

Proposal to Host the 2021 Community Summer Study (Snowmass CSS2021) at the University of Minnesota

Introduction:

The University of Minnesota, School of Physics and Astronomy and Fermilab jointly propose to host the 2021 Community Summer Study (Snowmass CSS2021) on the University of Minnesota East Bank campus in Minneapolis, Minnesota July 11-20, 2021 (Average Temperature: High 84°, Low 63°). Fermilab and the University expect to provide all of the facilities and amenities that enabled the success of Snowmass CSS2013 with the following additions:

- A totally renovated and expanded Tate Hall that houses many of the offices and classroom used by the School of Physics and Astronomy. Snowmass CSS2021 Registration, Coffee Breaks and some Parallel Sessions will take place in Tate Hall.
- A renovated venue for plenary sessions; Northrop Memorial Auditorium (adjacent to Tate Hall) can seat up to 1,100 people on its main floor with additional seating possible in the balconies.
- A new Physics and Nanotechnology Building (PAN), a few-minute walk from Tate, that includes additional offices and labs assigned to the School. PAN will house some Parallel Sessions. Together, the Tate and PAN capital projects represent a \$190 million investment in Physics and Astronomy and related science and technology.
- Two new hotels within walking distance of the Workshop venues.
- A totally renovated Pioneer Hall (University Residence Hall). Pioneer and Yudof Halls will likely be used for Snowmass CSS2021 on-campus housing.
- A new Light Rail Transit (LRT) line that connects the campus to the Minneapolis-St. Paul Airport, the city centers of both Minneapolis and St. Paul, and the Mall of America.

A map of the relevant portions of the campus is included in Appendix A. Buildings which are new or renovated since 2013 enable a more compact layout for the proposed Snowmass CSS2021 Workshop than the venues used in 2013. Since Snowmass CSS2021 will use only East Bank buildings, crossing the Mississippi will not be necessary.

Local Organizing Committee (LOC):

Fermilab: Bob Bernstein (co-Chair), Pushpa Bhat, Patrick Fox, Andrew Norman, Peter Shanahan, Joseph Zennaro

UMN: Tony Gherghetta, Ken Heller, Marvin Marshak (co-Chair), Greg Pawloski, Ron Poling, Roger Rusack, Nadja Strobbe

Scientific Program:

The LOC expects the Division of Particles and Fields (DPF) will organize the Scientific Program. The LOC's role is to provide logistical support for the program that the DPF arranges. In addition to the Plenary and Parallel Session Program, the LOC recommends the addition of an Evening Poster Session (Tate Hall) and has included a Poster Session in its budget estimates. The LOC program estimates are based on the actual numbers for Snowmass CSS2013.

	Snowmass CSS2013 Actual	Snowmass CSS2021 Estimate
Participants	690	800
Days of Plenary Sessions	1 day at beginning; 2 days at end	1 day at beginning; 2 days at end
Maximum Number of Simultaneous Sessions	18	18
Evening Poster Session With Refreshments	0	1

Social Interaction Program:

The LOC proposes a Social Program including an Evening Reception early in the Summer Study, a “Pizza Dorm Night”, a Young Snowmass Picnic, an Outreach Event and a Banquet towards the end of the Summer Study. The Evening Reception with hors d’oeuvres, wine and beer will provide an environment for relaxed interaction in the University’s Weisman Art Museum. The Social Interaction Events other than the Banquet will be open to all registrants at no additional charge. The Banquet at the McNamara Alumni Center (the Banquet site used for Snowmass CSS2013) will be optional at a cost of \$75 per person. Light refreshments will also be provided during a late afternoon/evening early registration opportunity (Tate Hall) on July 10, the day preceding the Summer Study.

Budget and Registration Fee Estimates:

The LOC proposes an unsubsidized Registration Fee of \$495, which will be reduced by any subsidies that the LOC is able to obtain. This fee will include coffee breaks, conference infrastructure, a welcoming Reception and a Poster Session. As already mentioned, the Banquet will be optional at a cost of \$75.

