



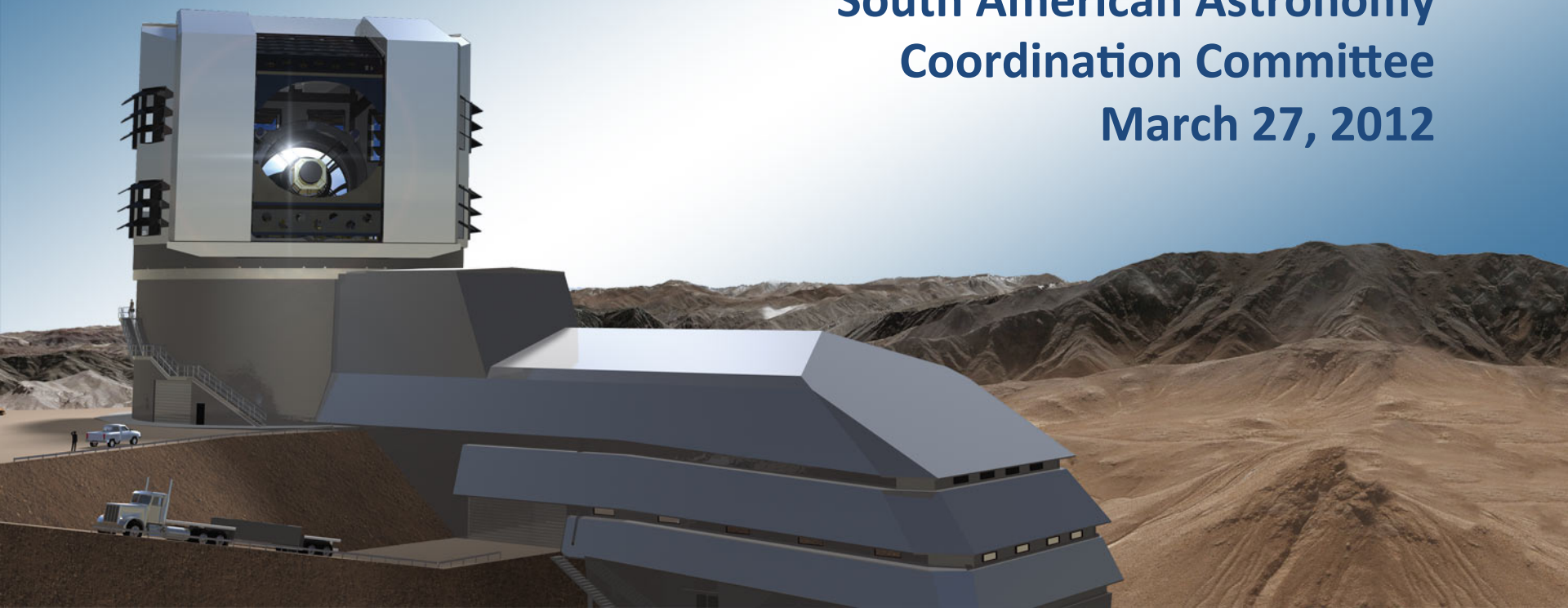
## Overview of LSST Networking

Jeffrey P. Kantor

