

A Profile: Ron McNair

by Peter Bates

While shuttle astronaut Ron McNair was still working at the Hughes Research Laboratory and awaiting NASA's decision, he and his wife Cheryl decided to buy a car. Like any young couple, they were concerned about priorities.

The option arose whether to spend \$600 on air conditioning or not; Ron felt they didn't need it in Malibu's temperate climate. "That might be true," Cheryl replied, "but we're sure going to need it when we get to Houston next year." In a burst of optimism, they chose the air conditioning.

"Everybody I knew," said Ron, "expressed far more certainty I'd make it than I did. In fact, they sort of took it for granted, which disturbed me somewhat." Perhaps Ron was right in not hoping too hard for the position. There were 8,000 applicants for 35 shuttle astronaut positions. "The odds were definitely against me, so when I was accepted, I was overjoyed. My desire to be an astronaut goes way back to when I was seven years old. Of course it was more in the realm of fantasy than anything else."

How to reach that goal — what steps to take, what to study — is not something one can concretely plan from the beginning of an educational career. For Ron, as perhaps for the others who made it, it was simply a matter of having the right credentials at the right time. When he heard NASA was canvassing the country for recruits to the shuttle program, he simply sent in his



Ron McNair is scheduled for trip into space on Challenger 11.

resume and waited. In January, 1978, less than two years after he received his PhD in physics from MIT, he was selected.

Perhaps one of the most significant events in his career occurred in his junior year at North Carolina A & T. The MIT branch of the Black College Faculty-Student Exchange Program selected him, along with two other students from predominantly black schools, to study for two semesters at the University. Through the aid of Dr. D.H. Gould and Dr. Albert Hill, who was chairman of the

Physics Council at the time, Ron received guidance and support to press deeper into the field of physics. The program was short-lived, however. Funded by the Office of Education, it was begun in 1969 and discontinued six years later. Dr. Hill: "The federal government, in its infinite wisdom, saw fit to de-fund the program." Currently, minority admissions to MIT are lower than they were in the 'Seventies. "I'm saddened to see a decline in black admissions," says Ron. "I think there are two reasons for it. The first, of course, is money, scholarship availability. But there's also the current climate — fewer youngsters are interested in pursuing some of the careers MIT offers. As far as the Faculty-Student Exchange Program goes, we made recommendations to resurrect it, but failed."

Despite increased difficulties now facing young blacks in the fields of education and employment, it is clear that they and many other young people see Ron McNair as a model of attainment. At a reception and dinner held for him by MIT's chapter of the National Society of Black Engineers, Ron was warmly greeted by minority undergraduates who asked him questions ranging from his upcoming Challenger 11 Space Shuttle Flight to his ongoing involvement in karate.

"Sometimes being a good human being and a good scientist don't always go together," says Karl Reid, undergraduate student of NSBE. "But Ron is a very positive individual

with a great sense of humor. To see someone like that who made it through here is very inspiring. I think it encourages us to aim even higher than he attained. I for one would like to be part of a team that *develops* a major portion of a shuttle, not just the one who drives it."

Ron downplays the role-model stance. "It's very hard to envision yourself as a model of anything, unless you're very arrogant. But I suppose there's some usefulness in it. I was very inspired when, as an undergraduate, I saw a black physicist. But I don't go around saying, 'hey everybody ought to try to do this!' It's not everybody's bag. Maybe a lot of people can do it, but not everybody wants to."