The costs presented in Appendix B are based on actual costs for Snowmass CSS2013. The 2013 Registration Fee was \$260, plus \$60 for the Banquet. The DOE subsidy was \$96,902 or \$140 per participant. The University of Minnesota provided a subsidy of \$6,930. The unsubsidized fee for CSS2013 was \$410. Adjusting this amount by 17% for inflation (2% per year for 8 years) and 11% for an extra day yields a fee of \$533. The LOC has chosen to reduce environmental waste by making box lunches optional. That change and the addition of a Poster Session reduces the unsubsidized fee to \$495. The itemized costs in Appendix B were calculated from CSS2013 costs using a similar methodology.

Facilities:

Plenary: Plenary Sessions will be held in Northrop Auditorium, which has wide screen projection facilities and sufficient WiFi for more than 2,500 simultaneous connections (<http://www.northrop.umn.edu>).

Parallel: Parallel Sessions will be focused in Tate Hall, Bruininks Hall and the Physics and Nanotechnology Building. These three buildings and Northrop are all within about 200 m of each other. Appendix C lists some possible rooms and room sizes for Parallel Sessions. Lists of other possible rooms and details of each room are available at

<https://roomsearch.umn.edu/roomsearch/#/rooms>.

Coffee Breaks and Registration: Breaks and Registration will take place in Tate Hall, which has a large atrium that will be used for these activities.

Reception: The Reception location is the Frank Gehry-designed Weisman Art Museum (<https://wam.umn.edu>) located adjacent to Bruininks Hall on the edge of the Mississippi River.

Banquet: The Banquet will be held in the McNamara Alumni Center (<https://mac-events.org>) located at the east end of the Scholars' Walk, about 300 m from Tate.

Cost and Availability of Lodging:

Hotels: Appendix D lists five hotels within walking distance of the UMN campus. Four of the five hotels are also very near to an LRT Station. All of the hotels have indicated a willingness to conform to the GSA price cap, which is currently \$157 (FY 2020). More than 20 other hotels are located in the Minneapolis City Center, which is accessible in less than 10 minutes by LRT.

AirBNB: The UMN campus is ringed by many apartment buildings, including one 25 story building. During the summer, many of these buildings have apartments available on AirBNB.

University Residence Halls: The Minneapolis Campus has 10 University Residence Halls with more than 5,000 beds. Current rates (2019) are as follows:

"Down the Hall" Bath: Single \$49.60; Double \$37.20

Private Bath: Single \$66.00;

Breakfast: \$9.20

Transportation:

Minneapolis-St. Paul Airport (MSP) is served by 17 airlines which, in total, provide nonstop flights to/from 167 destinations. The airport is located 14 km (9 miles) from the University of Minnesota campus.

Metro Transit (www.metrotransit.org) provides public transportation (Light Rail, Buses, Handicap Transport) throughout the Twin Cities metropolitan area. Fares are currently \$2.50 (peak hours) and \$2.00 (off-peak hours) and permit unlimited rides on any transport mode for 2.5 hours. Tickets can be purchased from on platform machines at all LRT stations using cash or debit/credit cards. Of particular interest is LRT transport from MSP Airport to the UMN campus. The Airport has LRT Stations at both Terminal 1 and Terminal 2. The campus has three stations: West Bank, East Bank and Stadium Village. Both the Airport and the UMN Campus are also served by taxis, Uber and Lyft. For the more adventurous participants, the UMN campus also hosts multiple rental bicycle stations and large numbers of rental scooters (Lime, Spin and Lyft). A detailed trip planner is available on the Metro Transit website or by using Google Maps.

WiFi:

The entire University of Minnesota campus is equipped with WiFi, both inside and outside buildings. The primary network is eduroam, so most Snowmass participants will be able to connect with their home institution username and password. A limited bandwidth guest network is also available for participants without eduroam.

