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Fokker-Planck Modelling: An Update

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Modest-6
29 August 2005

Detailed &
Time Consuming

N-body
Liouville eqn

Fokker-Planck
Boltzmann eqn

Orbit averaged vs. Dynamical

Direct vs. Monte Carlo

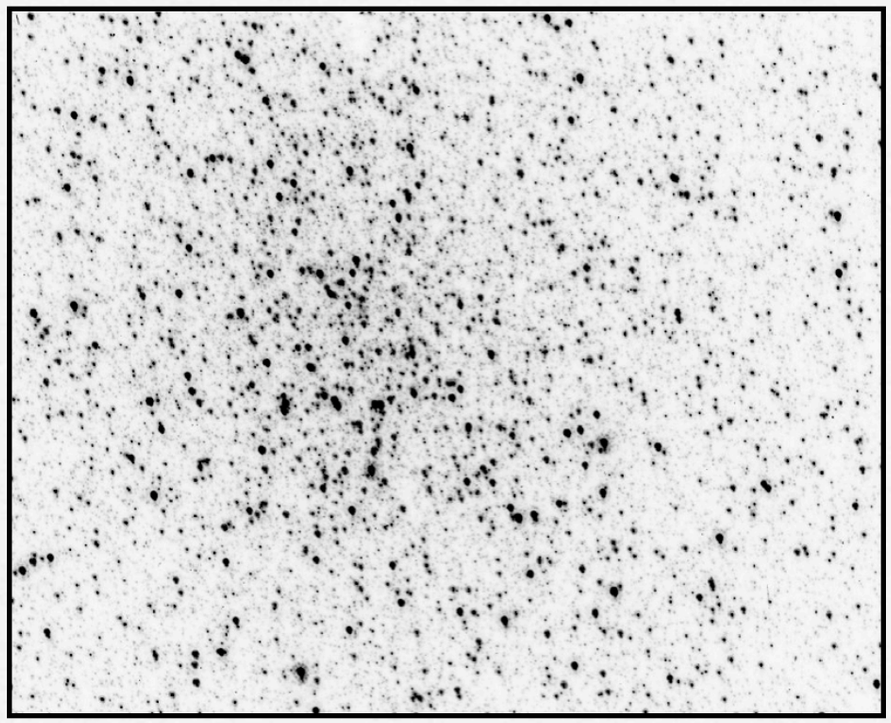
Isotropic vs. Anisotropic

Gas sphere
Moment eqns

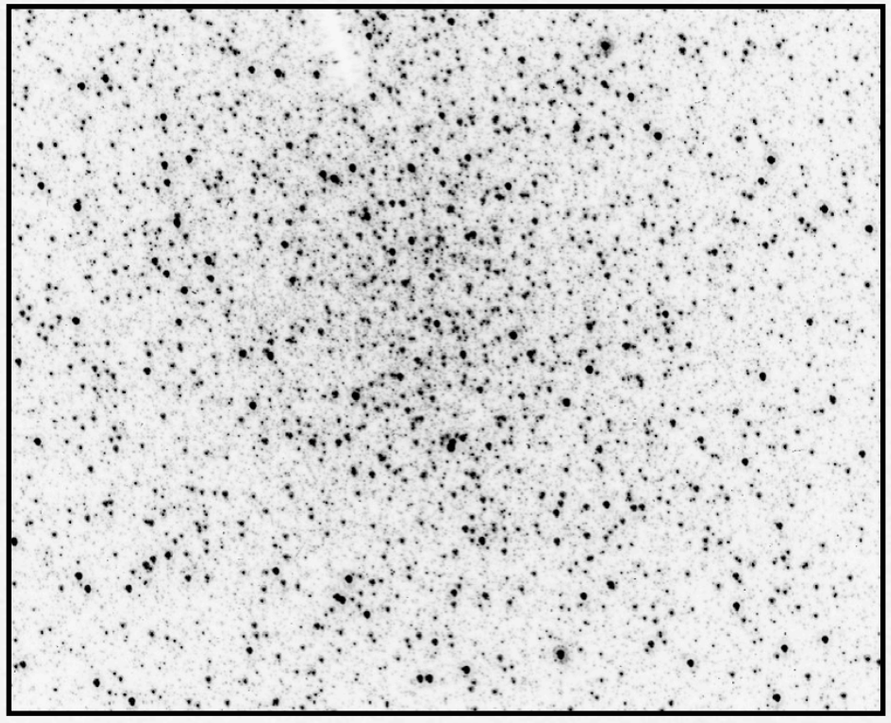
Virial
Virial thm

Simplified
Quick

A FP perspective on central black holes



NGC 6388



NGC 6441

What this code will contain:

