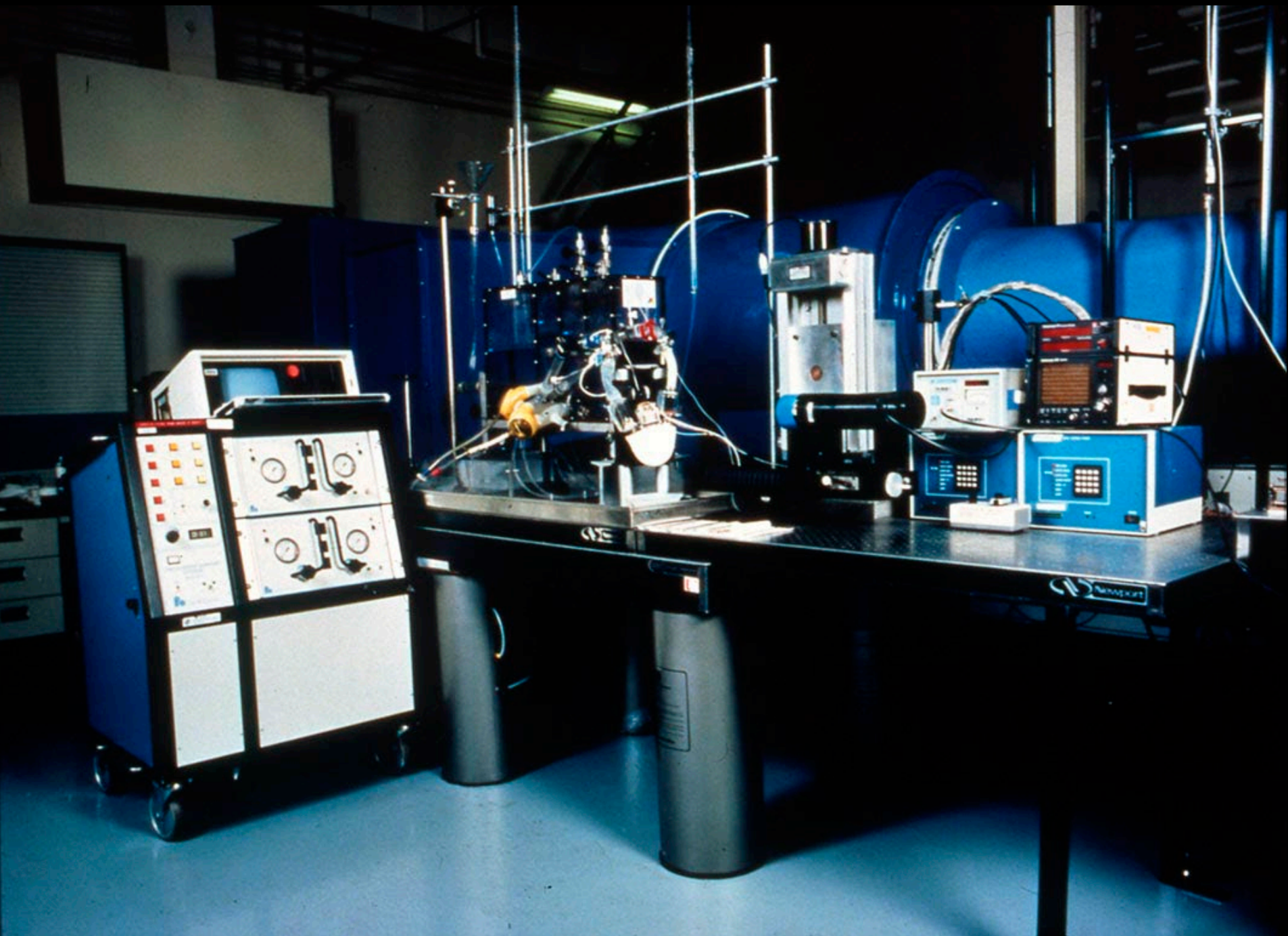
