## Spectroscopic variations in proto-planetary nebulae with pulsation

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## Abstract

We are carrying out a long-term radial velocity study of seven bright proto-planetary nebulae (PPNe) that possess bipolar or ellipsoidal nebulae. None of the seven show clear evidence of variability due to binarity yet. Their velocity variations are dominated by pulsation. We will present and discuss the changes in relevant atomic and molecular lines over the pulsations cyclus in our O- and C-rich sample.

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