ted segregation, this variety exhibited high fertility. In the present interchange heterozygote, 68.2% interchange multiples had non-disjunctional orientation. At anaphase I the interchange complexes disjuncted normally due to the presence of mostly terminal chiasmata. However, pollen stainability remained very low and there was no seed formation. This may be due to the deficiency-duplication arising from non-disjunctional orientation of the interchanged chromosomes. However, sterility is not a handicap in the present case, as the taxon is usually propagated through cuttings. Their attractive flowers have perhaps been responsible for selection and perpetuation in the gardens. Similar cases of adaptive advantages of interchange heterozygosity have been reported in a number of perennial ornamentals like *Amaryllis*[5], *Bougainvillea*[6], *Canna*[7], *Crinum*[8], *Gloriosa*[9], *Hemerocallis*[10], *Zephyranthes*[11].

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NEWS

SUPER NEUTRON MACHINE WILL SPEED MATERIALS RESEARCH

The world's most powerful machine for probing the structure of matter has started to produce new information about the composition of basic materials such as crystals, metals and glasses.

The £100 million facility, officially known as a Spallation Neutron Source, or SNS, has been built at the UK Science and Engineering Research Council's Rutherford Appleton Laboratory near Oxford and is destined to become the most important international equipment of its kind over the next year or so as it works up to full power.

The giant machine, which took seven years to build, was designed to produce short but very intense bursts of neutrons. These are one of the elementary building blocks of matter and are considered a unique tool for wideranging studies of the properties of materials at atomic and molecular levels.

Neutrons are normally obtained for such scientific research from nuclear reactors, but the SNS produces them by a different method that involves a series of accelerators in the release of neutrons. Once freed, they escape along tubes where instruments measure the intensity of neutrons scattered from the material under investigation. It is hoped to expand the facility in the future to accommodate up to 25 experiments at a time.

The SNS, which was formally inaugurated by the Prime Minister, Mrs Margaret Thatcher, has been named Isis, after a river that runs through Oxford. Mrs. Thatcher said some areas of industry were showing interest in using the new facility, which is already the subject of working scientific agreements with France, Federal Germany, Italy, Sweden and other European Community countries. Discussions on using the SNS were also at an advanced stage with other countries.

The new facility also opens up the possibility of giving engineers a new insight into the working of jet engines by producing three-dimensional maps of turbine blade temperatures.

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