Buying a Christmas Scope

By: Dick Suiter

Often we are confronted with purchasing a limited-budget optical instrument for a child. The budget limitation presents itself because we do not want to be seen favoring one niece or nephew (or grandkid) over another. Either we have a massive budget for all or we are constrained to lower our aim beyond the small $500 Dob or other telescope that we would declare to be the absolute limit in a perfect world.

Typically, we fall back on that old mantra "Get binocs before a telescope" without thinking. While this advice is still valid, the child may have already exhausted the number of things that can be seen from an urban environment with binoculars. Binoculars are no longer the rare item they once were, and most kids have at least tried out one. They have probably not used the optimum binocular nor looked through one at a nearly dark location, but the bottom line is that they probably were able to see only the moon at 7 to 10 power through any instrument.

Kids do not control car keys (at least directly), so if we want to give them an astronomical telescope, the question remains: "What is it that they can see?" The answer is kind of surprising and gives us a hint about which inexpensive telescope to buy.

1) Moon craters.
2) The moons of Jupiter
3) The phases of Venus
4) The rings of Saturn
5) Globular clusters
6) Open clusters
7) Small, bright, planetary nebulae.

What objects have been excluded? Mainly they are emission and reflection nebulae, dark nebulae, and galaxies.

Even though kids can observe numbers 5 through 7 above, that doesn't mean they will be easy to find. They're difficult enough for us to find in town, and we know where they are! So the question arises: "Do we get a go-to unit?"

In general, low-end go-to telescopes are difficult to balance, hard to initiate and train, and of extremely limited aperture (the money has gone into the electronics instead of the telescope). Of the deep-sky categories above, globular clusters and bright planetary nebulae are uninspiring from the city, so we should really give up on all deep sky except open clusters. Of course, exceptions exist (the Orion nebula, the Ring nebula), but we've got to chase down more likely viewing with our few dollars.

We would be better off giving a really good elementary text as an accessory, teaching the star patterns to the child so he or she will know what they are looking at. One good text is H.A. Rey's *The Stars*. (Yes that is the Rey of the Curious George books.) But still they want a telescope.

The alternative is the small, rich-field telescope. The key element is not the "rich-field", but the "small". We want a small telescope that the child has no trouble setting up, like the 4-inch f/4 Edmund Astroscan or 4.5-inch f/4 Orion Starblast. I favor the Starblast myself, because it has a better finder, but with the accessory sight, the Edmund is not too far behind. The Edmund has the advantage of presenting the eyepiece at any angle, including straight up. Kids like to use this angle while "spying" on their friends by looking upside-down in the eyepiece -- a kind of low-tech image erector. The Orion unit has a better astronomical mounting. The under-$200 price of both is attractive.

Anyway, department-store refractors, with their wobbly mountings, are still a bad idea.