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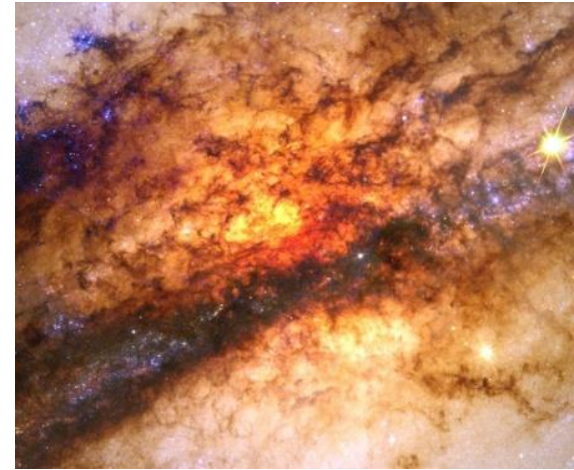
## physics and geometry

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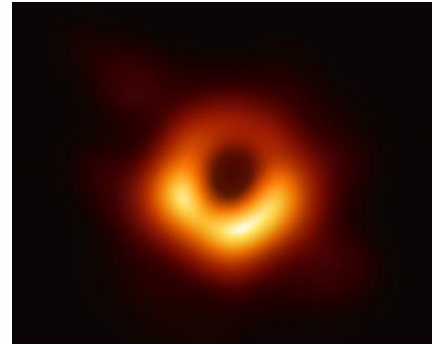


**BLR gas:**

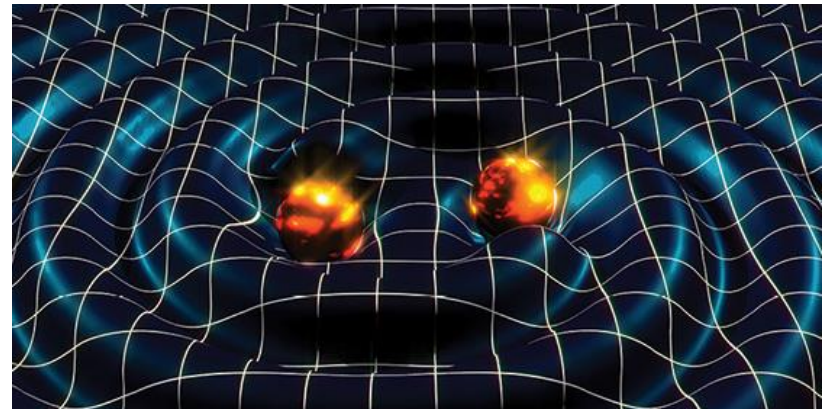
$T_e \sim 10^4 \text{ K}$

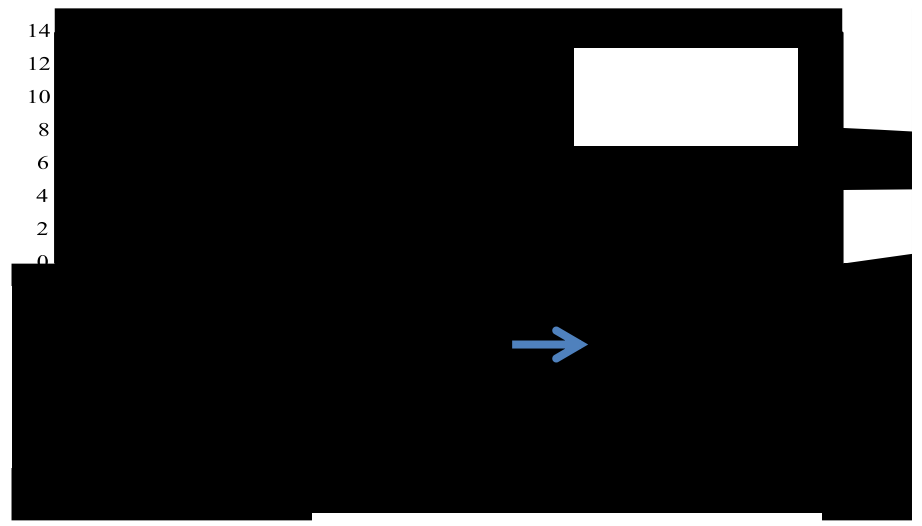
$N_e \sim 10^8\text{-}10^{14} \text{ cm}^{-3}$

→ spectroscopy still important tool



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## Alla Shapovalova (Russia)





