

BULGARIA

P. BOZIANOV and M. TSEKOV, Institute for Emergency Medical Aid  
(Institut za burza meditsinska pomoshch) "N.I. Pirogov", Chief  
Physician (glaven lekar) Khr. ZDRAVKOV [Sofia.]

"Hepatic Syndrome Due to an Acute Allergic Process."

Sofia, Sovetska Meditsina, Vol 13, No 12, 1962; pp 43-44.

Abstract [English summary modified]: Description of syndrome of  
hepatitis with full-blown jaundice in man of 27 following allergic  
rash and fever attributed to ingestion of fried fish. Clinical  
details of the rapid course of multisymptomatic condition ending  
in uneventful recovery. Three Bulgarian and 1 Western reference.

1/1

BOYANOV, Y.

Factory Circuit Diagrams. In Radio Engineering, No. 2: Feb 55

BOYANOV, Y.

$H_{\mu}$  Compensation in Radio Receivers with Semi-Automatic Grid Potentials. In Radio Engineering, No. 2:25 Feb 55

BOYANOV, Y.

The RFT1U11 Receiver. In Radio Engineering, No. 2:29 Feb 55

BOYANOV, Y.

At 660 Wk 3a. In Radio Engineering, No. 2:30 Feb 55

BOYANOV, Y.

Conventional Soviet Radio Tube Markings (Designations). Radio Engineering,  
#3:44:Mar.55

ACC NR: AP7002827

SOURCE CODE: UR/0142/66/009/006/0714/0718

AUTHOR: Boyanov, Y. D.; Baynov, D. D.; Marinov, Yu. P.; Partinova, N. A.

ORG: none

TITLE: Theory of transistorized LC-oscillators having n oscillatory circuits

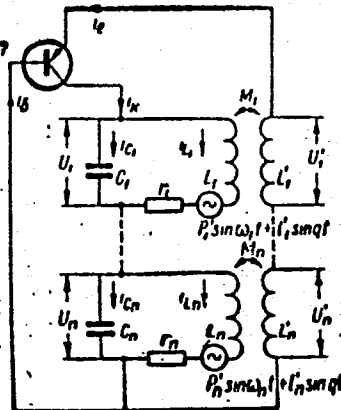
SOURCE: IVUZ. Radiotekhnika, v. 9, no. 6, 1966, 714-718

TOPIC TAGS: electronic oscillator, transistorized oscillator, OSCILLATOR THEORY

ABSTRACT: A theory is set forth of an n-circuit transistorized oscillator that has inductive feedback and is excited by external harmonic voltage (see figure). The transistor is connected in a common-base circuit, and the coupled oscillatory circuits are connected to its collector. Operation of this oscillator is described by differential equations, examination of whose solutions yields this condition of asymptotic stability:

$$2b_n + 2V_n + d_n E^3 < 0,$$

$$(\kappa = 1, 2, \dots n).$$



Card 1/2

UDC: 621.373.52.11

ACC NR: AP7002827

in the general (nonresonance) case. In the notation of the article, the above condition means that, in order to ensure stable oscillations, the oscillatory-circuit parameters and the oscillator operating regime should be so proportioned that  $r_k$  is very small and  $\beta_0$  and  $b$ , negative; transistor voltage gain,  $\beta = \beta_0 + aU_0 + bU_0^2$ . Further examination shows that the same stability condition holds true for resonance case. Orig. art. has: 1 figure and 25 formulas.

SUB CODE: 09 / SUBM DATE: 01Nov65 / ORIG REF: 003 / OTH REF: 001



1. I. BOYANOVA

2. USSR (600)

4. Bulgaria - Trade Unions

7. In the Bulgarian city of Kiustendil. V pom. profativu 14 no. 1. 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

BOYANOVA, N. B.

Corneal transplantation. Vest. oft. no.5:33-35 '61.

(MIRA 14:12)

1. Zaveduyushchaya glaznym otdeleniem Buryatskoy respublikanskoy  
bol'nitsy (Ulan-Ude)

(CORNEA-TRANSPLANTATION)

BOYANOVA, V. P.

BOYANOVA, V.P.

Health protection of the workers of the Buryat-Mongolian A.S.S.R.  
Zdrav.Ros.Feder. 1 no.10:26-34 0 '57. (MIRA 10:12)  
(BURYAT-MONGOLIA--PUBLIC HEALTH)

BOYANQVA, V.R.

Mother and child care in the Buryat-Mongolian A.S.S.R. Vop.okh.mat.  
1 det. 2 no.5:73-80 8-0 '57. (MIRA 10:12)

1. Ministr zdravookhraneniya Buryat-Mongol'skoy ASSR.  
(BURYAT-MONGOLIA--MATERNAL AND INFANT WELFARE)

GELLER, Z.I.; RASTORGUYEV, Yu.L.; SUDAKOV, P.Ye.; ANTIMIROV, M.Ya.;  
Prinimali uchastiye: DIMITRIYENKO, O.M.; BOYANOVICH, V.A.

GNI automatic densitometer for liquids. Izv.vys.ucheb.zav.;  
neft' i gaz 5 no.2:109-116 '62. (MIRA 15:7)

1. Groznenskiy neftyanoy institut.  
(Densitometers)  
(Petroleum products—Density)

BOYANOVSKIY, I. [Bojanovsky, I.]; KHLoupKOVA, K. [Chloupkova, K.]

Scale for the evaluation of depressive states. Zhur. nevr. i  
psikh. 64 no. 12:1864-1867 '64. (MIRA 18:1)

1. Psikhiatricheskaya klinika (zaveduyushchiy - prof. Y.Gadlik)  
Universiteta im. Purkino, Brno, Chekhoslovakiya.

17(10)

SOV/29-58-11-23/28

AUTHOR:

Boyanovskiy, S., Physician

TITLE:

The Tongue of the "Green Dragon" (Zhalo "zelenogo zmiya")

PERIODICAL:

Tekhnika molodezhi, 1958. Nr 11, pp 34-36 (USSR)

ABSTRACT:

This scientific paper intended for the lay public deals with the effects and dangers of alcoholism and how to fight it. There are several reasons for the spreading of alcoholism. One of them is the rather common superstition of the people according to which alcohol has a soothing, warming, and even healing effect. Many talented people who believed in inspiration by alcohol destroyed themselves by drinking. The most dangerous fact, however, is that many people (especially weak-minded ones) seek consolation in alcohol. Experiments carried out with animals have established the fact that alcohol is a poison. Excessive use of alcohol can even kill adults. Professor V. Ban'shchikov reports such a case in his book "Alkogolizm" (Alcoholism). The more dangerous is alcohol for young people. A grown-up who induces a child or juvenile to drink alcohol, is a criminal. Alcohol is characterized by short-lived stimulating effect which temporarily gives the feeling of well-being and

Card 1/3

The Tongue of the "Green Dragon"

SOV/29-58-11-23/28

high spirits. It is this property of alcohol that induces people to drink more and more often, until drinking becomes a habit. Systematic drinking not only destroys the brain, nerves, and some of the organs of the human body, but also affects the human character. A person who drinks will come into bad company, will go wrong, even become a criminal. According to Comrade I. D. Vetrov, Minister of Justice of the Belorusskaya SSR, about 70 per cent of the crimes committed in 1958, such as brawls, were committed in a state of drunkenness. In L'vov 71 per cent of the persons sentenced in 1957 for minor offences, and 95 per cent of the persons sentenced for more serious offences had broken the law while they were intoxicated. Numerous accidents and disasters are due to intoxication. Alcoholism, however, does not only cause personal injuries, it also damages the national economy. It reduces the working capacity of persons, makes the quality of the work done drop, and causes industrial accidents. The country is also deprived of assets by the waste of foodstuffs from which alcohol is distilled. Under Soviet law, persons found guilty of such an offence are sentenced to five years' imprisonment and seizure of their property. There are 8 figures.

Card 2/3



The Tongue of the "Green Dragon"

804/29-58-11-23/28

Card 3/3

BOYANOVSKIY, S. Ye

SHESTAKOVA, Yevgeniya Vasil'yevna, zasluzhennyy vrach RSPSR; BOYANOVSKIY, S.Ye., red.; KHAKHIN, M.F., tekhn. red.

[Work with volunteer sanitary workers in the Krasnaya Presnya District, 1919-1956; manual for auxiliary councils and volunteer workers of medical institutions] Opyt raboty s obshchestvenno-sanitarnym aktivom Krasnoi Presni, 1919-1956 gg.; v pomoshch' Sovetam sodeistviia i obshchestvennomu aktivu lechebno-profilakticheskikh uchrezhdenii. Moskva, Gos. izd-vo med. lit-ry, 1957. 101 p. (MIRA 11:7)

(MOSCOW--PUBLIC HEALTH)

KOROSTELEV, Nikolay Borisovich; NEYMAN, Mikhail Isaakovich; BOYANOVSKIY,  
S.Ye., red.; ROMANOVA, Z.A., tekhn. red.

[Mass movement for the promotion of sanitary culture] Massovoe  
dvizhenie za sanitarnuyu kul'turu. Moskva, Gos.izd-vo med.lit-ry  
Medgis, 1960. 39 p. (MIRA 13:9)  
(Sanitation)

BOYANSKIY, A. A.  
NOVITSKIY, L. I.; BOYANSKIY, A. A.

