

# Contents

<b>1 Foreword</b> .....	1
<b>2 Childhood and Education</b> .....	9
A Family of Inventors .....	9
The Bank Employee and Secondary Education.....	11
Higher Education and Early Travels .....	13
Determination of the Magnetic Equator in Peru .....	14
With the Schneider Family at Le Creusot, Marriage, and His Doctoral Thesis.....	14
<b>3 Spectral Analysis and the Telluric Lines</b> .....	21
The Fine Skies of Italy and Janssen’s Spectroscopes .....	22
The Faulhorn and Lake Geneva .....	26
The Gasworks at La Villette .....	27
The Trani Eclipse .....	29
The Study of Volcanoes and the Invention of the Brush Thermometer .....	30
Water Vapor in the Martian Atmosphere and Life in the Universe.....	31
Research Trips or Tourist Travels?.....	31
<b>4 Janssen and the Solar Flames: The Key Eclipse of 1868</b> .....	35
Preparations.....	35
Observation of the Eclipse .....	37
The Discovery of the “Prominence Method” .....	38
Problems of Communication .....	39
Norman Lockyer Enters the Picture.....	40
The Stay in the Himalaya.....	41
The Principle of the Spectrohelioscope .....	44
Janssen and the Helium that He Did Not Discover.....	45
<b>5 The Eclipse of 1870, Balloons, and Patriotic Missions</b> .....	49
Departure from Besieged Paris on Board the Balloon <i>Le Volta</i> .....	49
The Mission to the Government.....	51

The Scientific Mission and the Invention of the Aeronautical Compass .....	52
The Stay at Bordeaux .....	53
Janssen Awarded a Doctorate at Edinburgh .....	56
Janssen and Aeronautics .....	56
<b>6 Janssen and the Sun in Its Majesty: The Eclipse of 1871</b> .....	63
The Man Mad About the Sun and his Friend Jules Simon .....	63
En Route for India .....	64
The Choice of Site and Preparations .....	65
The Observation .....	66
Henriette and the Todas .....	68
<b>7 Janssen and the Cinema: The Transit of Venus of 1874 and the Revolver Photographique</b> .....	73
The Problem to be Solved During the Transit of Venus .....	73
Nineteenth-Century Aspirations .....	74
Janssen and His Revolver .....	75
The British and Their “Janssens” .....	78
The Trip to Japan .....	80
Observations and Results .....	82
The Eclipse of 8 April 1875 in Siam .....	83
The Revolver’s Future .....	83
<b>8 The Foundation of the “Paris Observatory for Physical Astronomy” ... Located in the Meudon Estate</b> .....	89
Janssen’s Request .....	89
Agreement by the Académie des Sciences .....	90
The Decree of 1875 .....	93
The Choice of Meudon .....	94
Routine Observations of the Sun and the Rumford Medal .....	94
The Law of 1879 .....	97
The Great 83-cm Refractor .....	98
The Large 1-m Reflector .....	100
The Laboratory for the Analysis of Gases .....	102
The Director’s Accommodation .....	104
<b>9 Janssen, the Photographic Technician</b> .....	109
Venus Was the Turning Point .....	109
Solar Photography in 1874 .....	110
Janssen and Prazmowski’s Solar Photographic Refractor .....	111
Granulation and the Non-existent “Janssen’s Photospheric Network” .....	113
The Scientist’s Retina .....	115

The Method of Stellar Circles..... 116

The Great Comet of 1881 ..... 116

The Transit of Venus in 1882..... 117

Janssen’s *Atlas of Solar Photographs* ..... 119

**10 From Caroline Island to Washington**..... 123

    Westward Ho! – for the Antilles ..... 123

    The Isthmus of Panama and the Marquesas..... 125

    The Eclipse of 9 May 1883 at Caroline Island ..... 125

    Tahiti, the Sandwich Islands, and America..... 127

    Planet Henrietta..... 128

    A Dwelling at Père-Lachaise ..... 129

    The Washington Conference of 1884..... 129

    The Battle Over the Meridian ..... 132

    The Non-existent Battle Over the “Metric System” ..... 133

**11 Janssen and Edison’s Phonograph** ..... 137

    The Meeting at Bath..... 137

    The Phonograph Under the Dome (*of the Académie Française*)..... 138

    The Phonograph at the Marmite ..... 140

    The Phonograph at the Exhibition of 1889..... 141

**12 The Saga of the Observatory on the Summit of Mont Blanc**..... 143

    Altitude Is Essential ..... 143

    The Unveiling of the Monument to Saussure ..... 143

    The Ascent to the Grands-Mulets Refuge in 1888..... 145

    The First Ascent to the Summit in 1890 ..... 148

    The Project, the Sponsors, and Gustave Eiffel..... 150

    The Observatory’s Inauguration in 1893 ..... 152

    The Observatory in Action..... 156

    The End of the Venture ..... 159

**13 Literary Salons and Educational Problems**..... 163

    The Salon of Mme Adam..... 163

    Janssen and His Friend Henner..... 164

    Janssen and Education ..... 166

    Janssen and the Académie Française ..... 167

**14 Janssen and Communication** ..... 173

    The Société Philomathique and the Académie Des Sciences ..... 173

    The Meetings of the British Association for the Advancement  
of Sciences and Friends on the Other Side of the Channel..... 174

    The French Association for the Advancement of Science..... 178

    Conferences on Photography ..... 180

The Société Astronomique de France and the Société  
de Géographie ..... 181

Inaugurations, Prize-Givings, Banquets, and Funerals ..... 183

Publications ..... 186

Relationships with Fellow Astronomers and Colleagues ..... 188

**Epilogue** ..... 193

    The Last Ascent: Vesuvius in a Sedan-Chair ..... 193

    The Last Eclipse ..... 194

    The Last Farce ..... 195

    The Last Family Photo ..... 197

    December 23, 1907 ..... 198

    Passing into the Land of Memory ..... 199

**Chronology** ..... 201

**Bibliography** ..... 207

**Index** ..... 213



<http://www.springer.com/978-1-4614-0696-9>

The Astronomer Jules Janssen  
A Globetrotter of Celestial Physics  
Launay, F.  
2012, XXII, 222 p., Hardcover  
ISBN: 978-1-4614-0696-9