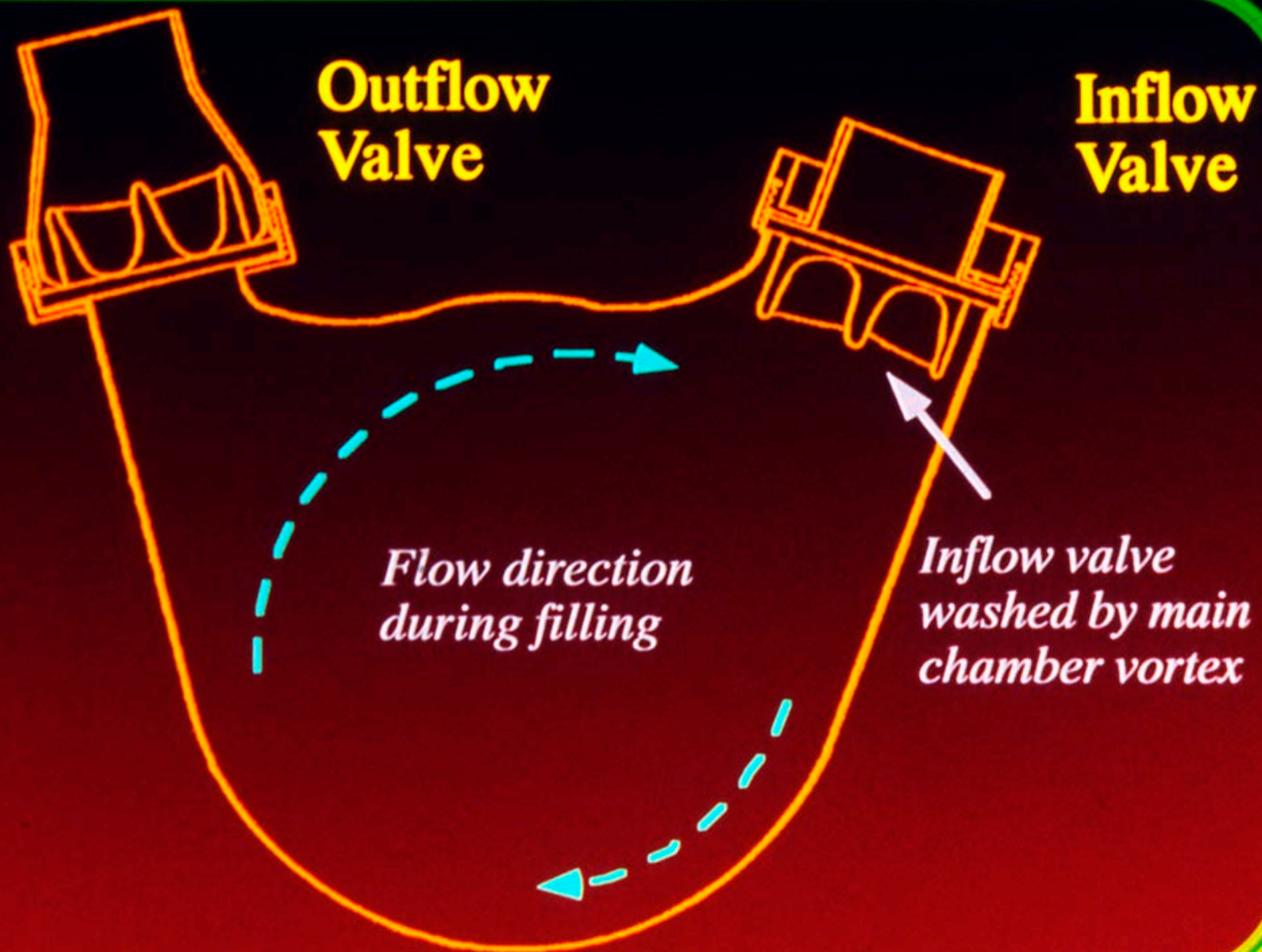


