Gary Seronik
Telescope Workshop

PART 1

Travelscope Challenge

Ingenious designs help traveling ATMs get the most out of the least.

In this column last March, I threw out a challenge to readers to find who has made the most compact 8-inch travelscope. I thought I'd get a handful of responses, and that there would be an obvious winner. I thought wrong. *Really* wrong. Clearly this is a telescope-making project that has a lot of appeal. I've sorted through the submissions and narrowed the choices down to the seven finalists presented here. Next month, I'll unveil a winner, but for now, let's meet the contestants.

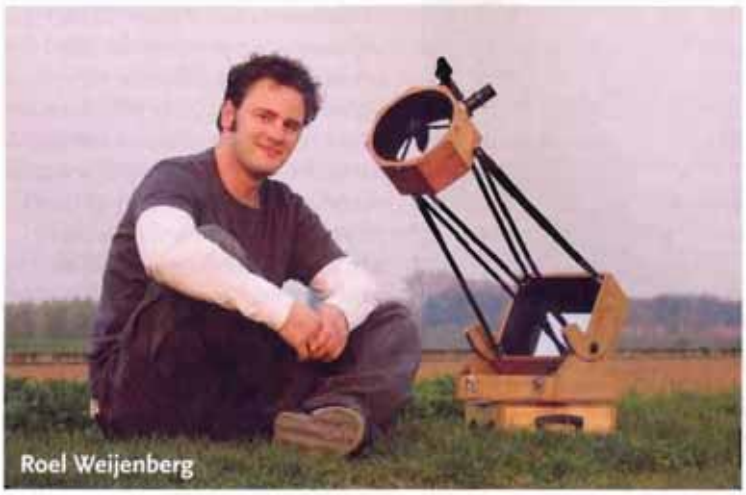
All the finalists made 8-inch travelscopes smaller than mine or Mike Lockwood's described in the March issue. Mike and I hadn't set out to build the smallest-possible scopes — just ones that would qualify as carry-on luggage. But even so, it's impressive how much more compact some of the entries were. What's even more impressive is the numerous ways the finalists trimmed the dimensions of their scopes.

Take, for example, Carole Benoit of Calgary, Alberta. Her scope makes use of a two-piece, single strut to support the scope's lightweight front end. And the sideboards of her scope's rocker box are hinged to fold down into a tidy package. Carole was a participant in the annual Costa Rican Star Party I lead, so I got to play with her scope under a dark sky last February. I can attest to how well it works. The scope was designed by Phil Johnson, the ATM guru at the Calgary Centre of the Royal Astronomical Society of Canada. Every astronomy club should have a Phil Johnson!

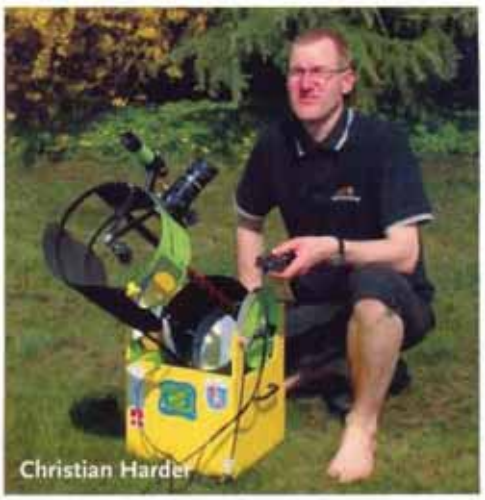
If there were a special award for the most novel use of a ready-made part, it would go to Dutch ATM Roel Weijenberg. His travelscope uses eight folding "carpenter's" rulers for the trusses. As Roel notes, "The problem with travel Dobsonians has always been the trusses. People build a nice compact box with everything in it except the trusses." Each ruler is a mere 9½ inches long folded, and extends to 28 inches. They fit inside the scope's case along with a couple of eyepieces, shroud, finder, and other accessories.