Centralized repair of equipment. Leg. prom. 18 no.2:46 P '58.  
(MIRA 11:2)  
1. Direktor Leningradskoy fabriki No.2 "Proletarskaya pobeda" (for  
Novitskiy). 2. Zamestitel' glavnogo mekhanika Leningradskoy fabriki  
No.2 "Proletarskaya pobeda" (for Boyanskiy).  
(Shoe industry)

YEREMINA, V.; BOYANZHU, F.

Manufacture of rendered lard in briquets. Mias.ind.SSSR 33  
no.2:40 '62. (MIRA 15:5)

1. Moldavskiy Sovet narodnogo khozyaystva.  
(Moldavia—Lard)

BOYAR, E.

BOYAR, E.

Expanding production of building materials. Prom. koop. 12 no.1:  
23 Ja '58. (MIRA 11:1)

1. Zamestitel' predsedatelya pravleniya oblpromoveta, Leningrad.  
(Leningrad--Building materials industry)

BOJHKATOV, Ya.I., red.; BOYAR, O.I., red.; VLASOV, L.F., red.; LIFSHTS,  
M.O., red.; MASHKILLEYSON, L.N., red.; MILOVIDOV, B.M. [deceased],  
red.; MOLCHANOVA, O.P., red.; POL'SHANSKIY, V.S., red.; POPKOV,  
V.I., red.; REVIN, A.I., otv. red.; TIMOFEYEVA, Z.N., red.;  
LAZAREV, S.M., tekhn. red.; LEBEDEVA, L.A., tekhn. red.

[Concise encyclopedia of home economics] Kratkaiia entsiklopediia  
domashnego khoziaistva. Izd.2. Moskva, Gos. nauchn. izd-vo  
"Sovetskaia entsiklopediia." Vol.1. A-M. 1962. 895 p. Vol.2.  
N-IA. 1962. 903-1758 p. (MIRA 15:6)  
(Home economics--Dictionaries)

ZAKHAROV, MIKHAIL KONSTANTINOVICH, dotsent; ~~BOYAR-SOZONOVICH,~~  
~~STANISLAV PAVLOVICH,~~ dotsent; SHUSTER, ALEKSANDR YEFIMOVICH,  
inzh.

Method for mechanized arranging of the stator windings of  
converted asynchronous motors. Izv. vys. ucheb. zav.;  
elektromekh. 4 no.7:116-118 '61. (MIRA 14:7)

1. Kafedra elektricheskikh mashin Odesskogo politekhnicheskogo  
instituta (for Zakharov, Boyar-Sozonovich). 2. Odesskiy zavod  
stroitel'no-otdel'chnykh mashin (for Shuster).  
(Electric motors, Induction--Windings)



BOYARCHENKO, I.F. (g. Voroshilovgrad).

Determining geographical coordinates of a point of observation with the  
aid of gnomons. Fiz. v shkole 13 no.4:72-74 J1-Ag '53. (MLRA 6:6)  
(Geographical positions)

BOYARCHENKO, Ivan Fomich; RYBAS, T., red.; IL'IN, A., tekhn.red.

[To the far reaches of the universe] V glubiny vselenoi.  
Lugansk, Luganskoe obl.isd-vo, 1960. 118 p.

(MIRA 13:12)

(Cosmology)

(Artificial satellites)

BOYARCHENKO, I.F. (g. Lugansk)

Observing the height of the sun and determining the latitude of a  
point with the aid of a quadrant. Geog. v shkole 23 no.5:66-68  
S - 0 '60. (MIRA 13:9)

(Quadrant)

(Latitudes)

BOYARCHENKO, I.F.

Latitude determination with the aid of a theodolite. Fiz.v  
shkole 20 no.1:92-94 Ja-F '60. (MIRA 14:10)

1. Pedagogicheskiy institut, g. Lugansk.  
(Latitude) (Theodolites)

BOYARCHENKO, Ivan Fomich [Boiarchenko, I.Kh.]; LEVANDOVSKIY, S.V.  
[Levandovs'kiy, S.V.], red.; SHEVCHENKO, L.I., tekhn.red.

[To the depths of the universe] V hlybny Vsesvitu. Kyiv,  
Radians'ka shkola, 1963. 147 p. (MIRA 16:10)  
(Outer space—Exploration) (Astronomy)

BoyARCHENKOV, M.A.

USSR/Automatics and telemechanics

FD-2664

Card 1/1

Pub. 10-11/15

Author : Vasil'yeva, N. P.; Boyarchenkov, M. A.; Subbotina, G. V.

Title : Conference on contactless magnetic elements and their application

Periodical : Avtom. i telem. 16, Jul-Aug 1955, 403-406

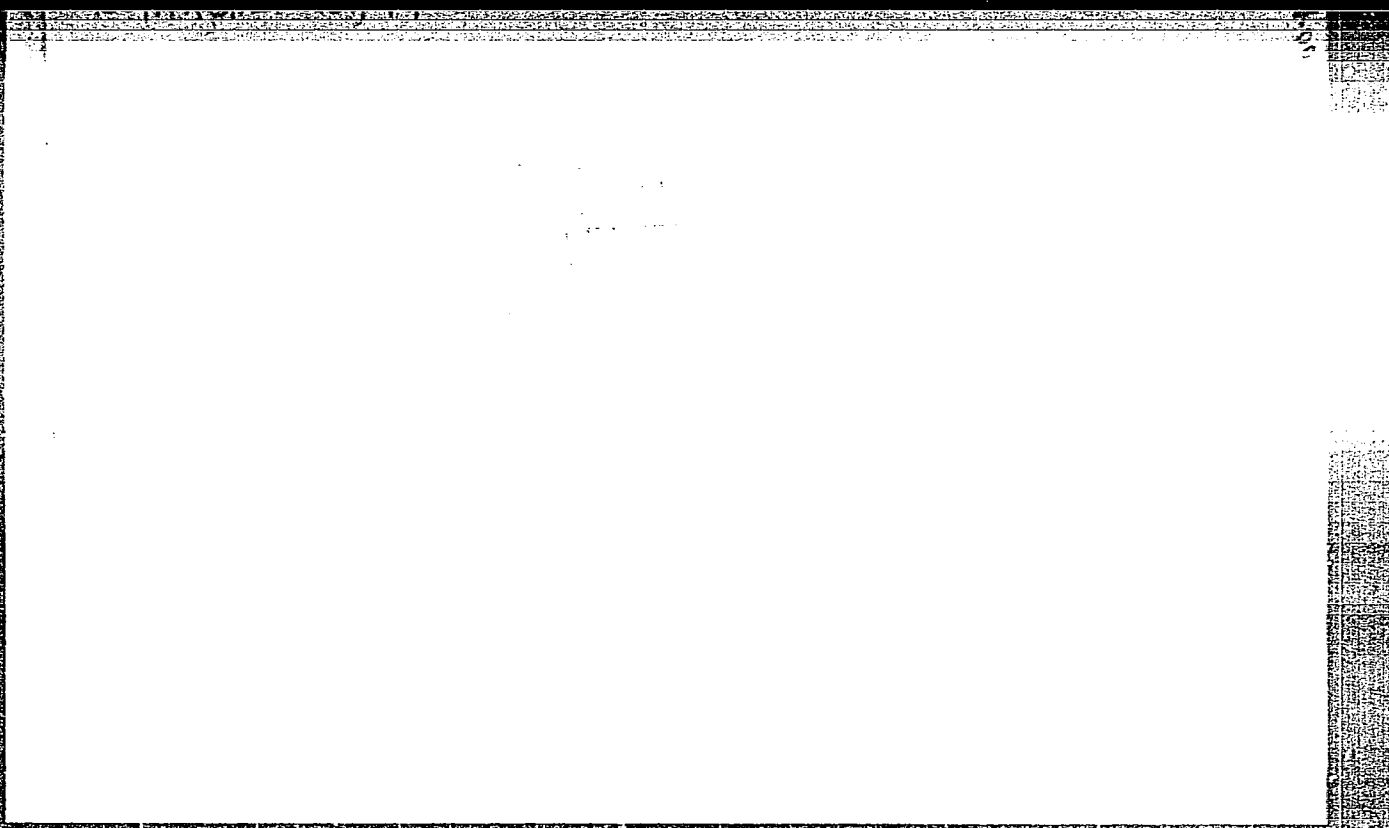
Abstract : In Moscow from 24 to 28 May 1955 the Institute of Automatics and Telemechanics held a conference, on contactless magnetic elements and their application, participated in by more than 450 representatives of various organizations of Moscow, Leningrad, Kiev, Taganrog, Novocherkassk, Urals, including institutions of the Academy of Sciences USSR, scientific-research and educational institutes designing and planning organizations of the ministries of the electrical industry, aviation and ship construction industry, ministries of central machine construction and defense. The conference heard 27 reports devoted to the theory and application of magnetic amplifiers and other contactless magnetic elements.

Institution :

Submitted :

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BOYARCHENKOV, M.A.

Seminar on magnetic amplifiers and contactless magnetic circuit  
members. Avtom. i telemekh. 17 no.12:1029-1031 D '56. (MIRA 10:1)  
(Magnetic amplifiers)



BOYARCHENKOV, M.A.

