

## **Gamma Rays to Blame for Mass Extinction**

**Brandon Lohman**

### **Abstract:**

A new hypothesis postulates that the mass extinction during the late Ordovician period 440 million years ago may have been triggered by cosmic events. A high intensity gamma ray burst directed toward Earth may have irradiated our atmosphere with a large amount of energy in a very short amount of time causing fast-paced production of nitrogen oxides. These oxides (particularly NO<sub>2</sub>) deplete ozone and block visible light from the sun. During the brief time before these oxides can decay the planet's temperature drops considerably while at the same time the surface is bombarded with unusually high dangerous UV rays. Evidence in the fossil record, evolutionary patterns, and geological evidence tend to support a hypothesis that a gamma-ray burst may have coincided with and triggered the mass extinction of the Ordovician period.

Summarized from

*Did a gamma-ray burst initiate the late Ordovician mass extinction?*

A.L. Melott et al.