DUBOSSARSKIY, M.I.; DESPONTEYNES, Ye.Ye.

Multiposition attachment used for grinding five-edged reamers.
Stan.i instr. 28 no.9:42 S '57. (MIRA 10:10)
(Grinding machines--Attachments) (Reamers)

DuBOSSARSKIY, V. Ya.

PHASE I BOOK EXPLOITATION SOV/4893

Vsesoyuznoye soveshchaniye po fizike, fiziko-khimicheskim svoystvam ferritov i fizicheskim osnovam ikh primeneniya. 3d, Minsk, 1959

Ferrity; fizicheskiye i fiziko-khimicheskiye svoystva. Doklady (Ferrites; Physical and Physicochemical Properties. Reports) Minsk, Izd-vo AN BSSR, 1960. 655 p. Errata slip inserted. 4,000 copies printed.

Sponsoring Agencies: Nauchnyy sovet po magnetizmu AN SSSR. Otdel fiziki tverdogo tela i poluprovodnikov AN BSSR.

Editorial Board: Resp. Ed.: N. N. Sirota, Academician of the Academy of Sciences BSSR; K. P. Belov, Professor; Ya. I. Kondorskiy, Professor; K. M. Polivanov, Professor; R. V. Telesnin, Professor; G. A. Smolenskiy, Professor; N. N. Sholtz, Candidate of Physical and Mathematical Sciences; K. N. Sholyarenko; Tech. Ed.: A. Bashilov; Ed. of Publishing House: S. Kholyavskiy; Tech. Ed.: I. Volchkomovich.

PURPOSE: This book is intended for physicists, physical chemists, radio electronics engineers, and technical personnel engaged in the production and use of ferromagnetic materials. It may also be used by students in advanced courses in radio electronics, physics, and physical chemistry.

COVERAGE: The book contains reports presented at the Third All-Union Conference on Ferrites held in Minsk, Belorussian SSR. The reports deal with magnetic transformations, electrical and galvanomagnetic properties of ferrites, studies of the growth of ferrite single crystals, problems in the chemical and physicochemical analysis of ferrites, studies of ferrites having rectangular hysteresis loops and multicomponent ferrite systems exhibiting spontaneous rectangularity, problems in magnetic attraction, highly coercive ferrites, magnetic spectroscopy, ferromagnetic resonance, magneto-optics, physical principles of using ferrite components in electrical circuits, anisotropy of electrical and magnetic properties, etc. The Committee on Magnetism, AS USSR (S. V. Vonsovskiy, Chairman) organized the conference. References accompany individual articles.

Card 17/18

Card 4/18

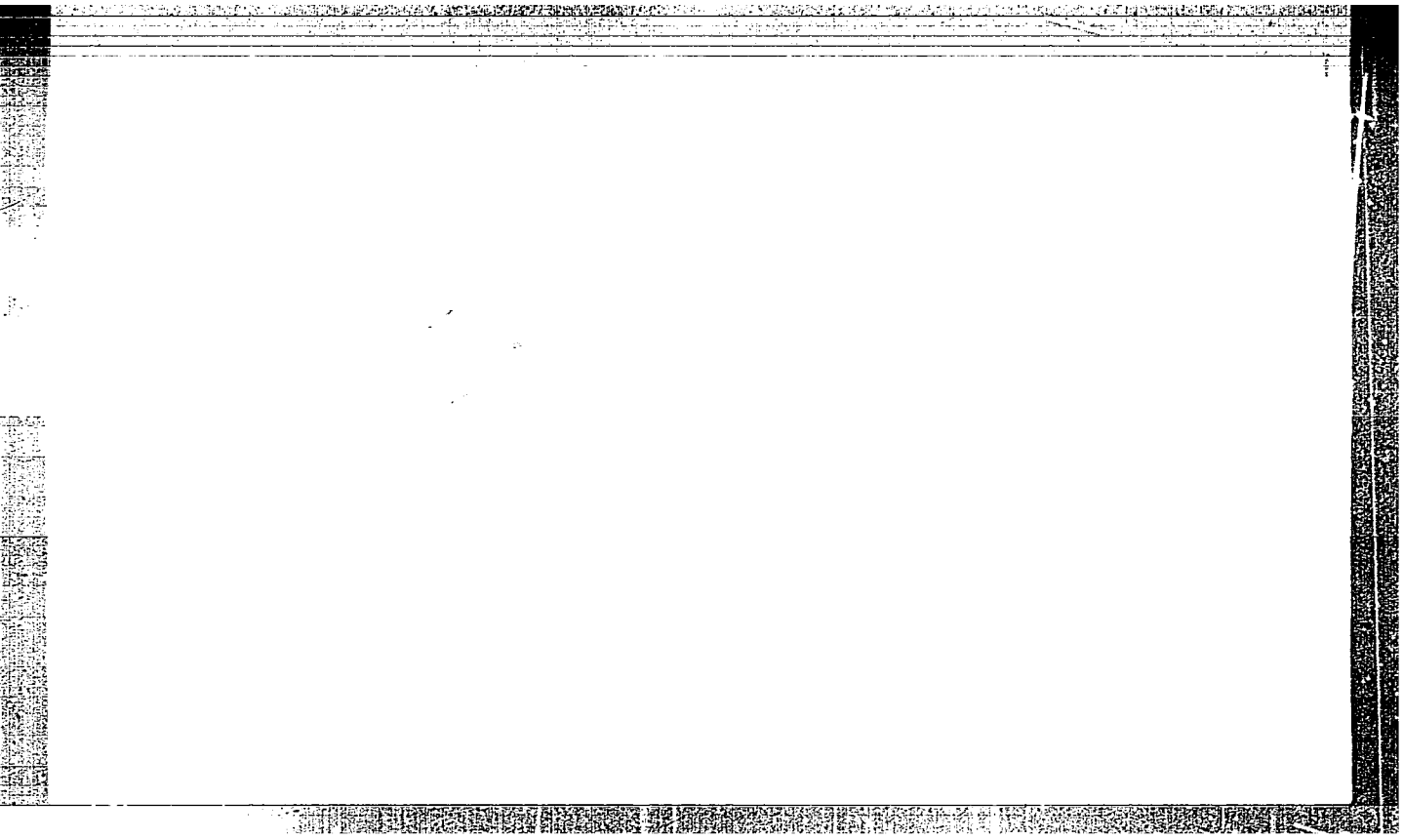
GNEVUSHEV, M.A.; KRASOV, L.M.; DUBOTOVKO, Yu.V.; D'YAKOVA, N.I.

Color of Yakutian diamonds. Trudy IAFAN SSSR. Ser.geol. no.6:87-96 '61. (MIRA 14:9)
(Yakutia--Diamonds)

BLEYKHMAN, I.Z.; DUBOV, A., redaktor; TRUKHANOVA, A., tekhnicheskiy redaktor.

[Technical progress in the Soviet Union] Tekhnicheskii progress v Sovetskom Soiuse. Minsk, 1954. 34 p. (MLRA 8:2)

1. Deystvitel'nyy chlen Obshchestva po rasprostraneniyu politicheskikh i nauchnykh znaniy Belorusskoy SSR.
(Technology)



APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000411330003-6"

GORYACHKIN, V.G.; DUBOV, A.B.

Shear stress limit for several types of White Russian peat.
Trudy Inst. torf. AN BSSR 6:365-372 '57. (MIRA 11:7)
(Peat--Testing)

DUBOV, A.B.