AUTHOR VASIL'YEVA N.P., BOYARCHENKOV M.A. (Moscow) 103-7-7/21  
TITLE Design Peculiarities of Multi-Cascade Magnetic Amplifiers.  
(Osobennosti rascheta mnogokaskadnykh magnitnykh usiliteley - Russian)  
PERIODICAL Avtomatika i Telemekhanika, 1957, Vol 18, Nr 7, pp 660-668 (U.S.S.R.)  
ABSTRACT Some peculiarities on the occasion of the projecting of magnetic amplifiers of small power are shown and the following is stated:  
1.- The steel volume per power unit first increases slowly and then a little more quickly, and theoretically into infinity, on the occasion of the transition of amplifiers of high power to amplifiers of low power, if the degree of change of the load current, of the amplification coefficient and of the regeneration coefficient are maintained. 2.- There are critical minimum values  $H_{u-kr}$  for every kind of armature material (minimum values of the maximum magnetizing field - critical values), where it is no longer possible to build an amplifier of the given degree of change of load current. The magnitude  $H_{u-kr}$  is the smaller the smaller is the necessary degree of the change of load current. The authors then discuss the selection of the schemes\* as well as of the cascade number and the determination of calculation parameters of multi-cascade amplifiers for the purpose of maintaining the quick effect demanded. In conclusion, a calculation example is given.  
(1 table, 6 illustrations and 6 Slavic references).

Card 1/2

Design Peculiarities of Multi-Cascade Magnetic Amplifiers. 103-27/11

ASSOCIATION Not Given.  
PRESENTED BY  
SUBMITTED 28.4.1956  
AVAILABLE Library of Congress.  
Card 2/2

BOYARCHENKOV, M.A.; VASIL'YEVA, N.P.; LIPMAN, D.A., red.; VORONIN, K.P.,  
tozh. red.

[High-speed magnetic amplifiers] Bystrodeistvuiushchie magnitnye  
usiliteli. Moskva, Gos. energ. izd-vo, 1958. 30 p. (MIRA 11:7)  
(Magnetic amplifiers)

BOYARCHENKOV, M.A.; VOLODIN, V.S.; KREBNIKOV, F.I.; KOZLOV, G.D.; SUBBOTINA,  
G.V.; TREFILOVA, I.S.

All-Union conference on magnetic elements of automatic and remote  
control and computer techniques. Avtom. i telem. 19 no.6:614-620  
Je '58. (MIRA 11:6)

(Automatic control—Congresses)  
(Magnetic amplifiers)

PHASE I BOOK EXPLOITATION

SOV/4915

Boyarchenkov, Mikhail Aleksandrovich, and Moisey Aronovich  
Rozenblat

Bystrodeystvuyushchiye reversivnyye elektroprirody s magnitnymi  
usilitel'nyami (High-Speed Reversible Electric Drives With  
Magnetic Amplifiers) Moscow, 1959. 40 p. 5,000 copies print-  
ed. (Series: Peredovoy opyt proizvodstva. Seriya  
"Elektroenergetika," vyp. 1)

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh  
i nauchnykh znaniy RSFSR and Moskovskiy Dom nauchno-tekhnicheskoy  
propagandy imeni F. E. Dzerzhinskogo.

Ed.: A. V. Shinyanskiy; Resp. Ed.: I. A. Manin; Tech. Ed.:  
R. A. Sukhareva.

PURPOSE: This booklet is intended for designers of automation  
devices used for electric drives.

Card 1/3

High-Speed Reversible Electric Drives (Cont.)

SOV/4915

COVERAGE: The booklet is based on results obtained by the Laboratory of Automation Components of the Institut avtomatiki i telemekhaniki AN SSSR (Institute of Automation and Telemechanics of the Academy of Sciences USSR) in the development and experimental investigation of two high-speed reversible electric drives, one of which is activated by a d-c motor of the PN2.5(P11) type, and the other by a two-phase induction motor of the DAD2-350/50 type. The booklet is divided in two parts. Part I, entitled "Reversible D-C Drive With Magnetic Amplifiers," contains the following chapters: "Selection of the Circuit of a Power Magnetic Amplifier"; "Mechanical Characteristics of the Drive"; "Feedback Drive System"; "Amplifier of the Excitation Circuit and General Diagram of the Drive"; and "Basic Structural Parameters of a Magnetic Amplifier and Drive Characteristics." Part II, entitled "High-Speed Reversible Drive With a Two-Phase Induction Motor and a Transistor-Magnetic Amplifier," consists of the following chapters: "Motor"; "Selection of Magnetic-Amplifier Circuit"; "Selection of Magnetic-Amplifier Bias"; "Reduction of the Effect of the

Card 2/3

High-Speed Reversible Electric Drives (Cont.)

SOV/4915

Feedback Circuit on the Inertness of the Magnetic Amplifier";  
Structural Parameters of the Amplifier and its Static Charac-  
teristics"; "Transistorized Phase-Sensitive Amplifier";  
"Matching of Magnetic and Transistor Stages"; and "Drive  
Characteristics." No personalities are mentioned. There are  
9 references: 6 Soviet, and 3 English.

TABLE OF CONTENTS: None

AVAILABLE: Library of Congress

Card 3/3

JP/rsm/os  
3/27/61

BANDAS, Aleksandr Markovich; SOMOV, Vladimir Aleksandrovich; SEMIDT, Aleksey Osipovich; BOYARCHENKOV, M.A., red.; LARIONOV, G.Ye., tekhn.red.

[Transformers and stabilizers controlled by superimposed magnetisation of shunts] Transformatory i stabilizatory, reguliruemye podmagnichivaniem shuntov. Moskva, Gos.energ. izd-vo, 1959. 135 P. (MIRA 12:6)  
(Electric transformers) (Voltage regulators)



BOYARCHENKOV, M.A.  
8(2,3)

PHASE I BOOK EXPLOITATION

SOV/1950

Vasil'yeva, Nataliya Petrovna, Ol'ga Alekseyevna Sedykh, and Mikhail Aleksandrovich Boyarchenkov

Proyektirovaniye magnitnykh usiliteley (Design of Magnetic Amplifiers)  
Moscow, Gosenergoizdat, 1959. 335 p. 25,000 copies printed.

Ed.: I.I. Mednikova; Tech. Ed.: K.P. Voronin.

**PURPOSE:** This book is intended for engineers working in the field of industrial automation. It may also be used as a textbook by students specializing in automatic control, electric drives, etc.

**COVERAGE:** The authors present the fundamentals of design of magnetic power amplifiers for a given maximum load power, load impedance, power amplification coefficient and variation of the load current. They emphasize size, weight and cost in designing an amplifier for a given power and maximum overheating of windings. They also discuss the technology of manufacturing magnetic amplifiers. If the book is used as a reference book in designing amplifiers no spe-

Card 1/7

## Design of Magnetic Amplifiers

SOV/1950

cial knowledge of the theory of magnetic amplifiers is needed. Fundamental principles discussed in the book are based on the modern theory of magnetic amplifiers. The theoretical part of the book is based on the work of N.P. Vasil'yeva and O.A. Sedykh. Chapters 1, 2, 3, 4, 5, 6 and Section 1 of Chapter 9 were written by N.P. Vasil'yeva; Chapters 8 and 11 by N.P. Vasil'yeva and O.A. Sedykh; Section 2 of Chapter 9 by N.P. Vasil'yeva and M.A. Boyarchenkov; Chapter 7 by O.A. Sedykh; and Chapter 10 and Part II by M.A. Boyarchenkov. The authors thank I.B. Negnevitskiy and B.I. Filipovich for reviewing the text. There are 44 references: 37 Soviet (including 1 translation), 6 English and 1 German.

## TABLE OF CONTENTS:

Foreword	3
Introduction	7
Symbols and Abbreviations	11
PART I. FUNDAMENTALS OF AMPLIFIER DESIGN	15

Card 2/7

Design of Magnetic Amplifiers	SOV/1950
Ch. 1. Input-Output Characteristic and Basic Parameters of an Amplifier	15
Ch. 2. Core Volume and Magnetic Conditions of Magnetic Power Amplifiers	22
1. Introduction	22
2. Output power, core volume and magnetic conditions of irreversible magnetic amplifiers	24
3. Output power, core volume and magnetic conditions of reversible magnetic amplifiers	33
Ch. 3. Optimum Magnetic Operating Conditions of a Magnetic Amplifier and Curves Showing Minimum Specific Volume of Cores	82
1. Curves showing minimum specific volume of an amplifier core	82
2. Analytical expression for curves showing specific volume of an amplifier core	101
Ch. 4. Core Volume and Amplification Coefficient of Magnetic Amplifiers	114
Card 3/7	

Design of Magnetic Amplifiers	SOV/1950
1. Introduction	114
2. Irreversible d-c amplifiers without feedback	116
3. Irreversible d-c amplifiers with feedback	123
4. Reversible d-c amplifiers without feedback	127
5. Reversible d-c amplifiers with feedback	131
6. A-c amplifiers	133
Ch. 5. Maximum Value of Field Intensity Depending Upon Heating and Core Volume	136
1. Maximum field intensity, current density and volume of cores	137
2. Relationship between current density and the temperature of overheating	143
3. Maximum field intensity, temperature of overheating and volume of cores	145
Ch. 6. Volume of Amplifier Windings	146
Ch. 7. Determination of Optimum Geometric Relationships in Cores	150
1. Dependence of core magnetic characteristics on the ratio of outside and inside diameters	150
2. Optimum geometric relationships in cores of sensitive magnetic amplifiers	152

