

BIO DATA OF PROF. A.K. SAXENA
(PHYSICS - DEPARTMENT)

①

BIO DATA

- 1- Name and Designation : Ajay Kumar Saxena, (Professor and Head, Department of Physics)
- 2- Father's Name : Late Shri Om Prakash
- 3- Date and Place of Birth : 15-01-1960, Delhi
- 4- Home Address : KRISHNAYAN, 2/13/587 Nehru Nagar, Behind Jyoti
Sr. Sec. School, Near Rajiv Rotary Park Rewa (M.P.) 486001, India
- 5- Telephone No. : 7898621575, 8602974697
- 6- Email Id : drajaykumar15011960@gmail.com

7- Education Qualifications:

Exams	Name of Board University	Year of Passing	Percentage of Marks / Division/Grade	Subjects
Intermediate /Higher Secondary	CBSE Delhi	1975	58.5% (2 nd)	Physics, Chemistry, Bio, Adv. Maths, English
BSc (Hons.)	Delhi University (K.M. College)	1979	60.55% (1 st)	Physics Honours (Chemistry & Maths as subsidiary subjects)
MSc.	Delhi University	1981	69% (1 st)	Physics
M. Tech	IIT Delhi	1984	74% (1 st)	Energy Studies
Ph.D.	B.H.U. Varanasi	1996	N.A.	Physics (High Temperature superconductors)

8- Post Held

Designation	Department & University	Dates		Grade pay
		From	To	
Lecturer	Physics, APS University Rewa (M.P.)	27-11-1996	27-11-2000	Date of confirmation 27-11-1998
Sr. Lecturer	Physics, APS University Rewa (M.P.)	27-11-2000	27-11-2005	
Reader	Physics, APS University Rewa (M.P.)	27-11-2005	27-11-2008	1200-420-18300
Associate Professor	Physics, APS University Rewa	27-11-2008	03-07-2016	37400-67000+AGP

	(M.P.)			9000
Professor (Stage-5)	Physics, APS University Rewa (M.P.)	04-07-2016 (w.e.f. 02-09- 2012)	Till date	51720+AGP 10000

9- Teaching Experience:

P.G. (MSc. Classes) : 26 years 4 months
M. Phil. : 20 years

10- Research Experience (excluding years spent in Ph.D.) : 19 years

11- Fields of Specialization: Materials Sciences, Space Science

12- Academic Staff College : Orientation/Refresher Course Attended:

Name of the course /Summer School	Place	Duration	Sponsoring Agency
Refresher Course in Physics	APS University Rewa	Jan. 4, 1999 to Jan. 25, 1999	Physics Dept. APSU Rewa
School on Cosmology	HRI Allahabad	Dec. 17, 2001 to Dec. 31, 2001	HRI Allahabad
UGC Orientation Course	DR. H.S. Gour Univeristy Sagar (M.P.)	Dec. 8, 2003 to Jan. 4, 2004	UGC

13- Teaching Activities (Lectures, Contact Hours, Practicals, Tutorials)

S. No.	Course	Mode of Teaching	Hours per week allotted	% of Classes taken
1.	M.Sc.	Lecture	6L+4P+1T	98%
2	M. Phil.	Lecture	4L+2C	N.A. Now

14- Use of participatory teaching updating of subject content, Course improvement etc:

- (i) Framed earlier, syllabi of Solid State Physics, Electromagnetic Theory, and Quantum Mechanics.
- (ii) Member, Board of Studies for Physics, APSU Rewa

15- Other duties performed :

Exam invigilation, paper setting, evaluation of Answer books, as moderator, and as exam superintendent.

16- Professional Development related Activities:

- (i) Life Member of Indian Physics Association
- (ii) Member of Department Academic Committee
- (iii) Chairman Board of Studies.

17- Authored quality Physics Books (14) published by renowned Indian publishers and one from Springer Verlag, Germany (List attached)

17- Books Authored by Dr. A.K. Saxena

(A) Text/Reference Books Published by International Publishers

- (1) High Temperature Superconductors, 2nd Edition, Springer Verlag, Heidelberg, Germany
ISSN : 0993-033X, Single Author (2012)
(1st Edition Published In 2010)
- (2) An Introduction to Thermodynamics and Statistical Mechanics 2nd Edition, Alpha Science International Ltd. Oxford U.K.
ISBN : 978-1-78332-204-6, Single Author (2016)
(1st Edition Published In 2010)
- (3) Electromagnetic theory and Applications, Alpha Science International Ltd. Oxford U.K.
ISBN : 978-1-84265-500-9, Single Author (2009)
- (4) Heat & Thermodynamics, Alpha Science International Ltd., Oxford U.K.
ISBN : 978-1-84265-902-1, Two Authors (2014)
- (5) An Introduction to Electronics, Alpha Science International Ltd., Oxford, U.K.
ISBN : 978-1-84265-860-4, Single Author (2014)

