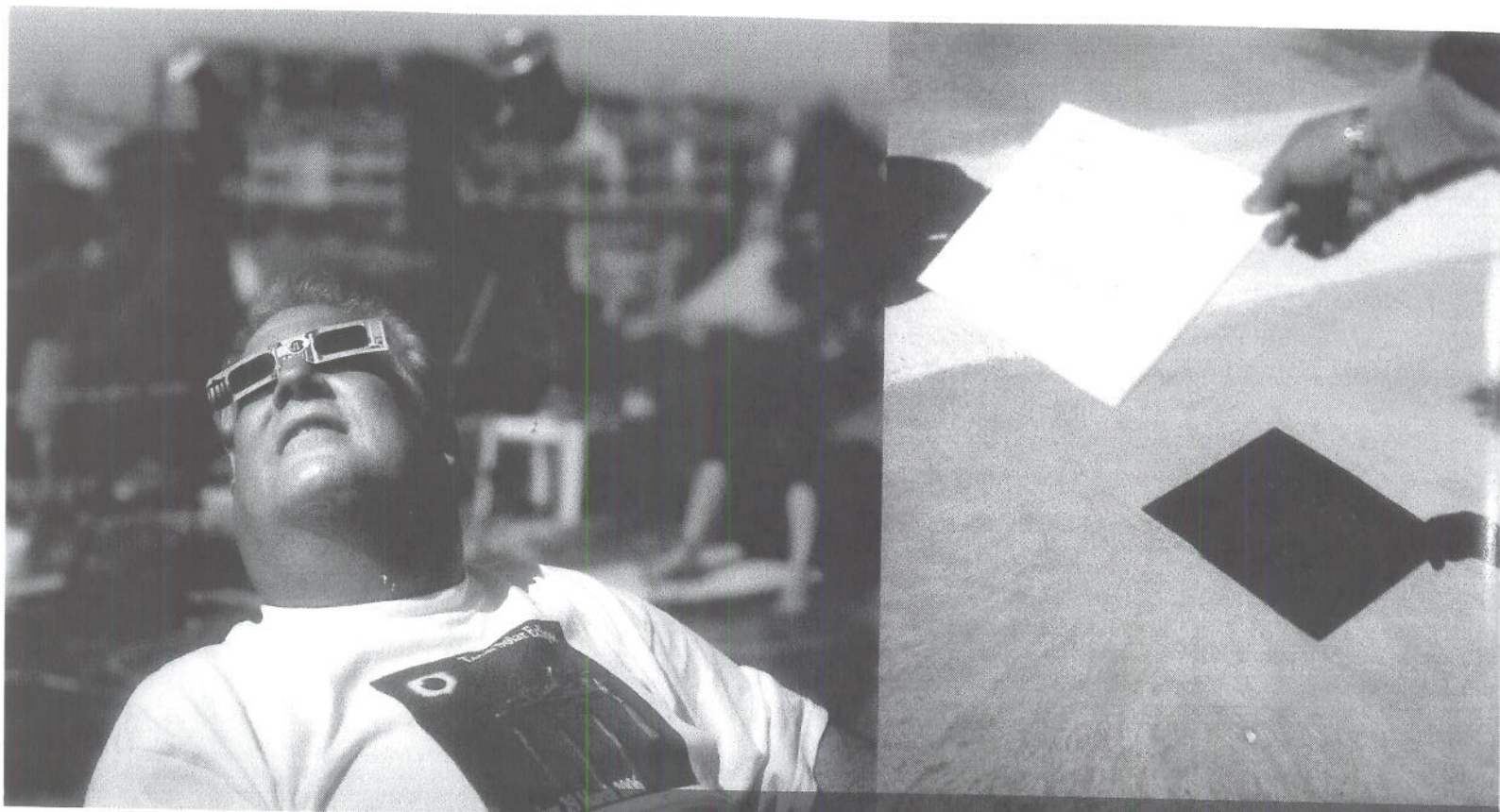


IN THE SHADOW OF THE MOON

Every year and a half, a black disk traverses the planet at thousands of miles an hour. To a few dozen people, nothing is more spectacular, and they will travel anywhere on Earth to stand in the umbral darkness. On March 29th, Jake Silverstein followed them to Turkey and found out why.

Photography by Bear Guerra





Eclipse chasers know what the weather might be like in Shanghai on July 22nd, 2009. They spend their money on telescopes and welder's glasses, and max out their credit cards on airfares and hotel rooms booked far into the future.

Once every 18 months or so, the Earth, the sun and the moon find themselves arranged in a perfect line, with the moon in the middle. The Earth is traveling at around 65,520 miles an hour. The moon is going 2,286 mph. The sun is blasting itself to smithereens some 90-million miles away. For a moment, however, the three make an orderly queue. The moon blots the sun from the sky and casts a cone of shadow at the Earth. The path this shadow takes is always different, but is usually very narrow, rarely wider than 150 miles. Crossing at sunrise in such-and-such village or town or field or bay, it glides quickly over the globe and is gone. Less than one half of one percent of the Earth's surface darkens. If you are on that half-a-percent, standing in the path of this streaking black band—the umbra, it is called—you will experience a total solar eclipse. The sky darkens, the temperature drops precipitously. The disk of the moon slides over the disc of the sun, and around this black sphere whirl the wisps of the solar corona. A total solar eclipse (or "TSE") is, by all accounts, an impressive show. Most people will never see one.

