By Roberto Molar Candanosa

Millions of golf enthusiasts worldwide tuned in to watch Zach Johnson conquer the famed Old Course at St. Andrews in Scotland on his way to victory in the 2015 British Open. That included former Goddard physicist Dave Pelz, a scientist-turned-golf instructor whose teachings were applied by many players in the tournament.

Pelz’s unique scientific approach to golf has helped professional golfers worldwide, including Hall of Famers Tom Kite and Phil Mickelson, who won the British Open himself just two years ago. With 10 golf schools in the United States and two in Europe, Pelz also helps amateurs improve their game.

In part, it all started at NASA’s Goddard Space Flight Center, where Pelz studied planetary atmospheres for nearly 15 years.

After attending Indiana University on a golf scholarship and earning a bachelor’s degree in physics, Pelz joined the Goddard family in 1960.

“Doing space research was the dream,” he said. “At the time, the Soviet Union had just put up Sputnik, and NASA was new, exciting and doing things that had never been done before.”

He studied the atmospheres of Earth, Venus and Mars through international collaborations with Italian and German agencies. “I got to work with brilliant people – the best minds in the world,” he added.

He also analyzed variables one at a time to prevent other variables from mixing up results and masking the causes and effects of things. After a decade, this new approach to research got him thinking seriously about pursuing golf professionally.

In his spare time, Pelz used lasers and computers to analyze his swings and strokes in his basement, helping him hit the ball more accurately. “I was really in the high-tech end of the golf industry,” he said.

His analysis would show that most golf shots are taken inside and within 100 yards from the green, the small area surrounding a hole. He would later focus all his efforts on perfecting pitches, chips and putts – which are collectively known as the “short game.”

“Golf is all about controlling your golf ball,” Pelz explained. “Any child or old man can get the ball to the hole because they are strong enough, but the question is total accuracy.”

Based on his findings, Pelz designed the Teacher Putter, a club with retractable clips to help players aim the ball better toward the hole. His new putter led to an improved accuracy.

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Pelz has had a successful career after leaving Goddard by doing research for big golf companies, writing books and articles, and teaching pros and amateurs alike. Today, he holds 21 patents for inventions and techniques that golfers all over the world use as learning aids, and he is continually working to come up with new ones.

Golf Digest named Pelz one of the 25 most influential instructors of the 20th century, and his professional students have won 20 major championships to date. His book, Dave Pelz’s Short Game Bible, was a New York Times best seller in 1999. He made regular appearances on the Golf Channel and remains a contributing writer to Golf Magazine.

He now studies the game in an area much bigger than his basement. Pelz has turned the 2-acre backyard of his dream house – located just outside of Austin, Texas – into a space-age golf course that he casually calls his “research facility.”

Covered with artificial turf and a range of greens that includes a replica of the iconic 12th hole of Augusta National Golf Club in Georgia – site of the annual Masters Tournament – Pelz’s course functions rain or shine, hot or cold.

“In 30 seconds, I can get out of my chair and go hit shots and have balls in the air,” he said.

Even after leaving Goddard, he remembers the good times he had as a NASA scientist. In 2006, he reunited with nine scientists from his former team.

“I was a grand old time,” said Pelz, who was among the few members of that team who left NASA. “I am probably one of the few people who ever left a job they loved as much as I loved working at Goddard.”

Looking back, Pelz just considers himself to be a lucky guy. “I’ve had an incredible life. I feel like I’m living the dream, and it has continued even after I left NASA,” he added.

Above, left: Golf instructor Dave Pelz, a former Goddard physicist, poses in front of his backyard golf course just outside of Austin, Texas. Photo credit: Pelz Golf

Above, right: Phil Mickelson (foreground, left), winner of five major golf championships, credits much of his success to short game skills he learned from Dave Pelz (foreground, right). Photo credit: Pelz Golf

Below: Dave Pelz (fifth from right) with a Goddard team in Italy. Photo courtesy of Pelz Golf.