

X-rays from reconnection in pulsar winds

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Abstract. The rotational energy of a pulsar is most likely carried away by a relativistic MHD wind. Near the equatorial plane, such a wind should exhibit a striped structure in which regions of opposite magnetic polarity are separated by current sheets. Using a recent model of the reconnection rate in these sheets, we estimate the synchrotron radiation which they emit. For sufficiently fast winds, this radiation

is observed in a pulse/interpulse pattern. We compare our computations with observations of rotationally powered X-ray and optical pulsars.

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