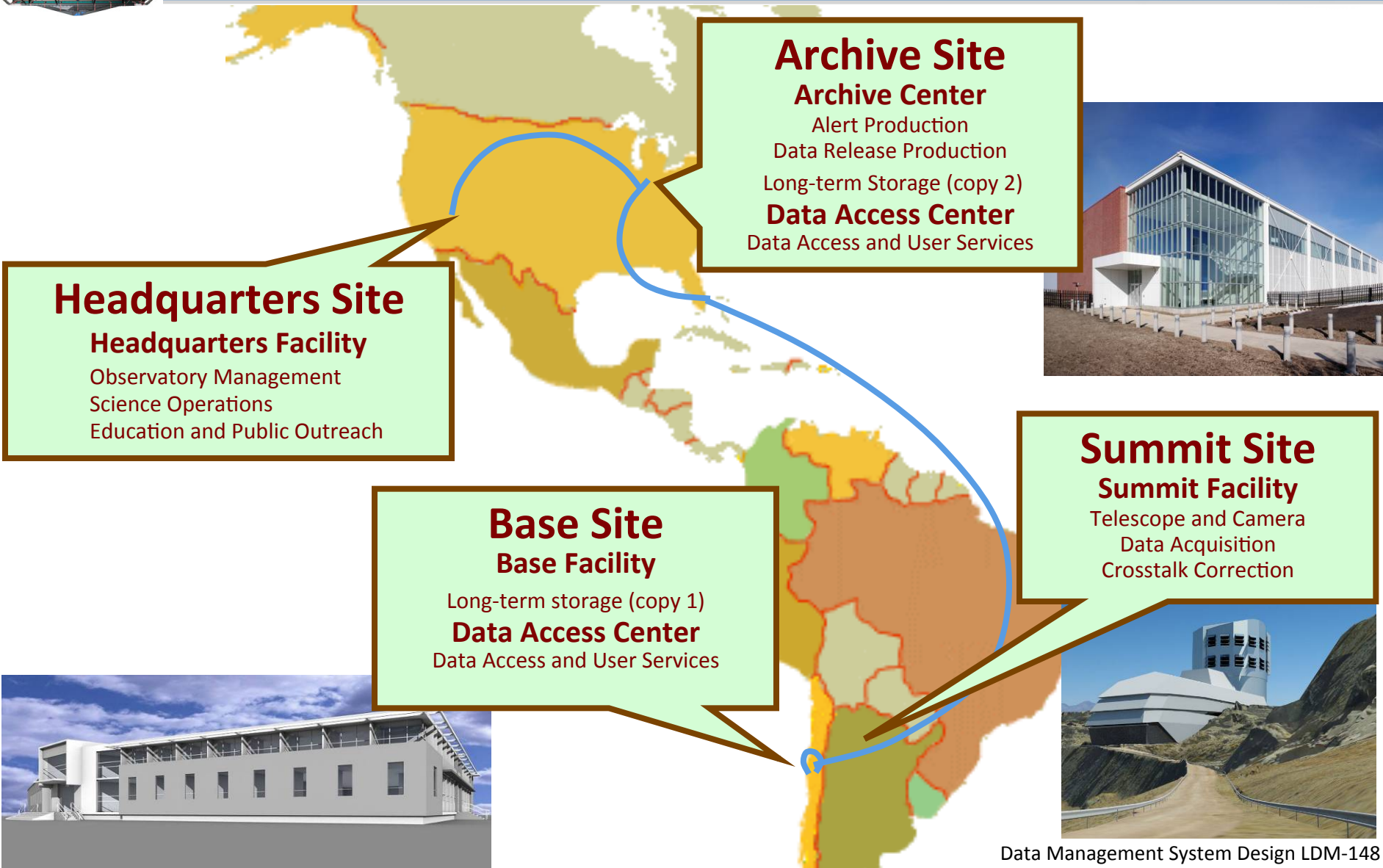
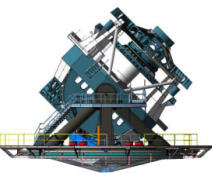
LSST Data Management Project Manager

