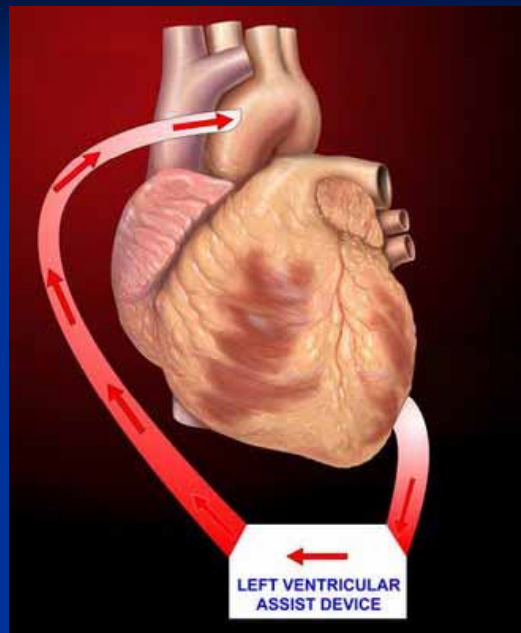




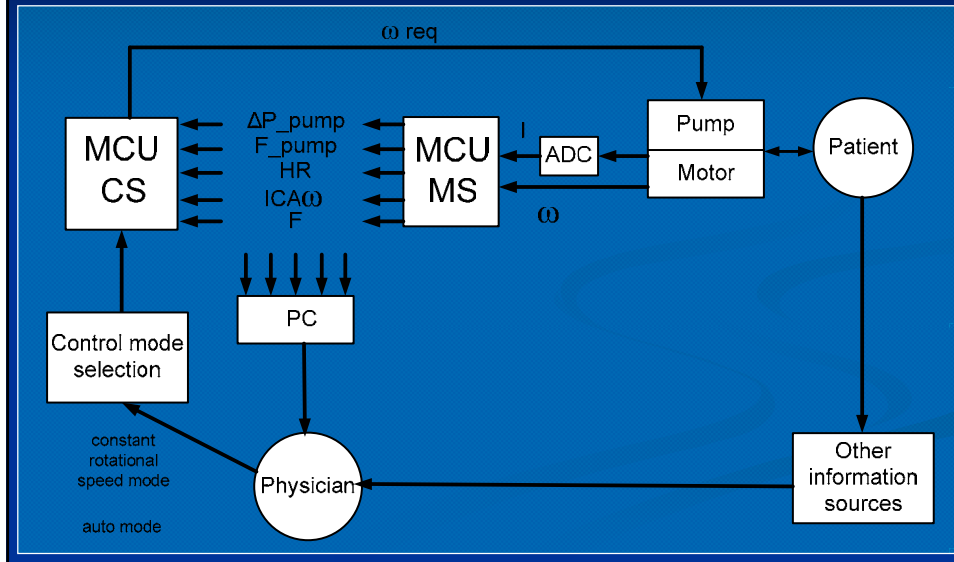
ФГУ НИИТ и ИО

The biotechnical control system of rotary blood pump

VAD connection



BTS structure



General equations for indirect measurements

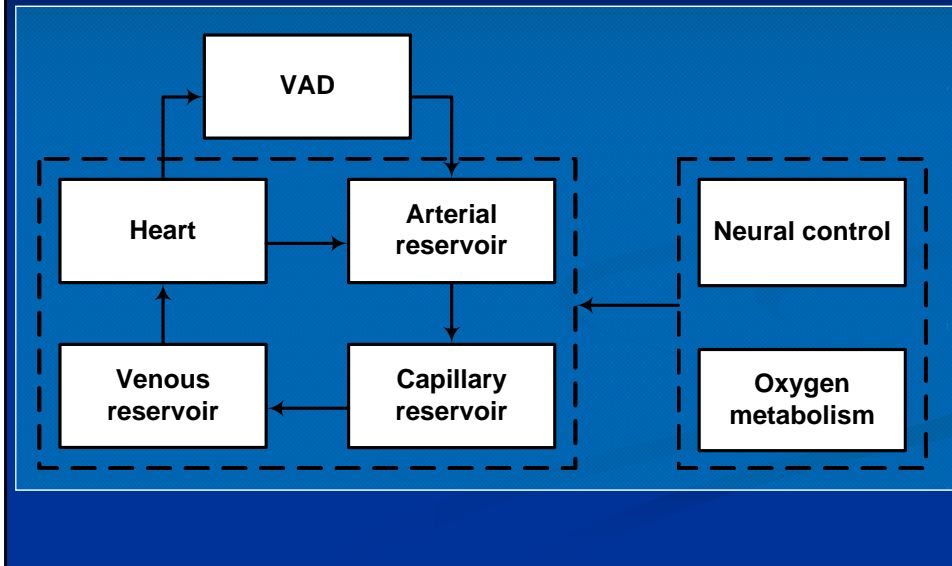
$$\hat{F}_{PUMP} = f(\omega_{MEAN}, I_{MEAN})$$

$$\Delta \hat{P}_{PUMP} = f(\hat{F}_{PUMP}, \omega_{MEAN})$$

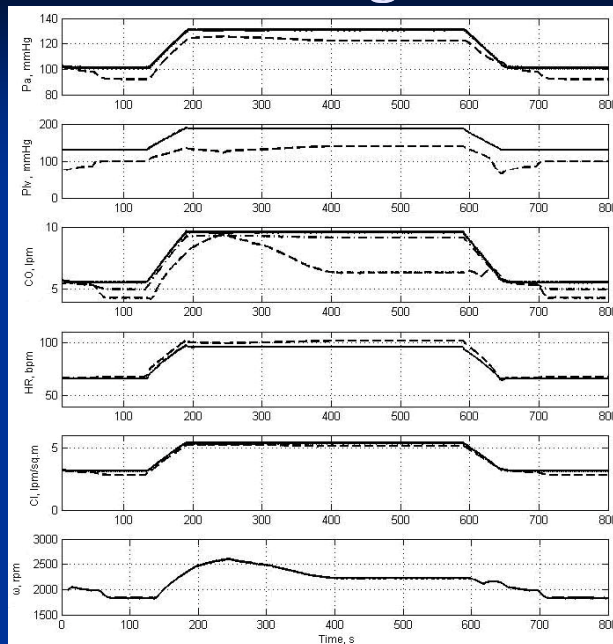
$$SV_{EFF} = K_{SV} \frac{\hat{F}_{PUMP}}{HR}$$

$$ICA\omega = \frac{I_{MAX} - I_{MIN}}{I_{MEAN}} \omega$$

BTS model block scheme



BTS modeling results



Thank you!