285; see also "Clean" nuclear weapons
Nuclear weapons control, interaction with Soviet behavior, 8-9; link to world order, 7-9
Nuclear weapons tests, as political issue, 1959 Presidential campaign, 209; at high altitudes, 63; comprehensive agreement for suspension of, 171; deep underground, 58; extremely high altitudes, 58; first underground detonation by USSR, 353; 1958 US series, Hardtack I (Teak, Orange, Argus); Hardtack II (Tamalpais, Logan, Blanca), 145-47; improved detection of, 368; in atmosphere, resumed by US, April 26, 1962, 377; more extensive in 1962 than in any other year, 378; opposition to resumption of, in US, 345-49; President's assurances on Moscow Treaty, 462; resumption by USSR, August 5, 1962, 393; resumption of, in laboratory and underground, ordered by Kennedy, September 5, 1961, 343; underground, 63; under water, in the atmosphere, in the biosphere, detection and identification of, 366-67; USSR resumed, September 1, 1961, 280, 332; USSR test of "superpowerful" bomb, 284; see also Moratorium on nuclear testing
Oliver, Jack E., 151n, 212n
Olmstead, George B., 55n
On-site inspections, 61, 72, 74, 134-35, 149, 171, 253, 280, 303, 322, 369, 376; annual quota of, 177, 226; continued deadlock over quota, 433, 438-39; criteria for, 181, 185, 226-28; criteria in US-UK draft comprehensive test ban treaty (Aug. 1962), 402-5; difficulty of, 253; discussion in the Conference of Experts Report, 78; in mainland China, 166; new approach suggested by US, 275; number of, 241; number of, as political issue in Technical Working Group II, 221; quota of, 249; quota of three not acceptable to US Senate, 449; reduction in number of, 363; Soviet proposal for temporary criteria for initiation of, 238; Soviet proposal of three per year, 199; Soviet proposal on annual quota, 199, 235; Soviet reaction to Western draft of Aug. 1962, 414; still required in 1962 for comprehensive ban, 388; two schemes proposed by US, 236-37; of unidentified events, 352; US insistence on,
Preparatory Commission (cont.)
309-10; composition of, 309-10;
functions of, 309-10; see also
Control Organization
President (US), presidential cam-
paign and test ban, 24-25, 263
President's Science Advisory Com-
mittee (PSAC), 46-49, 63, 88,
93, 149-51, 153, 156, 160; ad
hoc panel appointed by Ken-
nedy, 277; appointment of
Panofsky Panel, 146, 153; mem-
bers, 277n
Press, disclosure to, 118
Press, Frank, 62, 151n, 212n, 219,
254-55, 259, 277n, 352n, 455
Press, R., 186n
Pressure; by public opinion, 80,
91, 180; on public officials, by
insistent press corps, 390-91;
to resume testing, 275, 279;
against test ban, from NATO,
38, 275; for test ban, 19-21,
25-26; for test ban negotiations,
277; against testing, 371; see
also Public opinion
Privileges and Immunities, abuse
of, 316; Agreement on the Privi-
egles and Immunities of the
International Atomic Energy
Agency, 311; Agreement on the
Status of the North Atlantic
Treaty Organization, National
Representatives and Interna-
tional Staff, 311; Annex II, 258,
310-17; access of personnel to
party's territory, 316; of Con-
trol Organization, 313-14; repre-
sentatives on Control Comis-
sion, 313; of staff and experts,
313-14; waiver of immunities,
313; Specialized Agencies, 1947
Convention on, 311; to be
granted by parties to own na-
tionals, 314-16; of the UN,
1946 Convention on, 311
Production of nuclear weapons,
cut-off, 41, 91-92
Project Cowboy, 223, 351
Project Gnome, 351-52
Project Plowshare, 35, 351, 456
Projects Vela and Cowboy, 177-
80; see also Vela Program
Proliferation; see Nth country
problem
Proof testing of existing weapons,
378
Propaganda (by USSR), 113;
benefits for USSR, 180, on pre-
ventive war, 422; victory for
USSR, admitted by Dulles, 46
Prouty, Winston, 448n
Proxmire, William, 448
Public opinion, 95, 162; British,
169; concern of, since 1954,
15; domestic, in Western and
uncommitted states, 334; Soviet
control over, 99; Soviet effort to
influence Western and uncom-
mitt ed countries, 118; in US,
39, 169, 470; Western sensitiv-
ty to, 350; see also Pressure
Pugwash Conference (Tenth), on
Science and World affairs, 425
Quarles, Donald A., 48, 146, 178
Quemoy, bombardment of, 94-97
Rabi, Isador I., 33n, 460
Radford, Arthur W., 461
Radioactive fallout; see Fallout
Rainier, data, 148-49; shot, mag-
nitude incorrectly estimated,
218; underground nuclear ex-
losion in Nevada, Sept. 1957,
58-61, 72, 148, 155, 163
RAND Corporation, 36, 179, 252
Randolph, Jennings, 448n