Cooperative R&D Agreement with the U.S. Department of Energy

Provides access to DOE laboratories and expertise

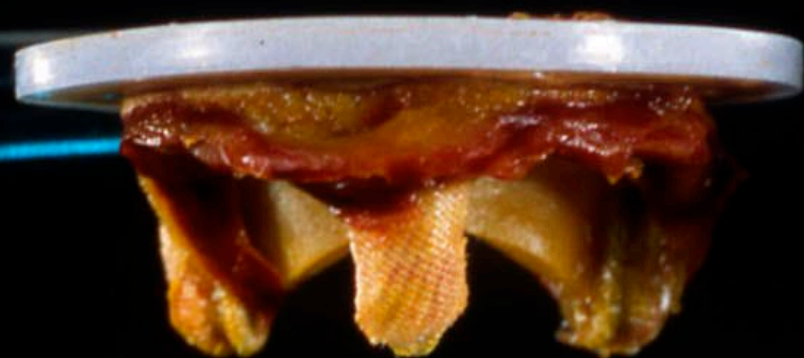






3CAN





cm 1

2

3

4

5

6

7

INFLOW

HK-26

OUTFLOW

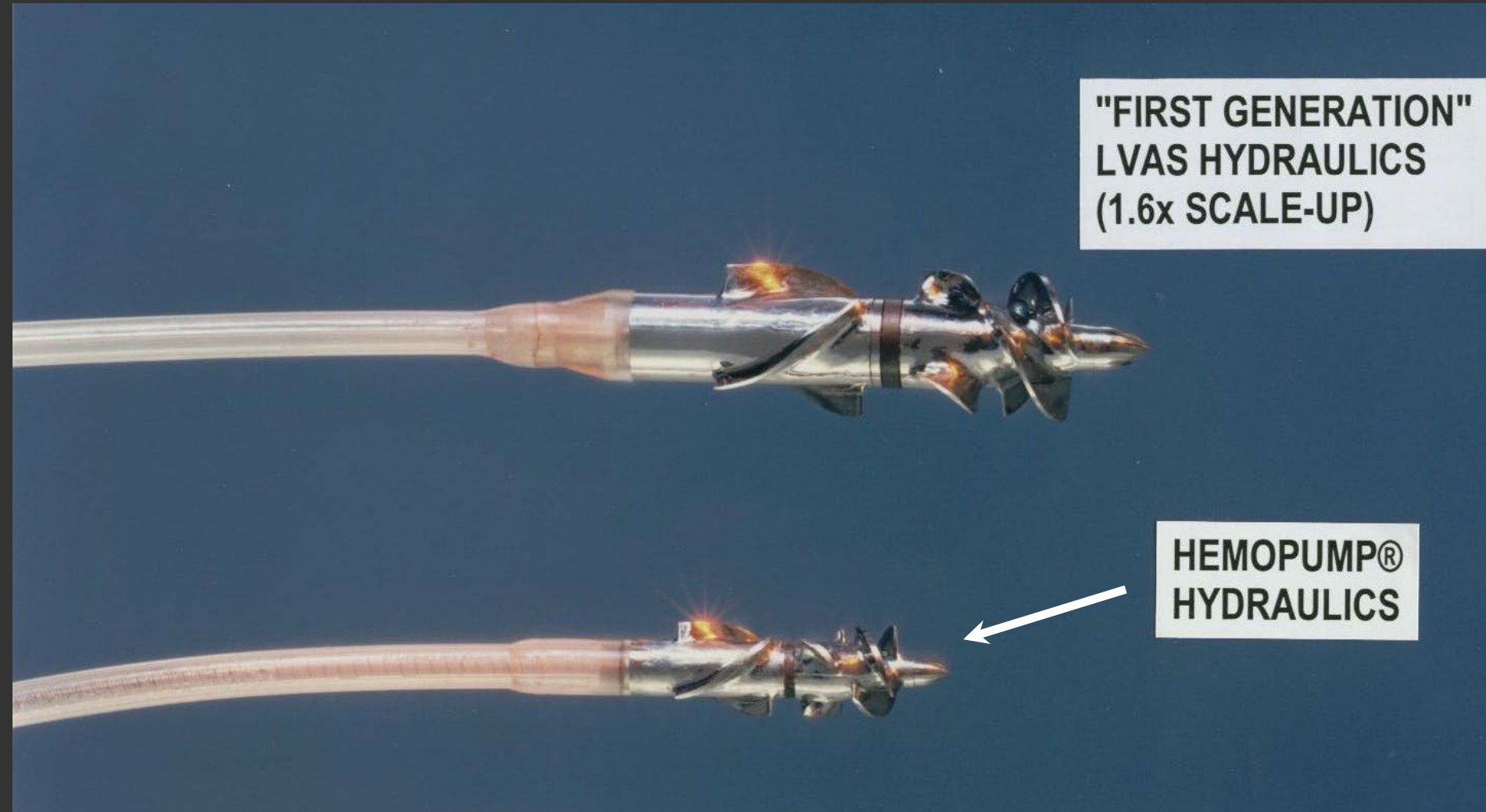
Design Evolution – Axial Flow VADS