MALININ, S.N.; LUPINOVICH, I.S.; MOLOCHKO, I.S.; ABRAMCHUK, A.P.; ALEKSEYEV, Ye.K.; AL'SMIK, P.I.; AMBROSOV, A.L.; ANDREYEVA, N.M.; ANOKHIN, A.N.; AFONIN, M.I.; BABOSOV, M.M.; BALOBIN,V.N.; BARANOVSKIY, A.K.; BEZDENKO, T.T.; BEL'SKIY, B.B.; BOBKOVA, A.F.; BOL'SHAKOVA, V.P.; BULGAKOV, N.P.; VAGIN, A.T.; BIL'DYUSH, R.T.; VIL'CHINSKIY, A.D.; VLASOVA, K.S.; VOYTKO, D.I.; VOLUZNEV, A.G.; GABYSHEV, M.F. [deceased]; GAYKO, A.A.; GALASHEV, M.A.; GORELYAD, Kh.S.; GARKUSHA, I.F.; GOSTILOVSKAYA, M.N.; GORBUNOVA, N.N.; GORSKIY, N.A.; GORFINKEL', Z.Sh.; GRUBILKO, N.P.; GUSAKOV, V.A.; GUDAYKIN, A.I.; DANILOVICH, A.F.; DEMENT'YEV, V.A.; DENISOV, Z.N.; DOROZHKIN, N.A.; DUBOV, A.B.; DUBOVSKIY, Ya.K.; YEVTIKHIYEV, B.Ye.; ZHARIKOV, I.S.; ZHILIN, A.P.; ZHOLNEROVICH, A.M.; ZHURAVEL', B.N.; ZABELLO, D.A.; ZAKHARENKO, G.D.; ZUBETS, V.M.; IVITSKIY, A.I.; KACHURO, I.M.; KEDROV-ZIKHMAN, O.K.; KIDALINSKIY, V.A.; KIPENVARLITS, A.F.; KOVALEVSKIY, G.T.; KOVAL'CHUK, P.P.; KOZHANOV, K.Ya.; KOZLOVSKIY, I.Ye.; KOCHETOVA, Z.N.; KRIVODUBSKIY, I.P.; KUDRYAVTSEV, S.F.; KUSTOVA, A.I.; LAPPO, A.I.; LARIONENKO, V.B.; LASHKEVICH, G.I.; MAL'CHEVSKIY, V.I.; MAN'KO, N.F.; MARKOVETS, A.F.; MATSEPURO,M.Ye.; MEDVEDEV, A.G.; MEL'TSER, Ya.D.; MOISEYEV, I.G.; MUSORIN, V.V.; MUKHIN, N.D.; NAGORSKAYA, Ye.D.; NALIBOTSKIY, S.B.; NIKOLAYEVA, Yu.N.; NEDOLUGOV, I.T.; ORLOVSKIY, I.A.; ORLOVSKIY, K.P.; PANKEVICH, A.A.; PESKIN, A.L.; PROKOPOV, P.Ye.; PUSHKAREV, I.I.; RAZMYSLOVICH, I.R.; RAZUMENKO, A.V.; REMNEVA, Z.I.; RINKIS, V.A.; ROVDO, A.I.; ROGOVOY, P.P.; ROZENBLYUM, B.M.; RYZHMANOV, A.G.; RUSINOV, A.A.; SAVCHENKO, A.I.; SAPUNOV, V.A.; SAFRONOV, I.P.; SVIRSKIY, Ya.N.; SEVERNEV, V.P.; SERGEYEV, I.V.; SEMENOV, A.L.; SIDORENKO, G.M.;

(Continued on next card)

MALININ, S.N.---(continued) Card 2.
SKOROPANOV, S.G.; SKRIPNICHENKO, L.A.; SMIRNOV, T.Ye.; STAROVOYTOV, K.T. [deceased]; STRELKOV, I.G.; SUSLOV, V.P.; SUKHORUKOV, G.Ye.; SYUBAROV, A.Ye.; TIMOSHININ, V.D.; TISHKEVICH, I.I.; TROPASHKO, I.N.; TRIZNO, S.I.; TRIMA, N.K.; TUZOVA, R.V.; TURETSKIY, R.L.; UMANSKIY, M.M.; UR'YEV, I.M.; KHOT'KO, A.I.; KHROBOSTOV, S.N.; TSE-KHANOVICH, P.V.; CHERNYAVSKIY, I.G.; CHULKOVA, Ye.I.; CHUNOSOV, M.N.; SHEMPEL', V.I.; SHIKHALEYEV, N.F.; SHKLYAR, A.Ye.; SHCHERBOV, N.A.; YURGENS, B.A.; YUSKOVETS, M.K.; YAKOVLEV, B.I.; YAKERSON, S.A.; YARO-SHEVICH, A.A.; LUTSENKO, M.N., red.; LARIN, V., red.; KALECHITS, G., tekhn.red.

[Measures for increasing agricultural production per 100 hectares of land on collective and state farms of White Russia] Meropriiatiia po uvelicheniiu proizvodstva sel'skokhoziaistvennoi produktsii na 100 gektarov zemel'nykh ugodii v kolkhozakh i sovkhozakh BSSR. Red.kolle-giia; I.S.Lupinovich i dr. Minsk, Gos.izd-vo BSSR. Red.sel'khoz. lit-ry, 1959. 601 p. (MIRA 13:4)

1. White Russia. Ministerstvo sel'skogo khozyaystva.
(White Russia--Agriculture)

NABATOVA, K.A.; DYMSHITS, I.I.; DUBOV, A.P.; VINOGRADOVA, V.P.

Shot peening the transmission gears of the Moskvich automobile. Avt. i trakt. prom. no.6:29-31 J3 '56. (MLRA 9:9)

1. Nauchno-issledovatel'skiy avtomotornyy institut i Moskovskiy zavod malolitrashnykh avtomobiley.
(Automobiles--Transmission devices) (Shot peening)

1. POKROVSKIY, A. A.; DUBOV, A. G.

2. USSR (600)

4. Measuring instruments

7. Measuring apparatus for demonstration. Fiz. v shkole 12 no.6 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

DUBOV, A. G.

DUBOV, A. G. -- "Measurement in a Physics Demonstration Experiment." Cand Pedagog Sci, Sci Res Inst of Teaching Methods, Acad of Pedagogical Sciences RSFSR, Moscow 1953. (Referativnyy Zhurnal--Fizika, Jan 4)

SO: SUM: 168, 22 July 1954

Dubov A.G.

POKROVSKIY, Aleksandr Andreyevich; GLAZYRIN, Aleksandr Ivanovich; DUBOV, Aleksandr Grigor'yevich; ZVORYKIN, Boris Sergeyevich; SHURKHIN, Soren Abramovich; MIKHAYLEVICH, T.V., redaktor; TSYPPO, R.V., tekhnicheskiy redaktor

[Demonstrative experiments in physics for classes 6 and 7 of the secondary schools; teacher's manual] Demonstratsionnye opyty po fizike v VI-VII klassakh srednei shkoly; posobie dlia uchitelia. Pod red. A.A.Fokrovskogo. Izd. 2-oe. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshchenila RSFSR, 1956. 270 p. (MLRA 9:12)
(Physics--Experiments)

POKROVSKIY, Aleksandr Andreyevich; GLAZYRIN, Aleksandr Ivanovich; DUBOV, Aleksandr Grigor'yevich; ZAVORYKIN, Boris Sergeyevich; SHURKHIN, Semen Abramovich; MIKHAILKEVICH, T.V., redaktor; DZHATIYEV, S.G., tekhnicheskiy redaktor

[Practical work in physics for senior classes of secondary schools; a manual for teachers] Praktikum po fizike v starshikh klassakh srednei shkoly; posobie dlia uchitelia. Pod red. A.A.Pokrovskogo. Izd. 3-e, ispr. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1956. 288 p. (MLRA 9:10)
(Physics--Problems, exercises, etc.)

DUBOV, A.G. (Moskva)

Teaching methods for machine-shop practice. Fiz.v shkole 16 no.1: 40-45 Ja-Fe '56. (MLRA 9:3)
(Machine-shop practice) (Technical education)

BELOGORSKAYA, N.I.; GALININ, D.D.; GORYACHKIN, Ye.N.; GLAZYRIN, A.I.; DUBOV, A.G.; YEVROPIN, Yu.P.; YEMOKHOVICH, A.S.; ZVOHYKIN, B.S.; IVANOV, S.I.; KHAUKLIS, V.V.; LAVROVSKIY, K.F.; MENSHUTIN, N.F.; MINCHENKOV, Ye.Ya.; NABOKOV, M.Ye.; PERYSHKIN, A.V.; POPOV, P.I.; POKROVSKIY, A.A.; REZNIKOV, L.I.; SAKHAROV, D.I.; SOKOLOV, I.I.; SOKOLOVA, Ye.N.; EVENCHIK, E.Ye.; YUS'KOVICH, V.F.

Sergei Nikolaevich Zharkov. [Obituary]. Fiz.v shkole 16 no.3:94-95 My-Je '56. (Zharkov, Sergei Nikolaevich, 1883-1956) (MIRA 9:7)

DUBOV, A.G.; PARMENOV, K.Ya.

Ways of strengthening school equipment for technical education.
Politekh. obuch. no.10:69-79 O '57. (MLRA 10:9)

1. Nauchno-issledovatel'skiy institut metodov obucheniya Akademii Pedagogicheskikh nauk RSFSR.
(Technical education)

DUBOV, Aleksandr Grigor'yevich; RIVES, Yu.Ye., redaktor; SOKOLOVA, P.Ya., tekhnicheskiy redaktor.

[Practical work in school workshops; manual for workshop teachers of grades five to seven] Prakticheskie zanatiia v uchebnykh masterskikh; metodicheskoe posobie dlia prepodavatelei truda V-VII klassov. Moskva, Izd-vo Akad.pedagog.nauk RSFSR, 1957. 204 p. 127 p. of diagrams. (MLRA 10:5)

(Manual training)

POKROVSKIY, Aleksandr Andreyevich. Prinimali uchastiye: GLAZYRIN, A.I., nauchnyy sotrudnik; DUBOV, A.G., nauchnyy sotrudnik; ZVORYKIN, B.S., nauchnyy sotrudnik; SHURKHIN, S.A., nauchnyy sotrudnik; KUZ'MIN, A.P., glavnyy konstruktor; MIKHALKEVICH, T.V., red.; TSYPPO, E.V., tekhn.red.