Reciprocal control system, 502
Reciprocal inspection, 446
Reid, Luther, 114n
Report of the Conference of Ex-
perts; see Conference of Ex-
perts
Republican Conference on Nu-
clear Testing (early 1963), 437-
38
Republican opposition to test ban
negotiations, Jan. 1963, 436-38
Research program, East-West, coordinated, 237-41, 247-49; East-West, agreed by USSR, 249; joint program, USSR insistence on, 249; joint Soviet-Western, of criteria for initiating on-site inspection, 239; Seismic Research Program Advisory Group (SRPAG), 248; in US, reported at SRPAG meetings, 254-55
Ribicoff, Abraham A., 448n
Rich, A., 425n
Riznichenko, Y. V., 163-65, 214n, 254n, 255-56, 425n
Roberts, Chalmers M., 245n
Robertson, A. W., 463n
Robertson, H. P., 33n
Roberston, Walter S., 66
Rocard, Yves, 54
Rockefeller, Nelson A., 209
Roddis, Louis H., 277n
Rome treaties, 307
Romney, Carl F., 55n, 150, 151n, 160, 164-66, 212n, 218, 220n, 222n, 254, 354n, 444
Roosevelt, Franklin Delano, Mrs., 158
Rumania, 52, 57, 419; Ten-Nation Disarmament Committee, ENDC, 357
Rusk, Dean, 80, 270, 276, 281, 345, 362, 365, 390, 446, 453, 456, 461
Roosevelt, Franklin Delano, Mrs., 158
Sadovsky, Mikhail A., 56-57, 186, 214n, 254-56, 258-60, 418n
Sahlou, P., 375-76
Saltonstall, Leverett, 462
Saturday Evening Post, 346
Saudi Arabia, 419
 Scheid, Robert C., 254n
Scheidling, Thomas C., 9n
Schilling, Warner R., 6n
Schlei, Norbert A., 20n
Schlesinger, Arthur M., Jr., 276n, 277n, 278n, 279n, 281n, 282n, 285n, 346n, 348 and n, 431n, 440n, 447n, 448n, 453n, 465n
Schnierman, G. L., 254n
Schweitzer, Albert, 21
Science, "betrayal by," 154-57
Science Adviser; see Special Assistant for Science and Technology
Science Advisory Committee of the Office of Defense Mobilization (ODM), 32-33, 49; see also President's Science Advisory Committee
Science policy, relation to security policy (US), 477-78
Scientific Committee on Effects of Atomic Radiation, 20
Scientific literacy, importance for politicians and diplomats, 481-83
Scientists, 185; as advisors and negotiators in international conferences, 53, 486-90; conflicting advice by, 365, 483; East-West area of agreement, 225, 239; East-West disagreement on need for international control, 69; efforts to use for achieving agreement, 378; employed in executive agencies, 485; interpretation of Hardtack II, 221; need for advice from mixture of scientific disciplines, 484; outside government, 485; panel of, proposed, 280; personal relationships of, 489; problems of communication with nonscientists, 10, 481-82; proposal for national scientific institute, 486; role in TWG I and II, 188-95, 218, 223-25, 489; in Seismic Research Program Advisory Group, 254-57, 490; statement on 1962 comprehensive draft treaty, 445; suggested use of "black boxes," 425; Sweden, 369; use in informal sessions, 490
Scientists, US, ability to detect underground shots, 386; access to highest policy-makers, 33; ability to function apolitically doubted, 392; advice at highest
Scientists, US (continued)
level of government, 483-84; advice within bureaucracy, 484-86; arrangements for participation in policy process, 32-33; clarifying US position to ENDC, Subcommittee 1, 368-70; contradictory replies to questionnaires on test ban control, 60-61; divided over resumption of atmospheric tests, 346; engaged in political negotiations, 191; in Geneva to explain technical situation in light of Vela Program data, 392; impact of Eight-Nations delegates, 394; interpretation of seismic data, 149; lacking political guidance, 192-93, 195; as new actors in policy process, 9-11; opposition to acceptance of Soviet proposals, 437-38; petition for test ban by, 25; as policy advisers, 479-81; political issue in TWG II, 221; role in Conference of Experts, criticism of, 487; role in consensus-building, 470-72; selected for Conference of Experts to balance differing views, 55-56; Western panel at Conference of Experts, 54-56; willing to generalize on basis of single Rainier experiment, 60
Scott, Hugh, 448n
Scoville, Herbert, Jr., 47n, 55n
Seaborg, Glenn T., 86, 270, 327, 461
Secretary of Defense, 85-86
Secretary of State, 85-86; see also Dulles, John Foster; Rusk, Dean
Security Policy (US), ambiguous and vacillating, 490-91; relation to science policy, 477-78
Seismic data (new), 216, 303; USSR agrees to examine, 210; USSR reaction to, 162-66; US insistence on consideration of, 210; see also Technology
Seismic method of detection, 75-77
Seismic research in USSR, 161-62

