

THE
SCAS
Clipboard

Vol. II

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No. 14

SCAS CAMPUS

General contract award for the construction of the first unit of Research Building No. 1 on the SCAS campus, has been made to the George A. Fuller Company of Dallas.

Total amount of the contract is \$2,006,800, including a basic bid for construction of the south section of the two-story laboratory, and an annex; in addition, a \$14,000 connecting bridge is to be built between the two units.

Director of campus development Frank Seay reports that first-phase site development is about 75 per cent complete. Remaining work to be finished during approximately the next six months, according to Mr. Seay, includes parking lot to serve the first laboratory building, campus roads to serve this building, extension of gas, electric, and telephone service, and incidental landscaping. He said that the main water, drainage, and sanitary sewer systems are complete, and that first-phase paving (Armstrong Road, campus entrance road, plus 25 per cent of the peripheral road) has been finished.

Gravel roads to the magnetic facility and main building site, and to the neutron monitor building have been constructed, he said, and added that landscaping for the magnetic facility is under way.

(Continued on page 2).

RESEARCH NEEDS CITED

Testifying before a House committee charged with evaluation of the national program of scientific research, GRCSW president Dr. Lloyd Berkner stated on November 21, that the \$1 billion expended each year for true research in the U.S. must be doubled within ten years.

He stressed the vital need for innovation brought about by pure science and said that such innovation can bring transition between an economy of scarcity and one of plenty. In pointing up the impact of research on our national situation, the GRCSW scientist stated that the impact of scientific research influences public attitudes toward the acceptance of innovation.

"Research provides knowledge that lifts civilization in the cultural sense to a higher richness of living," he said, "and will put us in the forefront of science in every sector, so that we cannot be immobilized in defense of our nation."

In discussing what research the government should support, Dr. Berkner said that we must gamble -- test, and try to attain success.

"A serious mistake could be in not supporting programs whose outcome cannot be clearly established," he said, and cited research in the field of relativity.

(Continued on page 2).

SCAS CAMPUS (From page 1)

Foundation and basement of the building to be known as South Laboratory Section of Research Building No. 1 is complete, according to Mr. Seay, and will, together with Annex No. 1 (to be used as temporary steam and refrigeration plant), contain approximately 116,000 square feet.

Scheduled to be occupied in the summer of 1964, the building will house projects of the Laboratory of Earth and Planetary Sciences, including Atmospheric and Space Sciences, Geosciences, and Mathematics and Mathematical Physics. Also located there will be the Laboratory of Computer Sciences, as well as the administrative offices of the GRCSW.

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RESEARCH NEEDS (From page 1)

He defended what is sometimes called duplication in research, calling it "the handmaiden of diversity -- because with it there is the natural selection of the best."

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VISITOR

Professor Carsten Bresch of the Institut für Genetik, Universität zu Köln (Cologne) - Lindenthal, Köln, Deutschland, visited the Center December 2 and 3.

SEMINAR

Prof. Ivor Robinson will give the relativity seminar Thursday, December 5, at 3:30 p.m. Held in SMU's Fondren Science Hall, the seminar will be: "Special Relativity III."

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TWO SCAS SCIENTISTS TO ADDRESS SCIENTIFIC RADIO UNION MEETING

Prof. Francis S. Johnson and Prof. Harold B. Liemohn, DASS, will address the 1963 Fall Meeting of the International Scientific Radio Union at the University of Washington, Seattle, December 9-12.

Division head Dr. Johnson will serve as chairman of the meeting's Commission IV session on "Waves and Particles in the Magnetosphere." Prof. Liemohn will deliver a paper in this session on the very low frequency power spectra of geomagnetically trapped electrons.

Prof. Johnson will also present a paper which will set forth highlights of the Commission IV session of the Union's XIVth General Assembly held in Tokyo, Japan, last September.

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TRIOLO TO WASHINGTON MEETING

GRCSW vice president for Development and Public Relations James S. Triolo will attend the American College Public Relations Association Conference at Washington's Willard Hotel, December 8-10. He will serve as discussion leader of the group dealing with "Financing the Future."