Anisotropy

Spherical symmetry

Mass spectrum

Stellar evolution

Tidal boundary

Central point mass with loss cone

Three-body binary heating

Antecedents

Cohn & Kulsrud (1978): A static code with a central black hole

Cohn (1979): First of the direct, anisotropic, OA codes

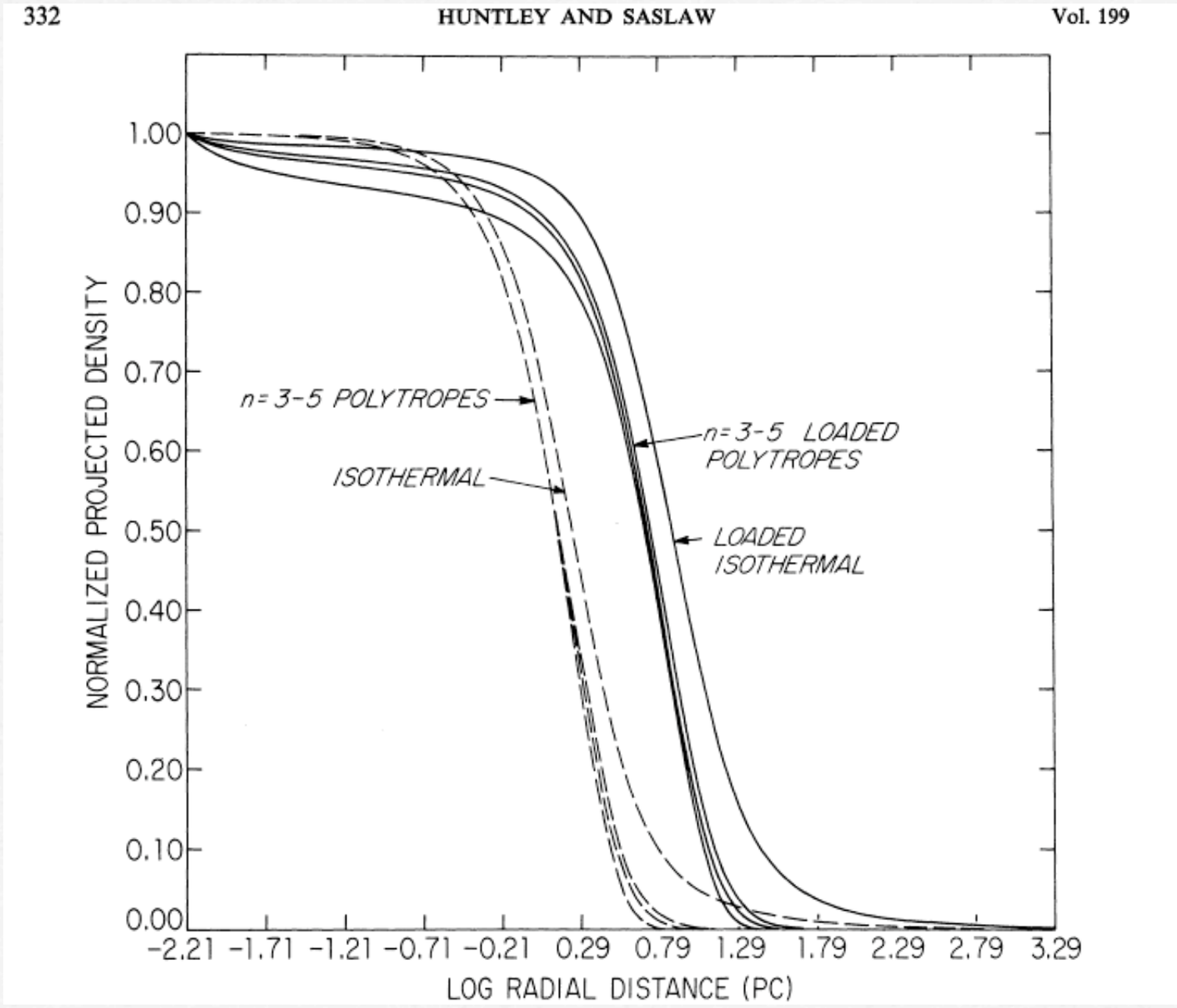
Drukier (1995): Augmented isotropic code