Seismic recording stations, 75, 148, 352, 502; automatic, 428, 432, 434
Seismic Research Program Advisory Group (SRPAG), 248, 254-61, 392; delegations from UK, US, USSR, 254; disagreements, 259-61
Seismic signals, 75, 160, 199, 369; disagreement on recording method, 72-73; decoupling or muffling, 153; effects of various media on transmission of, 352, 369-70, 385-86; shots tamped in salt and in tuff, 351; “Second Zone,” 354; “Third Zone,” 354, 384
Seismographs, improved effectiveness of, 385
Seismological stations, 59, 502; detection of French underground shot in Algeria, 384; existing facilities, 395-96; instrumentation offered by US Coast and Geodetic Survey, 353; preliminary lists of, exchanged by US and USSR, 434; prototype, established at Fort Sill, Oklahoma, 354
Seismologists, Soviet, unavailable in Moscow, 455
Semenov, N. N., 56-57
Senate, Committee on Armed Services, Preparedness Investigating Subcommittee, 412, 450-51, 459, 462
Senate, Committee on Foreign Relations, 26, 445-46, 459, 461-62; Subcommittee on Disarmament, 26, 35, 43, 45, 60-63, 150, 156, 213-14, 245, 475-76
Senate, consent to Moscow Treaty, 463; debate on Moscow Treaty, 462; resolution on partial test ban, 448
Shepilov, Dimitri T., 31
Shulman, Marshall D., viii, 424n
Shustov, V., 214n
Siberia, on-site inspections in, 363; central, 353
Signature, ratification, entry into force of treaty, article on, adopted, 305
Simpson, Milward L., 463n
Sino-Soviet alliance, 66; border fighting, 371; disarmament differences, 251; dispute, 424; ideological differences conference, 450; tensions, 265
Smith, Margaret Chase, 463n, 464
Solandt, Ormond, 54
Somalia, 419
Sorenson, Theodore C., 276n, 277n, 283n, 344n, 345n, 346n, 347n, 348n, 449n, 450n, 452 and n, 456n, 463 and n
South Africa, 421
Southeast Asia, 339; guerilla action, 382; SEATO, 103
Sovereignty, cooperation among sovereign states, 132
Soviet bloc, 207, 421; vote in UN, 284-85
Soviet press, 281
Soviet Union; see Union of Soviet Socialist Republics
Spain, 419, 421
Sparkman, John J., 448n
Special Assistant for Science and Technology, 32, 86, 88, 93
Special Assistant to the President for Disarmament, 43
Special Assistant to the President for National Security Affairs, 86
Speier, Hans, 30n
Spence, Roderick, 47n
Spiers, Ronald I., 47, 55
Sputnik I and Sputnik II, 32
Starbird, Alfred D., 44, 47n, 201, 270n, 344
Stassen, Harold, 16-17, 43-44, 58, 91, 93, 460
Stebbins, Richard P., 31n, 96n, 119n, 258n
Stelle, Charles C., 114n
Stennis, John, 463n
Stevenson, Adlai E., 24-25, 345, 456
Stockholm, Defense Research Organization, 360
Strategic doctrine, US, 382; alert forces, 340; see also North Atlantic Treaty Organization
Strategy (US), “massive retaliation” abandoned, 26
Strauss, Lewis L., 25n, 29, 44, 48, 55, 59n, 86, 88n, 461
Street, Kenneth Jr., 151n
Stromberg, Roland N., 7n
Subcommittee (tripartite) of ENDC, 416, 429, 442
Summit meeting (Eisenhower and Soviet leaders), 41; collapse of, 257-58
Summit meeting, Western, May 1959, 168-69
Supreme Soviet, Gromyko’s speech before, 156
Surprise attack, 92; agreement on meeting to consider, 67; Conference, 104, 111-12; safeguards against, 16-17
Sweden, 105, 206-7, 268, 372, 379, 421, 427; delegation to ENDC, 357-60, 395; Gnome shot recording, 352
Symington, Stuart, 35, 444, 462
Syria, 419
Tactical nuclear weapons, 30, 62, 126, 128, 147, 252; demanded by Germany, 31
Talmadge, Herman E., 463n
Tamm, I. Ye., 56-57, 425n
Tass, 94
Taubenfeld, Howard J., 211n
Technical agreement, search for, 174-230
Technical experts, 49; see also Scientists; Technology; Technical talks
Technical preparation for negotiations appraised, 491-92
Technical talks, 472; agreed to by Khrushchev, 50; conference on surprise attack, 104, 107, 111-112; first suggested by UK, 17; group of experts suggested in UN resolution, 22, by Eisen-
Technical talks (continued)