A small group of individuals, however, do their best to see a TSE every year and a half. These people are known as "eclipse-chasers." They are fanatical. Years in advance they plot a maneuver of several minutes. They know what the weather might be like over Shanghai in sum-

mer 2009. They live in mortal fear of clouds that have not yet formed. Friends and family worry about them a great deal. Their money is spent on stabilized binoculars and solar telescopes and welder's glasses; their credit cards are racked up with airfares and hotel reservations made far into the future. Constantly they travel: on boats, in planes, by van or truck or mule, getting themselves into position for the next occultation.

Congregating periodically—in a village on the island of Java for the 1983 eclipse, on a hilltop in the Zapahuira plains in 1994, crowded at the stern of a cruise ship in 1999, plowing the Black Sea—the eclipse chasers form a passionate, jet-lagged fellowship. Their tribe is small—of the truly dedicated, the ones whom nothing will ever stop, there are likely no more than 50. If an alien asked to be shown the leader of these people, it might be taken to see an astronomer at the Steward Observatory in

Tucson, AZ named Glenn Schneider.

Schneider is from the Bronx. He was 15 when he saw his first eclipse—in Greenville, NC—in 1970. It changed his life. Since then he's missed just one eclipse—off the coast of Antarctica in 1985, when the seasonal conditions made it too impractical to get through the ice pack and into the path of totality. He's traveled to 25 TSEs and been clouded out just three times, an experience he calls "completely traumatic." It is no exaggeration to say that Schneider is physically addicted to the moon's shadow. He calls this condition "umbraphilia." "Umbraphilia is not only an addiction, but an affliction, and a way of life," he declares on his home page. "The real *raison d'être* for many of us. The more common and prolific term 'solar eclipse chaser' is nearly synonymous, but somehow does not convey the depth of commitment to this lifelong endeavor."

Like any addict, Schneider will spend whatever it takes and go wherever he must. He has seen eclipses from the land, the sea and the air. In 1986, he was one of the famous "Gang of Nine," a group that flew over the North Atlantic, the only people on Earth to witness that year's 5.2-second TSE. In 2003, he wrote a navigational software called Eflight that allowed chartered jets from Chile and Australia to intercept totality for two minutes and 30 seconds over Antarctica. 2005 found him floating in the South Pacific for 27 precious seconds of umbral darkness.

Compared to all that, this year's eclipse would be a cinch, presenting plenty of opportunities for land-based observations. The umbra was scheduled to touch Earth at sunrise in Brazil. It would then jump the mid-Atlantic, whisk through west Africa, head to Egypt, cross the Mediterranean, traverse Turkey and the Black Sea, fly over Georgia, Russia and Kazakhstan, wink at Mongolia, and return to the fellow darkness of space. Totality would be the longest—four minutes and six seconds—for those marooned in the barren deserts near the border of Libya and Chad, and they would deserve every moment of it.

A slightly shorter eclipse would be available along the southern coast of Turkey, in the resort town of Side (pronounced *see-day*), and it was here that Schneider and his small posse of diehards planned to travel, piggybacking on the hotel reservations of a larger group led by Rick Brown. A veteran of eight eclipses, Brown is a Manhattan commodities trader who's been leading tours since 1991. This year he had 65 people in tow—doctors, businessmen, lawyers, professors, computer programmers, entrepreneurs—men and women, mostly American, of accomplishment and wealth. They would stay at the Sunrise Queen Hotel, a massive, five-star joint with pool bars and ballrooms, located just a few kilometers from the centerline.

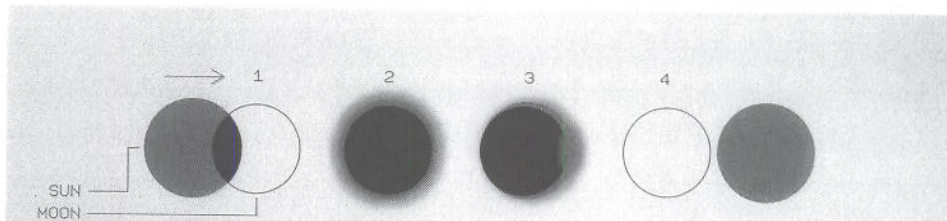
A few of the people on Brown's tour, like Schneider, had seen a great many eclipses. Many, like Brown, had seen a bunch. A handful, like me, had never seen one.

The moon's plane of orbit is inclined very slightly with respect to the Earth's plane and the two invisible points in space at which these planes intersect are called nodes. For a solar eclipse to happen, the moon must be at or near one of these nodes when a new moon occurs. On March 26th, as the waning moon approached its node, I met Brown's group at the airport in Antalya, a city of one million about an hour from Side. Antalya was swamped with umbraphiles, poking about the kebab shops in ill-fitting t-shirts commemorating past totalities (most common: Baja, 1991).

They ran the gamut. Many were headed for Soulclipse, a seven-day trance festival timed to climax with totality and featuring such acts as Chemical Drive, Hallucinogen and the Peaking Goddess Collective. Organizers claimed to have sold some 10,000 advance tickets. All throughout town, dreadlocked Europeans and hipster Japanese stumbled to and fro with overloaded backpacks, chartering buses and stockpiling cigarettes. The night before, I'd lain awake in my pension for an hour listening to four Brits argue about how best to portion out their psilocybin mushrooms so they'd be in

top form when the moment arrived.