1983-1999

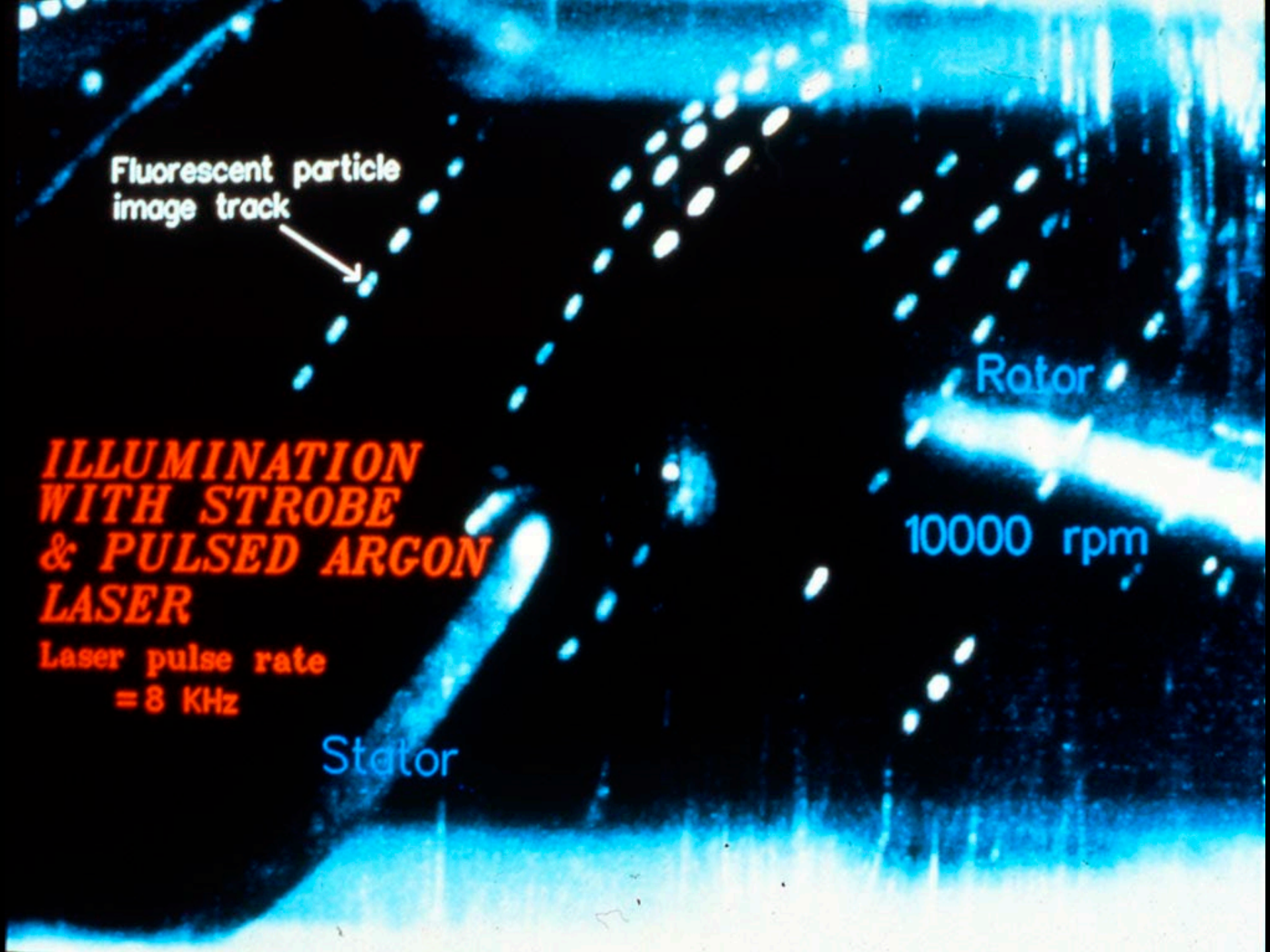
- **Hemopump 3 L/min, Cable Drive**
- **Feasibility Model - 6 L/min, Cable Drive**
- **Integrated Pump - Motor, Purge Seal**
- **Feasibility Model - Blood Bearings**
- **IVAS Development Model**
- **Heartmate II**