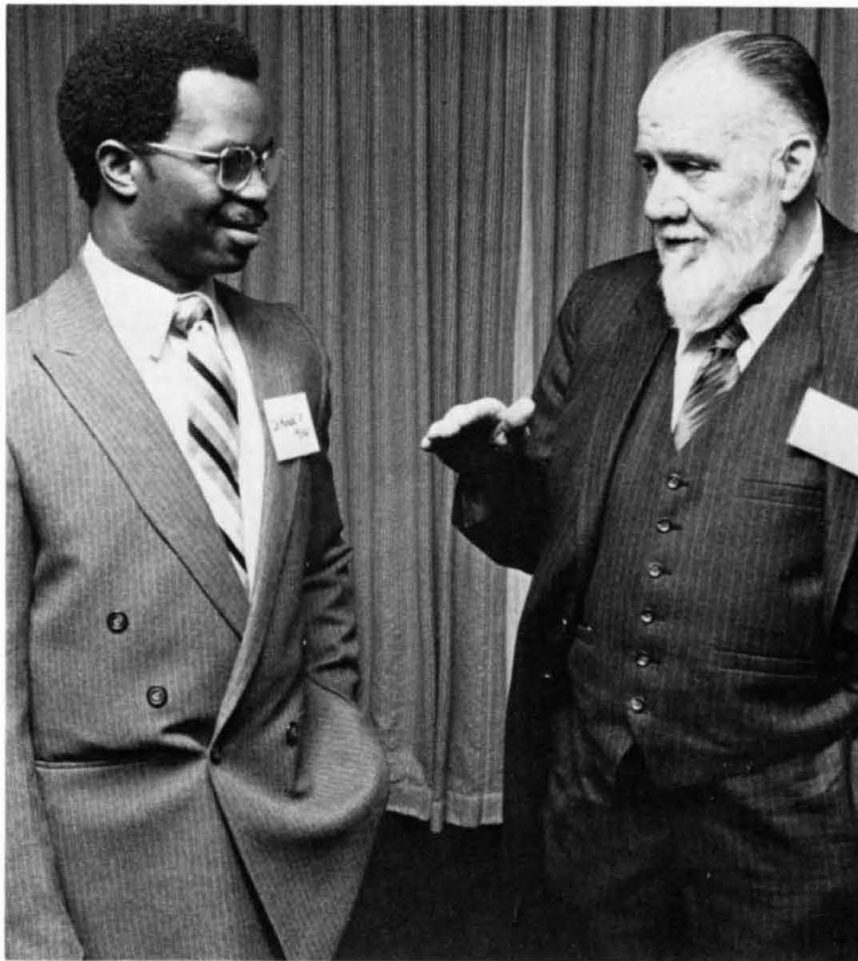
Also holding a black belt in Karate, McNair plays saxophone as well.

Perhaps the reason fewer people would want to change positions with McNair than, say if he were a pioneering brain surgeon, is the prevailing fear that many still hold of space travel. The deep void continues to stir up visions of "the last frontier," with all of the danger that implies. At this point, with the shuttle launch date set for 1/31/84, Ron does not feel apprehensive. "If I were the first man going into space, I probably would feel a little jumpy, but we've been doing this for years. I have no trace of anxiety. But that doesn't mean I'm not cautious. Any time you're sitting on two big firecrackers like those solid rocket boosters and all that liquid hydrogen and oxygen is nearby, you want to make sure everything's real tight."

McNair's role on the Challenger 11's flight is as its chief scientist. Like Lt. Guion S. Bluford Jr., who is scheduled to be the first American black in space this July 4th, McNair will conduct electrophoresis experiments, exploring the separation of biological substances into their chemical constituents through electromagnetic charges. In previous flights, large quantities of insulin were manufactured in this ultrapure matter, since there was no gravity to cause the substances to recombine shortly after separation. Ron will also use acoustic waves to levitate materials while they're being processed, melted, and/or solidified. He and the other astronauts will also test the RMS (remote manipulator system, a jointed arm outside the shuttle). Perhaps the Challenger's most impressive feat will be to eject a weighted balloon into space, allow it to drift 200 miles, then track it down and approach it. This maneuver is being carried out as a dress rehearsal for the Challenger 13's mission: to retrieve and repair a dying satellite.

McNair's life in Houston has not been all astrophysics and orbital mechanics. As a black belt in karate, he teaches the sport at the Wheeler Avenue Baptist Church to community members. "I don't take any money, so they have to play by my rules," says Ron. "I get a pretty healthy generational cross section. My students range in age from six to the late 'forties." Once or twice he also teaches physics at Texas Southern University. Although only a part-time job, it is enjoyable to interact with the students in their activities.

Ron sees his involvement in activities — karate, physics, teaching, music (he plays saxophone) — as mutually impelling. "These are all areas that require long-term disciplined training. They are not things you do for awhile and forget. To maintain them for long periods of time requires practice when you don't feel like it. But what I try to impress on all my students is that while we may be getting winded and bruised out there, it's all transferable, the whole mental process." EO



Ron McNair with Dr. Albert Hill, who was instrumental in the astronaut's early education career.