







# Phystat-DM

## Intro

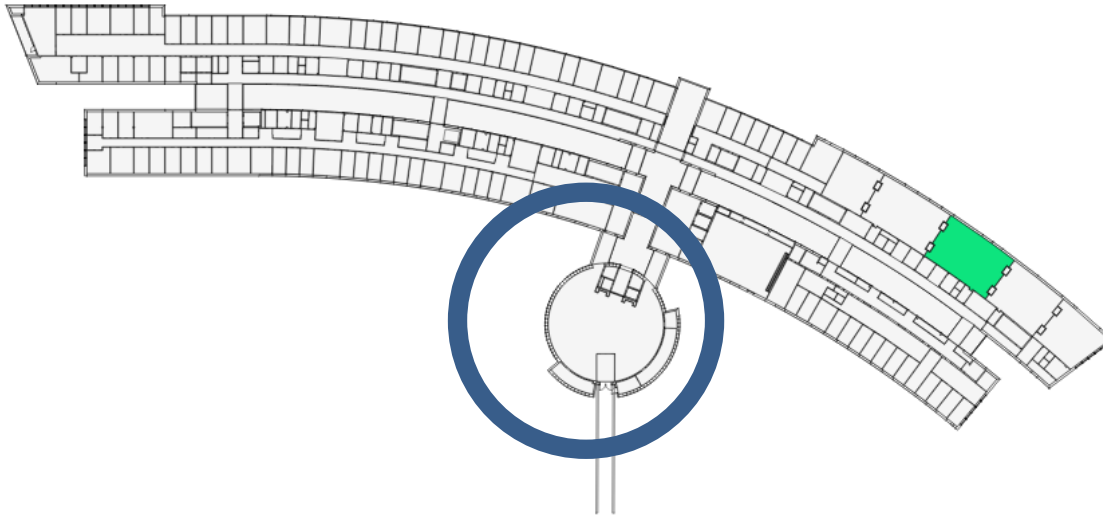
Jan Conrad

### Langtidsvarsel for Stockholm

I morgen 31.07.2019	Torsdag 01.08.2019	Fredag 02.08.2019
		
17°	19°	26°
		
Delvis skyet. Lett bris, 4 m/s fra nord- nordøst. 0 mm nedbør.	Klarvær. Lett bris, 4 m/s fra nord. 0 mm nedbør.	Lettskyet. Svak vind, 2 m/s fra nordøst. 0 mm nedbør.

