Community Coordinated Modeling Center
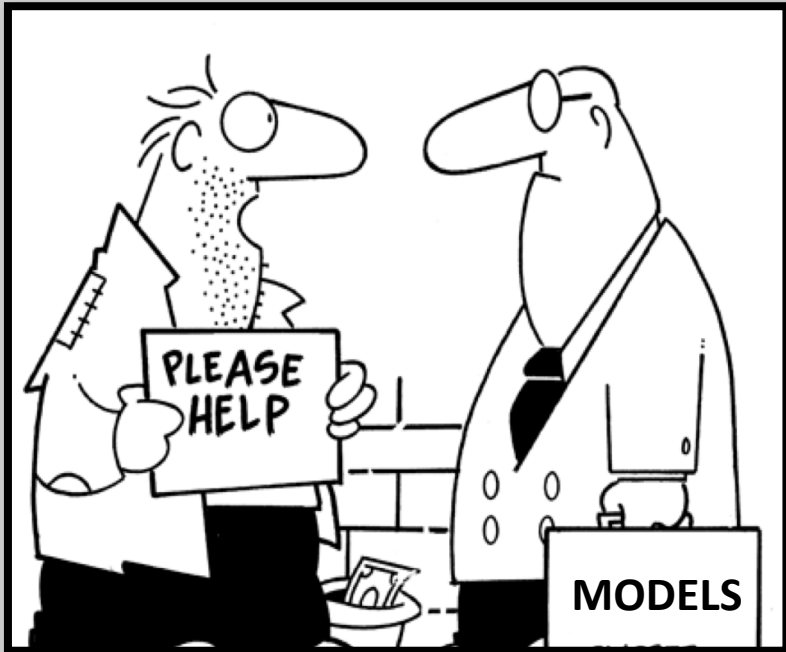
CCMC Introduction