hower, 41, 49-53; as a neutral device, 392; possible USSR opposition to group, 392; proposal on “black boxes,” 429; proposed working group, 139; see also Technical Working Group I (TWG.I); Technical Working Group II (TWG.II); Conference of Experts; Seismic Research Program Advisory Group (SRPAG)

Technical Working Group I, 183-209, 472; agenda argument, 188; bulk of data from West, 189; delegates, 186-87; high altitude testing, and banning of, 182; little political guidance, 187; recommendations on basis for control system, proposed by US, 271; report to diplomatic Geneva Conference, 190-91, 195; terms of reference, 185-85

Technical Working Group II, 210-29; agenda for, 214-15; agreed report on improvement of techniques and instrumentation, 226; delegations: Soviet, 214, UK, 218, US 212; deadlock, 229; failure of, impact on moratorium, 232; lack of preparation, US delegation, 214; report, with four Annexes, 229; talks end without agreement, 229-30; terms of reference, 210-11

Technological lead, impact of, on negotiations, 498

Technology, changes in, impact on test ban negotiations, 497, 501; controlling modern, 501; military, impact on vulnerability of US, 5; military, revolution in, 42; new date, 145; Soviet reaction to new data, 162-68


Ten-Nation Disarmament Committee, 202, 205, 207, 232; composition of, 357; Soviet suggestion of adding five nonaligned nations, 357; USSR walks out, 263

Testing of nuclear weapons; see Moratorium on nuclear testing

Test sites, funds for, 201; US offer to allow Soviets to inspect, 279

Thailand, 421

Thomas, Norman, 25, 158

Thompson, Llewelyn E., 272, 282, 386, 453

Thor intermediate range rockets, 175

Threshold, 74-77, 138, 181, 191, 199-200, 236-37, 241, 290; failure by Administration to find acceptable, 62; acceptable risk disagreement, US, 196-97; seismic magnitude (4.75); elimination of, 271, 280, 362; of detectability, 250, 446

