So Many Miles to Cover and So Little Time to Do It

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SOLVANG, Calif., Jan. 20 - On a sunny Southern California afternoon, a crowd gathered in a hotel parking lot here to watch Lance Armstrong and his team complete its daily six-hour training ride.

Though it appears to be a solo effort, bicycle racing is clearly a team sport. In Armstrong's case that team effort extends to an informal group known as F-One, an array of sports physiologists, computer engineers, aerodynamicists, as well as bicycle, helmet and clothing designers, which met for the first time this year on Thursday.

Indisputably the world's best cyclist, Armstrong, the six-time winner of the Tour de France, has been hinting broadly that he might take a year hiatus from the event he has dominated since 1999. He has also speculated that his next goal may be a sporting challenge virtually unknown in the United States until now.

For the rest of the world, however, the Hour Record, as it is known, holds as much magnetism as ascending Mount Everest. The object is for a solo rider to ride as far as possible in 60 minutes on a banked velodrome.

The record was first set in 1893 by the Tour de France founder, Henri Desgrange, with a mark of 21.95 miles. Since then, many of the world's cycling greats have taken turns assaulting the standard. Chris Boardman of Britain, a time-trial specialist, most recently set a mark of 30.721 miles in Manchester, England, in May 2000.

The event is attractive to Mr. Armstrong because it plays to many of his strengths: he is domineering in time trials, a category he has defined by his ability to produce extraordinary amounts of pedaling power over long periods.

"I think it would be an amazing spectacle," said Morris Denton, an executive for Advanced Micro Devices, one of Mr. Armstrong's sponsors. "If you look at the crowds Lance draws in the United States and you think about what would happen if you put some kind of marketing effort behind this event, it would be immense."

Mr. Armstrong has said he will not announce his intentions until April at the earliest. However, the plotting began here last week in a windowless hotel conference room for an attack on the Hour Record.

Johan Bruyneel, who is the coach of Mr. Armstrong's team, and Bart Knaggs, the president of his sports management company, Capital Sports and Entertainment of Austin, Tex., assembled the group to begin discussing the complex strategy and design issues that need to be solved.

Mr. Knaggs made clear to the group in his opening comments that no decision had yet been reached on which races Mr. Armstrong would attempt this year.

"Right now it's an idea," he said. "It's a four-minute-mile kind of thing, but we don't have it on the calendar yet."

The colorful history of the event is divided between an "athlete's record" originally set at 30.71 miles on a traditional track bike by the Belgium cycling legend Eddie Merckx in Mexico City in October 1972, and another record set using the most advanced technology.

The Merckx record went unchallenged until Francesco Moser broke it in January of 1984 at 31.57 miles, using a technologically advanced bicycle and a radical aerodynamic position.

Mr. Boardman then set the record of 35.029 miles in September 1996 in Manchester, only to have the Union Cycliste Internationale, the bicycle racing sports organization, set new rules in an effort to rein in the pace of technology.

Now, Mr. Armstrong must decide which record he wants to break.

"You have a philosophical decision to make," said Jay T. Kearney, a sports physiologist who is a vice president at Carmichael Training Systems, a company in Colorado Springs that oversees Mr. Armstrong's training regimen each year.

That is not the only decision the F-One group is faced with. In a presentation before the group last week, Mr. Kearney laid out a matrix of variables, each of which could have a drastic impact on Mr. Armstrong's chances.

For example, while Mr. Boardman set his records at sea level, Merckx rode at a velodrome at high altitude in Mexico City. In detailed charts, Mr. Kearney showed the group how moving the challenge to higher altitude significantly cuts air resistance, making it easier for a rider to go faster. The benefit of lowered air resistance is balanced by the decline in maximum oxygen uptake, which declines at altitude, even for elite athletes like Mr. Armstrong.

Air pollution, or even a cheering audience exhaling carbon dioxide in an enclosed stadium can have a measurable effect on rider performance, Mr. Kearney told the group.

In Las Vegas during a recent appearance at a media event, Mr. Armstrong showed a keen interest in the Hour Record. He rattled off the distance that Boardman had gone in his

2000 "athletic" attempt to the one-hundredth of a kilometer. He suggested that one exciting way to try to capture the record would be to make a first attempt at sea level in Madison Square Garden. Two weeks later, he would tackle the event at a higher altitude, perhaps in Salt Lake City in a sporting center that is a favorite of speed skaters and has produced many records for that sport.

At the meeting here on Thursday, the F-One design effort was just beginning.

"You need to tell me whether you need 60 days, 120 days or 500 days to be ready," Mr. Knaggs told the group.

In addition to thinking about the possibility of the Hour Record, each representative made progress reports on preparations for the new Discovery Communications Pro Cycling team, which replaces Mr. Armstrong's United States Postal Service sponsor this year.

The F-One group is made up of Carmichael Training Systems; Giro, the helmet maker; Nike; Trek bicycles; the wheel builder Hed Cycling Products; the computer chip maker Advanced Micro Devices; and the aerodynamicist Len Brownlie.