Another Dutch entry came from Bert Bogchelman, who wanted to be able to set up his scope quickly. His submission is version 2.0, as he found several ways to better his initial effort. The greatest improvement was minimizing the number of small parts, which allowed him to get the assembly time down to just 5 minutes. The resulting f/5 instrument is elegant, attractive, and impressively compact.

German telescope maker Christian Harder produced a scope that's as colorful as it is well equipped. Christian's "flower power" scope uses an f/4 primary mirror, and its bells and whistles include JMI's MiniMax computerized setting circles and a secondary-mirror dew heater. But those colors? Says Christian, "I used summer-fresh colors because the Dob was my summer project, built for holidays under the dark skies of the North Sea island, Fano."



Roel Weijenberg



Christian Harder


Reinhard Schulten

Like several other travelscope builders, German ATM Reinhard Schulten chose an f/6 primary mirror to minimize the effects of coma prevalent in fast optics. This meant a longer tube assembly, which is more difficult to balance when used with a low-profile rocker box. To get around the balance problem, Reinhard's scope utilizes a spring-and-pulley system. As the tube is aimed toward the horizon, the spring tension increases, eliminating the scope's tendency to nosedive.

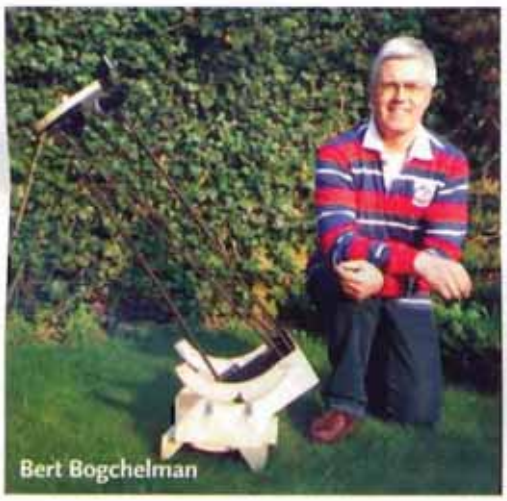
Another way around the balance issue with an f/6 primary is simply to make the rocker box higher, which allows the tube's side bearings to be positioned at the scope's center of balance. This is the approach used by Seattle, Washington, ATM Jeff Bottman for his scope, Skelator. To make the instrument compact, Jeff built his rocker box so that the side boards can be easily removed.

The final entry in our challenge comes from French amateur Vincent Becker. His instrument is the only one in the group to utilize the string-scope concept. The tube consists of four aluminum poles tensioned by four pairs of strings that give the structure rigidity. Vincent's entry is part of a tradition. "This telescope was made in memory of my father, Jean-Marc Becker, who was a famed amateur telescope maker in France. He wrote a book on the subject in the 1980s with Pierre Bourge (another great French ATM) and collaborated on other publications, including the French edition of Antonín Rükl's *Atlas of the Moon*." A fitting tribute, I'd say.


Carole Benoit

Next month, I'll announce a winner! ✦

Contributing editor ***Gary Seronik*** *builds scopes at his home in Victoria, British Columbia, Canada. Details of his 8-inch travelscope can be found on his website, www.garyseronik.com.*