The conversations on the tour buses for the Queen addressed different co Brown, a large man with curly gray hair, a boundless store of energy, wanted to if I'd seen many solar filter glasses for Antalya. The 14,400 he'd brought also been tough to move in Istanbul. "Think unload some here?" he asked. "One bu euro, one lira, whatever." Brown appreciated the eclipse with an interesting mixture of less salesmanship and unmitigated aw week before, when I'd caught him on t



A TOTAL SOLAR ECLIPSE (TSE) consists of three phases—the first partial phase, when the moon is only partially covering the sun's bright photosphere; totality, when the photosphere is completely obscured and the fainter coronal gasses become visible around the dark circle of the moon; and the second partial phase, when the moon recedes. The first partial phase is initiated by first contact, when the leading edge of the moon touches the sun. Totality is initiated by second contact, when the trailing edge of the moon touches the sun. Third contact is when the second partial phase begins, and fourth contact is when the eclipse ends.



Above: The March 29th eclipse was Glenn Schneider's 22nd. Opposite: Spectators await the event; Rick Brown (left) has been leading eclipse tours since 1991. He brought 14,400 pairs of the glasses he's wearing with him to Turkey. Previous page: Schneider and friends, at E-hour.

phone, he'd told me, "Listen, I'm a moderately observant Jewish guy. I don't go to *shul* much. I'm a scientific kind of guy. But this is an extremely religious experience. It's the best way I know to approach what God can do and the mystical stuff He can put together."

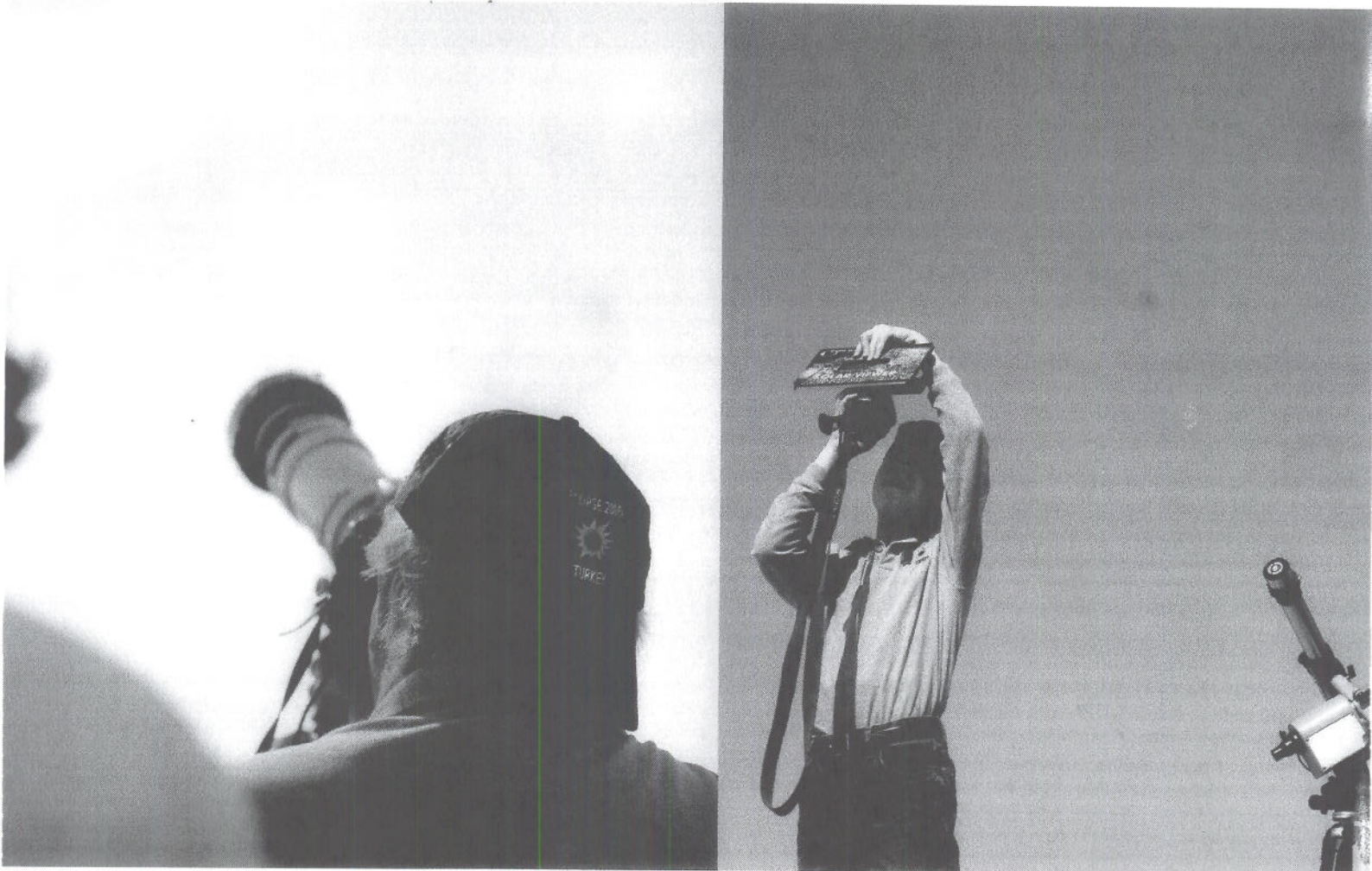
We reached the Queen and took our rooms. Thankfully, Brown's schedule had given us two days to acclimate to the baffling size and insulated atmosphere of what was essentially a beached cruise ship. A 25-foot parrot cage filled the lobby, and in the bar, a two-piece lounge act covered "How Deep Is Your Love?" while

standby at the Antalya airport. If clouds threatened to obscure the view, they could use the aircraft to quickly relocate to a more favorable position. Six airfields with infrastructure to support a last-minute repositioning had been identified, and Schneider knew the coordinates and the expected duration of totality for each one. If the cover was thick, a one-hour flight plan was in place to take eight umbraphiles up for a 40,000-foot observation.

