

IST Status and Plan

Yaping Wang
(University of Illinois at Chicago)

MIT/MIT-Bates

Gerrit van Nieuwenhuizen,

Stephen Steadman, Jim Kelsey, Ben Buck, Peter Goodwin

Jason Besuille, Peter Binns, Joseph Dodge

UIC

Zhenyu Ye, Yaping Wang, Anatoly Evdokimov

FNAL

Bert Gonzalez, Tammy Hawke, Michelle Jonas

Indiana University

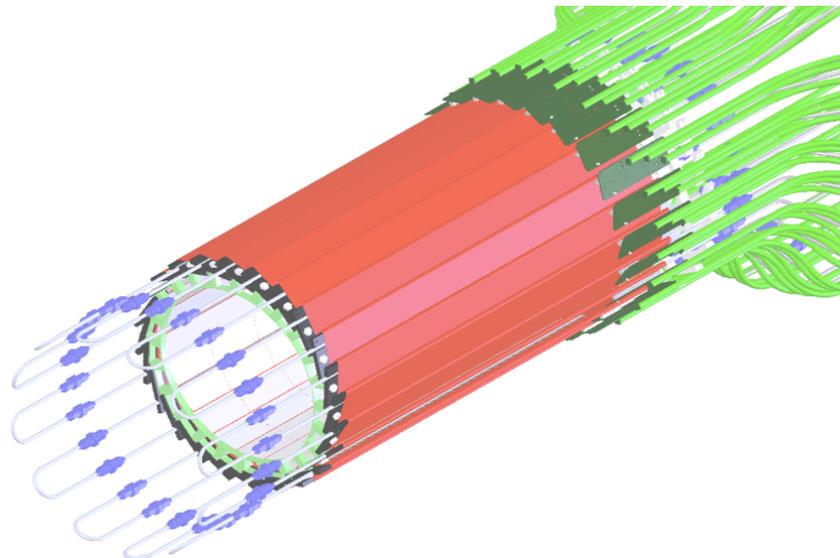
