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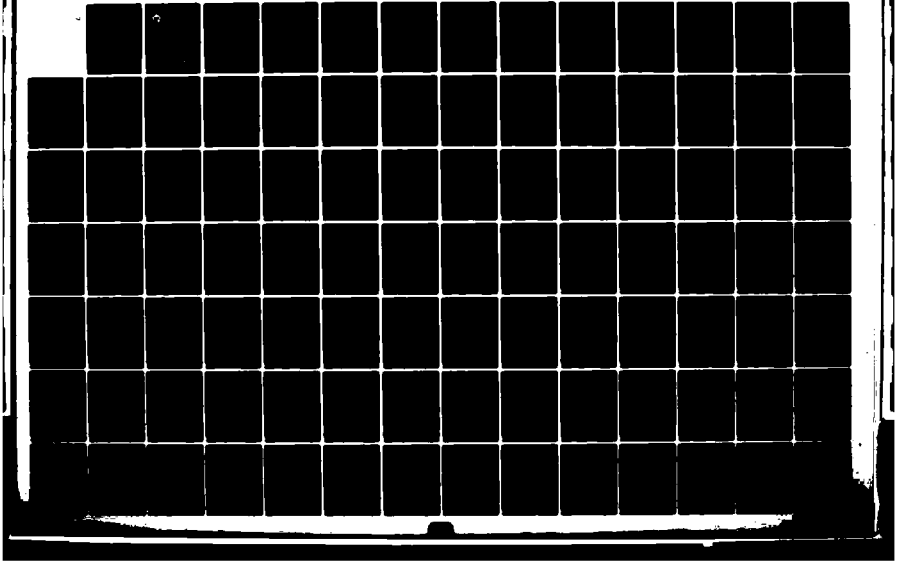

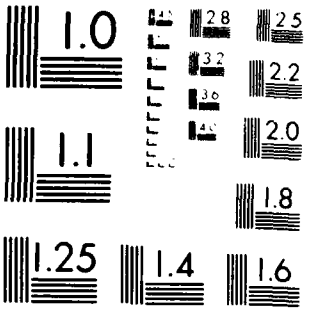

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No. 64

MARCH - APRIL 1983

Date of Report

March 6, 1984

Vice Director for Foreign Intelligence
Defense Intelligence Agency

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20. ABSTRACT

This is the Soviet Laser Bibliography for March-April 1983, and is No. 64 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; crystal growing; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; beam propagation; adaptive optics; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; laser spectroscopy; beam-target interaction; and plasma generation and diagnostics.

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Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is March-April 1983, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Russian Reference Journals are also included. Laser items from the popular or semipopular press are generally omitted.

For convenience we have abbreviated frequently cited source names; a source abbreviations list and an author index are included. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry (RZh, KL) indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library. The authors' affiliations are indicated by the numbers in parentheses following the authors' names in the text and are listed in an author affiliations list. New affiliations are assigned a new number and are added to a cumulative list which includes all affiliations from 1969 to the present. Only those affiliations which appear in this issue are listed in this issue's author affiliations list.

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D. CHEMICAL LASERS

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E. COMPONENTS

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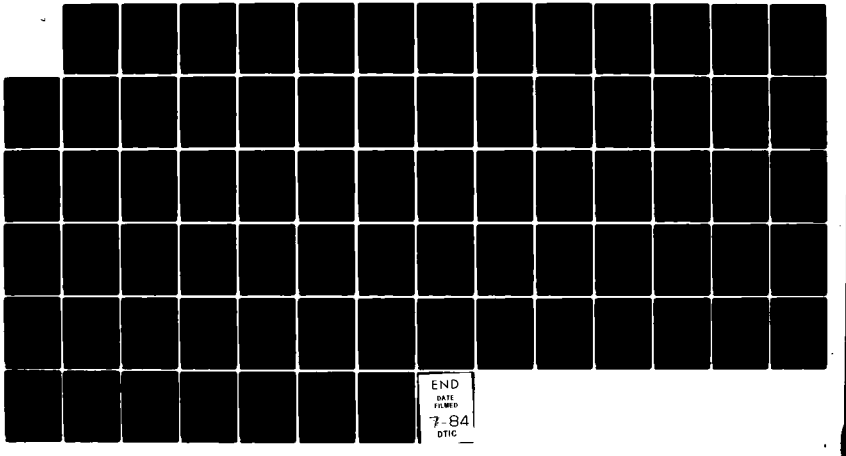