"The next weather model drops in 15 or 20 minutes," Schneider said. Schneider is short, with long hair, large glasses and the amiable in-

she'd get the diamond ring. (This is the term given to the moments at second and third contact when the moon has blotted out most of the sun, leaving a thin circular glow—the ring—except one small spot of solar brightness—the diamond. The term is believed to have originated with TSE 1925, which crossed New York City.) Melissa said yes.

"The majority of the people you see sitting here right now," said Craig Small, a course instructor at the Hayden Planetarium and a boyhood pal of Schneider's, "have every intention of seeing every solar eclipse there is for the



elderly umbraphiles shuffled the marble floor. Without sufficient time to master this labyrinth of tunnels, elevators and panoramic lifts, it was a sure bet someone was going to wind up trapped in an underground ballroom listening to Muzak right at the crucial hour.

Schneider and his boys arrived the following night. I found them on Tuesday morning, huddled around a laptop in the lobby bar, checking the weather projections and trying to decide whether or not to cancel the two planes—a Hawker 400 and a Learjet 60—they had on

tensity of the thoroughly prepared. His T-shirt read, "There are only 10 kinds of people in the world, those who understand binary and those who don't." Hunched on either side of him were Joel Moskowitz, a New York gynecologist, and Jay Friedlander, a marketing consultant from Santa Cruz, CA. They hadn't been chasing eclipses as long as Schneider, but they shared his dedication. Friedlander had proposed to his wife Melissa on the Bolivian *altiplano* during the 1994 eclipse. He'd timed it so that when he took a knee, he could tell her to look up and

rest of their lives, no matter what."

"What do you mean 'for the rest of their lives?'" Schneider cracked. "You forgot about my will."

After a call to the meteorological office, Schneider decided to cancel the planes. Not only did the weather look good, but Small was in attendance, and since 1963, Small had been to 22 eclipses without getting clouded out once. At lunch I asked him what his secret was.

"Some of it is always luck, but a lot of it is not," he said, nodding at Schneider.

The conversation turned to the far-flung locales visited in pursuit of totality. On average, once a particular locality has enjoyed an eclipse, 362 years must pass before the umbra returns. But recently, there'd been repeat eclipses in certain parts of Africa. Small, who is from Long Island, sighed heavily. "And you know the next time New York City gets one?" he said. "May the first, 2079. A Tuesday morning."

"Fox's Chocolate Syrup factory in Brooklyn is right in the path of totality," Schneider said, looking up from his plate. "I've looked at the satellite photos, and they have a big flat roof."

day is another contributor to umbral velocity, which is at its lowest when totality occurs at noon (for the same reason that shadows move more quickly at sunset).

The Earth is not a perfect sphere and it does not move in a perfect circle around the sun. Its closest point, perihelion, is met in early January and its farthest point, aphelion, in early July. The moon is the same way. At its apogee it is 253,000 miles from us; at its perigee, it is only 221,000 miles away. When an eclipse occurs while the Earth is at aphelion and the moon is at perigee, the moon appears relatively large

and recording this very phenomenon in the light of stars from the constellation Taurus, which passed by the sun during the eclipse. Eddington delivered the dramatic experimental proof of relativity that finally convinced the public of its merit.

Eddington's experiment, and others like it, depended on the observational circumstances presented by a TSE. But as the 20th century progressed, experimental astronomers began to rely on observations from space vehicles. Today experimenters study the temperatures and gas motions of the corona, determine the orbits of interplanetary dusts, and try to measure the rate of current solar shrinkage. This year, in Turkey, a group of independent scientists ran tests of the controversial Allais Effect (results still pending as of press time), a claimed anomalous precession of the plane of oscillation of a pendulum during a solar eclipse, first observed by French economist and physicist Maurice Allais in 1954. Though conventional physics frowned at Allais' hypothesis that such anomalies are the result of flaws in the general theory of relativity, a small number of adherents have been carrying out experiments ever since. —J.S.

A BRIEF HISTORY OF ECLIPSE SCIENCE

For thousands of years, total solar eclipses have provided scientists with unique but fleeting conditions under which to perform experiments. In Babylonia, some of the earliest astronomers used eclipses to keep a relatively accurate record of time; for centuries thereafter, eclipses helped astronomers develop theories of orbital motion. The 19th century saw a boom in eclipse experiments, culminating in 1868, when the new science of spectroscopy—measuring the spectral lines of light to determine chemical composition—was first put to use during a total solar eclipse (TSE). Using a spectroscope, British astronomer Norman J. Lockyer discovered a new spectral line in the sun. He named it helium. Helium, which constitutes about 20% of the sun's mass, was not discovered on Earth until 27 years later.

On May 29th, 1919, on the Portuguese island of Principe Impressive, Sir Arthur Eddington observed six minutes and 51 seconds of umbral darkness. Einstein's general theory of relativity had been finalized three years earlier, but skeptics remained. According to the theory, rays of light are bent by a gravitational field. By observing

and recording this very phenomenon in the light of stars from the constellation Taurus, which passed by the sun during the eclipse. Eddington delivered the dramatic experimental proof of relativity that finally convinced the public of its merit.

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Left to right: Photographing the first partial phase; one of the newest umbraphiles shot a lot of video on March 29th; totality. Bailey's beads are at 10:00 and 11:30.

Not only are eclipses inconvenient, they are short. The theoretical maximum duration of totality is only seven minutes and 31 seconds. For this to occur, four factors must align out of the chaos of the solar system. The umbra is always moving at around 2100 mph, but because it moves eastward, with the rotation of the Earth, the speed of the Earth's rotation seems to slow it down. The Earth's rotational speed is greatest at the equator, so this is also where the umbra slows the most. The angle of the sun throughout the

compared to the sun and blots it from the sky for a longer time. When such an eclipse passes near the equator at noon, the conditions are met to completely max out totality and deliver 7:31 of umbral darkness.