Card 4/7

Design of Magnetic Amplifiers	SOV/1950
3. Core geometric relationships ensuring a given amplification coefficient at minimum weight (size, cost)	154
4. Optimum geometric relationships of cores in high-power magnetic amplifiers	163
Ch. 8. Design of Magnetic Amplifiers for a Given Supply Voltage	168
Ch. 9. High-speed Amplifiers. Design Characteristics of Multi-stage Magnetic Amplifiers	179
1. Effect of multistage connection on the operating speed of magnetic amplifiers with feedback	180
2. Design characteristics of multistage magnetic amplifiers	190
Ch. 10. Basic Considerations in the Design of Rectifiers for Magnetic Amplifier Circuits	198
Ch. 11. Procedure in Amplifier Design	202
1. Introduction	202
2. Design of amplifiers for a selected type of core plates	206

Card 5/7

Design of Magnetic Amplifiers	SOV/1950
3. Design of amplifiers with an optimum core configuration	232
<b>PART II. MAGNETIC MATERIALS. RECTIFIERS, DESIGN AND MANUFACTURE OF MAGNETIC AMPLIFIER CORES</b>	244
<b>Ch. 12. Magnetic Materials</b>	244
1. Methods of obtaining experimental curves for simultaneous magnetization	244
2. Measurement of the dynamic hysteresis loop by means of a cathode-ray oscillograph	254
3. Measurement of the dynamic hysteresis loop by means of a mechanical controlled rectifier	270
4. Measurement of the dynamic hysteresis loop by means of crystal diodes and a magnetic switch	272
5. Basic parameters of domestic (Soviet) magnetic materials	275
<b>Ch. 13. Design of Magnetic-amplifier Cores</b>	287
1. Toroidal cores	287
2. Three-leg and two-leg cores	292
3. M-type core	295
4. O-type and C-type cores	296

Card 6/7

Design of Magnetic Amplifiers

SOV/1950

Ch. 14. Technology of Manufacturing Magnetic-amplifier Chokes	298
1. Cutting of tape	299
2. Removal of burrs and degreasing of tape	302
3. Insulating and winding of cores	305
4. Final thermal processing (annealing) of cores	313
5. Technology of manufacturing sectional tape-wound cores (C-type)	318
6. Testing and matching of paired cores	321
7. Winding of magnetic amplifiers	322
8. Basic types of diode rectifiers used in magnetic amplifiers	328

Bibliography

334

AVAILABLE: Library of Congress

Card 7/7

JP/bg  
8-28-59

BOYARCHENKO, M. A.

BOJARCZENKO, Michal [Boyarchenko, Mikhail] (Moskwa); WASILEWA, Natalia  
[Vasil'yeva, Nataliya] (Moskwa)

High-speed magnetic amplifiers. Archiw automat 4 no.3/4: 243-252  
'59. (EEAI 9:7)

(Magnetic amplifiers)



BOYARCHEV, M.A.

Тезисы докладов конференции по автоматизации производства в машиностроении и автоматизации электропривода в промышленности. М., Москва, 1979

Электрические приводы автоматизированных станочных групп (Электрические приводы автоматизированных станочных групп). М.: Машиностроение, 1980. 470 с. 11,000 экземпляров отпечатано.

Составители: И.И. Петров, А.А. Строганов, и М.О. Чиликин. Редакторы: И.И. Сид, и А.П. Шлыков. Тех. редактор: Е.П. Туркина, и Г.В. Ларионов.

ПРЕДИСЛОВИЕ: The collection of reports is intended for the scientific and technical personnel of scientific research institutes, plants and schools of higher education.

CONTENTS: The book is a collection of reports published by scientific workers at plants, scientific institutes and schools of higher education at the third All-Union Scientific Conference on Automation of Industrial Processes in Machine Building and Automated Electric Drives in Industry held in Moscow on May 12-16, 1979. The Conference was called by the Academy of Sciences USSR, the Central State Planning Commission (USSR), the GDTI USSR, the Gosstatizdat USSR (State Statistical Administration) (State Committee on Automation and Remote Control) and the National Academy of Sciences USSR and prepared by the Scientific Committee on Automated Electric Drives (Scientific and Technical Committee on Automated Electric Drives), the RCI (Research Institute of Electrical Drives), the VTI (Institute of Automation and Robotics) of the Academy of Sciences USSR, the Institute for Automation and Robotics of the Institute of Machine Building of the Academy of Sciences USSR, the Institute of Machine Building of the Institute of Science of Machines of the Academy of Sciences USSR). It was the purpose of the Editorial Board to arrange the reports in a way which would ensure a relatively systematic presentation of theoretical and practical problems relating to electric drives and automatic controls of industrial mechanisms used in various branches of industry. Basic problems of automated electric drives and their solution are outlined. The book also contains articles on electric machinery and means of automation. Considerable attention is paid to non-linear automatic control systems, including systems with semiconductor devices and adaptive controllers, and to computer-aided methods for the analysis and the synthesis of control systems. The special problems of electric drives and the special problems of automatic control systems are also considered. The papers are published in journals of scientific and technical nature, or in the journal "Trakhtoburov" are marked with an asterisk. So personalities are mentioned. References accompany some of the papers.

РЕДАКТОРСКАЯ КОЛЛЕКЦИЯ: THE THEORY AND PRACTICE OF ELECTRIC DRIVES AND AUTOMATION OF CONTROL

Книга И.И. Петрова, А.А. Строганова, М.О. Чиликина. Редакторы: И.И. Сид, и А.П. Шлыков. Тех. редактор: Е.П. Туркина, и Г.В. Ларионов. М.: Машиностроение, 1980. 470 с. 11,000 экземпляров отпечатано.

Составители: И.И. Петров, А.А. Строганов, и М.О. Чиликин. Редакторы: И.И. Сид, и А.П. Шлыков. Тех. редактор: Е.П. Туркина, и Г.В. Ларионов.

Электрические приводы автоматизированных станочных групп (Электрические приводы автоматизированных станочных групп). М.: Машиностроение, 1980. 470 с. 11,000 экземпляров отпечатано.

Составители: И.И. Петров, А.А. Строганов, и М.О. Чиликин. Редакторы: И.И. Сид, и А.П. Шлыков. Тех. редактор: Е.П. Туркина, и Г.В. Ларионов.

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Электрические приводы автоматизированных станочных групп (Электрические приводы автоматизированных станочных групп). М.: Машиностроение, 1980. 470 с. 11,000 экземпляров отпечатано.

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Электрические приводы автоматизированных станочных групп (Электрические приводы автоматизированных станочных групп). М.: Машиностроение, 1980. 470 с. 11,000 экземпляров отпечатано.

Составители: И.И. Петров, А.А. Строганов, и М.О. Чиликин. Редакторы: И.И. Сид, и А.П. Шлыков. Тех. редактор: Е.П. Туркина, и Г.В. Ларионов.

Электрические приводы автоматизированных станочных групп (Электрические приводы автоматизированных станочных групп). М.: Машиностроение, 1980. 470 с. 11,000 экземпляров отпечатано.

Составители: И.И. Петров, А.А. Строганов, и М.О. Чиликин. Редакторы: И.И. Сид, и А.П. Шлыков. Тех. редактор: Е.П. Туркина, и Г.В. Ларионов.

BOYARCHENKOV, Mikhail Aleksandrovich; SHINYANSKIY, Aleksandr Viktorovich;  
ROZMAN, Ya.B., red.; BORUNOV, N.I., tekhn.red.

[Magnetic amplifiers] Magnitnye usiliteli. Moskva, Gos.energ.  
izd-vo, 1960. 54 p. (Biblioteka elektromontera, no.30)

(MIRA 14r3)

(Magnetic amplifiers)

9.2530  
28.1000 (1043, 1031)

86258  
S/103/60/021/011/007/014  
B019/B067

AUTHORS: Boyarchenkov, M. A., Rozenblatt, M. A. (Moscow)  
TITLE: Push-pull Magnetic D.C. Amplifier With Increased Efficiency  
PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 21, No. 11,  
pp. 1503 - 1513

TEXT: The use of magnetic push-pull amplifiers in automatic control systems offers great advantages. It is mainly used for the summation of voltage and current at the output of single-cycle amplifiers. In the first chapter of this extensive paper the design principle of push-pull amplifiers with increased efficiency is dealt with. In the second part the authors discuss the dependence of the efficiency of push-pull amplifiers on different factors. In the third part, three-phase push-pull amplifiers are dealt with, and in the fourth part the transformerless full-wave circuits of magnetic push-pull amplifiers with increased efficiency are described. The authors conclude from the discussion of the results obtained that those circuits which are based on the subtraction of the currents of nonreversive amplifiers are suited best for the

Card 1/2

Push-pull Magnetic D.C. Amplifier With  
Increased Efficiency

86258

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B019/B067

d.c. amplifiers concerned. To attain increased efficiency, the following conditions must be observed: saturation of one or several cores must not lead to an increase in the terminal voltage of the coils with nonsaturated cores, furthermore the voltage drop at the load must not reduce the back voltage of the valves in the control semi-period. These conditions can be fulfilled by connecting single-cycle amplifiers in a bridge. Furthermore, short current changes in the operating coil of the nonreversible amplifier and low pulsation of the d.c. are necessary to increase the efficiency. Hence, under these conditions, the three-phase push-pull amplifiers have the best efficiency. This paper was presented at the All-Moscow Seminar on Contactless Magnetic Elements on March 23, 1960. There are 12 figures, 2 tables, and 3 Soviet references. X

SUBMITTED: April 9, 1960

Card 2/2

BOYARCHENKOV, M.A.