[Equipment of a physical laboratory; teacher's manual] Oborudovanie fizicheskogo kabineta; posobie dlia uchitelia. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv. RSFSR, 1958. 422 p. (MIRA 12:7)

1. Upravleniye uchebno-tekhnicheskoy promyshlennosti.
(Physical laboratories--Equipment and supplies)

POKROVSKIY, A.A., kand.pedagog.nauk, starshiy nauchnyy sotrudnik; BUROV, V.A., uchitel'; GLAZYRIN, A.I., starshiy nauchnyy sotrudnik, pensioner; DUBOV, A.G., starshiy nauchnyy sotrudnik; ZVORYKIN, B.S., nauchnyy sotrudnik; KAMENETSKIY, S.Ye., uchitel'; KOSTIN, G.N., prepodavatel'; MIRGORODSKIY, B.Yu., uchitel'; OREKHOV, V.P., prepodavatel'; ORLOV, P.P., prepodavatel'; RAZUMOVSKIY, V.G., aspirant; RUMYANTSEV, I.M., aspirant; TERENT'YEV, M.M., prepodavatel'; KHOLYAPIN, V.G., prepodavatel'; SHAKHMAYEV, N.M., nauchnyy sotrudnik, uchitel'; VOYTENKO, I.A., uchitel' sredney shkoly, pensioner; STAROSTIN, I.I., prepodavatel'; MOGILKO, A.D., aspirant; SEMAKIN, N.K.; KOPTEKOVA, L.A., red.; LAUT, V.G., tekhn.red.

[New school equipment for use in physics and astronomy] Novye shkol'nye pribory po fizike i astronomii. Pod red. A.A.Pokrovskogo. Moskva, Izd-vo Akad.pedagog.nauk RSFSR, 1959. 161 p. (MIRA 12:11)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut metodov obucheniya. 2. Laboratoriya metodiki fiziki Instituta metodov obucheniya Akademii pedagogicheskikh nauk RSFSR (for Pokrovskiy). 3. Srednyaya zheleznodorozhnaya shkola st.Kratovo, Moskovskoy oblasti (for Burov). 4. Institut metodov obucheniya Akademii pedagogicheskikh nauk (for Glazyrin, Dubov, Razumovskiy, Rumyantsev).

(Continued on next card)

POKROVSKIY, A.A.---(continued) Card 2.

5. Institut metodov obucheniya Akademii pedagog.nauk; srednyaya shkola No.315 Moskvy (for Zvorykin). 6. Srednyaya shkola No.212 Moskvy (for Kamenetskiy). 7. Krasnodarskiy pedinstitut (for Kostin). 8. Srednyaya shkola No.18 g.Sumy (for Mirgorodskiy). 9. Ryazanskiy pedinstitut (for Orekhov). 10. Stalingradskiy pedinstitut (for Orlov). 11. Moskovskiy gorodskoy pedinstitut; srednyaya shkola No.443 Moskvy (for Terent'yev). 12. Balashevskiy pedinstitut (for Kholyapin). 13. Institut metodov obucheniya Akademii pedagog.nauk; srednyaya shkola No.215 Moskvy (for Shakhmayev). 14. Moskovskiy pedinstitut im. V.I.Lenina (for Starostin). 15. Pedinstitut im. V.I.Lenina v Moskve (for Mogilko). 16. Zaveduyushchiy narodnoy astronomicheskoy observatoriyey Dvortsa kul'tury Moskovskogo avtozavoda im. Likhacheva (for Semakin).

(Physical instruments)

DUBOV, A.G.

Training for work in the eight-year schools. Politekh.obuch. no.2:15-19 F '59. (MIRA 12:3)
(Manual training)

POKROVSKIY, Aleksandr Andreyevich; BUROV, Vladimir Alekseyevich; GLAZYRIN, Aleksandr Ivanovich; DUBOV, Aleksandr Grigor'yevich; ZVORYKIN, Boris Sergeyevich; RUMYANTSEV, Ivan Mikhaylovich; MASLOV, L.S., red.; KREYS, I.G., tekhn. red.

[Laboratory manual on physics in secondary schools; a teacher's manual] Praktikum po fizike v srednei shkole; posobie dlia uchitelia. [By] A.A.Pokrovskii i dr. Izd.4. perer. Moskva, Uchpedgiz, 1963. 223 p. (MIRA 17:3)

TKACHEV, V.V., inzh.; DUBOV, A.M., inzh.; OGANESOV, V.N., inzh.; ANDREYEV, N.M., inzh.; KAL'DA, R.R., inzh.; NOORMETS, Kh.A.

Effectiveness of grinding in mills of closed and open cycles. Tsement 31 no.2:13-14 Mr-Ap '65. (MIRA 18:8)

1. Gosudarstvennyy vsesoyuznyy institut po proyektirovaniyu i nauchno-issledovatel'skim rabotam tsementnoy promyshlennosti, Leningrad, i tsementnyy zavod "Punane Kunda".

Card 1/1

Author: Dubov, A. N.

Title: Modification of the profile of a tool for [illegible] steel, [illegible] shaving

Publication: Stan. i instr. 24/4, 17 - 19, April 1953

Abstract: The author states that one of the measures for increasing the

Submitted: [illegible]

25(7) p.3 PHASE I BOOK EXPLOITATION SOV/1257

Moscow. Stankoinstrumental'nyy institut. Kafedra "Instrumental'noye proizvodstvo."

Novoye v konstruirovanii metallorezhushchikh instrumentov (Recent Developments in the Design of Metal-cutting Tools) Moscow, Mashgiz, 1958. 229 p. 5,000 copies printed.

Ed.: Semenchenko, I.I., Professor; Ed. of Publishing House: Balandin, A.F.; Tech. Ed.: Gerasimova, Ye.S. and Uvarova, A.F.; Managing Ed. for Literature on Metal Working and Tool Making (Mashgiz): Beyzel'man, R.D., Engineer.

PURPOSE: The book is intended for engineers and technicians of the machine-building industry.

COVERAGE: In this collection of articles results are presented of investigations carried out at the chair of "Tool Making" of the Moscow Machine Tool and Tool Making Institute imeni I.V. Stalin. The articles discuss new features in designing highly productive metal-cutting tools: generating cutters, cutter gear generating heads, hobs and gear shaper cutters for cutting gears for subse-

Card 1/3

quent shaving, of flat broaches for broaching bodies of rotation, and circular broach cutters for cutting straight level gears with circular tooth profile. Problems of definition and the classification of metal-cutting tools are also investigated. The role of Russian toolmakers claimed to be the first in the world to manufacture rifles with interchangeable parts is related. No personalities are mentioned. There are 24 references, all Soviet.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress GO/sfm
Card 3/3 3-26-59

DUBROV, A.P.

Simple method of ultraviolet microirradiation with the use of a reflecting optic system. Radiobiologiia 3 no.2:317-320 '63 (MIRA 17:1)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

S.5-140 551.551.551.506.5

Gandin, L. S. and Dubov, A. S., [The complex expedition of 1947 for the study of atmospheric turbulence. Leningrad. Glavnaia Geofizicheskaia Observatoriia, Trudy, 16 (78):5-9, 1949. 4 figs. append. p. 136-143. DLC--A series of observations, devoted to all aspects of atmospheric turbulence, was made at the station Dolgoprudnaia (near Moscow) in order to test theoretical formulas proposed by BUDYKO, LAIKHTMAN, ERTEL and others. This paper serves as an introduction to 11 papers, published in the same volume, and describes the general conditions of the expedition, the program of measurements and the location of instruments. The appendix presents profile data for temperature (surface, 0.2, 0.55, 20 m), and data for the radiation balance and weather conditions. The time distance is 20 min (for 15 days), but the conditions during the night are not covered.

5.5-136 551.551.551.508,53

Dubov, A. S., "Determination of the velocity of wind gusts in airplane soundings by means of accelerometer records." Leningrad. Glavnaia Geofizicheskaia Observatoriia, Trudy, 16(78):85-92, 1949. 5 figs., tables, 8 refs., 7 eqs. DLC--The Vertical velocity of wind gusts and the coefficient of exchange in the free atmosphere can be computed by means of accelerometer records, made on an airplane, considering the air density, the weight and wing spread of the plane, etc. The author analyzed a set of eight differential equations, but failed to solve them, and proposes a simplified solution, which considers only larger eddies (over 7-8 m). An analysis of possible error is made. Samples of computations are presented, showing the superiority of the author's equation, which considers also the vertical velocity of the plane itself. A nomogram facilitates practical computations.

VORONTSOV, P.A.; DUBOV, A.S.

Methods of investigating the structure of air currents from and airplane. Trudy GGO no.51:50-65 '55. (MLRA 9:8)
(Atmosphere) (Aeronautics in meteorology)

DUBOV, A. S.

GANDIN, L.S.; DUBOV, A.S.

Qualitative analysis of the vortex equation. Meteor.i gidrol. no.4:36-37 Ap '57. (MLRA 10:5)

(Atmosphere)

GANDIN, L.S.; DUBOV, A.S.; SOLOV'YEV, V.A.