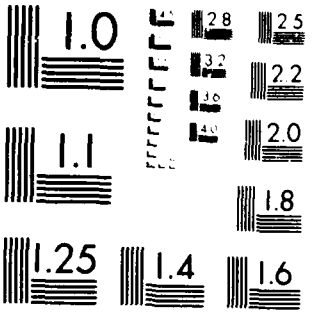

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J. BEAM-TARGET INTERACTION

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IV. SOURCE ABBREVIATIONS

	(CIRC Codens)	
APC	(ARYCA)	Acta physica et chemica. Szeged
APP	(ARANA)	Acta physica Academiae scientiarum hungaricae
BAPS	(BAPTA)	Bulletin de l'Academiae Polonaise des Sciences. Serie des Sciences Techniques
BAPS Chim	(BAPCA)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Chimique
CCCC	(CCCCA)	Collection of Czechoslovak Chemical Communications
CCF	(CKCFA)	Ceskoslovenskiy casopis pro fyziku
CJP	(CZYPA)	Czechoslovak Journal of Physics
DAN	(DANKA)	Akademiya nauk SSSR. Doklady
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN Ukr	(DUKAB)	Akademiya nauk Ukrainskoi RSR. Dopovidi. Seriya A. Fiziko-matematychni ta tekhnichni nauky
DAN Uz	(DANUA)	Akademiya nauk Uzbekskoy SSR. Doklady
DNR	(DERUB)	Deponirovannyye nauchnyye raboty
ETP	(EXPRA)	Experimentelle Technik der Physik
FAiO	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FiKhOM	(FKOMA)	Fizika i khimiya obrabotki materialov
FiKhS	(FKSTD)	Fizika i khimiya stekla
FM	(FNMKA)	Finommechanika, mikrotechnika [Hungary]
FTP	(FTPPA)	Fizika i tekhnika poluprovidnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Arm	(IAAFA)	Akademiya nauk Armyanskoy SSR. Izvestiya. Fizika
IAN B	(VBSFA)	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
	(VABFA)	Seriya fiziko-tekhnicheskikh nauk
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IAN Lat	(LZFTA)	Akademiya nauk Latviyskiy SSR. Izvestiya. Seriya fizicheskikh i tekhnicheskikh nauk
I-FZh	(INFZA)	Inzhenerno-fizicheskiy zhurnal
ISOAN	(IZSTA)	Akademiya nauk SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya tekhnicheskikh nauk
IT	(IZTEA)	Izmeritel'naya tekhnika

IVUZ Fiz	(IVUVA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHVKA)	Khimiya vysokikh energiy
KL	(KNLTA)	Knizhnaya letopis'
KLD	(-----)	Knizhnaya letopis'. Dopolnitel'nyy vypusk. Avtoreferaty dissertatsii
KSpF	(KRSFA)	Kratkiye soobshcheniya po fizike
MiTOM	(MTOMA)	Metallovedeniye i termicheskaya obrabotka materialov
NM	(IVNMA)	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
OiS	(OPMPA)	Optiko-mekhanicheskaya promyshlennst'
Opc app	(OPAPB)	Optica applicata [Poland]
Otkr izobr	(OiPOB)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
Poverkh	(-----)	Poverkhnost'. Fizika, khimiya, mekhanika
PSS	(PSSAB) (PSSBB)	Physica Status Solidi (A). Applied Research (B). Basic Research
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
RRP	(RRPZA)	Revue Roumaine de Physique
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhR	(RARAB)	Referativnyy zhurnal. Radiotekhnika
Sb1	sbornik	Metrologicheskoye obespecheniye izmereniy chastotnykh i spektral'nykh kharakteristik izlucheniya lazerov. Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya, 20-22 Oct 1982. Tezisy dokladov. Khar'kov, 1982, pp not given.
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Sb41		Otraslevaya nauchno-tekhnicheskaya konferentsiya molodykh uchenykh NI gornorudnogo instituta, Krivoy Rog. 9th. 26-28 May 1982. Materialy. Part 1. Deposit at UkrNIINTI, no. 3974Uk-D82, 8 Dec 1982.
SCF	(SCEFA)	Studii si cercetari de fizica
TKiT	(TKTEA)	Tekhnika kino i televedeniya
Tr1	trudy	Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 323, 1983.
Tr2		Moskovskiy energeticheskiy institut. Trudy, no. 579, 1982.
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Tr5		Moskovskiy energeticheskiy institut. Trudy, no. 547. 1981.
Tr6		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 307, 1982.
Tr7		Moskovskiy vyssheye tekhnicheskoye uchilishche. Trudy, no. 391, 1982.
TVKE	(TVKED)	Tochnoye vremya i kvantovaya elektronika
TVT	(TVYTA)	Teplofizika vysokikh temperatur
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhAKh	(ZAKHA)	Zhurnal analiticheskoy khimii
ZhETF	(ZETFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETFP	(ZEPFA)	Pis'ma v Zhurnal ekesperimental'noy i teoreticheskoy fiziki
ZhNKh	(ZNOKA)	Zhurnal neorganicheskoy khimii
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
ZhTFP	(PZTFD)	Pis'ma v Zhurnal tekhnicheskoy fiziki
ZhVMMF	(ZVMFA)	Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki
ZL	(ZVDLA)	Zavodskaya laboratoriya

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