Audio-Visual:

All rooms scheduled for parallel sessions will have video projectors with USB-C, VGA and HDMI inputs. If needed, adapters will be provided. All rooms will also provide Zoom connections to support off-site participation.

Restaurants:

Restaurants within walking distance of Tate Hall are located on campus, in Dinkytown (northwest of campus) and in Stadium Village (southeast of campus). Appendix E lists more than 70 restaurants and four brewpubs serving food that are accessible by at most a 10-15 minute walk. Many of these establishments focus on a particular cuisine at modest prices. Together, they offer food from most every continent. Many high-end restaurants are located in the Minneapolis city center (LRT: Nicollet) or in the North Loop (LRT: Target Field).

Because of the large number of available restaurants, the LOC has decided to encourage participants to choose their own venues for meals other than the Banquet. Some food will be provided at Coffee Breaks. The LOC will also facilitate ordering of optional box lunches.

Program Officer/PI Meetings:

The LOC expects to offer to the DOE and the NSF facilities for individual meetings with Principal Investigators.

Childcare:

The University of Minnesota operates a licensed childcare facility on the edge of campus. The University also has experience with independent, licensed childcare facilities off campus. For older children, the University also offers a variety of summer STEM outreach and athletic camp programs. Examples are at <https://cse.umn.edu/college/summer-camps> and <https://gophersports.com/sports/2018/5/21/camps.aspx>. The LOC will advertise these opportunities to potential Snowmass participants and will designate a Liaison to assist registrants with selection of childcare options. The LOC will also request funding from multiple sources to subsidize childcare.

Administrative Help:

The LOC will provide professional support staff from Fermilab, the School of Physics and Astronomy and the University Conference Office. In addition, we expect to hire about 20 undergraduate students to perform a variety of tasks including staffing the Summer Study desk, checking the A/V in Parallel Session rooms and assisting with the layout and cleanup of Coffee Breaks.

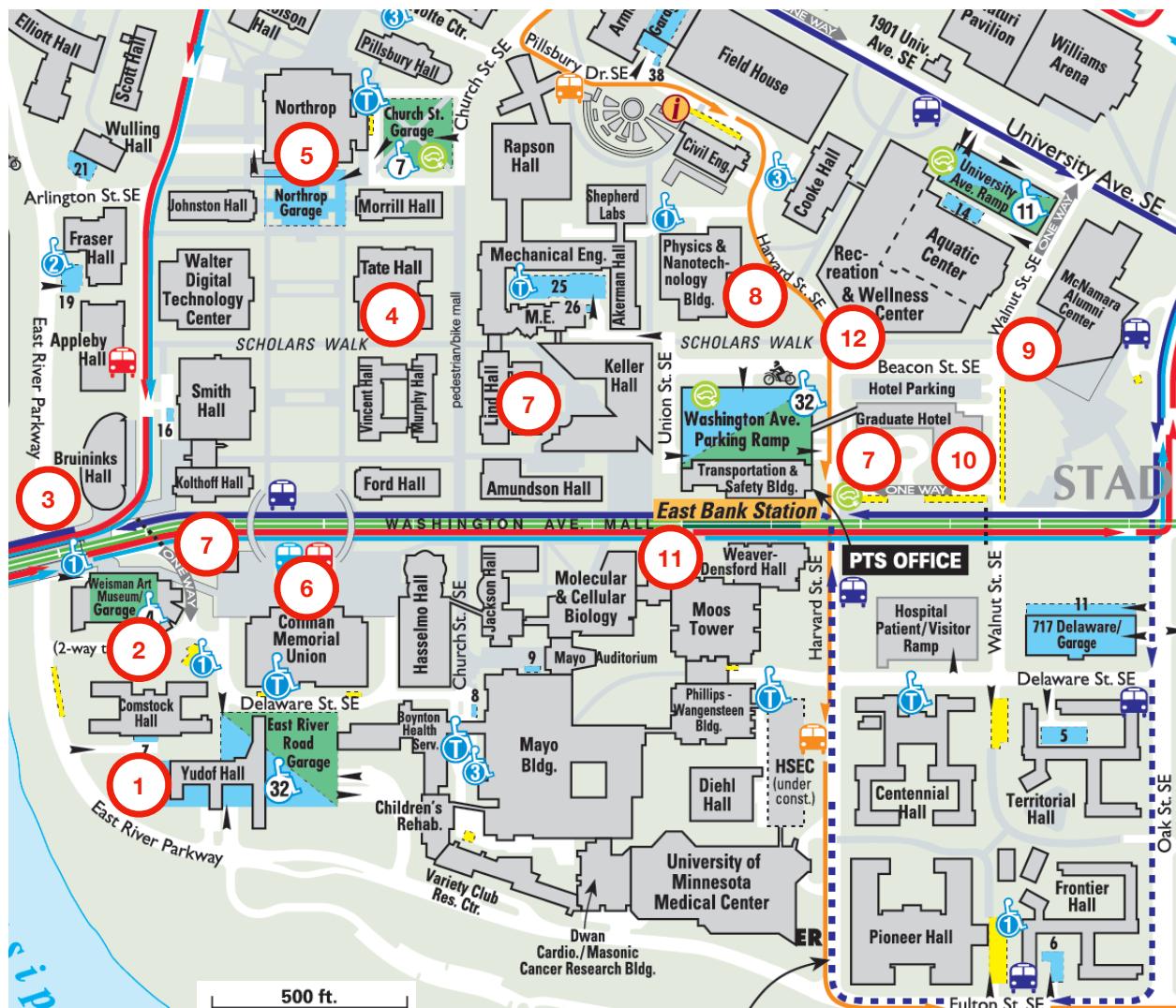
Sightseeing and Recreational Activities in and near Minneapolis-St. Paul (MSP):