(B) Subject Books by National Level Publishers:

- (6) Principles of Modern Physics, 4th Edition, Narosa Publishing House, Delhi
ISBN : 978-81-8487-362-7, Single Author (2014)
(Third Edition 2010)
- (7) Solid State Physics, Trinity Press (Laxmi Publications), Delhi, Third Edition,
ISBN : 978-93-5138-052-85, Single Author (2014)
- (8) Mathematical Physics, Narosa Publishing House Delhi,
ISBN : 978-81-8487-336-8, Single Author (2015)
- (9) Atomic and Molecular Spectra & Lasers, 2nd edition, CBS Publisher & Distributers, Delhi
ISBN : 978-81-239-2509-7, Single Author (2015)
(First Edition : 2009)
- (10) Digital Electronics, CBS Publisher & Distributers, Delhi,
ISBN : 978-81-239-2374-1, Single Author (2014)
- (11) Classical Mechanics, CBS Publisher & Distributers, Delhi
ISBN : 978-81-239-1896-9, Single Author (2010)
- (12) Text Book of Quantum Mechanics, 2nd Edition, CBS Publisher & Distributers, Delhi
ISBN : 978-81-239-1899-0, Single Author (2010)
(First Edition 2007)
- (13) Quantum Mechanics, Concepts and Applications, I.K. International Publishing House Pvt. Ltd. New Delhi.
ISBN : 978-93-86768-89-6, Single Author (2020)
- (14) Mechanics, Laxmi Publications Delhi
In Press (2018)
- (15) Condensed Matter Physics, I.K. International Publishing House Pvt. Ltd. New Delhi
(Accepted in May, 2019, In Press)

18- AWARDS

- (1) Life Time Golden Achievement Award (2021) conferred by World's Leading Biographical specialists, Bharat Rattan Publishing House Delhi
- (2) National Gold Medallist Padma Award (2022) conferred by World's most leading Biographical Specialists Bharat Rattan Publishing House, Delhi.
(Copies attached)

19- List of Publications : (A) (Materials Science)

- (1) Thermal Test Procedure for Box- Type Solar cookers,
S.C. Mullick, T.C. Kandpal and A.K. Saxena
Solar Energy Vol. 39, No. 4 pp 353-360, (USA) 1987. Pergamon Journals Ltd.
- (2) On the Formation of Y-Ba-Cu-O Super- Conducting Thin Films
A. K. Saxena , S.P.S. Arya, B.Das, A.K. Singh, R.S. Tiwari and O.N. Srivastava
Solid State Communications, Vol 66, No. 10, pp 1063-1065 (Great Britain) 1988, Pergamon Press.
- (3) Formation of Y-Ba-Cu-O Thin films by spray pyrolysis
A.K. Saxena, B. Das, S.P.S. Arya, P. Mandal. C.C. Tripathi, A.K. Singh, R.S. Tiwari and O.N. Srivastava
Reviews of Solid State Science, Vol 2, No. 2 &3, pp497-502 (world scientific), 1988
- (4) Preparation of Y-Ba-Cu-O and Bi-Sr- Ca-Cu-O superconducting films by conventional techniques
K.K. Verma, A.K. Saxena, S. Rastogi, R.S. Tiwari and O.N. Srivastava
Bulletin of Materials Science, Vol. 14, No. 2, pp 493-499 (India)1991
- (5) Preparation of highTc superconducting Thin films of Tl-Ca-Ba-Cu-O by the chemical spray pyrolysis technique
K.K. Verma A. K. Saxena, A.K. Singh. R.S. Tiwari and O.N. Srivastava.
Superconductor Science and Technology, Vol.5, pp163-167, (U.K.) 1992
- (6) Studies on the RF SQ UID effect in Tl-Ca-Ba-Cu-O thin films prepared by the spray pyrolysis technique.
Neeraj Khare, A.K. Gupta, A. K. Saxena, K.K. Verma and O.N. Srivastava
Superconductor Science and Technology Vol.7, pp402-406 (U.K.), 1994
- (7) The synthesis of Tl-Ba-Ca-Cu-O- (Ag_y) HTSC films through spray pyrolysis and evaluation of the influence of silver on the critical current density
H.K. Singh, A.K. Saxena and O.N. Srivastava
Superconductor Sceince and Technology Vol.8, pp448-454 (U.K.) , 1995
- (8) The formation and characterization of Tl doped Hg-Ba-Ca-Cu-O superconducting fimls synthesized through spray pyrolysis
H.K. Singh, A.K. Saxena and O.N. Srivastava
Physica C, Vol. 262, pp 7-12, (North Holland, Elsevier) 1996.
- (9) Effect of Ag doping on the transition temperature and critical current density of $Hg_{1-x} Tl_x Ba_2 Ca_2 Cu_3 O_{8+\delta}$ films fabricated through spray pyrolysis
H.K. Singh, A.K. Saxena and O.N. Srivastava
Physica C, Vol. 273, pp 181-188 (North Holland, Elsevier) 1997

