

THE EXPERIMENT FOR PLASMA MEASUREMENTS ON THE BEPI-COLOMBO PO SPACECRAFT WITH PICAM INSTRUMENT

**Koinash G.V.¹, Vaisberg O.L.¹, Berthelier J.-J.², Torkar K.³,
F.LebLANC⁴, Smirnov V.N.¹, AvANOV L.A.⁵**

¹*Space Research Institute, Profsoyuznaya 84/32, Moscow 119997, Russia*

²*CETP, 4 Avenue de Neptune, 94100 Saint-Maur, France*

³*Institut für Weltraumforschung der AW, Schmiedlstrasse 6, 8042 Graz,
Austria*

⁴*Service d'Aéronomie du CNRS, Verrières-Le-Buisson, France*

⁵*National Space Science and Technology Center, NASA Marshall Space
Flight Center, Space Science Department /SD50, 320 Sparkman Drive,
Huntsville, AL 35805.*

We developed a novel type of panoramic mass-analyzer of ions PICAM, that is based on the earlier proposed instantaneous 2 feeding optics. This instrument can be used for investigation of space plasmas, specifically for the solar wind interaction with planetary bodies. These measurements are crucial for investigation of planetary atmospheres evolution, and may be used for measurements of surface composition. The mass of this instrument is slightly above 1kg. PICAM instrument using this electro-optics outlay is included in SERENA suite of ESAs BepiColombo planetary orbiter. PICAM will provide 3-dimensional velocity distributions of ions near Mercury. The goal of experiment is to study the solar wind-Mercury interaction, surface sputtering and transport of planetary ions.