Bert Bogchelman


Vincent Becker


Jeff Bottman

ALL IMAGES PROVIDED BY CONTESTANTS

Gary Seronik
Telescope Workshop

PART 2

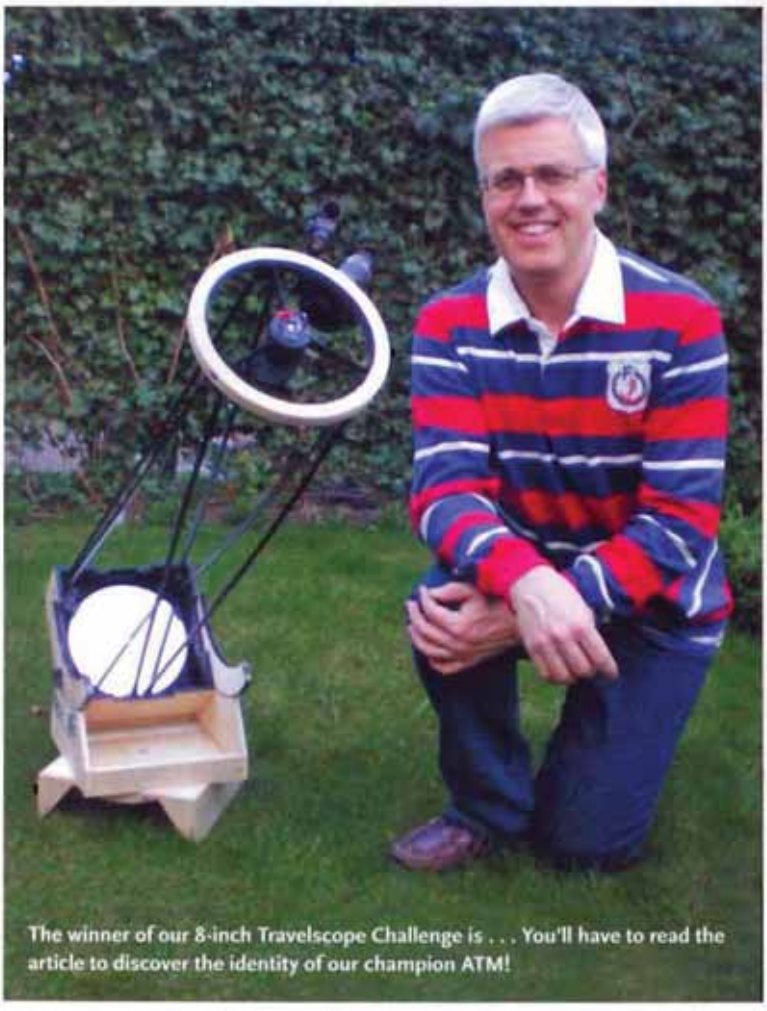
Travelscope Challenge Winner

Here's the ATM who fit the most into the least.

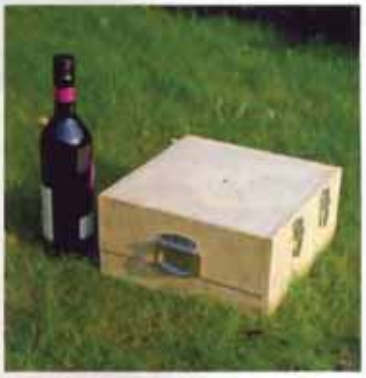
THE ENVELOPE PLEASE. . . Last month I introduced the seven finalists in my Travelscope Challenge, and now it's time to announce the winner. The ATM who fit a complete 8-inch scope into the smallest package is Bert Bogchelman of Achterveld, The Netherlands.

Bogchelman managed to trim his f/5 scope down to an impressively compact 26-by-26-by-12½-cm (10¼-by-10¼-by-5-inch) box. As someone who has built an 8-inch travelscope, I find that remarkable. What's even more impressive is that within those dimensions he's managed to include the scope's six truss poles (each breaks down into four sections), three eyepieces, a collimation tool, a red-dot finder, and a shroud. The whole kit and caboodle tips the scales at 5.9 kilograms (13 pounds).

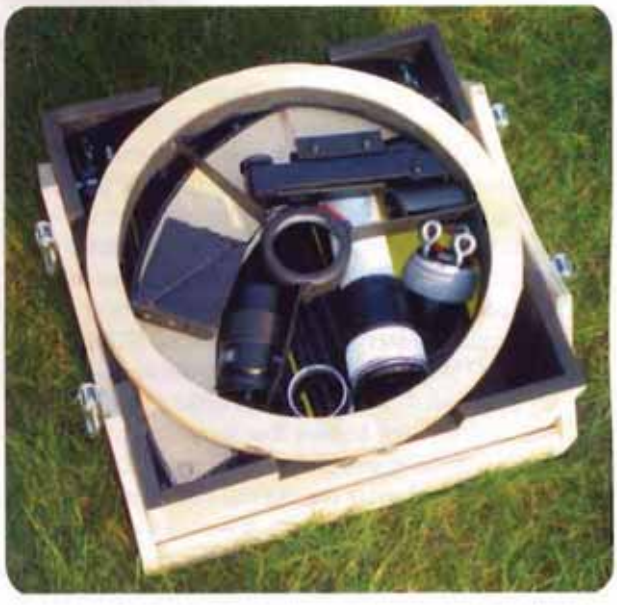
Long-time readers of this magazine will remember advertisements from Questar touting its 3½-inch observa-