But such marathons are extremely rare. There are simply too many factors involved. In the 20th century there were only three eclipses longer than seven minutes. In the 21st century, there will be none. The last five TSEs have totaled 12 minutes exactly. Umbraphiles deal with this horrible reality by taking huge quan-

and rotating at the pace of the sun. Friedlander started to give me the specs to his set-up, but my ears were already bleeding.

All three would be running their cameras with Umbraphile, a computer program Schneider had developed so he could quit fiddling with his gear and actually watch eclipses. But even automation was not enough for Moskowitz; the 24 hours before first contact seemed an agony for him. He worried that his equipment would not run properly. He worried that the planes should not have been let go. He worried

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that someone might knock into his tripod. He even worried that some unfathomable error might have been made in the solar predictions made by NASA and countless astronomers over the last several hundred years. When we were shortly into the partial phase the next day he remarked, "at least we know we're here at the right time on the right day."

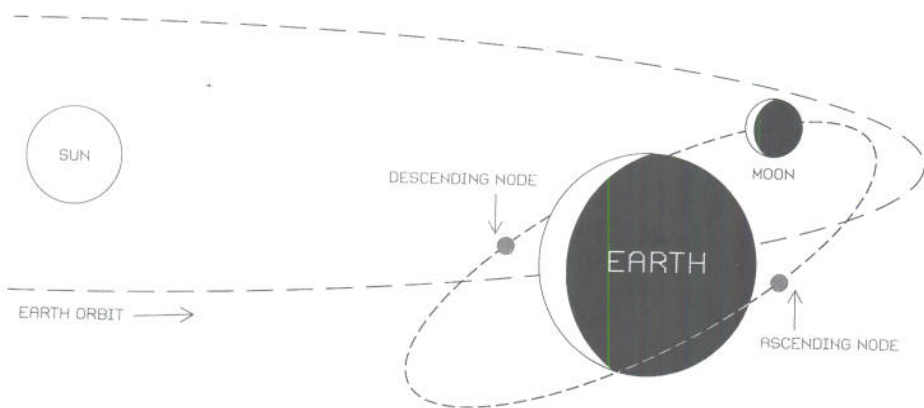
But it was easy to understand his torment. Having started chasing eclipses in 1991 at the age of 42, even if Moskowitz lived a reason-

Brown had scheduled a final eclipse debriefing for nine o'clock that night in the game room to give us the basics. Sharing the stage with him was Bill Kramer, the immediate past president of the Astronomical Society of Columbus, OH and a frequent collaborator on Brown's eclipse tours. They explained the phenomenon of Bailey's Beads, and told us to look for them right before second contact. Sunlight comes pouring through the valleys of the moon in the last few

of Brown's spiel seemed to be that we should prepare for a wallop.

"For those who have not seen an eclipse," he told the group seated among ping pong and snooker tables, "I can assure you that you're gonna be different people tomorrow afternoon." He wouldn't even try and describe the spectacle of totality; words could not do it justice. "Best I've heard is that people say it looks like the pupil of God," he told us. "You're gonna hear grown men cry tomorrow."

"You know the next time New York gets one?" asked Craig Small, an instructor at the Hayden Planetarium. "2079." Schneider looked up from his plate. "Fox's Chocolate Syrup factory in Brooklyn is right in the path. I checked out the satellite photos—they have a big, flat roof."



If the moon's and the Earth's orbits happened in the same plane, the moon would block out the sun once a month. But the orbits are offset by about 5°, so they are only in the same plane twice during the moon's orbit (at points are called "nodes"). So the moon rarely falls directly between Earth and the sun, and its shadow generally misses Earth altogether. A total solar eclipse, when the moon blocks out the sun entirely, is even more rare.

ably long time, and things went smoothly all the while, he'd probably spend no more than 81 minutes of his life in the umbra—a paltry fix for an addict so powerfully consumed. "You can never get enough time in the shadow of the moon," he told me several weeks before we left for Turkey. "Never." Even Schneider, with his early start and his proven ability to rise to almost every umbraphilic challenge imaginable, would likely get no more than 132 minutes, about the length of a typical movie.

seconds before totality, giving the impression of small "beads" of light strung in a circle. He told us we might see "shadow bands," peculiar glowing ripples (think of the bottom of a swimming pool) that sometimes appear in the last few minutes of the first partial phase. They are caused by atmospheric irregularities, which act as a lens focusing the remaining crescent of sunlight in the sky onto the ground in wavy bands of dark and light. Aside from these technical explanations, though, the gist

The morning of the 29th dawned crisply and clearly. As if on command, a high pressure ridge had rolled in and parked itself over the Mediterranean, flushing most of the low clouds to the north and giving us a spectacularly clear blue sky. Some fool in the front office had scheduled a bowling tournament for smack in the middle of totality, but other than that, everyone in the Queen seemed to be extremely focused on the business at hand.

More than a year in advance, Brown had arranged for us to have the exclusive use of the terrace of the helipad adjoining the Queen's most fabulous lodge—a seven bedroom villa that rented for \$10,000 a night. Appointed with wicker chairs and tables and white chaise lounges, the terrace extended on a dramatic promontory out over the lower quarters. The pad itself was a 25-foot circle of concrete with a giant painted H. A tidy lawn sloped away to a sheer, railless, four-story drop.