The Minneapolis-St. Paul metropolitan area has a population of about 3.6 million. As suggested by sample activities listed in Appendix F, MSP is large enough to provide a variety of choices and small enough that it is relatively easy to access the various possibilities. Renting a car is not necessary and public transport, especially the LRT, with an occasional Uber, will address

most transport needs. LOC members and staff will look forward to assisting Snowmass 2021 participants in choosing and arranging opportunities to take advantage of local offerings.

Opportunities for active recreation are available on and near the University of Minnesota campus. The University's Recreation and Wellness Center (RecWell), located across Harvard Street from PAN, is a four-building complex (<http://recwell.umn.edu>). RecWell offers an Olympic-size swimming pool with a diving well, two other swimming pools, multiple gyms for basketball and volleyball, 19 squash and handball/racquetball courts, a climbing/bouldering wall, sauna and steam rooms, camping equipment rental, two indoor running tracks and four floors of weights and exercise machines. Guest fees for RecWell are \$12 for an entire day and \$35 for a week. Some hotels provide free or discounted RecWell passes.

Outdoor recreational possibilities on or near campus include tennis courts, bicycle trails and running/walking paths. Particularly attractive are paths and trails that extend from the campus along both the east and west sides of the Mississippi River gorge. Three bridges, restricted to pedestrians, walkers and runners, cross the River, including the historic Stone Arch Bridge. These bridges connect the eastside and westside paths and trails. Trails near campus also connect to the Minneapolis Grand Rounds Trail System, which circles the city and provides access to many of the Minneapolis lakes, including some with swimming beaches.