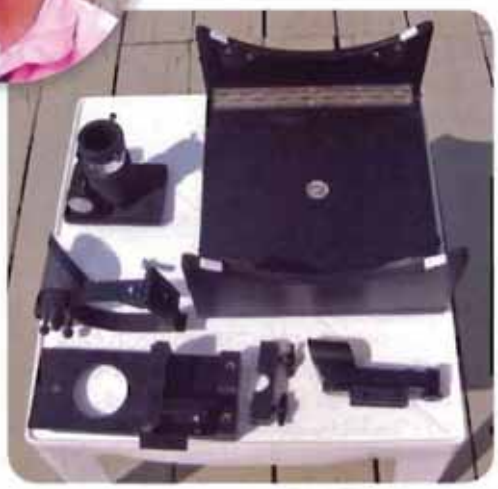


The winner of our 8-inch Travelscope Challenge is . . . You'll have to read the article to discover the identity of our champion ATM!



Not that wine and photons necessarily mix, but this bottle of red does provide a handy sense of scale. Everything necessary for a night of observing at some exotic, remote location — including eyepieces, finder, and shroud — fits into this compact box.





The main components of Carole Benoit's travelscope (except for the two-piece strut and eyepieces) are seen in the photograph at right. Benoit's telescope was a close second to our contest winner.

tory in a box. For decades the Questar and its custom leather carrying case have remained an icon of portability. To put Bogchelman's instrument into perspective, consider that his 8-inch occupies about a third the volume of the Questar case, yet delivers five times the light-gathering power. Amazing.

What advice would Bogchelman give prospective builders? First, do your homework. Look at past issues of this magazine and do some searching on the internet to see how others have made compact scopes. Second, though he says none of the individual parts of his scope were difficult to fabricate, you should be prepared for a certain amount of trial and error to get things to fit the way you want. Third, you sometimes need a bit of good fortune. For example, he points out that the dimensions of his altitude bearings were a lucky happenstance. They just fit inside the mirror box, yet are large enough that he can use a heavy eyepiece without the scope nose-diving.

But of course, the real payoff for achieving this level of portability are the places you can take the scope and the things it can show you. "Last autumn I took the telescope to the darkest location in northern Europe, Kollase, Germany," recalls Bogchelman. "The views from there were stunning. In my 8-inch reflector, the Double Cluster in Perseus looked as if I were seeing it with the Hubble Space Telescope. Wow!"

If for some reason Bogchelman can't fulfill his reign as king of compact travelscopes, then the crown would go to our first runner-up. That would be the owner of the scope from Calgary, Alberta, Carole Benoit. Her 8-inch was a significant departure from the scope-in-a-box concept that the other finalists utilized. As such, it was difficult to compare Carole's entry with the others. Her 8-inch reflector comprises several parts that she simply breaks down and packs into a suitcase for travel. Its overall size is very similar to Bogchelman's scope, and no one could dispute that it's as portable. But because her scope didn't include a carrying case, the nod for the most-compact, complete travelscope goes to her Dutch competitor — but it wasn't an easy choice.

Finally, if one curious trend emerged from this challenge, it's the preponderance of European entries. Indeed, there were only two telescopes from North America in the running. I'm not sure what that says about the relative differences between telescope makers on either side of the Atlantic Ocean, or their travel-related equipment needs. But one thing is certain — if the creative aspect of telescope making is a dying art, someone forgot to tell the Europeans! ✦

S&T *contributing editor and hockey fanatic* ***Gary Seronik*** *builds telescopes at his home in Victoria, British Columbia. Details of his own 8-inch travelscope project can be found on his website, garyseronik.com.*