

## CONTENTS

### Number 1

Diffuse reflection and transmission of light by an atmosphere with anisotropic scattering . . . . .	<i>V. V. Sobolev</i>	5
The scattering of radiation in the spectral line of the turbulent plasma	<i>S. A. Kaplan, V. N. Tsitovich</i>	21
Nonstationary radiation field in infinite media . . . . .	<i>D. I. Nagirner</i>	31
The radiation of Novae before the light maximum . . . . .	<i>V. V. Leonov</i>	55
On the motion of gas in close binary systems . . . . .	<i>Yu. P. Korovyakovsky</i>	67
The curve of growth for an expanding atmosphere . . . . .	<i>M. A. Arakelian</i>	75
On the expansion of planetary nebulae . . . . .	<i>V. V. Vitgasev</i>	83
Slowly rotating relativistic polytropic models	<i>V. V. Papoyan, D. M. Sedrakian, E. V. Chubarian</i>	97
Spectral observations of Markarian galaxies with ultraviolet continuum	<i>D. W. Weedman, E. Ye. Khachikian</i>	113
Spectrophotometry of the F-stars. IV. Line profiles in the spectra of $\sigma$ Boo, $\nu$ Her and 41 Cyg . . . . .	<i>T. A. Kipper</i>	123
The Andromeda galaxy M 31. I. Preliminary model . . . . .	<i>J. E. Einasto</i>	137
The investigation of the dynamics of triple system by the method of statistic tests. III. Case of components of different masses . . . . .	<i>J. P. Anosova</i>	161
NOTES		
On Salmona's paper on the model of static configuration . . . . .	<i>M. A. Mnatsakanian</i>	169

### Number 2

On some asymptotic formulae in the theory of anisotropic light scattering	<i>A. K. Kolesov, V. V. Sobolev</i>	175
The resonance line radiation transfer from point source in semi-infinite medium	<i>Y. Y. Abramov, A. P. Napartovich</i>	187

On the nonlinear nonstationary problem of radiation transfer in spectral line R. S. Vardanian, N. B. Yengibartian	203
On the relative intensities of the hydrogen lines in the spectra of nebulae V. P. Grinin	213
Models of clusters of point masses with great central red shift G. S. Bisnovaty-Kogan, Z. F. Seidov	243
The spectra of stars in comet-like nebulae . . . . . E. A. Dibay	249
The total line and band absorption in spectra of F-M stars . . M. H. Rodriguez	269
Estimation of intensities of fluctuating component of radio source 3C 2713 at frequencies 86 and 60 MHz T. D. Antonova, V. V. Vitkevitch, V. G. Panajian	283
An estimation of angular dimensions of radio source 3C 48 at 60 MHz from interplanetary scintillations . . . . . V. G. Panajian	291
On the dependence of the spectral index of extragalactic radio sources from flux density . . . . . R. D. Dagkesamanski	297
The construction of stellar system models by numerical experiment T. A. Agekian, A. S. Baranov	305
A model of the distribution of mass in M 31.II . . . . . V. S. Sizikov	317
The masses of cepheids . . . . . I. N. Latyshev	331
NOTES	
About possible nature of short-period variations of the light of the star DQ Her V. I. Taronov	337

## Number 3

Anisotropic light scattering in the atmosphere of finite optical thickness V. V. Sobolev	343
The polychromatic light scattering in a semi-infinite medium . . V. Yu. Terebikh	359
Intensities of hydrogen lines emitted by an optically thick plasma . . V. P. Grinin	371
On the light-curves of flare stars . . . . . G. A. Gurzadian	383
The effect of electron screening on thermonuclear reactions under high densities V. V. Porfiryev, Yu. N. Redcoborodny	393
Slow rotation of white dwarfs and barionic stars V. V. Papagan, D. M. Sedrakian, E. V. Chubarlan	415
On the equilibrium states of the system of gravitating particles G. S. Bisnovaty-Kogan, Y. B. Zeldovich	425
The velocity distribution function for stars of small mass in starclusters V. S. Kaltberda	433
The galaxies with ultraviolet continuum. II . . . . . B. E. Markarian	443

## CONTENTS

673

On the nature of evolutionary effects associated with quasi-stellar radio sources. I . . . . .	<i>M. A. Arakelian</i>	461
On the intrinsic polarization of the Persei radiation	<i>O. S. Shoulov, G. G. Goudkova</i>	477
On the relaxation of stars of flat subsystems of galaxy on spiral structure	<i>L. S. Marochnik</i>	487
<b>NOTES</b>		
Two remarkable flare stars in Pleiades . . . . .	<i>E. S. Parsamian, O. S. Chavushian</i>	503
The photoelectric photometry of the binary star of the Wolf-Rayet type HD 211853	<i>A. A. Guseinzade</i>	503
The ellipticity of slowly rotating configurations . . . . .	<i>Z. F. Seidov</i>	504
<b>N u m b e r 4</b>		
Transfer of resonance radiation in the optically thick layer . . . . .	<i>D. I. Nagirner</i>	507
Line formation in magnetic field. I. Scattering matrix . . . . .	<i>H. Domke</i>	525
The kinetic theory of neutrinos in the anisotropic cosmological models	<i>A. G. Doroshkevich, Y. B. Zeldovich, I. D. Novikov</i>	539
On the relativistic generalized theory of gravity. II. Baryon configurations	<i>G. S. Sahakian, M. A. Mnatsakanian</i>	555
Galaxies with ultraviolet continuum. III. . . . .	<i>B. E. Markarian</i>	581
On the central condensations in Sa galaxies . . . . .	<i>K. A. Sahakian</i>	593
On the nature of evolutionary effects associated with quasi-stellar radio sources. II. . . . .	<i>M. A. Arakelian</i>	603
The investigations of the influence of radiation on the convection in polytropic atmosphere . . . . .	<i>N. S. Petruchin</i>	615
The rotating systems of gravitating bodies in quasi-stationary state	<i>T. A. Agekian, I. N. Mitchels</i>	623
Formation of binary systems in triple encounters	<i>T. A. Agekian, J. P. Anosova, V. P. Bezgubova</i>	637
<b>NOTES</b>		
Polytropic models by the relativistic generalized theory of gravity	<i>M. A. Mnatsakanian</i>	645
The cosmological solutions of the Jordan-Dicke field equations and the observed data . . . . .	<i>A. V. Manjos</i>	649
Interaction of vortex and potential motions in relativistic hydrodynamics. I	<i>A. D. Chernin, E. D. Eidelman</i>	654
Interaction of vortex and potential motions in relativistic hydrodynamics. II	<i>A. D. Chernin</i>	656