Appendix A: University of Minnesota-Twin Cities East Bank Campus Map

1. Yudof Hall (University Residence Hall)
2. Weisman Art Museum (Reception)
3. Bruininks Hall (Parallel Sessions)
4. Tate Hall (Coffee Breaks, Conference Desk, Parallel Sessions)
5. Northrop Auditorium (Plenary Sessions)
6. Coffman Union (Food Service)
7. Starbucks (3 locations)
8. Physics and Nanotechnology (Parallel Sessions)
9. McNamara Alumni Center (Banquet)
10. Graduate Hotel
11. East Bank LRT Station
12. RecWell Complex

Appendix B: Proposed Budget Details

Conference

Conference Infrastructure (WiFi, Projectors, Laptop Rental, Custodial, Poster Boards, Nametags, etc.)	\$ 28,300
Space Rental (Plenary Sessions, Poster Session, Outreach, Reception)	\$ 31,800
Coffee Breaks (2/day, local tax)	\$ 200,000
Conference Staff (Professional and Undergraduate Student Assistants)	\$ 76,500
Credit Card Fees	\$ 10,500

Conference Total **\$347,100**

Social Interaction

Dorm Night, Young Snowmass Picnic, Poster Session Refreshments	\$ 12,700
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Social Interaction Total **\$ 12,700**

Contingency **\$36,000**

Total Cost (Excluding Banquet) **\$ 395,800**

Total Cost (Excluding Banquet) Per Registrant **\$ 495**

Banquet (325 Participants @ \$75 each) **\$24,375**

Assumptions: Costs and Banquet Participation scaled from actual costs for Snowmass 2013: (1) an inflation rate of 2.0%/yr; (2) 800 participants instead of 690; (3) 10 days instead of 9. Each factor was applied where appropriate.

	2013	2021
Registrants	690	800
Days	9	10
Banquet Attendees	270	325

Appendix C: Rooms for Plenary and Parallel Sessions

Plenary: Northrop Auditorium

Main Floor: 1160 seats

Parallel: Tate Hall:

Seats	Rooms
252	B50
150	B20, 101, 105
70	110
48	B65, 201-20, 301-20, 401-20
43	120
36	B85
32	B45, B55
20	B23, B26, B70, B72, B74, B76, B78, B80, B82

Parallel: Bruininks Hall:

Seats	Rooms
236	220, 230
171	114
126	312, 330, 412
90	432
63	131B
54	131A
45	420B, 512A, 512B, 530A, 530B
32	117, 123, 144
30	121
27	420A
24	119

Parallel: Physics and Nanotechnology:

Seats	Rooms
50	110
25	120

Appendix D: Cost and Availability of Lodging:

Hotel	Price	Distance	Rating	LRT Station
Courtyard	\$167	0.9 miles	4.4/5	West Bank
Days Hotel	\$133	0.8 miles	3.7/5	Stadium Village
Doubletree	\$159	0.8 miles	4.2/5	Stadium Village
Graduate	\$169	0.4 miles	4.4/5	East Bank
Hampton	\$169	1.1 miles	4.7/5	Prospect Park
University Inn	\$89	0.8 miles	4.1/5	

University Residence Halls: The Minneapolis Campus has 10 University Residence Halls with more than 5,000 beds. Current rates (2019) are as follows:

“Down the Hall” Bath:

Single \$49.60

Double \$37.20

Private Bath:

Single \$66.00

Breakfast: \$9.20

Ratings are from Travelocity. Prices are current quotations from websites. All hotels have indicated that they would charge less than or equal to the June 2021 GSA rate. The June 2020 GSA rate is \$159.

Appendix E: Restaurants

University Dining Facilities (<0.4 miles)

Coffee and Snacks:

Einstein Bagels
Starbucks (2 locations)
Caribou Coffee
Wise Owl Café

Restaurants (Counter Service):

Panda Express (Chinese)
Chick-fil-A
Tavolino (Italian, vegan)
Topio (Pizza)
Greens to Go
Jamba Juice
Surdyks (Paninis, Wraps, Soups, Salads, alcohol license)
Freshii (Healthy Options)
University BBQ
House of Hummus (Kosher)
French Meadow Bakery
Erbert & Gerbert's (Sandwiches)
Campus Club (American, alcohol license)

