escape directly. Therefore, the efficiency of the Bowen conversion is reduced.

In addition it is found that the inner boundary condition is less important for spherical geometry than for plane parallel geometry as a consequence of the peaking effect.

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MODELS OF PLANETARY NEBULAE

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From existing models of planetary nebulae an important discrepancy comes out with the low ionization potential ions, as N^+ and O^+, whose calculated line intensities are smaller than the observed ones. In this work the effect of charge transfer reactions between single, double, and triple ionized oxygen and nitrogen with neutral hydrogen is taken into account in a model of NGC 7662. The ionization structure of oxygen and nitrogen becomes strongly modified. The computed fractional abundances of O^+ and N^+ turn out substantially larger than in previous models, thus helping to reconcile the computed line emissions from low ionization potential ions with the observed ones. (Paper will appear in Astronomy and Astrophysics.)