
Subject: Realistic Illumination, IDL & OpenGL
Posted by [nasalmon](#) on Fri, 30 Jan 2004 22:06:09 GMT
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Could someone please help me with problems of illumination in IDL.

For Object Graphics to emulate reality, illumination must be accurately represented. Take for example an outdoor scene, where sky background emission above and up-welling emission below bathes an object in different intensities from all directions. Can this be accurately described in IDL or OpenGL?

In IDL Object Graphics there is the possibility to bring in the "light" by way of `obj_new "IDLgrLight"`. However, this can only be: type 0) Ambient; 1) point source; 2) collimated beam; 3) spot light (apertured). The number of lights is limited to 8. Is this illumination limited by IDL or the OpenGL on which IDL operates?

General illumination in an outdoor environment has something of an angular distribution, for an overcast day at least. This might be represented in an alt-azimuth coordinate system; large amount of emission at zenith, with some kind of distribution coming down to the horizon, with some up-welling illumination from the ground. This could be either simulated by a very large number of point sources or ambient illumination with some angular distribution on it. Are there plans to introduce this kind of "light" into IDL in future versions?

many thanks,
Neil
