**电离辐射与电磁辐射的区别**

电离辐射是什么

电离辐射是一切能引起物质电离的辐射总称，其种类很多，高速[带电粒子](http://www.so.com/s?q=%E5%B8%A6%E7%94%B5%E7%B2%92%E5%AD%90&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)有[α粒子](http://www.so.com/s?q=%CE%B1%E7%B2%92%E5%AD%90&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)、[β粒子](http://www.so.com/s?q=%CE%B2%E7%B2%92%E5%AD%90&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)、[质子](http://www.so.com/s?q=%E8%B4%A8%E5%AD%90&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)，不带电粒子有种子以及X射线、[γ射线](http://www.so.com/s?q=%CE%B3%E5%B0%84%E7%BA%BF&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)。[α射线](http://www.so.com/s?q=%CE%B1%E5%B0%84%E7%BA%BF&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)是一种[带电粒子流](http://www.so.com/s?q=%E5%B8%A6%E7%94%B5%E7%B2%92%E5%AD%90%E6%B5%81&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)，由于带电，它所到之处很容易引起电离。α射线有很强的电离本领，这种[性质](http://www.so.com/s?q=%E6%80%A7%E8%B4%A8&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)既可利用。也带来一定破坏处，对人体内组织破坏能力较大。由于其质量较大，穿透能力差，在[空气](http://www.so.com/s?q=%E7%A9%BA%E6%B0%94&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)中的[射程](http://www.so.com/s?q=%E5%B0%84%E7%A8%8B&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)只有及厘米，只要[一张纸](http://www.so.com/s?q=%E4%B8%80%E5%BC%A0%E7%BA%B8&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)或健康的皮肤就能挡住。β射线也是一种高速带电粒子，其电离本领比α射线小得多，但穿透本领比α射线大，但与X、γ射线比β射线的射程短，很容易被铝箔、有机玻璃等材料吸收。X射线和γ射线的性质大致相同，是不带电[波长](http://www.so.com/s?q=%E6%B3%A2%E9%95%BF&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)短的[电磁波](http://www.so.com/s?q=%E7%94%B5%E7%A3%81%E6%B3%A2&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)，因此把他们统称为[光子](http://www.so.com/s?q=%E5%85%89%E5%AD%90&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)。两者的[穿透力](http://www.so.com/s?q=%E7%A9%BF%E9%80%8F%E5%8A%9B&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)极强，要特别注意意外照射防护。

电磁辐射又是什么

电磁辐射是由空间共同移送的电能量和磁能量所组成，而该能量是由[电荷](http://www.so.com/s?q=%E7%94%B5%E8%8D%B7&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)移动所产生；举例说，正在发射[讯号](http://www.so.com/s?q=%E8%AE%AF%E5%8F%B7&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)的射频[天线](http://www.so.com/s?q=%E5%A4%A9%E7%BA%BF&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)所发出的移动电荷，便会产生[电磁](http://www.so.com/s?q=%E7%94%B5%E7%A3%81&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)能量。电磁「[频谱](http://www.so.com/s?q=%E9%A2%91%E8%B0%B1&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)」包括形形色色的电磁辐射，[从极](http://www.so.com/s?q=%E4%BB%8E%E6%9E%81&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)低频的电磁辐射至极高频的电磁辐射。[两者之间](http://www.so.com/s?q=%E4%B8%A4%E8%80%85%E4%B9%8B%E9%97%B4&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)还有[无线电波](http://www.so.com/s?q=%E6%97%A0%E7%BA%BF%E7%94%B5%E6%B3%A2&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)、[微波](http://www.so.com/s?q=%E5%BE%AE%E6%B3%A2&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)、[红外线](http://www.so.com/s?q=%E7%BA%A2%E5%A4%96%E7%BA%BF&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)、[可见光](http://www.so.com/s?q=%E5%8F%AF%E8%A7%81%E5%85%89&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)和[紫外光](http://www.so.com/s?q=%E7%B4%AB%E5%A4%96%E5%85%89&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)等。[电磁频谱](http://www.so.com/s?q=%E7%94%B5%E7%A3%81%E9%A2%91%E8%B0%B1&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)中射频部分的一般[定义](http://www.so.com/s?q=%E5%AE%9A%E4%B9%89&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)，是指[频率](http://www.so.com/s?q=%E9%A2%91%E7%8E%87&ie=utf-8&src=internal_wenda_recommend_textn" \t "_blank)约由3千赫至300吉赫的辐射。