

Contents

	<i>pages</i>		
<i>List of Contributors</i>	ix	6	Global Configuration and Seasonal Variations of Saturn's Magnetosphere
<i>List of Reviewers</i>	xiii		126
			NORBERT KRUPP, PETER KOLLMANN, DONALD G. MITCHELL, MICHELLE THOMSEN, XIANZHE JIA, ADAM MASTERS AND PHILIPPE ZARKA
1 Introduction to <i>Saturn in the 21st Century</i>	1	7	Saturn's Aurorae
KEVIN H. BAINES, F. MICHAEL FLASAR, NORBERT KRUPP AND TOM STALLARD			166
			TOM STALLARD, SARAH V. BADMAN, ULYANA DYUDINA, DENIS GRODENT AND LAURENT LAMY
2 The Origin and Evolution of Saturn, with Exoplanet Perspective	5	8	Saturn's Ionosphere
SUSHIL K. ATREYA, AURÉLIEN CRIDA, TRISTAN GUILLOT, JONATHAN I. LUNINE, NIKKU MADHUSUDHAN AND OLIVIER MOUSIS			196
			LUKE MOORE, MARINA GALAND, ARVYDAS J. KLIORE, ANDREW F. NAGY AND JAMES O'DONOGHUE
3 The Interior of Saturn	44	9	Saturn's Variable Thermosphere
JONATHAN J. FORTNEY, RAVIT HELLED, NADINE NETTELMANN, DAVID J. STEVENSON, MARK S. MARLEY, WILLIAM B. HUBBARD AND LUCIANO IESS			224
			DARRELL F. STROBEL, TOMMI T. KOSKINEN AND INGO MÜLLER-WODARG
4 Saturn's Magnetic Field and Dynamo	69	10	Saturn's Seasonally Changing Atmosphere: <i>Thermal Structure, Composition and Aerosols</i>
ULRICH R. CHRISTENSEN, HAO CAO, MICHELE K. DOUGHERTY AND KRISHAN KHURANA			251
			LEIGH N. FLETCHER, THOMAS K. GREATHOUSE, SANDRINE GUERLET, JULIANNE I. MOSES AND ROBERT A. WEST
5 The Mysterious Periodicities of Saturn <i>Clues to the Rotation Rate of the Planet</i>	97	11	The Global Atmospheric Circulation of Saturn
JAMES F. CARBARY, MATTHEW M. HEDMAN, THOMAS W. HILL, XIANZHE JIA, WILLIAM KURTH, LAURENT LAMY AND GABRIELLE PROVAN			295
			ADAM P. SHOWMAN, ANDREW P. INGERSOLL, RICHARD ACHTERBERG AND YOHAI KASPI

12	Saturn's Polar Atmosphere	337	14	The Future Exploration of Saturn	417
	KUNIO M. SAYANAGI, KEVIN H. BAINES, ULYANA DYUDINA, LEIGH N. FLETCHER, AGUSTÍN SÁNCHEZ-LAVEGA AND ROBERT A. WEST			KEVIN H. BAINES, SUSHIL K. ATREYA, FRANK CRARY, SCOTT G. EDGINGTON, THOMAS K. GREATHOUSE, HENRIK MELIN, OLIVIER MOUSIS, GLENN S. ORTON, THOMAS R. SPILKER AND ANTHONY WESLEY	
13	The Great Saturn Storm of 2010–2011	377			
	AGUSTÍN SÁNCHEZ-LAVEGA, GEORG FISCHER, LEIGH N. FLETCHER, ENRIQUE GARCÍA-MELENDO, BRIGETTE HESMAN, SANTIAGO PÉREZ-HOYOS, KUNIO M. SAYANAGI AND LAWRENCE A. SROMOVSKY				
				<i>Index</i>	442
				<i>Color plates can be found between pages 210 and 211</i>	