M. Kuznetsova & CCMC Team

MODELS • **DATA** • **TOOLS** • **DATABASES** • **SYSTEMS** • **SERVICES**

Prior To CCMC

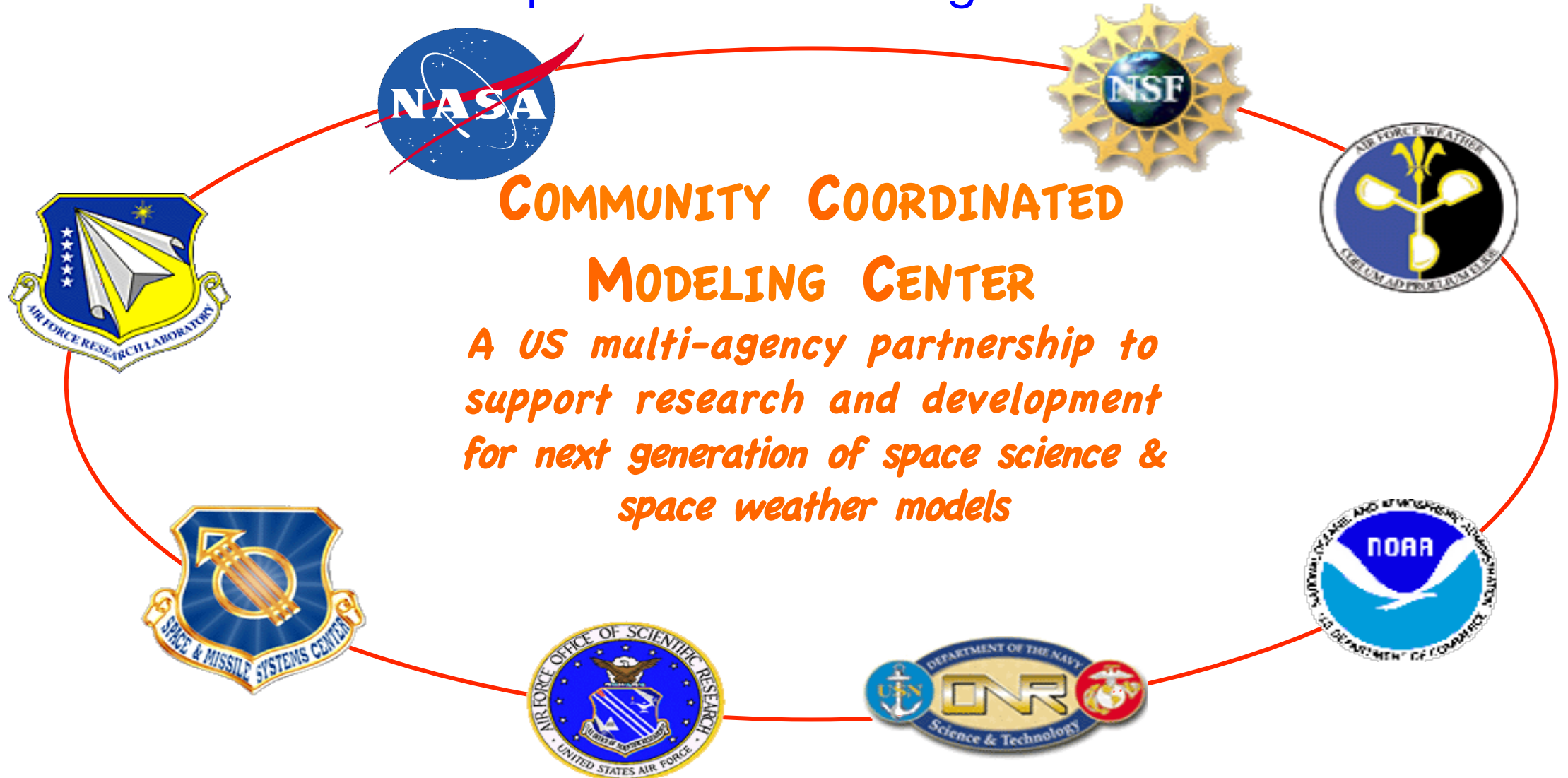**Models accessed and used by developers only.**