B- Cosmic Rays and Space Science Papers in Journals

- (10) Forbush Decreases in Relation with and Partial Halo coronal Masss Ejection and Storms in Solar Wind Plasma Parameters.
P.L. Verma, G.P. Agrawal, R.J. Prajapati, A. Vishwakarma, A.Saxena, S.G. Singh (2009)
Proceedings of 31st ICRC, LODZ.
- (11) Effect of coronal index (Ap) on Cosmic Ray Intensity variation during solar Cycles 22, 23 and Ascending phase of Recent Solar Cycle 24.
A.K. Saxena, S.G. Singh. Neresh Dwivedi, Ashok Vishwkarma,
Current Science 52, 15-152 (India), (2010)
- (12) Association of Solar Flux (2800 MHz) & Cosmic Ray Intensity for solar Cycle 22, 23 and Ascending Phase of Recent cycle 24.
A.K. Saxena, S.G. Singh, Ashok Vishwakarma (2010)
Journal of Radio and Space Physios 40. 189-190 (2010)

- (13) Study of anisotropic variation of cosmic ray intensity with solar activity
C.M. Tiwari, Devendra Sharma, Lalji Tiwari, A.K. Saxena, D.P. Tiwari
Natural Sciences 32, 101-103, 2011, China (2011)
- (14) Study of time-lag in long term cosmic ray intensity variation with sunspot number
S.G. Singh, A. K. Saxena, R.P. Singh, R.S. Gupta
Ultra Scientist, Vol. 24 (3)B, 452-456, (2012)
- (15) Variation of geomagnetic disturbances (A_p) and plasma electric field (V.B.) with sunspot number (R_z) during stream time for solar cycle 22 and 23.
S.G. Singh, A. K. Saxena, R.P. Singh, Neeresh Dwivedi
Indian Journal of Applied Research Vol. 1(12) (2012)
- (16) Association between solar wind streams and cosmic ray intensity variation during 1996-2001.
S.G. Singh, A. K. Saxena, Ashok Vishwakarma
International Journal of current material Science Vol. 1 (2) (2013)
- (17) Study of high speed solar wind streams events and proton density during solar cycle 22 and 23
S.G. Singh, A. K. Saxena, R.P. Singh, R.S. Gupta
Acta Ciencia indica Vol XXXVII No. 4, 393-395, (2011)
- (18) Correlative study of geomagnetic storms with sunspot number in solar cycle 23. S.G. Singh, A.K. Saxena, Gopal Narayan Shrivastava
Indian J. Sci. Res. 2 (5) 18-22, (2012)
- (19) Long-term variation of solar indices, geomagnetics, and cosmic ray intensities.
S.G. Singh, A.K. Saxena, Sangeet Kumar Tiwari
International Journal of Multi Disciplinary Educational Research III, (1) (2012)
- (20) Study of long term variation of cosmic ray intensity with interplanetary magnetic field.
S.G. Singh, A.K. Saxena, Ashok Vishwakarma, K.L. Jaiswal
European Scientific Journal Vol.8, No. 27, 159-161, (2012)
- (21) Correlative study of solar wind streams velocity and cosmic ray intensity variations during 2002-2007.
S.G. Singh, A.K. Saxena, R.P. Singh, Y.K. Singh
International Journal of Science, environment and Technology, Vol.2 (1), 56-59, (2013)
- (22) Effect of Geomagnetic Disturbance Index (A_p) on cosmic ray intensity variation during solar cycles 22 & 23
K.L. Jaiswal, S.G. Sing, A.K. Saxena
Vidhya Journal of Basic Seicens, Vol.-2 (G), 21-22 (2014)
- (23) Variability of solar cycles 22-24 in relation to cosmic ray intensity and geomagnetic parameters.
Prithvi Raj Singh, A.K. Saxena, and C.M. Tiwari
International Journal of Current Research, Vol.7, issue 09, pp 20045-20048 (2015)