According to Mr. Triolo, this ACPRA meeting will center around "Pressures '64," and is designed to provide a national viewpoint of major issues facing the campus today.

Among the conference speakers is the Hon. Carl R. Elliott of Alabama, author in the House of the National Defense Education Act of 1958, and chairman of the House committee investigating government-sponsored research.

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SCAS SCIENTIST AT INTERNATIONAL MEETING

Prof. Kenneth G. McCracken, of the DASS cosmic ray section, left for Jaipur, capital of Rajasthan state, India, Thanksgiving Day, to speak before the Eighth International Conference on Cosmic Rays.

Held December 2 through 14, attendance at the Jaipur conference was invited by the Department of Atomic Energy of the Government of India, and organized under the auspices of the International Union of Pure and Applied Physics.

Dr. McCracken has also been invited to lecture on cosmic ray research at the Physical Research Laboratory at Ahmedabad.

He noted that the conference would cover the broad fields of primary cosmic radiation -- composition, energy spectrum, origin, pre-history, cosmological and astrophysical aspects; solar particle radiation, interplanetary fields and plasma, modulational phenomena and time variations; phenomena at energies greater than 30 GeV; properties of extensive air showers; cosmic ray muon and neutrino physics.

In providing ten full working days for the cosmic ray conference, Indian officials hoped to eliminate parallel or concurrent sessions.

Dr. McCracken has recently been appointed a member of the NASA Manned Spacecraft Center's subcommittee for guidance on radiation hazard problems.

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MEETING

Dr. Berkner will attend a meeting of the President's Science Advisory Council in Washington, December 9 and 10. He is consultant to the Council.

PROF. PATTERSON TO GIVE NASA SEMINAR

Prof. T. N. L. Patterson, DASS physicist, will give the December 9 Space Environment Seminar for the NASA Manned Spacecraft Center, Rice University, Houston. His subject: "The Exosphere and Particle Escape."

Prof. Francis S. Johnson gave the NASA lecture on December 2, on the subject "Atmospheric Structure!"

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GEOSCIENCES SEMINAR

"Some Recent Work on the Structure and Density of the Earth's Crust," will be the subject of a seminar to be given by Prof. Keith E. Bullen, F.R.S., of the department of Applied Mathematics, University of Sydney, Australia, Monday, December 9, at 10:00 a.m., in the SCAS Seminar Room (Room 352).

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SCAS TCU LECTURE

Prof. William B. Hanson will deliver the Upper Atmosphere and Space Physics lecture at TCU's Winton Scott Hall of Sciences, Tuesday, December 10. His subject will be "Ionosphere," a continuation of his Tuesday, December 3 lecture.

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SCAS TRAVELS

Dr. Lloyd Berkner will attend the Rockefeller Public Service Awards Luncheon in Washington, D.C., on December 5. He and Mr. R. C. Peavey will attend the NAS Space Science Board meeting at Princeton, December 6-7.

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...ON GAINING A LITTLE KNOWLEDGE OF RUSSIAN

"If a scientist has some knowledge of another language than English, that language should be Russian," is the statement of an internationally known scientist.

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A LITTLE KNOWLEDGE

Русский Урок - Russian Lesson

Словáрь - Vocabulary

ýтро - morning

вéчер - evening

Дóбрый вéчер - Good evening

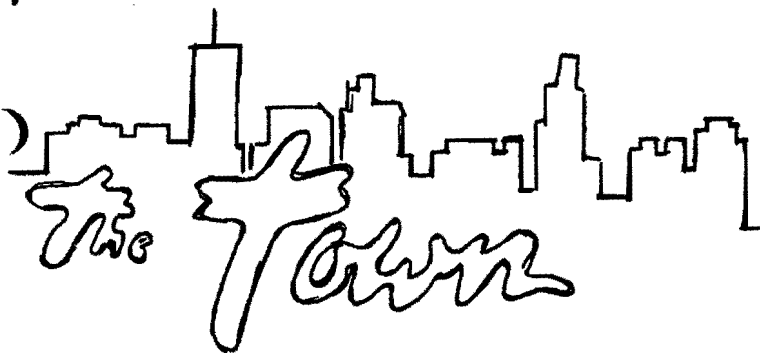
До-свидáния - Au revoir

ГРАММАТИКА - GRAMMAR

Gender: Gender endings are very important, since adjectives in Russian always agree with the noun in gender and number. In addition to the principal gender endings, **-(ъ), -а, -о,** there are others which follow logically on an examination of the table of Russian vowels. From this table we derive that since **-а** is the ending of the feminine, **-я**, being the modified sound of **а** is also a sign of the feminine. Similarly, neuter nouns end in **-ø** and **-е** (**е** being the unaccented-**ø**) as well as in **-о**.