"Valley of Death" between **FUNDAMENTAL** space science research and **APPLICATIONS** & **SERVICES** to users affected by space environment
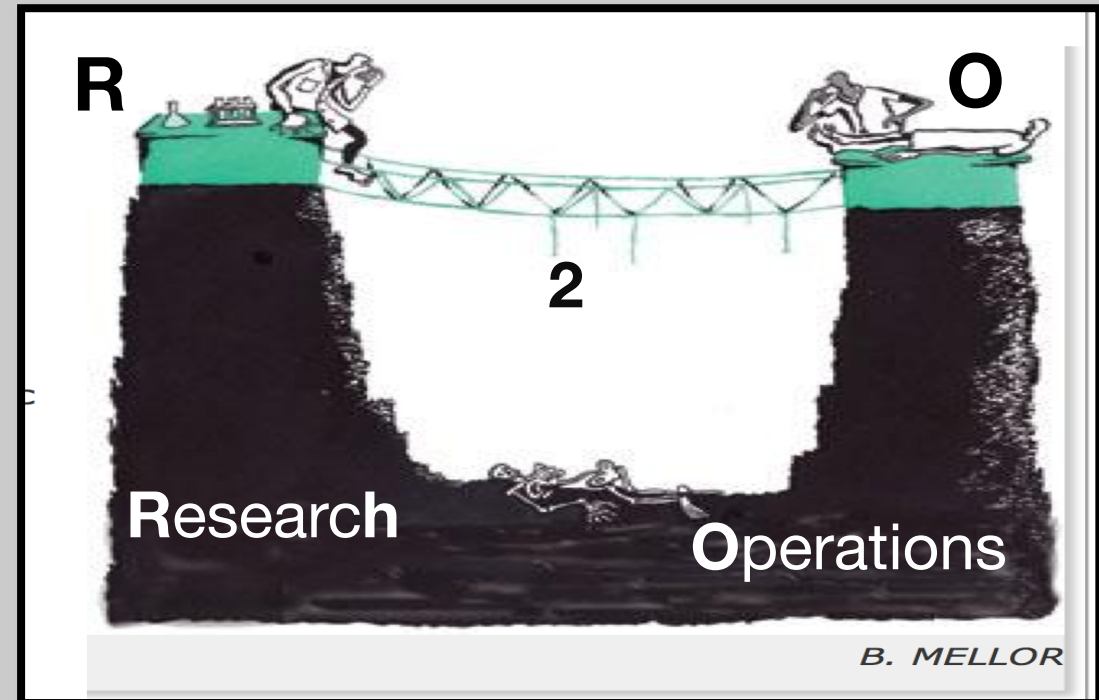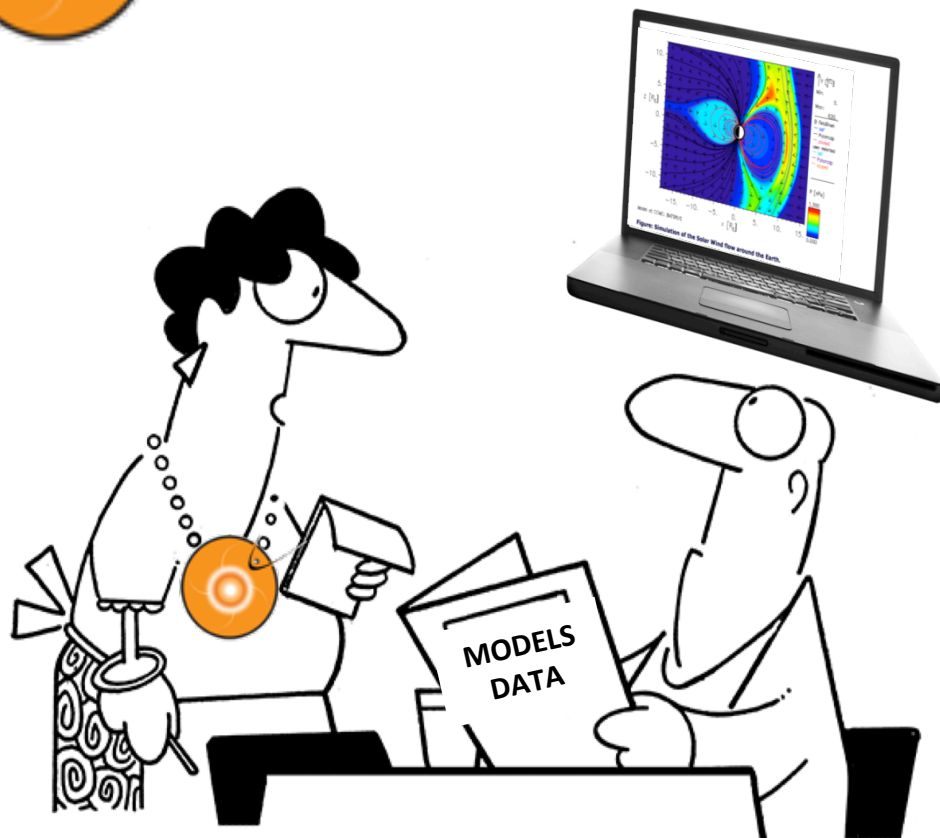
Established in 2000 as an essential element of the
National Space Weather Program

COMMUNITY COORDINATED MODELING CENTER

A US multi-agency partnership to support research and development for next generation of space science & space weather models