Since theirs were the most delicate photographic systems, Schneider's group had the pad to themselves. Moskowitz was up there snapping his gadgets together when I arrived. We still had about two hours until first contact. "I don't like that high schmutz over there," he said, pointing at some gauzy clouds on the horizon. Schneider showed up, wheeling the bedside tables from his hotel room on a utility dolly. Working quickly, he put together his scope and peered through the filter at the sun. "Yep," he said, to no one in particular. "There it is."

Gradually, over the next 90 minutes or so, the group collected. A waiter arrived and began taking sandwich orders. It was entirely pleasant. Children played. A woman read a Jonathan Kellerman novel with her feet up on a stool. A couple played cards. There was no indication at all that in less than an hour we would be staring into the eye of God.

FIRST CONTACT!" Kramer yelled, spotting the moment before anyone else with his powerful Questar scope. I put on a pair of eclipse glasses. The sun looked like a navel orange. The polymer filters of the glasses made the rest of the sky jet black. It was still too early for me to make out the

lunar edge with my naked eye, and then suddenly it wasn't. A very tiny portion of the sun was simply gone. It did not look like the moon was in front of it. It looked like a mistake. I took off my glasses and examined them. "Ladies and gentlemen," Small shouted, "a total solar eclipse is now underway!"

According to a board on which Schneider had scrawled the time for first through fourth contacts, we now had 1:16:24.5 to wait. Kramer had warned us that it would be the longest 1:16:24.5 we'd ever experienced, and it was, but more surprising than the slowness of this time was its physical presence in the sky. The moon had inched its way into place, and now it was inching across the sun; it would inch all afternoon. It was always inching. We were watching the massive grinding gears of a clock. "Forty-five minutes to go!" someone announced.

Up on the pad the mood was jolly. Everyone was dark-adapting their dominant eyes so that once the sun was gone, their night vision would enable them to see a wider corona. They wore black eye patches underneath their glasses. "Arr," Friedlander said. "Any flash photographer will be made to walk the plank."

The moon is 400 times smaller than the sun. It is only able to block the sun during a total eclipse because the sun happens to be 400 times farther away. Another way of putting it is that both the moon and the sun are located 109 times their own diameters from the Earth. This is entirely coincidental. No other planets in our solar system have satellites capable of producing a total solar eclipse. There is no reason for the moon to be exactly where it is, and, in fact, it won't be there forever. Every day the moon recedes another 0.039 inches from the Earth. In six million years, eclipse chasers will be screwed.

I had read about these and other astounding facts. I knew that total eclipses recur in an 18-year, 11-day, 8-hour cycle known as a saros, and that the saros to which the March 29th eclipse belonged had first crossed the Earth on August 11, 1627, and would last cross it on March 26,

2601. I knew that saros cycles move northerly or southerly over the globe, that they generally last around 1200 years, and that, unbelievably, the Babylonians had this information 4000 years ago. I knew that the sun is about 4.7 billion years old, and the moon is a little younger. I knew that the corona is a million times fainter than the photosphere, which is why we cannot see it until the photosphere is blocked, and that it would likely have an elongated, "winged" appearance on March 29th due to our position in

er," Moskowitz said, his voice wavering. The tension was great. Umbraphiles talked to themselves and re-checked their equipment, rubbing their hands and stamping their feet. An ominous darkness appeared in the clouds along the horizon, hanging in the mountains across the water. On the ground, my shadow had a clear edge on one side and a blurry edge on the other. Moskowitz worried someone would knock over his gear—"No moving around at this point!"

"Thirty seconds!"

I turned for a last look at the group. Those who weren't gazing at the sky were scanning their laptops, making sure that Umbraphile was set to properly engage. The shouting grew louder and more hoarse. "Getting close!" "There's Venus!" "Shadow bands!" "Oh, my God!" I wanted to shout with them but I couldn't make a sound. This can't be happening, was what I was thinking. The light spun through the changes of three hours in a handful of seconds. From the clouds and mountains at the end of the bay a terrifying darkness emerged and began to race over the water. All over the patio people shook and moaned. "Oh, look at that shadow come!" Small screamed, and his voice sounded surrender. The entire wide sweep of the bay went dark, as the edge of the umbra made for our bluff. It was traveling 1600 miles an hour. We were meaningless motes in its path. With a sickening rush, the dark wall slammed into



the 11-year sunspot cycle. I knew that Bailey's Beads are named for Francis Bailey, a British astronomer who noticed the phenomenon in 1836. I knew all this, and yet it turned out I was completely unprepared.

At the 10-minute mark, people began to pull on sweaters. The light was neither dawn nor dusk. It was weak and pale. The sun was an orange sliver. Everyone began to talk at once. Friedlander and Small strode around the pad, shaking hands. "See you after!" they said. "Have a good eclipse!"

As totality approached the temperature plunged. The wind picked up. The bay before us lost its glitter and went dark. "It's getting dark-

our tiny perch, and the miscellaneous shouting of the huddled crowd fused into a single howl, a rising ooooooawwwwwweeeee from which anonymous comments flared—"Oh, beautiful!" "Oh, God!" "Oh, *shit!*"

I looked up and the sun was gone. In its place a deep, unfathomable blackness stared down at the Earth. Brown had been absolutely right. Words cannot describe the force of this stare. Words pertain to a smaller scale. I had planned to spend totality roaming the helipad, observing the reactions of the other eclipse watchers, but the instant this stare was on me I was powerless to move. I was powerless to think. I seemed to be standing waist deep in honey, holding my

brain in a jar. Umbraphiles were screaming at the top of their lungs as if this were the first eclipse they'd ever seen. "Look at the chromospheric light!" "Look at the horizon colors!" "Look at *that!*" Schneider stood at the center of the H with his shoulders slumped and his hands hanging down. "Oh, God, that is beautiful," he said. It wasn't hard to imagine him at the age of 15, gazing upon this sight for the first time and realizing that his life had been irrevocably changed. Moskowitz swung his binoculars back and forth, spanning the elongated corona. "I love you all!" he shouted.