Gerard Visser

LBNL

Eric Anderssen

BNL

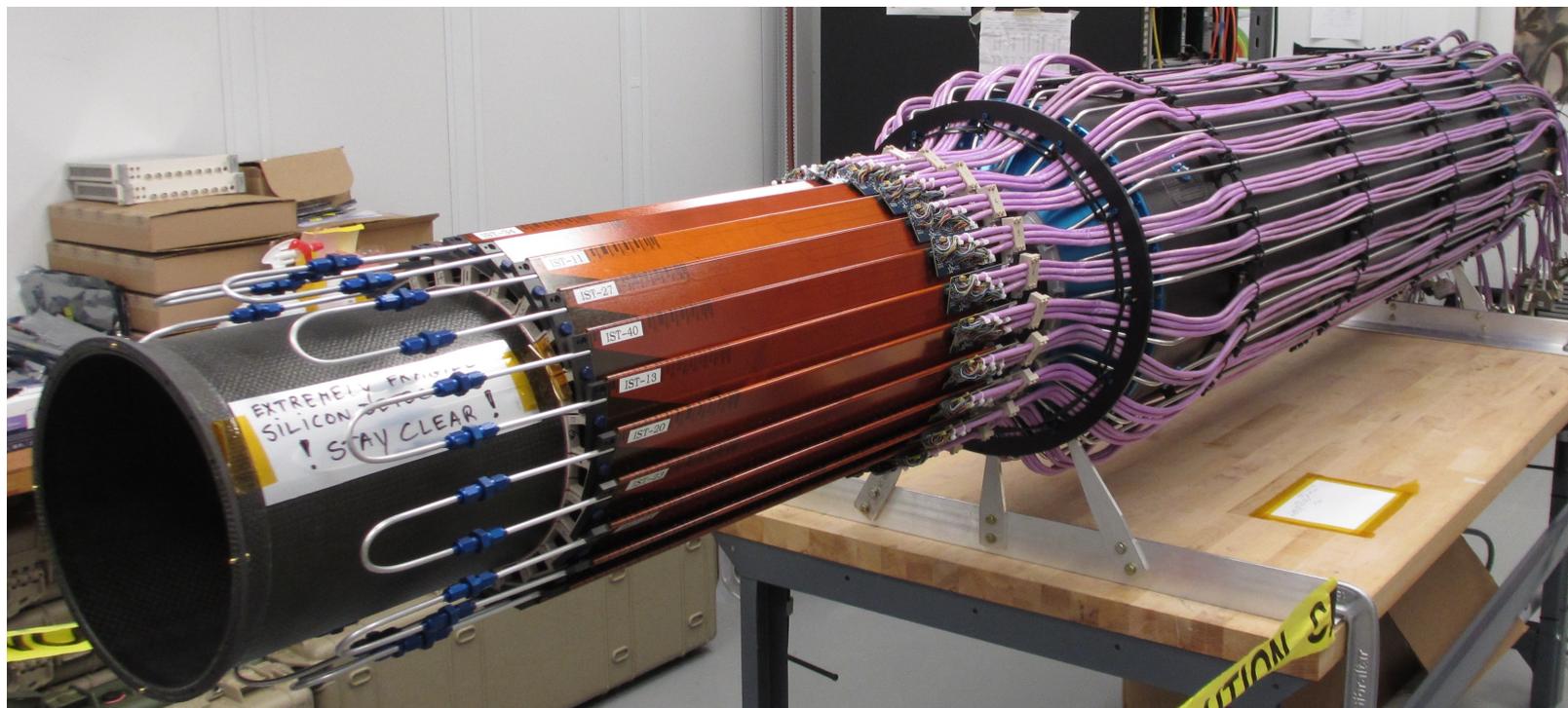
Bob Soja, Don Pinelli



- **Introduction**
- **Detector status and plan**
- **Cooling system status and plan**
- **Readout system status and plan**
- **Software status and plan**
- **Summary**

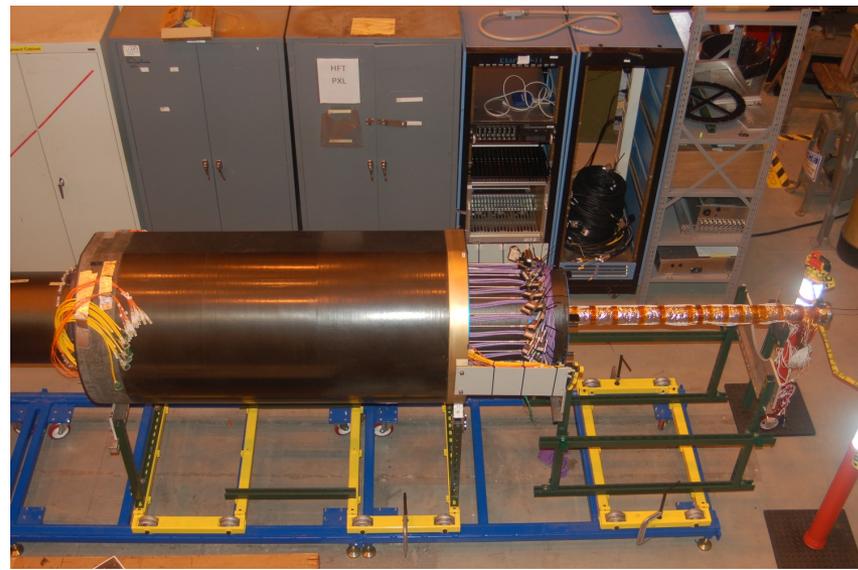
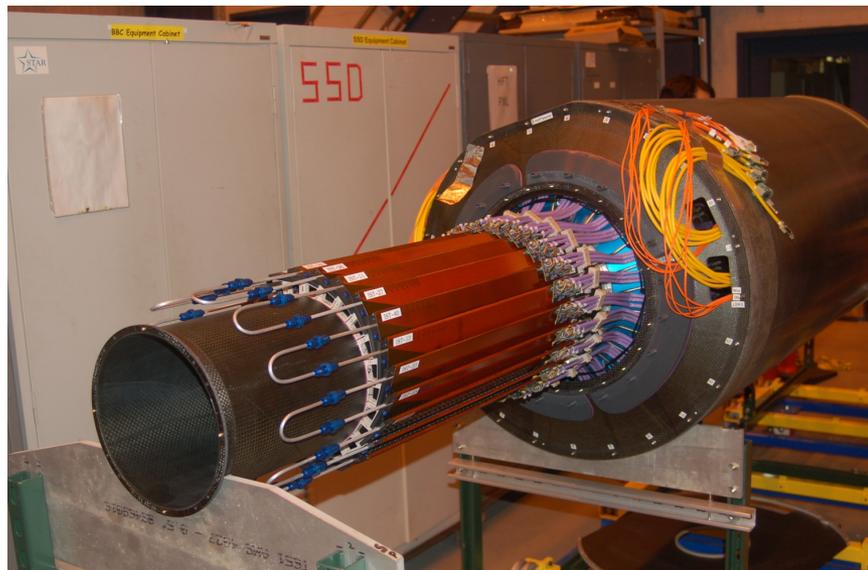
Introduction