CCMC is a Game Changing Solution

MODELS DATA

http://ccmc.gsfc.nasa.gov

*CCMC enabled
'Open model' policy*
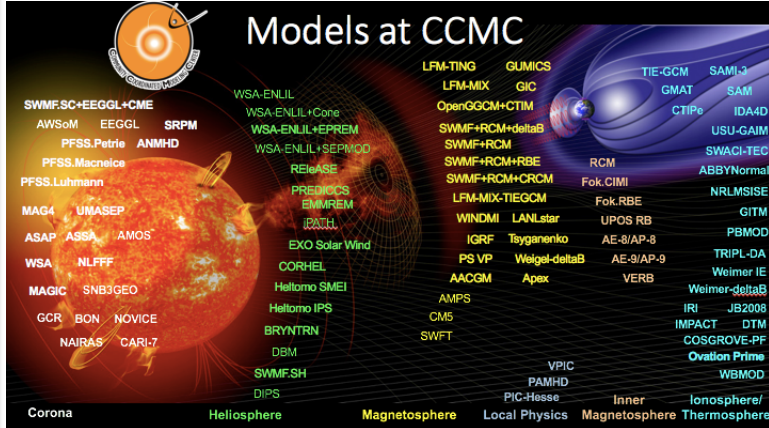
Advances in Research

Operations

CCMC Assets & Services

Models

Models at CCMC
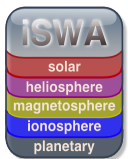
(expanding collection: > 100)

Simulation
Services

Evaluations

Skill Scores
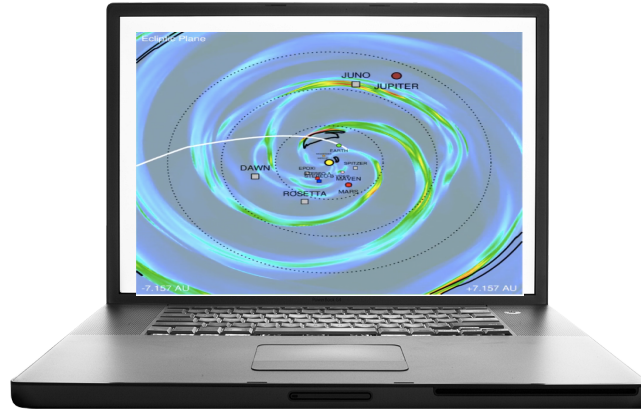
Scoreboards
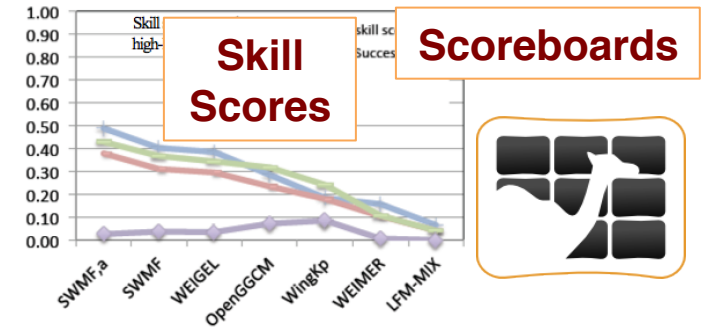
Uncertainty Assessment

Applications
for space weather research, monitoring, forecasting
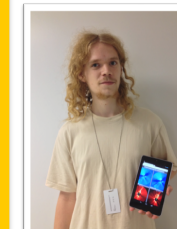

Space Weather
Services
for NASA's missions

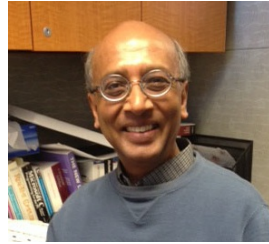### In-House Prototyping

Hands-on
Education

CCMC Staff

T. Tsui
(Hardware lead)

S. Bakshi
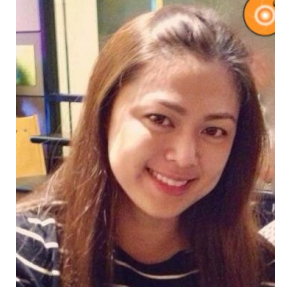(security, systems)

Kiran Patel
(clusters)

