

C4-Large Project

# Virgo/Fornax Clusters CO Survey

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2015/2/17 @ ALMA mini WS, mtk

**Topic: Virgo/Fornax CO Survey**

**Line: 12CO(1-0,2-1,...)**

**FoV: 20 disks, 100 centers, ca 1000 detection**

**Beamsize: 10-30pc**

**No. of targets: All cluster galaxies (ca 1000)**

**Use of ACA: yes**

**International Col: Japan (Virgo team), UK (M. Bureau), US (Jin Koda) (TBD)**

# 1. Objects

Virgo/Fornax clusters of galaxies CO survey;

~20 disks, ~100 centers, ~1000 detection/per cluster

Virgo= Extended NobeCO S, best studied cluster;

Fornax= Martin's suggestion, best nearest cluster for ALMA)

## 2. Science

CO database,

Rot curve, dynamics, BH to Disk

ISM, SF,

HI + Environment (SKA-ALMA)

Fundamental Plane, CO Tully-Fisher =>  
3D Vir/For structure)

## 3. Teams

Interntl collabo (recomm. for Large Program)

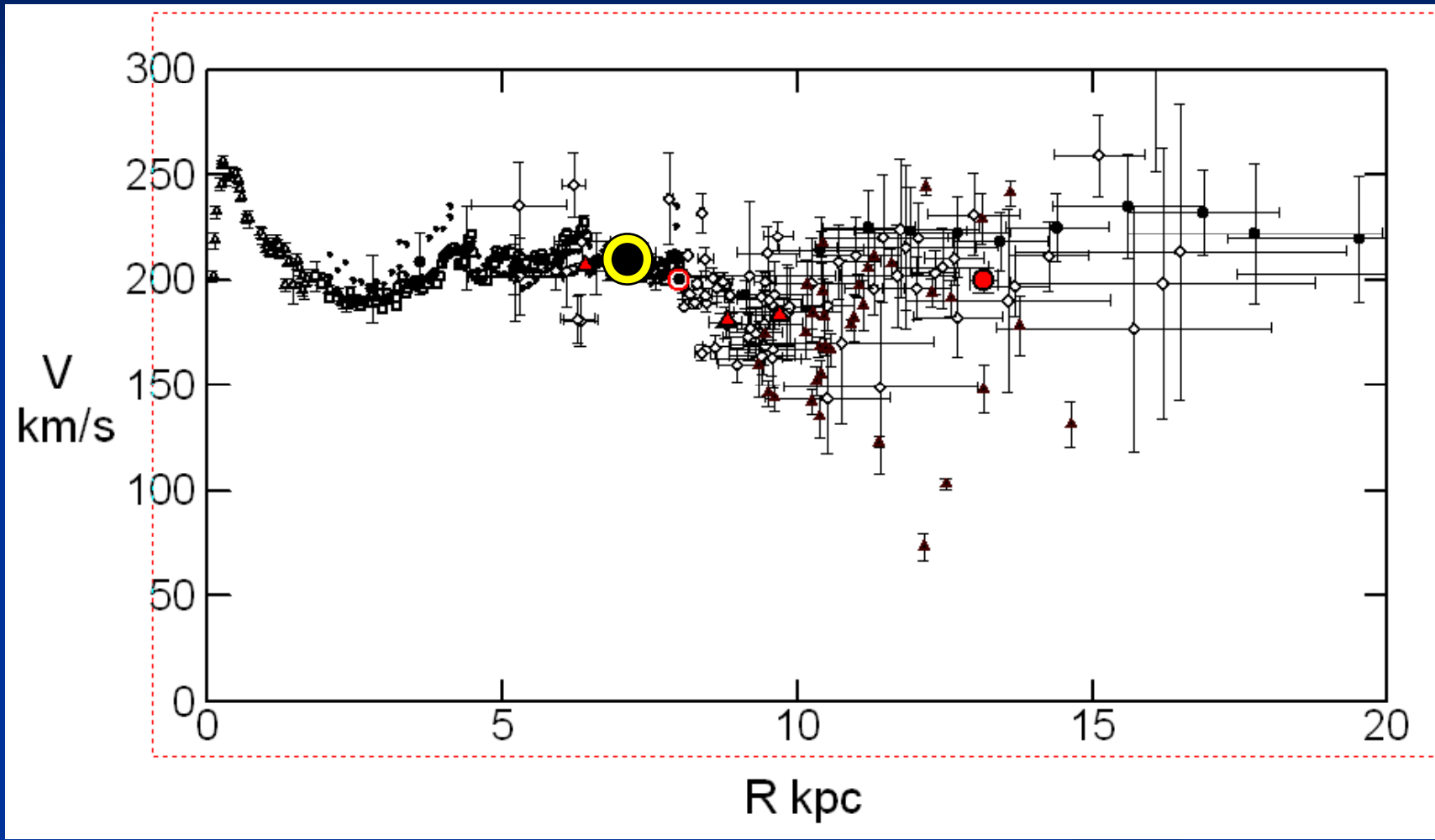
Japan (Virgo team),  
UK (Martin Bureau),  
US (Koda)  
SKA (HI team)