South American Astronomy  
Coordination Committee

March 27, 2012

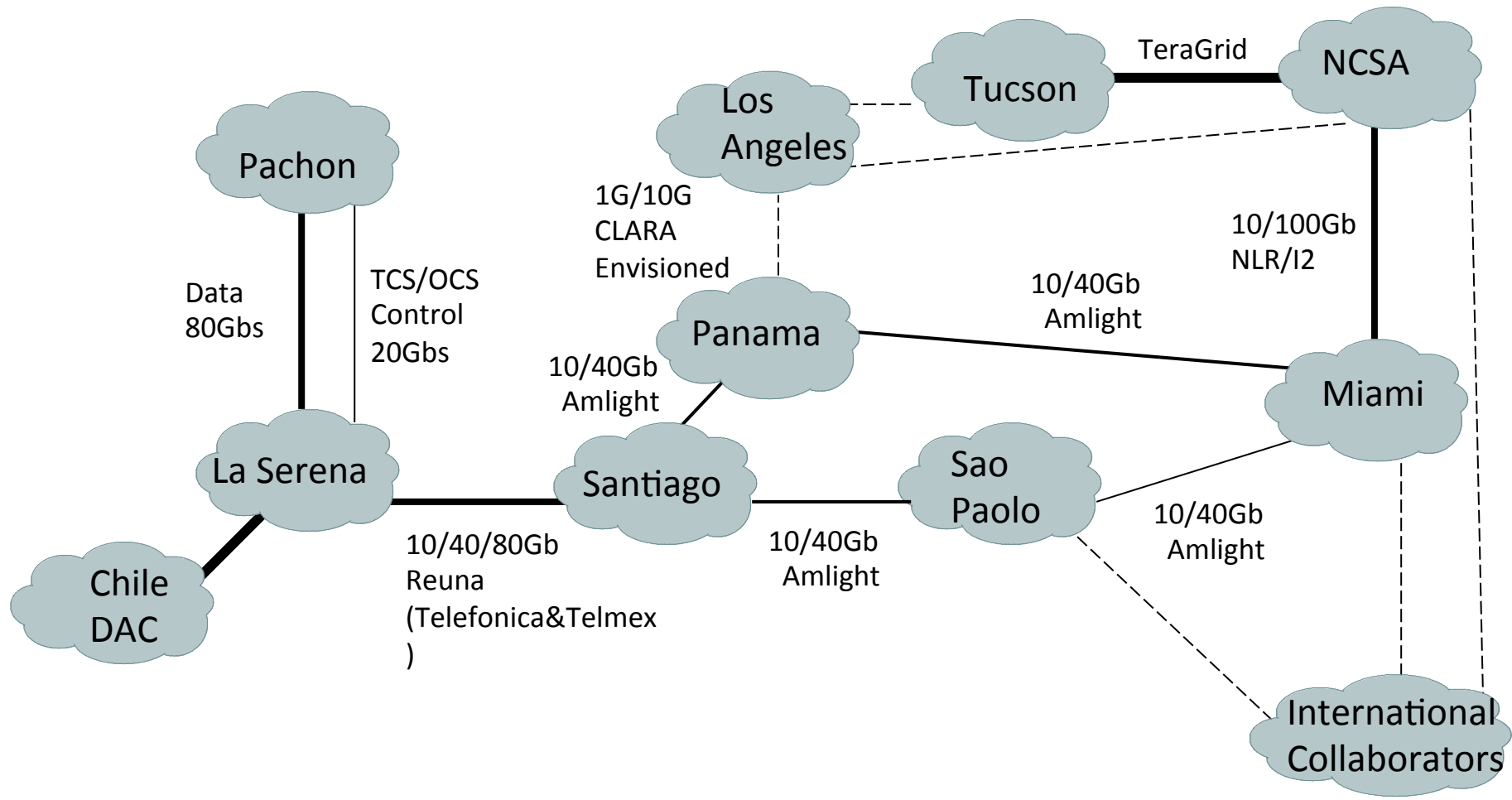
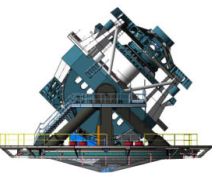


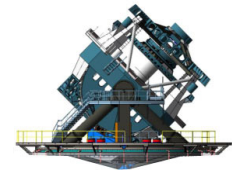
# One System, Two Continents, Four Sites



Data Management System Design LDM-148

# LSST International Dataflow





# LSST Networks Schedule



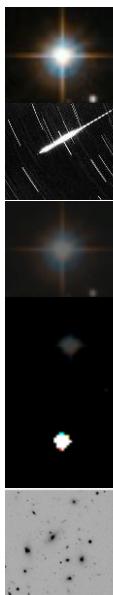
FISCAL YEAR	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021...30
Mountain to Base	0	0		1	1.5	2	2.5	100	100	100
Base to Santiago	0.65	1	1	1	1.5	2	2.5	3	10 - 40	10-40-80
Santiago - MIA	0.65	1	1	1	1.5	2	2.5	3	10 - 40	10-40-80
MIA - NCSA	0.65	1	1	1	1.5	2	2.5	3	10 - 40	10-40-80
NCSA - Tucson	0.65	1	1	1	1.5	2	2.5	3	3	3
International Collaborators	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

- Blue years are Research and Development Phase
- Pink years are Construction Phase
- Yellow years are Commissioning Phase
- Green years are Operations Phase

# Access patterns and tables with trillions of rows drive the database schema and architecture



Database Table	Billions of rows	Column width in kilobytes	Total Terabytes
Object	37.0	3.2	109.0
Moving Object	0.006	0.5	0.003
Source	4920.0	0.8	3594.0
Forced Source	32100.0	0.04	71.0
Difference Image Source	196.0	0.4	1079.0
CCD Exposure	16.0	0.6	0.6



*Table sizes: the largest table in the last release, row size, uncompressed, no replication, indices not included*