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Gamma-ray Nebulae around Recurrent Novae

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Novae have been recently established as prompt gamma-ray sources in the GeV energies, and also in one case in the TeV energies (RS Oph), lasting for a few days up to a month after the nova optical outburst. We consider a scenario in which electrons, accelerated continuously in the expanding nova shell, escape into the surrounding medium forming an extended nebula around recurrent nova. Electrons diffusing through the nova remnant nebula produce gamma-rays as a result of the ICS of the thermal radiation from the companion red giant and the MBR. Predicted steady gamma-ray emission from the nova nebula (RS Oph) is confronted with the sensitivities of the satellite (Fermi-LAT) and the Cherenkov telescopes (CTA).

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