The hole in the sky was transfixing. We seemed to be falling up into it, leaving ourselves behind. In no time, I utterly lost whatever ability I'd had to behave like a professional journalist. I was a column of mute, unthinking awe. How could I take notes? I didn't even know what notes were. I required some sort of reporter's Umbraphile, some brilliant program that would take over the job and carry it out with mechanical efficiency while I collapsed in stupefaction. Tears were streaming down my face and dumb laughter came from my throat. I still couldn't seem to move my feet. "50 seconds!" Schneider shouted. Seconds? Were there seconds in this place? "Prominence at five o'clock!" "And three

o'clock!" What is a clock?

At third contact there was another great whoop, and then the light came rushing back. Mercifully, the world returned, but I no longer had any idea what to do with it. In the center of the pad, the umbraphiles crashed into an awkward bear hug, laughing and singing. Schneider seemed magnificently, unprofessionally happy. "That was pretty," he said. "When's the next one?" Friedlander hollered. Their joy was marvelous and distant. How did they manage? I couldn't open my mouth.

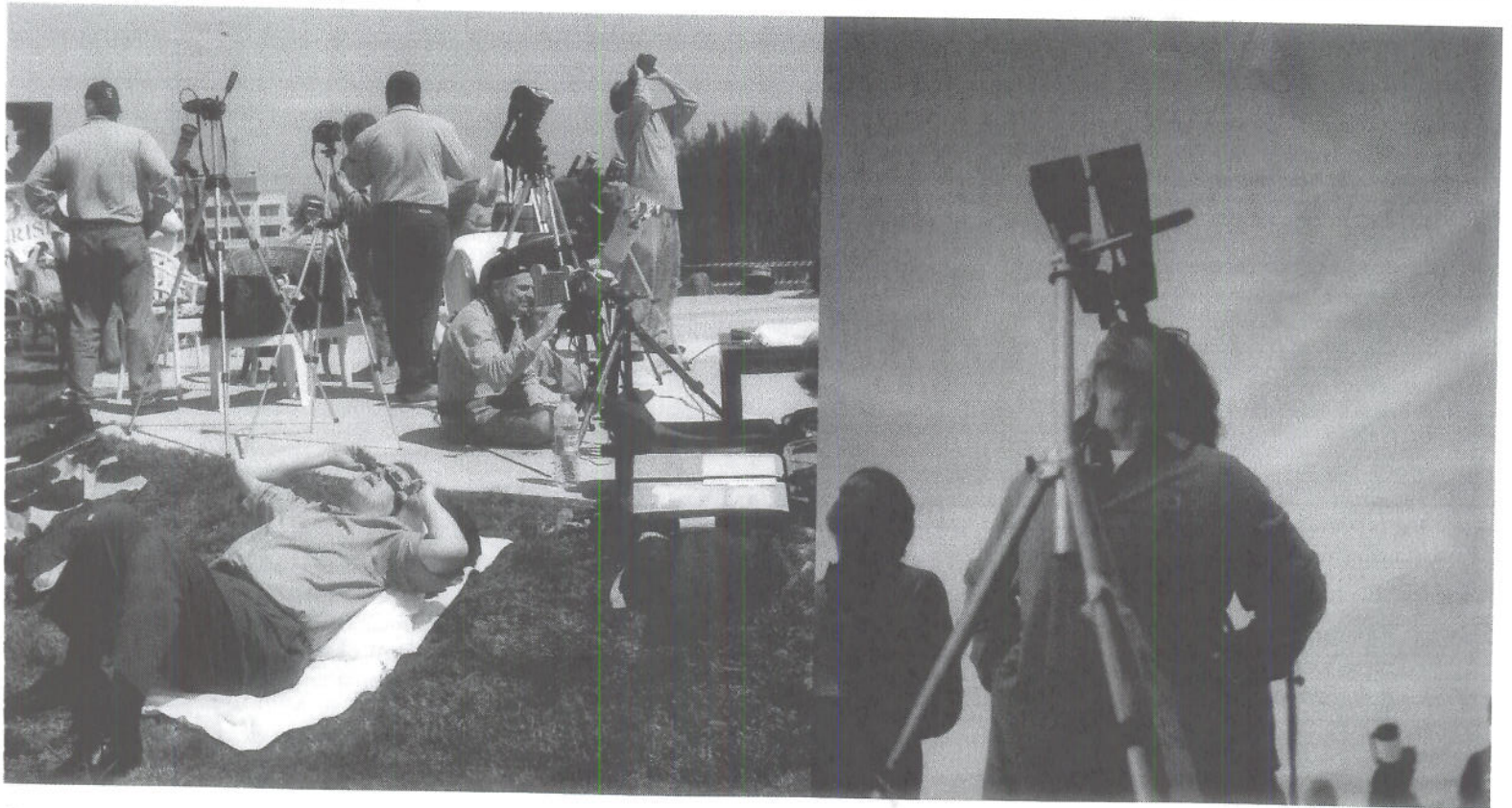
A consensus formed that this had been a stupendous eclipse. "That was a great corona," I heard Kramer tell someone. He turned and looked at me. Apparently my predicament was nothing new. "Very emotional, isn't it?" he said. "Now you see why I said five eclipses before my hands stopped shaking." I nodded dumbly. All around me, umbraphiles were slapping each other on the backs, shaking each other's hands, shouting about the chromospheric structure. No longer did any of it require explanation. I understood. For three days I'd been studying these people and now I seemed to be seeing them for the first time. Their faces beamed with a rare exultation. Elaborate plans had led them here, but their wonder was simple and stark.