Thurmond, Strom, 463n

TNT explosions, data from, 73

Toon, Malcolm, 714n

Toussaint, Paul, 114n

Tower, John G., 463n

Treaties; see Comprehensive Nuclear Test Ban Treaty, drafts and agreed draft articles; Partial Nuclear Test Ban Treaty, drafts; Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and Under Water (Moscow Treaty)

Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and Under Water (Moscow Treaty), 3-13, 444-66; assurances on, by Kennedy, 462; comparison with 1962 draft, 456-58; consent by US Senate, 463; drafts, 389, 397, 409-13, 454-55; effect of Cuban crisis on signing, 424; effective date, 464; lack of control machinery, 288; negotiations opened, 454; negotiations in retrospect, 464-503; Original Parties as depository governments, 458; preliminaries to negotiations, 444-54; ratifica-
Index

Treaty Banning (continued) tion, 458-64; refusal to sign by Communist China, Albania, Cuba, France, 465; signed by more than 100 other states, 464; text of, 504-6; see also Partial Nuclear Test Ban Treaty “Troika” concept, 357-58

Truman, Harry S., 32, 48


Tukey, John, 151n, 212n, 277n

Tunisia, 22

Turkevich, Anthony L., 55n, 212n

Turkey, 175, 421

Twining, Nathan F. (General), 461

Tyler, William R., 452n

Unilateral intelligence systems, 193

Union of Soviet Socialist Republics (USSR), Academy of Sciences, 163; accepted inspection in aseismic areas, January 7, 1963, 433; armed forces, reduction suspended, 340; as nuclear power, 6; bombers, long-range, 341; Central Committee of the Communist Party of the Soviet Union, 450; closed society, impact on negotiations, 496; concern at China’s nuclear capability, 200; delegates to Geneva Conference, 115; delegates to Seismic Research Program Advisory Group, 254; derision of Vela Program results, 393; discontinuance of nuclear assistance to Communist China, 200; discussions with Communist China, agreement on new technology, October 15, 1957, 95-96; drafts of comprehensive test ban treaty tailed: October 31, 1958, 122-24, 454, November 18, 1961, 286, 454-55; “global” intercontinental missile, 360; high-yield weapons (1962), 423; insistence on “joint” research program, 249; lead in areas of nuclear weapons development, 343; lead in ballistic missiles, 32; missiles, long-range, 341; motivation in agreeing to Conference of Experts, 51; 1961 nuclear weapons tests, 341-43; objections to meeting of technical experts, 378-79; objections to NATO nuclear plans, 174-76; position in 15th General Assembly, 268; position on “black boxes,” 428; preliminary moves at Moscow treaty negotiations, 453-54; proposal for control system by, at Conference of Experts, 75; proposal for nonaggression pact, etc. in ENDC, March 1963, 443; reaction to “new data,” 162-68; reaction to Western draft treaties of August 1962, 413-14; readiness for partial test ban without unpoliced moratorium, July, 1963, 453; refusal to assist Communist China, 274; reinstatement of offer of 3 on-site inspections (1962), 426; rejection of offer to reduce number of on-site inspections and control stations, 394; response to US suggestion for phased treaty, Feb. 1960, 238; resumption of atmospheric testing, Dec. 13, 1962, 429; resumption of testing, Sept. 1, 1961, 280-81; sharp change in conduct in negotiations, 275; Soviet members, Conference of Experts, 56-58; Soviet sites for “black boxes,” Dec. 10, 1962, 429; superiority in conventional forces, 16; superiority over US in intermediate and long-range ballistic missiles, 341; test series completed in March 1958,
Soviet Union (continued)
45; troop strength reduced, 234; underground nuclear explosion, first (Feb. 1962), 353; unwillingness to accept inspection, 245; willingness to establish control system (June 1958), 15; viewed as expansionist by US, 6; willingness to consider direct line of communication with US, 446; see also Khrushchev, Nikita S.
United Arab Republic, 357, 420-21, 427
United Kingdom (UK), Agreement for Cooperation with US (1958), 37; agreement with US on Thor rockets (1958), 175; Atomic Energy Authority, 56; Bomber Command, 436; decision to continue moratorium, 203; delegates to Geneva Conference, 114-15; delegates to Seismic Research Program Advisory Group, 254; delegation to TWG I, 186; draft treaty (with US, April 18, 1961), 363-64; Labor Members of Parliament, 20; members of Conference of Experts, 56; position in 15th General Assembly, 268; primary objective to perpetuate negotiations, 291; proposed technical talks on "black boxes," 429; suggestion for meeting of technical experts, 378-79; technical talks: first suggestion, 17, favored again, 392; willingness to accept partial test ban (July 1963), 454; see also Macmillan, Prime Minister