PLATE I BOOK REVIEWS 50V/2403

Автоматизация управления [автоматический] (Automatic Control) Collected Works [Voenno] Izdatvo M VSSR [1960] 431 p. Price 51p. Illustrated, 7,500 copies printed.

Ed. I. I. Geydin, Doctor of Technical Science, Professor; Ed. of Publishing House: I. A. Geyger'ev; Tech. Ed.: G. A. Astaf'eva.

NOTE: This collection of reports is intended for scientists and engineers engaged in the study of automation.

CONTENTS: The collection contains reports presented at the 6th Conference of Young Scientists of the Institute of Automatics I Voennoizdat M VSSR (Institute of Automation and Telemechanics of the Academy of Sciences USSR) in November 1977. The reports deal with the theory and design of automatic control systems connected with automatic control. 50 personalities are mentioned. References accompany each report.

Депутат Л. К. Система of Combined Signals Multiring Frequency-Pulse At- tributes for Remote Control of Concentrated Objects 334

In considering the information theory and the structure of signals, the frequency-time analysis as information carriers and as combination elements. After analyzing in detail the features, combinations, and general classification of signal systems, the author describes the structure and methods of remote control in which time, polarity, amplitude, phase, mixed signal systems, and combined systems are used in varying degrees. Investigations were conducted using parallel and series signals with a varying number of pulses, amplitude and frequency modulation, and the signals with varying pulse duration. There are 8 references, all Soviet.

PART IV. APPROVED DATA

Инженер М. А. Исследование D-C Drive Equipped With Negative Amplifiers 34

A system for the speed regulation of d-c drives which permits the reversal of speed has been designed and experimentally tested at the Institute of Automation and Telemechanics of the Academy of Sciences USSR. Speed control is obtained by changing in a magnetic amplifier, the voltage fed to the drive's armature. According to the author, this system is free from the driver's fault in the majority of d-c drive control systems as the drive's speed is not influenced on this point. There are 7 references: 1 Soviet, and 3 English.

Волк В. С. Экспериментальное исследование Индукционных Моторов With a Solid State Motor 373

The author states that sufficiently accurate theoretical methods for determining the rated power of a motor with a solid state motor do not exist, and therefore experimental data has an important value. In the practical realization of a system of speed regulation, it was found that specifications for motors of the AMB series with a Solid State motor were raised in the region of low speeds approximately 2.5 to 3 times. The author describes a method used for an accurate determination of admissible loading limits of such motors in a wide range of speeds during continuous operation. He suggests using the obtained data for calculating the rated power of motors of the A and AM series for capacities ranging from 2 to 14 kw. There are 2 references, all Soviet.

S/103/62/023/001/008/014  
D201/D304

9,2530

AUTHORS: Boyarchenkov, M.A., and Rozenblat, M.A. (Moscow)

TITLE: The operation of a back e.m.f. magnetic amplifier

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 1, 1962, 77-90

TEXT: The authors analyze the operation and performance of half- and full-wave saturation magnetic amplifiers working into a resistive inductive load with a back e.m.f. The analysis of operation is made under the following assumptions: 1) The hysteresis loop of amplifier cores is of nearly a rectangular shape, i.e. the value of residual induction  $B_r$  is equal to the saturation induction  $B_s$ . 2) The resistance of rectifiers in the output circuit is constant in the forward and infinite in the reverse direction. The analysis of the effect of back e.m.f. on the processes occurring in the load circuit of saturation magnetic amplifiers shows that the operating regimes of amplifiers depend on the back e.m.f. to the supply voltage ratio and on the load time constant. For large time constants and small back e.m.f.'s the amplifier becomes continuously conducting,

Card 1/2

The operation of a back e.m.f. ...

S/103/62/023/001/008/014  
D201/D304

so that the current flows through the load all the time, irrespective of whether the amplifier is cut off or not. In this case the mean load current is independent of the load inductance. With increasing back e.m.f. and/or a decrease in the load time constant, the current flow in the load becomes intermittent. In this case the average value of the load current decreases with the increase of load inductance until at some value of the time constant, a continuous conduction is again established. The continuous conduction cannot occur in half-wave circuits, and occurs only in full-wave circuits when the magnitude of back e.m.f. is below a certain critical value. If the back e.m.f. stays above a certain critical value, the magnetic amplifier may be designed to operate at greater load powers than without the back e.m.f. There are 16 figures and 3 Soviet -bloc references. B

SUBMITTED: July 7, 1961

Card 2/2

BOYAROHENKOV, M. A.

55

PHASE I BOOK EXPLOITATION SOV/6012

Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.

Avtomaticheskoye regulirovaniye i upravleniye (Automatic Regulation and Control) Moscow, Izd-vo AN SSSR, 1962. 526 p. Errata slip inserted. 9000 copies printed.

Resp. Ed.: Ya. Z. Tsypkin, Professor, Doctor of Technical Sciences; Ed. of Publishing House: Ye. M. Grigor'yev; Tech. Ed.: I. N. Dorokhina.

PURPOSE: This book is intended for scientific research workers and engineers concerned with automation.

COVERAGE: The book is a collection of articles consisting of papers delivered at the 7th Conference of Junior Scientists of the Institute of Automation and Telemekhanika, Academy of Sciences USSR, held in March 1960. A wide range of scientific and technical questions relating to automatic regulation and control is covered.

Card 1/12



Automatic Regulation (Cont.)

SOV/6012

The articles are organized in seven sections, including automatic control systems, automatic process control, computing and decision-making devices, automation components and devices, statistical methods in automation, theory of relay circuits and finite automatic systems, and automated electric drives. No personalities are mentioned. References are given at the end of each article.

TABLE OF CONTENTS:

PART I. AUTOMATIC CONTROL SYSTEMS

Andreychikov, B. I. The effect of dry friction and slippage [play] on error during reverse gear operation of servo-feed systems	3
Andreychikov, B. I. Dynamic accuracy of machine tools with programmed control	14

Card 2/12

Automatic Regulation (Cont.)

SOV/6012

PART IV. AUTOMATION COMPONENTS AND DEVICES

Boyarchenkov, M. A. Analysis of operation of a magnetic amplifier with back electromotive force	297
Gogolevskiy, V. B. Transient processes in a-c and d-c electromagnetic mechanisms	303
Gogolevskiy, V. B. Vibration of contacts	318
Yefremova, T. K. Time-dependent pneumatic relay circuits	321
Matorina, V. C. Design calculation of a magnetic amplifier operating with a nonlinear load	329
Prokhorov, N. L. Storage circuits with magnetic logic components	335

Card 8/12

SUBBOTINA, G.V., kand.tekhn.nauk; BOYARCHENKOV, M.A., kand.tekhn.nauk

Magnetic units in automation. Vest. AN SSSR 32 no.12:111-112  
B '62. (MIRA 15:12)  
(Automation--Congresses) (Magnetic units)

BOYARCHENKOV, M. A.

Dissertation defended at the Institute of Automation and Telemechanics  
for the academic degree of Candidate of Technical Sciences:

"Several Problems of the Theory and Designing of Magnetic Amplifiers Using  
Self-Saturation, Applied in Controlling Direct-Current Engines."

Vestnik Akad Nauk, No. 4, 1963, pp. 119-145

BOYARCHENKOV, M.A. (Moskva)

Some problems concerning the use of self-saturating magnetic  
amplifiers for controlling d.c. drives. Elektrichestvo  
no.8:46-52 Ag '63. (MIRA 16:10)

S/103/63/024/003/015/015  
D405/D301

**AUTHORS:** Boyarchenkov, M.A. and Subbotina, G.V.

**TITLE:** Eighth scientific-technical conference on magnetic elements in automation, remote control, and measuring and computing technique

**PERIODICAL:** Avtomatika i telemekhanika, v. 24, no. 3, 1963, 428-434

**TEXT:** The conference was held at L'vov (from 10-16 September 1962). It was called at the initiative of the Commission on Non-Contact Magnetic Elements of the AS SSSR, the Scientific Council of the AS UkrSSR on 'Scientific Instrument Construction', the Institute of Science of Machines and Automation of the AS UkrSSR, and several L'vov institutions. Over 500 participants from 130 research organizations, industry, and education of the Soviet Union were present. Over 120 reports on theory, design, manufacture and applications of magnetic and magnetic-semiconductor elements were presented. Five sections of the conference were simultaneously in session: Mag-

Card 1/3

Eighth scientific-technical ...