## 4. Relation to other subjects

**Topic 1.**  
**Rotation Curve and**  
**Mass Distribution**

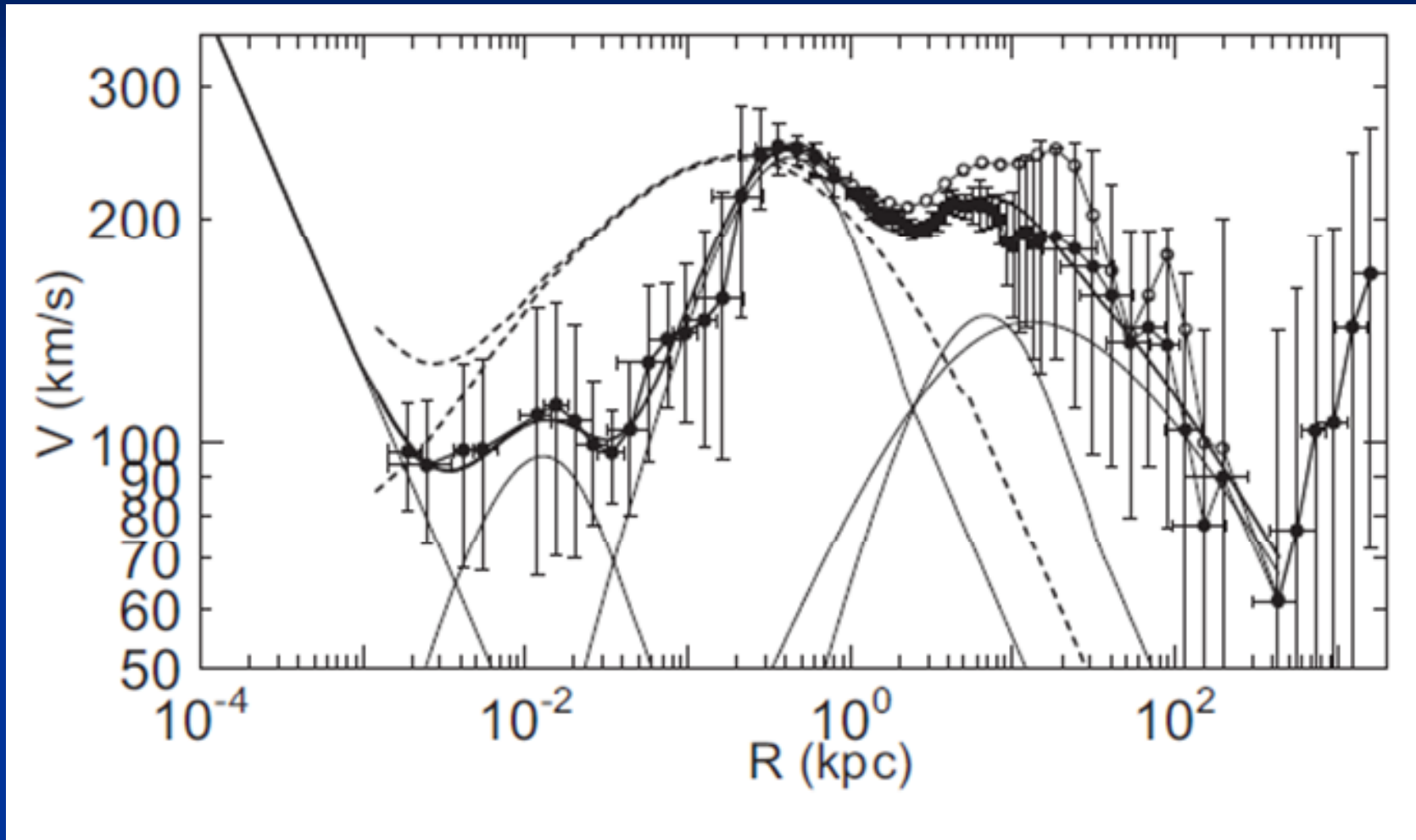
1. Log Rotation Curve
2. Mass models
3. BH - Bulge – Disk -DH

