

Honeywell Technology Center Steered Agile Beams Program

DARPA/MTO Steered Agile Beams
(STAB) Kickoff Meeting

August 8-9, 2000

Los Angeles, California

Principal Technical Contacts:

Honeywell Technology Center

Klein Johnson

612-951-7841

klein.johnson@honeywell.com

Thomas Ohnstein

763-954-2770

tom.ohnstein@honeywell.com

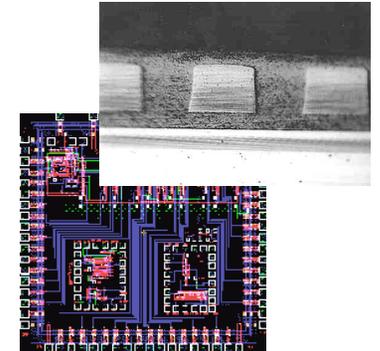
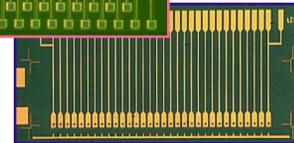
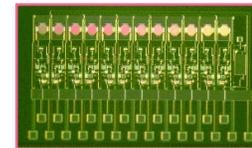
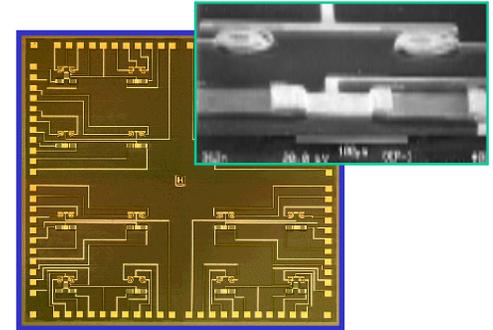
Talk Outline

- Honeywell Technology Center
- Stab Application
- System Level Concept

HTC Core Technologies

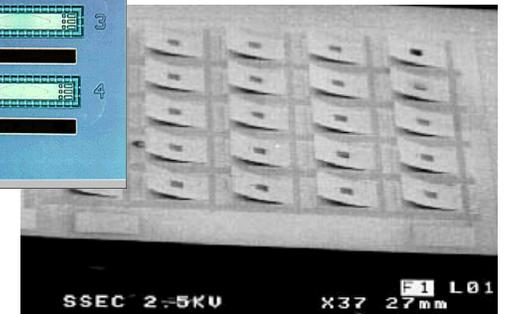
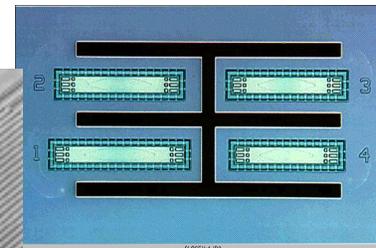
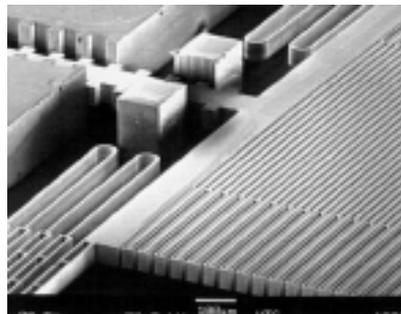
- Photonic Technologies

- VCSELs, MSMs and PINs
- Integrated and Diffractive Optics
- Non-Linear Optics
- Polymer Waveguides
- GaAs-based microelectronics



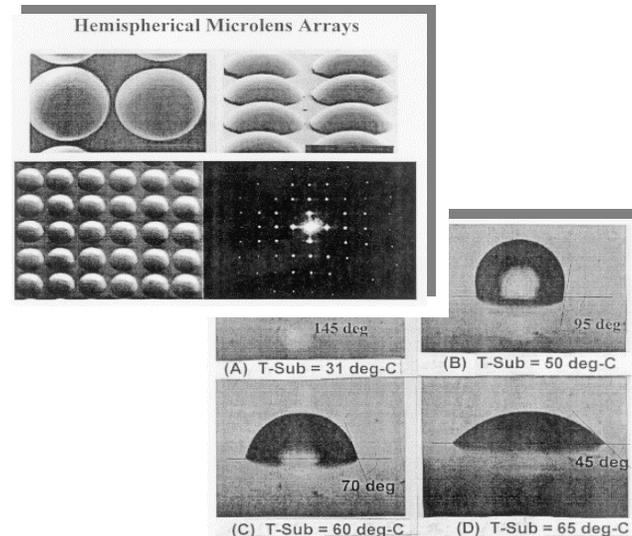
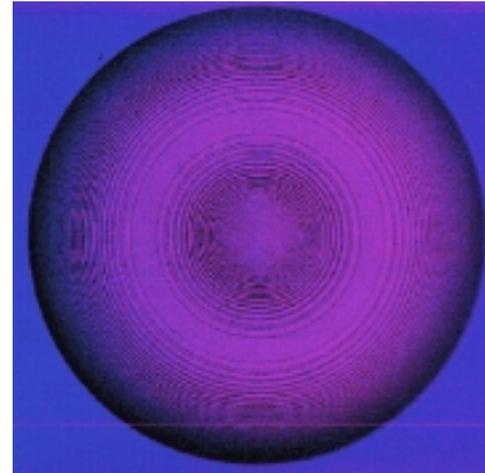
- Micro Electro-Mechanical Systems

- Sensors (Uncooled IR, Flow, Pressure, ORIMS, MEMs gyro)
- Fluidic Control (mesoscopic pump, microvalves)
- Optics (polychromator, Tunable IR filter)



Micro-Optics at HTC

- Diffractive
 - Silica
 - Borosilicate
- Refractive
 - Polymer Reflow
 - Transfer Etching



Microstructure Technologies

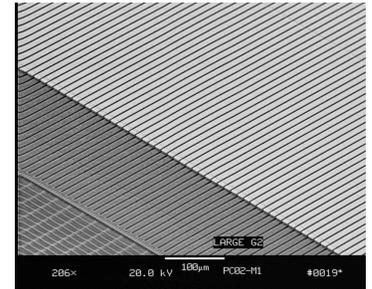
HTC Capabilities

- Micromechanical sensors
- Micromechanical actuators
- Integrated MEMS

Applications

- Inertial sensors for navigation
- Compact chemical detection systems
- Fluid sampling systems
- Actuators for surface control
- Microthrusters for satellite control

MEMS-Based Chemical Detection System



Tactical-Grade MEMS Gyro

*Polymer-Based Mesoscopic
Pump for Fluid Sampling*