



May 18, 2001

SPACE CENTER Roundup

VOL. 40, NO. 9 LYNDON B. JOHNSON SPACE CENTER, HOUSTON, TEXAS

Sunny days!

Thanks to NASA space-based technology, child with four rare skin diseases can now play in the daylight

By Melissa Davis

Cardi Hicks couldn't keep from laughing as he ran around in the bright sunshine.

His mother Samantha Hicks couldn't keep from crying as she watched her 8-year-old son play outside in the daylight.

Cardi suffers from four rare skin diseases that for years forced him to stay out of the sun and its potentially harmful ultraviolet radiation. However, that has all changed thanks to NASA and the Hypohidrotic Ectodermal Dysplasia (HED) Foundation.

On April 23 at Regents Park, Cardi received a special UV blocking suit that was developed from NASA space-based technology. The suit allows him to go outside protected from harmful light.

The little boy from Magnolia, Texas, was all smiles when presented with the suit by HED foundation Founder and President Sarah Moody as members of JSC's Office of Technology Transfer and Commercialization looked on. His mother thanked the two organizations for giving her son a chance to live a much fuller life.

"It's a very special endeavor for us to have been involved in," said David Haines, a member of the Office of Technology Transfer and Commercialization.

Although Cardi was covered from head to toe in the white garment once he was suited up, there was no stopping the giddiness of a child finally set free to play in the sunlight.

The UV blocking suits give children like Cardi freedom to be fun-loving and active for the first time in their lives. "The UV suit/cooling garment is an outstanding example of NASA-developed technology with a meaningful real-life application here on earth," Haines said.

HED is a medical disorder characterized by the lack of sweat glands. The HED Foundation works not only to improve the quality of life for children suffering from

HED, but also for children with other disorders that affect the body's ability to naturally cool itself.

It is estimated that several thousand children around the world suffer from various defects that cause either extreme sensitivity to light or problems in cooling their bodies.

The HED Foundation began in 1986 when Moody sought help from NASA in finding a cooling garment for her nephew, who suffered from HED. The foundation also provides cooling garments to children with multiple sclerosis, spina bifida, cerebral palsy and other disorders.

In 1997, JSC, seeking a broader use for spacesuit technology, offered Moody the concept for the UV blocking garment. The first three suits distributed were prototypes provided by NASA to the foundation. The foundation has since provided more than 15 additional UV blocking suits.

While Moody works many hours running the not-for-profit HED Foundation, she is quick to share the limelight. "I'm only the tool," she said. "If it had not been for NASA technology...these children would have to live their lives in the dark."

The predicament of children like Cardi deeply touches JSC's Haines, who has three children—ages 4, 5 and 7.

"As a parent of three small, very active children myself it is hard to imagine what life would be like for one of these precious ones not to be able to run and play outside," he said. "It is also very sobering to realize the implications for the rest of the family in accommodating

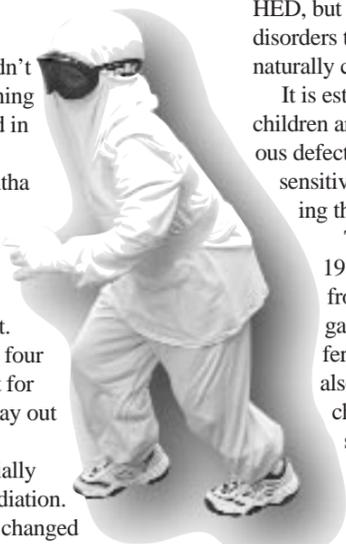
such a debilitating condition."

Haines said it has been a privilege to be part of the technology transfer effort at JSC.

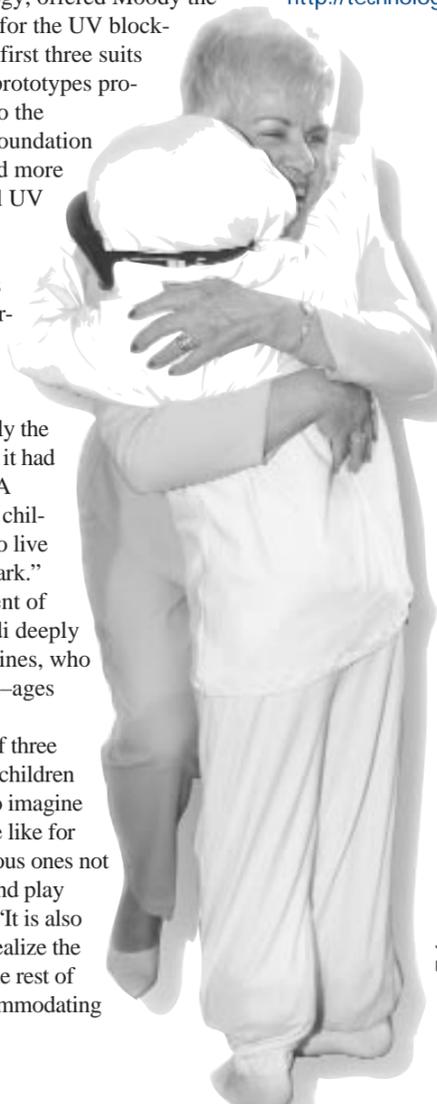
"To have been a small part of making a child's life more enjoyable in such a basic, but meaningful, way makes me feel very humbled, thankful for my own blessings and also very proud of our agency and our folks here at JSC having been involved."

For more information about the HED Foundation, visit: www.hedfoundation.org

For more information about the Office of Technology Transfer and Commercialization, visit: <http://technology.jsc.nasa.gov/index.htm>



JSC NASA 2001e12105 photo by James Blair



JSC NASA 2001e12102 photo by James Blair

Cardi Hicks, who suffers from four skin diseases, can now play in the sun thanks to NASA and the Hypohidrotic Ectodermal Dysplasia (HED) Foundation. At left, Cardi was recently presented a special UV blocking suit, which was developed from NASA space-based technology, by Sarah Moody, HED Foundation's founder and president. At right, Cardi is being suited up by his mother Samantha Hicks, left; HED Foundation's Sarah Moody and Cardi's doctor, Bas Nair, M.D.

At-a-GLANCE

- The protective suit includes a white jacket, pants, gloves and headgear, including goggles.
- The external garments protect the child's sensitive skin from more than 99.9 percent of the sun's hazardous UV rays.
- Underneath the protective Earth-bound spacesuit, the child wears a small cooling support system, necessary because full-body UV suits can get warm.
- The cooling unit has no moving parts, using four gel packs in a vest-like garment. The gel packs can supply cooling for two to four hours and can be recharged in a refrigerator in about 30 minutes.
- Through an agreement with JSC's Office of Technology Transfer and Commercialization, NASA and the HED organization have worked together since 1997 providing suits to children who need them.
- The suits are designed to cost less than \$2,000 and are now available in various colors.



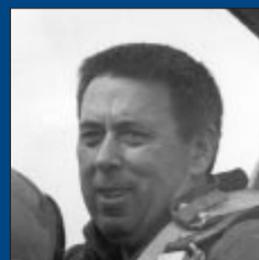
JSC NASA 2001e12096 photo by James Blair



STS-100
delivers
Canadarm2.
Page 2



Astronaut
David Walker
remembered.
Page 3



Special
tribute to
George Abbey.
Page 4 & 5