# In comparison with the Milky Way

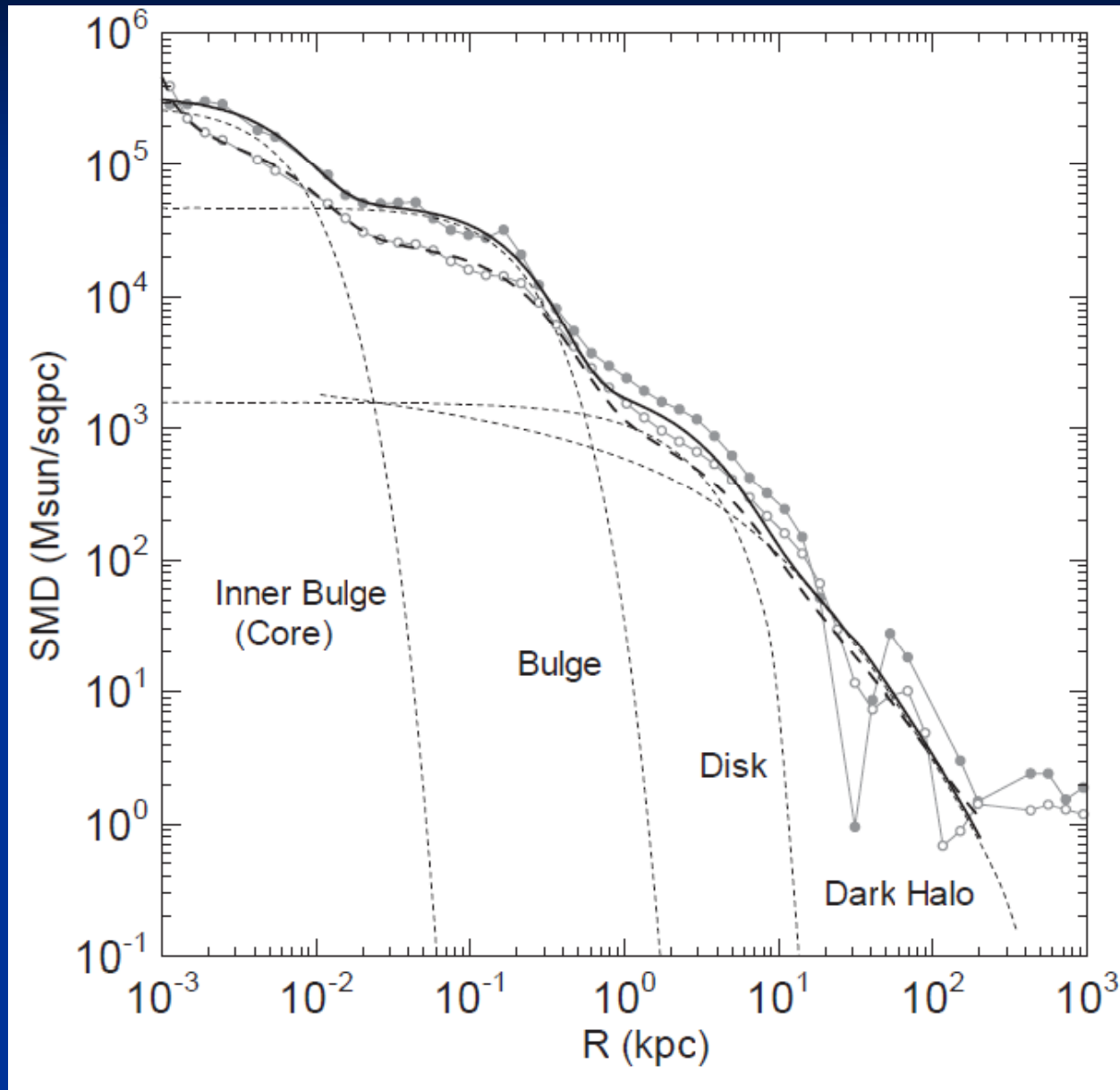




# MW: Log RC; Inner bulge-BH



# MW: Surf. Mass Density



# Comparison with BH by Genzel et al. 1994

