

Can We Detect Extra-Solar Technology in the Cosmic Ray Spectrum?

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The question whether an extra-solar developed technology can be detected through its ability to build extremely high energy accelerators (Schneider 1998) is investigated. Two aspects are developed here:

1. Study of an acceleration mechanism, based on coherent scattering of an extremely intense laser beam on protons or electrons. To accelerate a proton at 10^{20} eV, a laser source 'only' 10^4 more intense than the present Laser MegaJoule would be sufficient.
2. Investigation of presently detected UHECR (Ultra High Energy Cosmic Rays). It is shown that the present number of sources (for which no satisfactory 'natural' mechanism of acceleration has been found yet) could be explained if there is only one such accelerator in 10^6 galaxies.