**"FIRST GENERATION"
LVS HYDRAULICS
(1.6x SCALE-UP)**

**HEMOPUMP®
HYDRAULICS**



Fluorescent particle
image track



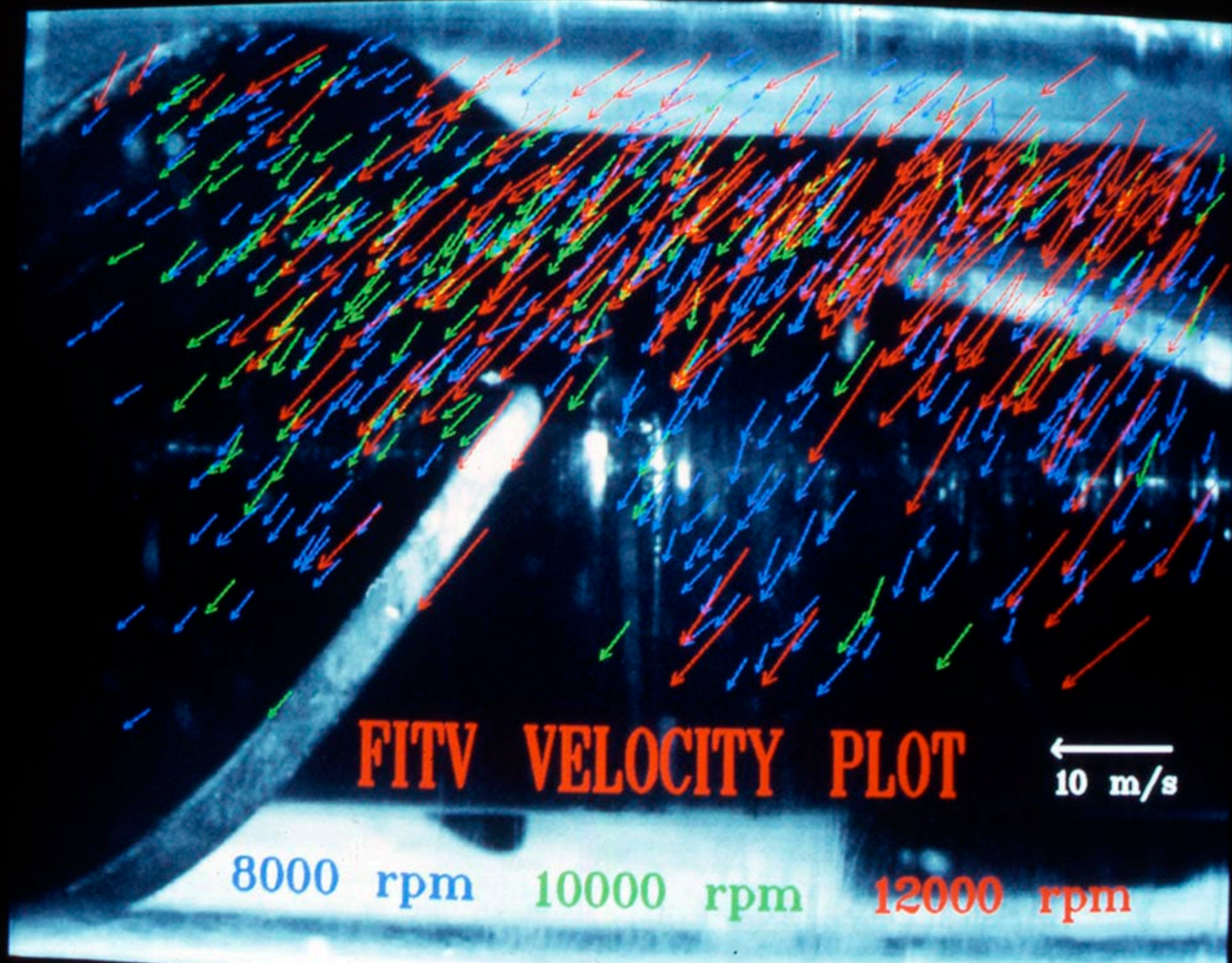
**ILLUMINATION
WITH STROBE
& PULSED ARGON
LASER**

**Laser pulse rate
= 8 KHz**

Rotor

10000 rpm

Stator



FITV VELOCITY PLOT

← 10 m/s

8000 rpm

10000 rpm

12000 rpm