S/103/63/024/003/015/015  
D405/D301

netic amplifiers and modulators. Digital magnetic elements. Magnetic memory devices and magnetic polarity reversal. Magnetic materials and cores; their control. Magnetic converters. The following reports were heard at plenary sessions: On non-contact magnetic switching of continuous signals (by Doctor of Technical Sciences M.A. Rozenblat); on measurement and control of magnetic variables by magneto-modulation pickups (by V.N. Mikhaylovskiy, Corresponding Member of the AS UkrSSR); on electromagnetic devices of antisymmetric character having gyroscopic connections (by Doctor of Technical Sciences A.N. Milyakh). The reports presented to the various sections dealt (among others) with the following subjects: Methods of designing measuring and operational amplifiers of low threshold sensitivity and high stability under temperature and voltage fluctuations. Simulation of magnetic amplifiers on analog computer. Theory and applications of magneto-modulation pickups and magnetic modulators. Magneto-logical inverter elements with a line frequency of 400 cycles. Automatic control using non-contact magneto-logical elements. Logical systems using inductive parametrons. Multi-stable magnetic elements. Ferrite-transistor elements. Operating mea-

Card 2/5

Eighth scientific-technical ...

S/103/63/024/003/015/015  
D405/D301

ory devices using thin ferromagnetic films. Semiconductor controlled fast response memory devices. Temperature characteristic of perm-alloys. Permalloy cores for ferrotransistor circuits. Preparation of temperature stable cores for resonance circuits. Inductive capacitive converters. Development of new statical ferromagnetic and magneto-transistor frequency converters for automatic systems.

Card 3/3



ACCESSION NR: AP4022907

S/0119/64/000/003/0027/0028

AUTHOR: Boyarchenkov, M. A. (Candidate of technical sciences)

TITLE: Magnetic amplifier with increased reliability

SOURCE: Priborostroyeniye, no. 3, 1964, 27-28

TOPIC TAGS: magnetic amplifier, push-pull amplifier, transformerless amplifier, amplifier reliability, reliability, amplifier, bridge circuit

ABSTRACT: This article is a discussion of a transformerless magnetic push-pull amplifier with an ac output for control of a two-phase induction motor. The usual circuit for a reverse self-saturating amplifier has four cores and eight diodes connected in a double bridge circuit. In this type of set-up, short circuits and changes in parameters cause false output signals and the servo-motor is actuated when there is no input signal. The system proposed in this article avoids these drawbacks. The load is connected in one diagonal as before and in the other diagonal two diodes are connected between the interior and exterior bridges at the vertices. The supply voltage is connected to the common points between these diodes (fig. 2 of the enclosure). Thus, each diode is connected to two ac windings

Card 1/3

ACCESSION NR: AP4022907

which are connected to opposite ends of the load. Therefore any change in the characteristics of the diode affects both bridges equally and does not upset the balance. While this amplifier has only half as many diodes as existing amplifiers, it also has a smaller amplification factor. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 08Apr64

ENCL: 01

SUB CODE: GE, SD

NO REF SOV: 000

OTHER: 000

Car: 2/3

ROZENBLAT, M.A., doktor tekhn. nauk, otv. red.; BOYARCHENKOV, M.A.,  
kand. tekhn. nauk, red.; KERENIKOV, F.I., red.; ROZENTAL',  
Yu.D., inzh., red.

[Magnetic analog elements] Magnitnye analogovye elementy.  
Moskva, Nauka, 1965. 226 p. (MIRA 18:3)

1. Moscow. Institut avtomatiki i telemekhaniki.

L 34868-55 EWI(d)/EWI(m)/EEC(k)-2/EWP(1)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EED-2/

EWP(b)/EWP(1)/EWA(c) Pq-4/Pf-4/Pad/Pg-4/Pk-4 IJP(a) BB/JD/HW/JG/GG  
ACCESSION NR: AP5013852 UR/0103/65/026/005/0932/0942  
681.142.6

AUTHOR: Boyarchenkov, M. A.

TITLE: All-Union Conference on magnetic elements of automation and computer technique

SOURCE: Avtomatika i telemekhanika, v. 26, no. 5, 1965, 938-942

TOPIC TAGS: electric engineering conference, magnetism conference, computer component, automation equipment, automation, electronic data processing

ABSTRACT: The Ninth All-Union Conference on Magnetic Elements of Automation and Computer Technology, held in Kaunas from 7 to 10 September 1964, was organized by the National Committee of the USSR on Automatic Control, the Institute of Power and Electrical Engineering of the Academy of Sciences, Lithuanian SSR, the Lithuanian Scientific and Technical Society of the Instrument Building Industry, and the Institute of Automation and Telemekhanika of the Main Committee on Instrument Building, Means of Automation, and Control Systems under Gosplan and the Academy of Sciences. 450 participants discussed some 90 reports concerning the theory, design,

71  
58  
16

Card 1/5

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ACCESSION NR: AP5013852

production, and application of magnetic and magnetic-semiconductor elements. Reports were presented for seven areas: digital and analog elements, memory devices, magnetic power devices, magnetic amplifiers and converters, parametrons, and power sources.

At the opening plenary session, M. A. Rozenblat presented a survey of the present state of contactless magnetic elements, which he considers to be one of the most efficient and promising technical means of automation and computer technology. Problems of designing logic elements to provide stable operation for various types of circuits were discussed in a series of reports. B. A. Yefimov and G. N. Chizhukhin reported on the development of modules of ferrite-transistor elements (FTE) which can be used for various types of computers and also for discrete automation for general and special purposes. This system provides reliable operation at a 200-kc clock frequency in the -10 to +50° C temperature range.

The same authors together with M. A. Aksenov reported on the development of a general-purpose heavy-duty FTE which can be used as a cell of a clock-frequency pulse generator or as an independent heavy-duty control

Card 2/5

L 54868-65

ACCESSION NR: AP5013852

element. <sup>14</sup> It is capable of performing command recording or readout of information reaching it in large quantities from a low-power FTE. I. A. Tyumin, B. A. Yefimov, and A. A. Shavrov reported on the development and testing of biax-type logic circuits operating at 1 Mc and performing several logic operations. Advantages cited are: high s/n ratio, about 20; high switching rate, about 2 Mc; and high reliability due to the simplicity of the circuit. Such circuits may also be used in complex logic devices. Additional reports discussed logic circuits using biax-type elements in a working storage device with a nondestructive readout cycle of  $10^{-7}$  sec and a recording time for new information of several microseconds. 6

L. P. Afinogenov et al. reported on discrete and discrete-analog computer units based on the use of the area of an emf pulse originating in the winding during magnetization reversal in the ferrite. Development of ferrite matrixes which release a voltage pulse at the output with an area proportional to the code supplied at the matrix input was also discussed.

Problems connected with the development of single-wire memory elements with multiaperture ferrite plates were presented by R. A. Lashev-

Card 3/5

L 54868-65

ACCESSION NR: AP5013852

skiy et al. A. S. Sverdlov and others presented results of developing working storage units using miniature memory cubes made with multiaperture ferrite plates. 7

16  
Thin-film technology was discussed in several reports. A paper by Ye. F. Berezhnyy et al. dealt with the development of a super storage device built on thin-film matrices with conductive substrates with a capacity of 64 56-bit words and a cycle of 400 nsec. Experiments with magnetic-film storage devices produced by electrochemical deposition on glass and metal cylindrical substrates were discussed, and a method of using an element of cylindrical magnetic film in a matrix storage device was also reported.

A. Tutauskas and R. Litvinaytis reported on a stable storage device with a short access time, a capacity of 512 x 32 bits, an access rate of 500 kc, and a readout time of 1  $\mu$ sec. A. B. Lyasko et al. have developed a small decade counter of periodic and nonperiodic signals in which a parametric element with five stable phase states was used. The counter displays better energy properties than other known counters, high reliability, and high noise immunity. A. G. Rabin'kin reported on the characteristics of

Card 4/5.

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ACCESSION NR: AP5013852

new high-coercivity (5000 oe) alloys of the cobalt-platinum system. M. A. Rozenblat et al. discussed the theory and design of magnetic analog computing devices (adder, integrator, multiplier) based on single-stage magnetic amplifiers using magnetic analog storage.

A large number of reports was devoted to the theory and application of power magnetic devices. The papers presented by the Gor'kiy school of A. M. Bاندas concerning frequency multipliers and voltage stabilizers were of great interest in this field.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: DP, IE

NO REF SOV: 000

OTHER: 000

ATD PRESS: 4021-F

Card 5/5



BOYARCHENKOV, O.A., kand. tekhn. nauk; KOSSOV, O.A., kand. tekhn. nauk

Third international conference on the magnetic elements of automation and computer techniques held in Washington. Vest. AN SSSR 35 no. 8:72 Ag '65. (MIRA 18:8)

BAMDAS, Aleksandr Markovich; SHAPIRO, Semen Vol'fovich;  
BOYARCHENKOV, M.A., red.

[Electric transformers with bias control] Transformatory,  
reguliruemye podmagnichivaniem. Moskva, Energiia, 1965.  
158 p. (Biblioteka po avtomatike, no.147) (MIRA 18:10)

BOYARCHENKOV, M.A.

All-Union Conference on Magnetic Components in Automatic  
Control and Computer Engineering. Avtom. i telem. 26  
no.5:938-942 My '65. (MIRA 18:12)

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EWP(d)/EWP(k)/EWP(h)/EWP(v)/EWP(l) BC

ACC NR: AP6003171

SOURCE CODE: UR/0030/65/000/012/0098/0101

AUTHOR: Boyarchenkov, M. A. (Candidate of technical sciences)

610  
B

ORG: none

TITLE: The development of technical cybernetics (All-Union Conference in Odessa)

SOURCE: AN SSSR. Vestnik, no. 12, 1965, 98-101

TOPIC TAGS: automatic control system, scientific conference, international conference

ABSTRACT: This is a report of the Third All-Union Conference on Automatic Control (Technical Cybernetics) held in Odessa from 20 to 26 September, 1965.

