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Titulo: Towards a new model of AGN: hints of an ionized outflowing clumpy torus

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Resumen:

We report on the long- and short-term X-ray spectral analysis of the polar-scattered Seyfert 1.2 galaxy ESO 323-G77, observed in three epochs between 2006 and 2013 with Chandra and XMM-Newton. Four high-resolution Chandra observations give us a unique opportunity to study the properties of the absorbers in detail, as well as their short time scale (days) variability. From the rich set of absorption features seen in the Chandra data, we identify two warm absorbers with column densities and ionizations that are consistent with being constant on both short and long time scales, suggesting that those are the signatures of a rather homogeneous and extended outflow. A third absorber, ionized to a lesser degree, is also present and it replaces the strictly neutral absorber that is ubiquitously inferred from the X-ray analysis of obscured Compton-thin sources. This colder absorber appears to vary in column density on long time scales, suggesting a non-homogeneous absorber. Moreover, its ionization responds to the nuclear luminosity variations on time scales as short as a few days, indicating that the absorber is in photoionization equilibrium with the nuclear source on these time scales. All components are consistent with being cospatial and located between the inner and outer edges of the dusty, clumpy torus. Assuming cospatiality, the three phases also share the same pressure, suggesting that the warm / hot phases confine the colder, clumpy medium. We discuss further the properties of the outflow in comparison with the lower resolution XMM-Newton data.