Sciamachy - Exploring The Changing Earths Atmosphere

8.6;5.6Polarisation;86 8.7;5.7Radiometric Calibration;89 8.8;5.8Optical Performance Monitoring;90 8.9;References;91 9;Chapter 6: SCIAMACHY In-Orbit Operations and Performance;92 9.1;6.1 Commissioning Phase;92 9.1.1;Engineering Tasks;93 9.1.2;Measurement Tasks;94 9.1.3;The SODAP Sequence;94 9.1.4;The Validation Sequence;95 9.2;6.2 Routine Operations Phase;95 9.2.1;Operation Change Requests and Final Flight Configuration;97 9.3;6.3 Optical Performance;98 9.3.1;Optical Throughput;98 9.3.2;Scan Angle Dependence;100 9.3.3;Light Leak in Channel 7;101 9.3.4;Spatial Stray Light in Limb Measurements;102 9.4;6.4 Thermal Performance;103 9.4.1;Ice on Detectors 7 and 8;103 9.4.2;Decontamination;103 9.4.3;Active Thermal Control;104 9.4.4;Thermal Control;105 9.5;6.5 Line-of-Sight Performance;108 9.5.1;Scanners;108 9.5.2;Extra Mispointing;109 9.5.3;Tangent Height;109 9.6;6.6 Mission Extension;110 9.6.1;Orbit Modification;110 9.6.2;Impact on Instrument Performance;112 9.7;References;112 10;Chapter 7: From Radiation Fields to Atmospheric Concentrations - Retrieval of Geophysical Parameters;113 10.1;7.1 Radiative Transfer in the Earth s Atmosphere;114 10.2;7.2 Nadir Trace Gas Retrieval Schemes;116 10.2.1;DOAS Retrieval;116 10.2.2;Modified DOAS Methods;121 10.3;7.3 Cloud and Aerosol Retrieval;121 10.3.1;Cloud Parameters;122 10.3.2;Cloud Fraction (CF);123 10.3.3;Cloud Top Height (CTH);125 10.3.4;Cloud Geometrical Thickness (CGT);125 10.3.5;Cloud Optical Thickness (COT) and Effective Radius (Reff,cld);125 10.3.6;Cloud Phase Index (C EAN/ISBN : 9789048198962 Publisher(s): Springer, Berlin, Springer Science & Business Media Format: ePub/PDF Author(s): Gottwald, Manfred - Bovensmann, Heinrich