Off-Campus Dining

Dinkytown (~0.4 miles)

Annie's Parlor (Burgers)
Erbert and Gerbert's (Sandwiches)
Loring Pasta Bar (Table Service)
Purple Onion Café (Sandwiches, salads, soups, quiche)
Al's Breakfast (Historic breakfast dive)
Burrito Loco
Qdoba Mexican Grill
Potbelly Sandwiches
Kitty Cat Klub (Live music, drinks, food)
Mesa Pizza
Espresso Royale
The Library Bar
Blarney Pub & Grill

Pagoda
Five Guys Burgers and Fries
Wally's Falafel and Hummus
Jimmy John's Sandwiches
Tony's Diner
Camdi (Chinese, Vietnamese)
Shuang Cheng
Bordertown Coffee
China Express Inn
Chatime (Tea)
Himalayan
Jersey Mike's Subs
Frank from Philly and Andrea Pizza

Stadium Village (~0.5 miles)

Punch Pizza
Chipotle Mexican Grill
Stub and Herb's Pub
Korea Restaurant
Bruegger's Bagels
Raising Cane's Chicken Fingers
Tea House Chinese Restaurant
The Beacon Public House
Applebee's
Roti Mediterranean
Buffalo Wildwings
Bona Vietnamese
Little Szechuan
Yogurt Lab
Kim Chi & Tofu House
Kowloon Restaurant
Noodles & Company
Naf Naf Grill (Middle Eastern)
Abdul's Afandi
Haiku Japanese Bistro
Sally's Saloon & Eatery
Toppers Pizza
Dino's Gyros
Tea Garden
Hong Kong Noodle
My Burger
Afro Deli
Bar Luchador

Ippindo Ramen House
D'Amico & Sons
Blaze Pizza
Sprout Salad
Lao Sze Chuan
Caspian Bistro & Gourmet
U Garden Chinese

Brew Pubs Near Campus

Surly Brewing (LRT: Prospect Park)
Day Block Brewing (LRT: West Bank)
Town Hall Brewery (LRT: West Bank)
Republic Gastropub (LRT: West Bank)

Appendix F: Things to Do in Minneapolis-St. Paul

Major League Baseball (LRT: Target Field)
Major League Soccer at Allianz Field (LRT: Snelling)
Minnesota Orchestra Sommerfest (LRT: Nicollet)
Hennepin Theater District (LRT: Warehouse District)
Guthrie Theater (LRT: Downtown East, U.S. Bank Stadium)
Free, Open Air Concerts at Lake Harriet

Mystic Lake Casino
Canterbury Downs (Horseracing)

Mall of America (LRT: Mall of America)
Sternwheel Cruise on Mississippi River

Art Museums

Minneapolis Institute of Art
Walker Art Center
Weisman Art Museum
Minneapolis Sculpture Garden
Museum of Russian Art

Other Museums

Bakken Museum (Medical Devices)
Minnesota Historical Society
Minnesota Science Museum
Bell Museum (Natural History)
Historic Fort Snelling
Minnesota Landscape Arboretum
Mill City Museum and Historic Mill District
Historic Arch Bridge and St. Anthony Falls

Especially for Children

Children's Museum
Children's Theater
Minnesota Zoo
Como Park Zoo
Great Wolf Lodge Water Park
Valleyfair Amusement Park
Nickelodeon Amusement Park
Como Town Amusement Park

Music Clubs

7th Street Entry

First Avenue
Palace Theater
Turf Club
Cedar Cultural Center
Icehouse
Varsity Theater (Dinkytown)
Dakota Music Café
Fine Line Music Café
Cabooze
Music Hall

Outdoor Activities

Swimming Beachs at Cedar Lake, Lake Harriet and Lake Bde Maka Ska.
Sailboat and Canoe Rentals at Lake Bde Maka Ska
Bicycle Trails <https://moveminneapolis.org/bicycle/bike-route-maps/>
University Tennis Courts