In the Voeikov Main Geophysical Observatory. Meteor. i gidrol. no.8:70-72 Ag '57. (MLRA 10:8)
(Meteorology)

Dubov, A.S.

36-71-2/16

AUTHOR: Dubov, A. S., Orlova, L. S.

TITLE: Results of Forecasting a Surface Field of Pressure and Mapping of Baric Topography by the Graphic-analytical Method (Rezul'taty prognoza nazemnogo polya davleniya i kart baricheskoy topografii grafo-analiticheskim metodom)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii 1957, Nr 71, pp. 34-48 (USSR)

ABSTRACT: The forecasting method described by M.I. Yudin (this publication, pp. 3-331) is described and evaluated. The particulars of selected units and practical steps in the formulation of the method were given, and the areas for which the material was collected are cited. A major point is made of the calculated transfer of pressures and three separately leading air streams. The efficiency factor for successful prognostication may range from 96 percent in summer to 24 percent in autumn. All predictions are based on the correlation of calculated and actual values which, in general, are difficult to establish. New indices of possibly lesser precision are recommended for

Card 1/2

36-71-2/16

Results of Forecasting a Surface Field of Pressure (Cont.)

this evaluation. On the whole, the predictions for surface baric fields are more reliable than those for the 500 mb. surface. Of the special components, the advection of temperature is better reflected in the findings than the advection of the vortex. At the same time, synoptic forecasting methods are better justified percentage-wise, than analytical methods which provide no advantage in picking up the emerging baric components. The insufficient "weight" given to advection by temperature is a major source of error, however, the basic weakness of analytical schemes is seen in the unsatisfactory follow-up of the intensification of baric formations. Correlations of probability are given for all types of baric situations, such as, cyclonic, anticyclonic and mixed. The failure to forecast development of the Leningrad cyclone which caused an inundation in Sept. 1955 is attributed to a failure of graphic integration and to some errors in evaluating various surface factors. Use of electronic computers is strongly recommended. Persons mentioned include: Yudin, M. I., Dubov, A.S., Orlova, L.S. There are 7 figures, 11 tables, and 3 references of which 2 are USSR.

AVAIAABLE: Library of Congress

Card 2/2

DUBOV, A.S.

36-71-4/16

AUTHOR: Dubov, A. S.

TITLE: Evaluation of Surface Friction in Forecasting the Field of Pressure on the Ground (Ob uchete prizemnogo treniya pri prognoze polya davleniya u zemli)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii 1957, Nr 71, pp. 66-71 (USSR)

ABSTRACT: The Central Institute of Forecasting has thoroughly analyzed the effect of turbulent friction on the variation of pressure. This is used by M. I. Yudin in his study of the flow of an ideal liquid i.e., that vertical velocity of the ground friction at the surface is not zero but is proportional to the Laplacian of surface pressure. Proof is given that equations for vertical turbulent transfer alter the relationship between temperature and spatial derivatives of the geopotential. At a later stage is appears that this factor of transfer is somewhat overvalued. The mathematical characteristics of the initial field are expressed by first derivatives of pressure in time restricted by some limiting conditions. The graphic-analytical method is applied to evaluation of the pressure factor and to the schemes used in the solution of the problem.

Card 1/2

Evaluation of Pressure on the Ground (Cont.) 36-71-4/16

An illustration of the actual findings is given and the efficiency of this method of forecasting is evaluated. There are 1 figure, 3 tables and 2 USSR references.

AVAILABLE: Library of Congress

Card 2/2

DUBOV, A. S.

DUBOV, A. S. and STOLYAROVA, G. V., "Experience in Forecasting Temperature Using hydrodynamic Methods," p. 30

DUBOV, A. S., "Influence of Mountain Ranges on the Displacement of Cyclones." p. 40

Publication: Voprosy dinamicheskoy meteorologii i teorii klimata (Problems in Dynamic Meteorology and the Theory of Climate.) Leningrad , Gidrometeoizdat, 1958. 125 p. Trudy Glavnaya geofizicheskaya observatoriya, Leningrad, vyp. 76,

The collection of 9 articles deals with problems in dynamic meteorology, the theory of climate, and the forecasting of air temperature using elements of the thermohydrodynamic theory, A system of climatological regionalization for the USSR is analyzed and recent pertiment data in this regard shown graphically.

Dubov, A.S.

3(7) PHASE I BOOK EXPLOITATION SOV/2547

Leningrad. Glavnaya geofizicheskaya observatoriya

Voprosy dinamicheskoy meteorologii (Problems in Dynamic Meteorology) Leningrad, Gidrometeoizdat, 1959. 91 p. (Series: Its Trudy, vyp. 81) Errata slip inserted. 1,200 copies printed.

Sponsoring Agency: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR.

Ed. (Title page): M.I. Yudin, Doctor of Physical and Mathematical Sciences and M.Ye. Shvets, Doctor of Physical and Mathematical Sciences; Ed. (inside book): L.P. Zhdanova; Tech. Ed.: O.G. Vladimirov.

PURPOSE: This issue of the Geophysical Institute's Transactions is intended for scientific workers and specialists in dynamic and synoptic meteorology.

COVERAGE: This collection of articles treats problems in dynamic meteorology. The articles, for the most part, discuss computation methods of forecasting meteorologic elements. Closely related to this is a study aimed at determining vertical velocities according to aircraft vibration data. No personalities are mentioned. References accompany each article.

(1)

21111
S/531/59/000/098/001/005

10.6120

AUTHOR: Dubov, A. S.

TITLE: Lateral Aircraft Oscillations Caused by Wind Gusts

SERIAL: Leningrad. Glavnaya geofizicheskaya observatoriya im. A. I. Voyeykova. Trudy, no. 98, 1959, Voprosy aviatsionnoy meteorologii, 3-16.

TEXT: A formula is derived in order to associate lateral aircraft oscillations with horizontal wind gusts. The establishment of this association is necessary because present accelerographs do not reliably determine the magnitudes of horizontal gusts, which, upon analysis, play a much greater role than the vertical in creating lateral aircraft oscillations. From well-known equations describing lateral motions of aircraft, the author generalizes expressions describing individual increments of aerodynamic forces and moments in the aircraft's boundary layer, resulting from changes in flight attitude angles as turbulent motions are encountered in the onflowing airstream. The author notes that as a result of the V-shape of the winds, vertical gusts may cause lateral aircraft oscillations only if the vertical gust values amount to approximately 20 per cent of the horizontal gust values on the wings. This circumstance is most probable at times when the variability of vertical velocities is abrupt . In establishing

Card 1/3

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Lateral Aircraft Oscillations Caused by Wind Gusts

a relationship between horizontal gusts and lateral aircraft oscillations, the set of equations derived is made for the simpler problem of uniformity of wind gustiness over the entire boundary layer of the aircraft, that is, the wind has been averaged as a single value. This set of equations can be used in solving the more complex problem of variability of wind gustiness if the gust fields are given. The solution of this set of equations is made similarly to that for differential equations derived by M.I. Yudin in 1946 for describing longitudinal aircraft oscillations. By means of this solution it is possible to obtain the statistical characteristics of the aircraft's oscillations, if the characteristics of the wind gusts on the flight path are known. As an example, the question of ratios between amplitudes of horizontal wind gusts and lateral accelerations at the aircraft's center of gravity for turbulent motions of different frequencies are analyzed. From this analysis a transfer function is obtained similar to that for transfer functions for longitudinal aircraft oscillations. Concrete calculations were made for Northrop-2-E aircraft, the aerodynamic characteristics of which were published in in A.L. Raikh's work (Ref. 2: Trudy, TsAGI no. 458,1939) Conclusions: The transfer function which is graphed shows that low-frequency lateral wind gusts are only slightly reflected in lateral accelerations of the aircraft. As in the case of

Card 2/3

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Lateral Aircraft Oscillations Caused by Wind Gusts

longitudinal oscillations, the derived formula is expressed in dimensional values and is valid only for high-frequency turbulent motions. In order to determine the low-frequency turbulent motions, the relationship between the transfer function and the frequency must be taken into account. It also was mathematically determined that the sensitivity of accelerographs must be raised by one order so that the horizontal wind gusts can be determined as accurately as the vertical gusts are presently determined. The Russian abstract of this article appears in Referativnyy Zhurnal, Geofizika, 1960, No. 11, Ref. no 14469. There are 3 references, all Soviet.

Card 3/3

21114
S/531/59/000/098/004/005

10.9010

AUTHOR: Dubov, A. S.

TITLE: The Relationship Between Turbulence Parameters of Aircraft Possessing Different Structural Designs Under Identical Meteorological Conditions

SERIAL: Leningrad. Glavnaya geofizicheskaya observatoriya im. A. I. Voyeykova. Trudy, no. 98, 1959, Voprosy aviatsionnoy meteorologii, 43-53.