Masculine nouns end in a hard consonant (**ъ**), with no flexible ending; they may accordingly also end in a soft consonant, i.e., one with a soft sign after it, and in **-и**, which also has no sound of its own and is a semi-vowel. Thus the three endings of the masculine **-(ъ), -ь, -и,** are to be found in the vertical column under "1"; **ы** and **и** being the signs of the plural, do not come into gender endings. (Table of gender endings next week).

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'POPS' CONCERT

Dallas' Symphony Orchestra has announced the first in a series of three "Supper Pops" concerts -- a buffet, followed by a symphony program, 6 p.m., Thursday, December 12. These concerts are modeled after those so popular in Boston, conducted by Arthur Fiedler.

Charge for the buffet and concert is \$4.95 per person.

Tickets may be obtained at the Dallas Symphony Office; State Fair Box Office; Preston State Bank; Neiman-Marcus Downtown; all Sears stores; the Shoemaker in Richardson.

Time: 6 p.m. Thursday, December 12.

Place: Grand Ballroom of the Dallas Sheraton Hotel

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ANNOUNCEMENT:

Russian lessons, as well as the "Town" column, which were discontinued last June, are resumed.

A Russian alphabet sheet is included with this issue of the CLIPBOARD.

A further announcement concerning the study of scientific Russian through an SMU-SCAS arrangement is upcoming.

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THE RUSSIAN ALPHABET

The Russian alphabet consists of 31 letters. The alphabet, as far as every sound is represented by a separate sign, may be considered phonetic. It should be noticed that no letter serves more than one purpose, and that two letters never represent one sound.

Printed	Written	English equivalent
А а	<i>A a</i>	a in car
Б б	<i>Б б</i>	b „ bar
В в	<i>В в</i>	v „ vice
Г г	<i>Г г</i>	g „ get
Р р	<i>Р р</i>	r „ rose
С с	<i>С с</i>	s „ site
Т т	<i>Т т</i>	t „ time
У у	<i>У у</i>	oo „ foot
Ф ф	<i>Ф ф</i>	f „ fine
Х х	<i>Х х</i>	h „ hard
Ц ц	<i>Ц ц</i>	z „ German zu, or ts
Ч ч	<i>Ч ч</i>	ch „ church
Ш ш	<i>Ш ш</i>	sh „ short
Щ щ	<i>Щ щ</i>	sh (longer) suggestion of y after it
Ы ы	<i>Ы ы</i>	i in writ
Ъ ъ	<i>Ъ ъ</i>	hard sign, used after a consonant to separate it from a vowel
Ь ь	<i>Ь ь</i>	soft sign, used after a consonant to soften it, i.e. to produce an effect similar to that of putting y after it
Д д	<i>Д д</i>	d in day
Е е	<i>Е е</i>	ye „ yet
Ё ё	<i>Ё ё</i>	yo „ yonder
Ж ж	<i>Ж ж</i>	s „ pleasure
З з	<i>З з</i>	z „ zero
И и	<i>И и</i>	ee „ meet
Й й	<i>Й й</i>	y „ boy
К к	<i>К к</i>	k „ Kato
Л л	<i>Л л</i>	l „ lamp
М м	<i>М м</i>	m „ might
Н н	<i>Н н</i>	n „ nine
О о	<i>О о</i>	o „ or (never oh)
П п	<i>П п</i>	p „ pipe
Ө ө	<i>Ө ө</i>	e in met
Ю ю	<i>Ю ю</i>	u „ use
Я я	<i>Я я</i>	ya „ yard