United Nations (UN), agreements authorized between Control Organization and UN, 143; Charter, 305; Committee on the Peaceful Uses of Outer Space, 211; Convention on Privileges and Immunities, 1946, ratified by USSR and UK, 307; Convention on Privileges and Immunities of the Specialized Agencies, 1947, 311; Economic and Social Council, 21, 373; expanded membership, implications, 53; impact on US position, 108; role of, in international political system, 12; Scientific Committee on the Effects of Atomic Radiation, 395; Secretariat, 371; Secretary General, 117, 290 (see also Hammarskjöld); Security Council, 289, 303; Subcommittee of the Disarmament Commission, 14-24, 91; see also Disarmament Commission; General Assembly
United States, Arms Control and Disarmament Agency (ACDA), 381, 474; Army, 340; Coast and Geodetic Survey, seismological network, 353; Disarmament Administration, 269; Information Agency (USIA), Director of, 86; National Security Council (NSC), 46-47, 63; Office of Defense Mobilization (ODM), Director of, 33; President's Science Advisory Committee (See President's Science Advisory Committee), Seismological stations equipped by, 384; absence of contingency planning, 39; Administration's defense of draft comprehensive treaty, 445-46, Agreements of Cooperation with UK and others, 1958, 37; assurance against misuse of on-site inspections, December 20, 1962, 431; assurances by President to Congress on Moscow Treaty, 462; atmospheric testing resumed, April 26, 1962, 377-78; bilateral agreements with Greece, Federal Republic of Germany, Netherlands, Turkey, Canada (May 1959), 175; Cold War attitudes reexamined, July 1963, 449; conflicting forces in nuclear test ban policy formulation, 18-33; confusion over
U.S. Arms Control (continued) necessity of control posts in USSR, 389-90; decision not to resume testing (1961), 278; decision to continue priority for comprehensive test ban (June 1963), 452; defense appropriations, 27, 339; defense strategy, 339-40; delegates to Geneva Conference, 113-14; delegates to Seismic Research Program Advisory Group, 254; delegates to TWG I and II, 186-87, 212; delegation to Geneva political negotiations, 113; development of policy leading to the Conference of Experts, 39-53; domestic opposition to 1962 comprehensive draft treaty, 444; evolution of policy on nuclear weapons test ban, 40-41; formulation of security policy, 470-90; impact of changes in international system upon, 4; impact of "new data" on US position, 145-62; instructions to scientists, Conference of Experts, 64-66; integration of scientist into policy process in, 9; interagency ad hoc committee (April-July 1962), 381, 386-89; lead in nuclear weapons (1961), 278; memorandum on draft treaty changes (April 1, 1963), 441; military power, 339-41, 439-41; need to explain policy changes (1962) to different audiences, 39; new concessions offered by Dean (Aug. 28, 1961), 280; new negotiating position tabled (Feb. 11, 1960), 235; new policy approved by Kennedy, 271; number of on-site inspection control stations in USSR acceptable to (October 1962), 426; offer to allow Soviet experts to examine US testing sites, 279; opposition to resumption of testing in atmosphere, 354; partial treaty suggested by (April 13, 1959), 171; policy in transition, April 1958, 50; position in 15th General Assembly, 268; power increasing, 339-41; processes of decision-making, 233-34; proposal (verbal) for partial test ban, Feb. 11, 1960, 234-38; readiness in 1962 to accept internationally supervised, nationally manned control stations, 390; security policy of, 11-13; strategic doctrine, 382; strategic forces, 436; strategy and nuclear weapons under Kennedy, 499; (with UK) tabling of draft partial test ban treaty (Aug. 27, 1962), 455; tactical air squadrons, 340; technical memoranda for General Assembly (1962), 418; technical preparation of delegation to Conference of Experts, 58; technical preparation for negotiations inadequate, 491-93; test ban policies appraised, 494-95; underground tests postponed (Jan. 26, 1963), 432; underground tests (Sept. 13, 1963), 463; underground tests series began (Feb. 8, 1963), 438; weapons progress if tests resumed, 278; willingness to accept a partial test ban, July 1963, 454; see also Atomic Energy Commission; Committee of Principals; Comprehensive Nuclear Test Ban Treaty, Western drafts; Congress (also Joint Committee on Atomic Energy; Senate, Committee on Armed Services; Senate, Committee on Foreign Relations); Department of Defense; Department of State; Eisenhower, Dwight D.; Eisenhower Administration; Kennedy, John F.; Kennedy Administration; Senate University of California Radiation Laboratory, 179
Ustyumenko, A. I., 186n, 214n, 254n