TEXT: A formula is derived whereby the characteristics of turbulence of one aircraft can be determined if the turbulence characteristics of another aircraft under identical meteorological conditions are known. The derivation of this formula was undertaken in order to establish a relationship between the degrees of aircraft turbulence for two aircraft possessing different structural designs but flying in the same air mass or under identical meteorological conditions. It is well known that two aircraft with different stability characteristics will react differently to turbulent air motions encountered in the main onflowing airstream on a flight made under identical meteorological conditions or in the same air mass. Of the presently available

Card 1/3

The Relationship Between Turbulence Parameters of Aircraft...

recording instruments for registering the effects of the atmosphere's turbulent motions, the accelerograph most readily and reliably records the vertical components of the acceleration at the aircraft's center of gravity. Although aircraft turbulence involves manifestations other than phenomena associated with vertical overloads (yawing, banking, abrupt lateral thrusts, etc) nevertheless for a general evaluation of aircraft turbulence, vertical overloads are adequate. A. S. Dubov (Ref. 5: Trudy GGO., no. 81, 1959) made an analysis of the attendant errors and certain recommendations pertaining to a number of approximate methods now being used to associate recorded vertical aircraft overloads with vertical components of wind gusts. In this article is used an approximate method obtained in one of A.S. Dubov's earlier works (Ref. 6: Trudy, GGO., no. 16(1949); this method gives good results for stable aircraft, and can be used to derive the formula. According to this approximation, the following equality must be realized where $u_z(t)$ is the vertical component of the wind gust, $n(t)$ is the vertical acceleration at the aircraft's center of gravity, b is a coefficient depending on the aerodynamic characteristics of the aircraft and on the flight attitude. C is a constant of integration determined from the condition of equating the u_z value, which has averaged over a fairly long interval of time, to zero.

Card 2/3

The Relationship Between Turbulence Parameters of Aircraft...

There is, however, one difficulty. It is impossible to equate values of the vertical wind speeds in the passage by the two aircraft of the same point in space, since the two aircraft pass this point at different moments of time in a field of vertical wind speeds where there also is temporal variability. Hence, after making the required formulated evaluation of the variability of vertical wind speeds with respect to both time and space, the formula being sought is readily derived: From this evaluation it was determined that if the aircraft speed is considerably greater than that of the wind, then it may be assumed that the aircraft penetrates a stationary field of wind gusts, but naturally only for brief intervals of time. In using the derived formula for practical purposes, actual numerical calculations were made for determining overload values for a LI-P aircraft from known overload values of a PO-2 (biplane) aircraft. The calculations were then compared with experimental data obtained by paired flights of these aircraft (eight cases). In comparing the calculated results of two other approximate formulas widely used with those of the author's derived formula it is seen from the graphed results that the author's formula is the most accurate. The Russian abstract of this article appeared in Referativnyy Zhurnal, Geofizika, 1960, No. 11, Ref. No. 14470, p. 168. There are 6 references, all Soviet.

Card 3/3

3.5000 (2205, 1093 only)
3.5140 (2305, 2405)

21115
S/531/59/000/09/005/005

AUTHOR: Dubov, A. S.

TITLE: Determination of the Turbulent Exchange Coefficient From an Aircraft's Acceleration

SERIAL: Leningrad, Glavnaya geofizicheskaya observatoriya im. A. I. Voyeykova. Trudy, no. 98, 1959, Voprosy aviatsionnoy meteorologii, 54-67.

TEXT: A formula is derived and verified for calculating the turbulent exchange coefficient in the free atmosphere, that is, at levels above the surface layer of the atmosphere. There were two reasons why this problem was undertaken: 1) existing methods for calculating this coefficient at levels above the surface layer of the atmosphere, especially in the 100-2000-meter layer, had not been substantiated by other independent methods and were, therefore, considered less reliable than the still imperfect but well substantiated methods used for calculating the exchange coefficient in the surface layer of the atmosphere, 2) vertical gradients of the various meteorological elements upon which calculations have been based and so reliably made for the surface layer, are less pronounced in the free atmosphere. Of three well known structural methods used for calculating the coefficient in the planetary boundary layer, only E. S. Lyapin's method

Card 1/5

(Ref. 9: Meteorologiya i gidrologiya, 1948, no.5) can be generalized for deriving equations making it possible to use acceleration and air speed data recorded by aircraft for calculating the exchange coefficient. In 1950, the author generalized Lyapin's formula for expressing the coefficient of turbulent exchange in terms of acceleration and speed characteristics recorded by sensing elements of instruments installed on aircraft in flight as follows:

$$k = \frac{u_z^2}{2} D \frac{\bar{V}}{u_x} \qquad (1)$$

where k is the coefficient of the vertical turbulent exchange, u_z is the mean (taken absolutely) value of the vertical wind speed, D is the mean duration of a vertical velocity of the same sign, $\bar{V}$ is the mean (taken absolutely) velocity of the recorder' sensing element with respect to the air, u_x is the mean (taken absolutely) value of the horizontal wind gusts. If the recorder's sensing element is stationary with respect to the earth, then equation (1) reverts to Lyapin's formula. In this case the recorder's sensing element measures the mean wind speed (that is, if the pulsations are considerably less than the mean speed) so that equation (1) is rewritten as

$$k = \frac{u_z^2}{2} D \frac{\bar{U}}{u_x} \qquad (2)$$

where $\bar{U}$ is the mean wind speed. If the recorder's sensing element moves simultaneously en masse with the air mass engulfing it, then $\bar{V} = u_x$ and equation (1) is the same as Hesselberg's structural method formula (Ref. 7: Ann. der Hydrogr. Bd. 57, 1927). The third or Ertel's structural method could not be used because L. F. Sheherbakova (Ref. 10: Trudy GGO no. 16 [78] 1949) and I. S. Borushko (Ref. 10: Trudy GGO no. 16 [78] 1949) had shown in their critical analysis that certain hypotheses upon which his method is based can not be substantiated. At present, accelerographs do not reliably determine gust values. But nevertheless, in the free atmosphere, velocity pulsations with a considerable degree of accuracy may be assumed to be isotropic, that is $u_z = u_x$ or an assumption upon which equation (1) acquires the form

$$k = \frac{u_z \overline{DV}}{2} \qquad (3)$$

The value of u_z, as was discussed above, was found by means of the relationship

$$u_z = bn \qquad (4)$$

where n is the acceleration of the aircraft's center of gravity expressed in percentages of the acceleration of gravity, b is a coefficient of proportionality

depending on the aerodynamic characteristics of the aircraft and of the flight attitude. This coefficient was determined from another of the author's work in the present symposium (Ref. 17: Trudy GGO no. 98, 1959).
Results and Conclusions. Completed calculations indicate that formula (3) gives entirely reasonable magnitudes of the coefficient, k. In particular, this is made apparent by comparing magnitudes of the coefficient obtained from gradient observations' data in the surface layer extrapolated up to flight altitude on the assumption that k increases linearly with altitude up to a level of 30 to 50 meters above which it remains constant. Certain data on the diurnal variations and of the k coefficient profile aloft determined from aircraft observations made jointly by the Central Geophysical Observatory and the Central Aerological Observatory at Moscow and by the Central Aerological Observatory in the vicinity of Tbilisi in the summer of 1947, were obtained. In comparing his results with earlier investigators concerned with the problem of calculating the exchange coefficient in the 100-2000-meter layer, the author believes their calculated values are too low, in particular those of Laykhtman and Chudnovskiy [1949] and Mildner [1939]. M. P. Churinova (Ref. 5: Trudy GGO no. 28, 1951), P.A. Vorontsov (Ref 15: Trudy GGO no. 39, 1953) and others have come to the same conclusion. Two explanations are given for this circumstance: 1) an aircraft is unable to react to turbulent formations of very small scales owing to its inertia and in the case of very large scale turbulent motions, the aircraft is seized by air mass engulfing it and ascends and descends en masse with it. 2) the final formula (4) is valid only for pulsations of high

frequencies, that is, pulsations of small scales. In addition, a third possible reason is the assumption of an approximate uniscalar nature of turbulence found in implicit form in the derivation of Lyapin's formula. The article presents a fairly detailed survey on the status of methods and results of determining the turbulent exchange coefficient in the atmosphere. The Russian abstract of this article appears in Ref. Zhur. Geofizika 1960, no. 12, as Ref. no. 15968. There are 20 references, all Soviet.

ABSTRACT OF REPORT

"THE INFLUENCE OF MOUNTAINS ON THE CYCLONE MOTION"

1. Synoptical experience shows that mountains essentially affect the motion of pressure-patterns, but the effect has not yet been studied in full from the point of view of theory. In the present paper an attempt is made to develop a theory about the influence of geometry on the motion of pressure centres. Basing on this theory, a method of forecasting the cyclone motion in mountain regions has been worked out and tested.

2. The presented theory is based on the formula for the velocity of motion of cyclones, where the velocity is shown to depend on the value of geostrophic wind which may be computed using a special method derived by Sundin. There were developed formulae to compute the geostrophic wind components due to the surface friction and the relief of the earth's surface.