- 24 staves + 3 spares
- 3 Wiener MPOD crates + 9 ISEG bias supplies
- 6 ARC-II boards + 36 ARM boards + 36 BOC boards + 72 external cables + 72 PP boards + 24 T-boards + 72 internal cables
- Cooling system
- 2 DAQ PCs with 6 fiber interfaces



Detector status and plan

- IST barrel fully assembled, installed on IDS/MSC and tested on July 31st
 - tested 4 staves at a time with full readout chain
 - more than 99% of the 110,592 channels fully functional, 1 to 3 chips malfunctioning
- Cooling lines were Helium leak tested
- Integrated with IDS in second week of August
- Roll-in STAR in 1st week of October
- Hookup and testing in 2nd and 3rd week of October



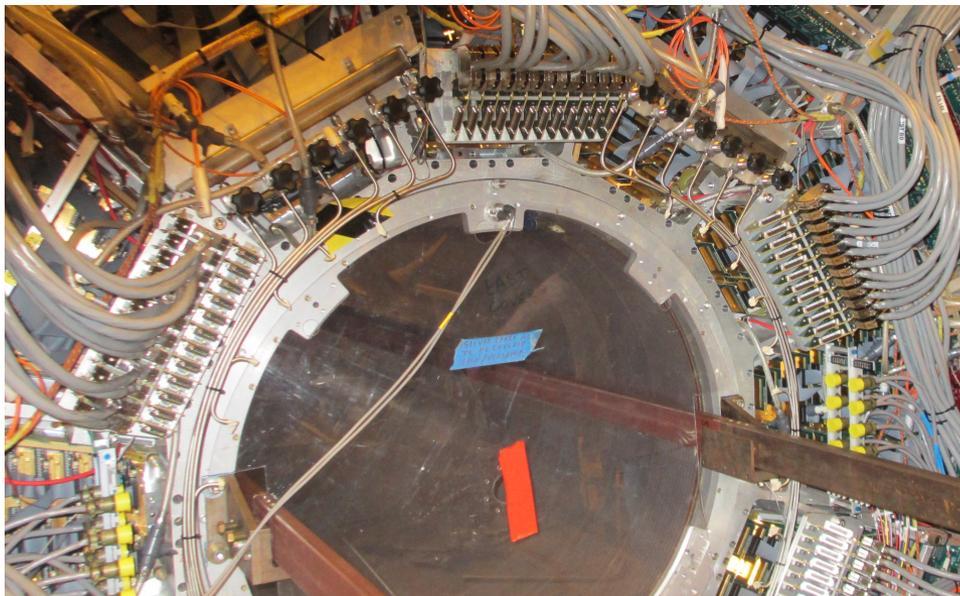
Cooling system status and plan

- All 4 cooling manifolds and cooling rack installed in STAR and connected
- Cooling lines will be connected on October 16.
- Cooling test will be started on October 16
- All slow control software exists, but need to be integrated into STAR slow control
- The rack slow controls have already been connected to Starp network, and are functioning.

