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## The Asymmetric Outflow of RS Ophiuchi

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### Abstract content <br> &nbsp; (Max 300 words)

RS Ophiuchi (RS Oph) is a symbiotic binary consisting of a hot, white dwarf accreting from the slow, dense stellar wind of a cool, red giant companion. The system belongs to, and is one of the best studied examples of, an even smaller subclass of binaries known as recurrent novae in which the white dwarf undergoes repeated thermonuclear outbursts. We present 3D Smoothed Particle Hydrodynamics (SPH) models of mass transfer from the red giant to the white dwarf followed by a nova outburst. We show that the outflow in the former is strongly concentrated towards the binary orbital plane. The nova ejecta is thus constrained in the equatorial directions, resulting in a bipolar outflow. The white dwarf in RS Oph is thought to be close to the Chandrasekhar mass making the system a likely Type Ia supernova candidate. We discuss the role that such a highly structured circumstellar medium will play in the evolution of the supernova remnant.

### Apply to be<br> consider for a student <br> &nbsp; award (Yes / No)?

No

### Level for award<br>&nbsp;(Hons, MSc, <br> &nbsp; PhD)?

N/A

### Main supervisor (name and email)<br>and his / her institution

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### Would you like to <br> submit a short paper <br> for the Conference <br> Proceedings (Yes / No)?

No

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