Participating were approximately 1,100 representatives of scientific-research organizations, higher educational institutes, and industrial enterprises. Among the guests at the conference were spokesmen from England, Bulgaria, Hungary, German Democratic Republic, Italy, Norway, U.S.A., Czechoslovakia, Finland, German Federated Republic, Yugoslavia, and Japan. The conference was opened by the Director of the Institute of Automation and Telemechanics (Technical Cybernetics) (Institut avtomatiki i telemekhaniki (Tekhnicheskoy kibernetiki)), V. A. Trapeznikov, who spoke on the history and present-day role of cybernetics. Over 200 reports and papers were read at 17 scientific sections. The reports

Card 1/2

L 26067-66 EWP(k)/EWT(d)/EWP(h)/EWP(i)/EWP(v)

ACC NR: AP6004559

SOURCE CODE: UR/0103/66/000/001/0166/0184

AUTHOR: Bermant, M. A.; Bovarchenkov, M. A.; Epshteyn, V. I.

ORG: none

TITLE: The third all-union conference on automatic control (engineering cybernetics)

SOURCE: Avtomatika i telemekhanika, no. 1, 1966, 166-184

TOPIC TAGS: automatic control, scientific conference, cybernetics, automation, automatic control system, optimal automatic control, nonlinear automatic control system, pattern recognition, queueing theory, analog computer, remote control system, self adaptive control

ABSTRACT: The Third All-Union Conference on Automatic Control (Engineering Cybernetics) was held in Odessa (on board the ship "Admiral Nakhimov"), from 20 to 26 September 1965. Some 1100 Soviet scientists and 52 scientists from England, Bulgaria, Hungary, East Germany, Italy, Norway, the United States, Czechoslovakia, Finland, West Germany, Yugoslavia, and Japan attended the conference. Among the Soviet scientists were 20 academicians and corresponding members of the academy of sciences USSR and of the academies of Soviet republics, over 100 doctors of sciences, and some 400 candidates of sciences. In his introductory remarks at the plenary session, Academician V. A. Trapeznikov, director of the Institute of Automatics and Telemekhanics, reviewed the progress made during the past twelve years (since the Second All-Union Conference) in the theory of automatic control and its applications. He noted that the theory of automatic control, which once was a key discipline in automation, had become the

Card 1/4

UDC: 061.3(47):62-506.1

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ACC NR: AP6004559

general theory for controlling various complex processes and had acquired the name "engineering cybernetics." In a paper entitled "Automatic control and economics," presented at the plenary session, Trapeznikov stressed that theoretical studies in this field are intolerably far behind practical needs and proposed new economic criteria of automation. In a paper by Ya. Z. Tsypkin entitled "Adaptation, learning, and self-learning in automatic systems," also presented at the plenary session, the problems of adaptation and learning were analyzed from a certain unified point of view which made it possible to use the same approach to problems which earlier appeared to be quite distinct. The new concept presented, which is based on the iterative methods of stochastic approximations, made it possible not only to generalize the known results, but also to obtain new results in the fields of identification, control with incomplete information, etc. A large number of problems of adaptation and learning theory which require solution were formulated. Over two hundred scientific papers were presented in seventeen sessions. Papers presented at Session 1 dealt with formulation of new problems in the theory of multiloop and invariant systems and with wide application of new methods to the solution of classical problems of optimum control theory. A series of articles were dedicated to problems of optimum control of multiloop systems and to invariance and self-control problems in many-dimensional, essentially nonlinear, automatic systems. Attention

Card 2/4

L 26067-66

ACC NR: AP6004559

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was paid to problems of the sensitivity of automatic control systems to external and parametric disturbances. The papers presented at Section 2 were concerned with frequency methods for studying the stability of continuous as well as discrete nonlinear systems, determining periodic regimes in many-dimensional nonlinear automatic control systems and systems with a variable structure. Almost all papers presented at Session 3 dealt with further development of statistical methods for the synthesis and analysis of control systems. Session 4 was dedicated to certain important particular problems of the well-established theory of optimum processes. In Session 5 two principal approaches to the solution of pattern recognition problem were presented: the probabilistic (statistical) and deterministic. Some papers dealt with comparisons of these two approaches. The papers presented in Session 6 were concerned with the following trends in the theory of discrete automatic control systems: 1) statistical dynamics of nonlinear discrete control systems; 2) stability and quality of nonlinear discrete systems; 3) methods for designing linear discrete systems. In Session 7 the majority of the papers were concerned with the synthesis of relay systems. Of particular interest were the papers on the synthesis of diagnostic systems and the reliability of relay devices. The papers presented in Session 8 (adaptive systems), dealt with 1) extremal systems and 2) systems with automatic adjustment of control parameters. In Session 9 (the application of computer technology to the control of manufacturing processes), the problems of selecting the parameters and the structure of computers for controlling continuous processes were analyzed. Session 10 was devoted to problems of the theory of designing large systems. The following main questions were considered: methods of Program Evaluation and Review Technique (PERT) systems, optimal distribution of time and resources in planes

Card 3/4

L 26067-66

ACC NR: AP6004559

2

of operation, and some problems of queueing theory. Session 11 was devoted to the problem of determining the characteristics and properties of control systems and their mathematical simulation (determining of equations describing the control plant). Session 12 dealt with applications of optimal and self-adapting systems to various manufacturing processes (chemical, metallurgical, mechanical). Great interest was shown in a paper by B. V. Vol'ter, I. Ye. Sal'nikov, and others entitled "Theoretical aspects of automatic control of polymerization reactors". Problems connected with establishing new principles for constructing the elements of automatic control on the basis of latest achievements in physics, chemistry, and biology and with developing new methods for designing and constructing these elements were analyzed in Session 13 (new elements). A large number of papers presented in Session 14 (devices for automation of manufacturing process) were concerned with various problems of automatic electric drives. The papers presented in Session 15 (methods and means for mathematical simulation) were concerned mainly with the modern trends of designing analog computers and with problems of utilizing them in automatic control systems. Development of pneumatic elements for analog computers was also considered. Session 16 was primarily concerned with problems of the structural reliability of redundant systems and the reliability of elements. Various methods for estimating the reliability of systems and for developing redundant systems were presented. The papers of the last session were dedicated mainly to the theory and principles of designing complex remote control systems. Remote control systems with pneumatic elements were considered. [FSB: v.2, no.4]

SUB CODE: 09 / SUBM DATE: none



L 27547-66 EWT(d)/EWT(1)/EEC(k)-2/T/EWP(1)/EWA(h) IJP(c) BB/GG  
ACC NR: AP6007598 SOURCE CODE: UR/0119/66/000/002/0031/0032

AUTHOR: Bermant, M. A. (Candidate of technical sciences); Boyarchenkov, M. A.  
(Candidate of technical sciences)

ORG: none

TITLE: All-Union Conference on Engineering Cybernetics

SOURCE: Priborostroyeniye, no. 2, 1966, 31-32

TOPIC TAGS: cybernetics, cybernetics conference, computer design, miniaturization

ABSTRACT: Proceedings at the 3rd All-Union Conference on Automatic Control (Engineering Cybernetics), 20-26 September, 1965, in Odessa, are briefly reported. Over 200 reports were delivered before 1100 representatives of Soviet organizations, and a few foreigners (England, Bulgaria, Italy, Norway, USA, Finland, W. Germany, Japan, Yugoslavia, and Soviet Satellites). Academician V. A. Trapeznikov delivered a report on the "Automatic control and economics". Corresponding Member, AN SSSR, B. S. Sotskov reviewed the today's state of automatic and control systems and kindred problems. P. D. Lukovtsev and L. A. Sokolov described solions and their possible applications. I. A. Zalmanzon reported on the theory of jet pneumo automatic devices. Ye. V. Fudim spoke about pneumatic resistors and computers. M. A. Rozenblat -- magnetic operational elements. I. V. Prangishvili -- discrete logical and computing systems. M. A. Rakov, I. A. Sinitskiy, Yu. M. Shumkov, and

Card 1/2

L 27547-56

ACC NR: AP6007598

10

V. P. Sigorskiy -- using multistable elements in automatic and computing equipment.  
Ya. Ye. Balen'kiy and V. N. Mikhaylovskiy -- multiphase multivibrators. A. M. Bandas  
-- ferromagnetic frequency multipliers. V. A. Viktorov -- level gages. N. P. Udalyov  
-- p-n-junction-based relays and temperature sensors. V. Yu. Kneller -- "Principles  
of synthesizing of a-c-complex-quantity-to-number converters with coordinated digit  
weighing". Doctor of technical sciences, D. V. Svecharnik -- combination selsyn.  
R. K. Karpenko and G. Ya. Kabkov -- permanent-magnet stepping motors.

Org. art. has: no figures, formulas or tables.