3. It is demonstrated that an account of surface friction on a plane surface is practically insignificant when the motion of pressure centres is being determined.

4. Simple formulae have been developed for the correction to velocity vector of pressure centre motion, the correction being due to the influence of mountains. The formulae show that the said correction is directed about the relief field just in the same manner as the geostrophic wind is directed about the relief field of isobaric surface. In particular, the influence of an isolated height on the motion of pressure centre comes to the fact that the centre seeks to pass round the height in the anticyclonic direction.

5. The method of forecasting the motion of cyclones in a mountain region is a combination of the method of spatially-smoothed flow, which has been suggested by Rutin to forecast cyclone motion over a plane surface, and the methods of computing the corrections caused by the relief effect. All the corrections are calculated using smoothed relief maps and are included when constructing the cyclone trajectory step by step with 2 hr. intervals.

6. The presented method has been tested on the data for cyclones crossing the Urals and the Scandinavian mountains. Tests of the method have proved that an account of the influence of mountains permits to essentially improve the accuracy of forecasting cyclone motion.

Report submitted for the XII General Assembly of the Intl. Union of Geodesy and Geophysics, Helsinki, Finland, 25 July - 6 August 1960.

GANDIN, L.S. [translator], red.; DUBOV, A.S. [translator], red.; VLASOVA, Yu.V., red.; VLADIMIROV, O.G., tekhn.red.

[Numerical methods of weather prediction; collection of translated articles] Chislennye metody prognoza pogody; sbornik perevodnykh statei. Pod red. L.S.Gandina i A.S.Dubova. Leningrad, Gidrometeor.izd-vo, 1960. 281 p. (MIRA 13:12)
(Weather forecasting)

DUBOV, A.S.

Orographic influence on the motion of baric centers. Meteor.i gidrol. no.7:3-8 Jl '60. (MIRA 13:7)
(Winds) (Mountains)

44593
S/169/62/000/012/054/095
D228/D307

35132

AUTHOR: Lubov, A.S.

TITLE: Forecasting the geopotential field in the lower stratosphere

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1962, 52, abstract 12B339 (In collection: Materialy Soveshchaniya Koordinats. komis. po chisl. metodam prognoza, L., Gidrometeoizdat, 1961, 55-62)

TEXT: On the grounds of analysis of statistical material (correlative relations between local temperature changes and vertical velocities on the one hand, and vertical velocities and temperature advections on the other) it is shown that for conditions of the lower stratosphere the local derivative of the temperature can be disregarded in the heat inflow equation. The soundness of this simplification is confirmed by analysis of the general solution for the problem of finding vertical velocities from the geopotential field. The existence of an "average level" analog for the vertical

Card 1/2

Forecasting the geopotential ...

velocity is considered. The simplifications introduced allow a two-dimensional prognostic equation to be constructed for the 200-mb surface geopotential. Unlike the barotropic scheme the right-hand side of this equation contains the temperature advection. Integration with respect to time is carried out graphico-analytically on a "Ural-1" machine. The justification characteristics in 8-day material are given.

[Abstracter's note: Complete translation]

Card 2/2

DUBOV, A.S.; KOBYAKOVA, A.A.

Problem of AT_{300} forecasting. Trudy GGO no.121:59-66 '61. (MIRA 15:5)

(Weather forecasting)

DUBOV, A.S.

Determination of vertical gusts of wind from vibrations of the airplane in flight, taking the pilot's action on the controls into account. Trudy GGO no.121:109-124 '61. (MIRA 15:5)
(Aeronautics in meteorology) (Winds)

DUBOV, A.S.

All-Union Scientific Meteorological Conference devoted to the 40th anniversary of the Hydrometeorological Service of the Soviet Union. Izv. AN SSSR. Ser. geofiz. no.1:138-141 Ja '62. (MIRA 15:2)

(Meteorology--Congresses)

S/531/62/000/135/001/002
1006/1206

AUTHOR: Dubov, A. S.

TEXT: On determination of spectral density of vertical gusts from airplane oscillations

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy no. 135, 1962. Voprosy fiziki pogranichnogo sloya atmosfery, 35–40

TEXT: A method for construction of spectral density of vertical gusts is described using simultaneous registration of angle of pitch and airplane overloading. The proposed method provides the basis for more reliable information about the spectral density of gusts in a larger frequency range (from the low frequency side). An example is brought of the calculation based on registrations of airplane's disturbed motion in an actual case. There are 3 figures.

Card 1/1

DUBOV, A.S.

Effect of static stability on changes in pressure and the forecasting equation for the lower stratosphere. Trudy GGO no.124:39-47 '62. (MIRA 17:6)

ACCESSION NR: AT4016868 S/2531/63/000/143/0014/0022

AUTHOR: Dubov, A. S.; Kobyakova, A. A.

TITLE: Experience in forecasting the fields of pressure, temperature and vertical currents in the lower stratosphere.

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy*, no. 143, 1963, Voprosy* chislennogo prognoza i struktura meteorologicheskikh poley (Problems in numerical forecasting and structure of meteorological fields), 14-22

TOPIC TAGS: troposphere, meteorology, baroclinic quasi-geostrophic model, weather forecasting, atmospheric pressure field, air temperature, air pressure, atmospheric vertical currents, stratosphere, lower stratosphere, atmospheric geopotential

ABSTRACT: The results of 13 one-day and two-day forecasts of the geopotential and temperature fields for the 200 millibar level are analyzed. The choice of the 200-mb level is not ideal but was selected because data were not available for higher levels. A baroclinic quasi-geostrophic model is used. Temperature forecasts for 48 hours in advance were successful, as illustrated by Enclosure. Correlation of the fields of vertical velocities, computed for the same period for the purpose of one-day and two-day forecasts, revealed no relationship

Card 1/4

ACCESSION NR: AT4016869 S/2531/63/000/143/0023/0026

AUTHOR: Dubov, A. S.

TITLE: Forecasting in the region of the stratospheric high-level frontal zone

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy*, no. 143, 1963, Voprosy* chislennogo prognoza i struktura meteorologicheskikh poley (Problems in numerical forecasting and structure of meteorological fields), 23-26

TOPIC TAGS: meteorology, stratosphere, prognostic equation, weather forecasting, atmospheric front, lower stratosphere, atmospheric geopotential field

ABSTRACT: More precise two-dimensional prognostic equations have been derived for conditions in the lower stratosphere within the framework of the geostrophic and adiabatic approximation. This is a further development of the author's previous work (Tr. GGO, No. 124, 1962). In that paper he derived a two-dimensional equation for changes of geopotential with time, with expansion for a small parameter inversely proportional to the value of static stability. In derivation of that simplified equation he neglected certain small terms, although allowance for them causes no difficulty. This paper cites refined prognostic equation with the earlier discarded terms taken into account. In computing terms

Card 1/2

ACCESSION NR: AT4016869

containing temperature it is assumed that isothermal conditions prevail, although for the stratosphere this is true only as a mean, but since small terms are involved there is no significant error. The author also presents new formulas giving greater accuracy to determination of vertical velocities in the initial equations of motion, which in practical prognostic methods usually are neglected, despite their importance. Orig. art. has: 11 formulas.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya (Main Geophysical Observatory)

SUBMITTED: 00 DATE ACQ: 20Feb64 ENCL: 00

SUB CODE: AS NO REF SOV: 008 OTHER: 001

Card 2/2

BERLYAND, M.Ye.; DUBOV, A.S.

Mikhail Isaakovich IUdin; on his 50th birthday. Meteor. i gidrol. no.12:55-56 D '63. (MIRA 17:3)

DUBOV, A.S.; ORLOVA, L.S.

Calculation of the movement of cyclones in mountainous regions. Trudy GGO no.124:56-62 '62. (MIRA 17:6)

GERMAN,M.A. ; DUBOV, A.S. (Leningrad)

"The aircraft as a means of atmospheric turbulence research".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan- 5 Feb 64.

ACCESSION NR: AT4043147 S/2531/64/000/151/0041/0047

AUTHOR: Dubov, A. S.(Candidate of physico -mathematical sciences)

TITLE: Determination of horizontal wind gusts from accelerograph records

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy*, no. 151, 1964. Voprosy* chislennogo analiza i prognoza pogody* (Problems in numerical analysis and forecasting), 41-47

TOPIC TAGS: wind, wind gust, meteorology, accelerograph, meteorological instrument, aircraft overload, aircraft acceleration

ABSTRACT: The author clarifies the possibility of determining horizontal wind gusts on the basis of longitudinal accelerations of the center of gravity of an aircraft. The article analyzes the contribution of the vertical and horizontal wind components in the formation of longitudinal aircraft accelerations. It is shown that with the exception of the sector of very low frequencies the role of these contributions is identical for a PO-2 aircraft. For aircraft of the fighter type an approximate formula has been derived relating the amplitudes of horizontal wind gusts and the longitudinal accelerations of an aircraft. Several formulations of the problem are presented. It was found that the sensitivity of

Card 1/2

ACCESSION NR: AT4043147

an aircraft to vertical gusts is approximately eight times as high as to lateral horizontal gusts and twenty five times as high as to longitudinal horizontal gusts. The accuracy of existing accelerographs ensures reliable measurement only of vertical aircraft overloads. The reconstruction of the three-dimensional wind gust field from the records of a three-component accelerograph is impossible due to the low sensitivity of existing acccelerographs. The solution of this problem requires instruments for recording accelerations of the center of gravity of an aircraft with a sensitivity one order of magnitude greater than that of existing instruments. Orig. art. has: 31 formulas, 3 figures and 2 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory

SUBMITTED: 00 ENCL: 00

SUB CODE: ES NO REF SOV: 009 OTHER: 000

Card 2/2

ACCESSION NR: AT4043162 S/2531/64/000/154/0090/0098

AUTHOR: Dubov, A. S.