Drukier et al. (1999): Modernized version of Cohn ‘79

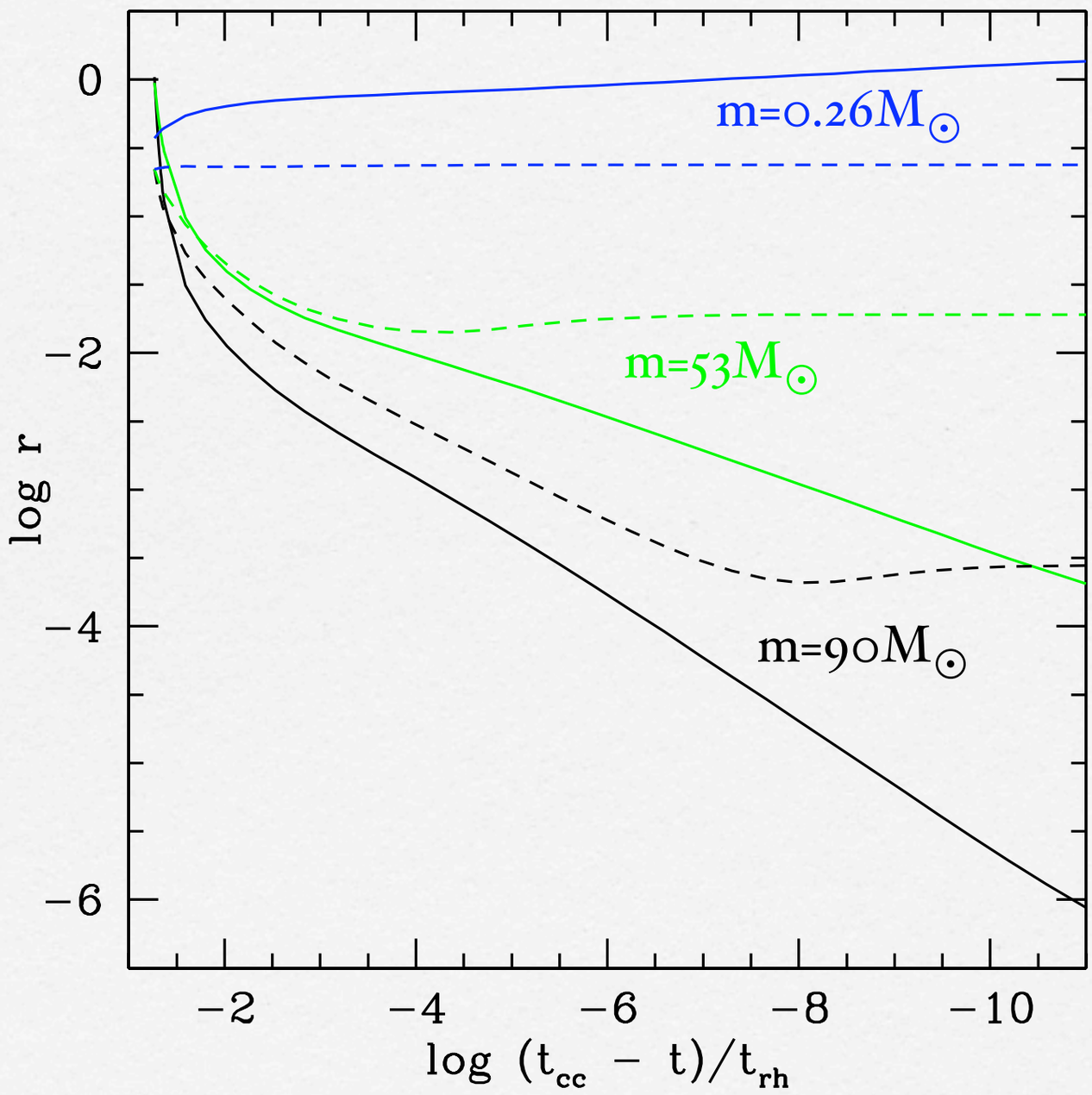
Takahashi (1995-2000): A parallel line of development.

How to put in the hole?

Initially there: e.g. loaded polytrope



How to put in the hole?



Dynamically formed

—— core radius

----- 0.01 Lagrangian radius

Initial conditions

IMF

Black hole masses

Cluster mass & radius

Try for particular clusters?

or something more generic?

What observables are of most interest?

Your input is welcome.

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