M.Kuznetsova
(Director)

Leila Mays
(Deputy)

Anna Chulaki
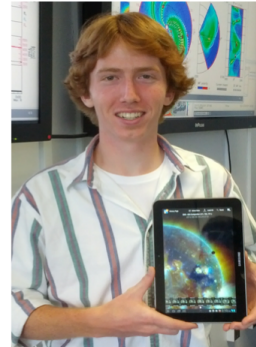(software, education)

M. Mendoza
(software)

Chiu Wiegand
(Software development team lead)

R.Mullinix
(software)

A.Pembroke
(software)

J. Boblitt
(software)

L. Rastaetter
(magnetosphere, software)

Ja Soon Shim
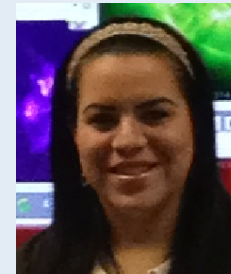(ionosphere)

D. De Zeeuw
(software)
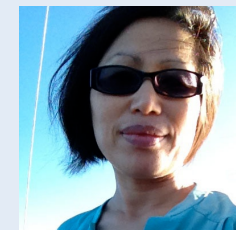
P. Macneice (solar)

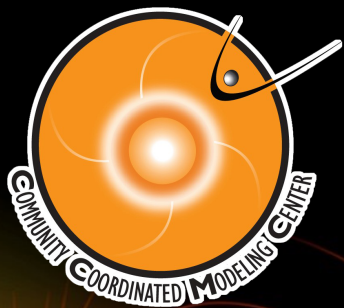A. Taktakishvili (solar)

B. Thompson

K. Muglach

Y. Collado-Vega
(Prototyping team lead)

Yihua Zheng
(radiation & plasma env)

Models at CCMC

Corona
- SWMF.SC+EEGGL+CME
- AWSoM
- EEGGL
- SRPM
- PFSS.Petrie
- ANMHD
- PFSS.Macneice
- PFSS.Luhmann
- MAG4
- UMASEP
- ASAP
- ASSA
- AMOS
- WSA
- NLFFF
- MAGIC
- SNB3GEO
- GCR
- BON
- NOVICE
- NAIRAS
- CARI-7

Heliosphere
- WSA-ENLIL
- WSA-ENLIL+Cone
- WSA-ENLIL+EPREM
- WSA-ENLIL+SEPMOD
- REleASE
- PREDICCS
- EMMREM
- iPATH
- EXO Solar Wind
- CORHEL
- Heltomo SMEI
- Heltomo IPS
- BRYNTRN
- DBM
- SWMF.SH
- DIPS

Magnetosphere
- LFM-TING
- GUMICS
- LFM-MIX
- GIC
- OpenGGCM+CTIM
- SWMF+RCM+deltaB
- SWMF+RCM
- SWMF+RCM+RBE
- SWMF+RCM+CRCM
- LFM-MIX-TIEGCM
- WINDMI
- LANLstar
- IGRF
- Tsyganenko
- PS VP
- Weigel-deltaB
- AACGM
- Apex
- AMPS
- CM5
- SWFT

Local Physics
- VPIC
- PAMHD
- PIC-Hesse

Inner Magnetosphere
- RCM
- Fok.CIMI
- Fok.RBE
- UPOS RB
- AE-8/AP-8
- AE-9/AP-9
- VERB

Ionosphere/Thermosphere
- TIE-GCM
- SAMI-3
- GMAT
- SAM
- CTIPe
- IDA4D
- USU-GAIM
- SWACI-TEC
- ABBYNormal
- NRLMSISE
- GITM
- PBMOD
- TRIPL-DA
- Weimer IE
- Weimer-deltaB
- IRI
- JB2008
- IMPACT
- DTM
- COSGROVE-PF
- Ovation Prime
- WBMOD