# Reception/poster session

**@18:00**



- Poster-presenters: please put up your posters in the afternoon break

**15:40 –16:00**

# Dinner cruise

**Boat will leave:**

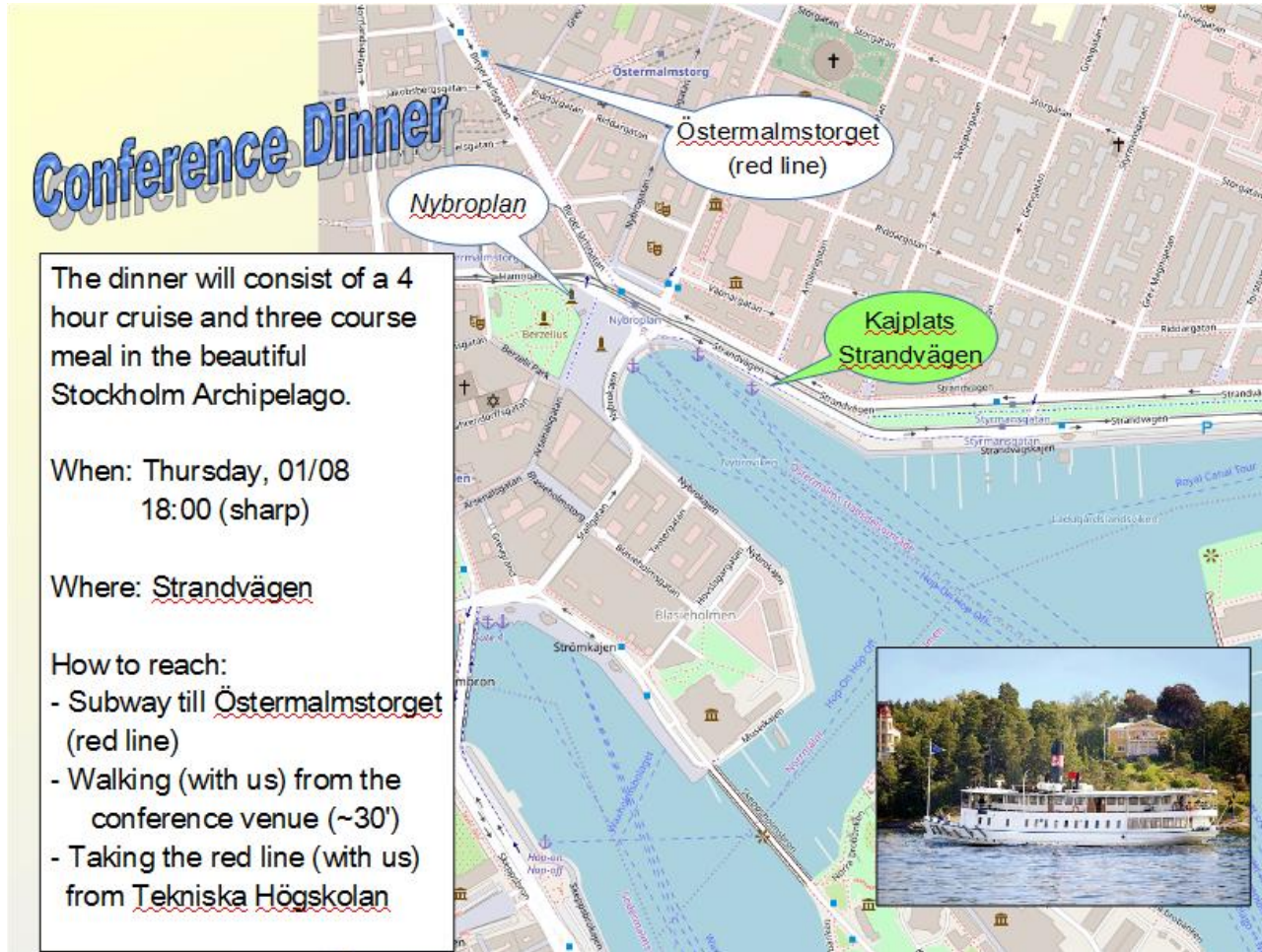
**Thursday, August 1, 18.00 SHARP**

**Trip to the beautiful town of Vaxholm (and back – at least for you)**



**Some wine and welcome drink included – than you are on your own.**

# NEW: Dinner cruise departure!



**Conference Dinner**


The dinner will consist of a 4 hour cruise and three course meal in the beautiful Stockholm Archipelago.

When: Thursday, 01/08  
18:00 (sharp)

Where: Strandvägen

How to reach:

- Subway till Östermalmstorget (red line)
- Walking (with us) from the conference venue (~30')
- Taking the red line (with us) from Tekniska Högskolan



UPDATED ON THE WEB!

# Lunches

## Lunch Restaurants in Sibirien

Sibirien is located in the north-east part of Vasastan in Stockholm.

The area offers several lunch restaurants. Most of them offer a special lunch menu.

You can find also a larger selection of restaurants and further information at the Stockholm district guide



# Local Crew



# Dark Matter and Statistics in Stockholm



Oskar Klein, professor in mathematical physics, Stockholm University (1894-1977)



Harald Cramér, Professor of Statistics (and president) of Stockholm University (1893-1985)

# History of PHYSTAT-DM

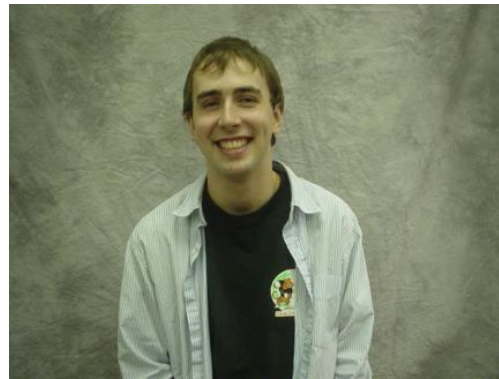
- After initial discussion (Hugh+) → good idea to converge on a few statistical choices to facilitate inter-experiment comparison.
- Broader discussion under the auspices of PHYSTAT conference series



Louis  
Lyons



Olaf  
Behnke



Hugh Lippincott  
(before)



Constanze  
Hasterok



Tarek  
Saab



# Questions

- Which test statistic? Should we impose over-coverage and if yes how? How to deal with instrumental and external nuisance parameters? When can we use asymptotic results? How do we deal with mismodelled backgrounds? ... and more.

# Questions

In case of awkward silence:

Why don't you all go fully-Bayesian?

# My first "PHYSTAT" – Durham 2002

## **COVERAGE OF CONFIDENCE INTERVALS FOR POISSON STATISTICS IN PRESENCE OF SYSTEMATIC UNCERTAINTIES**

*J. Conrad, O. Botner, A. Hallgren, C. P. de los Heros*

High Energy Physics Division, Uppsala University, Sweden.

- Both relevant and correct, ...just not at the same time
- Nevertheless comments were encouraging!



Enjoy!