U-2 incident, 71

Van Allen radiation belts, 191


Venezuela, 268

Verification; see Control Organization; On-site inspection

Vernov, S. N., 186n

Veto; see Control Commission; Control Organization

Vienna meeting, 276

Villard, Henry S., 114n

Violation of agreement, 110, 124-25, 333-34, 367

Violations, alleged by US, of General Assembly Resolution 1762A (XVII), 438

Voss, Earl H., 19n, 25n, 49n, 55n, 69n, 108n, 120n, 136n, 168n, 170n, 172n, 180, 224n, 251n, 271, 275n, 279n, 352n, 362n, 378n

Wadsworth, James J., 113-14, 136-40, 142, 143n, 150, 168-74, 196, 210, 235-43, 248, 258n, 312, 318, 329, 494n

Walske, M. Carl, 254n

Warsaw Pact, 274, 357, 443; forces, strength of, 341

Watson, Kenneth M., 186n

Weapons development, 462; state of, impact on negotiations, 498

Wennerström, Stig, 360

Western alliance, 421

Western press, conflicting views of scientists reported in, 365

Wiesner, conversations with Fedorov, 426

Wiesner, Jerome B., viii, 33n, 86, 270 and n., 341, 345, 362, 368-69, 393, 426, 431, 439-40, 475

Williams, G. Mennen, 199

Wilson, Charles E., 29

Wilson, Duncan, 352n

Wilson, Harold, 449, 453

Withdrawal from treaty, 142, 406-8; see also Duration of treaty on ban on nuclear testing; Control Organization

Wohlstetter, Albert, 479

Wolfe, Thomas W., 266n

Women's Strike for Peace, 471

Woodward, Lester, 47n

World Council of Churches, 21

World Meteorological Organization, 367, 395

World order, arms control, 493; link to control of nuclear weapons, 7-9; see also International system and control of modern technology

Wright, Christopher, viii, 9n, 479n

Wright, J. W., 218n, 254

Wright, Sir Michael, 159n, 167n, 169n, 196, 230-33, 241, 248n, 270, 326, 359n, 471n, 473n, 494n, 498n

Yarborough, Ralph W., 448n

Yifrú, Ato Ketema, 367

York, Herbert F., 33n, 47, 270n, 460

Yugoslavia, 206, 419

Zacharias, Jerrold R., 33n

Zagoria, Donald S., 251n, 265n

Zhukov (Marshall), 31

Zinn, Walter H., 277n

Zones of inspection, 112

Zoppo, Ciro E., viii, 69n, 329n

Zorin, Ambassador, 17n, 18n, 376, 393, 428

Zuckerman, Sully, 352n