

*THE SAN FRANCISCO MEETING OF THE
AMERICAN PHYSICAL SOCIETY*

THE American Physical Society will unite with Section B of the American Association for the Advancement of Science in a joint meeting to be held at San Francisco August 2 to 7, 1915.

The program of the meeting is in special charge of the Pacific Coast Committee of the American Association for the Advancement of Science and will differ somewhat from that of ordinary meetings. The presentation of the results of individual research in short papers volunteered by their authors will be a minor feature of this meeting, but several sessions will be devoted to a somewhat broader consideration of the larger questions of physics, particularly those which have engaged the attention of Pacific coast workers. At these sessions only papers given on invitation will be presented. One session will probably be devoted to spectroscopy and another to atmospheric physics, the latter in charge of Professor W. J. Humphreys.

On Wednesday, August 4, the society will visit Stanford University and Professor Harris J. Ryan will give demonstrations with high-potential electric currents in the new laboratory especially equipped for such work. The meetings on other days will be held at the University of California at Berkeley. On Friday the officers of the Physical Society will have charge of a session—or two if necessary—at which ordinary research papers will be presented. It is hoped that the western workers who do not often have an opportunity to attend our meetings may be conspicuous on this program and their contributions are especially requested. Visiting members from the east are not urged to present many papers, as time will be somewhat limited.

Physicists are invited to attend the joint sessions of the American Mathematical Society and the American Astronomical Society at Berkeley, Tuesday forenoon, August 3. An address will be given by Professor C. J. Keyser, of Columbia University, New York, on "The Human Significance of Mathematics," and by Dr. George E. Hale, of Mt.

Wilson Solar Observatory, on "Recent Progress in the Development of Astronomical Science."

An excursion to Lick Observatory has been arranged for Friday, August 6, by the American Astronomical Society. The observatory may also be visited on any day of the year from 8 A.M. to sunset, and on Saturday evenings by those arriving before 9 o'clock. Saturday evening visitors have the privilege of observing the stars with the 36-inch and 12-inch telescopes. The railway station for the Lick Observatory is San Jose. An auto-stage leaves San Jose on six days of the week at 8:30 A.M., stops at Smith Creek Hotel for luncheon and reaches the summit of Mount Hamilton before noon. The stage departs at 1:30 P.M. and reaches San Jose before 4 P.M. The round trip fare for the individual trip by auto-stage is \$5.

The director of the Mount Wilson Solar Observatory extends a cordial invitation to men of science interested in astronomical and physical research to visit the observatory either before or after the San Francisco meeting of the association. The shops and laboratories in Pasadena and the observatory buildings on Mount Wilson will be open, and all phases of the work in progress can be seen. The Mount Wilson Hotel Company maintains a daily auto-stage service between Pasadena and the summit, where comfortable accommodations for the night may be found at the hotel. If time is limited, the round trip from Pasadena can be made in a day. The auto-stage leaves the office of the company (173 E. Colorado Street) at 9:30 A.M., reaching the summit at 11:45 A.M. On the return trip the stage leaves at 3 P.M., and arrives in Pasadena at 4:45 P.M. The round trip fare is \$3.

The director of Congresses of the Panama-Pacific Exposition has organized a special convention news bureau to give due publicity to papers and proceedings of organizations meeting in San Francisco and vicinity. This will include the preparation, in advance of the meeting of articles for the daily press and for magazines, reporting each session for daily press and news agencies and in some

cases preparing full reports of meetings for magazines.

RAILROAD ROUTES AND RATES

From Denver to San Francisco and return...	\$45.00
From Omaha or Kansas City and return ...	50.00
From St. Louis or New Orleans and return..	57.50
From Chicago to San Francisco and return..	62.50
From Detroit to San Francisco and return..	73.50
From Cincinnati to San Francisco and return.	71.10
From Cleveland to San Francisco and return.	76.20
From Pittsburgh to San Francisco and re- turn	81.20
From Buffalo to San Francisco and return..	83.50
From Washington to San Francisco and re- turn	92.30
From Philadelphia to San Francisco and re- turn	92.95
From New York to San Francisco and re- turn	94.30
From Boston to San Francisco and return..	100.70

Tickets from Chicago, St. Louis and similar territory are good *via* New Orleans, returning by the same or any other direct route. All rates apply *via* Los Angeles. Round trip tickets going or returning *via* Canadian or northern lines through Prince Rupert, Victoria, Vancouver, Seattle or Portland, Shasta Route (rail) or steamship between these points and San Francisco are \$17.50 higher (berth and meals included on steamer from Prince Rupert to Seattle). The usual stop-over privileges will be allowed on both going and returning trip. Journey out may be taken *via* one route and return by another, and the above rates are good for 90 days from date of sale. Railroads participating in this arrangement include the Grand Trunk, Canadian Pacific, Great Northern, Chicago, Milwaukee and St. Paul; Northern Pacific, Southern Pacific, Union Pacific, Denver and Rio Grande, San Pedro, Los Angeles and Salt Lake, Santa Fe and Mexican Central. The Panama-California Exposition at San Diego is reached by rail from Los Angeles by the Santa Fe Railway and trans-continental excursion tickets by way of Los Angeles will include a trip to San Diego and return without extra charge, but *only if arrangement for it is made at the time the trans-continental ticket is purchased.*

Special lines of steamers advertise passage

between Atlantic and Pacific Coast by way of the Panama Canal at rates varying between \$135 and \$198 (one way).

Stop-overs for side trips can be arranged either going or returning. Round trip rate from San Francisco to Hawaiian Islands and return by either of several lines of steamers from \$110 up. Yellowstone National Park is reached from Livingston on the Northern Pacific (to Gardner and return \$3.20). A six-day trip in the park from Gardner costs \$40 and another of 5½ days \$53.50. Yellowstone Park may also be reached from Ogden on the Union Pacific by a branch to Yellowstone (round trip \$9.25). From here a five-day trip in the park costs \$35 and a six-day trip \$40.

The Yosemite National Park is reached by Southern Pacific or Santa Fe lines, stopping at Merced, Cal. Round trip from Merced to Valley \$18.50.

Both hotels and comfortable camps may be found at the camp. Several groves of Big Trees may be visited from the Valley. One grove very much visited is only six miles from Santa Cruz (on the Southern Pacific).

Alaska may be visited by steamer trip from Seattle or Vancouver. Round trip from Seattle \$66 and up. From Prince Rupert (on Grand Trunk) a trip to Alaska may be made at an additional expense of about \$30.

The Official Hotel Bureau of the Panama-Pacific International Exposition, with which are affiliated about 85 per cent. of the hotels of San Francisco and vicinity, guarantees that the rates of hotels associated with the bureau will not be advanced during 1915. Schedules of rates of the hotels may be secured from this bureau (address, Exposition Building, San Francisco).

Further information in regard to programs, travel connections, etc., may be secured by addressing Albert L. Barrows, associate secretary, American Association for the Advancement of Science, University of California Library, Berkeley, California.

The columns of SCIENCE will contain further announcements.

A. D. COLE,
Secretary