SUB CODE: / SUBM DATE: none

Card 2/2

BHG

ACC NR: AM6032370

Monograph

UR/

Boyarchenkov, Mikhail Aleksandrovich; Kerbinov, Fedor Ivanovich; Rayev Vyacheslav Konstantinovich; Rozenblat, Moisey Aronovich

Impulse regulators on contactless magnetic elements (Impul'snyye regulatory na beskontaknykh magnitny elementakh) Moscow, Izd-vo "Energiya", 1966. 119 p. illus., biblio. 16,000 copies printed.

Series note: Biblioteka po avtomatike, vyp. 186

TOPIC TAGS: summing amplifier, contactless relay regulator, impulse regulator, *magnetic amplifier, electric relay*

PURPOSE AND COVERAGE: This booklet is intended for engineers, technicians, and advanced students in the field of automation. The booklet discusses the fundamentals of contactless proportional plus-differential, proportional plus-integral, and proportional plus-differential plus-integral relay controllers with magnetic elements. Recommendations are given for the selection of separate regulator elements along with the circuit diagrams and basic technical characteristics of these elements. Results of investigations concerning the contactless proportional plus-integral relay controller with magnetic amplifiers and contactless mag-

Card 1/2

ACC NR: AM6032370

netic relays are described in detail. No personalities are mentioned. There are 16 references: 13 Soviet and 3 non-Soviet.

**TABLE OF CONTENTS:**

Introduction -- 3

Ch. I. Structural principles of proportional-integral, proportional plus-integral plus-differential relay regulators -- 6

- 1. Structural circuit diagrams of the regulators -- 6
- 2. Operating principles of the simplest relay regulator -- 13
- 3. General requirements for relay regulators -- 18

Ch. II. Elements of contactless relay regulators -- 23

- 4. Summing amplifiers
- 5. Contactless relay -- 41
- 6. Inertial feedback unit -- 61
- 7. Executive unit -- 82

Ch. III. Contactless relay regulators using magnetic elements -- 88

- 8. Periodical plus-integral regulator with a thermal bridge in the feedback network -- 89
- 9. Periodical plus-integral regulator with an integrating magnetic amplifier in the feedback network -- 106

Conclusion -- 116

Bibliography -- 119

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Card 2/2

BOYARCHIKOV, A.I.; NIKITINA, T.A.; TOPILINA, V.S.

Increasing the speed of the main shaft of AT-100-5M looms. *Tekst.prom.*  
23 no.11:59-60 N '63. (MIRA 17:1)

1. Starshiy inzh. Moskovskogo soveta narodnogo khozyaystva (for Boyarchikov).
2. Vedushchiy inzh. Vsesoyuznogo nauchno-issledovatel'skogo instituta legkogo i tekstil'nogo mashinostroyeniya (for Nikitina).
3. Starshiy tekhnik Vsesoyuznogo nauchno-issledovatel'skogo instituta legkogo i tekstil'nogo mashinostroyeniya (for Topilina).

BOYARCHIKOV, A.I.; NIKITINA, T.A.; TOPILINA, V.S.

Increasing the speed of the main shaft of AT-100-5M looms. Tekst.prom.  
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3. Starshiy tekhnik Vsesoyuznogo nauchno-issledovatel'skogo instituta legkogo i tekstil'nogo mashinostroyeniya (for Topilina).

KOPYLOV, I.M.; BOYARCHUK, A.A.

Spectrum of  $\gamma$  Cassiopeiae in August-September 1954. Izv.  
Kryn.astrofiz.obser. 15:190-194 '55. (MIRA 13:4)  
(Stars, Variable--Spectra)

BOYARCHUK, A.A.

Spectrophotometric observations of  $\gamma$  Cassiopeiae in 1955. Izv.  
Krym.astrofiz.obser. 16:143-147 '56. (MIRA 13:4)  
(Stars, Variable--Spectra)



BOYARCHUK, A. A.

"Some Characteristics of the B Stars," paper presented at the Eighth International Congress on Astrophysics, Liege, Belgium, 8-10 July 1957

BOYARCHUK, A.A.

Comparison of chemical composition of B and Be stars. Izv.  
Krym.astrofiz.obser. 17:89-116 '57. (MIRA 13:4)  
(Stars--Constitution)

BOYARCHUK, A.A.

Investigation of zeta Tauri. Isv.Krym.astrofiz.obser. 17:  
117-128 '57. (MIRA 13:4)  
(Stars, Variable)

**AUTHOR:** Boyarchuk, A. A.  
**TITLE:** Some characteristics of shells of Be stars. (Nekotorye kharakteristiki obolochek Be zvezd).  
**PERIODICAL:** "Astronomicheskii Zhurnal" (Journal of Astronomy), 1957, Vol. 34, No. 2, pp. 193 - 202 (USSR).  
**ABSTRACT:** Although much work has been devoted to the study of Be stars the characteristics of their shells have not, until now, been definitely determined. The present work is an attempt to fill this gap. Shells of 11 Be stars and their transparency are considered. Observational data were obtained using a large spectrograph (dispersion 23.4 Å/mm Hg.) with the 1200 mm reflector of the Crimean Astrophysical Observatory (1955-1956). Unsold's formula (eq.(1), ref.1) is used to calculate  $\lg(N_{O2}H)$  for the shells of 9 Be stars. The results are given in Table I and Fig.1. The optical thickness of the Be shells in the central parts of the lines of the Balmer series and beyond its limit is given by  
$$\tau = kN_{O2}H$$
where  $k$  is the coefficient of absorption/atom. In order to obtain the optical thickness of the shells beyond the Lyman series limit  $N_{O1}H$  must be known and

Some characteristics of shells of Be stars. (Cont.)<sup>501</sup>

The first column gives name of star, second - the speed of rotation of the rotating layer, third and fourth - speeds of rotation of the emitting and absorbing parts of the shell, fifth and sixth - the sizes of the emitting and absorbing parts, eighth and ninth - coefficient of dilution for the emitting and absorbing parts of the shell. From Table II it may be concluded that:-

- (1) Stratification exists in the shells of the Be stars. Emission lines originate in that part of the shell which is nearer to the surface of the star, while the absorption lines originate in those parts of the shell which are the more distant from the surface of the star.
- (2) The shell sizes of Be stars have a small dispersion (particularly the sizes of the emitting parts) and are independent of the speed of rotation of the stars.
- (3) The coefficient of dilution is not the same for different parts of the shell ( $W_{em} = 0.1$  ;  $W_{abs} = 0.02$ ). Fig.4 shows the dependence of the intensity<sub>abs</sub> of emission for  $H_{\alpha}$  on the speed of rotation ( $V \sin i$ ). Fig.5 shows the dependence of speed of expansion on the speed of rotation. Fig.6 shows the dependence of  $V/R$  on the speed of rotation ( $V \sin i$ ).

Some characteristics of shells of Be stars. (Cont.)<sup>501</sup>

The mean sizes of the emitting and absorbing regions of the 11 Be stars were found to be  $1.7 R_{st}$  and  $3.5 R_{st}$ .

The problem of continuous outflow of matter of Be stars is considered. It is shown that such a flow does not exist and that the rotation of the star helps in the formation of the shell. The main role in this formation is played by other active processes, possibly similar to solar protuberances and chromospheric flares. 3 tables, 6 figures; 9 references, 2 of which are Russian.

Crimean Astrophysical Observatory,  
Ac.Sc., USSR.

Recd. Nov.19, 1956.

Boy ARCHUK, A.A.

MUSTEL', E.R.; BOYARCHUK, A.A.

Symposium on "The stars with bright lines" in *Izvestiya* in July 8-10,  
1957. *Astron. zhur.* 34 no.6:962-965 N-D '57. (MIRA 11:2)  
(Stars-Spectra)

BOYARCHUK, A.A, Cand Phys-Math Sci--(diss) "Spectrophotometric study of  
stars." Len, 1958. 5 pp (Acad Sci USSR. Main Astronomical Observatory),  
100 copies (KL,26-58,105)

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A001/A001

Translation from: Referativnyy zhurnal, *Astronomiya i Geodeziya*, 1959, No. 3,  
p. 32, # 1907

AUTHOR: Boyarchuk, A. A.

TITLE: On Magnitudes of B- and Be-Stars

PERIODICAL: Izv. Krymsk. astrofiz. observ., 1958, Vol. 18, pp. 38-40  
(English summary)

TEXT: A composite spectrum-magnitude diagram was plotted for stars of the spectral classes O9-B6 belonging to the associations Orion I, Lacerta I, Cepheus II, Auriga I, Sagittarius I and Perseus I. Visible stellar magnitudes were used in plotting the diagram. Altogether 100 B stars and 19 Be stars were used. Main sequences of different associations were superimposed by means of vertical displacements. It is concluded that B- and Be-stars of the main sequence are of the same magnitude.

E. S. B.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

BOYARCHUK, A.A.

Spectrophotometric observations of Cassiopeiae in 1956.  
Izv.Kryn.astrofis.obser. 18:55-60 '58. (MIRA 13:4)  
(Stars, Variable)

BOYARCHUK, A.A.

Gamma Cassiopeiae in 1940. Izv.Krym.astrofiz.obser. 19:  
165-186 '58. (MIRA 13:4)  
(Stars, Variable)

BOYARCHUK, A.A.

Gamma Cassiopeiae in 1941. Izv. Krym. astrofiz. obser. 20:118-122  
'58. (MIRA 13:9)

(Stars, Variable)