TITLE: Allowance for heat fluxes in temperature forecasting

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy*, no. 154. Voprosy* fiziki atmosfery* (Problems in atmsopheric physics), 90-98

TOPIC TAGS: meteorology, atmospheric temperature, weather forecasting, atmospheric physics, heat flux, radiation, atmospheric turbulence, cloud cover

ABSTRACT: In this study, prepared in 1953 but only now published, the author computed the changes in the mean temperature of the lower 5-km layer of the atmosphere resulting from radiation and turbulent heat fluxes. Local temperature changes in the heat flux equation are represented as consisting of two parts: one part caused by horizontal heat transport and the presence of vertical air movements and the second caused by the presence of heat fluxes. As a simplification only heat fluxes associated with birbulence and radiation processes are considered; condensation processes are neglected. The study is therefore confined to computations of heat fluxes for anticyclonic weather with few clouds. The difference in radiative heat fluxes is computed directly by the Shekhter method. Turbulent

Card 1/3

ACCESSION NR: AT4043162

heat fluxes are computed using the formula $Q_T = -K\left(\frac{\partial T}{\partial z} + \gamma\right)$, where k is the coefficient of turbulent exchange, and γ is the adiabatic or equilibrium gradient which is not dependent on the coordinates. The temperature gradient is obtained from the stratification curve (sounding data). The coefficient of turbulent exchange is determined by one of two described methods. Information on temperature gradients at the 1000- and 500-mb levels is taken from the same temperature profile data used for computing the radiative heat flux. In the layer between the 500- and 1000-mb surfaces the radiative heat flux is compensated in a cloudless sky by a turbulent flux which is greater than the radiative flux by a factor of approximately 2. Transformation corrections are introduced by the M. Ye. Berlyand method. Two extreme cases are considered for determining the influence of cloud cover. In the first it is assumed that cloud cover is fixed in space and that air masses in their movement enter and emerge from these cloud formations. The second (more realistic) case allows for the fact that cloud cover is not fixed in space but moves together with air masses. The problem of directly or indirectly taking the latter reality into account is considered in detail. Orig. art. has: 9 formulas, 1 figure and 1 table.

Card 2/3

ACCESSION NR: AT4043162

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory)

SUBMITTED: 00 ENCL: 00

SUB CODE: ES NO REF SOV: 004 OTHER: 001

Card 3/3

VORONTSOV, P.A.; GERMAN, M.A.; DUBOV, A.S.

Methodology and some results of an airborne exploration of turbulent exchange in the boundary layer of the atmosphere. Trudy GGO no.158: 77-83 '64. (MIRA 17:9)

L 01515-66 EWT(1)/FCC GW

ACCESSION NR: AT5017066 UR/2531/65/000/168/0014/0020

AUTHOR: Dubov, A. S.; Turikov, V. G. 24 21 B+1

TITLE: Forecasting the tropospheric pressure field

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 168, 1965. Chislennyy analiz i prognoz pogody (Numerical analysis and weather forecasting), 14-20

TOPIC TAGS: atmospheric pressure, weather forecasting, troposphere

ABSTRACT: The three-dimensional equation for variations in pressure is solved using the approximate boundary condition at the lower edge of the stratosphere derived in a previous work (Dubov, A. S., "On Forecasting in Stratospheric Frontal Zone Regions," *Trudy GGO*, No. 148, 1963):

$$\left(\zeta\frac{\partial}{\partial t}+m_1^2\Delta\right)\frac{\partial z}{\partial t}=-m_1\left[\frac{g}{f}(z,\Delta z)+\beta\frac{\partial z}{\partial x}\right]-\frac{R}{T}(T,z) \qquad (1)$$

Here z is the altitude of the isobaric surface, T is temperature, g is acceleration due to gravity, f is the Coriolis coefficient, R is the gas constant,

Card 1/3

$m_1^2 = \frac{R^2 T}{g t^2} \gamma_a$ is the coefficient of static stability (γ is the dry adiabatic temperature gradient), $\zeta = \frac{p}{p_0}$ is the vertical coordinate in the isobaric system, x is the quasihorizontal coordinate along the meridian from north to south, t is time, Δ and ( ) are the symbols for Laplacian and Jacobian operators respectively. The derivation of this equation is based on a very simple and obvious fact, viz. on stratospheric isothermy. The approximate nature of the expression is due to the assumption that the condition of isothermy is satisfied not only by average temperature distribution, but that individual temperatures are close to isothermal. Empirical data have confirmed the applicability of this equation. The authors solve the well-known problem of Buleyev and Marchuk (N. I. Buleyev, G. I. Marchuk, "On the Dynamics of Large Scale Atmospheric Processes," *Trudy IFA AN SSSR*, No. 2, 1958) on integrating the equation

$$\left(\frac{\partial}{\partial \zeta}\zeta^2\frac{\partial}{\partial \zeta} + m^2\Delta\right)\frac{\partial z}{\partial t} = -m^2\left[\frac{g}{T}(z, \Delta z) + \beta\frac{\partial z}{\partial x}\right] - \frac{R}{T}\cdot\frac{\partial}{\partial \zeta}\zeta(T, z) \qquad (2)$$

with variable upper boundary condition. The solution is compared with the Buleyev-Marchuk results. It is found that there is very little difference between the two

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sets of results at ground level. Differences show up only at large distances along the horizontal. However, for practical purposes these discrepancies have no effect on calculation of $\frac{\partial z}{\partial t}$. The difference becomes more noticeable at higher levels.

Orig. art. has: 3 figures, 32 formulas.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory)

44,55

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 005 OTHER: 000

Card 3/3 GP

L 01516-66 EWT(1)/FCC GW

ACCESSION NR: AT5017067 UR/2531/65/000/168/0021/0026

AUTHOR: Dubov, A. S.; Il'in, B. M.
44 55 44 55

TITLE: Accounting for deviations of the wind from geostrophic in the boundary layer in numerical forecasting

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 168, 1965. Chislennyy analiz i prognoz pogody (Numerical analysis and weather forecasting) 21-26

TOPIC TAGS: geostrophic wind, weather forecasting, wind velocity
44,55

ABSTRACT: A model for the coefficient of turbulent interchange is used in calculations of the wind in the boundary layer. According to this model, the coefficient increases linearly up to a certain altitude and then remains constant. The parameters of the model are determined from data on the geostrophic wind and the roughness of the underlying surface (Laykhtman, D. L., "Physics of the Atmospheric Boundary Layer," *Gidrometeoizdat*, Leningrad, 1961) using the equation for balance of turbulent energy and the relationship between wind velocity and the coefficient of interchange at a height of one meter. Calculated values for the wind at the vane level

Card 1/2

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ACCESSION NR: AT5017067

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are compared with weather map data. Geostrophic vorticity and temperature advection are compared with the advections of these same factors with regard to wind in the boundary layer. A preliminary conclusions is made that the proposed calculation is most effective for stable wind conditions and high wind velocities. Orig. art. has: 1 figure, 1 table, 9 formulas.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory)

44,55

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 008 OTHER: 000

Card 2/2 GP

VOL'FSON, I.S.; ARAMYAN, Ye.S.; DUBOV, A.V.

Obtaining sulfolene. Neftoper. i neftekhim. no. 4:35-37 '64.
(MIRA 17:5)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut, g. Bugul'ma.

DUBOV, A.V.

Peculiarities in the clinical aspects of tick-borne encephalitis in districts of the Kuznetsk Basin with differing components in the population. Vop.virus 2 no.6:351-354 N-D '57. (MIRA 13:5)

1. Klinika nervnykh bolezney Novosibirskogo meditsinskogo instituta.

(KEMEROVO PROVINCE--ENCEPHALITIS)

DUBOV, A.V.

Quinacrine and serumtherapy in the acute stage of tick-borne encephalitis; data from Kemerovo Province. [with summary in French] Zhur.nevr i psikh. 58 no.2:198-199 '58. (MIRA 11:5)

1. Klinika nervnykh bolezney (zav. - prof. D.T. Kuimov) Novosibirskogo meditsinskogo instituta.

(ENCEPHALITIS, EPIDEMIC, ther.
quinacrine & serother. (Rus))
(QUINACRINE, ther. use,
encephalitis, epidem., with serother. (Rus))

KUIMOV, D.T.; DUBOV, A.V.