The cameras and clock drives and telescopes and flight plans were beside the point. The point was the hole in the sky. For three minutes and 45 seconds, I had fallen into the hole with them.

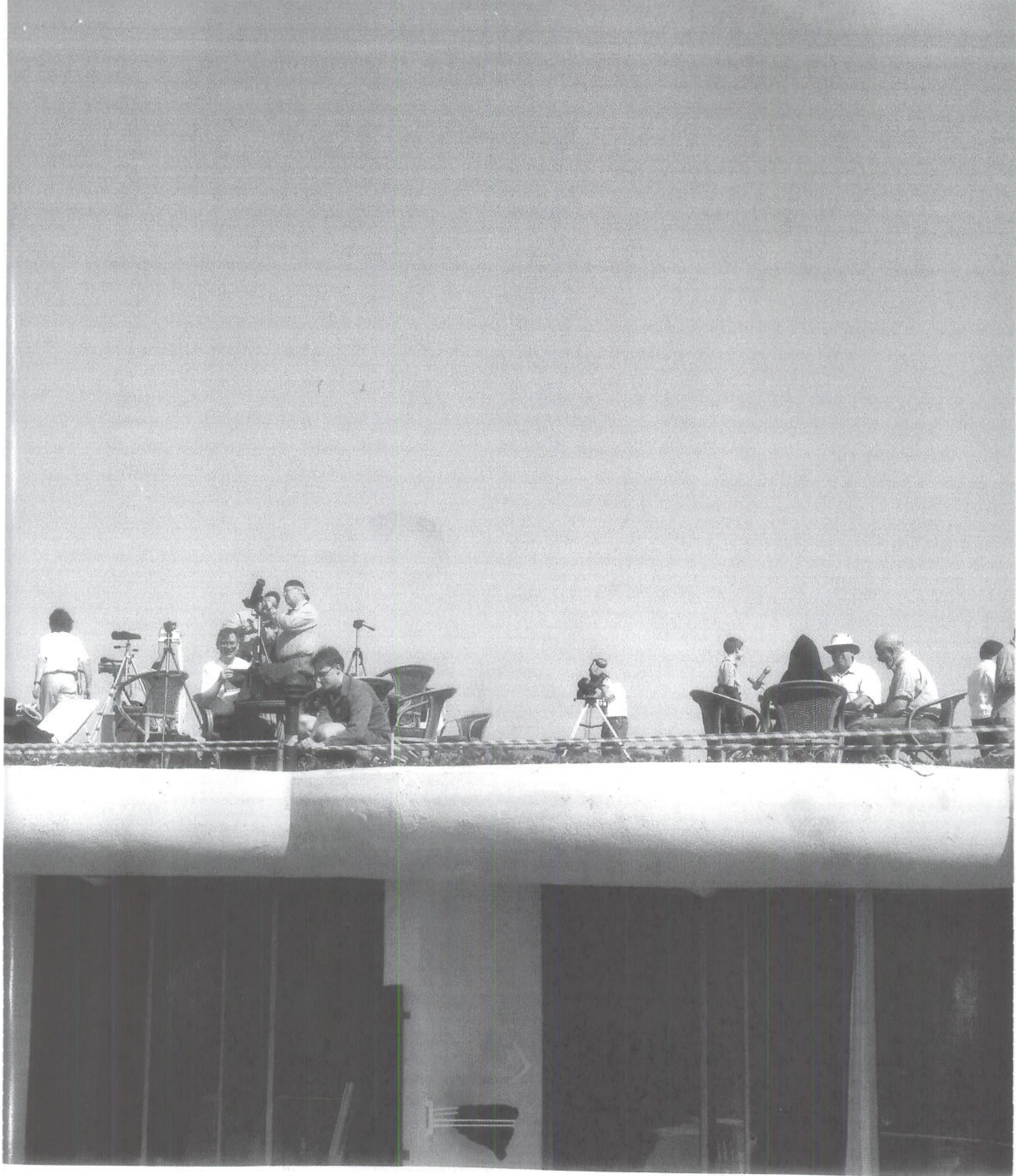
It wasn't long before people began packing up. The second partial phase is exactly like the first, except that no one cares anymore.

In the past, many of the chasers on the pad had made long journeys to behold obscurations like the one now overhead, but after totality it barely merited a glance. There is only so much a person can take, even if he is an umbraphile. The talk turned to lunch, to naps, to a swim in the pool.

Over on the pad Schneider was mixing up his traditional post-totality egg cream in a beer stein and pouring it into tiny shot glasses. After every eclipse—in Australia, in Africa, on the South Seas, in Bolivia and Mexico and the Caribbean—he and Small and some others drink egg creams and pass out New York City subway tokens (Small told me he'd bought hundreds of them for this purpose when the MetroCard was introduced). They have been doing this for many years. They are purists: for the egg creams, they bring their own seltzer and chocolate syrup. (Fox's, it turned out.) This is their practice. ☾



Above, left: Part of Brown's group, on the helipad at the Sunrise Queen Hotel. Joel Moskowitz is seated at center. Above, right: Schneider gazes at totality. Opposite: Some of the hardcore group setting up their gear. Previous page: Eclipse chasers testing their viewing equipment.



Go to seedmagazine.com/eclipse for more eclipse stories.