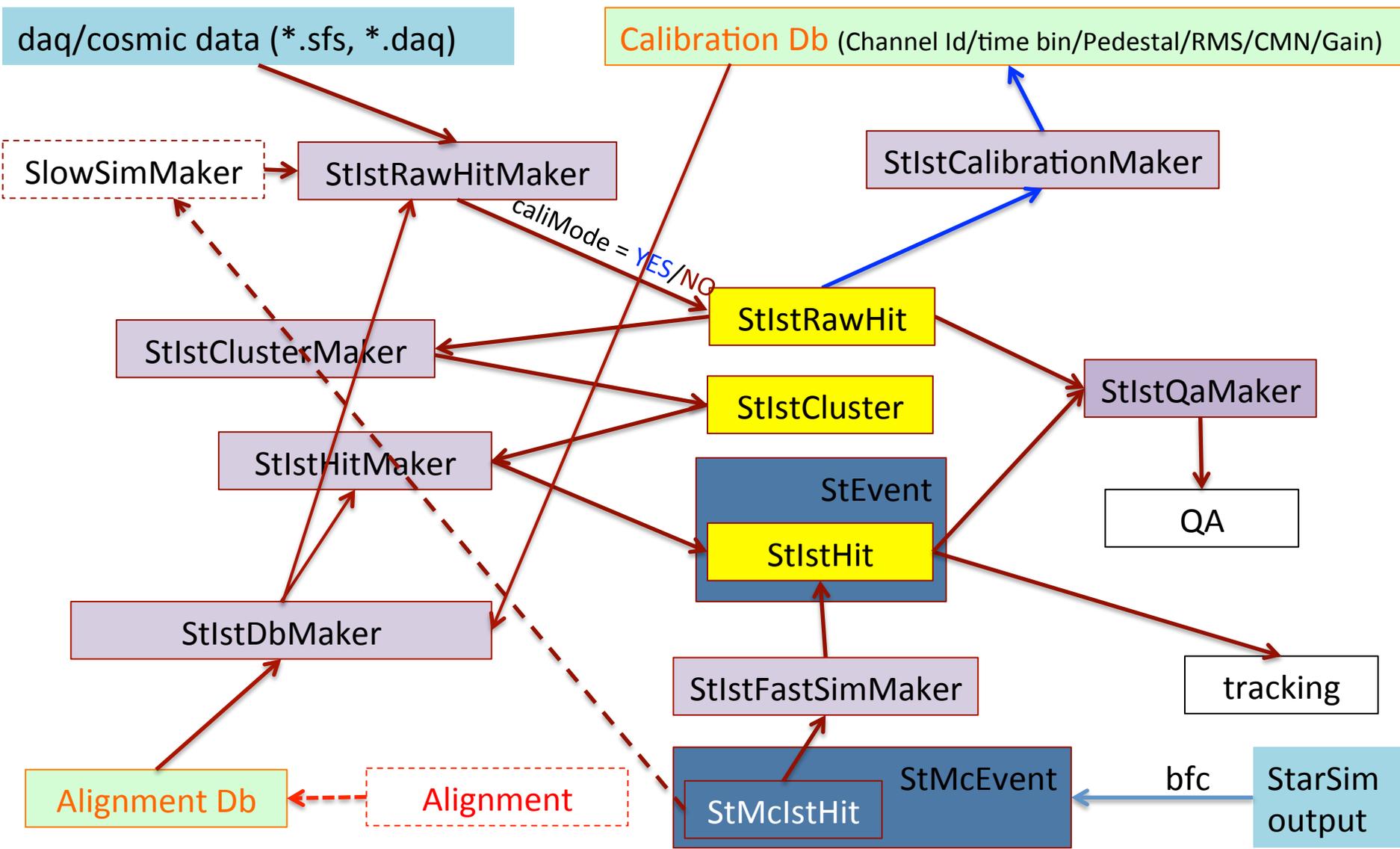


Readout system status and plan

- 72 patch panels installed and 72 signal cables routed to readout rack
- All 3 readout crates installed in rack, cable hookup finished
- Testing of all 72 readout chains is ongoing
- Until November, 2 ARC-II boards and 12 ARM modules are available to test 1/3 of the barrel at a time (8 staves)
- The rest system (4 ARC-IIs + 24 ARMs) will be available in November. The ARC-IIs are in production and ARMs too.



Software status and plan – offline (ready for review)



Online software status:

- The slow control software is available, but need to be modified to shift operations (ongoing).
- Online monitoring software needs to develop, and will be started once zero suppression is defined to be executed in ARM (FPGA level) or in DAQ-PC level.

IST geometry/calibration DBs:

- Two databases created: <http://online.star.bnl.gov/dbExplorer/>
 - **Geometry_ist**: istSurvey, istOnPst, istLadderOnIst, istSensorOnLadder, idsOnTpc, pstOnIds
 - **Calibration_ist**: istGain, istPedNoise
- Getting the IST survey data into geometry DBs will be started in 4th week of November
- Calibration DBs will be tested in the coming cosmic runs

- IST fully assembled and tested, already roll-in STAR .
- Cooling system installed, and cooling test with barrel will start on 3rd week of October.
- Readout system tests with 1/3 barrel at a time until November, and tests with full barrel in November.
- Offline software is mostly completed and ready for review.
- Online software (slow control and online monitoring) is in progress.

IST will be available for the coming cosmic runs.