Amyotrophic lateral sclerosis as a vernal encephalitis syndrome; on the anniversary of the discovery and study of vernal encephalitis by Soviet scientists. Zhur.nevr.i psikh. 58 no.3:282-287 '58. (MIRA 13:3)

1. Kafedra nervnykh bolezney (zaveduyushchiy - prof. D.T. Kuimov) Novosibirskogo meditsinskogo instituta.

(AMYOTROPHIC LATERAL SCLEROSIS, etiol. & pathogen.
Russian tick-borne encephalitis (Rus))
(ENCEPHALITIS, EPIDEMIC, manifest.
amyotrophic lateral sclerosis in Russian tick-borne encephalitis (Rus))

DUBOV, A.V.

Virological diagnosis of tick-borne encephalitis by the tissue culture method. Vop. virus 5 no.4:412-415 Je-Ag '60. (MIRA 14:1)

1. Kafedra mikrobiologii meditsinskogo instituta, Novosibirsk.
(ENCEPHALITIS) (TISSUE CULTURE)

DUBOV, A. V.

The use of tissue culture methods for the serological and virological diagnosis of tick-borne encephalitis. Acta virol. (Praha)[Eng]6 no.1: 58-65 Ja '62.

1. Chair of Microbiology, Novosibirsk Medical Institute, Novosibirsk, and Department of Virology, Institute of Experimental Medicine, U.S.S.R. Academy of Medical Sciences, Leningrad.

(ENCEPHALITIS EPIDEMIC diag)

DUBOV, A.V.

Cytopathogenic action of the tick-borne encephalitis virus on human and animal tissue culture cells. Vop. virus 7 no.1:39-43 Ja-F '62. (MIRA 15:3)

1. Kafedra mikrobiologii Novosibirskogo meditsinskogo instituta.

(ENCEPHALITIS)
(TISSUE CULTURE)
(TICKS AS CARRIERS OF DISEASE)

DUBOV, A.V.

Use of the tissue culture method for the differentiation of viruses of the tick-borne encephalitis group. Trudy Irk. NIIEM no. 7:121-126 '62 (MIRA 19:1)

Interference between viruses of the tick-borne encephalitis group and the R group. Ibid.:127-130

1. Iz Novosibirskogo meditsinskogo instituta.

SAKHAROV, A.A., inzh.; MAL'CHENKO, T.V., inzh.; MORKUSHIN, K.V., inzh.; DUBOV, B.G., inzh.; BABICH, L.S., inzh.

Improving the construction of high-capacity open-hearth furnaces at the Cherepovets metallurgical plant. Stal' 25 no.8:694-697 Ag '65. (MIRA 18:8)

DUBOV, B.S.

Relation of input and output values of multicomponent devices. Izm. tekh. no.8:1-4 Ag '65. (MIRA 18:9)

ACC NR: AP6025071 SOURCE CODE: UR/0115/66/000/006/0015/0018

41
B

AUTHOR: Dubov, B. S.

ORG: none

TITLE: Graphoanalytical method of processing measurement results

SOURCE: Izmeritel'naya tekhnika, no. 6, 1966, 15-18

TOPIC TAGS: measuring apparatus, data processing

ABSTRACT: A time-saving graphoanalytical method is suggested for measurement-result processing work; its application to linear and nonlinear input-output relations encountered in instrument calibrations is considered. (1) Linear relation. Parameters n' and C of a straight line described by n = n' + CQ (where Q and n are input and output quantities) are to be determined. The straight line is drawn through experimental points, and deviations of experimental points from the line are plotted in a larger scale in order to determine the mean square error. A numerical example shows that the error in determining C by the above method does not exceed 0.1%. (2) Nonlinear relation. Often the relation can be described by this polynomial:

$n = n' + C_1Q + C_2Q^2 + C_3Q^3 + \ldots + C_kQ^k$. In this case, a monotonous curve is drawn through the experimental points, and again (using tangent techniques) the curve of deviation of points is plotted. Ordinarily, the equation of a second-order parabola is sufficient

UDC: 681.2.088:519.281.2.001.6

ACC NR: AP6025071

for processing measurement results. Orig. art. has: 2 figures, 20 formulas, 1 table.

SUB CODE: 09, 13 / SUBM DATE: none

Card 2/2

DUBOV, D.

Maintenance of machines and tractors during winter. p. 6.

Vol. 6, no. 11, Nov. 1955
MASHINIZIRANO ZEMEDELIE
Sofiya, Bulgaria

So: Eastern European Accession Vol. 5 No. 4 April 1956

SOLOV'YEV, S.P., kand.tekhn.nauk; DUBOV, E.M., inzh.; KOLMOVSKOY, A.A., inzh.

Hermetic industrial buildings with exterior walls of glass reinforced concrete. Prom. stroi. 41 no.2:9-12 F '64. (MIRA 17:3)

DUBOV, E.Ye.

Turbulence in quiescent prominences. Izv.Krym.astrofiz.obser. 12:46-55 '54. (MIRA 13:4)
(Sun--Prominences)

DUBOV, E.Ye.

Automatic guide of the coronograph at the Krym Astrophysical Observatory. Izv.Krym.astrofiz.obser. 13:155-165 '55.
(MIRA 13:4)
(Electronic control) (Astronomical instruments)

DUBOV, E.Ye.

Isotropic turbulence and energy dissipation in quiescent prominences. Izv.Krym.astrofiz.obser. 15:121-129 '55.
(MIRA 13:4)

(Sun--Prominences)

DUBOV, E.Ye.

Abundance of lithium in the sun. Astron.tsir. no.159:11-13 My'55. (MLRA 8:12)
(Lethium)(Spectrum, Solar)

DUBOV, E.Ye.

Instrumental photoeffects in photoelectric spectrophotometry of the sun. Izv.Krym.astrofiz.obser. 16:45-53 '56.
(MIRA 13:4)

(Spectrophotometry) (Spectrum, Solar)

DUBOV, E. Ye. Cand Phys-Math Sci -- (diss) "Special features of the inside movements and luminescence of calm protuberances." Len, 1957. 12 pp 22 cm. (Acad Sci USSR. Main Astronomical Observatory), 100 copies. (KL, 15-57, 104)

SOV/124-58-11-12772

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 121 (USSR)

AUTHOR: Dubov, E. Ye.

TITLE: The Velocity Distribution in a Turbulent Medium and the Contours of the Spectral Lines Emitted by the Nodes of Quiescent Prominences (Raspredeleniye skorostey v turbulentnoy srede i kontury spektral'nykh liniy, izluchayemykh uzlami spokoynykh protuberantsev)

PERIODICAL: Izv. Krymsk. astrofiz. observ., 1957, Vol 17, pp 199-210

ABSTRACT: It is assumed that a normal correlation obtains between the velocities of any pair of points in the turbulent medium. In such a case the velocity-distribution function assumes the form

$$w(v) = B\int_0^1 \frac{(1-R)^{1/2}}{(1-R^2)^{1/2}} \exp\left\{-\frac{v^2}{2\sigma_1^2(1-R^2)}\right\} dR \qquad (1)$$

Here $R = 1 - (ar^{2/3}/2\ \sigma_1^2)$ is the correlation coefficient and σ is the standard deviation of the velocities. Formula (1) has the shape of a Gaussian distribution but drops off more steeply. A

Card 1/2

comparison against this formula was performed for the velocity distribution of clouds of interstellar matter. The agreement was termed satisfactory. The contours of the spectral lines were computed for the case in which the velocity distribution obeys formula (1) with consideration of the thermal velocities of the atoms. The contours differ only little from those computed for a normal distribution. The standard deviation of the turbulent velocities as determined according to the normal distribution is 12-15% smaller than that actually obtaining. In the absence of thermal mobility of the atoms this difference increases to 42%. The selfabsorption effect is also taken into account. Bibliography: 17 references.

S. A. Kaplan

Card 2/2

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Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 11, pp 56-57 (USSR)

AUTHORS: Dubov, E.Ye., Orlova, T.V.

TITLE: On the Differentiation of Flares and Brightenings of Flocculi

PERIODICAL: Solnechnyye dannyye, 1958 (1959), Nr 9, pp 69 - 72

ABSTRACT: For a reliable identification of chromospheric phenomena with flares or brightenings of flocculi, it is suggested, in doubtful cases, to determine the parameter $p = \Delta I/I_0 \Delta t$, where I_0 - is the initial brightness, ΔI - is the change of brightness, Δt - the time lapse from the beginning of heightened brightness to the attainment of the maximum value $I_0 + \Delta I$. Since the brightening of flocculi develops considerably slower than that of flares, while the brightness variation of flares is, as a rule, greater, the values of parameter p for flares and brightenings of flocculi are widely different. The authors suggest that phenomena, for which $p > 0.035$, should be considered as flares.

Card 1/1

R.A. Gal'gayev