- (24) Effect of pH value on compositional and other properties of chemical Bath Deposited CdS films
S.K. Kokate, A.K. Saxena, S. Katare, A.S. Mehta, S.K. Mahajan & J. Parashar
International Conference on Recent Advances in solar Energy conversion systems, M.A.N.I.T.
Bhopal, M.P. (India) 2002
- (25) Long Term Cosmic Ray variability during solar cycle 22 to 24
Anand Prakash Tiwari, A.K. Saxena, C.M. Tiwari, and P.K. Sharma
Divya Shodh Samiksha (An Int. Refereed Research Journal) ISSN 2394-3807, E-ISSN 2394-3513,
2015.
- (26) Study of Geomagnetic Storm Observed during March 1989.
Anand Prakash Tiwari, Saxena A.K., and Tiwari C.M.
International Journal of Current Research Vol.8 ISSN 02, pp 26098-26102, ISSN:0975-833X,
2016
- (27) Variation in Solar Cycle 22, 23 & 24 and their Effect on Earth's Climate
Prithvi Raj Singh, Chandramani Tiwari, Ajay Kumar Saxena
International Journal of Astronomy and Astrophysics Vol. 6 pp 8-13, 2016.
- (28) Variation of Solar Activity Parameters with Cosmic Ray Intensity and Comparison of Solar cycle
23-24
Shabir Ahmad, P.R. Singh, A.K. Saxena, and C.M Tiwari, IJSRSET Vol.3 Issue 8, ISSN: 2394-
4099, pp324, 2017
- (29) Cosmic Ray Associated with coronal Index and solar Flare Index during Solar Cycle 22-23,
Prithvi Raj Singh, Shabir Ahmad, A.C. Pandey, Ajay Kumar Saxena, Chandramani Tiwari and
A.P. Mishra
International Journal of Astronomy and Astro Physics, 7 pp162-173, ISSN 2161-4717, 2017.
- (30) Solar Wind Plasma associated with $Dst < -50nT$ during solar cycle 24.
P.R. Singh, S Ahmad, B. Nigam, P.K. Chamedia, A.K. Saxena, and C.M Tiwari.
International Journal of Physical Sciences, Vol. 12(21) pp. 280-285, ISSN 1992-1950, 2017.
- (31) Mid-term periodicities and heliospheric modulation solar cycles 22-23.
Prithvi Raj Singh, A.K. Singh, and C.M. Tiwari,
Journal of Astrophysics and Astronomy, 39:20 (Indian Academy of Sciences), 2018.
- (32) Study of CME events and their influence to the Earth's Environment during the event of June
2015.
Anand Prakash Tiwari, A.K. Saxena, Harish Kumar Mishra, S.G. Singh & Achyut Pandey,
International Journal of Innovative Knowledge concepts 7(3), ISSN: 2454-2415, 2019.
- (33) Correlative Analysis of Long Term Cosmic Ray Variation in Relation with Interplanetary
Magnetic Field,
Sarver A. Khan, A.K. Saxena, C.M. Tiwari Physics and Applied Sciences, Vol. 7 Issue 2, pp66-
70, E-ISSN: 2348-3423, 2019
- (34) Comparative study of Odd and Even solar cycles,
Sarver Ahmad Khan, Niyaz Ahmad, Shabir Ahmad, C.M. Tiwari, A.K. Saxena, A.P. Mishra,
G.N. Singh, K.L. Jaiswal
International Journal of Scientific Research in Physics and Applied Sciences, Vol. 7 Issue 5, pp11-
15 (E-ISSN : 2348-3423), 2019
- (35) Cosmic Ray Intensity Variation in relation to solar activity parameters for solar cycle 21-24.
Sarver Ahmad Khan, Niyaz Ahmad, A.K. Saxena, G.N. Singh, K.L. Jaiswal and C.M. Tiwari,
International Journal for Innovative Research in Multi disciplinary Field, Vol.6 Issue-2, pp 26-33
(ISSN:2455-0620), 2020

20. Ph.D. Awarded to 7 Students