## **Seyfert 1s:**

**NGC 5548**

**NGC 4151**

**NGC 7469**

**NGC 3516**

## **Narrow Line Seyfert 1:**

**Ark 564**

## **Double Peaked Line AGNs (DPLs):**

**3C 390.3**

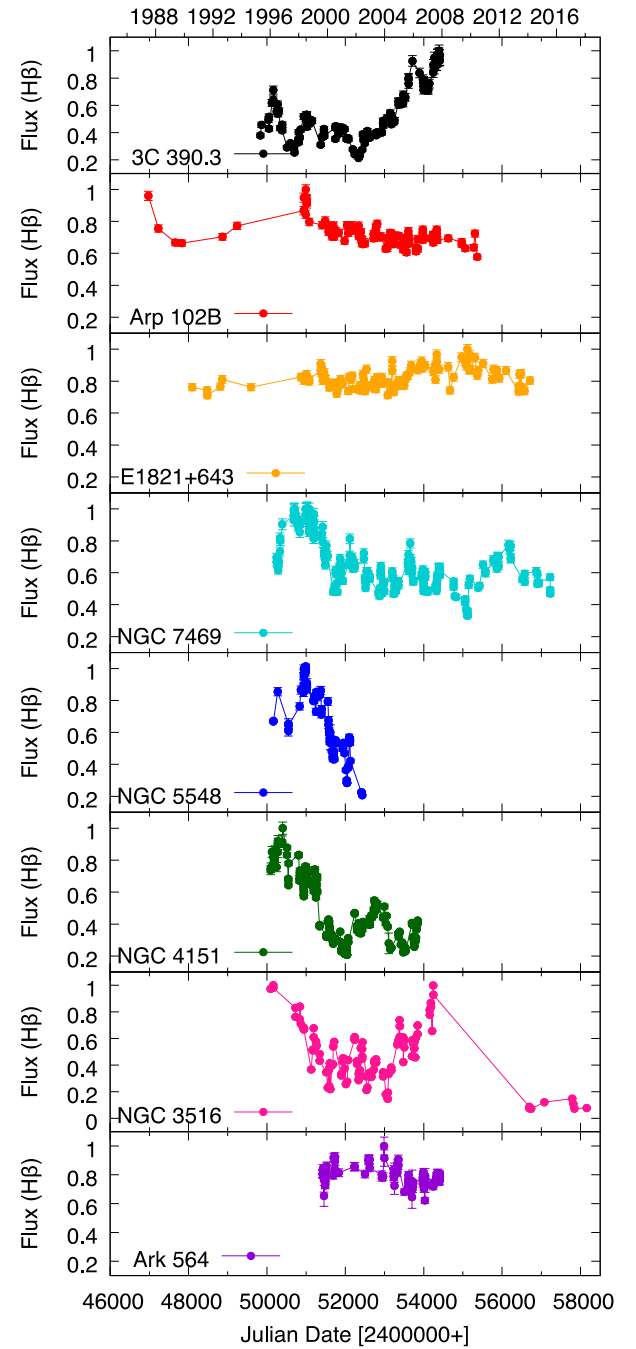
**Arp 102B**

## **High luminosity quasar**

**E1821+643**

## **Main papers:**

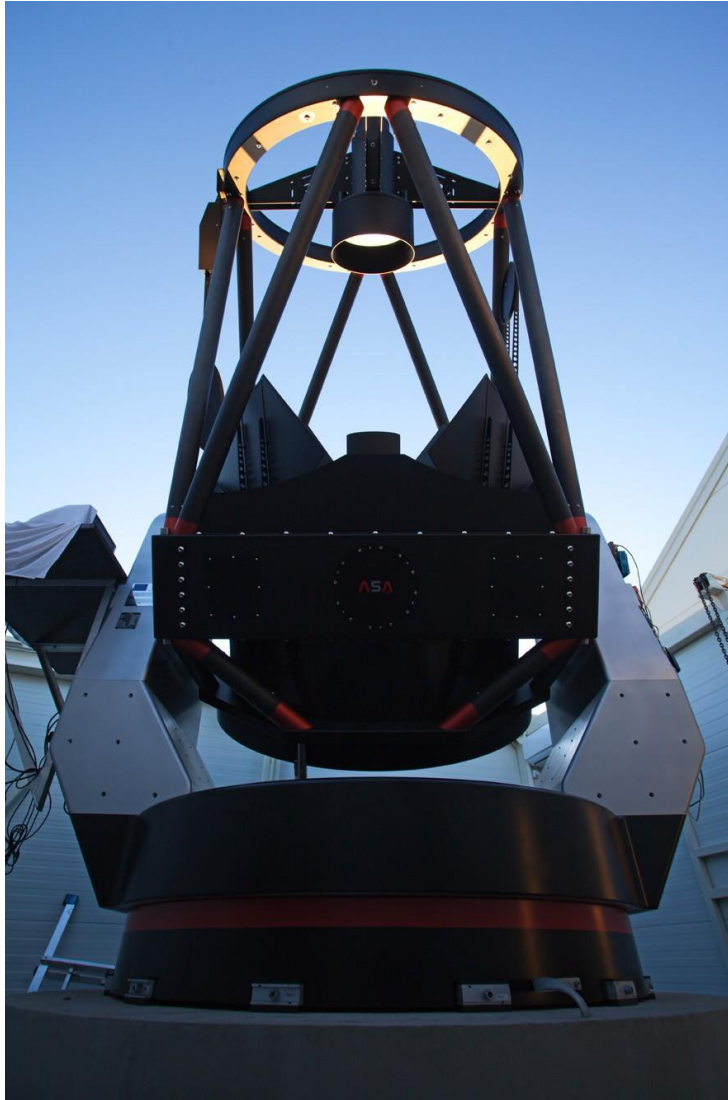
long-term











## Objects of the SAO's monitoring programme (1996-2016)

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