



Observing scenario paper update

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for the LIGO, Virgo and KAGRA collaborations

**1 Prospects for Observing and Localizing Gravitational-Wave
2 Transients with Advanced LIGO, Advanced Virgo and
3 KAGRA**

**4 Abbott, B. P. et al. (KAGRA Collaboration, LIGO
5 Scientific Collaboration and Virgo Collaboration)**

General plan: *an updated version of the Observing Scenario Paper (OSP) aiming at addressing astronomers' necessities and requests.*

- Show the observing scenario for O3, O4, and O5 (2024+) for the LIGO, Virgo and KAGRA network
- Updated sensitivity curves for each interferometer
- Include the upgrading of the existing instruments ALIGO+ and AdV+ (O5)
- Update timelines
- Use latest O1-O2 results (rate and population)
- Include information (range, localization, detection rate) on BNS, NSBH and BBH (CBC)
- Include information on 3D localization – expected distribution of 90 c.r. area, volume and luminosity distance (CBC)
- Include information on IMBHB (burst)
- Include description of alert process for O3+

(tentative) paper ready before O3 starting