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INTERBALL PROJECT, VACCUUM UV EXPERIMENT UVSIPS –SOME SCIENTIFIC,HARDWARE,SOFTWARE ASPECTS AND RESULTS

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A brief presentation of goals, tasks of Interball project and the corresponding methodology are presented.The choice of vacuum UV range of auroral discrete shapes emissions, the method of measurement, hardware and software decisions as well as some results proving the possibility the morphology of magnetosphere to be studed by using the relationship of UV emissions of oxygen and nitrogen are shown. The fact the UV emissions can not reflect and penetrate the studed layer in auroral ionosphere, the possibility to provide day and night measurements, suchlike providing information about the casp and other scientific aspects are shown.The large object(layer) and crossing 4 times by day the radiation belts determine the choice of slit-less optics ,the scanner and rad- hard components, respectively.We reach high reliability of instrument operation by schematic decisios using majority logical circuits,dubling of telemetric block. In addition to the hardware aspects mentioned above we ameliorate the reliability by special algoritms for the scanning mechanism, calibration on flight and proper data format for the scientific data and service information provided by instrument UV spectrometer UVSIPS via the Auroral satellite telemetry.The derived results are also presented to illustrate the successful functioning on flight and successive data processing , co-orelated with other experiments on board the Auroral satellite and ground based stations.